

Headphone Measurement Datasheets

All Headphones
April 2018
Alphabetical order

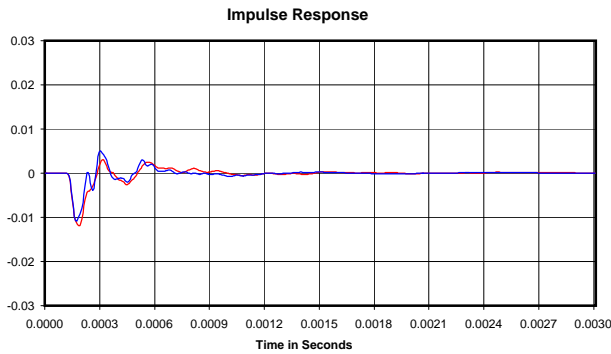
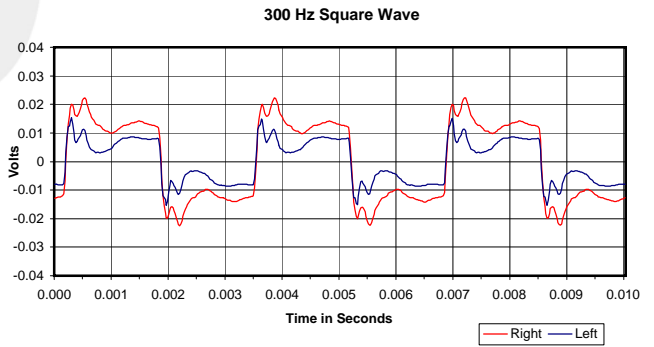
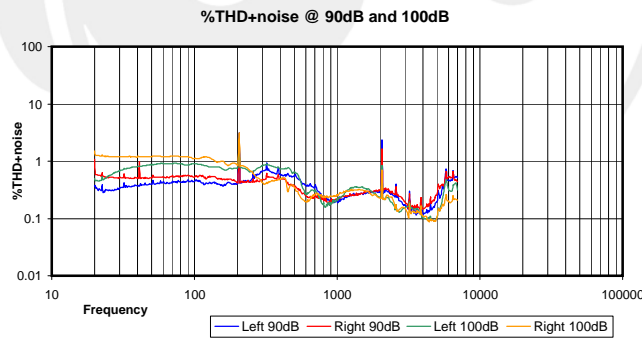
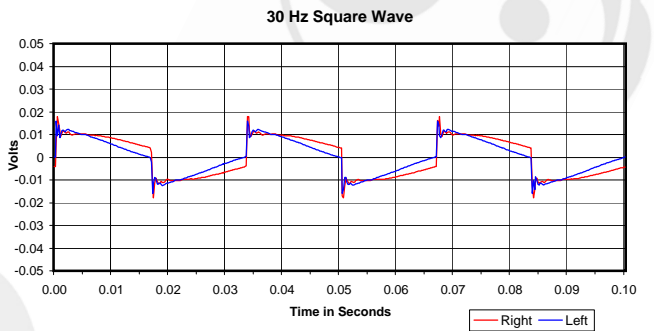
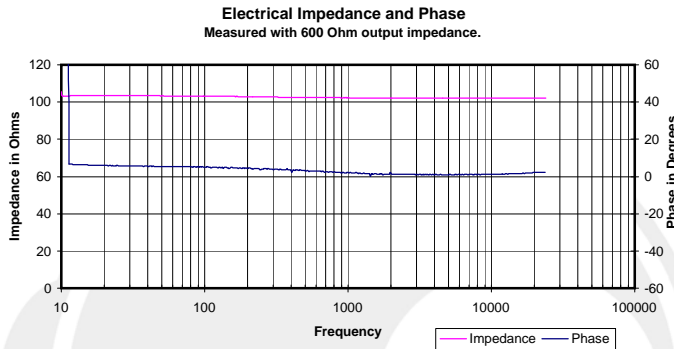
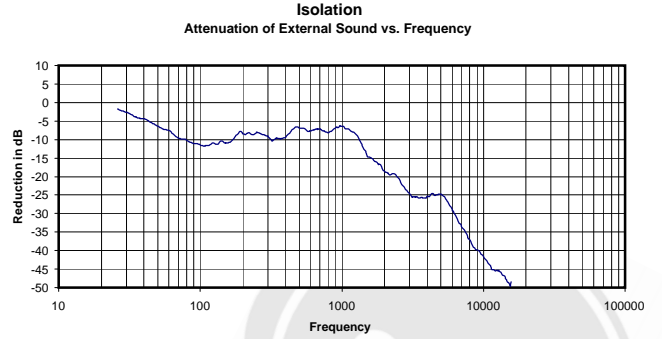
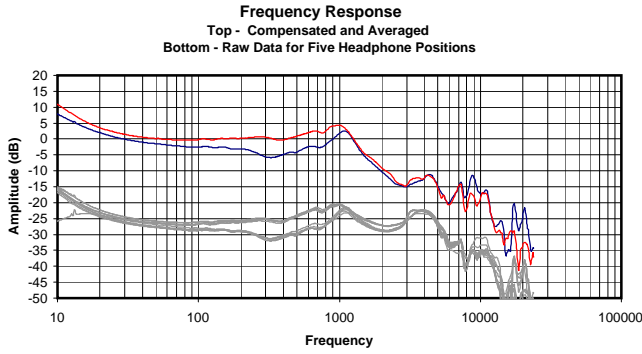
Tyll Hertsens
InnerFidelity, Editor-in-Chief
tyll@innerfidelity.com

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Headphone Measurements: A Audio Elite Bass Mode



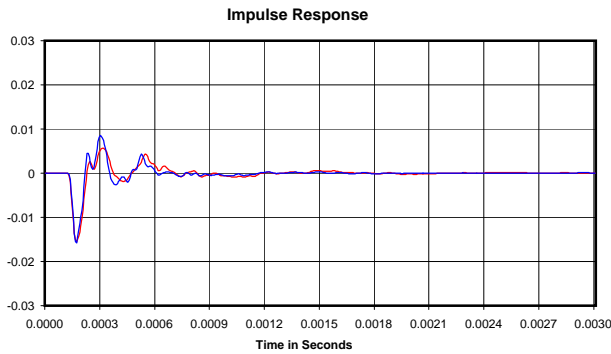
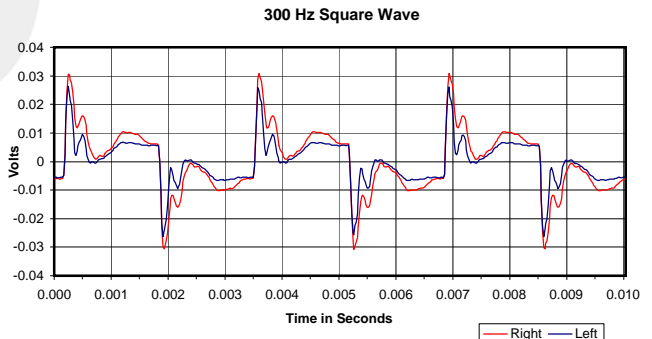
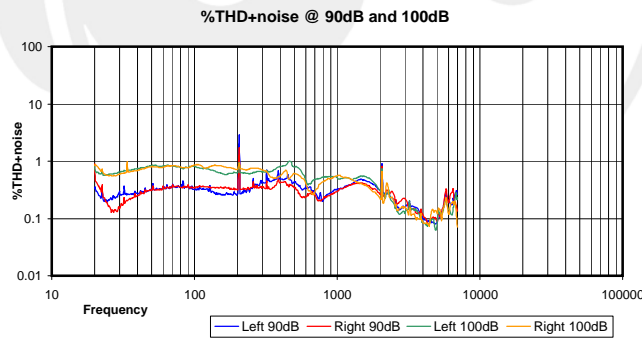
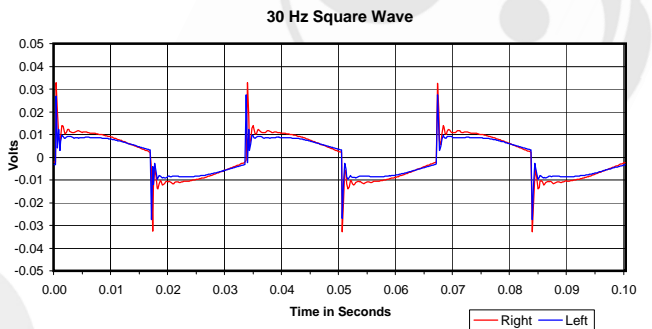
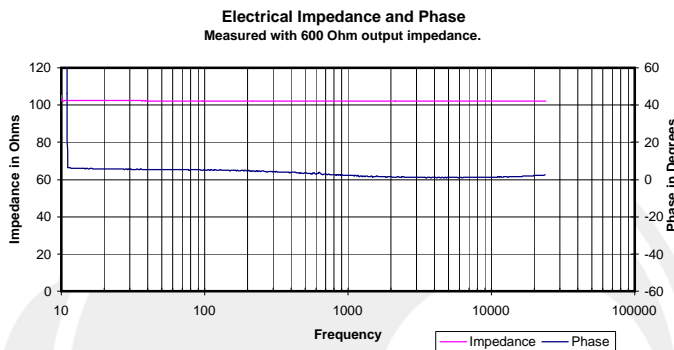
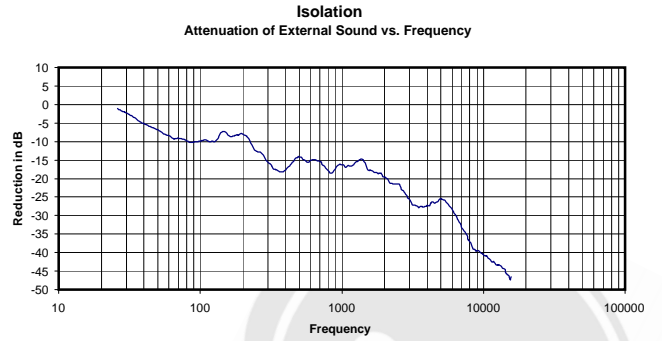
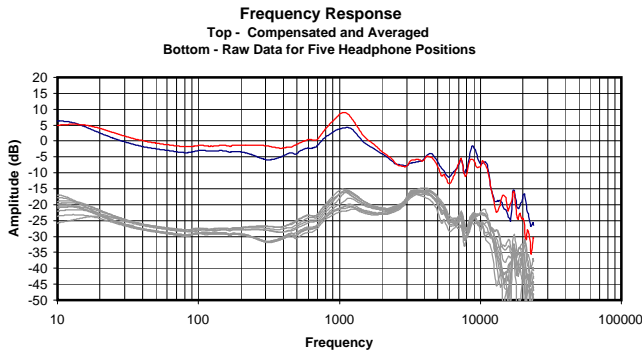
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.010 Vrms
102 Ohms
0.00 mW
-13 dB





Headphone Measurements: A Audio Elite NC Active

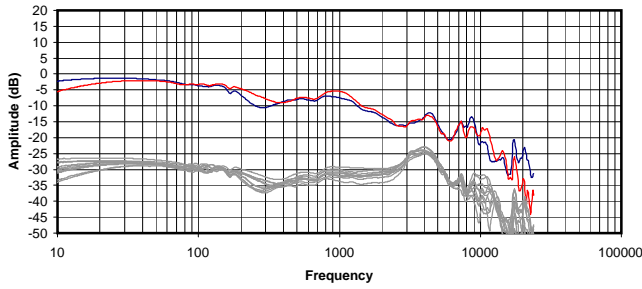


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

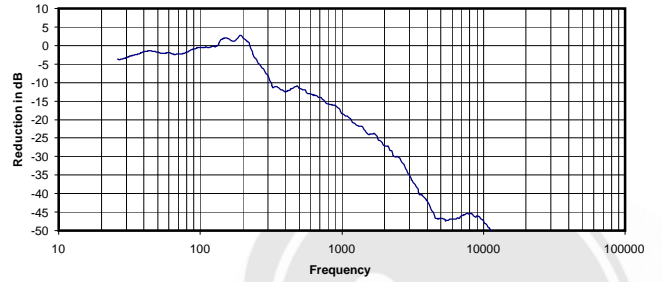
0.019 Vrms
102 Ohms
0.00 mW
-17 dB



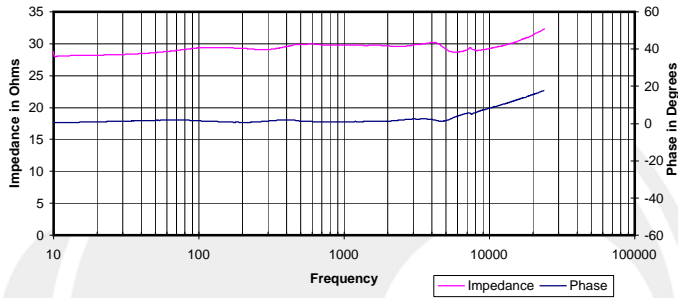
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



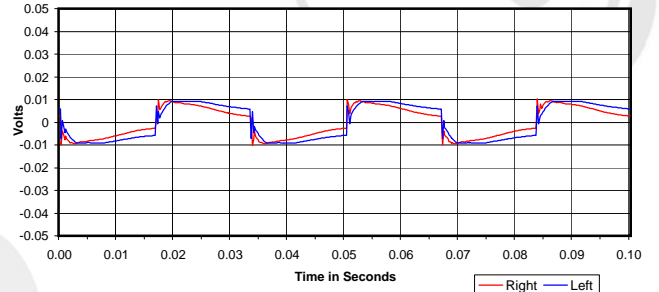
Isolation
 Attenuation of External Sound vs. Frequency



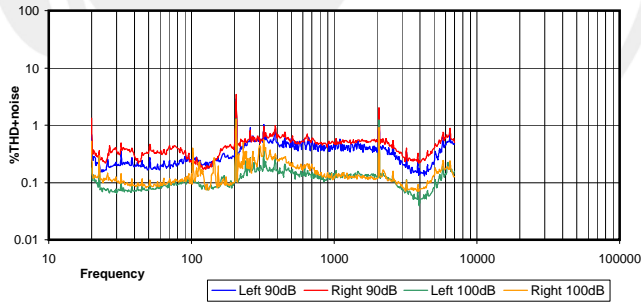
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



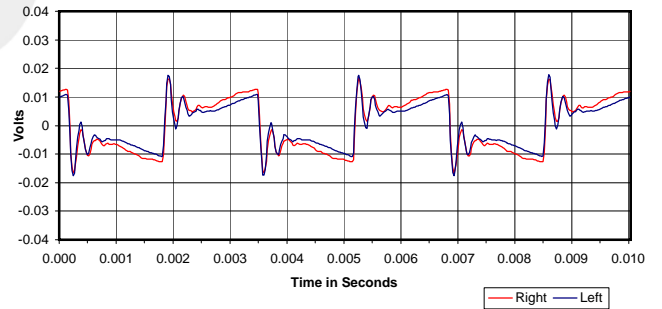
30 Hz Square Wave



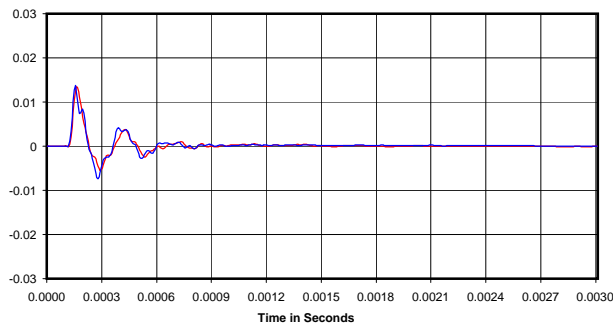
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

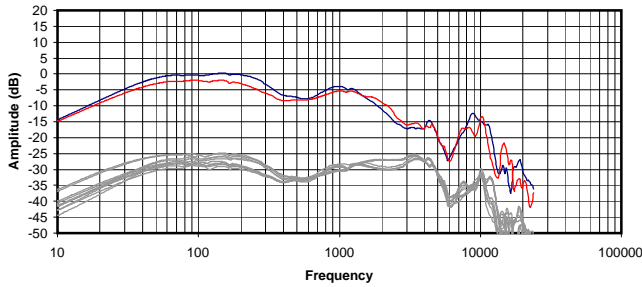


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

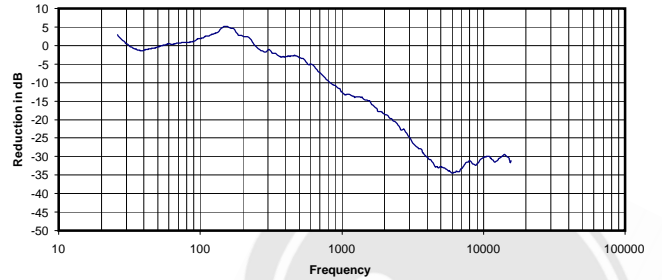
0.035 Vrms
 30 Ohms
 0.04 mW
 -18 dB



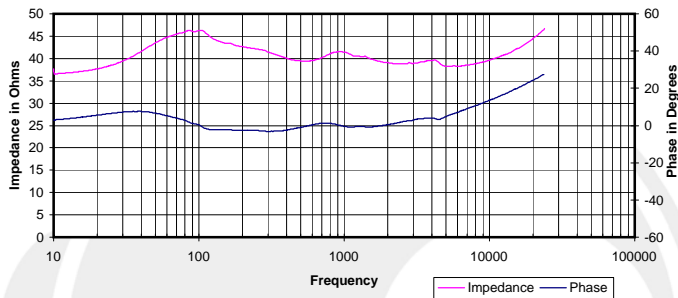
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



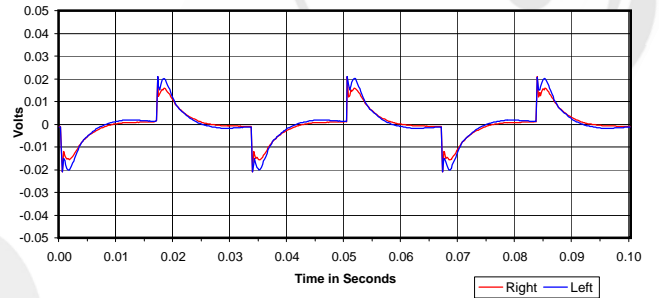
Isolation
 Attenuation of External Sound vs. Frequency



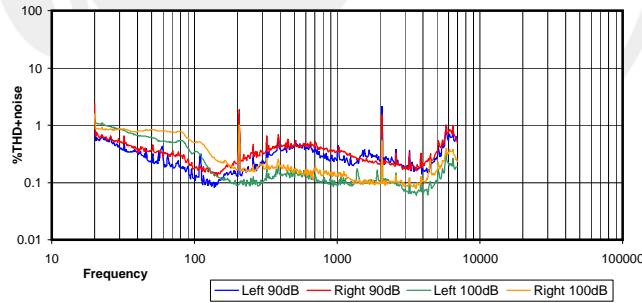
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



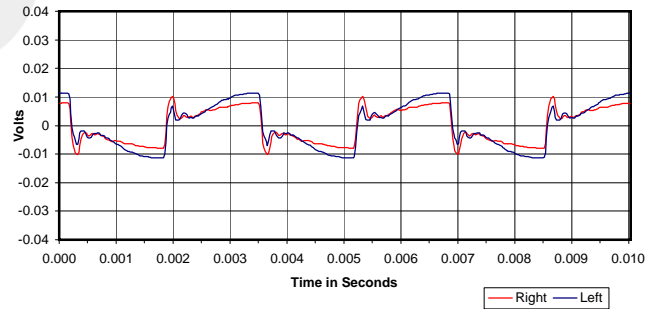
30 Hz Square Wave



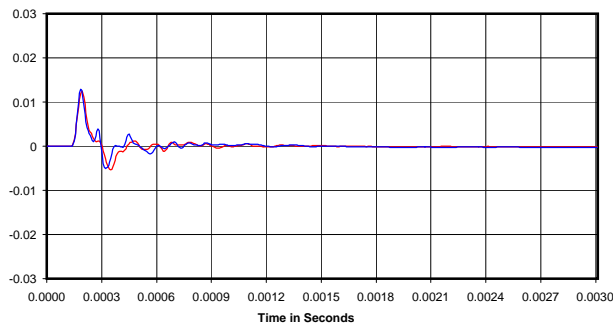
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

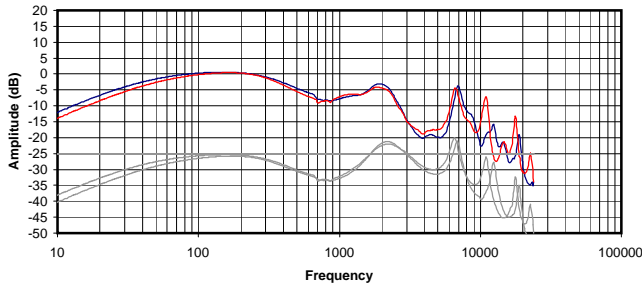


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

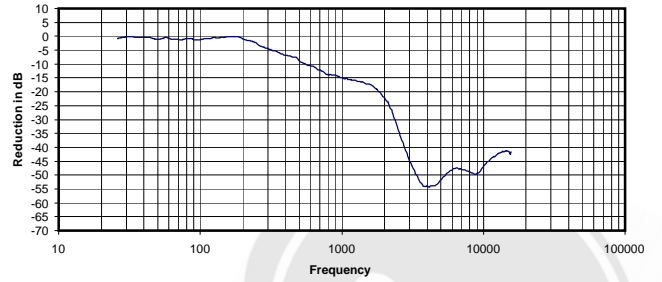
0.023 Vrms
 41 Ohms
 0.01 mW
 -11 dB



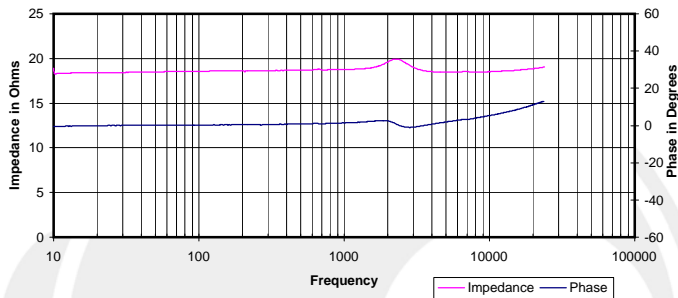
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



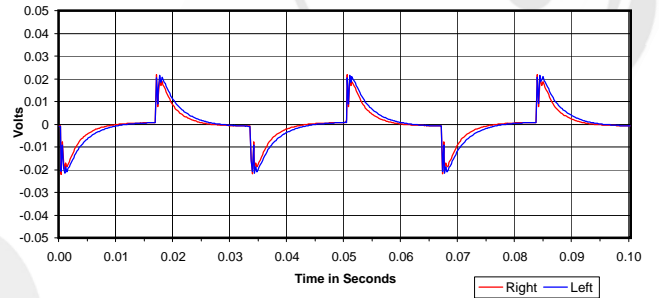
Isolation
Attenuation of External Sound vs. Frequency



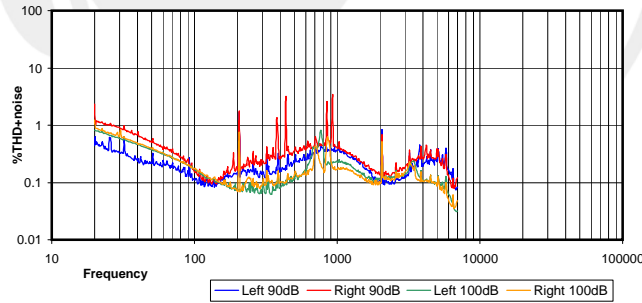
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



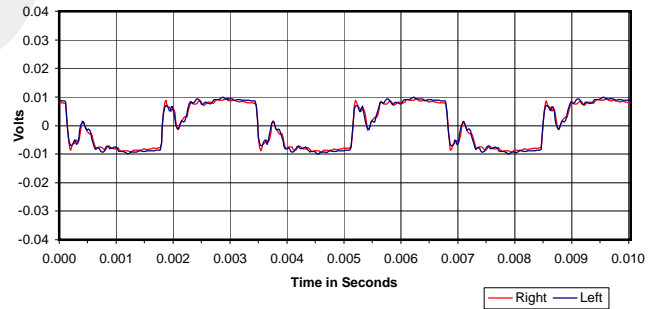
30 Hz Square Wave



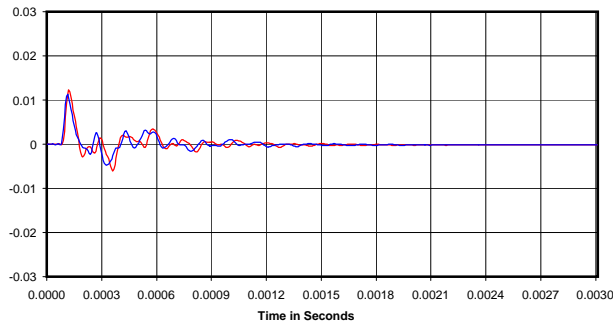
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

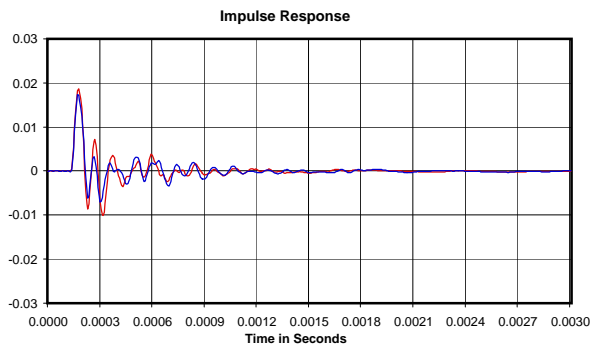
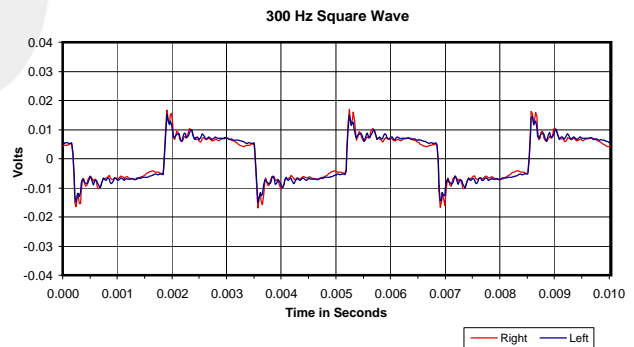
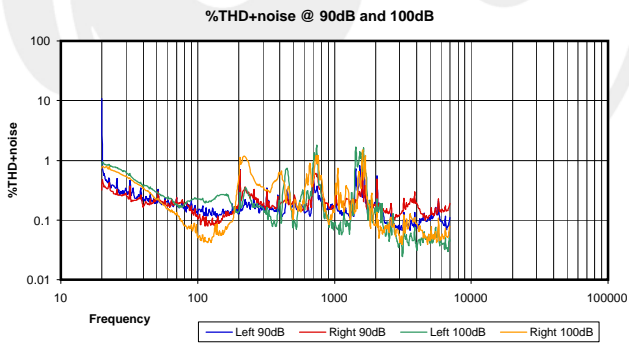
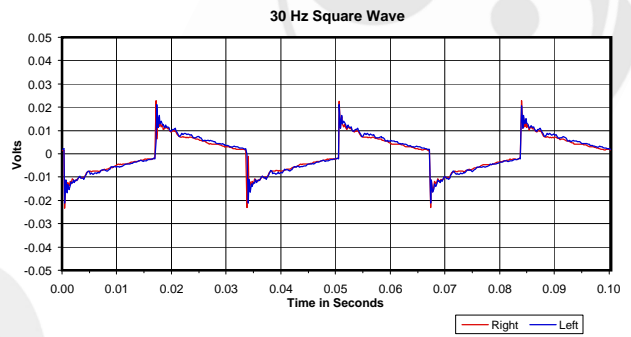
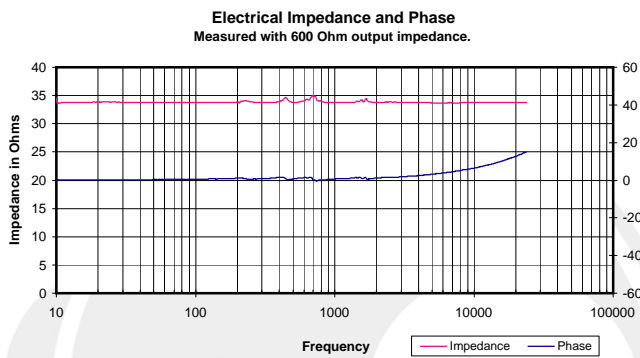
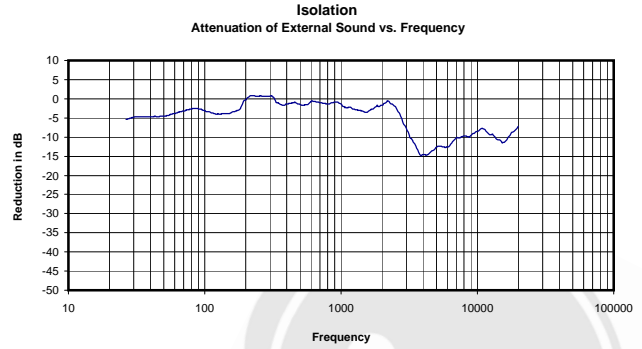
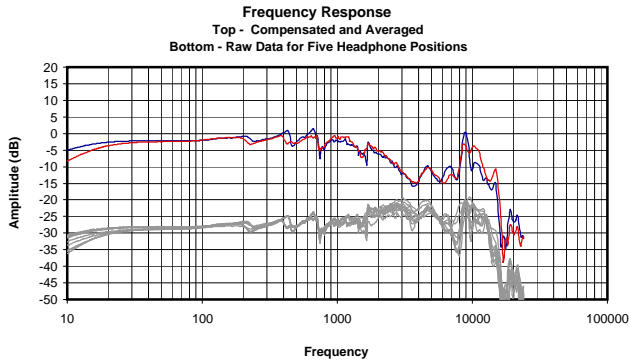


Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

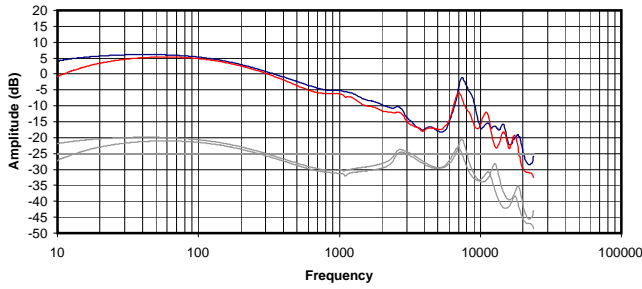
0.031 Vrms
19 Ohms
0.05 mW
-18 dB



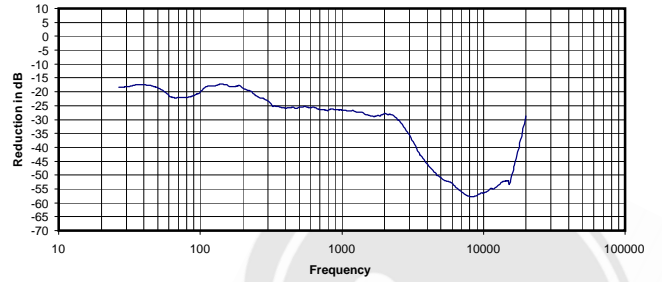
Volts RMS required to reach 90dB SPL: 0.137 Vrms
 Impedance @ 1kHz: 34 Ohms
 Power Needed for 90d BSPL: 0.56 mW
 Broadband Isolation in dB (100Hz to 10kHz): -4 dBr



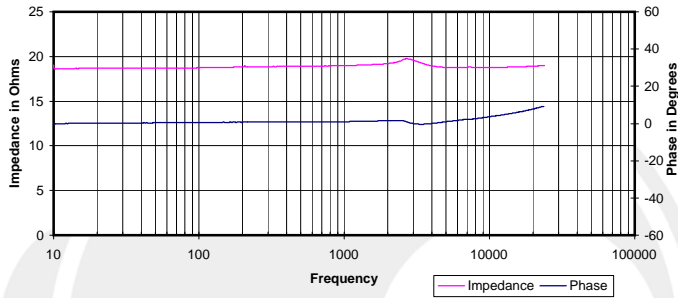
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



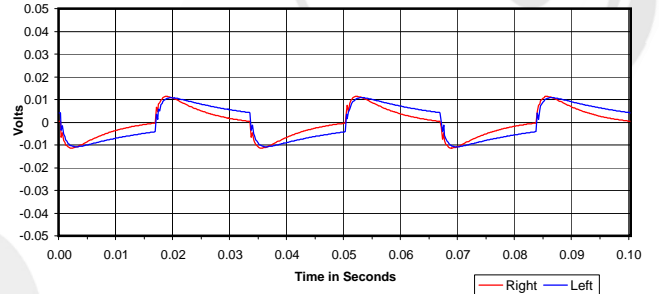
Isolation
Attenuation of External Sound vs. Frequency



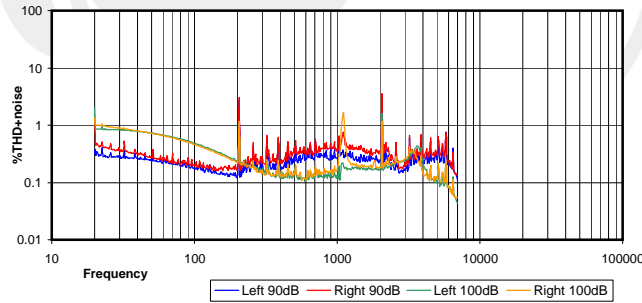
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



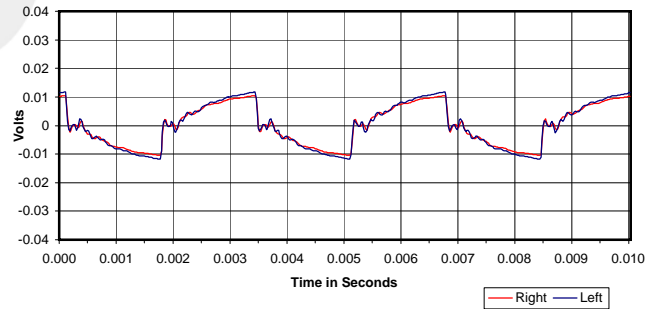
30 Hz Square Wave



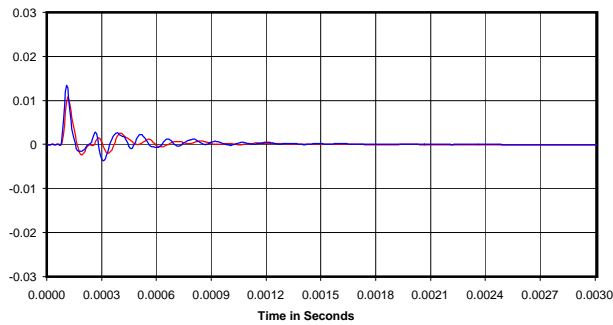
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



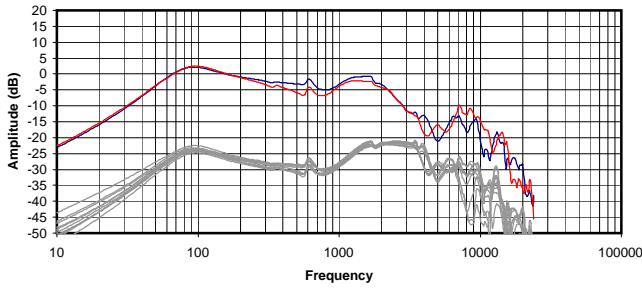
Impulse Response



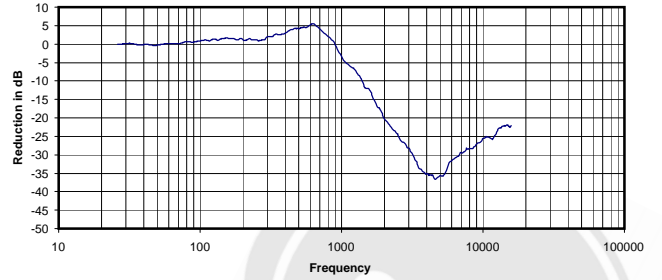
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.036 Vrms
19 Ohms
0.07 mW
-32 dB

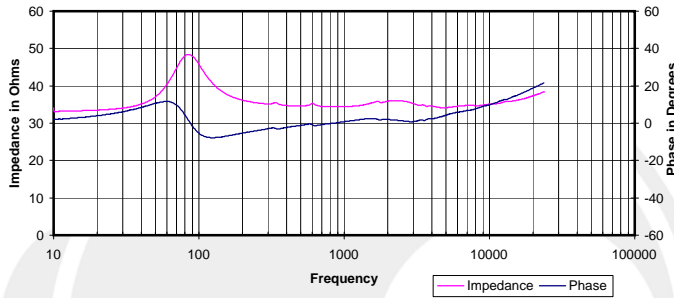
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



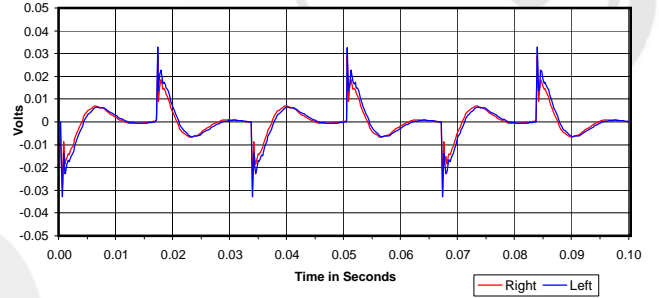
Isolation
 Attenuation of External Sound vs. Frequency



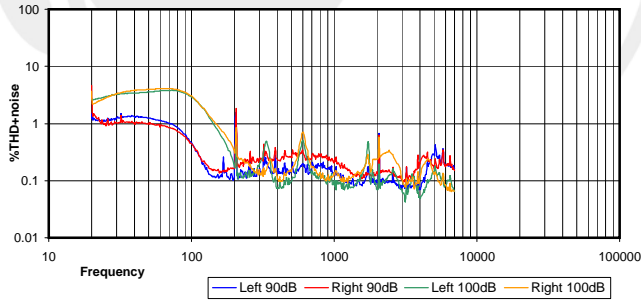
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



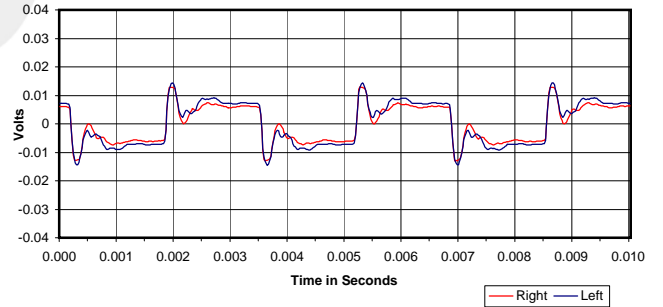
30 Hz Square Wave



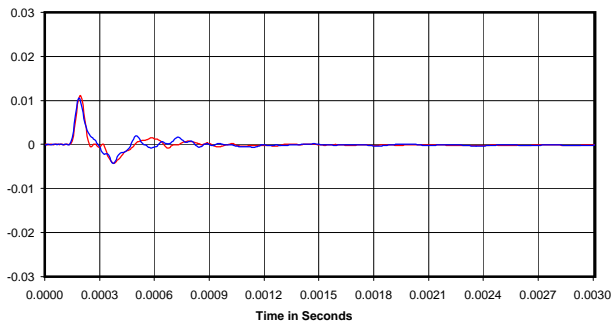
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

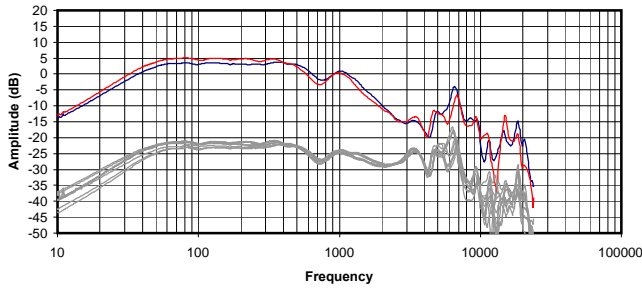


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

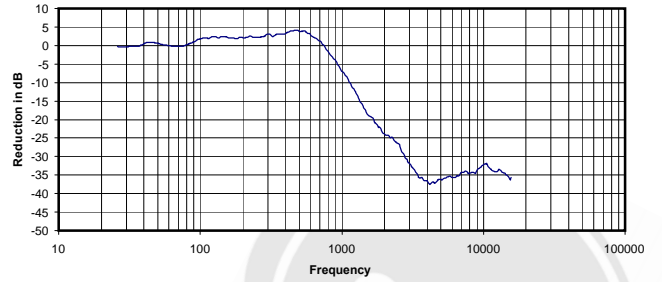
0.047 Vrms
 34 Ohms
 0.06 mW
 -9 dB



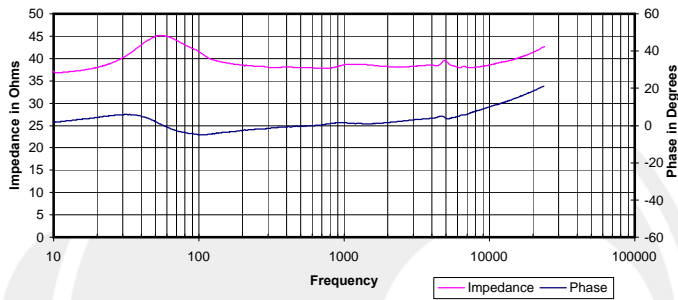
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



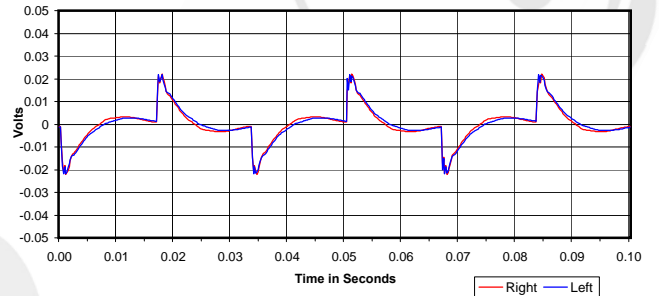
Isolation
 Attenuation of External Sound vs. Frequency



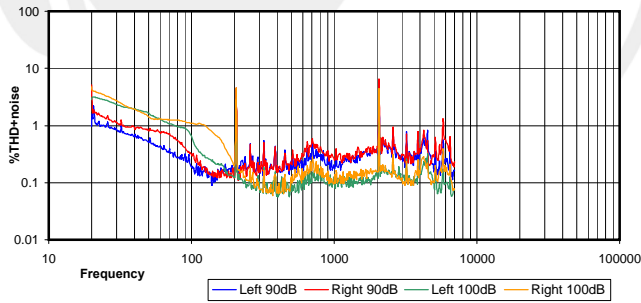
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



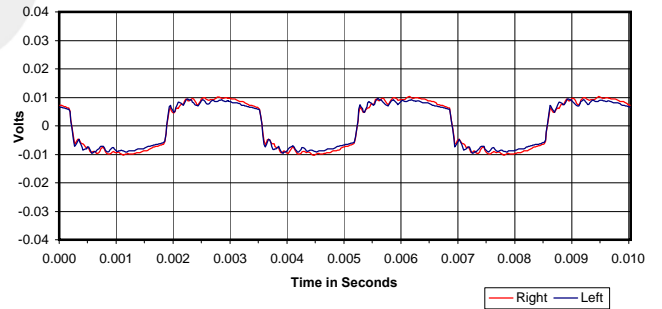
30 Hz Square Wave



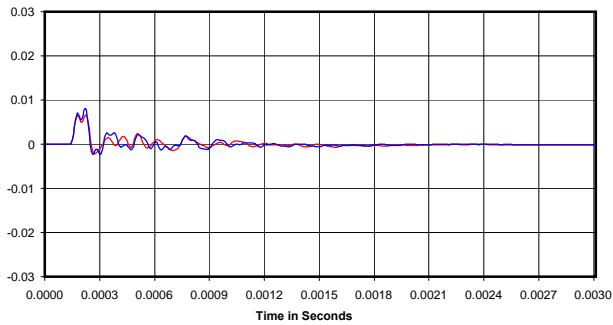
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

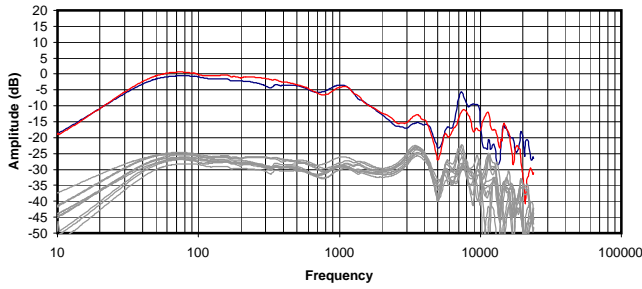


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

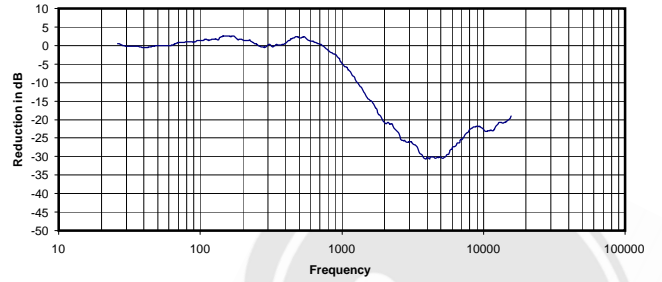
0.027 Vrms
 39 Ohms
 0.02 mW
 -10 dB



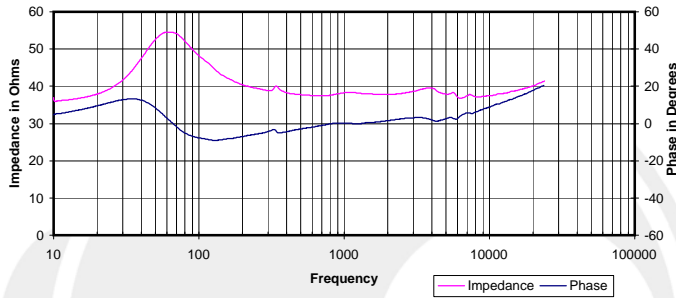
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



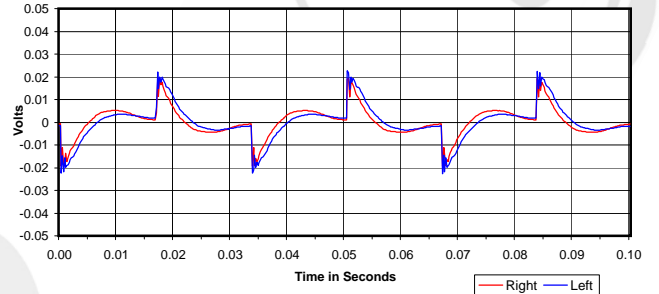
Isolation
 Attenuation of External Sound vs. Frequency



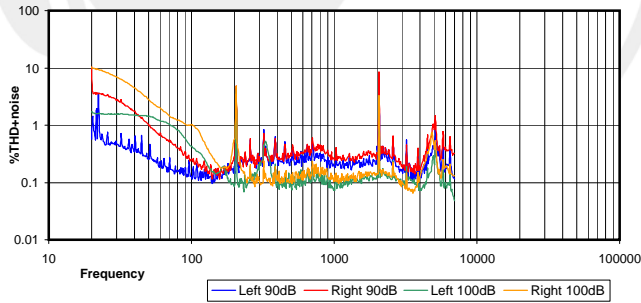
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



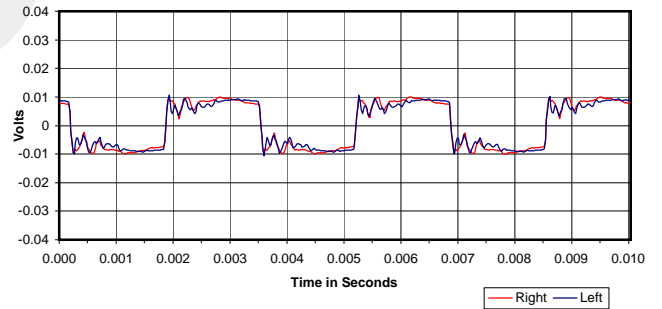
30 Hz Square Wave



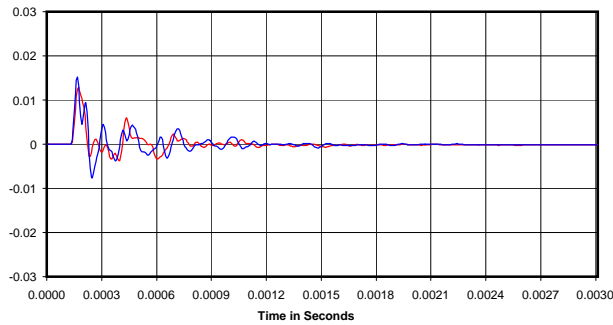
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

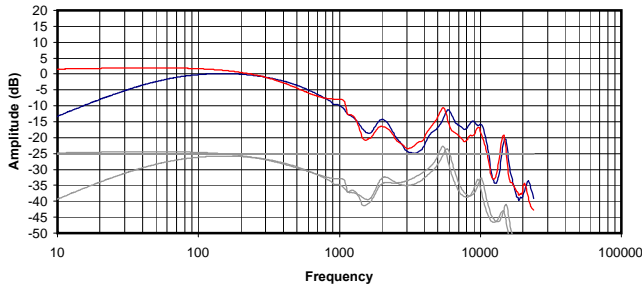


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

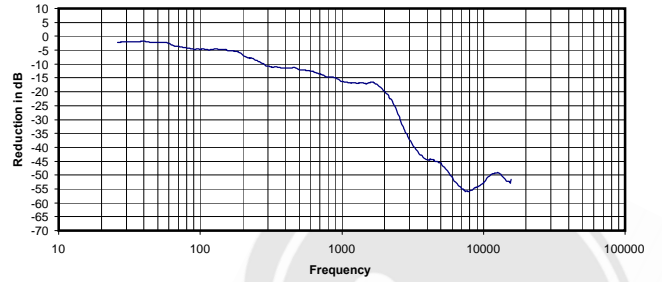
0.030 Vrms
 38 Ohms
 0.02 mW
 -9 dB



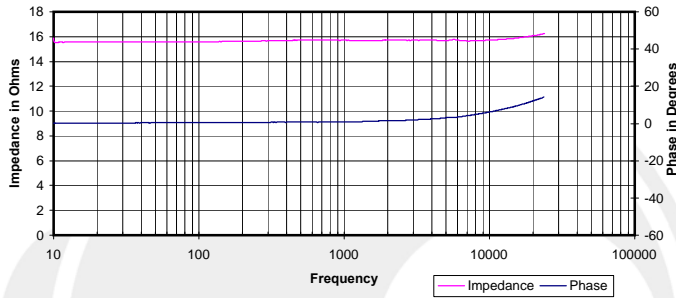
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



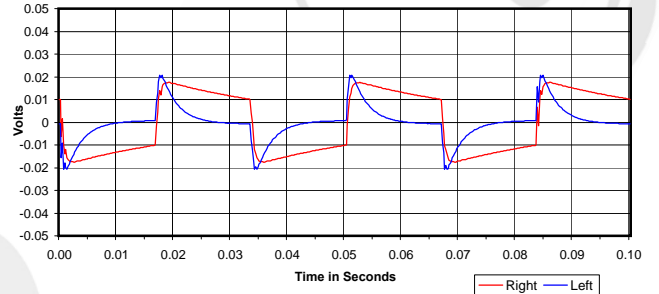
Isolation
Attenuation of External Sound vs. Frequency



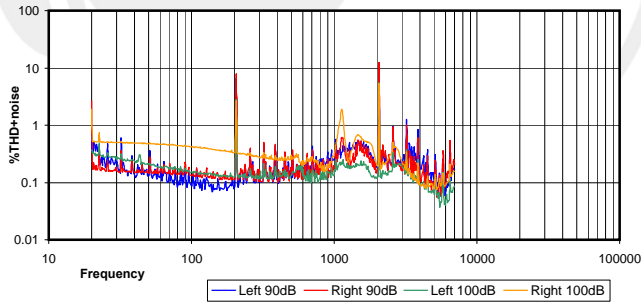
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



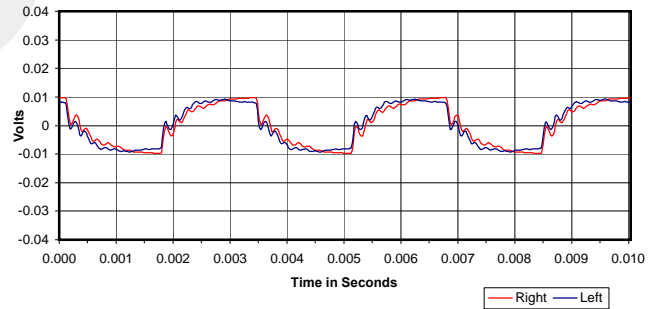
30 Hz Square Wave



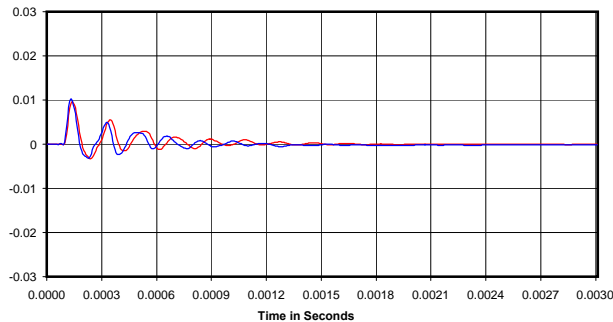
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

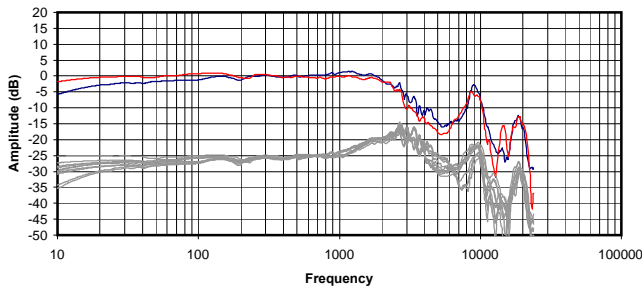


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

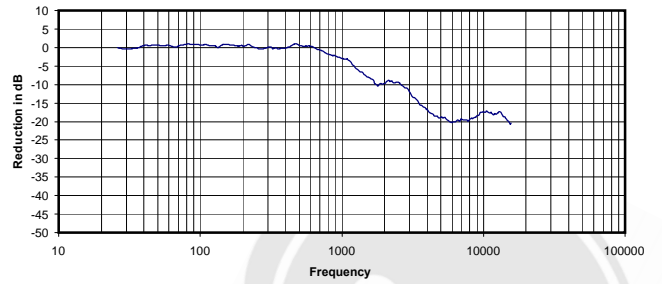
0.040 Vrms
16 Ohms
0.10 mW
-19 dB



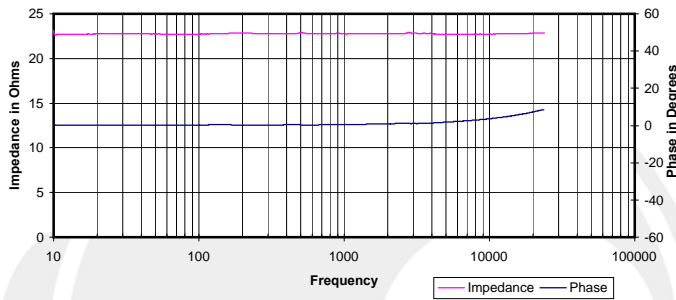
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



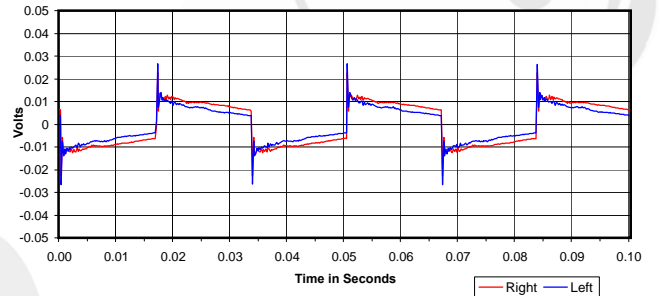
Isolation
Attenuation of External Sound vs. Frequency



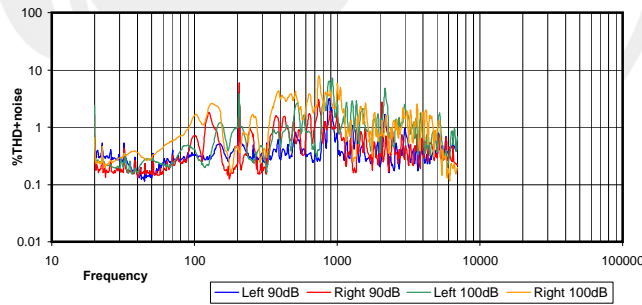
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



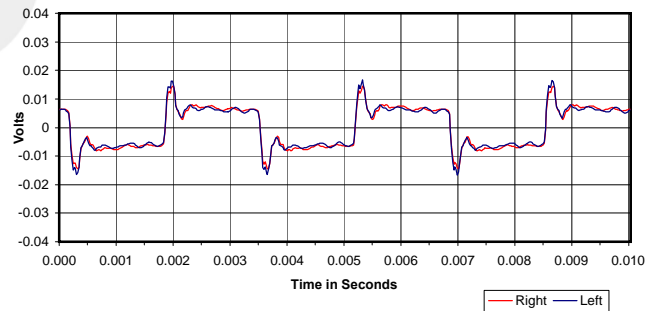
30 Hz Square Wave



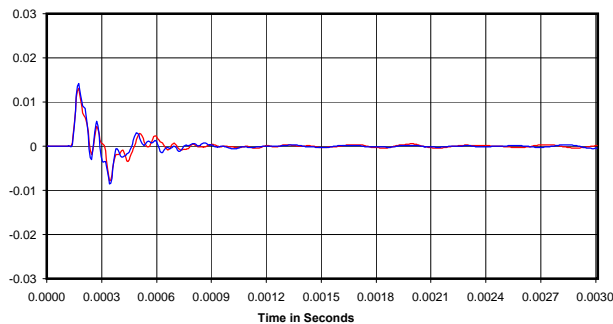
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

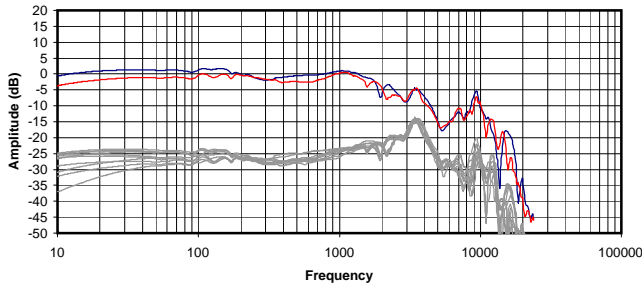


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

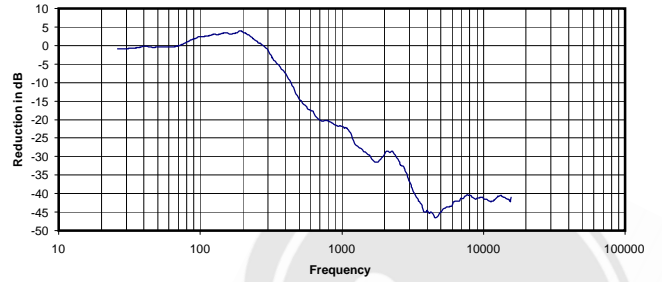
0.154 Vrms
23 Ohms
1.04 mW
-5 dB



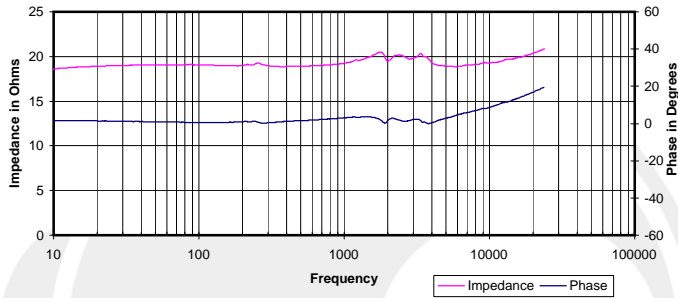
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



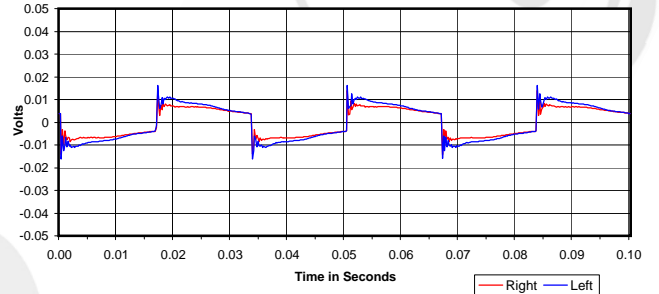
Isolation
 Attenuation of External Sound vs. Frequency



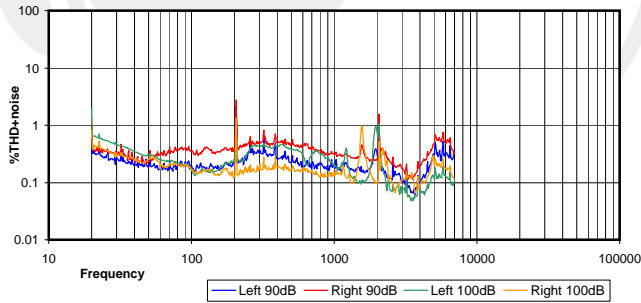
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



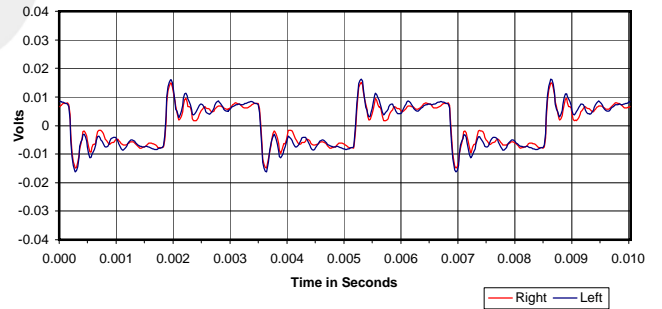
30 Hz Square Wave



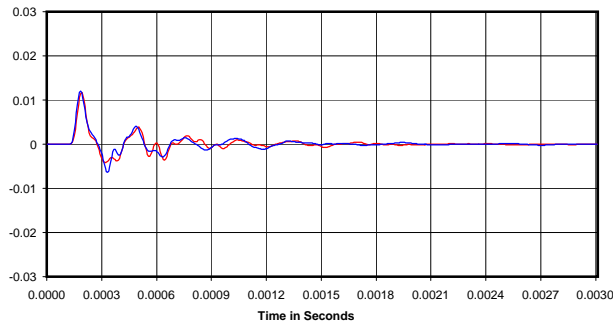
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

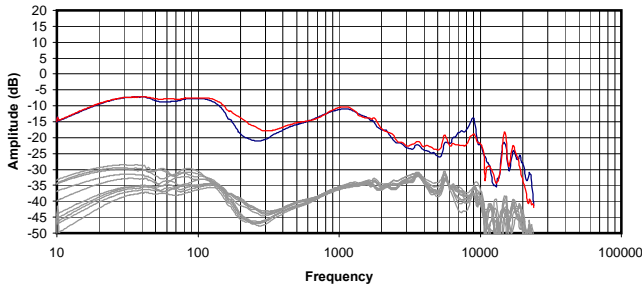


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

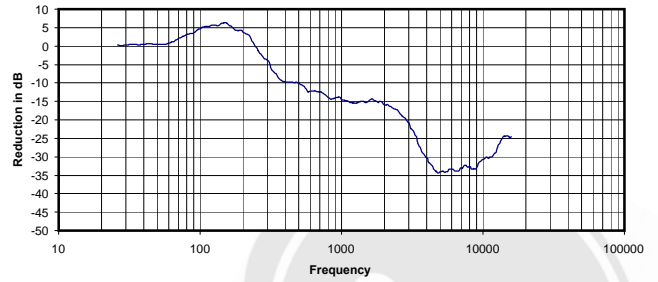
0.020 Vrms
 19 Ohms
 0.02 mW
 -18 dB



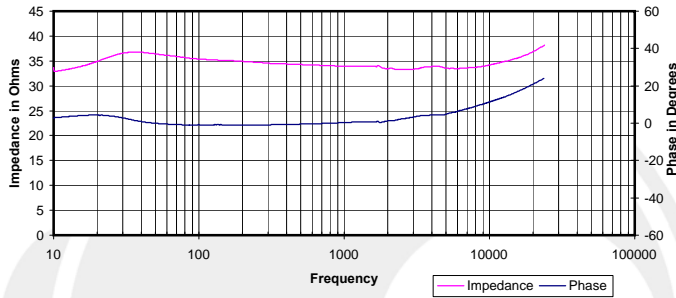
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



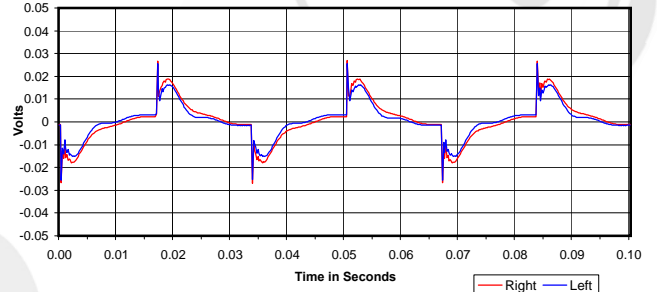
Isolation
Attenuation of External Sound vs. Frequency



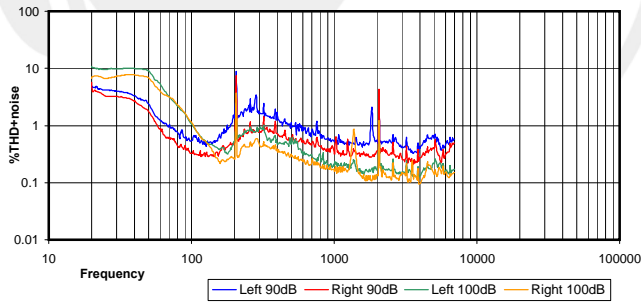
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



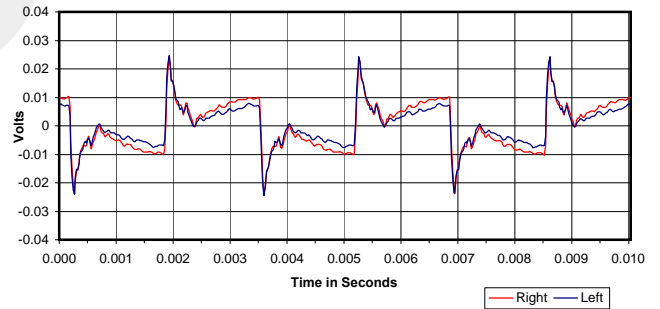
30 Hz Square Wave



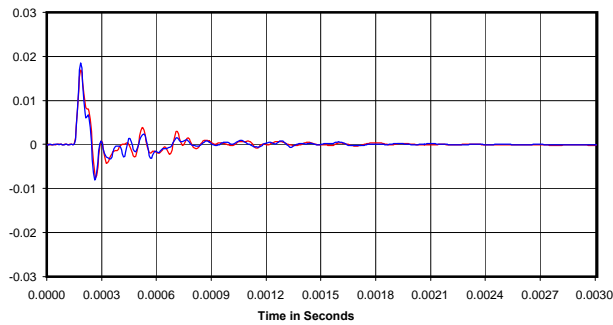
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

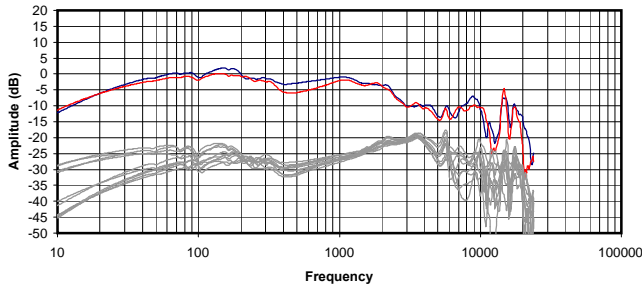


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

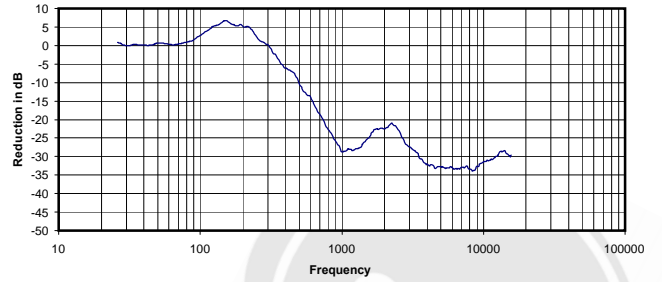
0.006 Vrms
34 Ohms
0.00 mW
-12 dB



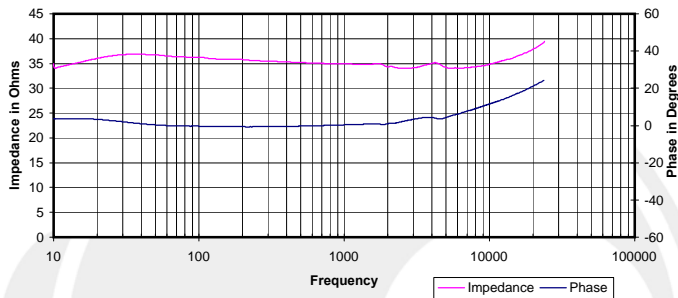
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



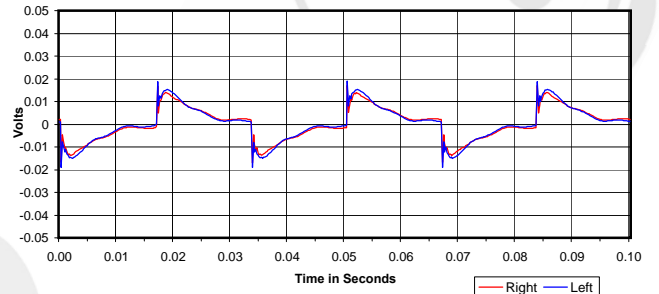
Isolation
Attenuation of External Sound vs. Frequency



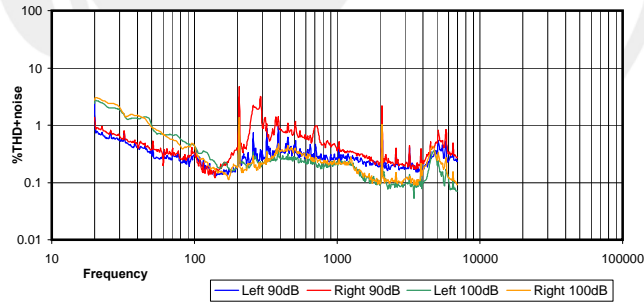
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



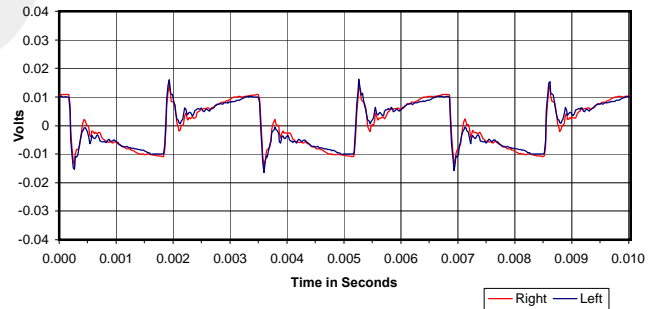
30 Hz Square Wave



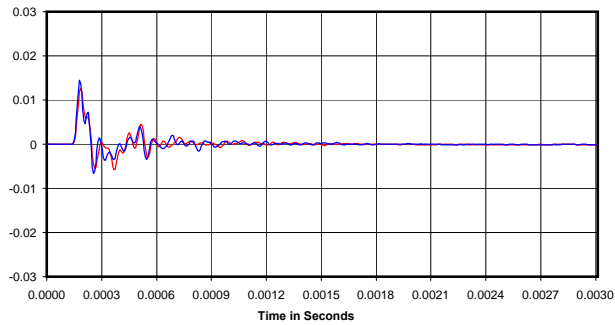
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

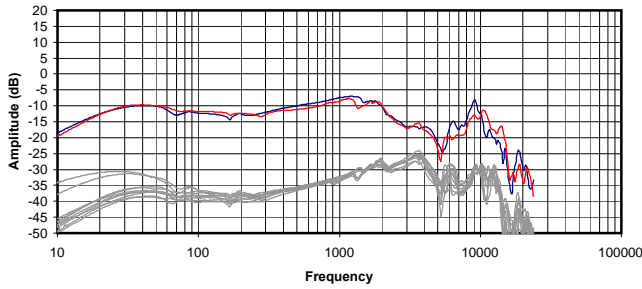


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

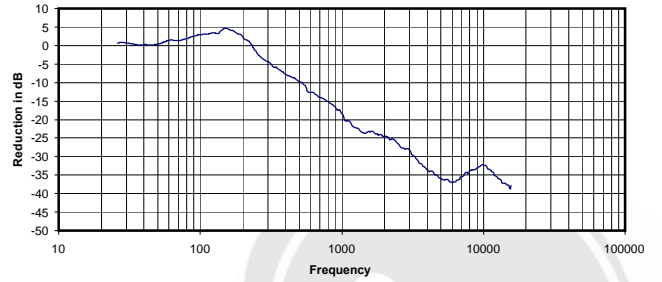
0.060 Vrms
35 Ohms
0.10 mW
-15 dB



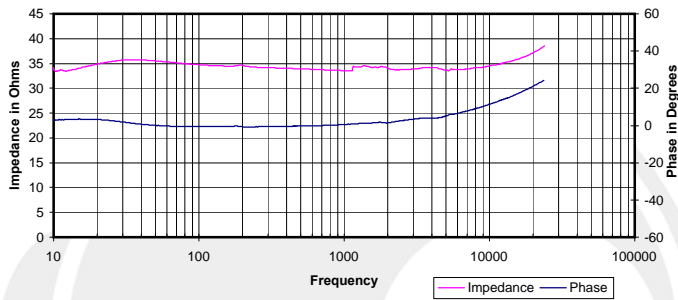
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



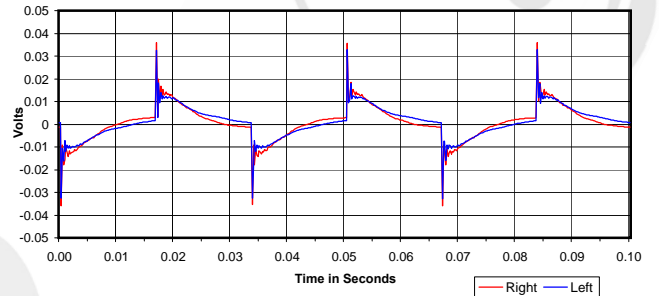
Isolation
 Attenuation of External Sound vs. Frequency



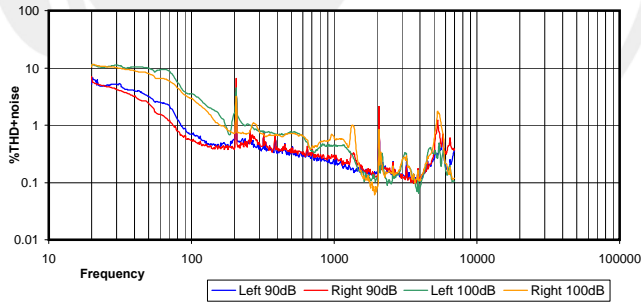
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



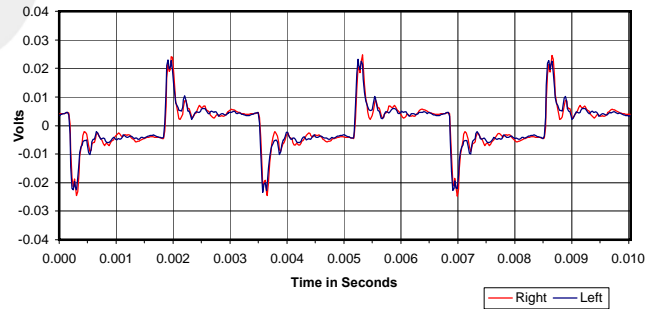
30 Hz Square Wave



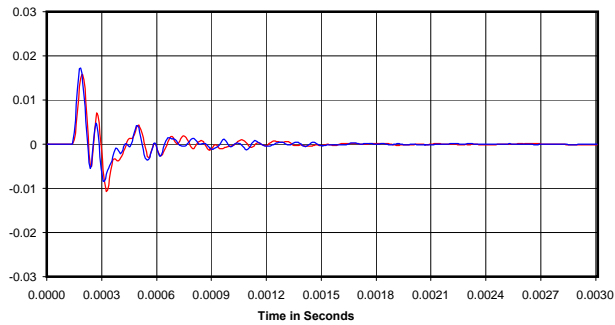
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

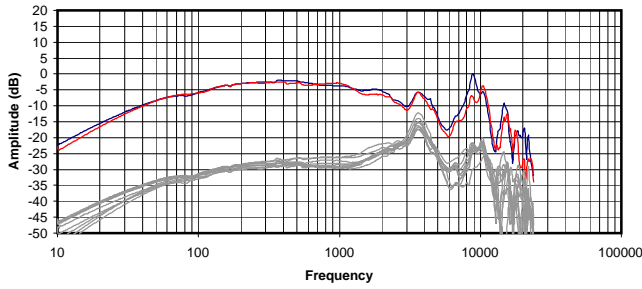


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

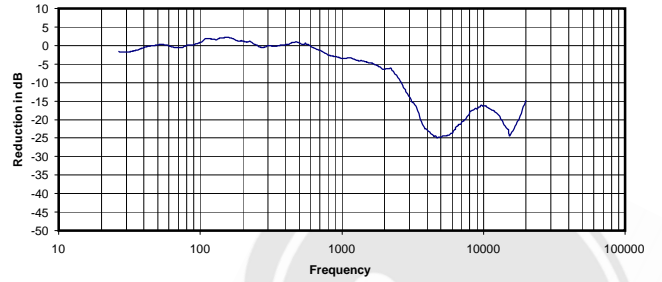
0.057 Vrms
 34 Ohms
 0.10 mW
 -15 dB



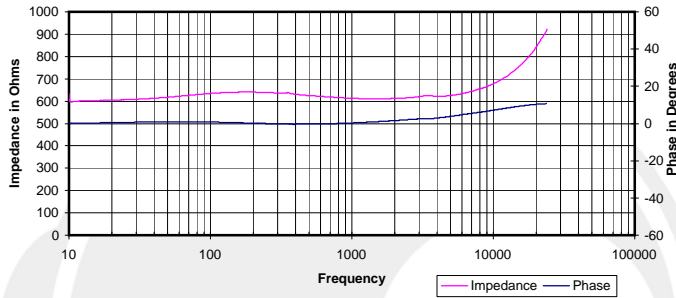
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



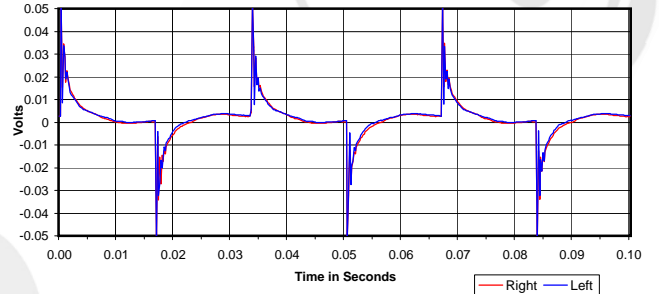
Isolation
 Attenuation of External Sound vs. Frequency



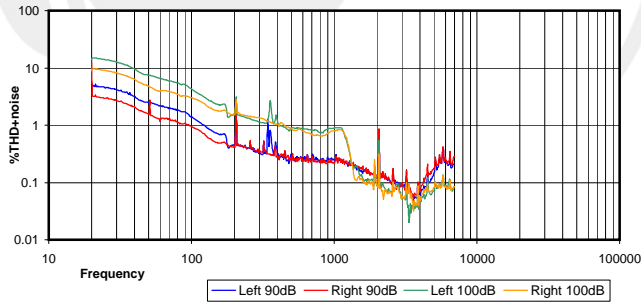
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



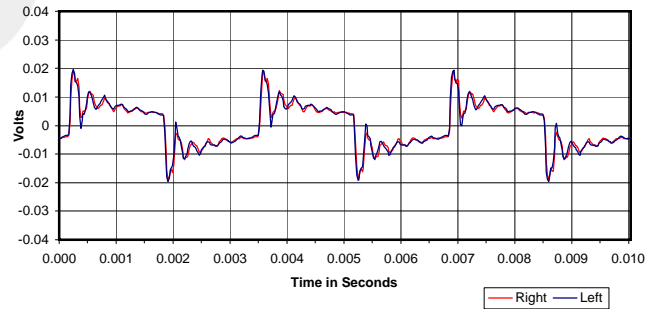
30 Hz Square Wave



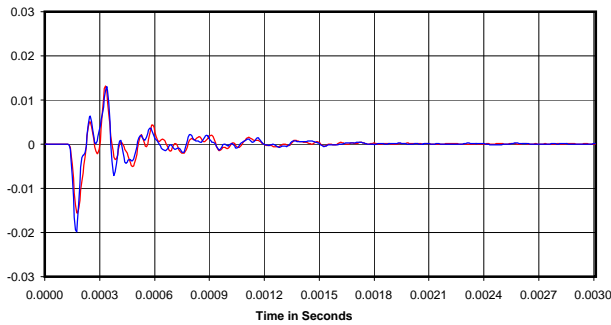
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

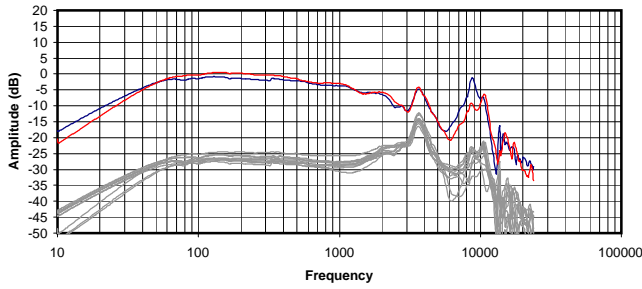


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

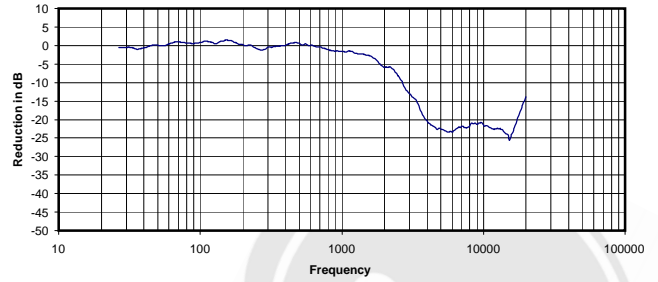
0.792 Vrms
 613 Ohms
 1.02 mW
 -7 dB



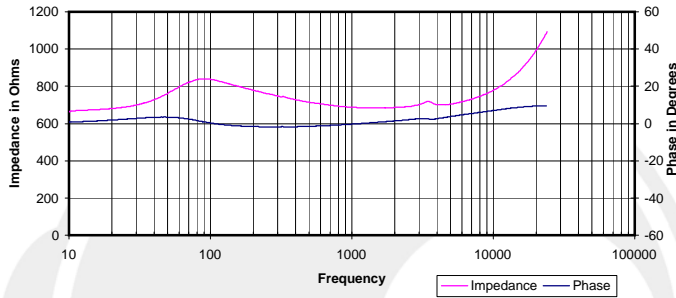
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



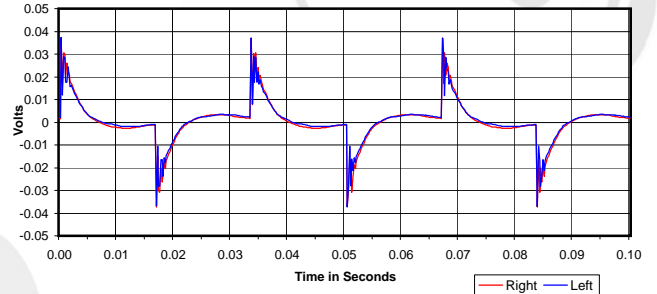
Isolation
 Attenuation of External Sound vs. Frequency



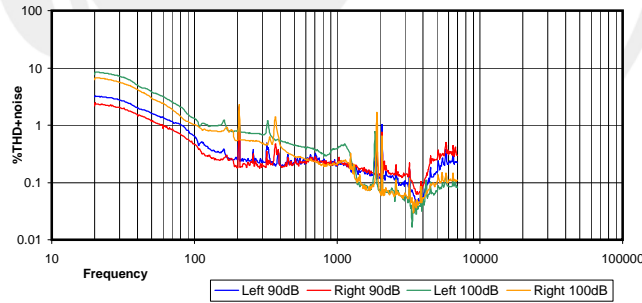
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



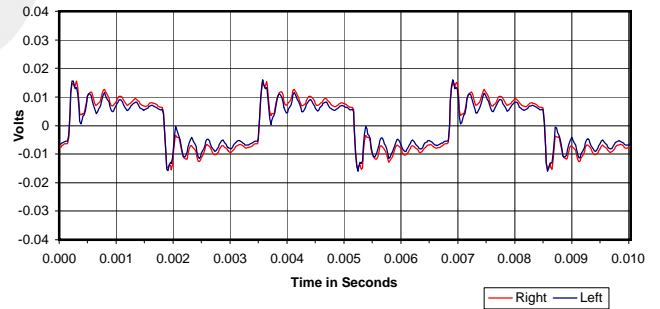
30 Hz Square Wave



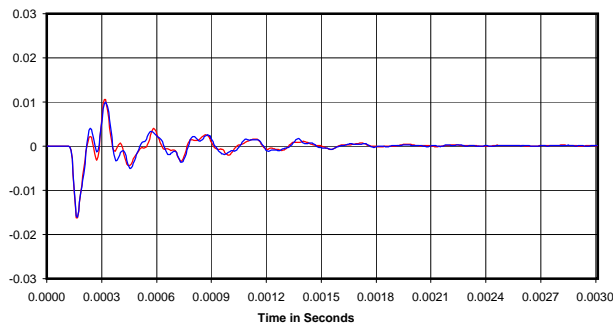
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

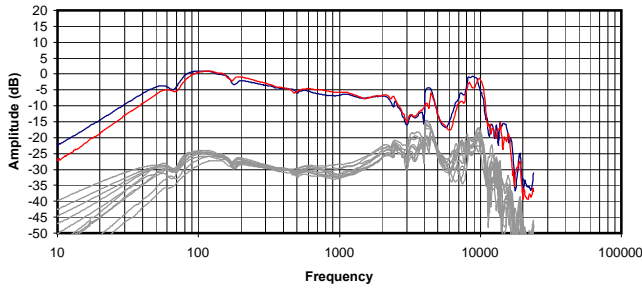


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

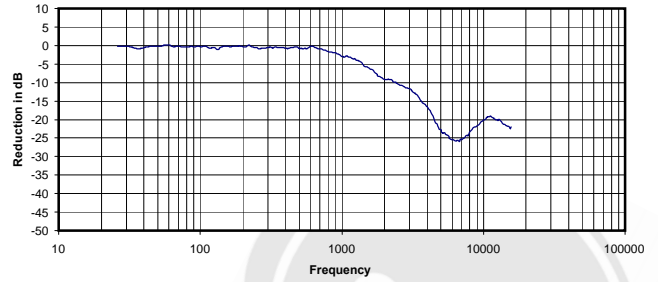
0.447 Vrms
 688 Ohms
 0.29 mW
 -7 dB



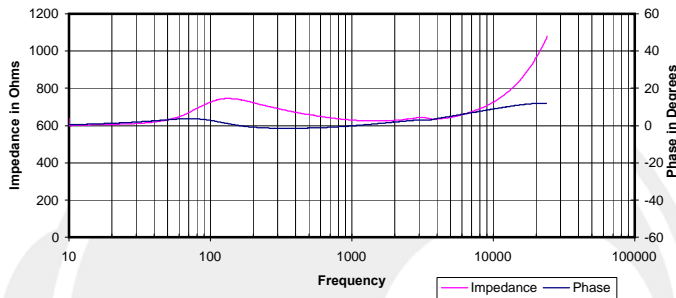
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



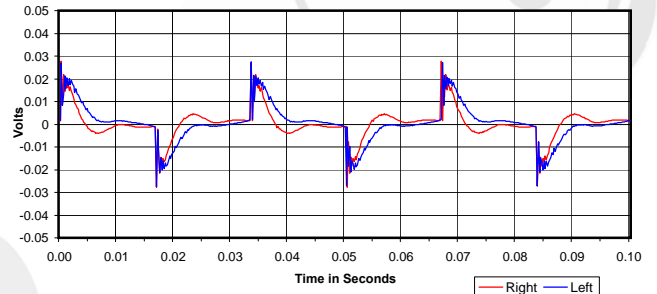
Isolation
 Attenuation of External Sound vs. Frequency



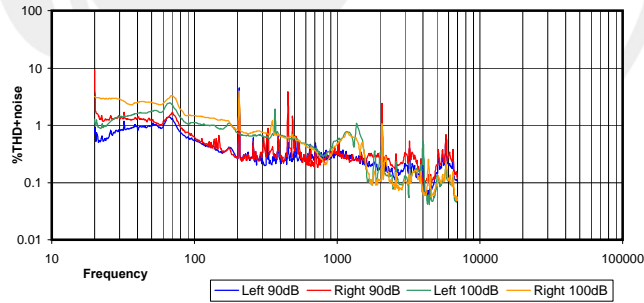
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



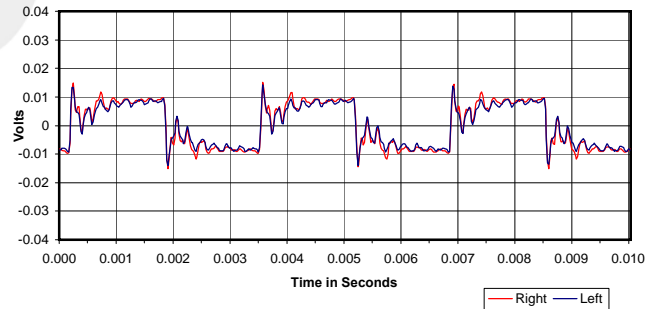
30 Hz Square Wave



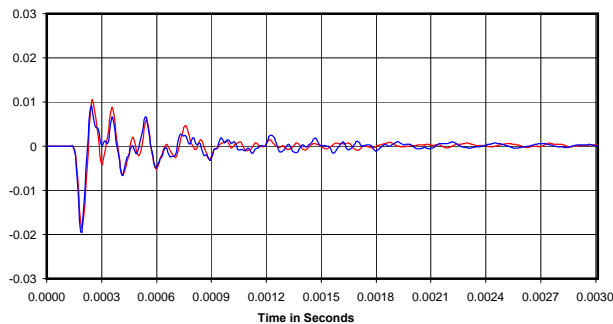
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

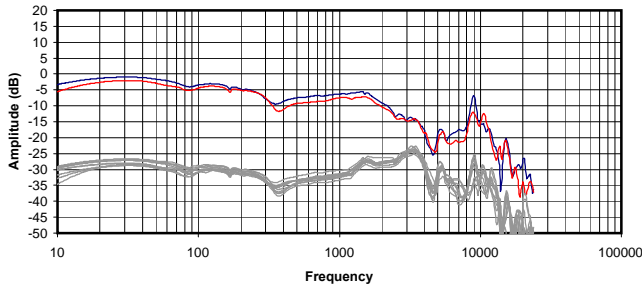


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

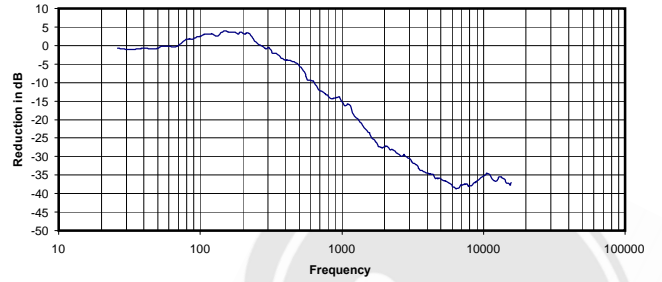
0.893 Vrms
 630 Ohms
 1.27 mW
 -6 dB



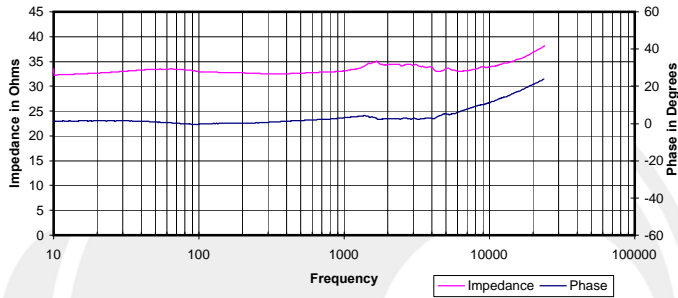
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



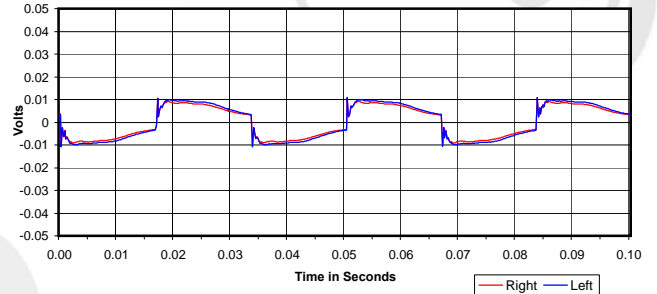
Isolation
 Attenuation of External Sound vs. Frequency



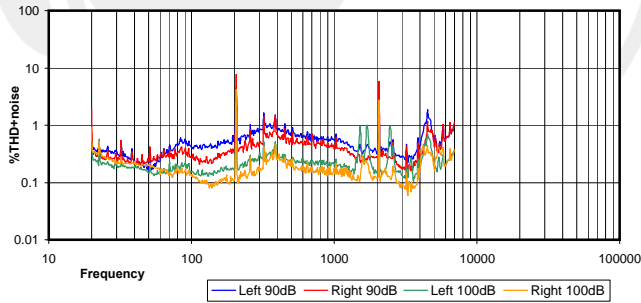
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



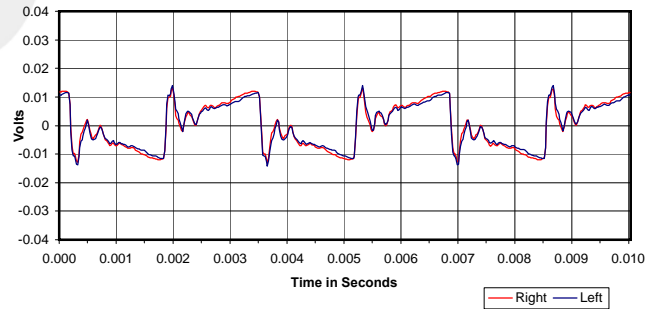
30 Hz Square Wave



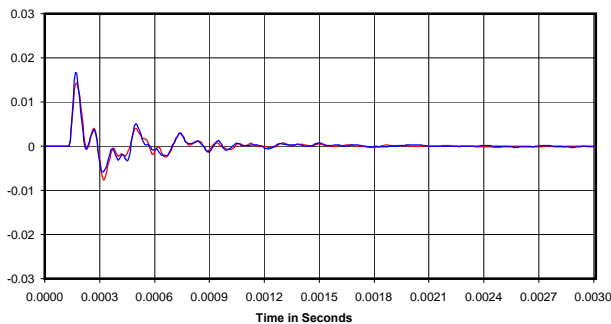
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

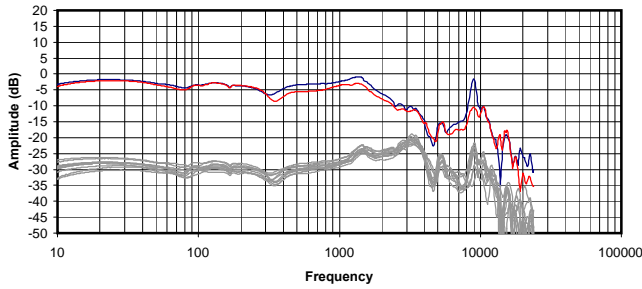


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

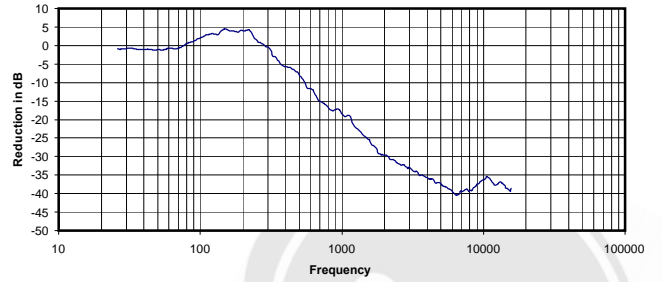
0.038 Vrms
 33 Ohms
 0.04 mW
 -14 dB



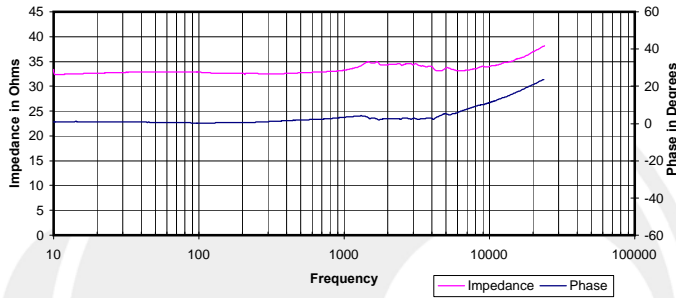
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



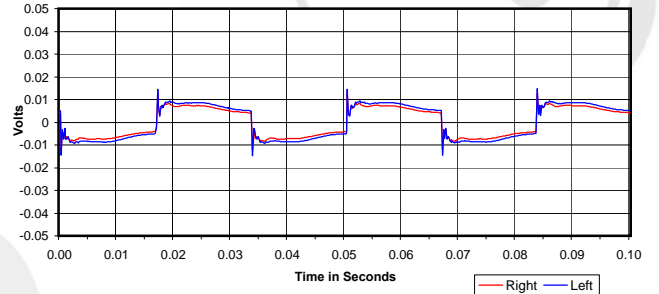
Isolation
 Attenuation of External Sound vs. Frequency



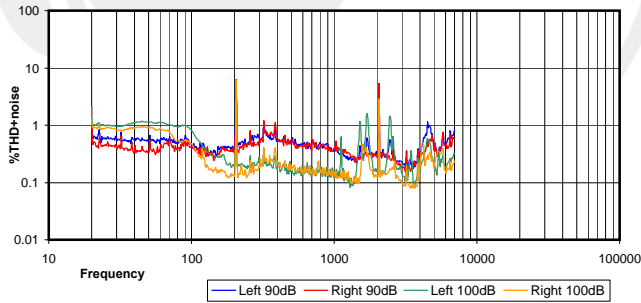
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



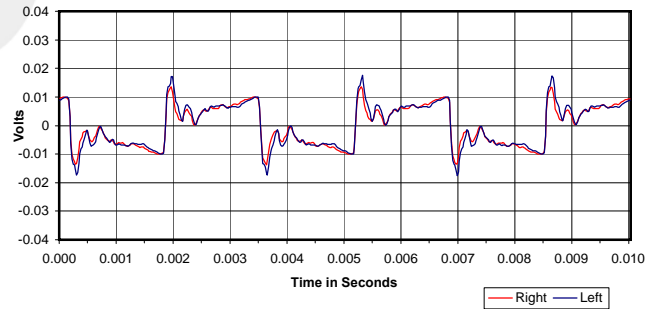
30 Hz Square Wave



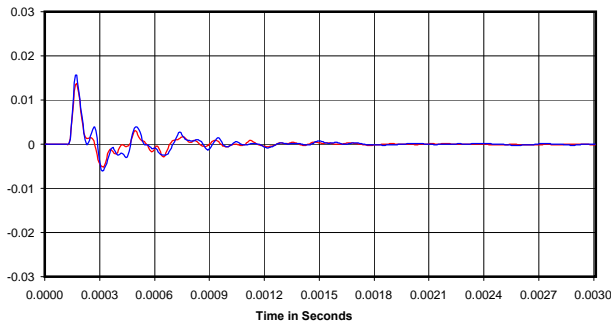
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

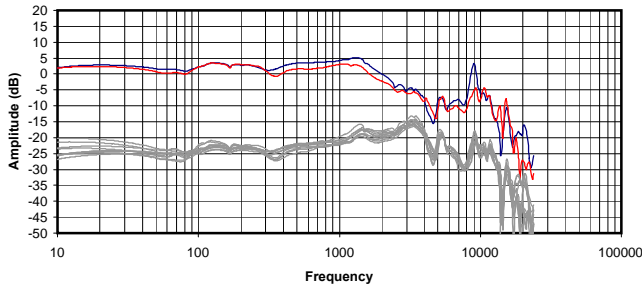


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

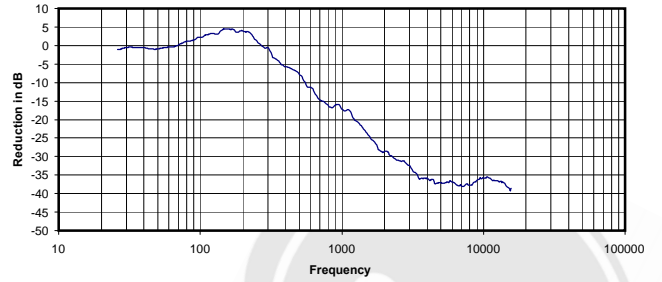
0.032 Vrms
 33 Ohms
 0.03 mW
 -15 dB



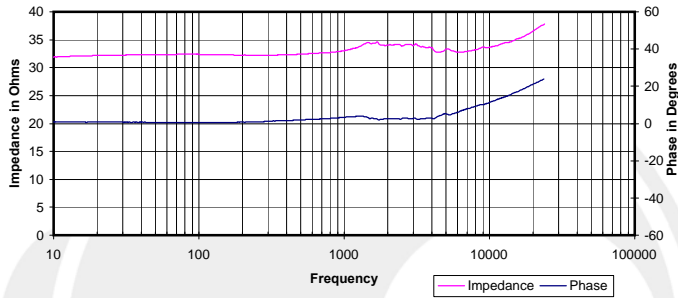
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



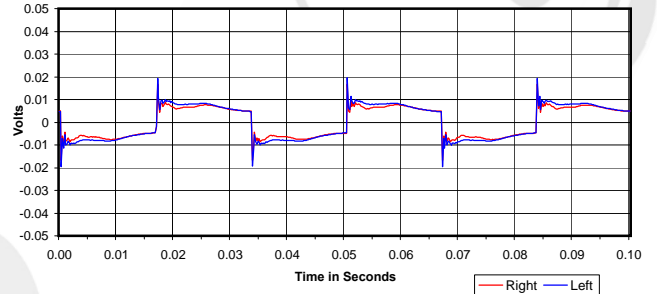
Isolation
 Attenuation of External Sound vs. Frequency



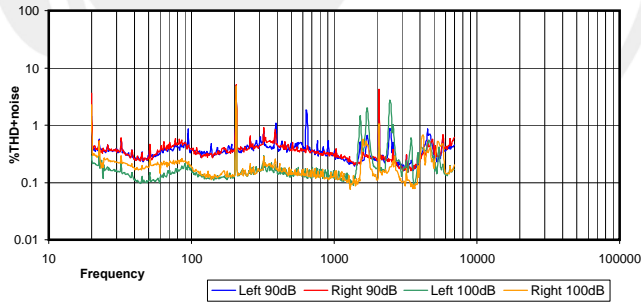
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



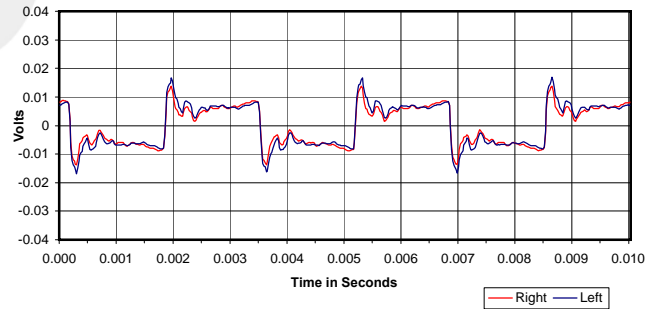
30 Hz Square Wave



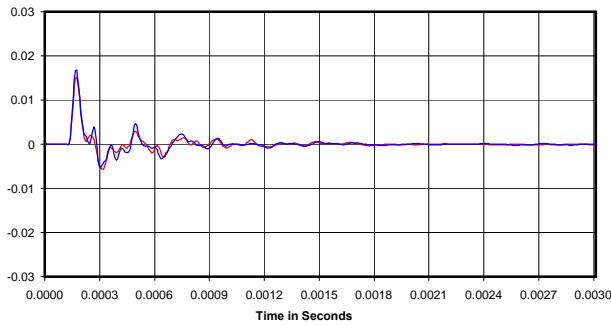
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

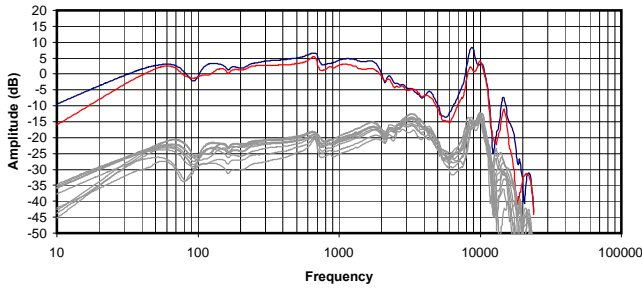


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

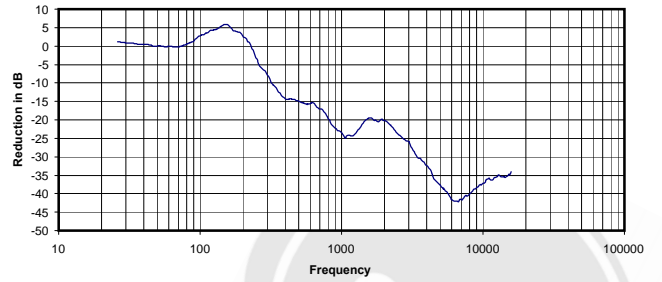
0.034 Vrms
 33 Ohms
 0.04 mW
 -15 dB



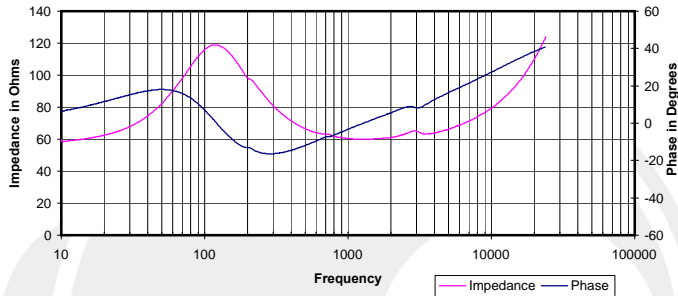
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



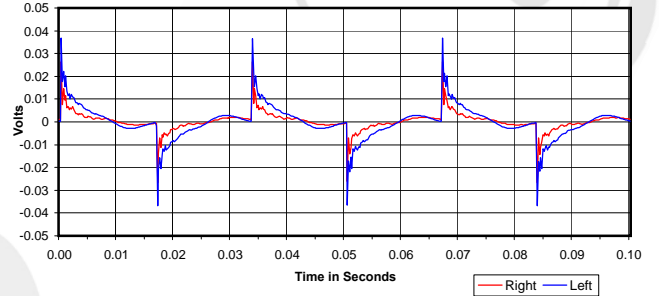
Isolation
 Attenuation of External Sound vs. Frequency



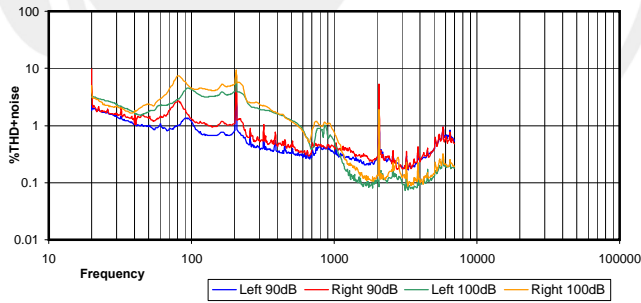
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



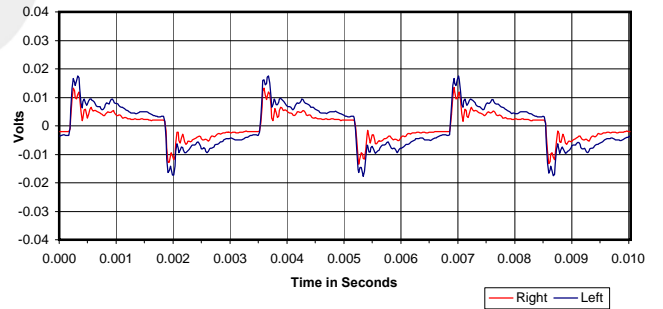
30 Hz Square Wave



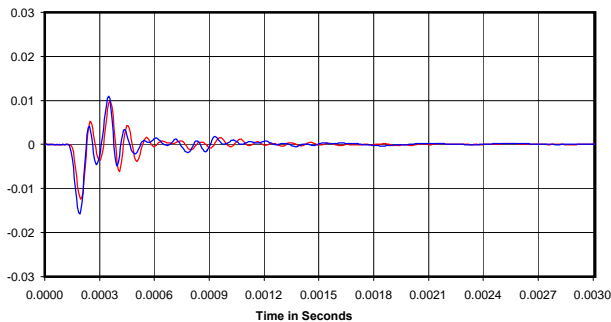
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

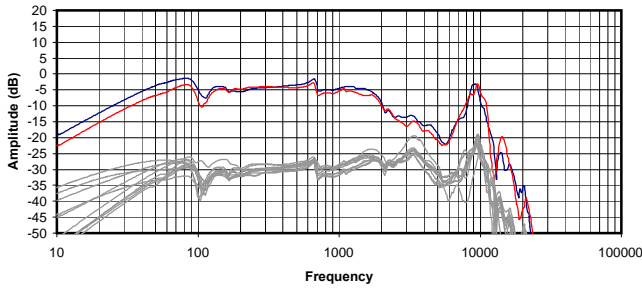


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

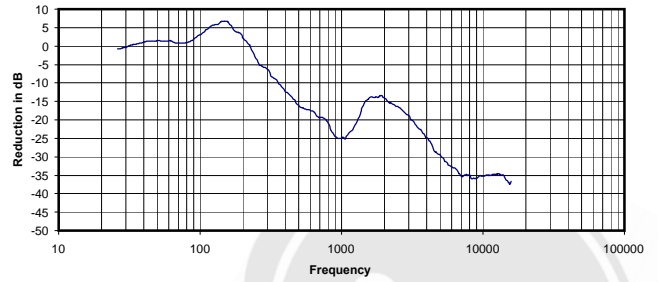
0.093 Vrms
 60 Ohms
 0.14 mW
 -16 dB



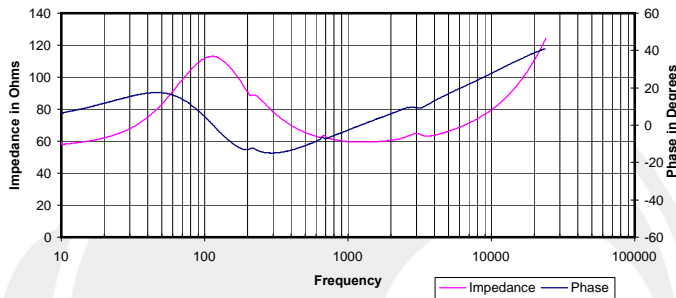
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



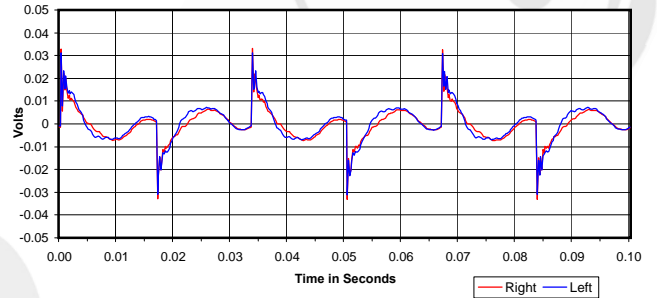
Isolation
 Attenuation of External Sound vs. Frequency



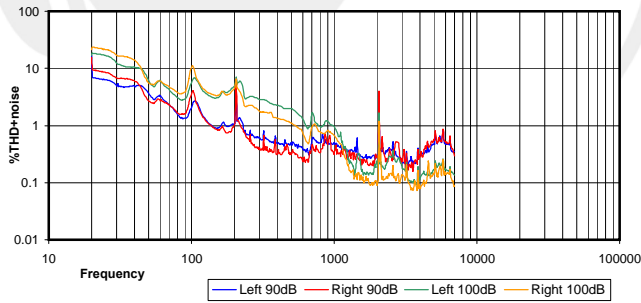
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



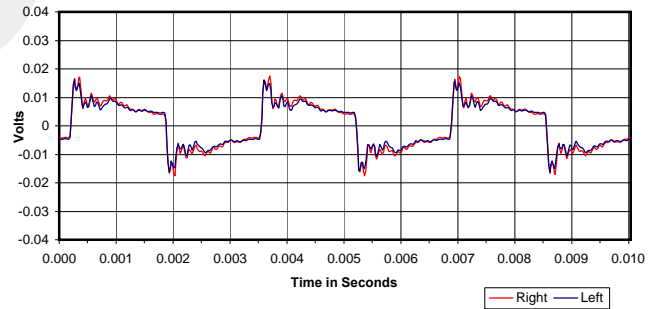
30 Hz Square Wave



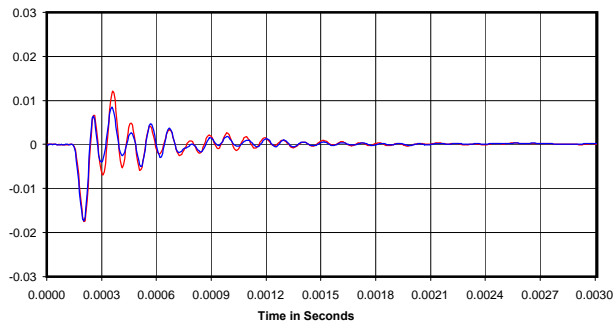
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

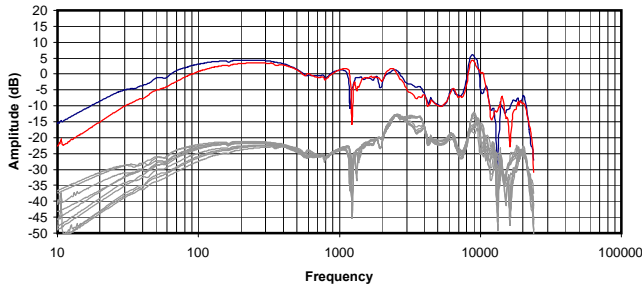


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

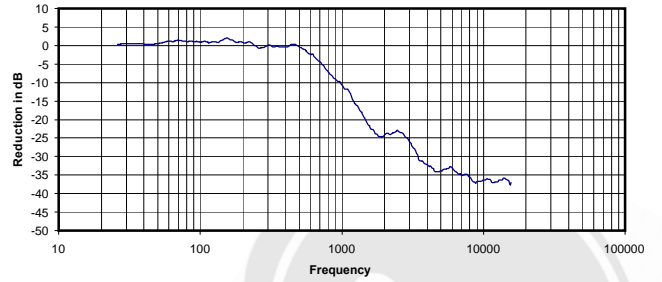
0.145 Vrms
 60 Ohms
 0.35 mW
 -13 dB



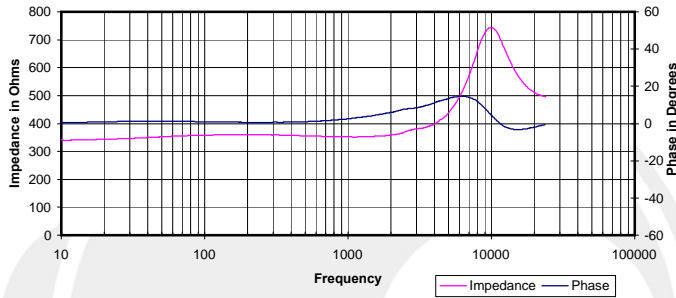
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



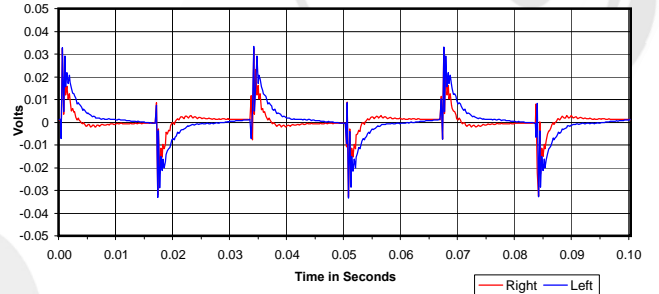
Isolation
Attenuation of External Sound vs. Frequency



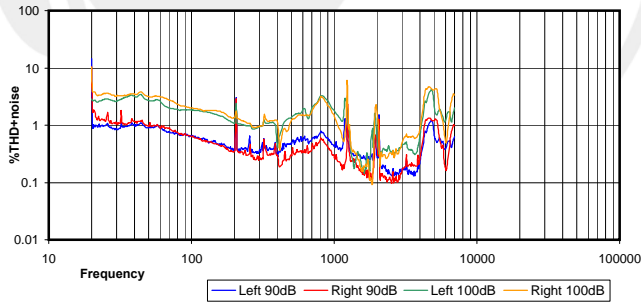
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



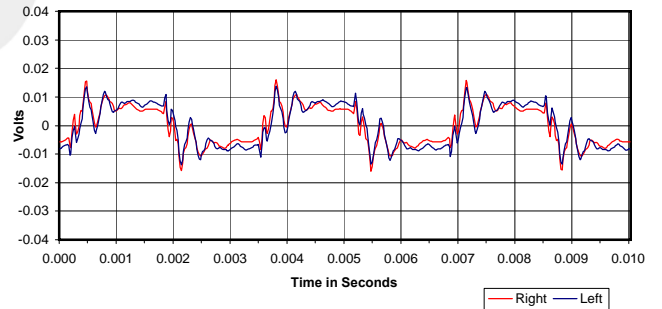
30 Hz Square Wave



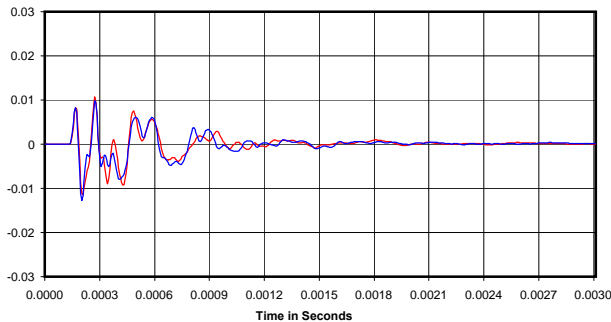
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



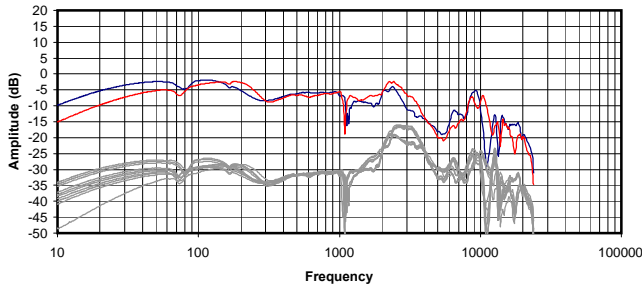
Impulse Response



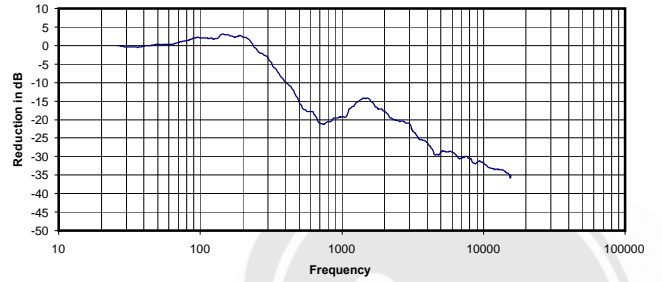
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.670 Vrms
352 Ohms
1.27 mW
-12 dB

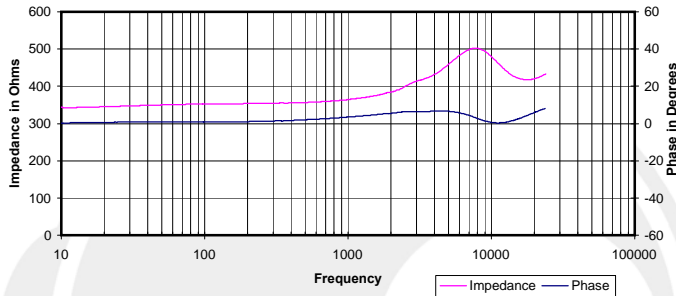
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



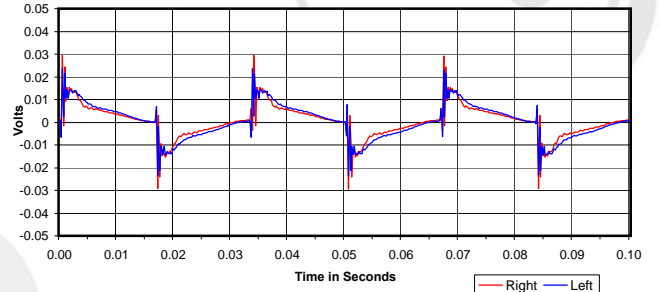
Isolation
 Attenuation of External Sound vs. Frequency



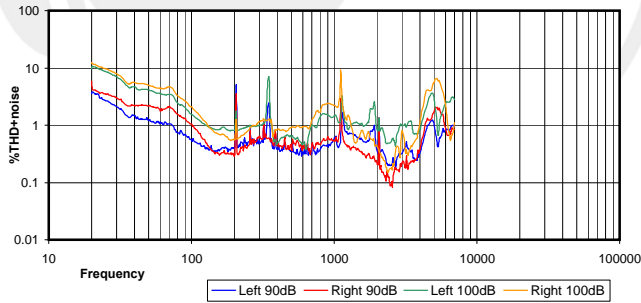
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



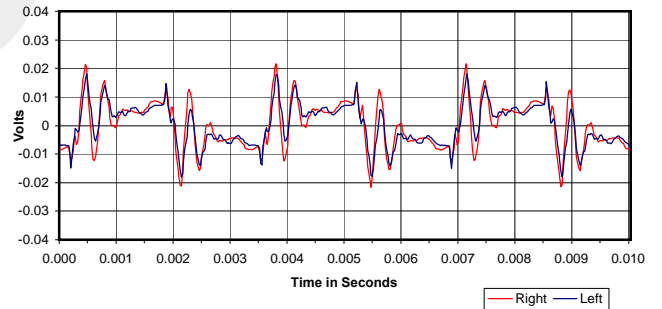
30 Hz Square Wave



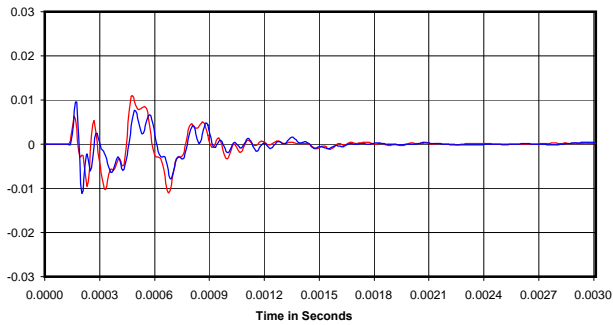
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



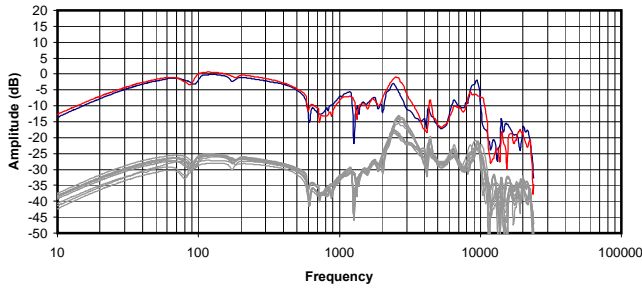
Impulse Response



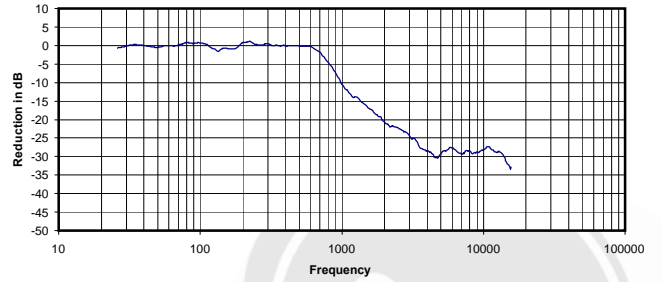
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

1.072 Vrms
 364 Ohms
 3.16 mW
 -13 dB

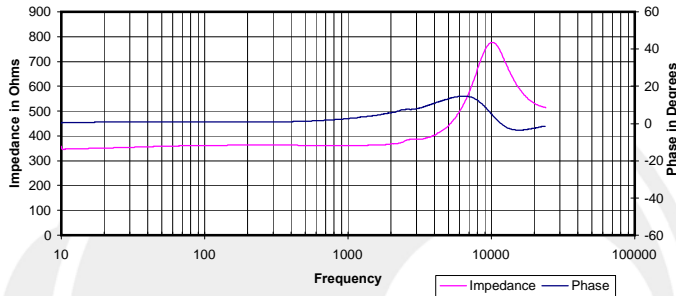
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



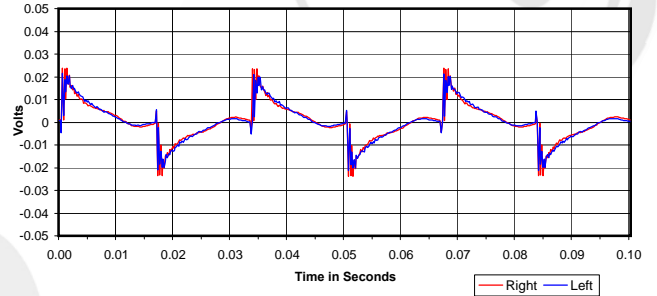
Isolation
Attenuation of External Sound vs. Frequency



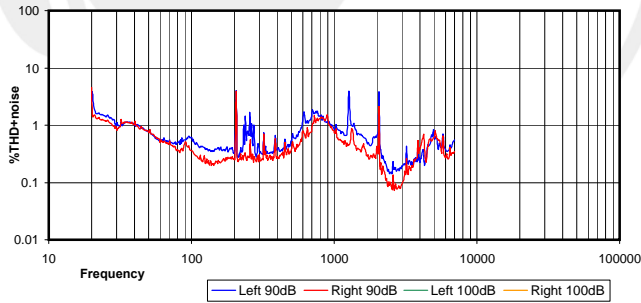
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



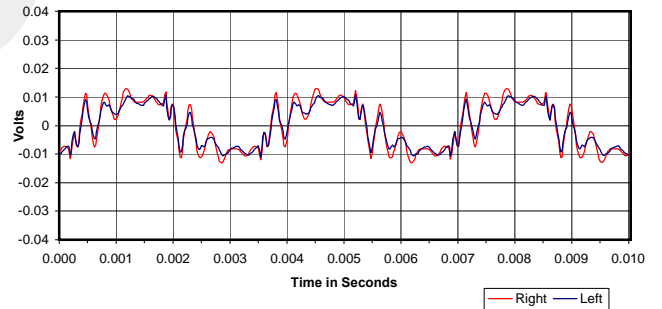
30 Hz Square Wave



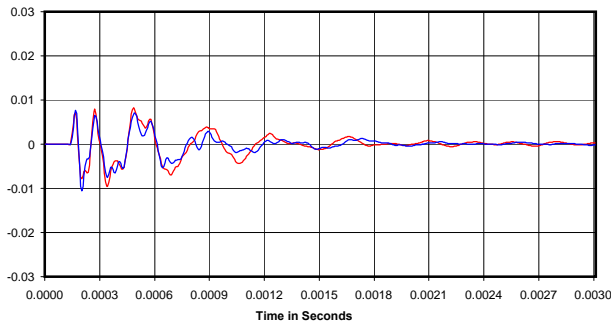
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

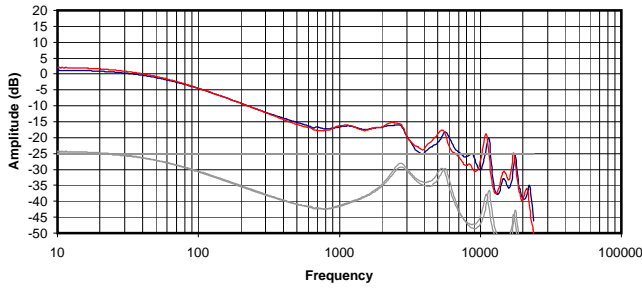


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

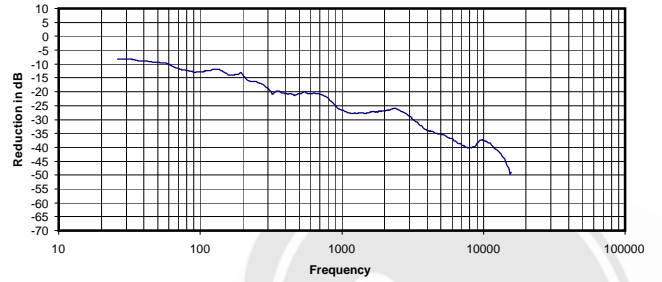
0.850 Vrms
361 Ohms
2.00 mW
-10 dB



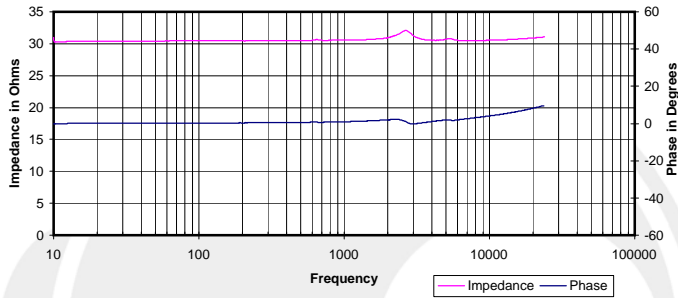
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



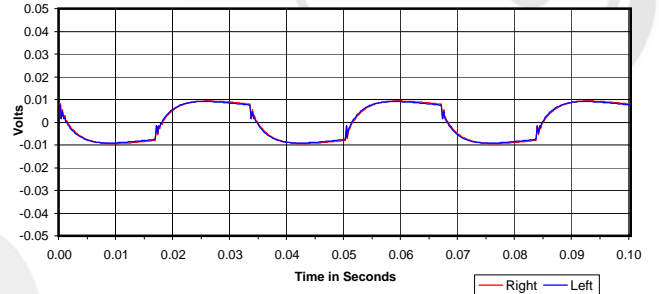
Isolation
Attenuation of External Sound vs. Frequency



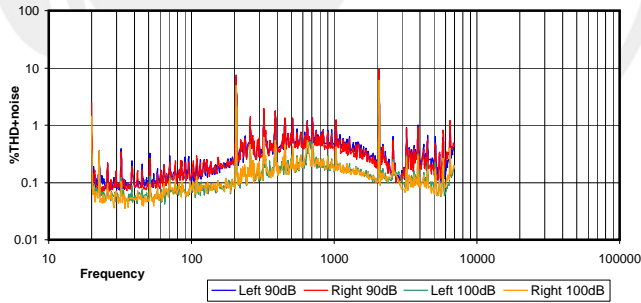
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



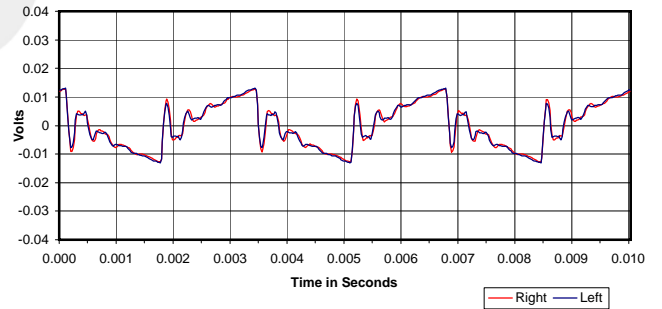
30 Hz Square Wave



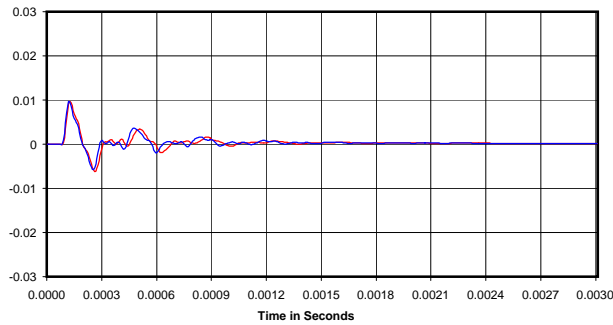
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



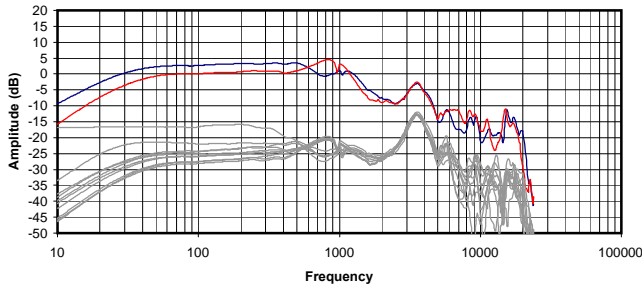
Impulse Response



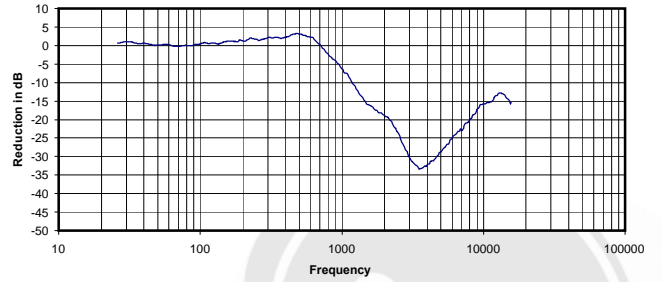
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.047 Vrms
31 Ohms
0.07 mW
-23 dB

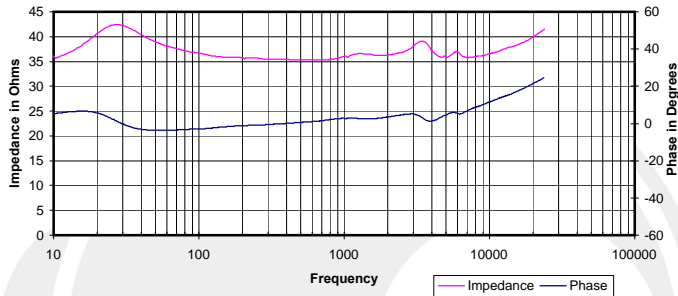
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



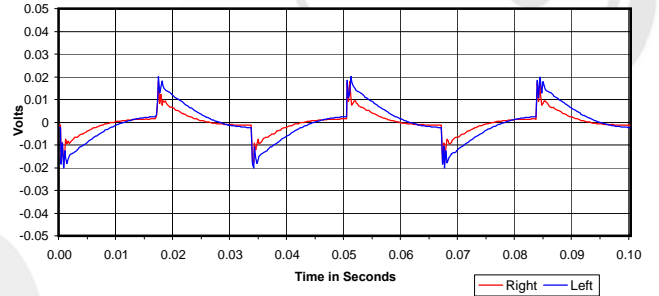
Isolation
 Attenuation of External Sound vs. Frequency



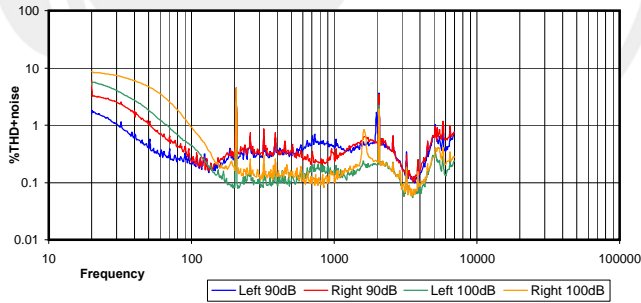
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



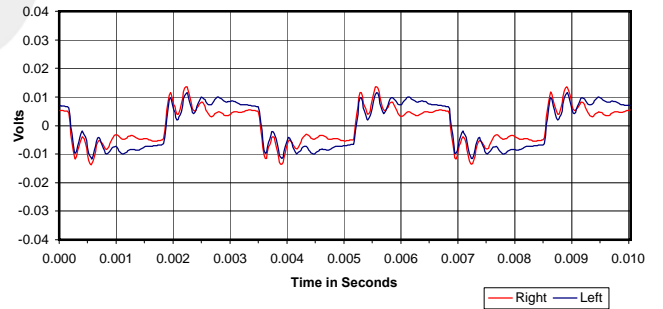
30 Hz Square Wave



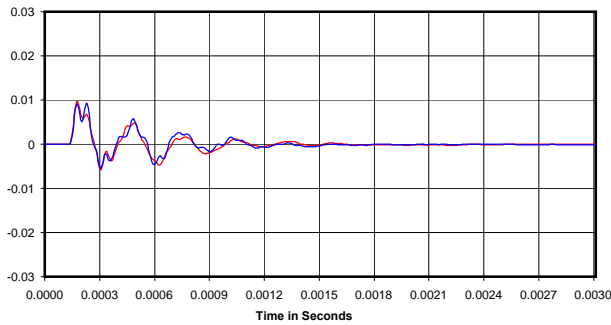
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



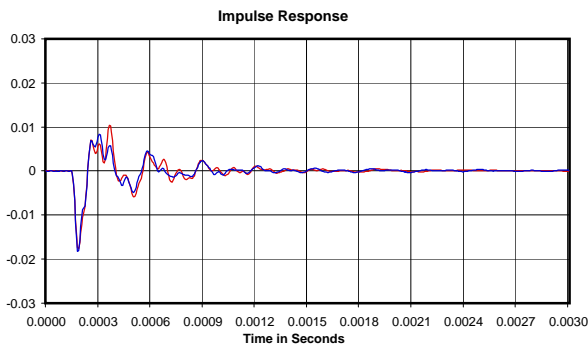
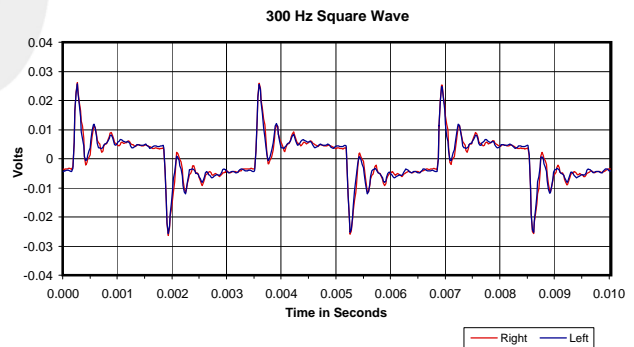
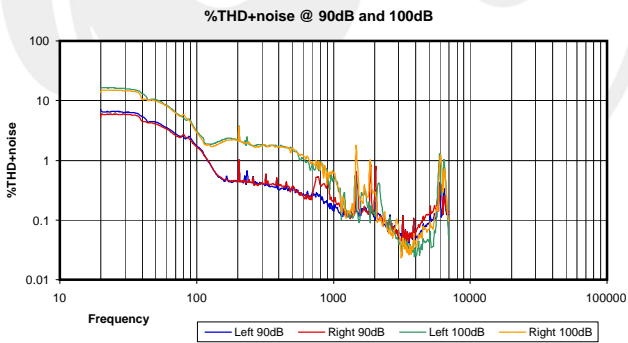
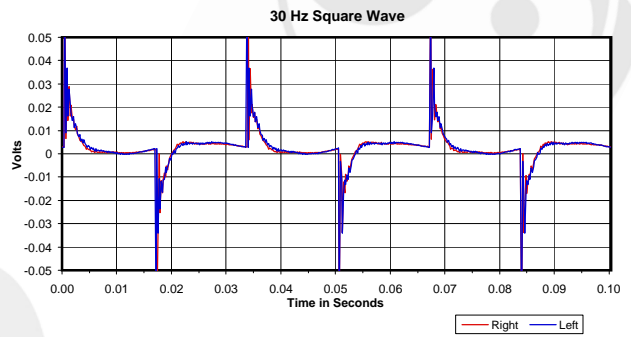
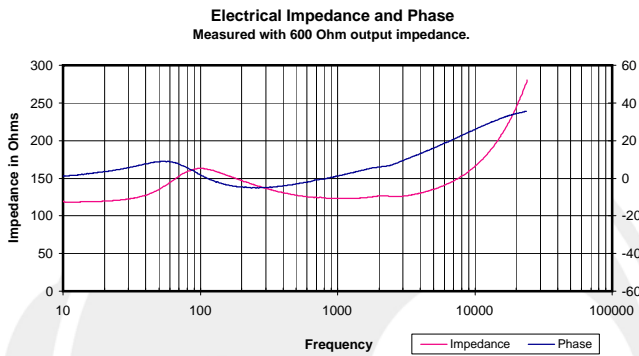
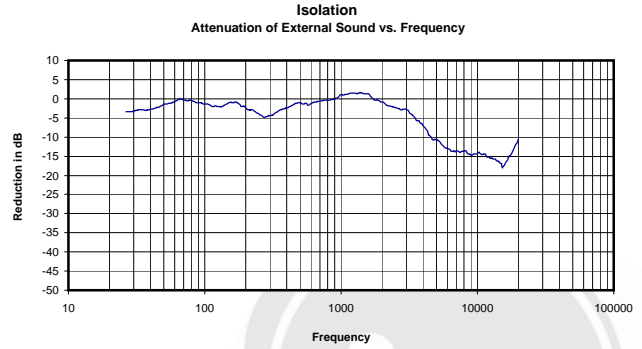
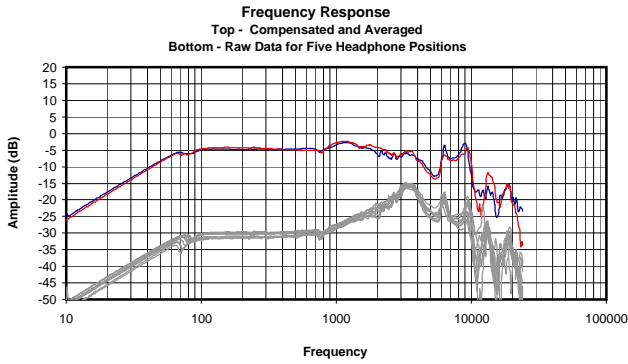
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
 36 Ohms
 0.02 mW
 -9 dBr



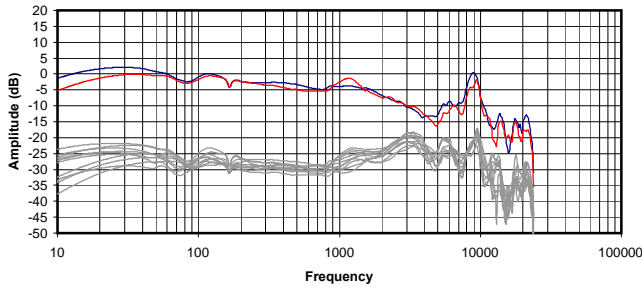


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

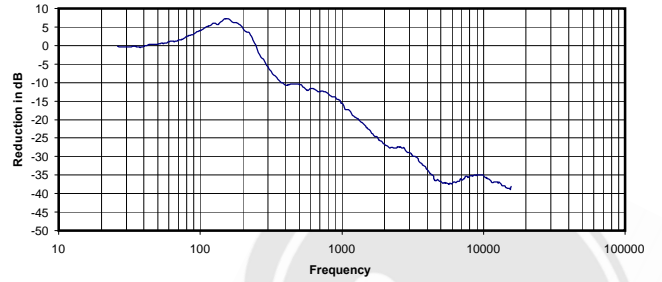
0.390 Vrms
123 Ohms
1.24 mW
-4 dBr



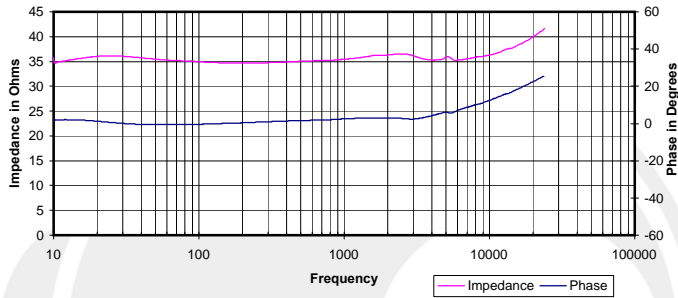
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



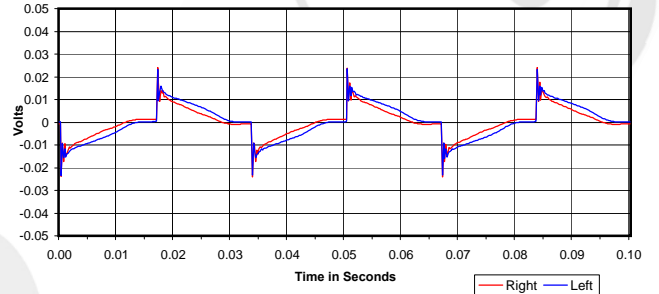
Isolation
 Attenuation of External Sound vs. Frequency



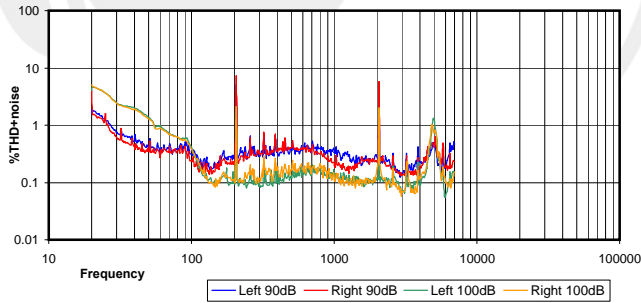
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



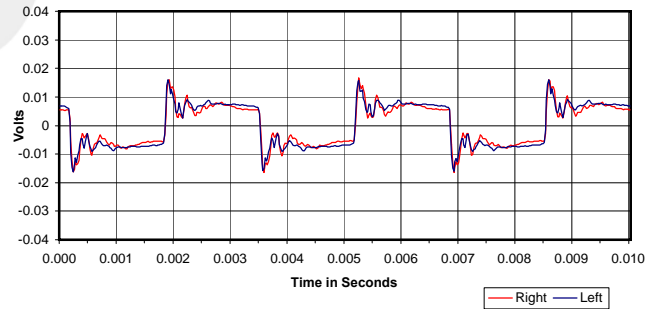
30 Hz Square Wave



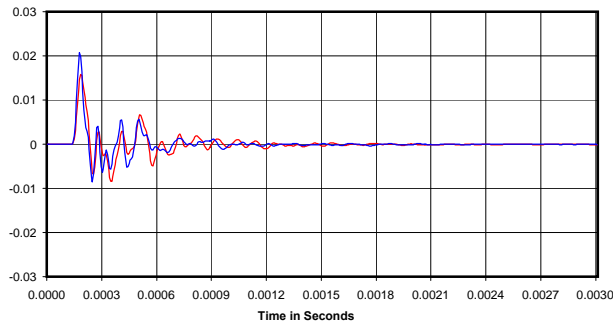
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

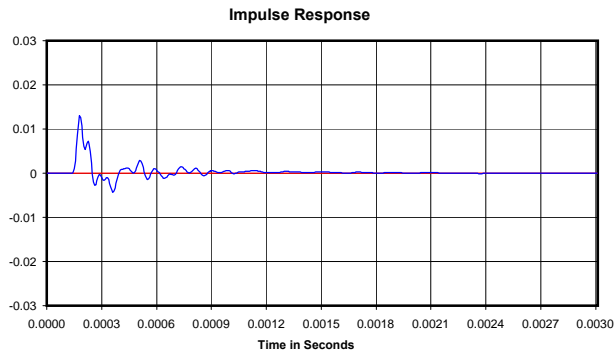
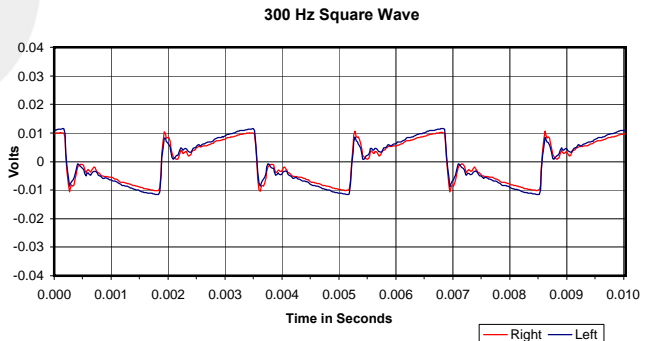
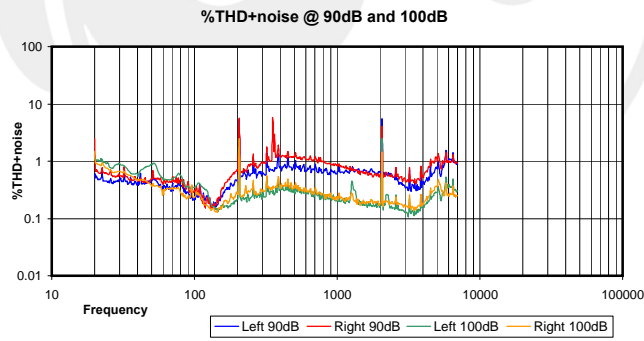
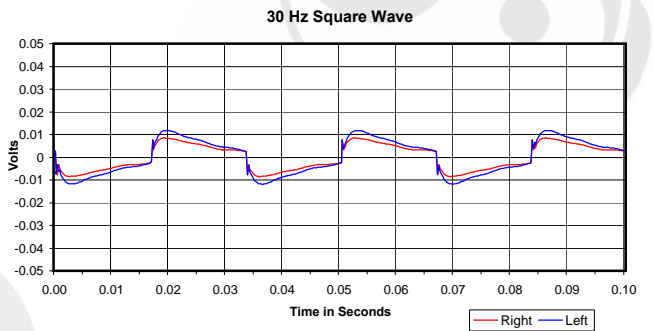
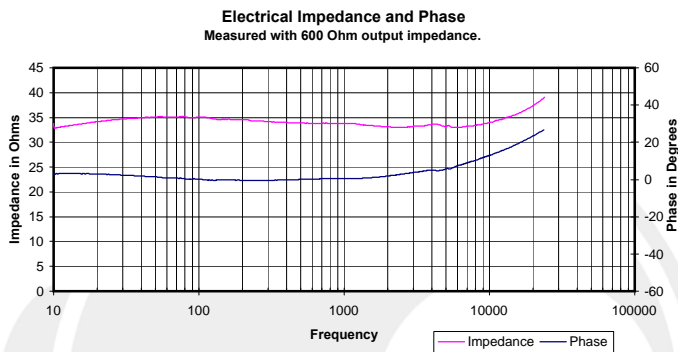
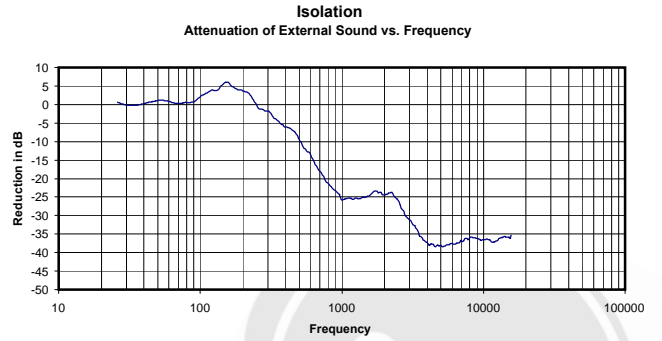
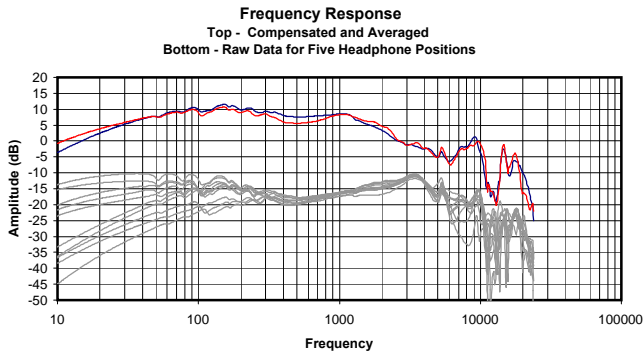


Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

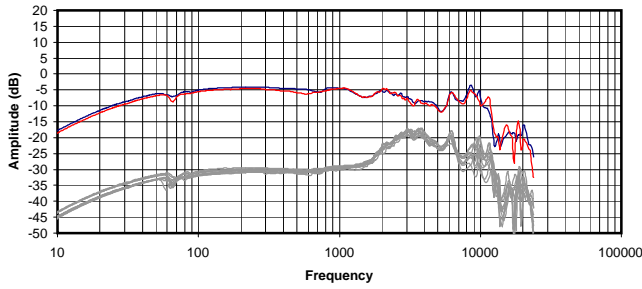
0.055 Vrms
 35 Ohms
 0.09 mW
 -14 dB



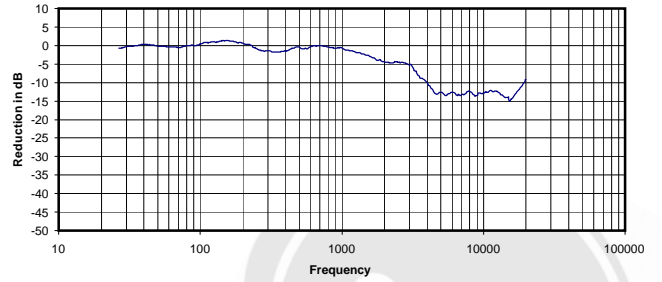
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.056 Vrms
34 Ohms
0.09 mW
-16 dB

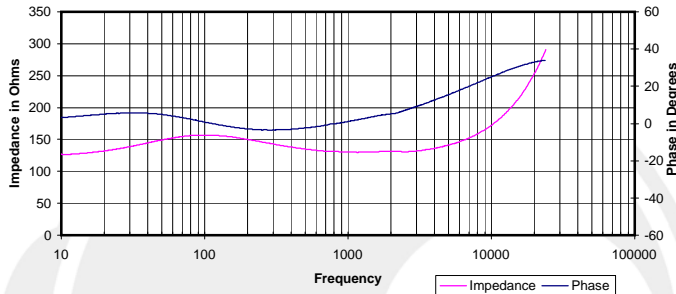
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



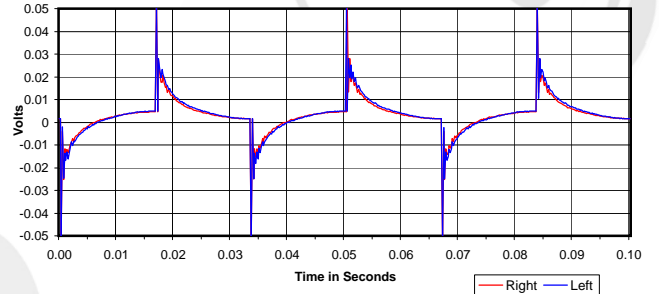
Isolation
 Attenuation of External Sound vs. Frequency



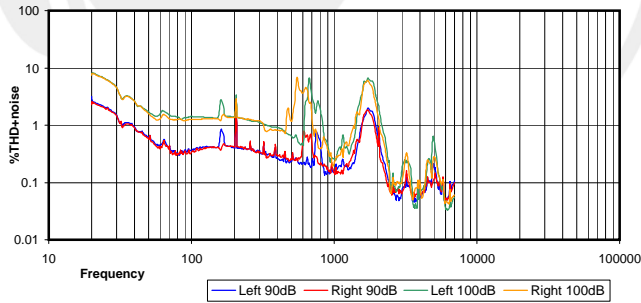
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



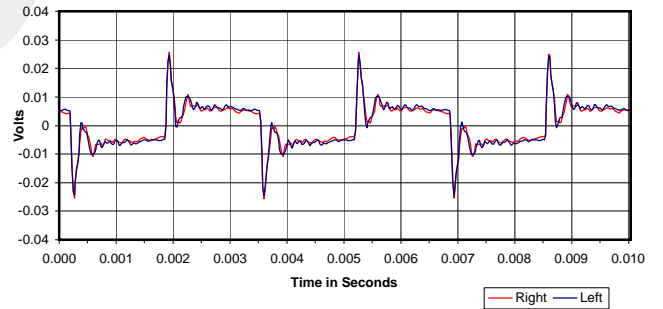
30 Hz Square Wave



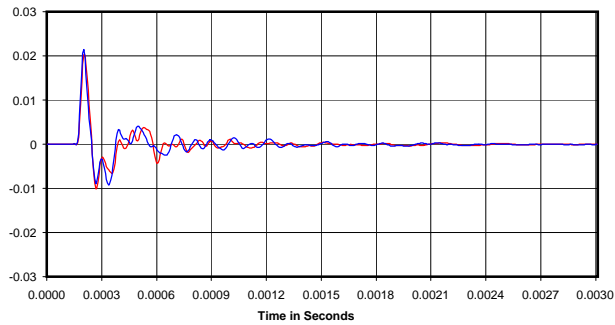
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

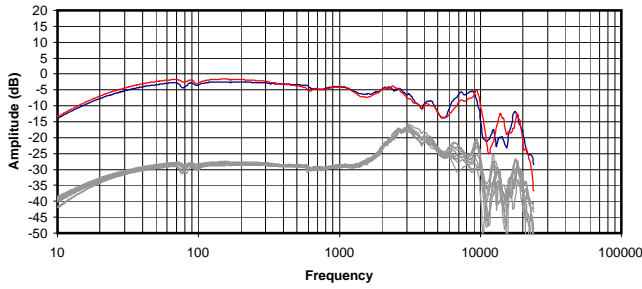


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

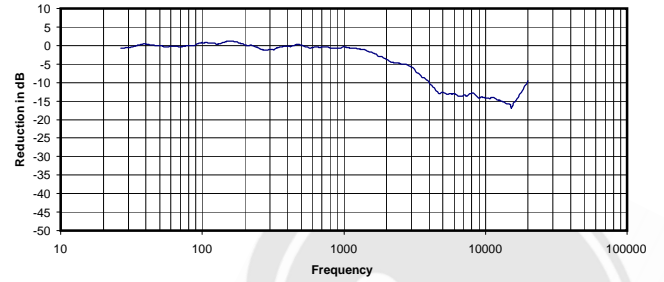
0.481 Vrms
 130 Ohms
 1.78 mW
 -4 dB



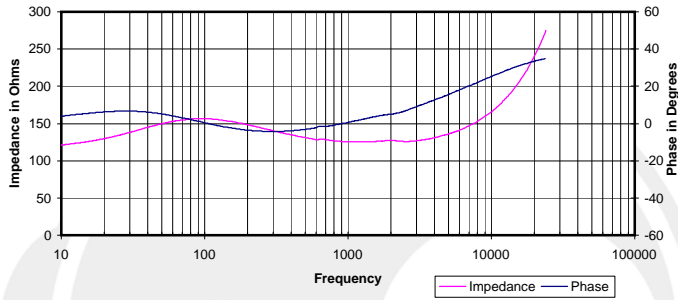
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



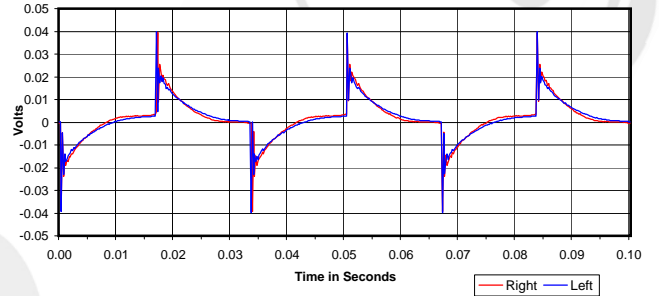
Isolation
Attenuation of External Sound vs. Frequency



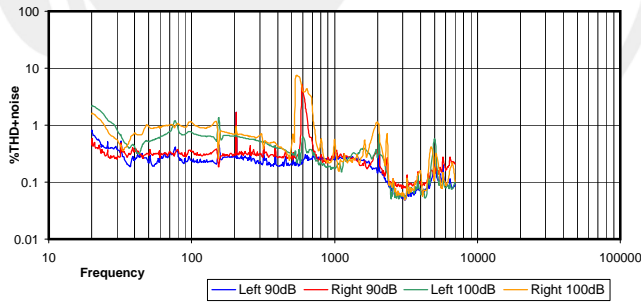
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



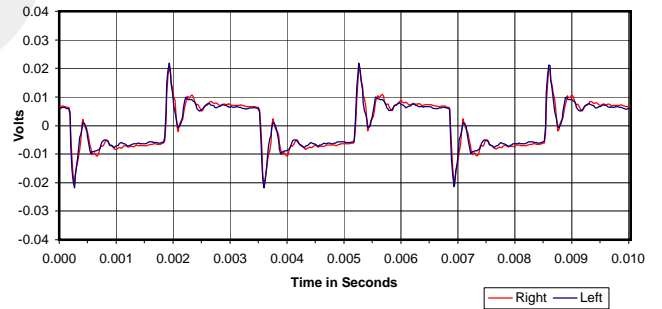
30 Hz Square Wave



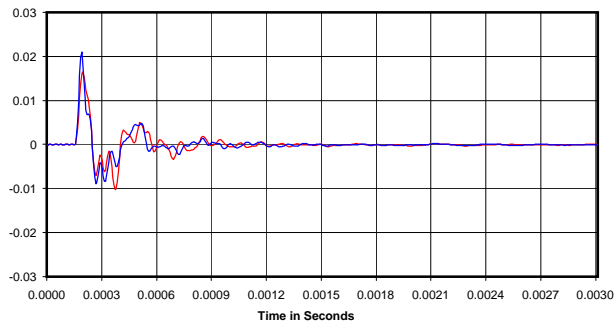
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

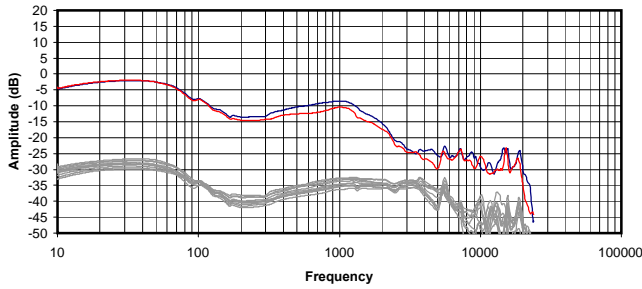


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

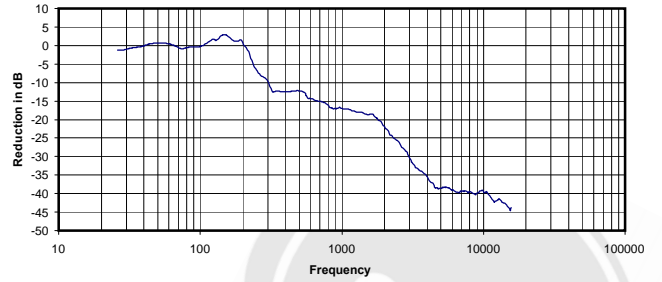
0.352 Vrms
125 Ohms
0.99 mW
-4 dB



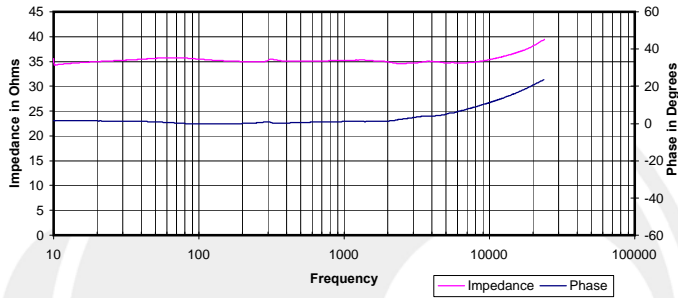
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



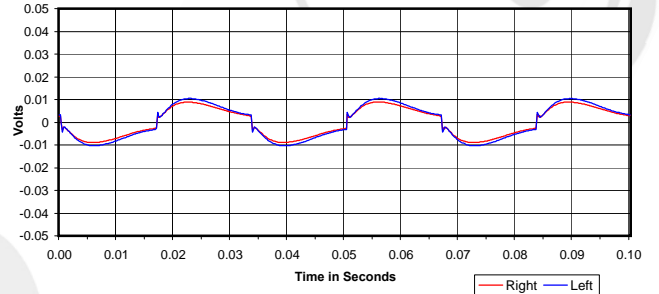
Isolation
 Attenuation of External Sound vs. Frequency



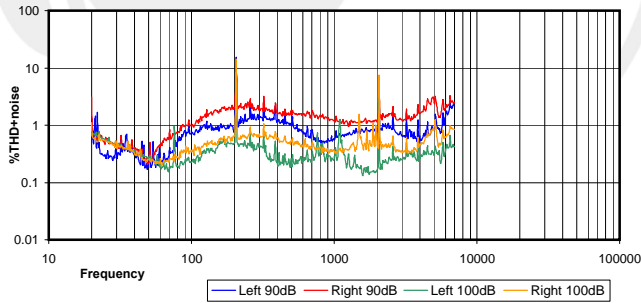
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



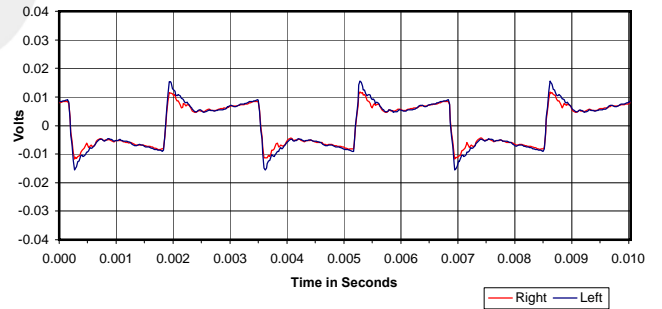
30 Hz Square Wave



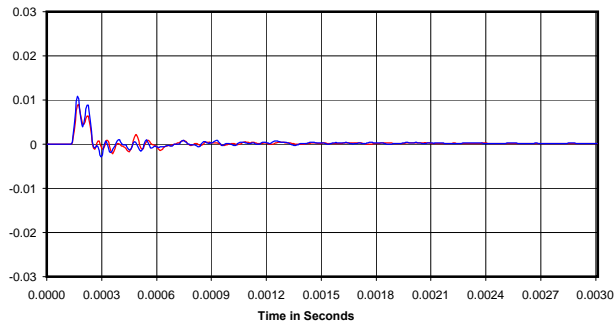
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

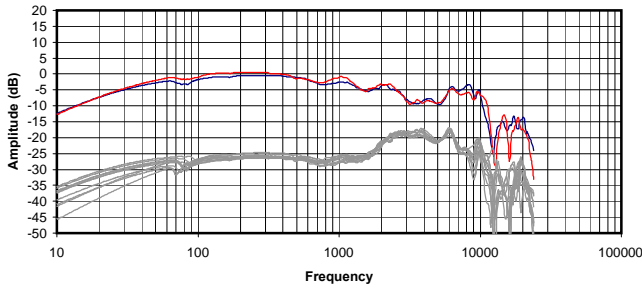


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

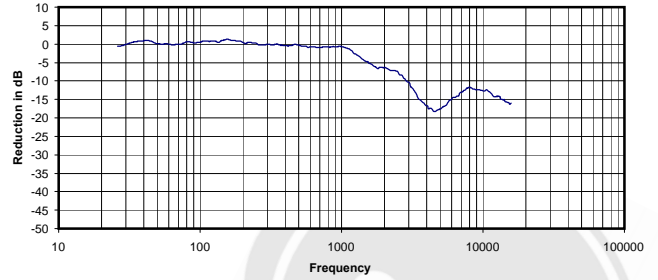
0.037 Vrms
 35 Ohms
 0.04 mW
 -16 dB



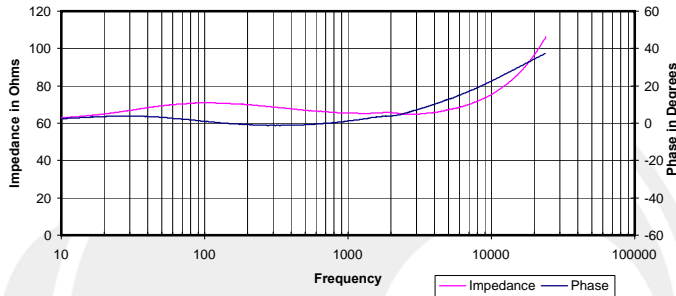
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



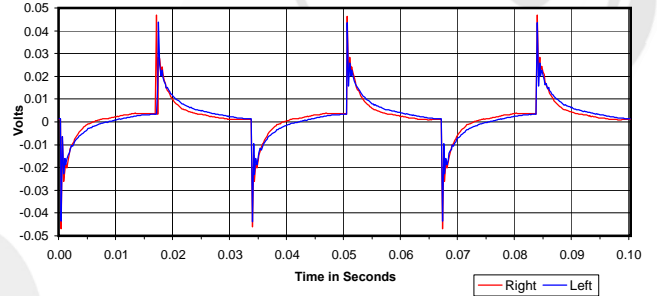
Isolation
 Attenuation of External Sound vs. Frequency



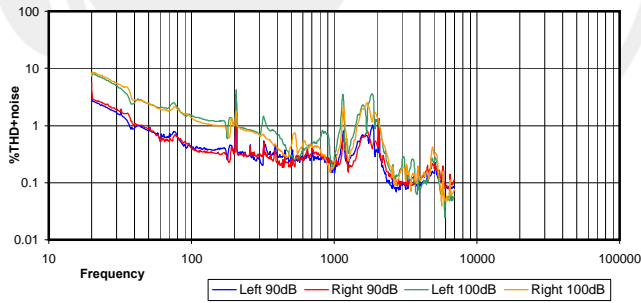
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



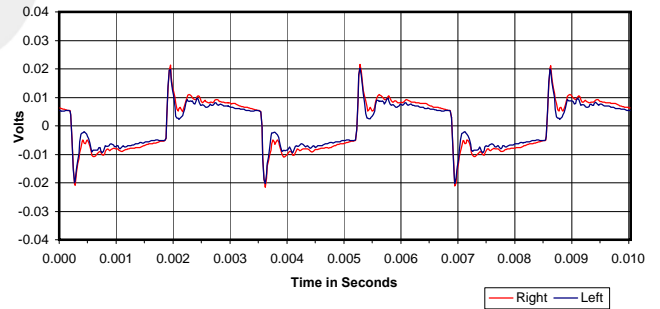
30 Hz Square Wave



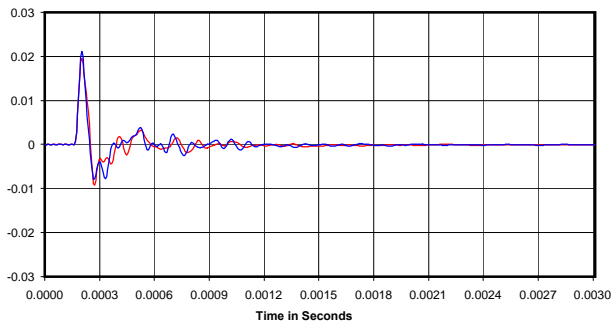
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

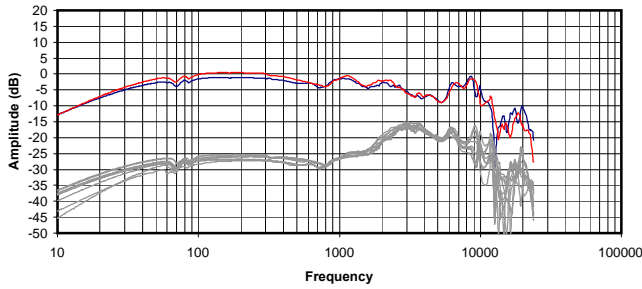


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

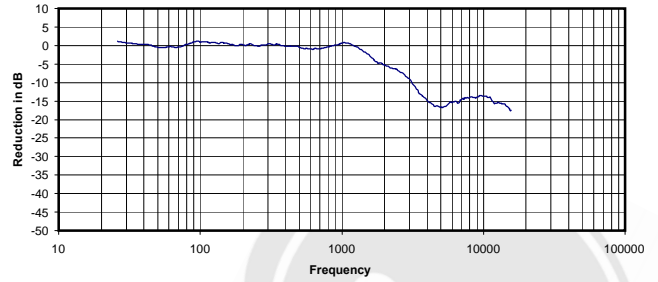
0.320 Vrms
 65 Ohms
 1.57 mW
 -4 dB



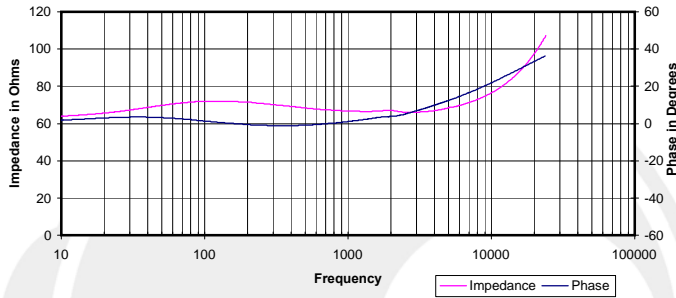
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



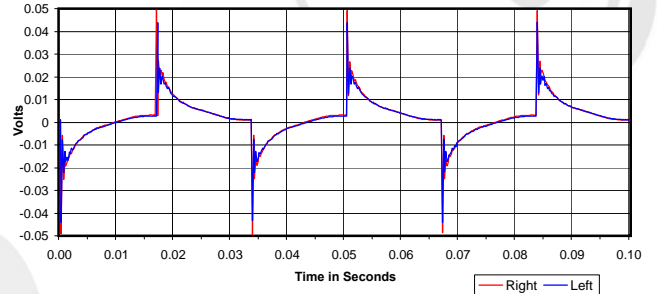
Isolation
 Attenuation of External Sound vs. Frequency



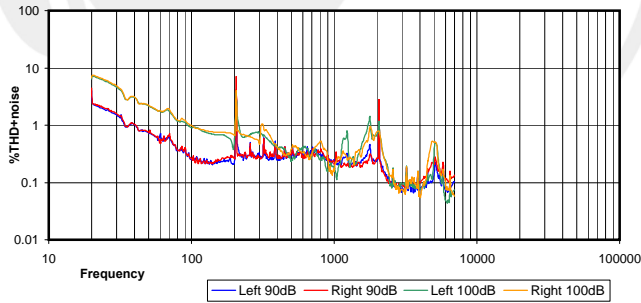
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



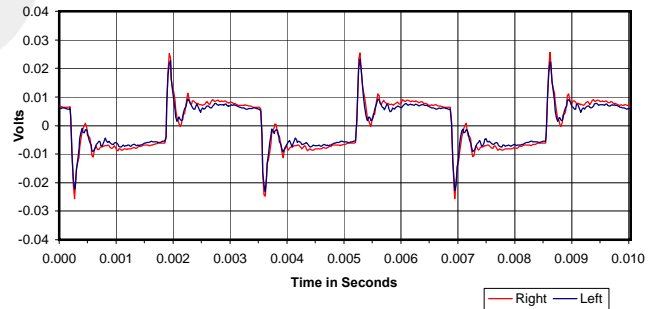
30 Hz Square Wave



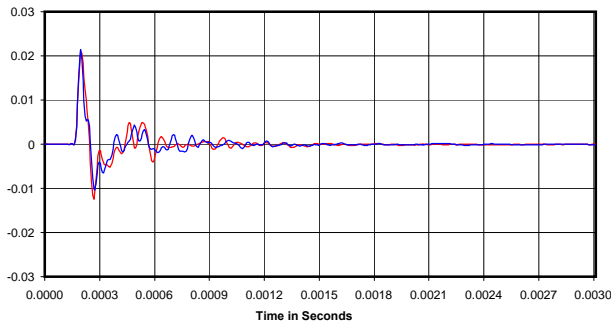
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



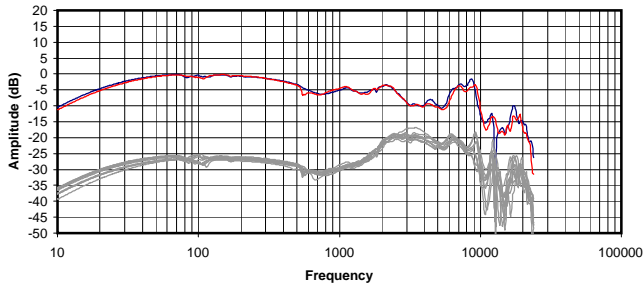
Impulse Response



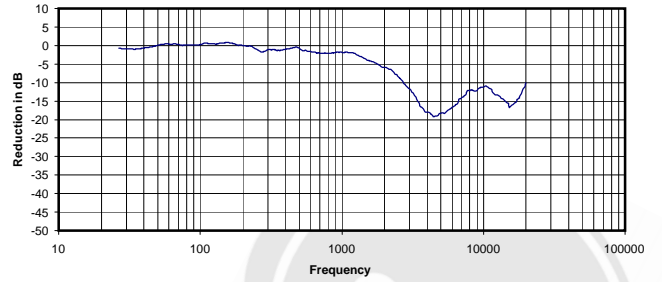
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.283 Vrms
 67 Ohms
 1.20 mW
 -4 dBr

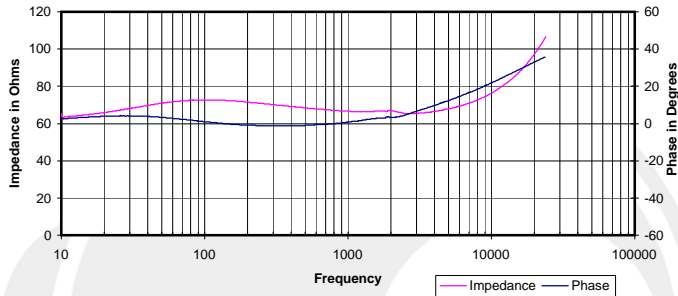
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



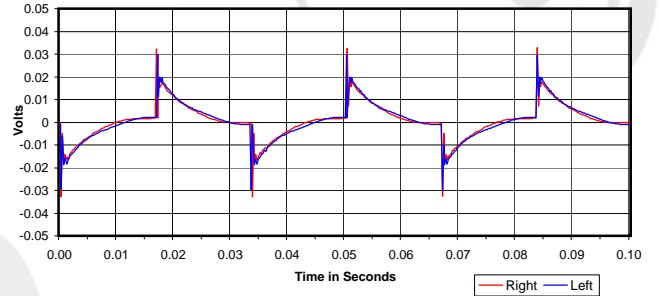
Isolation
 Attenuation of External Sound vs. Frequency



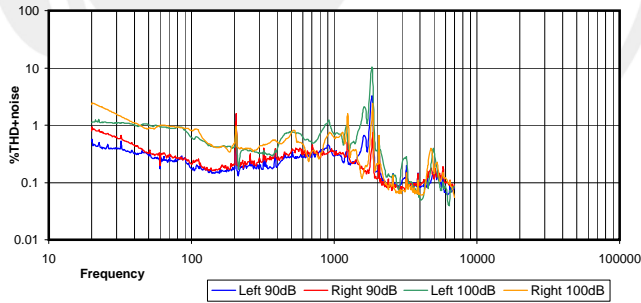
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



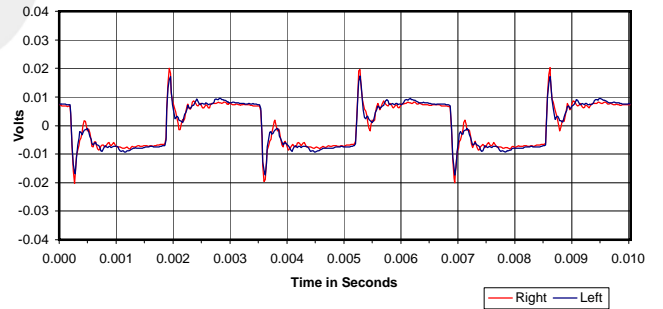
30 Hz Square Wave



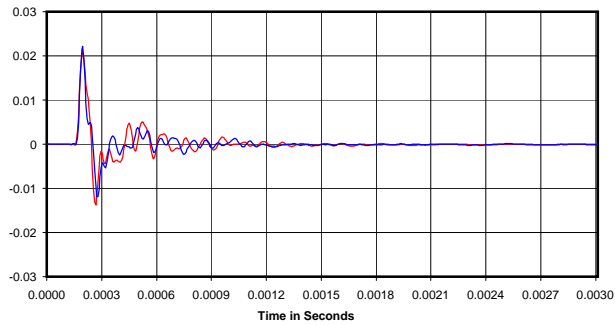
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

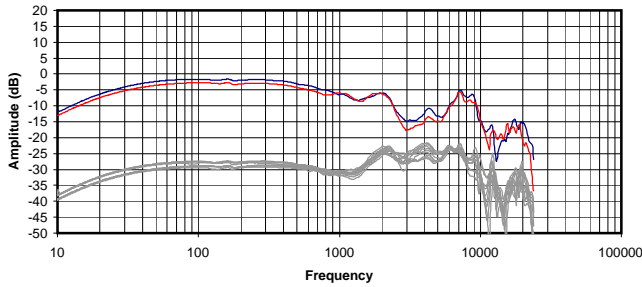


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

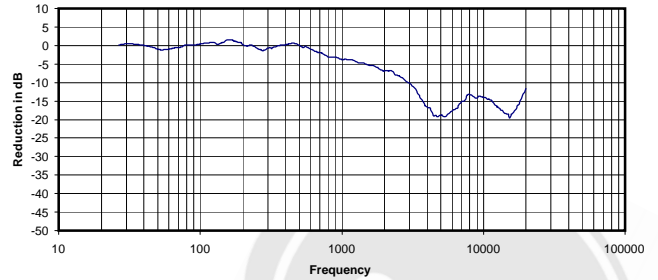
0.322 Vrms
 67 Ohms
 1.56 mW
 -6 dBr



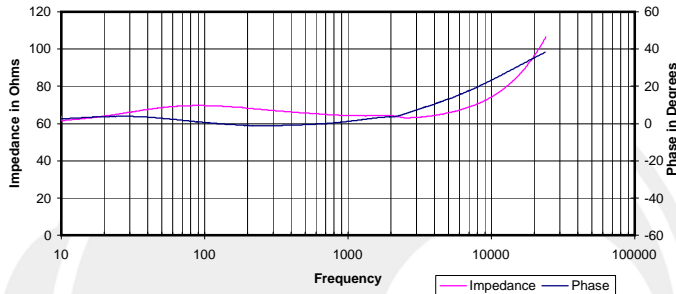
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



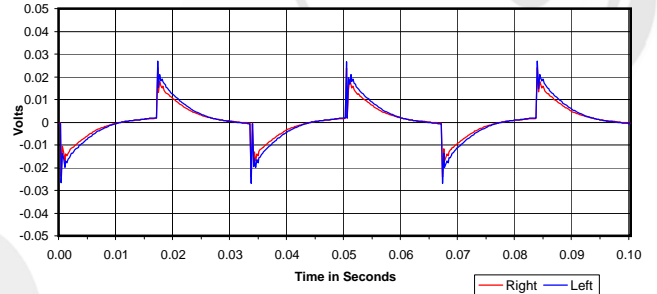
Isolation
 Attenuation of External Sound vs. Frequency



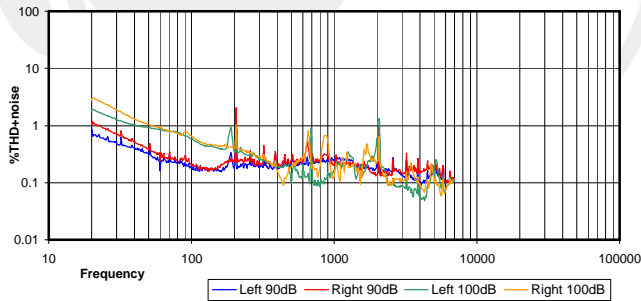
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



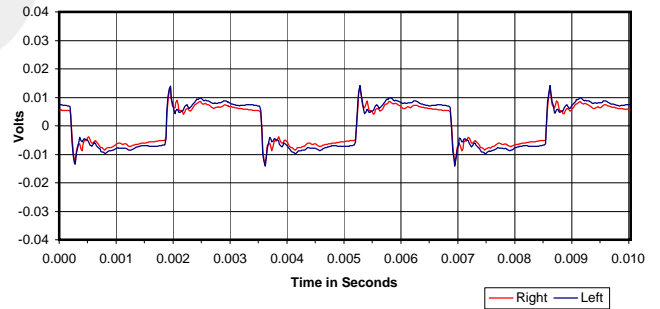
30 Hz Square Wave



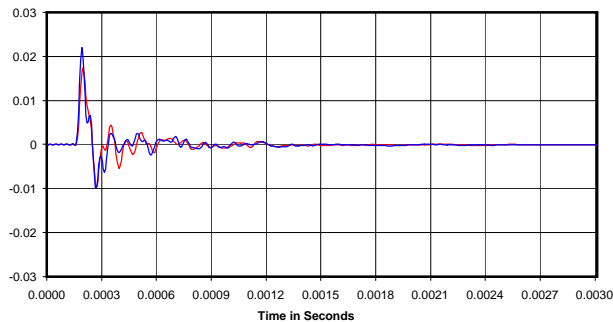
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



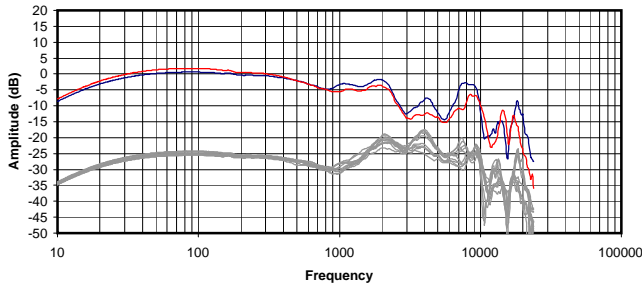
Impulse Response



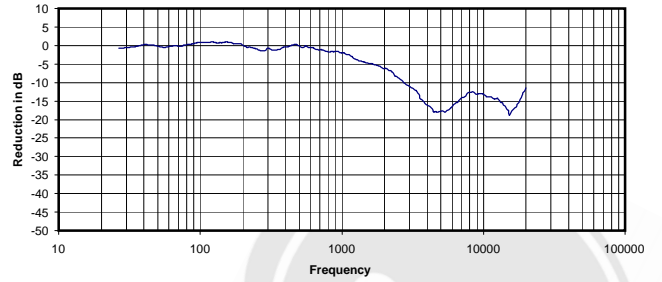
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.270 Vrms
 64 Ohms
 1.13 mW
 -6 dBr

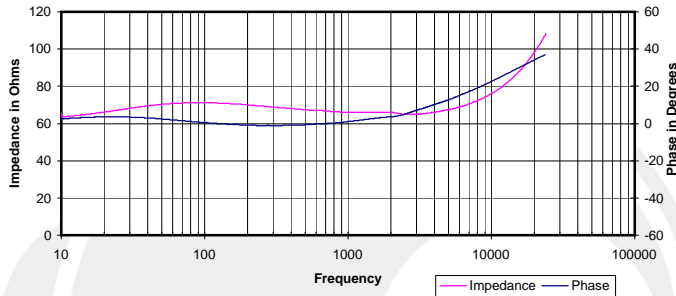
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



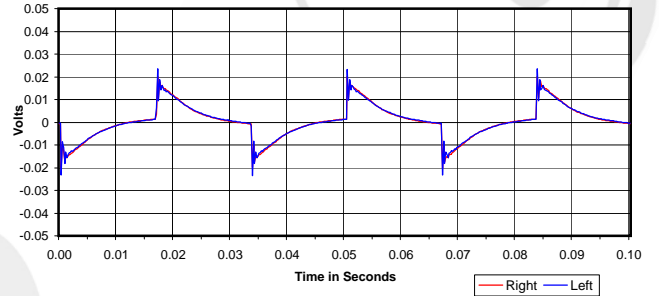
Isolation
 Attenuation of External Sound vs. Frequency



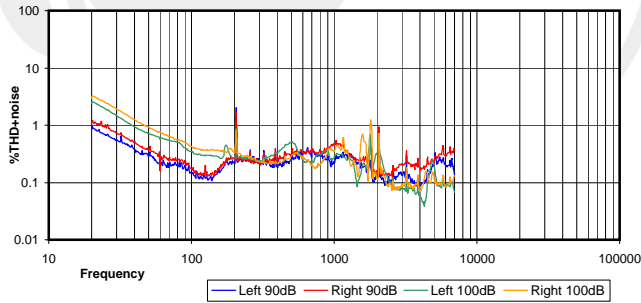
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



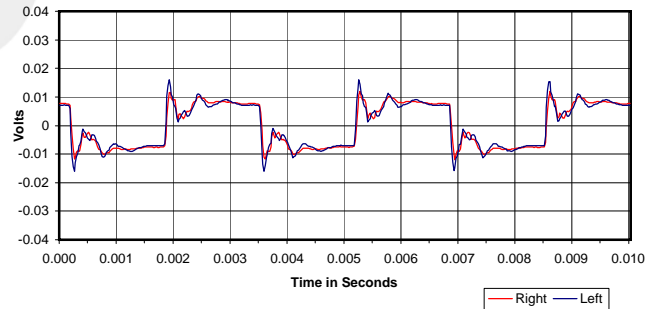
30 Hz Square Wave



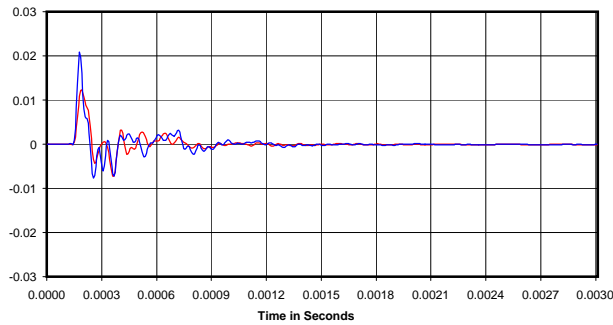
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



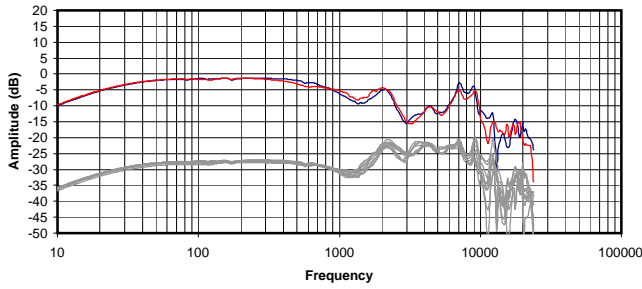
Impulse Response



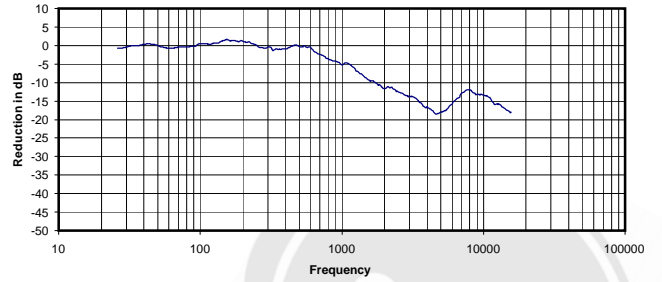
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.206 Vrms
 66 Ohms
 0.64 mW
 -6 dB

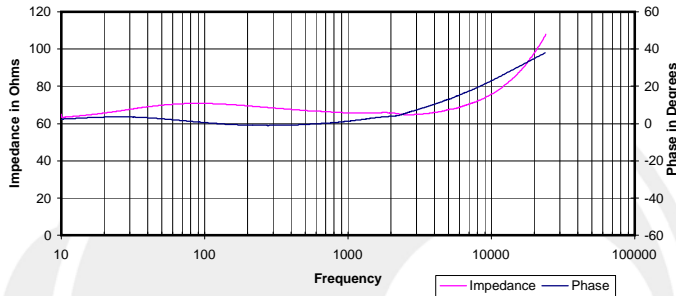
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



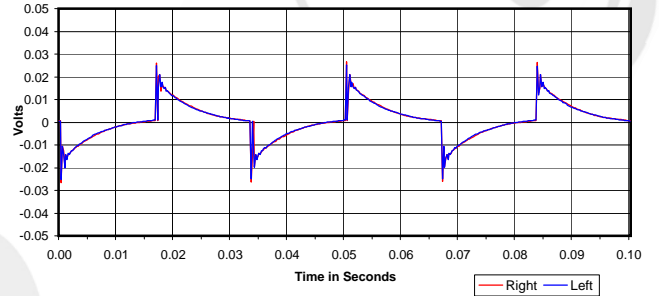
Isolation
 Attenuation of External Sound vs. Frequency



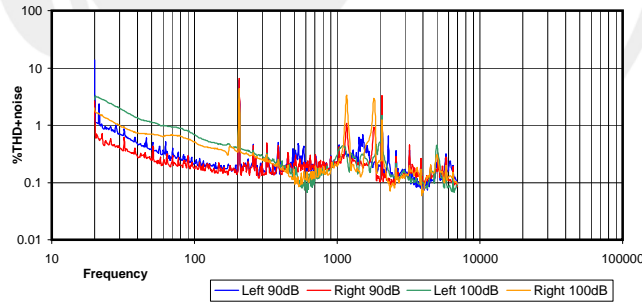
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



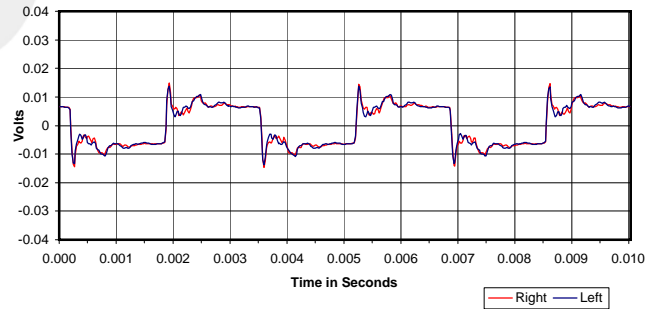
30 Hz Square Wave



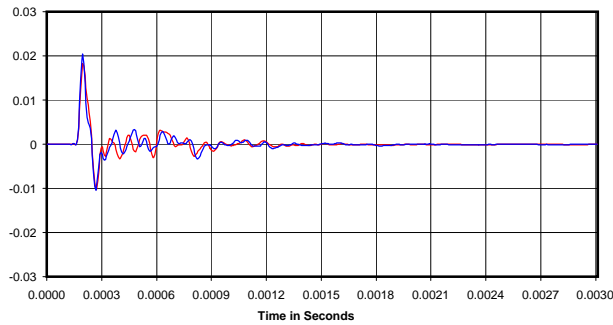
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

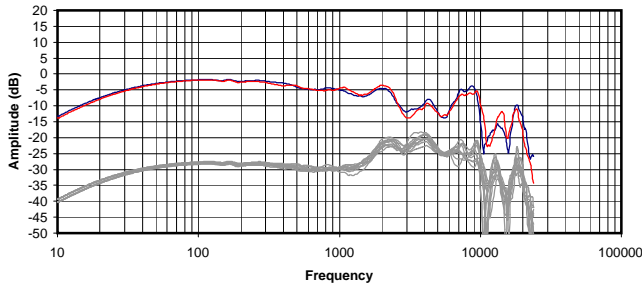


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

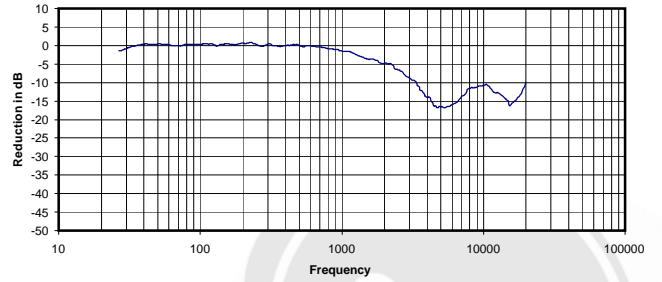
0.327 Vrms
 66 Ohms
 1.62 mW
 -6 dBr



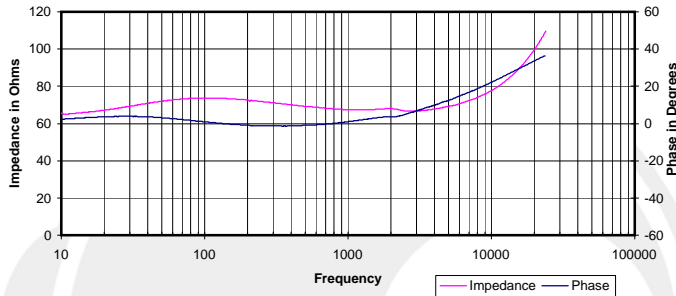
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



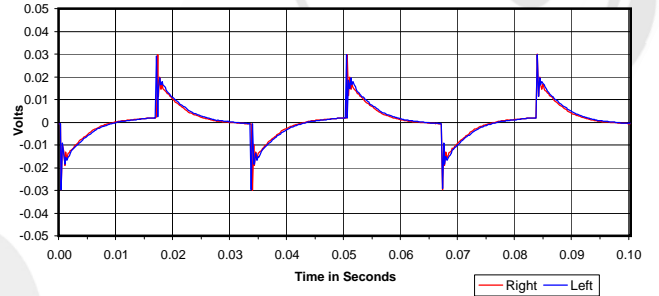
Isolation
 Attenuation of External Sound vs. Frequency



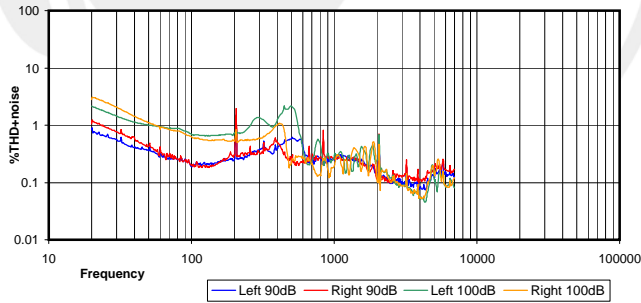
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



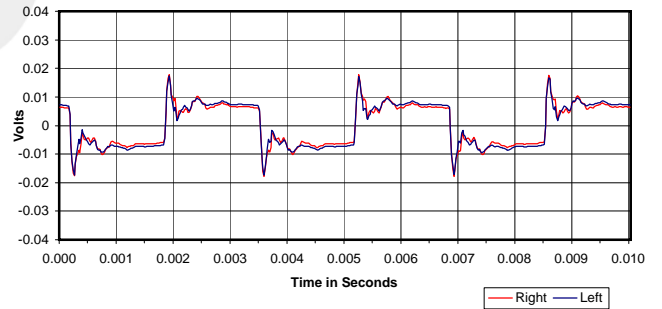
30 Hz Square Wave



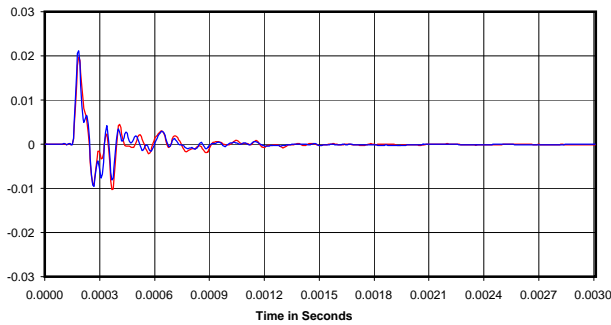
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

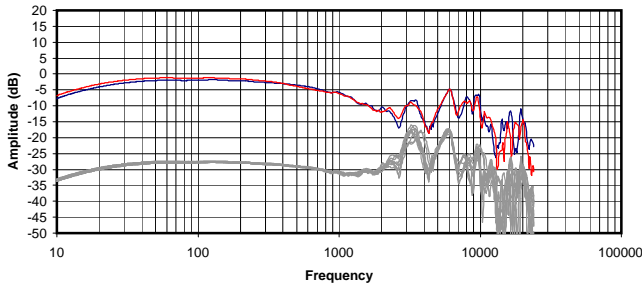


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

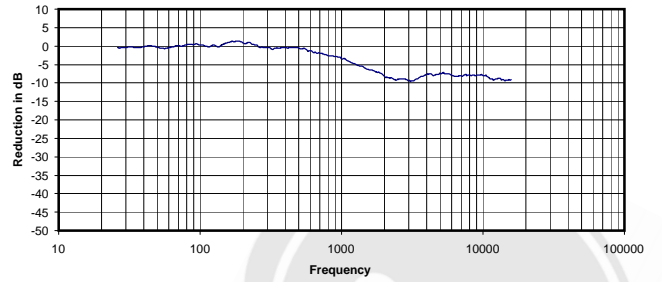
0.237 Vrms
 67 Ohms
 0.84 mW
 -5 dBr



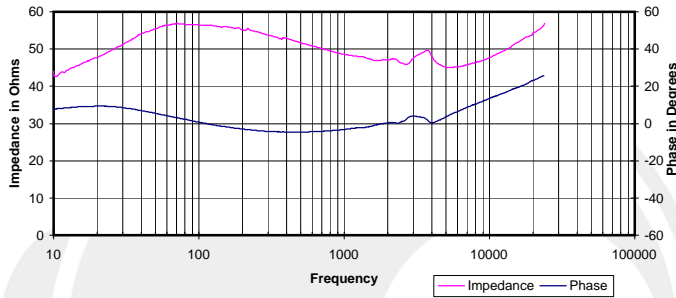
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



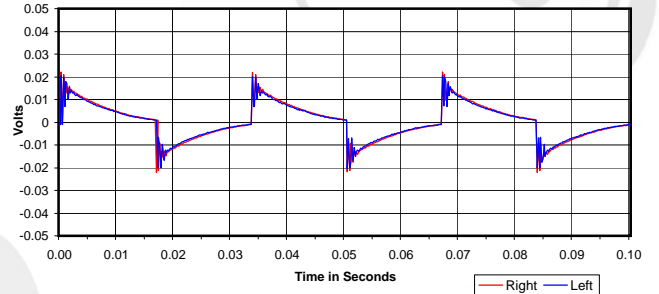
Isolation
 Attenuation of External Sound vs. Frequency



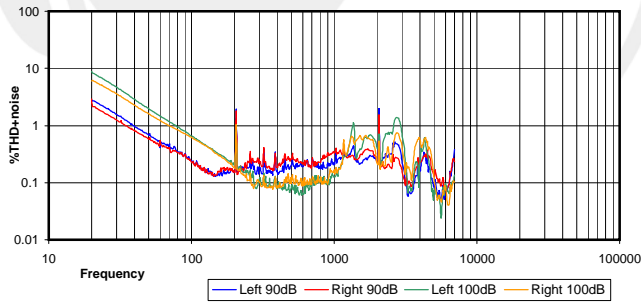
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



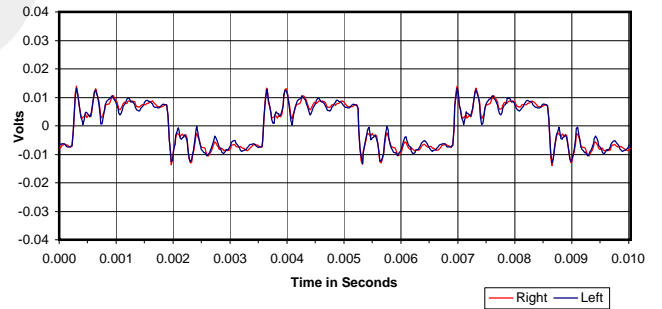
30 Hz Square Wave



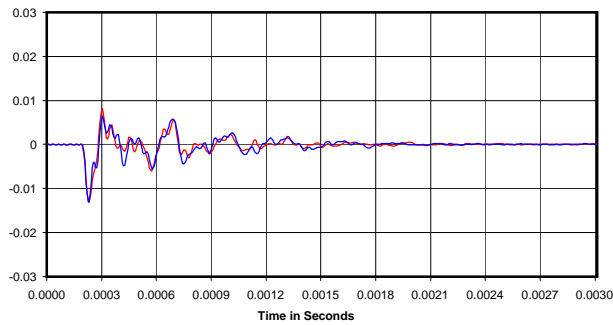
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

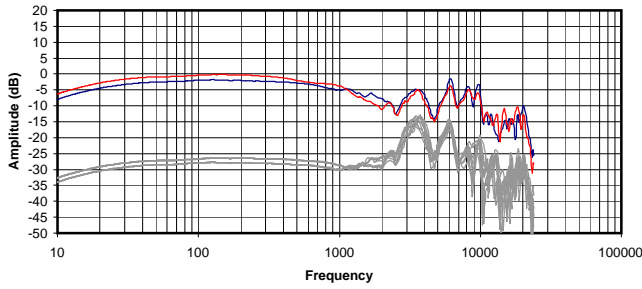


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

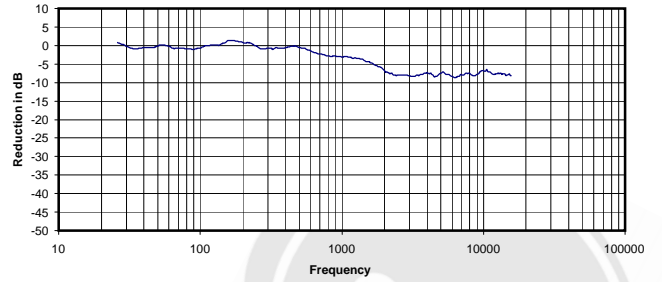
0.174 Vrms
 49 Ohms
 0.63 mW
 -3 dB



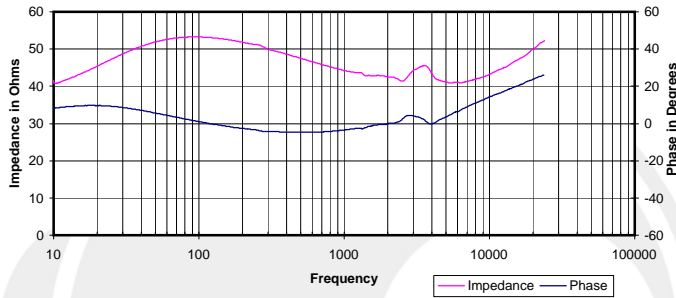
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



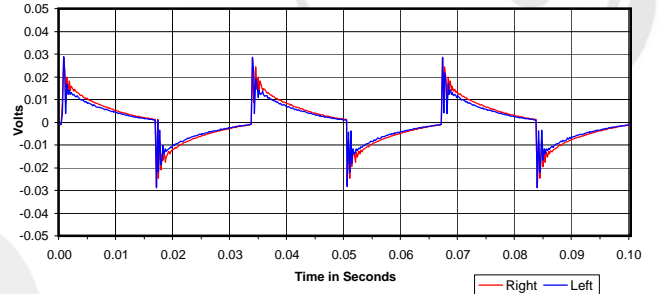
Isolation
 Attenuation of External Sound vs. Frequency



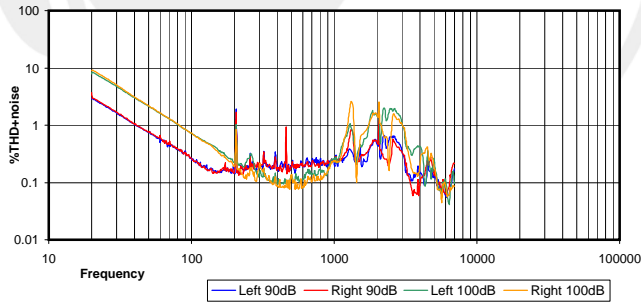
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



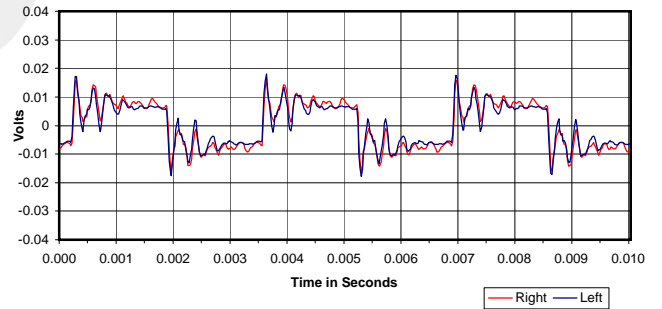
30 Hz Square Wave



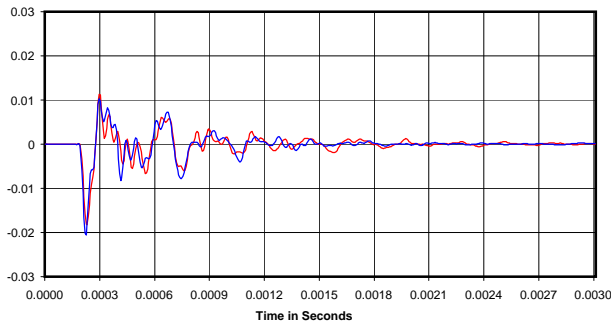
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



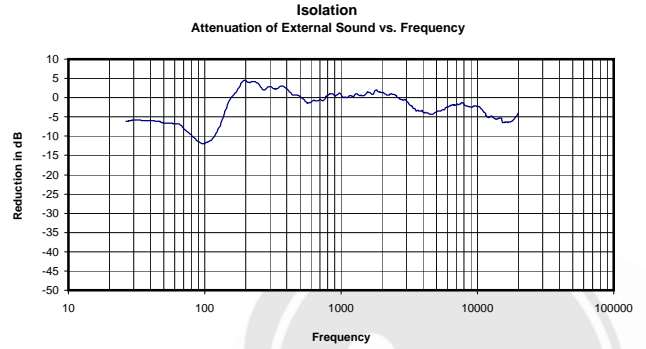
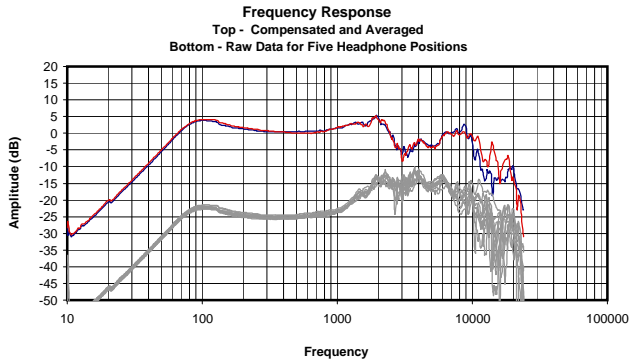
Impulse Response



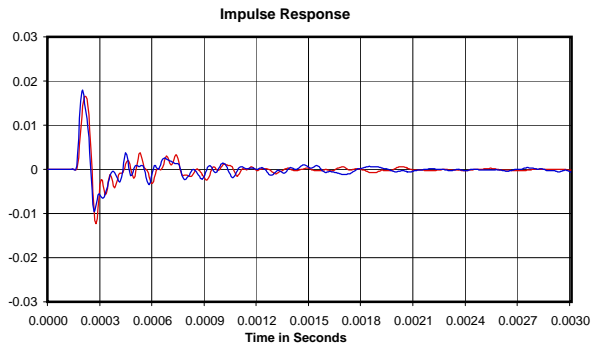
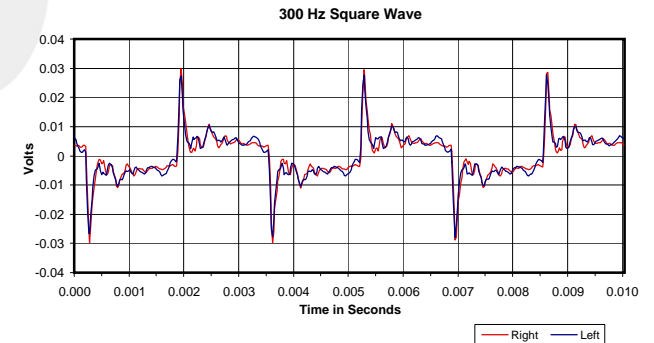
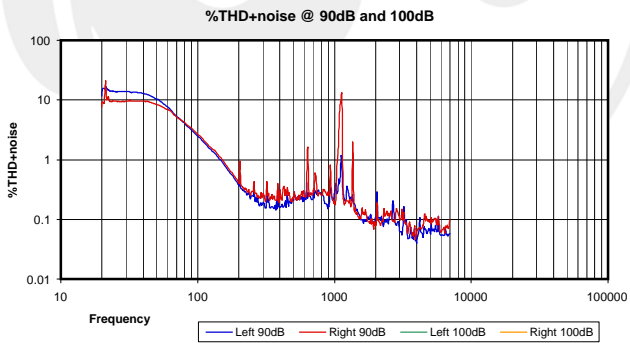
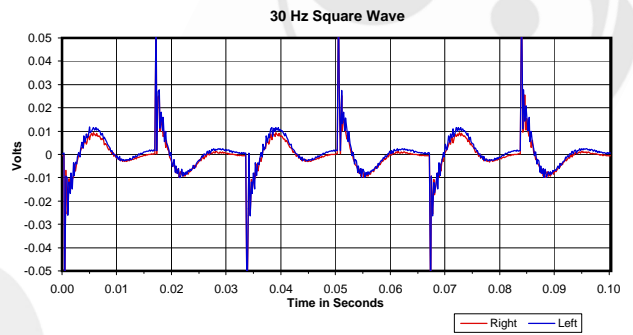
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.191 Vrms
 44 Ohms
 0.83 mW
 -3 dBr





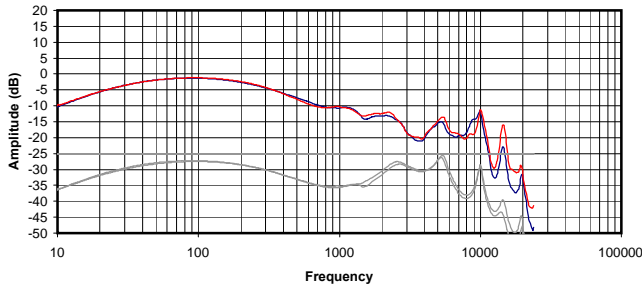
Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones



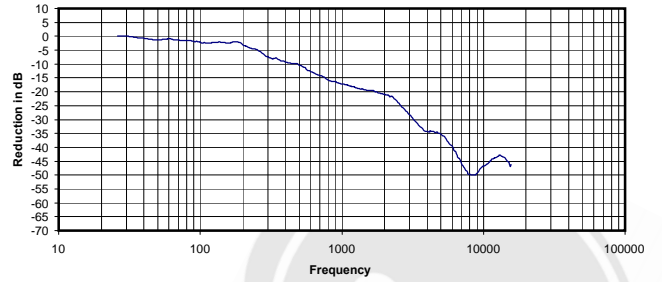
Broadband Isolation in dB (100Hz to 10kHz):

-1 dBr

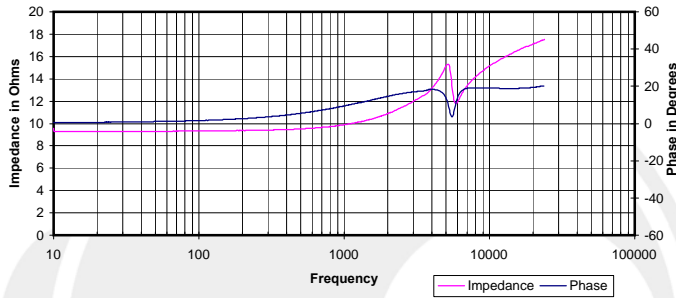
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



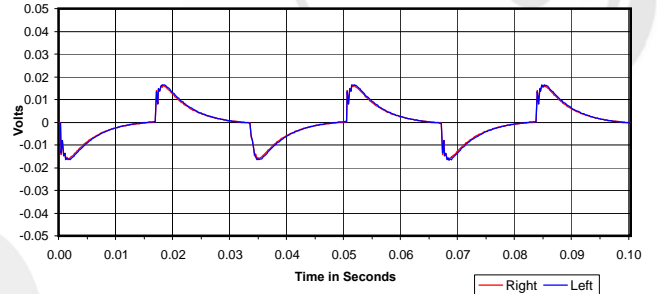
Isolation
Attenuation of External Sound vs. Frequency



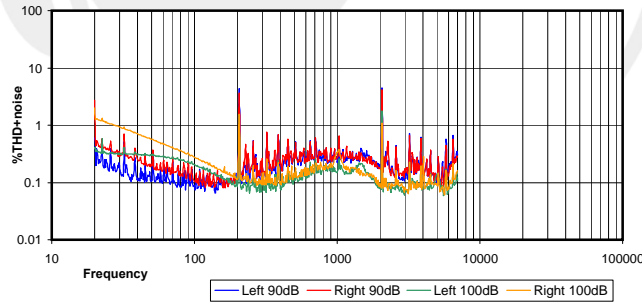
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



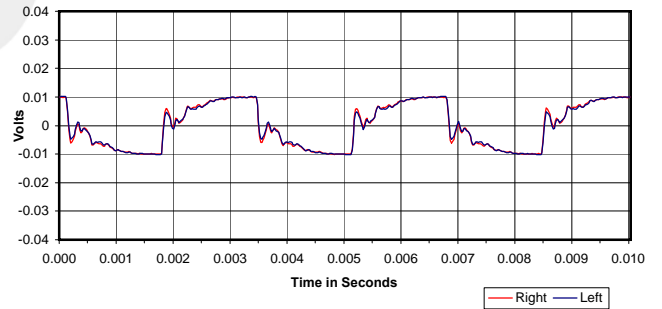
30 Hz Square Wave



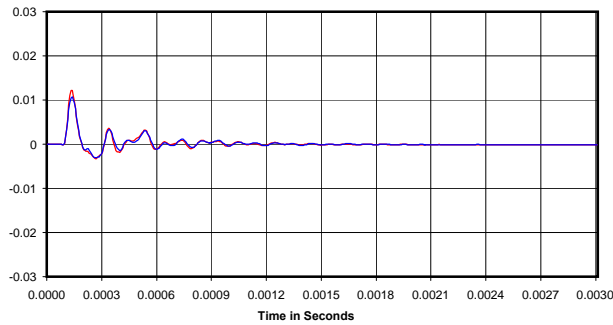
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

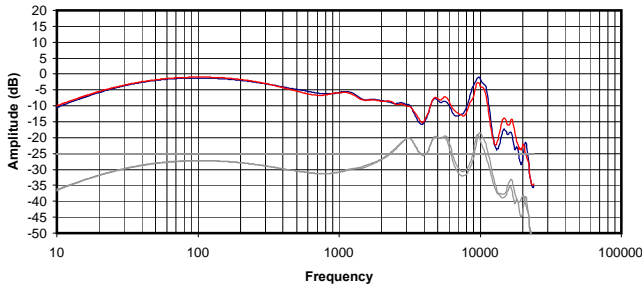


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

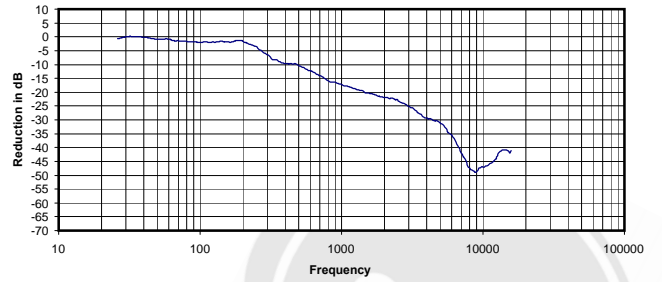
0.051 Vrms
10 Ohms
0.27 mW
-16 dB



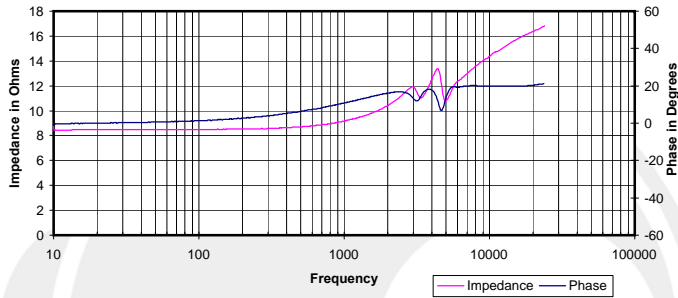
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



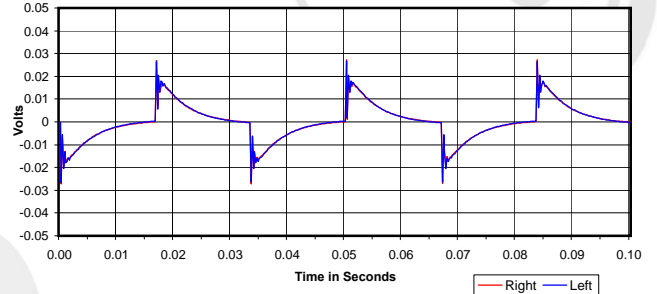
Isolation
Attenuation of External Sound vs. Frequency



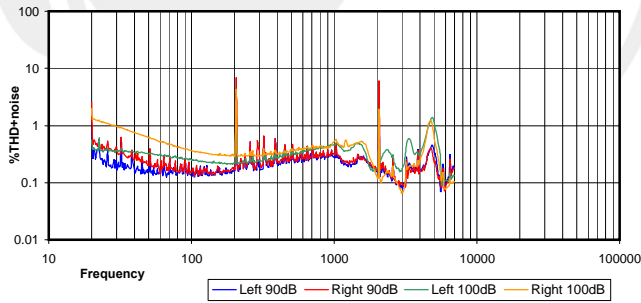
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



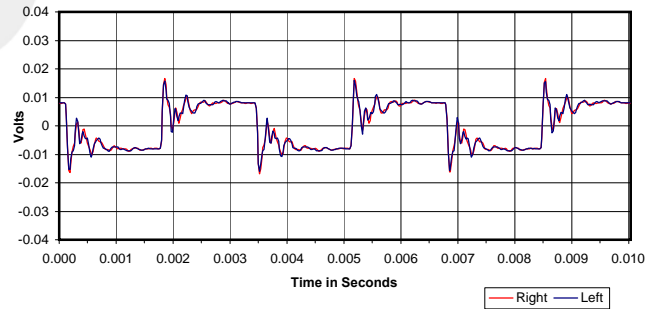
30 Hz Square Wave



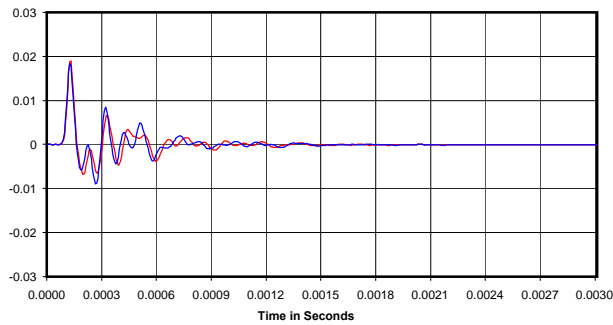
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

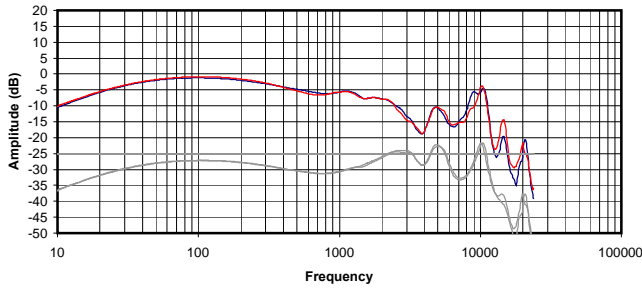


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

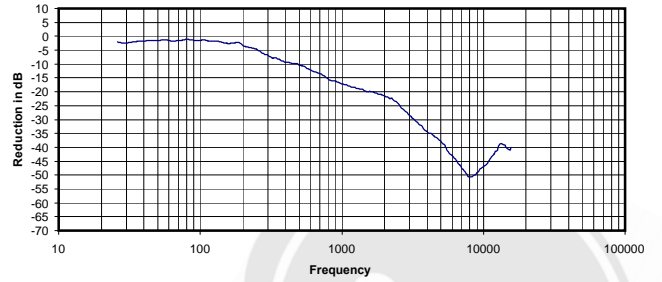
0.024 Vrms
9 Ohms
0.06 mW
-15 dB



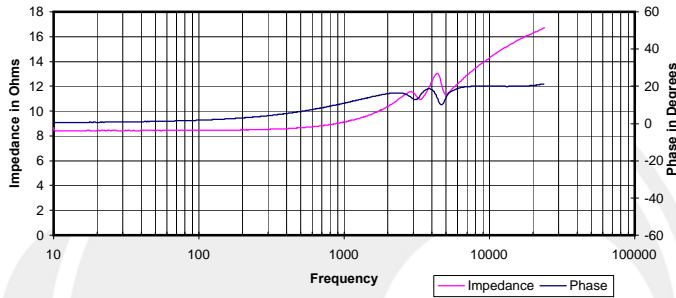
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



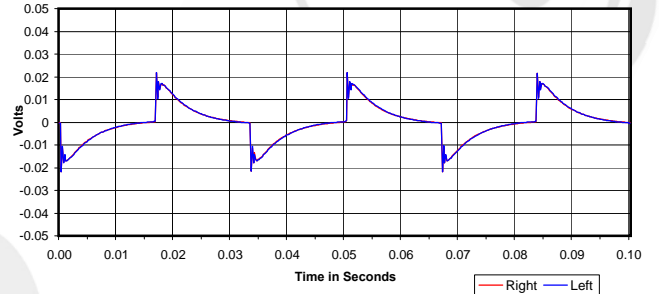
Isolation
Attenuation of External Sound vs. Frequency



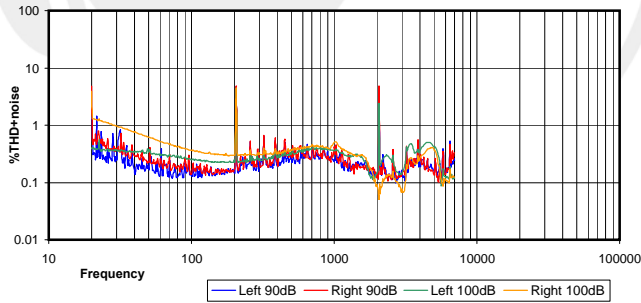
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



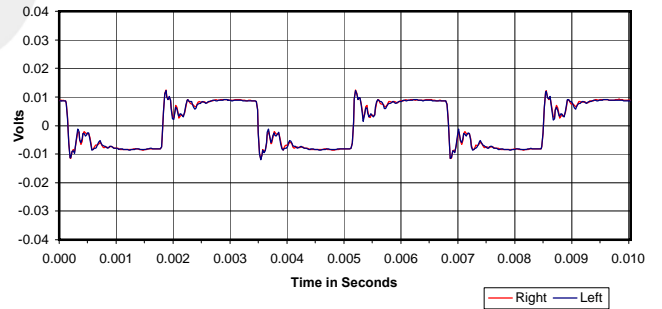
30 Hz Square Wave



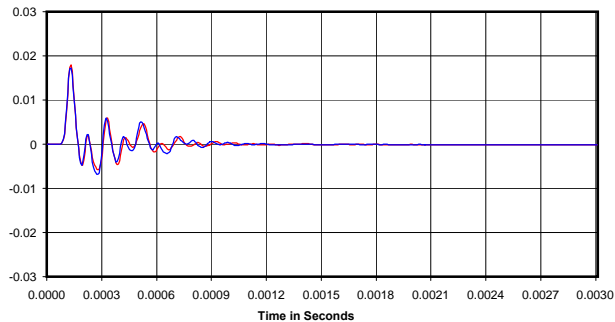
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



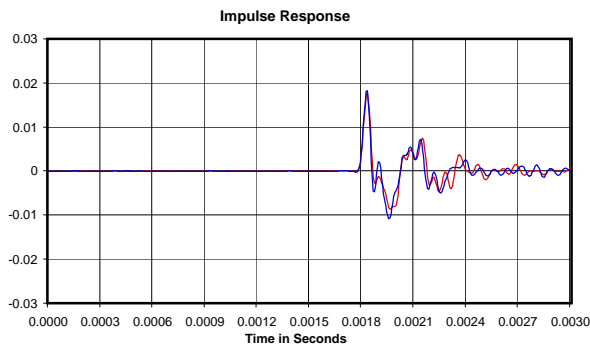
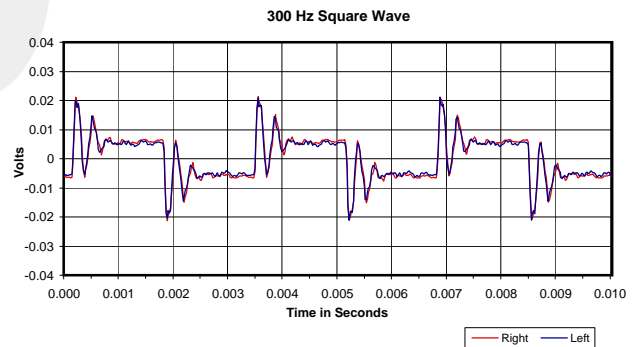
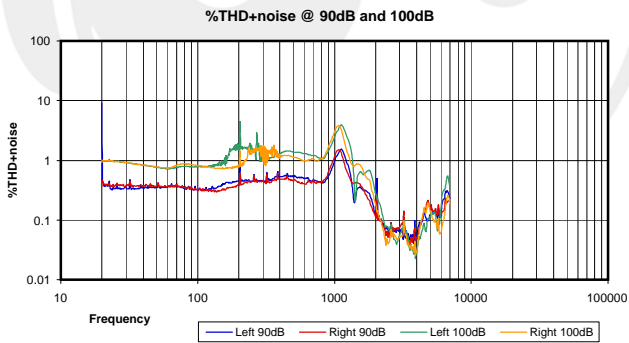
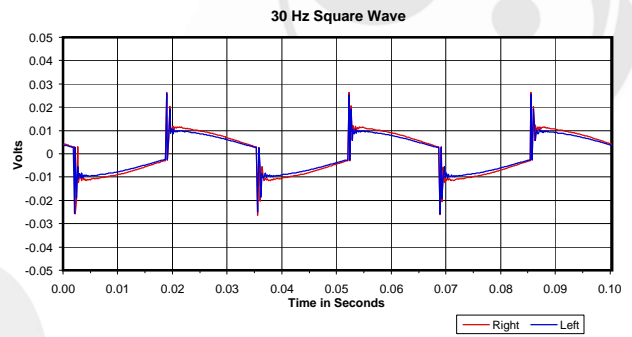
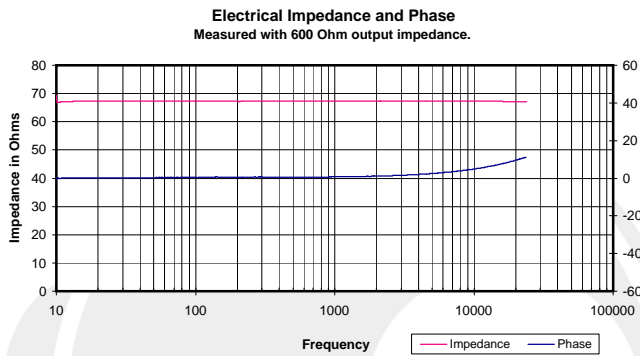
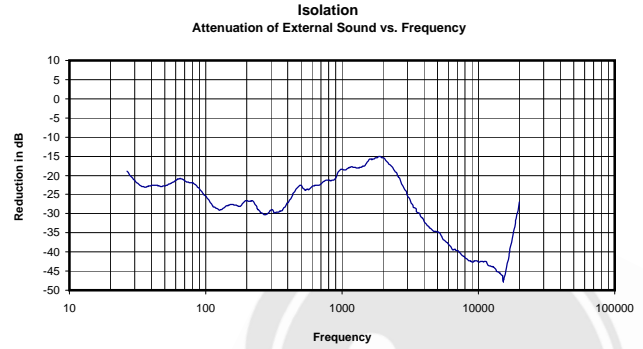
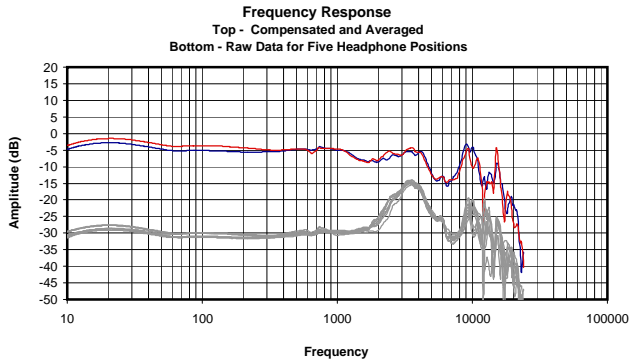
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
9 Ohms
0.06 mW
-16 dB



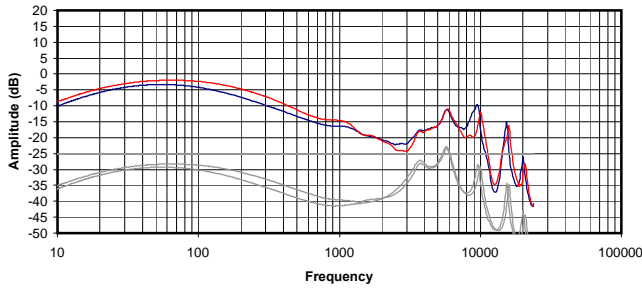


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

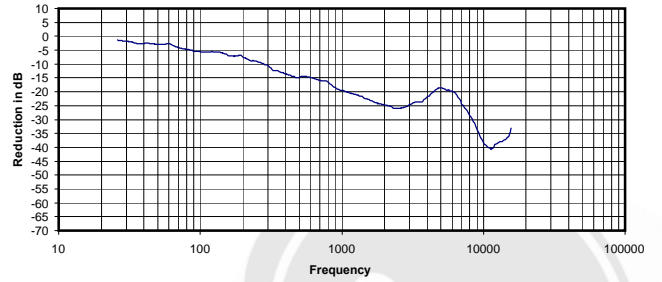
0.171 Vrms
67 Ohms
0.44 mW
-27 dB



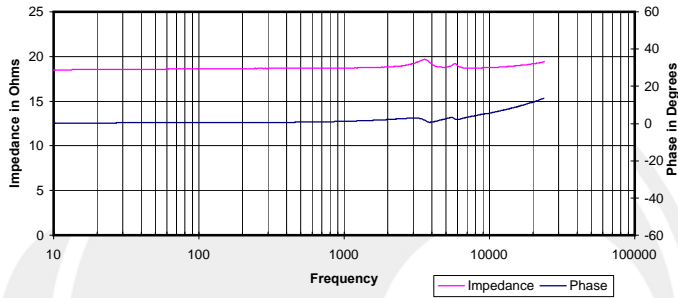
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



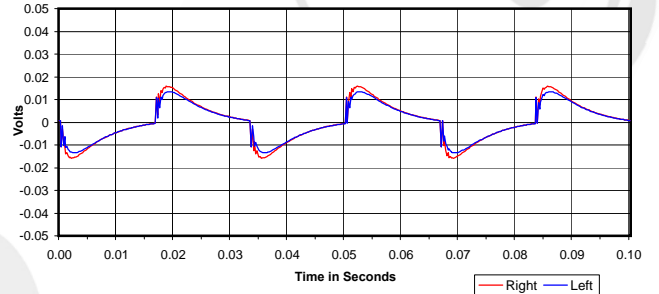
Isolation
Attenuation of External Sound vs. Frequency



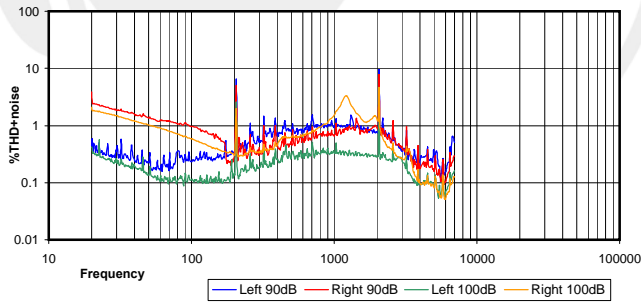
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



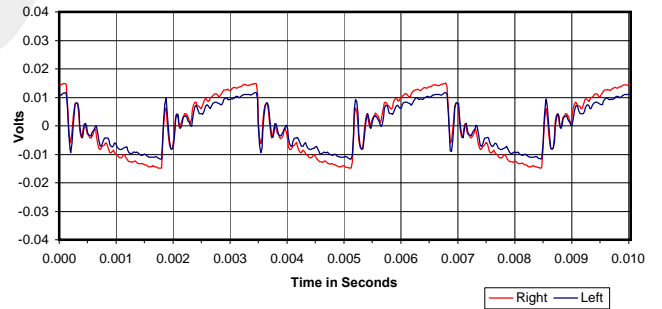
30 Hz Square Wave



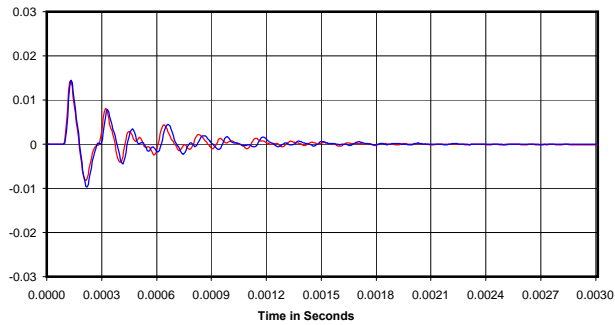
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



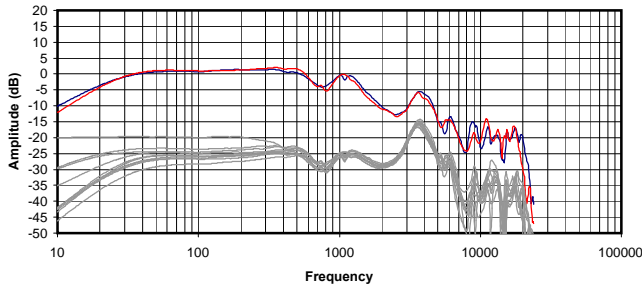
Impulse Response



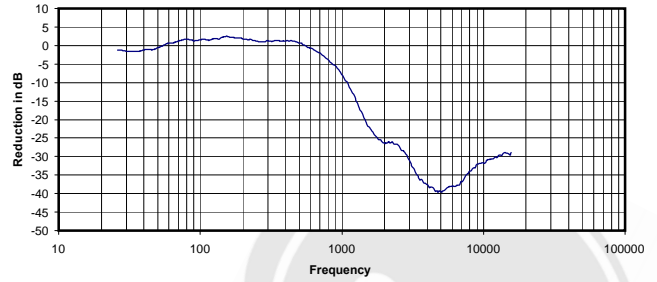
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
19 Ohms
0.08 mW
-16 dB

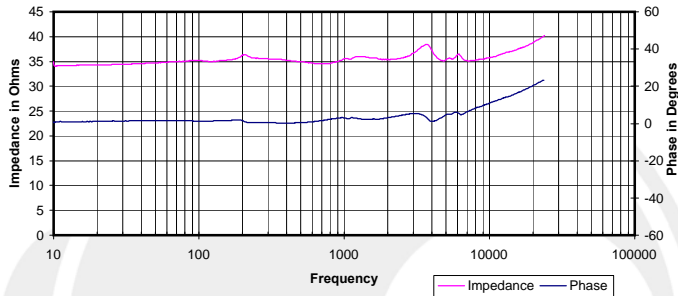
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



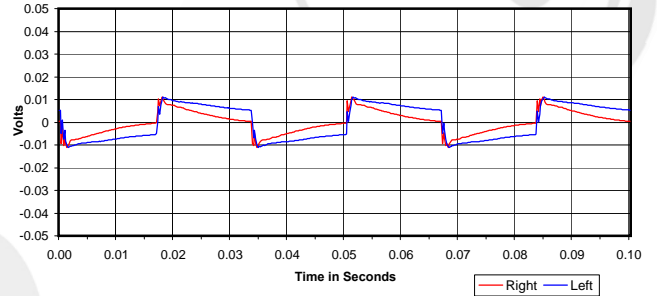
Isolation
Attenuation of External Sound vs. Frequency



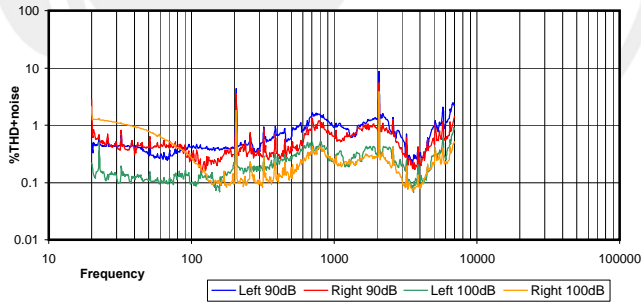
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



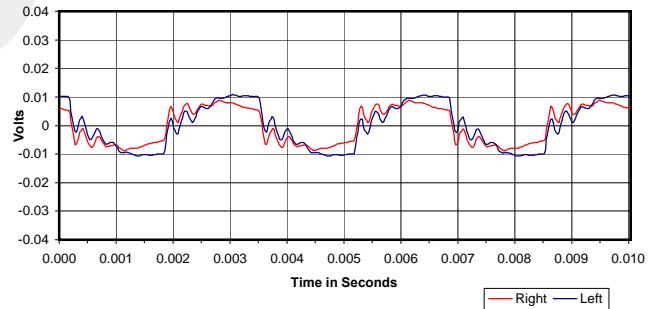
30 Hz Square Wave



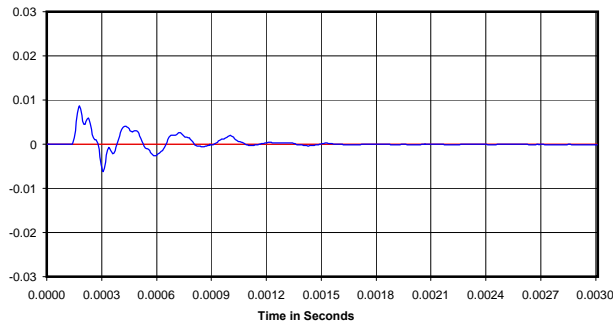
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



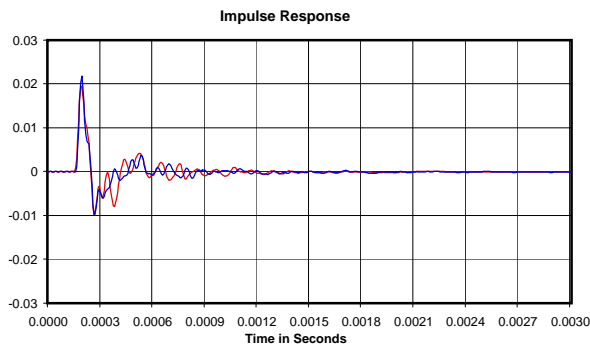
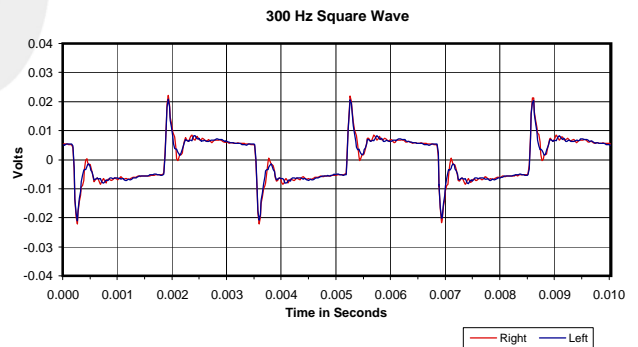
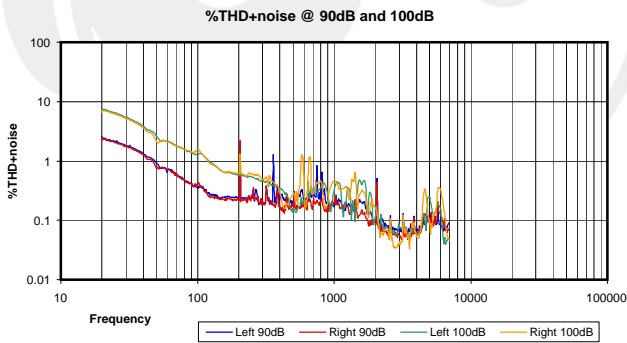
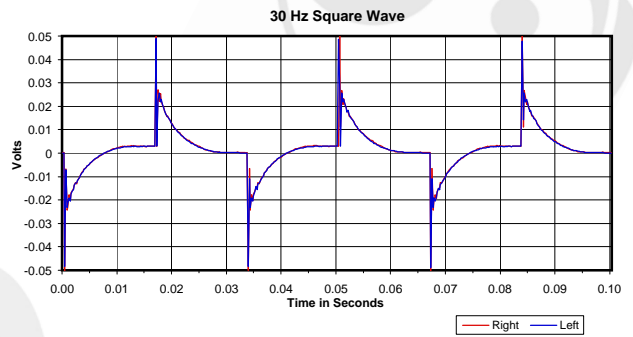
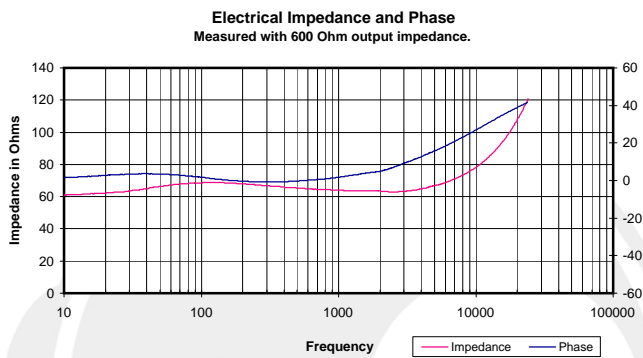
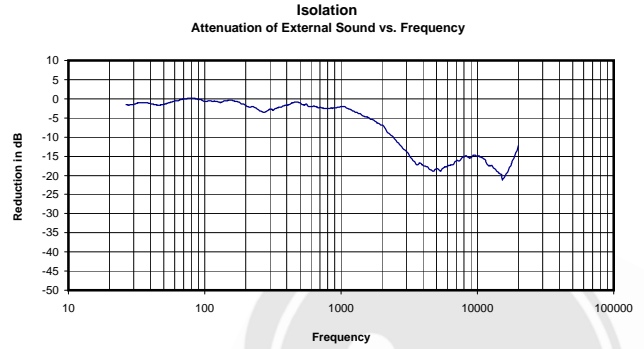
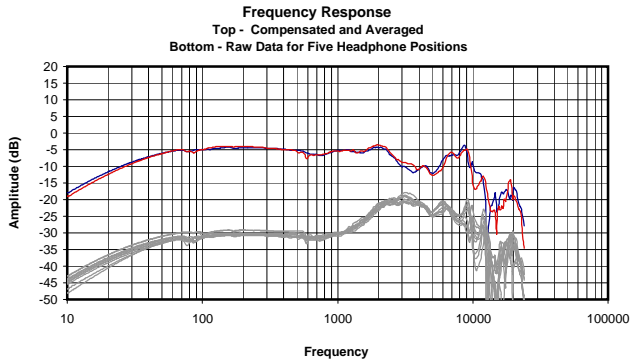
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
35 Ohms
0.01 mW
-12 dB



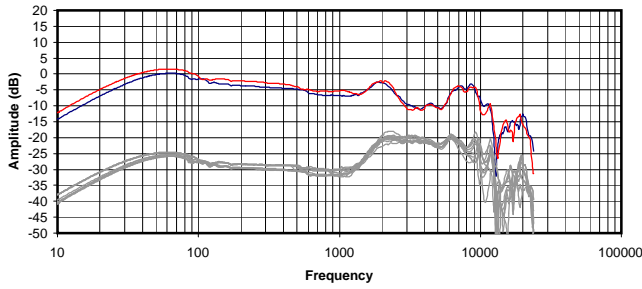


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

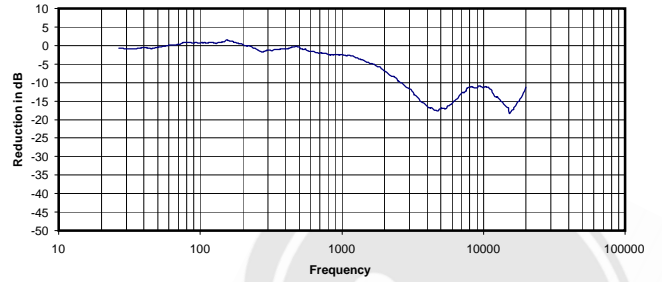
0.301 Vrms
64 Ohms
1.42 mW
-7 dB



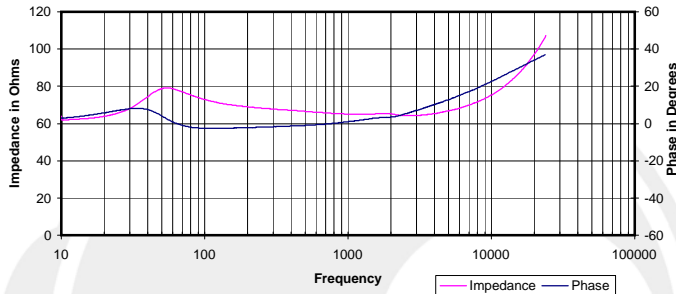
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



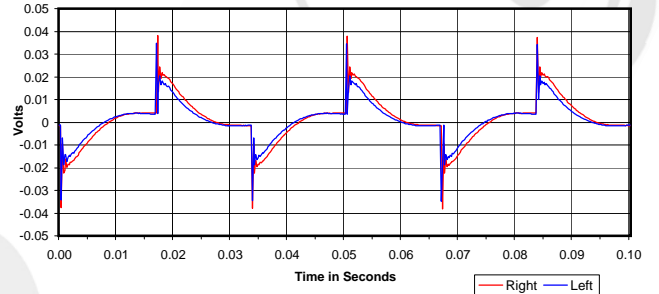
Isolation
 Attenuation of External Sound vs. Frequency



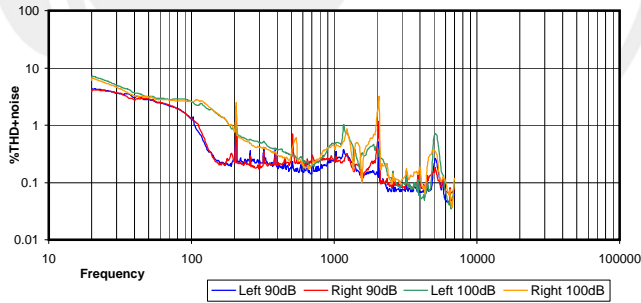
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



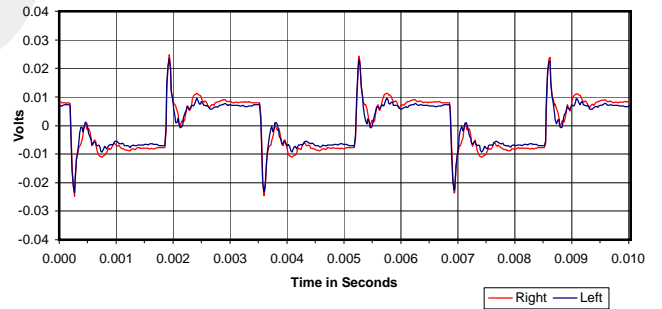
30 Hz Square Wave



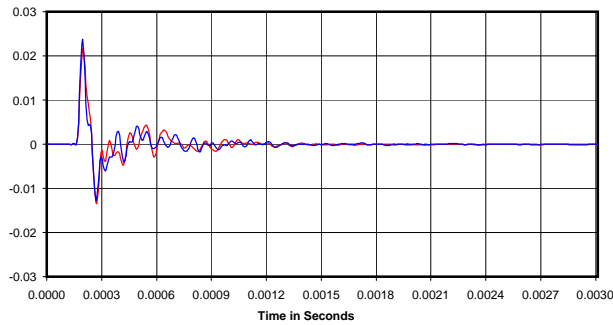
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

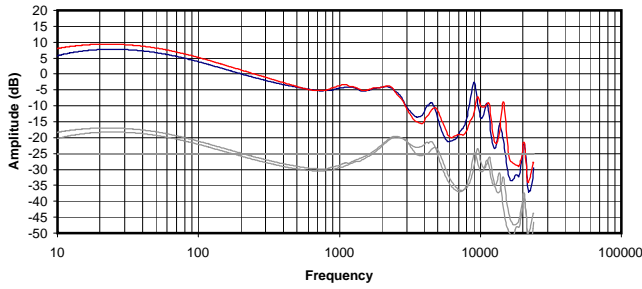


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

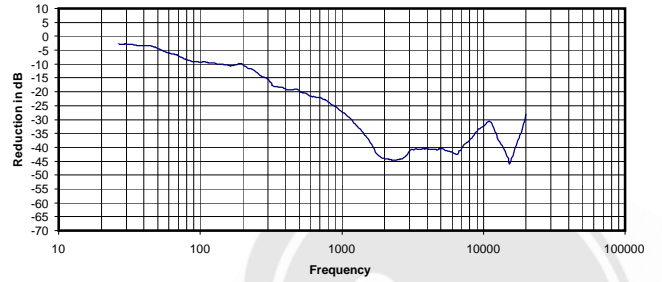
0.393 Vrms
 65 Ohms
 2.37 mW
 -6 dBr



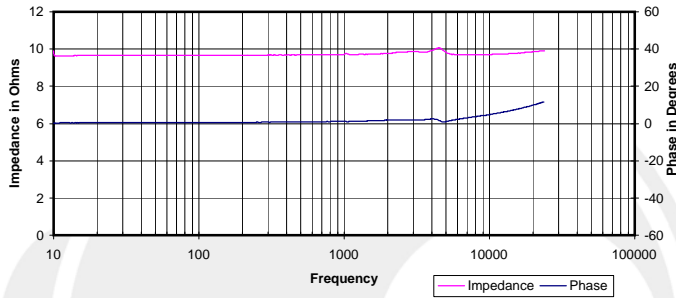
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



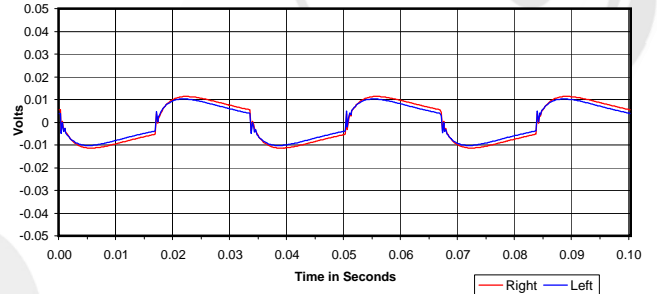
Isolation
Attenuation of External Sound vs. Frequency



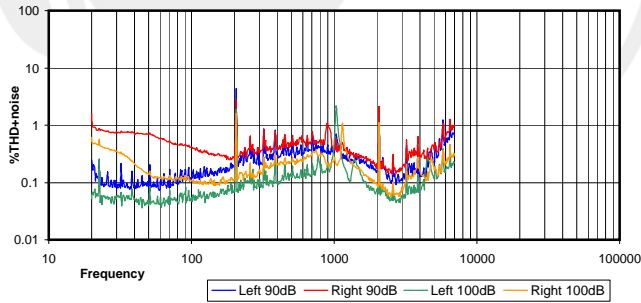
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



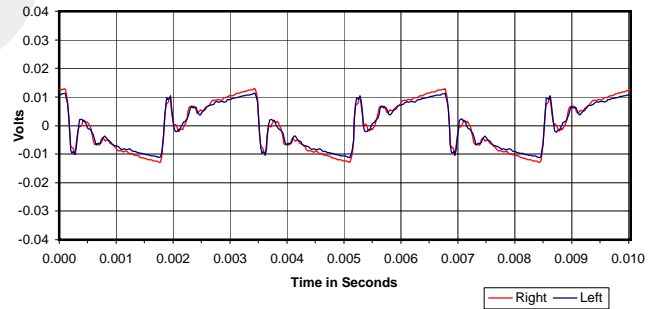
30 Hz Square Wave



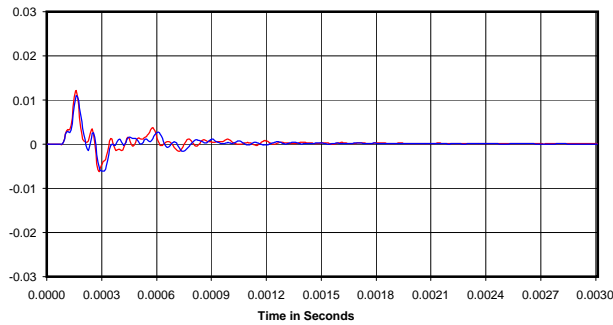
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



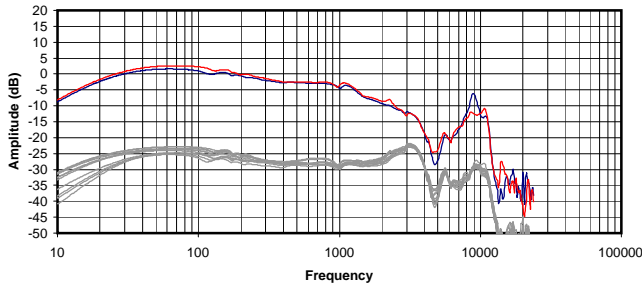
Impulse Response



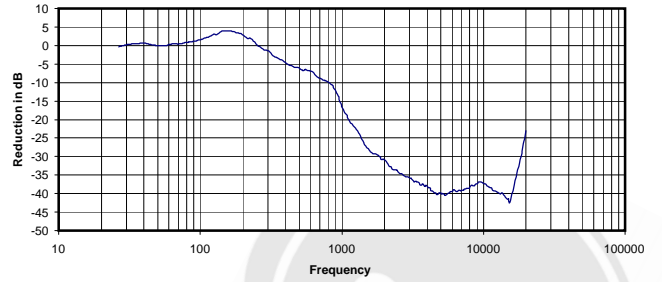
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
10 Ohms
0.09 mW
-28 dB

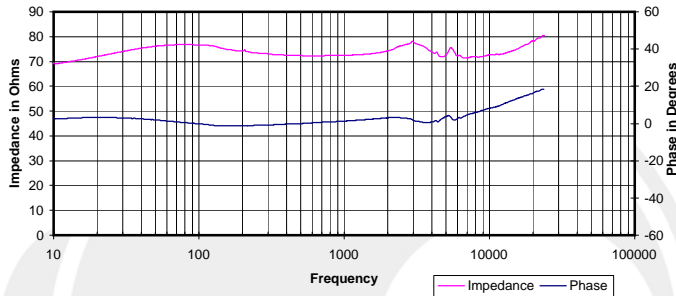
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



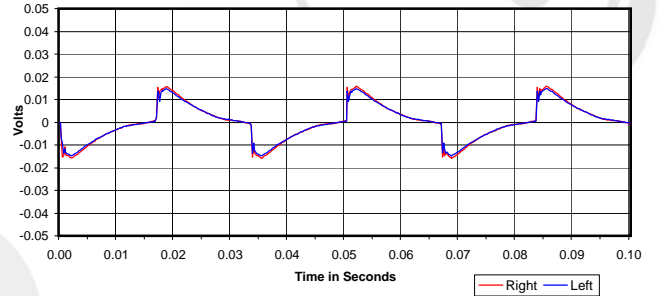
Isolation
 Attenuation of External Sound vs. Frequency



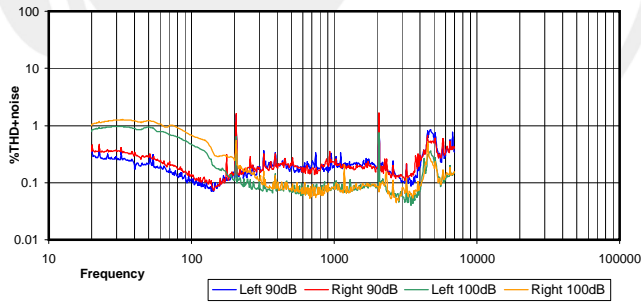
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



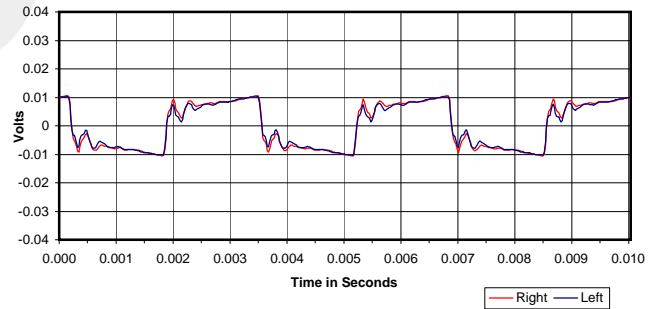
30 Hz Square Wave



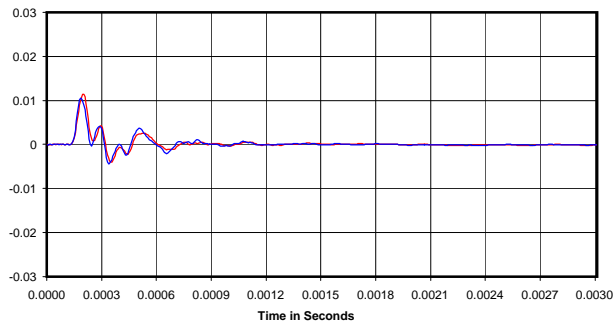
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

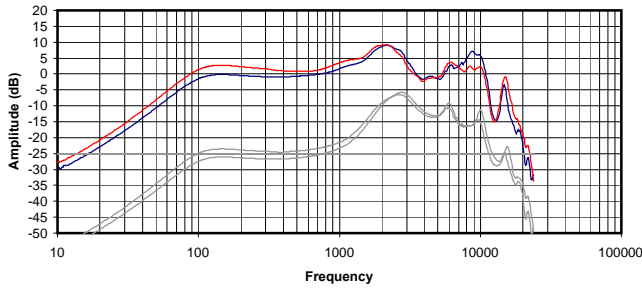


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

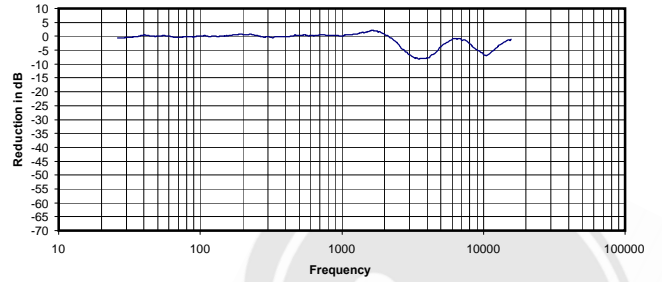
0.043 Vrms
 72 Ohms
 0.03 mW
 -18 dB



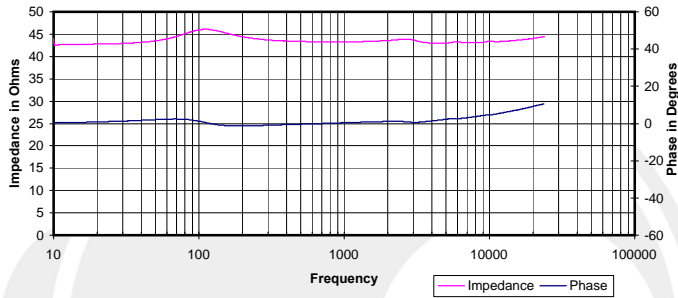
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



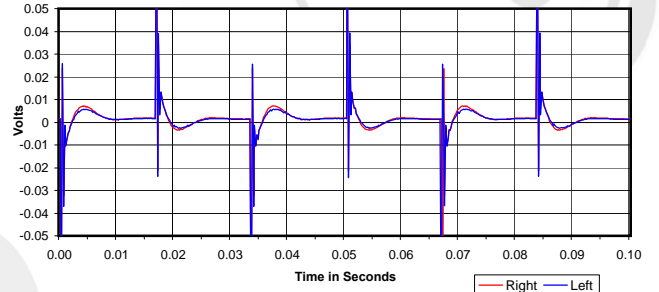
Isolation
Attenuation of External Sound vs. Frequency



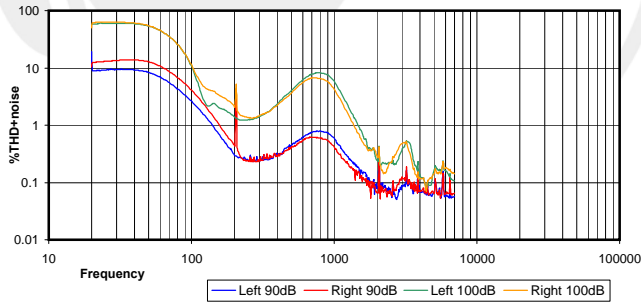
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



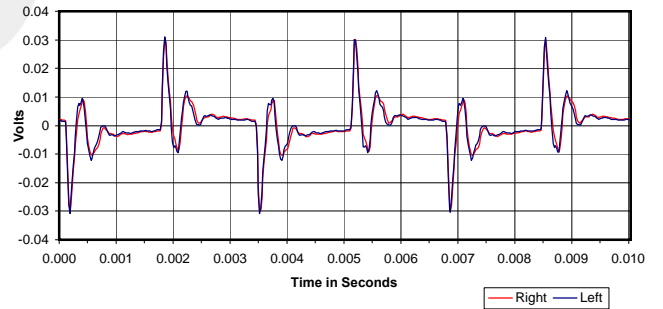
30 Hz Square Wave



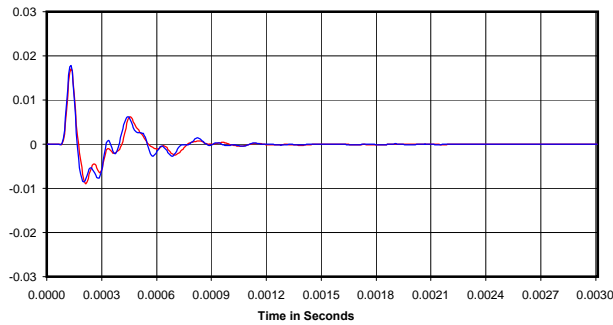
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

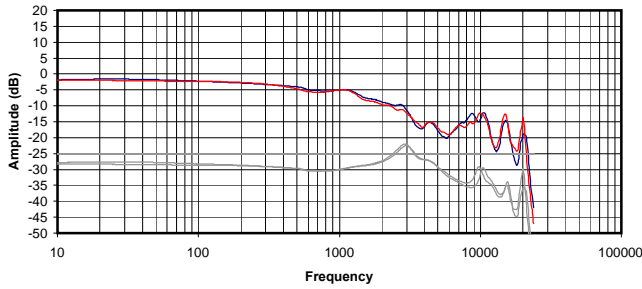


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

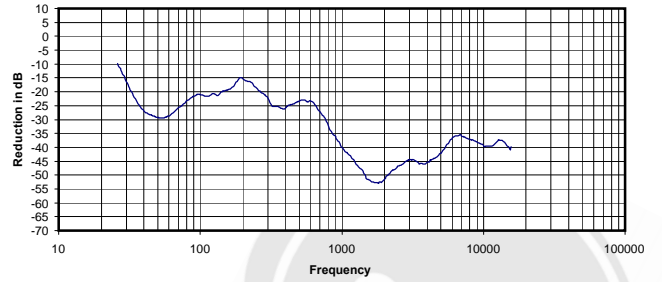
0.091 Vrms
43 Ohms
0.19 mW
-1 dB



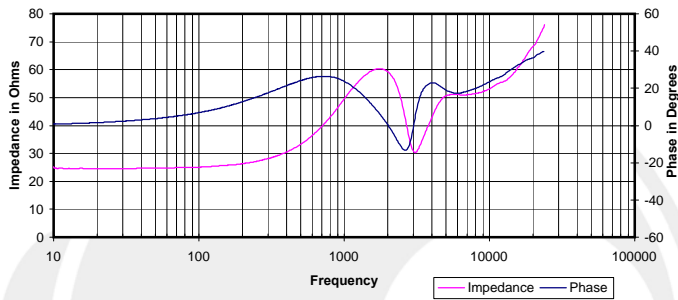
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



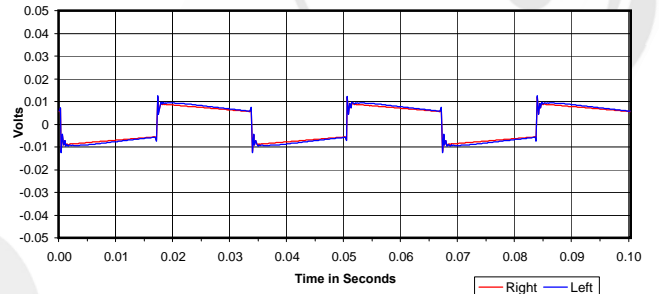
Isolation
Attenuation of External Sound vs. Frequency



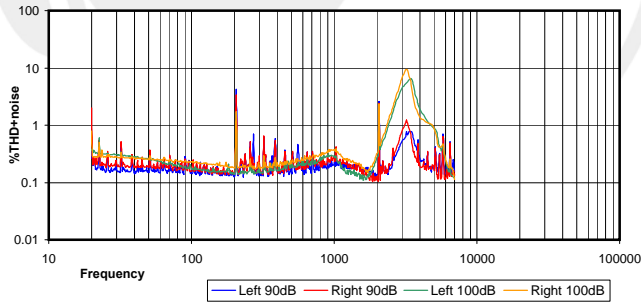
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



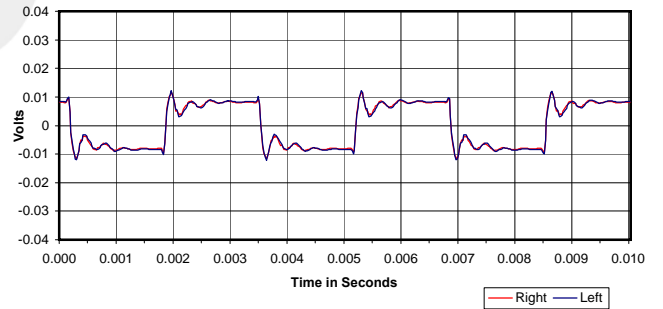
30 Hz Square Wave



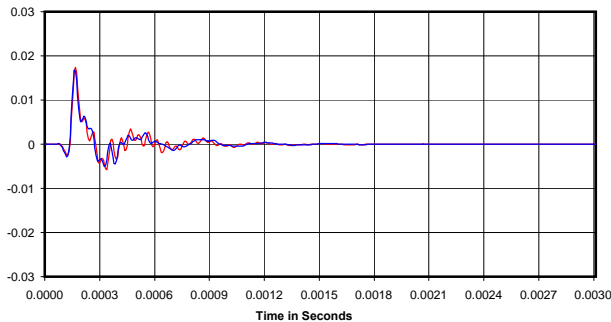
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

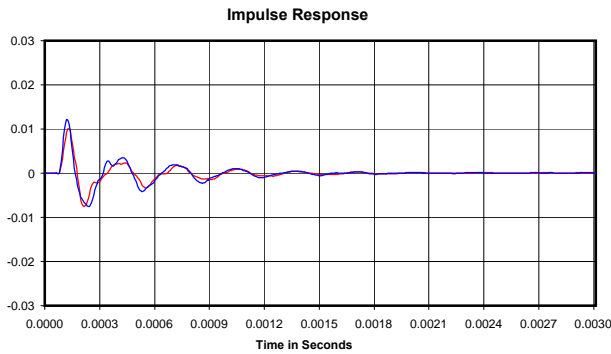
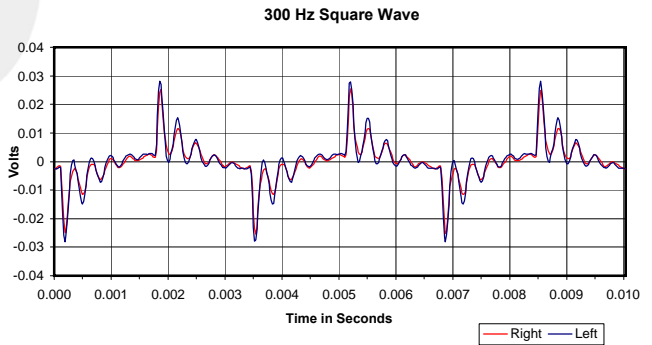
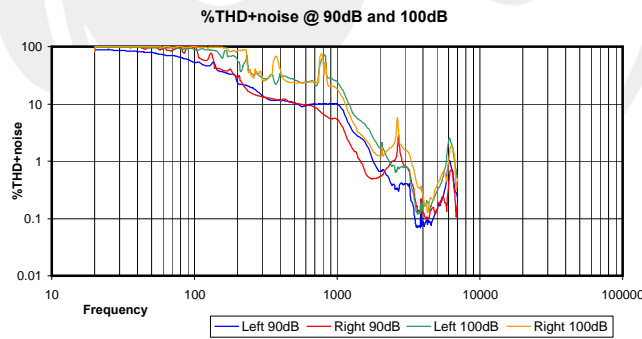
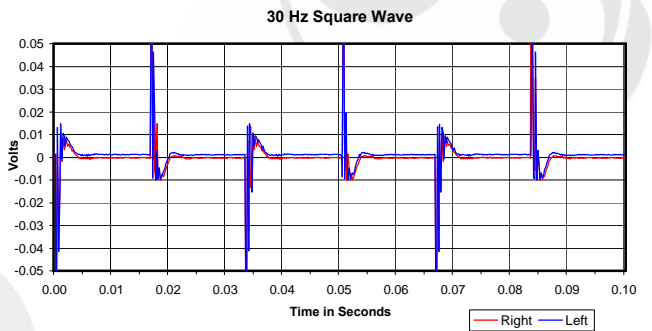
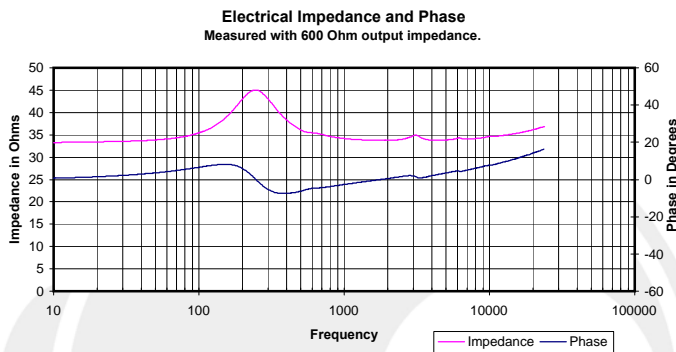
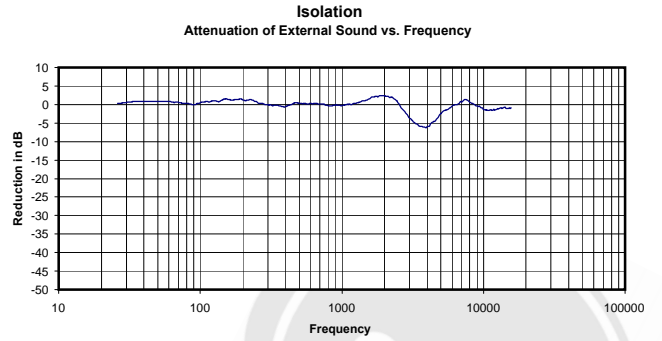
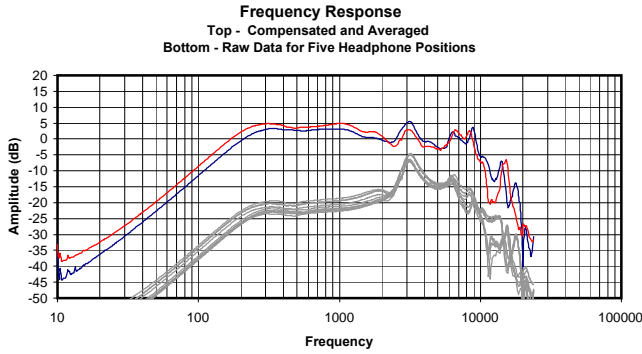


Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.035 Vrms
49 Ohms
0.02 mW
-33 dB

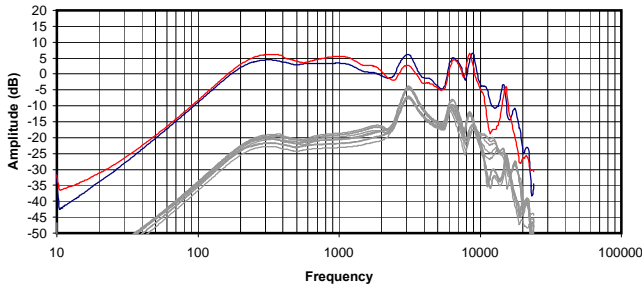


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

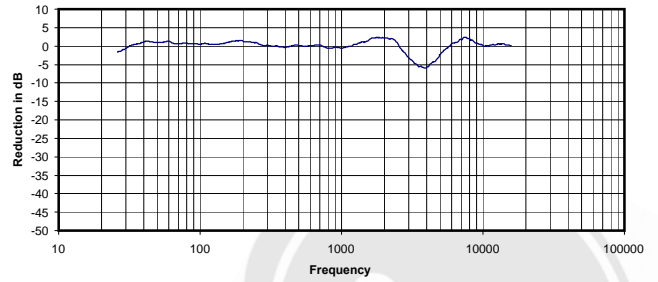
0.077 Vrms
34 Ohms
0.17 mW
0 dBr



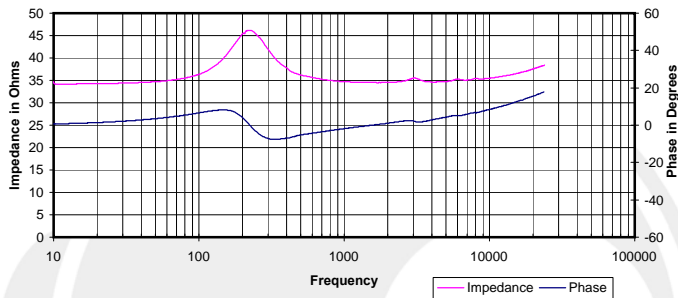
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



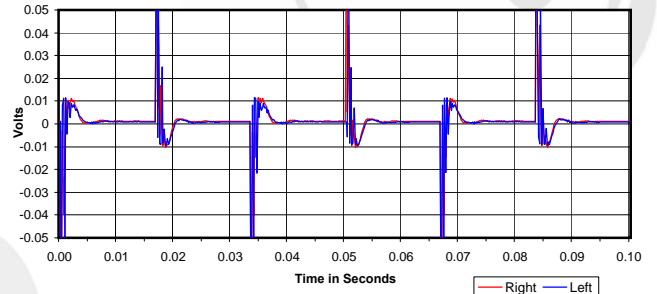
Isolation
 Attenuation of External Sound vs. Frequency



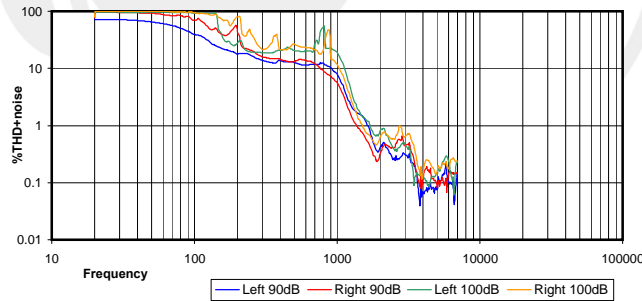
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



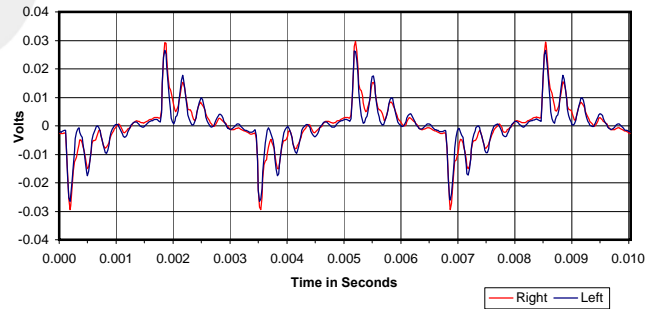
30 Hz Square Wave



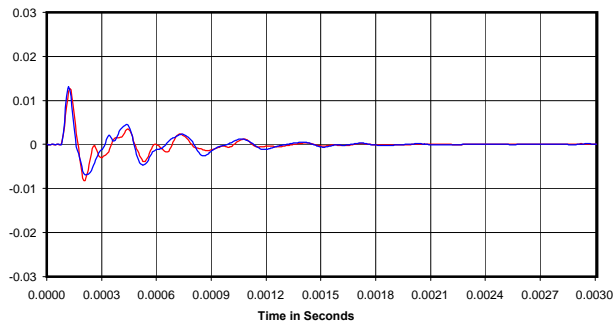
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

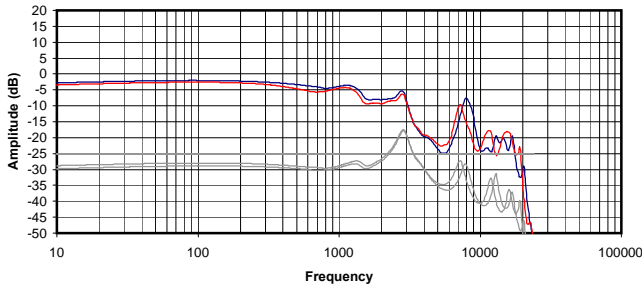


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

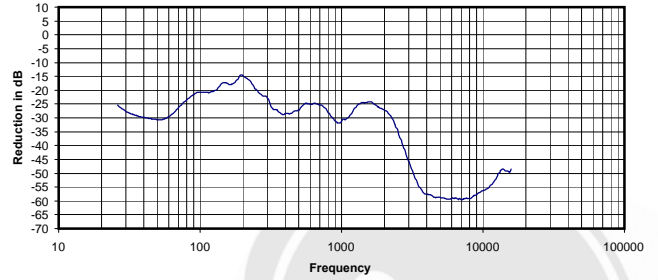
0.086 Vrms
 35 Ohms
 0.21 mW
 0 dB



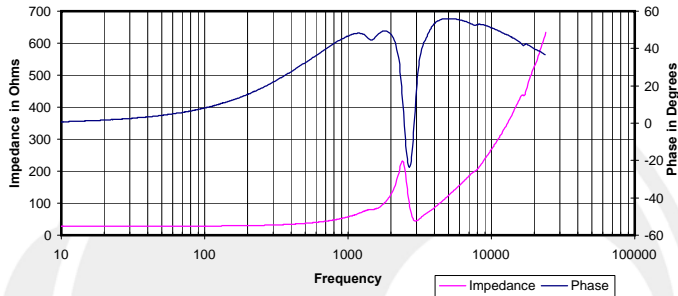
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



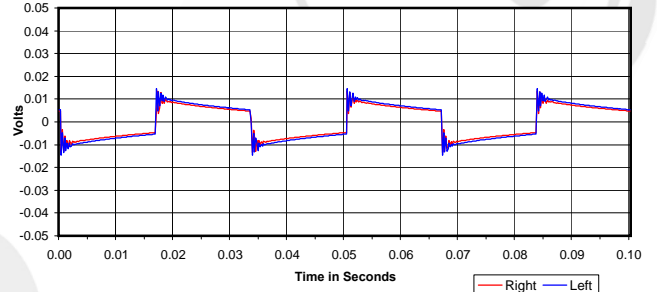
Isolation
Attenuation of External Sound vs. Frequency



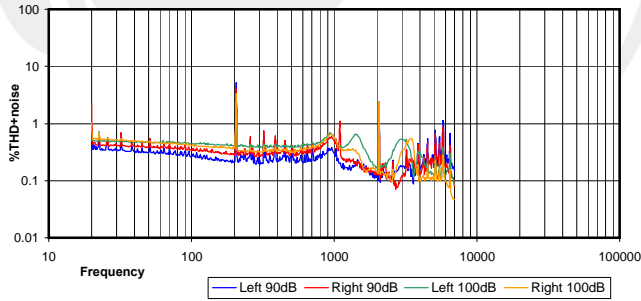
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



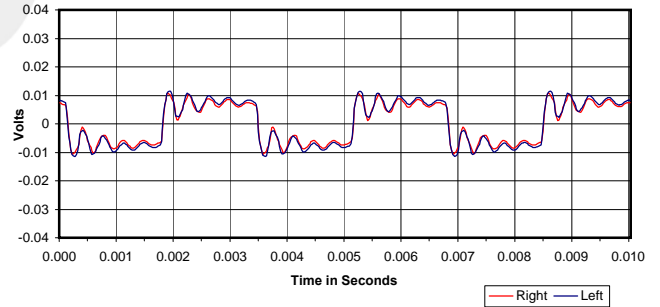
30 Hz Square Wave



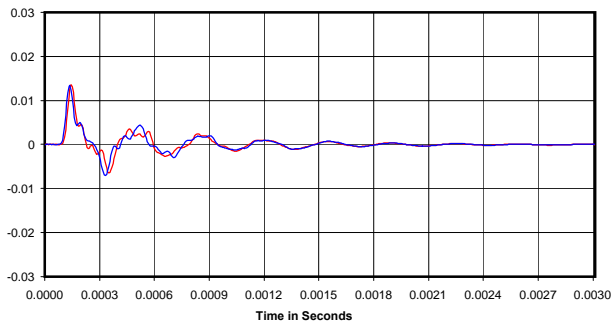
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

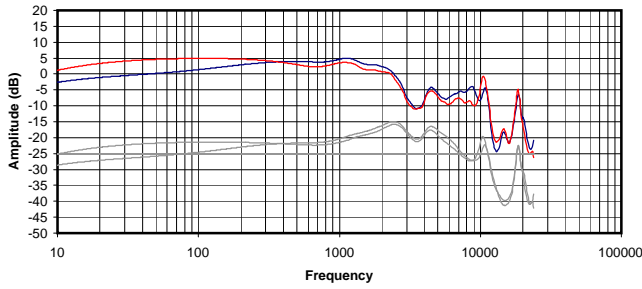


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

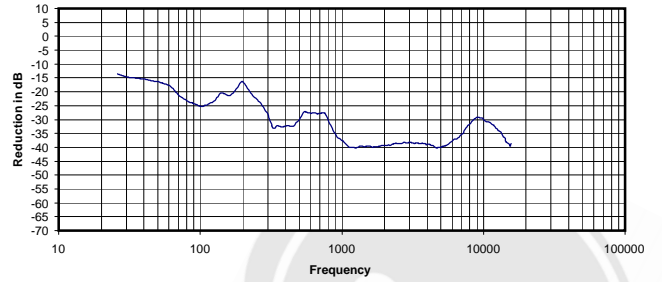
0.019 Vrms
57 Ohms
0.01 mW
-31 dB



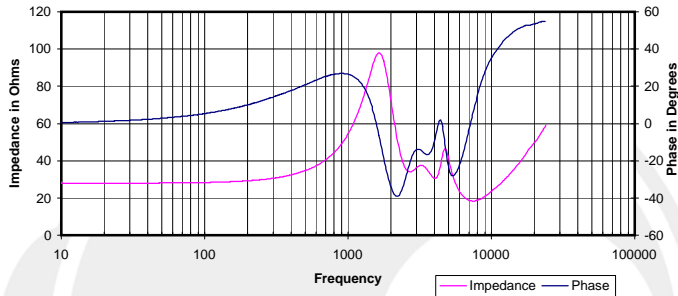
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



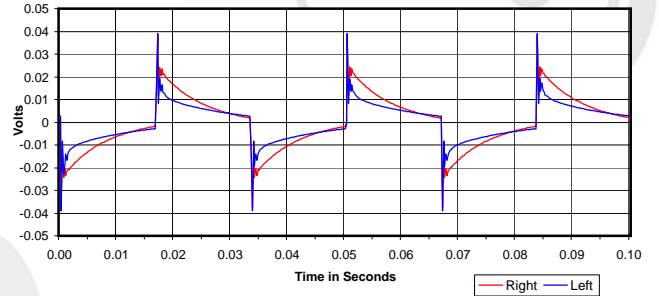
Isolation
Attenuation of External Sound vs. Frequency



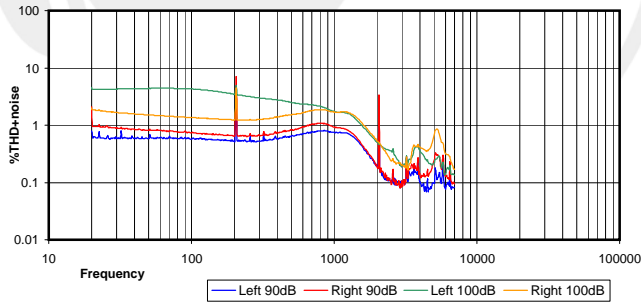
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



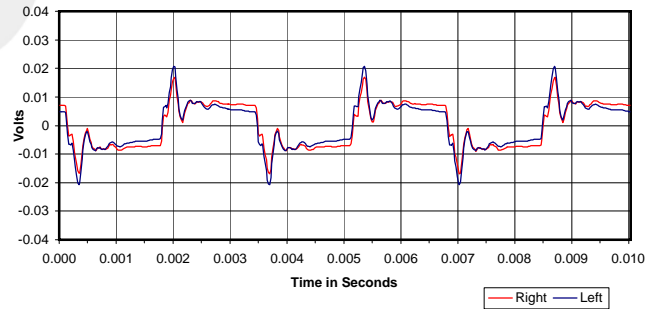
30 Hz Square Wave



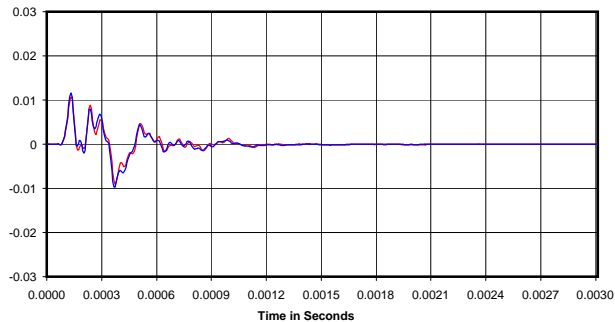
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

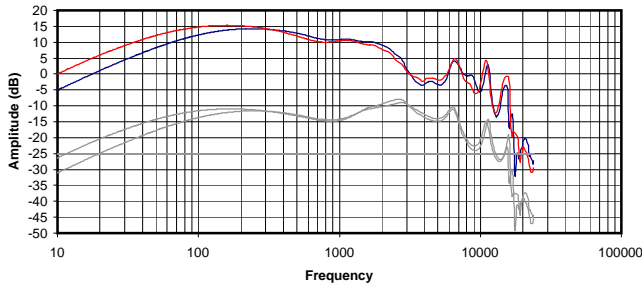


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

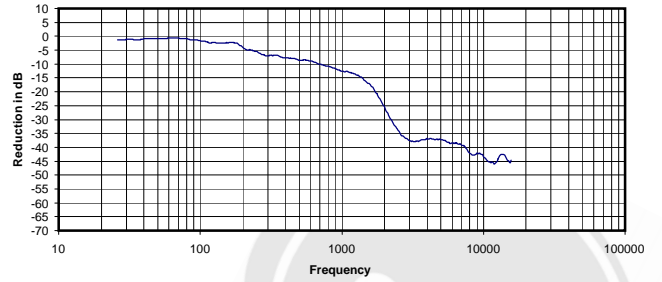
0.027 Vrms
55 Ohms
0.01 mW
-32 dB



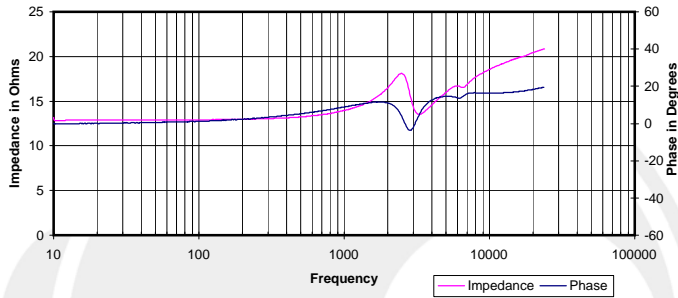
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



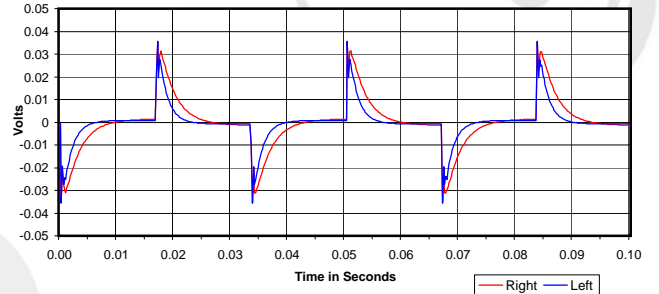
Isolation
Attenuation of External Sound vs. Frequency



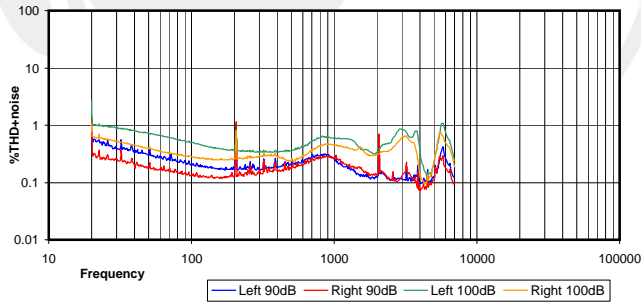
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



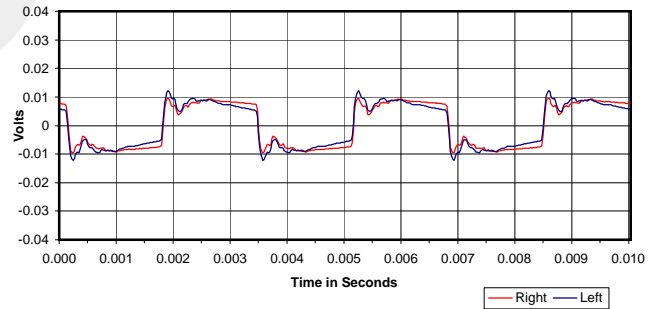
30 Hz Square Wave



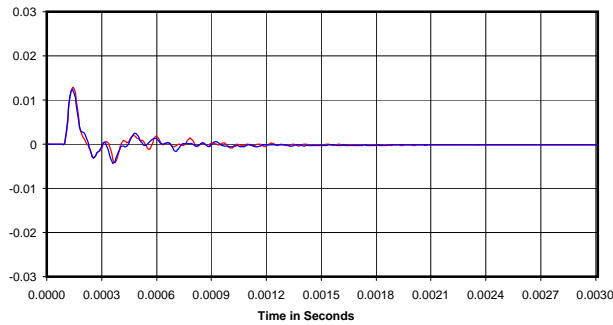
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

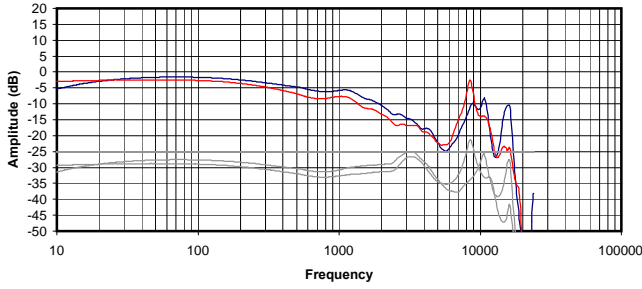


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

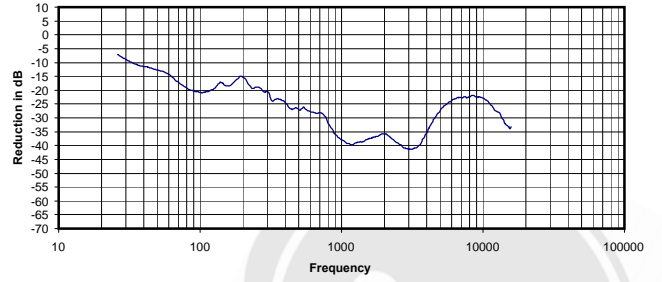
0.022 Vrms
14 Ohms
0.04 mW
-16 dB



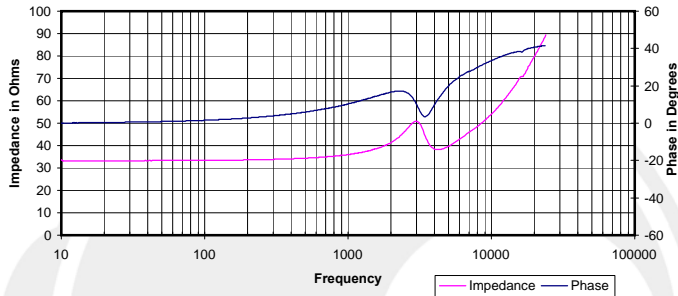
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



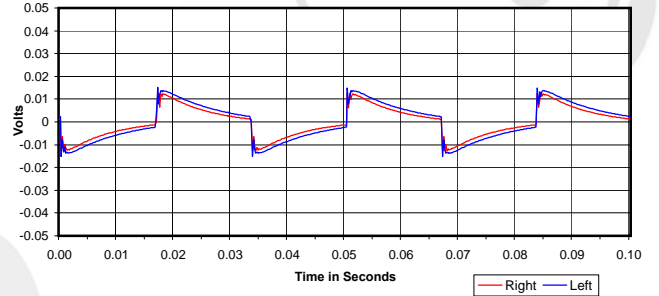
Isolation
Attenuation of External Sound vs. Frequency



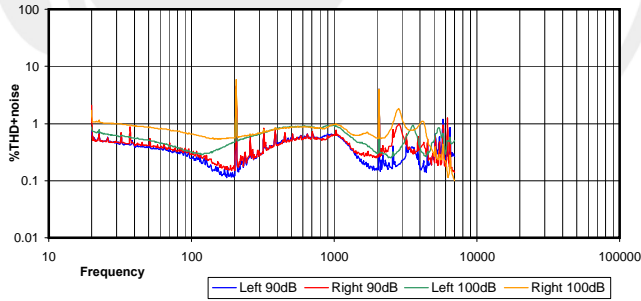
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



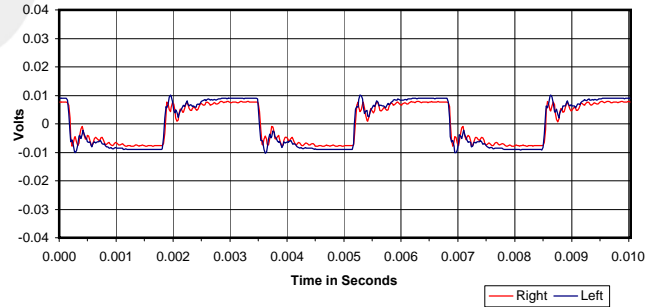
30 Hz Square Wave



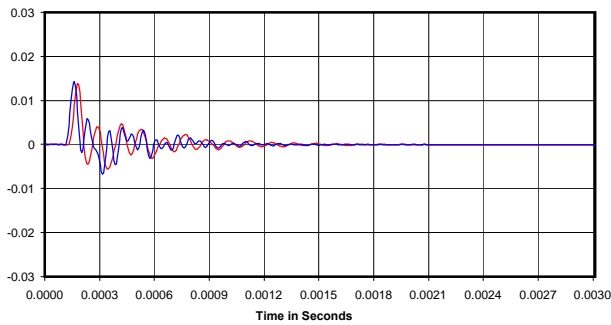
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

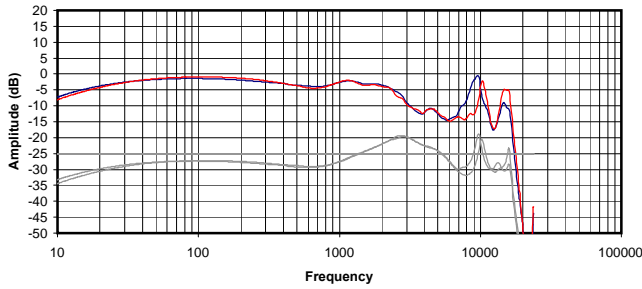


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

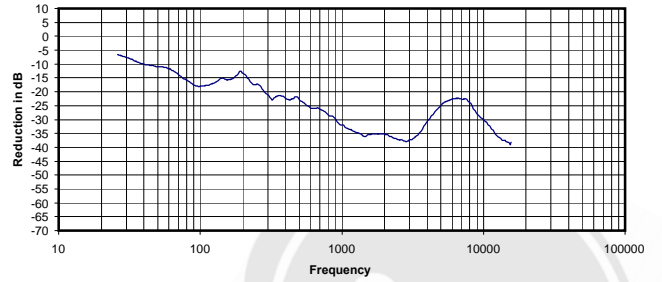
0.050 Vrms
36 Ohms
0.07 mW
-29 dB



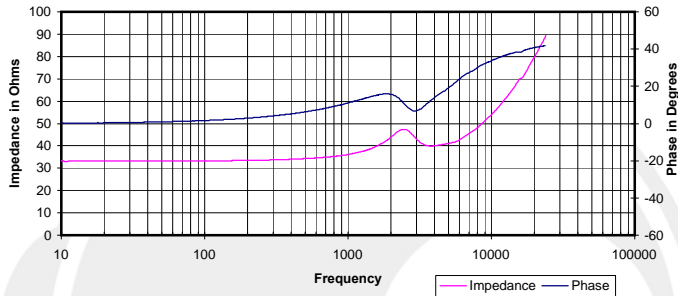
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



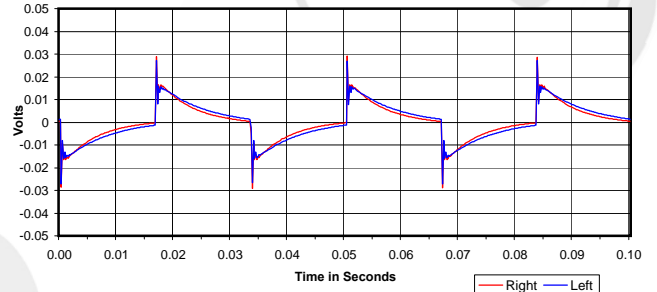
Isolation
Attenuation of External Sound vs. Frequency



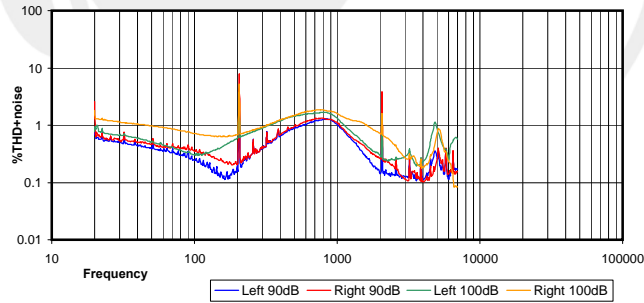
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



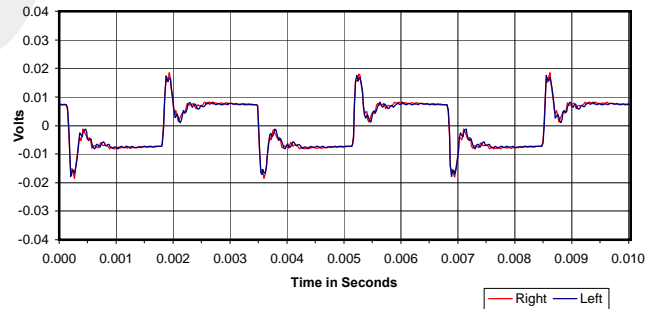
30 Hz Square Wave



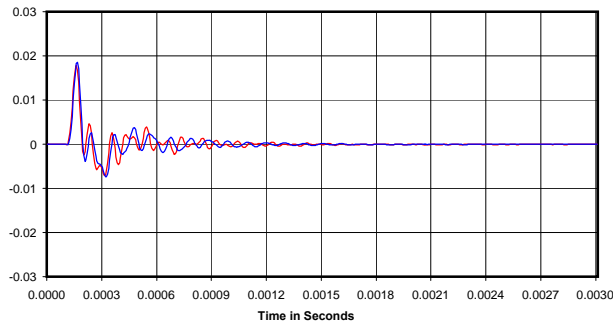
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

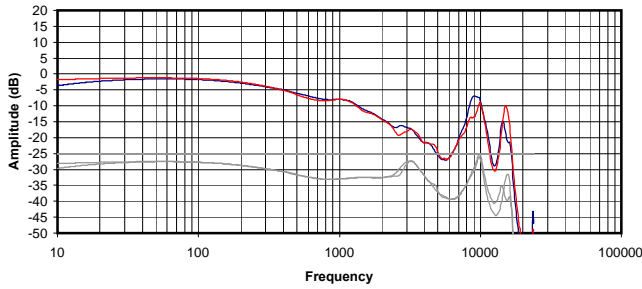


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

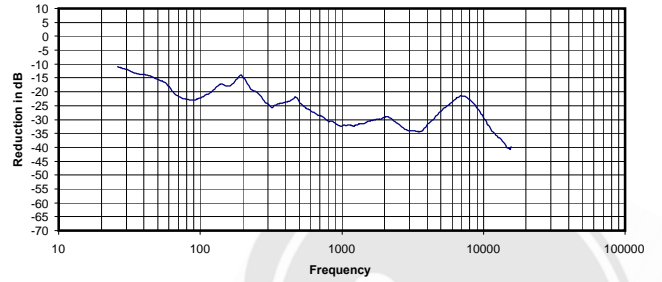
0.036 Vrms
36 Ohms
0.04 mW
-26 dB



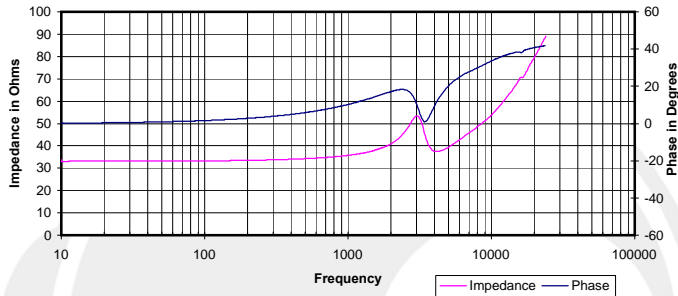
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



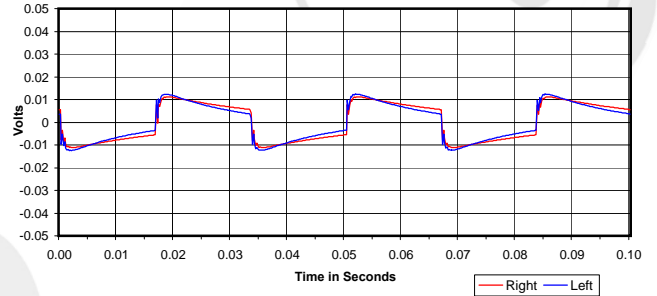
Isolation
Attenuation of External Sound vs. Frequency



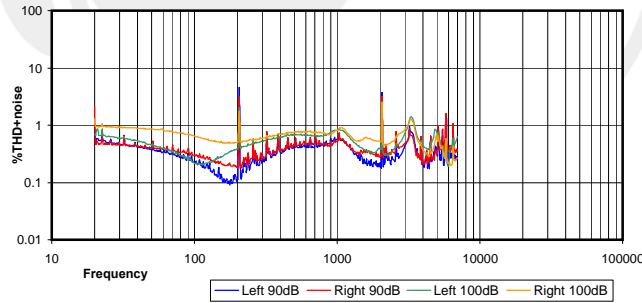
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



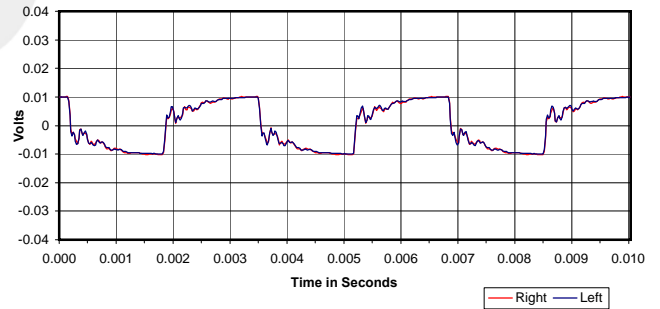
30 Hz Square Wave



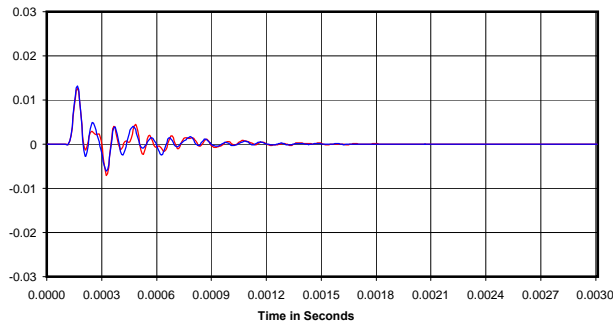
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

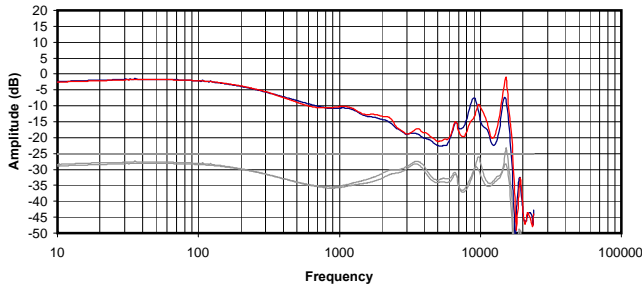


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

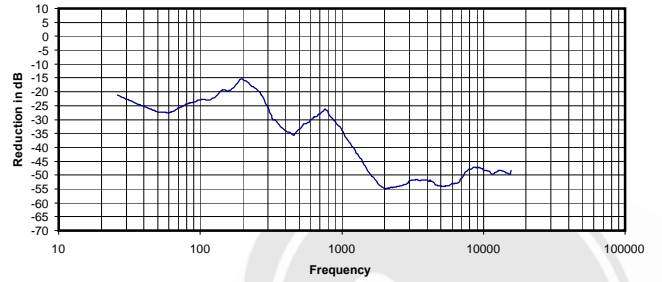
0.067 Vrms
36 Ohms
0.12 mW
-26 dB



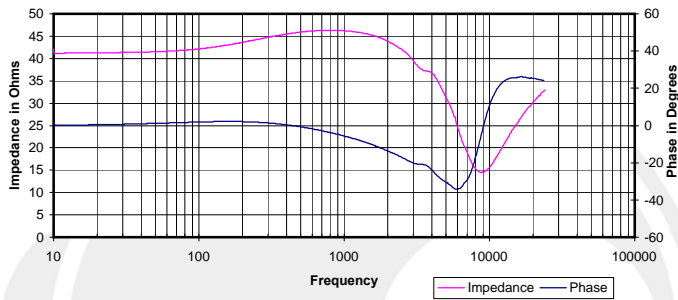
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



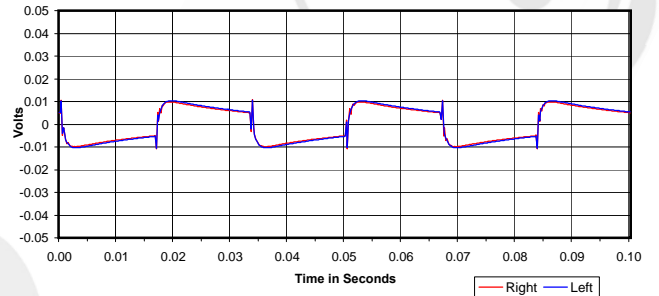
Isolation
Attenuation of External Sound vs. Frequency



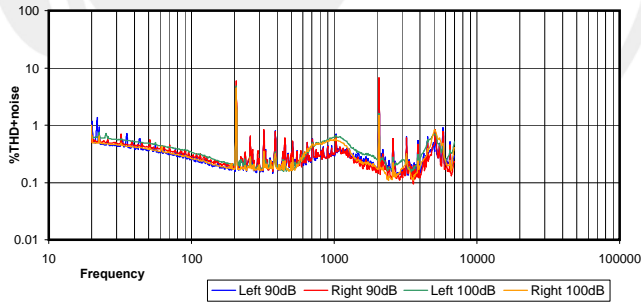
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



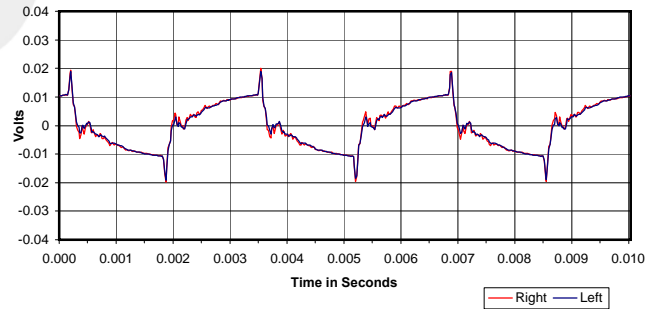
30 Hz Square Wave



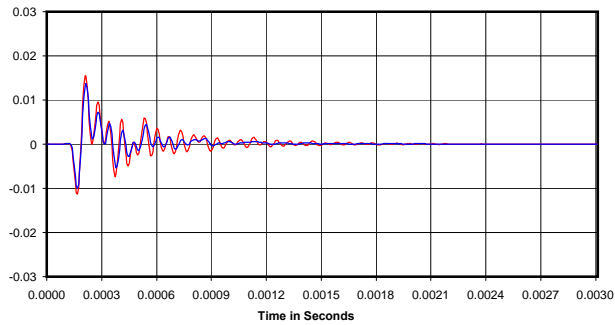
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



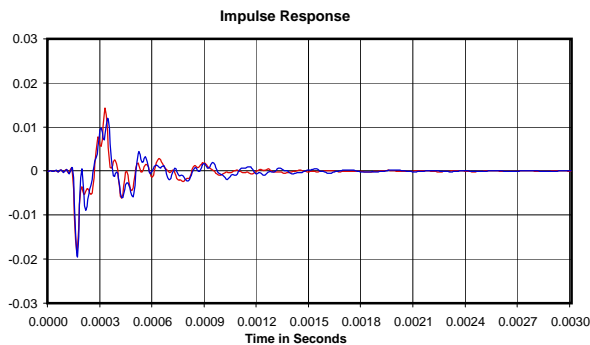
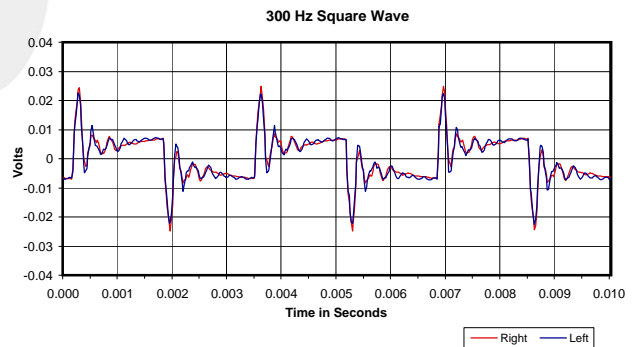
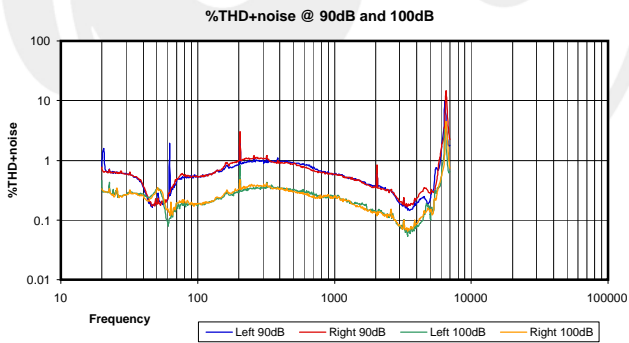
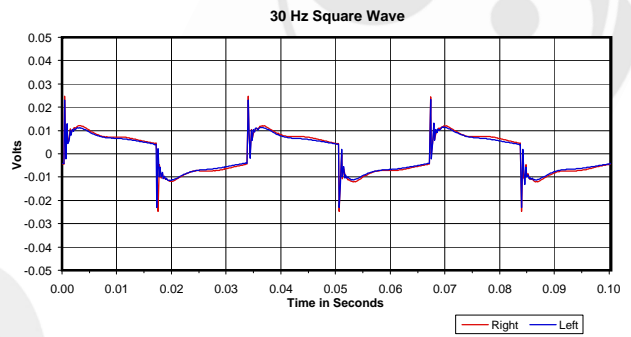
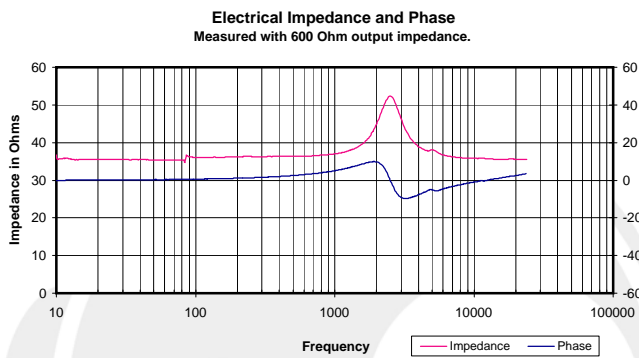
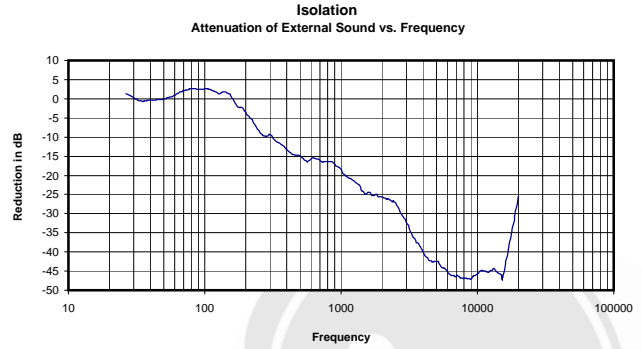
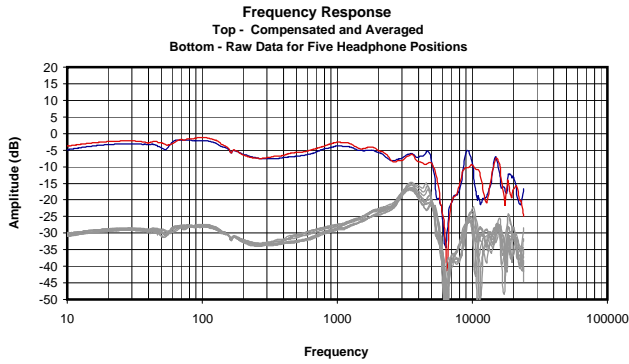
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.065 Vrms
46 Ohms
0.09 mW
-36 dB

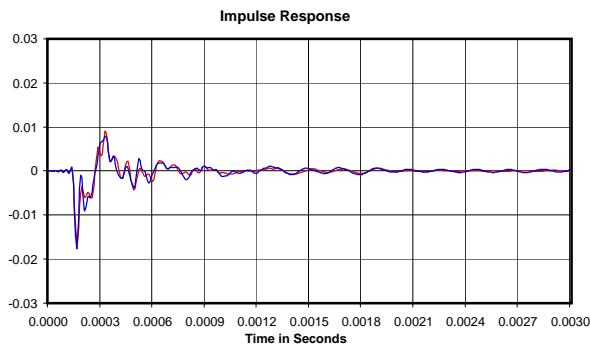
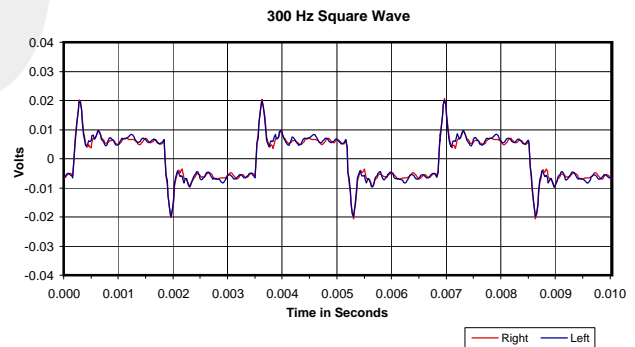
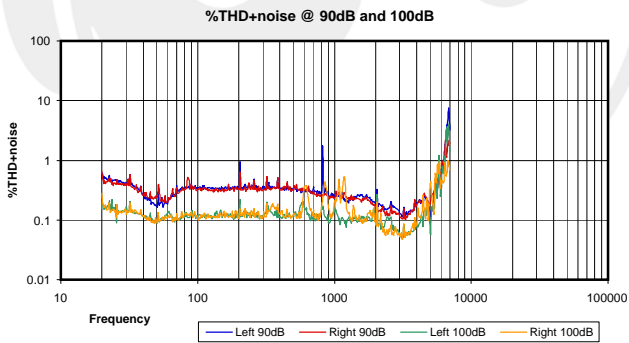
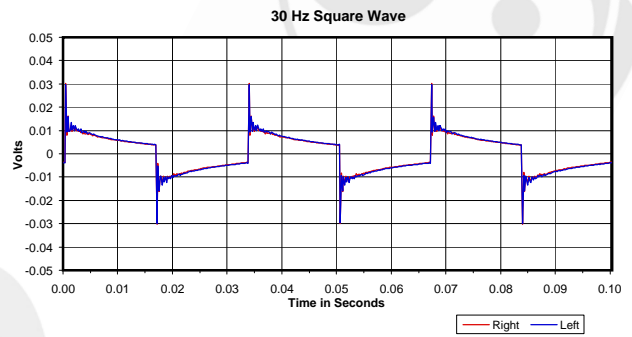
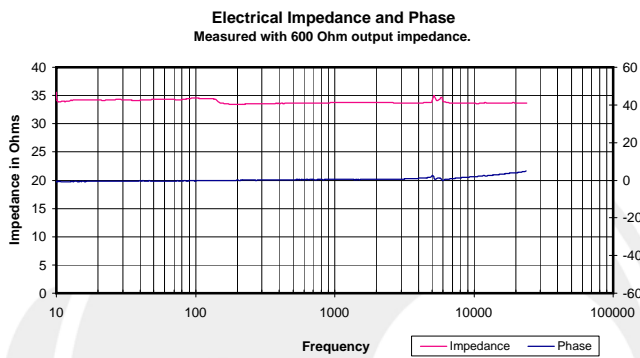
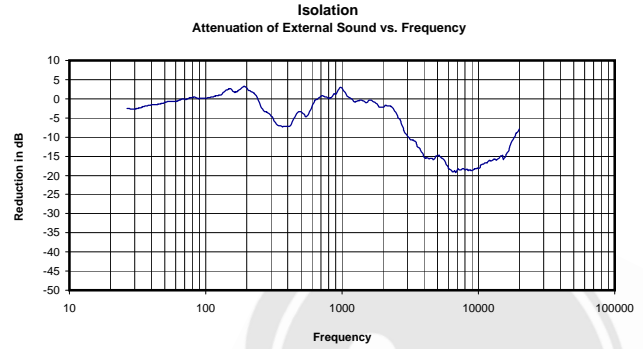
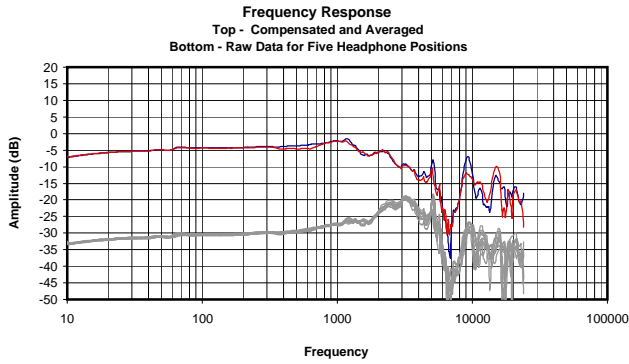




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.112 Vrms
37 Ohms
0.34 mW
-22 dB

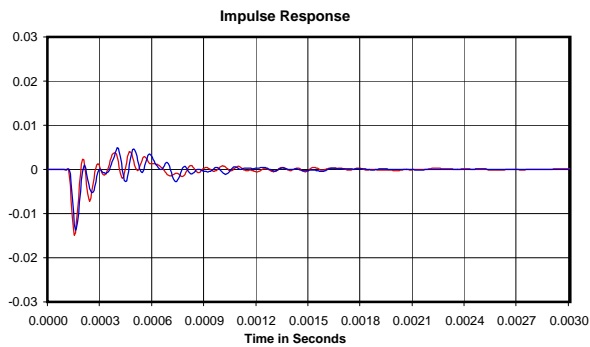
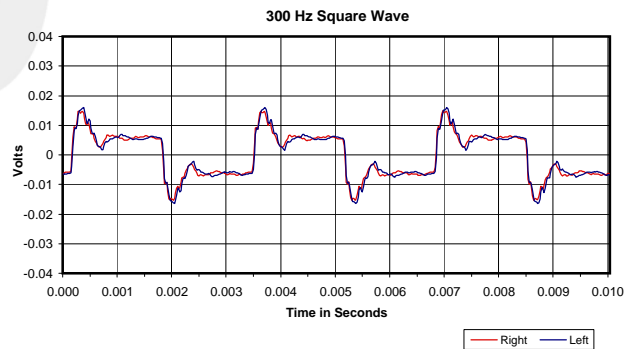
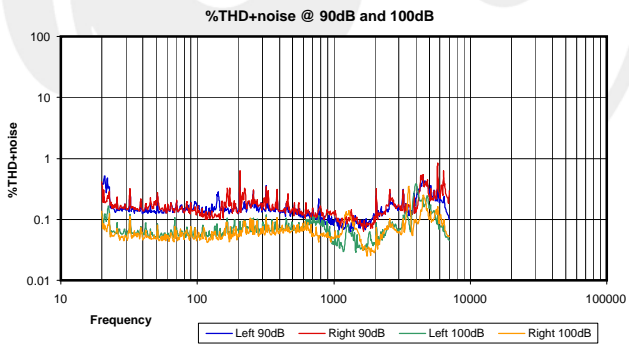
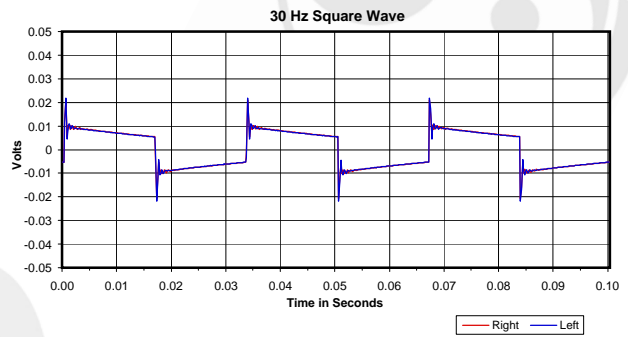
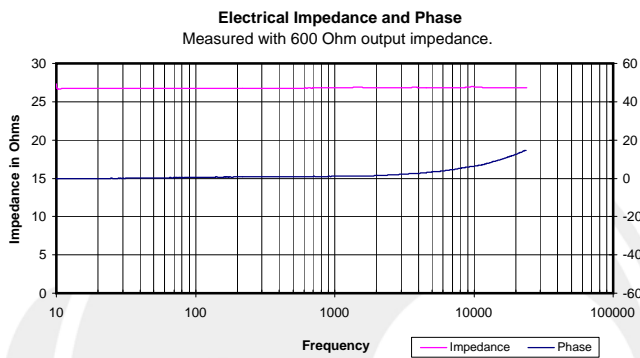
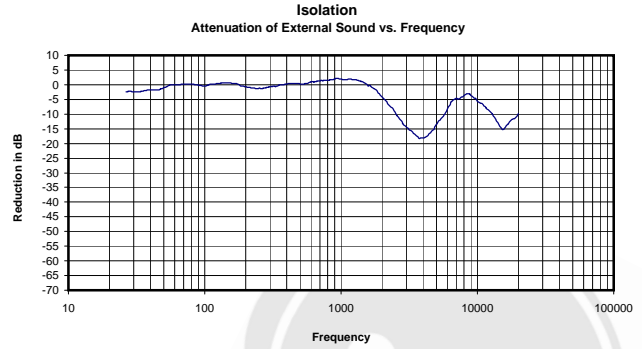
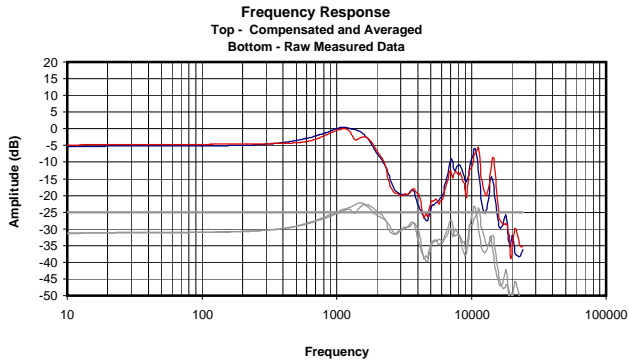




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.068 Vrms
34 Ohms
0.14 mW
-5 dBr



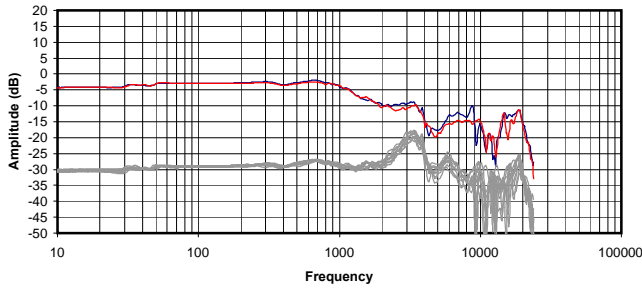


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

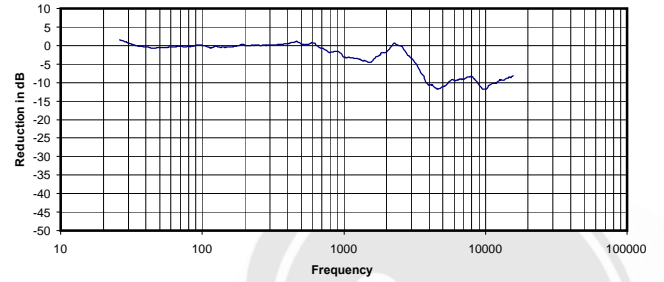
0.018 Vrms
27 Ohms
0.01 mW
-3 dBr



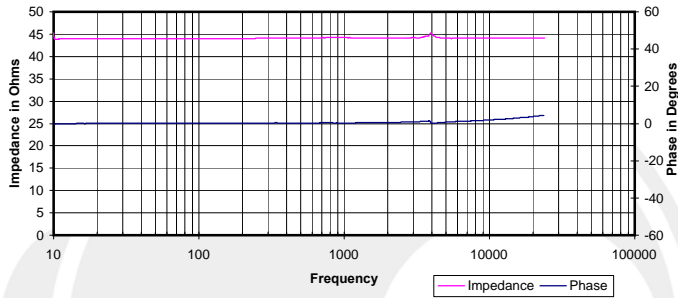
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



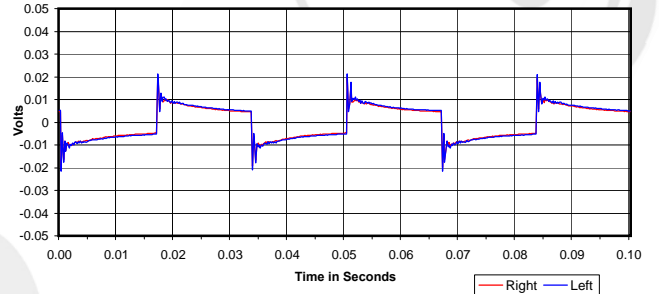
Isolation
 Attenuation of External Sound vs. Frequency



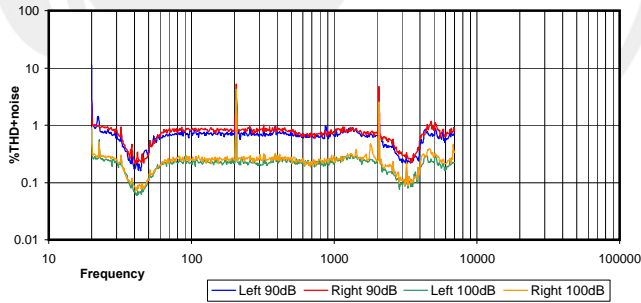
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



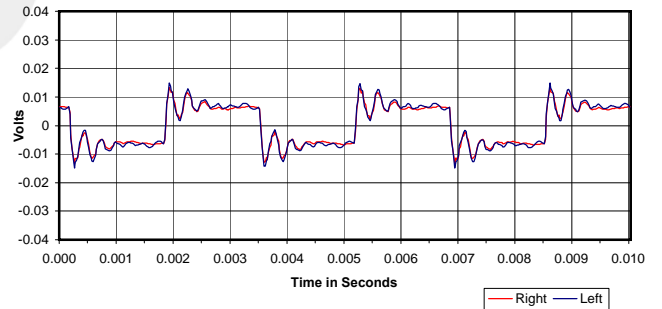
30 Hz Square Wave



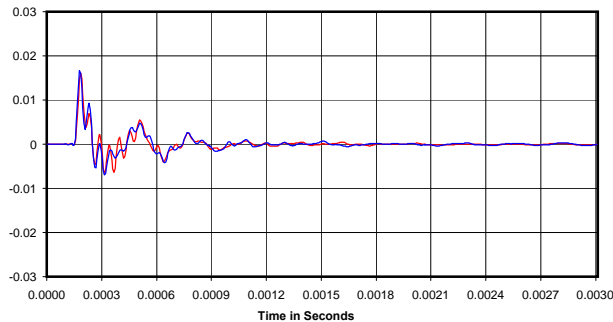
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

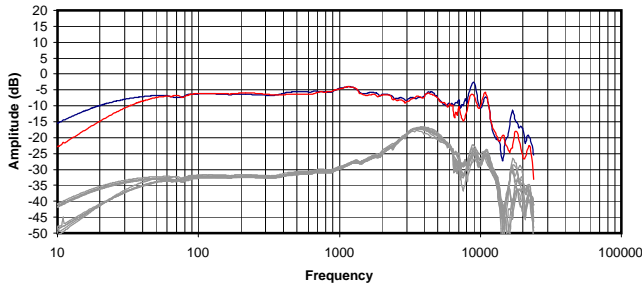


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

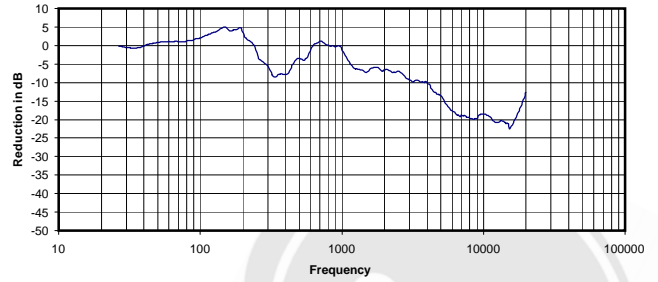
0.160 Vrms
 44 Ohms
 0.58 mW
 -2 dB



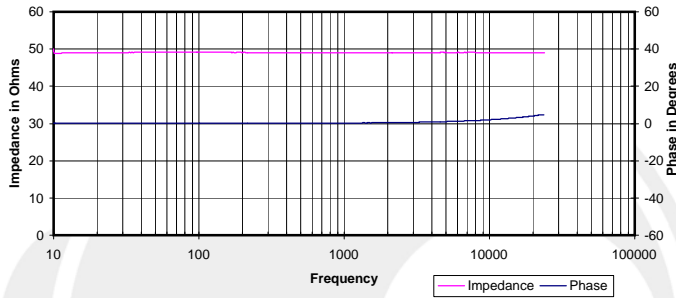
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



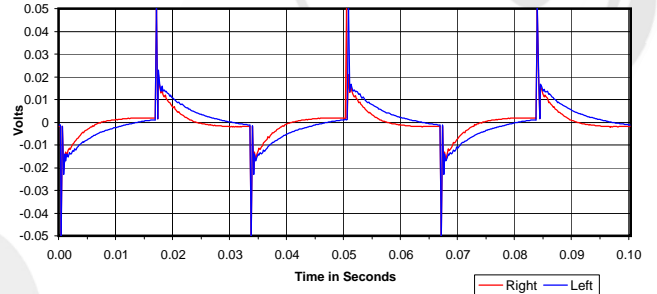
Isolation
Attenuation of External Sound vs. Frequency



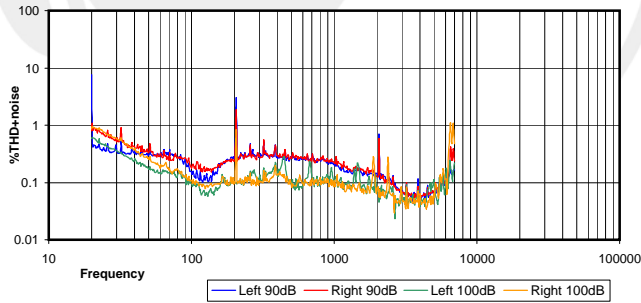
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



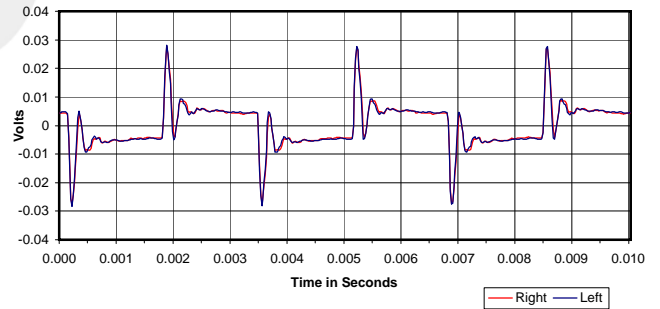
30 Hz Square Wave



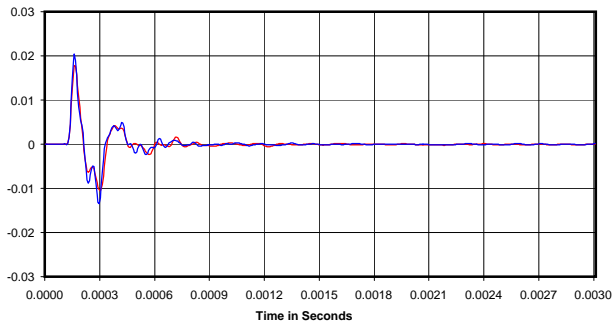
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

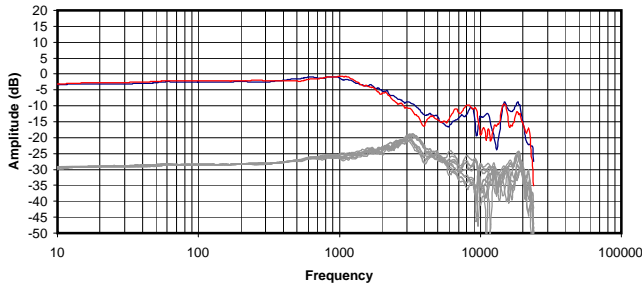


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

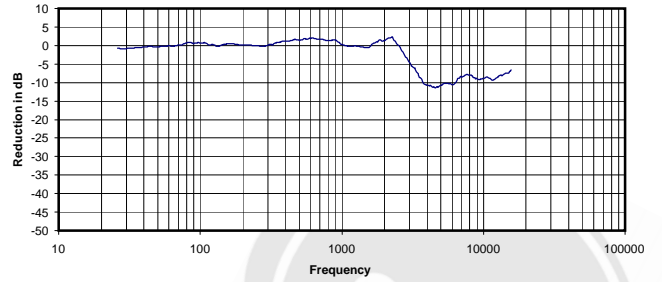
0.310 Vrms
49 Ohms
1.96 mW
-6 dBr



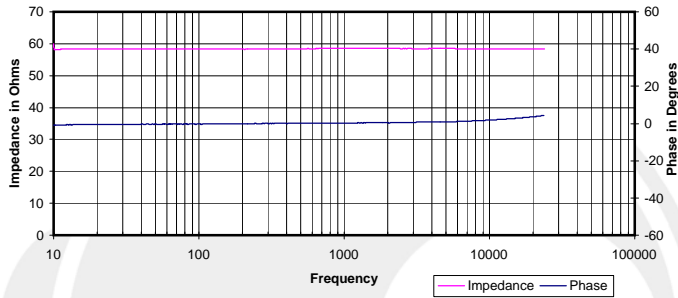
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



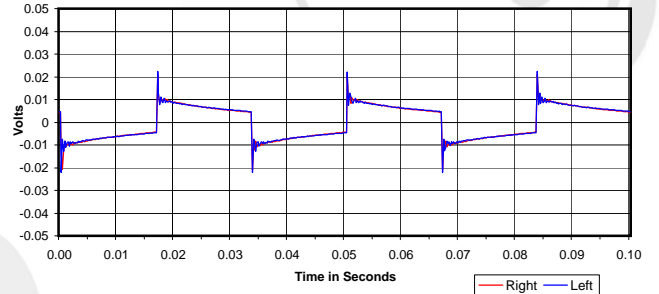
Isolation
 Attenuation of External Sound vs. Frequency



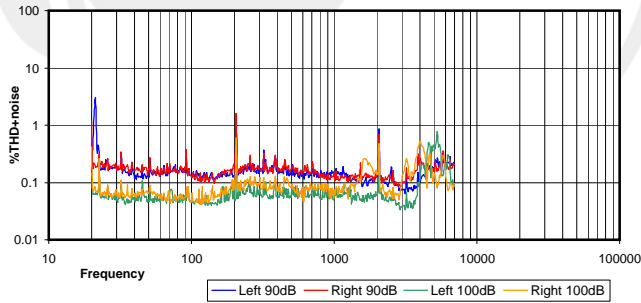
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



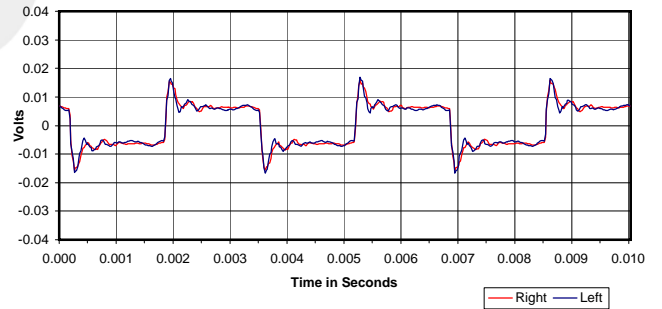
30 Hz Square Wave



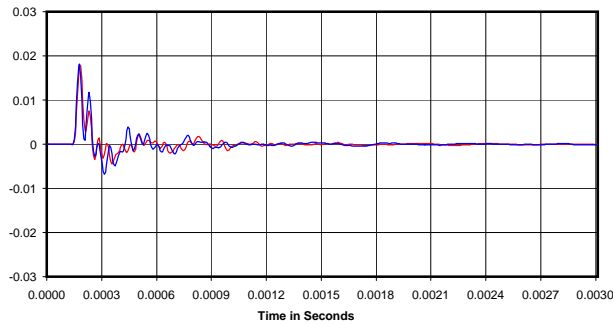
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

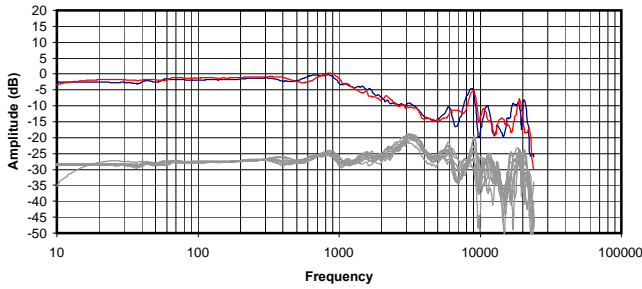


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

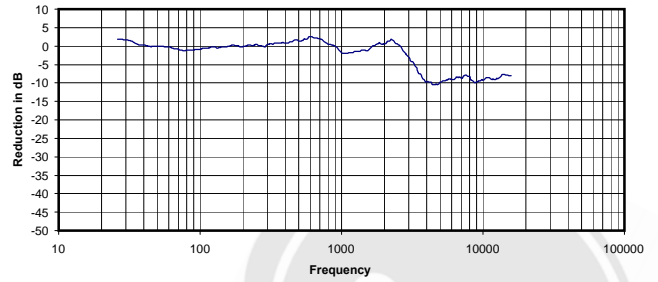
0.170 Vrms
 59 Ohms
 0.50 mW
 -1 dB



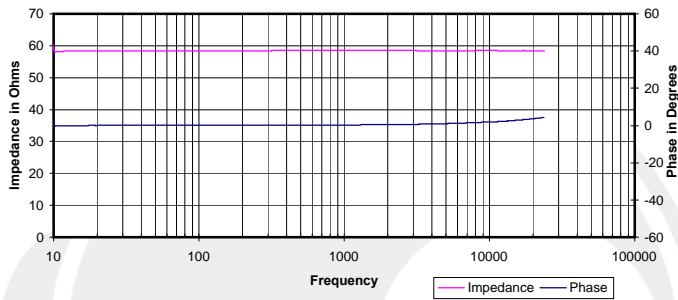
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



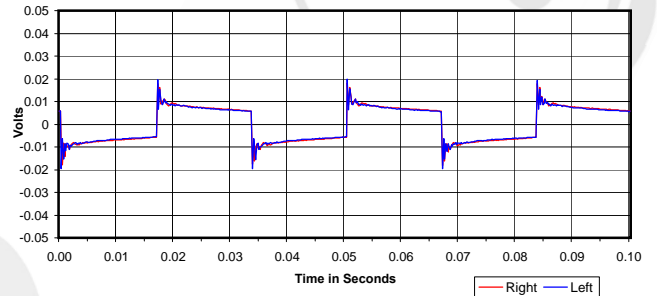
Isolation
 Attenuation of External Sound vs. Frequency



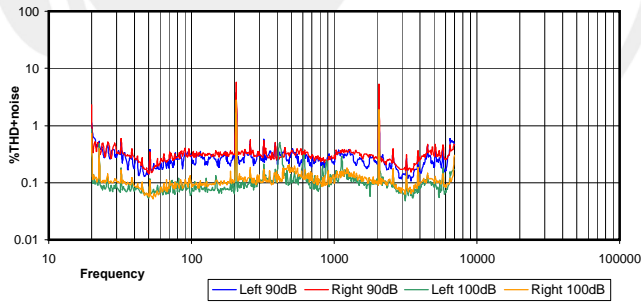
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



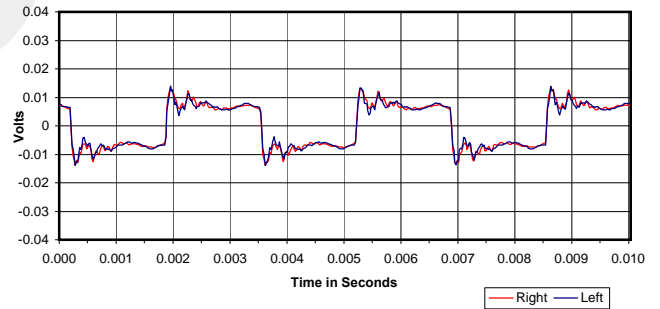
30 Hz Square Wave



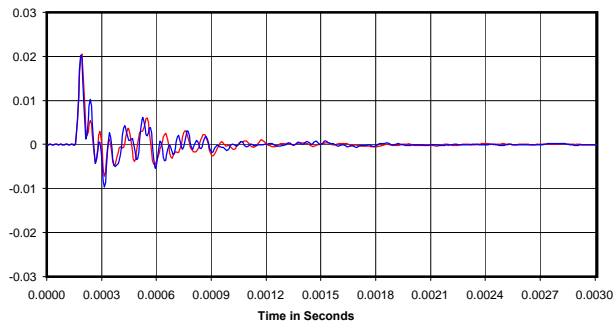
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

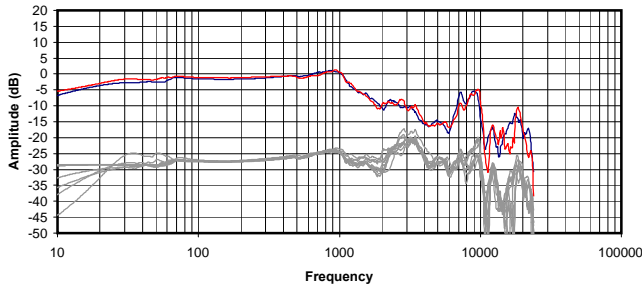


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

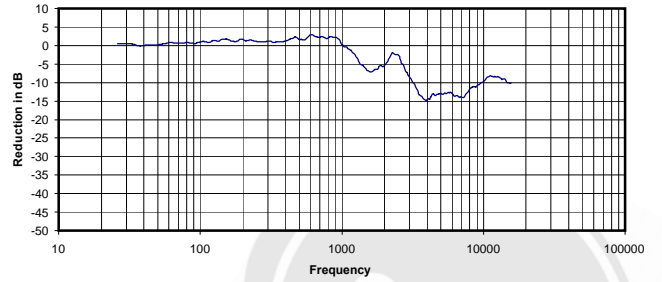
0.209 Vrms
 59 Ohms
 0.75 mW
 -1 dB



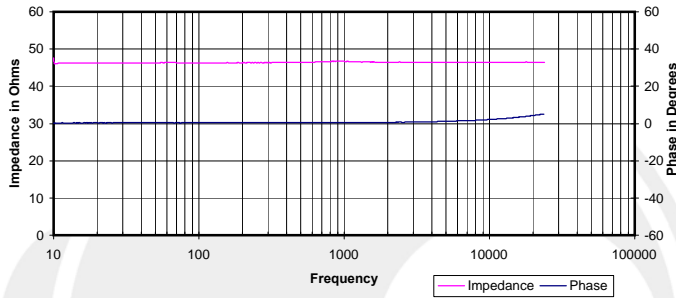
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



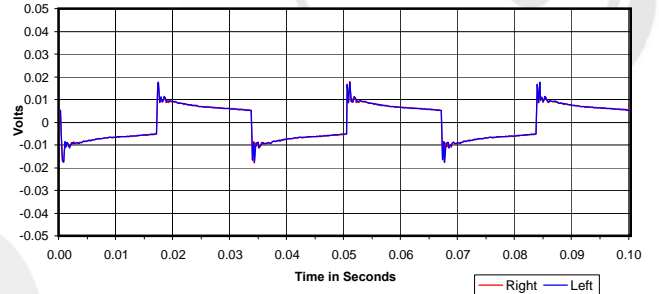
Isolation
 Attenuation of External Sound vs. Frequency



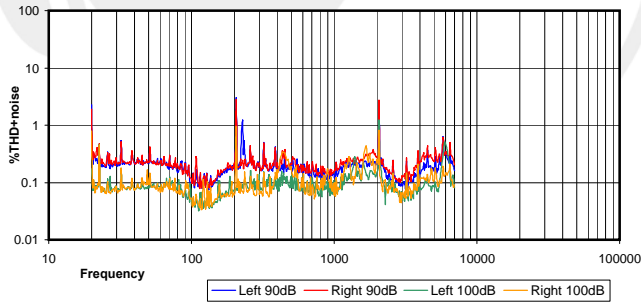
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



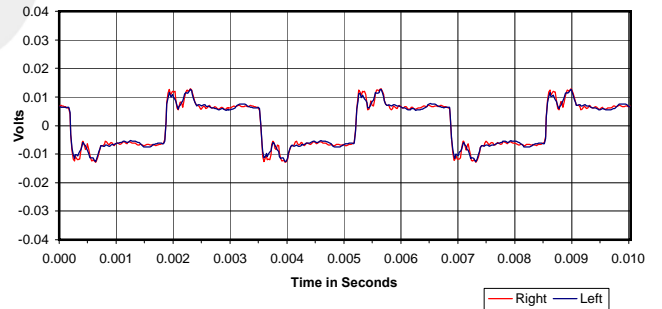
30 Hz Square Wave



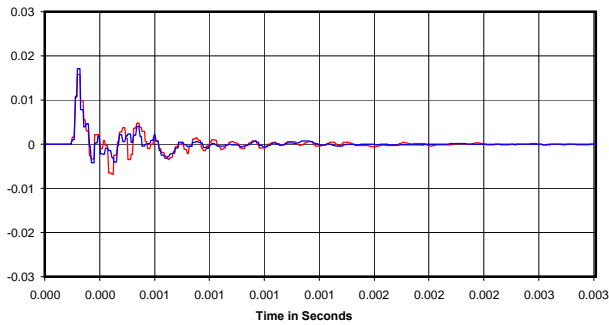
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

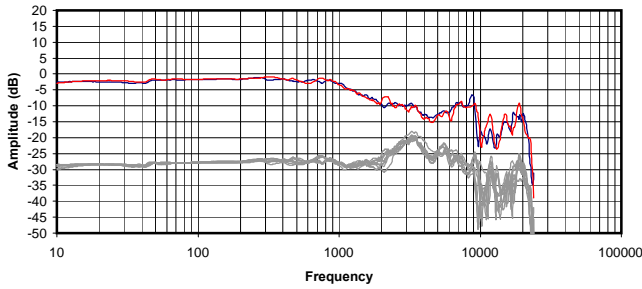


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

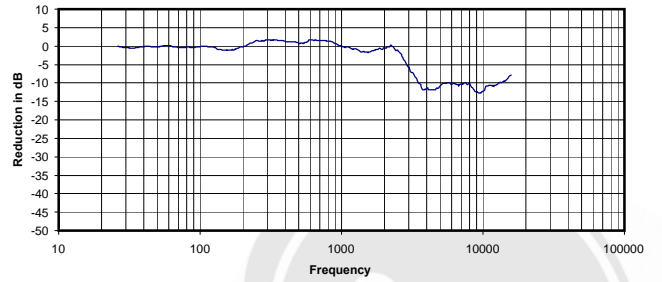
0.106 Vrms
 47 Ohms
 0.24 mW
 -3 dBr



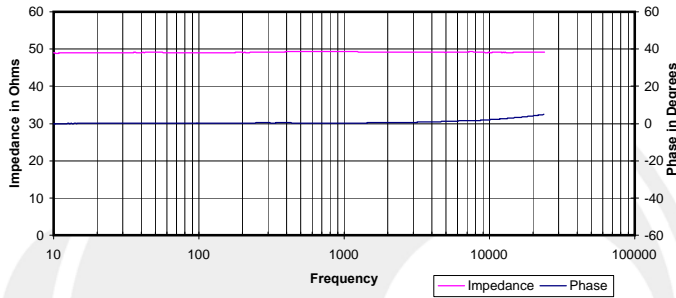
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



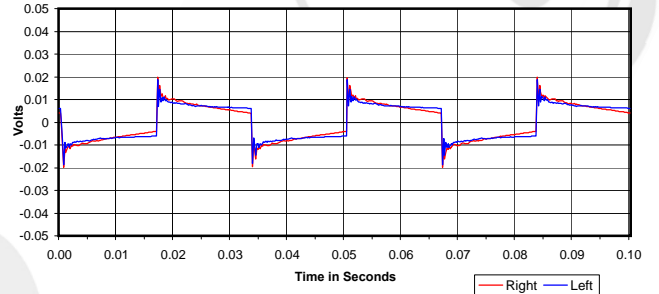
Isolation
 Attenuation of External Sound vs. Frequency



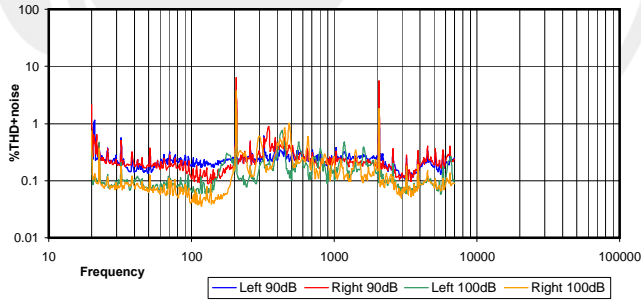
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



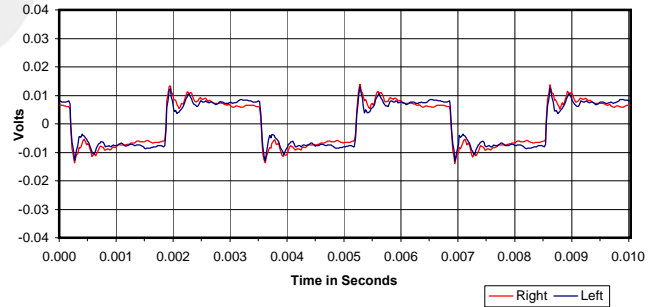
30 Hz Square Wave



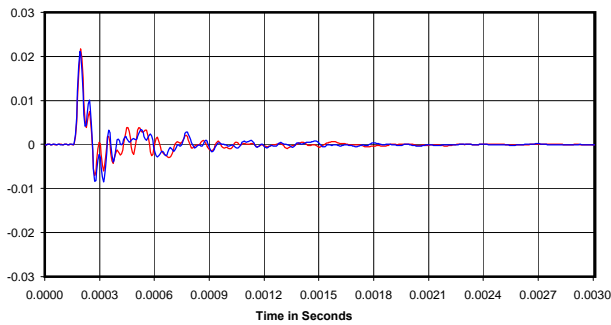
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



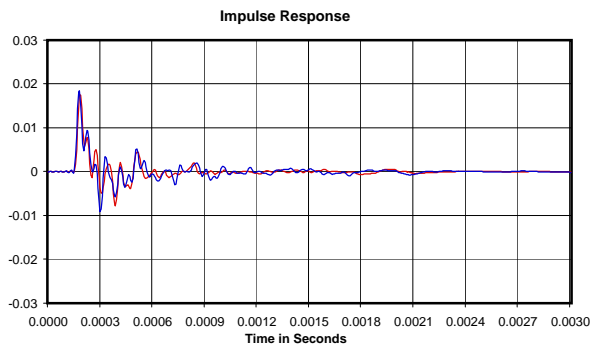
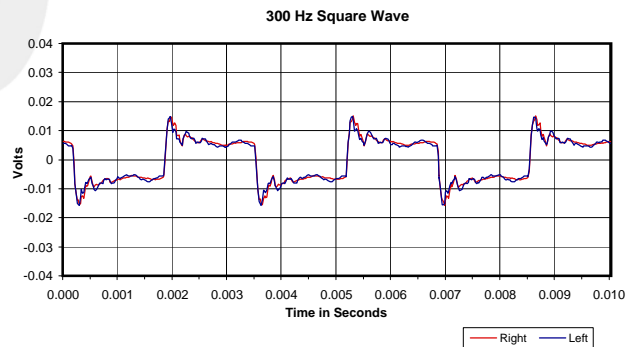
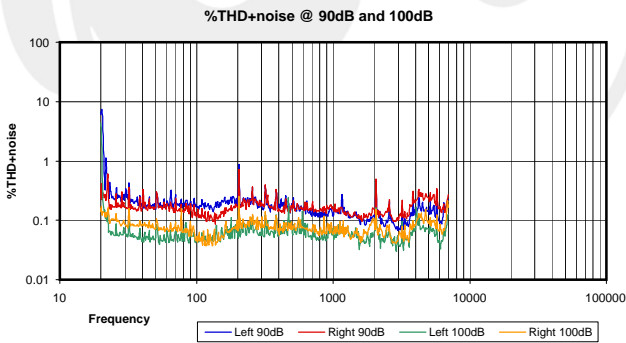
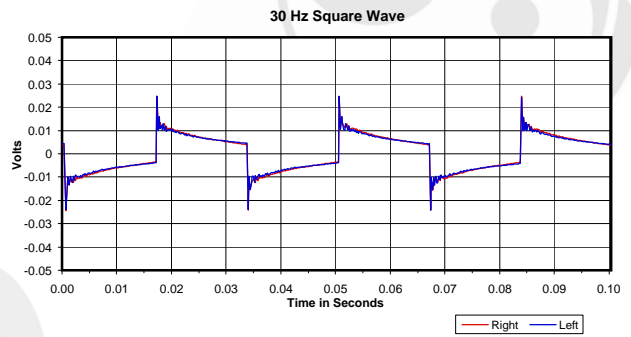
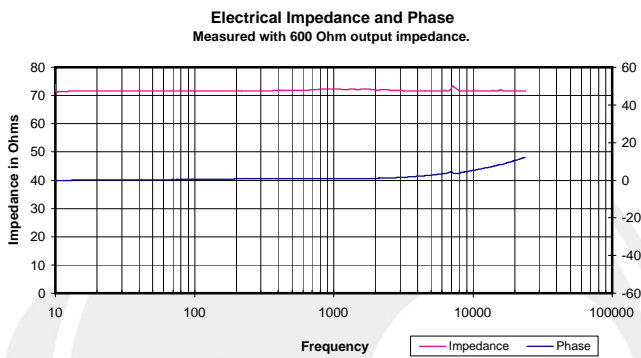
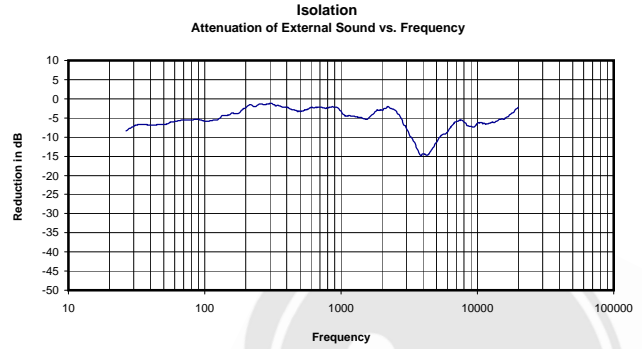
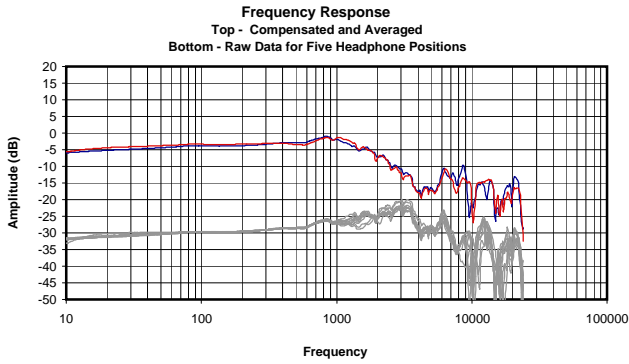
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.165 Vrms
 49 Ohms
 0.55 mW
 -2 dB



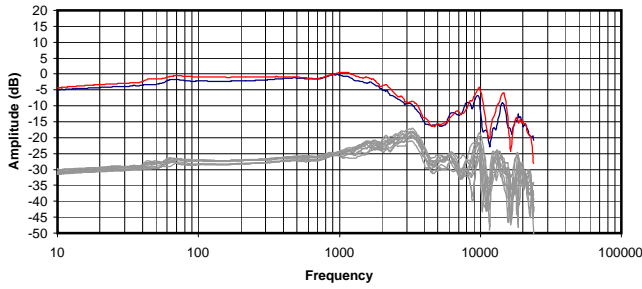


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

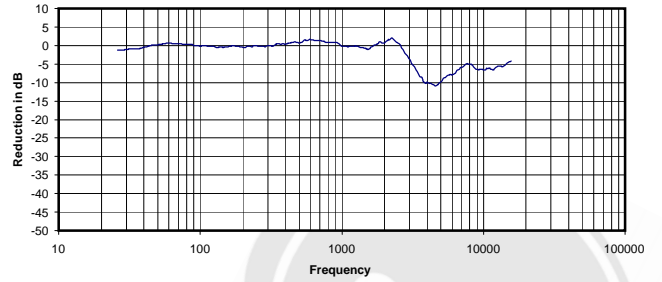
0.110 Vrms
72 Ohms
0.17 mW
-5 dBr



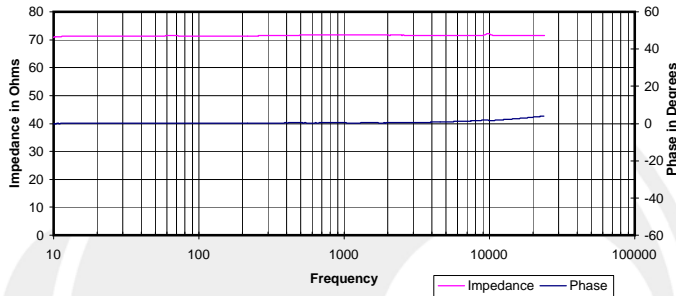
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



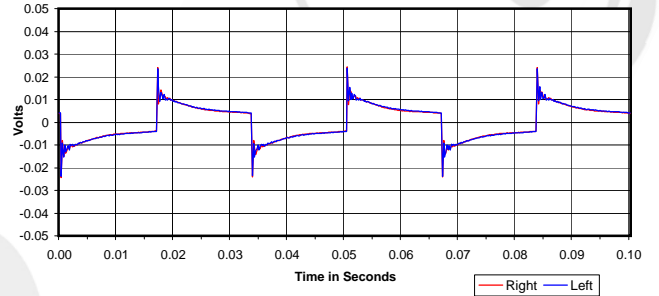
Isolation
Attenuation of External Sound vs. Frequency



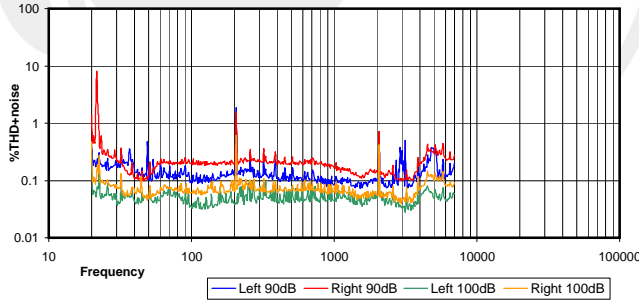
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



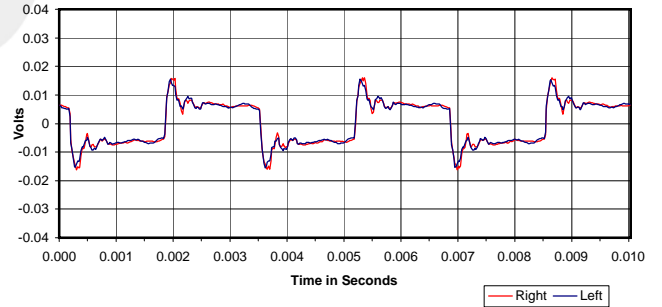
30 Hz Square Wave



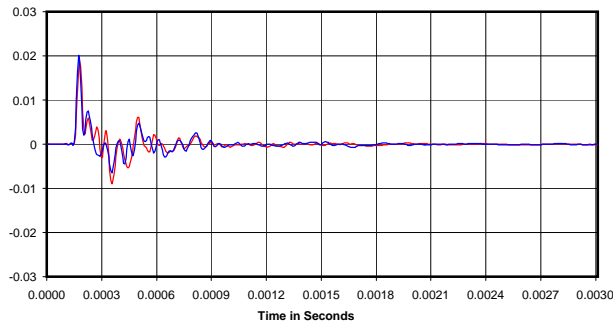
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

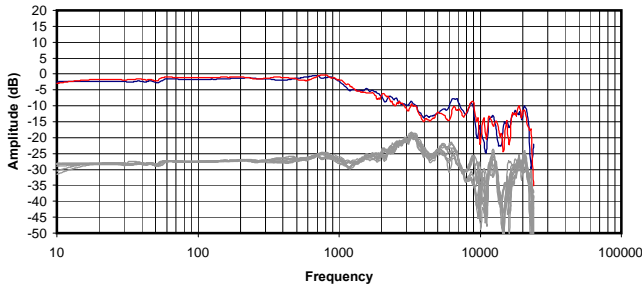


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

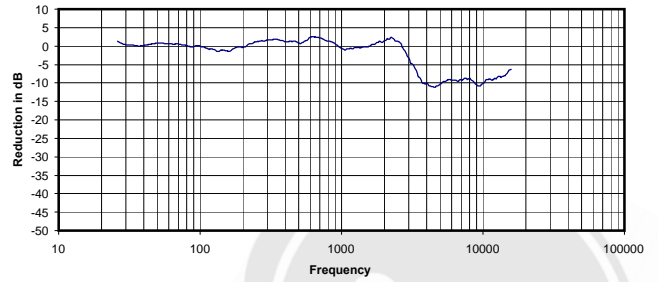
0.114 Vrms
72 Ohms
0.18 mW
-1 dB



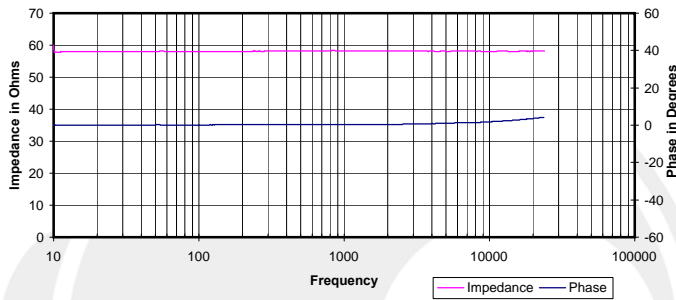
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



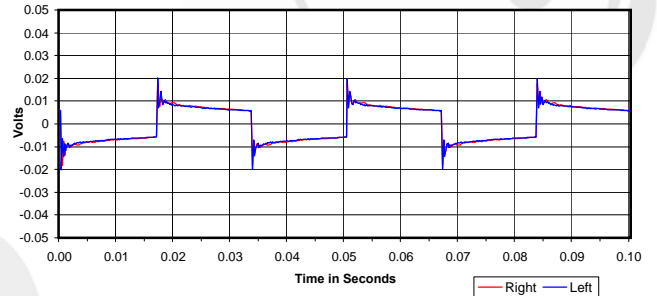
Isolation
 Attenuation of External Sound vs. Frequency



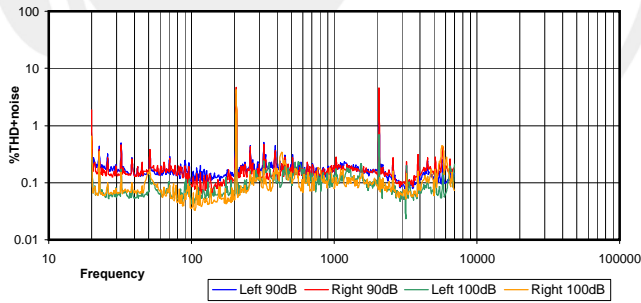
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



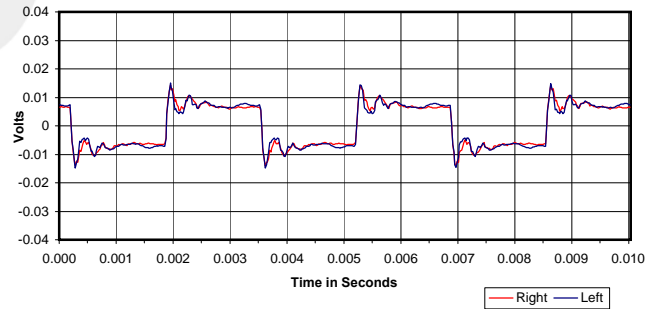
30 Hz Square Wave



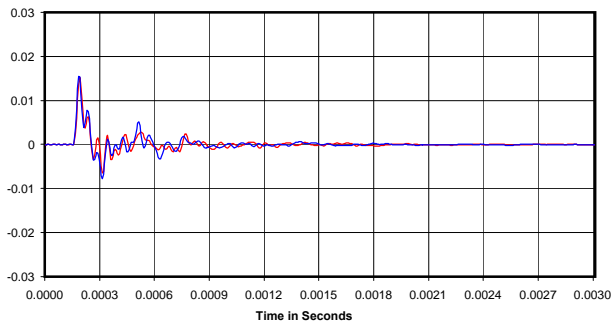
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

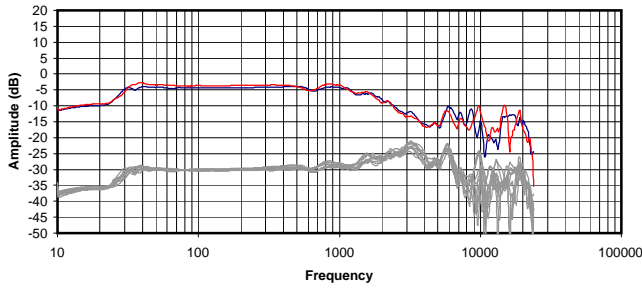


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

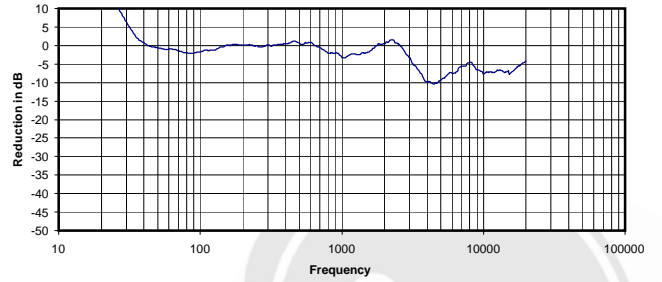
0.225 Vrms
 58 Ohms
 0.87 mW
 -1 dB



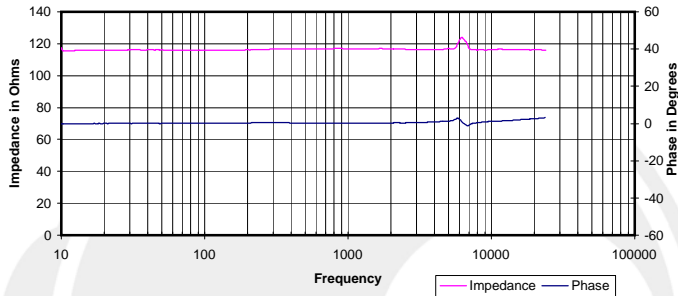
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



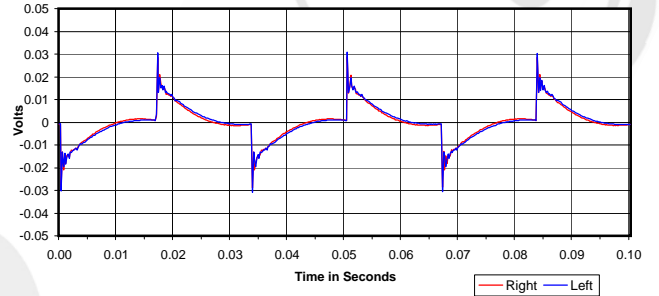
Isolation
 Attenuation of External Sound vs. Frequency



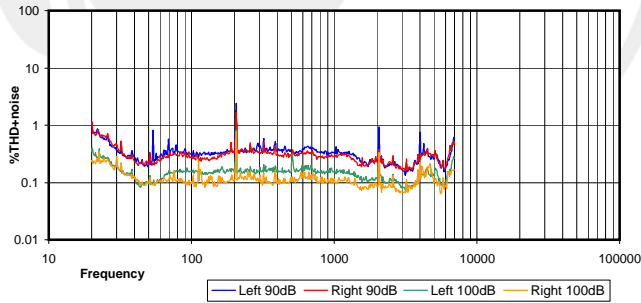
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



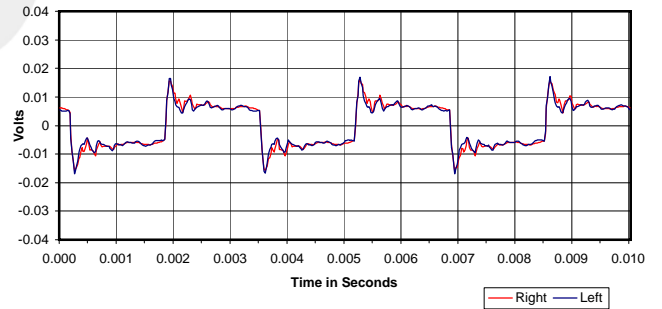
30 Hz Square Wave



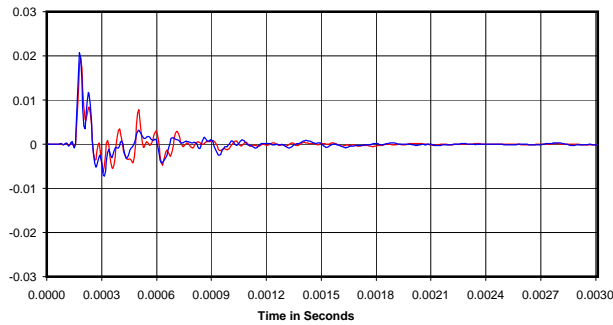
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

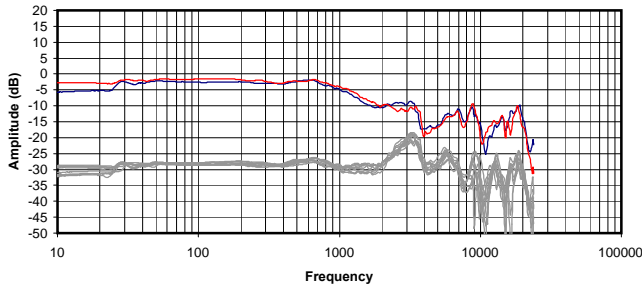


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

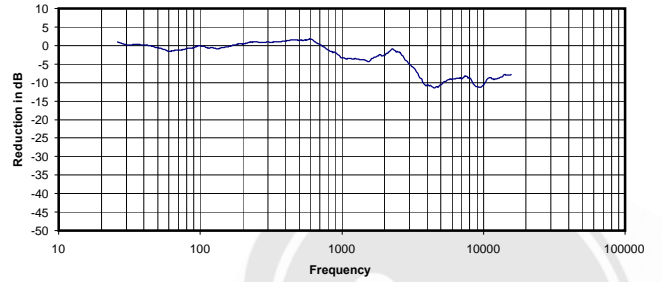
0.146 Vrms
 117 Ohms
 0.18 mW
 -2 dB



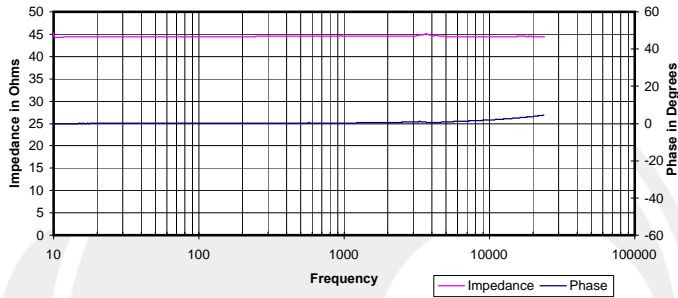
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



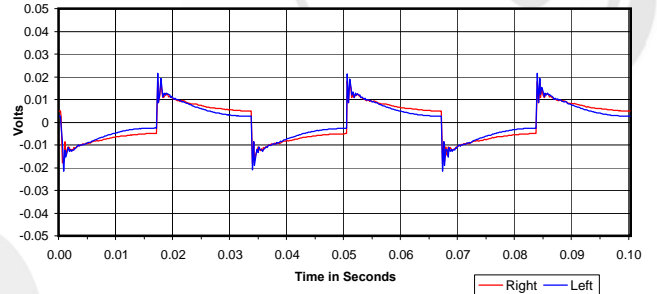
Isolation
 Attenuation of External Sound vs. Frequency



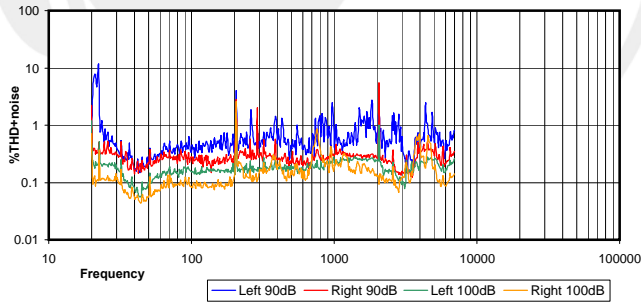
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



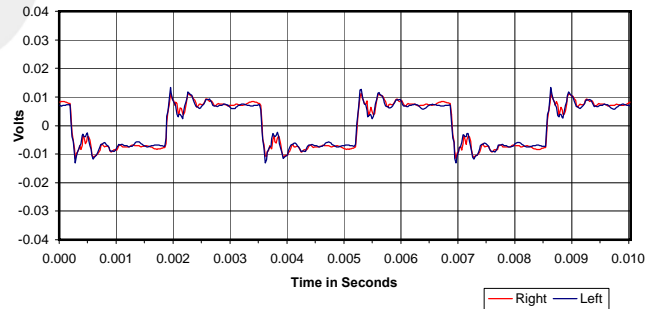
30 Hz Square Wave



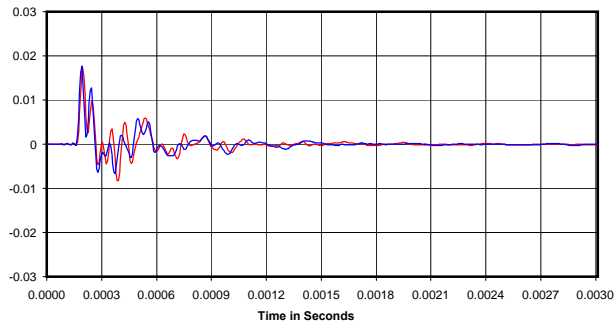
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

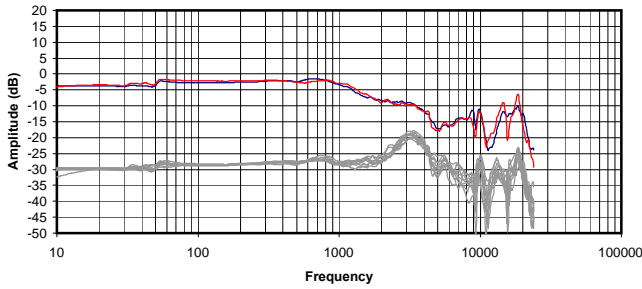


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

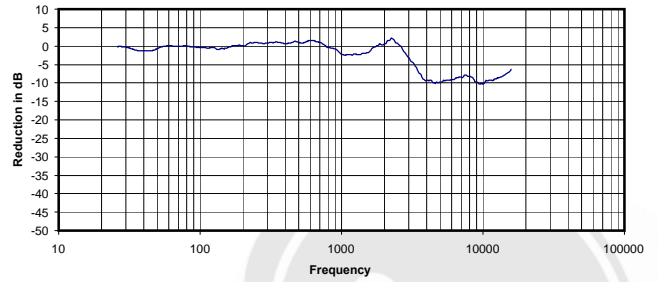
0.198 Vrms
 45 Ohms
 0.88 mW
 -2 dB



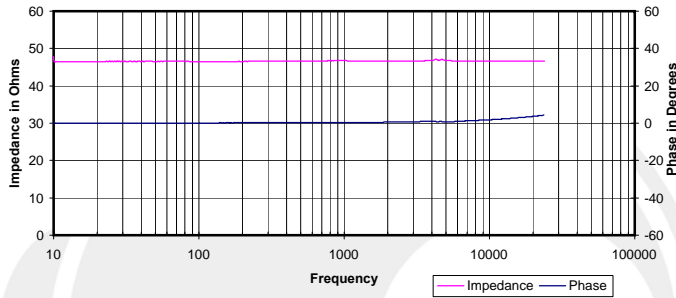
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



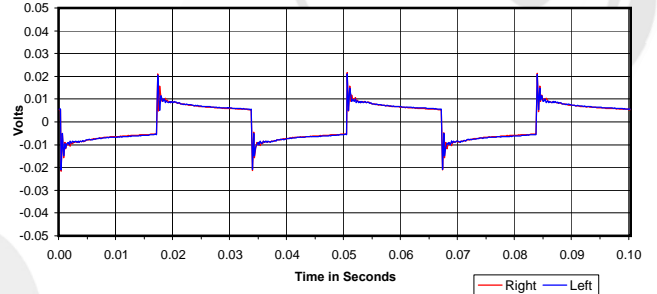
Isolation
 Attenuation of External Sound vs. Frequency



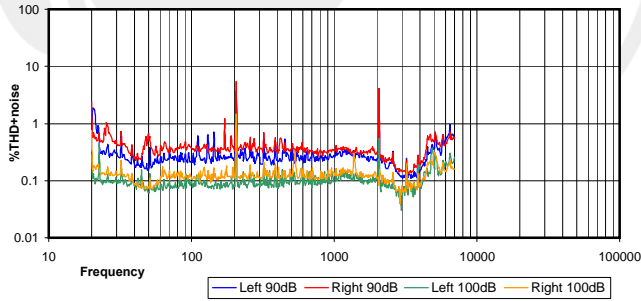
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



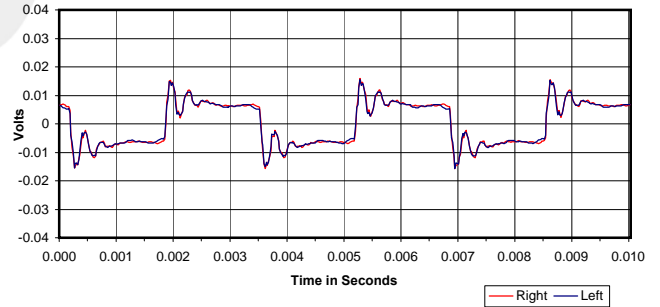
30 Hz Square Wave



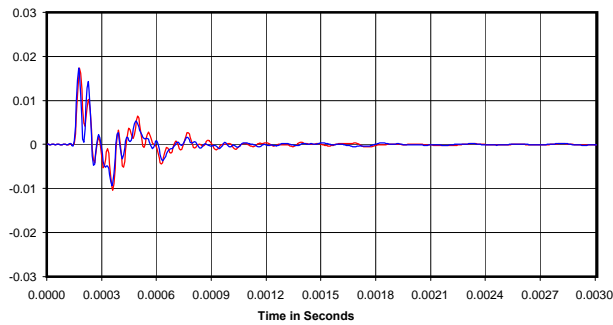
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

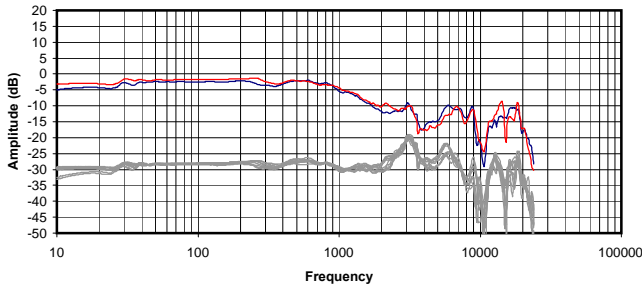


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

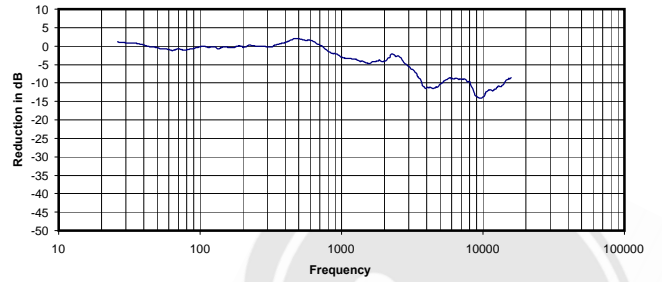
0.157 Vrms
 47 Ohms
 0.53 mW
 -2 dB



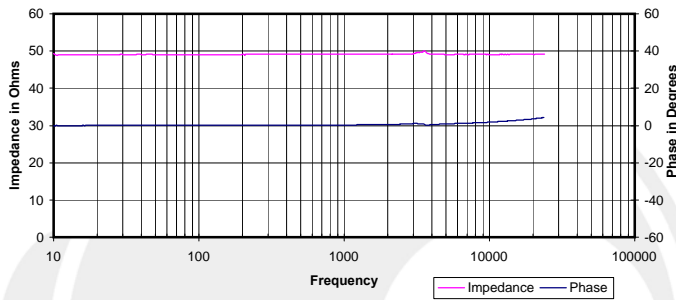
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



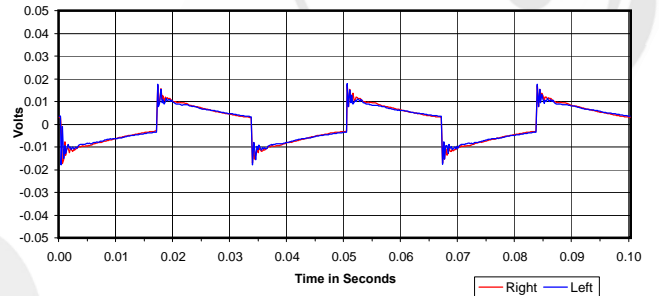
Isolation
 Attenuation of External Sound vs. Frequency



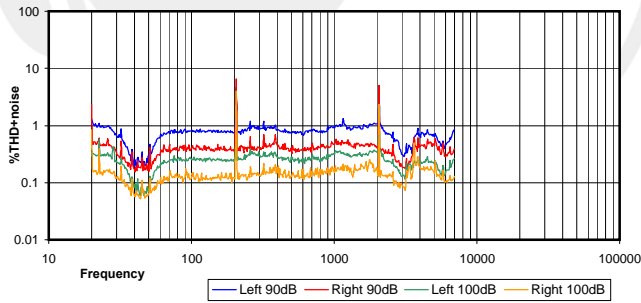
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



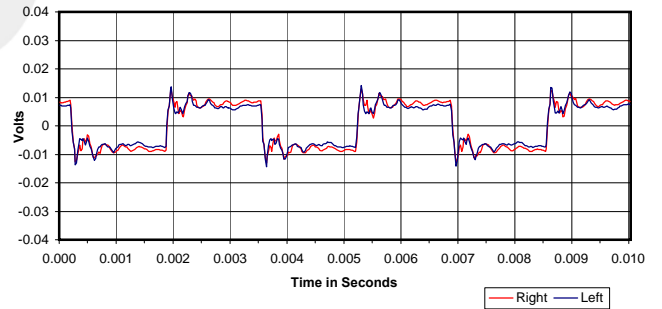
30 Hz Square Wave



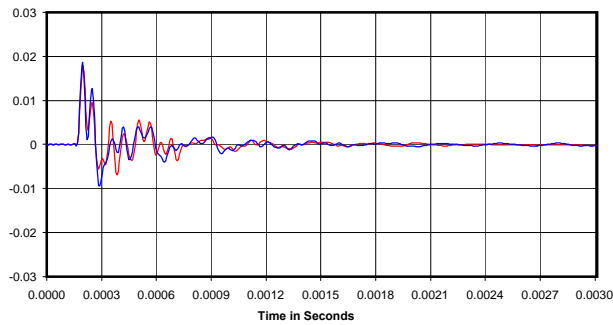
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

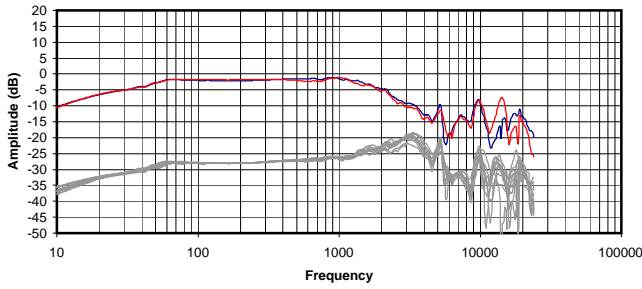


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

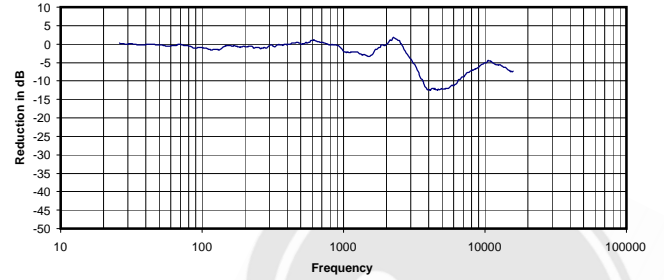
0.244 Vrms
 49 Ohms
 1.21 mW
 -3 dB



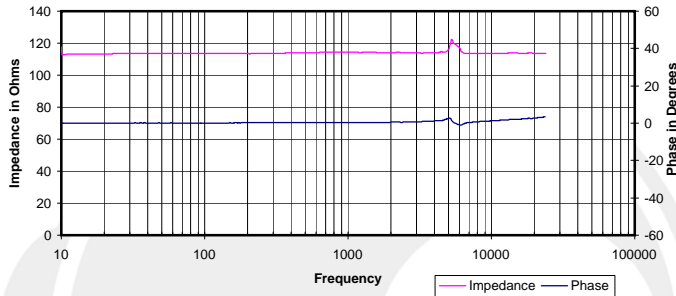
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



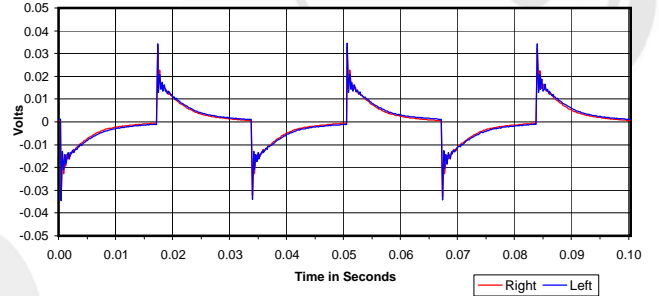
Isolation
 Attenuation of External Sound vs. Frequency



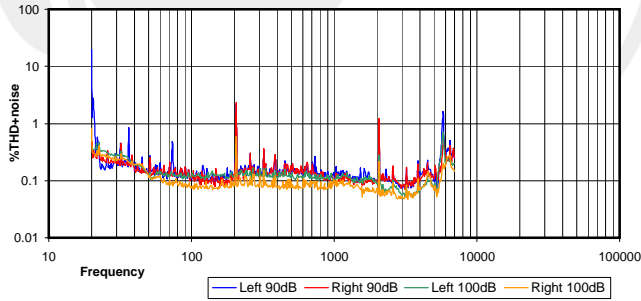
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



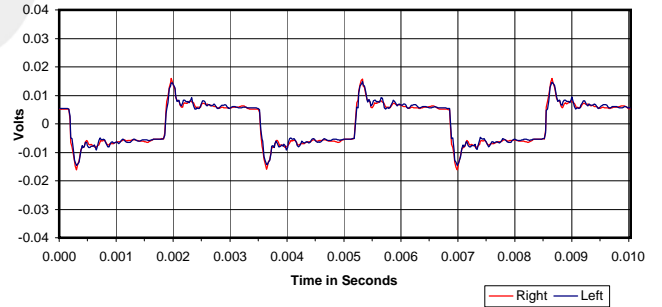
30 Hz Square Wave



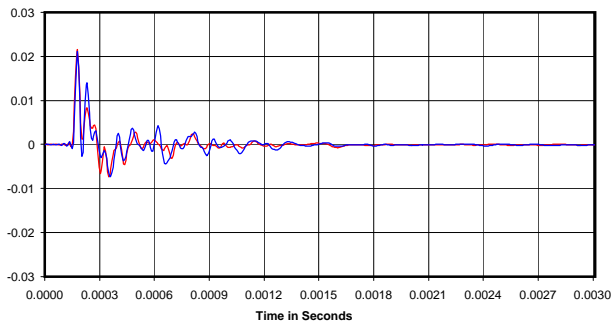
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

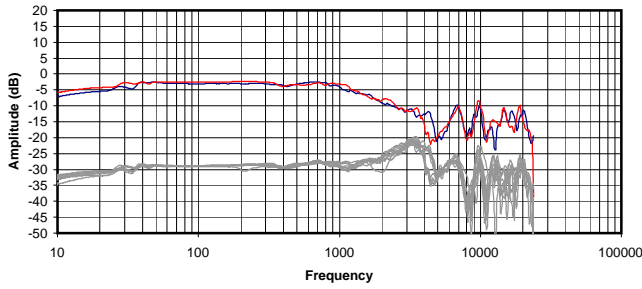


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

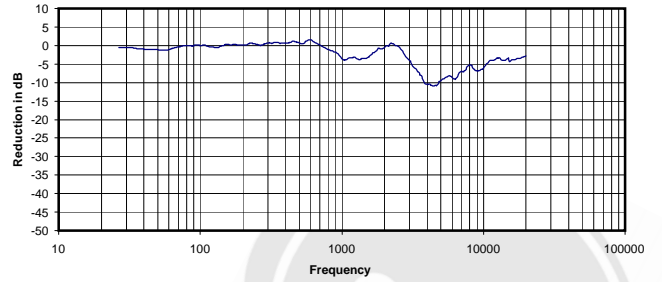
0.127 Vrms
 114 Ohms
 0.14 mW
 -3 dBr



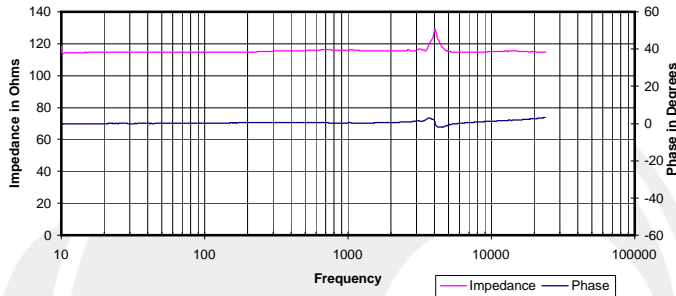
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



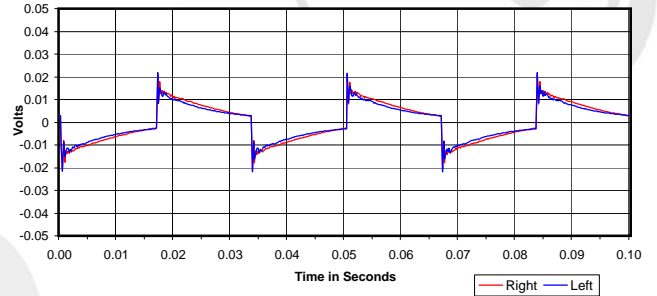
Isolation
 Attenuation of External Sound vs. Frequency



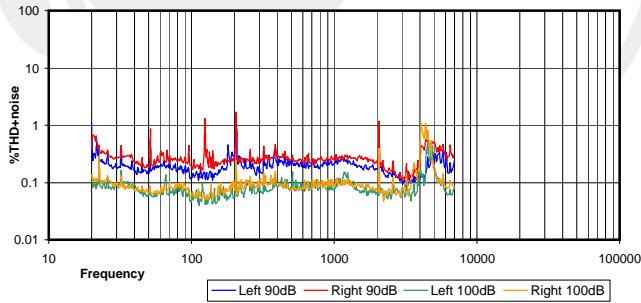
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



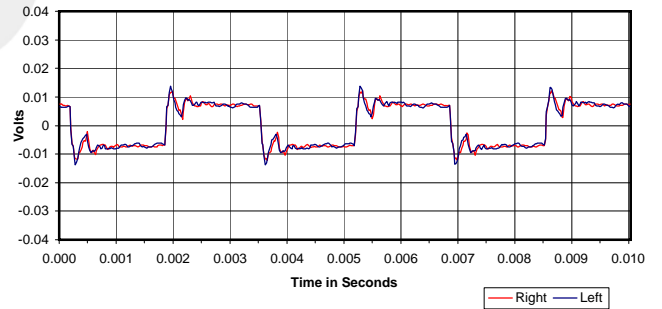
30 Hz Square Wave



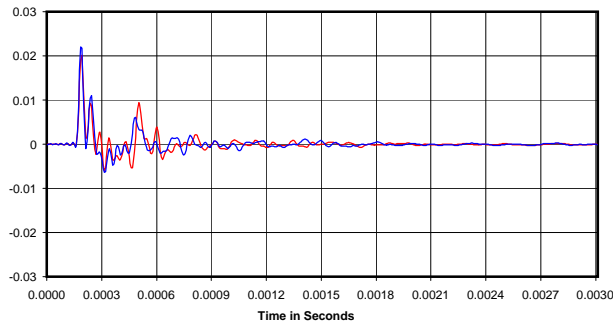
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

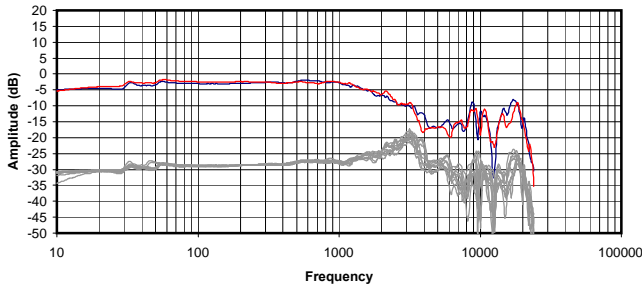


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

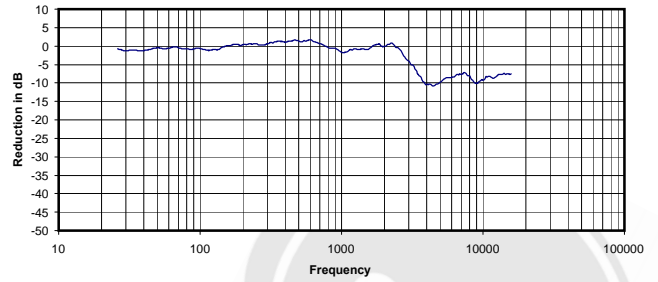
0.154 Vrms
 116 Ohms
 0.20 mW
 -3 dB



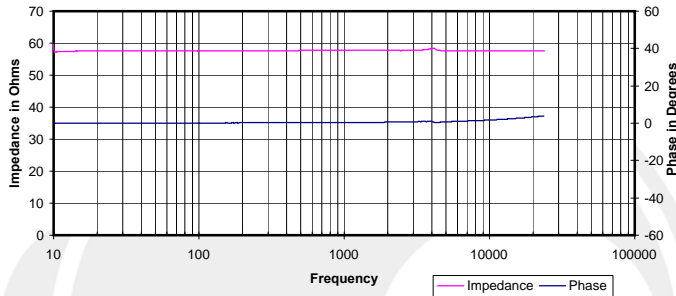
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



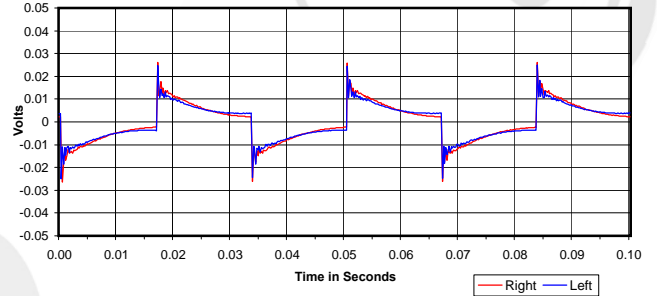
Isolation
 Attenuation of External Sound vs. Frequency



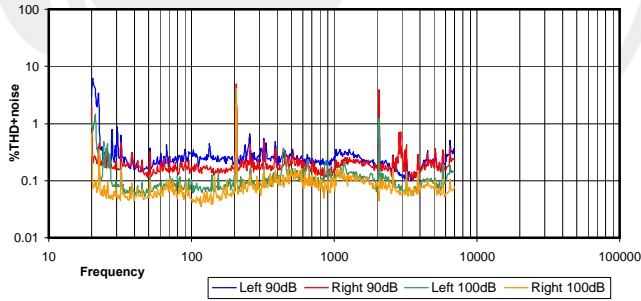
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



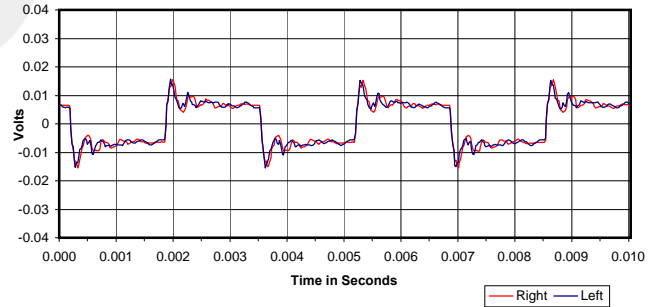
30 Hz Square Wave



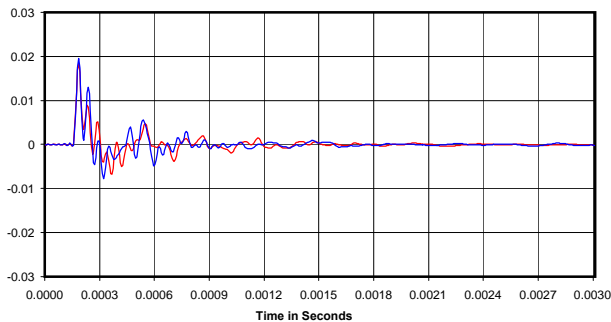
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



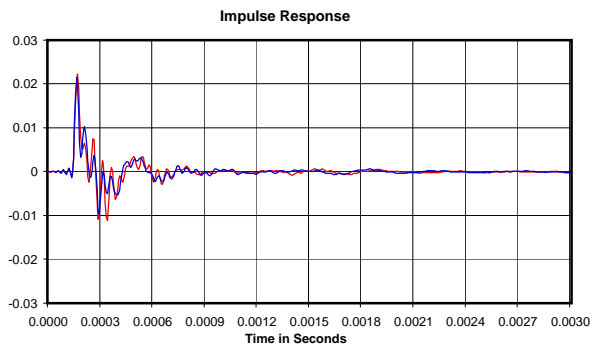
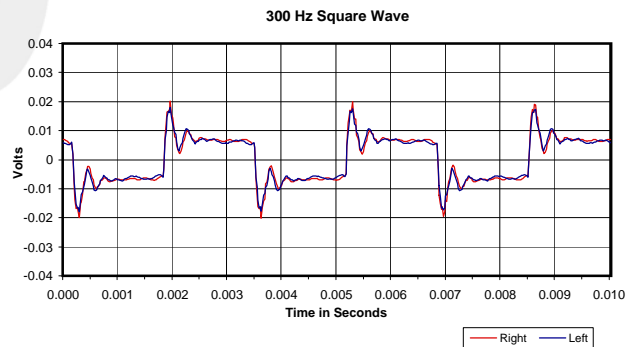
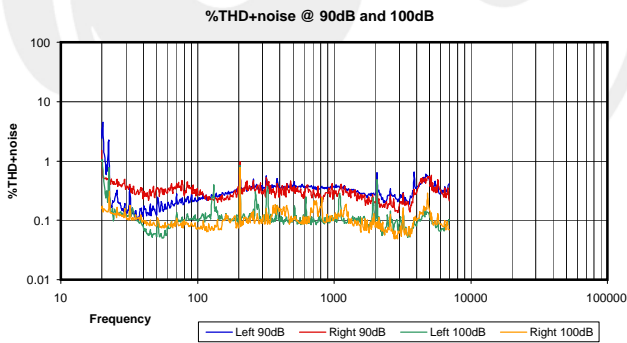
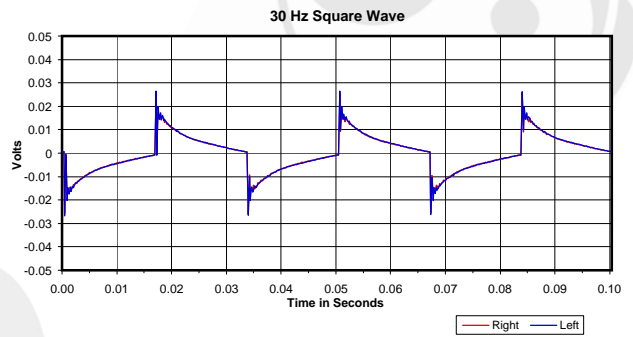
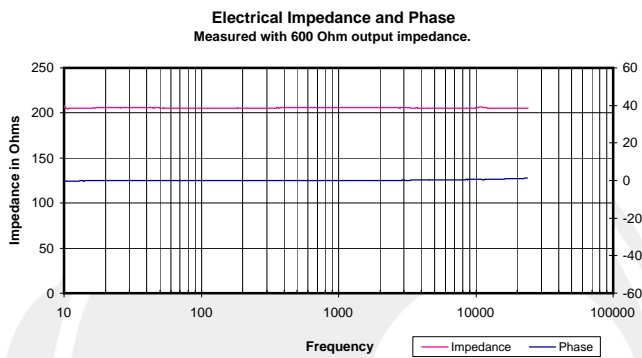
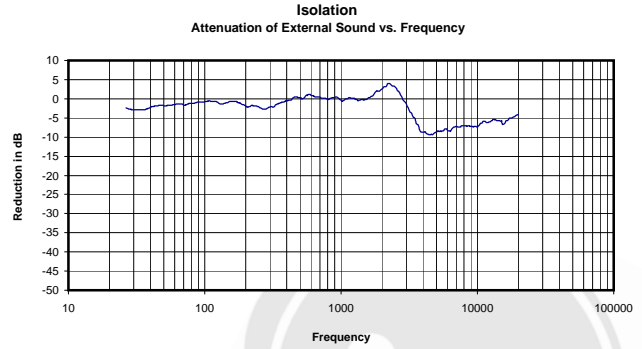
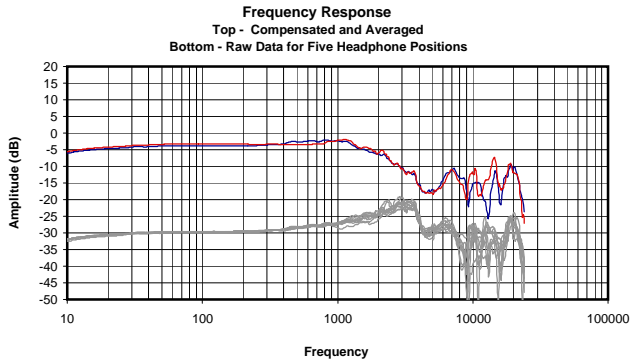
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.196 Vrms
 58 Ohms
 0.66 mW
 -2 dB



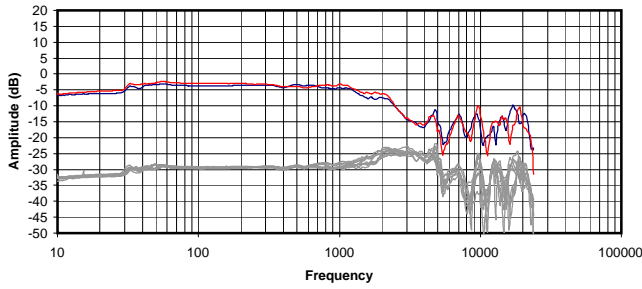


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

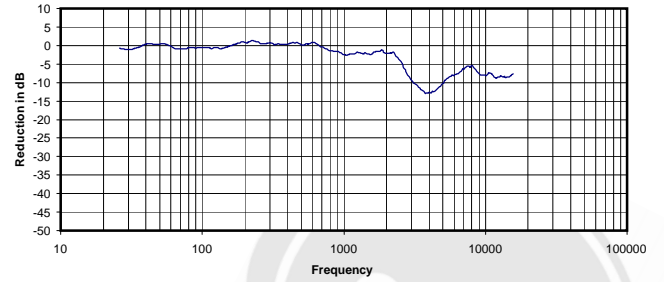
0.482 Vrms
206 Ohms
1.13 mW
-2 dBr



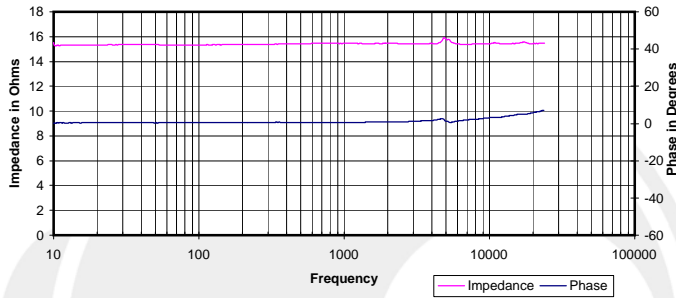
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



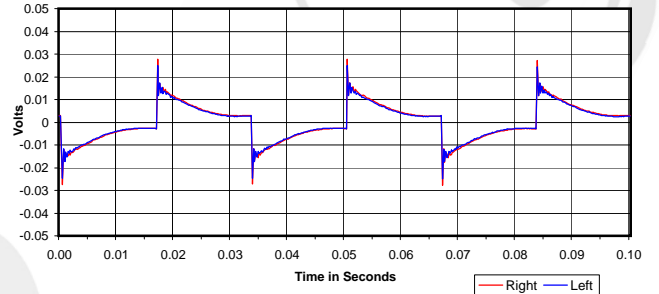
Isolation
 Attenuation of External Sound vs. Frequency



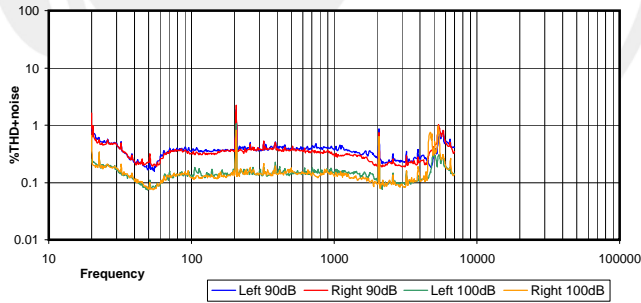
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



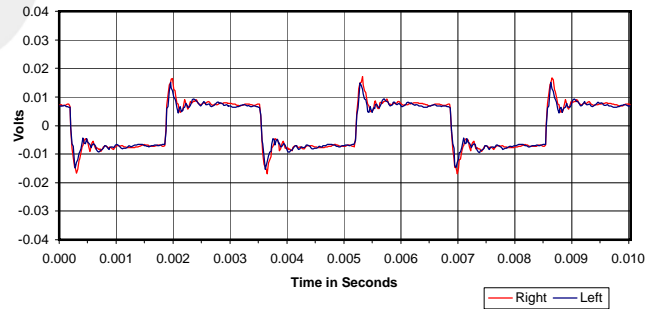
30 Hz Square Wave



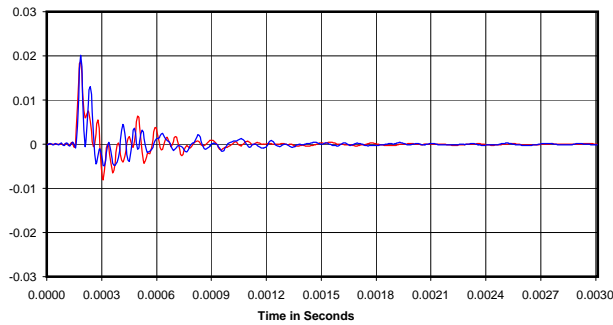
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

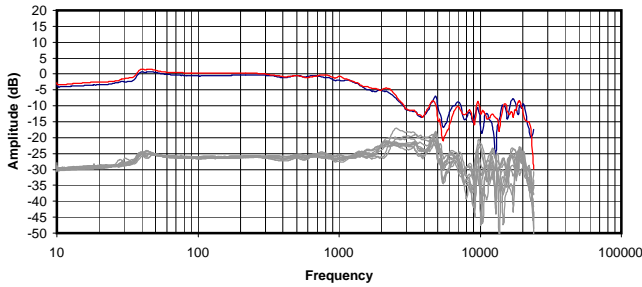


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

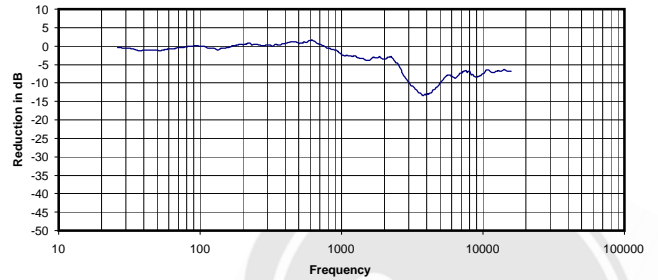
0.065 Vrms
 15 Ohms
 0.28 mW
 -3 dBr



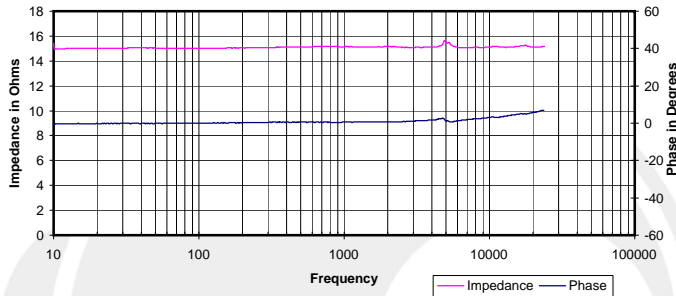
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



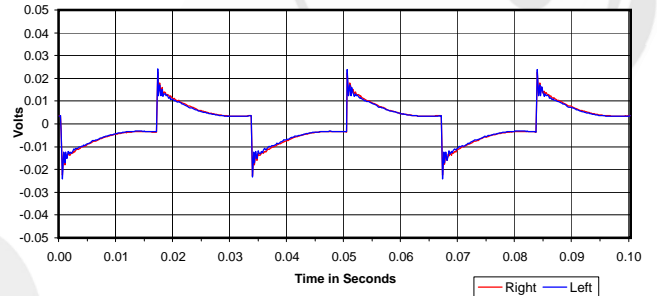
Isolation
 Attenuation of External Sound vs. Frequency



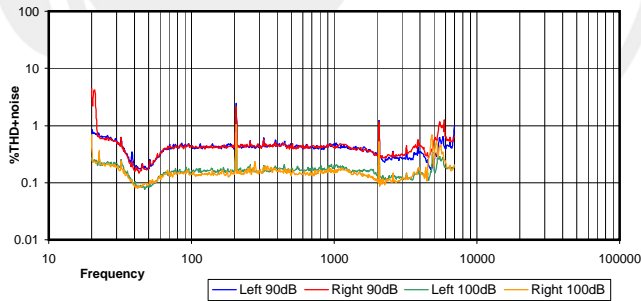
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



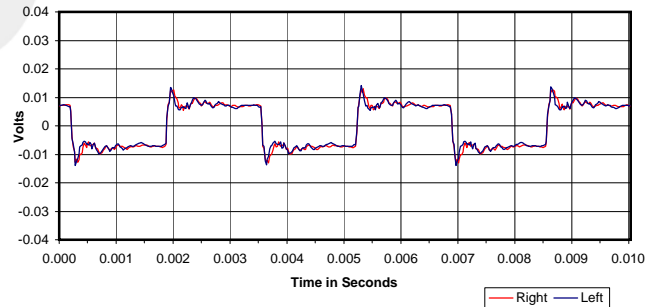
30 Hz Square Wave



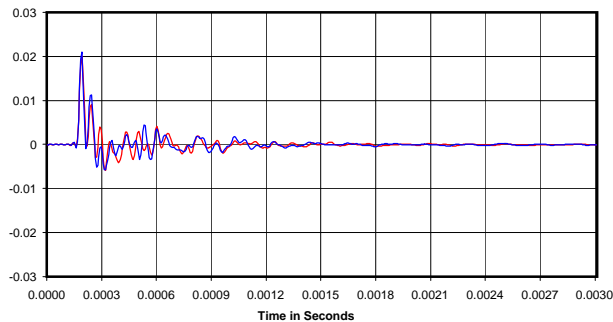
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

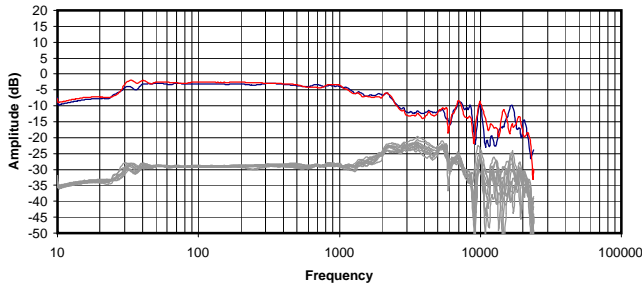


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

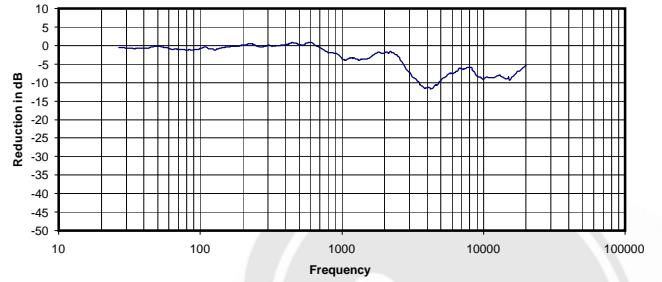
0.070 Vrms
 15 Ohms
 0.32 mW
 -3 dB



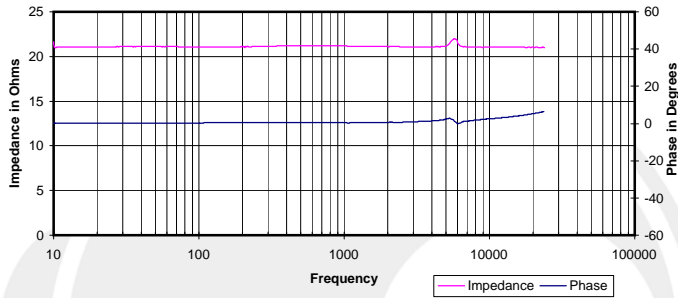
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



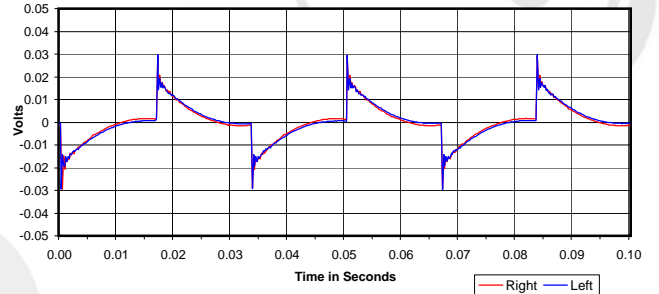
Isolation
 Attenuation of External Sound vs. Frequency



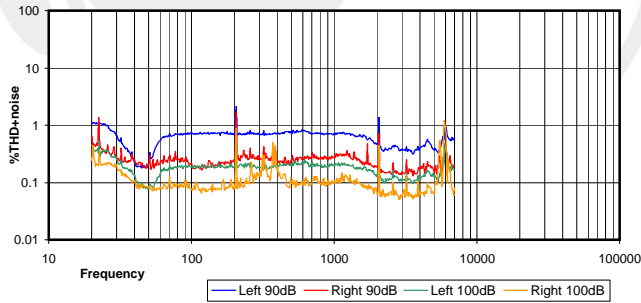
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



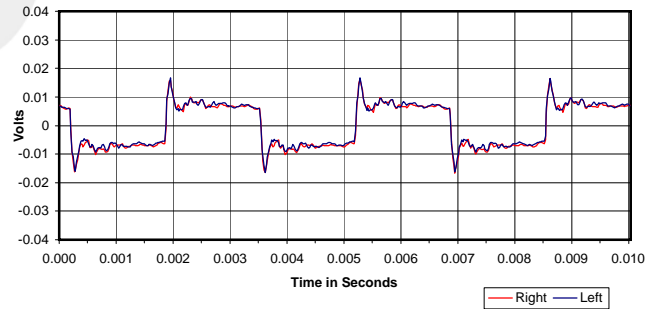
30 Hz Square Wave



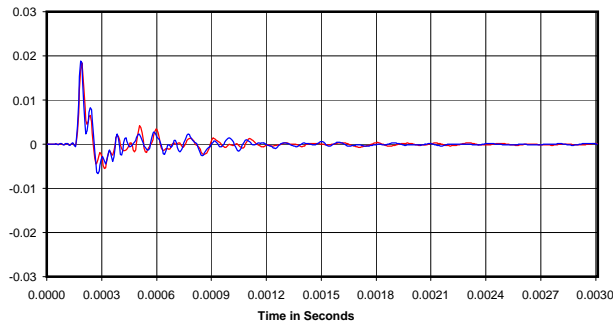
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

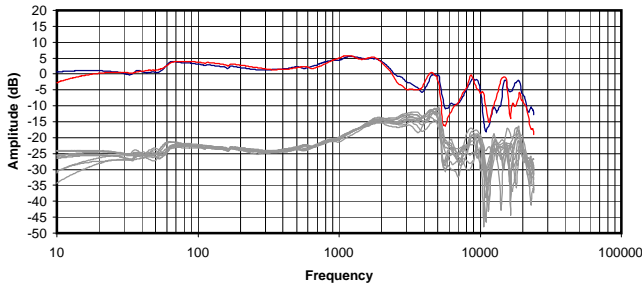


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

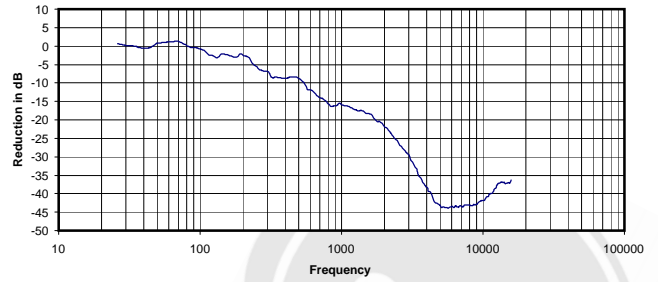
0.072 Vrms
 21 Ohms
 0.24 mW
 -3 dB



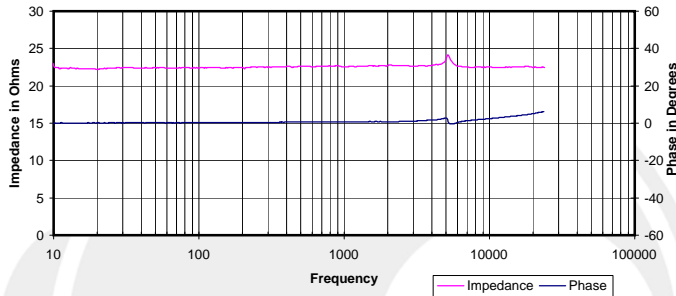
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



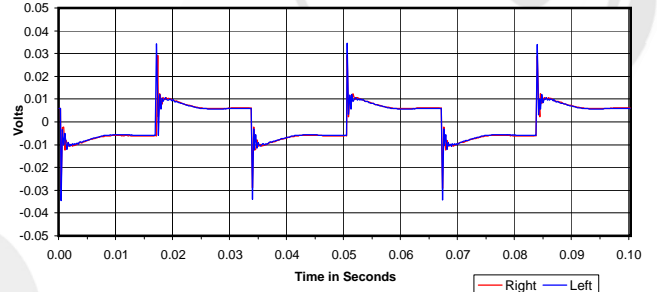
Isolation
 Attenuation of External Sound vs. Frequency



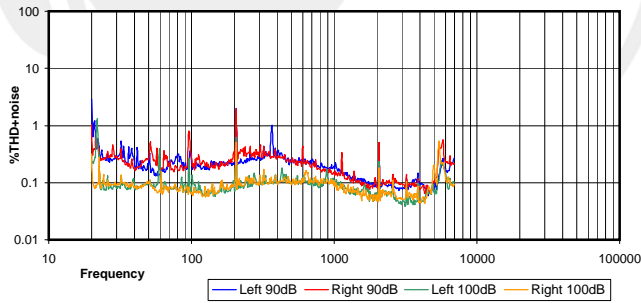
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



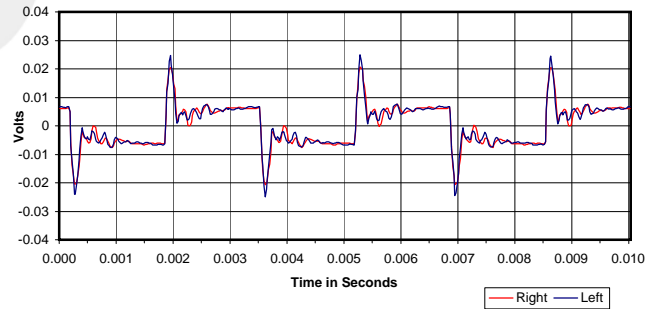
30 Hz Square Wave



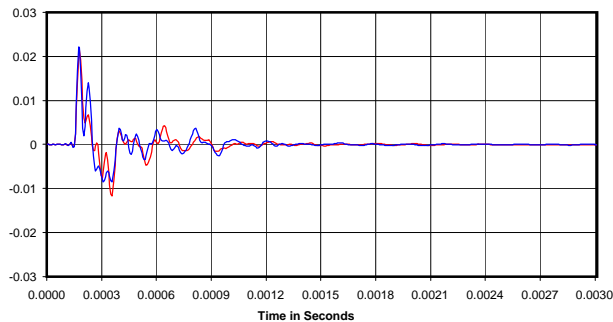
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

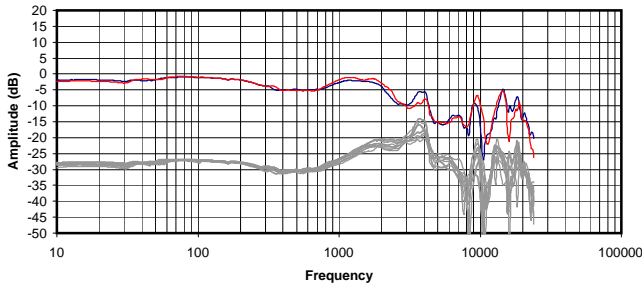


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

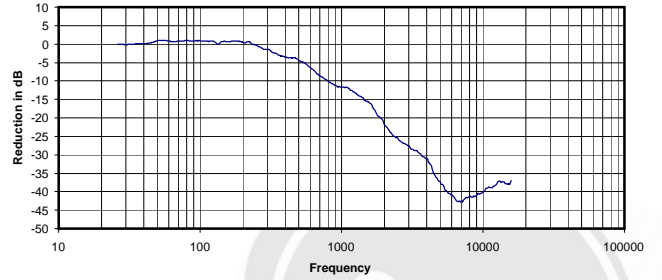
0.071 Vrms
 23 Ohms
 0.22 mW
 -16 dB



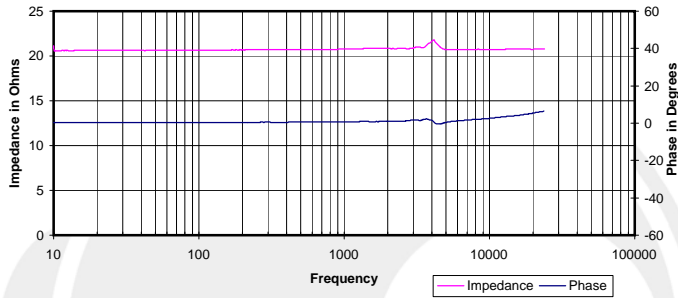
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



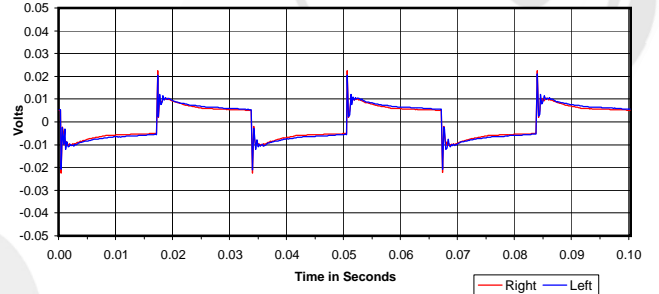
Isolation
 Attenuation of External Sound vs. Frequency



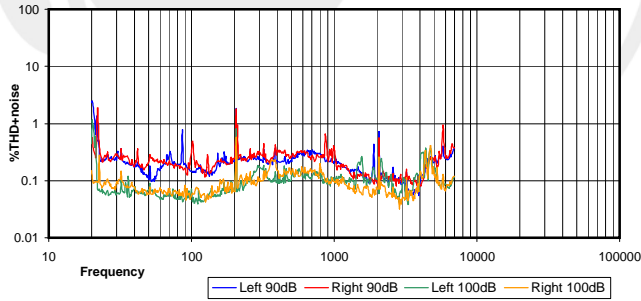
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



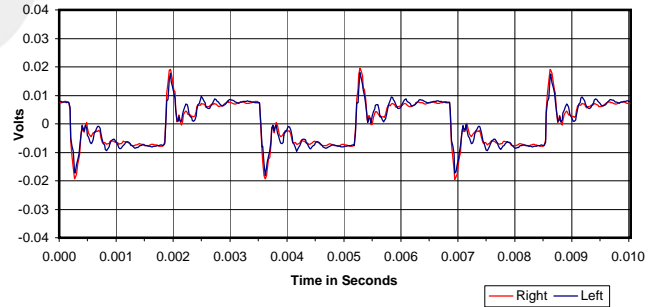
30 Hz Square Wave



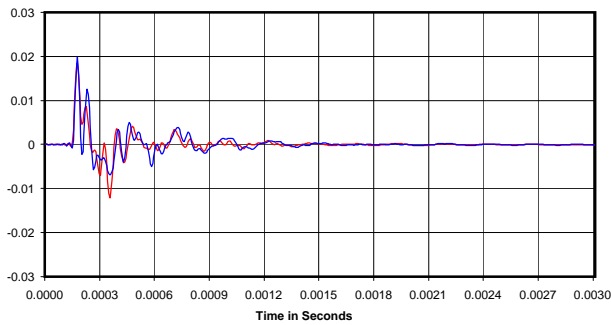
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

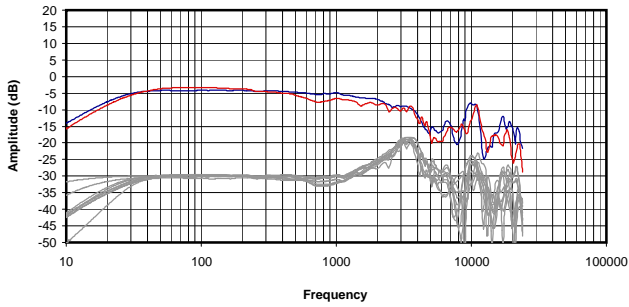


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

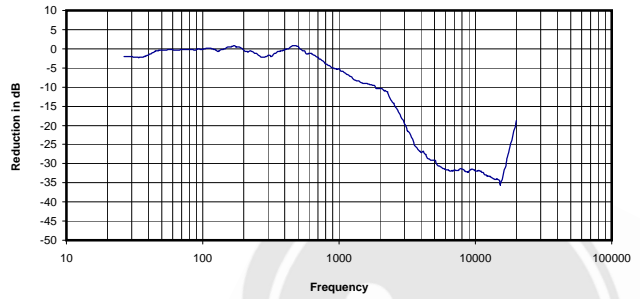
0.090 Vrms
 21 Ohms
 0.39 mW
 -13 dB



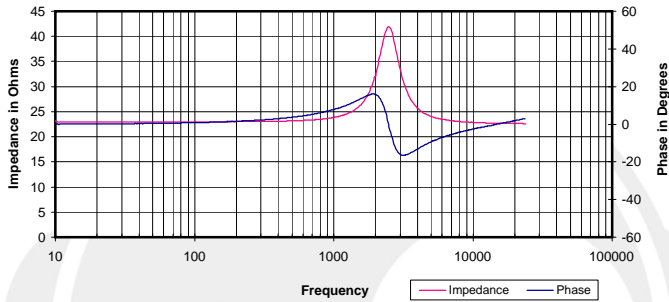
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



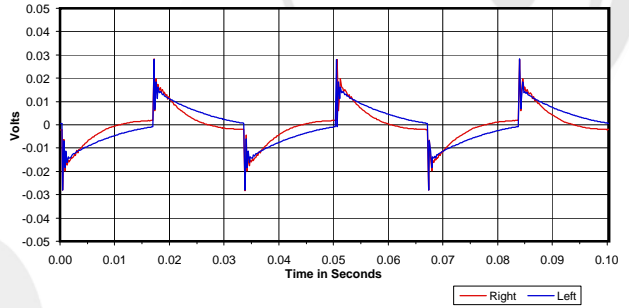
Isolation
 Attenuation of External Sound vs. Frequency



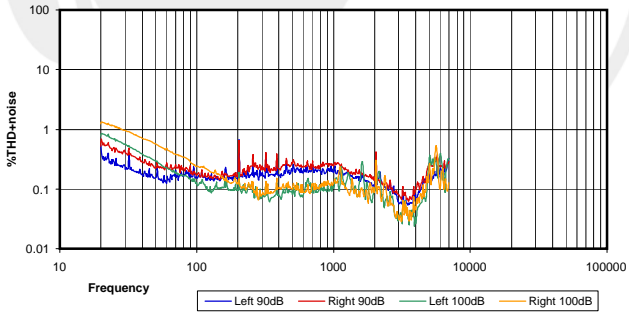
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



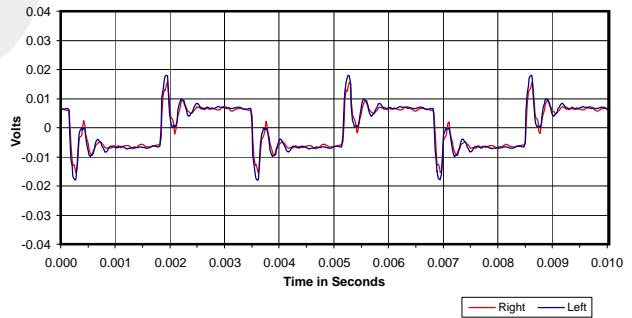
30 Hz Square Wave



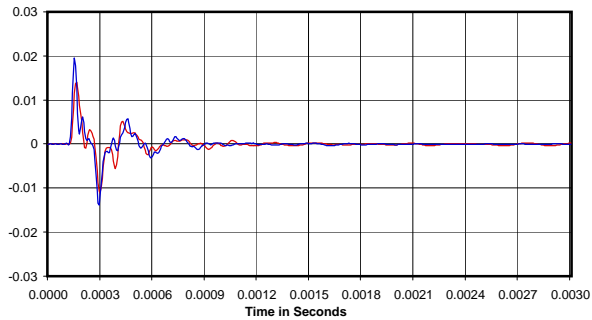
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

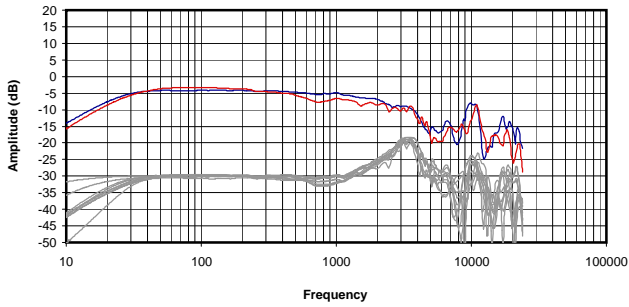


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

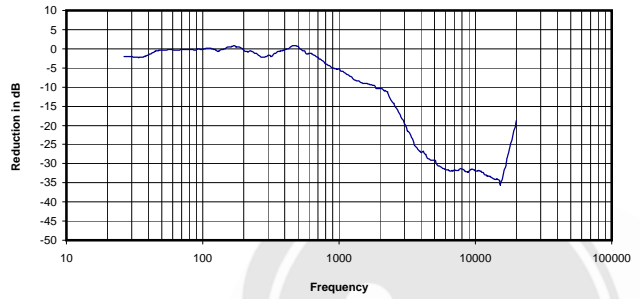
0.096 Vrms
 24 Ohms
 0.38 mW
 -11 dBr



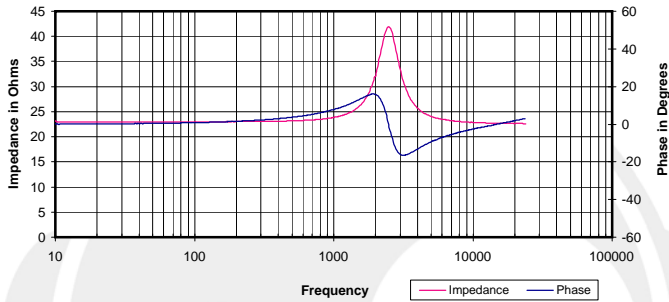
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



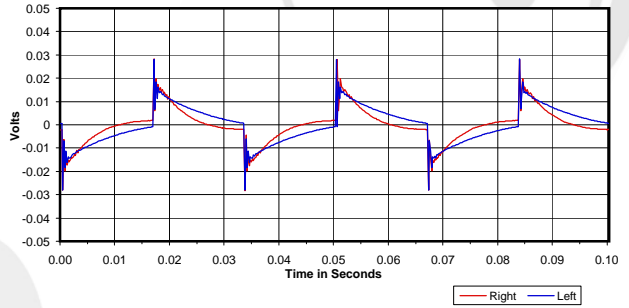
Isolation
Attenuation of External Sound vs. Frequency



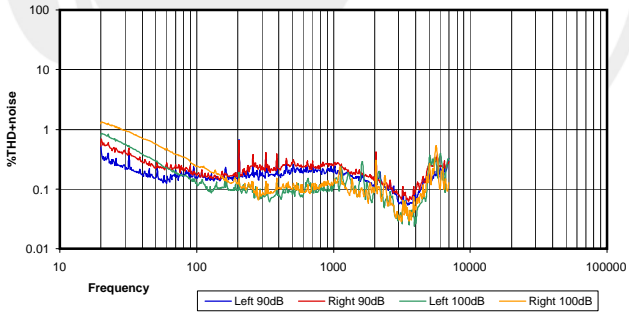
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



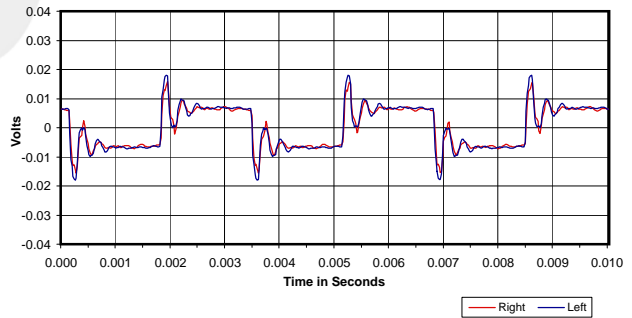
30 Hz Square Wave



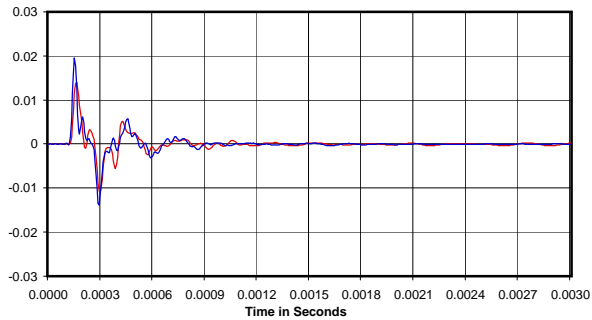
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

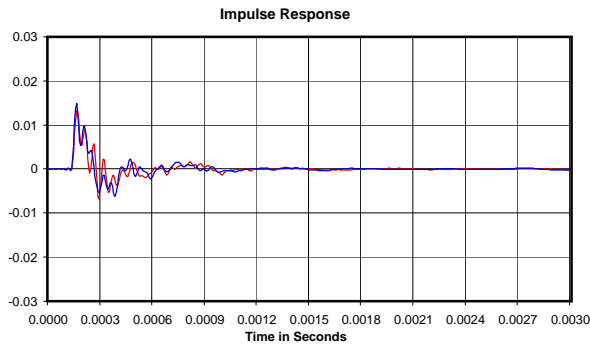
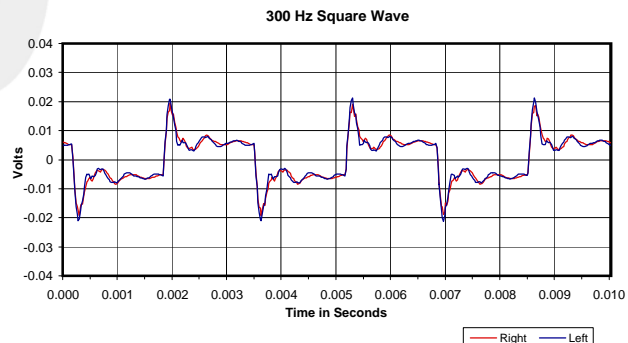
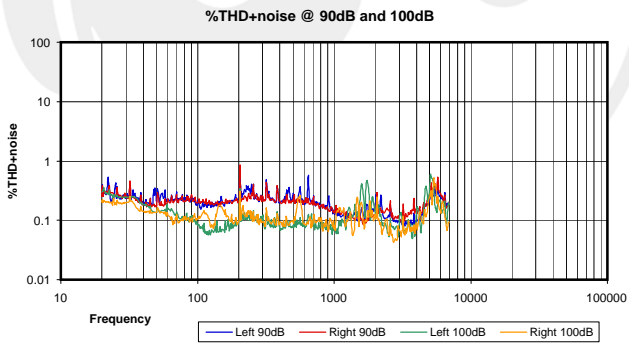
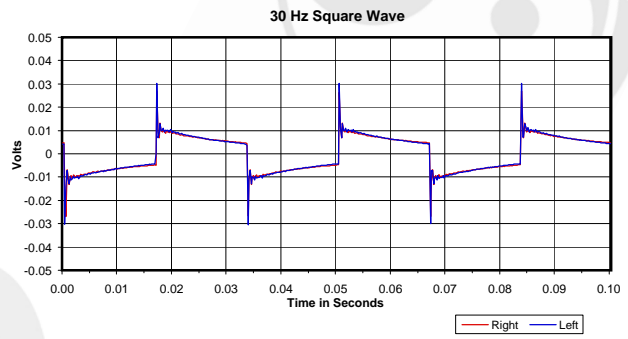
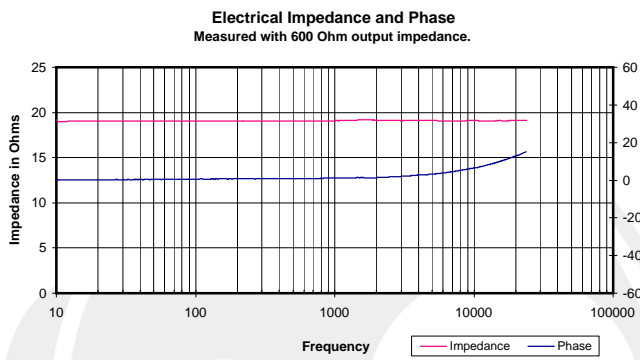
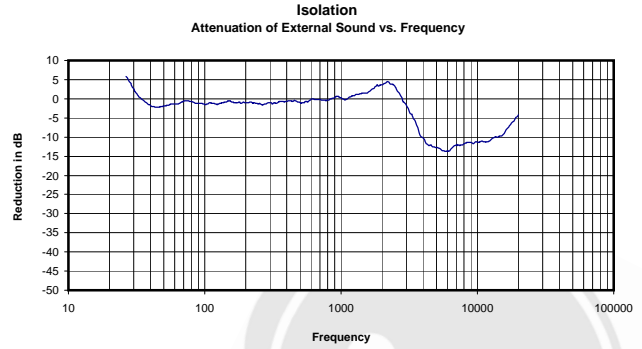
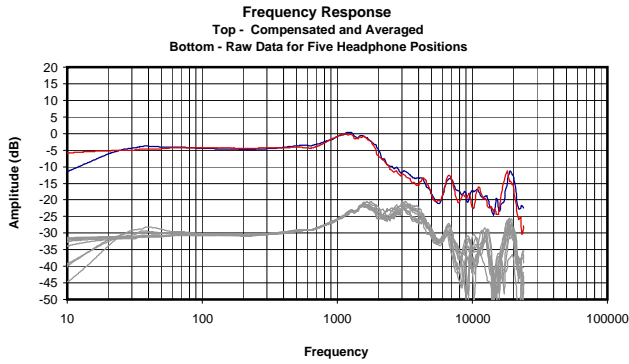


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.096 Vrms
24 Ohms
0.38 mW
-11 dBr



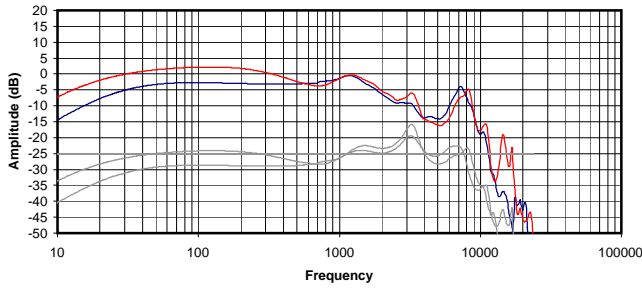
Headphone Measurements: Audeze Sine DX



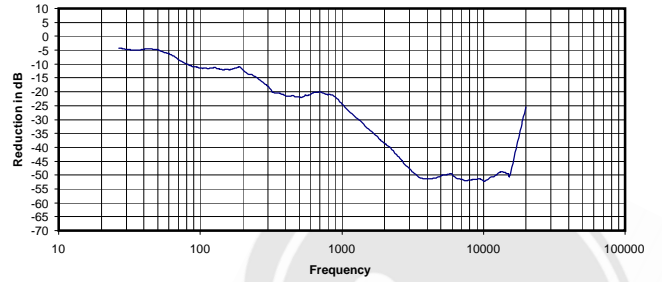
Volts RMS required to reach 90dB SPL: 0.047 Vrms
 Impedance @ 1kHz: 19 Ohms
 Power Needed for 90d BSPL: 0.12 mW
 Broadband Isolation in dB (100Hz to 10kHz): -3 dB



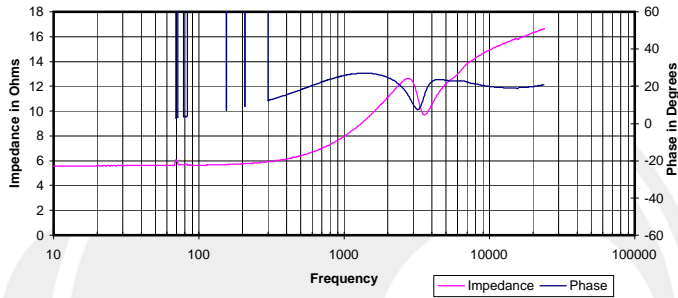
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



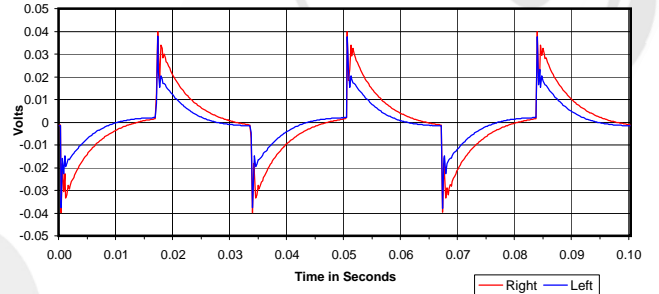
Isolation
Attenuation of External Sound vs. Frequency



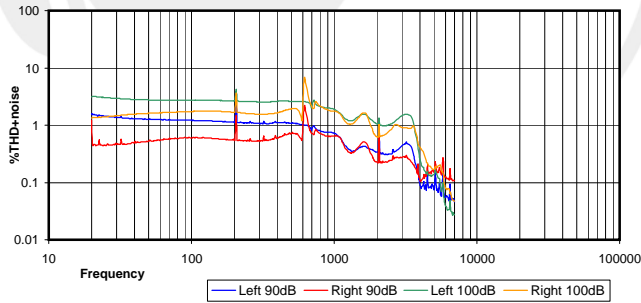
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



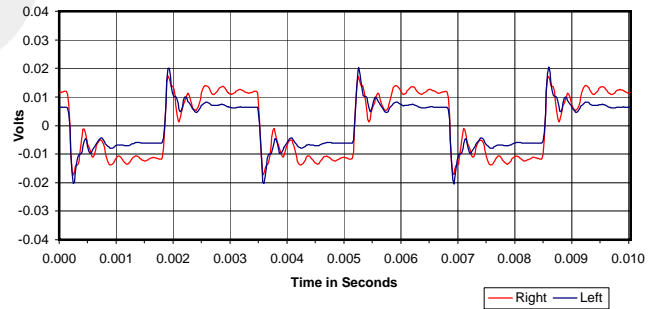
30 Hz Square Wave



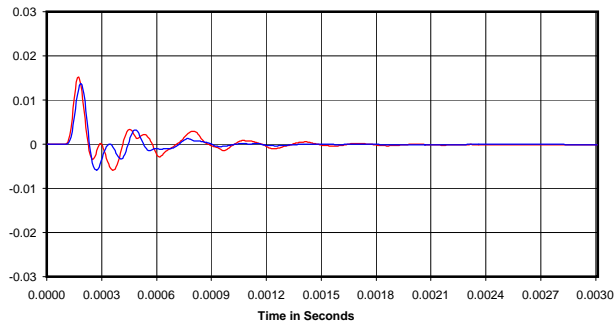
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

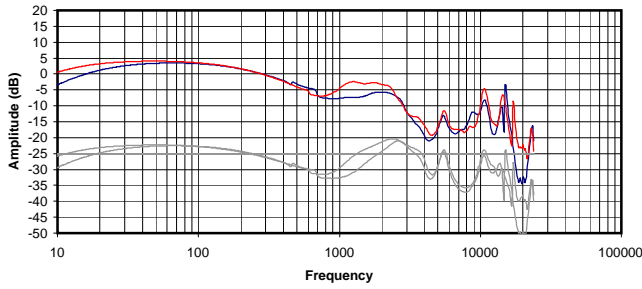


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

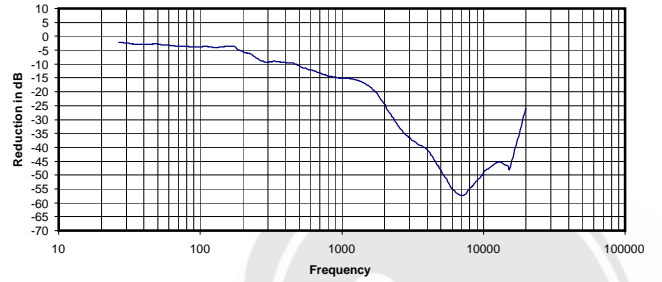
0.016 Vrms
8 Ohms
0.03 mW
-31 dB



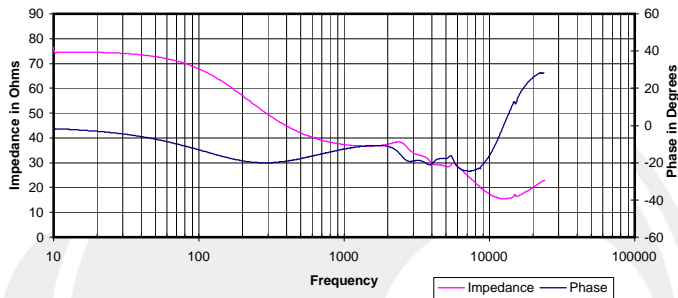
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



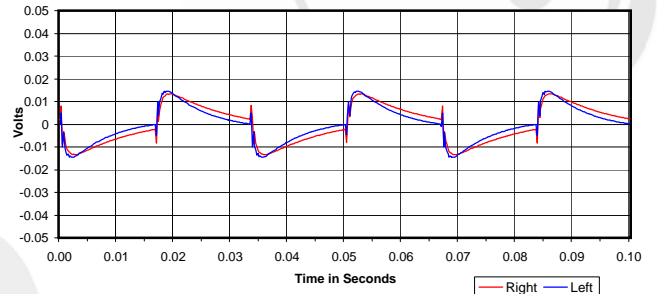
Isolation
Attenuation of External Sound vs. Frequency



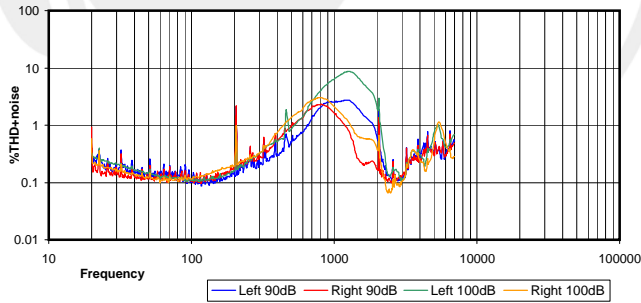
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



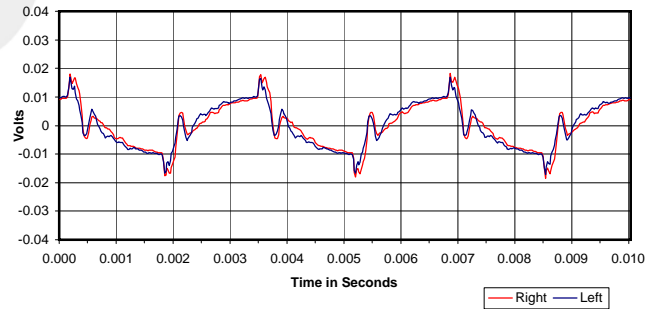
30 Hz Square Wave



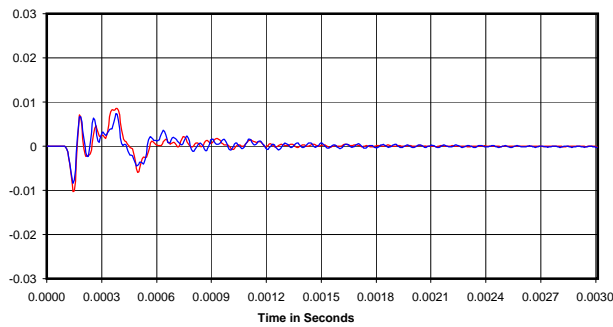
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

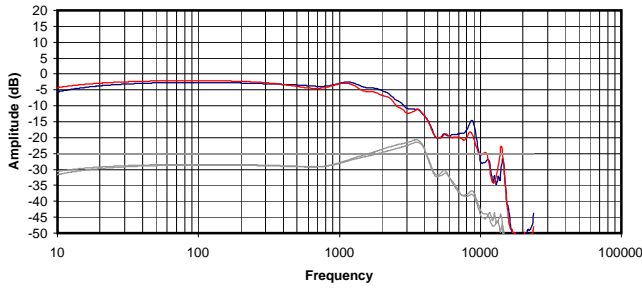


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

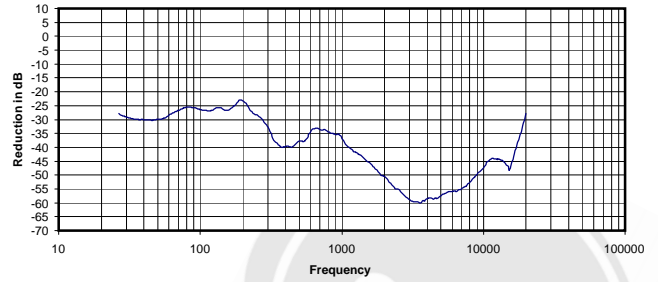
0.066 Vrms
37 Ohms
0.12 mW
-23 dB



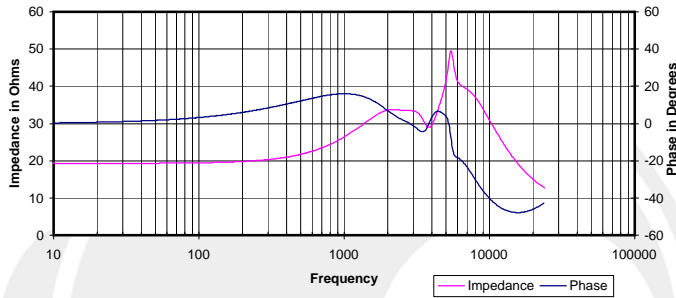
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



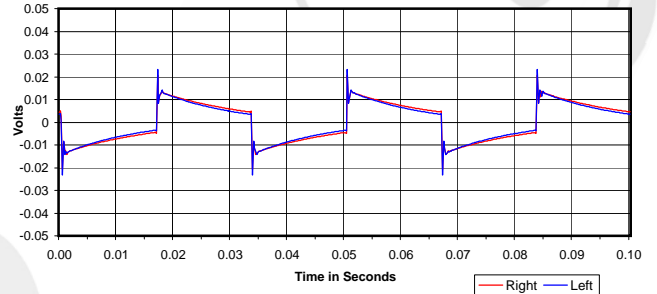
Isolation
Attenuation of External Sound vs. Frequency



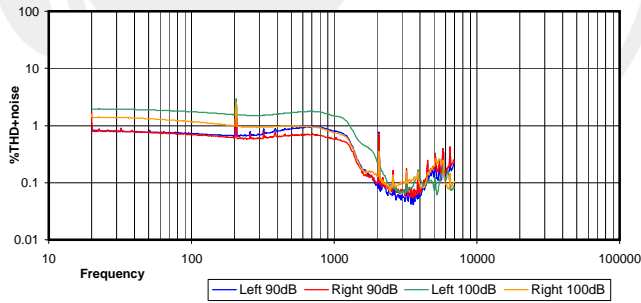
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



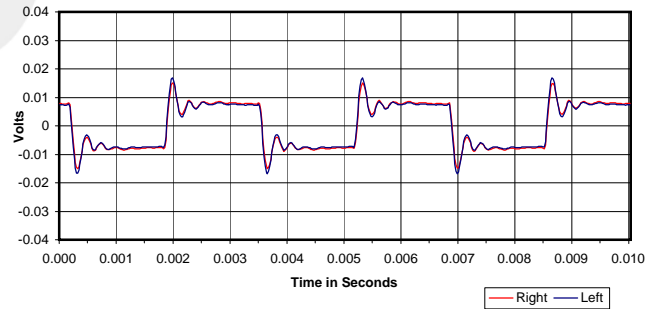
30 Hz Square Wave



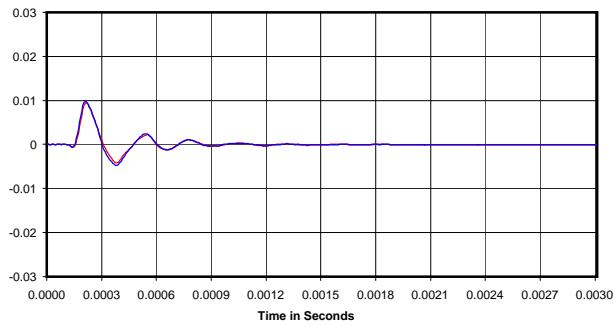
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

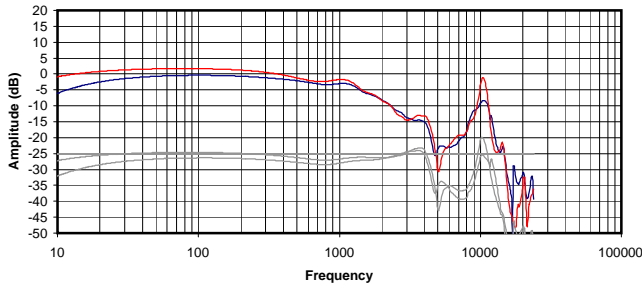


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

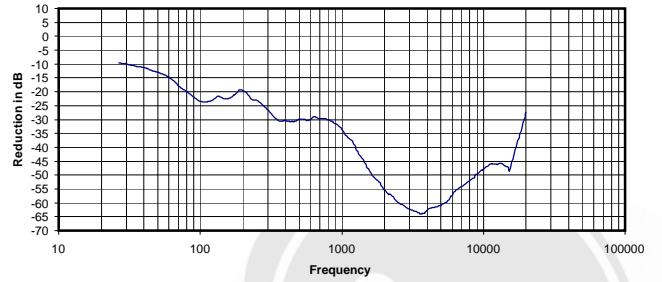
0.016 Vrms
26 Ohms
0.01 mW
-42 dB



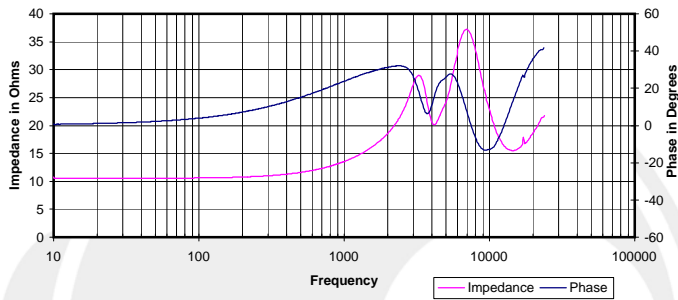
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



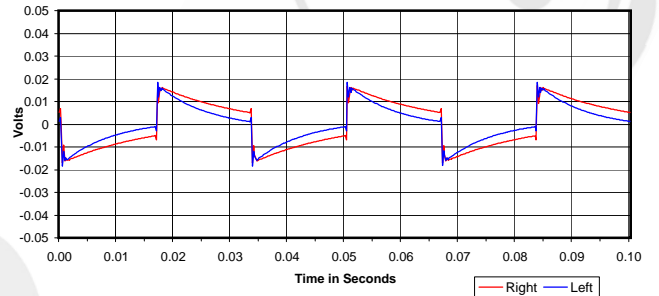
Isolation
Attenuation of External Sound vs. Frequency



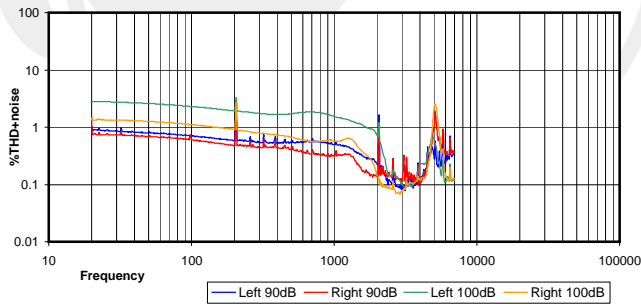
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



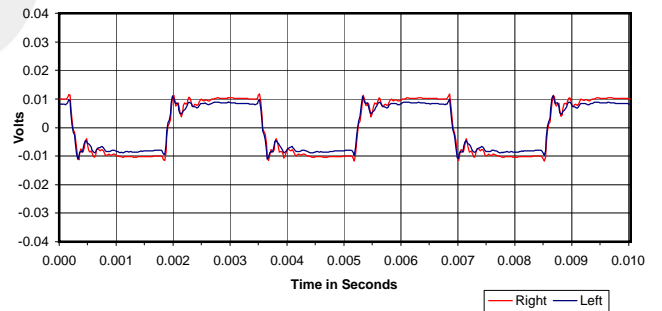
30 Hz Square Wave



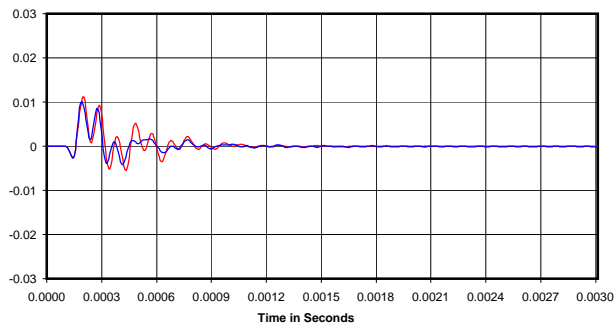
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



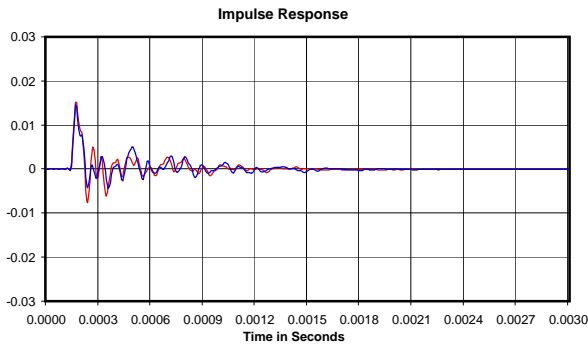
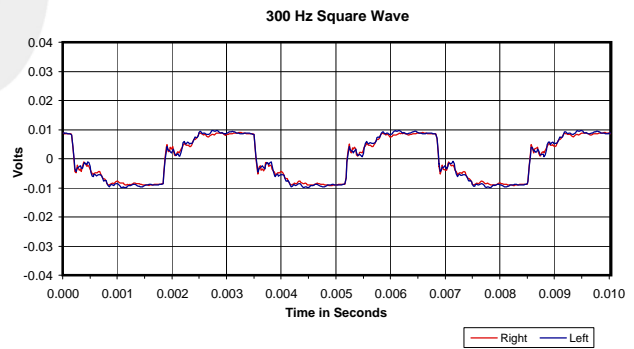
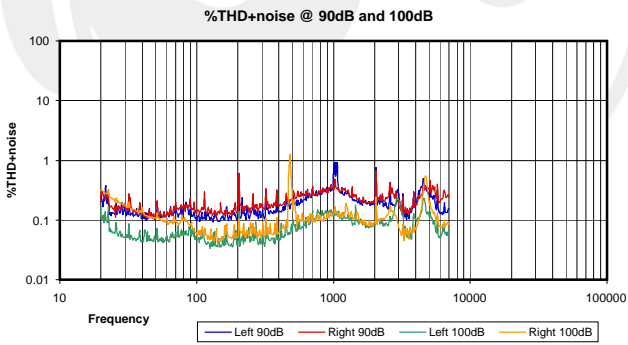
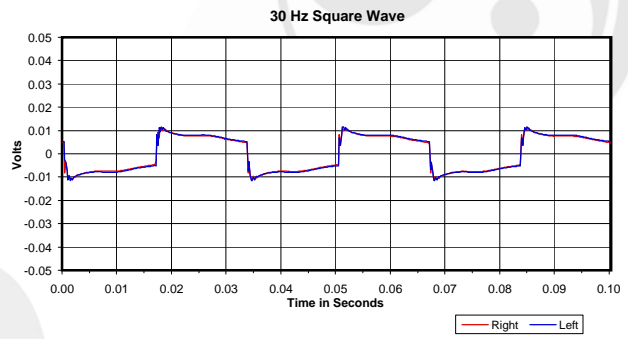
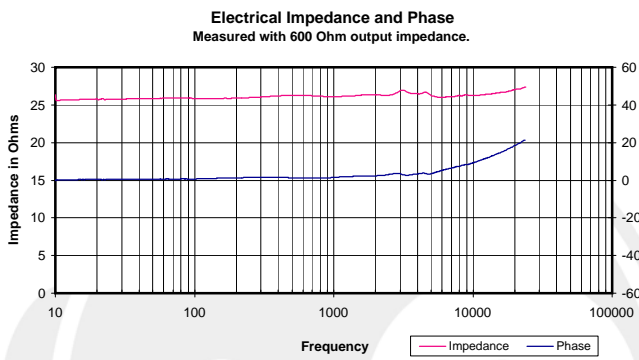
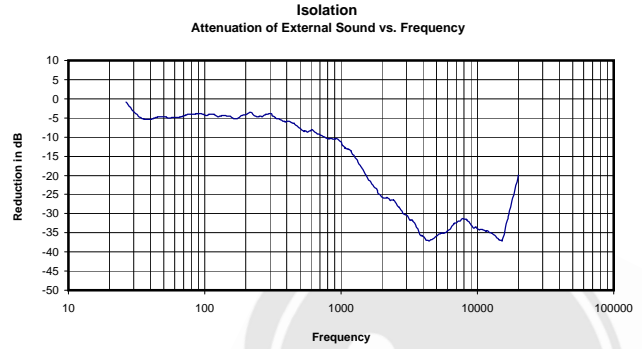
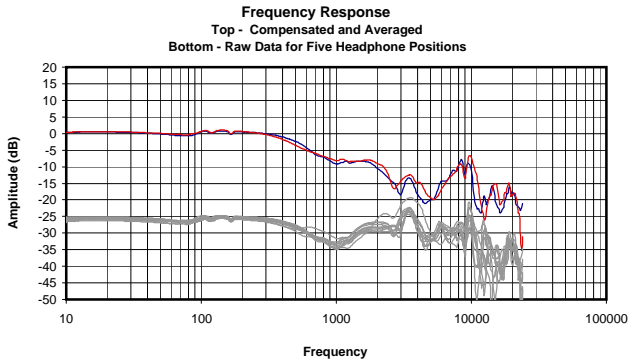
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.017 Vrms
14 Ohms
0.02 mW
-40 dB

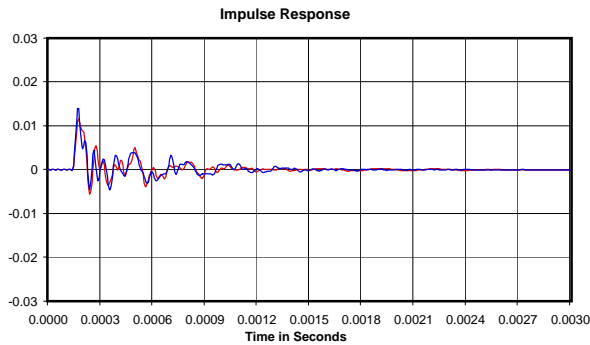
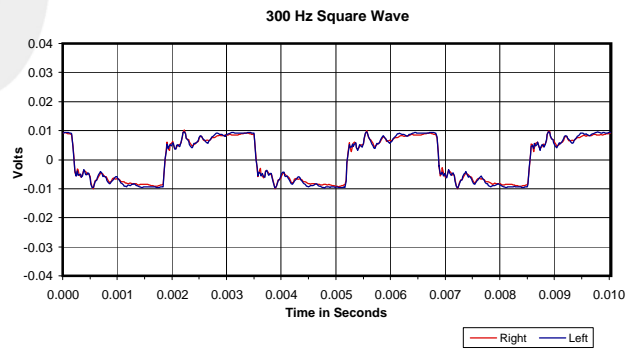
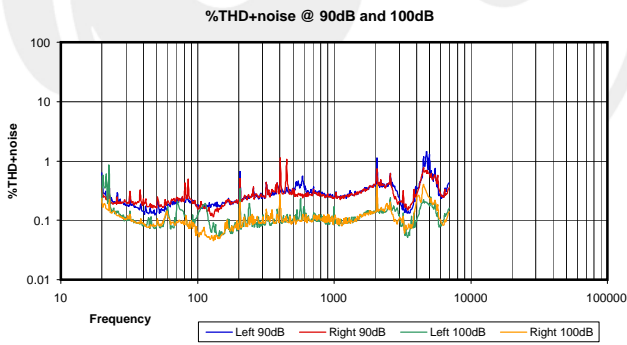
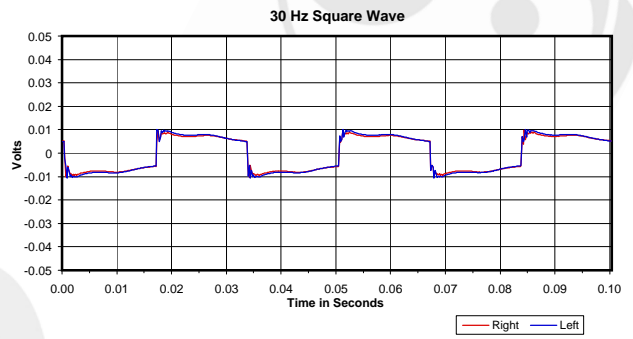
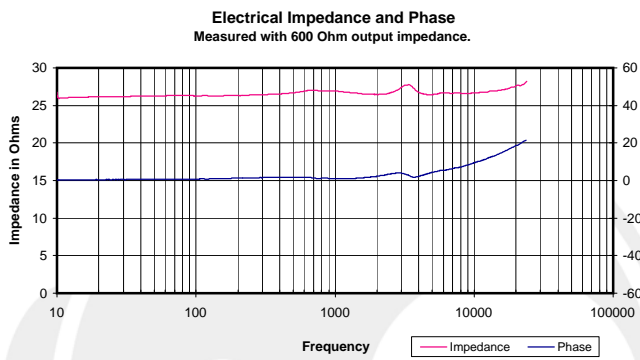
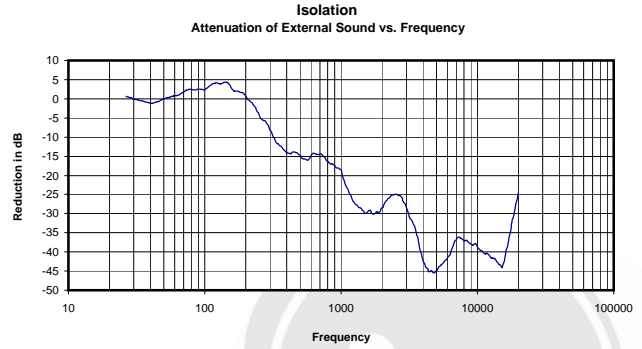
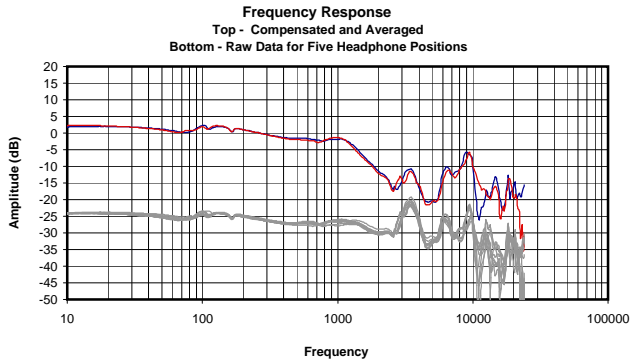




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.165 Vrms
26 Ohms
1.04 mW
-17 dB

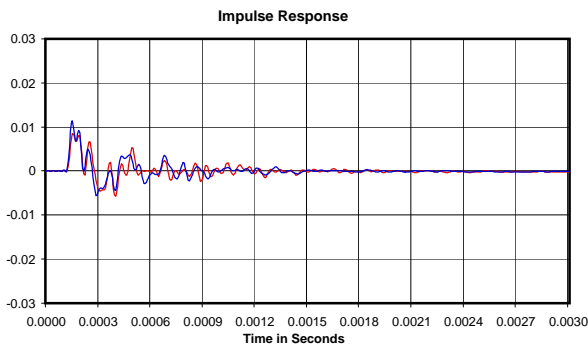
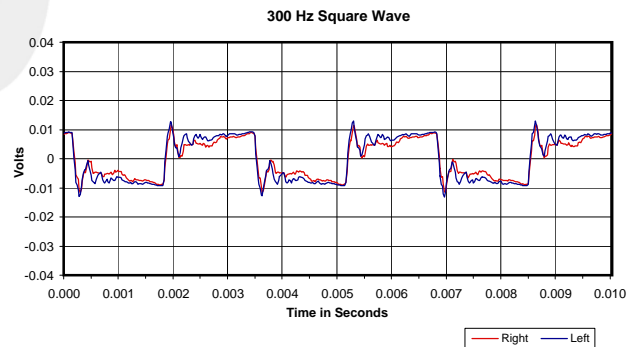
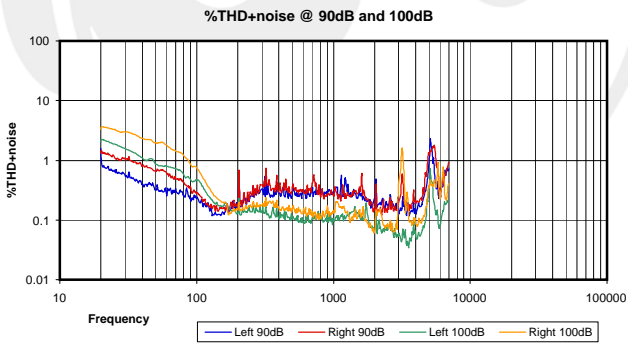
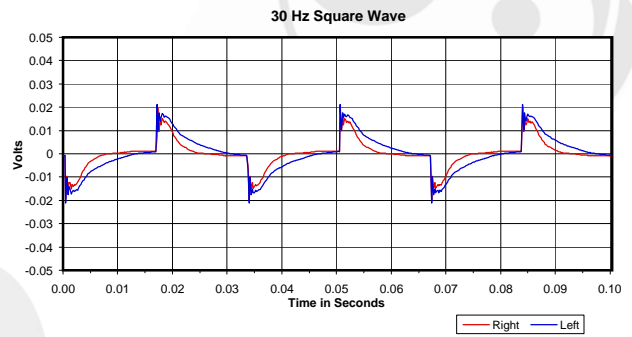
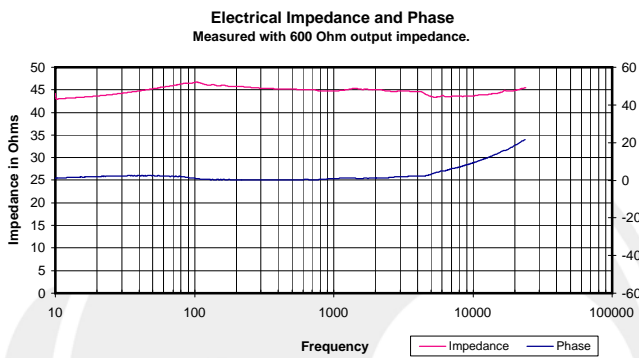
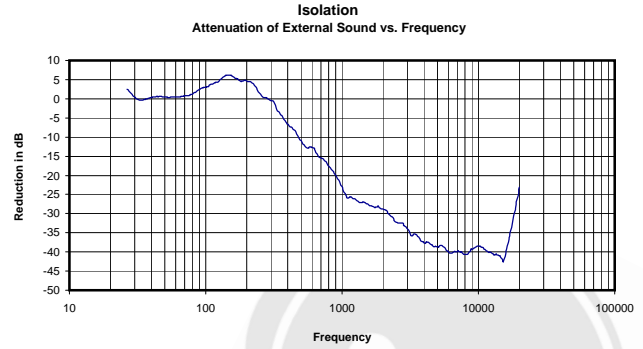
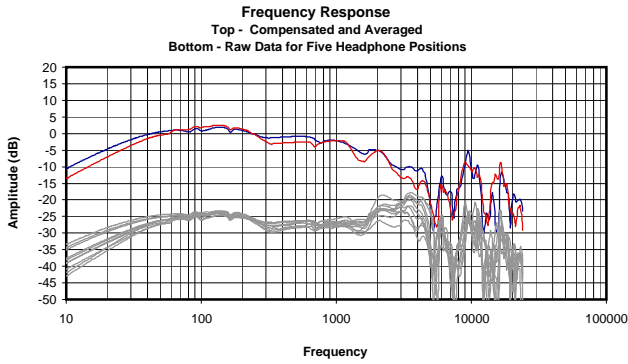




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
27 Ohms
0.07 mW
-20 dBr

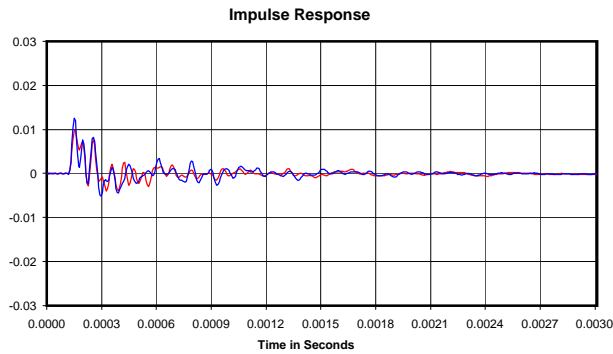
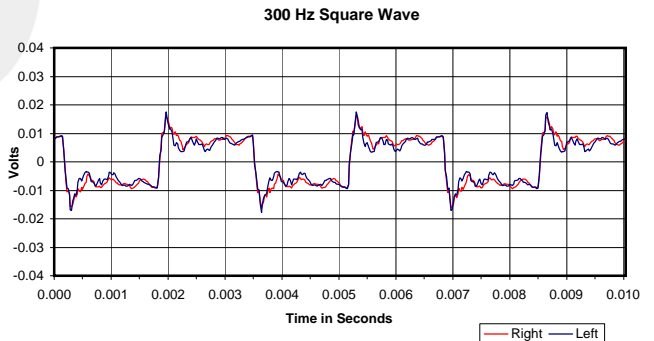
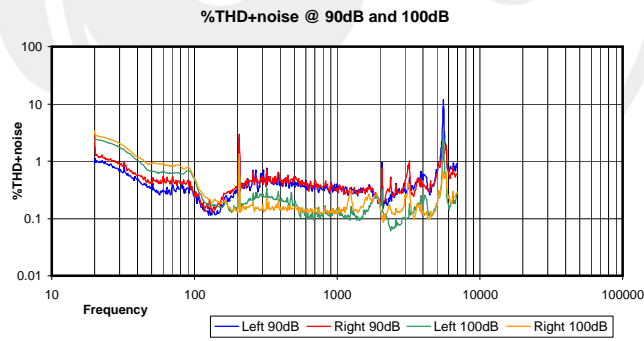
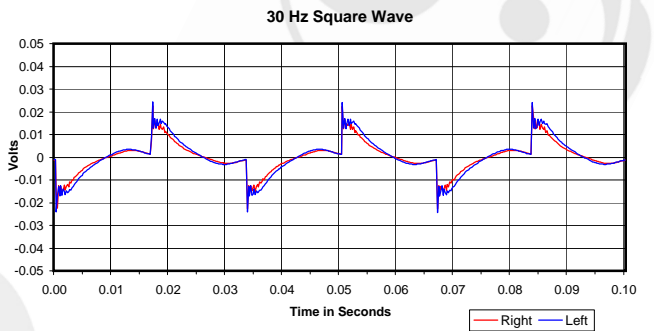
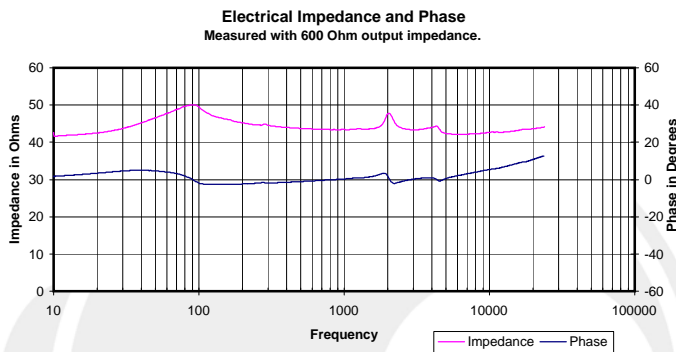
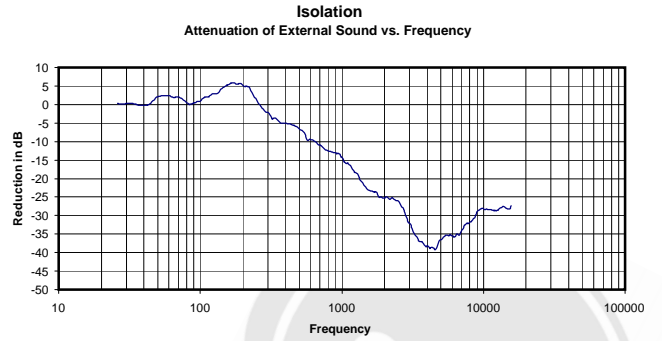
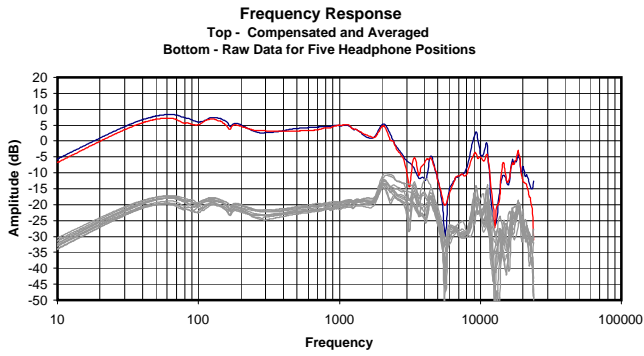




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.049 Vrms
45 Ohms
0.05 mW
-19 dBr

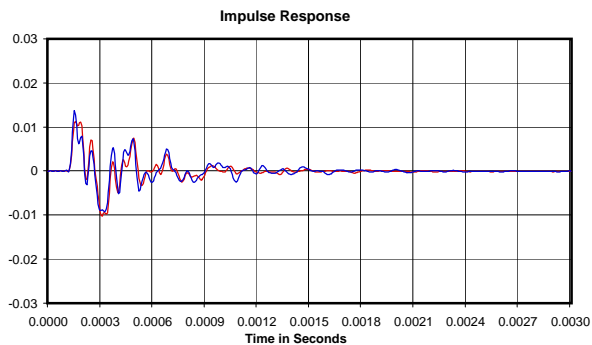
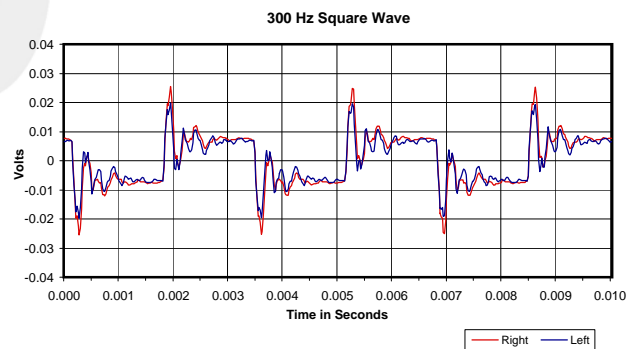
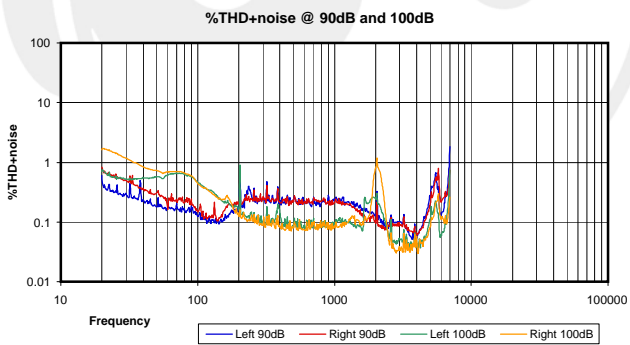
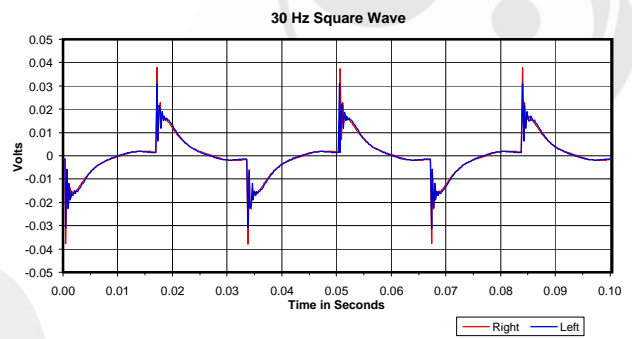
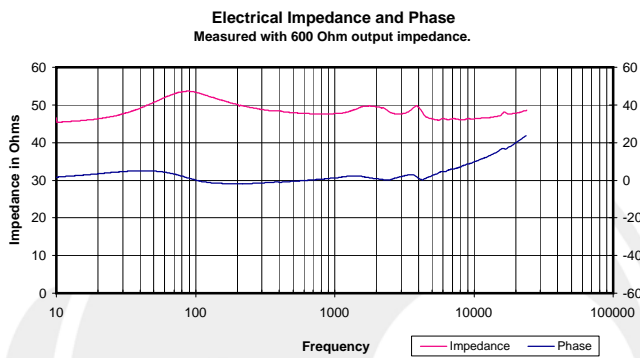
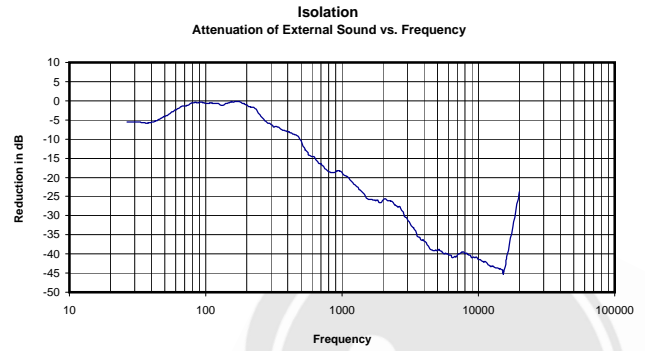
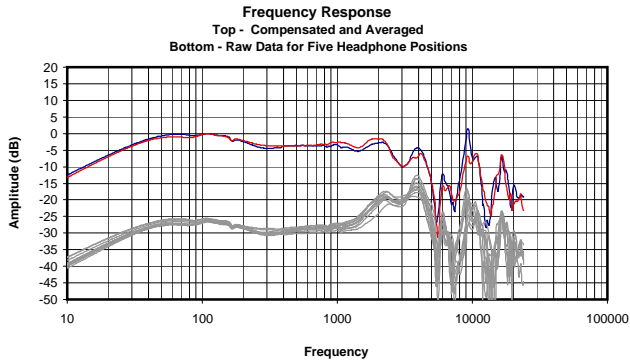




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.011 Vrms
43 Ohms
0.00 mW
-14 dB



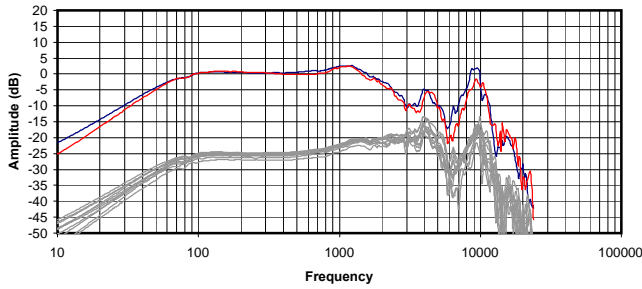


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

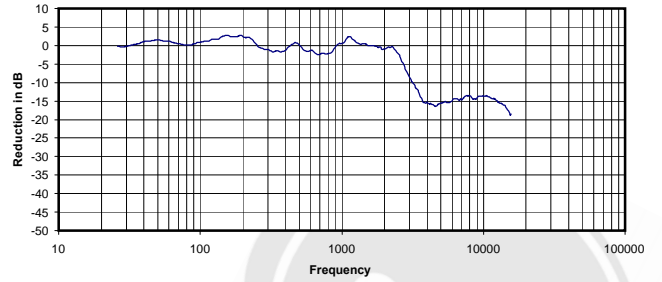
0.054 Vrms
48 Ohms
0.06 mW
-20 dBr



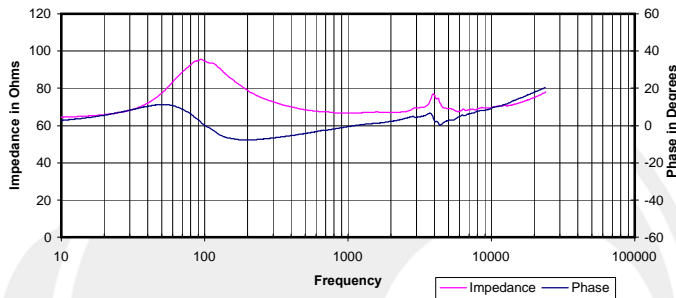
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



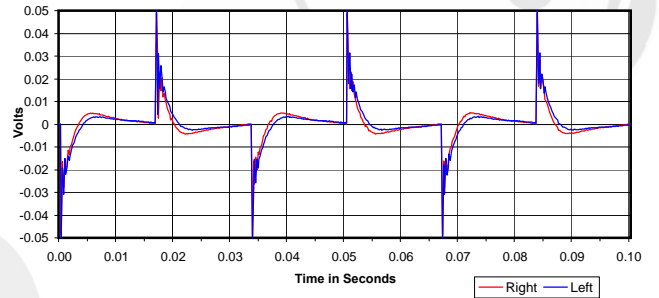
Isolation
 Attenuation of External Sound vs. Frequency



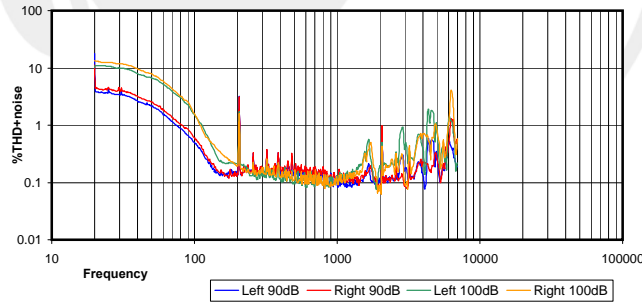
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



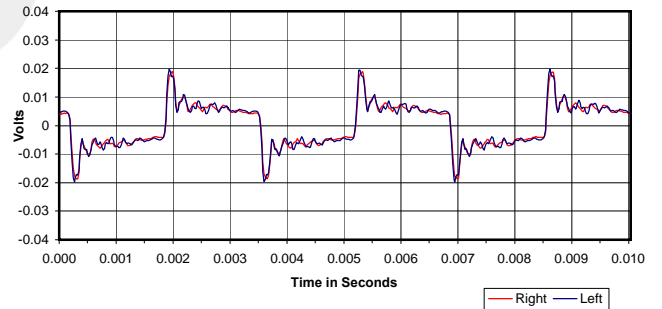
30 Hz Square Wave



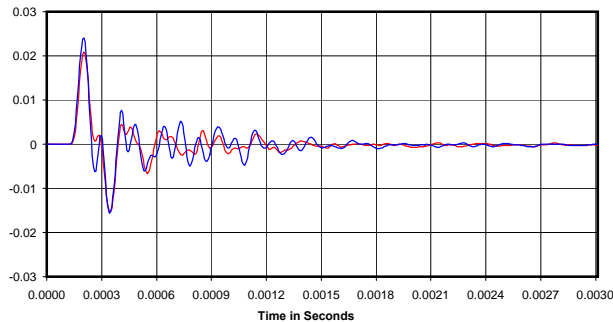
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

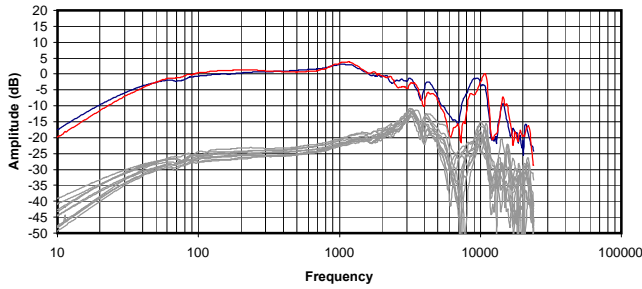


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

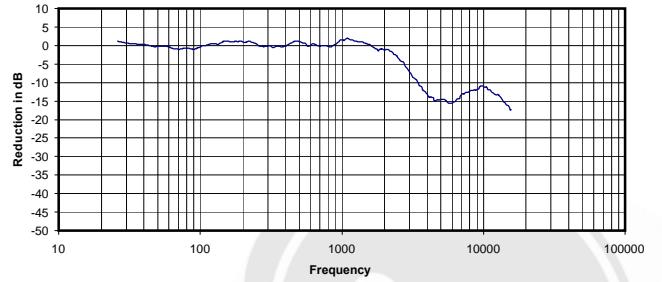
0.045 Vrms
 67 Ohms
 0.03 mW
 -3 dBr



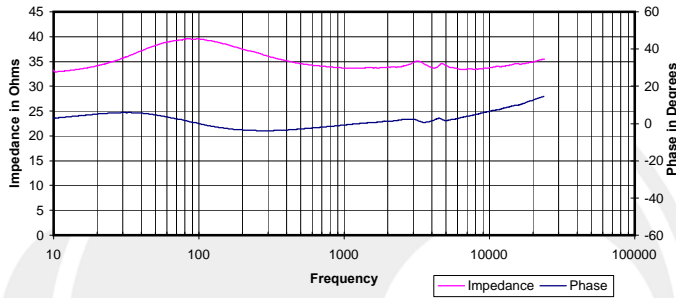
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



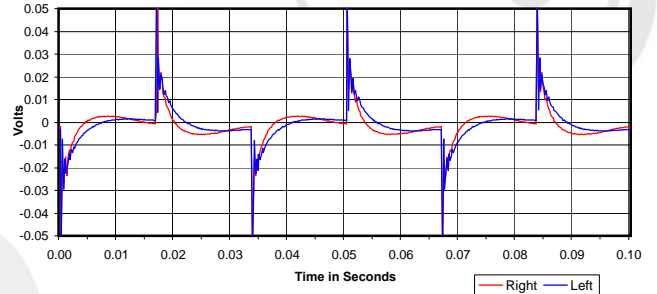
Isolation
Attenuation of External Sound vs. Frequency



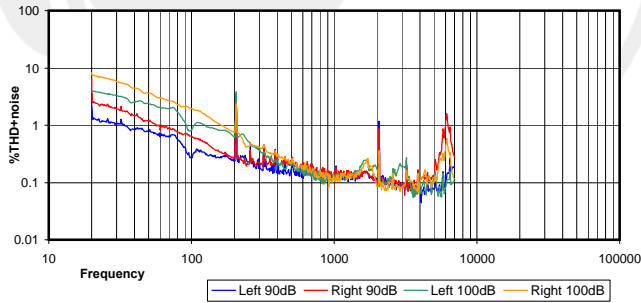
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



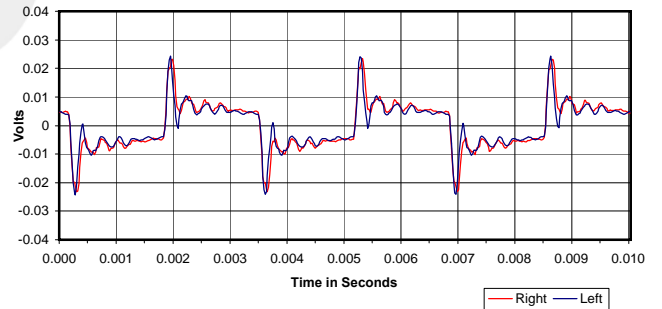
30 Hz Square Wave



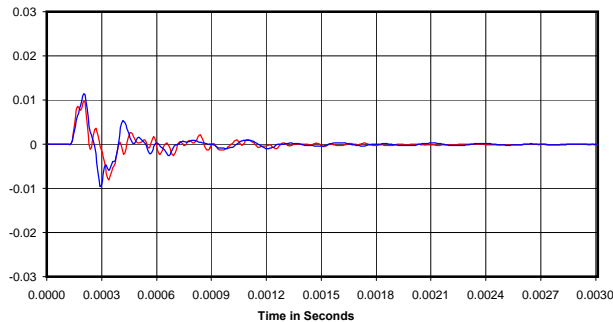
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

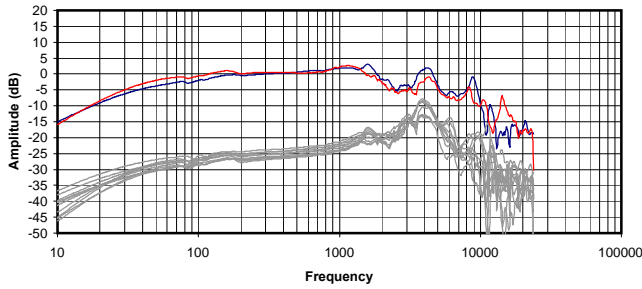


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

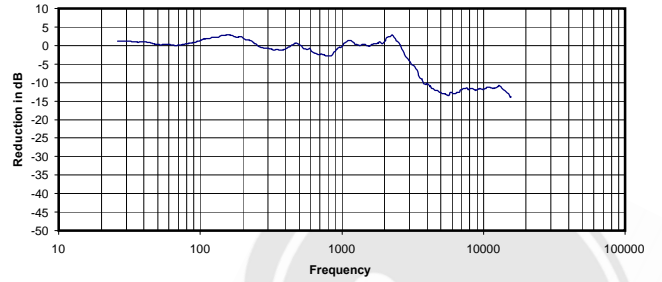
0.055 Vrms
34 Ohms
0.09 mW
-2 dBr



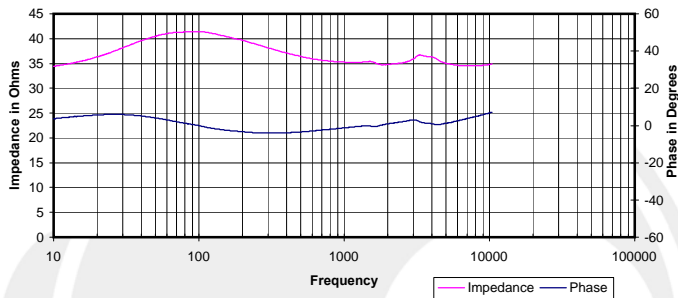
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



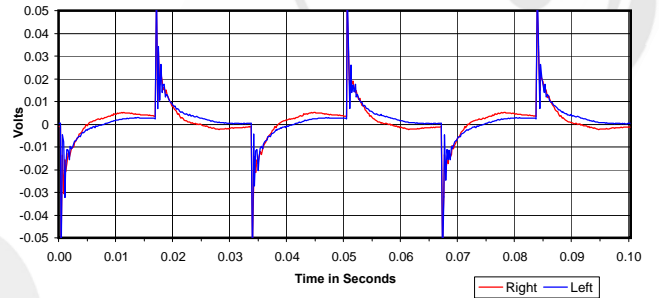
Isolation
 Attenuation of External Sound vs. Frequency



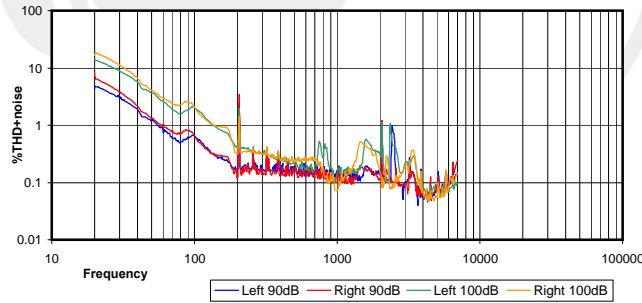
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



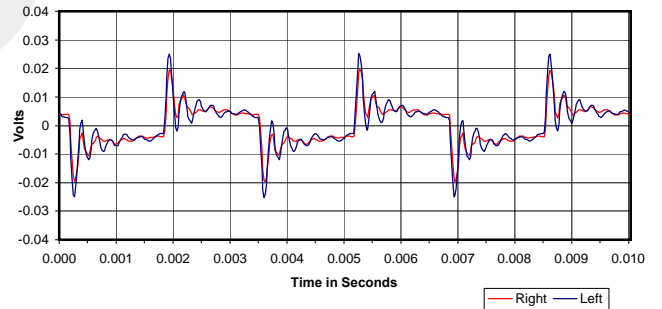
30 Hz Square Wave



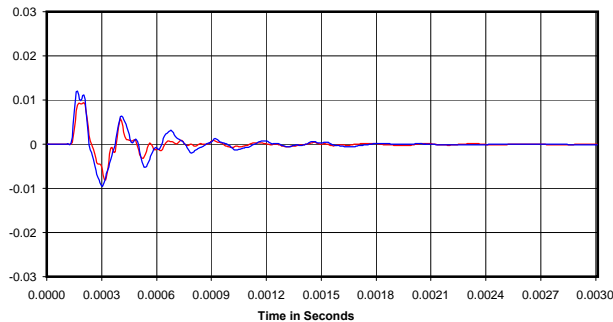
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

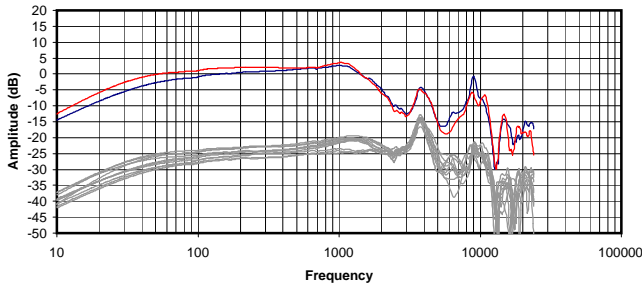


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

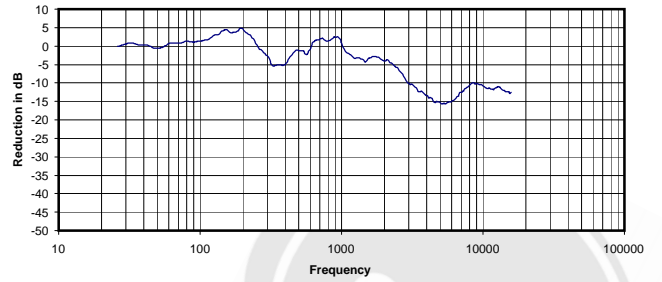
0.062 Vrms
 35 Ohms
 0.11 mW
 -2 dB



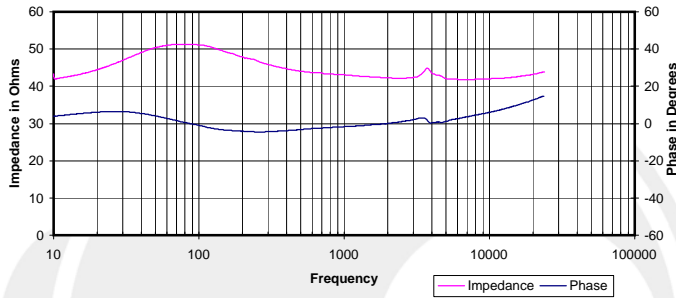
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



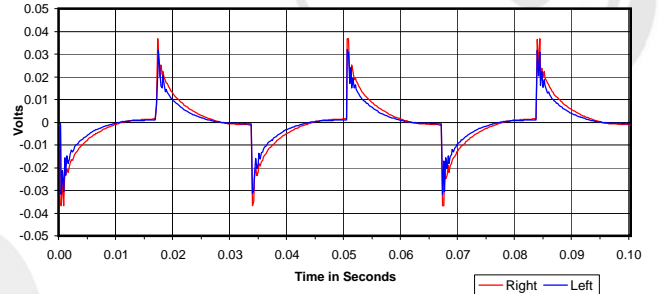
Isolation
Attenuation of External Sound vs. Frequency



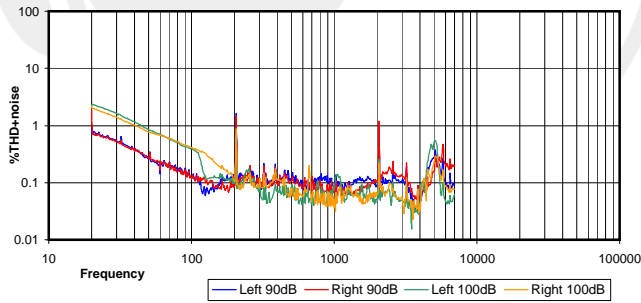
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



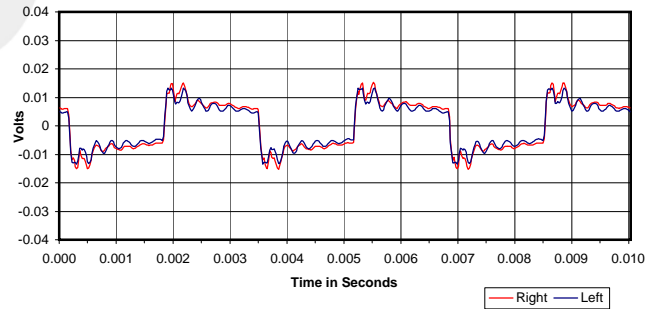
30 Hz Square Wave



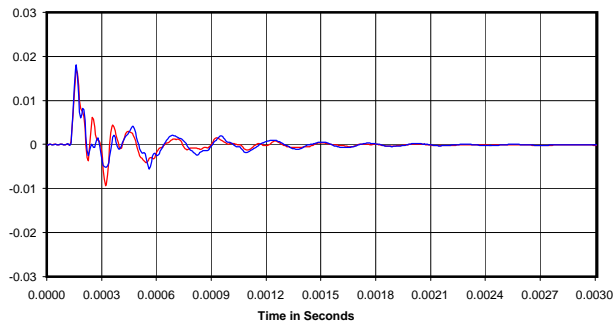
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

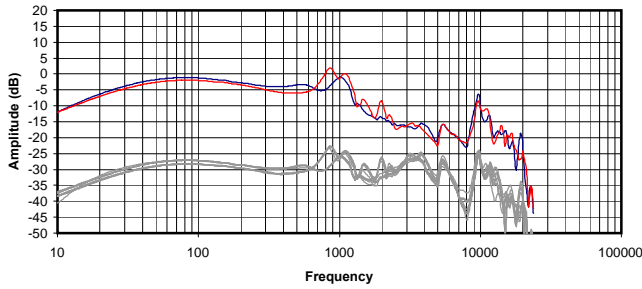


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

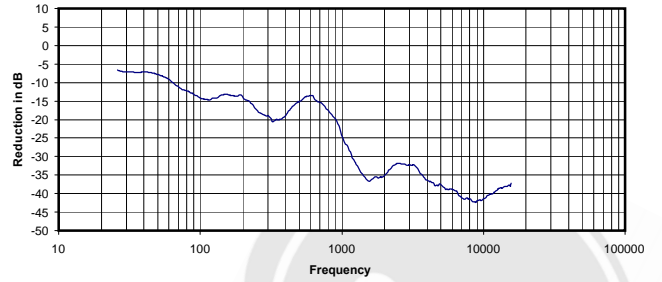
0.034 Vrms
43 Ohms
0.03 mW
-3 dB



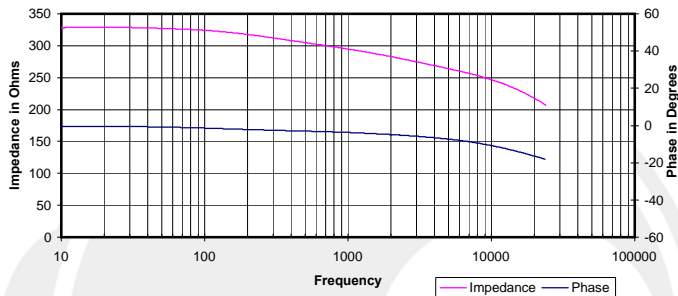
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



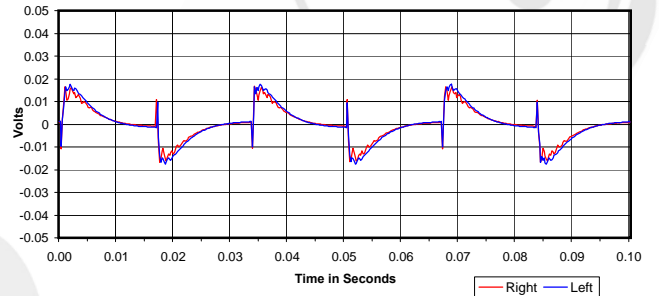
Isolation
 Attenuation of External Sound vs. Frequency



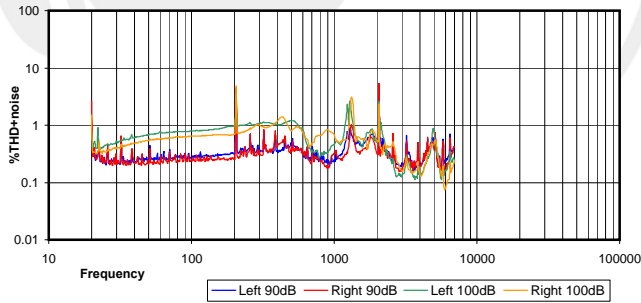
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



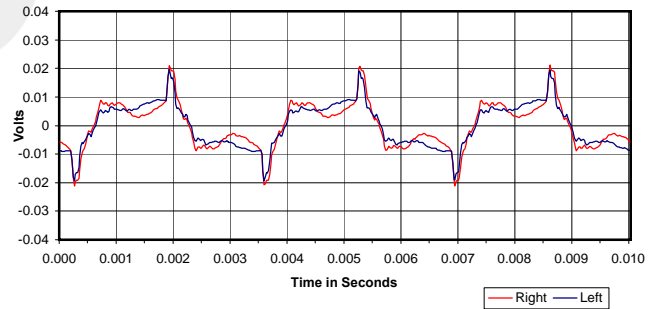
30 Hz Square Wave



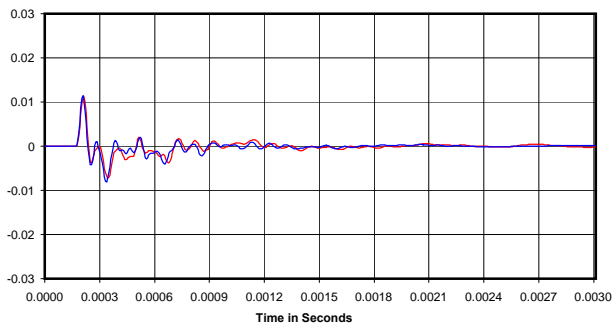
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

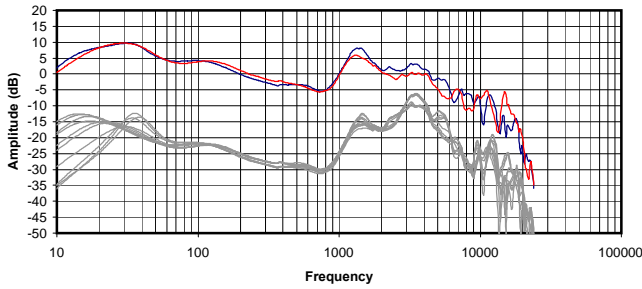


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

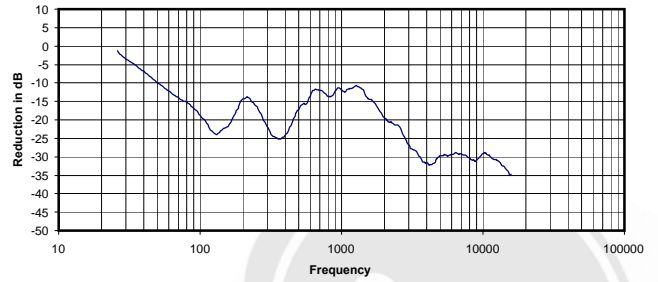
0.025 Vrms
 295 Ohms
 0.00 mW
 -24 dB



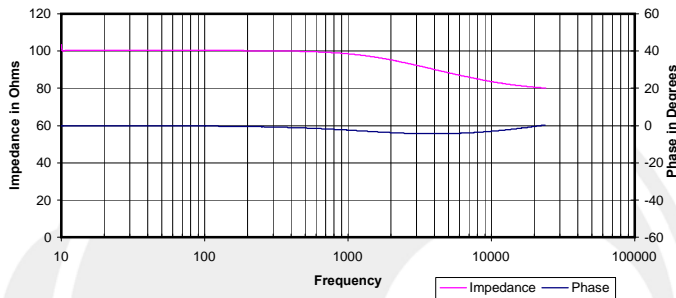
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



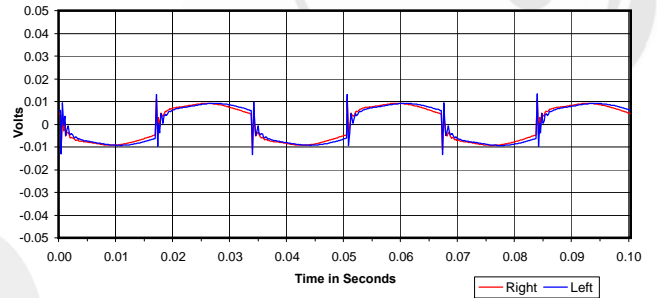
Isolation
 Attenuation of External Sound vs. Frequency



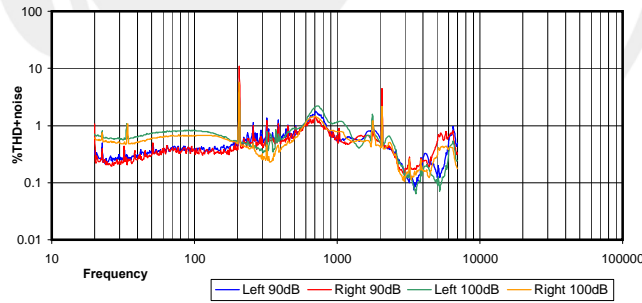
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



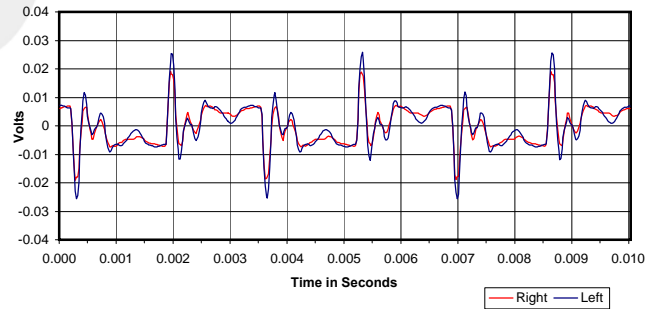
30 Hz Square Wave



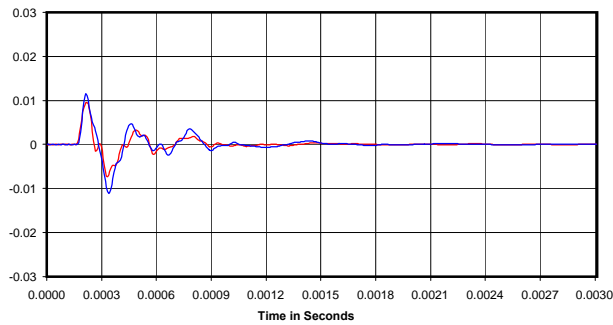
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



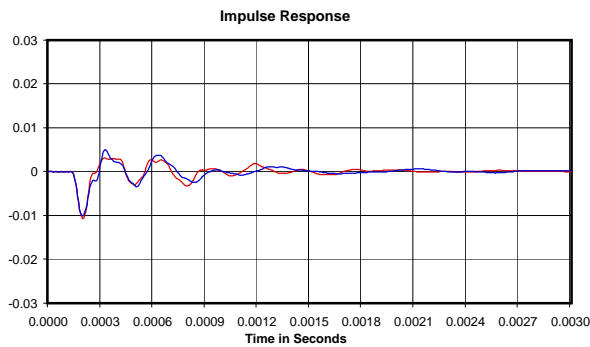
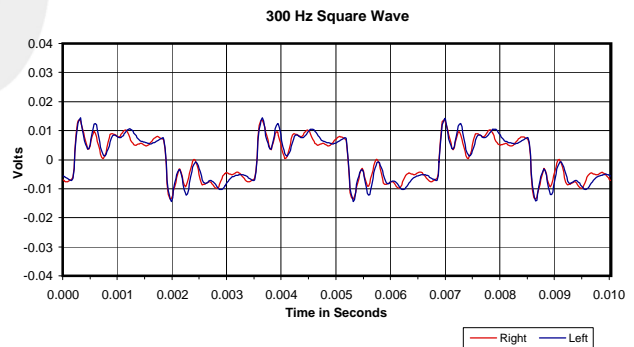
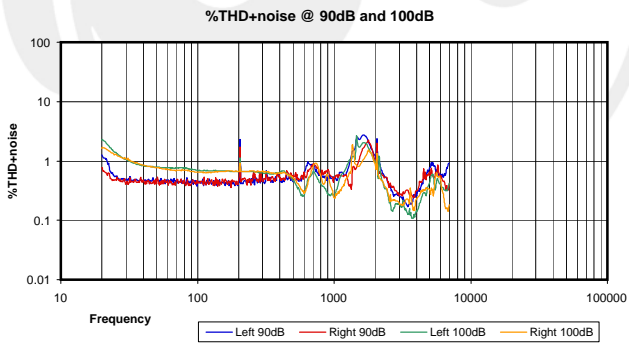
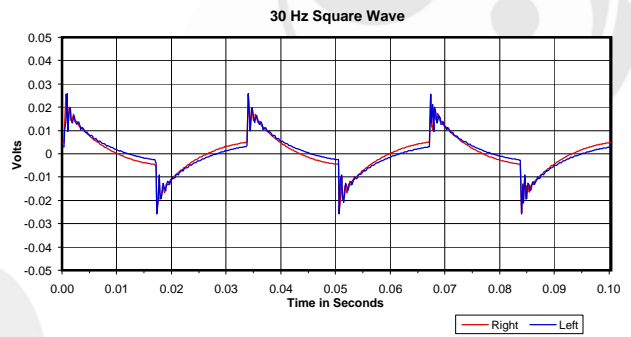
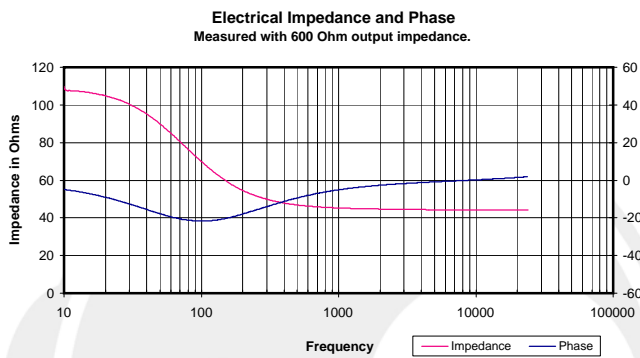
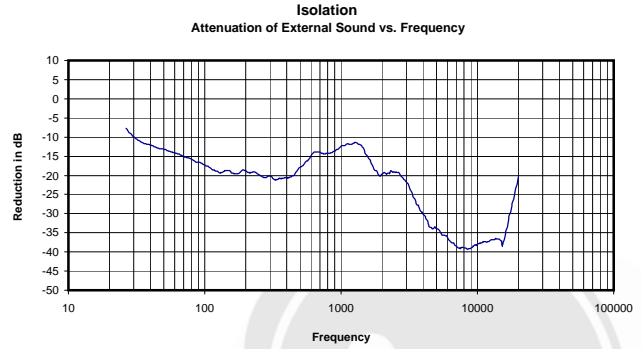
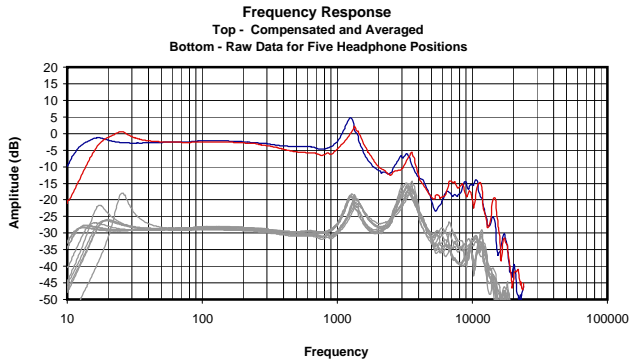
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.072 Vrms
 99 Ohms
 0.05 mW
 -20 dB

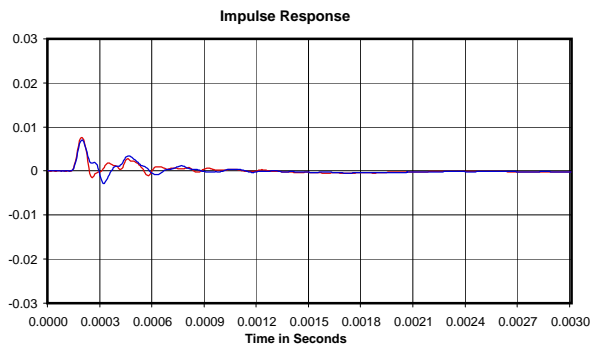
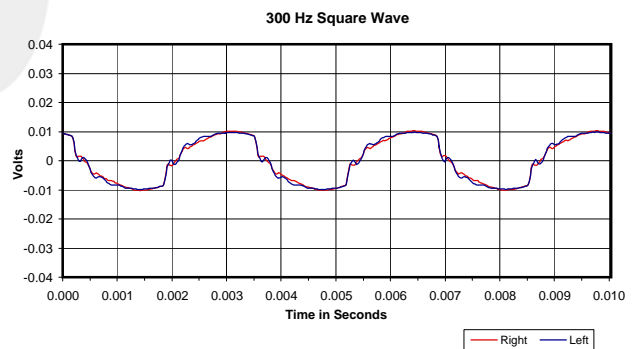
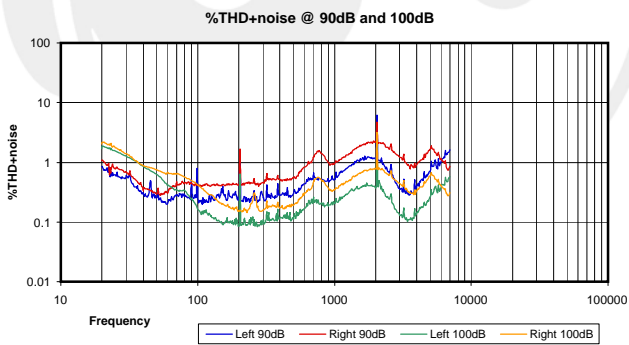
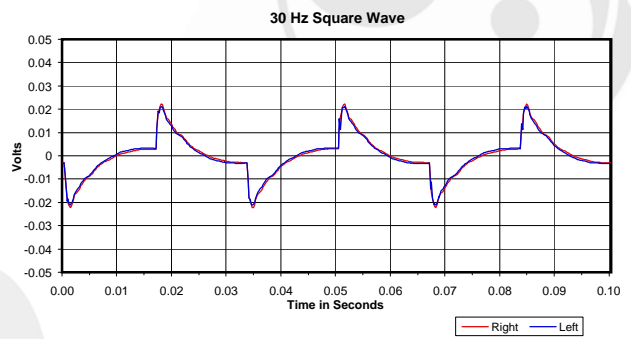
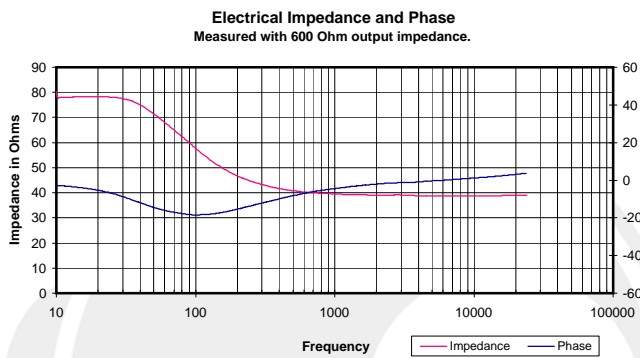
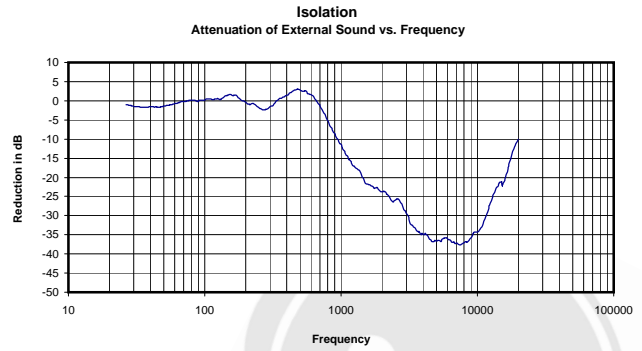
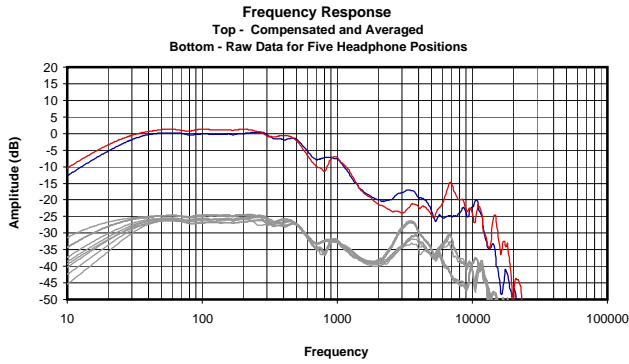




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.033 Vrms
45 Ohms
0.02 mW
-22 dB

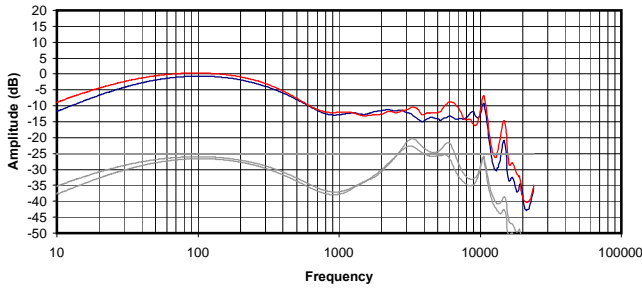




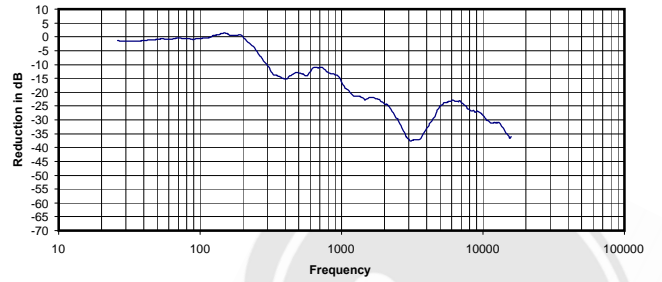
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.095 Vrms
40 Ohms
0.23 mW
-15 dBr

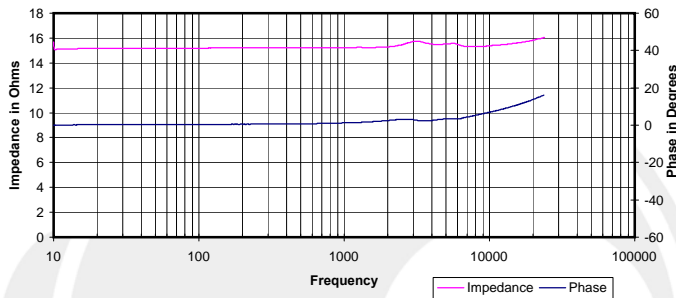
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



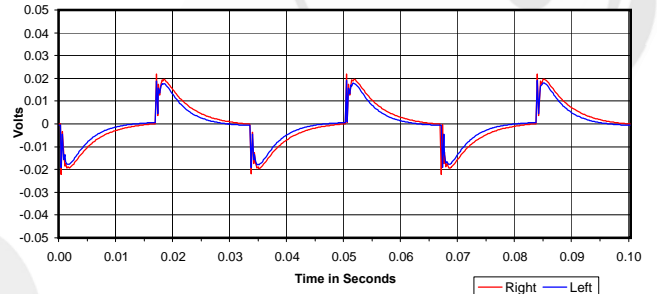
Isolation
Attenuation of External Sound vs. Frequency



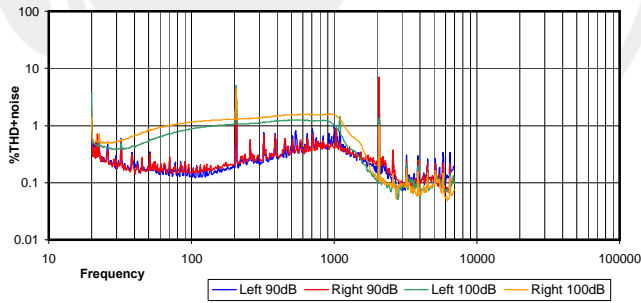
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



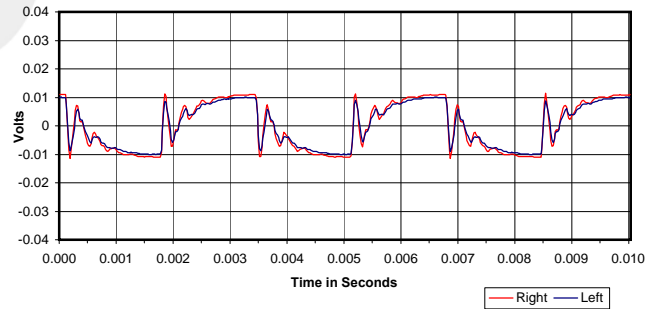
30 Hz Square Wave



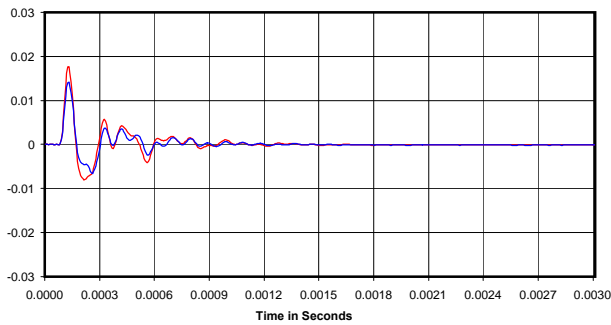
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

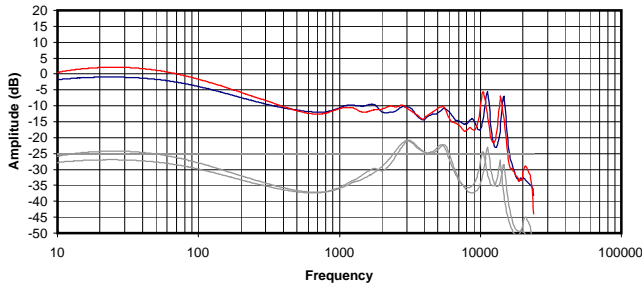


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

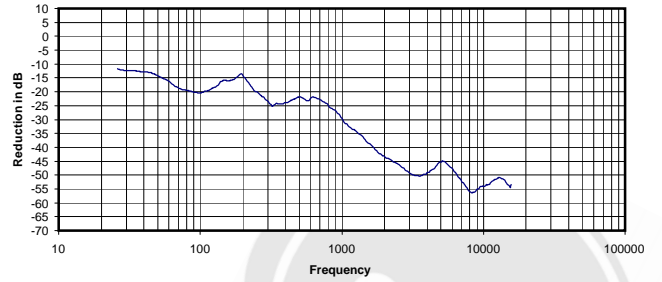
0.046 Vrms
15 Ohms
0.14 mW
-16 dB



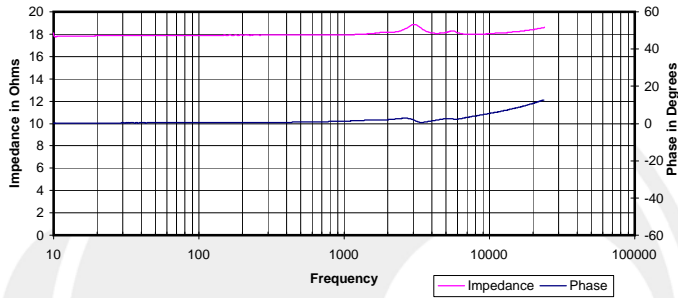
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



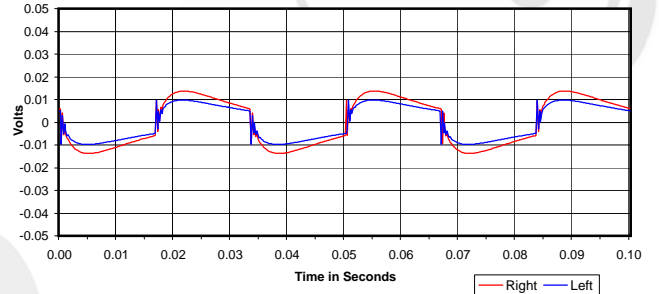
Isolation
Attenuation of External Sound vs. Frequency



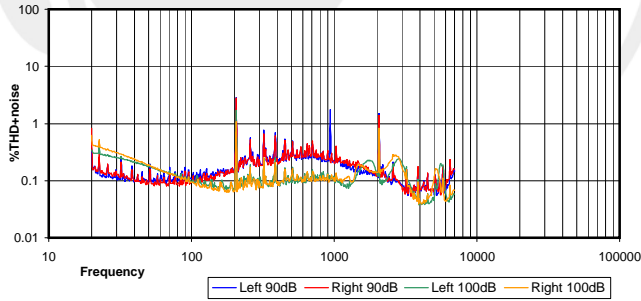
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



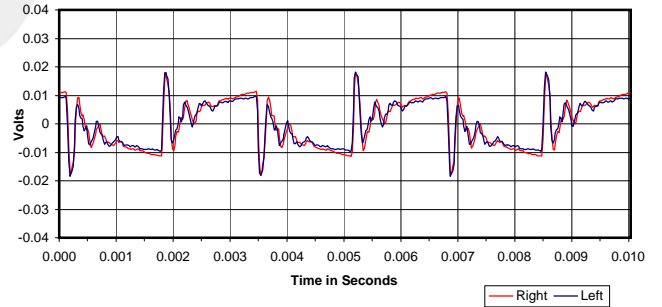
30 Hz Square Wave



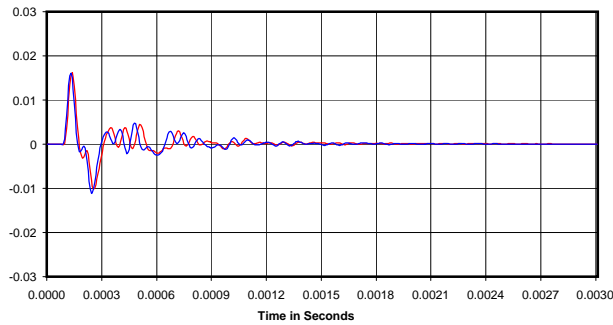
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

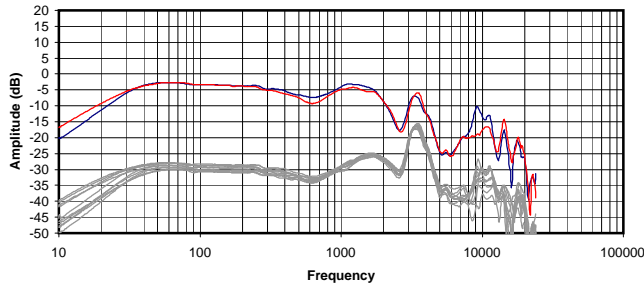


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

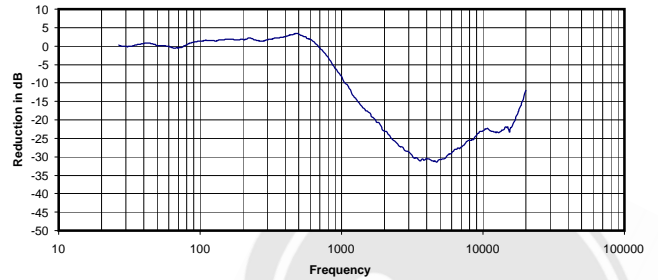
0.043 Vrms
18 Ohms
0.10 mW
-31 dB



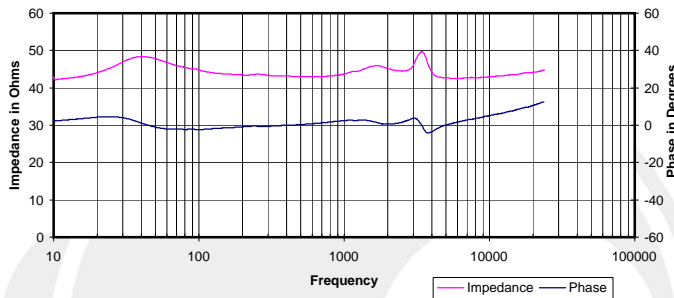
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



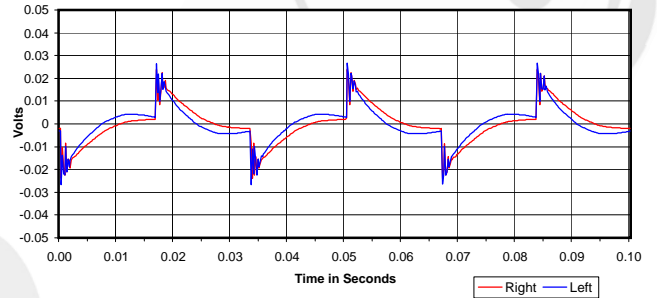
Isolation
Attenuation of External Sound vs. Frequency



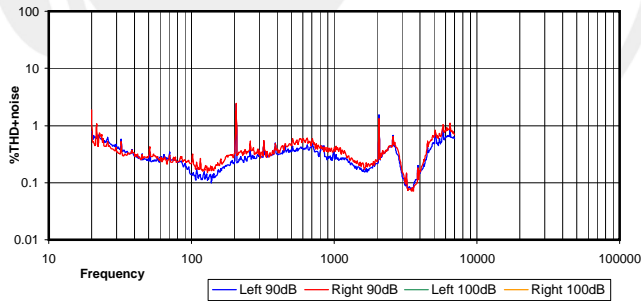
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



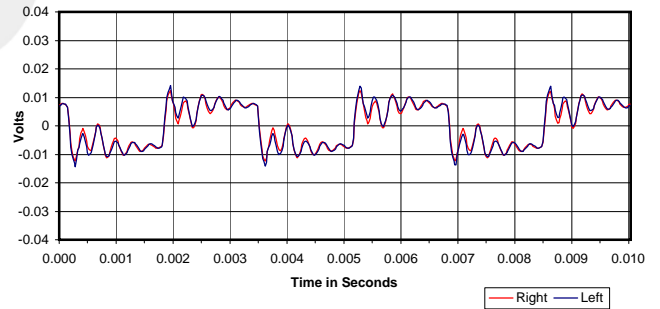
30 Hz Square Wave



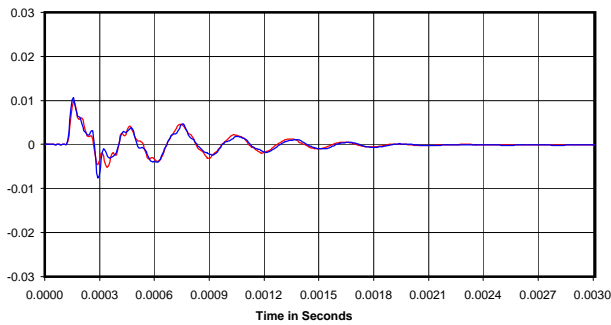
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

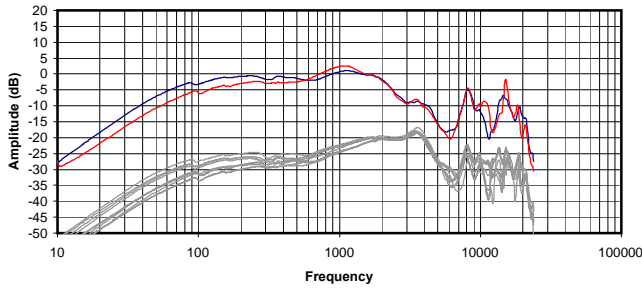


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

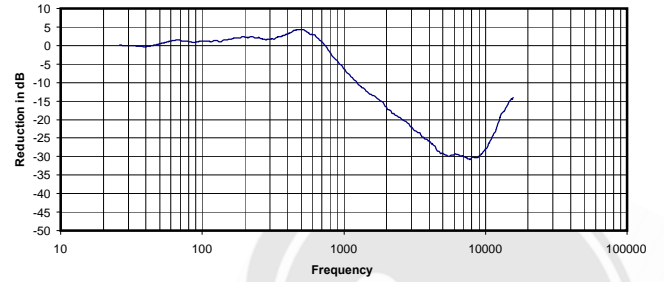
0.027 Vrms
44 Ohms
0.02 mW
-12 dB



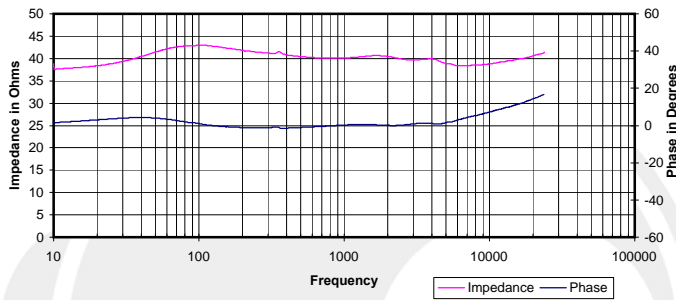
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



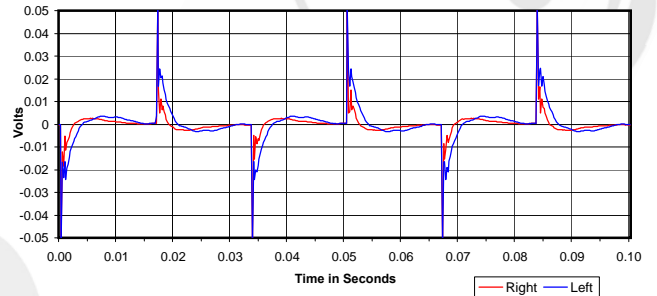
Isolation
 Attenuation of External Sound vs. Frequency



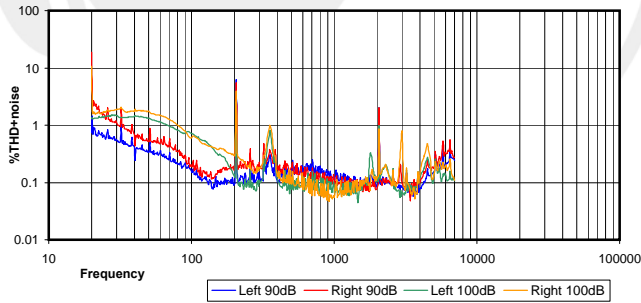
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



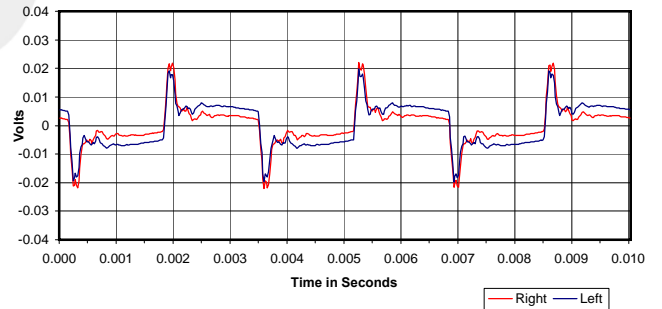
30 Hz Square Wave



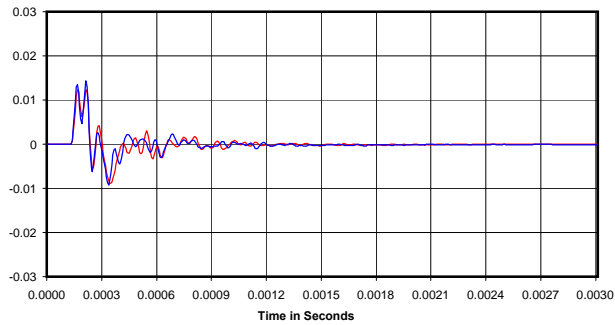
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

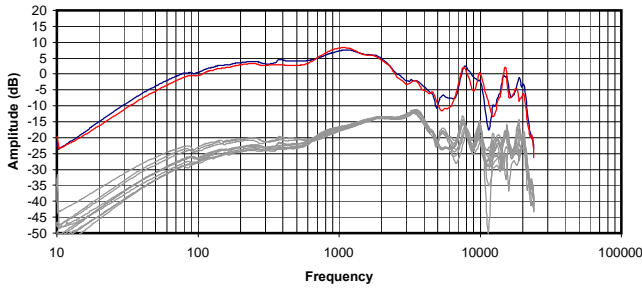


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

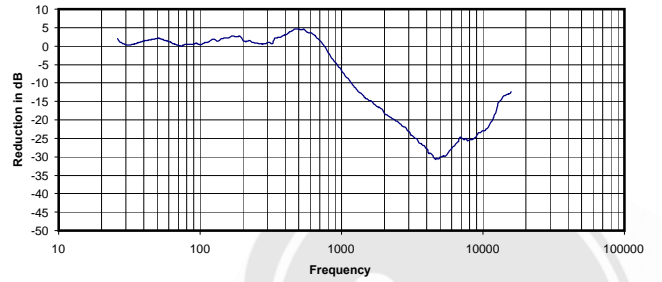
0.033 Vrms
 40 Ohms
 0.03 mW
 -8 dBr



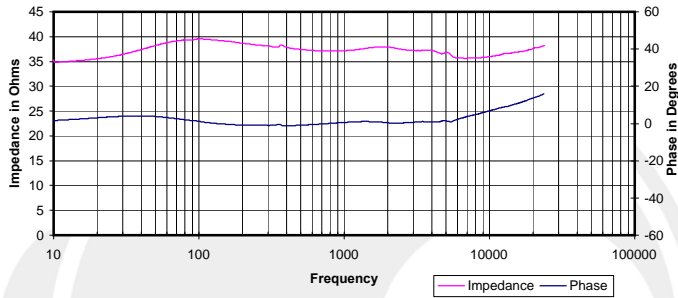
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



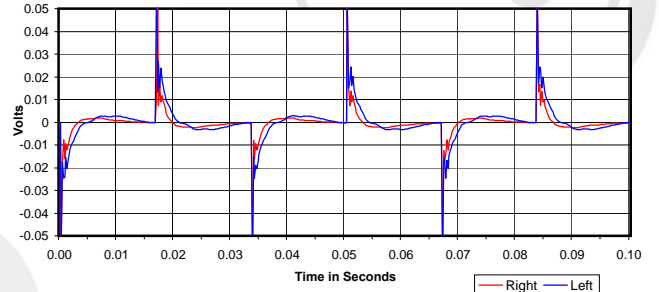
Isolation
 Attenuation of External Sound vs. Frequency



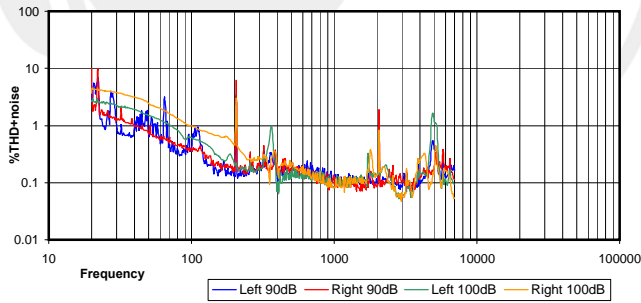
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



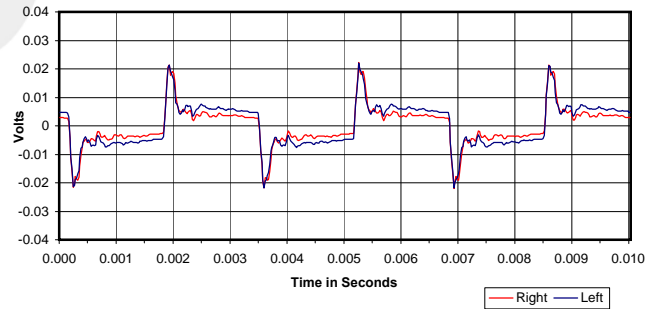
30 Hz Square Wave



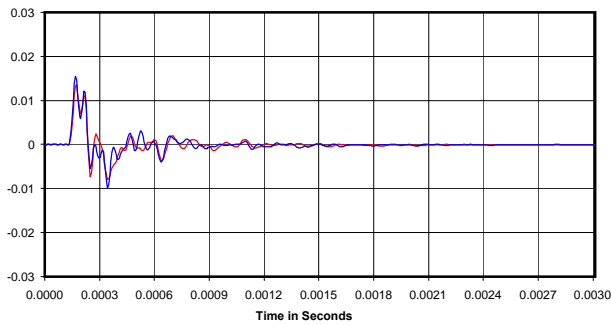
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

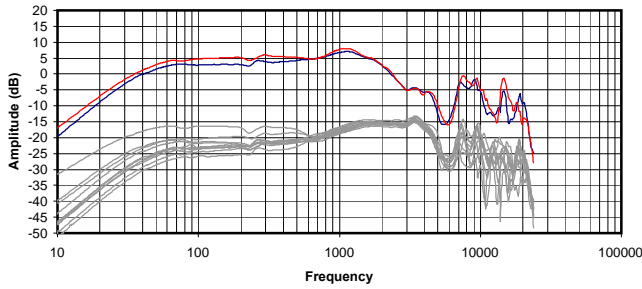


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

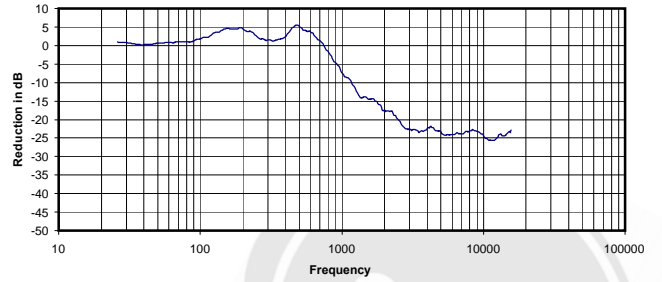
0.031 Vrms
 37 Ohms
 0.03 mW
 -8 dB



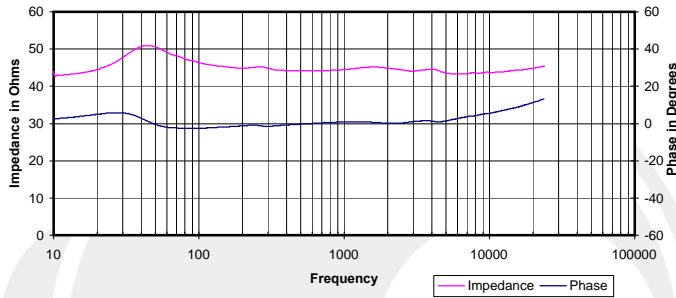
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



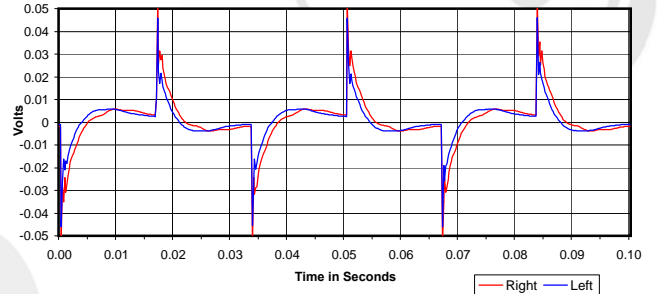
Isolation
Attenuation of External Sound vs. Frequency



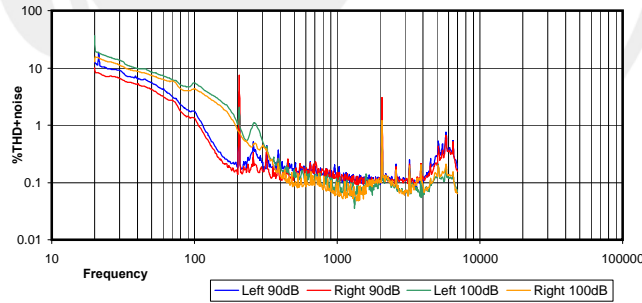
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



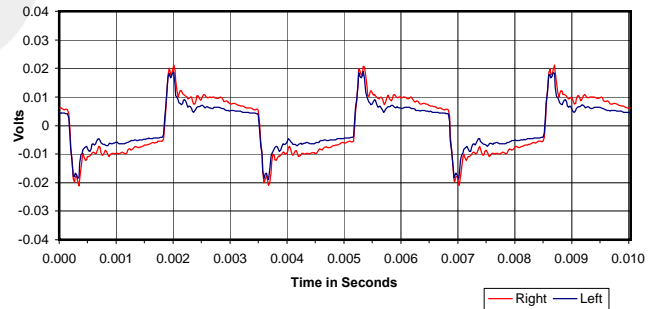
30 Hz Square Wave



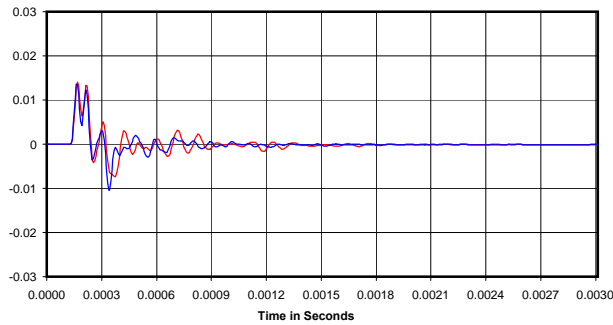
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

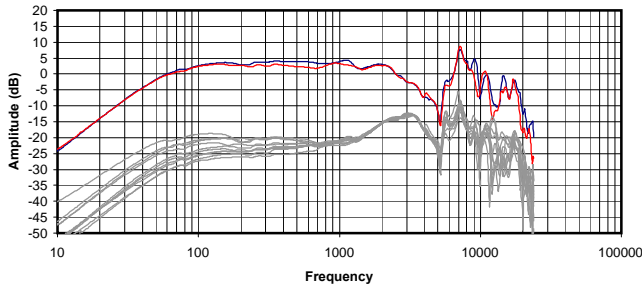


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

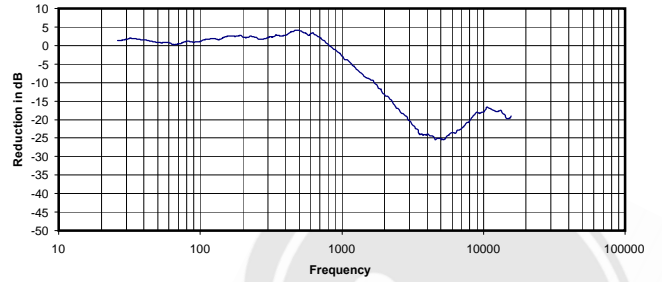
0.043 Vrms
44 Ohms
0.04 mW
-7 dB



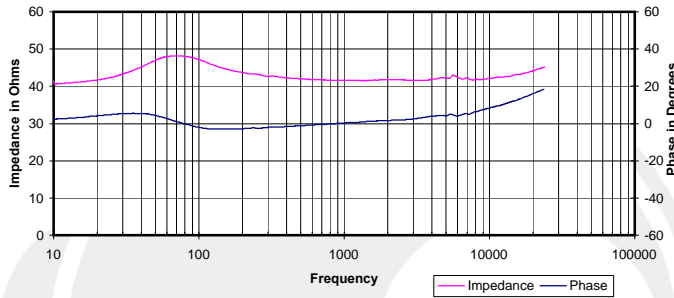
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



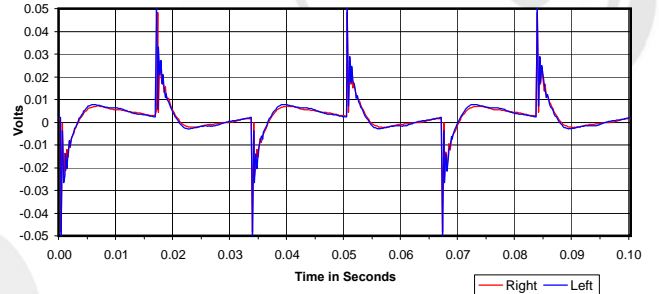
Isolation
Attenuation of External Sound vs. Frequency



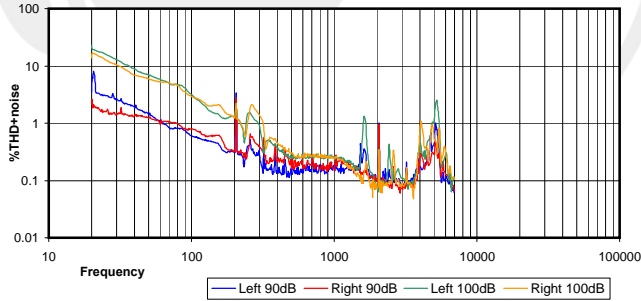
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



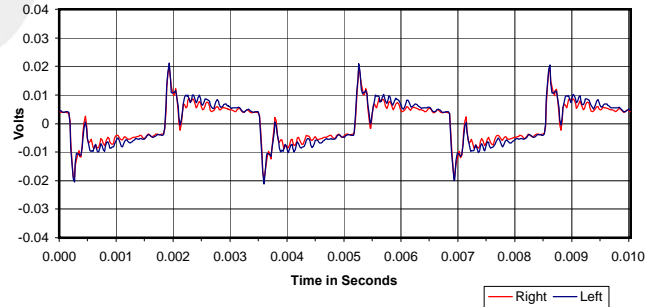
30 Hz Square Wave



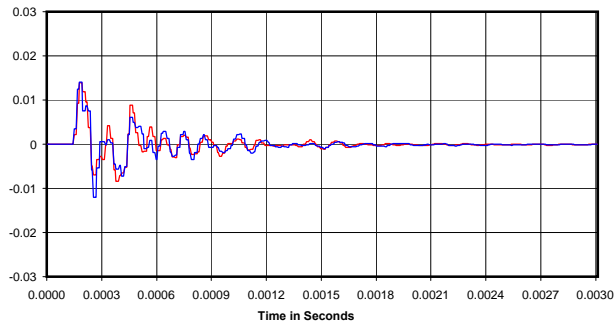
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

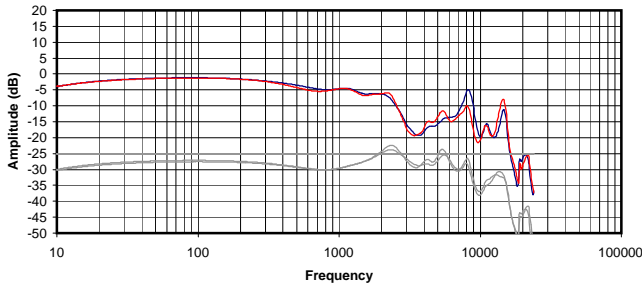


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

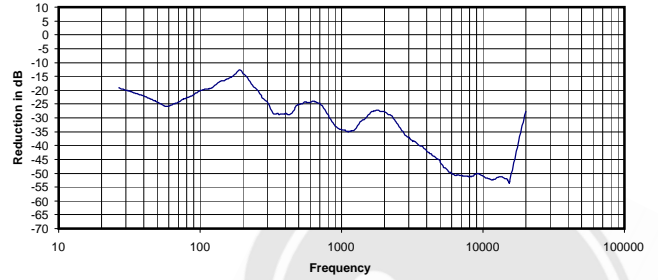
0.074 Vrms
42 Ohms
0.13 mW
-6 dBr



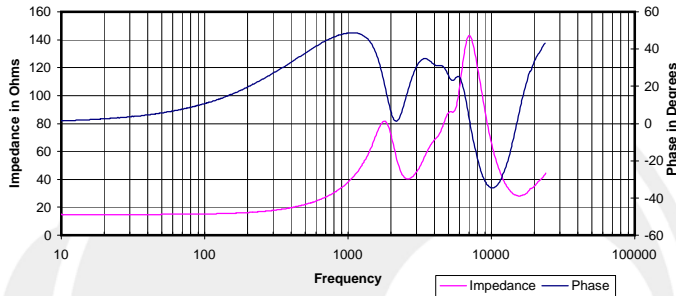
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



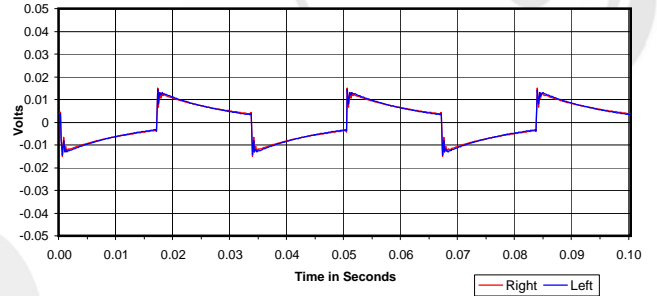
Isolation
Attenuation of External Sound vs. Frequency



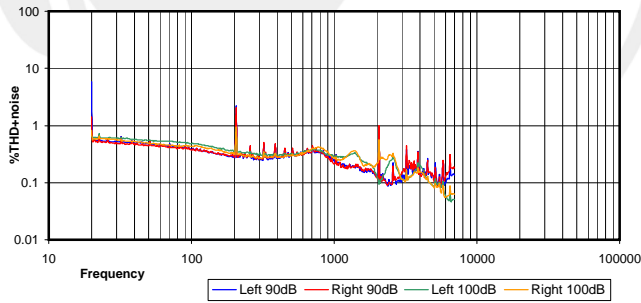
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



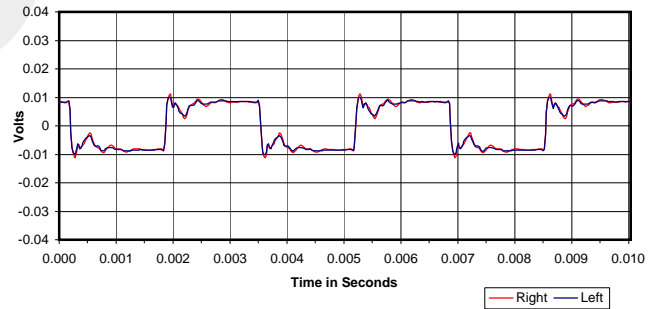
30 Hz Square Wave



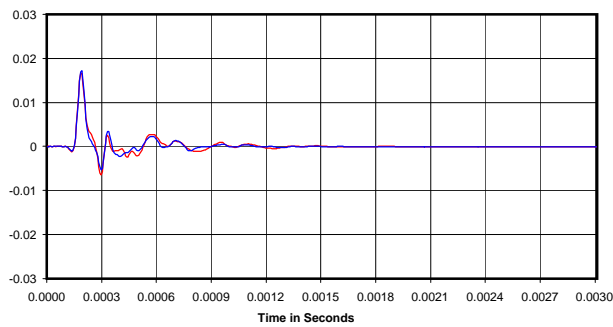
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



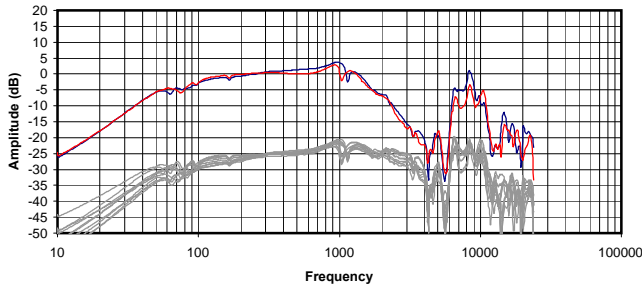
Impulse Response



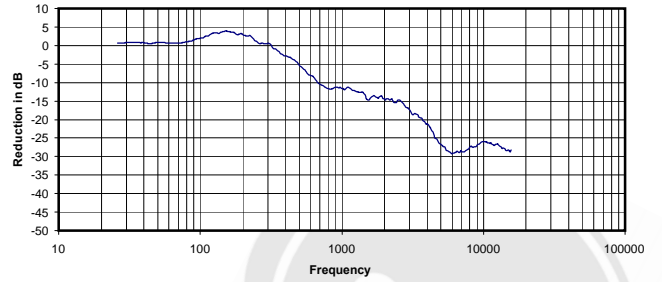
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.016 Vrms
38 Ohms
0.01 mW
-31 dB

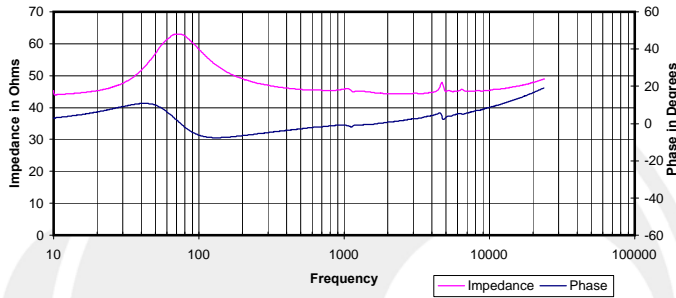
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



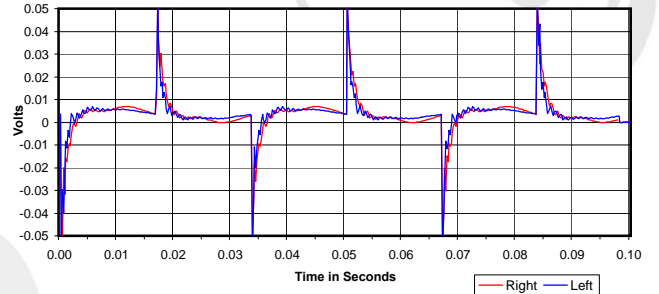
Isolation
 Attenuation of External Sound vs. Frequency



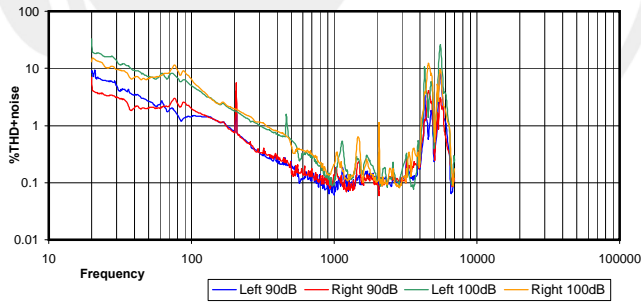
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



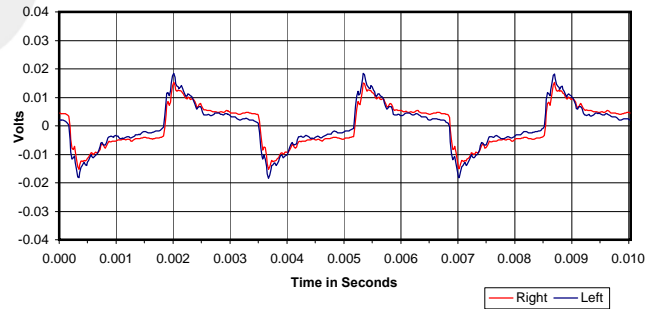
30 Hz Square Wave



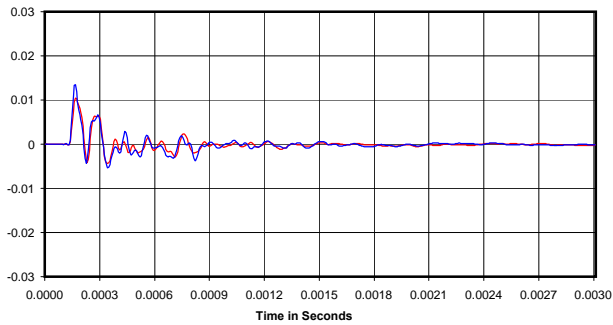
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

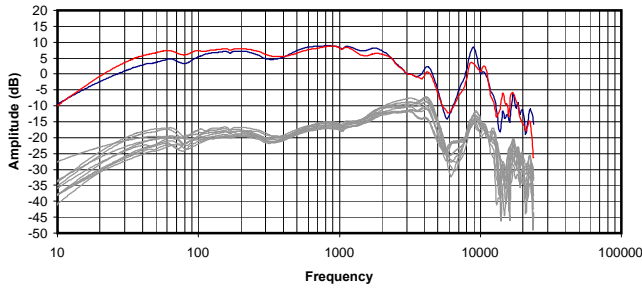


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

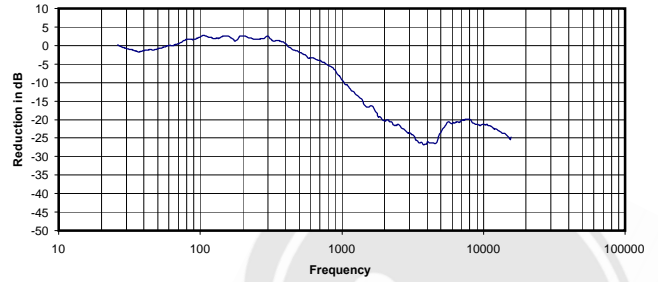
0.032 Vrms
 46 Ohms
 0.02 mW
 -9 dBr



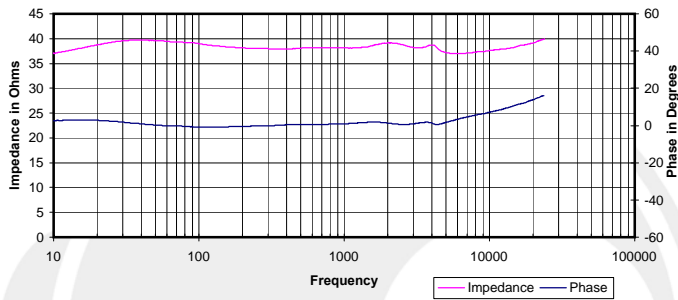
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



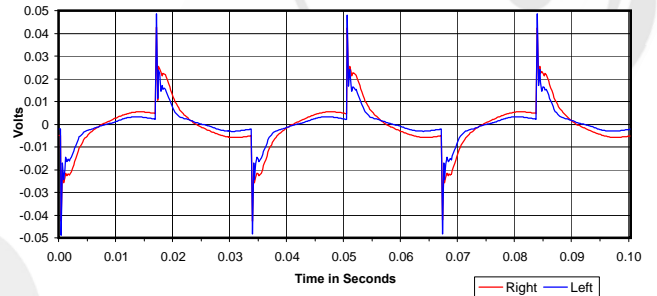
Isolation
 Attenuation of External Sound vs. Frequency



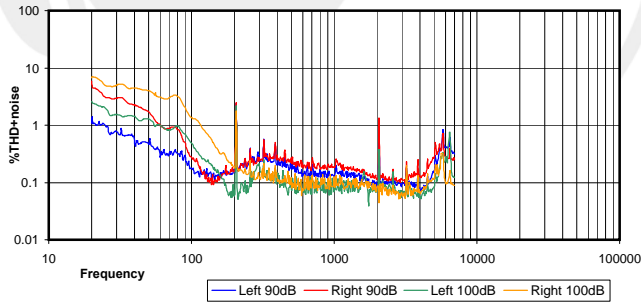
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



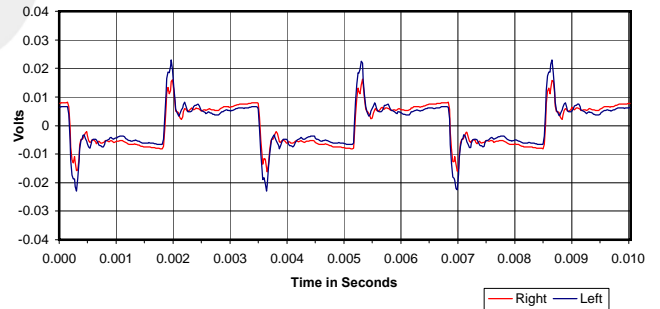
30 Hz Square Wave



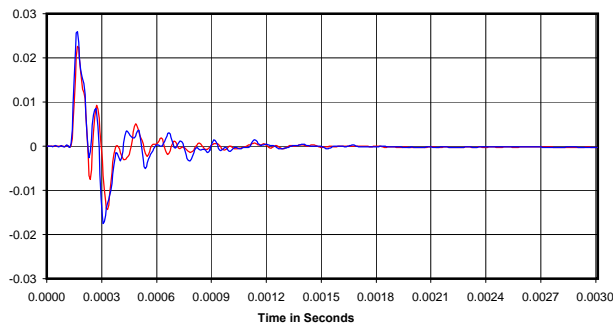
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

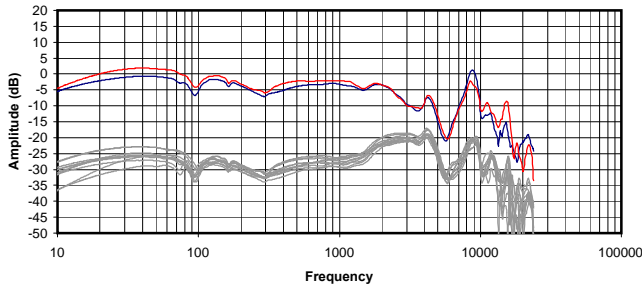


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

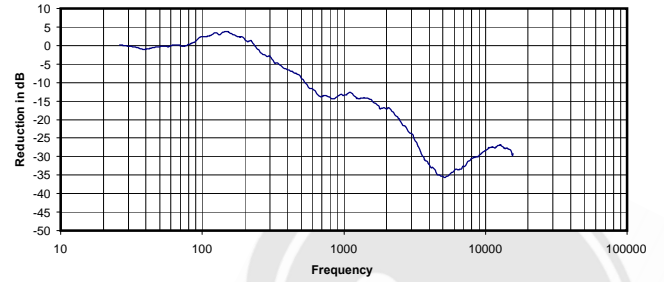
0.041 Vrms
 38 Ohms
 0.04 mW
 -9 dBr



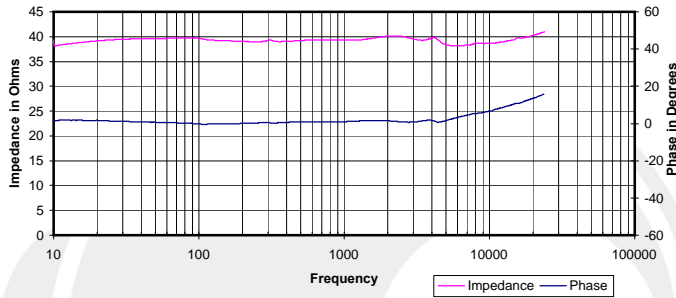
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



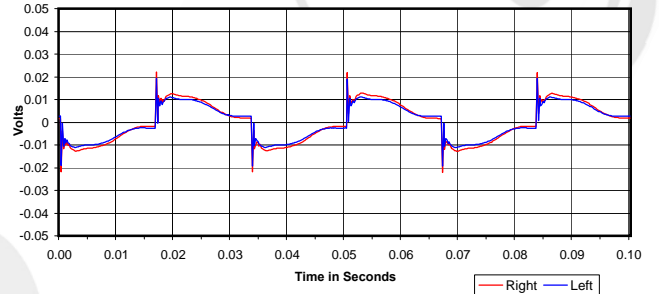
Isolation
 Attenuation of External Sound vs. Frequency



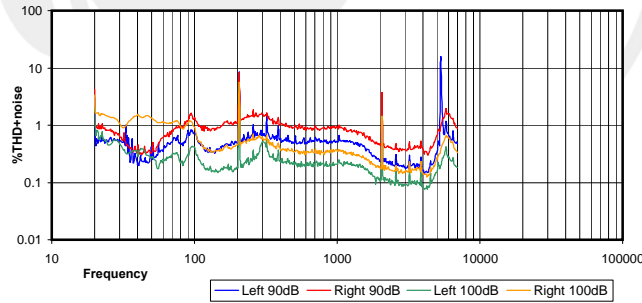
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



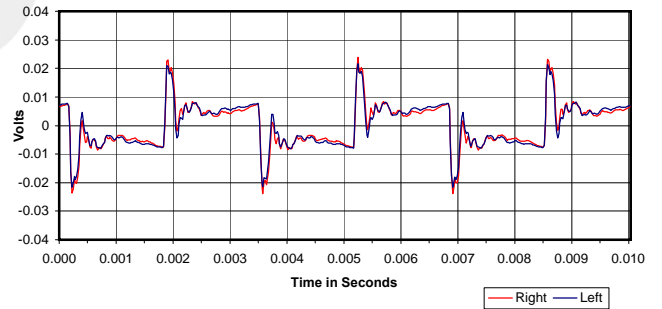
30 Hz Square Wave



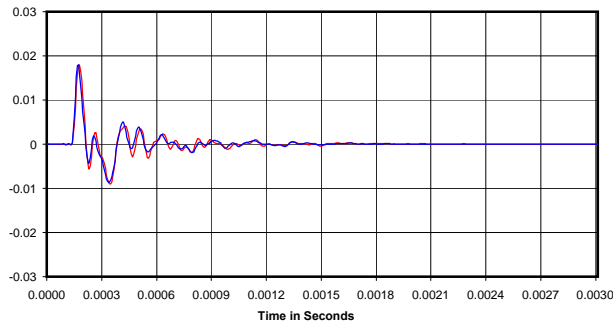
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

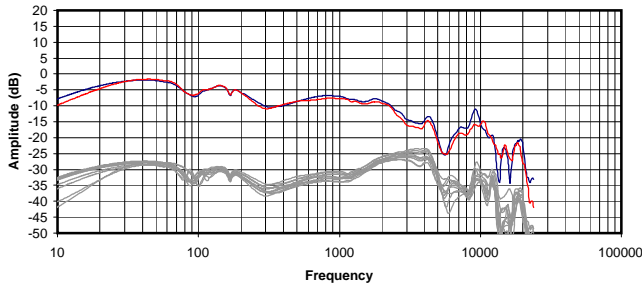


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

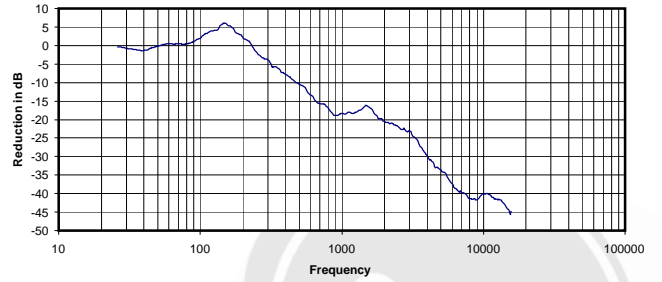
0.073 Vrms
 39 Ohms
 0.13 mW
 -12 dB



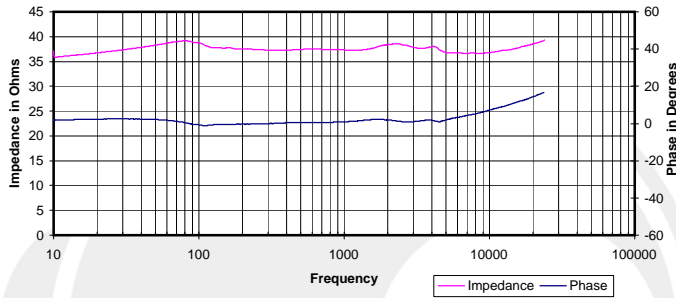
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



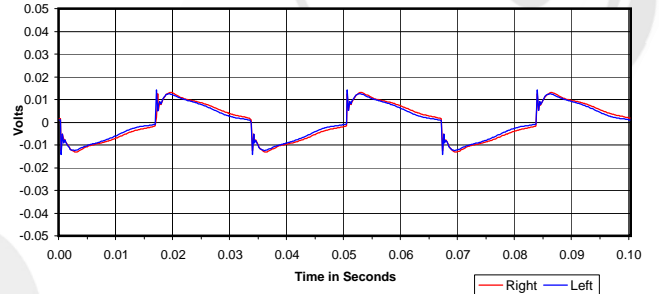
Isolation
Attenuation of External Sound vs. Frequency



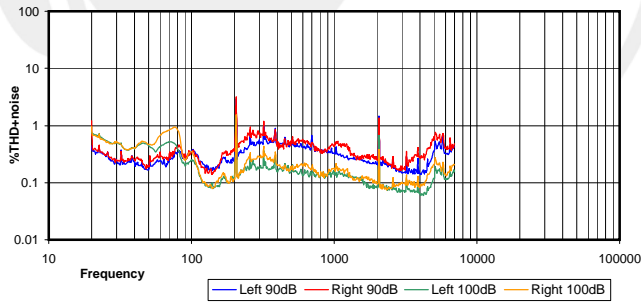
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



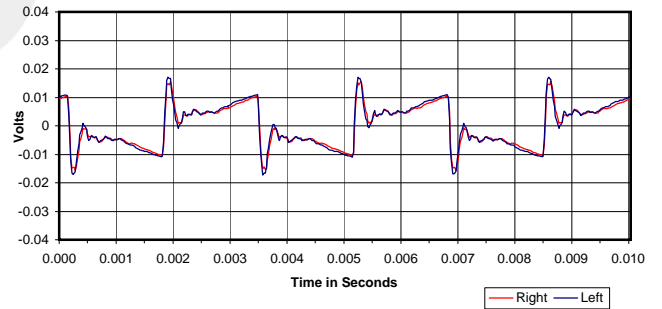
30 Hz Square Wave



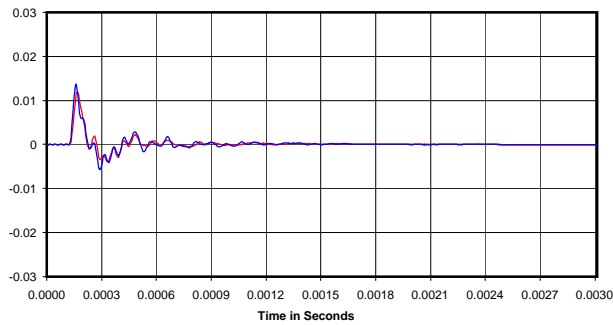
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



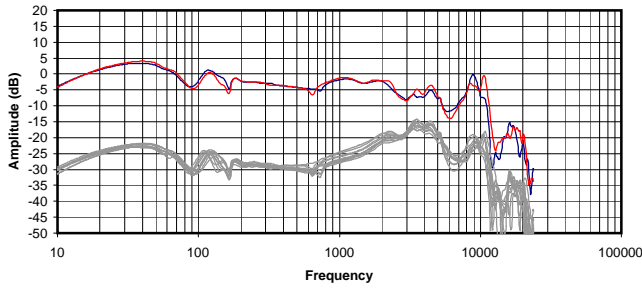
Impulse Response



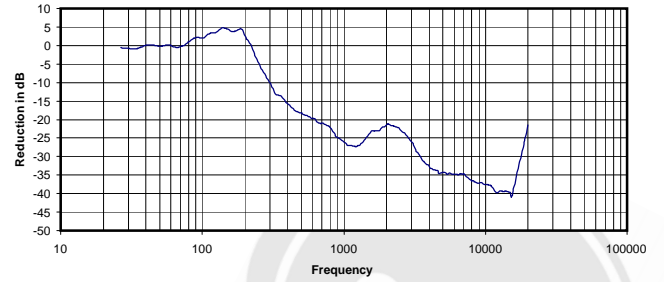
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.042 Vrms
37 Ohms
0.05 mW
-13 dB

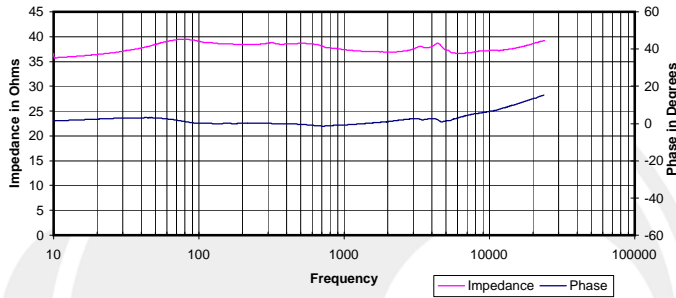
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



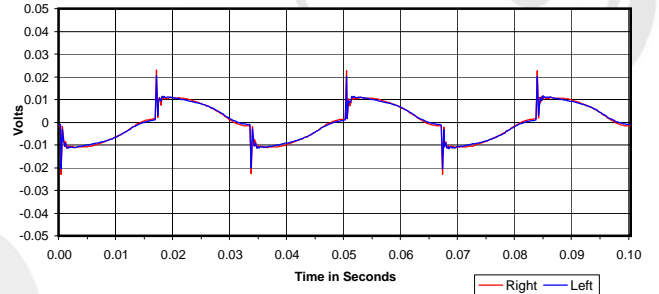
Isolation
 Attenuation of External Sound vs. Frequency



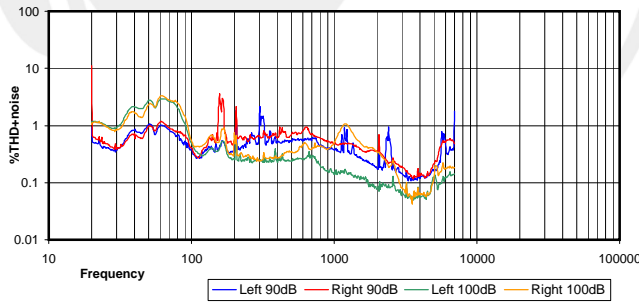
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



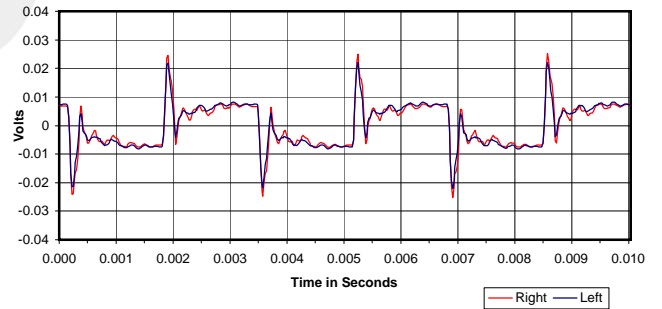
30 Hz Square Wave



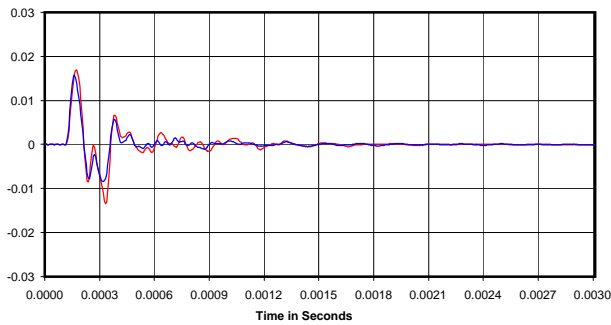
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

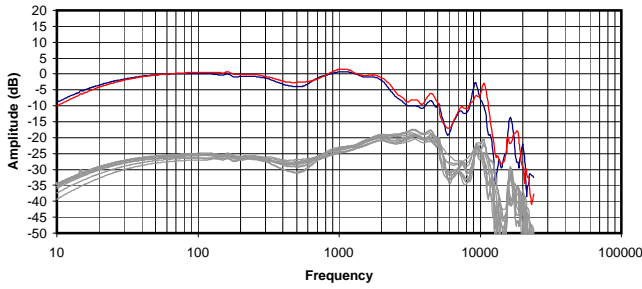


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

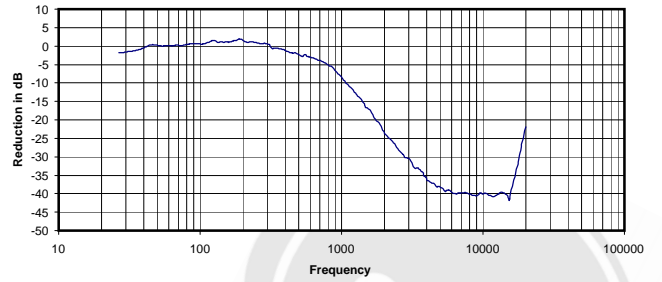
0.048 Vrms
 37 Ohms
 0.06 mW
 -19 dB



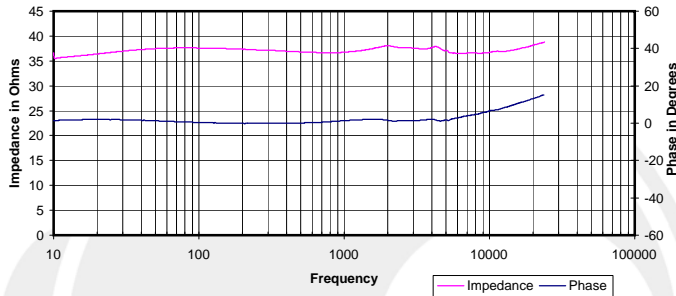
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



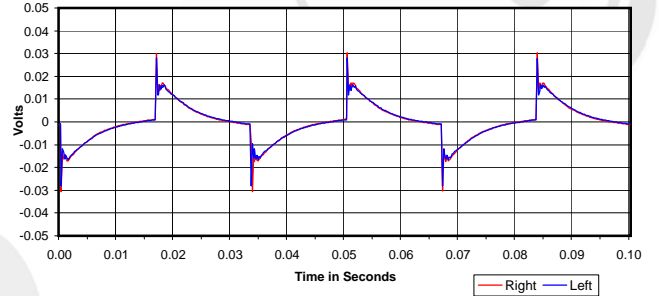
Isolation
 Attenuation of External Sound vs. Frequency



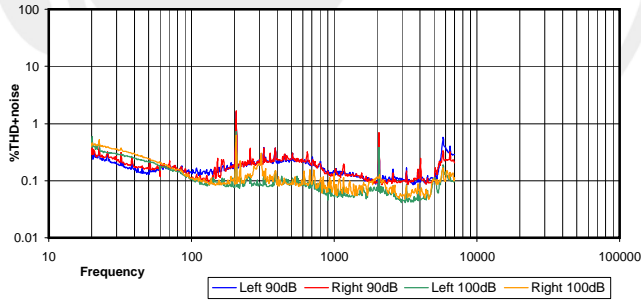
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



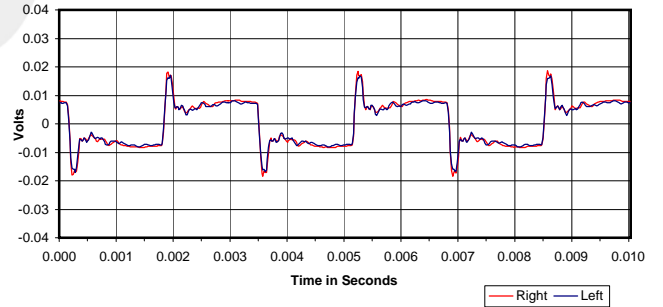
30 Hz Square Wave



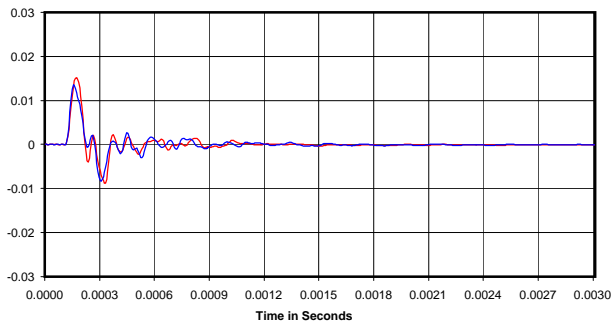
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



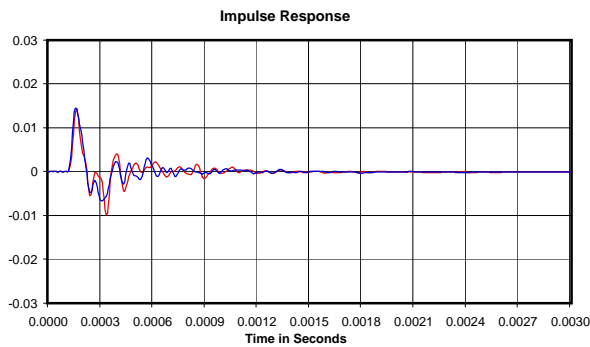
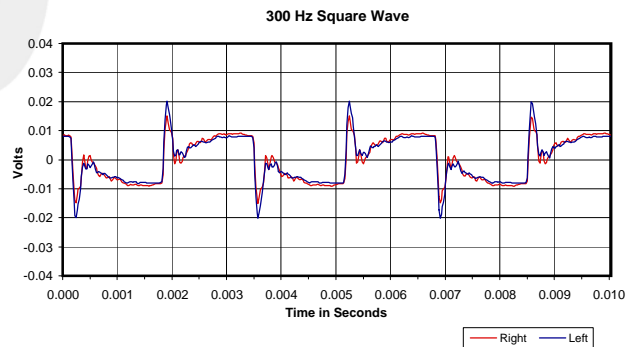
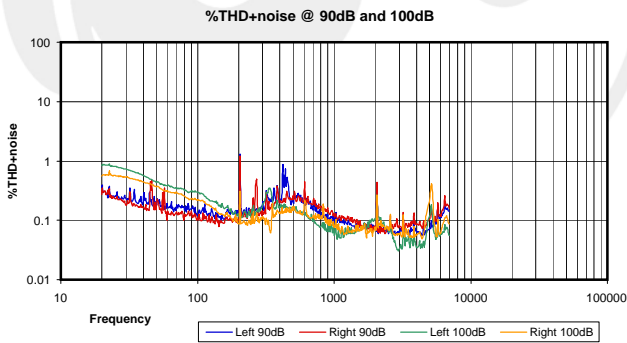
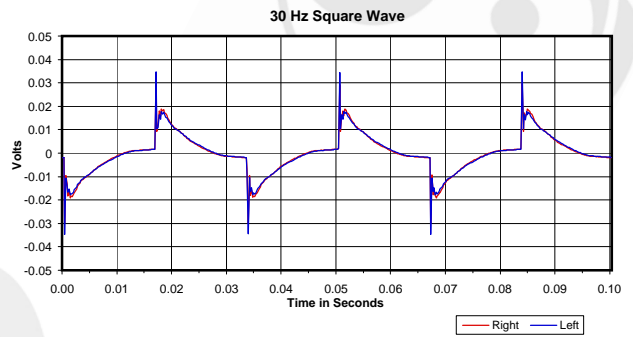
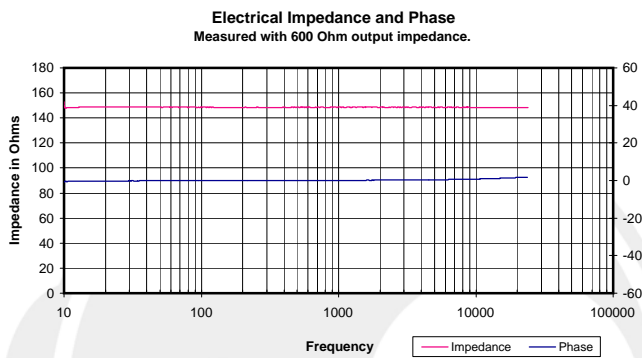
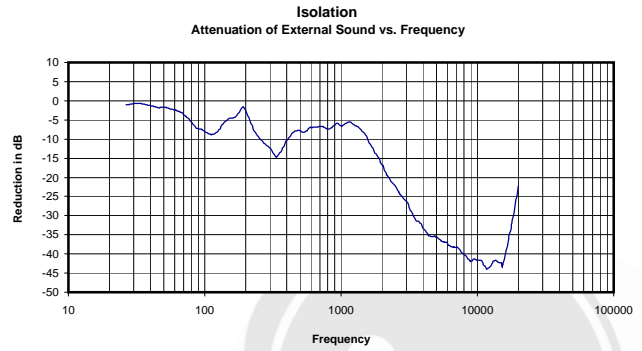
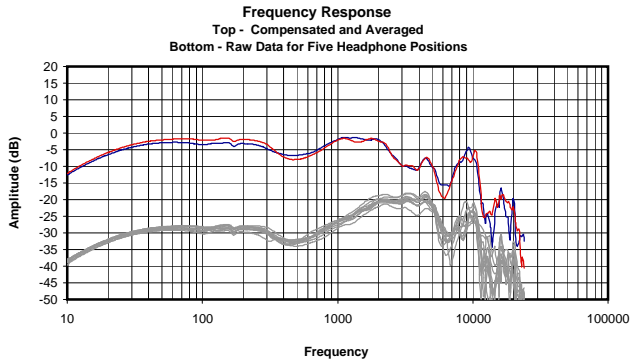
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
 37 Ohms
 0.01 mW
 -15 dB

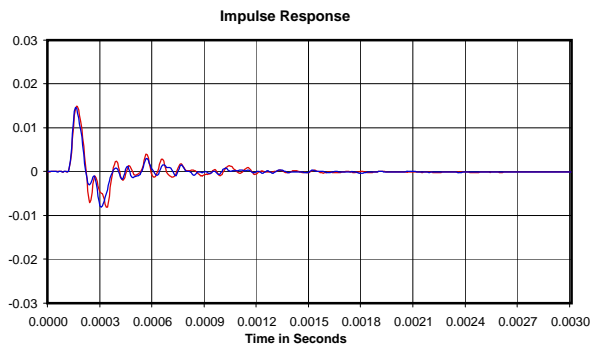
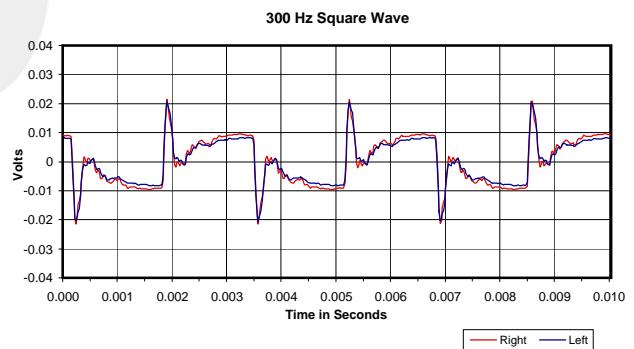
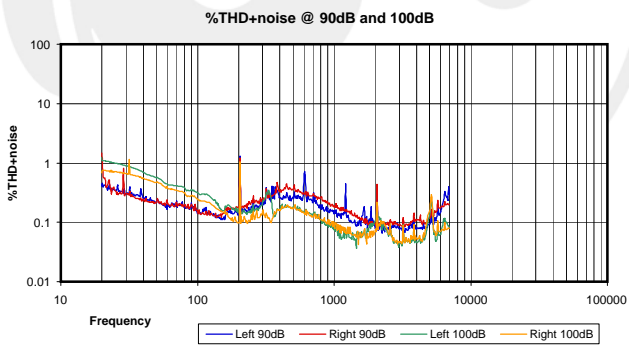
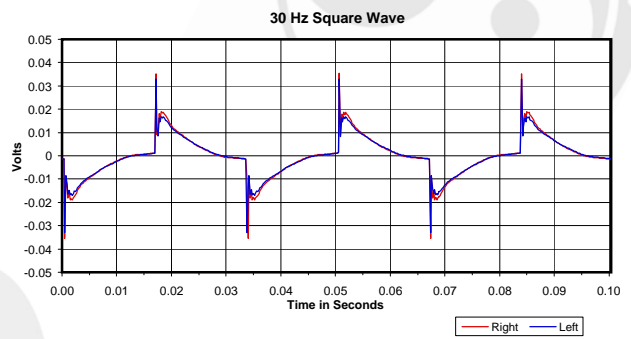
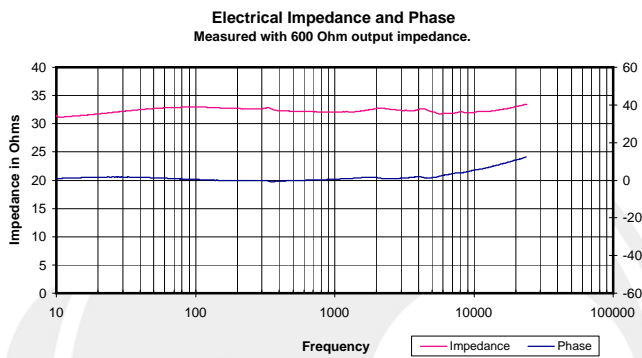
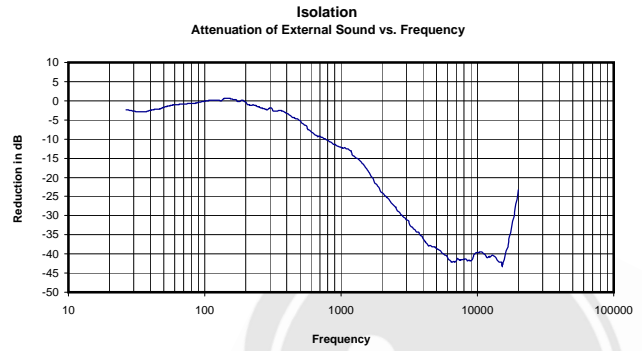
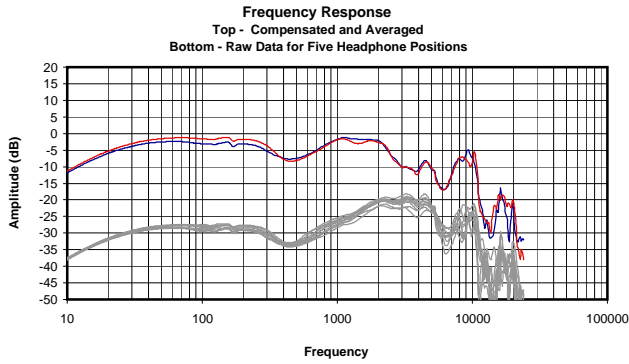




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
149 Ohms
0.01 mW
-17 dB

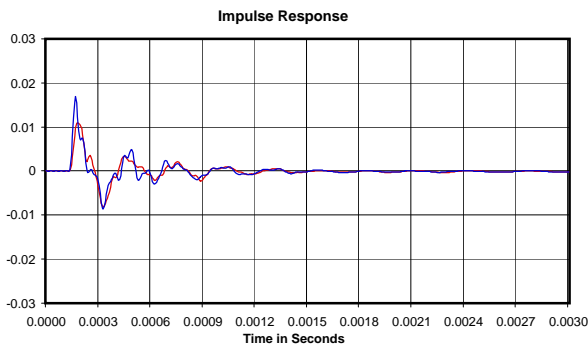
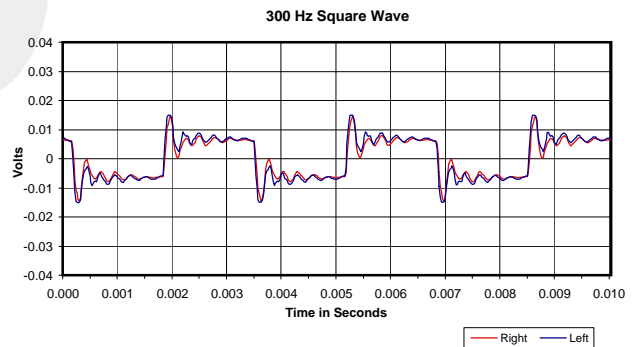
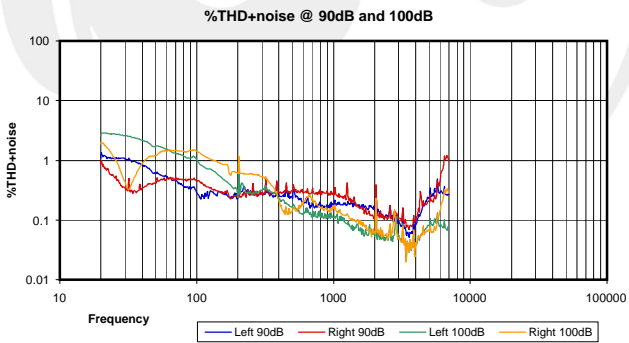
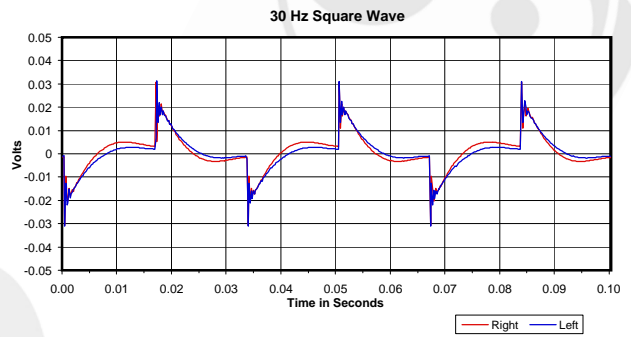
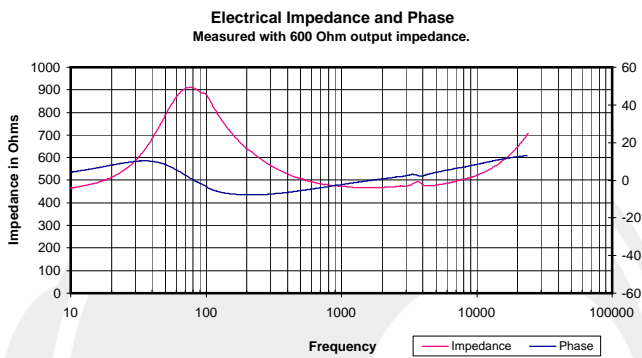
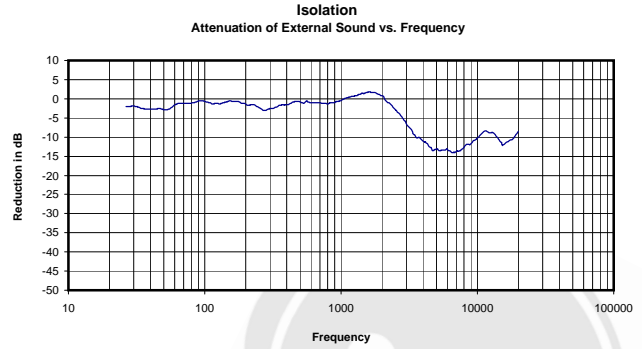
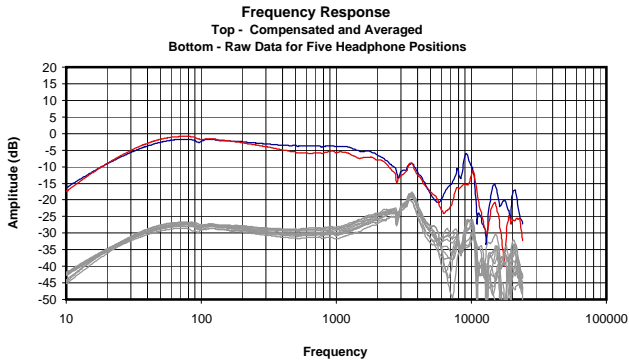




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
32 Ohms
0.04 mW
-17 dB

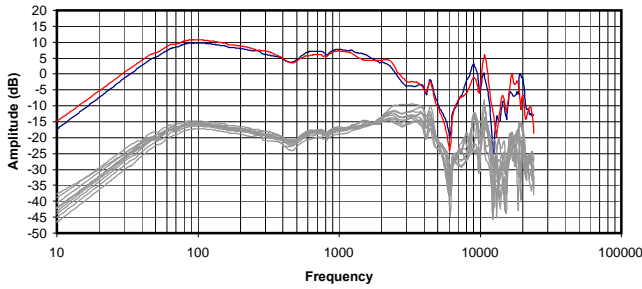




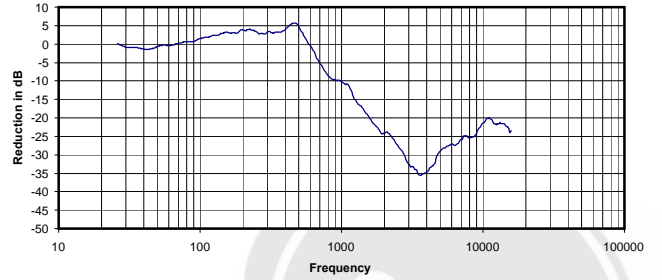
Volts RMS required to reach 90dB SPL:	0.195 Vrms
Impedance @ 1kHz:	473 Ohms
Power Needed for 90d BSPL	0.08 mW
Broadband Isolation in dB (100Hz to 10kHz):	-4 dBr



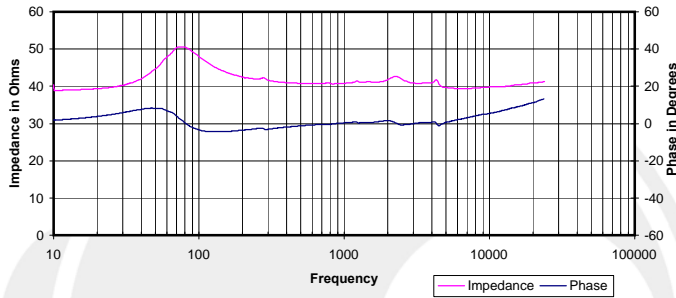
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



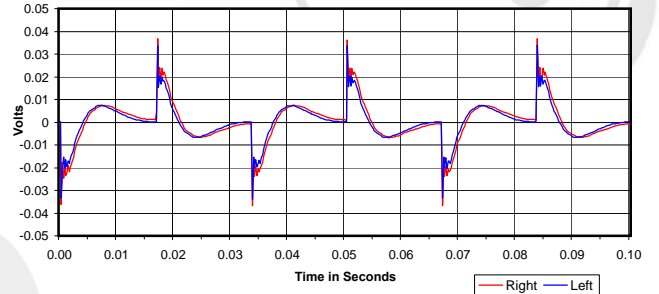
Isolation
 Attenuation of External Sound vs. Frequency



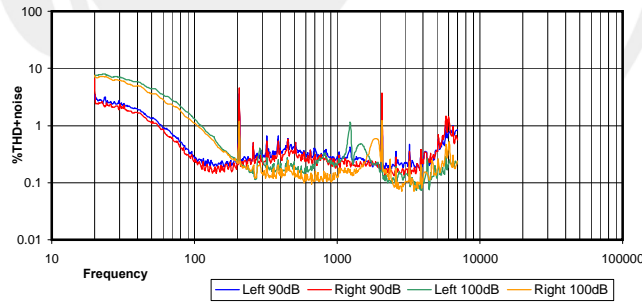
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



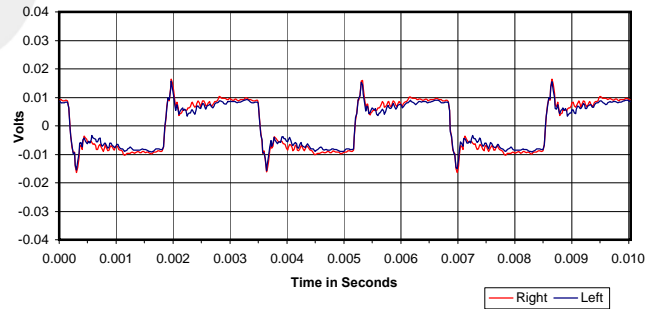
30 Hz Square Wave



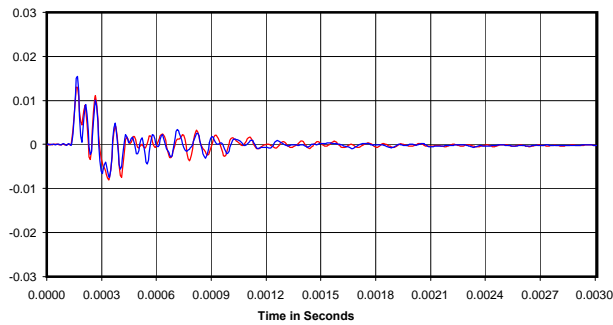
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

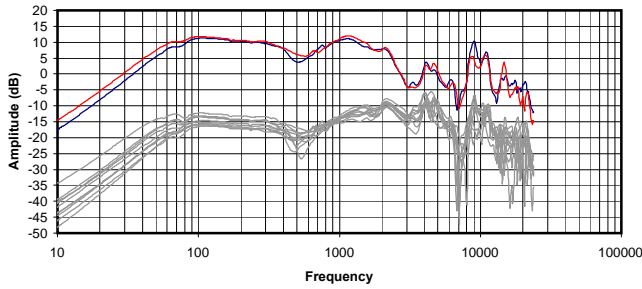


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

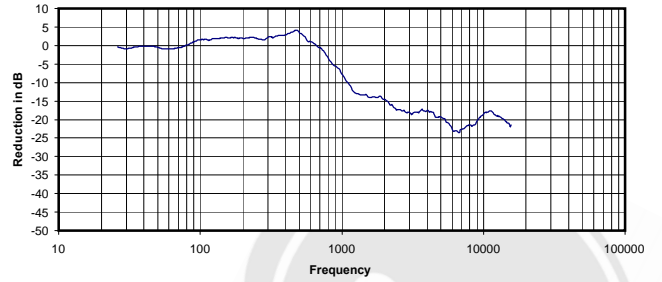
0.046 Vrms
 41 Ohms
 0.05 mW
 -10 dB



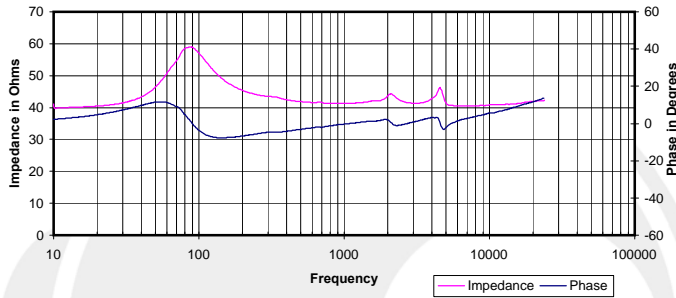
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



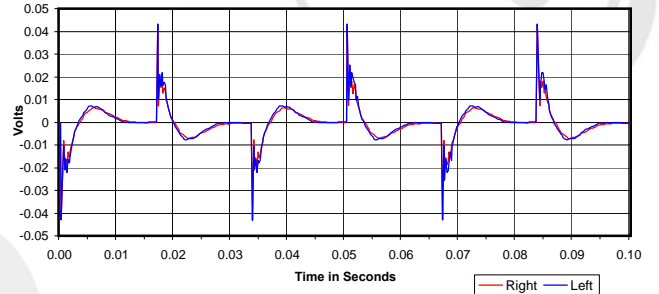
Isolation
 Attenuation of External Sound vs. Frequency



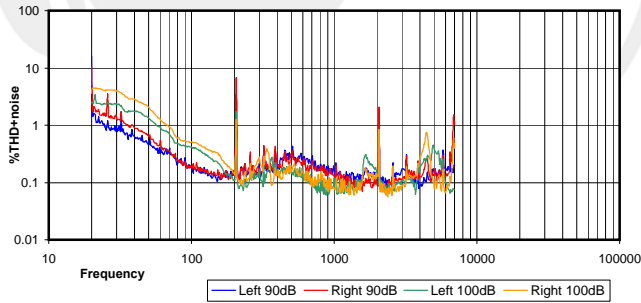
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



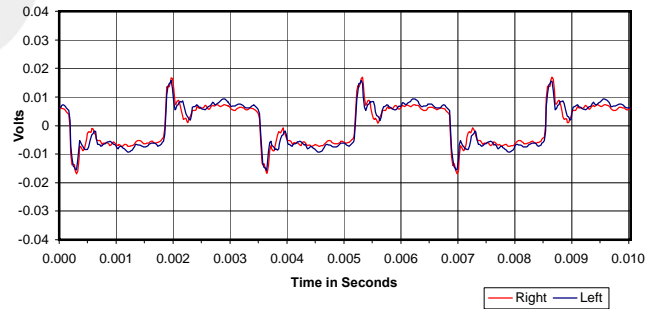
30 Hz Square Wave



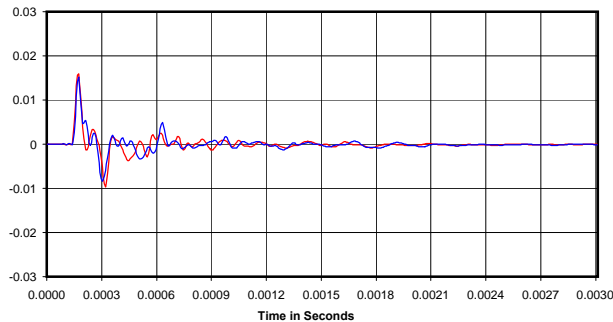
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

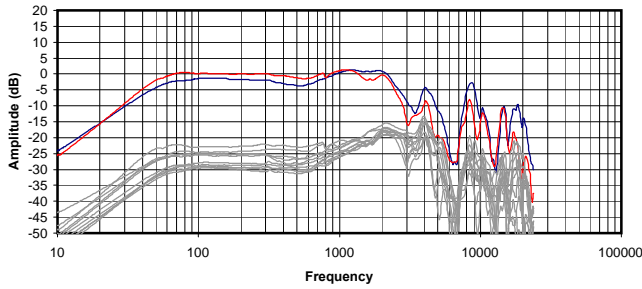


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

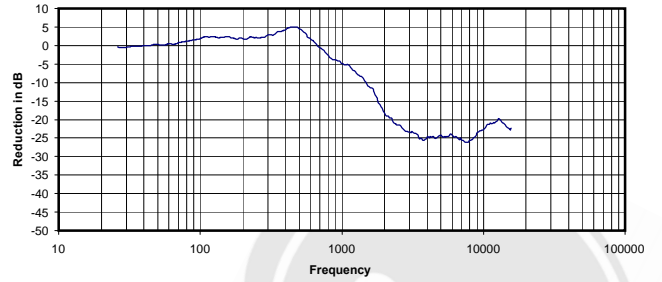
0.036 Vrms
 41 Ohms
 0.03 mW
 -6 dB



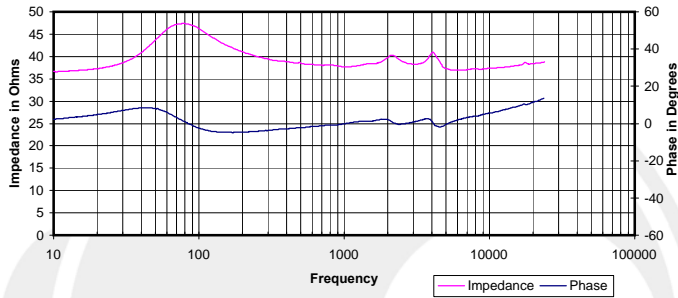
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



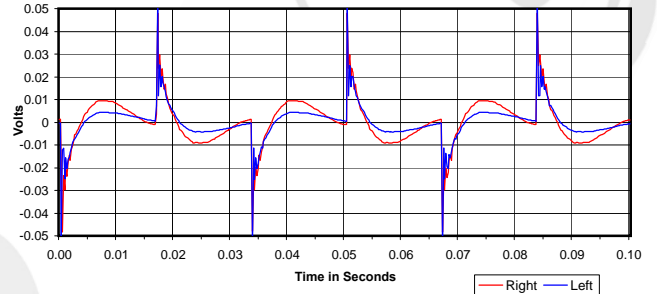
Isolation
 Attenuation of External Sound vs. Frequency



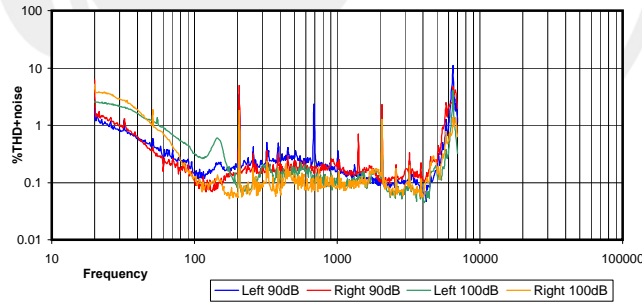
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



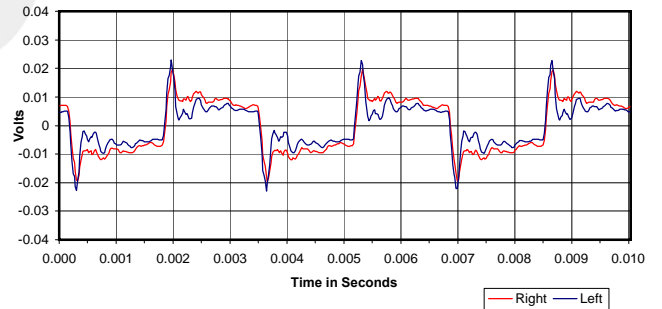
30 Hz Square Wave



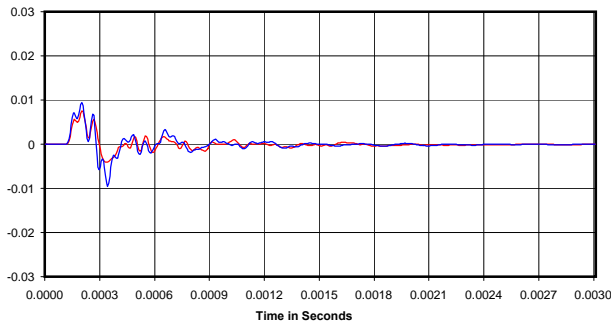
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

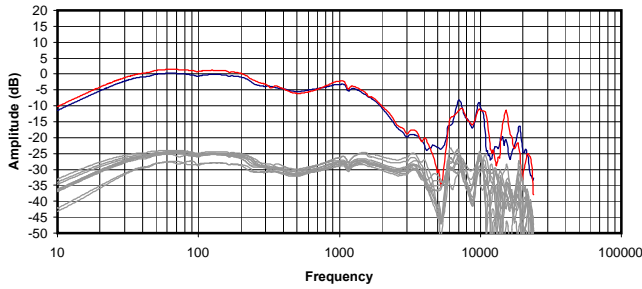


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

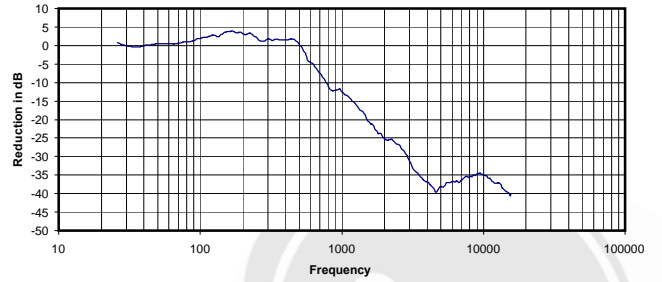
0.031 Vrms
 38 Ohms
 0.03 mW
 -7 dB



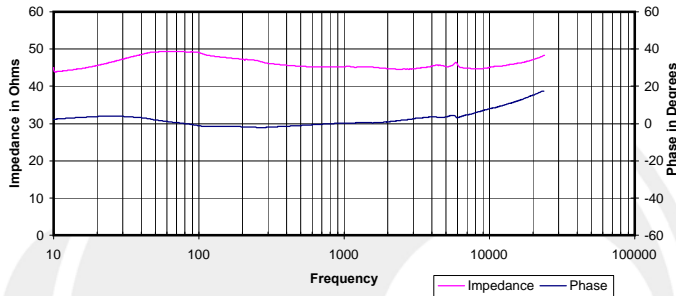
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



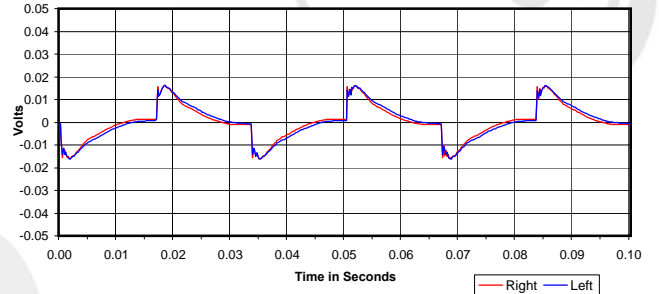
Isolation
 Attenuation of External Sound vs. Frequency



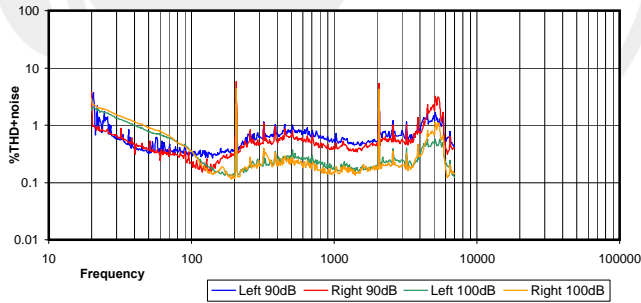
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



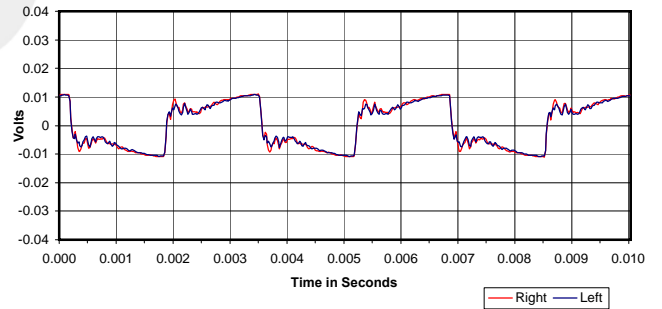
30 Hz Square Wave



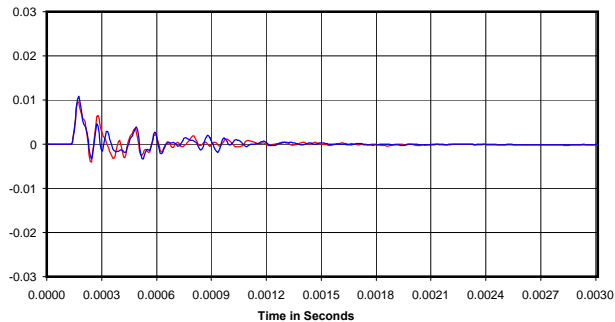
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

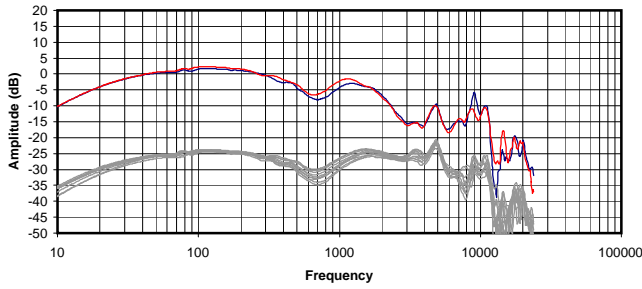


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

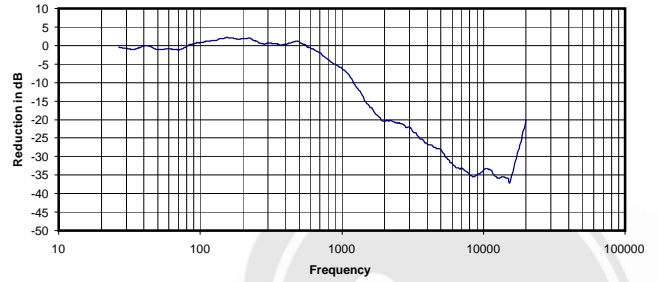
0.034 Vrms
 45 Ohms
 0.03 mW
 -12 dB



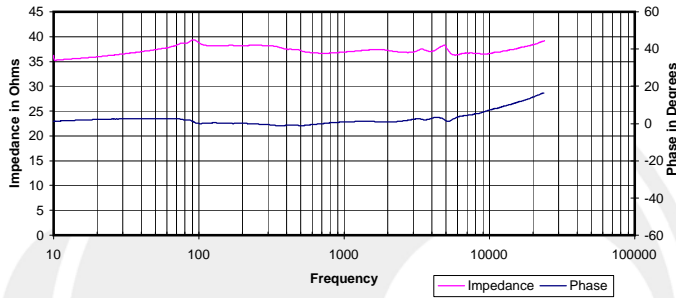
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



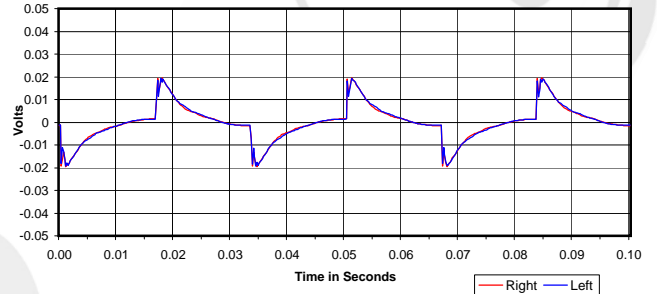
Isolation
 Attenuation of External Sound vs. Frequency



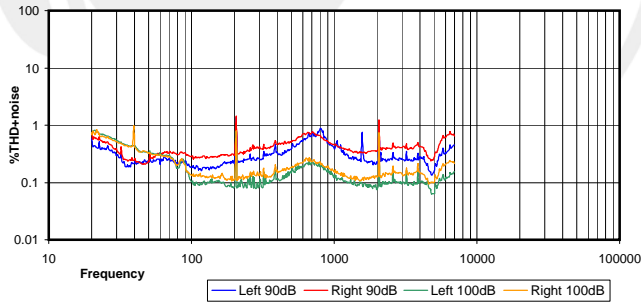
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



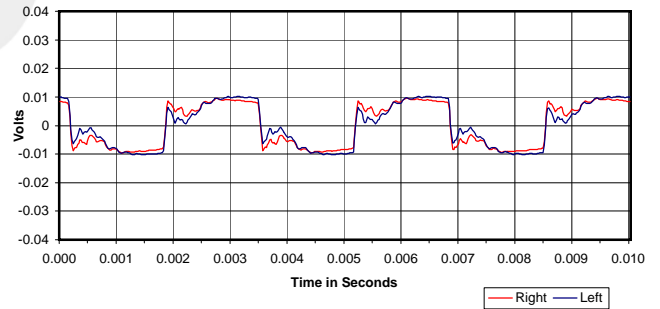
30 Hz Square Wave



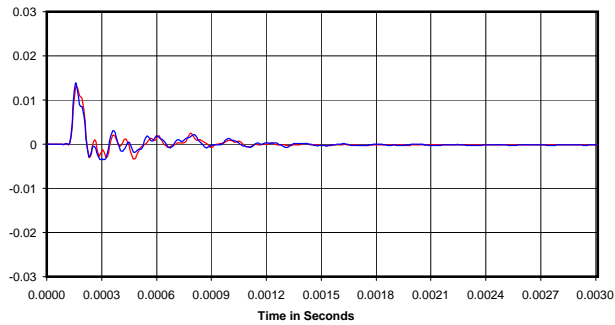
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



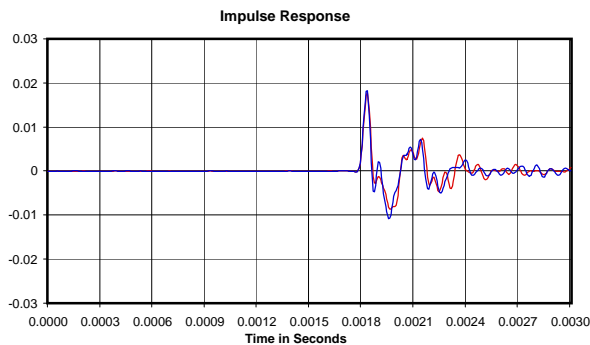
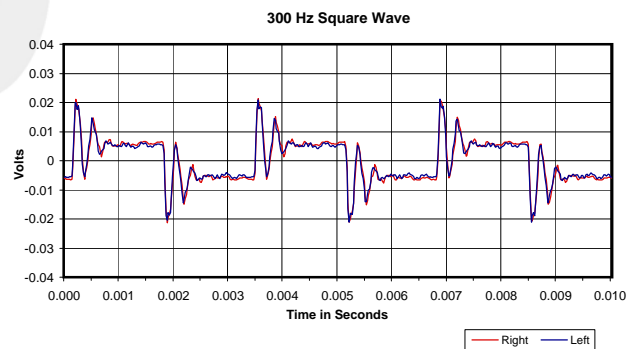
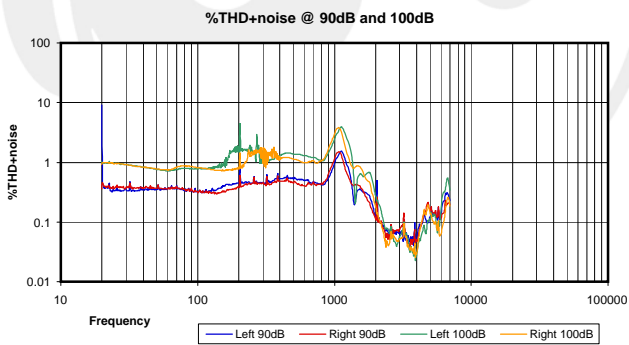
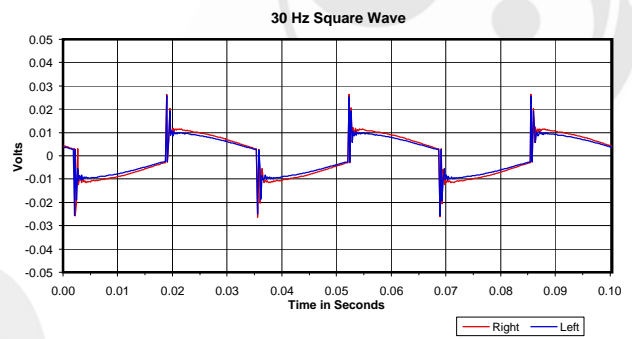
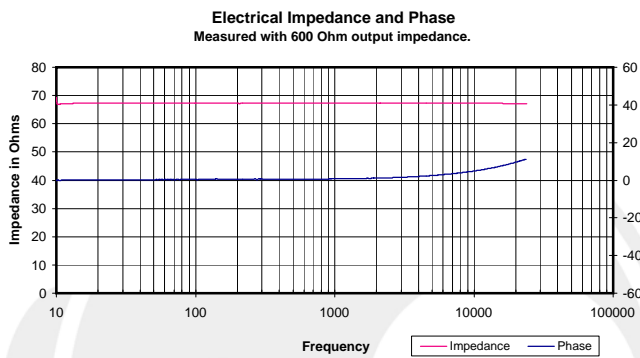
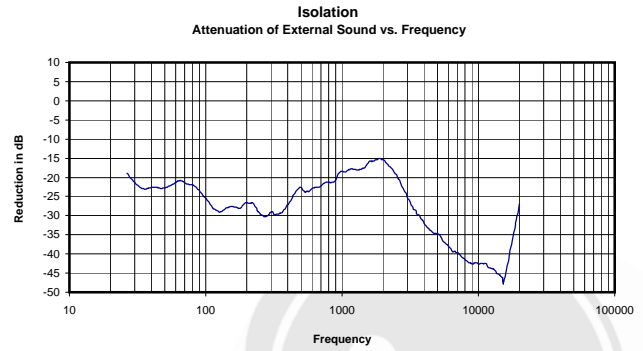
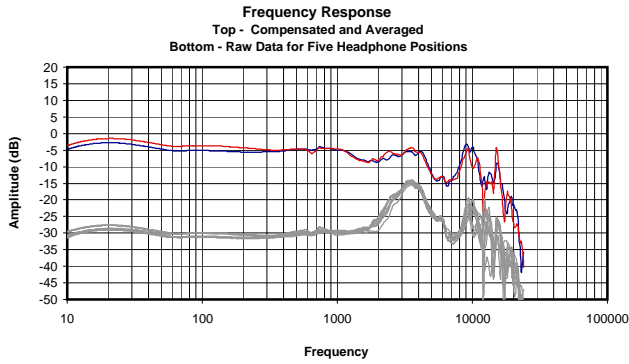
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.035 Vrms
 37 Ohms
 0.03 mW
 -12 dB

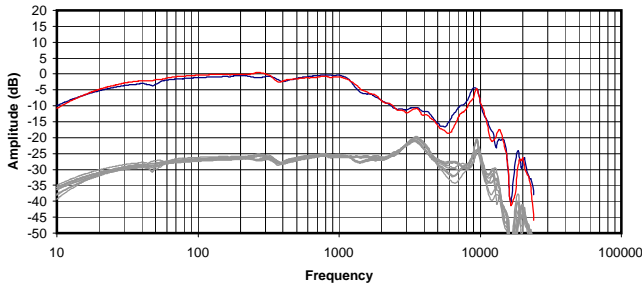




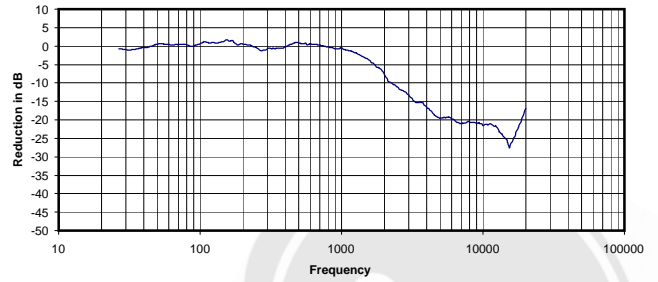
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.171 Vrms
67 Ohms
0.44 mW
-27 dB

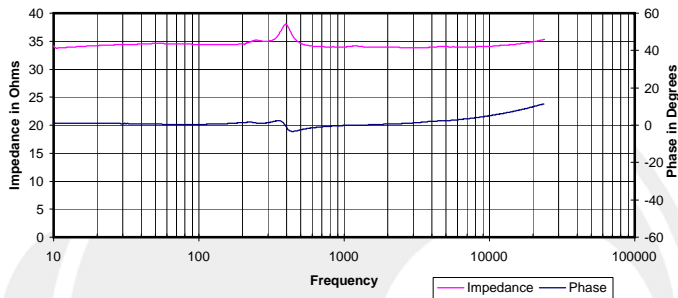
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



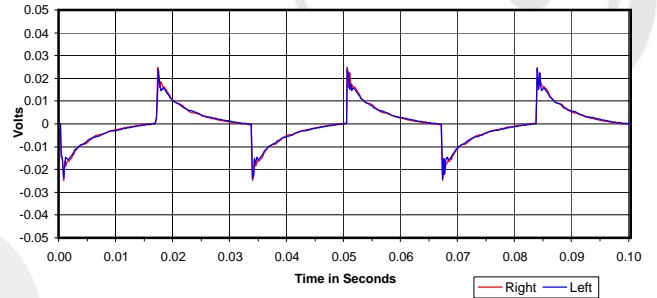
Isolation
 Attenuation of External Sound vs. Frequency



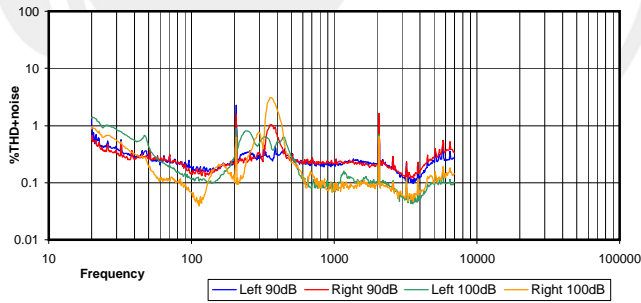
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



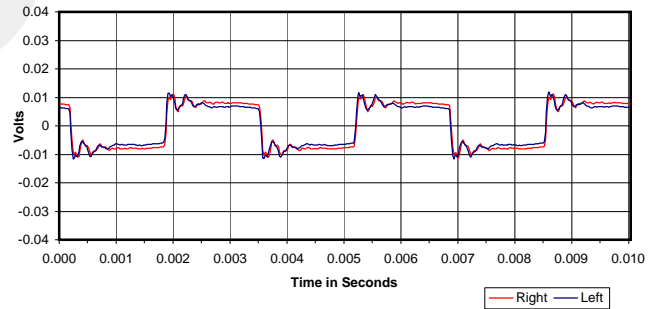
30 Hz Square Wave



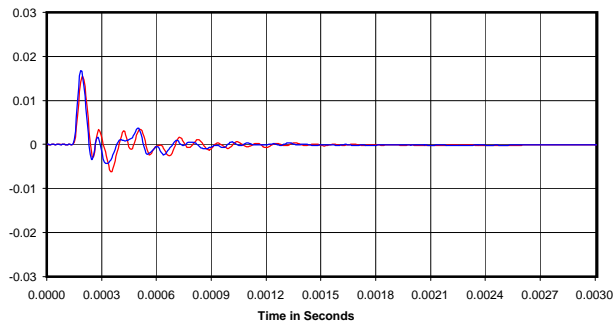
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

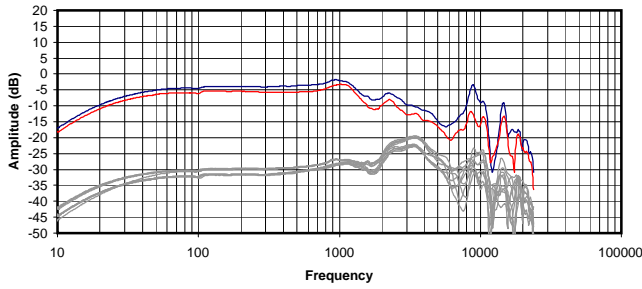


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

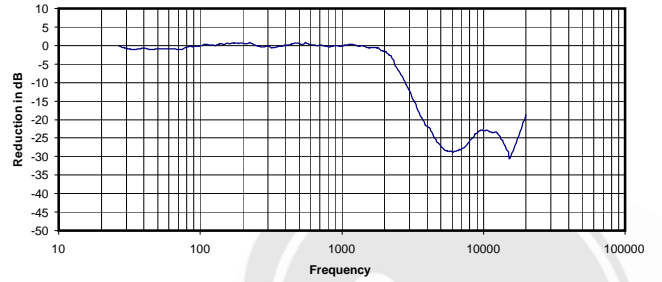
0.066 Vrms
 34 Ohms
 0.13 mW
 -6 dB



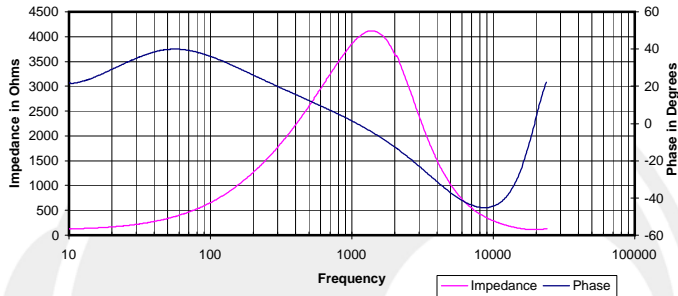
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



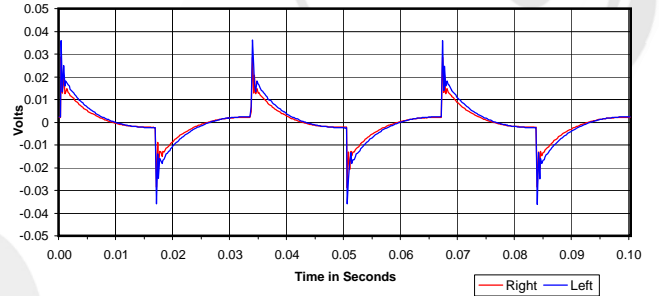
Isolation
 Attenuation of External Sound vs. Frequency



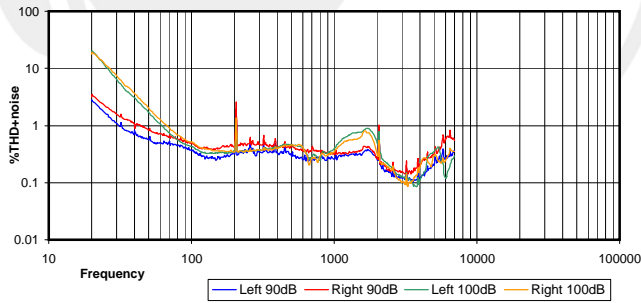
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



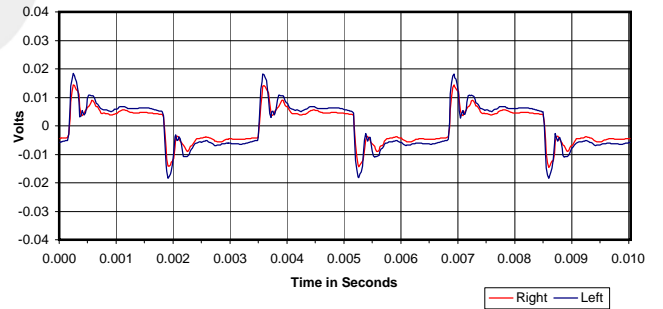
30 Hz Square Wave



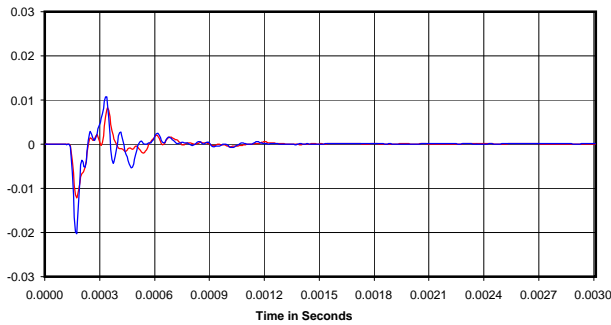
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

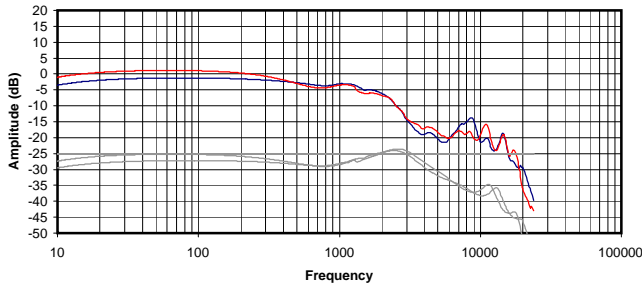


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

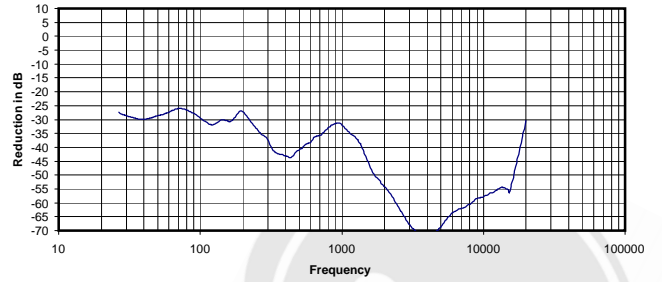
0.581 Vrms
 3853 Ohms
 0.09 mW
 -7 dB



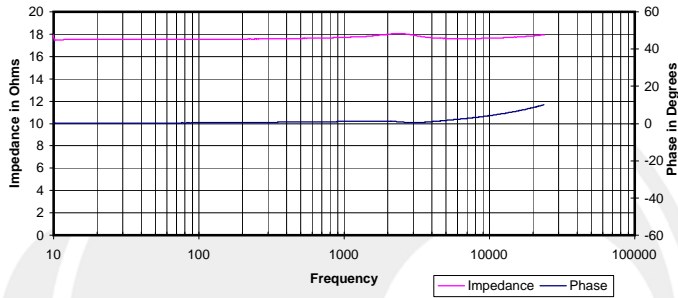
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



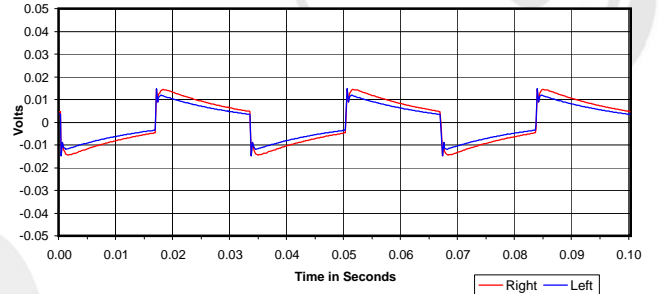
Isolation
Attenuation of External Sound vs. Frequency



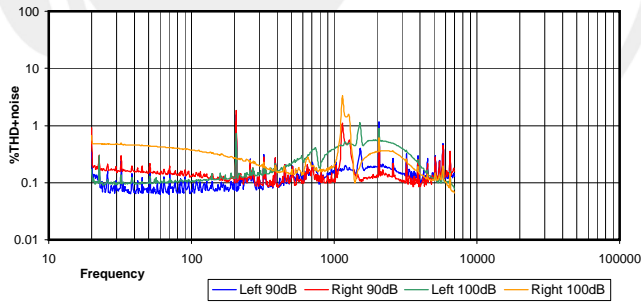
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



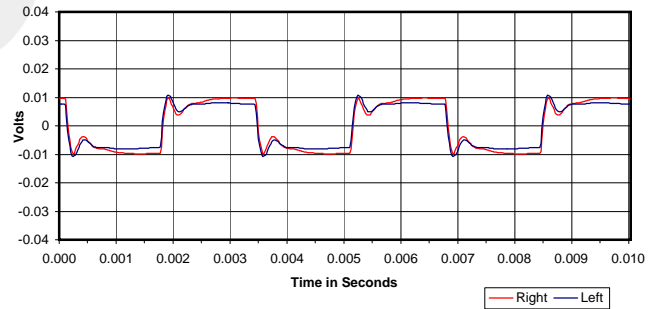
30 Hz Square Wave



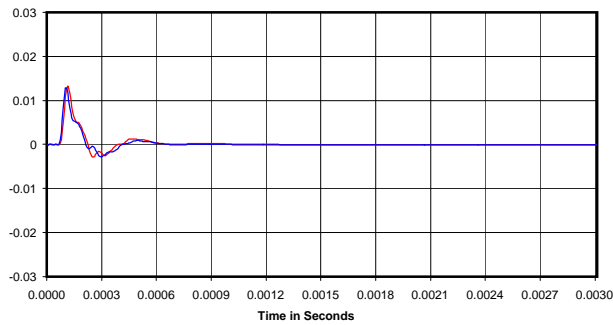
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



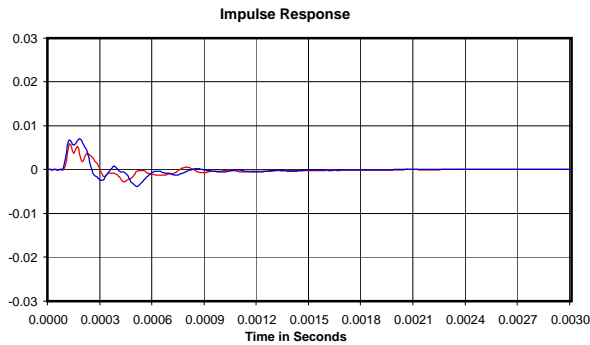
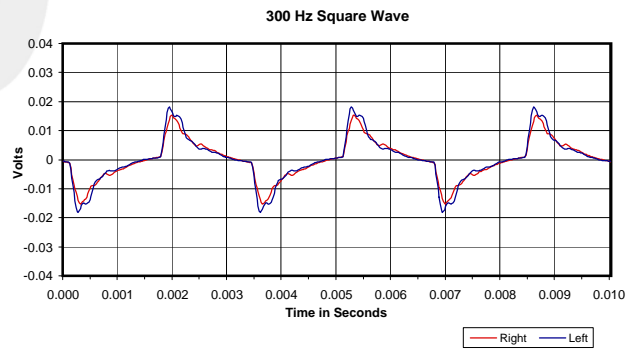
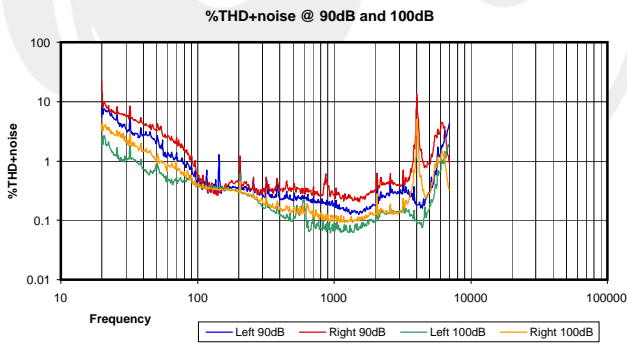
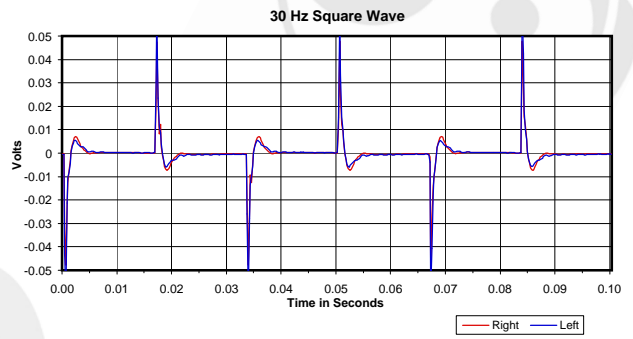
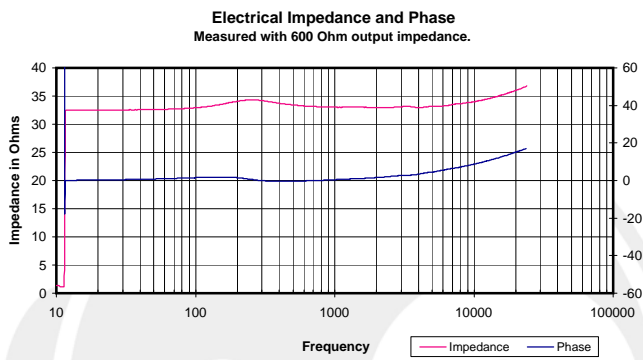
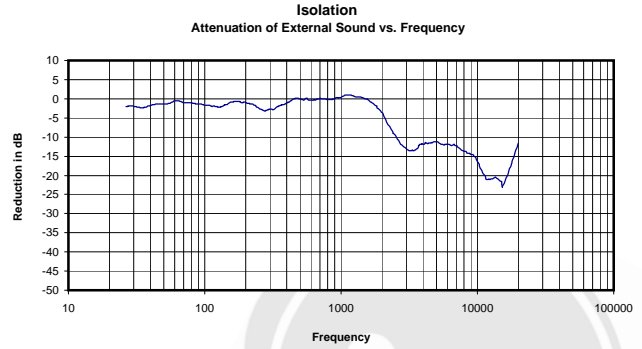
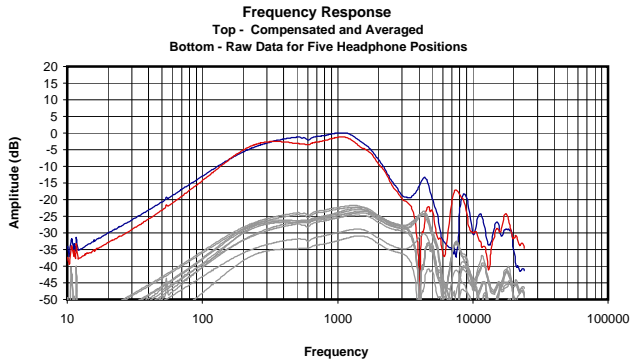
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
18 Ohms
0.09 mW
-47 dB



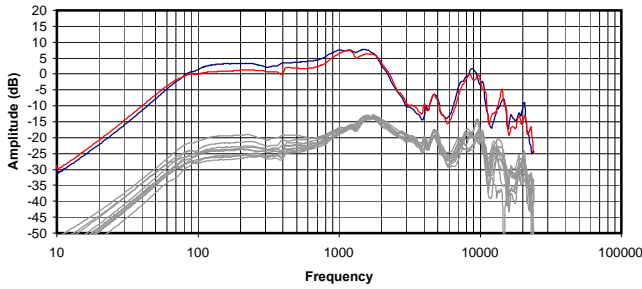


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

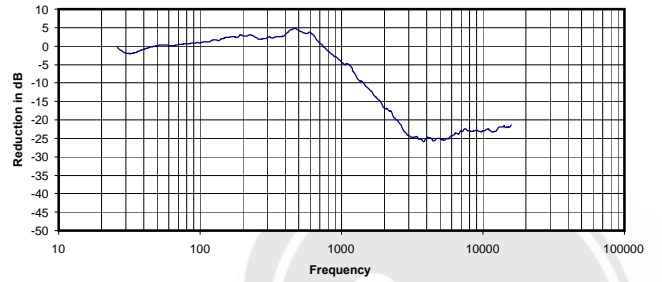
0.031 Vrms
33 Ohms
0.03 mW
-5 dBr



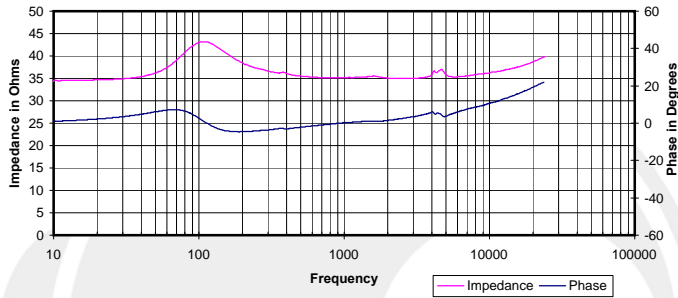
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



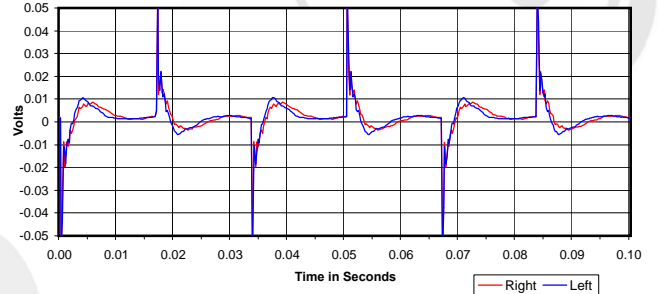
Isolation
Attenuation of External Sound vs. Frequency



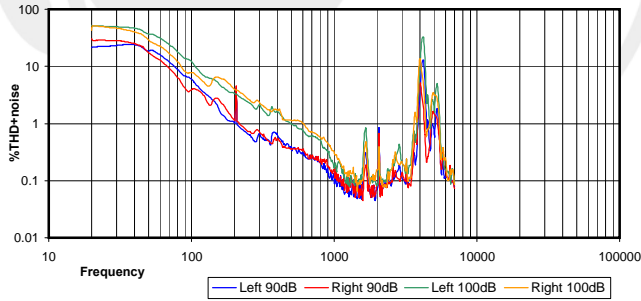
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



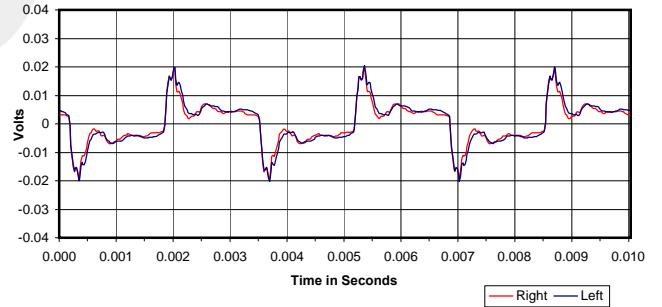
30 Hz Square Wave



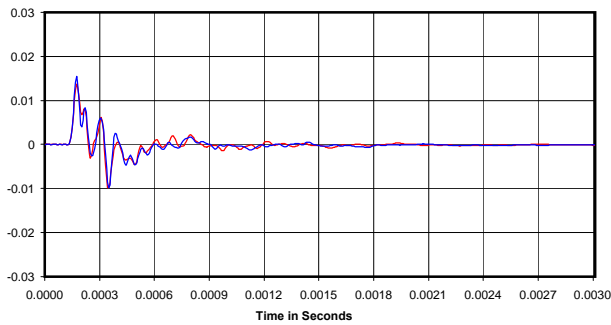
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

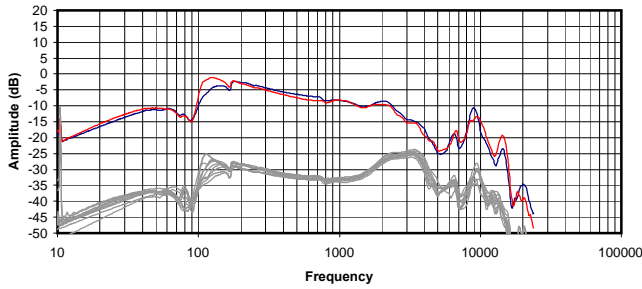


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

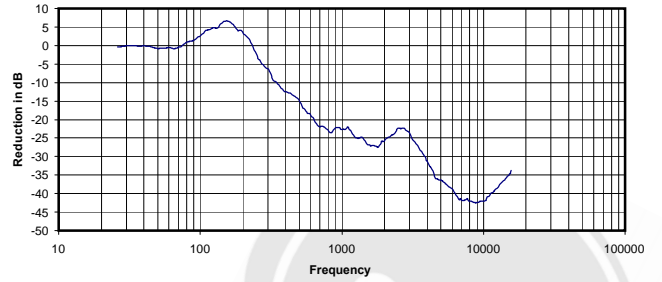
0.040 Vrms
35 Ohms
0.04 mW
-7 dB



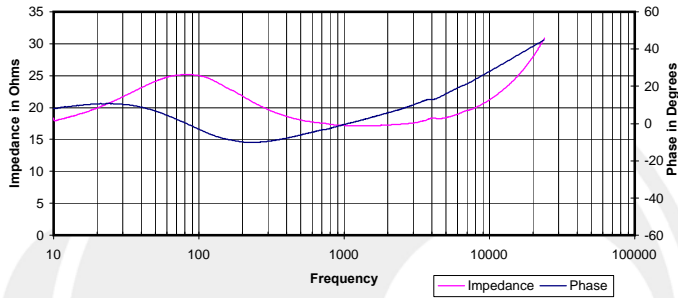
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



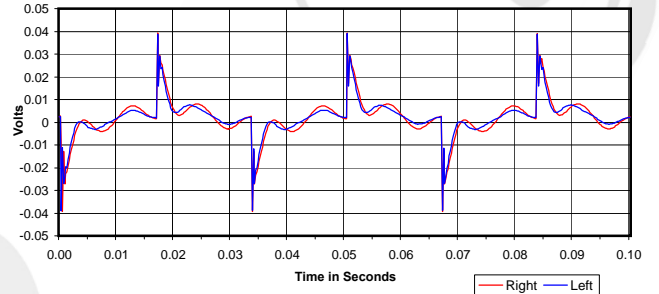
Isolation
Attenuation of External Sound vs. Frequency



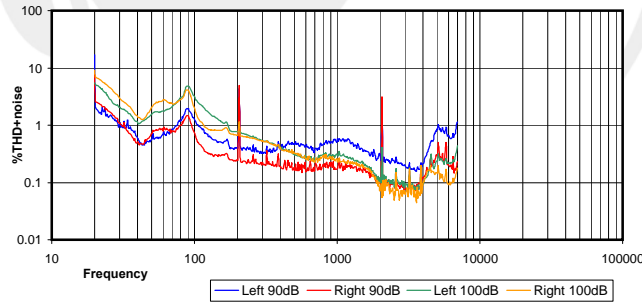
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



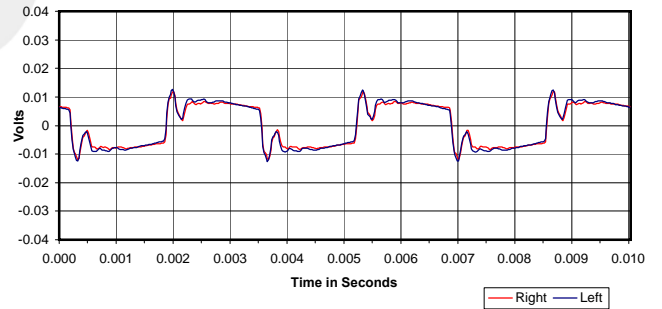
30 Hz Square Wave



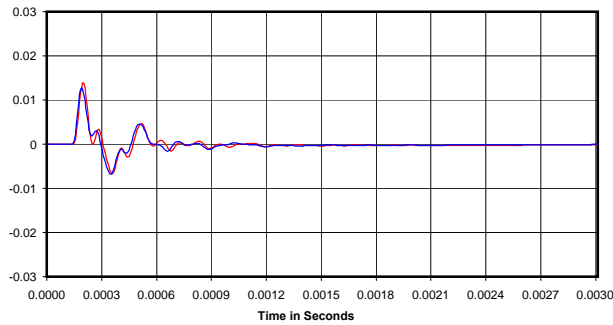
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

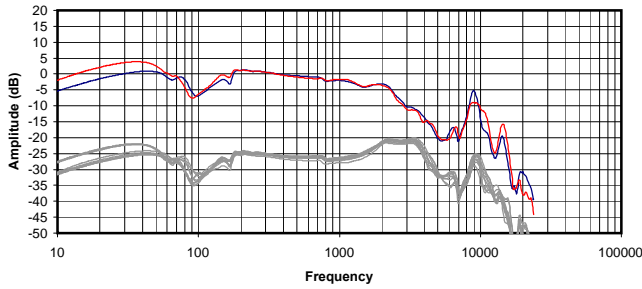


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

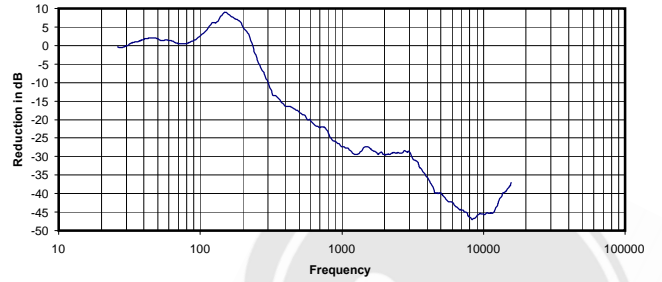
0.056 Vrms
17 Ohms
0.18 mW
-16 dB



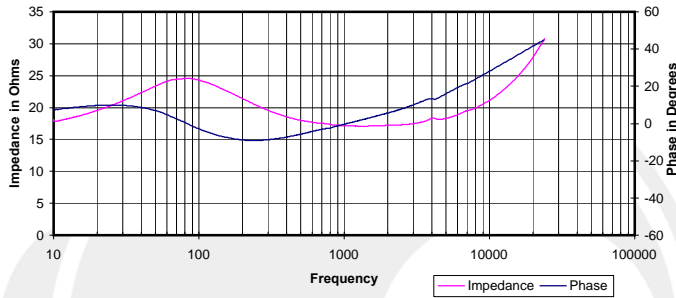
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



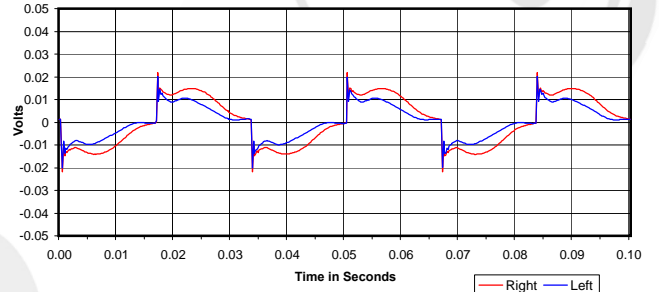
Isolation
Attenuation of External Sound vs. Frequency



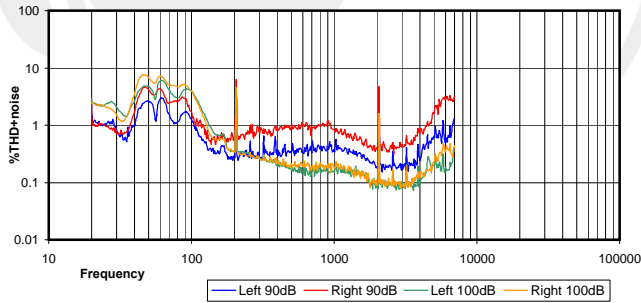
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



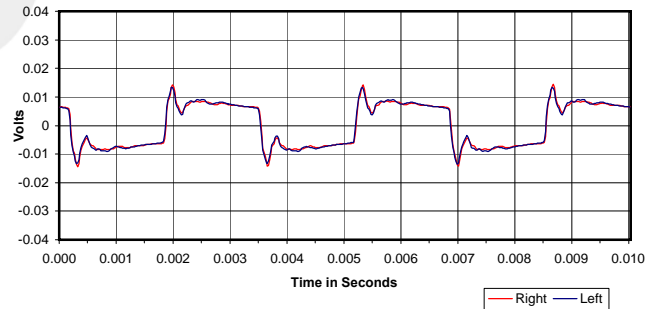
30 Hz Square Wave



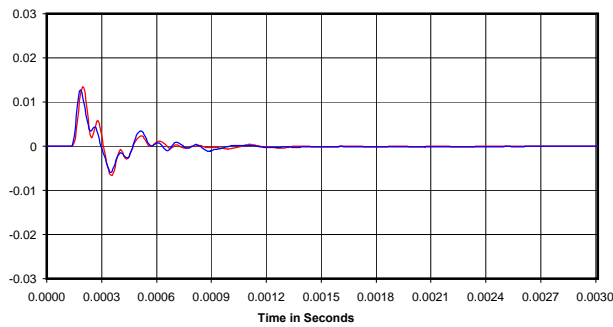
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

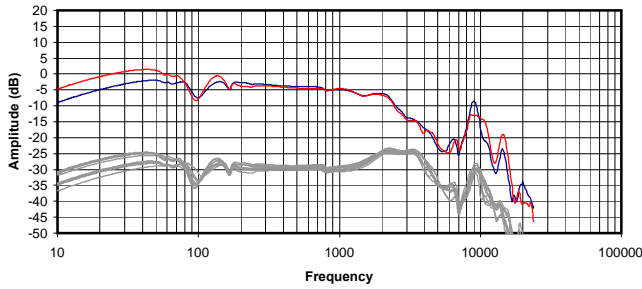


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

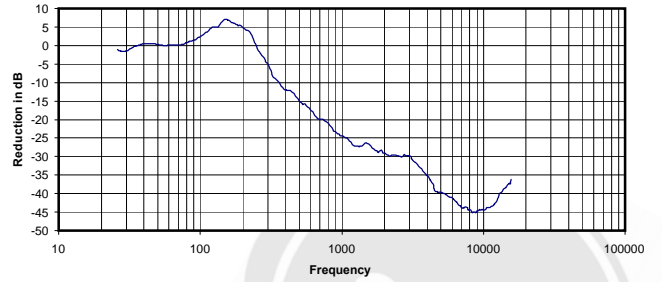
0.038 Vrms
17 Ohms
0.09 mW
-18 dB



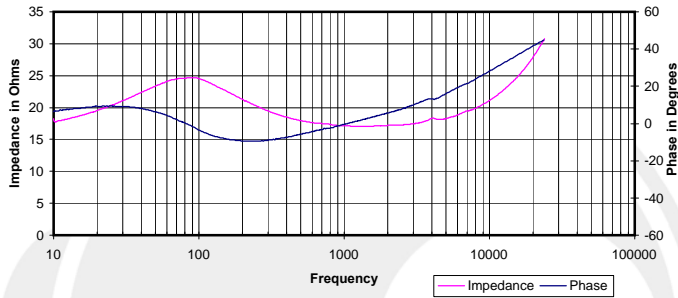
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



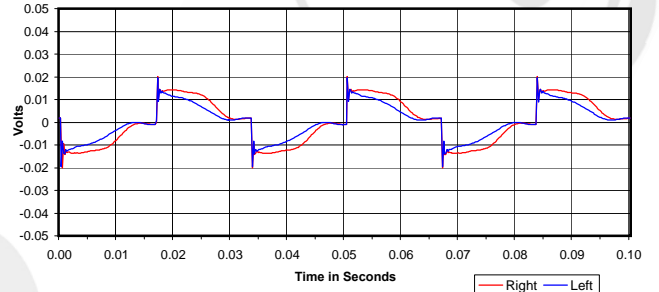
Isolation
Attenuation of External Sound vs. Frequency



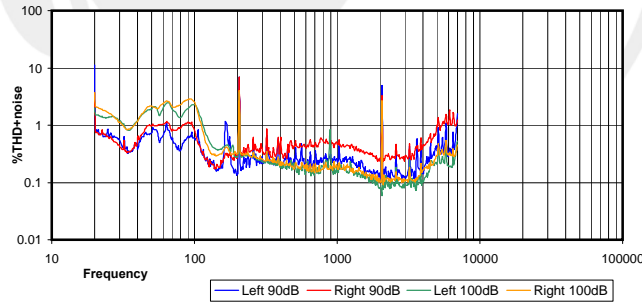
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



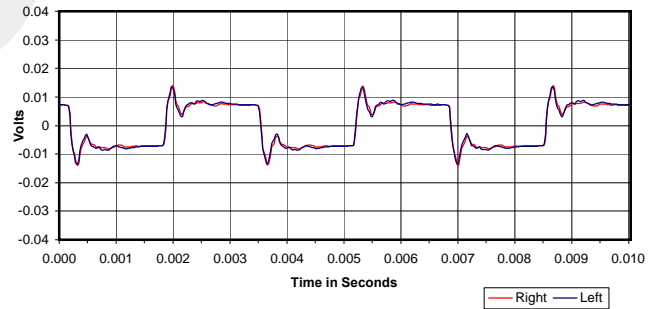
30 Hz Square Wave



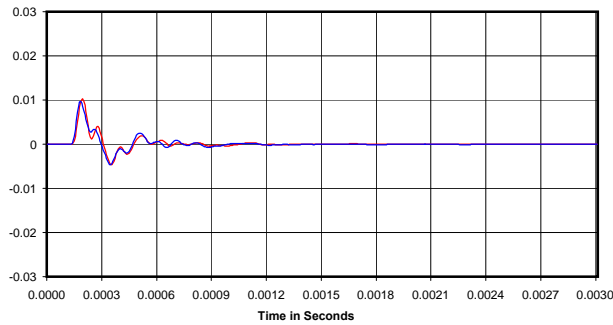
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

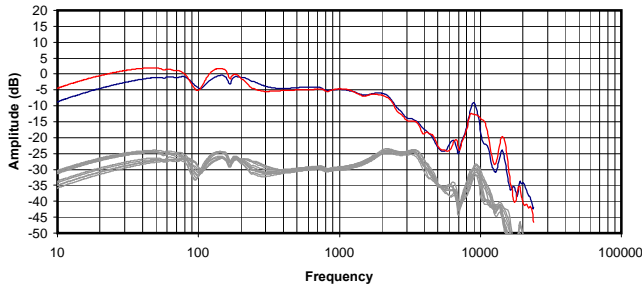


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

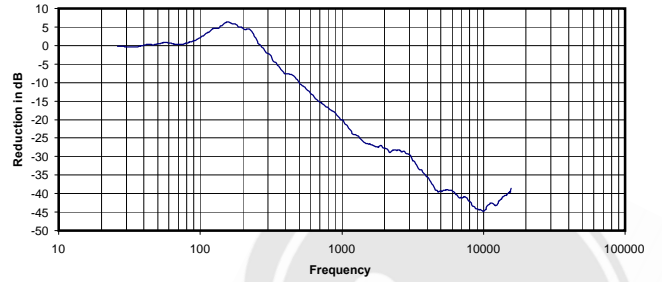
0.038 Vrms
17 Ohms
0.08 mW
-17 dB



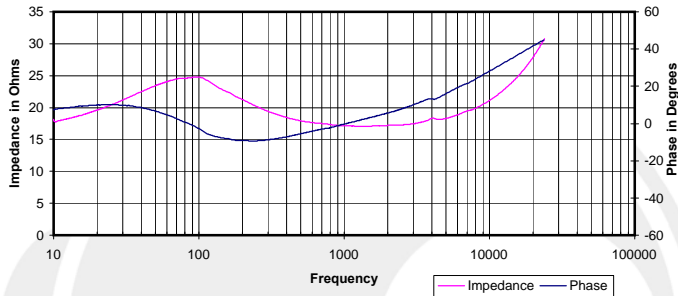
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



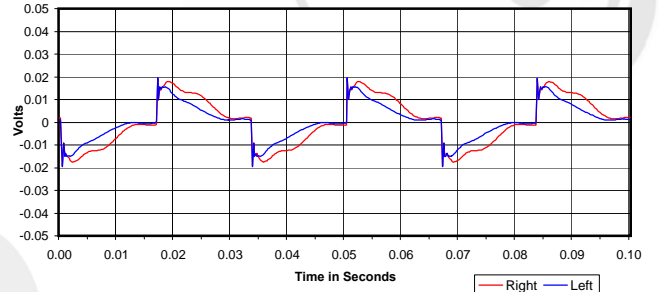
Isolation
Attenuation of External Sound vs. Frequency



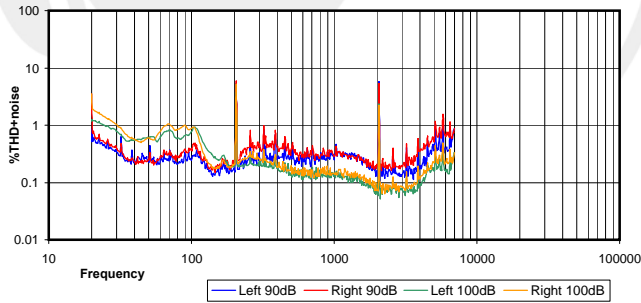
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



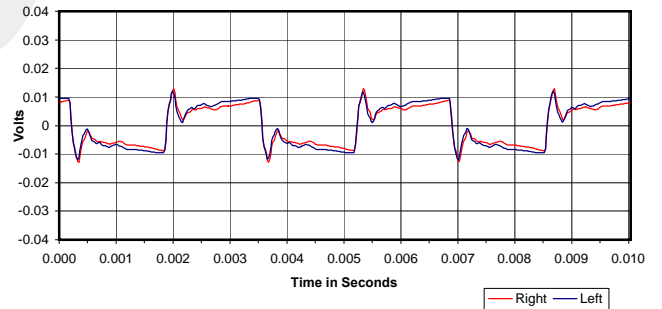
30 Hz Square Wave



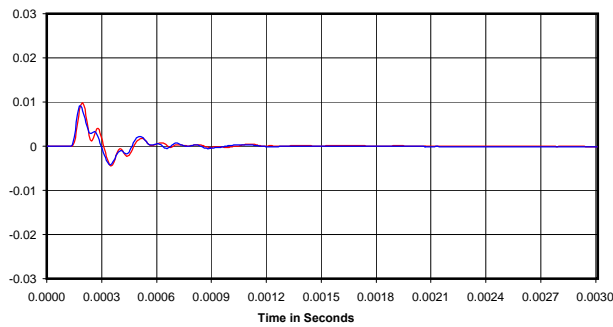
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

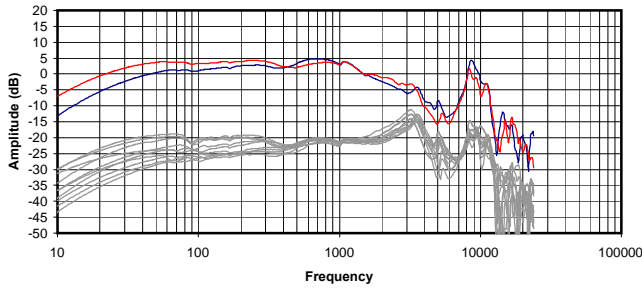


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

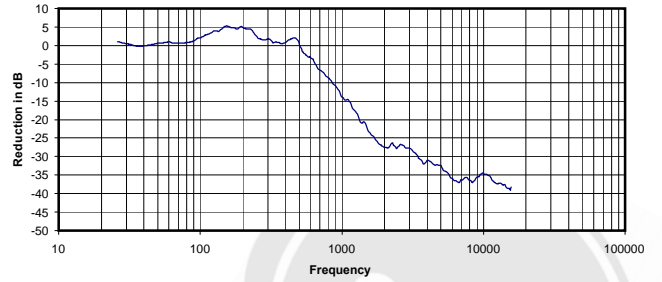
0.038 Vrms
17 Ohms
0.08 mW
-15 dB



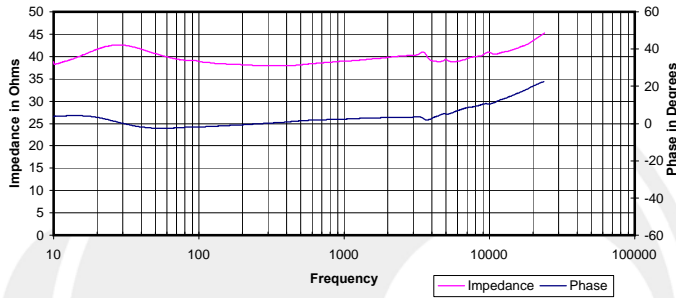
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



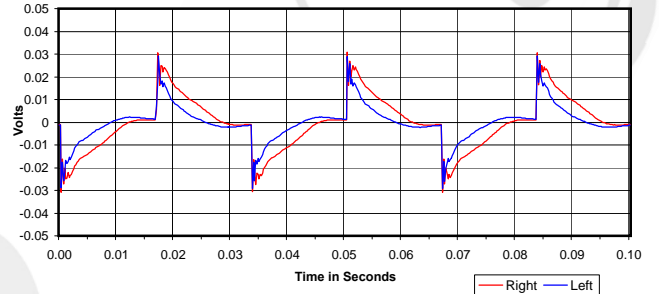
Isolation
 Attenuation of External Sound vs. Frequency



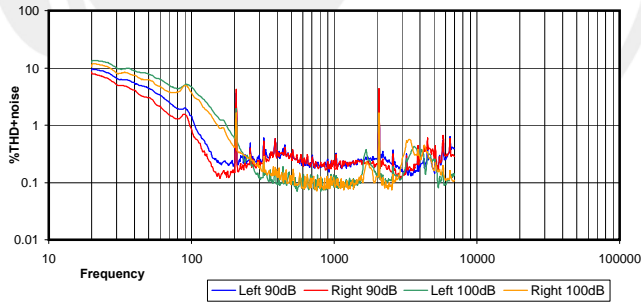
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



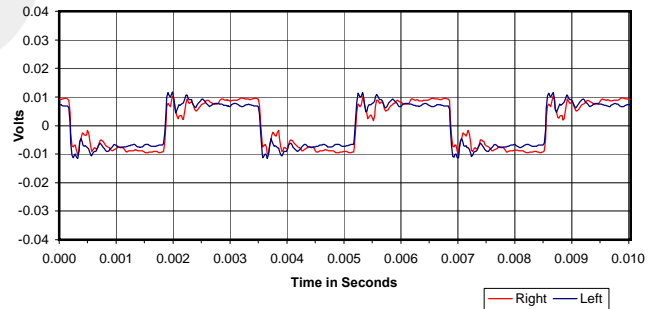
30 Hz Square Wave



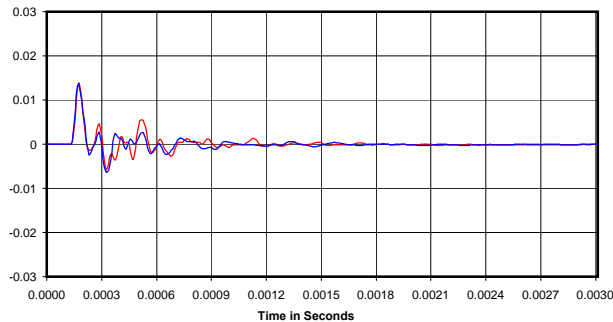
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

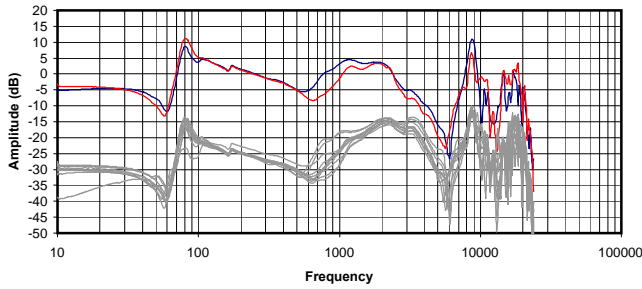


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

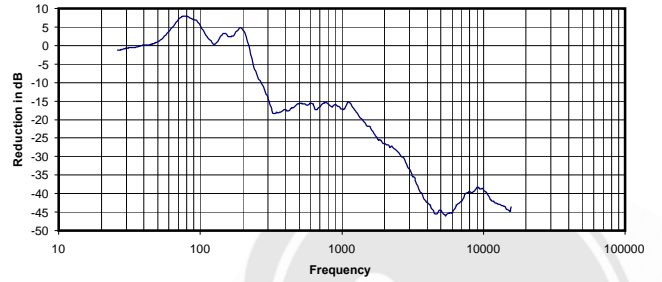
0.043 Vrms
 39 Ohms
 0.05 mW
 -11 dB



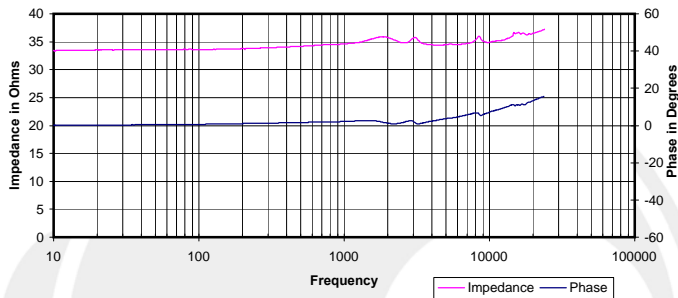
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



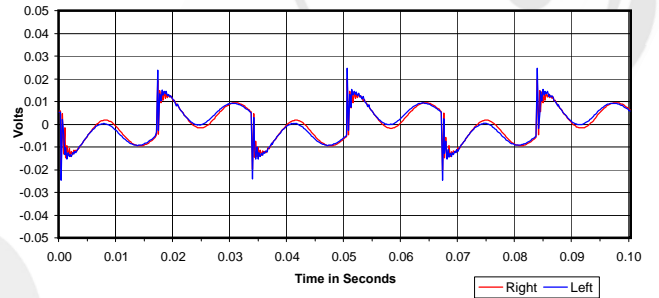
Isolation
 Attenuation of External Sound vs. Frequency



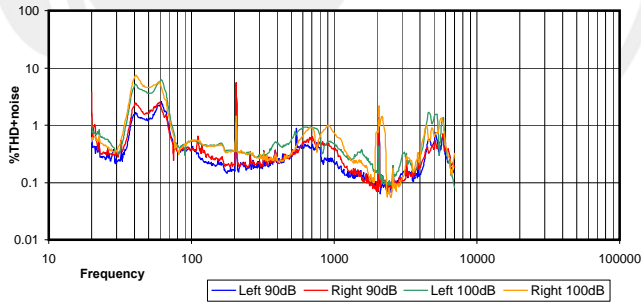
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



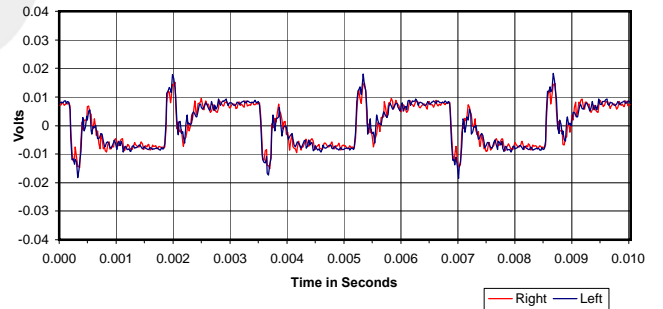
30 Hz Square Wave



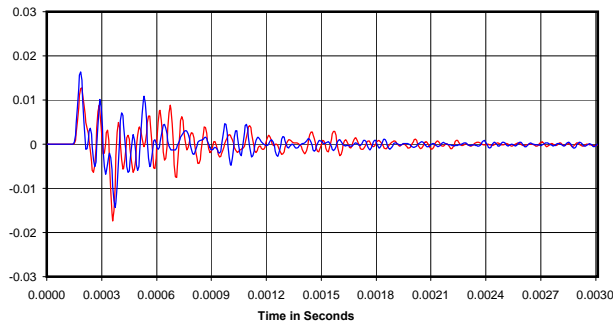
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

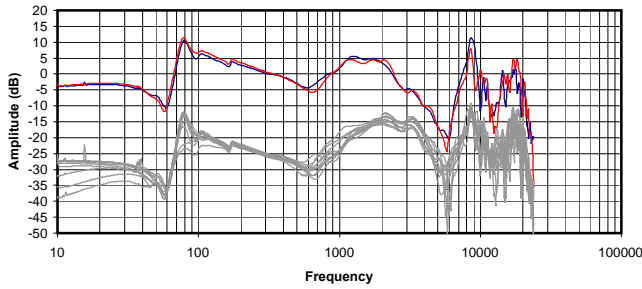


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

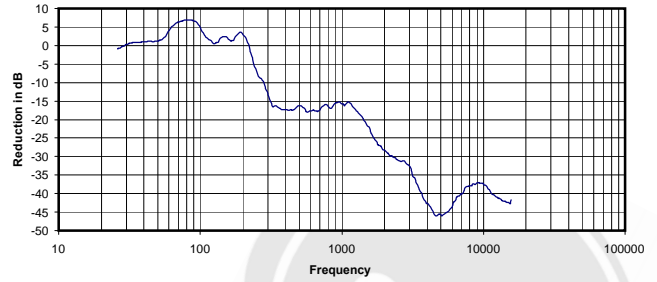
0.075 Vrms
 35 Ohms
 0.16 mW
 -18 dB



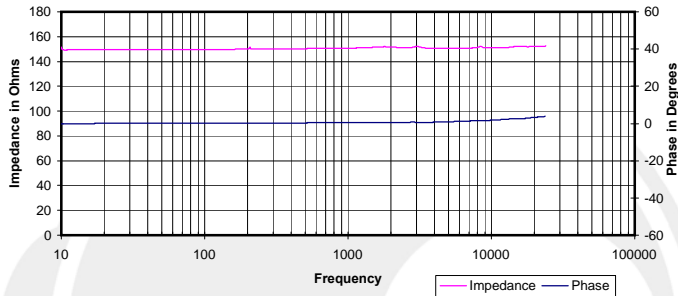
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



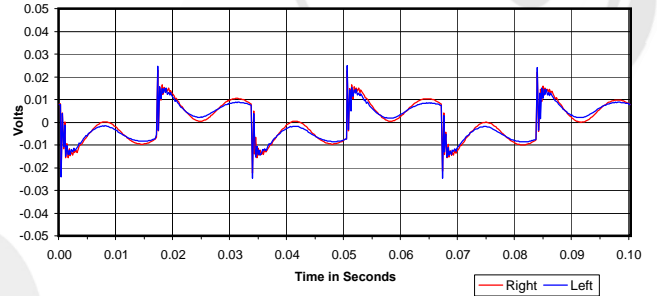
Isolation
 Attenuation of External Sound vs. Frequency



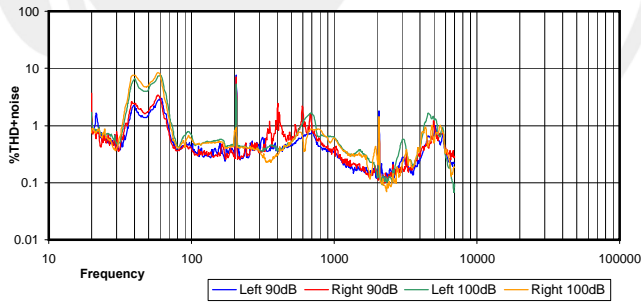
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



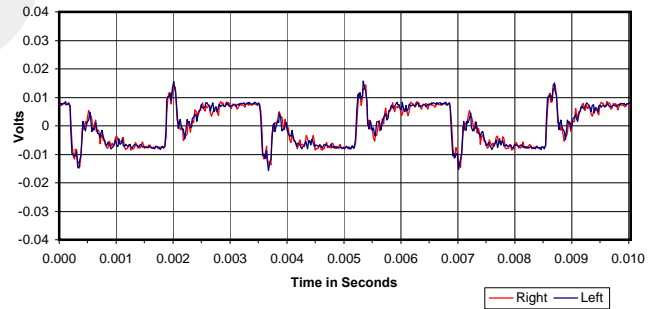
30 Hz Square Wave



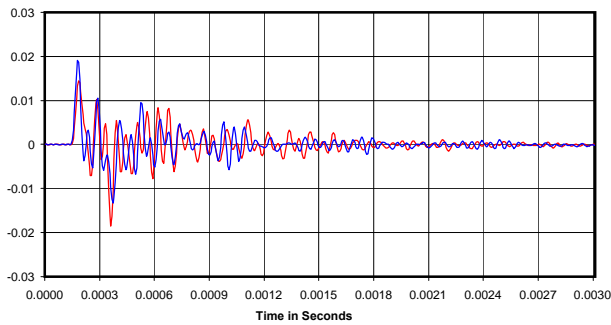
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

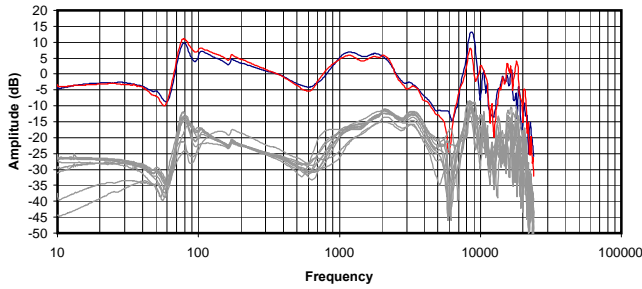


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

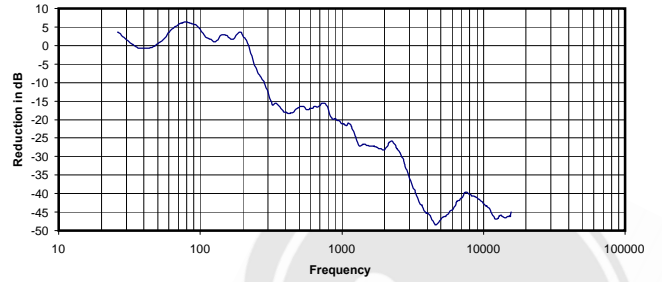
0.389 Vrms
 150 Ohms
 1.01 mW
 -19 dB



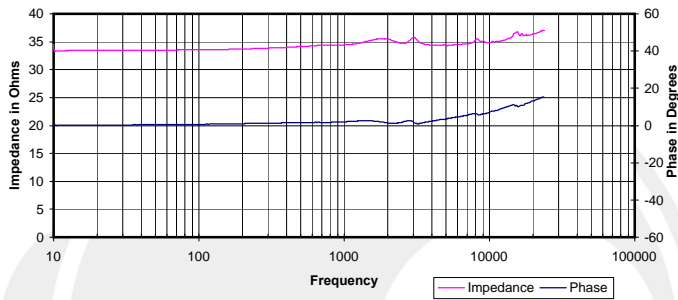
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



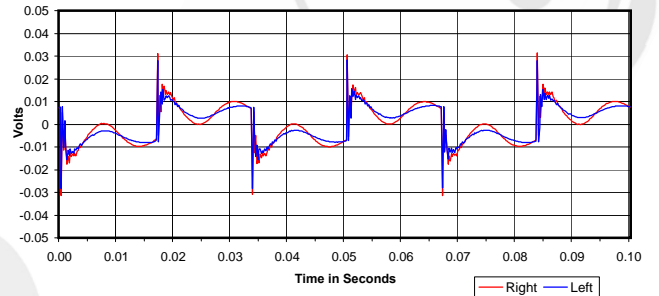
Isolation
 Attenuation of External Sound vs. Frequency



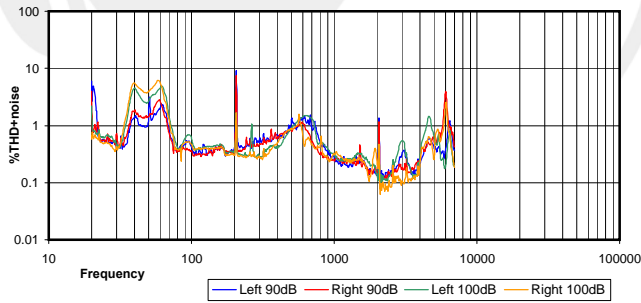
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



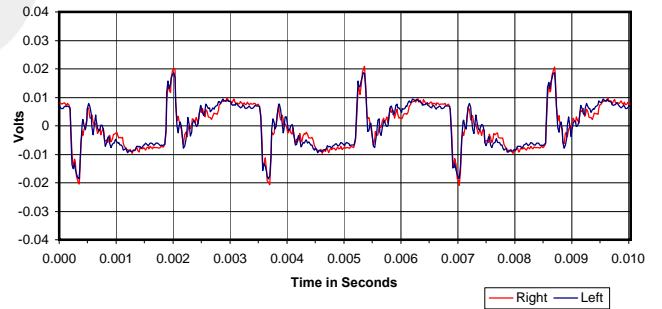
30 Hz Square Wave



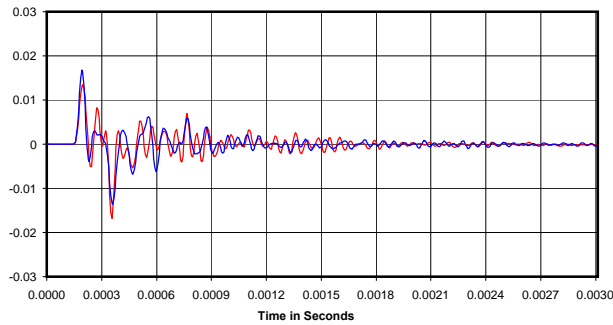
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

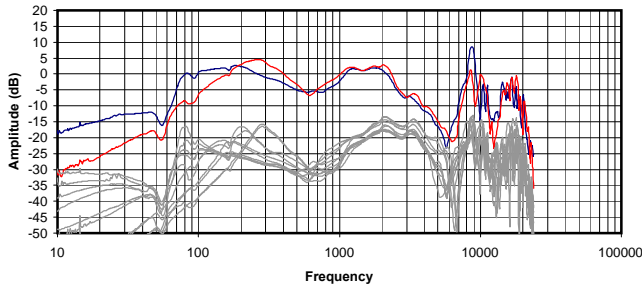


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

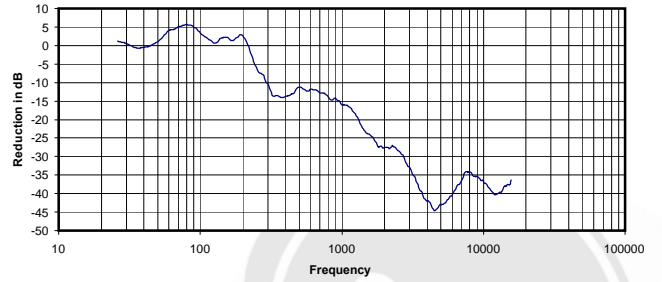
0.043 Vrms
 34 Ohms
 0.05 mW
 -20 dB



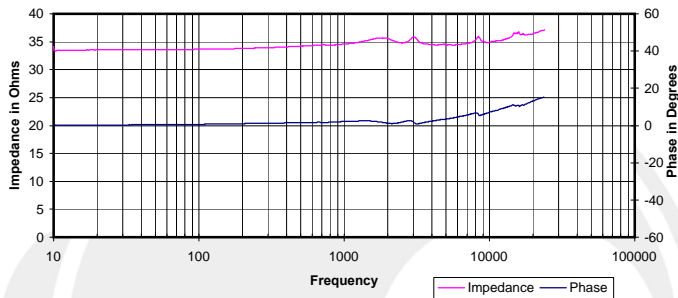
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



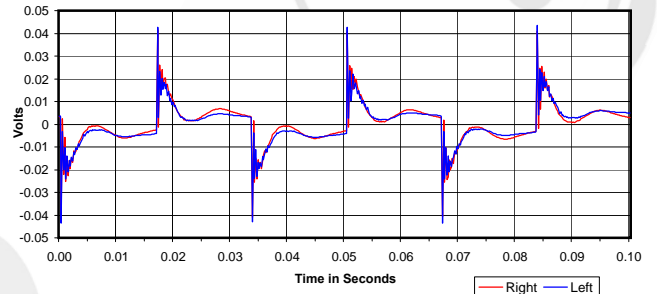
Isolation
 Attenuation of External Sound vs. Frequency



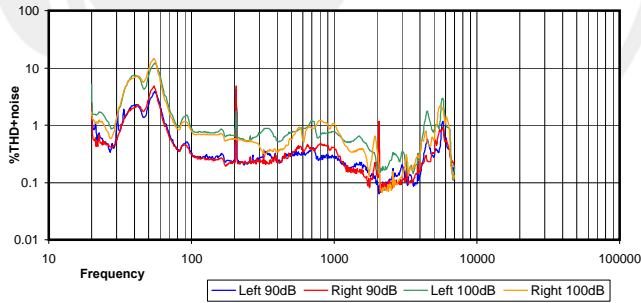
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



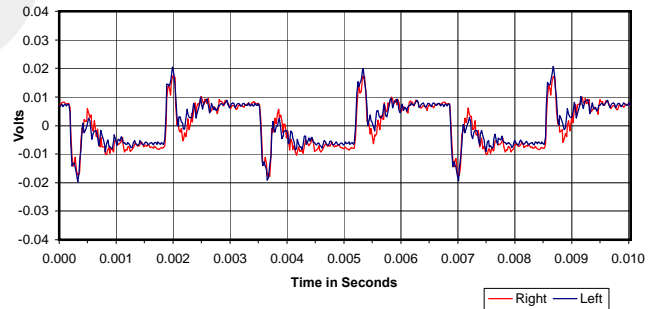
30 Hz Square Wave



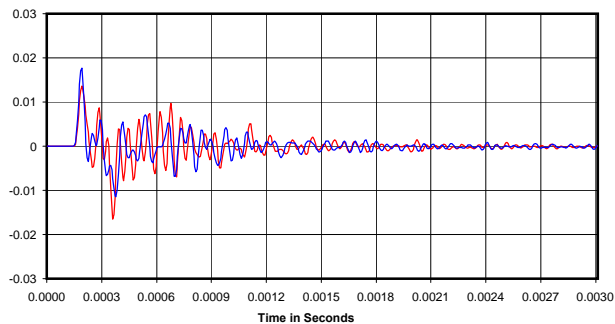
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

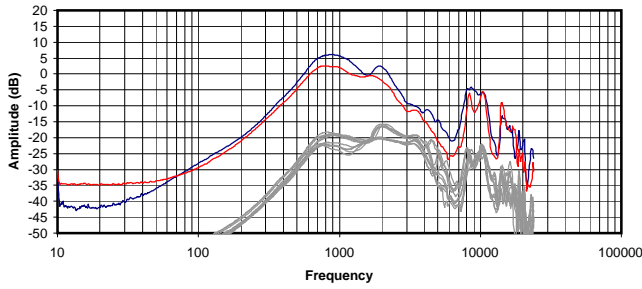


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

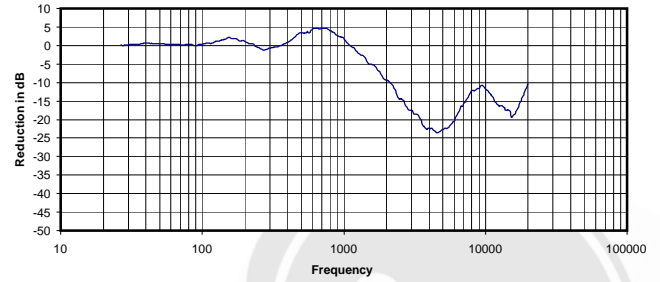
0.081 Vrms
 35 Ohms
 0.19 mW
 -17 dB



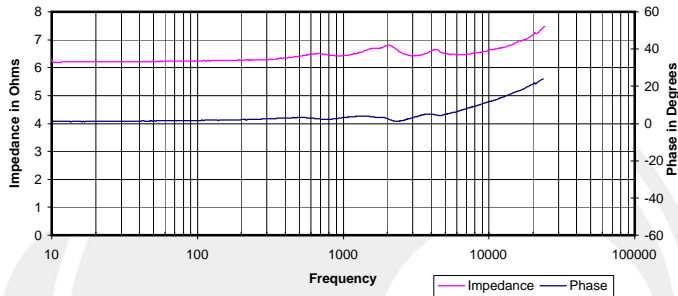
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



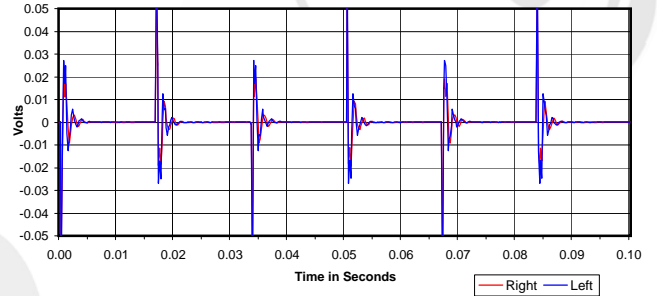
Isolation
 Attenuation of External Sound vs. Frequency



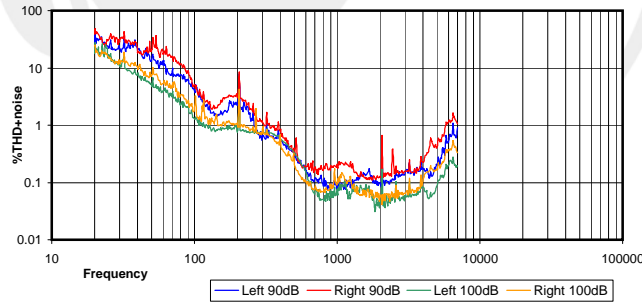
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



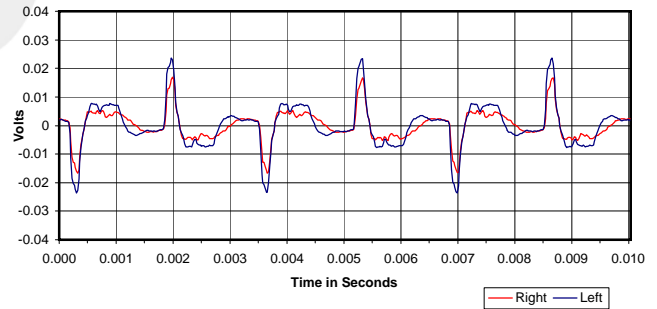
30 Hz Square Wave



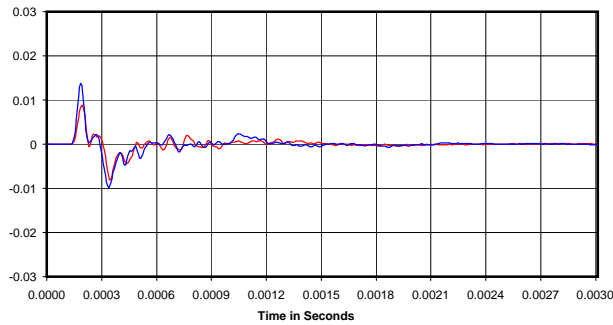
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

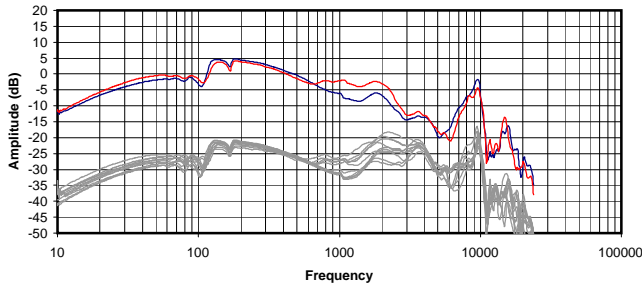


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

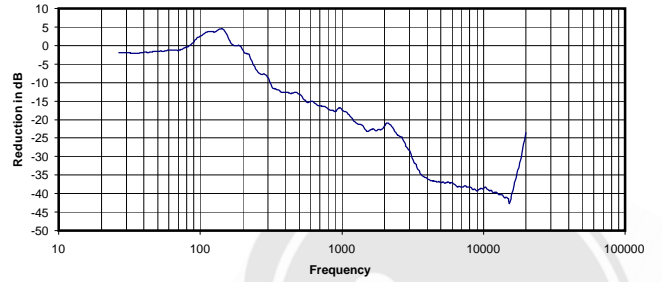
0.007 Vrms
 6 Ohms
 0.01 mW
 -6 dBr



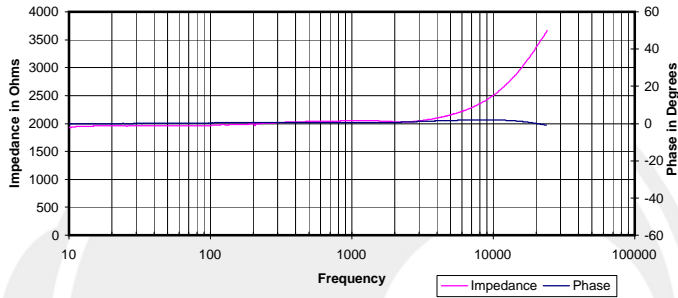
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



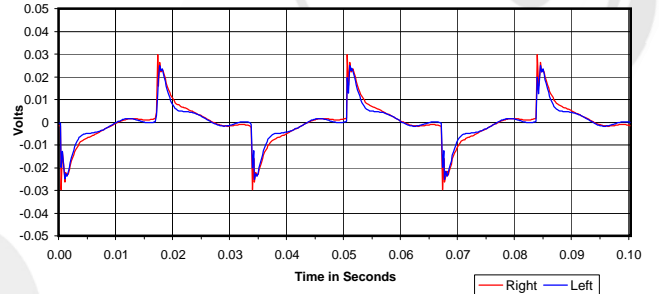
Isolation
 Attenuation of External Sound vs. Frequency



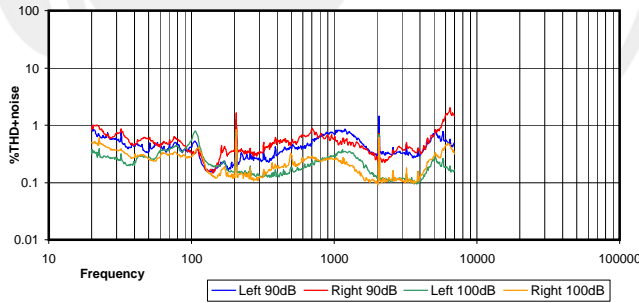
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



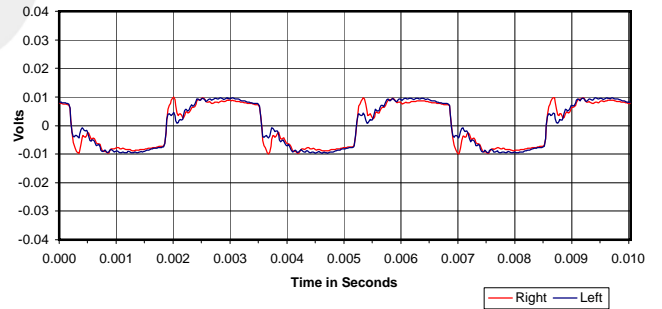
30 Hz Square Wave



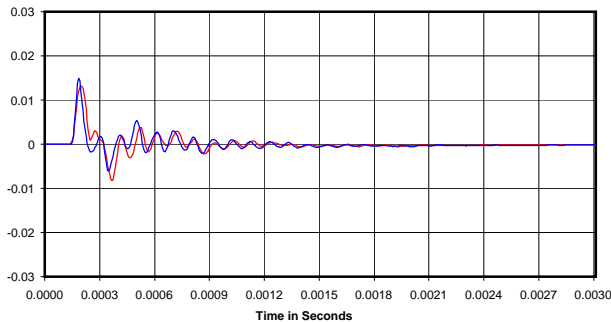
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

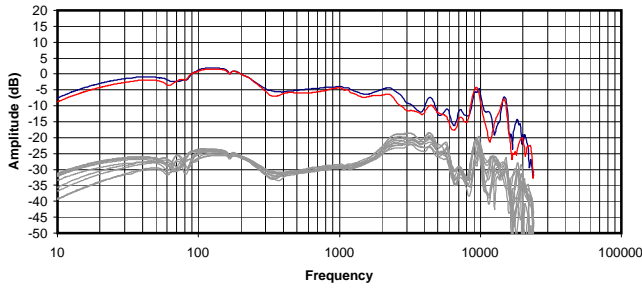


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

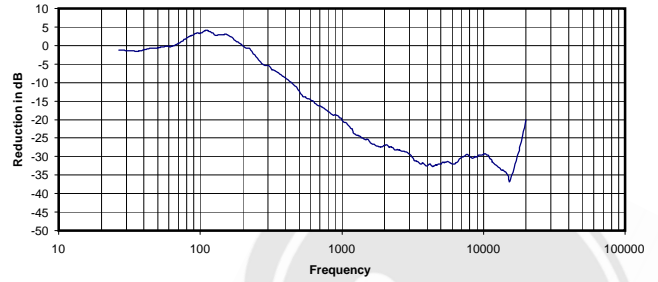
1.225 Vrms
 2050 Ohms
 0.73 mW
 -19 dB



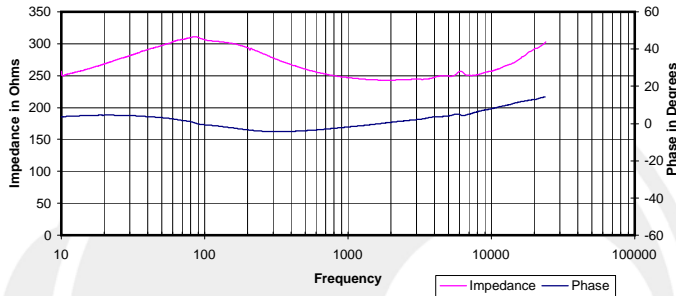
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



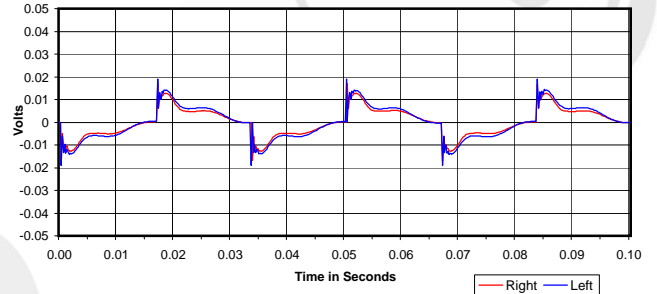
Isolation
 Attenuation of External Sound vs. Frequency



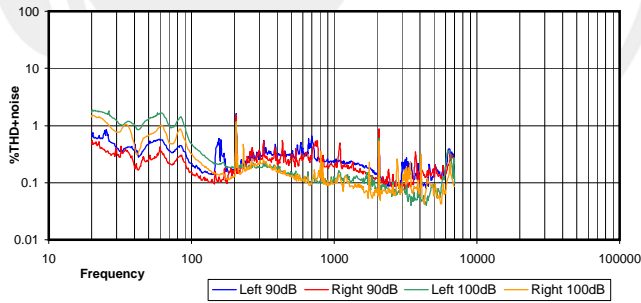
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



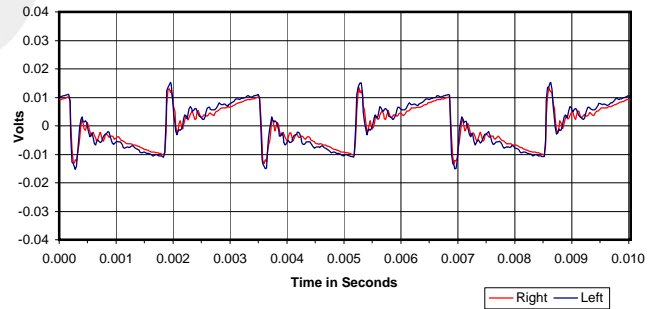
30 Hz Square Wave



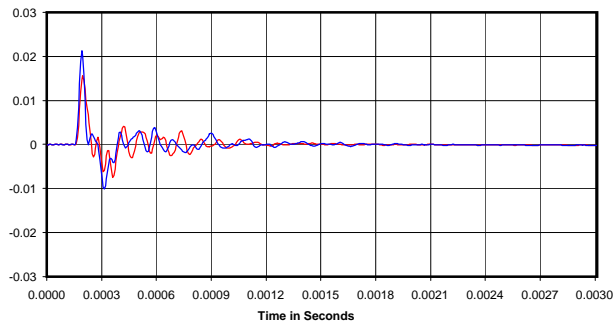
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



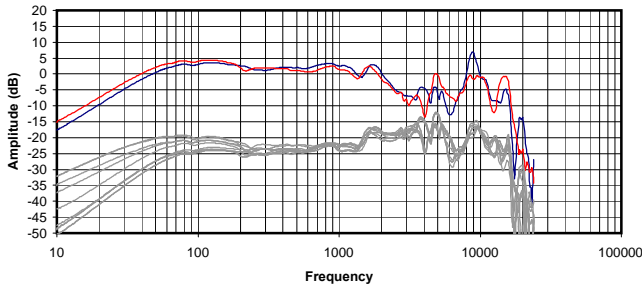
Impulse Response



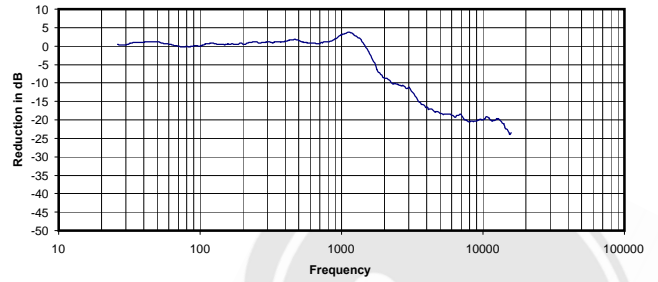
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.171 Vrms
 247 Ohms
 0.12 mW
 -18 dB

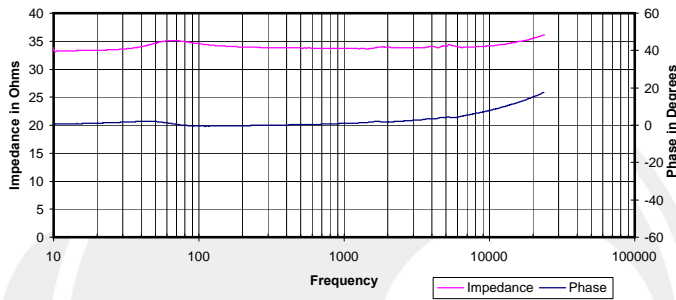
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



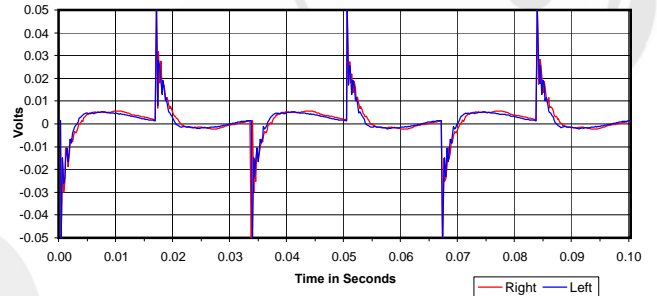
Isolation
 Attenuation of External Sound vs. Frequency



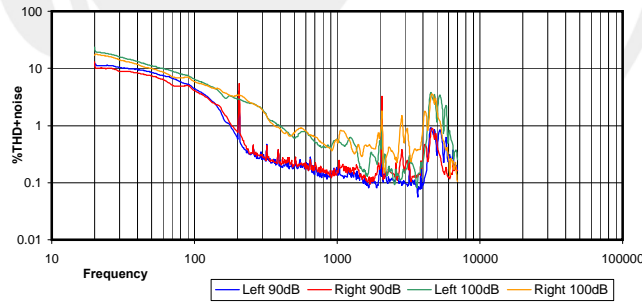
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



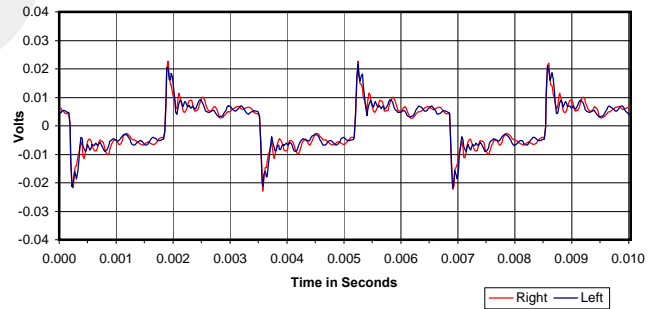
30 Hz Square Wave



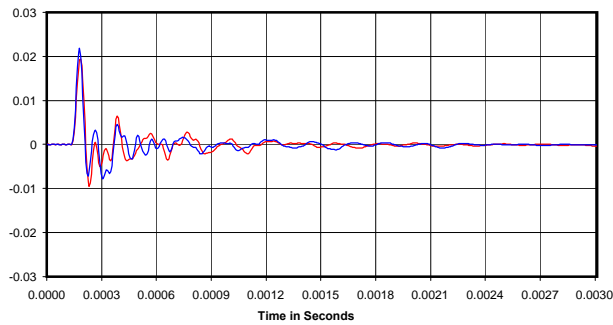
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



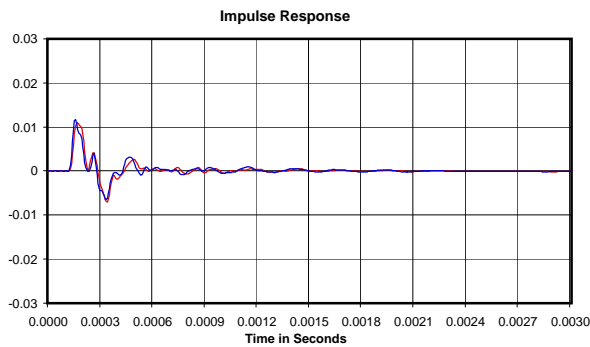
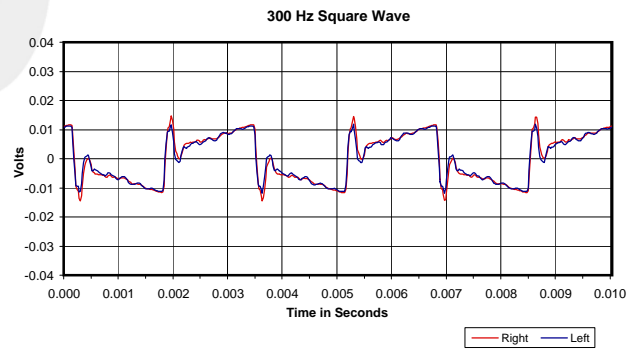
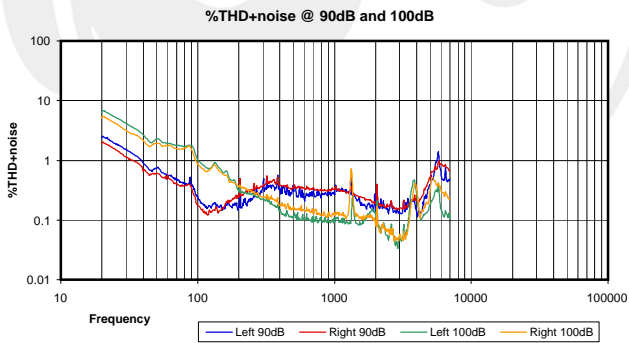
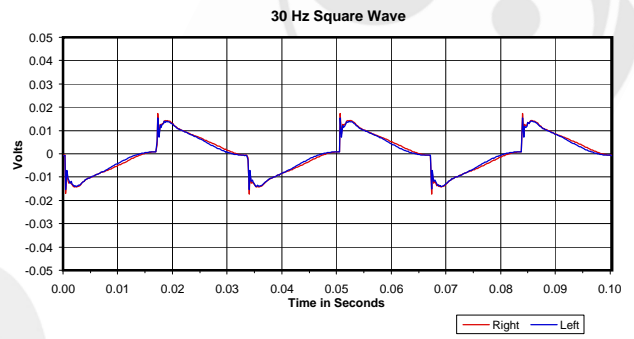
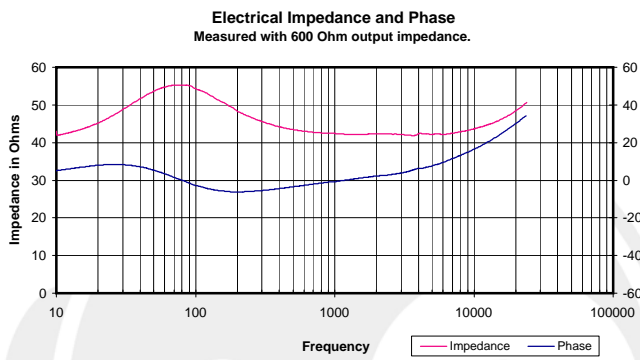
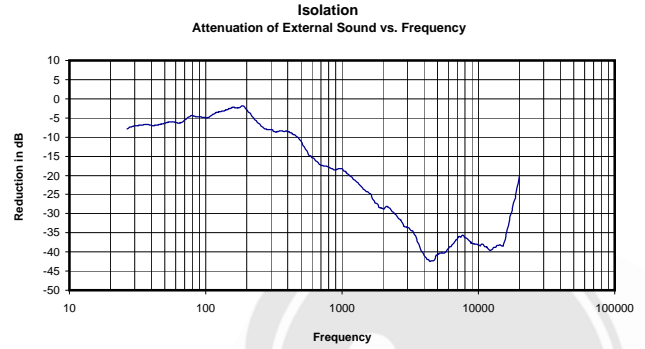
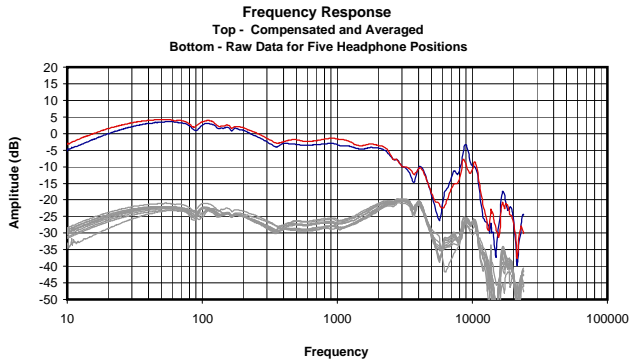
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.099 Vrms
 34 Ohms
 0.29 mW
 -3 dB



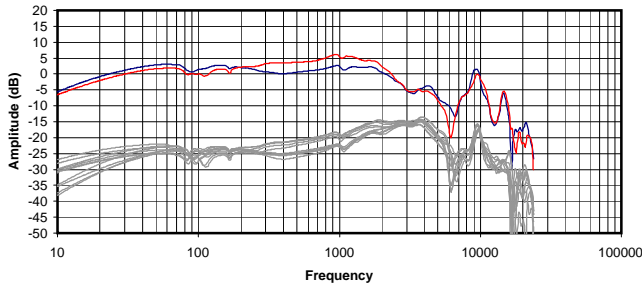


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

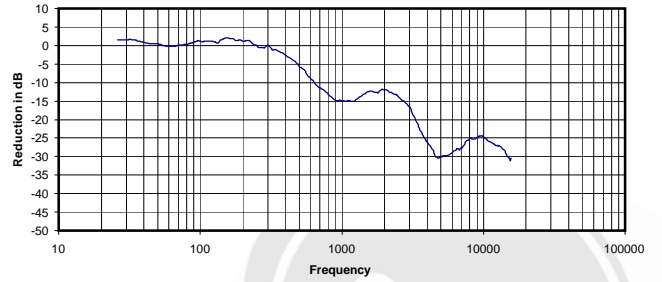
0.057 Vrms
42 Ohms
0.08 mW
-21 dB



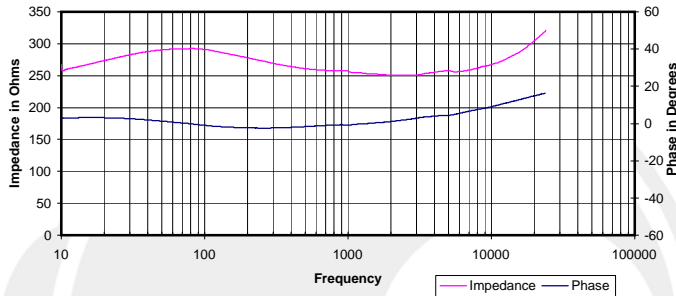
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



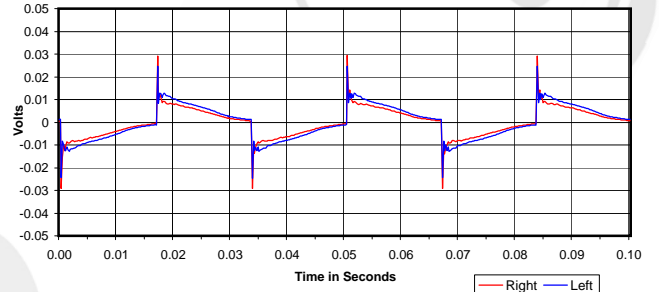
Isolation
 Attenuation of External Sound vs. Frequency



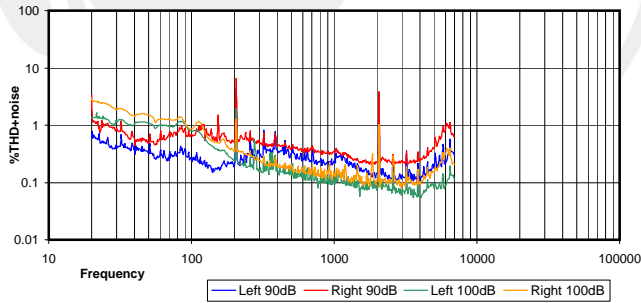
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



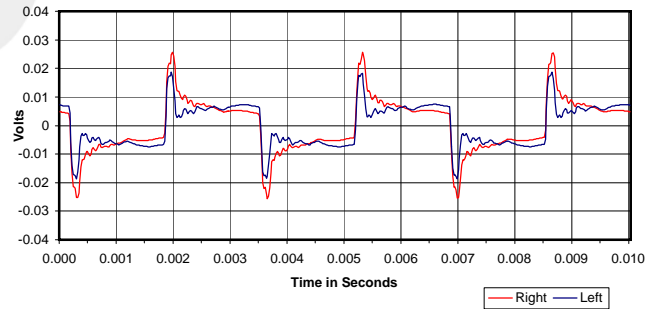
30 Hz Square Wave



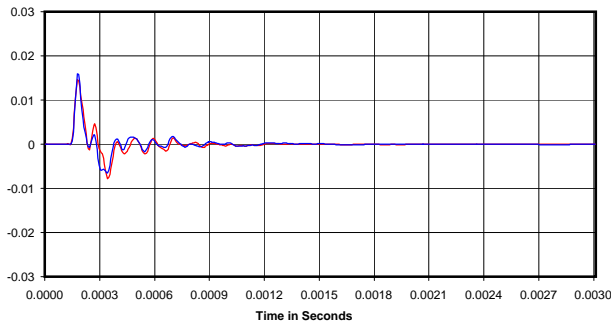
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

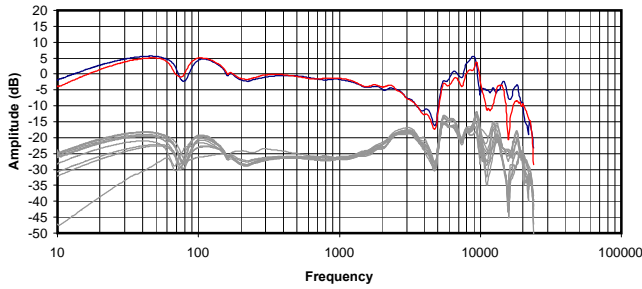


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

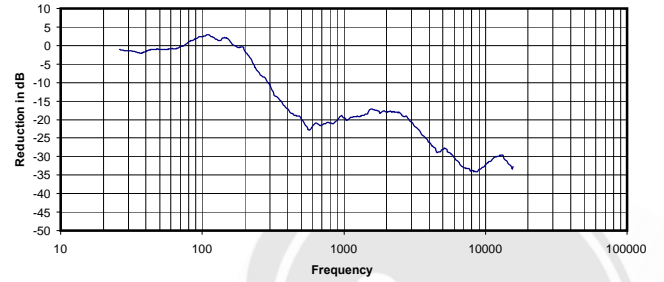
0.161 Vrms
 257 Ohms
 0.10 mW
 -10 dB



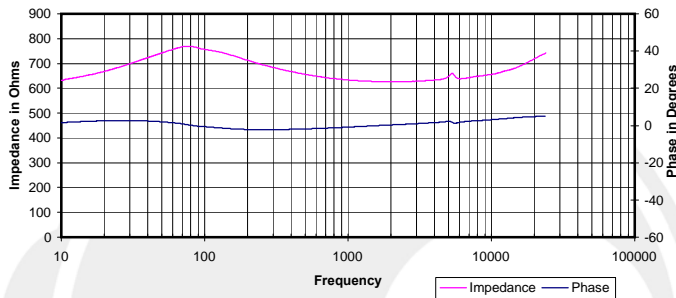
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



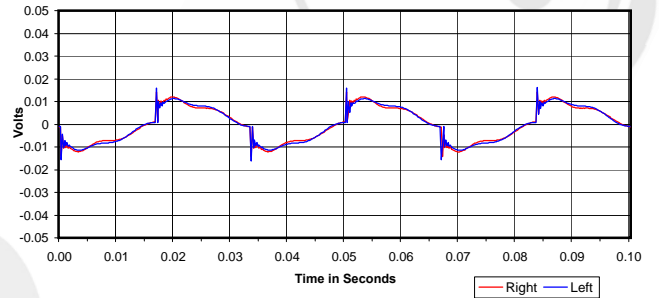
Isolation
 Attenuation of External Sound vs. Frequency



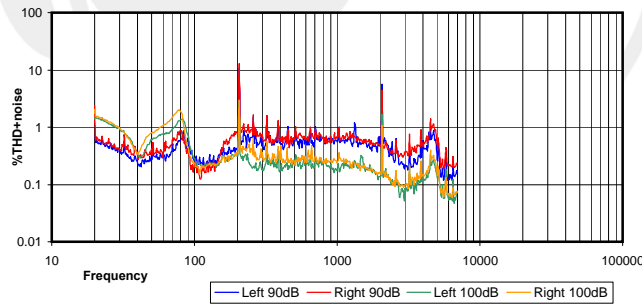
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



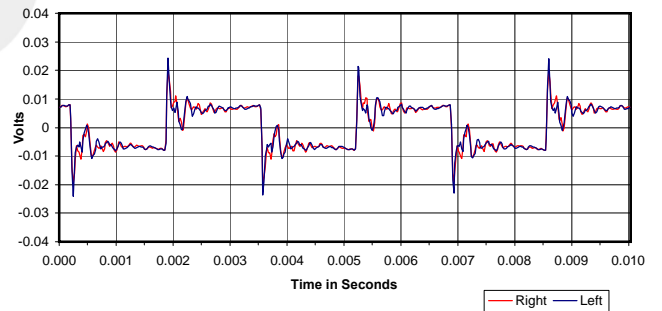
30 Hz Square Wave



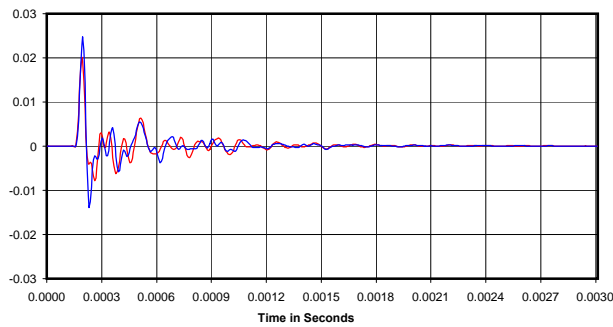
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

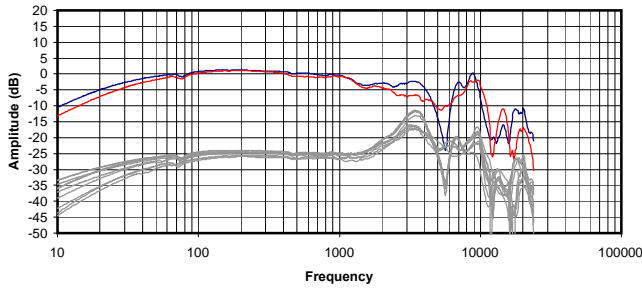


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

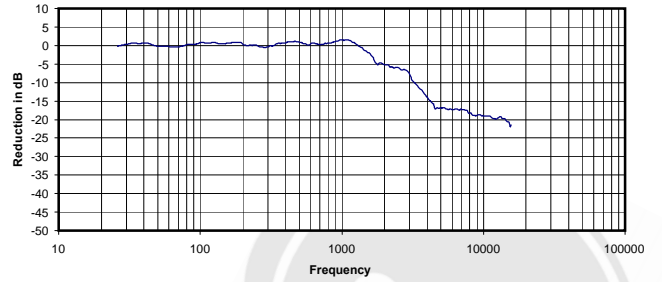
0.592 Vrms
 633 Ohms
 0.55 mW
 -15 dB



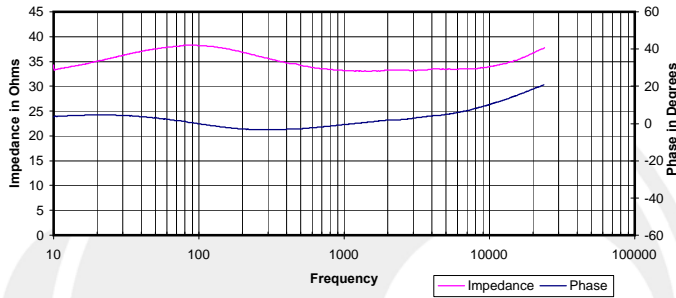
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



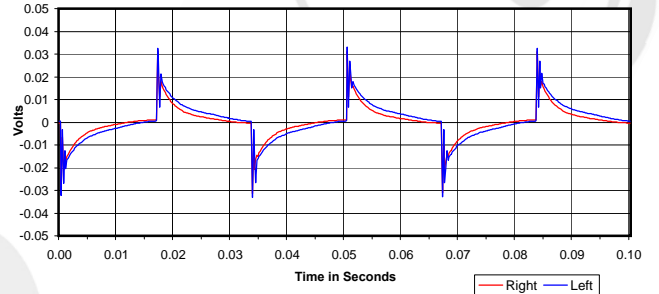
Isolation
Attenuation of External Sound vs. Frequency



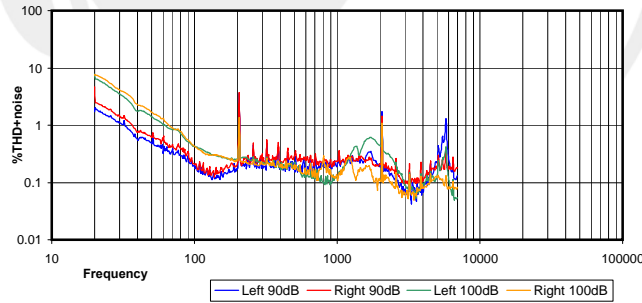
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



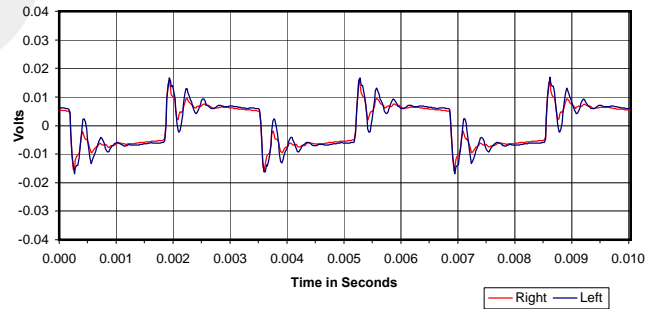
30 Hz Square Wave



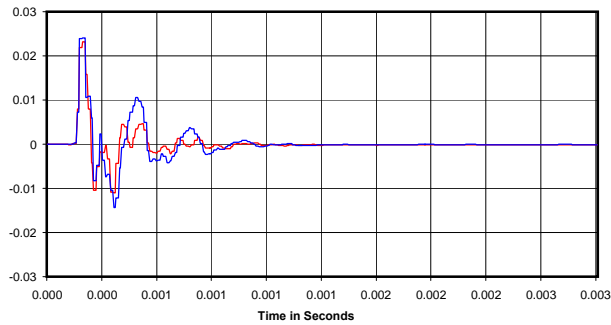
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

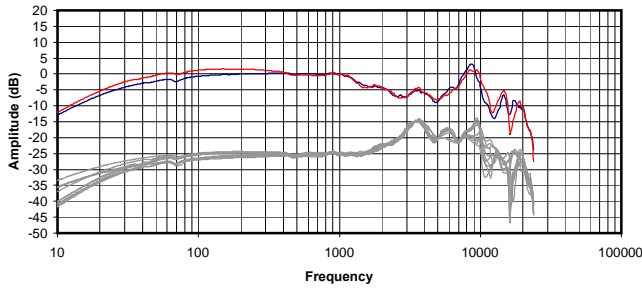


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

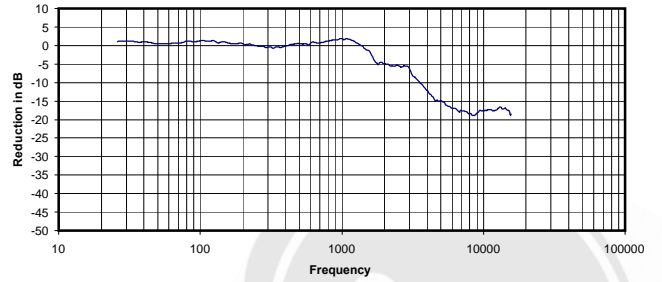
0.125 Vrms
33 Ohms
0.47 mW
-3 dB



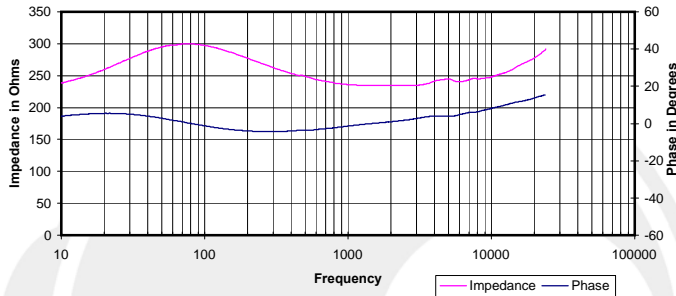
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



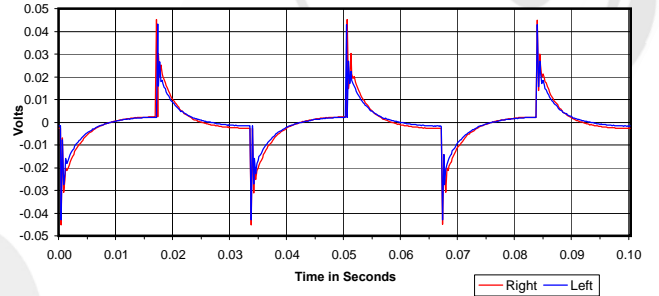
Isolation
Attenuation of External Sound vs. Frequency



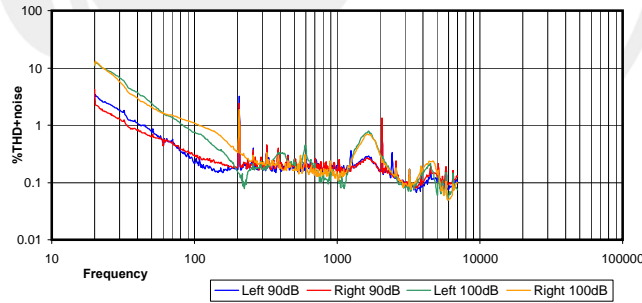
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



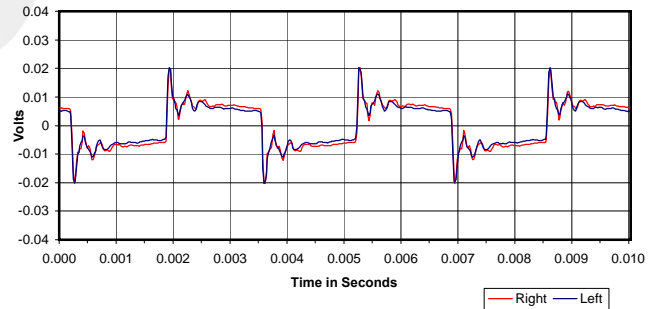
30 Hz Square Wave



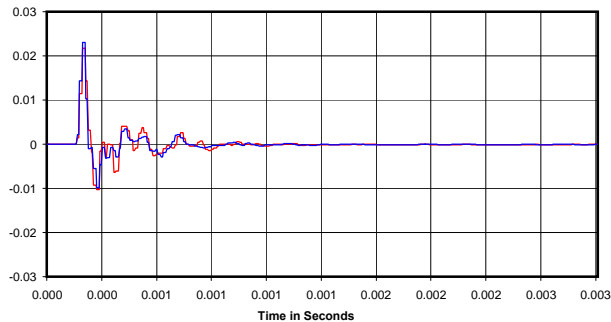
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

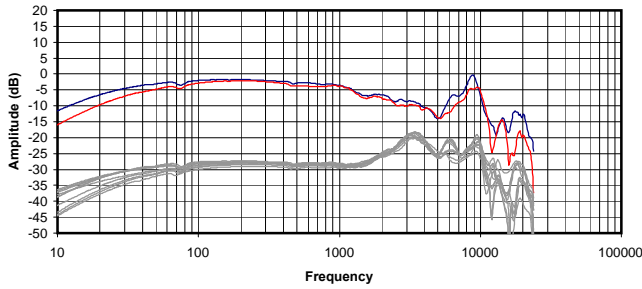


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

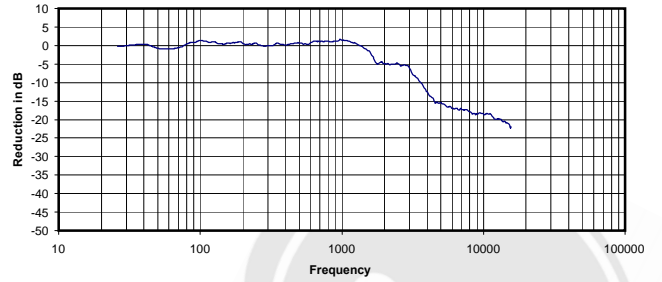
0.299 Vrms
236 Ohms
0.38 mW
-3 dBr



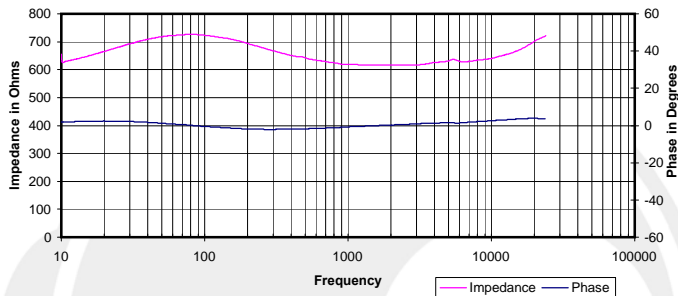
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



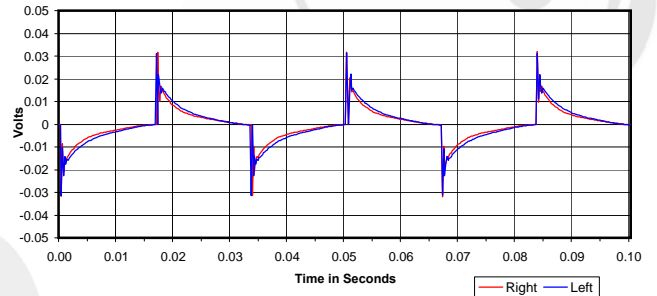
Isolation
 Attenuation of External Sound vs. Frequency



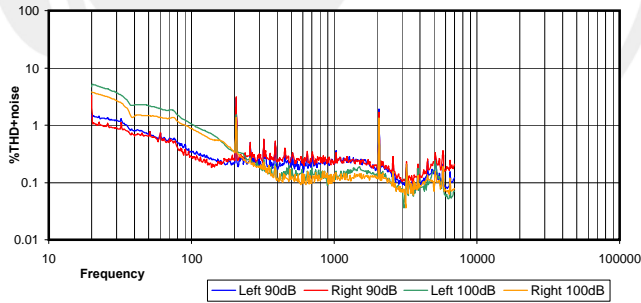
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



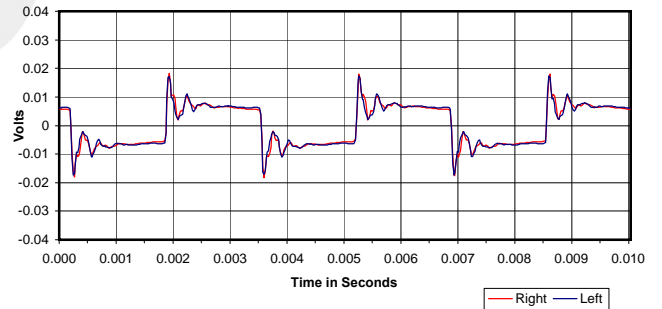
30 Hz Square Wave



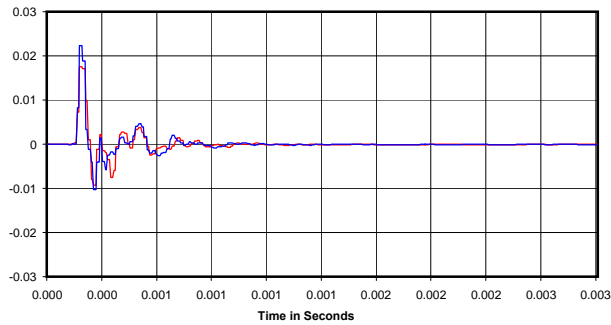
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



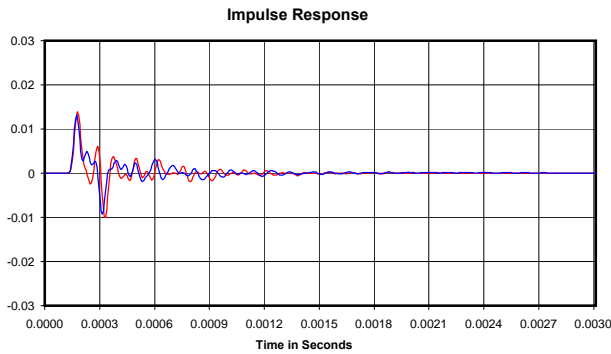
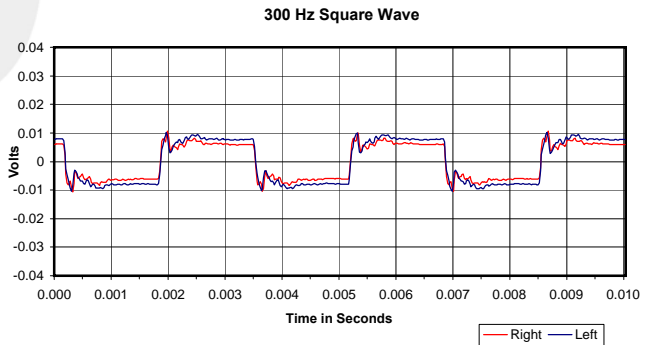
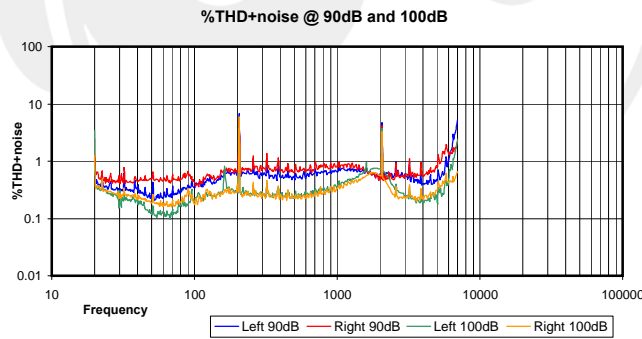
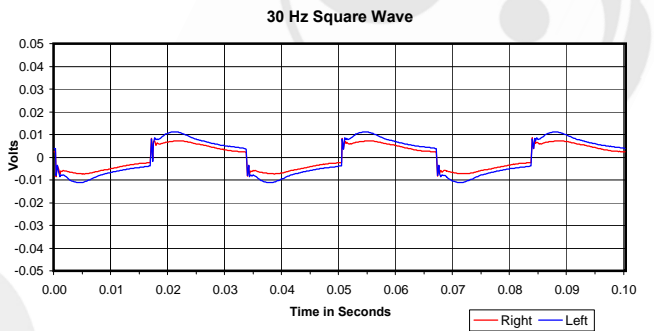
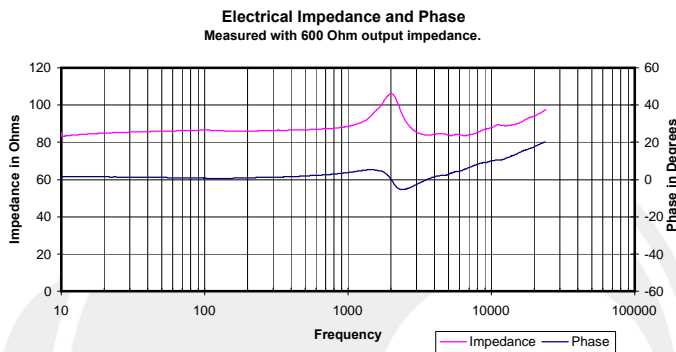
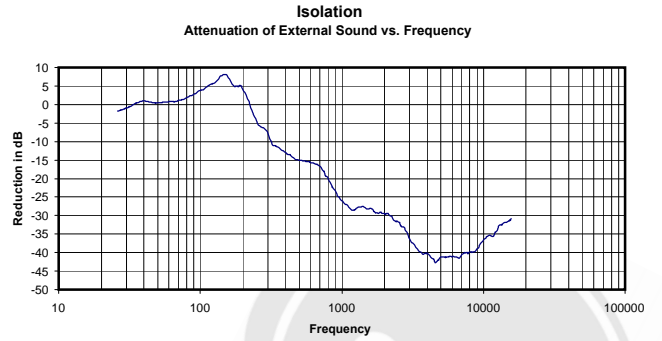
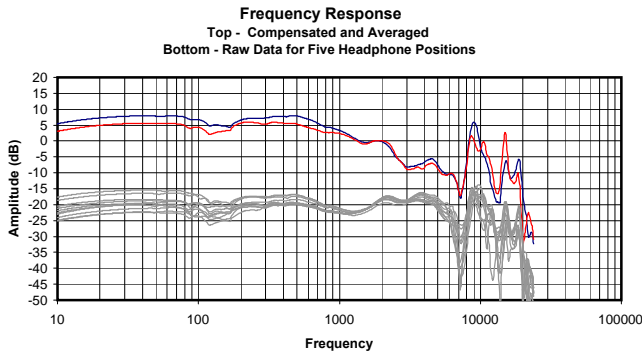
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.514 Vrms
 619 Ohms
 0.43 mW
 -3 dB

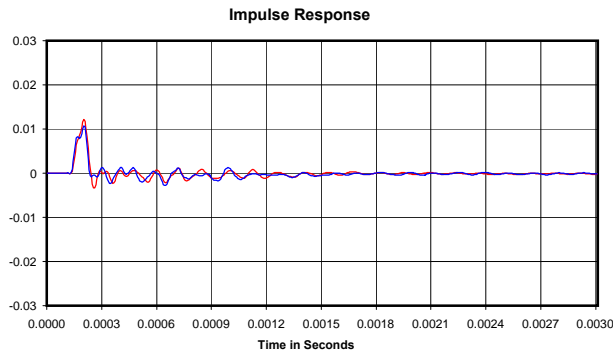
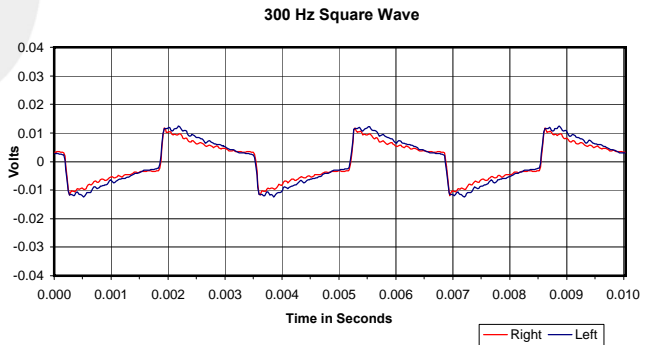
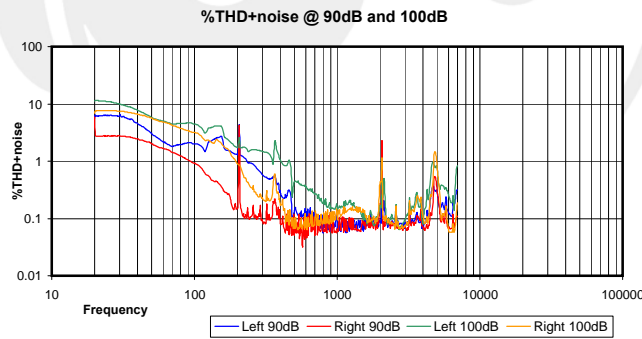
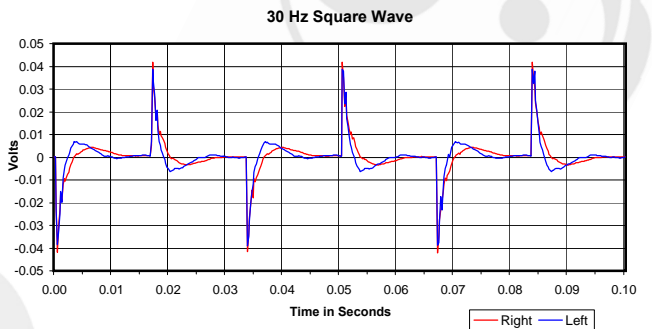
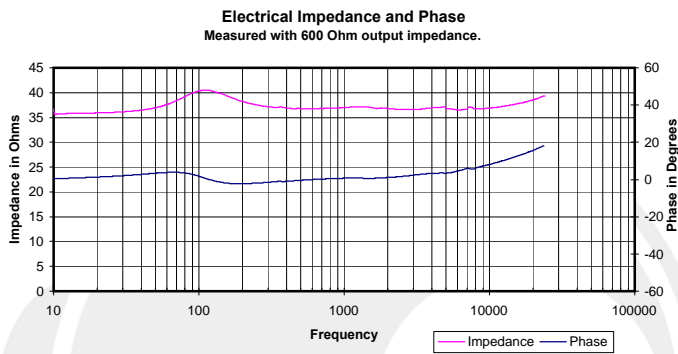
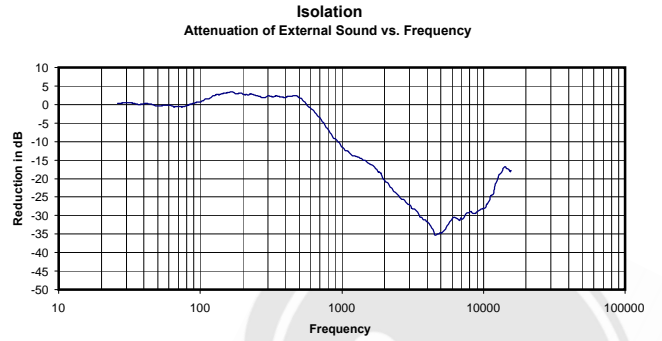
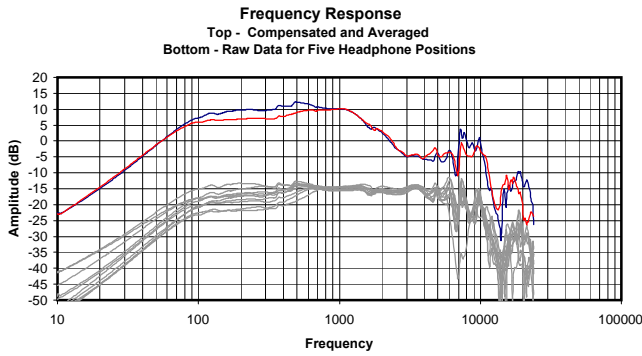




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.051 Vrms
89 Ohms
0.03 mW
-19 dB

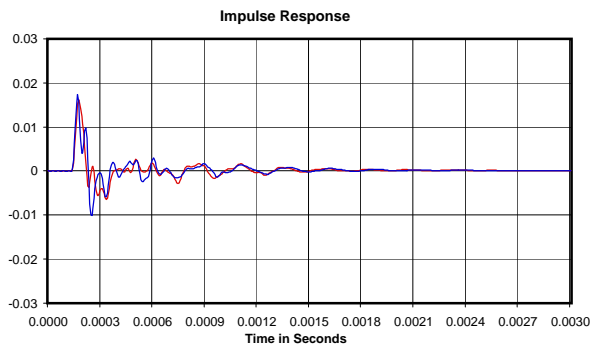
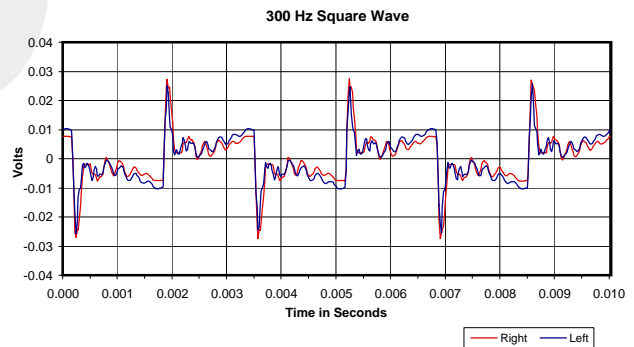
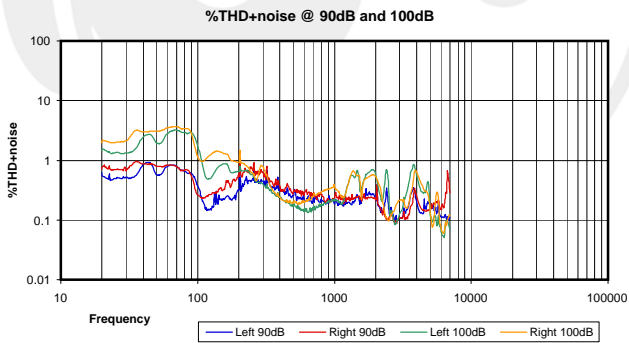
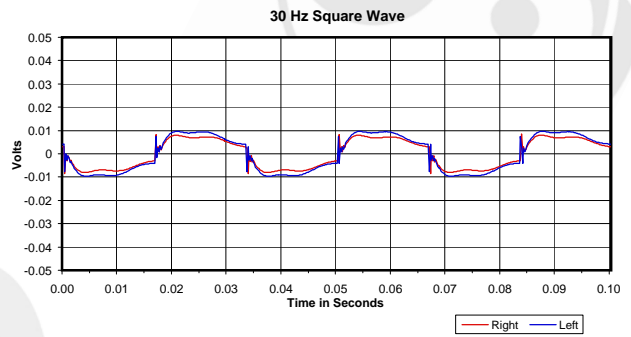
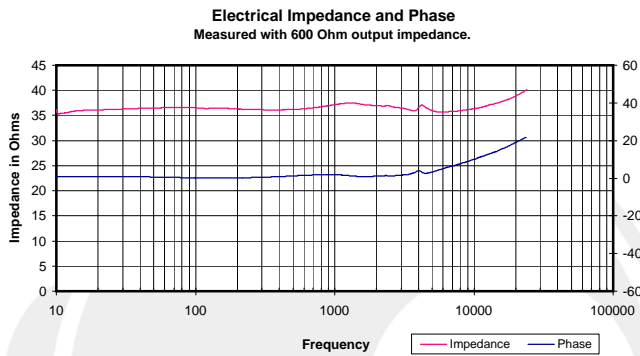
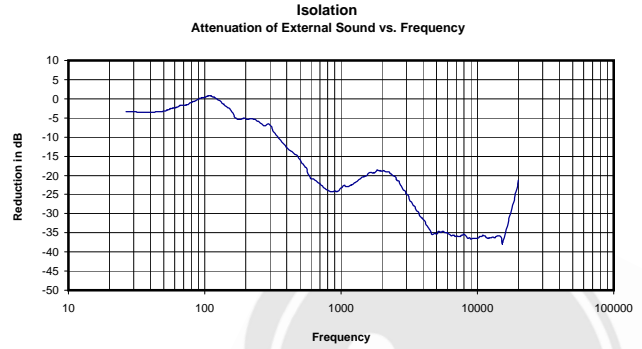
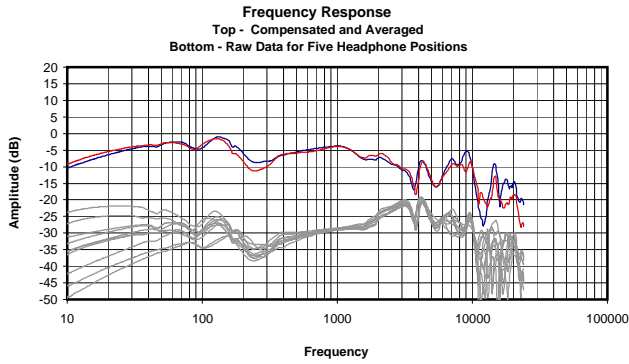




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
37 Ohms
0.02 mW
-10 dB



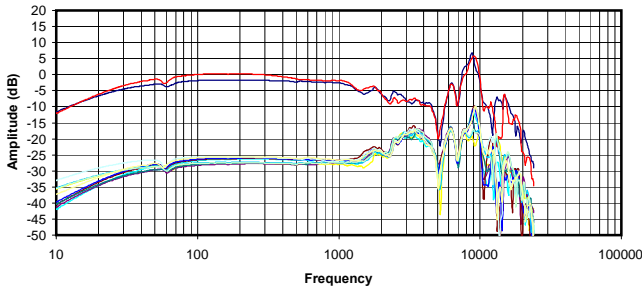


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

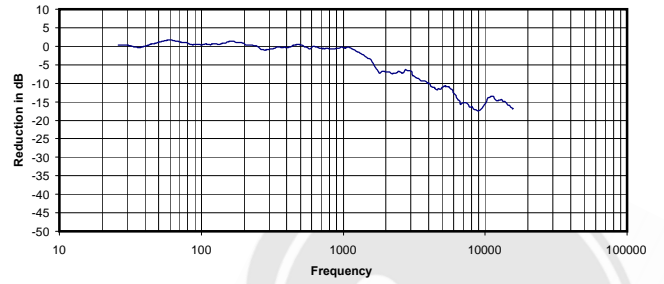
0.069 Vrms
37 Ohms
0.13 mW
-19 dBr



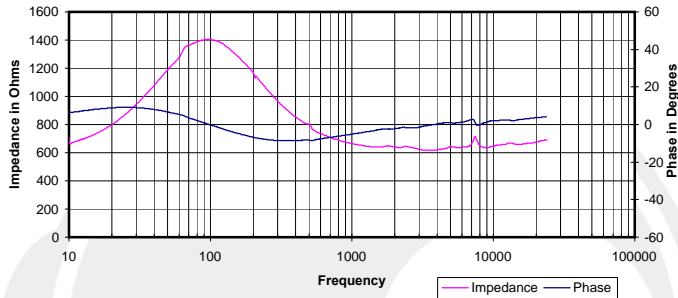
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



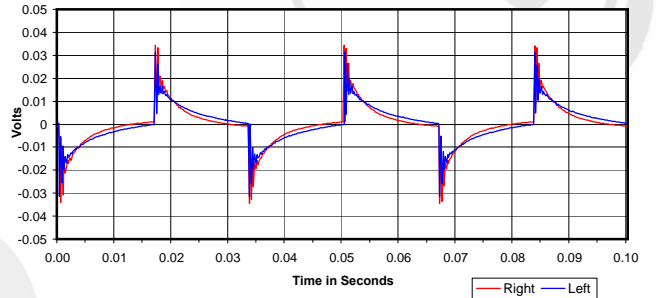
Isolation
Attenuation of External Sound vs. Frequency



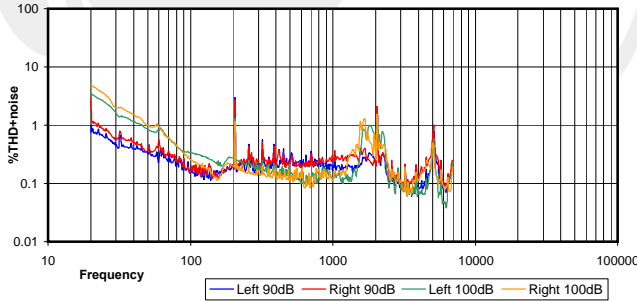
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



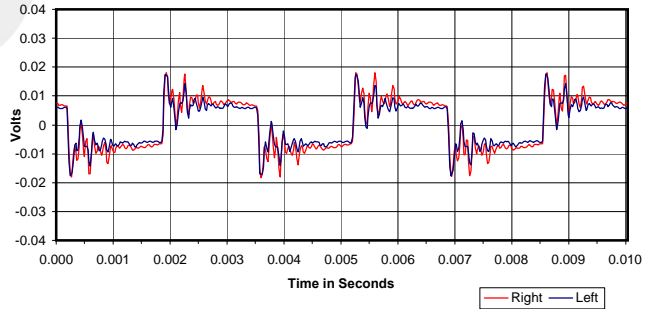
30 Hz Square Wave



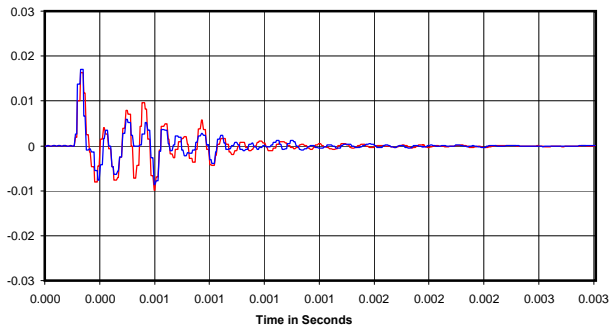
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

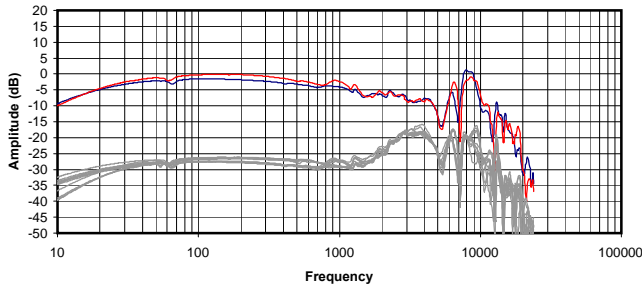


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

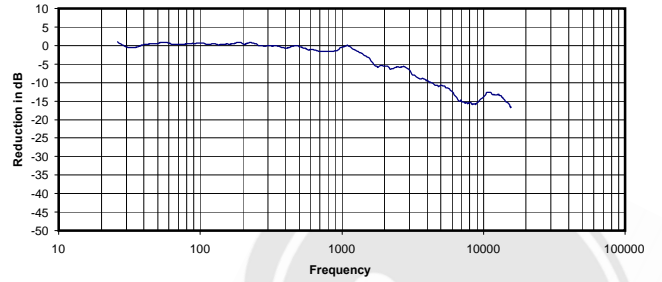
0.346 Vrms
665 Ohms
0.18 mW
-3 dBr



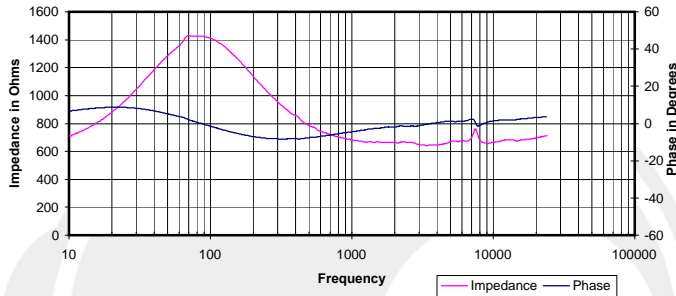
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



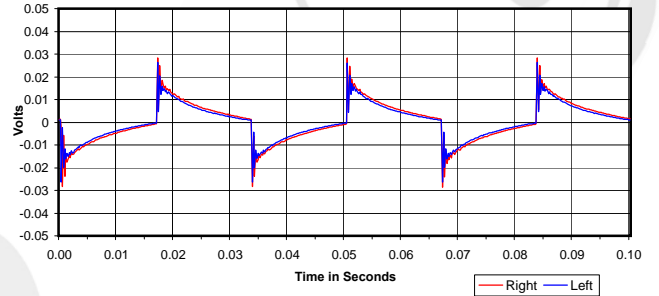
Isolation
 Attenuation of External Sound vs. Frequency



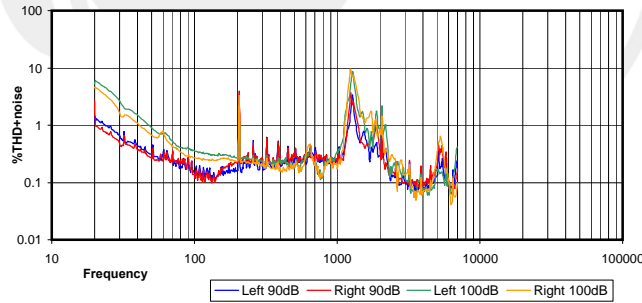
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



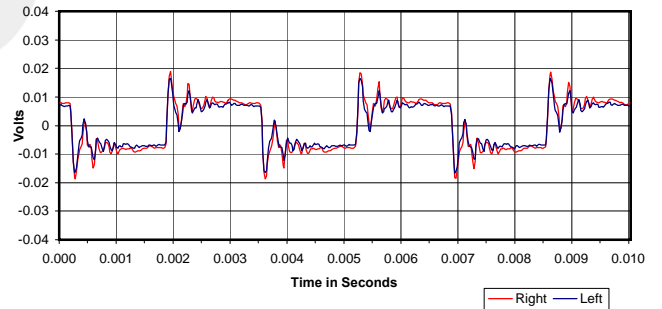
30 Hz Square Wave



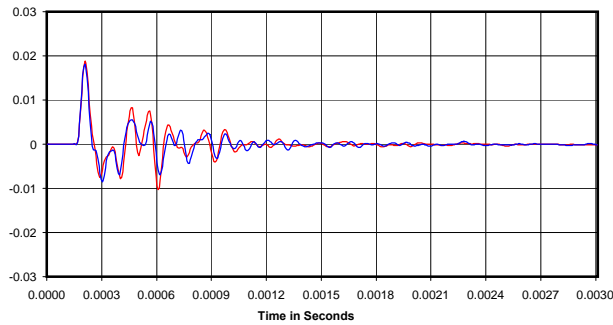
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

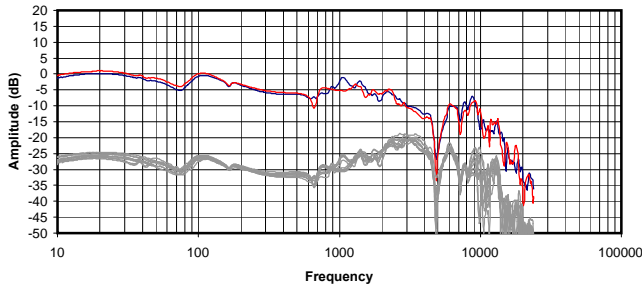


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

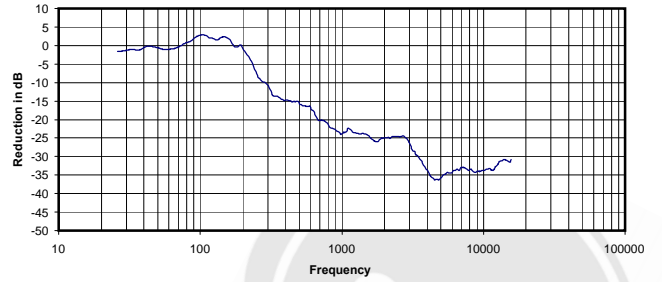
0.436 Vrms
 683 Ohms
 0.28 mW
 -3 dBr



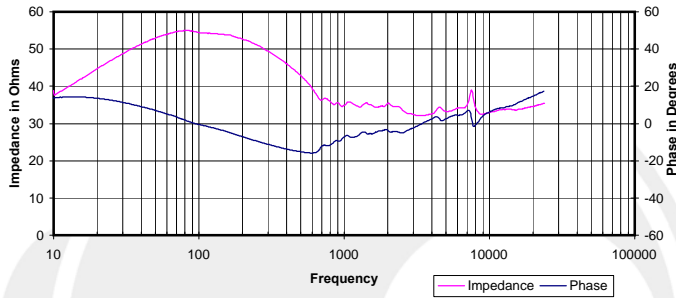
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



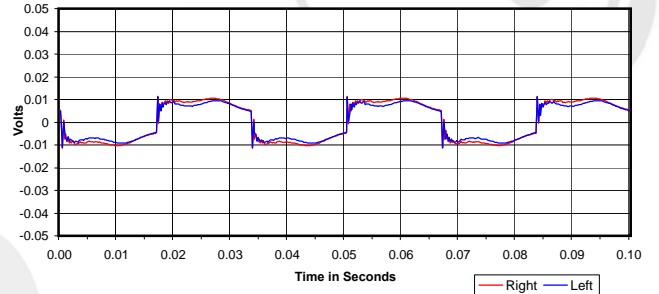
Isolation
 Attenuation of External Sound vs. Frequency



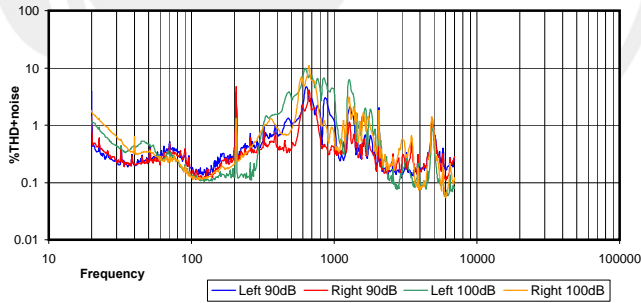
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



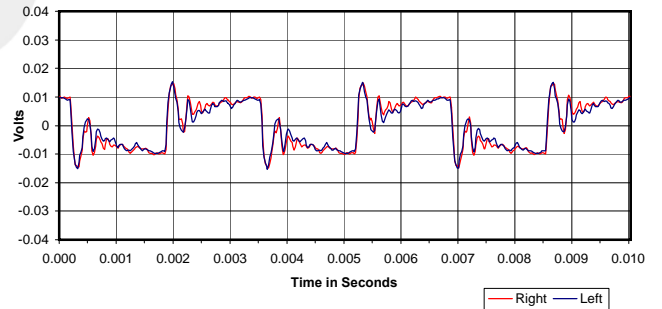
30 Hz Square Wave



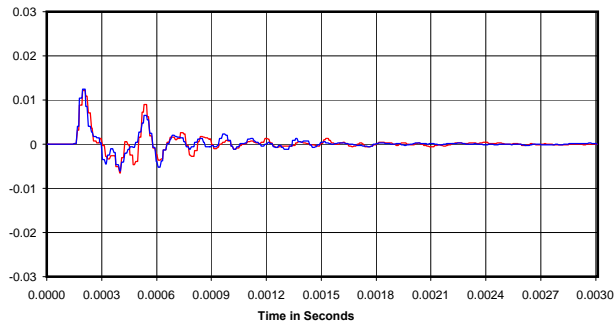
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

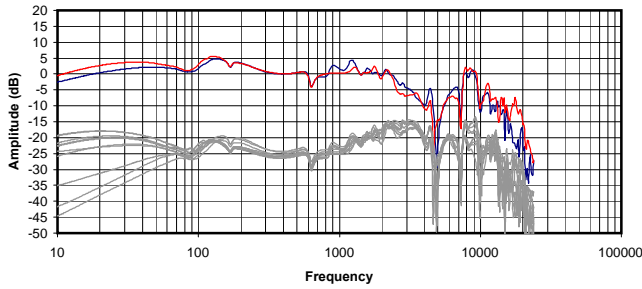


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

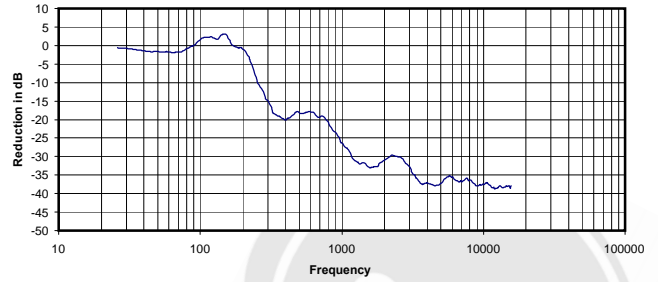
0.049 Vrms
 35 Ohms
 0.07 mW
 -17 dB



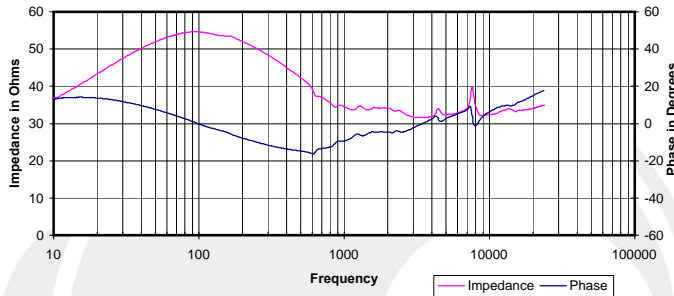
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



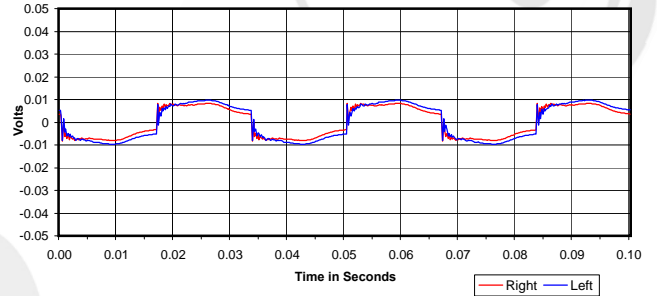
Isolation
 Attenuation of External Sound vs. Frequency



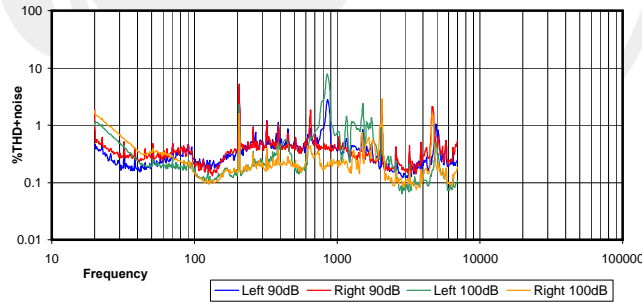
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



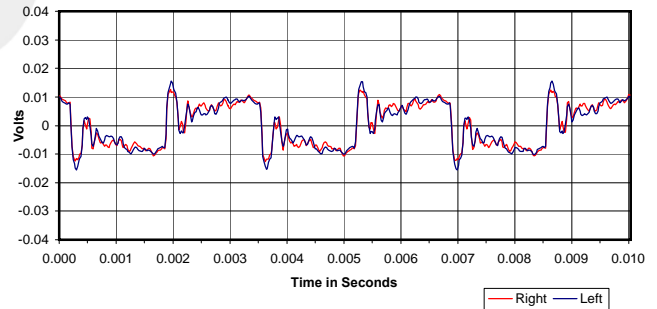
30 Hz Square Wave



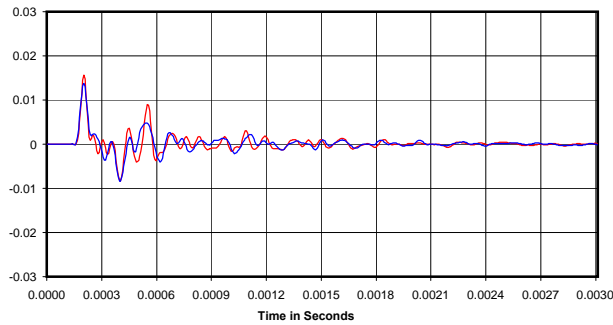
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



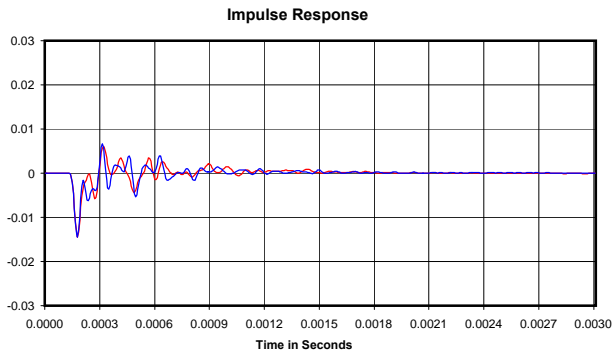
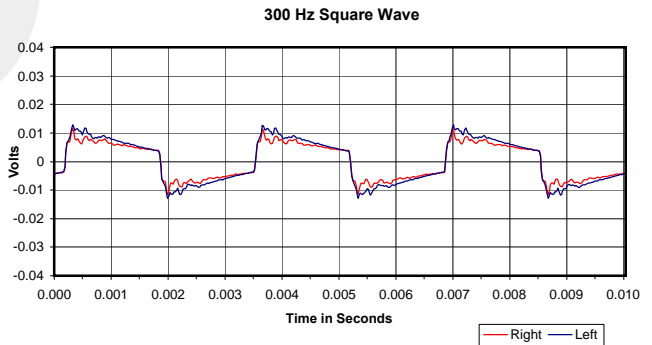
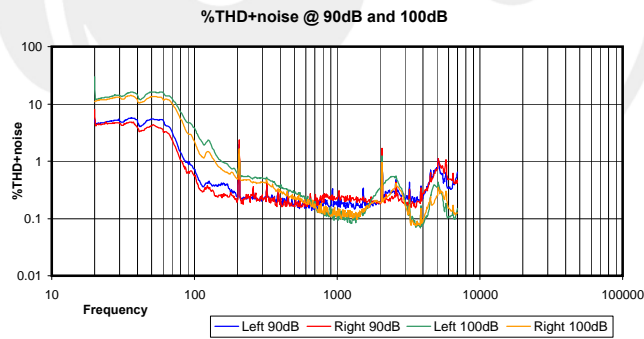
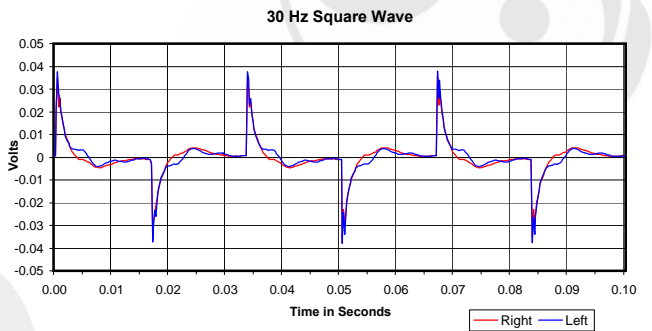
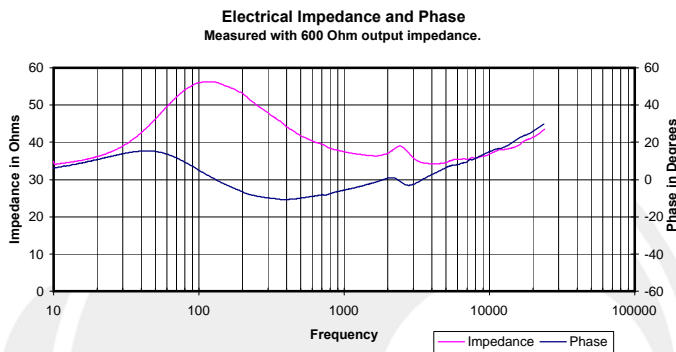
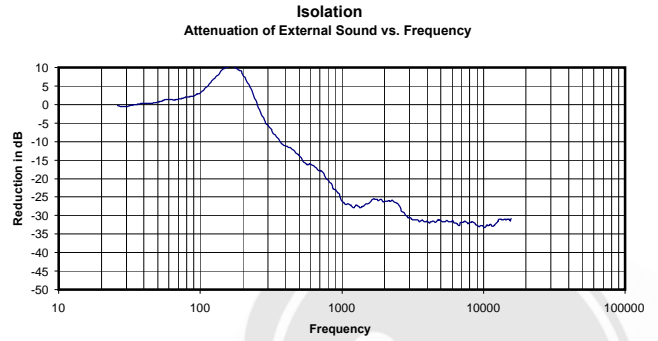
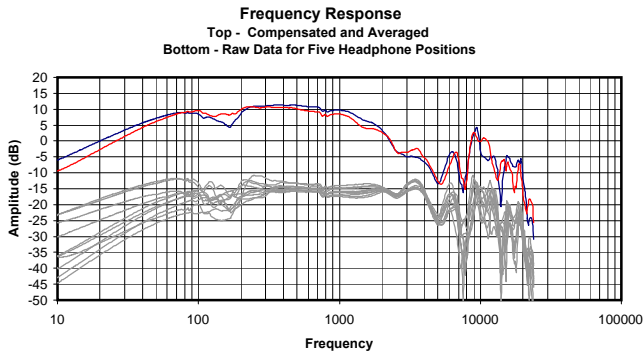
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
 34 Ohms
 0.09 mW
 -20 dB



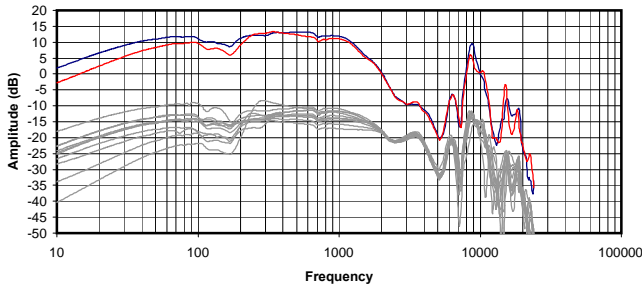


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

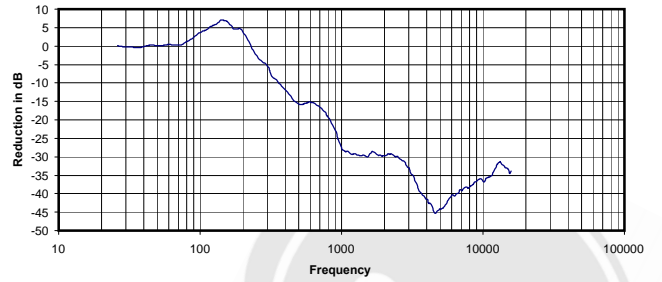
0.020 Vrms
37 Ohms
0.01 mW
-15 dB



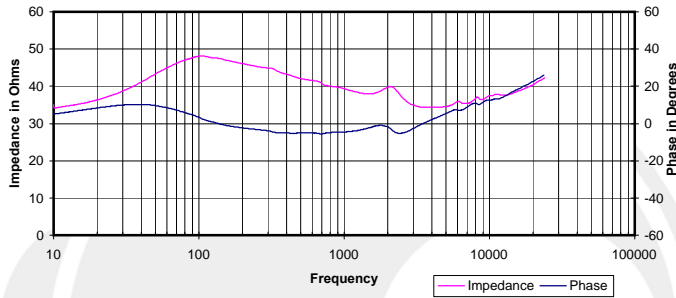
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



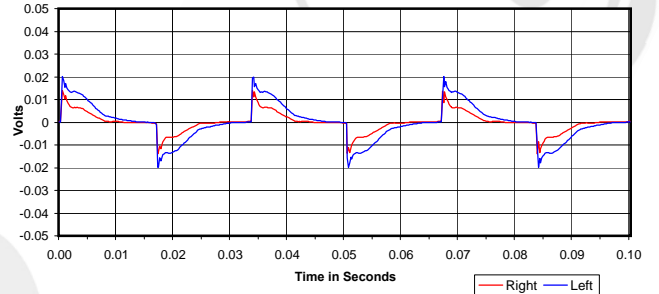
Isolation
Attenuation of External Sound vs. Frequency



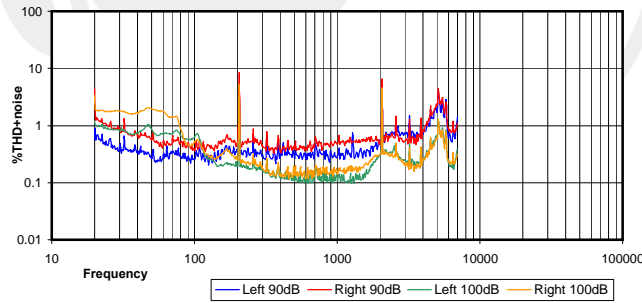
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



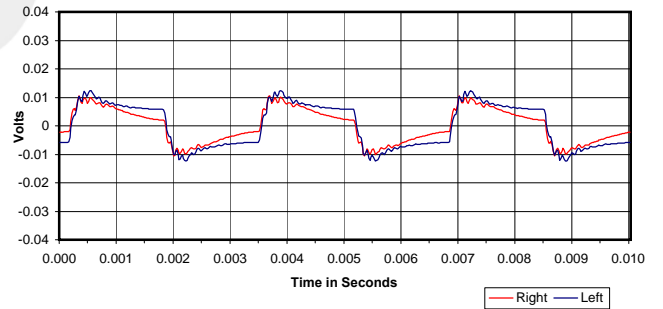
30 Hz Square Wave



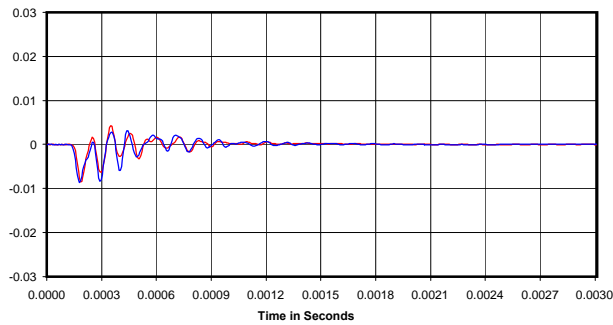
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

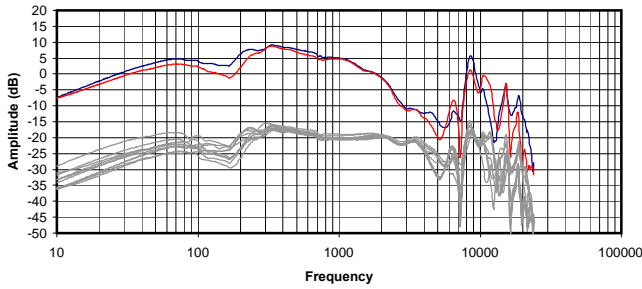


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

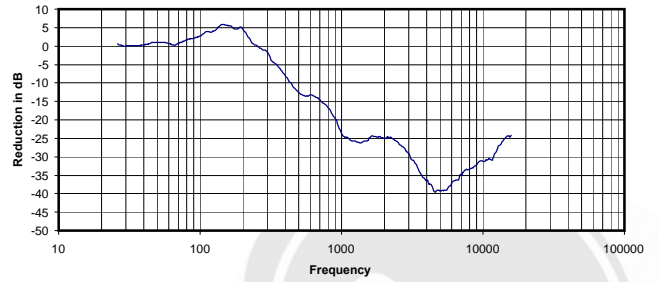
0.013 Vrms
39 Ohms
0.00 mW
-18 dB



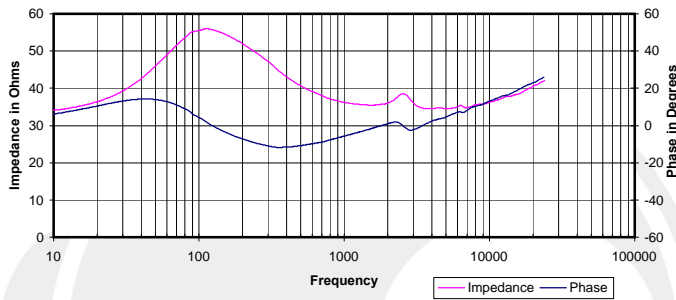
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



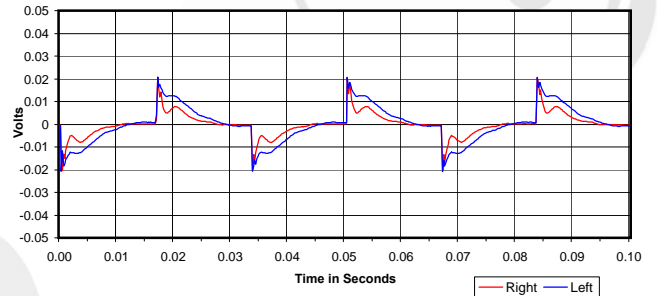
Isolation
 Attenuation of External Sound vs. Frequency



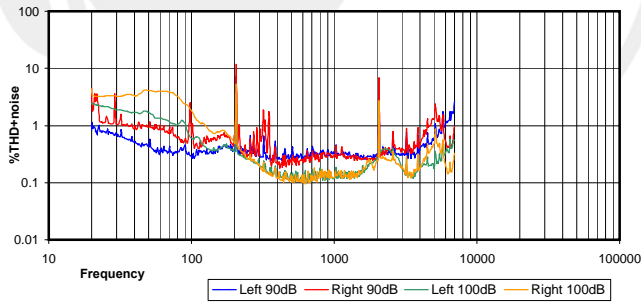
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



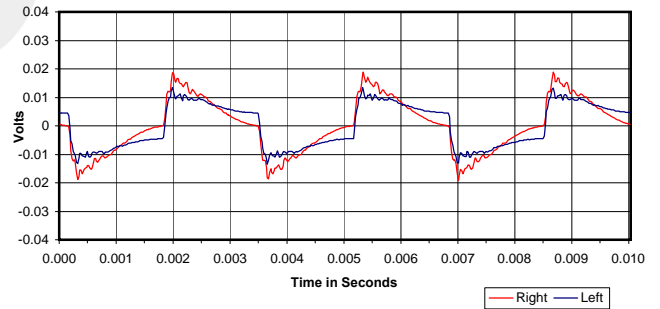
30 Hz Square Wave



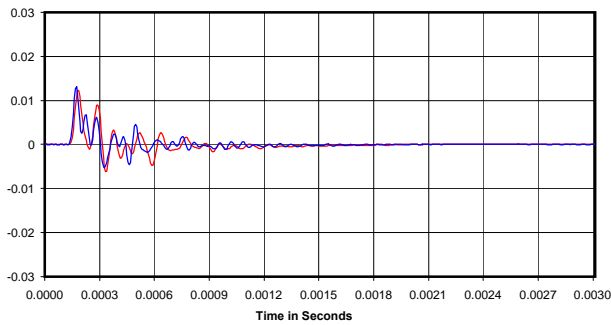
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

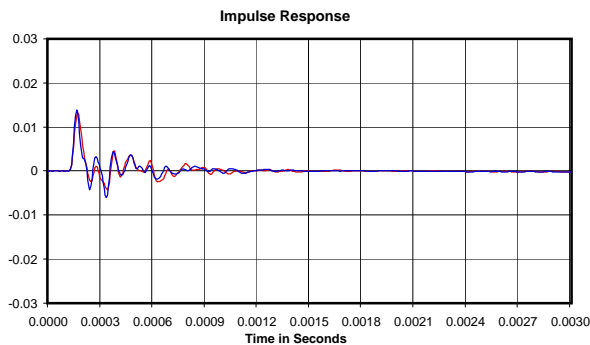
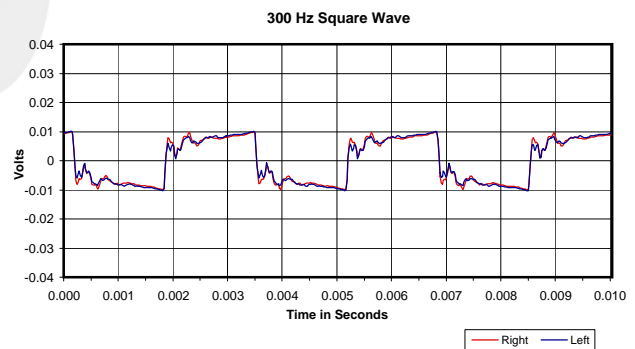
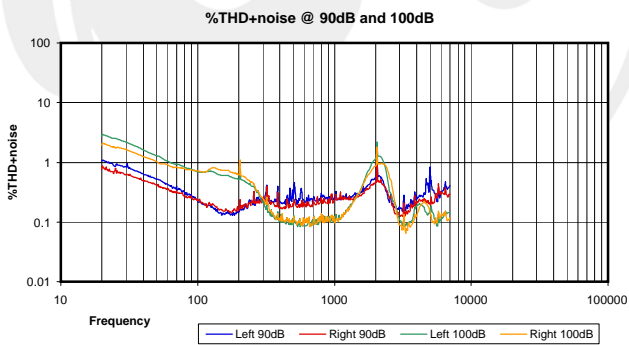
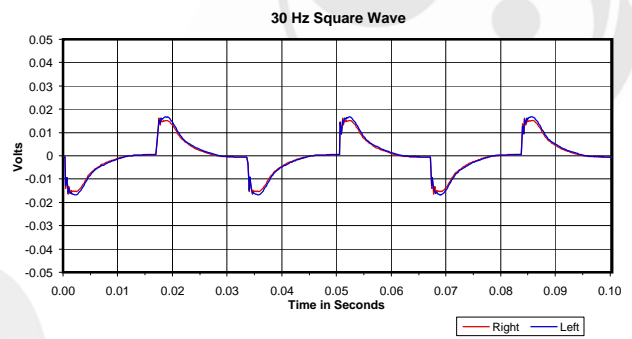
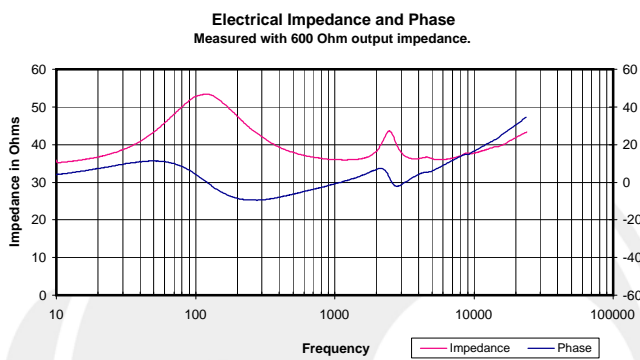
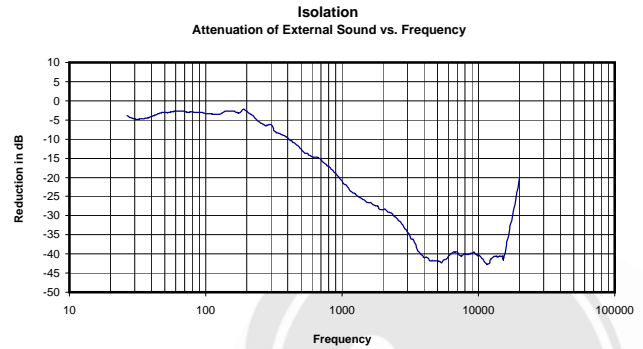
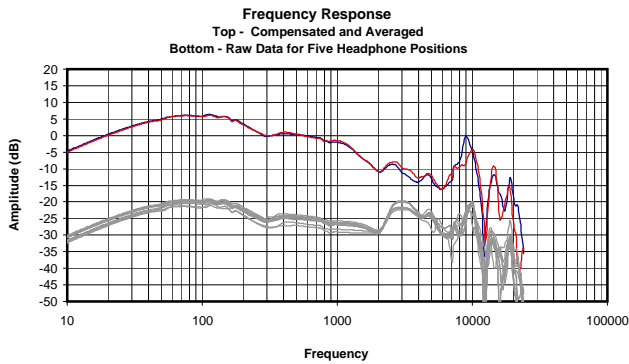


Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.025 Vrms
 36 Ohms
 0.02 mW
 -16 dB

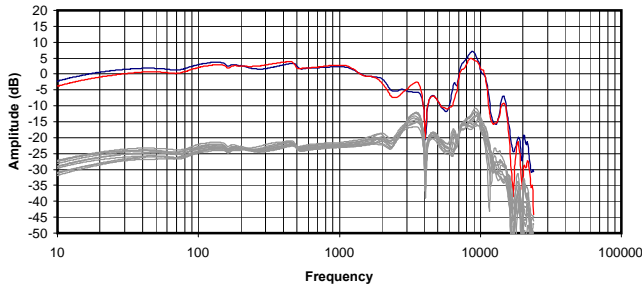


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

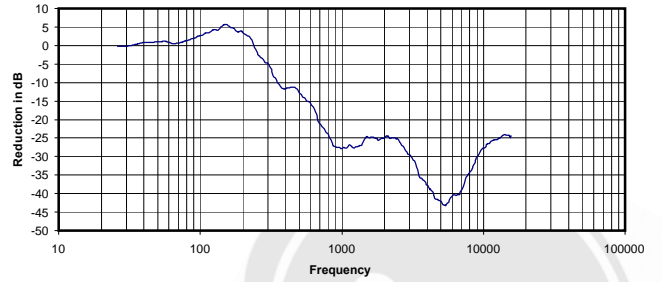
0.035 Vrms
36 Ohms
0.03 mW
-22 dB



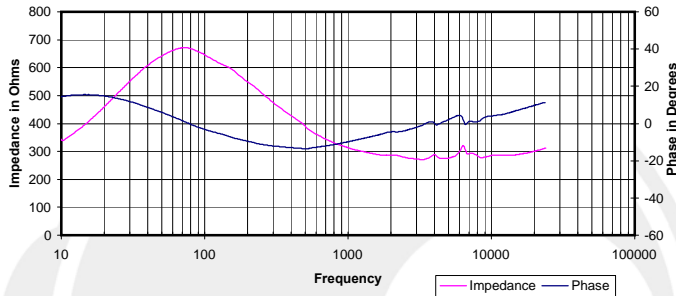
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



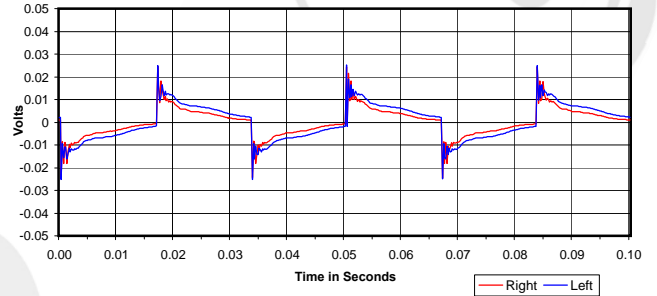
Isolation
Attenuation of External Sound vs. Frequency



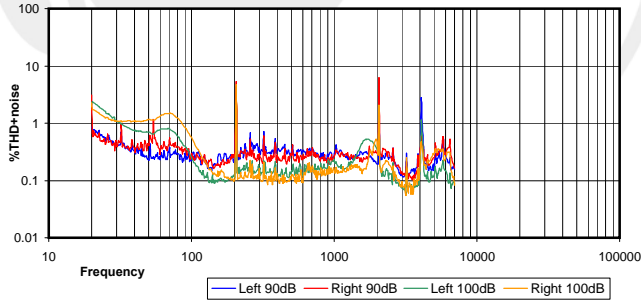
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



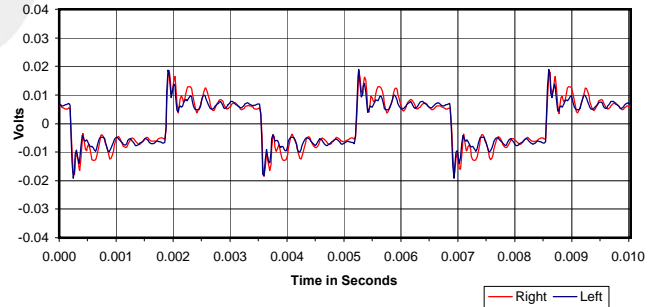
30 Hz Square Wave



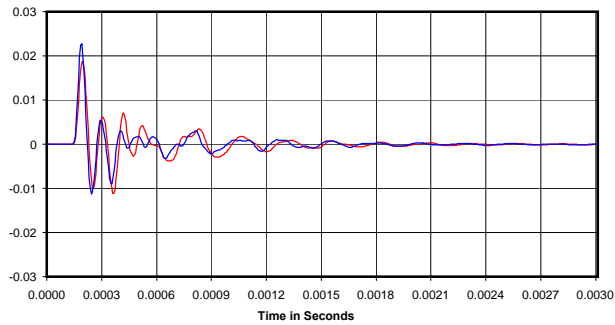
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

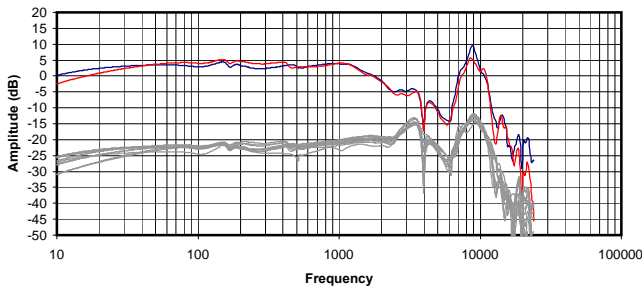


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

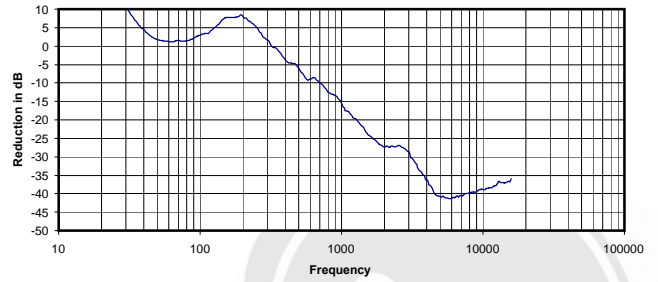
0.099 Vrms
313 Ohms
0.03 mW
-18 dB



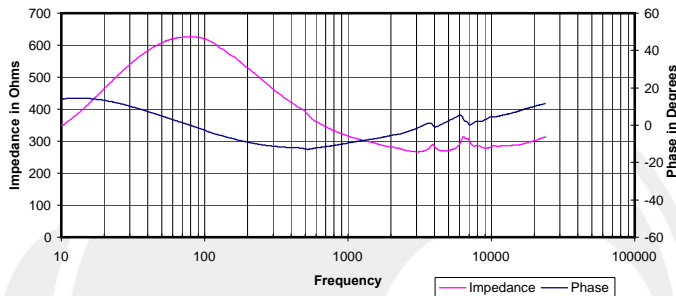
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



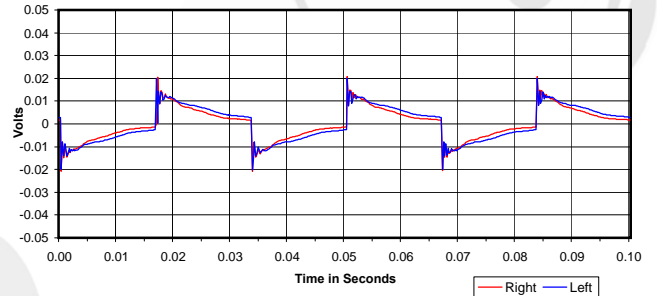
Isolation
Attenuation of External Sound vs. Frequency



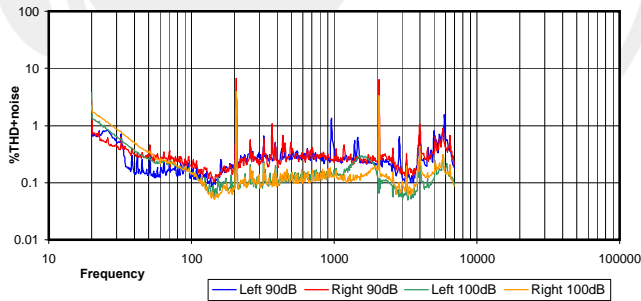
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



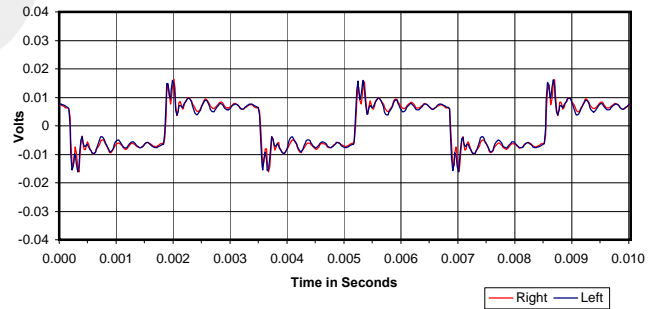
30 Hz Square Wave



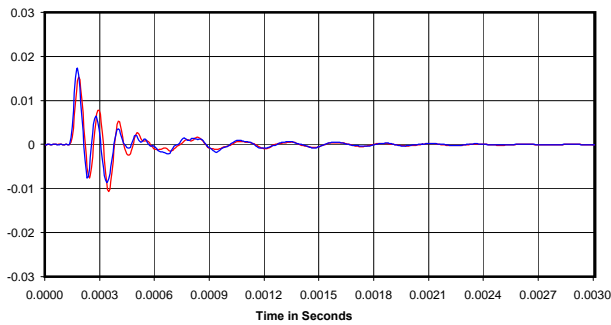
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



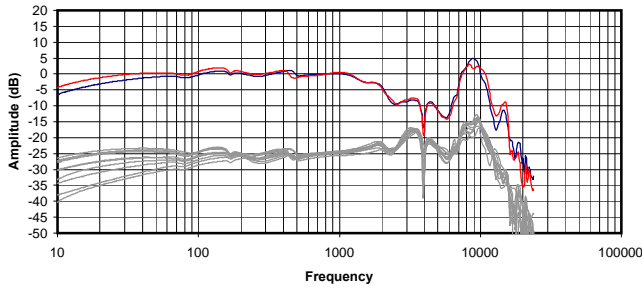
Impulse Response



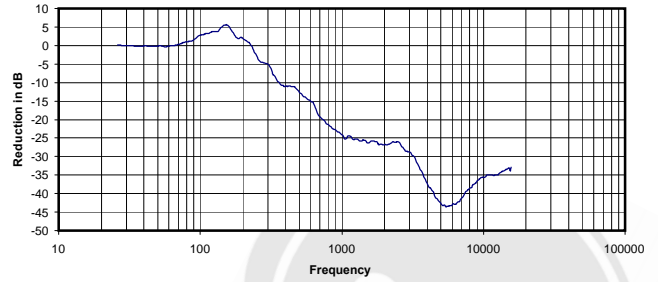
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.073 Vrms
316 Ohms
0.02 mW
-13 dB

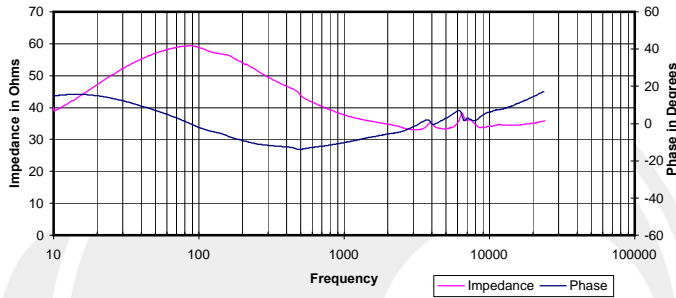
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



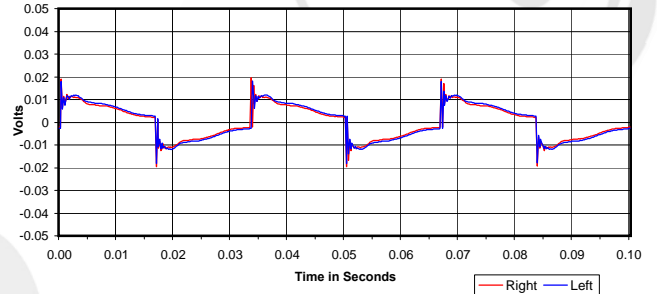
Isolation
 Attenuation of External Sound vs. Frequency



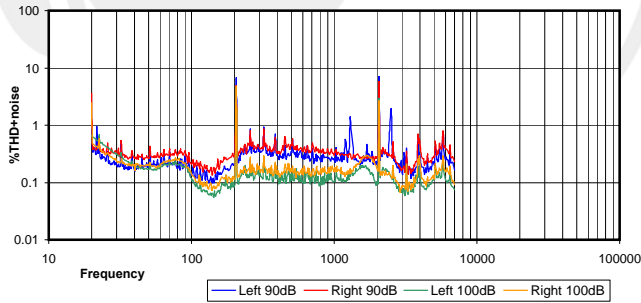
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



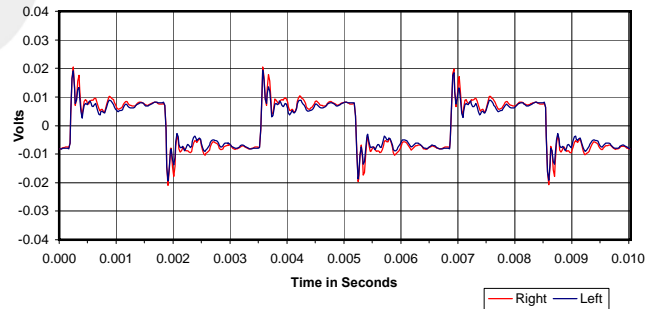
30 Hz Square Wave



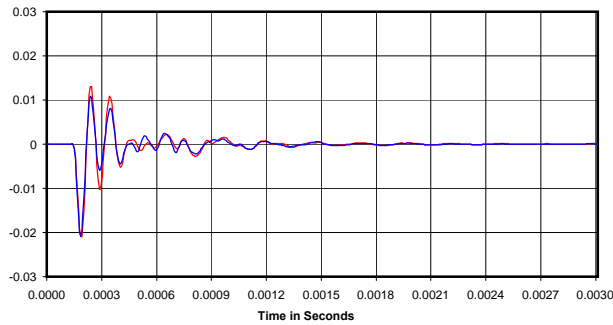
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

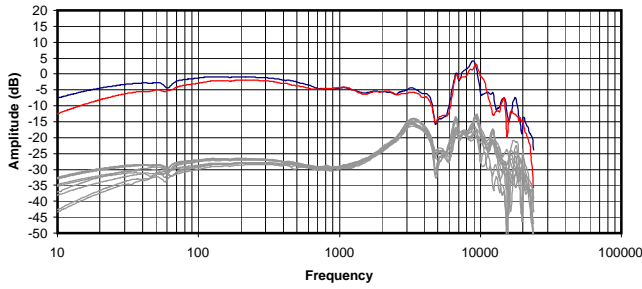


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

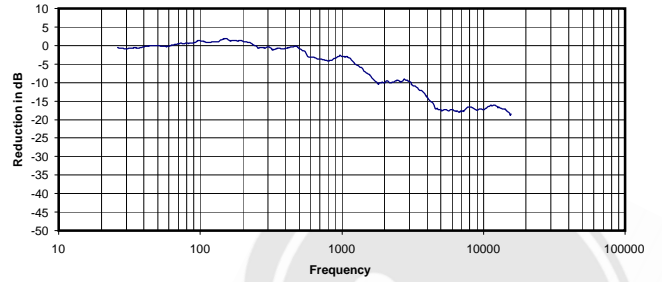
0.033 Vrms
 38 Ohms
 0.03 mW
 -17 dB



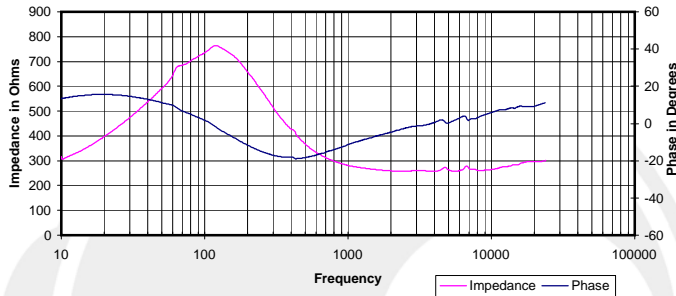
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



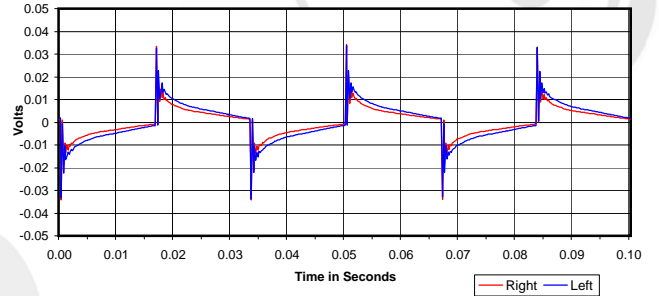
Isolation
 Attenuation of External Sound vs. Frequency



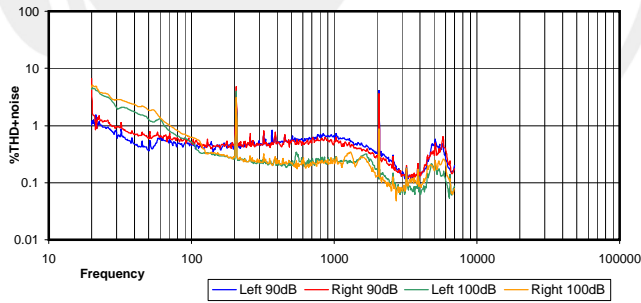
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



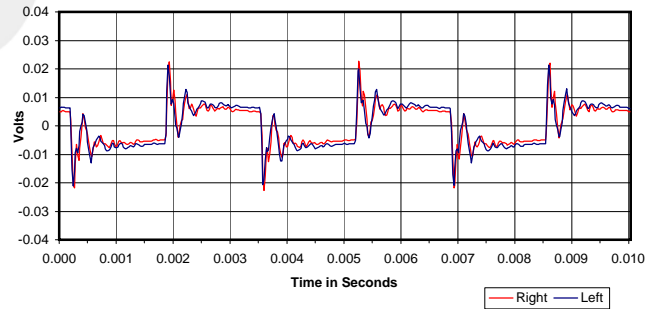
30 Hz Square Wave



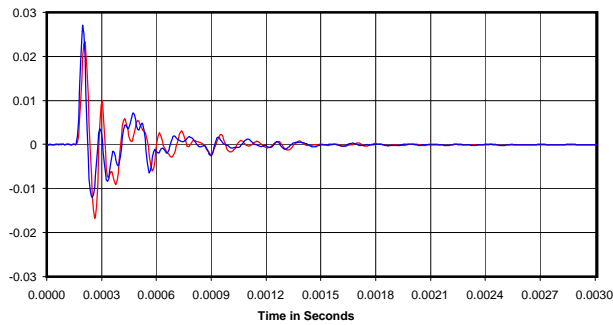
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

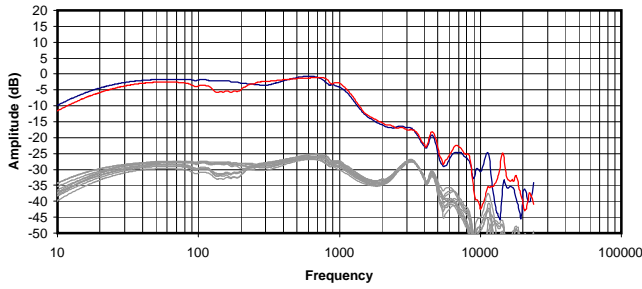


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

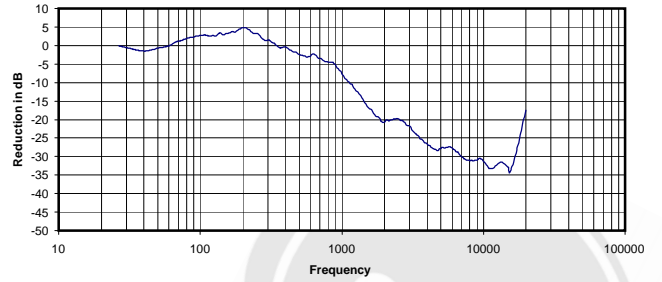
0.225 Vrms
 281 Ohms
 0.18 mW
 -5 dBr



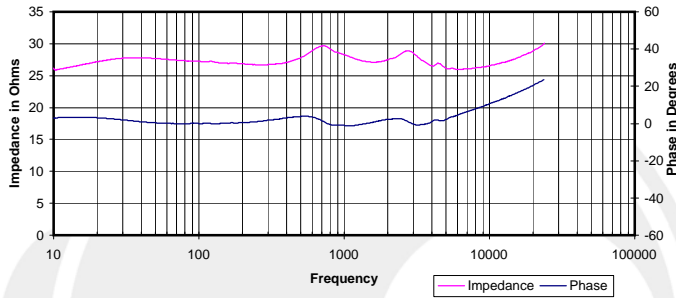
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



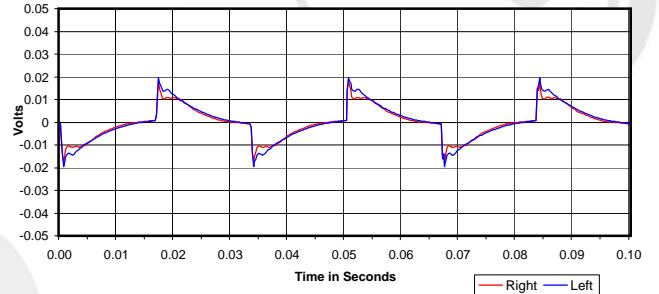
Isolation
 Attenuation of External Sound vs. Frequency



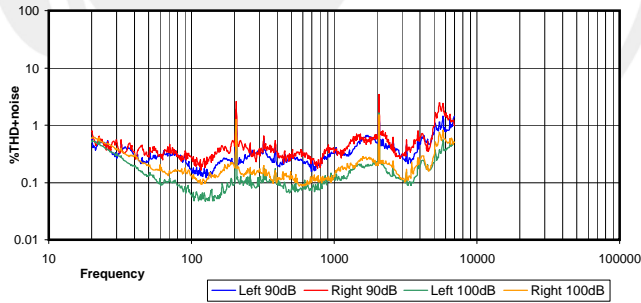
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



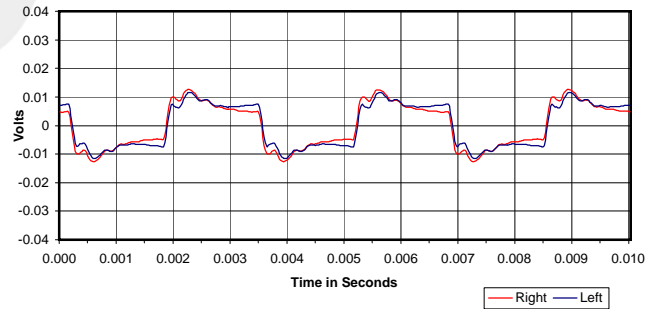
30 Hz Square Wave



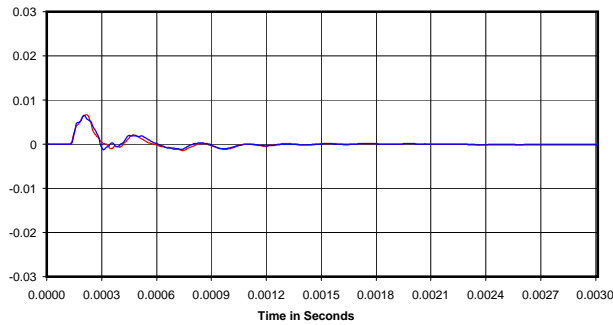
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



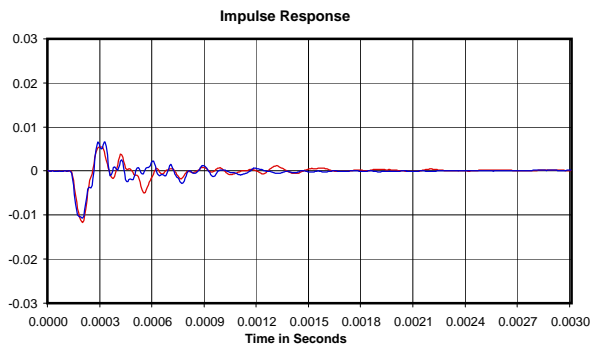
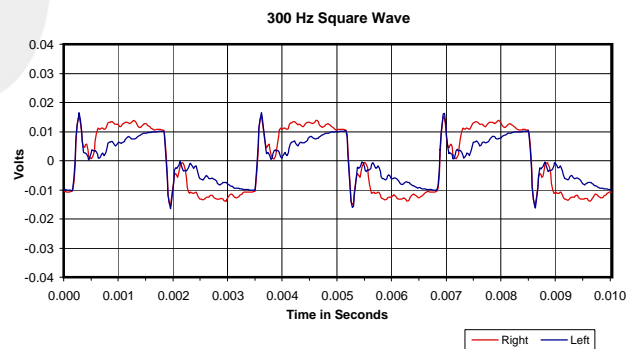
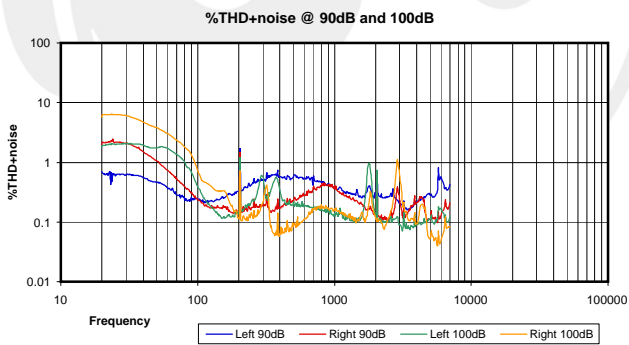
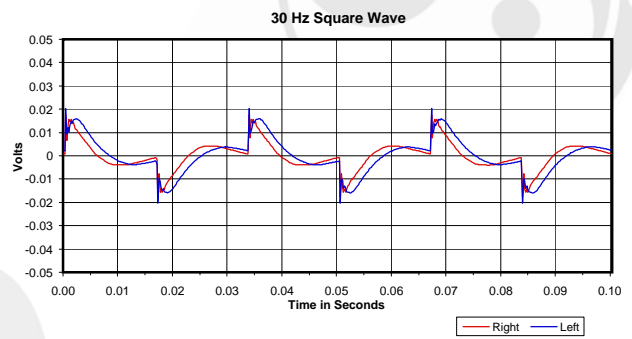
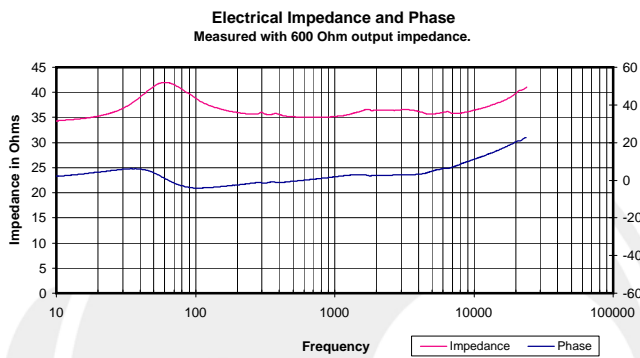
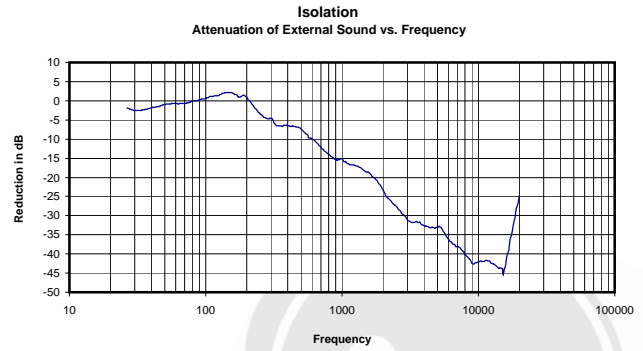
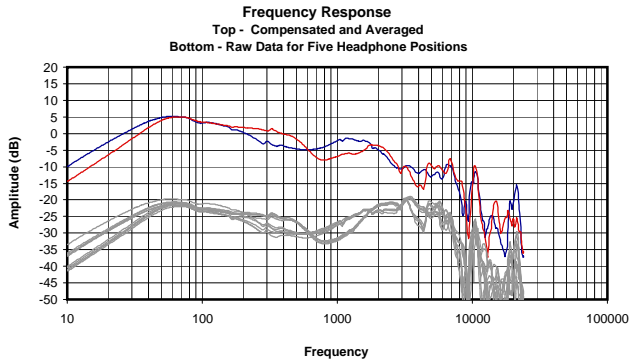
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.012 Vrms
 28 Ohms
 0.01 mW
 -11 dB

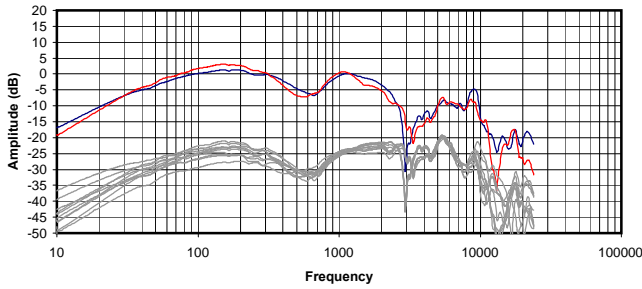




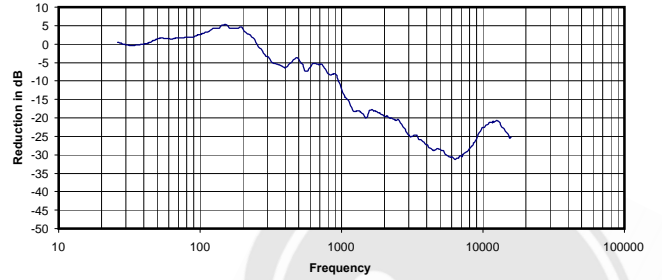
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
35 Ohms
0.04 mW
-17 dB

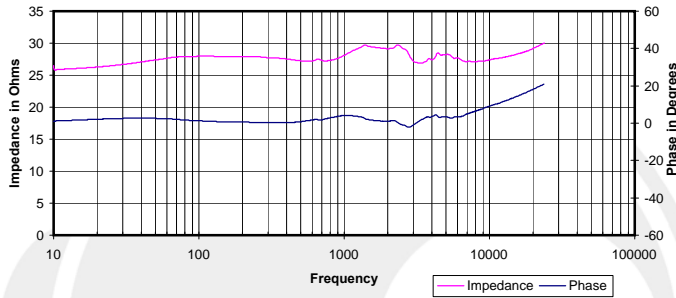
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



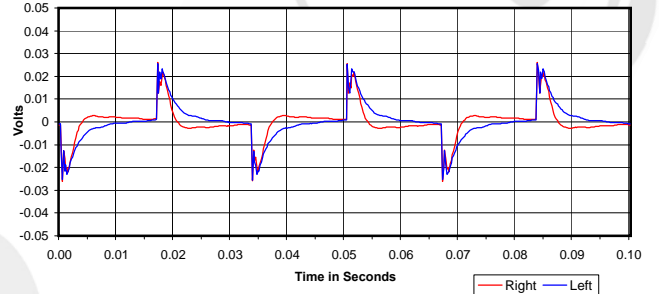
Isolation
Attenuation of External Sound vs. Frequency



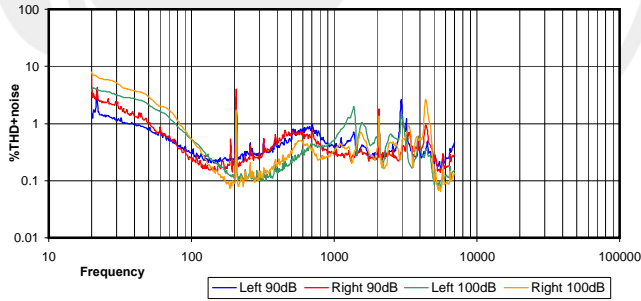
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



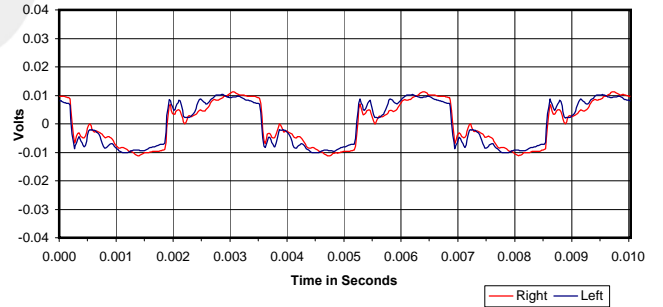
30 Hz Square Wave



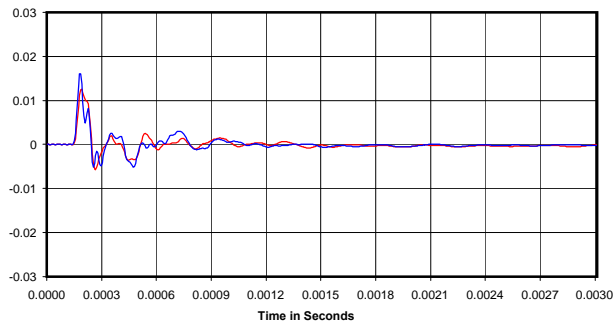
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

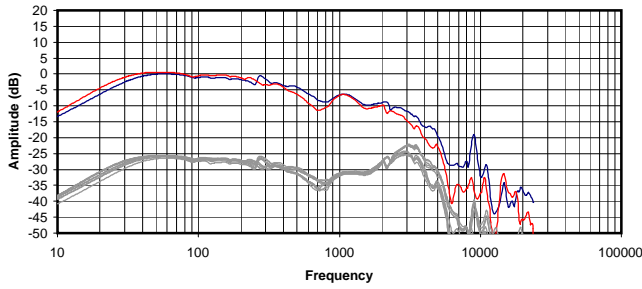


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

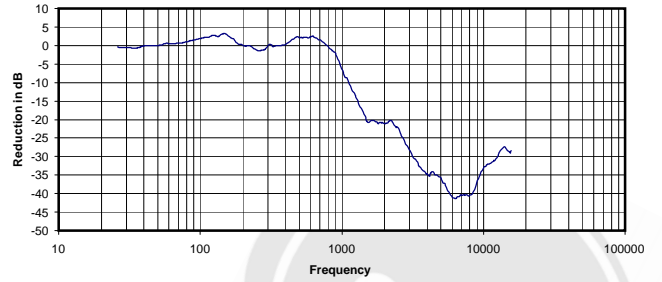
0.043 Vrms
28 Ohms
0.07 mW
-11 dB



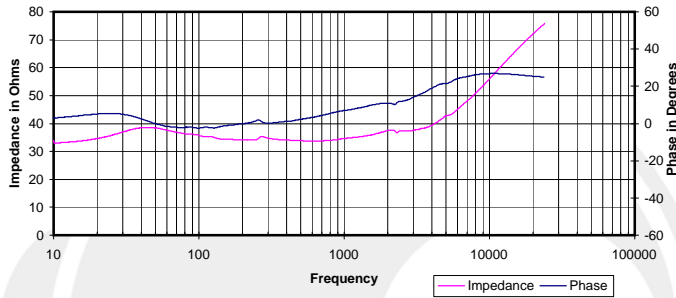
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



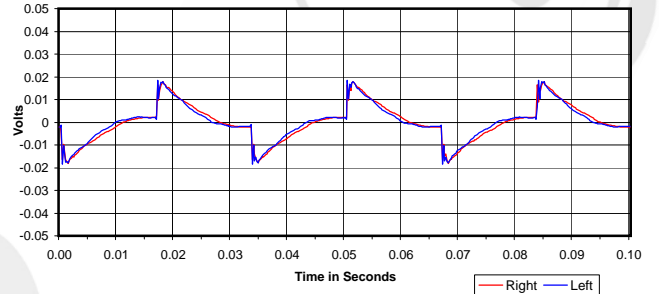
Isolation
Attenuation of External Sound vs. Frequency



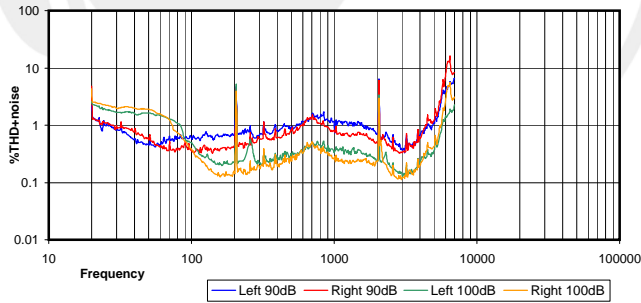
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



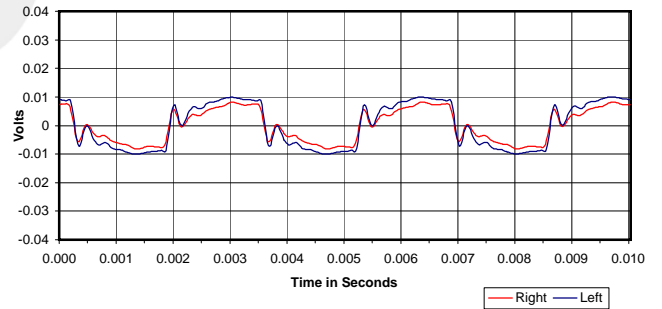
30 Hz Square Wave



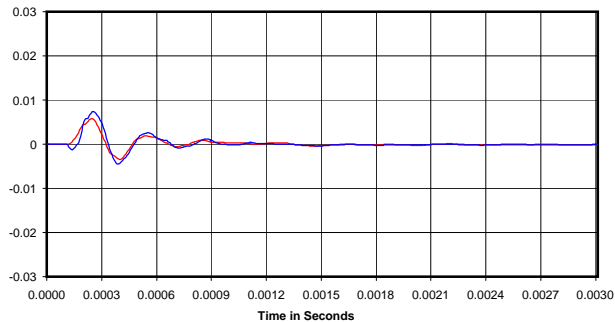
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

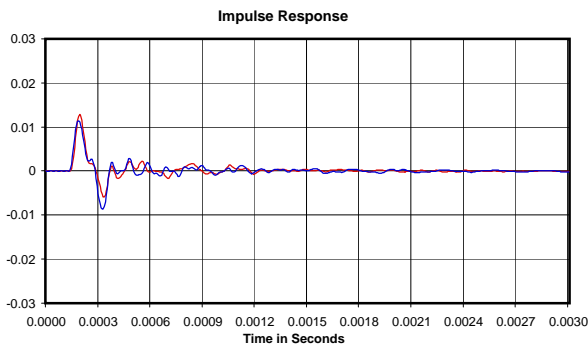
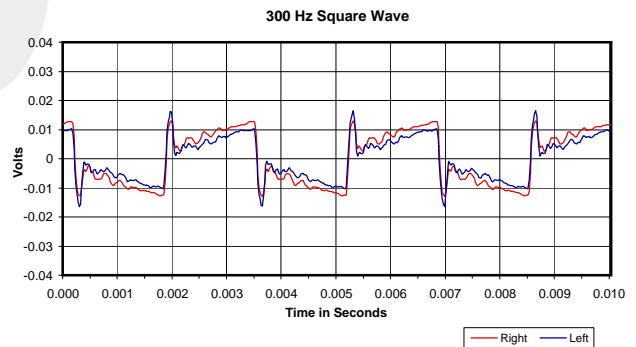
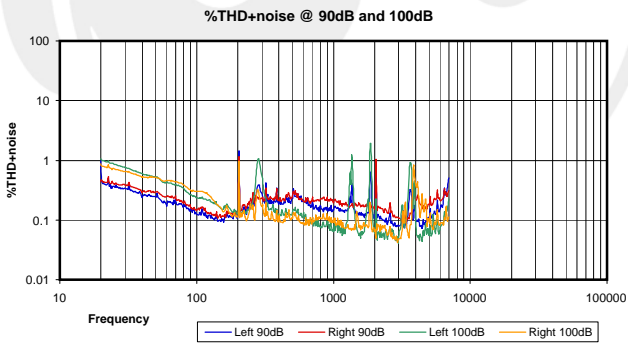
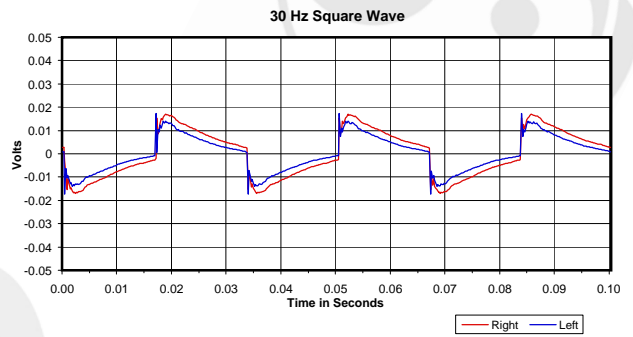
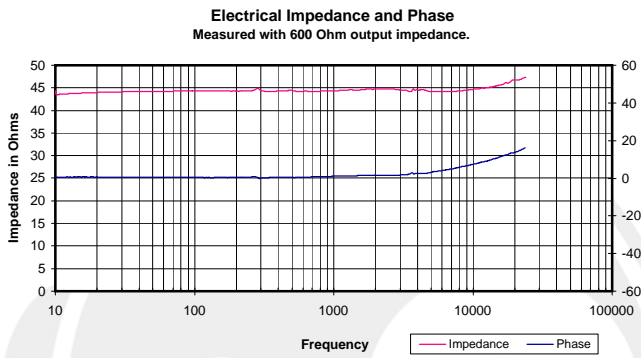
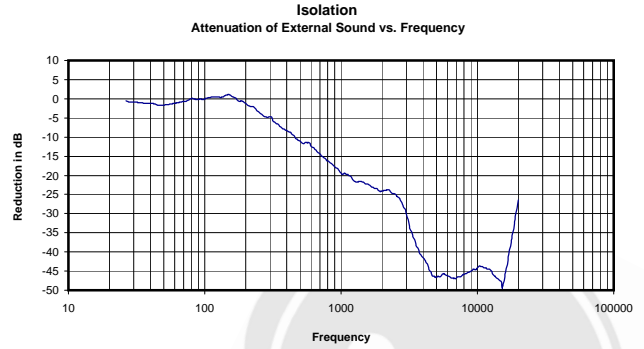
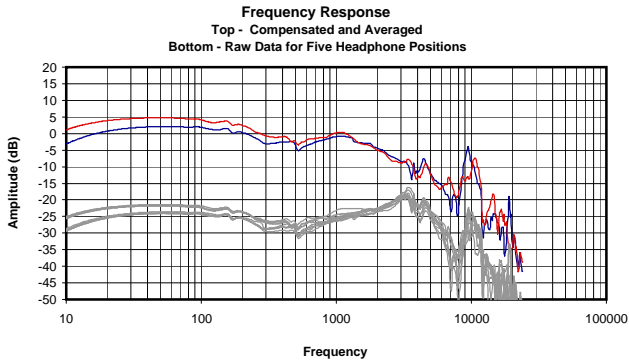


Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

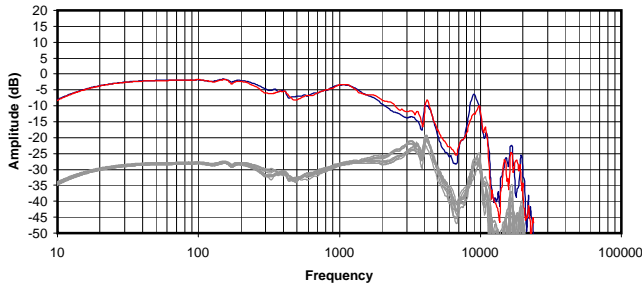
0.029 Vrms
35 Ohms
0.02 mW
-11 dB



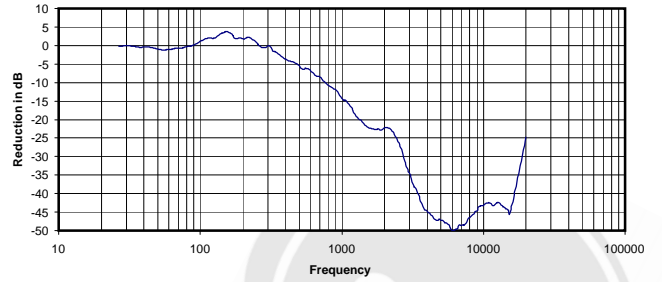
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.058 Vrms
44 Ohms
0.07 mW
-20 dBr

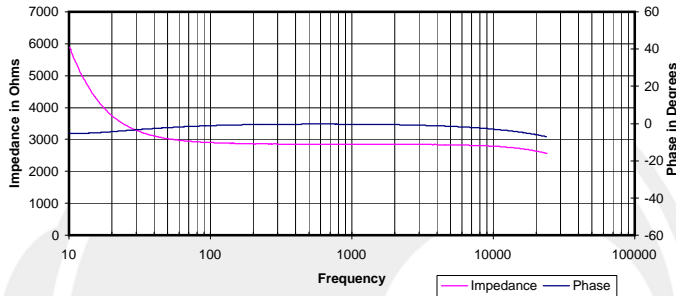
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



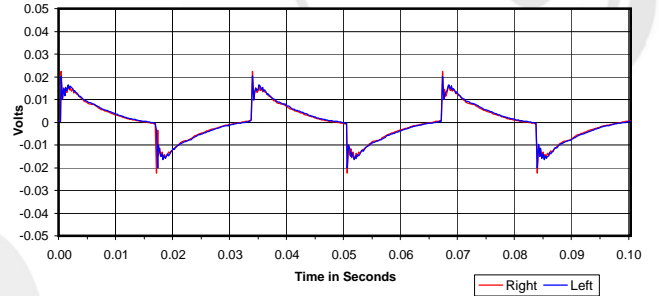
Isolation
Attenuation of External Sound vs. Frequency



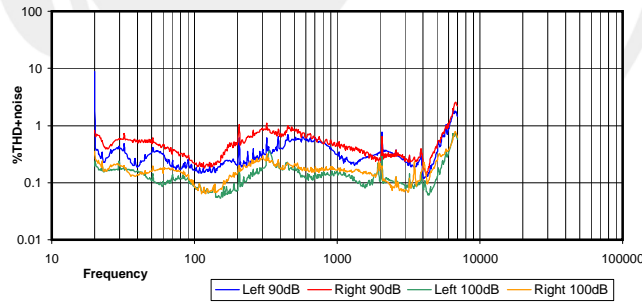
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



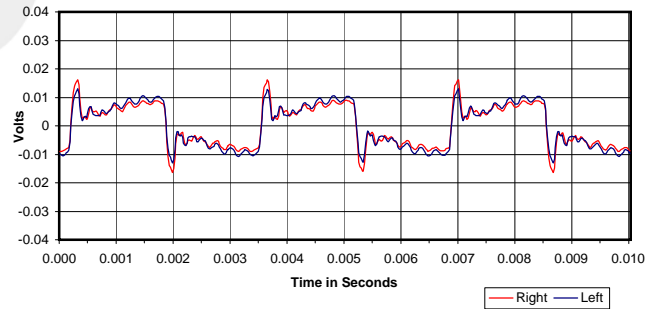
30 Hz Square Wave



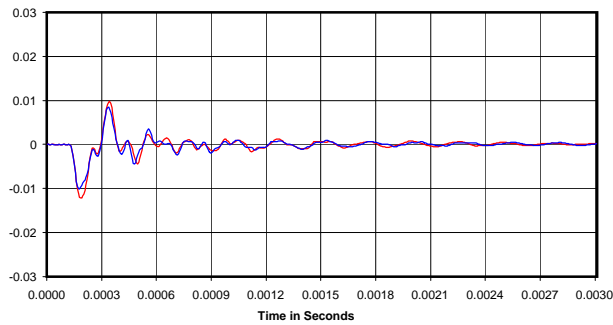
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

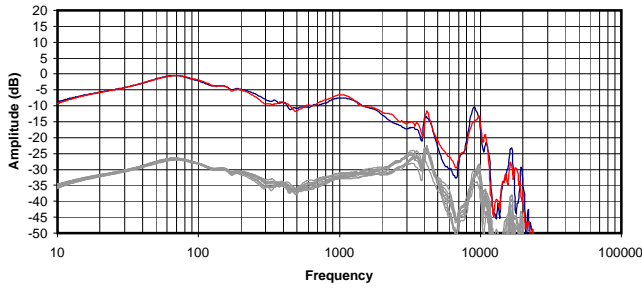


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

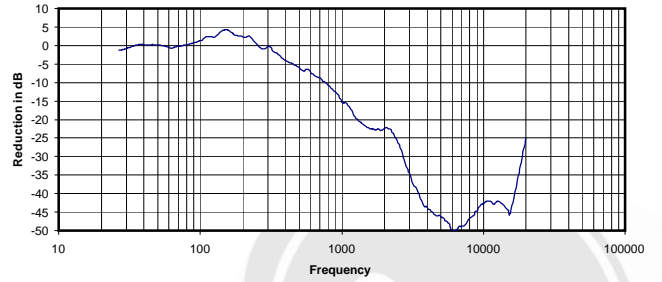
0.010 Vrms
2847 Ohms
0.00 mW
-19 dB



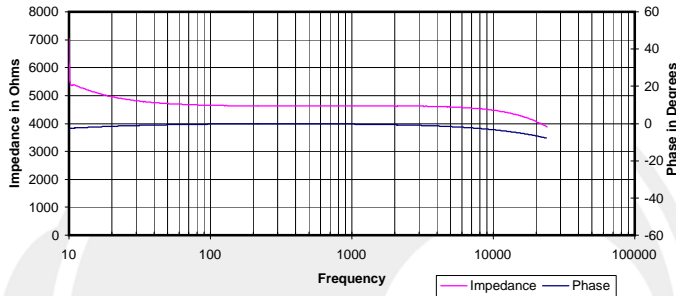
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



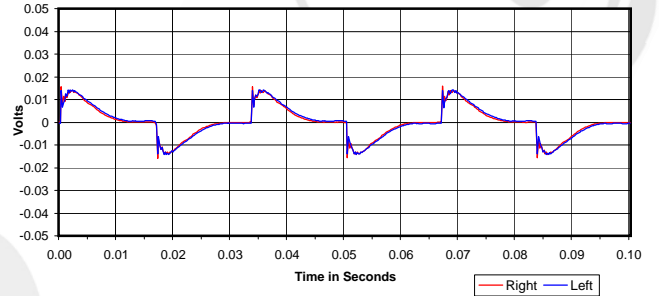
Isolation
 Attenuation of External Sound vs. Frequency



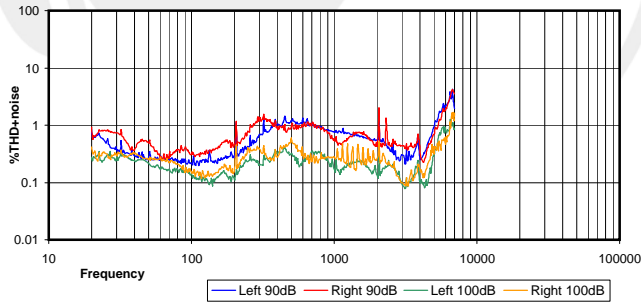
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



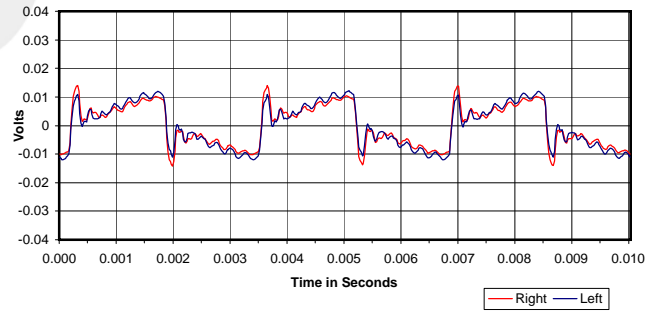
30 Hz Square Wave



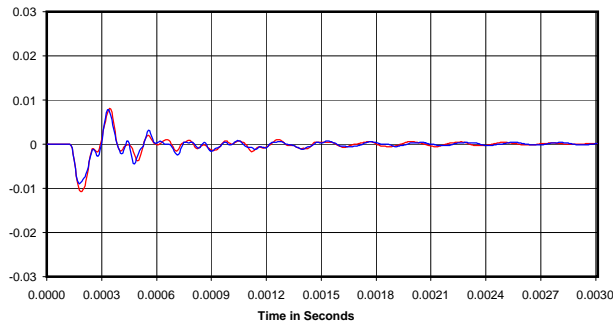
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

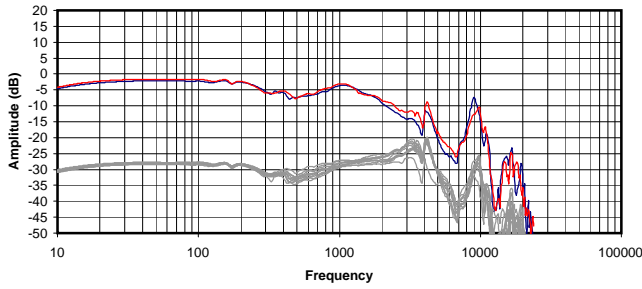


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

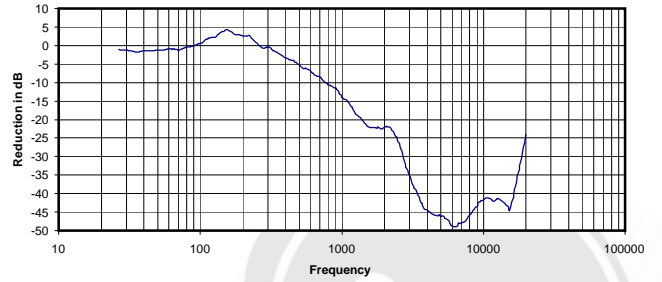
0.010 Vrms
 4633 Ohms
 0.00 mW
 -19 dB



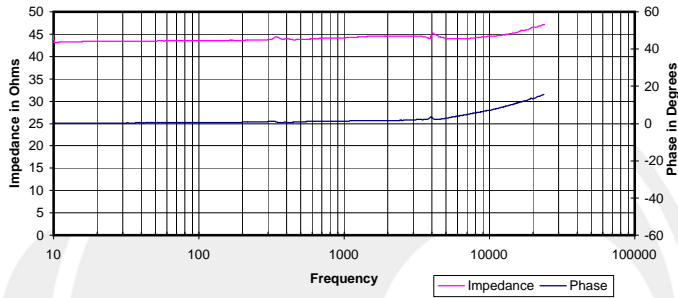
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



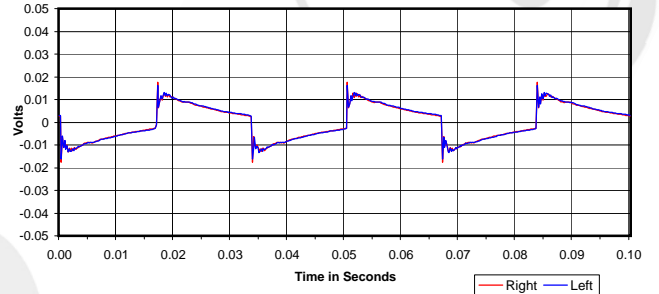
Isolation
Attenuation of External Sound vs. Frequency



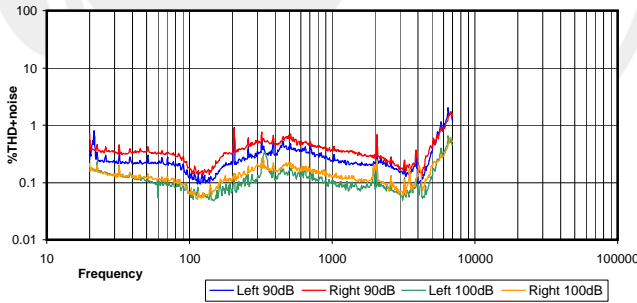
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



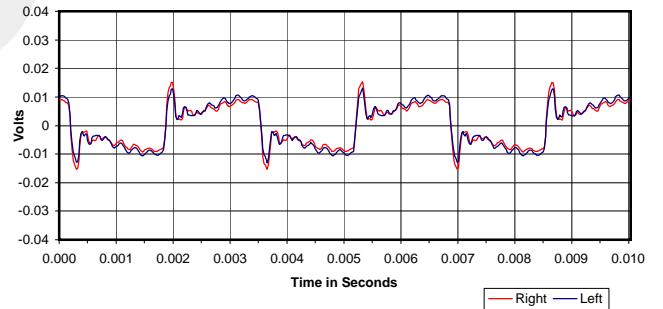
30 Hz Square Wave



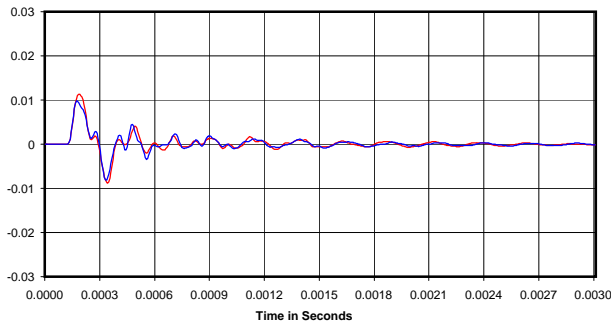
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

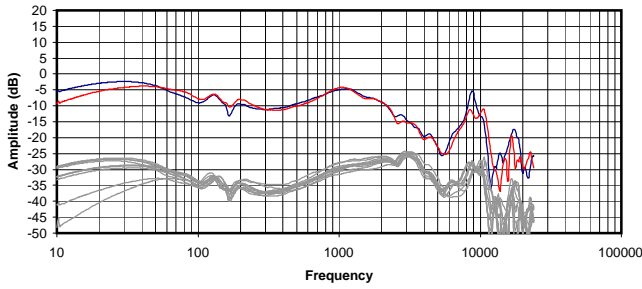


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

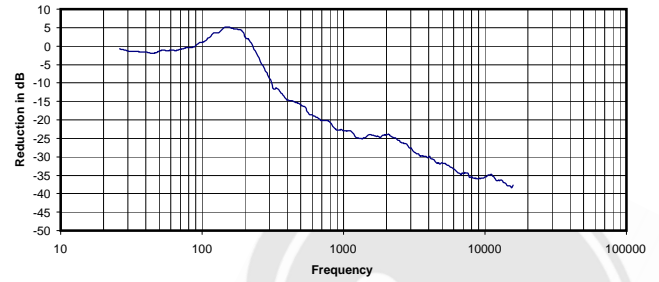
0.037 Vrms
44 Ohms
0.03 mW
-18 dB



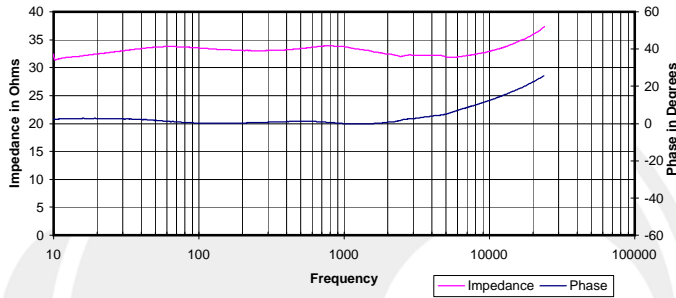
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



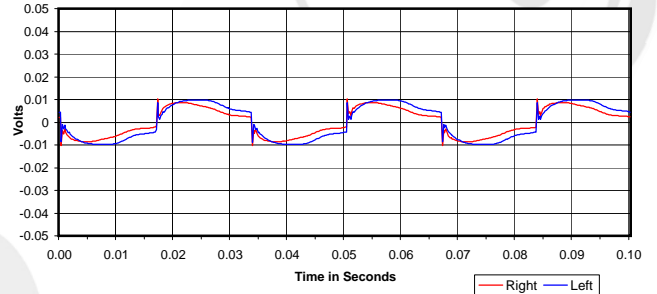
Isolation
Attenuation of External Sound vs. Frequency



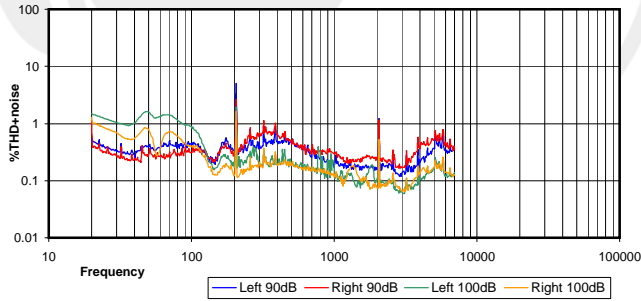
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



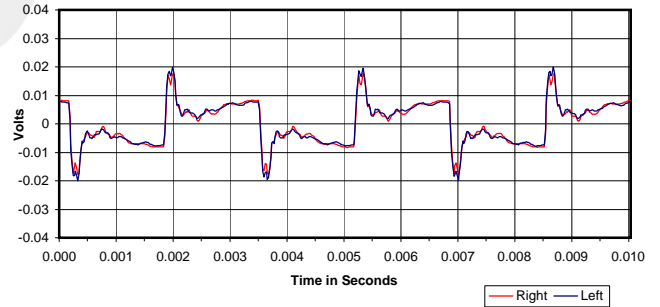
30 Hz Square Wave



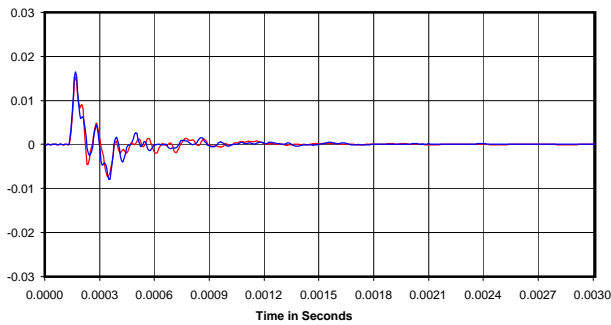
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



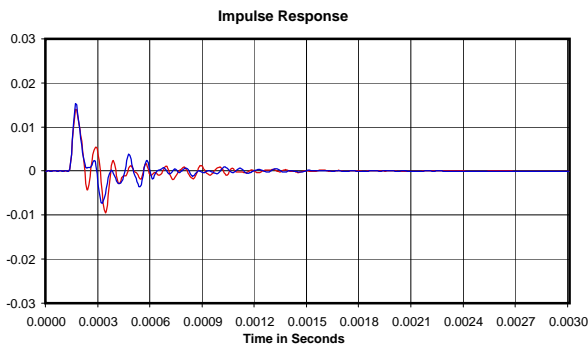
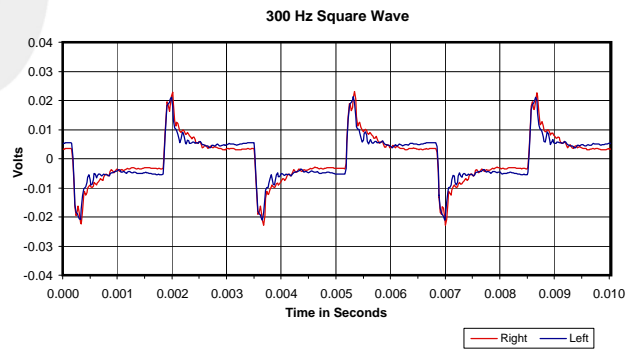
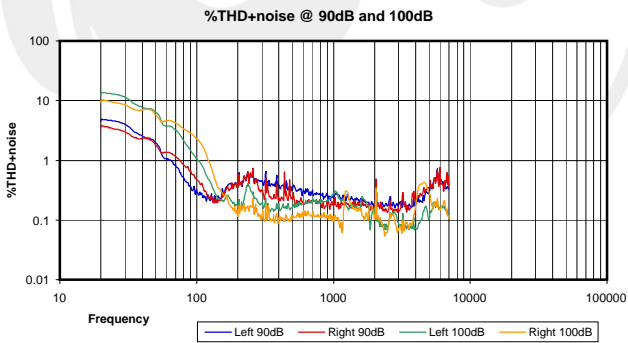
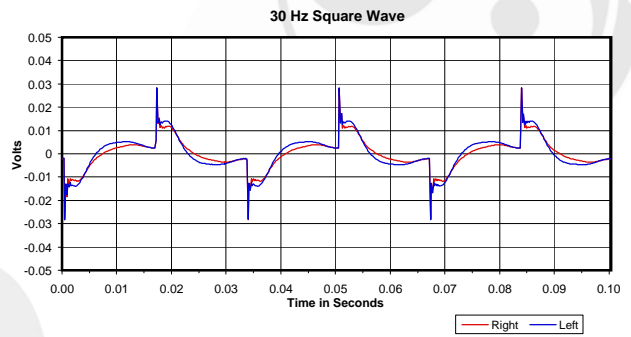
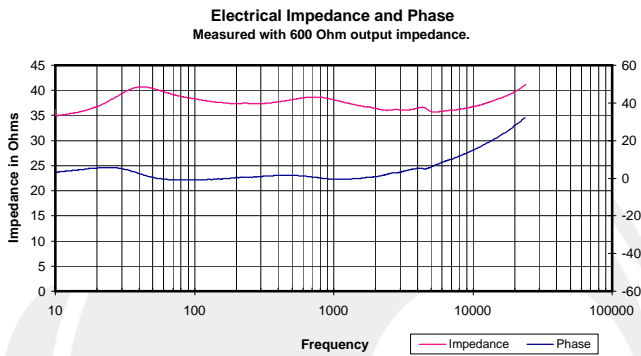
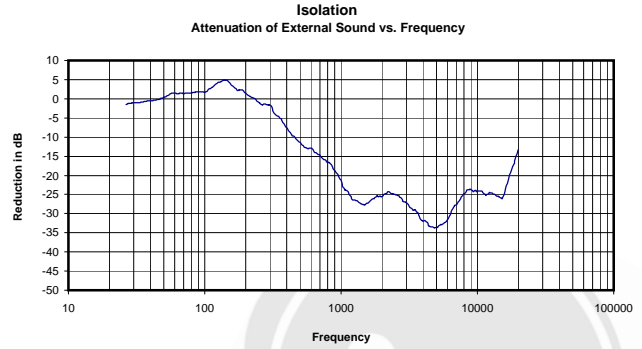
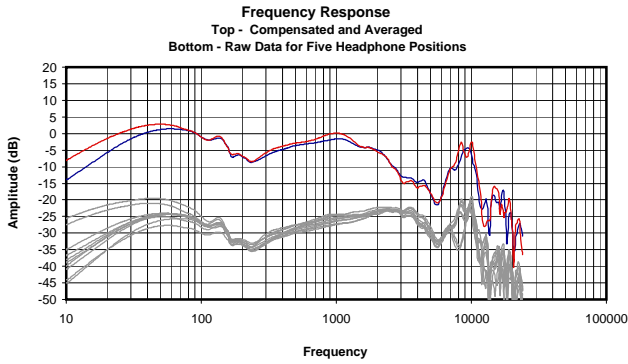
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.044 Vrms
34 Ohms
0.06 mW
-16 dB



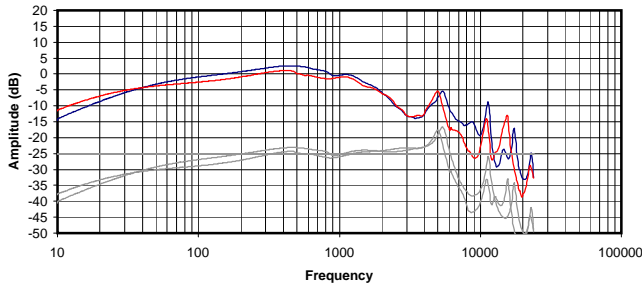


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

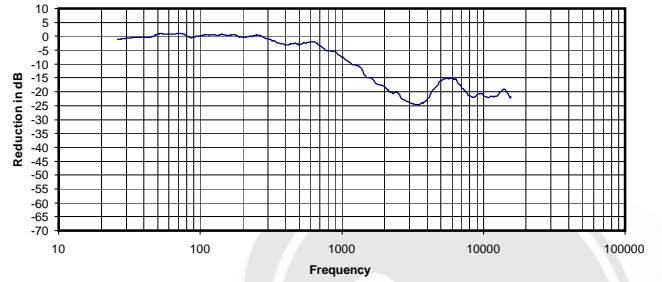
0.045 Vrms
38 Ohms
0.05 mW
-16 dBr



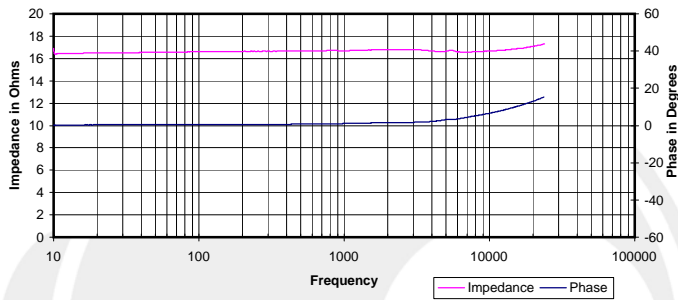
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



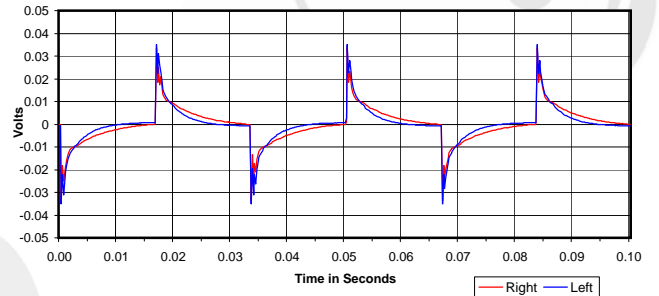
Isolation
Attenuation of External Sound vs. Frequency



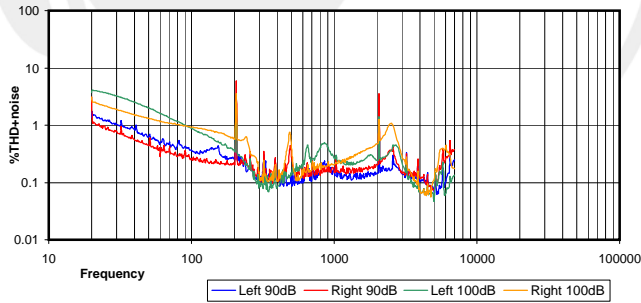
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



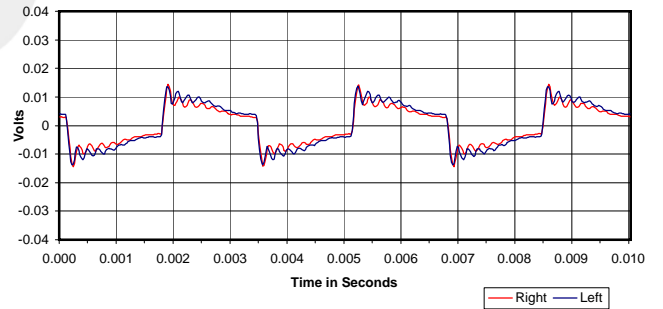
30 Hz Square Wave



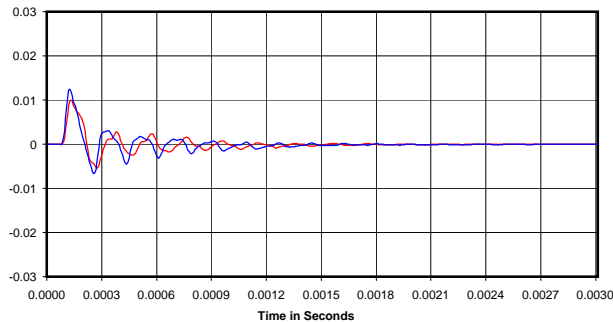
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



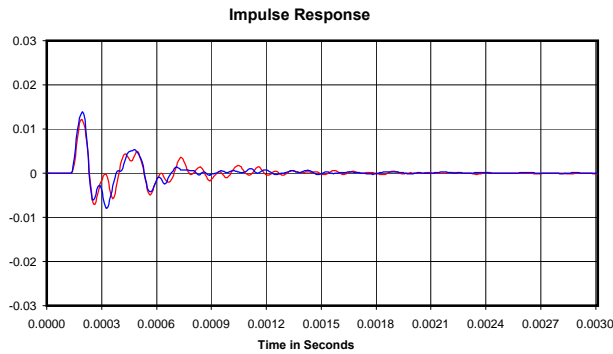
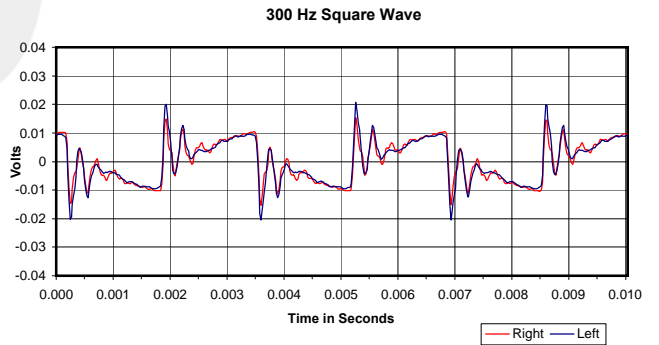
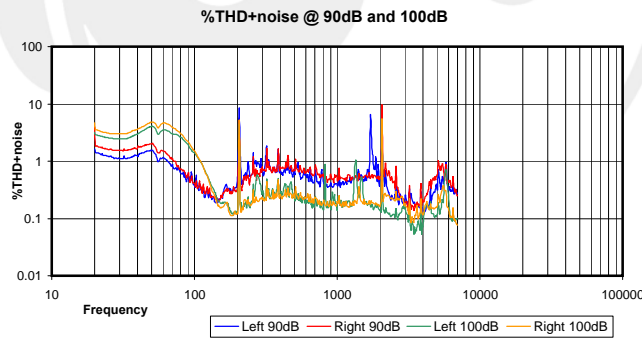
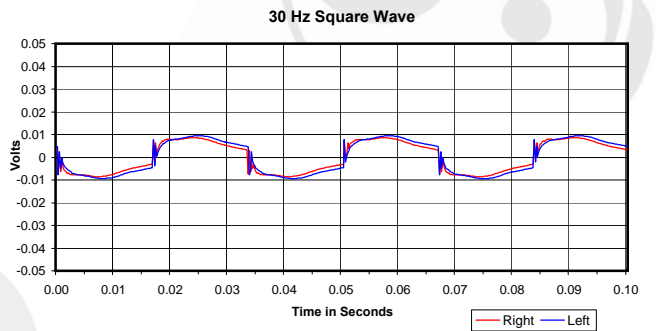
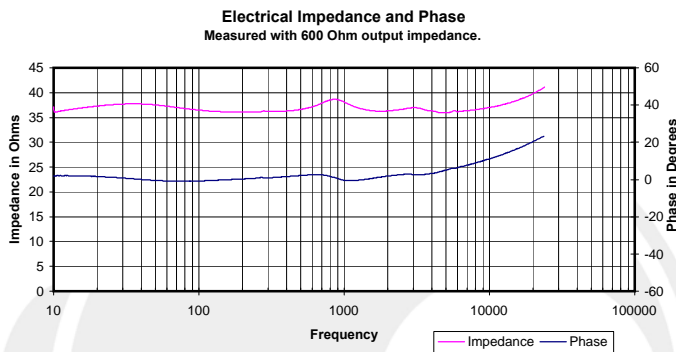
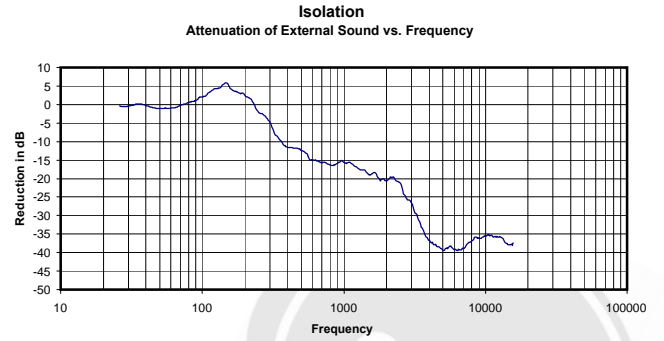
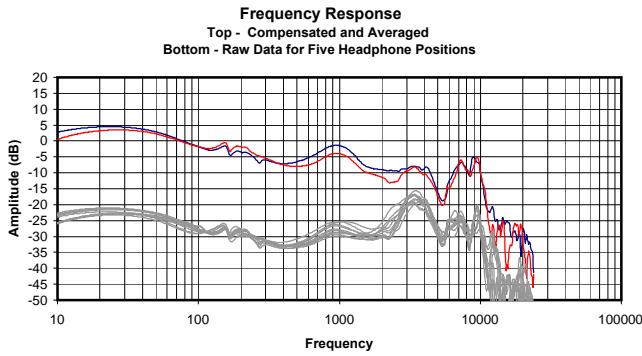
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
17 Ohms
0.03 mW
-8 dB



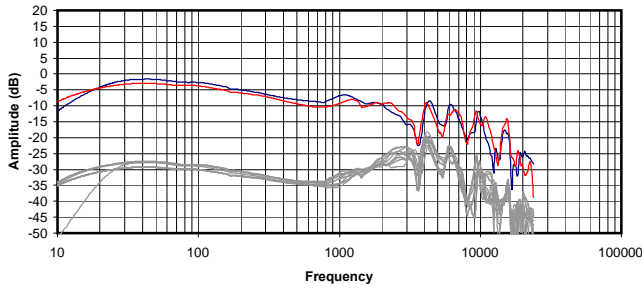


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

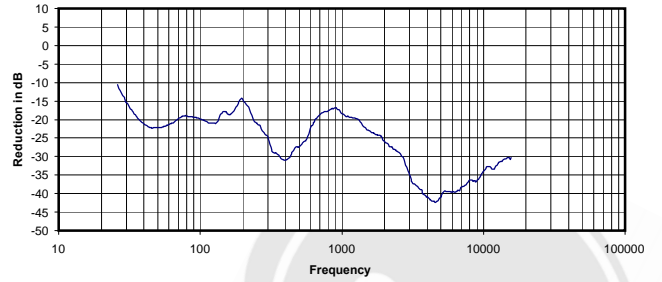
0.071 Vrms
38 Ohms
0.13 mW
-15 dB



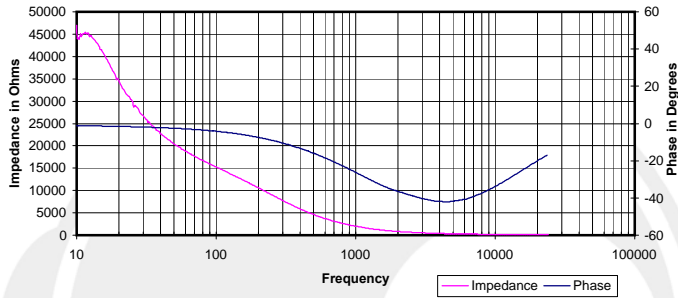
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



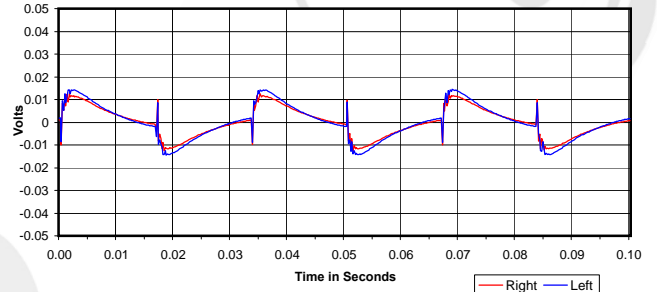
Isolation
 Attenuation of External Sound vs. Frequency



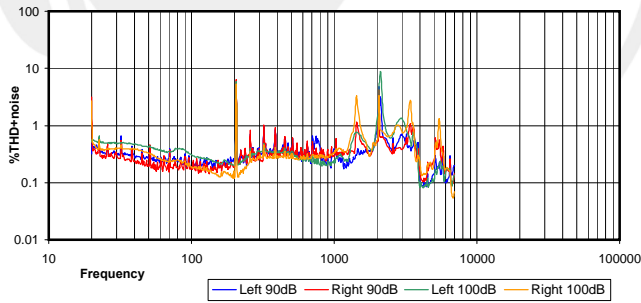
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



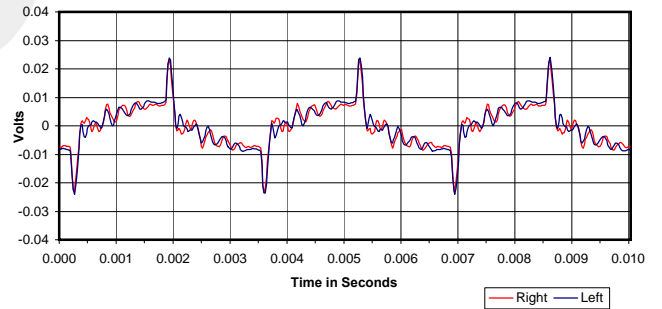
30 Hz Square Wave



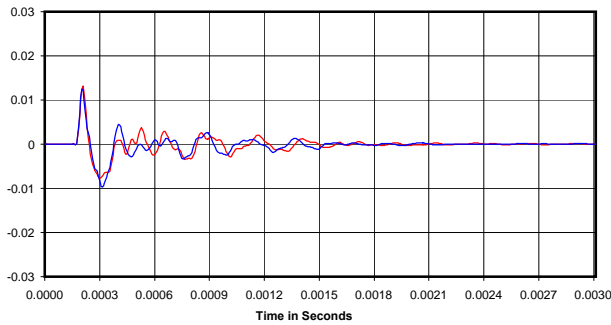
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

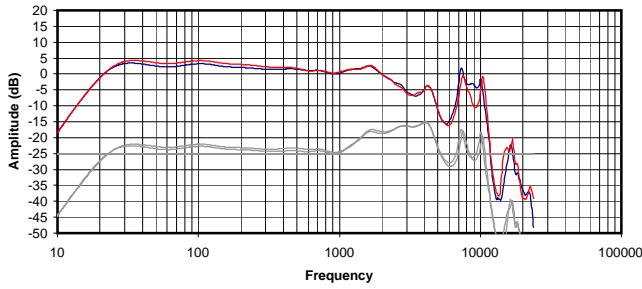


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

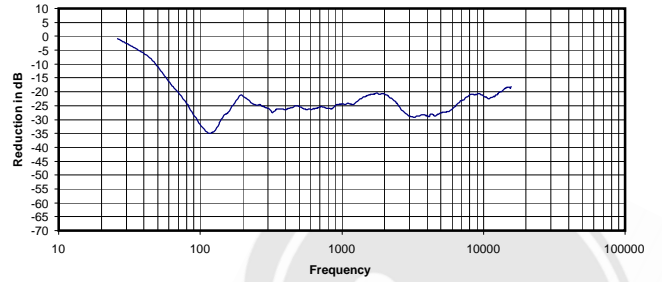
0.074 Vrms
 2001 Ohms
 0.00 mW
 -26 dB



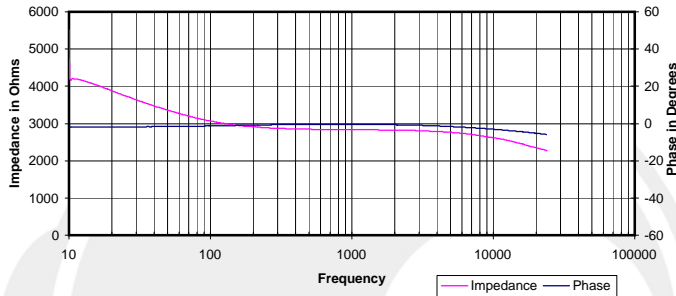
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



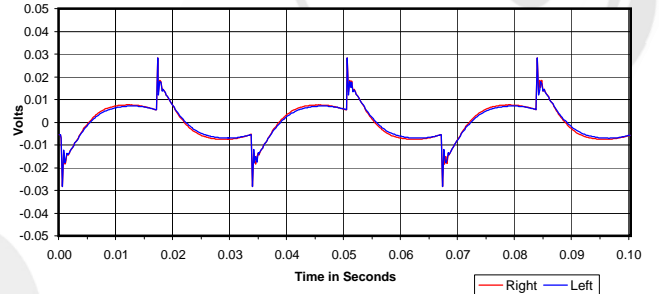
Isolation
Attenuation of External Sound vs. Frequency



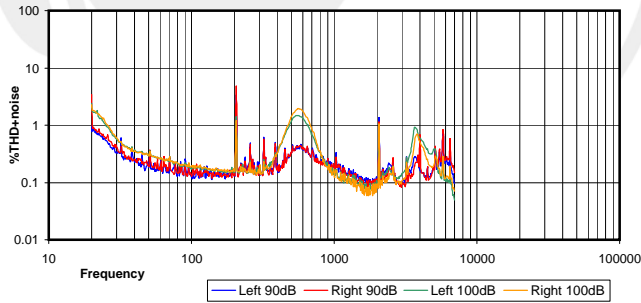
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



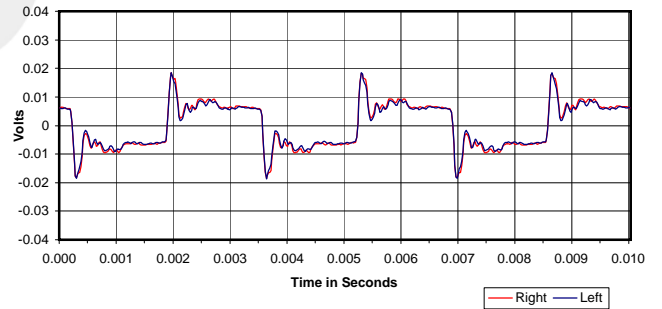
30 Hz Square Wave



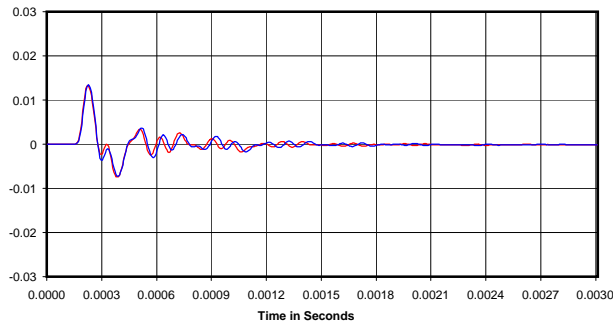
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



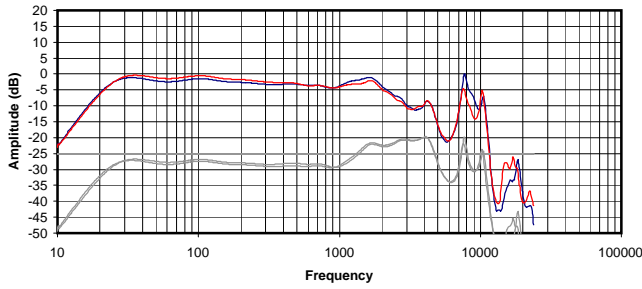
Impulse Response



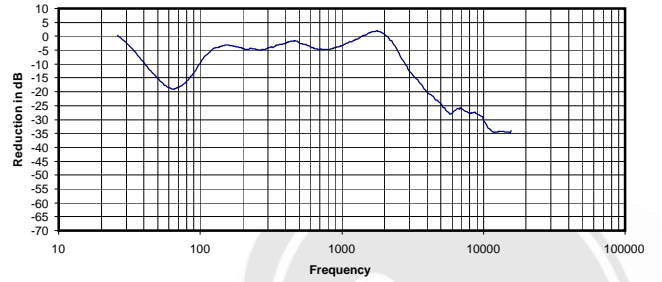
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.093 Vrms
2834 Ohms
0.00 mW
-26 dB

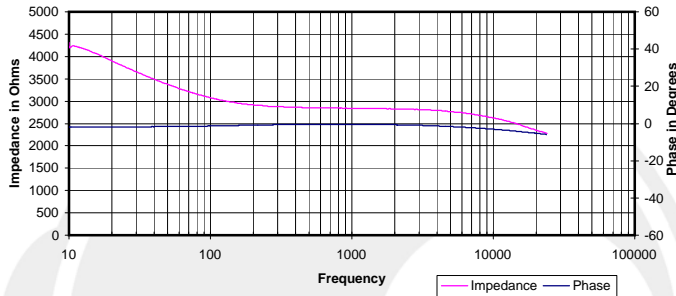
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



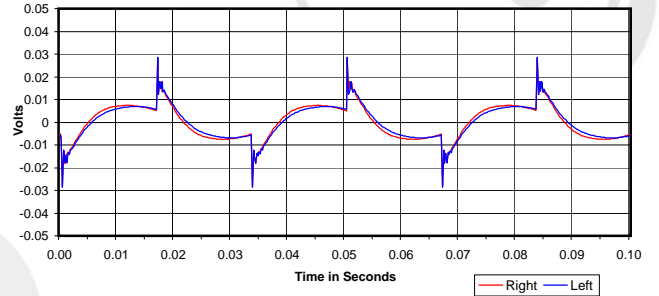
Isolation
Attenuation of External Sound vs. Frequency



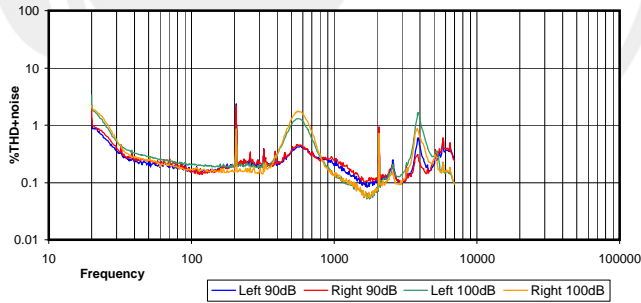
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



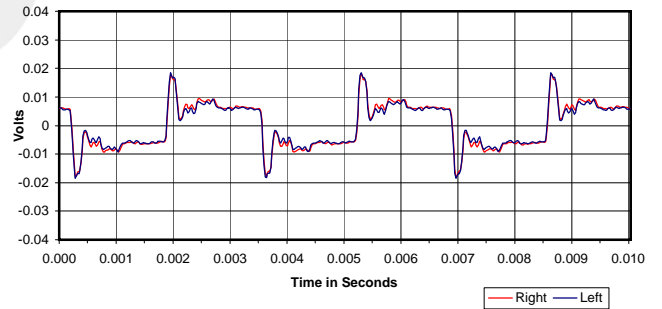
30 Hz Square Wave



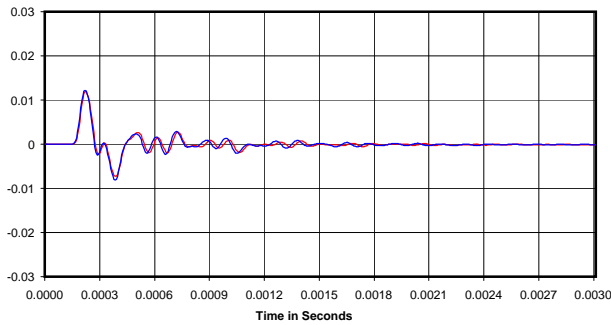
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

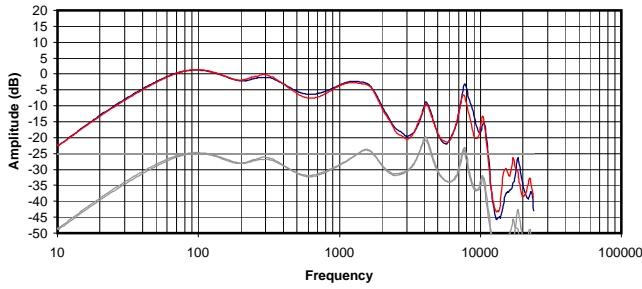


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

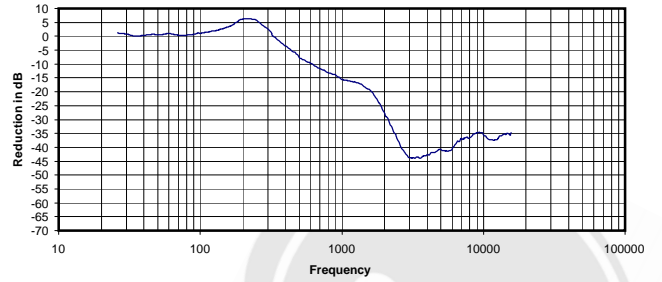
0.078 Vrms
2841 Ohms
0.00 mW
-7 dB



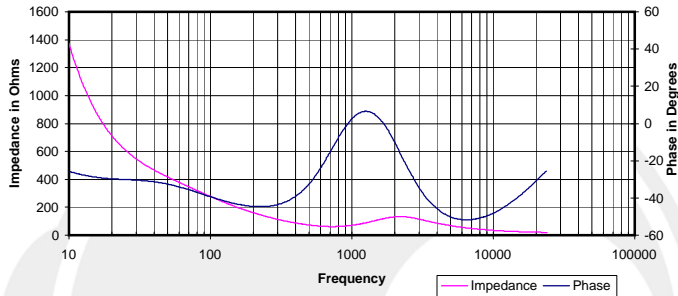
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



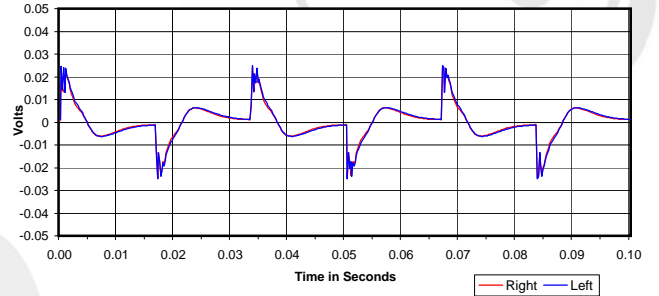
Isolation
Attenuation of External Sound vs. Frequency



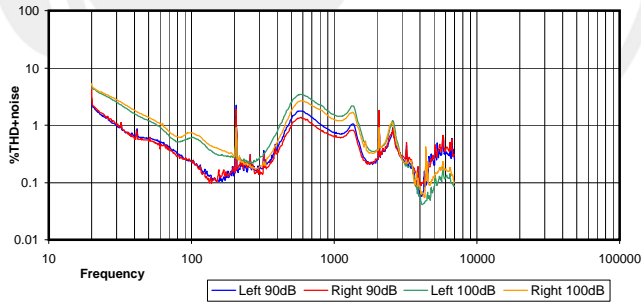
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



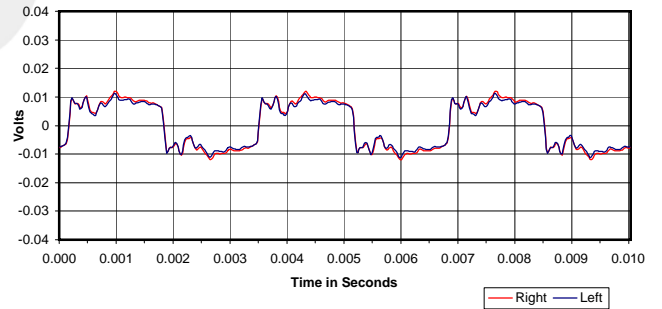
30 Hz Square Wave



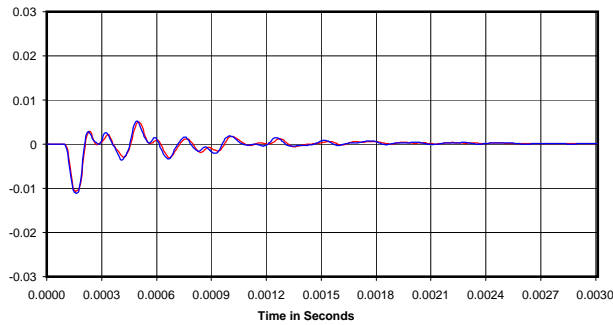
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

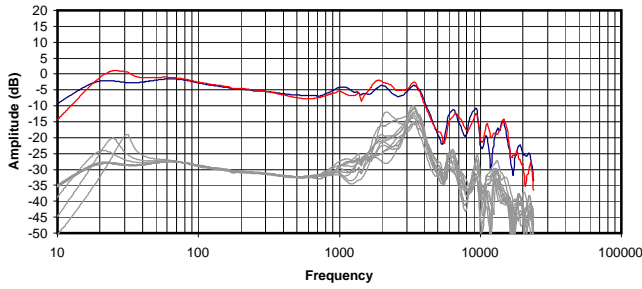


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

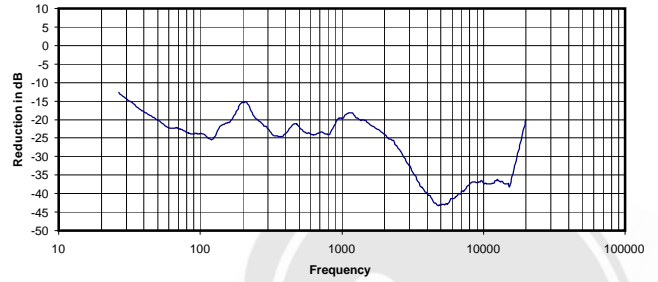
0.090 Vrms
71 Ohms
0.11 mW
-15 dB



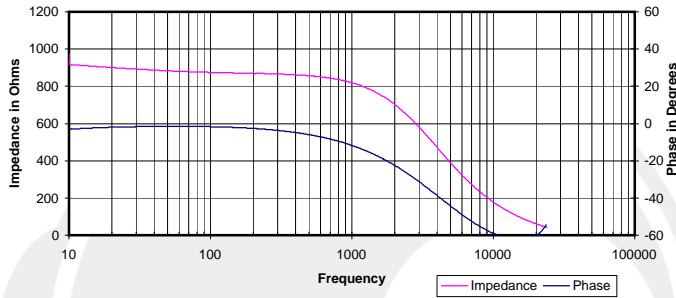
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



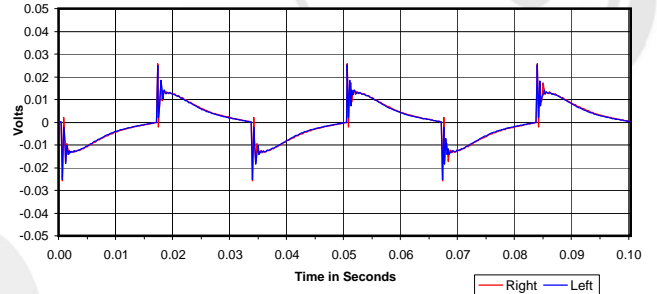
Isolation
 Attenuation of External Sound vs. Frequency



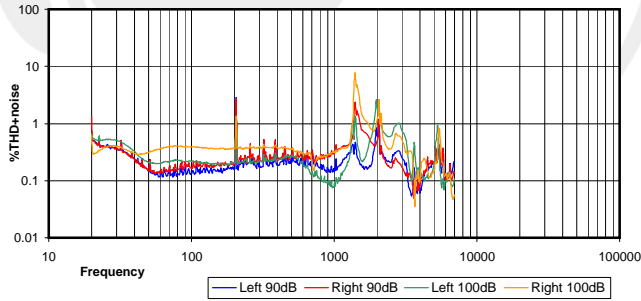
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



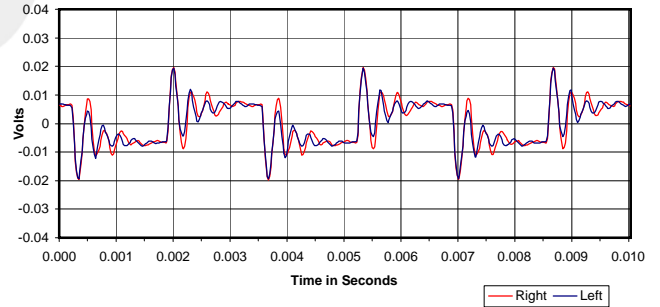
30 Hz Square Wave



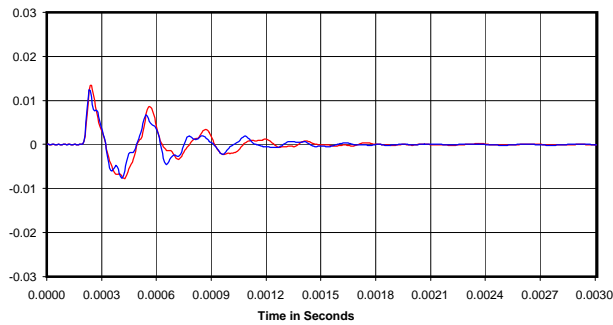
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

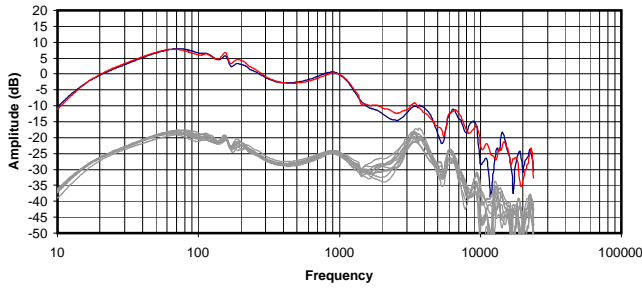


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

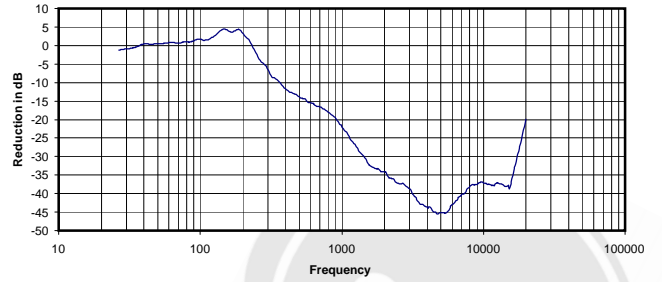
0.063 Vrms
 818 Ohms
 0.00 mW
 -27 dB



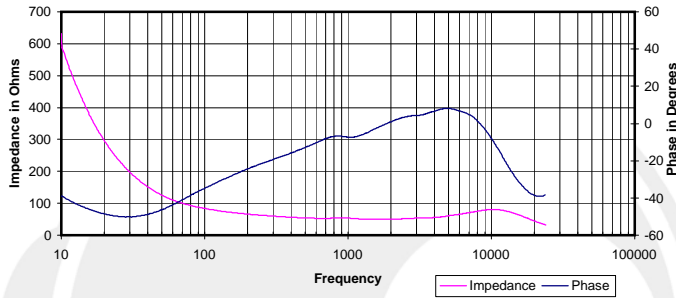
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



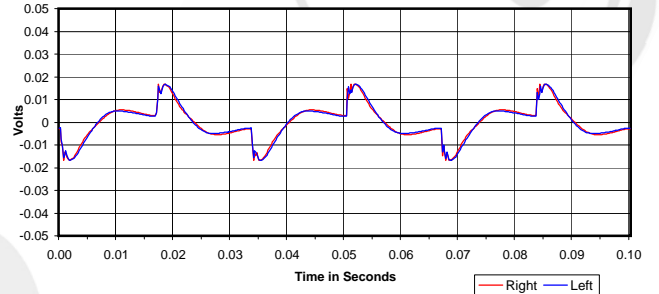
Isolation
Attenuation of External Sound vs. Frequency



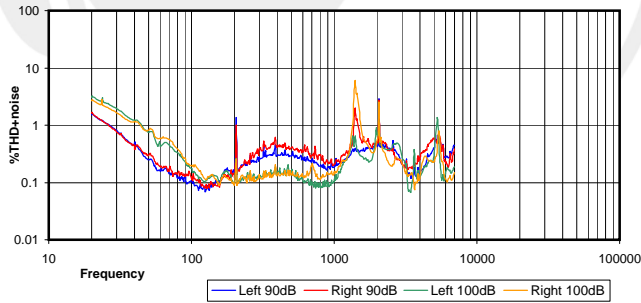
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



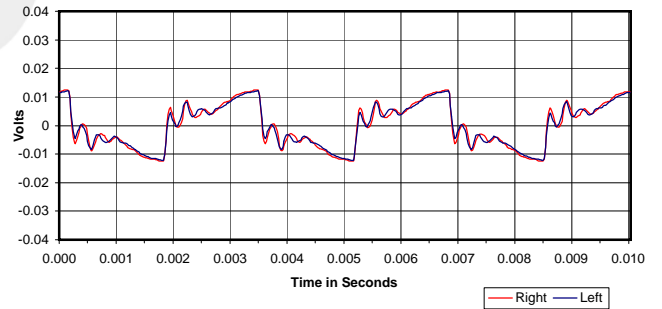
30 Hz Square Wave



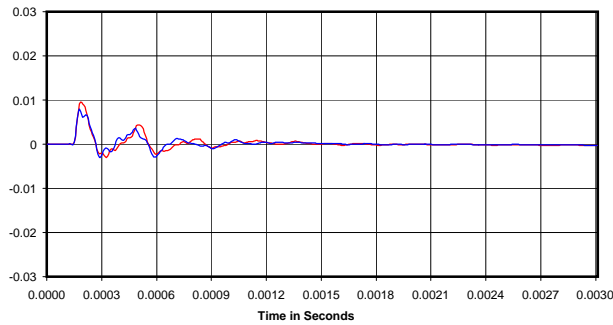
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



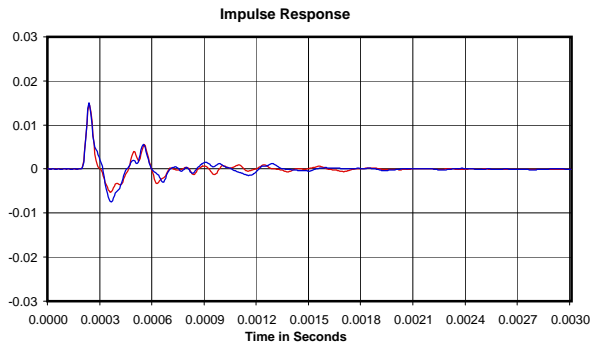
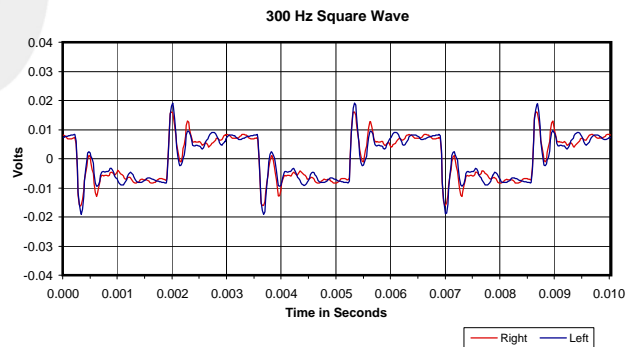
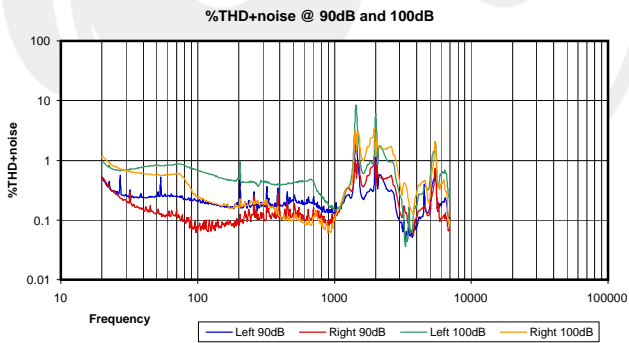
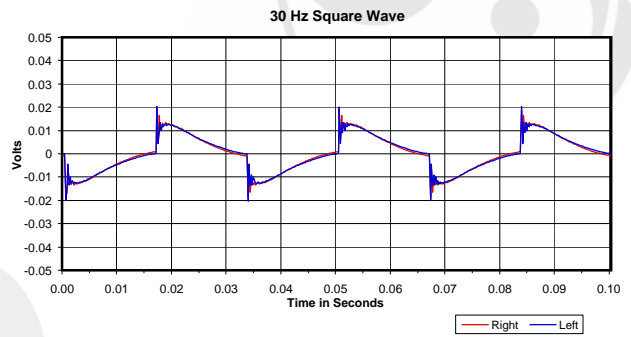
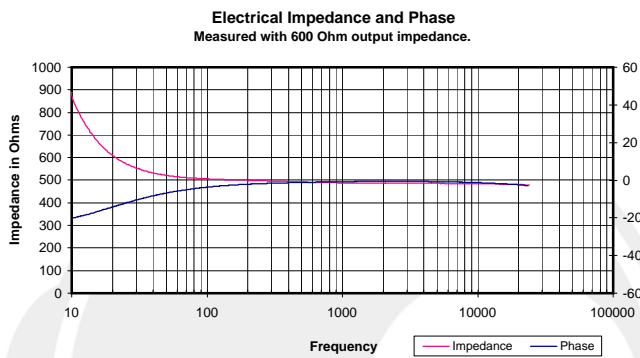
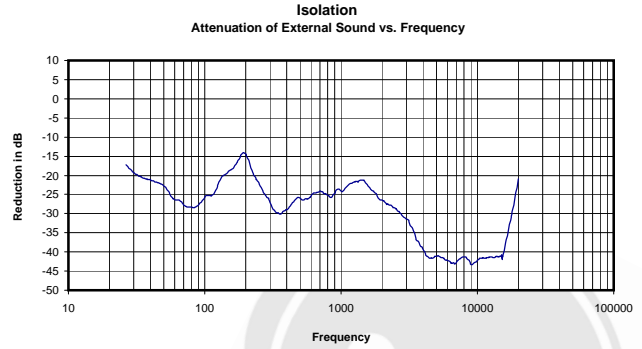
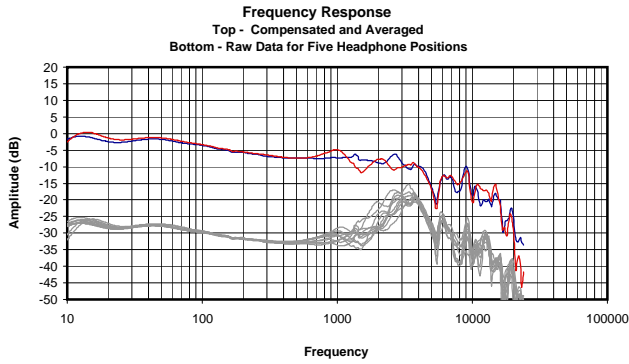
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.065 Vrms
53 Ohms
0.08 mW
-22 dB

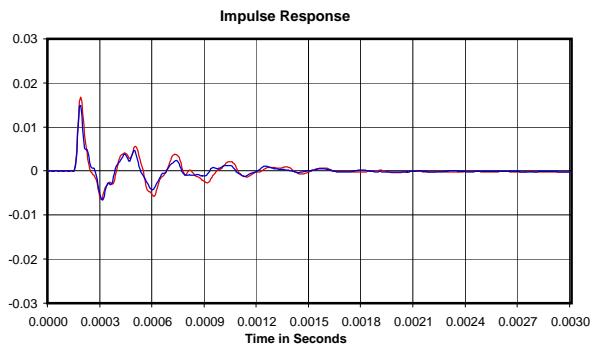
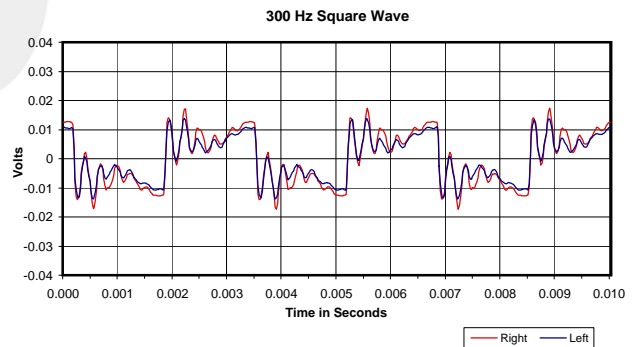
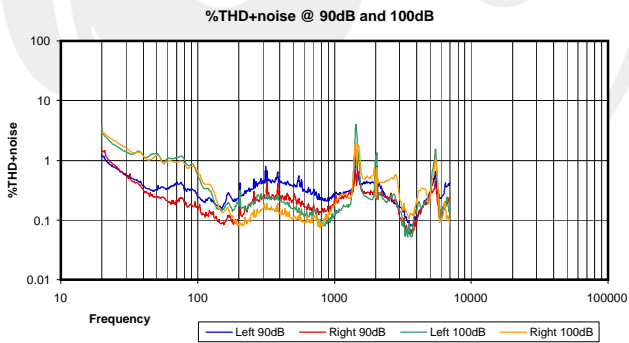
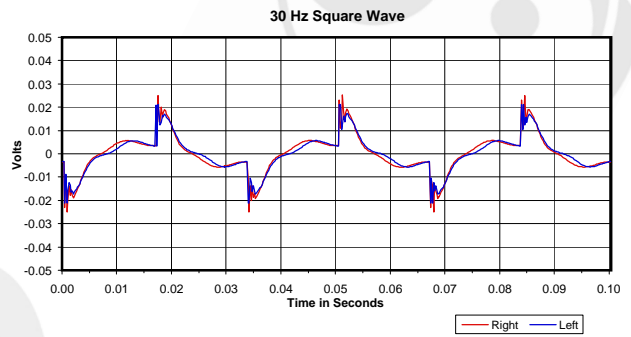
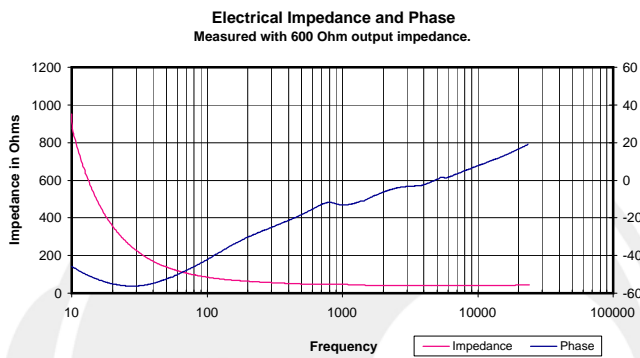
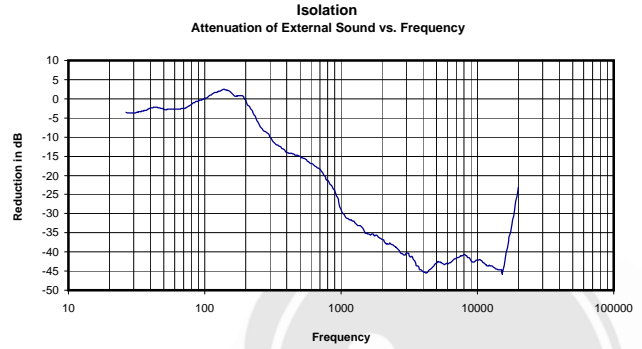
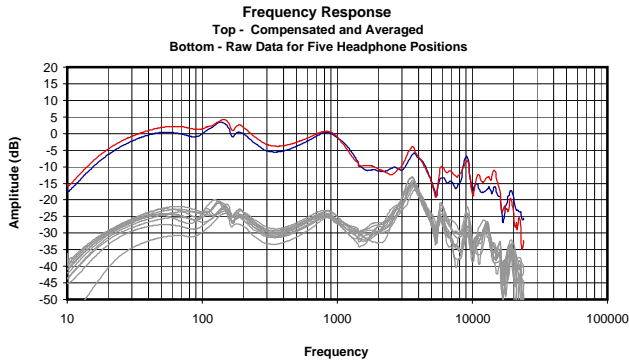




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.121 Vrms
488 Ohms
0.03 mW
-28 dBr

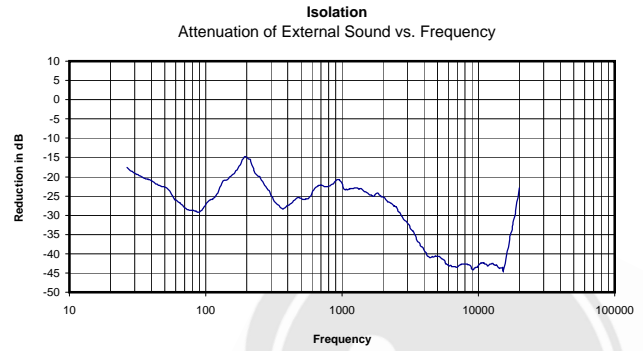
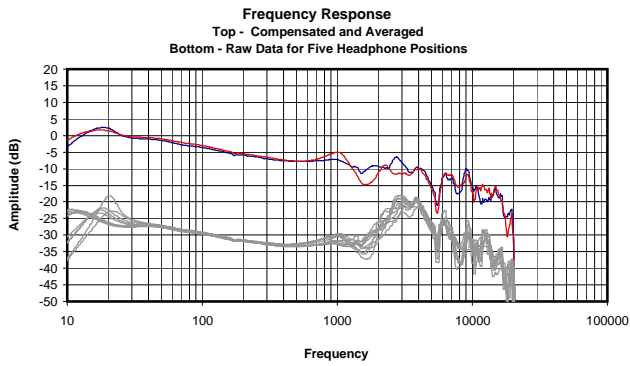




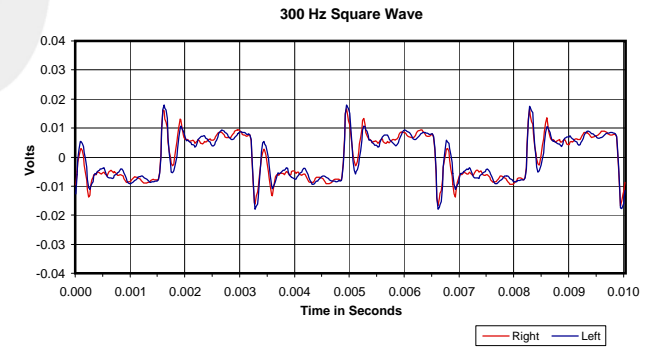
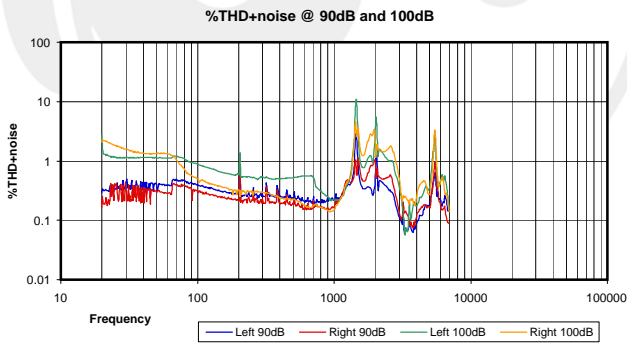
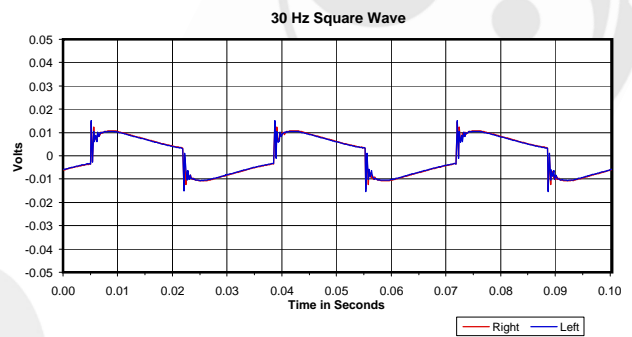
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.064 Vrms
47 Ohms
0.09 mW
-24 dBr





Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones

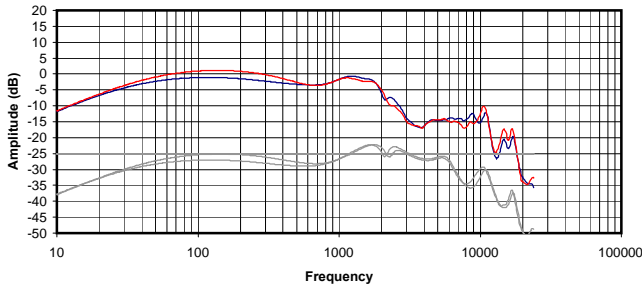


Broadband Isolation in dB (100Hz to 10kHz):

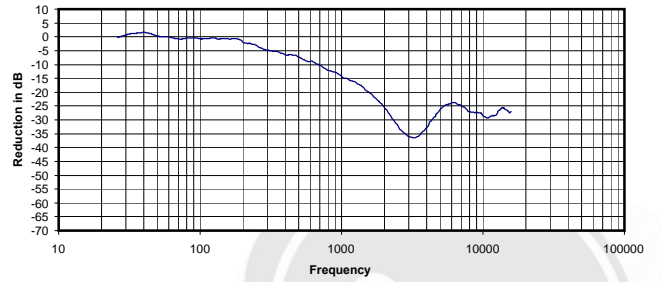
-28 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

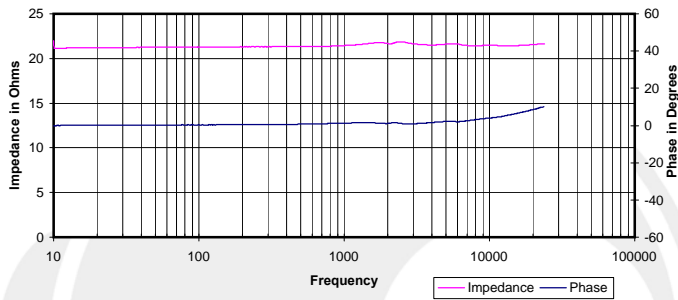
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



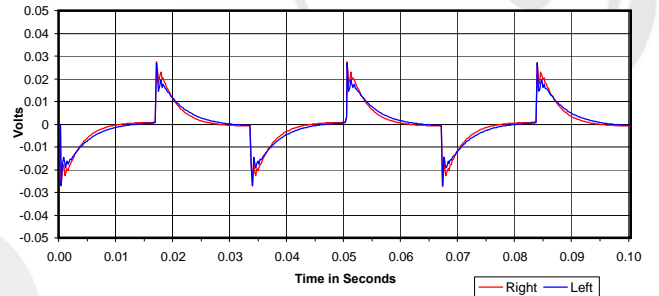
Isolation
Attenuation of External Sound vs. Frequency



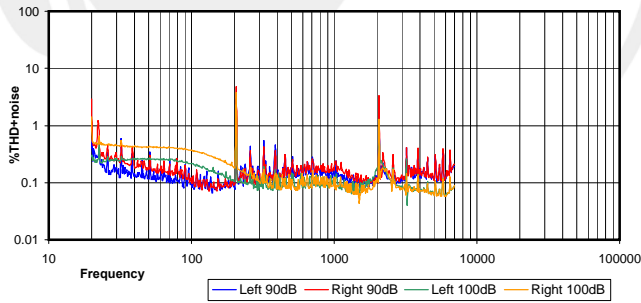
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



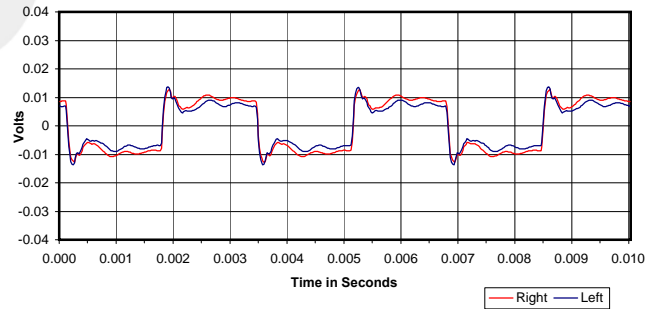
30 Hz Square Wave



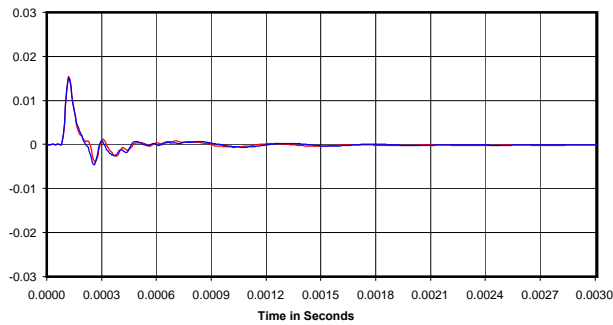
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



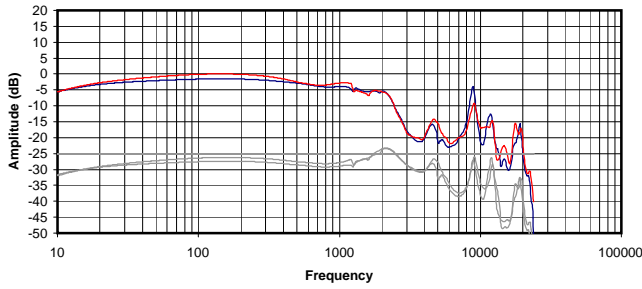
Impulse Response



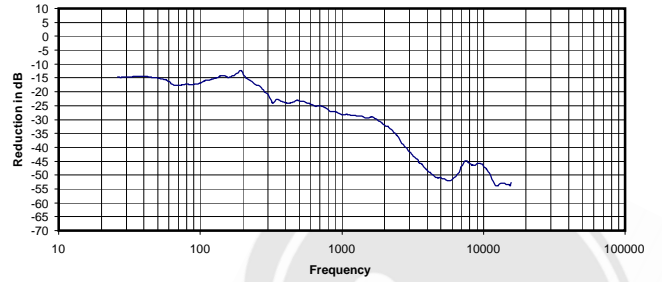
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
21 Ohms
0.01 mW
-14 dB

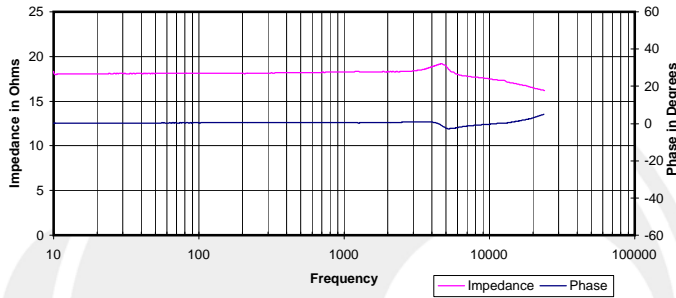
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



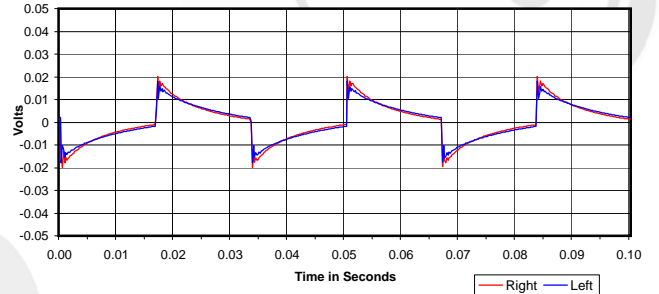
Isolation
Attenuation of External Sound vs. Frequency



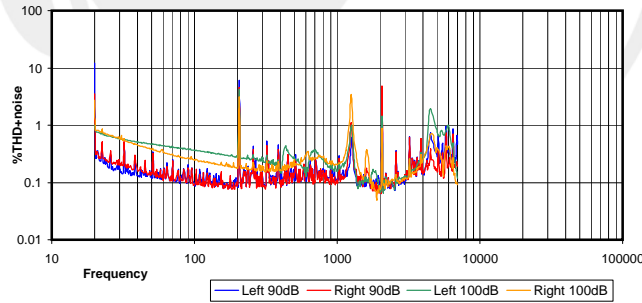
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



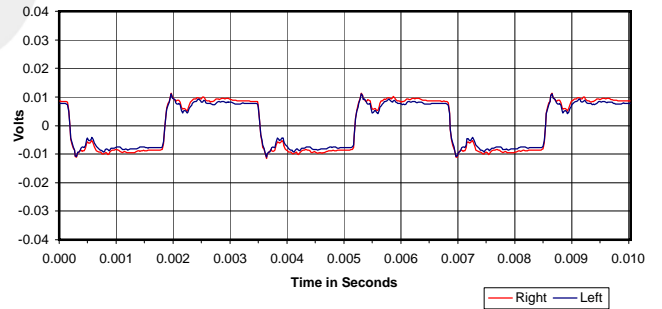
30 Hz Square Wave



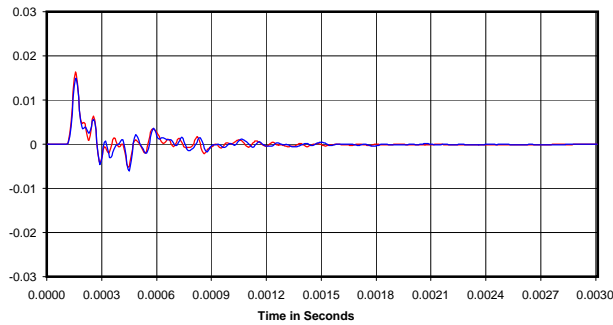
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



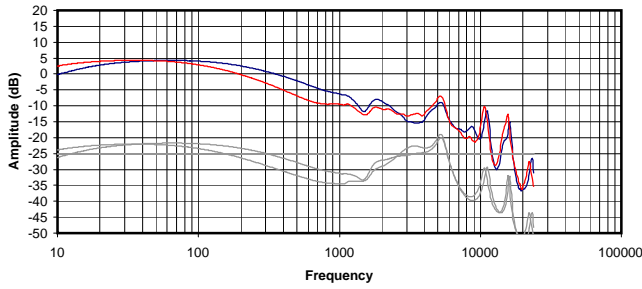
Impulse Response



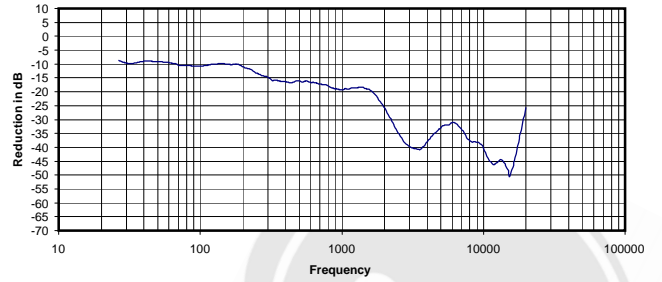
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.034 Vrms
18 Ohms
0.07 mW
-28 dB

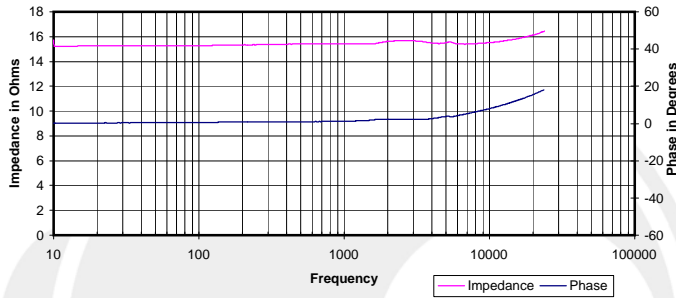
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



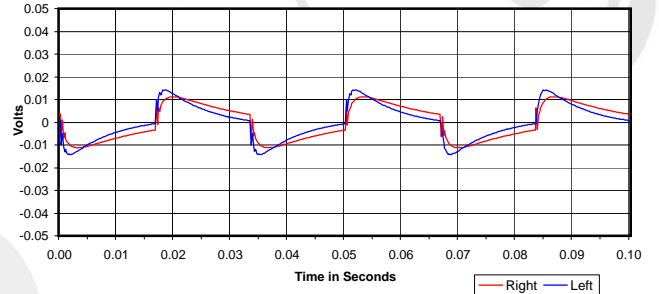
Isolation
Attenuation of External Sound vs. Frequency



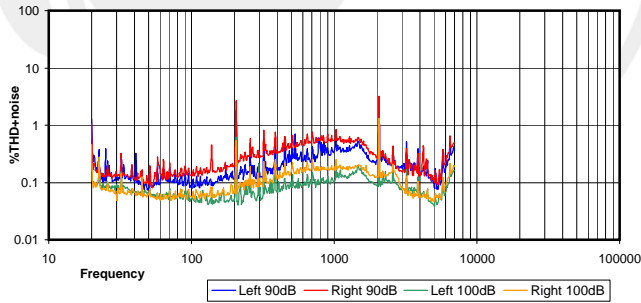
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



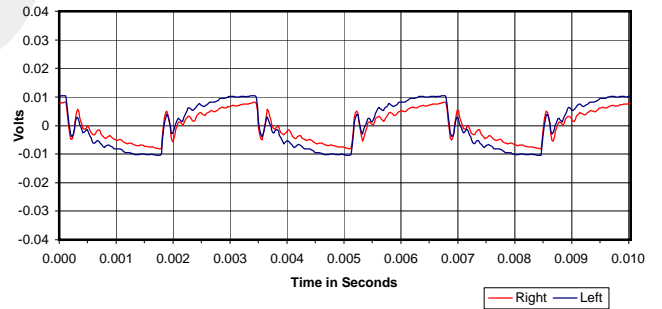
30 Hz Square Wave



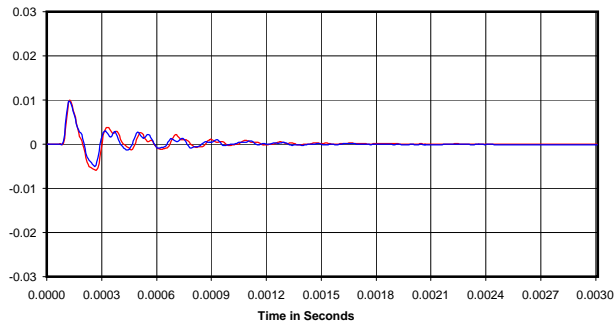
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



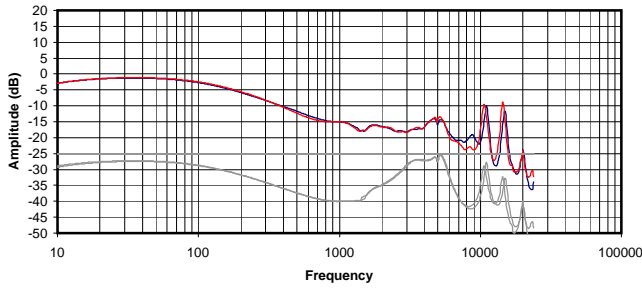
Impulse Response



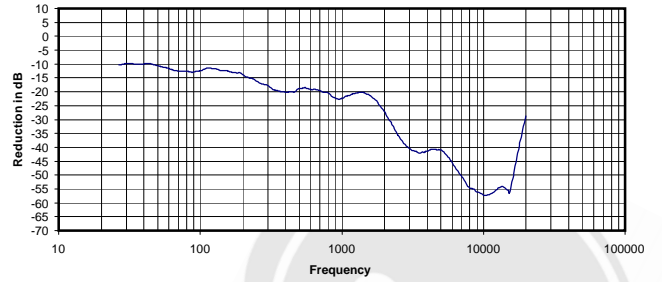
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
15 Ohms
0.05 mW
-23 dB

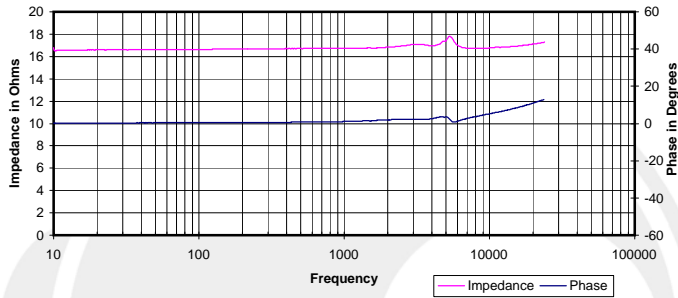
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



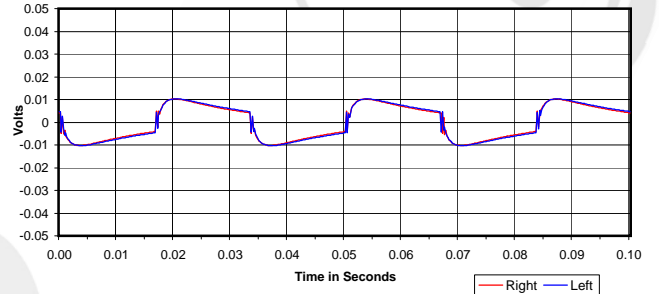
Isolation
Attenuation of External Sound vs. Frequency



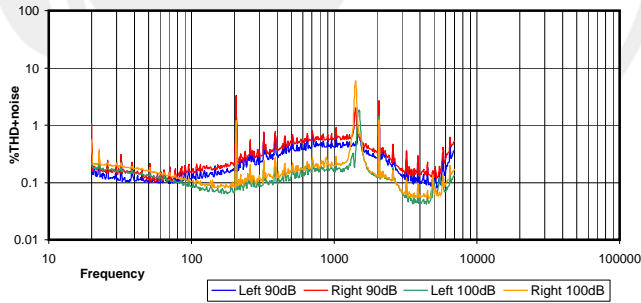
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



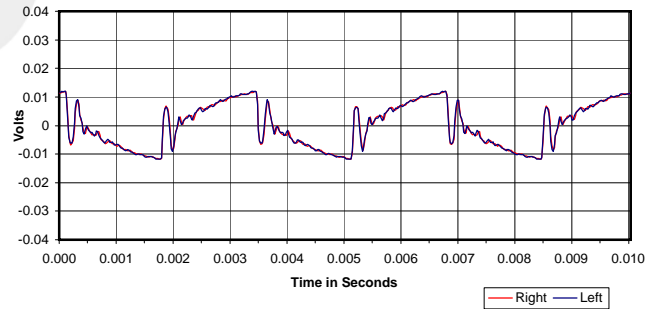
30 Hz Square Wave



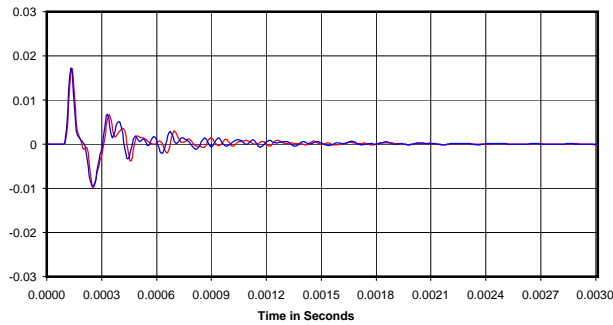
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

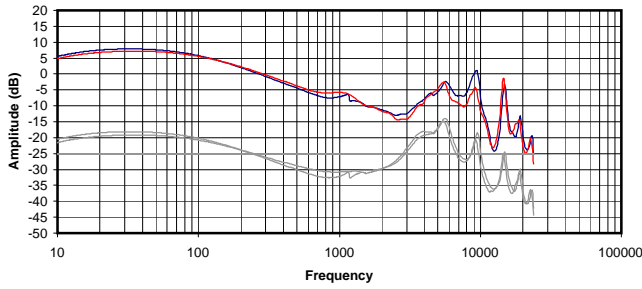


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

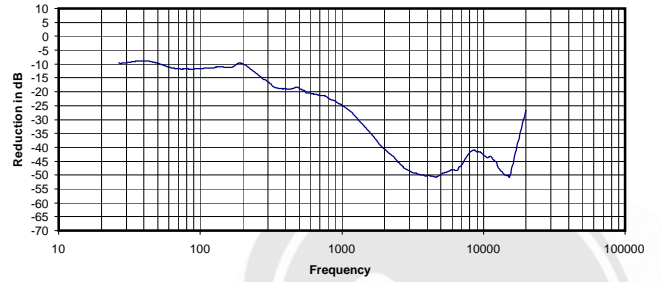
0.034 Vrms
17 Ohms
0.07 mW
-27 dB



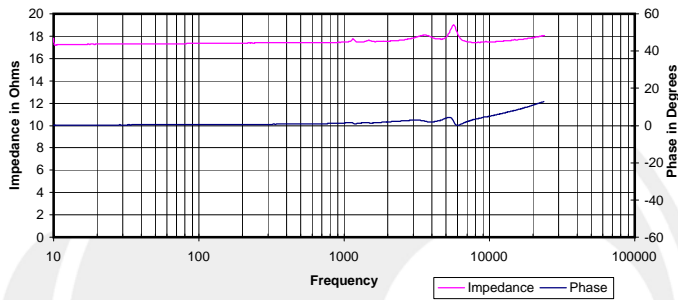
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



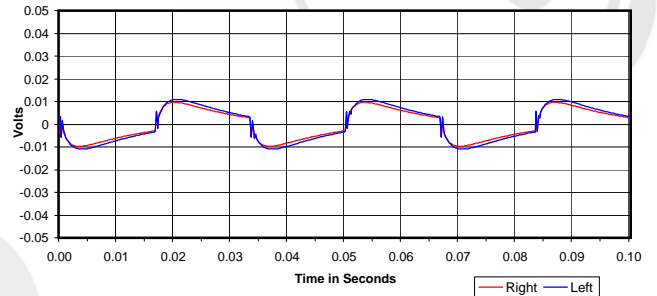
Isolation
Attenuation of External Sound vs. Frequency



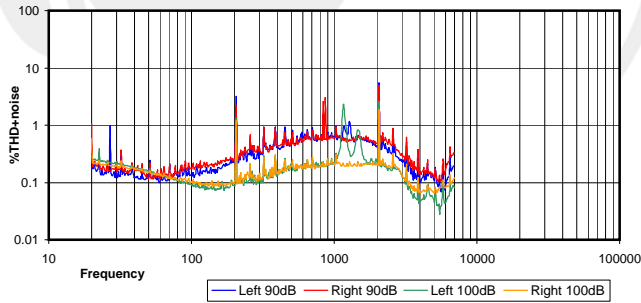
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



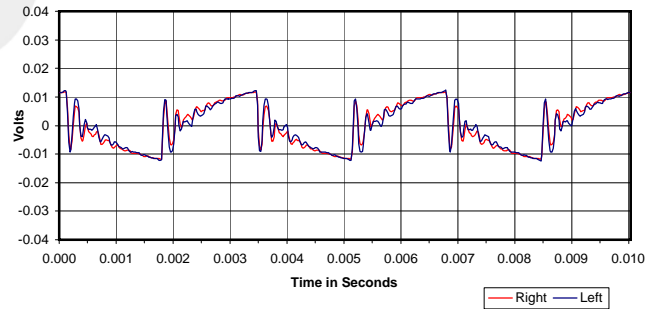
30 Hz Square Wave



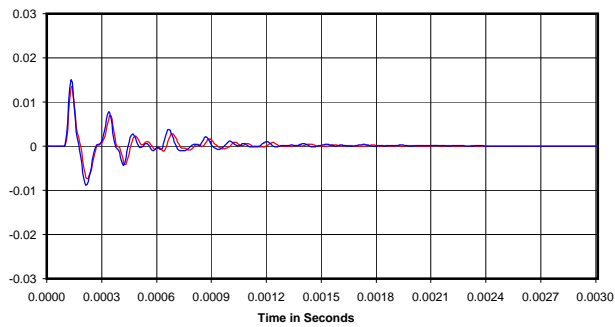
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

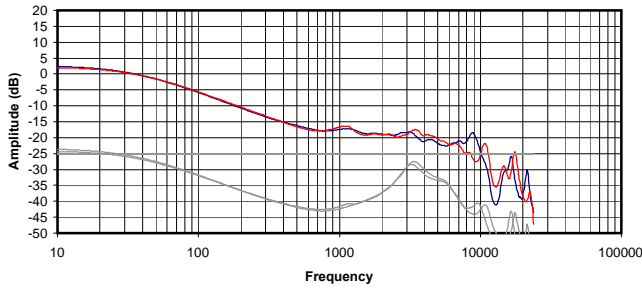


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

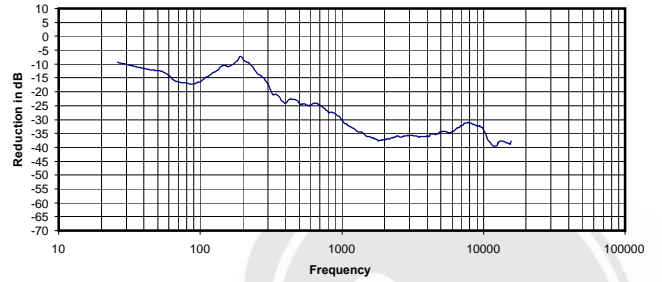
0.035 Vrms
17 Ohms
0.07 mW
-29 dB



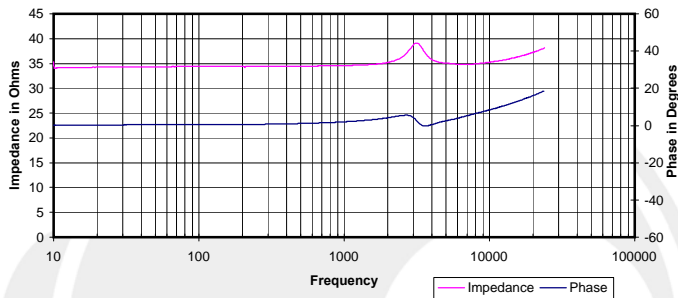
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



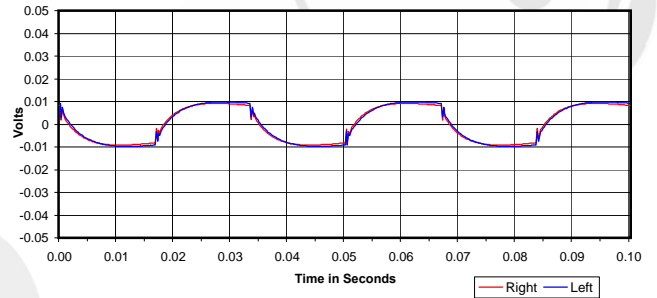
Isolation
Attenuation of External Sound vs. Frequency



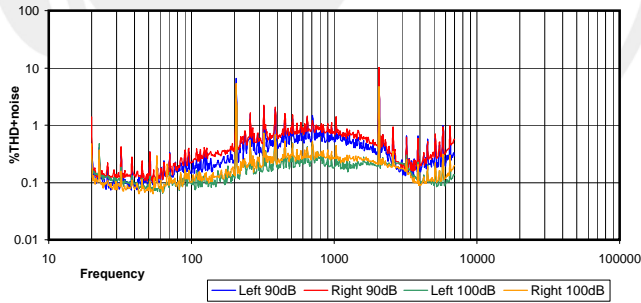
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



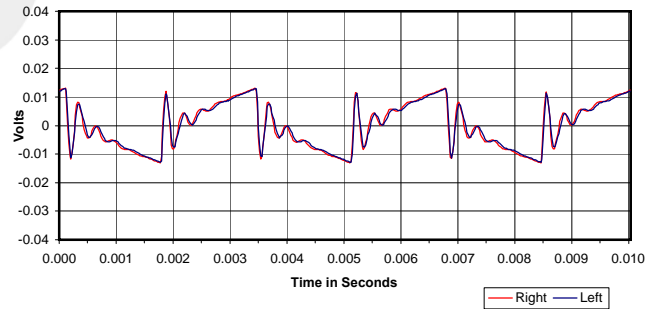
30 Hz Square Wave



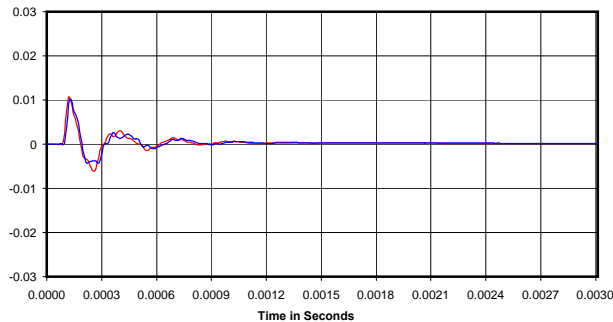
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



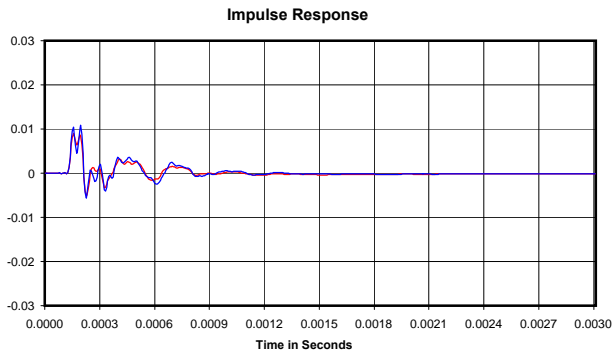
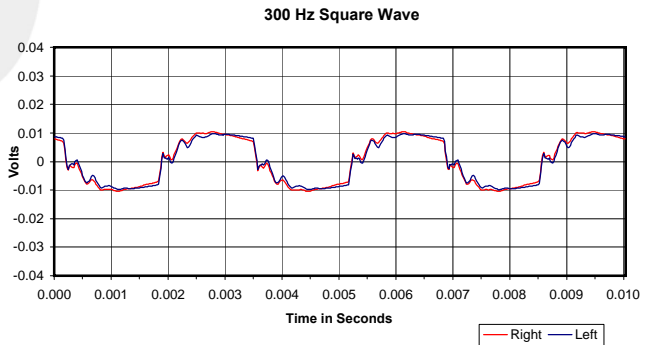
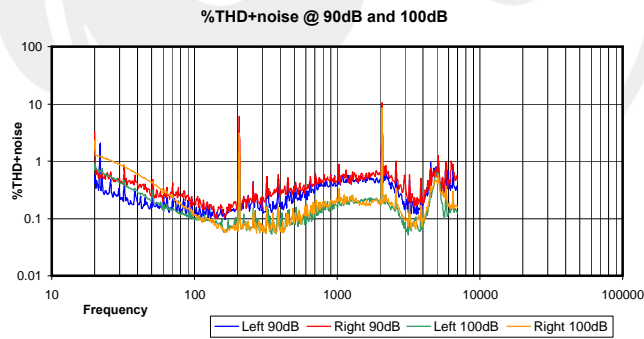
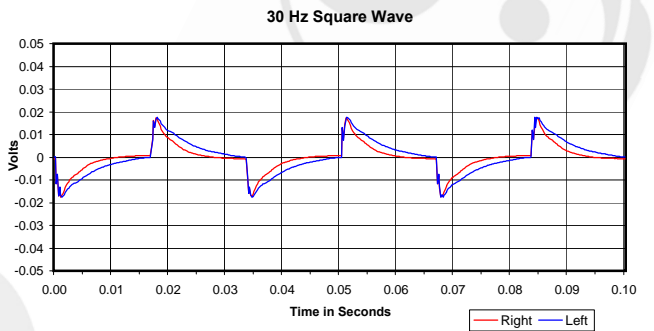
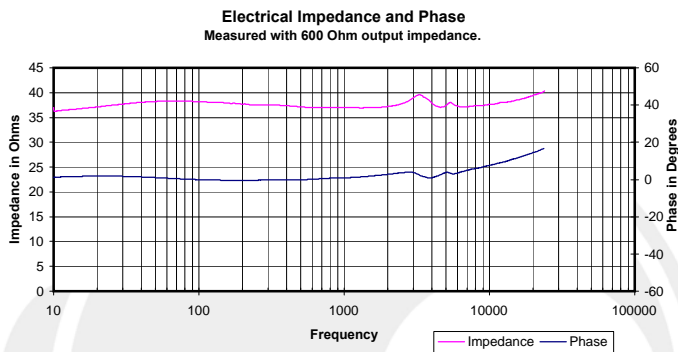
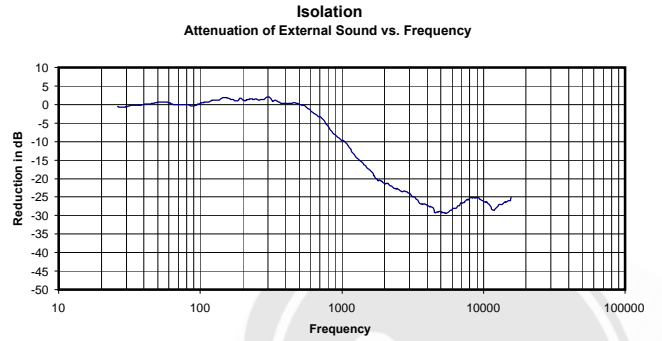
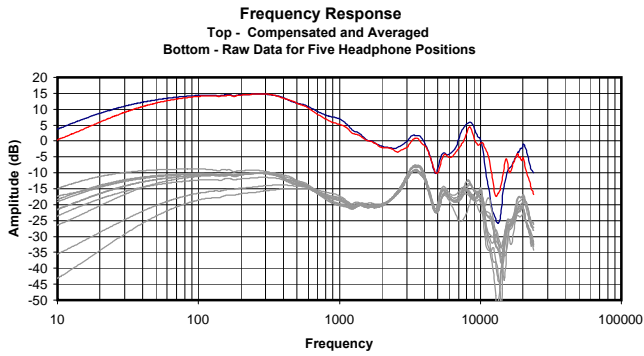
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.048 Vrms
35 Ohms
0.07 mW
-26 dB

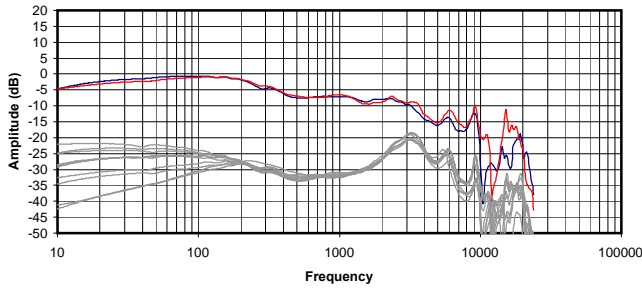




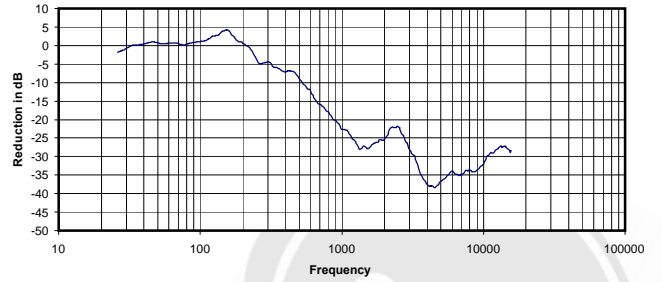
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.050 Vrms
37 Ohms
0.07 mW
-10 dB

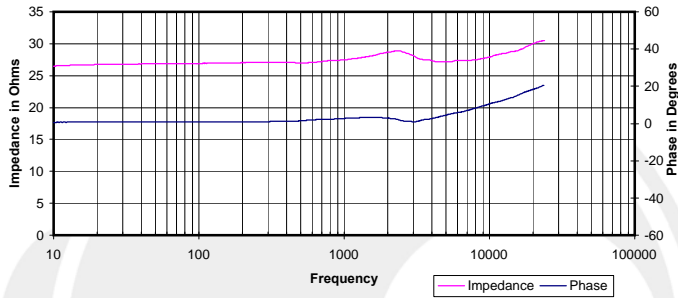
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



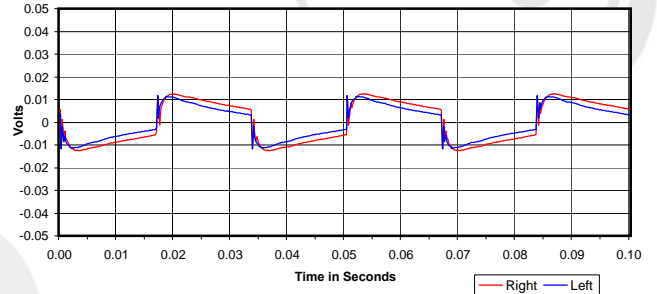
Isolation
 Attenuation of External Sound vs. Frequency



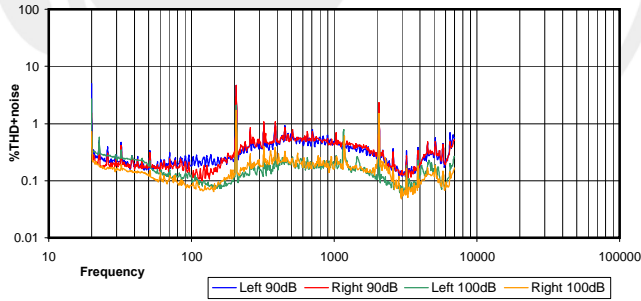
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



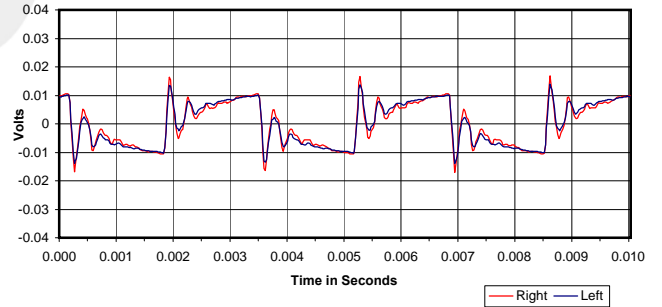
30 Hz Square Wave



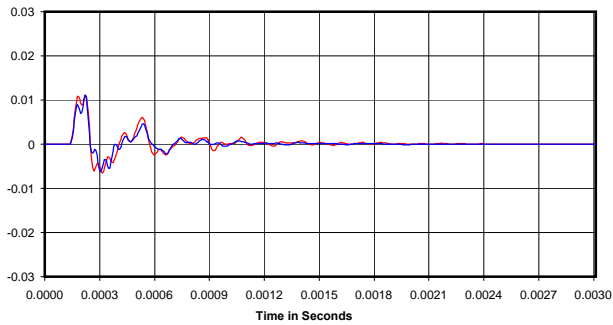
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

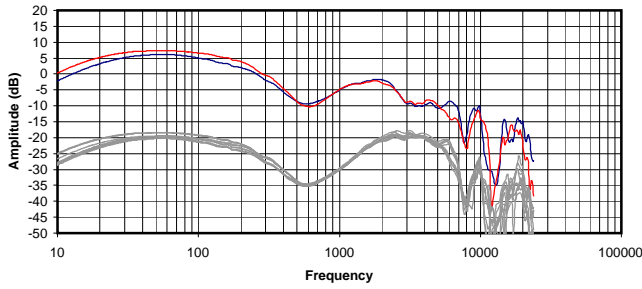


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

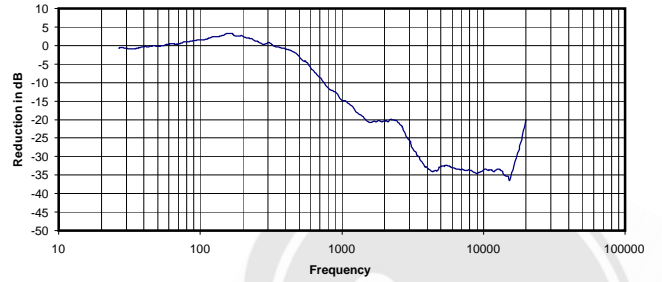
0.051 Vrms
 27 Ohms
 0.09 mW
 -16 dB



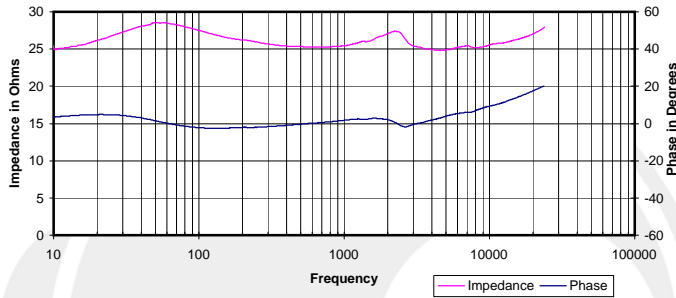
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



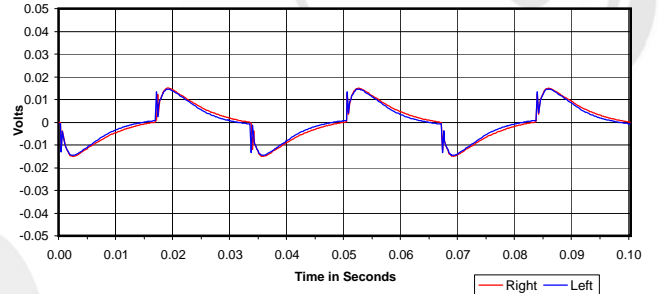
Isolation
 Attenuation of External Sound vs. Frequency



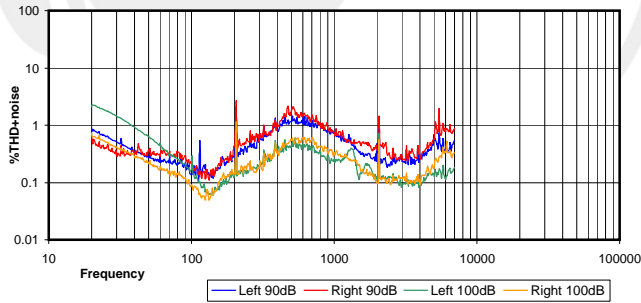
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



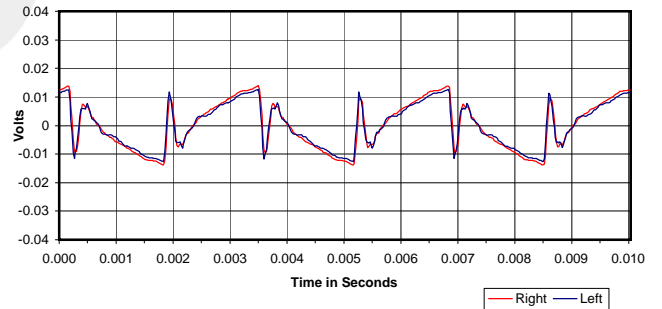
30 Hz Square Wave



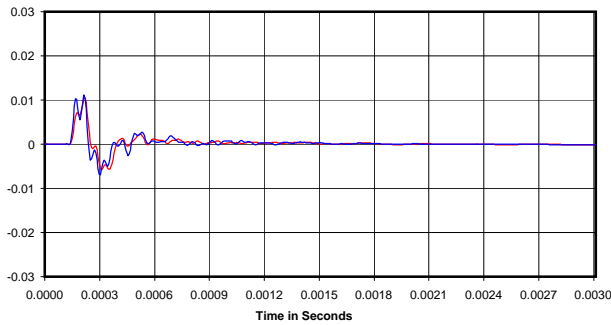
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

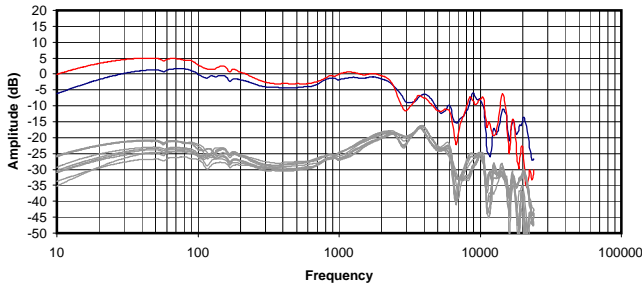


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

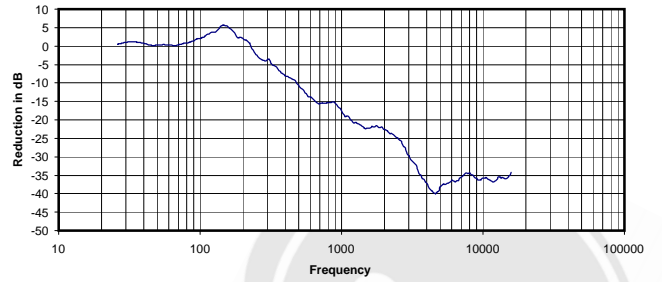
0.084 Vrms
 25 Ohms
 0.28 mW
 -14 dB



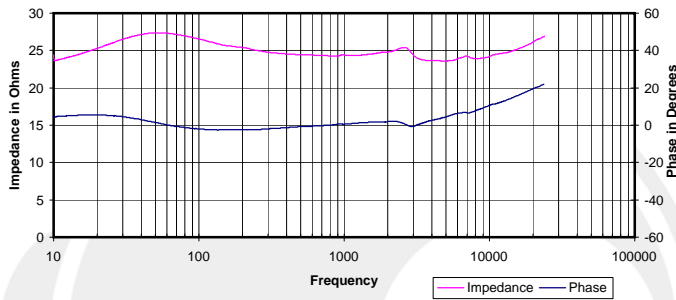
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



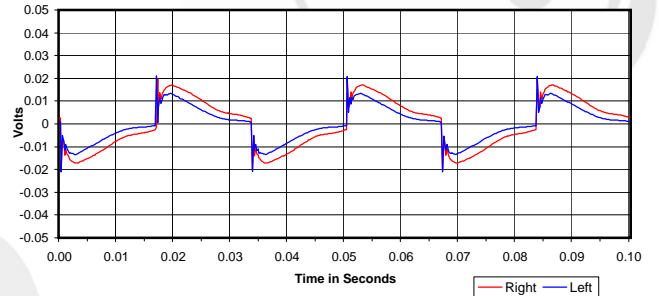
Isolation
 Attenuation of External Sound vs. Frequency



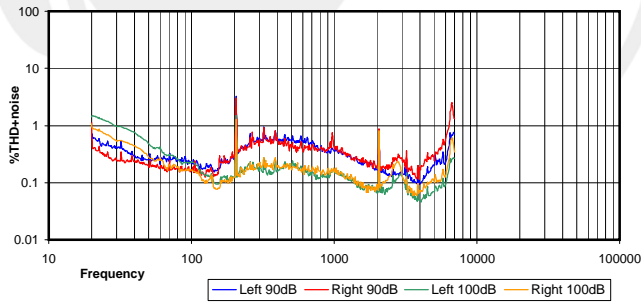
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



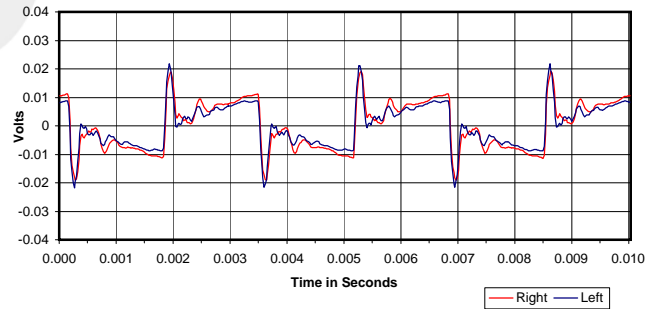
30 Hz Square Wave



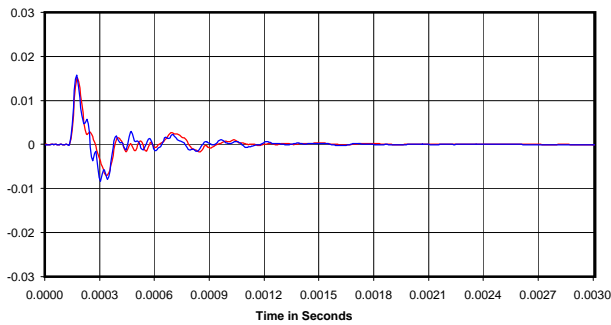
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



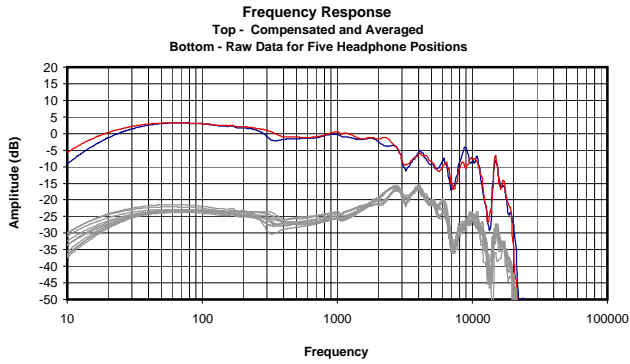
Impulse Response



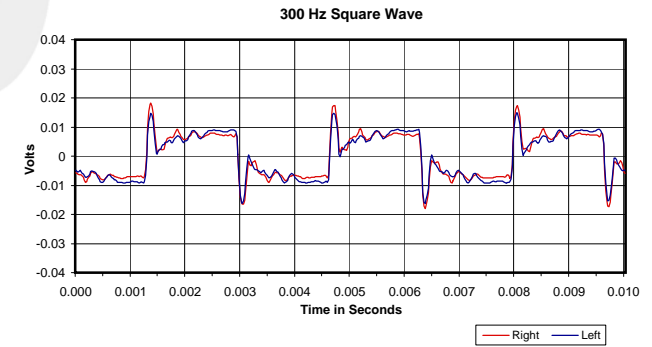
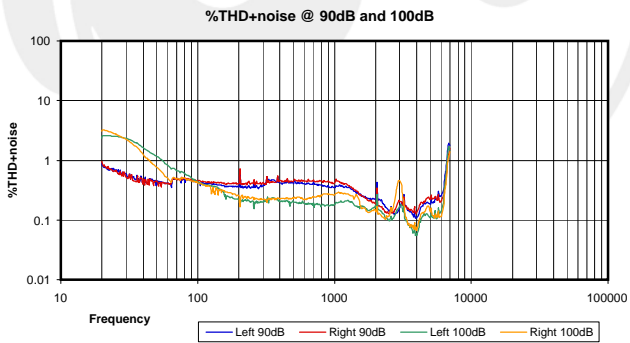
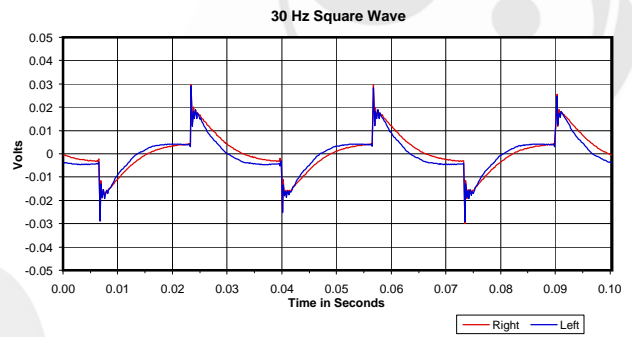
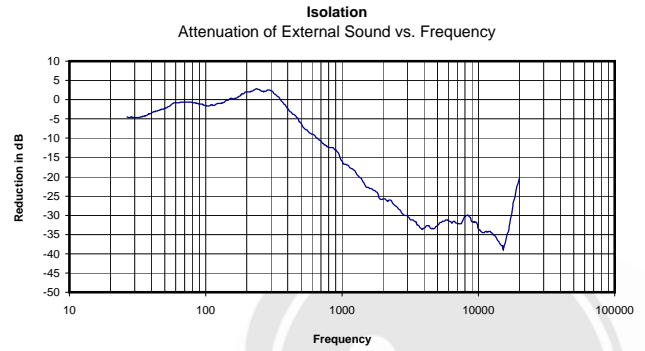
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.044 Vrms
 24 Ohms
 0.08 mW
 -15 dB





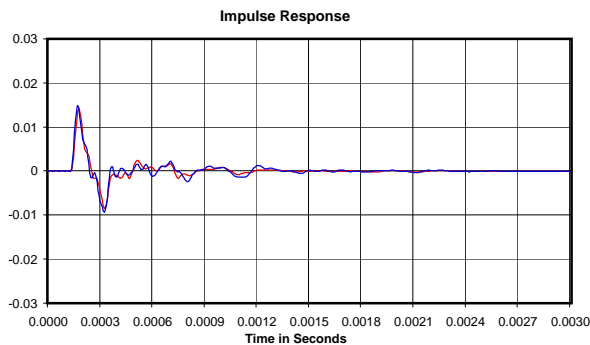
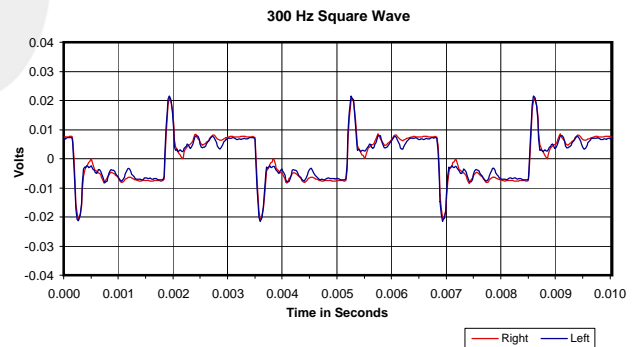
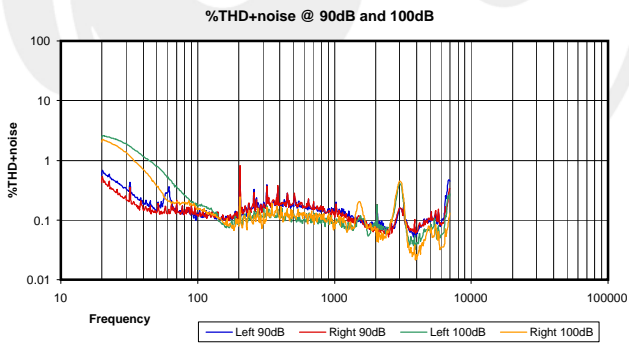
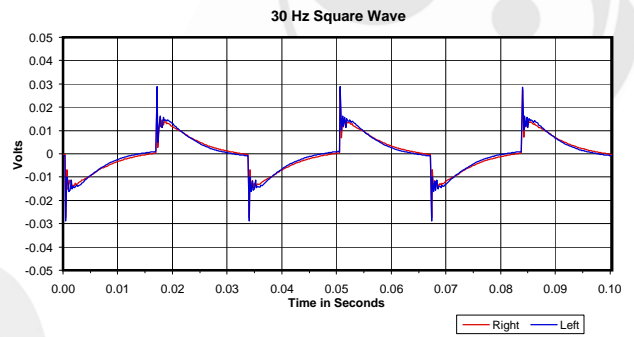
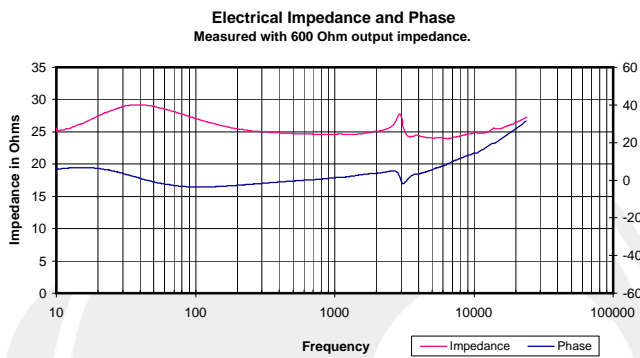
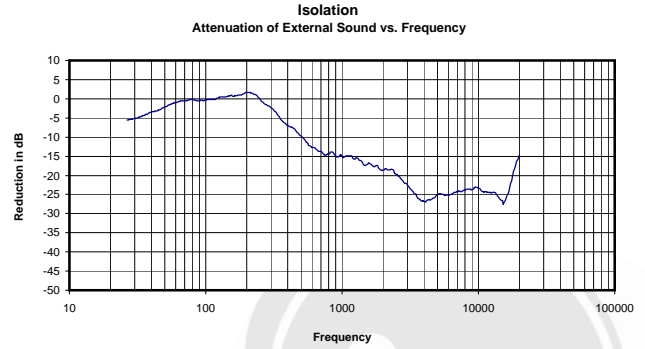
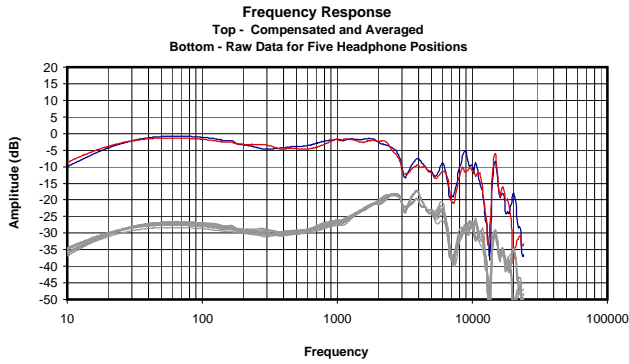
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

-16 dBr

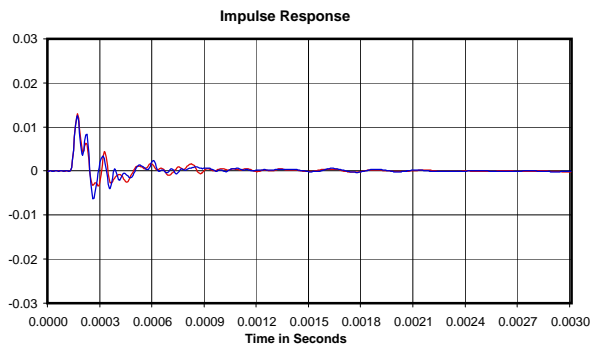
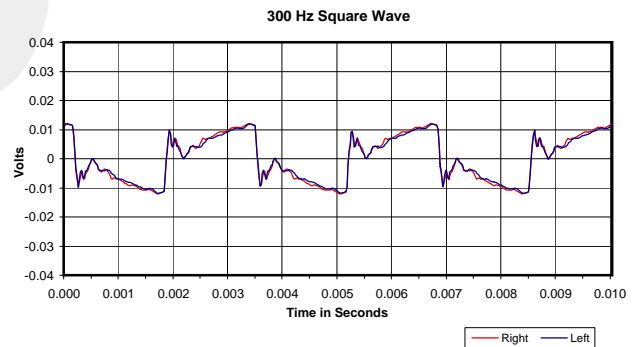
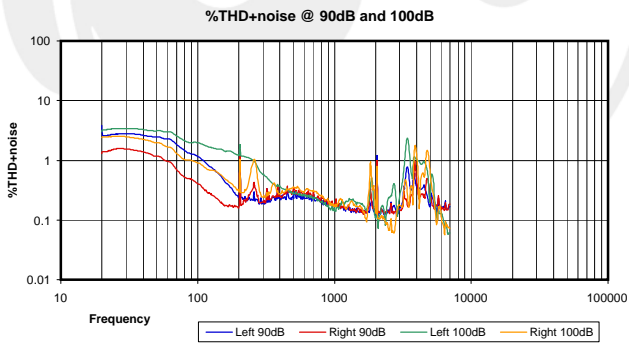
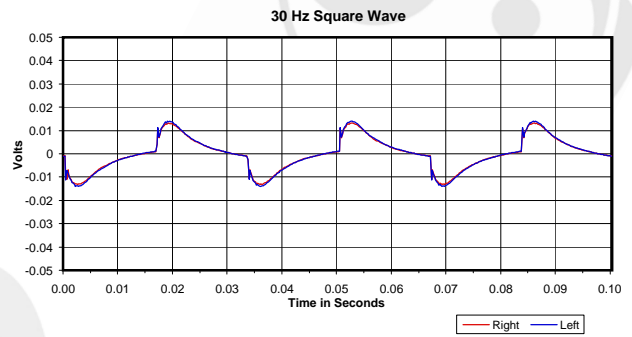
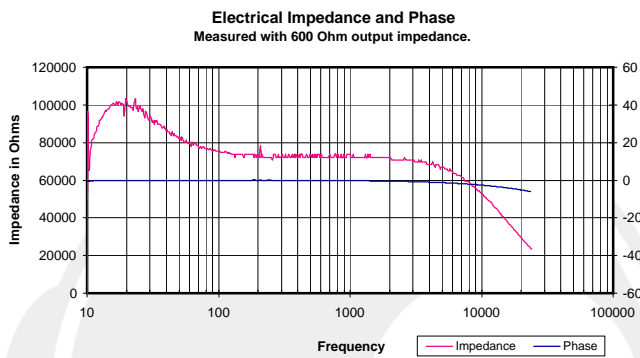
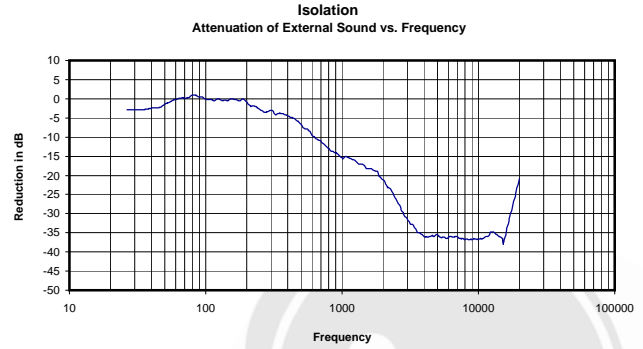
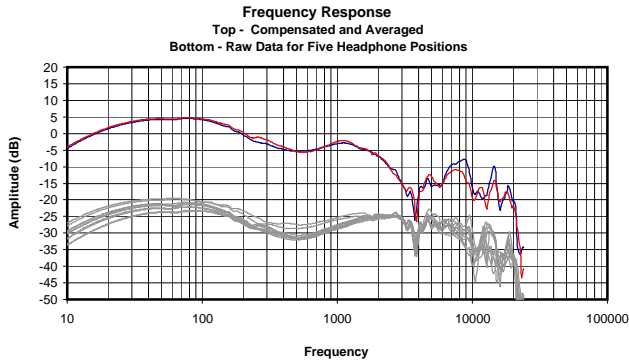
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
25 Ohms
0.06 mW
-13 dBr

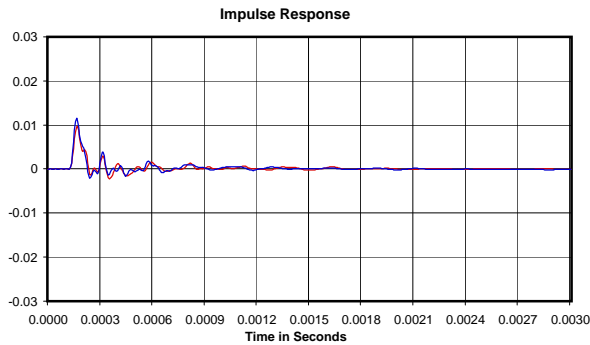
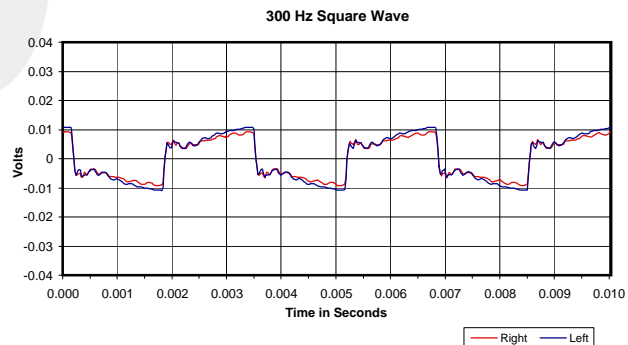
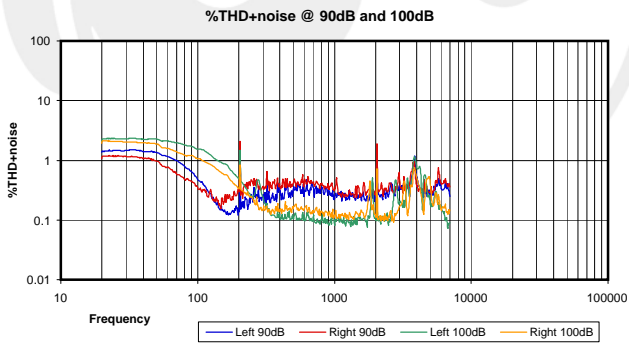
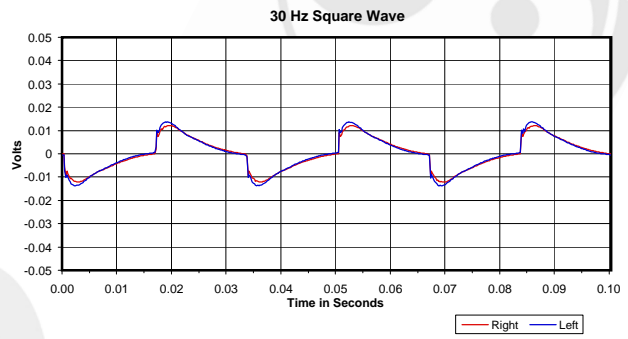
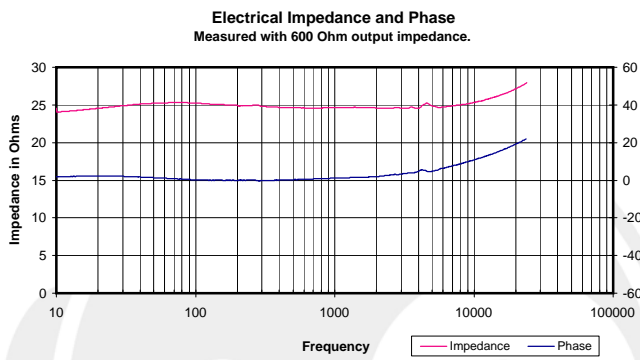
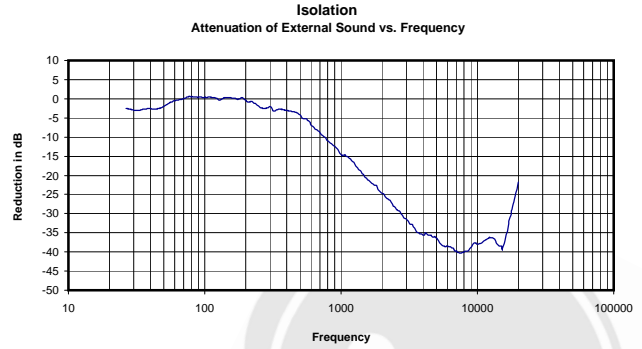
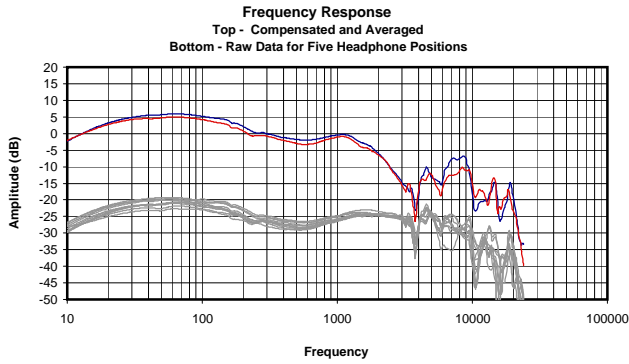




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.057 Vrms
72699 Ohms
0.00 mW
-17 dB



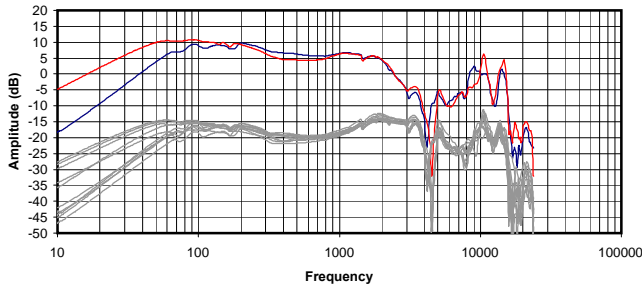


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

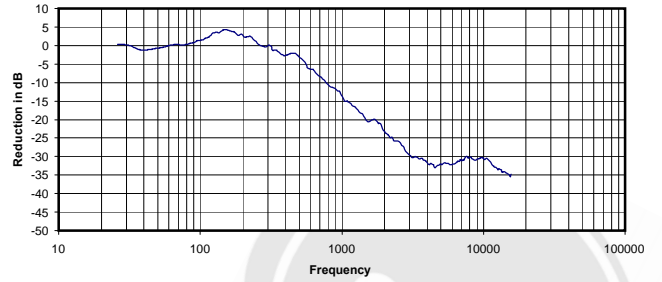
0.039 Vrms
25 Ohms
0.06 mW
-17 dB



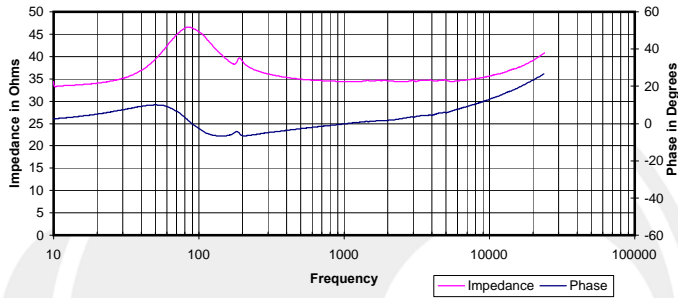
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



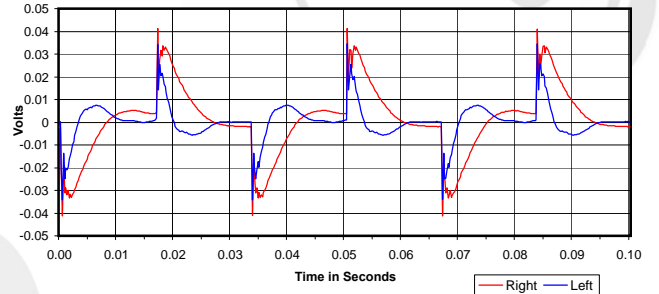
Isolation
Attenuation of External Sound vs. Frequency



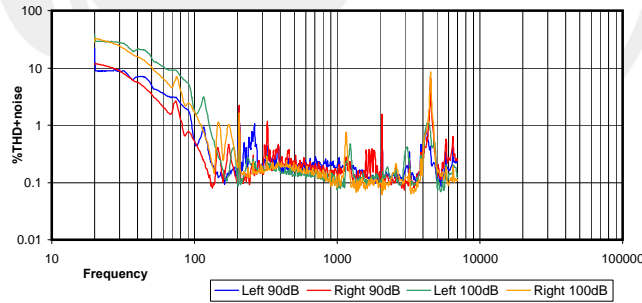
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



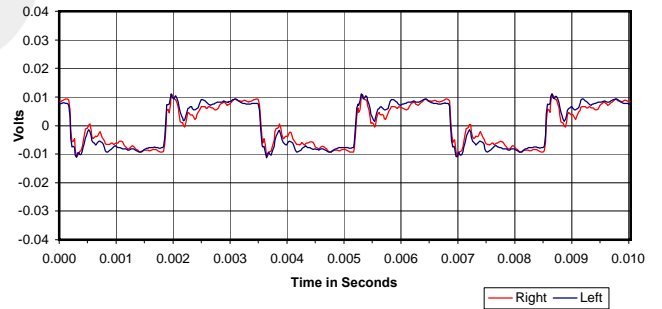
30 Hz Square Wave



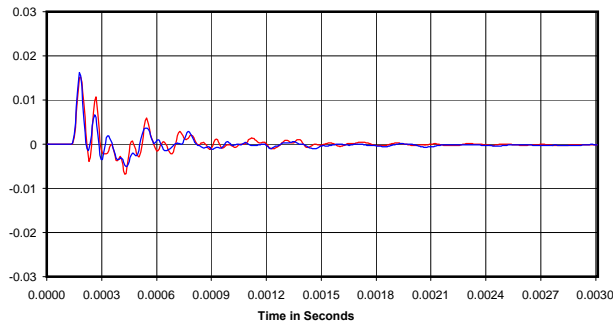
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

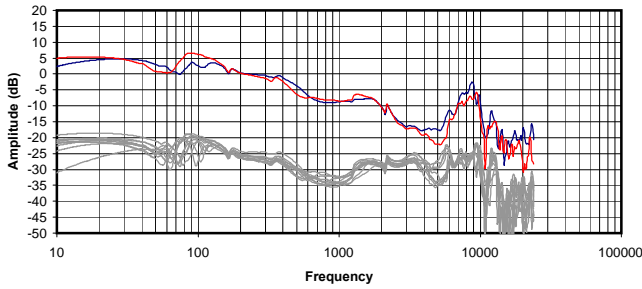


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

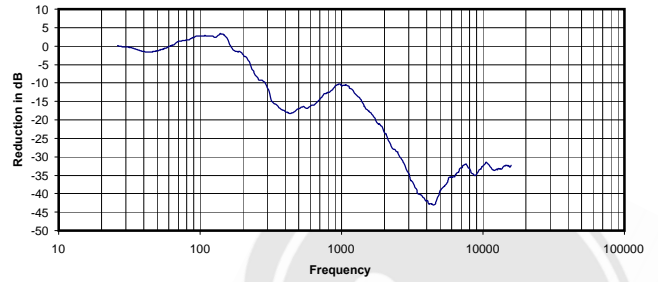
0.040 Vrms
34 Ohms
0.05 mW
-12 dB



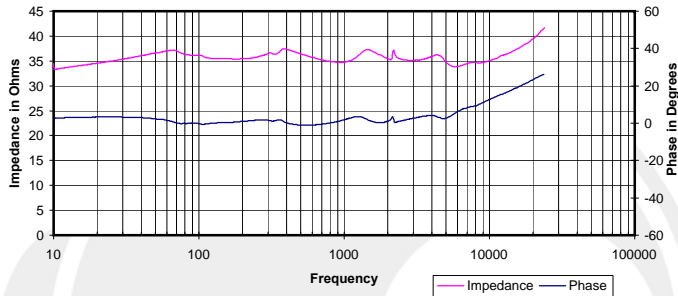
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



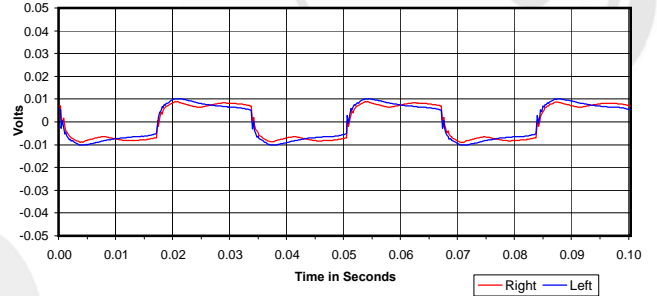
Isolation
 Attenuation of External Sound vs. Frequency



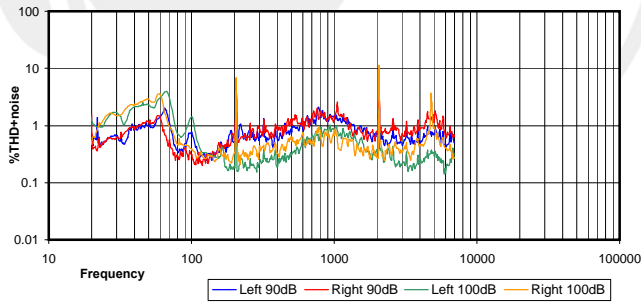
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



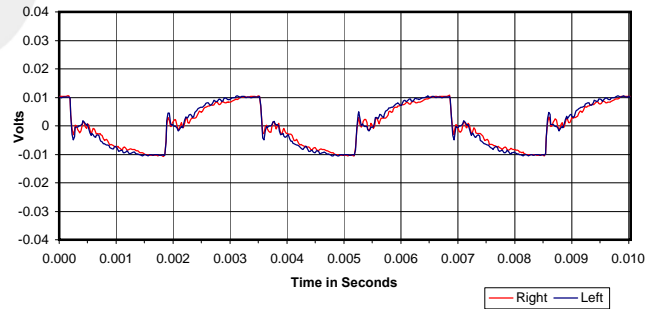
30 Hz Square Wave



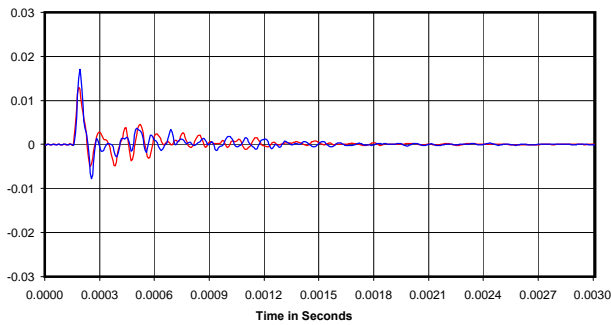
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

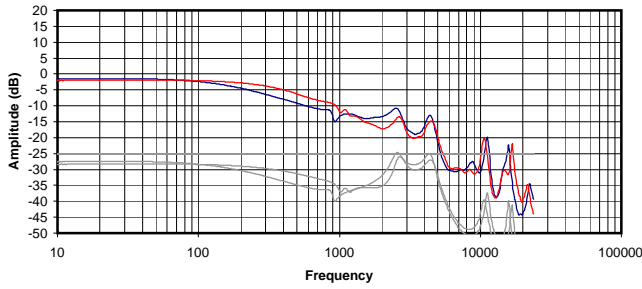


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

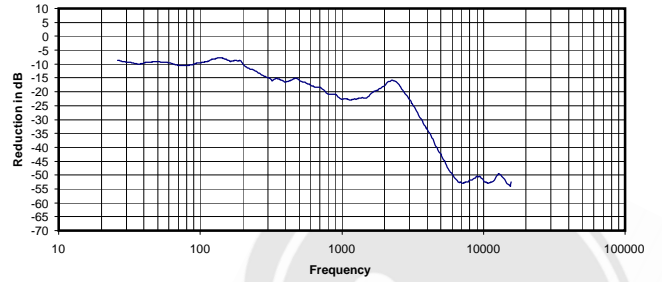
0.117 Vrms
 35 Ohms
 0.39 mW
 -17 dB



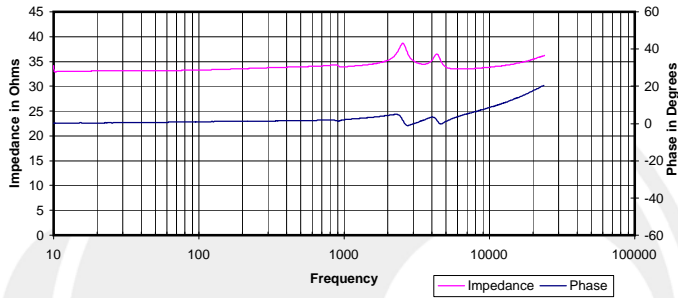
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



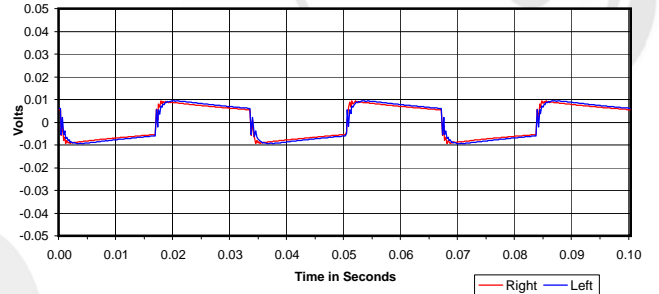
Isolation
Attenuation of External Sound vs. Frequency



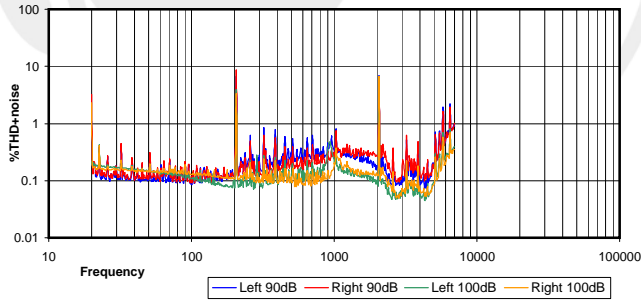
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



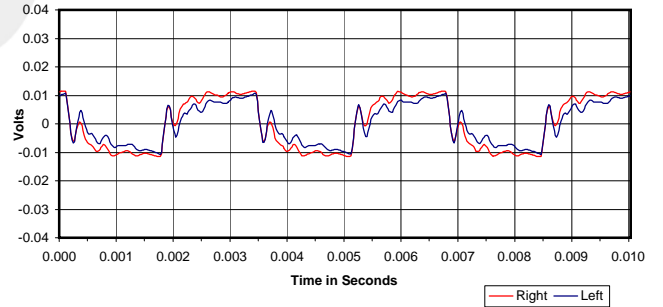
30 Hz Square Wave



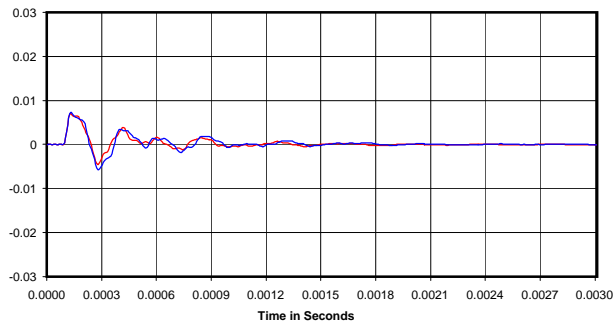
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



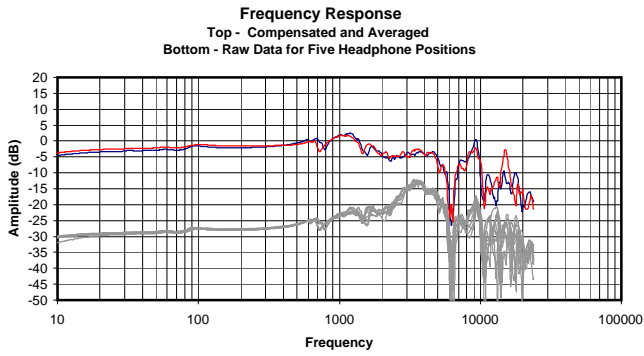
Impulse Response



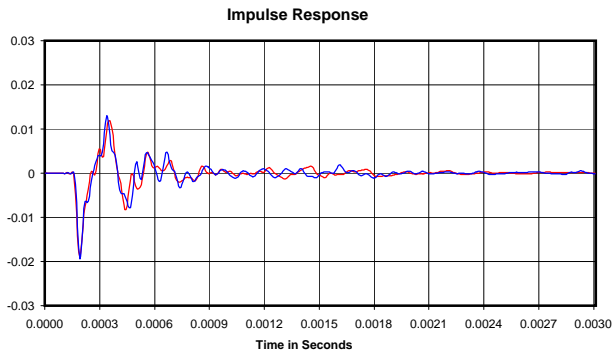
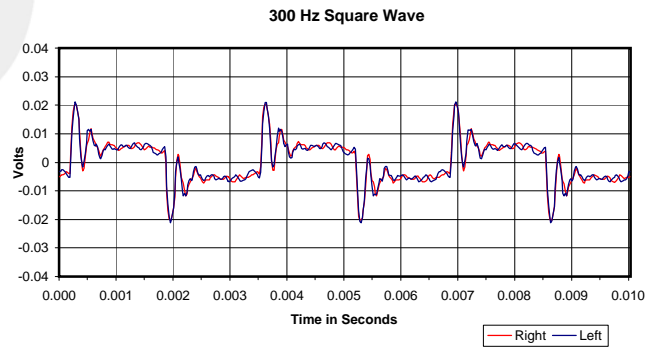
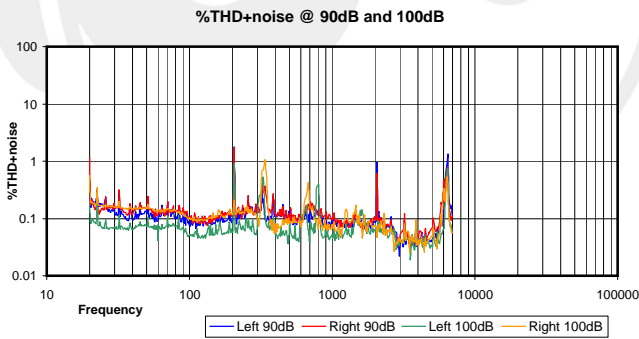
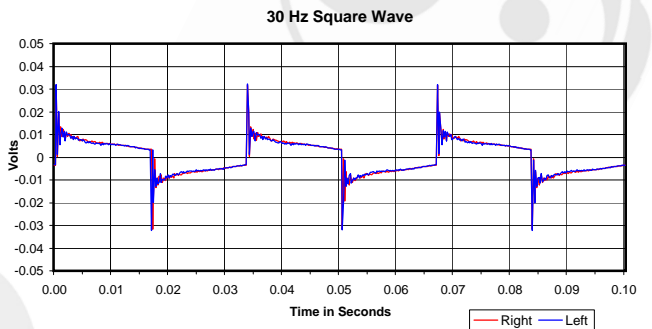
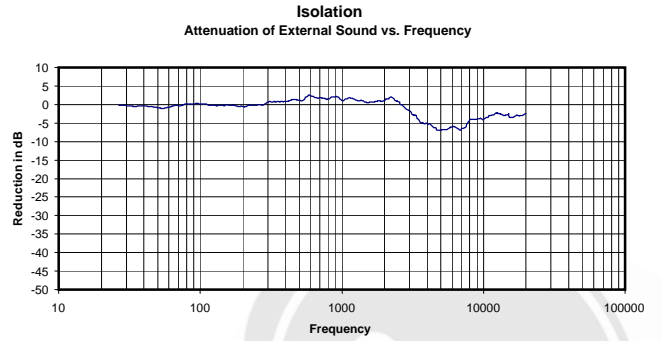
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.022 Vrms
34 Ohms
0.01 mW
-20 dB





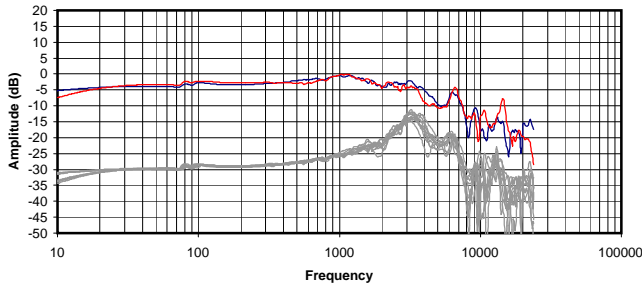
Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

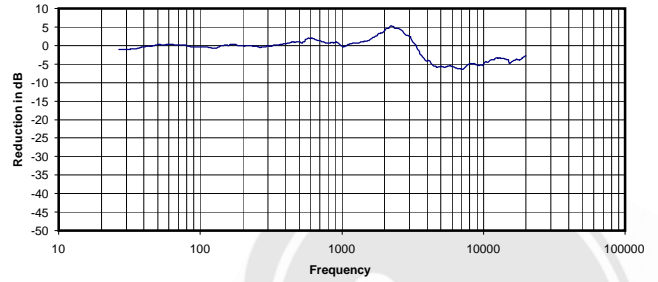
-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

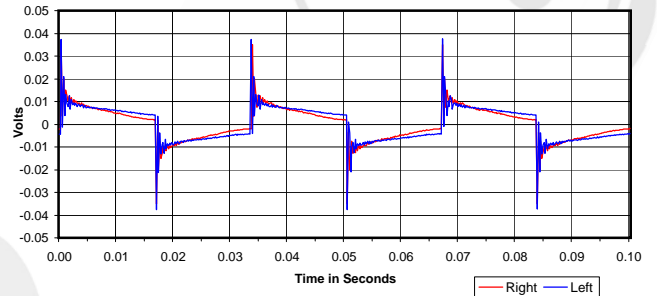


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

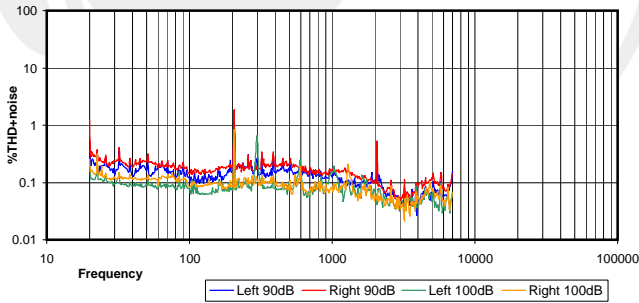
Isolation
 Attenuation of External Sound vs. Frequency



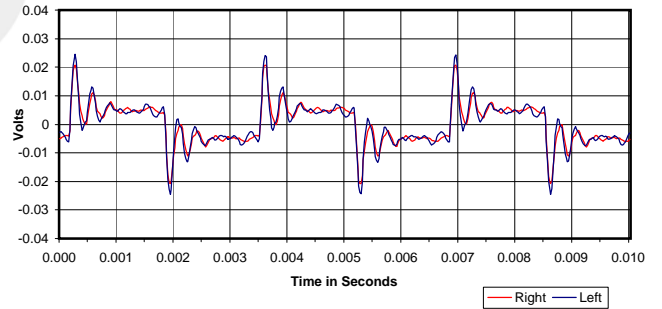
30 Hz Square Wave



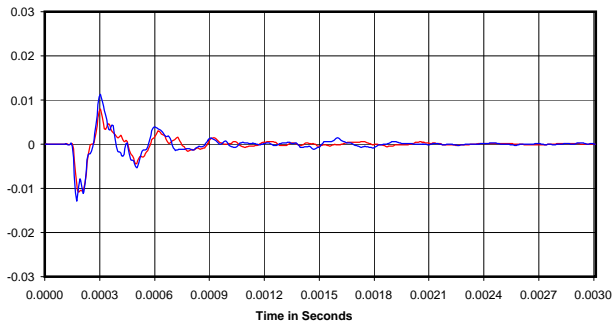
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



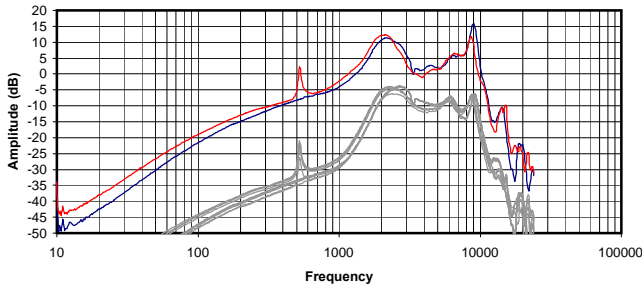
Impulse Response



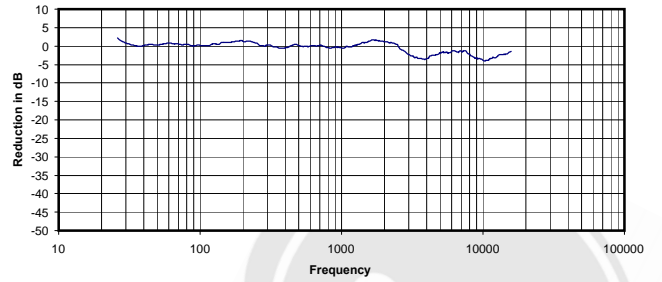
Broadband Isolation in dB (100Hz to 10kHz):

-1 dB

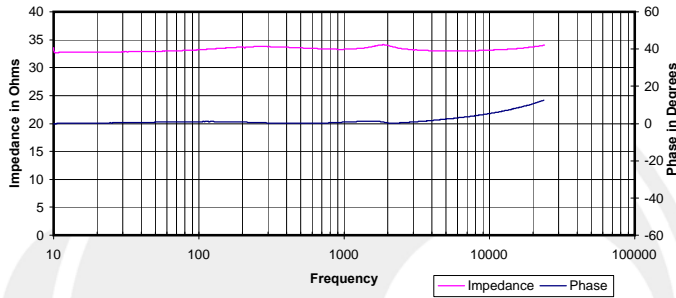
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



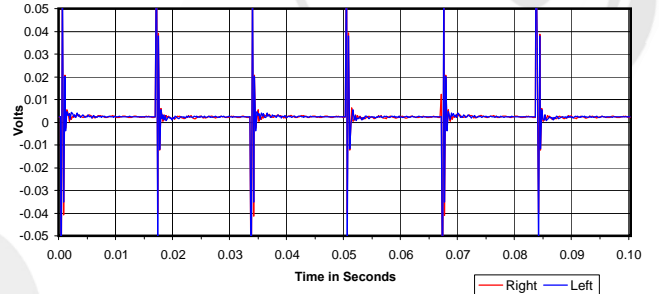
Isolation
 Attenuation of External Sound vs. Frequency



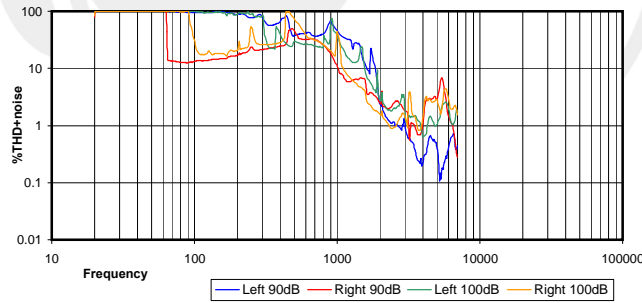
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



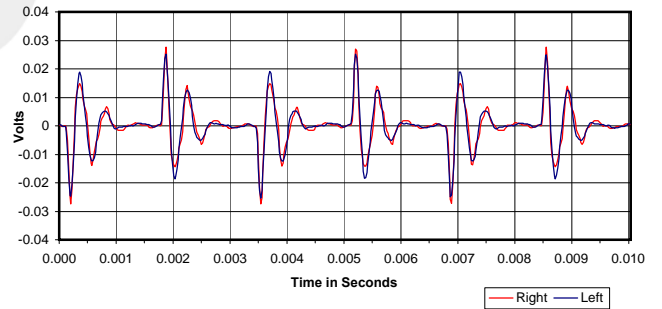
30 Hz Square Wave



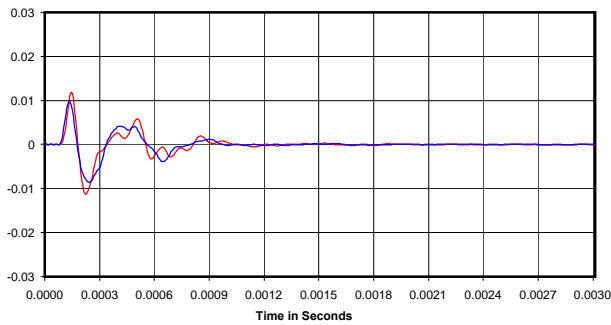
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

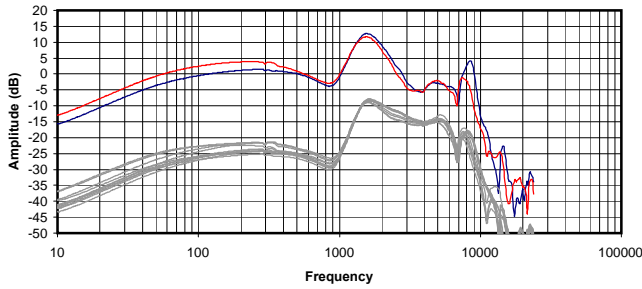


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

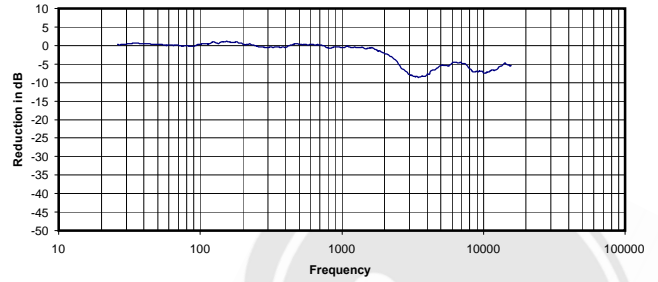
0.298 Vrms
 33 Ohms
 2.66 mW
 0 dB



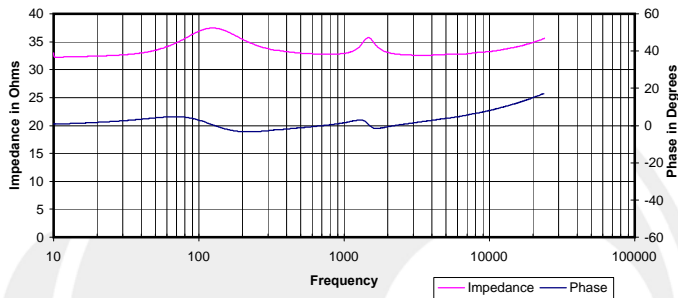
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



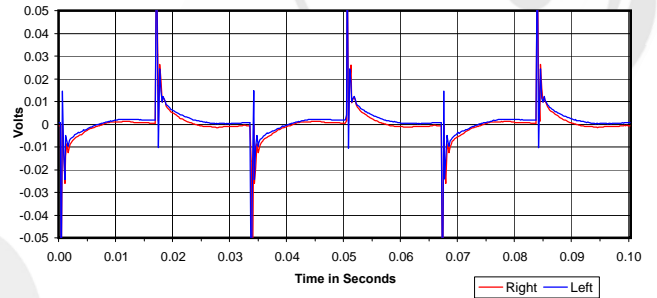
Isolation
 Attenuation of External Sound vs. Frequency



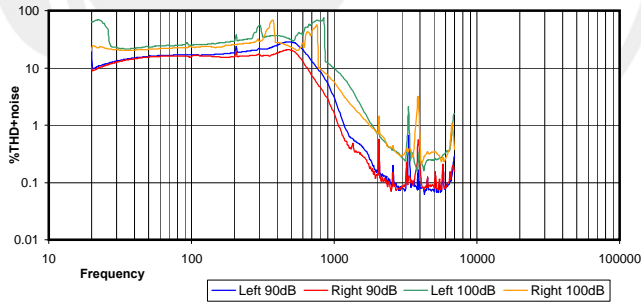
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



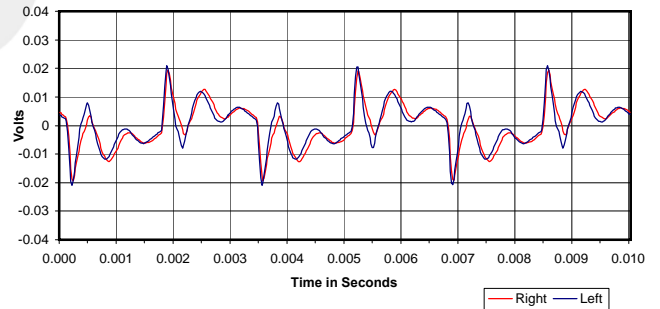
30 Hz Square Wave



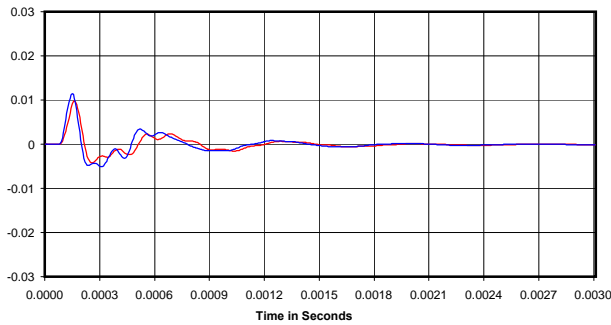
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



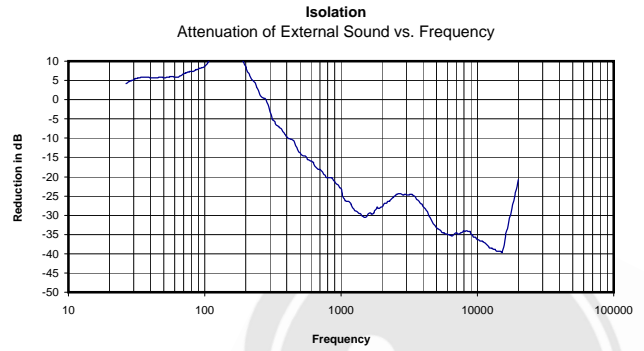
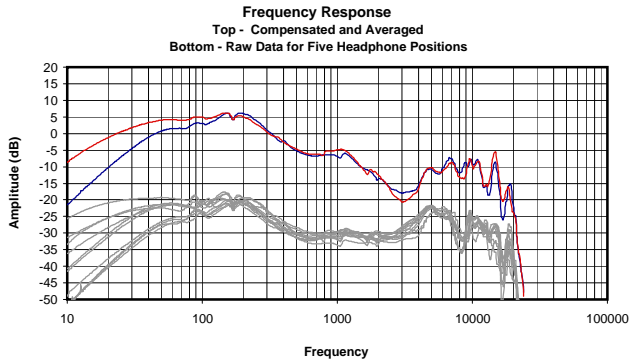
Impulse Response



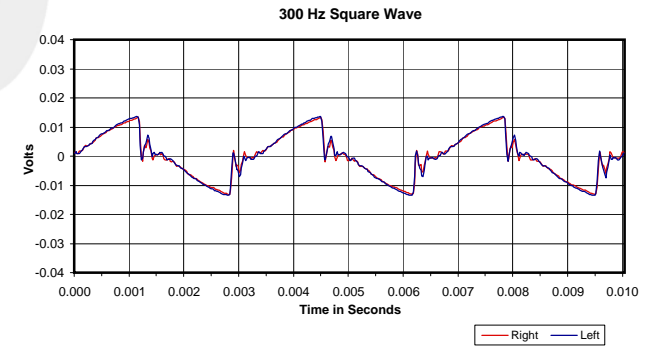
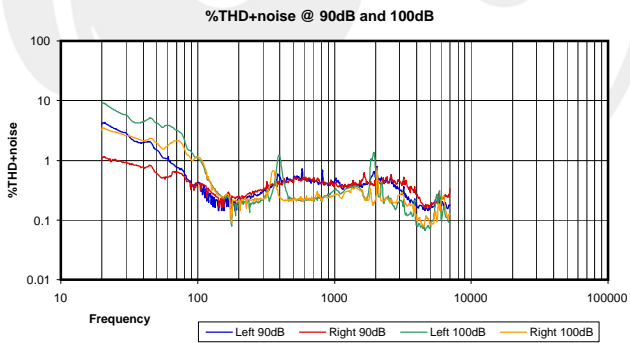
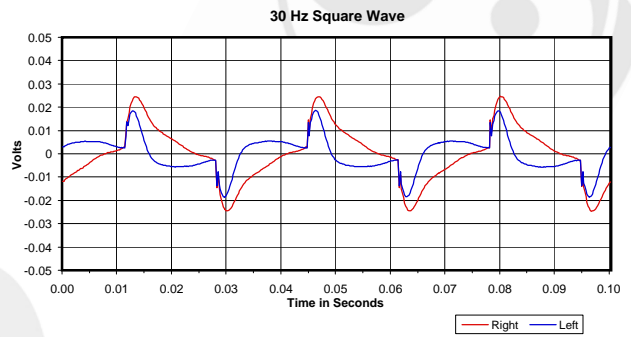
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.121 Vrms
 33 Ohms
 0.44 mW
 -2 dB



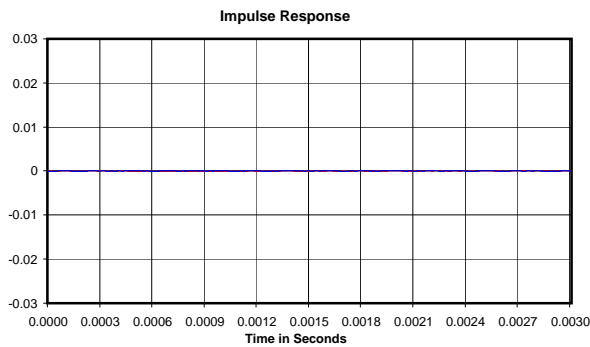
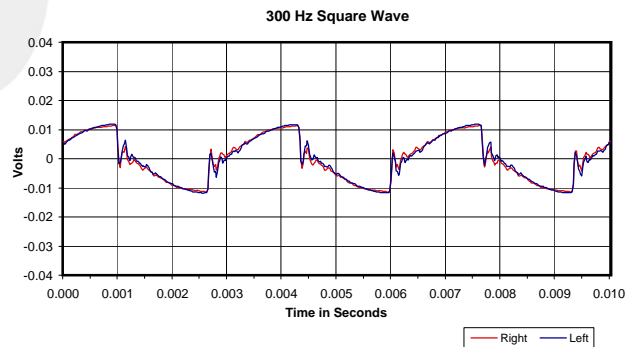
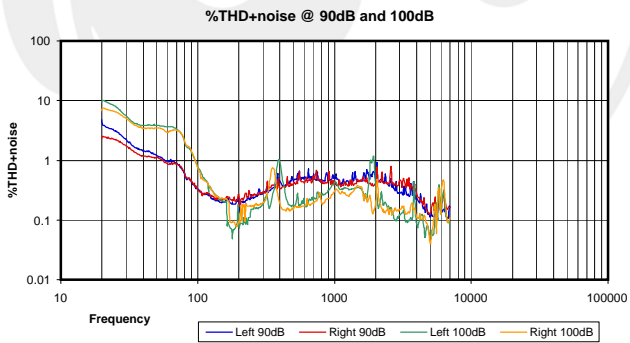
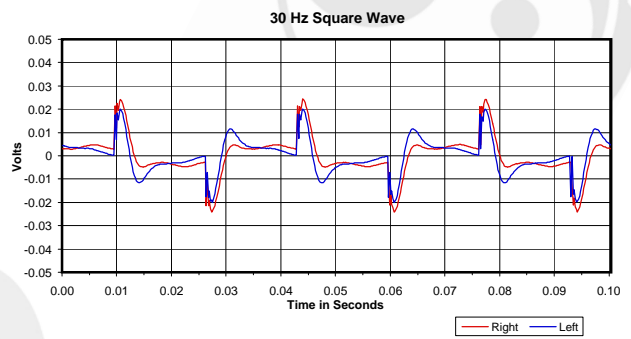
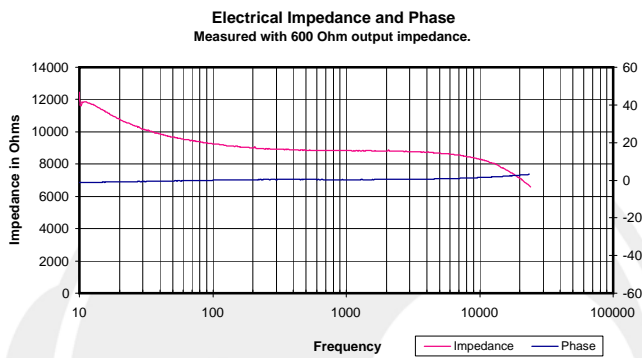
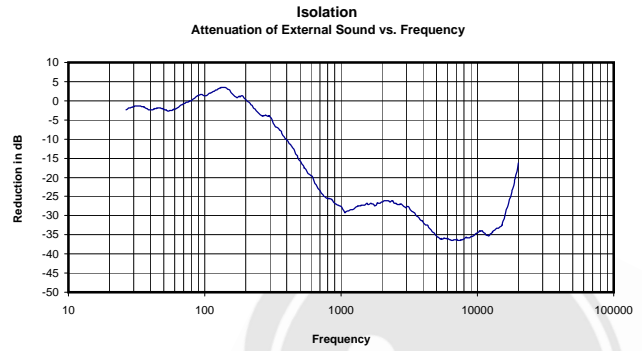
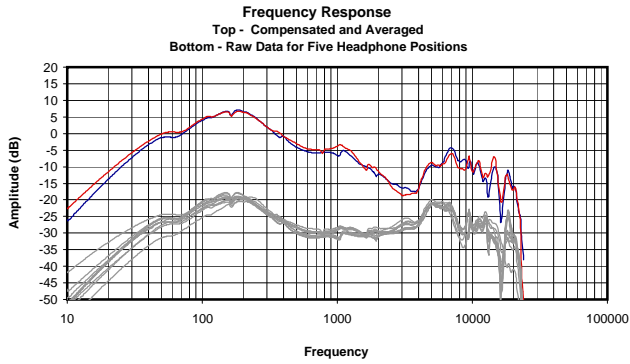


Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz): -17 dBr

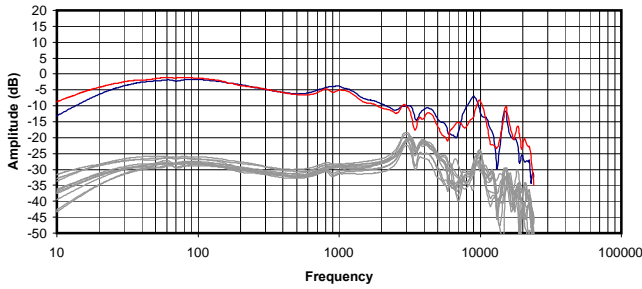
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



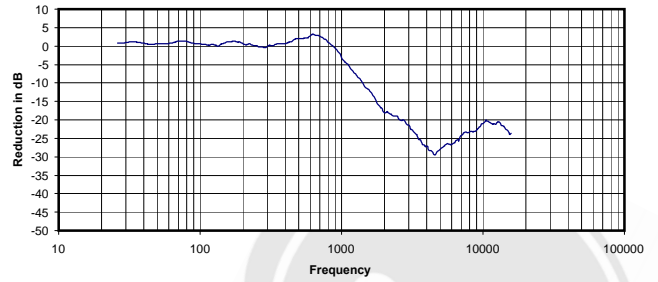
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.068 Vrms
8839 Ohms
0.00 mW
-20 dBr

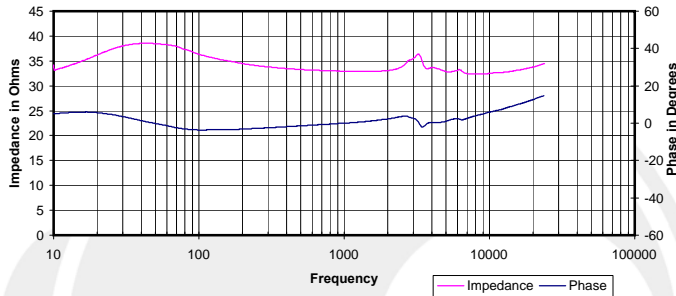
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



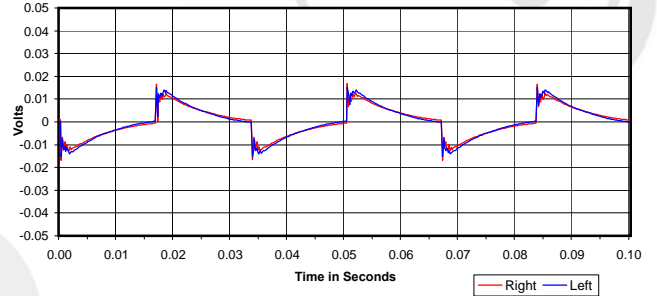
Isolation
Attenuation of External Sound vs. Frequency



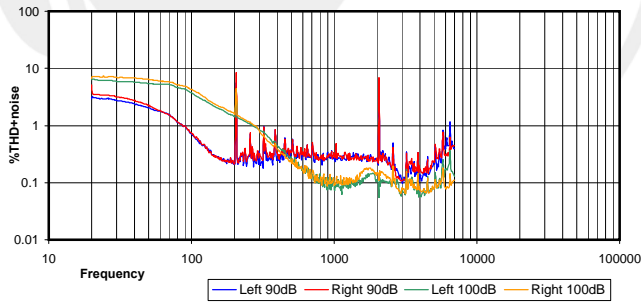
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



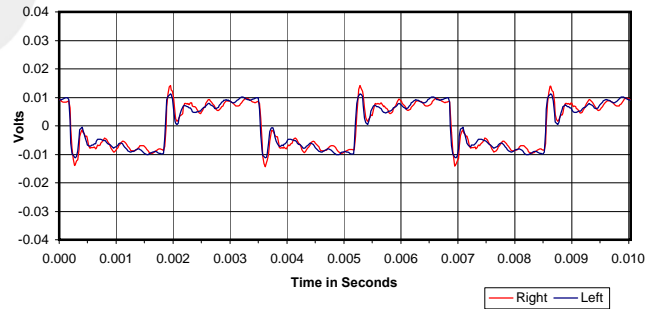
30 Hz Square Wave



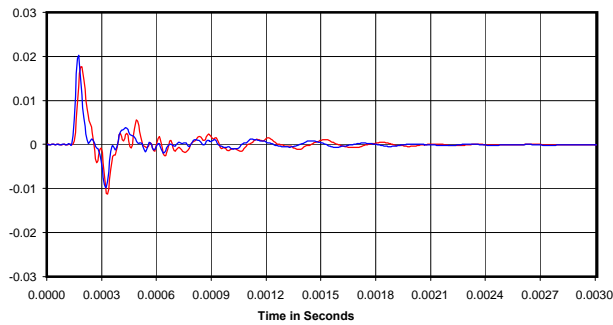
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

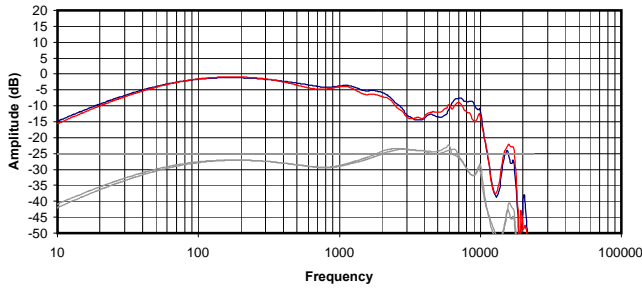


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

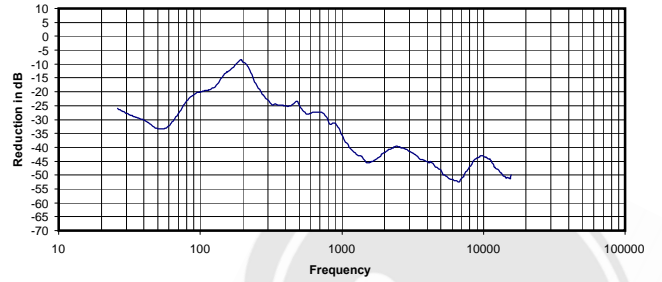
0.039 Vrms
33 Ohms
0.05 mW
-8 dB



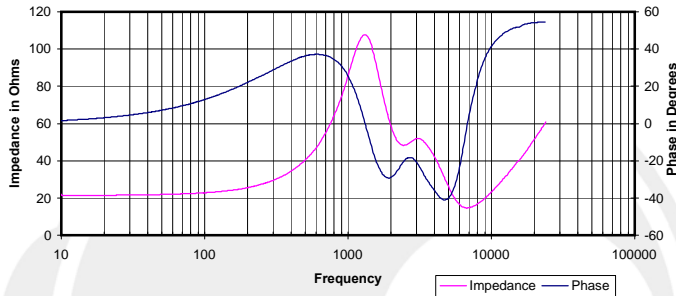
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



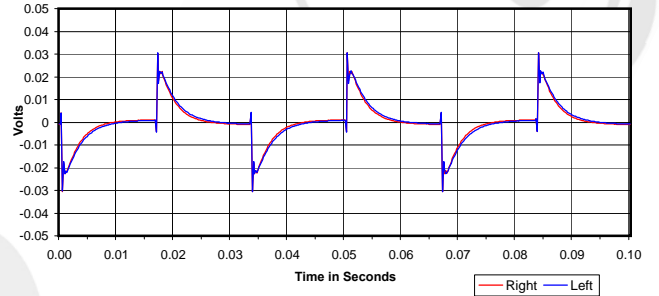
Isolation
Attenuation of External Sound vs. Frequency



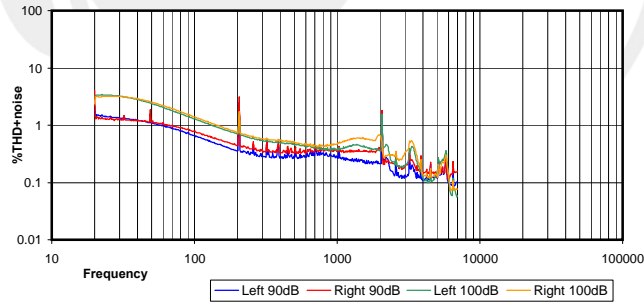
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



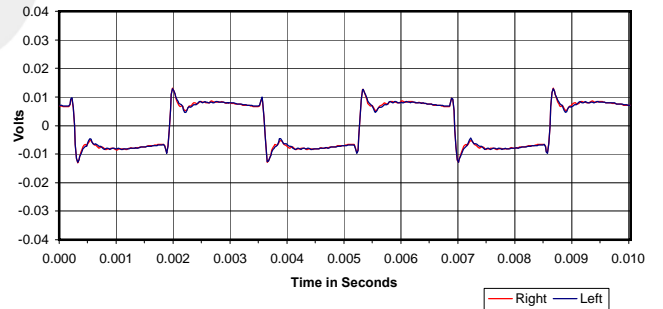
30 Hz Square Wave



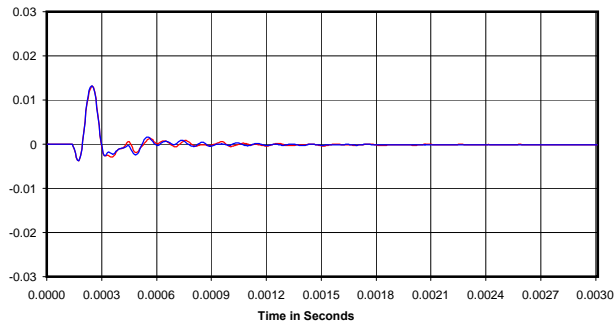
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

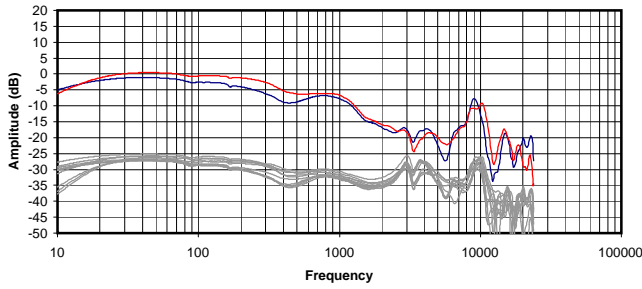


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

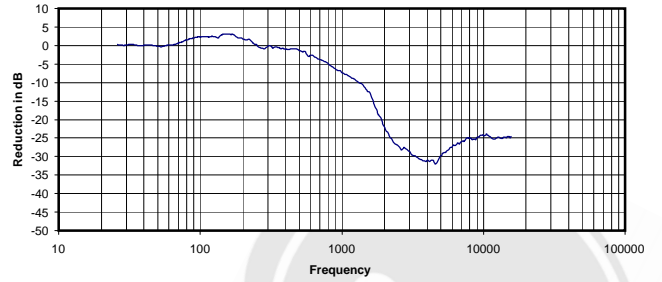
0.014 Vrms
86 Ohms
0.00 mW
-31 dB



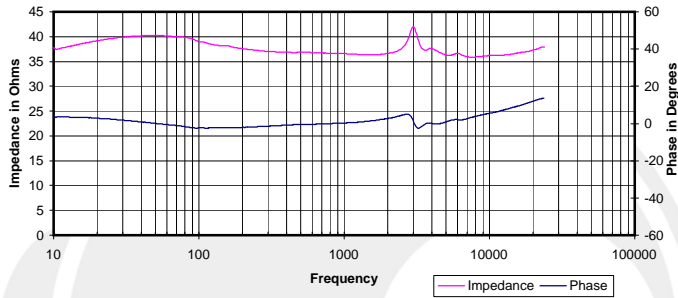
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



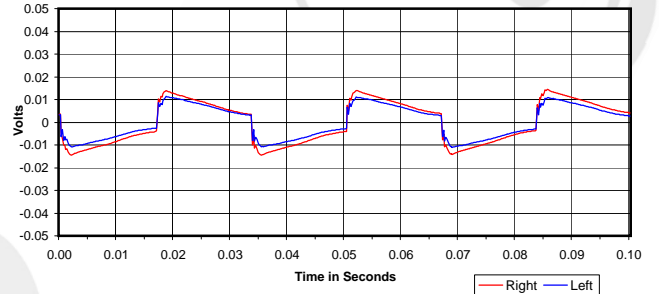
Isolation
Attenuation of External Sound vs. Frequency



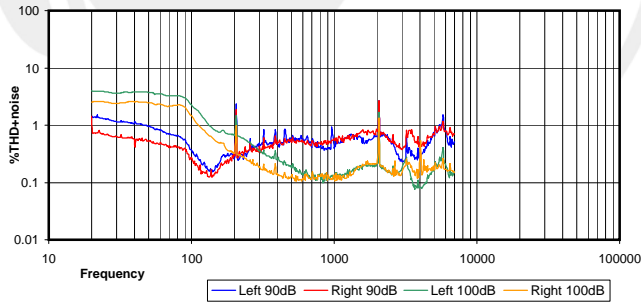
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



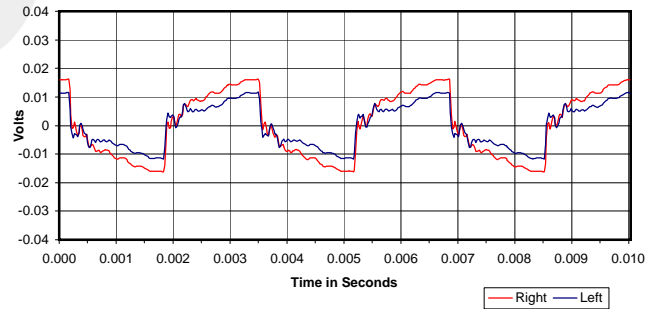
30 Hz Square Wave



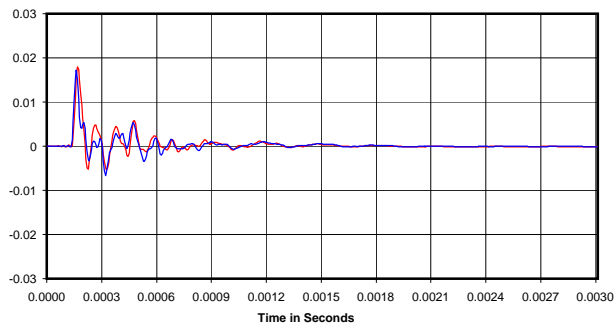
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



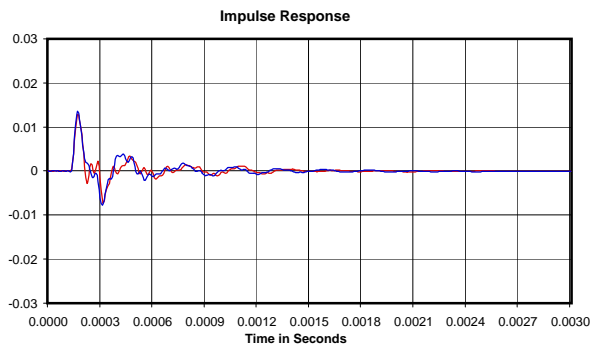
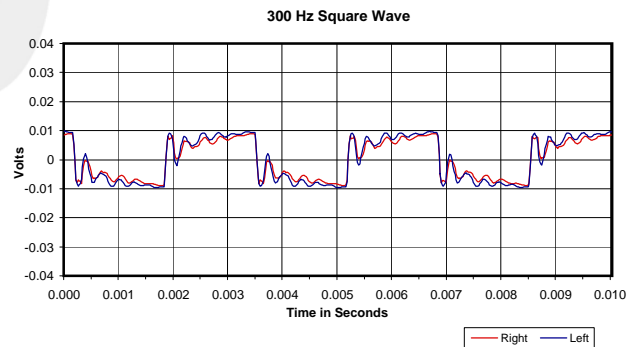
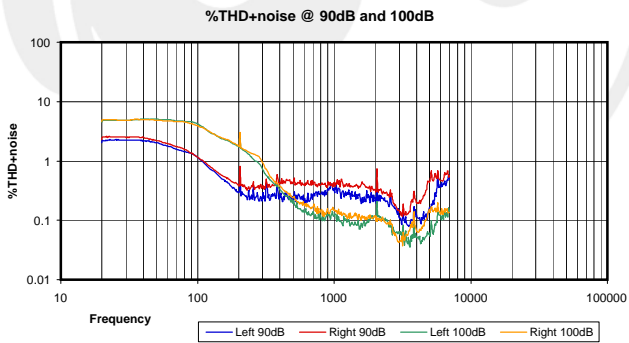
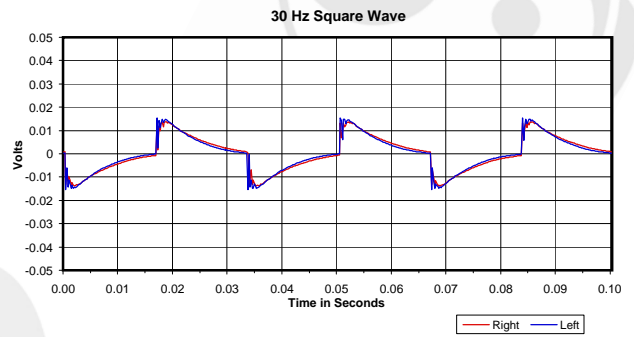
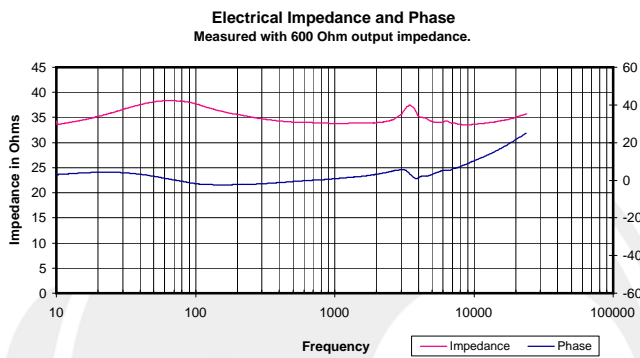
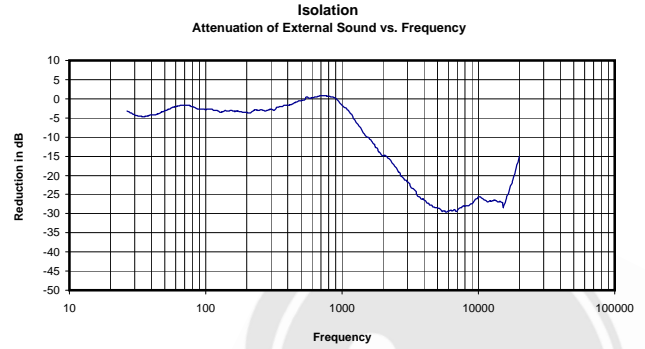
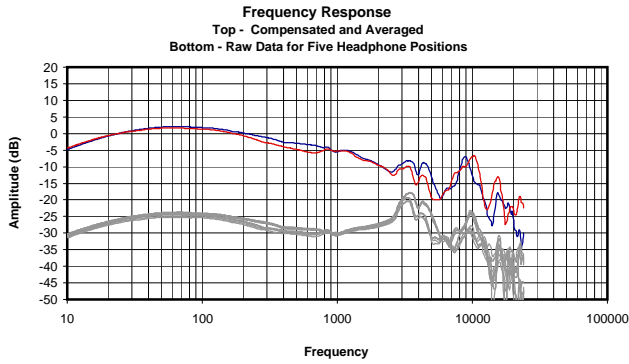
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.041 Vrms
37 Ohms
0.05 mW
-10 dB

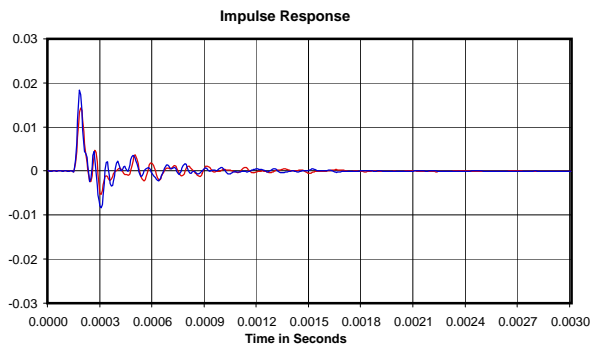
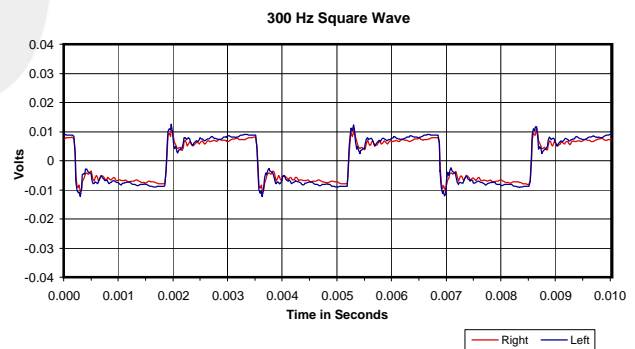
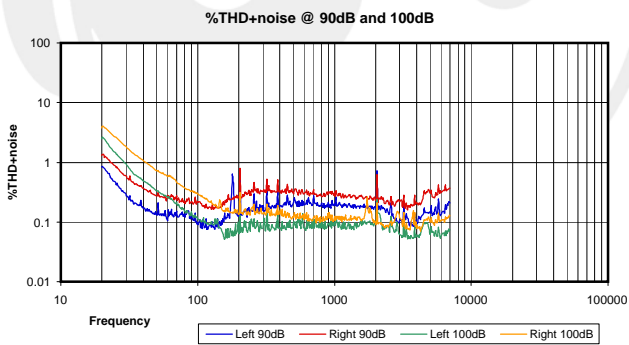
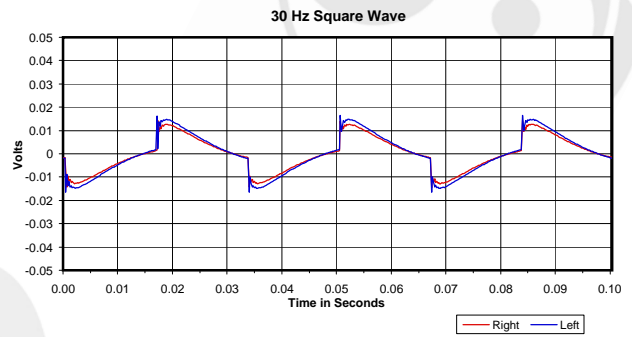
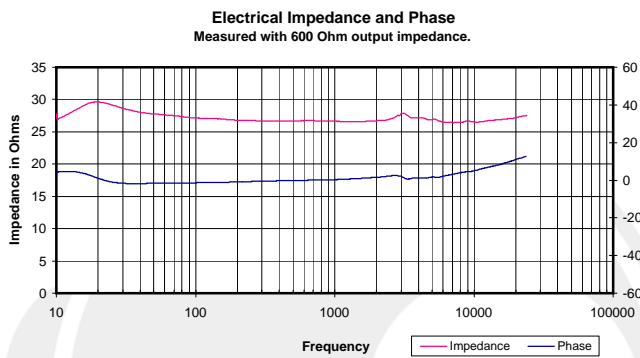
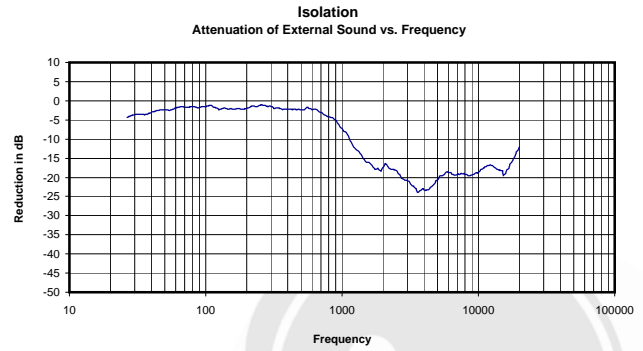
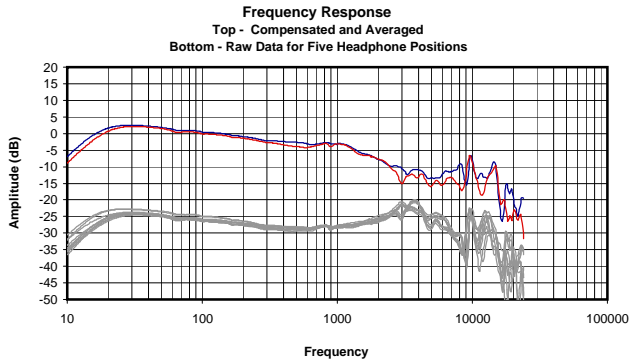




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.052 Vrms
34 Ohms
0.08 mW
-11 dB

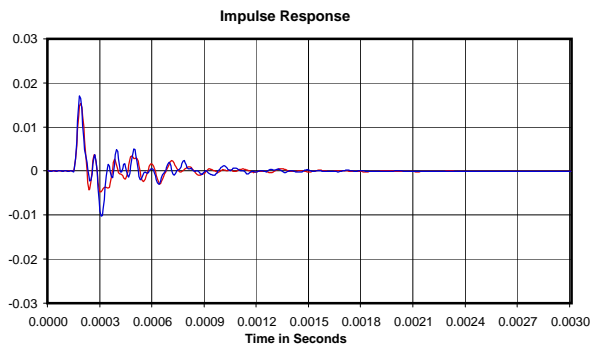
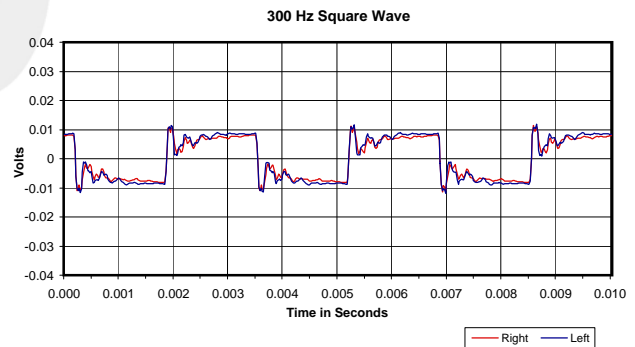
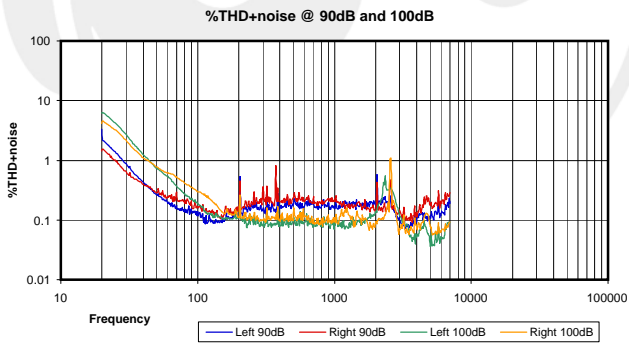
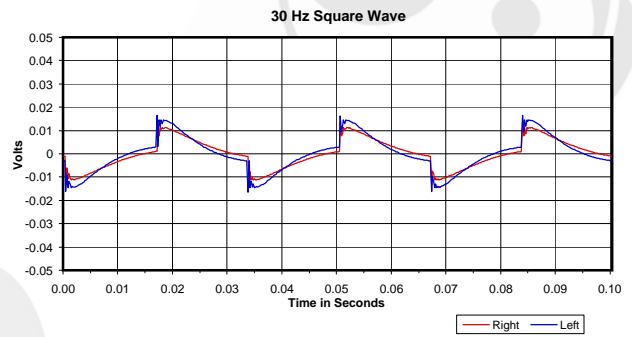
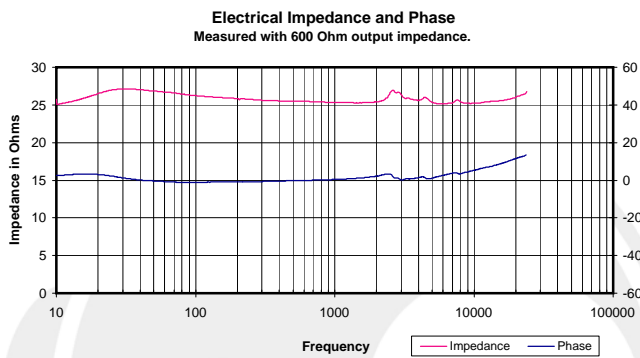
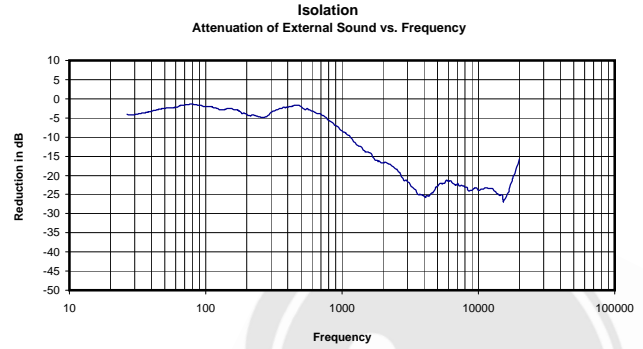
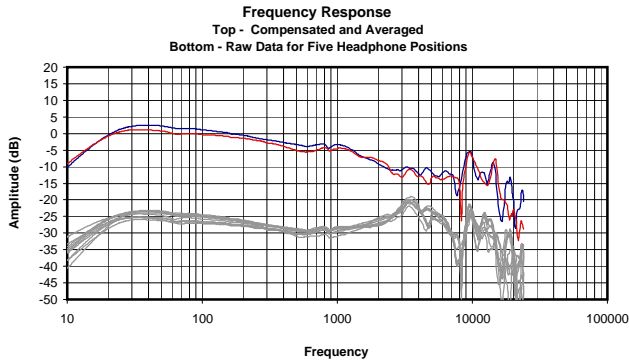




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
27 Ohms
0.11 mW
-10 dBr

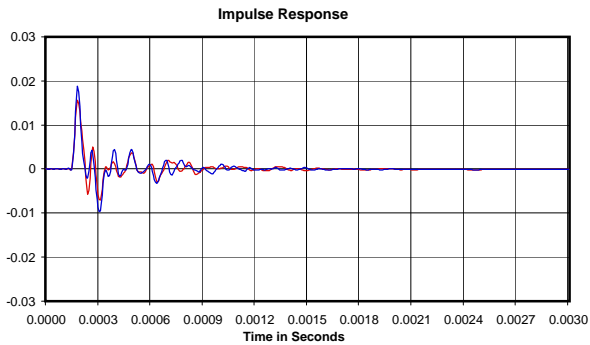
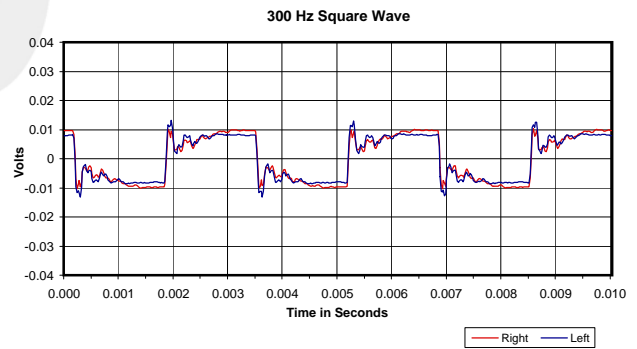
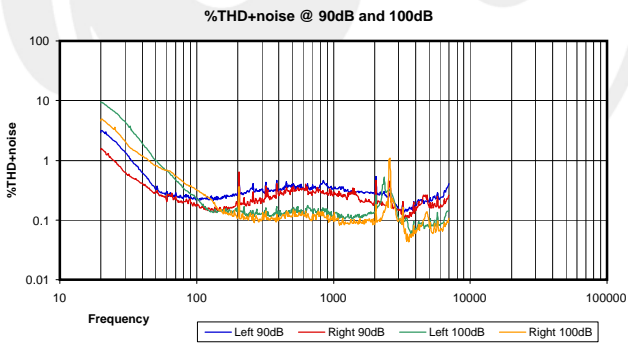
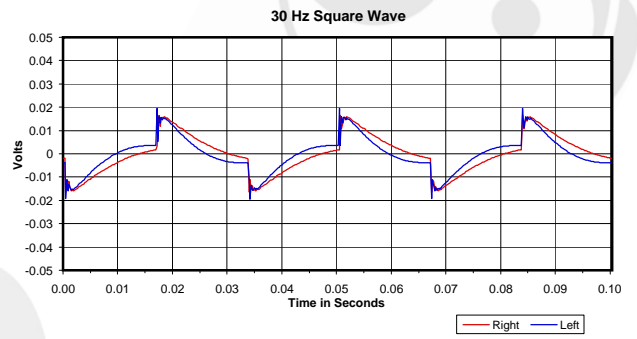
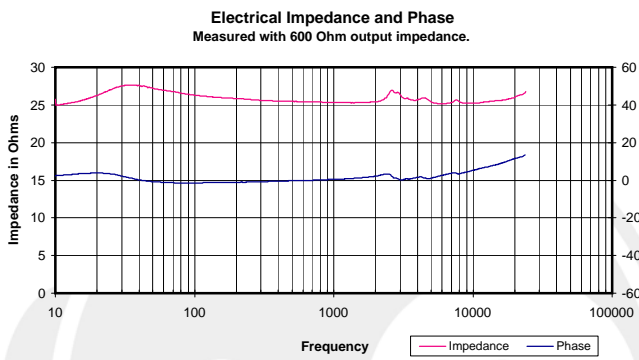
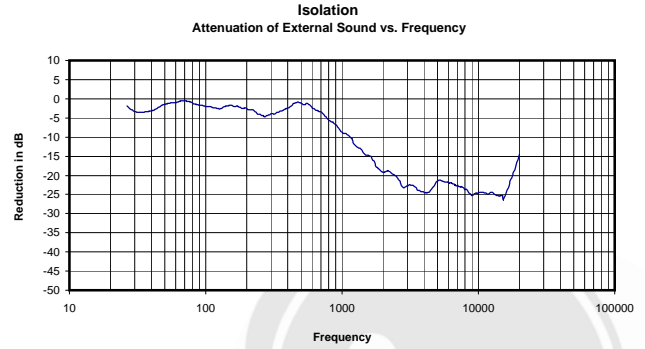
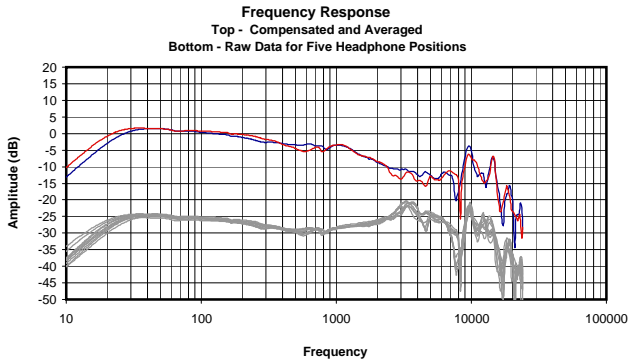




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
25 Ohms
0.12 mW
-12 dBr

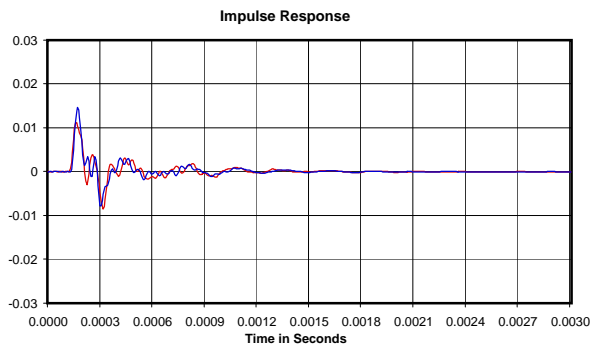
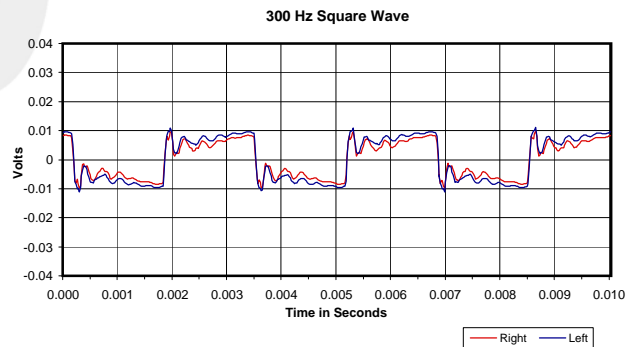
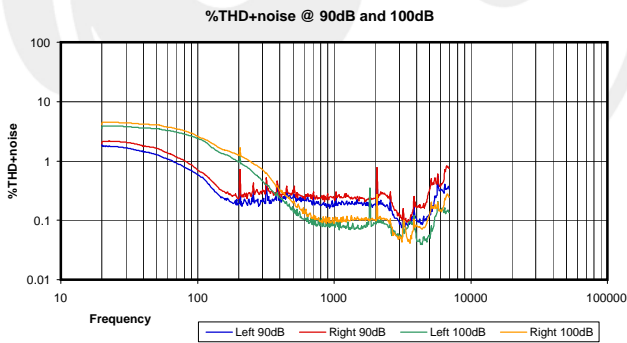
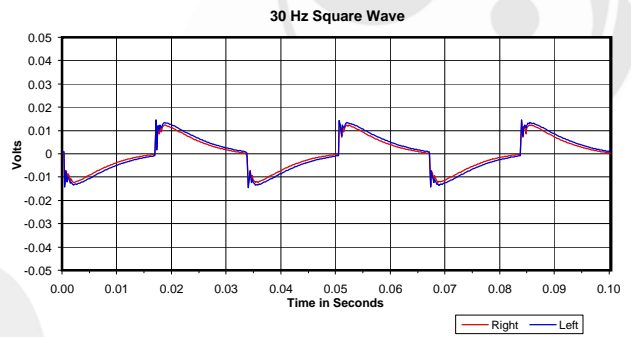
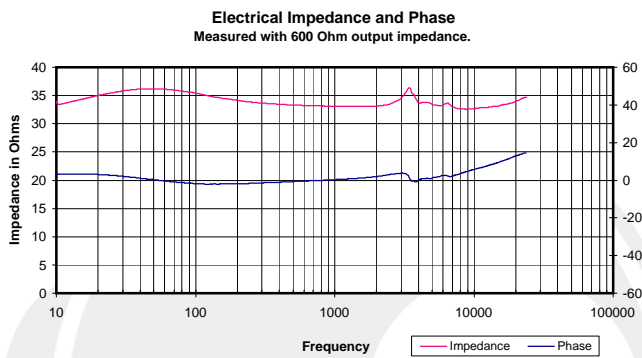
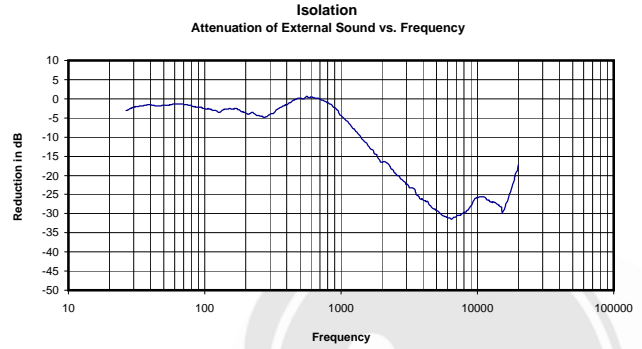
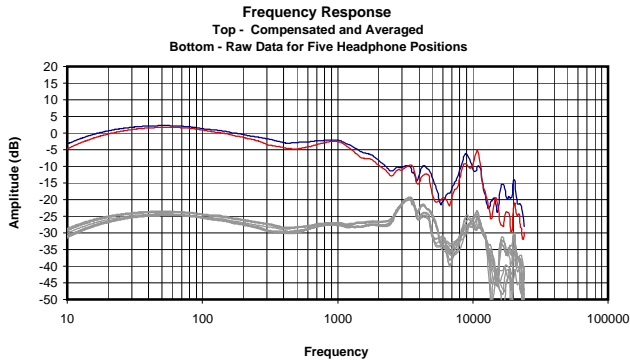




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.056 Vrms
25 Ohms
0.13 mW
-12 dBr

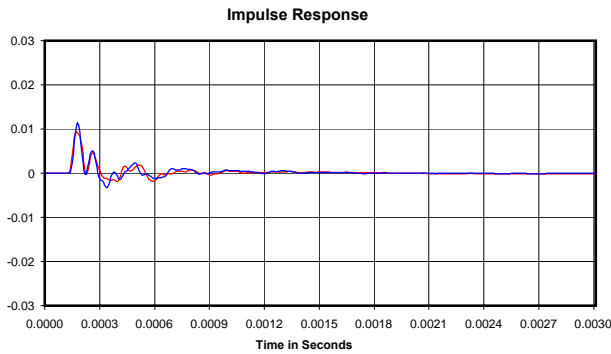
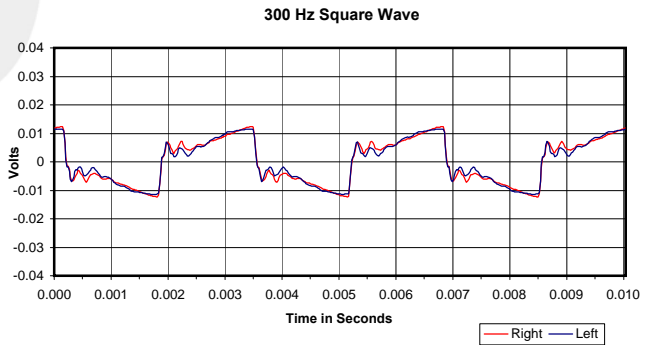
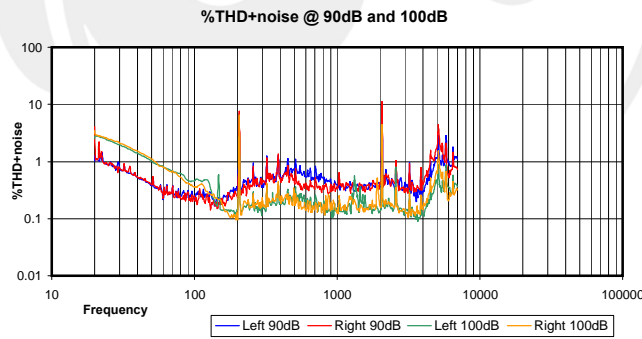
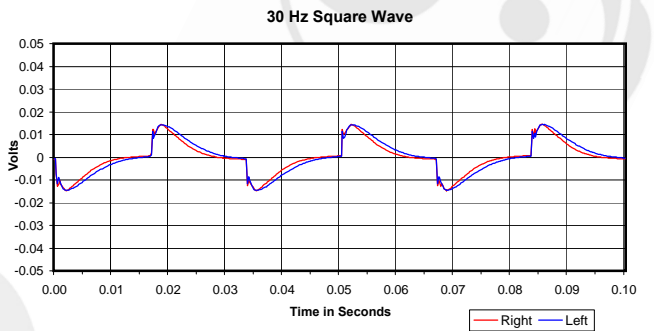
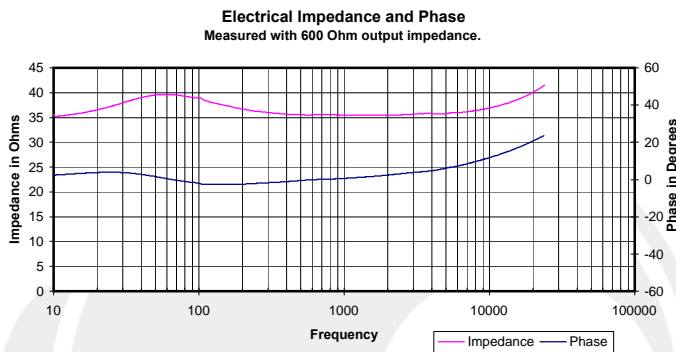
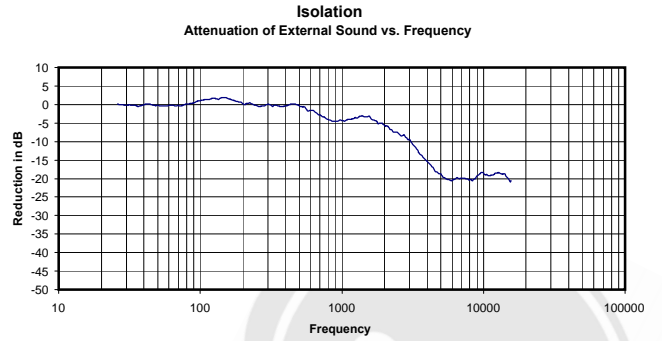
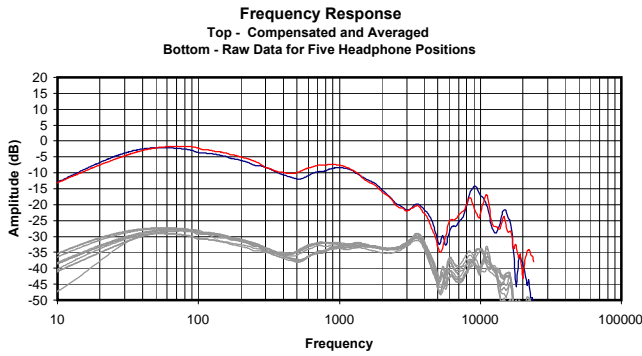




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
33 Ohms
0.03 mW
-12 dBr

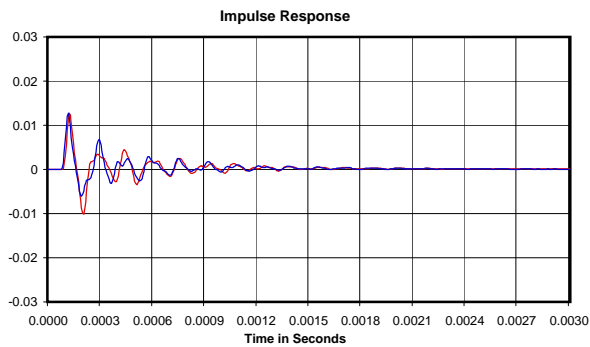
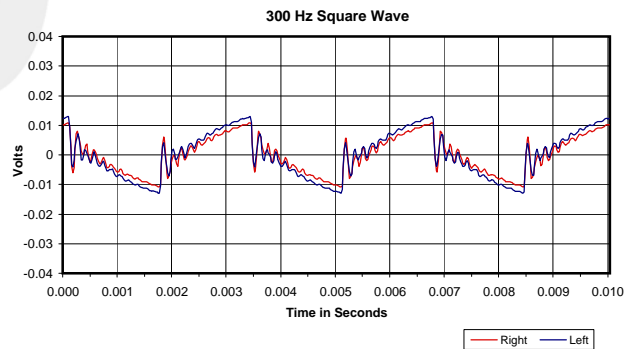
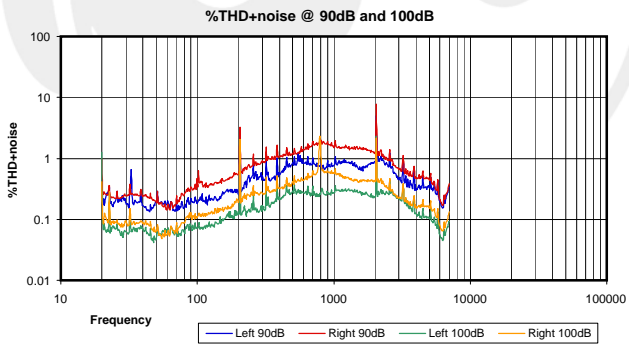
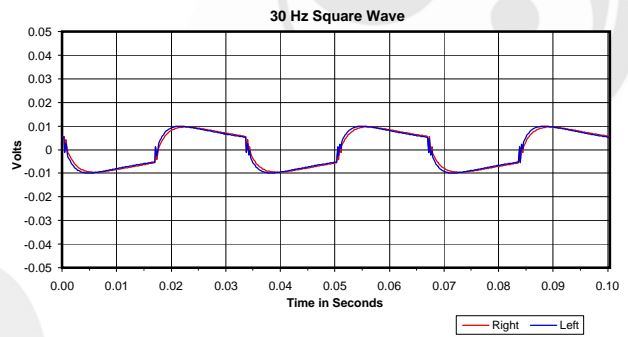
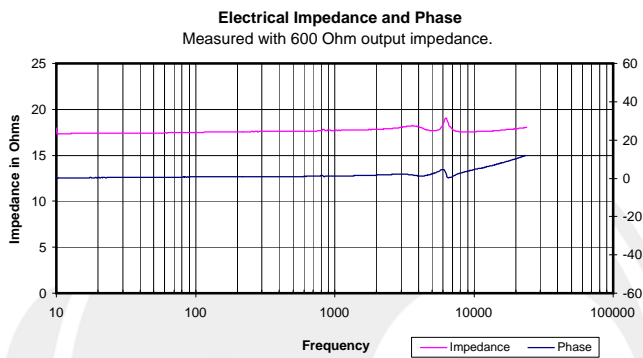
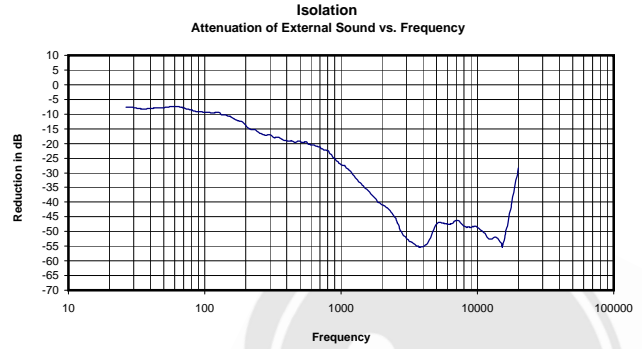
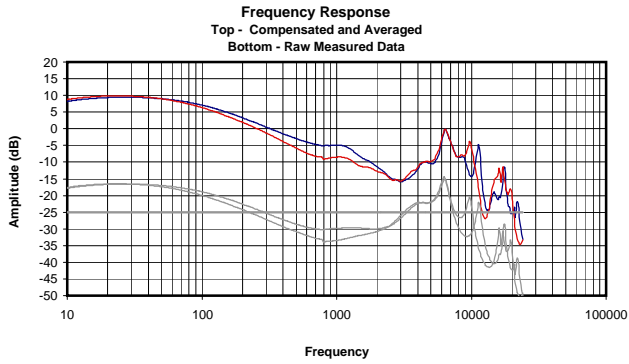




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.050 Vrms
35 Ohms
0.07 mW
-5 dB

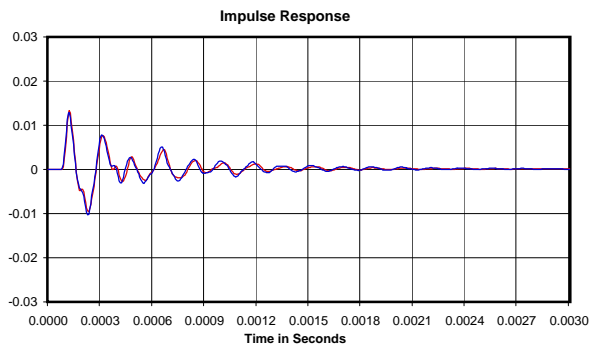
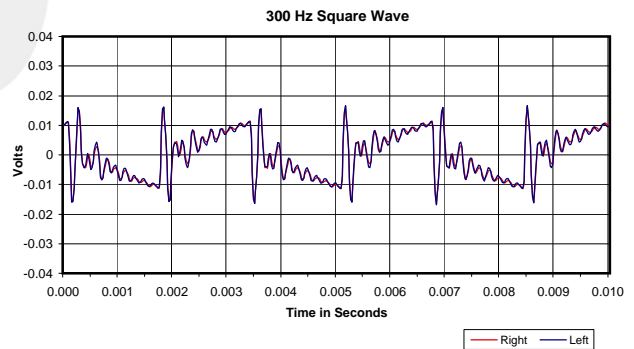
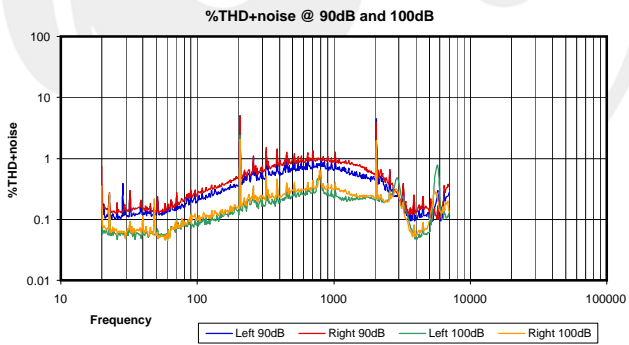
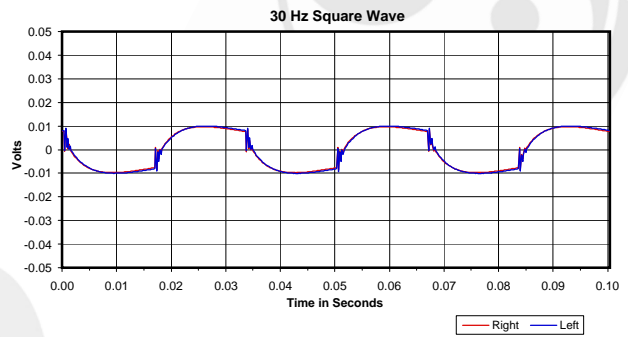
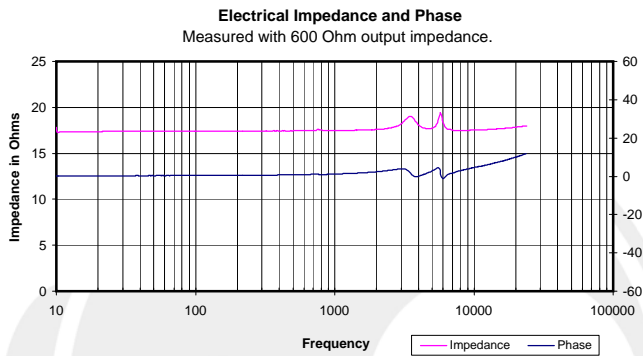
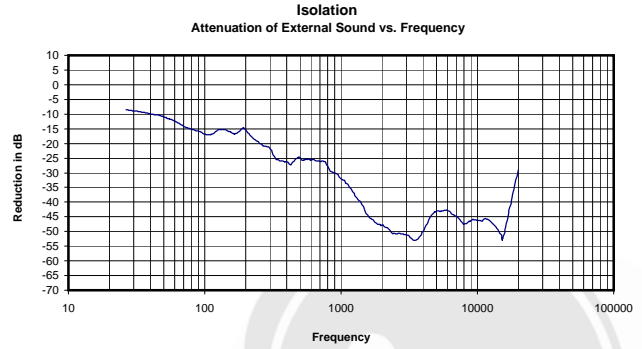
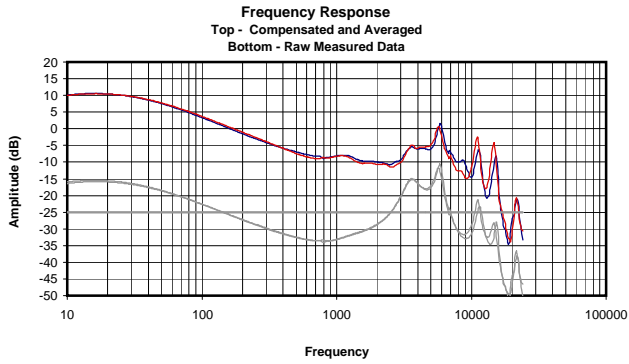




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
18 Ohms
0.02 mW
-31 dB





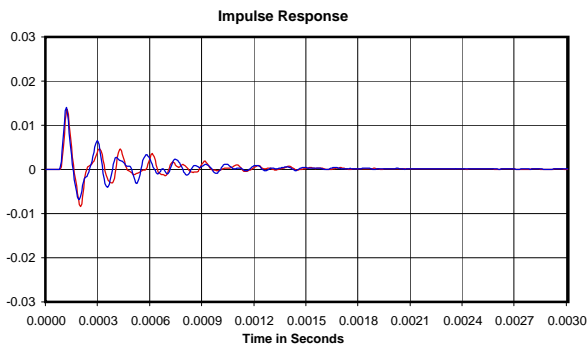
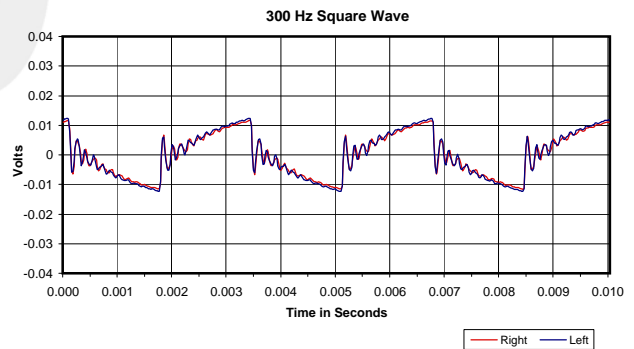
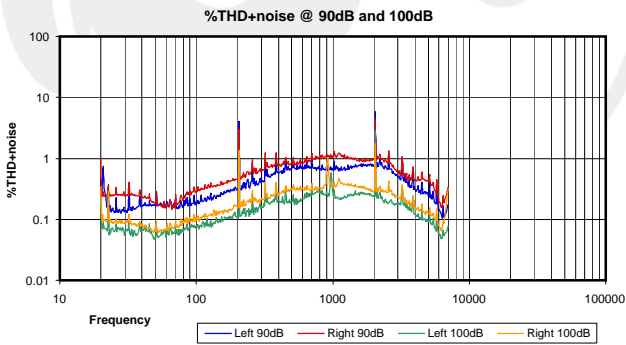
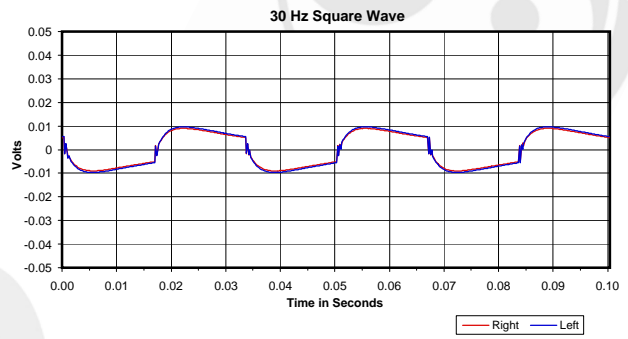
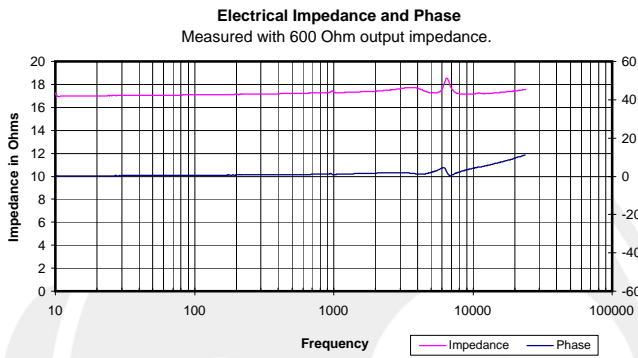
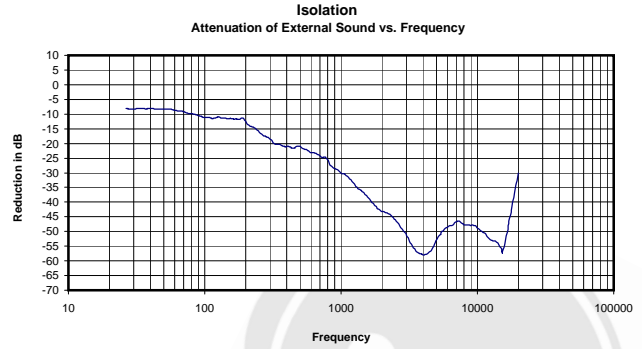
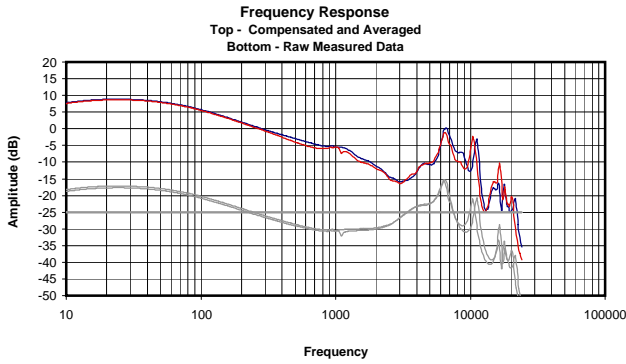
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.035 Vrms
17 Ohms
0.07 mW
-34 dBr





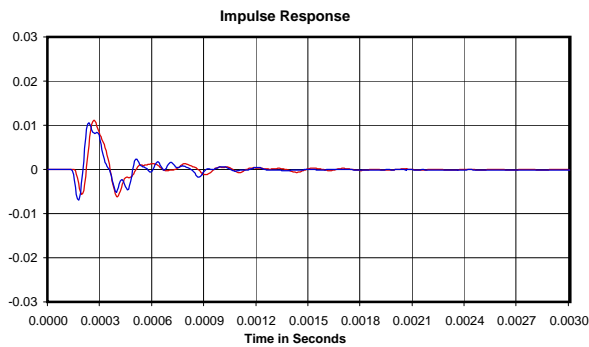
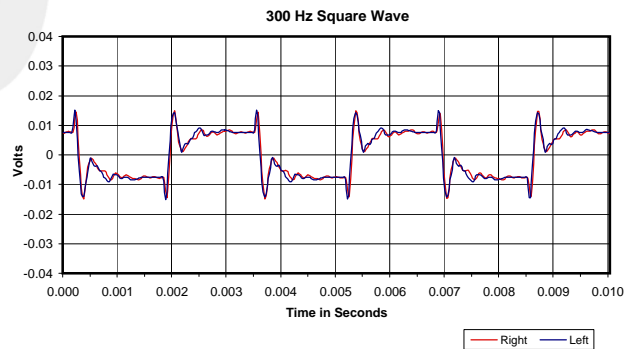
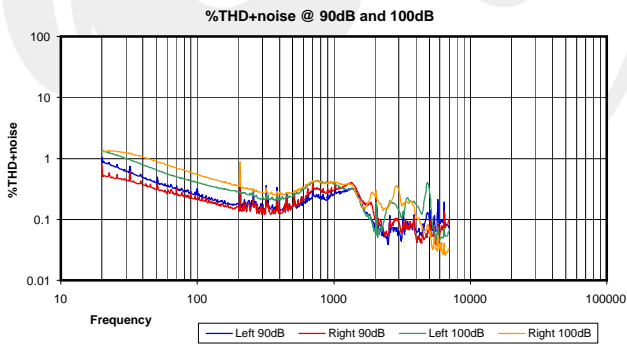
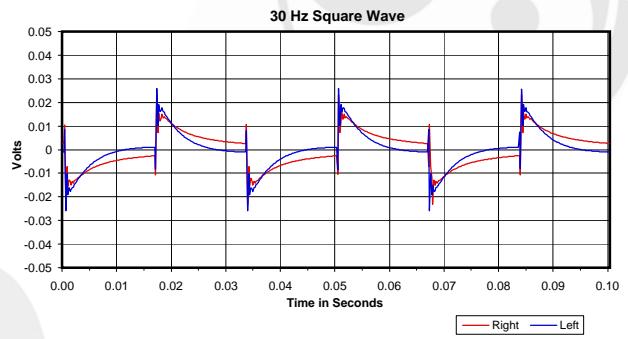
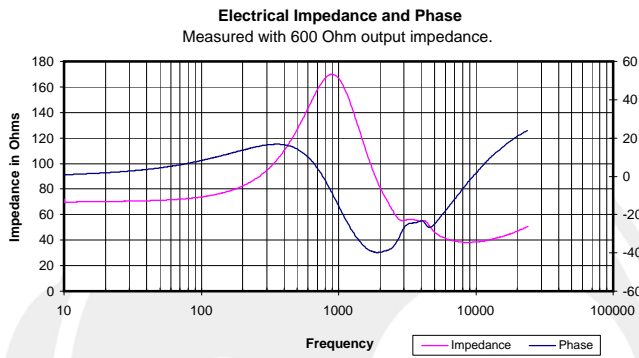
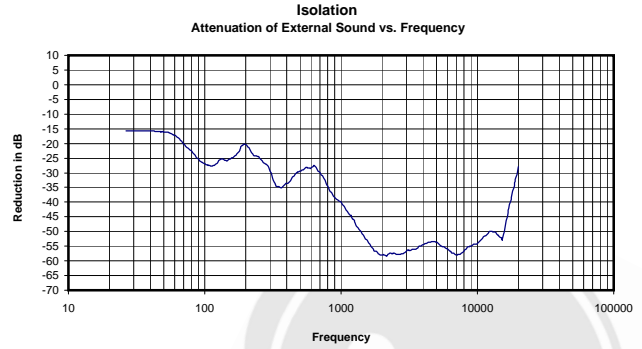
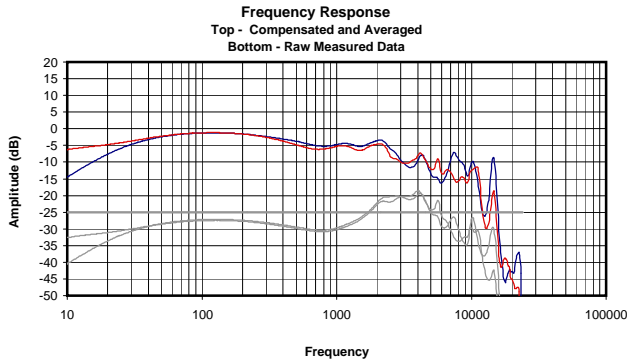
Headphone Measurements: **Cyberdrive Forte Impact Bass**



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.019 Vrms
17 Ohms
0.02 mW
-32 dBr

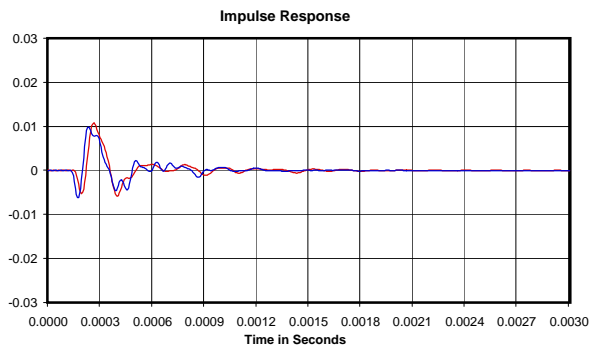
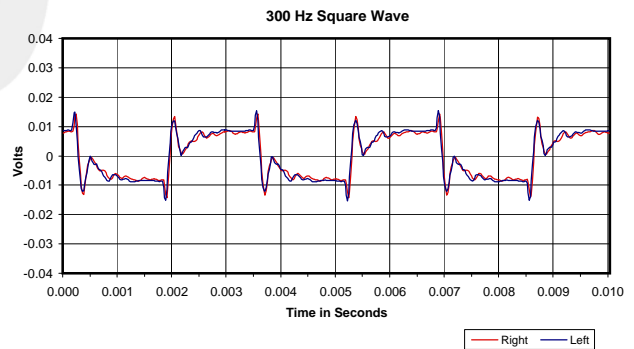
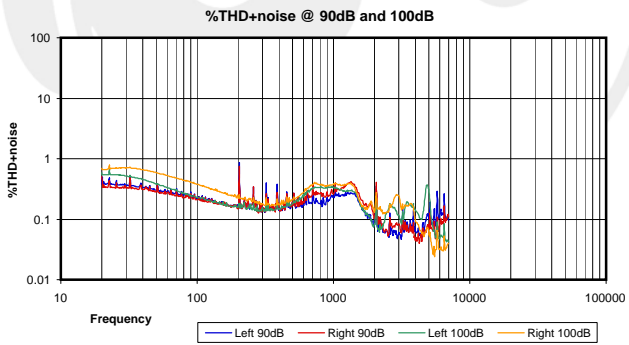
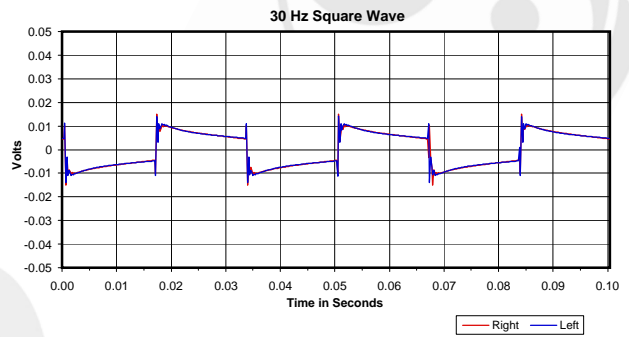
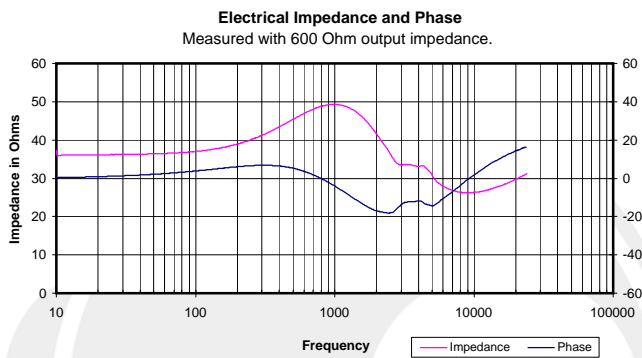
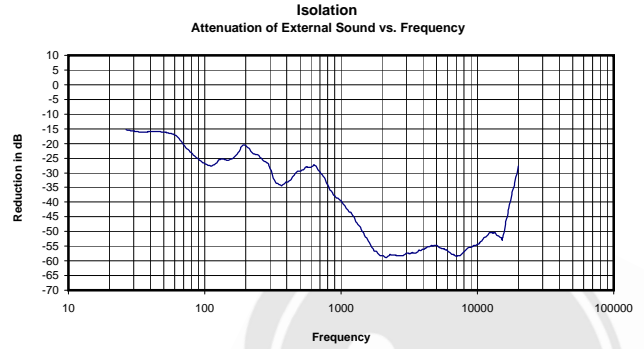
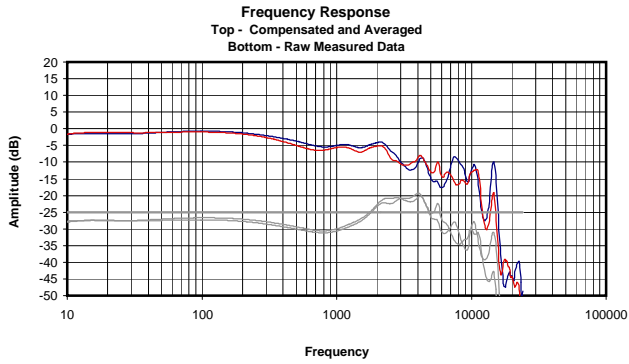




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.034 Vrms
166 Ohms
0.01 mW
-42 dBr



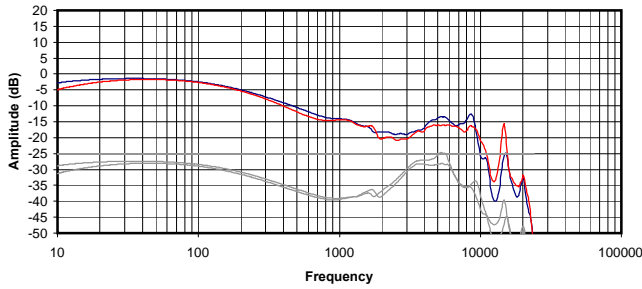


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

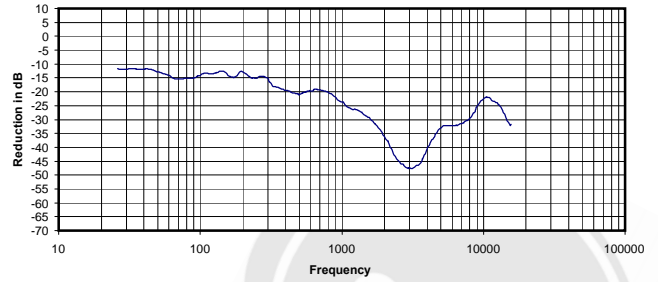
4.412 Vrms
49 Ohms
395.30 mW
-42 dB



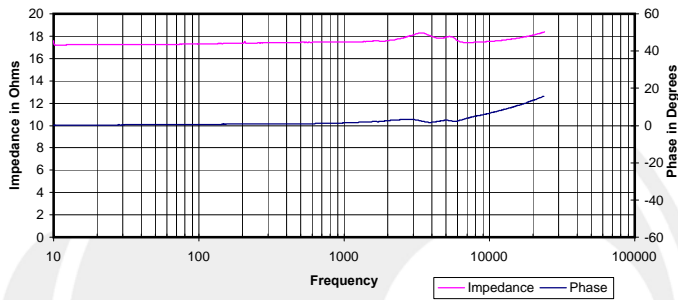
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



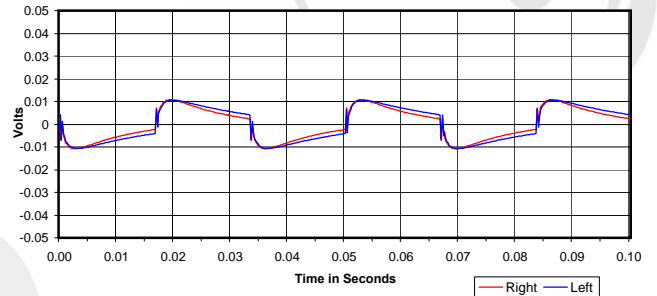
Isolation
Attenuation of External Sound vs. Frequency



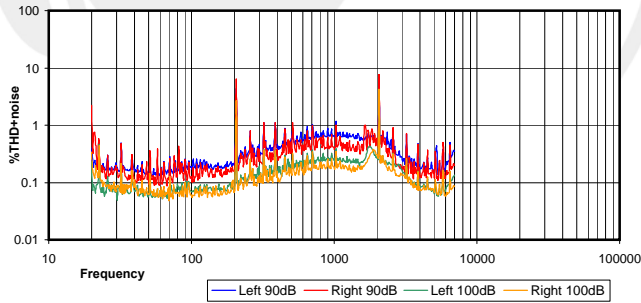
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



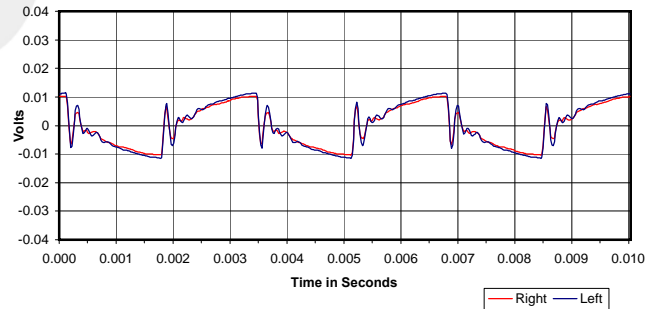
30 Hz Square Wave



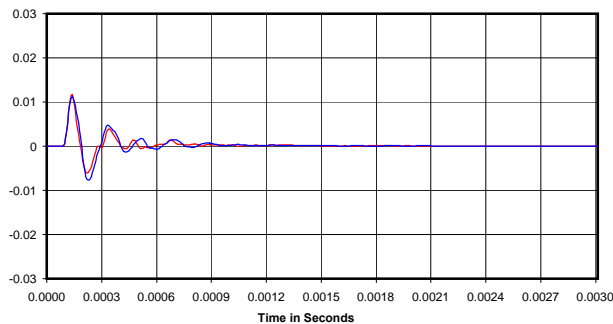
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



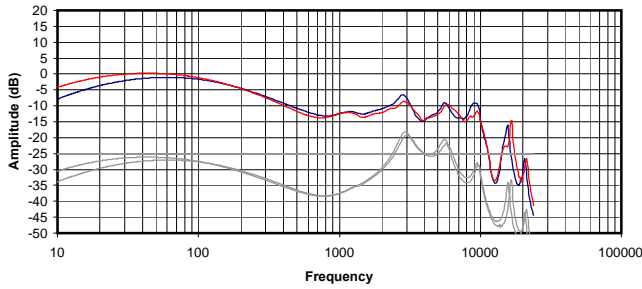
Impulse Response



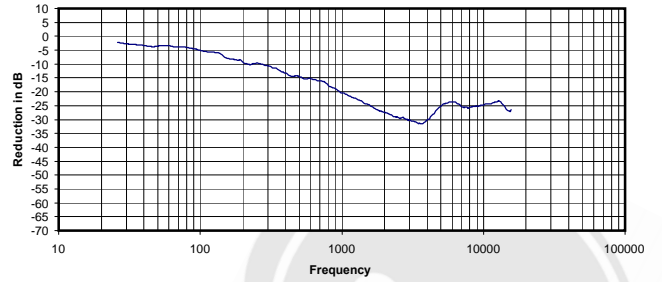
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.036 Vrms
17 Ohms
0.08 mW
-25 dB

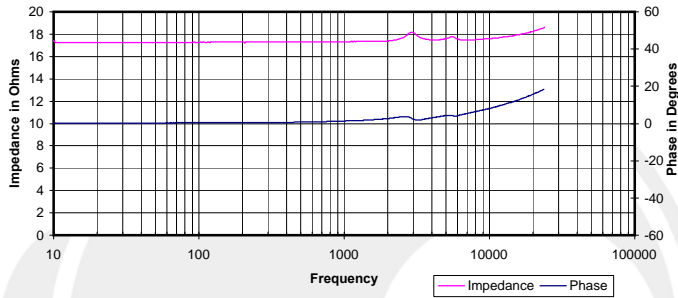
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



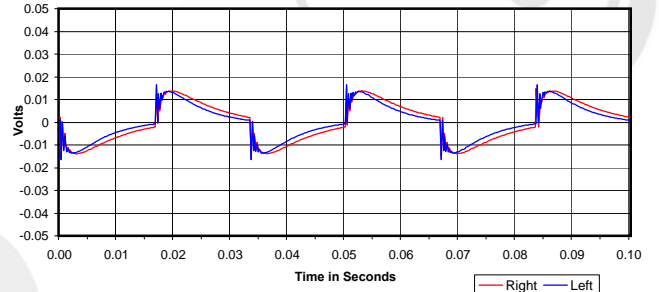
Isolation
Attenuation of External Sound vs. Frequency



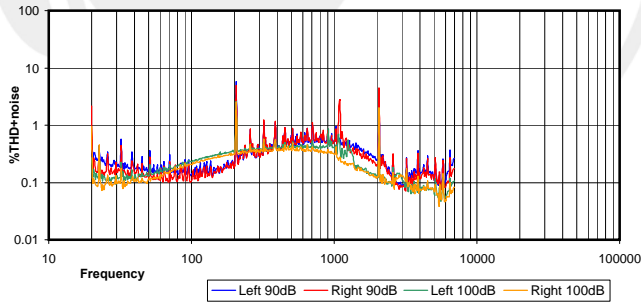
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



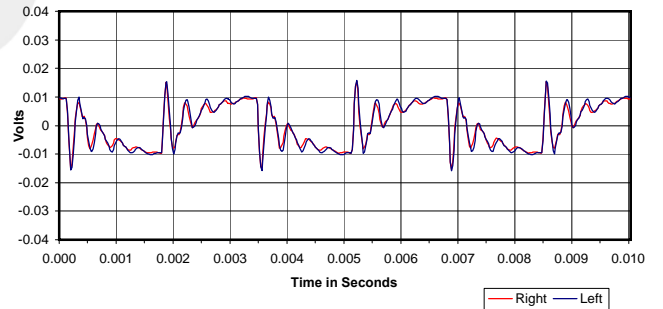
30 Hz Square Wave



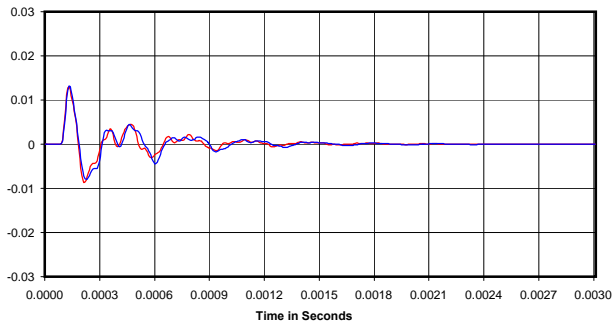
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



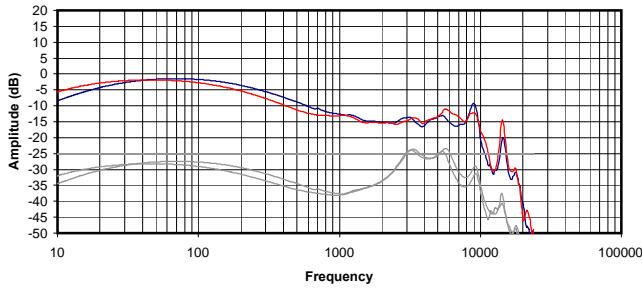
Impulse Response



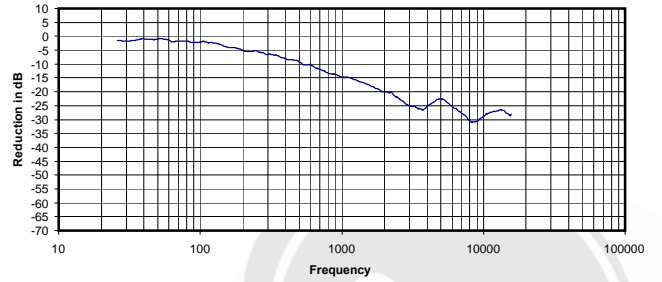
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.045 Vrms
17 Ohms
0.12 mW
-18 dB

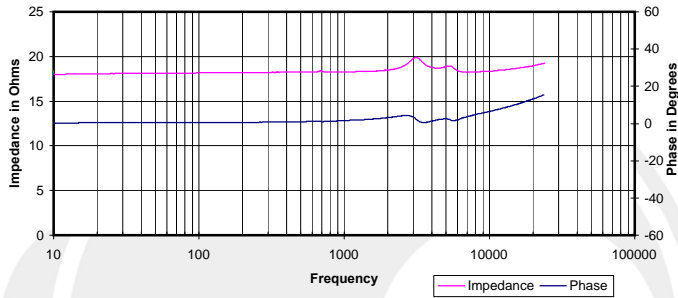
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



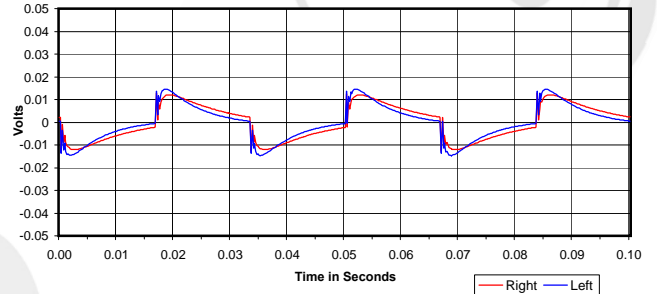
Isolation
Attenuation of External Sound vs. Frequency



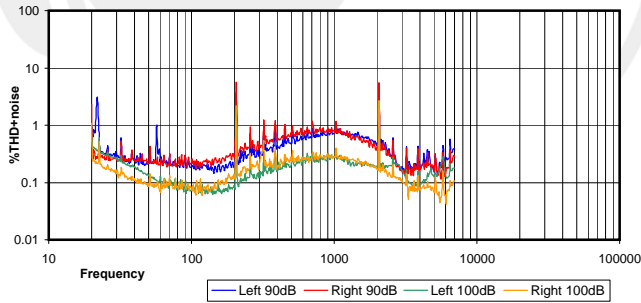
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



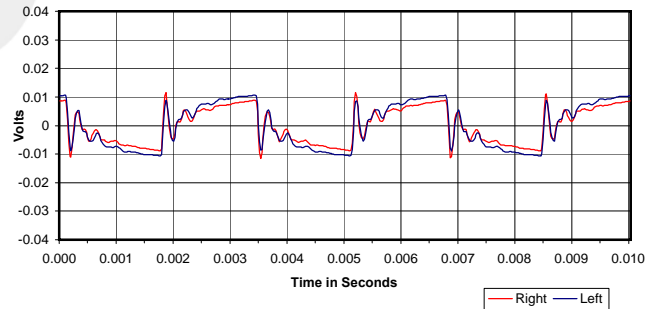
30 Hz Square Wave



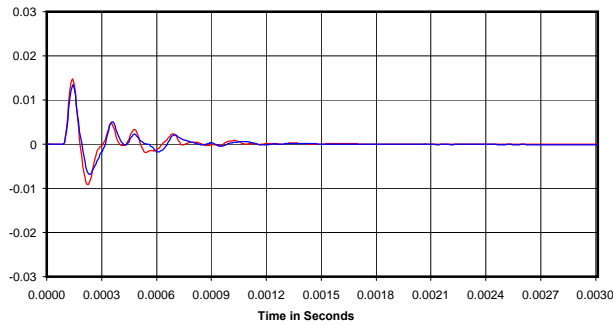
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

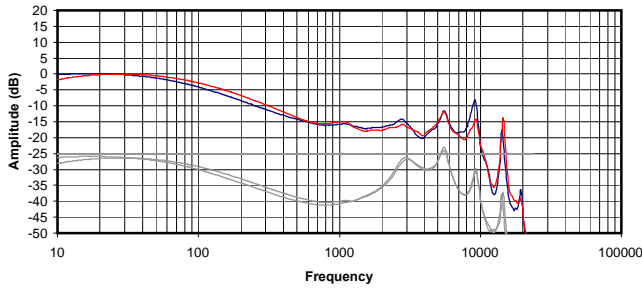


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

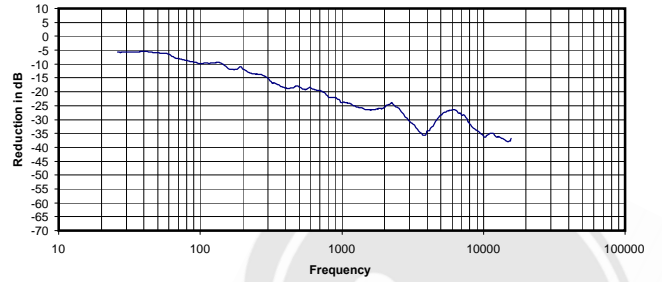
0.027 Vrms
18 Ohms
0.04 mW
-13 dB



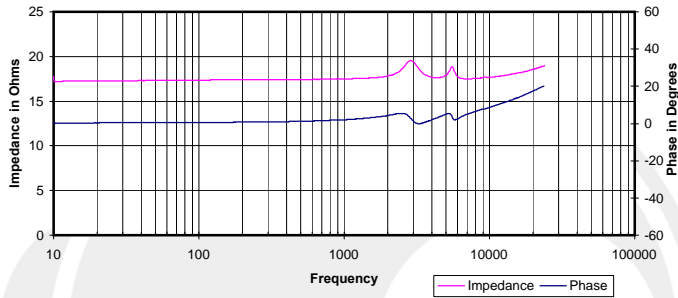
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



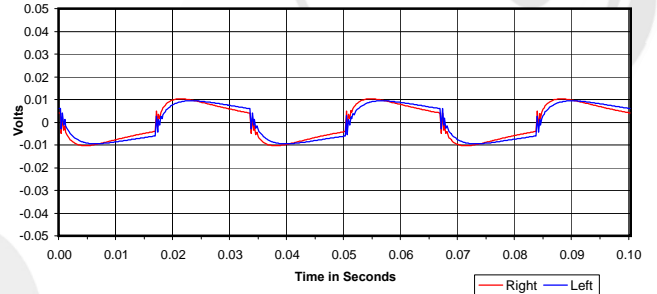
Isolation
Attenuation of External Sound vs. Frequency



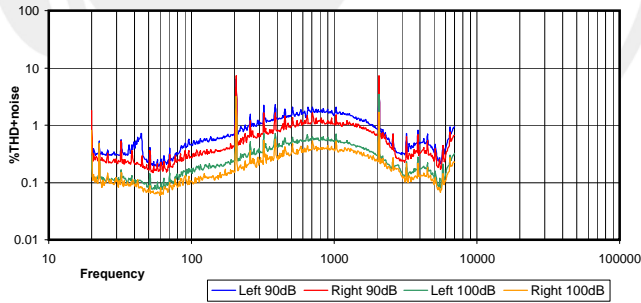
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



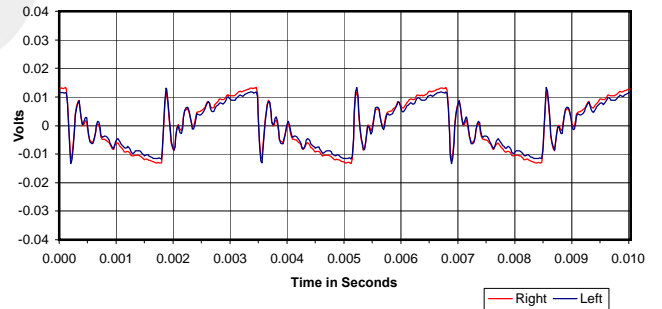
30 Hz Square Wave



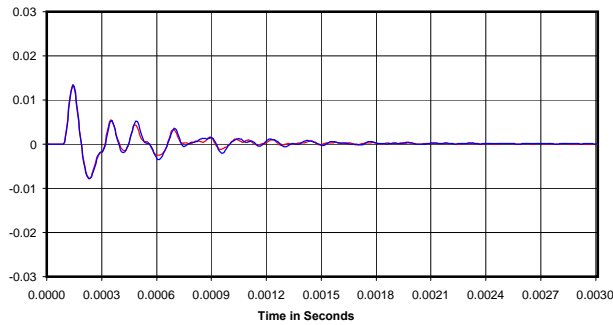
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

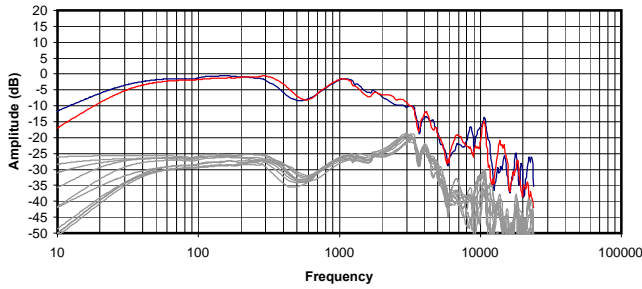


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

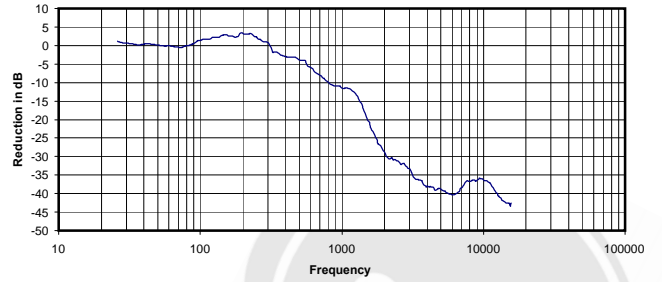
0.024 Vrms
17 Ohms
0.03 mW
-21 dB



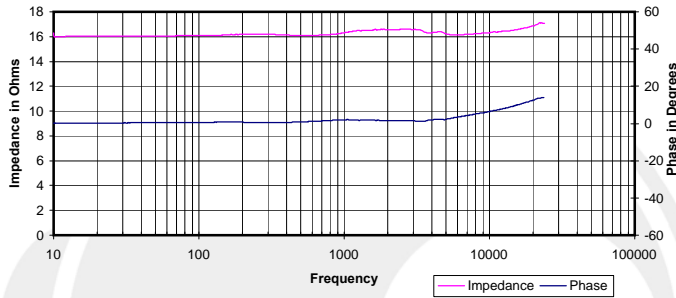
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



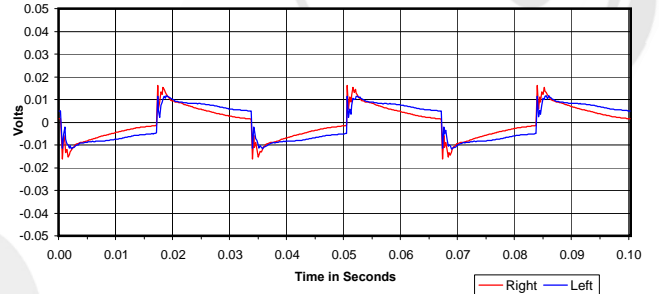
Isolation
 Attenuation of External Sound vs. Frequency



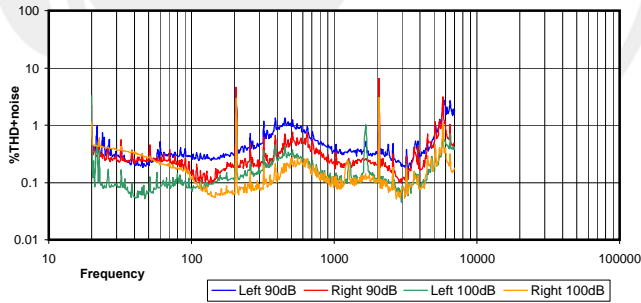
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



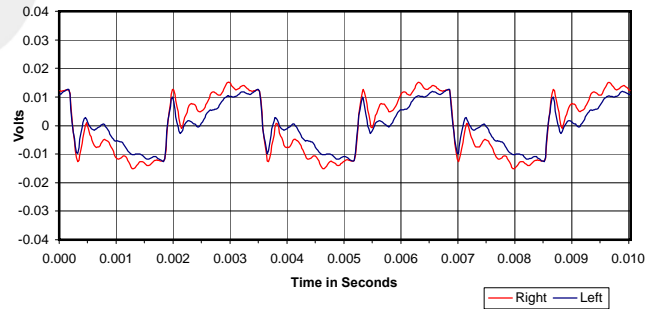
30 Hz Square Wave



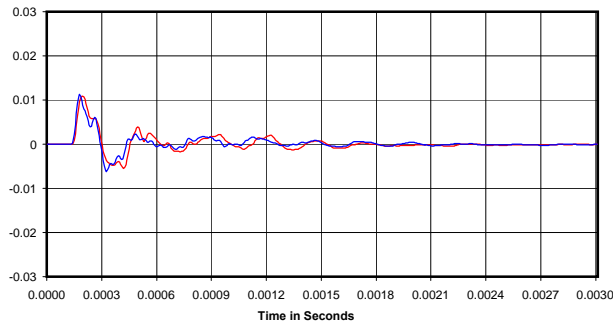
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

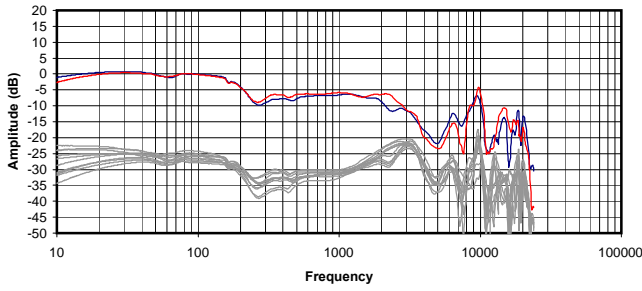


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

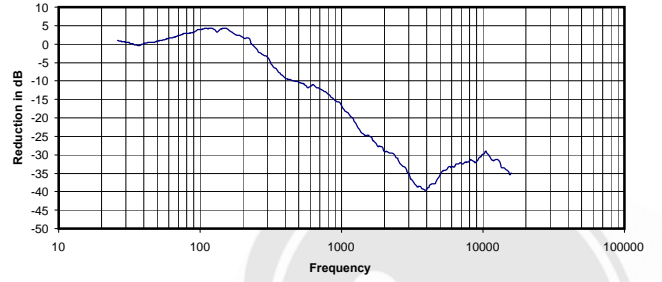
0.021 Vrms
 16 Ohms
 0.03 mW
 -14 dB



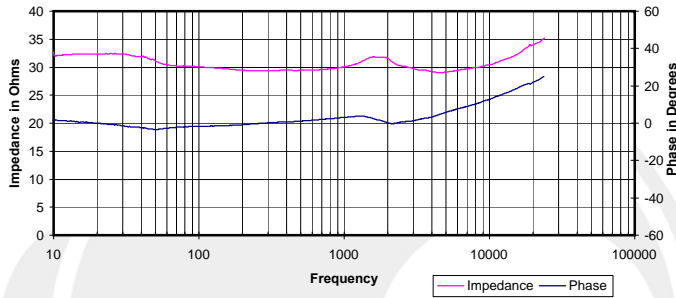
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



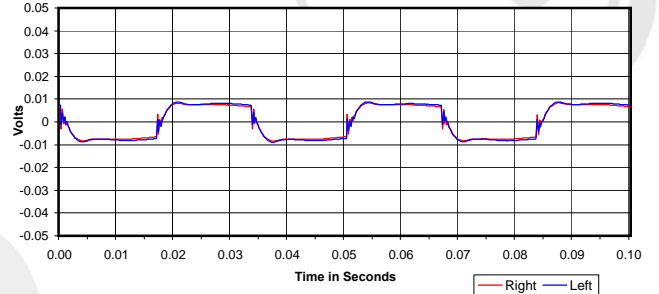
Isolation
 Attenuation of External Sound vs. Frequency



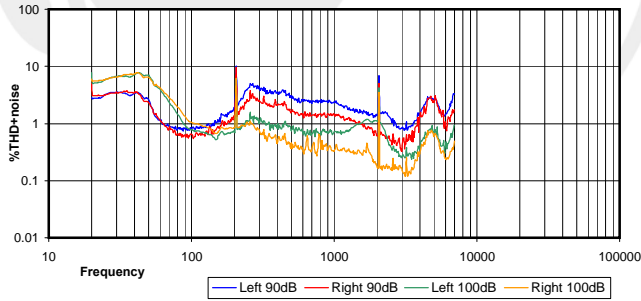
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



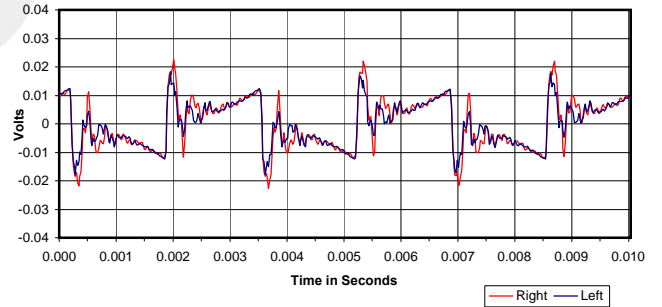
30 Hz Square Wave



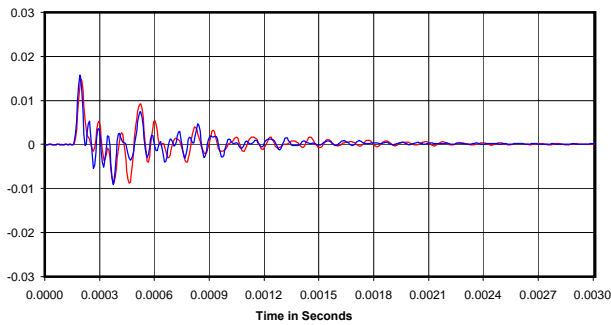
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

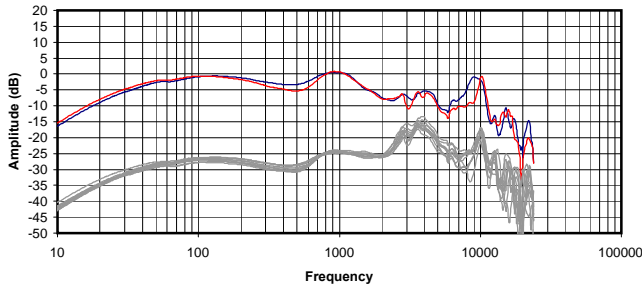


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

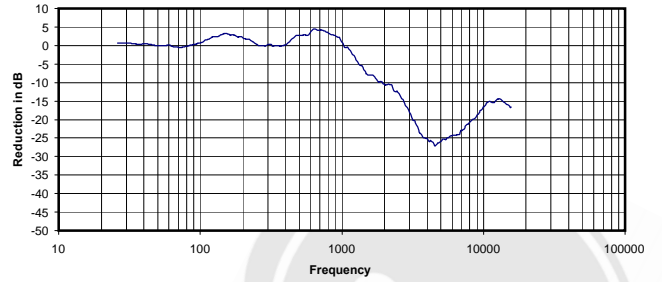
0.071 Vrms
 30 Ohms
 0.17 mW
 -16 dB



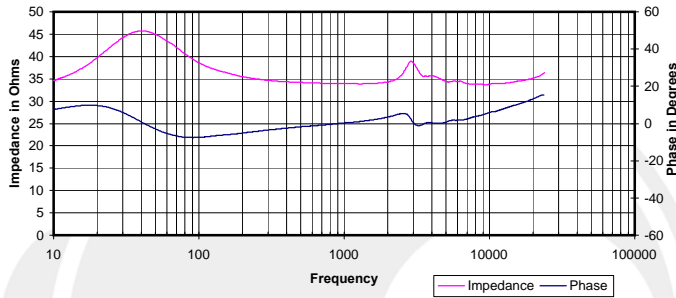
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



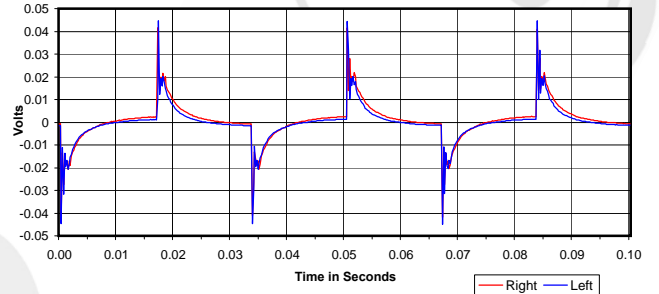
Isolation
 Attenuation of External Sound vs. Frequency



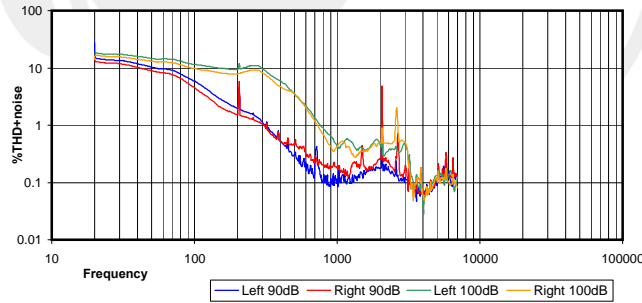
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



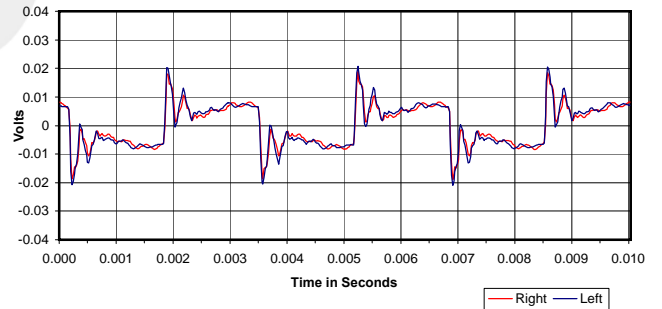
30 Hz Square Wave



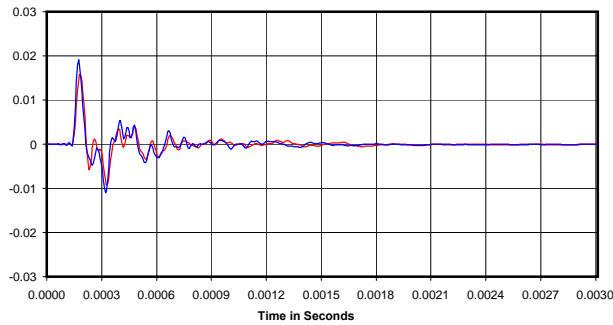
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

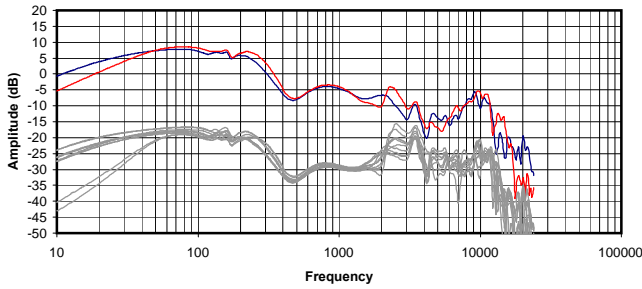


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

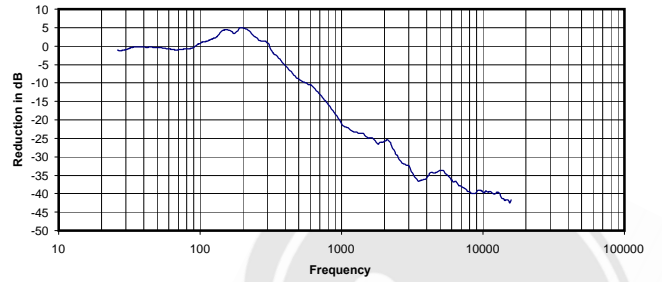
0.046 Vrms
 34 Ohms
 0.06 mW
 -5 dB



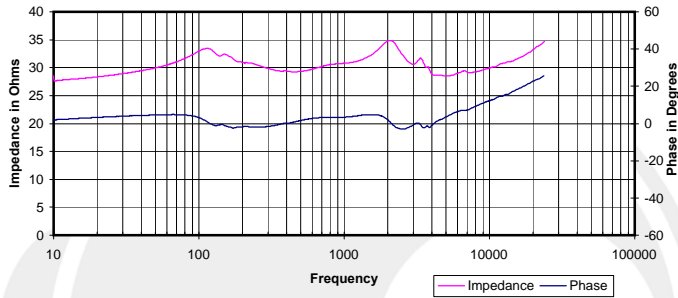
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



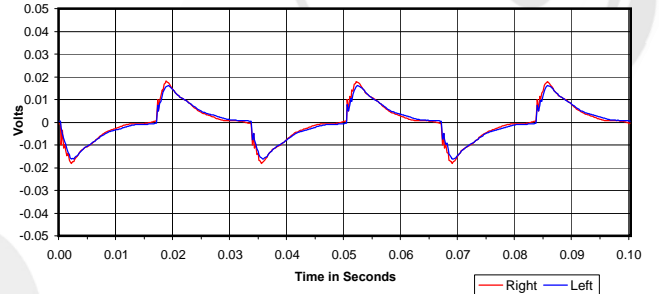
Isolation
 Attenuation of External Sound vs. Frequency



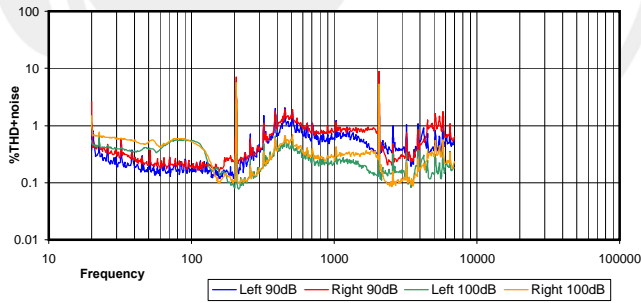
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



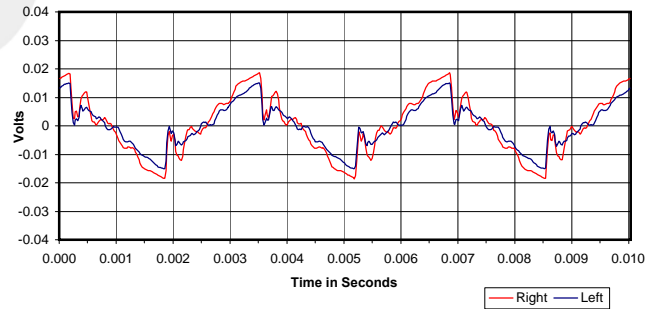
30 Hz Square Wave



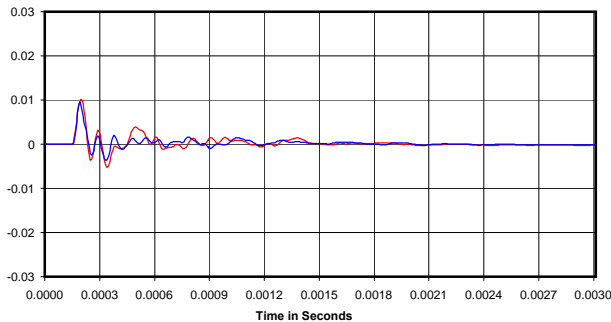
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

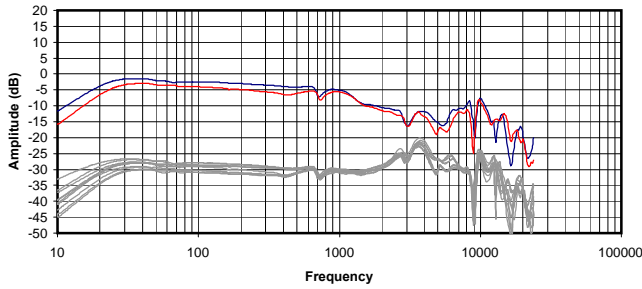


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

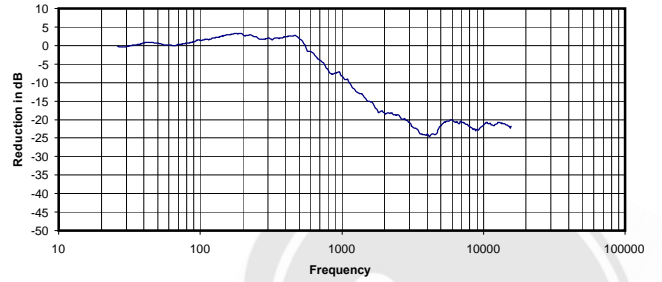
0.052 Vrms
 31 Ohms
 0.09 mW
 -15 dB



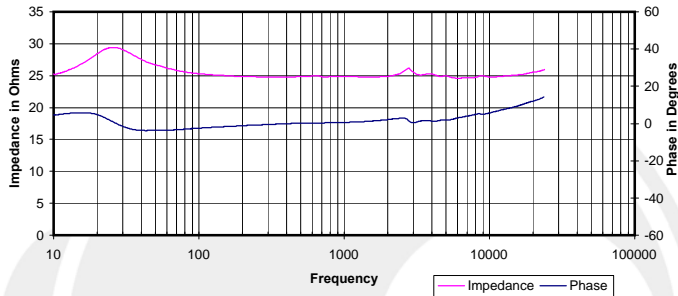
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



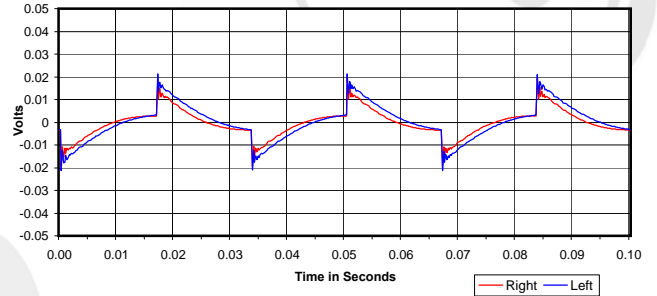
Isolation
 Attenuation of External Sound vs. Frequency



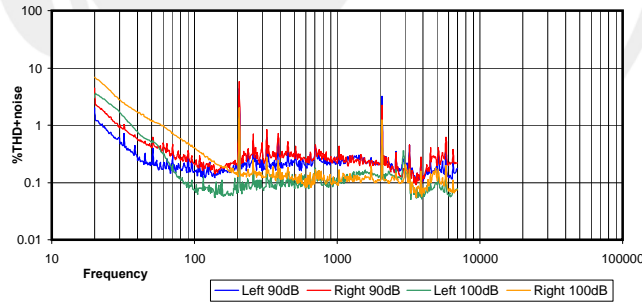
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



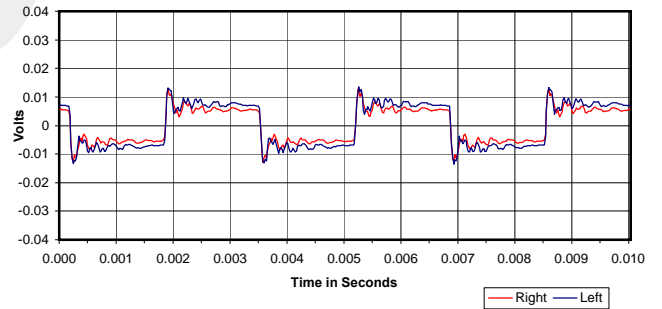
30 Hz Square Wave



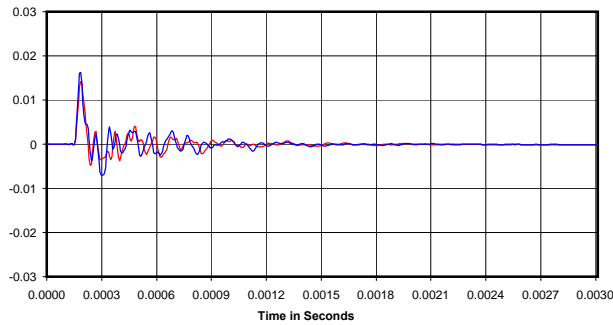
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

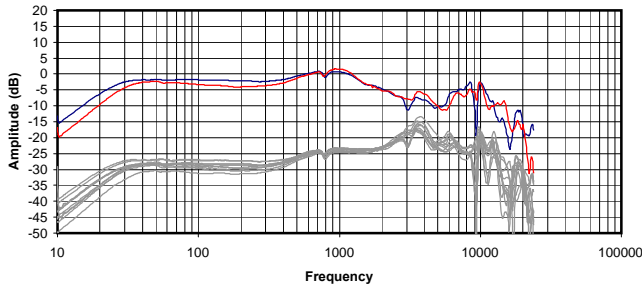


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

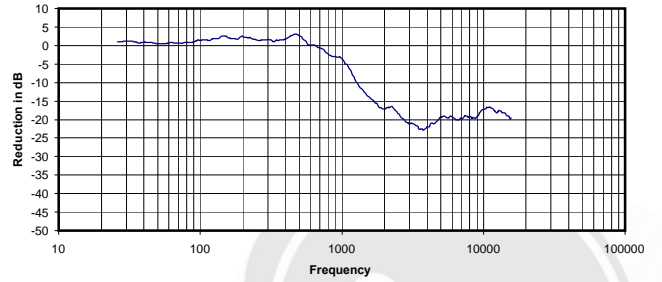
0.064 Vrms
 25 Ohms
 0.17 mW
 -8 dB



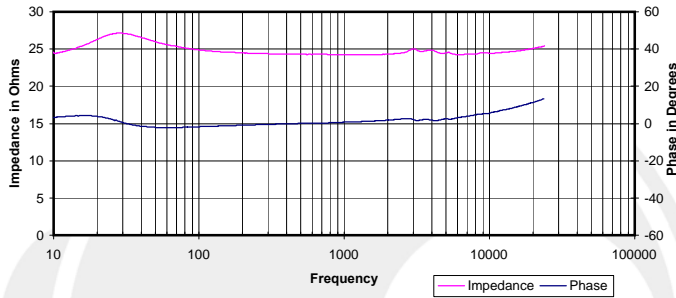
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



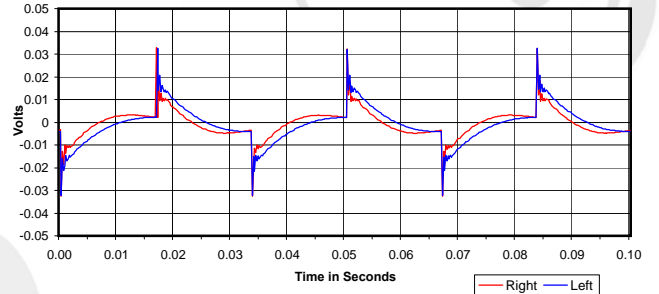
Isolation
 Attenuation of External Sound vs. Frequency



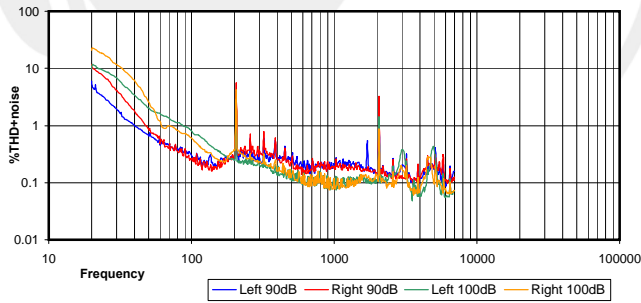
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



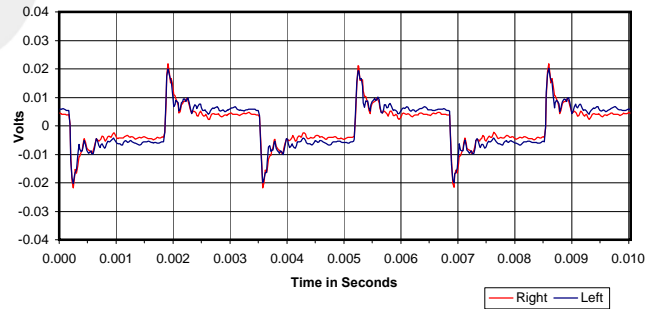
30 Hz Square Wave



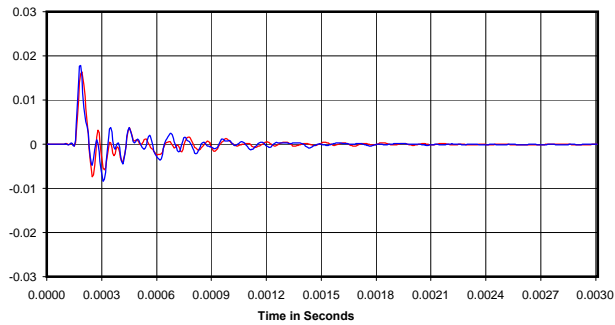
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

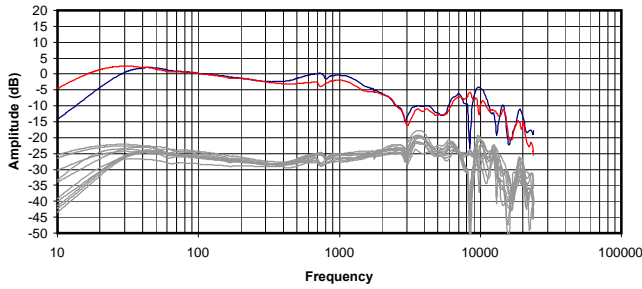


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

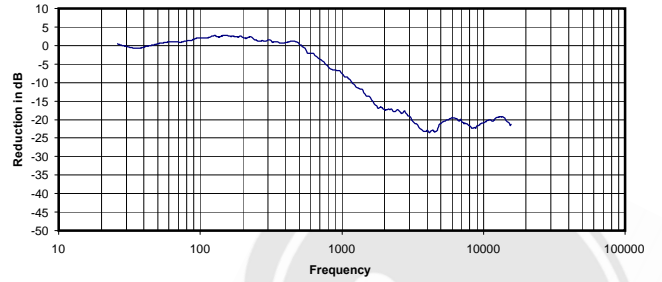
0.073 Vrms
 24 Ohms
 0.22 mW
 -7 dB



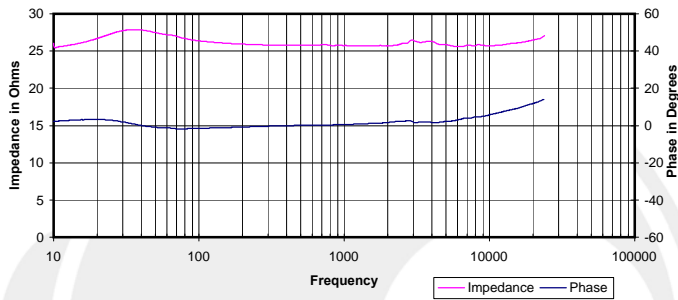
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



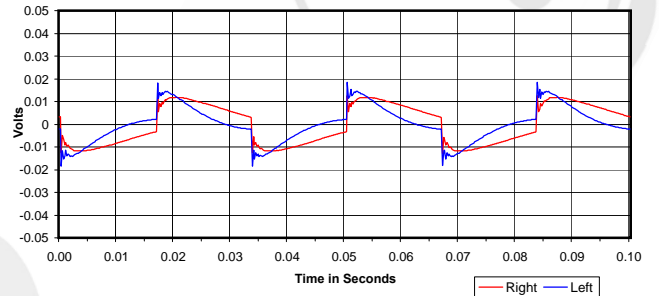
Isolation
Attenuation of External Sound vs. Frequency



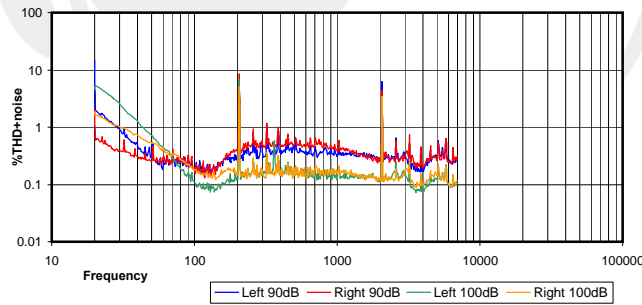
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



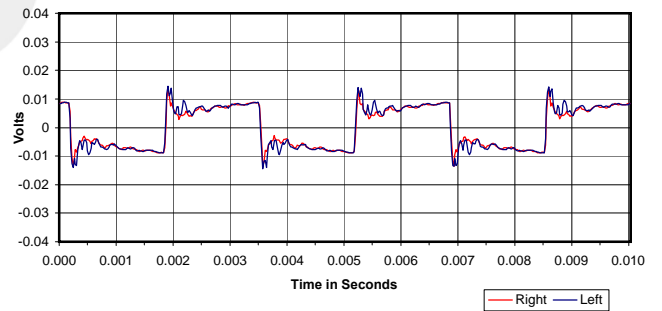
30 Hz Square Wave



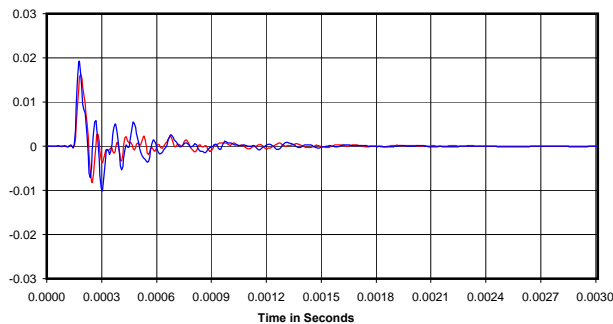
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

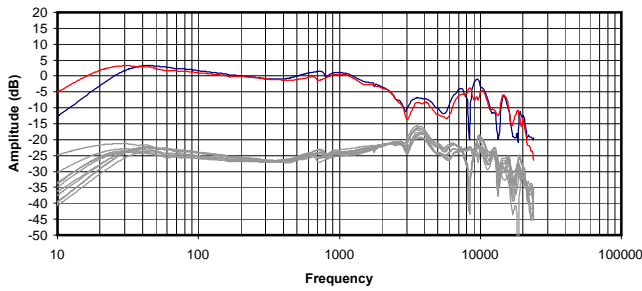


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

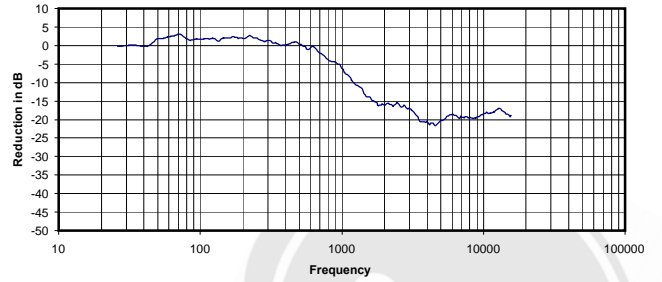
0.062 Vrms
26 Ohms
0.15 mW
-7 dB



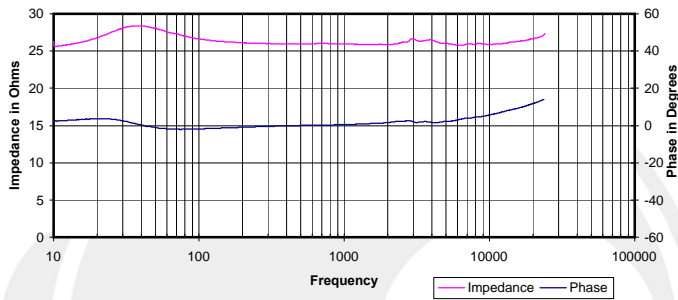
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



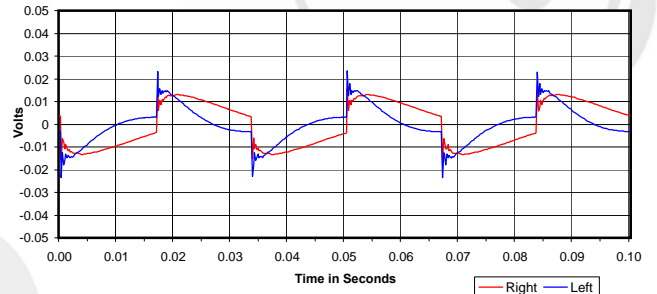
Isolation
Attenuation of External Sound vs. Frequency



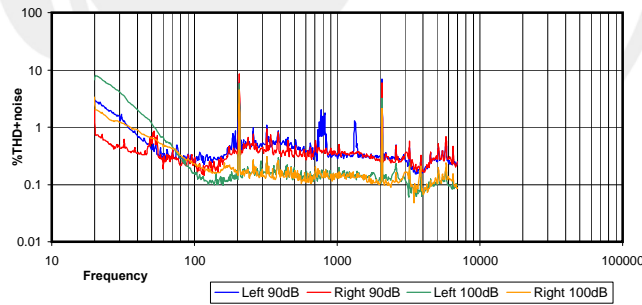
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



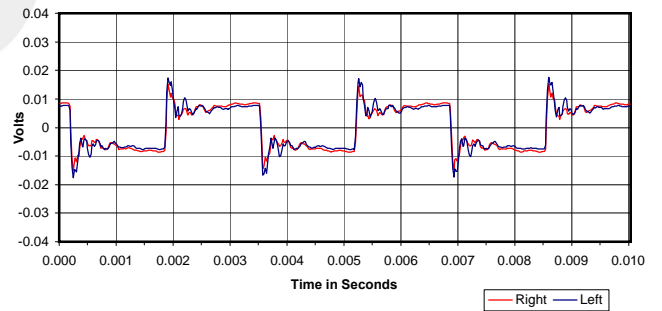
30 Hz Square Wave



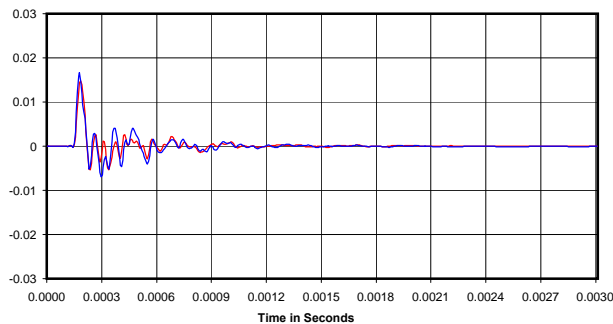
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

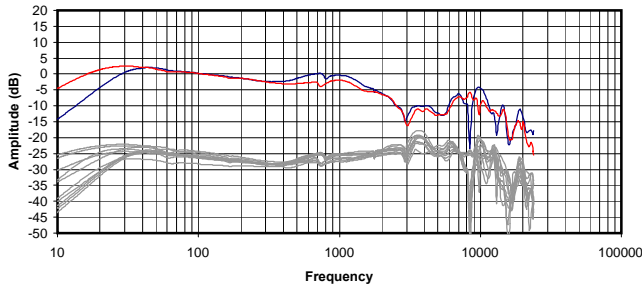


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

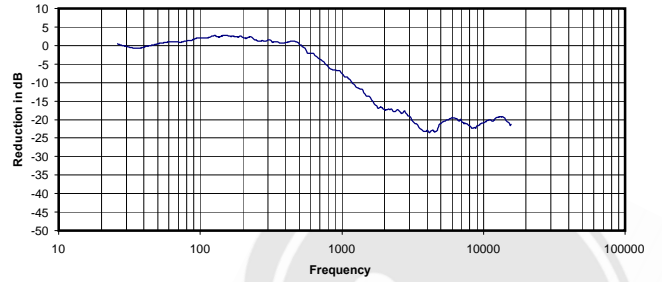
0.064 Vrms
26 Ohms
0.16 mW
-7 dB



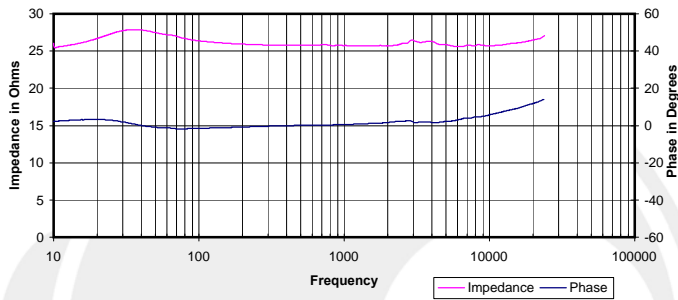
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



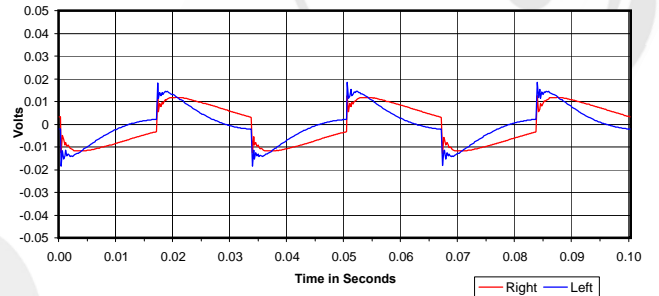
Isolation
 Attenuation of External Sound vs. Frequency



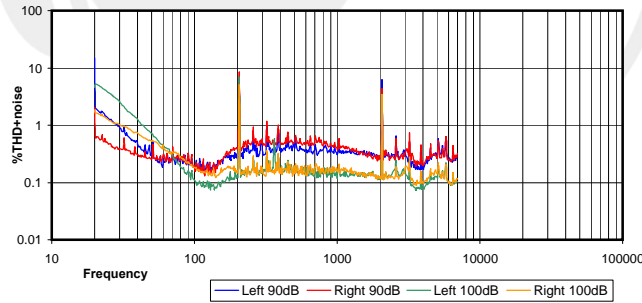
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



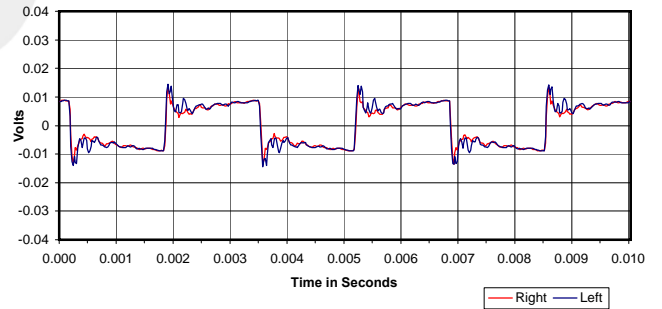
30 Hz Square Wave



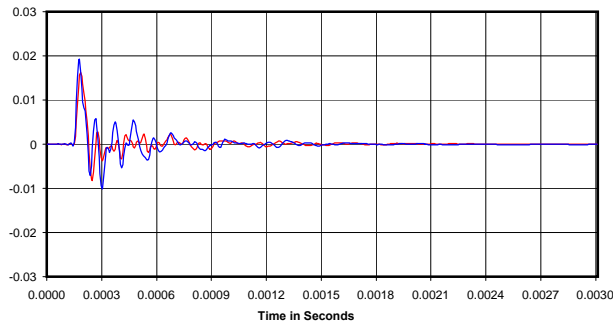
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

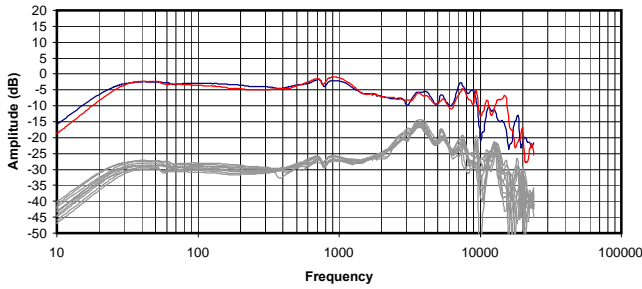


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

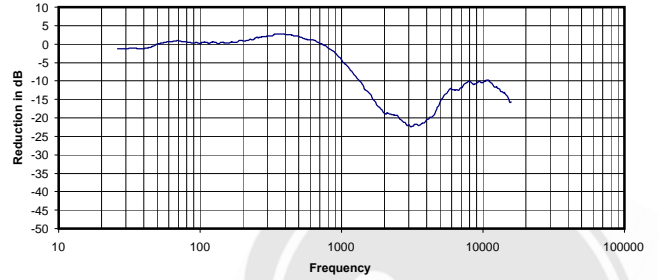
0.062 Vrms
 26 Ohms
 0.15 mW
 -7 dB



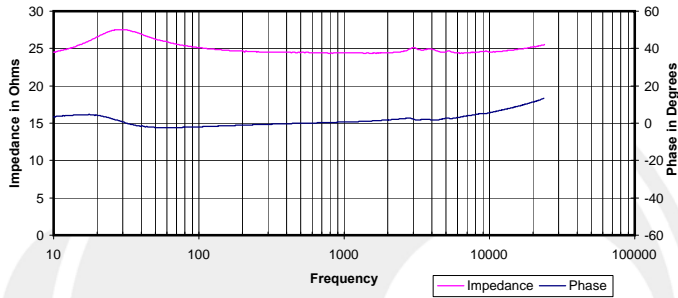
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



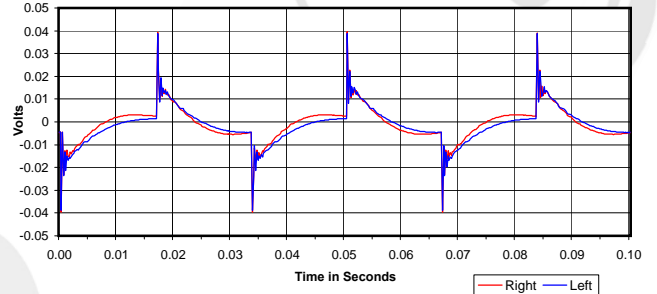
Isolation
Attenuation of External Sound vs. Frequency



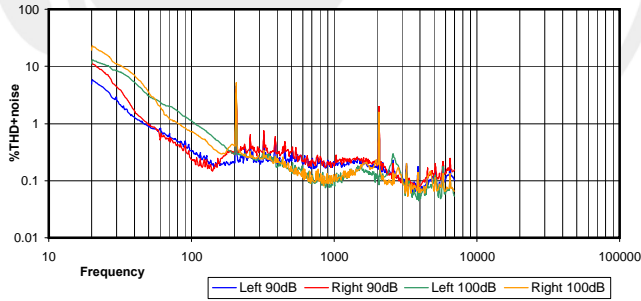
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



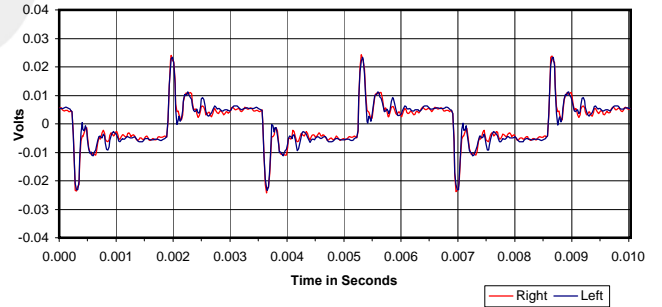
30 Hz Square Wave



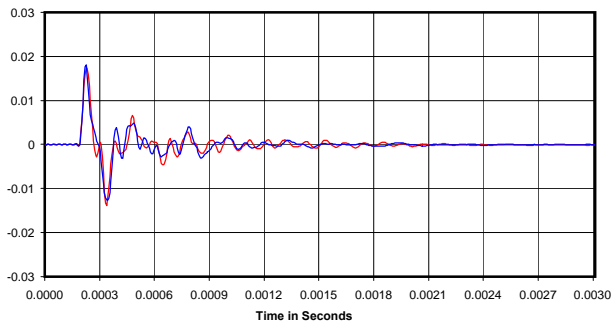
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

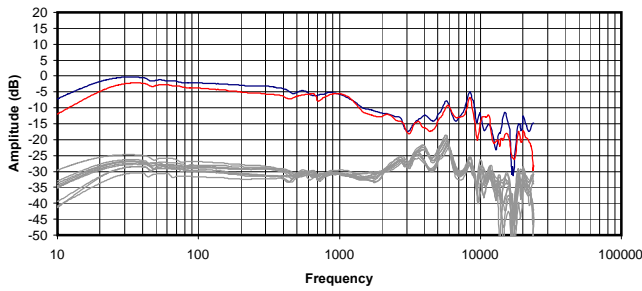


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

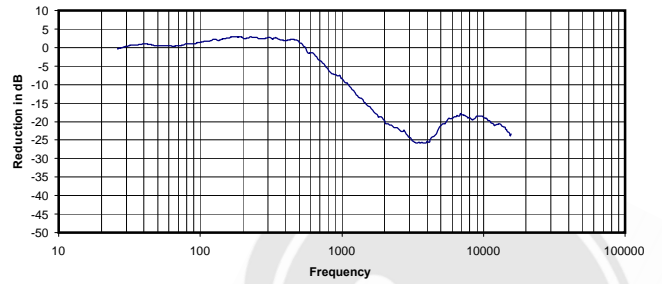
0.103 Vrms
24 Ohms
0.43 mW
-7 dB



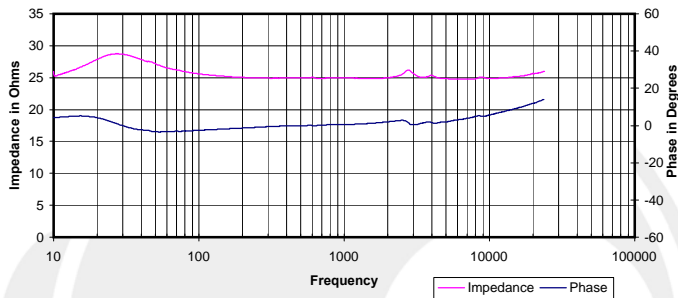
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



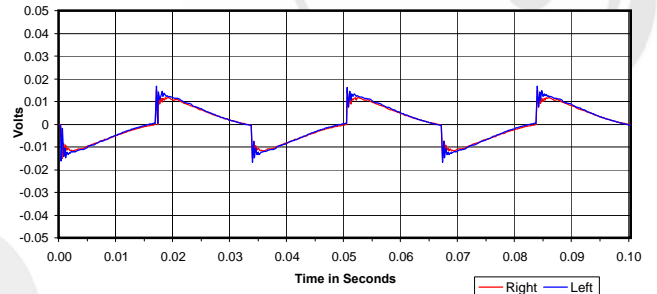
Isolation
Attenuation of External Sound vs. Frequency



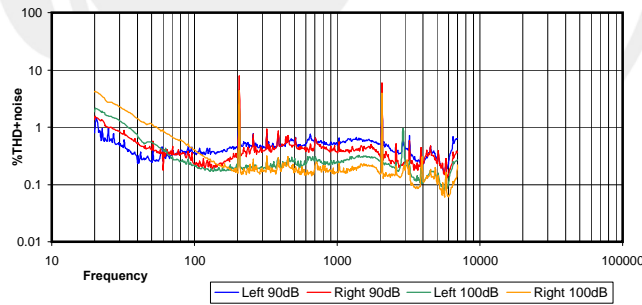
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



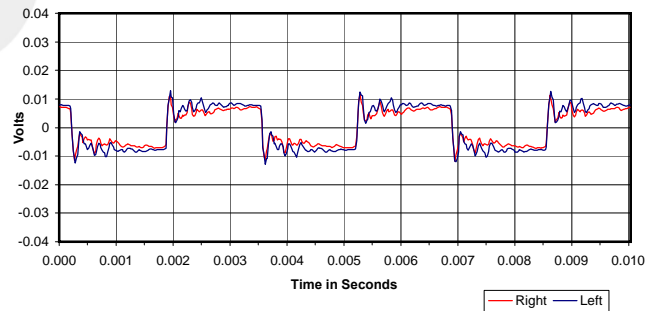
30 Hz Square Wave



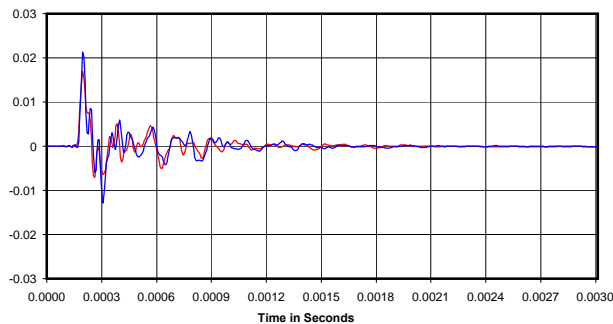
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

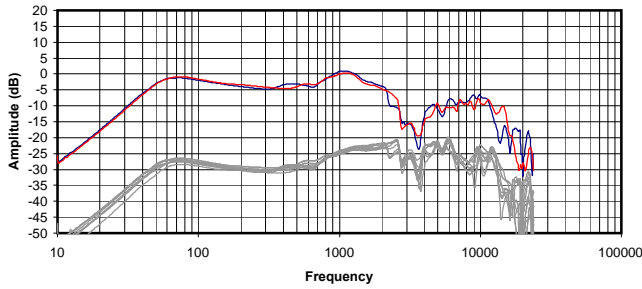


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

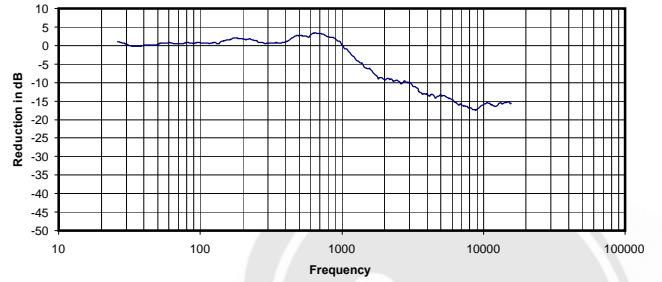
0.080 Vrms
25 Ohms
0.25 mW
-8 dBr



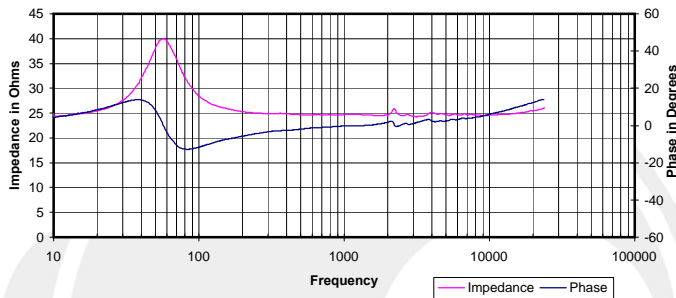
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



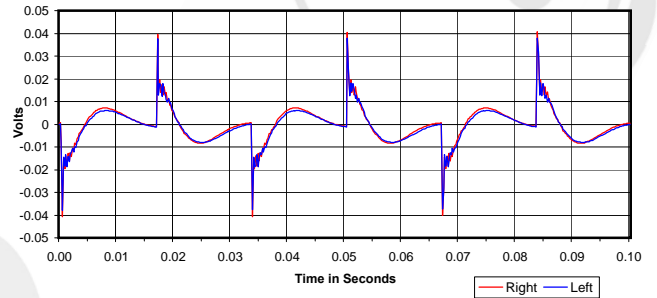
Isolation
 Attenuation of External Sound vs. Frequency



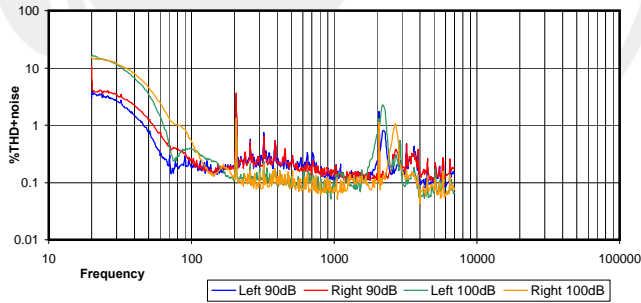
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



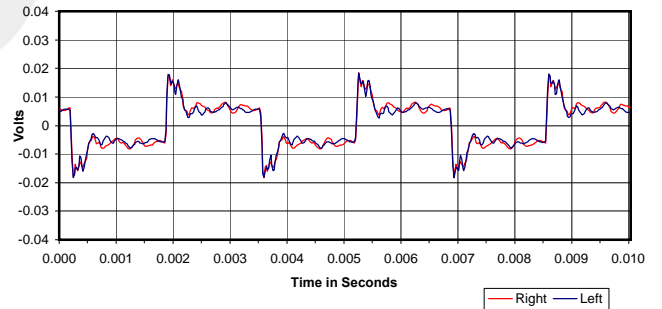
30 Hz Square Wave



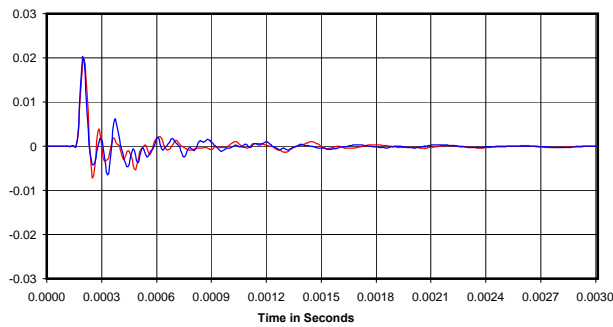
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

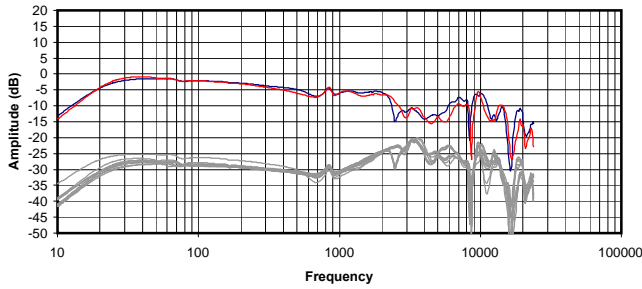


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

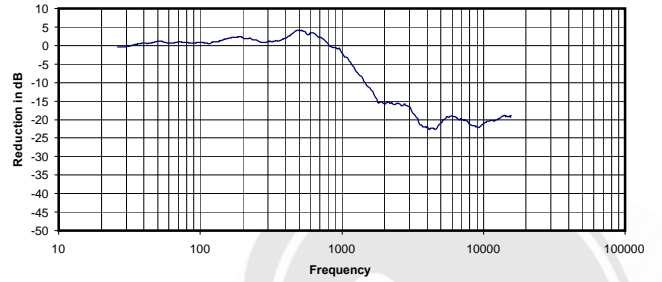
0.048 Vrms
 25 Ohms
 0.09 mW
 -3 dB



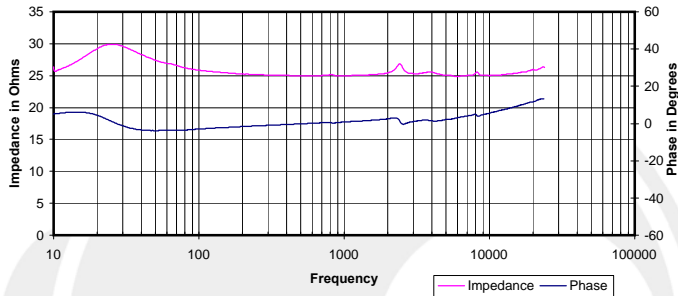
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



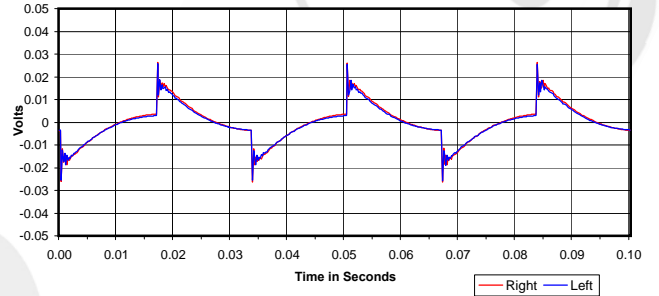
Isolation
 Attenuation of External Sound vs. Frequency



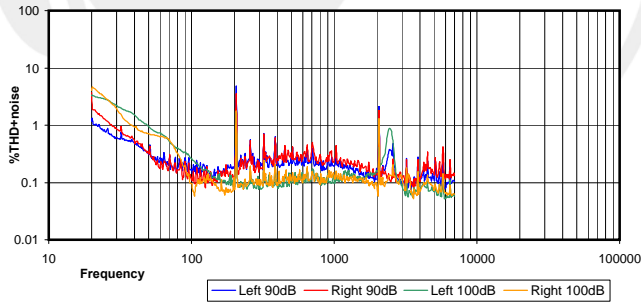
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



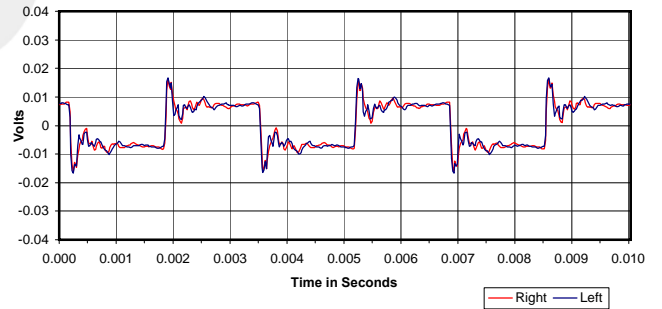
30 Hz Square Wave



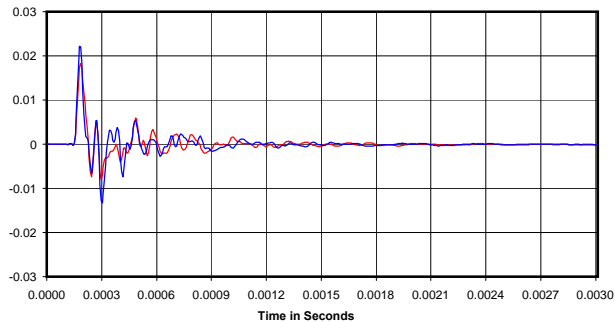
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

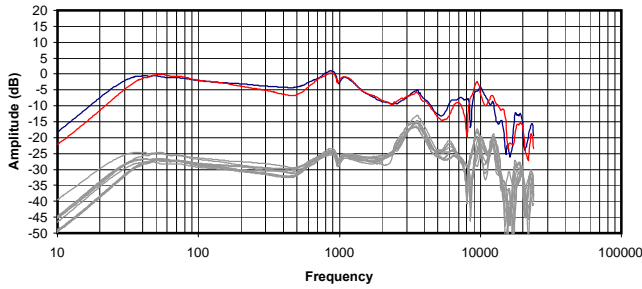


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

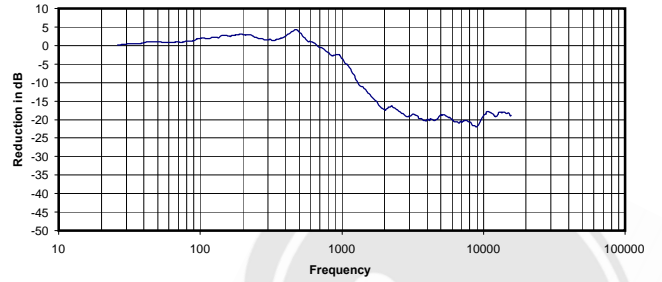
0.081 Vrms
 25 Ohms
 0.26 mW
 -6 dBr



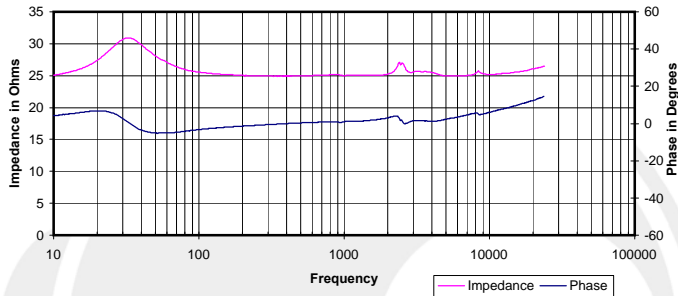
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



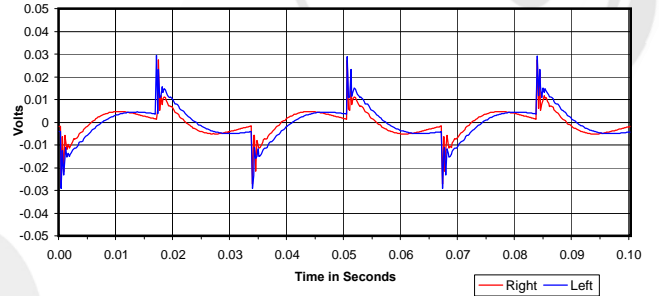
Isolation
 Attenuation of External Sound vs. Frequency



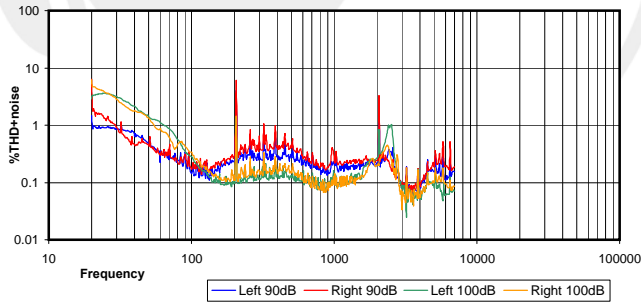
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



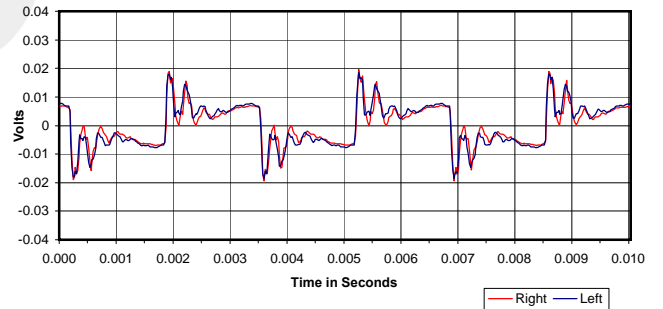
30 Hz Square Wave



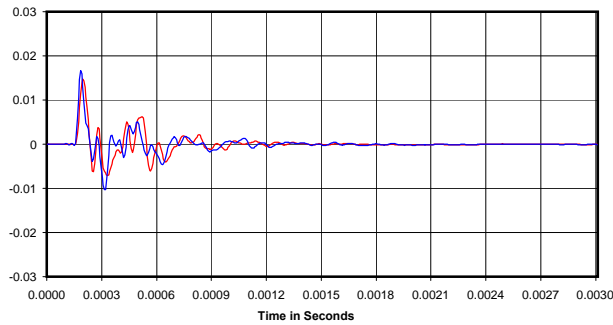
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

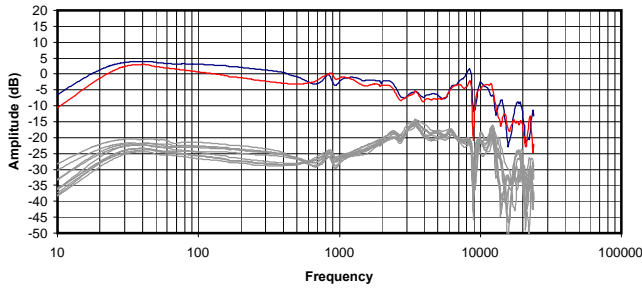


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

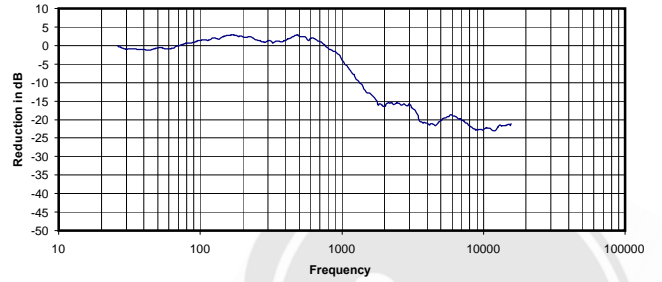
0.082 Vrms
 25 Ohms
 0.27 mW
 -6 dBr



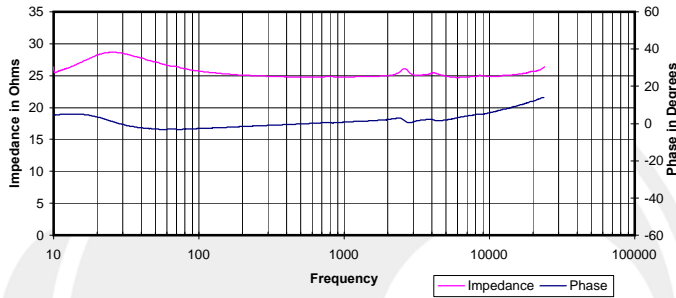
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



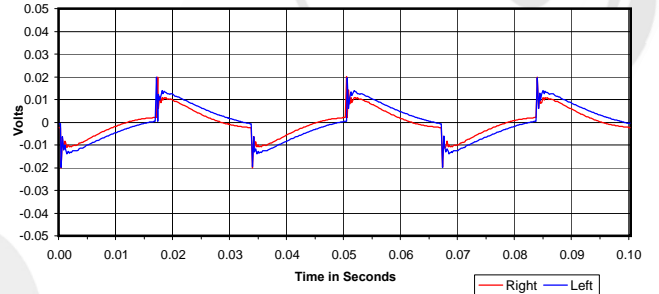
Isolation
Attenuation of External Sound vs. Frequency



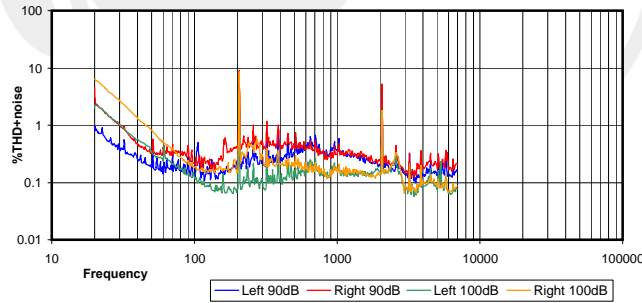
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



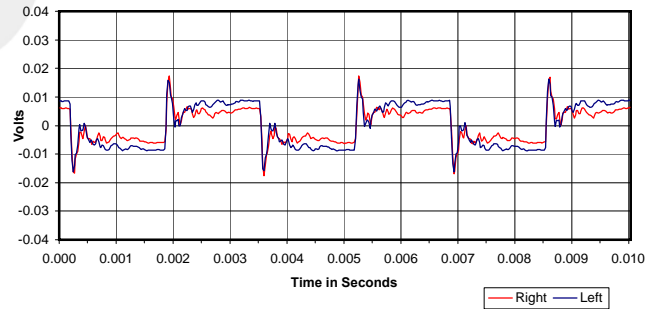
30 Hz Square Wave



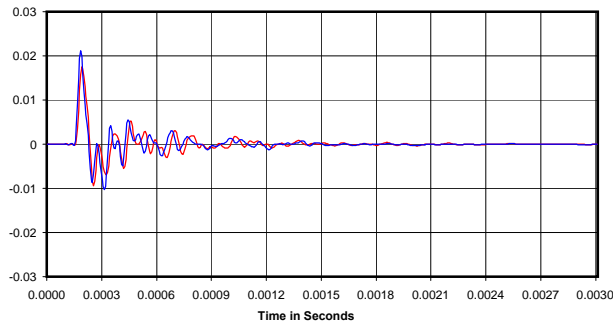
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

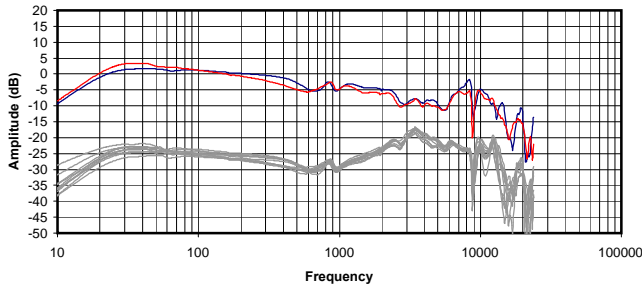


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

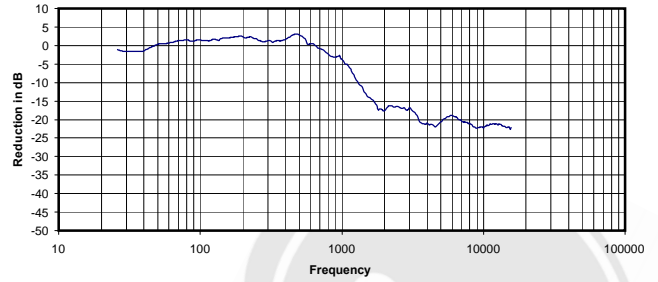
0.109 Vrms
25 Ohms
0.48 mW
-6 dB



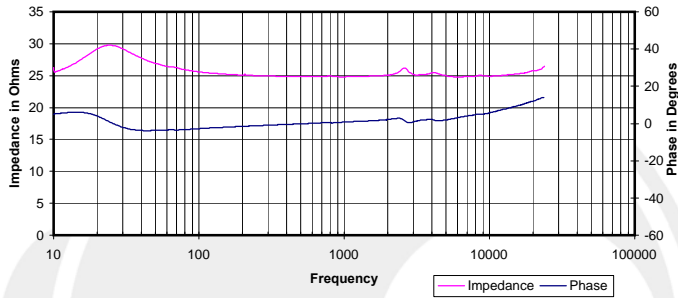
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



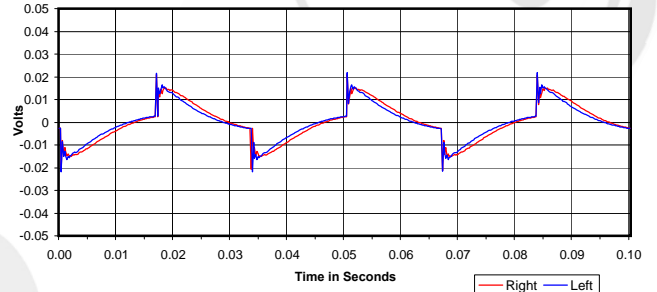
Isolation
 Attenuation of External Sound vs. Frequency



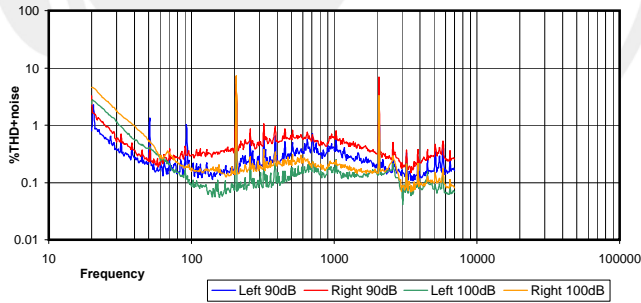
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



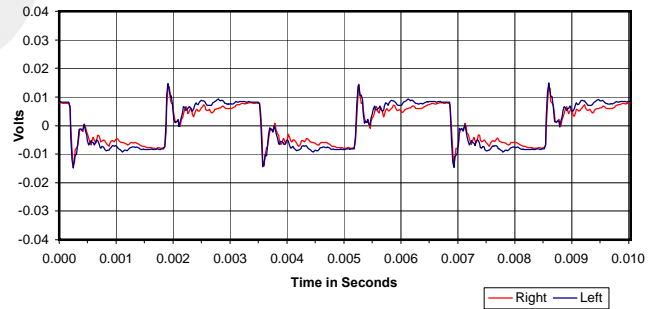
30 Hz Square Wave



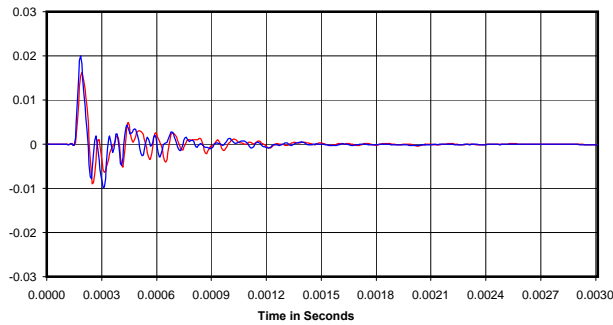
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

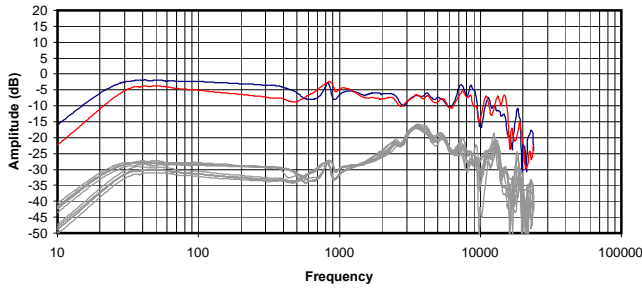


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

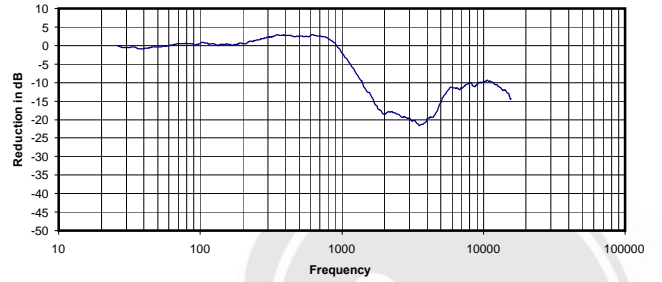
0.102 Vrms
 25 Ohms
 0.42 mW
 -6 dB



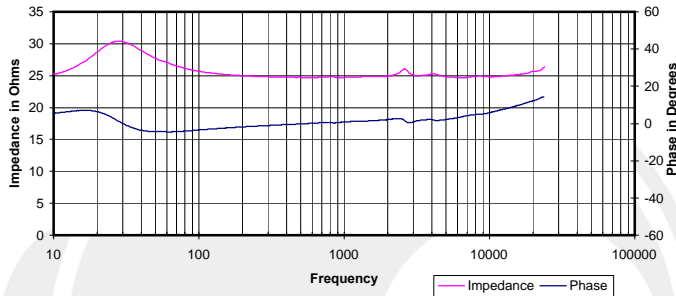
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



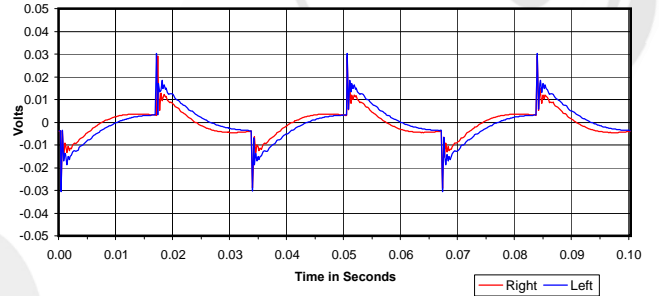
Isolation
 Attenuation of External Sound vs. Frequency



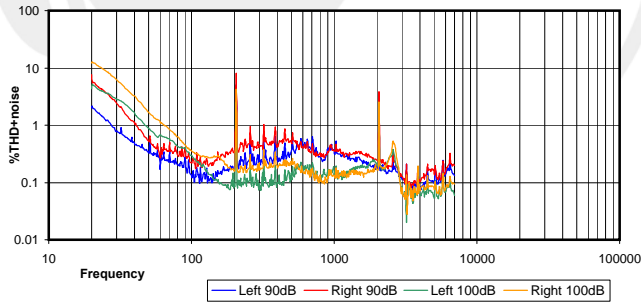
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



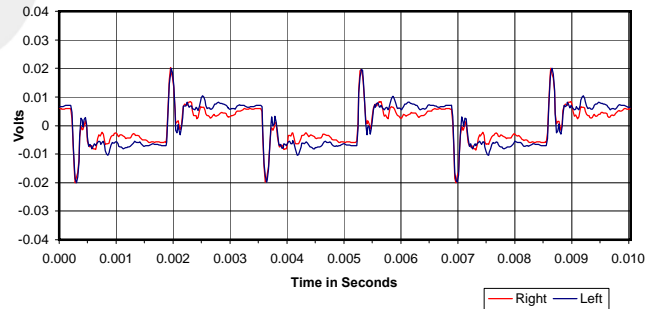
30 Hz Square Wave



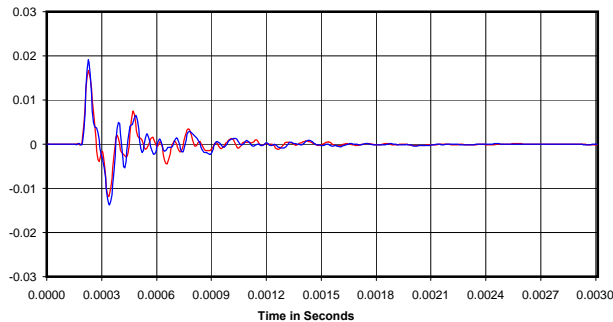
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

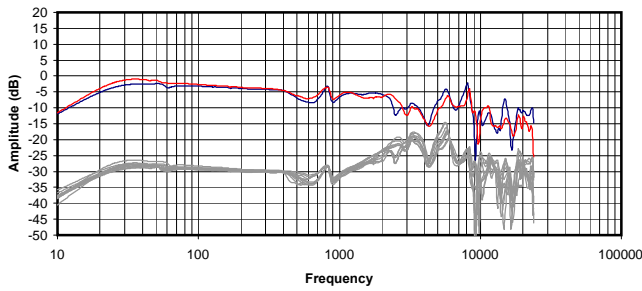


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

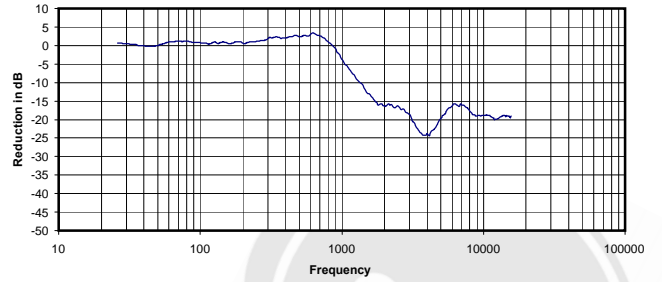
0.132 Vrms
 25 Ohms
 0.71 mW
 -6 dBr



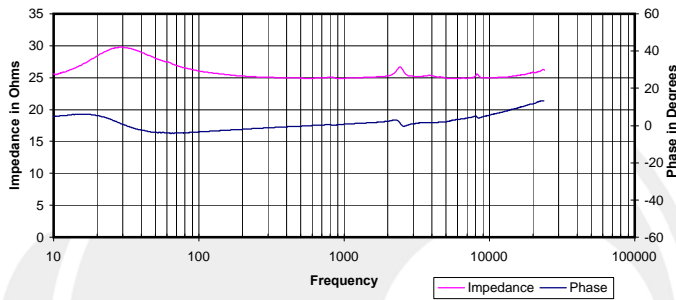
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



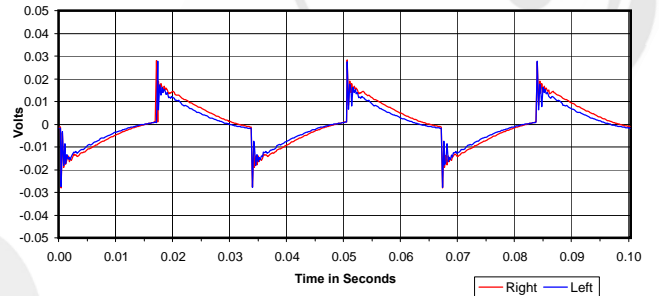
Isolation
 Attenuation of External Sound vs. Frequency



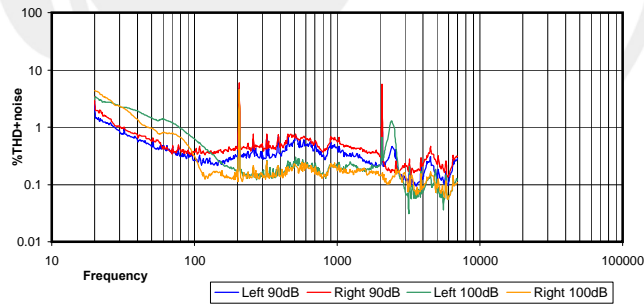
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



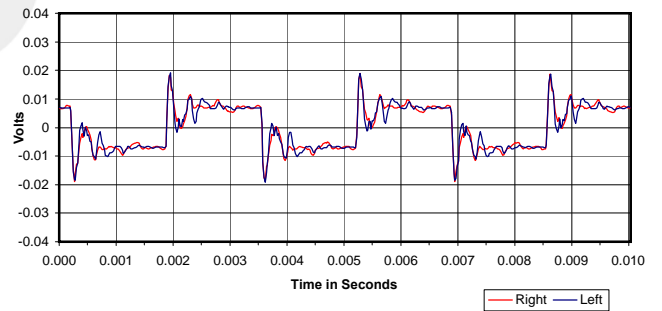
30 Hz Square Wave



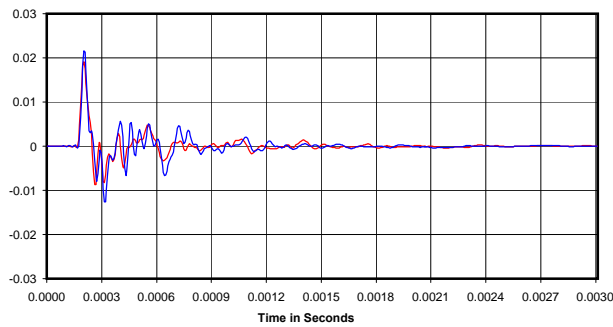
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



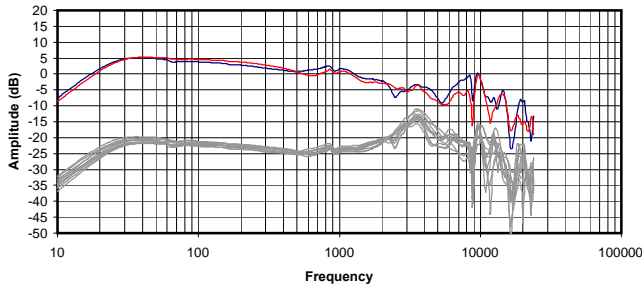
Impulse Response



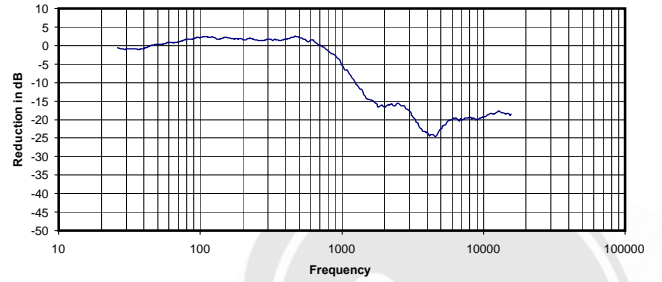
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.138 Vrms
 25 Ohms
 0.76 mW
 -6 dBr

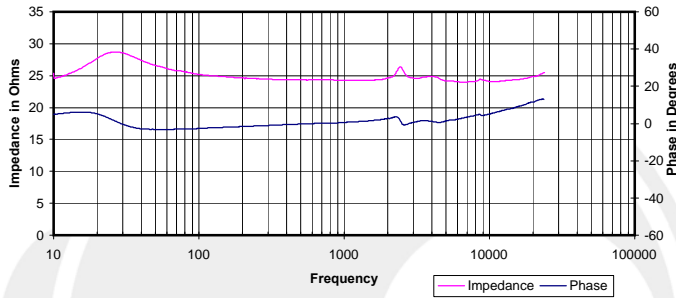
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



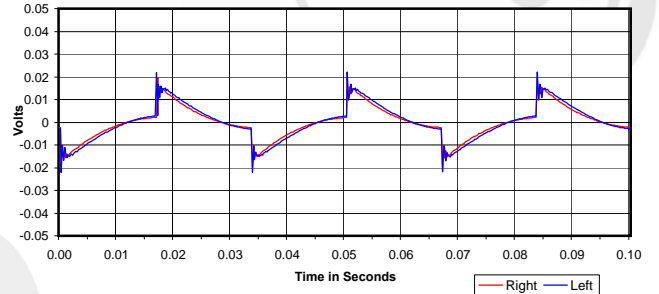
Isolation
 Attenuation of External Sound vs. Frequency



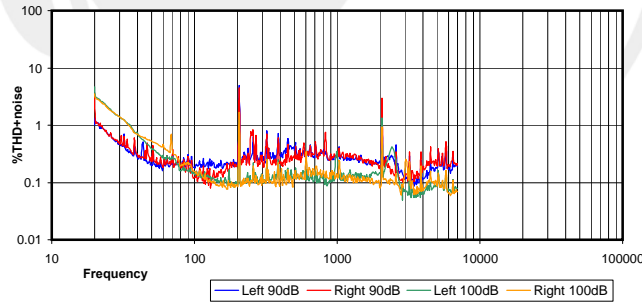
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



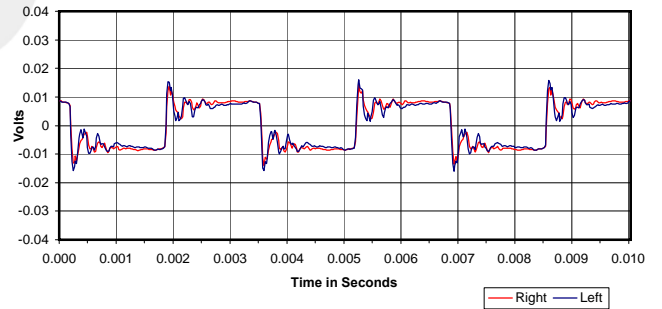
30 Hz Square Wave



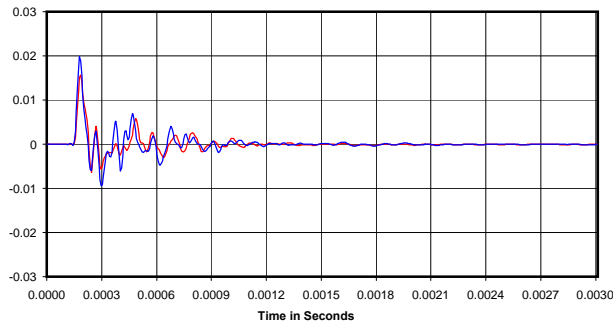
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

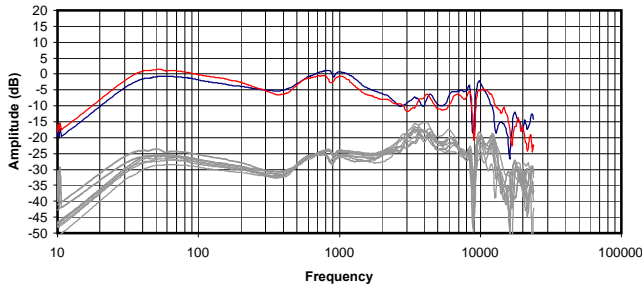


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

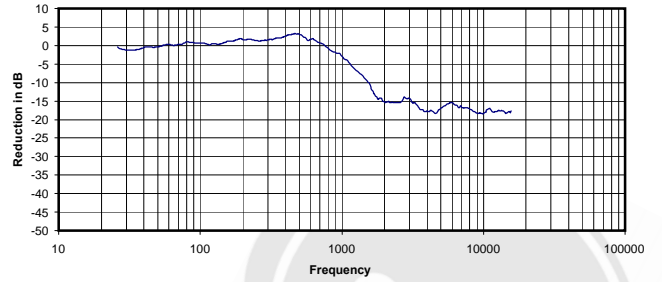
0.060 Vrms
 24 Ohms
 0.15 mW
 -7 dB



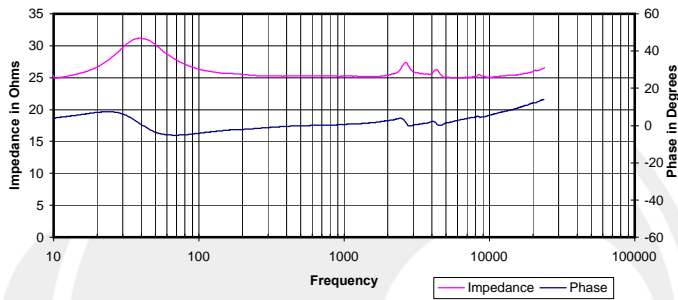
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



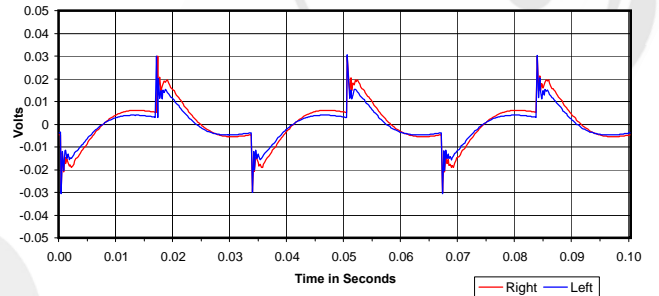
Isolation
 Attenuation of External Sound vs. Frequency



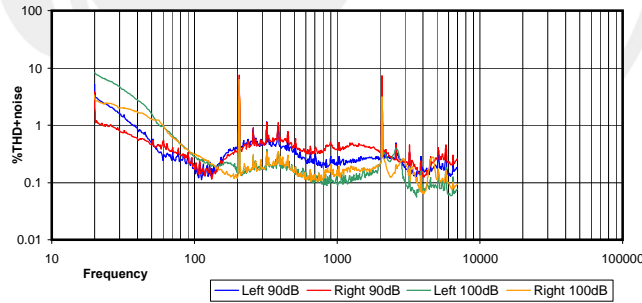
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



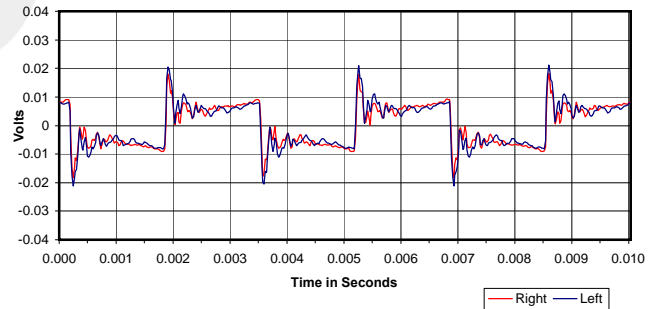
30 Hz Square Wave



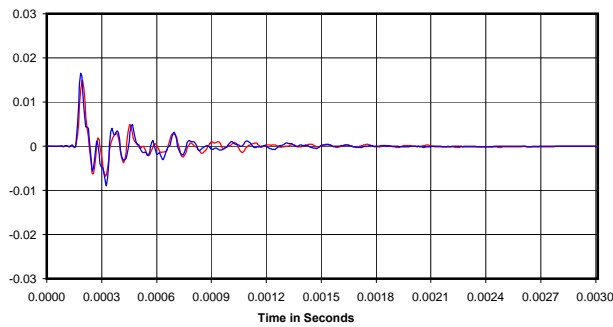
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

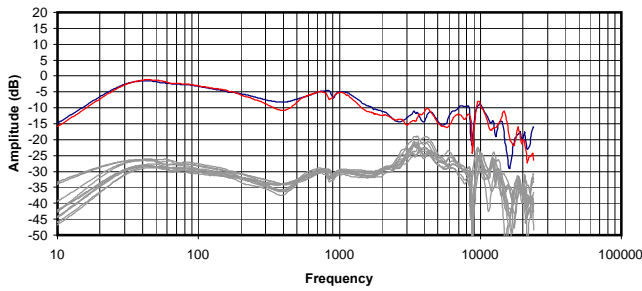


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

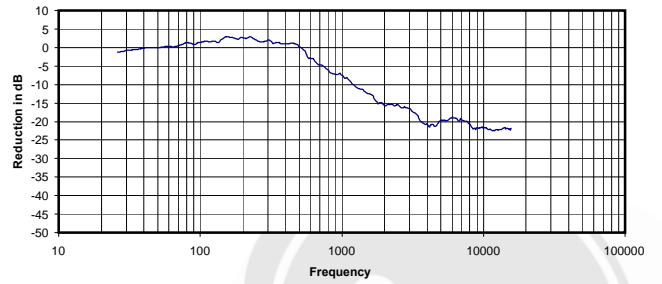
0.053 Vrms
 25 Ohms
 0.11 mW
 -5 dB



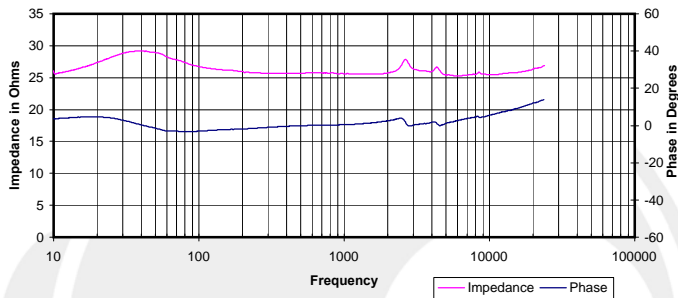
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



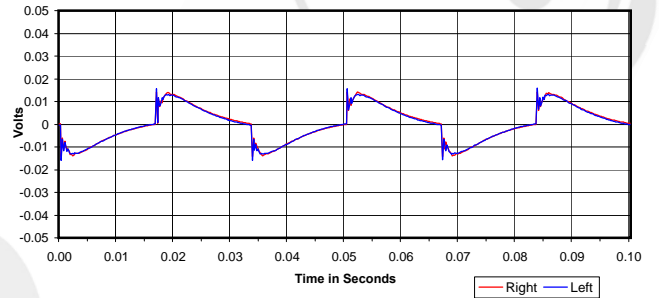
Isolation
Attenuation of External Sound vs. Frequency



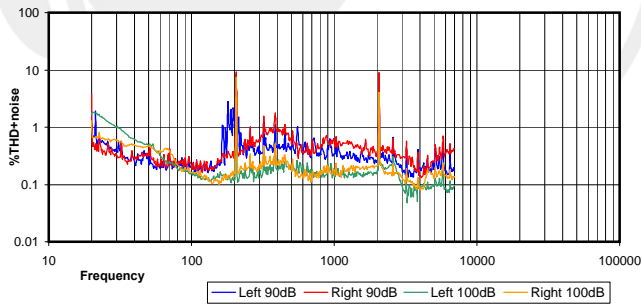
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



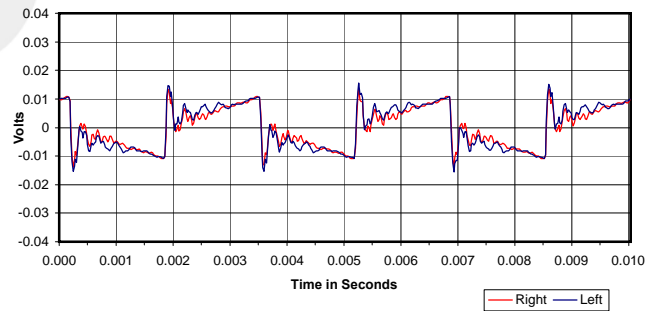
30 Hz Square Wave



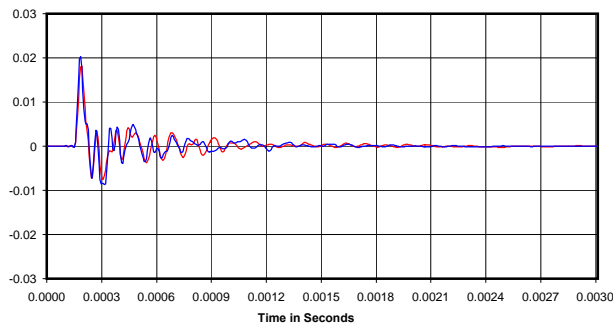
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

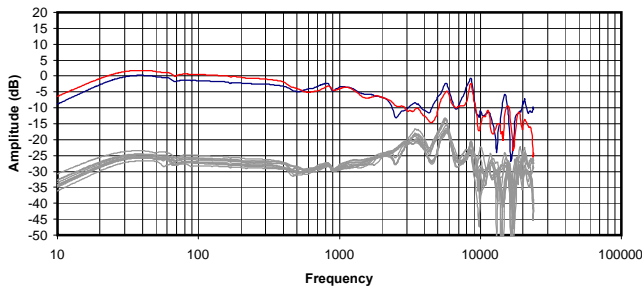


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

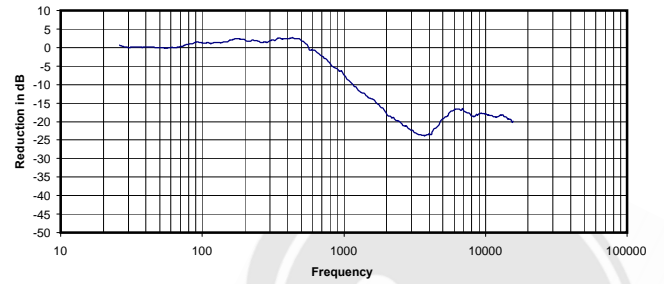
0.061 Vrms
26 Ohms
0.14 mW
-7 dB



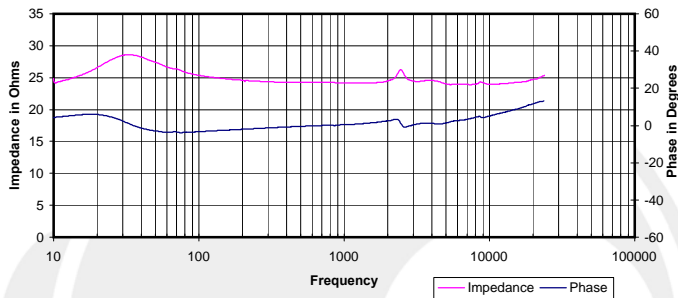
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



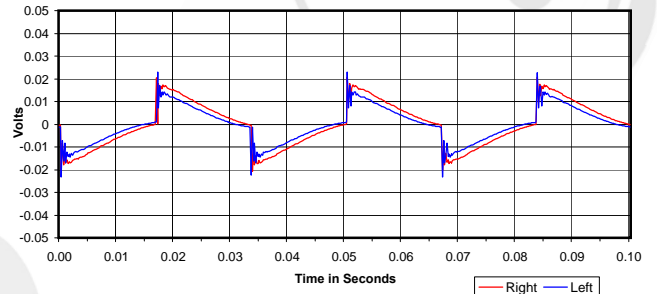
Isolation
Attenuation of External Sound vs. Frequency



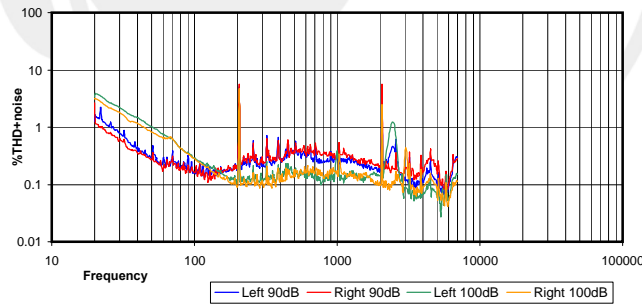
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



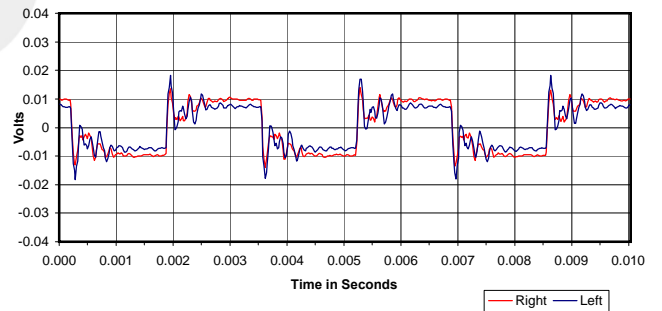
30 Hz Square Wave



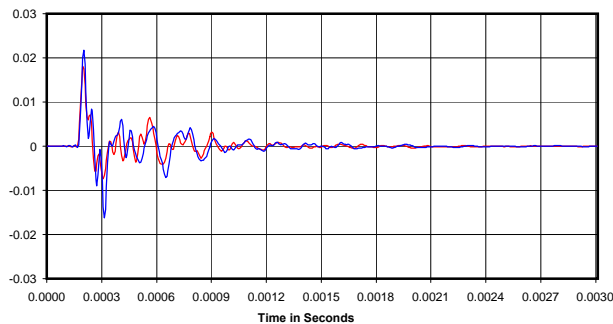
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



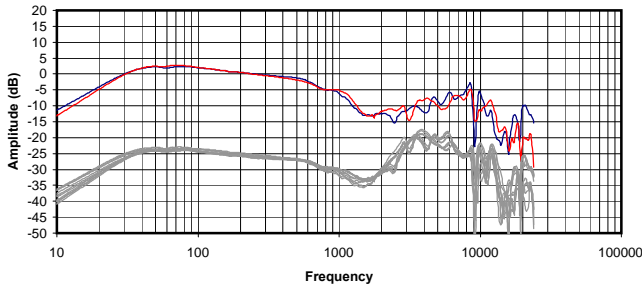
Impulse Response



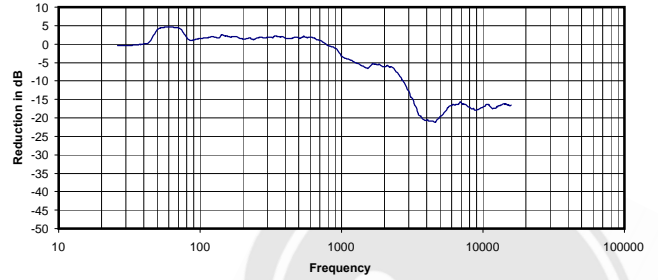
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.089 Vrms
24 Ohms
0.33 mW
-7 dB

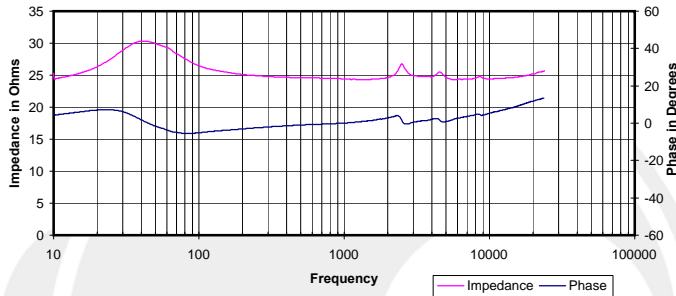
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



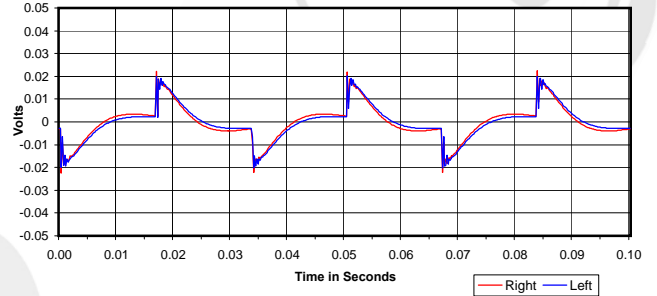
Isolation
Attenuation of External Sound vs. Frequency



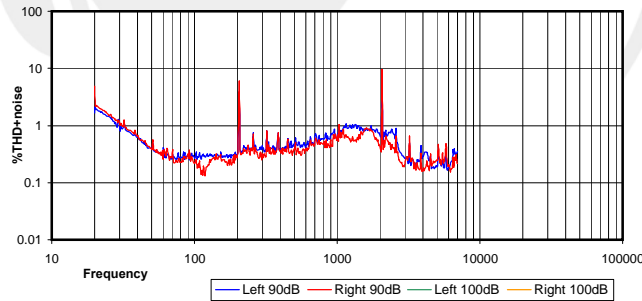
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



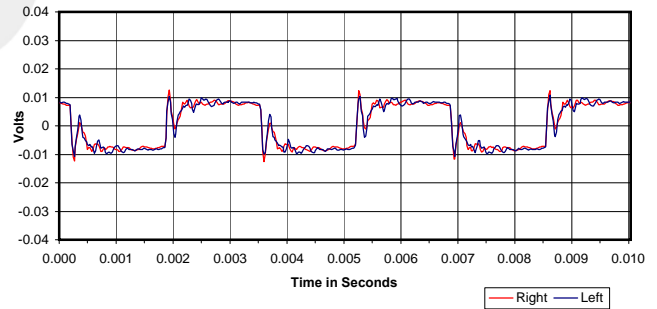
30 Hz Square Wave



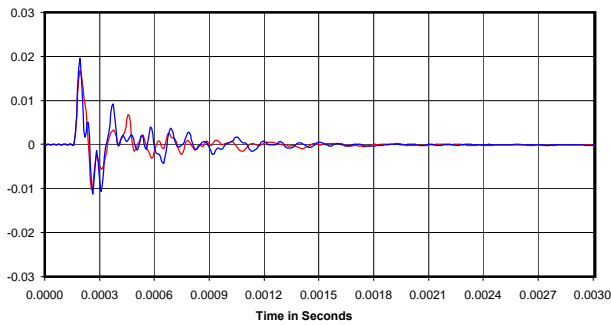
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

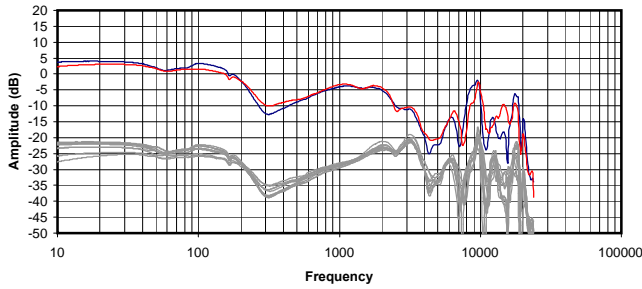


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

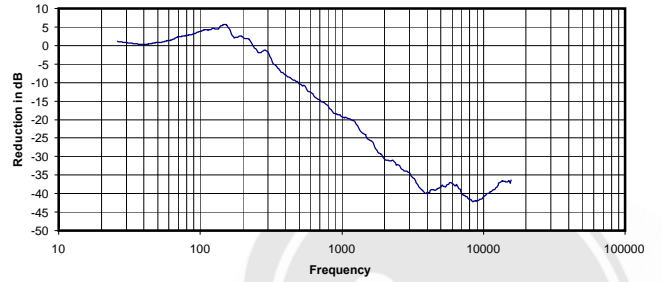
0.082 Vrms
24 Ohms
0.27 mW
-4 dB



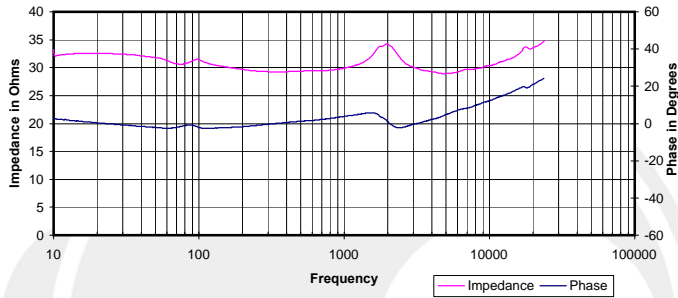
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



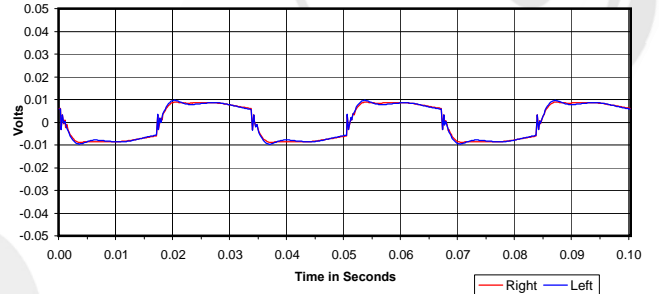
Isolation
Attenuation of External Sound vs. Frequency



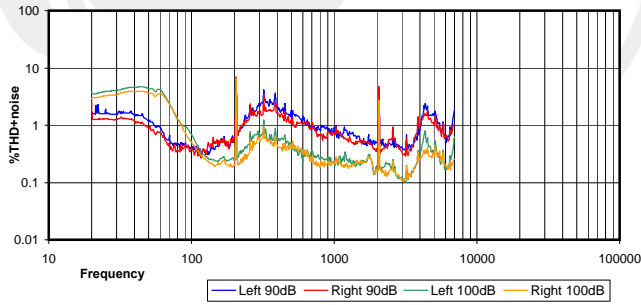
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



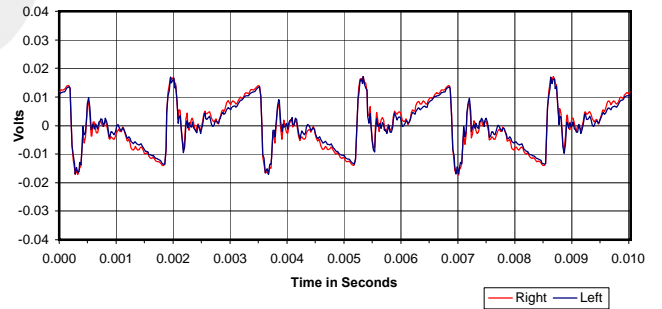
30 Hz Square Wave



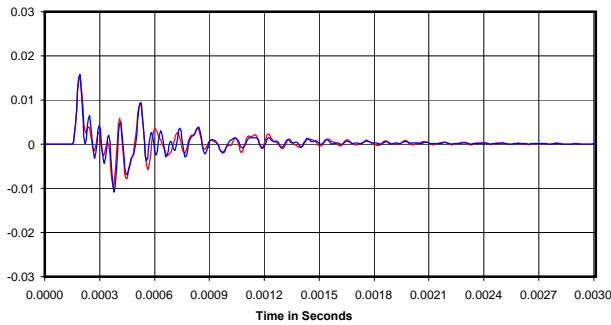
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

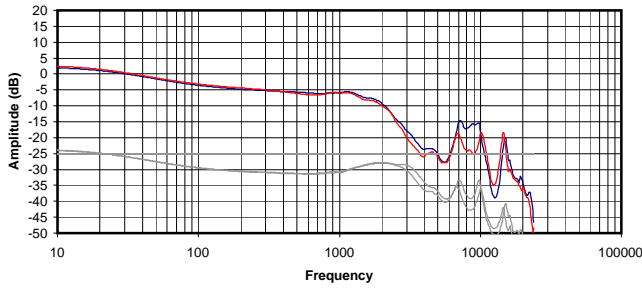


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

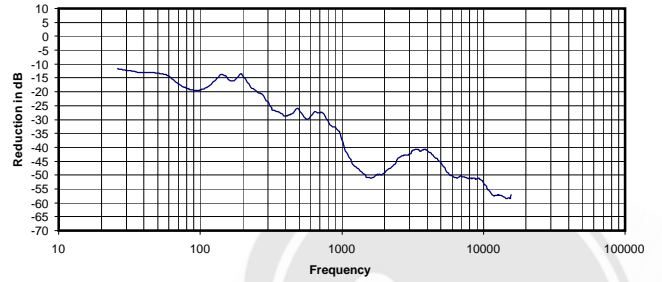
0.044 Vrms
30 Ohms
0.06 mW
-16 dB



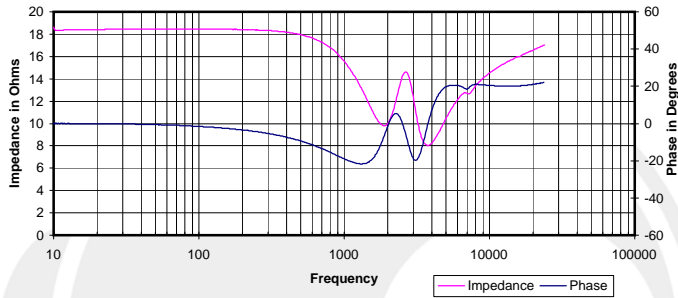
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



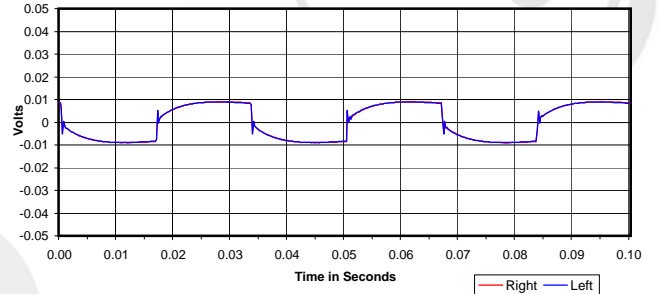
Isolation
Attenuation of External Sound vs. Frequency



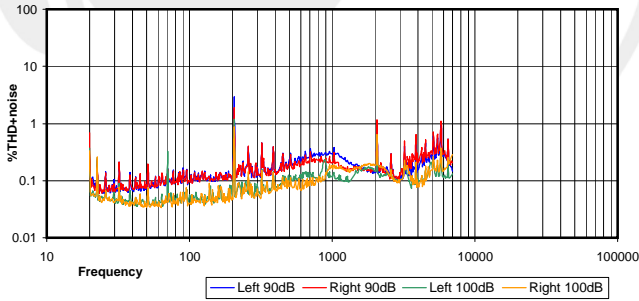
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



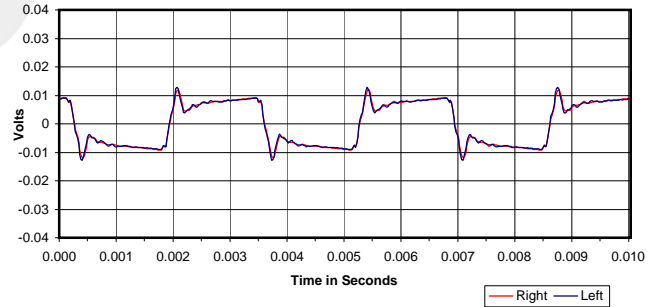
30 Hz Square Wave



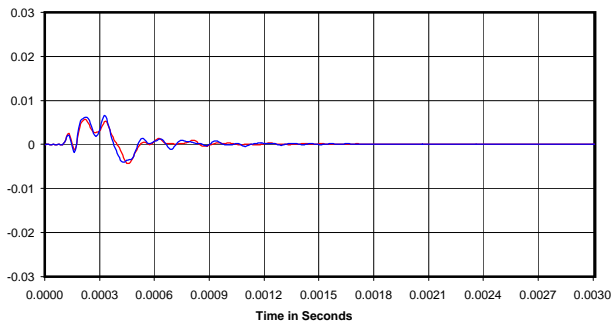
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

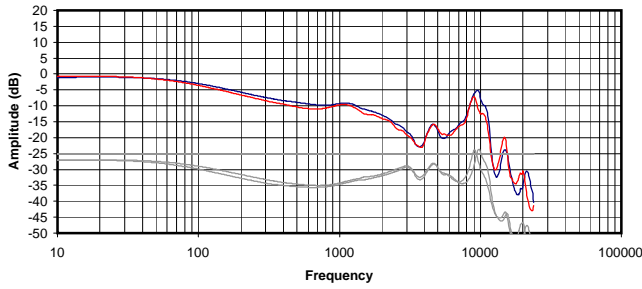


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

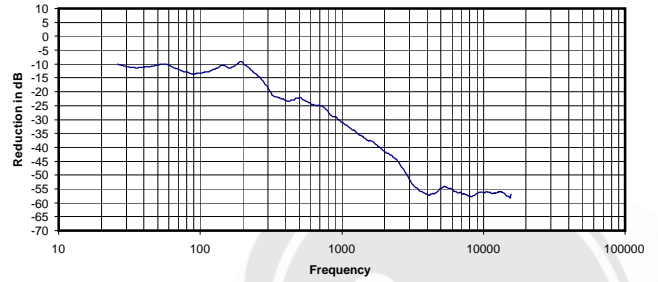
0.012 Vrms
16 Ohms
0.01 mW
-33 dB



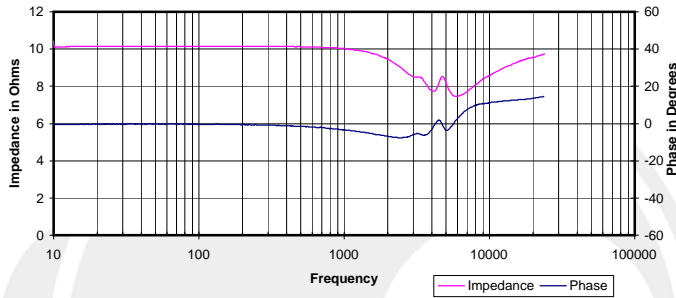
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



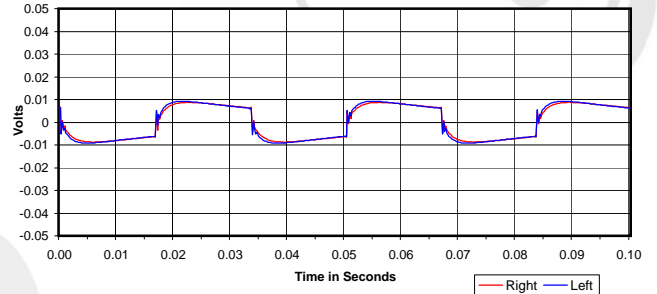
Isolation
Attenuation of External Sound vs. Frequency



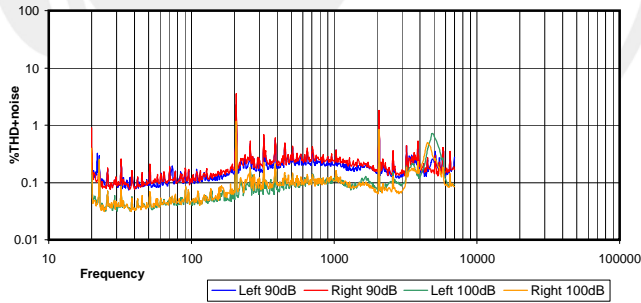
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



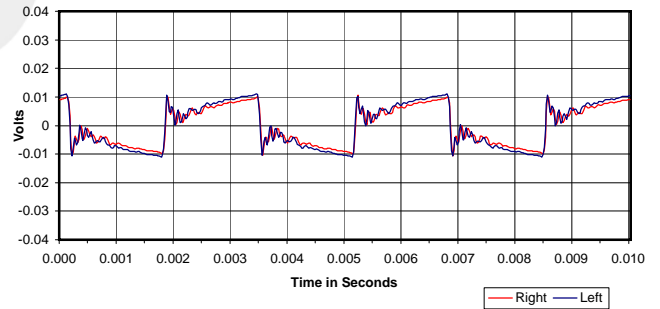
30 Hz Square Wave



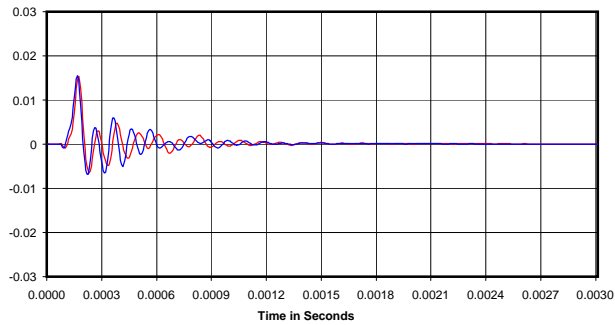
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



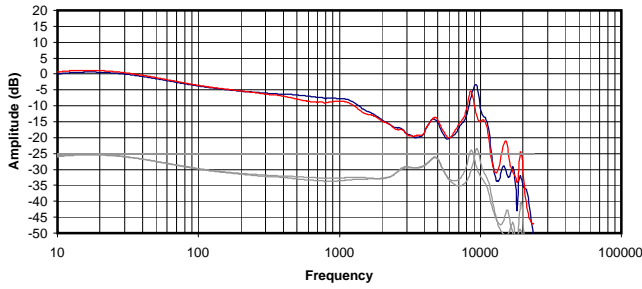
Impulse Response



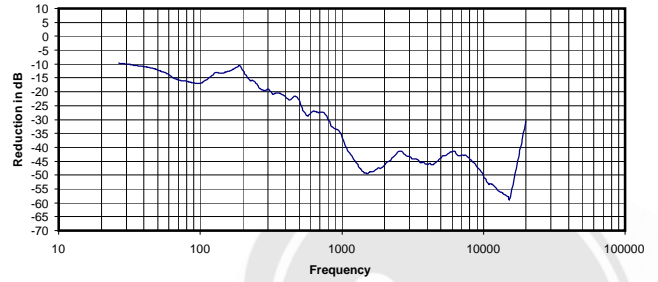
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
10 Ohms
0.05 mW
-30 dB

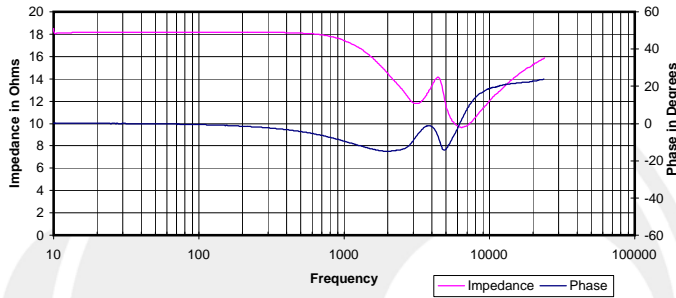
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



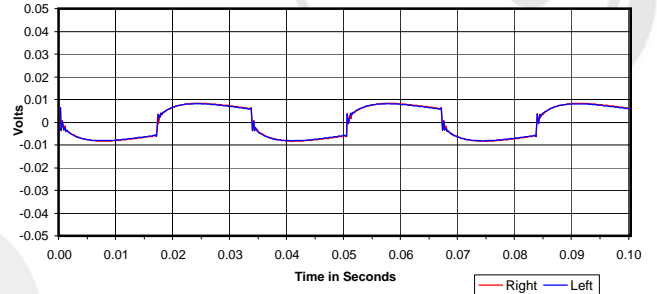
Isolation
Attenuation of External Sound vs. Frequency



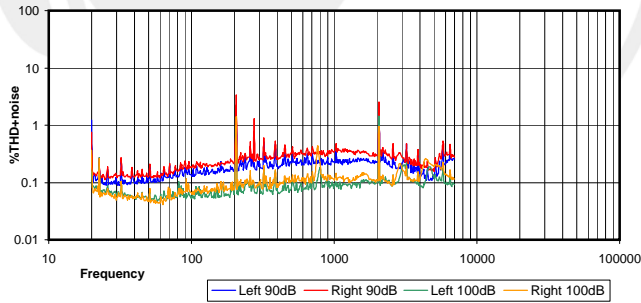
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



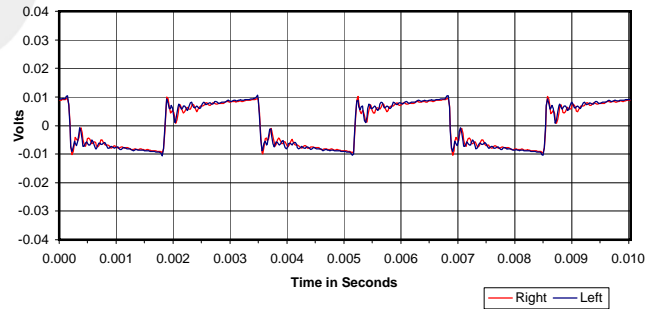
30 Hz Square Wave



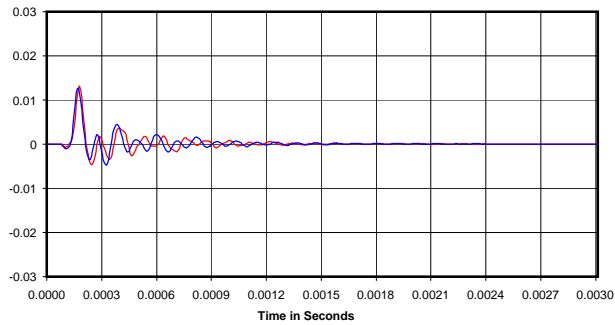
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

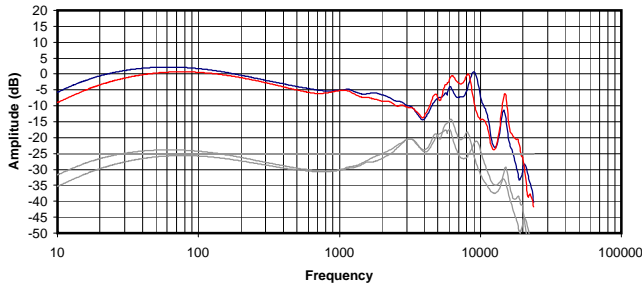


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

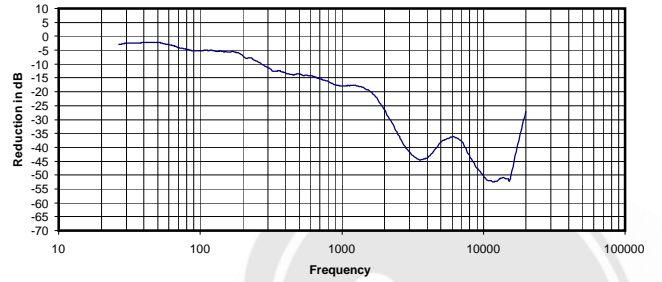
0.015 Vrms
17 Ohms
0.01 mW
-33 dB



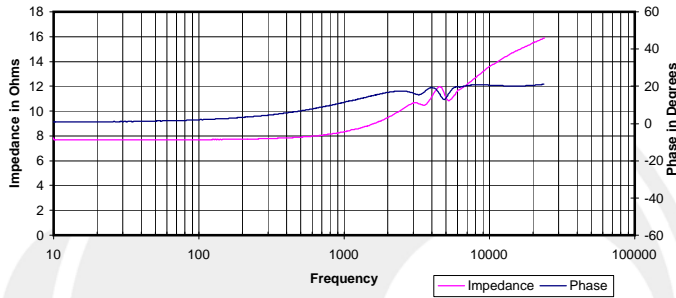
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



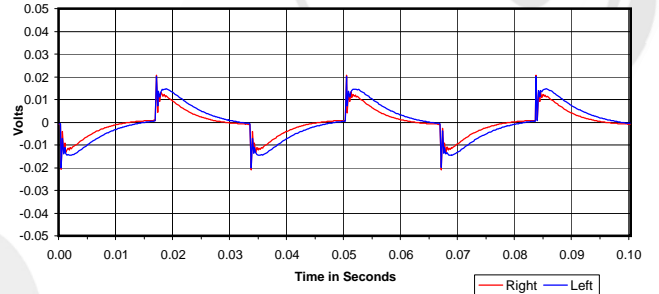
Isolation
Attenuation of External Sound vs. Frequency



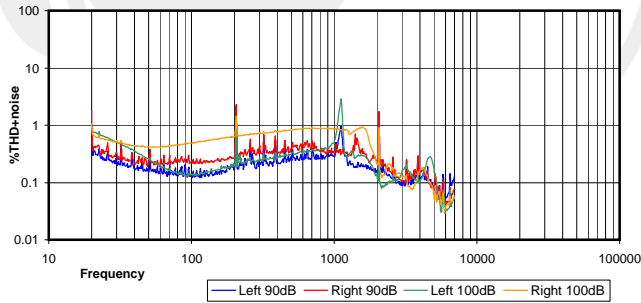
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



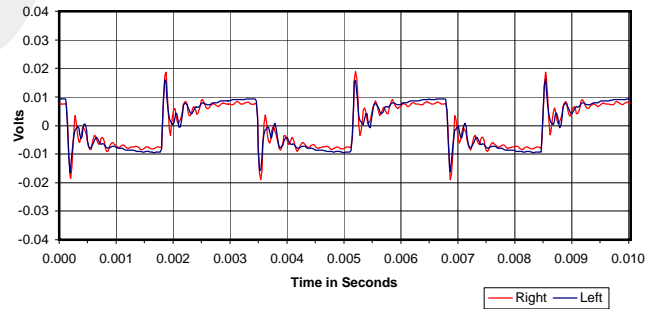
30 Hz Square Wave



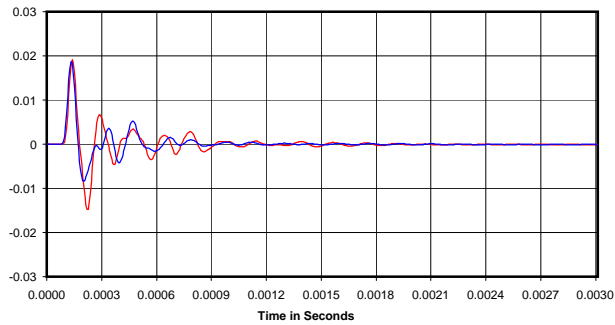
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



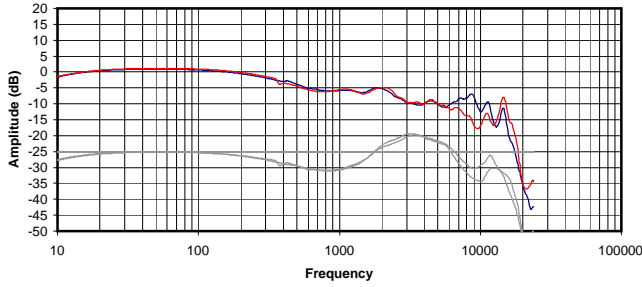
Impulse Response



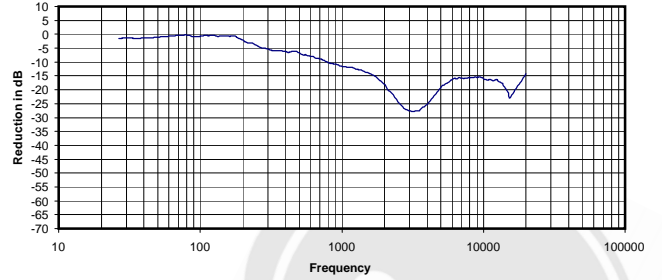
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
8 Ohms
0.09 mW
-22 dB

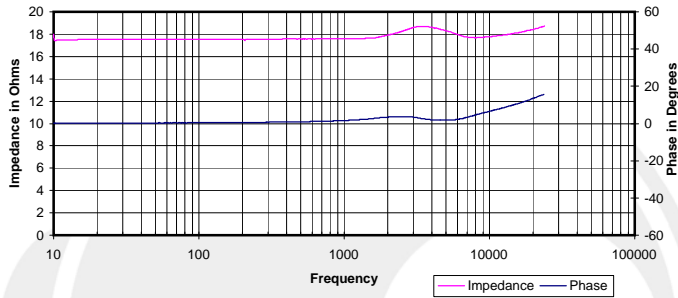
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



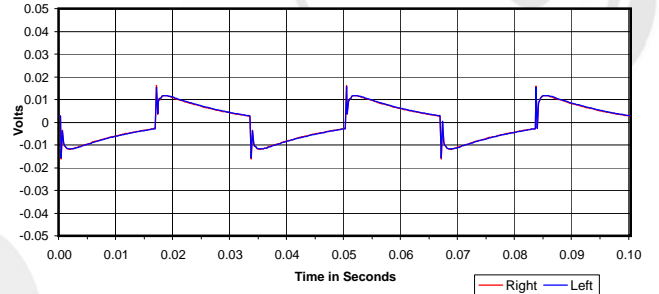
Isolation
Attenuation of External Sound vs. Frequency



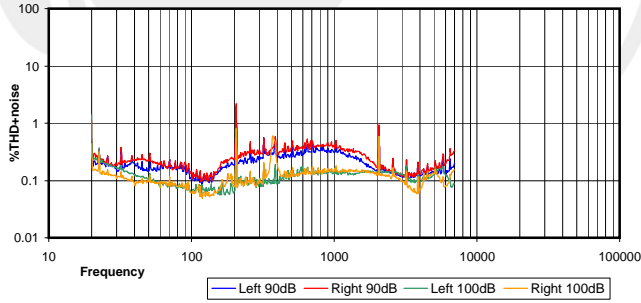
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



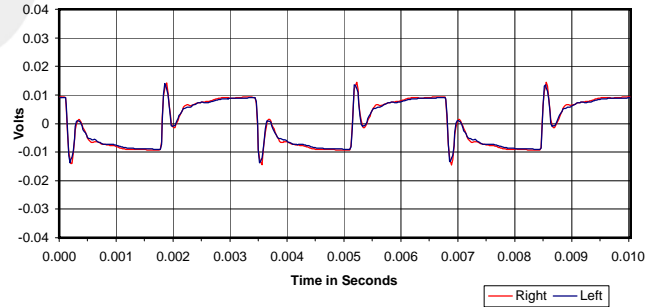
30 Hz Square Wave



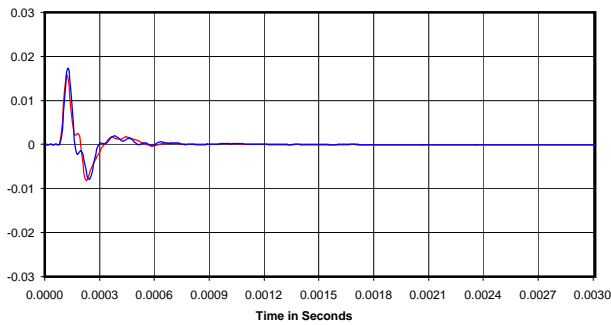
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



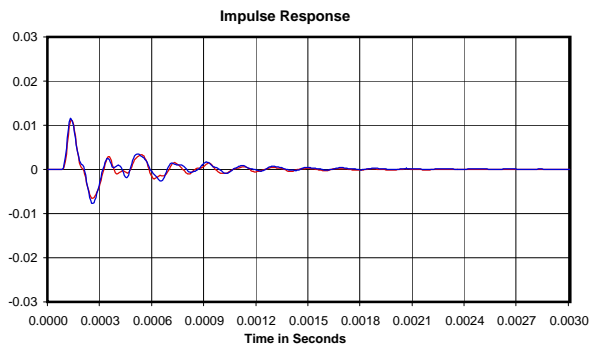
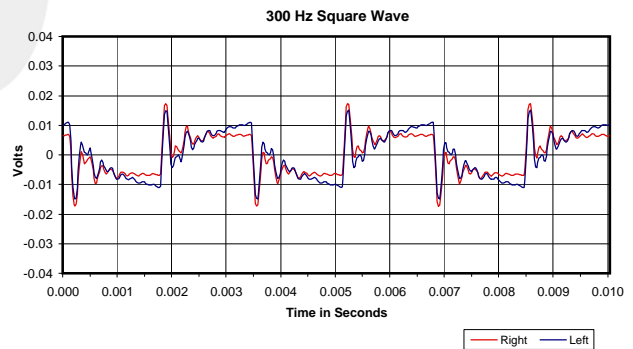
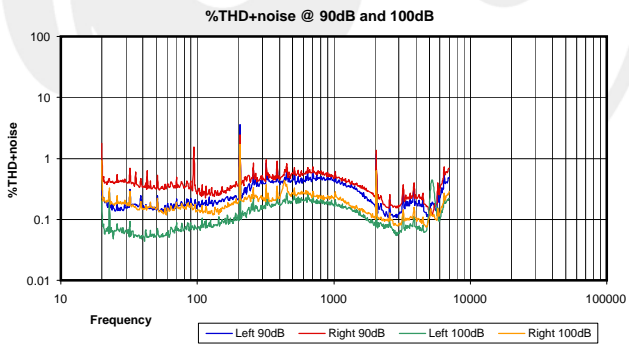
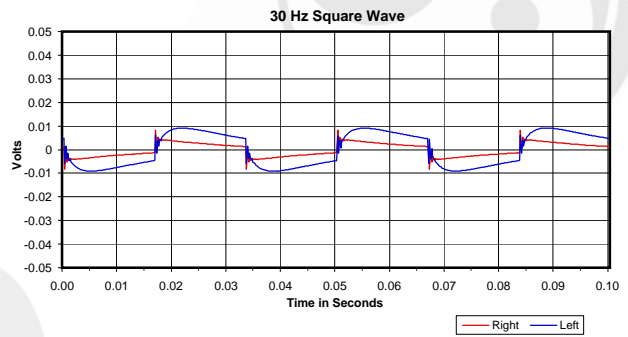
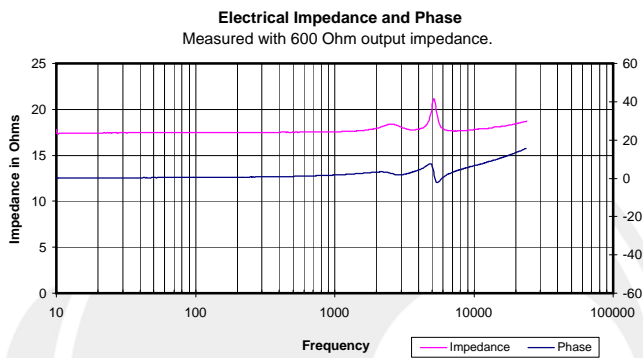
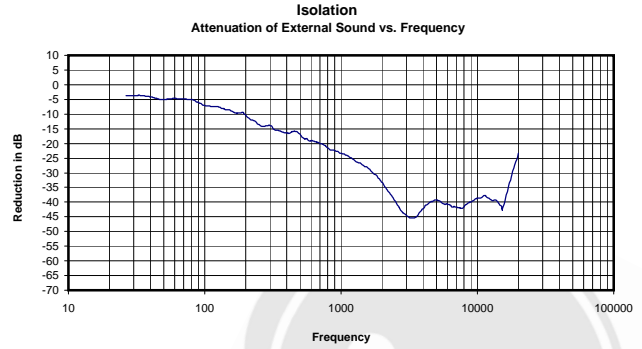
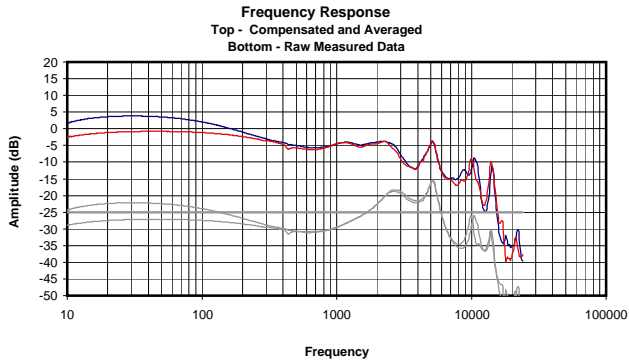
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.041 Vrms
18 Ohms
0.10 mW
-12 dB

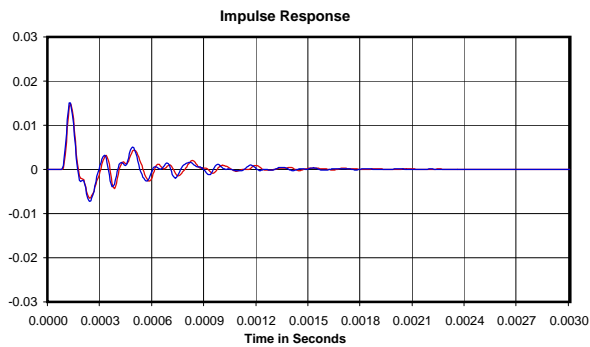
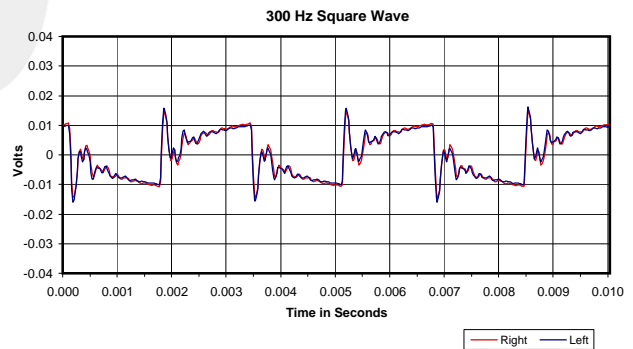
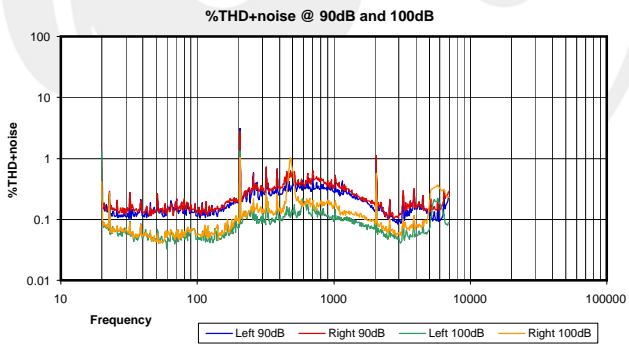
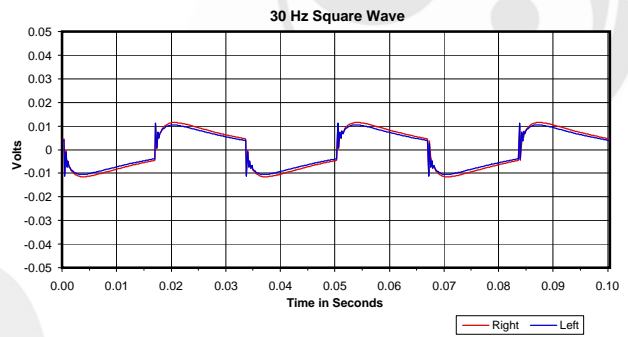
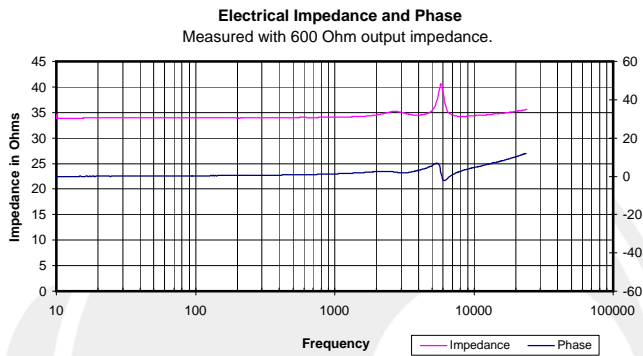
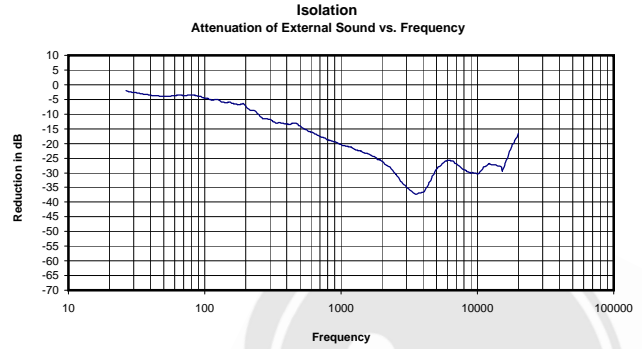
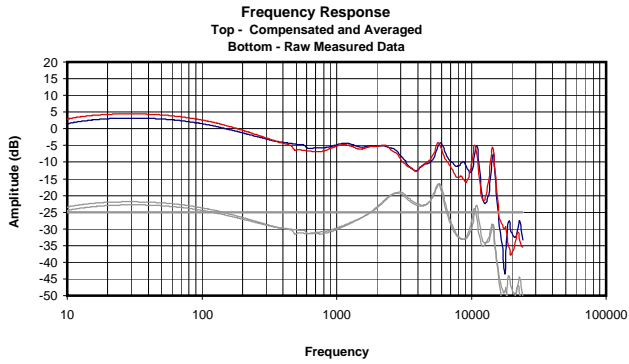




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.019 Vrms
18 Ohms
0.02 mW
-26 dB

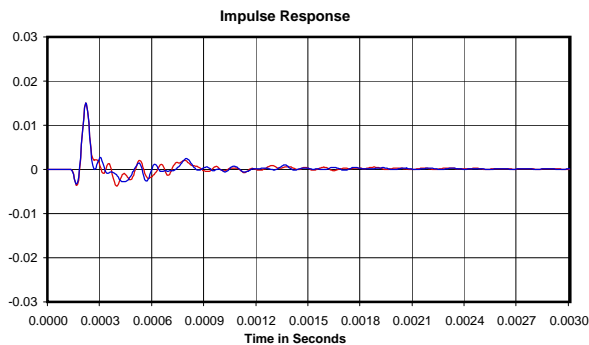
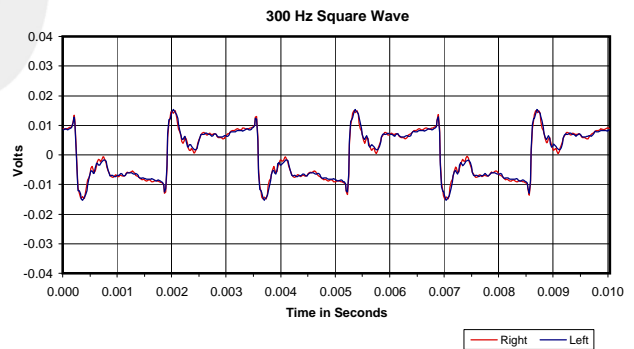
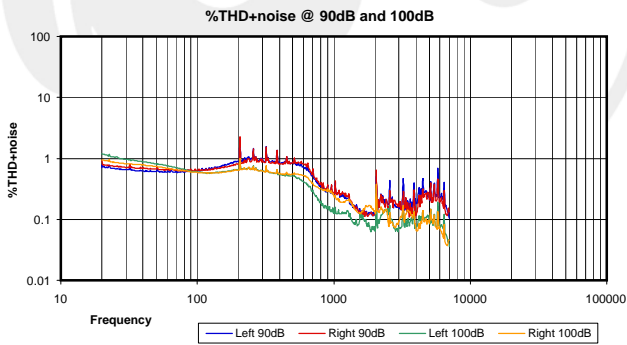
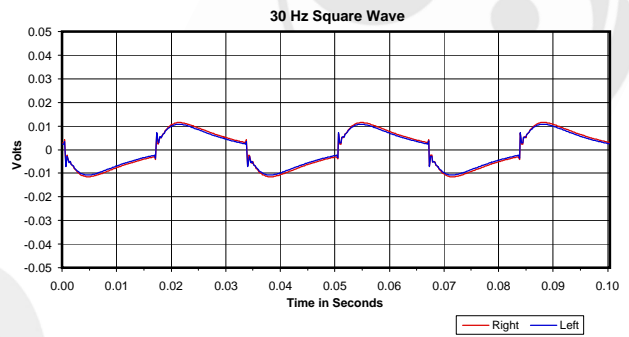
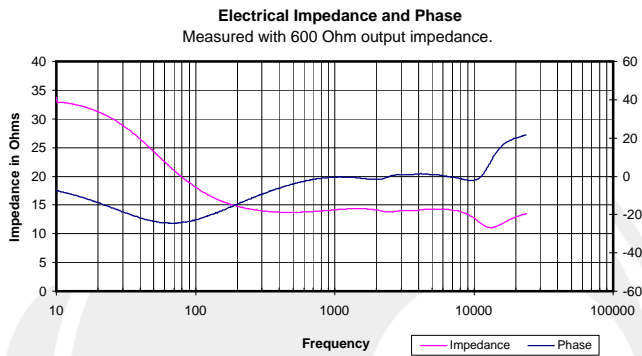
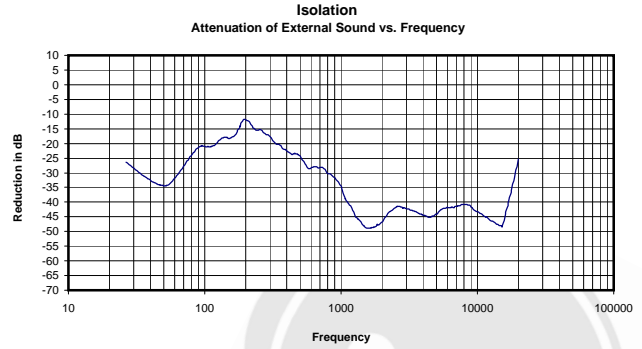
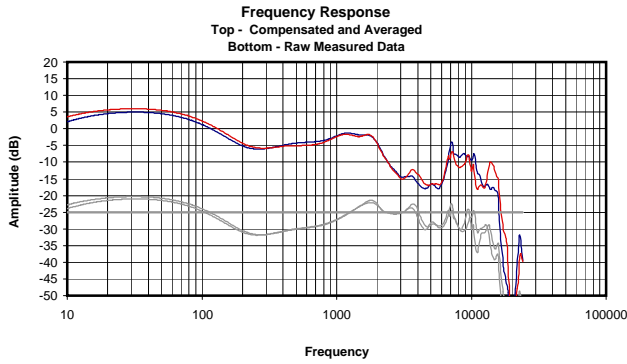




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
34 Ohms
0.03 mW
-20 dBr



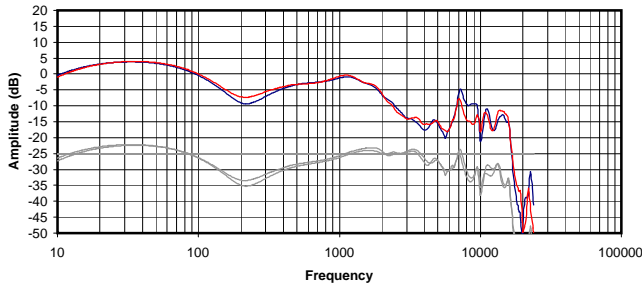


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

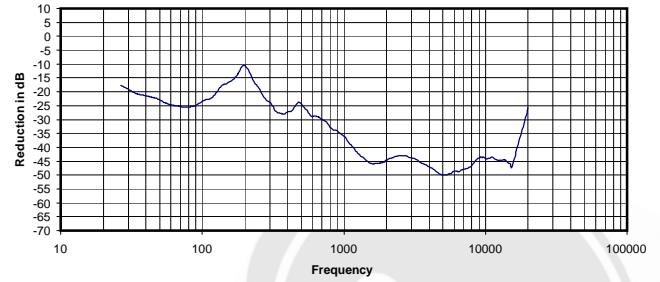
0.026 Vrms
14 Ohms
0.05 mW
-33 dBr



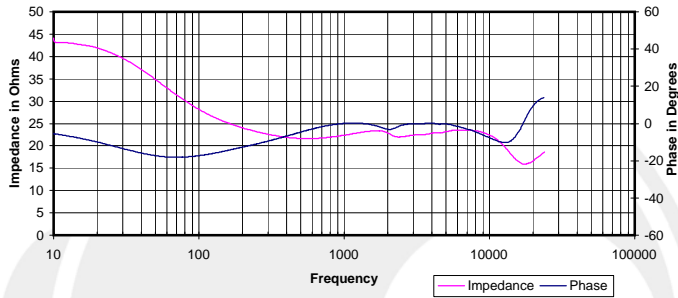
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



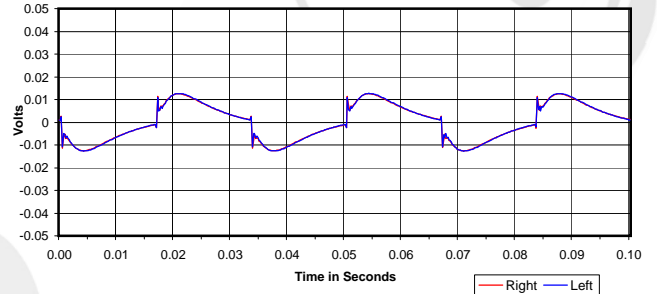
Isolation
Attenuation of External Sound vs. Frequency



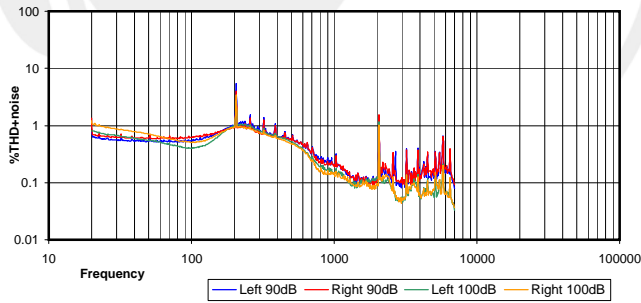
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



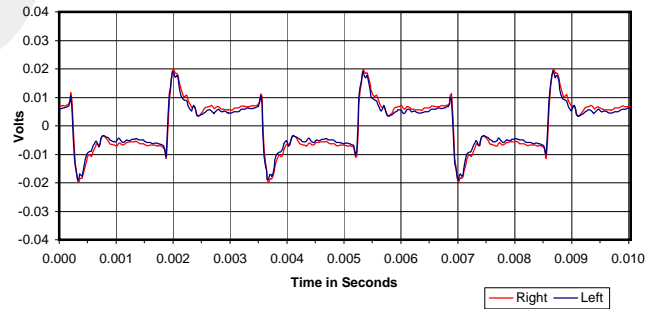
30 Hz Square Wave



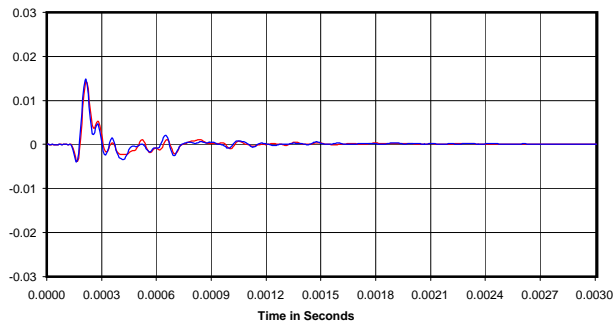
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



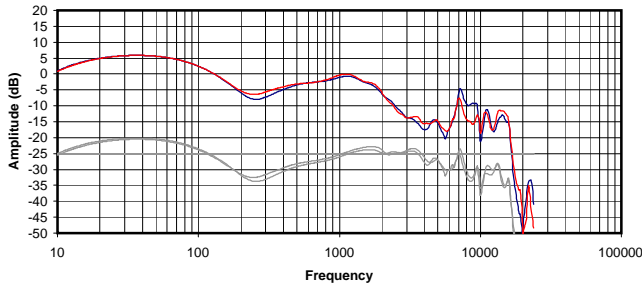
Impulse Response



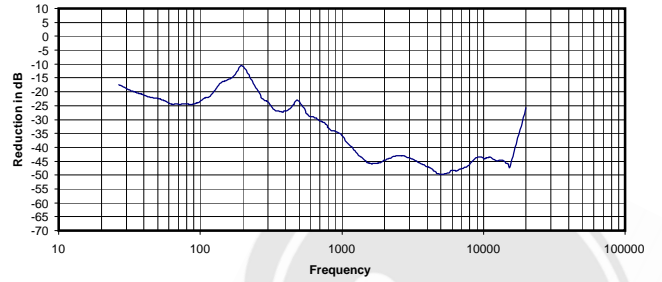
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
22 Ohms
0.03 mW
-34 dB

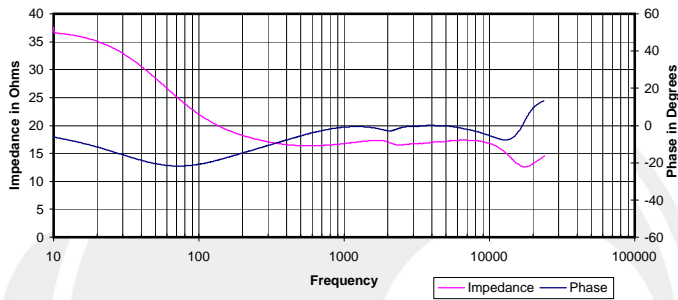
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



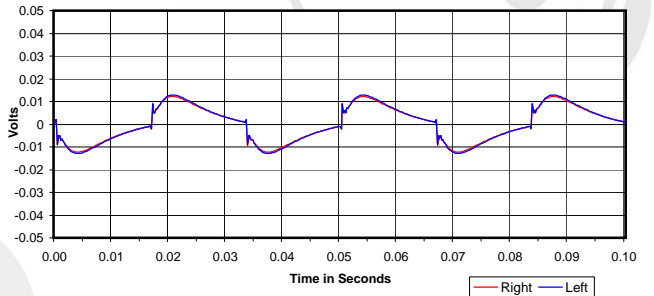
Isolation
Attenuation of External Sound vs. Frequency



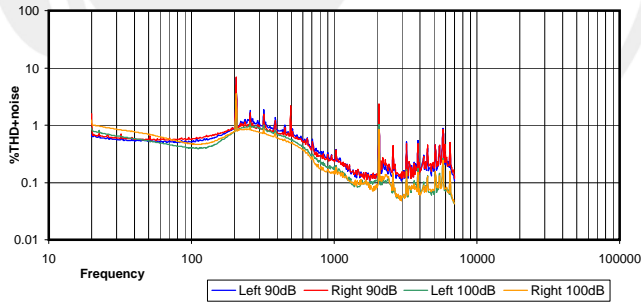
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



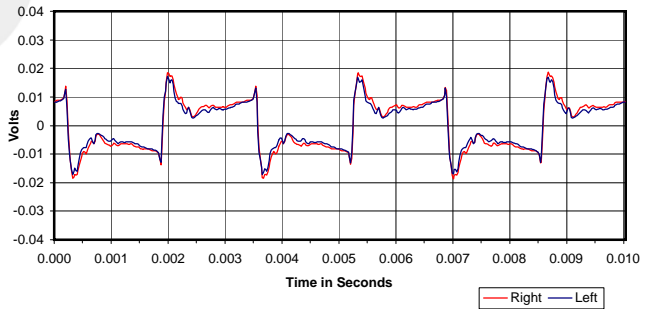
30 Hz Square Wave



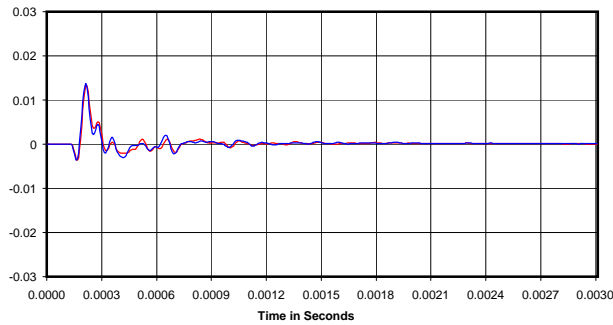
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

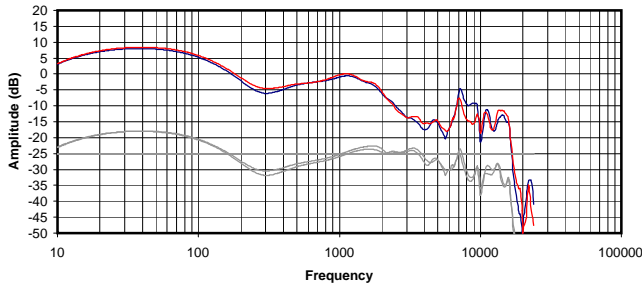


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

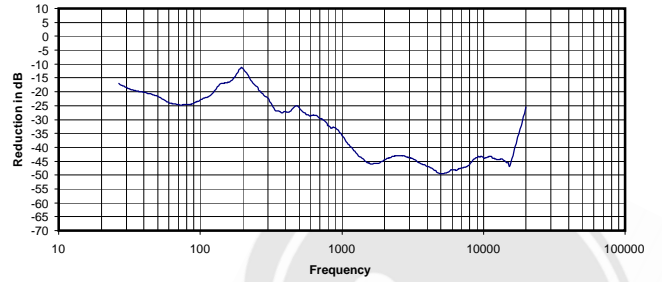
0.026 Vrms
17 Ohms
0.04 mW
-34 dB



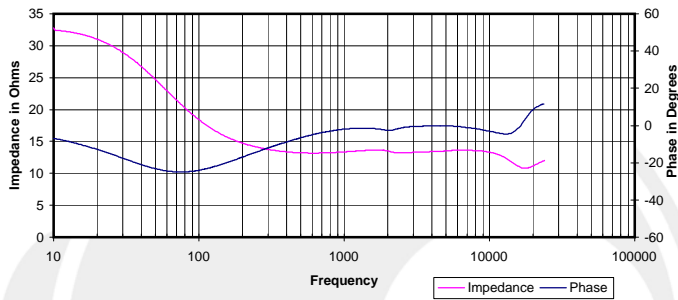
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



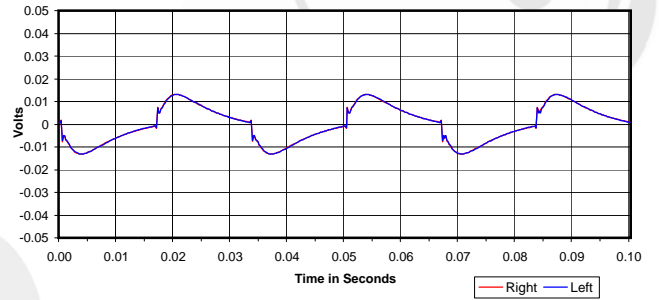
Isolation
Attenuation of External Sound vs. Frequency



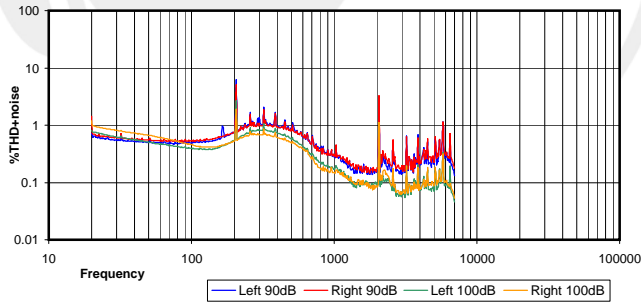
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



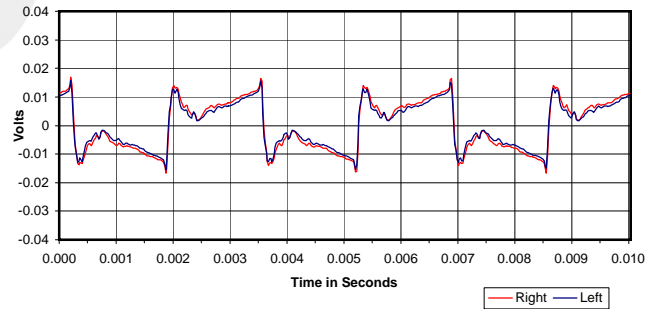
30 Hz Square Wave



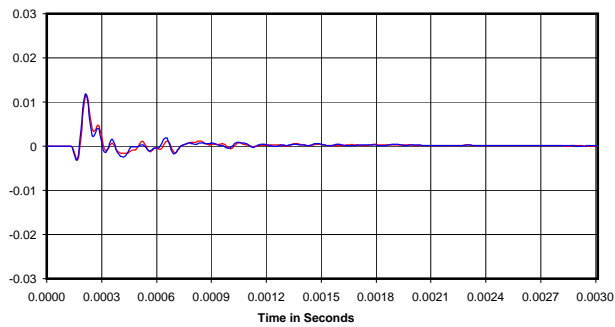
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



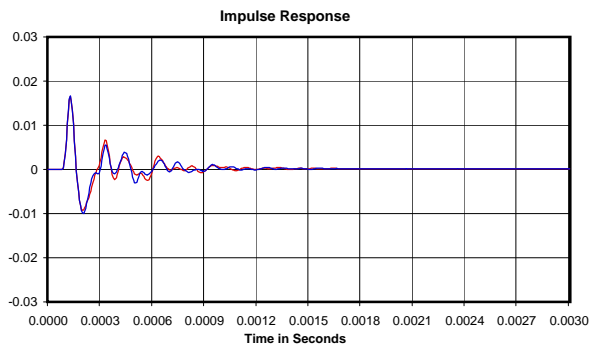
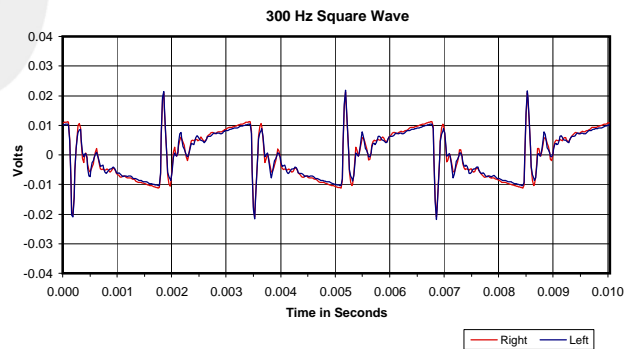
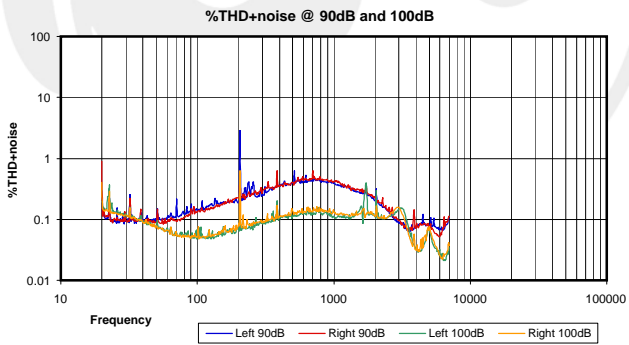
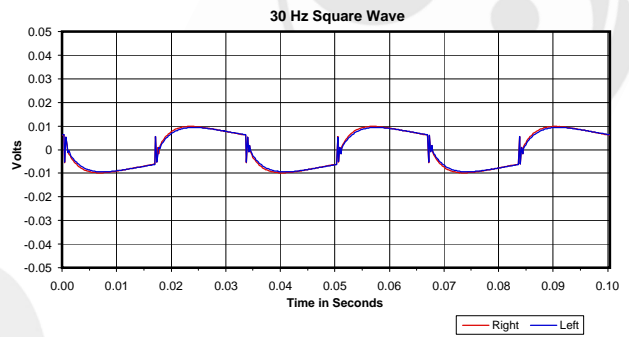
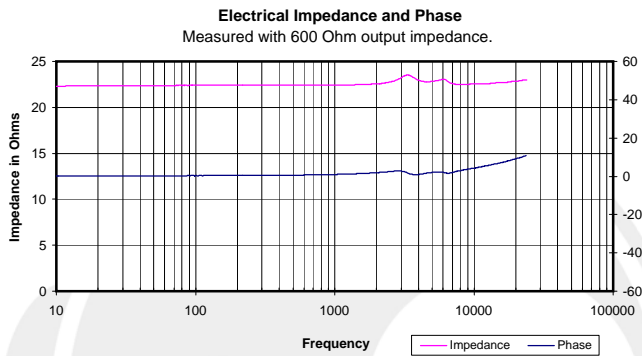
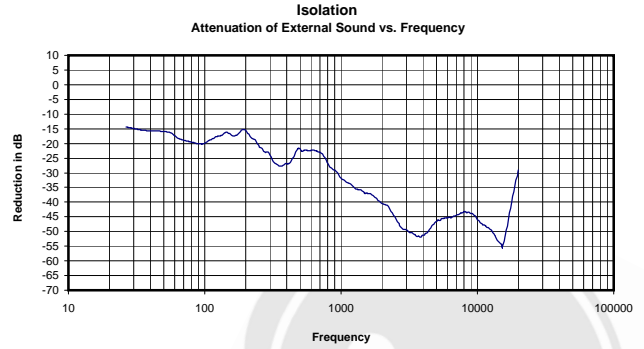
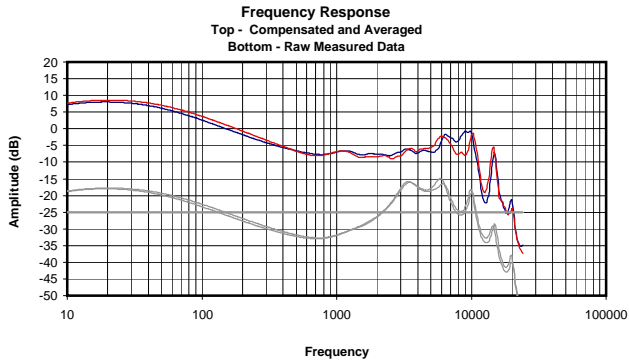
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
13 Ohms
0.06 mW
-34 dB

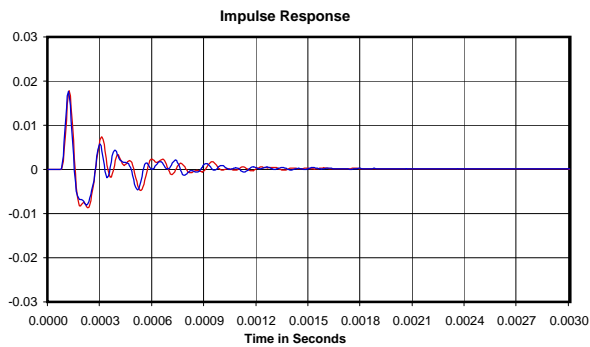
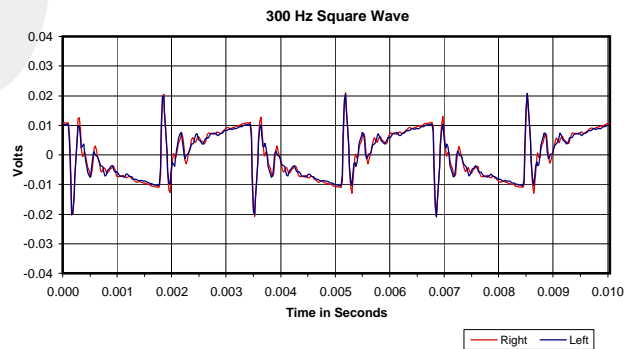
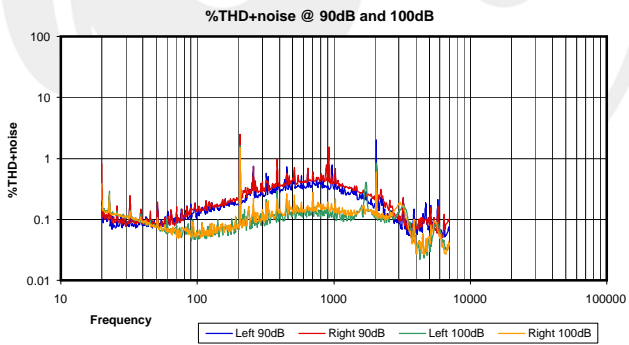
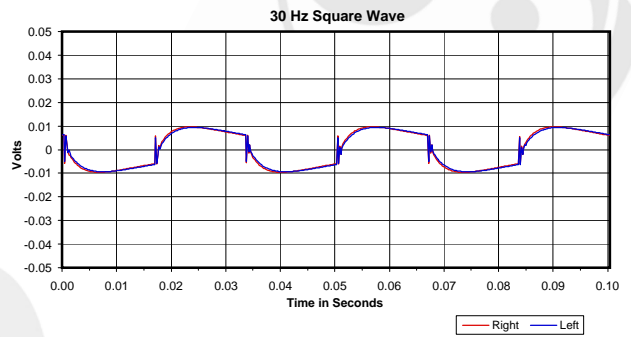
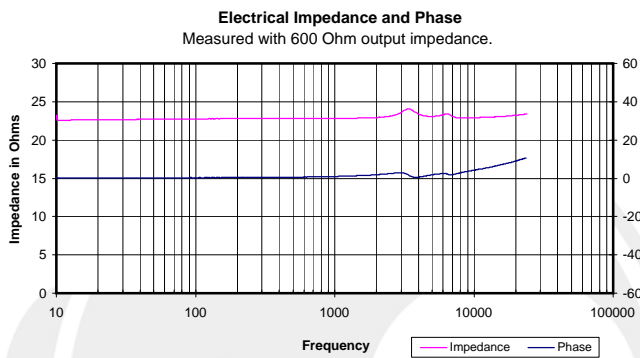
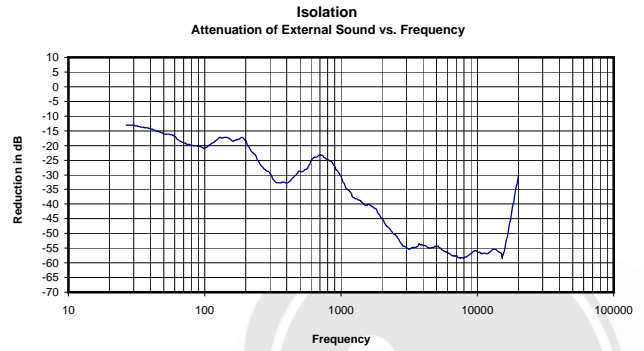
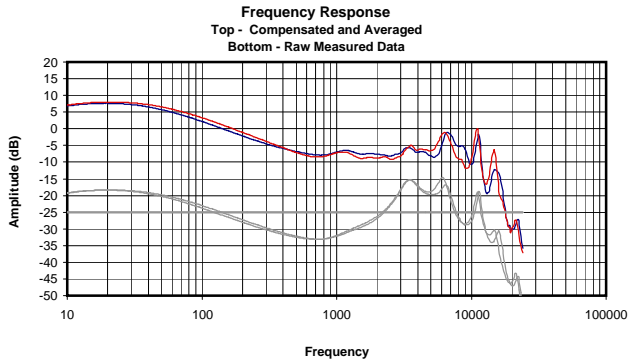




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.058 Vrms
22 Ohms
0.15 mW
-33 dBr

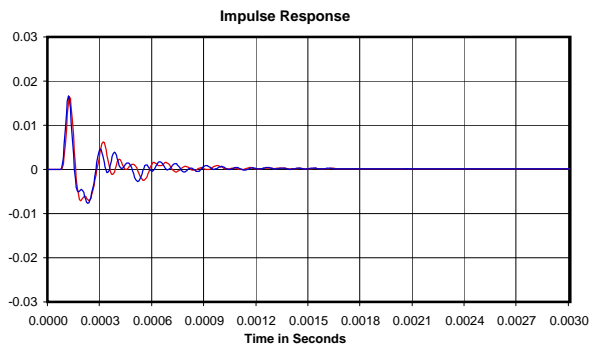
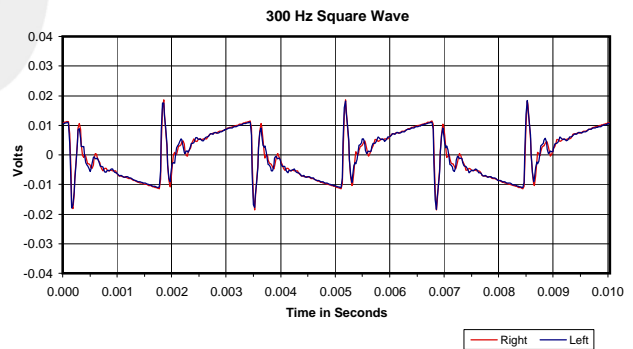
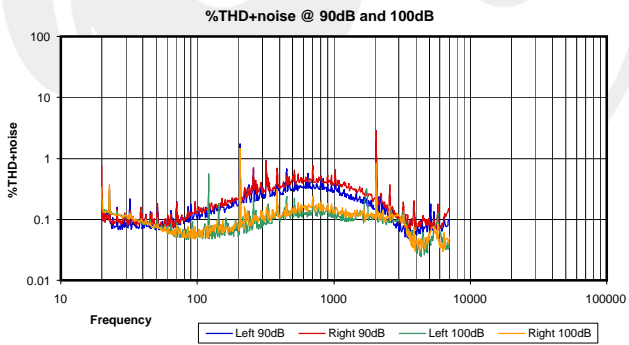
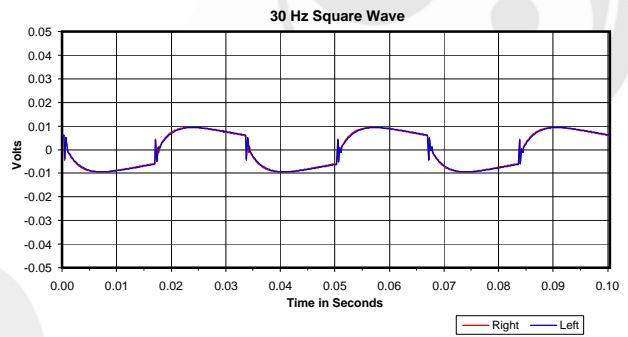
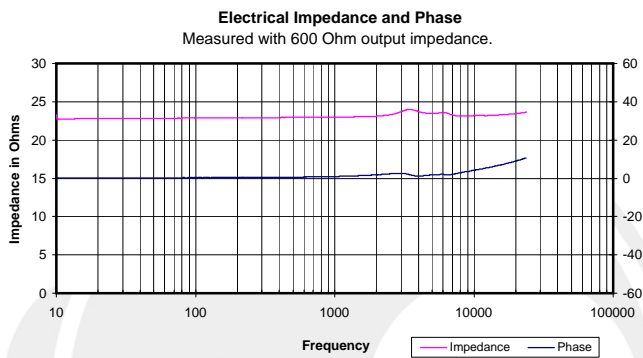
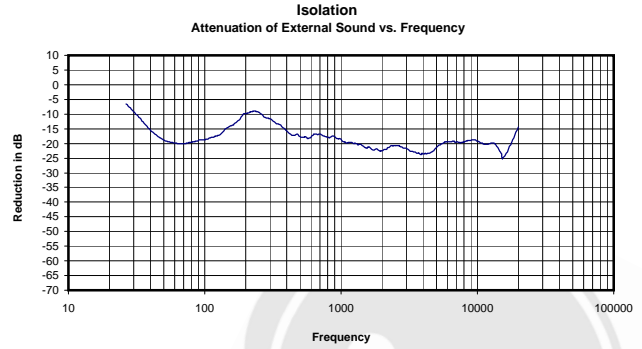
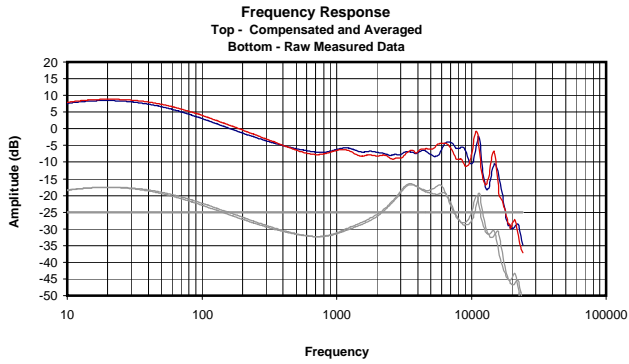




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.052 Vrms
23 Ohms
0.12 mW
-37 dBr

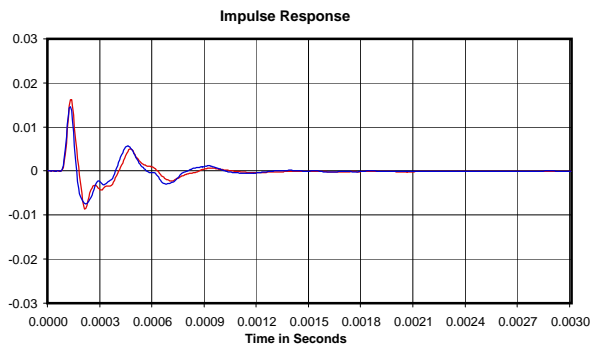
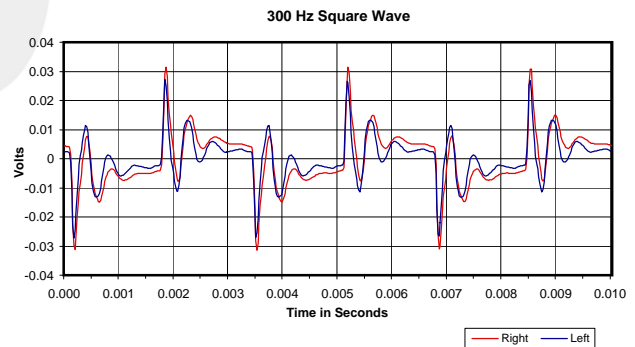
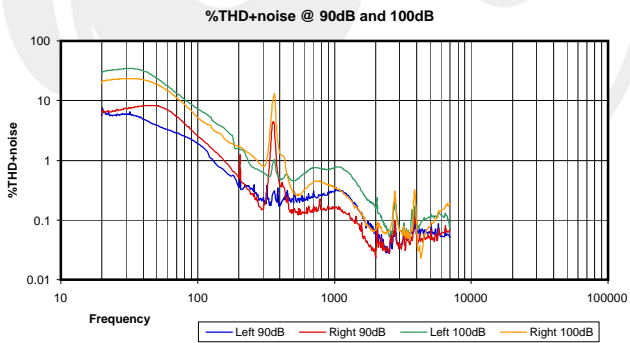
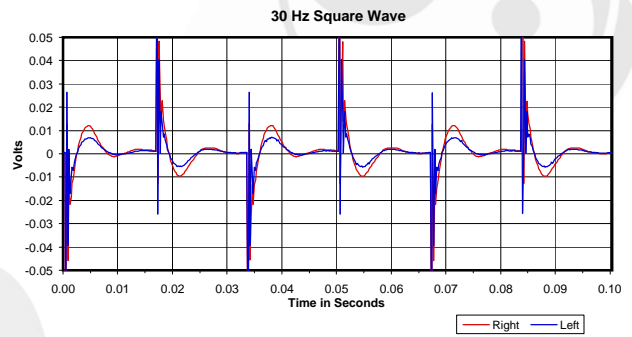
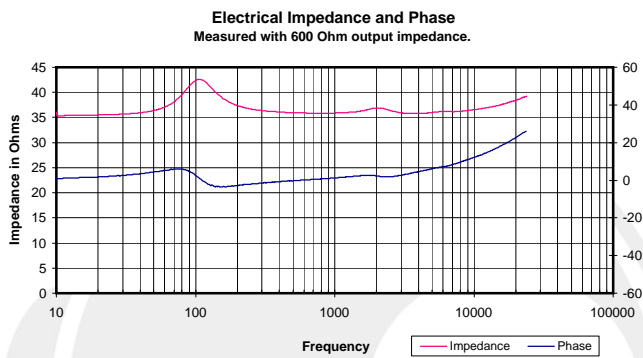
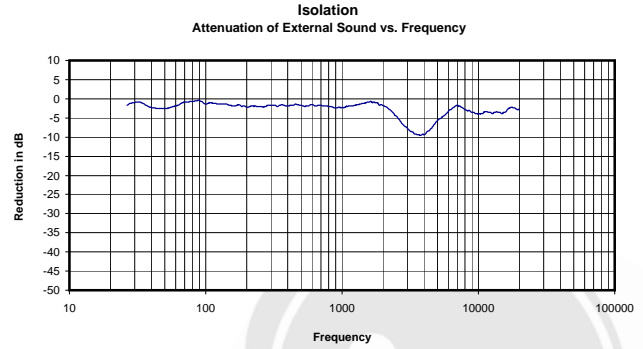
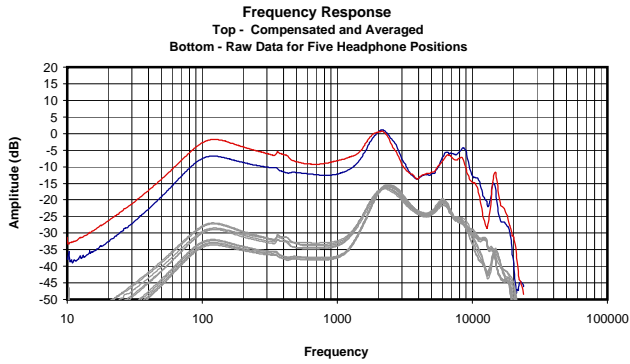




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
23 Ohms
0.13 mW
-18 dBr

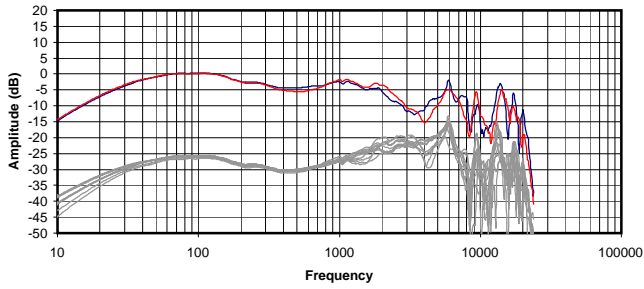




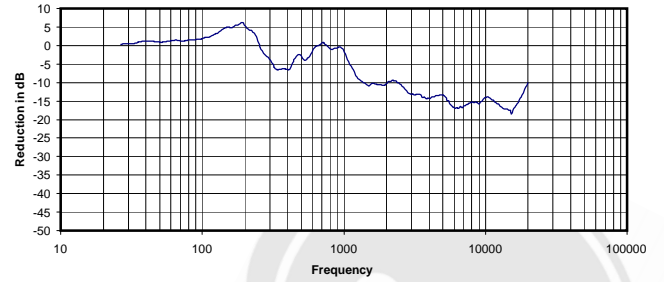
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.188 Vrms
36 Ohms
0.99 mW
-3 dBr

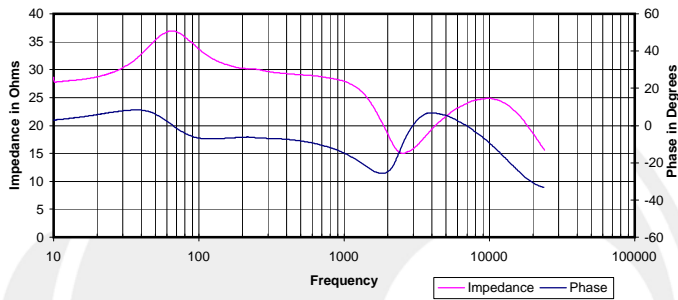
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



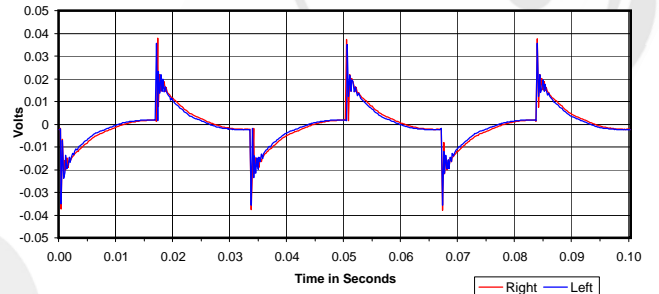
Isolation
Attenuation of External Sound vs. Frequency



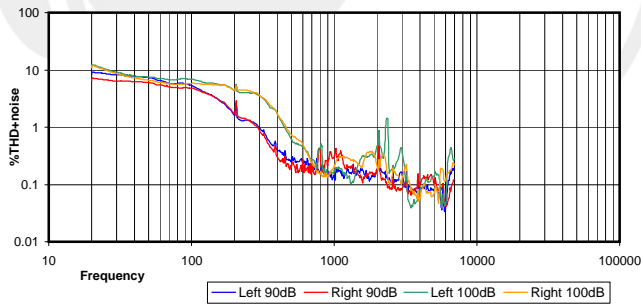
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



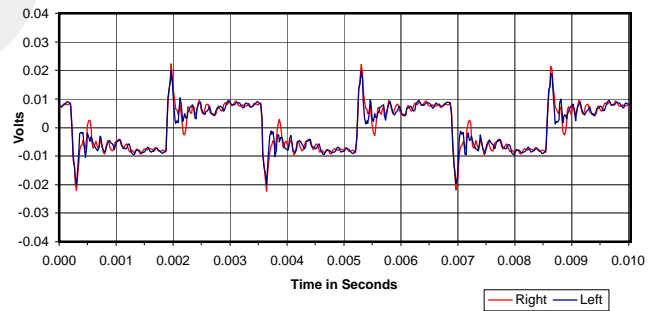
30 Hz Square Wave



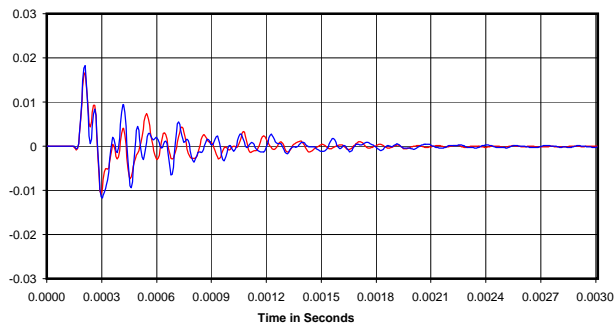
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

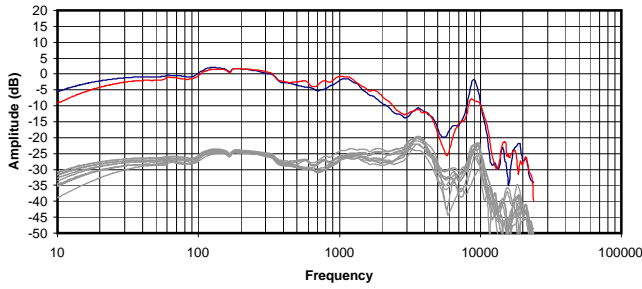


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

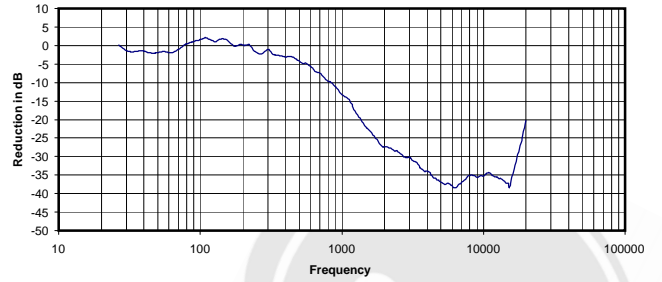
0.091 Vrms
28 Ohms
0.30 mW
-6 dBr



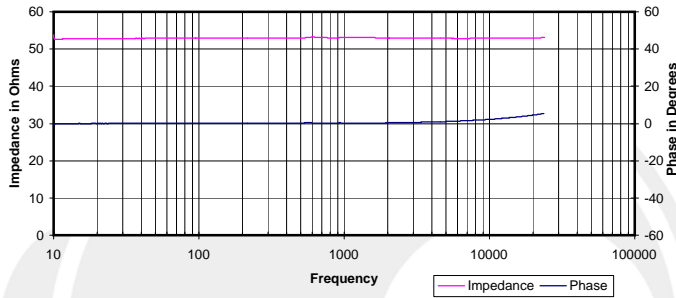
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



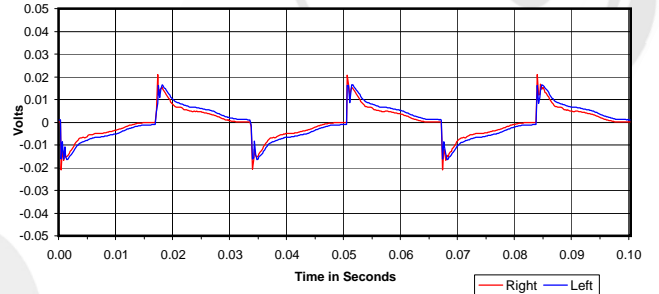
Isolation
 Attenuation of External Sound vs. Frequency



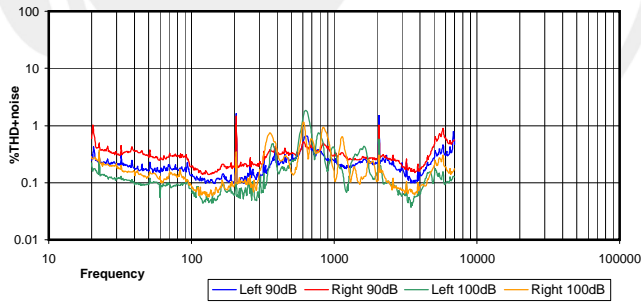
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



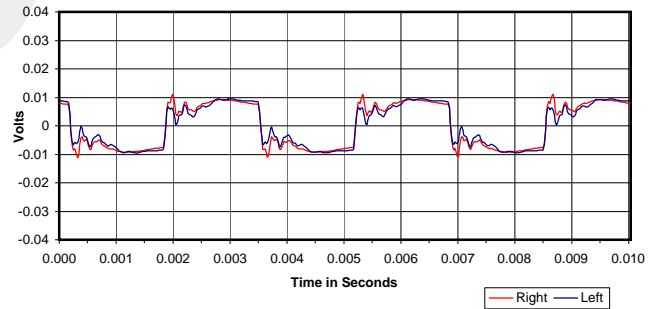
30 Hz Square Wave



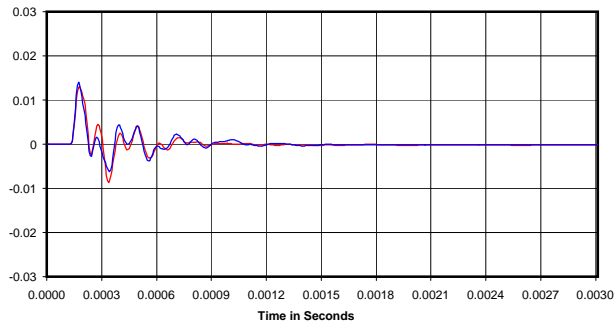
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

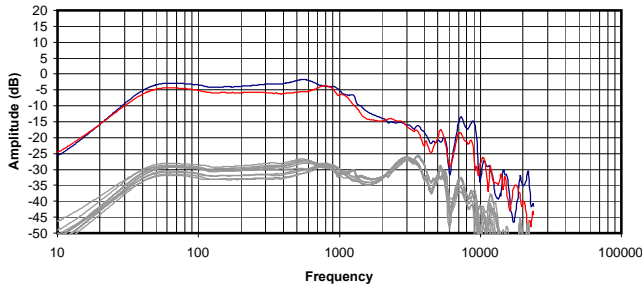


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

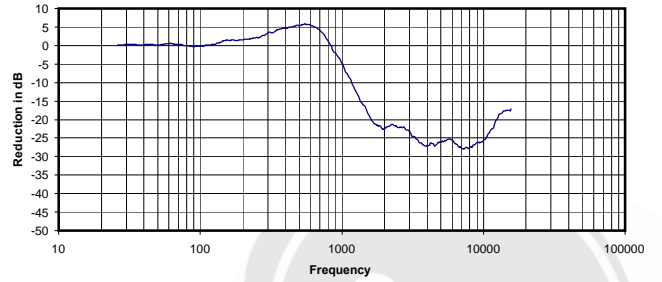
3.640 Vrms
 53 Ohms
 249.62 mW
 -16 dB



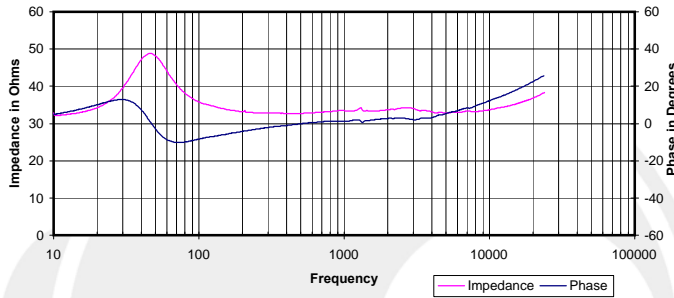
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



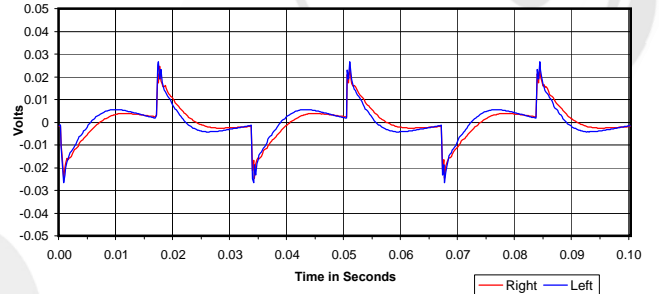
Isolation
 Attenuation of External Sound vs. Frequency



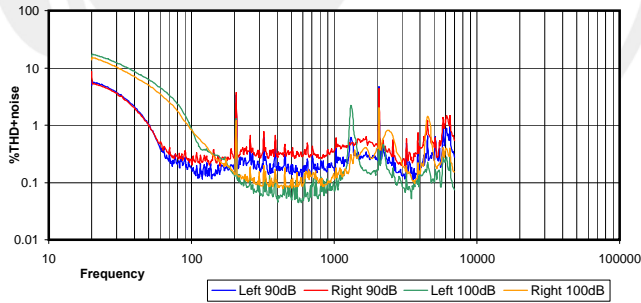
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



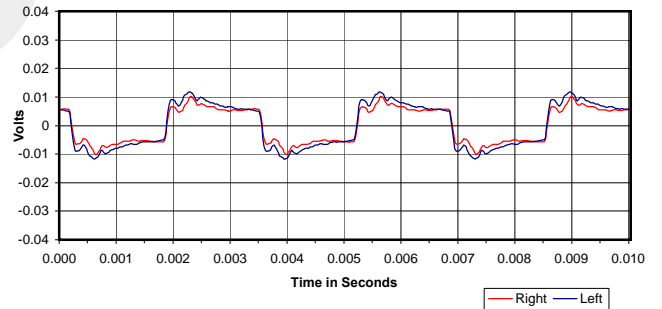
30 Hz Square Wave



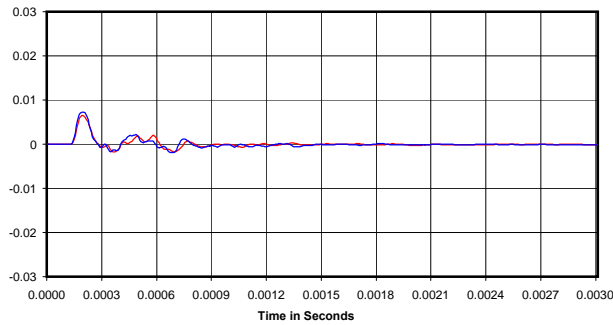
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

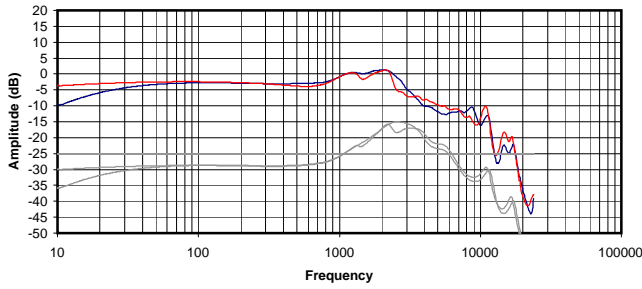


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

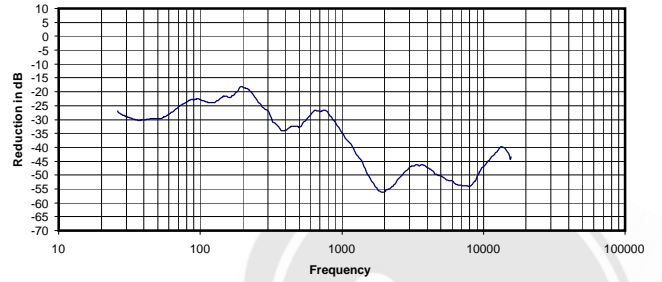
0.023 Vrms
 33 Ohms
 0.02 mW
 -8 dB



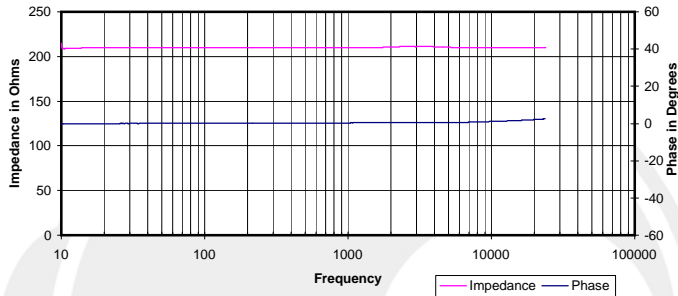
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



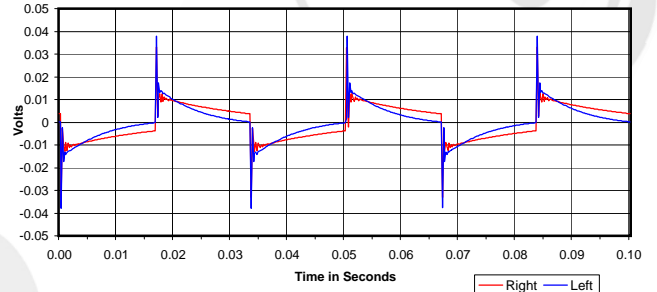
Isolation
Attenuation of External Sound vs. Frequency



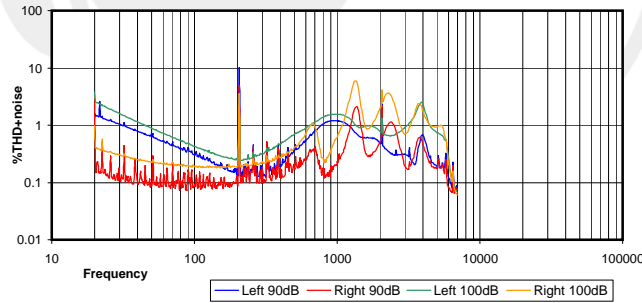
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



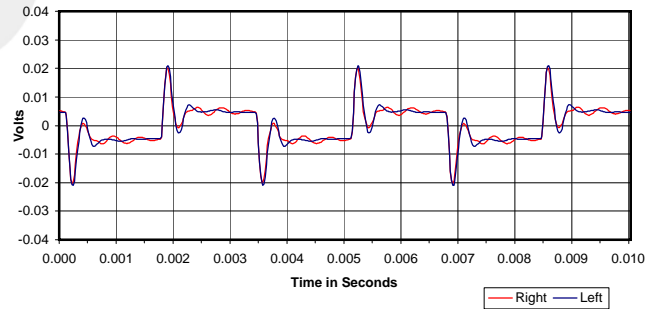
30 Hz Square Wave



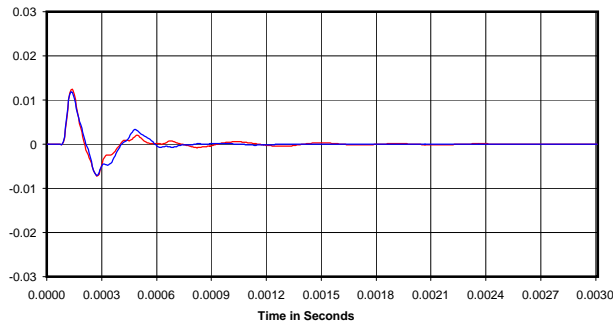
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



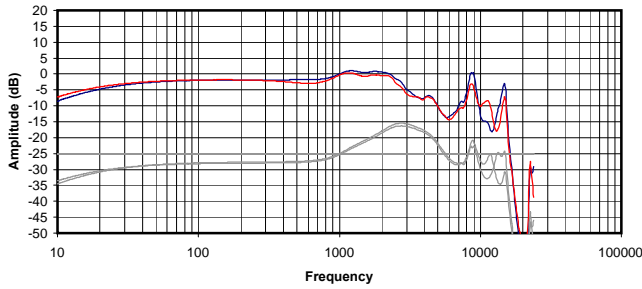
Impulse Response



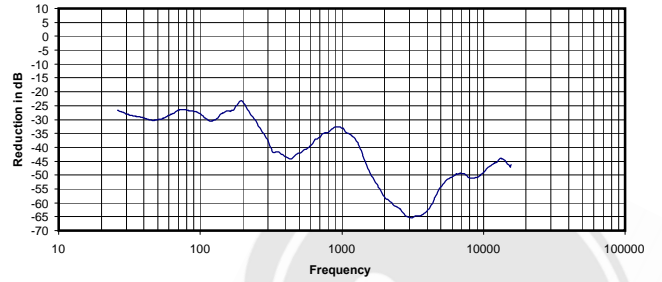
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.425 Vrms
210 Ohms
0.86 mW
-36 dB

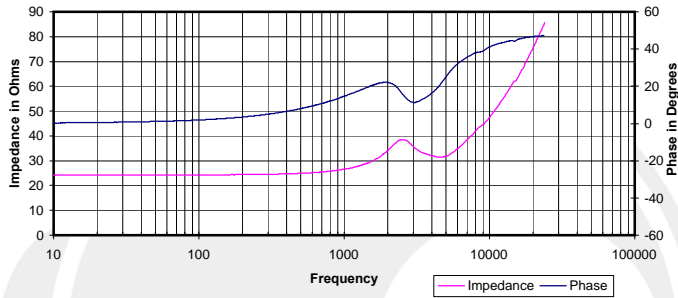
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



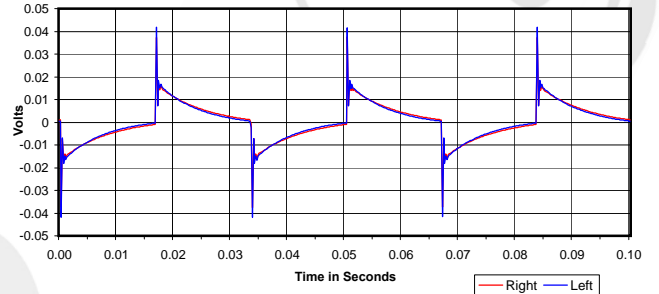
Isolation
Attenuation of External Sound vs. Frequency



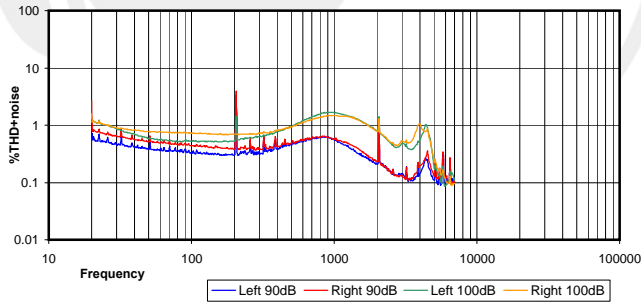
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



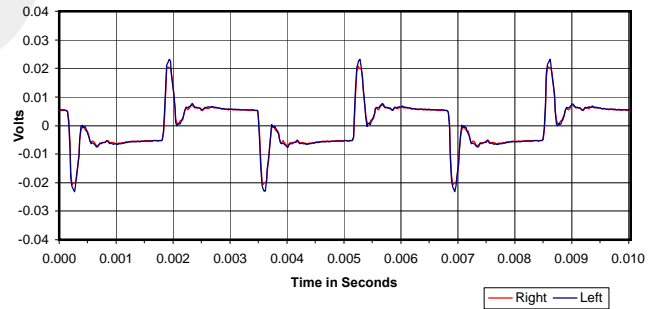
30 Hz Square Wave



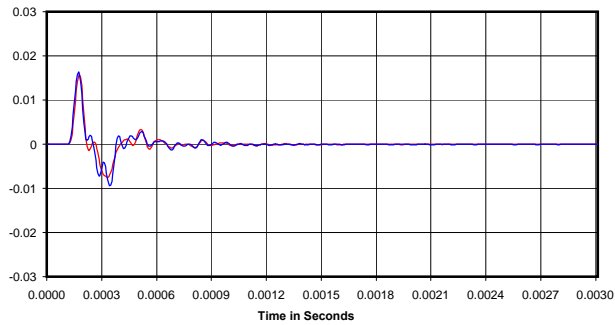
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



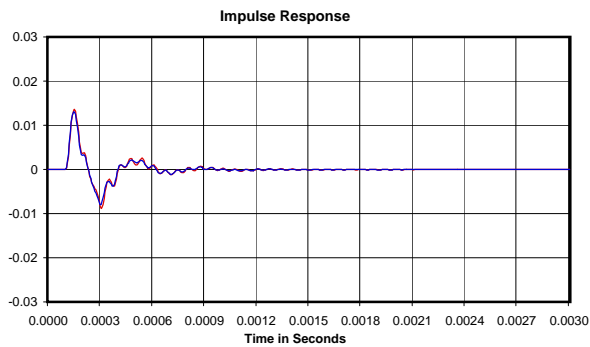
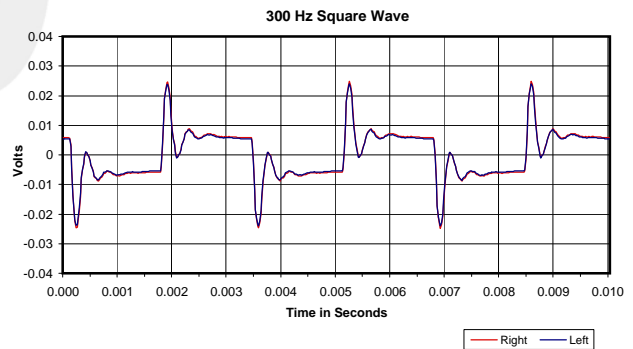
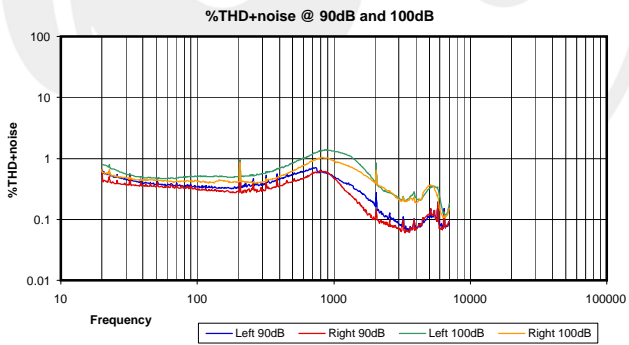
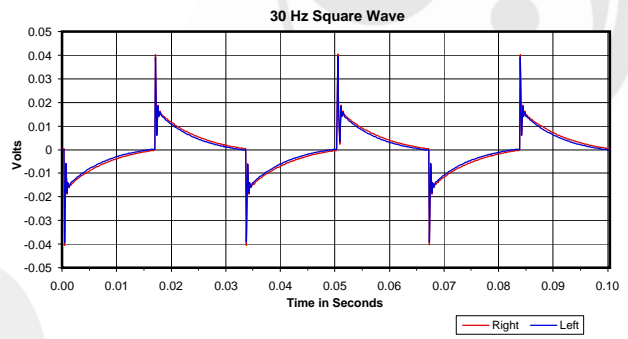
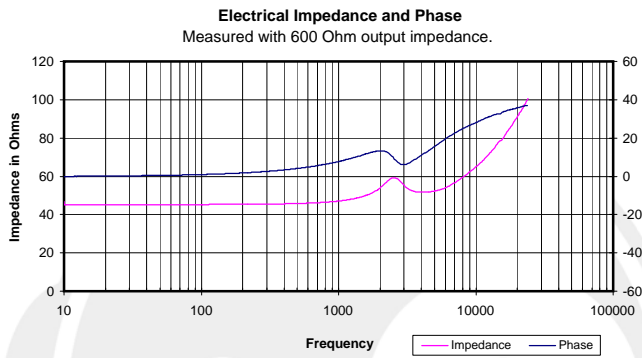
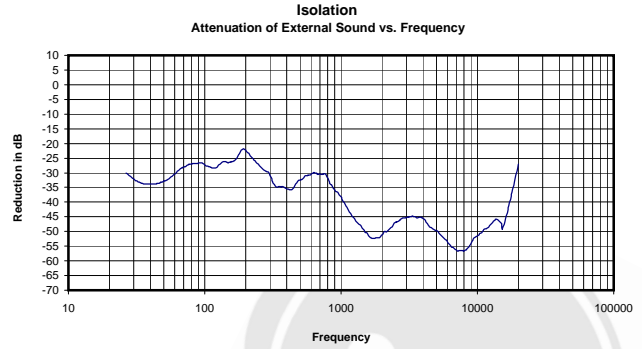
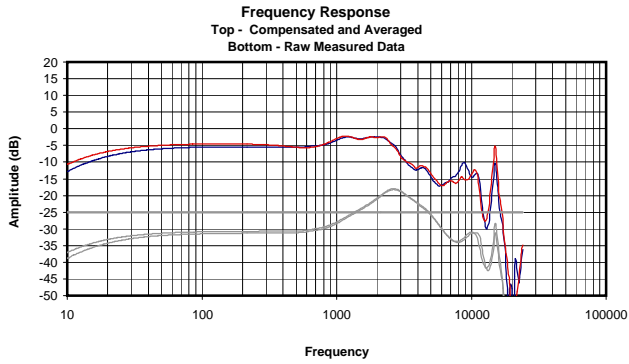
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
27 Ohms
0.03 mW
-43 dB

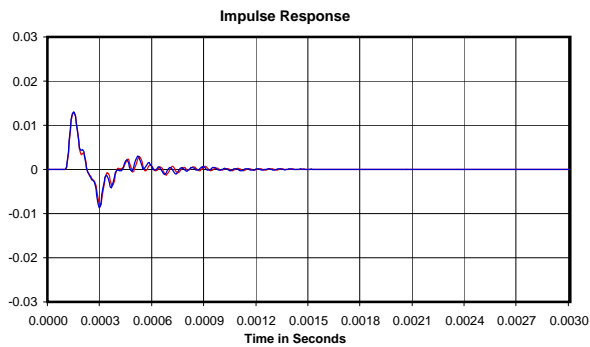
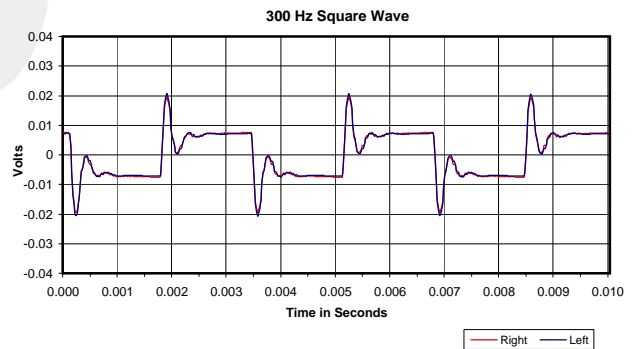
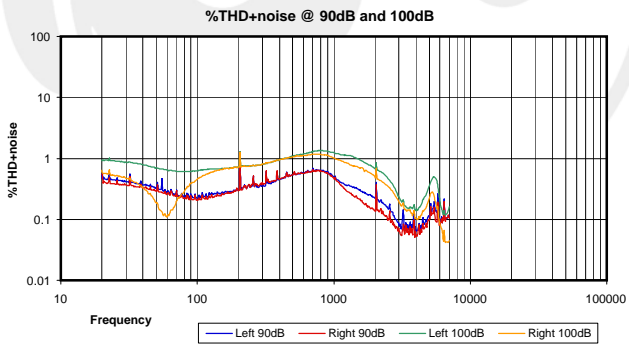
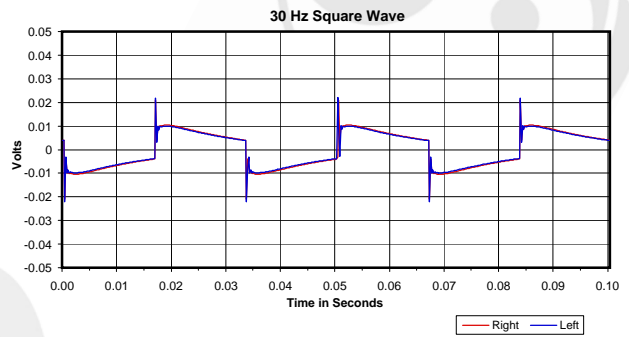
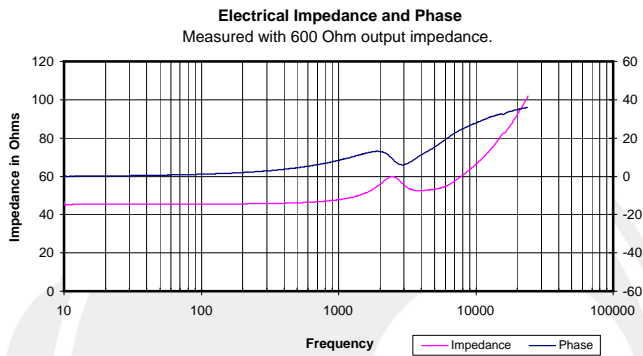
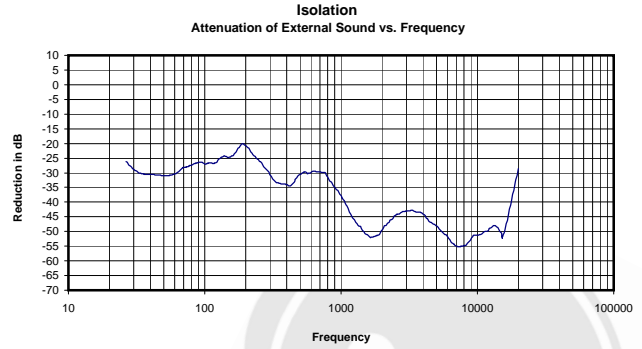
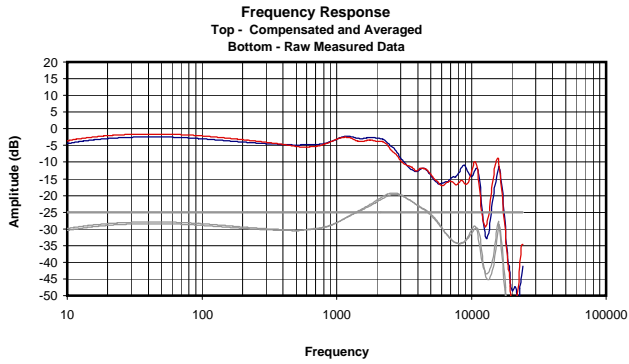




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.049 Vrms
47 Ohms
0.05 mW
-40 dBr



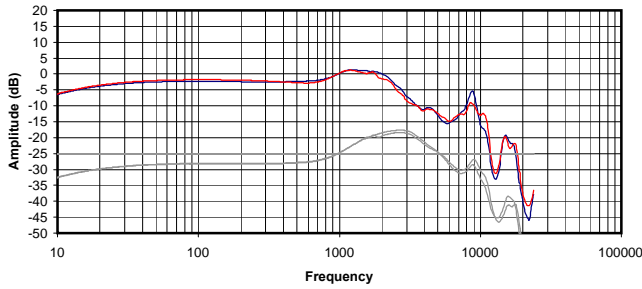


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

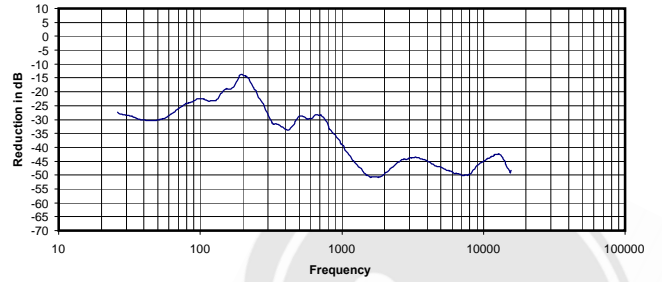
0.044 Vrms
48 Ohms
0.04 mW
-39 dBr



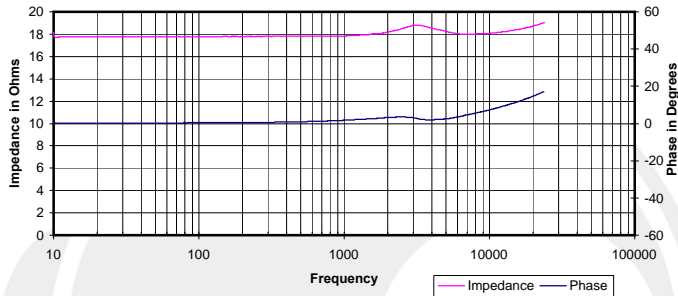
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



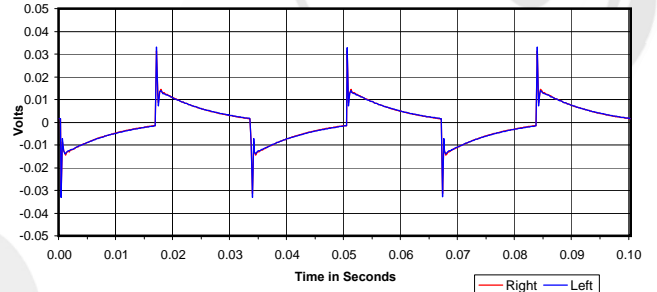
Isolation
Attenuation of External Sound vs. Frequency



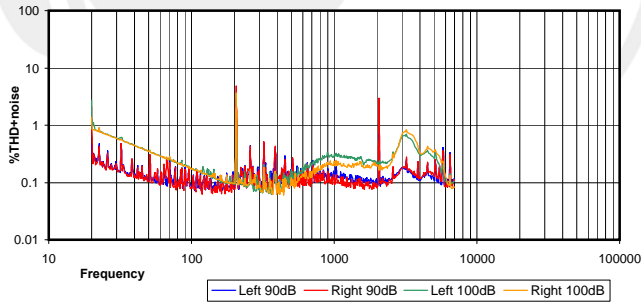
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



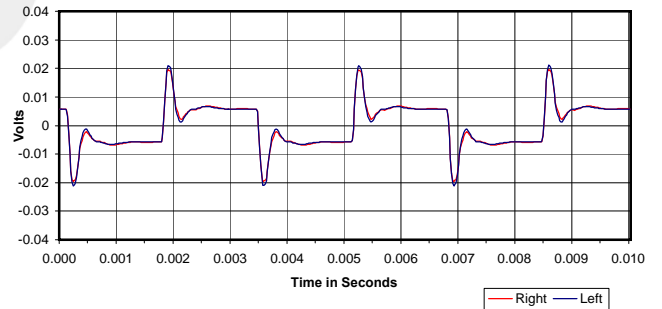
30 Hz Square Wave



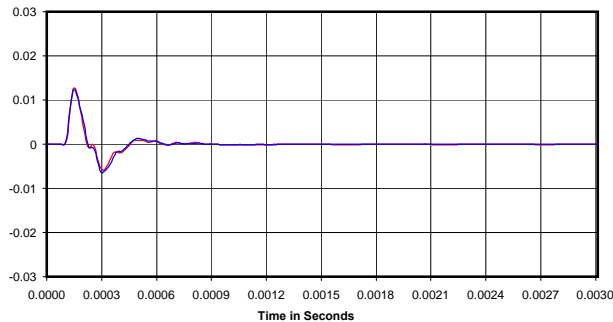
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

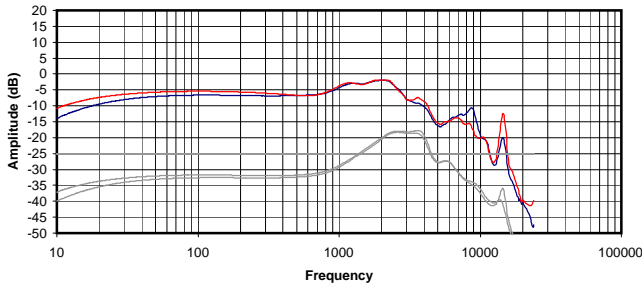


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

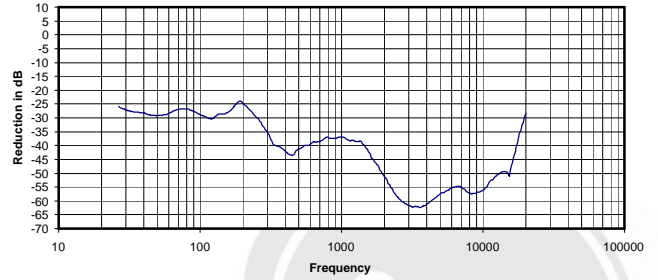
0.042 Vrms
18 Ohms
0.10 mW
-35 dB



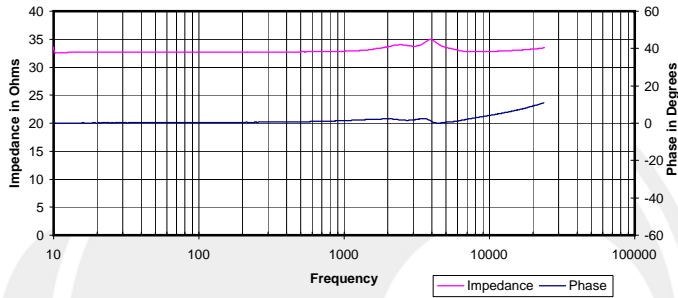
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



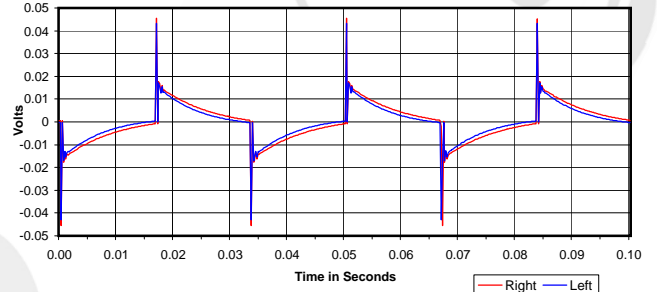
Isolation
Attenuation of External Sound vs. Frequency



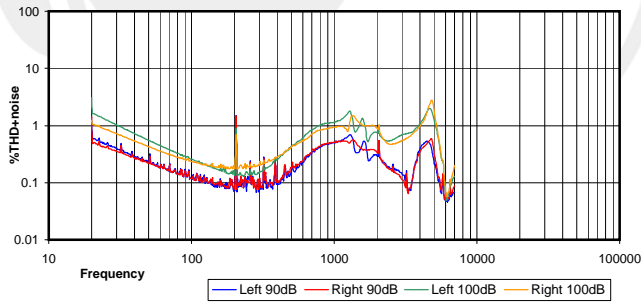
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



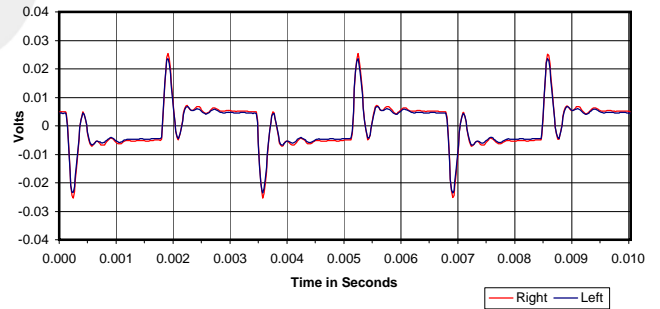
30 Hz Square Wave



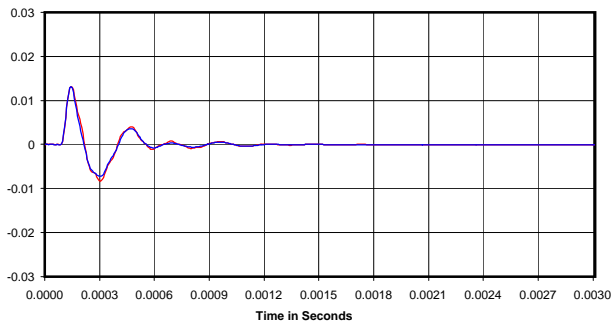
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



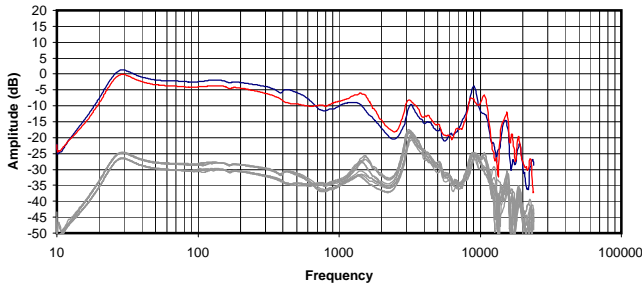
Impulse Response



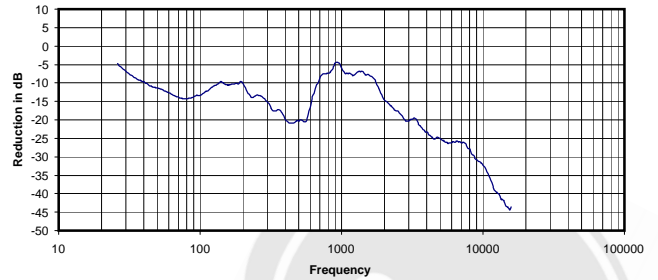
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.064 Vrms
33 Ohms
0.12 mW
-44 dB

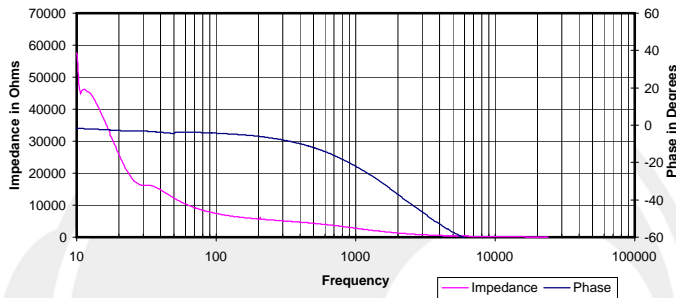
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



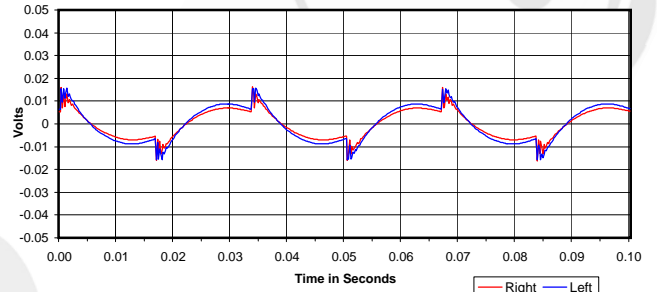
Isolation
Attenuation of External Sound vs. Frequency



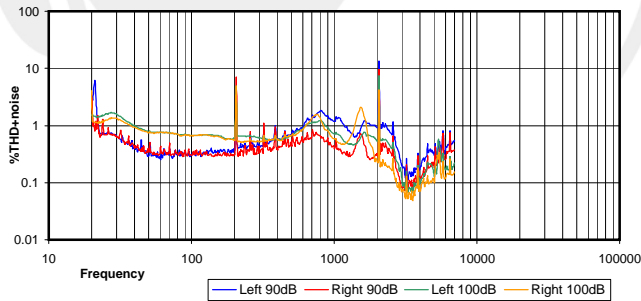
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



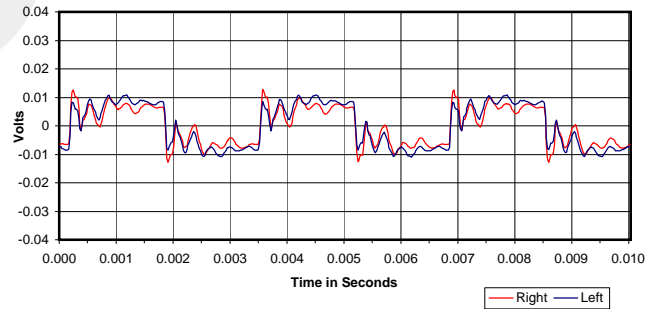
30 Hz Square Wave



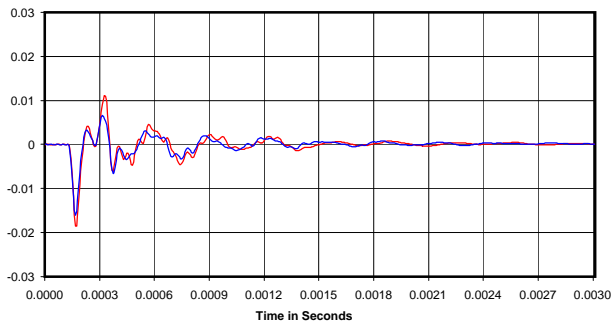
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

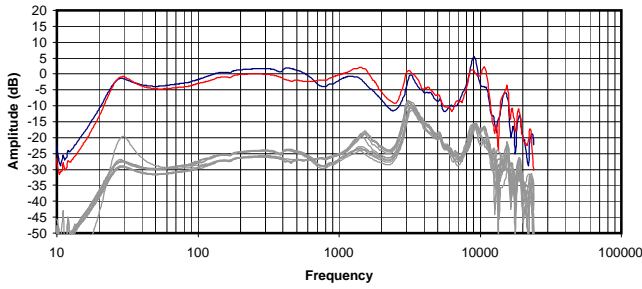


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

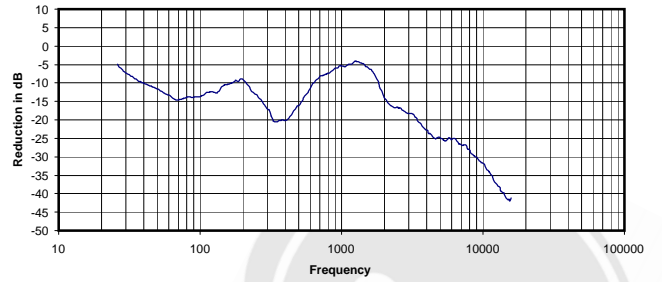
0.045 Vrms
2772 Ohms
0.00 mW
-15 dB



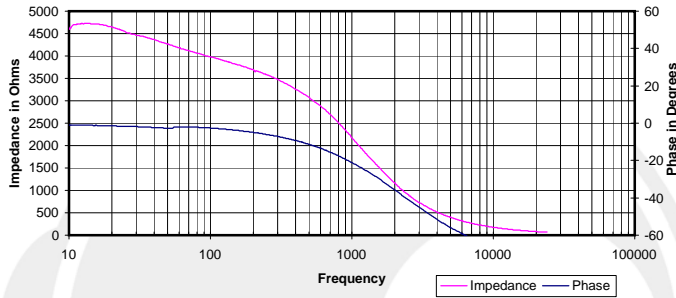
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



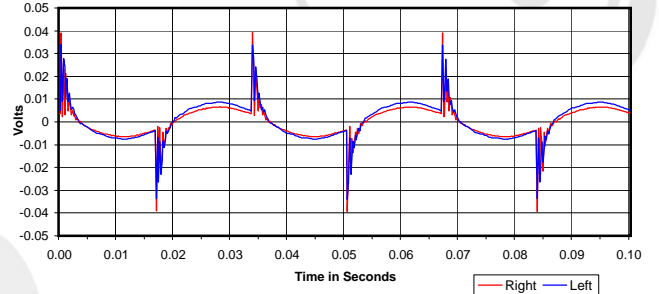
Isolation
Attenuation of External Sound vs. Frequency



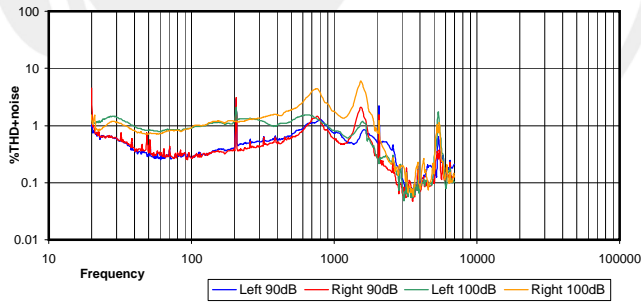
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



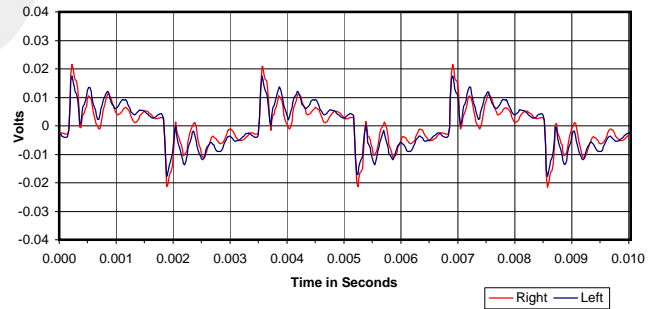
30 Hz Square Wave



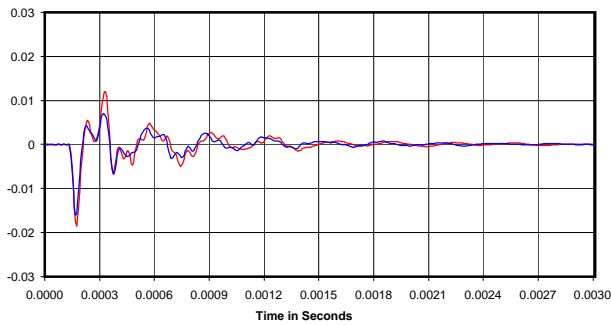
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

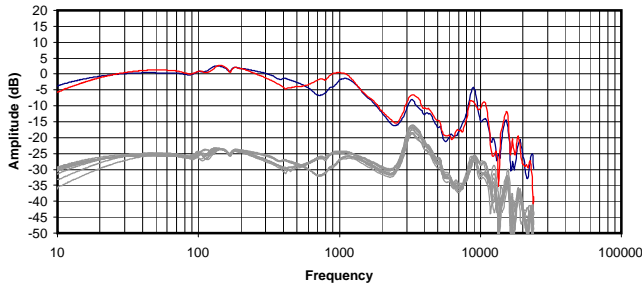


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

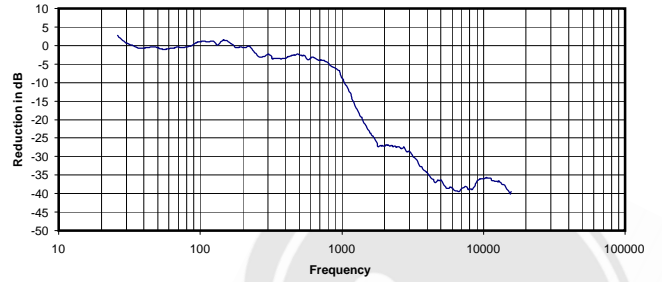
0.049 Vrms
2175 Ohms
0.00 mW
-14 dB



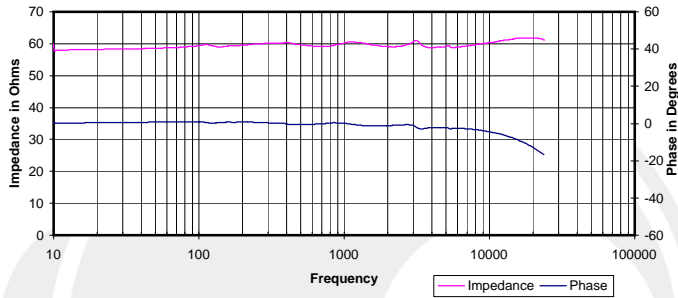
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



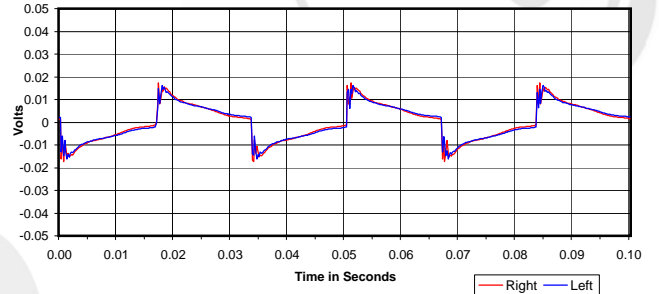
Isolation
 Attenuation of External Sound vs. Frequency



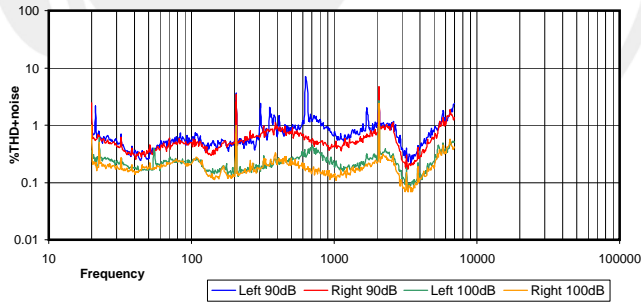
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



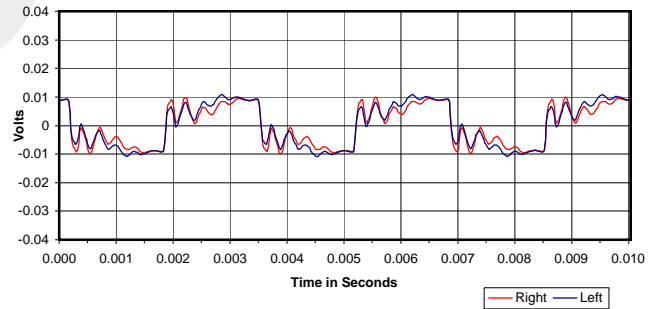
30 Hz Square Wave



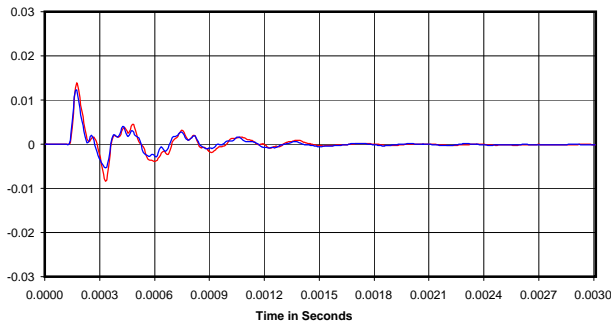
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



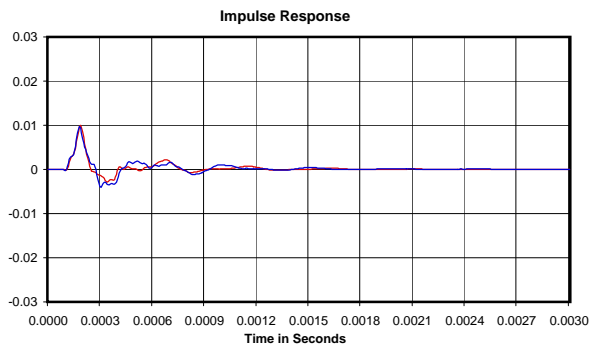
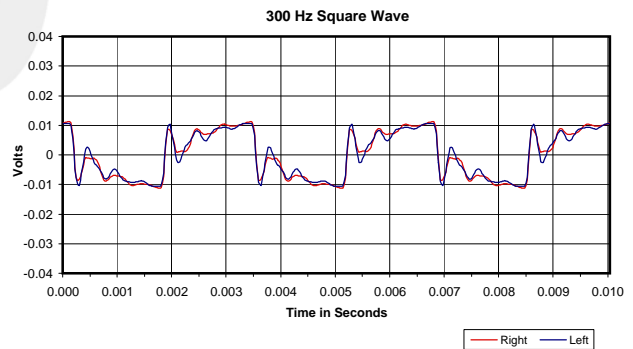
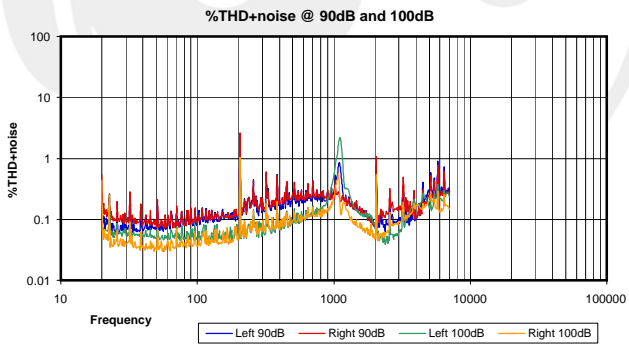
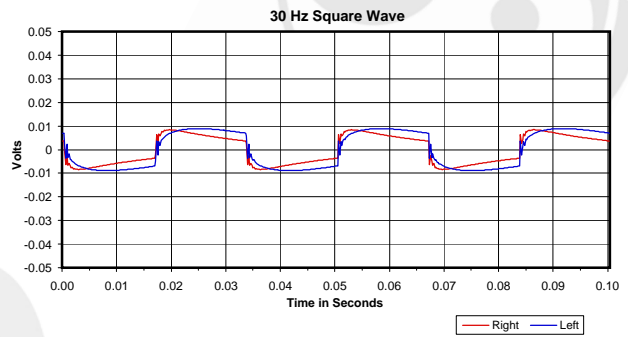
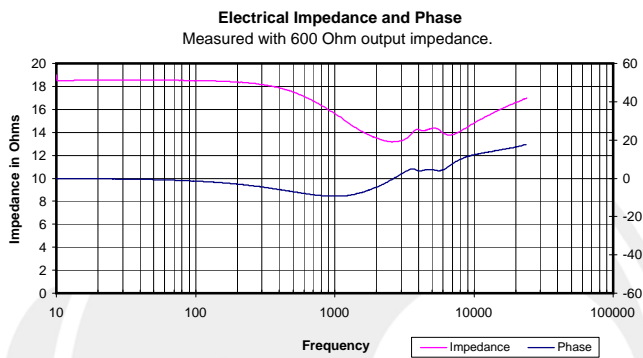
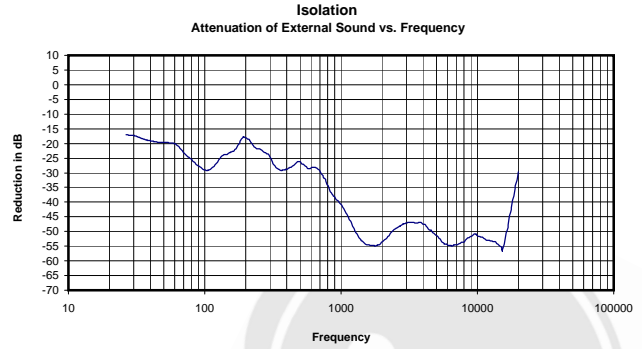
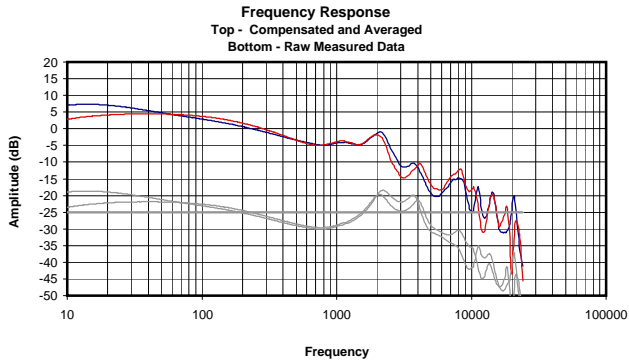
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.057 Vrms
 60 Ohms
 0.05 mW
 -13 dB



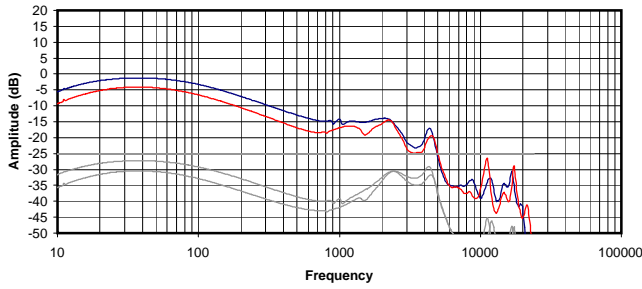


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

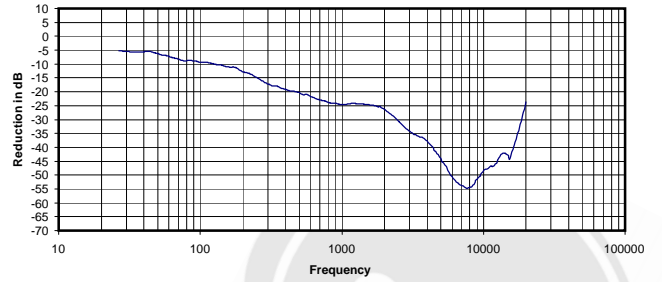
0.037 Vrms
16 Ohms
0.09 mW
-39 dBr



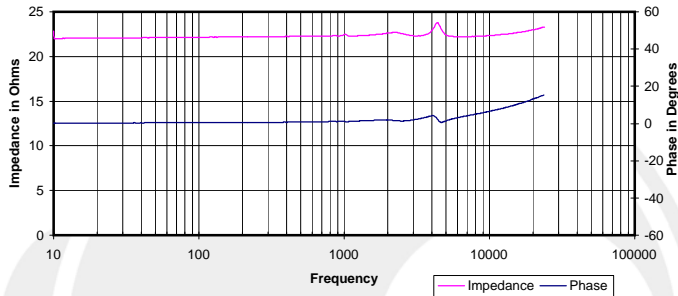
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



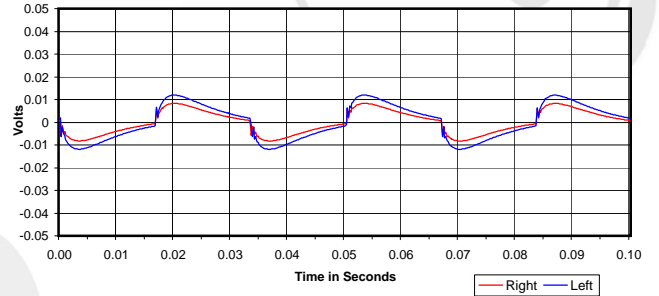
Isolation
Attenuation of External Sound vs. Frequency



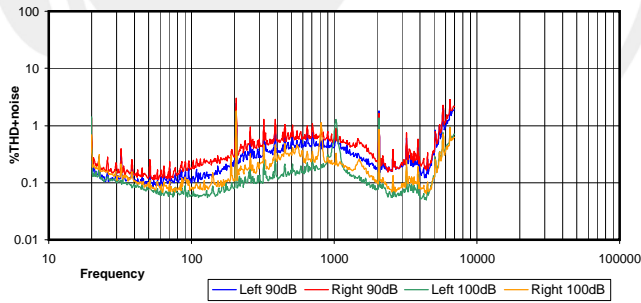
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



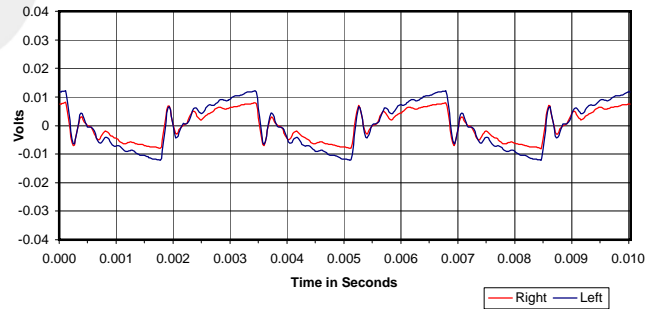
30 Hz Square Wave



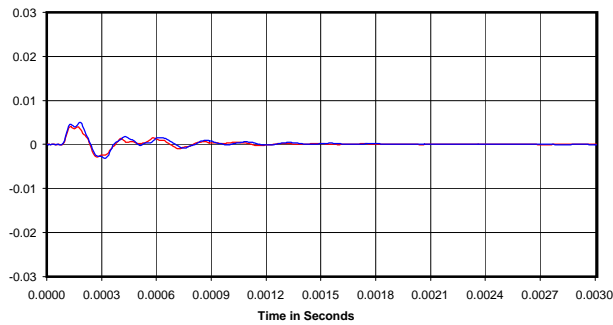
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



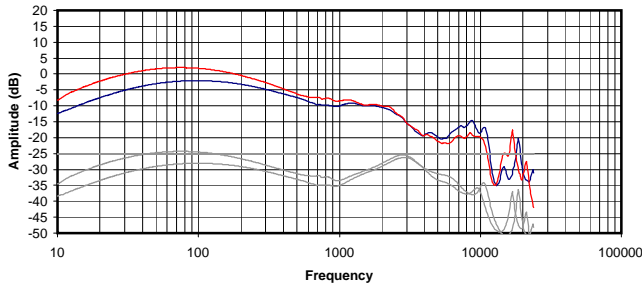
Impulse Response



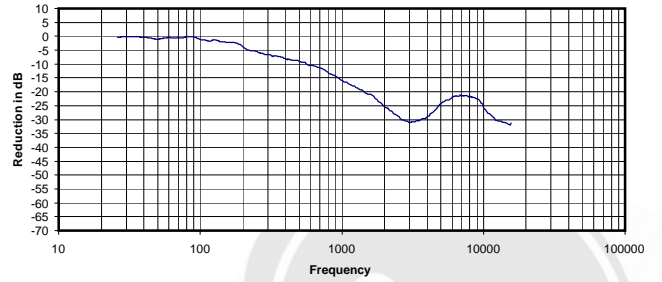
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.030 Vrms
22 Ohms
0.04 mW
-27 dB

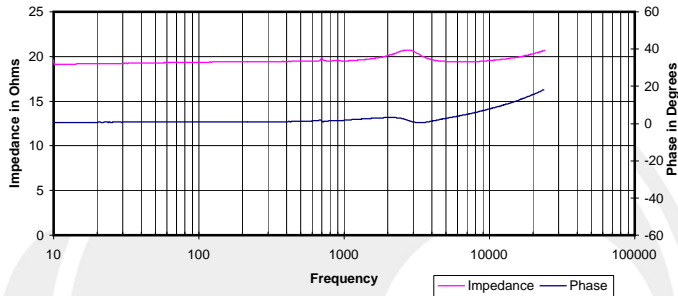
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



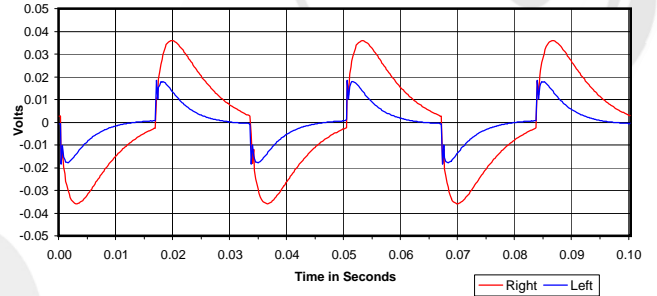
Isolation
Attenuation of External Sound vs. Frequency



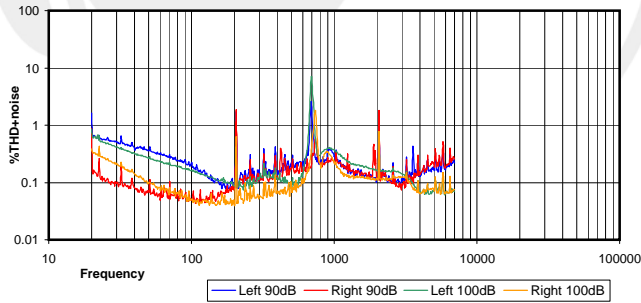
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



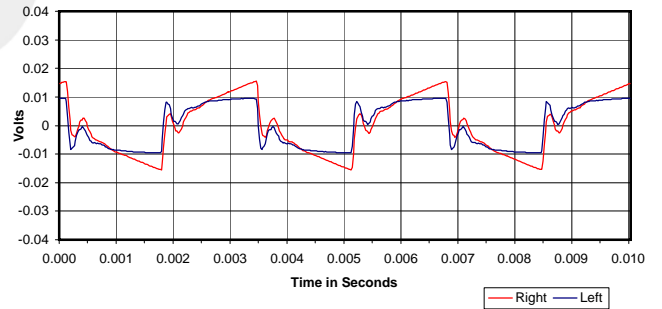
30 Hz Square Wave



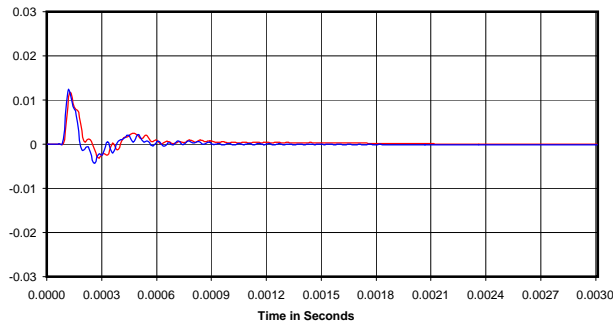
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

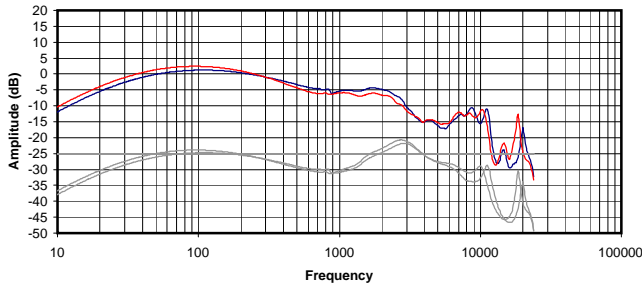


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

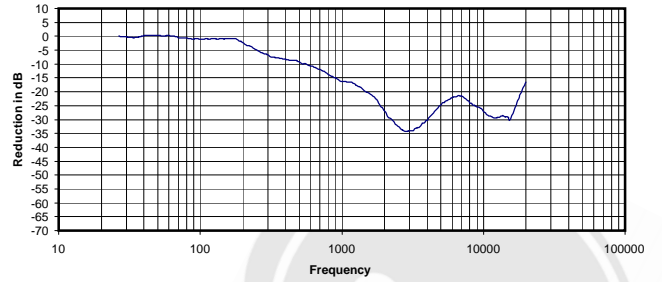
0.040 Vrms
20 Ohms
0.08 mW
-14 dB



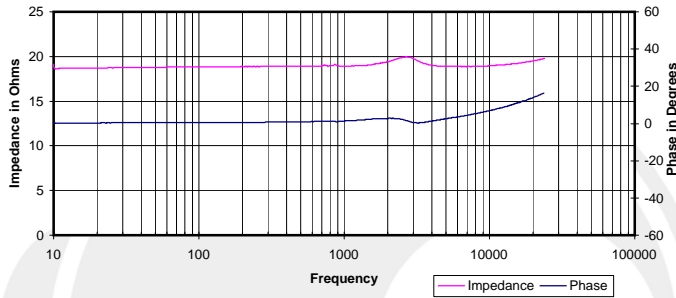
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



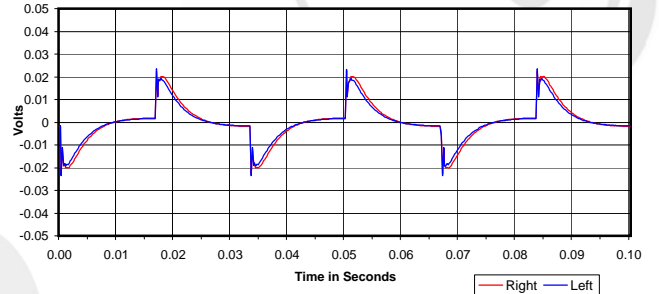
Isolation
Attenuation of External Sound vs. Frequency



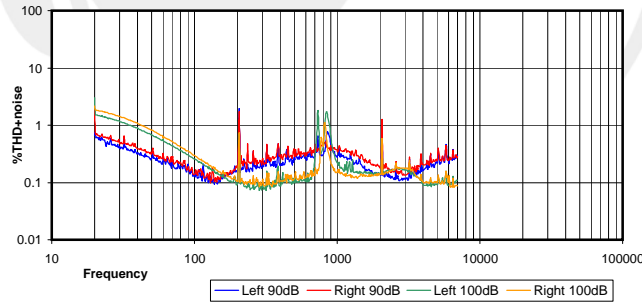
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



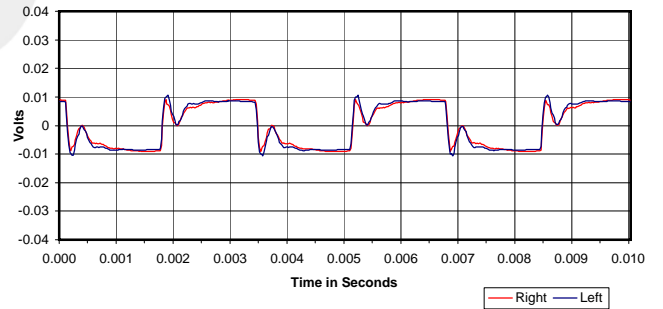
30 Hz Square Wave



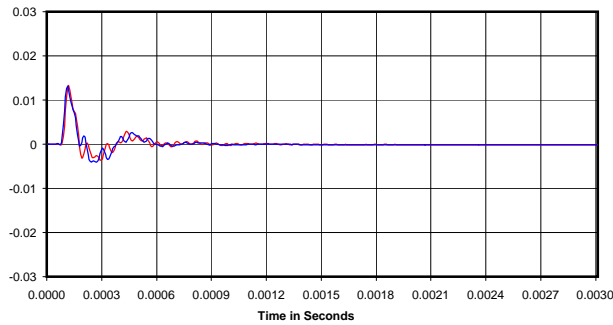
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

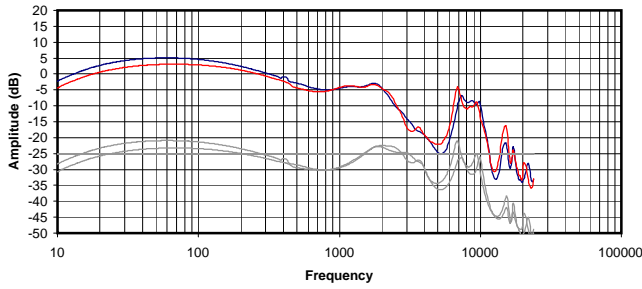


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

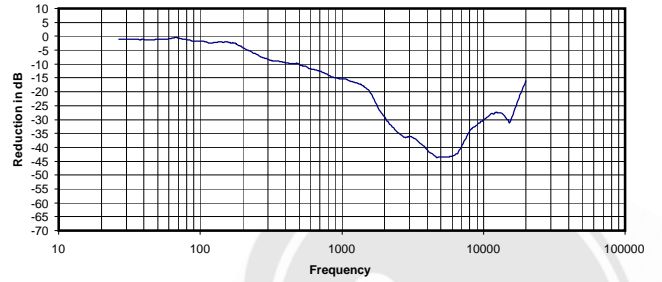
0.041 Vrms
19 Ohms
0.09 mW
-16 dB



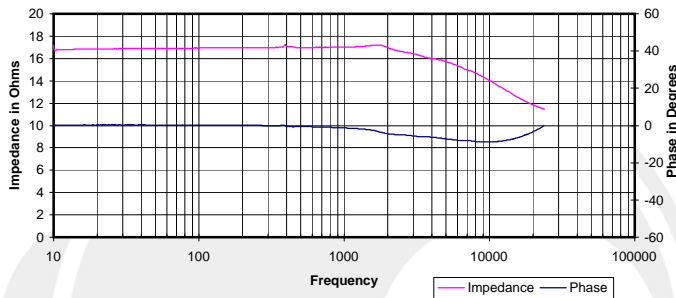
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



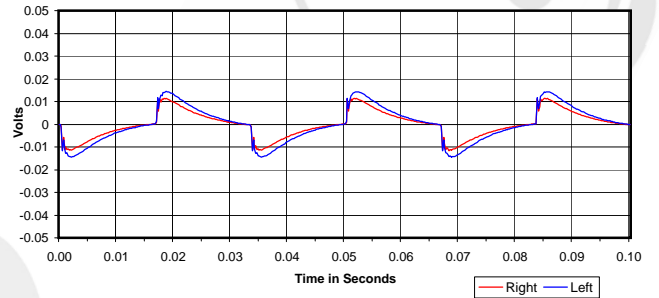
Isolation
Attenuation of External Sound vs. Frequency



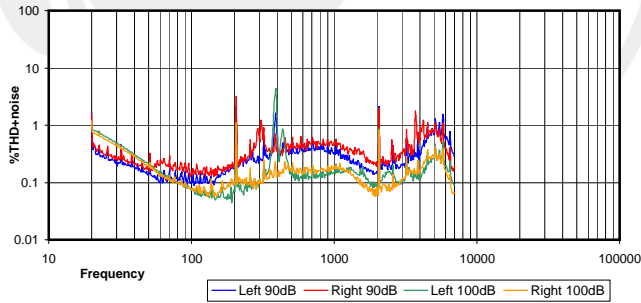
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



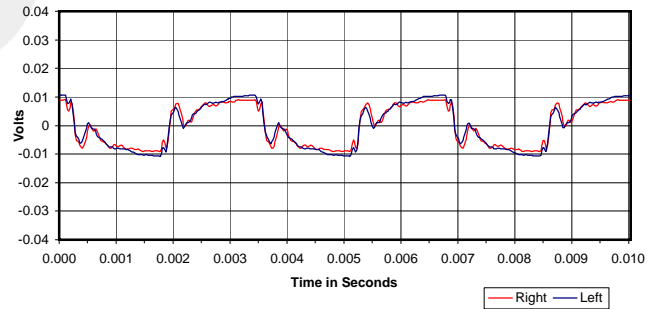
30 Hz Square Wave



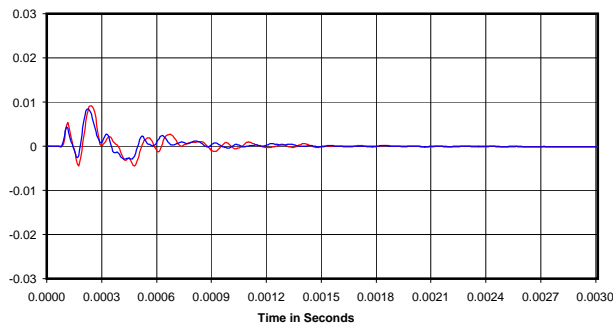
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



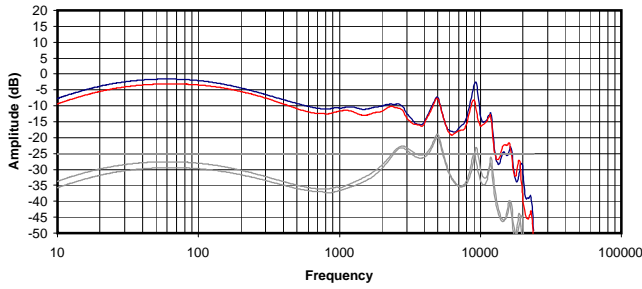
Impulse Response



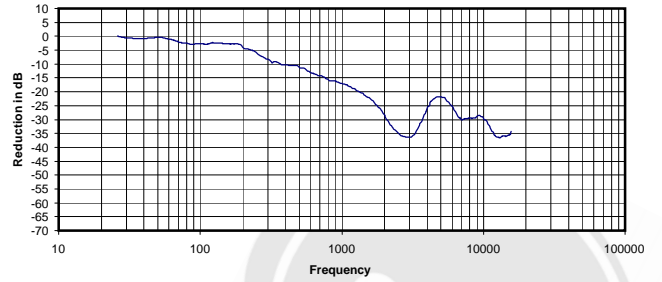
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.026 Vrms
17 Ohms
0.04 mW
-20 dB

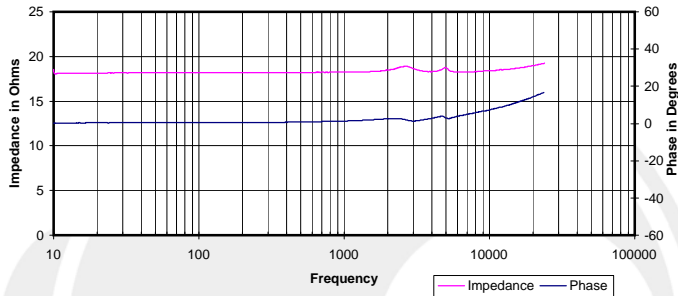
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



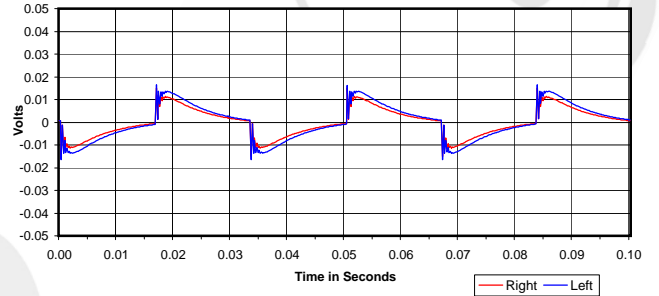
Isolation
Attenuation of External Sound vs. Frequency



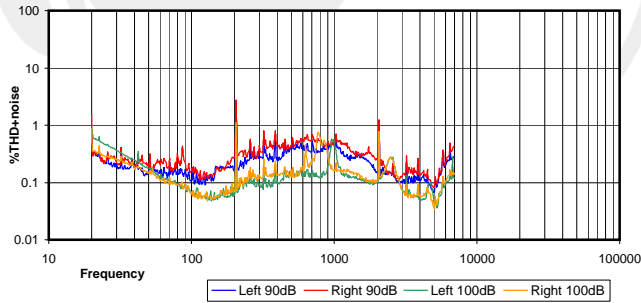
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



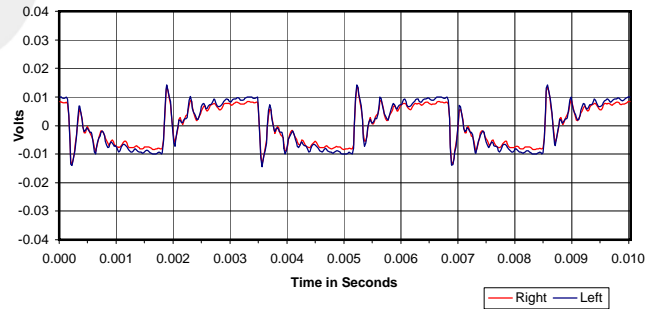
30 Hz Square Wave



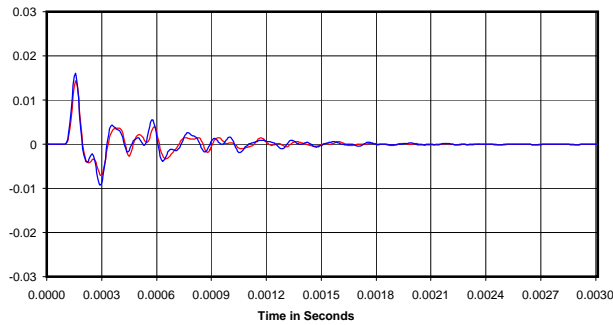
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



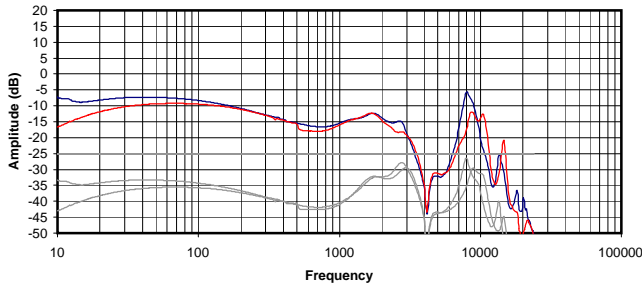
Impulse Response



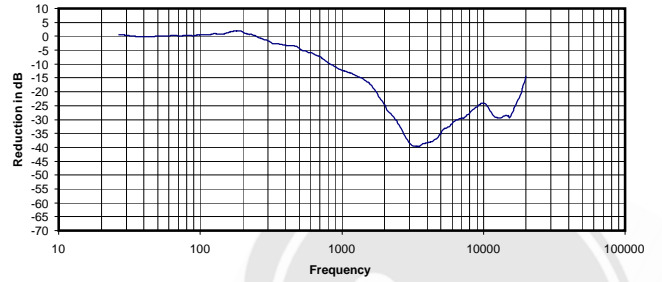
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
18 Ohms
0.07 mW
-16 dB

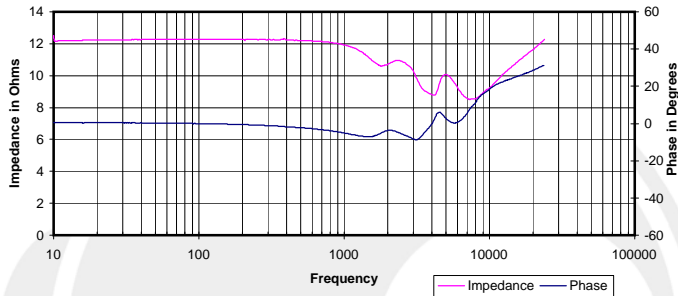
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



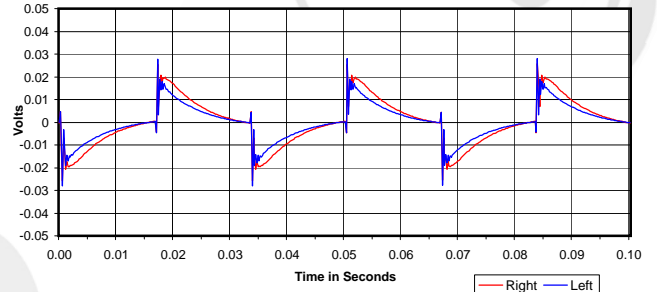
Isolation
Attenuation of External Sound vs. Frequency



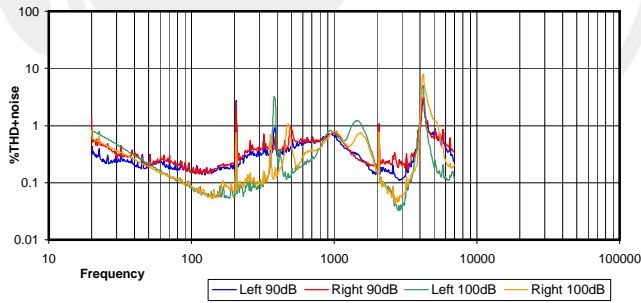
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



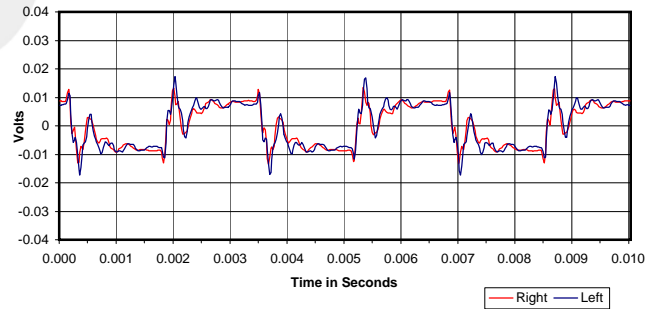
30 Hz Square Wave



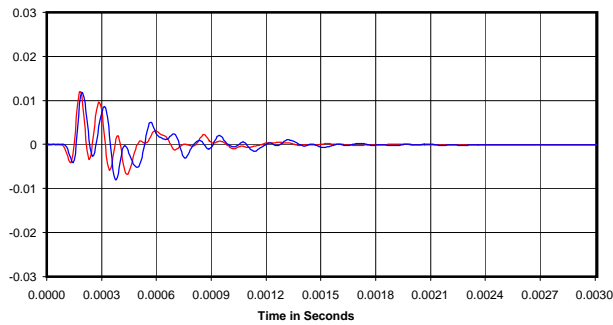
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

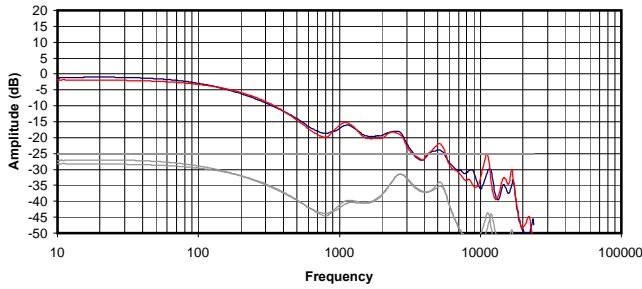


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

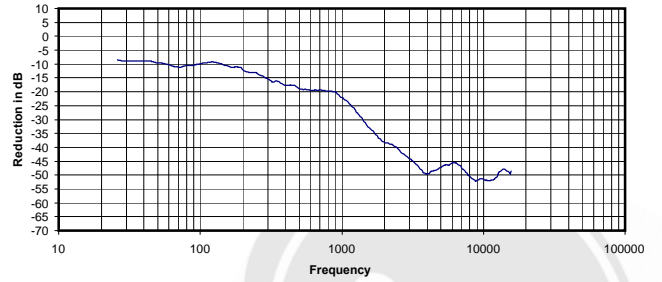
0.019 Vrms
12 Ohms
0.03 mW
-15 dB



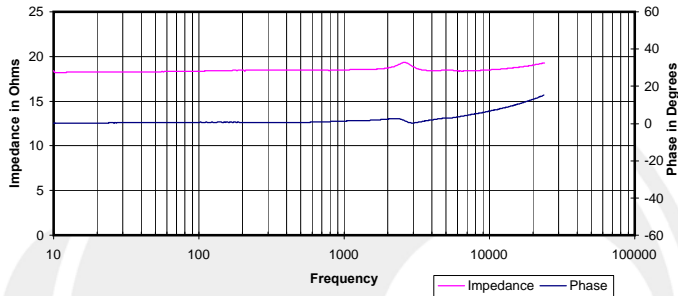
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



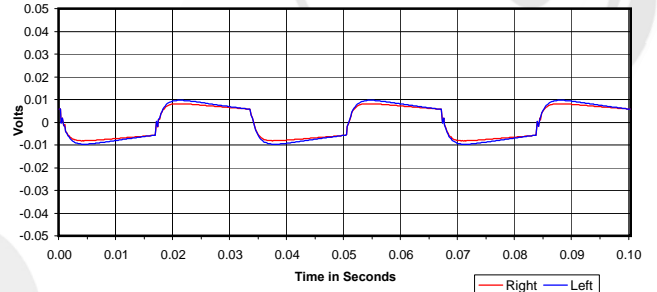
Isolation
Attenuation of External Sound vs. Frequency



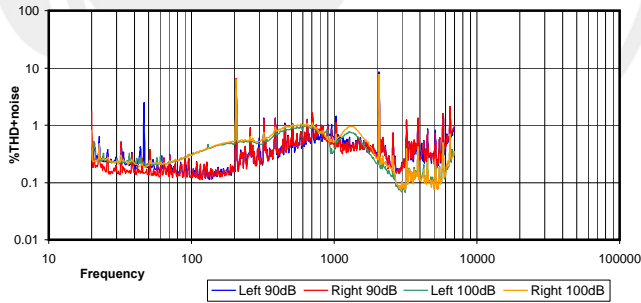
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



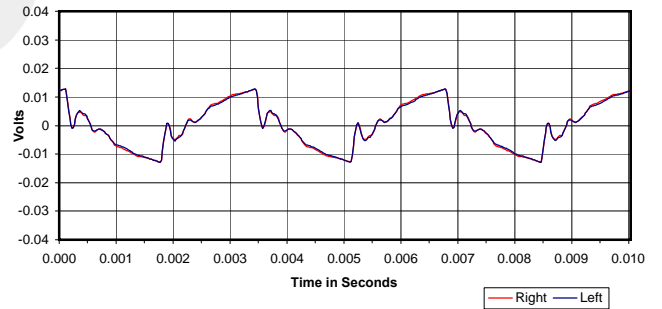
30 Hz Square Wave



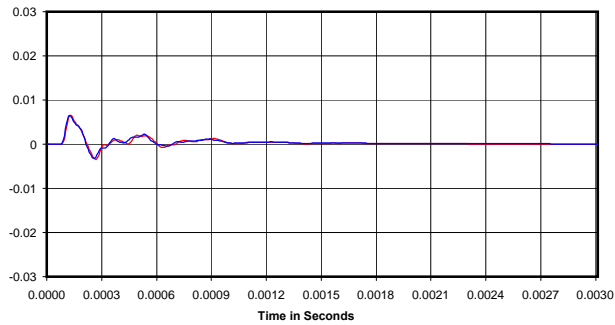
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



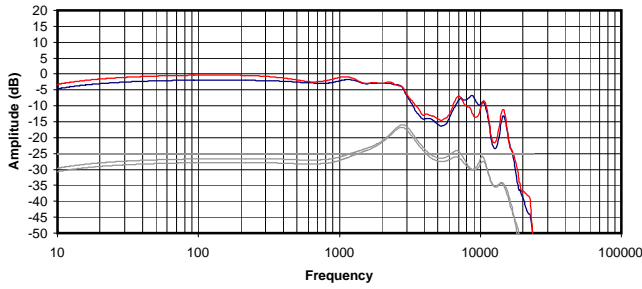
Impulse Response



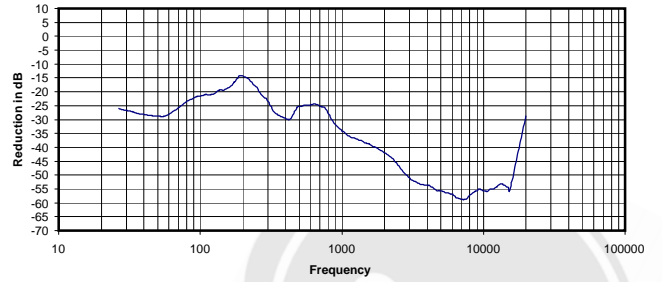
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.026 Vrms
18 Ohms
0.04 mW
-26 dB

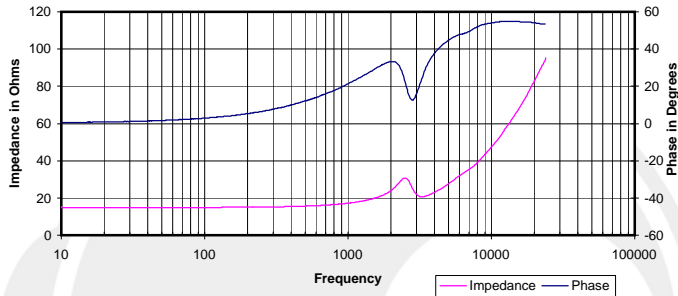
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



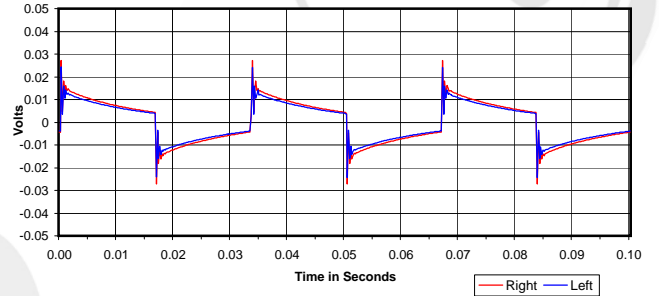
Isolation
Attenuation of External Sound vs. Frequency



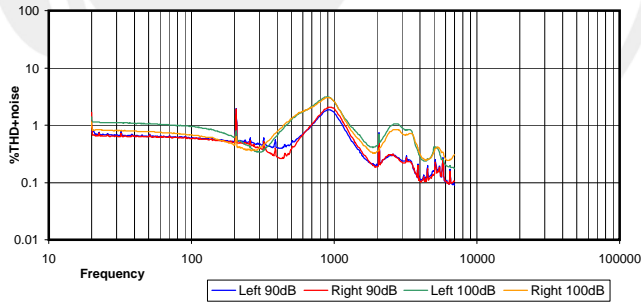
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



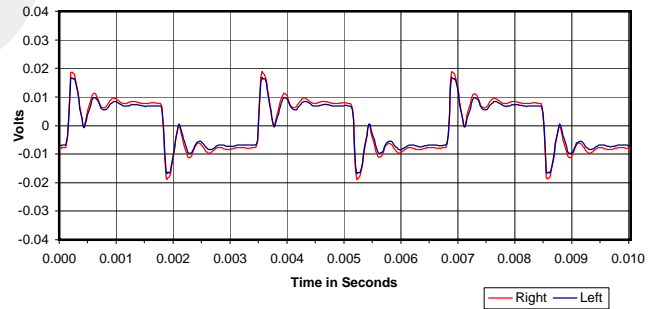
30 Hz Square Wave



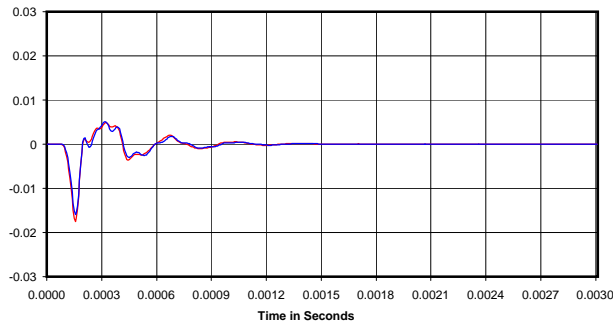
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

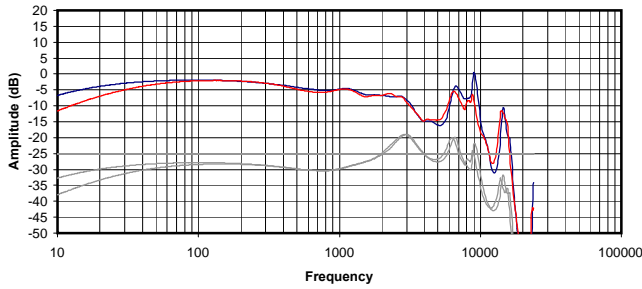


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

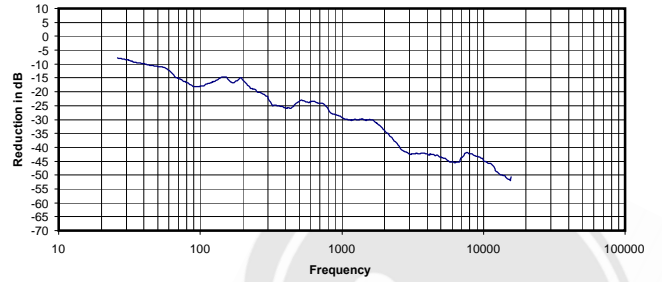
0.022 Vrms
17 Ohms
0.03 mW
-36 dB



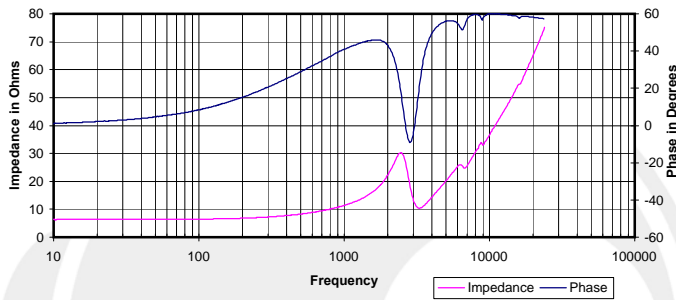
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



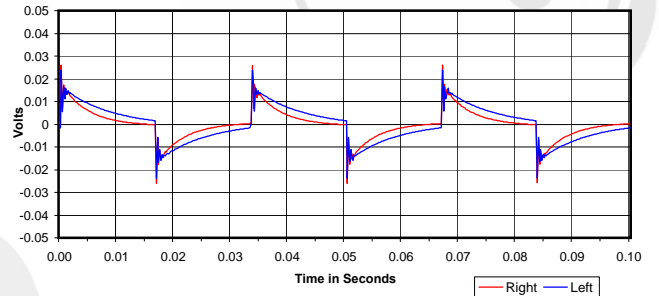
Isolation
Attenuation of External Sound vs. Frequency



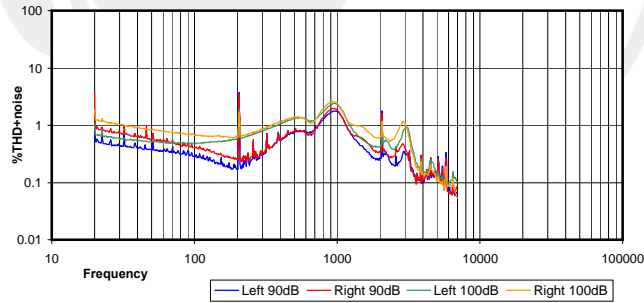
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



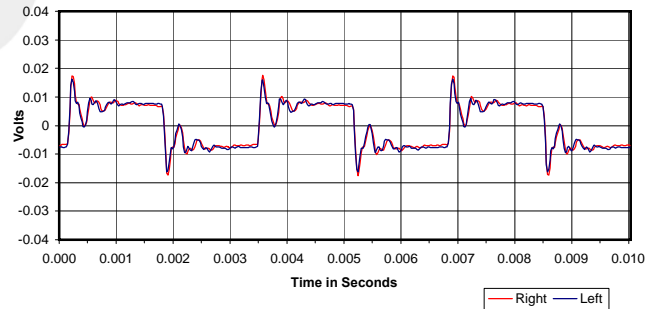
30 Hz Square Wave



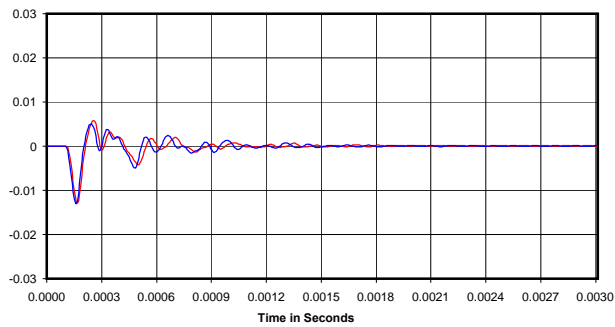
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

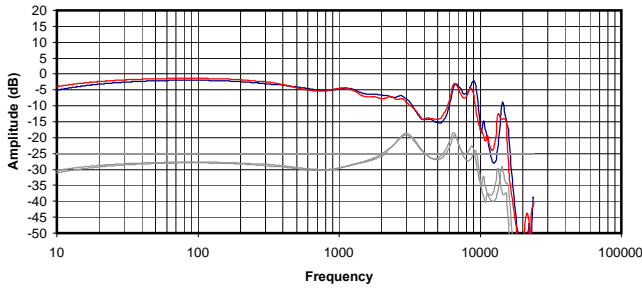


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

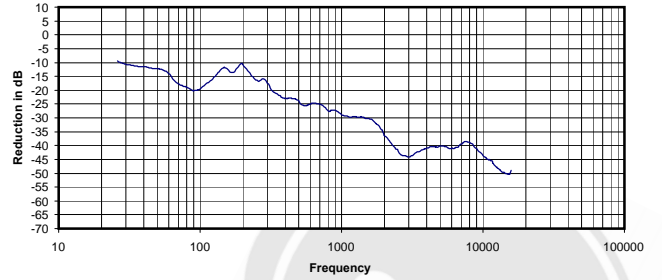
0.012 Vrms
11 Ohms
0.01 mW
-28 dB



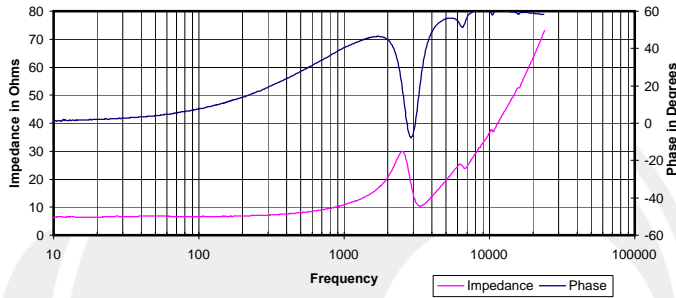
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



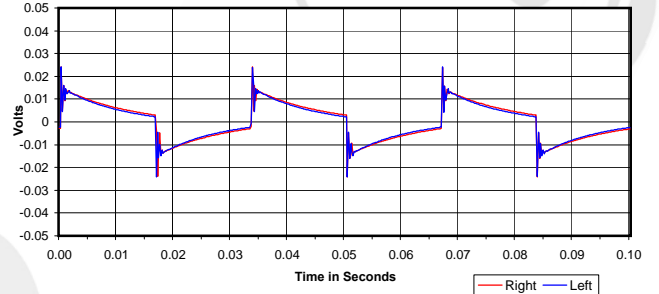
Isolation
Attenuation of External Sound vs. Frequency



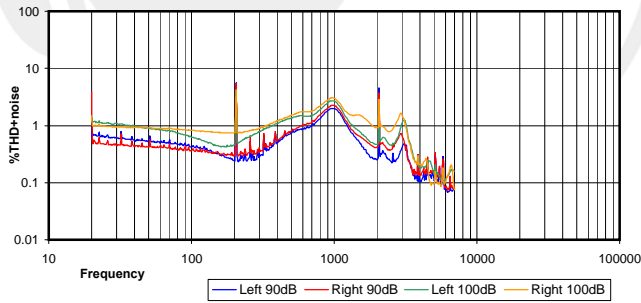
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



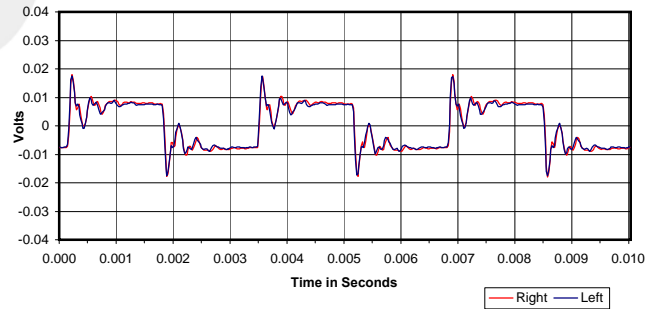
30 Hz Square Wave



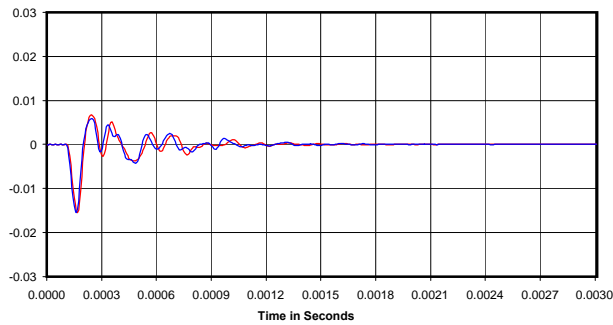
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

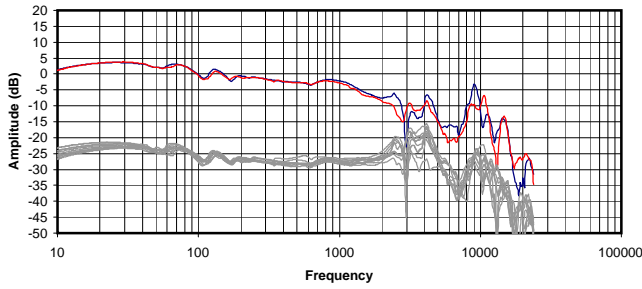


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

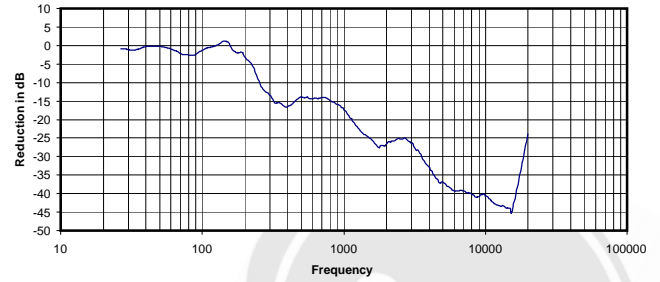
0.013 Vrms
11 Ohms
0.01 mW
-27 dB



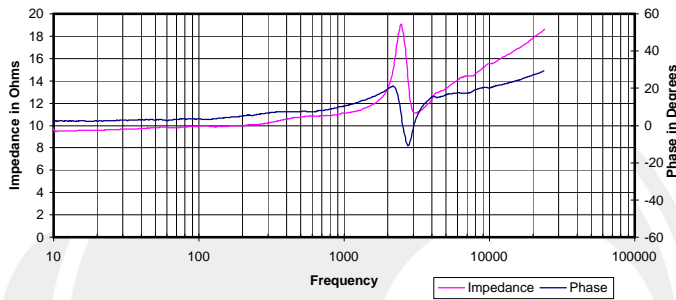
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



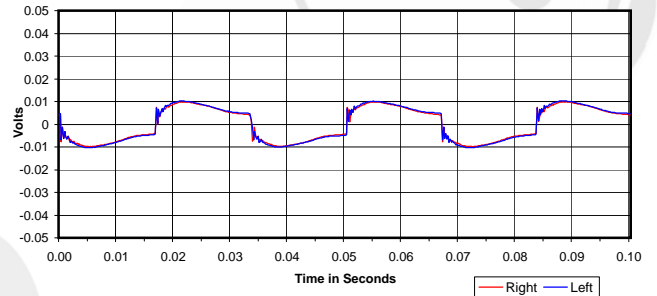
Isolation
 Attenuation of External Sound vs. Frequency



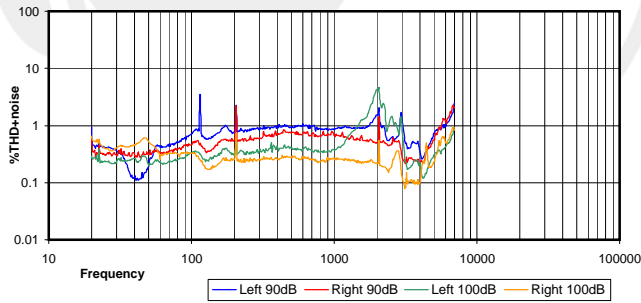
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



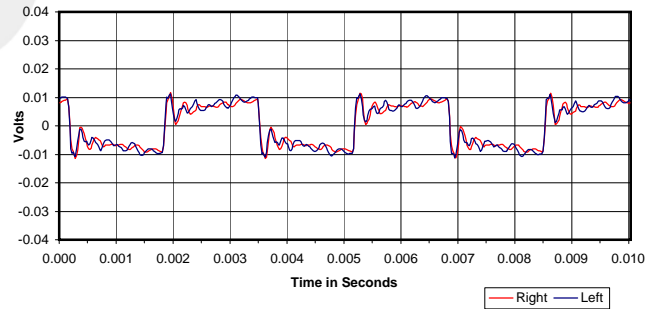
30 Hz Square Wave



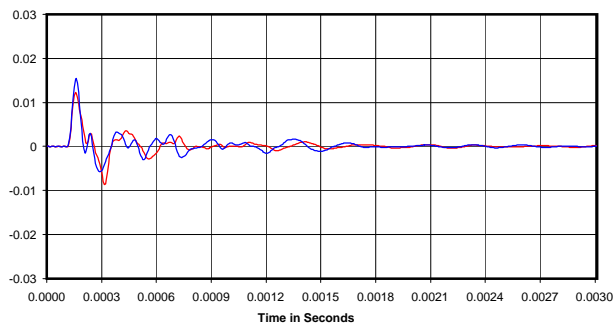
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



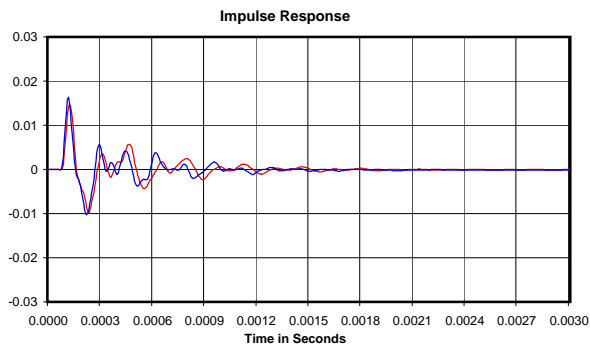
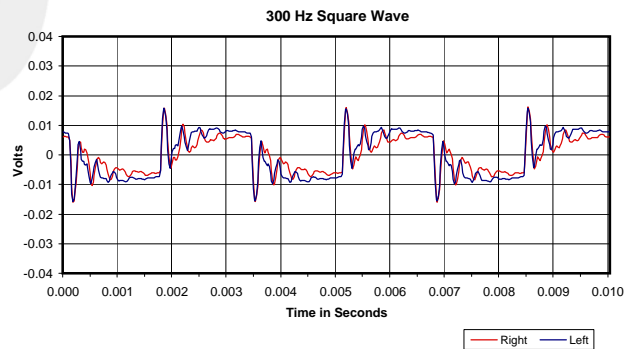
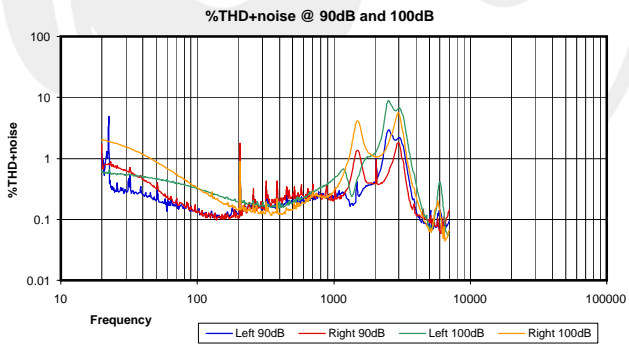
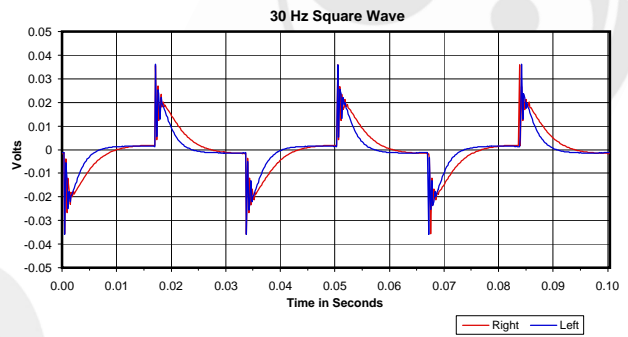
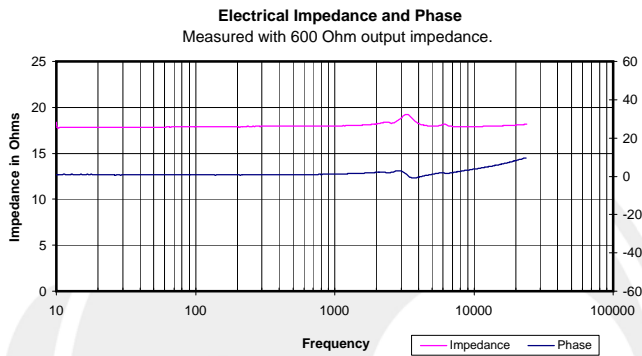
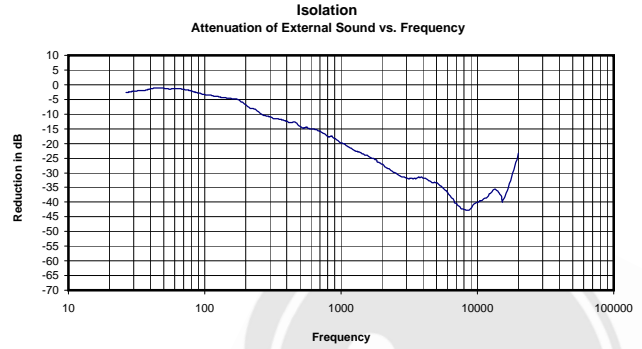
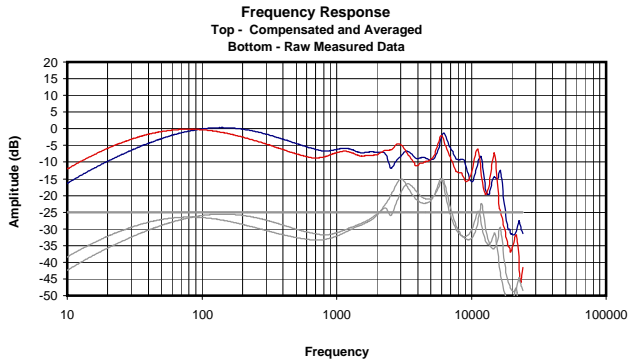
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.022 Vrms
 11 Ohms
 0.04 mW
 -20 dB



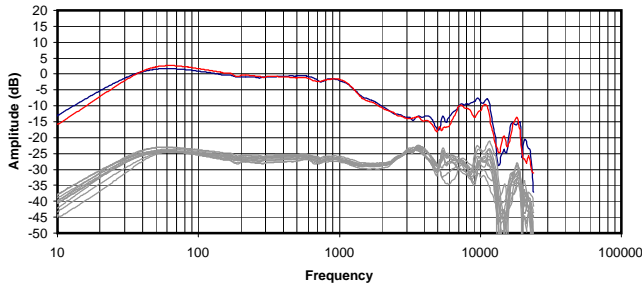


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

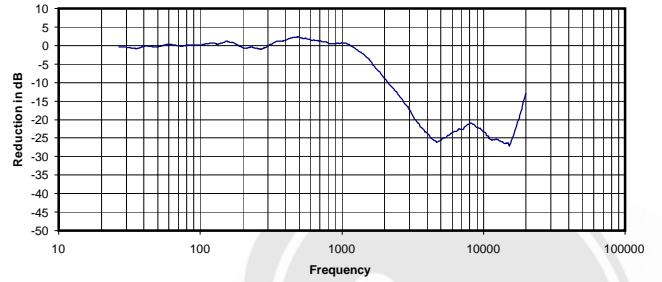
0.057 Vrms
18 Ohms
0.18 mW
-21 dB



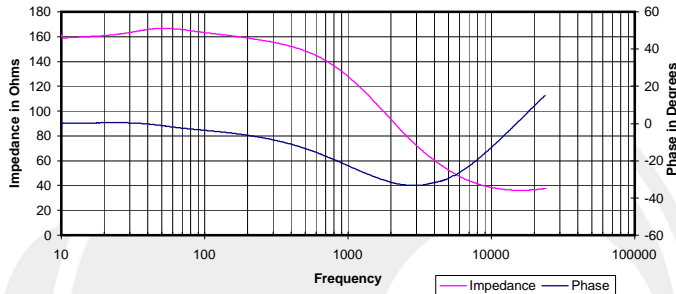
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



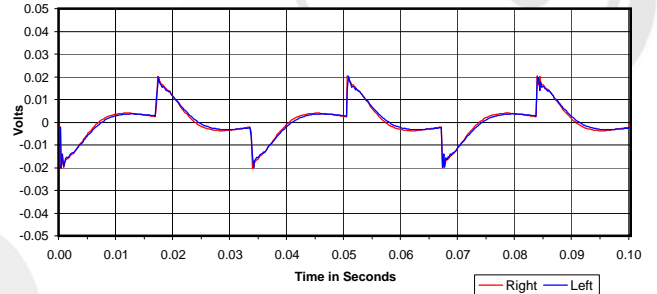
Isolation
 Attenuation of External Sound vs. Frequency



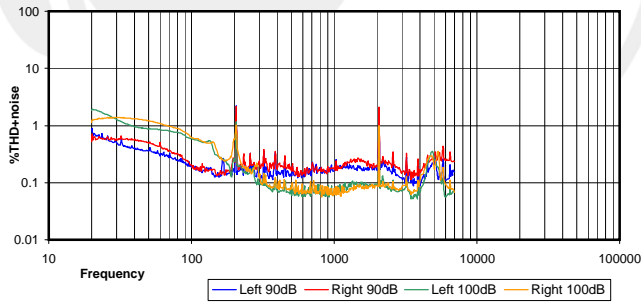
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



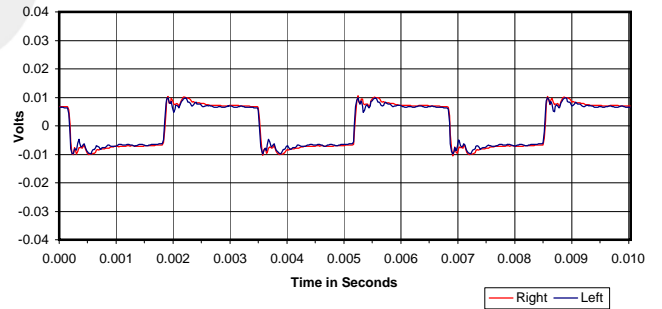
30 Hz Square Wave



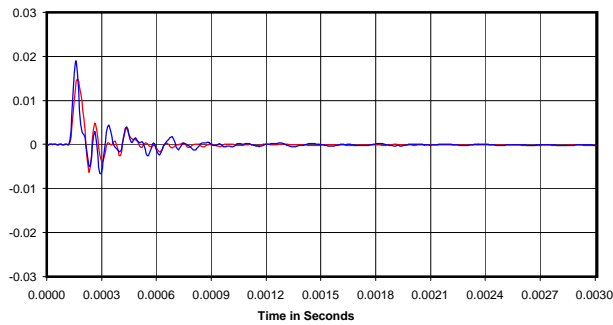
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

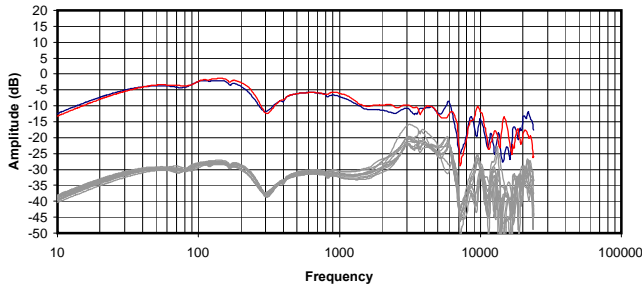


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

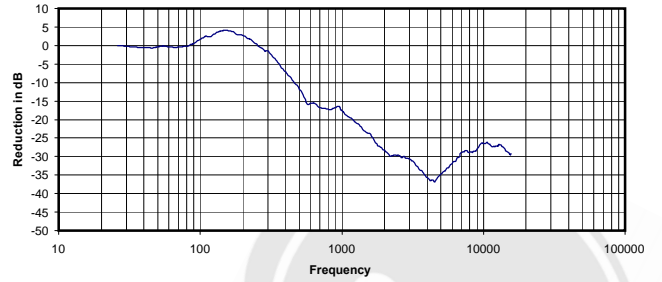
0.090 Vrms
 128 Ohms
 0.06 mW
 -7 dB



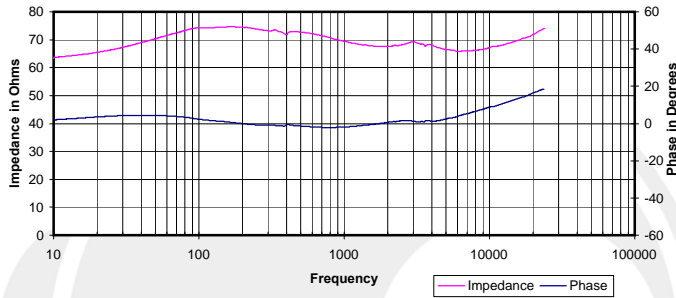
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



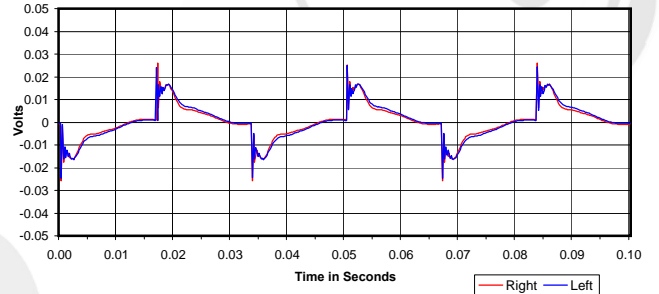
Isolation
 Attenuation of External Sound vs. Frequency



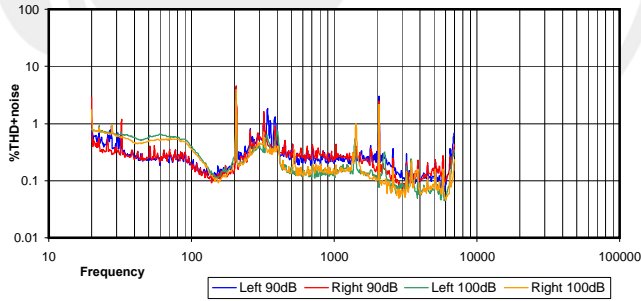
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



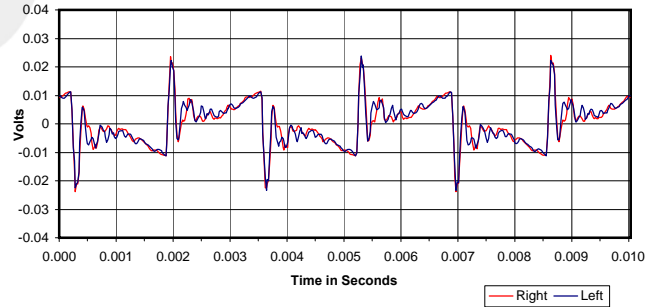
30 Hz Square Wave



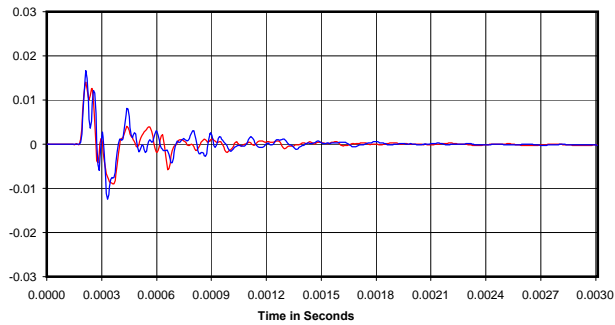
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

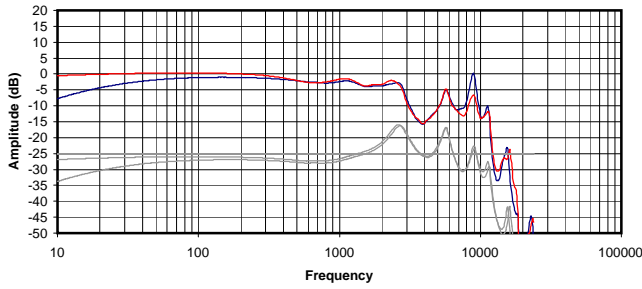


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

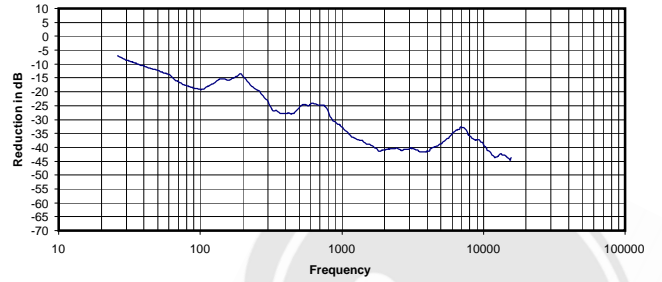
0.115 Vrms
 69 Ohms
 0.19 mW
 -15 dB



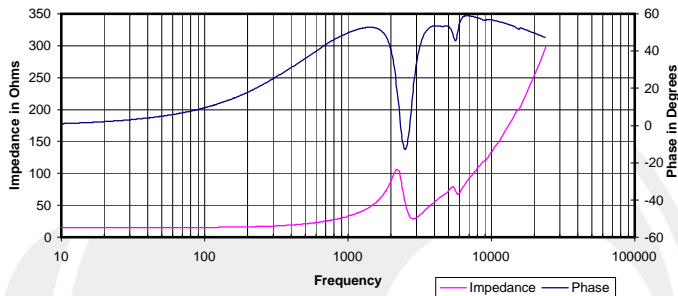
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



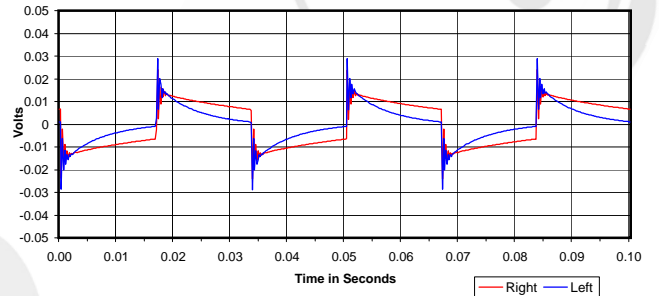
Isolation
Attenuation of External Sound vs. Frequency



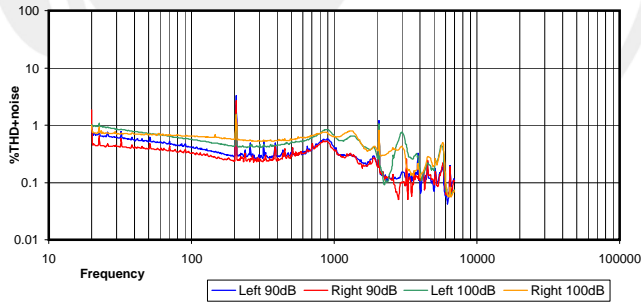
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



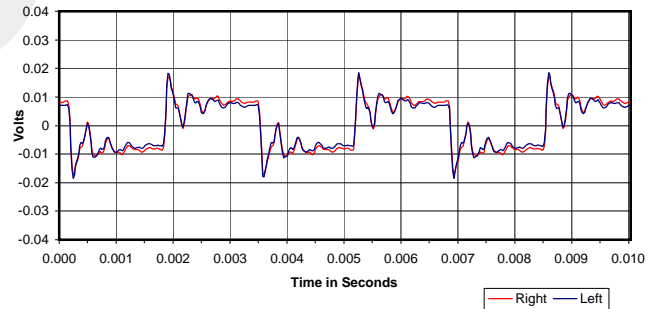
30 Hz Square Wave



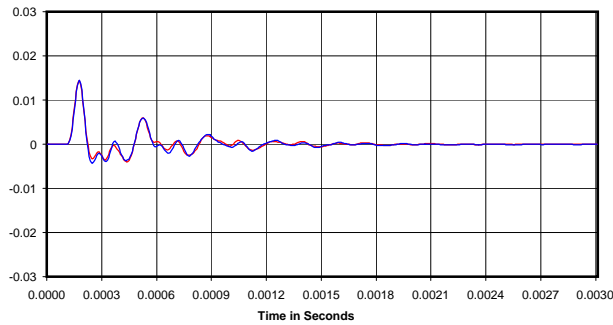
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

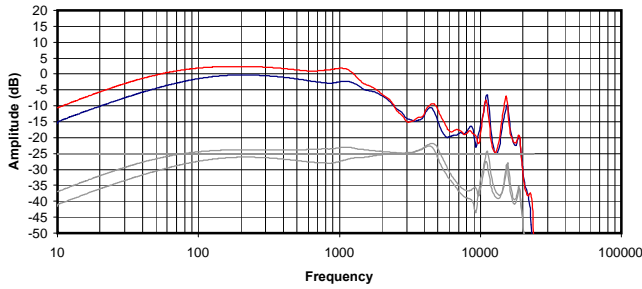


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

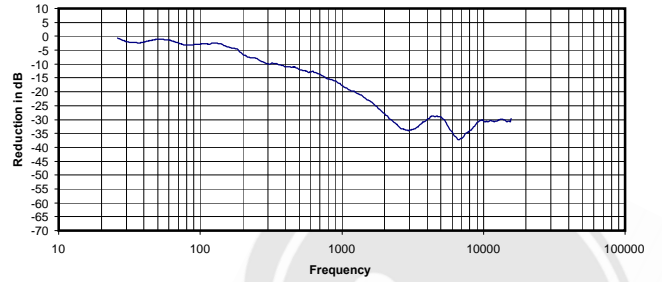
0.016 Vrms
33 Ohms
0.01 mW
-30 dB



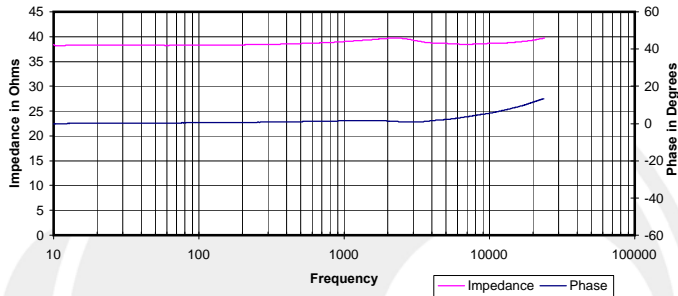
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



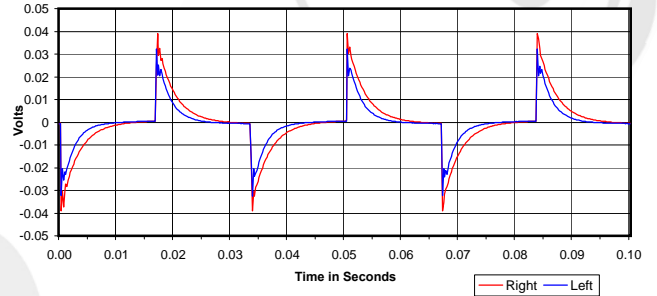
Isolation
Attenuation of External Sound vs. Frequency



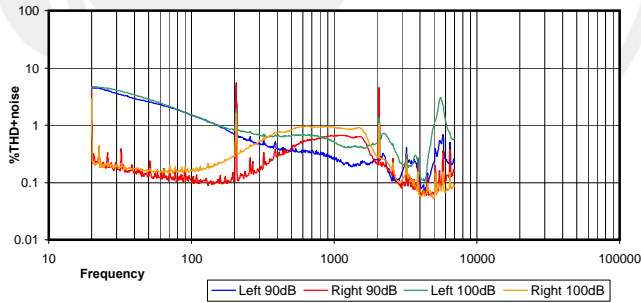
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



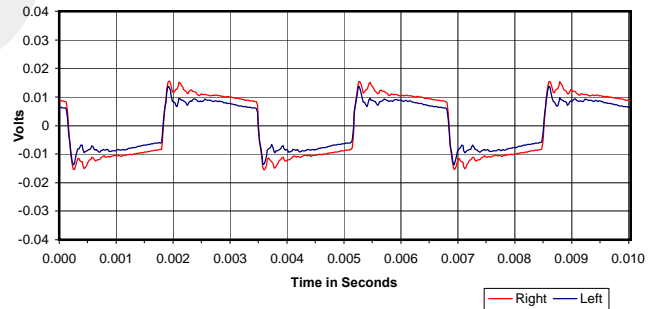
30 Hz Square Wave



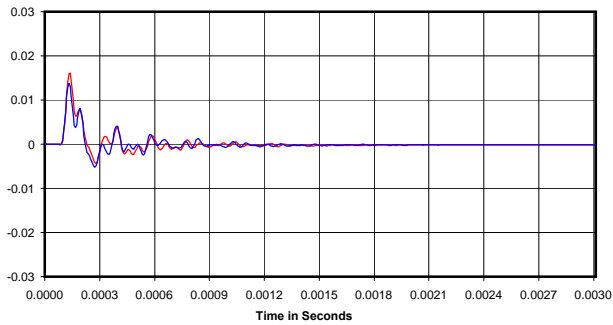
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

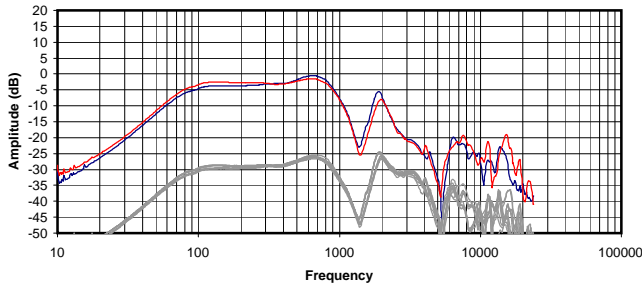


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

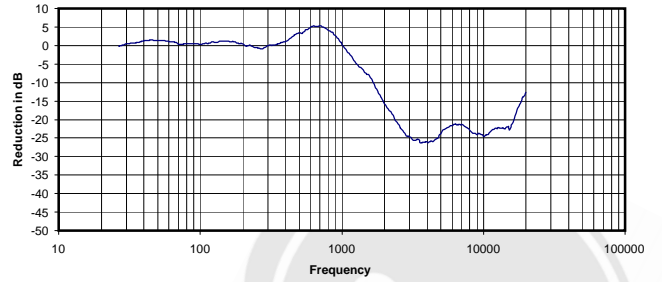
0.035 Vrms
39 Ohms
0.03 mW
-17 dB



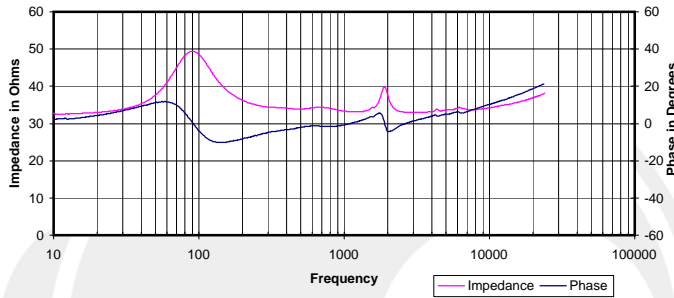
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



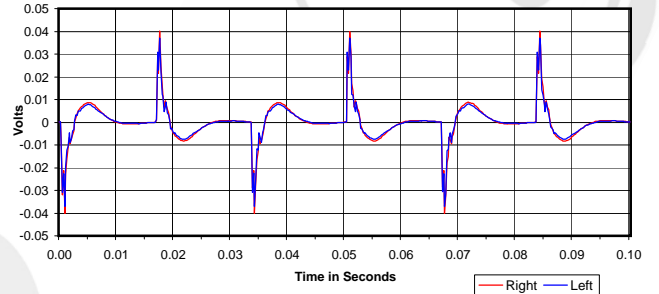
Isolation
 Attenuation of External Sound vs. Frequency



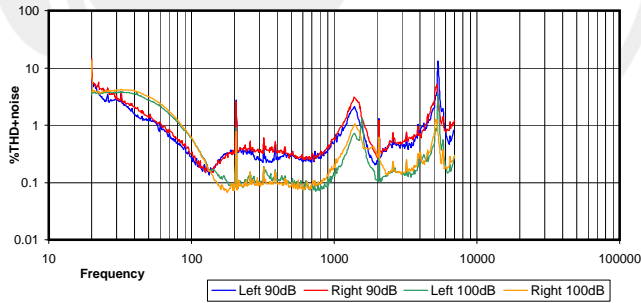
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



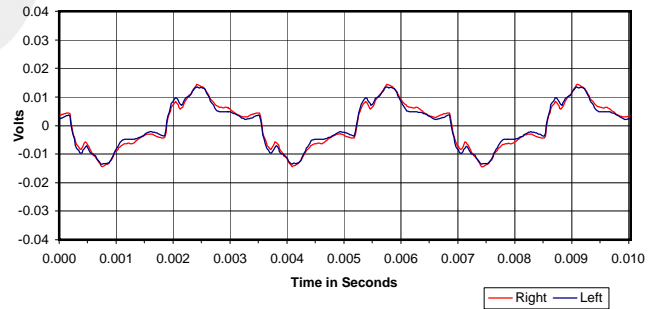
30 Hz Square Wave



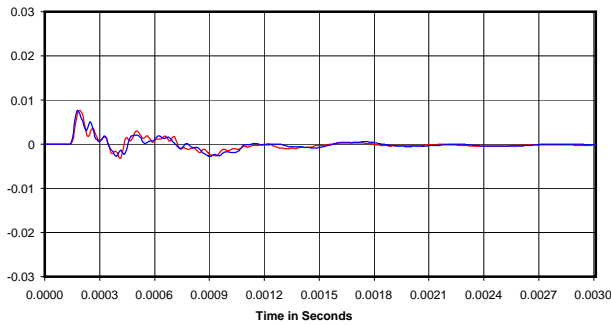
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

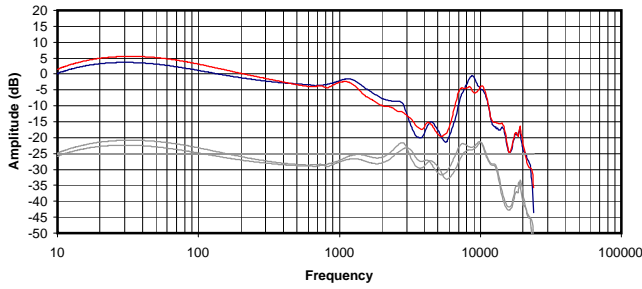


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

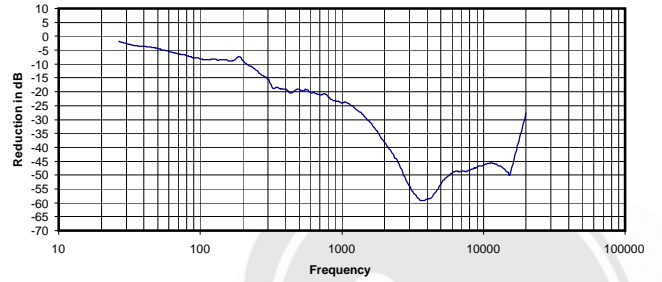
0.030 Vrms
 33 Ohms
 0.03 mW
 -8 dB



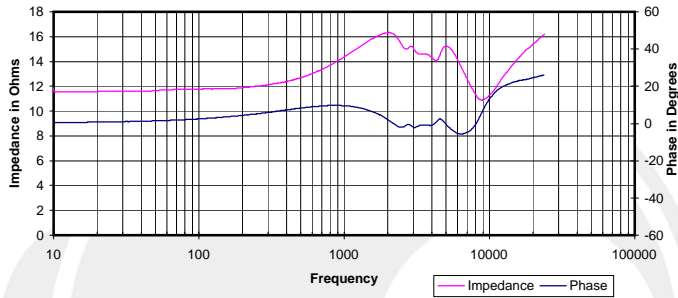
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



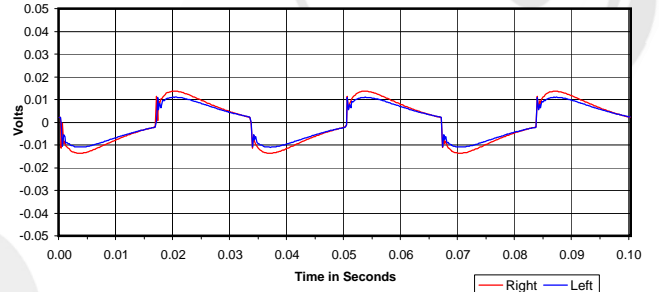
Isolation
Attenuation of External Sound vs. Frequency



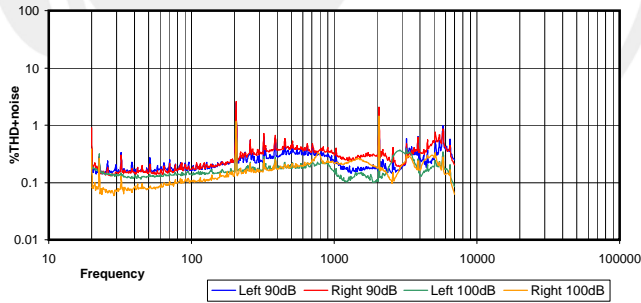
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



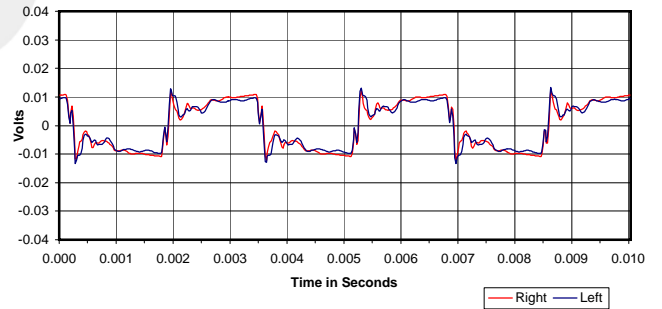
30 Hz Square Wave



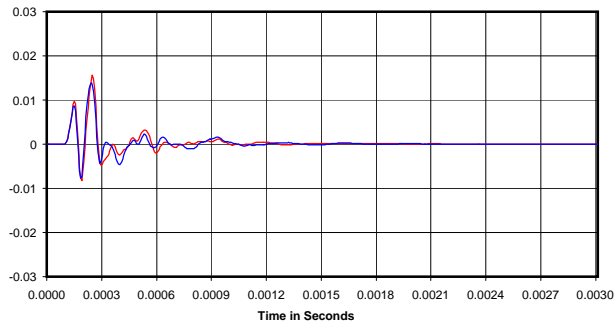
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

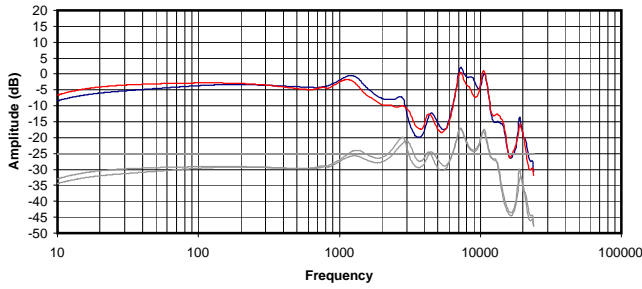


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

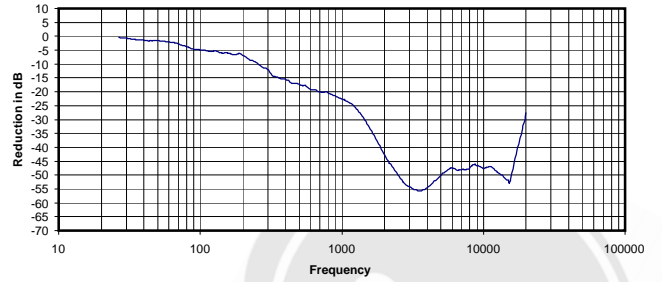
0.015 Vrms
14 Ohms
0.01 mW
-30 dB



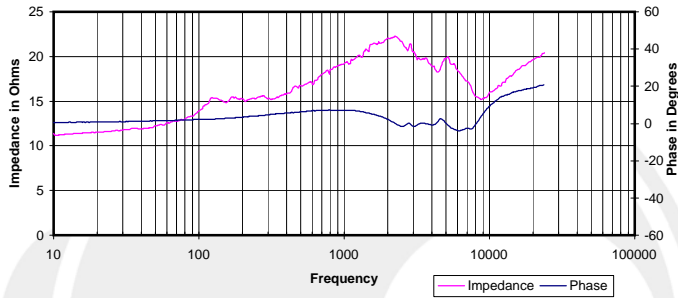
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



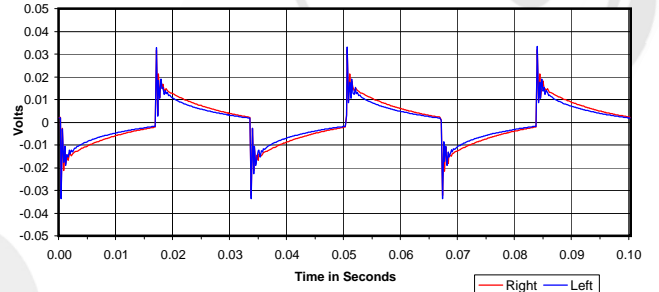
Isolation
Attenuation of External Sound vs. Frequency



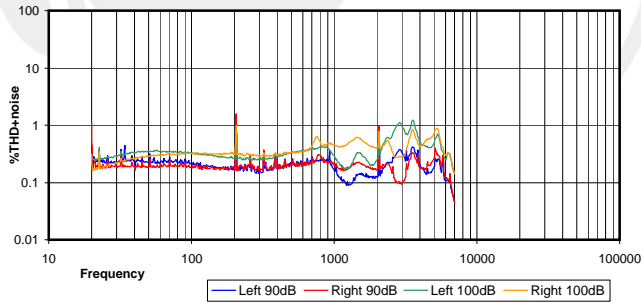
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



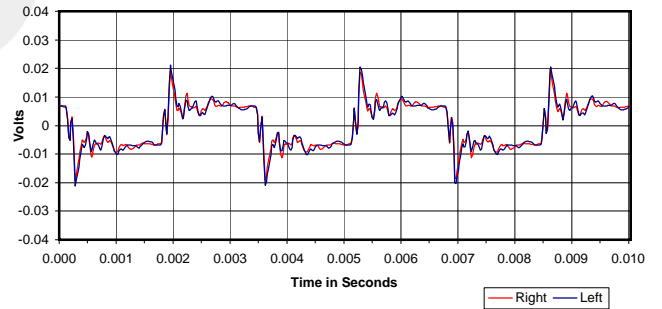
30 Hz Square Wave



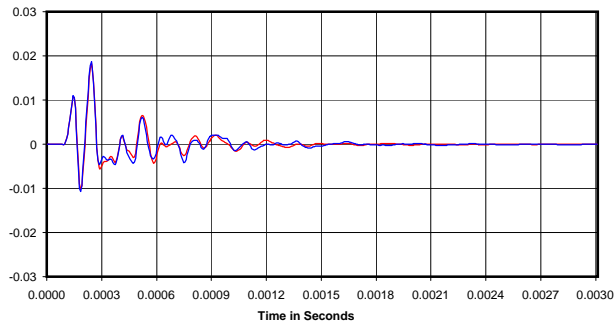
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



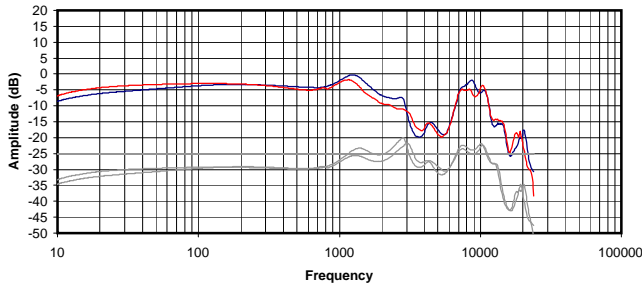
Impulse Response



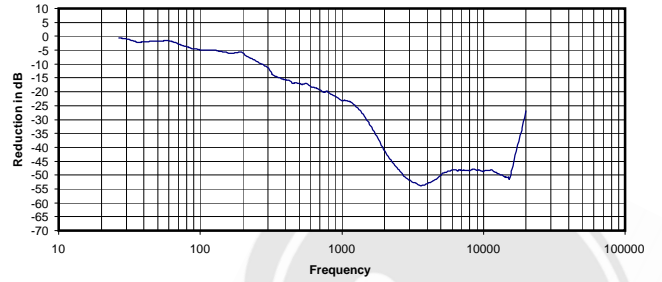
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.014 Vrms
19 Ohms
0.01 mW
-29 dB

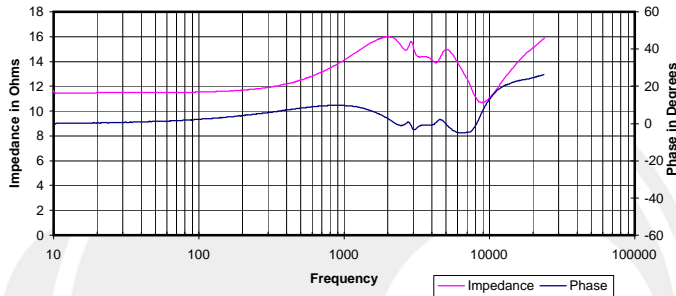
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



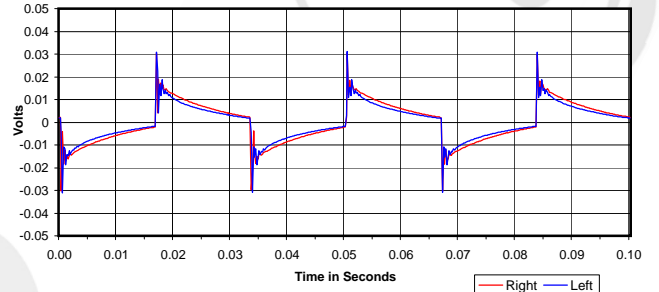
Isolation
Attenuation of External Sound vs. Frequency



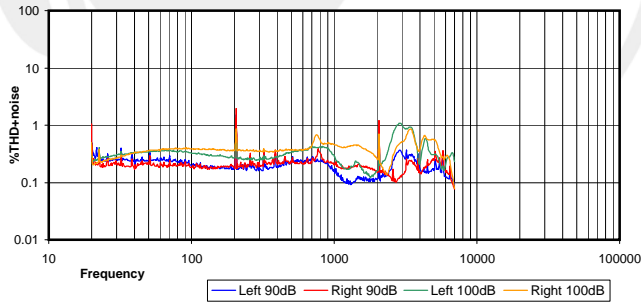
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



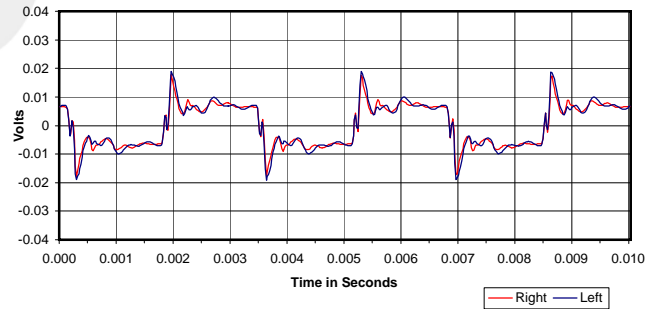
30 Hz Square Wave



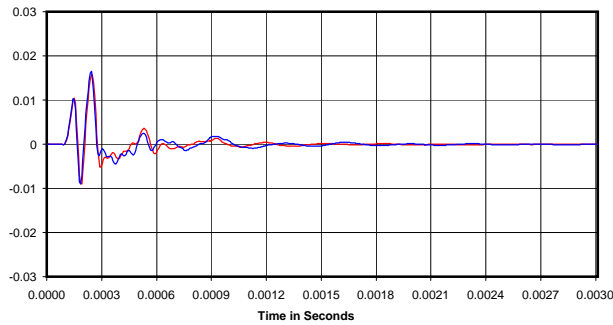
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

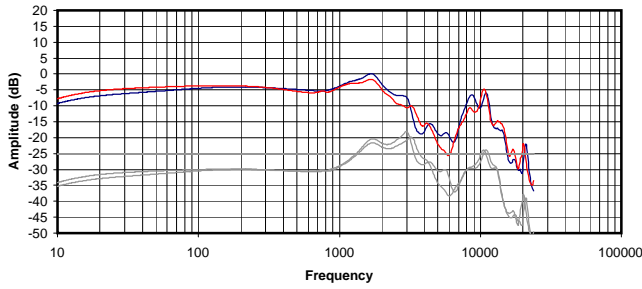


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

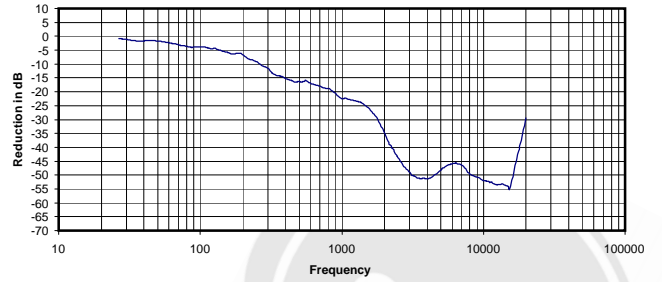
0.014 Vrms
14 Ohms
0.01 mW
-28 dB



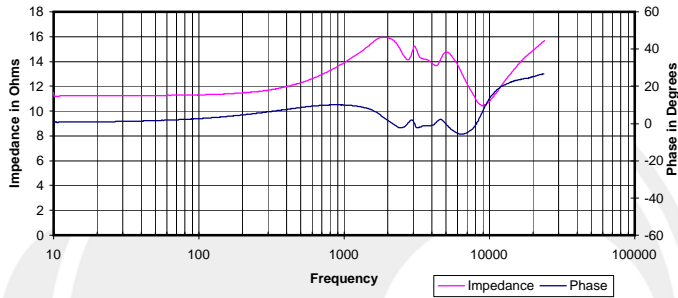
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



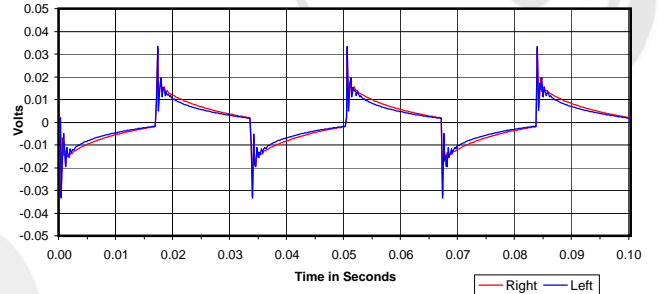
Isolation
Attenuation of External Sound vs. Frequency



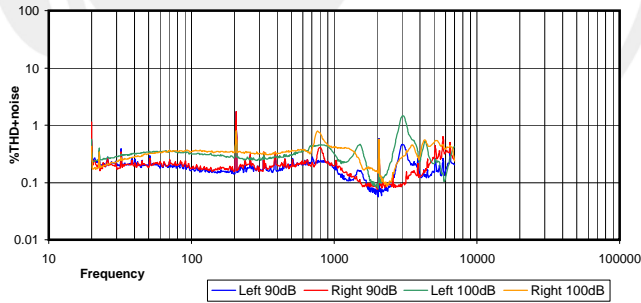
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



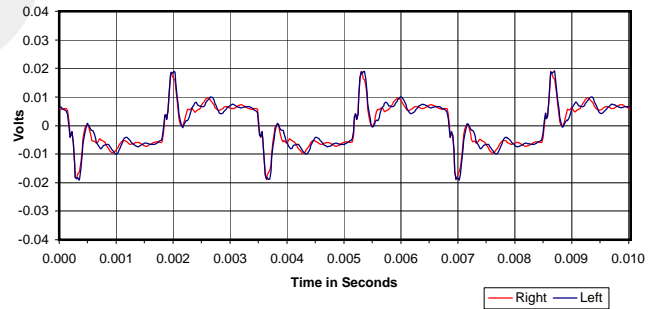
30 Hz Square Wave



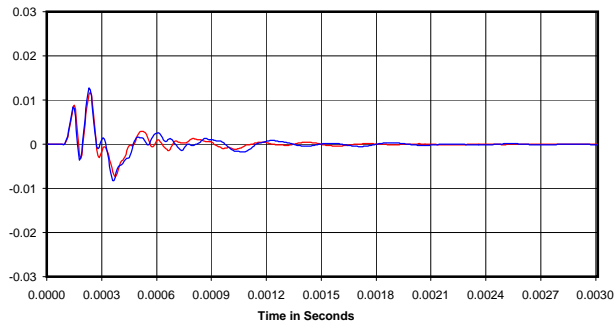
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

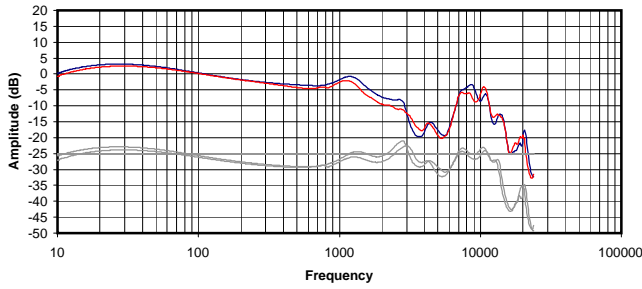


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

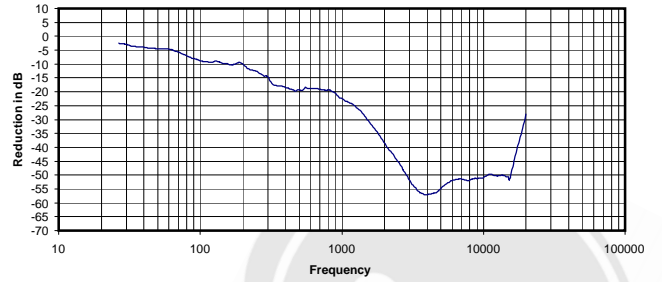
0.016 Vrms
14 Ohms
0.02 mW
-27 dB



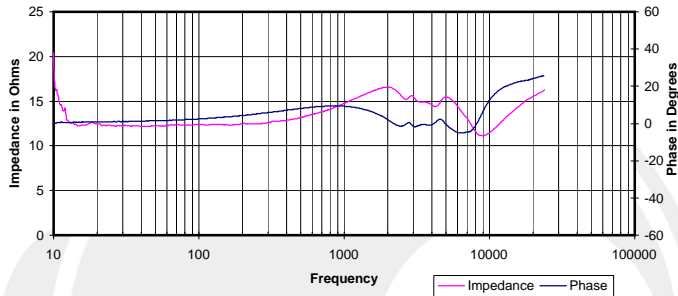
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



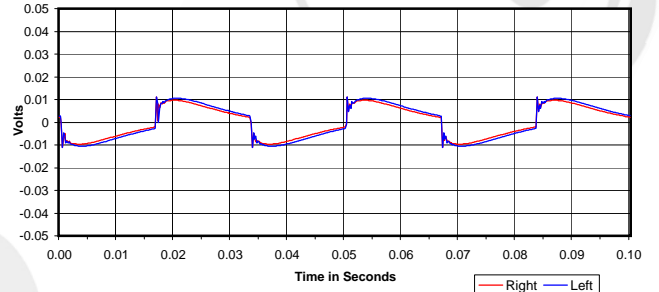
Isolation
Attenuation of External Sound vs. Frequency



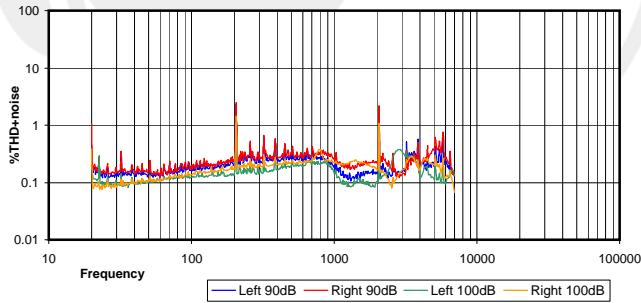
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



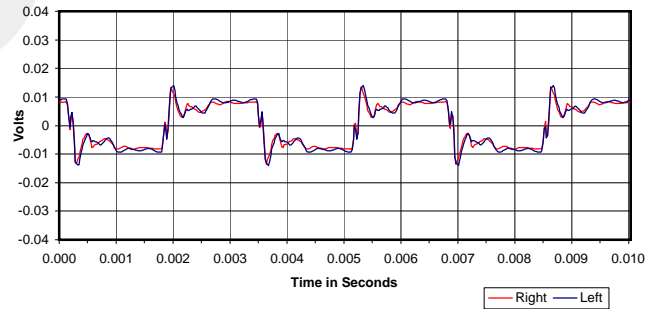
30 Hz Square Wave



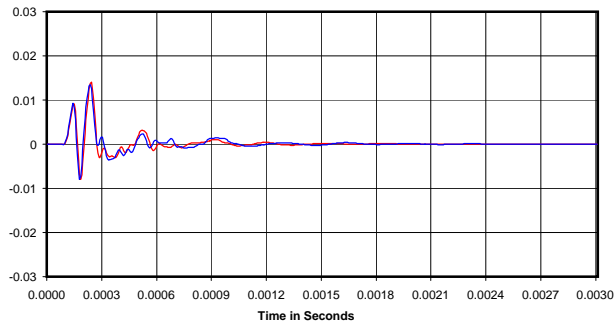
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



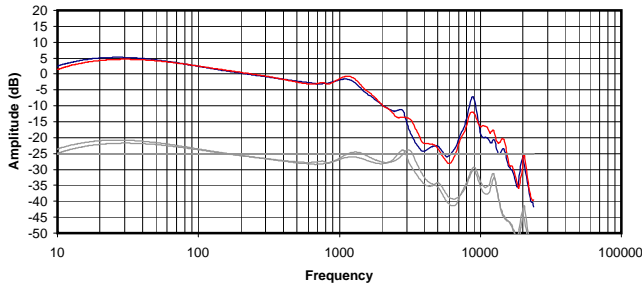
Impulse Response



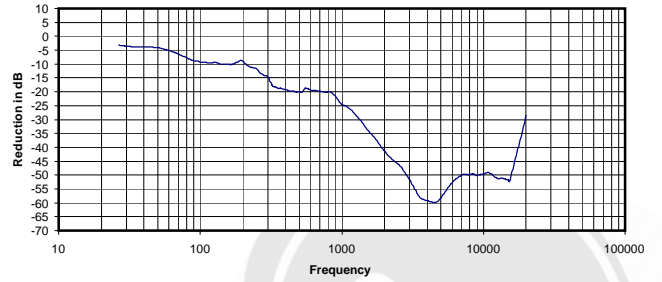
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.013 Vrms
15 Ohms
0.01 mW
-30 dB

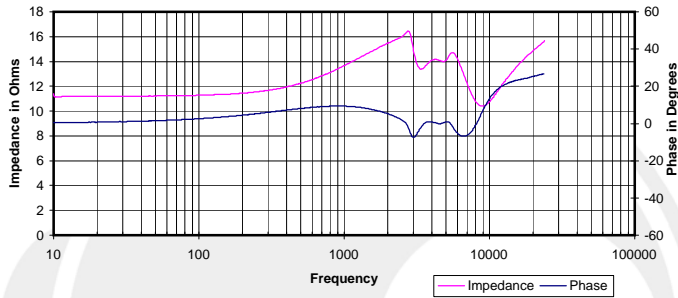
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



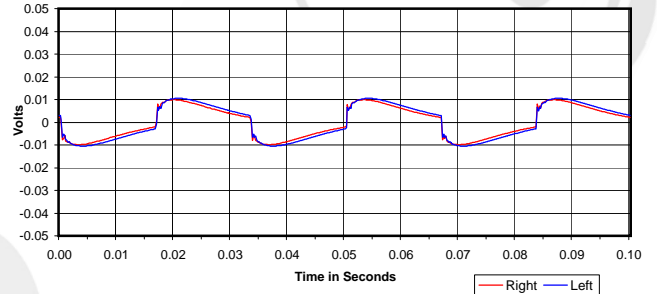
Isolation
Attenuation of External Sound vs. Frequency



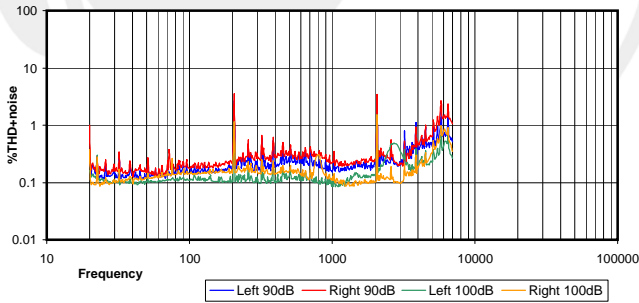
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



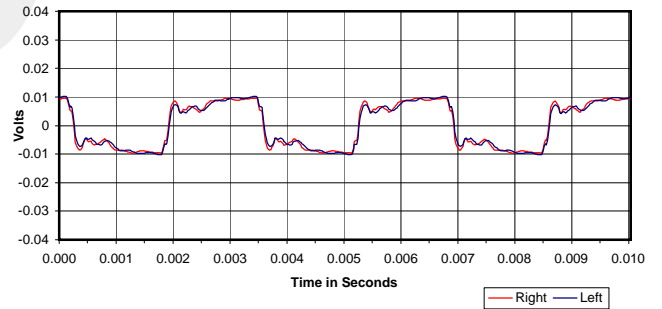
30 Hz Square Wave



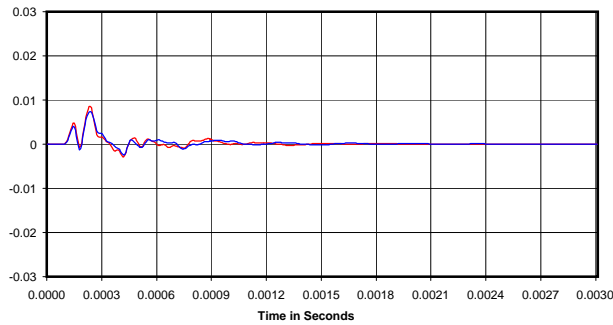
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



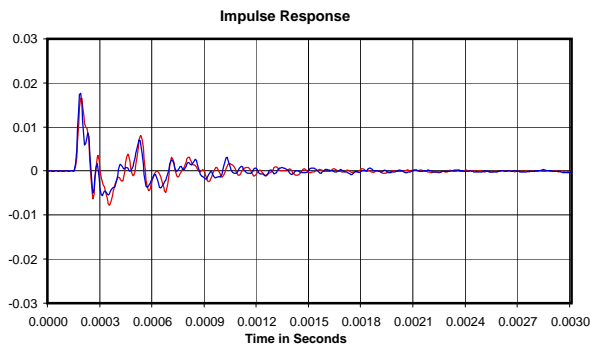
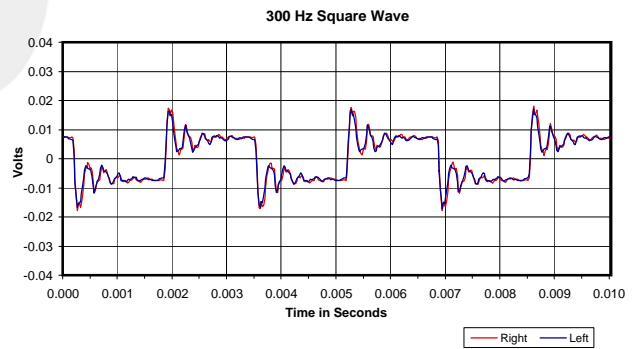
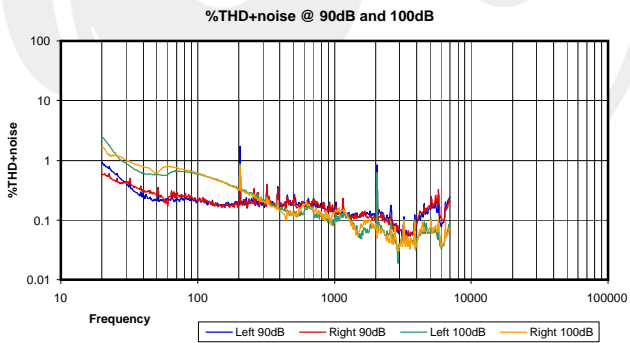
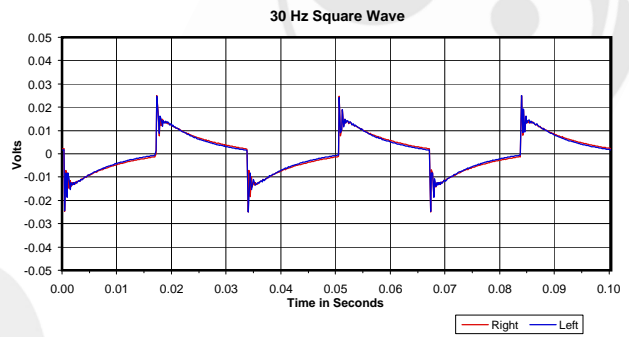
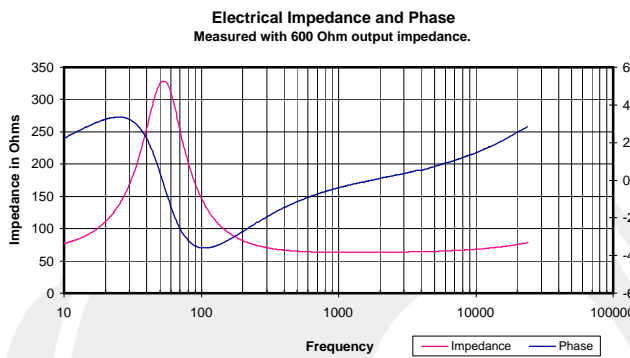
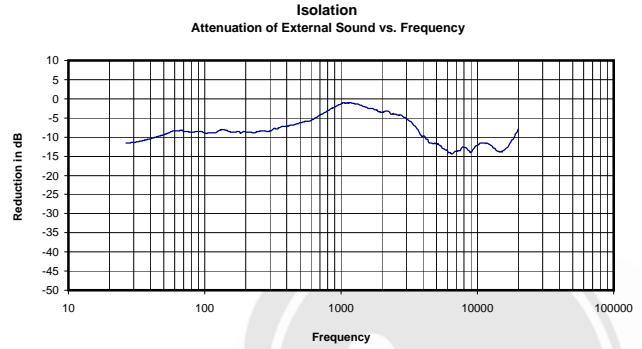
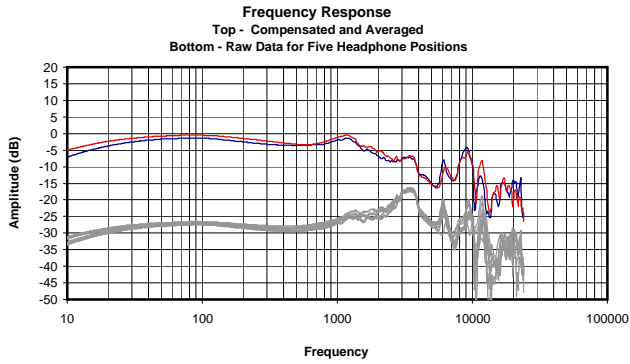
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.019 Vrms
14 Ohms
0.03 mW
-31 dB

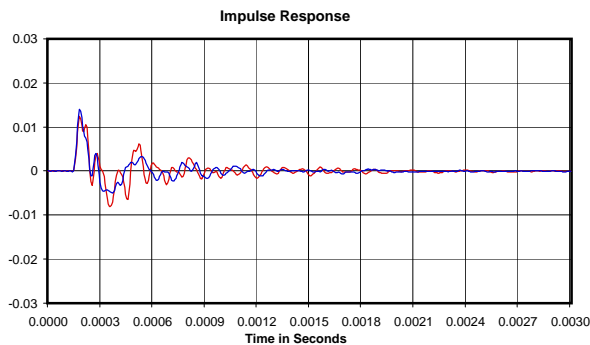
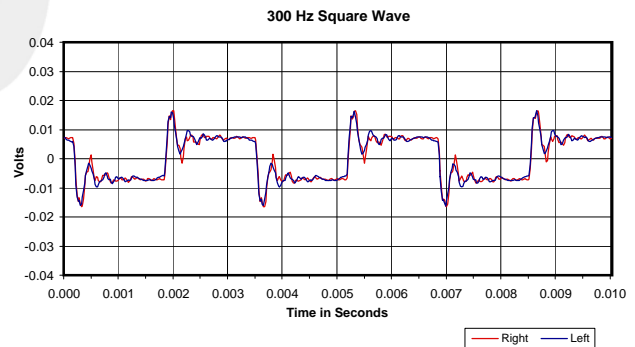
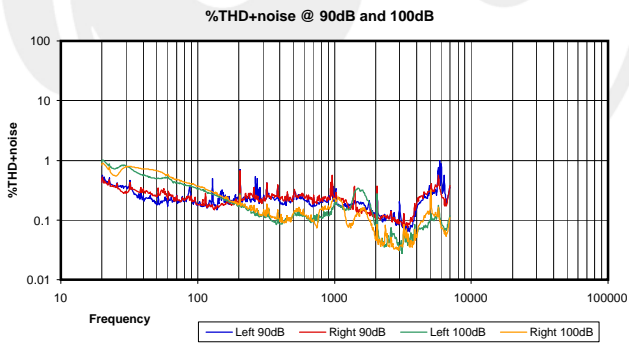
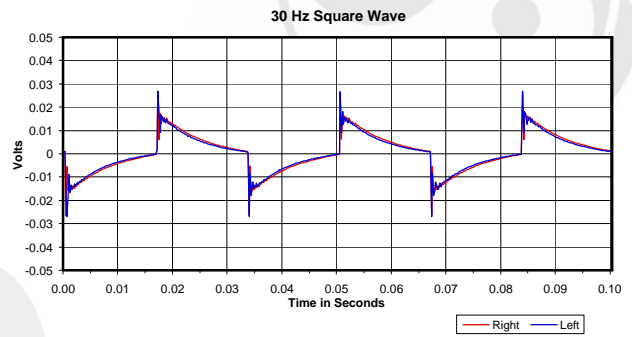
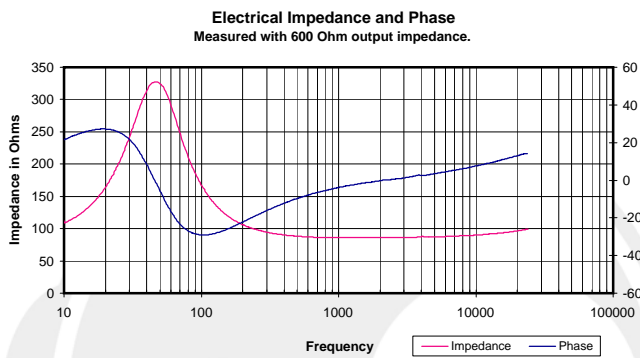
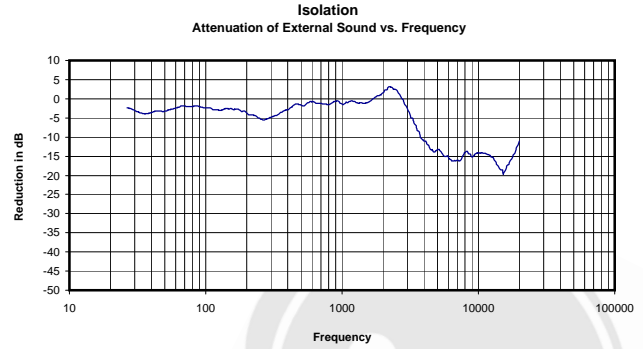
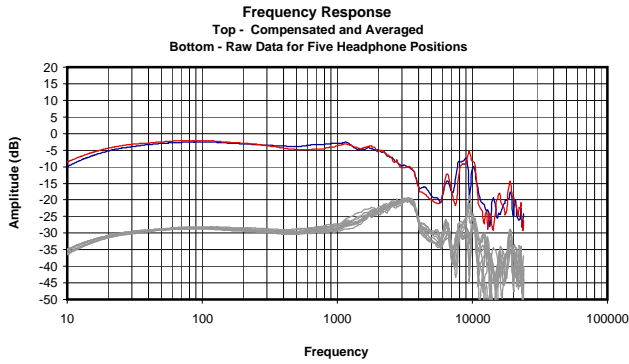




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.111 Vrms
63 Ohms
0.20 mW
-7 dB

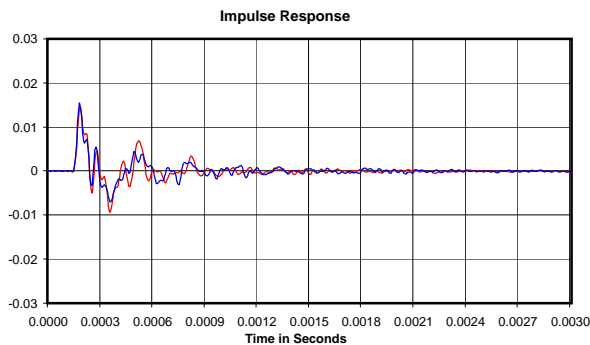
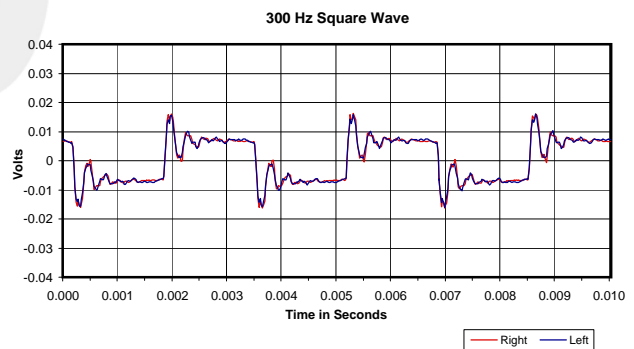
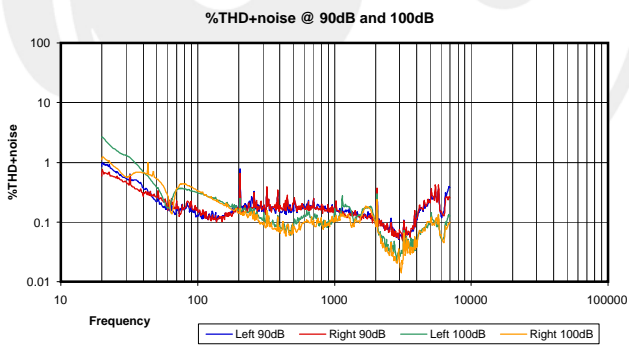
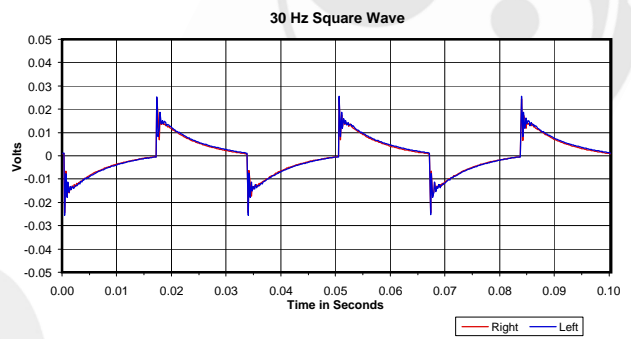
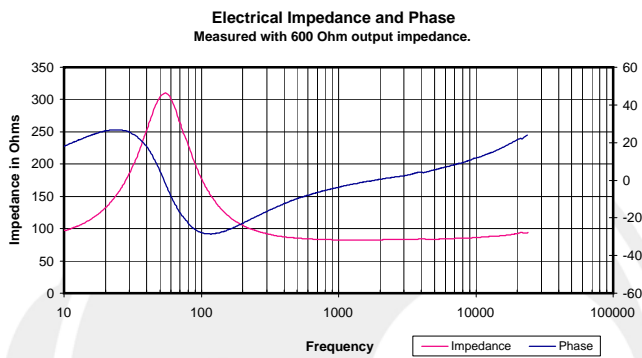
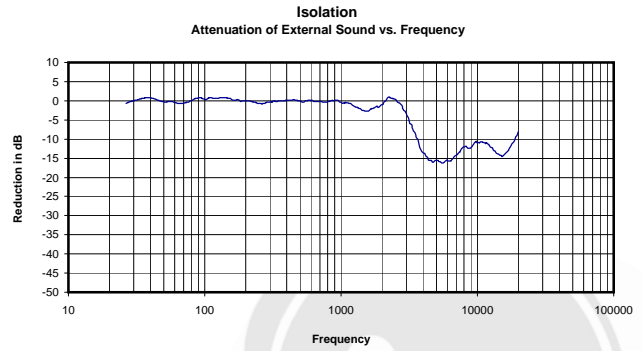
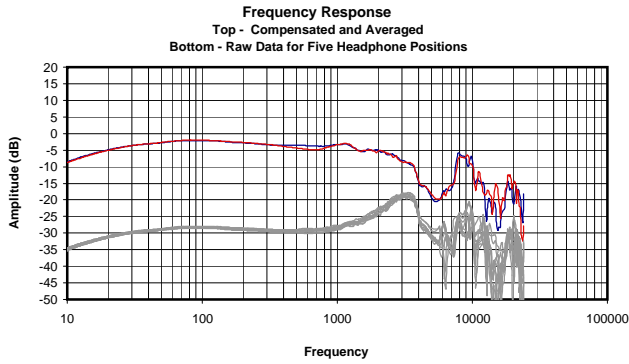




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.096 Vrms
86 Ohms
0.11 mW
-5 dBr

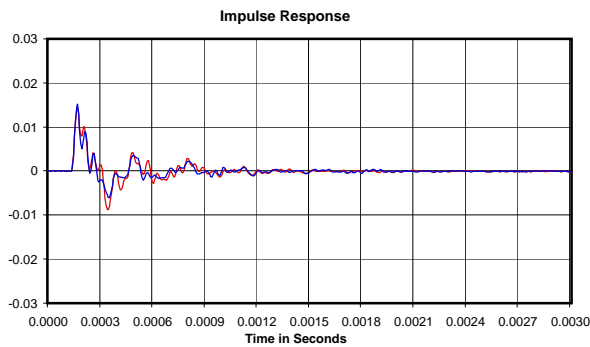
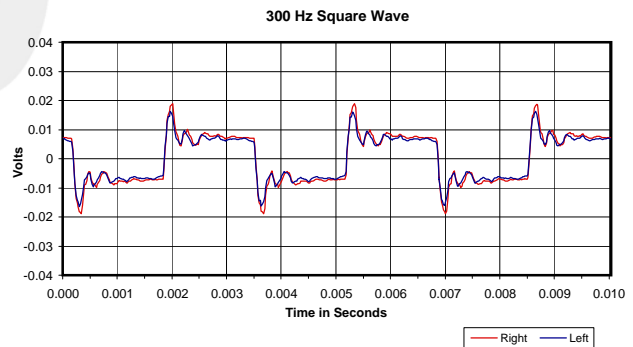
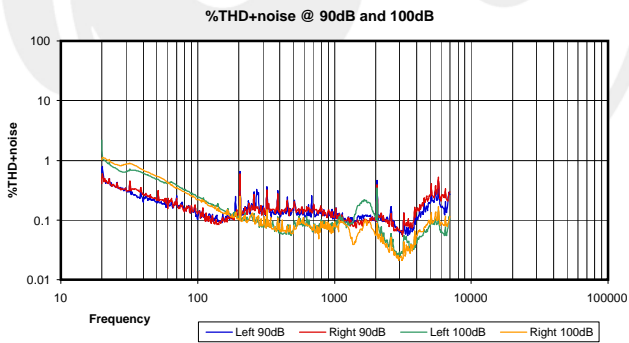
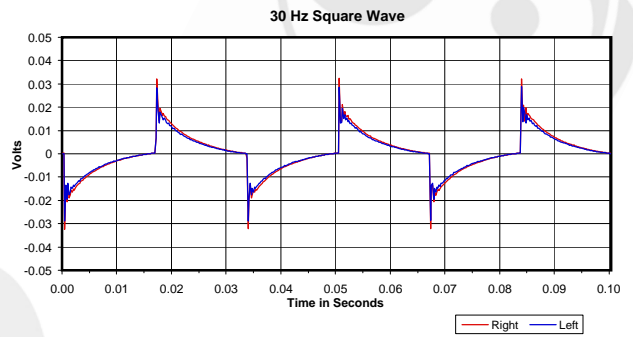
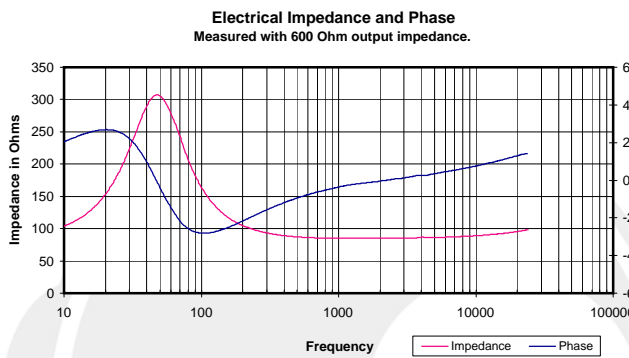
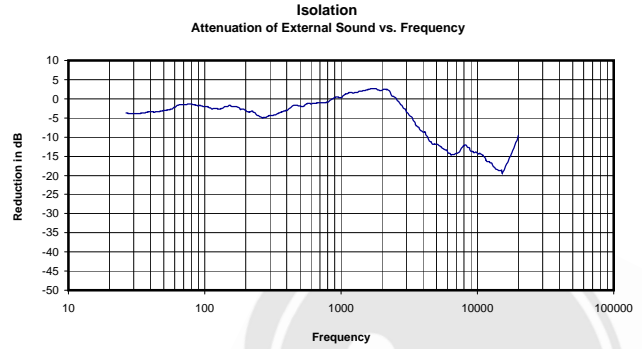
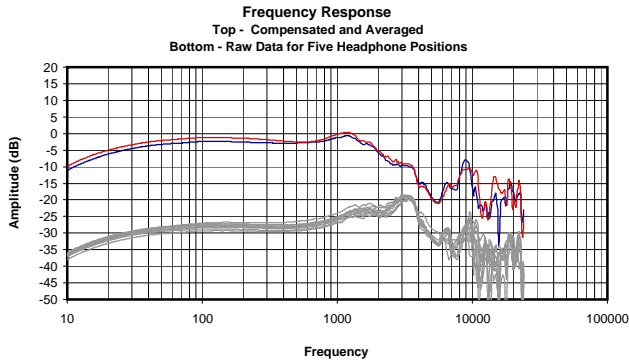




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.115 Vrms
83 Ohms
0.16 mW
-4 dBr

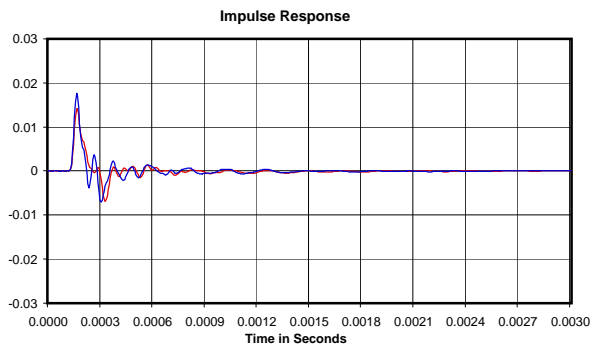
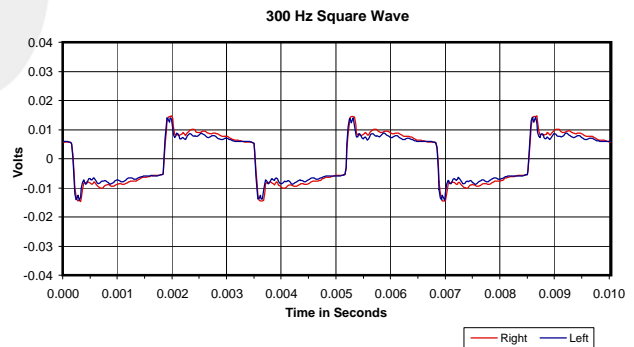
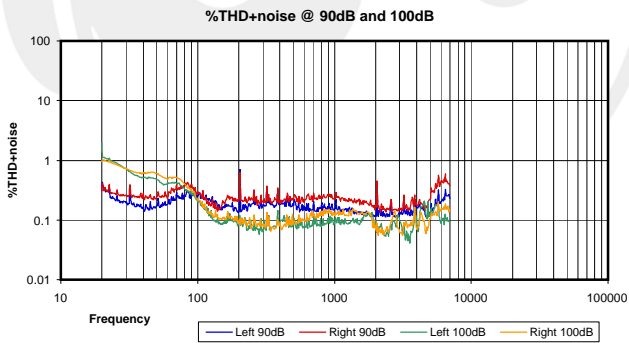
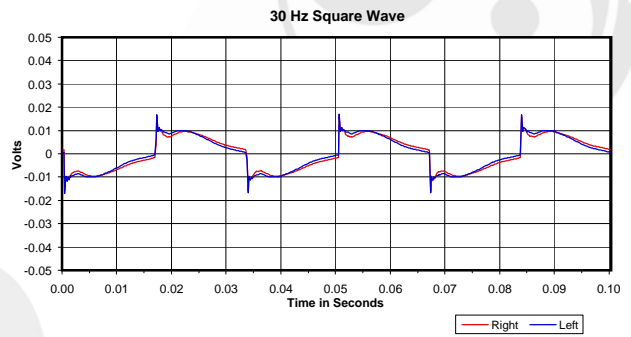
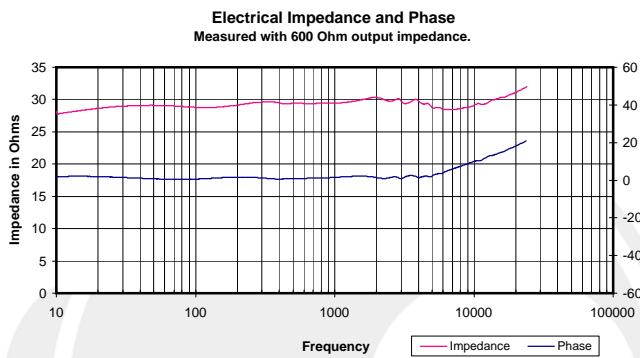
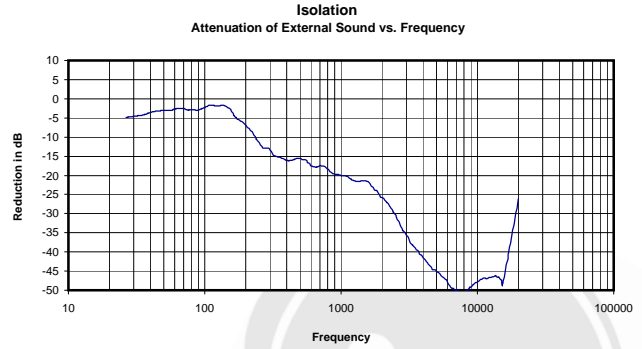
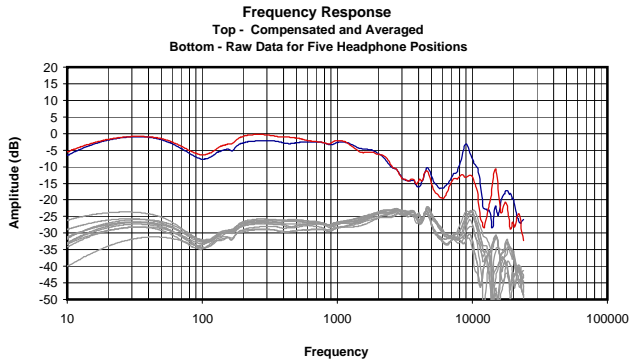




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.069 Vrms
85 Ohms
0.06 mW
-4 dBr

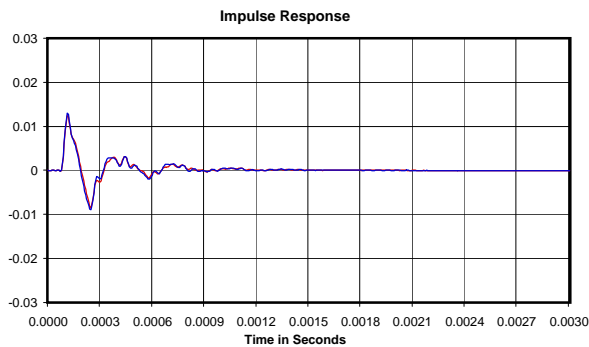
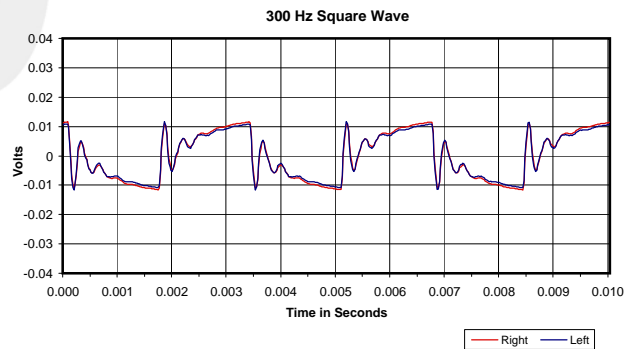
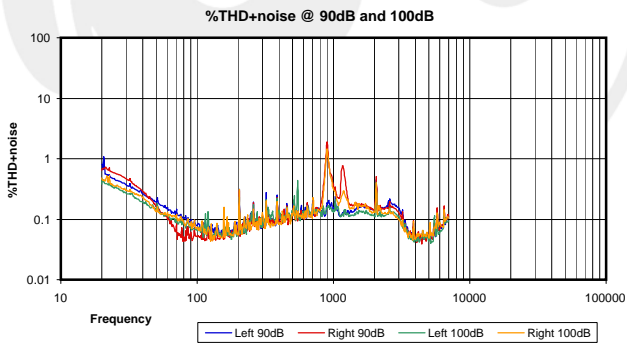
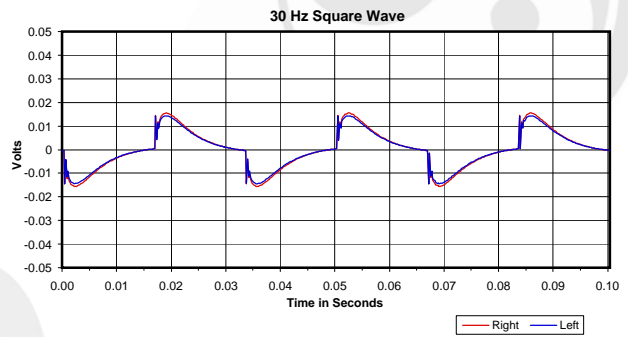
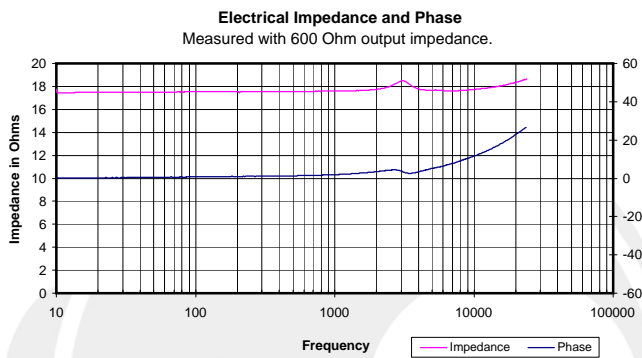
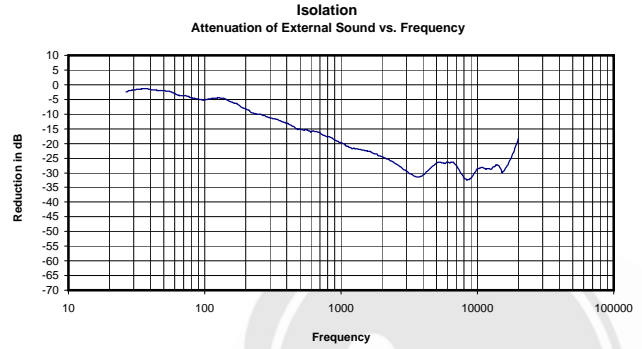
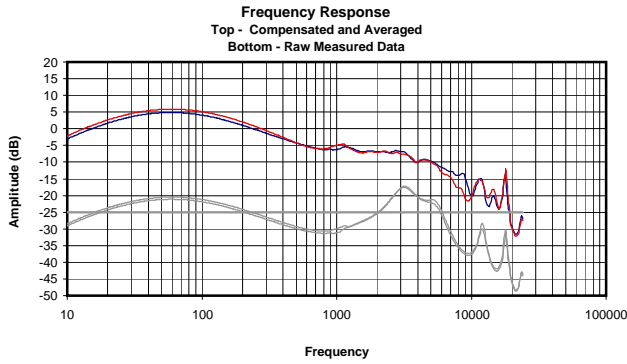




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.025 Vrms
29 Ohms
0.02 mW
-24 dBr



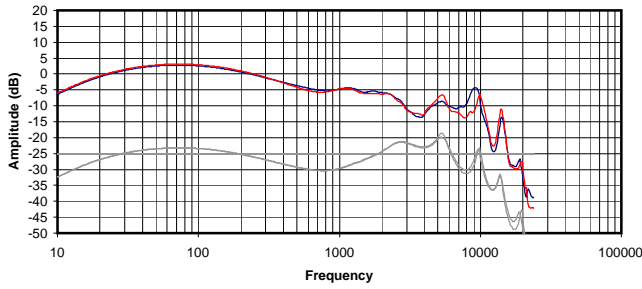


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

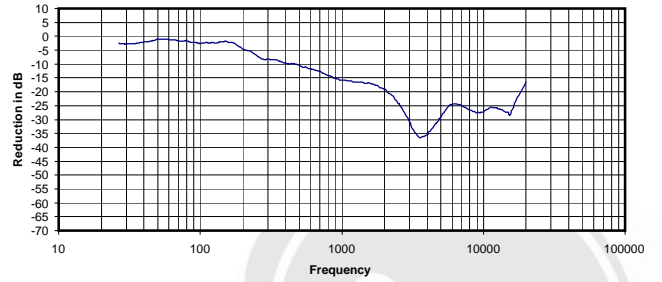
0.045 Vrms
18 Ohms
0.12 mW
-19 dBr



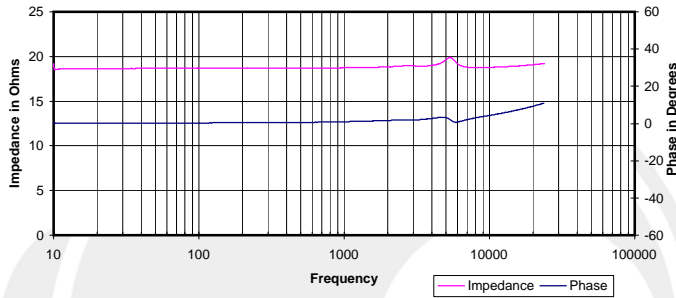
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



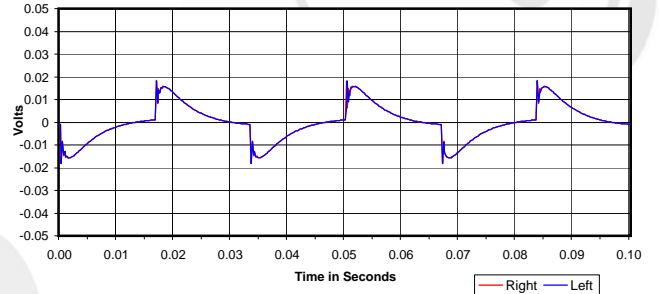
Isolation
Attenuation of External Sound vs. Frequency



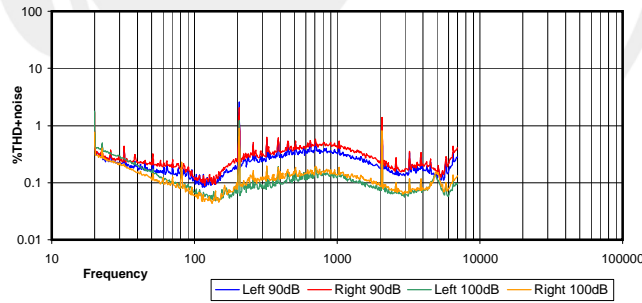
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



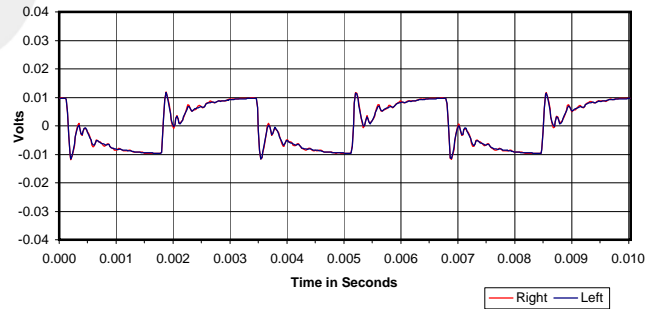
30 Hz Square Wave



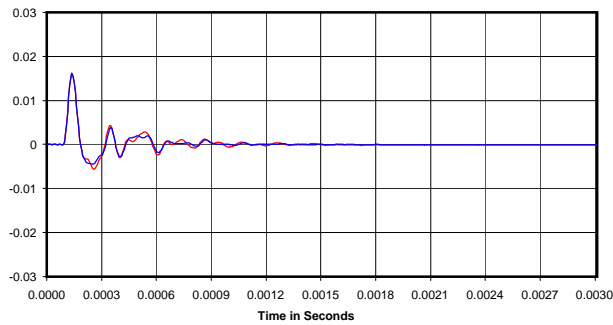
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

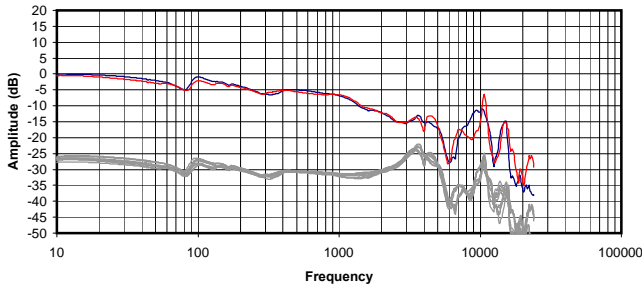


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

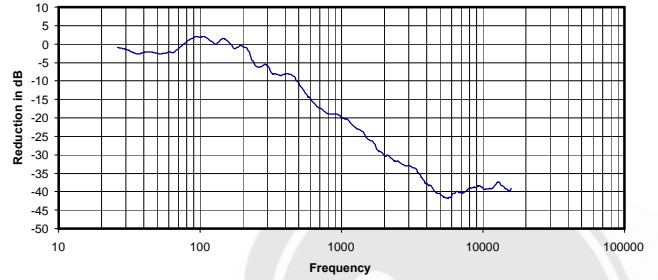
0.040 Vrms
19 Ohms
0.09 mW
-16 dB



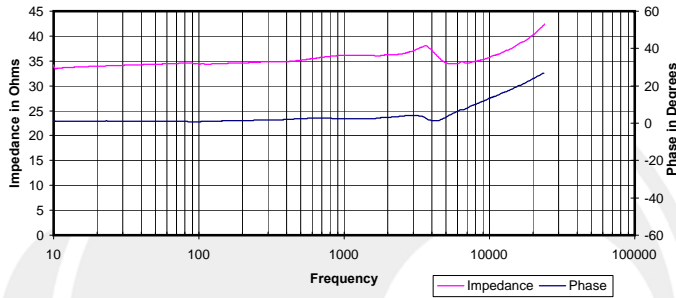
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



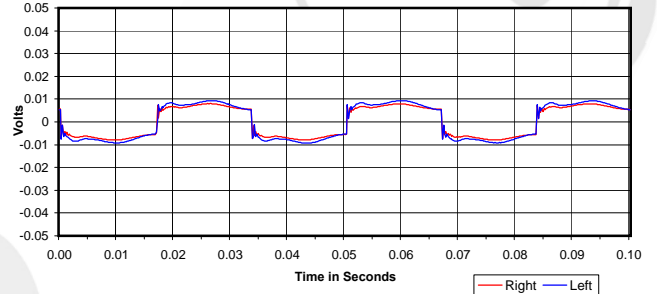
Isolation
Attenuation of External Sound vs. Frequency



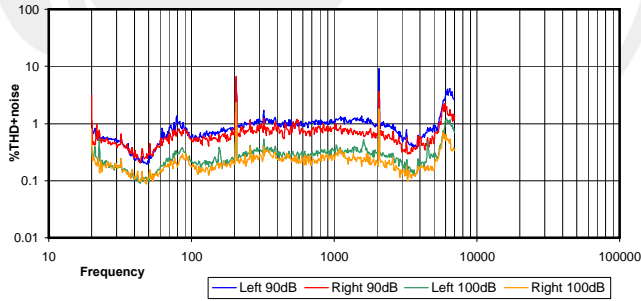
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



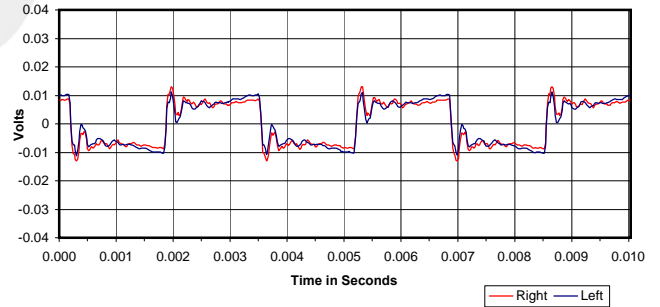
30 Hz Square Wave



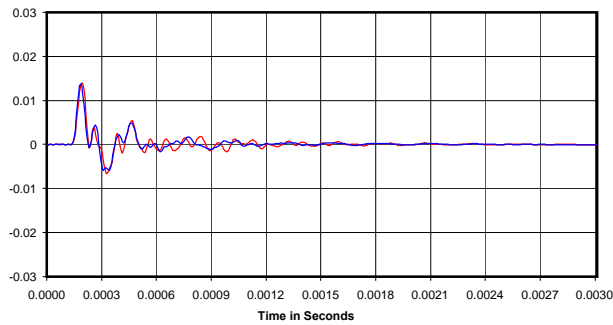
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

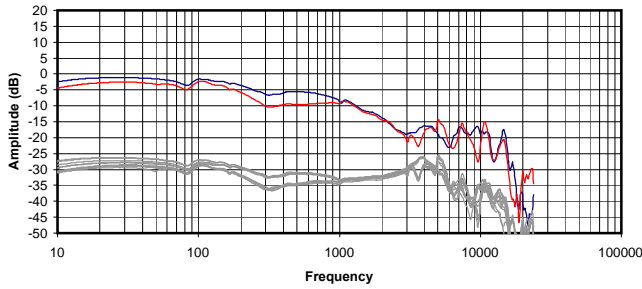


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

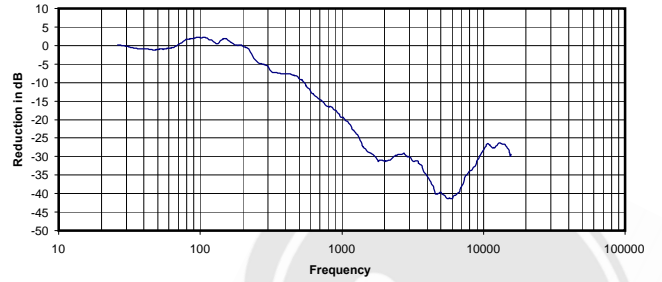
0.035 Vrms
36 Ohms
0.03 mW
-18 dB



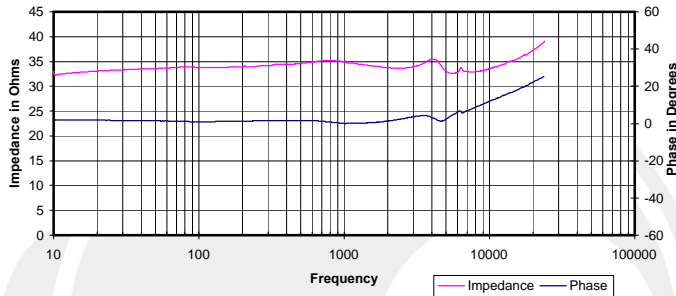
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



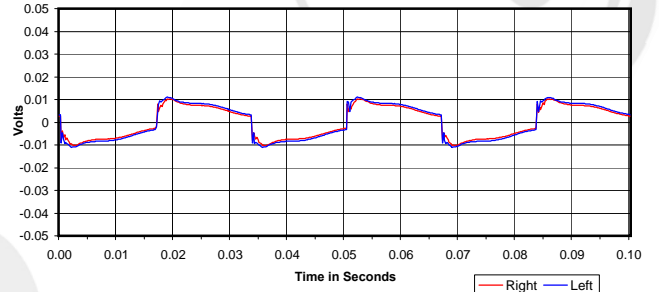
Isolation
 Attenuation of External Sound vs. Frequency



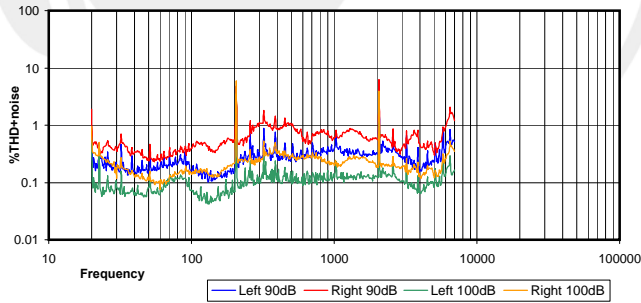
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



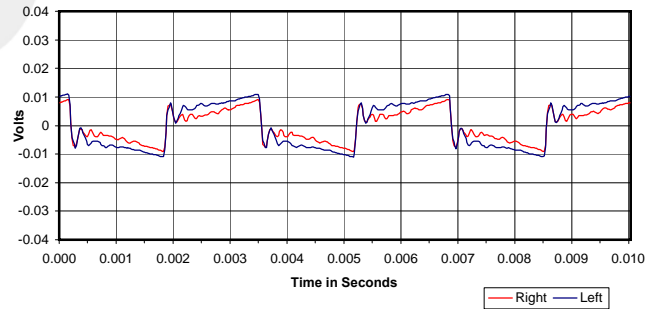
30 Hz Square Wave



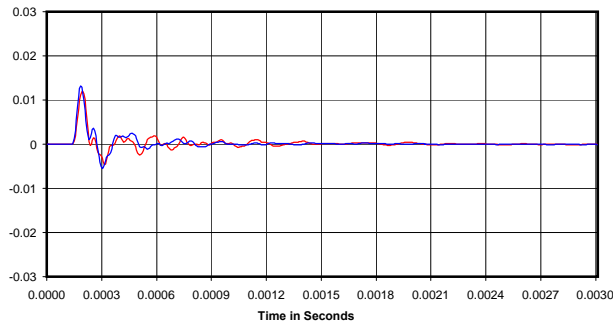
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



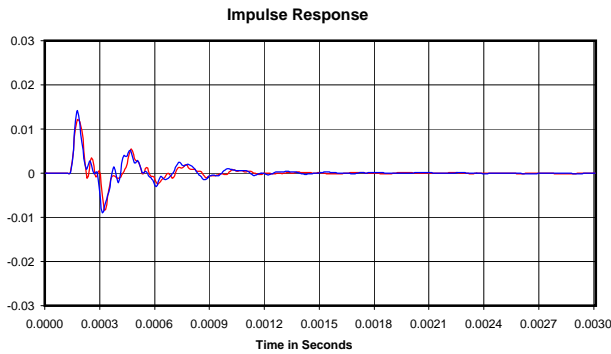
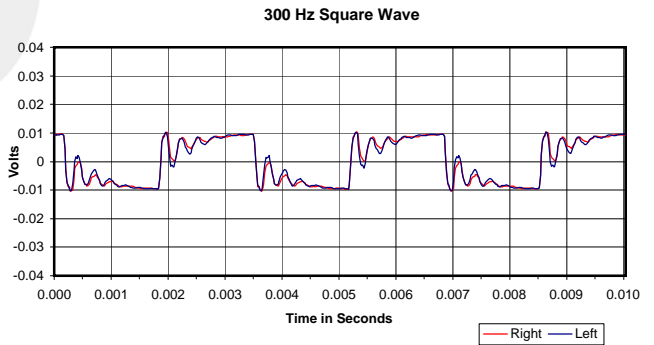
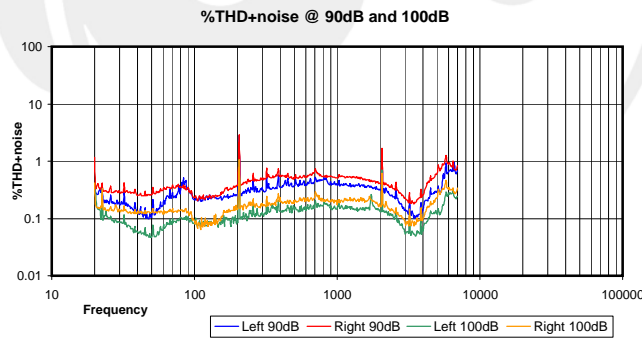
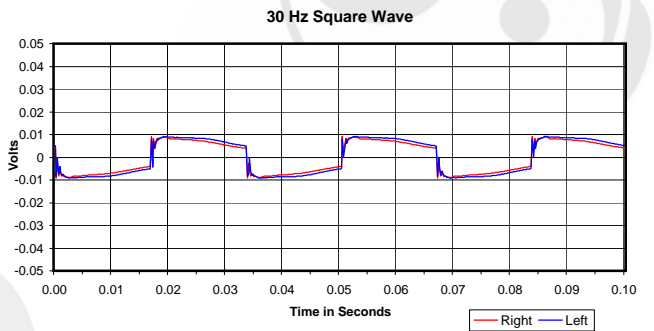
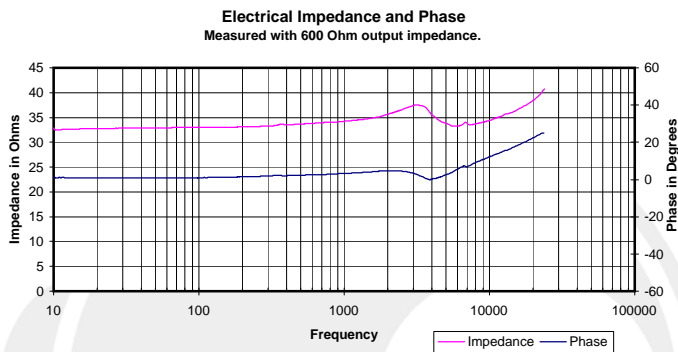
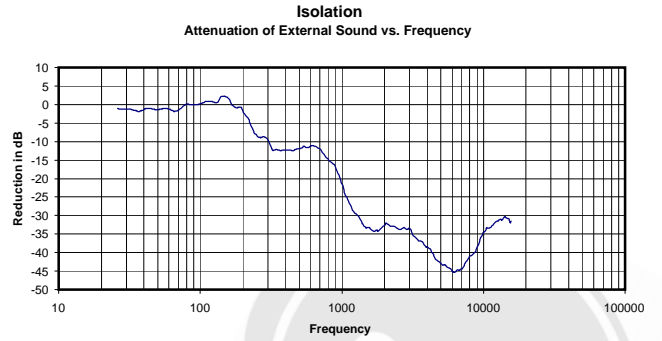
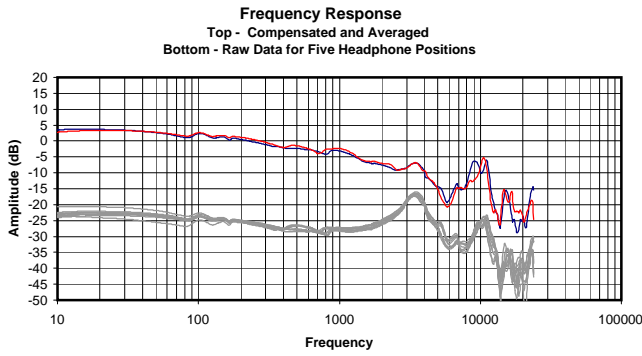
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.032 Vrms
 35 Ohms
 0.03 mW
 -17 dB



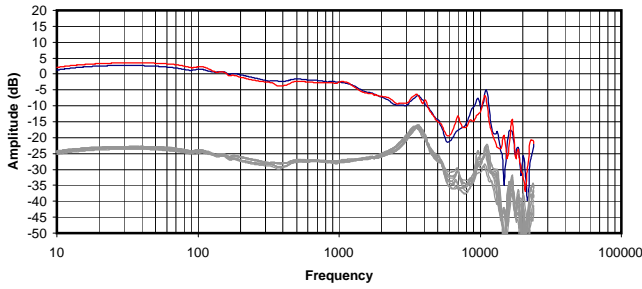


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

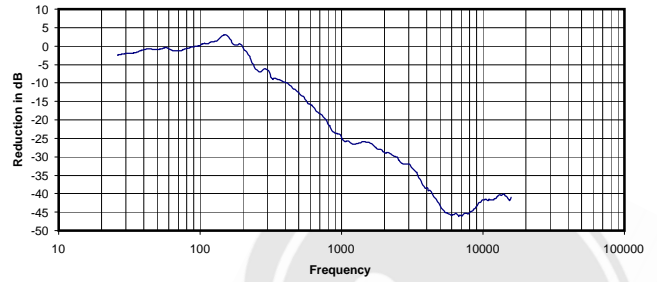
0.043 Vrms
34 Ohms
0.05 mW
-19 dB



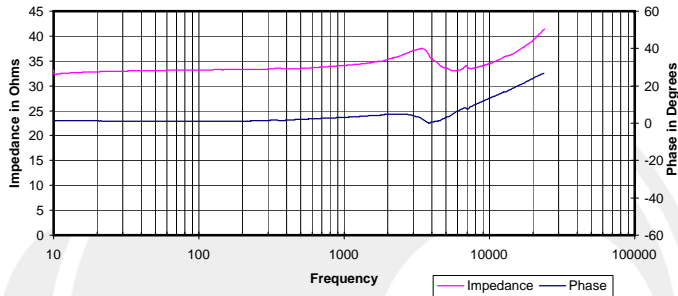
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



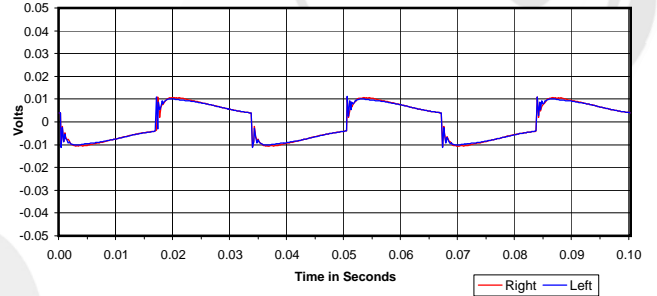
Isolation
 Attenuation of External Sound vs. Frequency



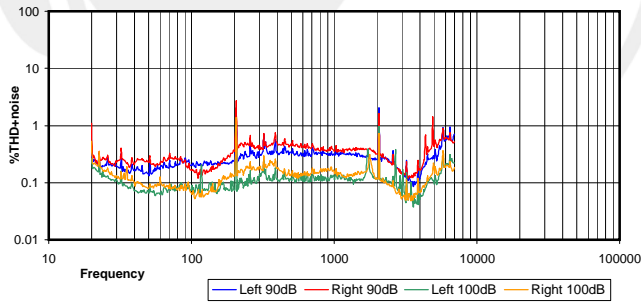
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



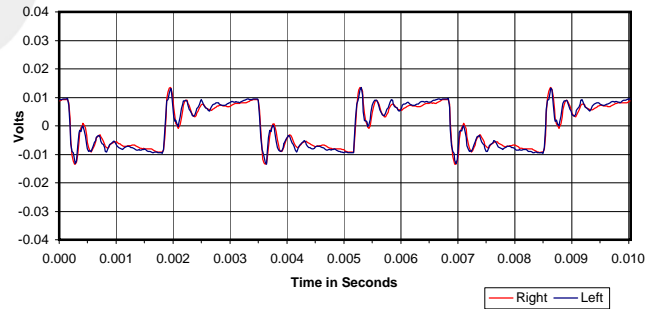
30 Hz Square Wave



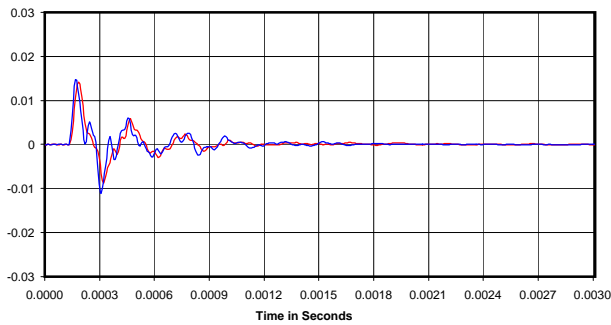
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



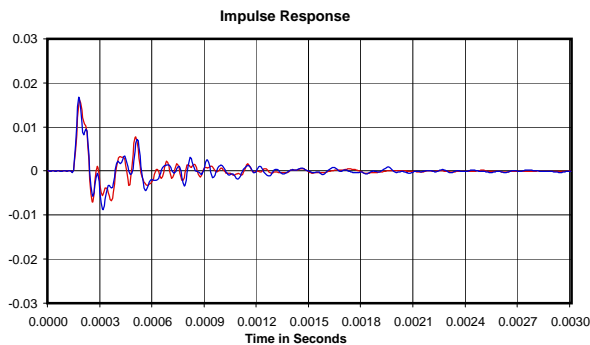
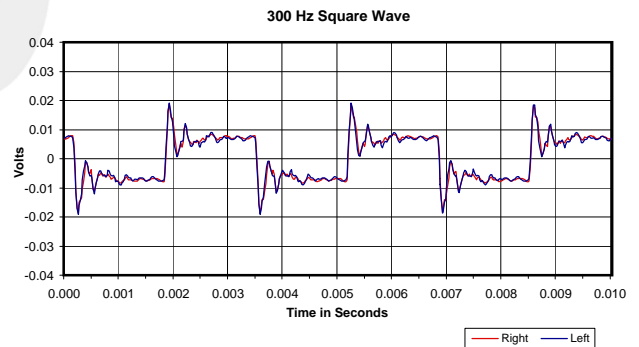
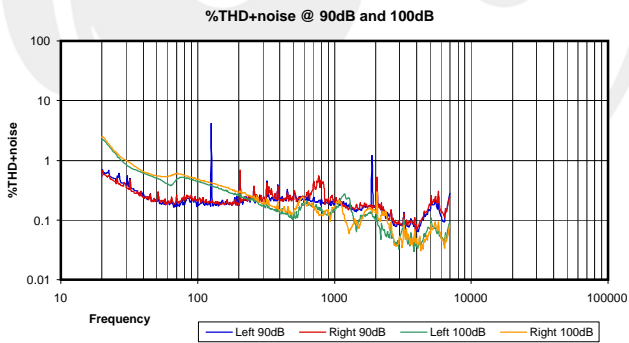
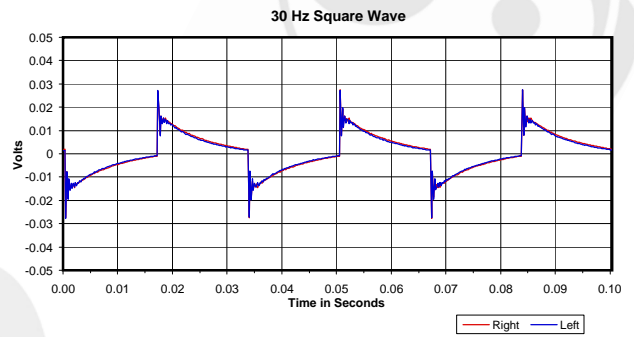
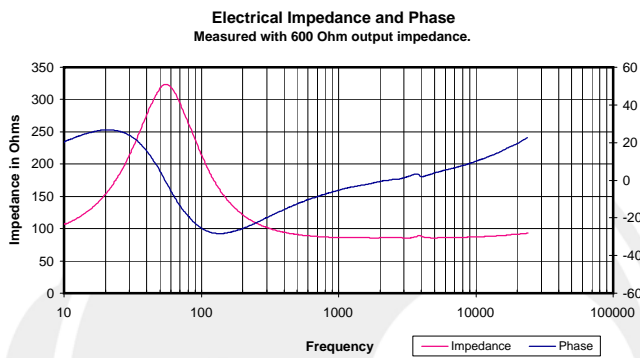
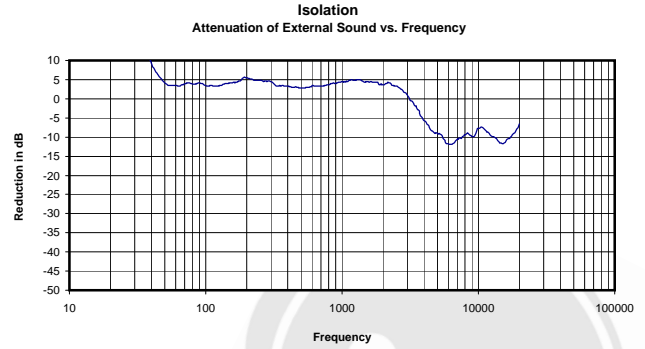
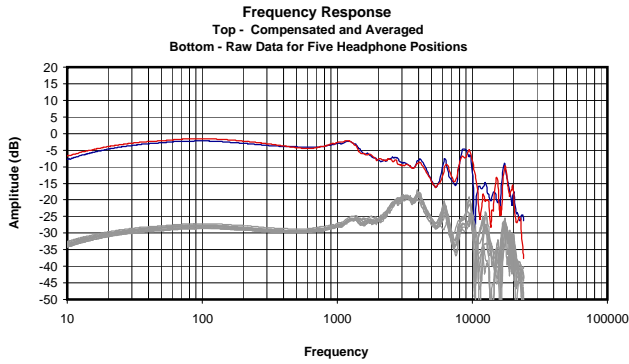
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

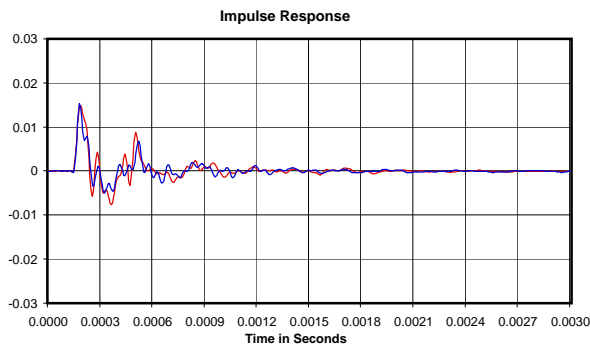
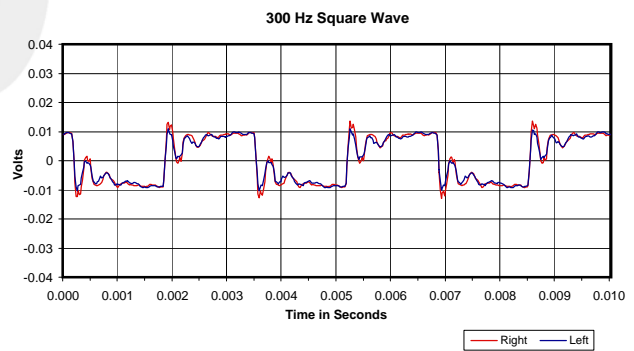
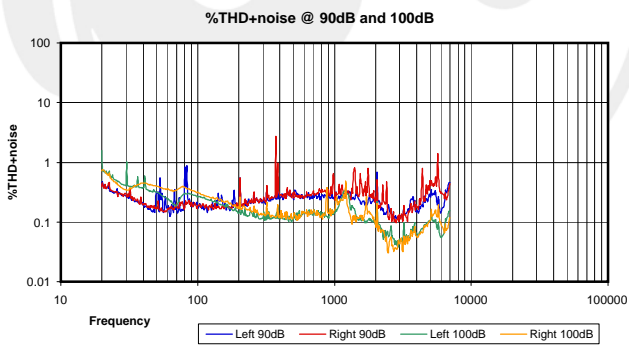
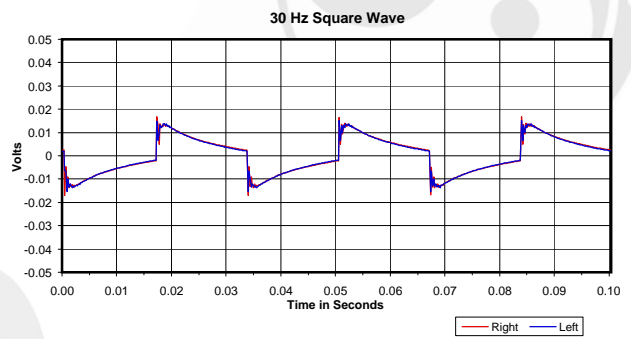
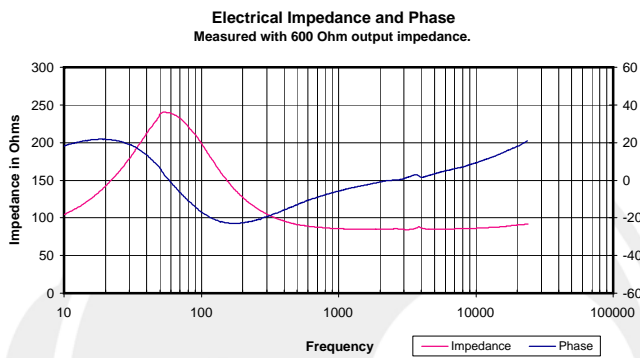
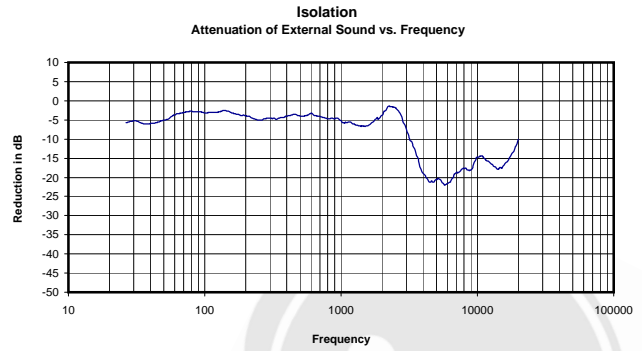
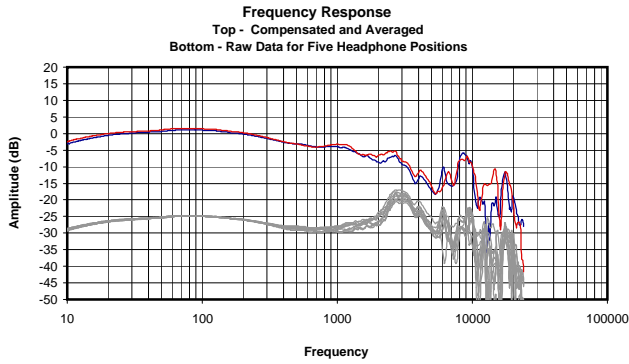
0.036 Vrms
 34 Ohms
 0.04 mW
 -19 dB





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

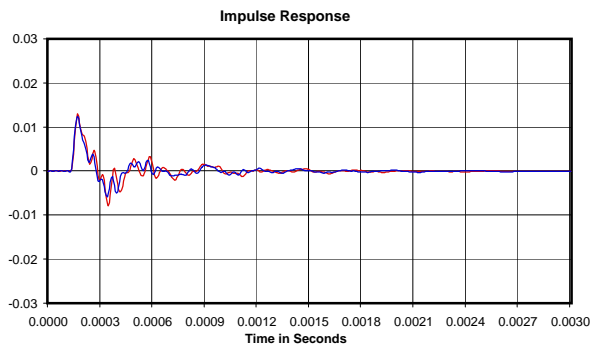
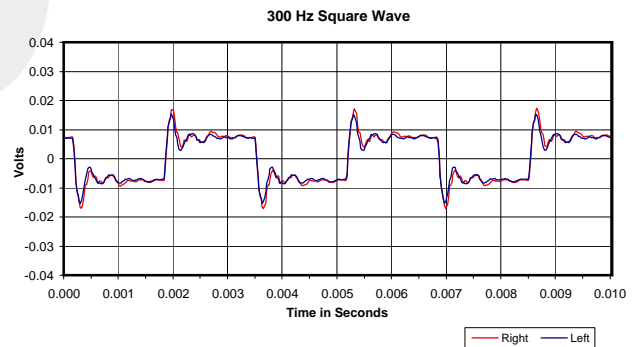
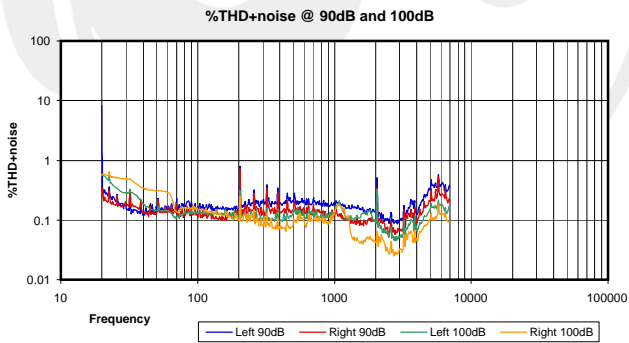
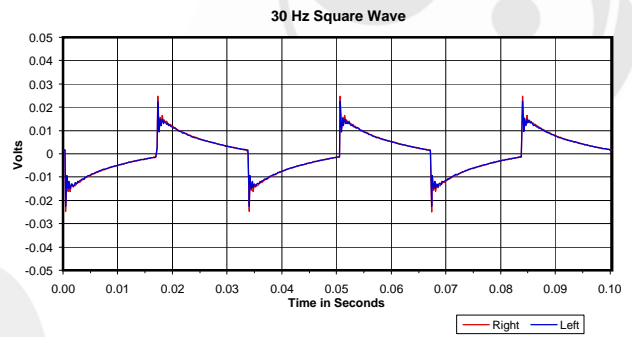
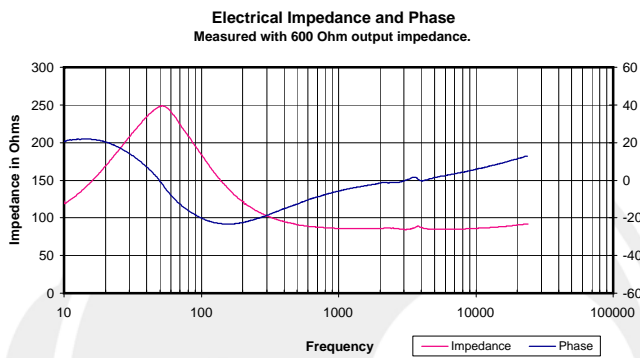
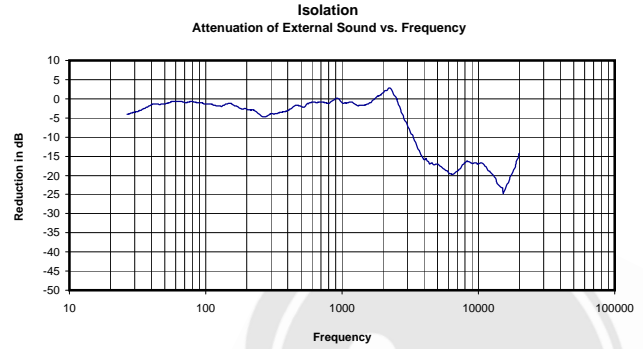
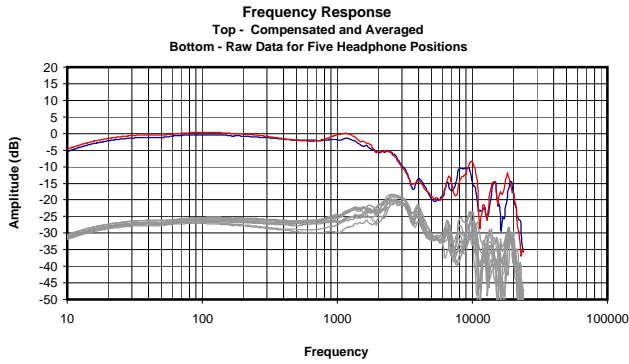
0.119 Vrms
86 Ohms
0.16 mW
1 dBr



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.144 Vrms
86 Ohms
0.24 mW
-8 dBr



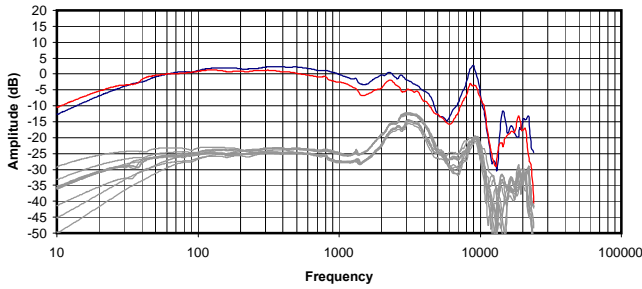


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

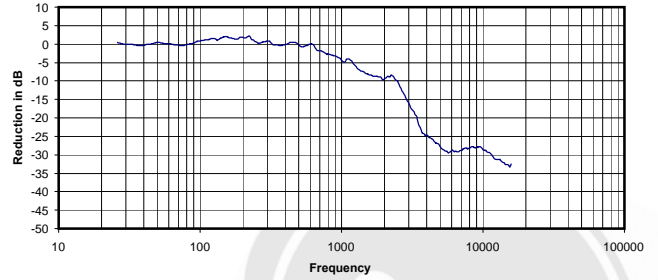
0.054 Vrms
86 Ohms
0.03 mW
-5 dBr



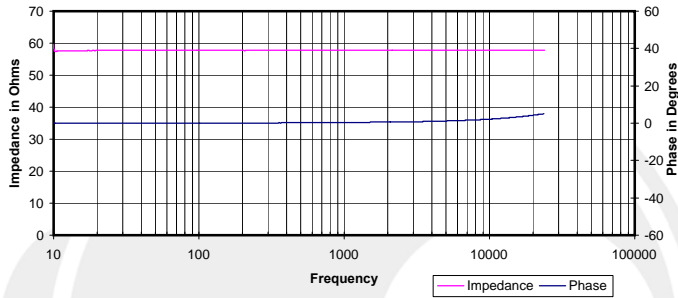
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



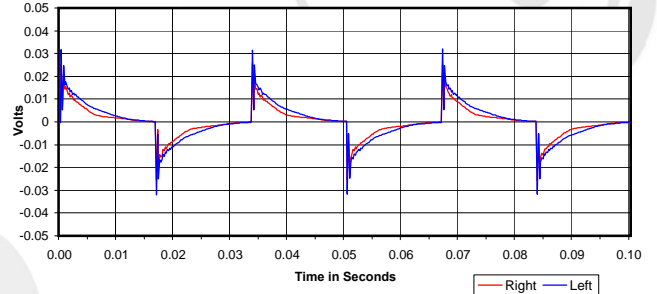
Isolation
 Attenuation of External Sound vs. Frequency



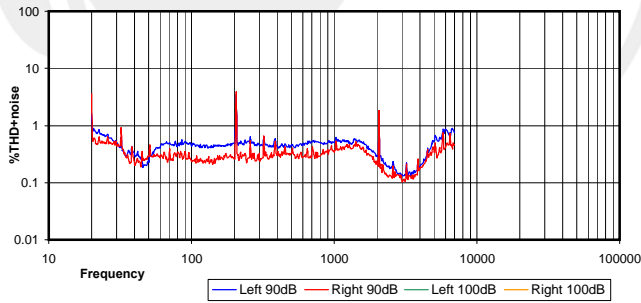
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



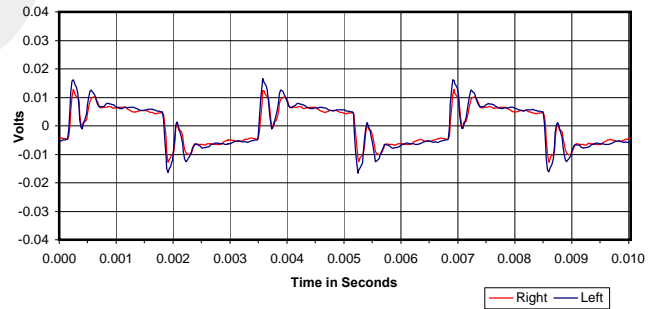
30 Hz Square Wave



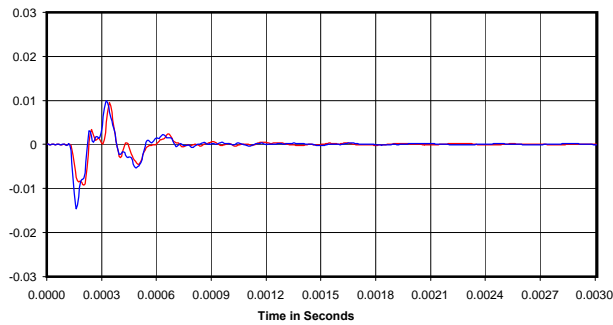
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

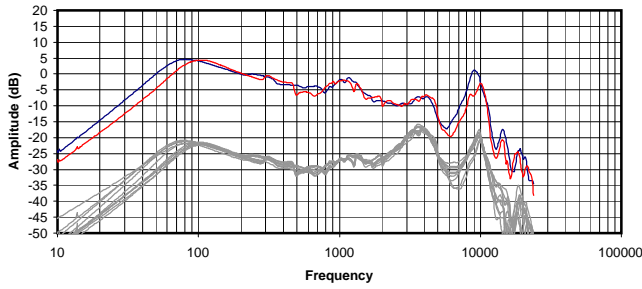


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

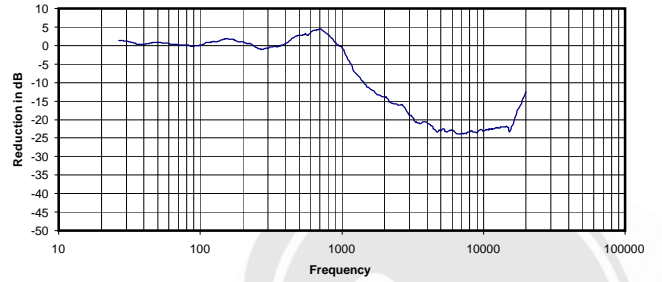
0.271 Vrms
 58 Ohms
 1.27 mW
 -7 dB



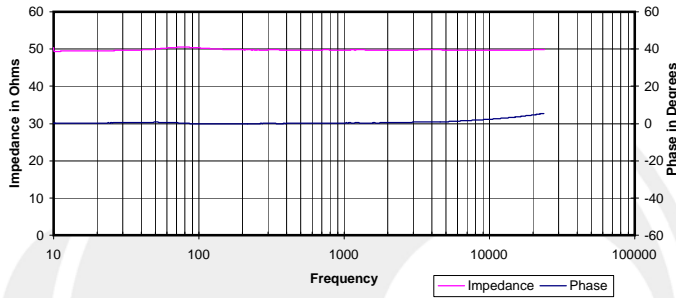
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



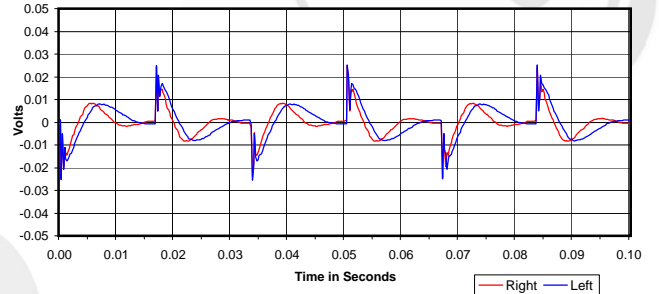
Isolation
 Attenuation of External Sound vs. Frequency



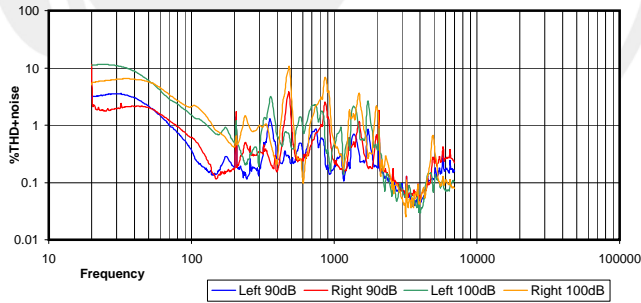
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



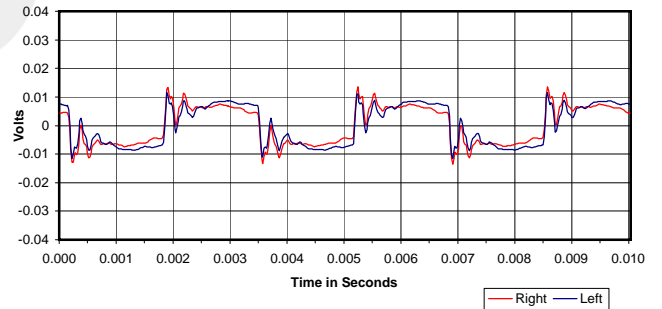
30 Hz Square Wave



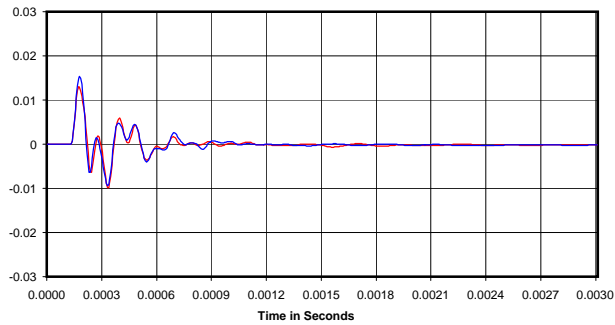
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

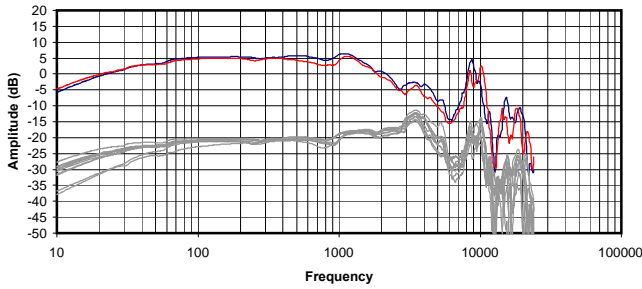


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

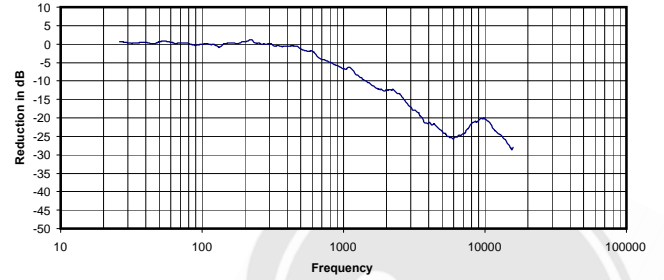
0.166 Vrms
 50 Ohms
 0.55 mW
 -8 dB



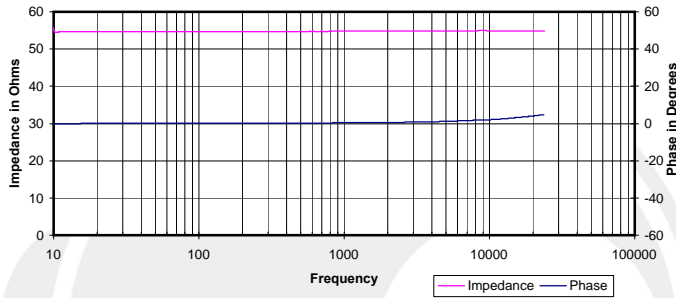
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



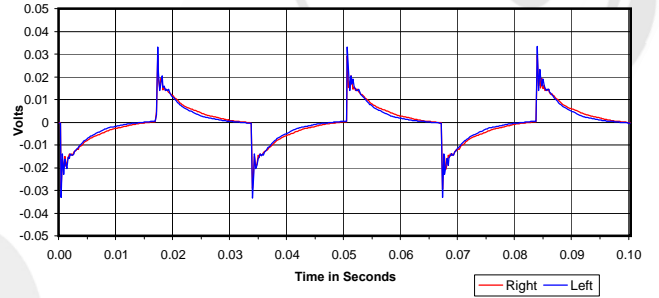
Isolation
 Attenuation of External Sound vs. Frequency



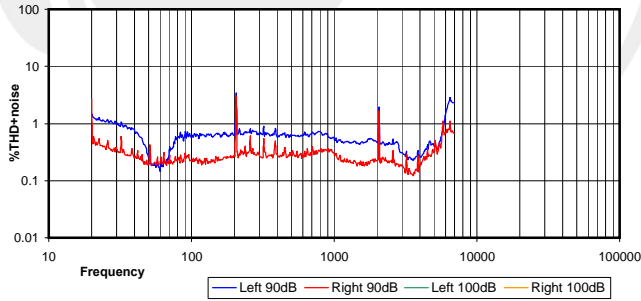
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



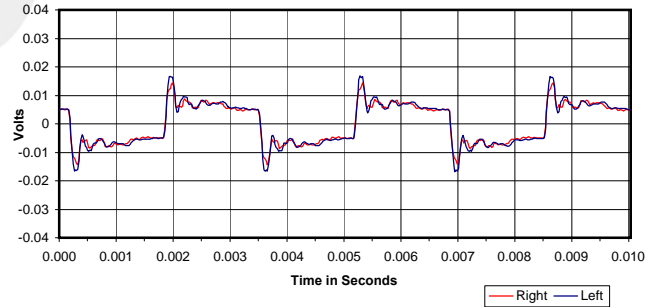
30 Hz Square Wave



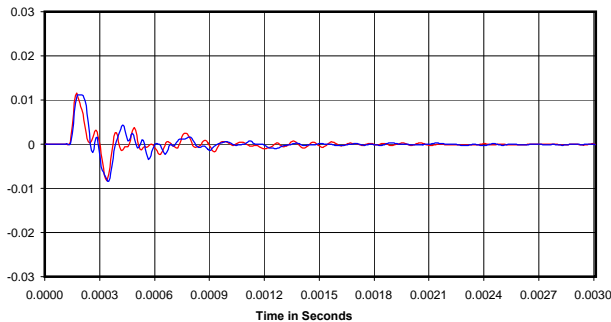
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

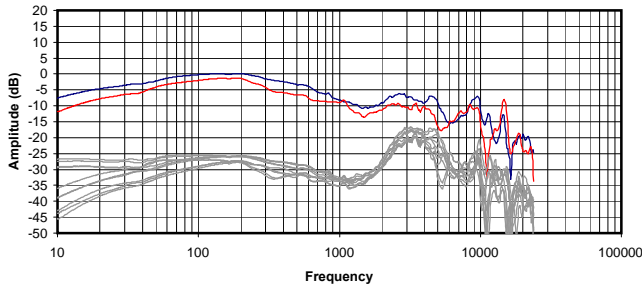


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

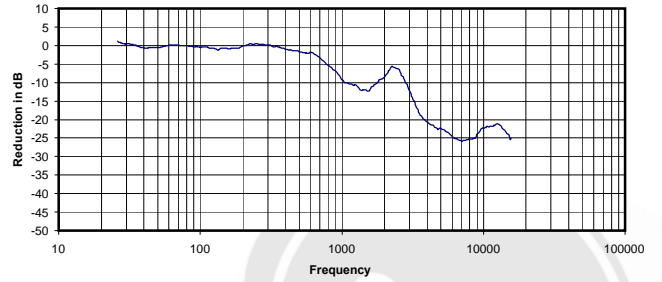
0.130 Vrms
 55 Ohms
 0.31 mW
 -8 dB



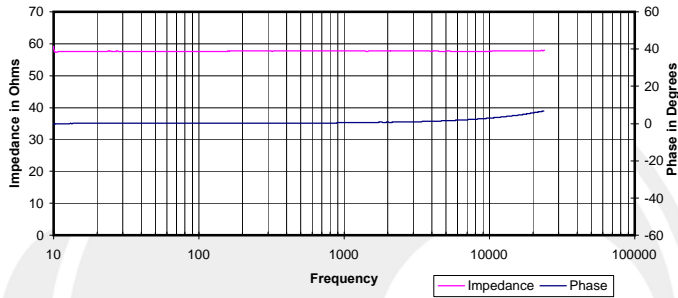
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



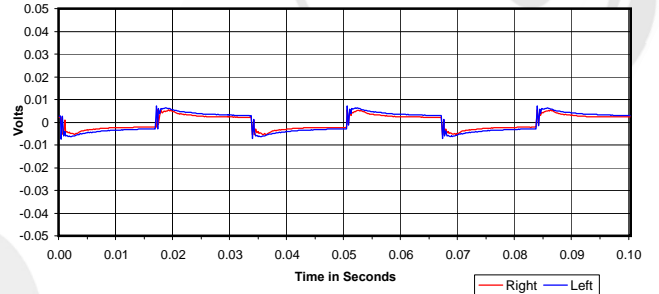
Isolation
Attenuation of External Sound vs. Frequency



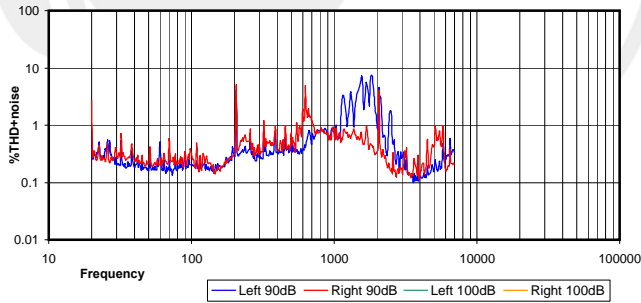
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



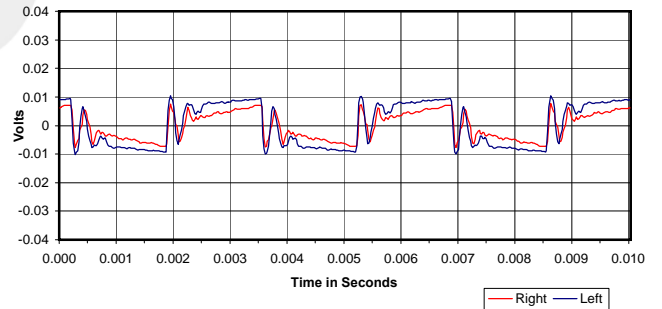
30 Hz Square Wave



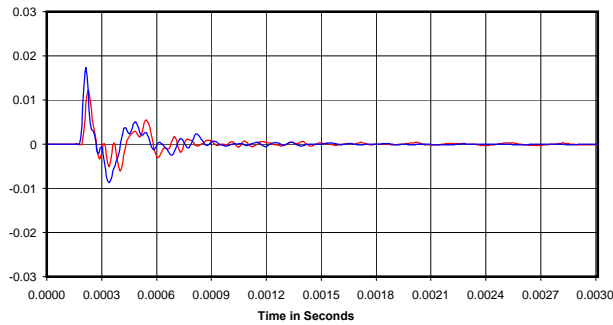
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

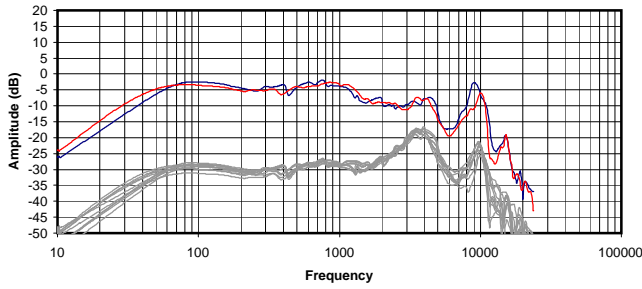


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

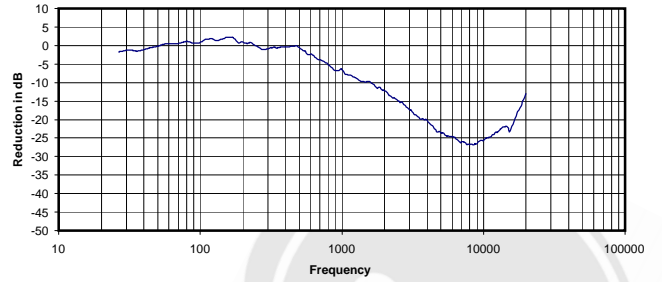
0.572 Vrms
58 Ohms
5.67 mW
-7 dB



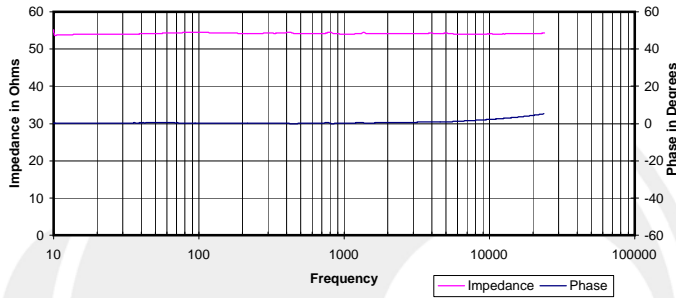
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



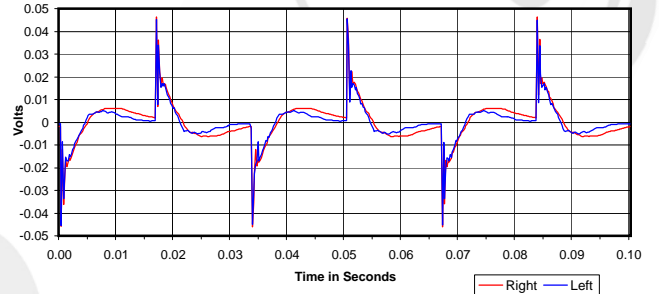
Isolation
Attenuation of External Sound vs. Frequency



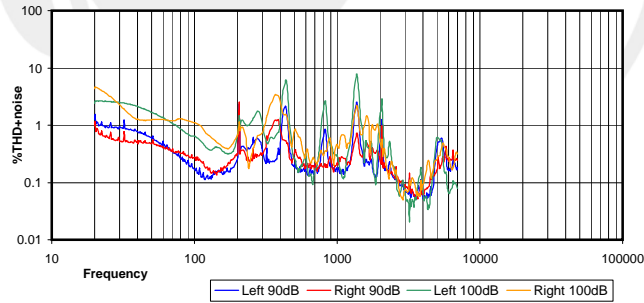
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



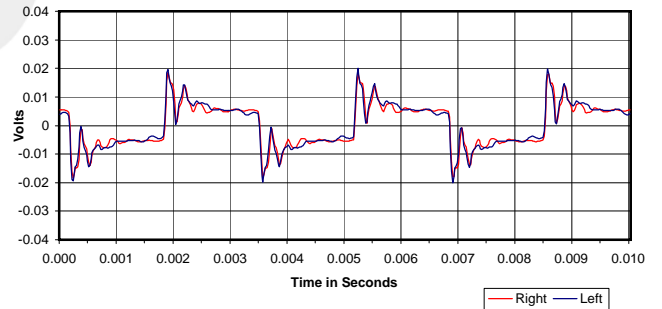
30 Hz Square Wave



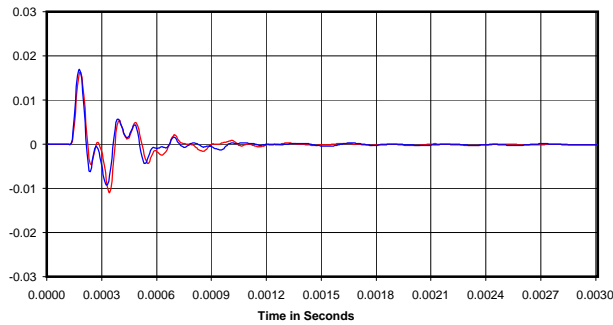
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

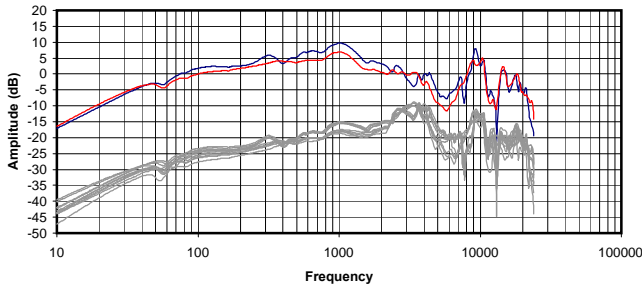


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

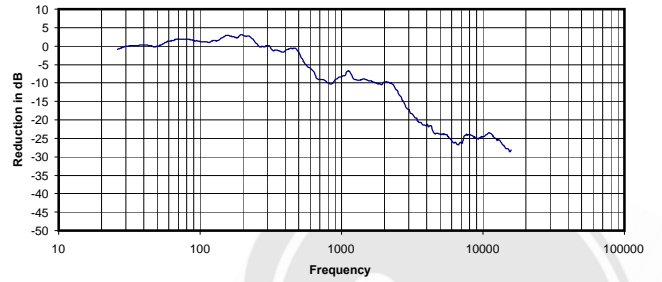
0.206 Vrms
54 Ohms
0.78 mW
-9 dB



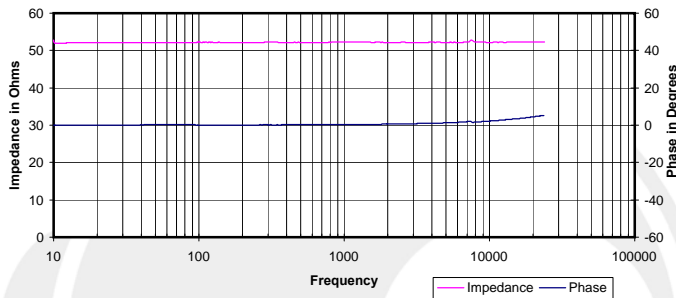
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



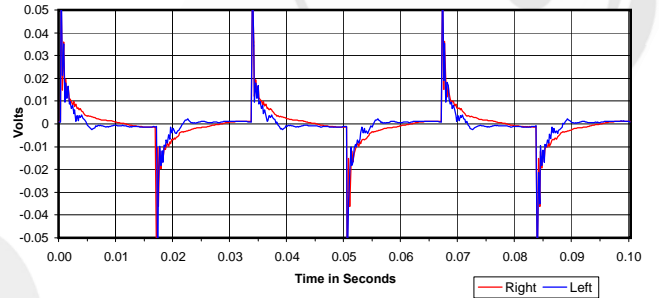
Isolation
 Attenuation of External Sound vs. Frequency



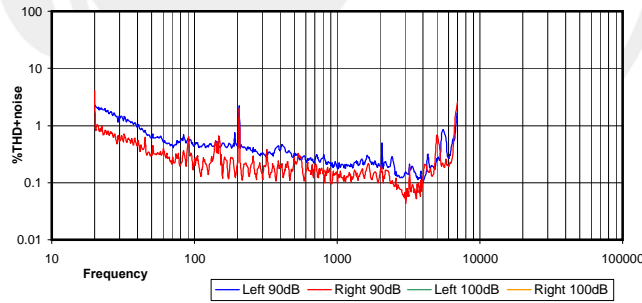
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



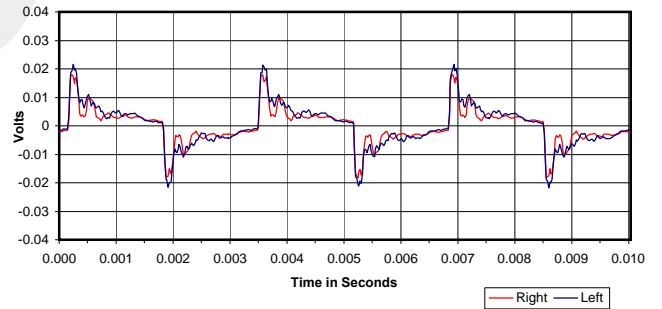
30 Hz Square Wave



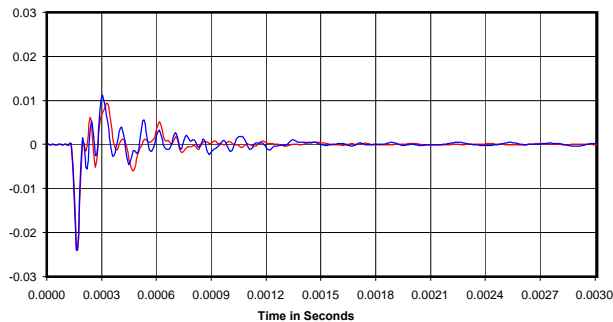
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

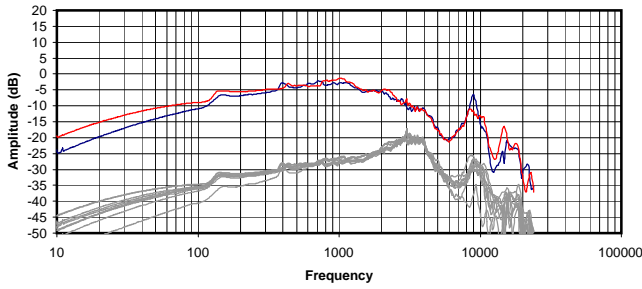


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

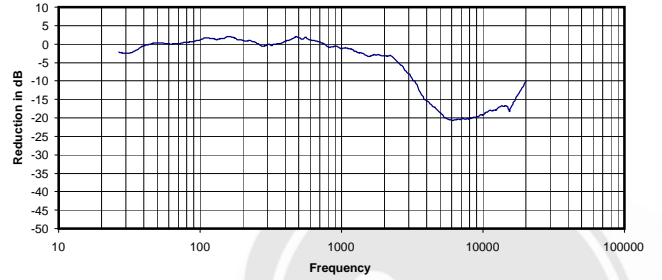
0.172 Vrms
 52 Ohms
 0.57 mW
 -8 dB



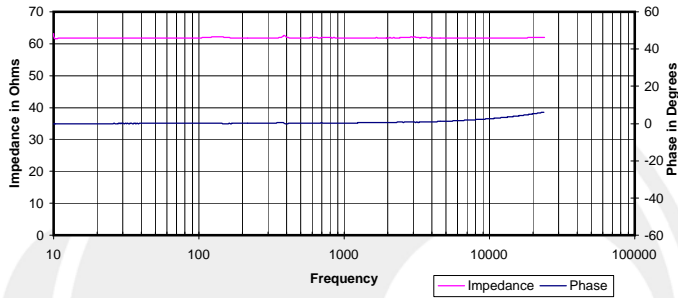
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



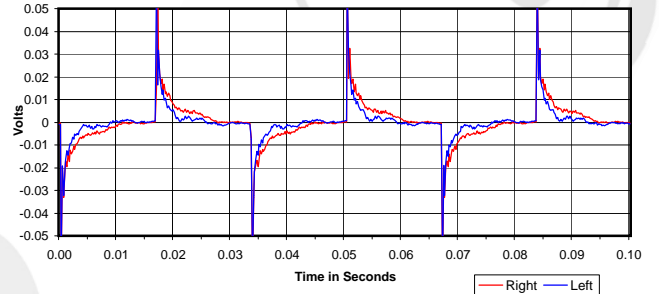
Isolation
 Attenuation of External Sound vs. Frequency



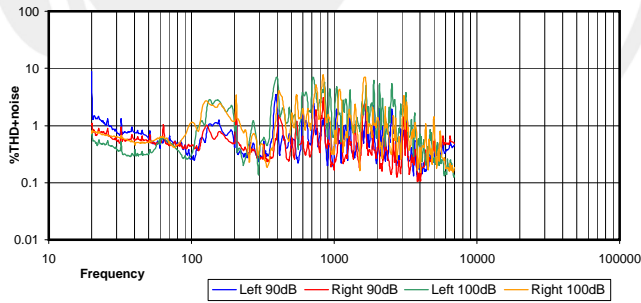
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



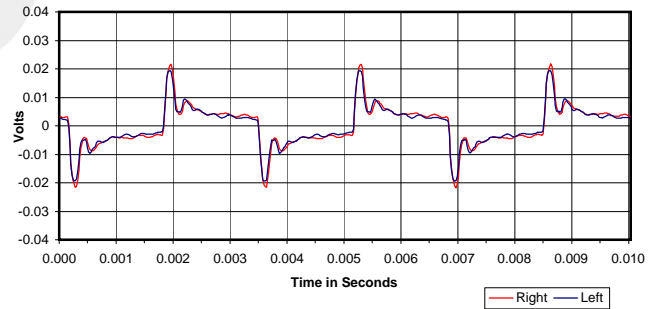
30 Hz Square Wave



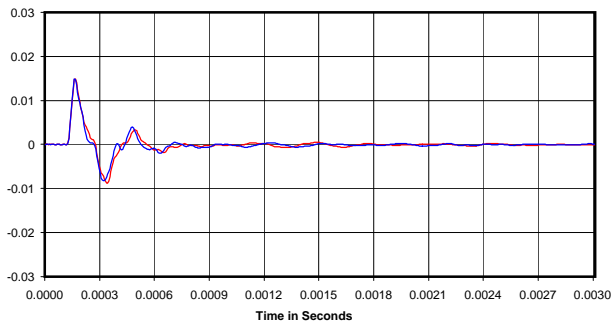
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

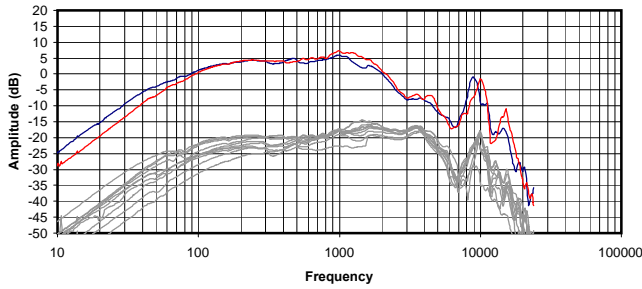


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

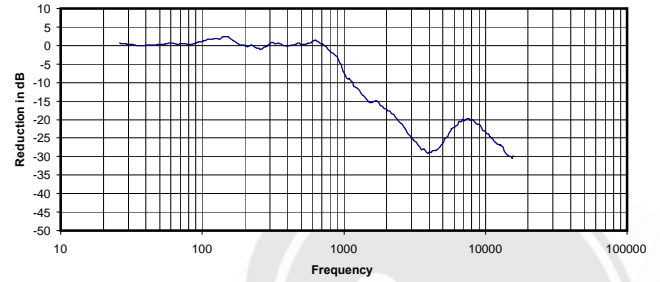
0.166 Vrms
 62 Ohms
 0.45 mW
 -5 dB



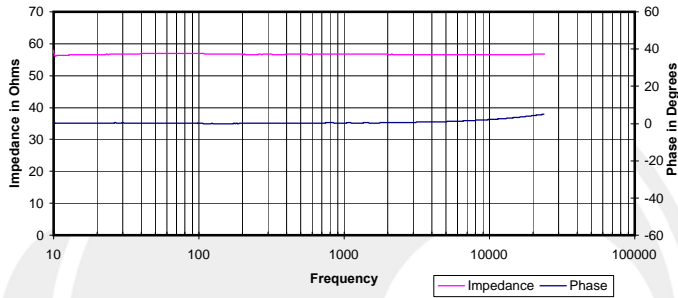
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



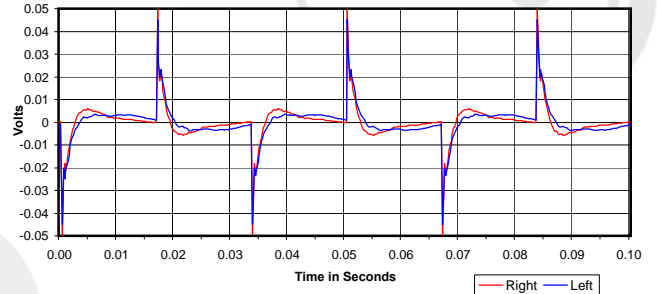
Isolation
 Attenuation of External Sound vs. Frequency



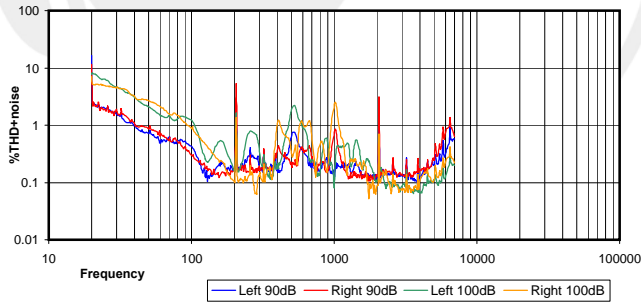
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



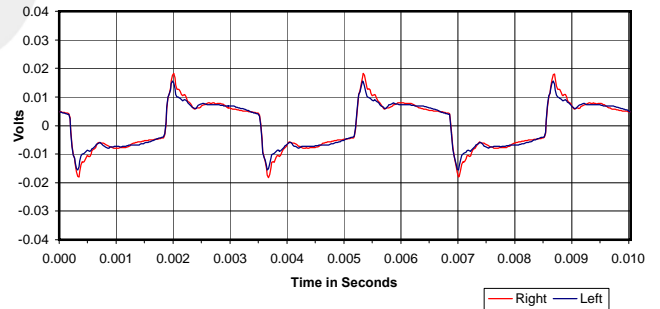
30 Hz Square Wave



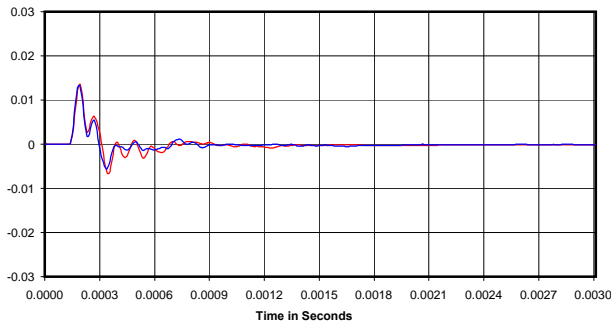
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



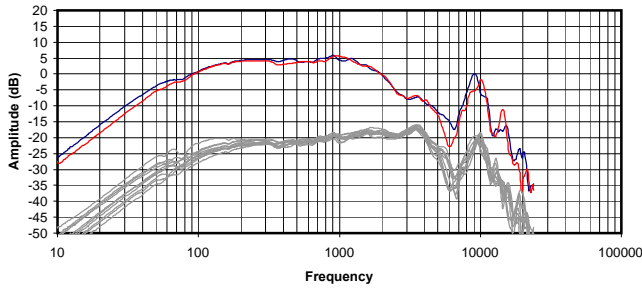
Impulse Response



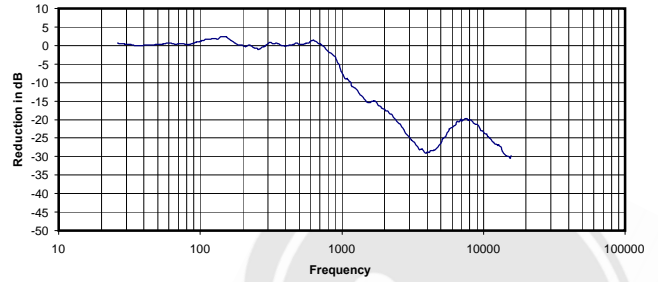
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.088 Vrms
 57 Ohms
 0.14 mW
 -9 dBr

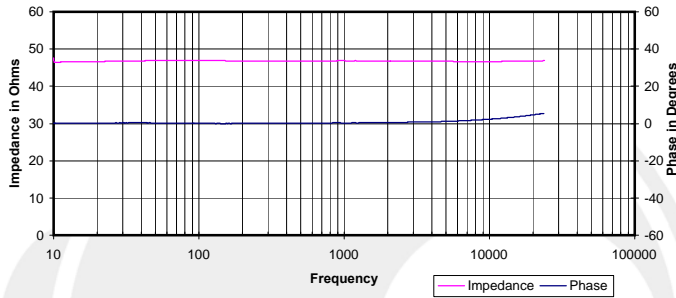
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



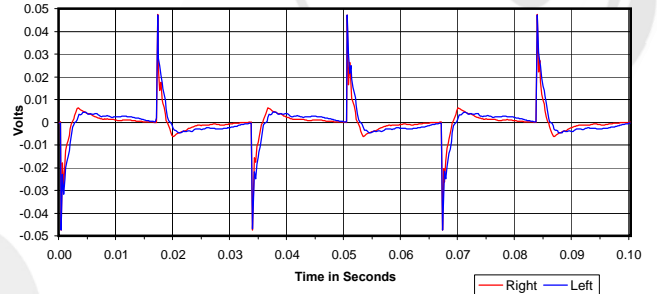
Isolation
Attenuation of External Sound vs. Frequency



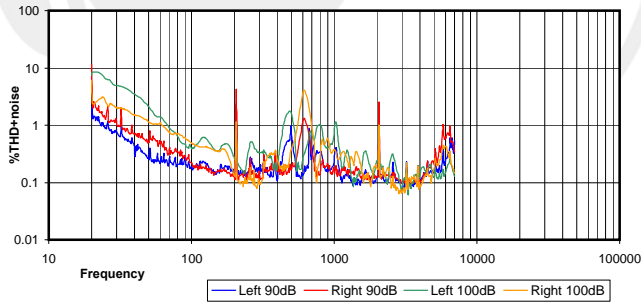
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



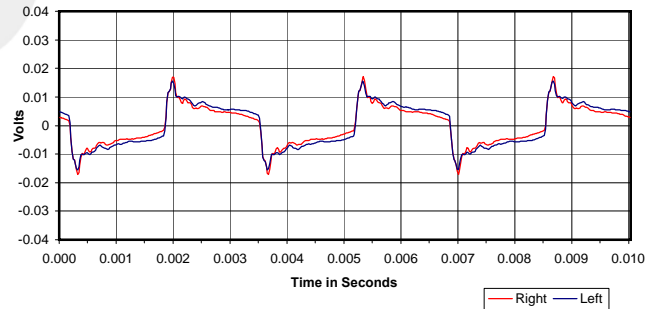
30 Hz Square Wave



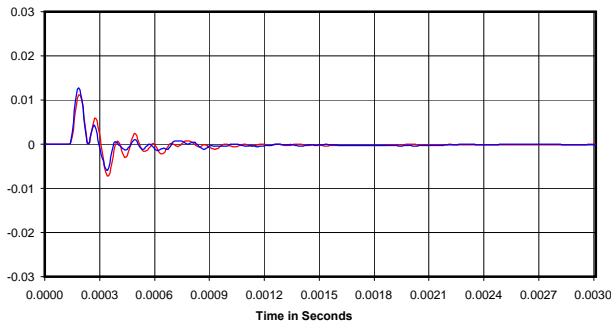
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



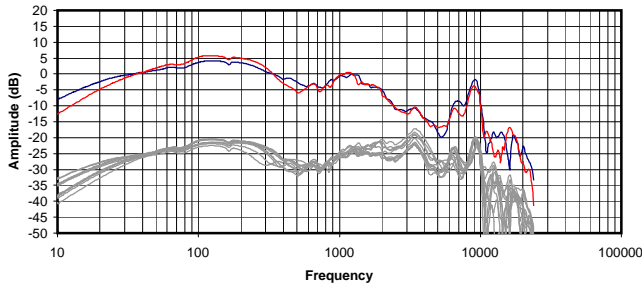
Impulse Response



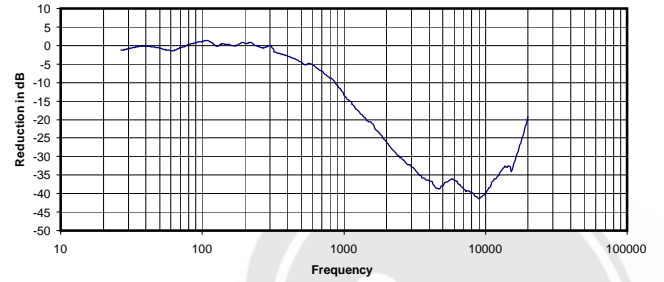
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.116 Vrms
47 Ohms
0.29 mW
-9 dB

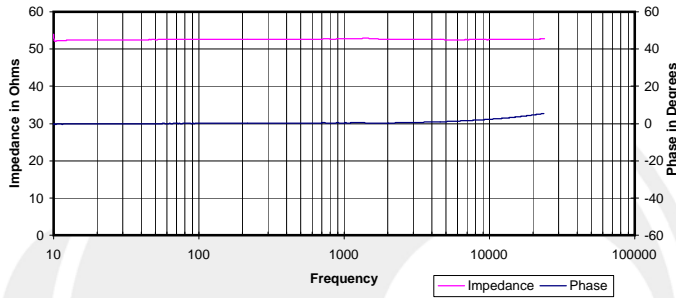
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



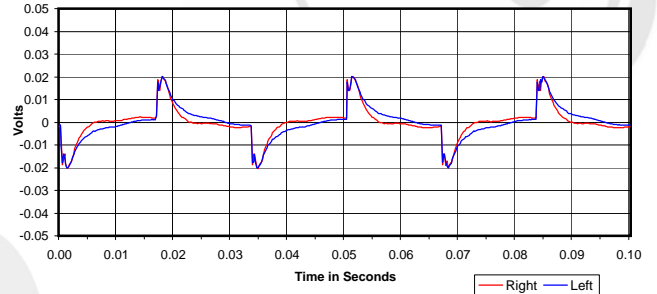
Isolation
 Attenuation of External Sound vs. Frequency



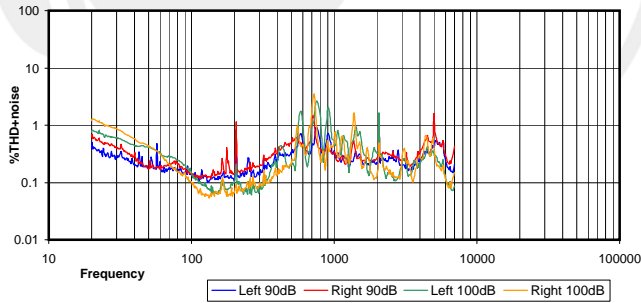
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



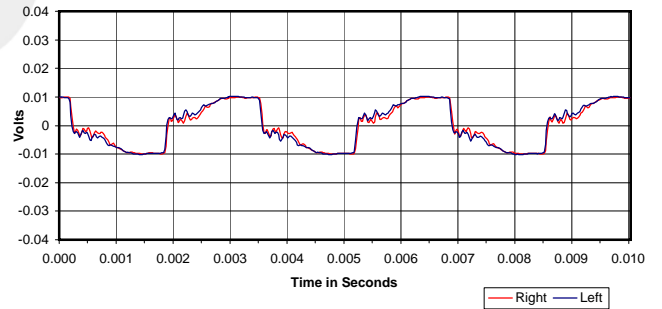
30 Hz Square Wave



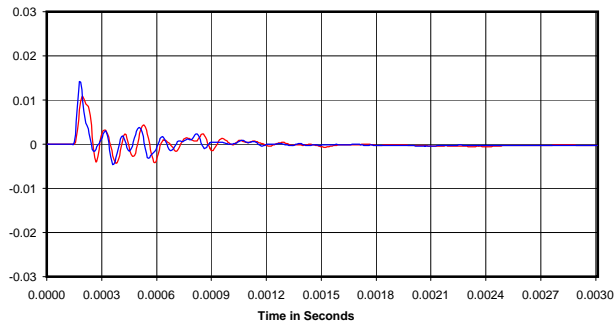
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



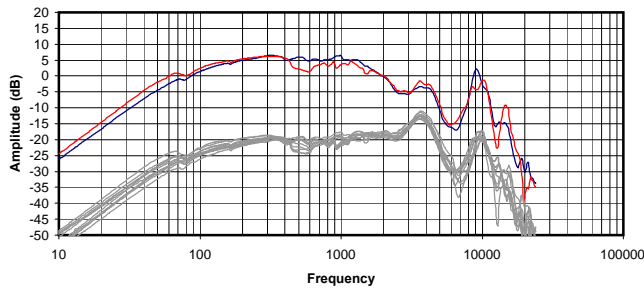
Impulse Response



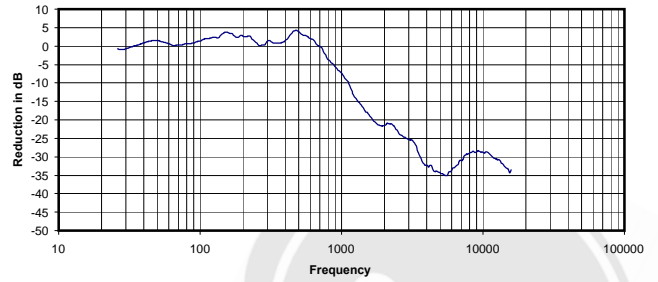
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.172 Vrms
 53 Ohms
 0.56 mW
 -17 dB

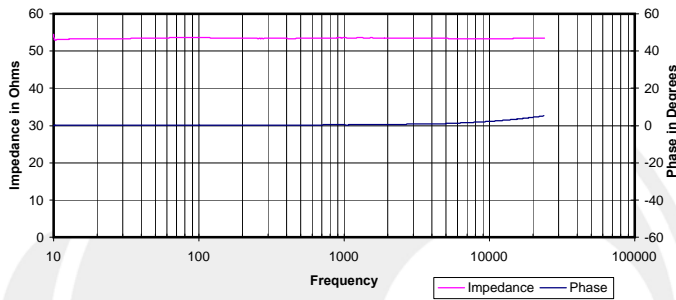
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



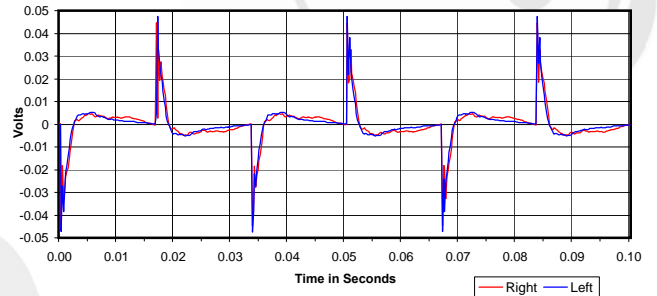
Isolation
Attenuation of External Sound vs. Frequency



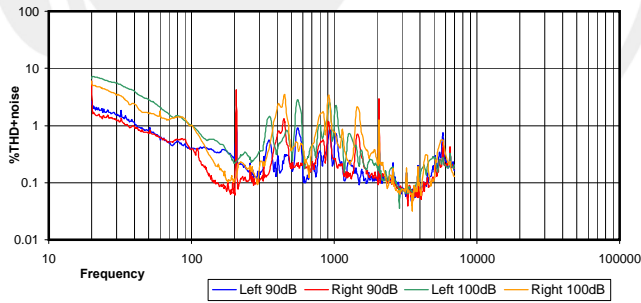
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



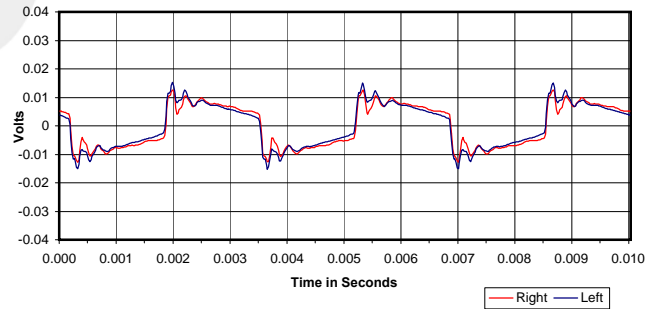
30 Hz Square Wave



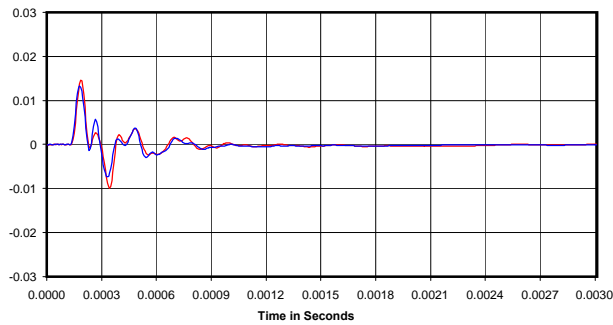
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

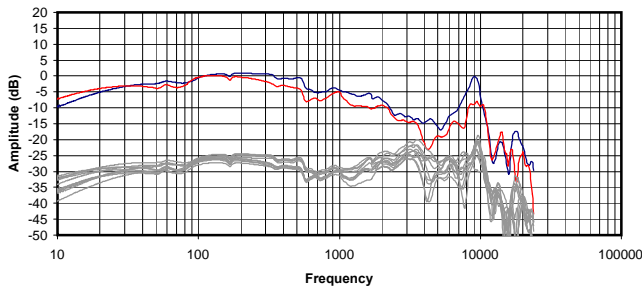


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

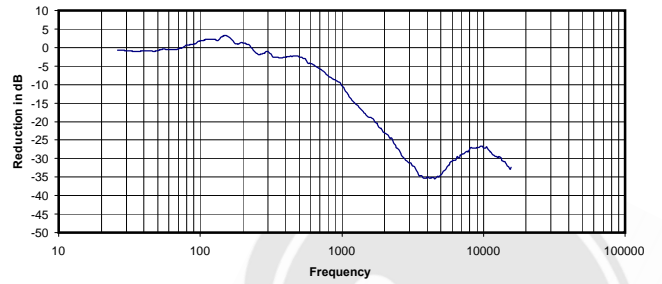
0.098 Vrms
54 Ohms
0.18 mW
-10 dB



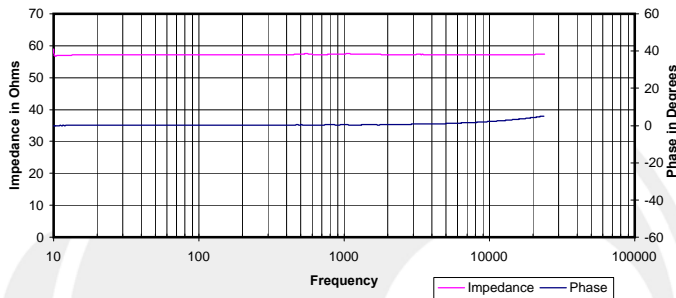
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



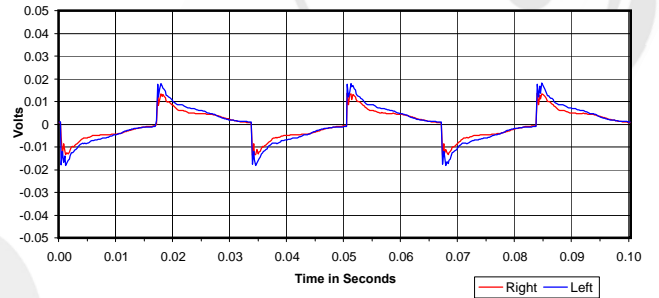
Isolation
Attenuation of External Sound vs. Frequency



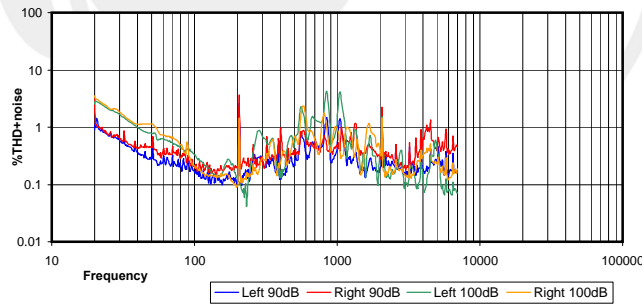
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



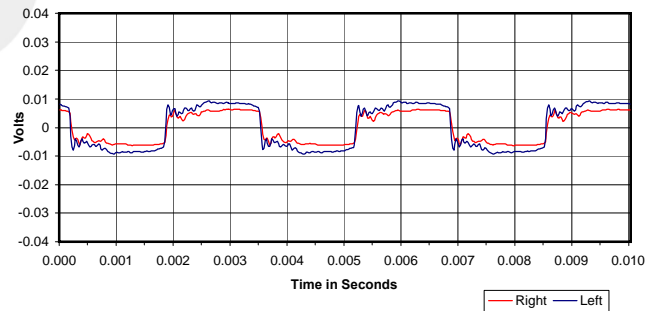
30 Hz Square Wave



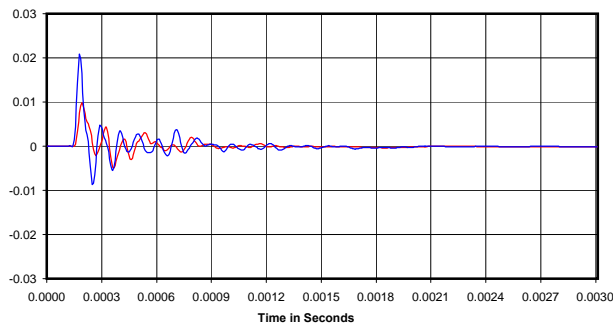
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

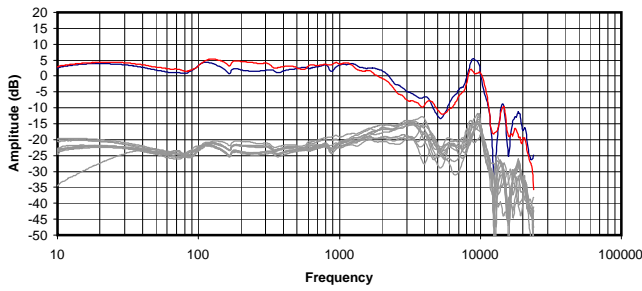


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

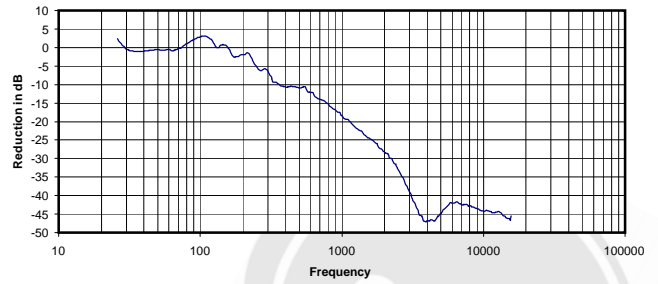
0.260 Vrms
57 Ohms
1.17 mW
-12 dB



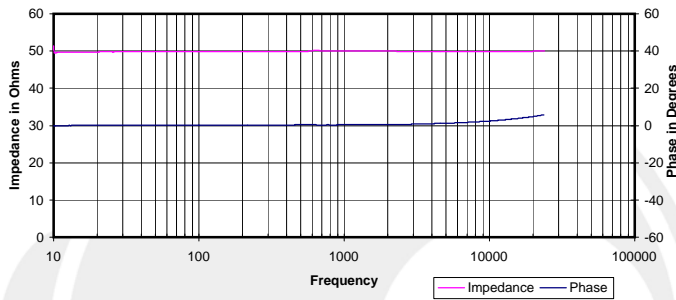
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



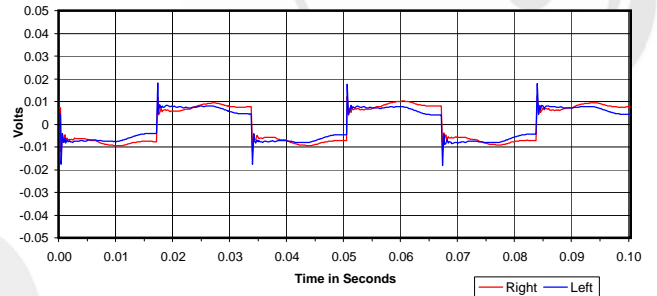
Isolation
 Attenuation of External Sound vs. Frequency



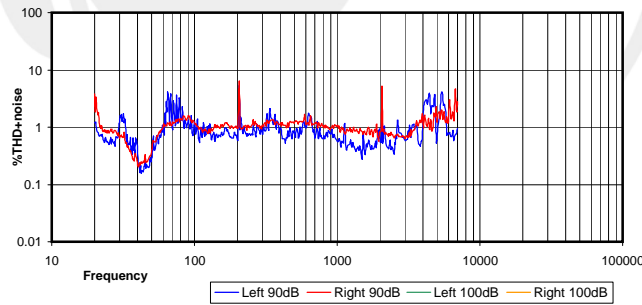
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



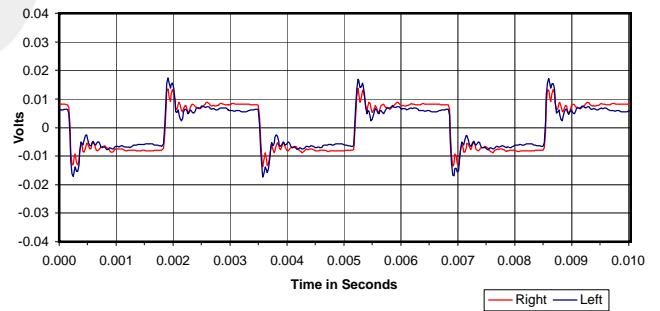
30 Hz Square Wave



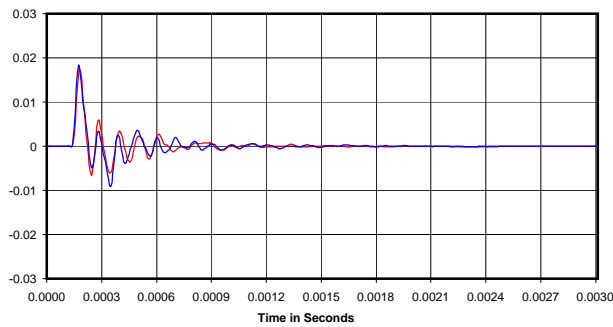
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

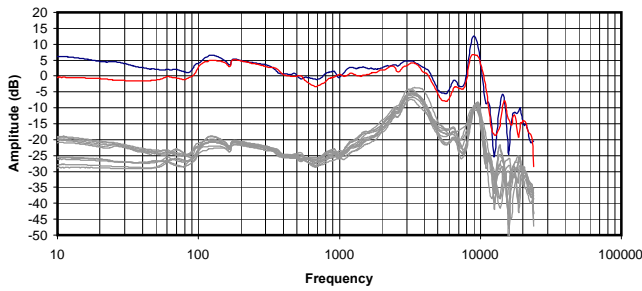


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

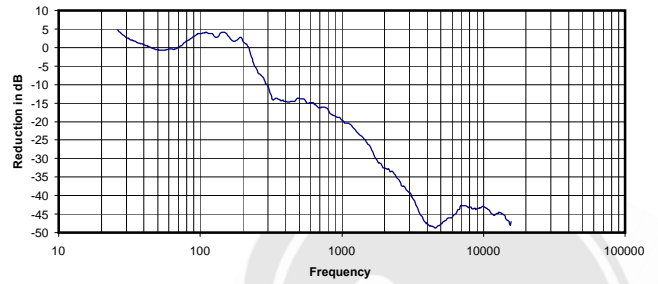
0.164 Vrms
 50 Ohms
 0.54 mW
 -18 dB



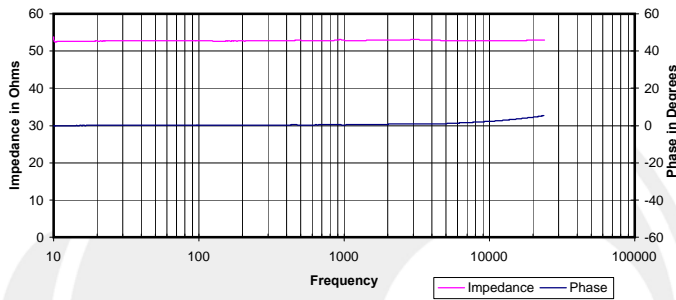
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



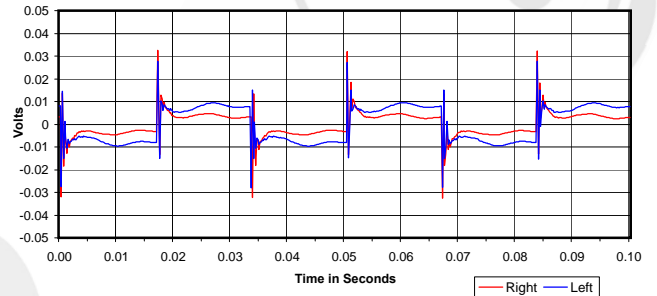
Isolation
Attenuation of External Sound vs. Frequency



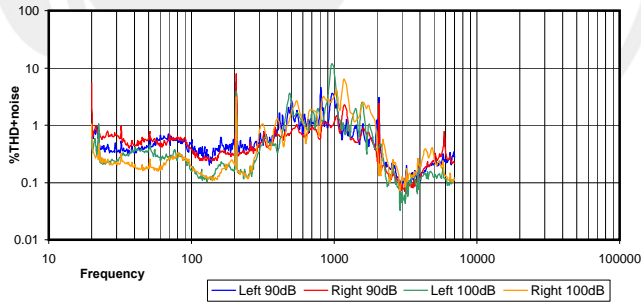
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



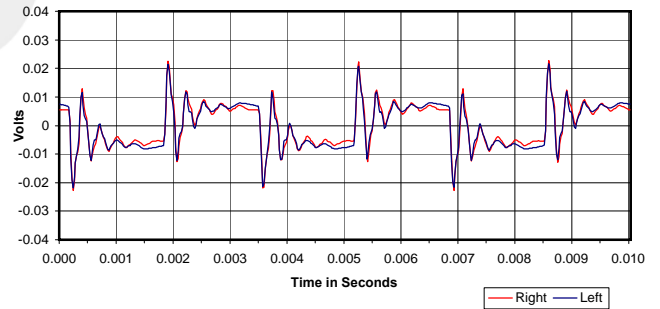
30 Hz Square Wave



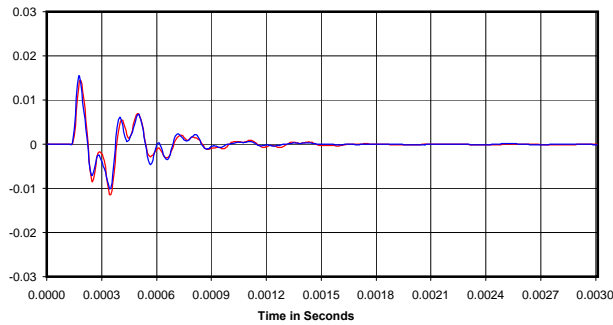
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

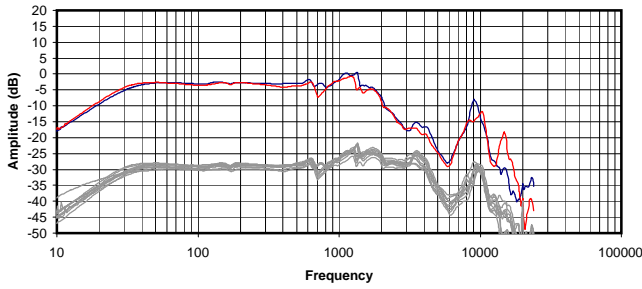


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

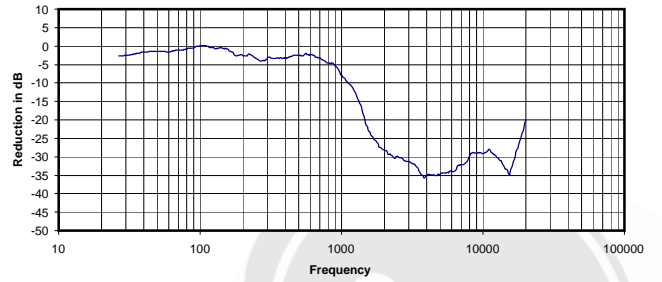
0.458 Vrms
53 Ohms
3.97 mW
-20 dB



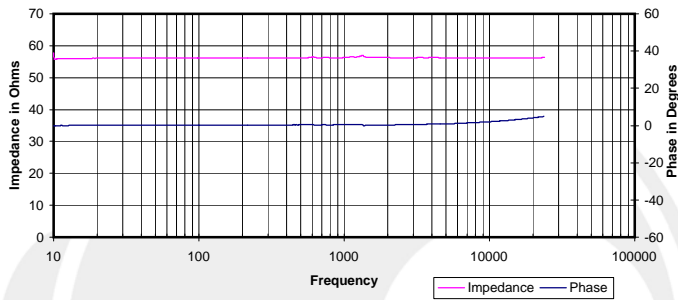
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



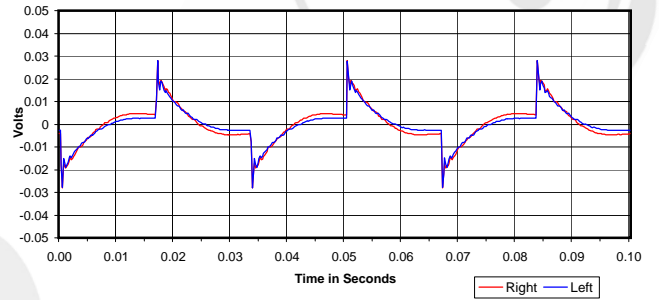
Isolation
 Attenuation of External Sound vs. Frequency



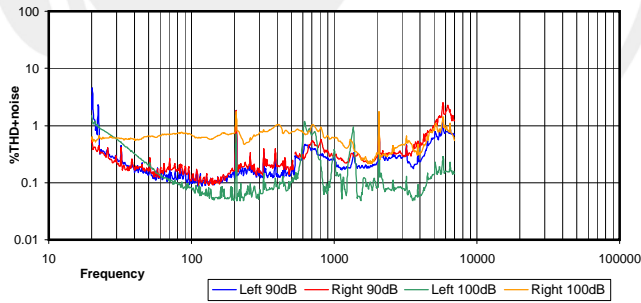
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



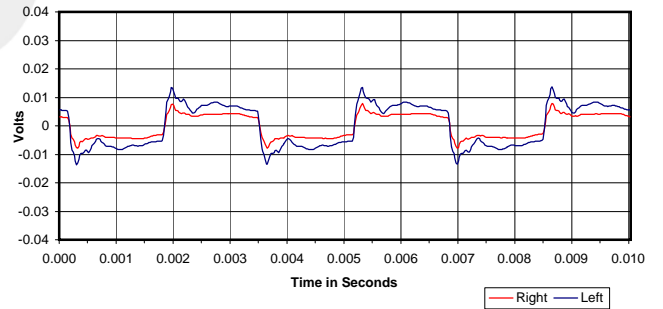
30 Hz Square Wave



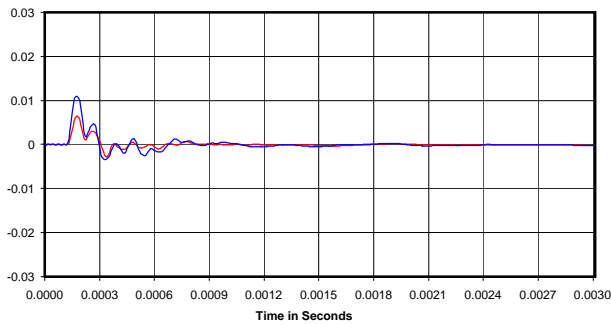
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

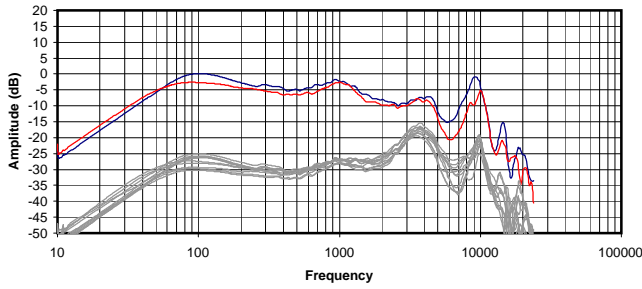


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

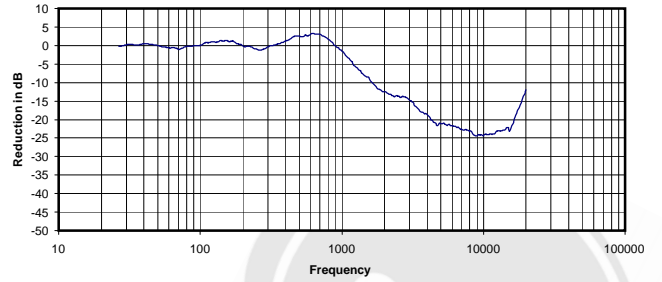
0.062 Vrms
 56 Ohms
 0.07 mW
 -15 dB



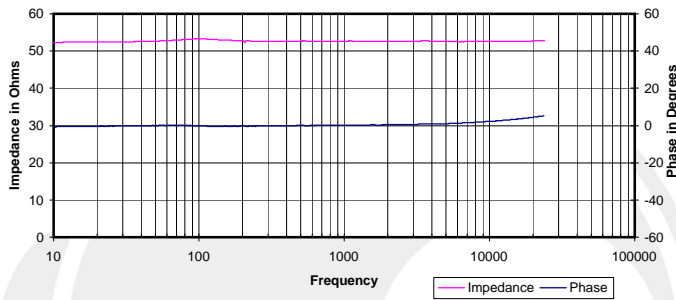
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



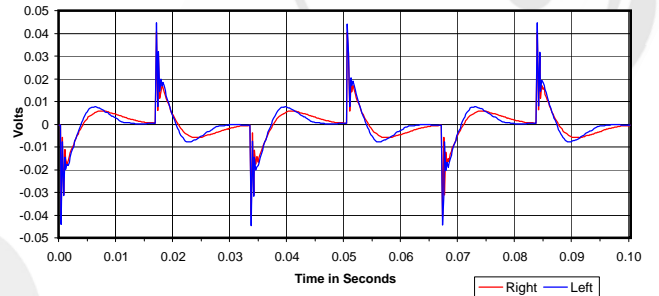
Isolation
 Attenuation of External Sound vs. Frequency



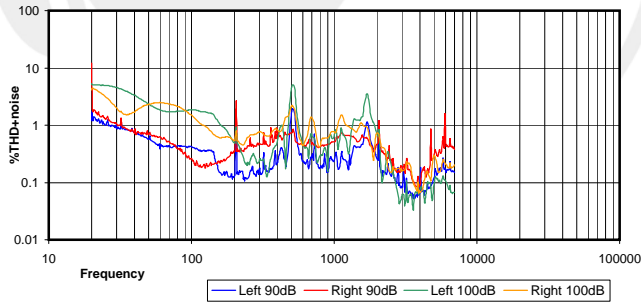
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



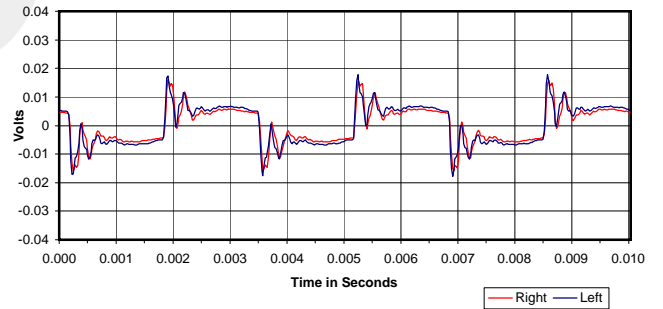
30 Hz Square Wave



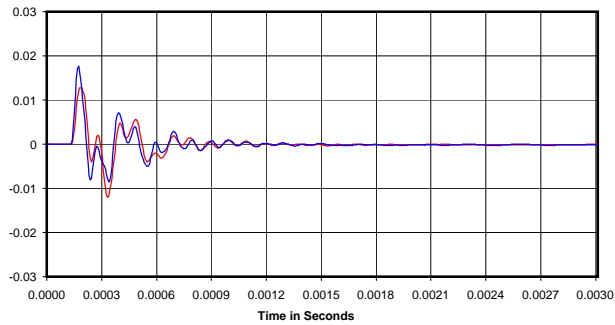
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

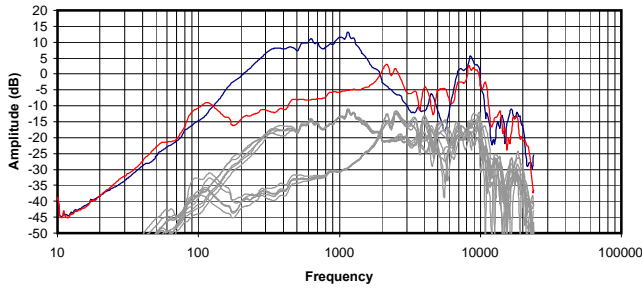


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

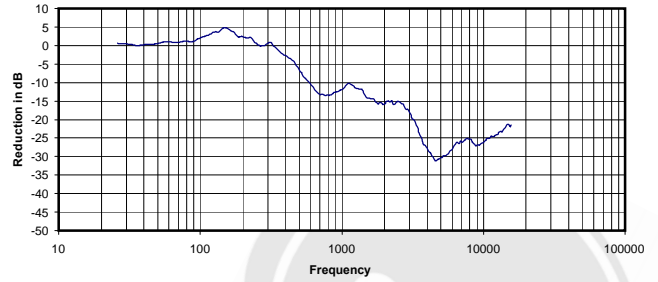
0.206 Vrms
 53 Ohms
 0.80 mW
 -7 dB



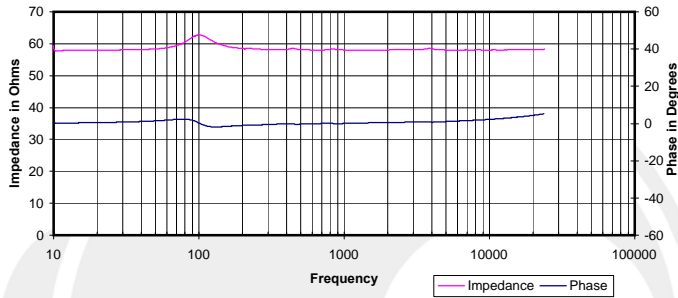
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



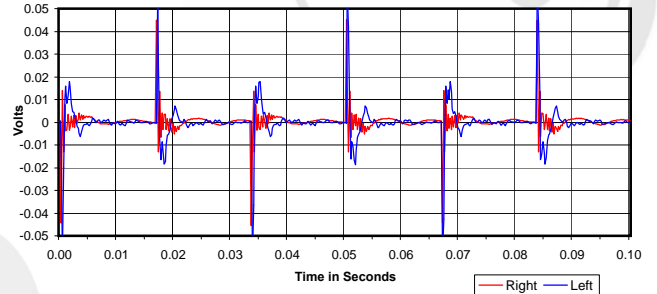
Isolation
 Attenuation of External Sound vs. Frequency



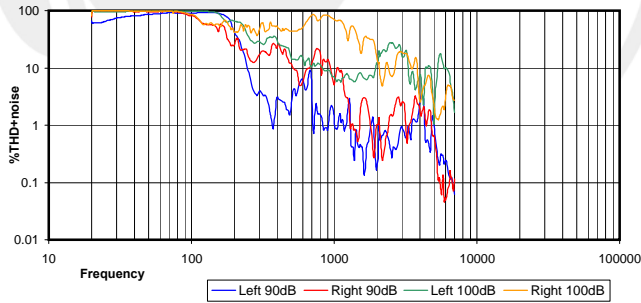
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



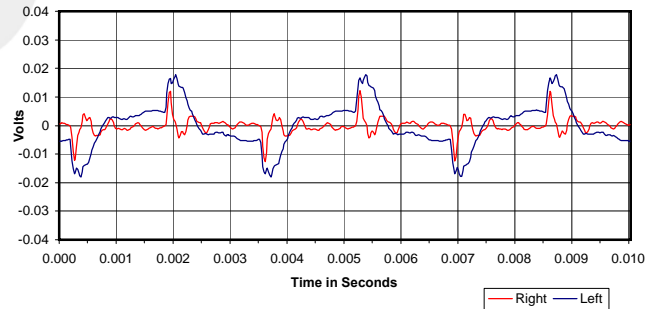
30 Hz Square Wave



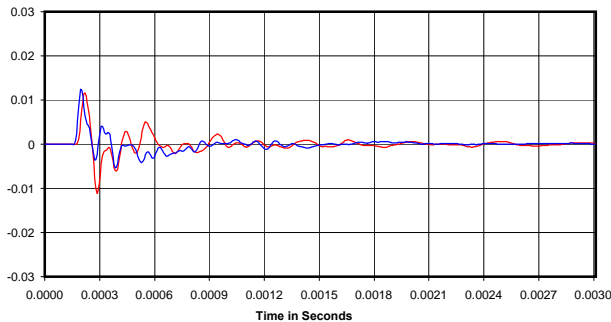
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

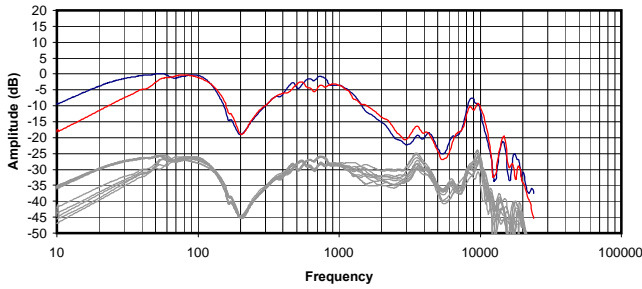


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

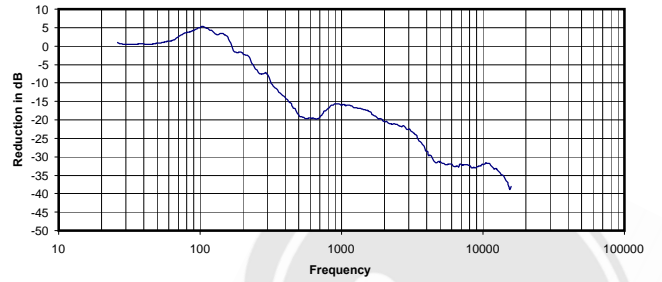
0.001 Vrms
 58 Ohms
 0.00 mW
 -10 dB



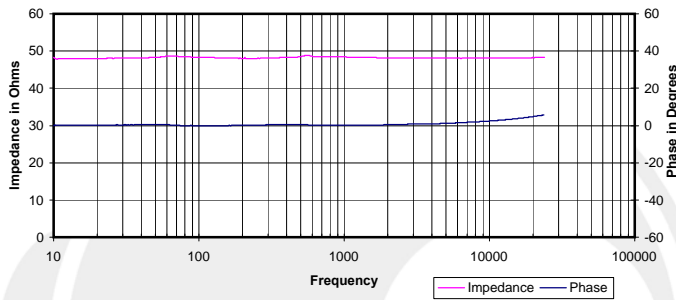
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



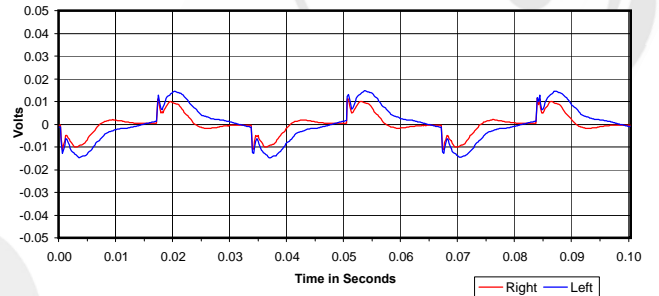
Isolation
Attenuation of External Sound vs. Frequency



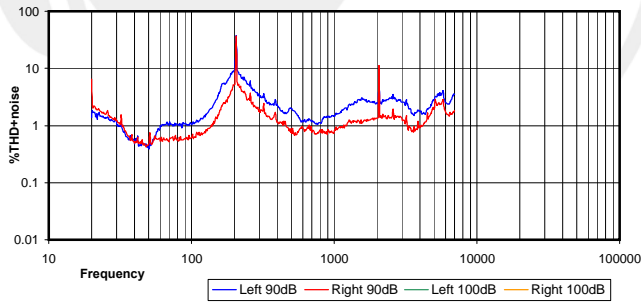
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



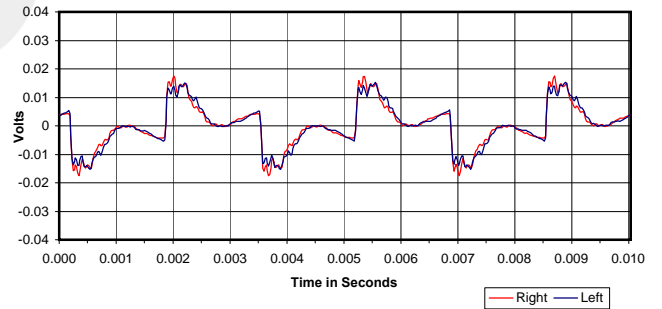
30 Hz Square Wave



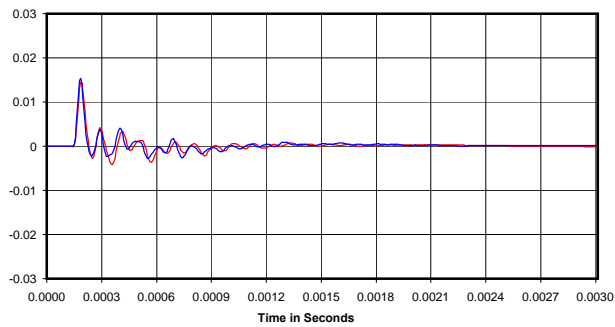
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

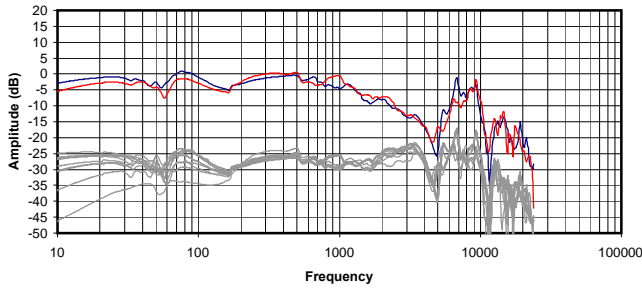


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

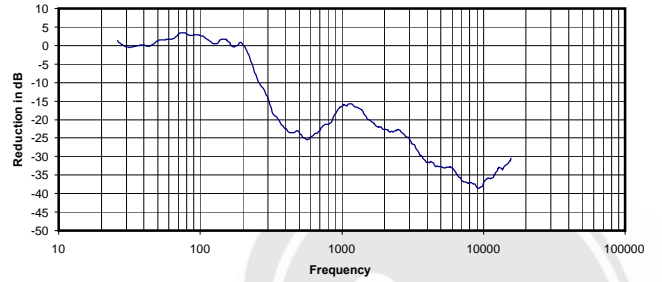
0.105 Vrms
48 Ohms
0.23 mW
-15 dB



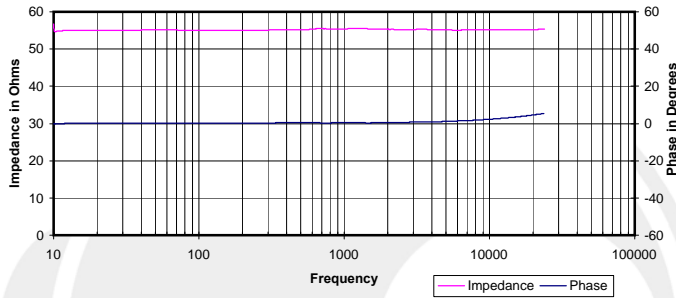
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



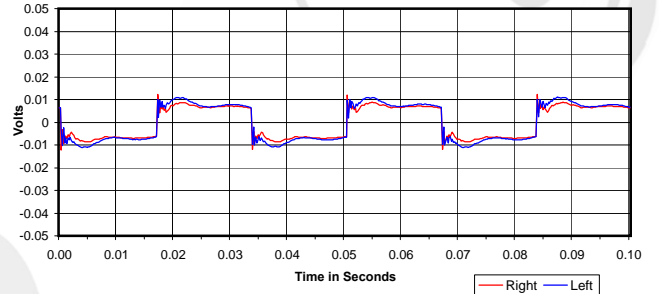
Isolation
Attenuation of External Sound vs. Frequency



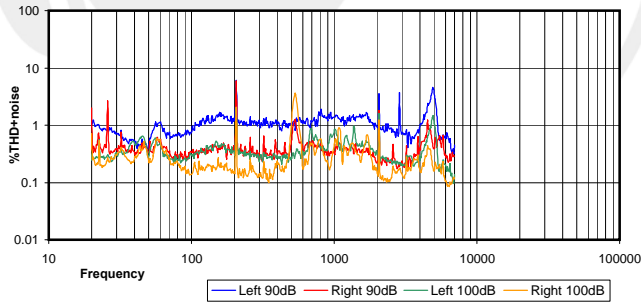
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



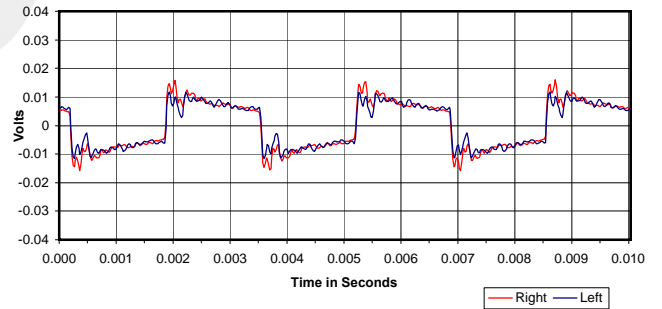
30 Hz Square Wave



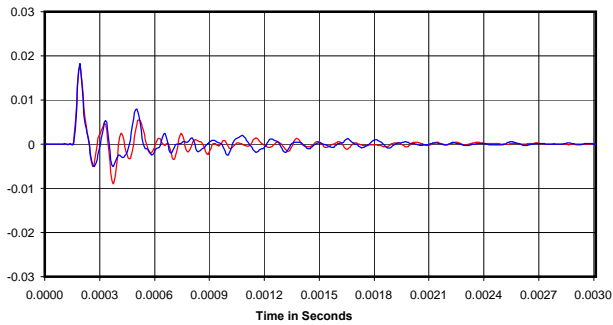
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

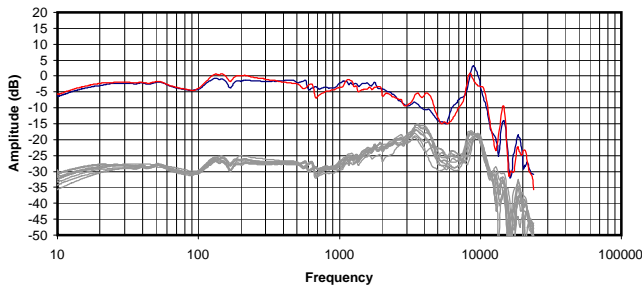


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

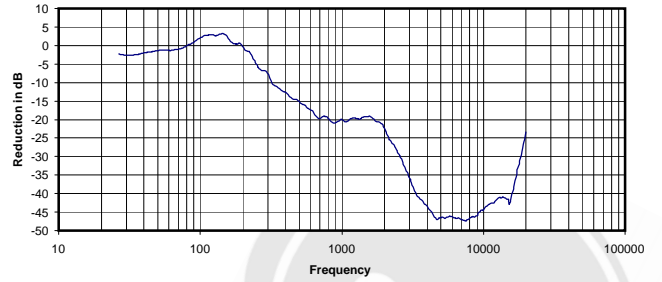
0.261 Vrms
55 Ohms
1.23 mW
-17 dB



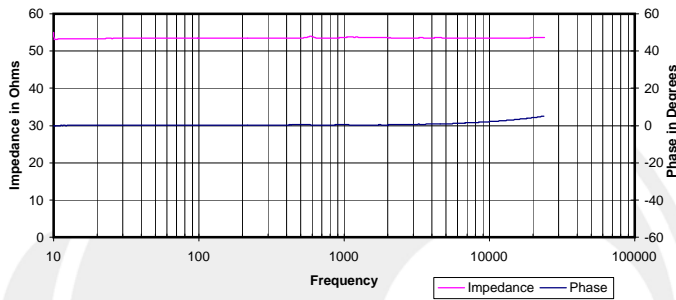
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



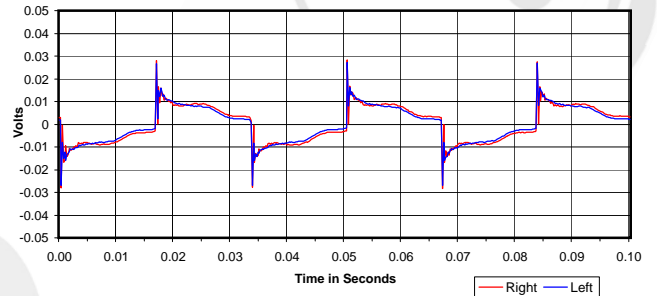
Isolation
Attenuation of External Sound vs. Frequency



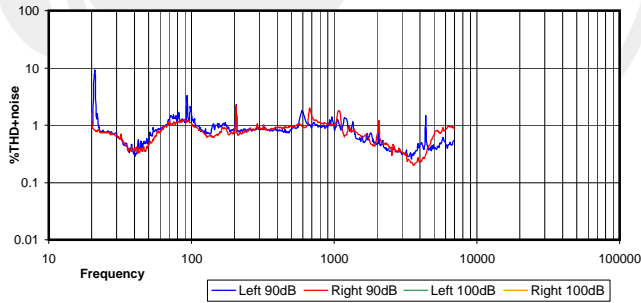
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



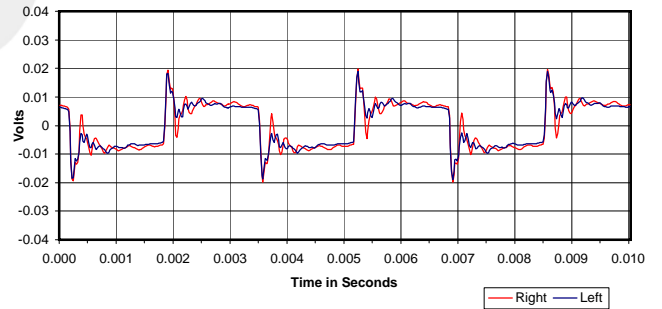
30 Hz Square Wave



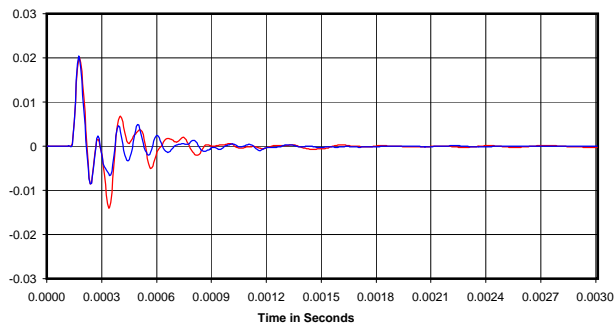
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

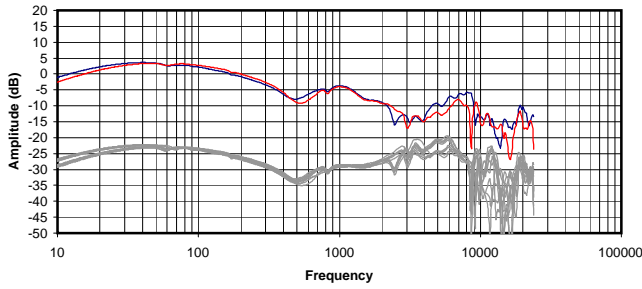


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

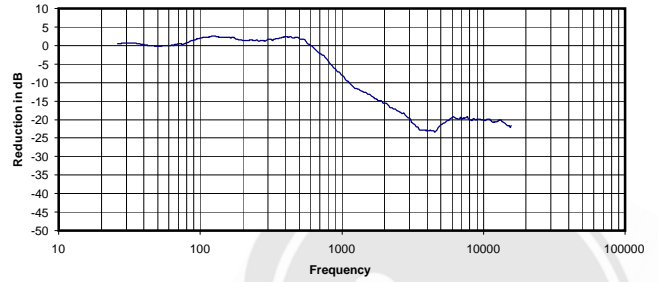
0.252 Vrms
54 Ohms
1.19 mW
-22 dB



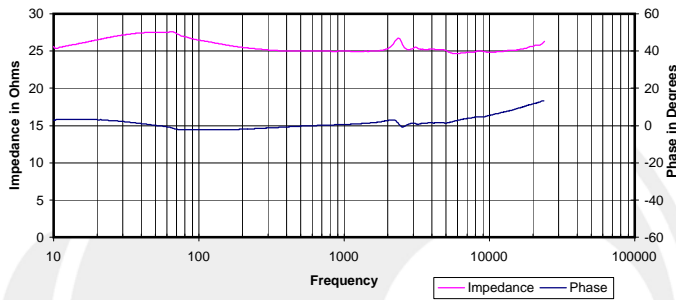
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



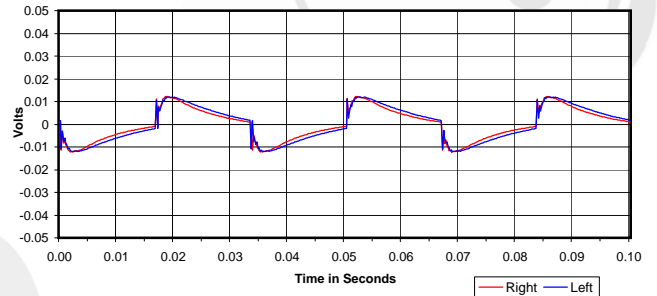
Isolation
 Attenuation of External Sound vs. Frequency



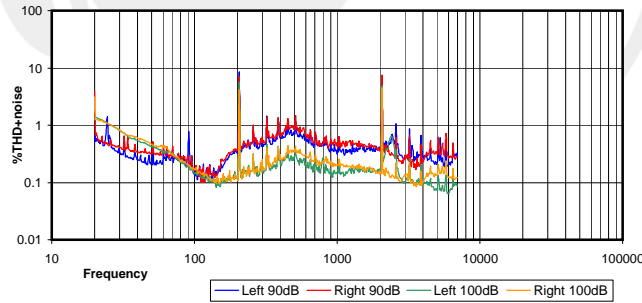
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



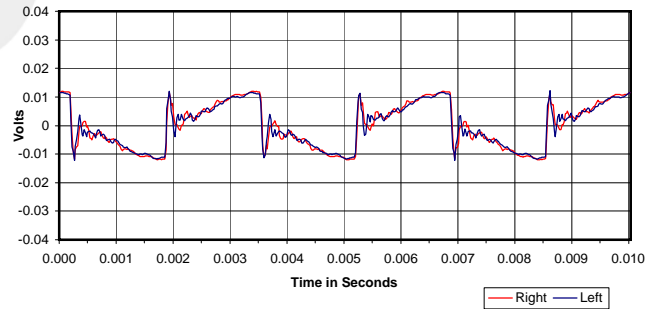
30 Hz Square Wave



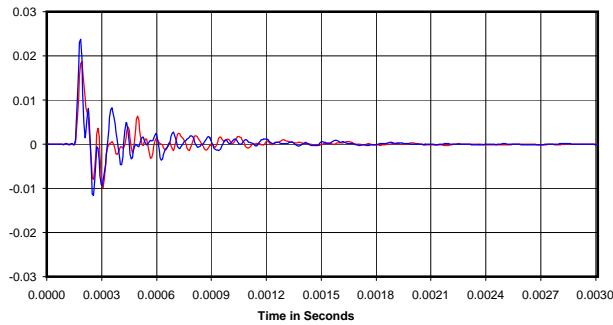
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



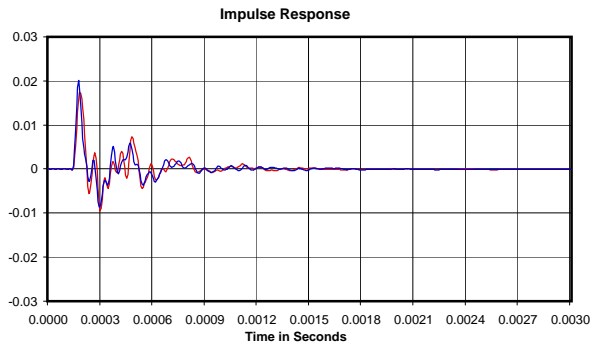
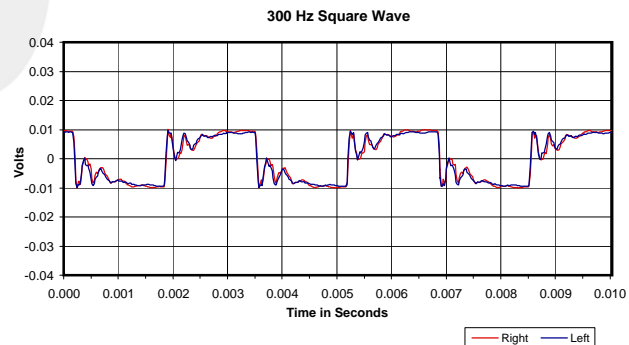
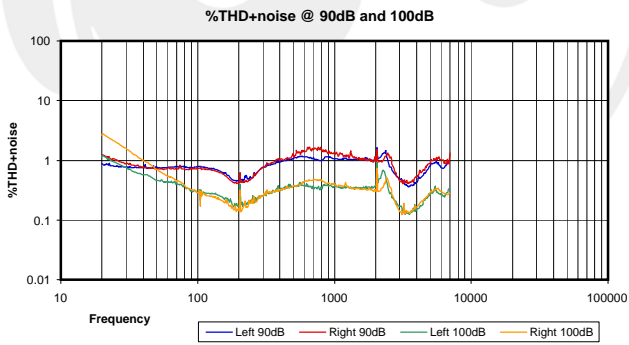
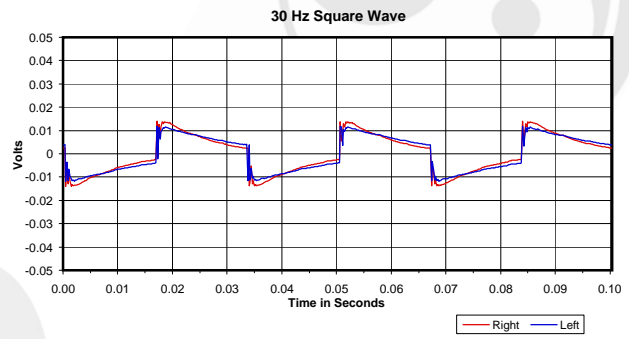
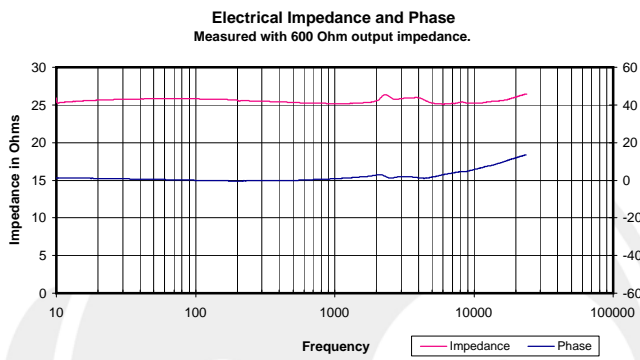
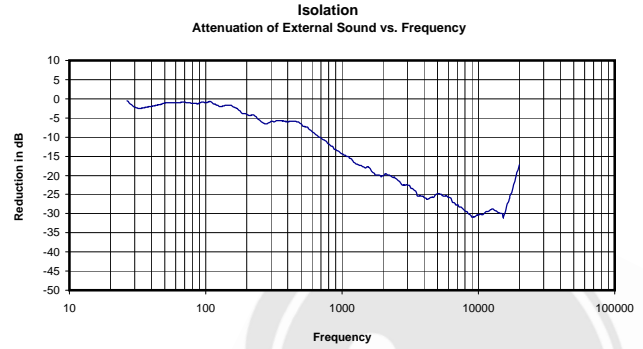
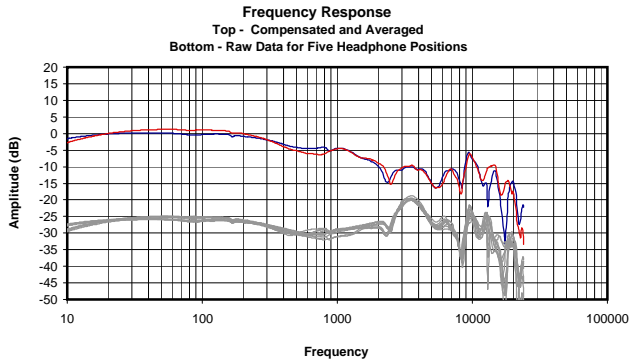
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.069 Vrms
 25 Ohms
 0.19 mW
 -7 dB

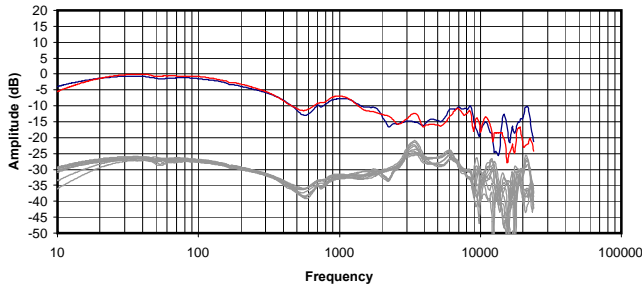




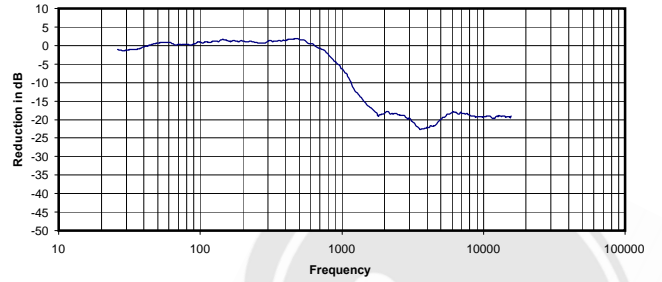
Volts RMS required to reach 90dB SPL: 0.000 Vrms
 Impedance @ 1kHz: 25 Ohms
 Power Needed for 90d BSPL: 0.00 mW
 Broadband Isolation in dB (100Hz to 10kHz): -15 dB



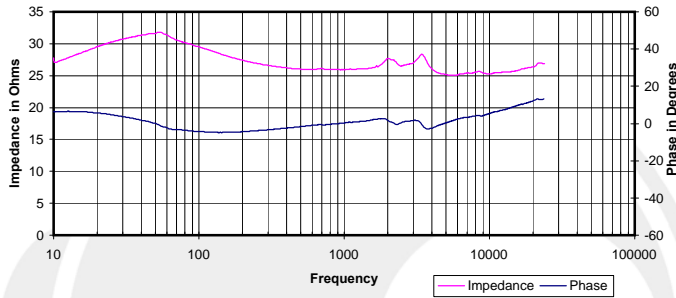
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



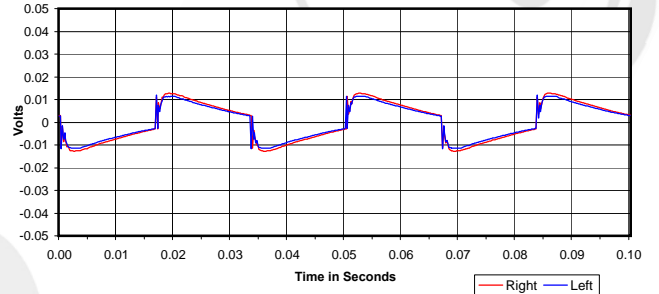
Isolation
 Attenuation of External Sound vs. Frequency



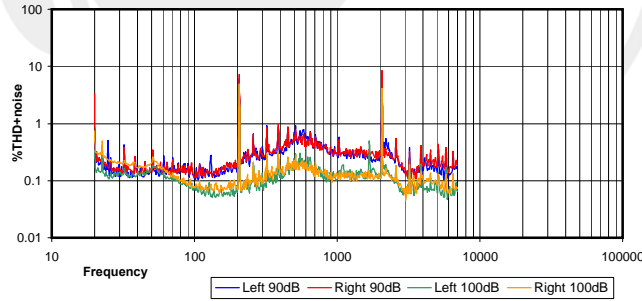
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



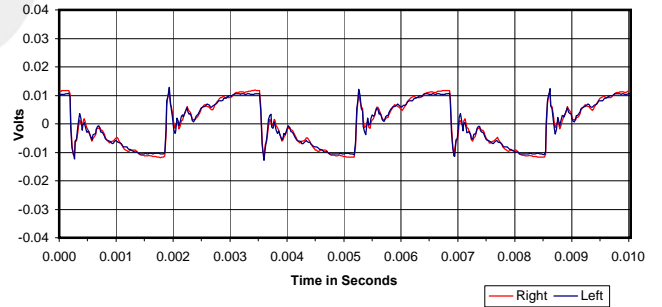
30 Hz Square Wave



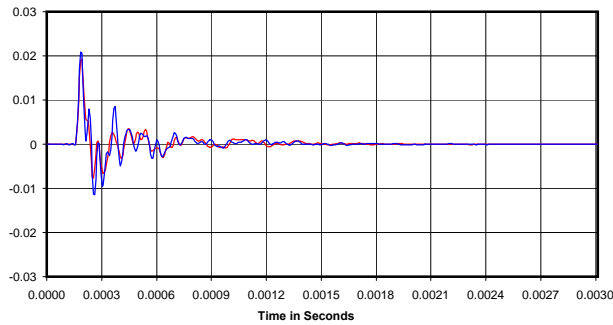
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

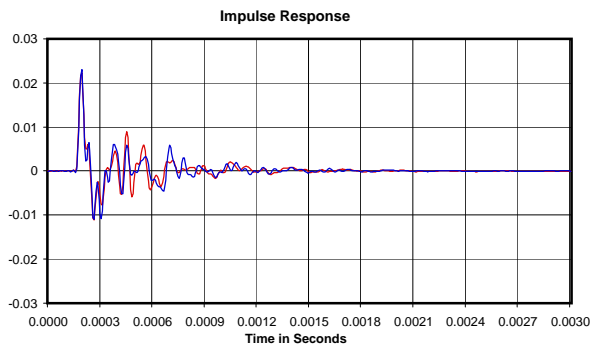
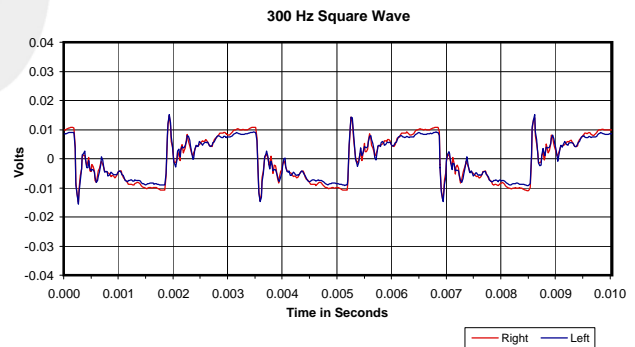
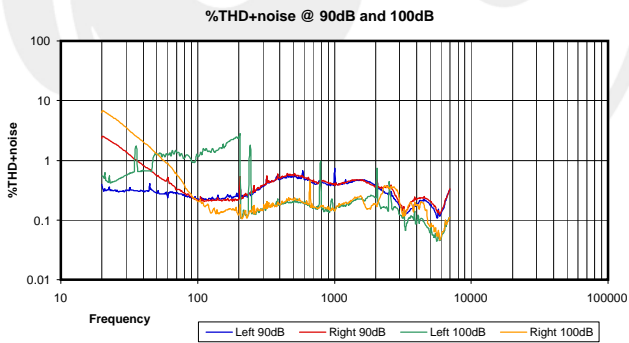
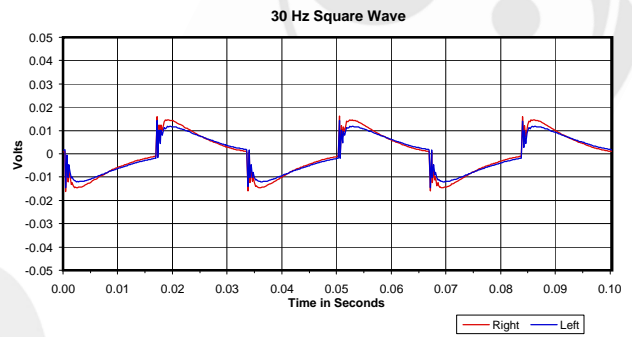
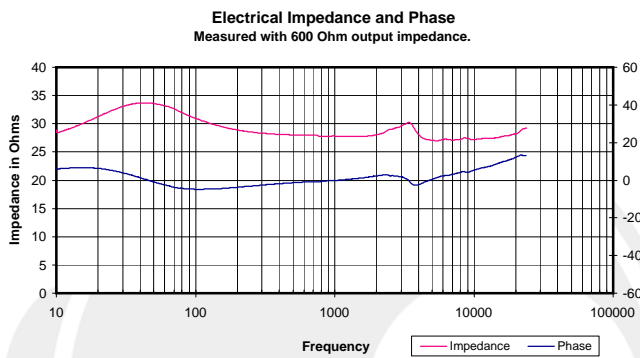
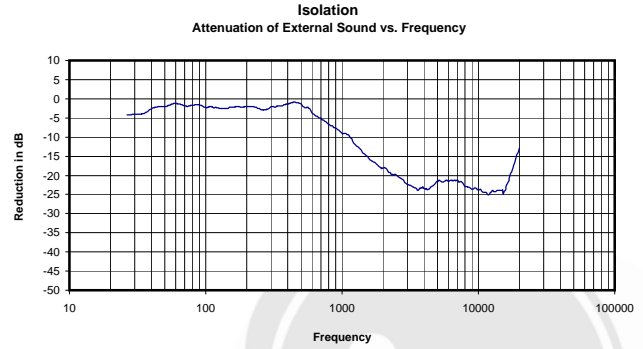
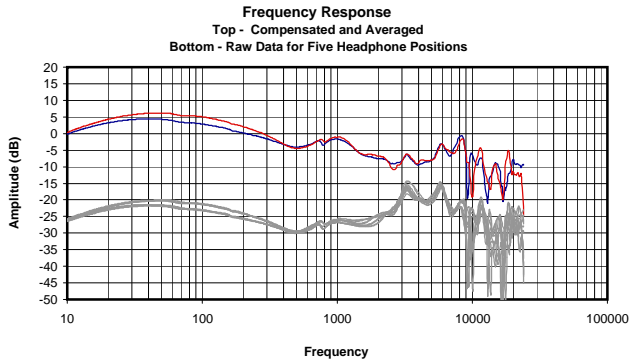


Impulse Response



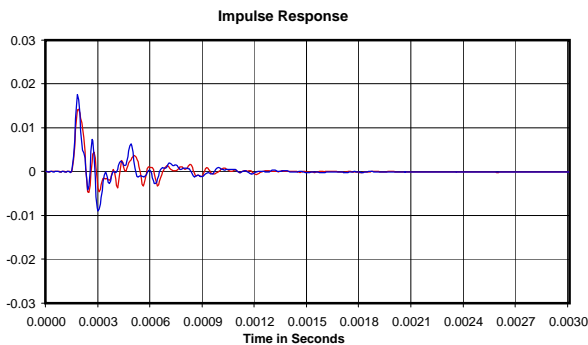
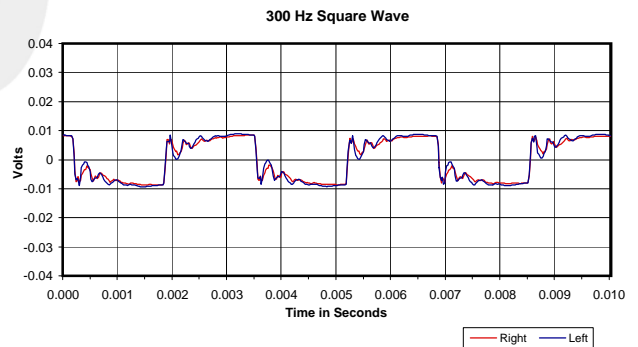
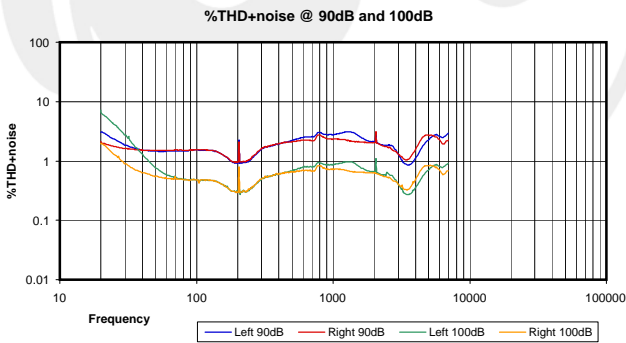
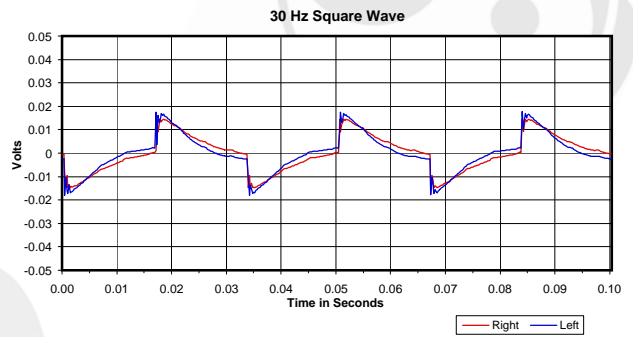
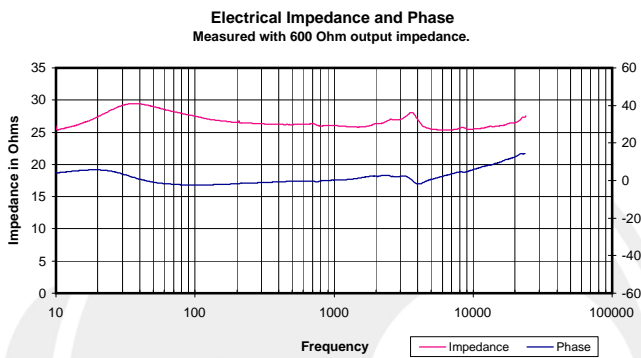
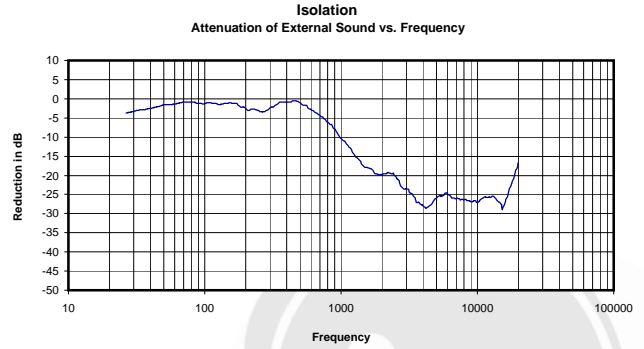
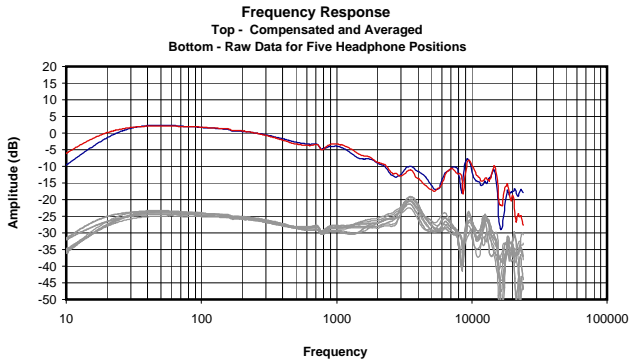
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.062 Vrms
 26 Ohms
 0.15 mW
 -7 dB



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

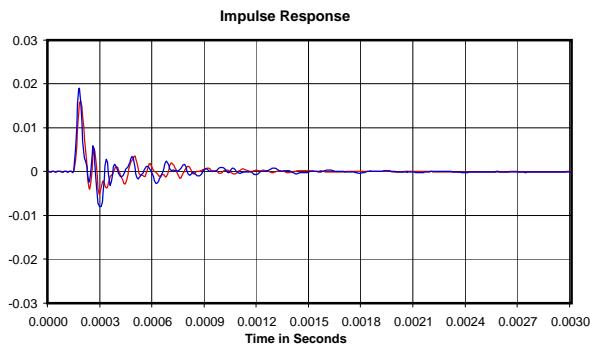
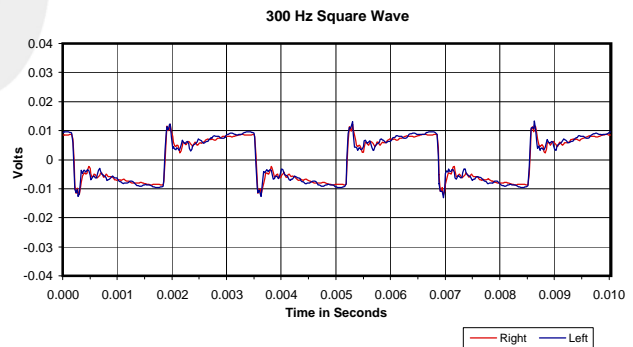
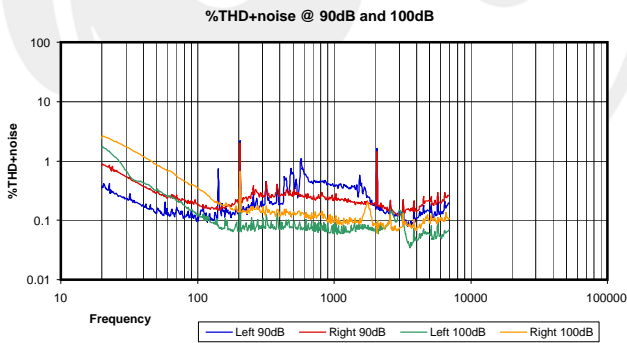
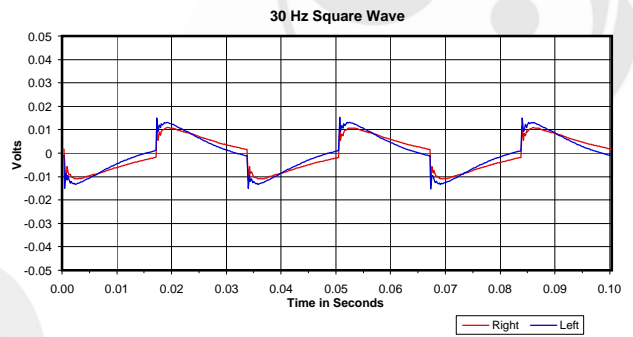
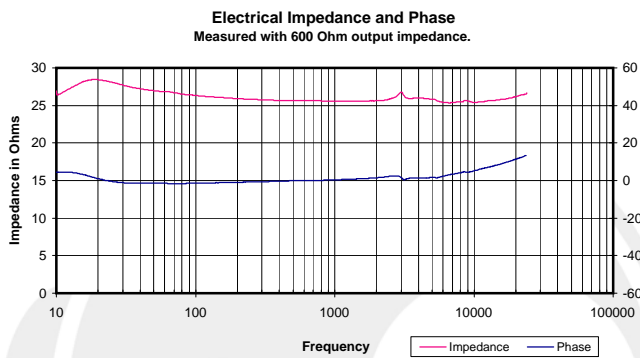
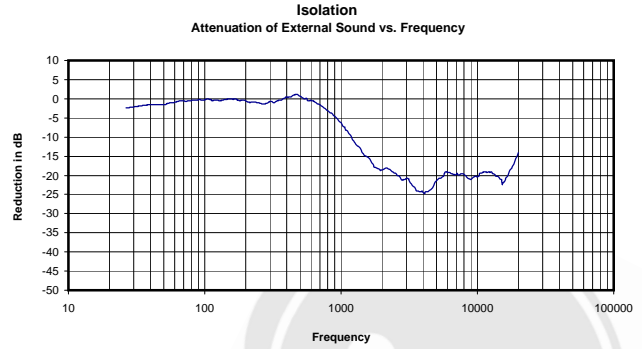
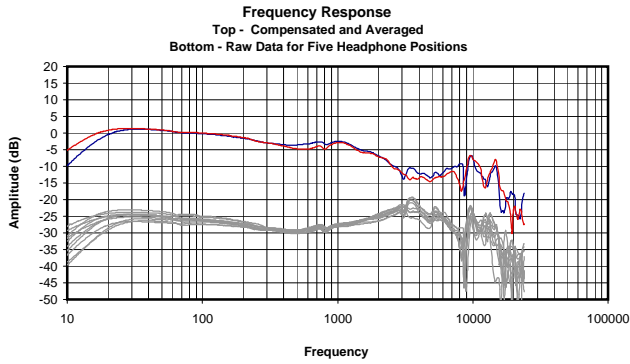
0.078 Vrms
28 Ohms
0.22 mW
-11 dBr



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.047 Vrms
26 Ohms
0.08 mW
-13 dBr

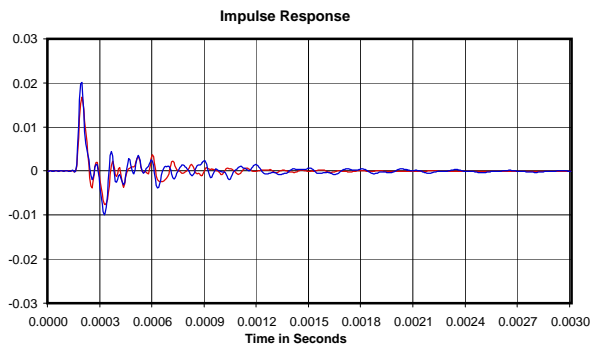
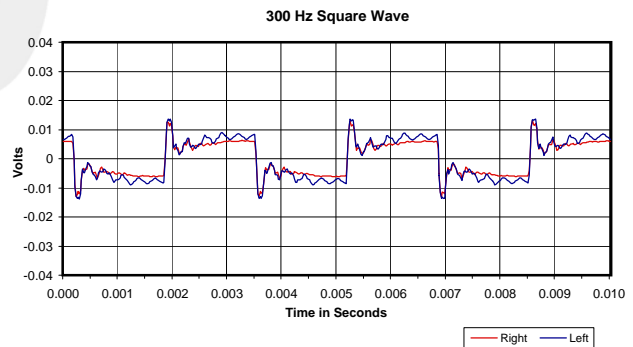
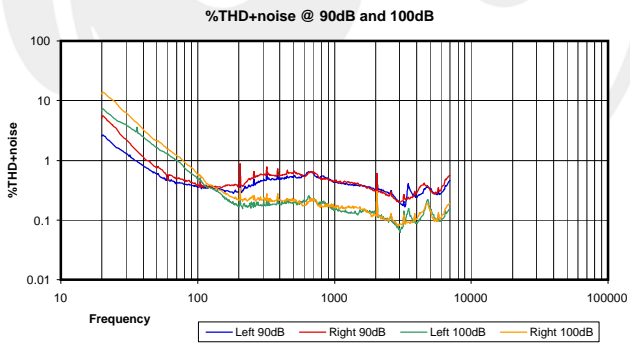
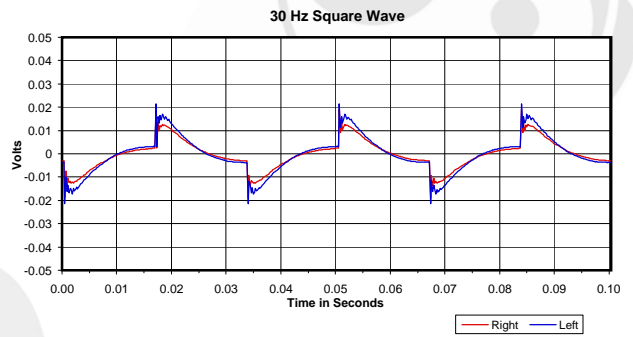
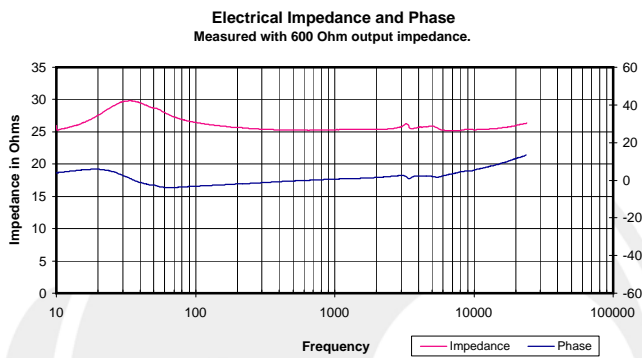
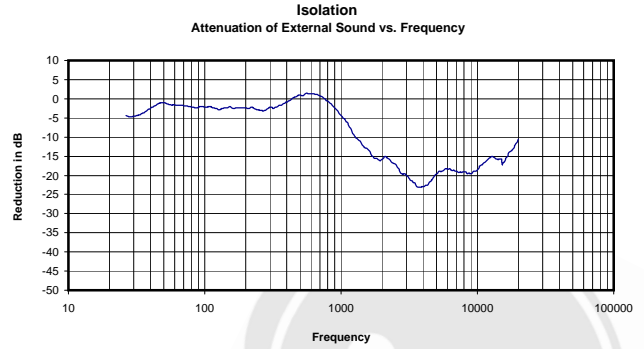
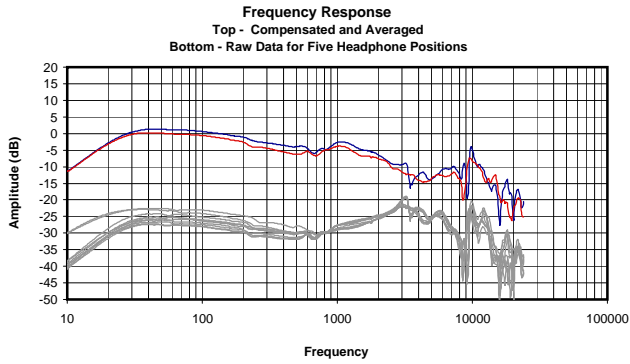




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.050 Vrms
26 Ohms
0.10 mW
-10 dBr

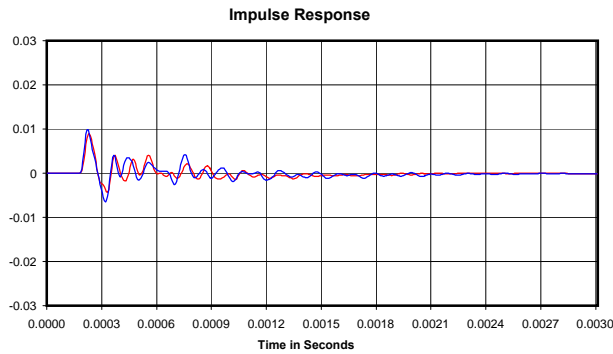
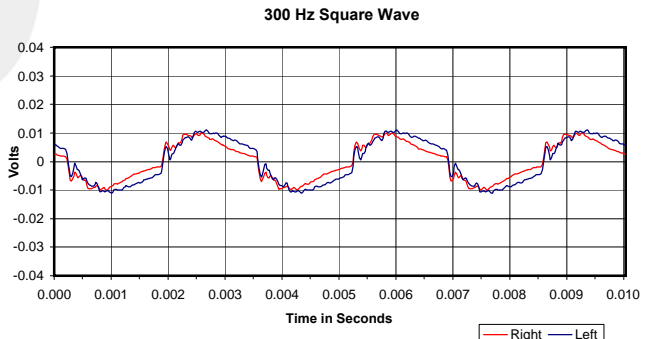
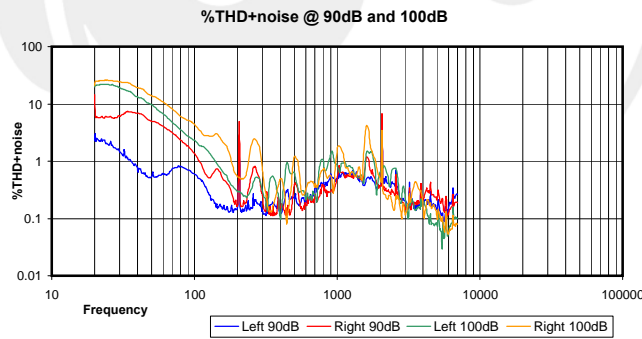
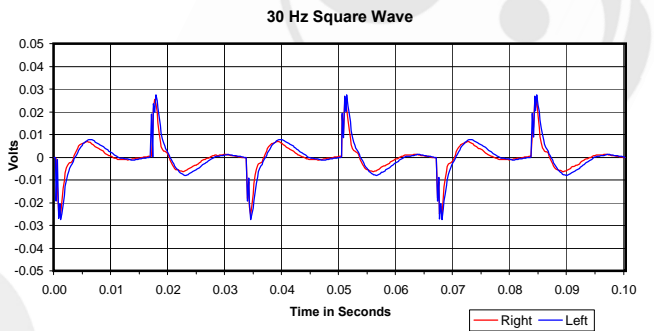
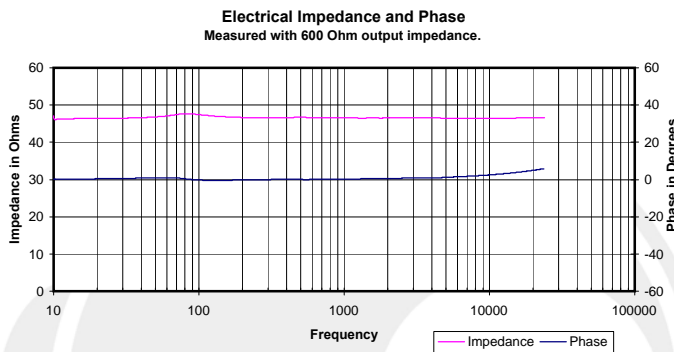
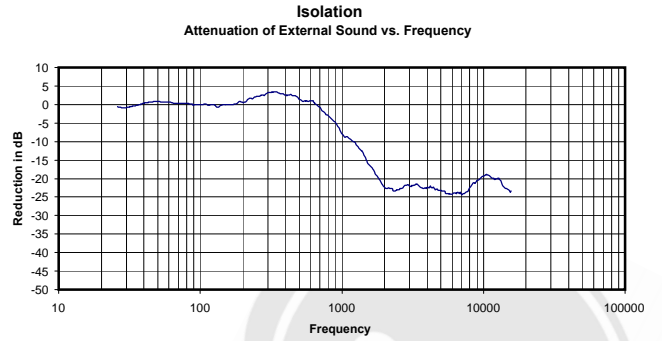
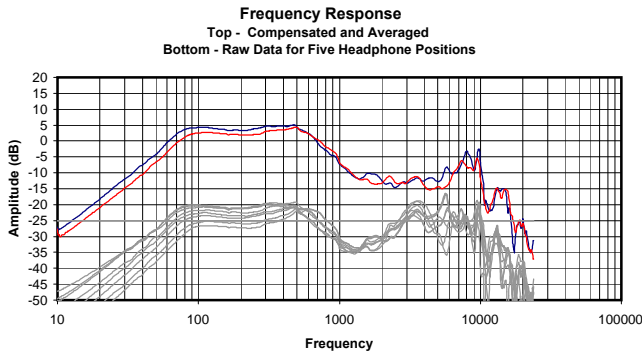




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

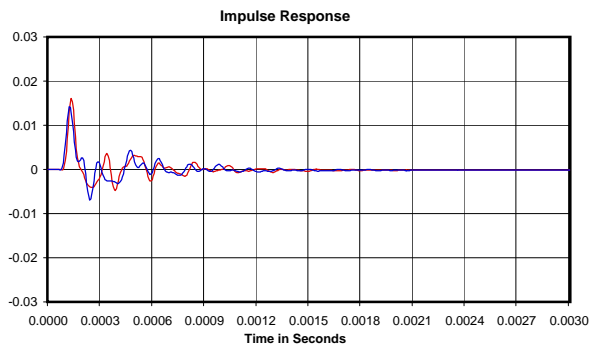
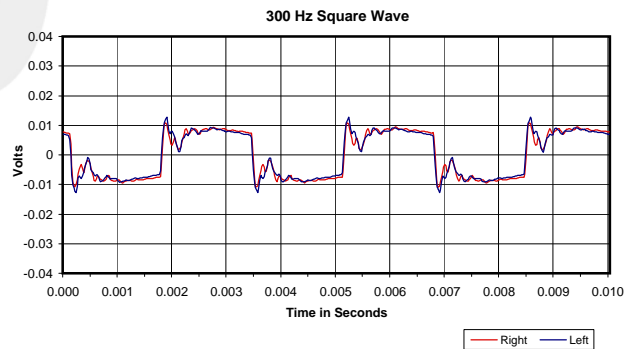
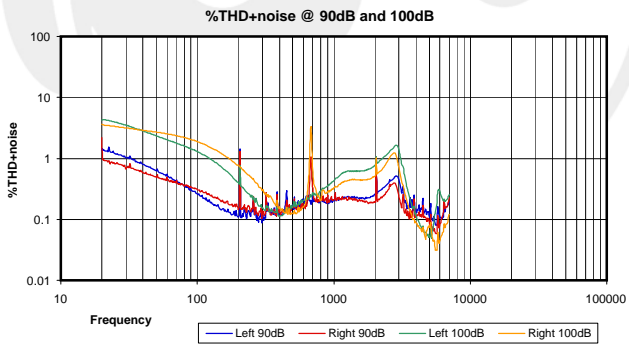
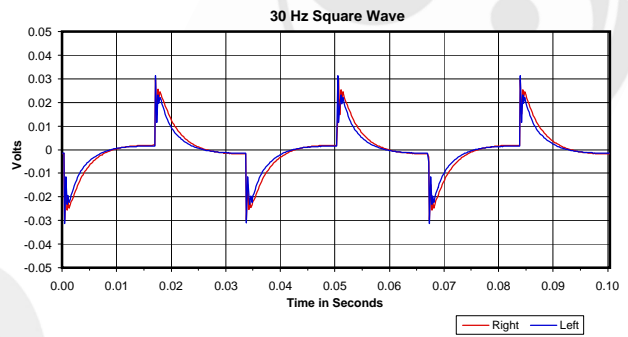
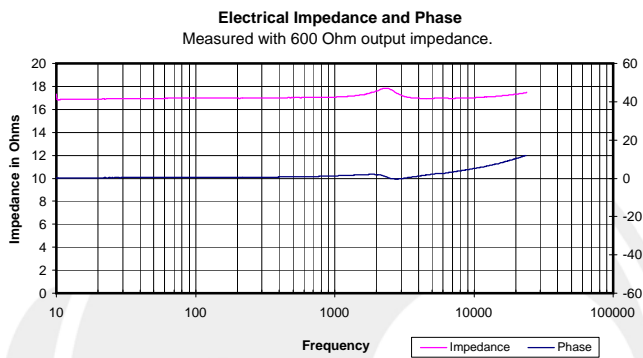
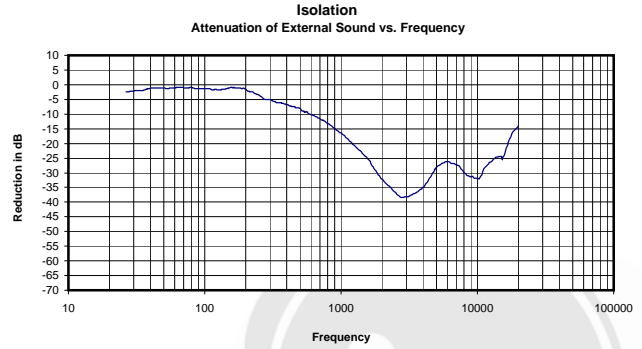
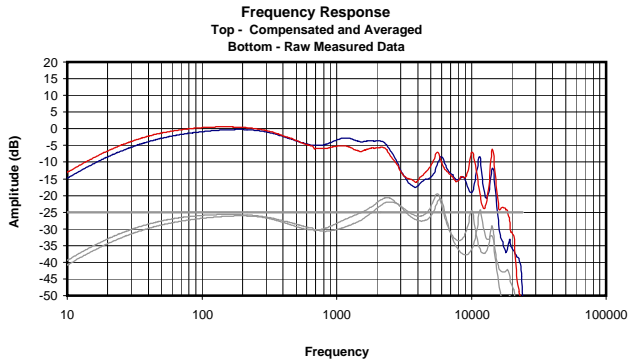
0.068 Vrms
25 Ohms
0.18 mW
-9 dBr





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.405 Vrms
47 Ohms
3.53 mW
-8 dB

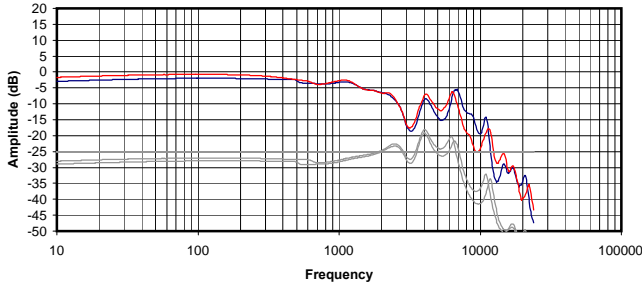


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

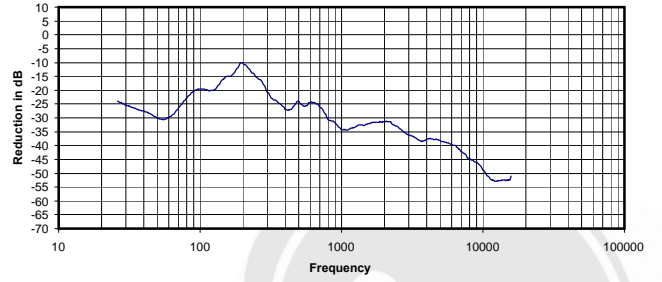
0.029 Vrms
17 Ohms
0.05 mW
-18 dB



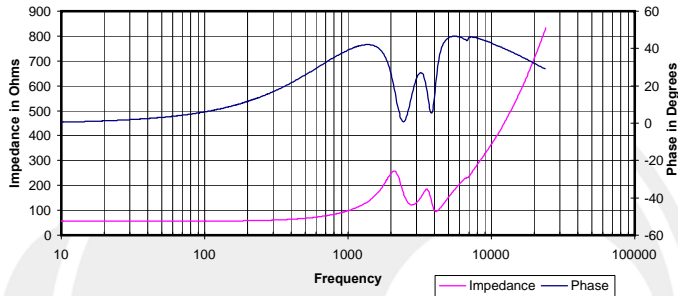
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



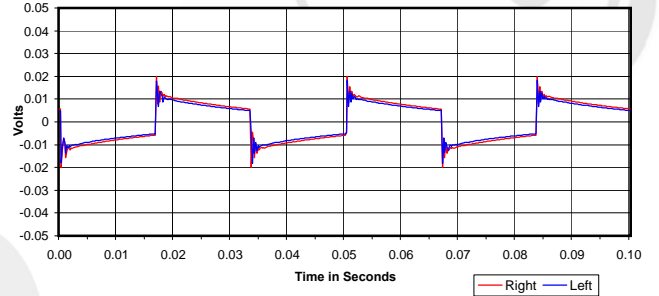
Isolation
Attenuation of External Sound vs. Frequency



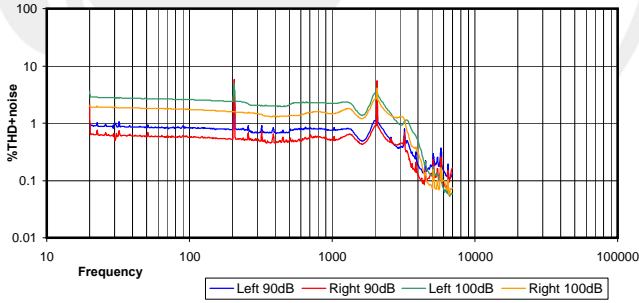
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



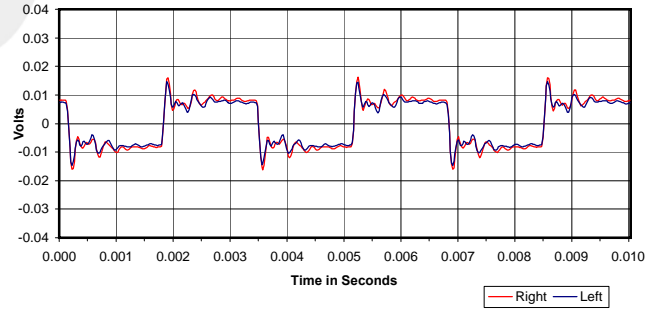
30 Hz Square Wave



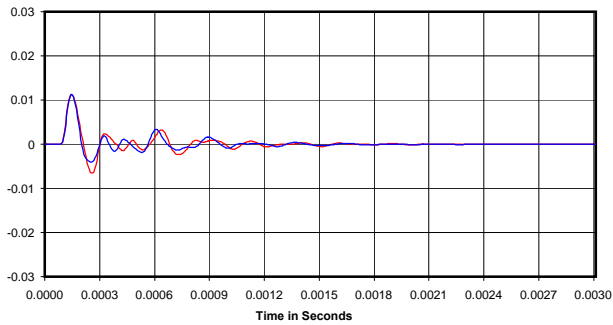
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

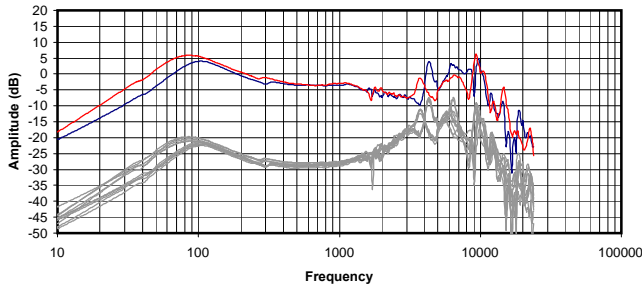


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

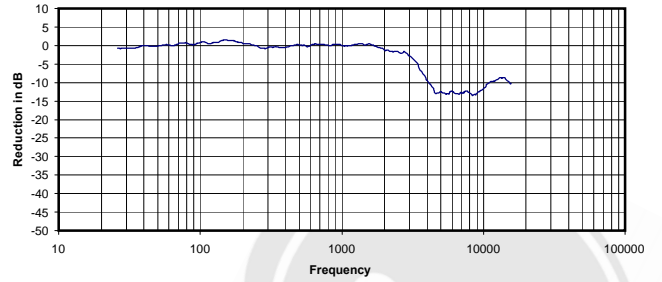
0.025 Vrms
99 Ohms
0.01 mW
-27 dB



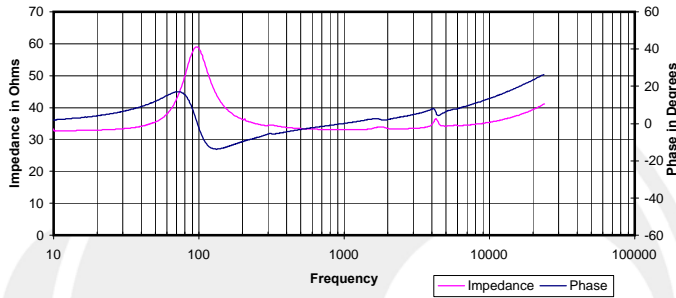
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



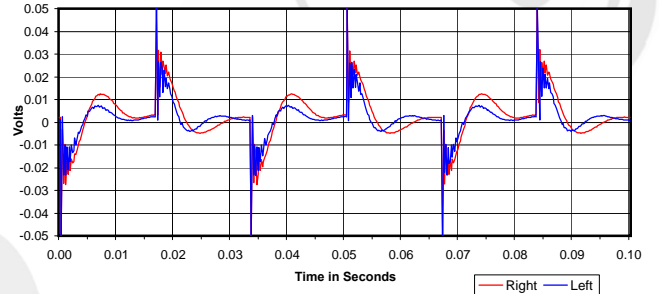
Isolation
 Attenuation of External Sound vs. Frequency



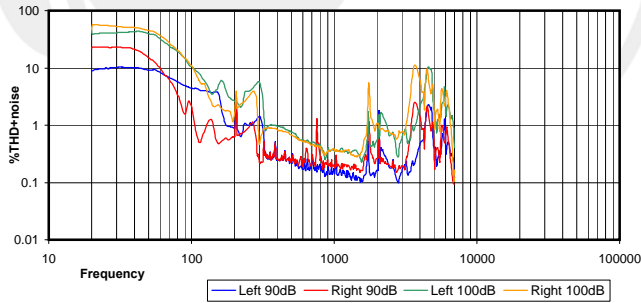
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



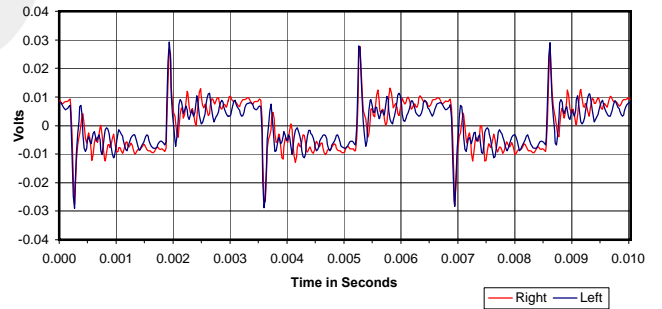
30 Hz Square Wave



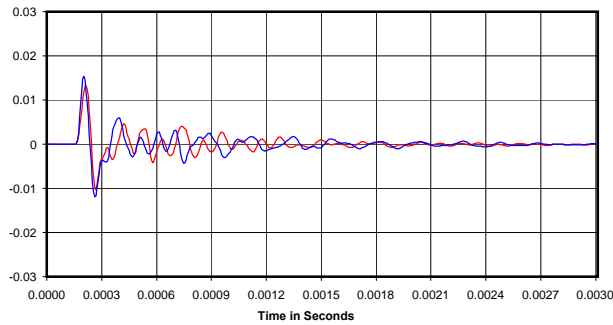
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

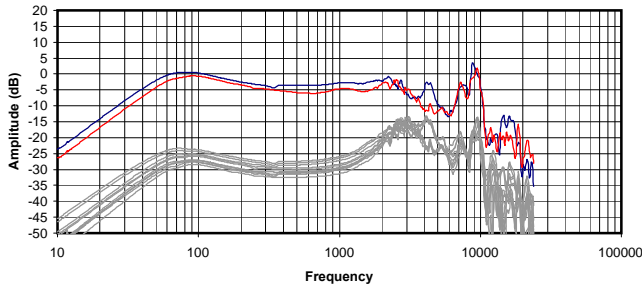


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

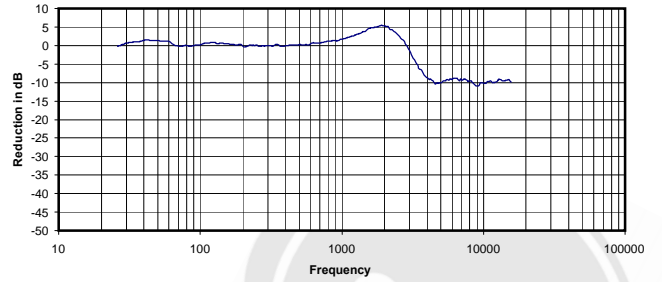
0.188 Vrms
 33 Ohms
 1.06 mW
 -2 dB



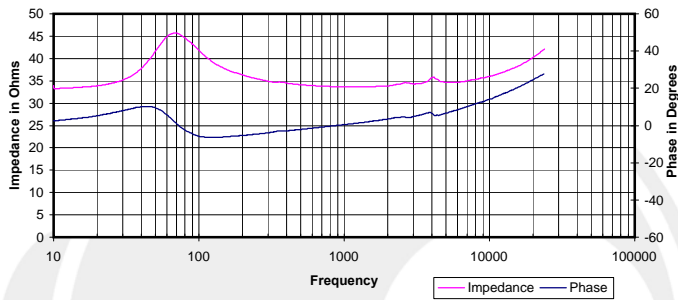
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



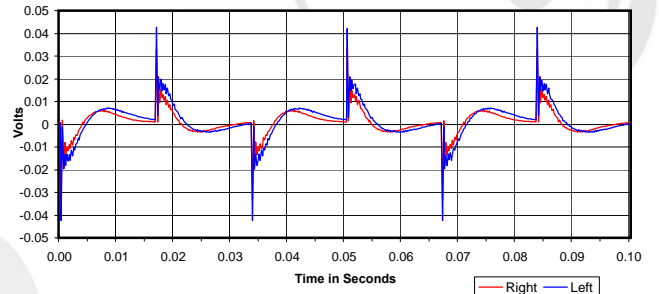
Isolation
 Attenuation of External Sound vs. Frequency



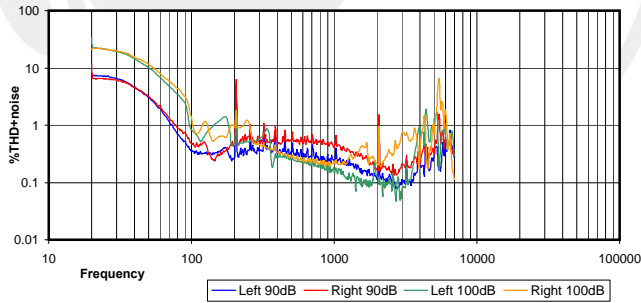
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



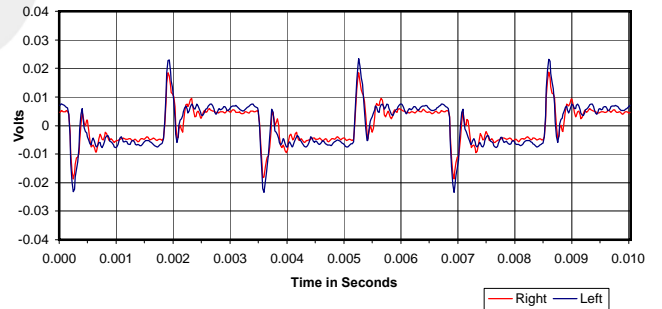
30 Hz Square Wave



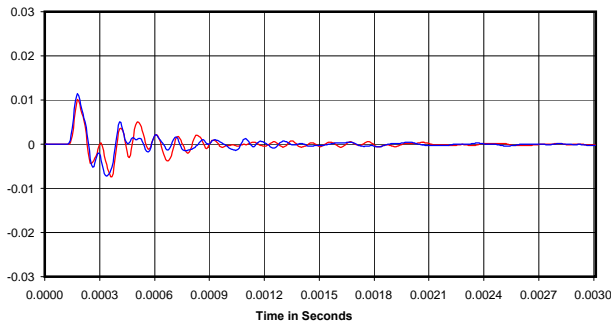
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

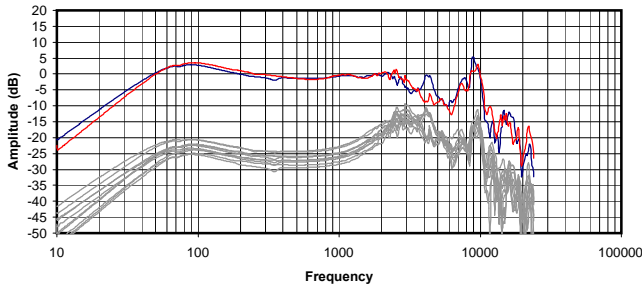


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

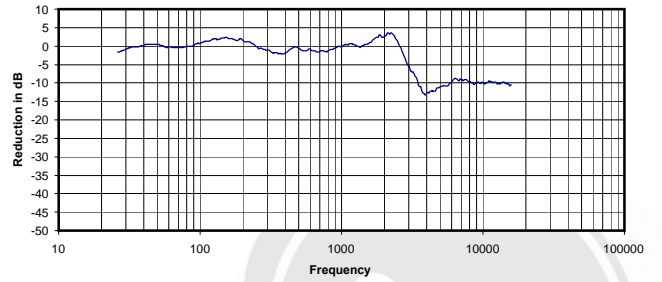
0.079 Vrms
 34 Ohms
 0.19 mW
 0 dB



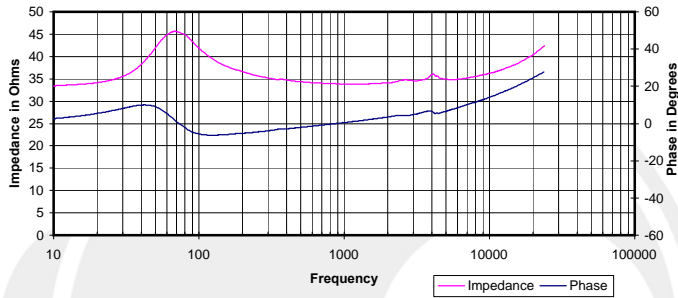
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



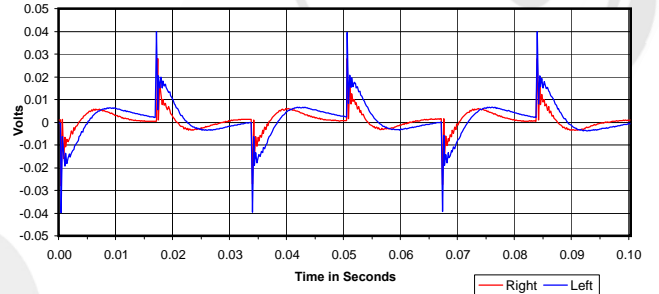
Isolation
 Attenuation of External Sound vs. Frequency



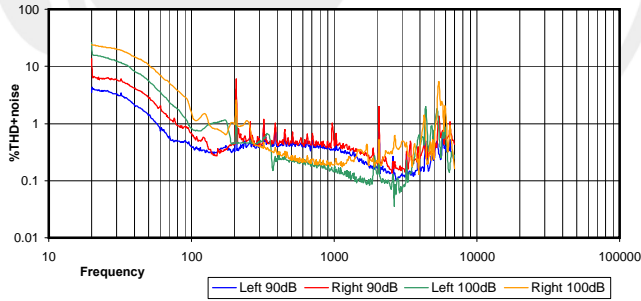
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



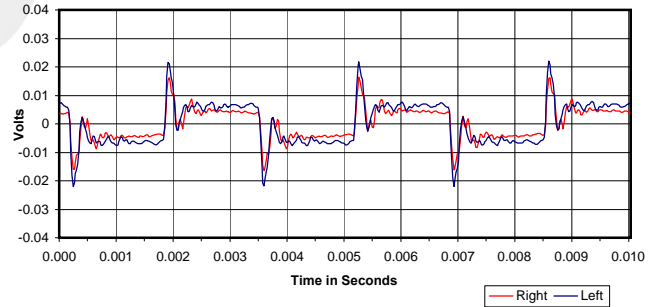
30 Hz Square Wave



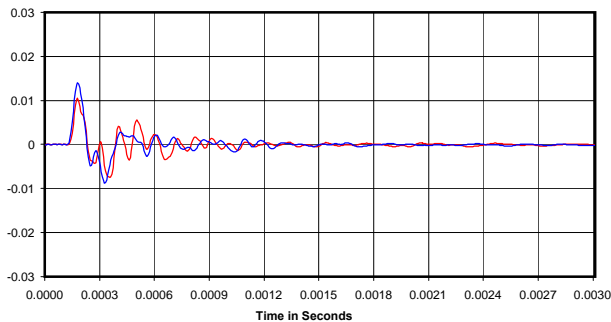
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

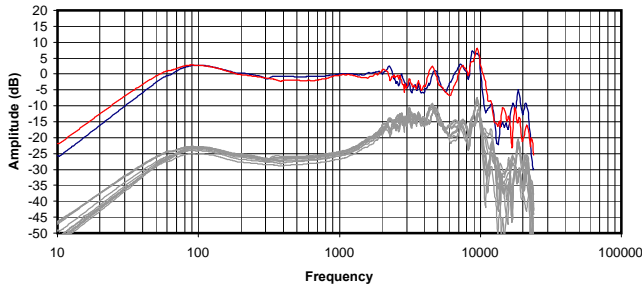


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

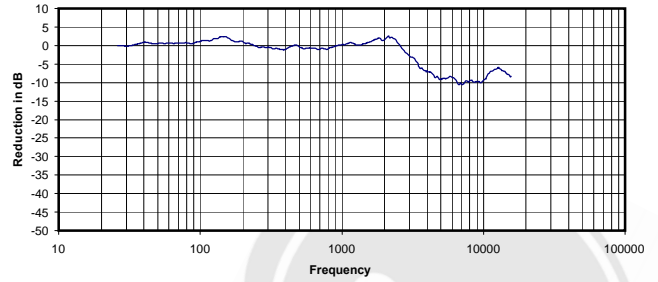
0.073 Vrms
 34 Ohms
 0.16 mW
 -2 dB



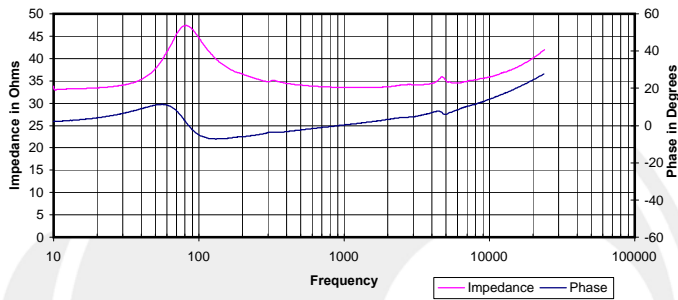
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



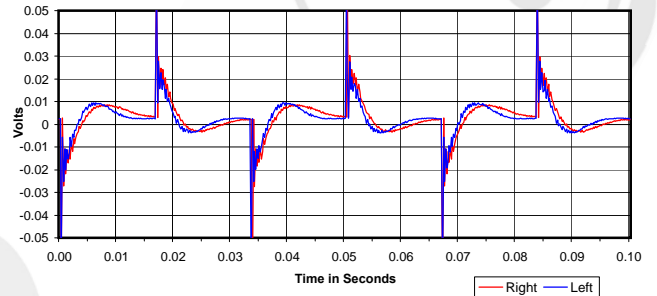
Isolation
Attenuation of External Sound vs. Frequency



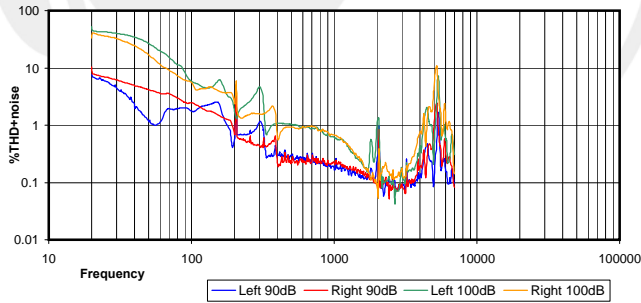
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



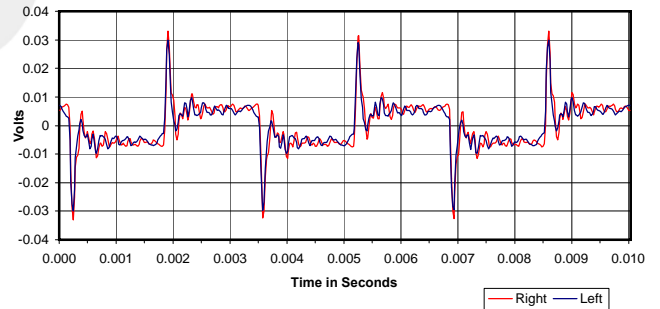
30 Hz Square Wave



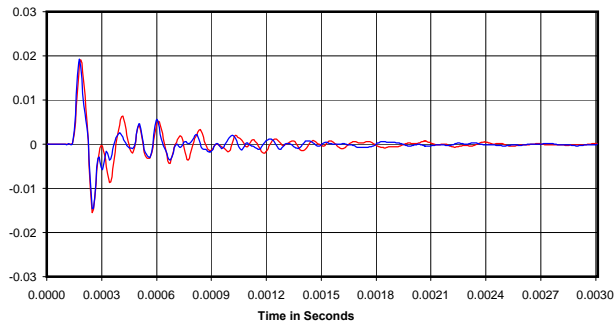
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



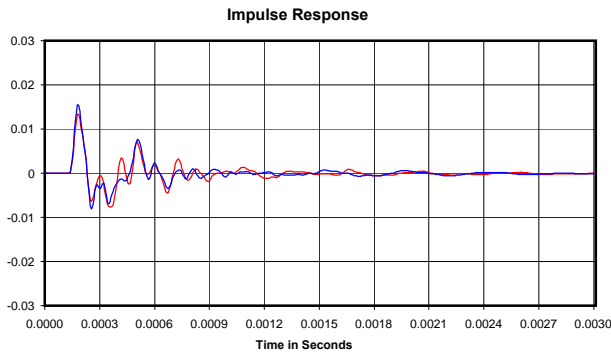
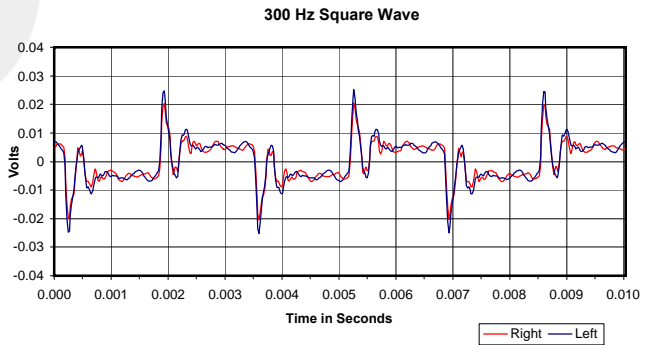
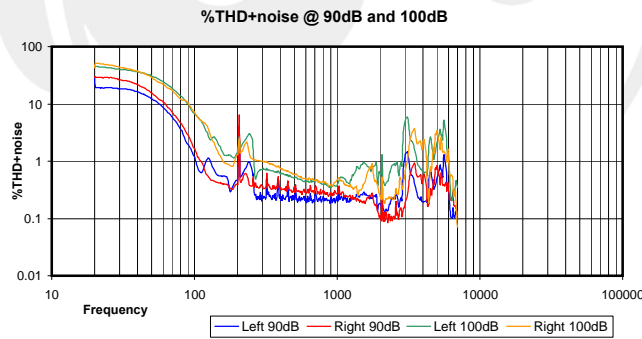
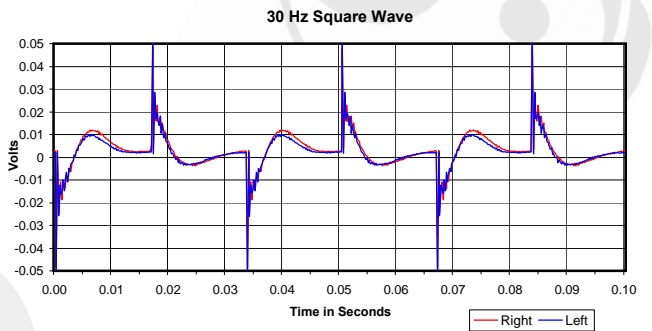
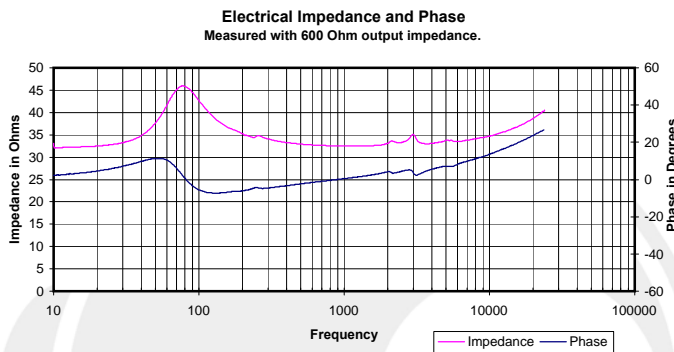
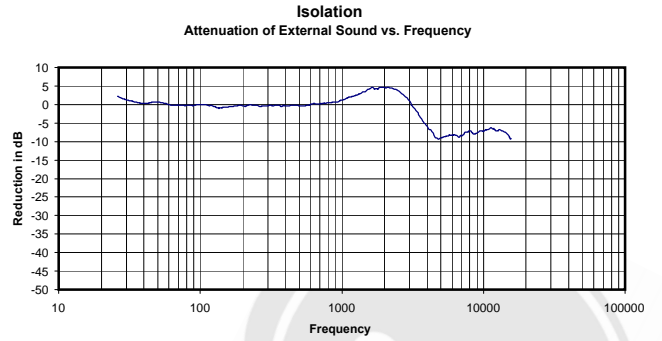
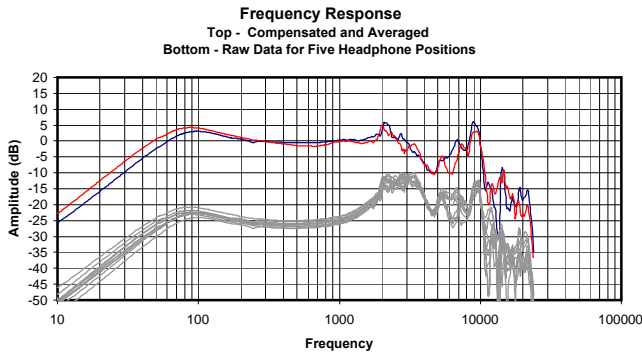
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.126 Vrms
34 Ohms
0.47 mW
-1 dB



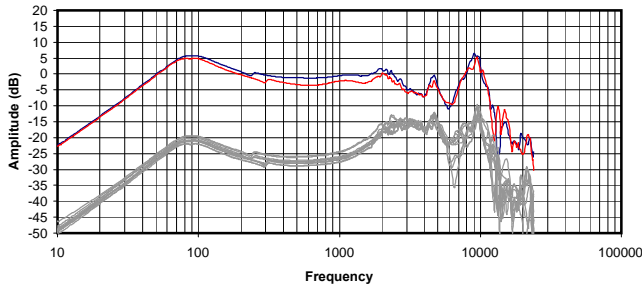


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

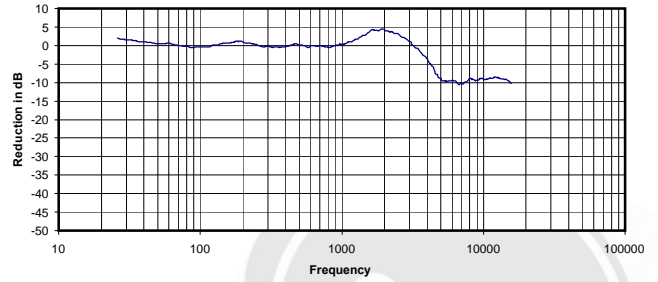
0.110 Vrms
32 Ohms
0.37 mW
0 dB



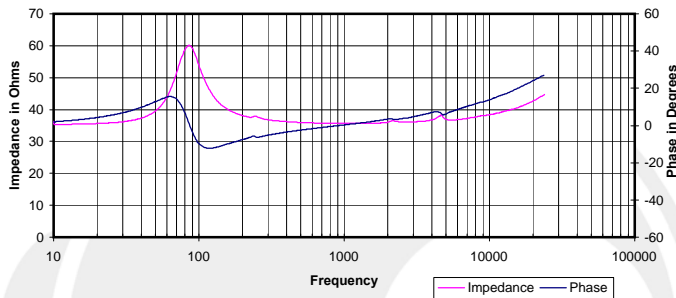
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



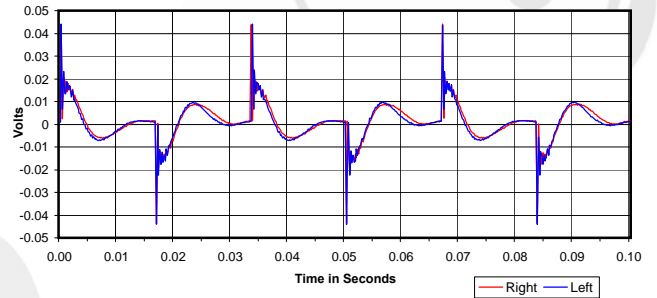
Isolation
Attenuation of External Sound vs. Frequency



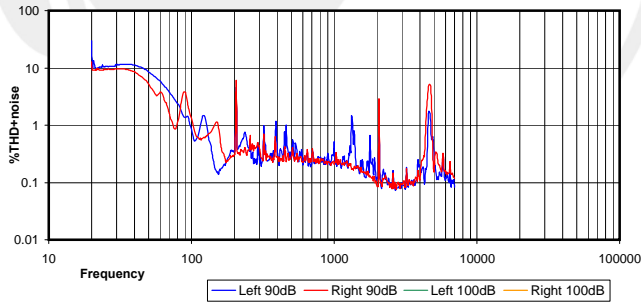
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



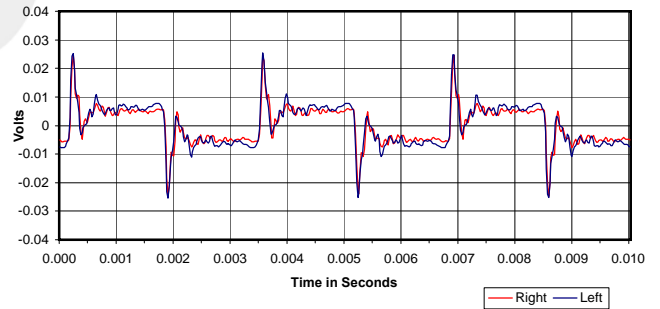
30 Hz Square Wave



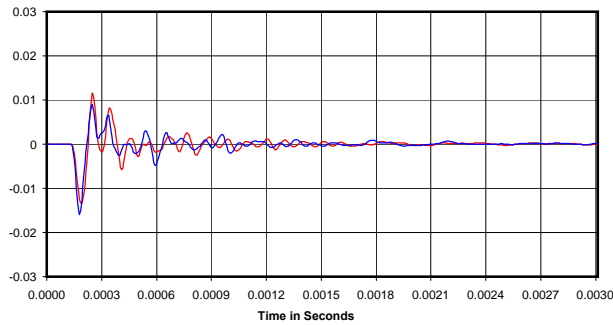
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

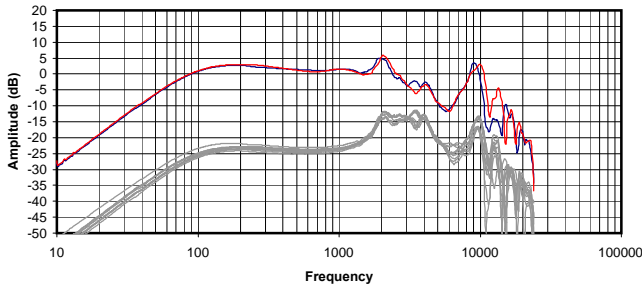


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

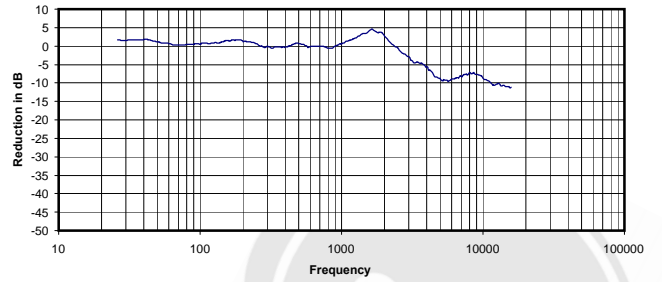
0.120 Vrms
36 Ohms
0.41 mW
0 dB



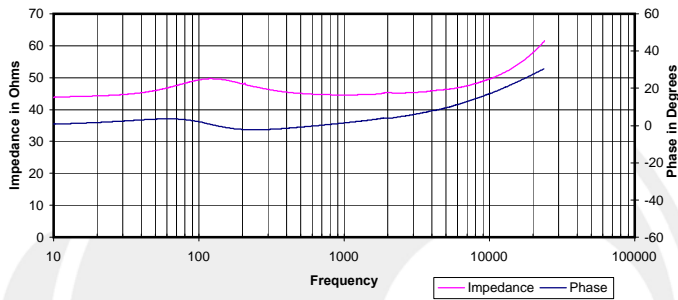
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



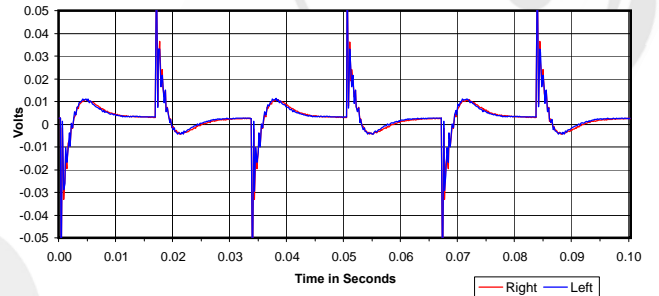
Isolation
Attenuation of External Sound vs. Frequency



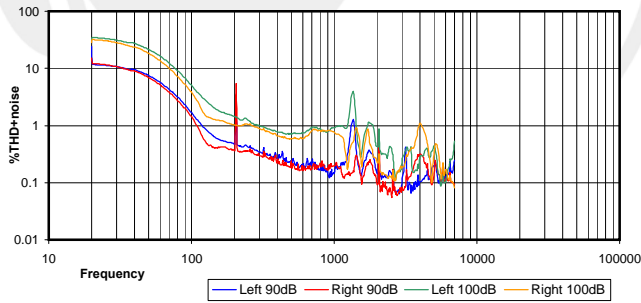
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



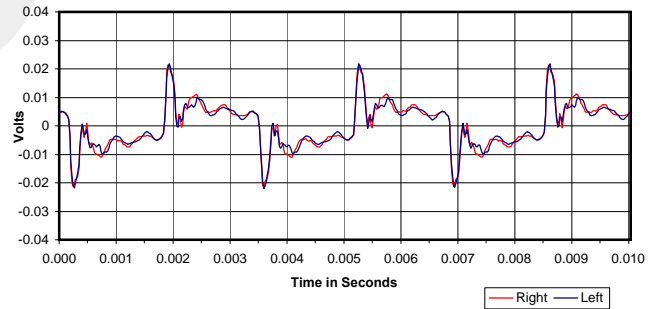
30 Hz Square Wave



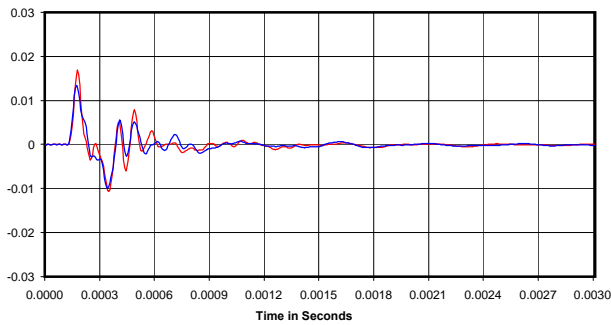
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



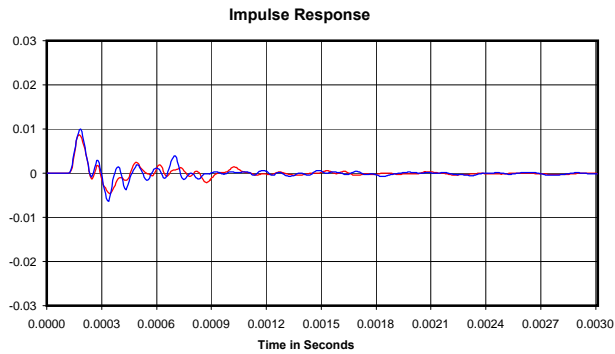
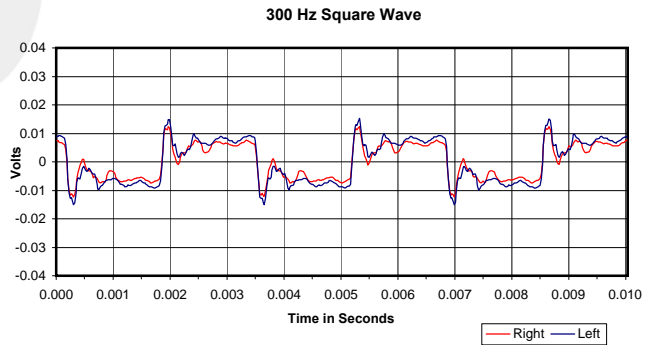
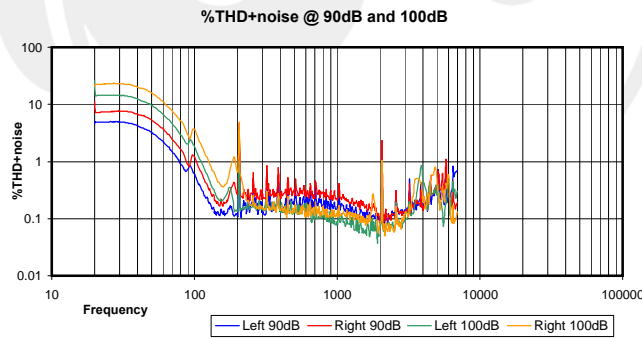
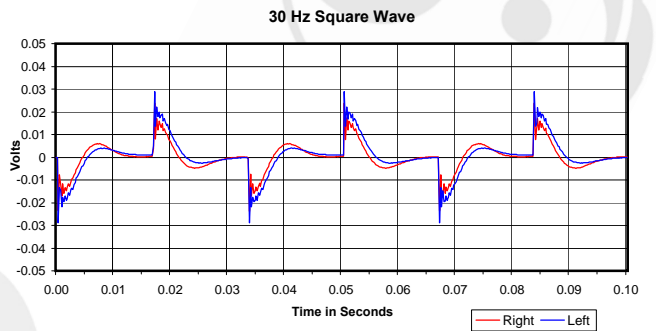
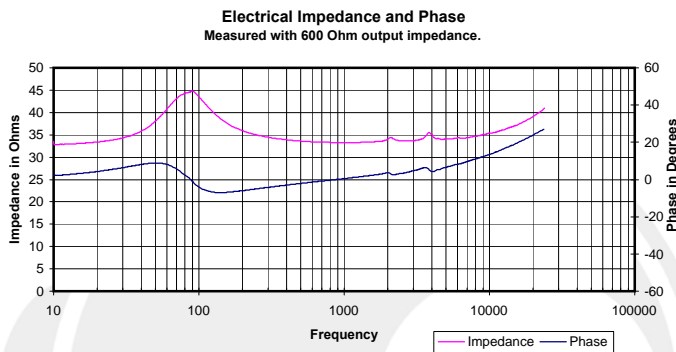
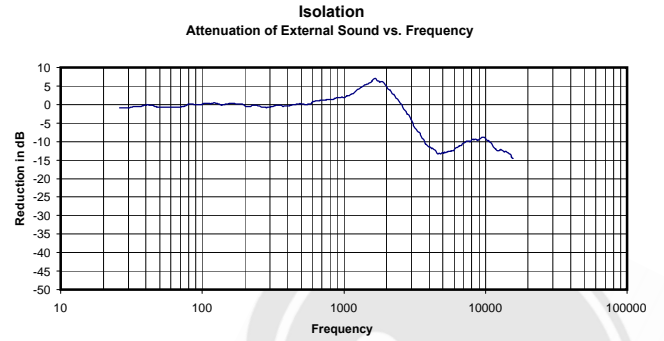
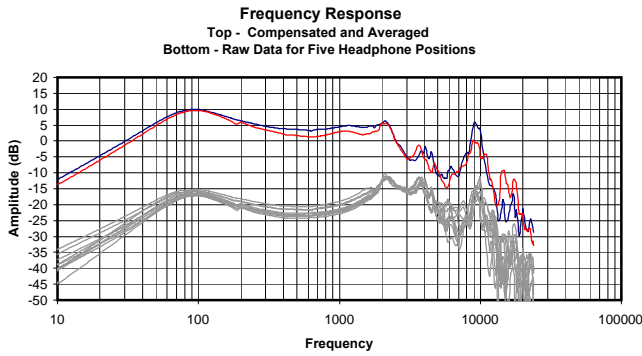
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.142 Vrms
45 Ohms
0.45 mW
-1 dB



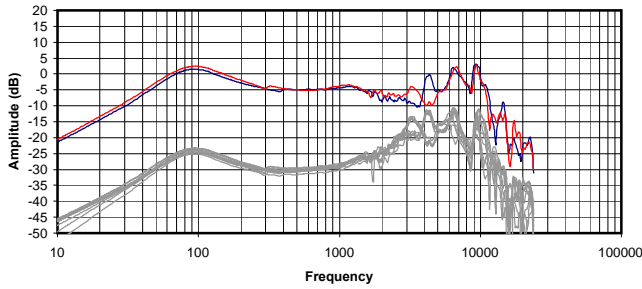


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

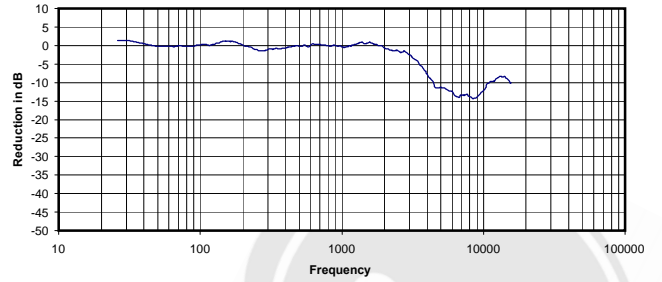
0.039 Vrms
33 Ohms
0.05 mW
-1 dB



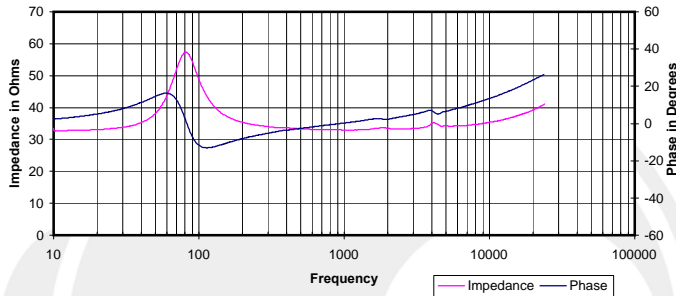
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



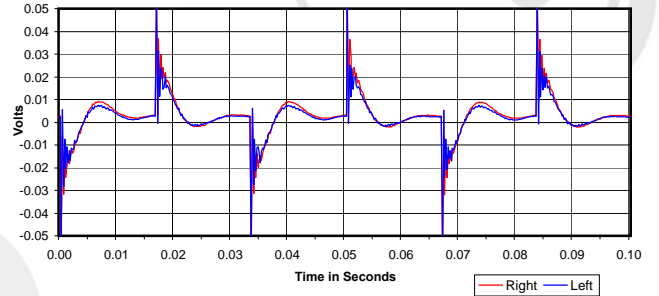
Isolation
 Attenuation of External Sound vs. Frequency



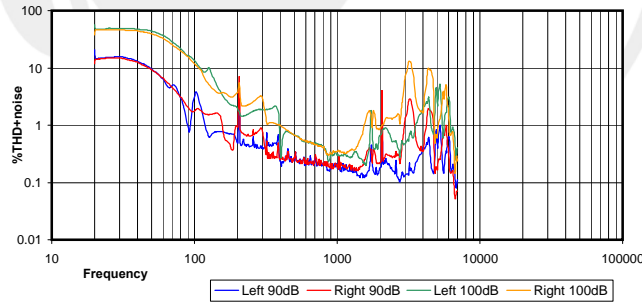
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



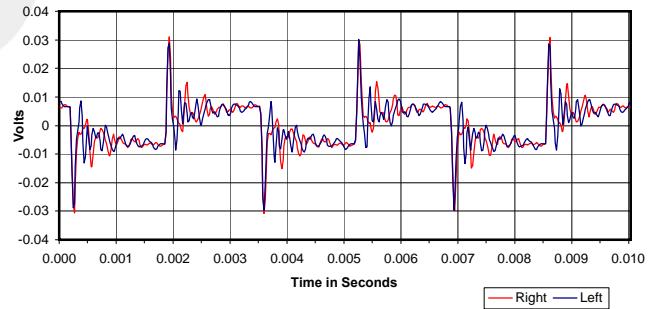
30 Hz Square Wave



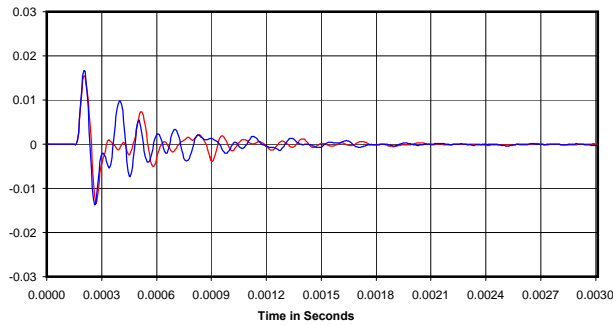
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

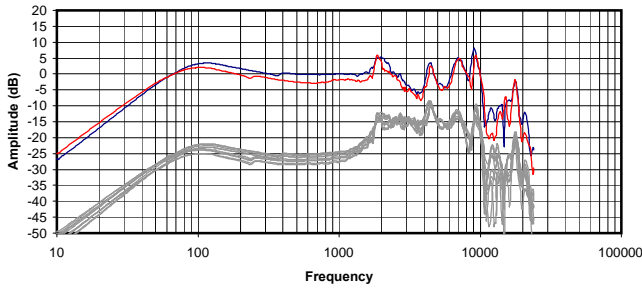


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

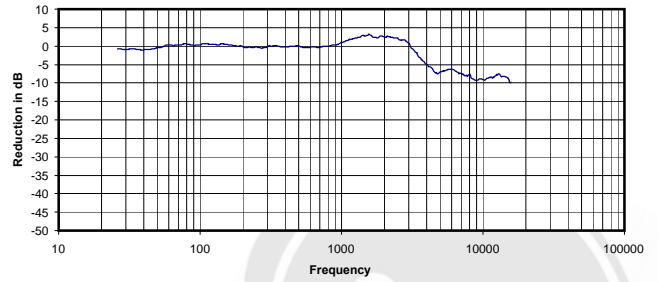
0.189 Vrms
 33 Ohms
 1.09 mW
 -2 dB



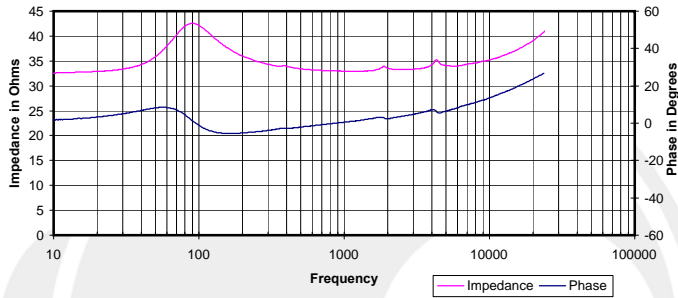
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



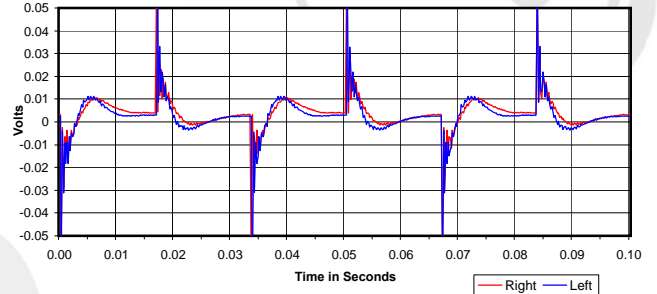
Isolation
Attenuation of External Sound vs. Frequency



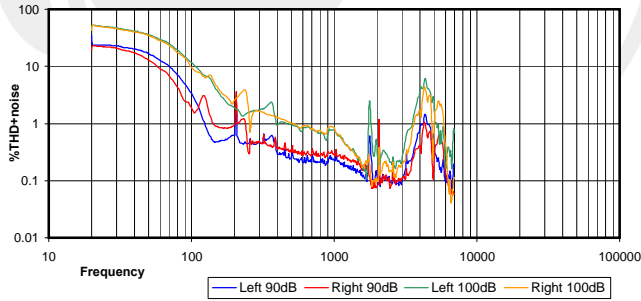
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



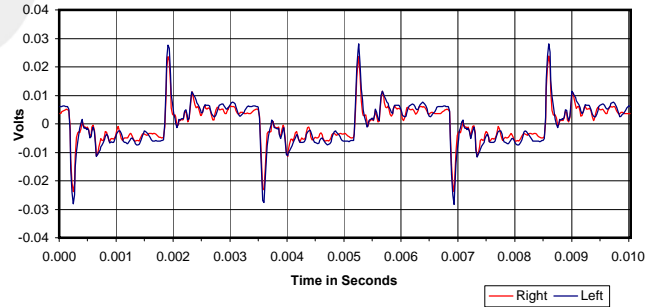
30 Hz Square Wave



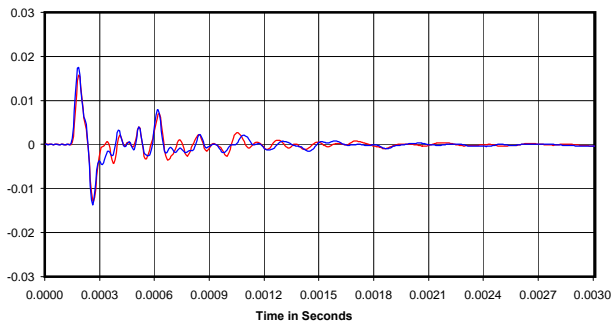
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

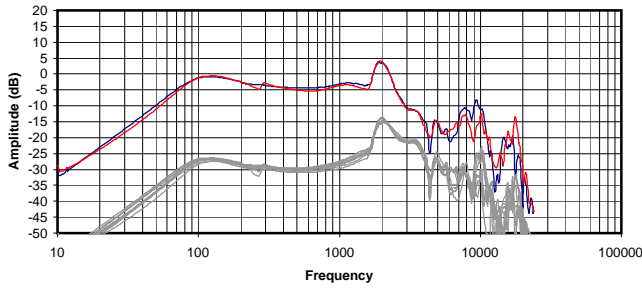


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

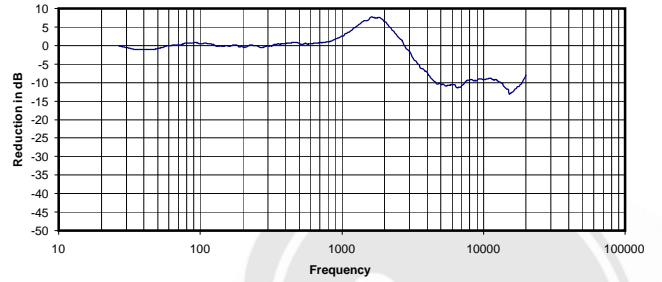
0.161 Vrms
33 Ohms
0.78 mW
0 dB



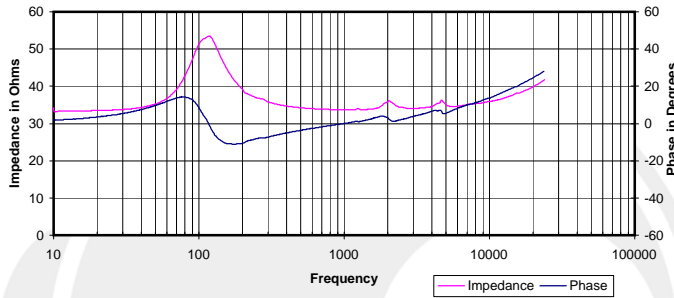
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



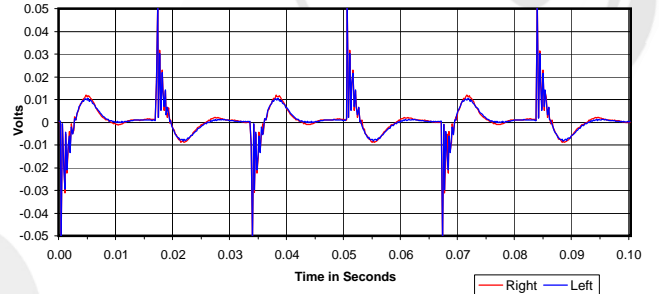
Isolation
Attenuation of External Sound vs. Frequency



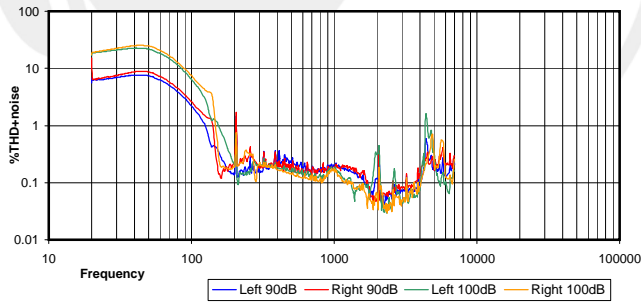
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



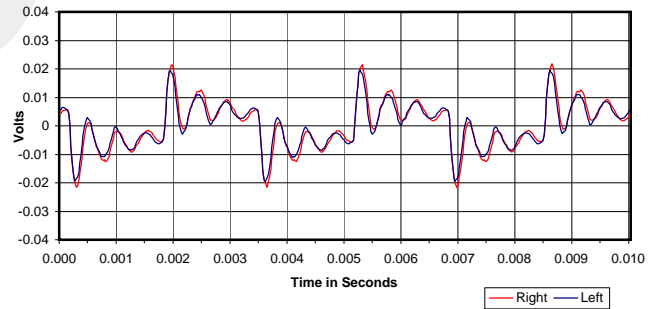
30 Hz Square Wave



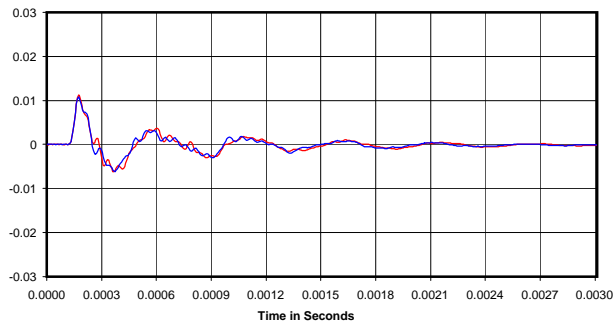
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

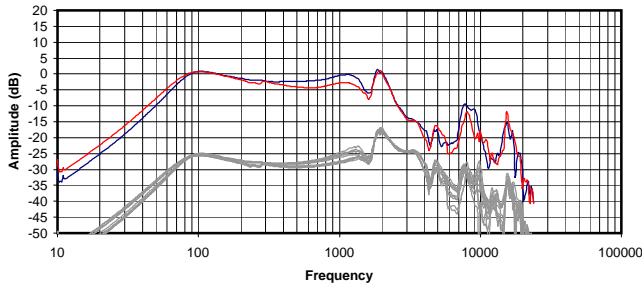


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

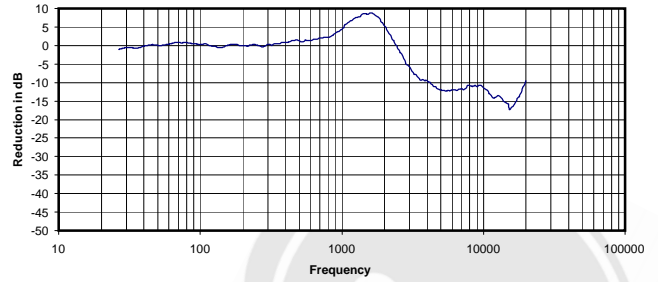
0.038 Vrms
34 Ohms
0.04 mW
-1 dB



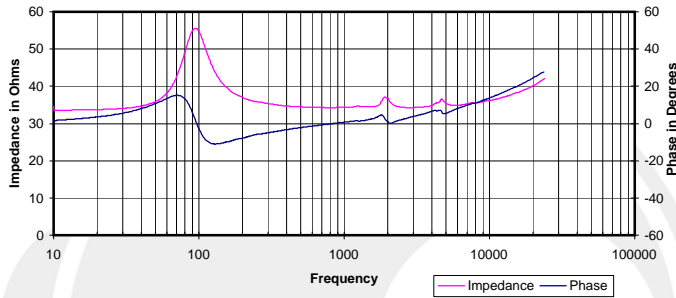
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



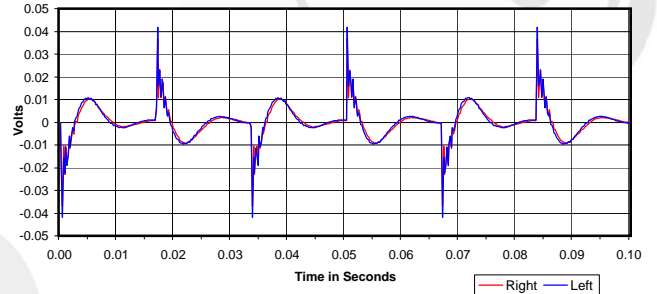
Isolation
 Attenuation of External Sound vs. Frequency



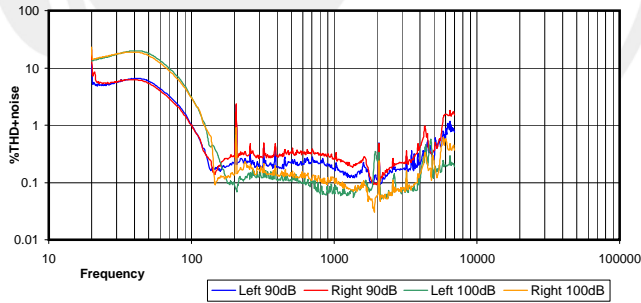
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



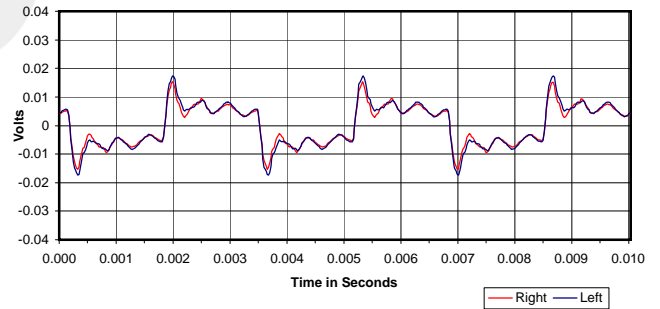
30 Hz Square Wave



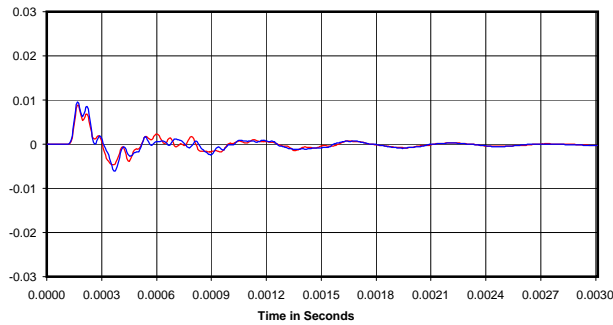
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

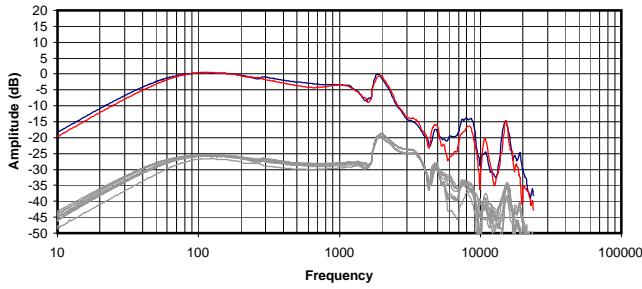


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

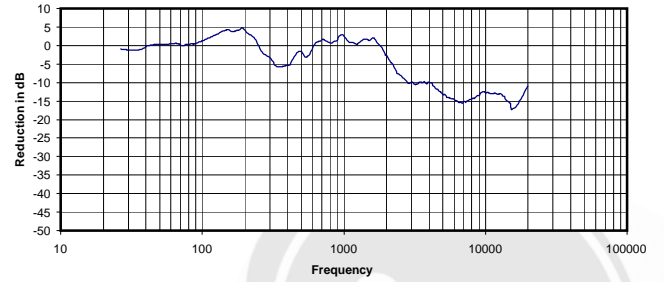
0.021 Vrms
 34 Ohms
 0.01 mW
 -1 dB



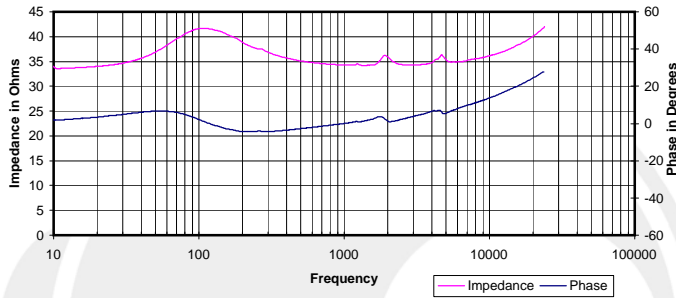
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



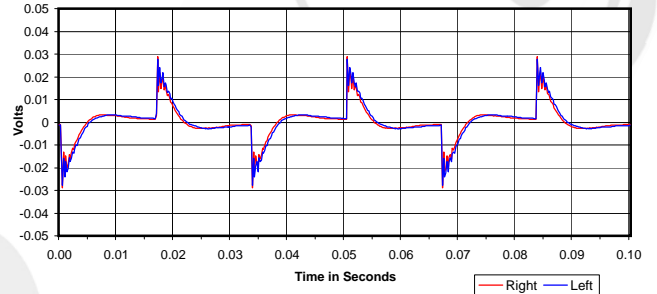
Isolation
 Attenuation of External Sound vs. Frequency



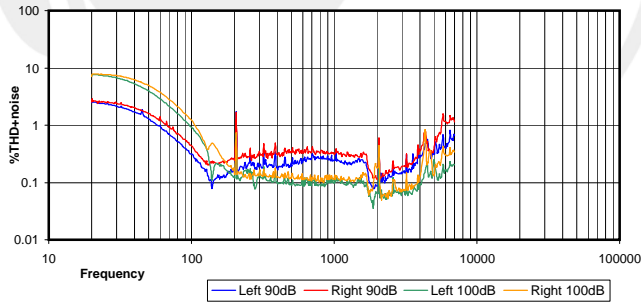
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



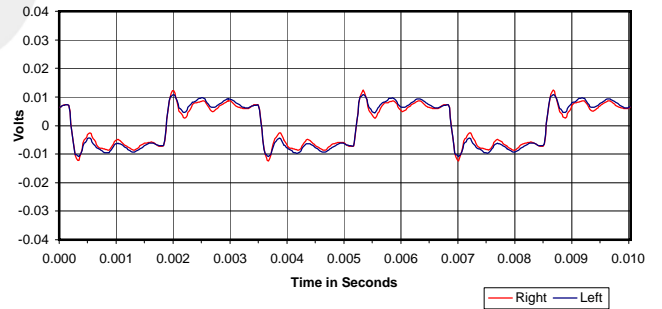
30 Hz Square Wave



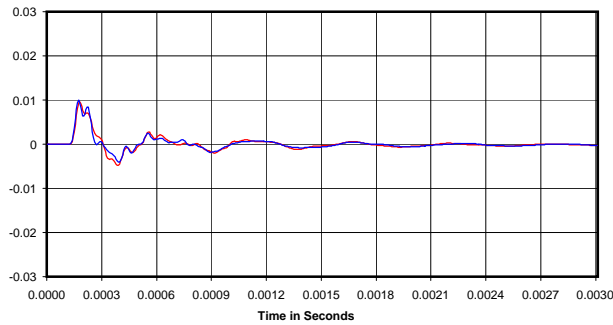
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

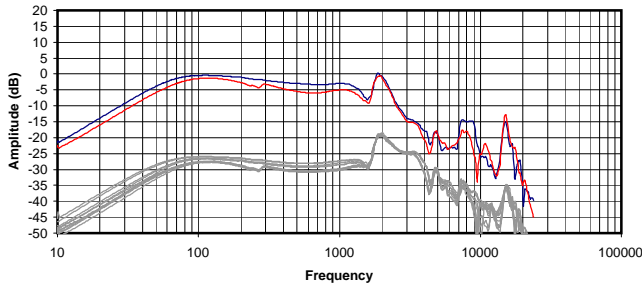


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

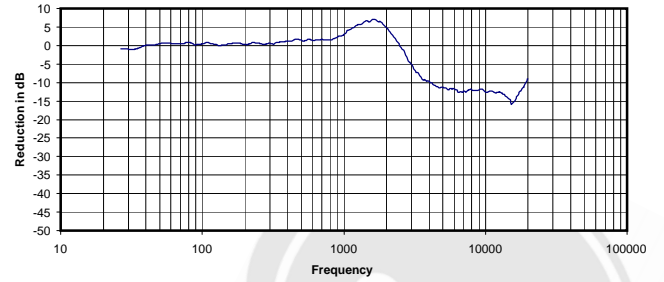
0.030 Vrms
 34 Ohms
 0.03 mW
 -4 dBr



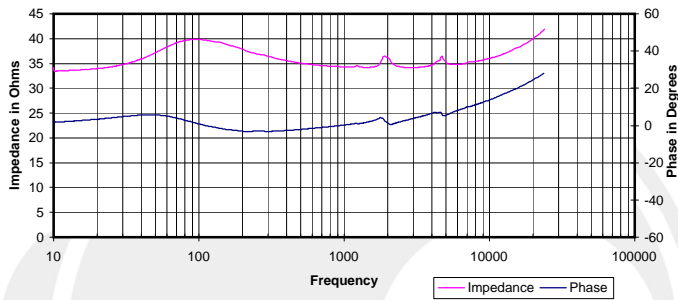
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



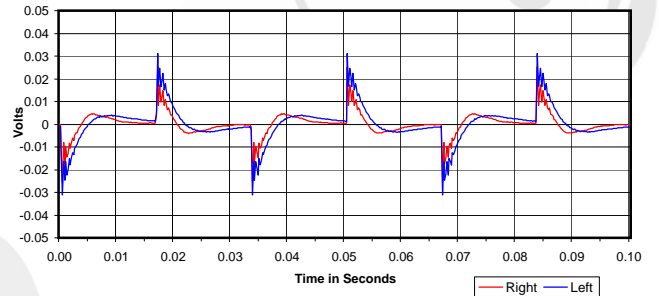
Isolation
 Attenuation of External Sound vs. Frequency



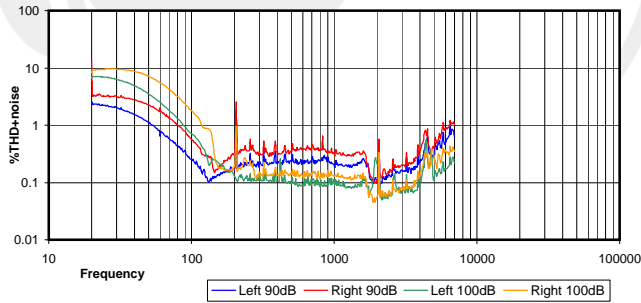
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



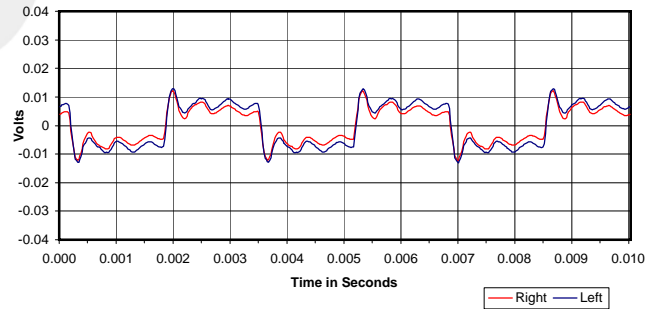
30 Hz Square Wave



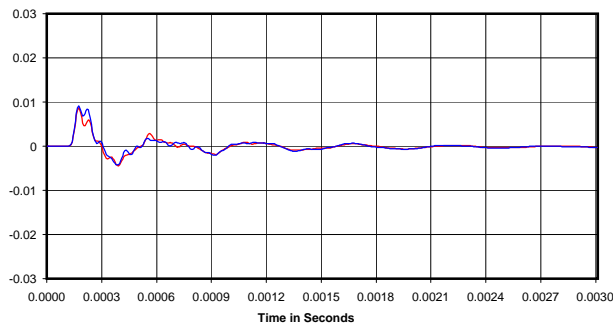
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

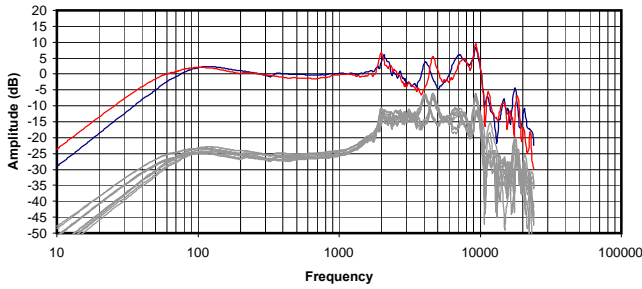


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

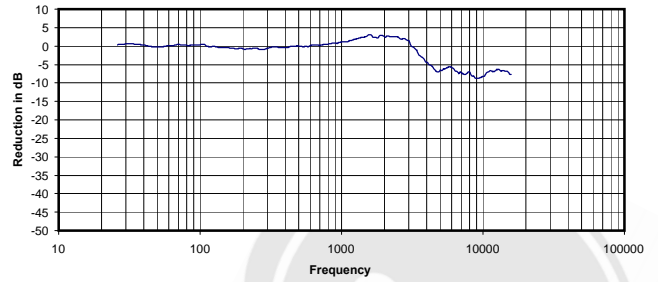
0.025 Vrms
 34 Ohms
 0.02 mW
 -2 dB



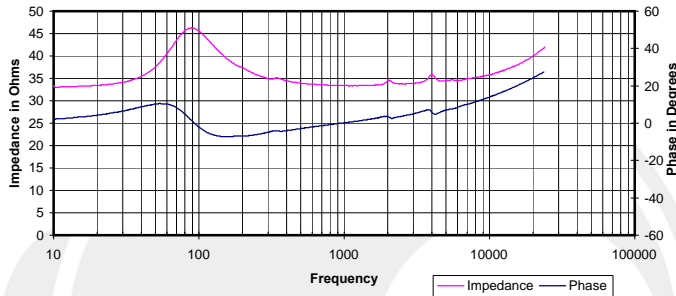
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



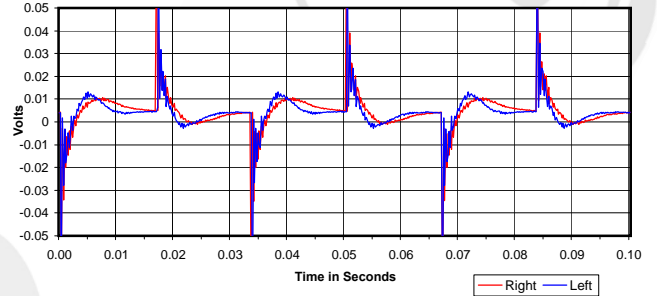
Isolation
Attenuation of External Sound vs. Frequency



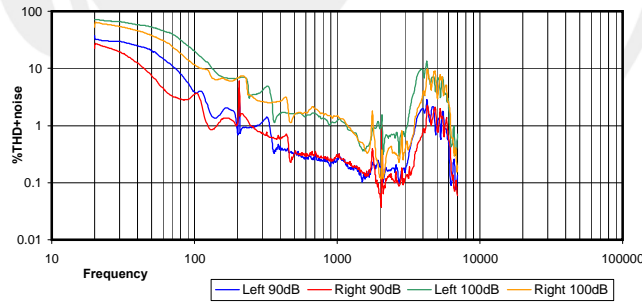
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



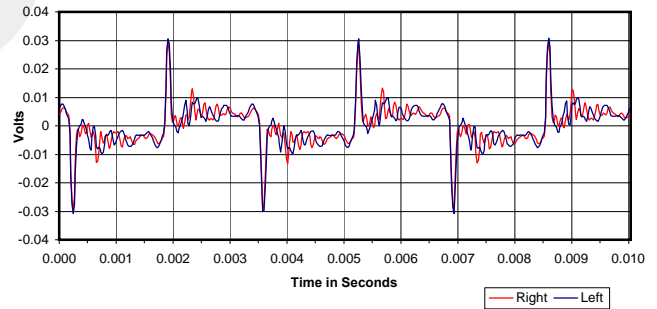
30 Hz Square Wave



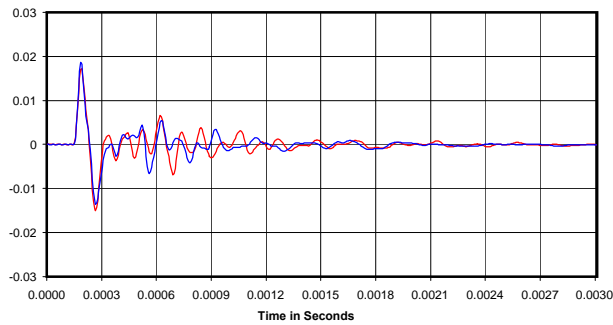
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

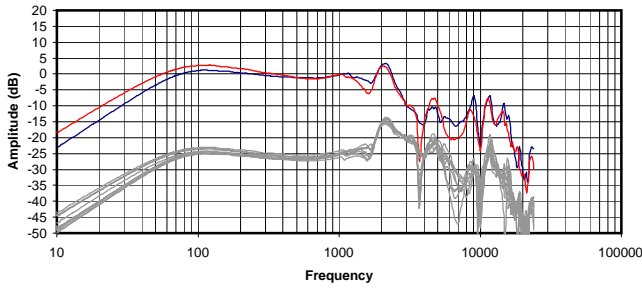


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

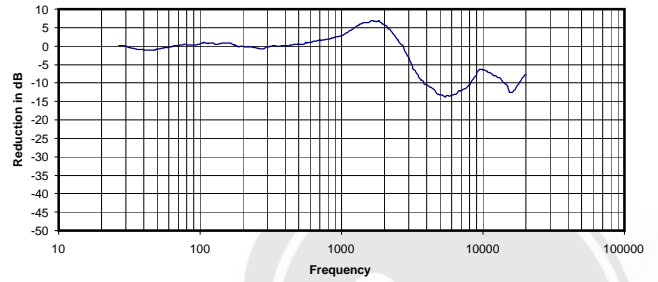
0.175 Vrms
33 Ohms
0.92 mW
0 dB



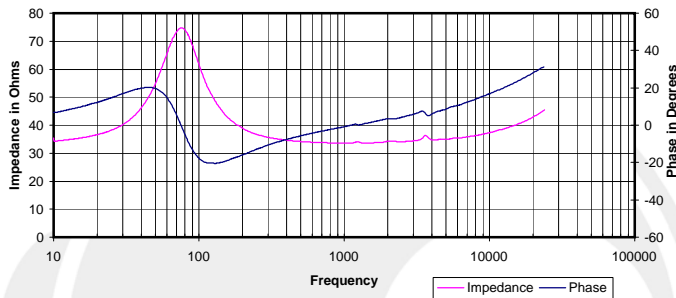
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



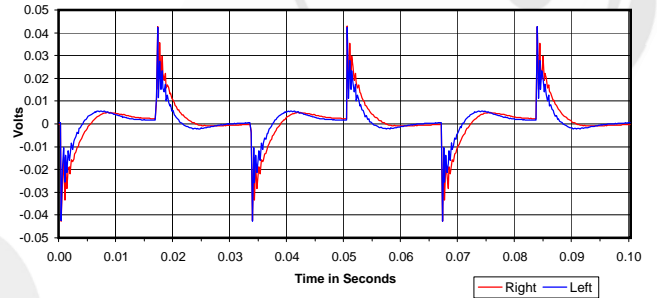
Isolation
 Attenuation of External Sound vs. Frequency



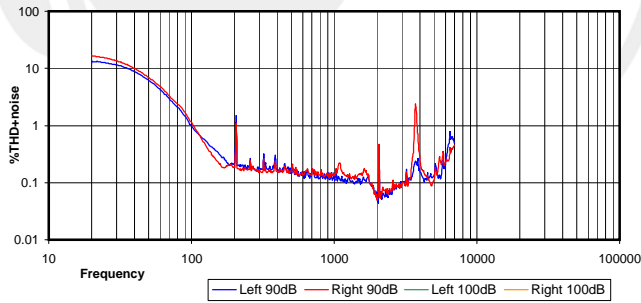
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



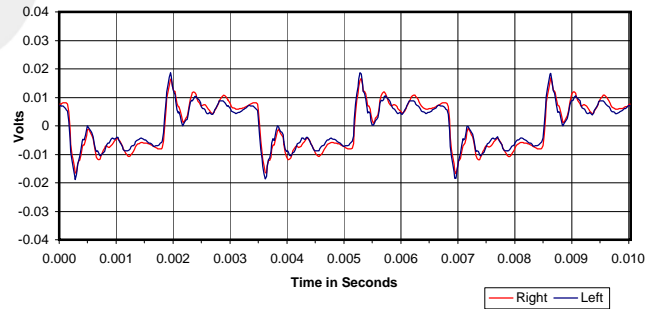
30 Hz Square Wave



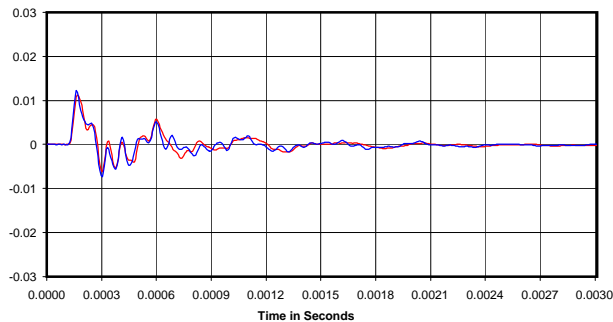
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

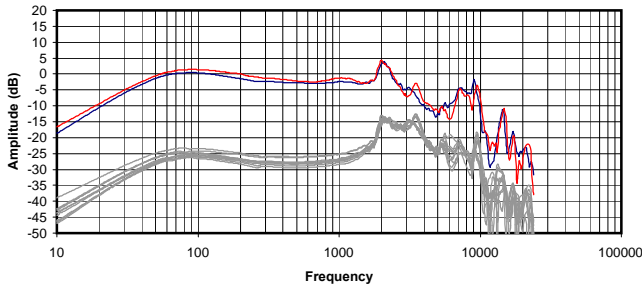


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

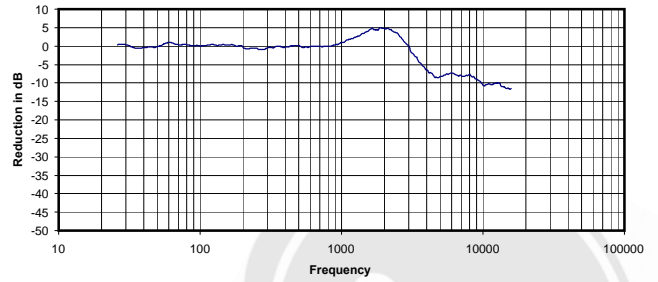
0.049 Vrms
 34 Ohms
 0.07 mW
 -2 dB



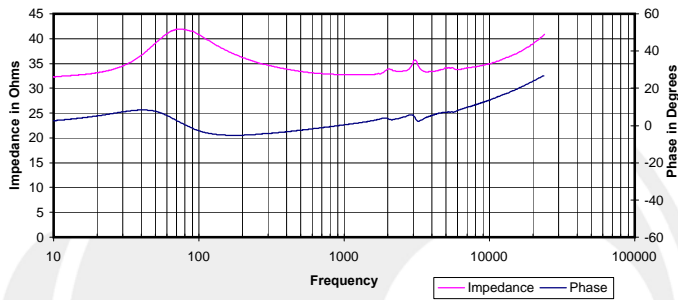
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



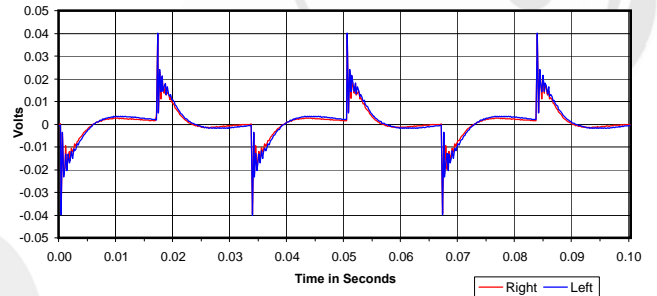
Isolation
 Attenuation of External Sound vs. Frequency



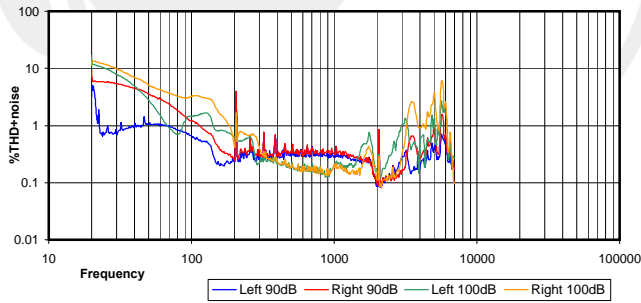
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



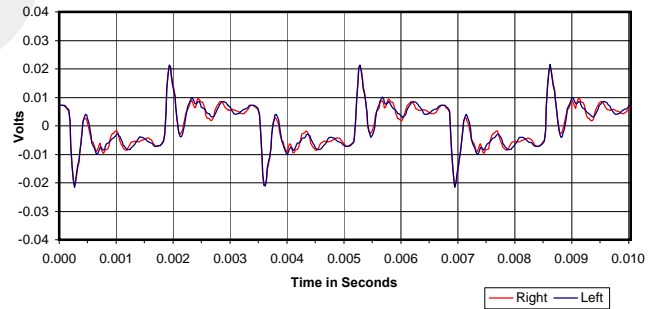
30 Hz Square Wave



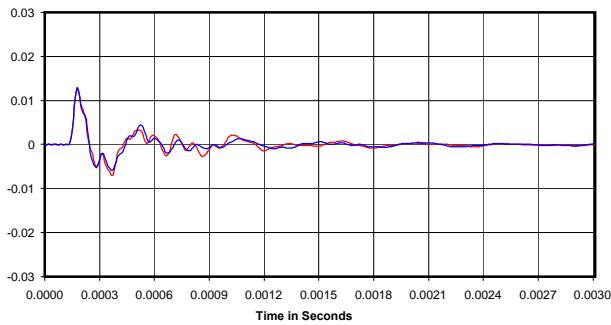
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

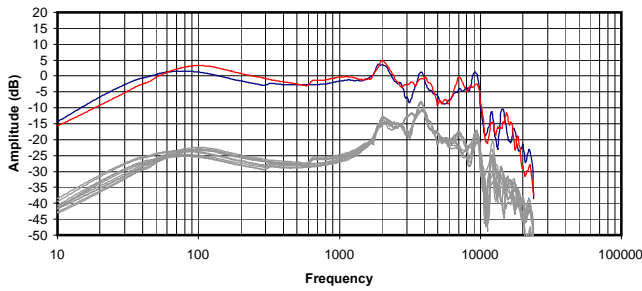


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

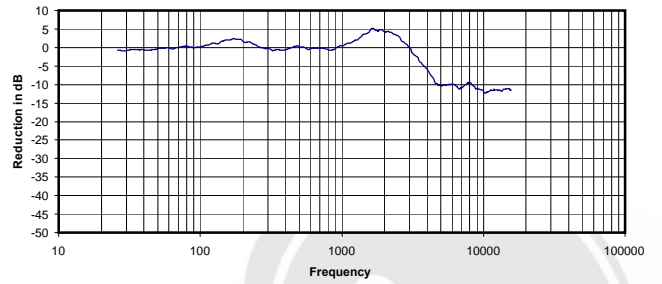
0.088 Vrms
 33 Ohms
 0.24 mW
 0 dB



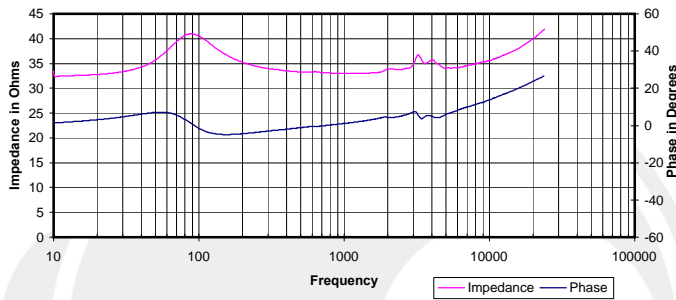
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



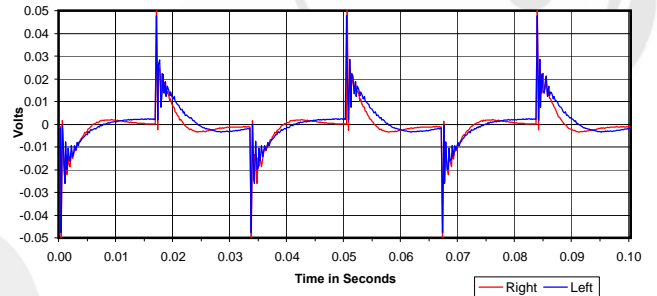
Isolation
Attenuation of External Sound vs. Frequency



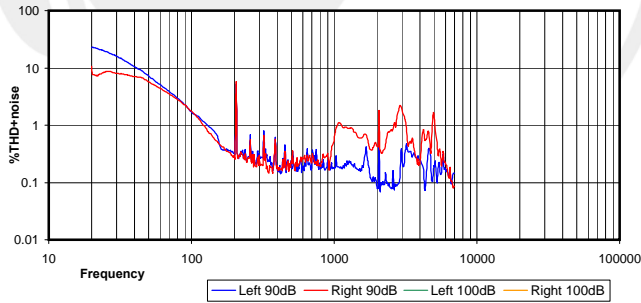
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



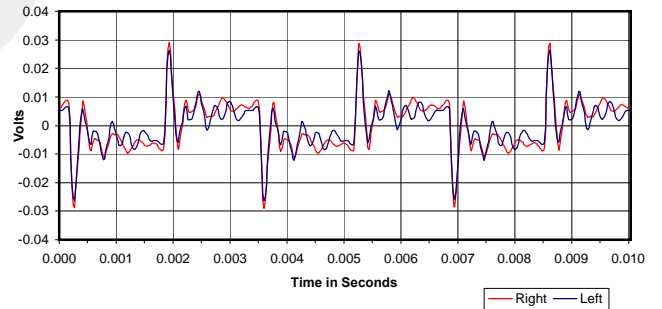
30 Hz Square Wave



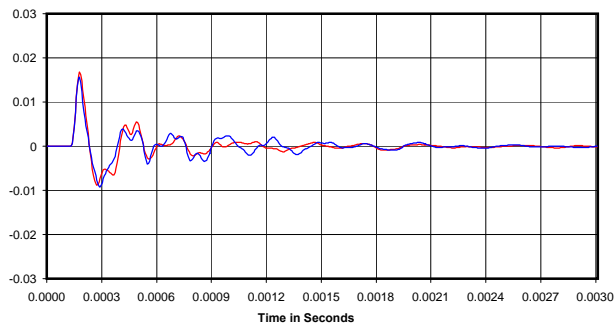
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

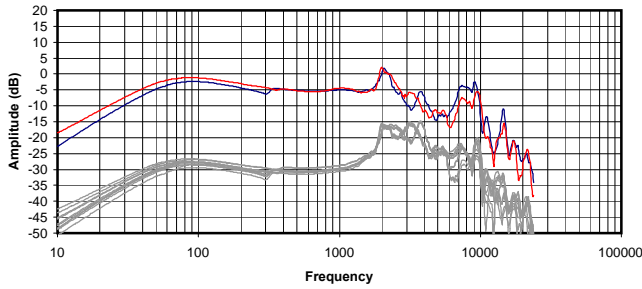


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

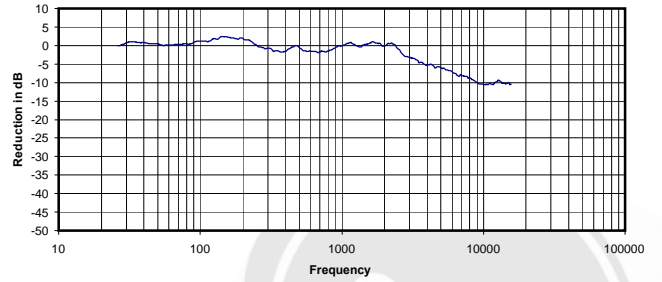
0.109 Vrms
33 Ohms
0.36 mW
0 dB



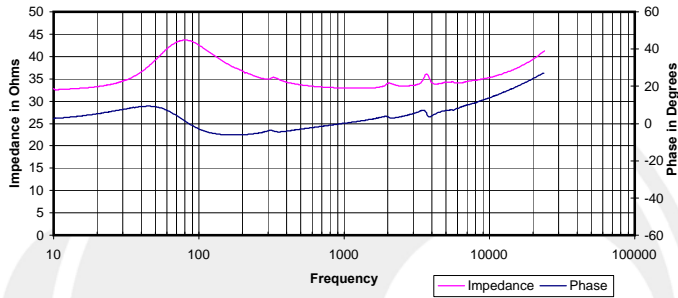
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



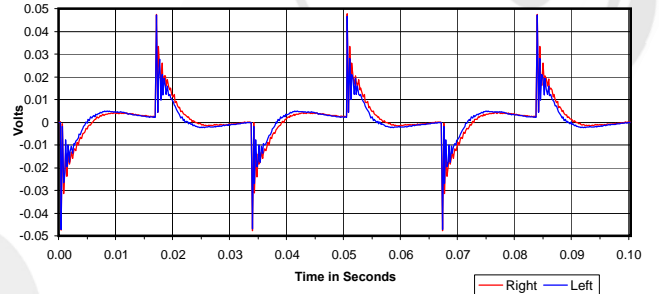
Isolation
Attenuation of External Sound vs. Frequency



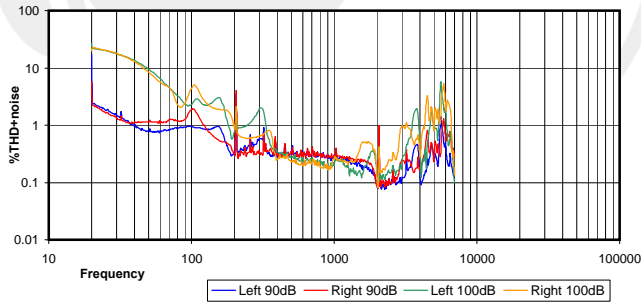
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



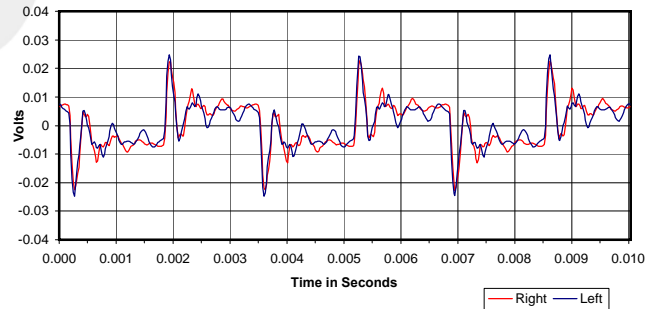
30 Hz Square Wave



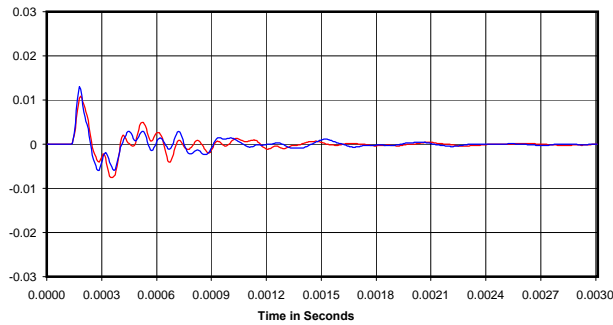
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



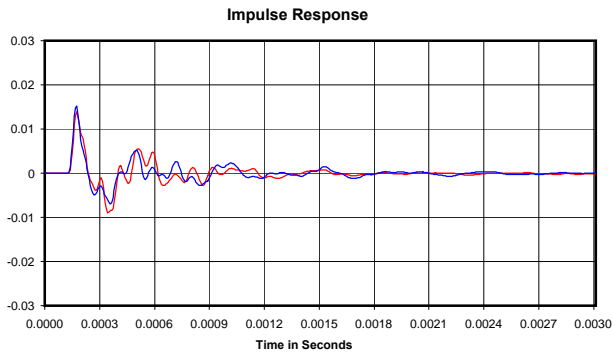
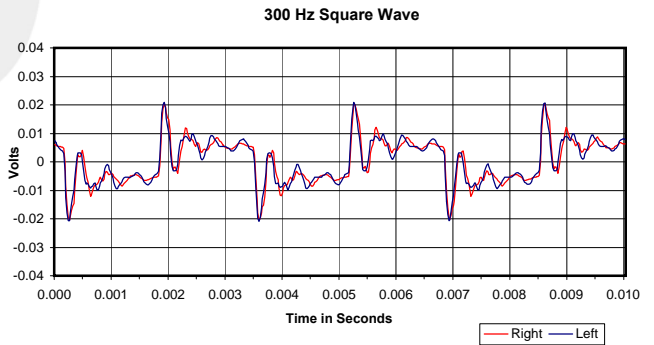
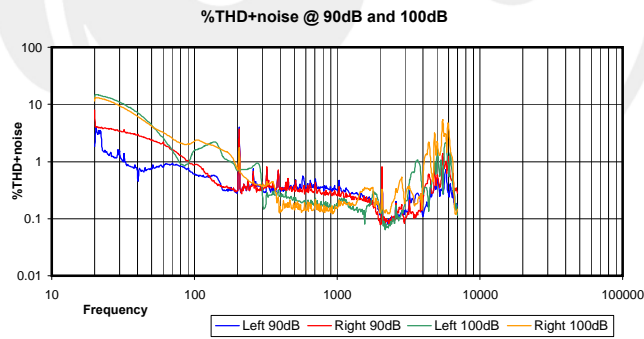
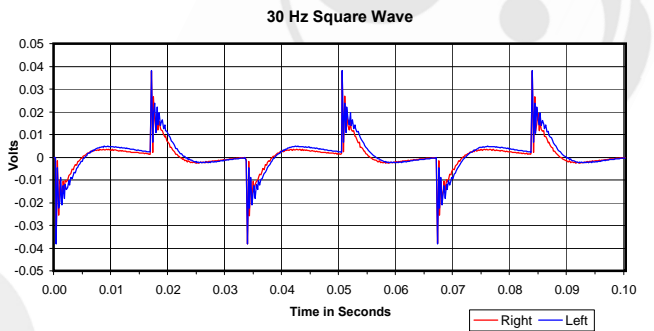
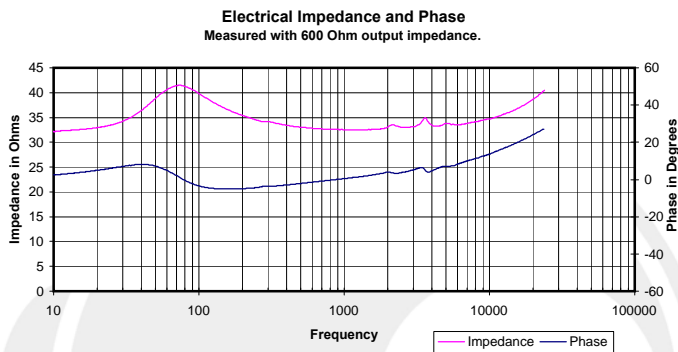
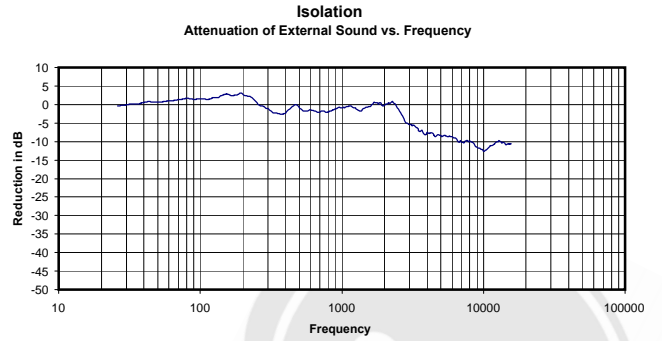
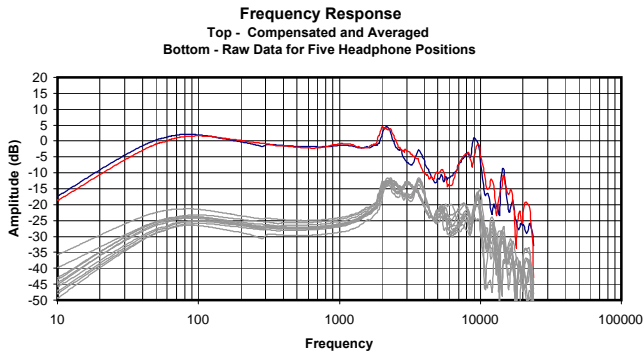
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.104 Vrms
33 Ohms
0.33 mW
-1 dB



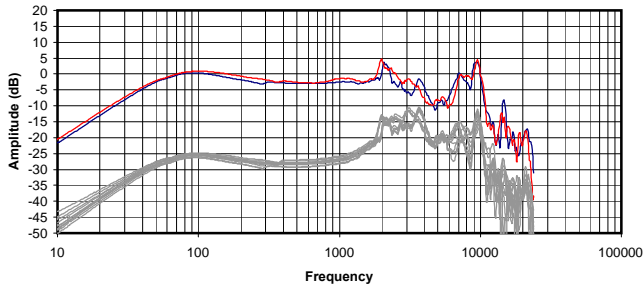


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

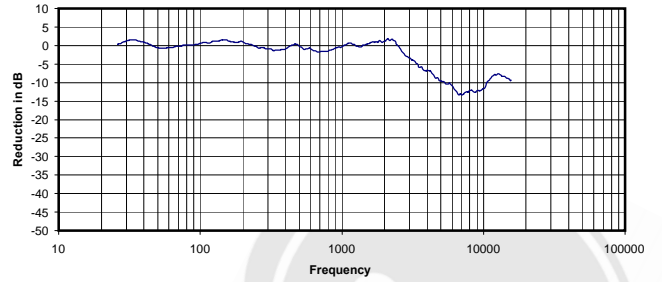
4.727 Vrms
33 Ohms
686.40 mW
-2 dB



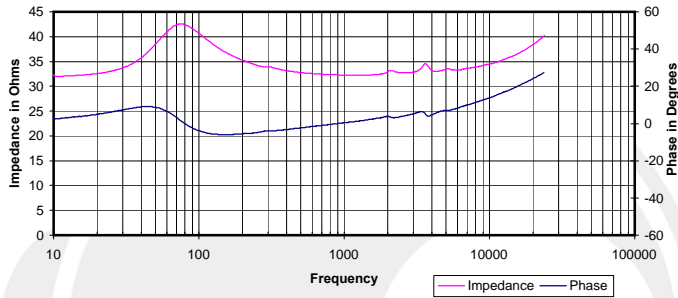
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



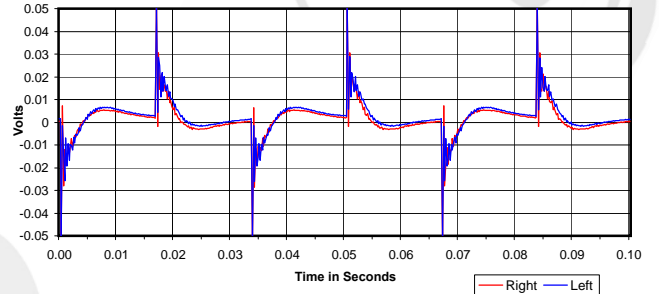
Isolation
Attenuation of External Sound vs. Frequency



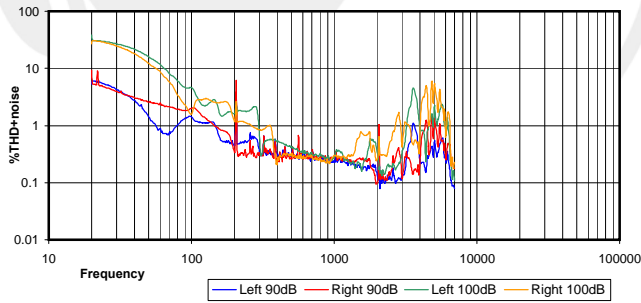
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



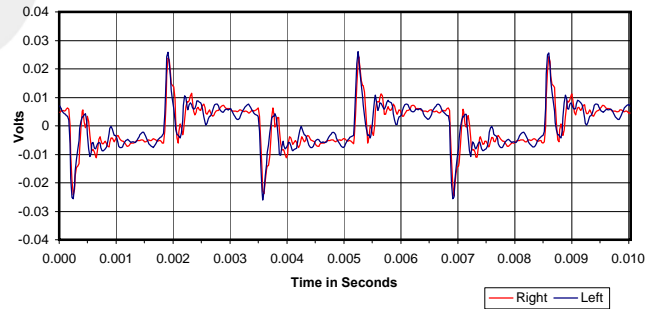
30 Hz Square Wave



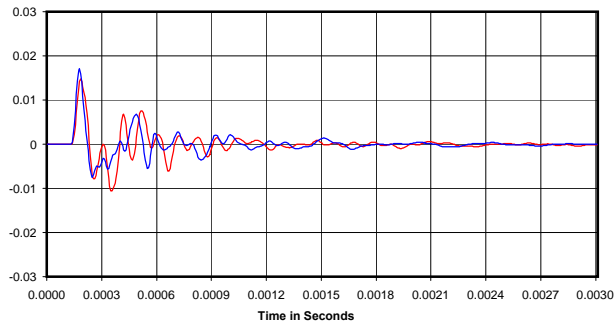
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

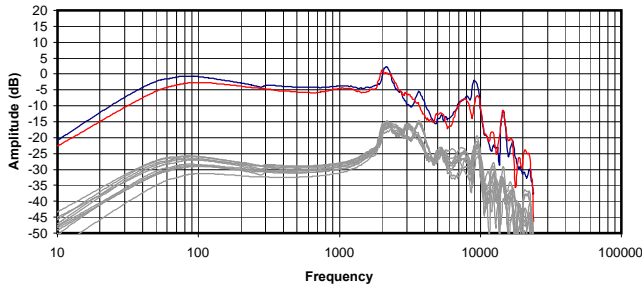


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

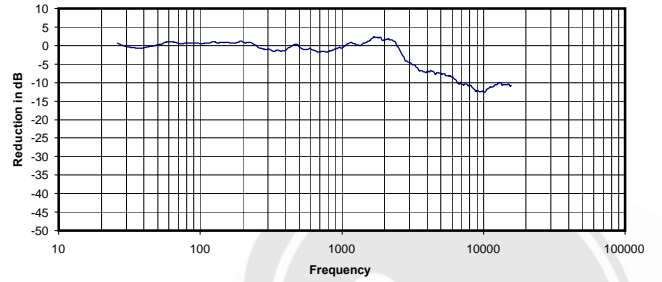
0.116 Vrms
32 Ohms
0.42 mW
-1 dB



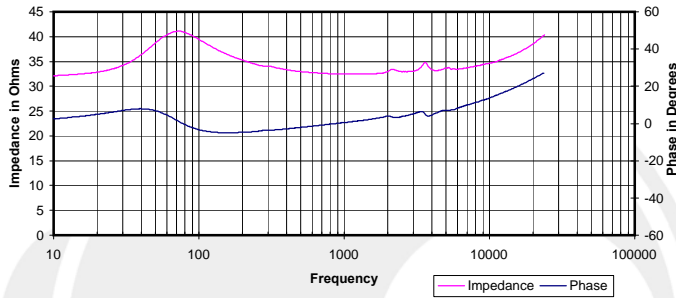
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



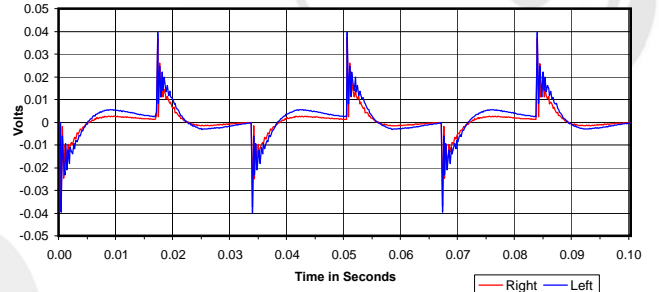
Isolation
 Attenuation of External Sound vs. Frequency



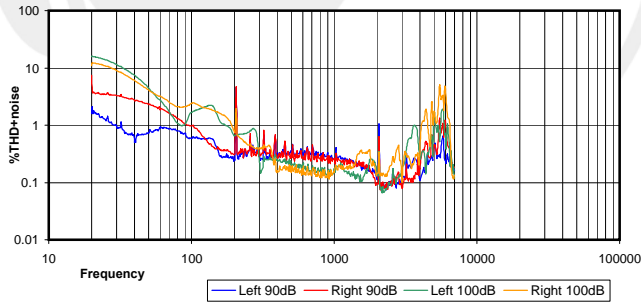
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



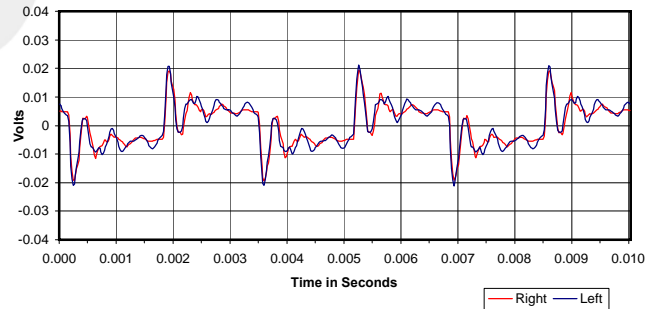
30 Hz Square Wave



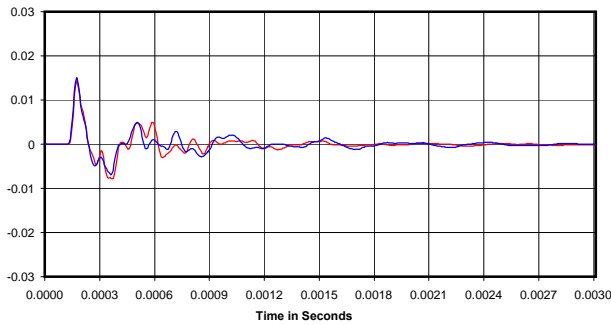
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

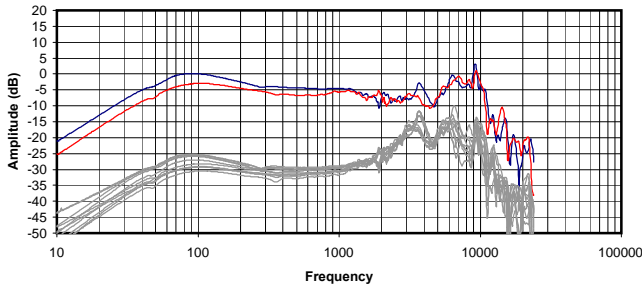


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

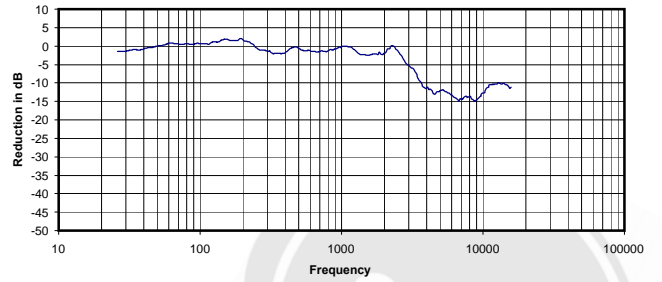
0.079 Vrms
 32 Ohms
 0.19 mW
 -1 dB



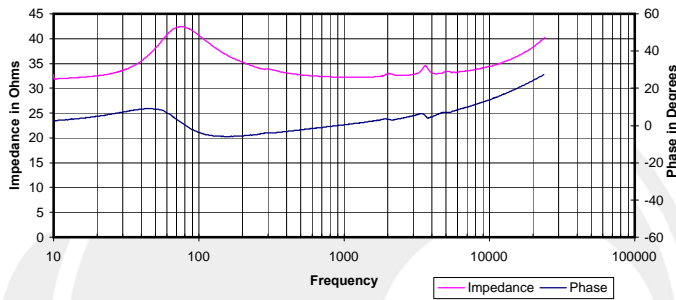
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



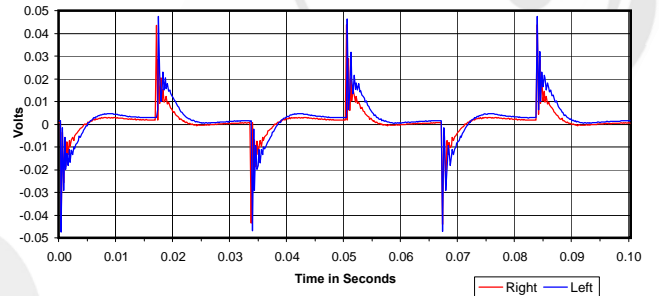
Isolation
Attenuation of External Sound vs. Frequency



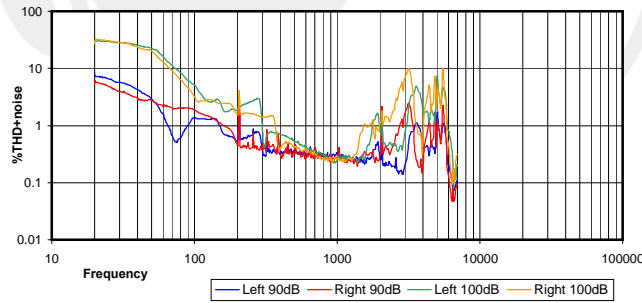
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



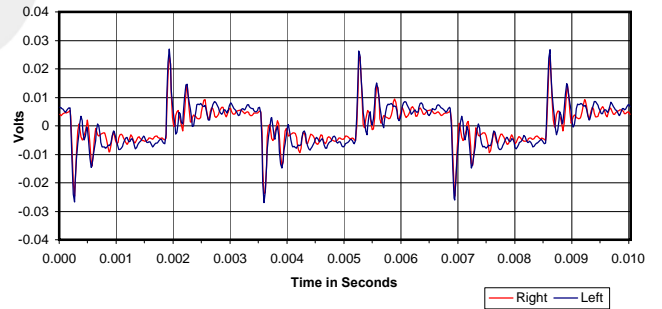
30 Hz Square Wave



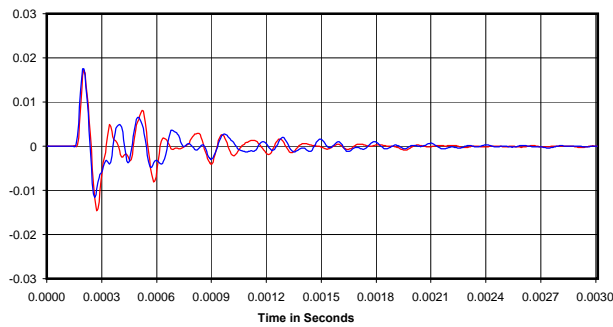
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

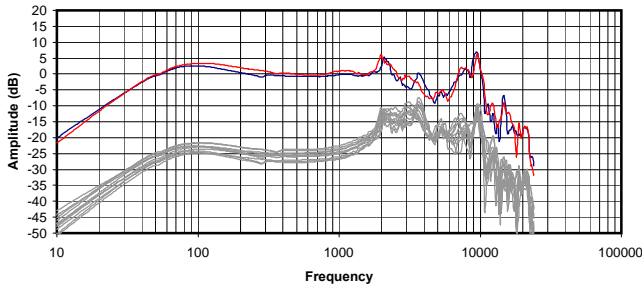


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

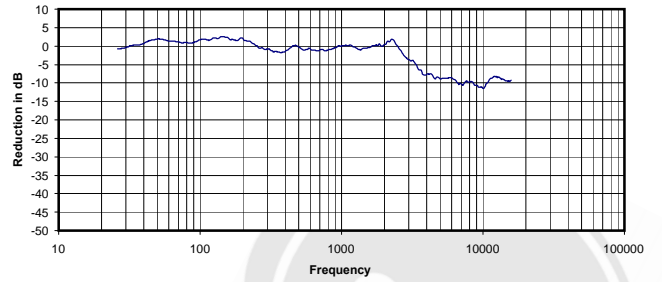
0.151 Vrms
32 Ohms
0.71 mW
-3 dB



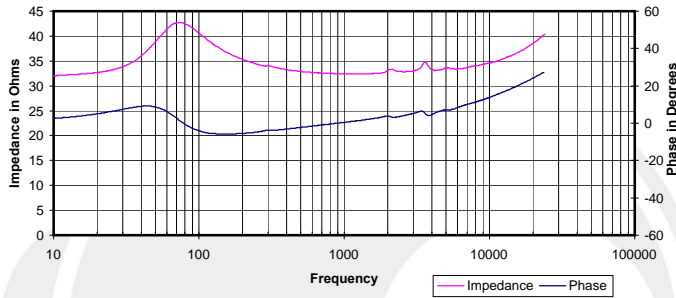
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



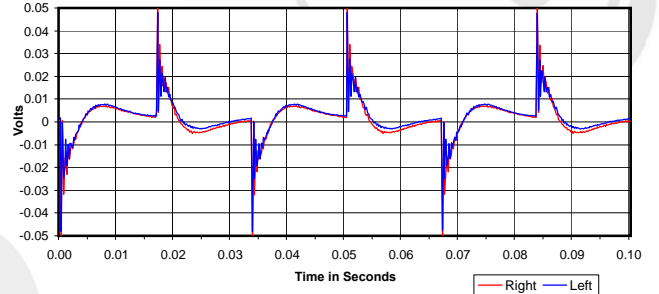
Isolation
 Attenuation of External Sound vs. Frequency



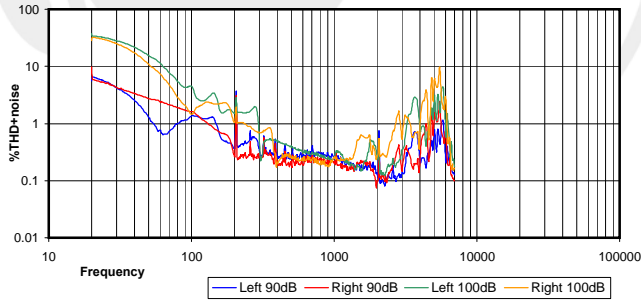
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



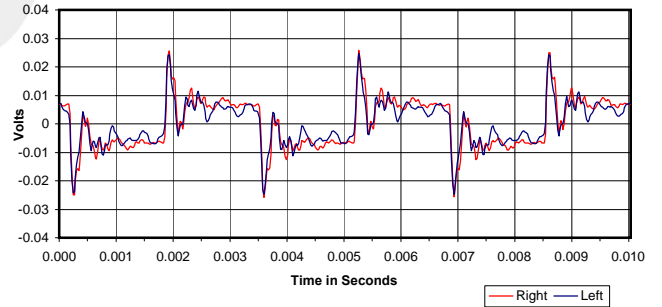
30 Hz Square Wave



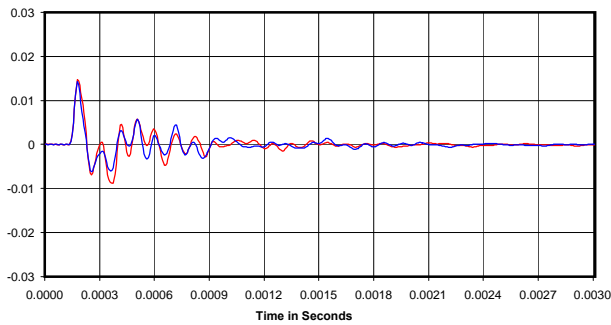
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

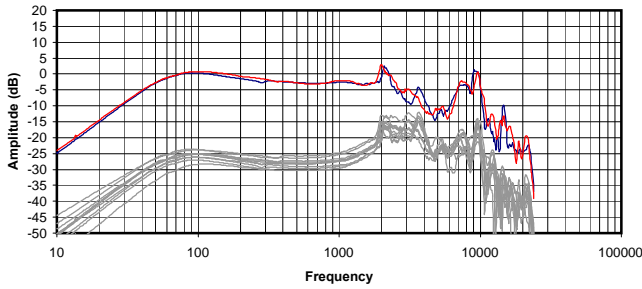


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

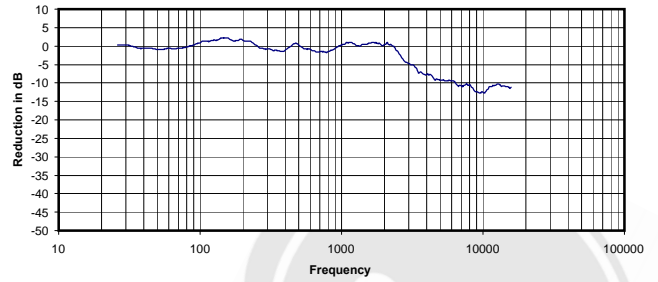
0.112 Vrms
 32 Ohms
 0.39 mW
 -1 dB



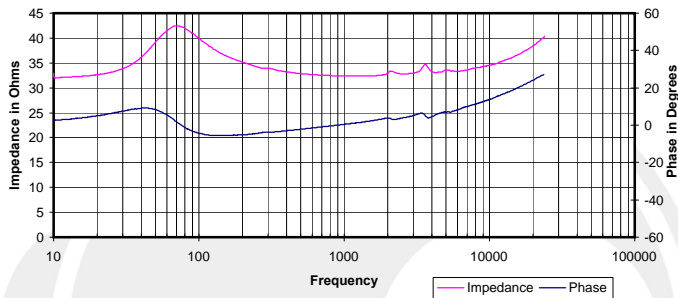
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



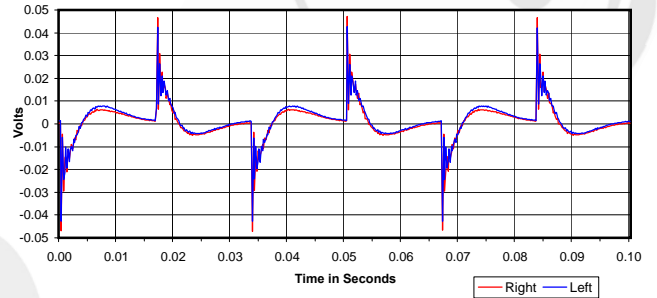
Isolation
 Attenuation of External Sound vs. Frequency



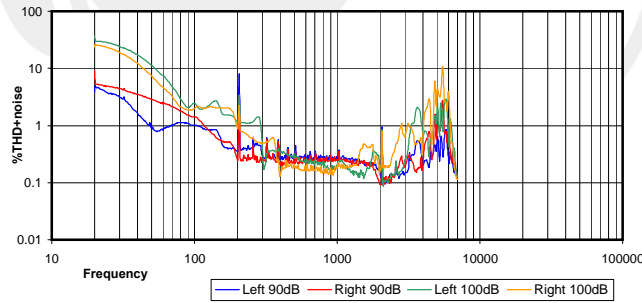
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



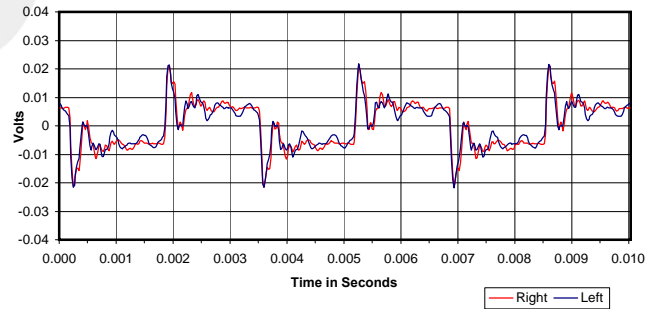
30 Hz Square Wave



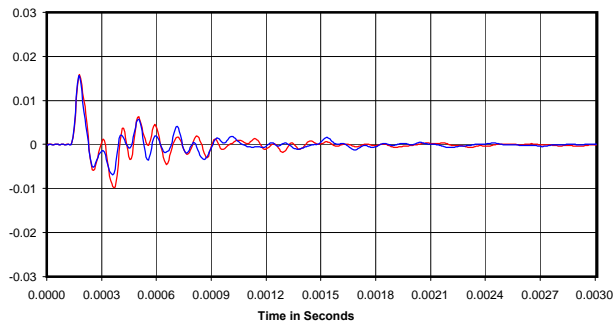
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

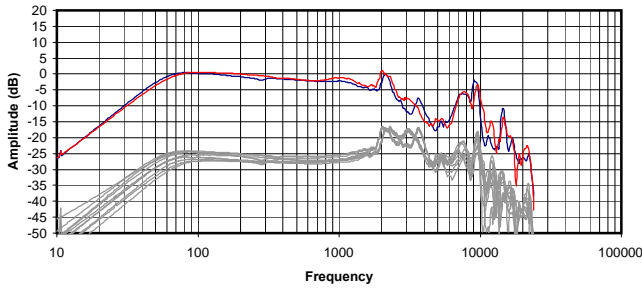


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

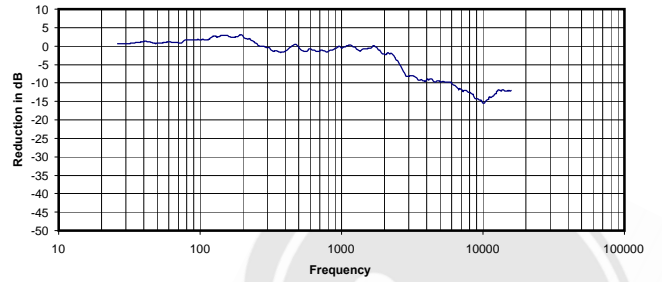
0.091 Vrms
 32 Ohms
 0.25 mW
 -1 dB



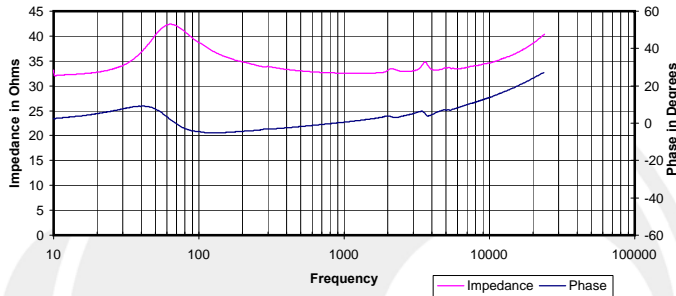
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



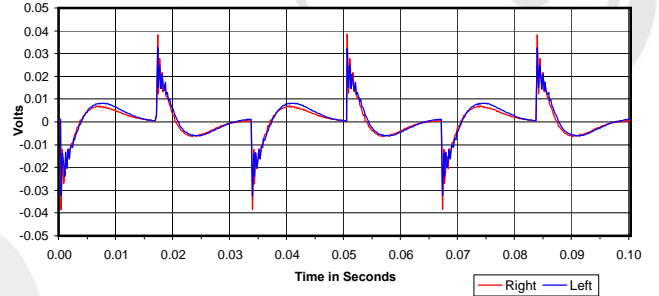
Isolation
 Attenuation of External Sound vs. Frequency



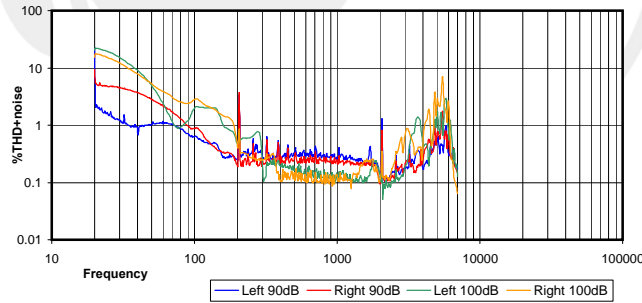
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



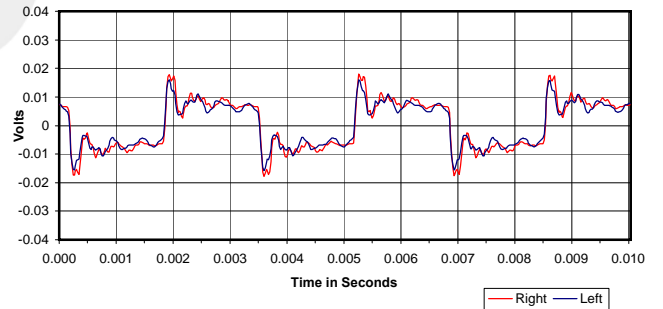
30 Hz Square Wave



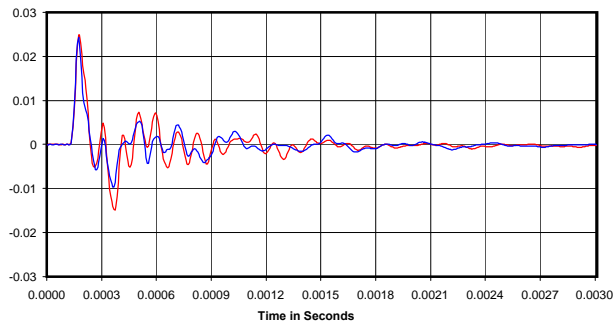
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

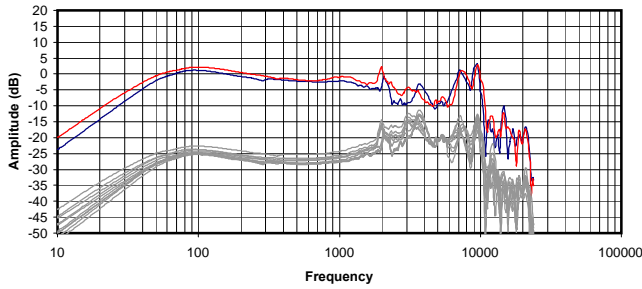


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

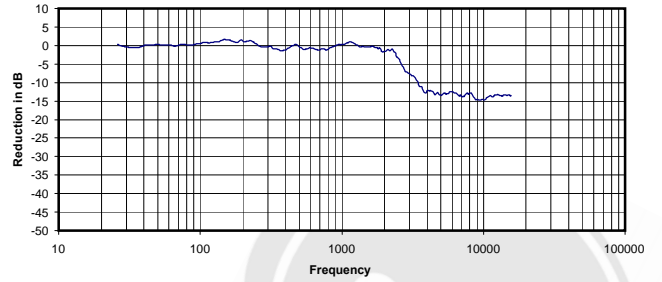
0.063 Vrms
 33 Ohms
 0.12 mW
 -2 dB



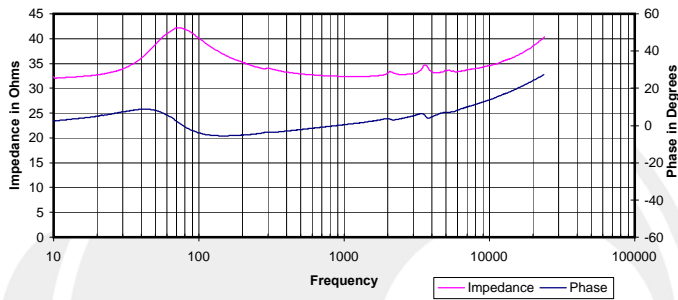
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



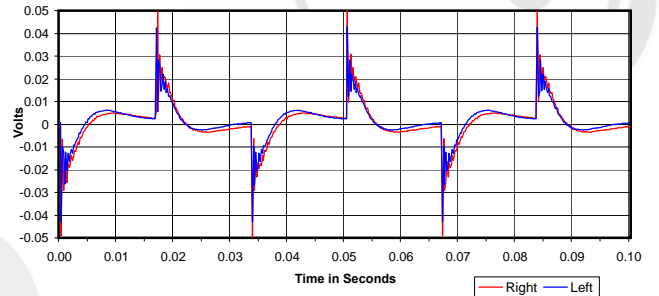
Isolation
 Attenuation of External Sound vs. Frequency



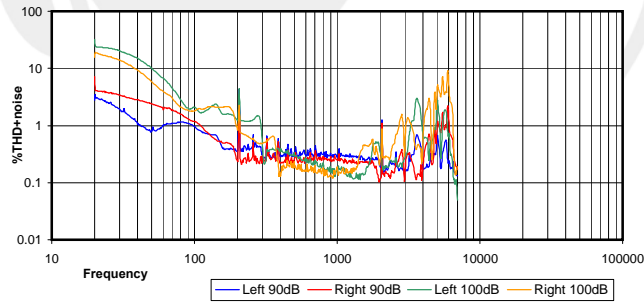
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



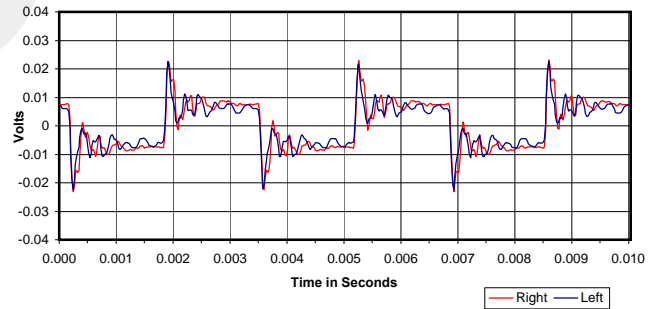
30 Hz Square Wave



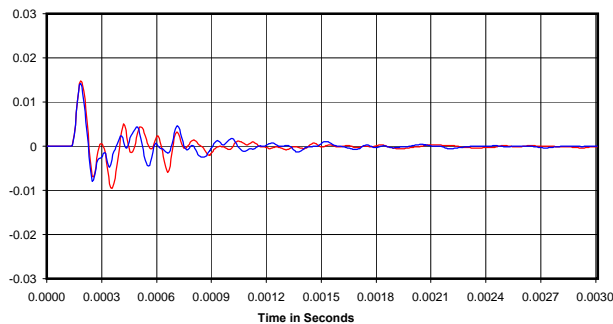
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

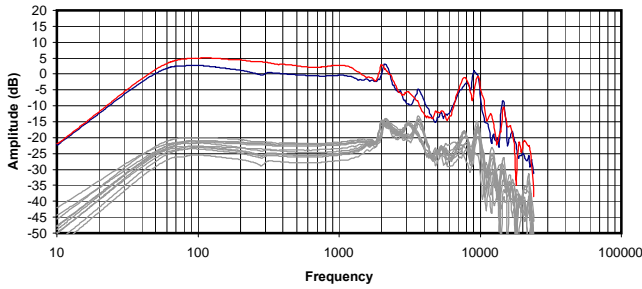


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

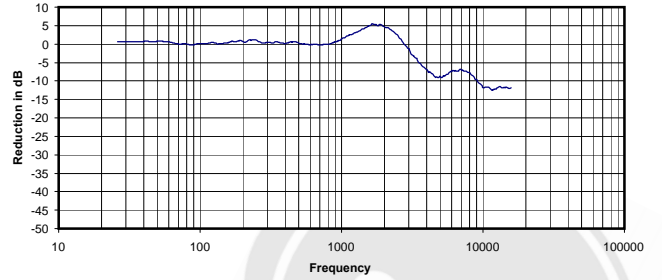
0.094 Vrms
 32 Ohms
 0.27 mW
 -3 dB



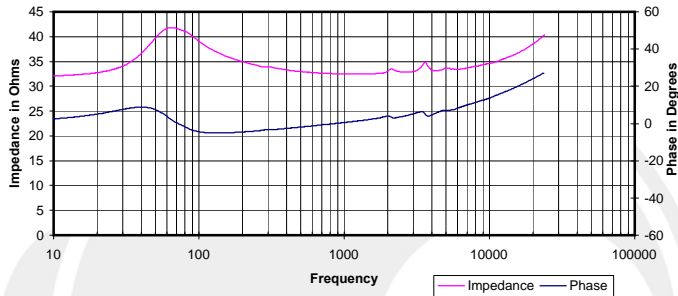
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



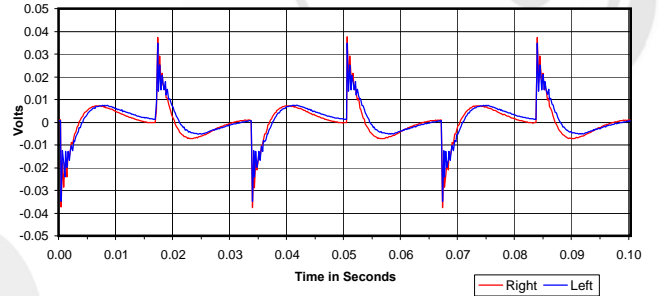
Isolation
 Attenuation of External Sound vs. Frequency



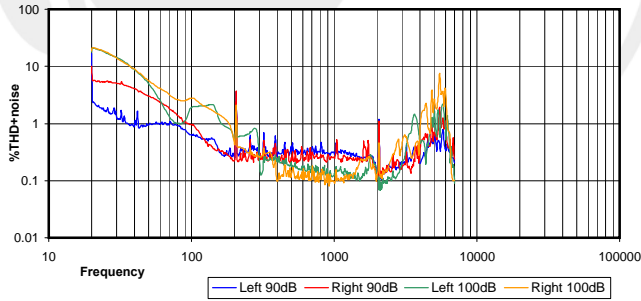
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



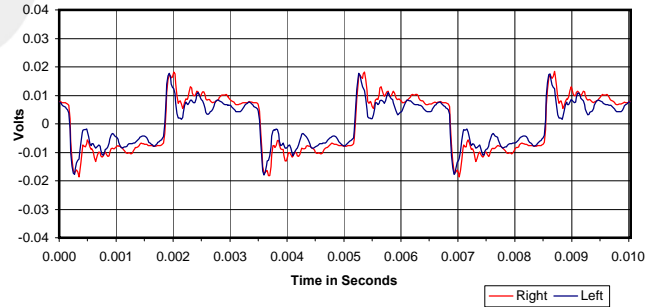
30 Hz Square Wave



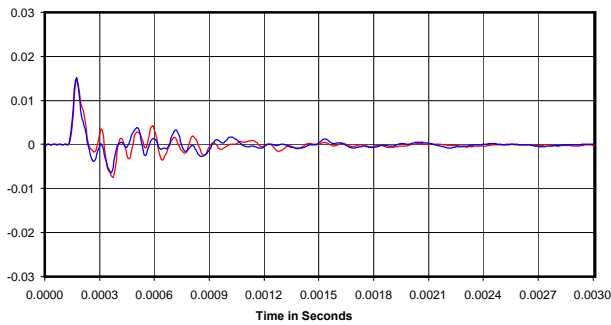
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

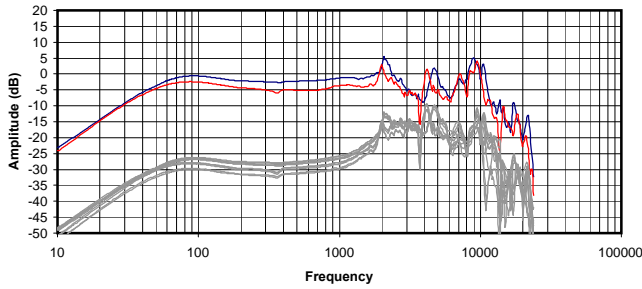


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

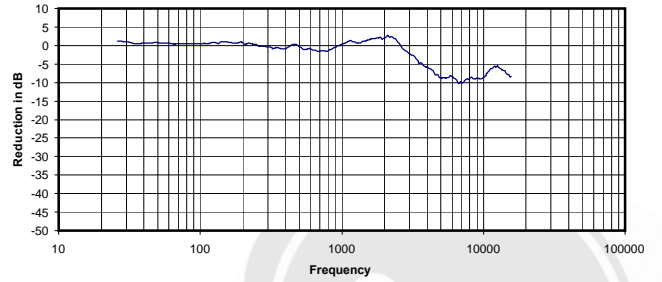
0.069 Vrms
 32 Ohms
 0.14 mW
 0 dB



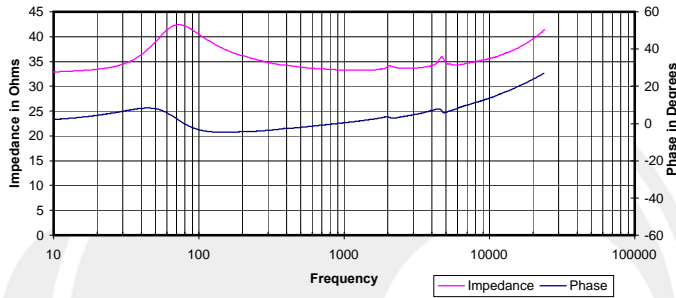
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



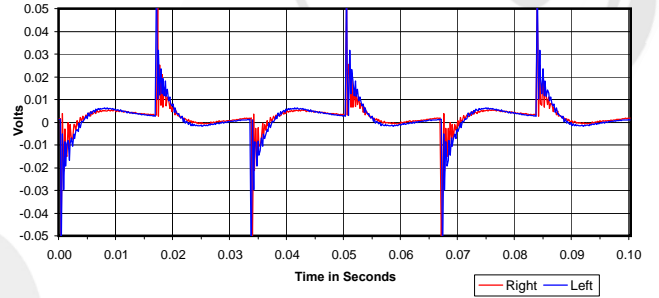
Isolation
 Attenuation of External Sound vs. Frequency



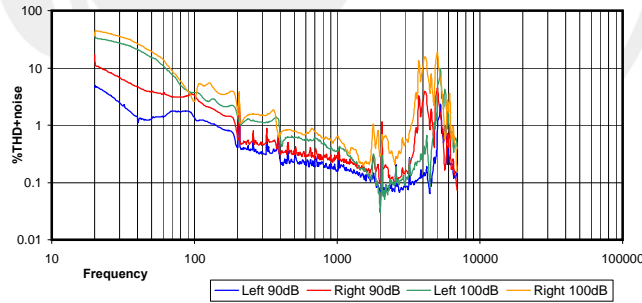
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



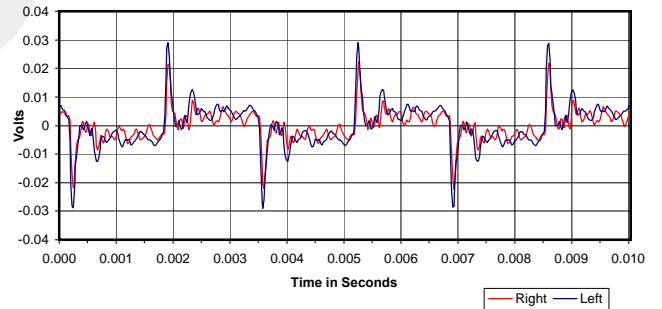
30 Hz Square Wave



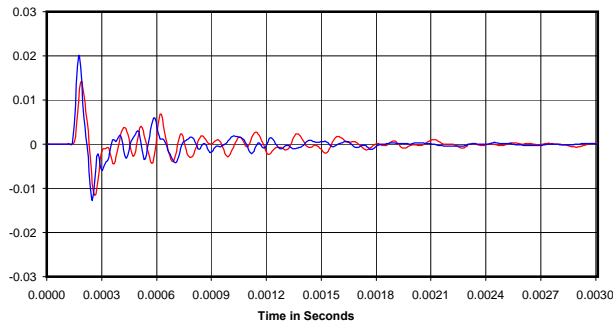
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

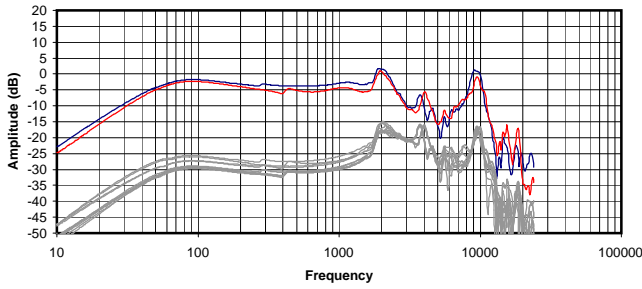


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

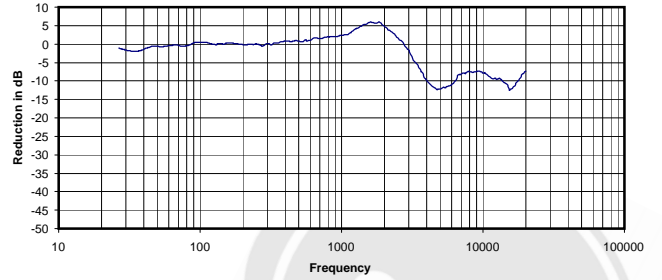
0.120 Vrms
 33 Ohms
 0.43 mW
 -1 dB



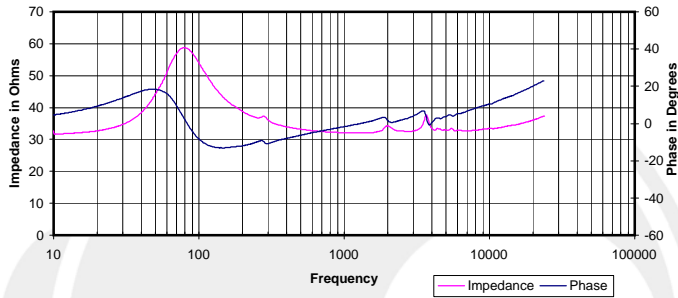
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



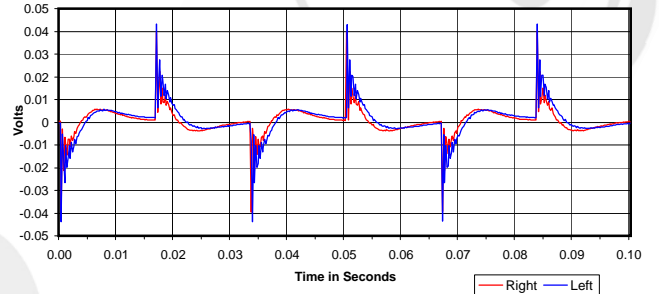
Isolation
Attenuation of External Sound vs. Frequency



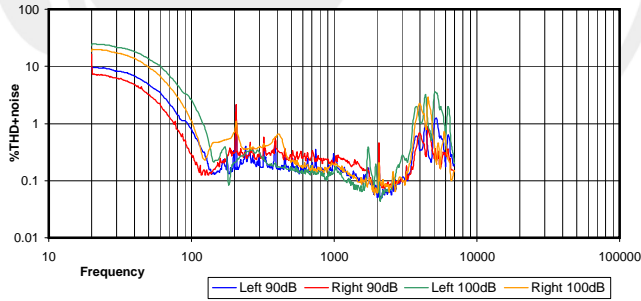
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



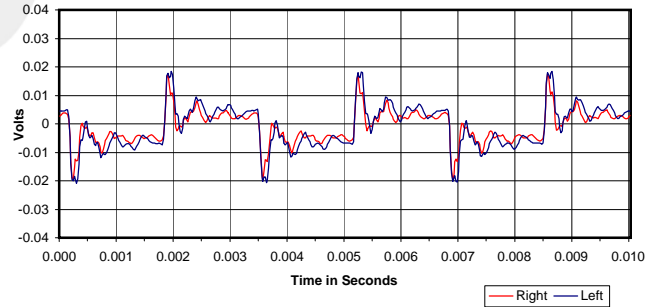
30 Hz Square Wave



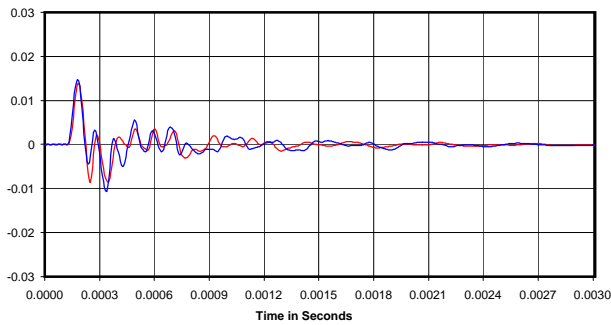
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

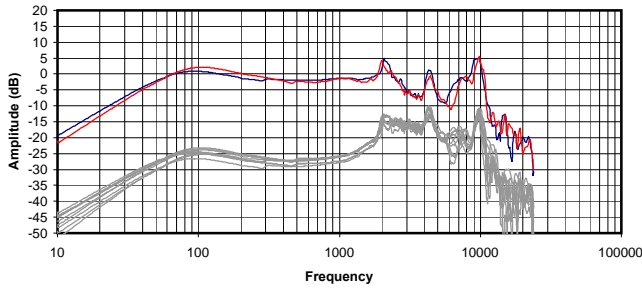


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

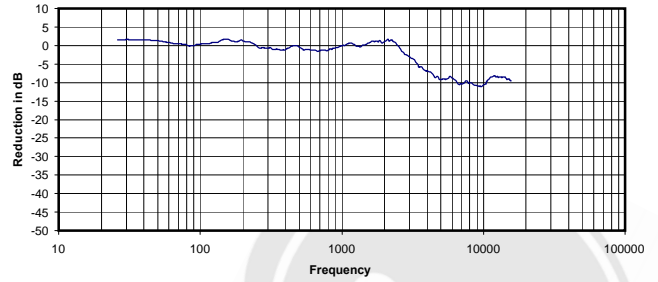
0.042 Vrms
32 Ohms
0.06 mW
-1 dB



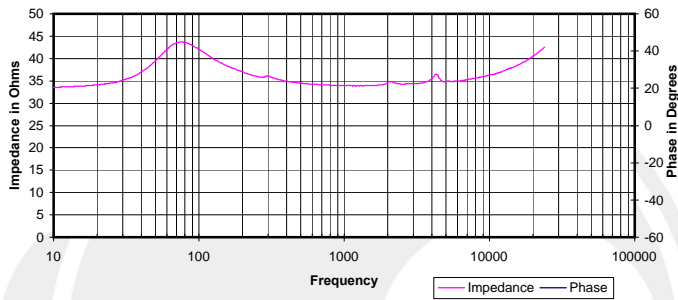
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



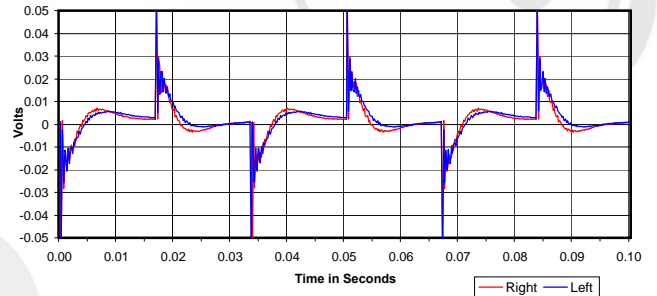
Isolation
Attenuation of External Sound vs. Frequency



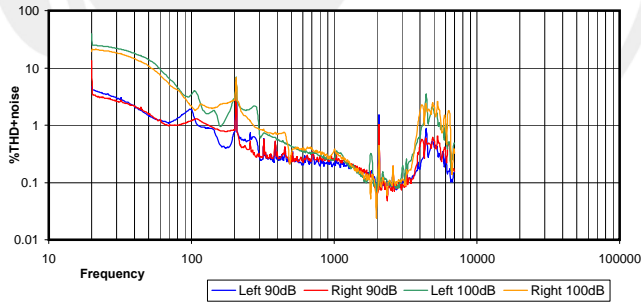
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



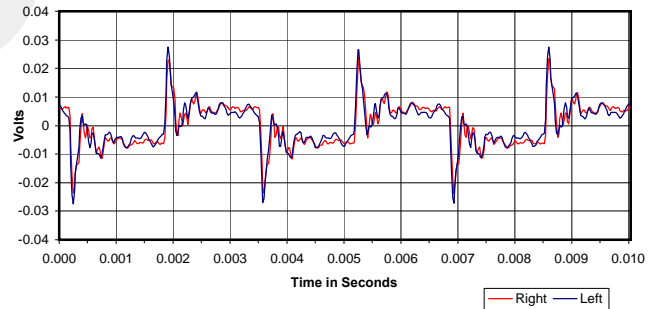
30 Hz Square Wave



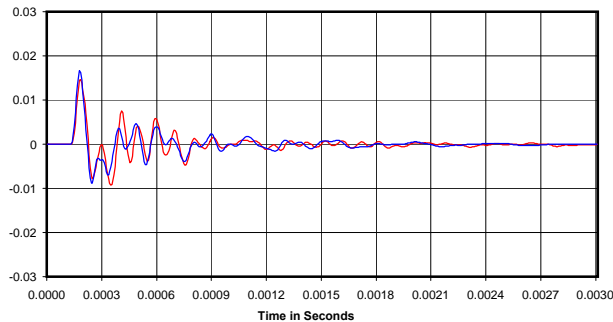
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

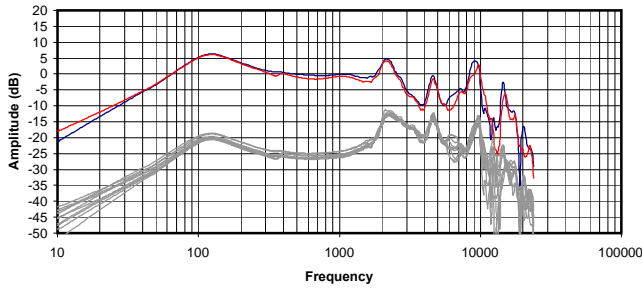


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

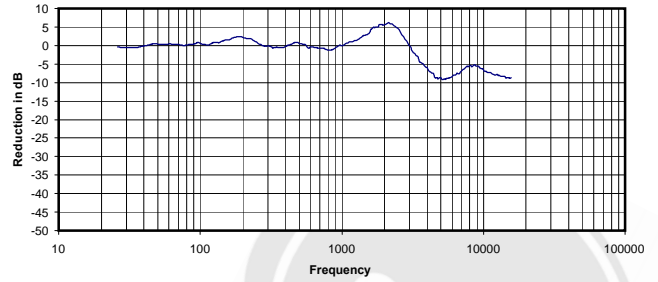
0.112 Vrms
34 Ohms
0.37 mW
-1 dB



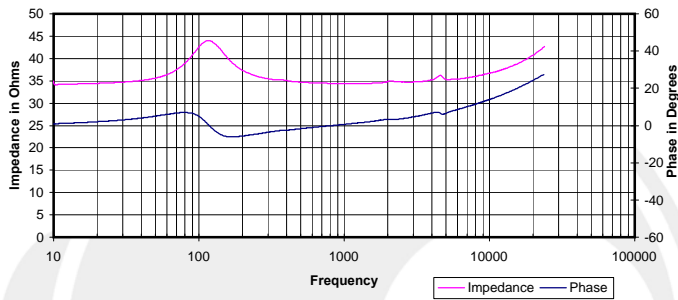
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



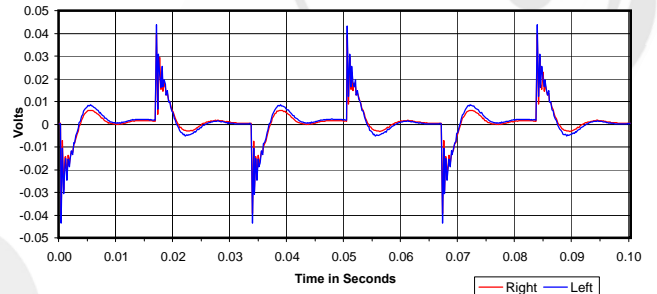
Isolation
 Attenuation of External Sound vs. Frequency



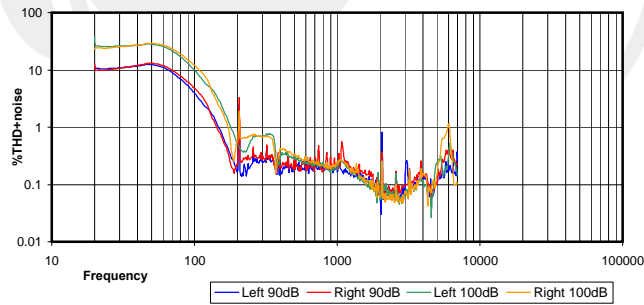
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



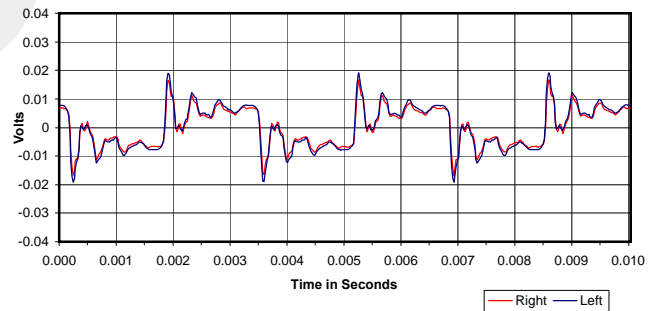
30 Hz Square Wave



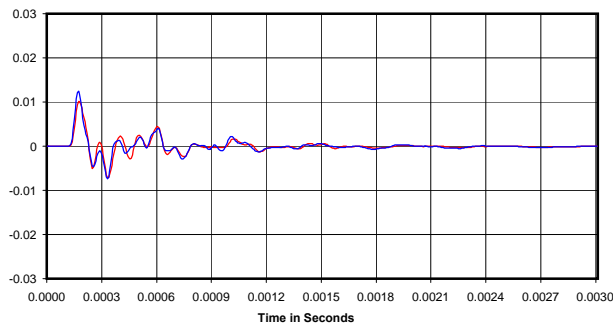
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

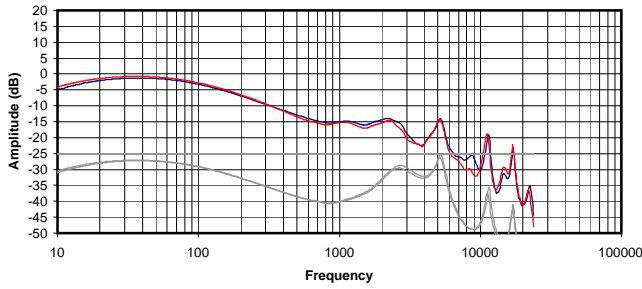


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

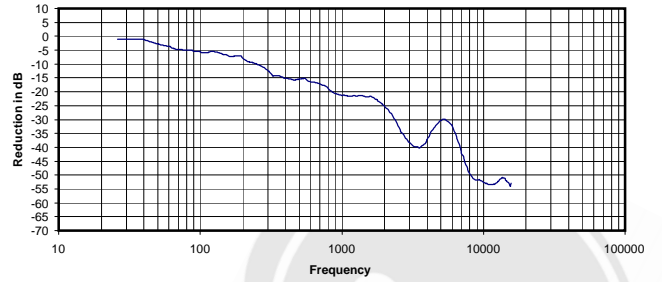
0.094 Vrms
 34 Ohms
 0.25 mW
 0 dBr



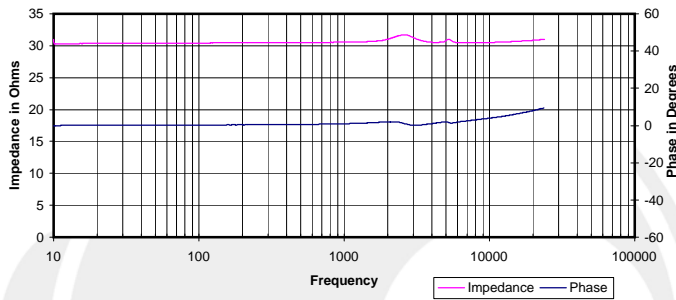
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



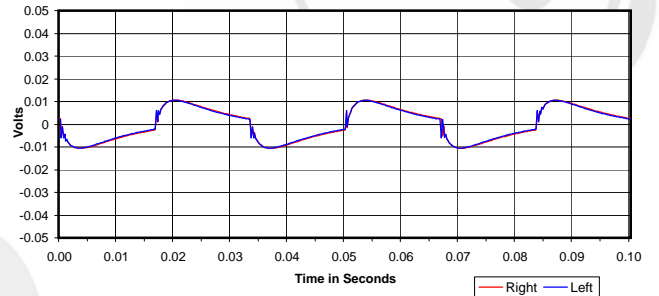
Isolation
Attenuation of External Sound vs. Frequency



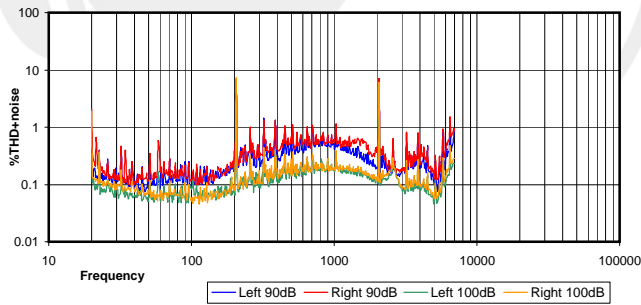
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



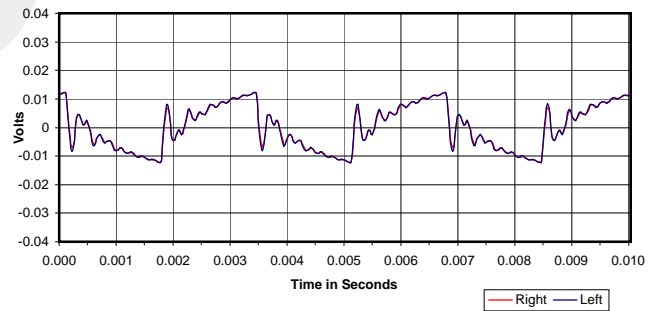
30 Hz Square Wave



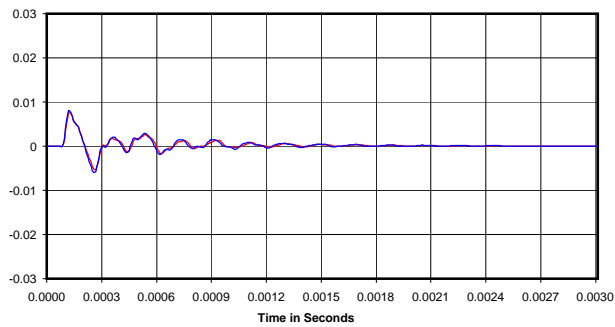
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

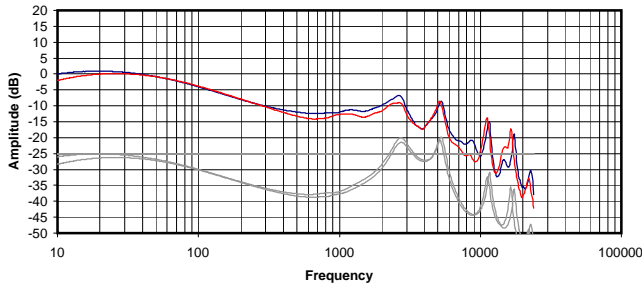


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

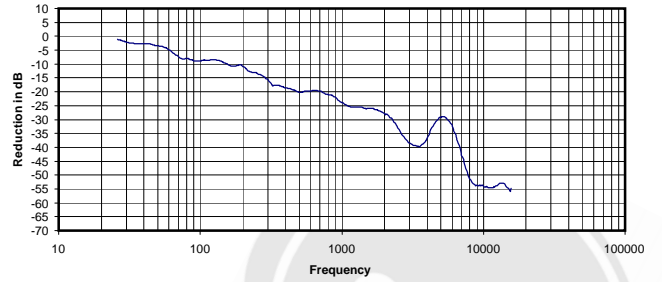
0.043 Vrms
31 Ohms
0.06 mW
-19 dB



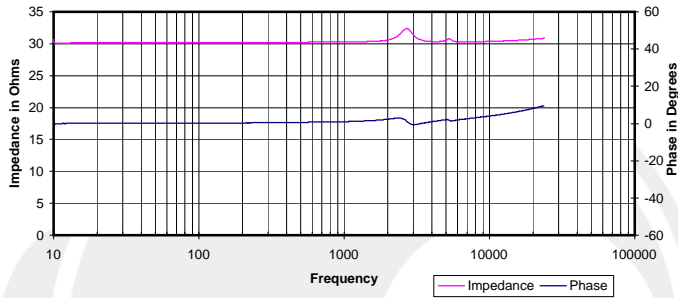
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



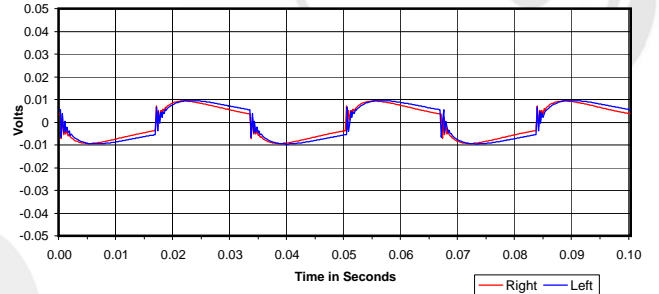
Isolation
Attenuation of External Sound vs. Frequency



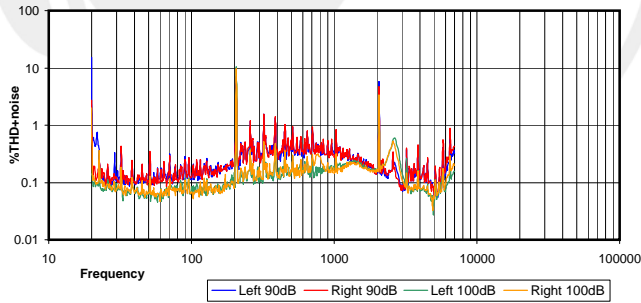
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



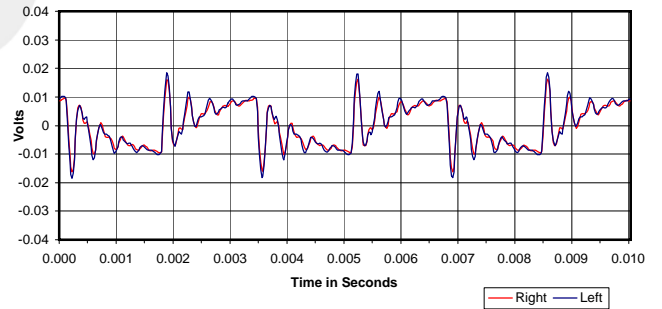
30 Hz Square Wave



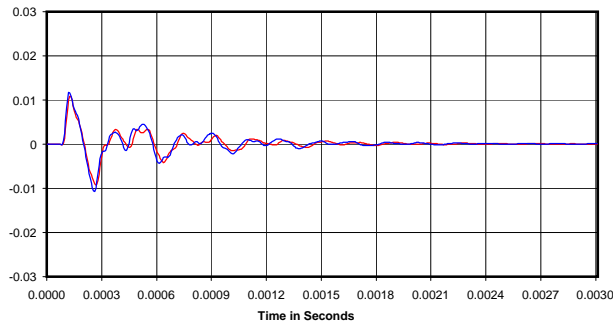
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

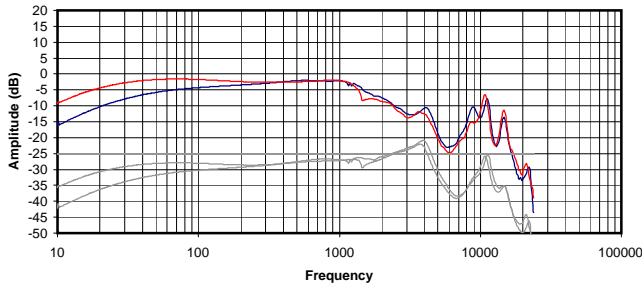


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

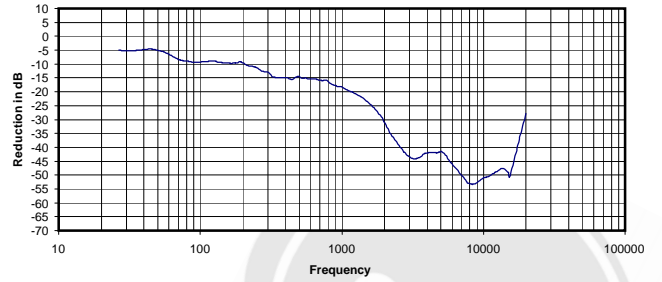
0.054 Vrms
30 Ohms
0.09 mW
-22 dB



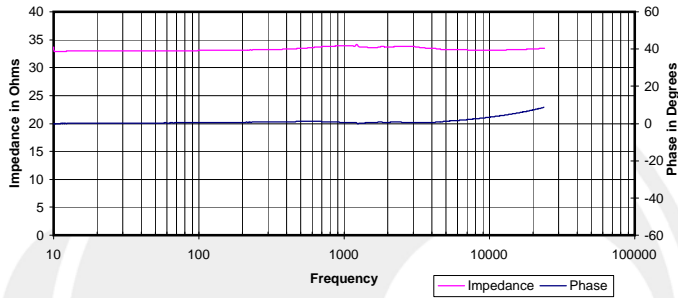
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



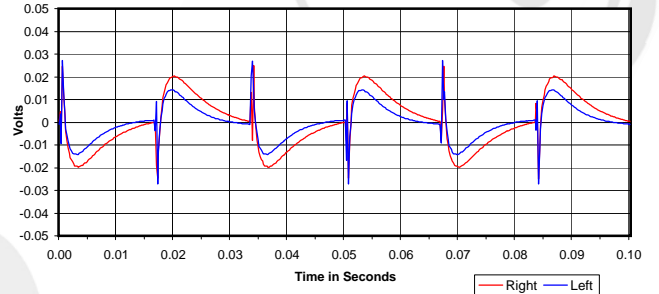
Isolation
Attenuation of External Sound vs. Frequency



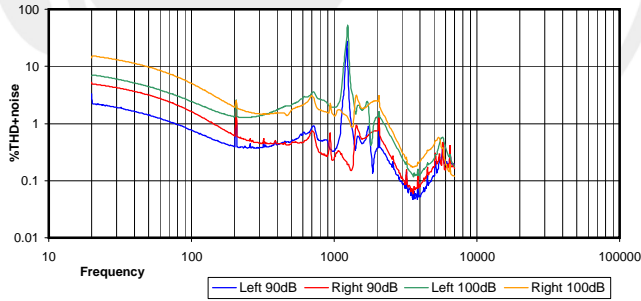
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



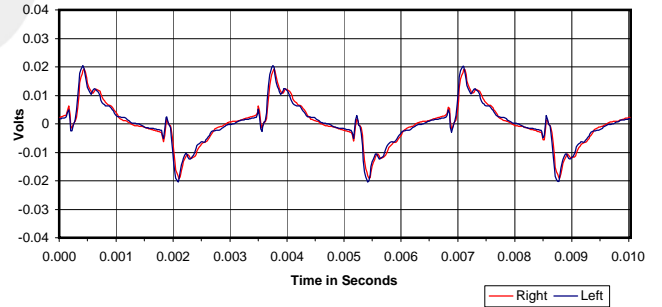
30 Hz Square Wave



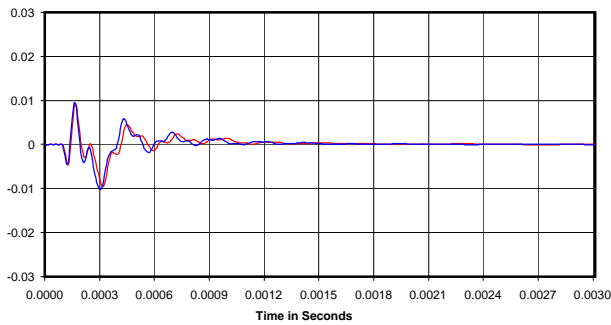
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

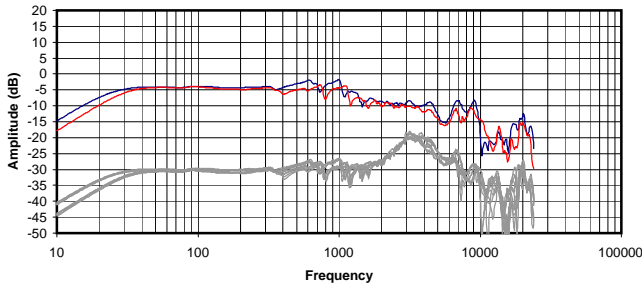


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

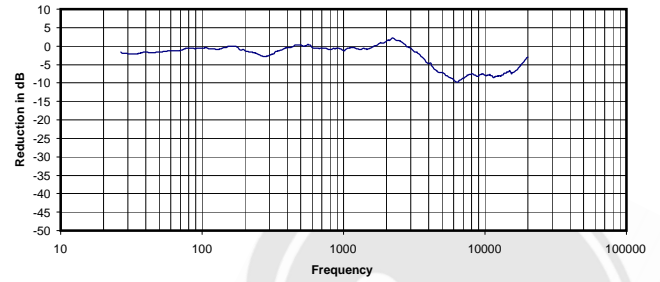
0.049 Vrms
34 Ohms
0.07 mW
-26 dB



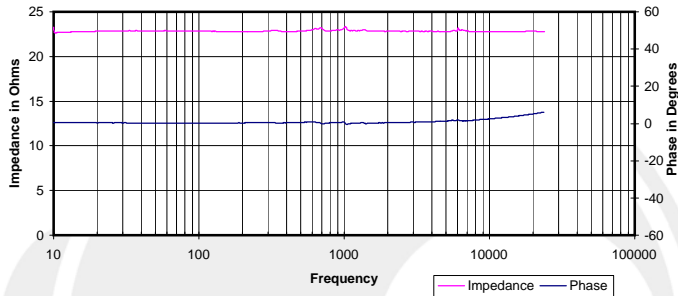
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



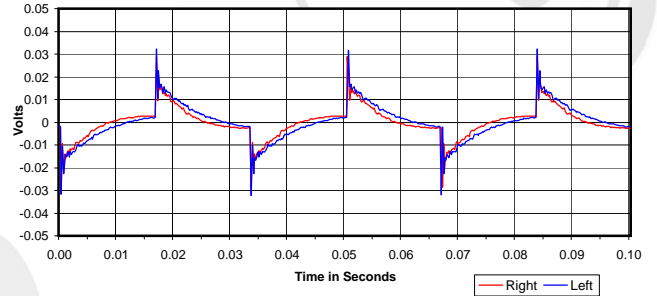
Isolation
 Attenuation of External Sound vs. Frequency



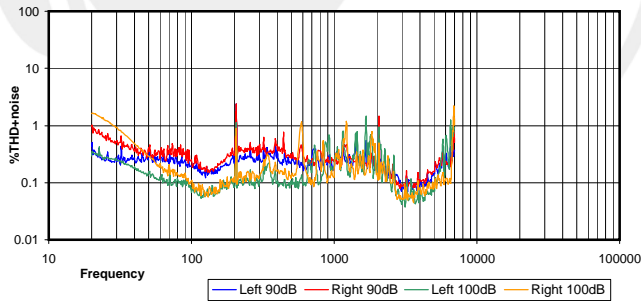
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



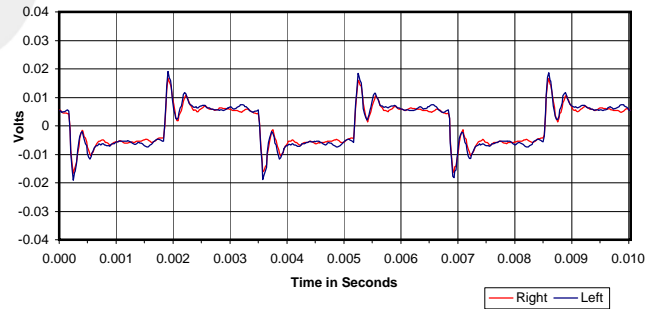
30 Hz Square Wave



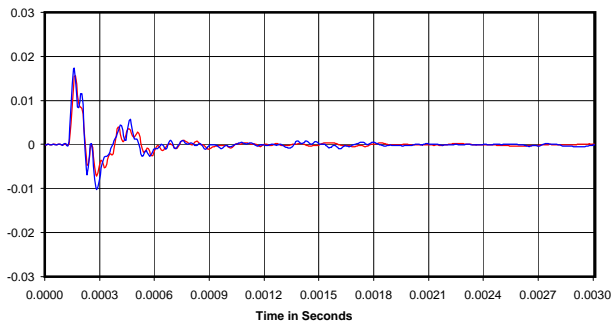
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



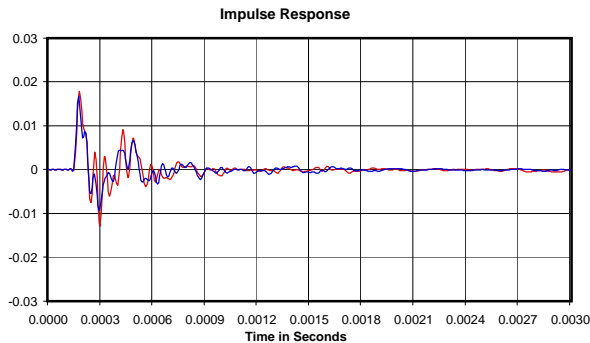
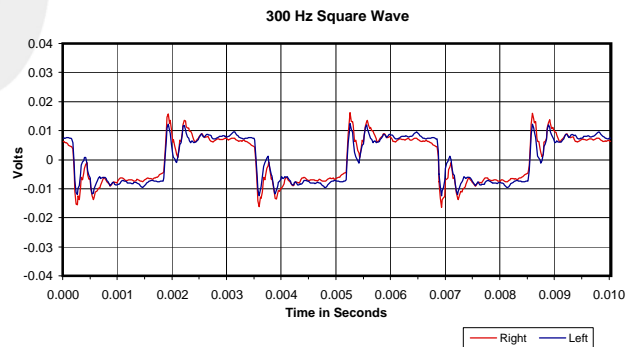
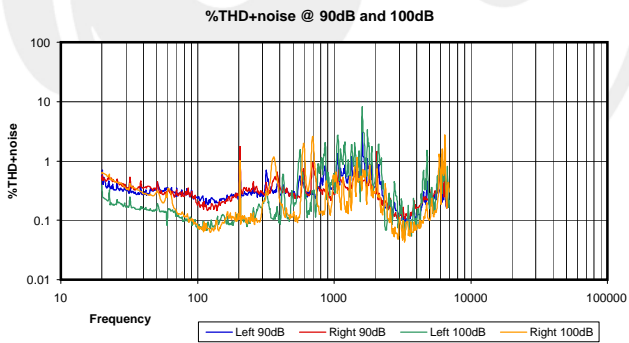
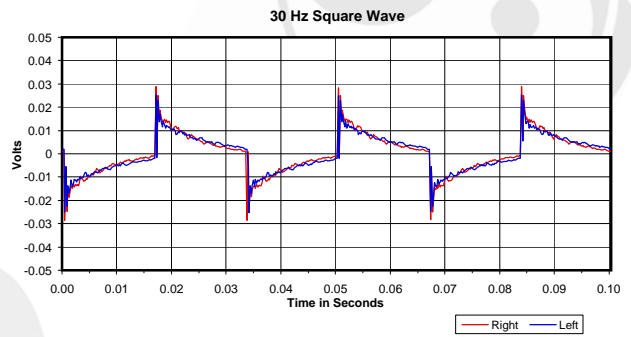
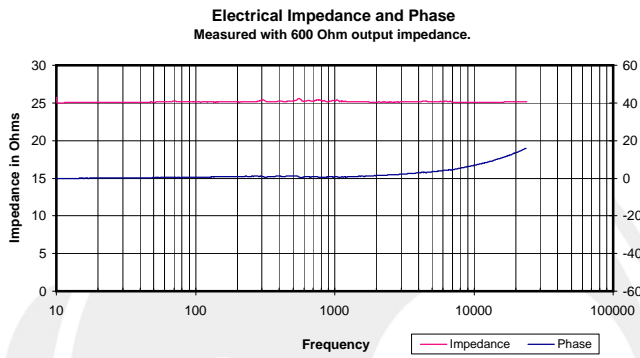
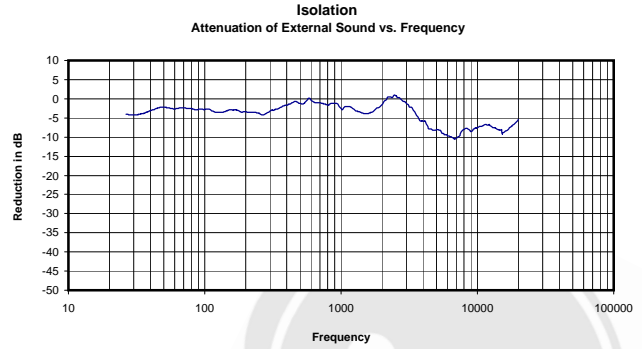
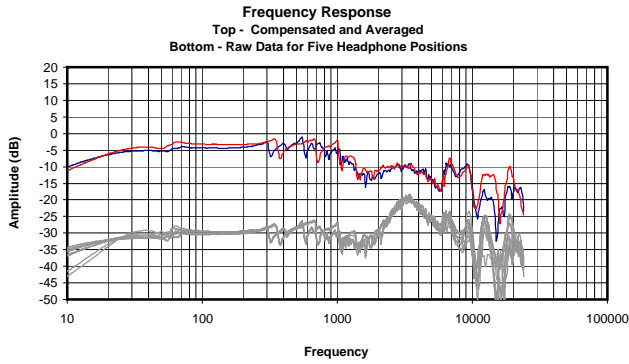
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.071 Vrms
 23 Ohms
 0.22 mW
 -2 dB

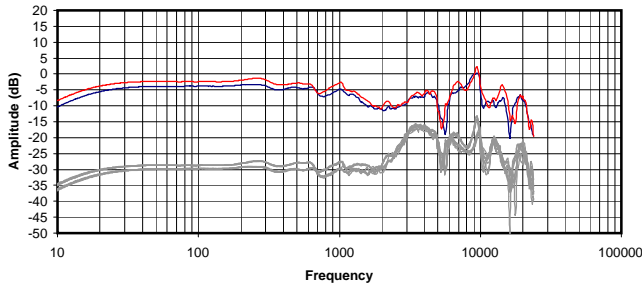




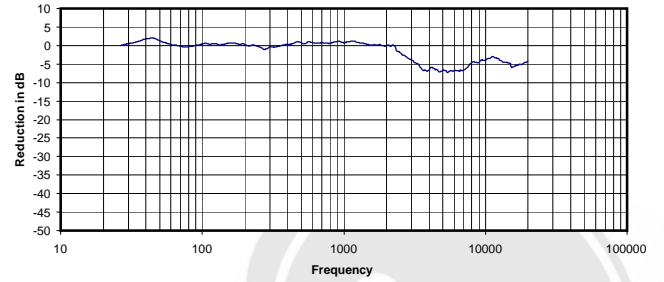
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.143 Vrms
25 Ohms
0.80 mW
-4 dBr

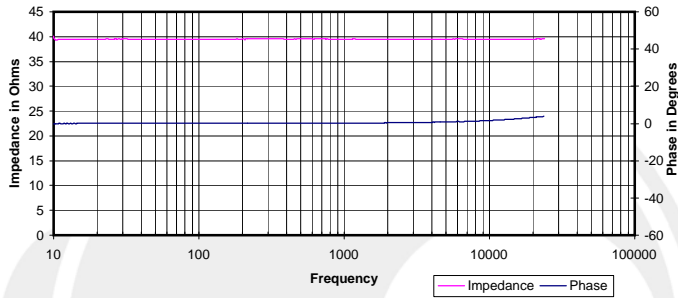
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



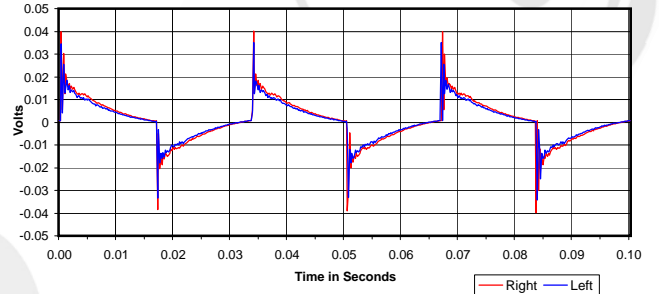
Isolation
 Attenuation of External Sound vs. Frequency



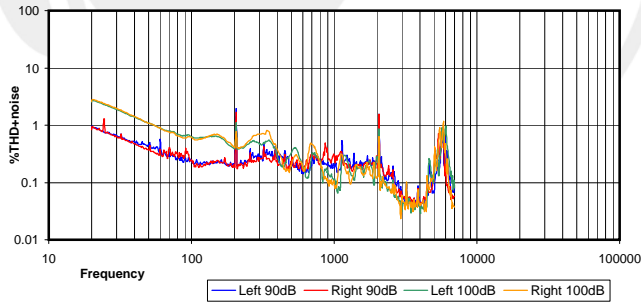
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



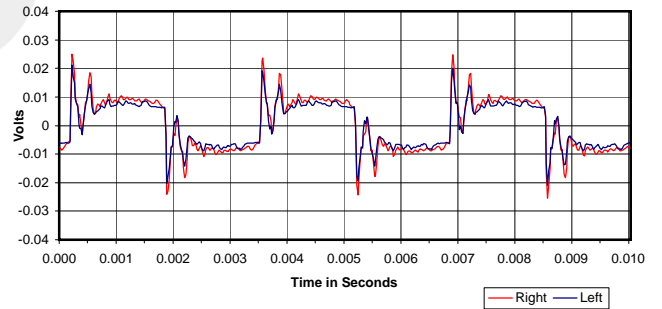
30 Hz Square Wave



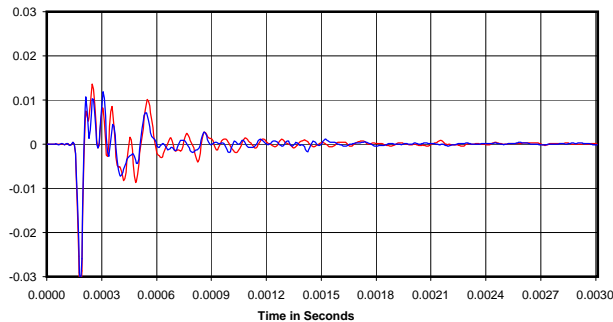
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

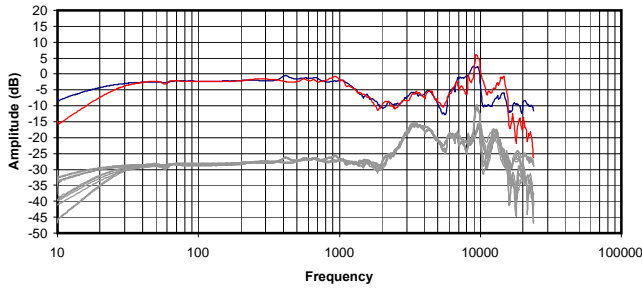


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

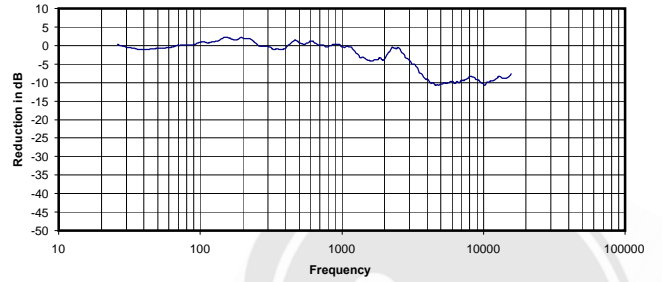
0.647 Vrms
 39 Ohms
 10.60 mW
 -1 dB



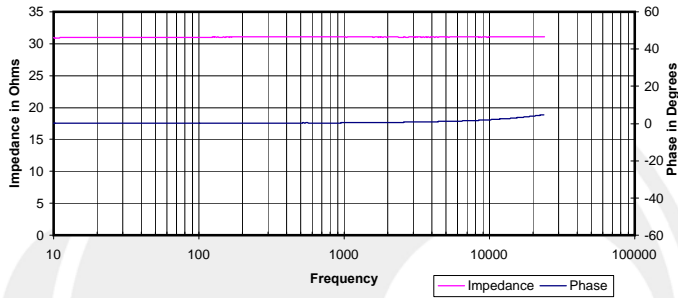
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



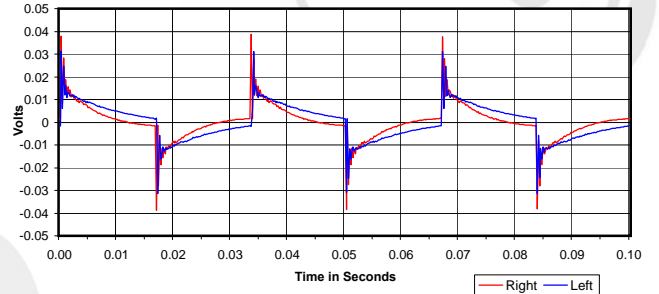
Isolation
 Attenuation of External Sound vs. Frequency



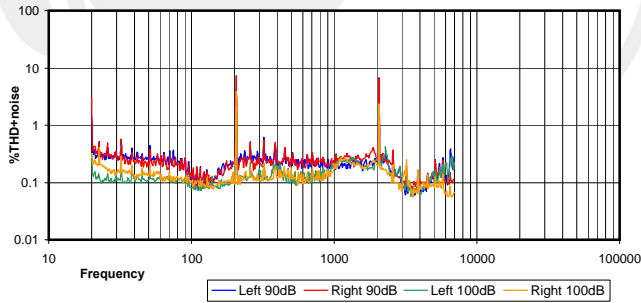
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



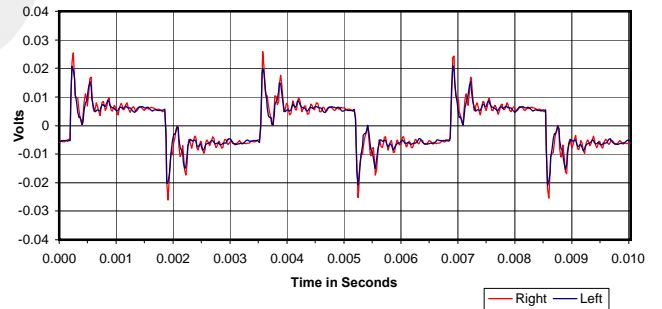
30 Hz Square Wave



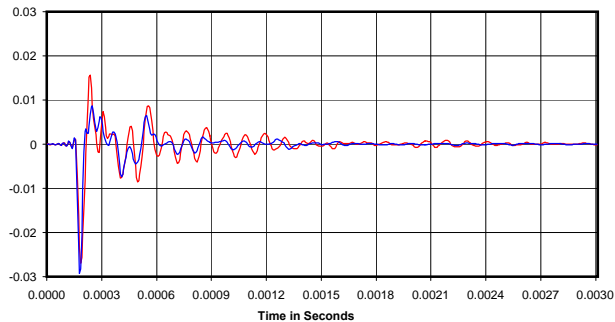
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

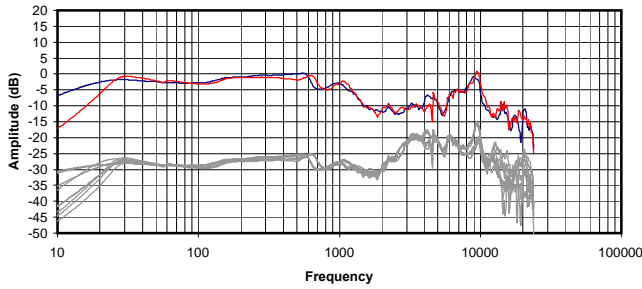


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

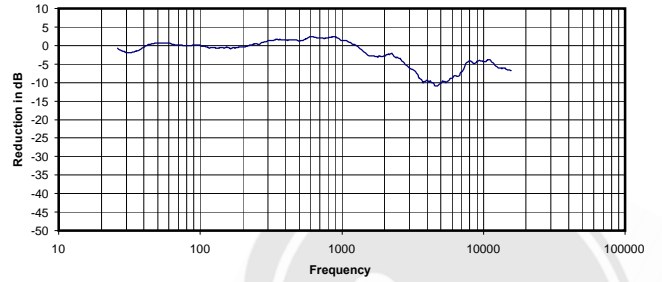
0.380 Vrms
 31 Ohms
 4.65 mW
 -2 dB



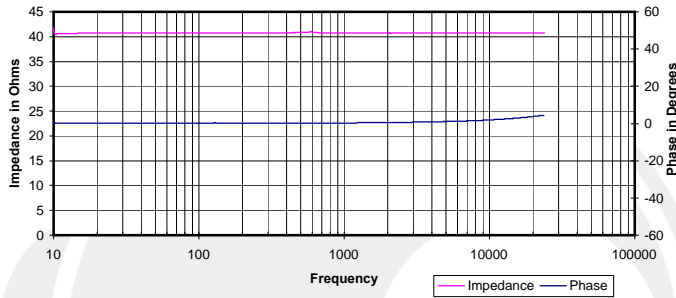
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



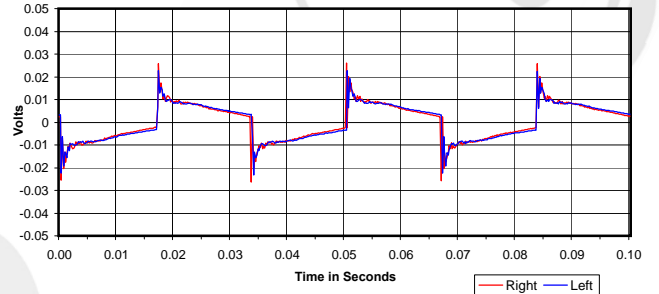
Isolation
 Attenuation of External Sound vs. Frequency



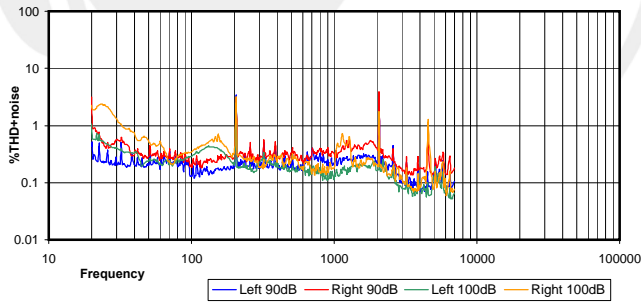
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



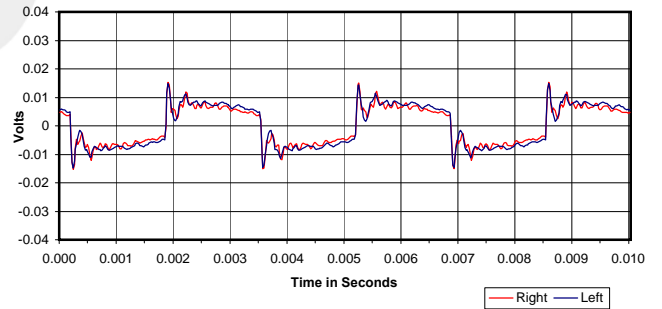
30 Hz Square Wave



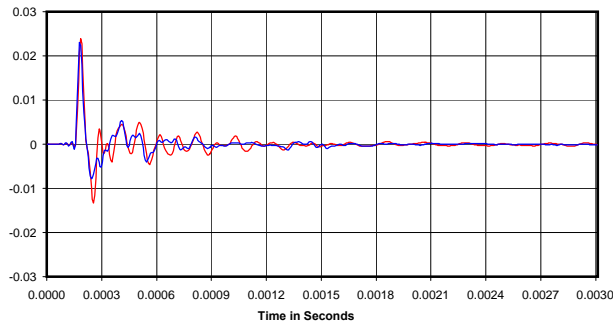
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

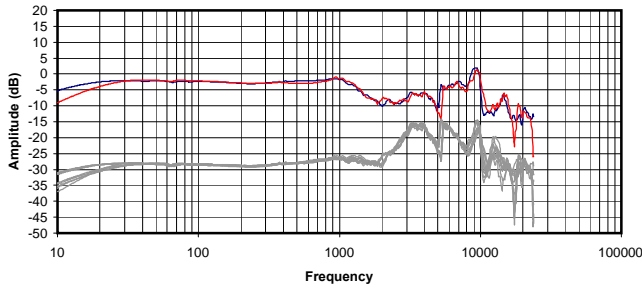


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

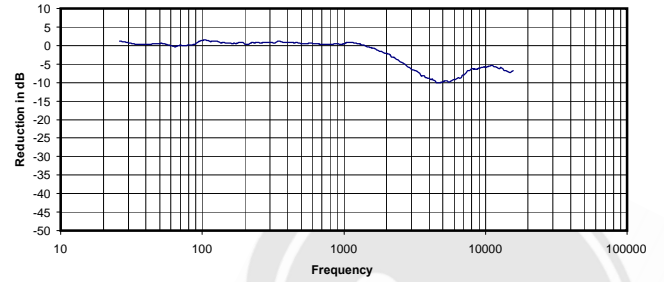
0.439 Vrms
 41 Ohms
 4.73 mW
 -2 dB



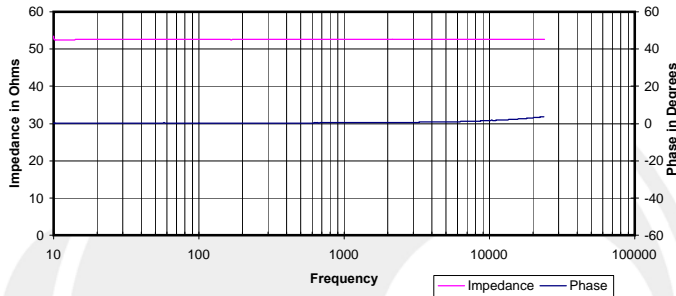
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



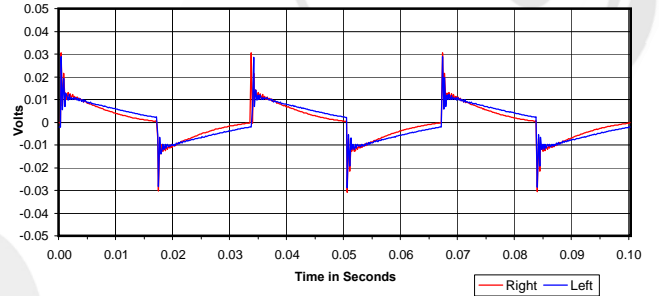
Isolation
 Attenuation of External Sound vs. Frequency



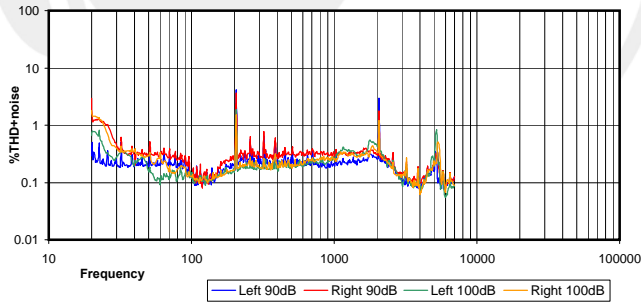
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



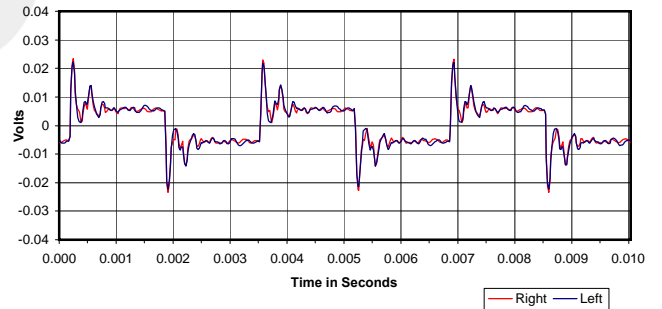
30 Hz Square Wave



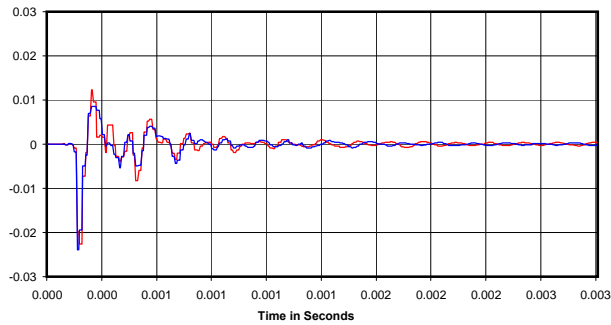
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

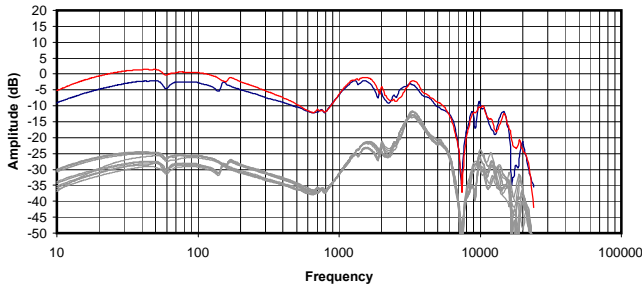


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

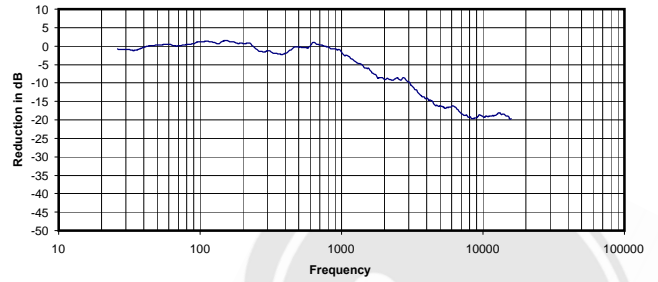
1.018 Vrms
 53 Ohms
 19.69 mW
 -2 dB



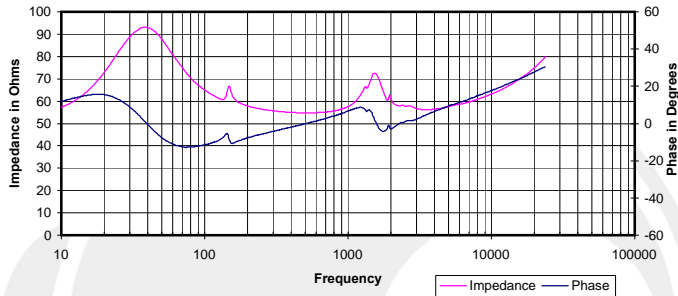
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



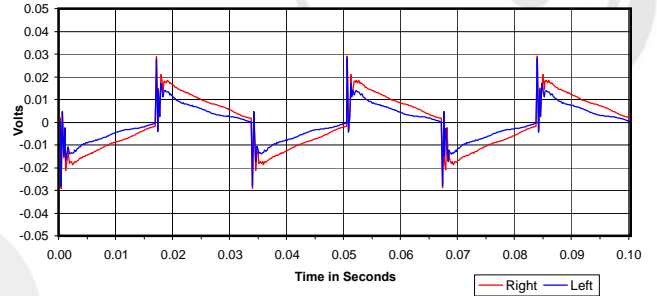
Isolation
 Attenuation of External Sound vs. Frequency



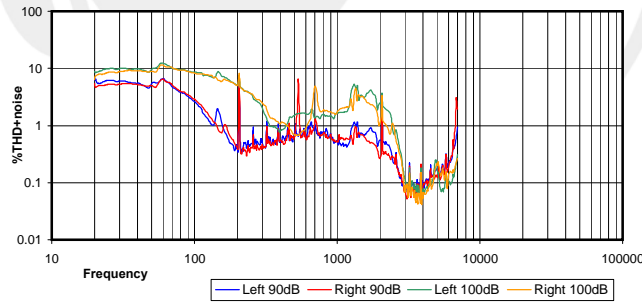
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



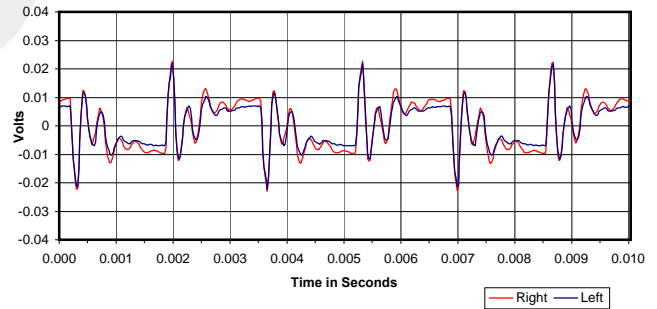
30 Hz Square Wave



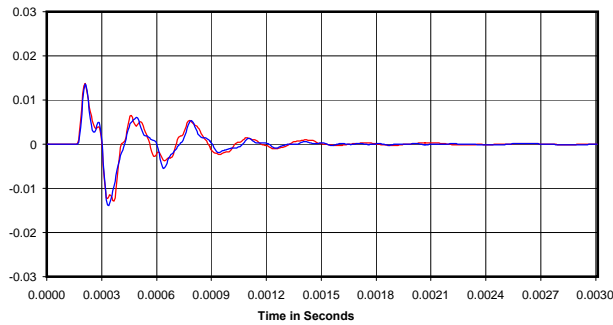
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

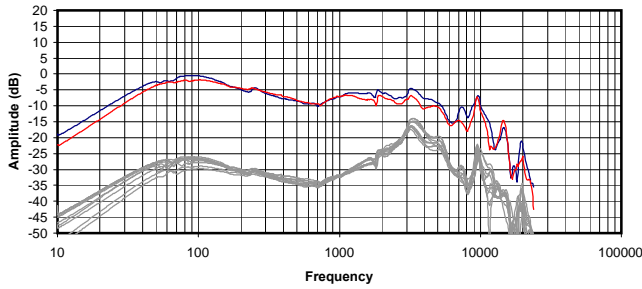


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

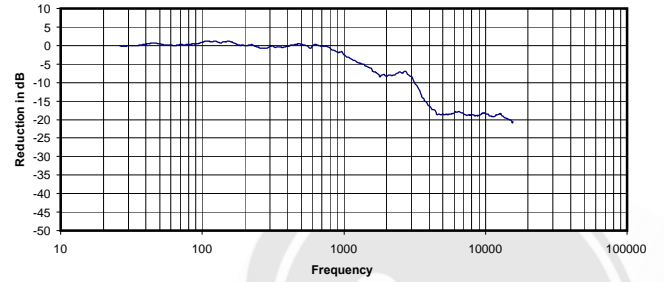
0.262 Vrms
 58 Ohms
 1.19 mW
 -4 dBr



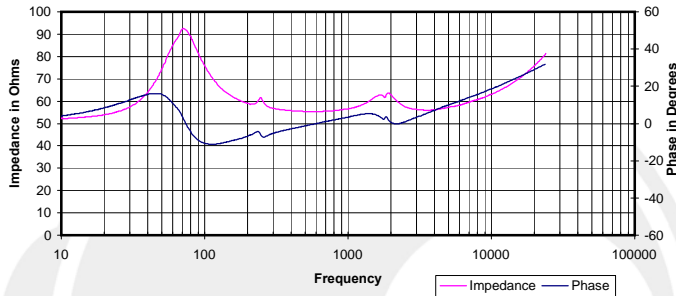
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



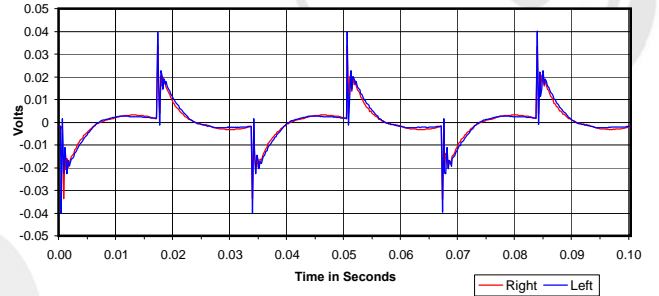
Isolation
 Attenuation of External Sound vs. Frequency



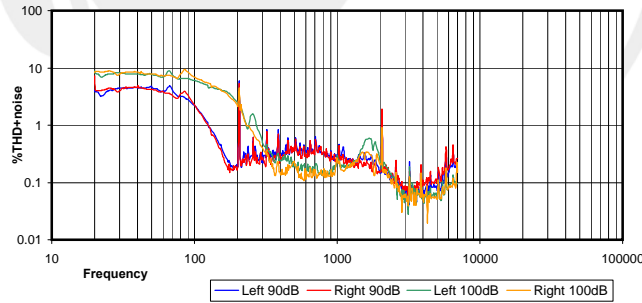
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



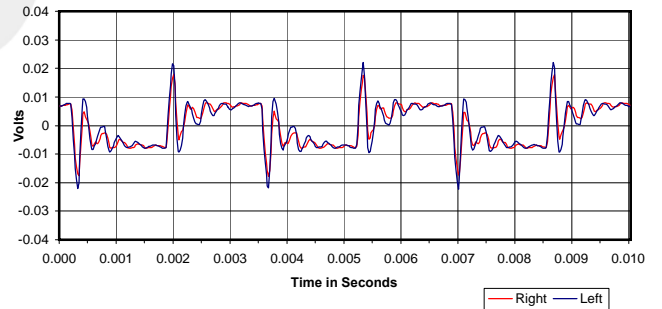
30 Hz Square Wave



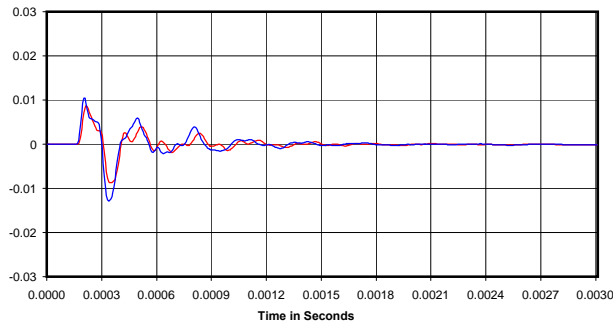
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

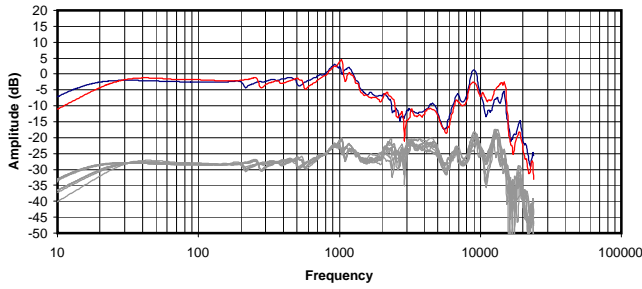


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

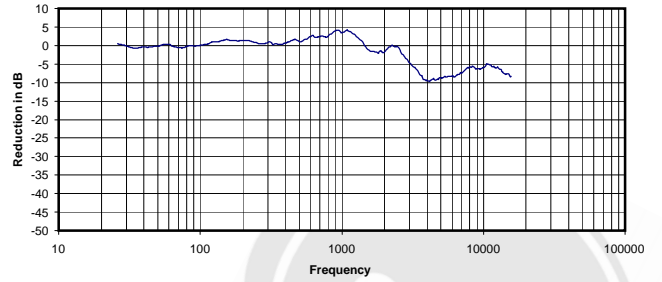
0.189 Vrms
 57 Ohms
 0.63 mW
 -4 dB



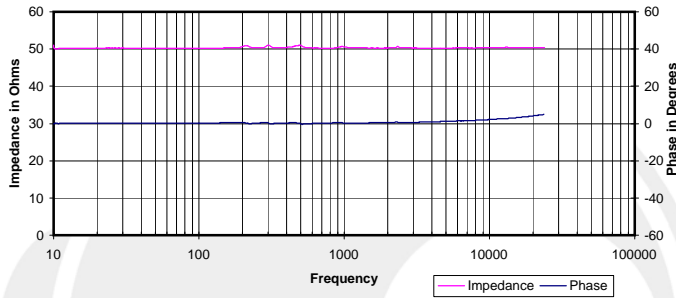
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



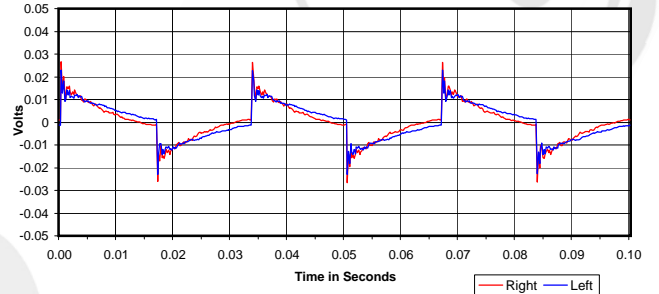
Isolation
 Attenuation of External Sound vs. Frequency



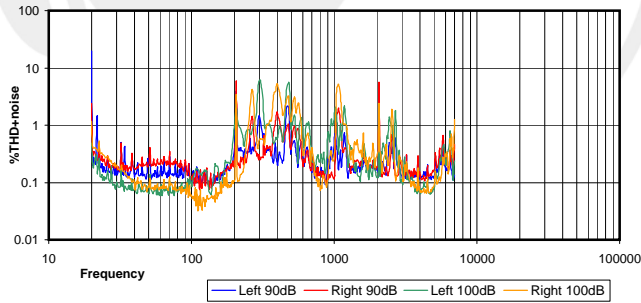
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



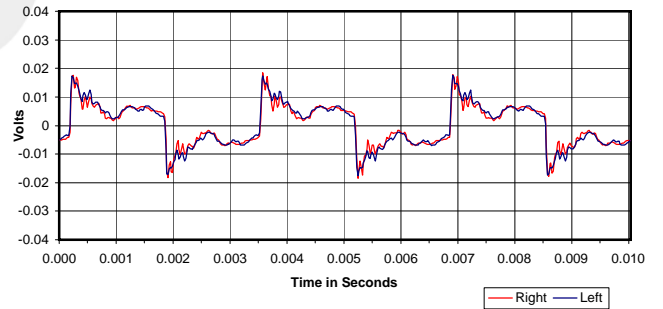
30 Hz Square Wave



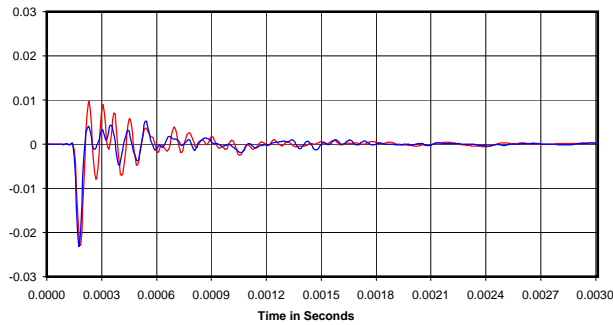
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

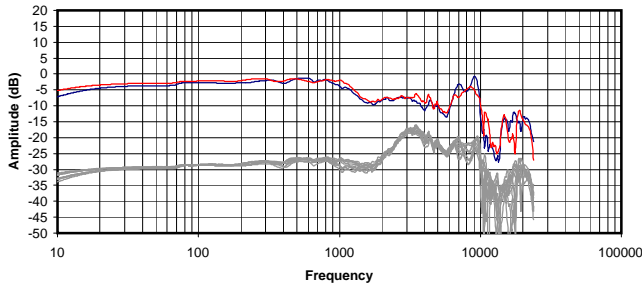


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

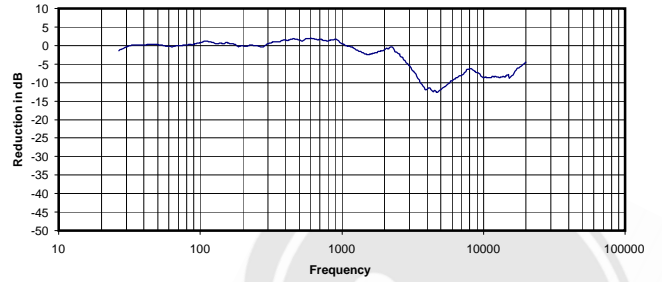
0.129 Vrms
 51 Ohms
 0.33 mW
 -1 dB



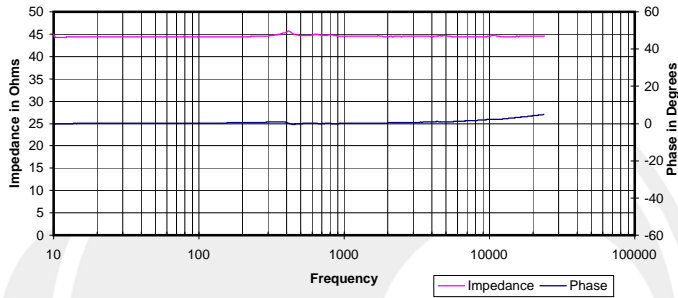
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



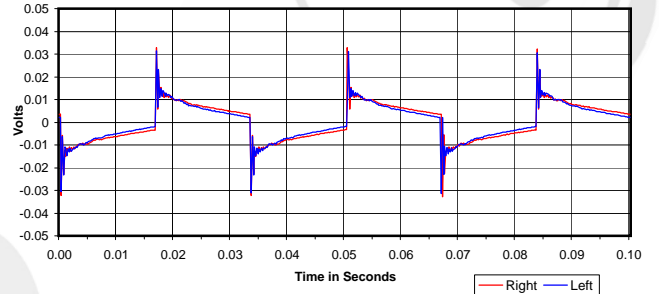
Isolation
 Attenuation of External Sound vs. Frequency



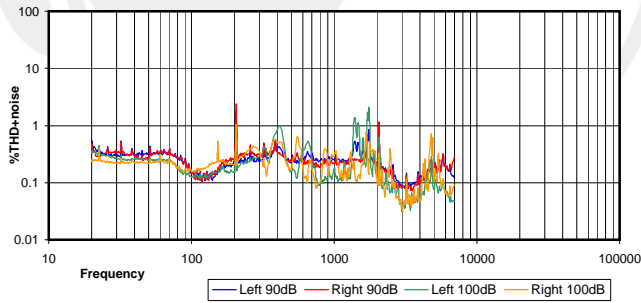
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



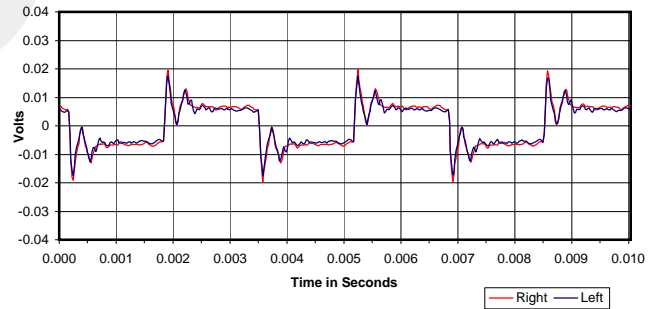
30 Hz Square Wave



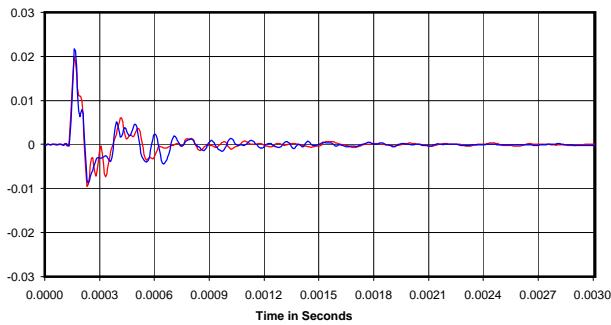
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

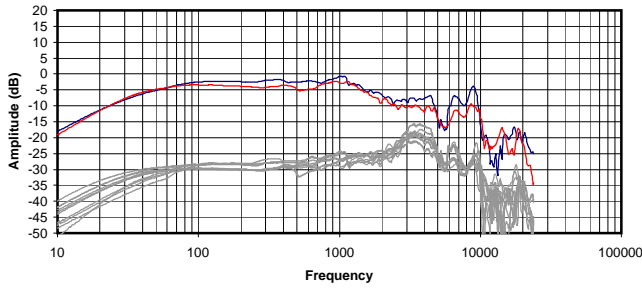


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

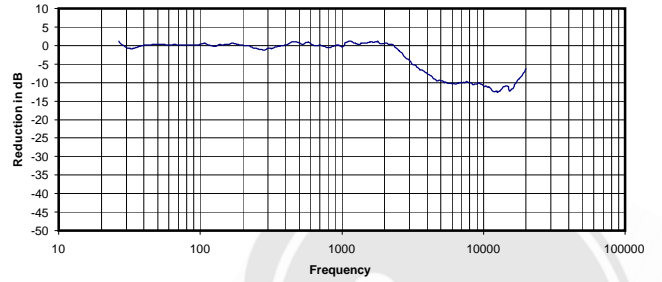
0.162 Vrms
 45 Ohms
 0.59 mW
 -2 dB



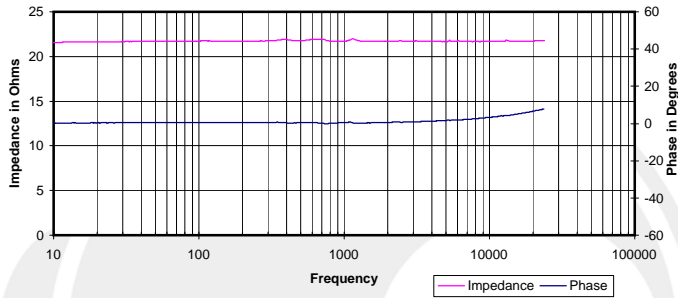
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



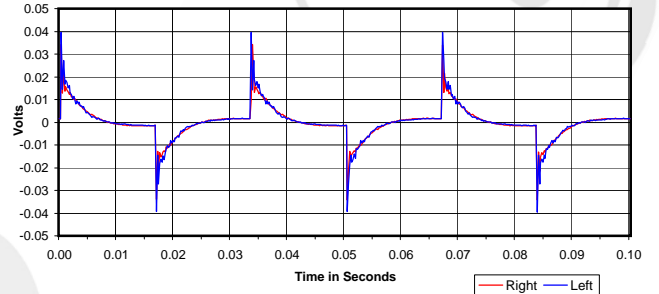
Isolation
Attenuation of External Sound vs. Frequency



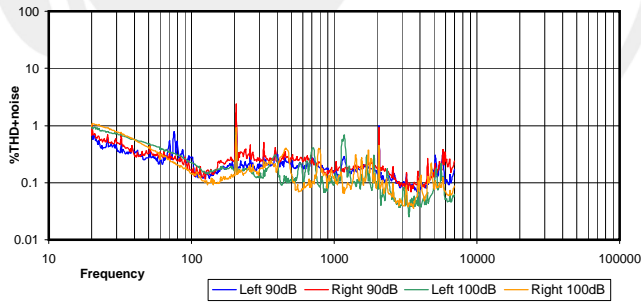
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



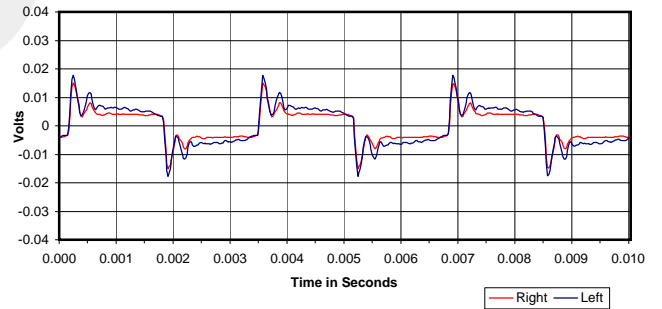
30 Hz Square Wave



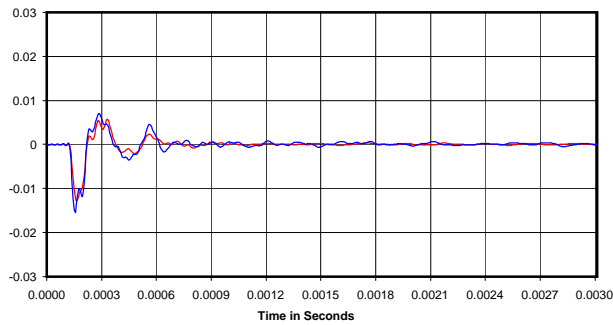
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



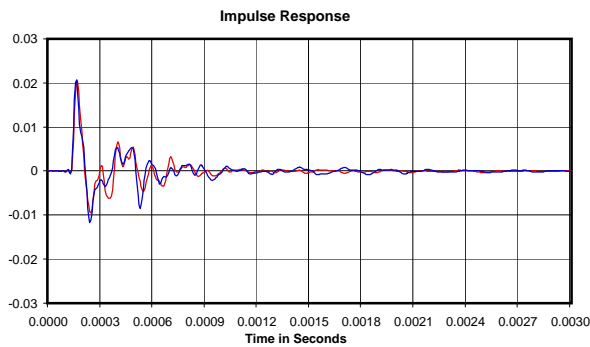
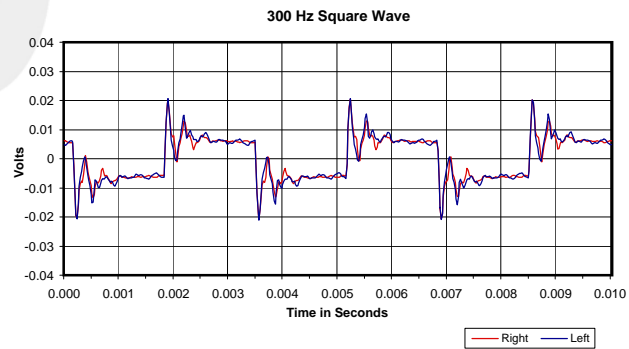
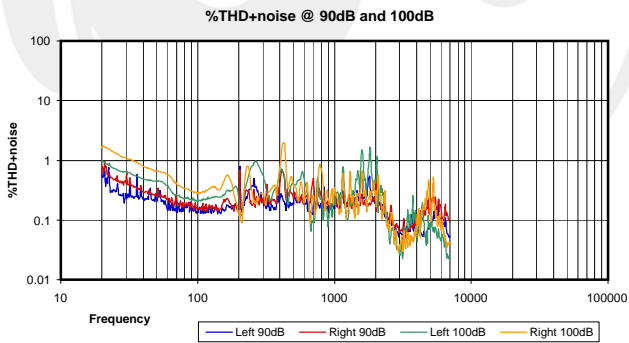
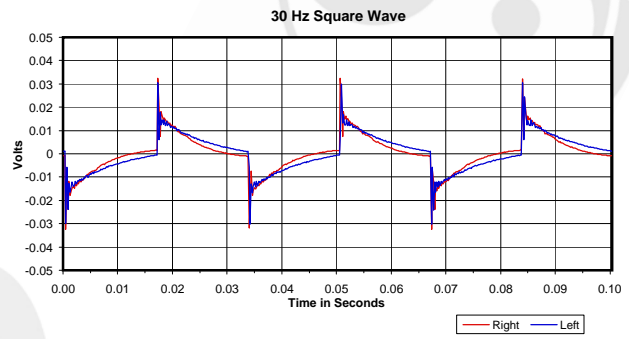
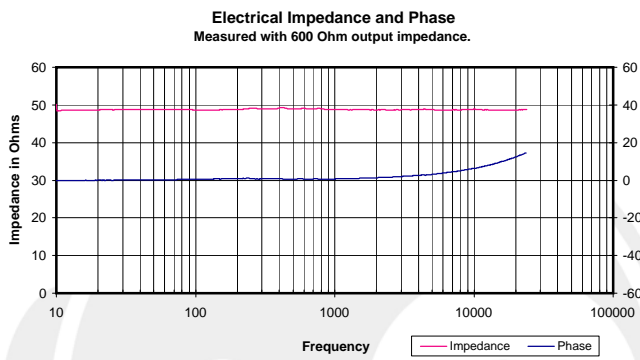
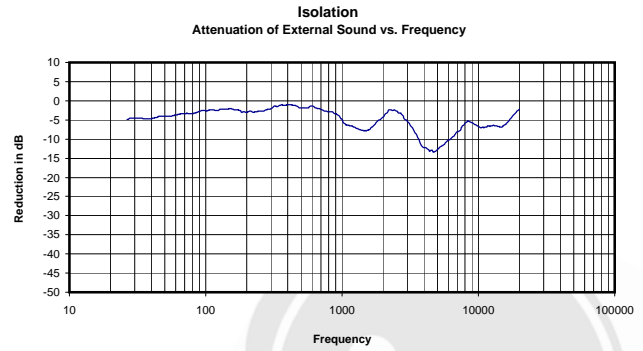
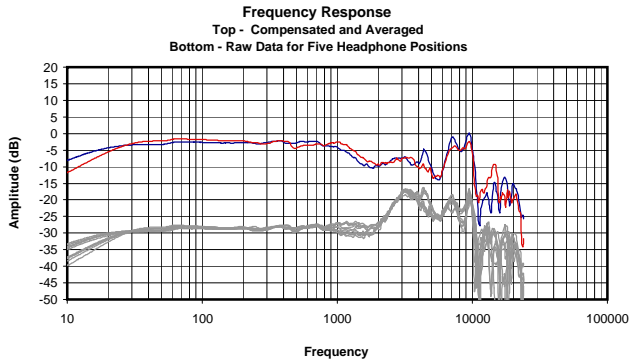
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.086 Vrms
22 Ohms
0.34 mW
-2 dB



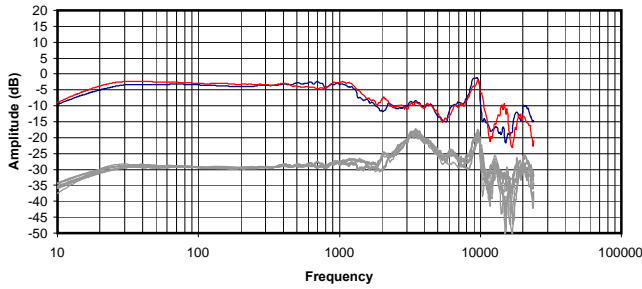


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

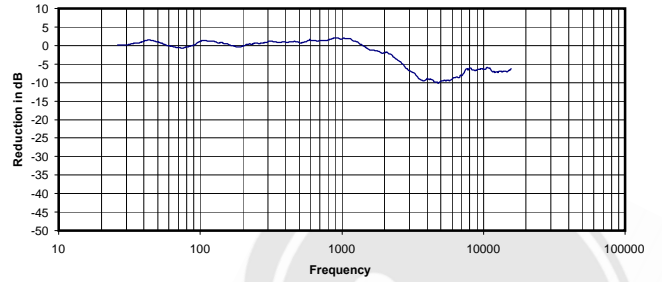
0.271 Vrms
49 Ohms
1.51 mW
-5 dBr



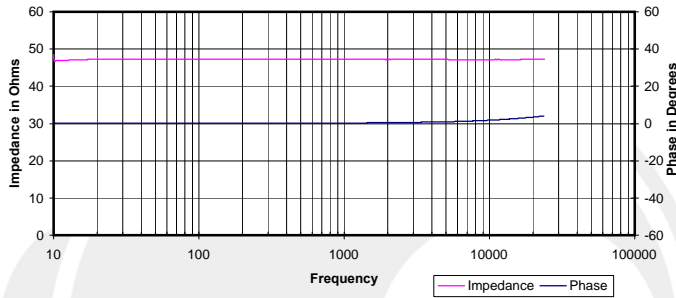
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



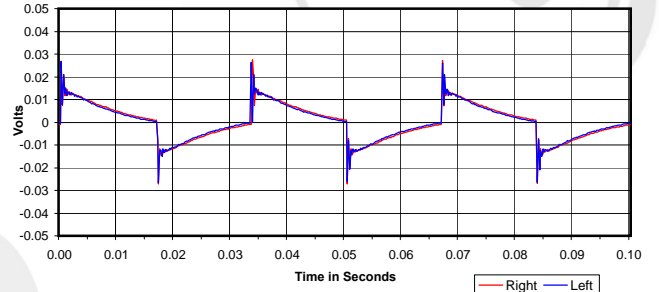
Isolation
 Attenuation of External Sound vs. Frequency



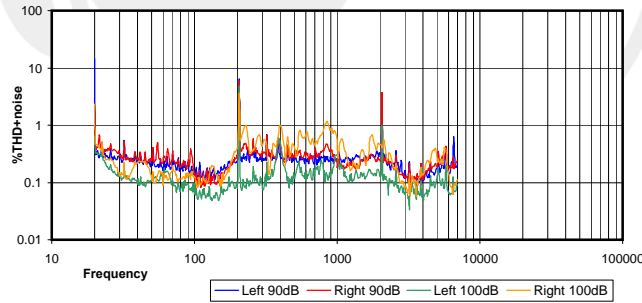
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



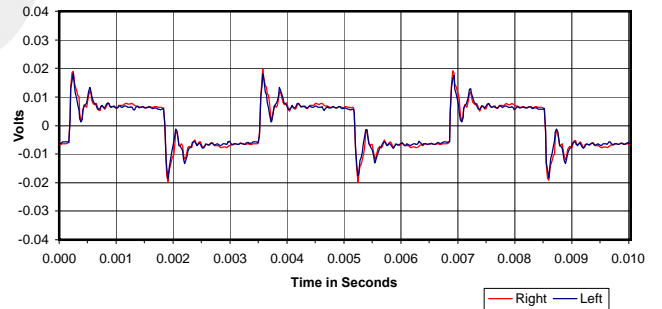
30 Hz Square Wave



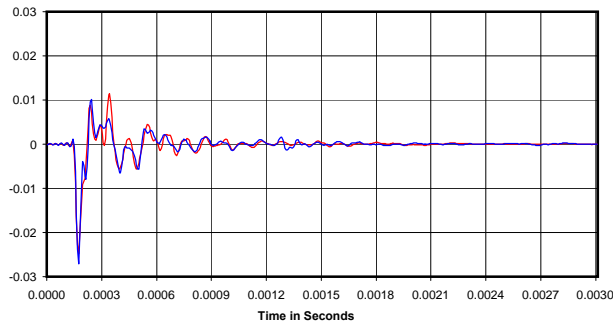
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



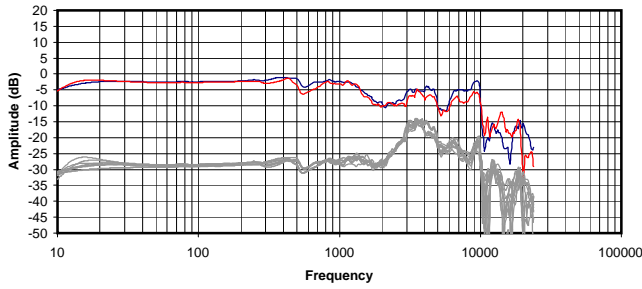
Impulse Response



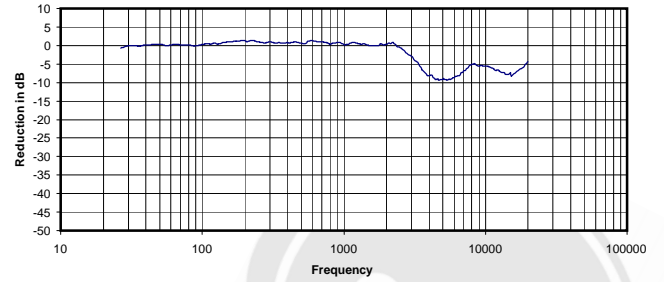
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.310 Vrms
 47 Ohms
 2.04 mW
 -1 dB

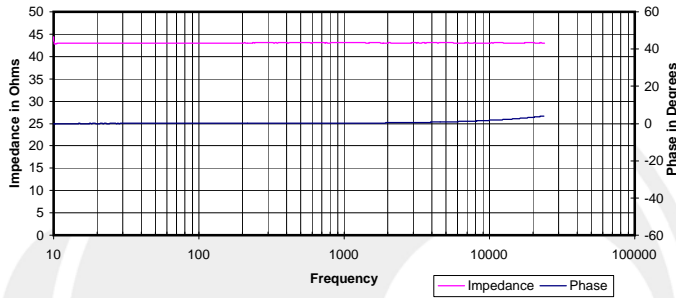
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



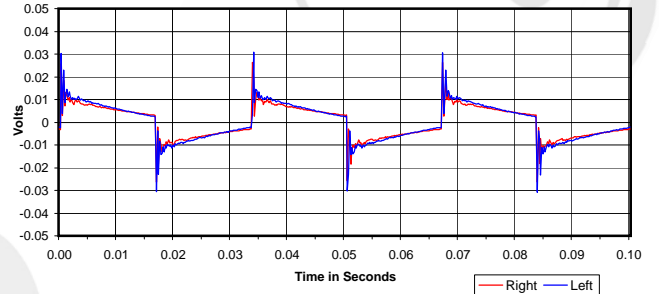
Isolation
 Attenuation of External Sound vs. Frequency



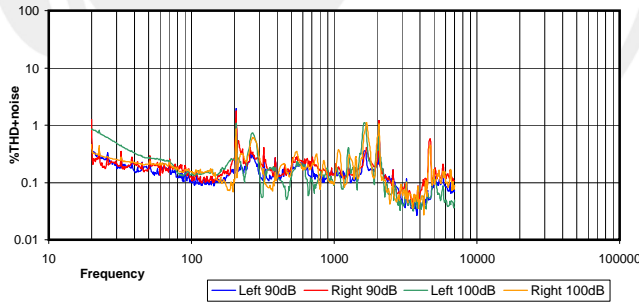
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



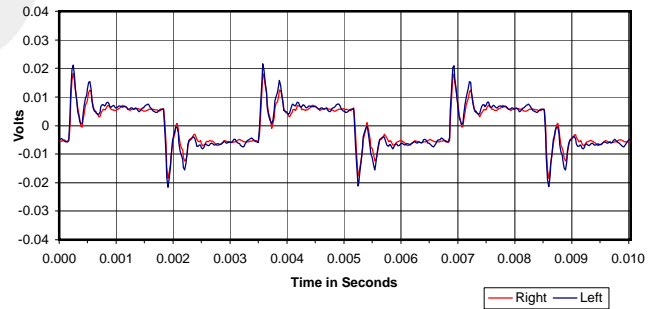
30 Hz Square Wave



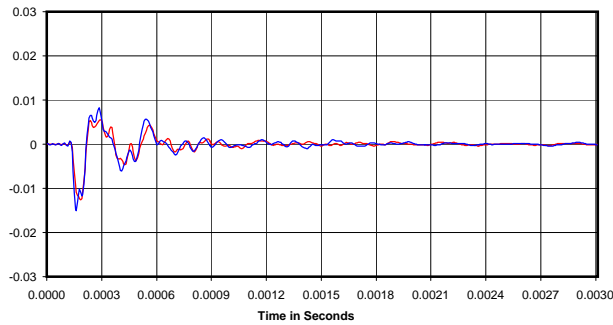
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

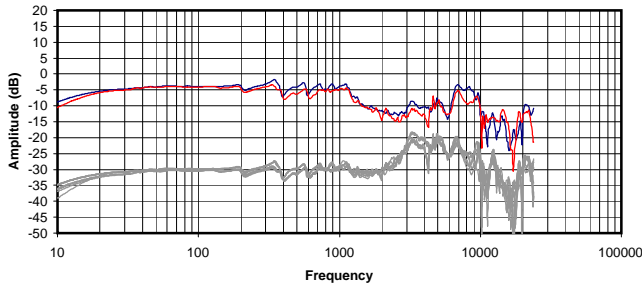


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

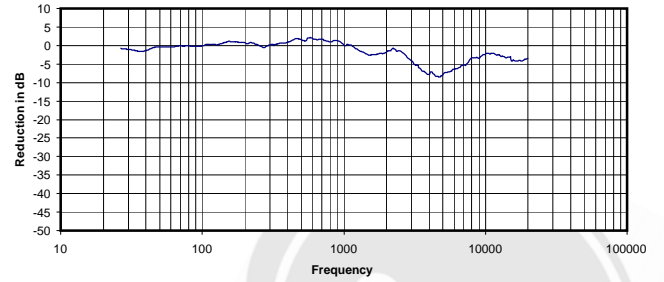
0.330 Vrms
 43 Ohms
 2.53 mW
 -1 dB



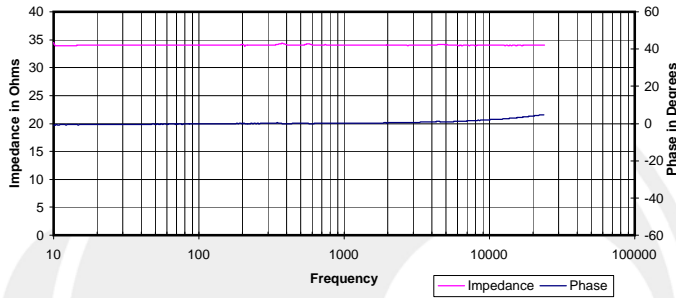
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



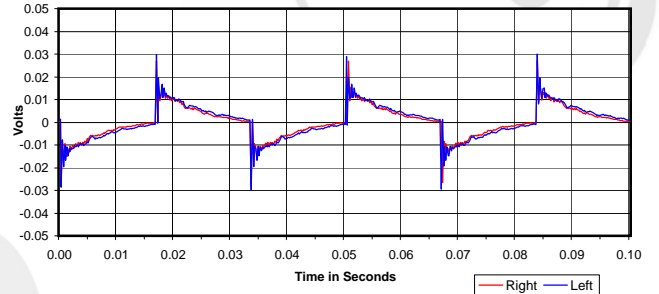
Isolation
 Attenuation of External Sound vs. Frequency



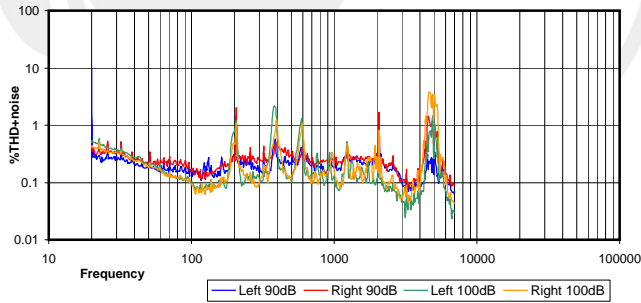
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



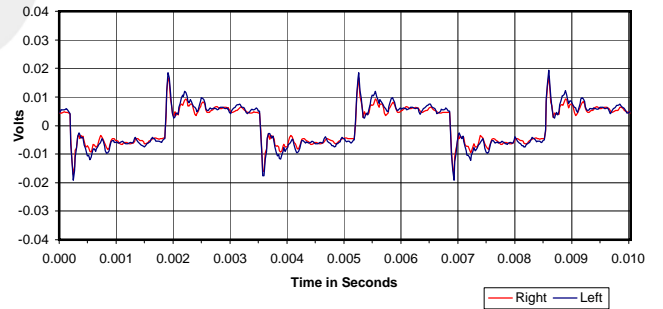
30 Hz Square Wave



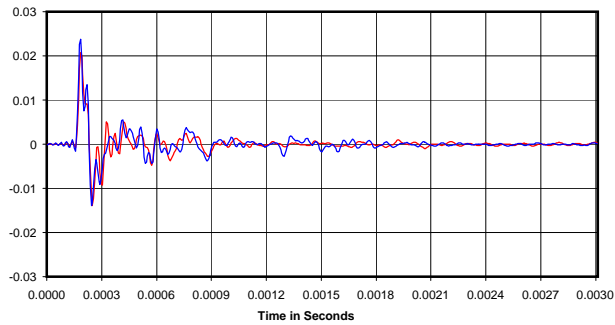
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

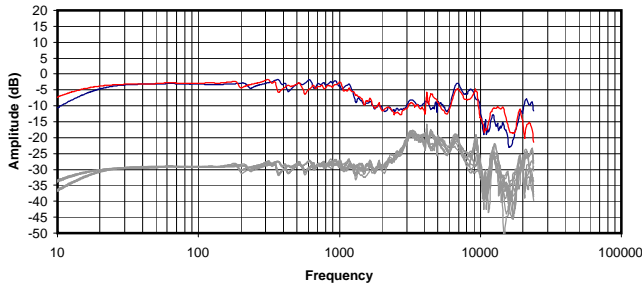


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

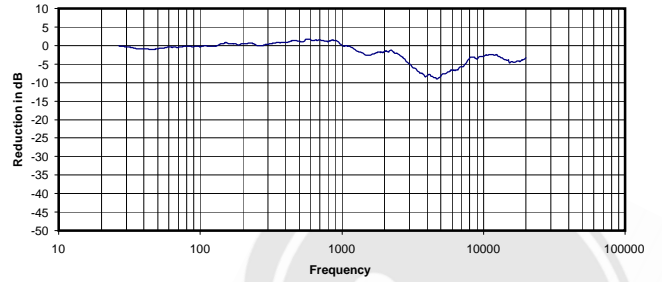
0.297 Vrms
 34 Ohms
 2.60 mW
 -2 dB



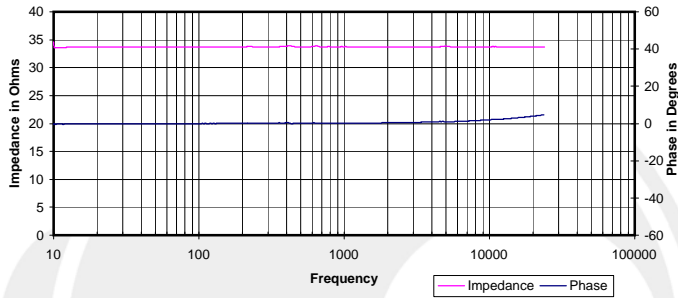
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



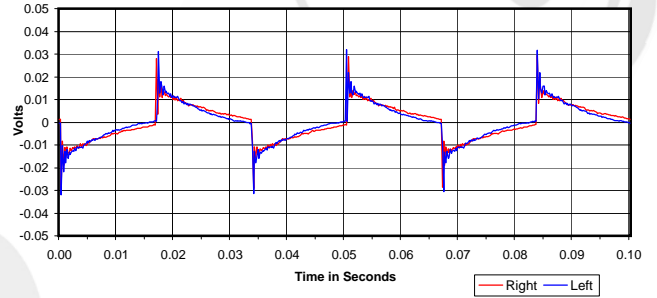
Isolation
 Attenuation of External Sound vs. Frequency



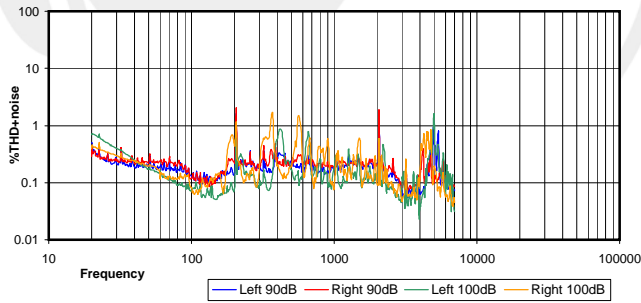
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



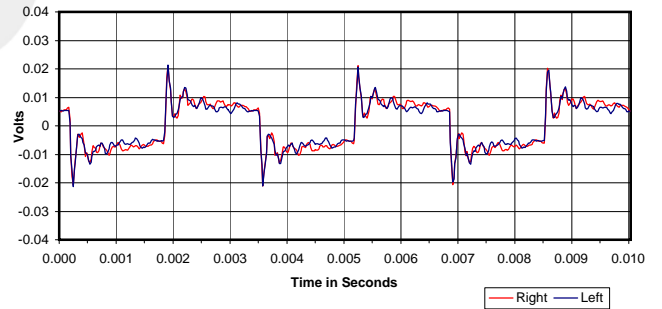
30 Hz Square Wave



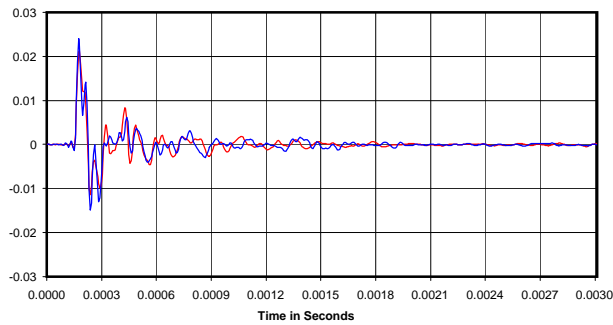
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

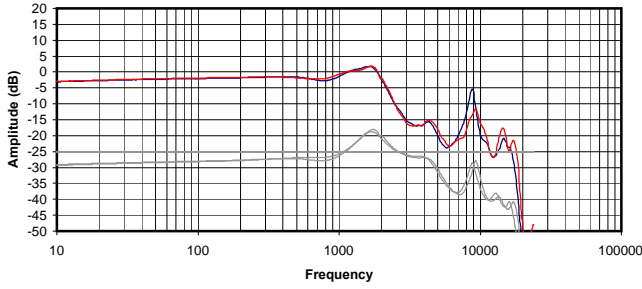


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

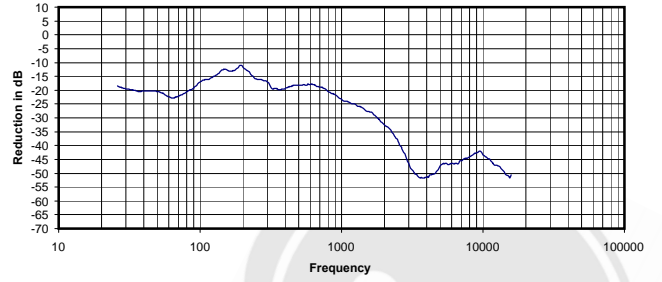
0.287 Vrms
 34 Ohms
 2.45 mW
 -2 dB



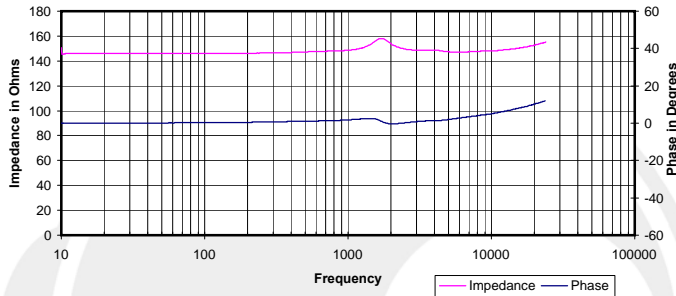
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



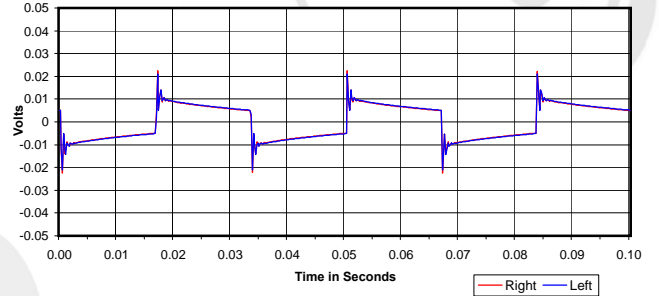
Isolation
Attenuation of External Sound vs. Frequency



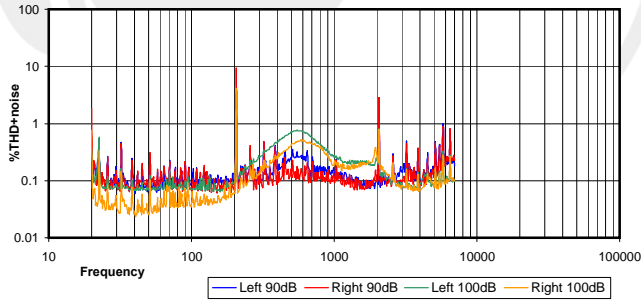
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



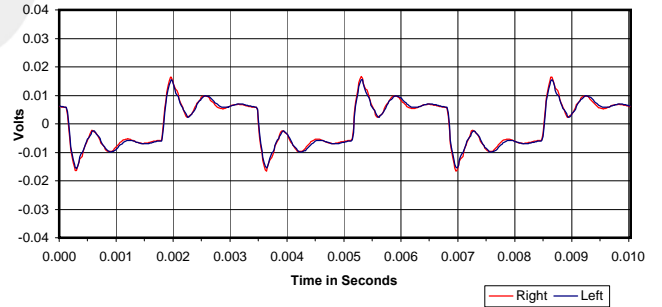
30 Hz Square Wave



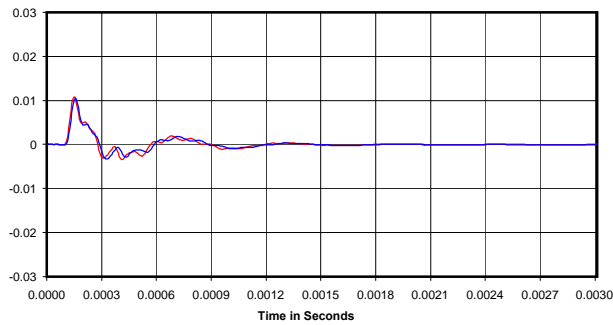
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



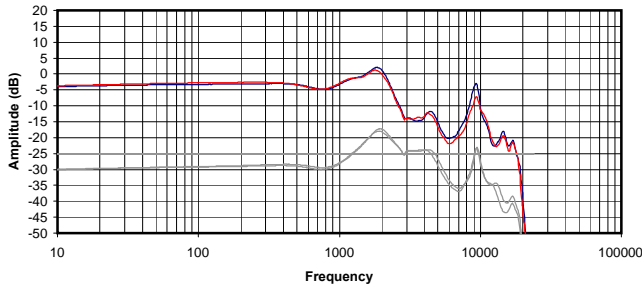
Impulse Response



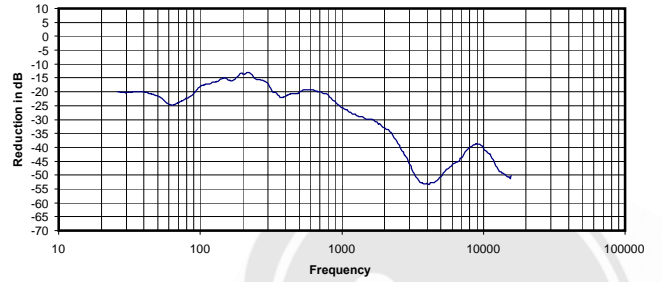
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
149 Ohms
0.01 mW
-26 dB

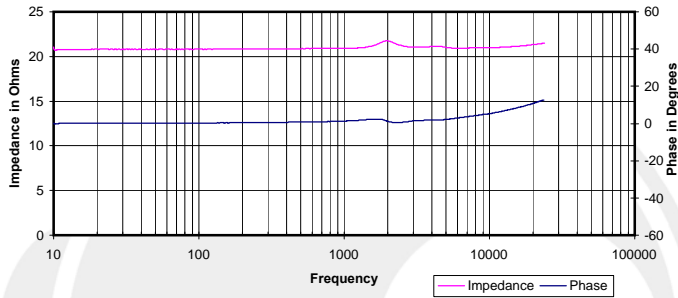
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



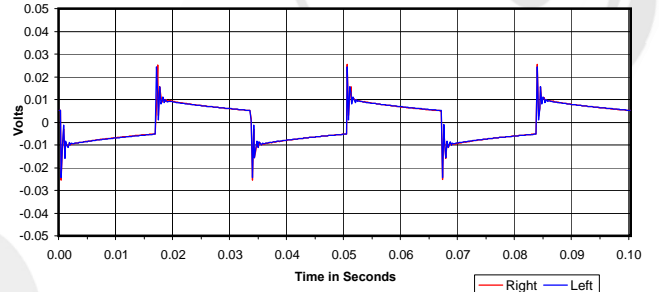
Isolation
Attenuation of External Sound vs. Frequency



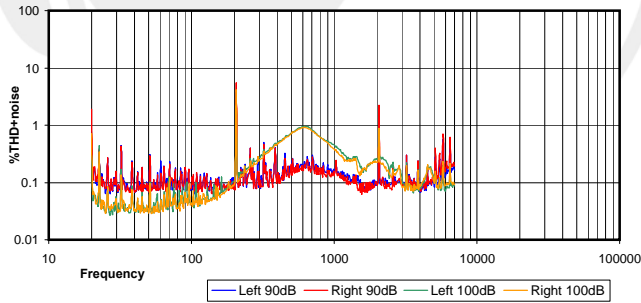
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



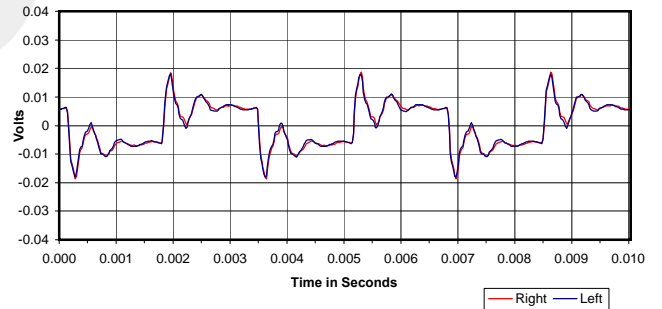
30 Hz Square Wave



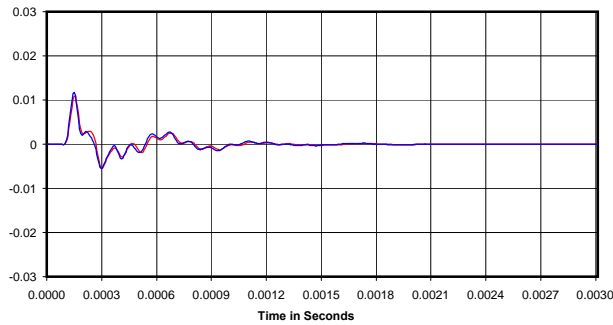
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



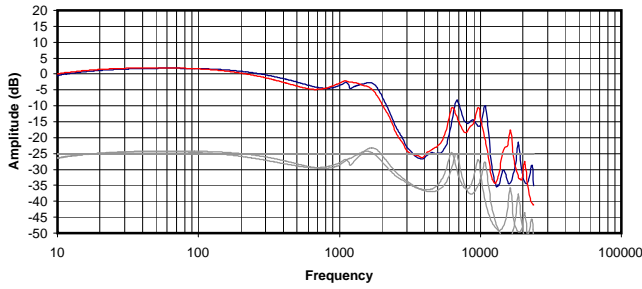
Impulse Response



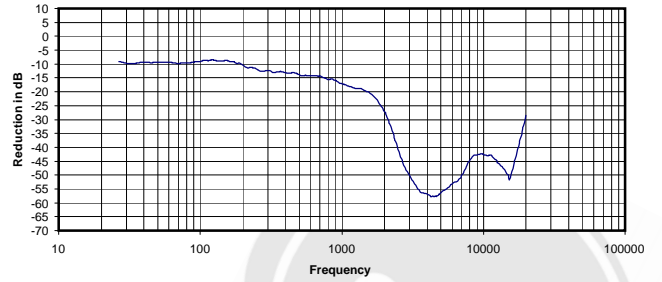
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
21 Ohms
0.04 mW
-28 dB

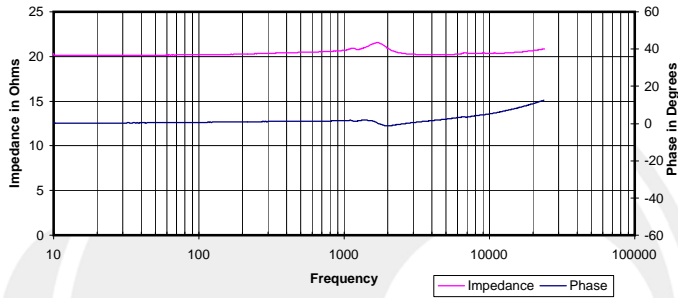
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



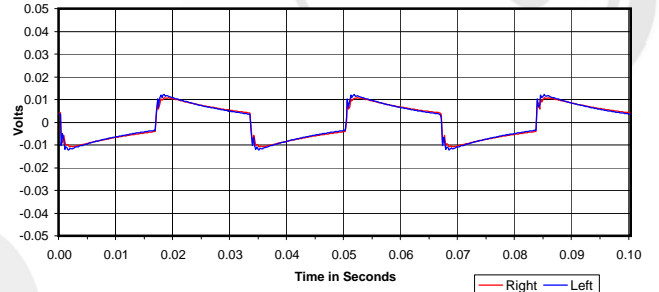
Isolation
Attenuation of External Sound vs. Frequency



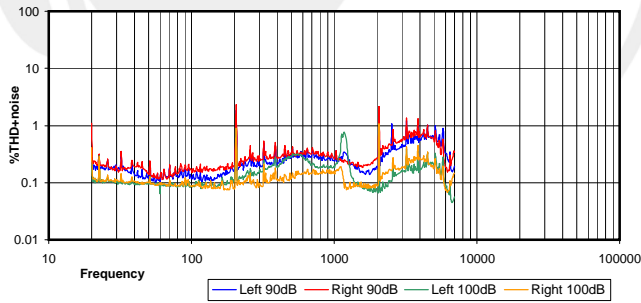
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



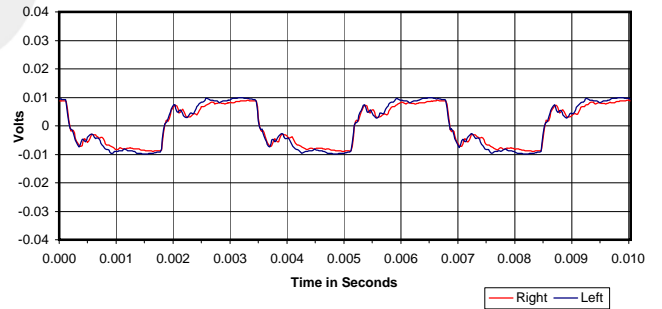
30 Hz Square Wave



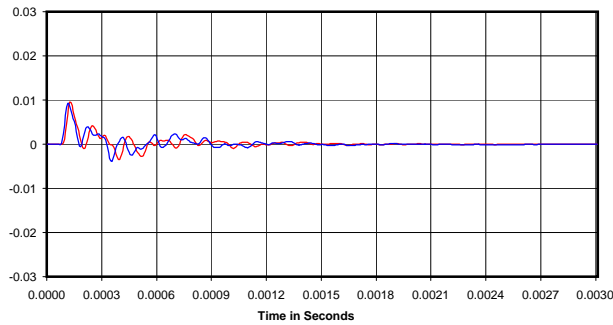
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

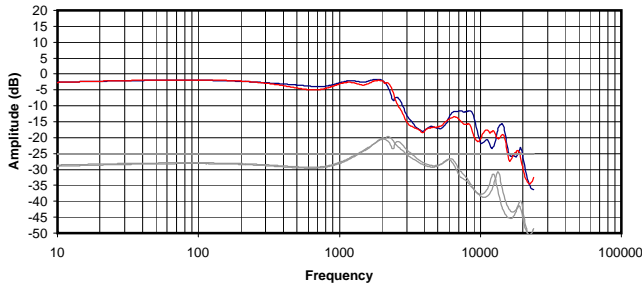


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

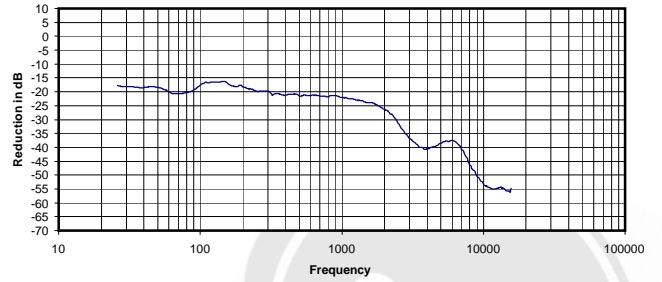
0.011 Vrms
21 Ohms
0.01 mW
-26 dB



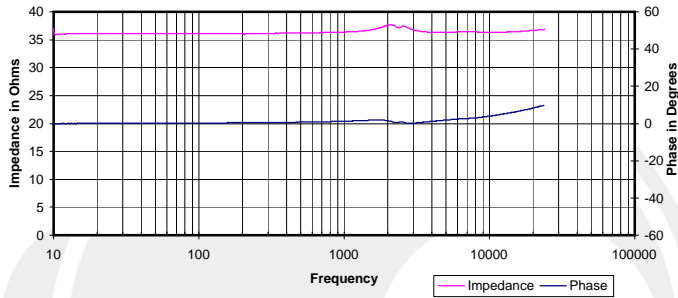
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



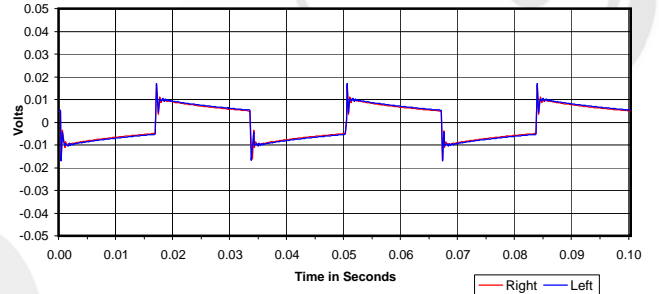
Isolation
Attenuation of External Sound vs. Frequency



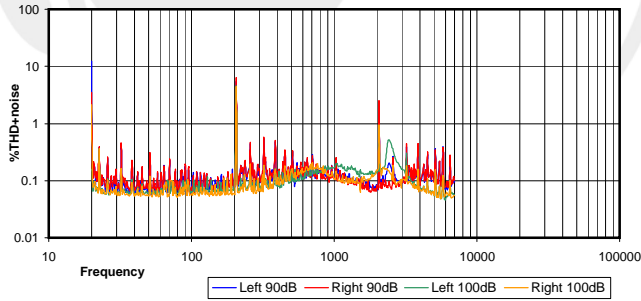
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



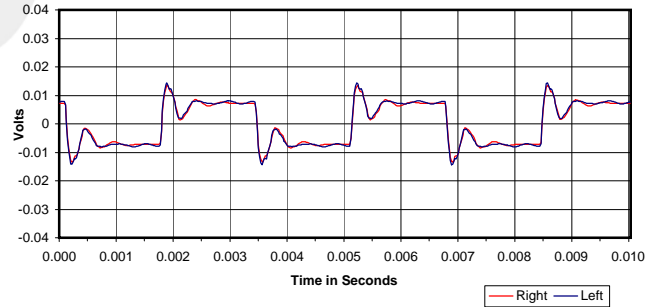
30 Hz Square Wave



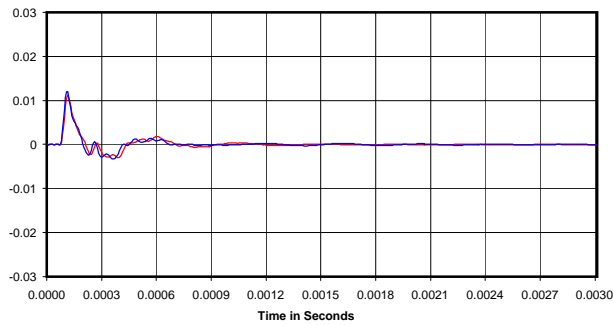
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

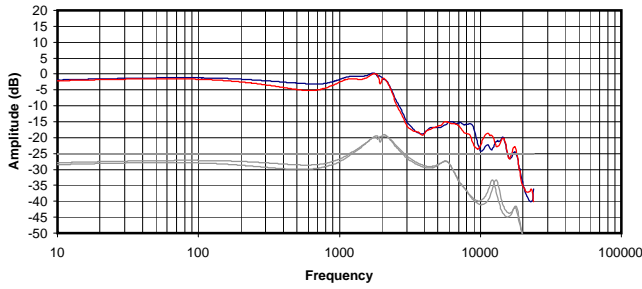


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

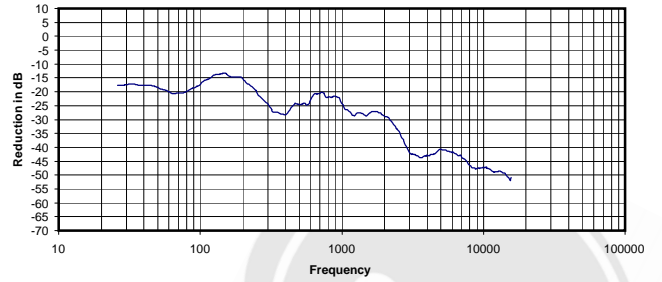
0.029 Vrms
36 Ohms
0.02 mW
-25 dB



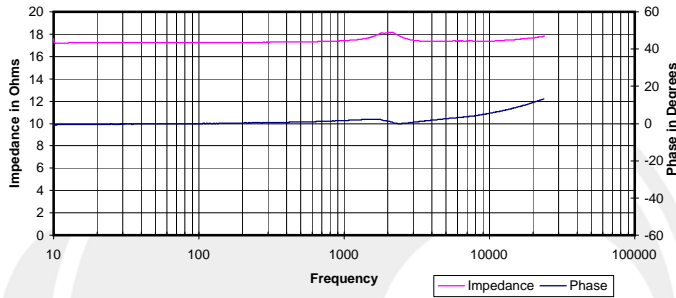
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



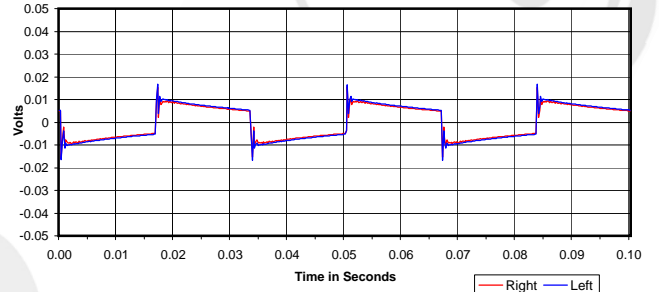
Isolation
Attenuation of External Sound vs. Frequency



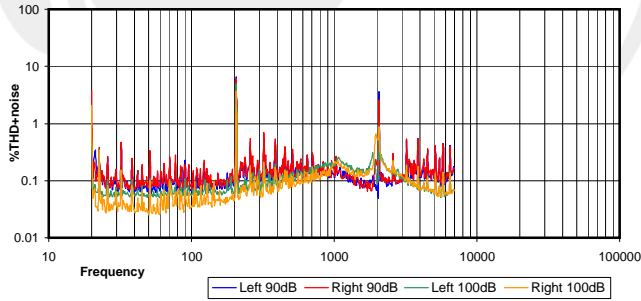
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



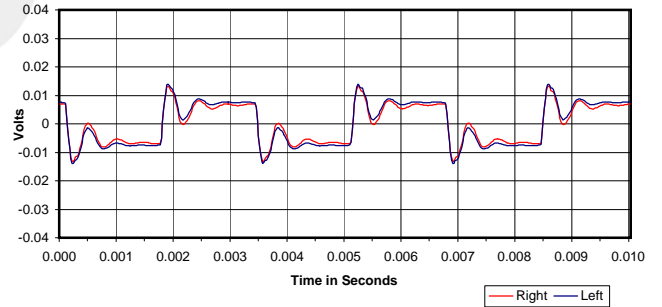
30 Hz Square Wave



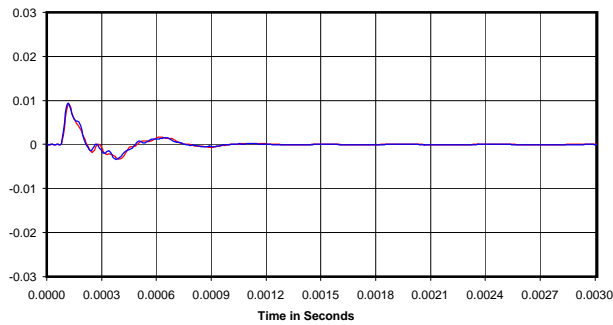
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



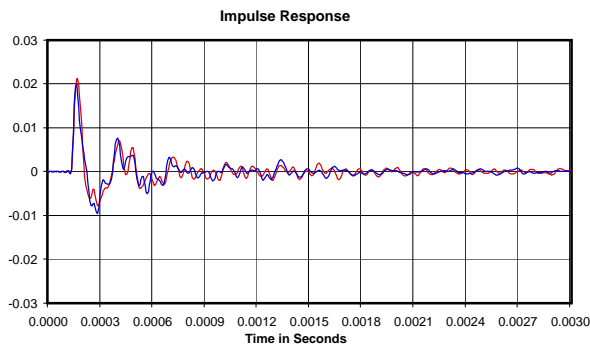
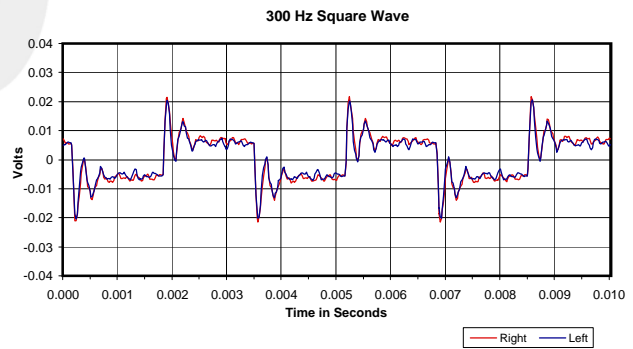
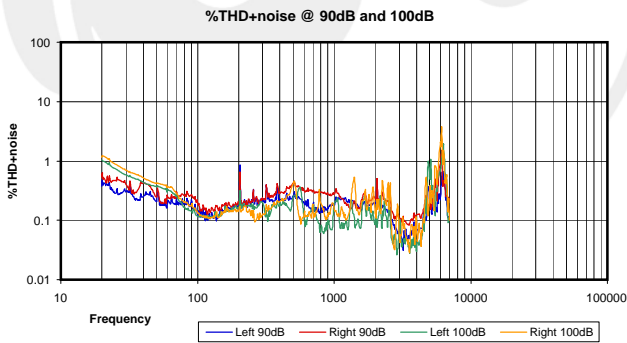
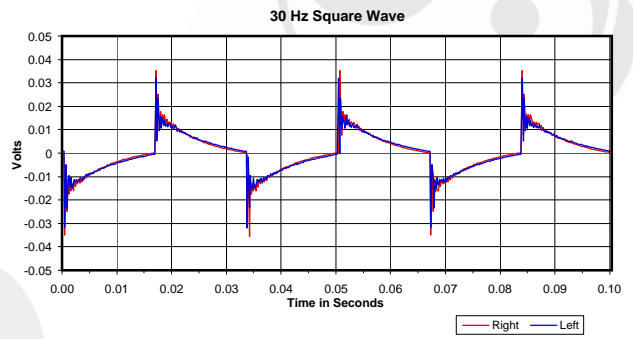
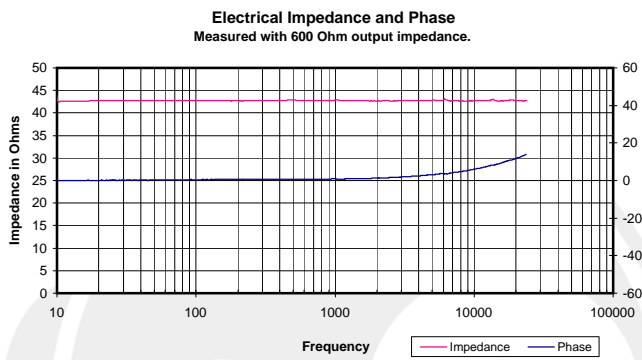
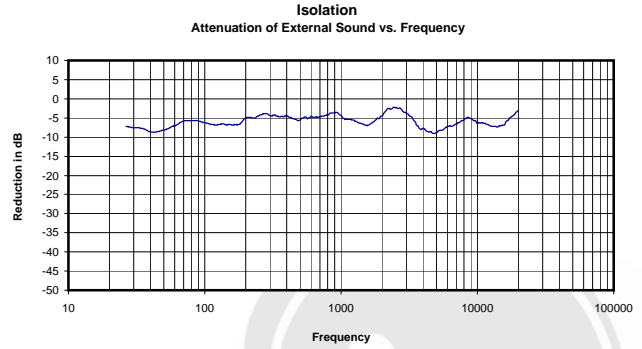
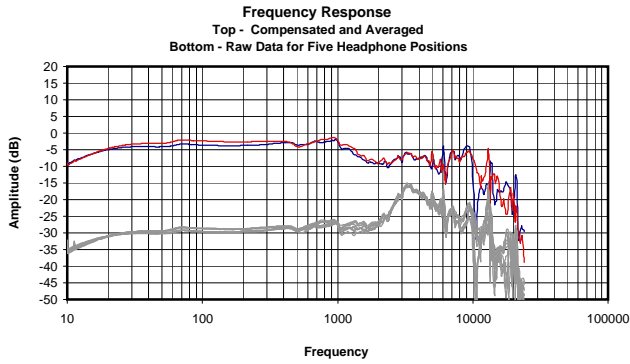
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
17 Ohms
0.02 mW
-27 dB



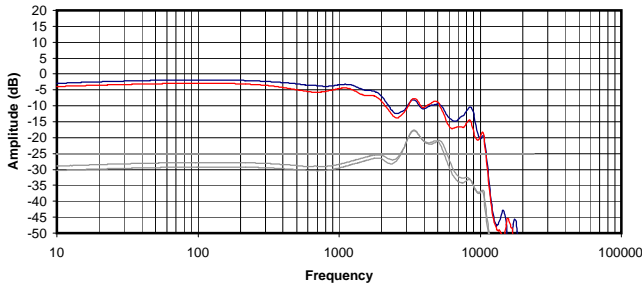


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

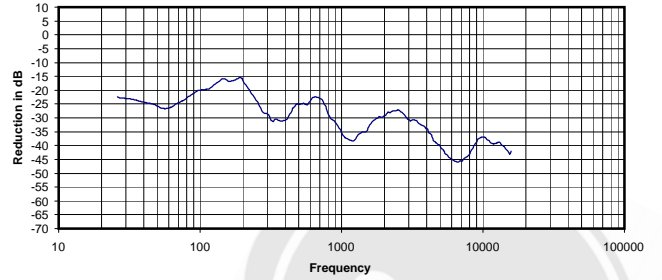
0.204 Vrms
43 Ohms
0.97 mW
-5 dBr



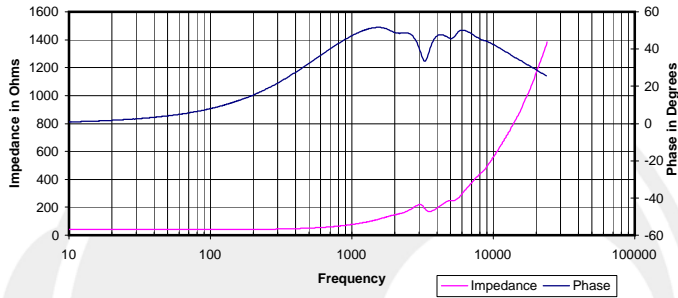
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



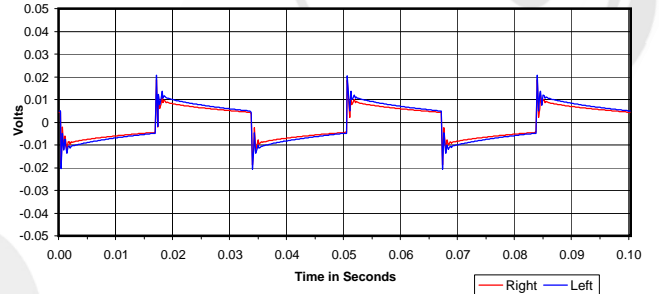
Isolation
Attenuation of External Sound vs. Frequency



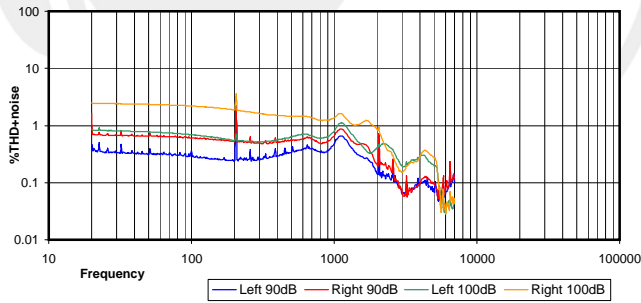
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



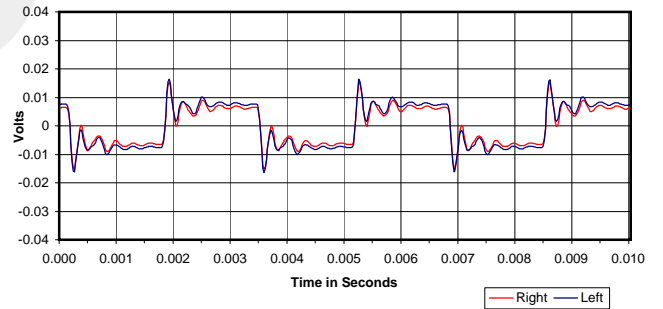
30 Hz Square Wave



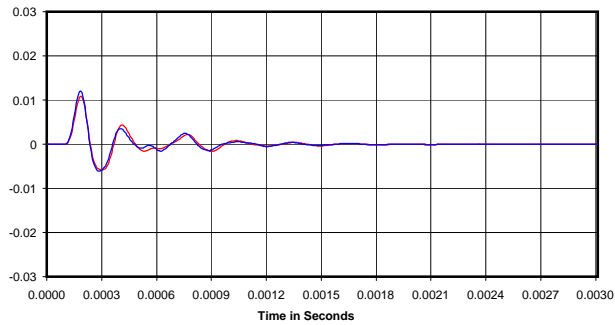
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

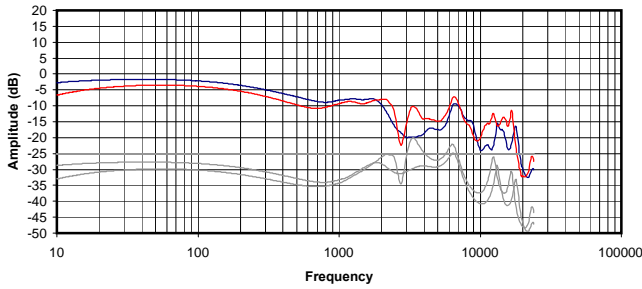


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

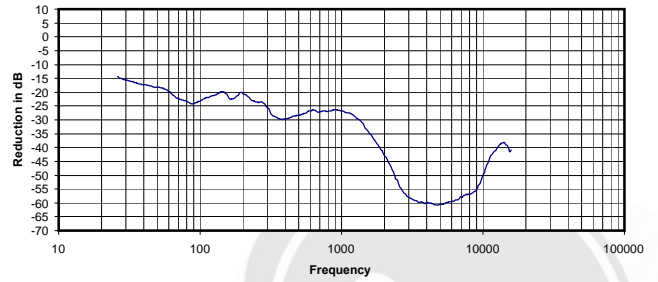
0.044 Vrms
76 Ohms
0.03 mW
-28 dB



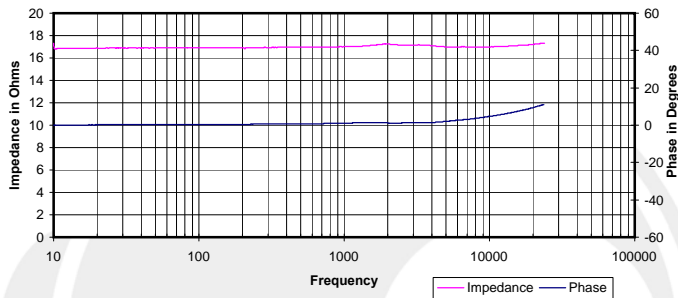
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



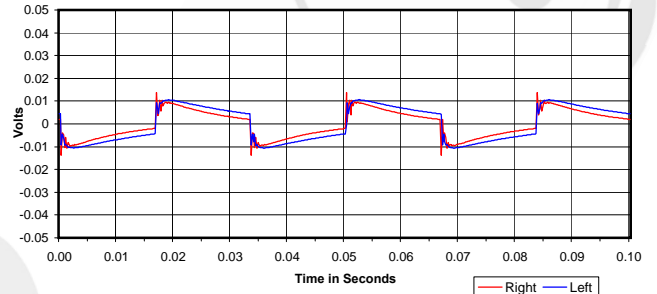
Isolation
Attenuation of External Sound vs. Frequency



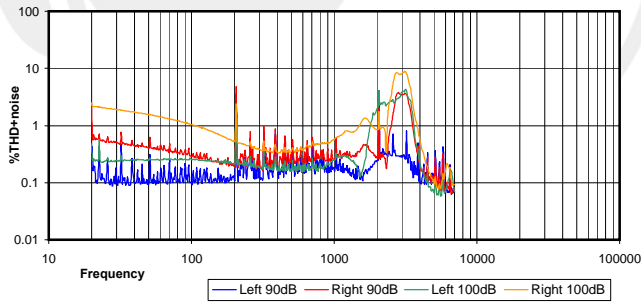
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



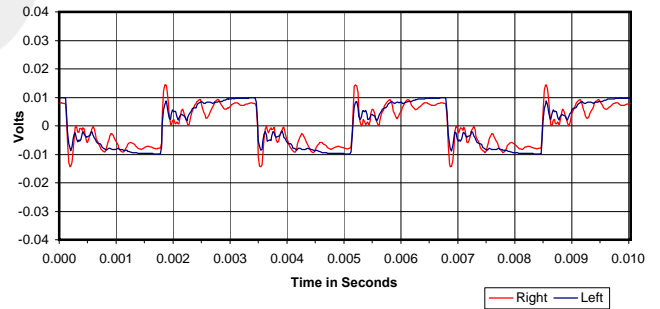
30 Hz Square Wave



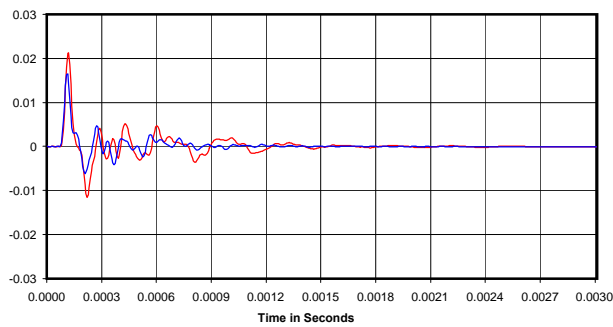
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

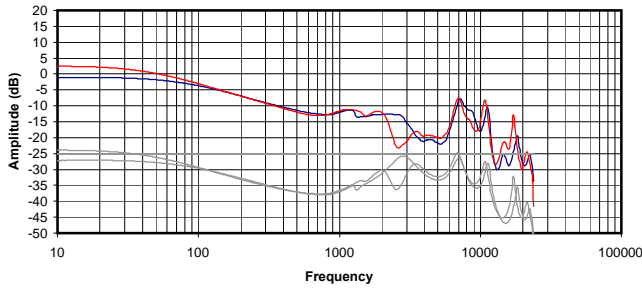


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

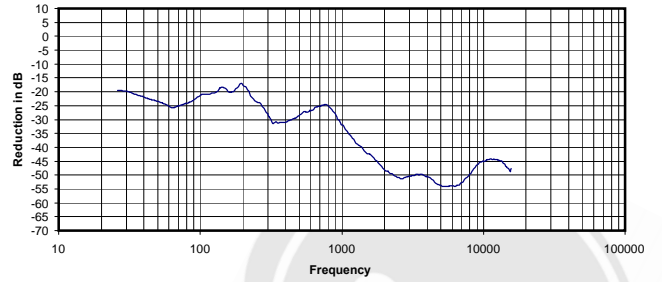
0.062 Vrms
17 Ohms
0.23 mW
-35 dB



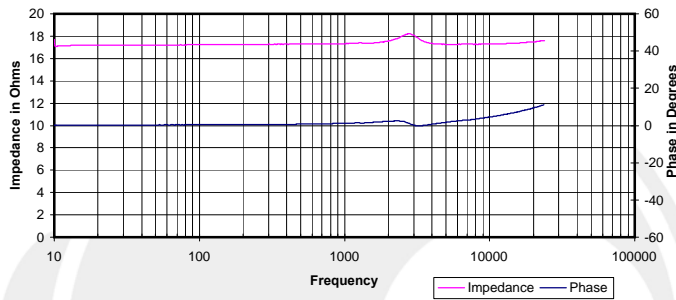
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



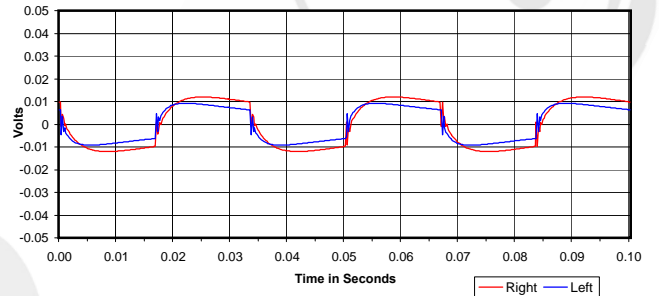
Isolation
Attenuation of External Sound vs. Frequency



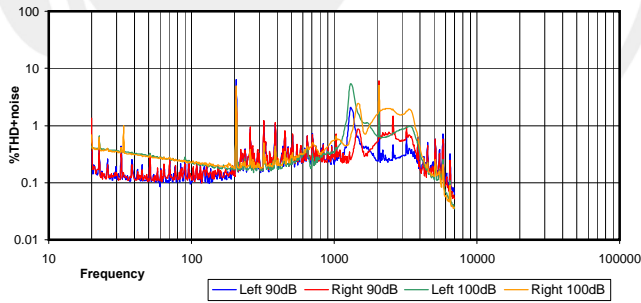
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



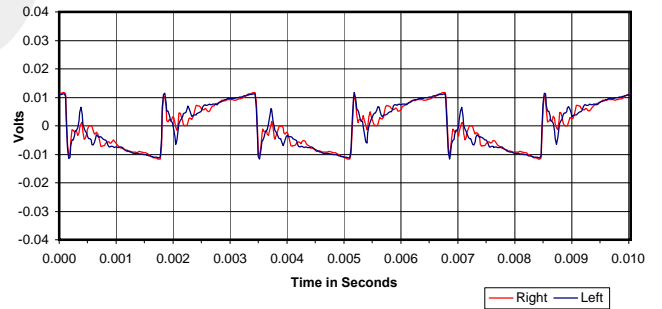
30 Hz Square Wave



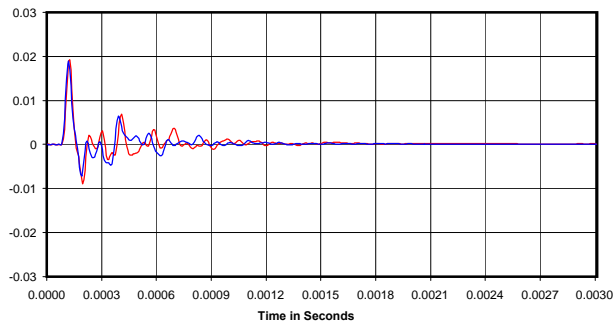
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

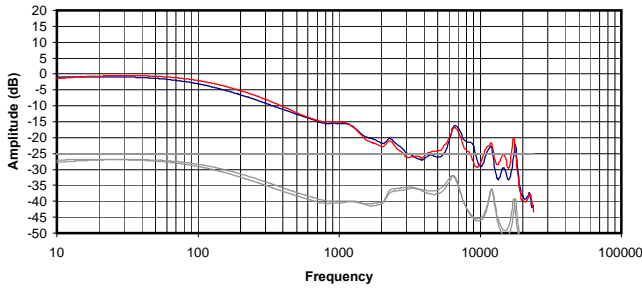


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

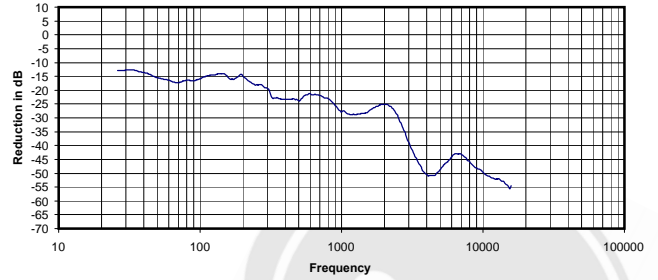
0.062 Vrms
17 Ohms
0.22 mW
-34 dB



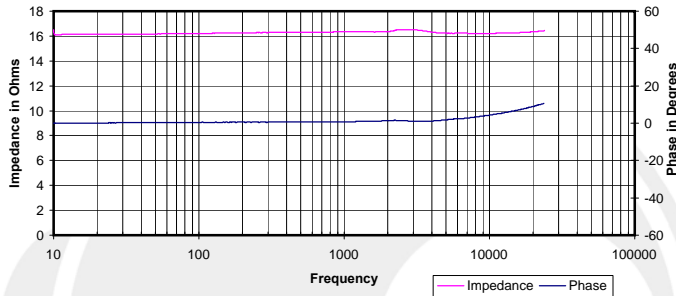
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



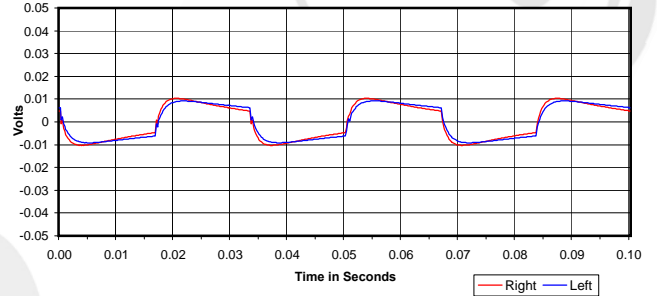
Isolation
Attenuation of External Sound vs. Frequency



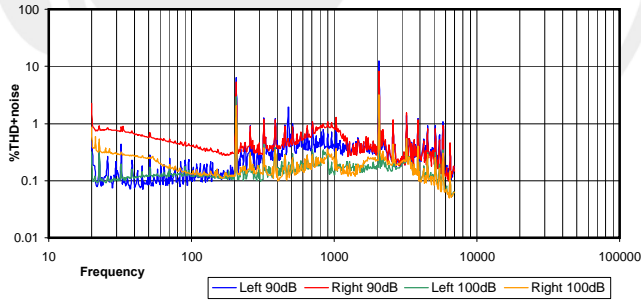
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



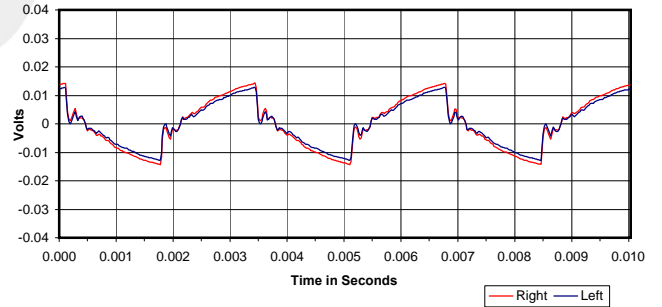
30 Hz Square Wave



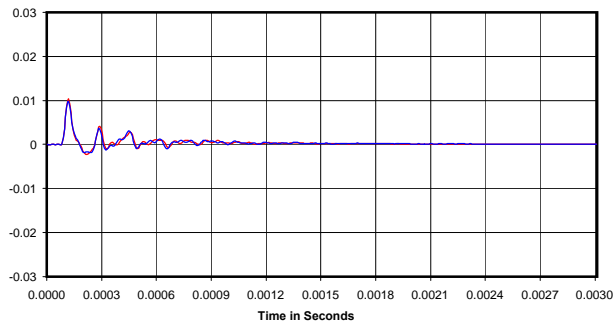
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

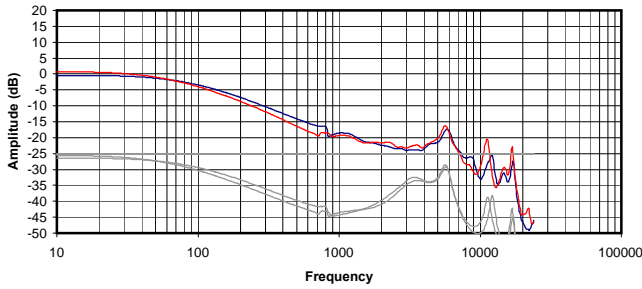


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

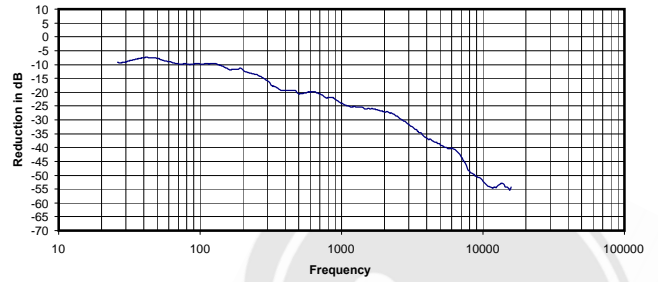
0.041 Vrms
16 Ohms
0.10 mW
-27 dB



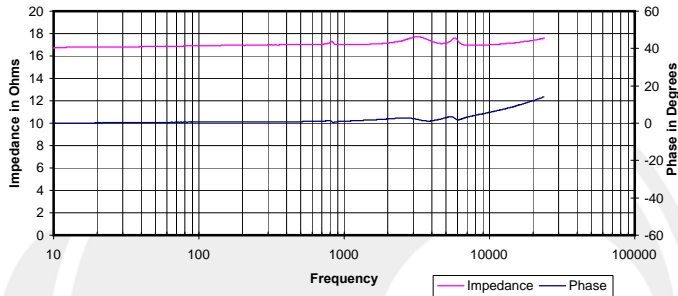
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



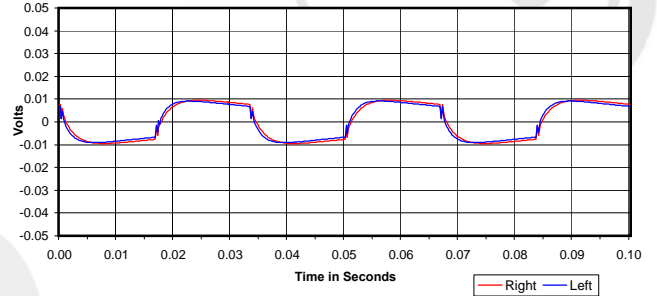
Isolation
Attenuation of External Sound vs. Frequency



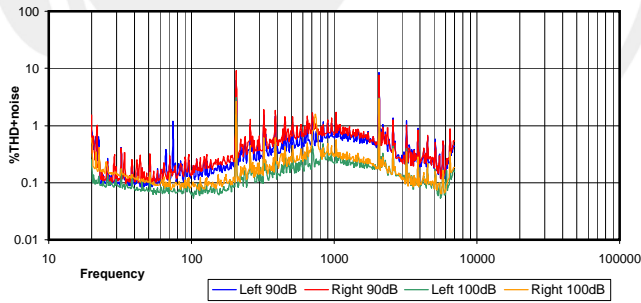
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



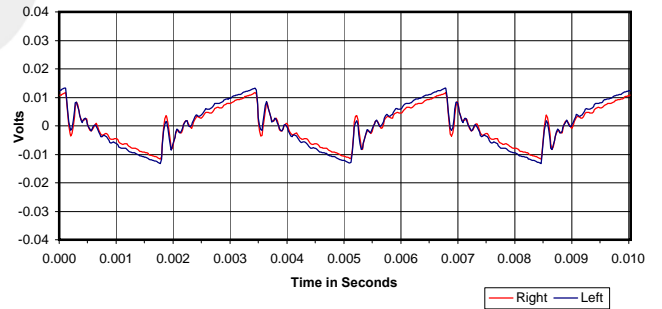
30 Hz Square Wave



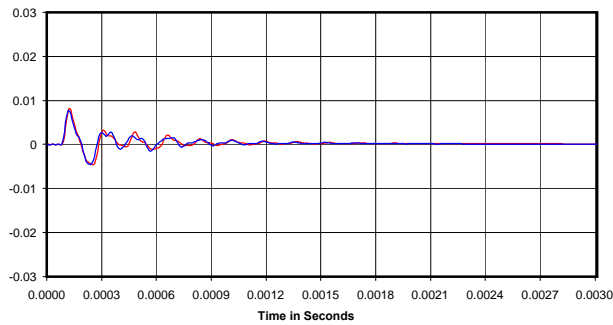
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

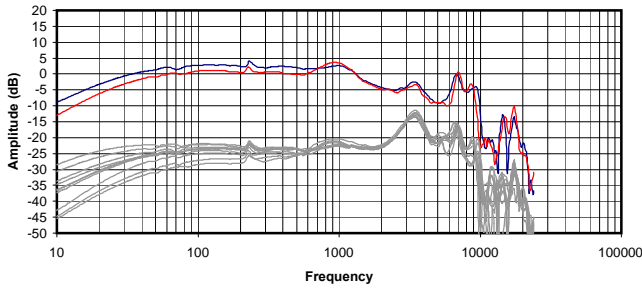


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

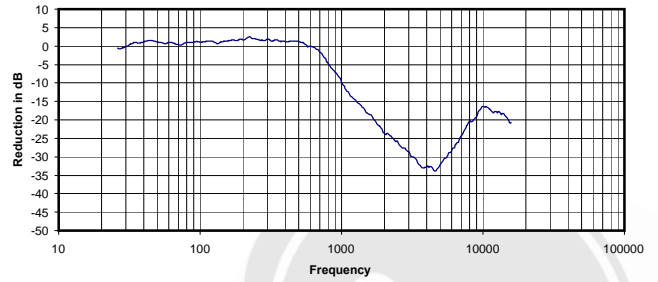
0.028 Vrms
17 Ohms
0.05 mW
-22 dB



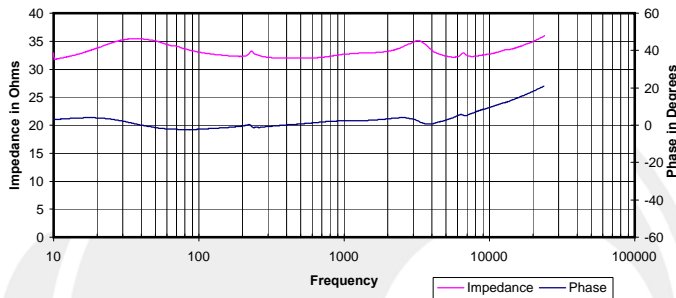
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



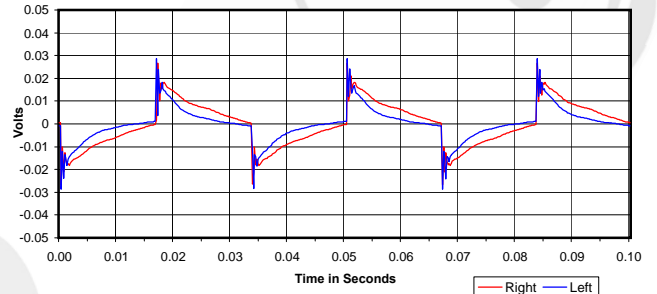
Isolation
 Attenuation of External Sound vs. Frequency



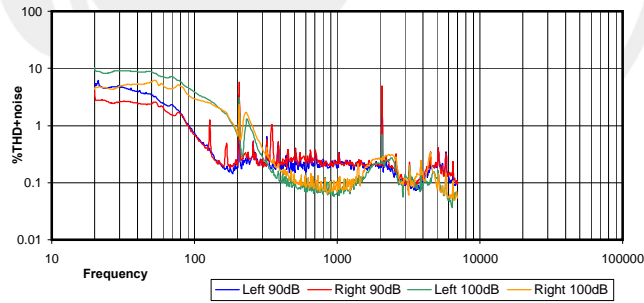
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



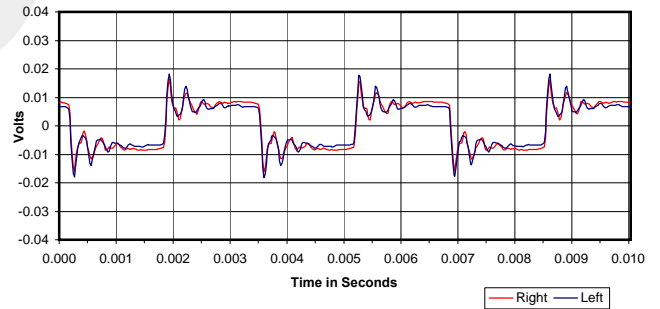
30 Hz Square Wave



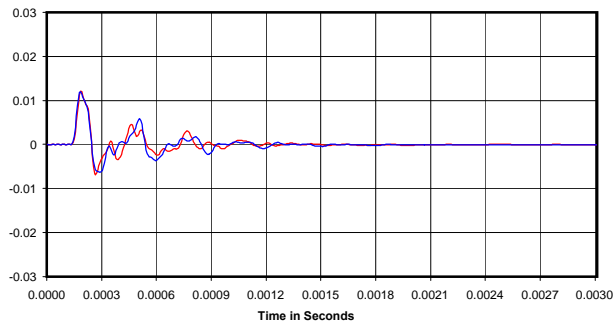
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

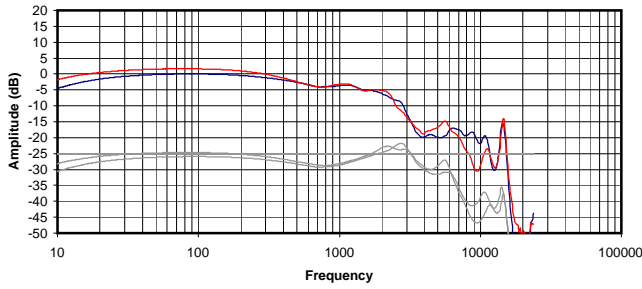


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

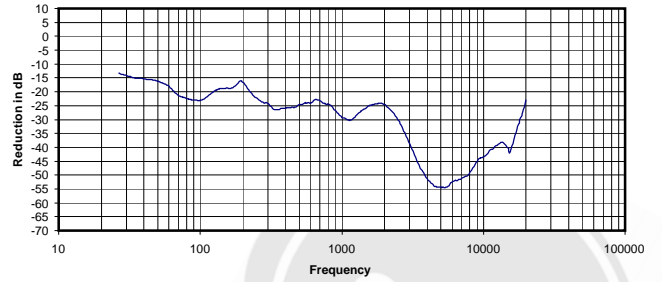
0.029 Vrms
 33 Ohms
 0.03 mW
 -11 dB



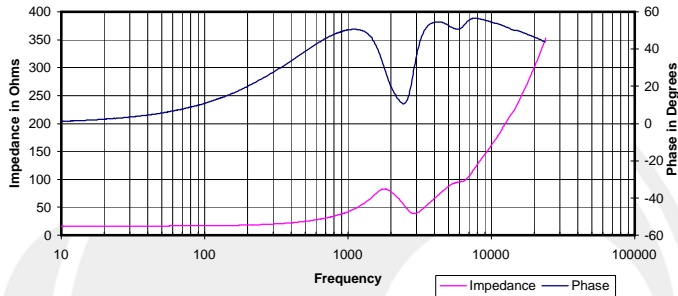
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



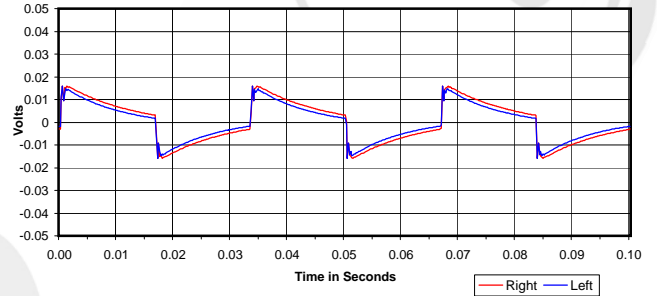
Isolation
Attenuation of External Sound vs. Frequency



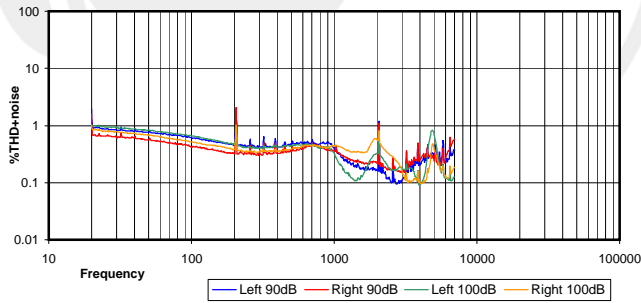
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



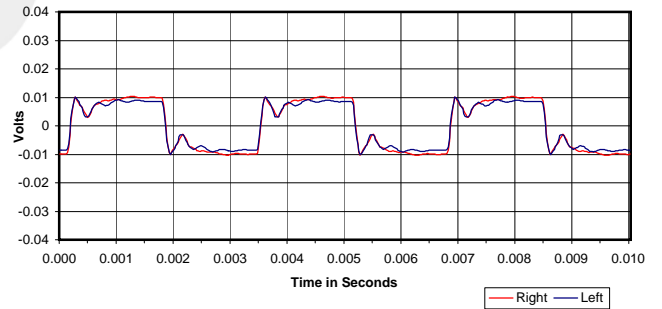
30 Hz Square Wave



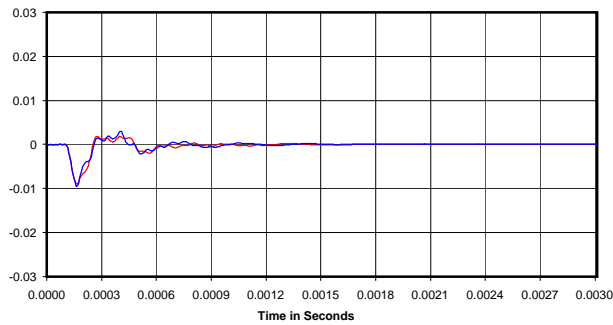
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

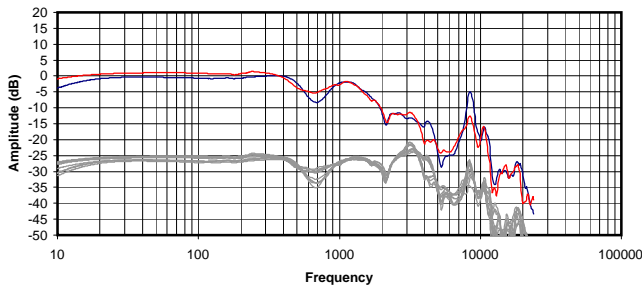


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

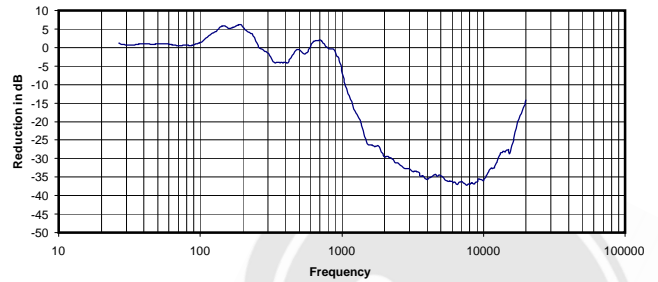
0.014 Vrms
42 Ohms
0.00 mW
-31 dB



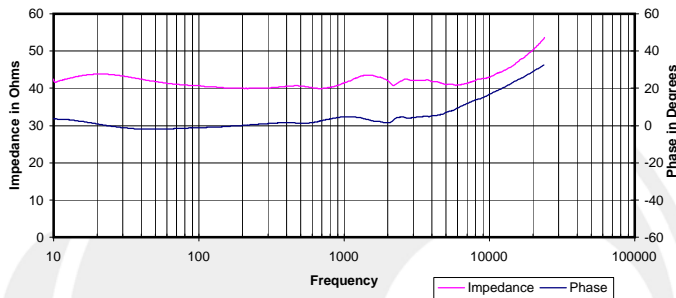
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



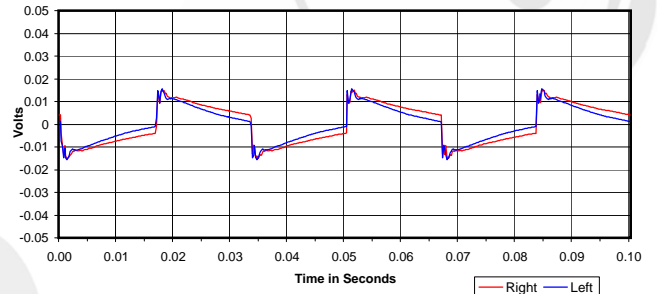
Isolation
Attenuation of External Sound vs. Frequency



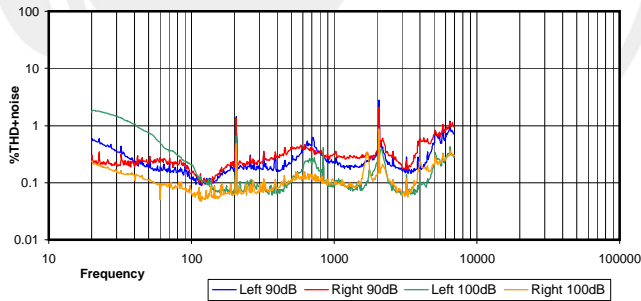
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



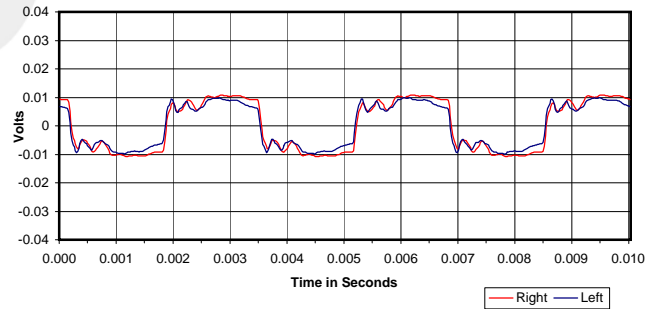
30 Hz Square Wave



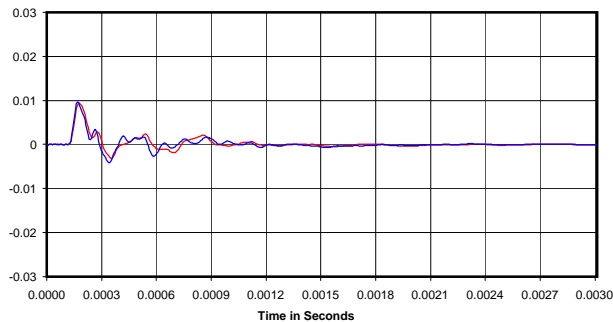
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



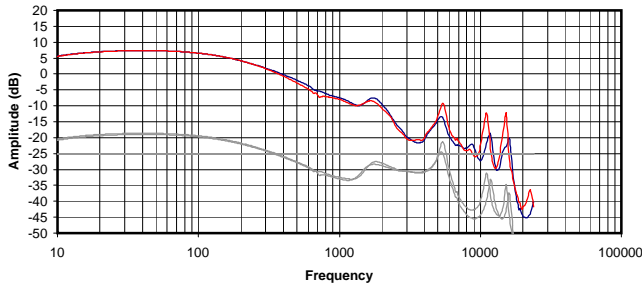
Impulse Response



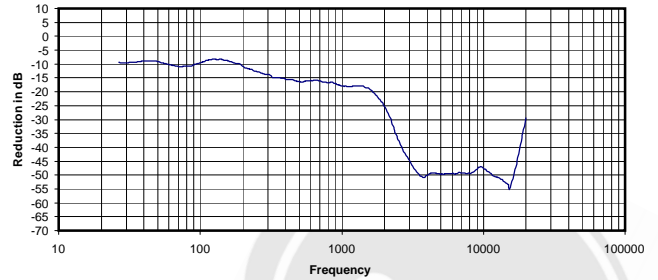
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.016 Vrms
41 Ohms
0.01 mW
-15 dB

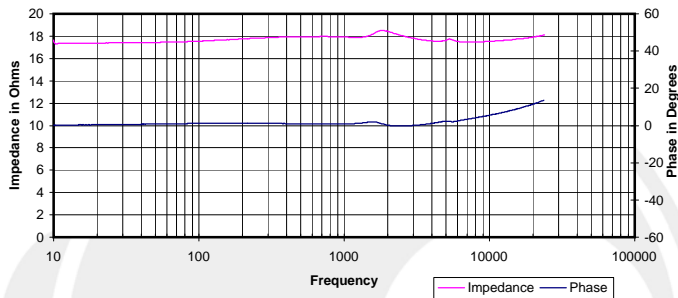
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



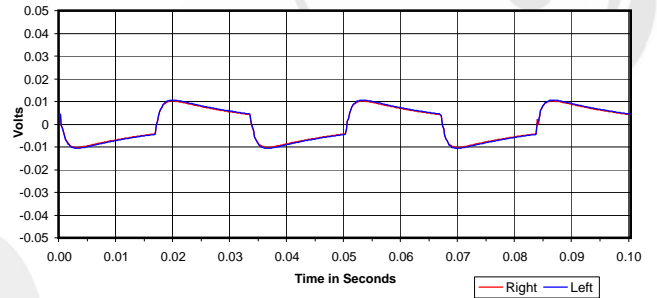
Isolation
Attenuation of External Sound vs. Frequency



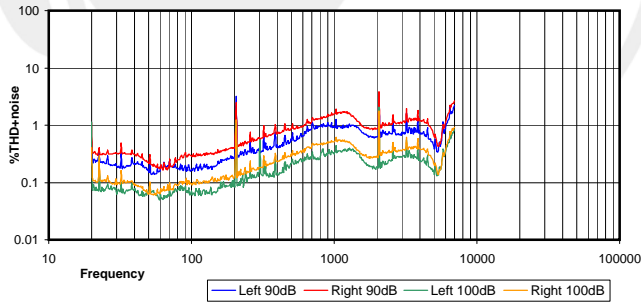
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



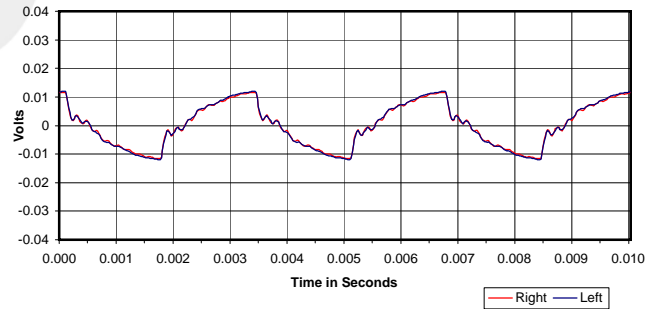
30 Hz Square Wave



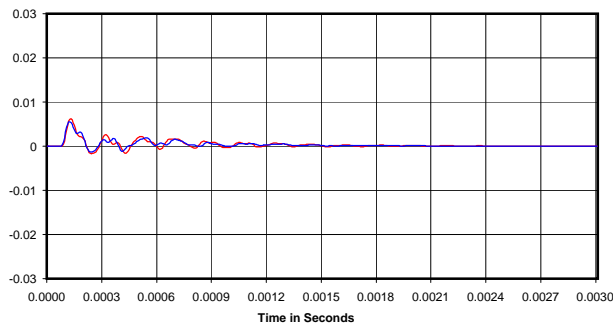
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

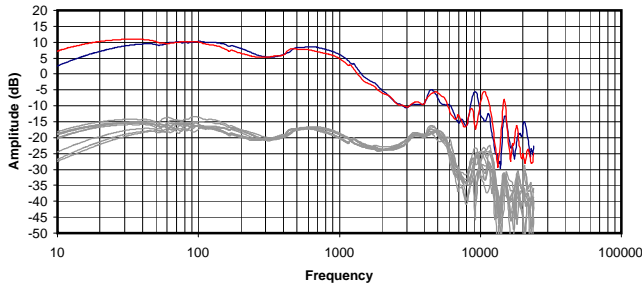


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

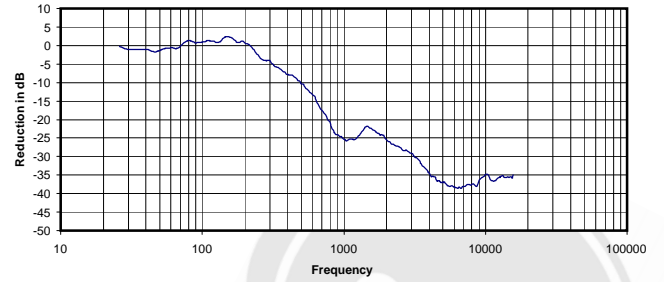
0.017 Vrms
18 Ohms
0.02 mW
-26 dB



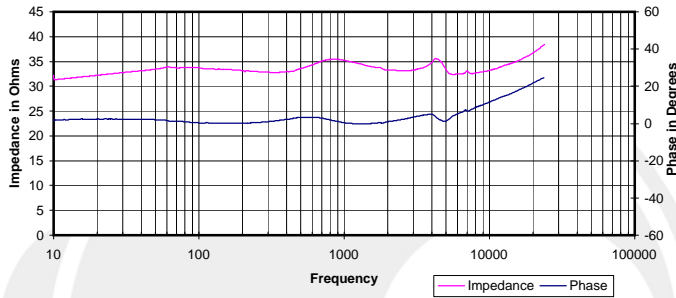
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



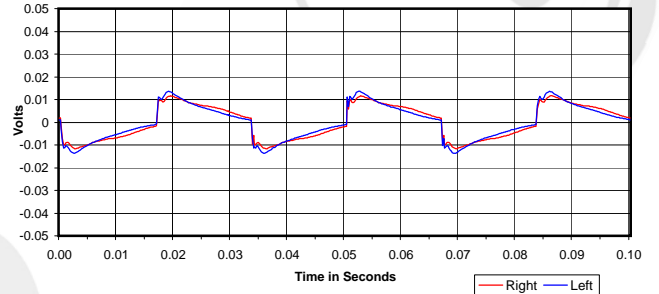
Isolation
 Attenuation of External Sound vs. Frequency



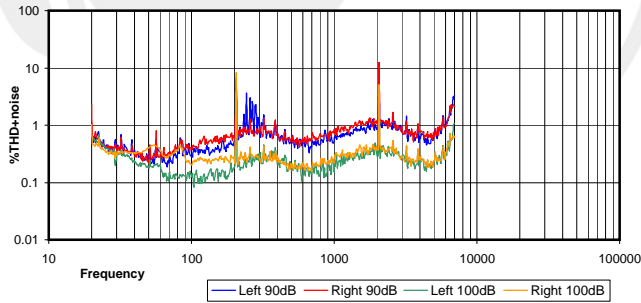
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



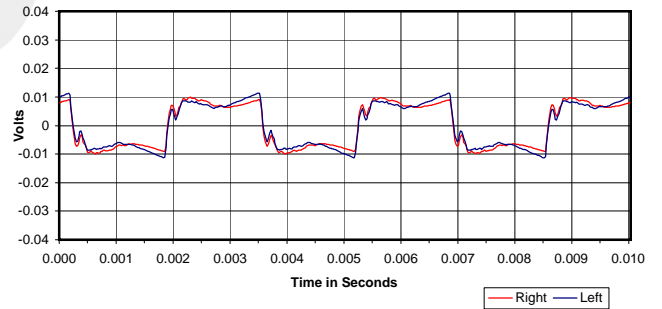
30 Hz Square Wave



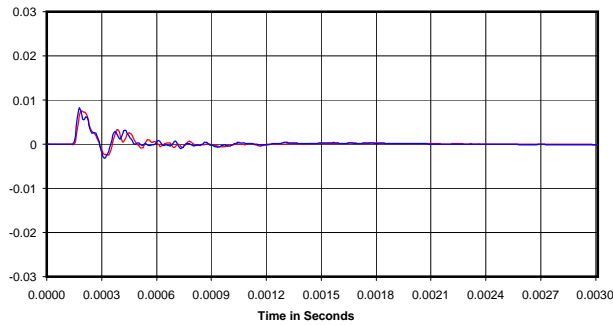
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



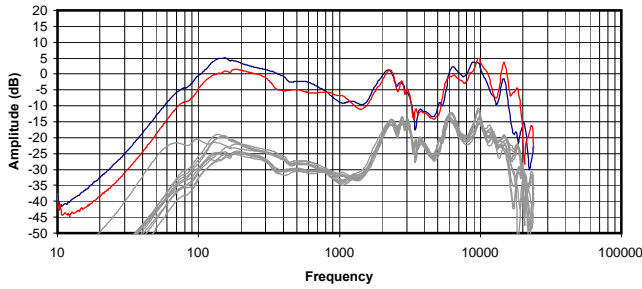
Impulse Response



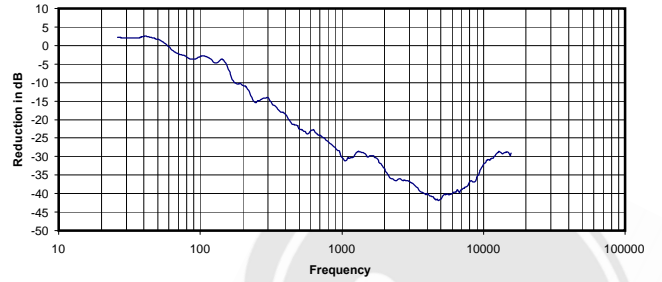
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
 35 Ohms
 0.02 mW
 -16 dB

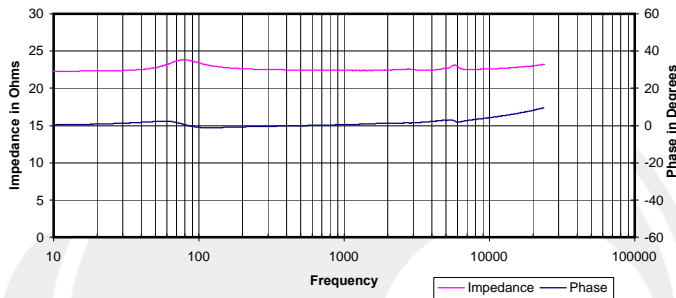
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



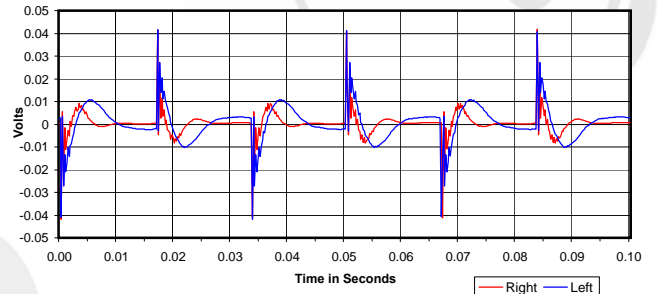
Isolation
 Attenuation of External Sound vs. Frequency



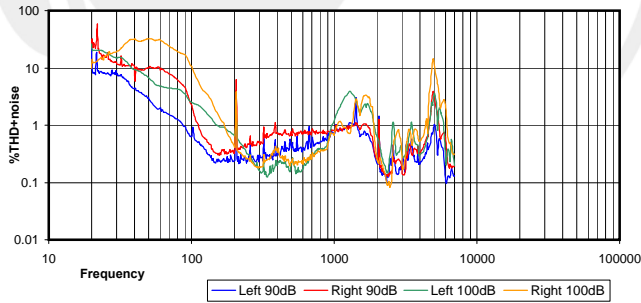
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



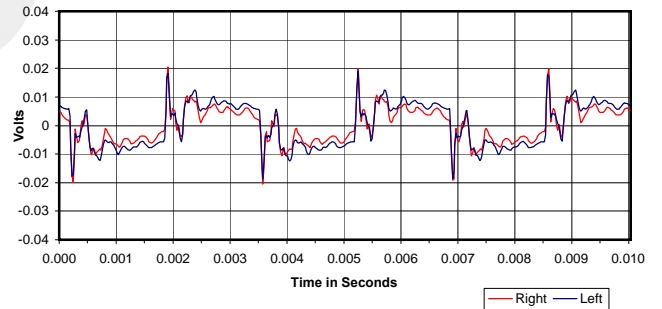
30 Hz Square Wave



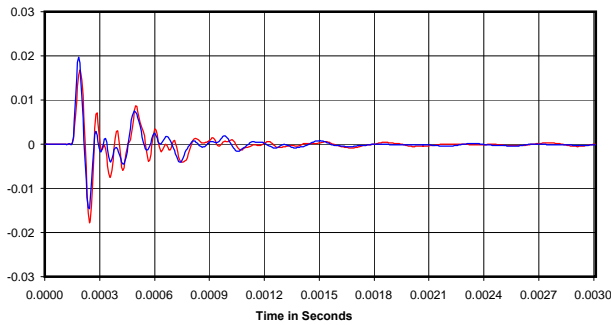
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



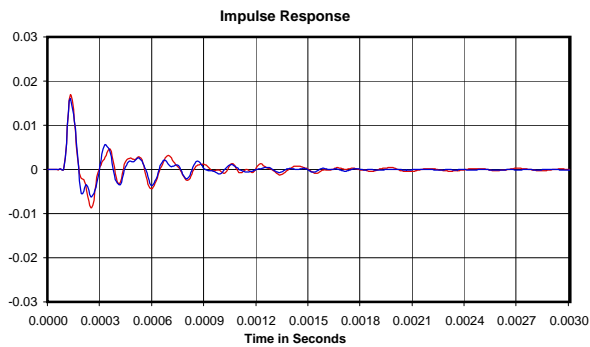
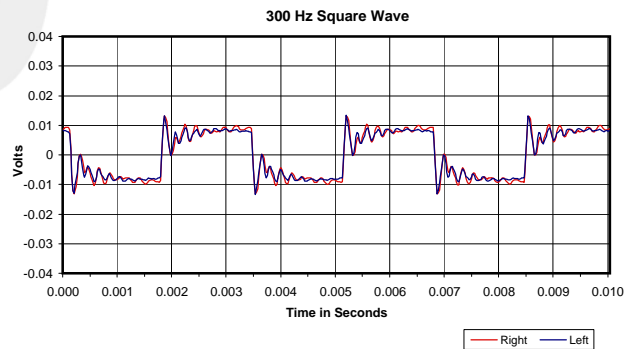
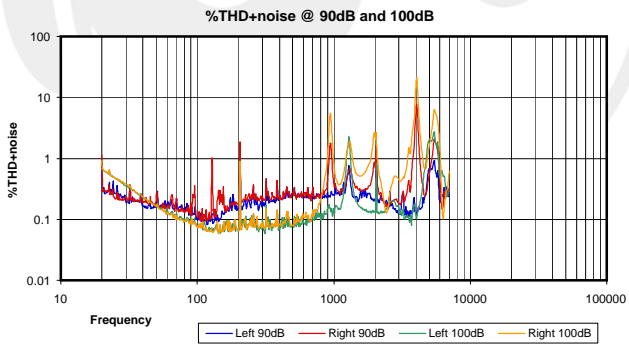
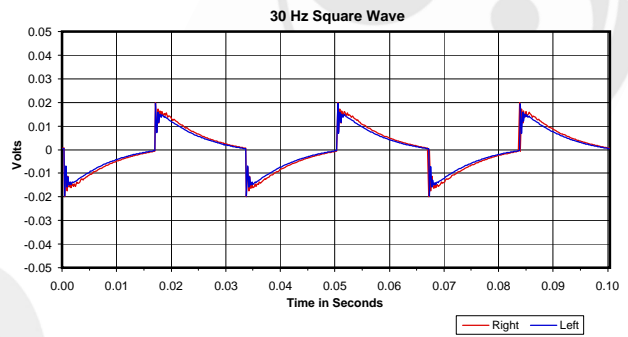
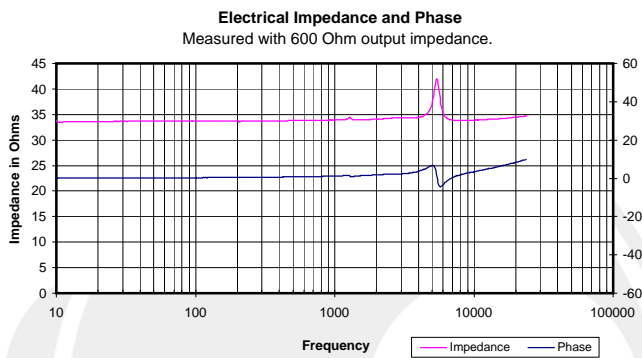
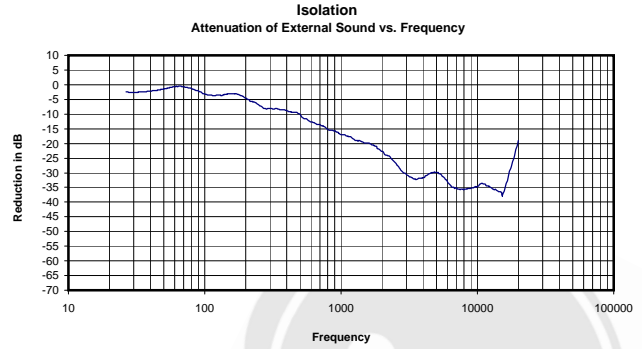
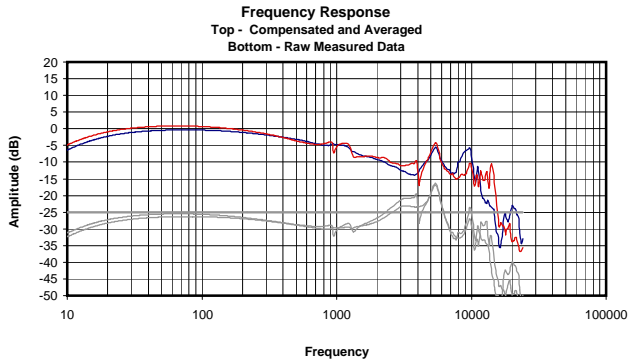
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.370 Vrms
 22 Ohms
 6.13 mW
 -24 dB



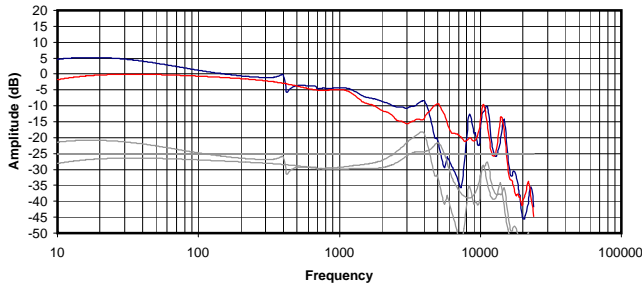


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

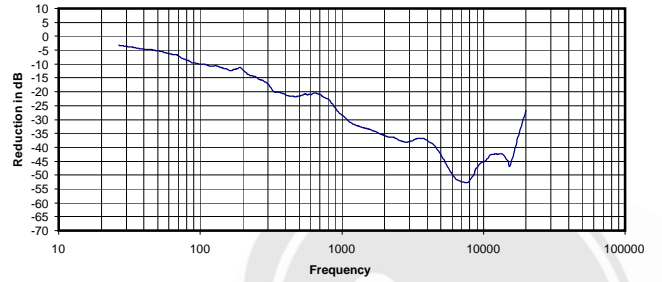
0.034 Vrms
34 Ohms
0.03 mW
-18 dB



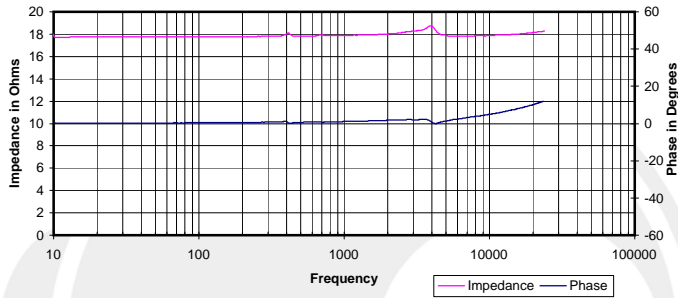
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



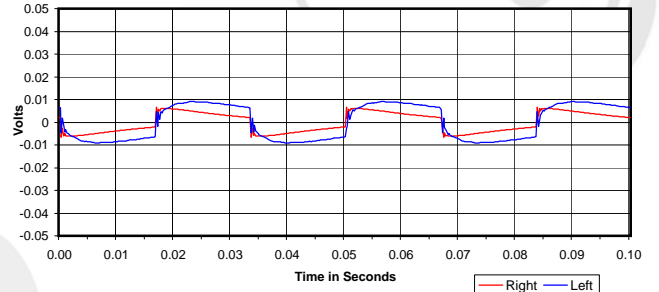
Isolation
Attenuation of External Sound vs. Frequency



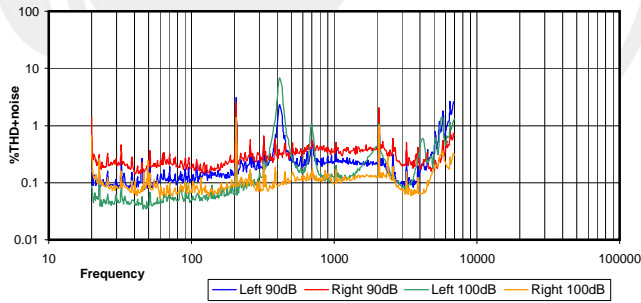
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



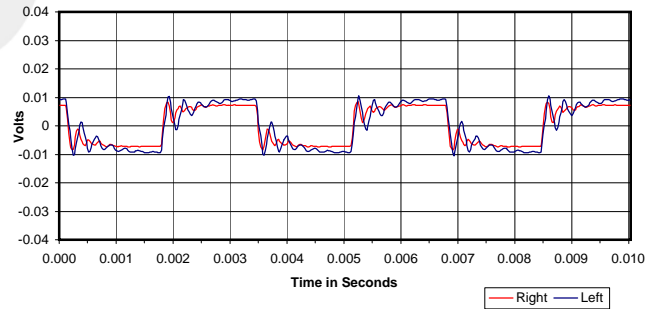
30 Hz Square Wave



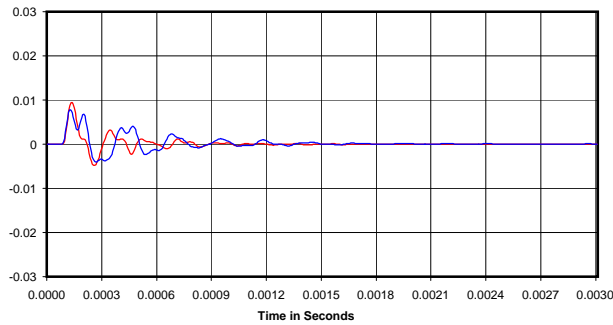
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

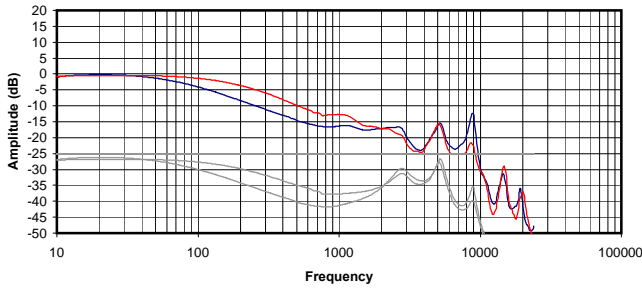


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

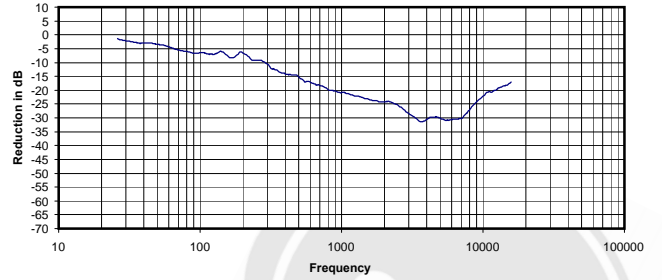
0.023 Vrms
18 Ohms
0.03 mW
-29 dB



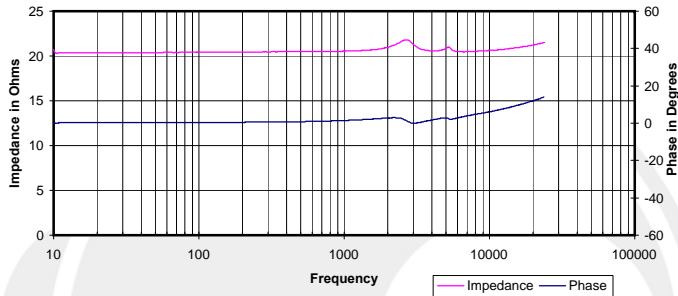
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



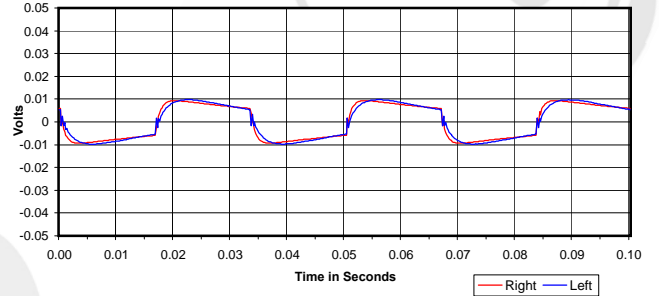
Isolation
Attenuation of External Sound vs. Frequency



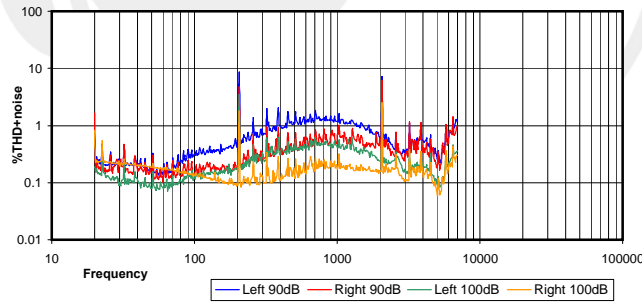
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



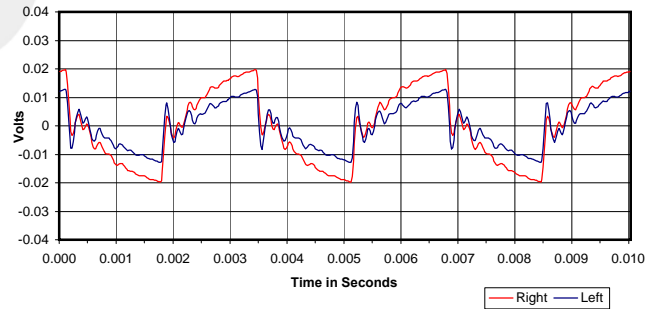
30 Hz Square Wave



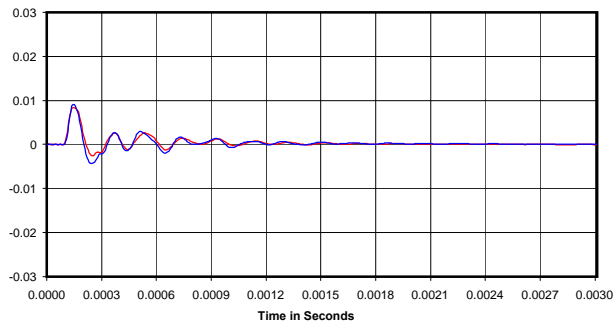
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

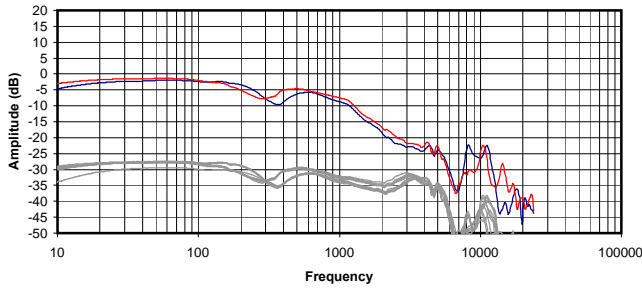


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

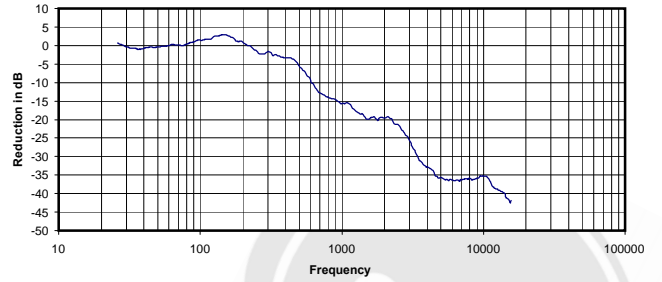
0.030 Vrms
21 Ohms
0.04 mW
-18 dB



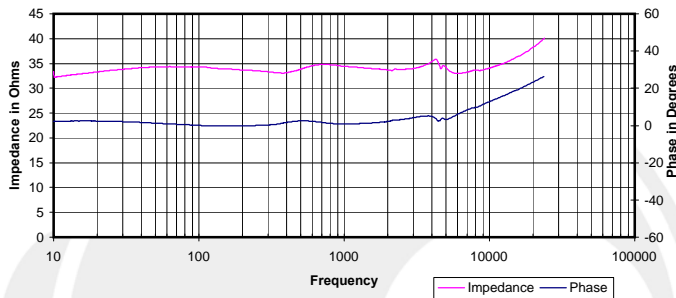
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



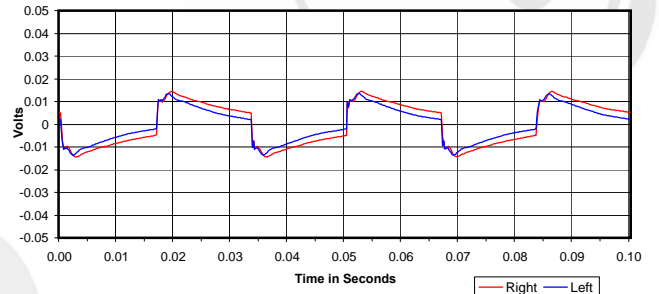
Isolation
 Attenuation of External Sound vs. Frequency



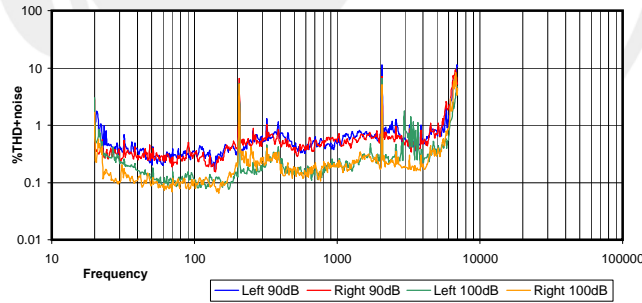
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



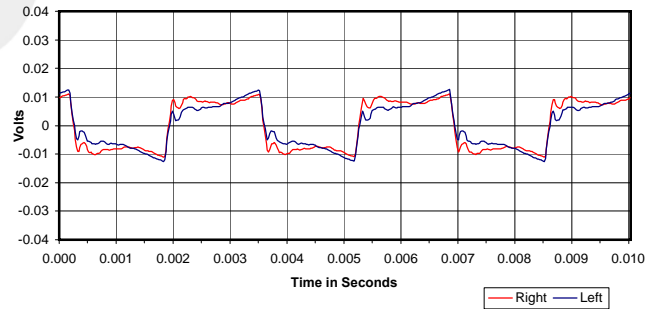
30 Hz Square Wave



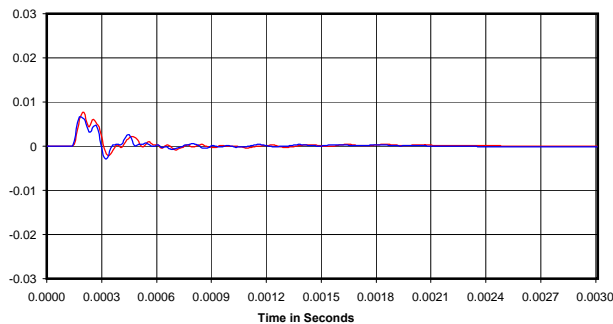
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

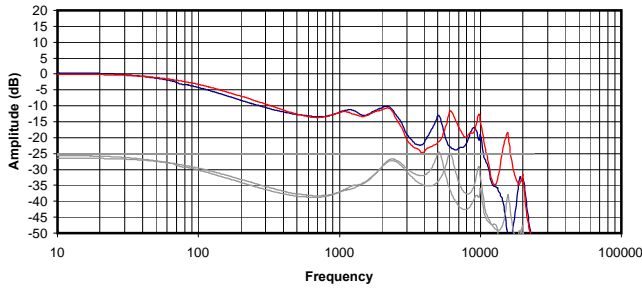


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

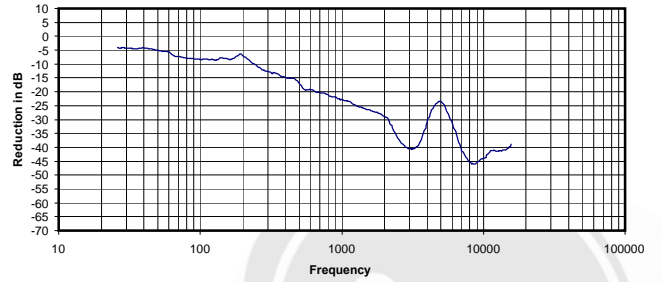
0.022 Vrms
 34 Ohms
 0.01 mW
 -13 dB



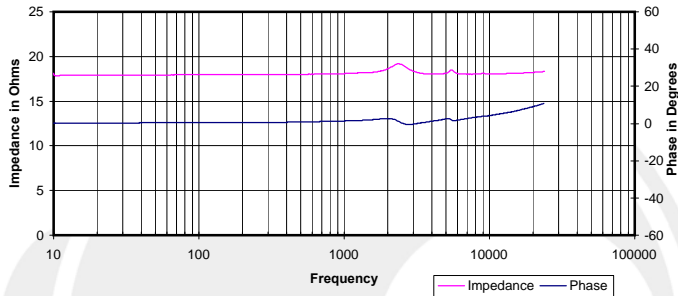
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



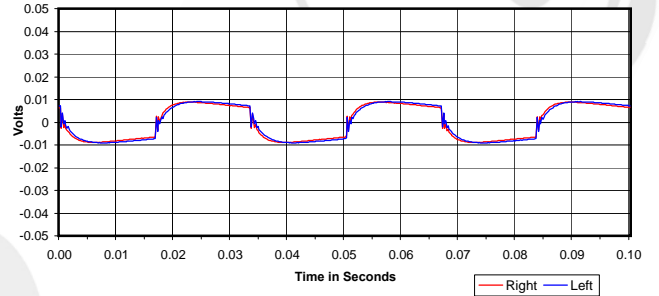
Isolation
Attenuation of External Sound vs. Frequency



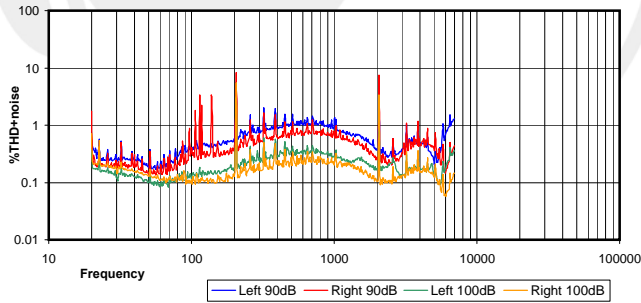
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



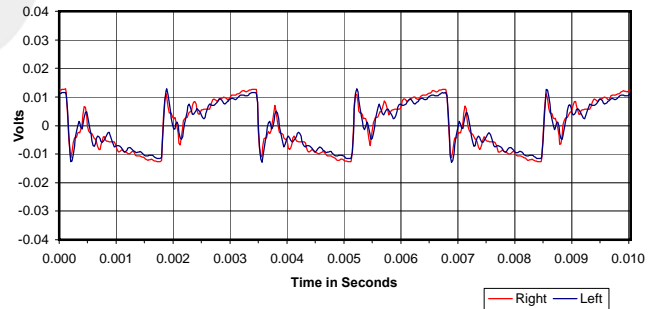
30 Hz Square Wave



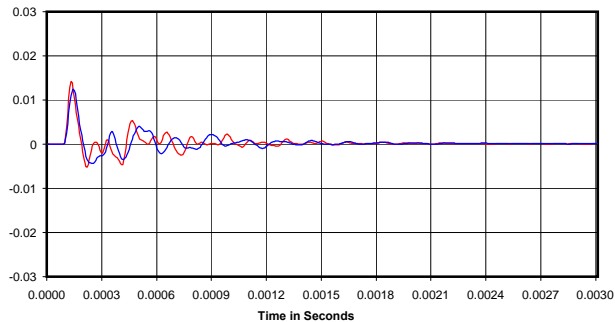
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

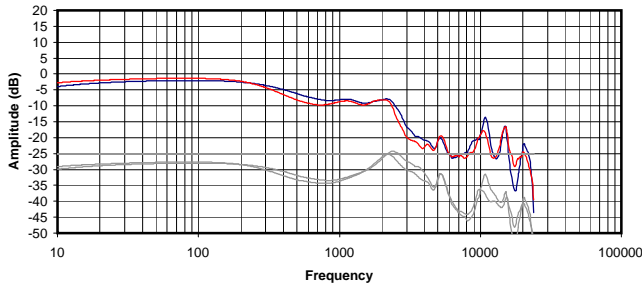


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

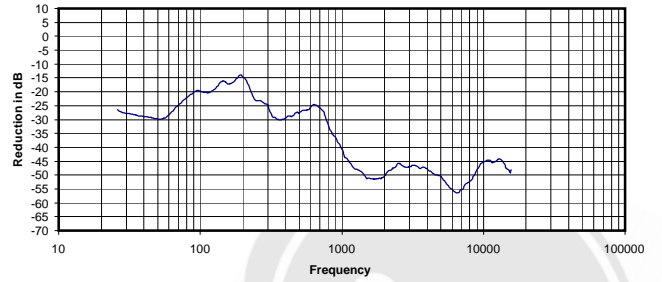
0.021 Vrms
18 Ohms
0.02 mW
-20 dB



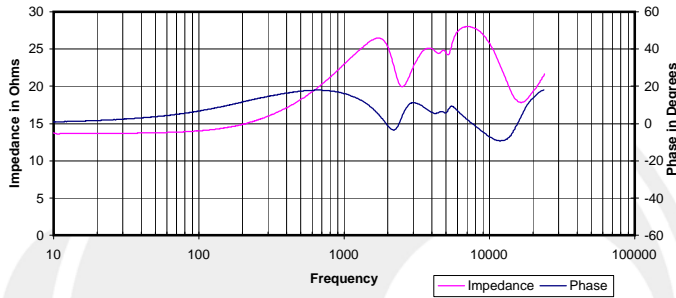
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



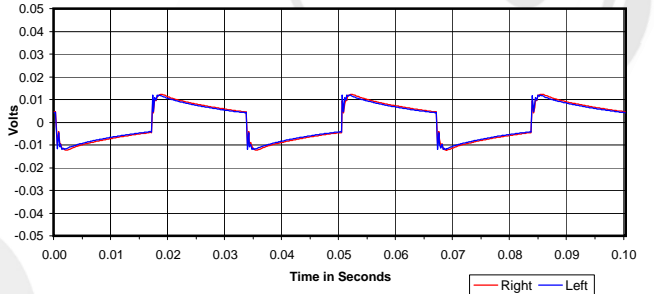
Isolation
Attenuation of External Sound vs. Frequency



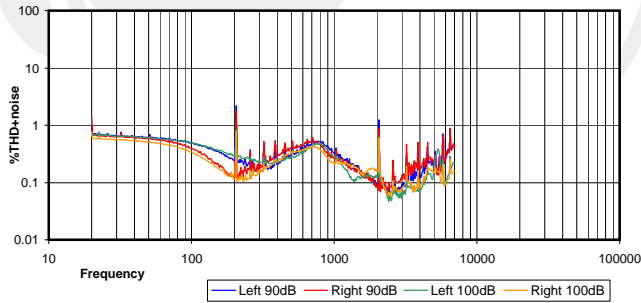
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



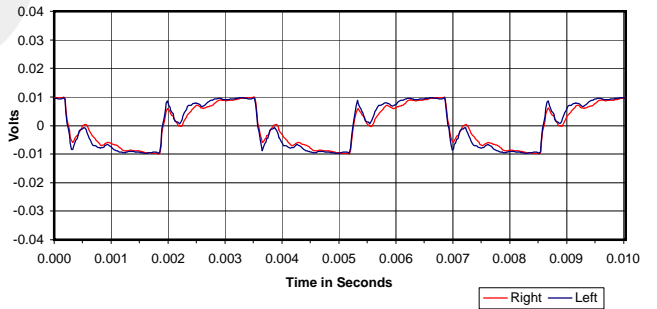
30 Hz Square Wave



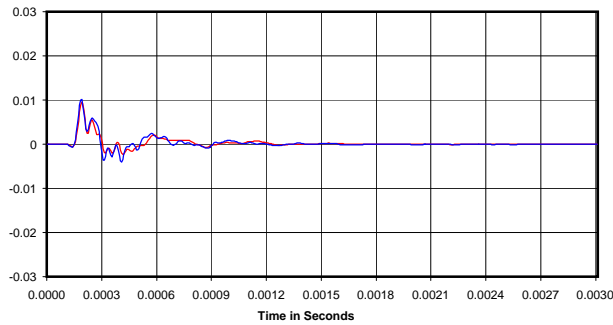
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

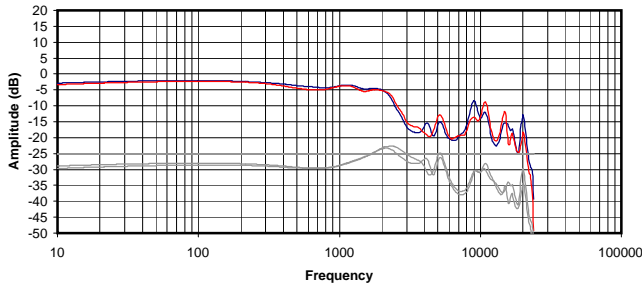


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

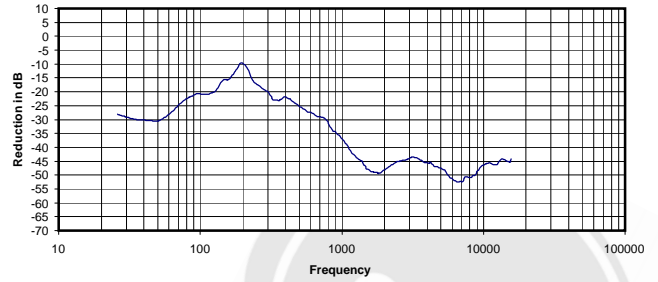
0.018 Vrms
23 Ohms
0.01 mW
-35 dB



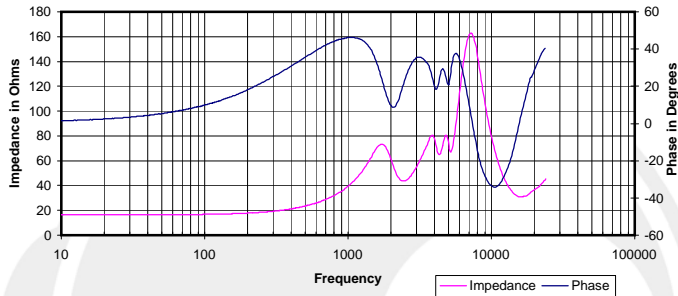
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



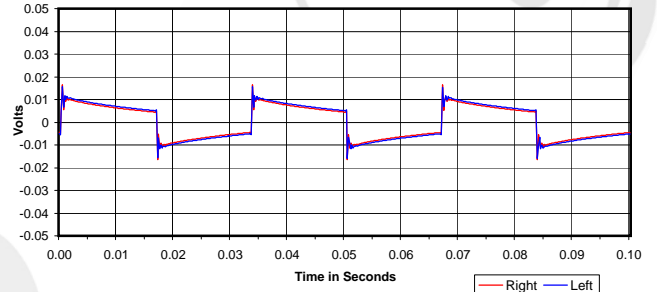
Isolation
Attenuation of External Sound vs. Frequency



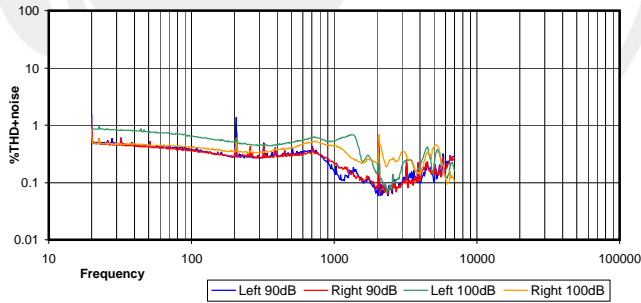
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



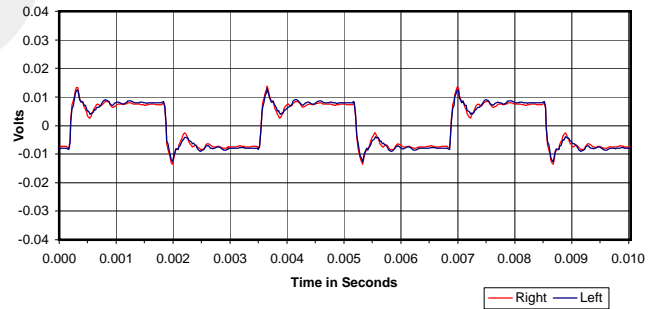
30 Hz Square Wave



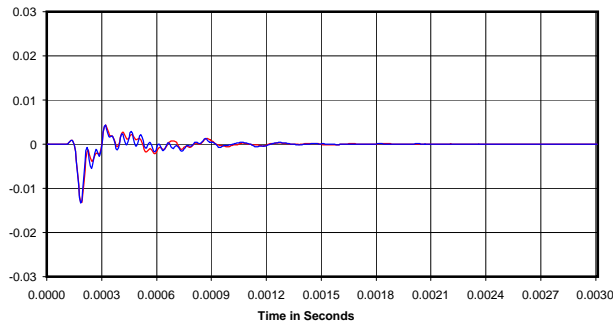
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

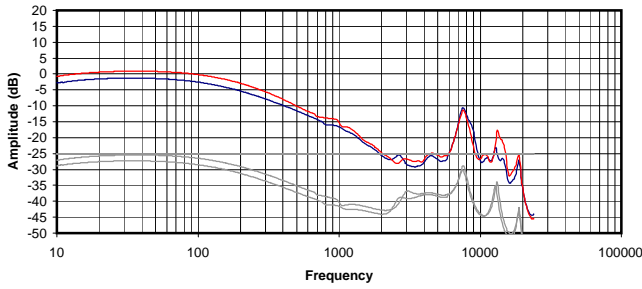


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

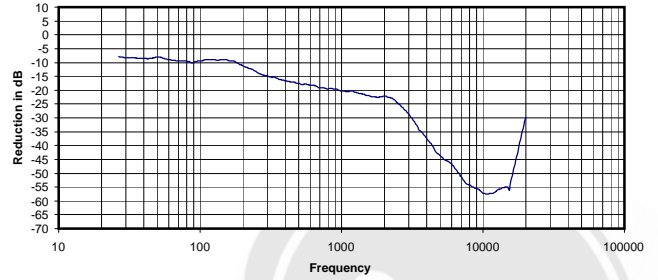
0.015 Vrms
40 Ohms
0.01 mW
-32 dB



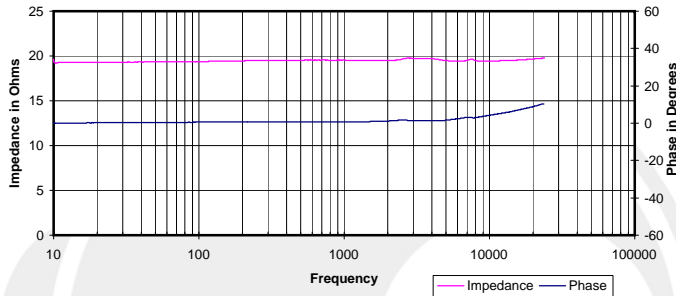
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



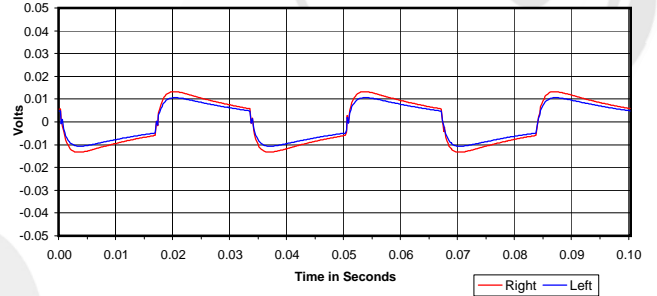
Isolation
Attenuation of External Sound vs. Frequency



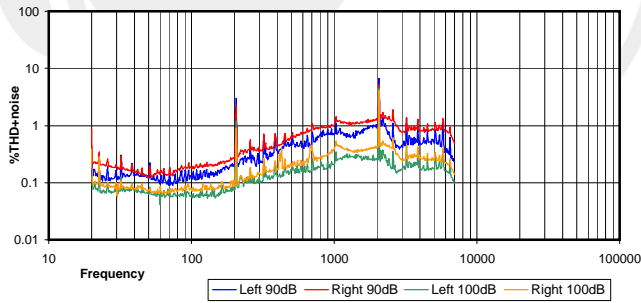
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



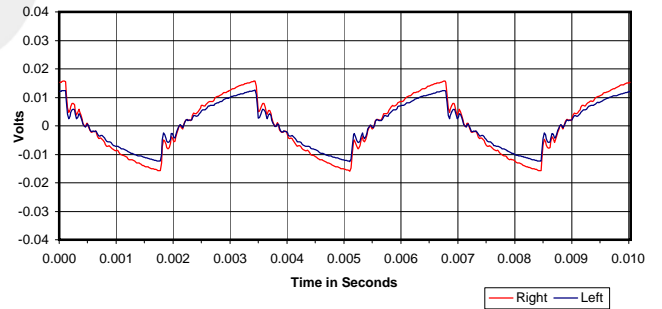
30 Hz Square Wave



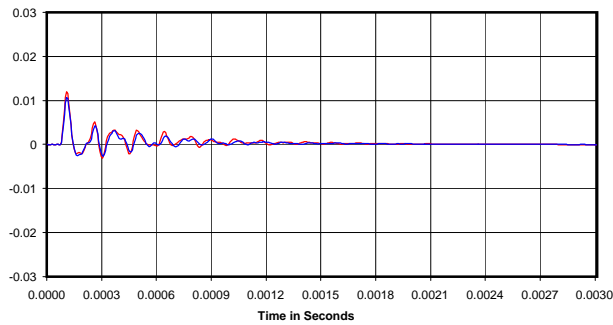
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



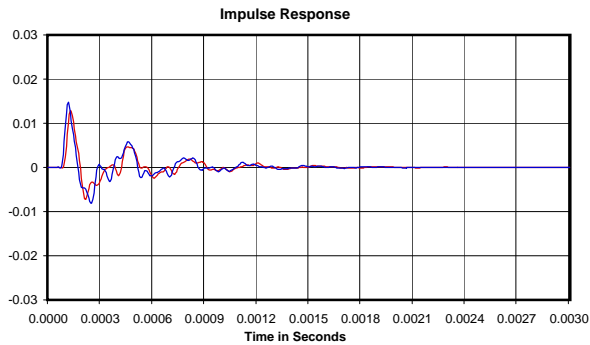
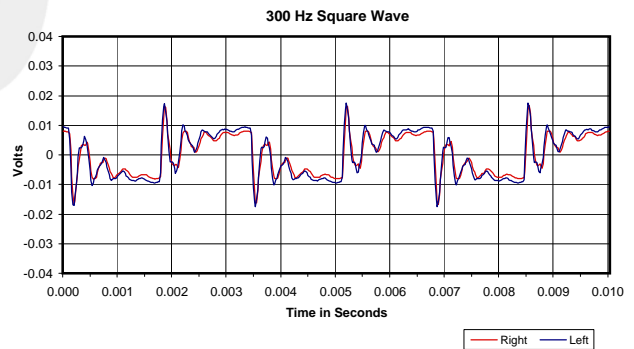
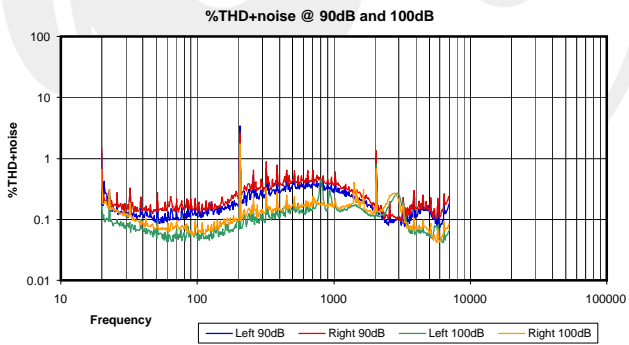
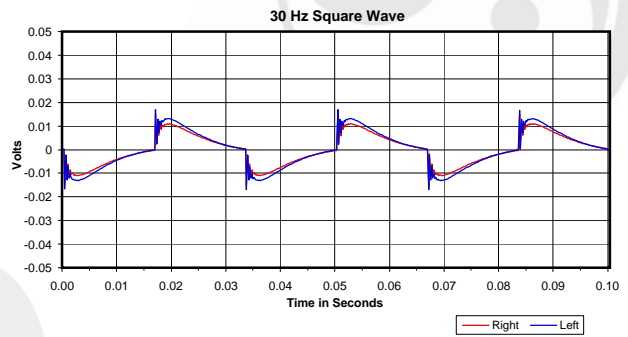
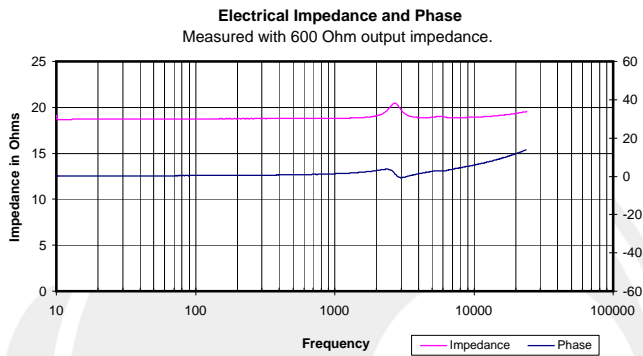
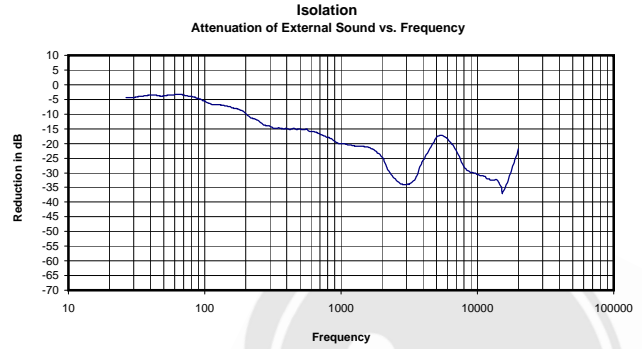
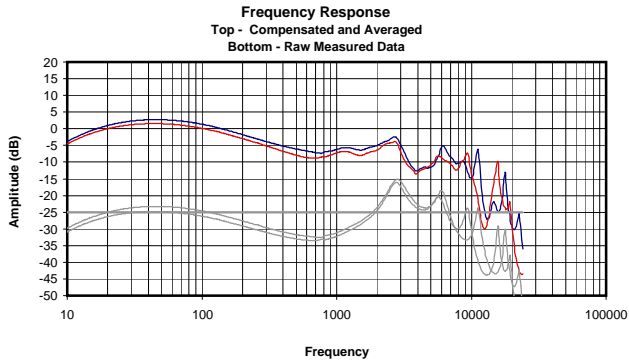
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.030 Vrms
20 Ohms
0.05 mW
-25 dB



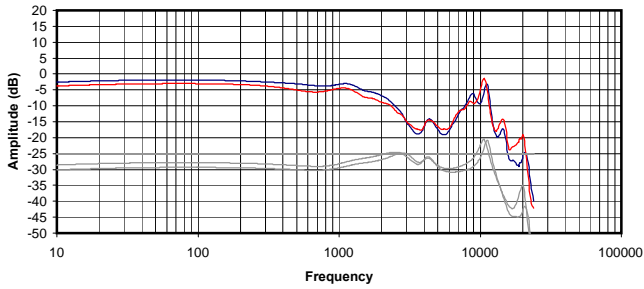


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

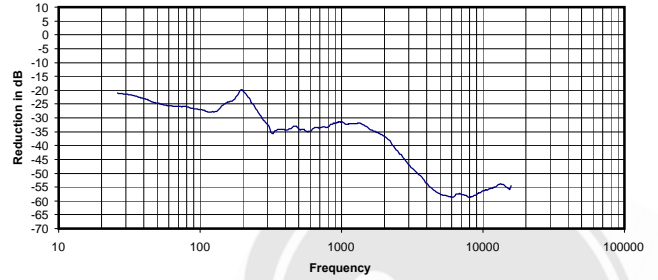
0.037 Vrms
19 Ohms
0.07 mW
-19 dBr



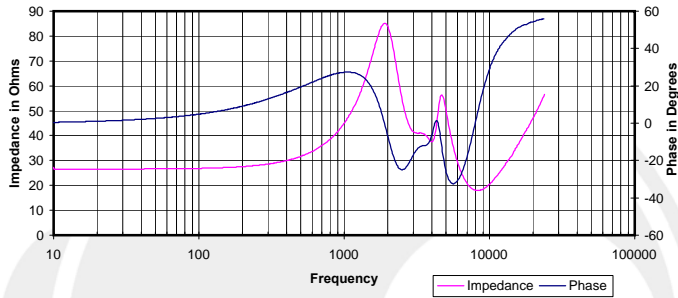
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



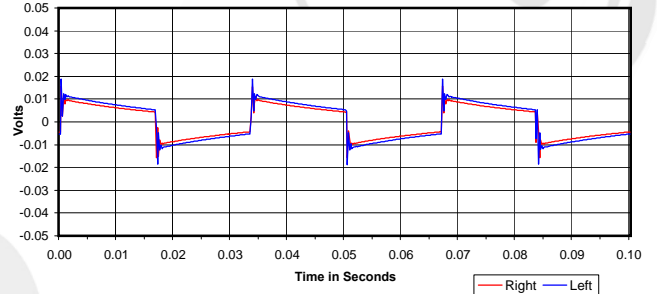
Isolation
Attenuation of External Sound vs. Frequency



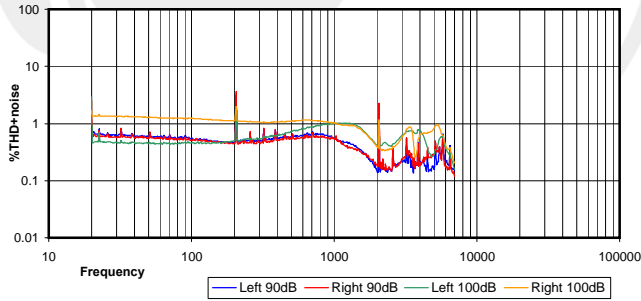
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



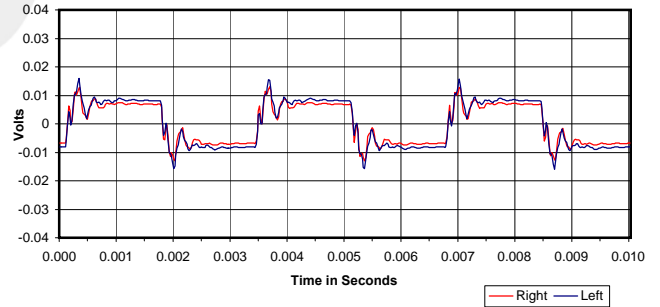
30 Hz Square Wave



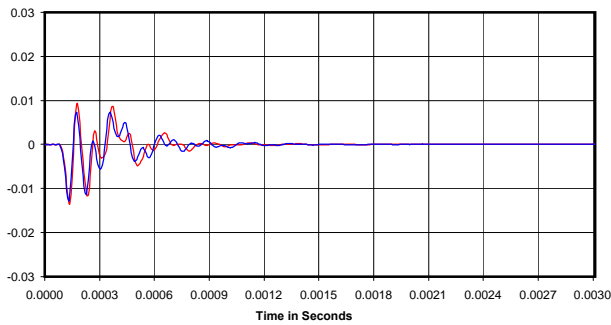
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



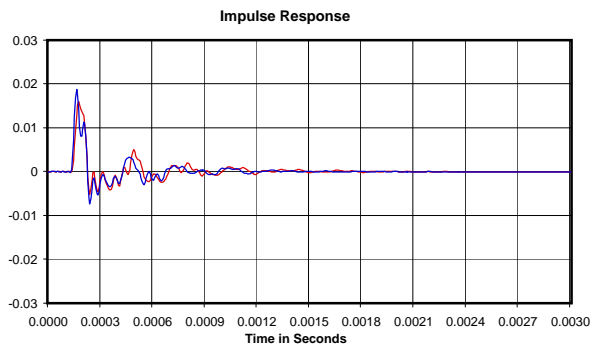
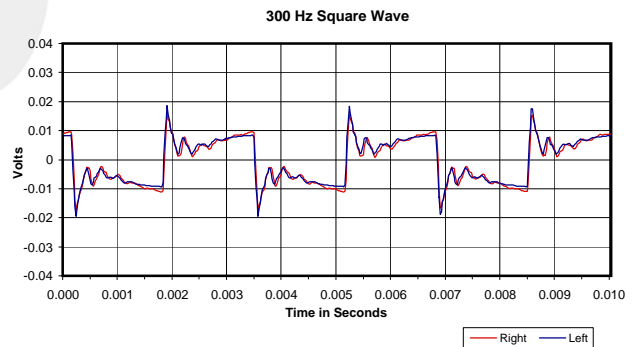
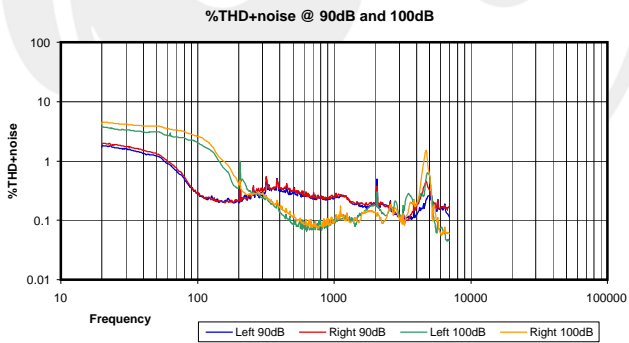
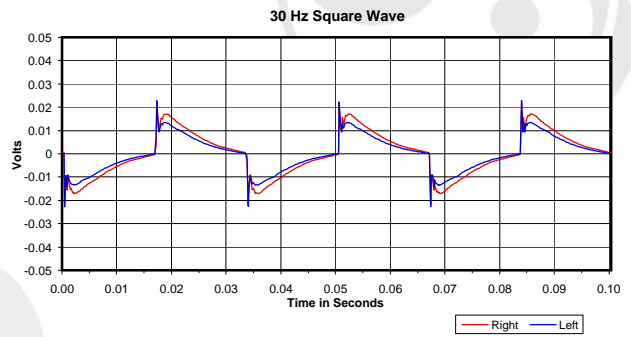
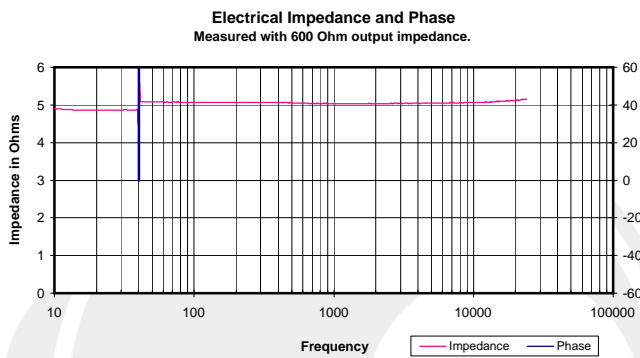
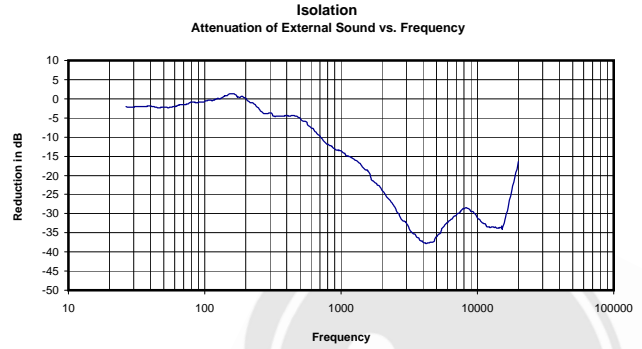
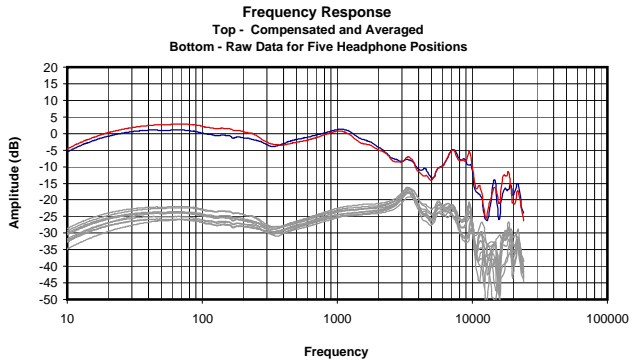
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
45 Ohms
0.02 mW
-36 dB



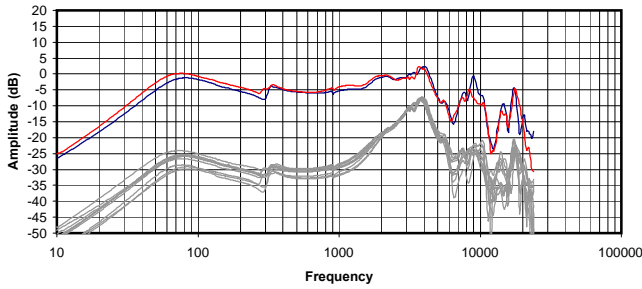


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

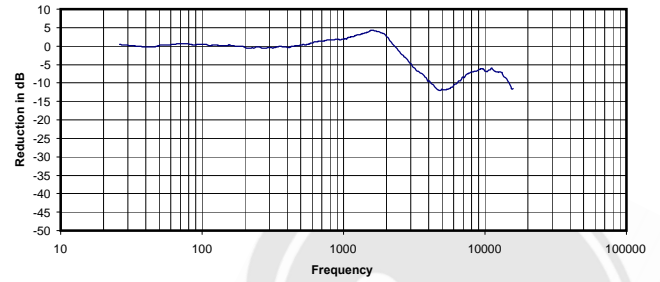
0.064 Vrms
5 Ohms
0.81 mW
-16 dB



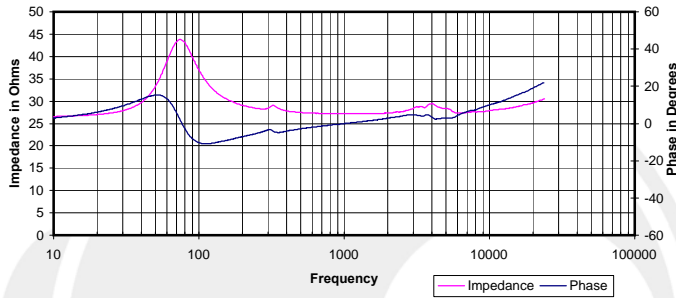
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



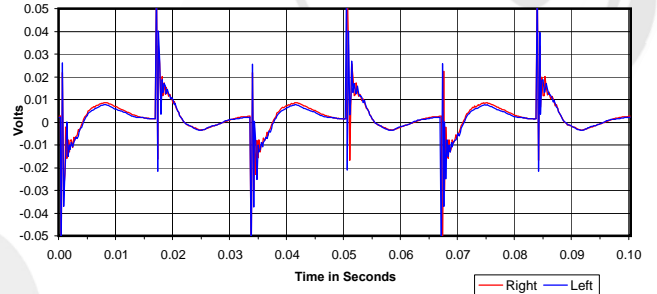
Isolation
 Attenuation of External Sound vs. Frequency



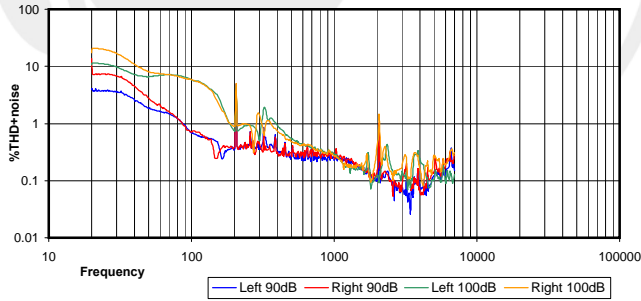
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



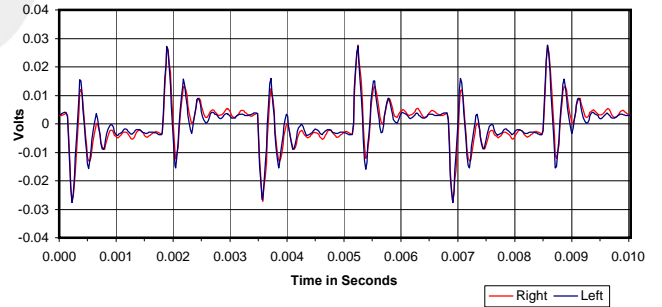
30 Hz Square Wave



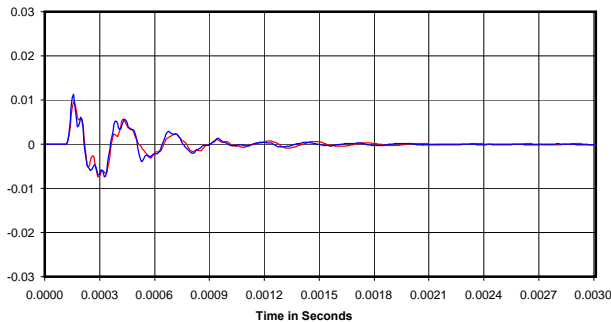
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



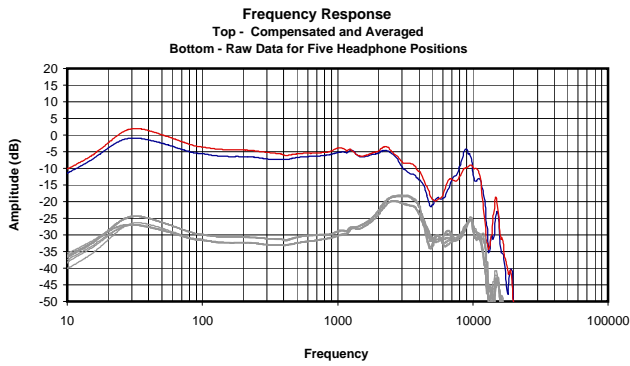
Impulse Response



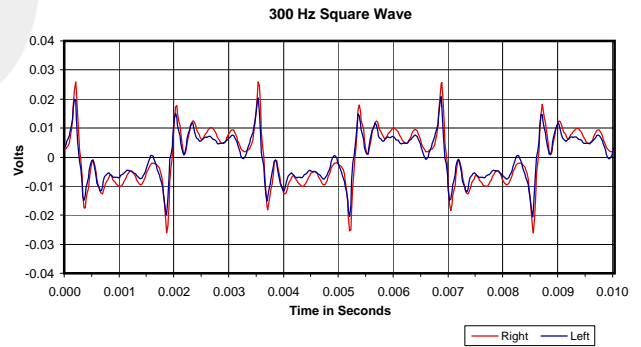
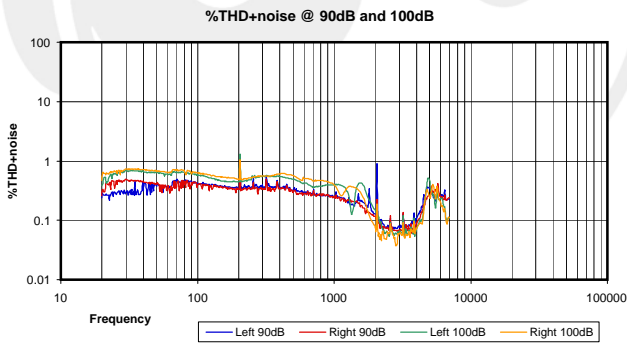
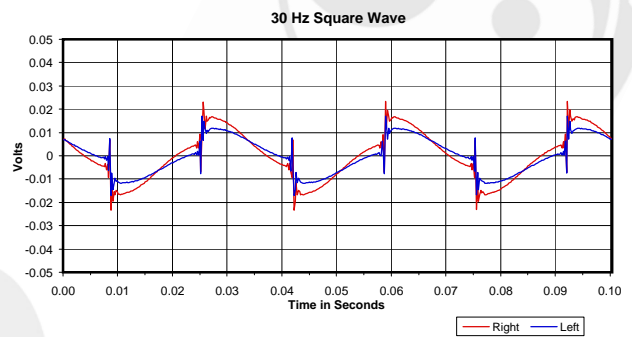
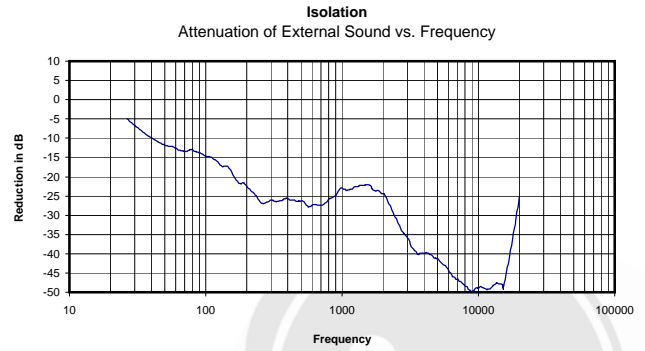
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.071 Vrms
 27 Ohms
 0.19 mW
 -1 dB



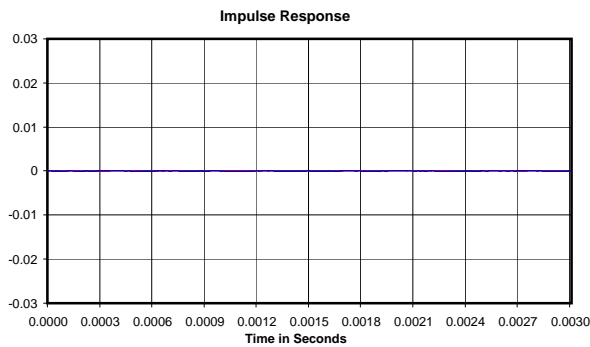
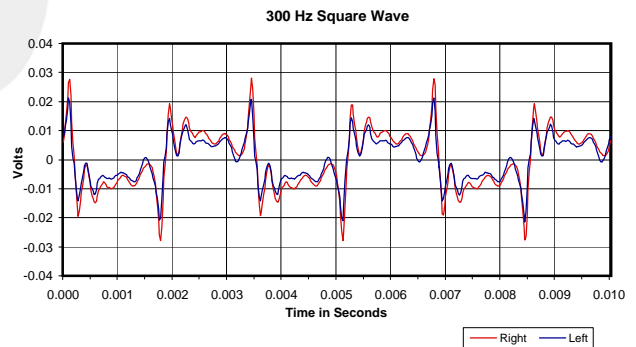
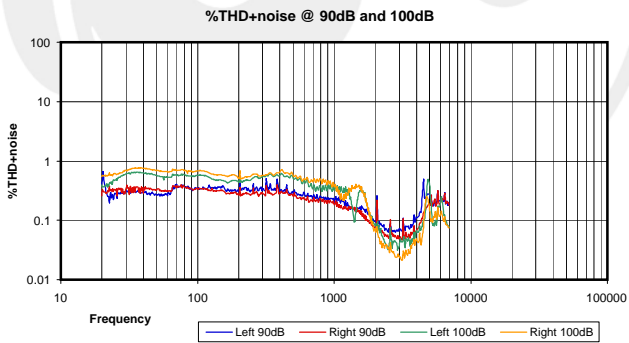
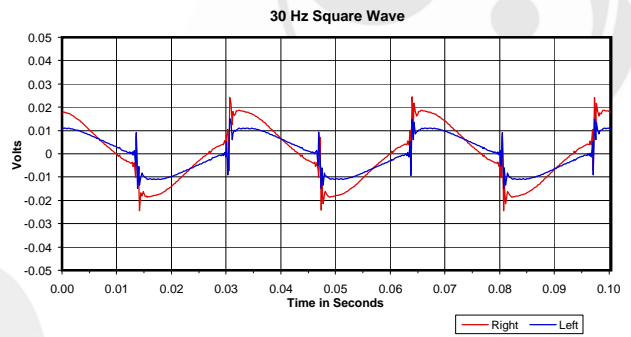
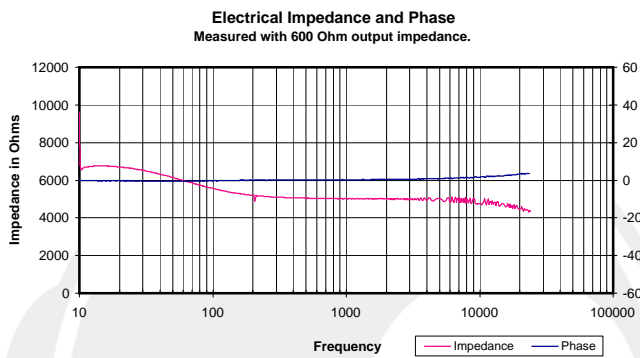
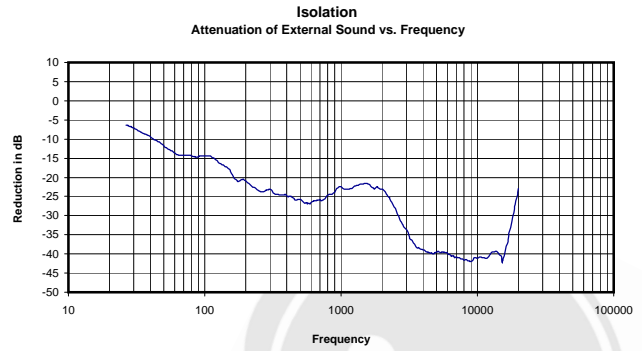
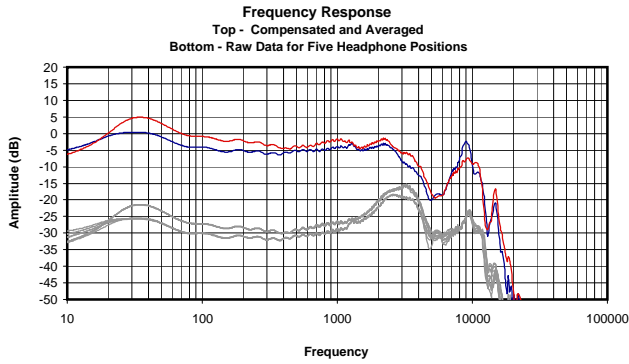


Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



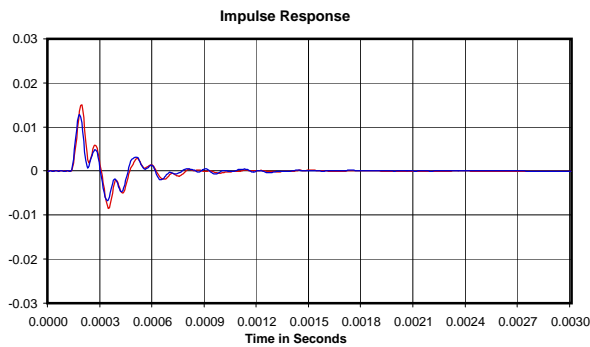
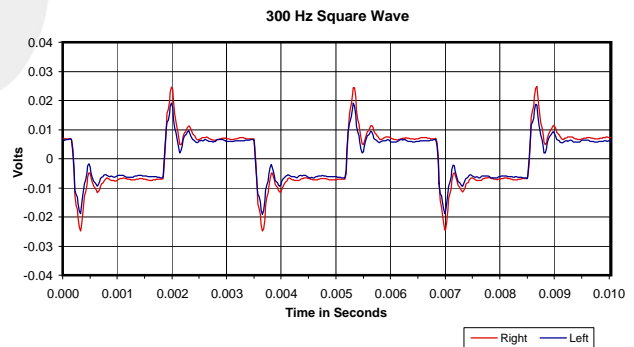
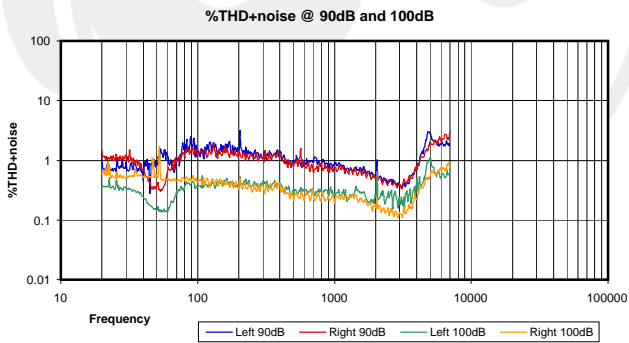
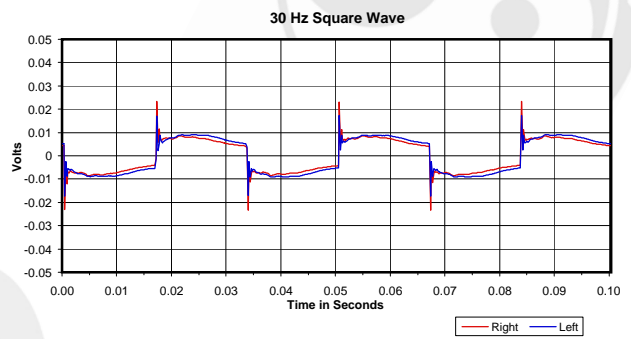
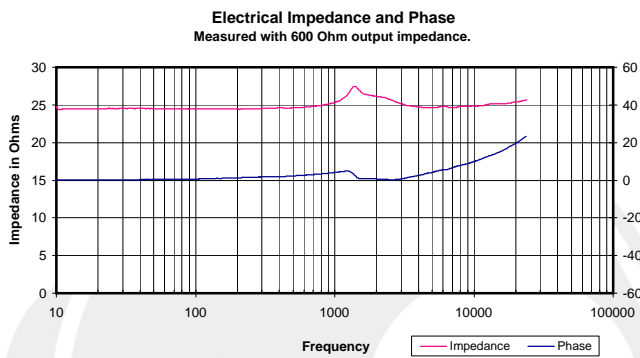
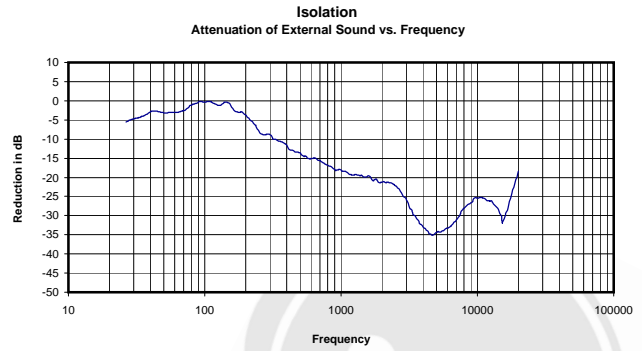
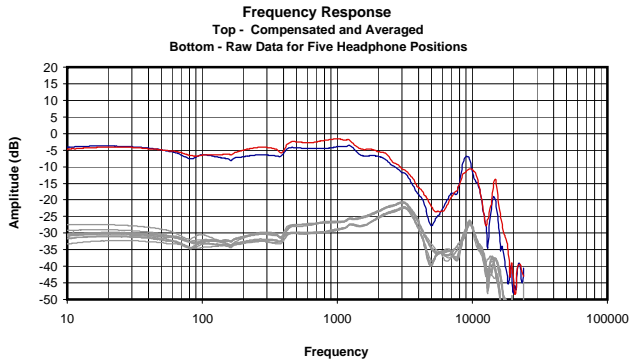
Broadband Isolation in dB (100Hz to 10kHz): -29 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.078 Vrms
5017 Ohms
0.00 mW
-28 dBr

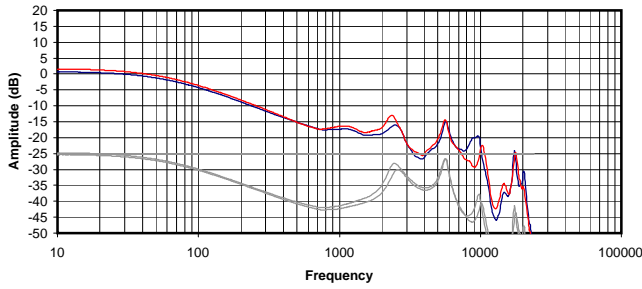


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

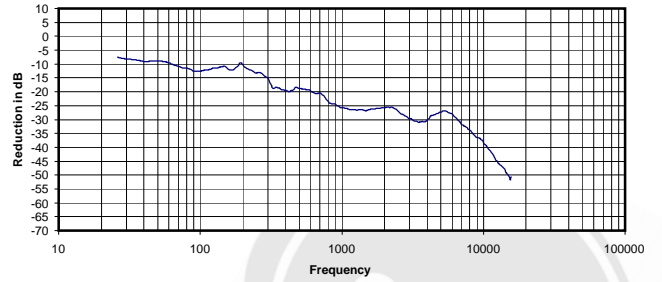
0.010 Vrms
25 Ohms
0.00 mW
-18 dBr



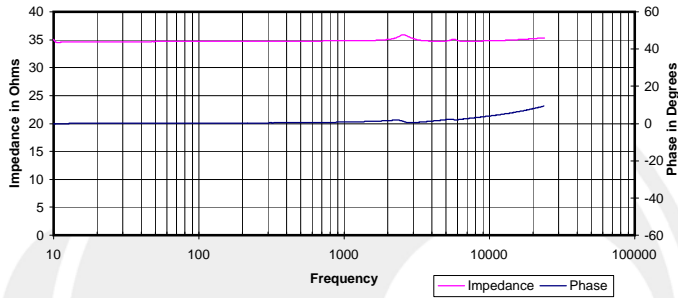
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



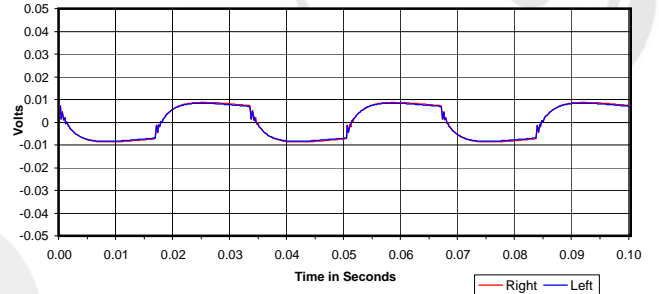
Isolation
Attenuation of External Sound vs. Frequency



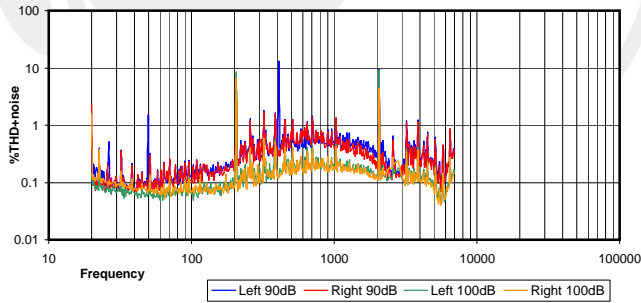
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



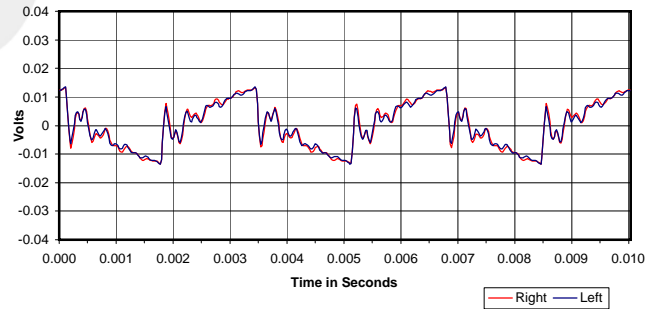
30 Hz Square Wave



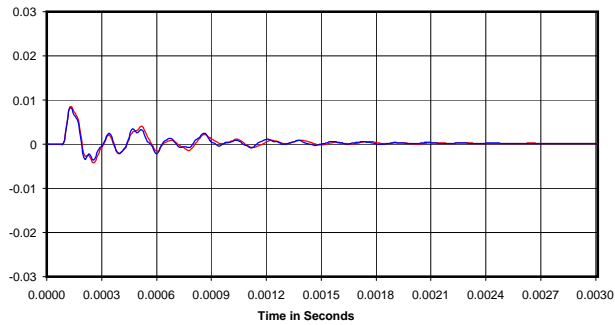
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

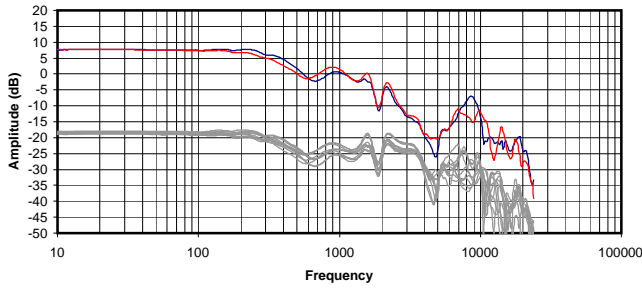


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

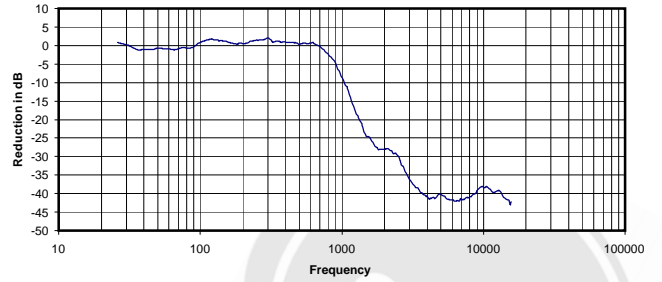
0.063 Vrms
35 Ohms
0.12 mW
-21 dB



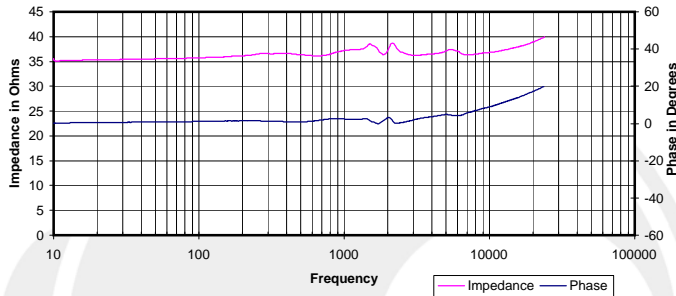
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



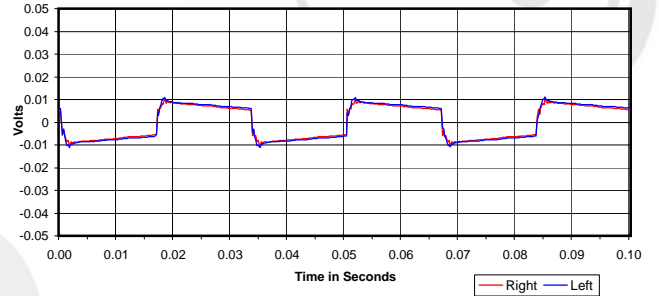
Isolation
Attenuation of External Sound vs. Frequency



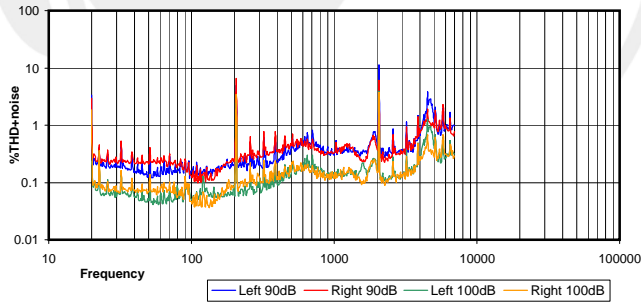
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



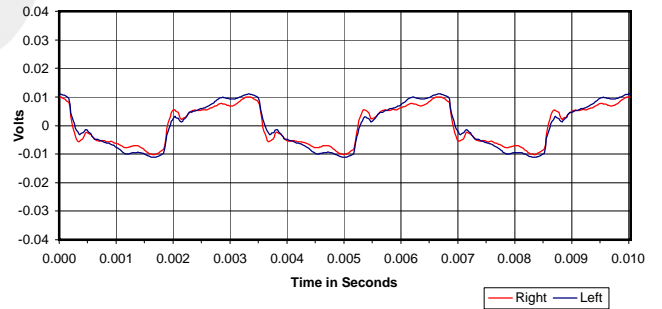
30 Hz Square Wave



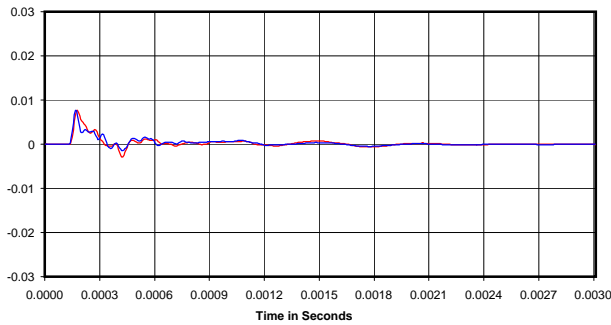
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

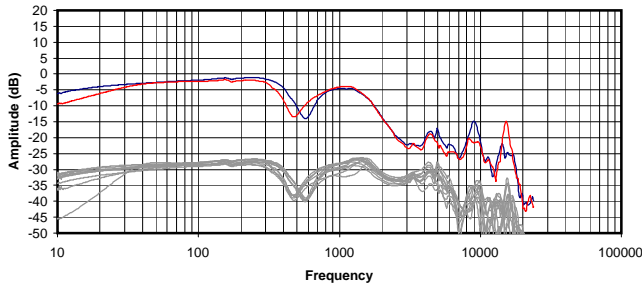


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

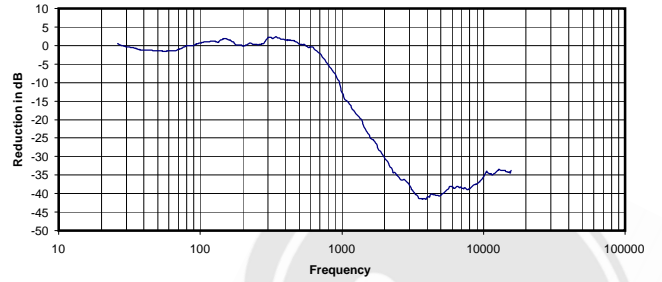
0.024 Vrms
37 Ohms
0.02 mW
-13 dB



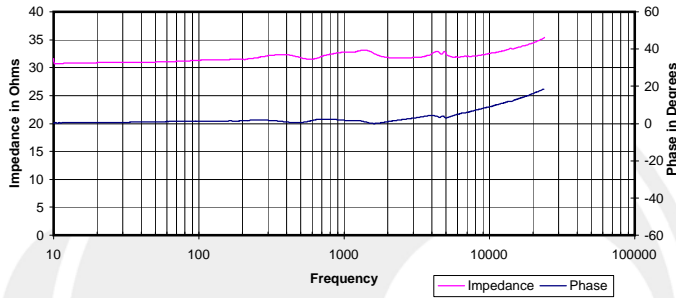
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



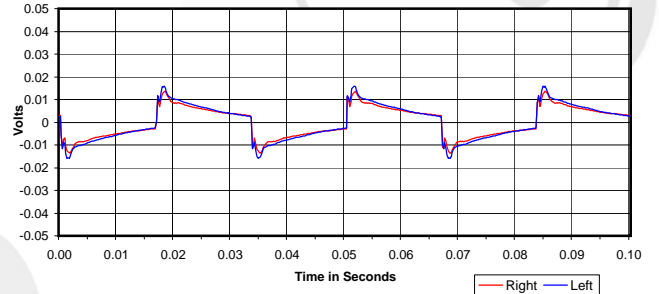
Isolation
 Attenuation of External Sound vs. Frequency



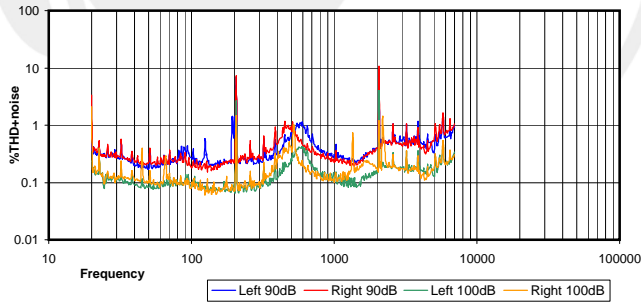
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



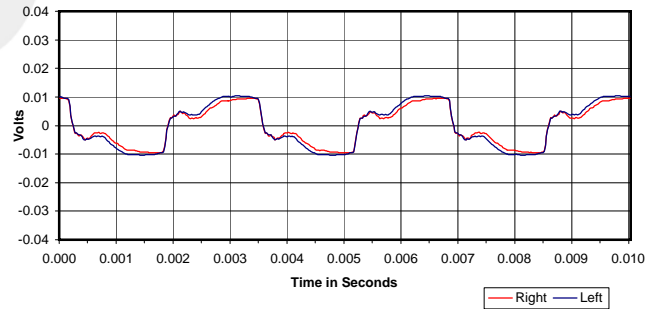
30 Hz Square Wave



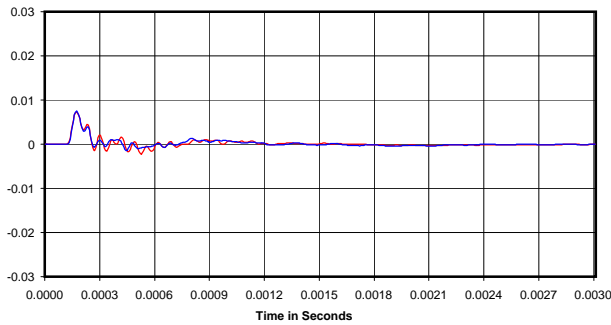
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



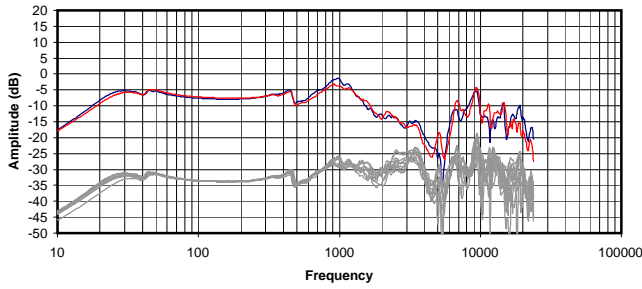
Impulse Response



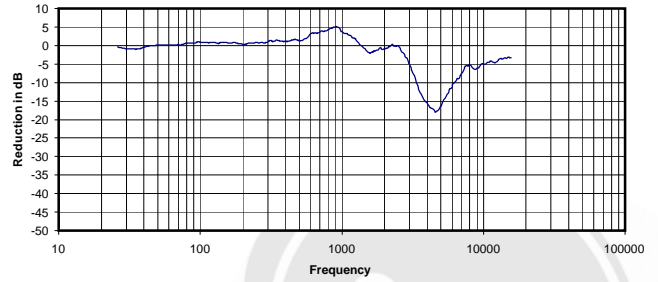
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
 33 Ohms
 0.02 mW
 -14 dB

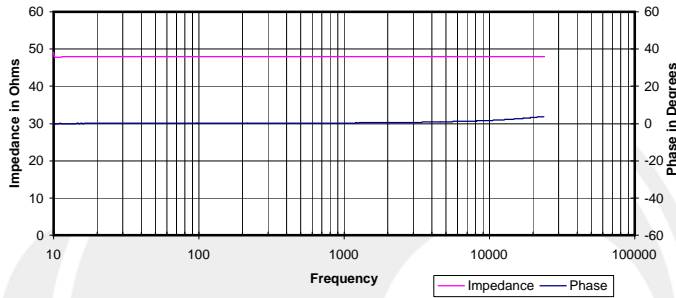
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



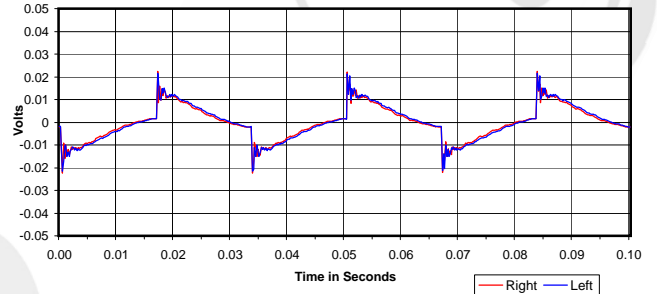
Isolation
 Attenuation of External Sound vs. Frequency



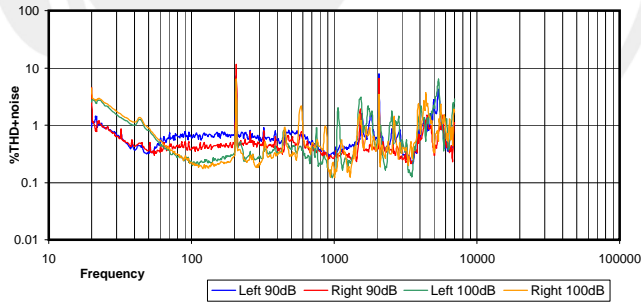
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



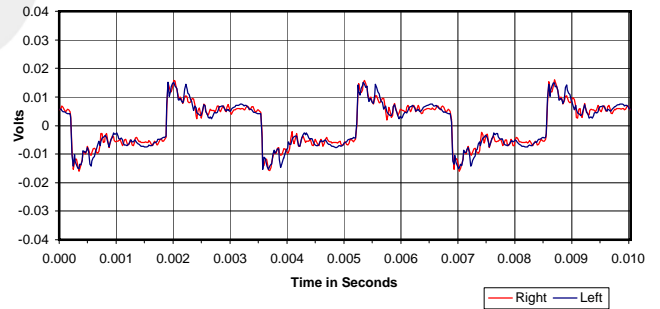
30 Hz Square Wave



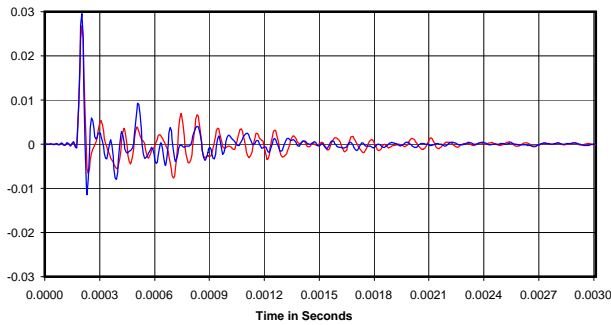
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

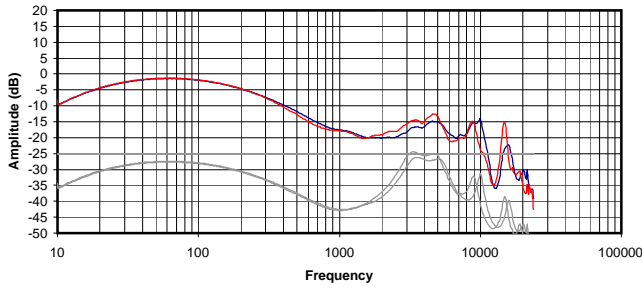


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

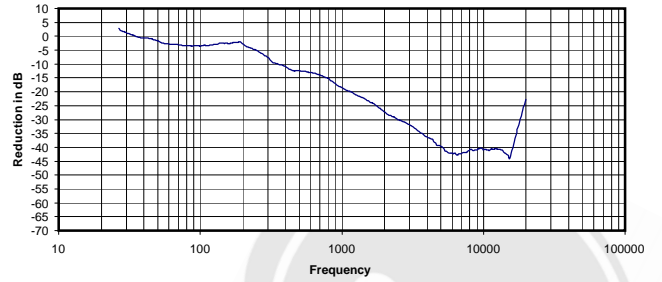
0.320 Vrms
 48 Ohms
 2.14 mW
 -2 dB



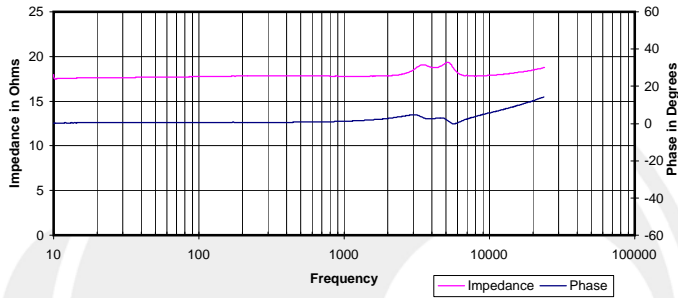
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



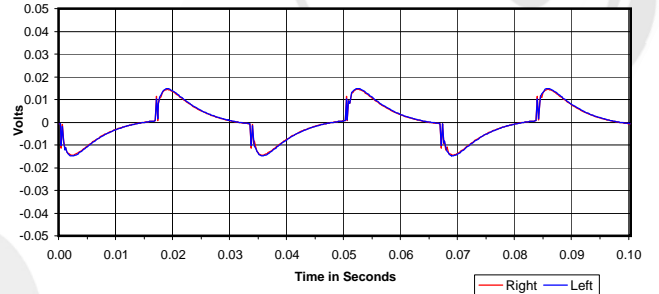
Isolation
Attenuation of External Sound vs. Frequency



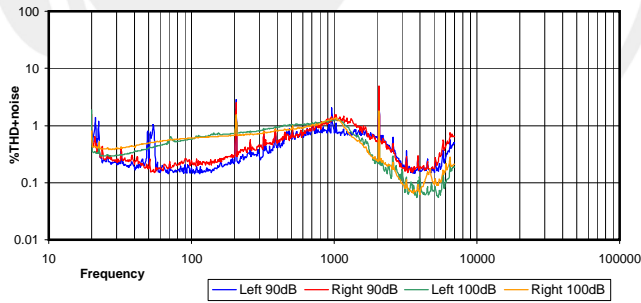
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



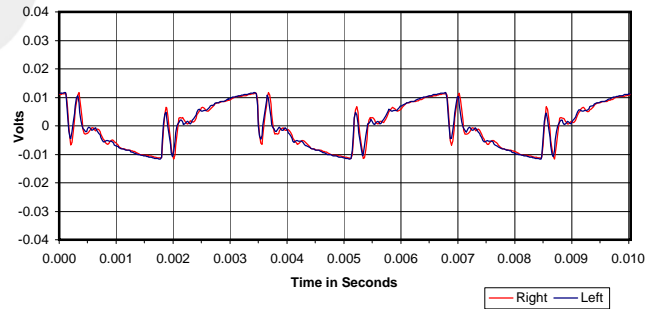
30 Hz Square Wave



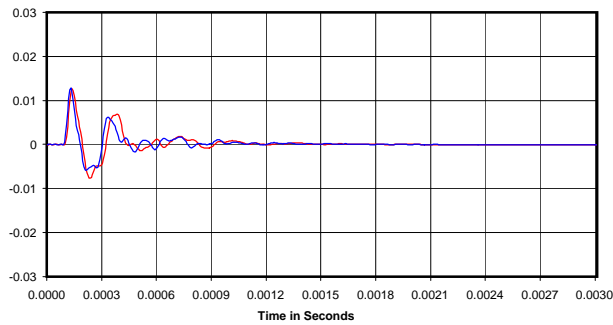
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

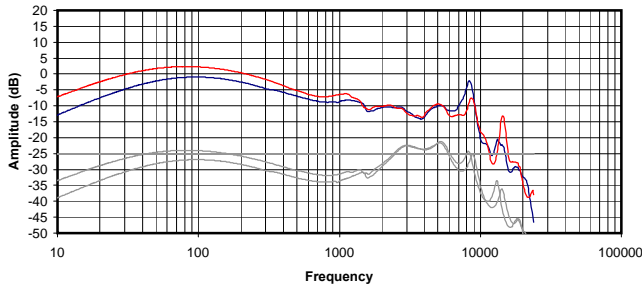


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

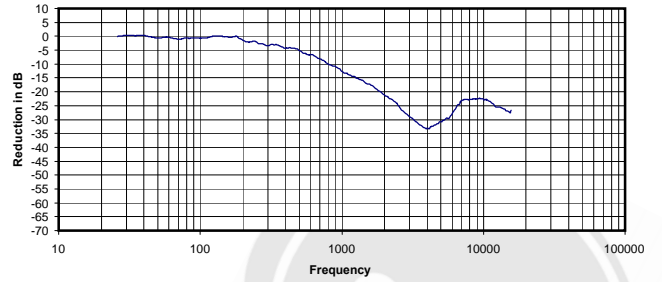
0.035 Vrms
18 Ohms
0.07 mW
-20 dB



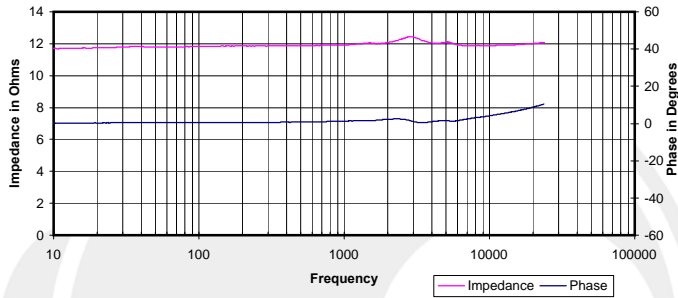
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



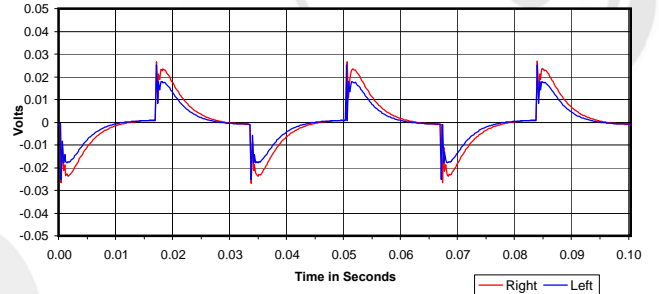
Isolation
Attenuation of External Sound vs. Frequency



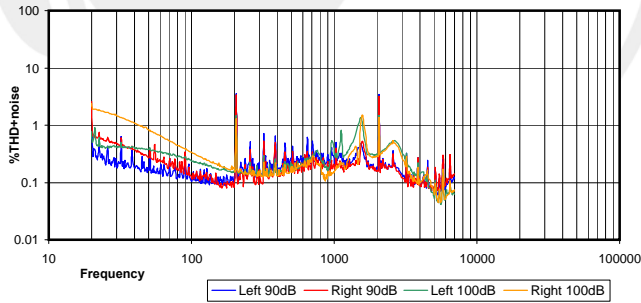
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



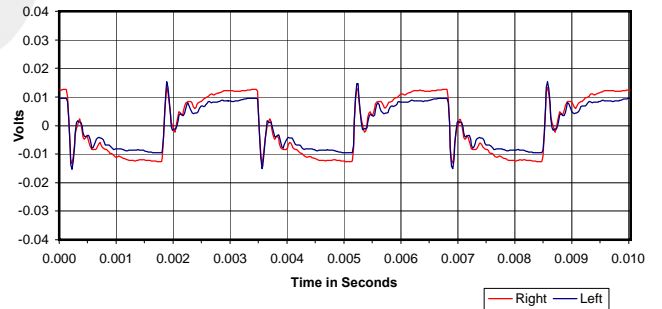
30 Hz Square Wave



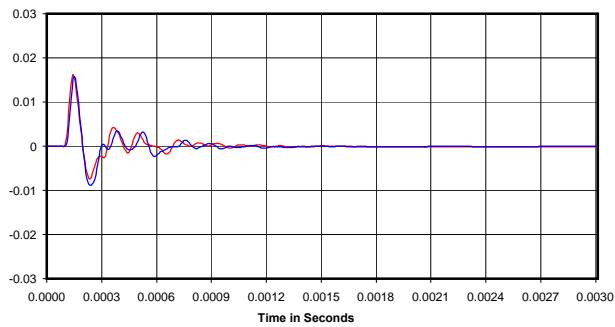
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



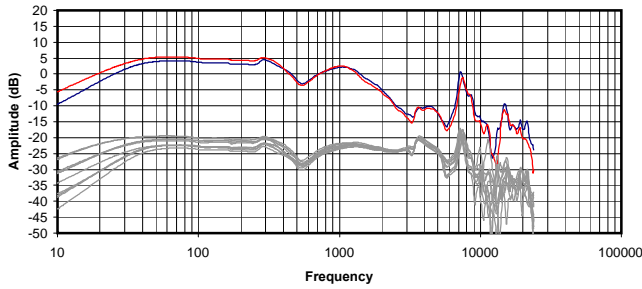
Impulse Response



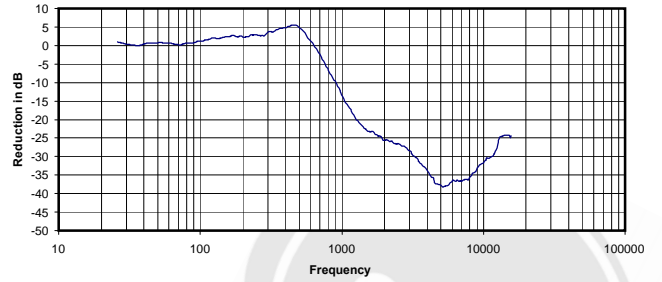
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.033 Vrms
12 Ohms
0.09 mW
-13 dB

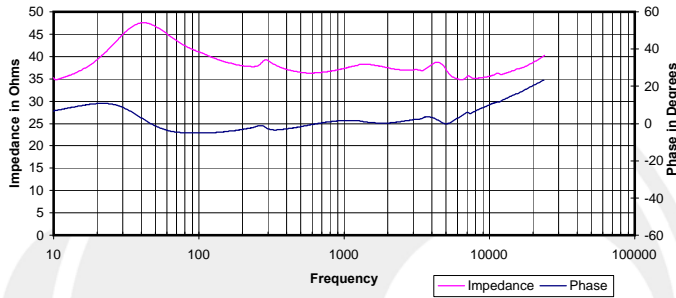
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



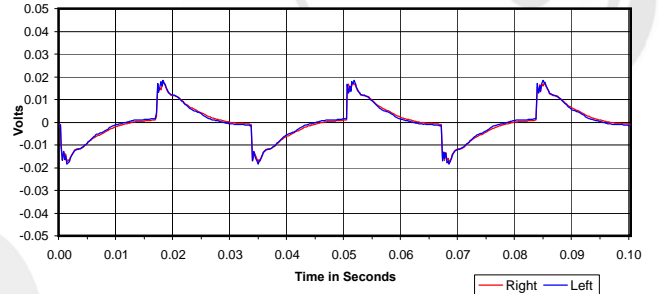
Isolation
 Attenuation of External Sound vs. Frequency



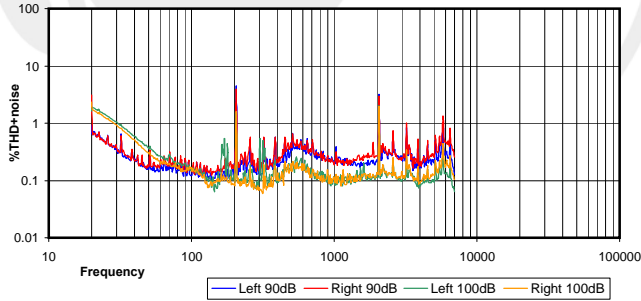
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



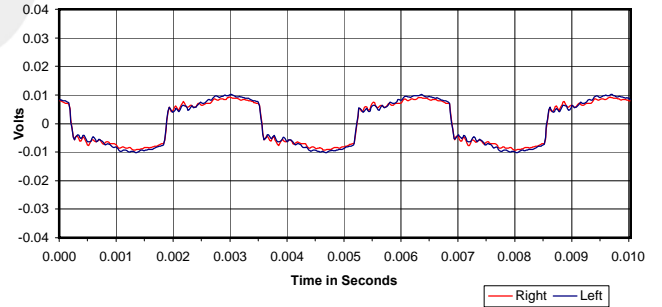
30 Hz Square Wave



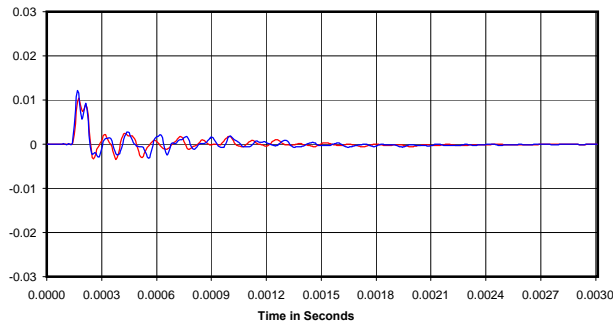
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

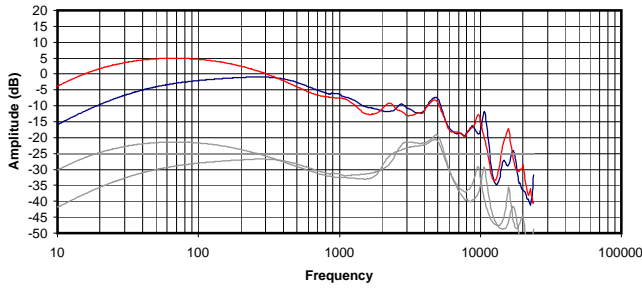


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

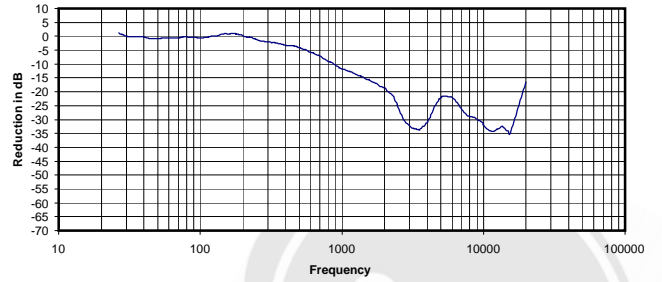
0.018 Vrms
 37 Ohms
 0.01 mW
 -12 dB



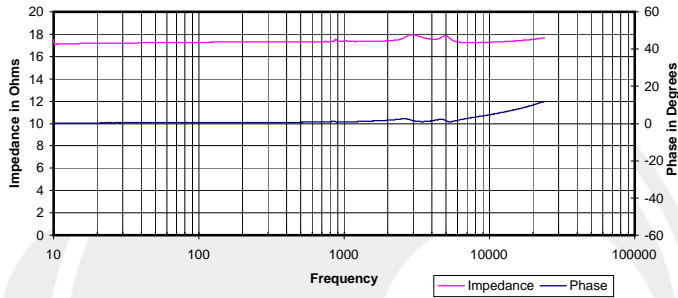
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



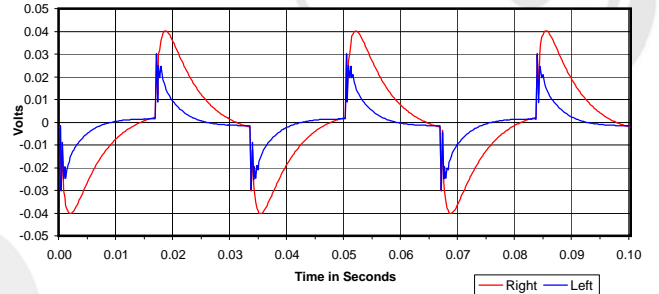
Isolation
Attenuation of External Sound vs. Frequency



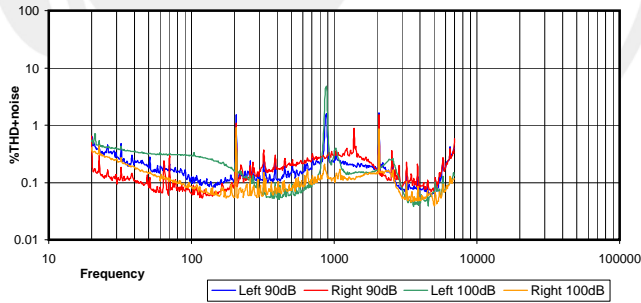
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



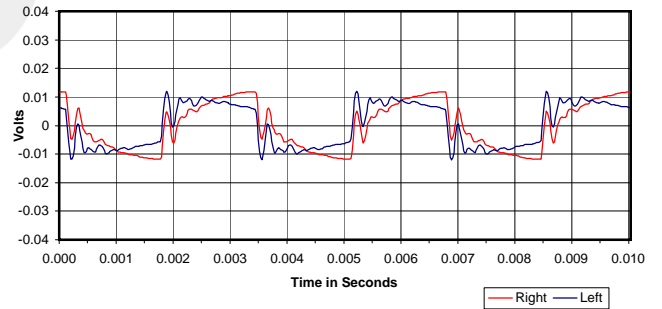
30 Hz Square Wave



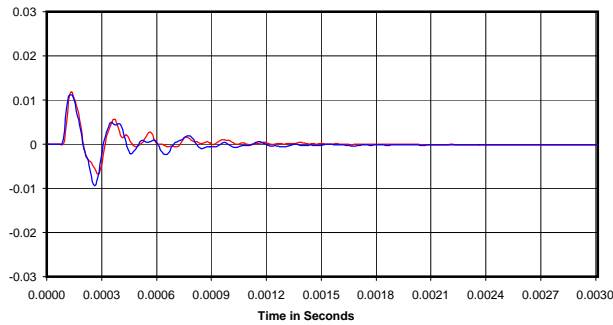
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

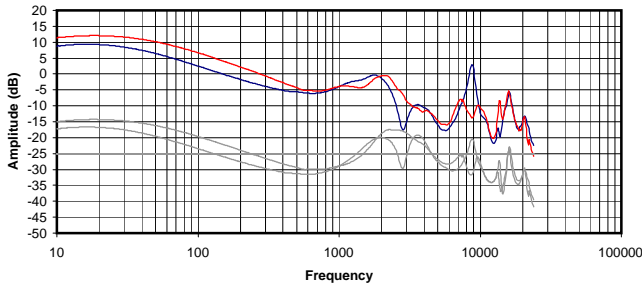


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

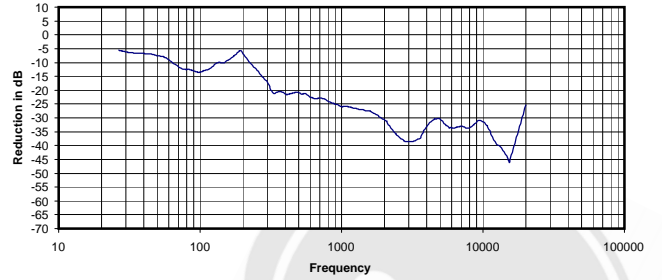
0.027 Vrms
17 Ohms
0.04 mW
-13 dB



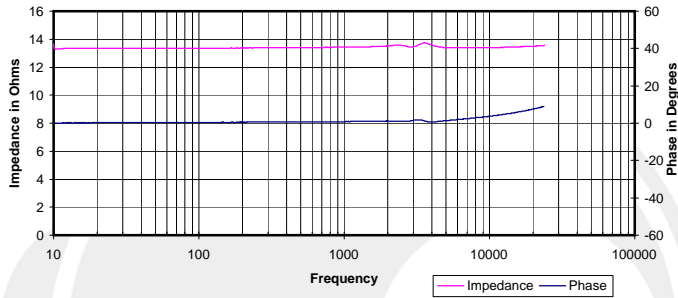
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



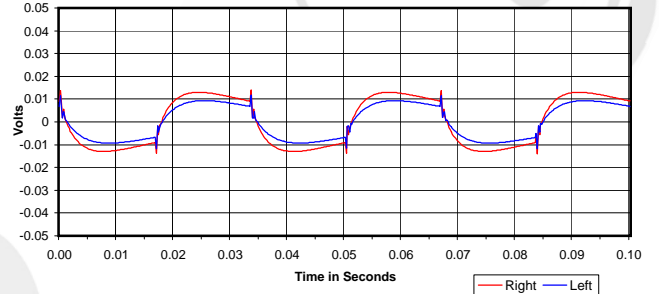
Isolation
Attenuation of External Sound vs. Frequency



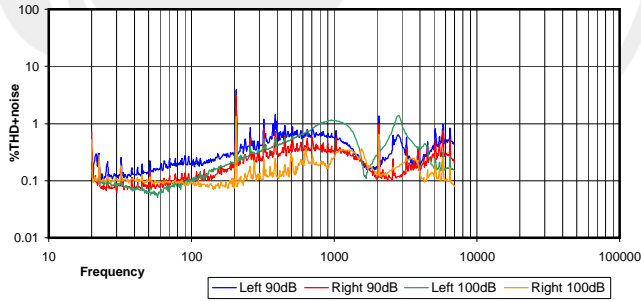
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



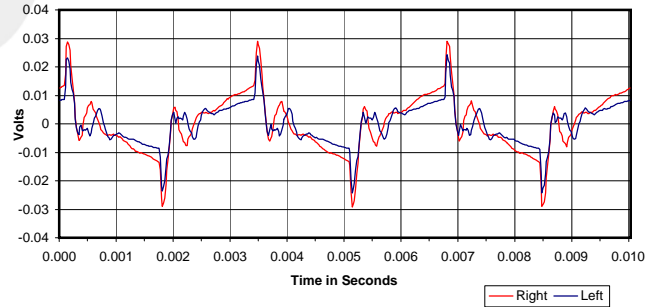
30 Hz Square Wave



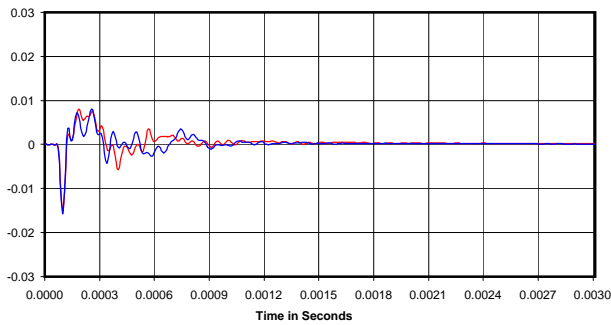
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



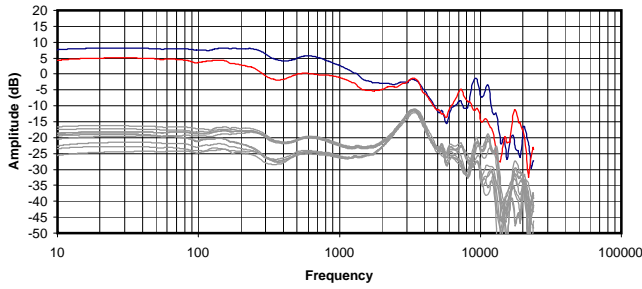
Impulse Response



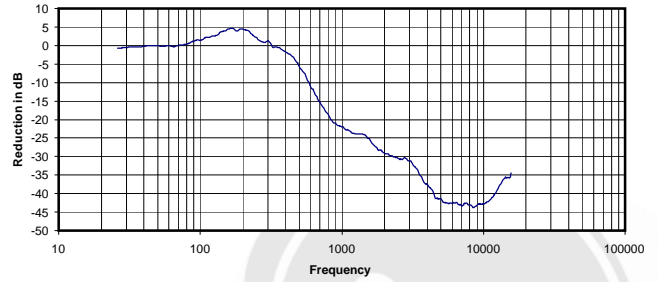
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.078 Vrms
13 Ohms
0.46 mW
-24 dB

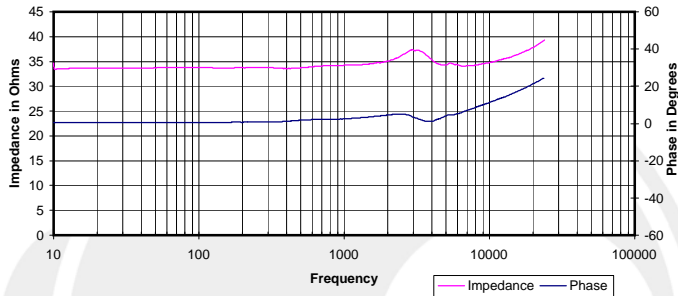
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



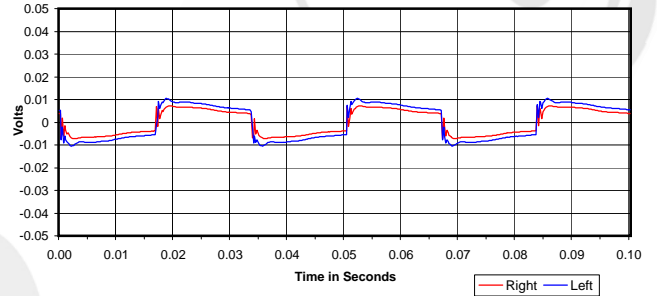
Isolation
 Attenuation of External Sound vs. Frequency



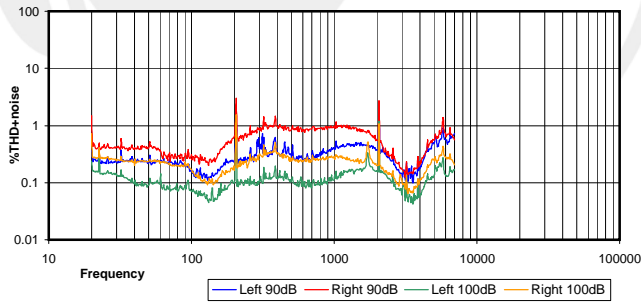
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



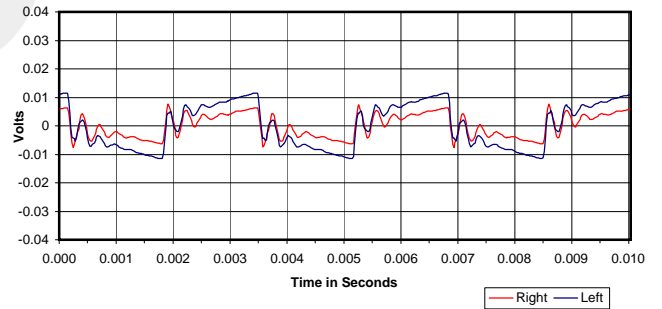
30 Hz Square Wave



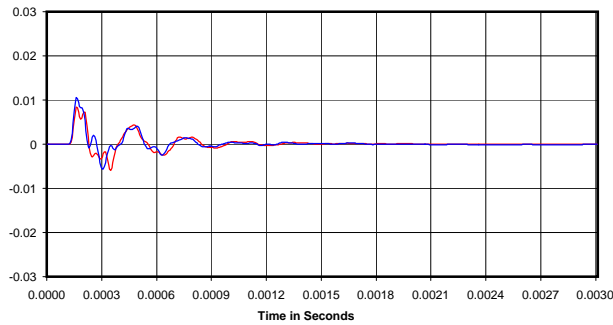
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

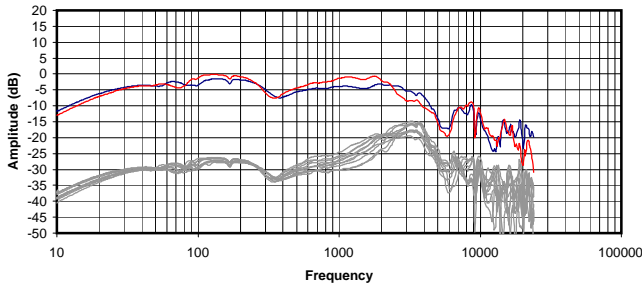


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

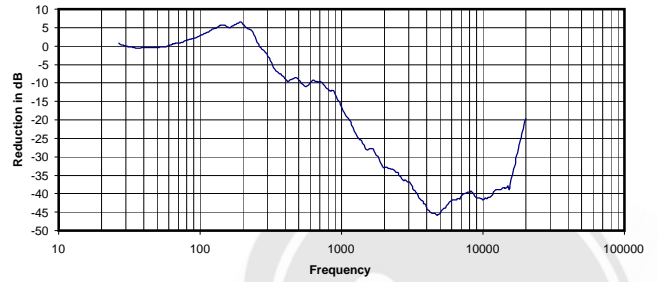
0.030 Vrms
 34 Ohms
 0.03 mW
 -16 dB



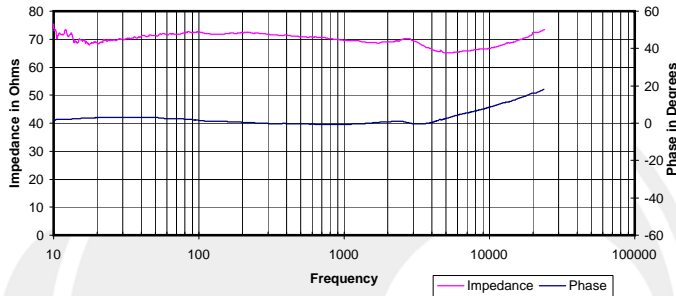
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



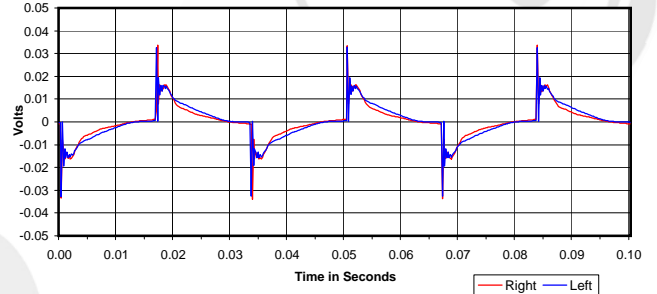
Isolation
 Attenuation of External Sound vs. Frequency



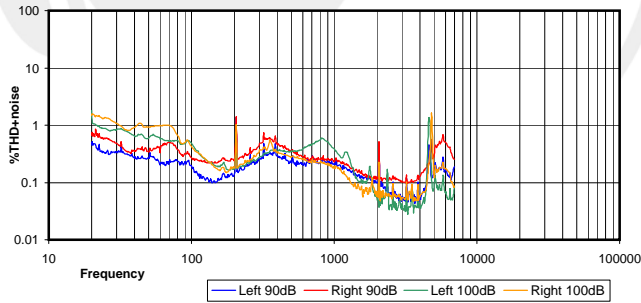
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



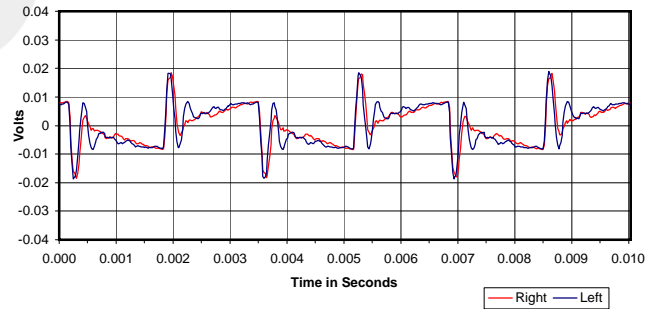
30 Hz Square Wave



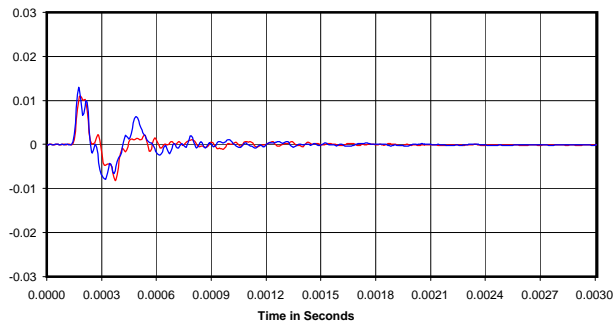
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

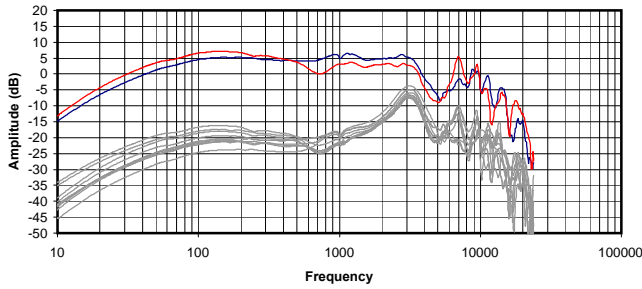


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

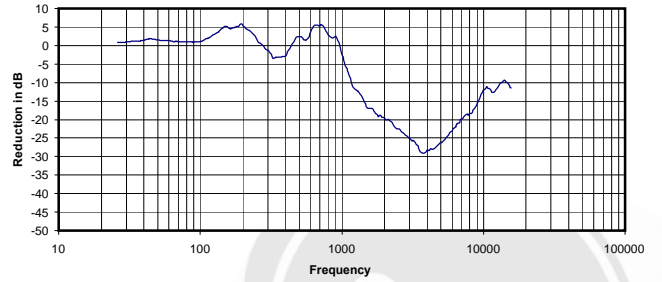
0.068 Vrms
 70 Ohms
 0.07 mW
 -19 dB



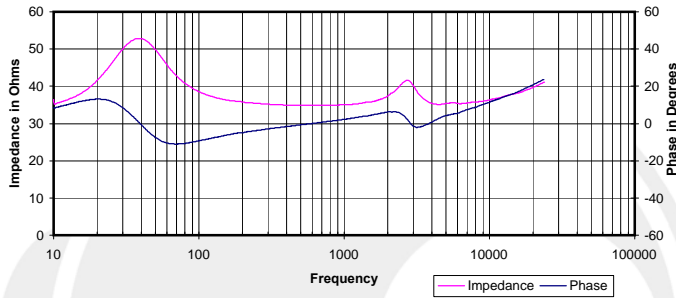
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



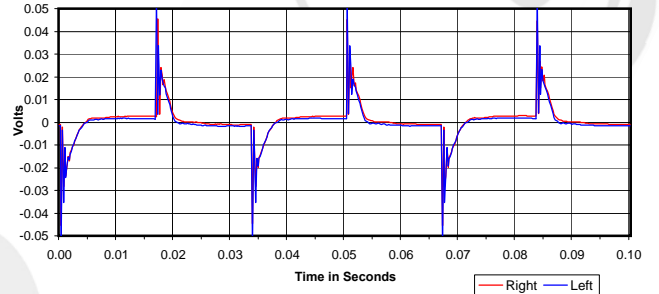
Isolation
 Attenuation of External Sound vs. Frequency



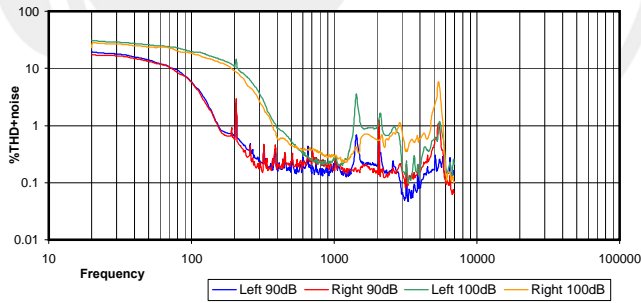
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



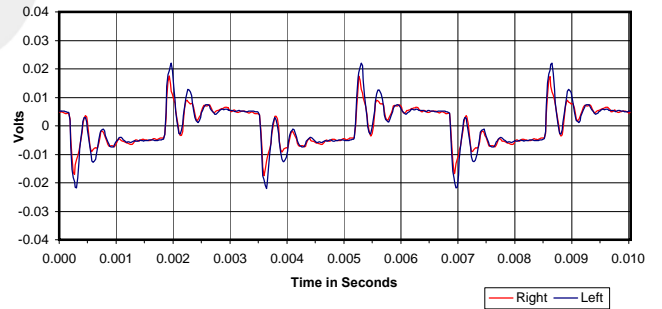
30 Hz Square Wave



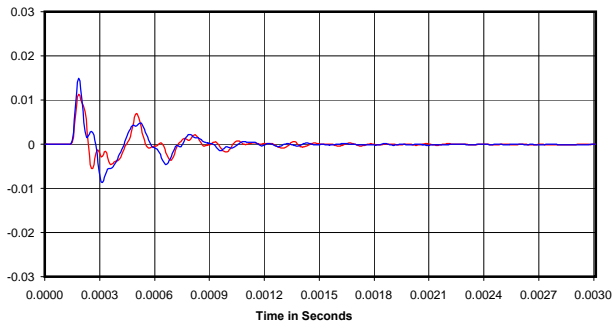
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

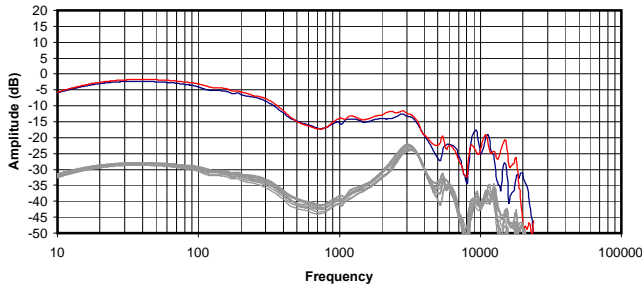


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

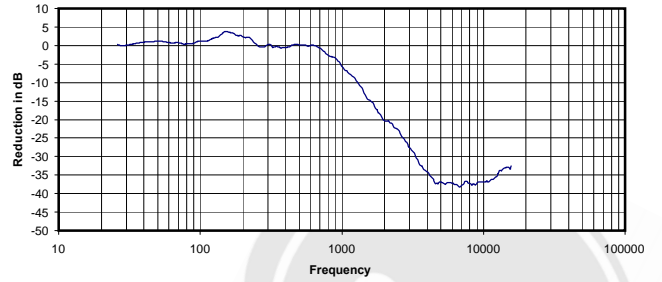
0.049 Vrms
 35 Ohms
 0.07 mW
 -8 dB



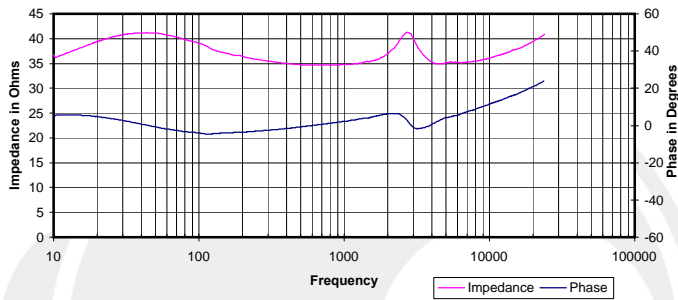
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



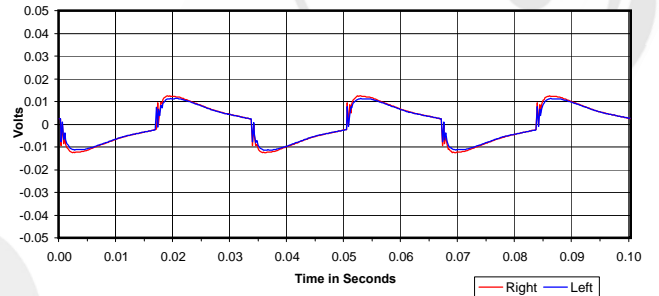
Isolation
 Attenuation of External Sound vs. Frequency



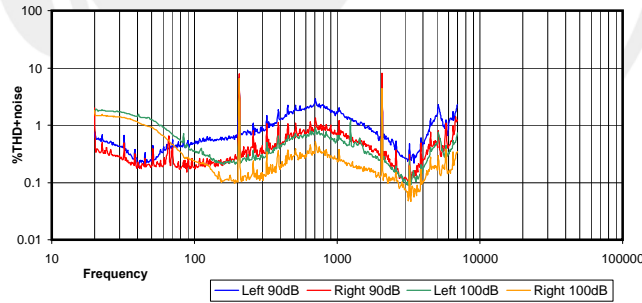
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



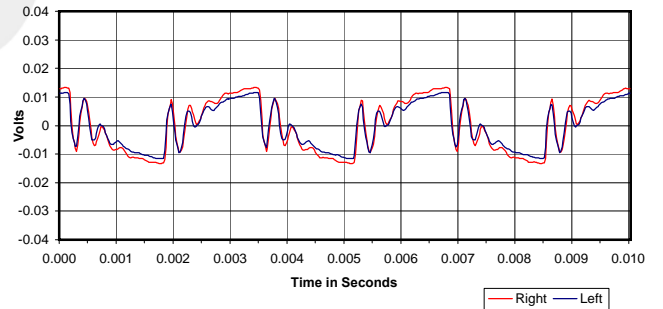
30 Hz Square Wave



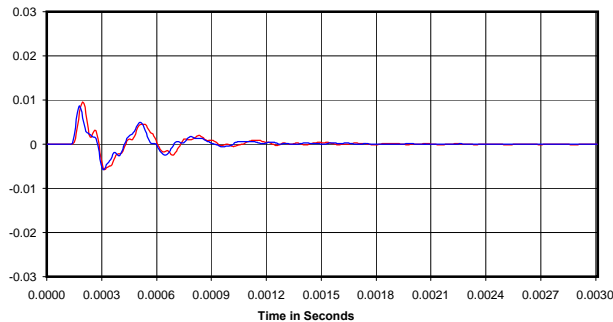
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

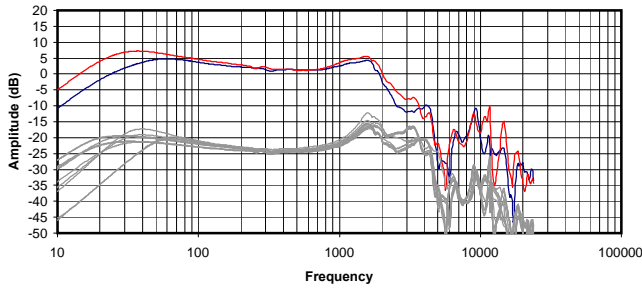


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

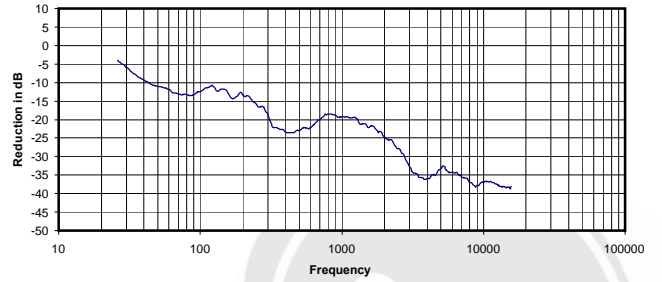
0.049 Vrms
 35 Ohms
 0.07 mW
 -10 dB



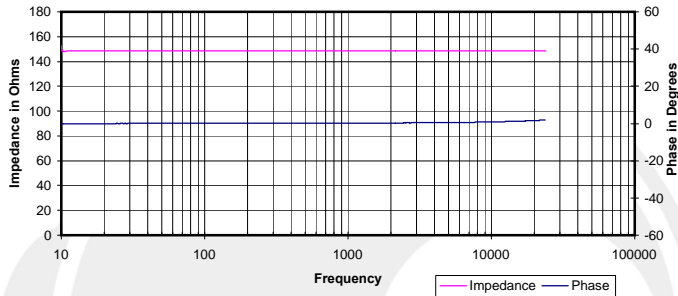
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



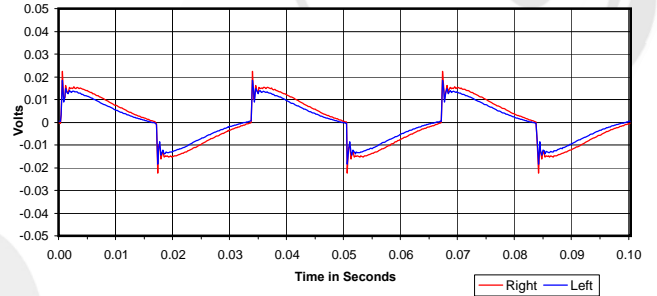
Isolation
 Attenuation of External Sound vs. Frequency



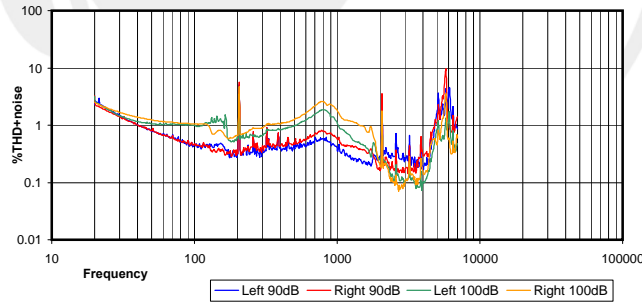
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



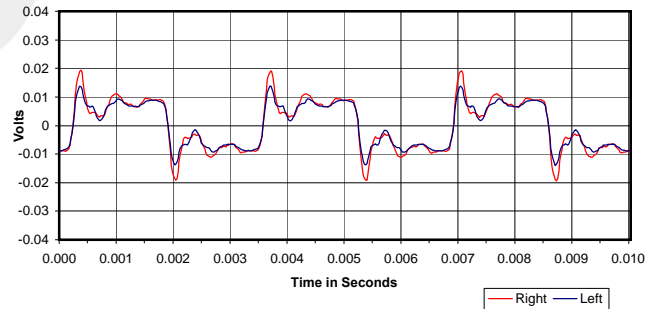
30 Hz Square Wave



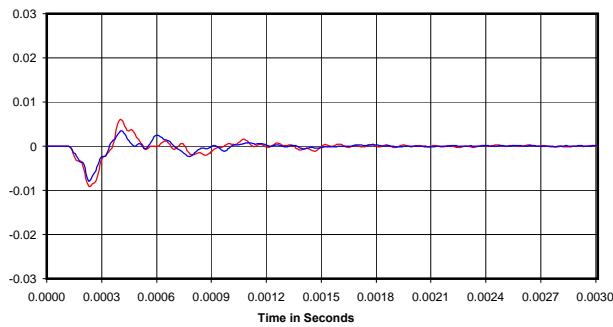
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



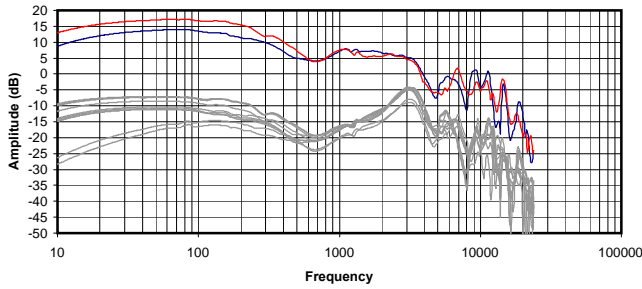
Impulse Response



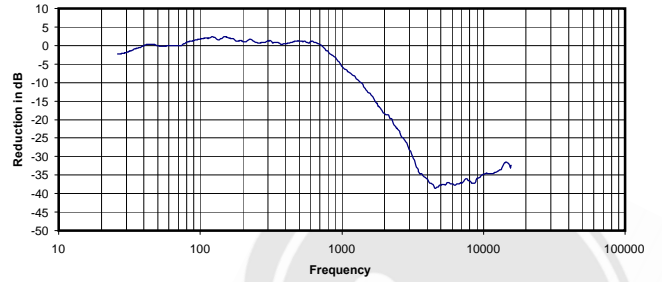
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
 149 Ohms
 0.00 mW
 -22 dB

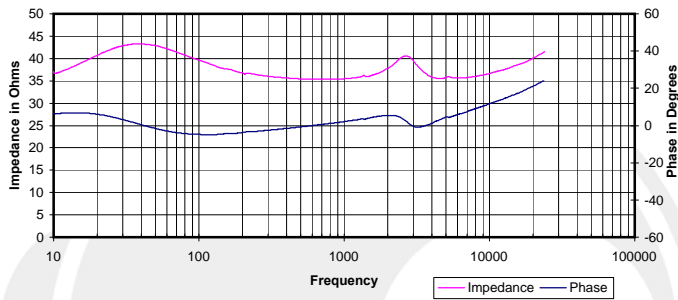
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



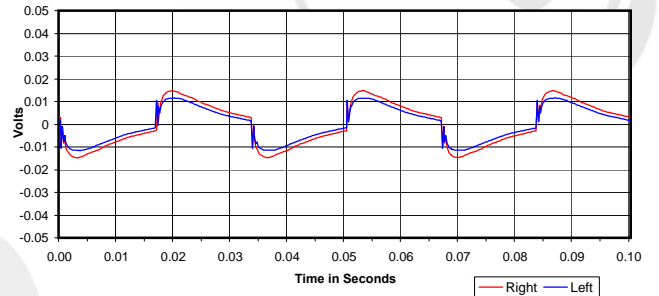
Isolation
Attenuation of External Sound vs. Frequency



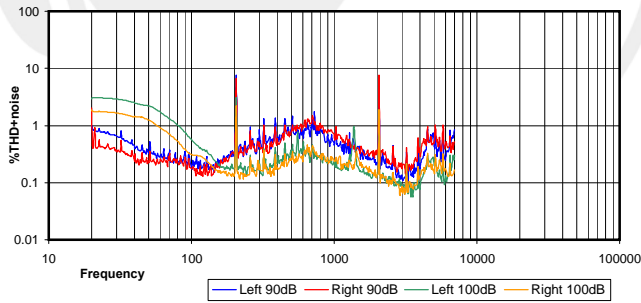
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



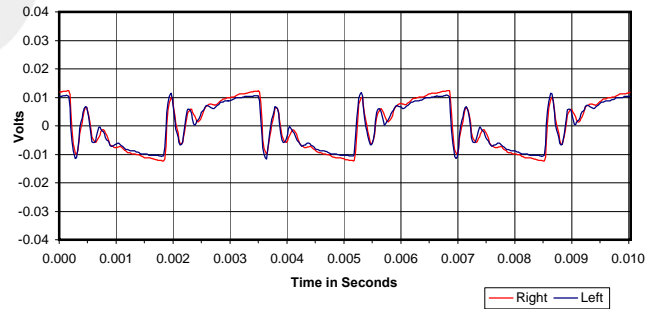
30 Hz Square Wave



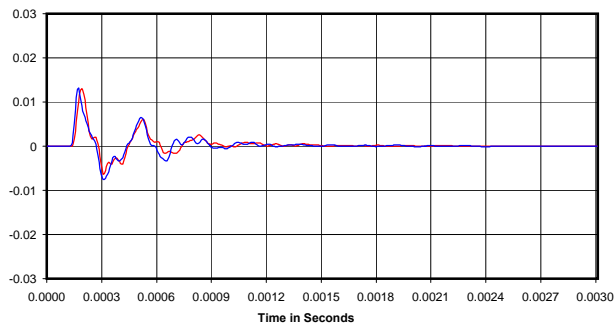
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

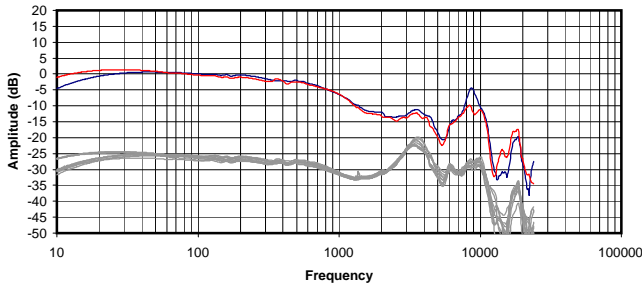


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

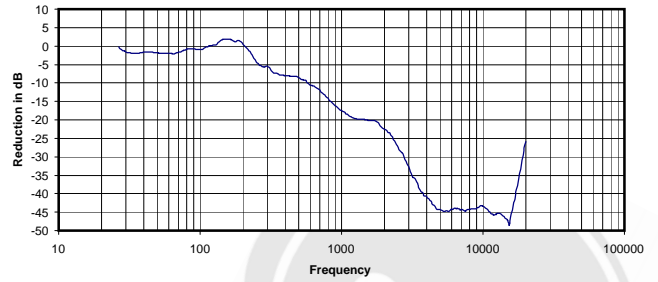
0.038 Vrms
35 Ohms
0.04 mW
-10 dB



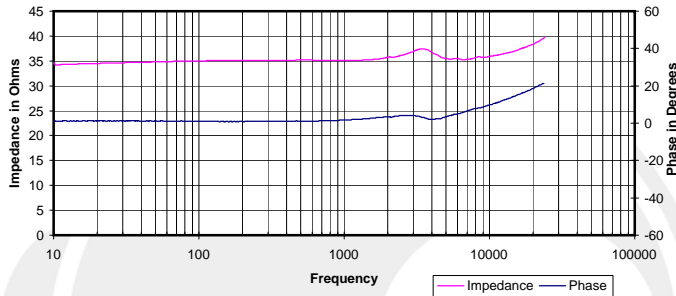
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



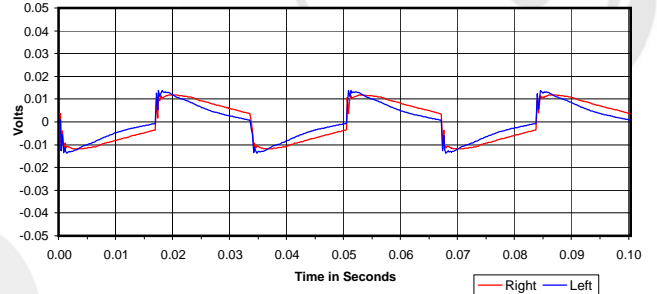
Isolation
Attenuation of External Sound vs. Frequency



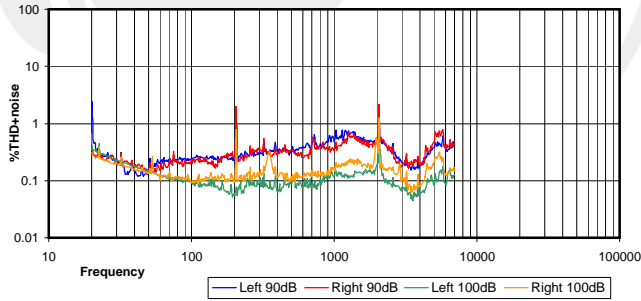
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



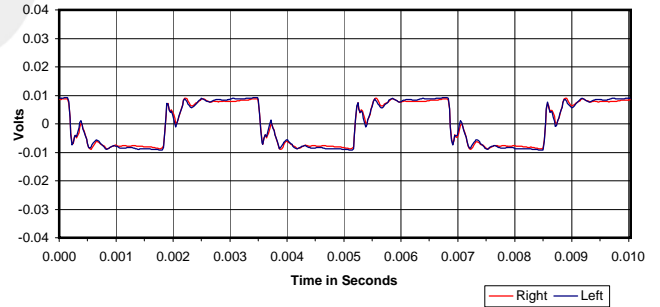
30 Hz Square Wave



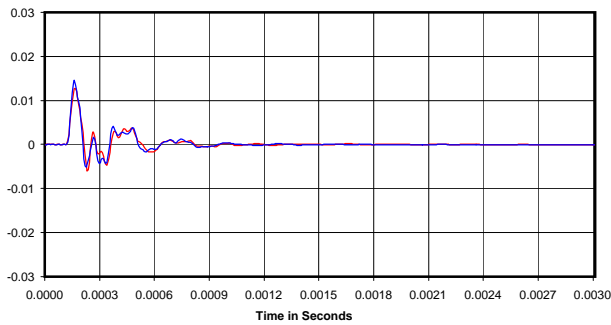
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



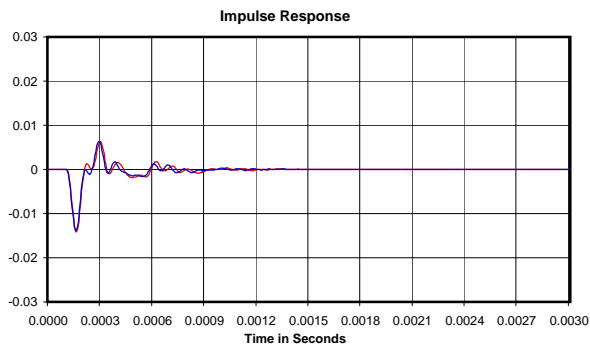
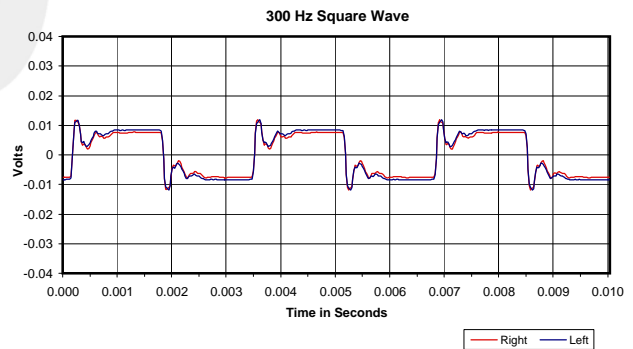
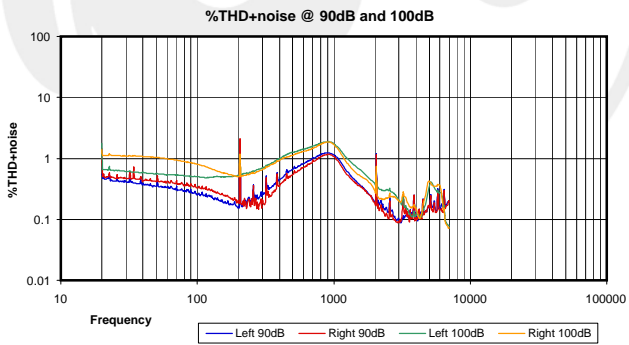
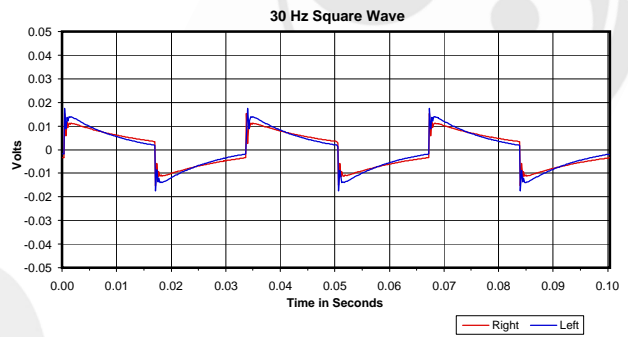
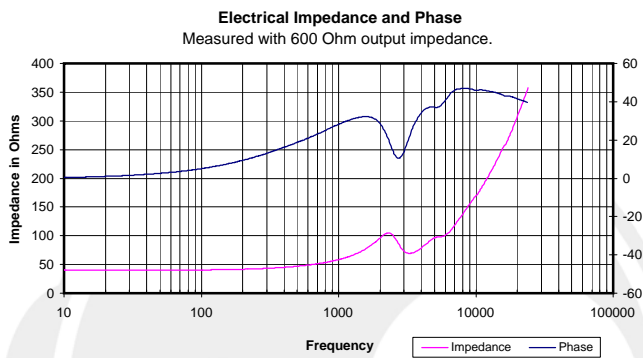
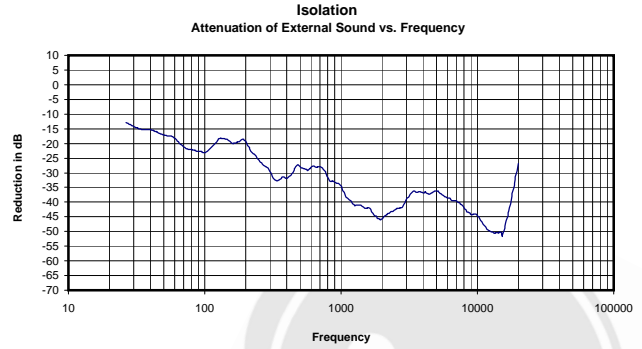
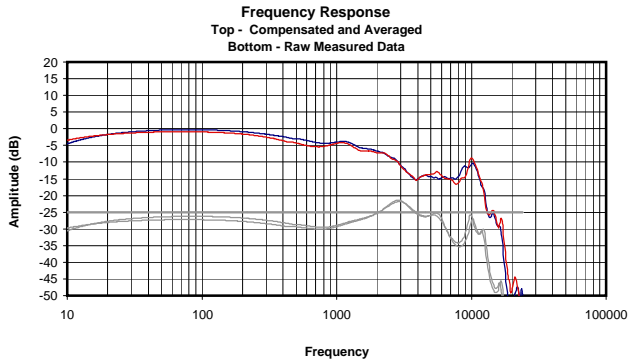
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
35 Ohms
0.05 mW
-19 dB



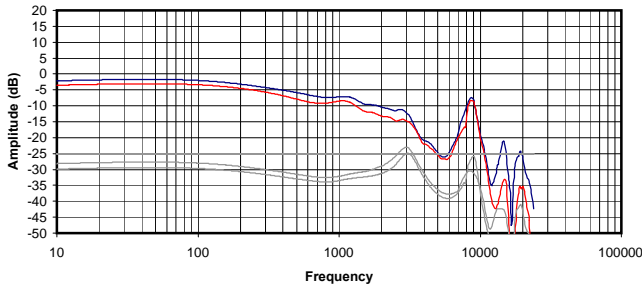


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

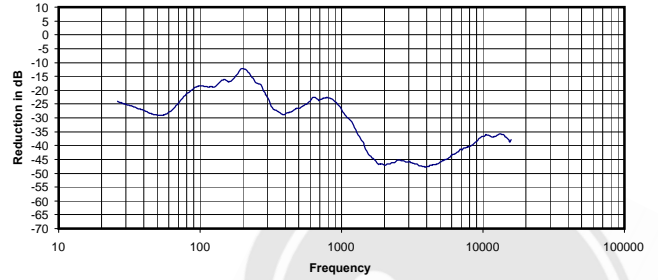
0.026 Vrms
58 Ohms
0.01 mW
-33 dBr



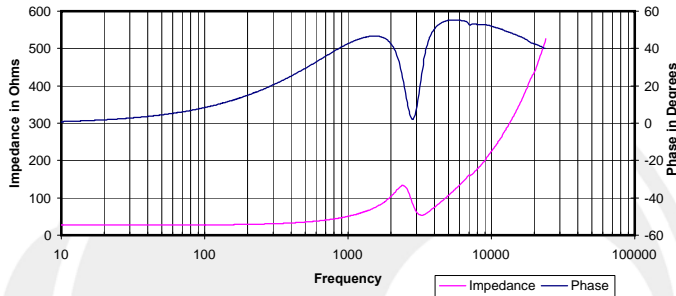
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



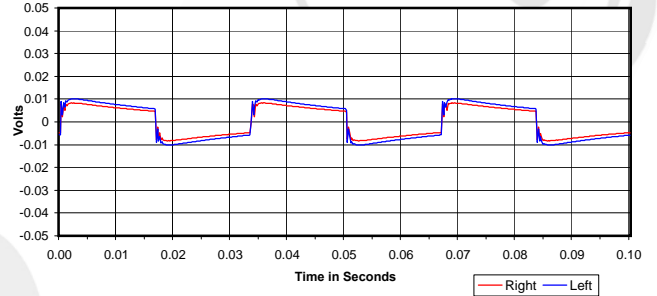
Isolation
Attenuation of External Sound vs. Frequency



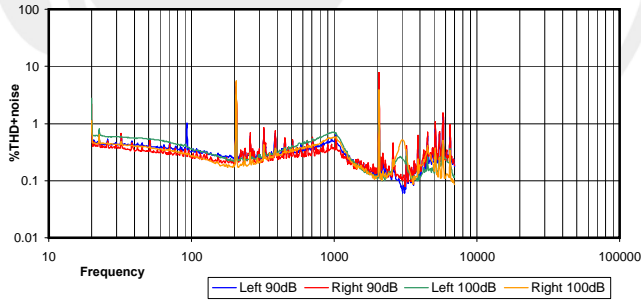
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



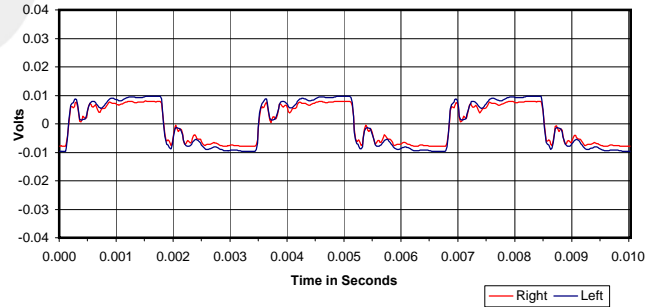
30 Hz Square Wave



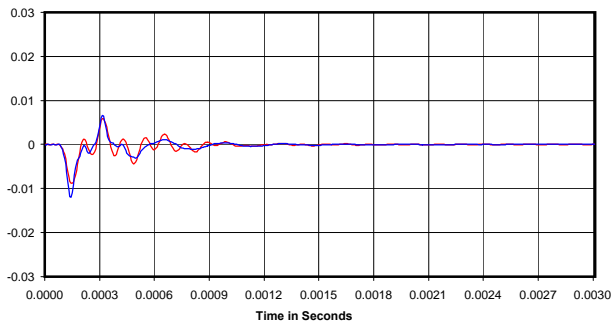
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



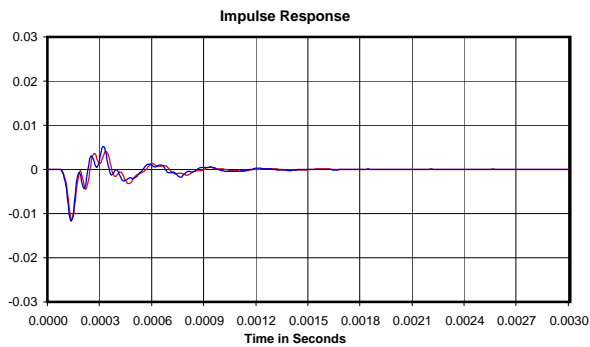
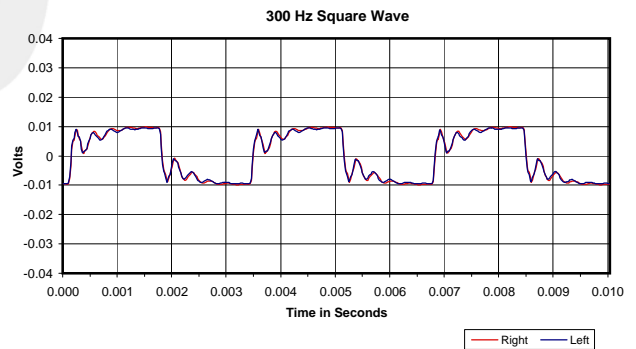
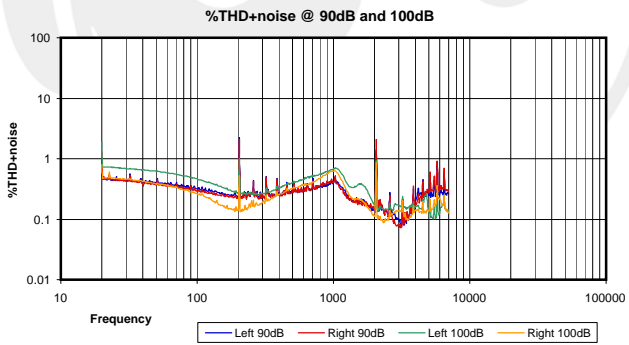
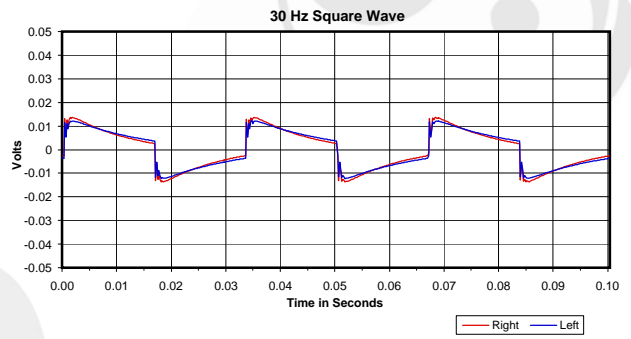
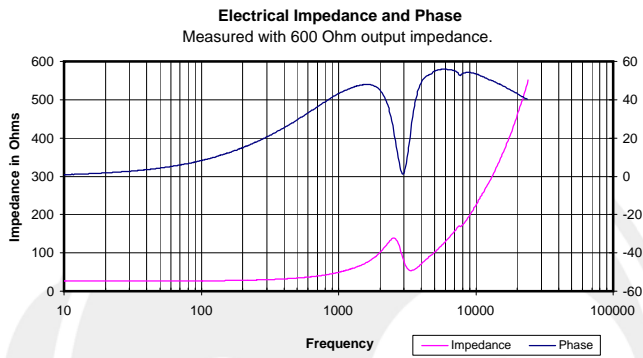
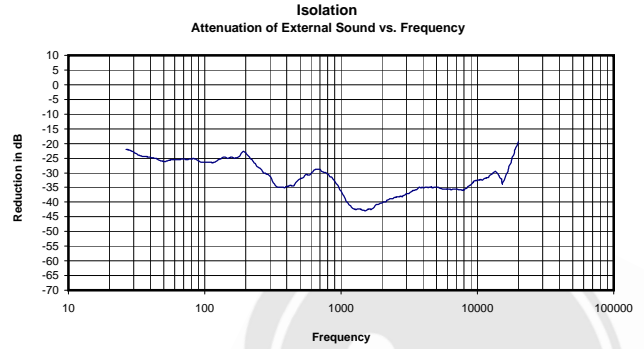
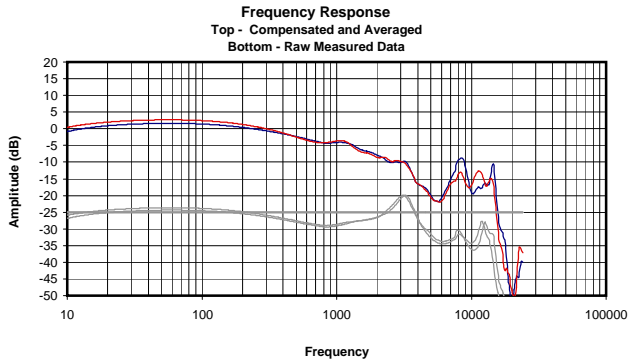
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.033 Vrms
50 Ohms
0.02 mW
-31 dB

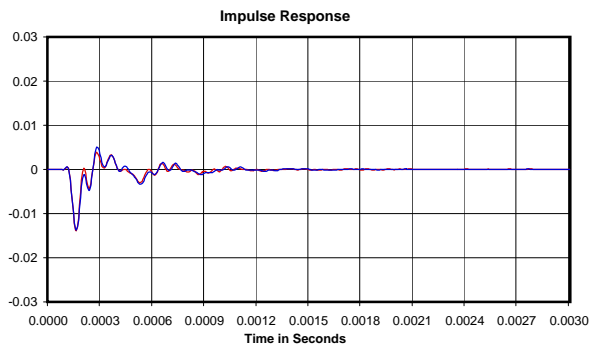
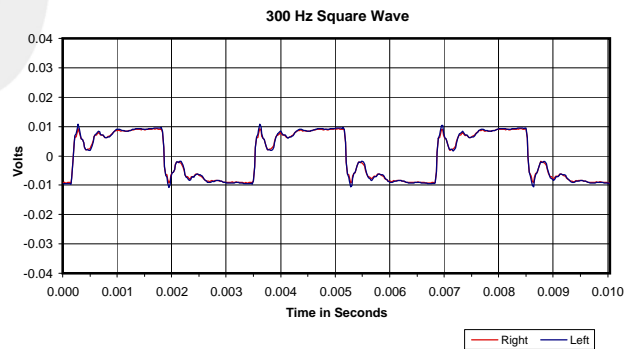
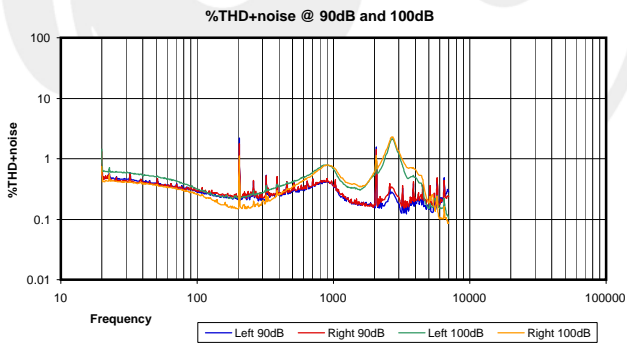
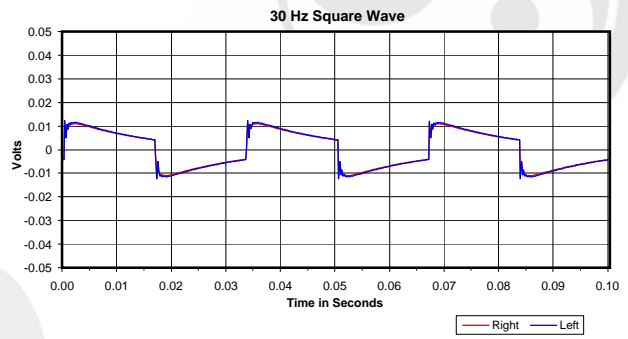
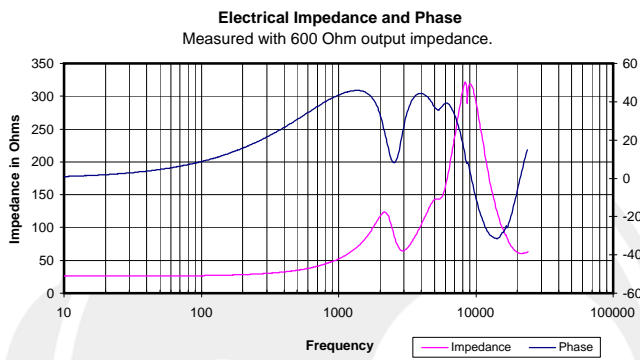
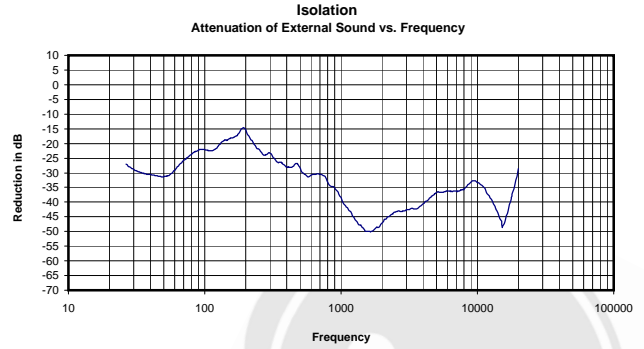
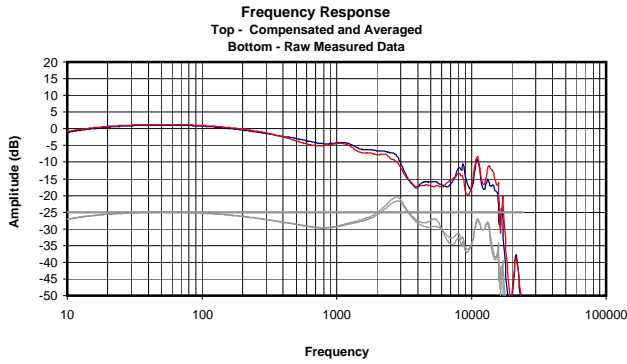




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
49 Ohms
0.02 mW
-34 dBr

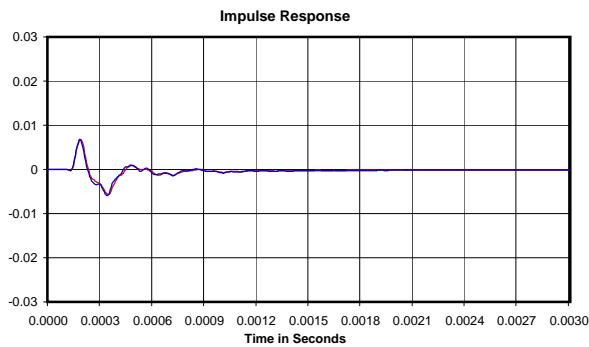
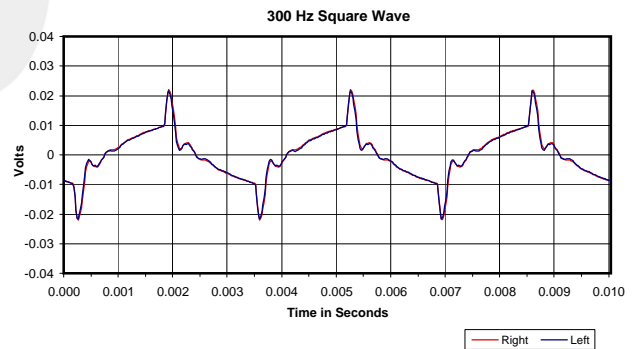
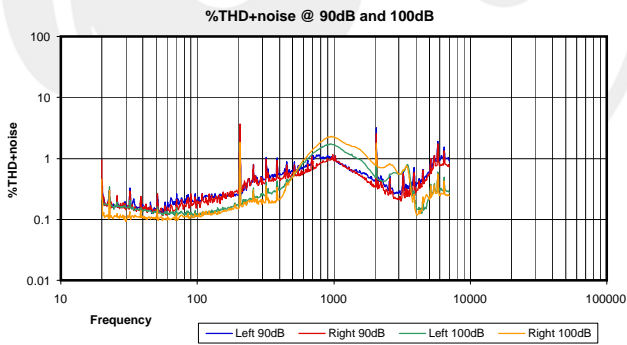
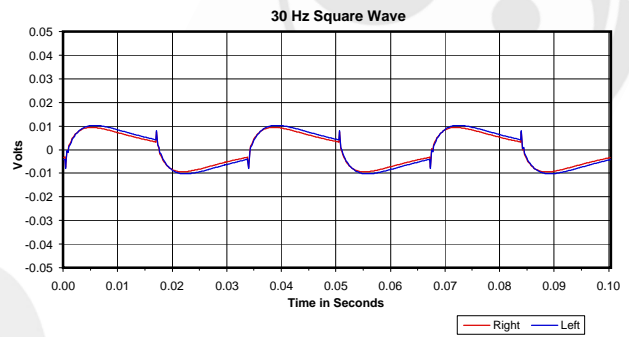
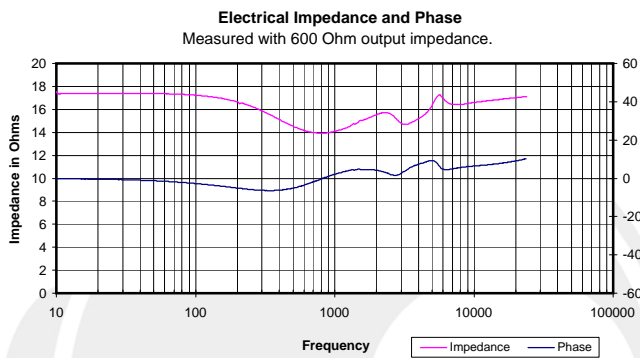
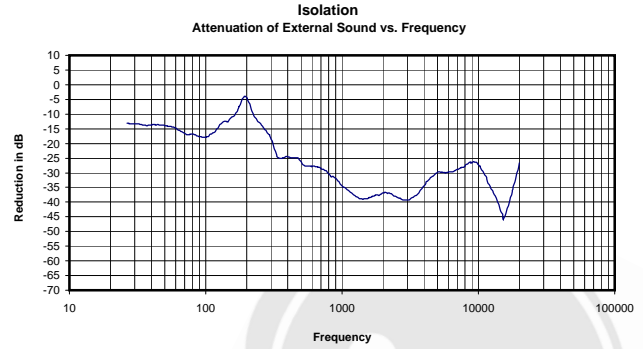
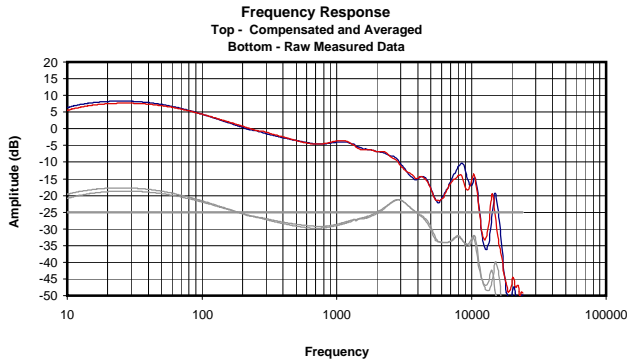




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.032 Vrms
52 Ohms
0.02 mW
-33 dBr



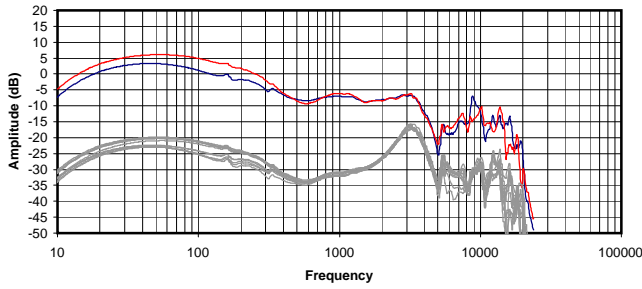


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.035 Vrms
14 Ohms
0.08 mW
-27 dB

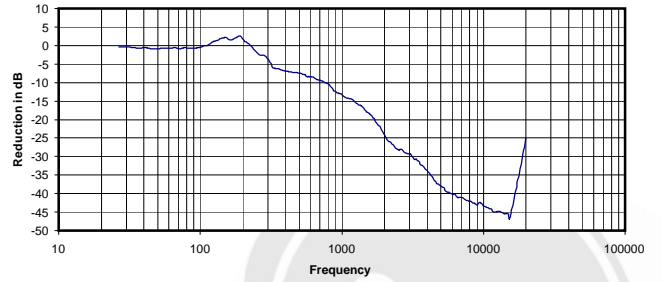


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

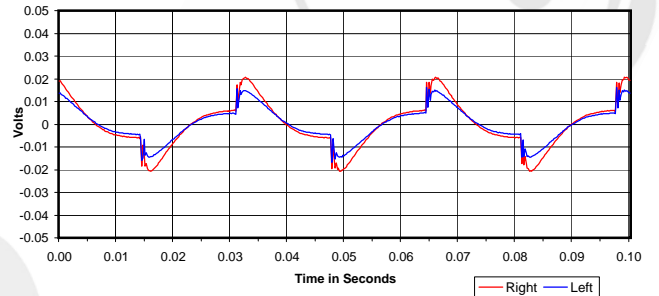


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

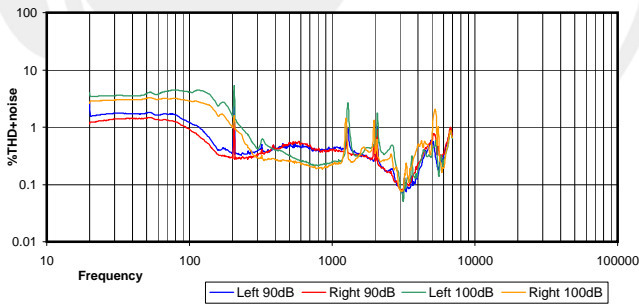
Isolation
 Attenuation of External Sound vs. Frequency



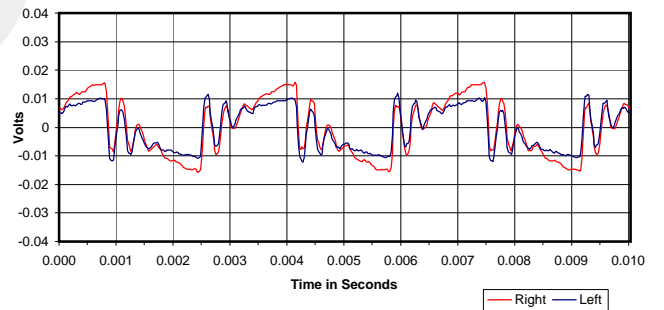
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

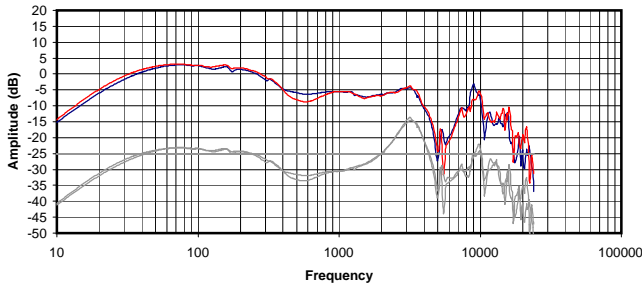


Broadband Isolation in dB (100Hz to 10kHz):

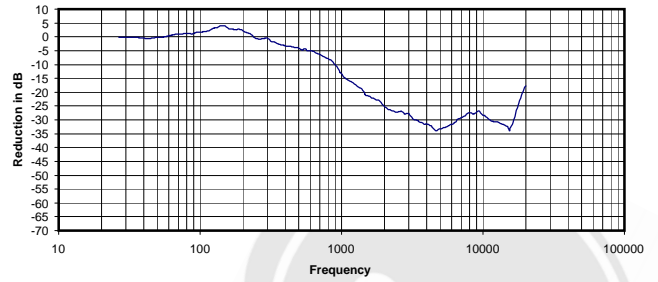
-17 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

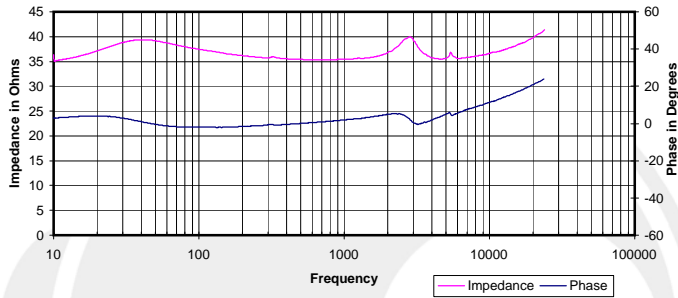
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



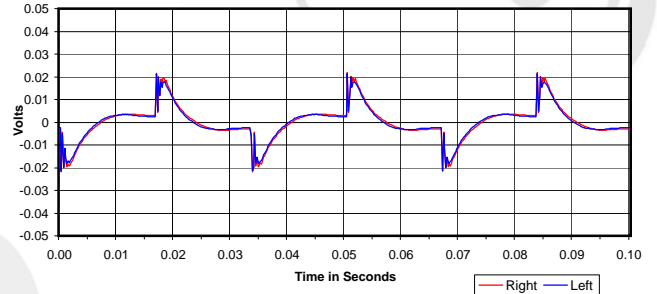
Isolation
Attenuation of External Sound vs. Frequency



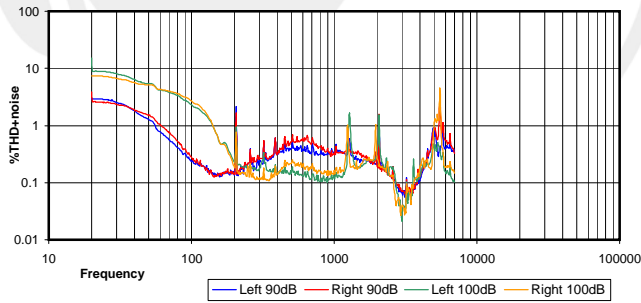
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



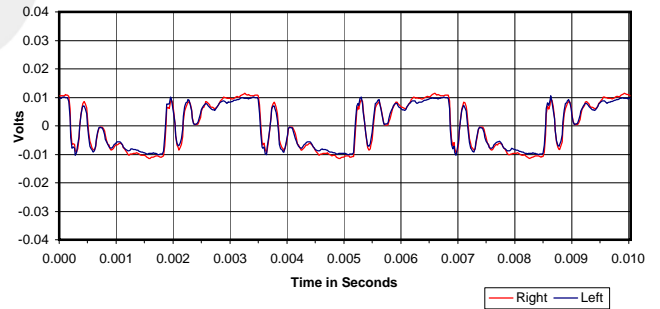
30 Hz Square Wave



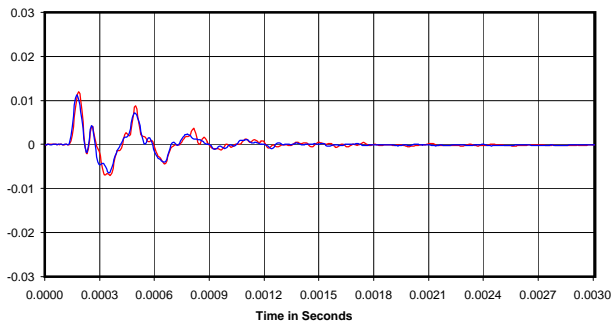
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

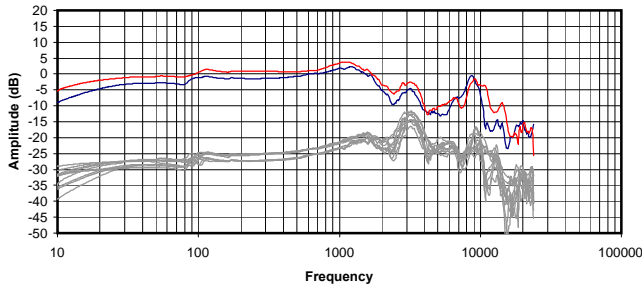


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

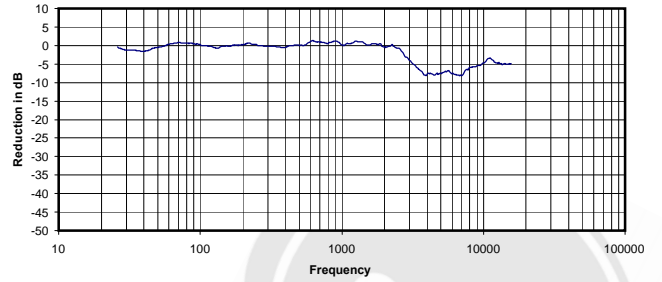
0.003 Vrms
35 Ohms
0.00 mW
-14 dB



Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

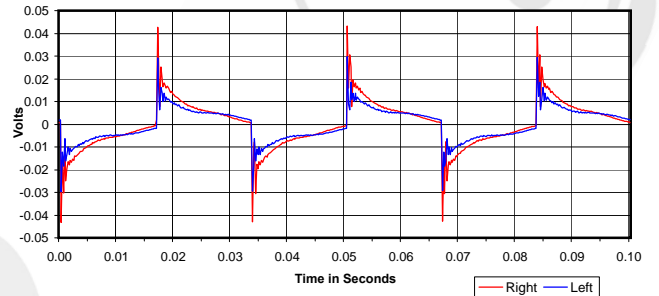


Isolation
 Attenuation of External Sound vs. Frequency

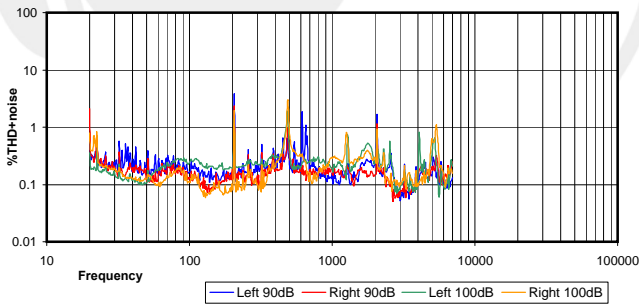


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

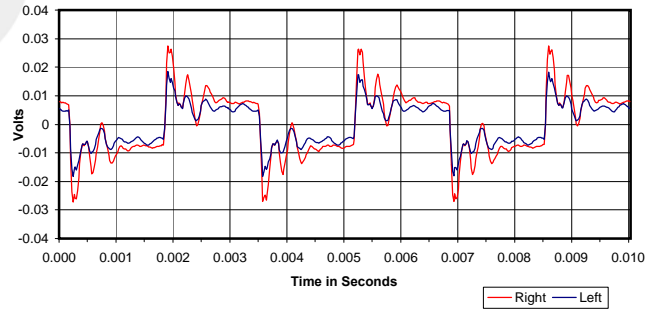
30 Hz Square Wave



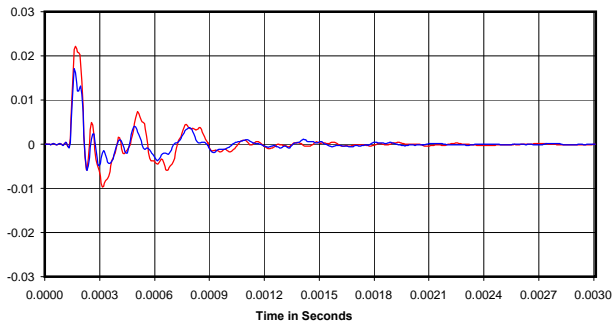
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



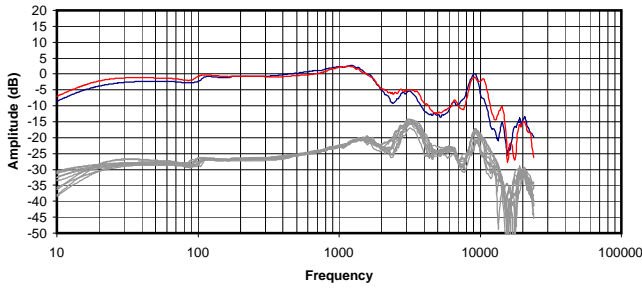
Impulse Response



Broadband Isolation in dB (100Hz to 10kHz):

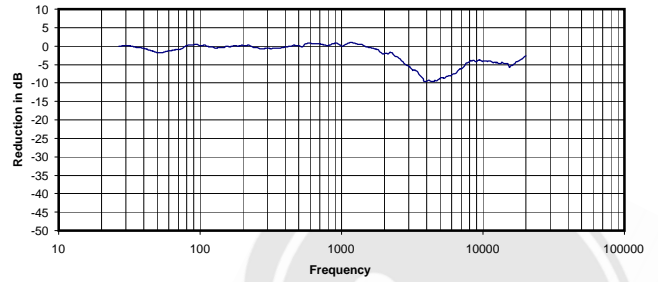
-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

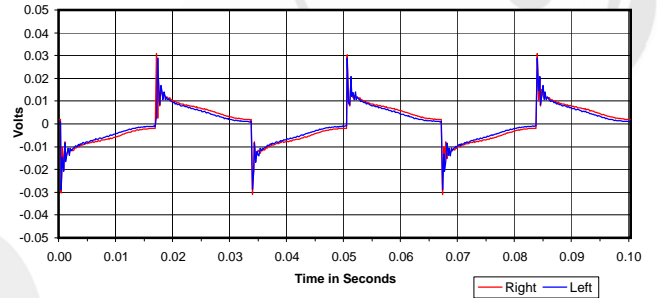


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

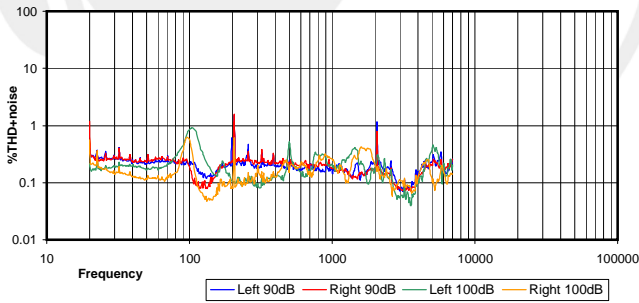
Isolation
 Attenuation of External Sound vs. Frequency



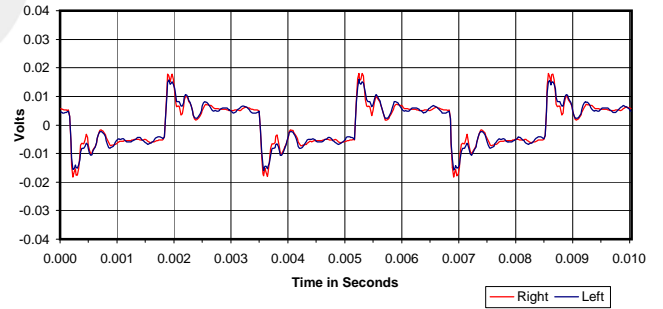
30 Hz Square Wave



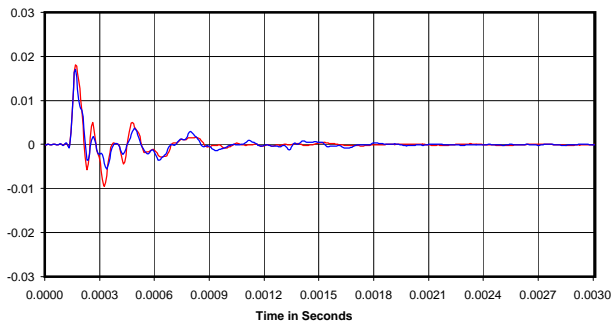
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



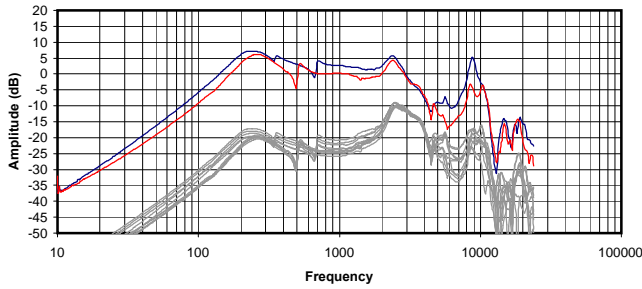
Impulse Response



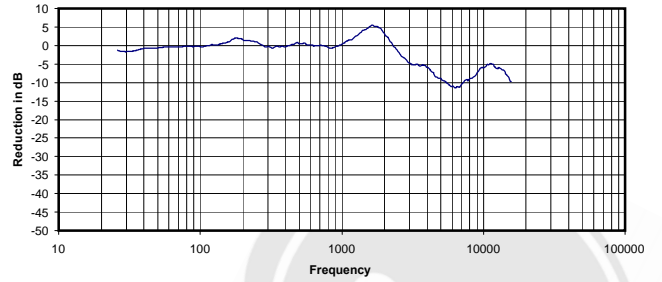
Broadband Isolation in dB (100Hz to 10kHz):

-2 dB

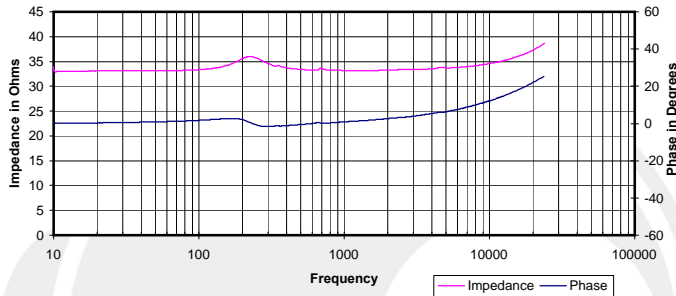
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



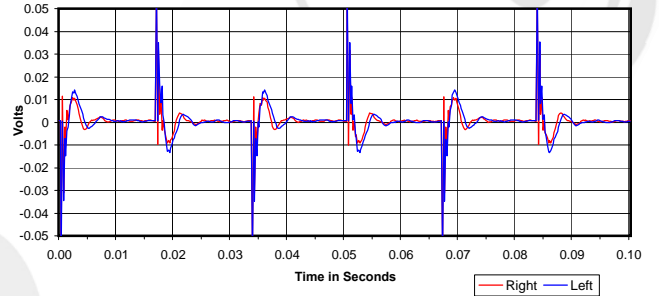
Isolation
 Attenuation of External Sound vs. Frequency



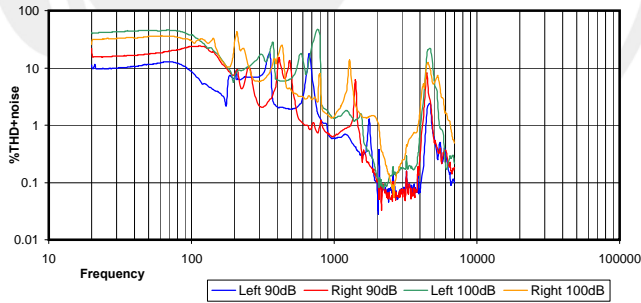
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



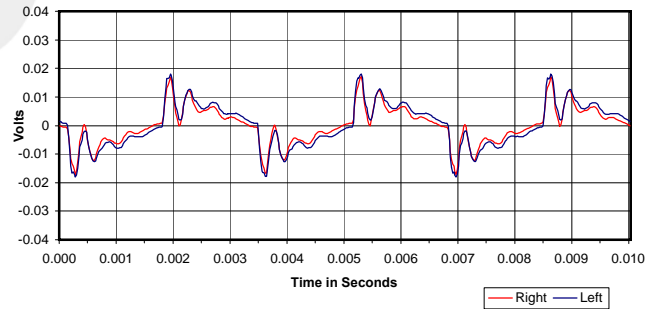
30 Hz Square Wave



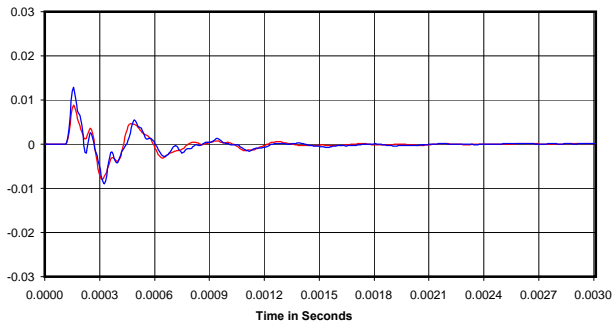
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

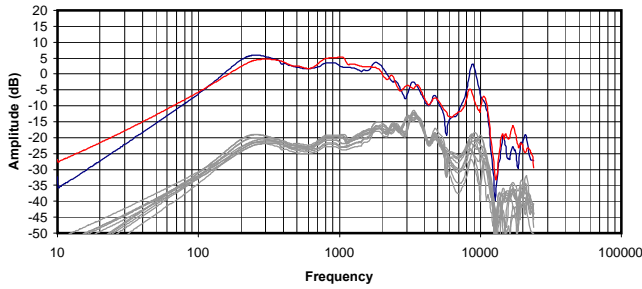


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

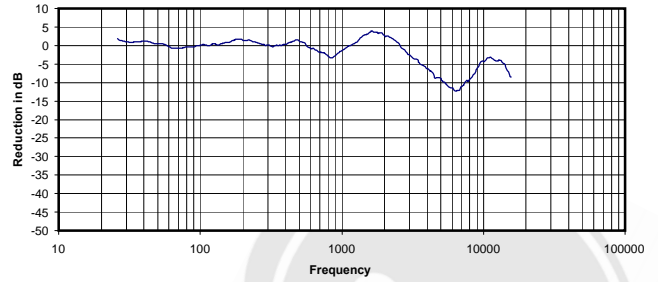
0.162 Vrms
 33 Ohms
 0.79 mW
 -1 dB



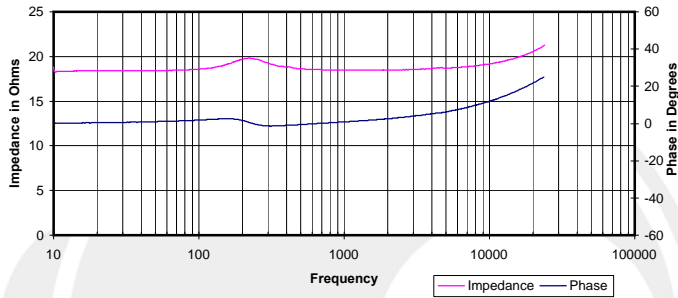
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



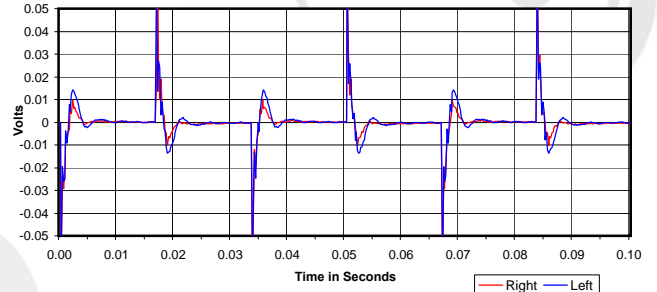
Isolation
 Attenuation of External Sound vs. Frequency



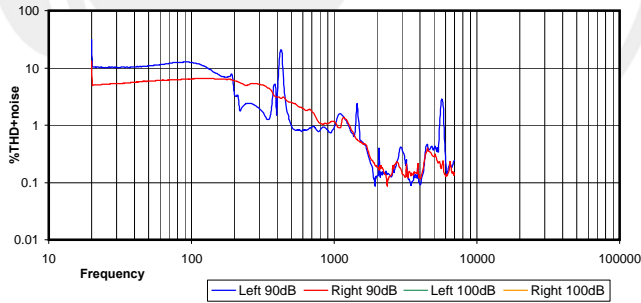
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



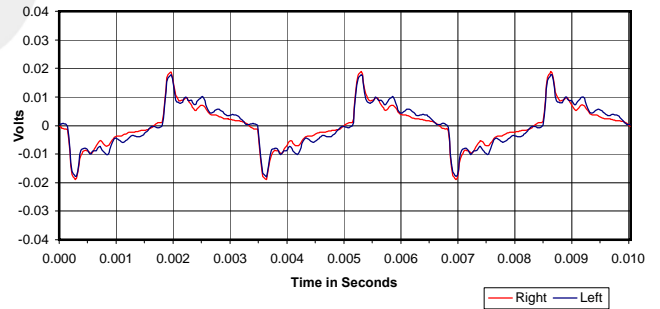
30 Hz Square Wave



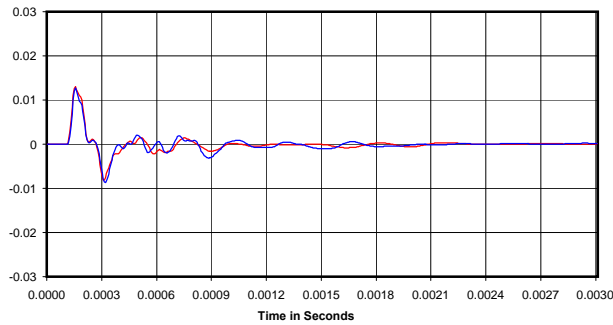
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



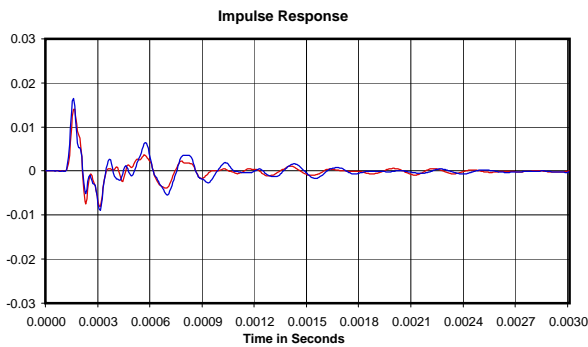
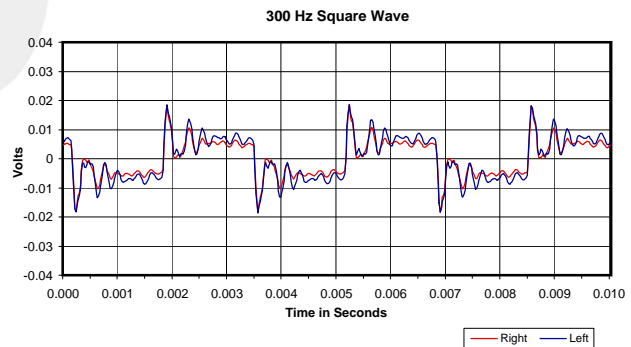
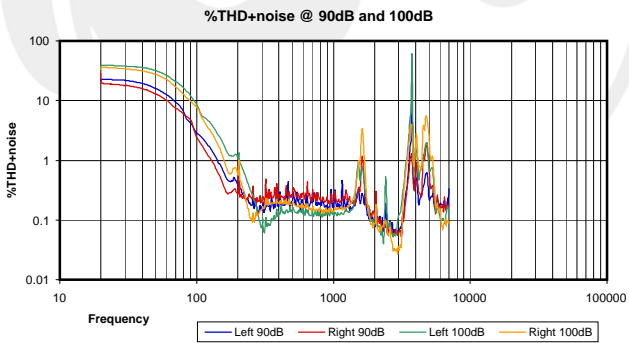
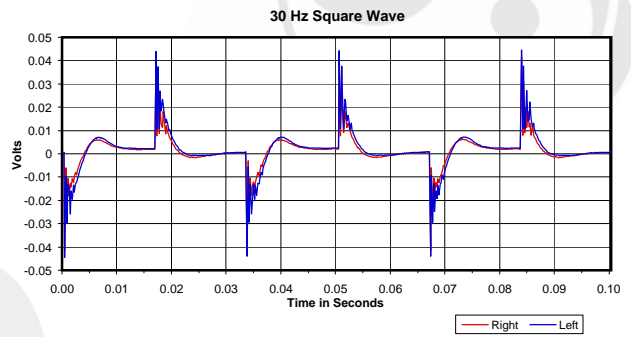
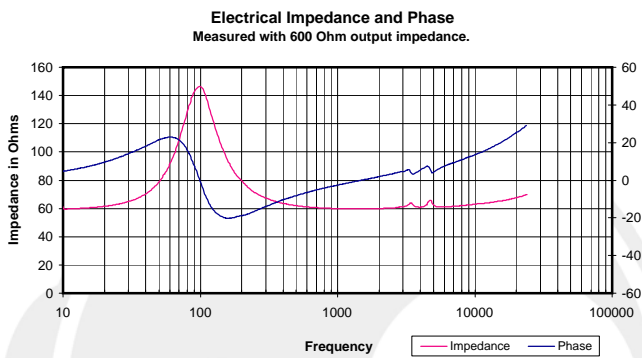
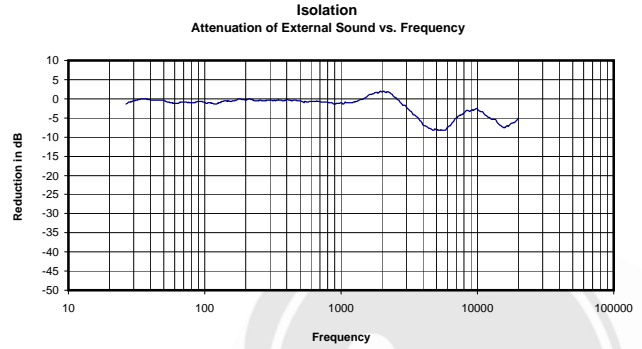
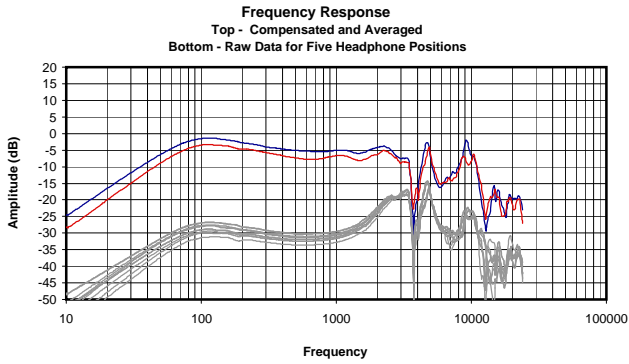
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.149 Vrms
 18 Ohms
 1.19 mW
 -1 dB

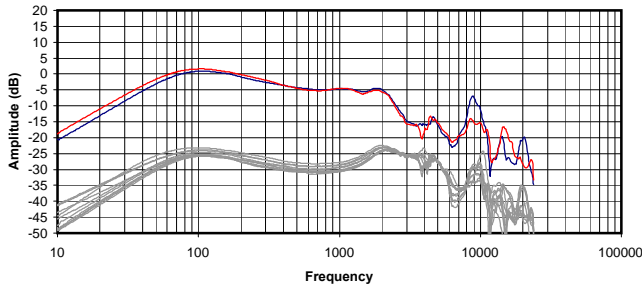




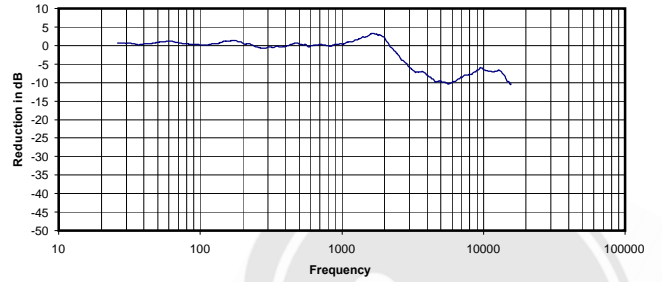
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.085 Vrms
60 Ohms
0.12 mW
-2 dB

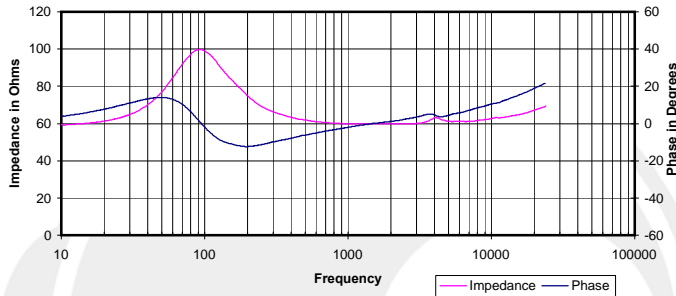
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



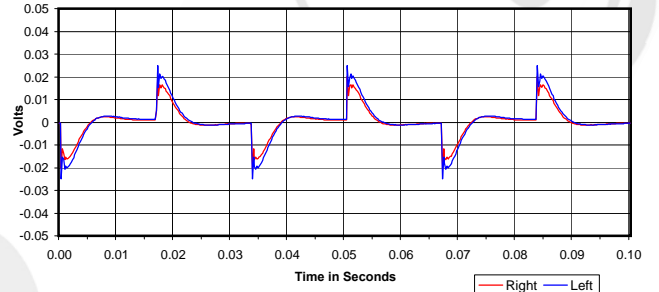
Isolation
 Attenuation of External Sound vs. Frequency



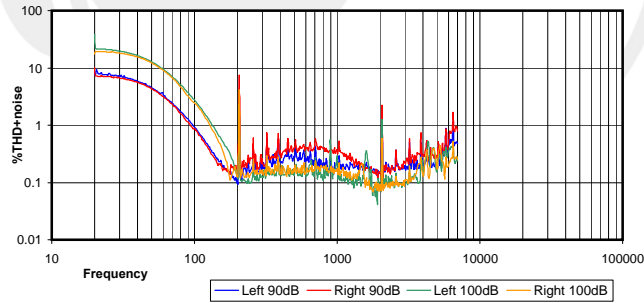
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



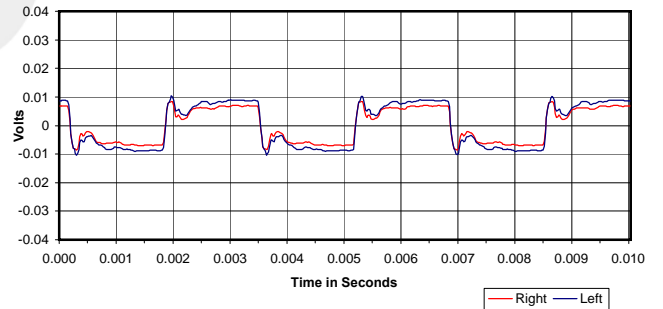
30 Hz Square Wave



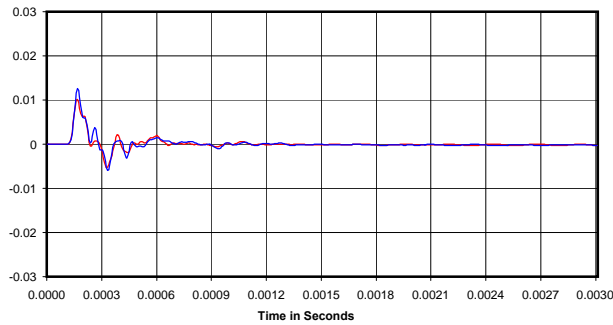
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



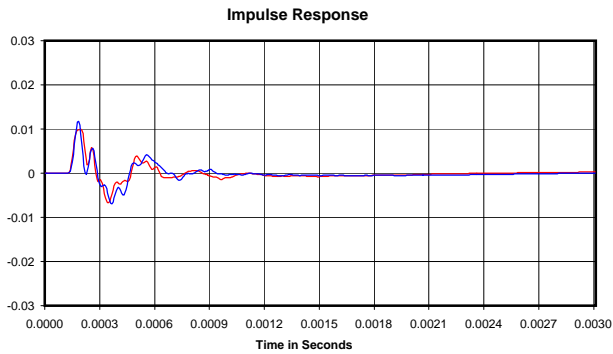
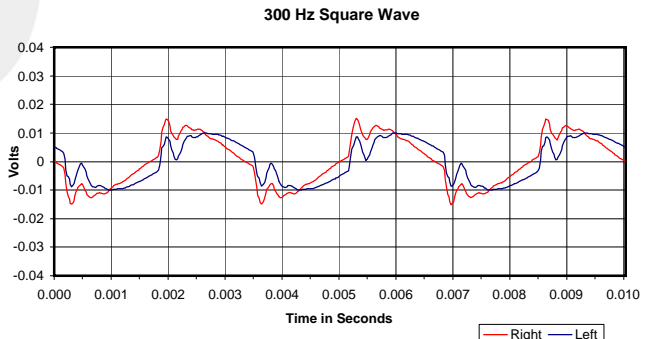
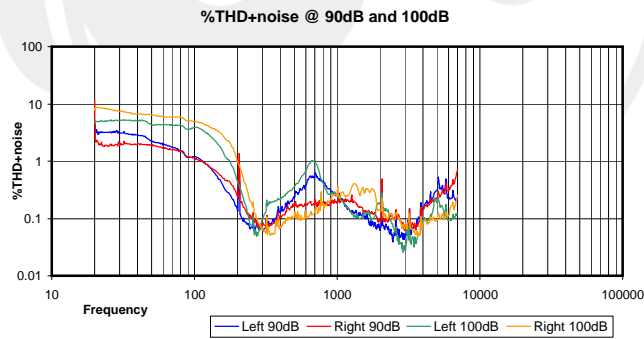
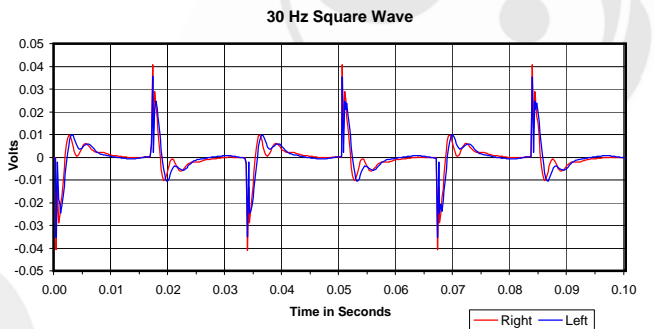
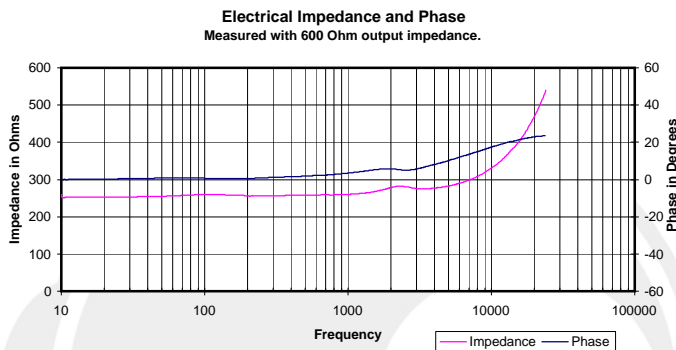
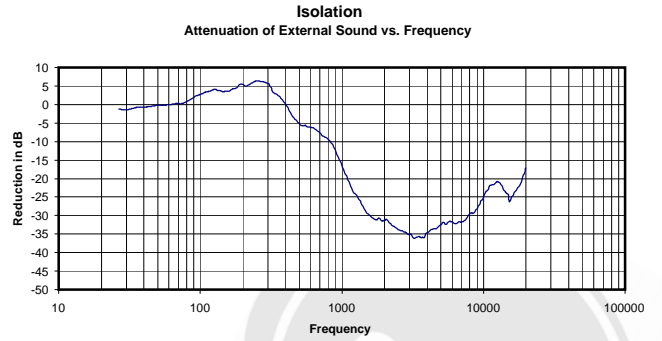
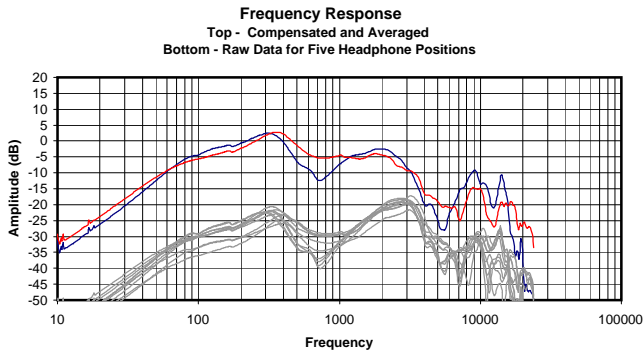
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.047 Vrms
 60 Ohms
 0.04 mW
 -1 dB



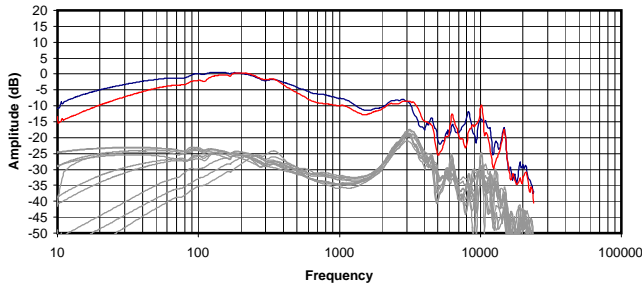


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

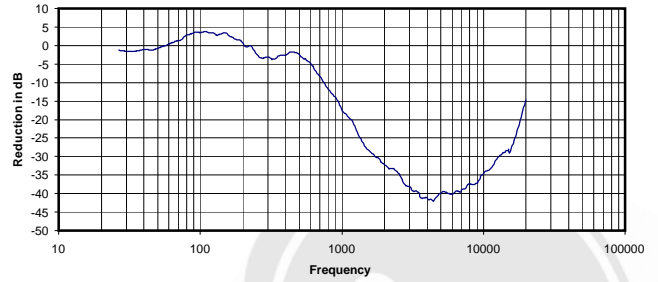
0.205 Vrms
260 Ohms
0.16 mW
-16 dB



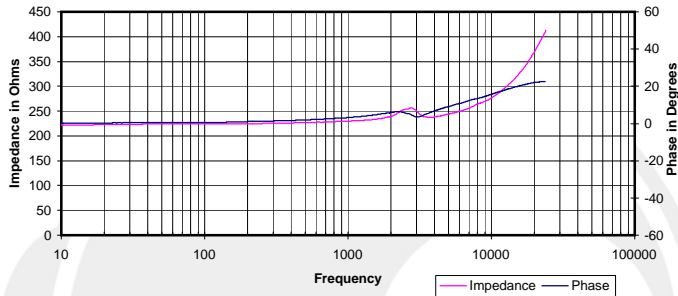
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



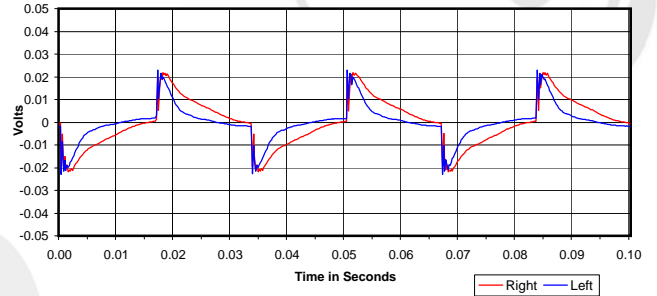
Isolation
 Attenuation of External Sound vs. Frequency



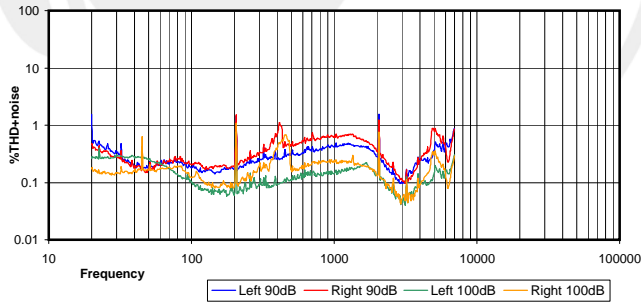
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



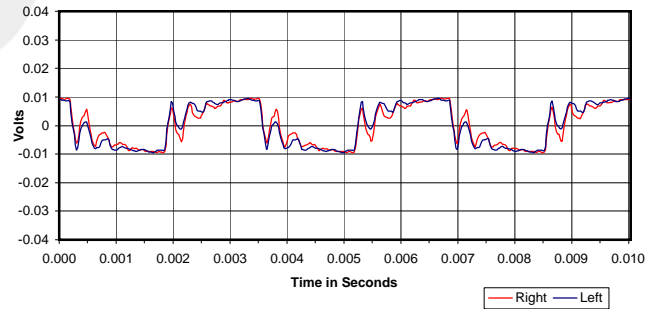
30 Hz Square Wave



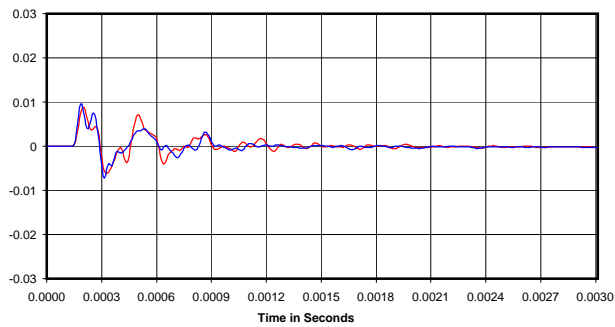
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

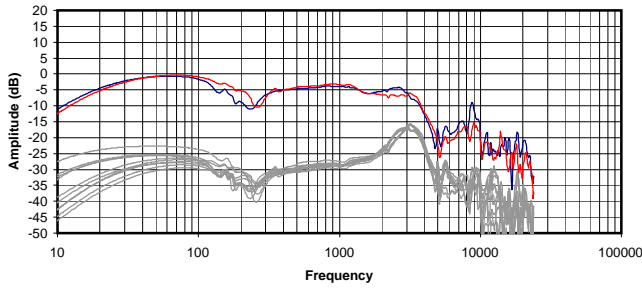


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

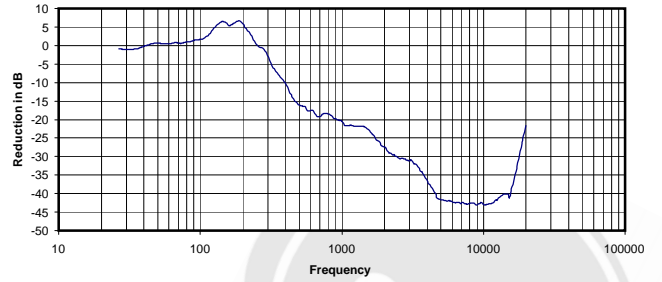
0.130 Vrms
 230 Ohms
 0.07 mW
 -19 dB



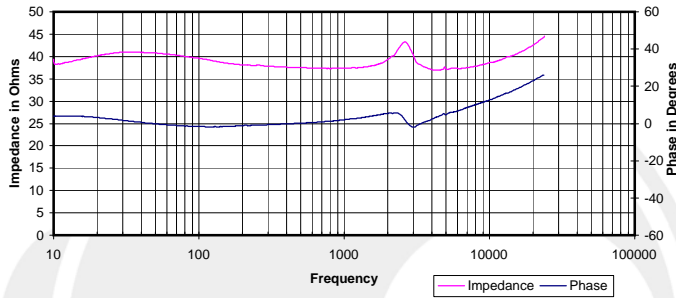
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



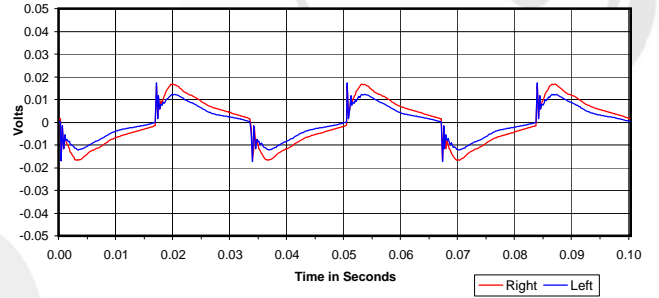
Isolation
 Attenuation of External Sound vs. Frequency



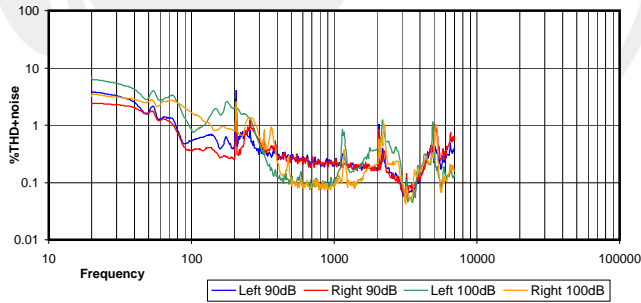
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



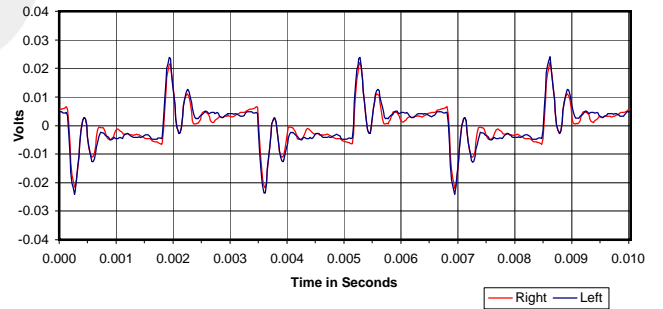
30 Hz Square Wave



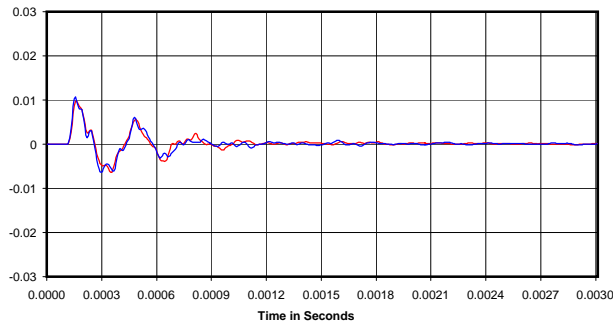
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

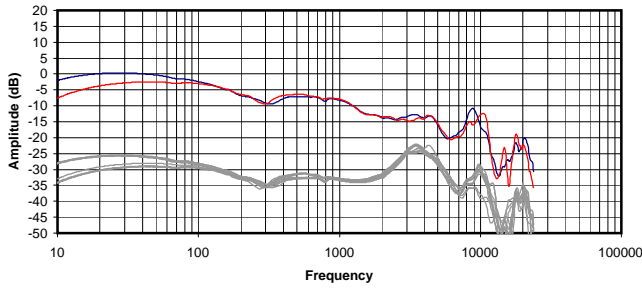


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

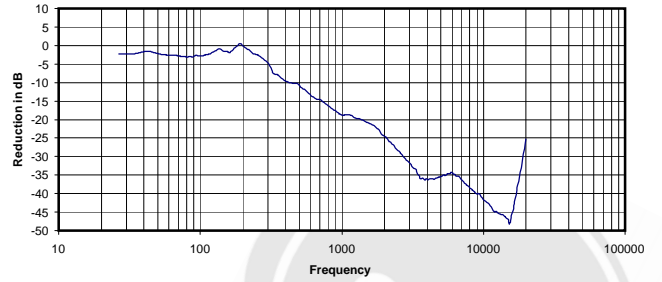
0.038 Vrms
 37 Ohms
 0.04 mW
 -20 dB



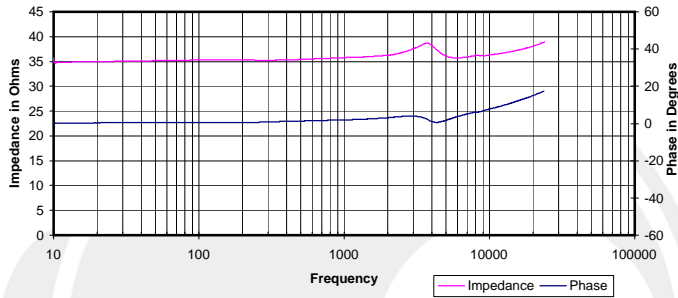
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



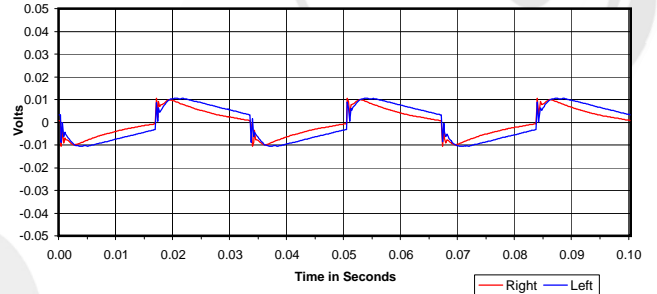
Isolation
Attenuation of External Sound vs. Frequency



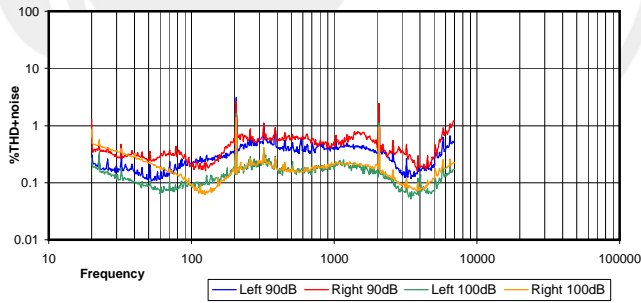
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



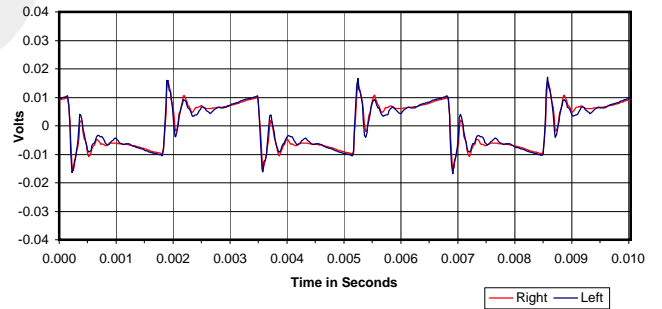
30 Hz Square Wave



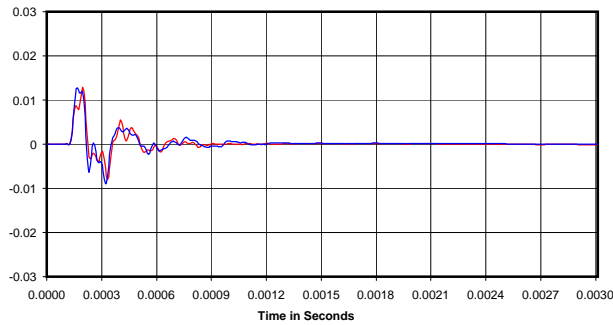
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

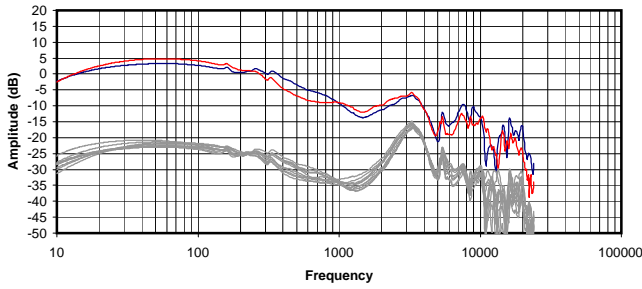


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

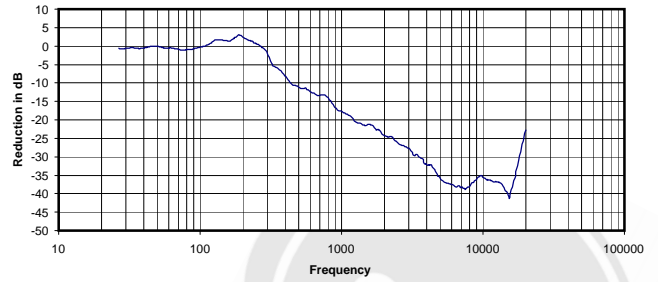
0.051 Vrms
36 Ohms
0.07 mW
-19 dB



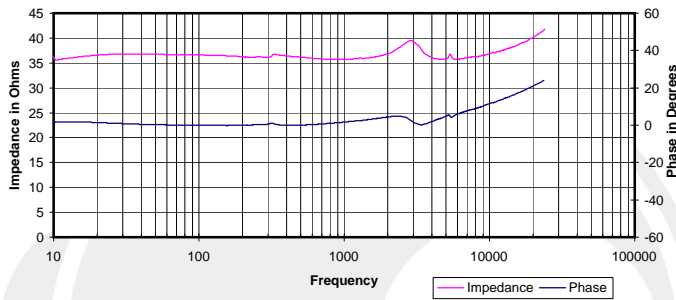
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



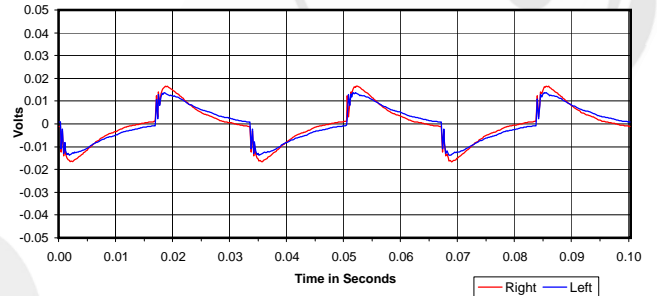
Isolation
 Attenuation of External Sound vs. Frequency



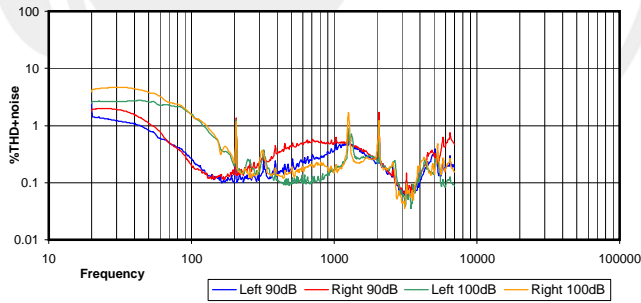
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



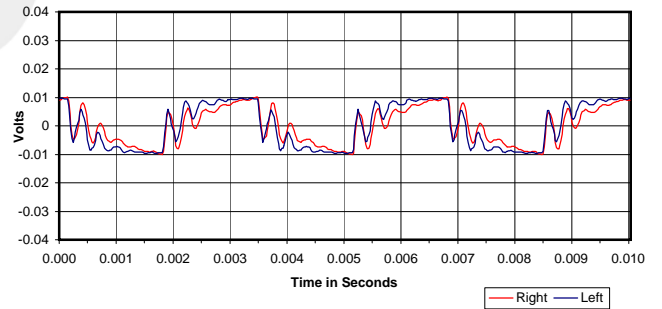
30 Hz Square Wave



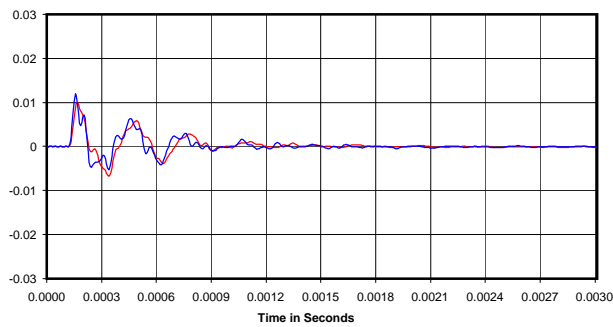
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

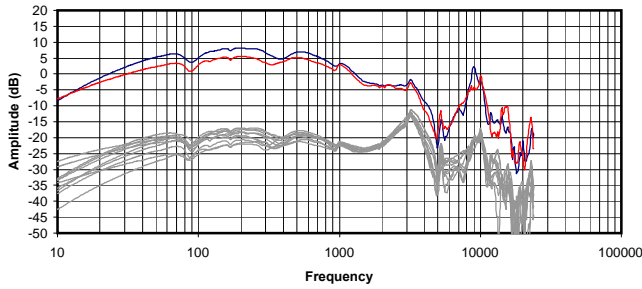


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

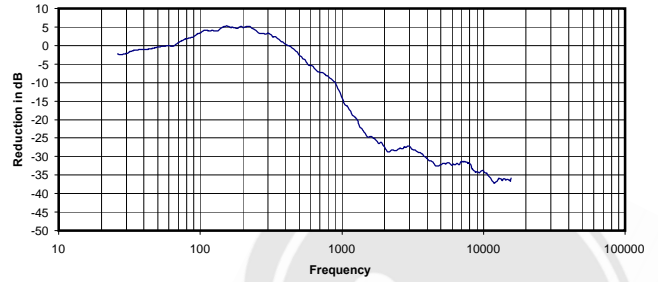
0.084 Vrms
 36 Ohms
 0.20 mW
 -17 dB



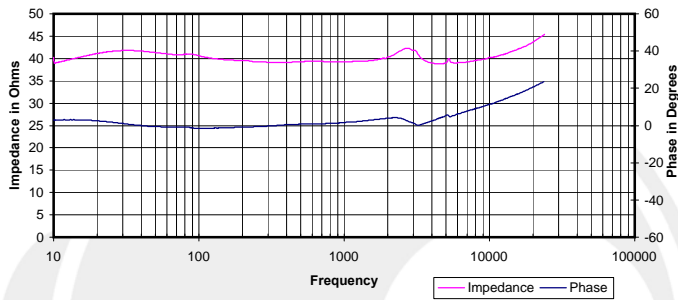
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



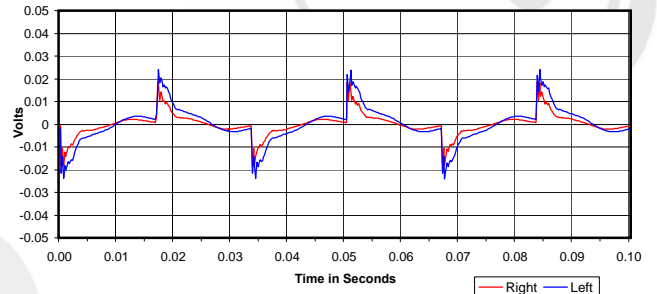
Isolation
 Attenuation of External Sound vs. Frequency



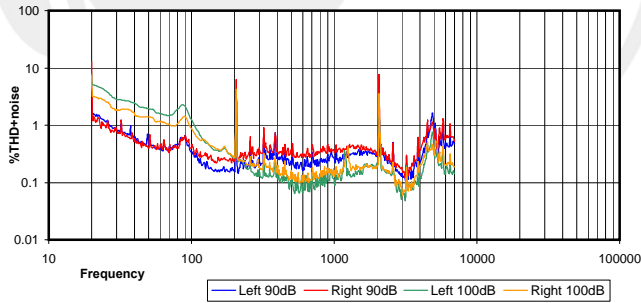
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



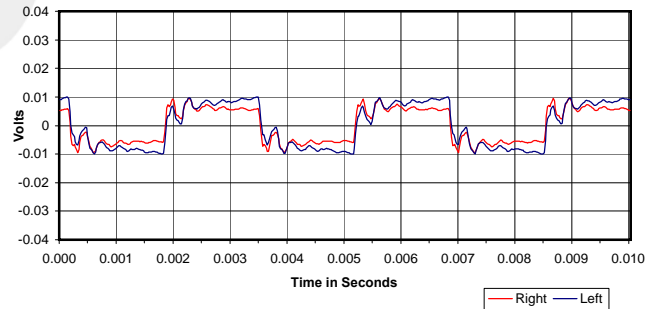
30 Hz Square Wave



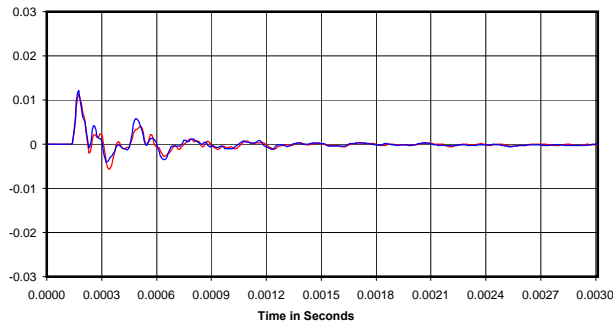
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



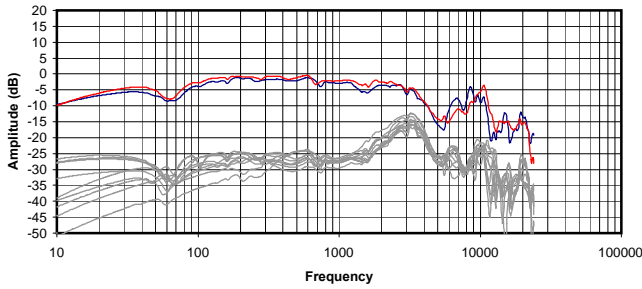
Impulse Response



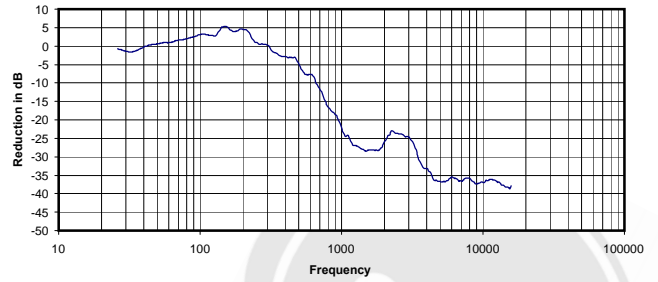
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.050 Vrms
 39 Ohms
 0.06 mW
 -12 dB

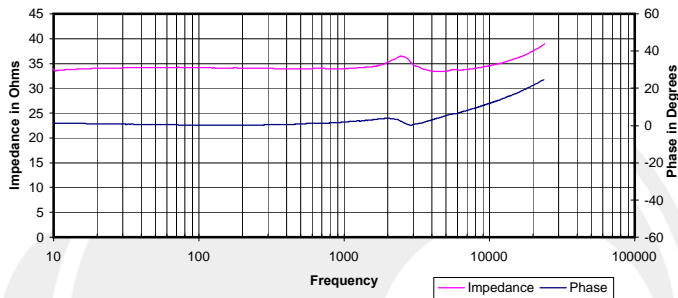
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



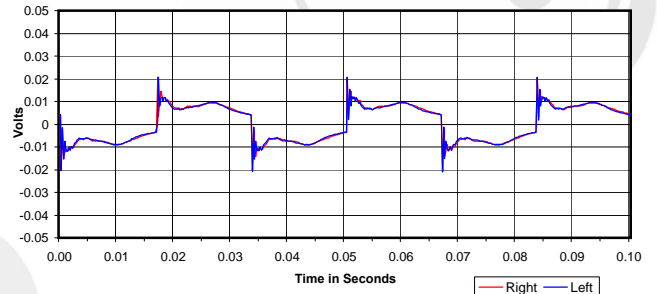
Isolation
 Attenuation of External Sound vs. Frequency



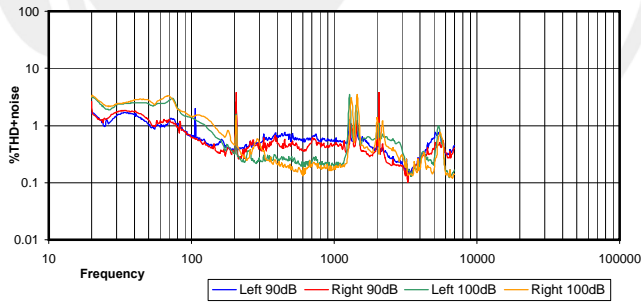
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



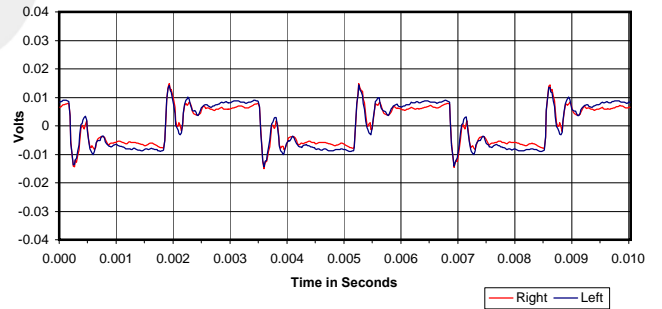
30 Hz Square Wave



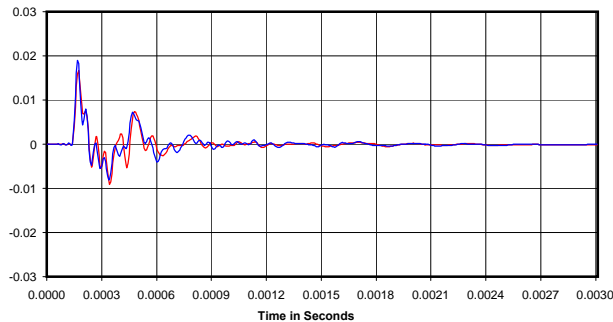
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

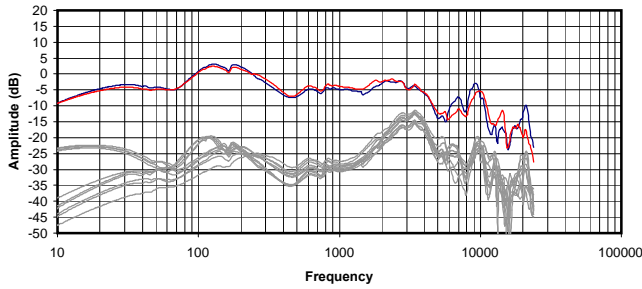


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

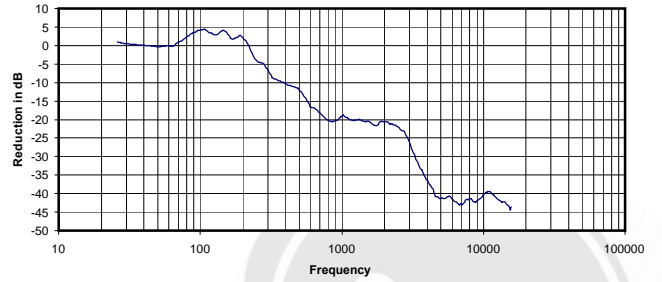
0.091 Vrms
 34 Ohms
 0.24 mW
 -14 dB



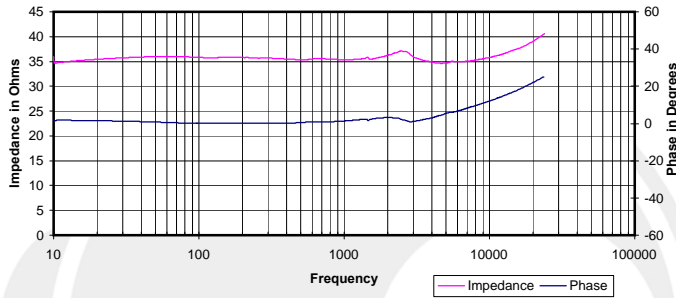
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



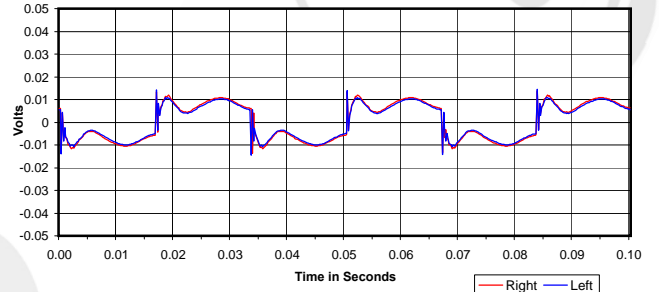
Isolation
 Attenuation of External Sound vs. Frequency



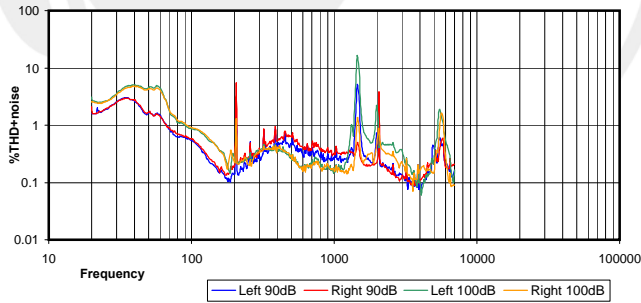
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



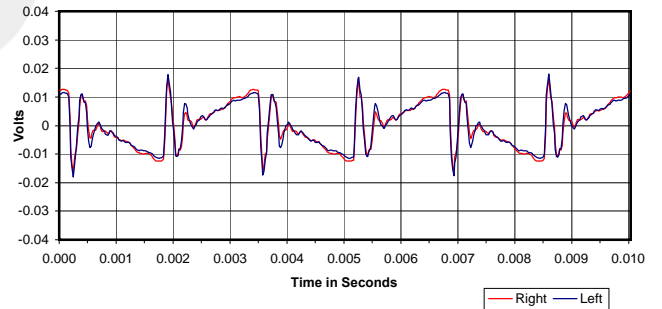
30 Hz Square Wave



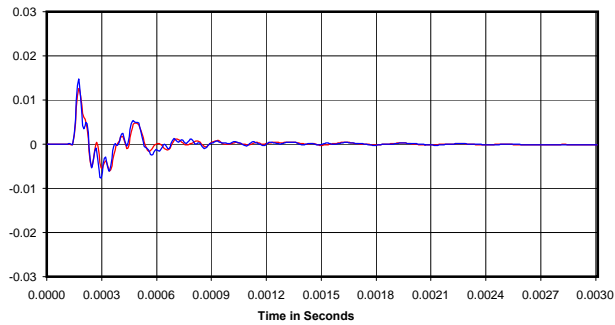
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

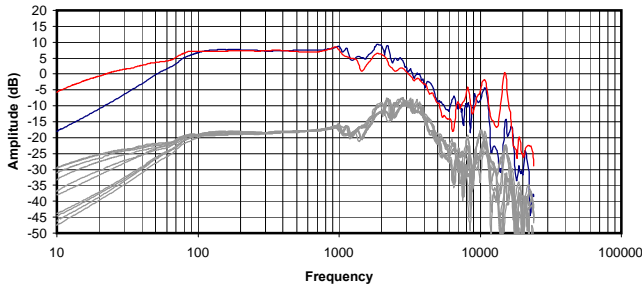


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

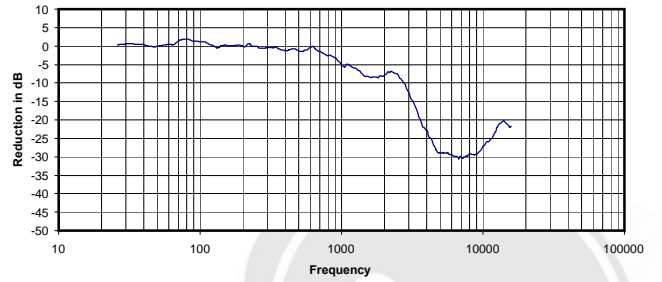
0.139 Vrms
 35 Ohms
 0.55 mW
 -16 dB



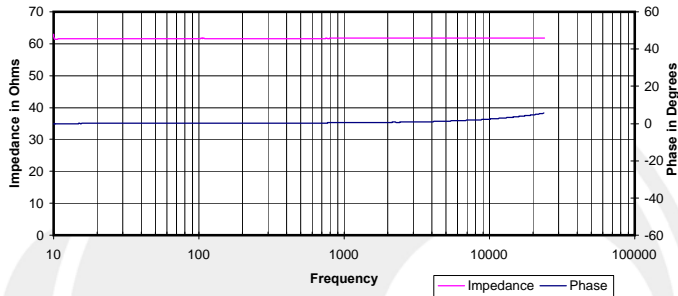
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



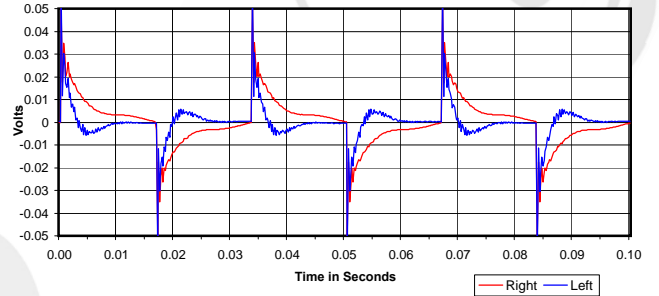
Isolation
Attenuation of External Sound vs. Frequency



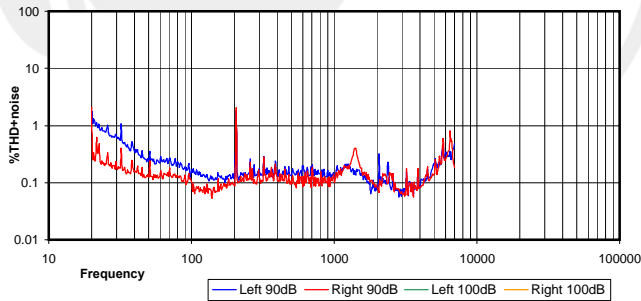
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



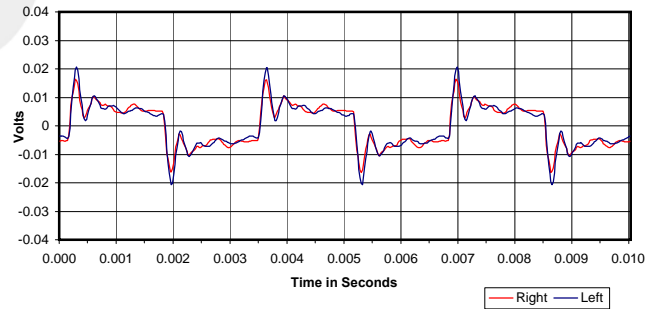
30 Hz Square Wave



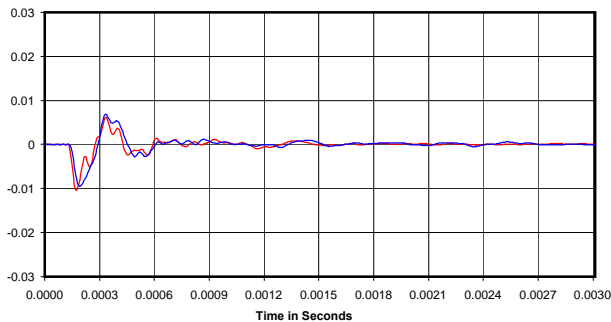
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

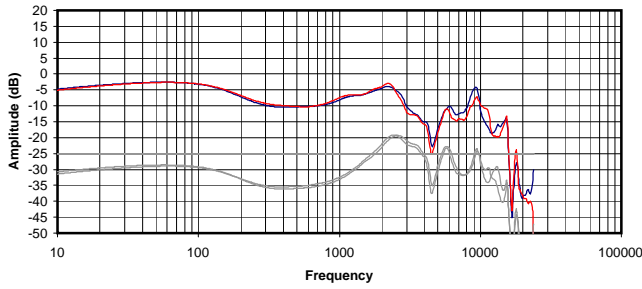


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

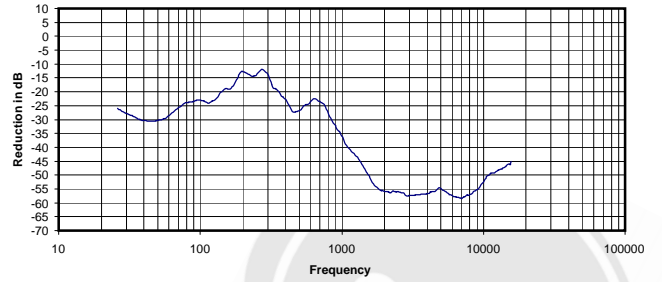
0.160 Vrms
62 Ohms
0.42 mW
-7 dB



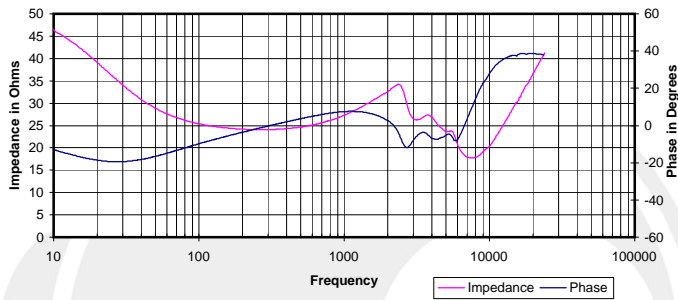
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



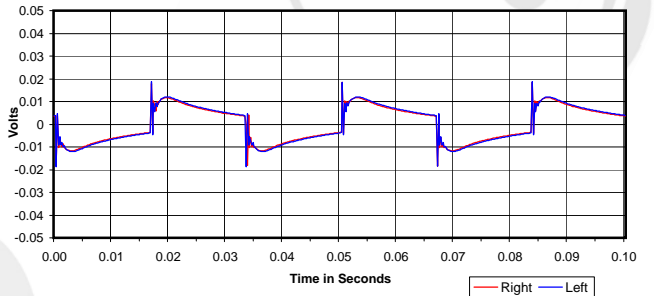
Isolation
Attenuation of External Sound vs. Frequency



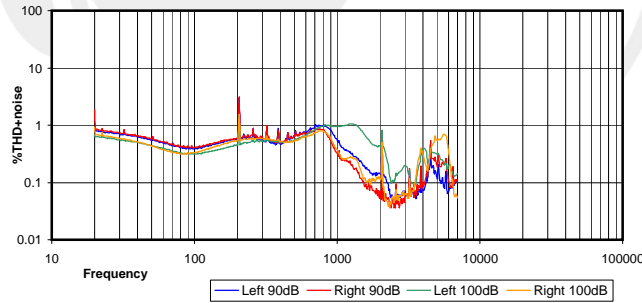
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



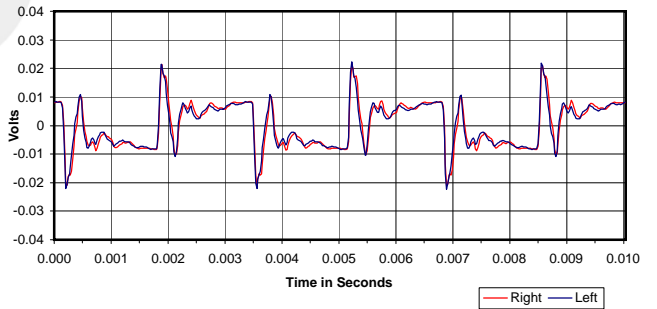
30 Hz Square Wave



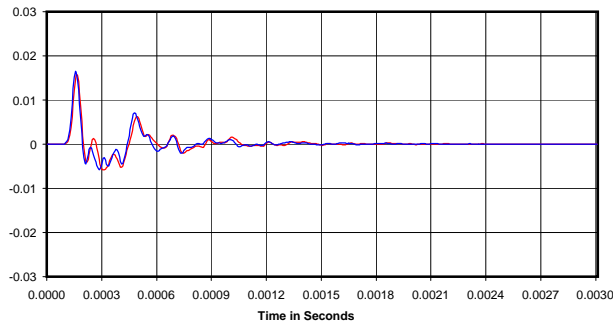
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

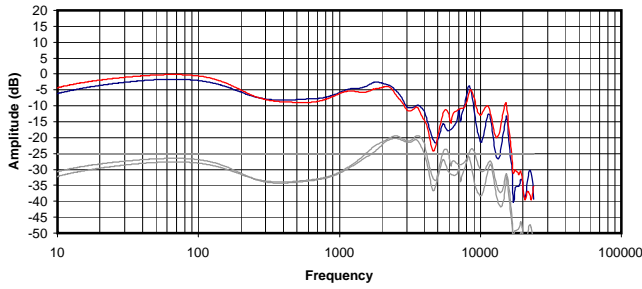


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

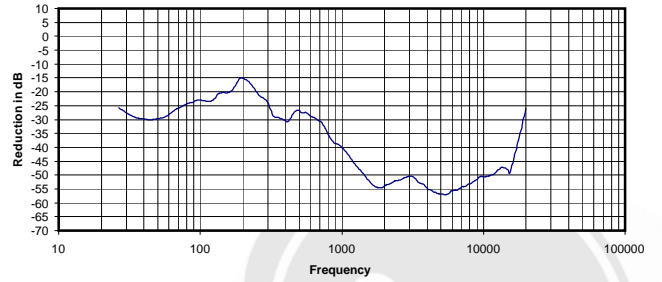
0.032 Vrms
27 Ohms
0.04 mW
-35 dB



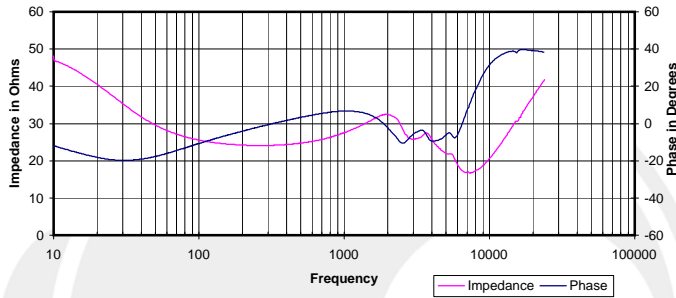
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



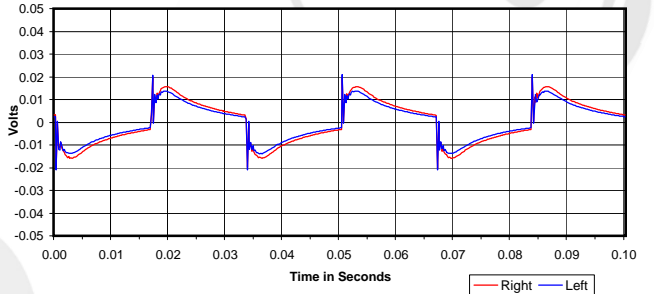
Isolation
Attenuation of External Sound vs. Frequency



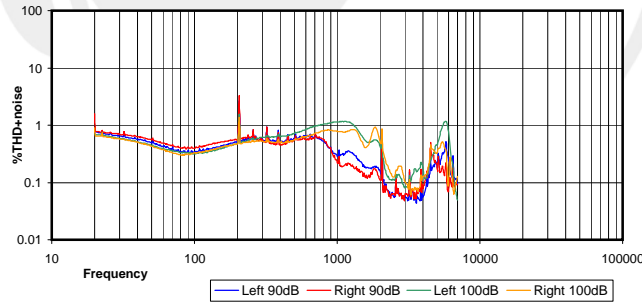
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



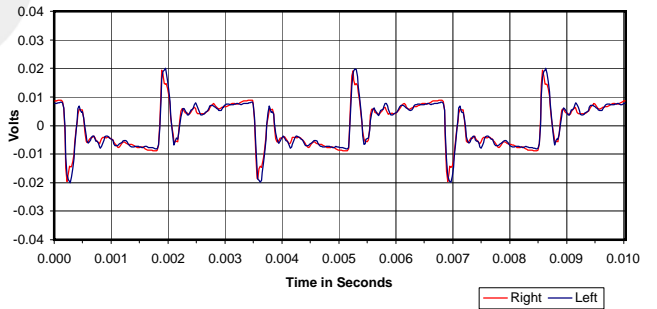
30 Hz Square Wave



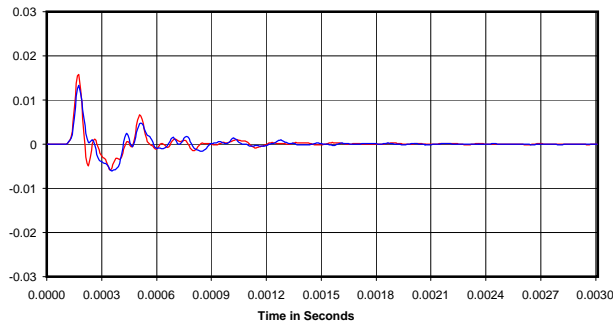
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

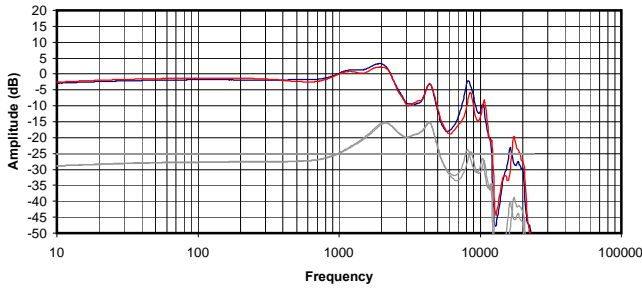


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

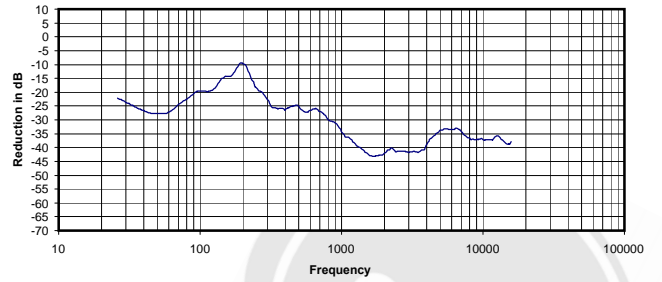
0.027 Vrms
28 Ohms
0.03 mW
-39 dB



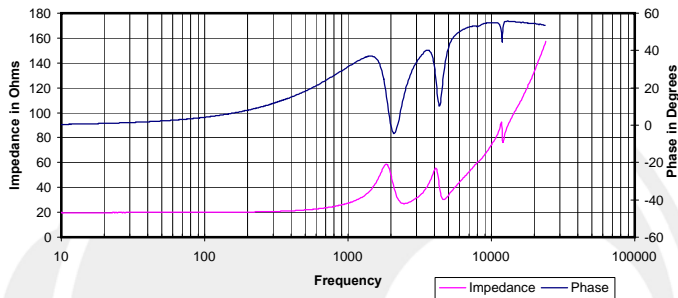
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



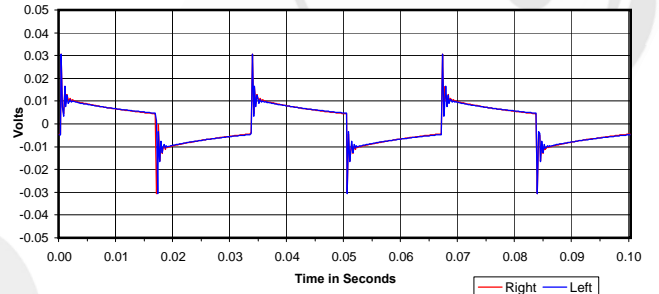
Isolation
Attenuation of External Sound vs. Frequency



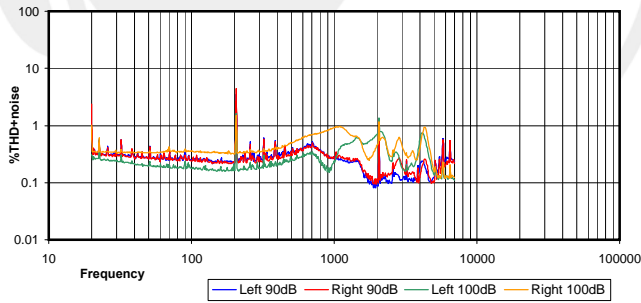
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



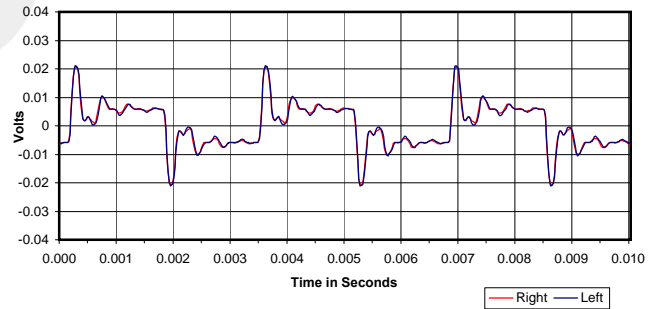
30 Hz Square Wave



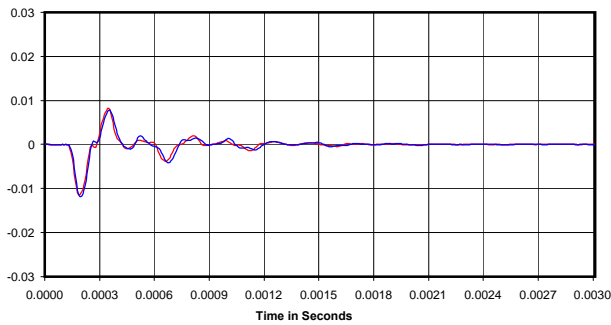
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

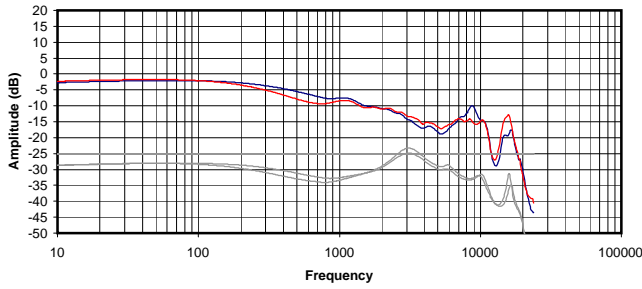


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

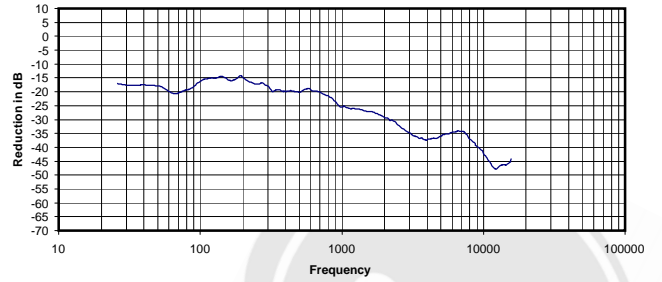
0.012 Vrms
27 Ohms
0.01 mW
-29 dB



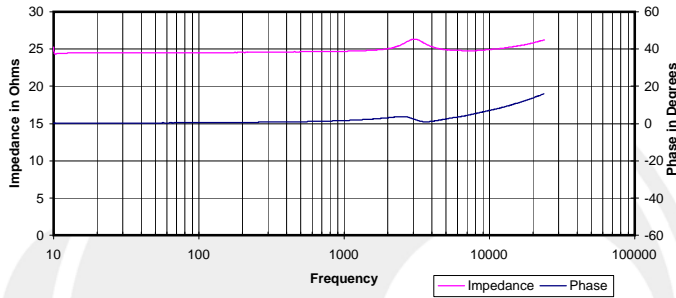
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



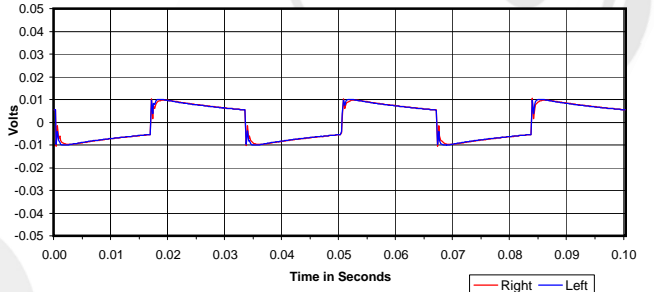
Isolation
Attenuation of External Sound vs. Frequency



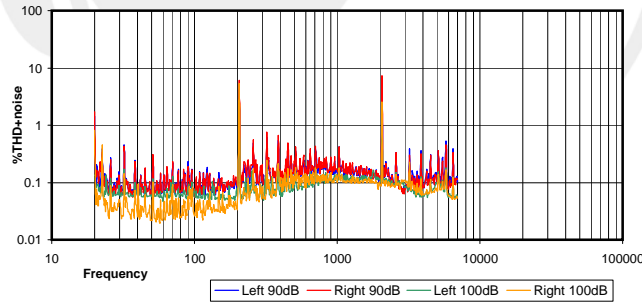
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



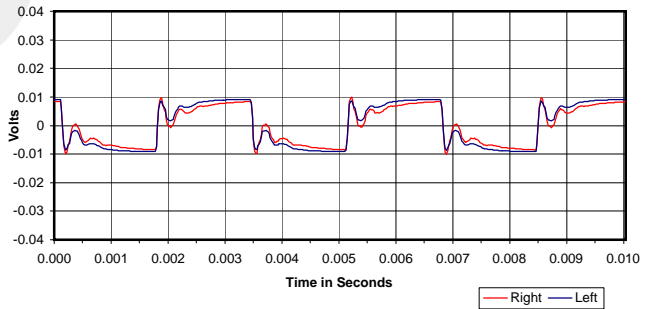
30 Hz Square Wave



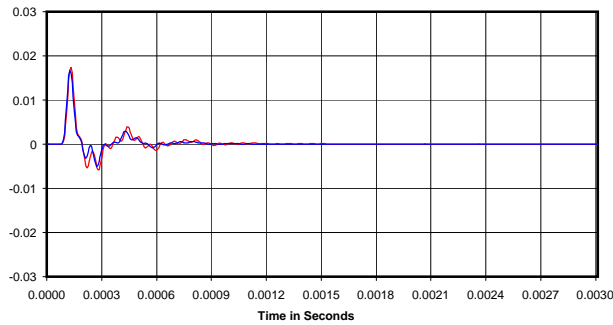
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

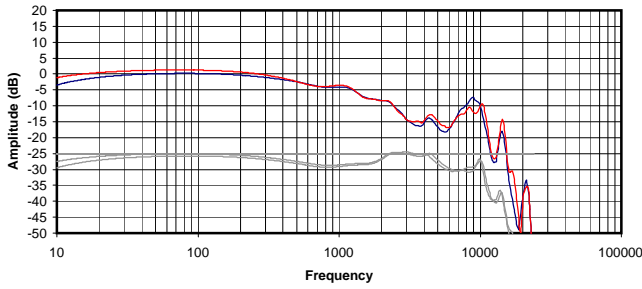


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

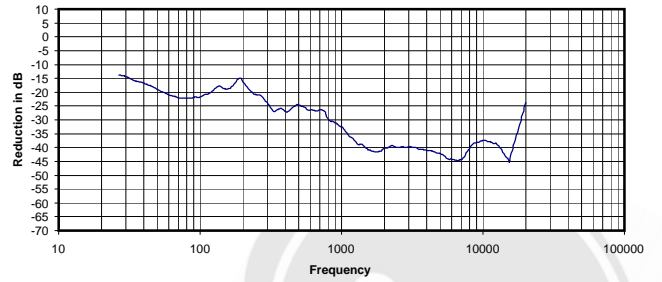
0.032 Vrms
25 Ohms
0.04 mW
-24 dB



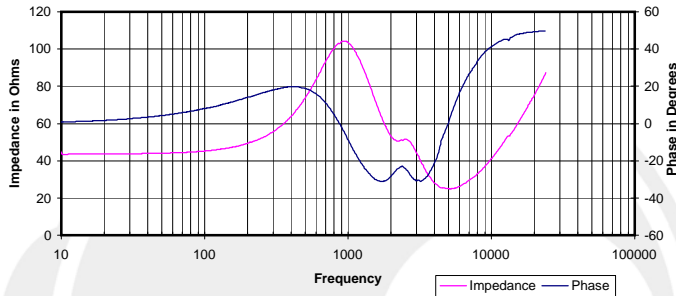
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



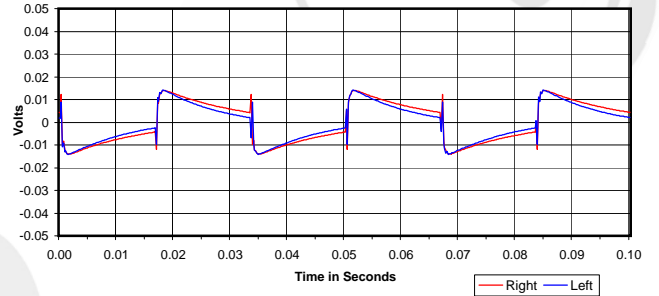
Isolation
Attenuation of External Sound vs. Frequency



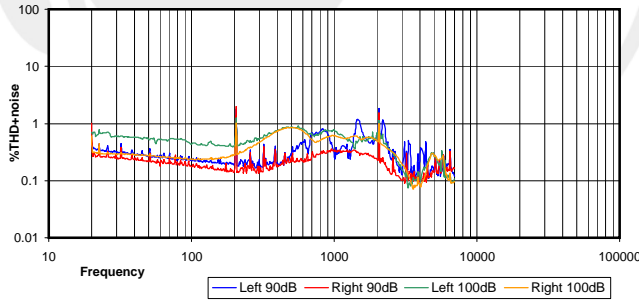
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



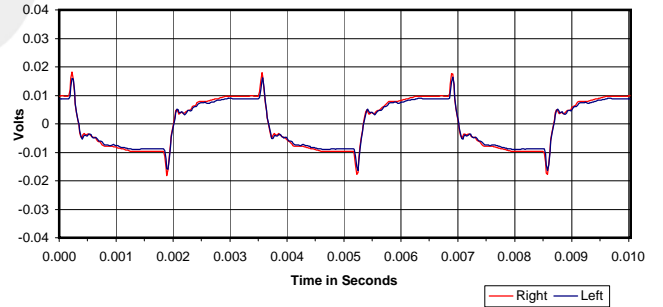
30 Hz Square Wave



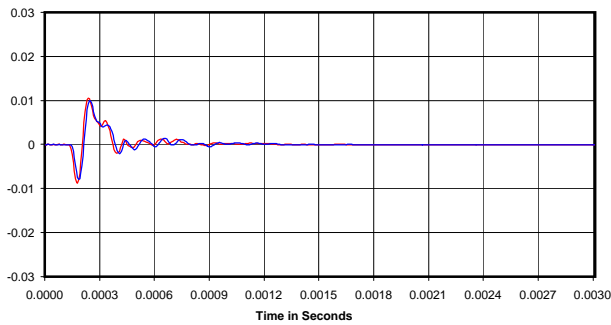
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

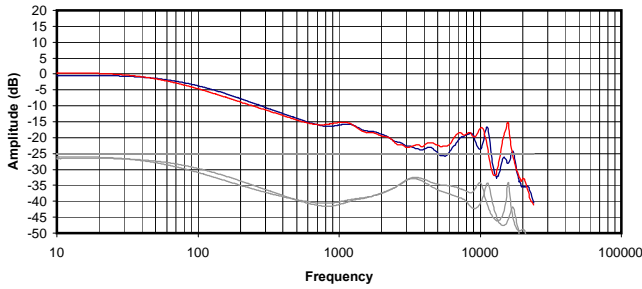


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

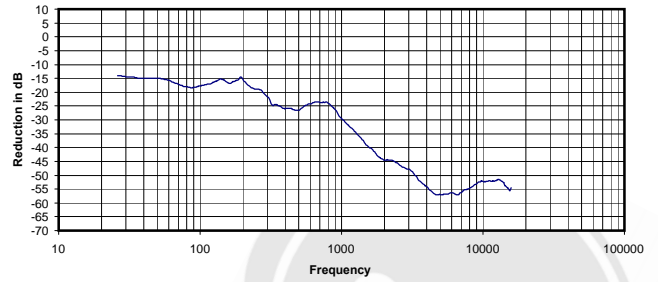
0.027 Vrms
103 Ohms
0.01 mW
-32 dB



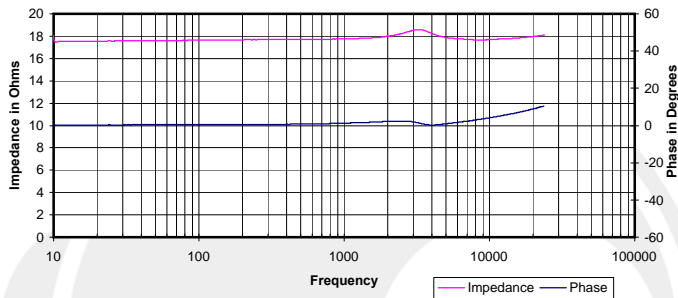
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



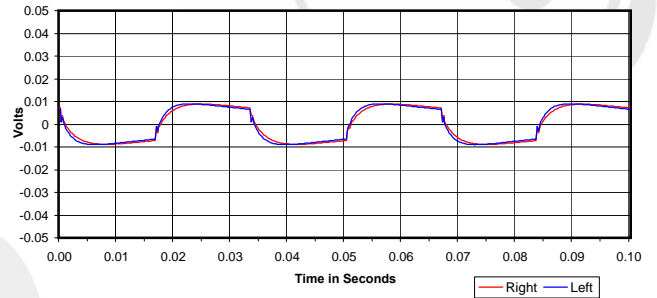
Isolation
Attenuation of External Sound vs. Frequency



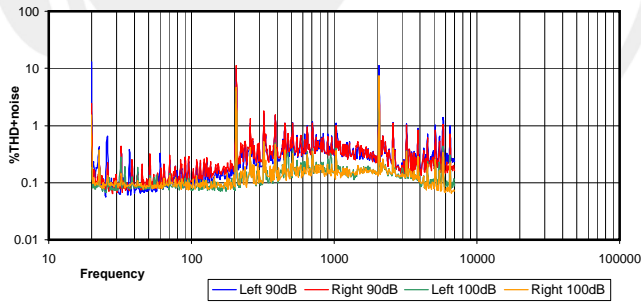
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



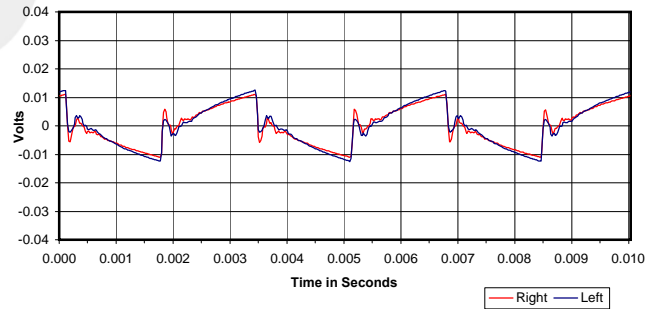
30 Hz Square Wave



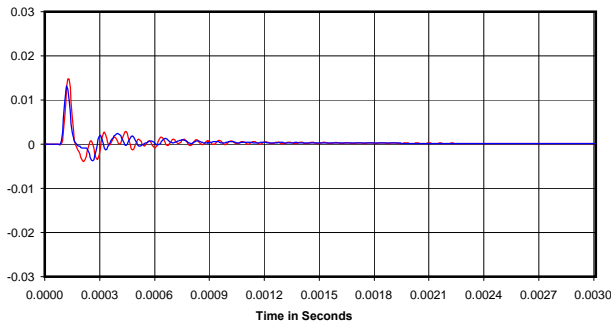
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



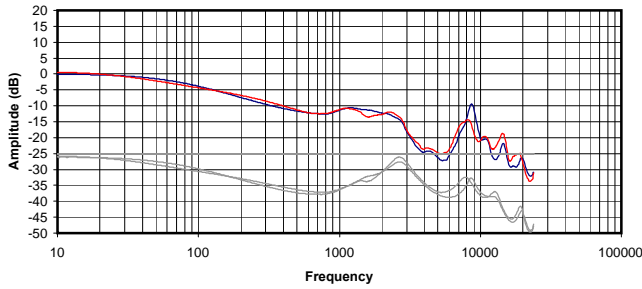
Impulse Response



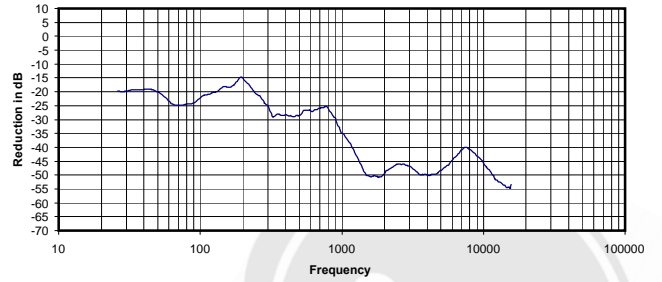
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
18 Ohms
0.08 mW
-32 dB

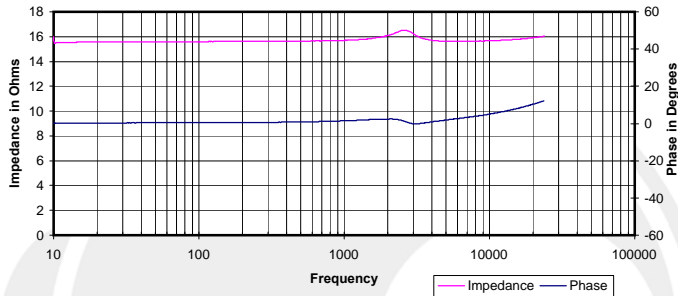
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



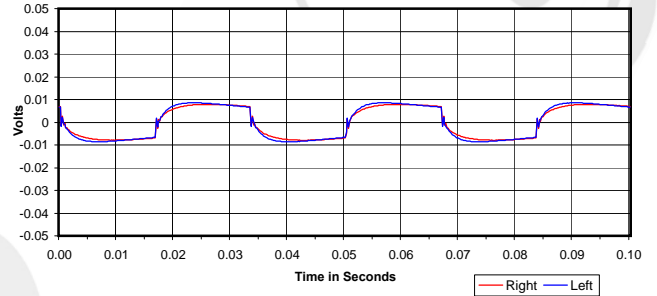
Isolation
Attenuation of External Sound vs. Frequency



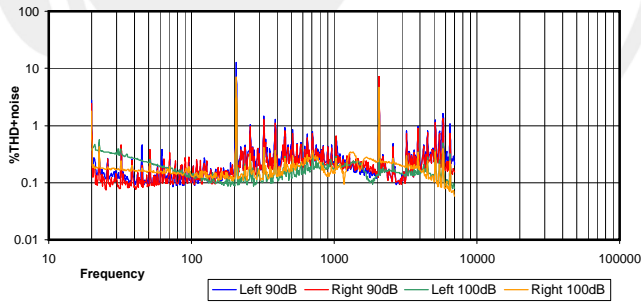
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



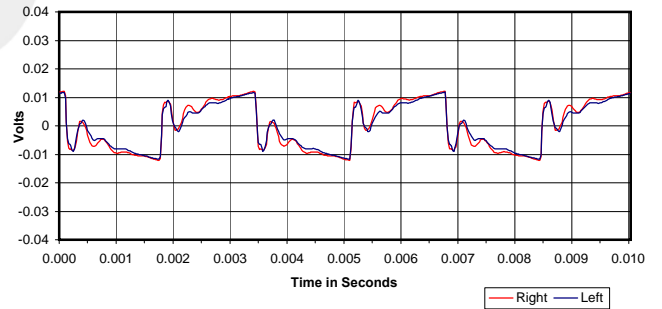
30 Hz Square Wave



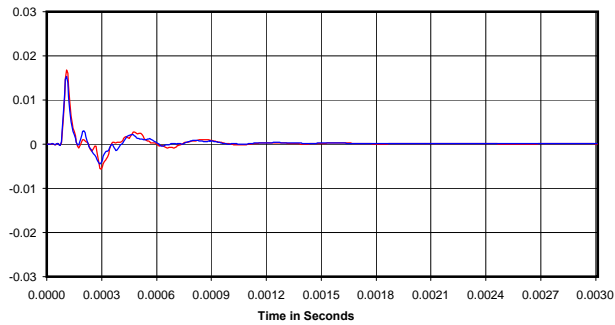
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

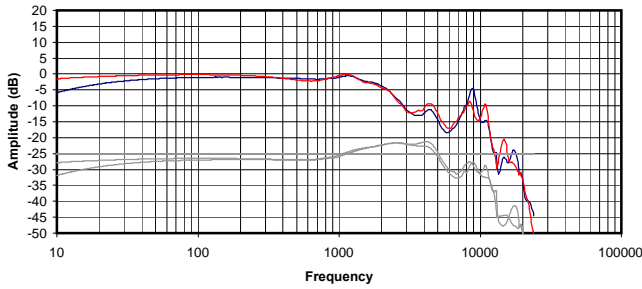


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

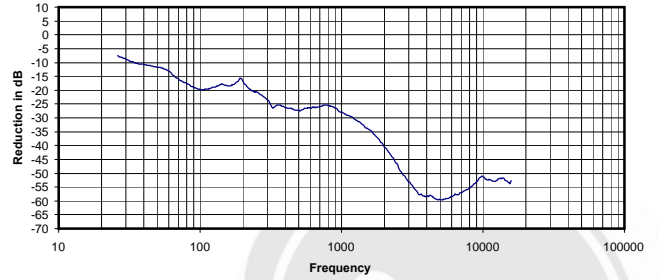
0.041 Vrms
16 Ohms
0.11 mW
-34 dB



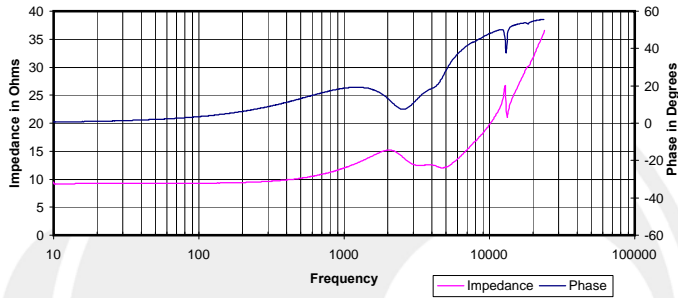
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



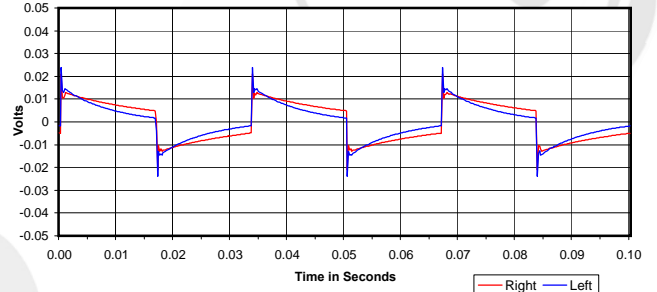
Isolation
Attenuation of External Sound vs. Frequency



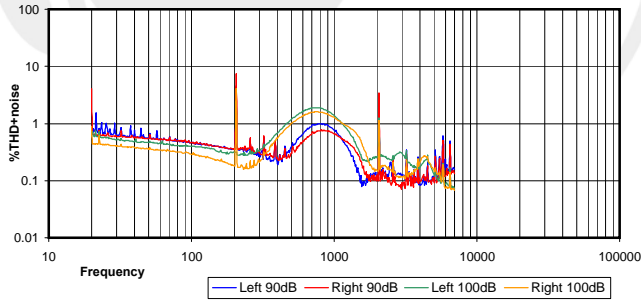
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



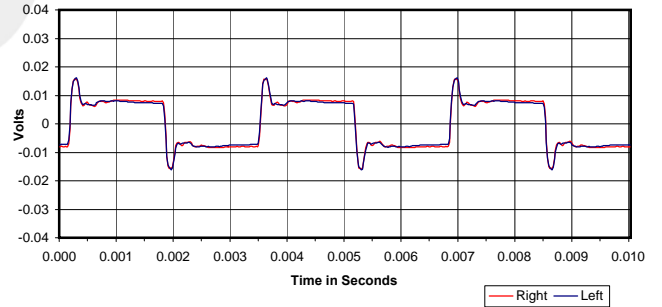
30 Hz Square Wave



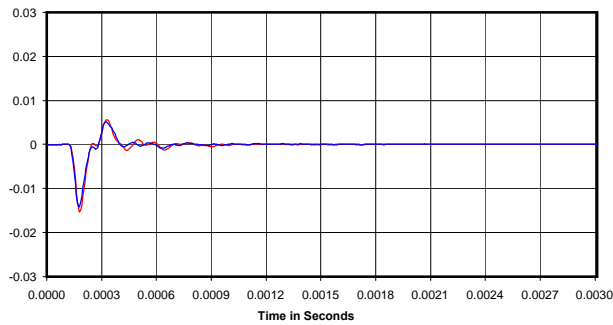
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

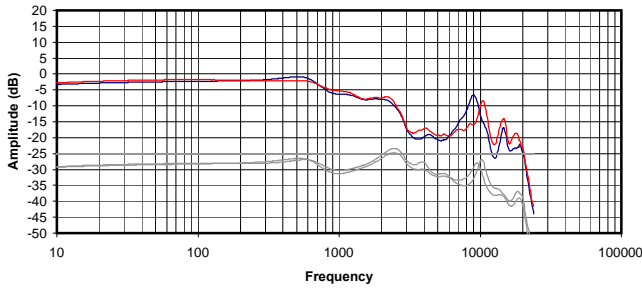


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

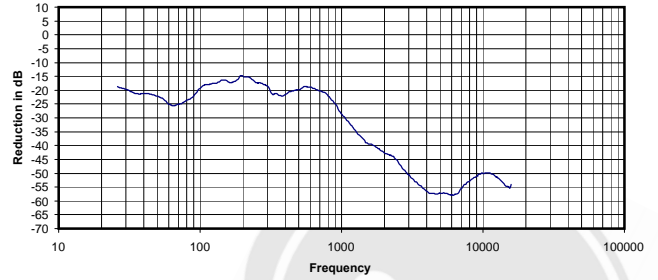
0.010 Vrms
12 Ohms
0.01 mW
-33 dB



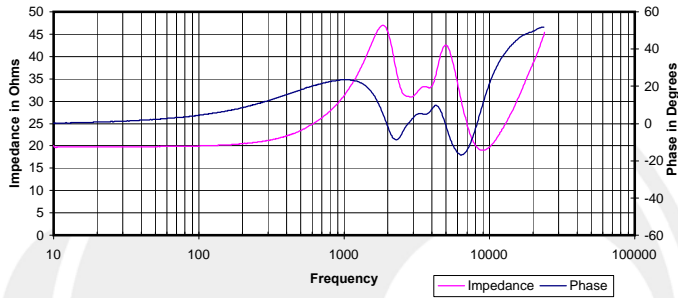
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



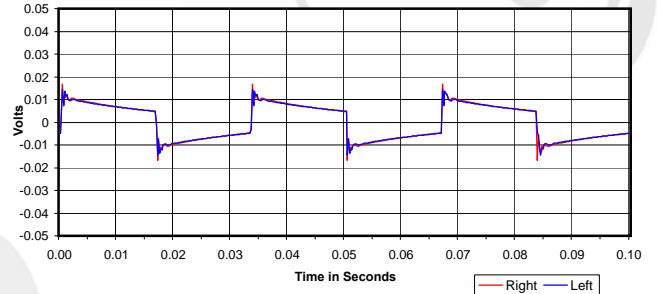
Isolation
Attenuation of External Sound vs. Frequency



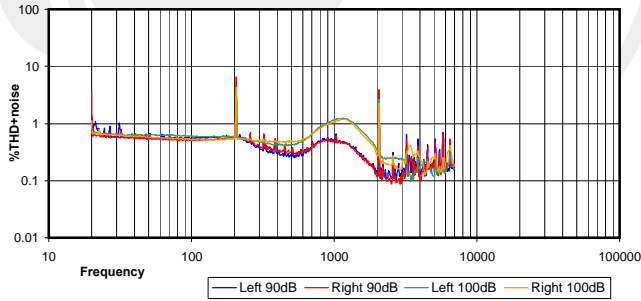
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



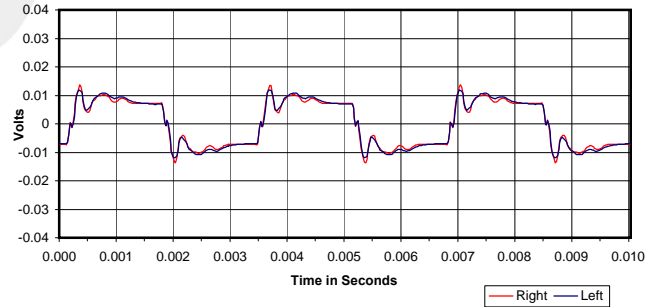
30 Hz Square Wave



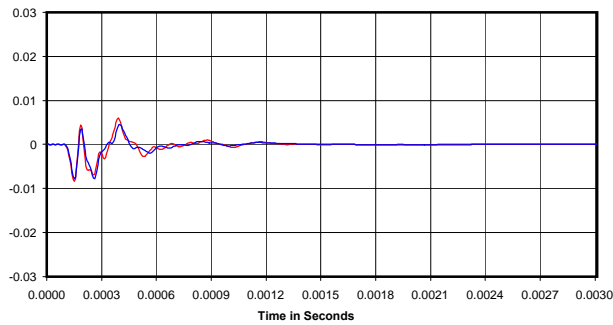
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

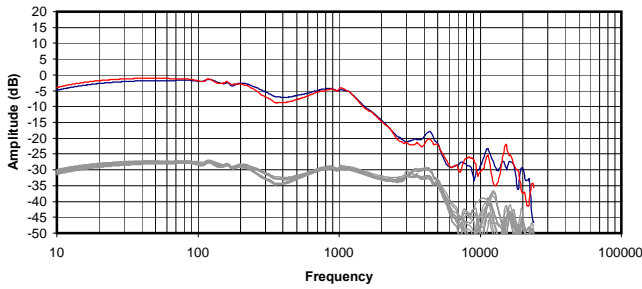


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

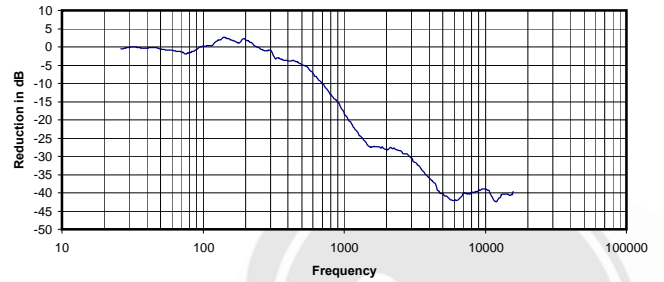
0.022 Vrms
31 Ohms
0.02 mW
-31 dB



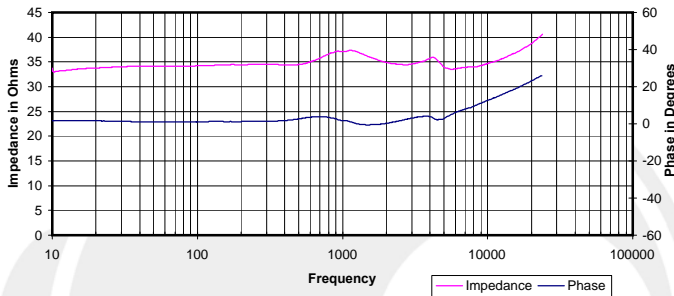
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



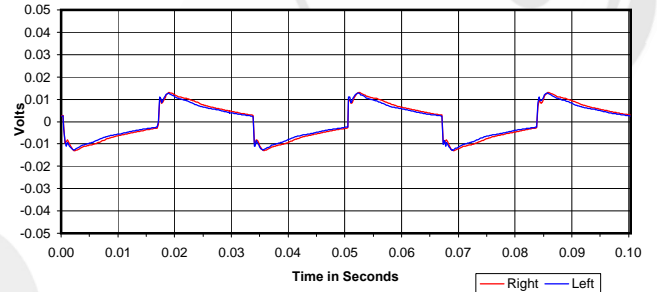
Isolation
 Attenuation of External Sound vs. Frequency



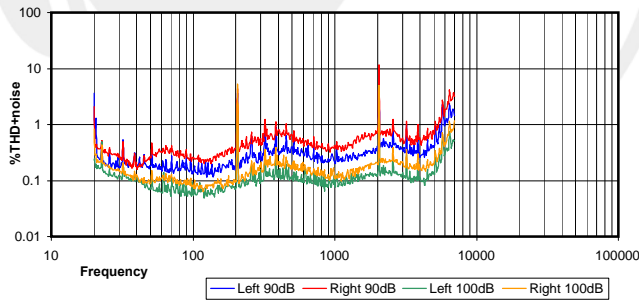
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



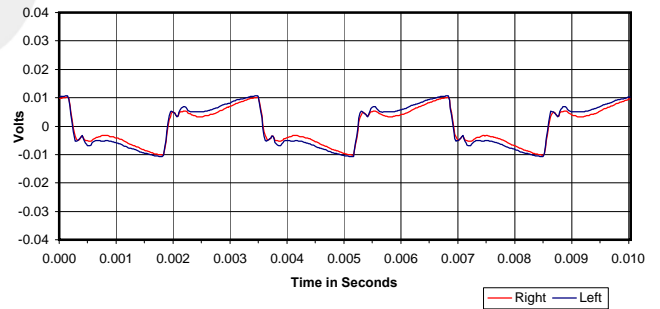
30 Hz Square Wave



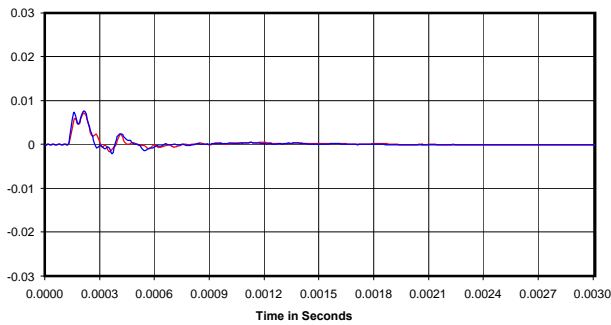
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



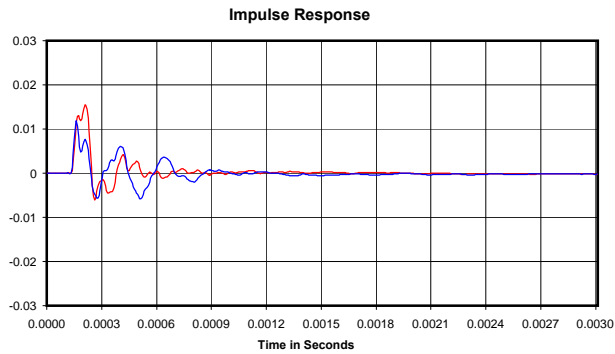
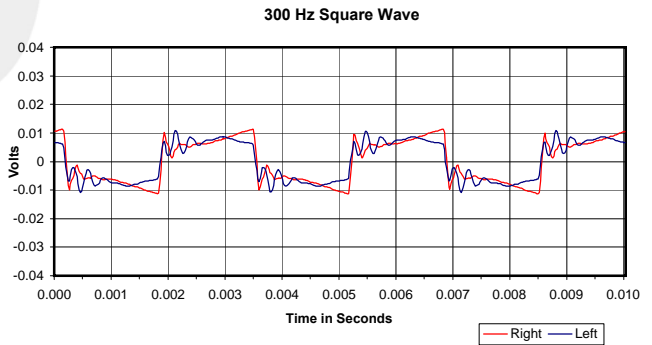
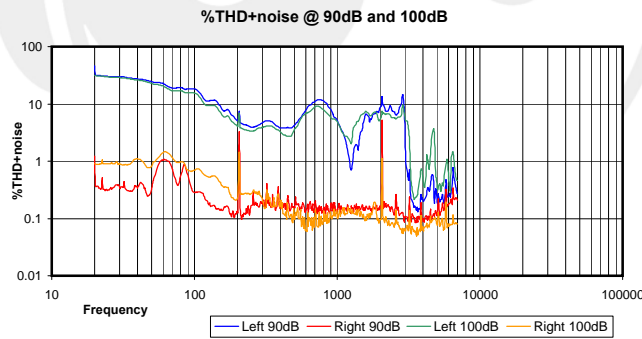
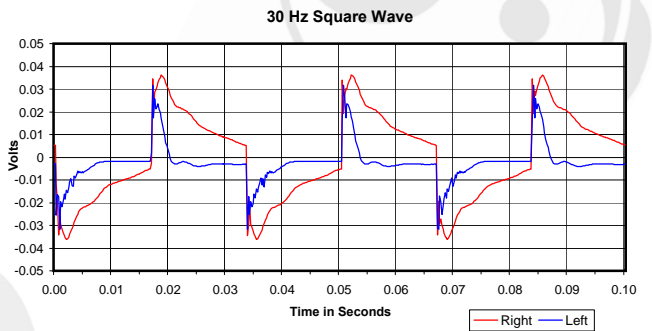
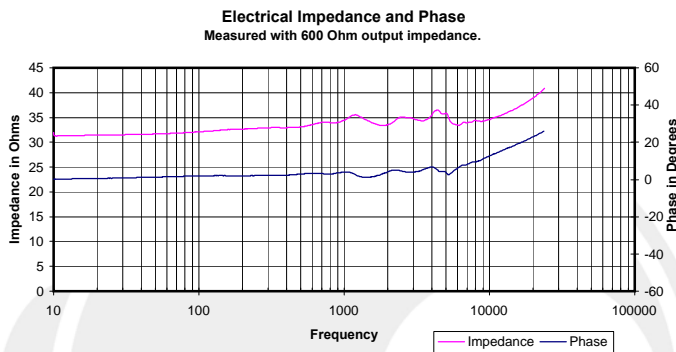
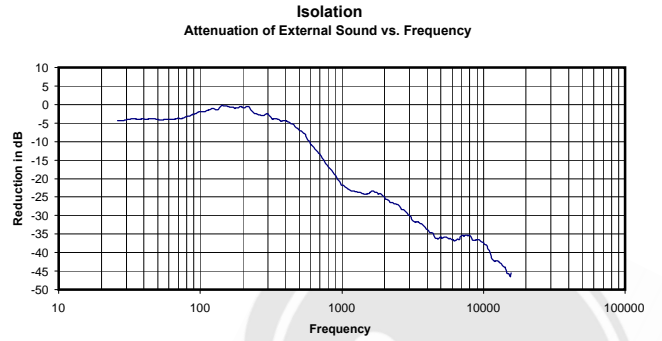
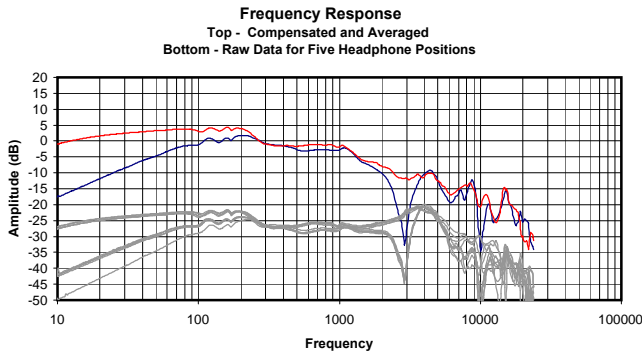
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
 37 Ohms
 0.01 mW
 -15 dB



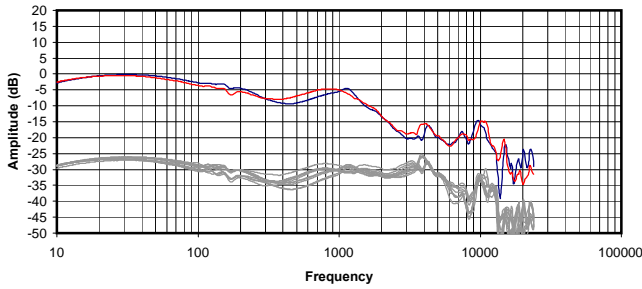


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

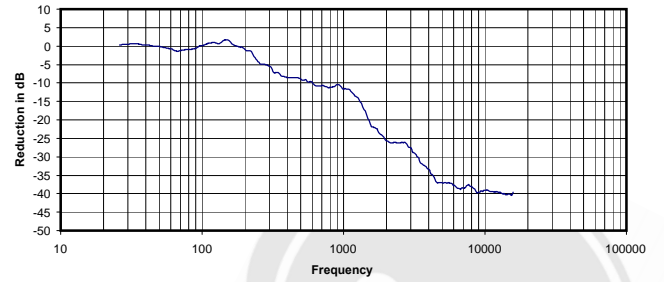
0.043 Vrms
34 Ohms
0.05 mW
-16 dB



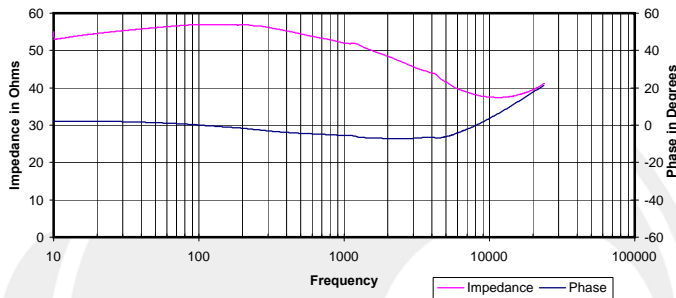
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



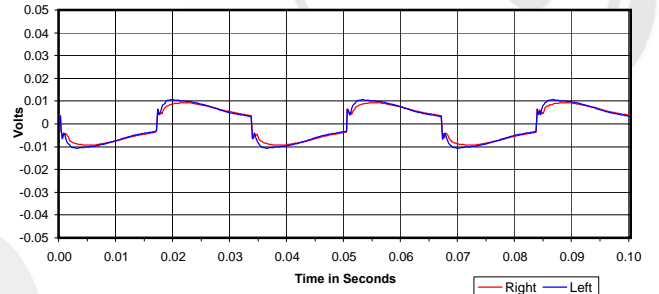
Isolation
 Attenuation of External Sound vs. Frequency



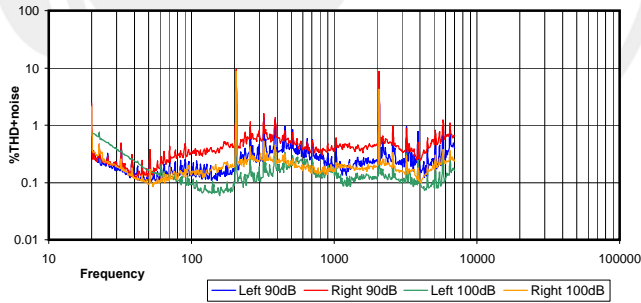
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



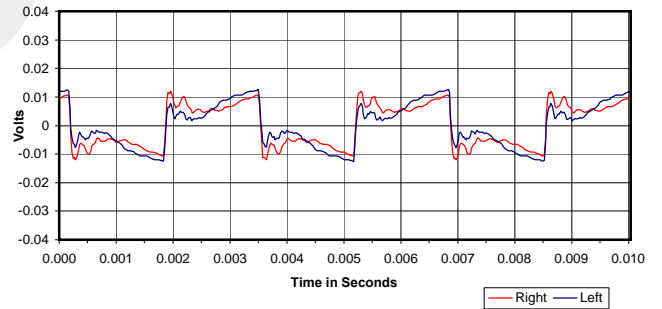
30 Hz Square Wave



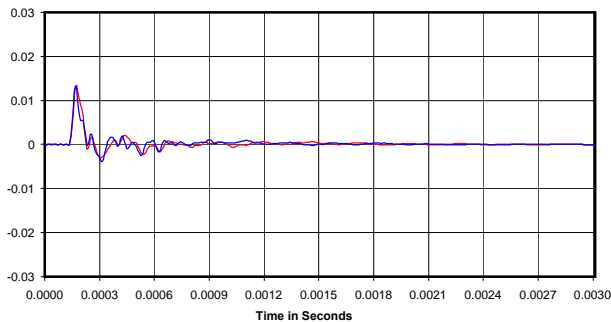
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

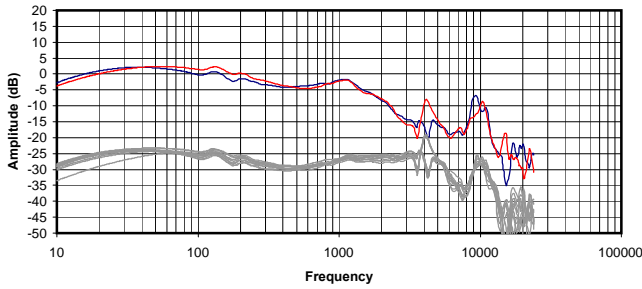


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

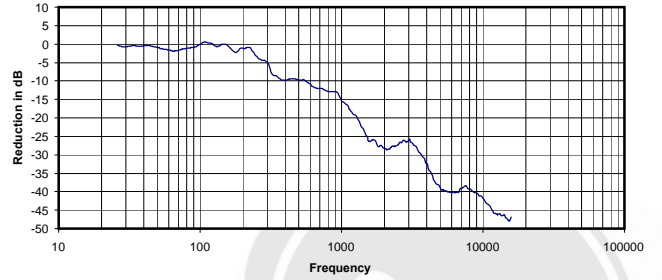
0.053 Vrms
 52 Ohms
 0.05 mW
 -14 dB



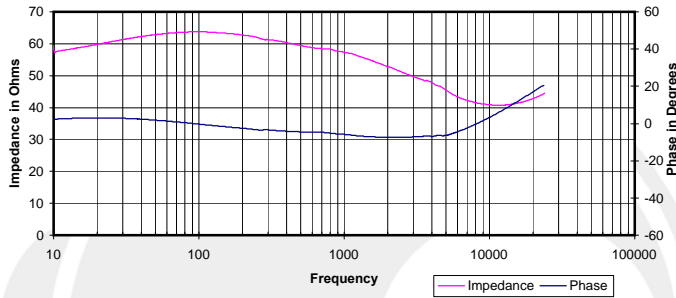
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



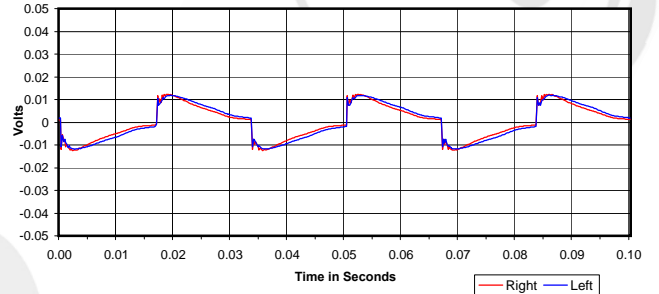
Isolation
 Attenuation of External Sound vs. Frequency



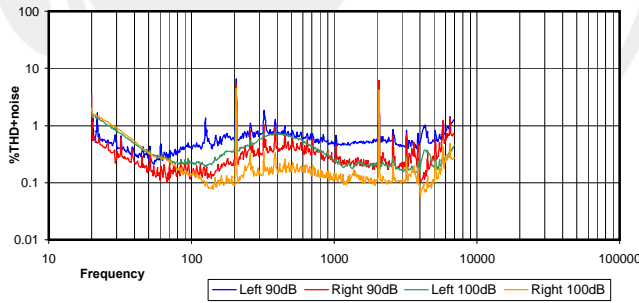
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



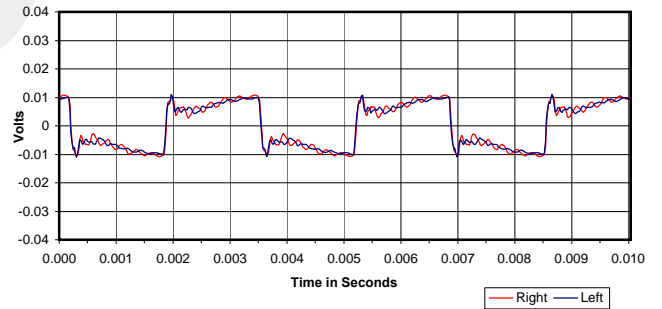
30 Hz Square Wave



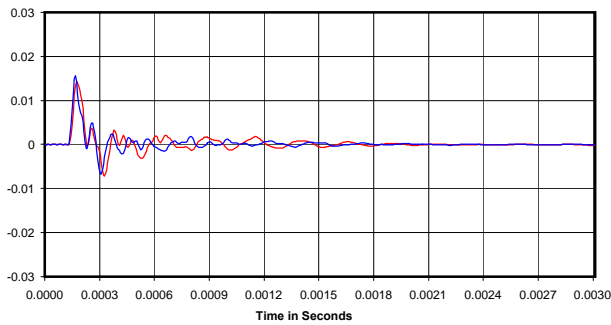
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

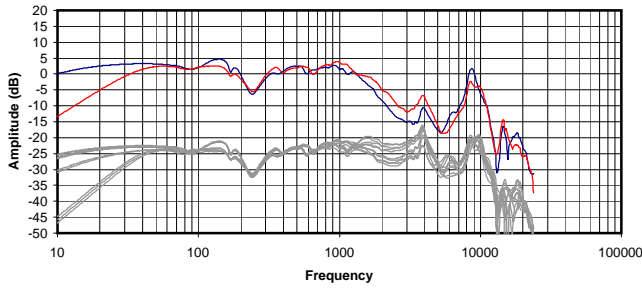


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

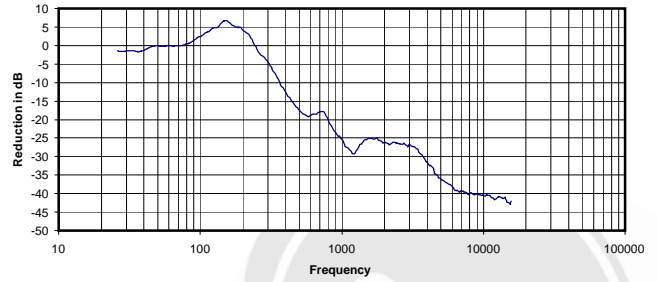
0.052 Vrms
 57 Ohms
 0.05 mW
 -16 dB



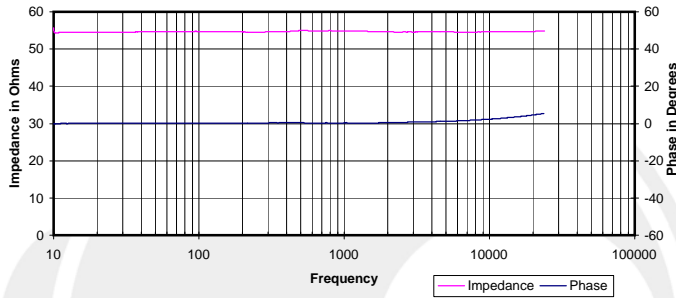
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



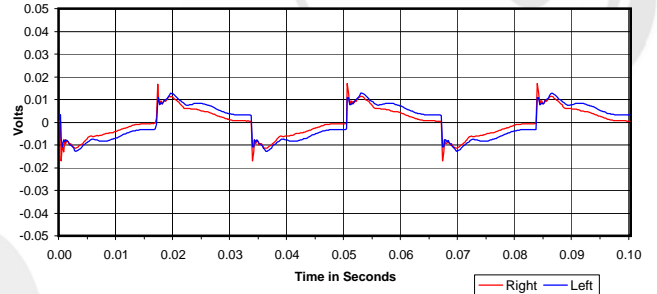
Isolation
 Attenuation of External Sound vs. Frequency



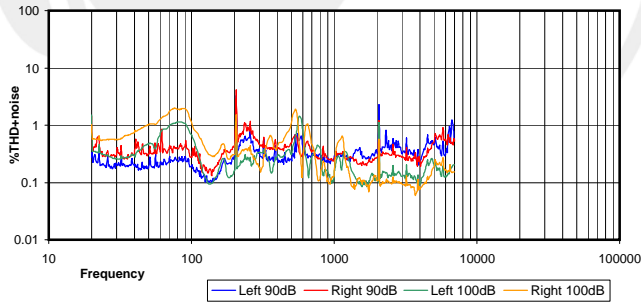
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



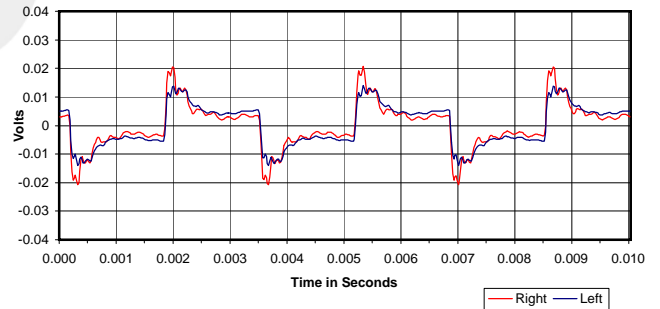
30 Hz Square Wave



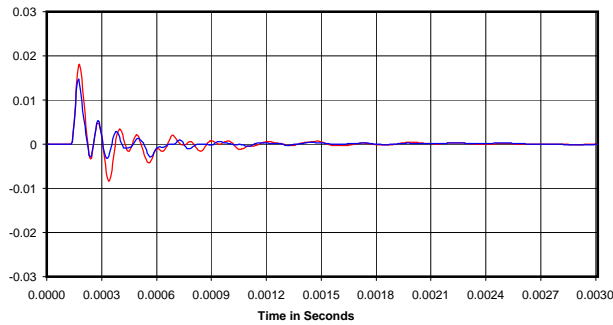
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

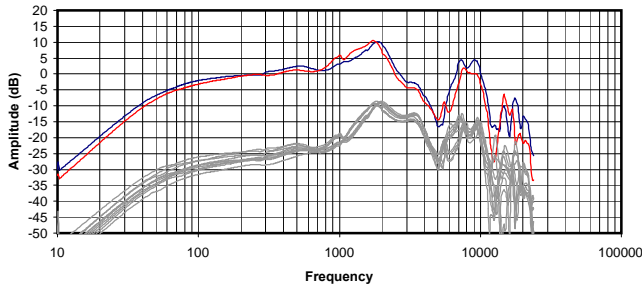


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

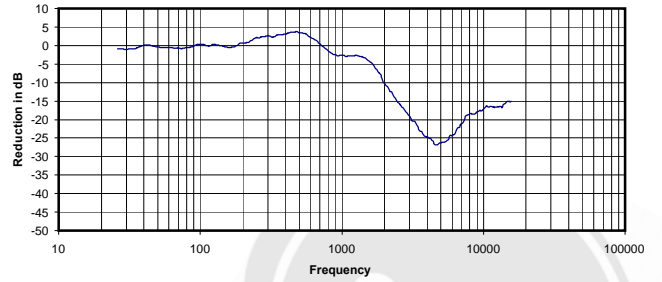
0.128 Vrms
 55 Ohms
 0.30 mW
 -16 dB



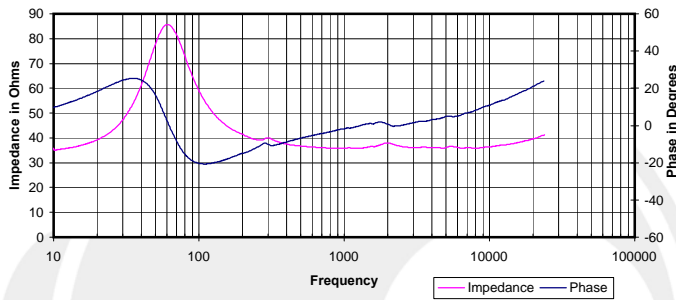
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



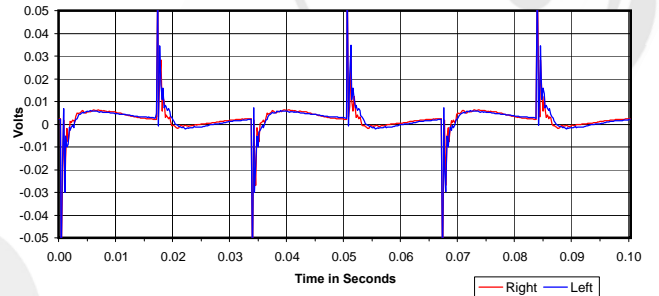
Isolation
 Attenuation of External Sound vs. Frequency



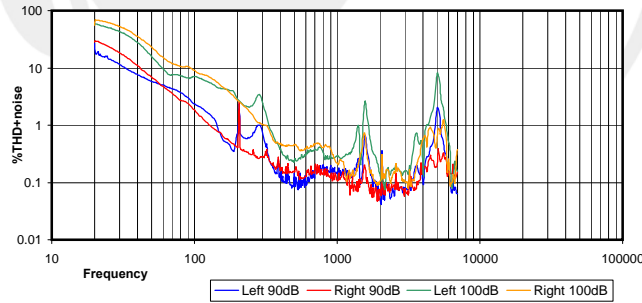
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



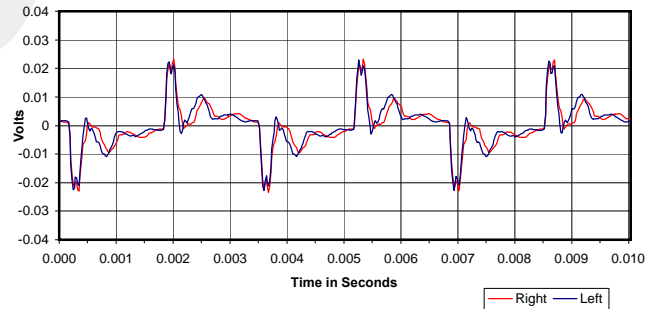
30 Hz Square Wave



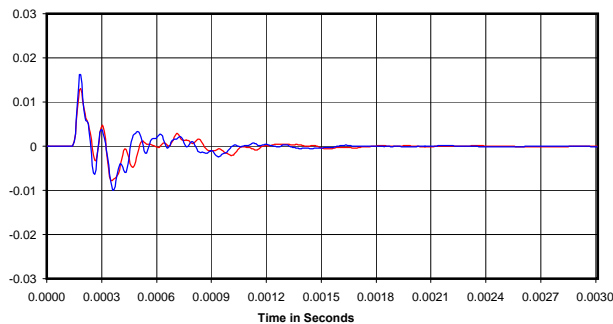
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

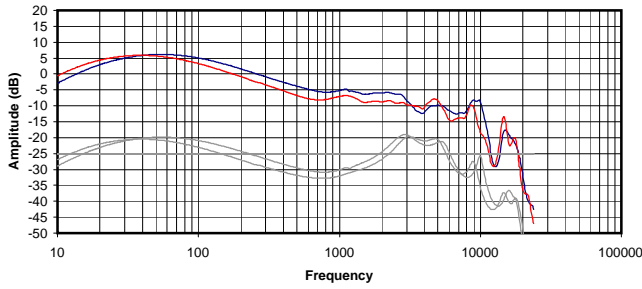


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

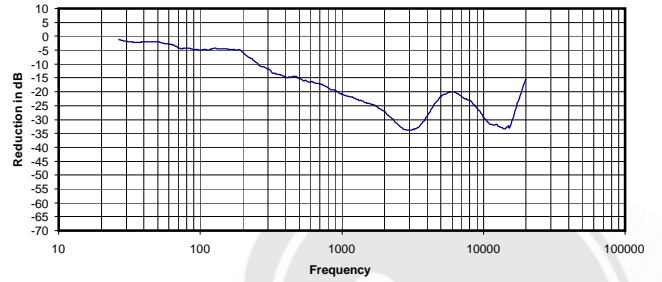
0.047 Vrms
 36 Ohms
 0.06 mW
 -6 dB



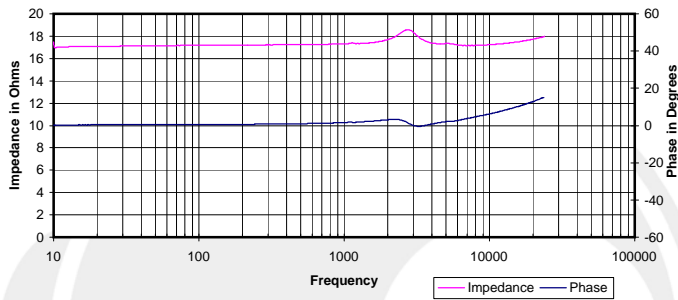
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



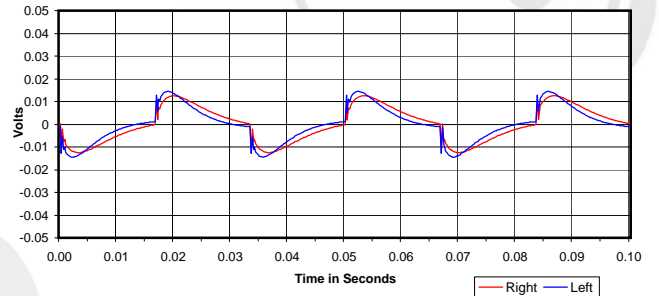
Isolation
Attenuation of External Sound vs. Frequency



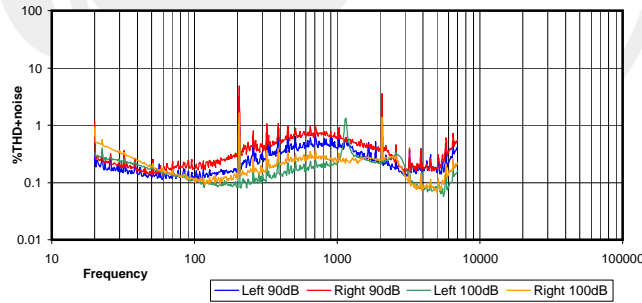
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



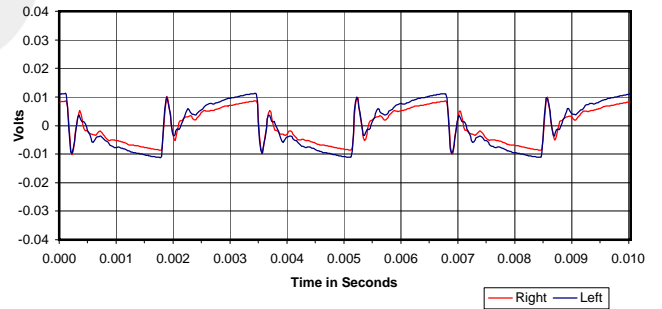
30 Hz Square Wave



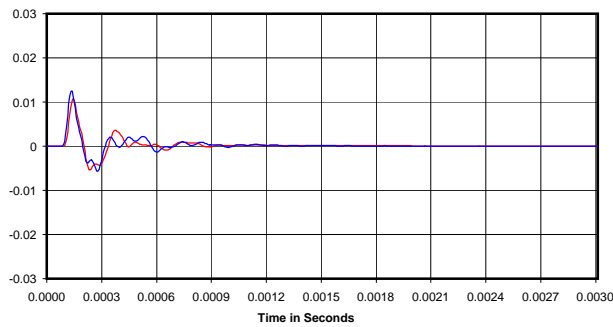
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



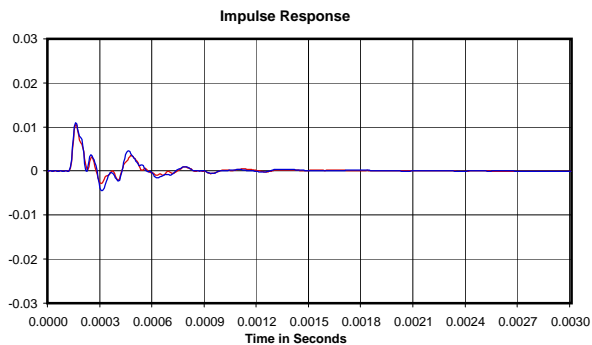
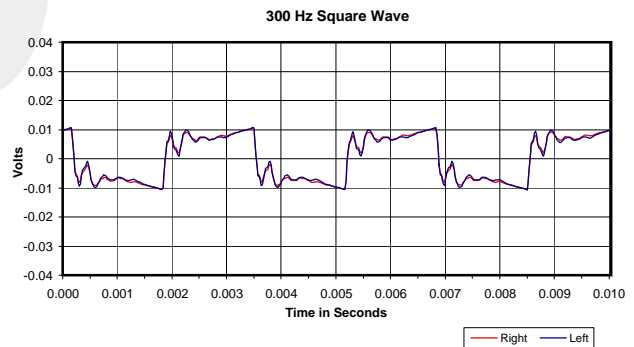
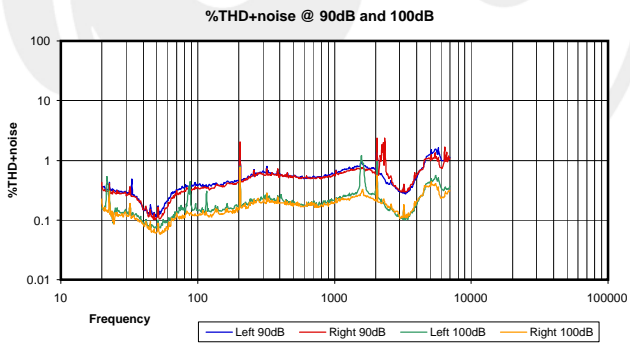
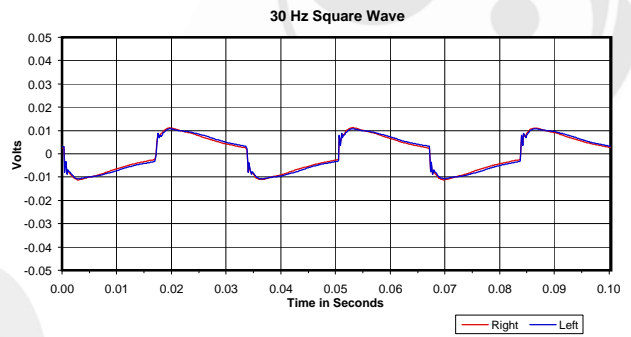
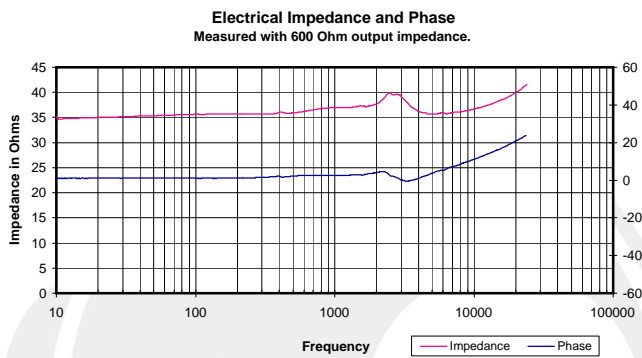
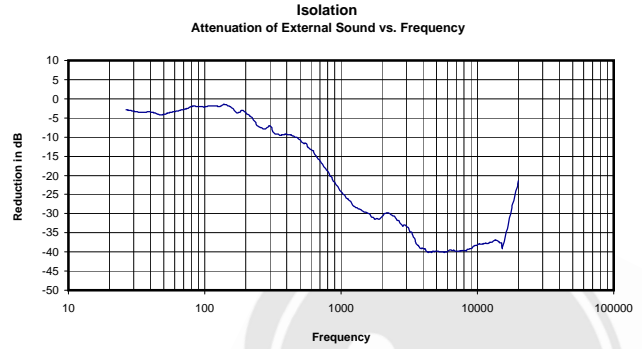
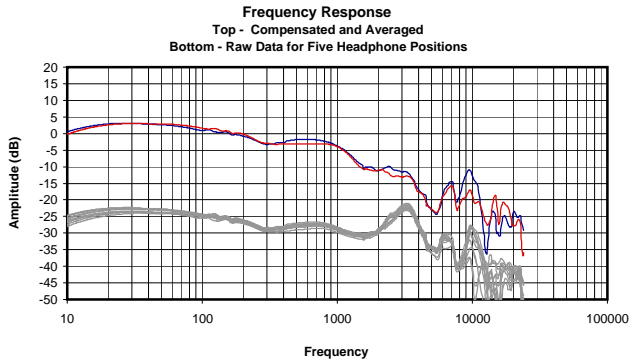
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
17 Ohms
0.08 mW
-19 dB



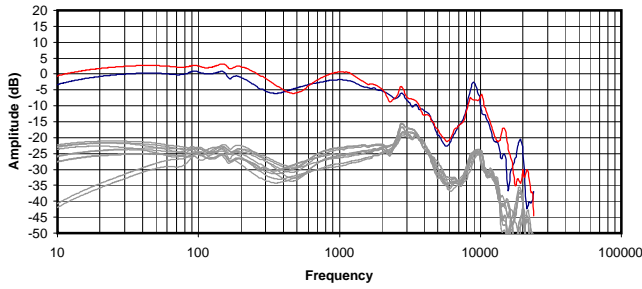


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

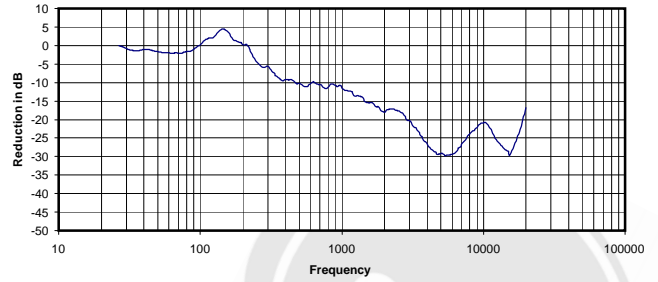
0.034 Vrms
37 Ohms
0.03 mW
-22 dB



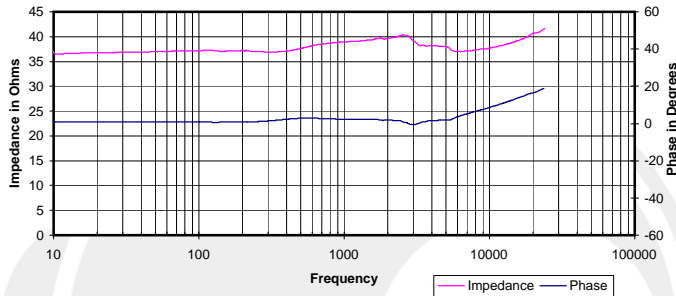
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



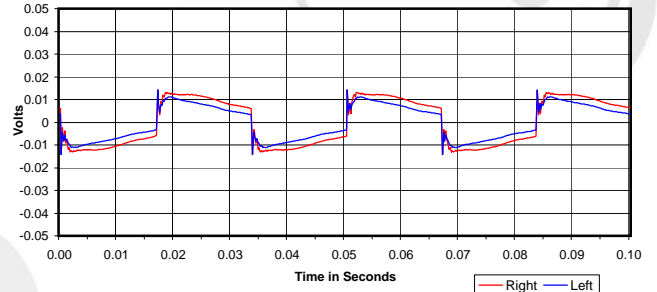
Isolation
 Attenuation of External Sound vs. Frequency



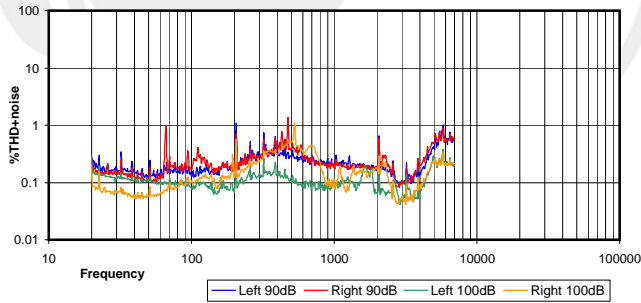
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



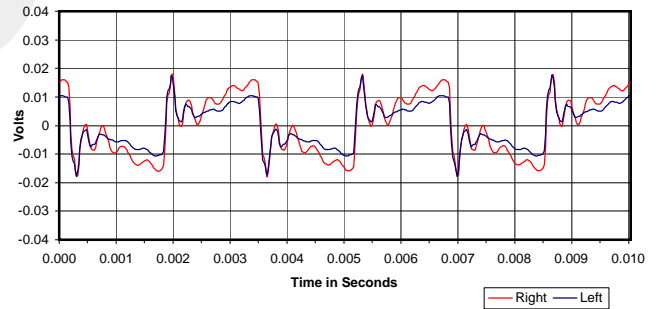
30 Hz Square Wave



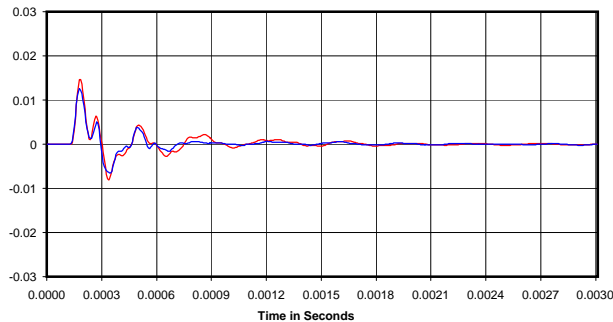
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

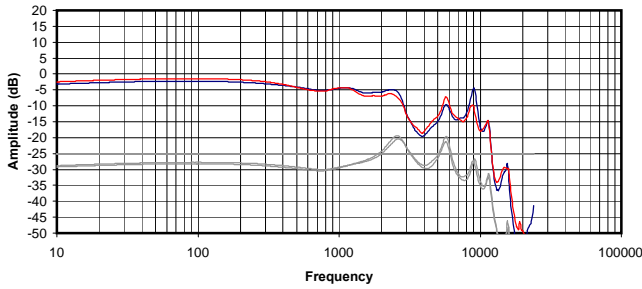


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

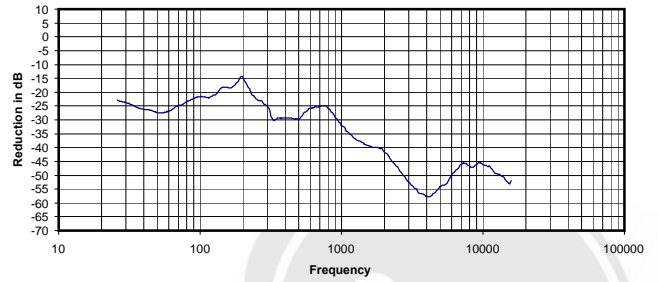
0.028 Vrms
 39 Ohms
 0.02 mW
 -13 dB



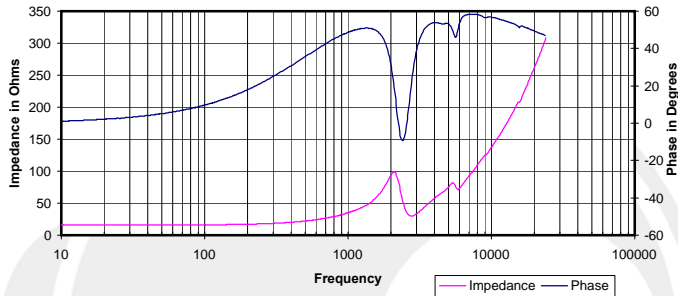
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



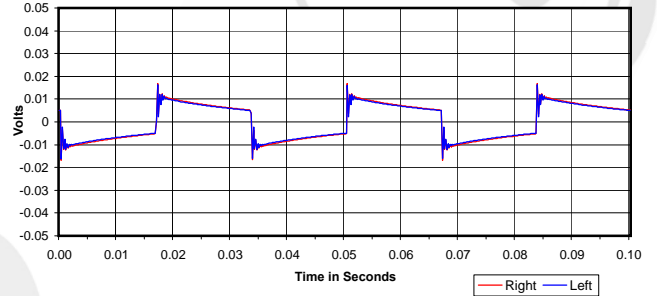
Isolation
Attenuation of External Sound vs. Frequency



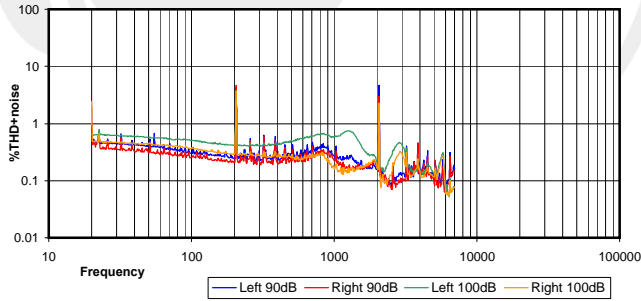
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



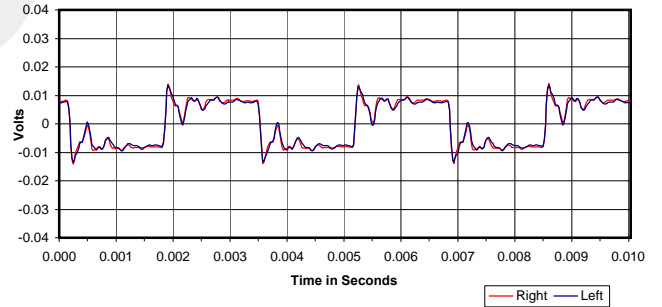
30 Hz Square Wave



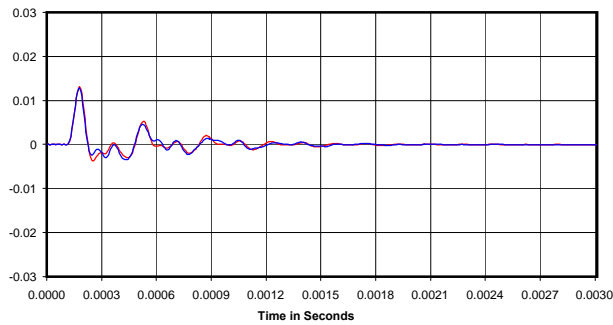
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

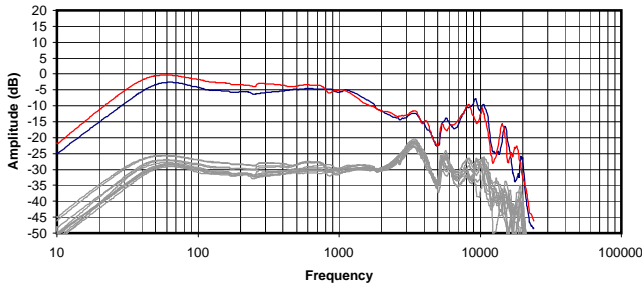


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.017 Vrms
35 Ohms
0.01 mW
-34 dB

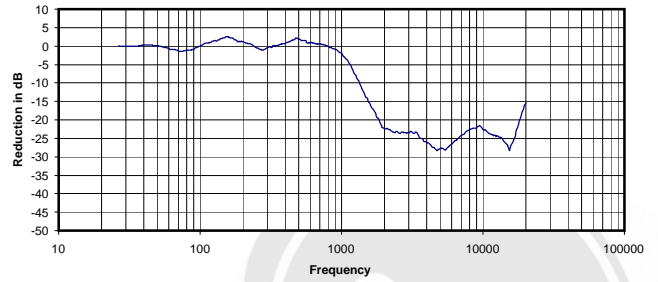


Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions

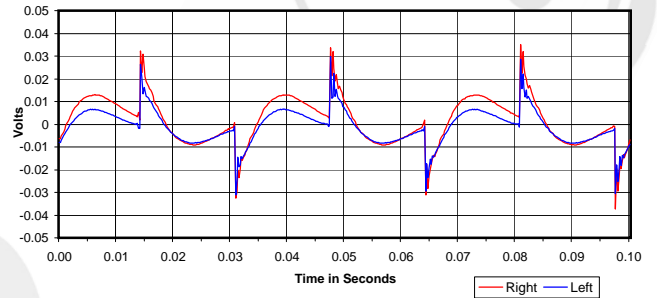


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

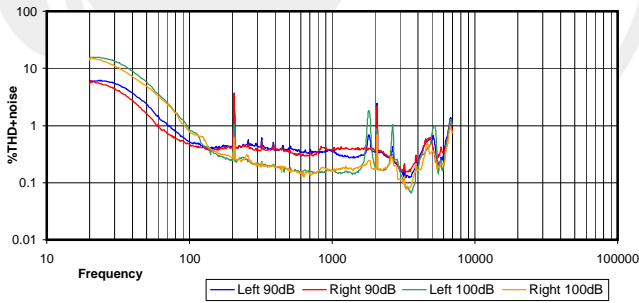
Isolation
Attenuation of External Sound vs. Frequency



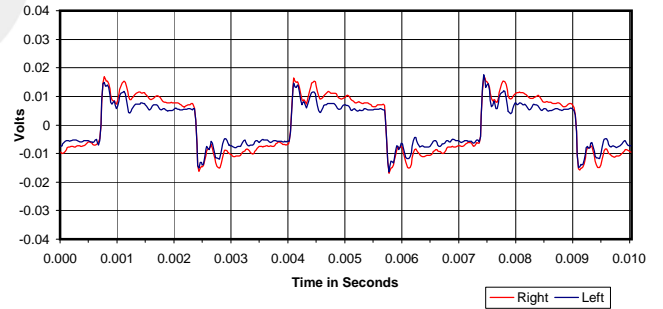
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

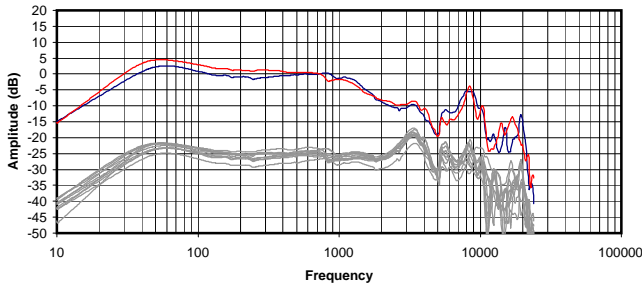


Broadband Isolation in dB (100Hz to 10kHz):

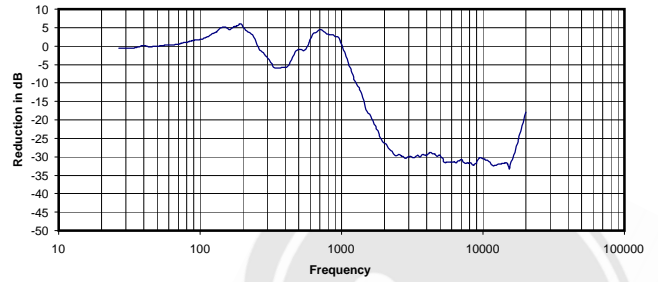
-10 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

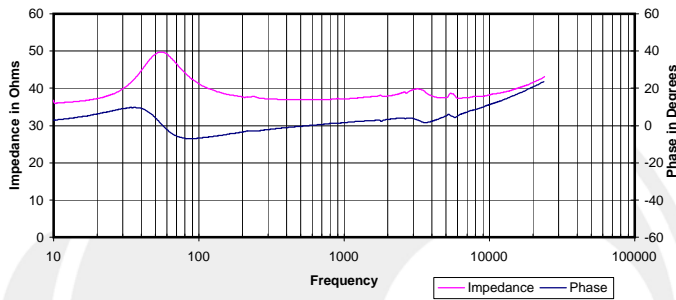
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



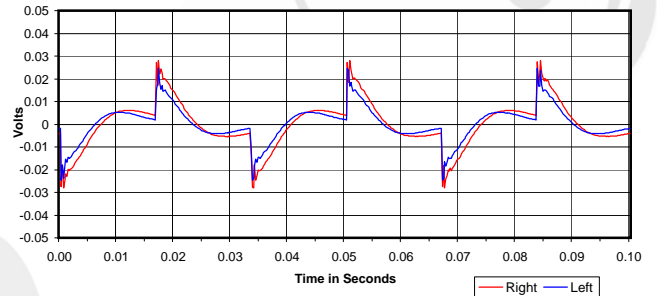
Isolation
 Attenuation of External Sound vs. Frequency



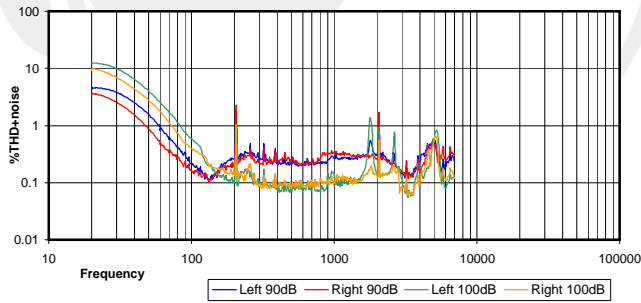
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



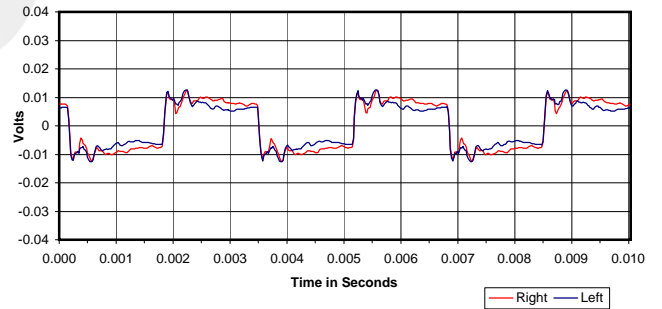
30 Hz Square Wave



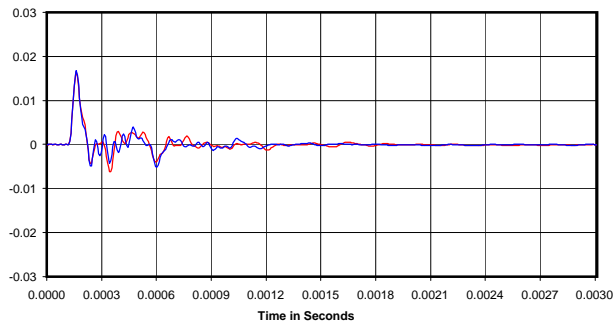
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

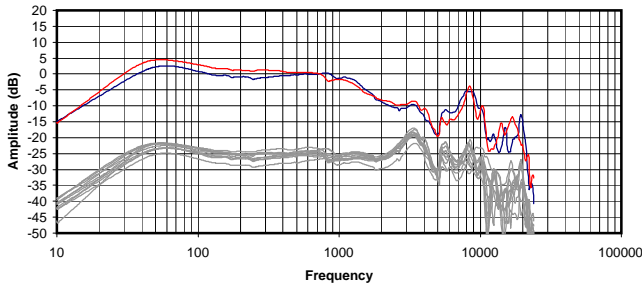


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

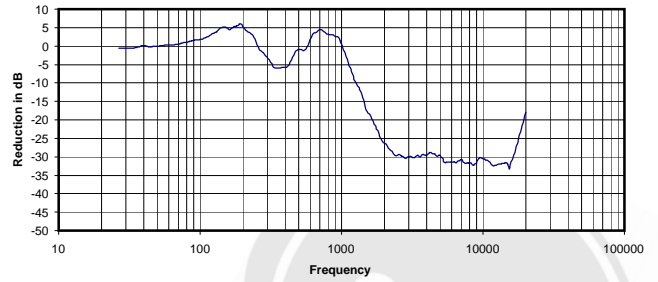
0.031 Vrms
 37 Ohms
 0.03 mW
 -12 dB



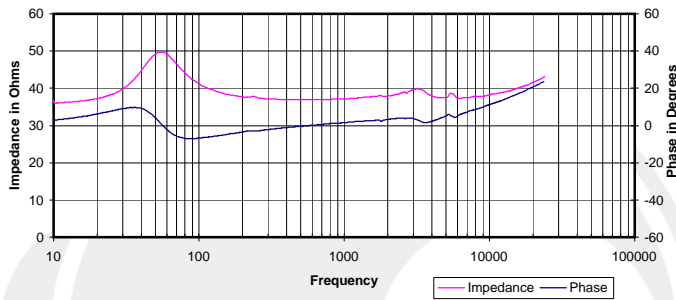
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



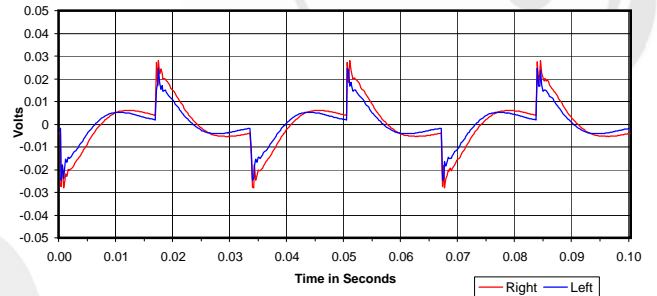
Isolation
 Attenuation of External Sound vs. Frequency



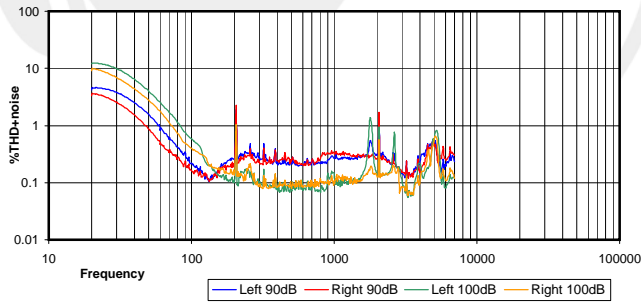
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



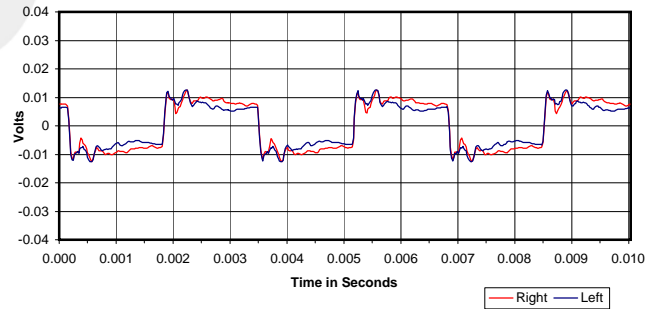
30 Hz Square Wave



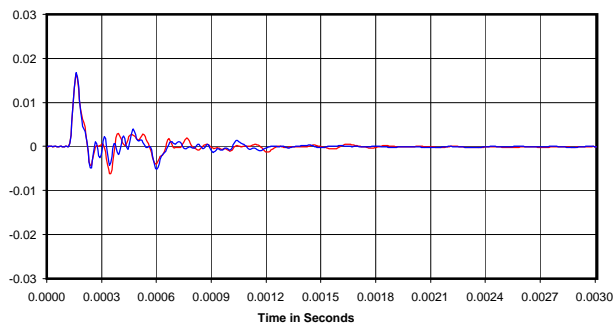
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

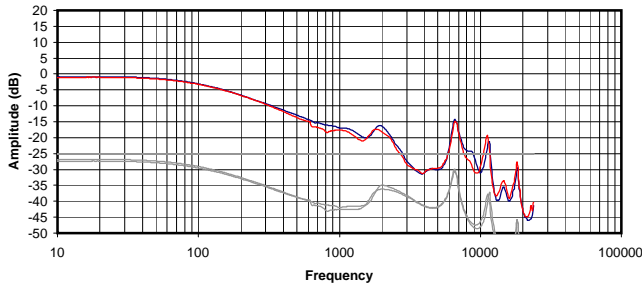


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

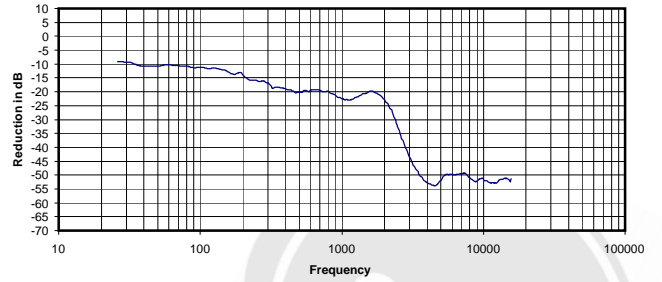
0.031 Vrms
 37 Ohms
 0.03 mW
 -12 dB



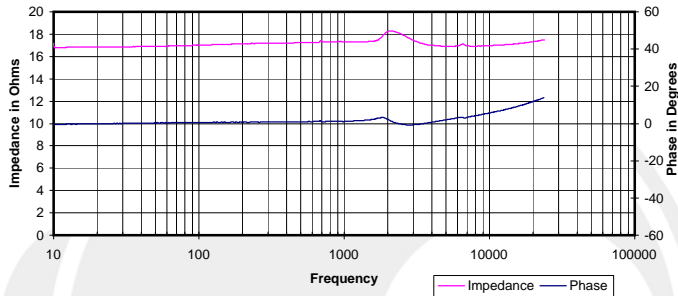
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



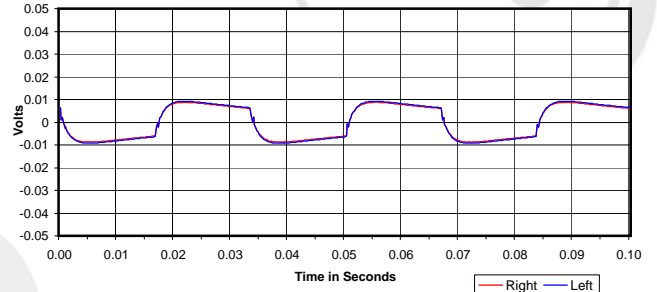
Isolation
Attenuation of External Sound vs. Frequency



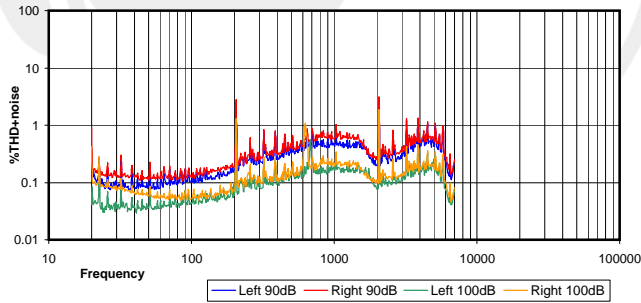
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



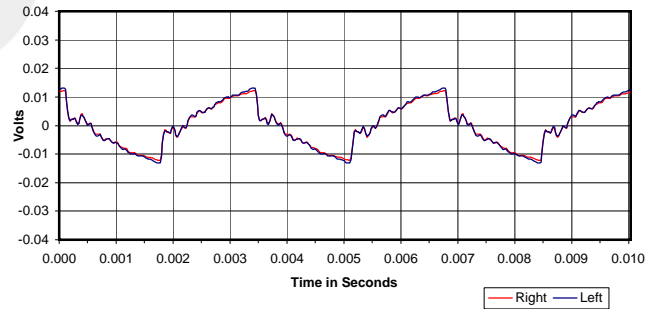
30 Hz Square Wave



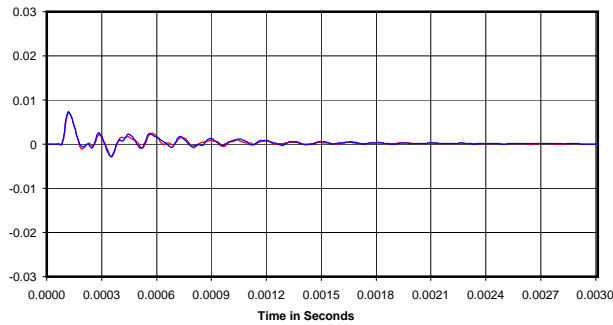
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



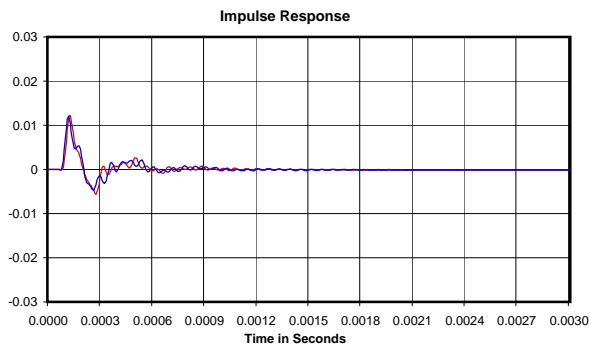
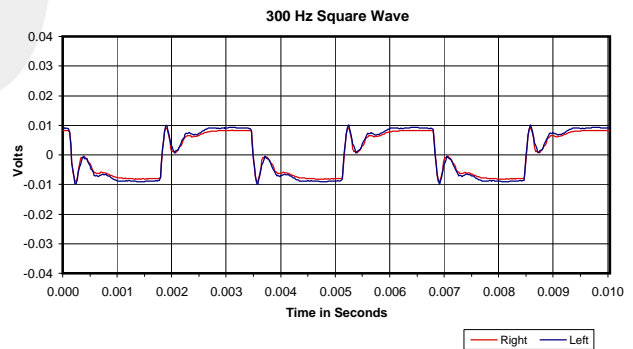
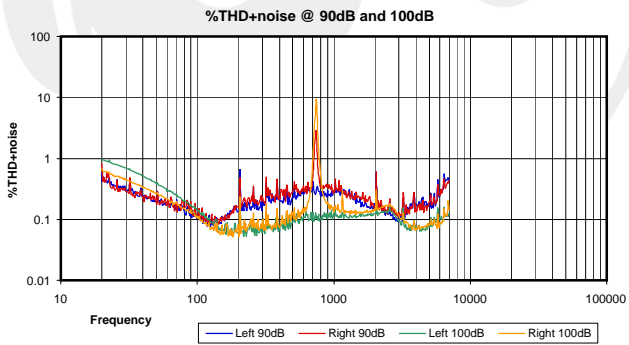
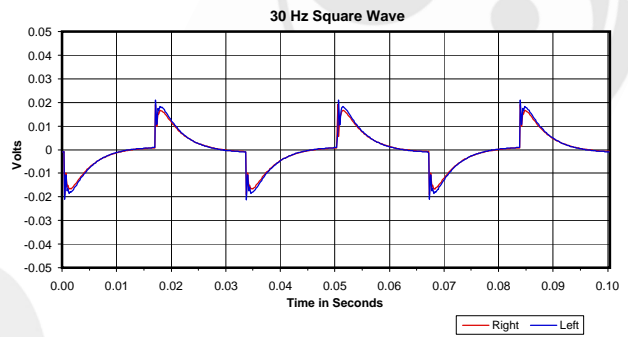
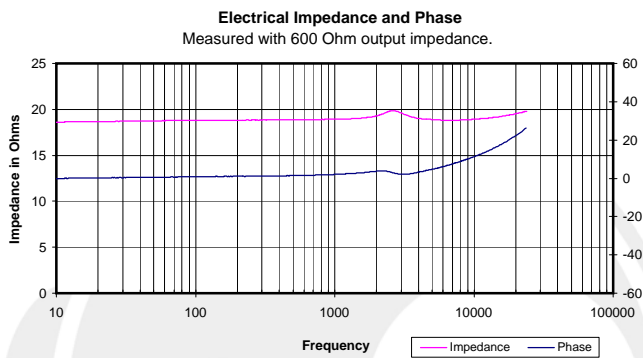
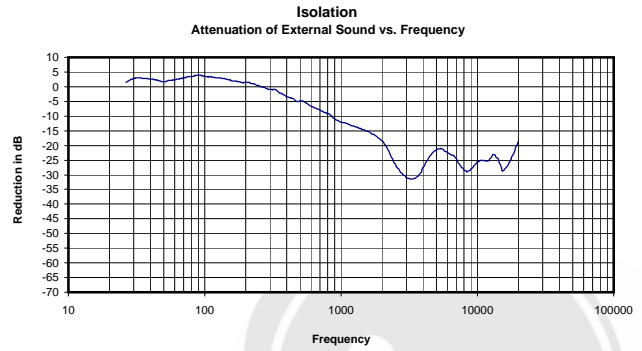
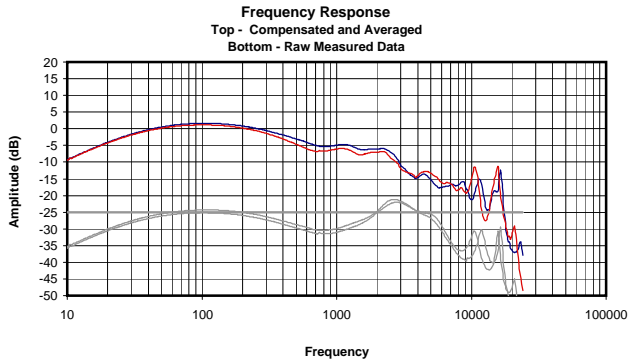
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.021 Vrms
17 Ohms
0.03 mW
-25 dB

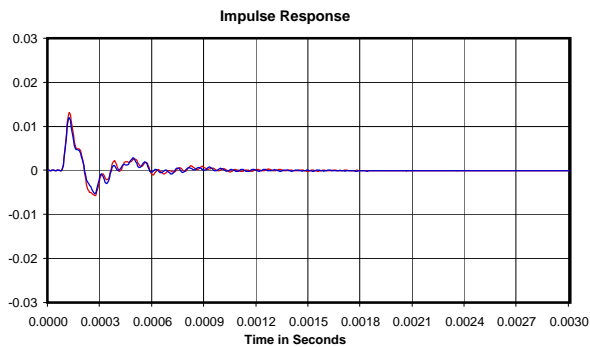
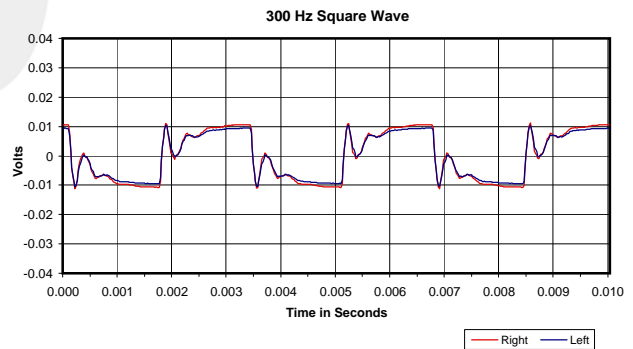
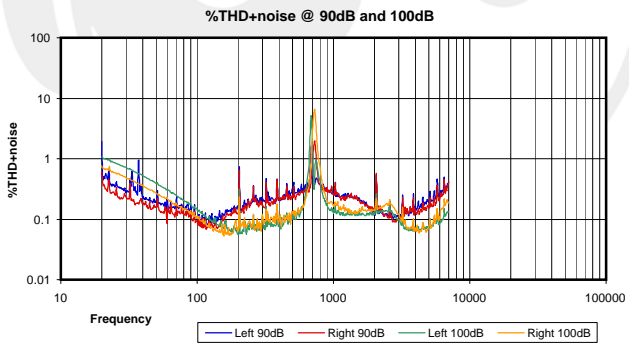
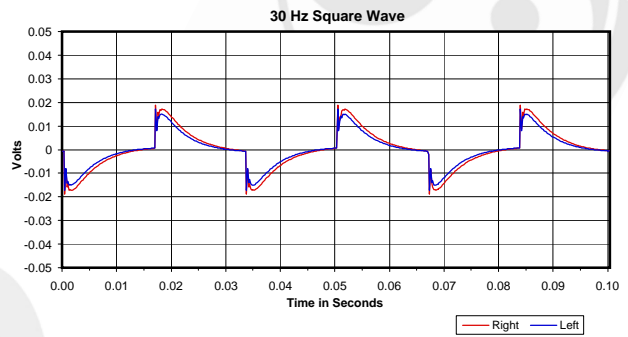
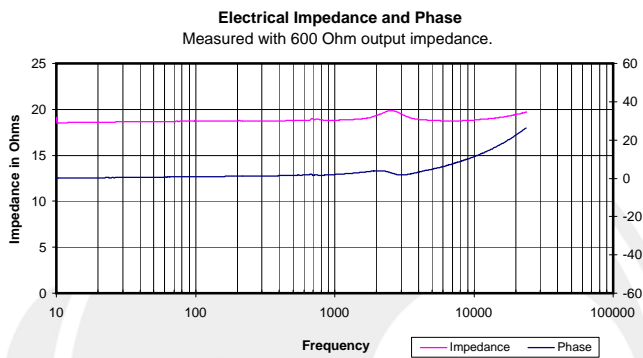
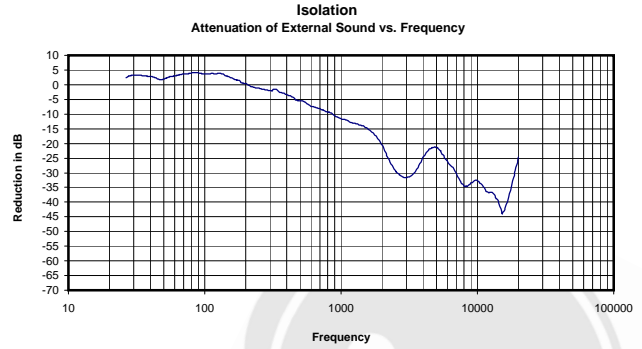
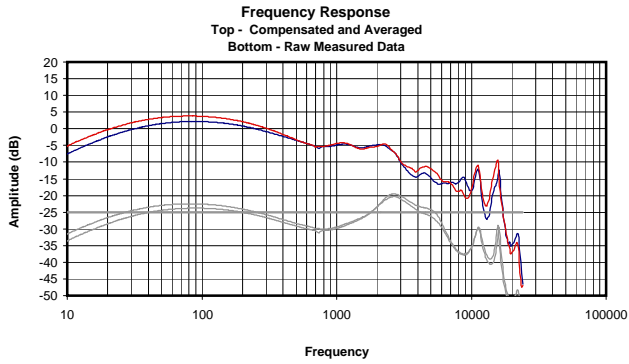




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.034 Vrms
19 Ohms
0.06 mW
-13 dBr



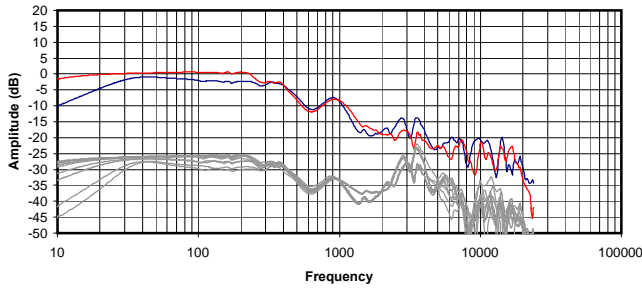


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

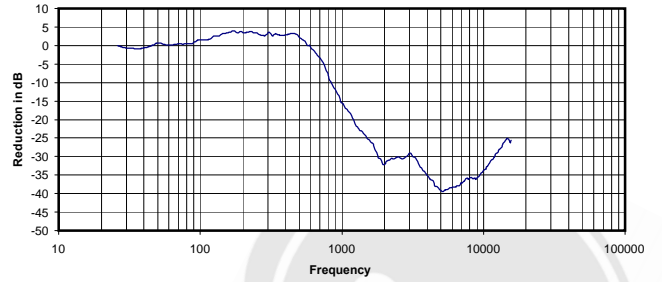
0.000 Vrms
19 Ohms
0.00 mW
-13 dBr



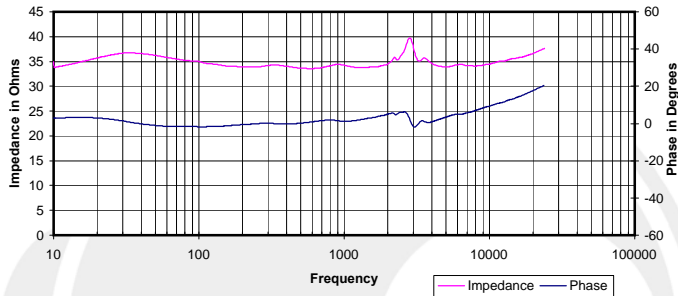
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



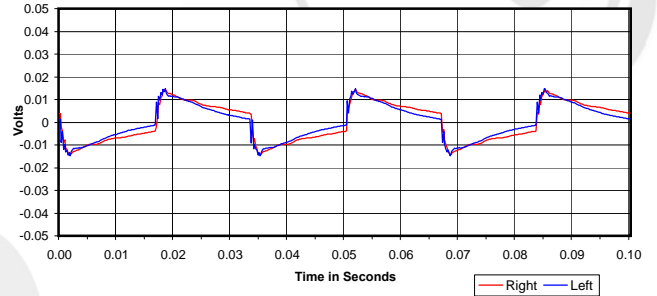
Isolation
Attenuation of External Sound vs. Frequency



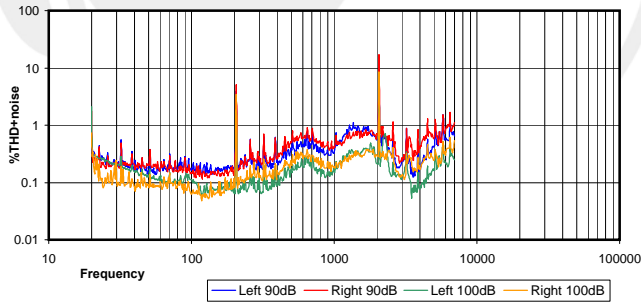
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



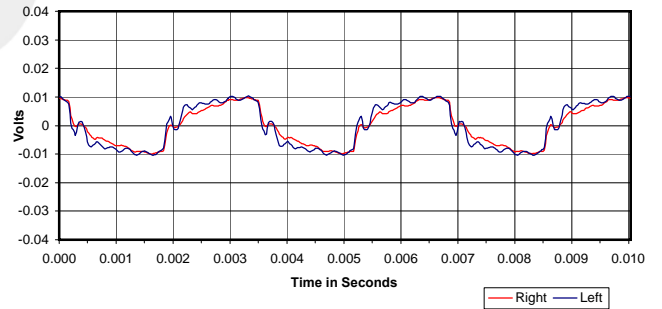
30 Hz Square Wave



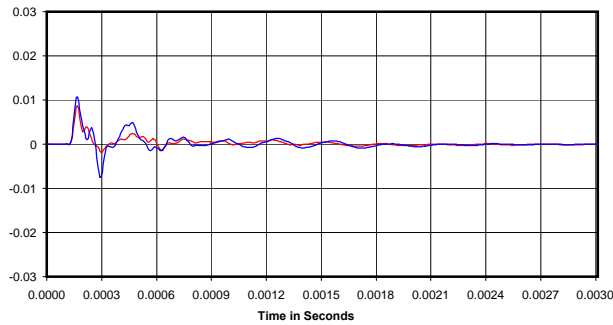
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

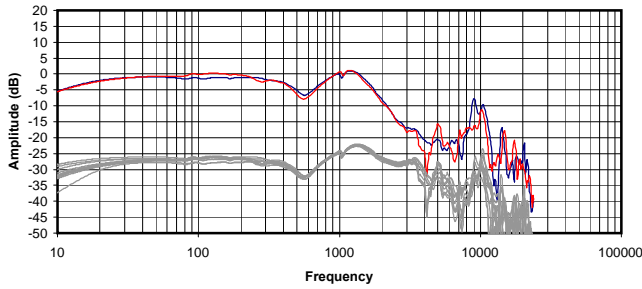


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

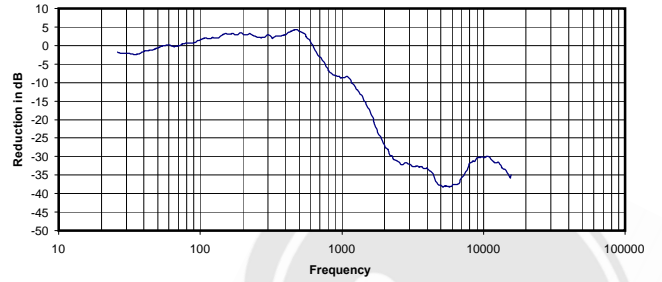
0.028 Vrms
34 Ohms
0.02 mW
-13 dB



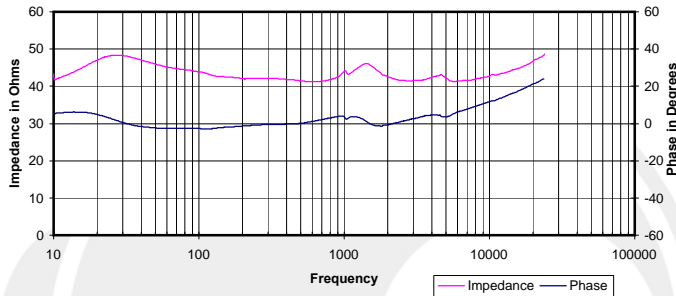
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



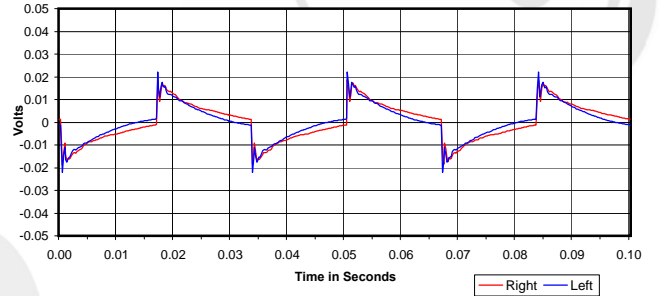
Isolation
Attenuation of External Sound vs. Frequency



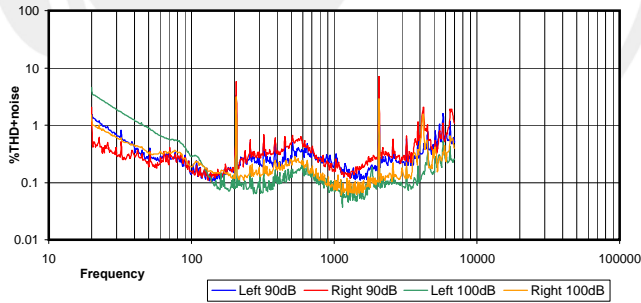
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



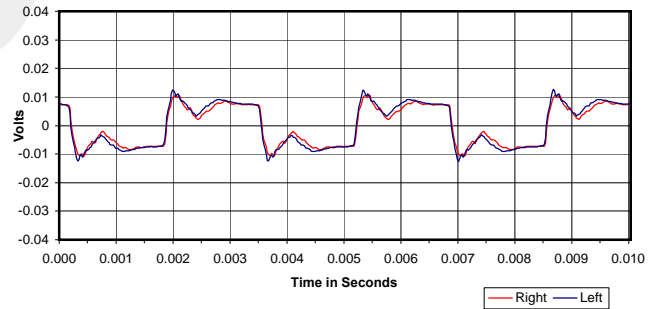
30 Hz Square Wave



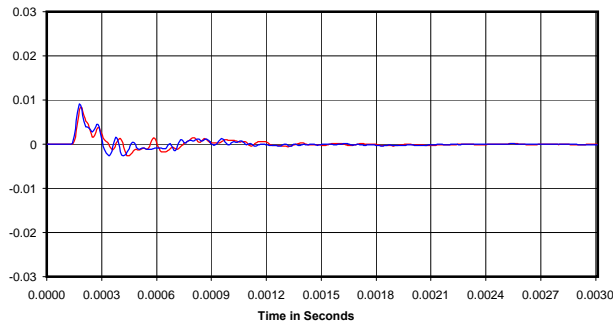
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



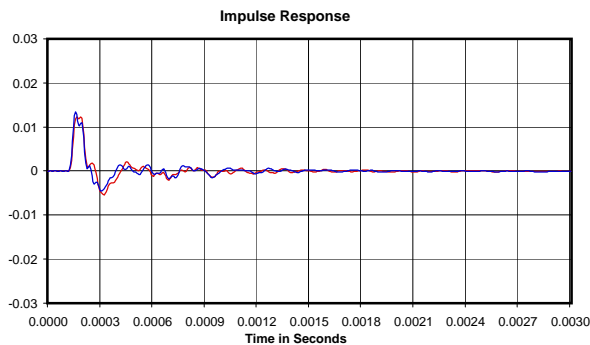
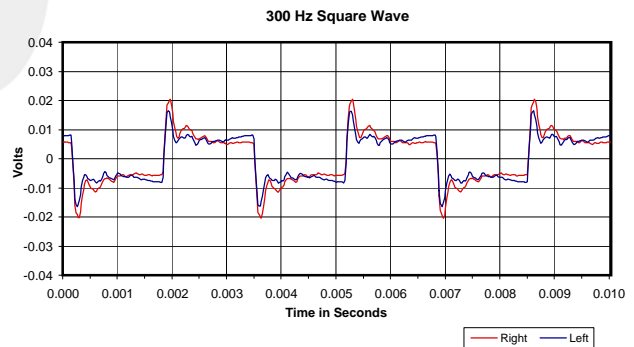
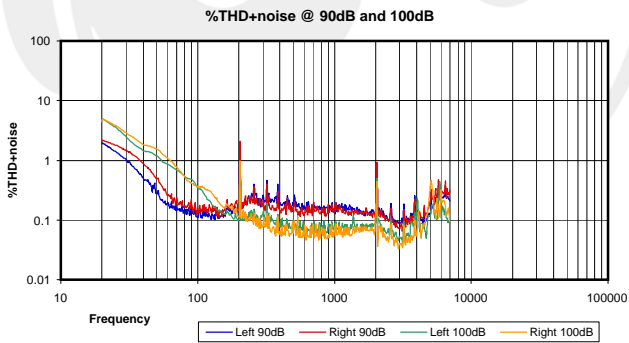
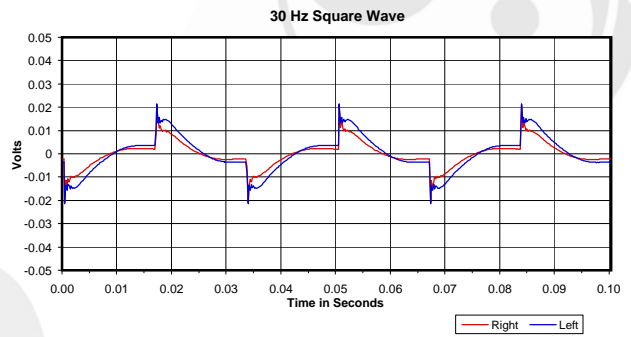
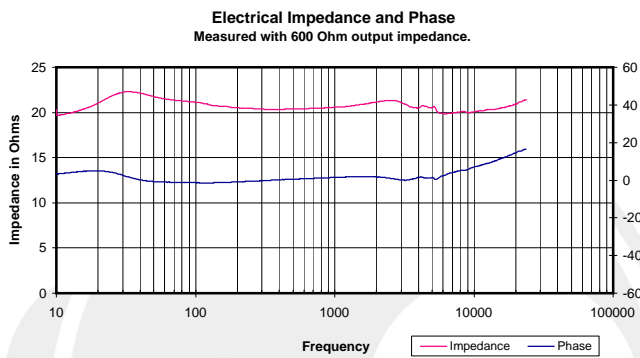
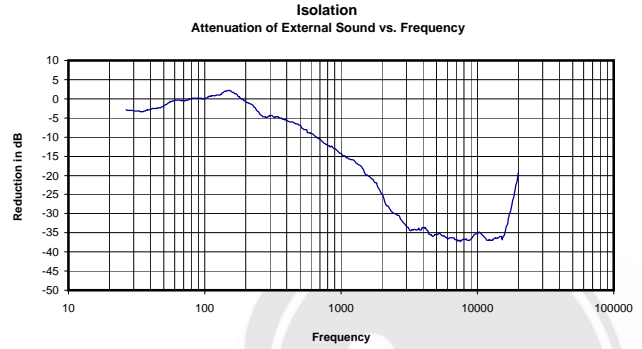
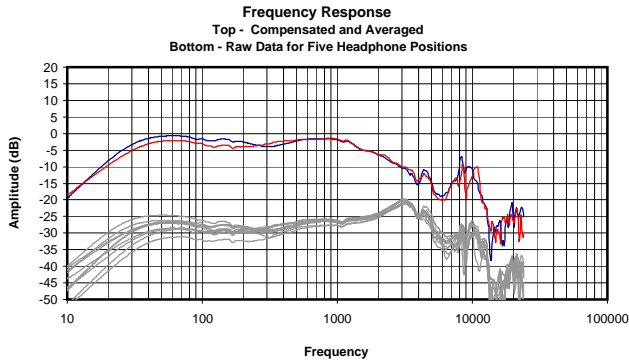
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.016 Vrms
43 Ohms
0.01 mW
-11 dB

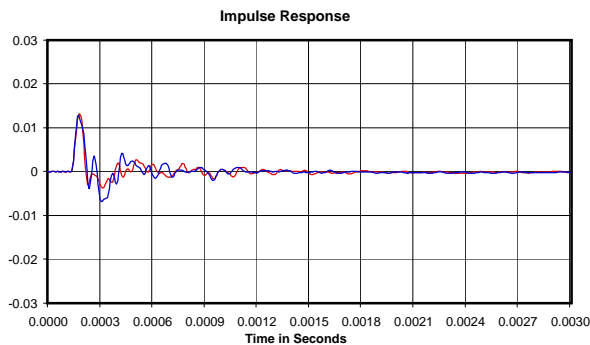
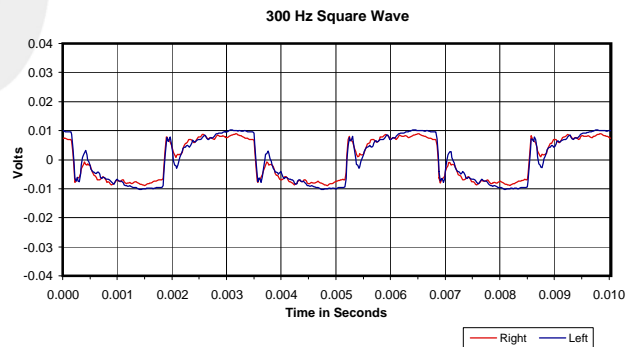
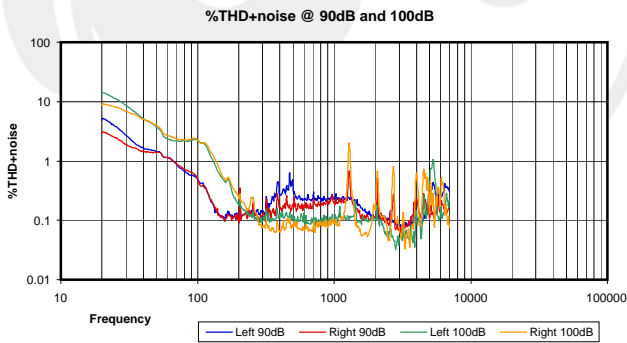
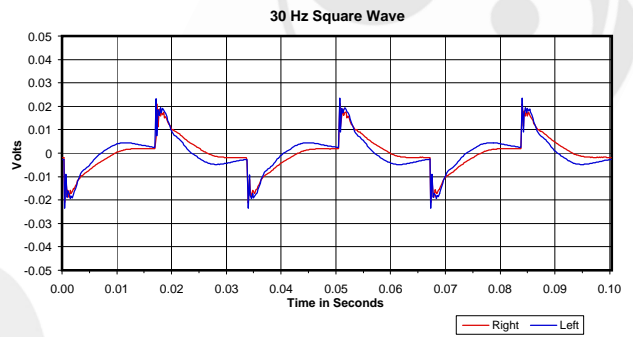
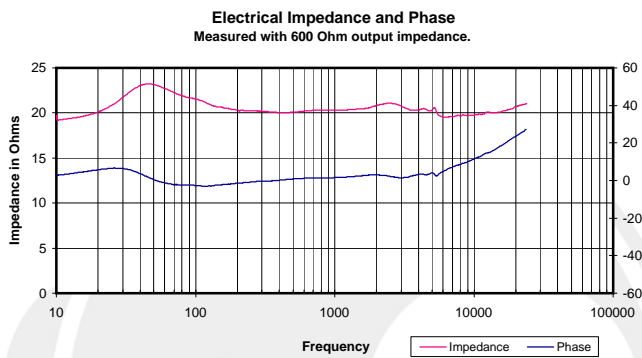
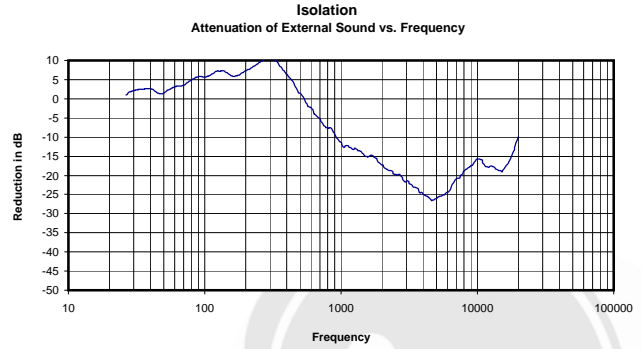
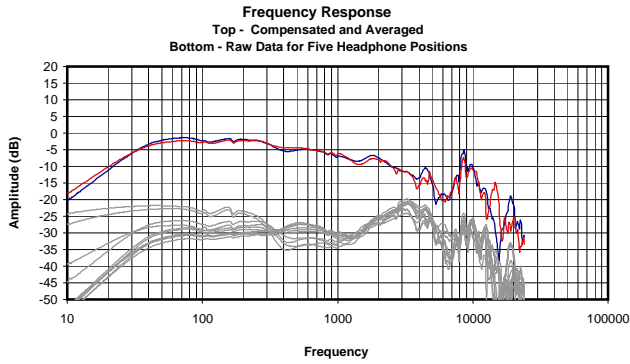




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.021 Vrms
21 Ohms
0.02 mW
-17 dB

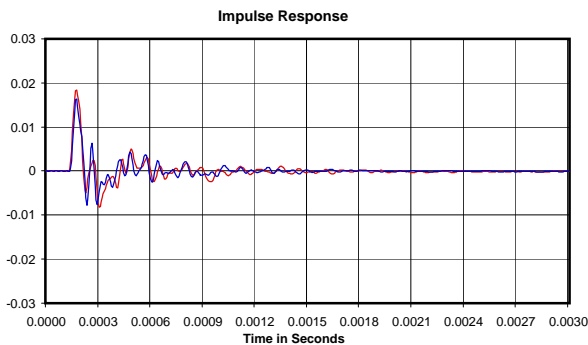
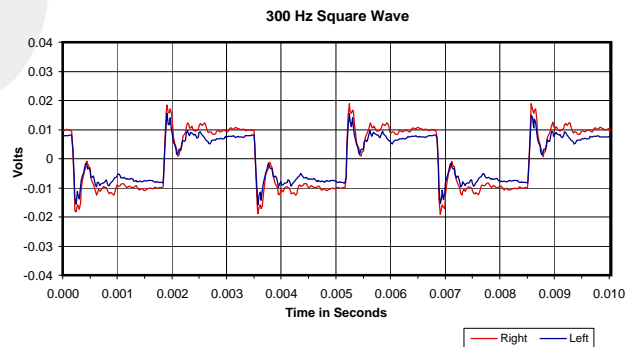
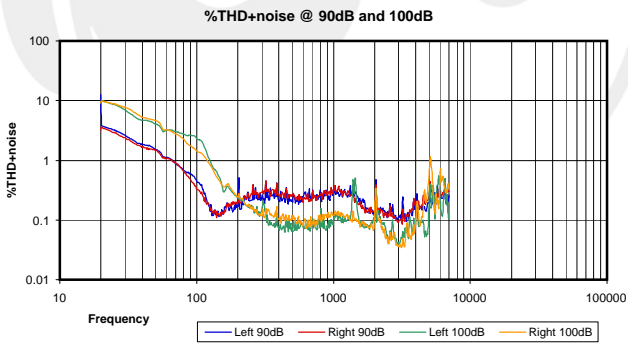
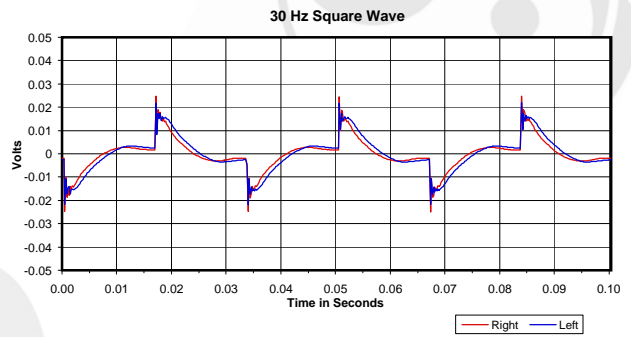
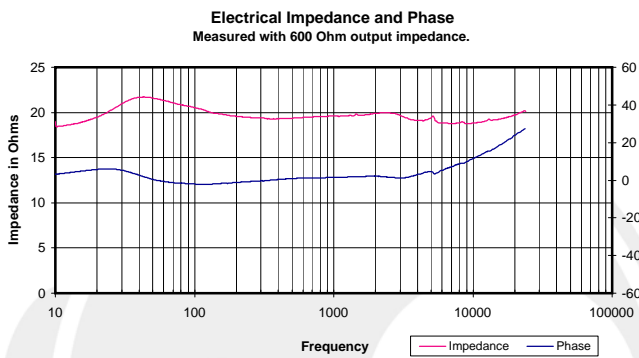
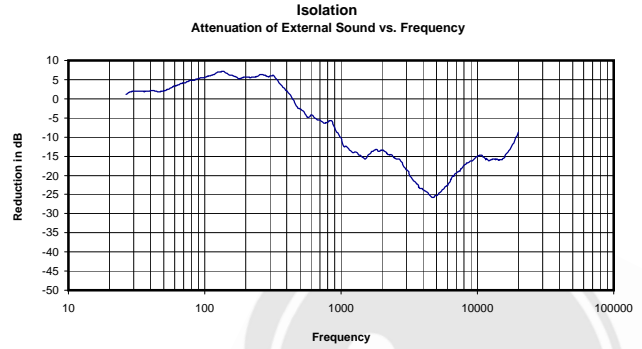
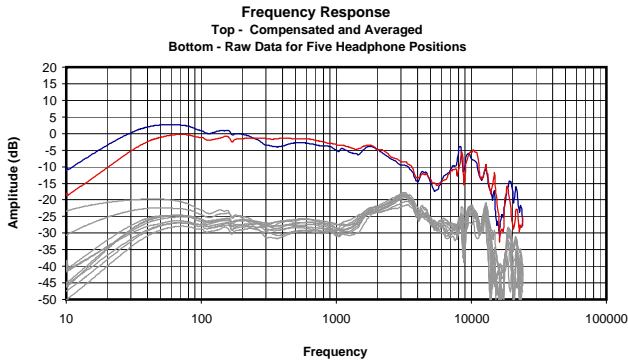




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
20 Ohms
0.08 mW
-8 dBr

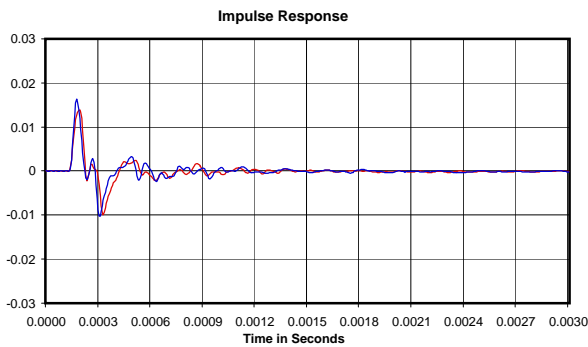
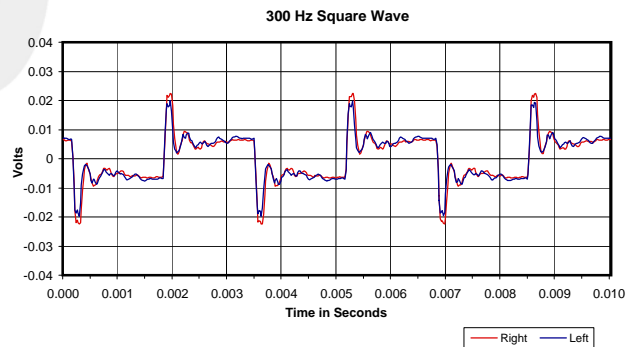
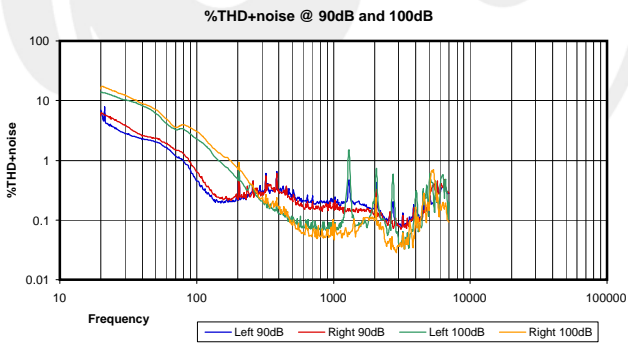
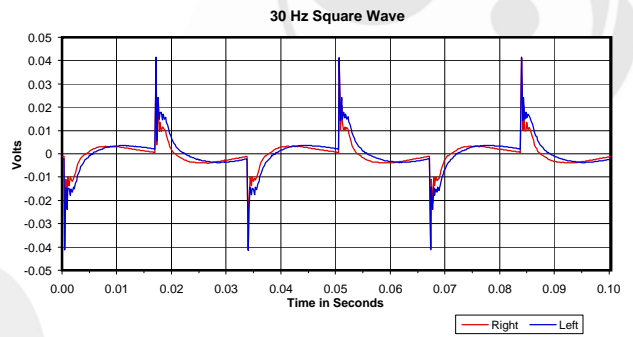
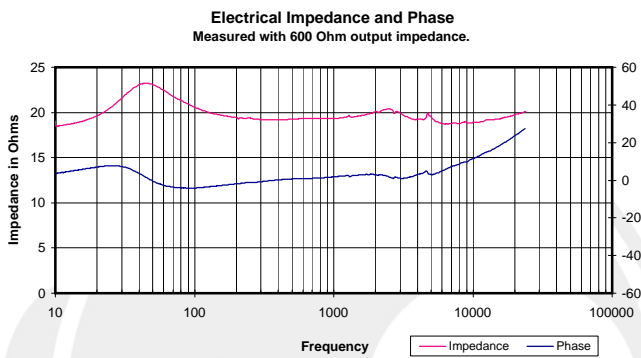
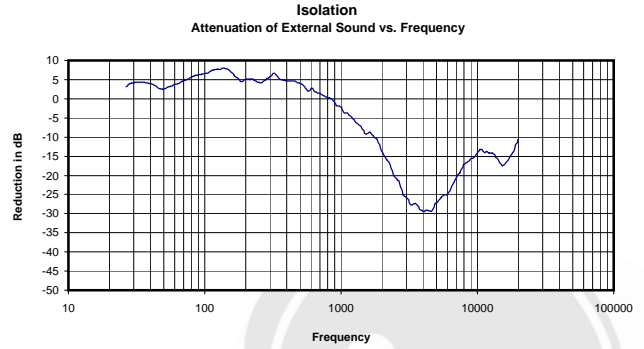
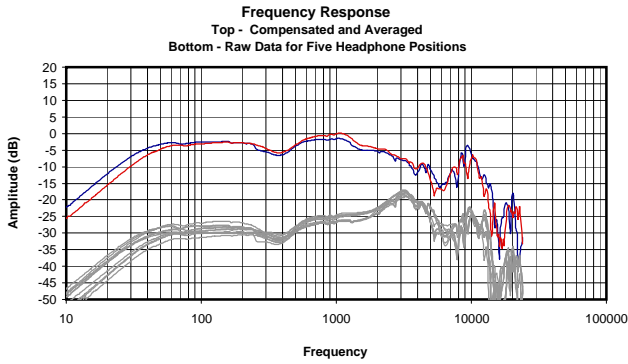




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
20 Ohms
0.10 mW
-8 dBr



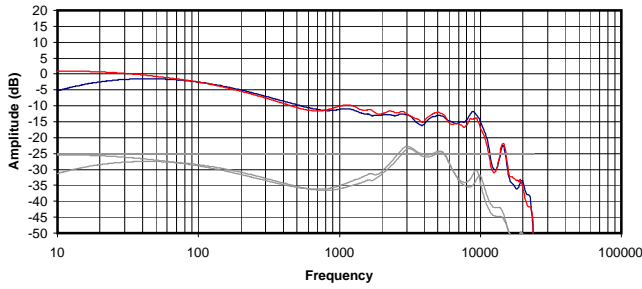


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

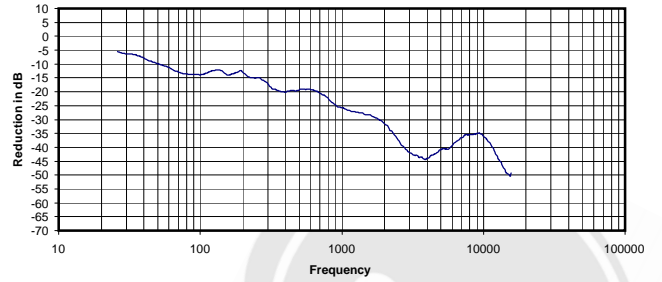
0.027 Vrms
19 Ohms
0.04 mW
-7 dB



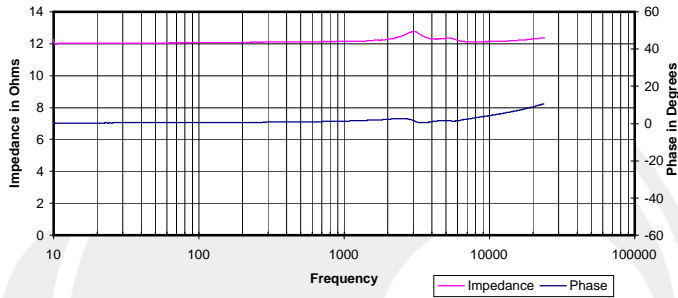
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



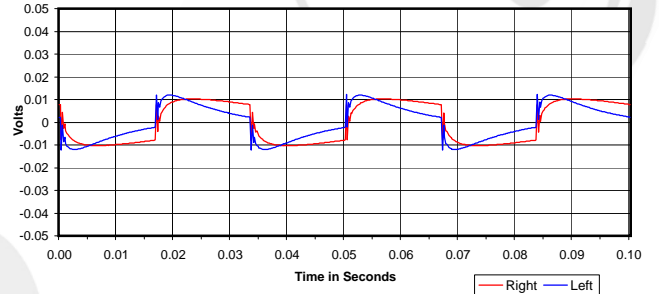
Isolation
Attenuation of External Sound vs. Frequency



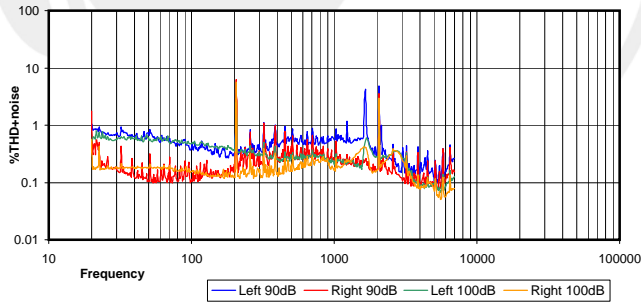
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



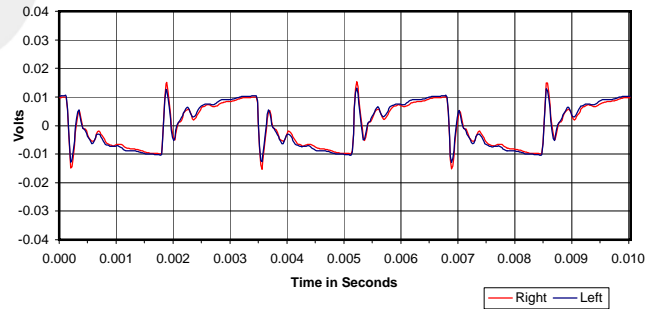
30 Hz Square Wave



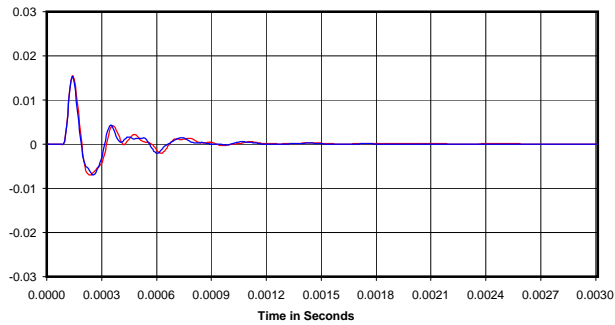
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

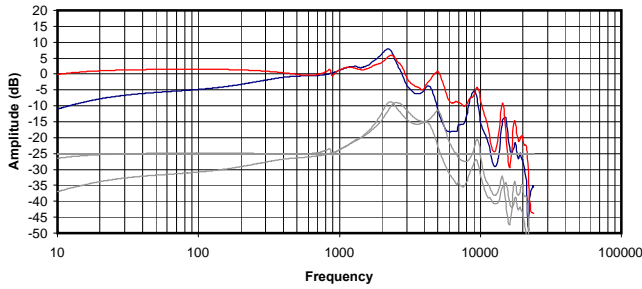


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

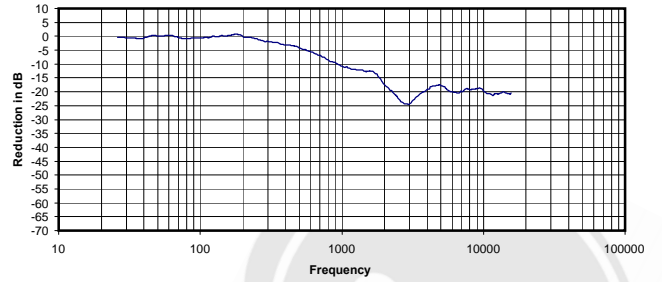
0.033 Vrms
12 Ohms
0.09 mW
-25 dB



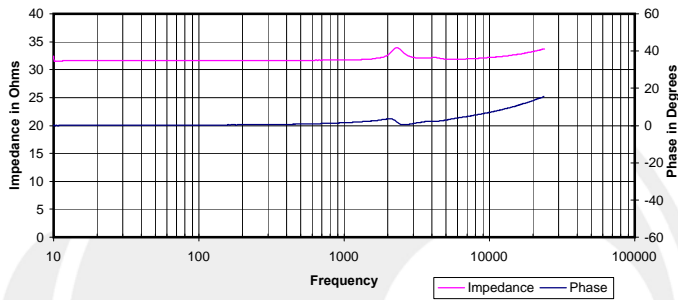
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



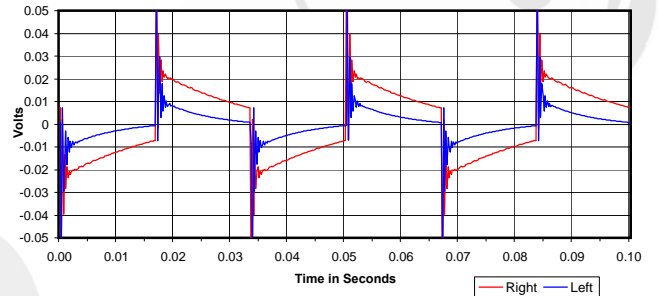
Isolation
Attenuation of External Sound vs. Frequency



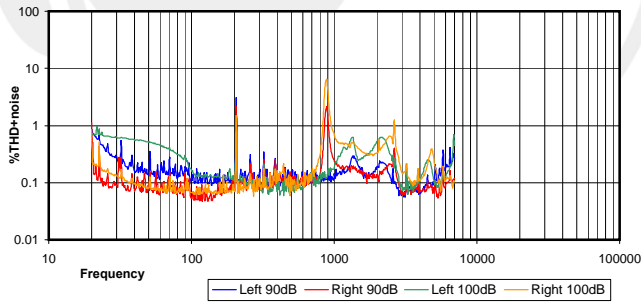
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



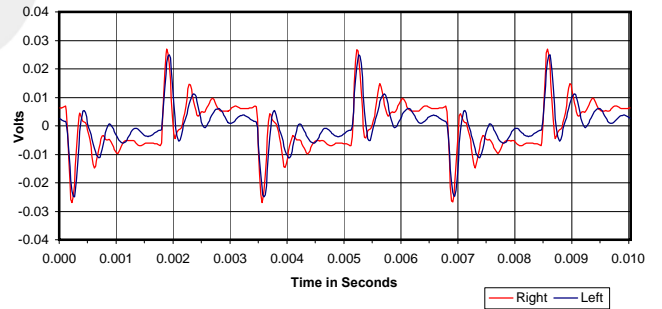
30 Hz Square Wave



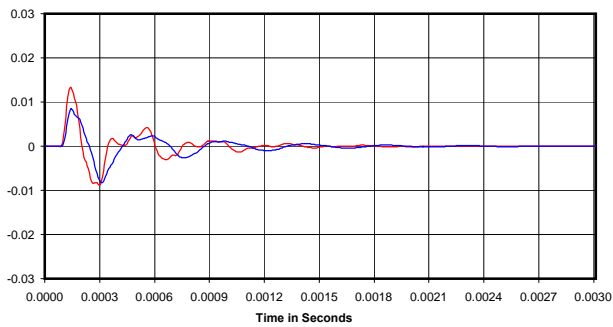
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

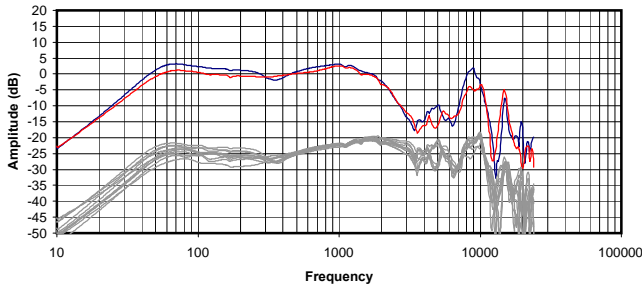


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

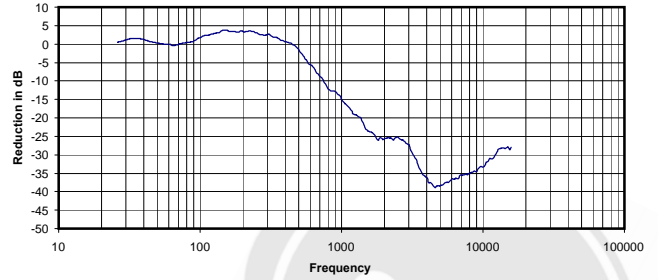
0.038 Vrms
32 Ohms
0.05 mW
-9 dB



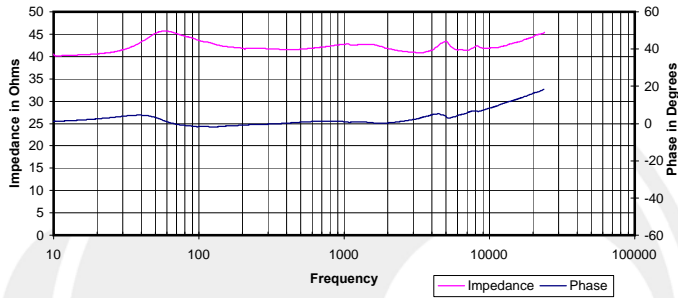
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



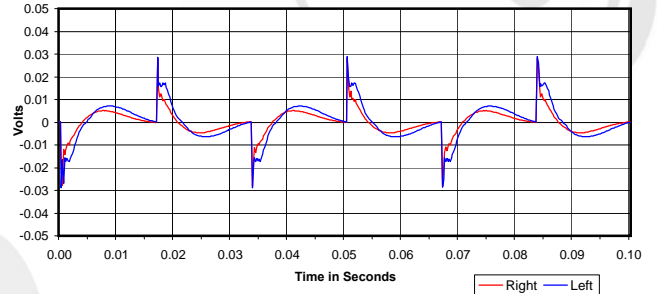
Isolation
Attenuation of External Sound vs. Frequency



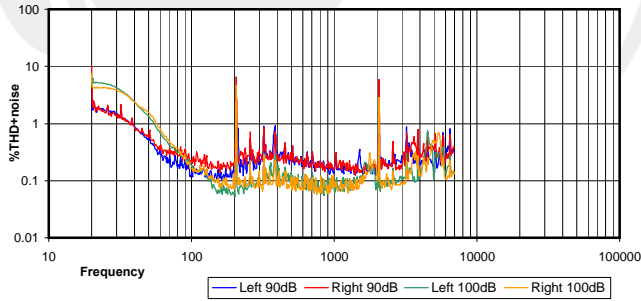
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



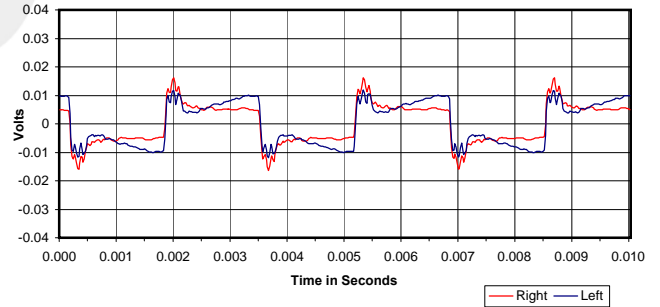
30 Hz Square Wave



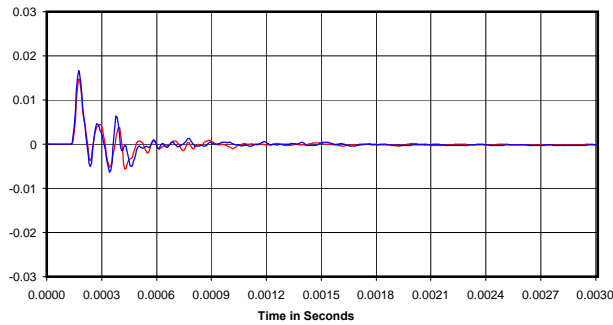
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

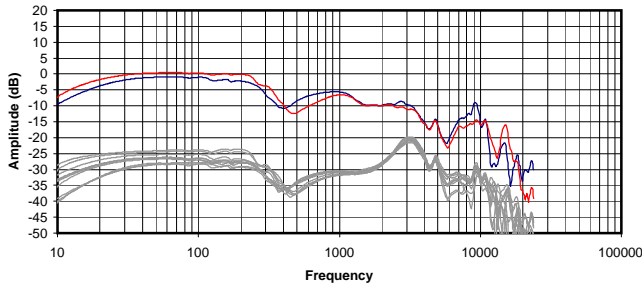


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

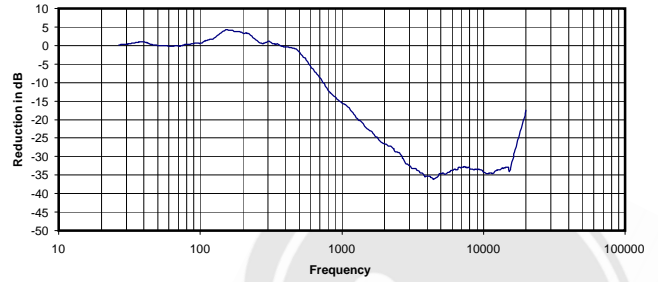
0.025 Vrms
43 Ohms
0.01 mW
-13 dB



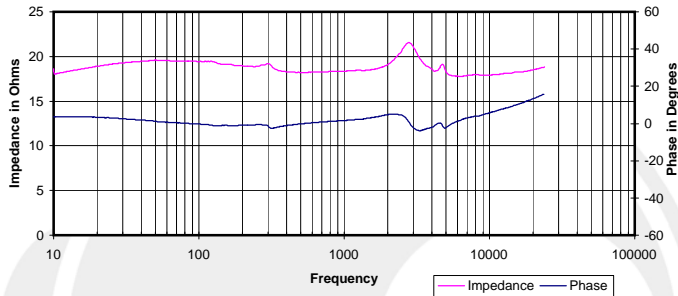
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



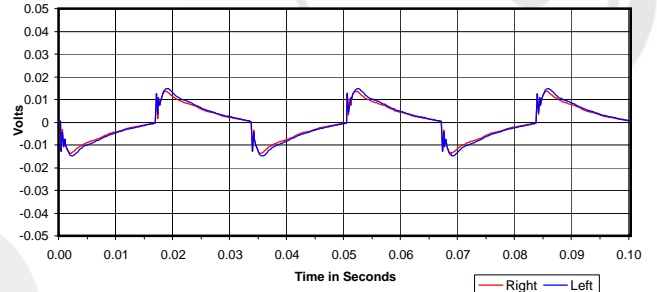
Isolation
 Attenuation of External Sound vs. Frequency



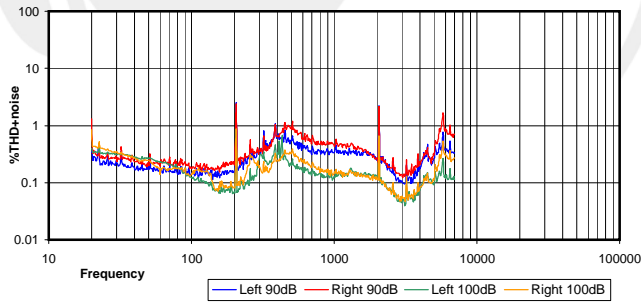
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



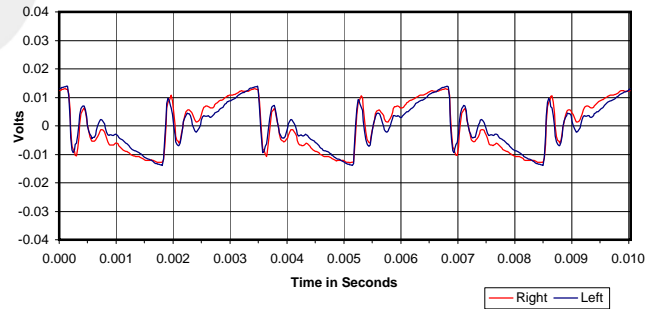
30 Hz Square Wave



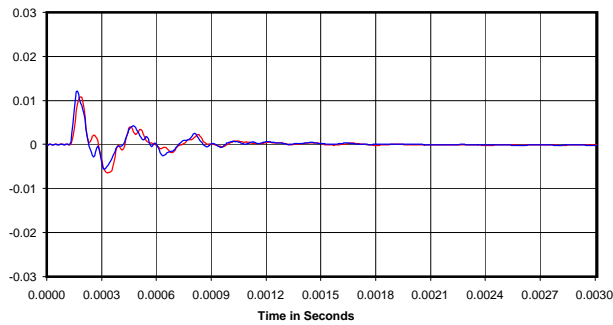
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

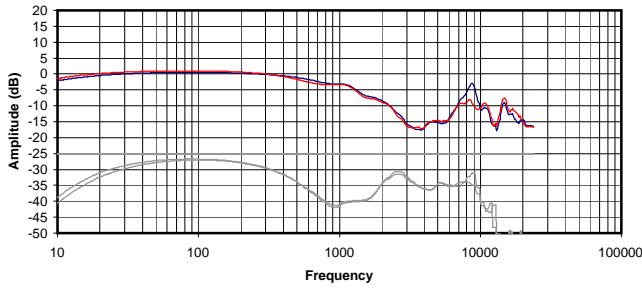


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.020 Vrms
 18 Ohms
 0.02 mW
 -15 dB

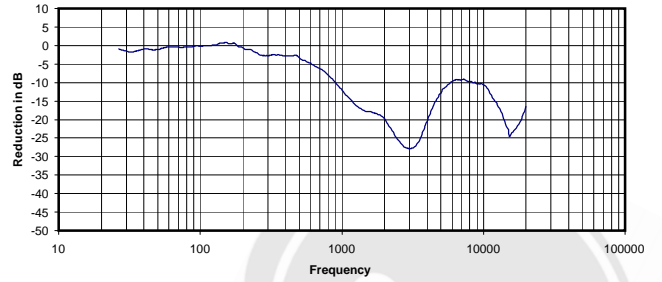


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

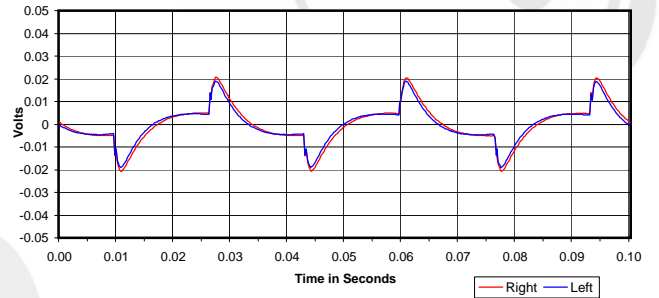


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

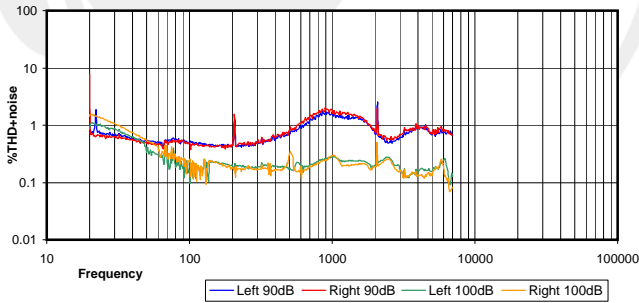
Isolation
 Attenuation of External Sound vs. Frequency



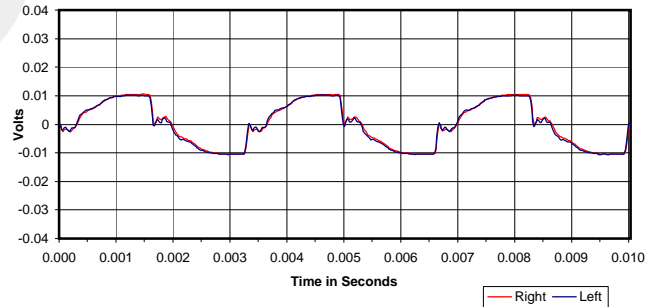
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

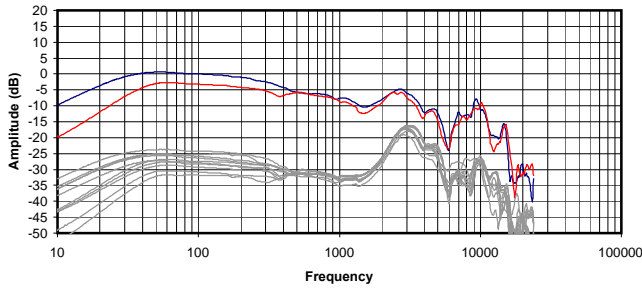


Broadband Isolation in dB (100Hz to 10kHz):

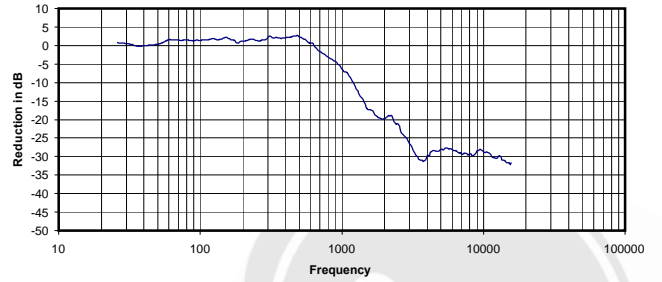
-10 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

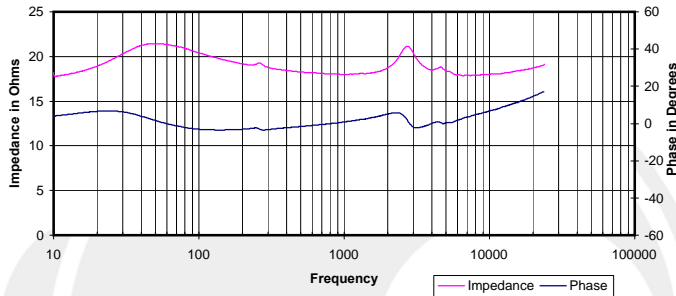
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



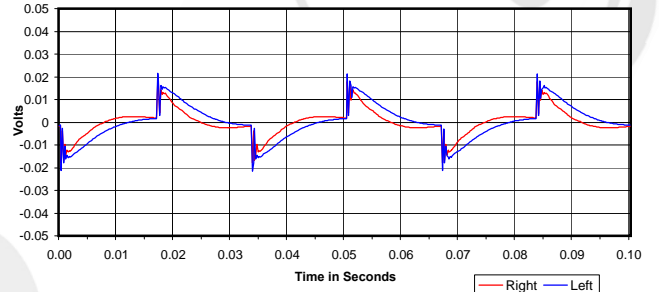
Isolation
Attenuation of External Sound vs. Frequency



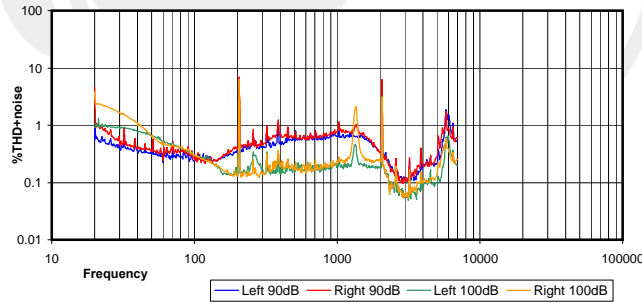
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



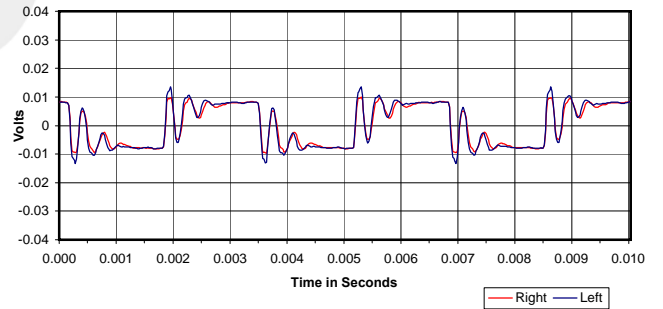
30 Hz Square Wave



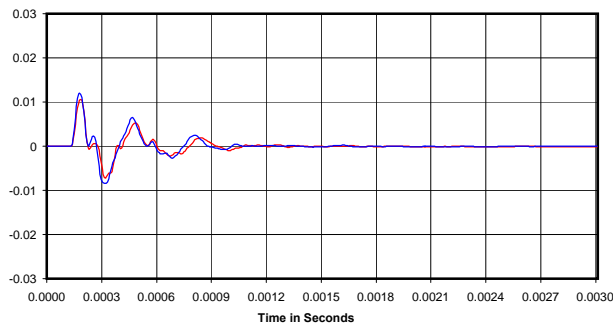
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

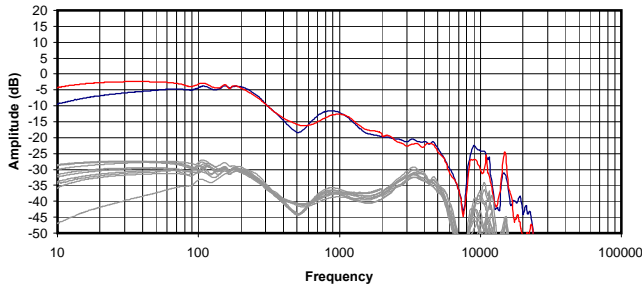


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

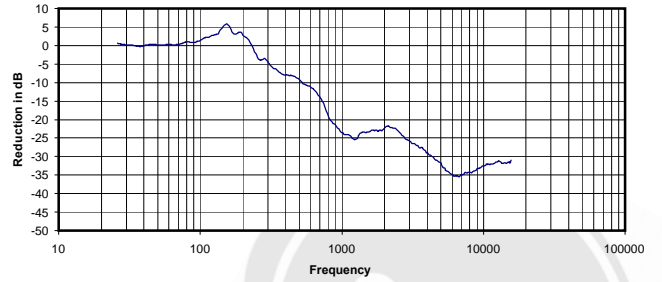
0.034 Vrms
18 Ohms
0.06 mW
-9 dB



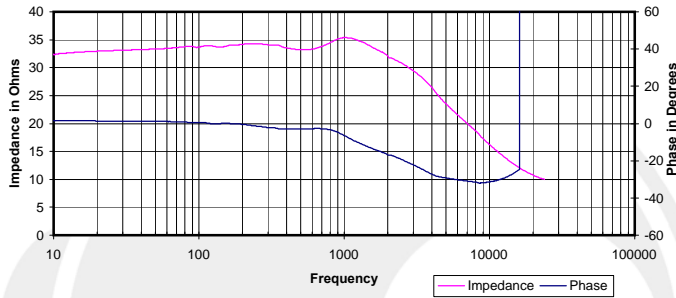
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



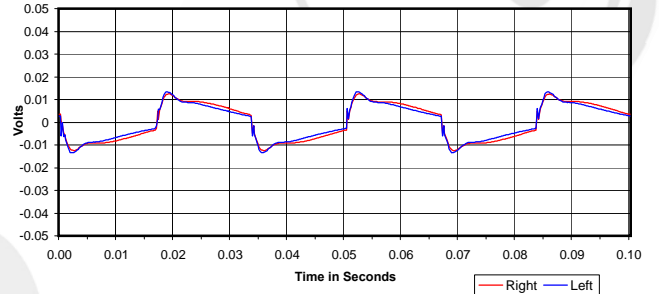
Isolation
Attenuation of External Sound vs. Frequency



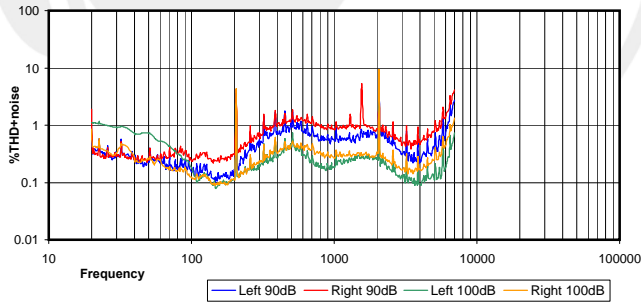
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



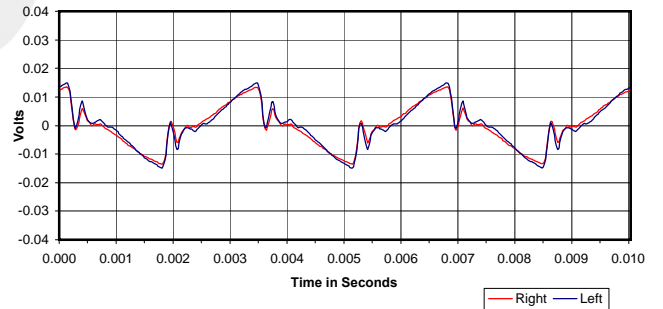
30 Hz Square Wave



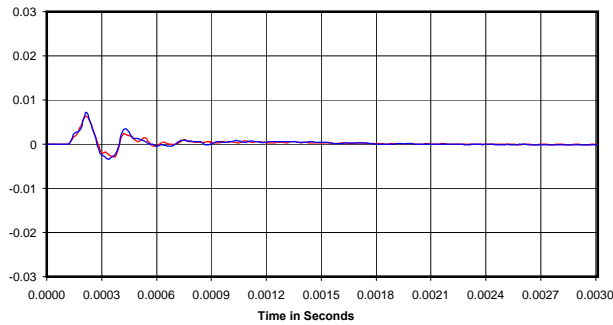
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

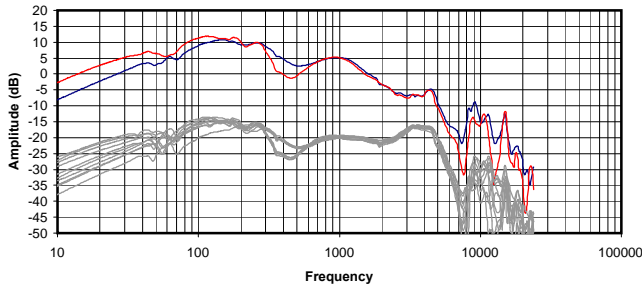


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

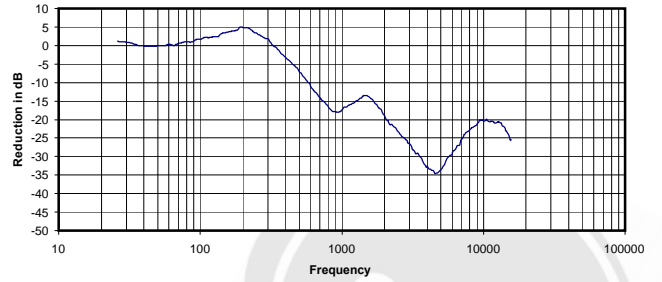
0.038 Vrms
35 Ohms
0.04 mW
-14 dB



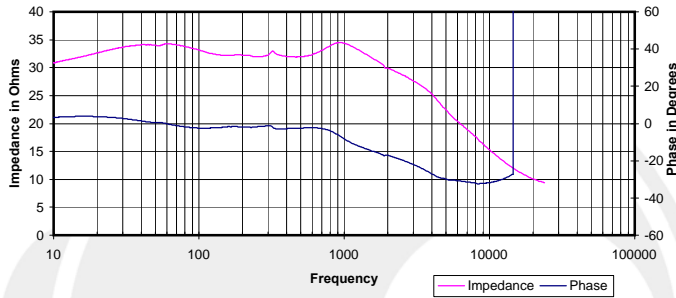
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



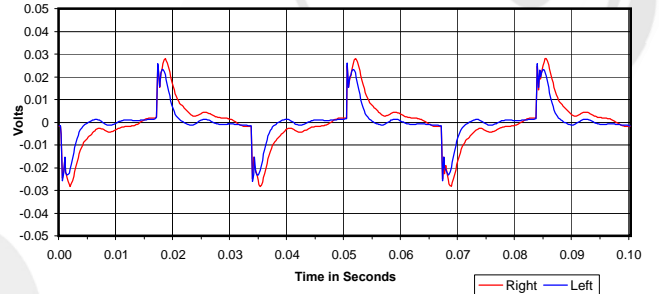
Isolation
Attenuation of External Sound vs. Frequency



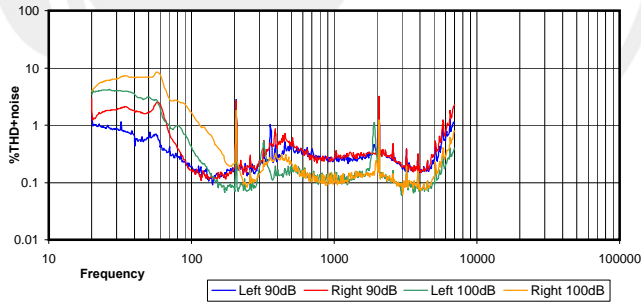
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



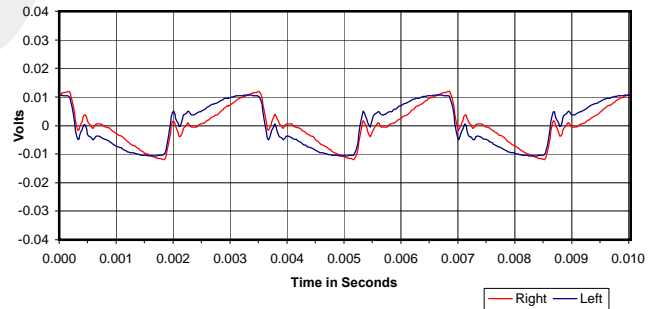
30 Hz Square Wave



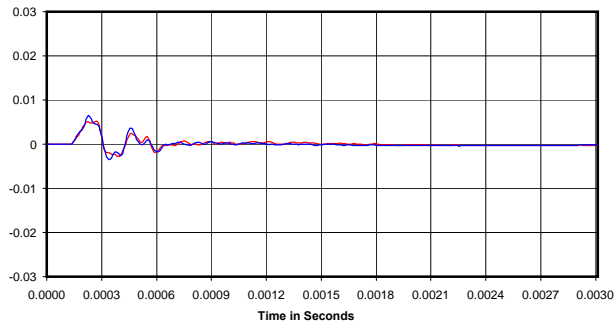
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

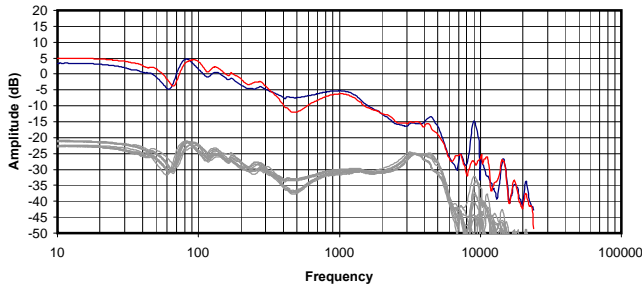


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

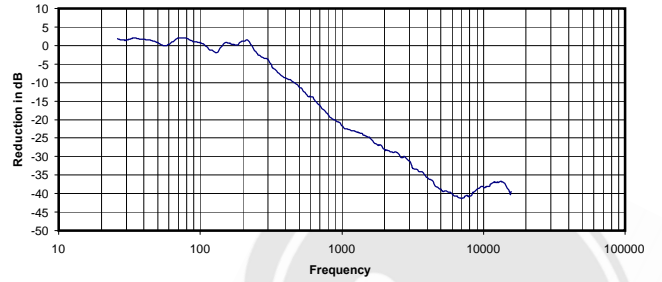
0.033 Vrms
34 Ohms
0.03 mW
-12 dB



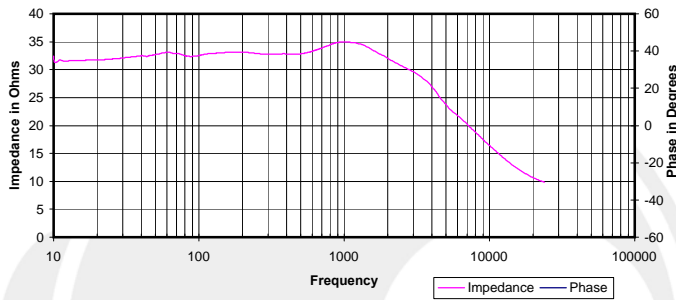
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



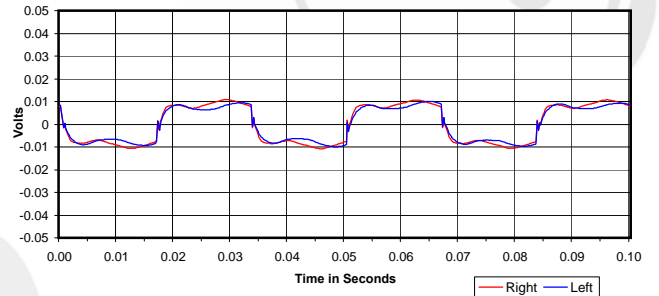
Isolation
 Attenuation of External Sound vs. Frequency



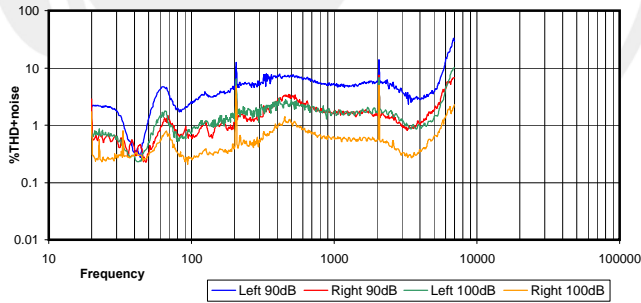
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



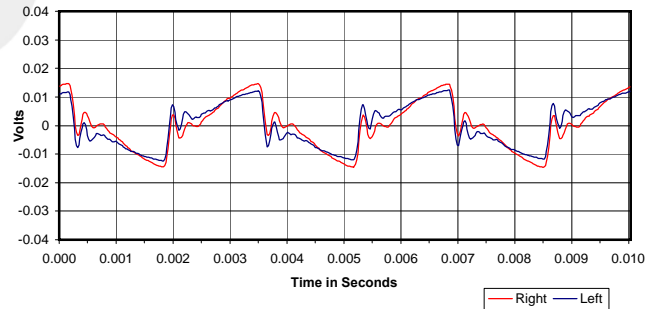
30 Hz Square Wave



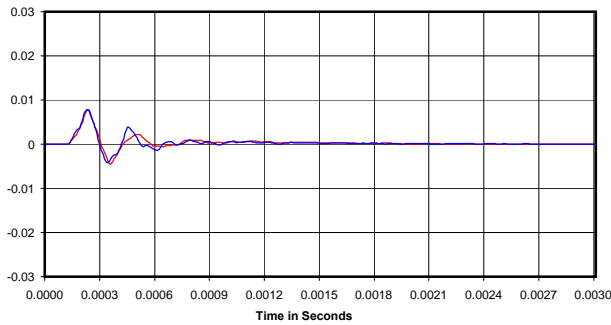
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

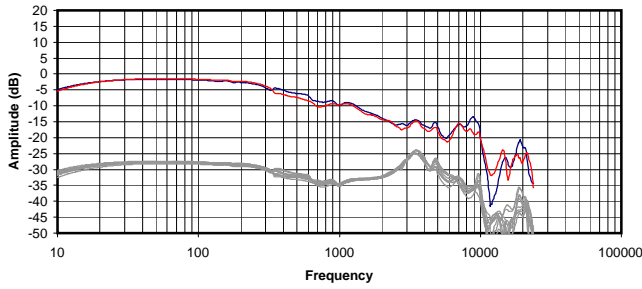


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

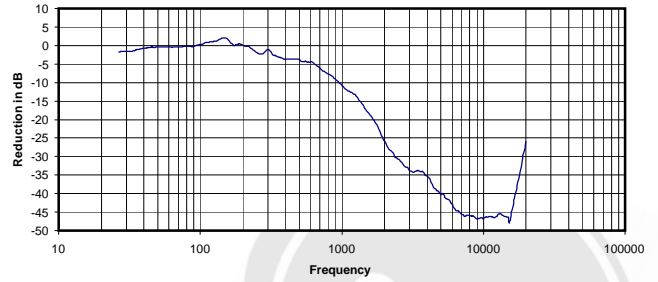
0.030 Vrms
 35 Ohms
 0.03 mW
 -17 dB



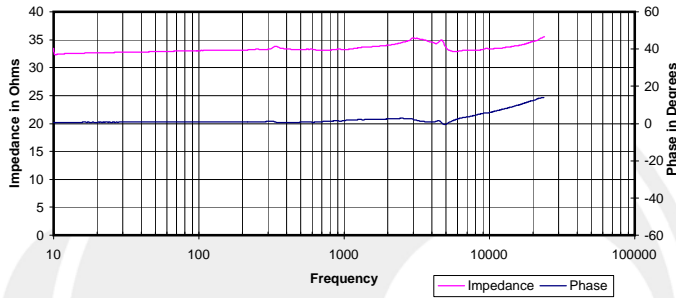
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



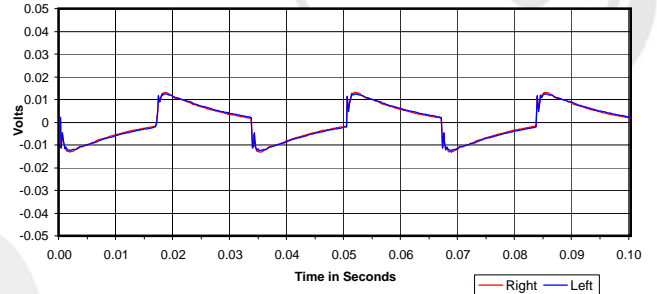
Isolation
 Attenuation of External Sound vs. Frequency



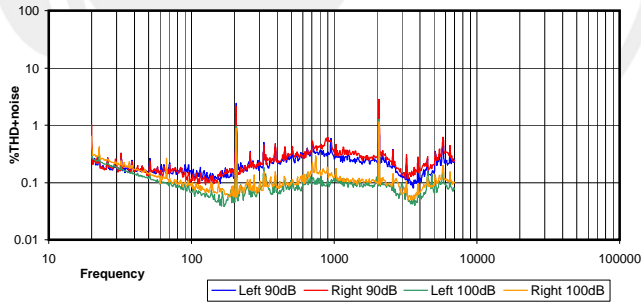
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



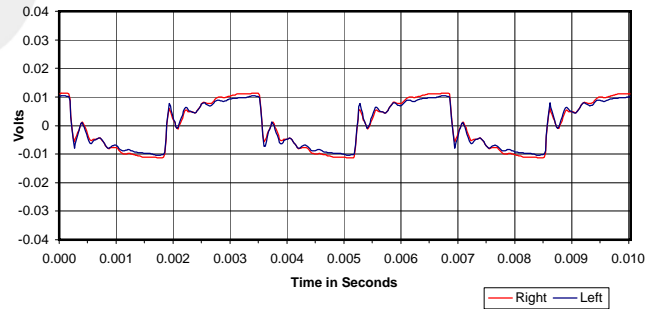
30 Hz Square Wave



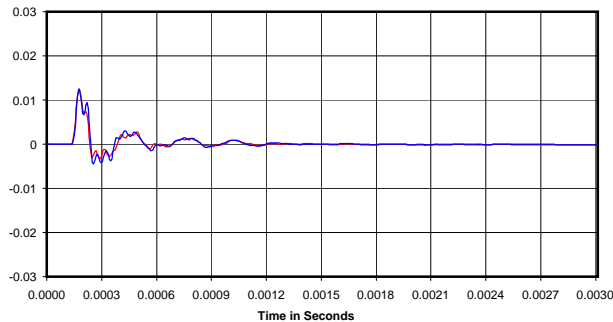
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



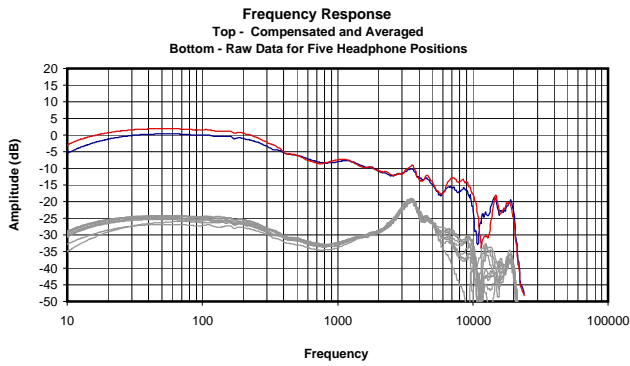
Impulse Response



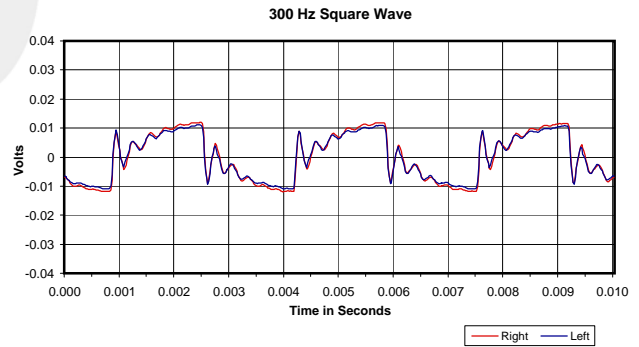
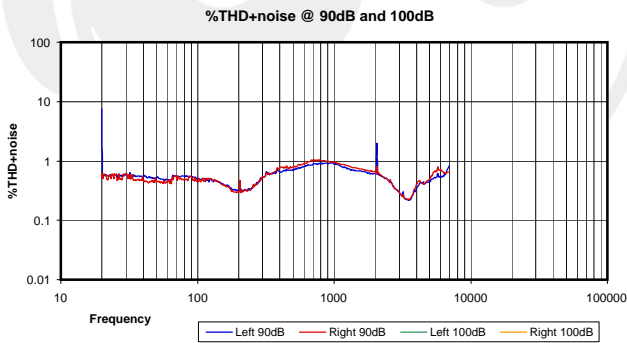
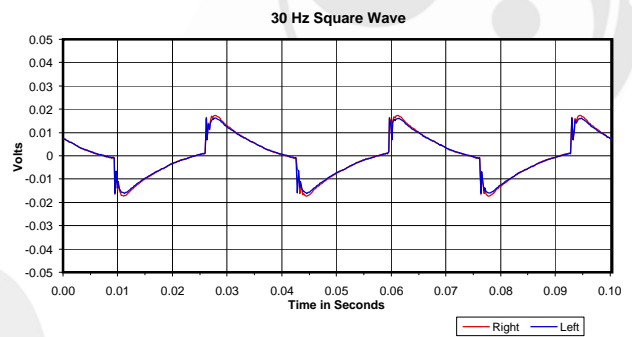
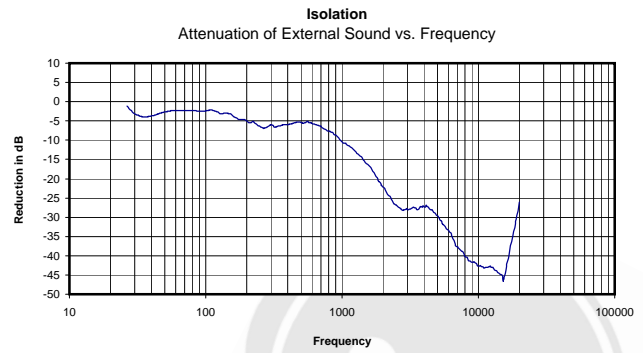
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
 33 Ohms
 0.05 mW
 -17 dB





Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

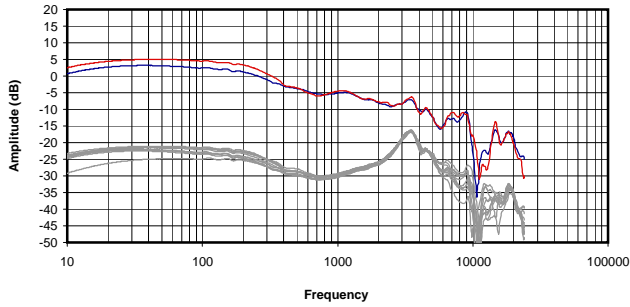


Broadband Isolation in dB (100Hz to 10kHz):

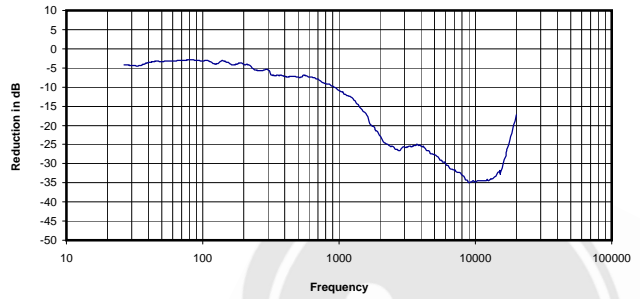
-16 dBr

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

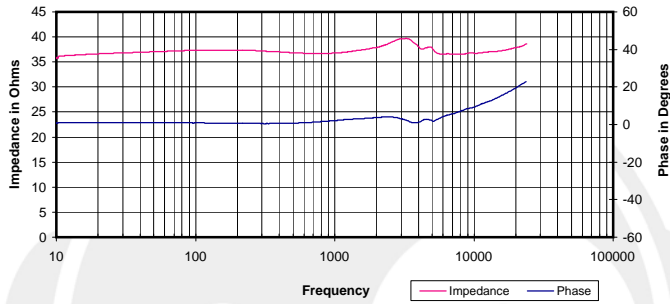
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



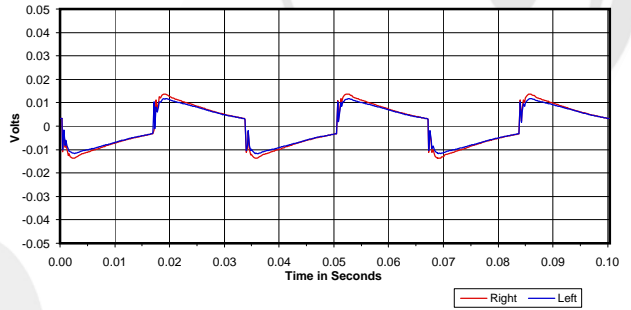
Isolation
Attenuation of External Sound vs. Frequency



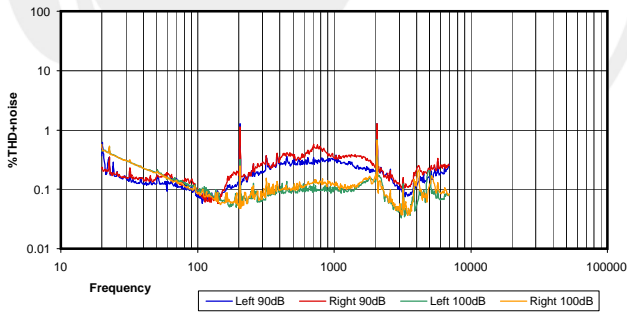
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



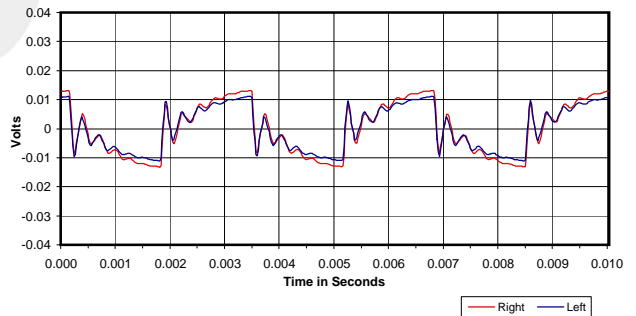
30 Hz Square Wave



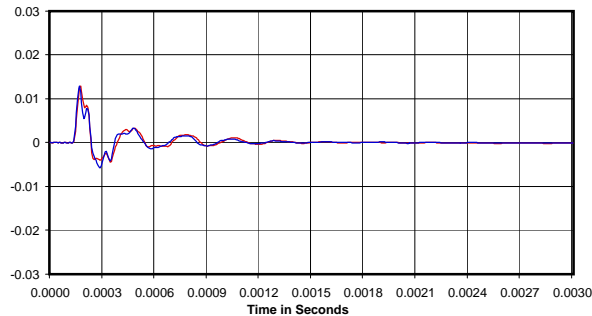
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

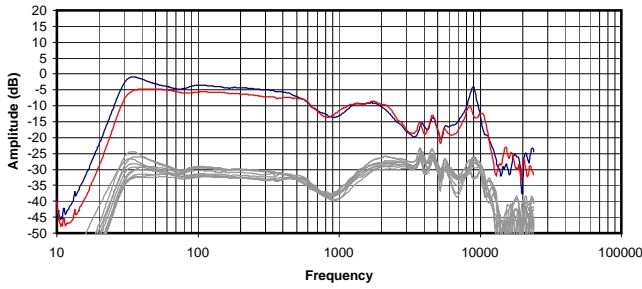


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

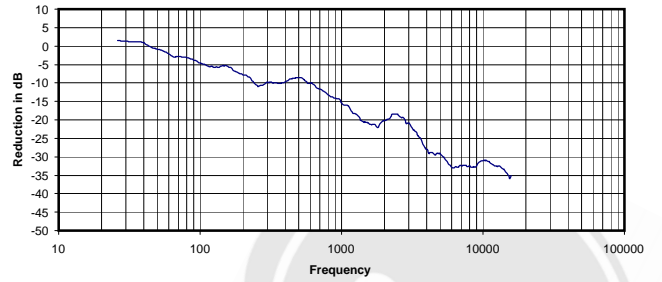
0.046 Vrms
37 Ohms
0.06 mW
-15 dB



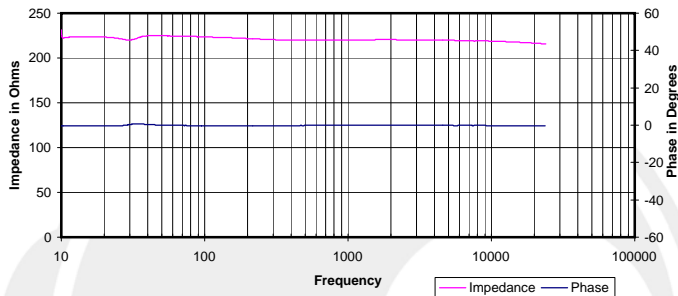
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



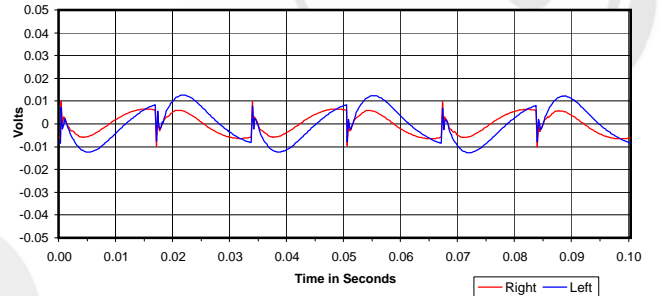
Isolation
 Attenuation of External Sound vs. Frequency



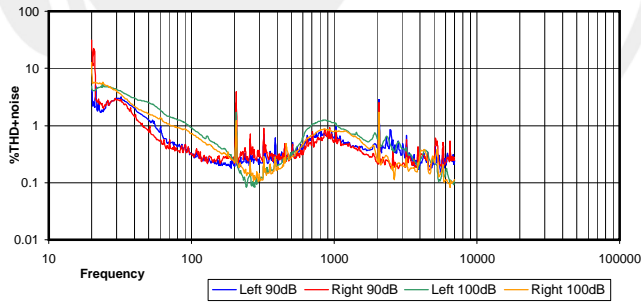
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



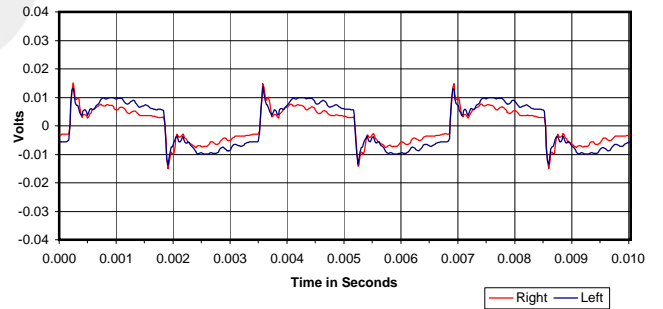
30 Hz Square Wave



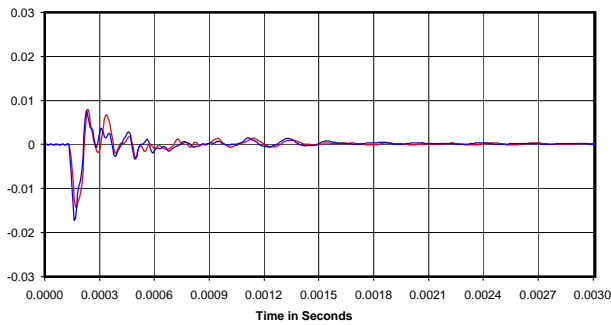
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

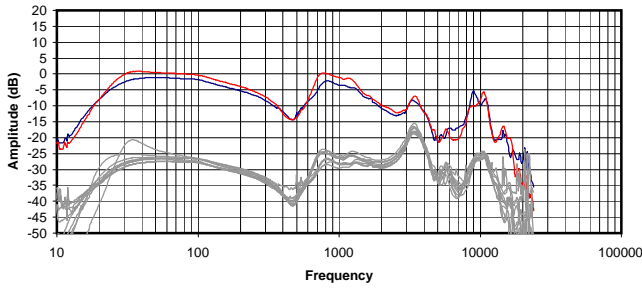


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

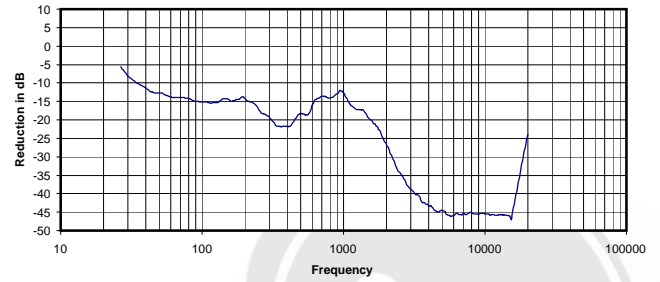
0.047 Vrms
 220 Ohms
 0.01 mW
 -15 dB



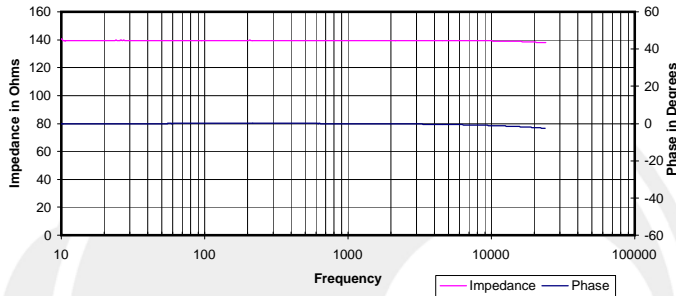
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



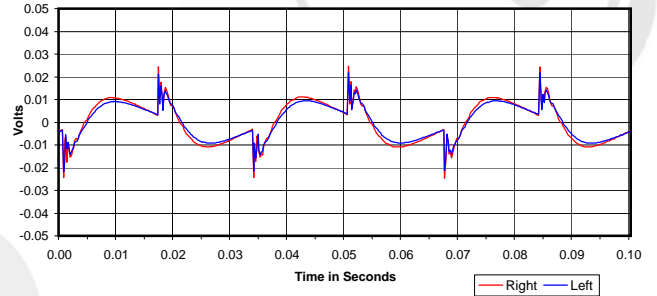
Isolation
 Attenuation of External Sound vs. Frequency



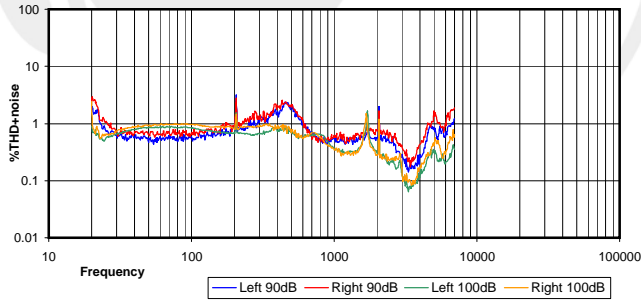
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



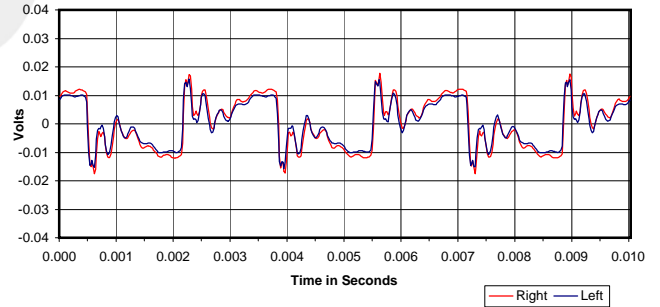
30 Hz Square Wave



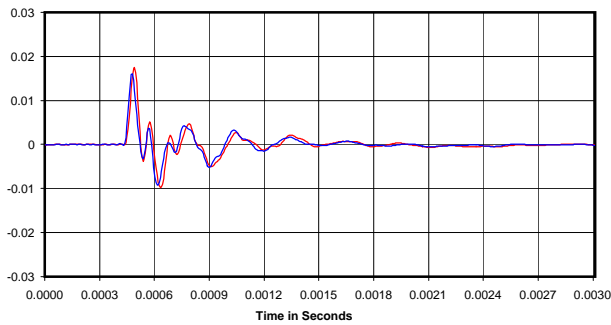
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



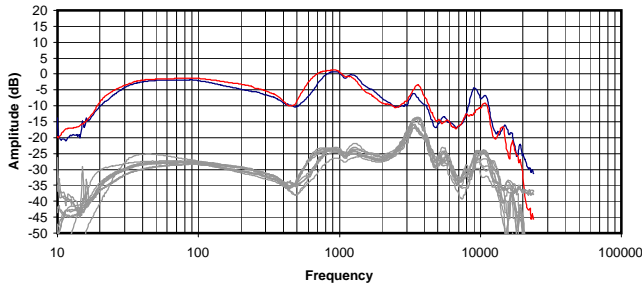
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

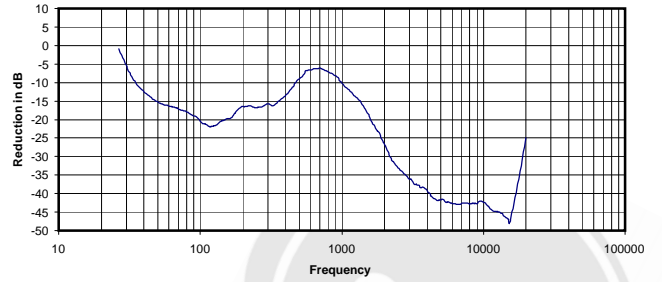
0.024 Vrms
 139 Ohms
 0.00 mW
 -26 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

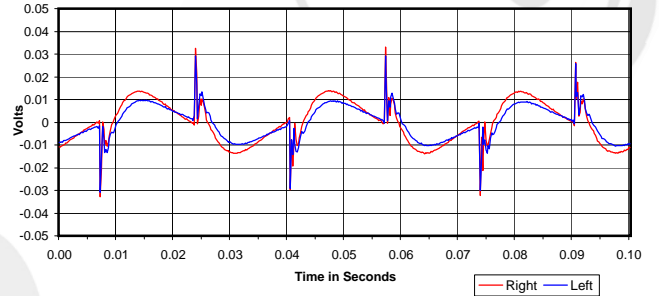


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

Isolation
 Attenuation of External Sound vs. Frequency



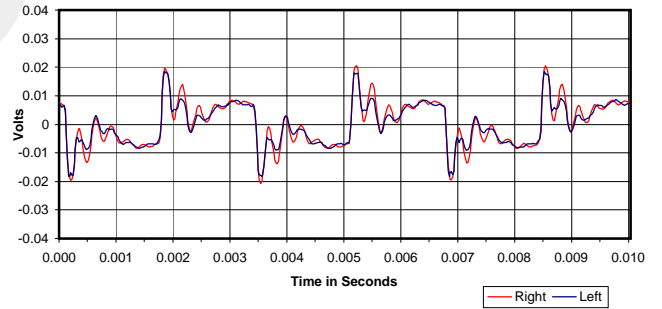
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

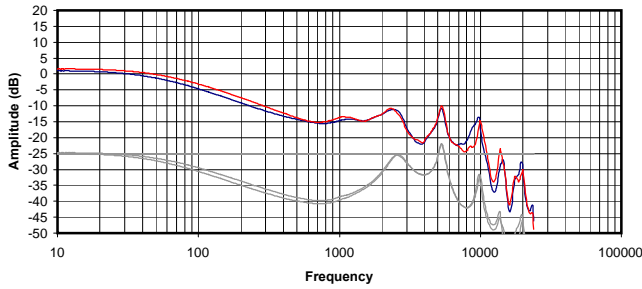


Broadband Isolation in dB (100Hz to 10kHz):

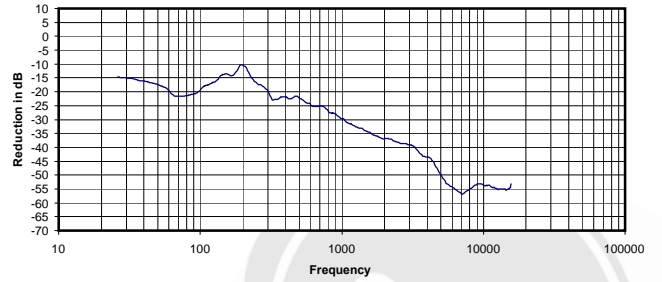
-23 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

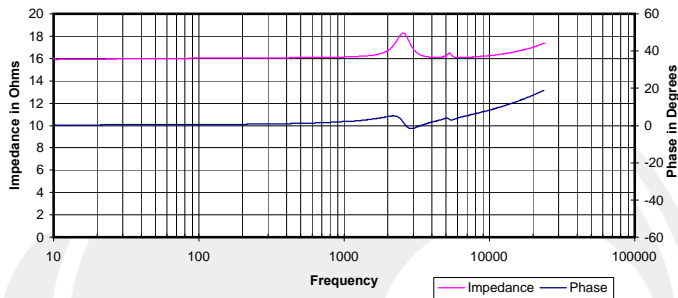
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



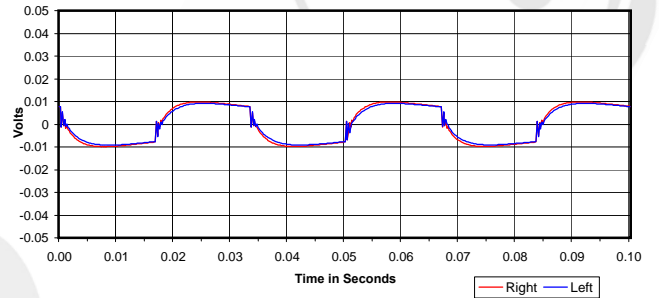
Isolation
Attenuation of External Sound vs. Frequency



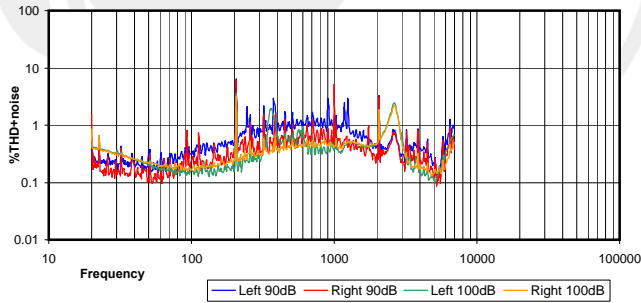
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



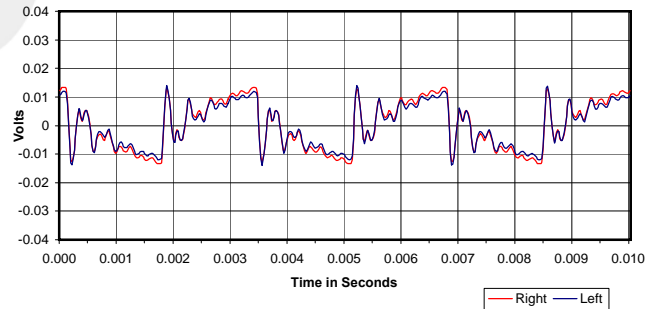
30 Hz Square Wave



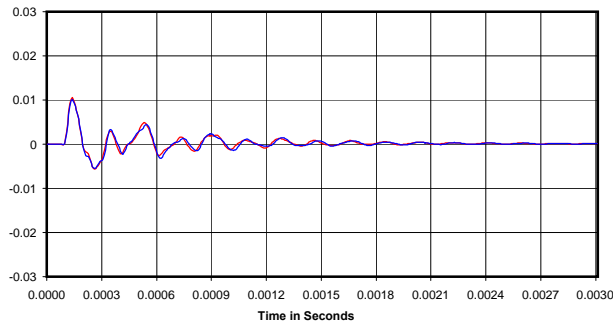
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

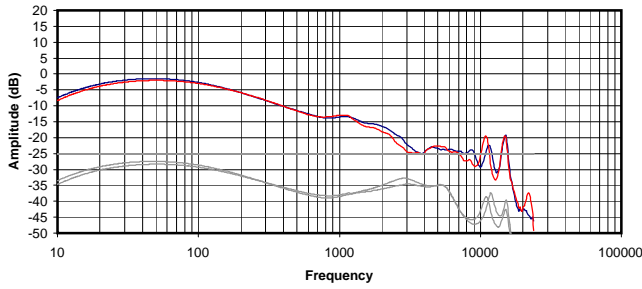


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

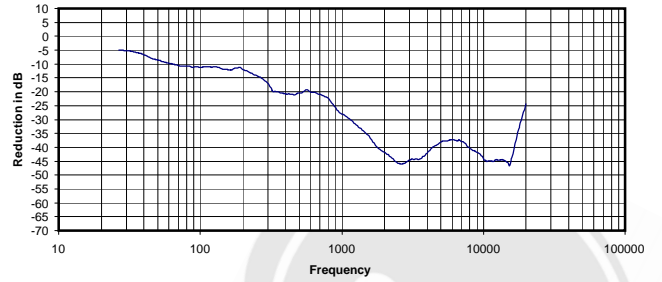
0.037 Vrms
16 Ohms
0.08 mW
-29 dB



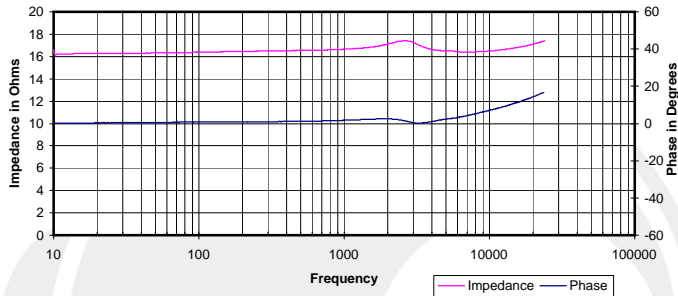
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



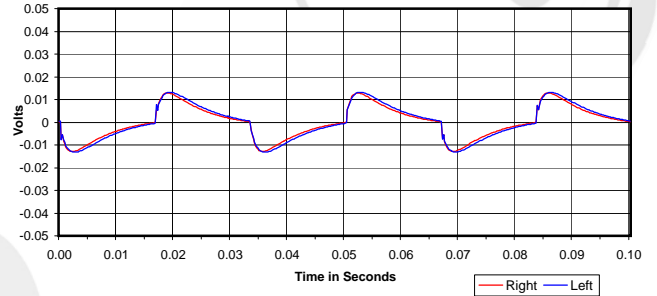
Isolation
Attenuation of External Sound vs. Frequency



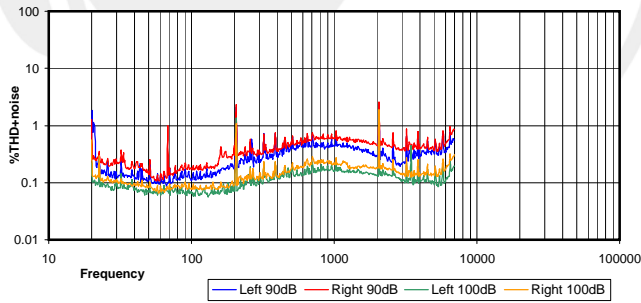
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



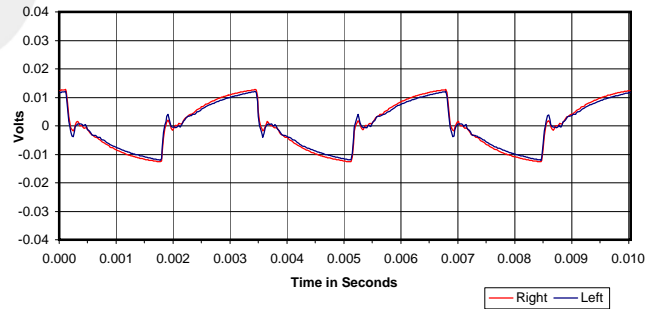
30 Hz Square Wave



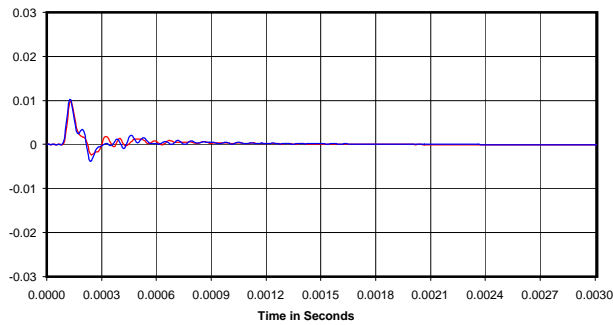
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

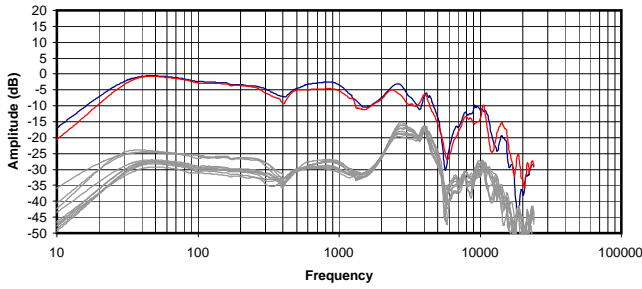


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

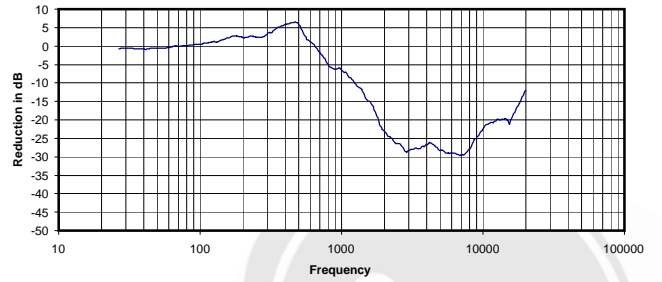
0.023 Vrms
17 Ohms
0.03 mW
-28 dB



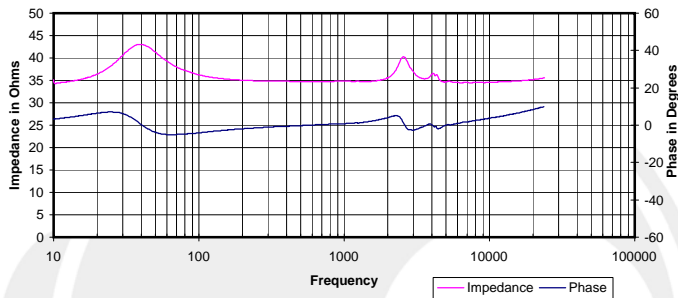
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



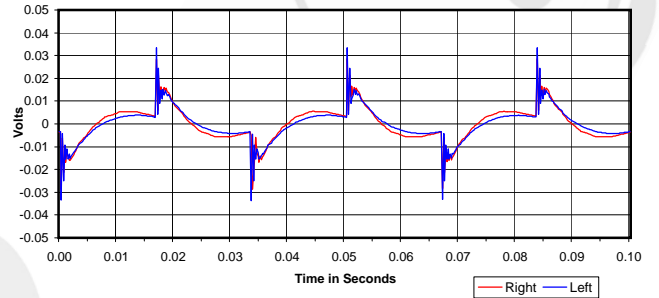
Isolation
 Attenuation of External Sound vs. Frequency



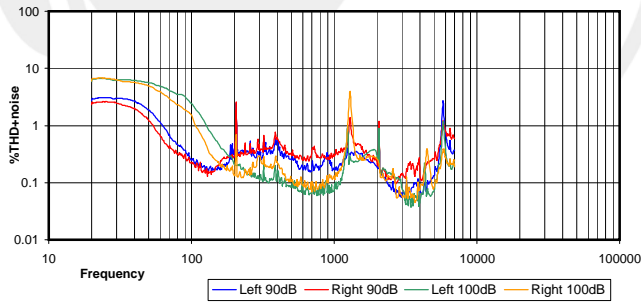
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



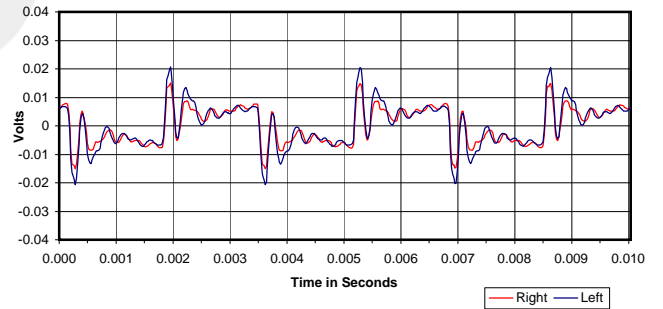
30 Hz Square Wave



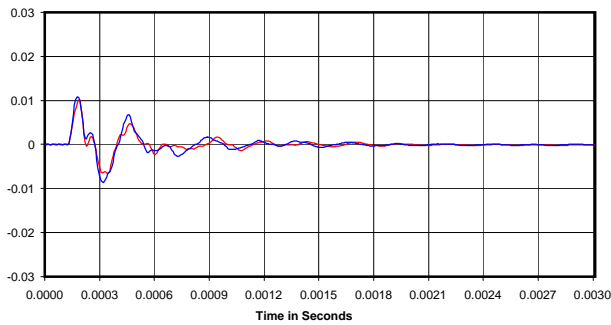
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

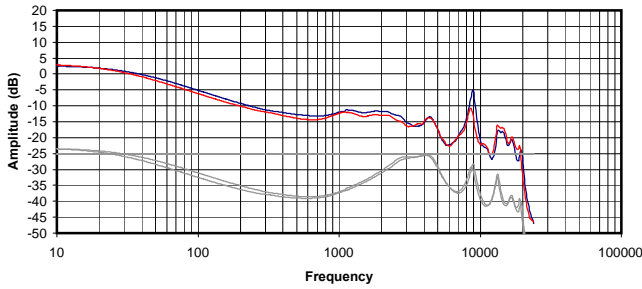


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

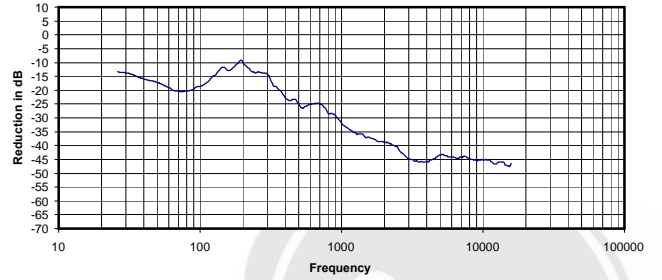
0.028 Vrms
 35 Ohms
 0.02 mW
 -11 dB



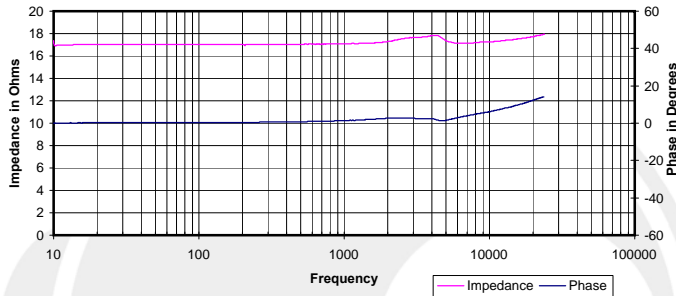
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



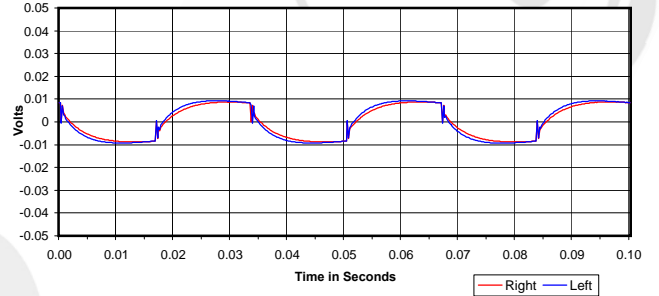
Isolation
Attenuation of External Sound vs. Frequency



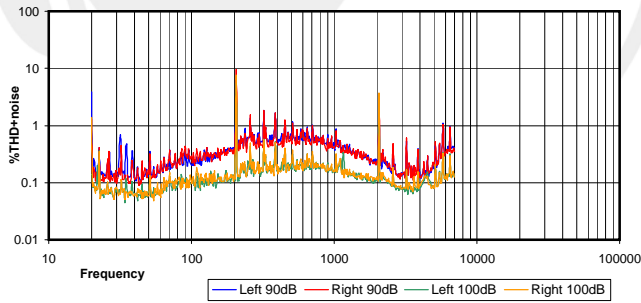
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



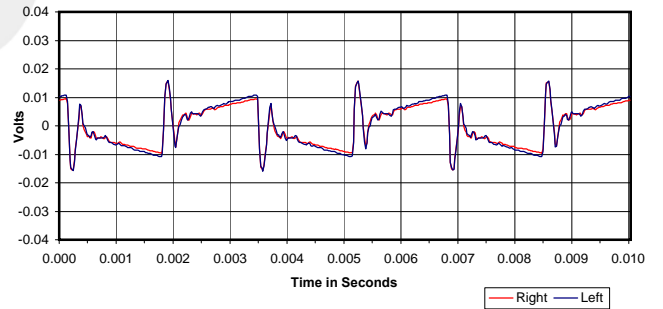
30 Hz Square Wave



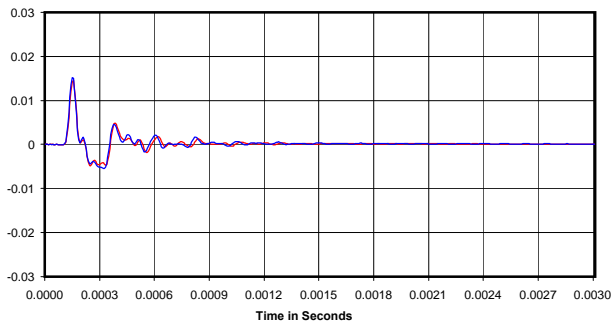
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

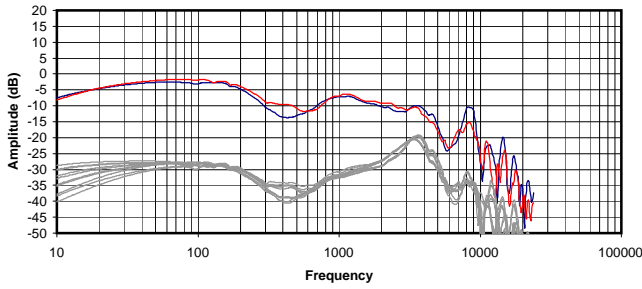


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

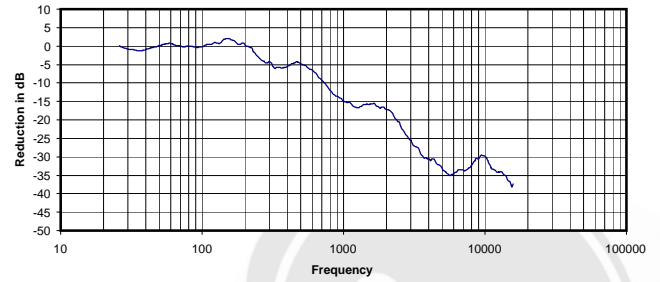
0.042 Vrms
17 Ohms
0.11 mW
-28 dB



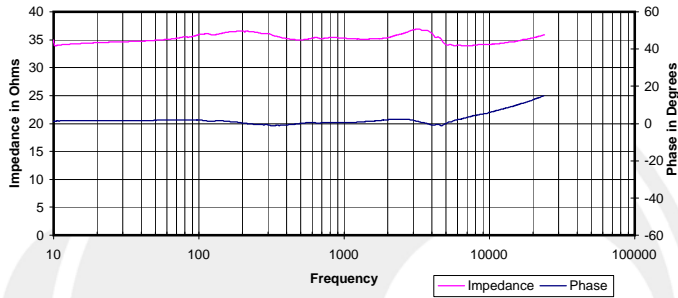
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



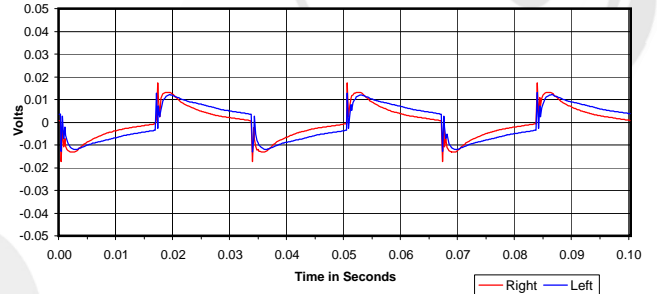
Isolation
 Attenuation of External Sound vs. Frequency



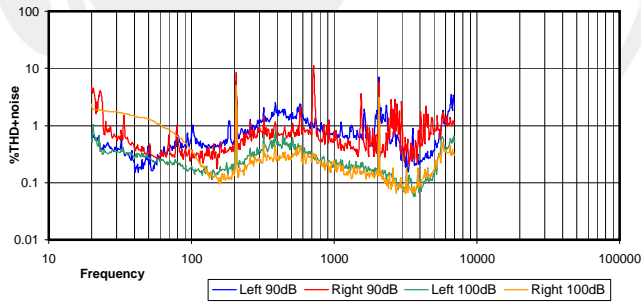
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



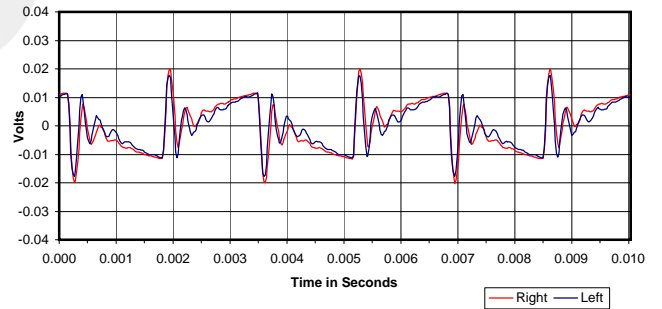
30 Hz Square Wave



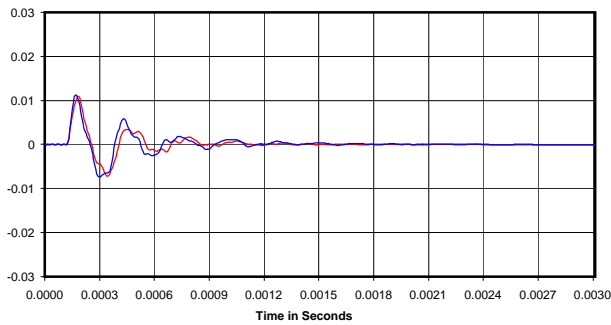
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

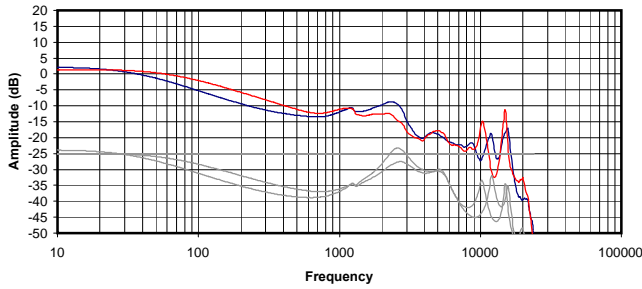


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

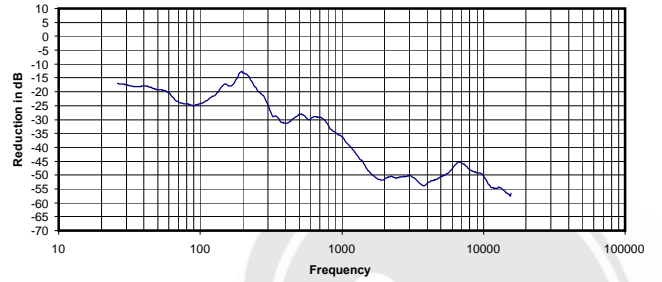
0.028 Vrms
 35 Ohms
 0.02 mW
 -12 dB



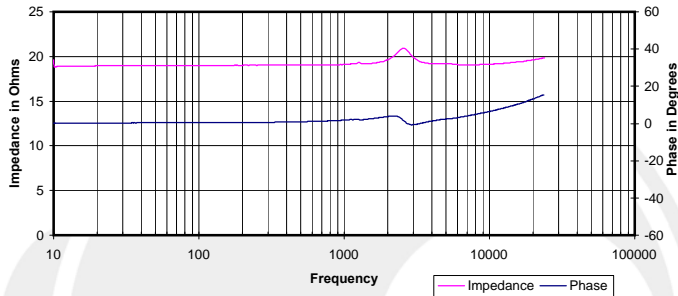
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



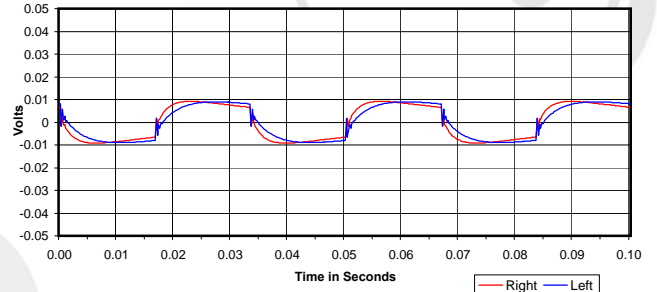
Isolation
Attenuation of External Sound vs. Frequency



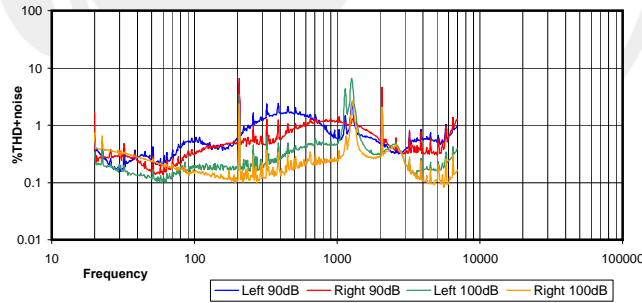
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



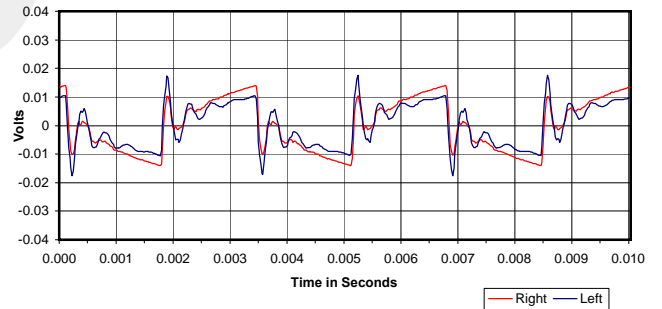
30 Hz Square Wave



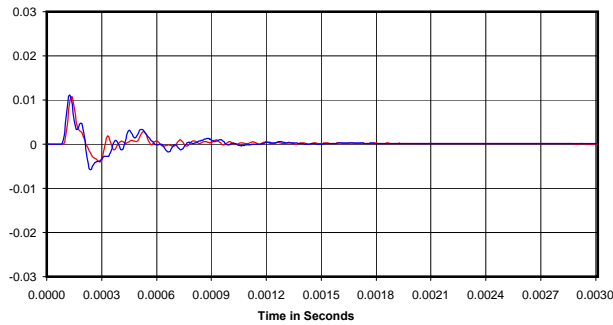
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



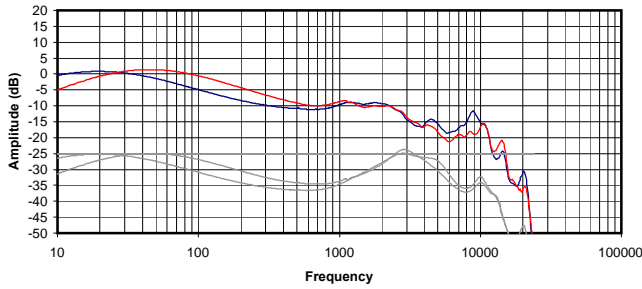
Impulse Response



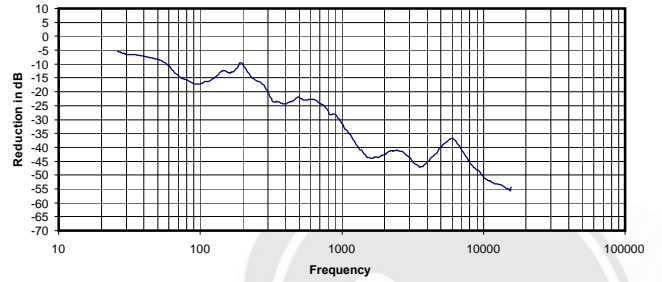
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.036 Vrms
19 Ohms
0.07 mW
-35 dB

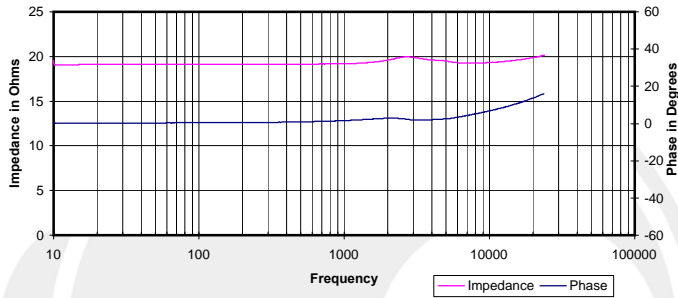
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



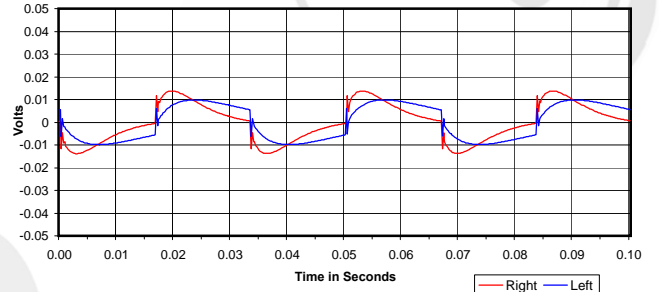
Isolation
Attenuation of External Sound vs. Frequency



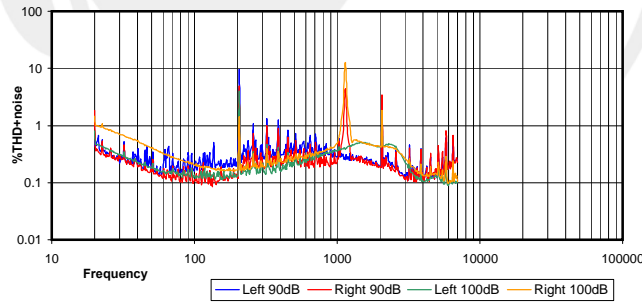
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



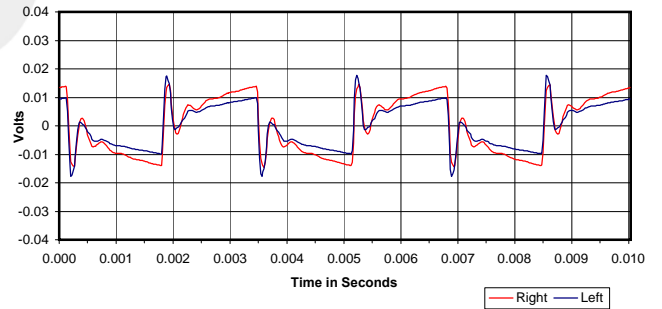
30 Hz Square Wave



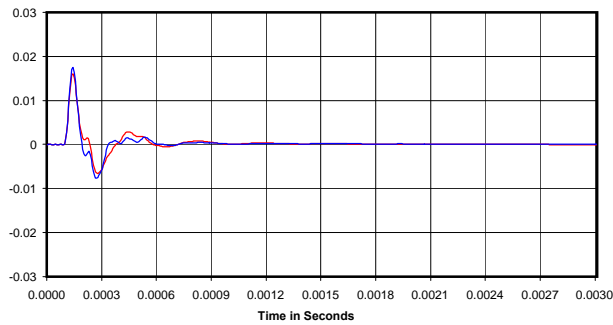
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

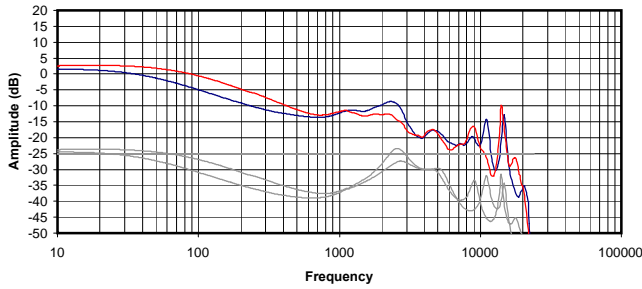


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

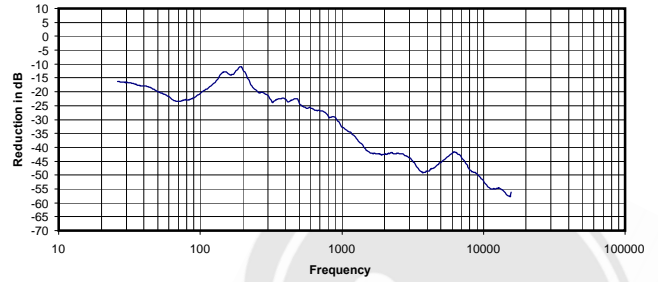
0.052 Vrms
19 Ohms
0.14 mW
-29 dB



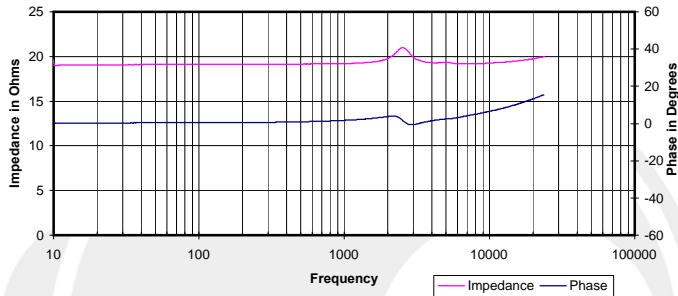
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



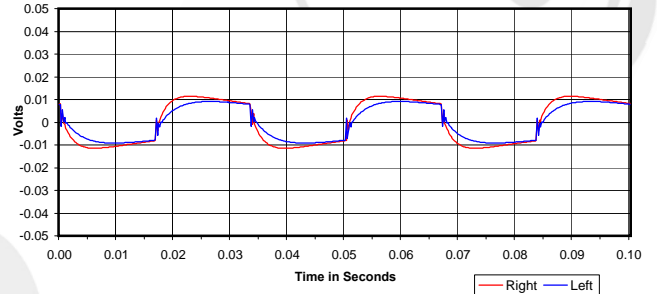
Isolation
Attenuation of External Sound vs. Frequency



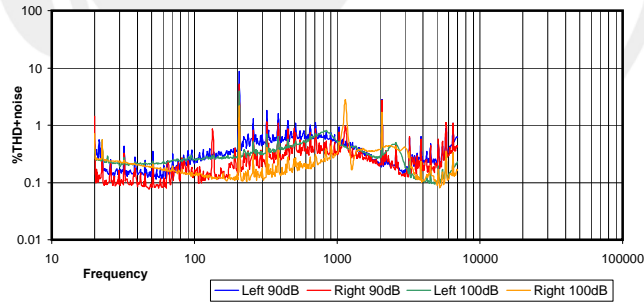
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



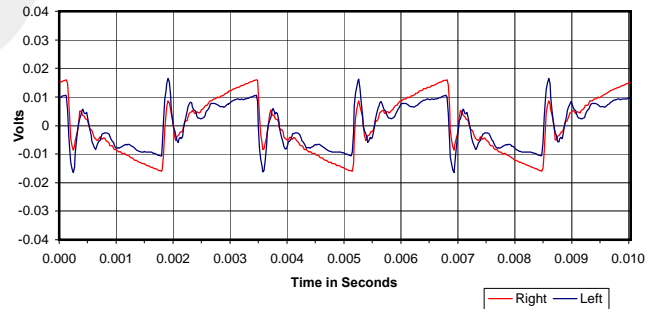
30 Hz Square Wave



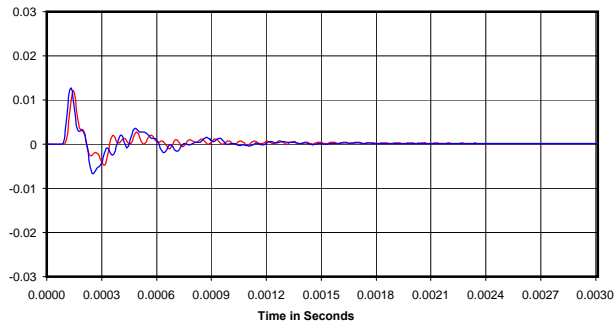
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

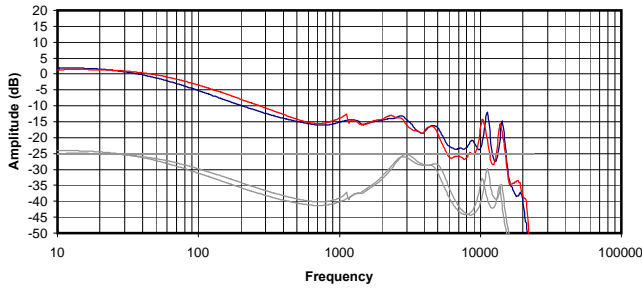


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

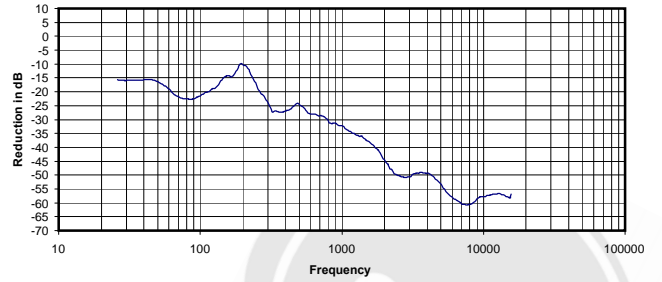
0.039 Vrms
19 Ohms
0.08 mW
-30 dB



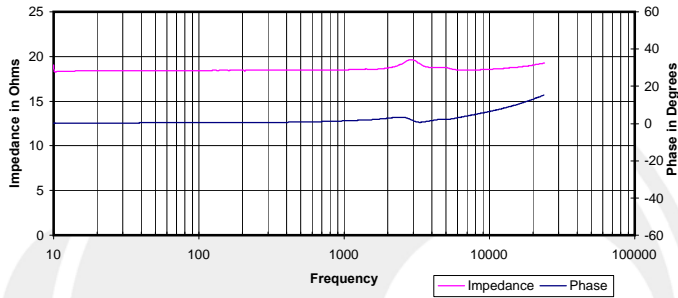
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



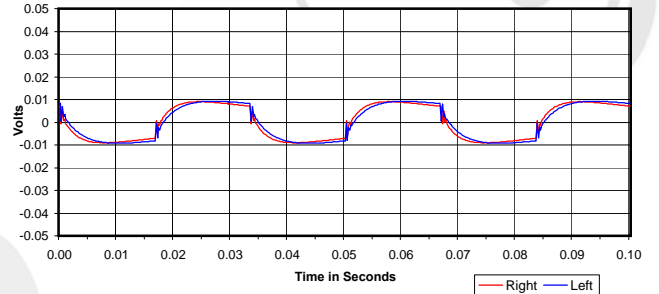
Isolation
Attenuation of External Sound vs. Frequency



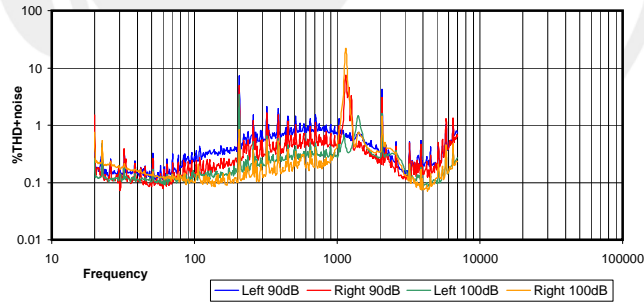
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



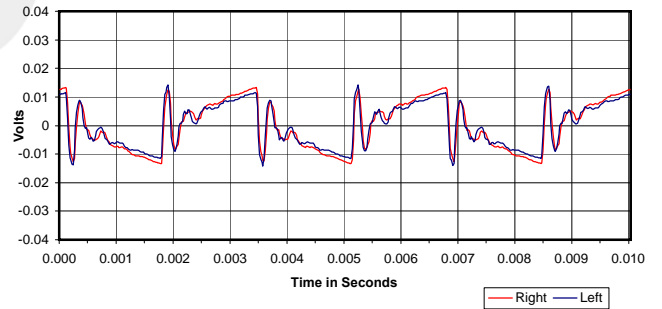
30 Hz Square Wave



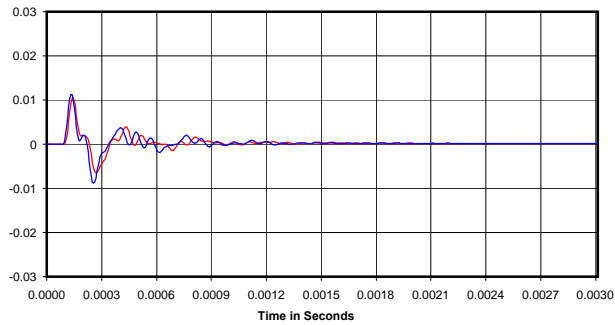
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

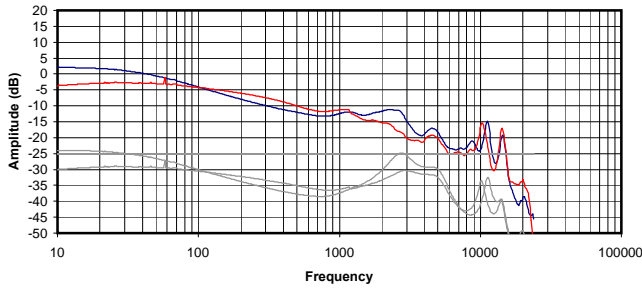


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

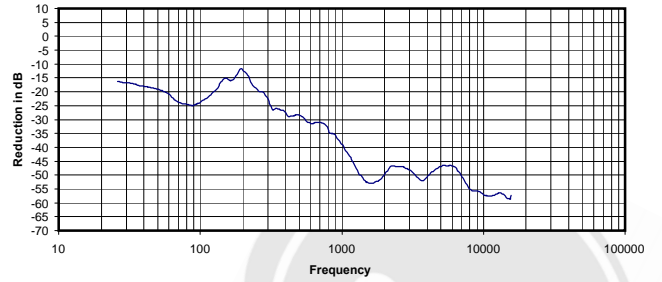
0.049 Vrms
19 Ohms
0.13 mW
-32 dB



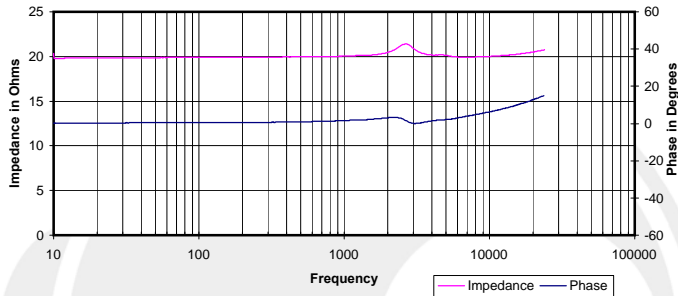
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



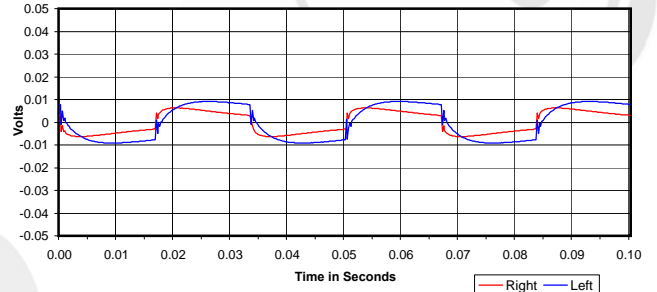
Isolation
Attenuation of External Sound vs. Frequency



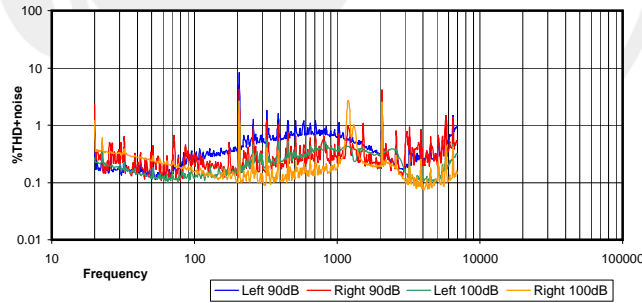
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



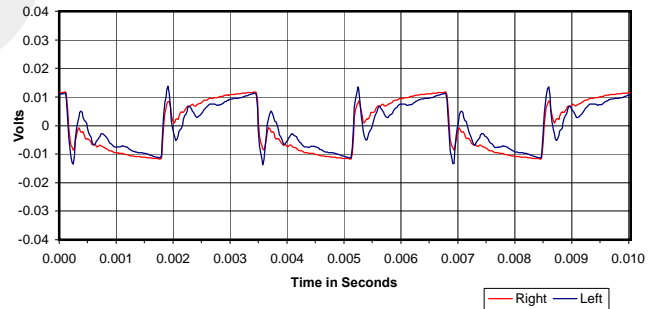
30 Hz Square Wave



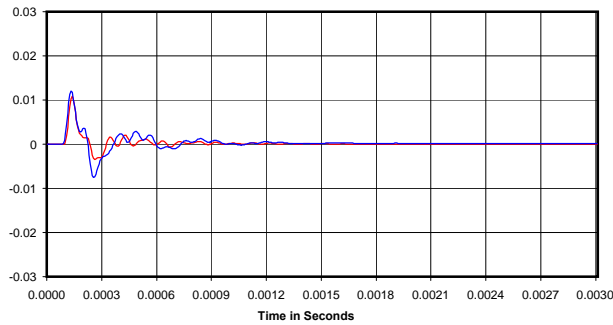
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

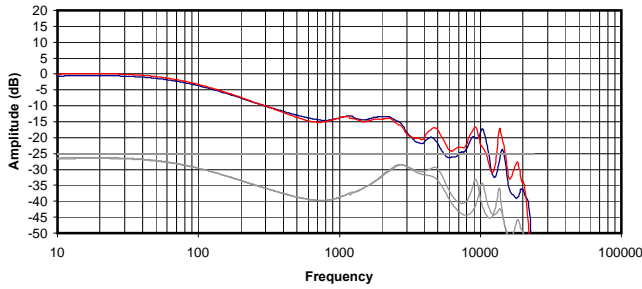


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

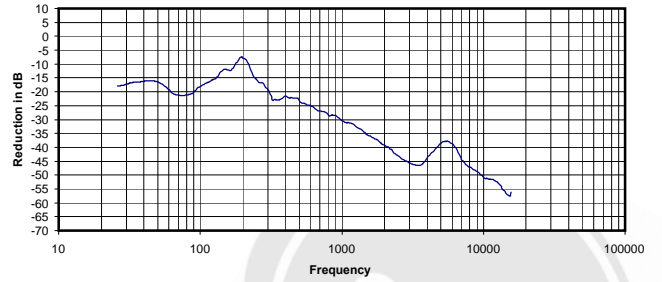
0.039 Vrms
20 Ohms
0.08 mW
-35 dB



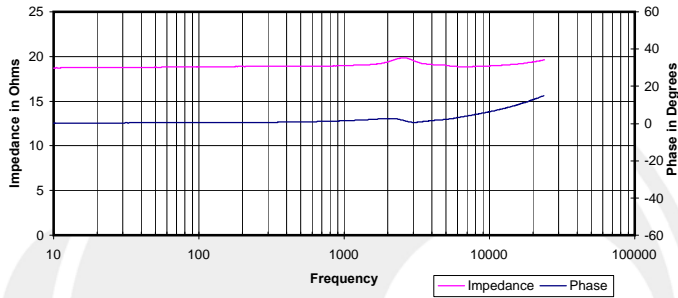
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



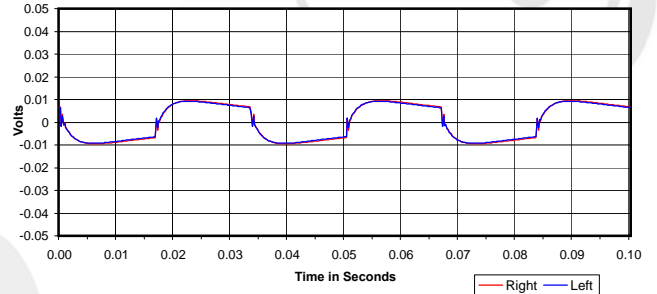
Isolation
Attenuation of External Sound vs. Frequency



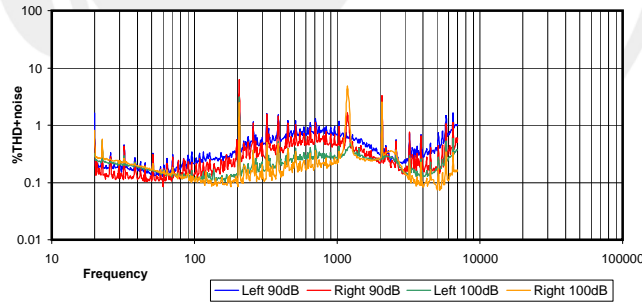
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



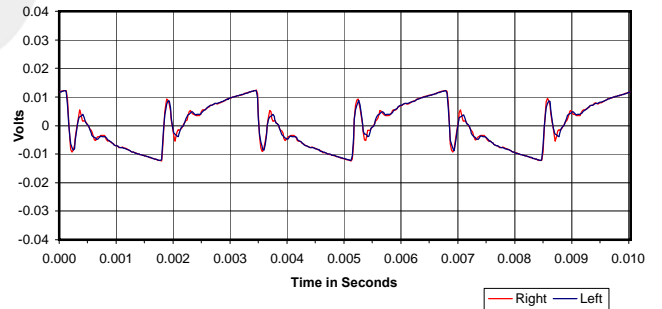
30 Hz Square Wave



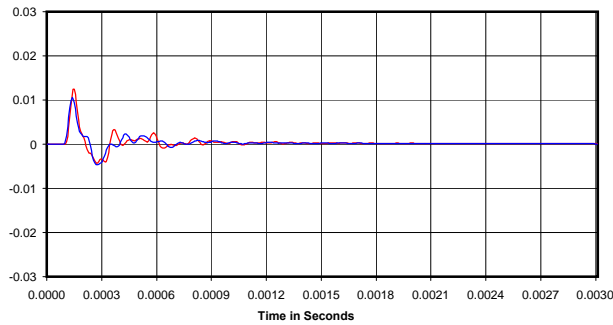
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

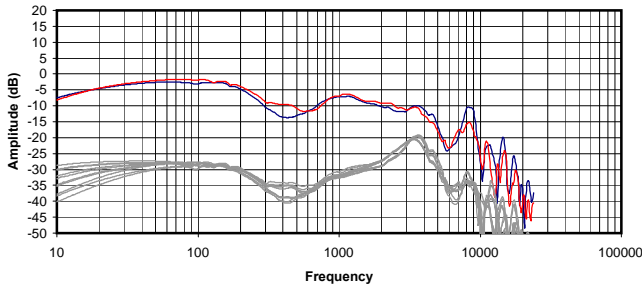


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

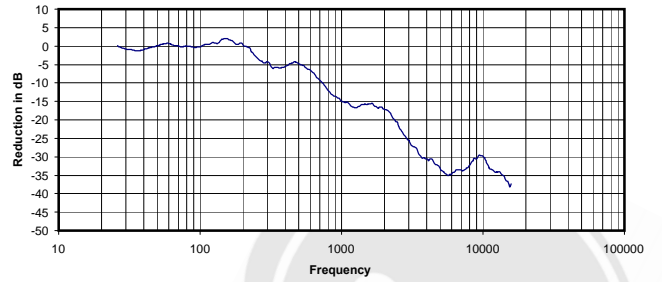
0.041 Vrms
19 Ohms
0.09 mW
-28 dB



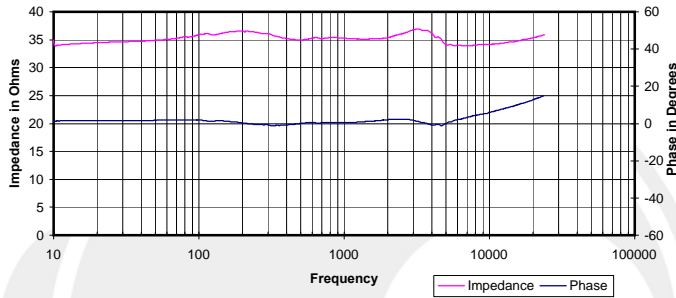
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



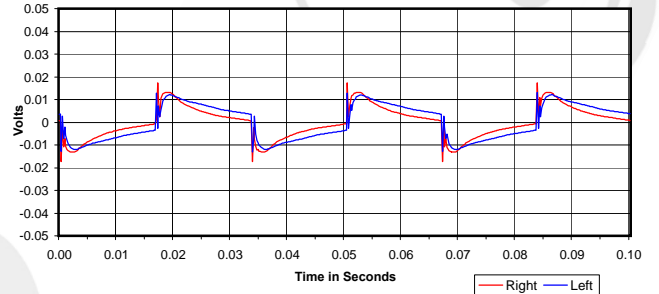
Isolation
Attenuation of External Sound vs. Frequency



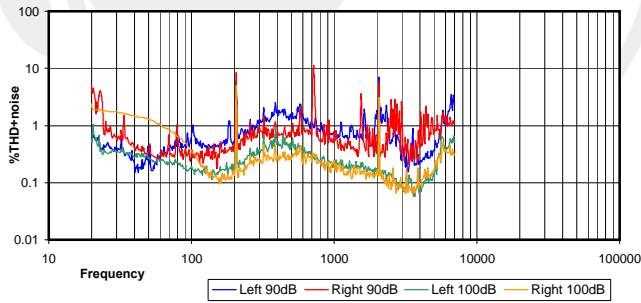
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



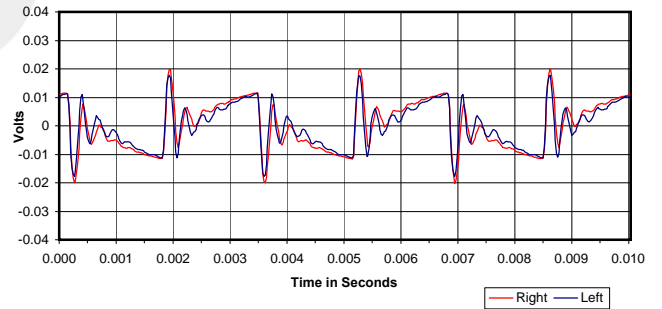
30 Hz Square Wave



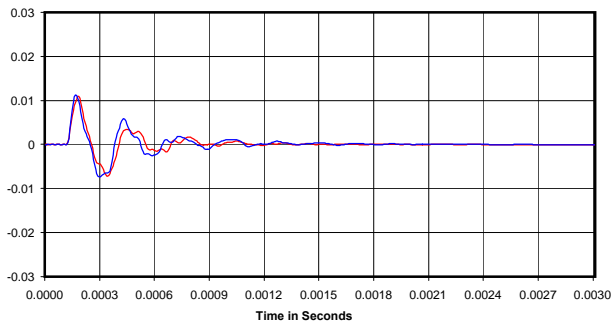
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



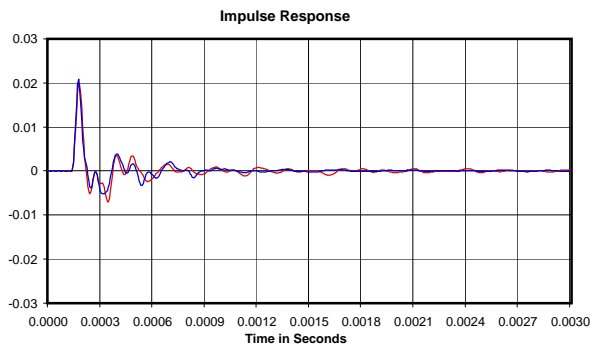
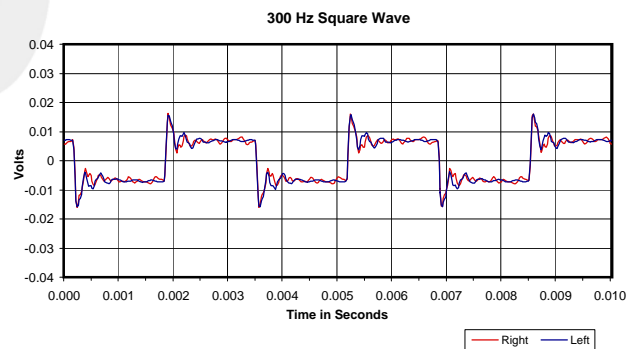
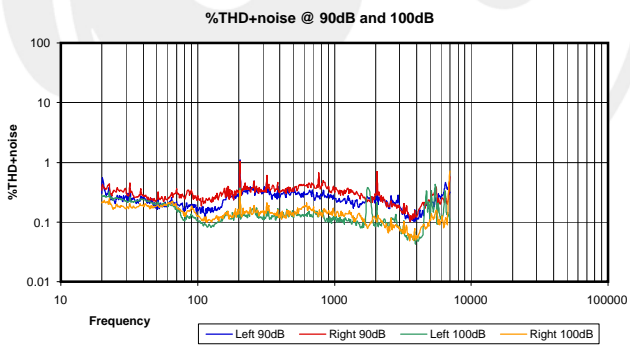
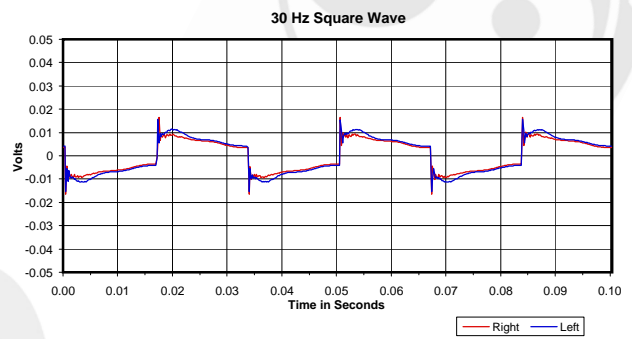
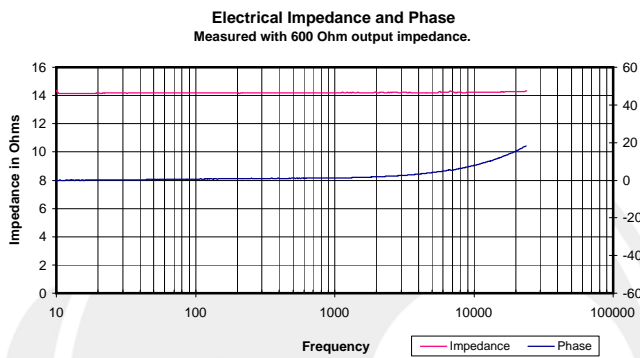
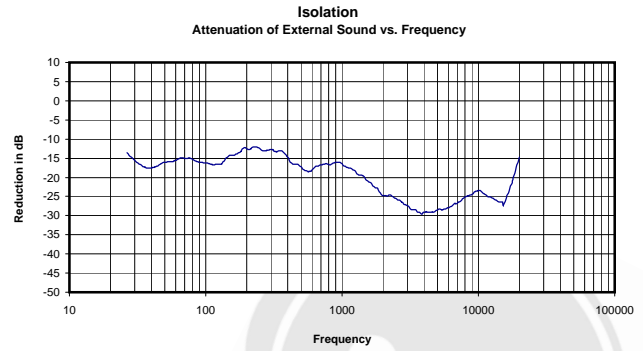
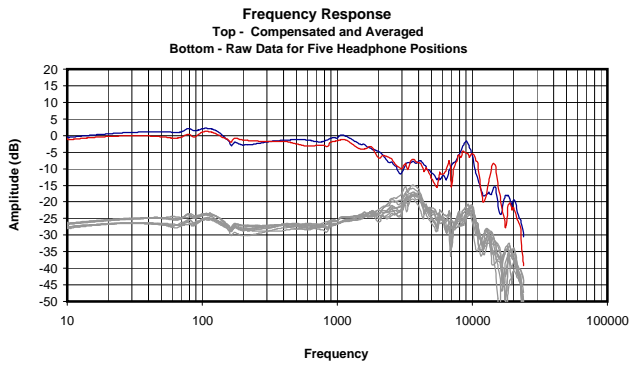
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
35 Ohms
0.02 mW
-12 dB

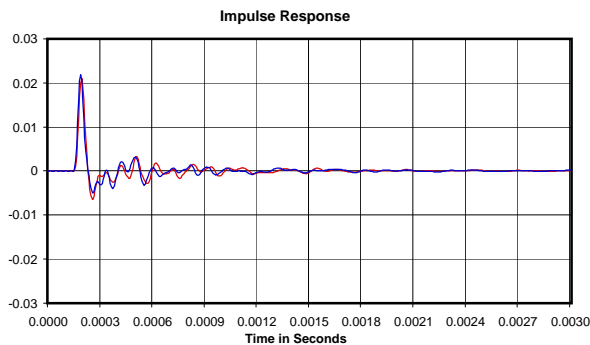
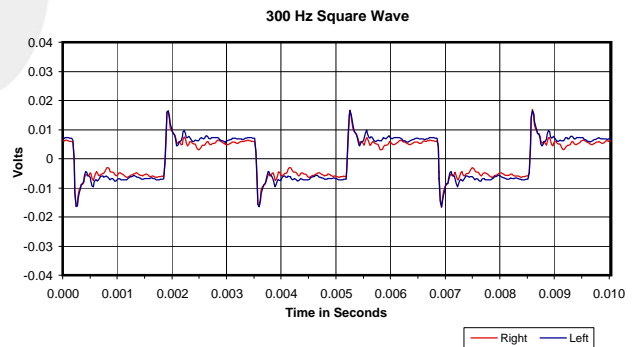
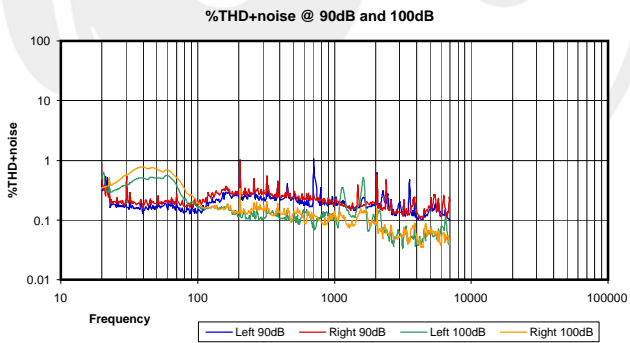
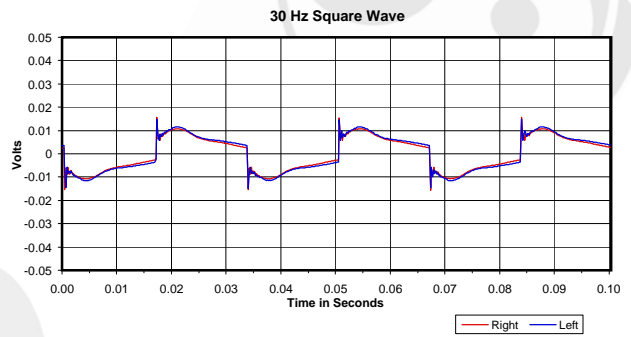
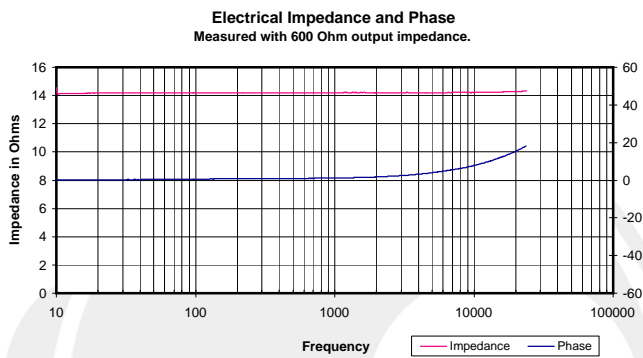
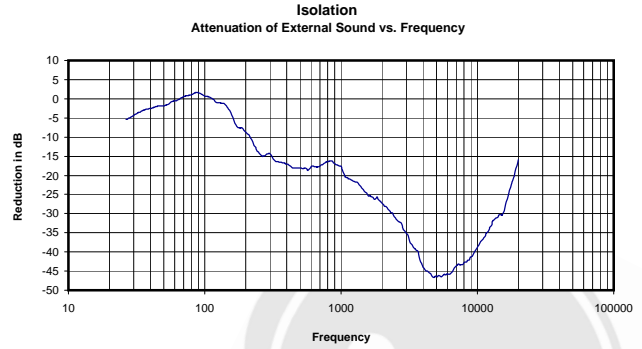
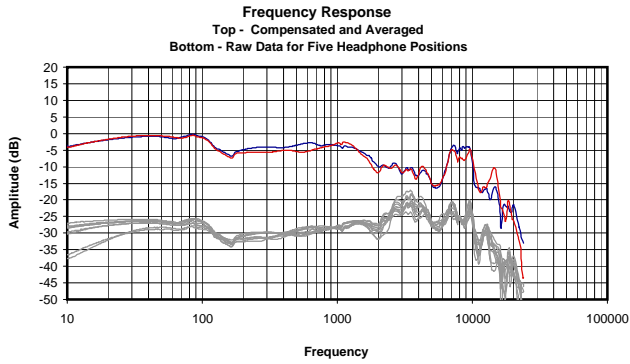




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

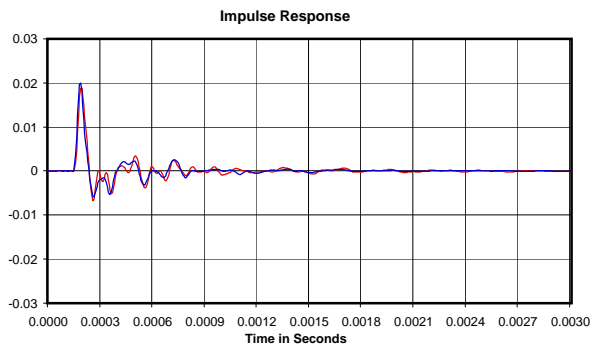
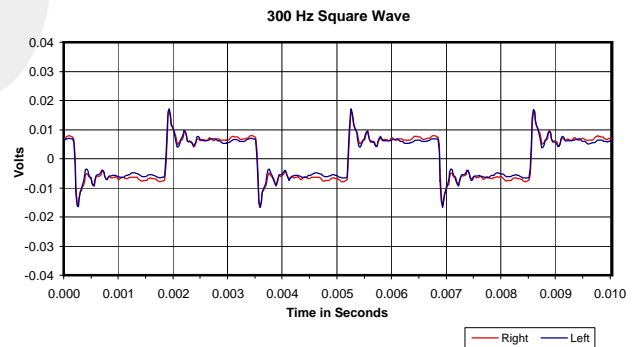
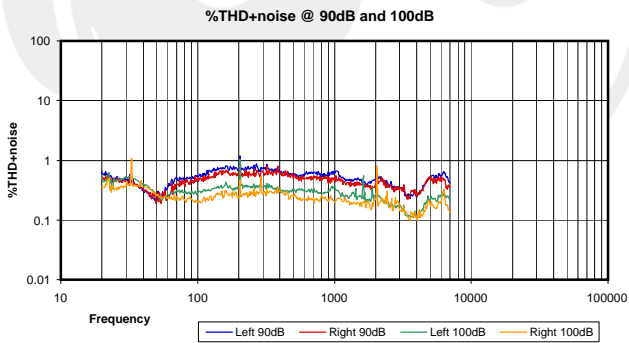
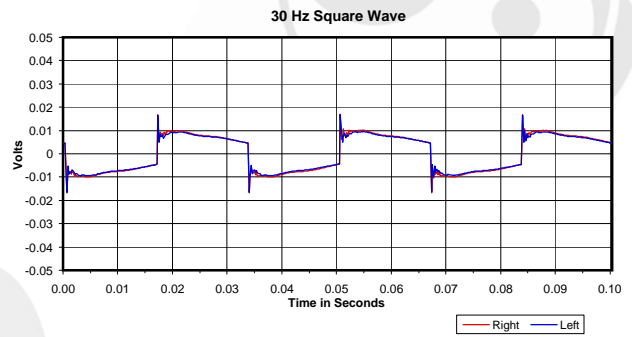
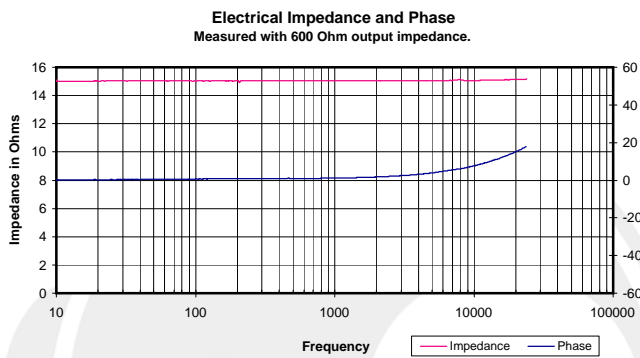
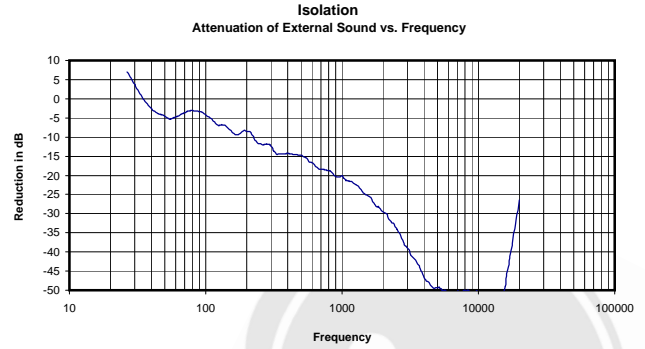
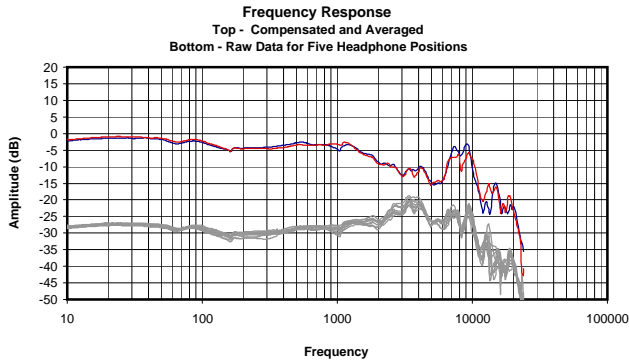
0.670 Vrms
14 Ohms
31.61 mW
-20 dBr





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

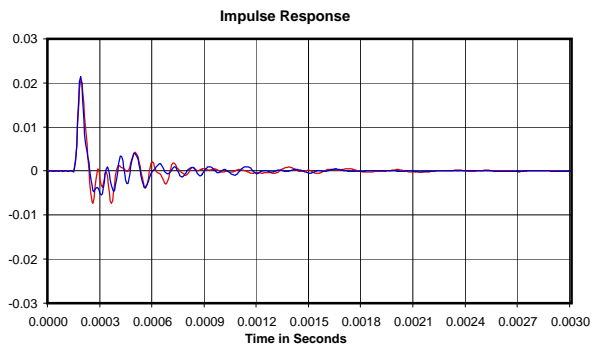
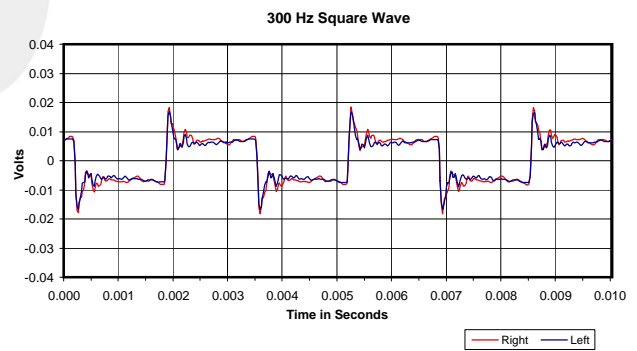
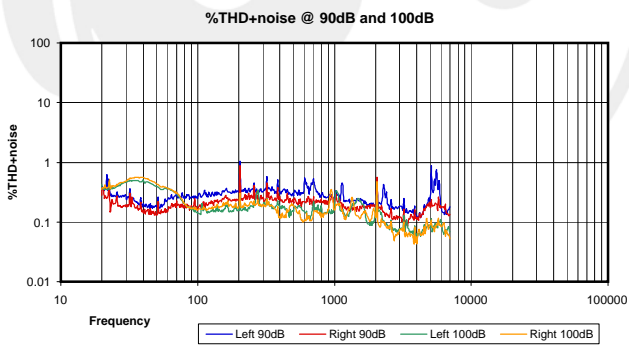
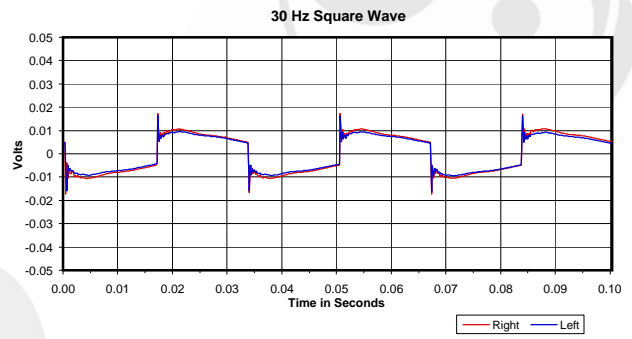
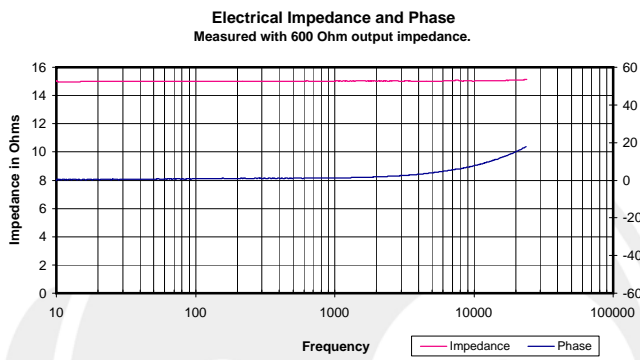
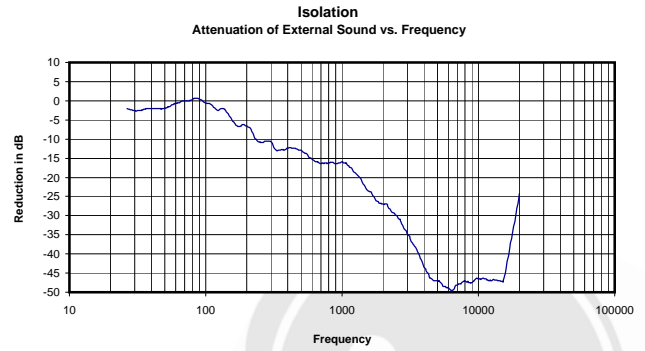
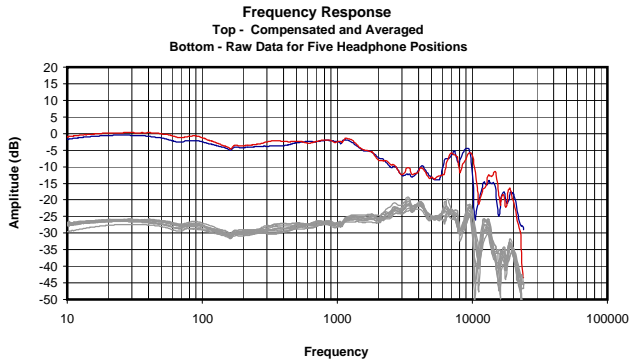
0.176 Vrms
14 Ohms
2.18 mW
-24 dB



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.346 Vrms
15 Ohms
7.96 mW
-26 dB

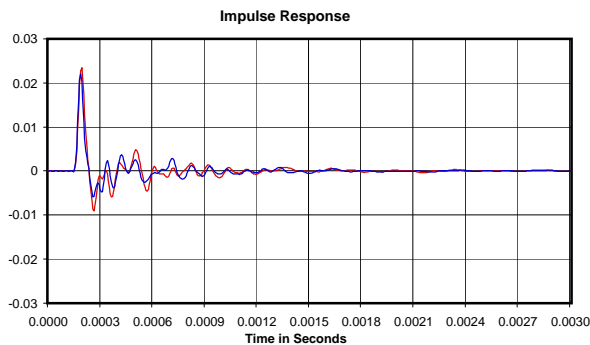
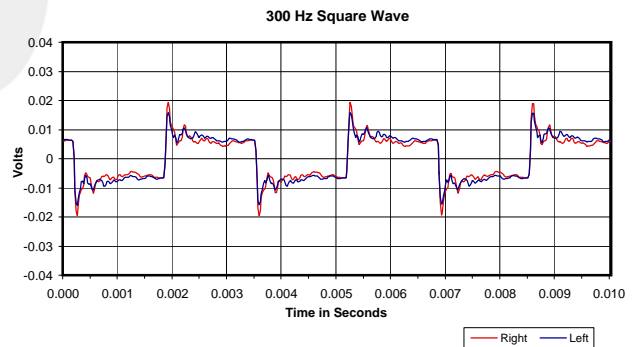
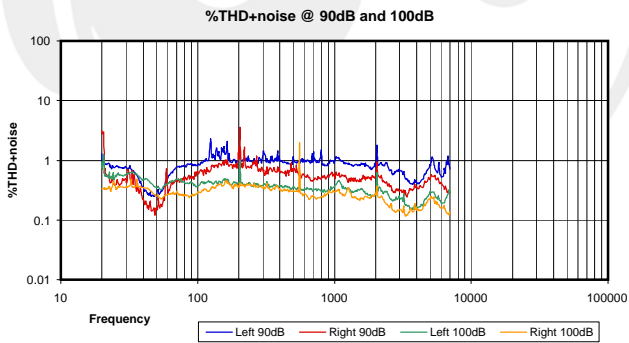
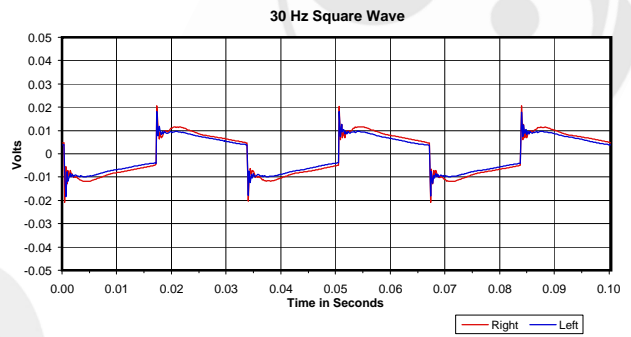
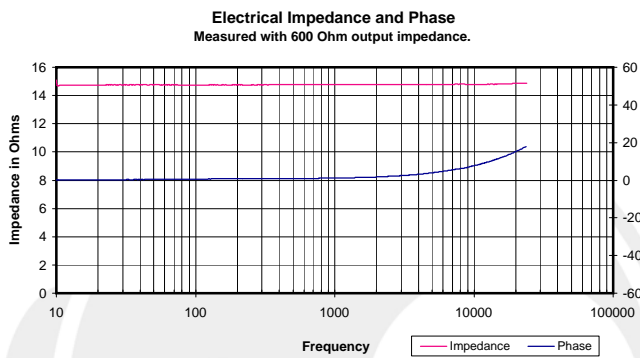
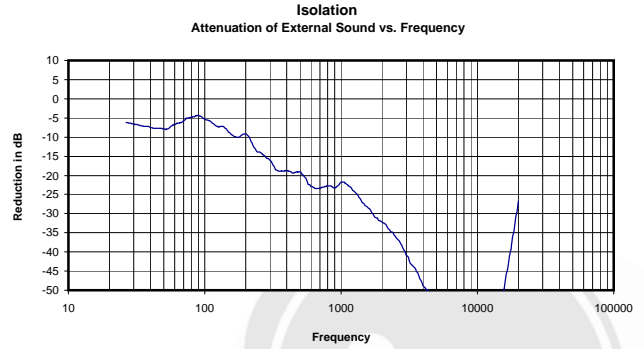
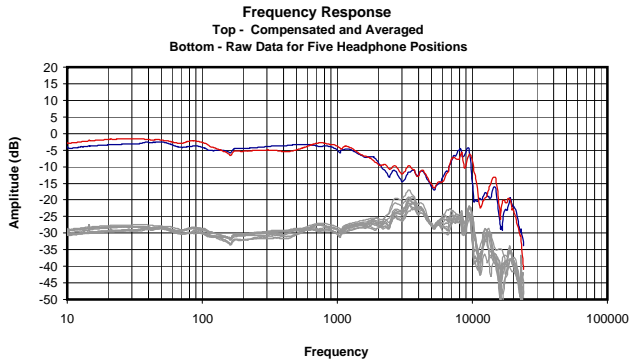




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.200 Vrms
15 Ohms
2.66 mW
-23 dB

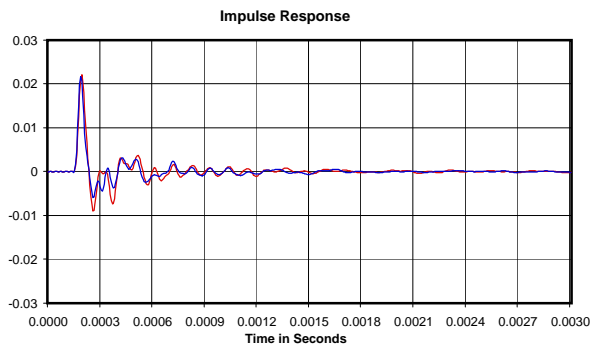
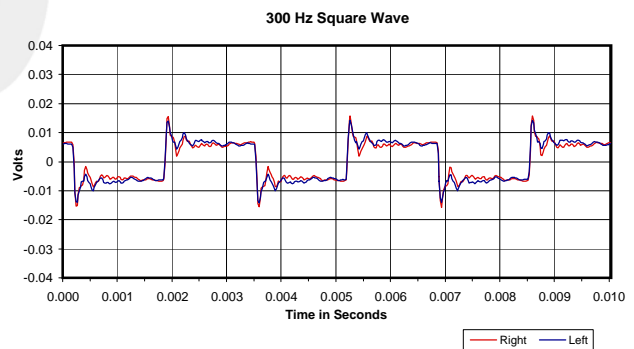
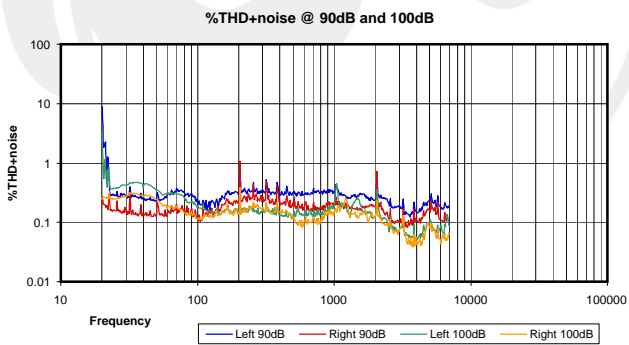
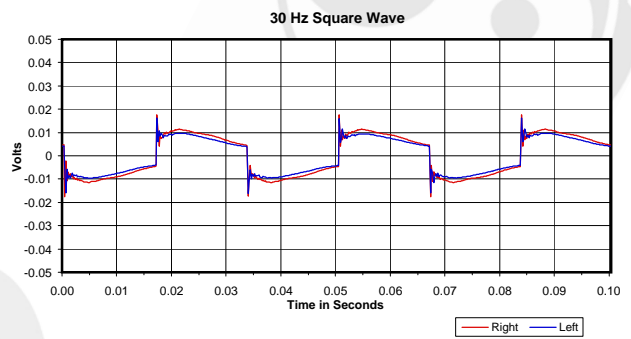
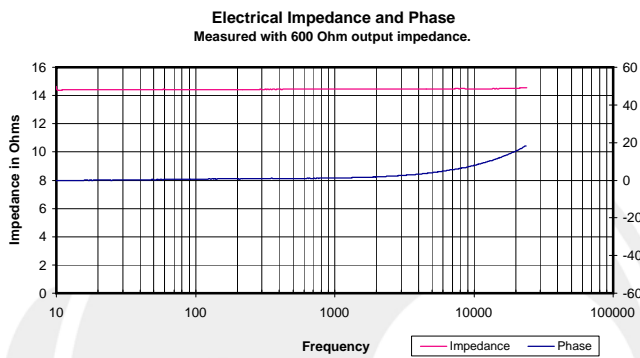
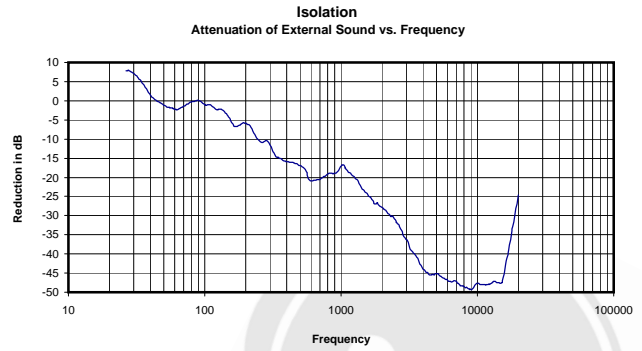
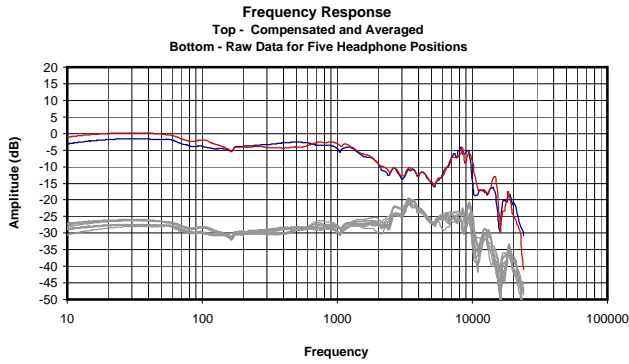




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.445 Vrms
15 Ohms
13.42 mW
-28 dB

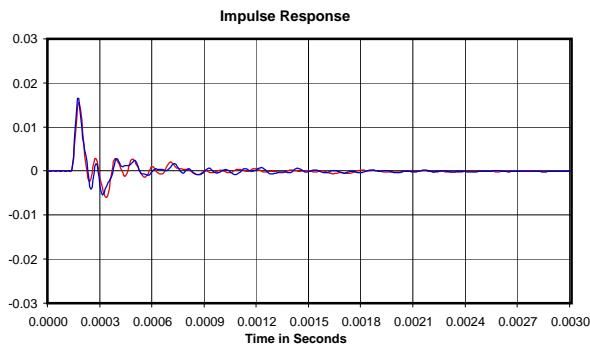
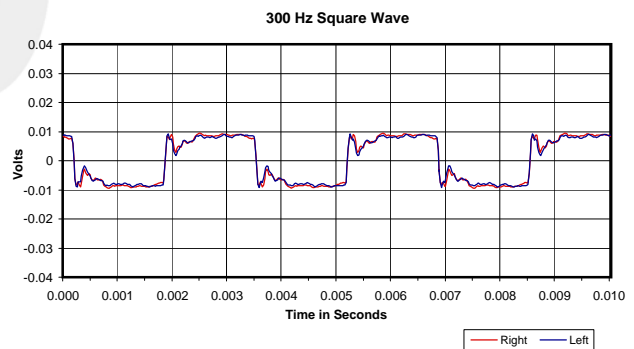
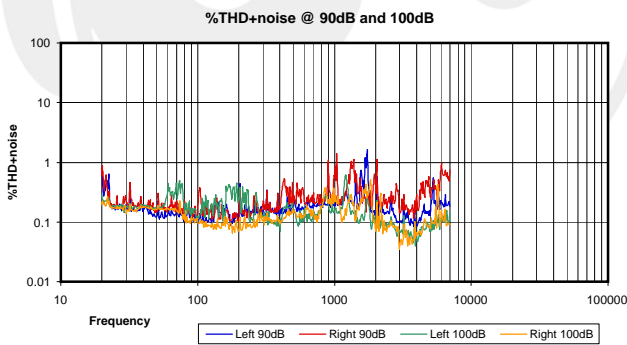
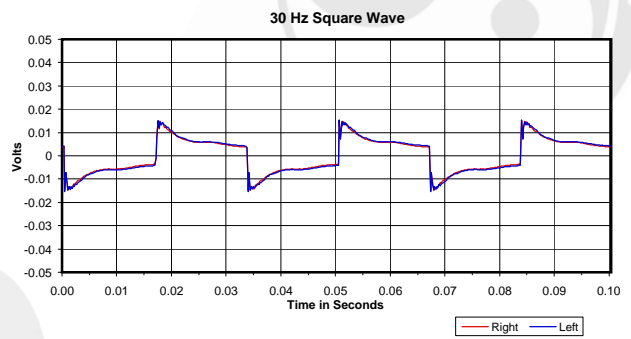
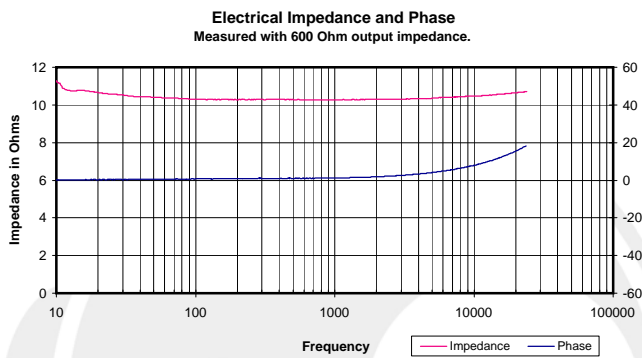
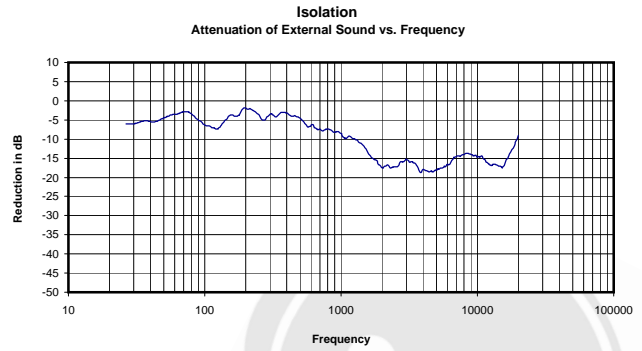
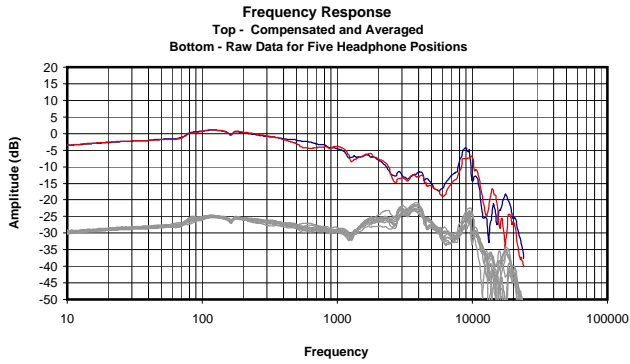




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.196 Vrms
14 Ohms
2.65 mW
-24 dB

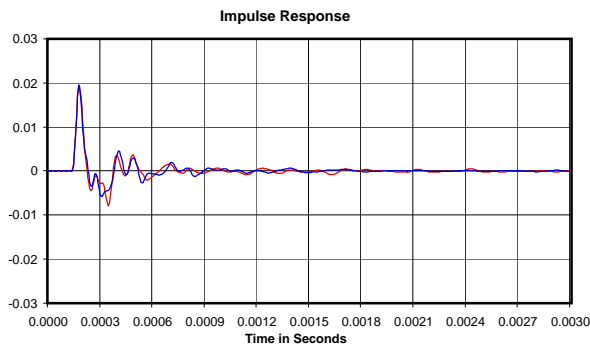
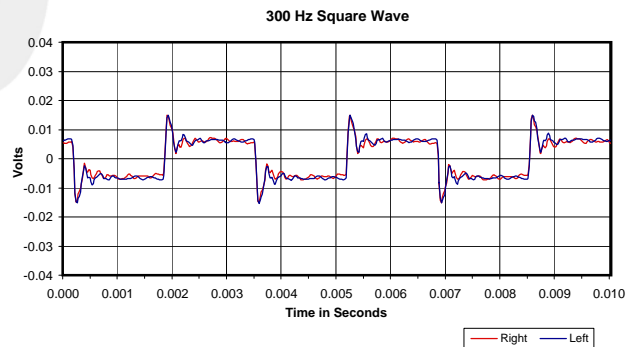
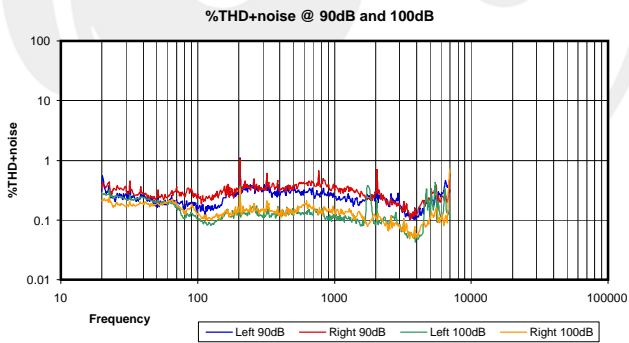
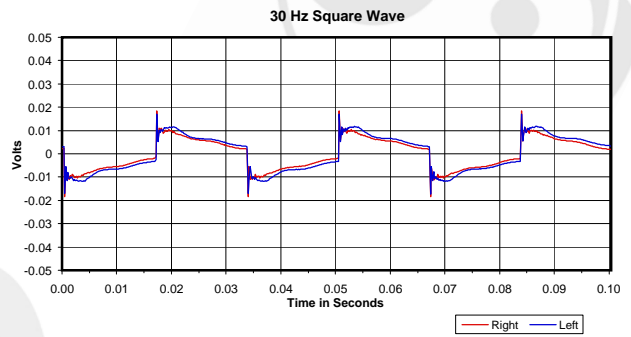
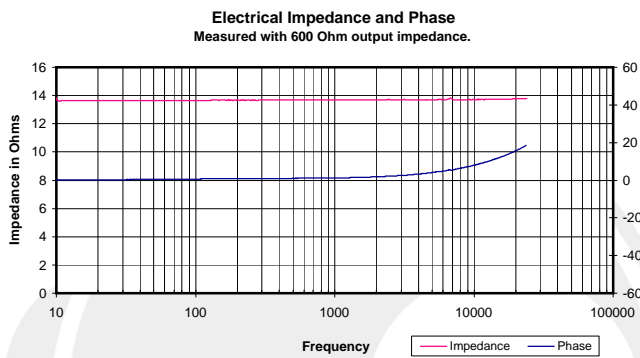
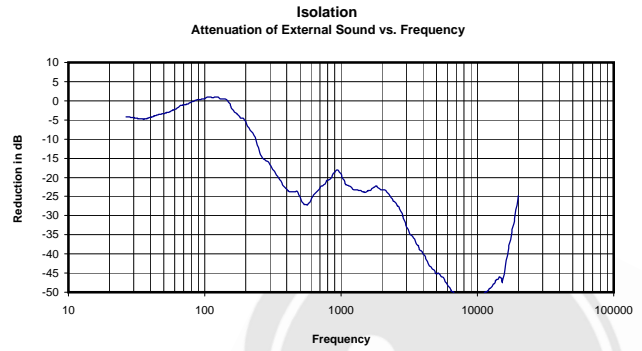
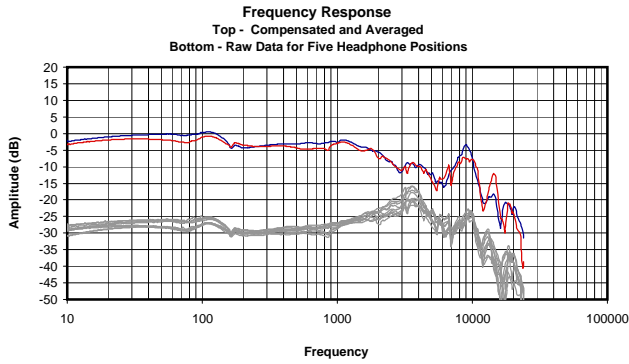




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.168 Vrms
10 Ohms
2.76 mW
-10 dB



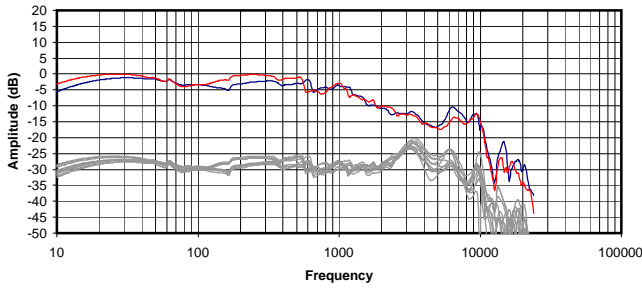


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

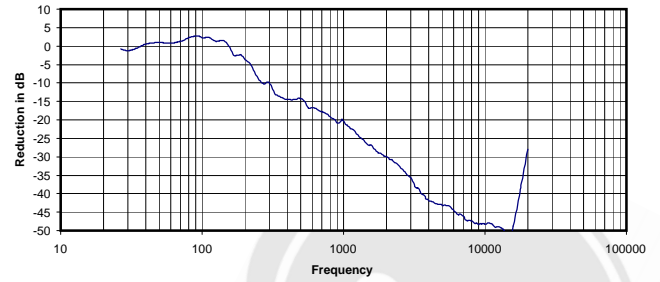
0.141 Vrms
14 Ohms
1.45 mW
-25 dB



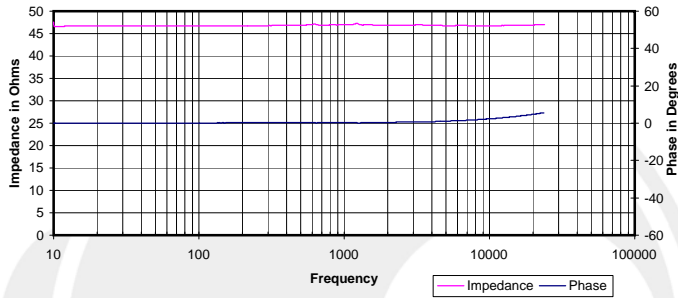
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



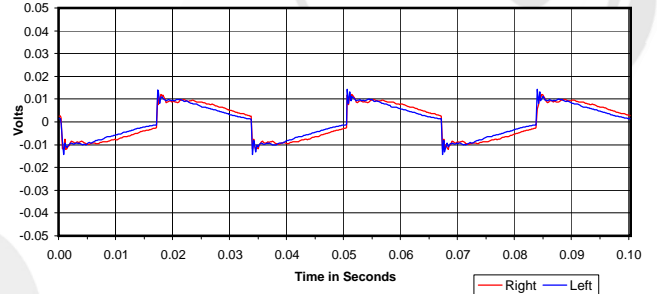
Isolation
 Attenuation of External Sound vs. Frequency



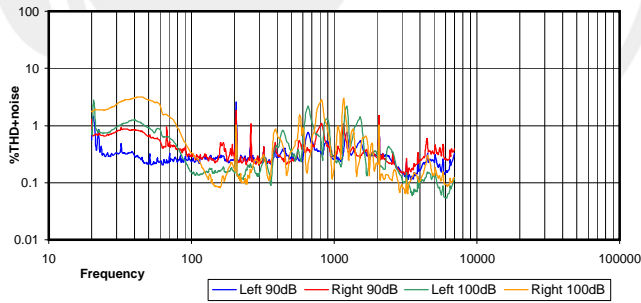
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



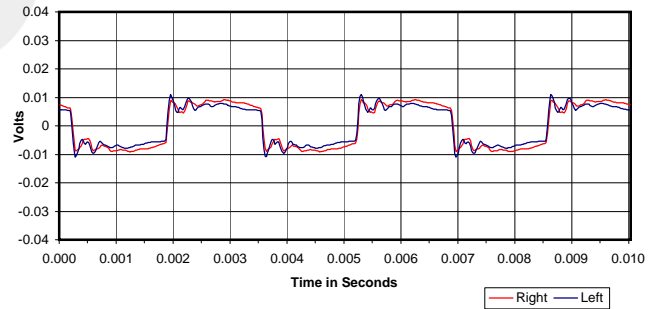
30 Hz Square Wave



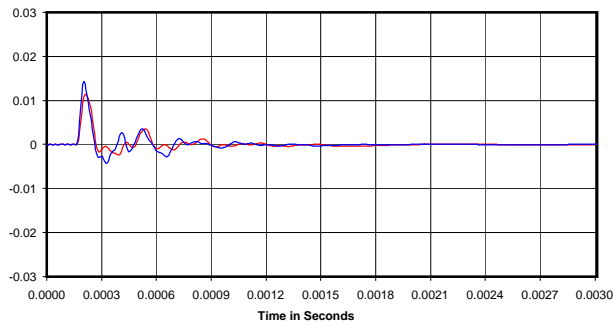
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



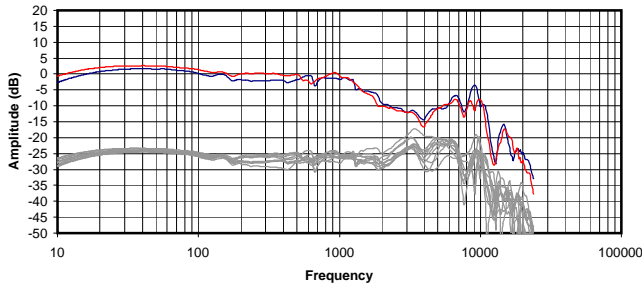
Impulse Response



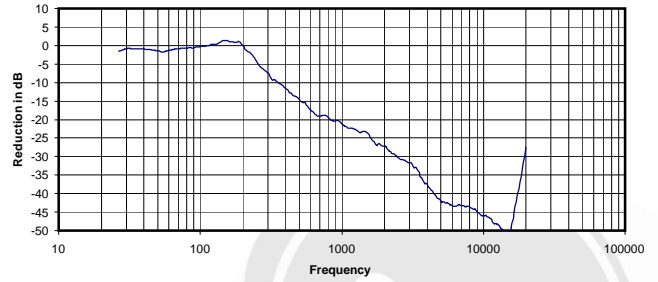
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.208 Vrms
 47 Ohms
 0.92 mW
 -23 dB

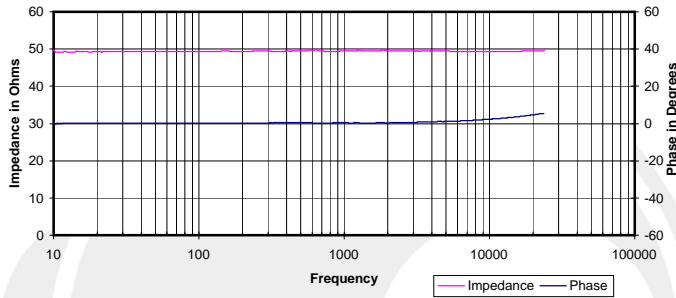
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



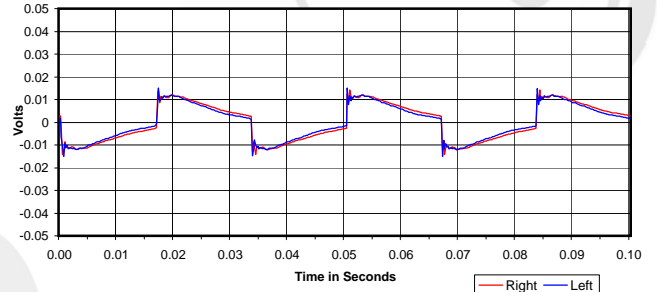
Isolation
Attenuation of External Sound vs. Frequency



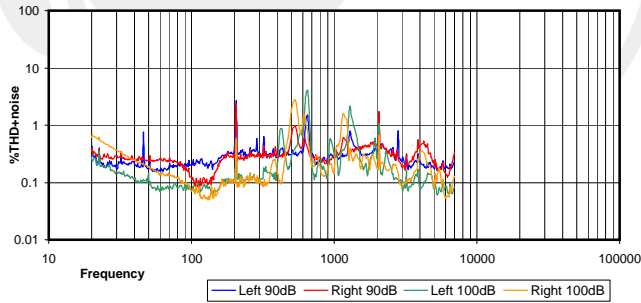
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



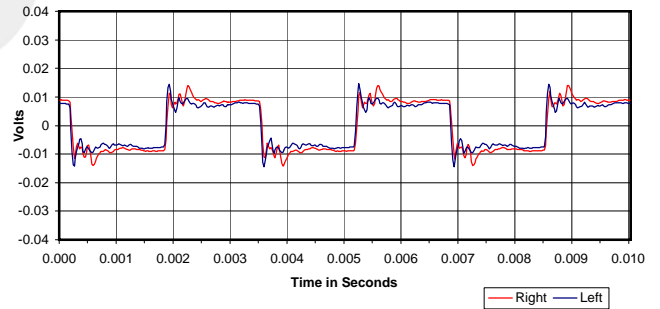
30 Hz Square Wave



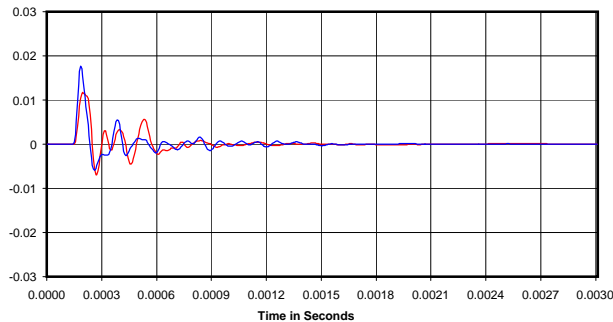
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



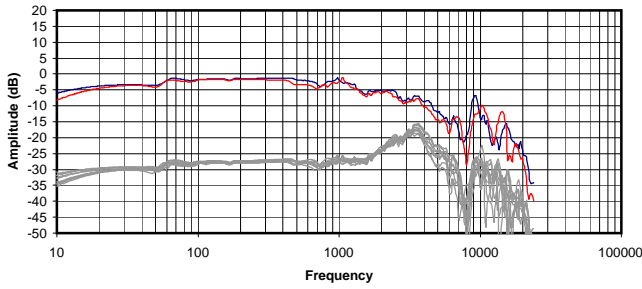
Impulse Response



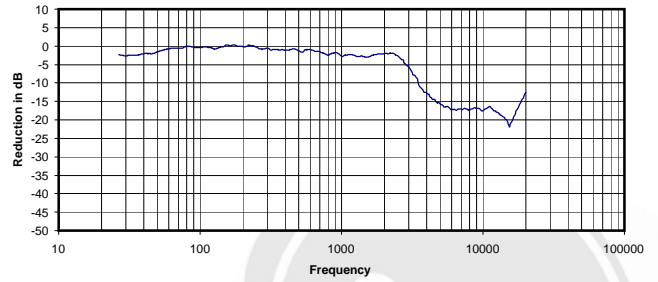
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.174 Vrms
49 Ohms
0.61 mW
-21 dB

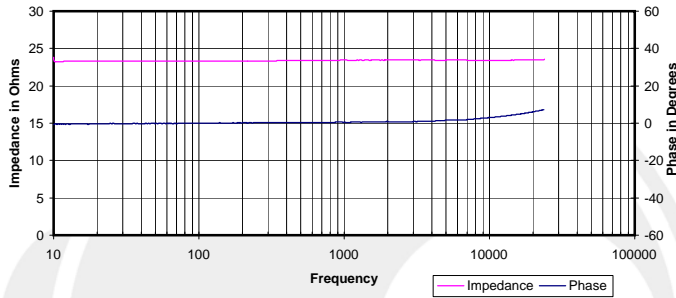
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



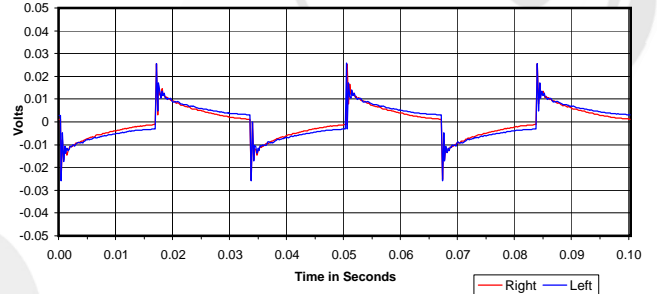
Isolation
 Attenuation of External Sound vs. Frequency



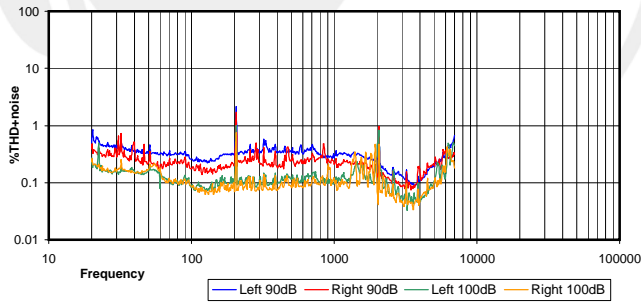
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



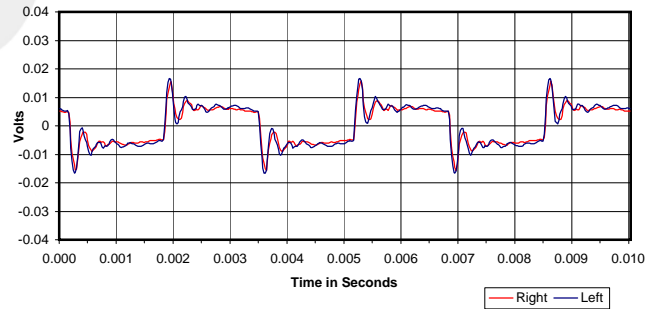
30 Hz Square Wave



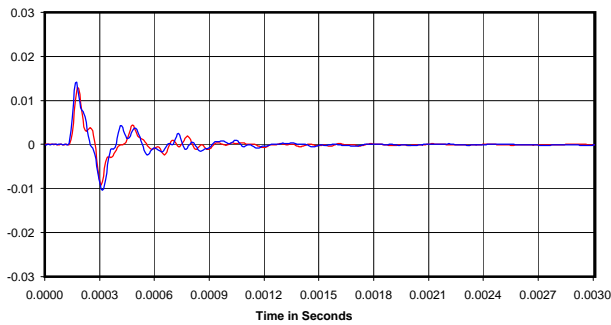
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

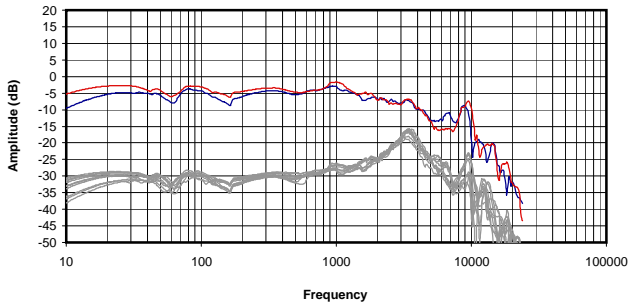


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

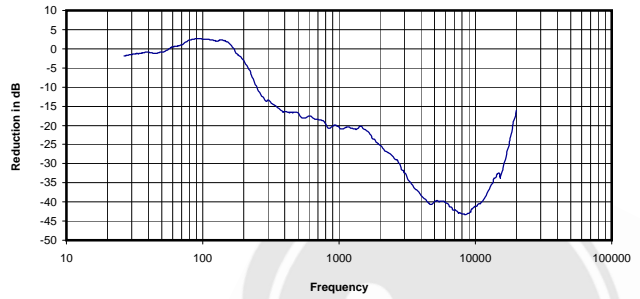
0.071 Vrms
 23 Ohms
 0.21 mW
 -5 dB



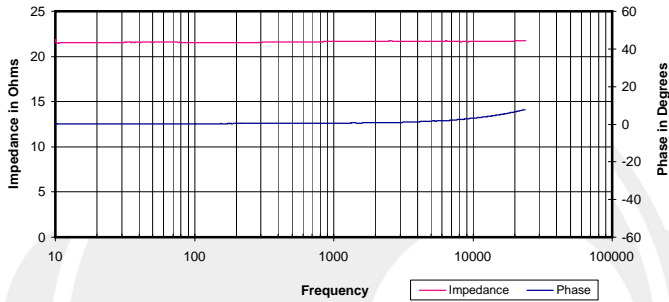
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



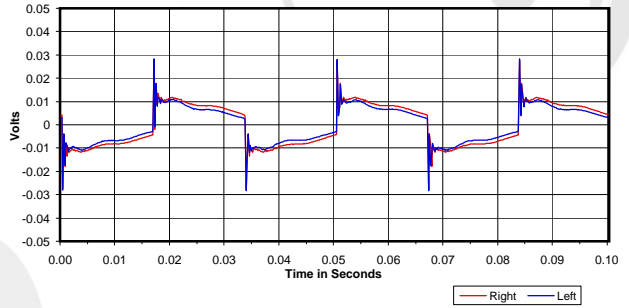
Isolation
Attenuation of External Sound vs. Frequency



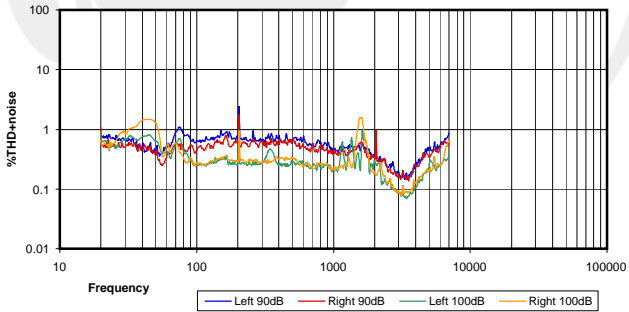
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



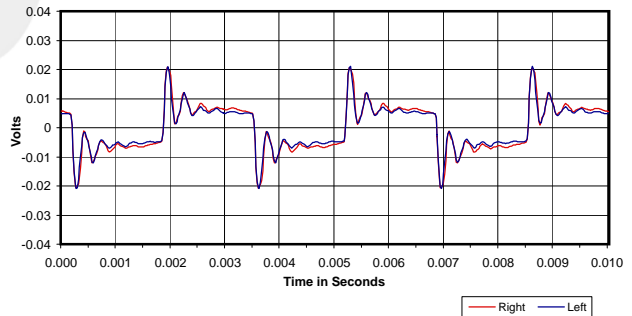
30 Hz Square Wave



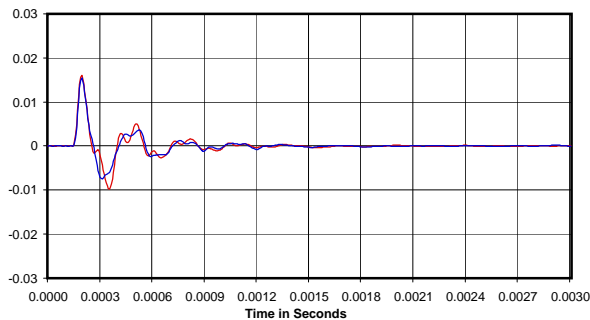
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



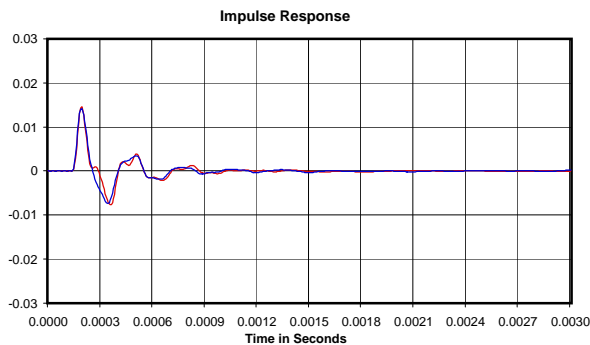
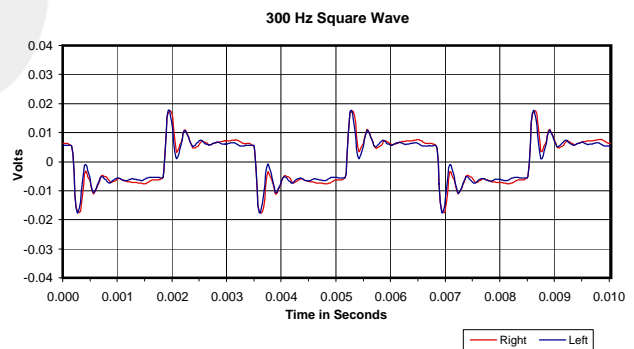
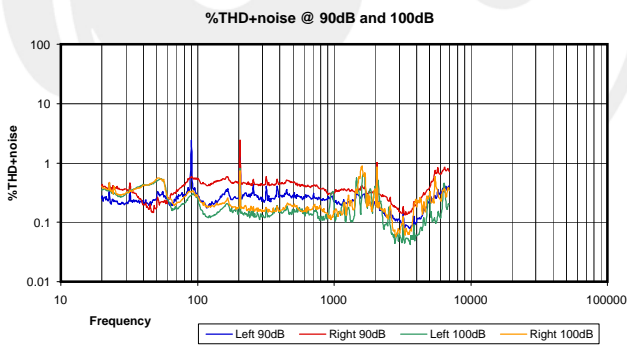
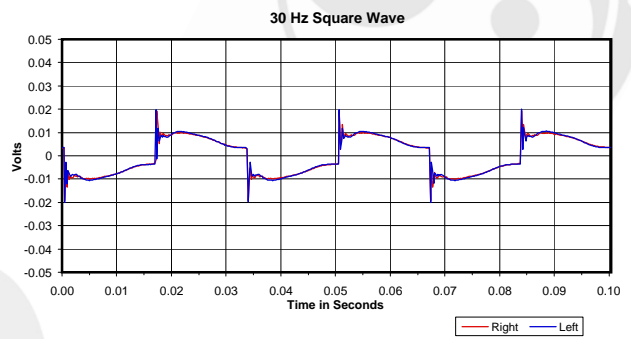
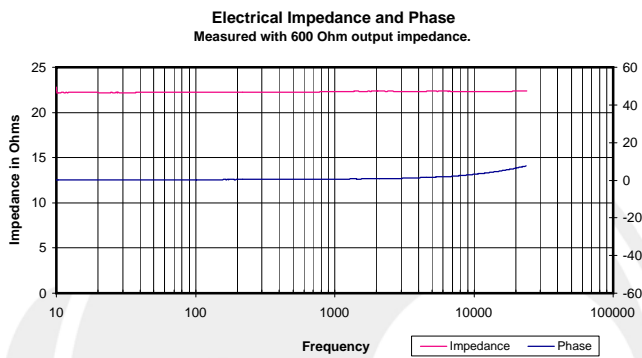
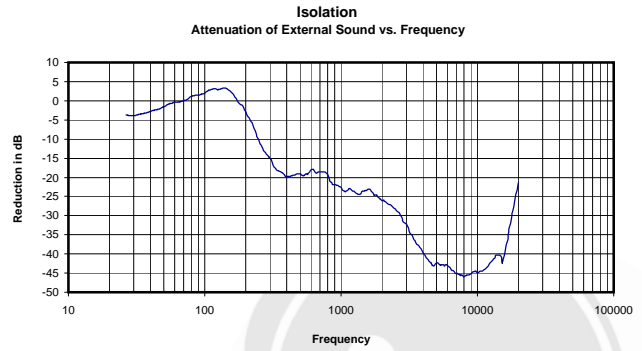
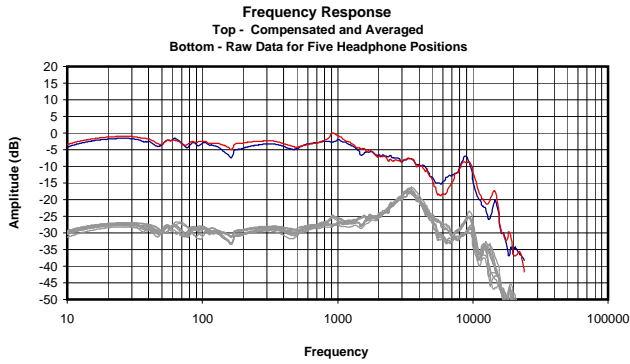
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.117 Vrms
22 Ohms
0.64 mW
-22 dB

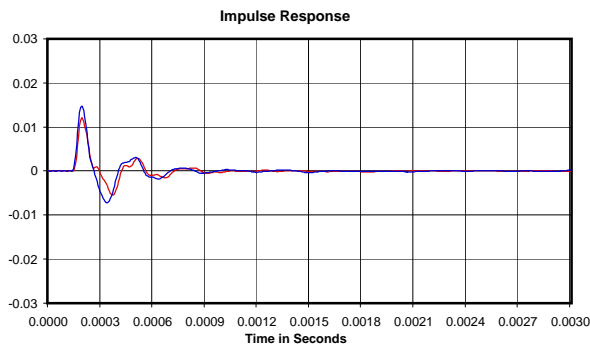
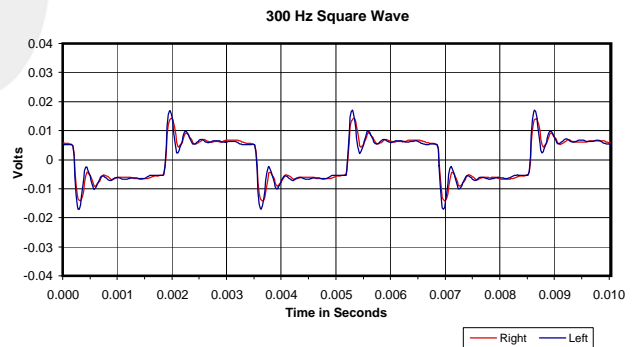
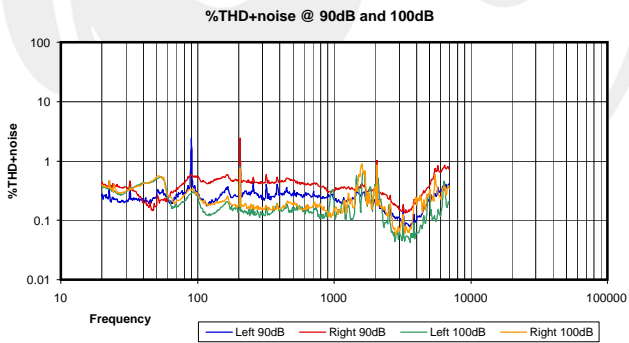
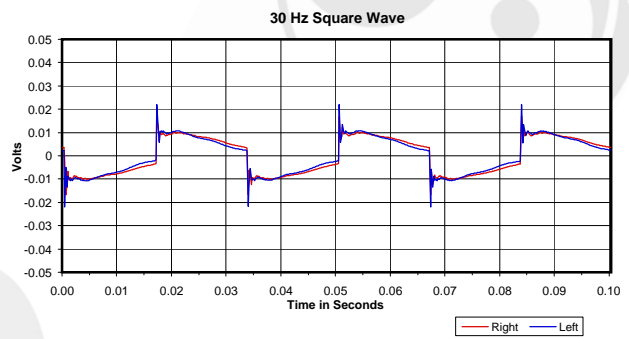
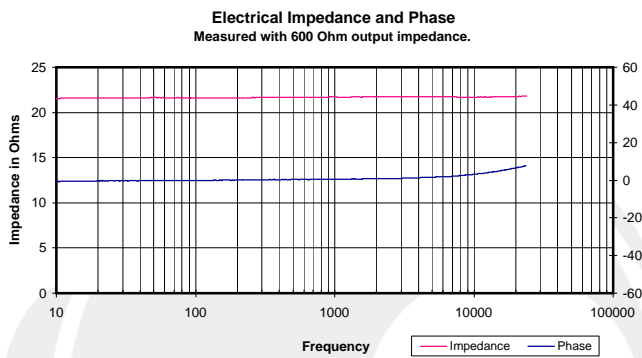
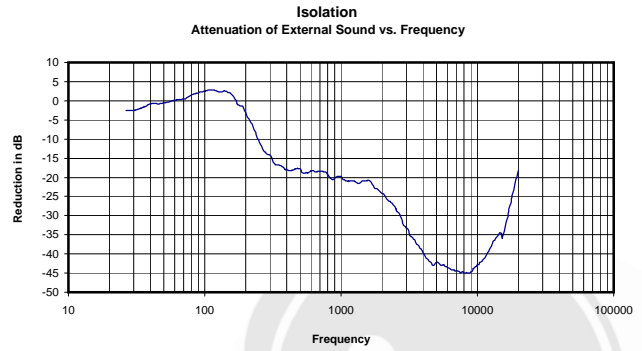
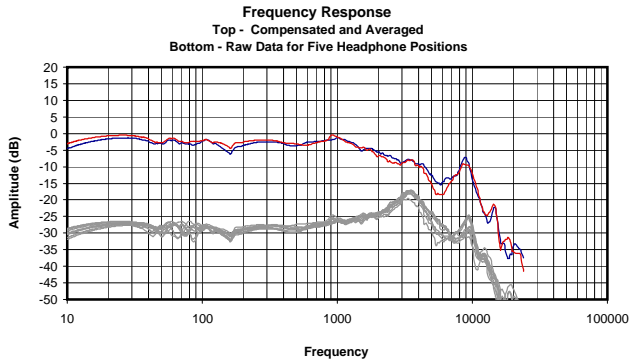




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

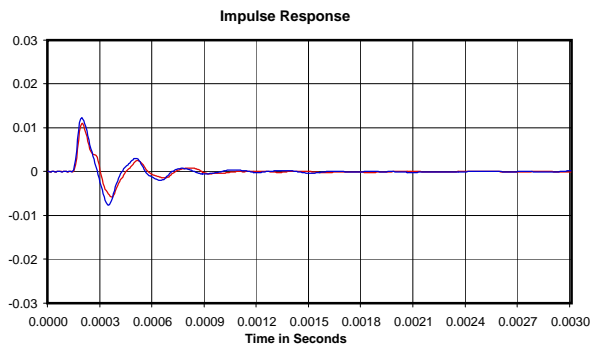
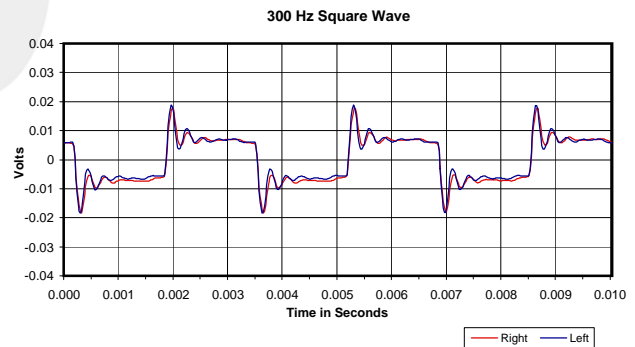
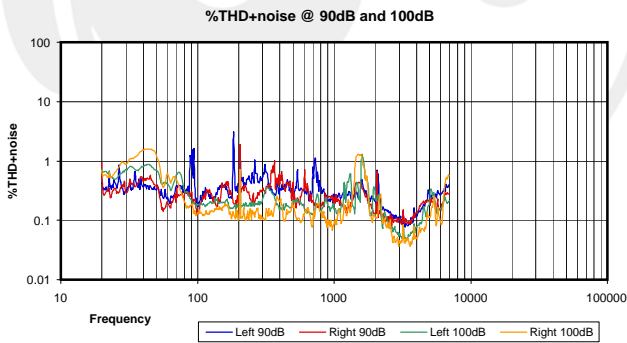
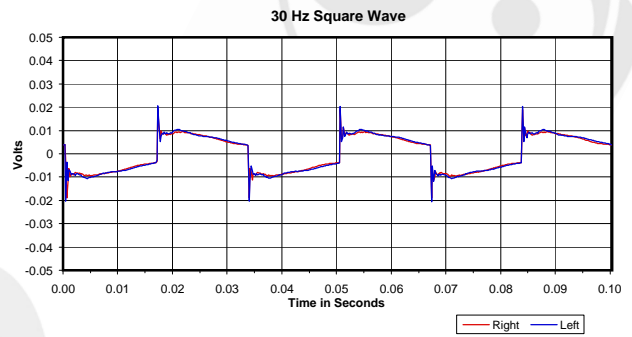
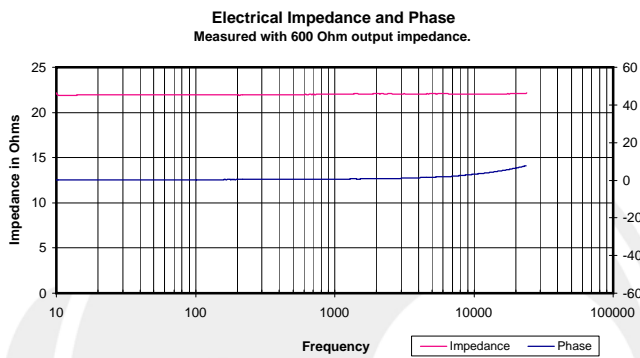
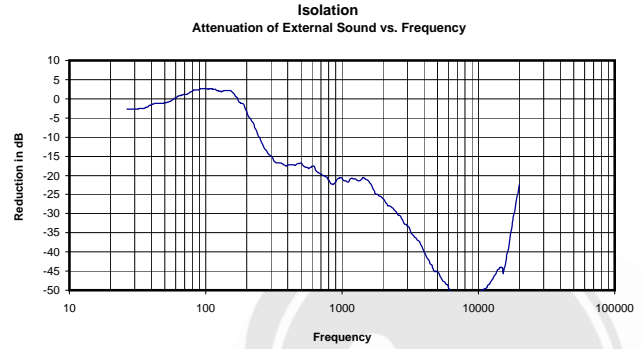
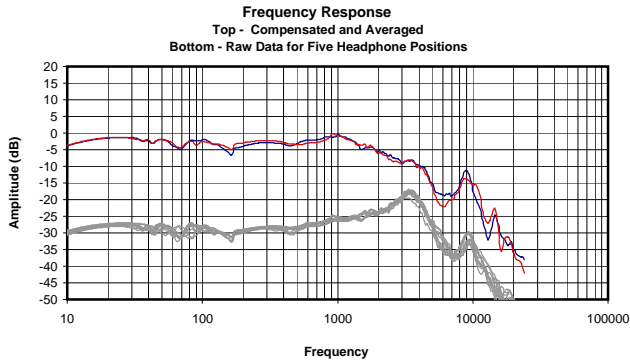
0.133 Vrms
22 Ohms
0.79 mW
-23 dBr





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

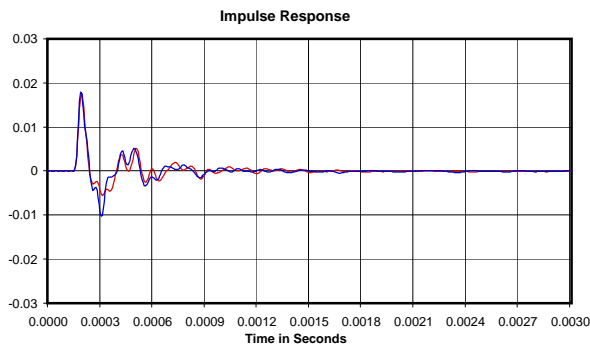
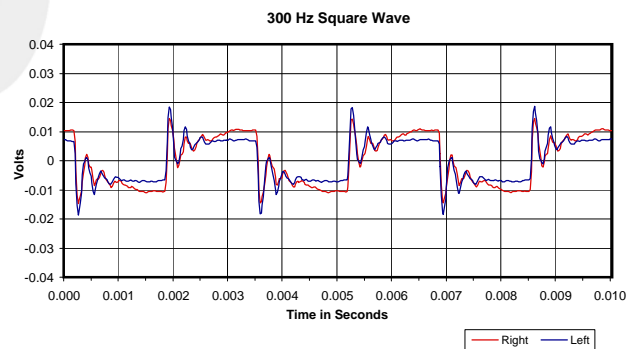
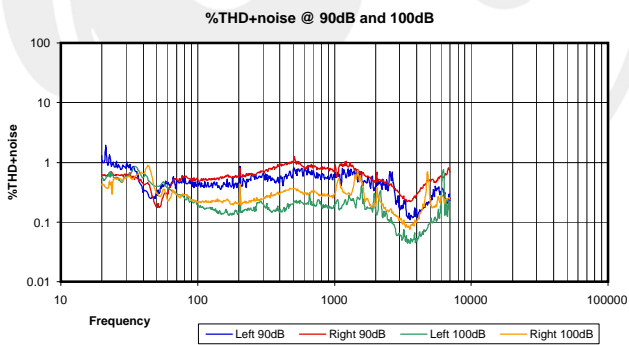
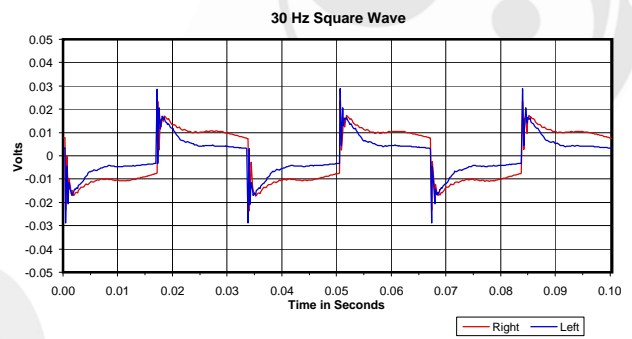
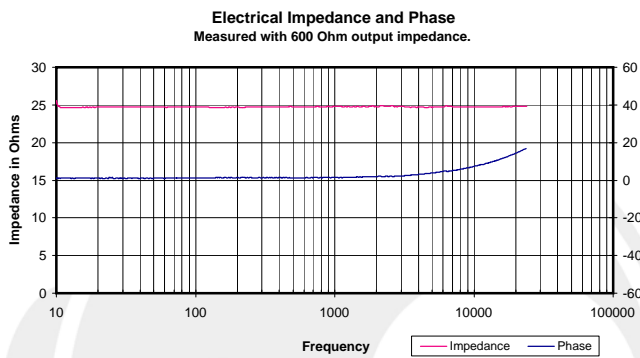
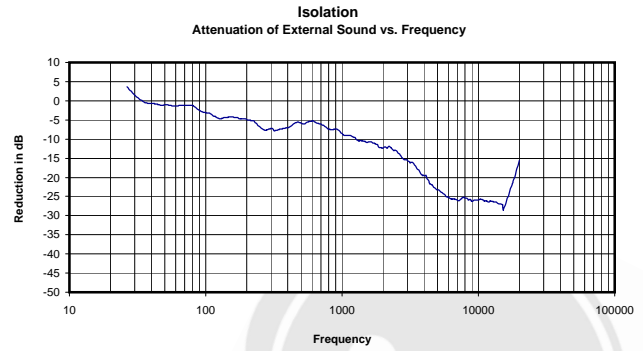
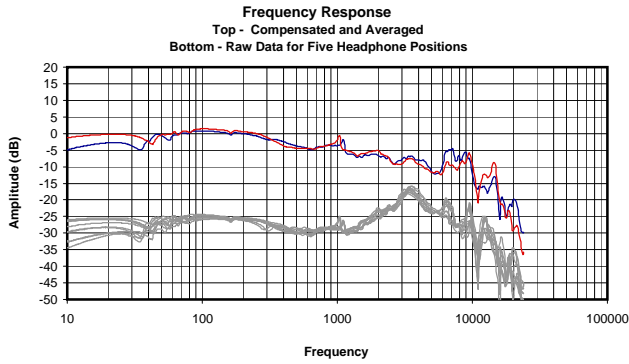
0.127 Vrms
22 Ohms
0.74 mW
-22 dB



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

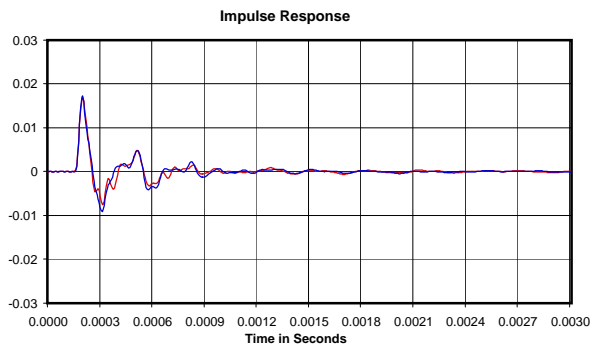
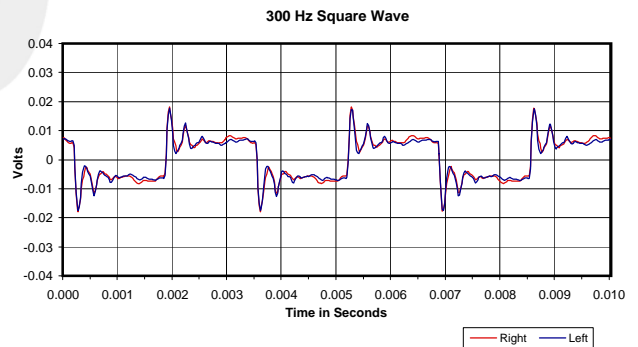
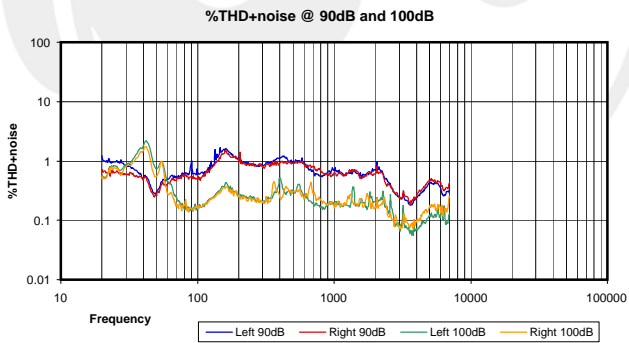
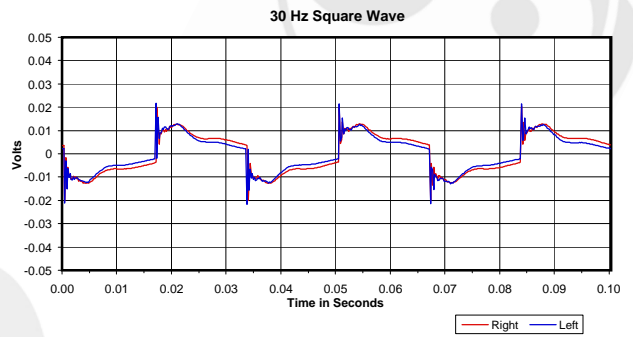
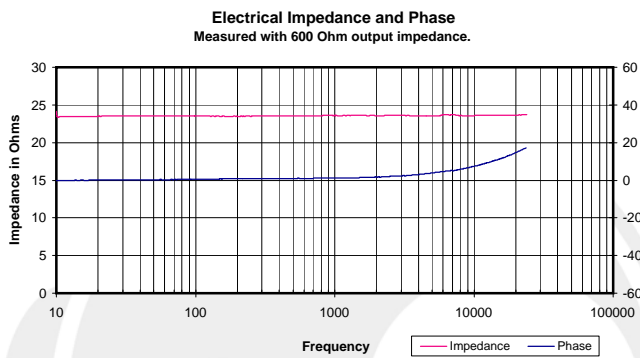
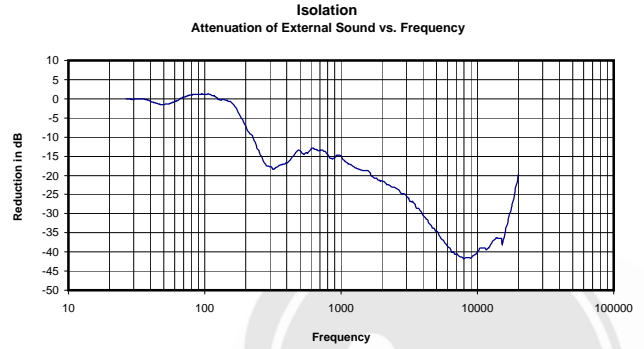
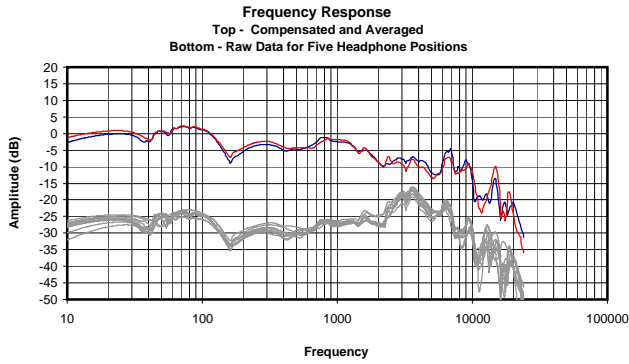
0.113 Vrms
22 Ohms
0.58 mW
-24 dB





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

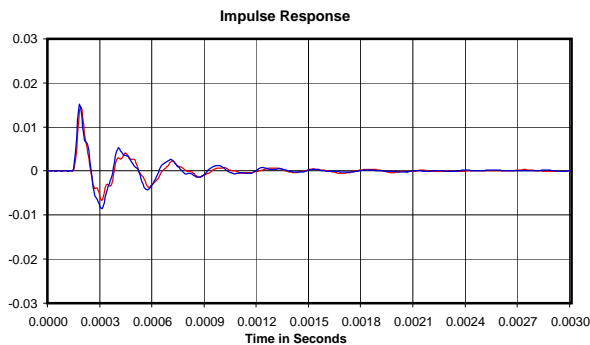
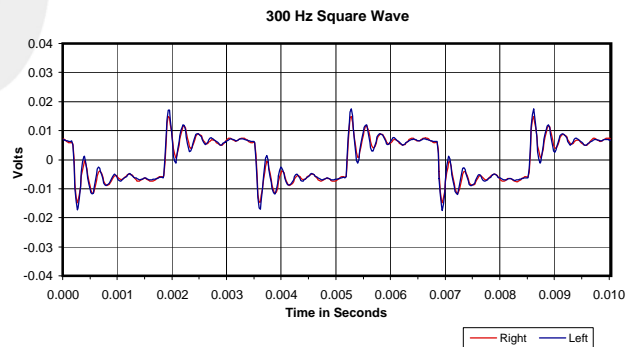
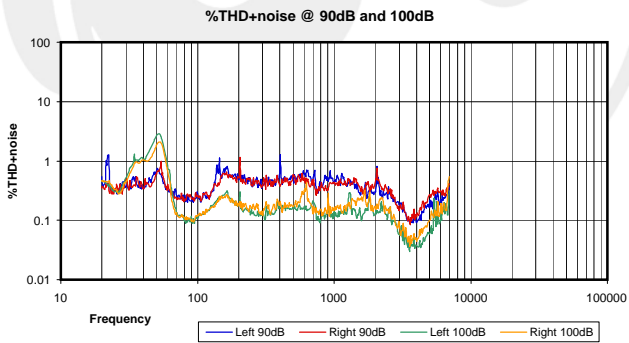
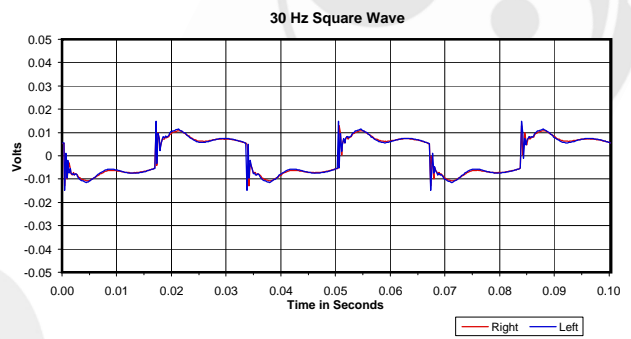
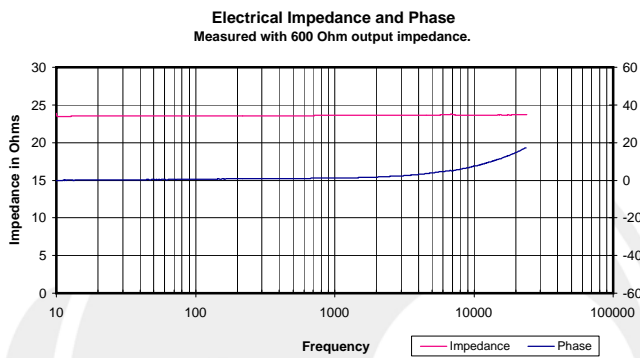
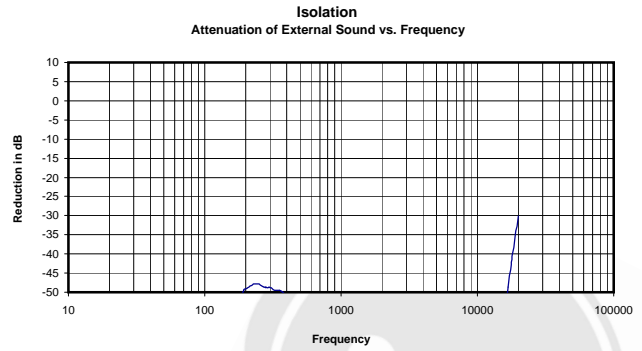
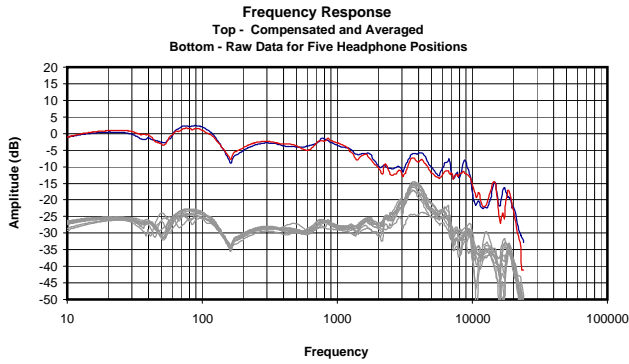
0.163 Vrms
25 Ohms
1.08 mW
-12 dBr



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.230 Vrms
24 Ohms
2.25 mW
-20 dBr



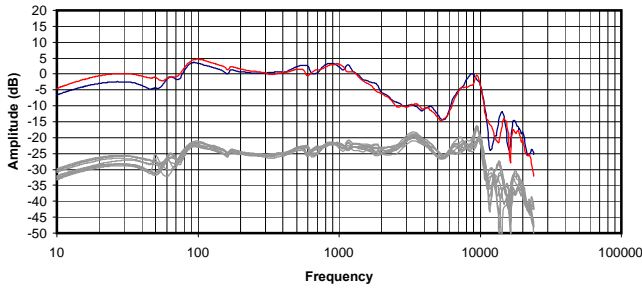


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

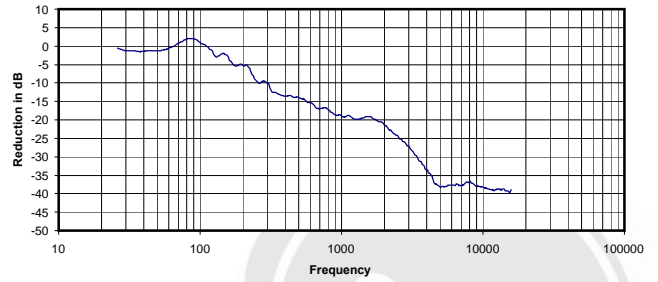
0.228 Vrms
24 Ohms
2.21 mW
-59 dBr



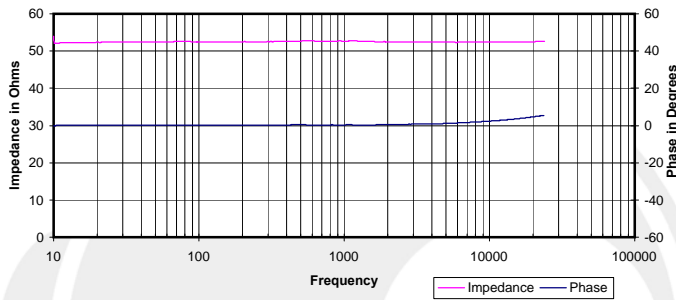
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



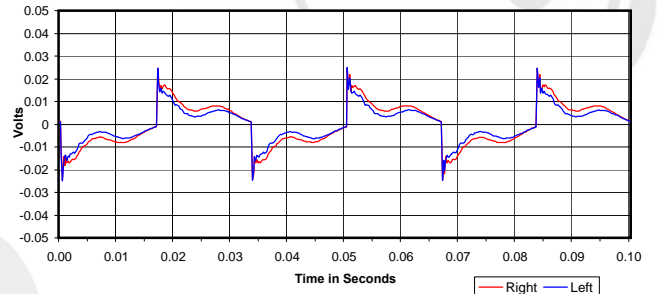
Isolation
 Attenuation of External Sound vs. Frequency



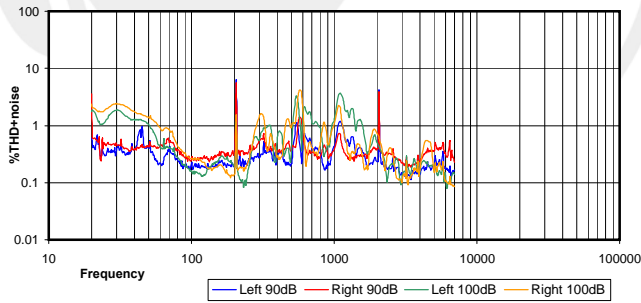
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



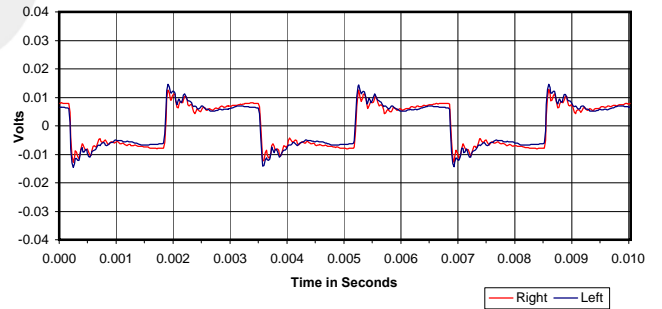
30 Hz Square Wave



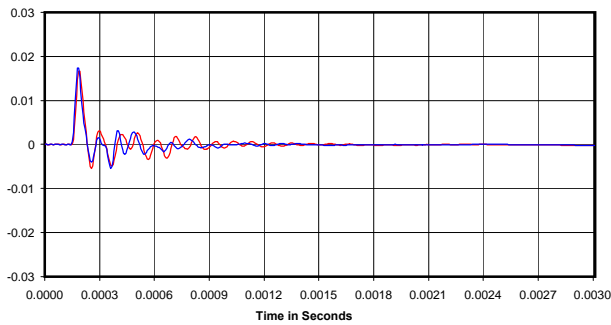
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

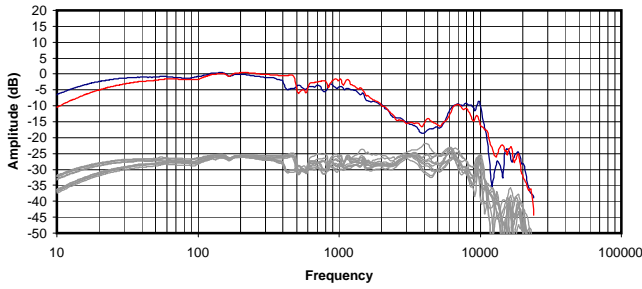


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

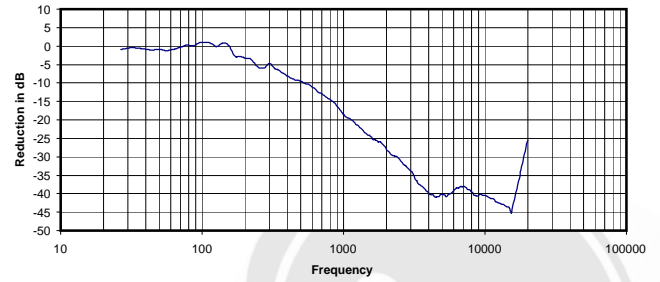
0.166 Vrms
 53 Ohms
 0.52 mW
 -17 dB



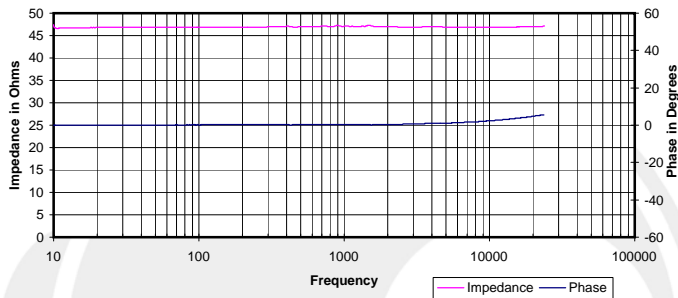
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



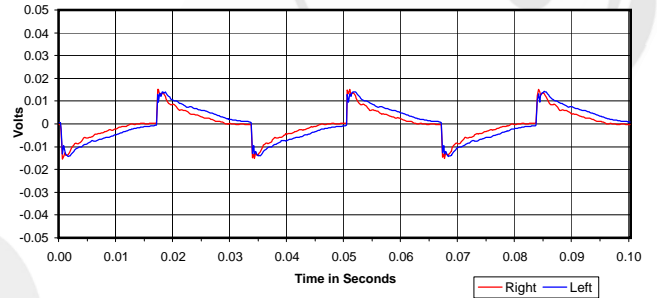
Isolation
 Attenuation of External Sound vs. Frequency



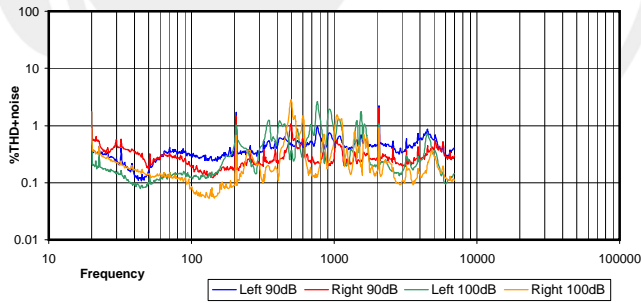
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



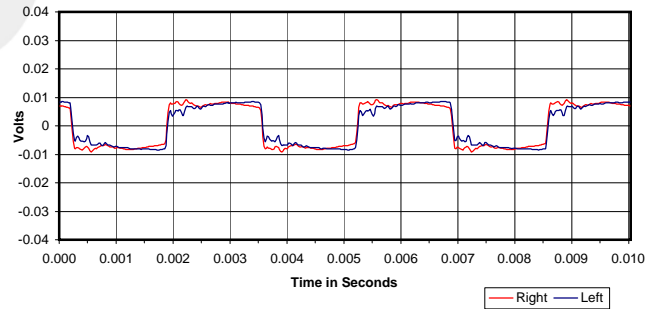
30 Hz Square Wave



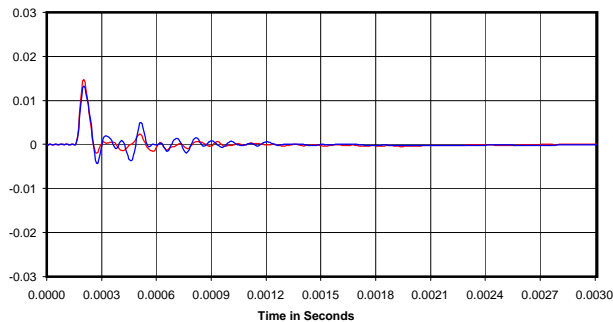
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



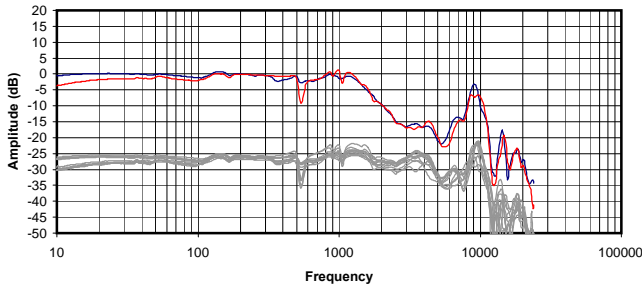
Impulse Response



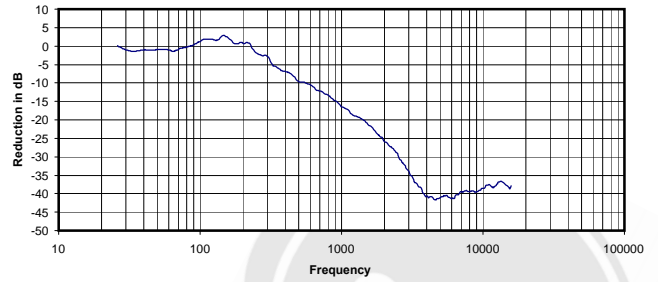
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.208 Vrms
 47 Ohms
 0.92 mW
 -20 dB

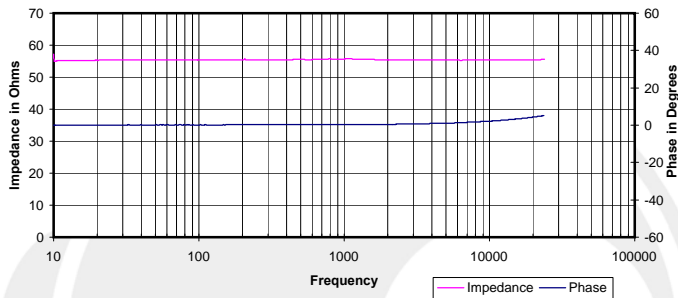
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



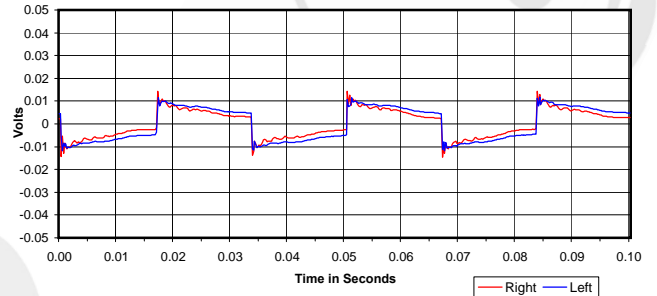
Isolation
 Attenuation of External Sound vs. Frequency



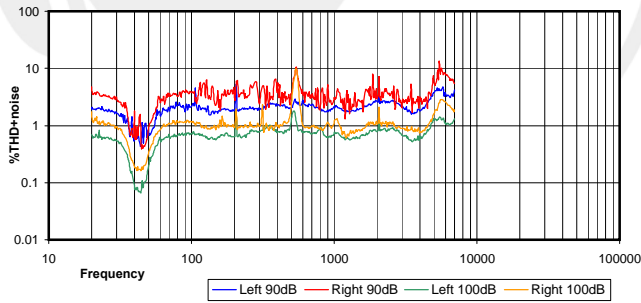
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



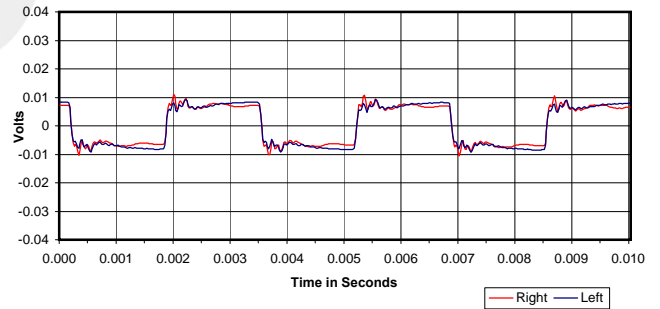
30 Hz Square Wave



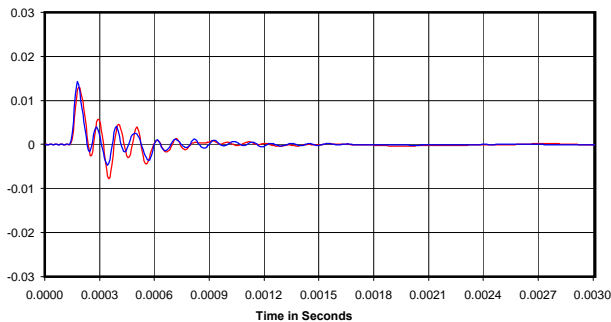
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

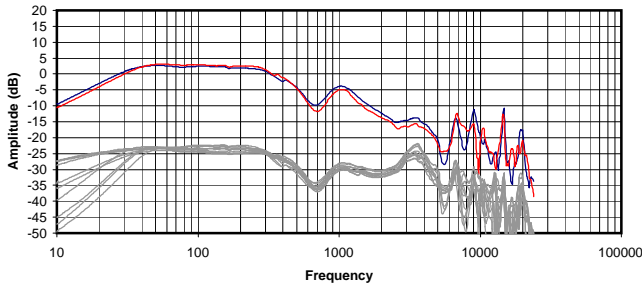


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

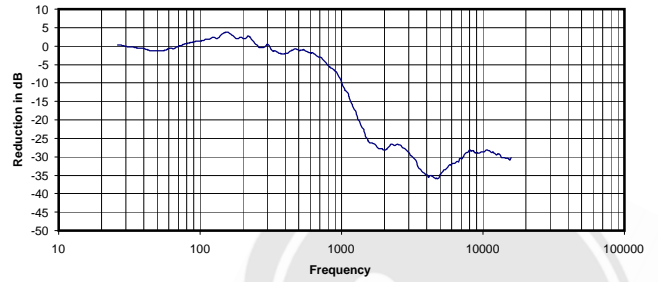
0.127 Vrms
 56 Ohms
 0.29 mW
 -16 dB



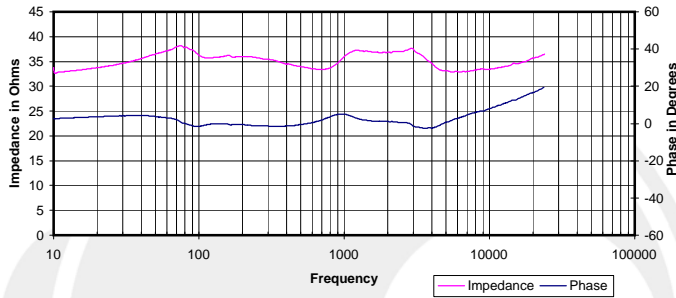
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



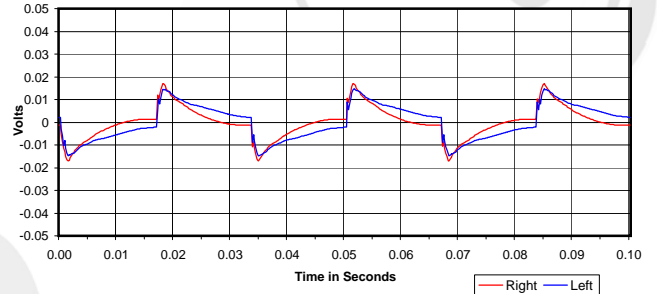
Isolation
 Attenuation of External Sound vs. Frequency



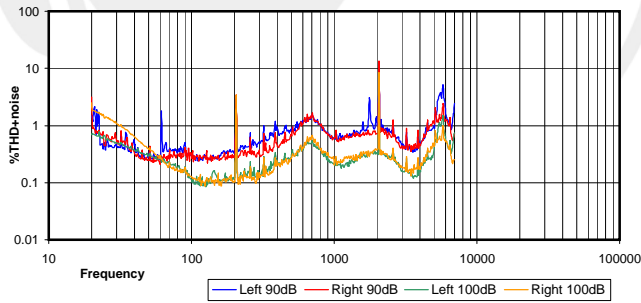
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



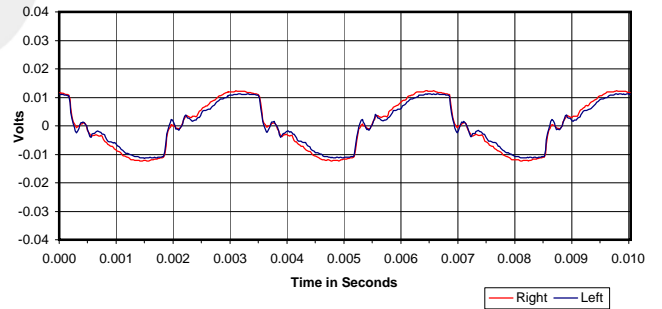
30 Hz Square Wave



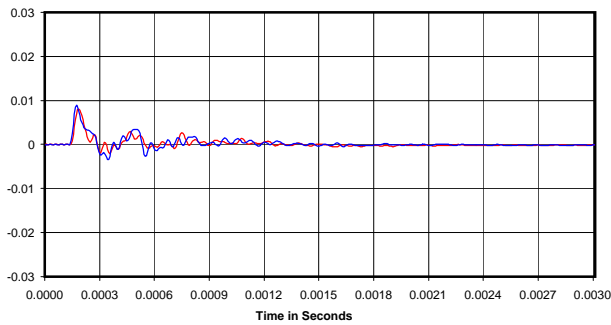
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

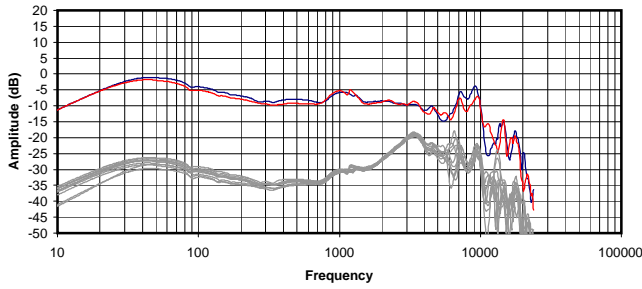


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

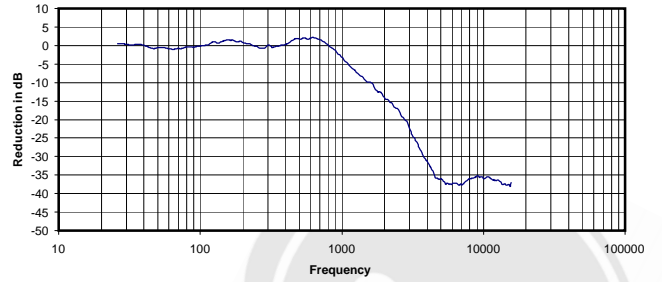
0.021 Vrms
 36 Ohms
 0.01 mW
 -12 dB



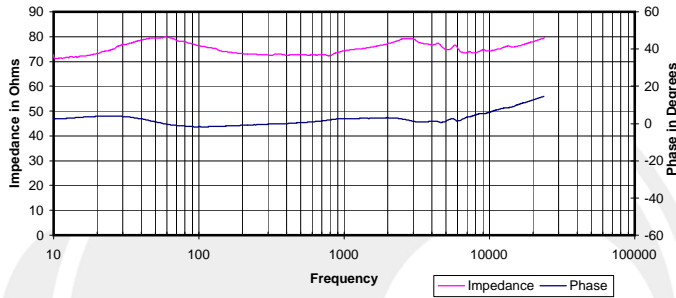
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



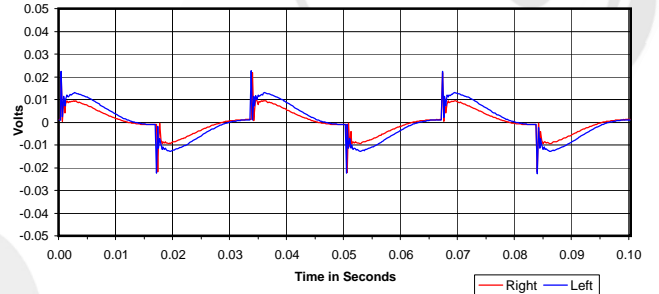
Isolation
 Attenuation of External Sound vs. Frequency



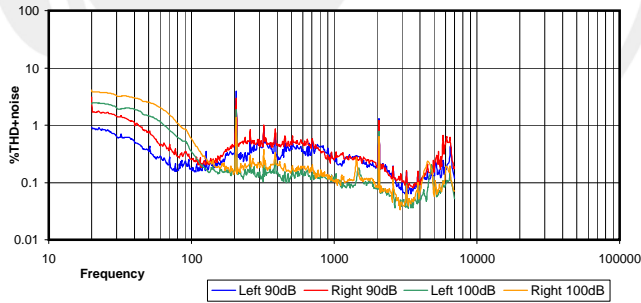
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



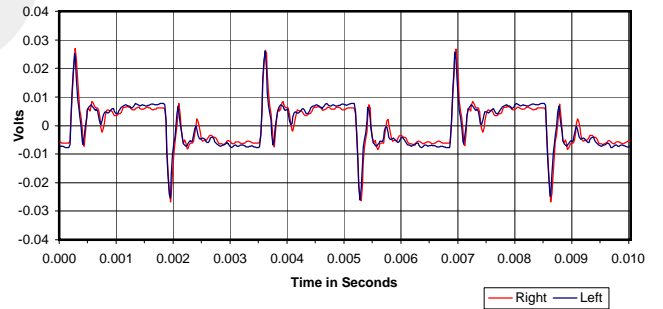
30 Hz Square Wave



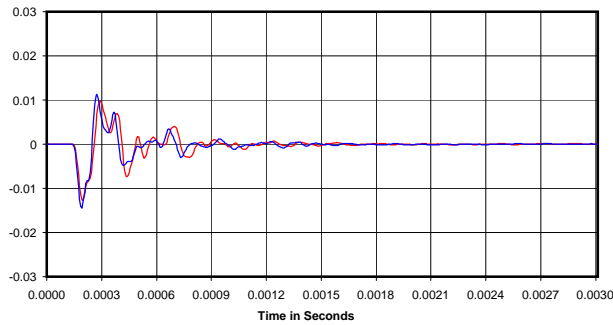
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

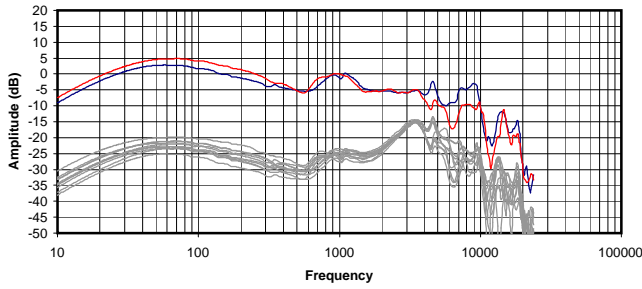


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

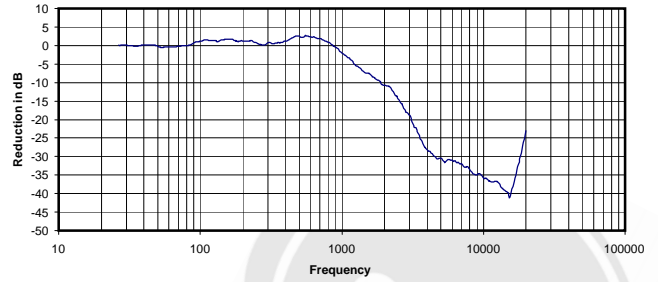
0.057 Vrms
 74 Ohms
 0.04 mW
 -9 dBr



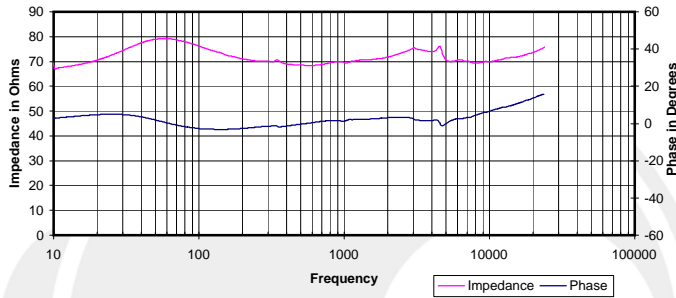
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



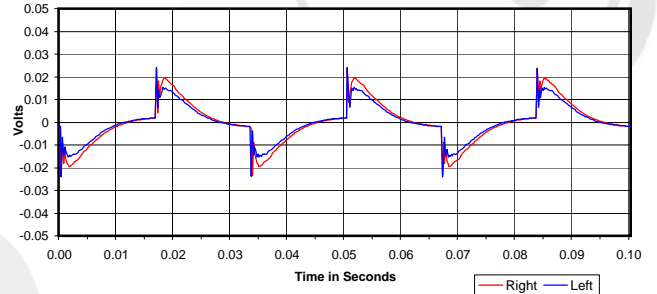
Isolation
 Attenuation of External Sound vs. Frequency



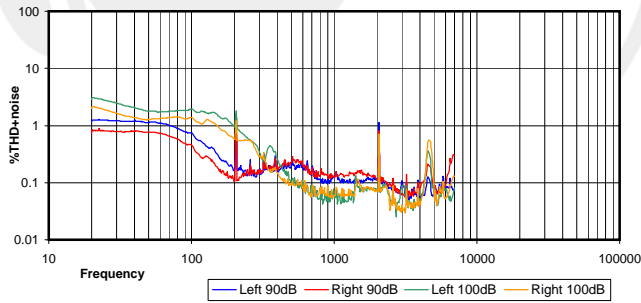
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



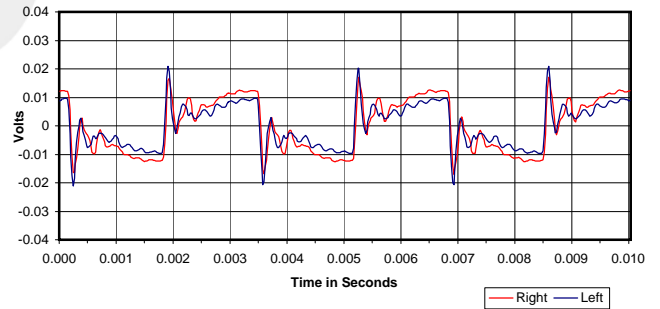
30 Hz Square Wave



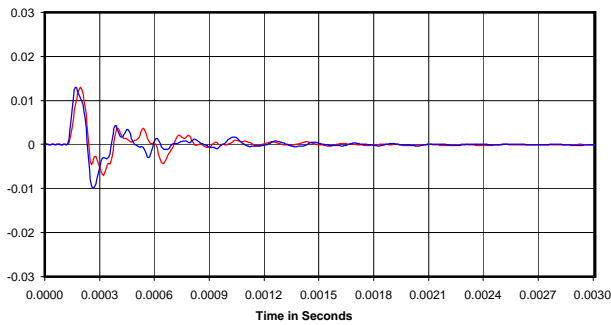
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

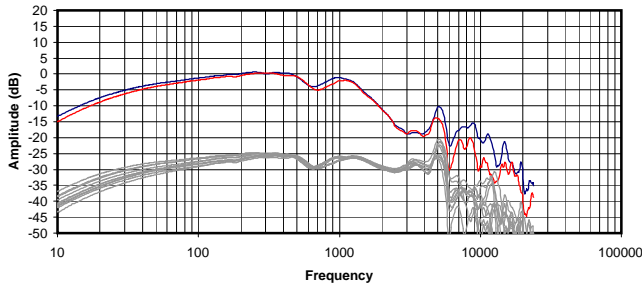


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

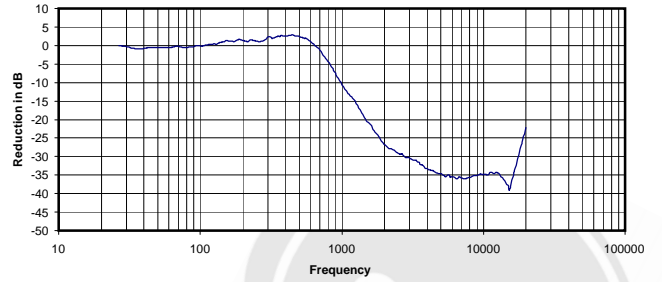
0.041 Vrms
 70 Ohms
 0.02 mW
 -10 dB



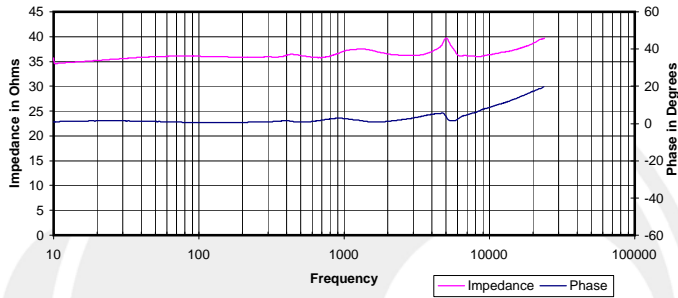
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



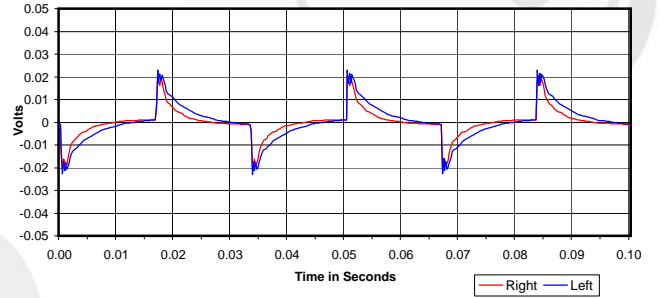
Isolation
 Attenuation of External Sound vs. Frequency



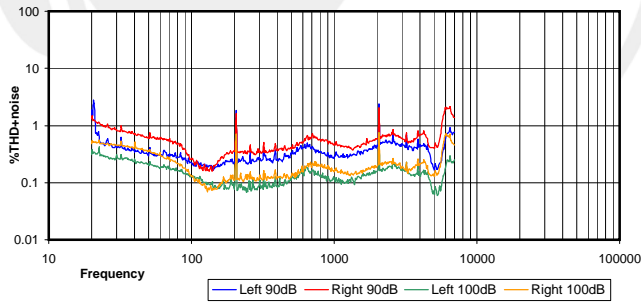
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



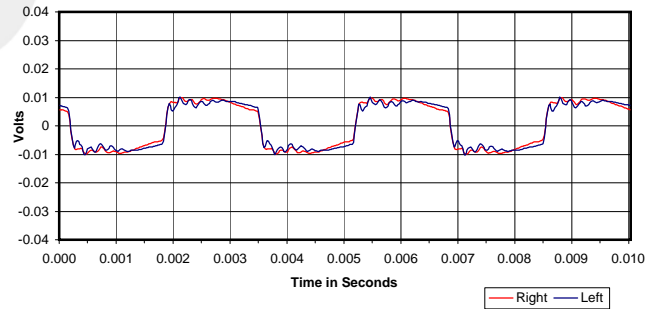
30 Hz Square Wave



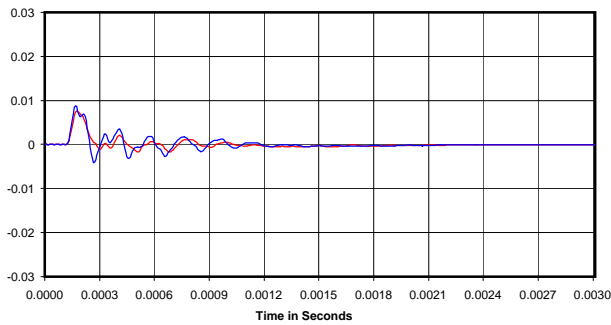
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



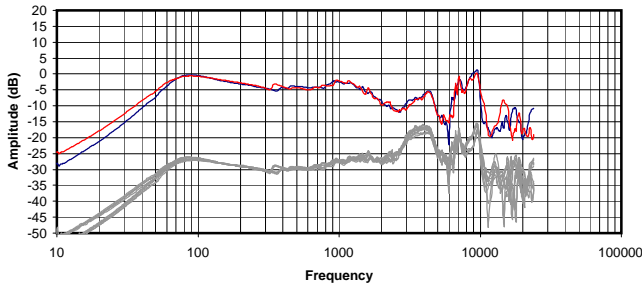
Impulse Response



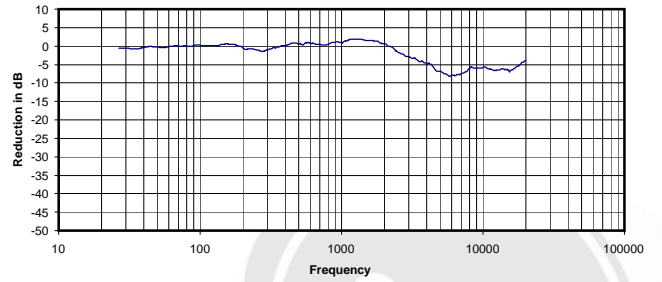
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.020 Vrms
 37 Ohms
 0.01 mW
 -14 dB

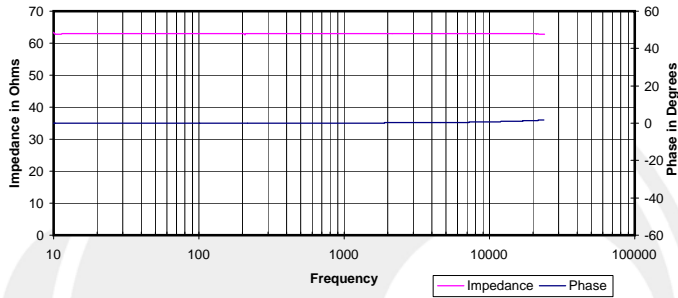
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



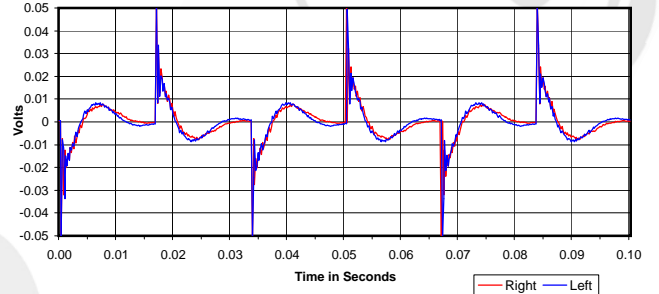
Isolation
 Attenuation of External Sound vs. Frequency



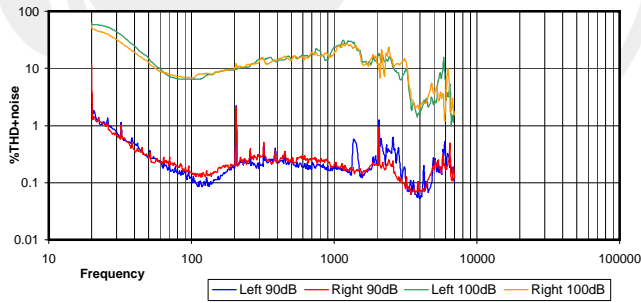
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



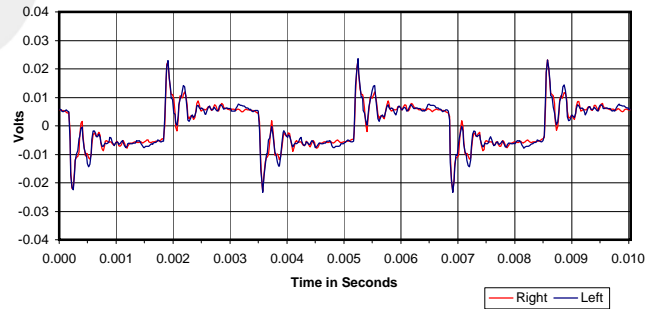
30 Hz Square Wave



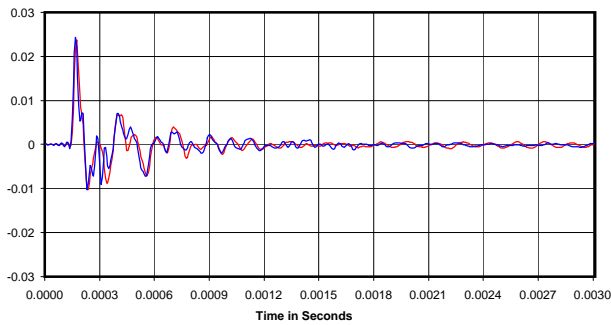
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



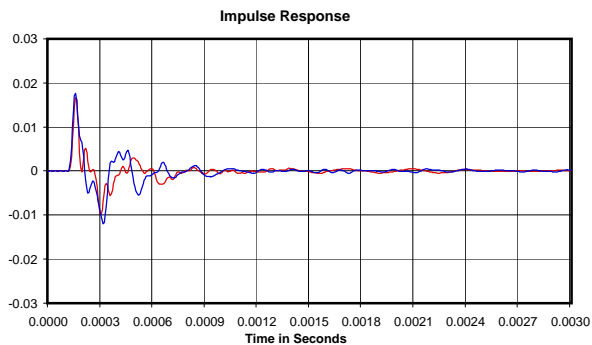
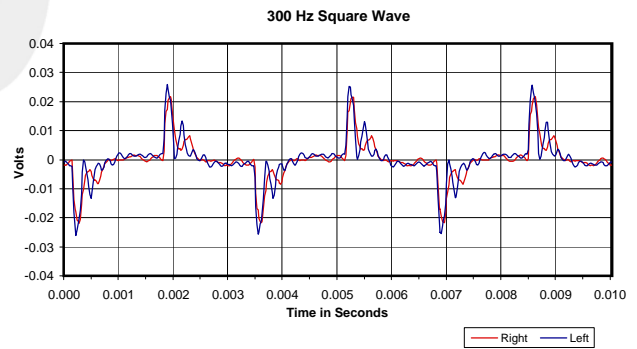
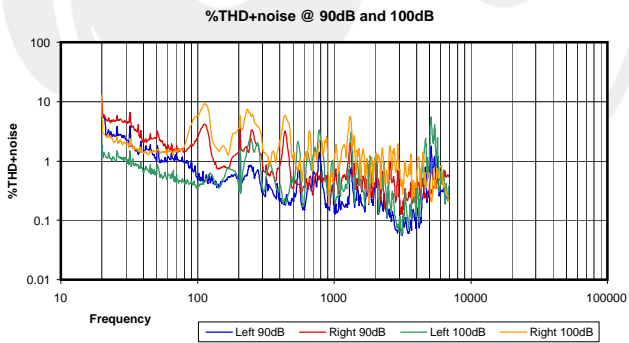
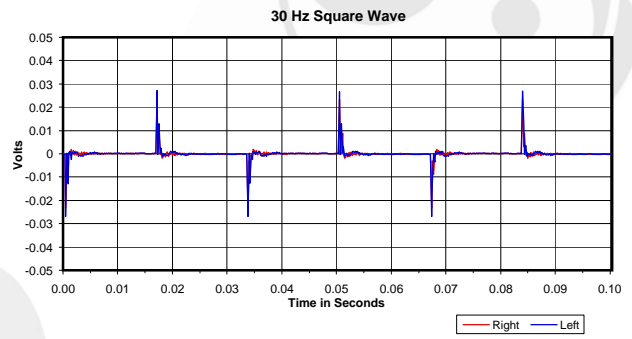
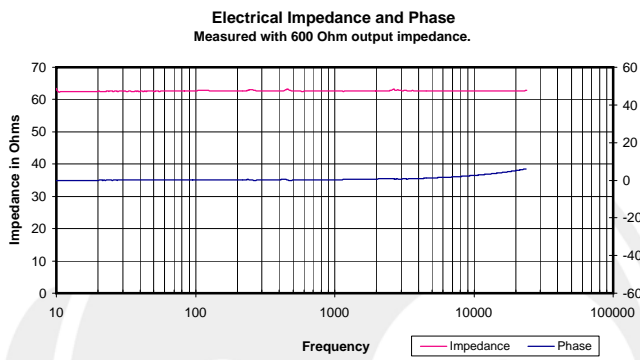
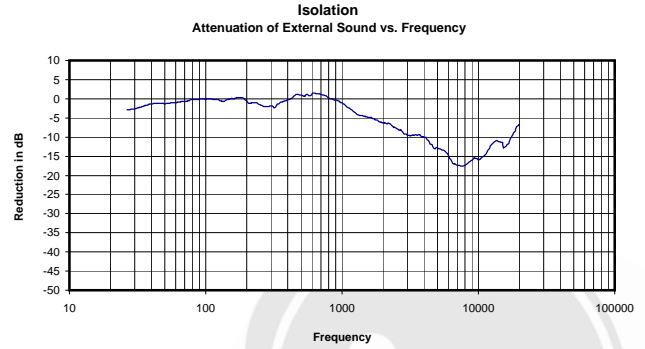
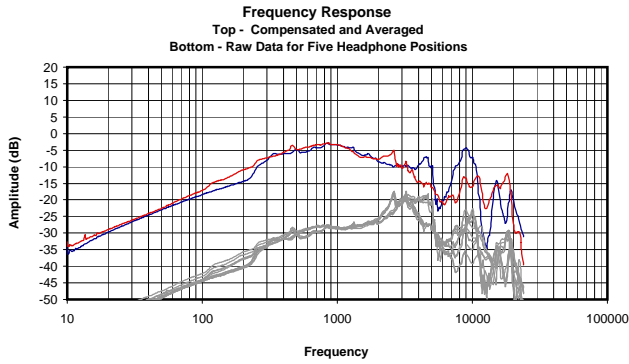
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

1.017 Vrms
 63 Ohms
 16.41 mW
 -1 dB



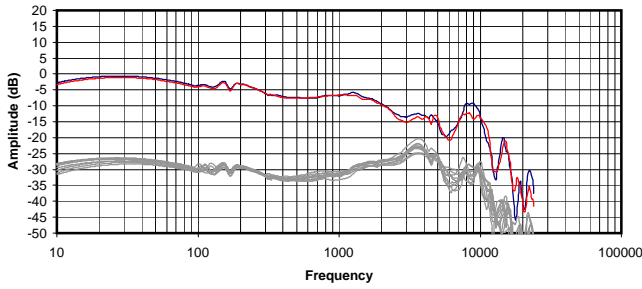


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

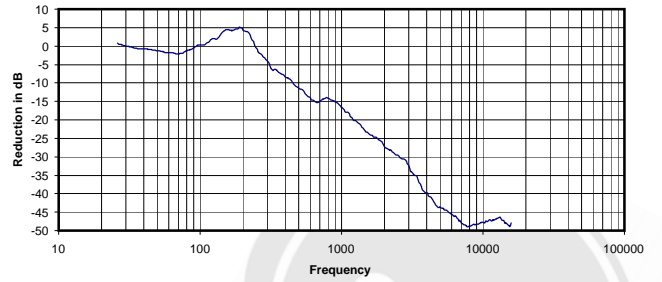
0.209 Vrms
63 Ohms
0.70 mW
-5 dBr



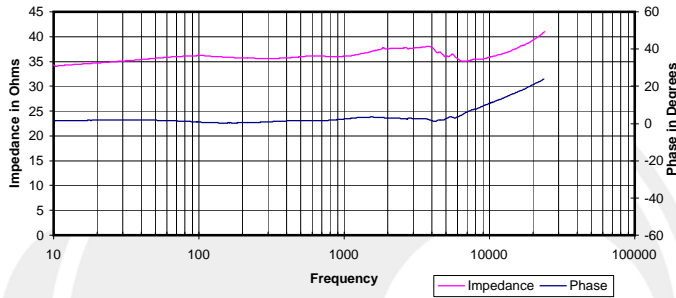
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



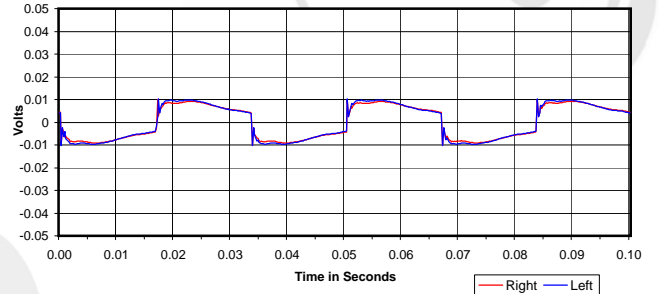
Isolation
 Attenuation of External Sound vs. Frequency



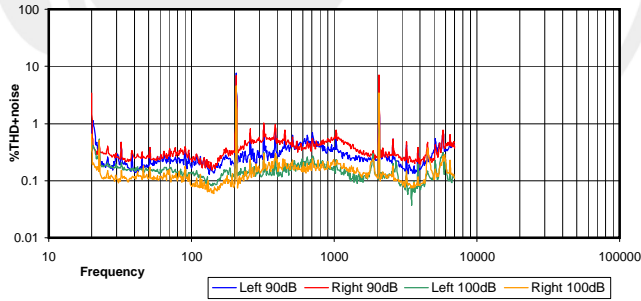
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



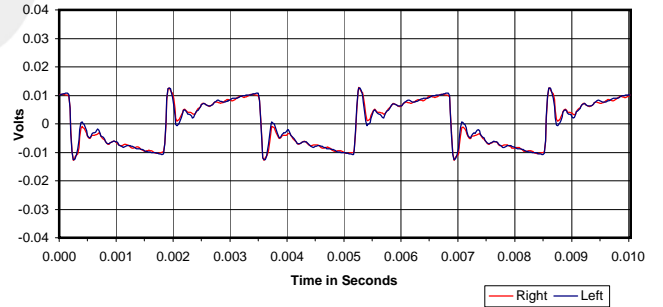
30 Hz Square Wave



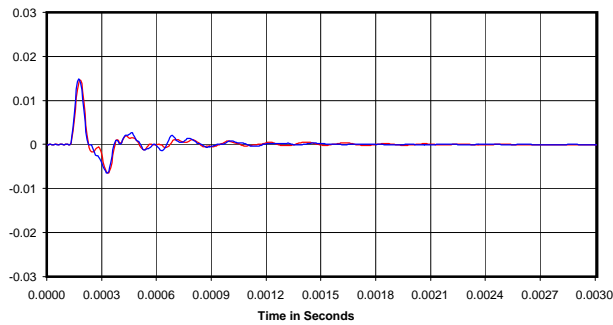
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



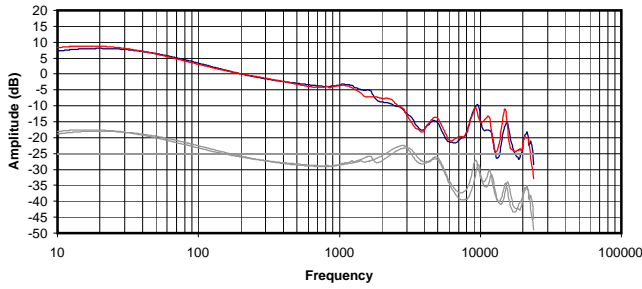
Impulse Response



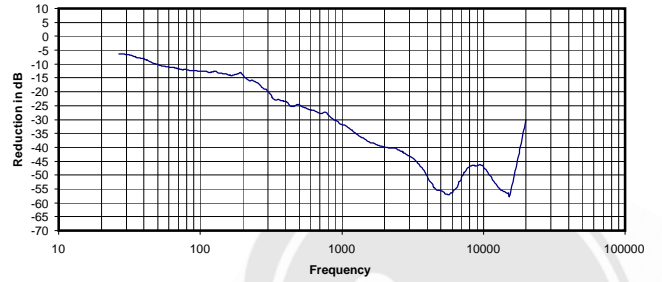
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
 36 Ohms
 0.04 mW
 -16 dB

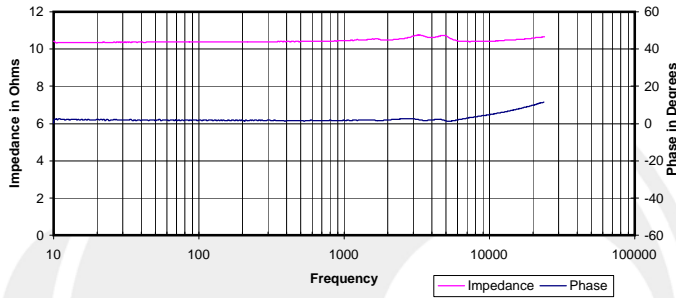
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



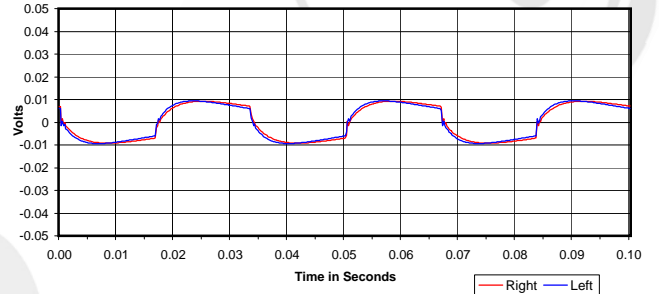
Isolation
Attenuation of External Sound vs. Frequency



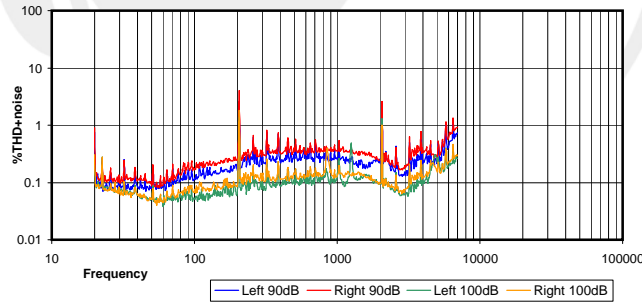
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



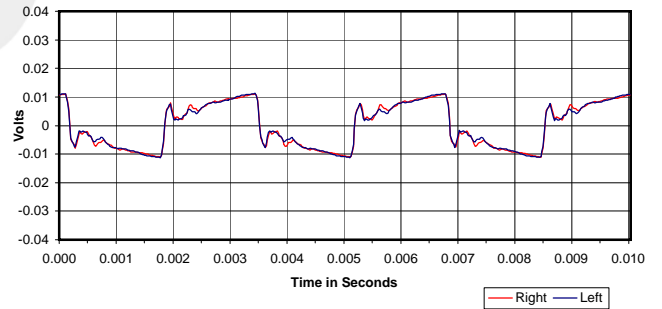
30 Hz Square Wave



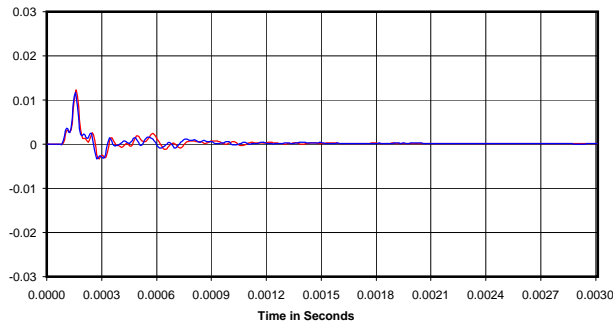
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

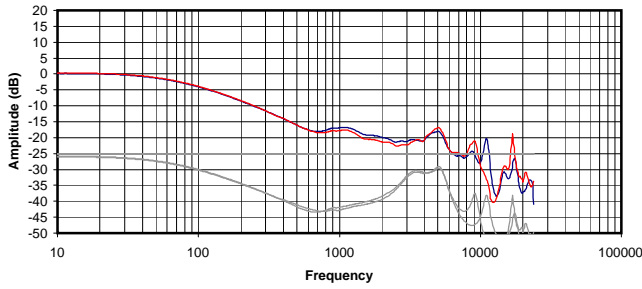


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

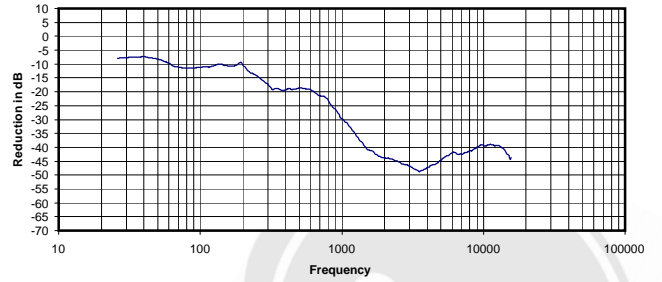
0.026 Vrms
10 Ohms
0.07 mW
-32 dB



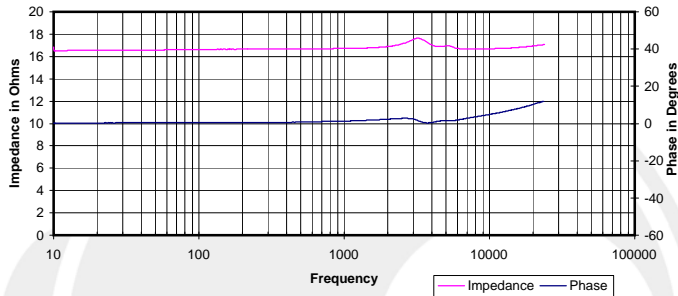
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



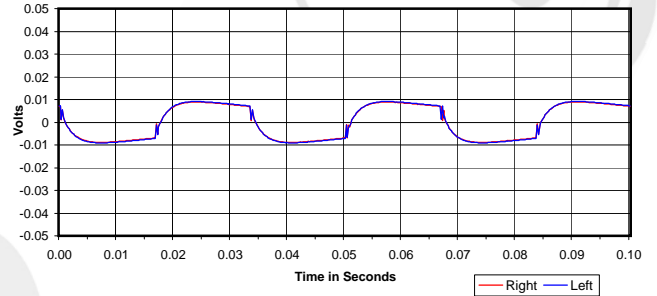
Isolation
Attenuation of External Sound vs. Frequency



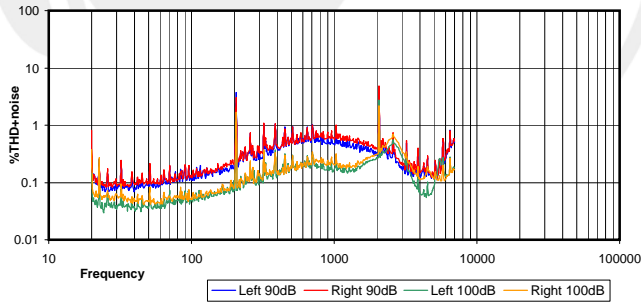
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



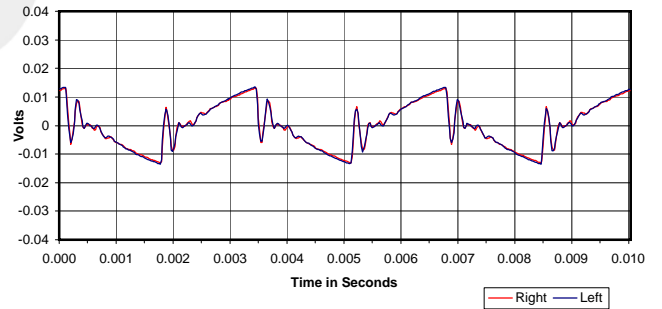
30 Hz Square Wave



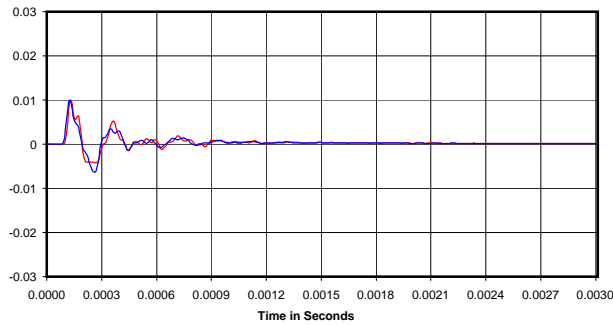
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

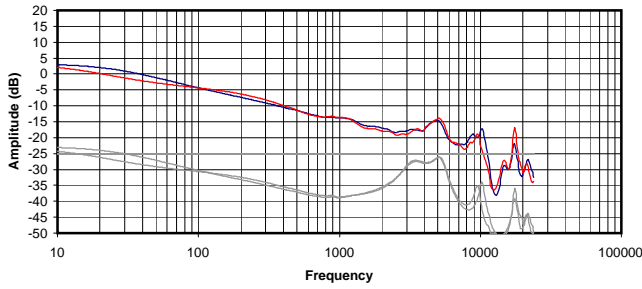


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

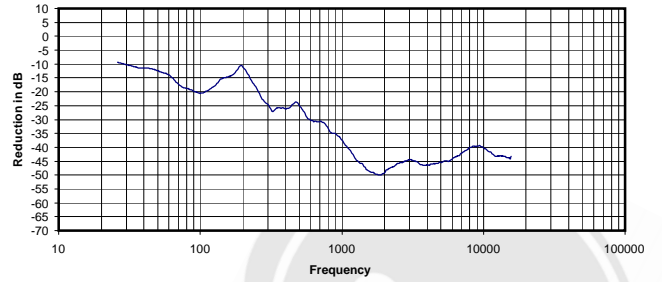
0.033 Vrms
17 Ohms
0.06 mW
-28 dB



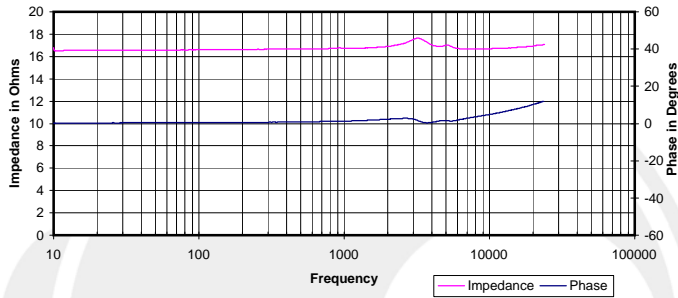
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



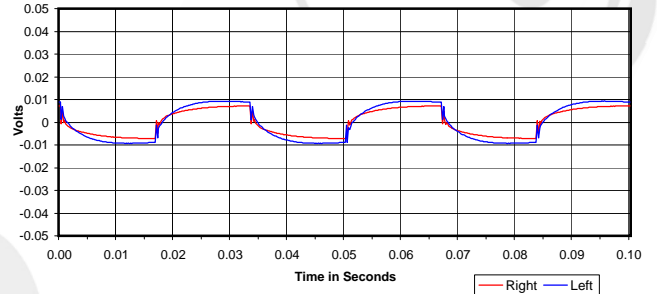
Isolation
Attenuation of External Sound vs. Frequency



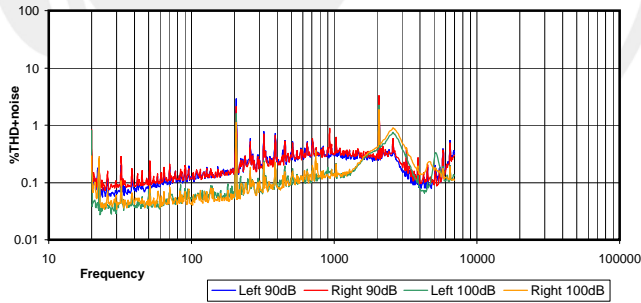
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



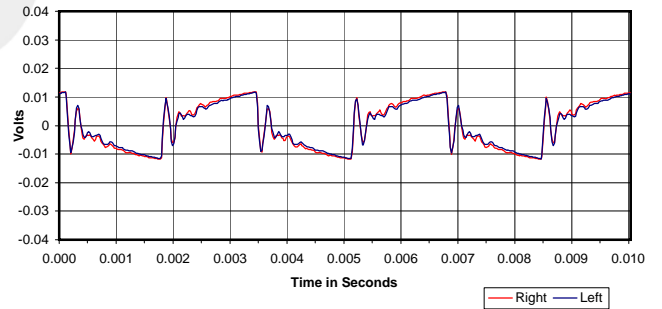
30 Hz Square Wave



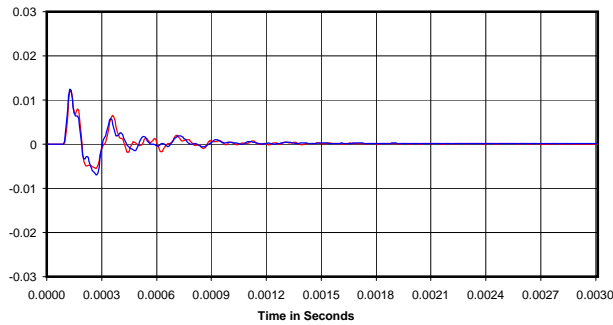
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

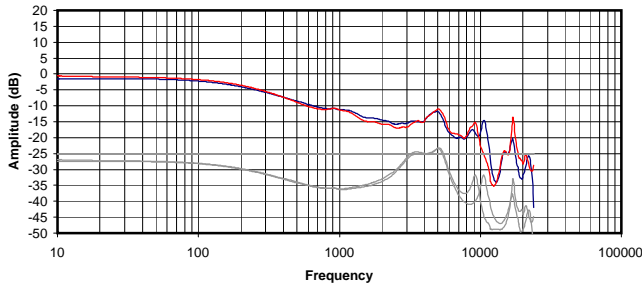


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

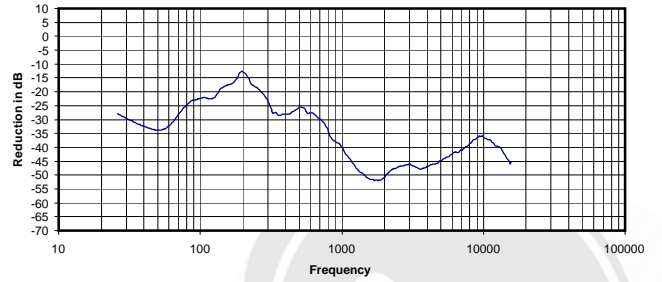
0.034 Vrms
17 Ohms
0.07 mW
-33 dB



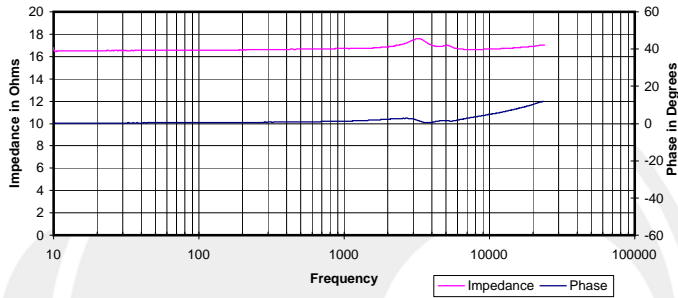
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



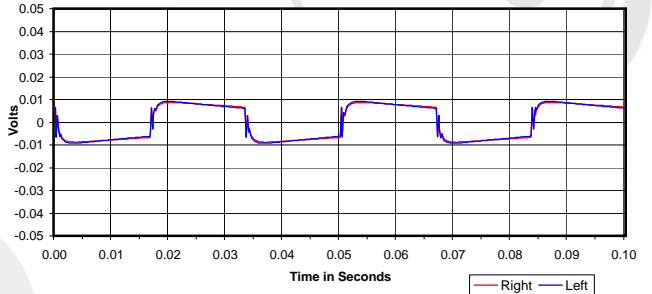
Isolation
Attenuation of External Sound vs. Frequency



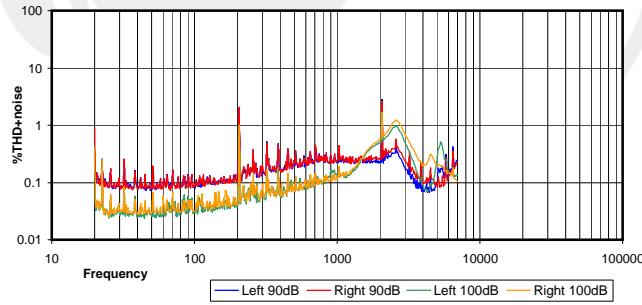
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



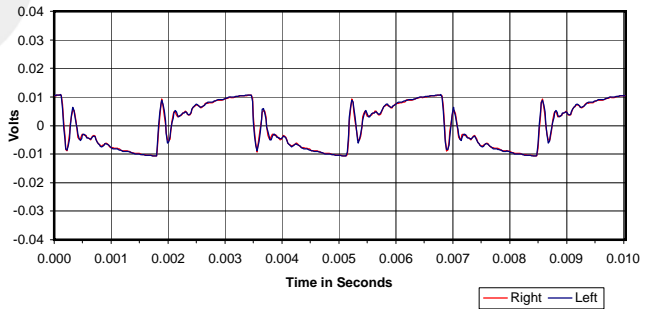
30 Hz Square Wave



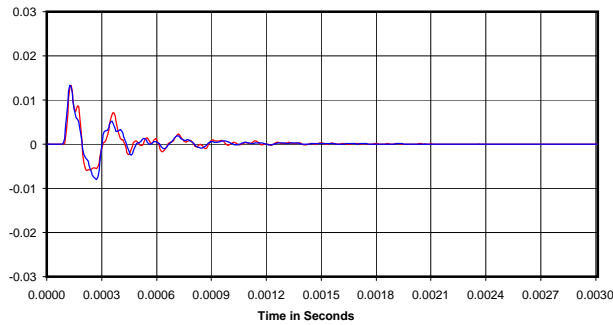
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

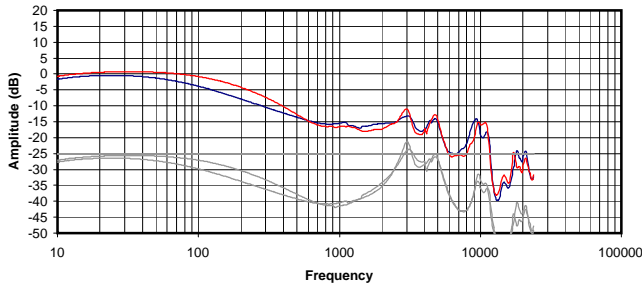


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

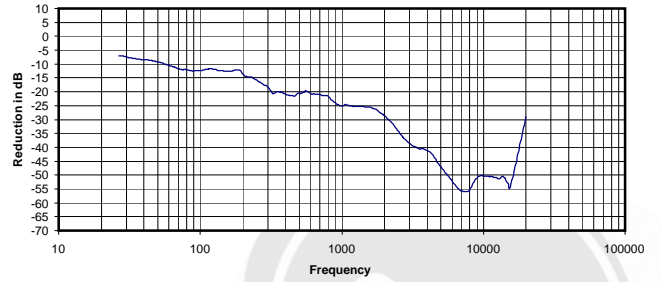
0.033 Vrms
17 Ohms
0.06 mW
-34 dB



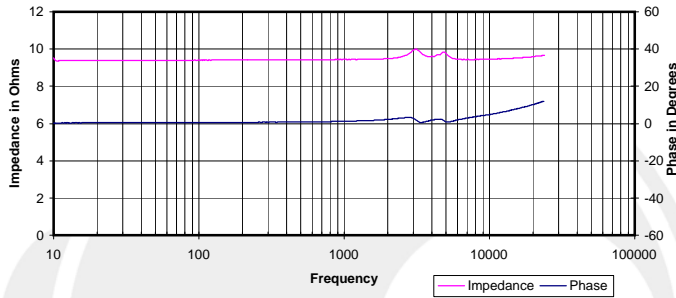
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



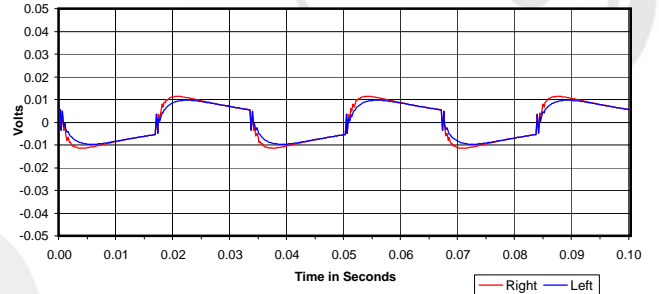
Isolation
Attenuation of External Sound vs. Frequency



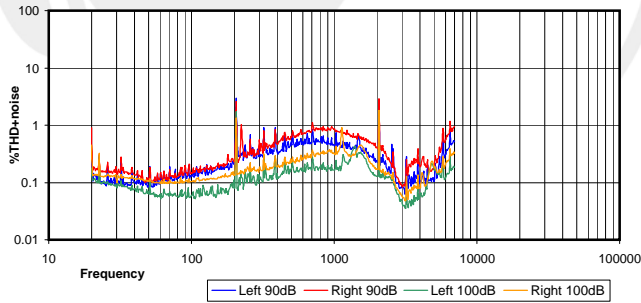
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



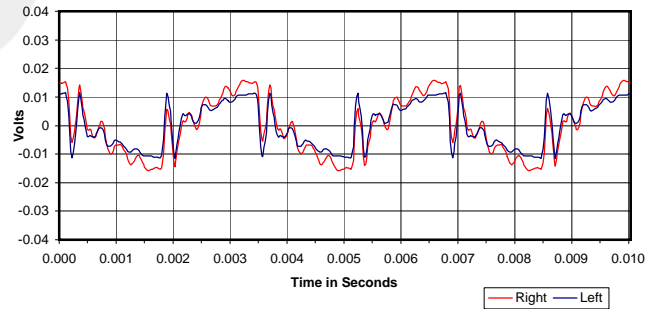
30 Hz Square Wave



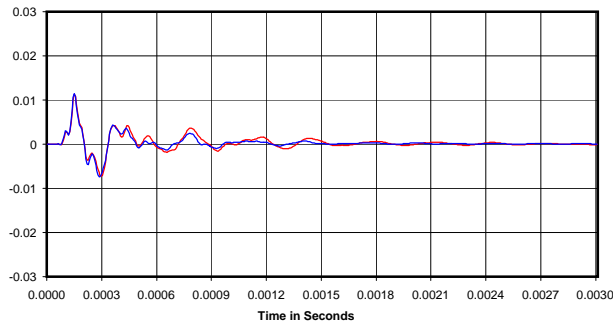
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

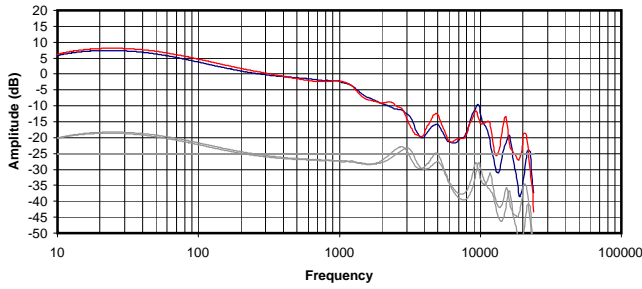


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

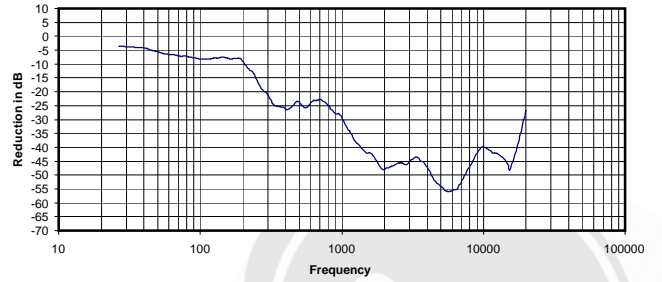
0.036 Vrms
9 Ohms
0.13 mW
-28 dB



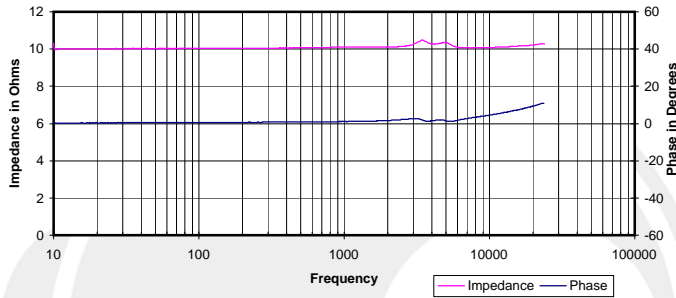
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



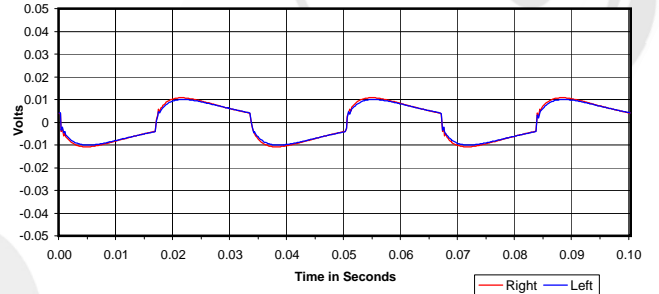
Isolation
Attenuation of External Sound vs. Frequency



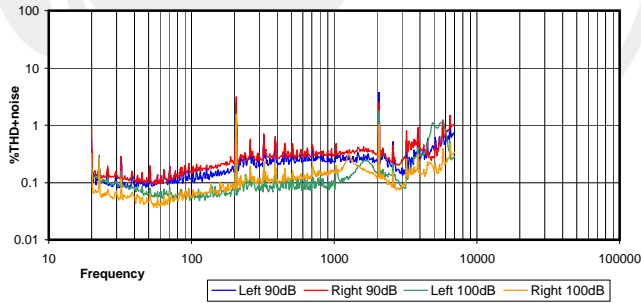
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



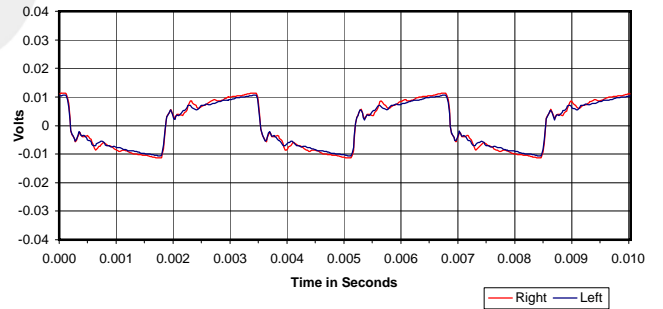
30 Hz Square Wave



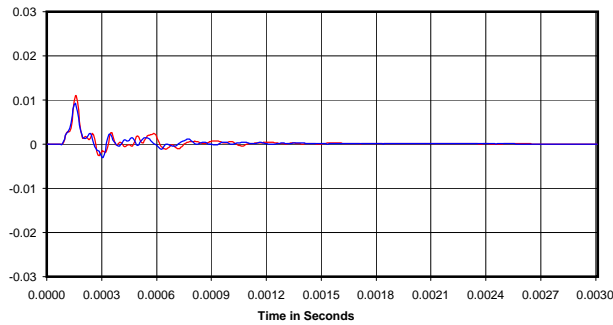
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

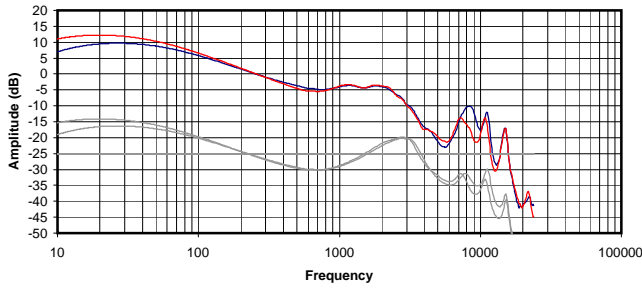


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

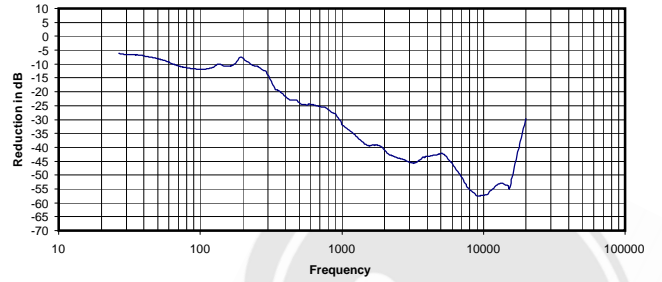
0.022 Vrms
10 Ohms
0.05 mW
-32 dB



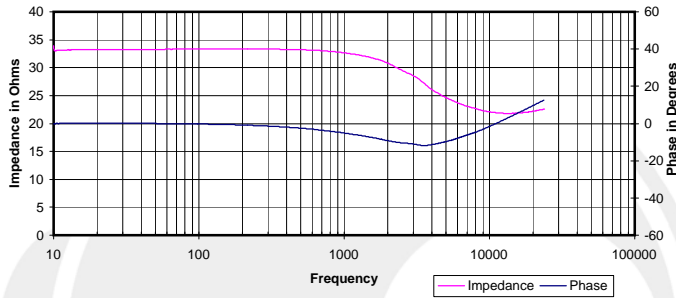
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



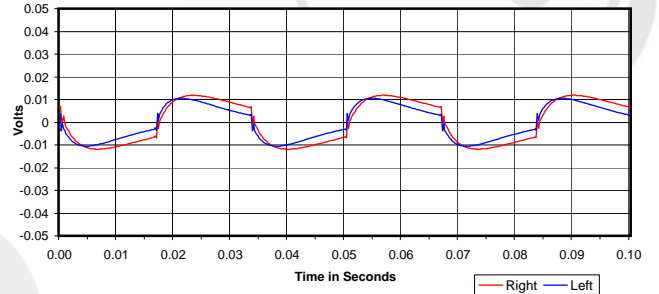
Isolation
Attenuation of External Sound vs. Frequency



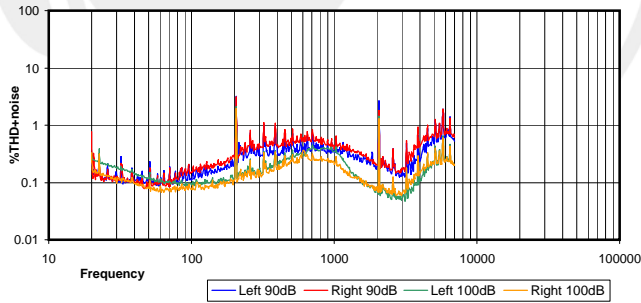
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



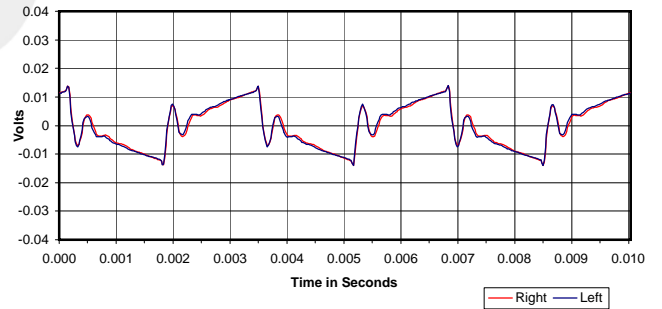
30 Hz Square Wave



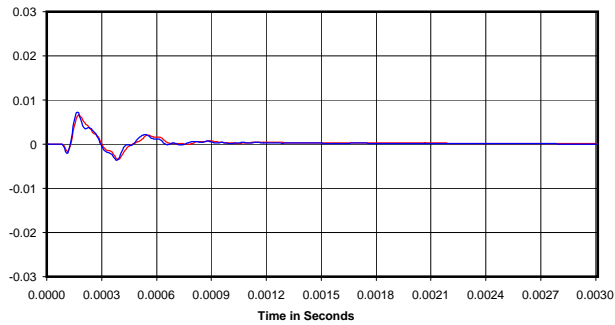
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



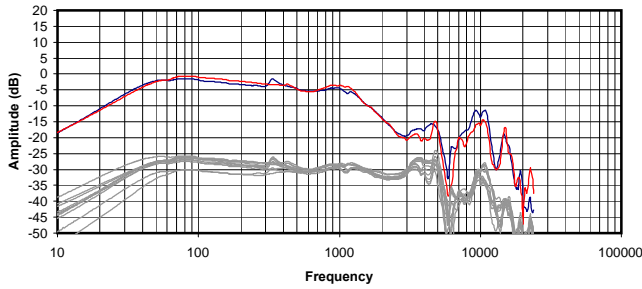
Impulse Response



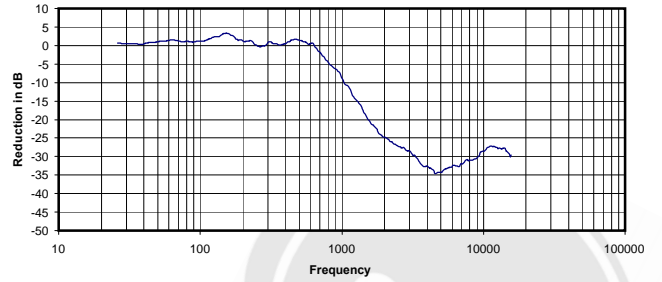
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
33 Ohms
0.05 mW
-31 dB

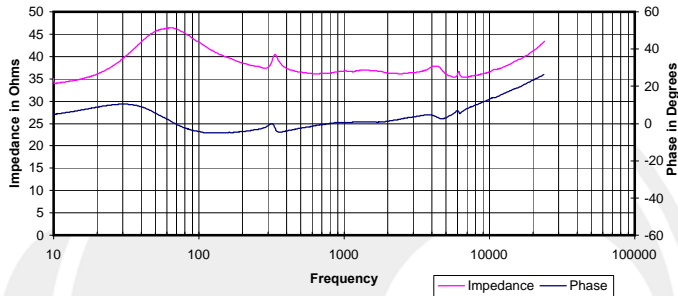
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



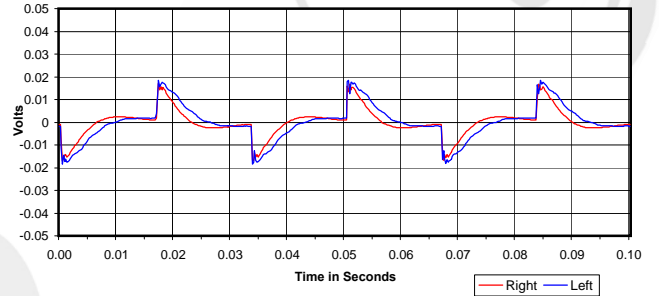
Isolation
 Attenuation of External Sound vs. Frequency



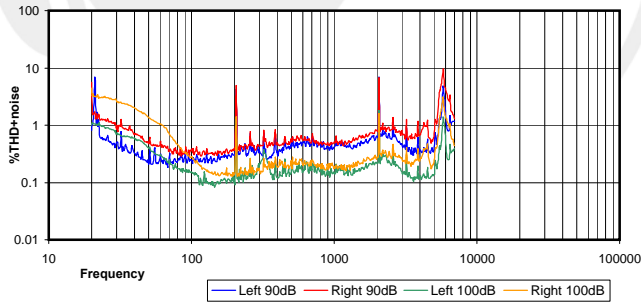
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



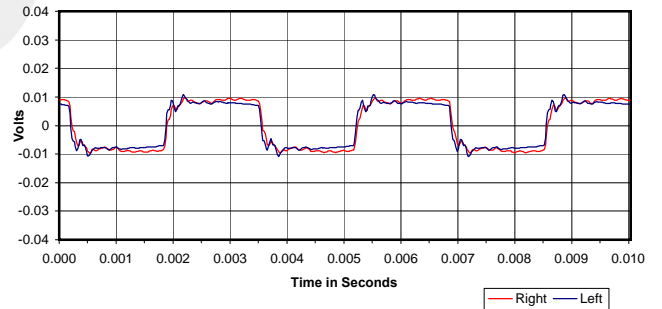
30 Hz Square Wave



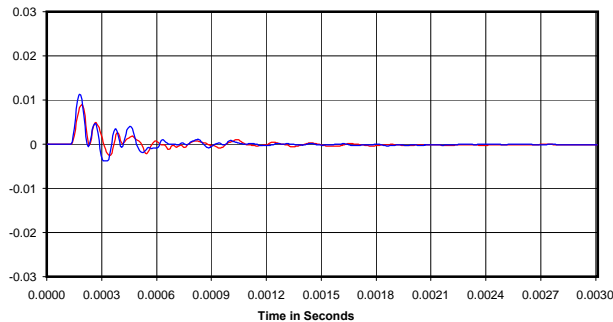
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

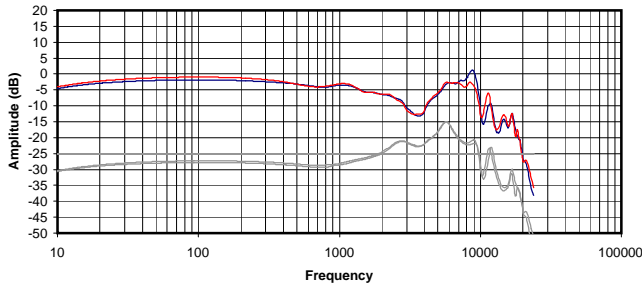


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

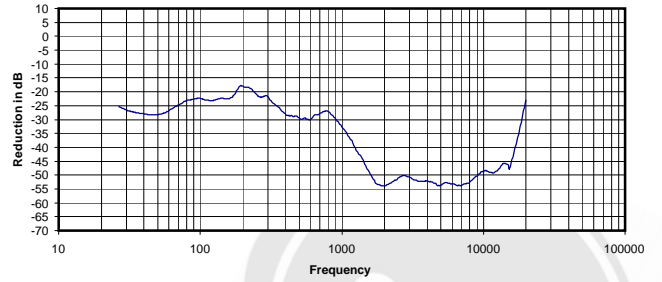
0.023 Vrms
 37 Ohms
 0.01 mW
 -11 dB



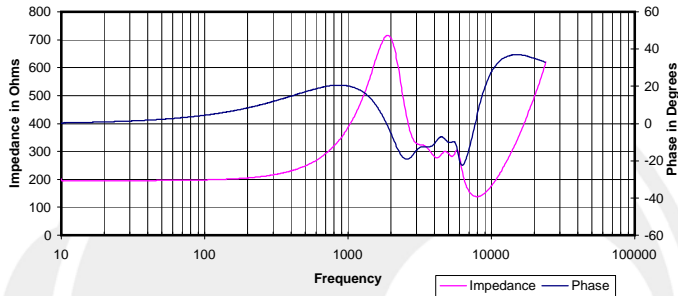
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



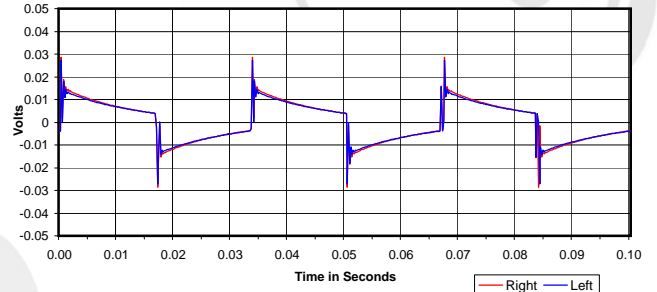
Isolation
Attenuation of External Sound vs. Frequency



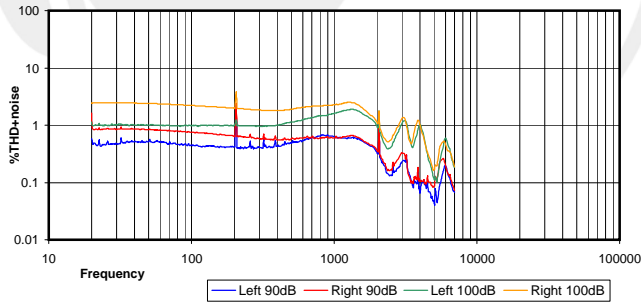
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



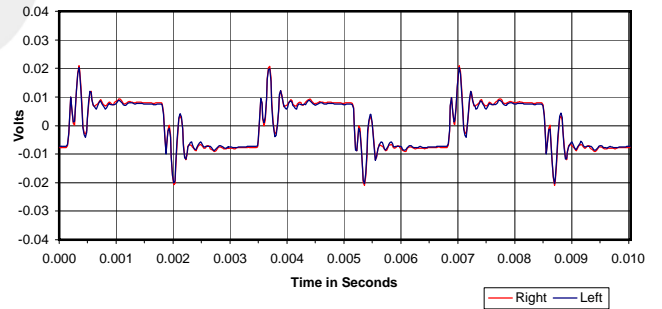
30 Hz Square Wave



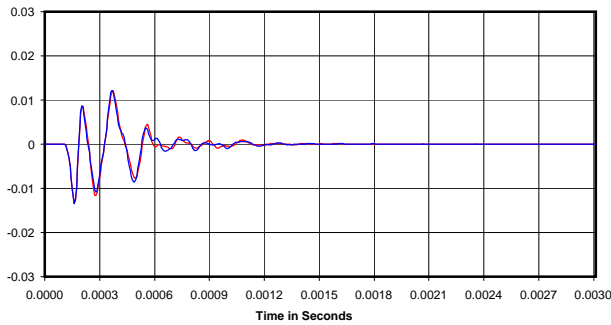
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

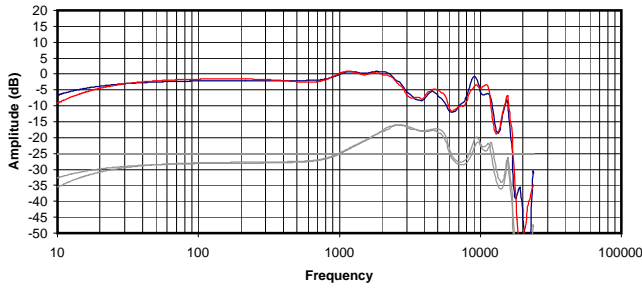


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

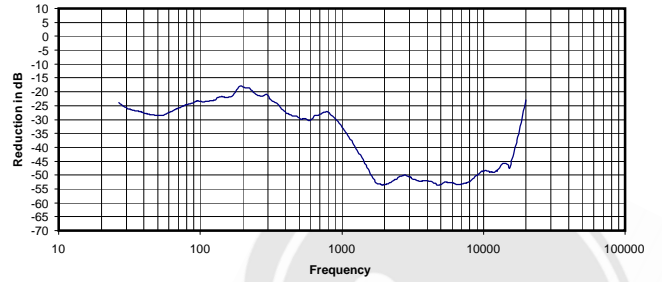
0.084 Vrms
387 Ohms
0.02 mW
-37 dB



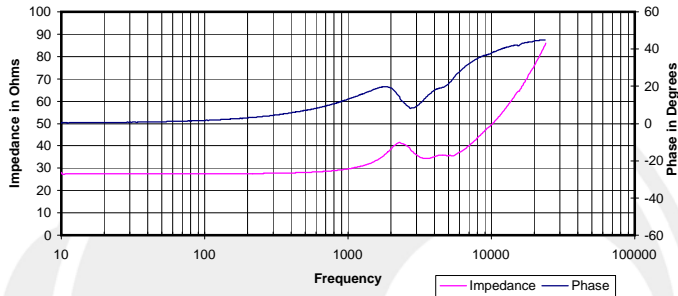
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



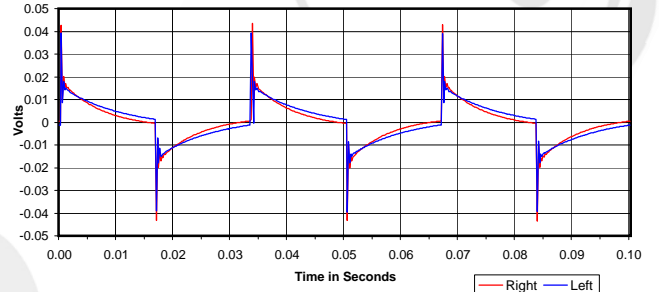
Isolation
Attenuation of External Sound vs. Frequency



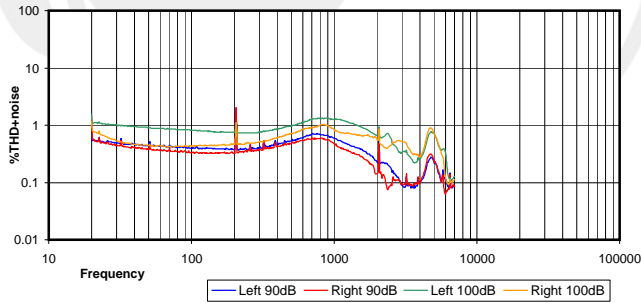
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



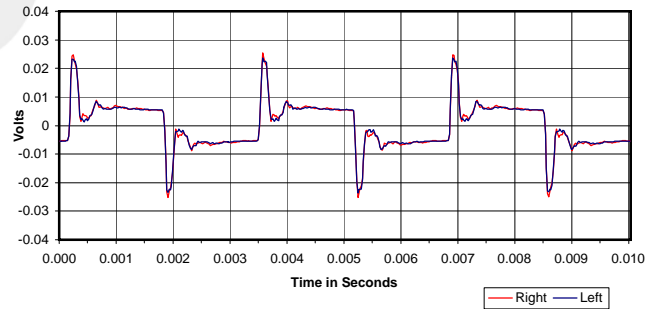
30 Hz Square Wave



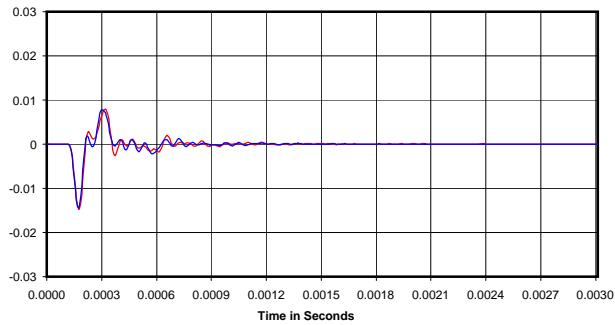
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



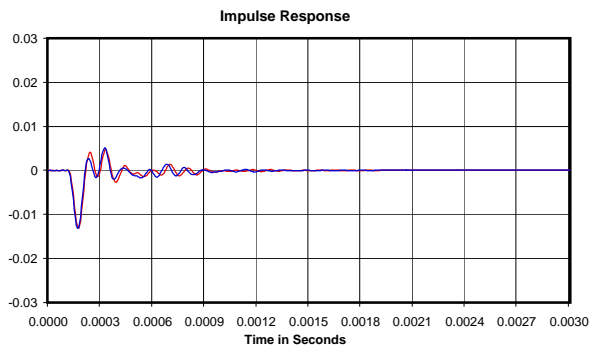
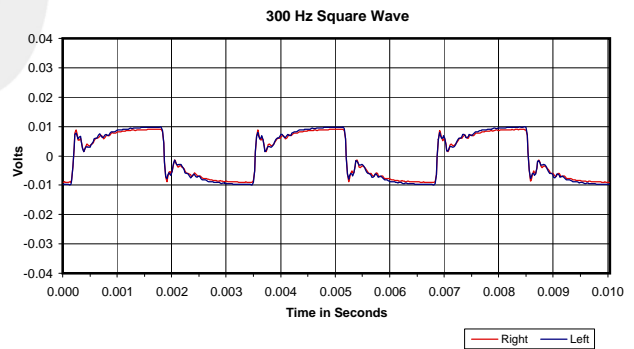
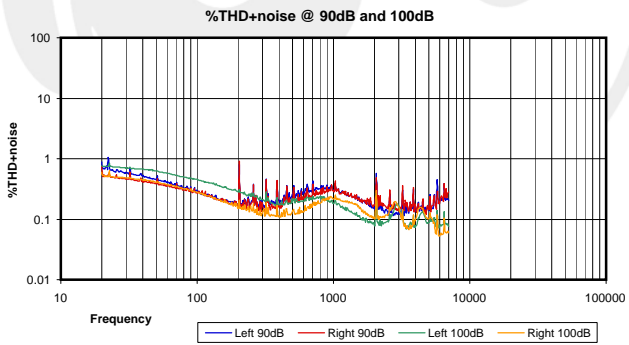
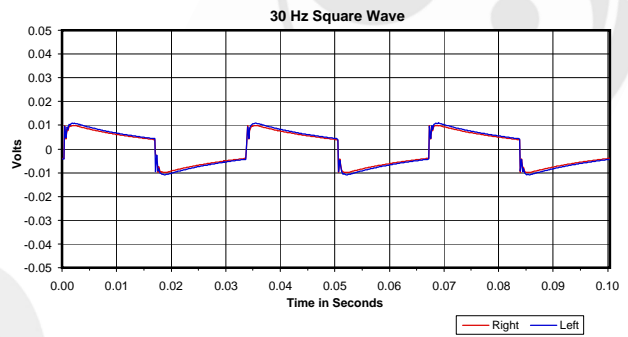
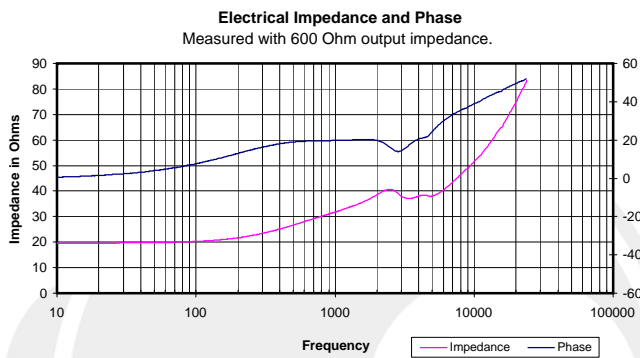
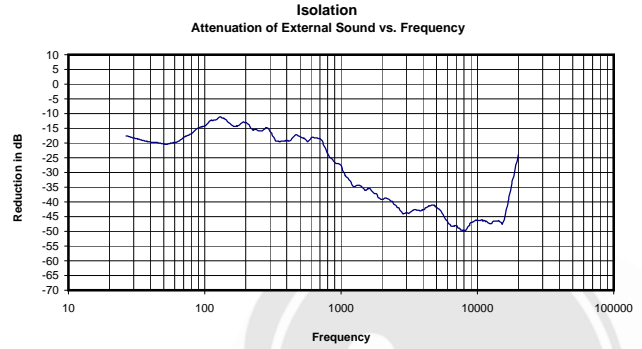
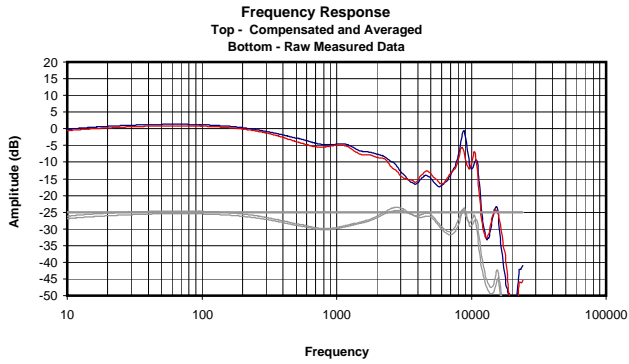
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
30 Ohms
0.03 mW
-37 dB



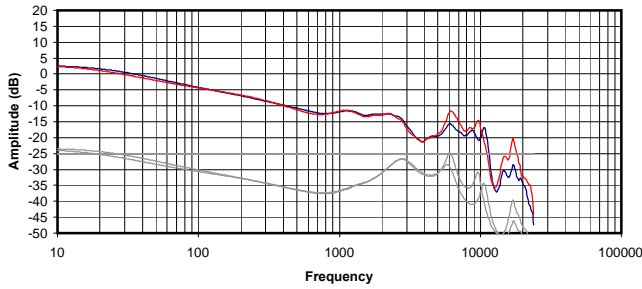


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

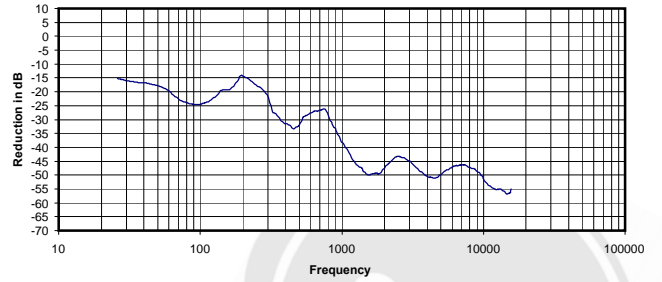
0.022 Vrms
32 Ohms
0.02 mW
-29 dB



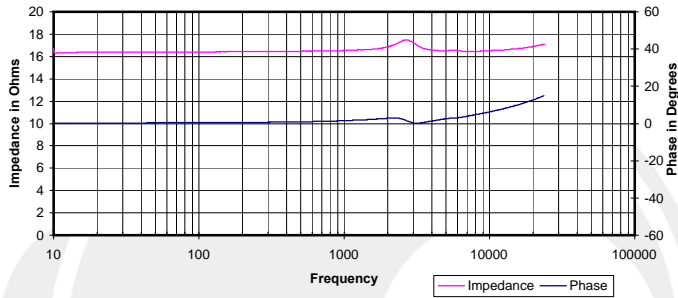
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



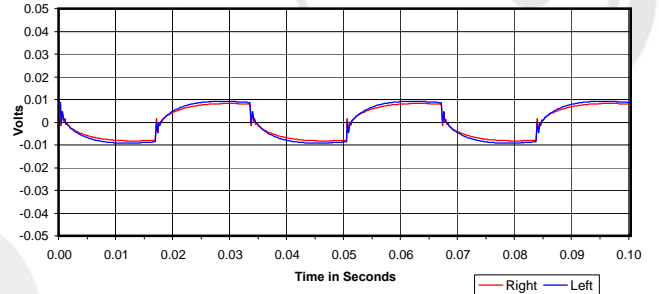
Isolation
Attenuation of External Sound vs. Frequency



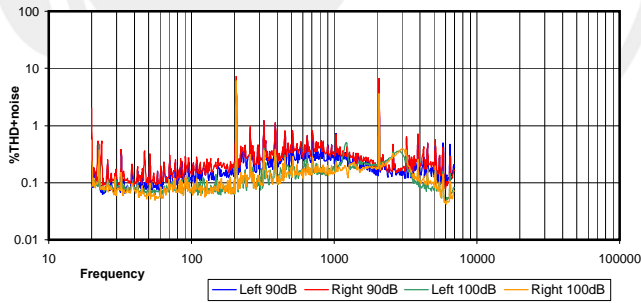
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



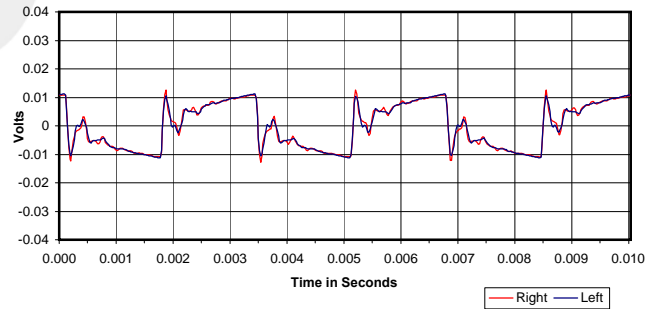
30 Hz Square Wave



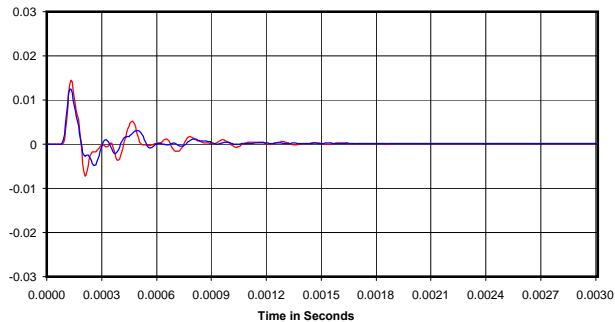
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

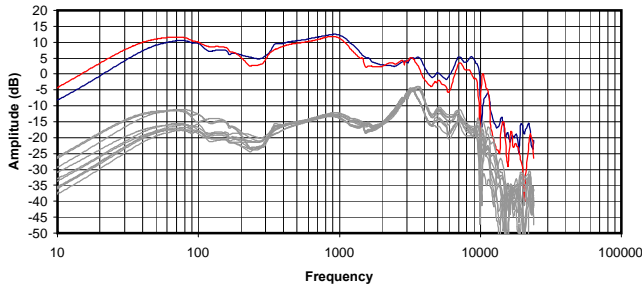


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

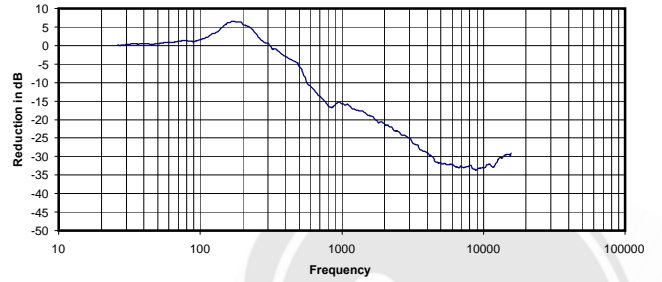
0.036 Vrms
17 Ohms
0.08 mW
-34 dB



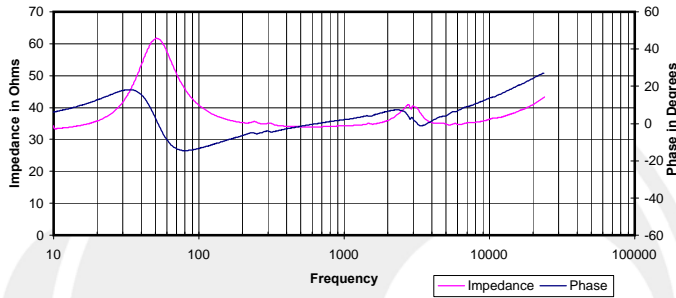
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



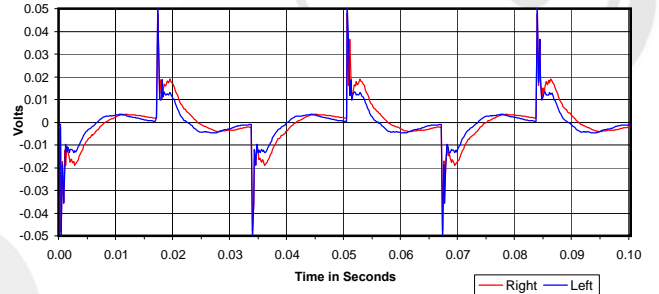
Isolation
 Attenuation of External Sound vs. Frequency



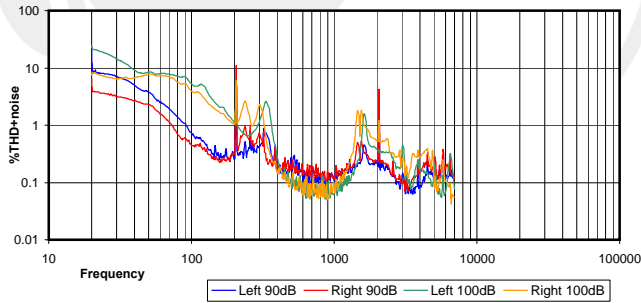
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



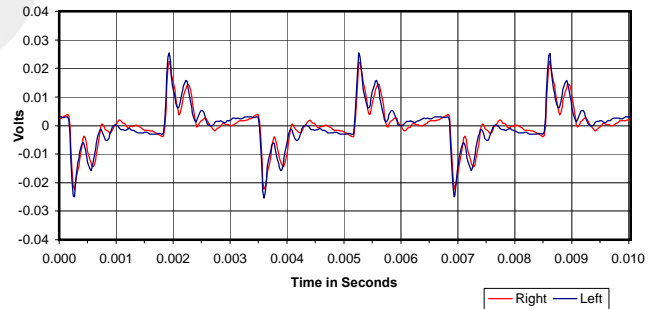
30 Hz Square Wave



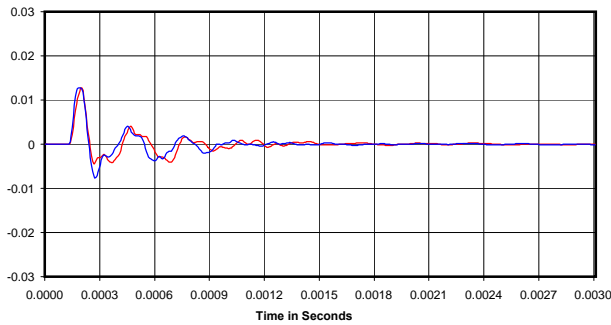
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

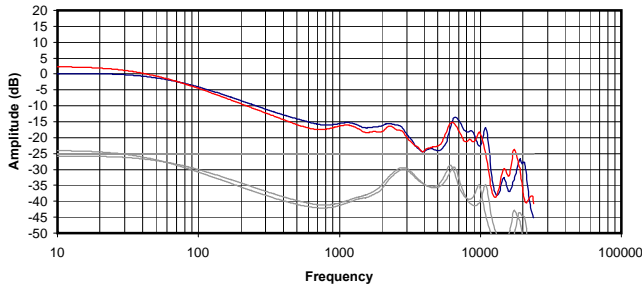


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

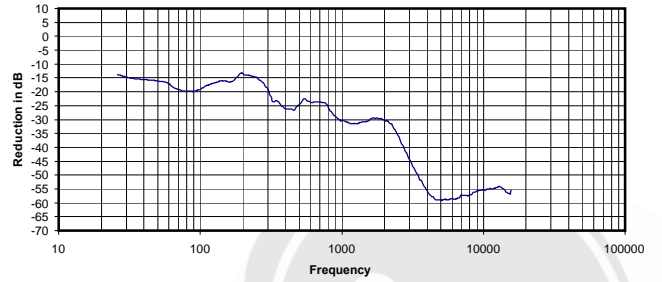
0.028 Vrms
 34 Ohms
 0.02 mW
 -12 dB



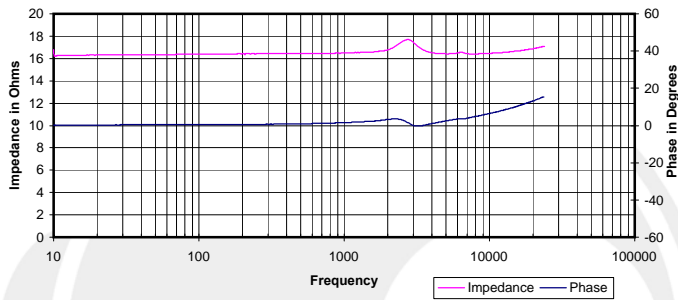
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



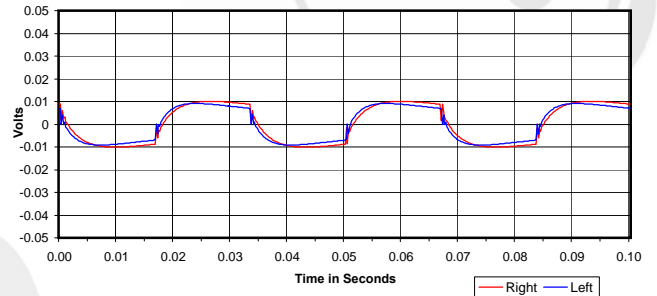
Isolation
Attenuation of External Sound vs. Frequency



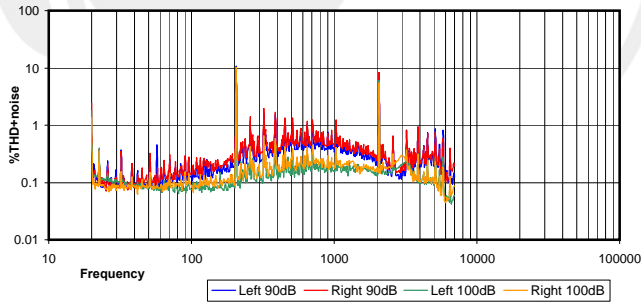
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



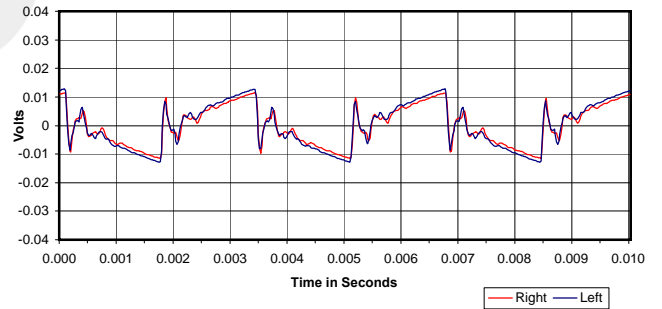
30 Hz Square Wave



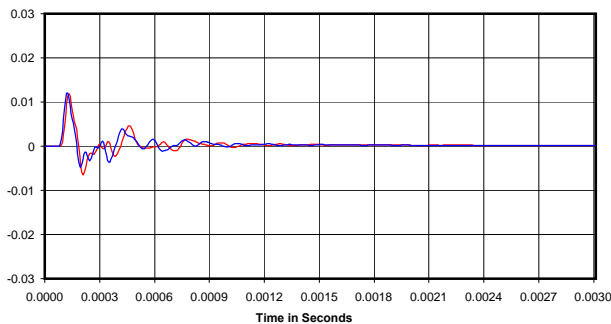
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

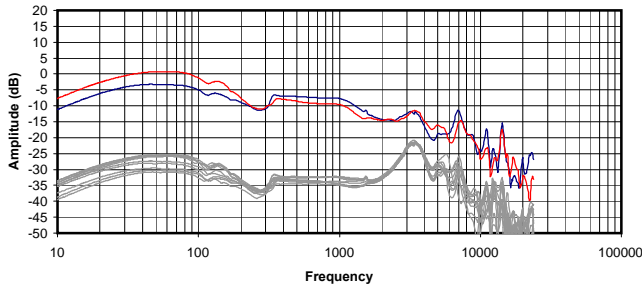


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

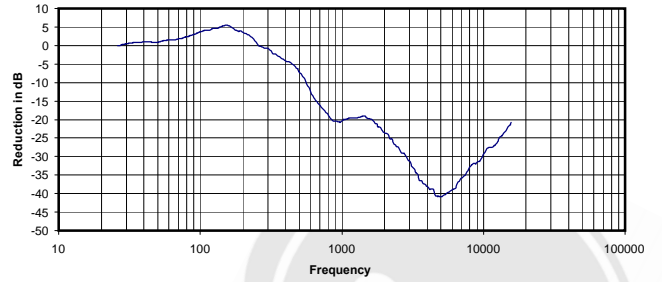
0.036 Vrms
16 Ohms
0.08 mW
-30 dB



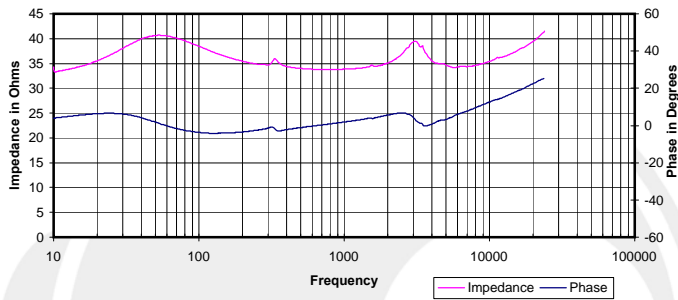
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



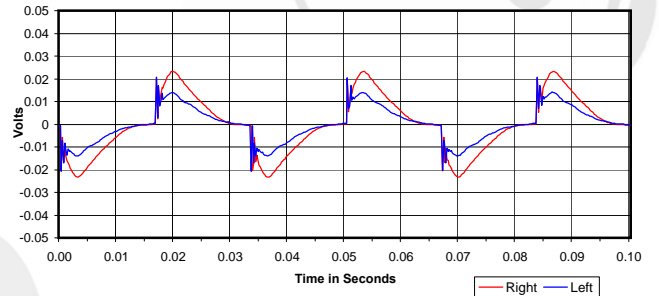
Isolation
 Attenuation of External Sound vs. Frequency



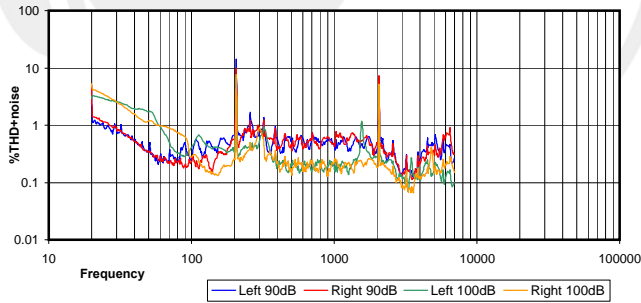
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



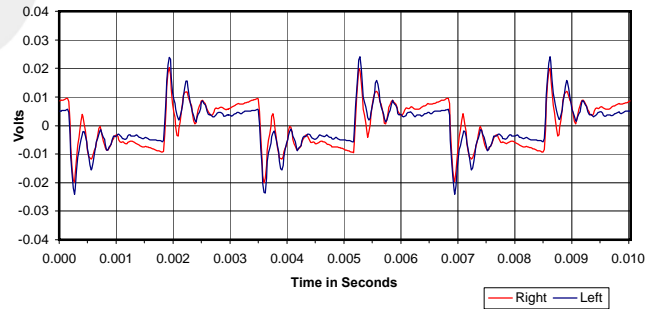
30 Hz Square Wave



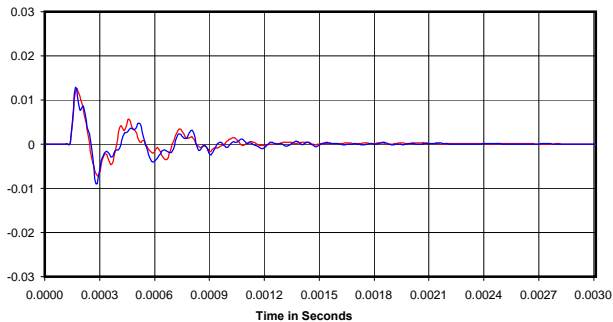
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



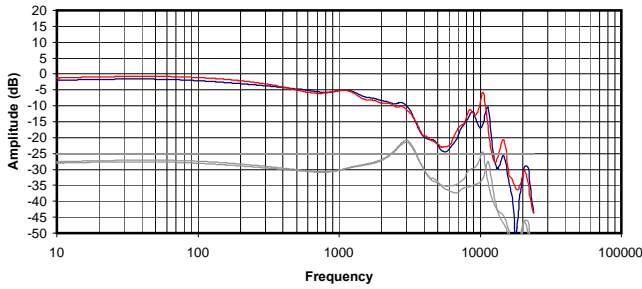
Impulse Response



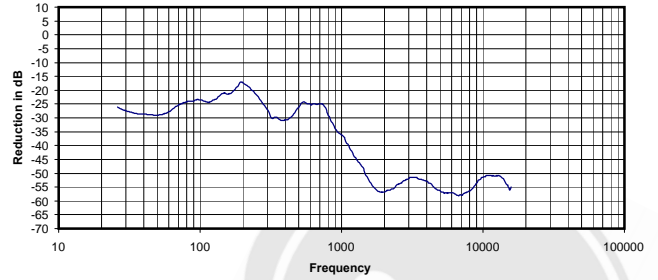
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.042 Vrms
 34 Ohms
 0.05 mW
 -15 dB

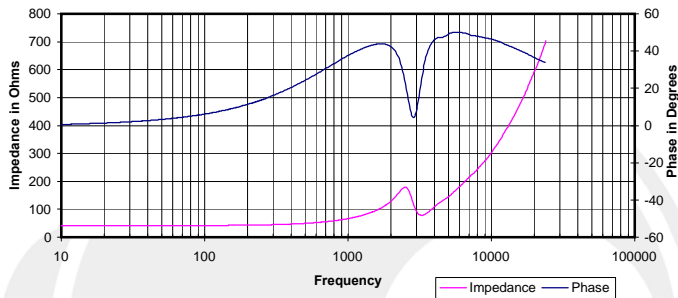
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



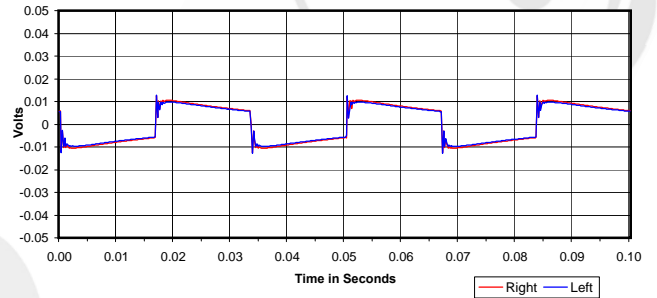
Isolation
Attenuation of External Sound vs. Frequency



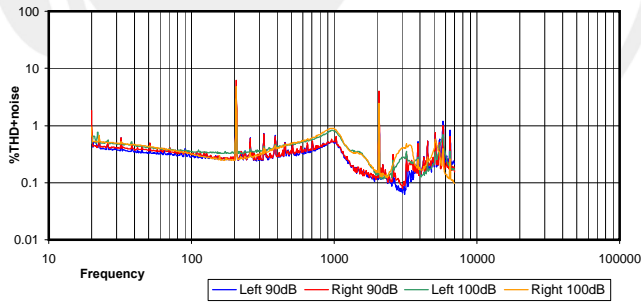
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



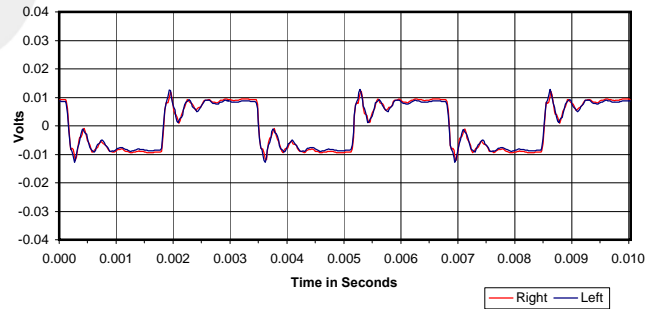
30 Hz Square Wave



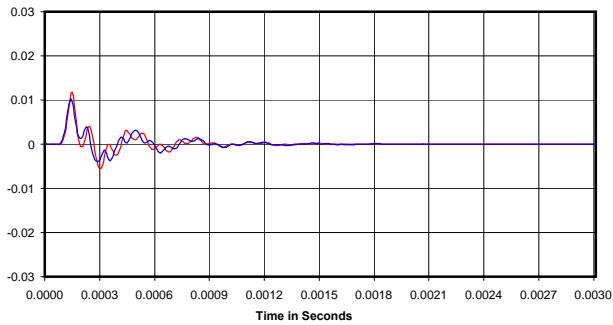
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



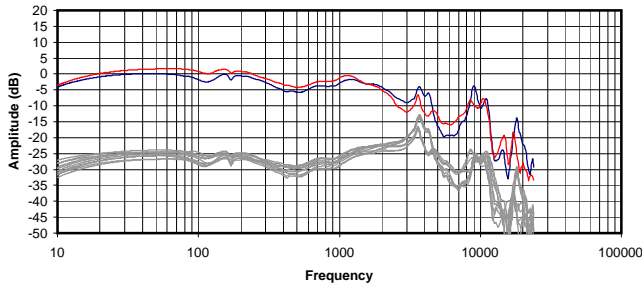
Impulse Response



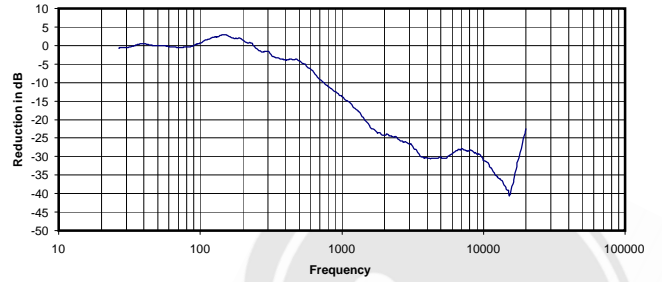
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.042 Vrms
67 Ohms
0.03 mW
-37 dB

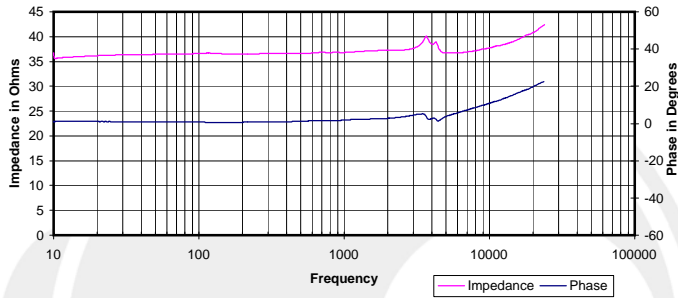
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



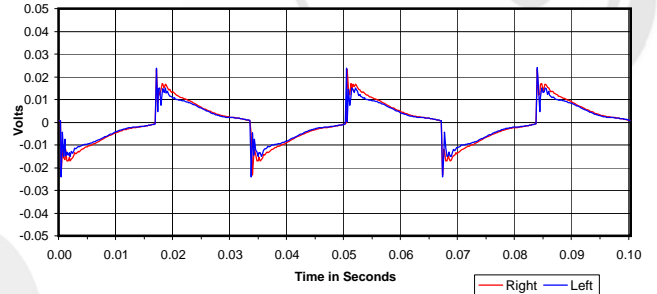
Isolation
 Attenuation of External Sound vs. Frequency



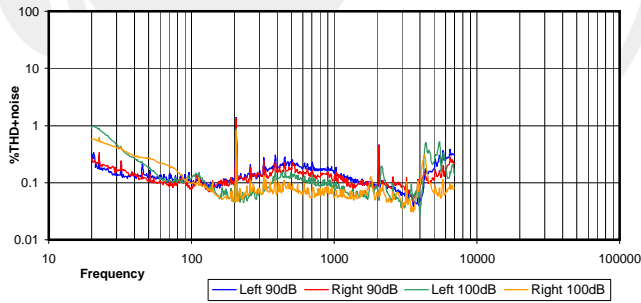
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



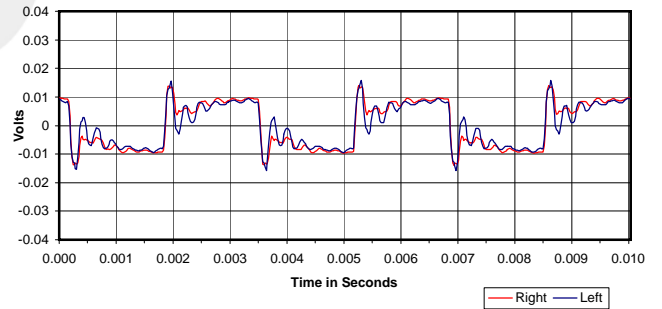
30 Hz Square Wave



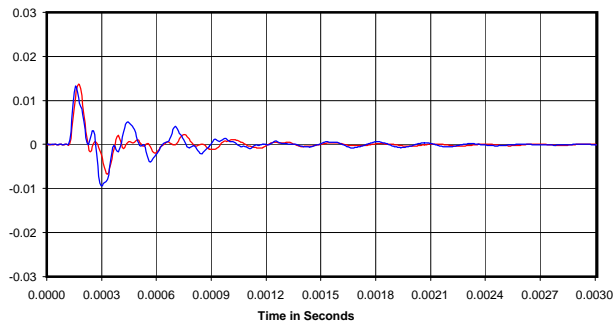
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

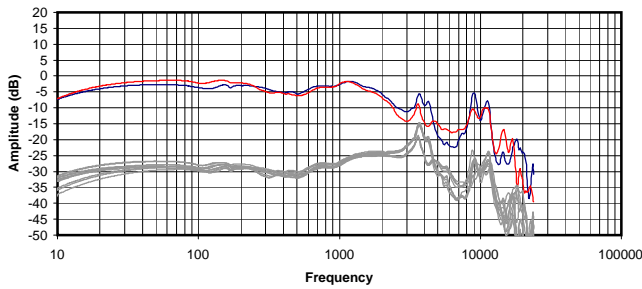


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

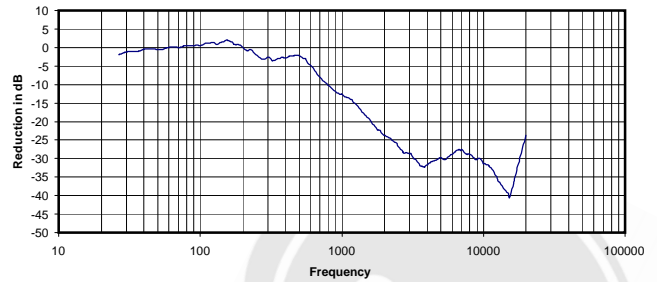
0.039 Vrms
 37 Ohms
 0.04 mW
 -14 dB



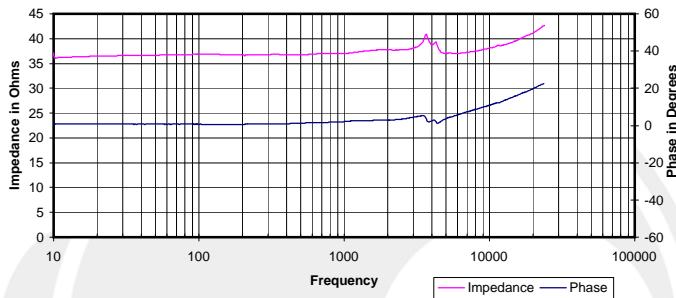
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



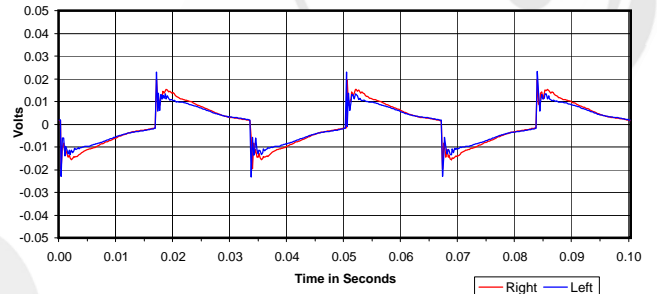
Isolation
 Attenuation of External Sound vs. Frequency



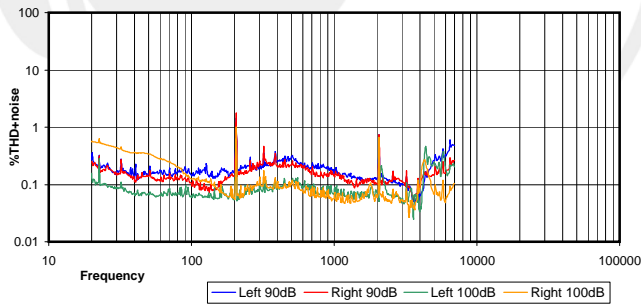
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



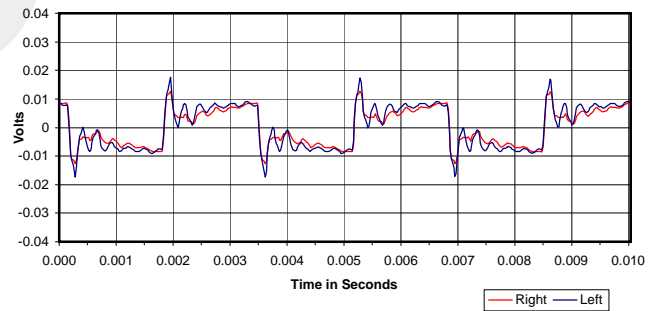
30 Hz Square Wave



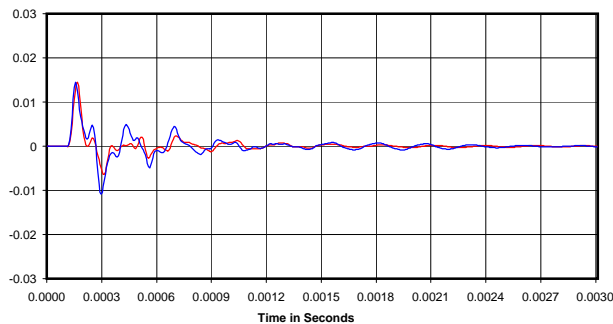
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

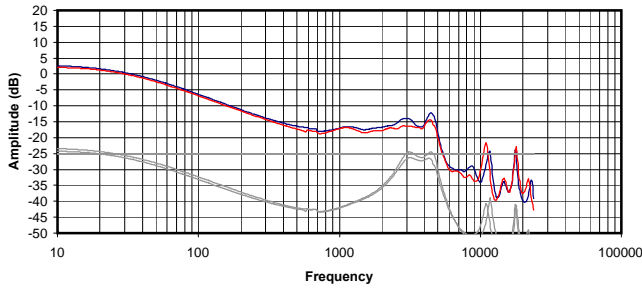


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

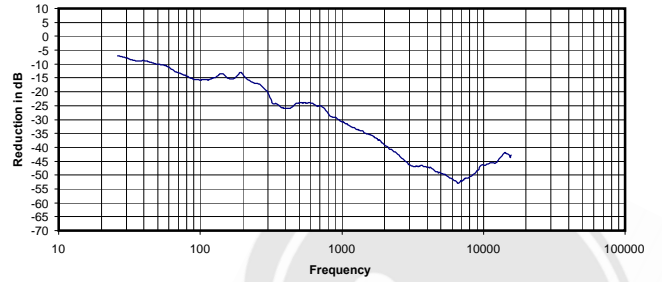
0.032 Vrms
 37 Ohms
 0.03 mW
 -14 dB



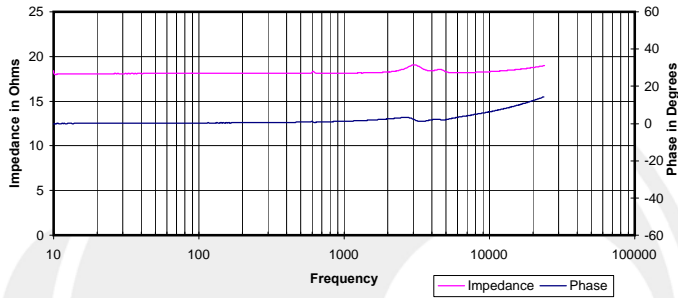
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



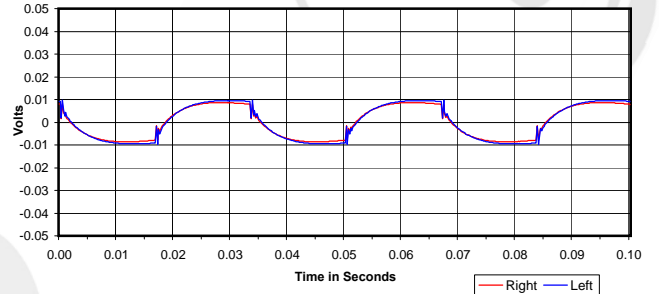
Isolation
Attenuation of External Sound vs. Frequency



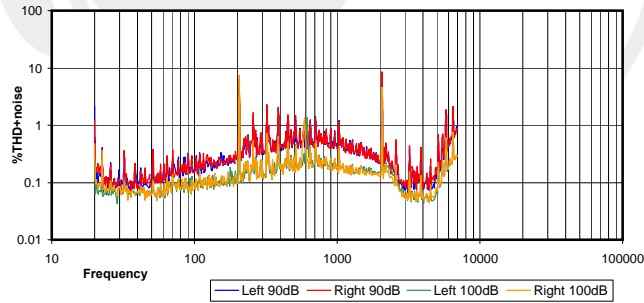
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



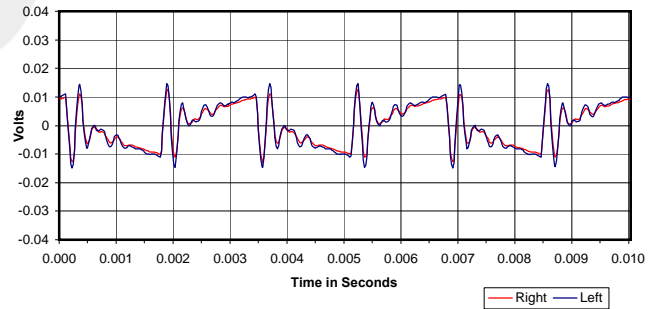
30 Hz Square Wave



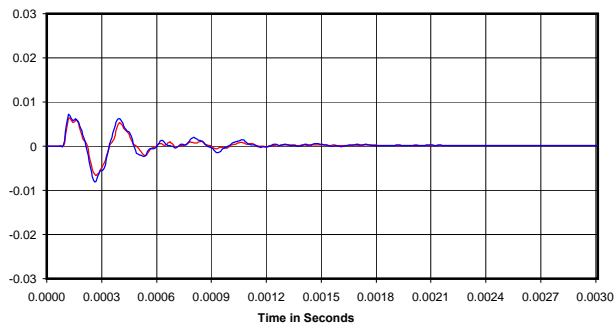
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

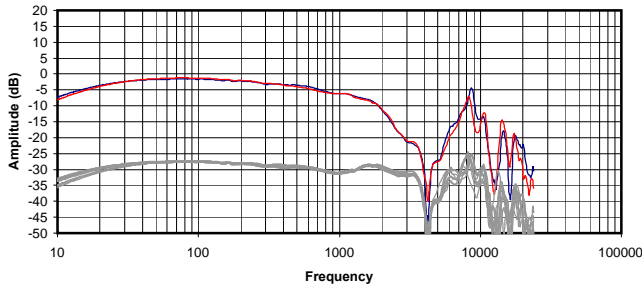


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

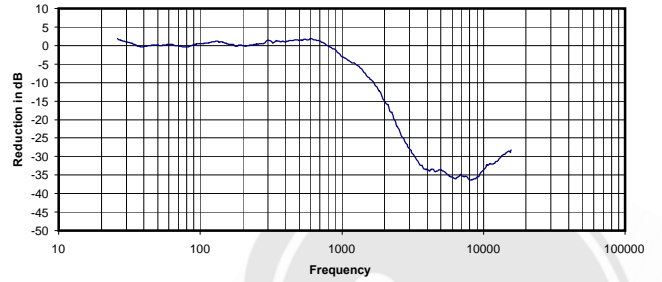
0.046 Vrms
18 Ohms
0.12 mW
-30 dB



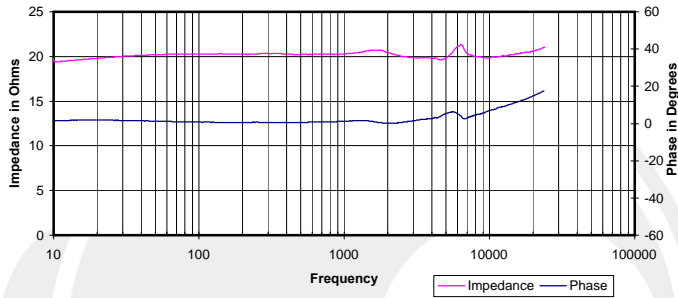
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



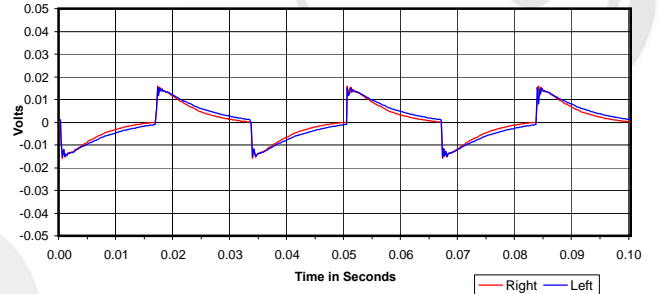
Isolation
 Attenuation of External Sound vs. Frequency



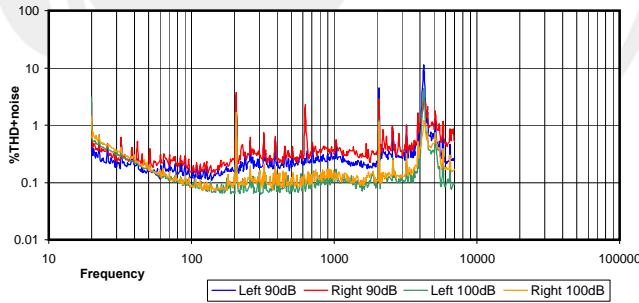
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



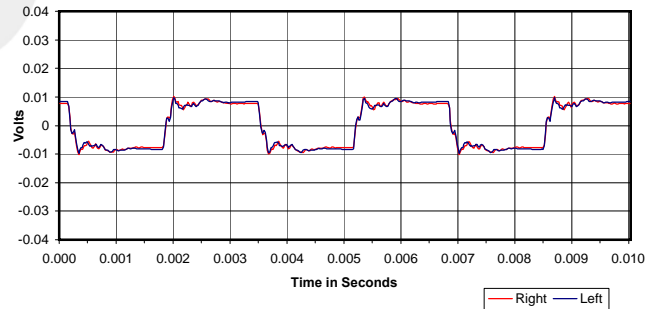
30 Hz Square Wave



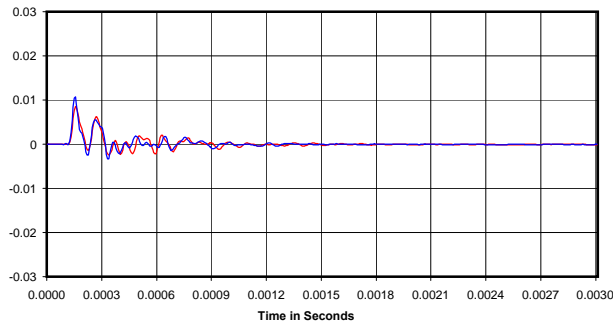
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

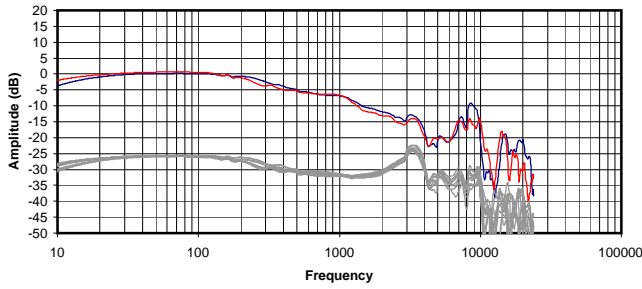


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

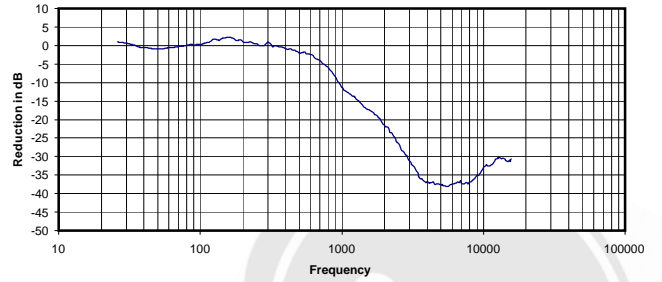
0.016 Vrms
 20 Ohms
 0.01 mW
 -9 dB



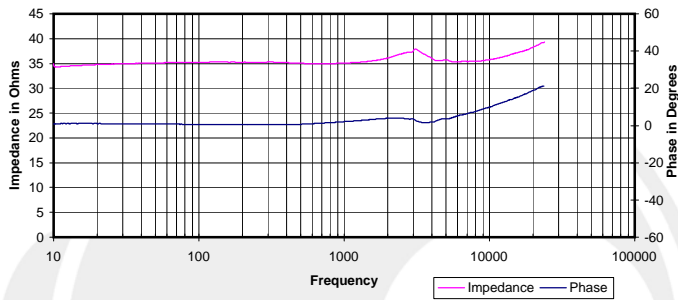
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



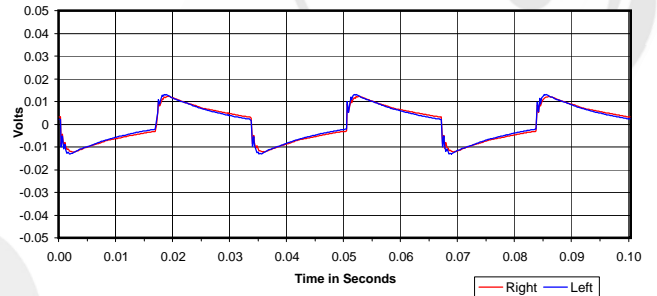
Isolation
 Attenuation of External Sound vs. Frequency



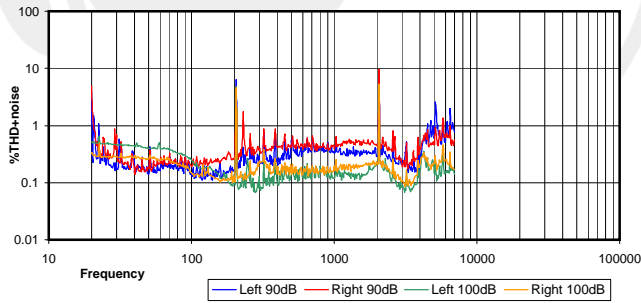
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



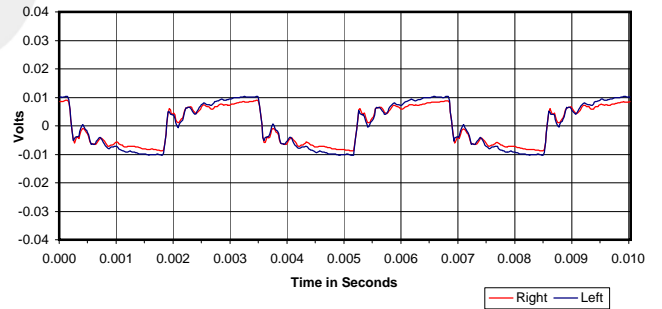
30 Hz Square Wave



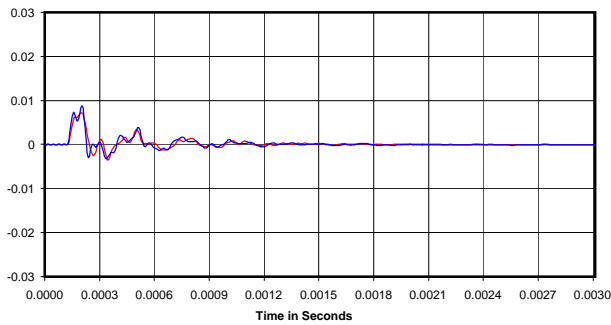
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



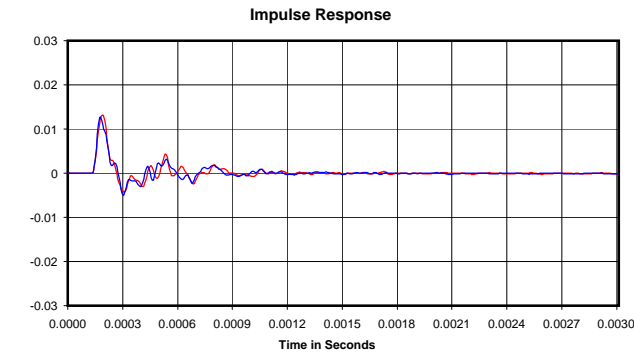
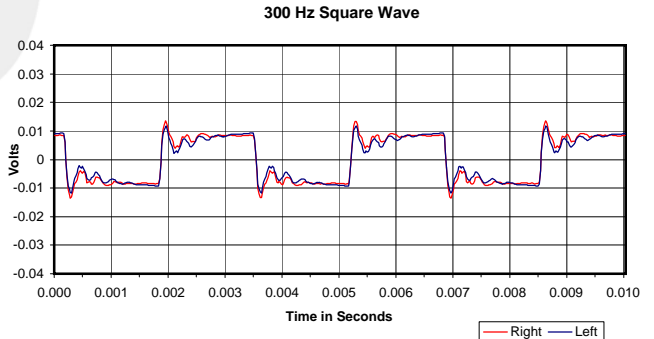
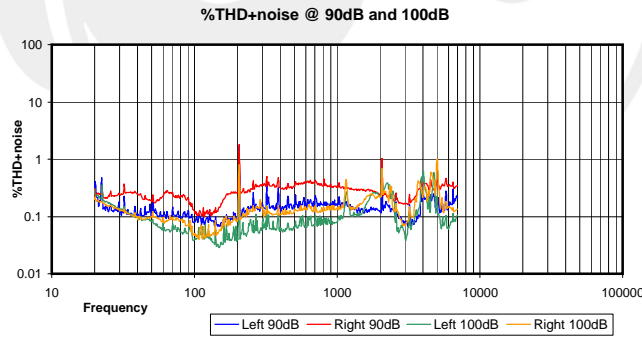
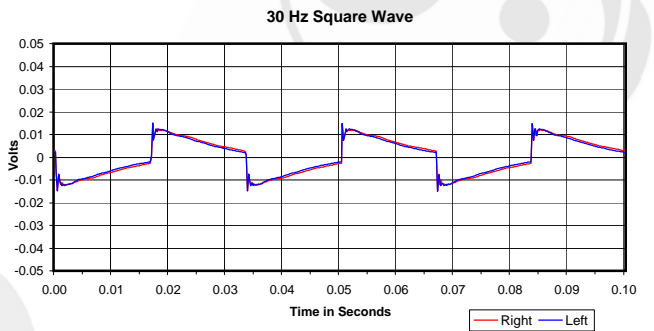
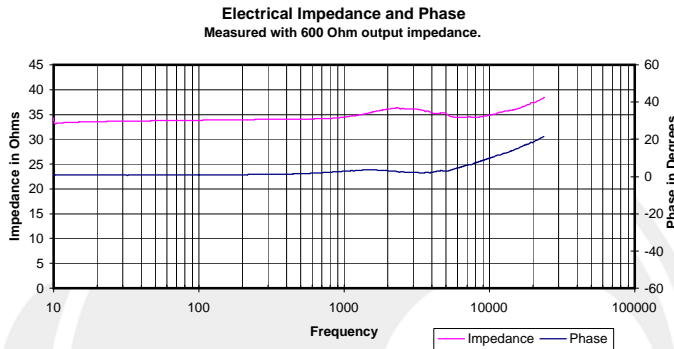
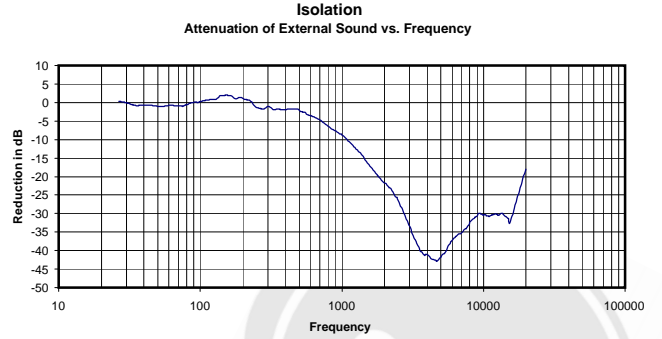
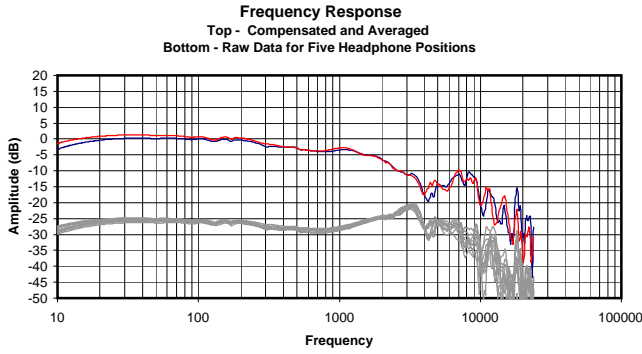
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.030 Vrms
 35 Ohms
 0.03 mW
 -12 dB

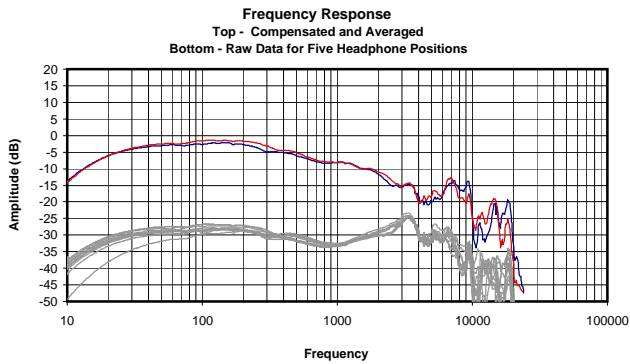




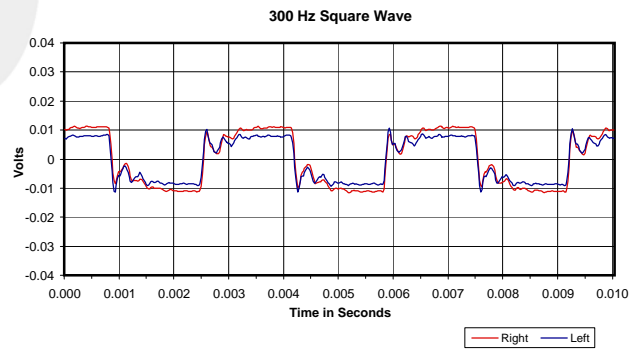
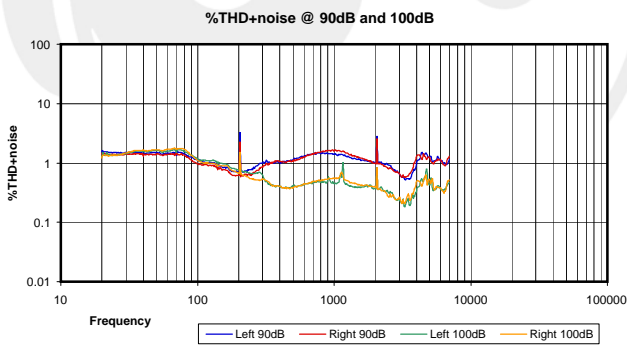
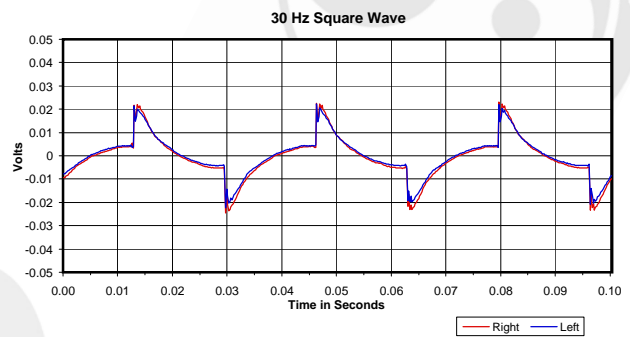
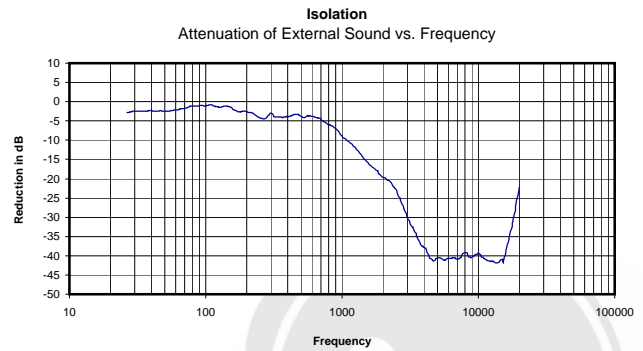
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.030 Vrms
34 Ohms
0.03 mW
-15 dB





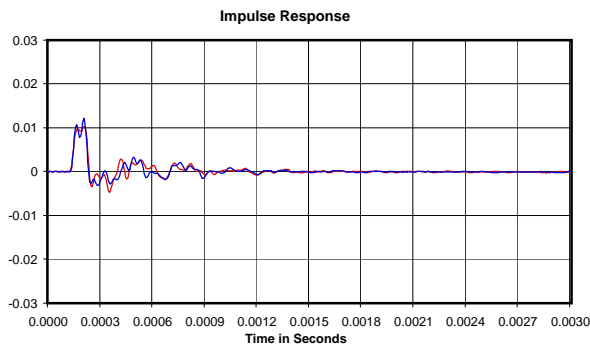
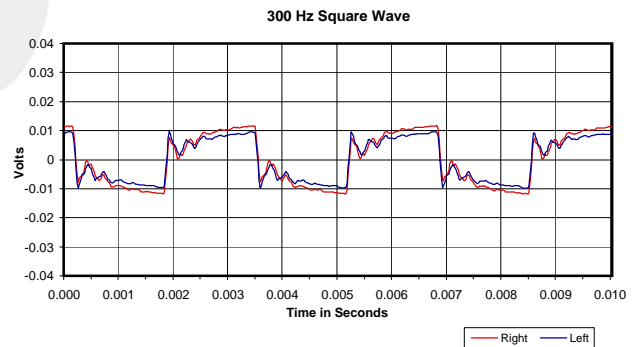
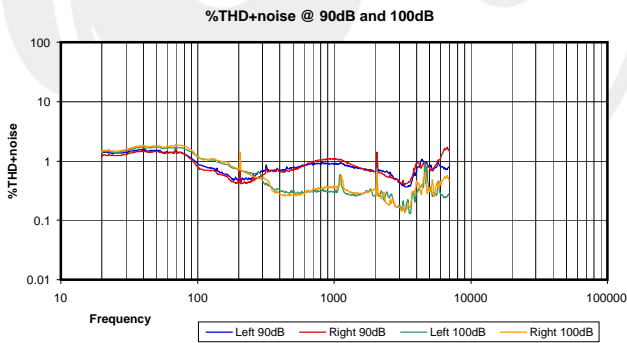
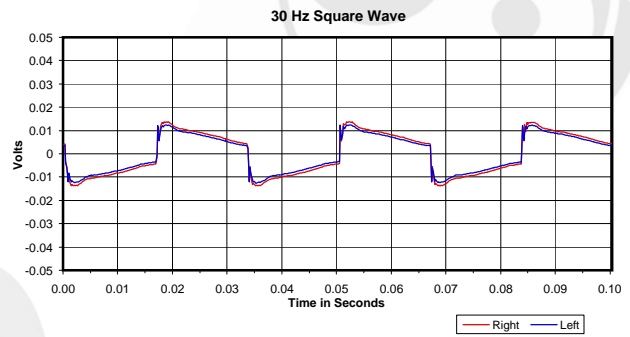
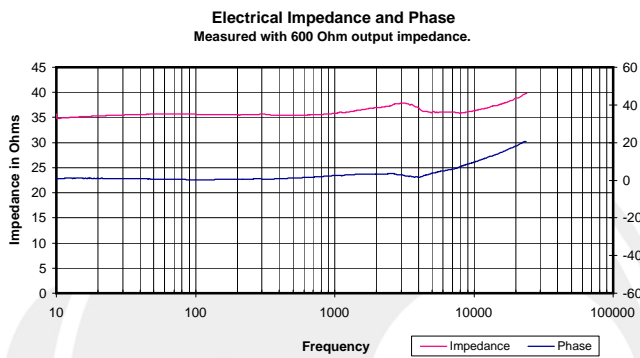
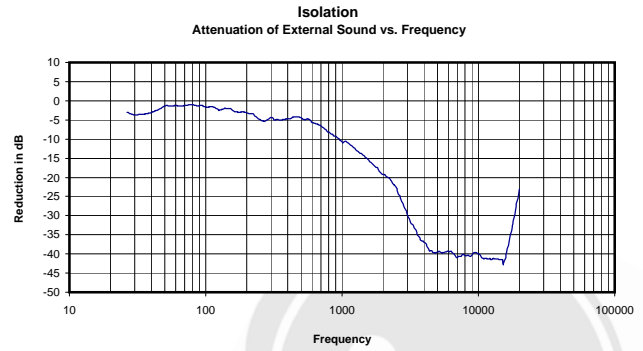
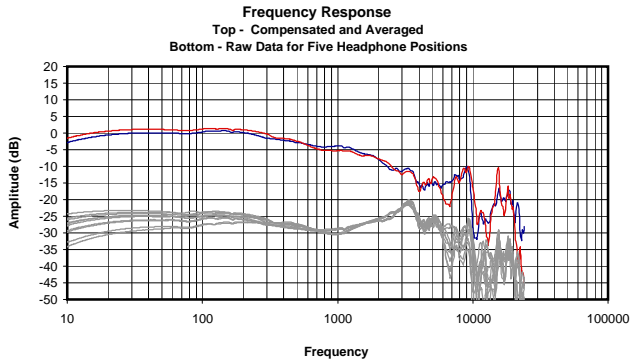
Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

-16 dB

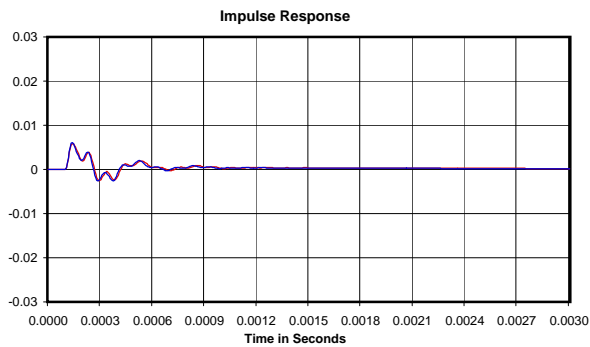
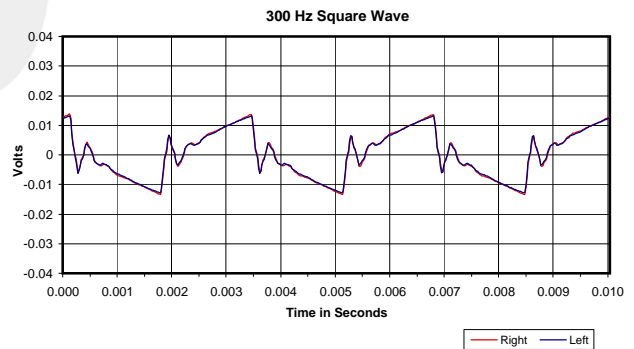
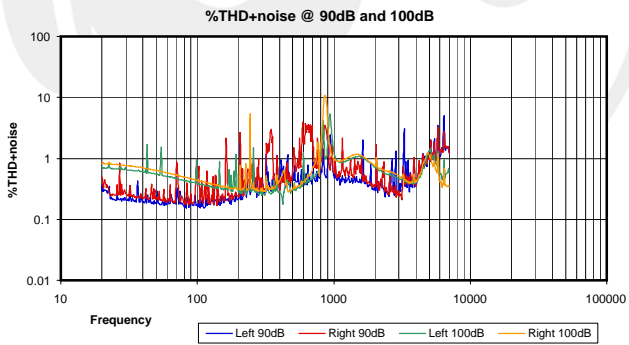
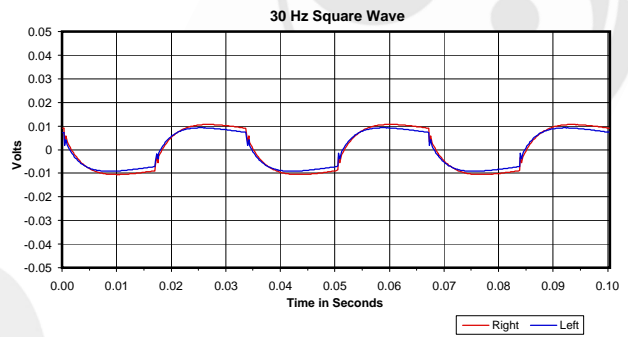
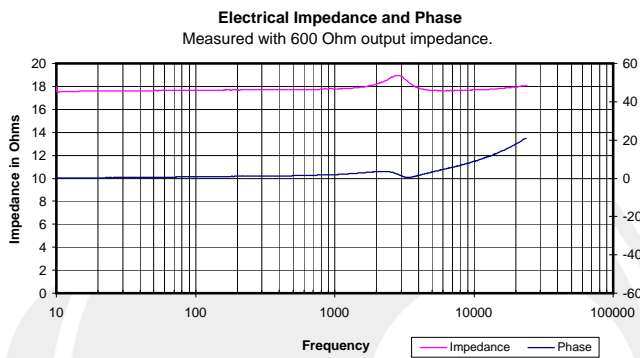
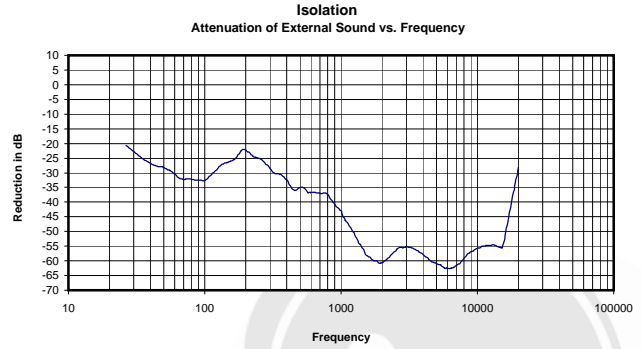
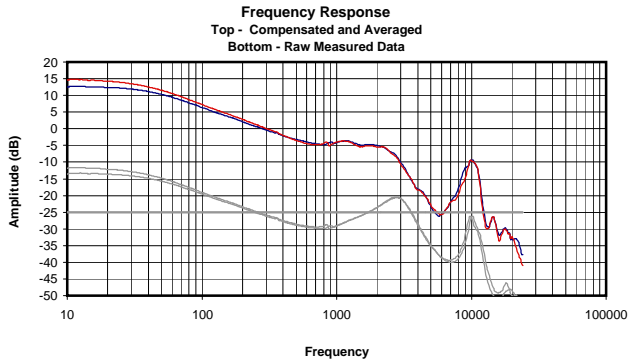
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.037 Vrms
36 Ohms
0.04 mW
-17 dB

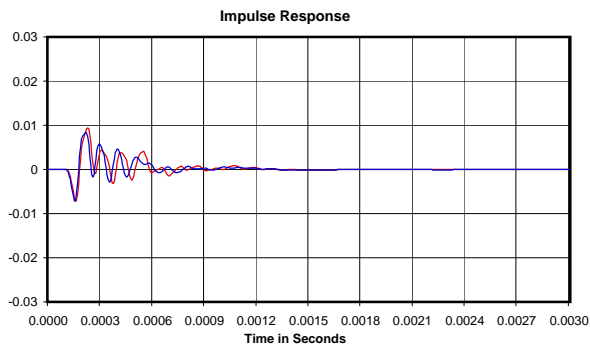
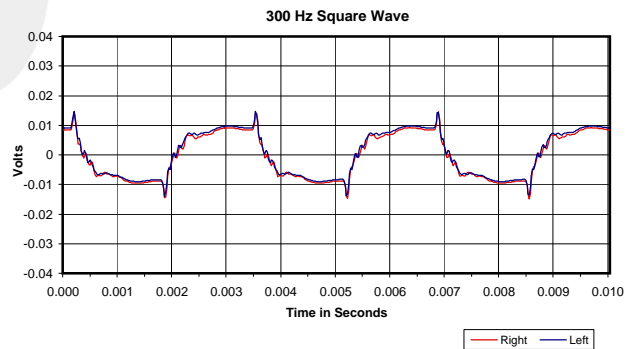
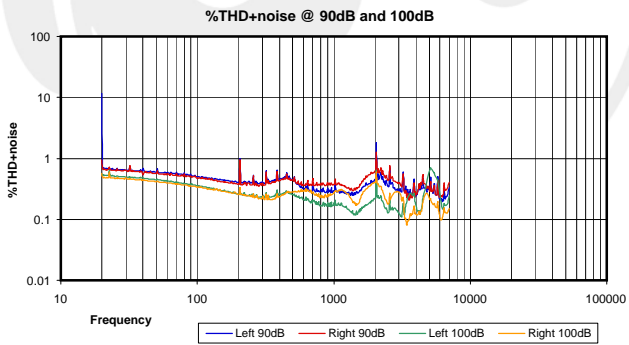
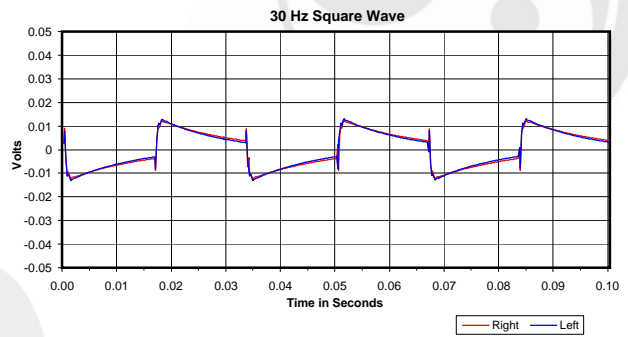
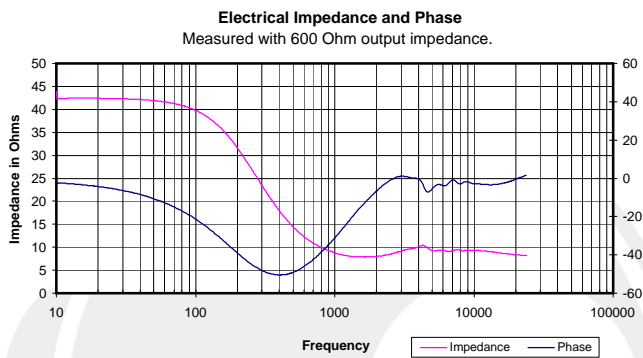
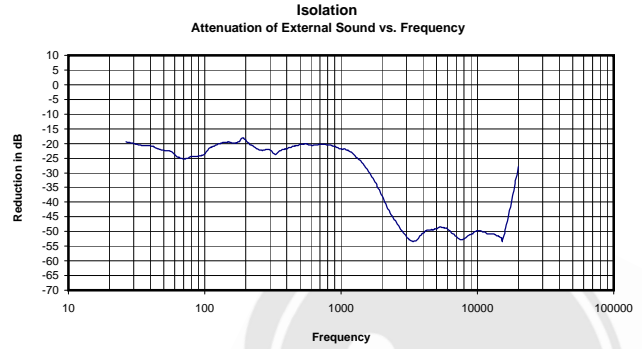
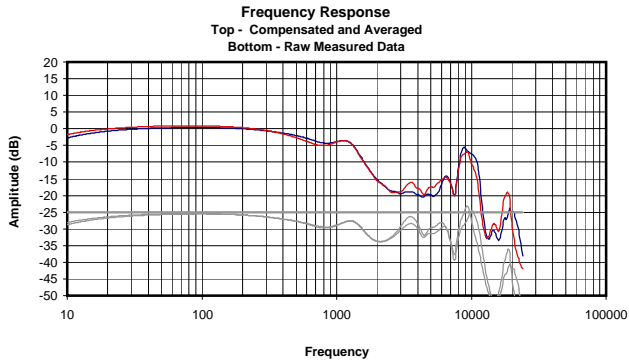




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.141 Vrms
18 Ohms
1.12 mW
-44 dB



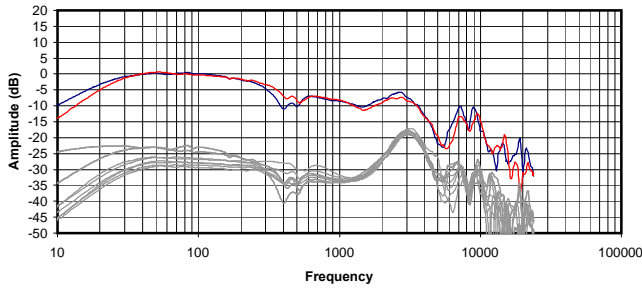


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

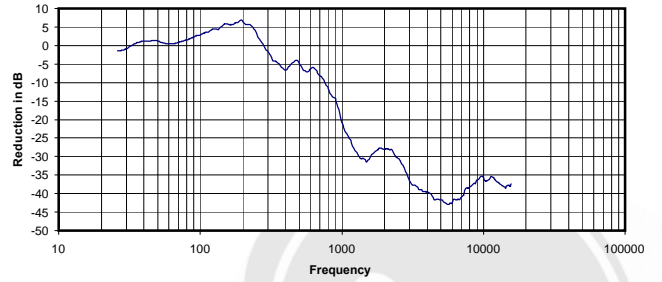
0.010 Vrms
9 Ohms
0.01 mW
-32 dBr



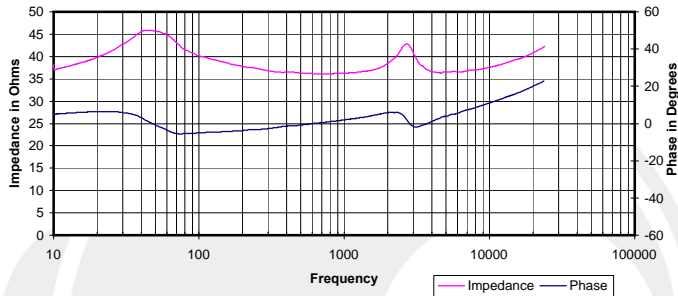
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



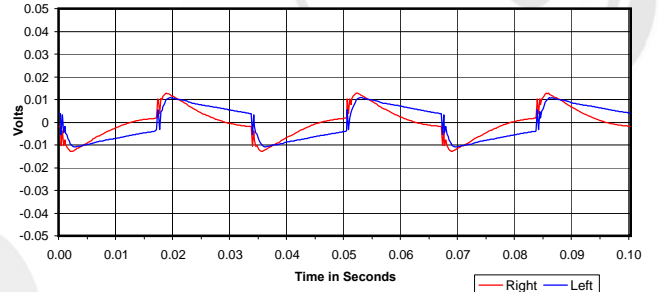
Isolation
 Attenuation of External Sound vs. Frequency



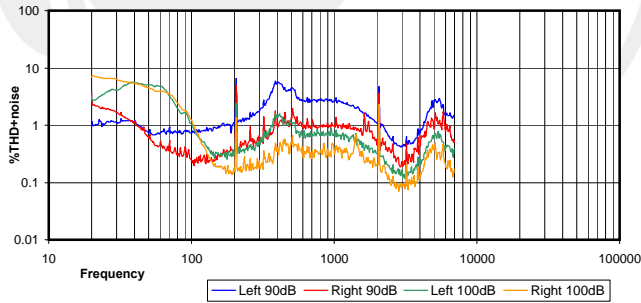
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



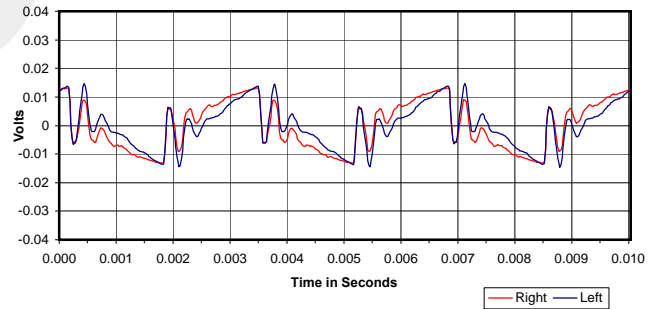
30 Hz Square Wave



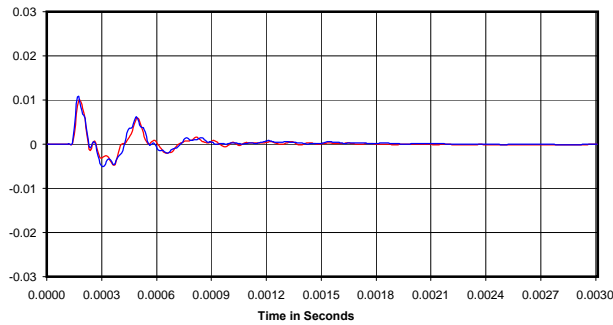
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

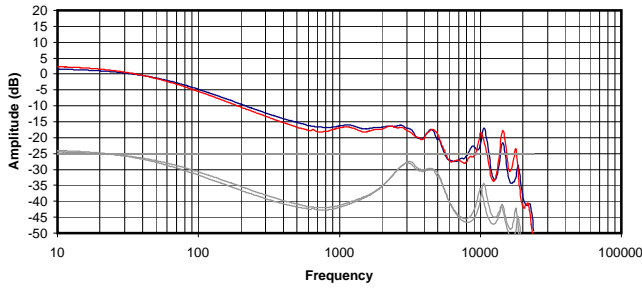


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

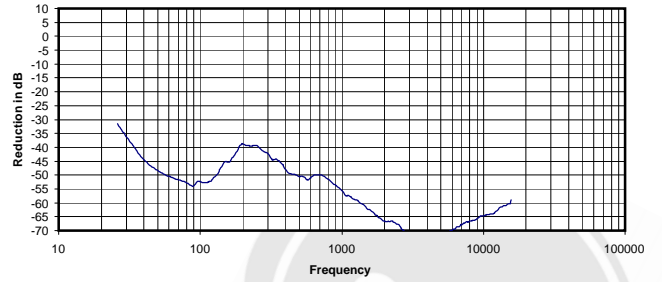
0.068 Vrms
 36 Ohms
 0.13 mW
 -16 dB



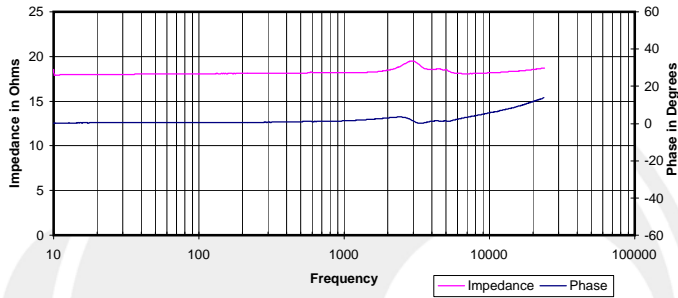
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



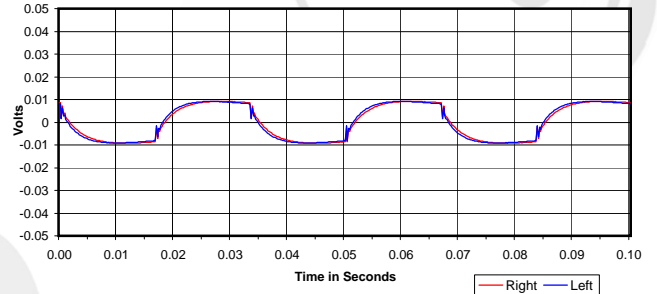
Isolation
Attenuation of External Sound vs. Frequency



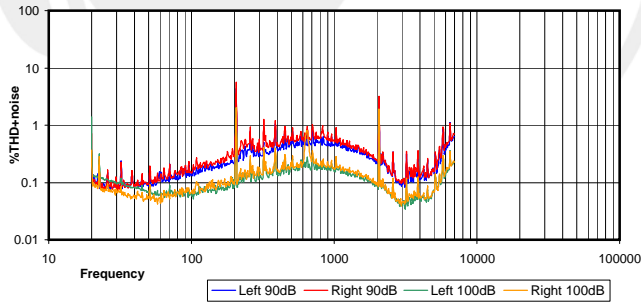
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



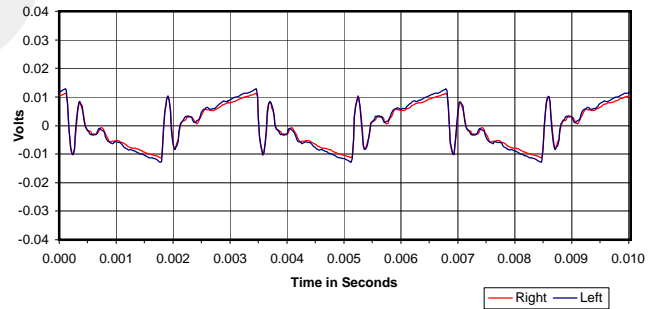
30 Hz Square Wave



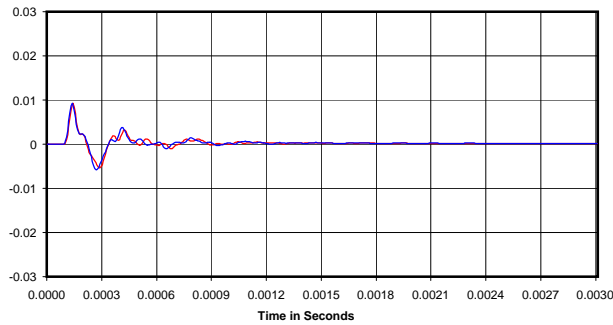
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

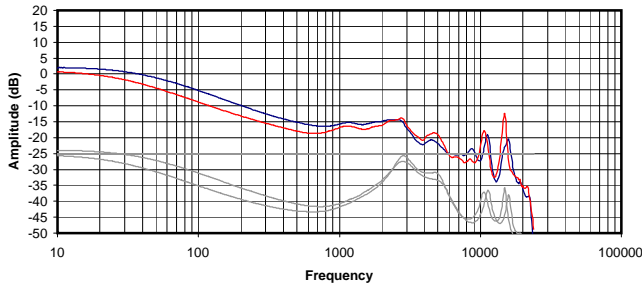


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

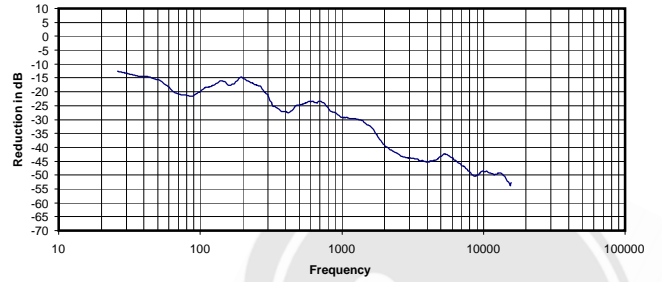
0.026 Vrms
18 Ohms
0.04 mW
-56 dB



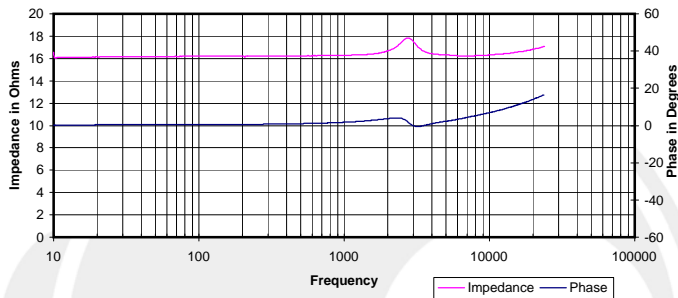
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



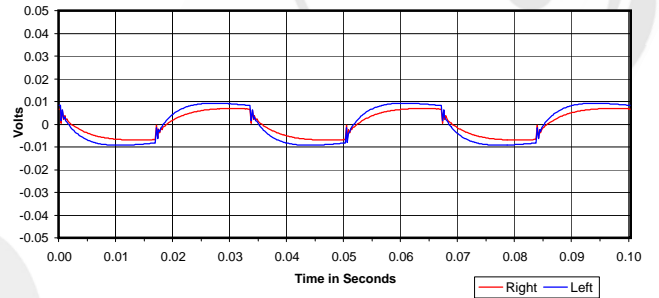
Isolation
Attenuation of External Sound vs. Frequency



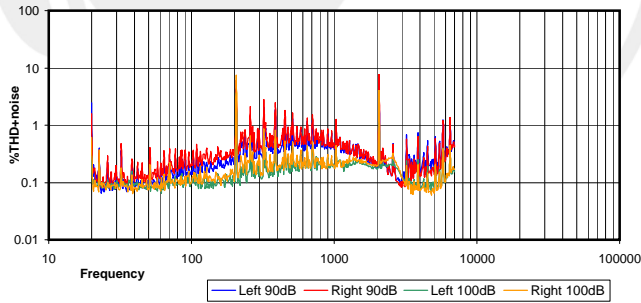
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



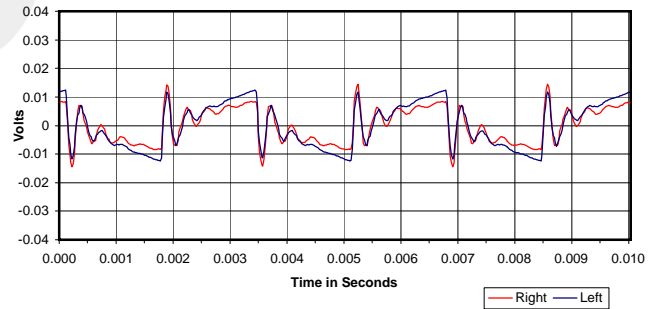
30 Hz Square Wave



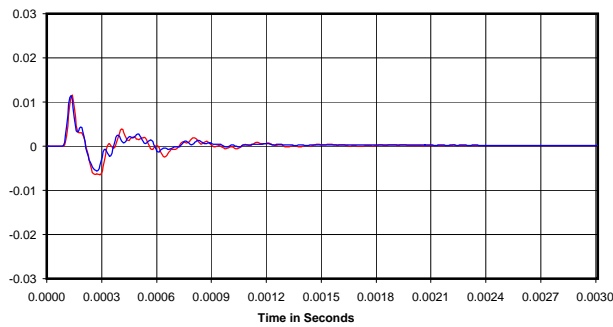
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

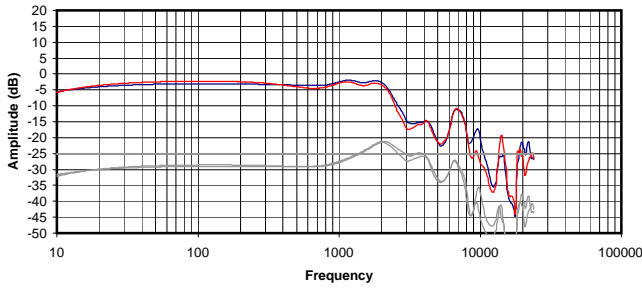


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

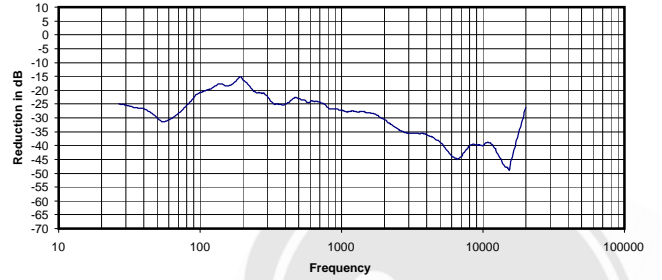
0.037 Vrms
16 Ohms
0.08 mW
-29 dB



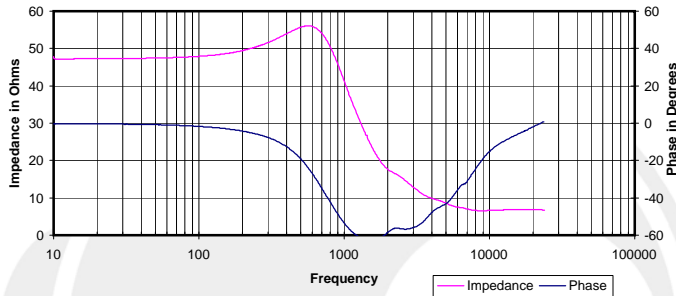
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



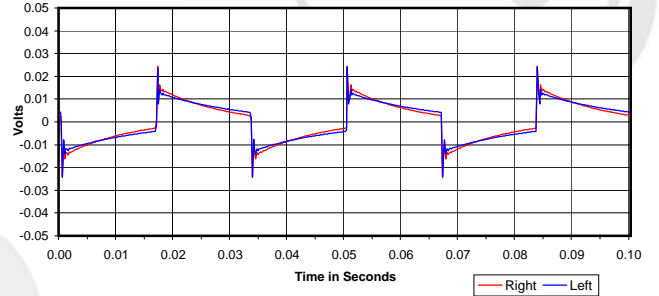
Isolation
Attenuation of External Sound vs. Frequency



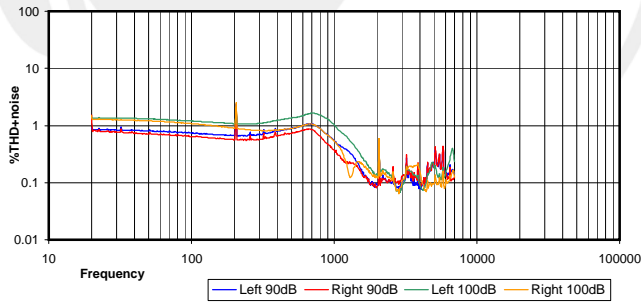
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



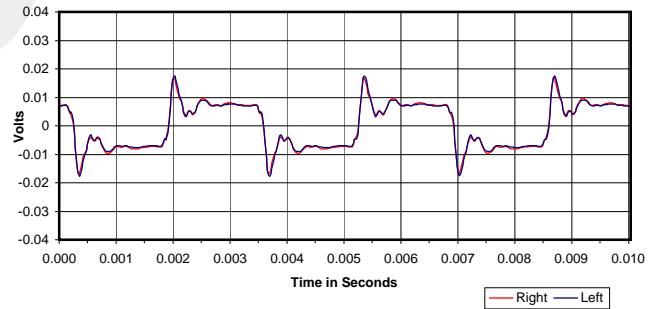
30 Hz Square Wave



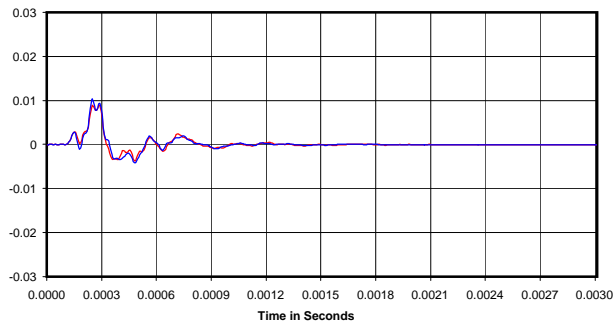
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

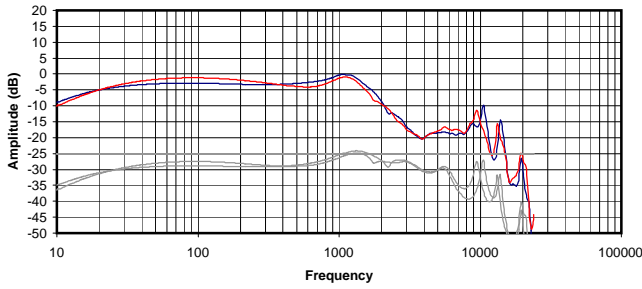


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

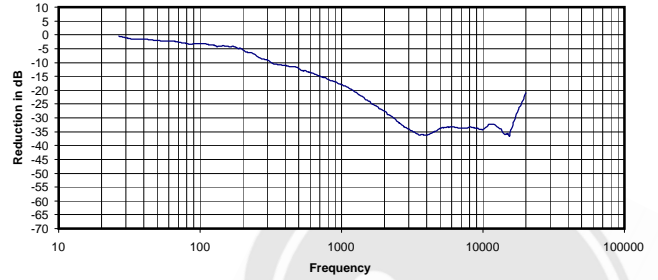
0.014 Vrms
41 Ohms
0.00 mW
-28 dB



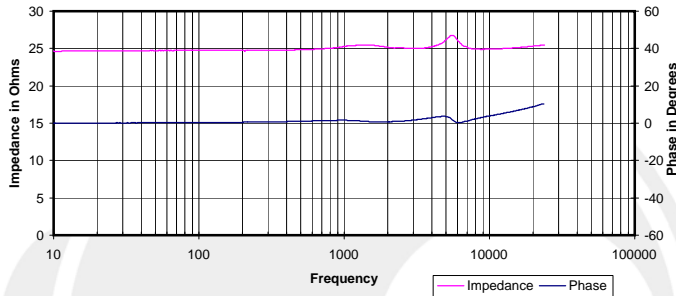
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



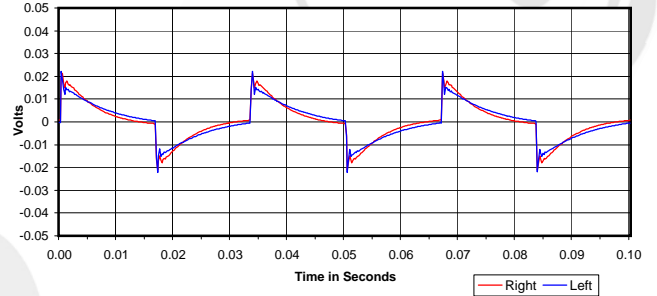
Isolation
Attenuation of External Sound vs. Frequency



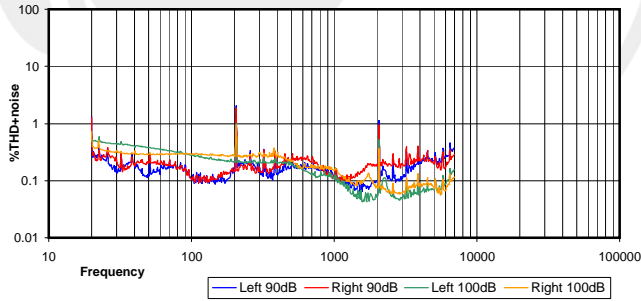
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



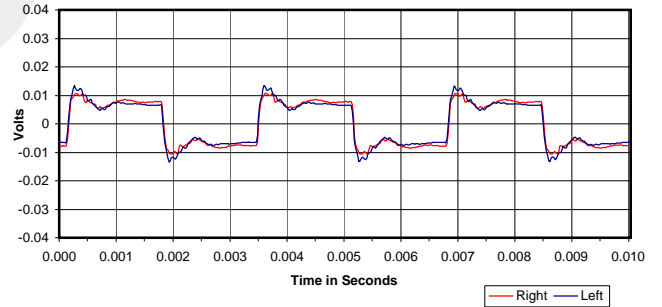
30 Hz Square Wave



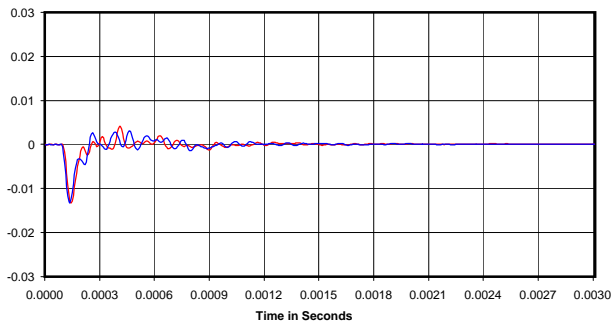
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

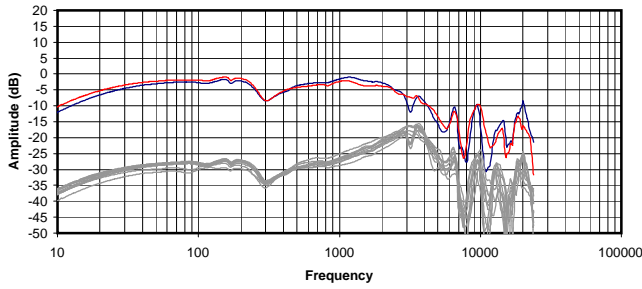


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

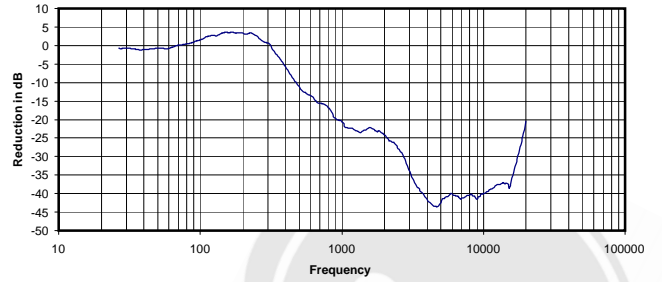
0.011 Vrms
25 Ohms
0.01 mW
-20 dB



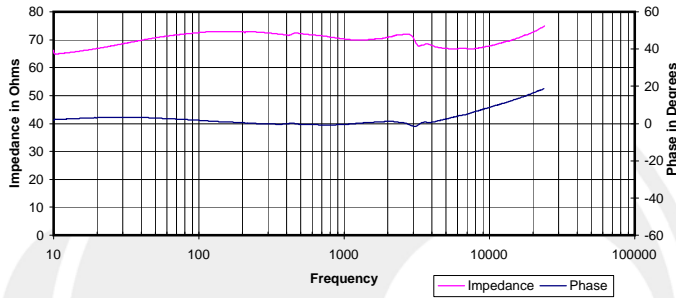
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



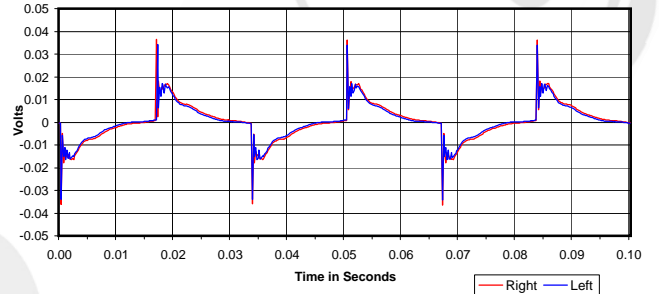
Isolation
 Attenuation of External Sound vs. Frequency



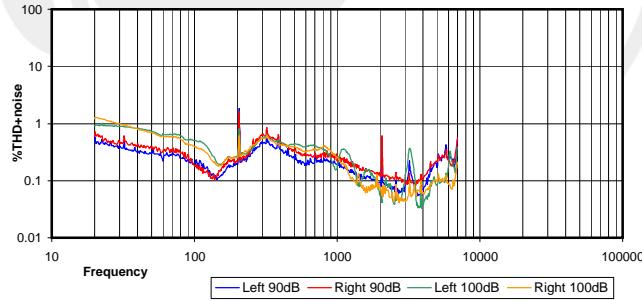
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



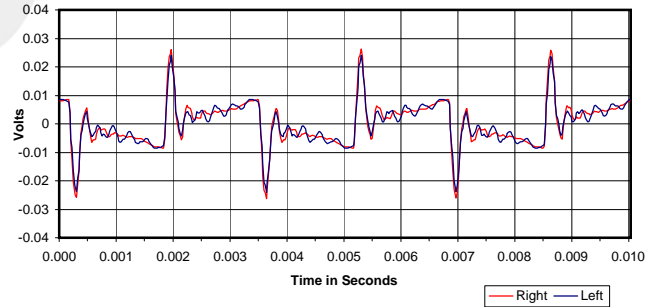
30 Hz Square Wave



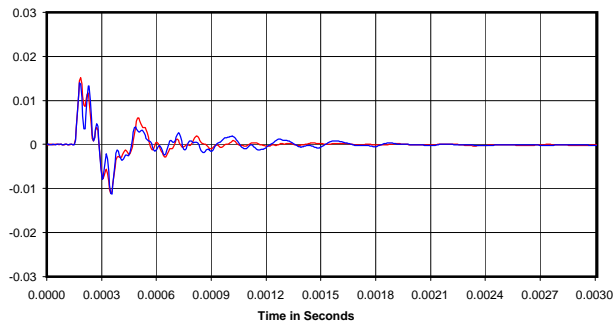
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

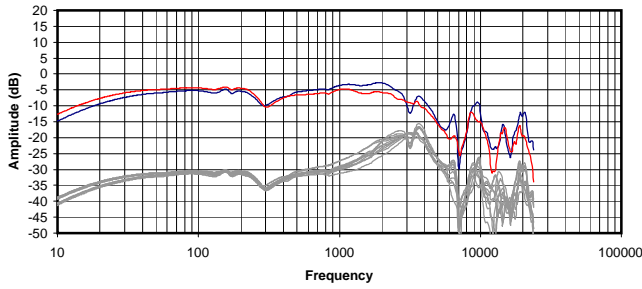


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

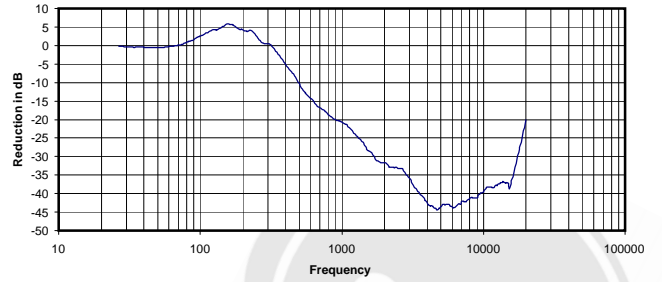
0.071 Vrms
 70 Ohms
 0.07 mW
 -19 dB



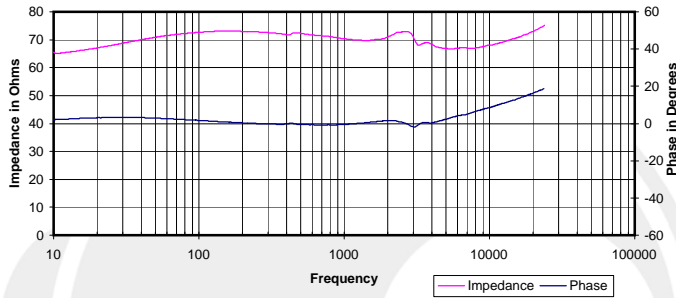
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



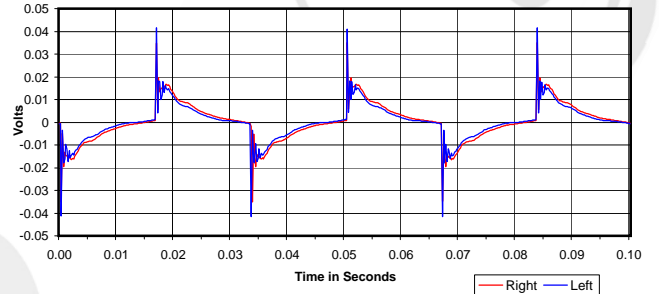
Isolation
 Attenuation of External Sound vs. Frequency



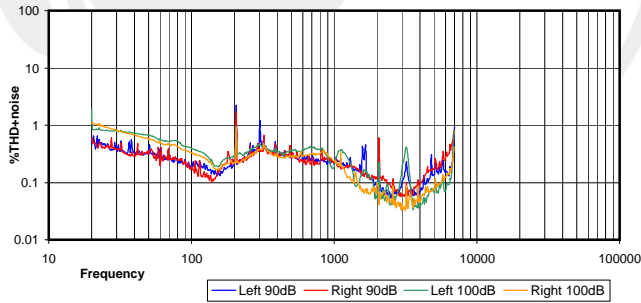
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



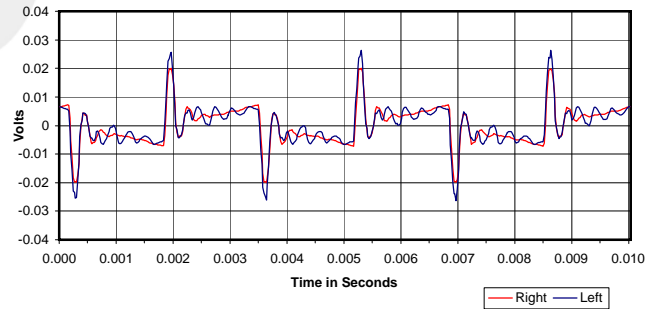
30 Hz Square Wave



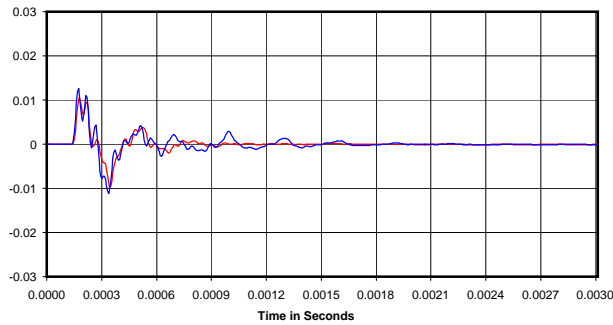
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

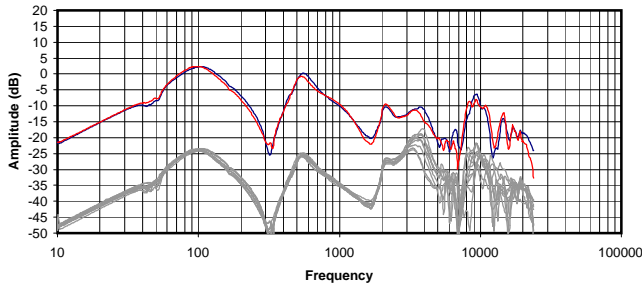


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

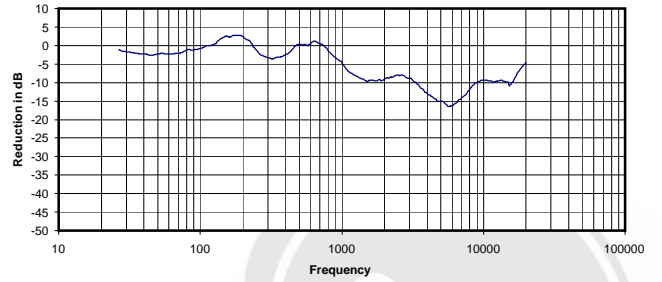
0.068 Vrms
 70 Ohms
 0.07 mW
 -20 dB



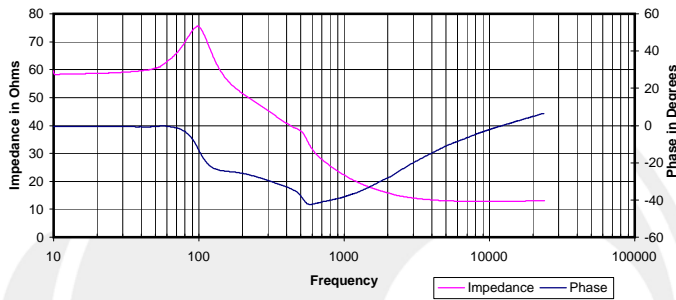
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



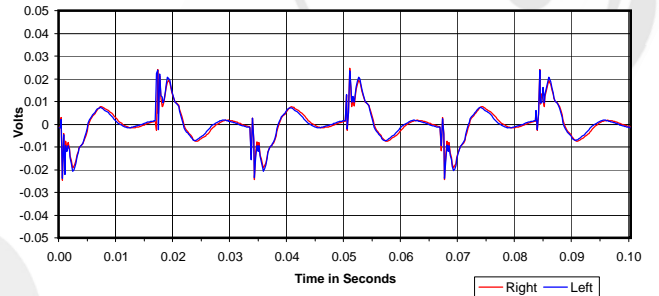
Isolation
 Attenuation of External Sound vs. Frequency



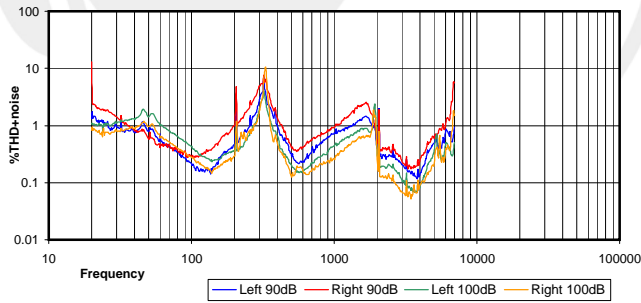
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



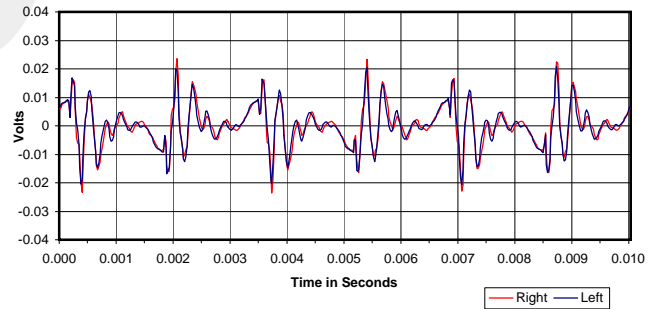
30 Hz Square Wave



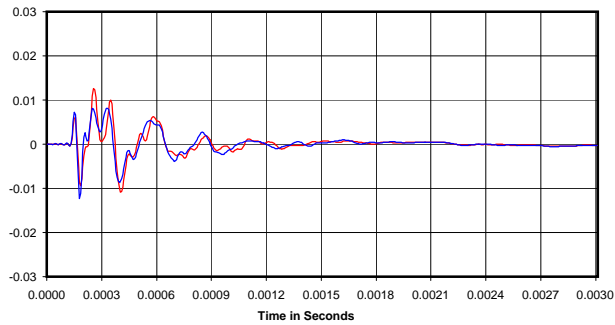
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

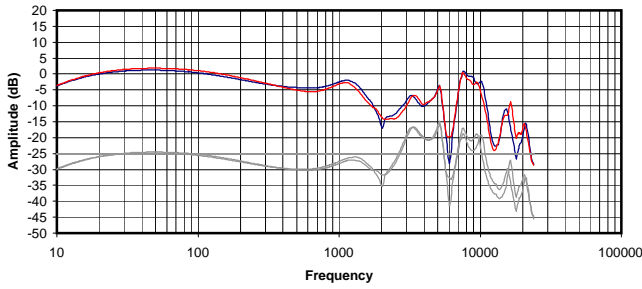


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

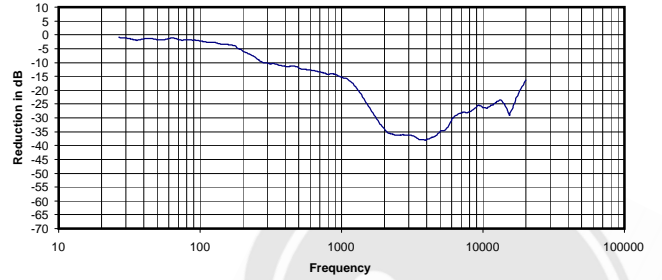
0.141 Vrms
 22 Ohms
 0.89 mW
 -6 dB



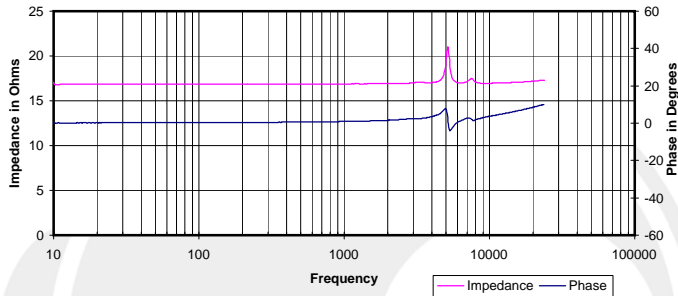
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



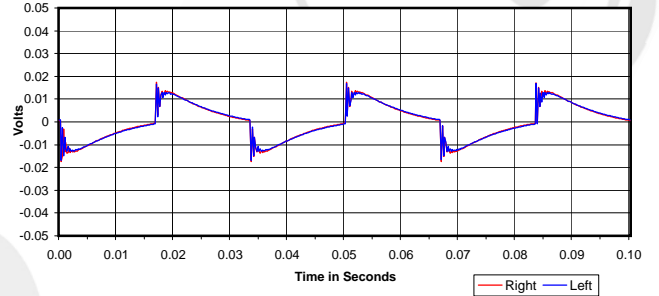
Isolation
Attenuation of External Sound vs. Frequency



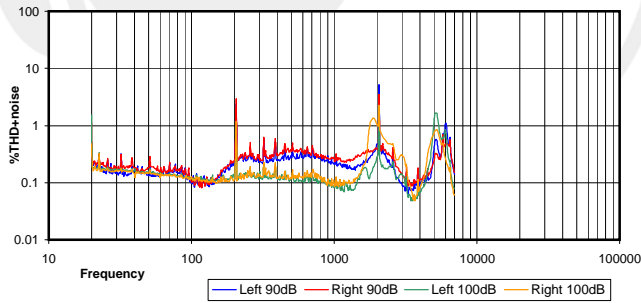
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



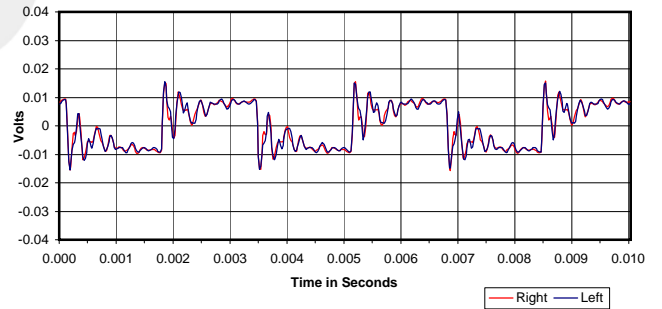
30 Hz Square Wave



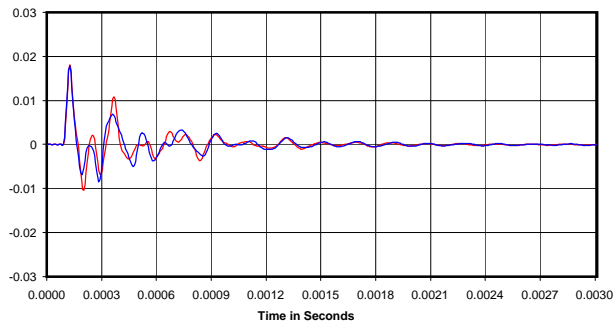
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

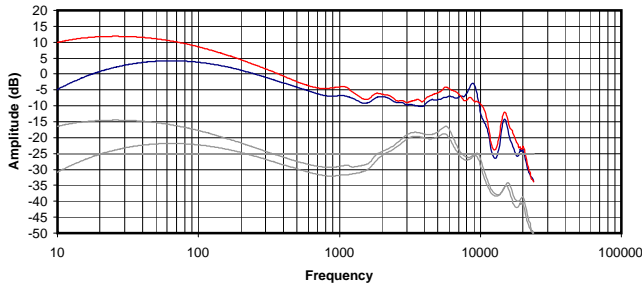


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

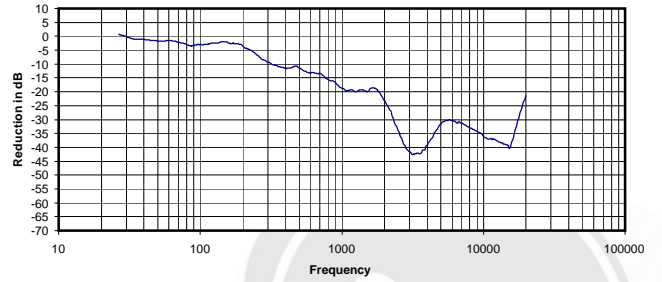
0.036 Vrms
17 Ohms
0.08 mW
-20 dB



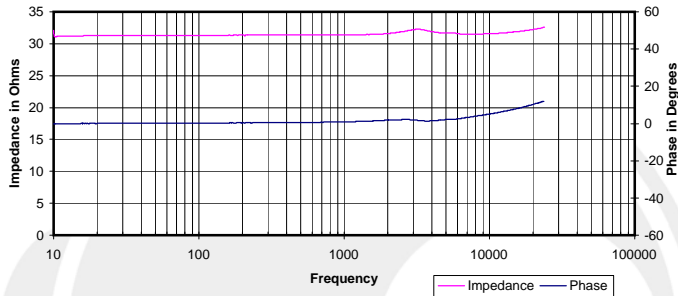
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



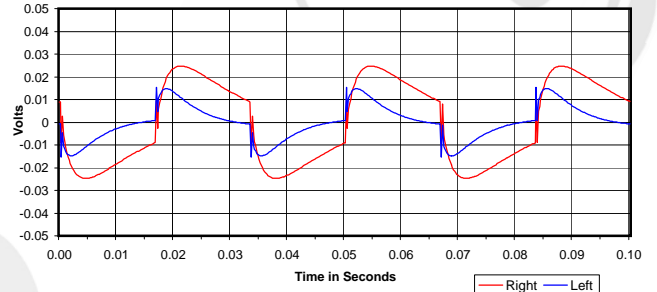
Isolation
Attenuation of External Sound vs. Frequency



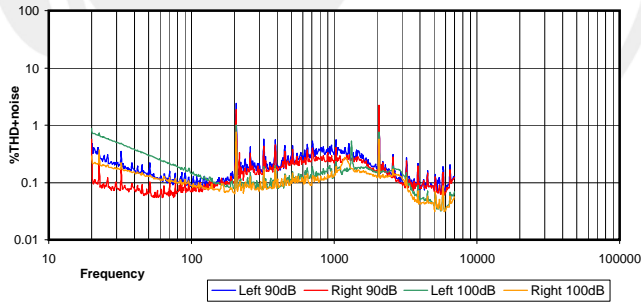
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



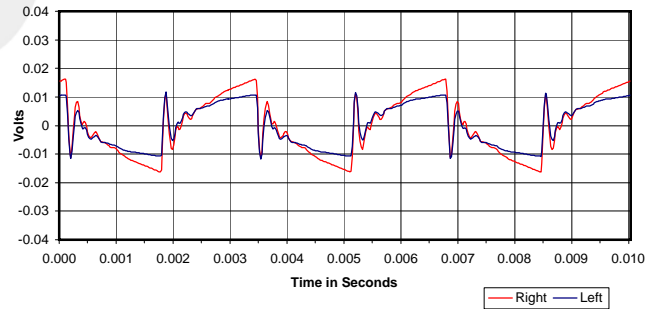
30 Hz Square Wave



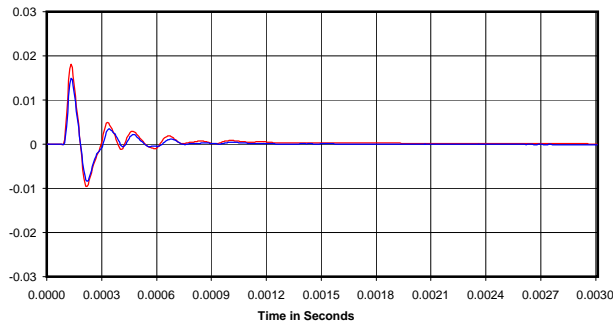
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



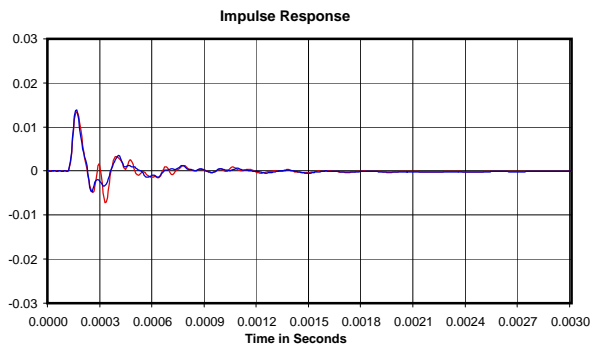
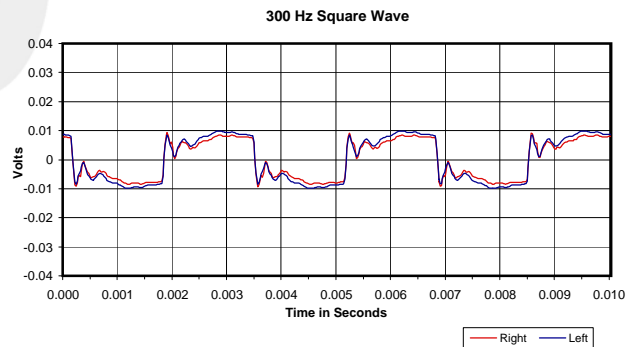
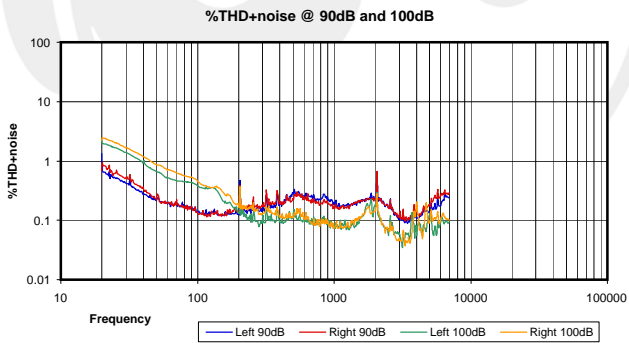
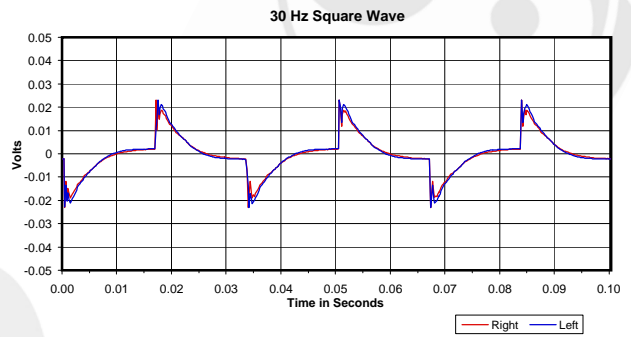
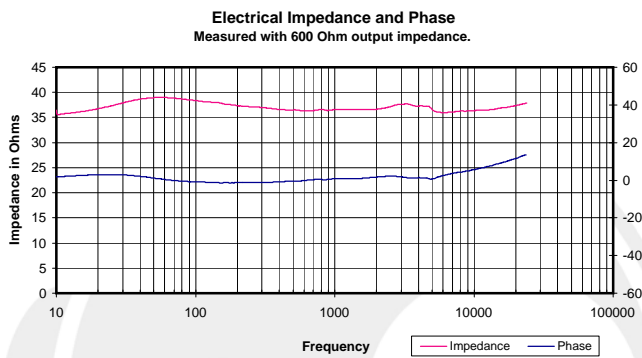
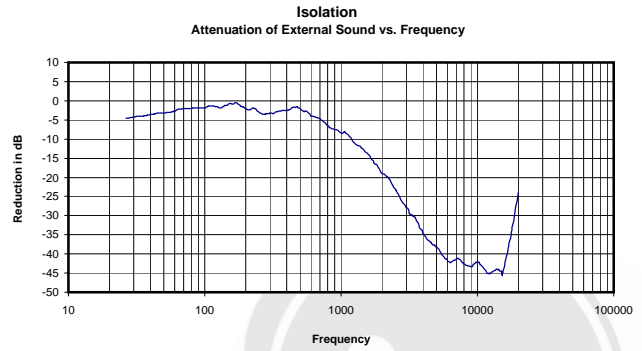
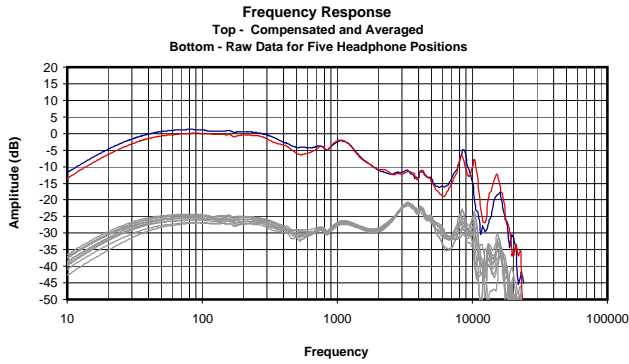
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.078 Vrms
31 Ohms
0.19 mW
-19 dB



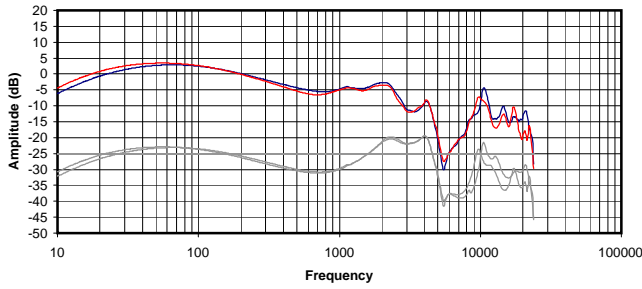


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

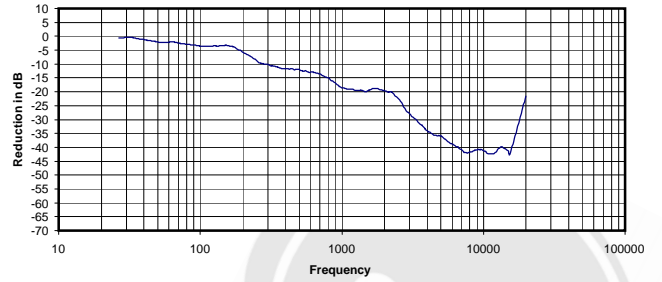
0.032 Vrms
37 Ohms
0.03 mW
-15 dBr



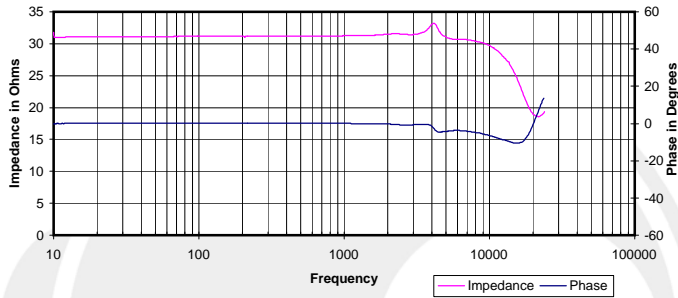
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



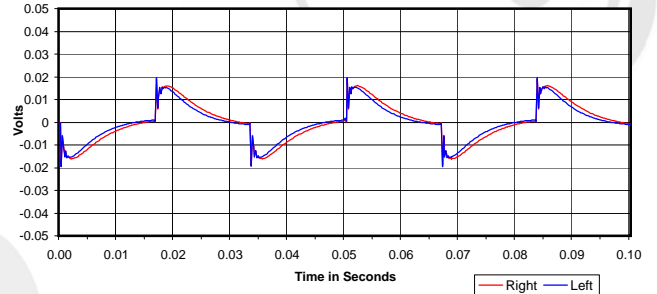
Isolation
Attenuation of External Sound vs. Frequency



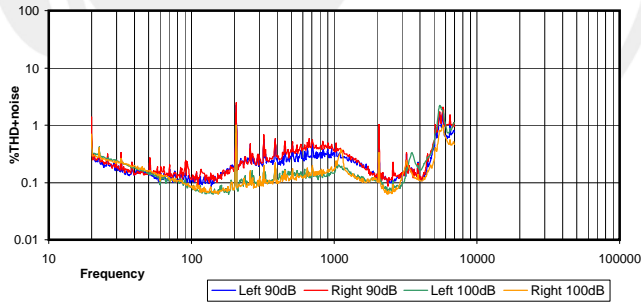
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



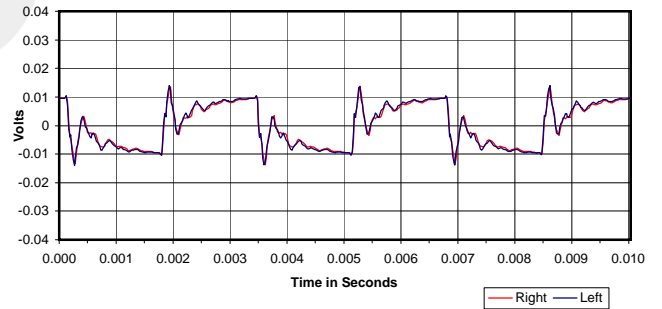
30 Hz Square Wave



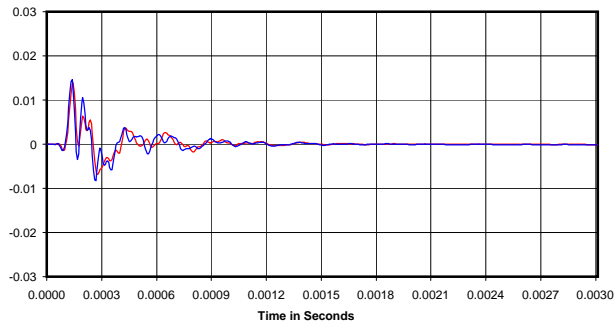
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



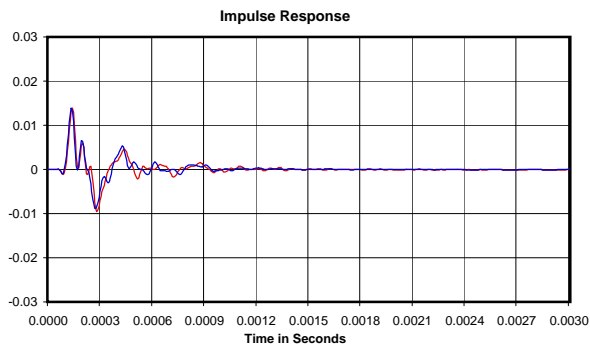
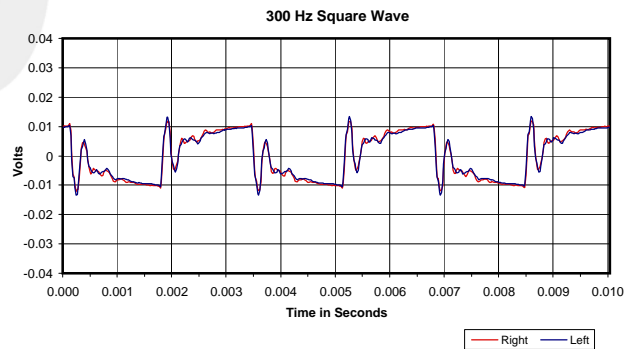
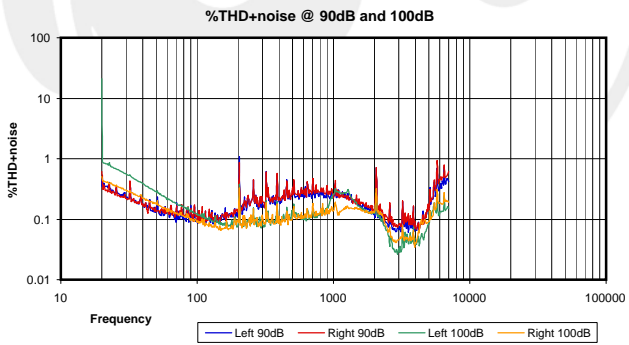
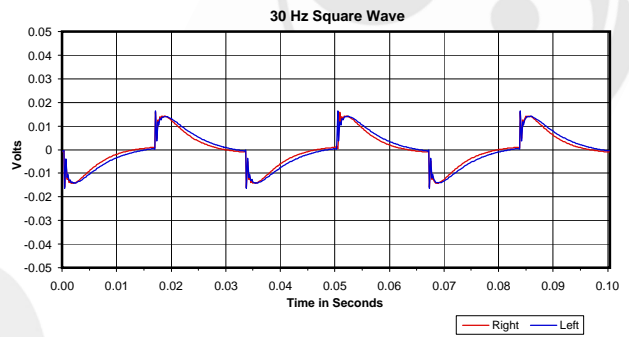
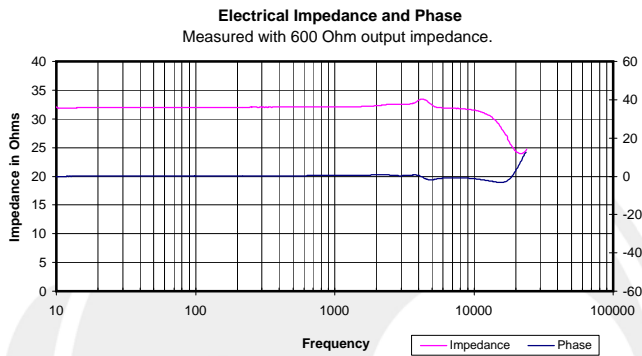
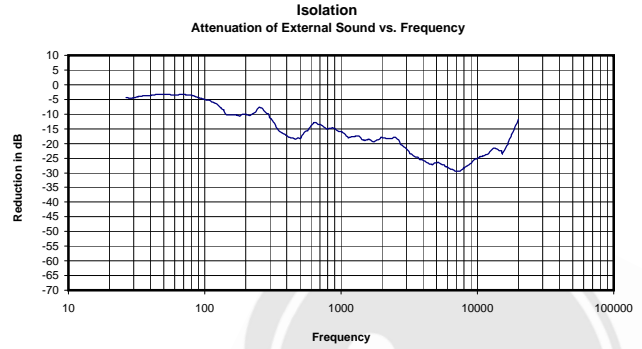
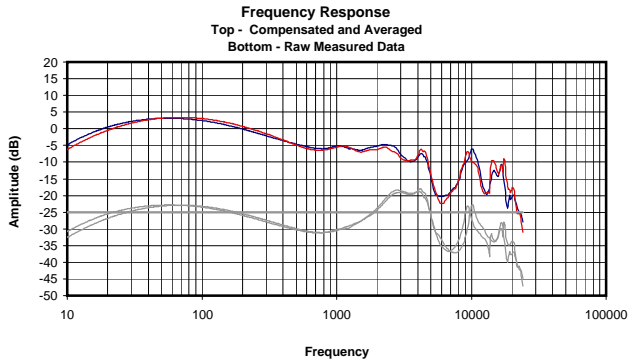
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.052 Vrms
31 Ohms
0.09 mW
-20 dB





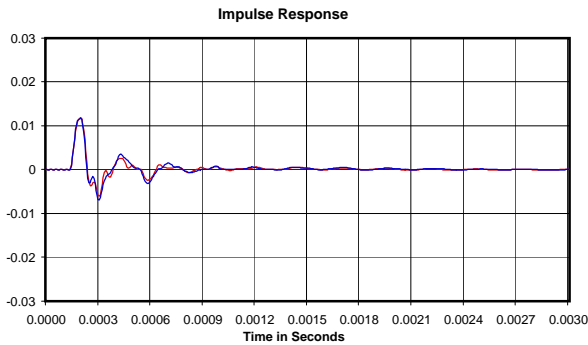
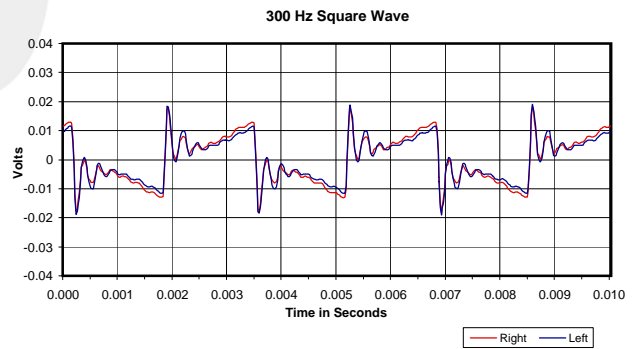
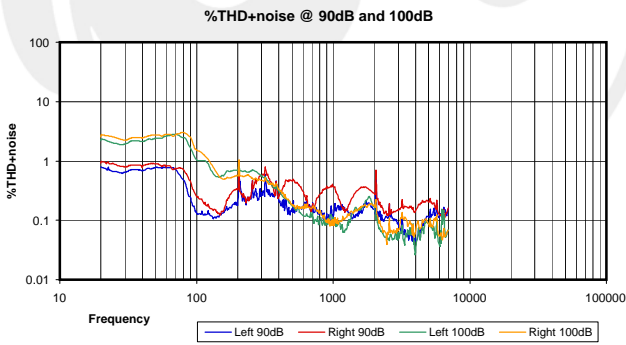
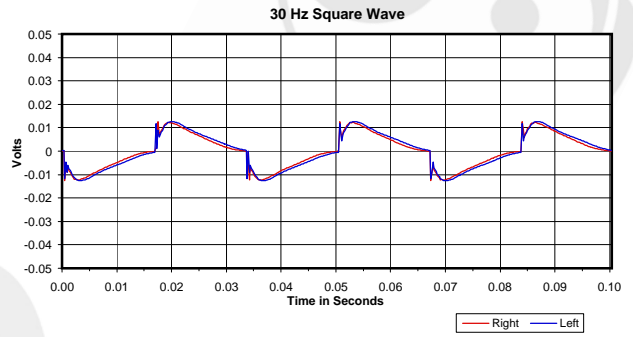
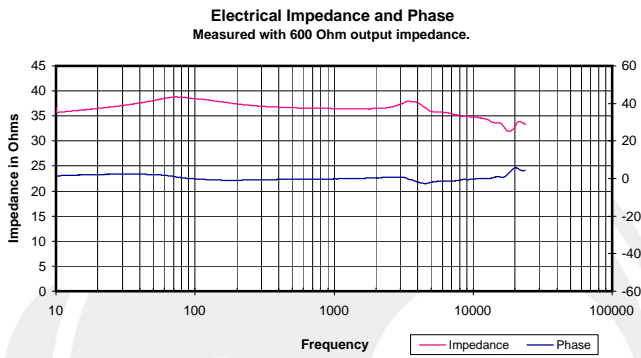
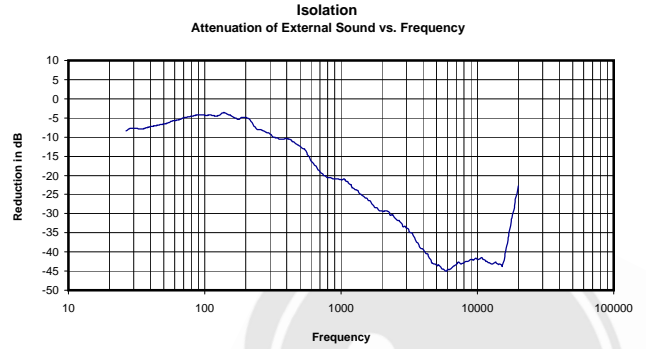
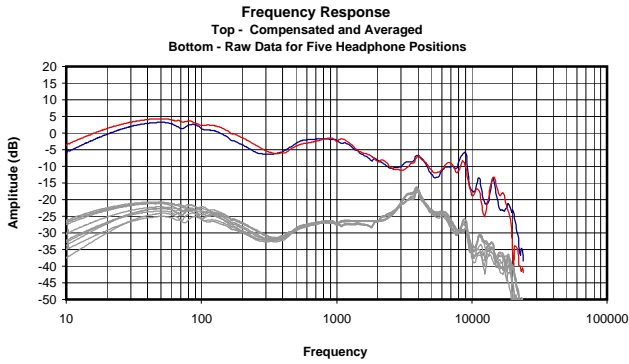
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
32 Ohms
0.09 mW
-18 dB





Headphone Measurements: 1More Triple Driver Over Ear

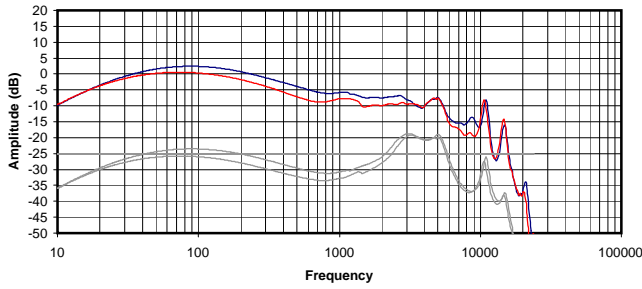


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

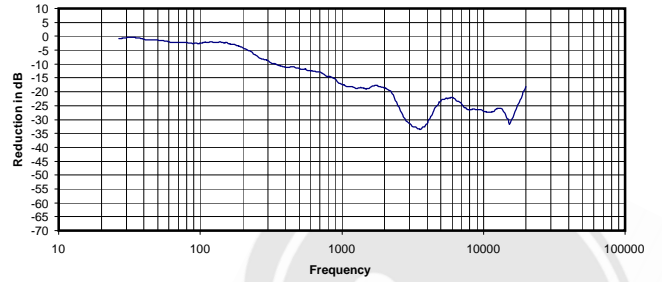
0.051 Vrms
36 Ohms
0.07 mW
-23 dBr



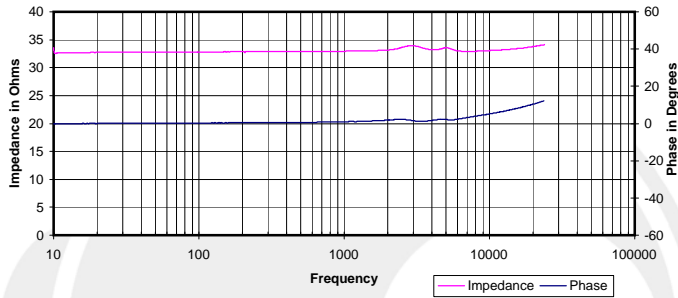
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



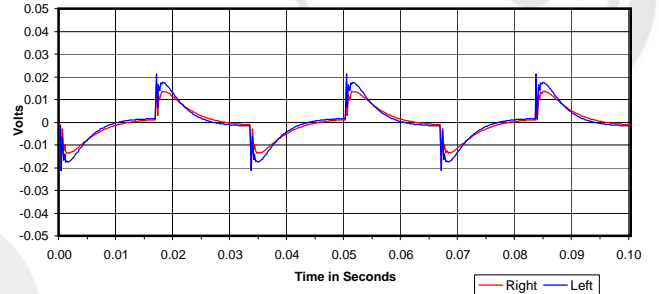
Isolation
Attenuation of External Sound vs. Frequency



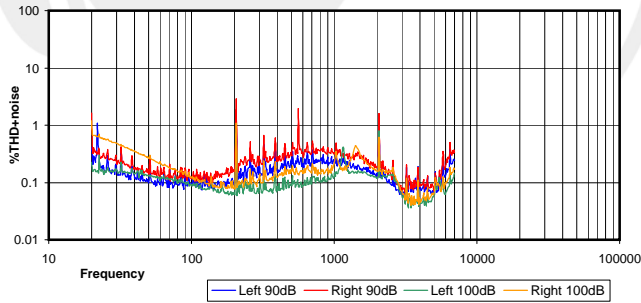
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



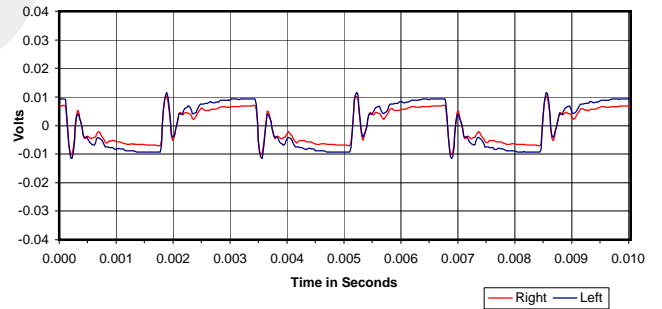
30 Hz Square Wave



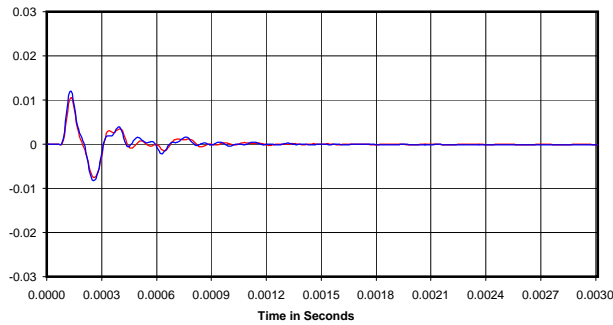
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



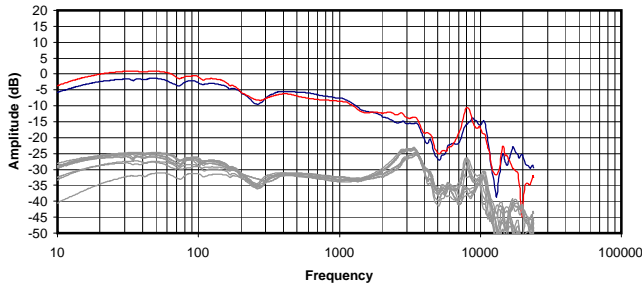
Impulse Response



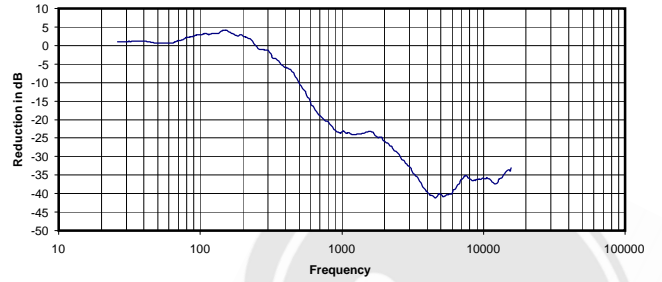
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.052 Vrms
33 Ohms
0.08 mW
-16 dB

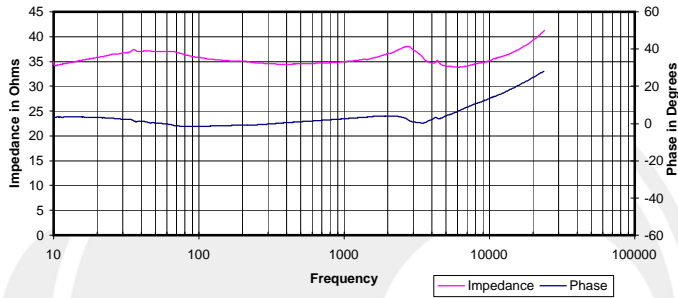
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



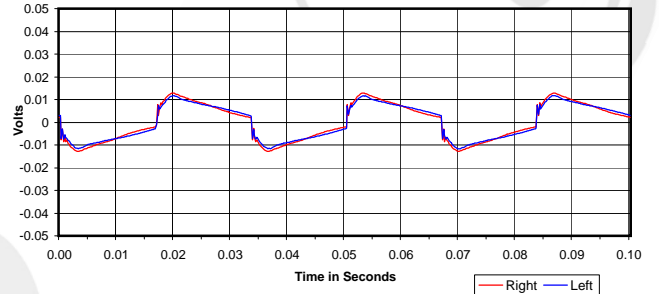
Isolation
 Attenuation of External Sound vs. Frequency



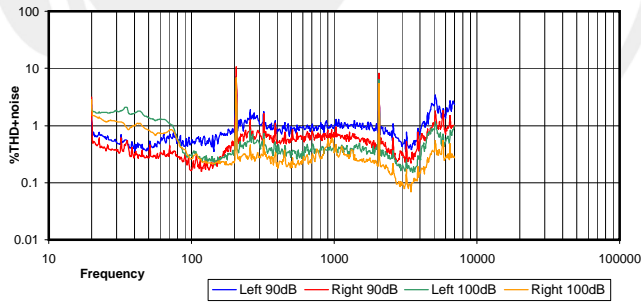
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



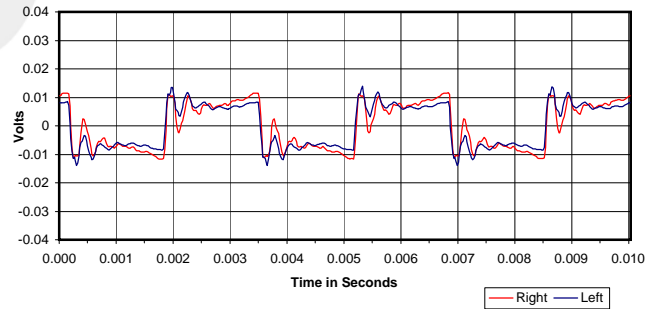
30 Hz Square Wave



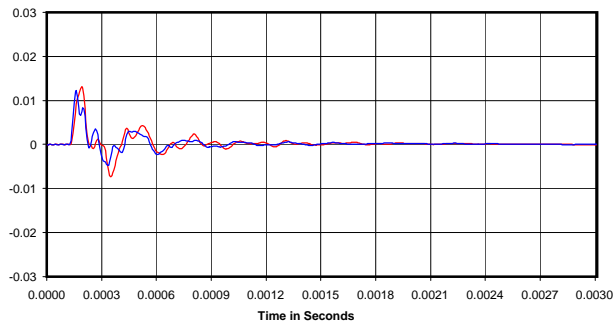
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



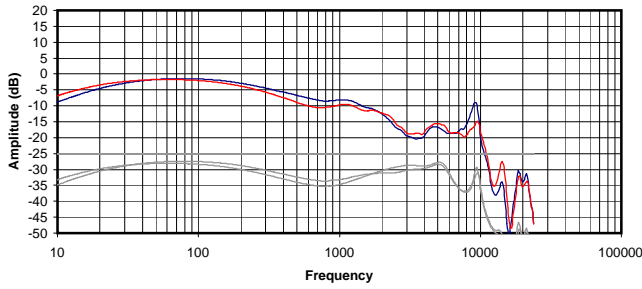
Impulse Response



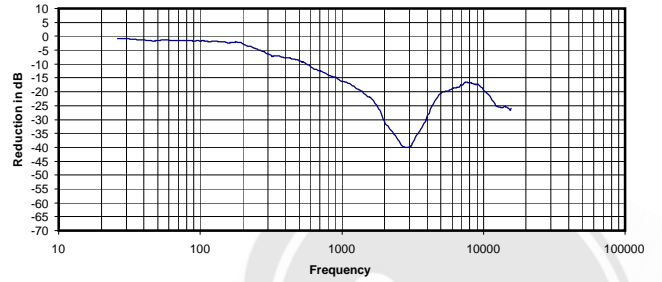
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.032 Vrms
 35 Ohms
 0.03 mW
 -16 dB

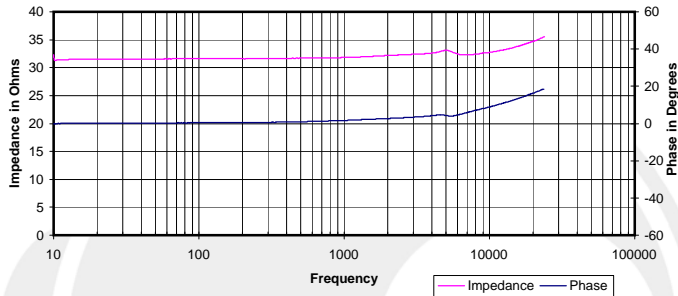
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



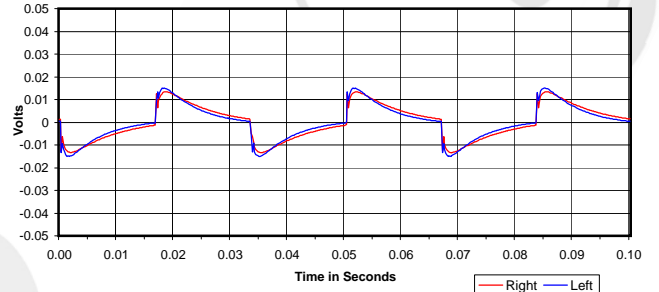
Isolation
Attenuation of External Sound vs. Frequency



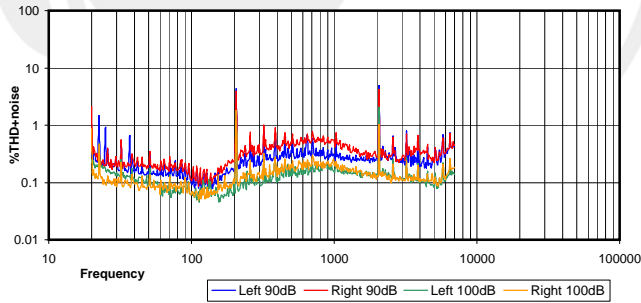
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



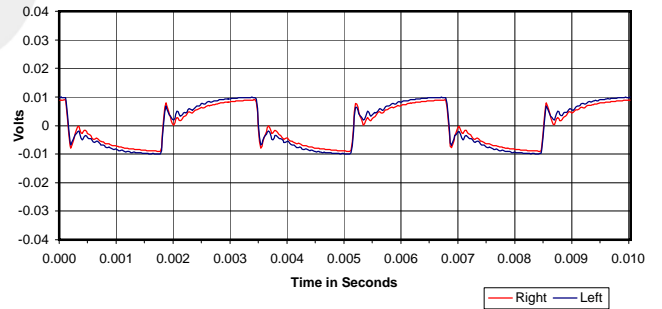
30 Hz Square Wave



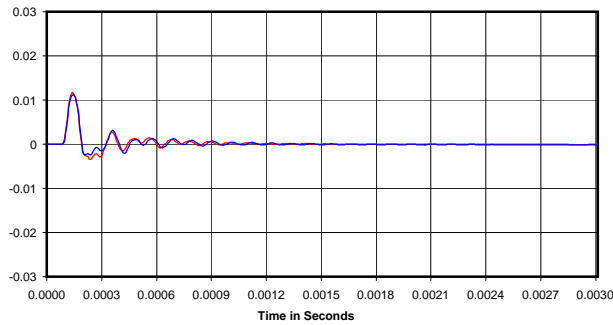
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



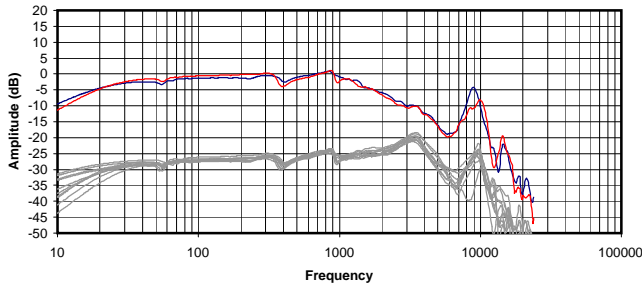
Impulse Response



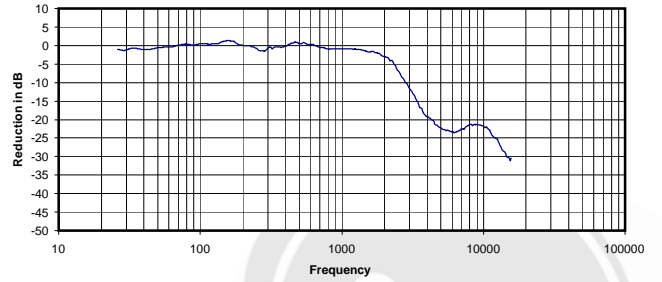
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
32 Ohms
0.03 mW
-15 dB

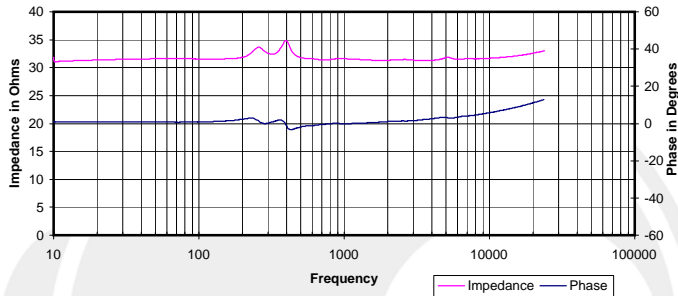
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



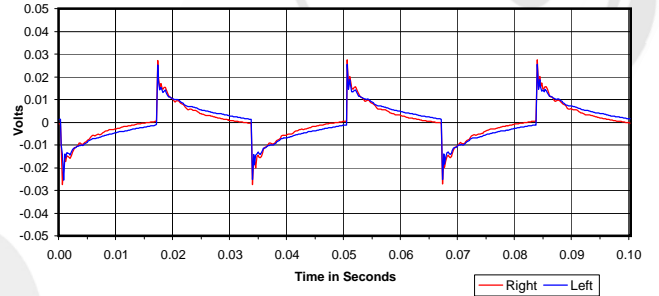
Isolation
 Attenuation of External Sound vs. Frequency



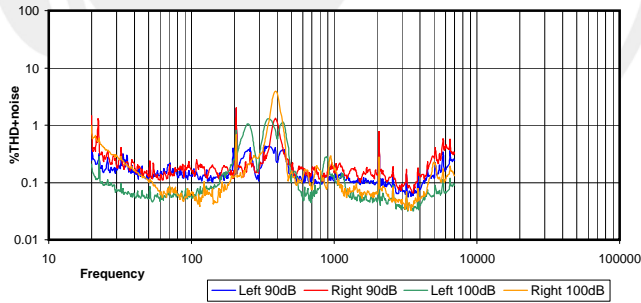
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



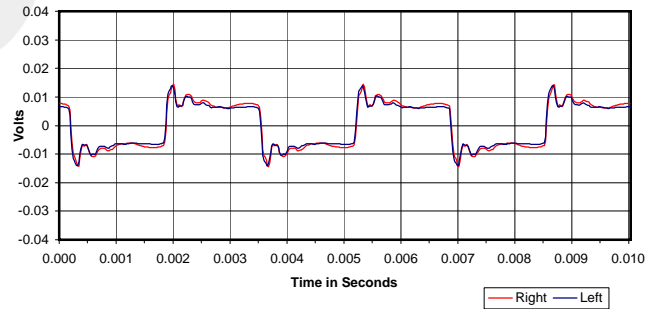
30 Hz Square Wave



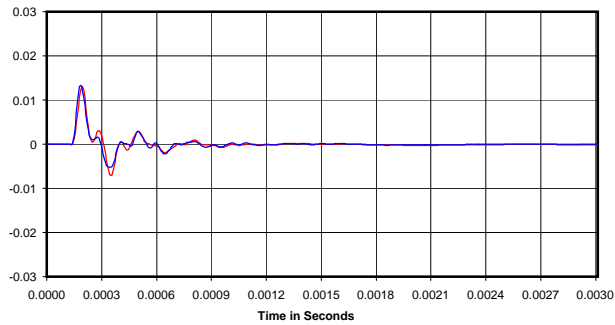
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

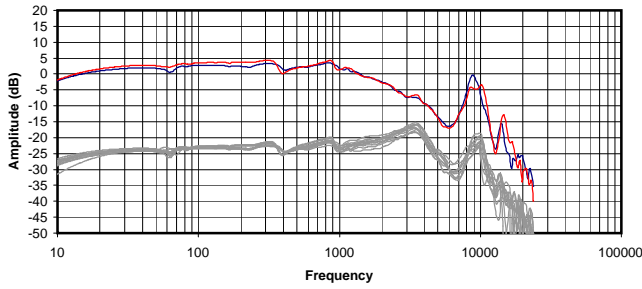


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

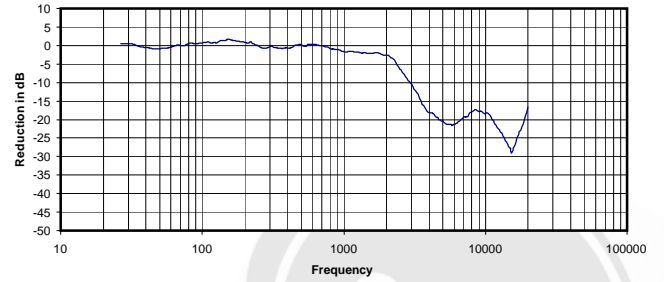
0.053 Vrms
 32 Ohms
 0.09 mW
 -4 dB



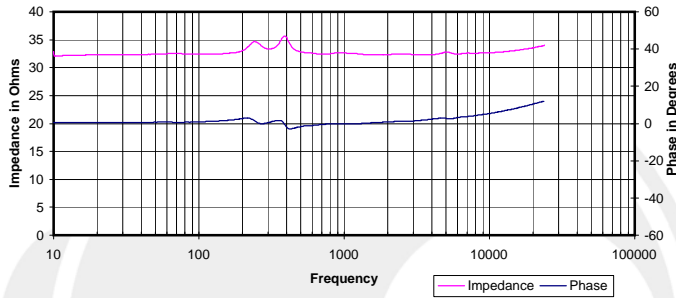
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



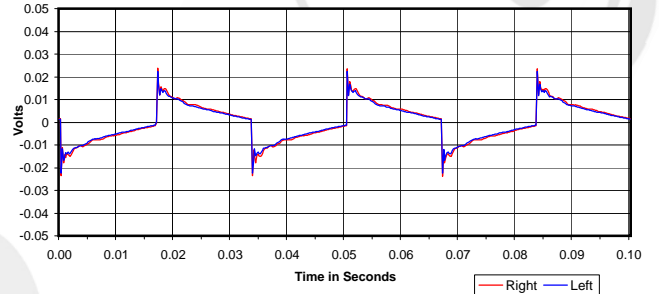
Isolation
 Attenuation of External Sound vs. Frequency



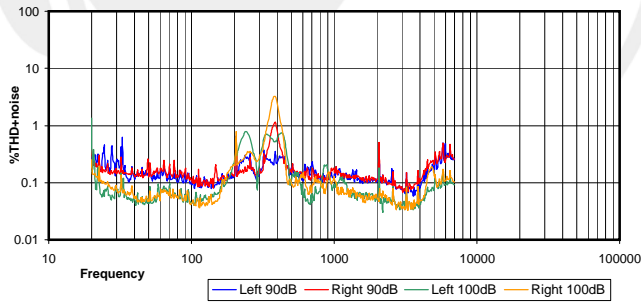
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



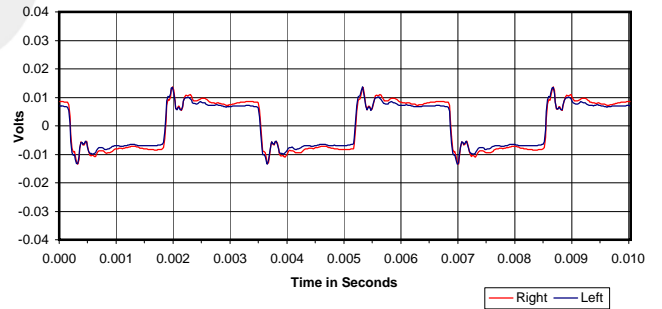
30 Hz Square Wave



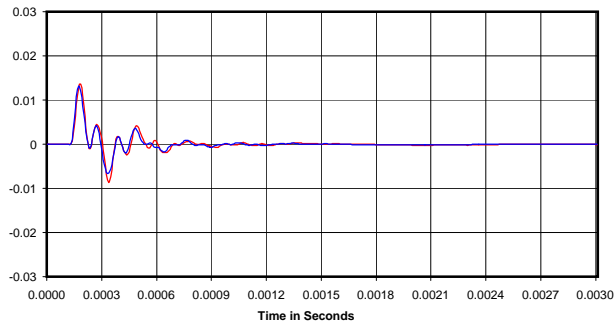
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

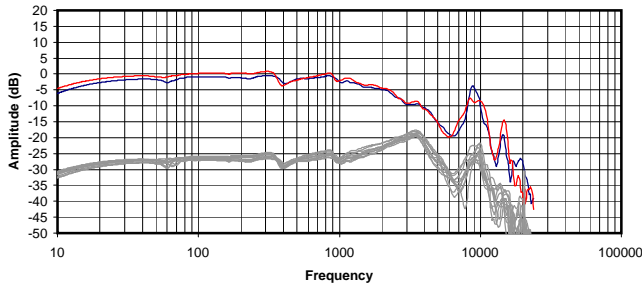


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

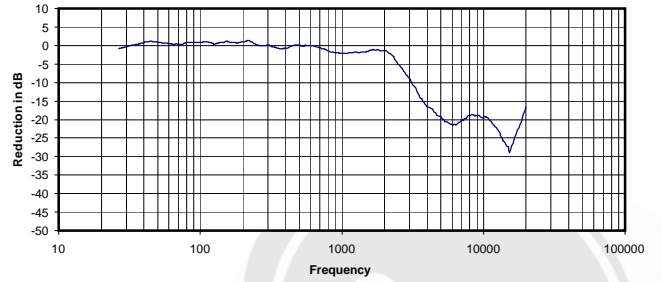
0.054 Vrms
 33 Ohms
 0.09 mW
 -6 dBr



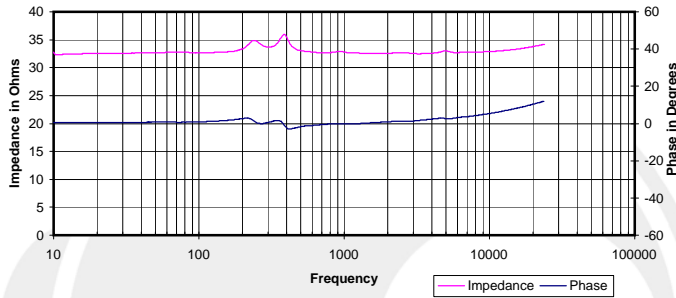
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



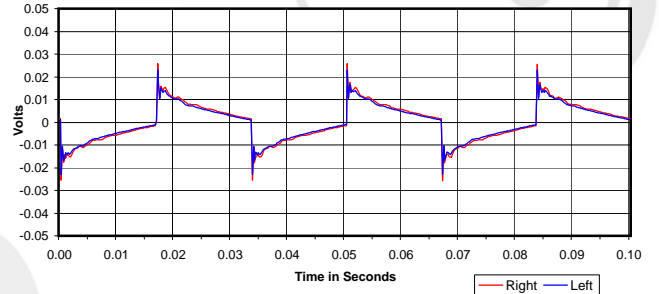
Isolation
 Attenuation of External Sound vs. Frequency



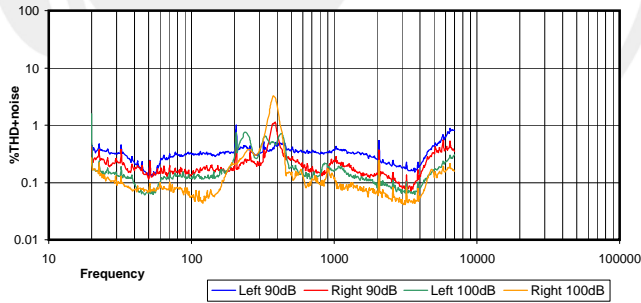
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



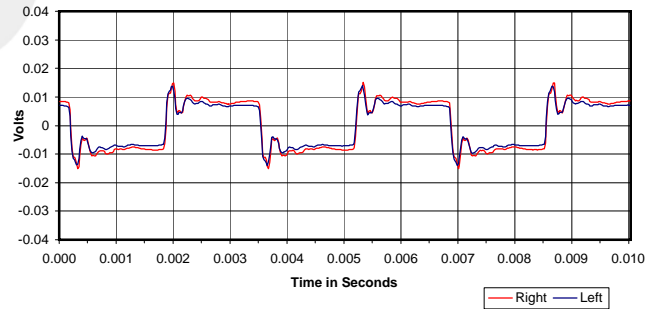
30 Hz Square Wave



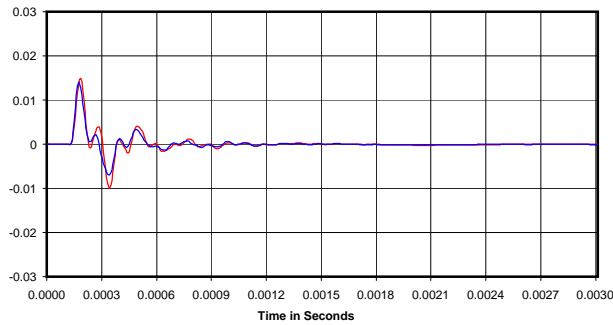
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

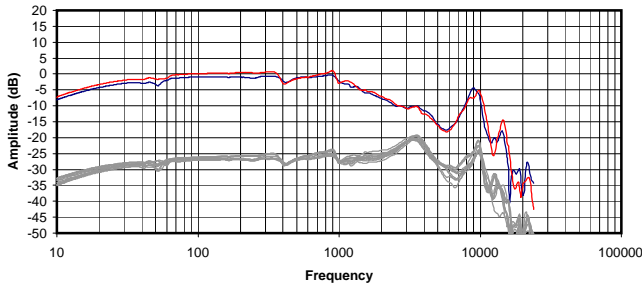


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

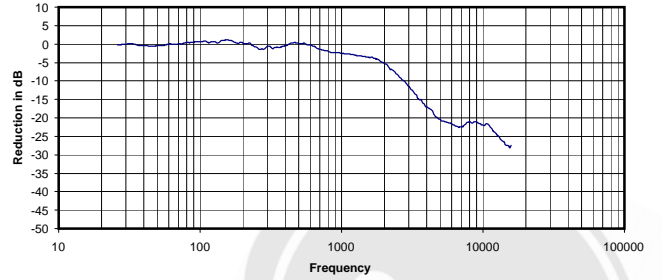
0.064 Vrms
 33 Ohms
 0.13 mW
 -5 dB



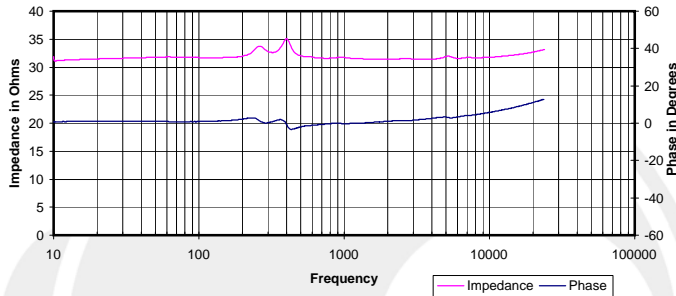
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



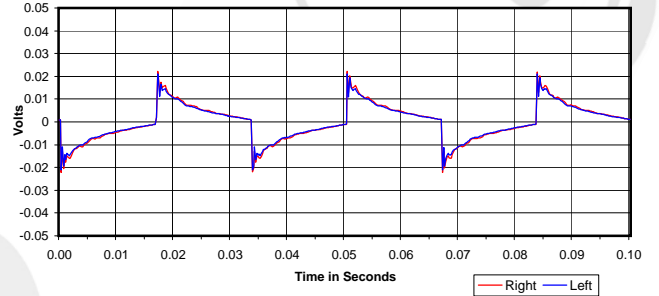
Isolation
Attenuation of External Sound vs. Frequency



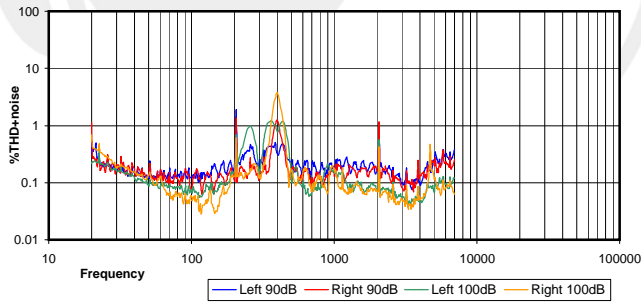
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



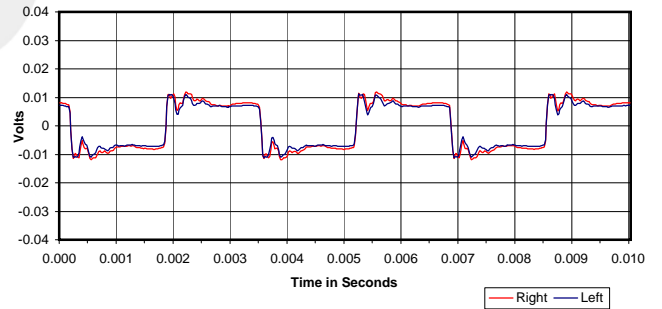
30 Hz Square Wave



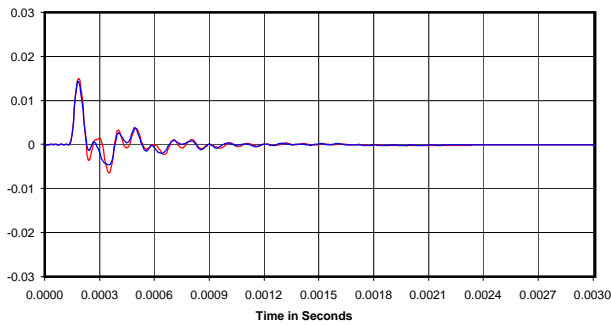
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

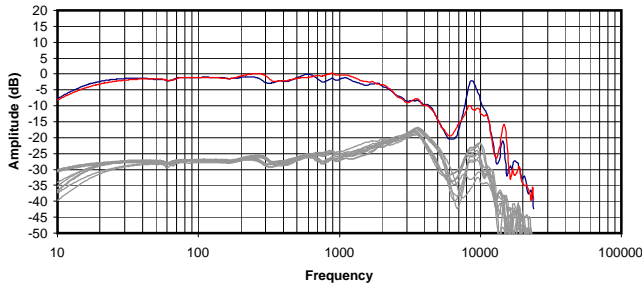


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

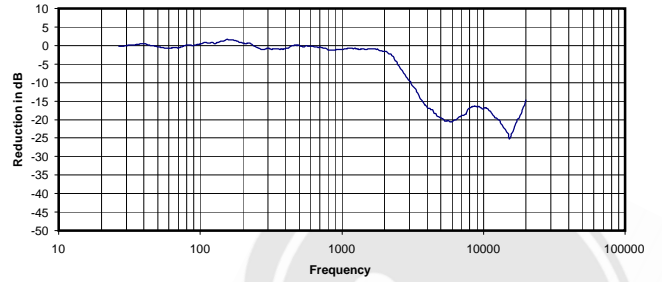
0.072 Vrms
32 Ohms
0.16 mW
-5 dB



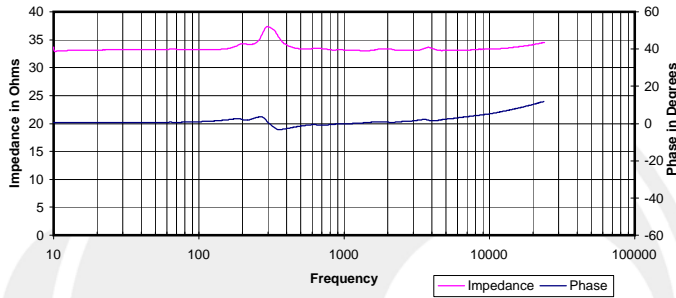
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



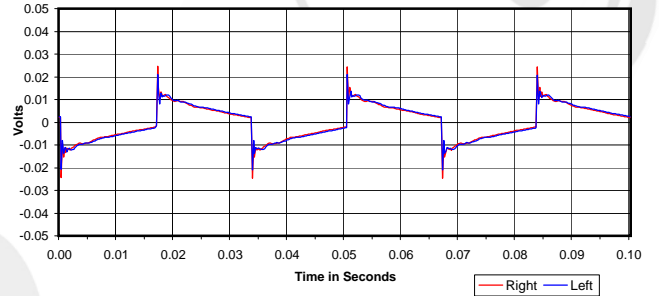
Isolation
 Attenuation of External Sound vs. Frequency



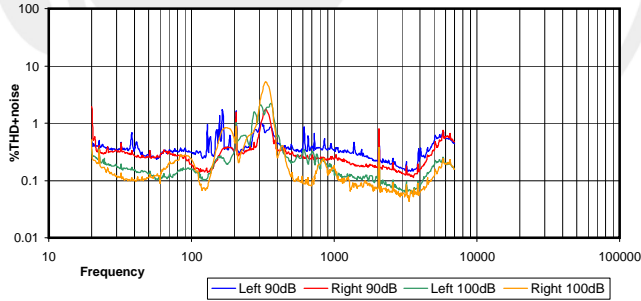
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



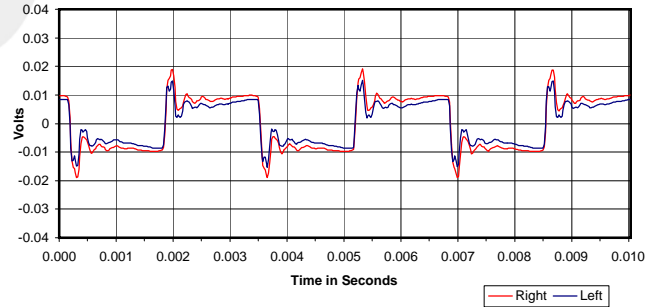
30 Hz Square Wave



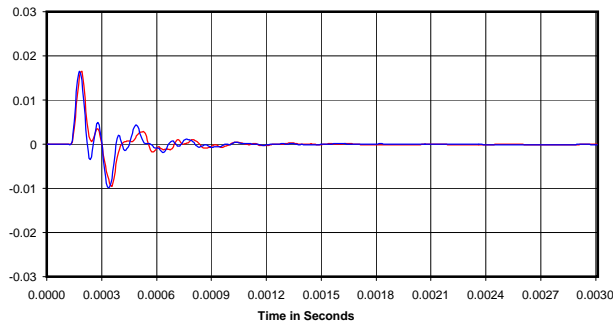
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

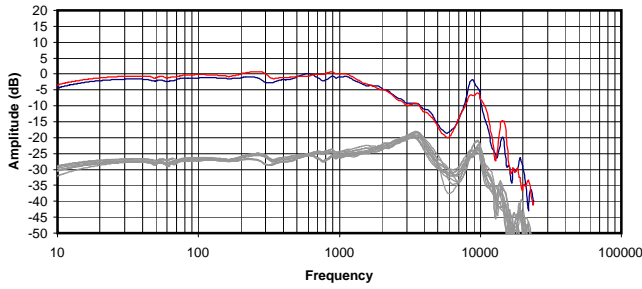


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

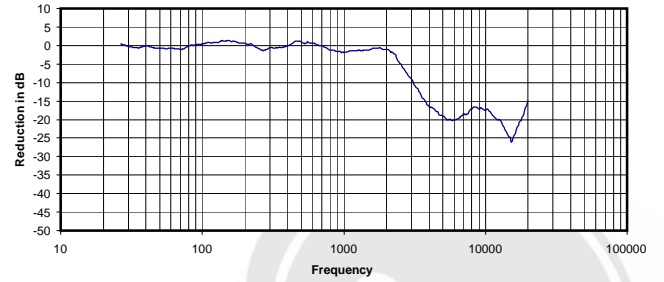
0.058 Vrms
 33 Ohms
 0.10 mW
 -5 dBr



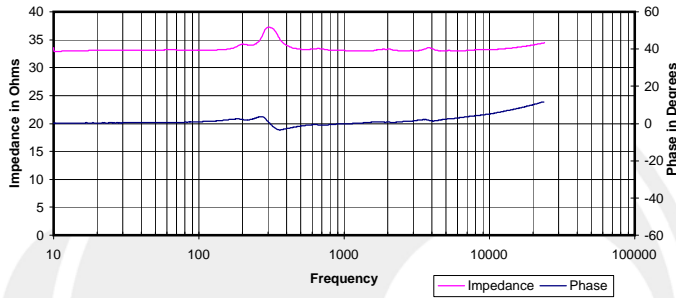
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



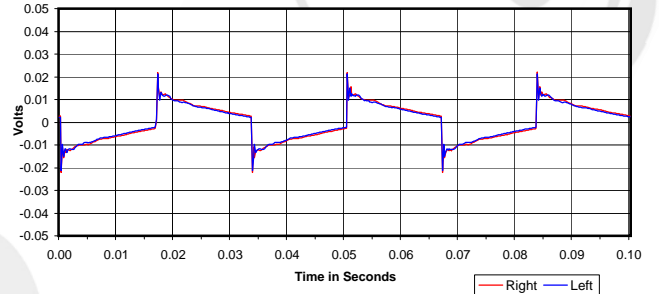
Isolation
 Attenuation of External Sound vs. Frequency



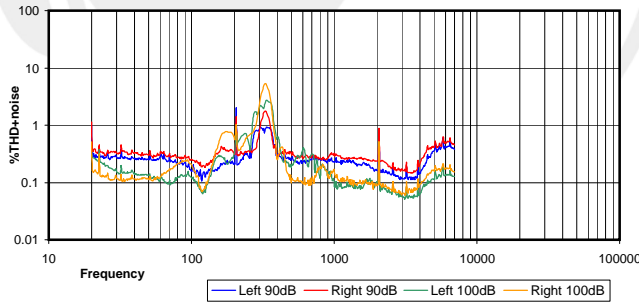
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



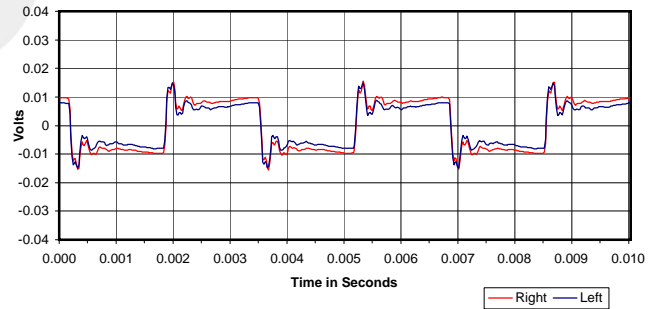
30 Hz Square Wave



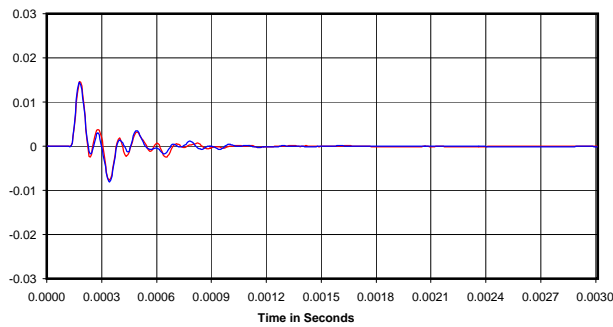
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

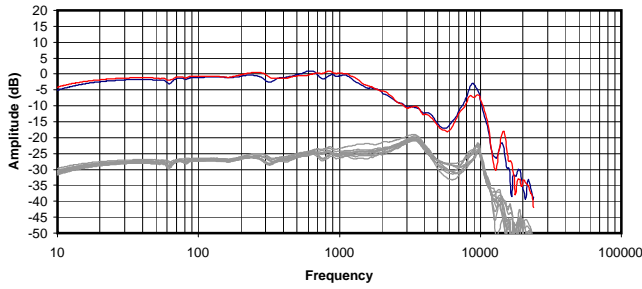


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

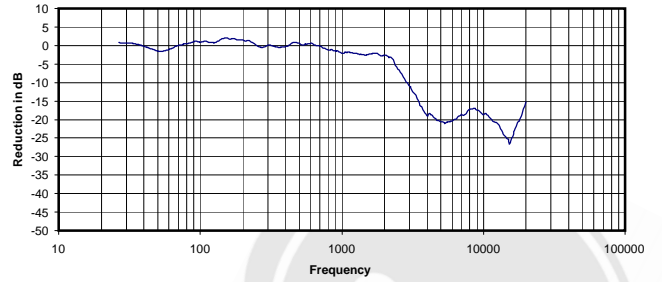
0.057 Vrms
 33 Ohms
 0.10 mW
 -5 dB



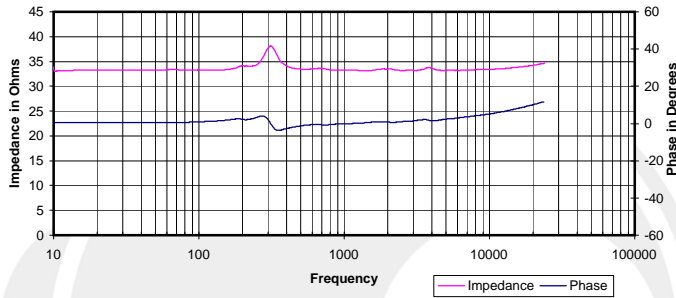
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



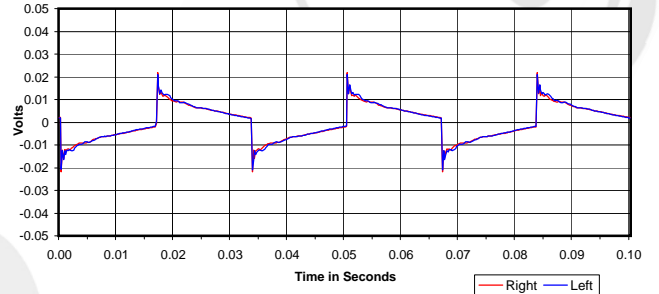
Isolation
 Attenuation of External Sound vs. Frequency



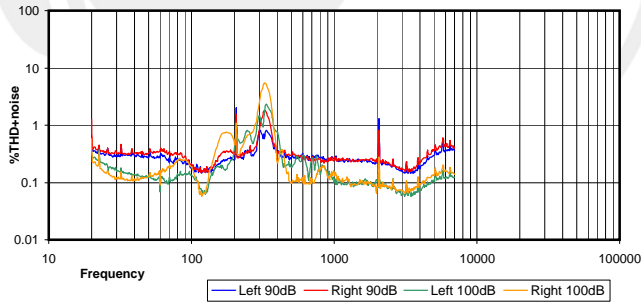
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



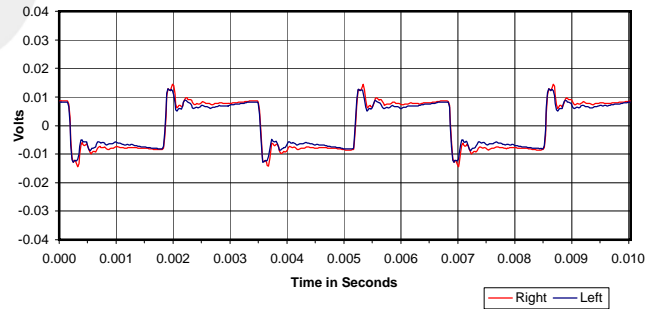
30 Hz Square Wave



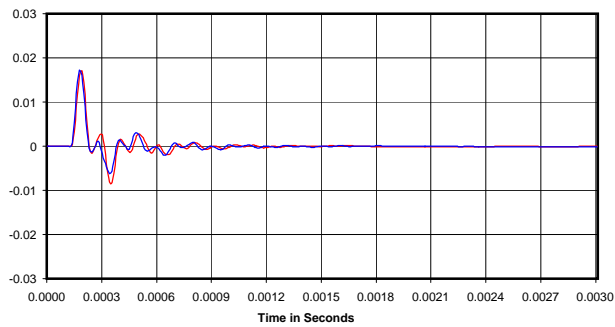
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

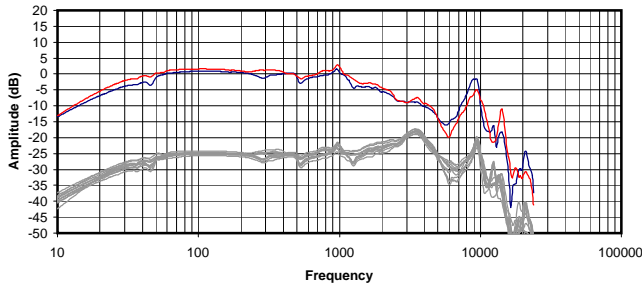


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

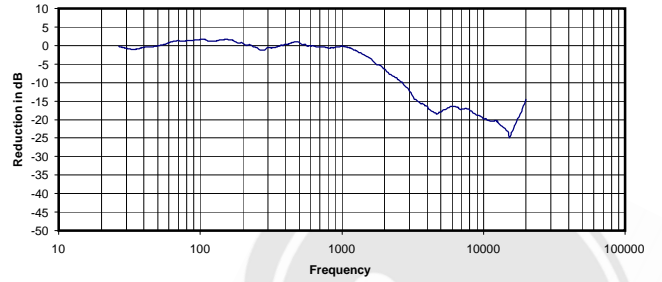
0.056 Vrms
 33 Ohms
 0.09 mW
 -5 dB



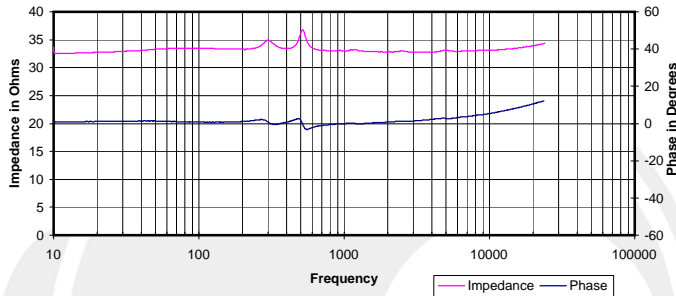
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



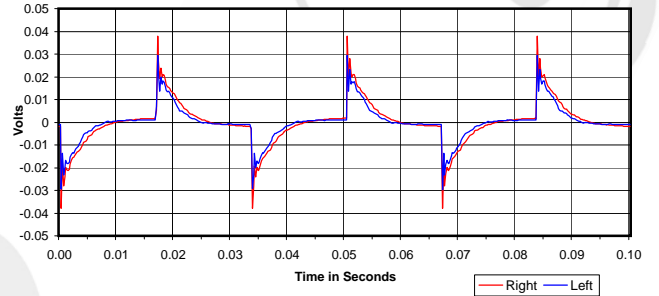
Isolation
 Attenuation of External Sound vs. Frequency



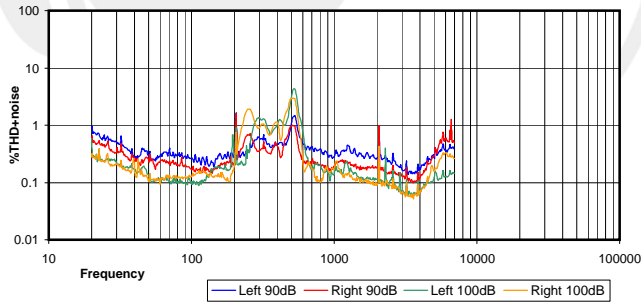
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



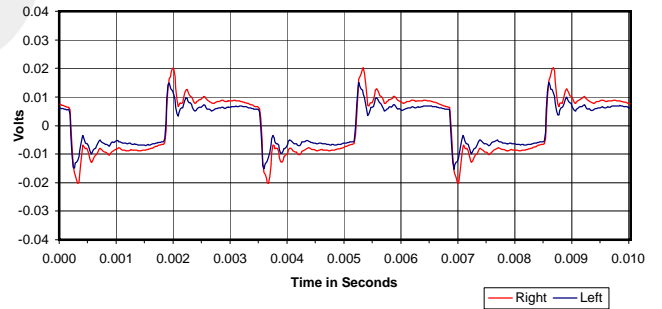
30 Hz Square Wave



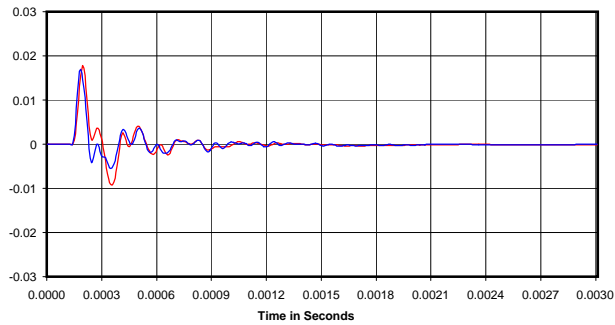
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

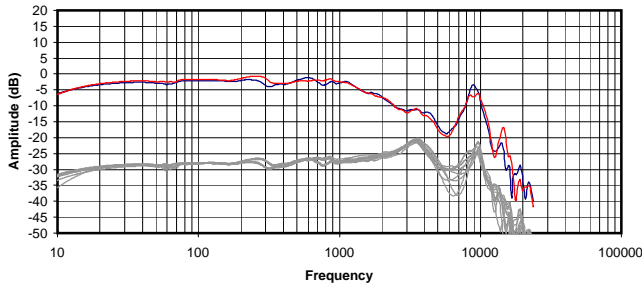


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

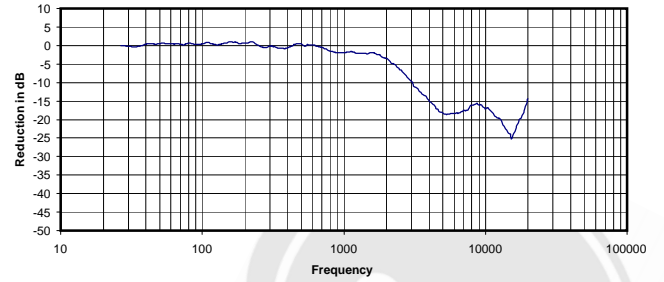
0.080 Vrms
 33 Ohms
 0.19 mW
 -6 dBr



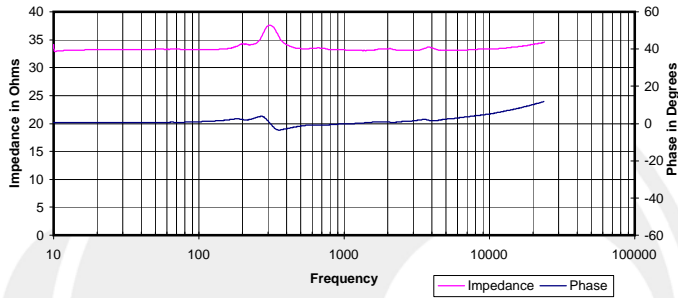
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



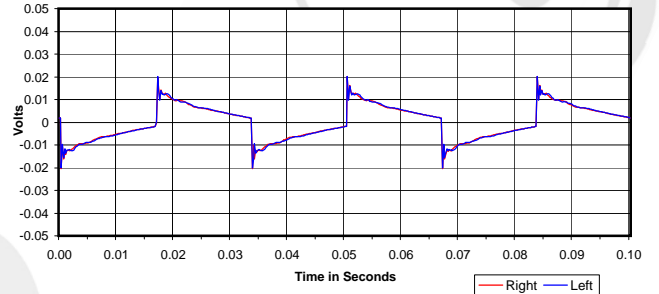
Isolation
 Attenuation of External Sound vs. Frequency



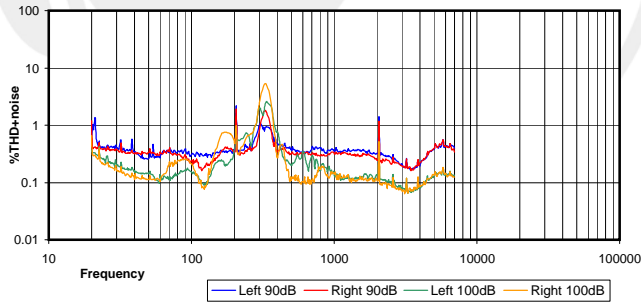
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



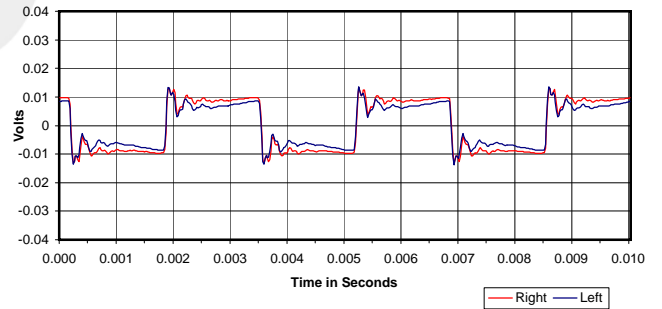
30 Hz Square Wave



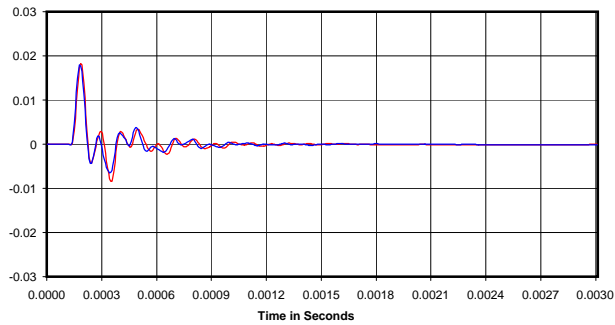
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

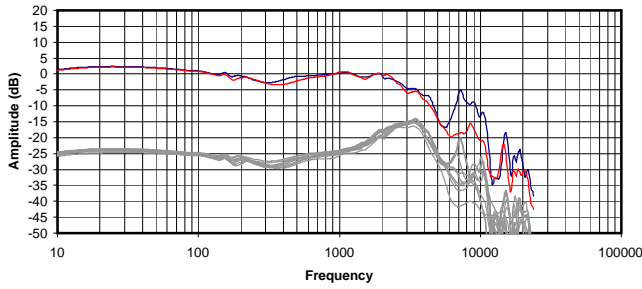


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

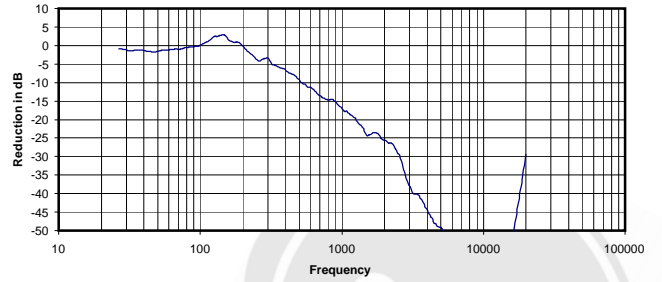
0.068 Vrms
 33 Ohms
 0.14 mW
 -5 dB



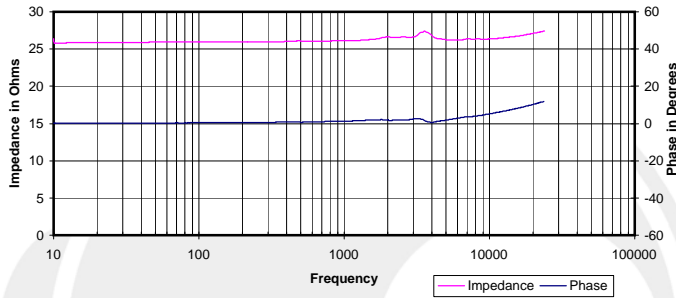
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



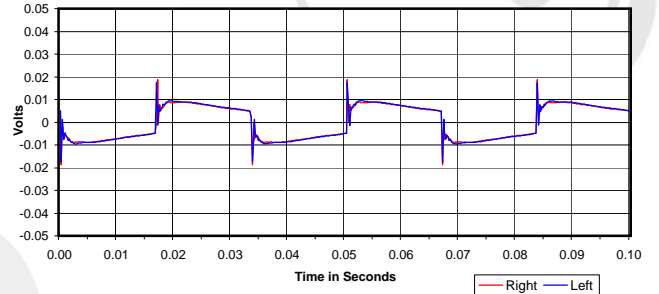
Isolation
 Attenuation of External Sound vs. Frequency



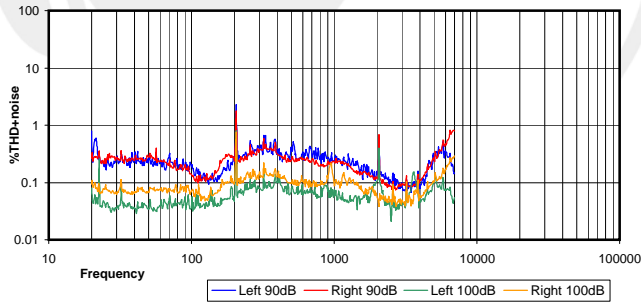
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



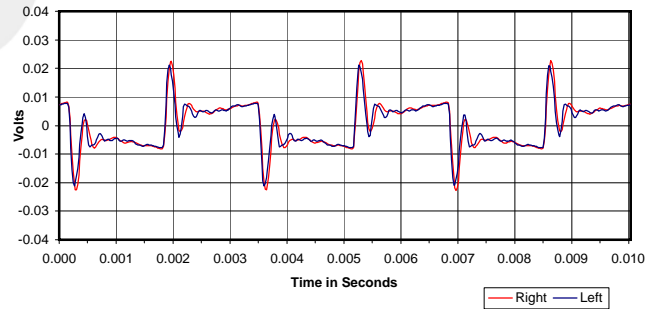
30 Hz Square Wave



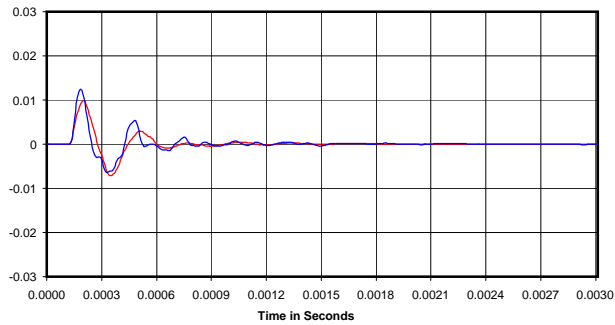
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

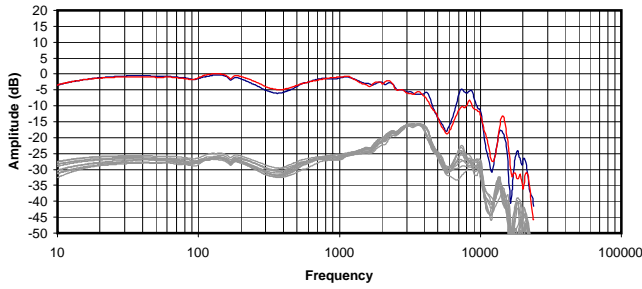


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

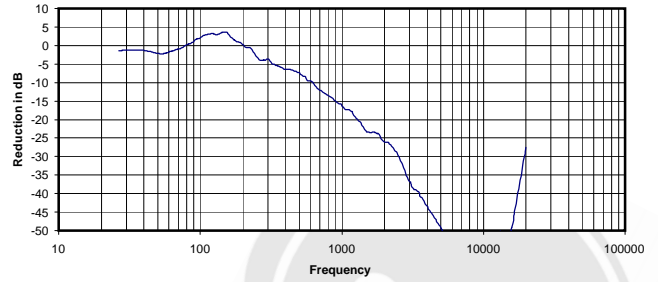
0.037 Vrms
 26 Ohms
 0.05 mW
 -22 dB



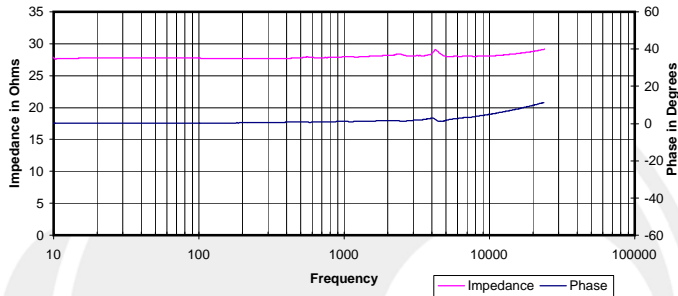
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



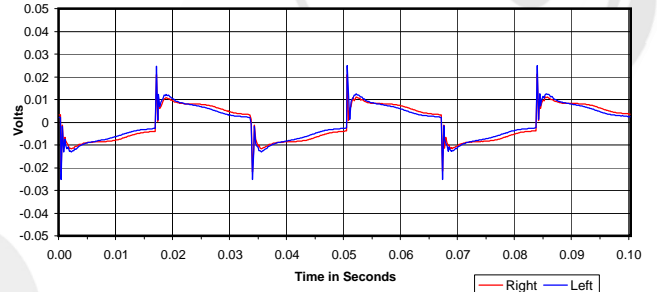
Isolation
 Attenuation of External Sound vs. Frequency



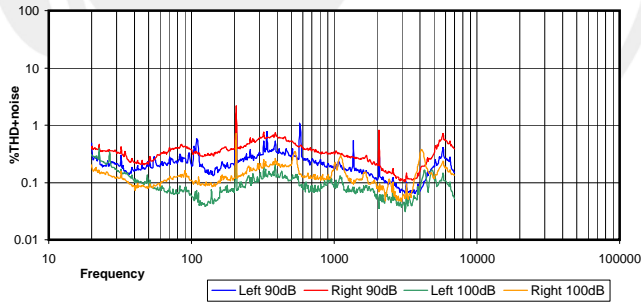
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



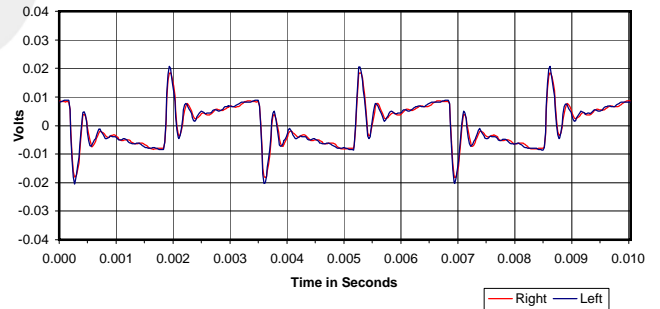
30 Hz Square Wave



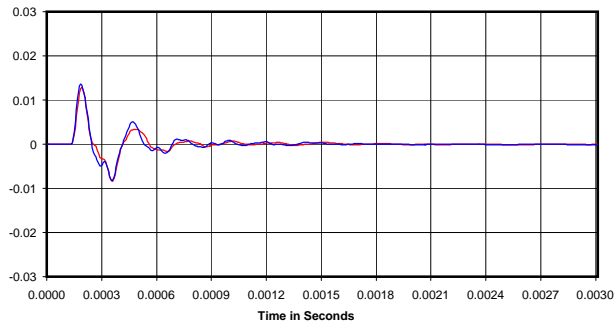
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

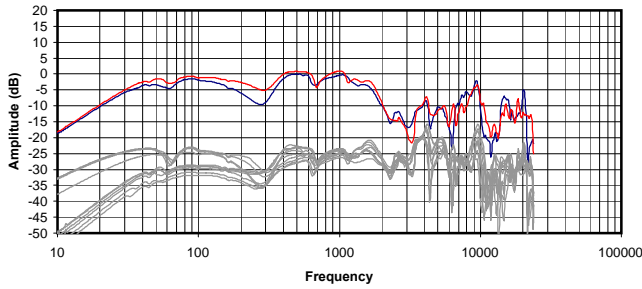


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

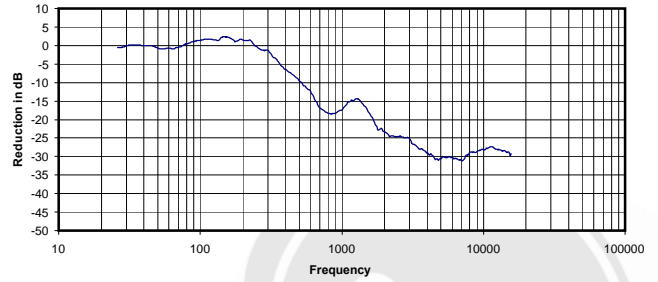
0.049 Vrms
 28 Ohms
 0.09 mW
 -21 dB



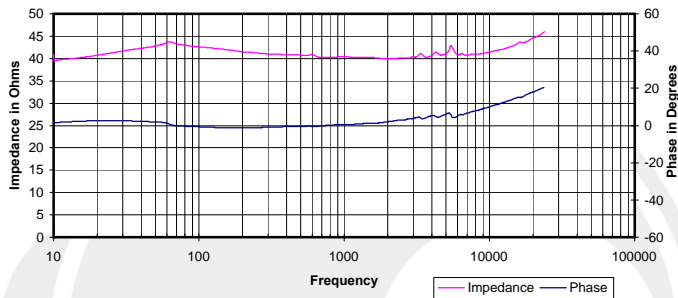
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



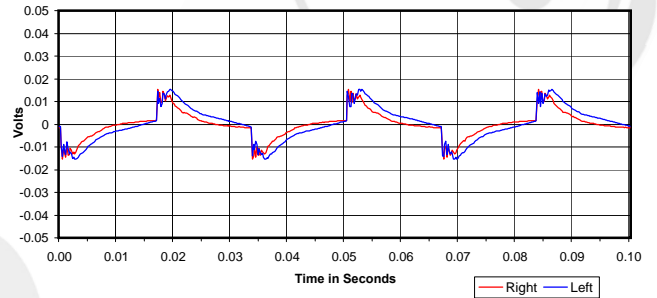
Isolation
 Attenuation of External Sound vs. Frequency



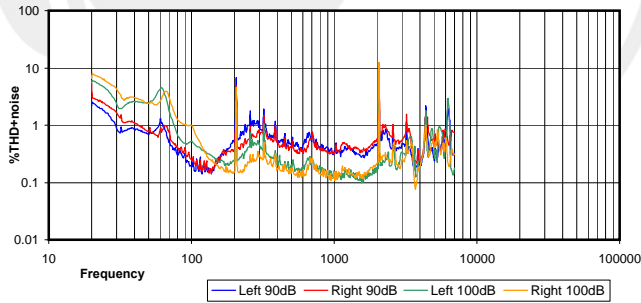
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



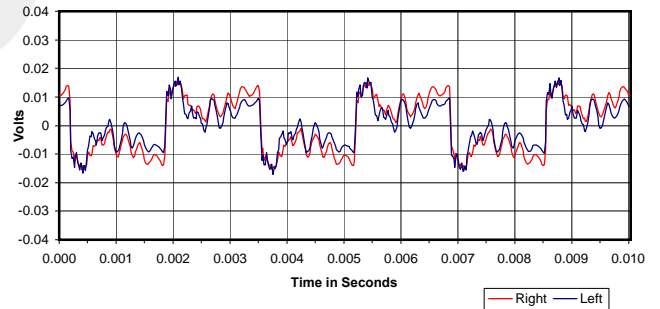
30 Hz Square Wave



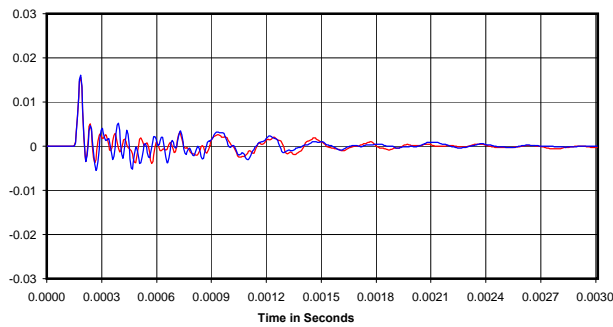
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

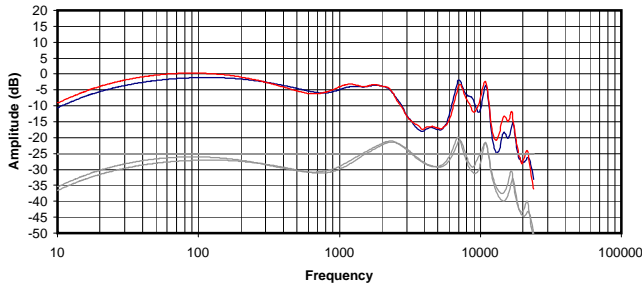


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

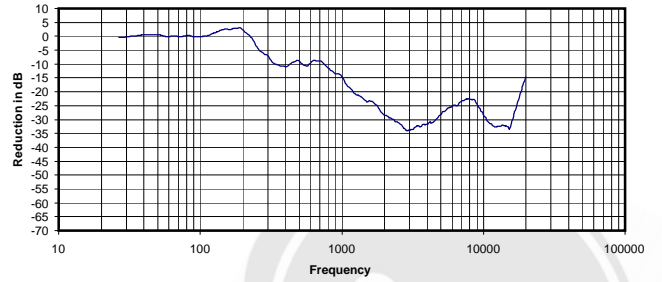
0.069 Vrms
 40 Ohms
 0.12 mW
 -13 dB



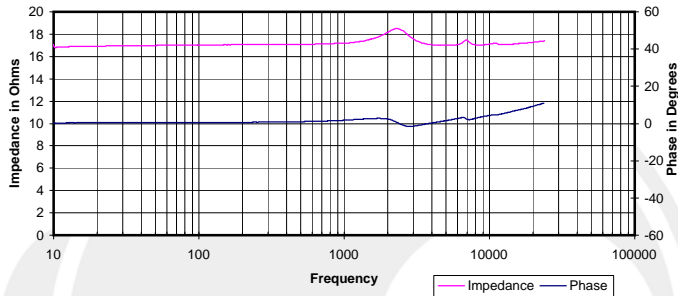
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



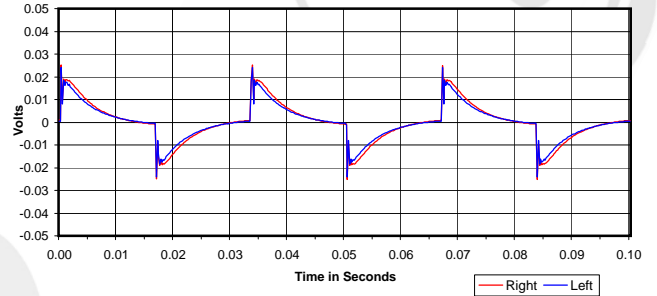
Isolation
Attenuation of External Sound vs. Frequency



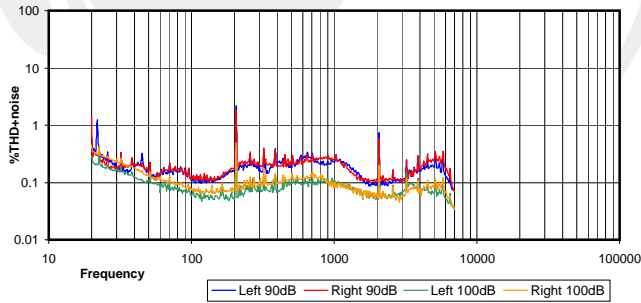
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



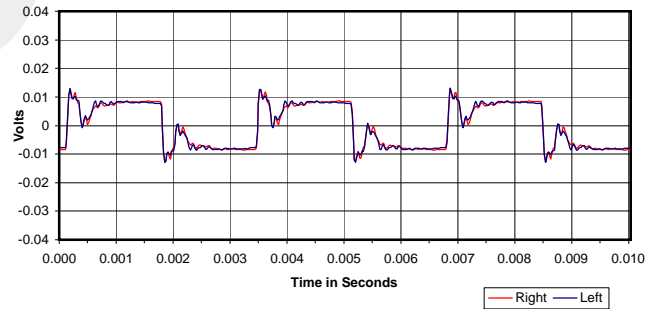
30 Hz Square Wave



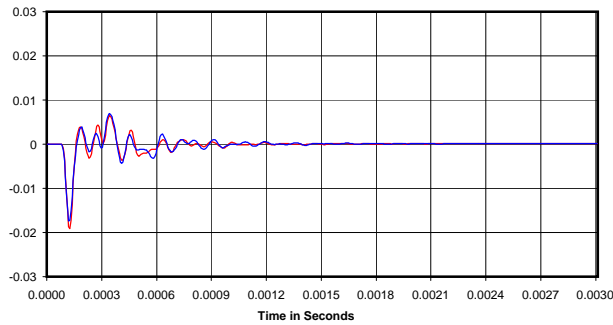
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

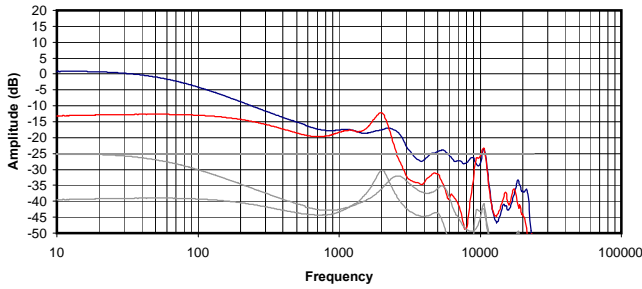


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

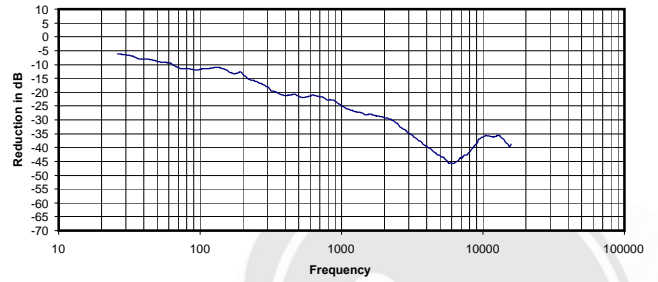
0.016 Vrms
17 Ohms
0.01 mW
-16 dB



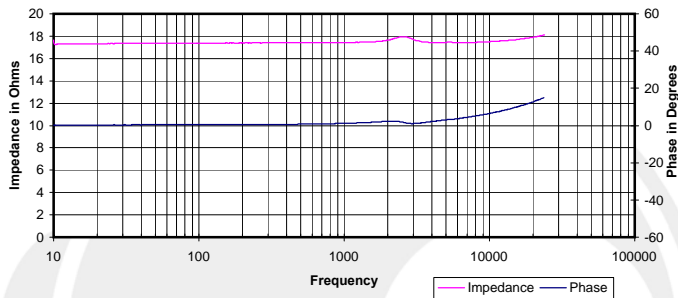
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



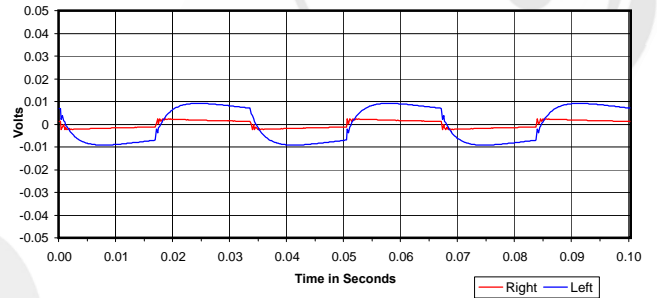
Isolation
Attenuation of External Sound vs. Frequency



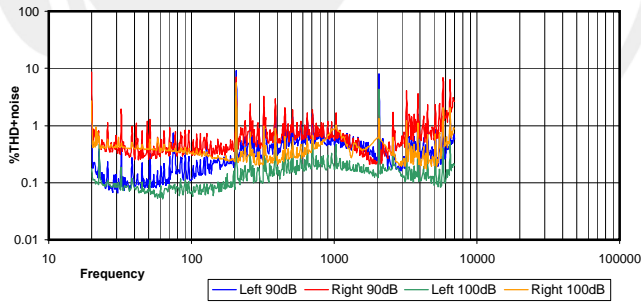
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



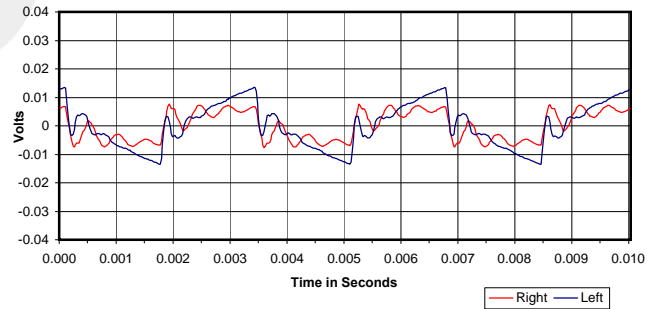
30 Hz Square Wave



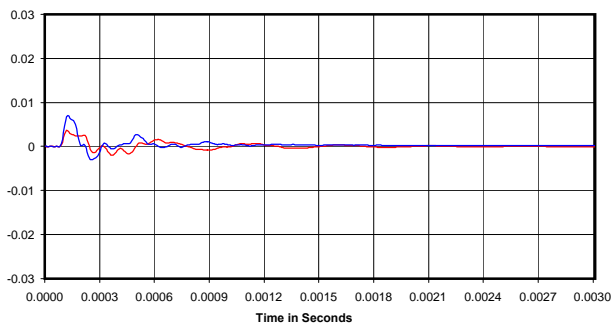
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



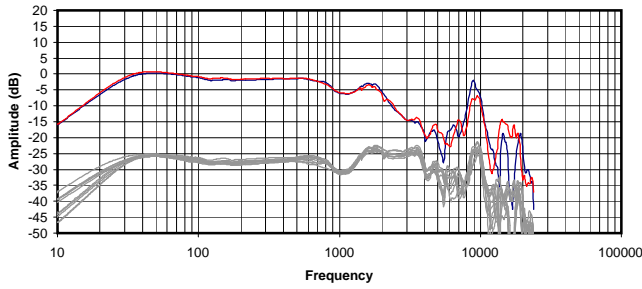
Impulse Response



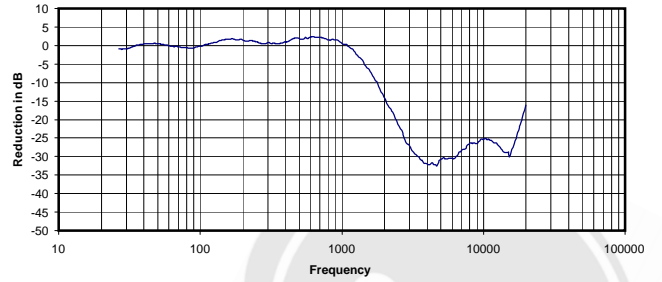
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
17 Ohms
0.10 mW
-25 dB

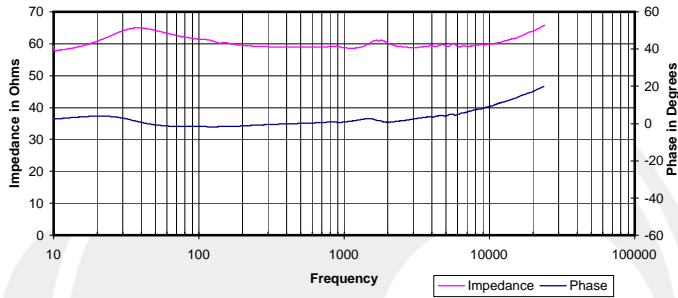
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



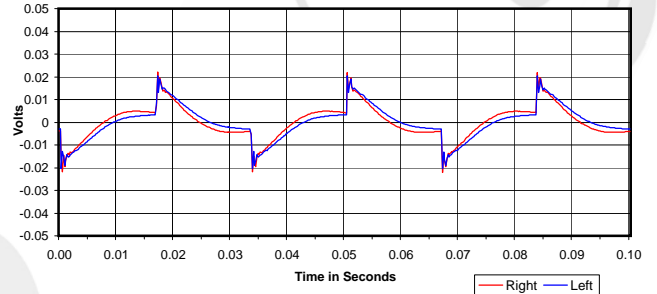
Isolation
 Attenuation of External Sound vs. Frequency



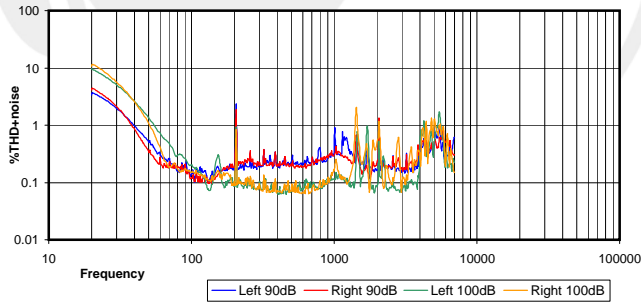
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



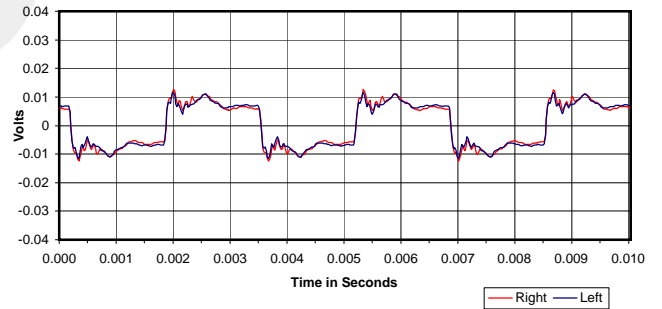
30 Hz Square Wave



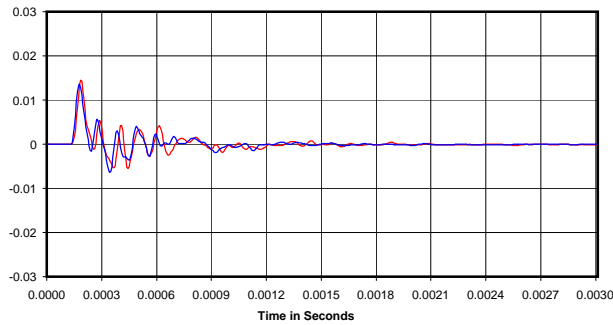
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

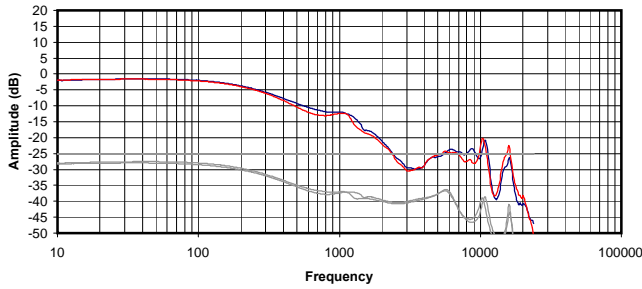


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

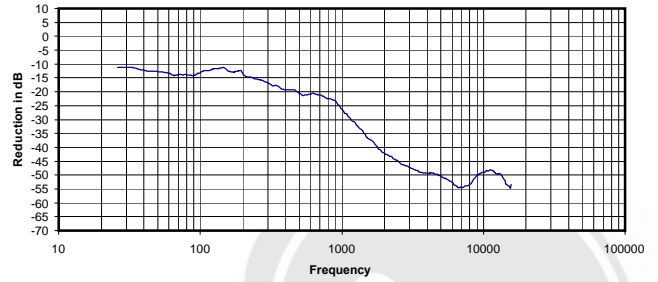
0.054 Vrms
 59 Ohms
 0.05 mW
 -10 dB



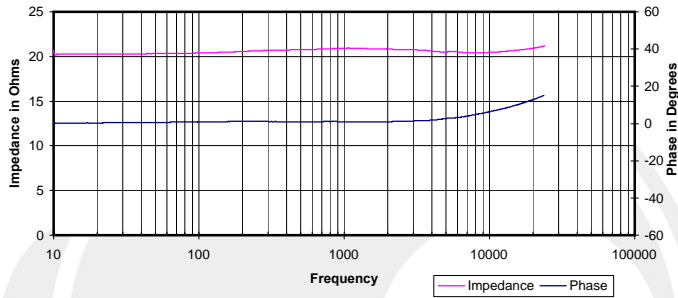
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



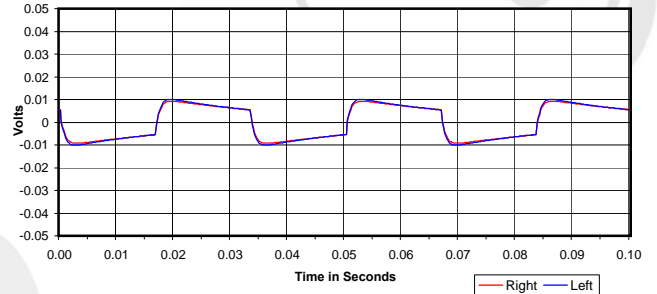
Isolation
Attenuation of External Sound vs. Frequency



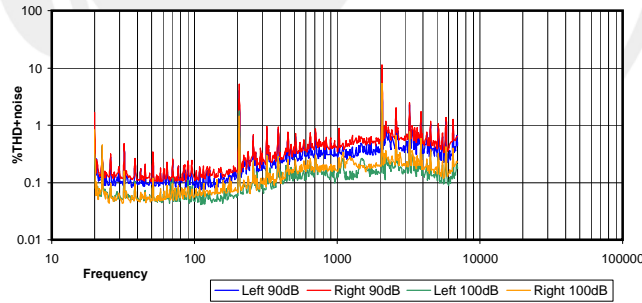
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



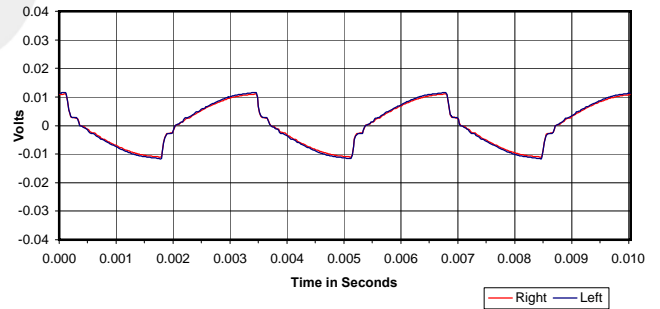
30 Hz Square Wave



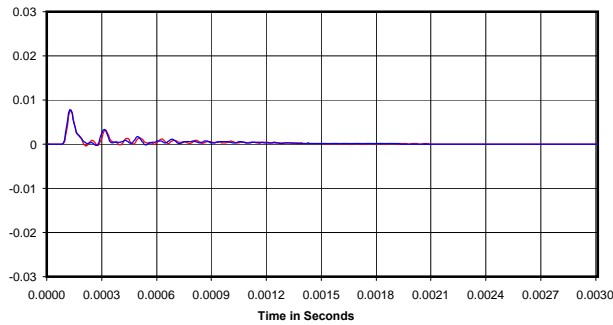
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



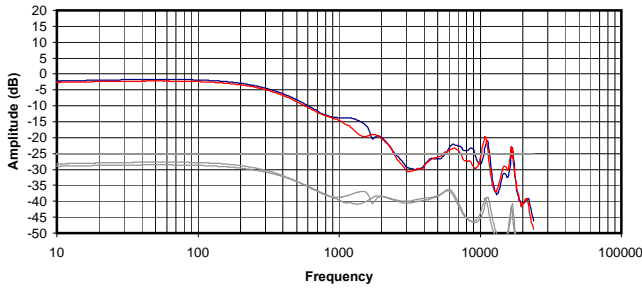
Impulse Response



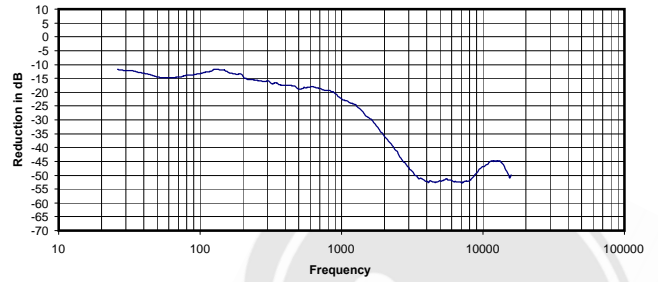
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.019 Vrms
21 Ohms
0.02 mW
-28 dB

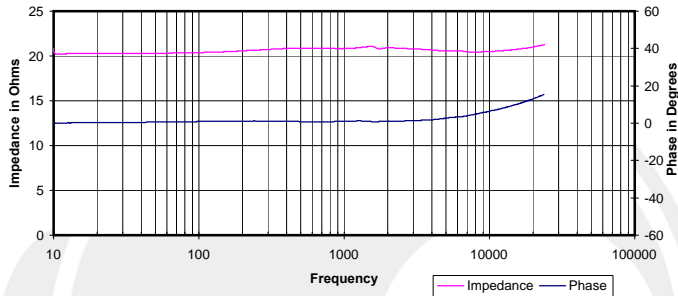
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



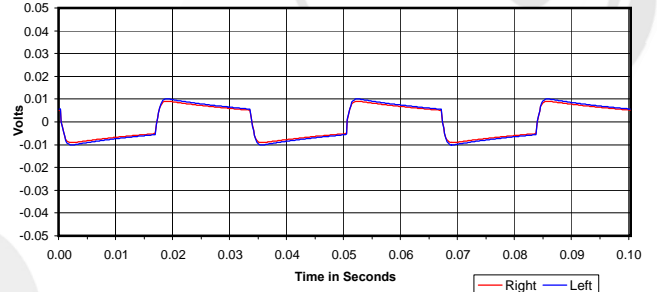
Isolation
Attenuation of External Sound vs. Frequency



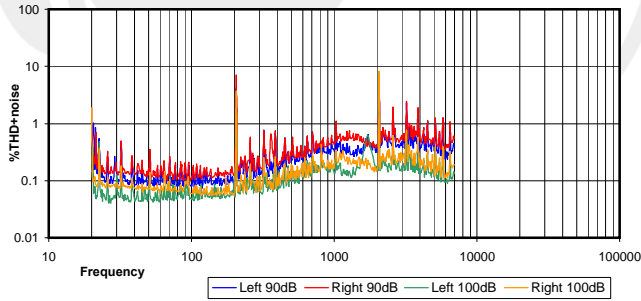
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



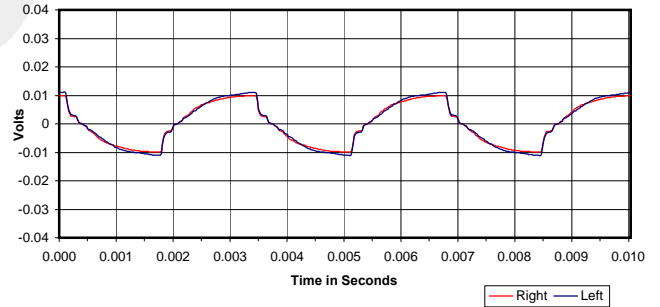
30 Hz Square Wave



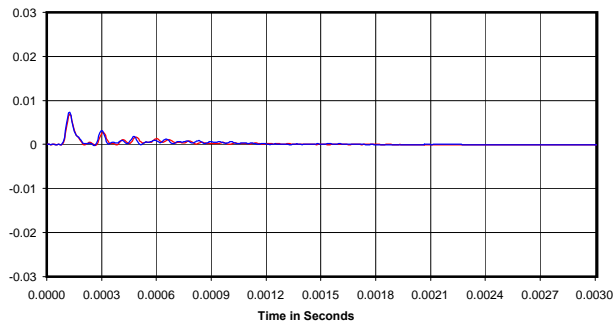
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

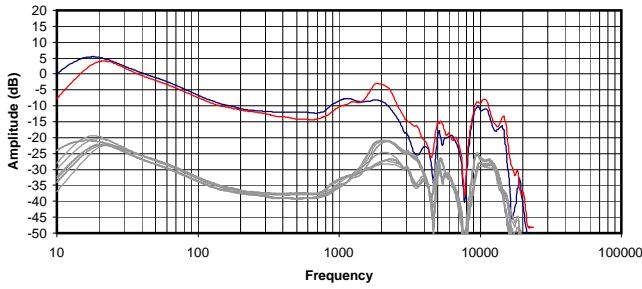


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
21 Ohms
0.03 mW
-27 dB

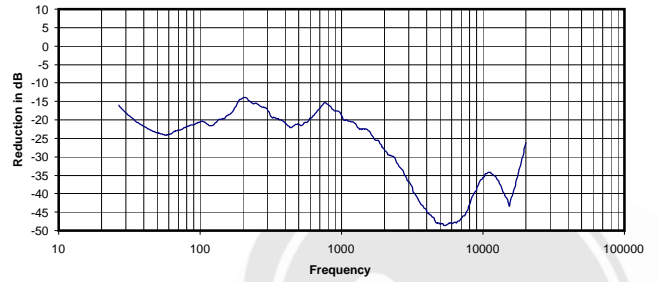


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

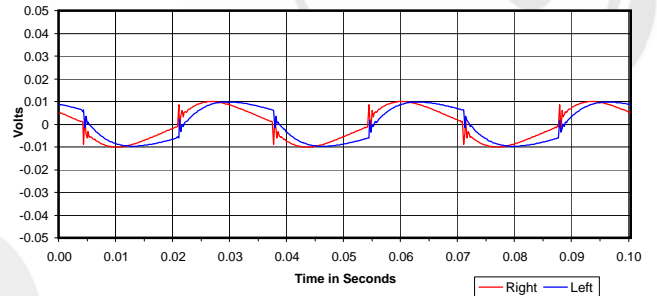


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

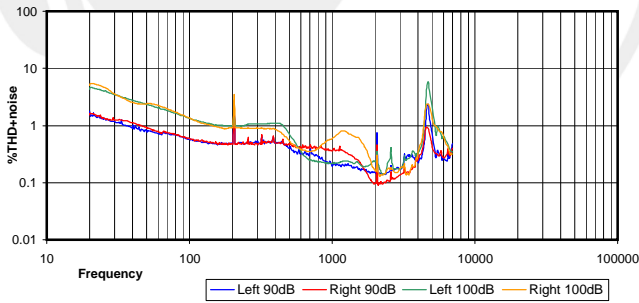
Isolation
 Attenuation of External Sound vs. Frequency



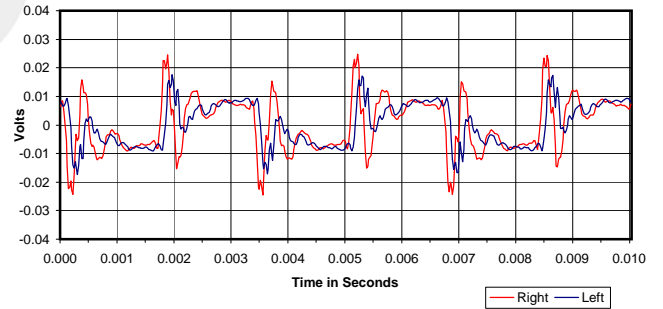
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

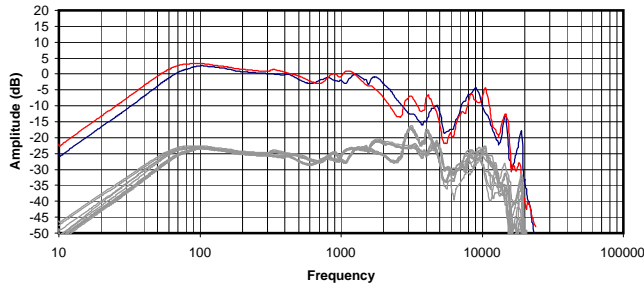


Broadband Isolation in dB (100Hz to 10kHz):

-27 dB

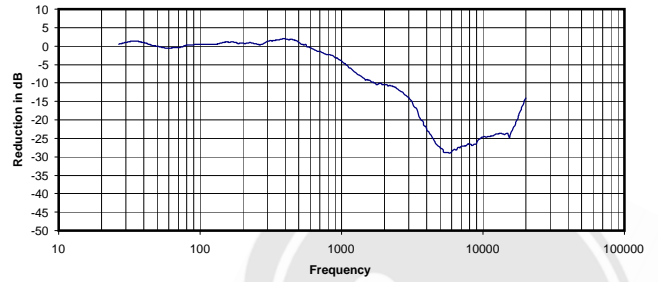
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions

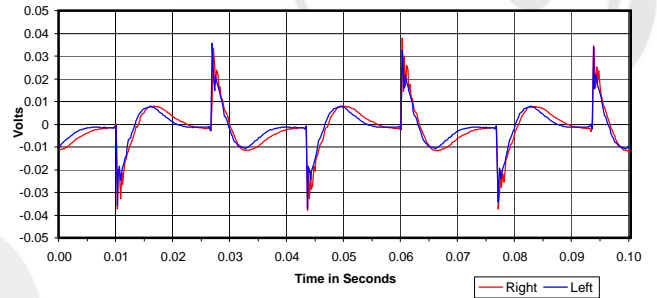


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

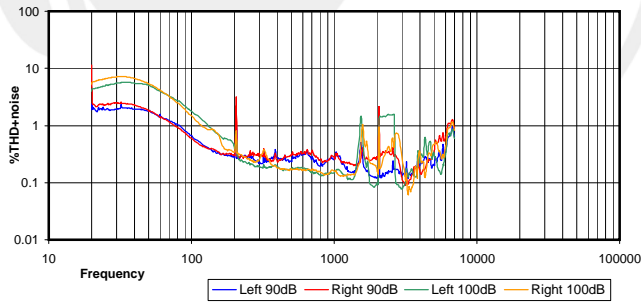
Isolation
Attenuation of External Sound vs. Frequency



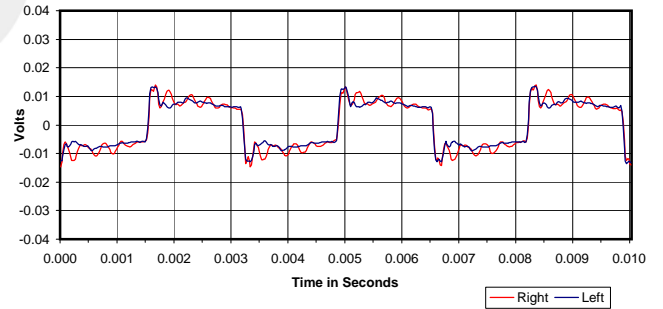
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



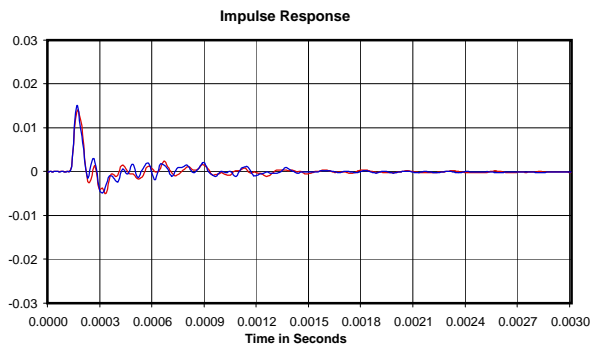
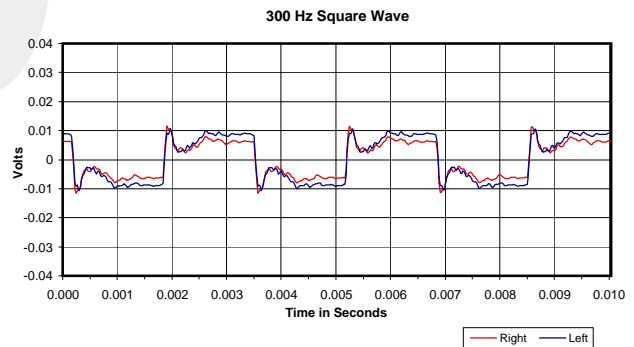
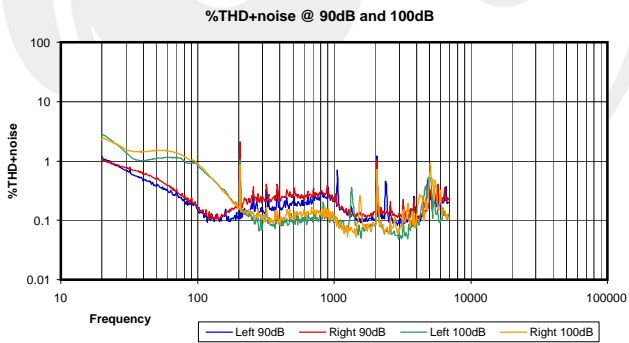
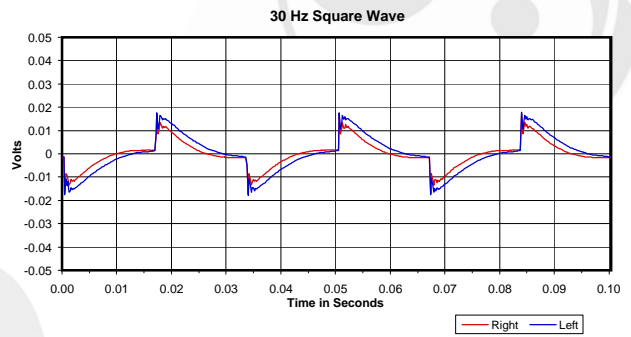
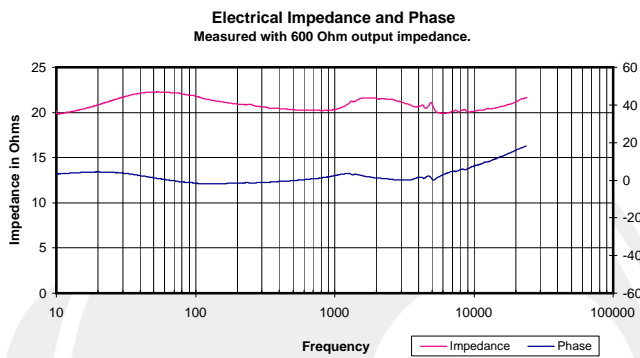
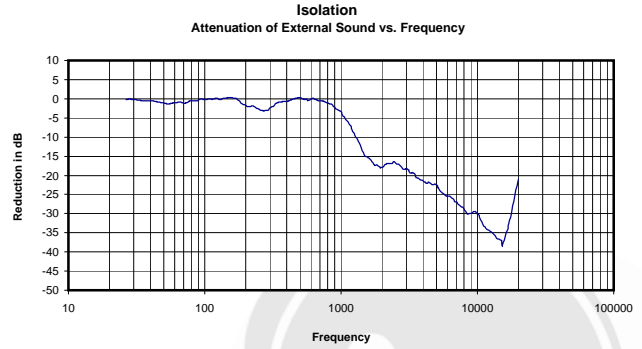
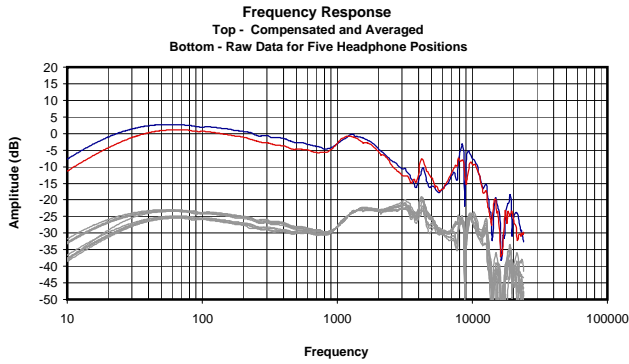
300 Hz Square Wave



Broadband Isolation in dB (100Hz to 10kHz):

-9 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

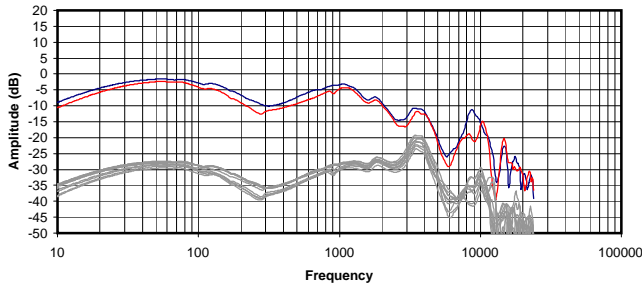


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

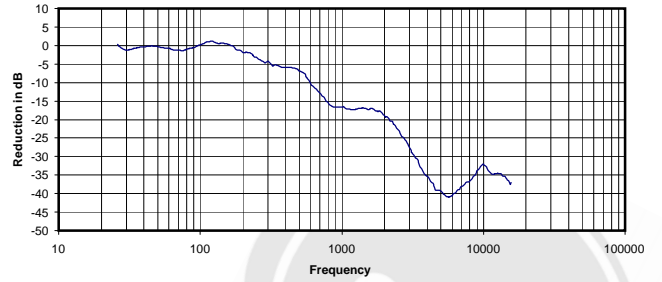
0.027 Vrms
20 Ohms
0.04 mW
-10 dBr



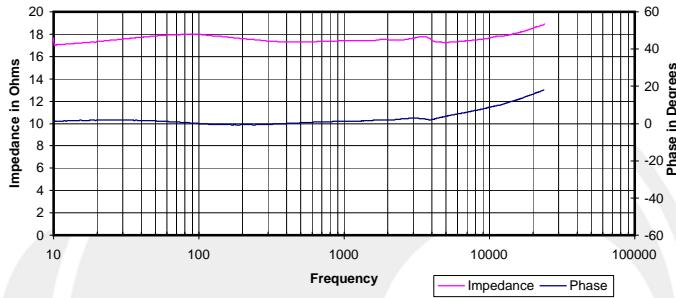
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



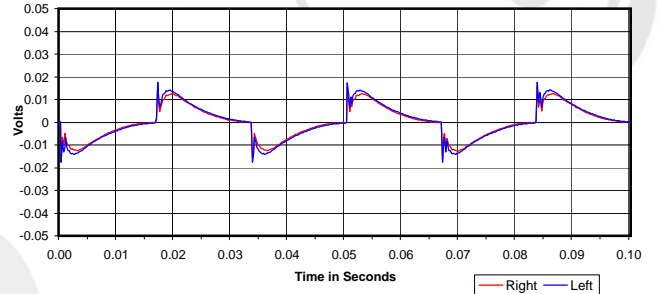
Isolation
 Attenuation of External Sound vs. Frequency



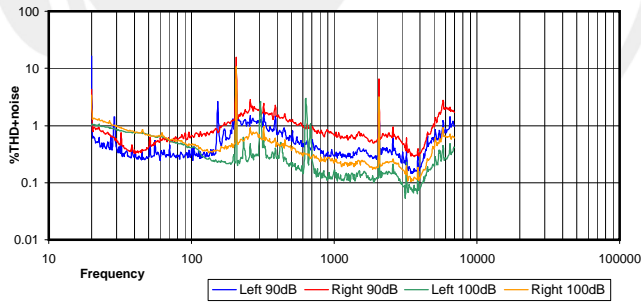
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



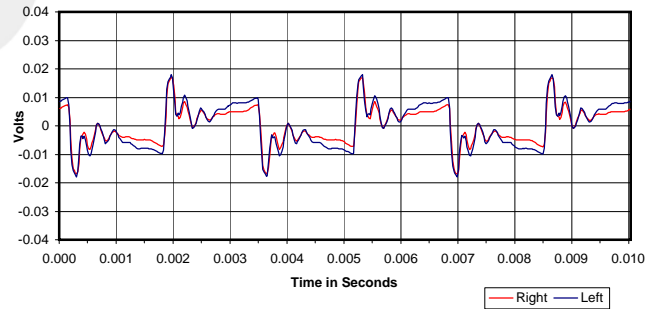
30 Hz Square Wave



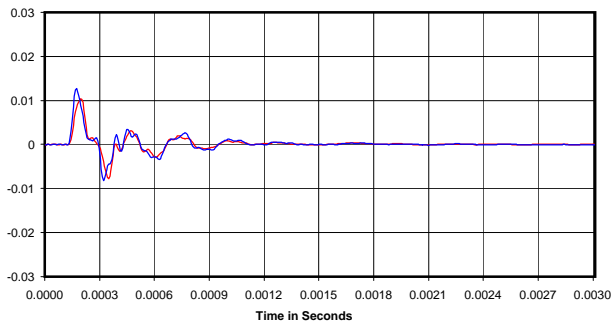
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

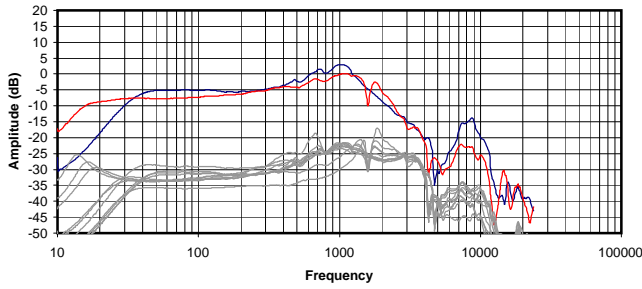


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

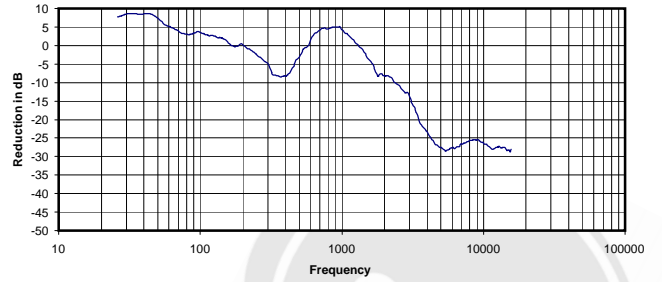
0.022 Vrms
 17 Ohms
 0.03 mW
 -14 dB



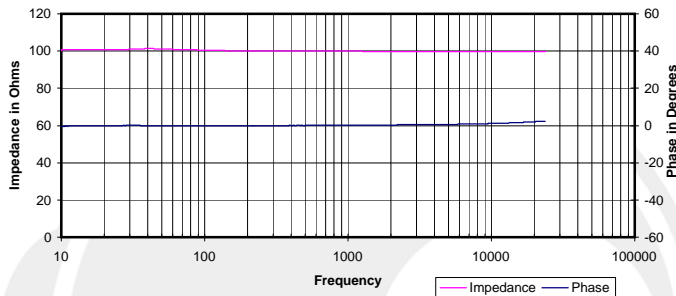
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



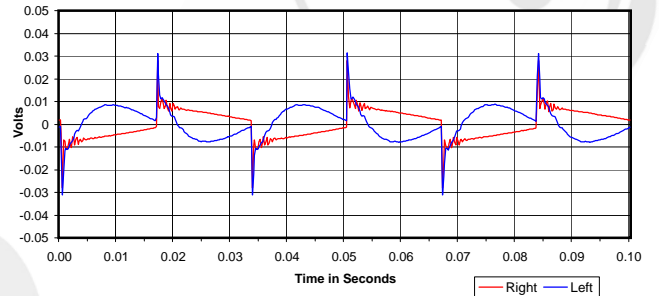
Isolation
 Attenuation of External Sound vs. Frequency



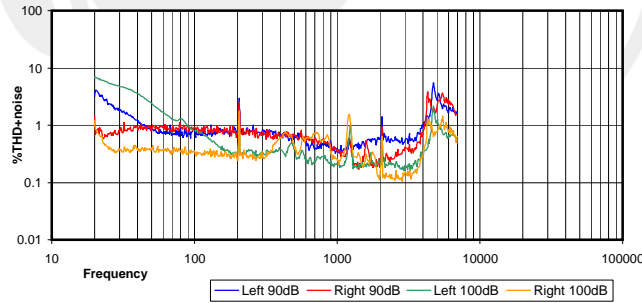
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



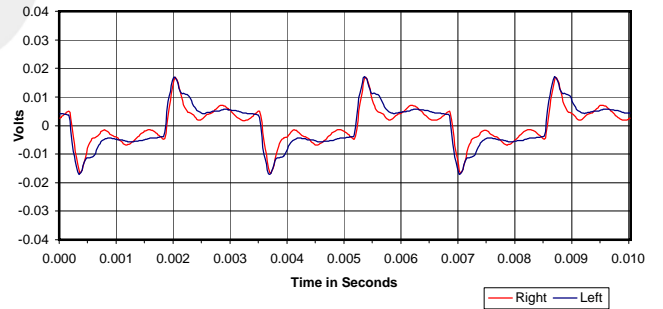
30 Hz Square Wave



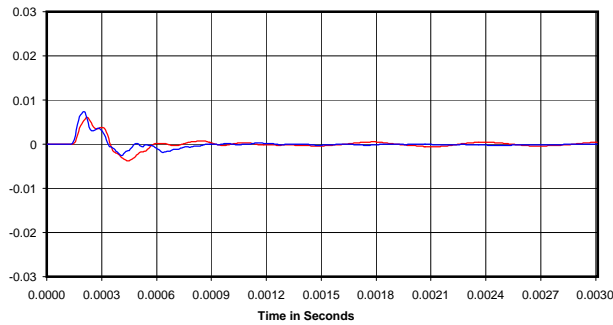
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

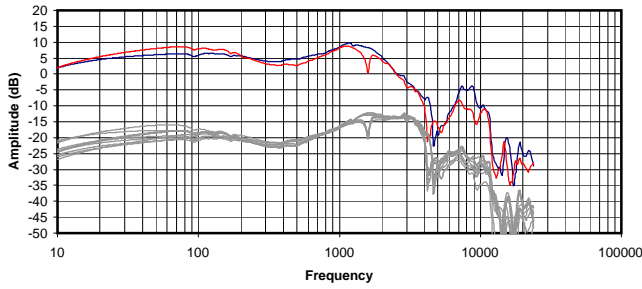


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

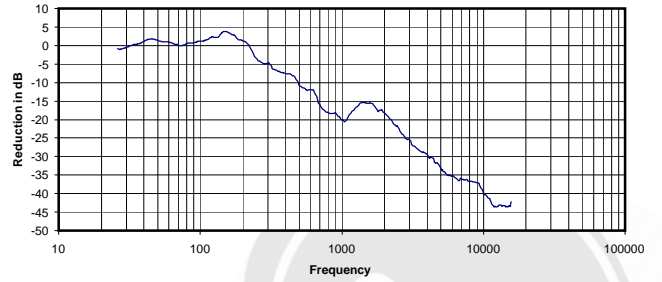
0.011 Vrms
 100 Ohms
 0.00 mW
 -6 dBr



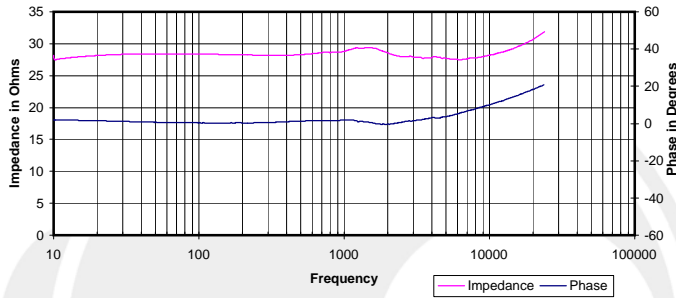
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



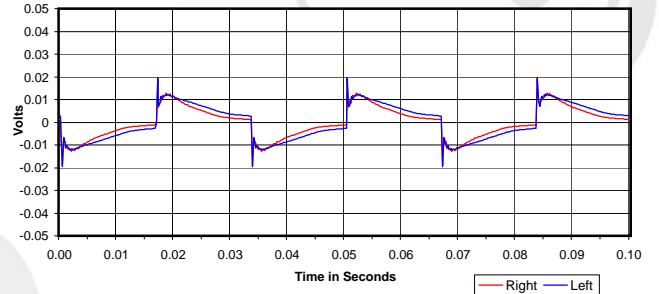
Isolation
 Attenuation of External Sound vs. Frequency



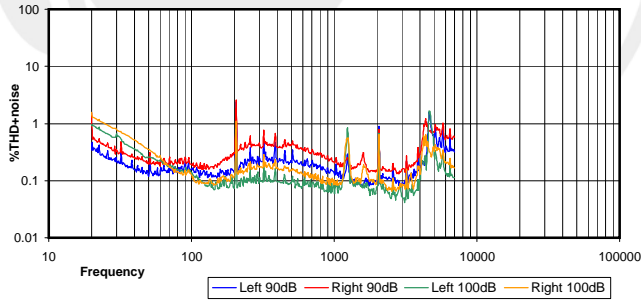
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



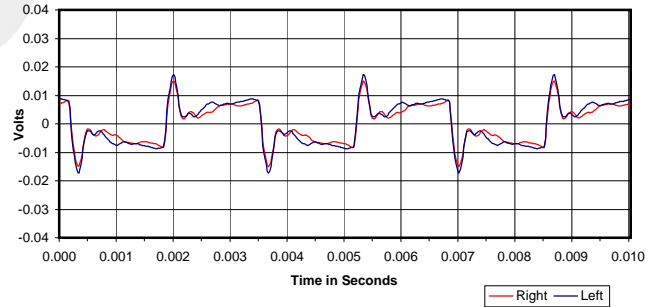
30 Hz Square Wave



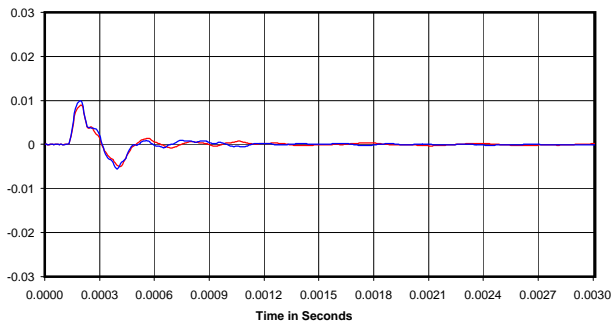
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

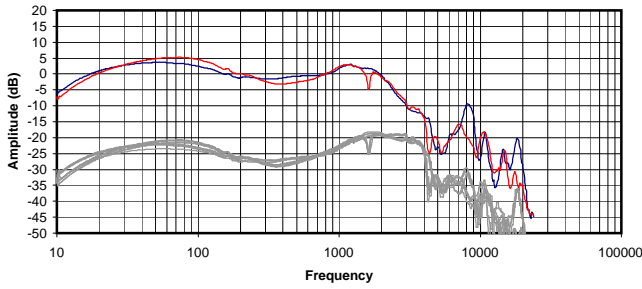


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.020 Vrms
 29 Ohms
 0.01 mW
 -14 dB

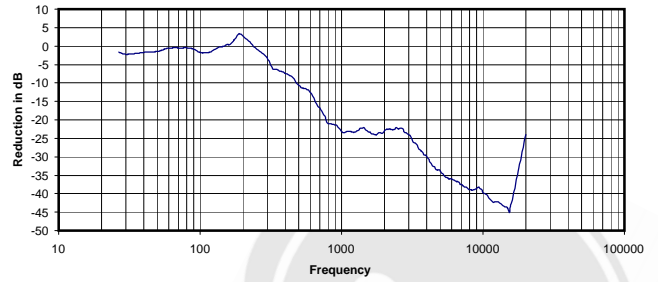


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

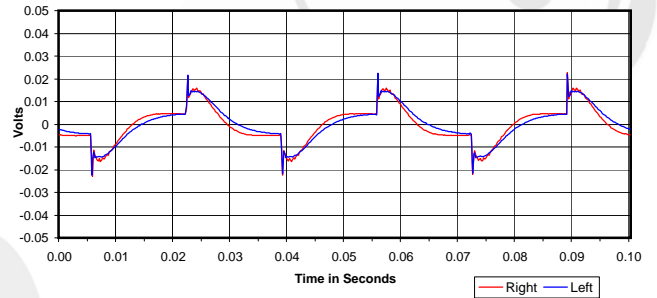


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

Isolation
 Attenuation of External Sound vs. Frequency



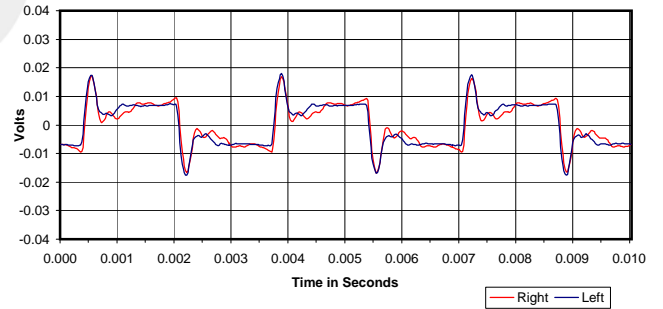
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

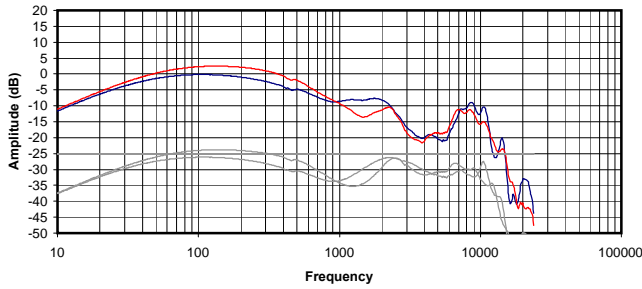


Broadband Isolation in dB (100Hz to 10kHz):

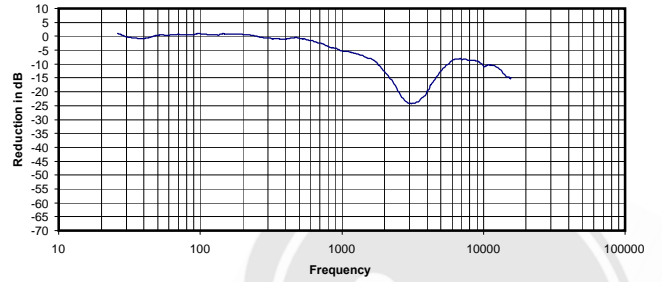
-18 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

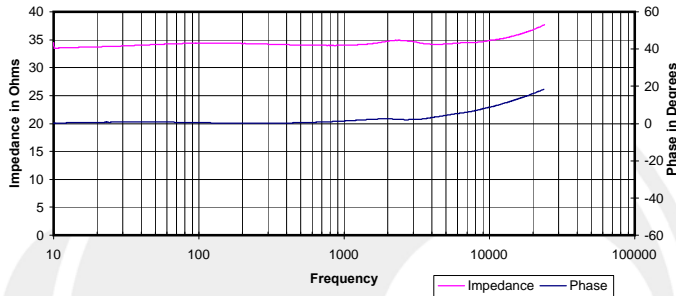
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



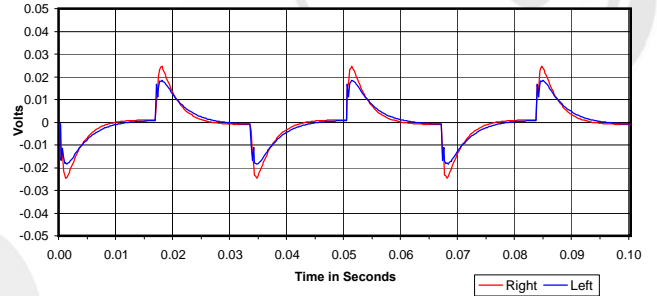
Isolation
Attenuation of External Sound vs. Frequency



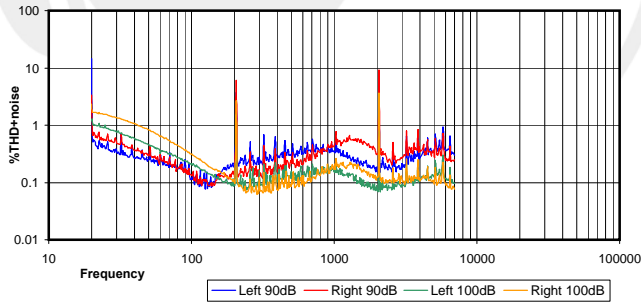
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



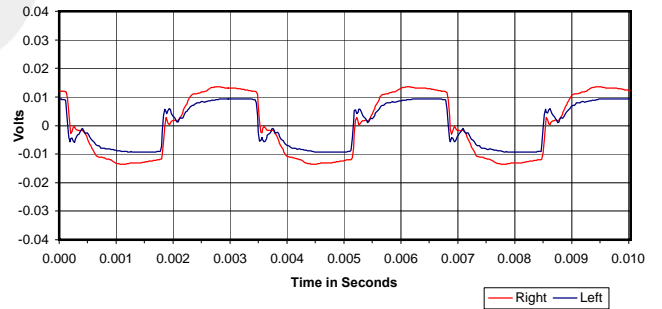
30 Hz Square Wave



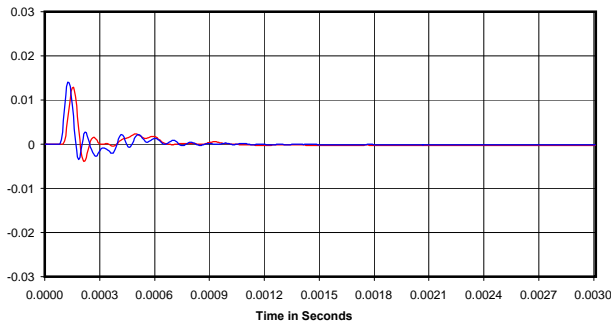
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

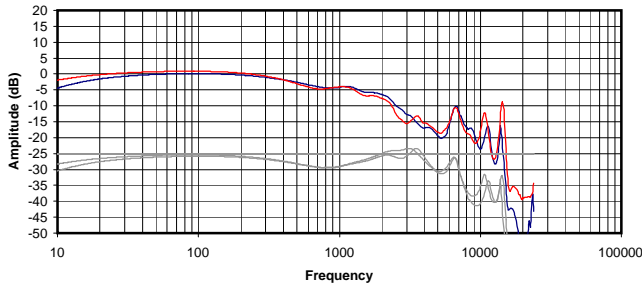


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

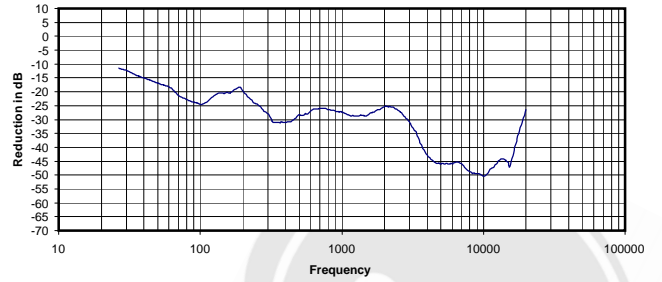
0.047 Vrms
34 Ohms
0.07 mW
-6 dB



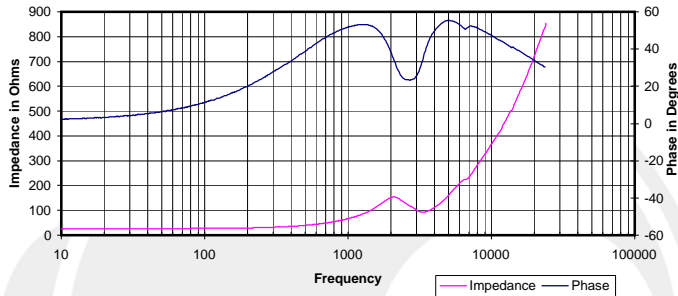
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



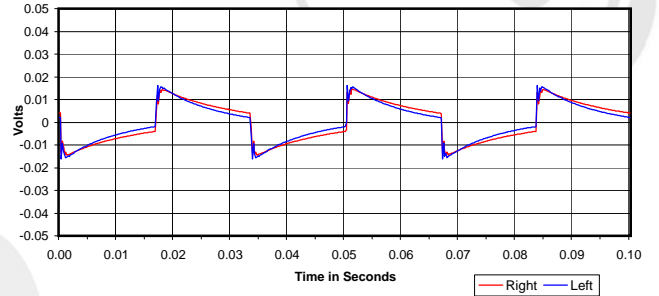
Isolation
Attenuation of External Sound vs. Frequency



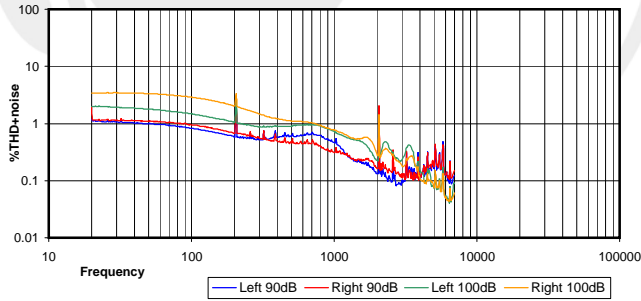
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



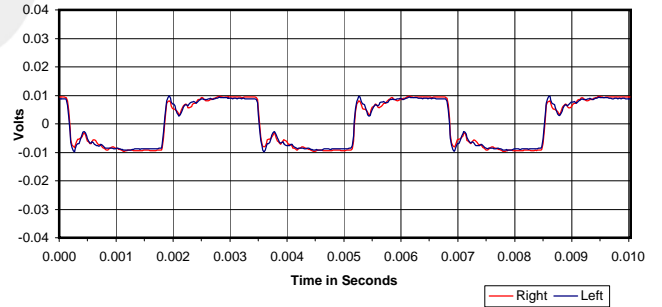
30 Hz Square Wave



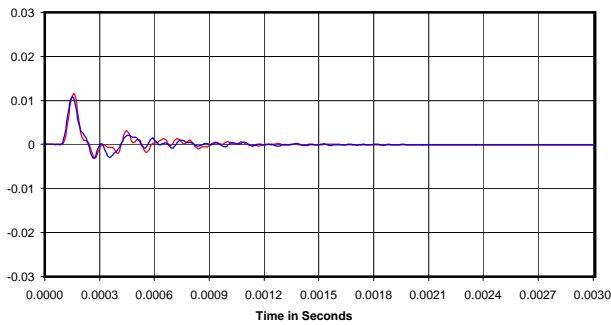
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

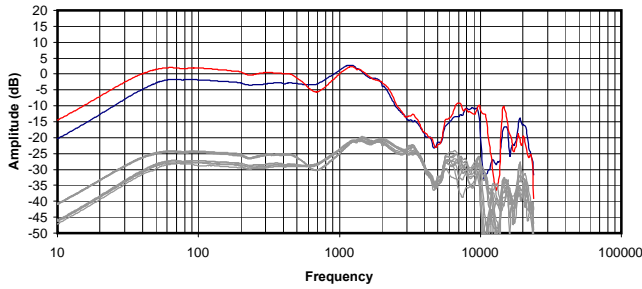


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

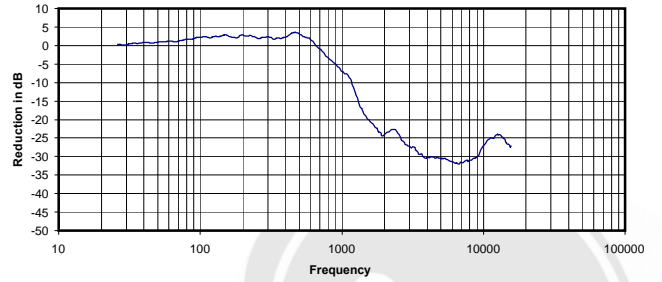
0.023 Vrms
67 Ohms
0.01 mW
-31 dB



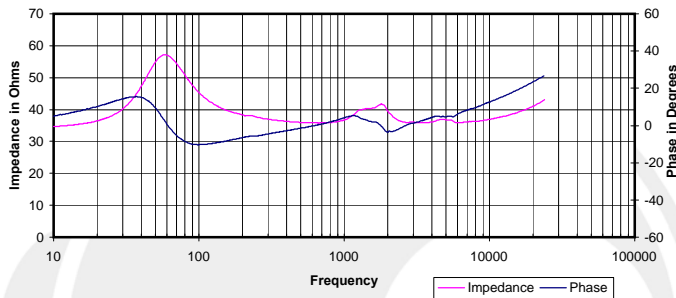
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



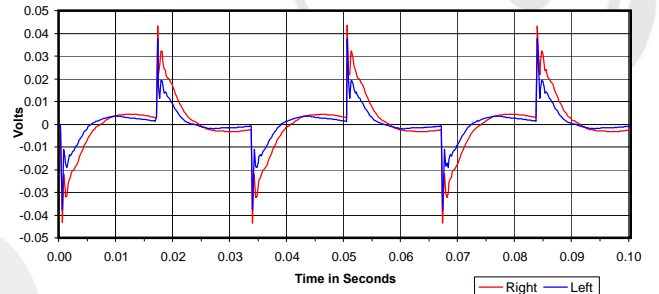
Isolation
 Attenuation of External Sound vs. Frequency



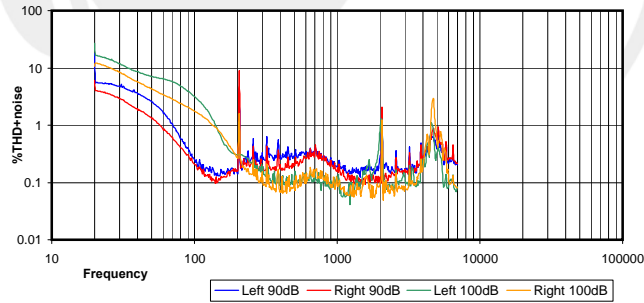
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



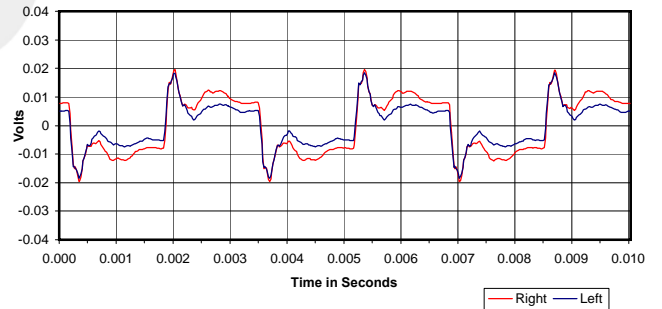
30 Hz Square Wave



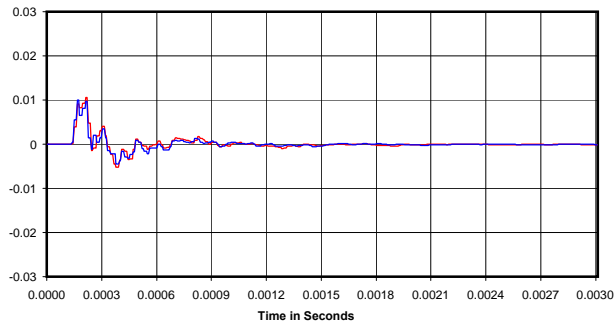
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

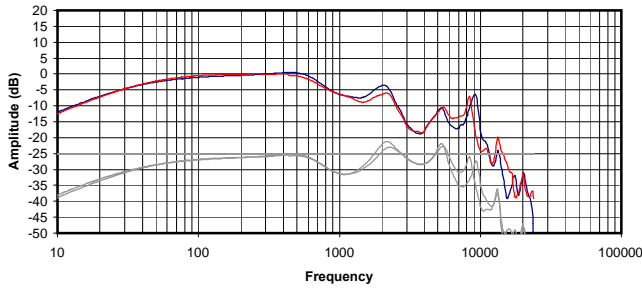


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

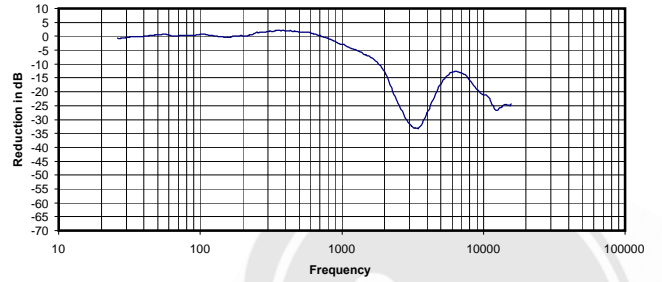
0.020 Vrms
 37 Ohms
 0.01 mW
 -10 dB



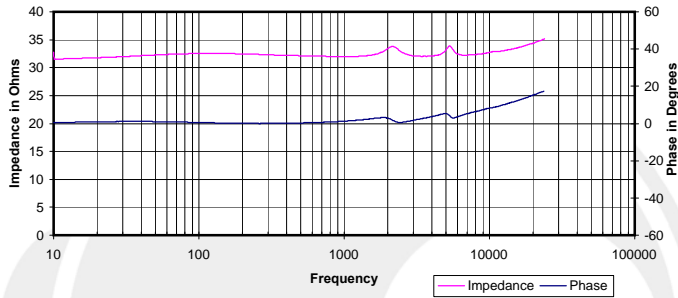
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



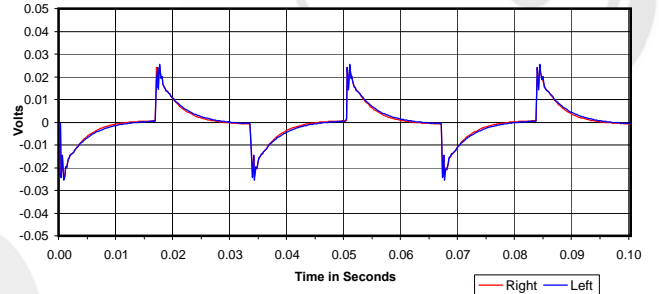
Isolation
Attenuation of External Sound vs. Frequency



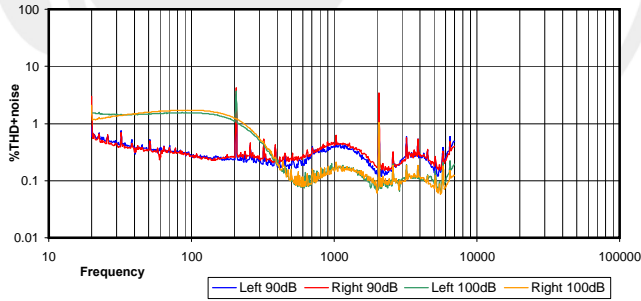
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



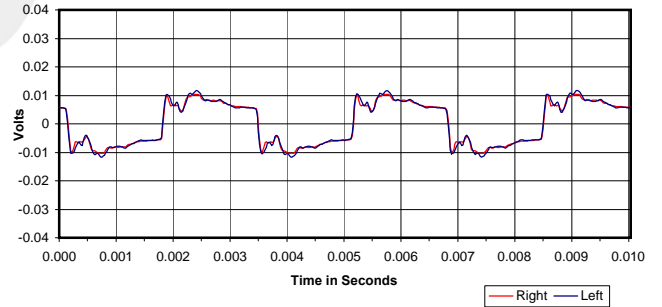
30 Hz Square Wave



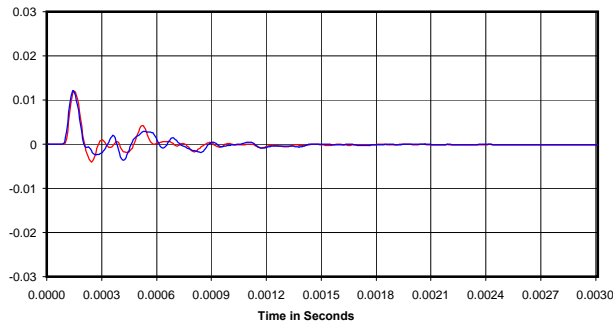
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



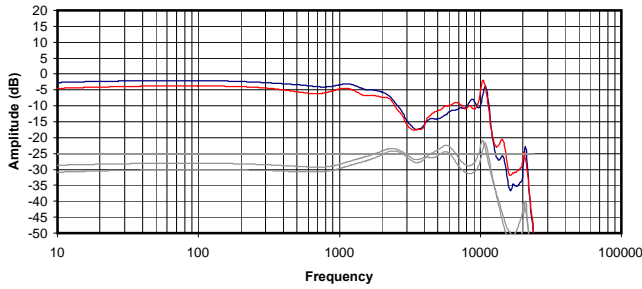
Impulse Response



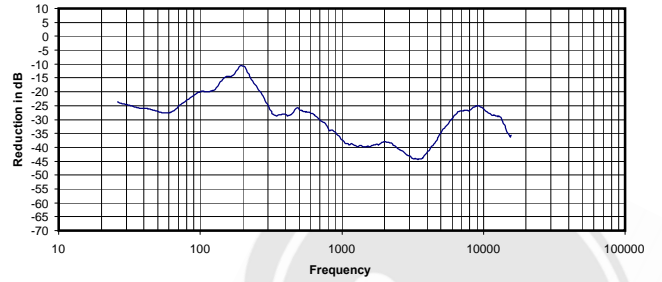
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.022 Vrms
32 Ohms
0.02 mW
-7 dB

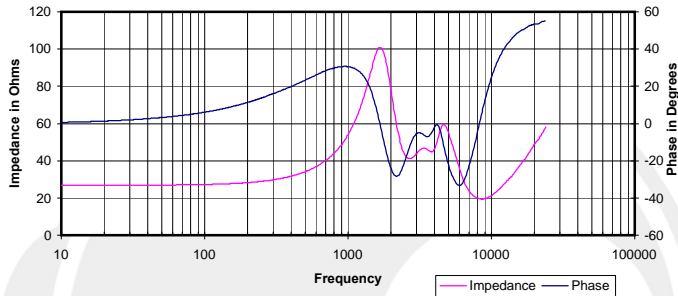
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



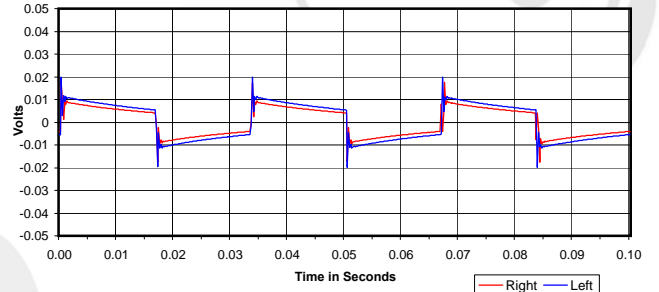
Isolation
Attenuation of External Sound vs. Frequency



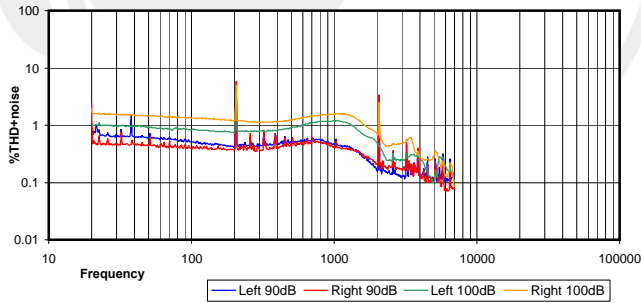
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



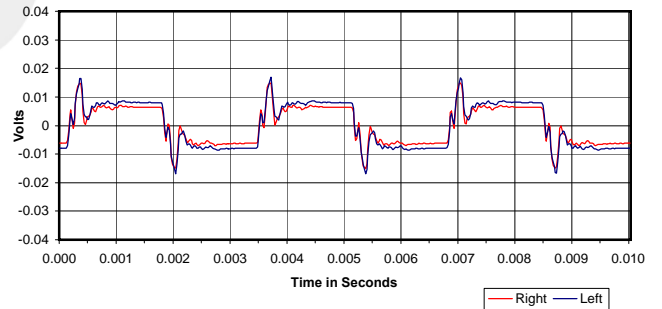
30 Hz Square Wave



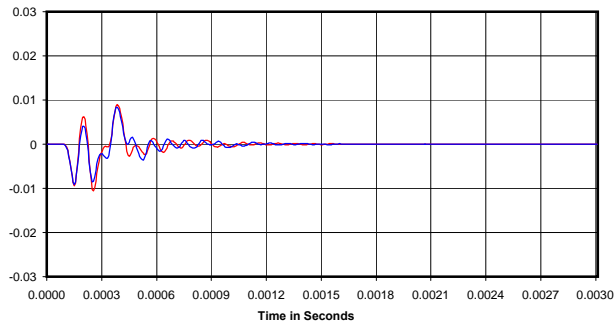
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



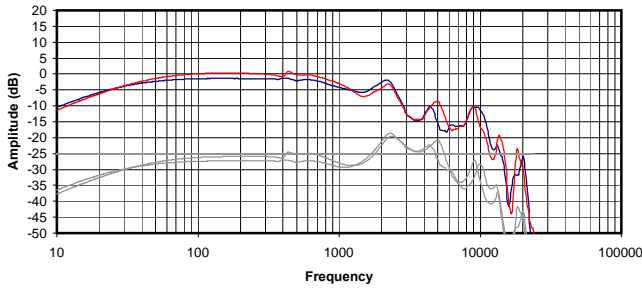
Impulse Response



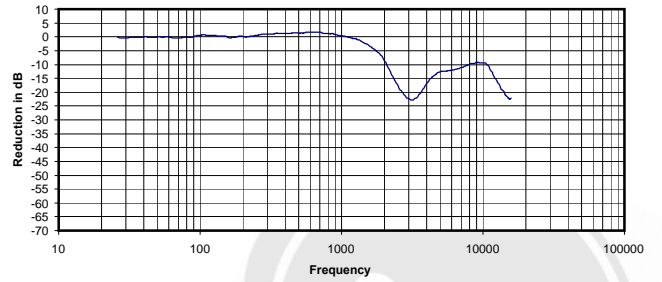
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
54 Ohms
0.01 mW
-30 dB

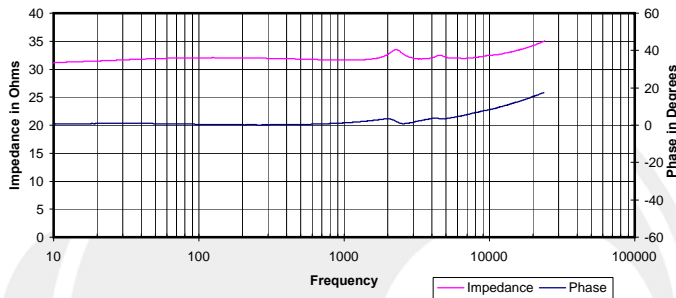
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



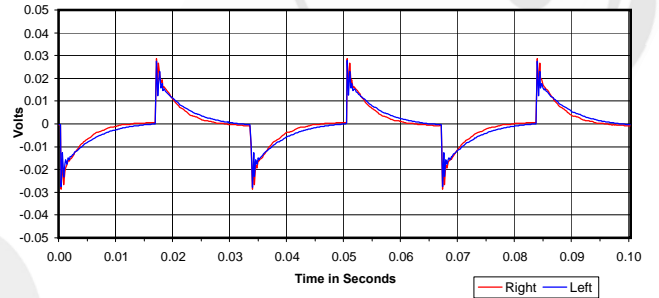
Isolation
Attenuation of External Sound vs. Frequency



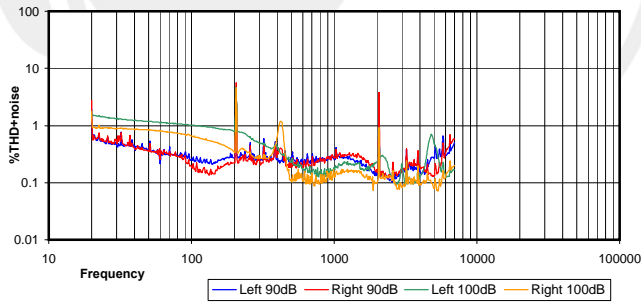
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



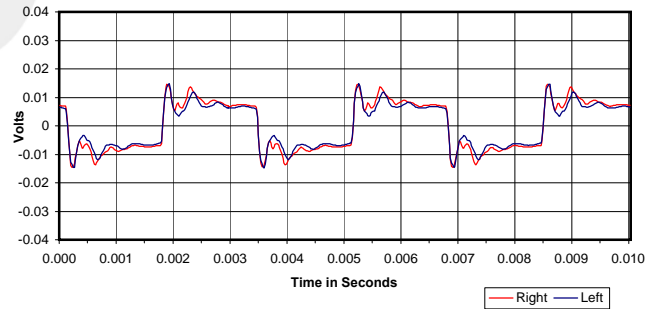
30 Hz Square Wave



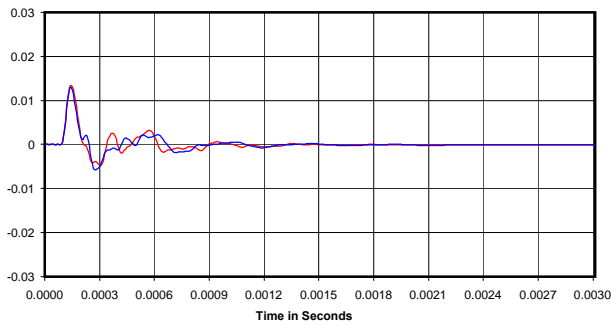
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

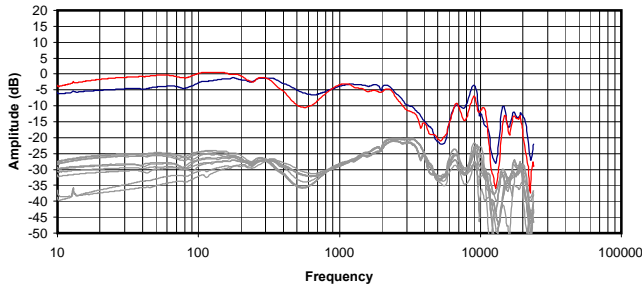


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

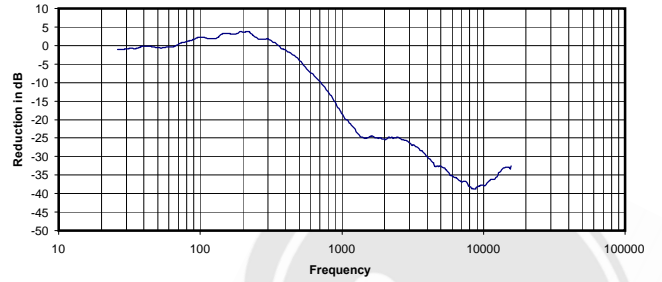
0.034 Vrms
32 Ohms
0.04 mW
-4 dB



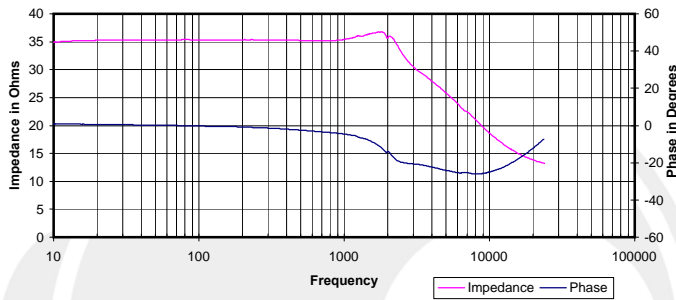
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



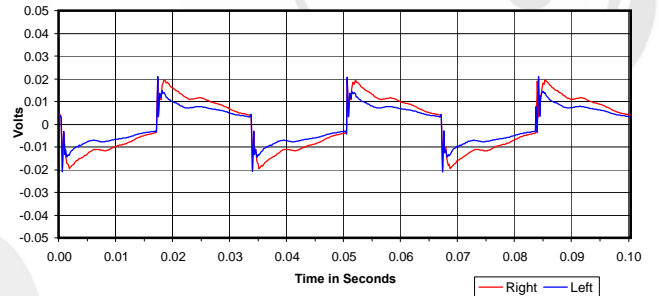
Isolation
 Attenuation of External Sound vs. Frequency



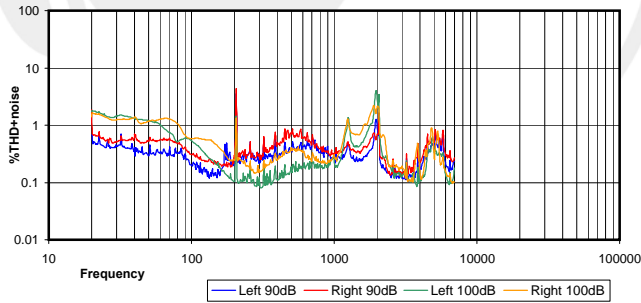
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



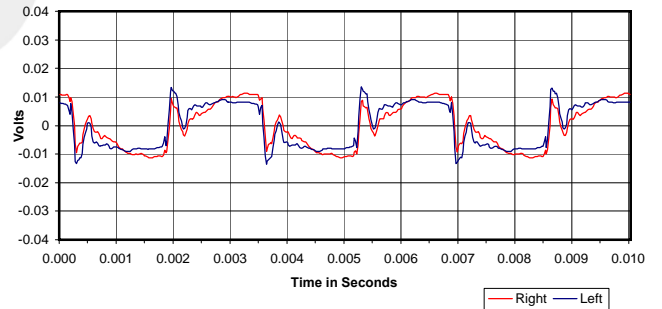
30 Hz Square Wave



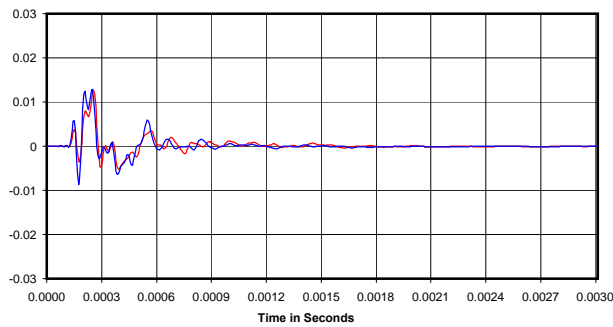
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

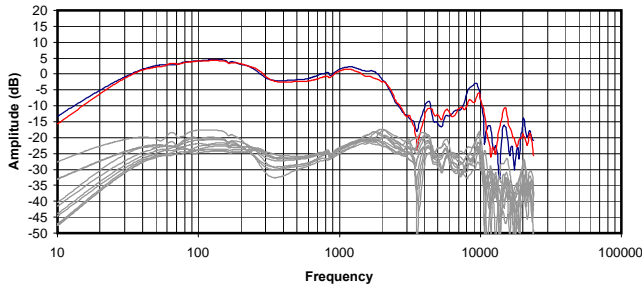


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

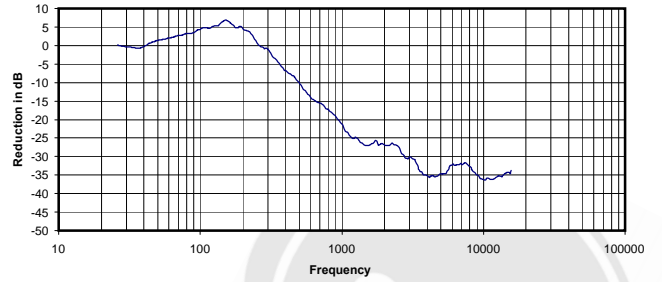
0.050 Vrms
 35 Ohms
 0.07 mW
 -13 dB



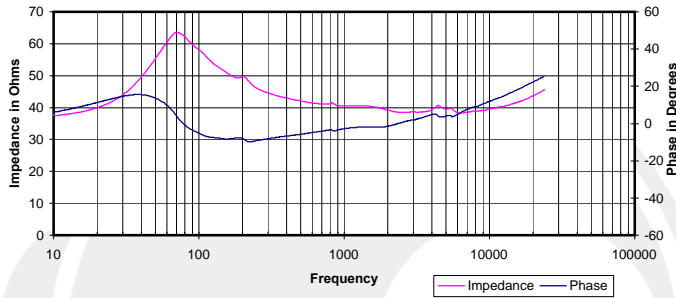
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



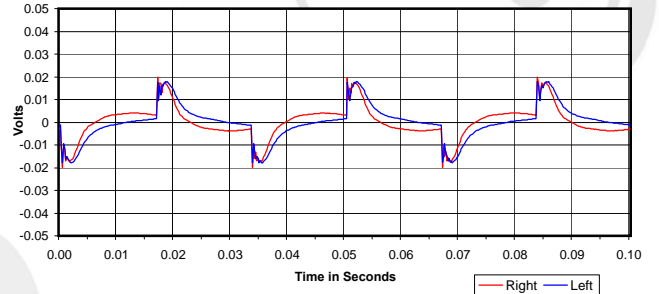
Isolation
 Attenuation of External Sound vs. Frequency



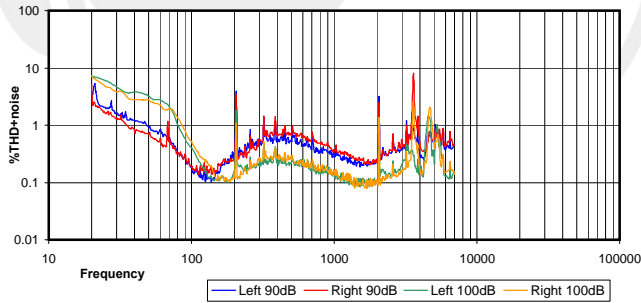
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



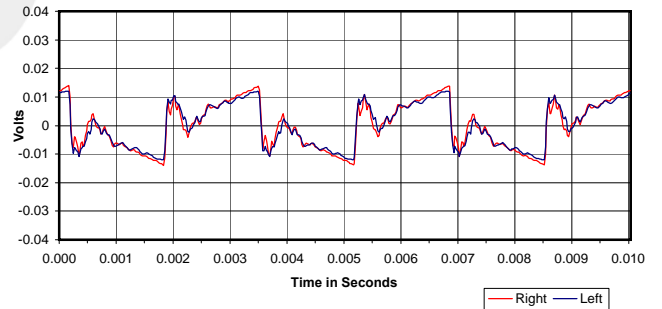
30 Hz Square Wave



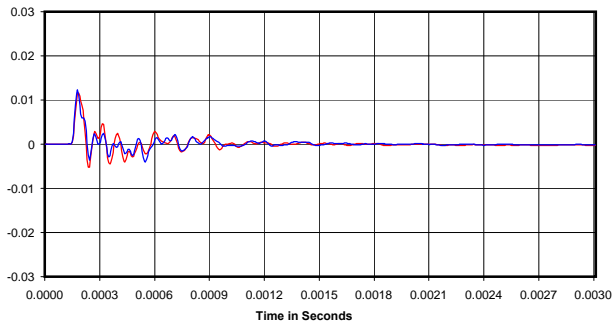
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



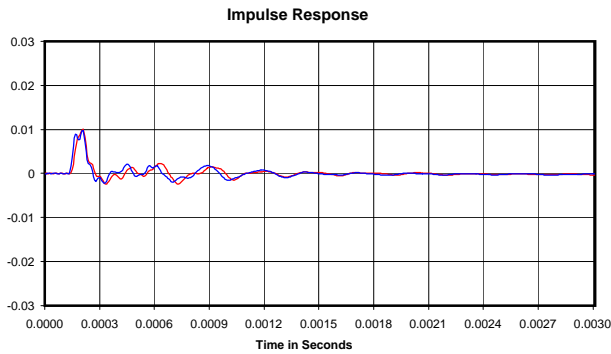
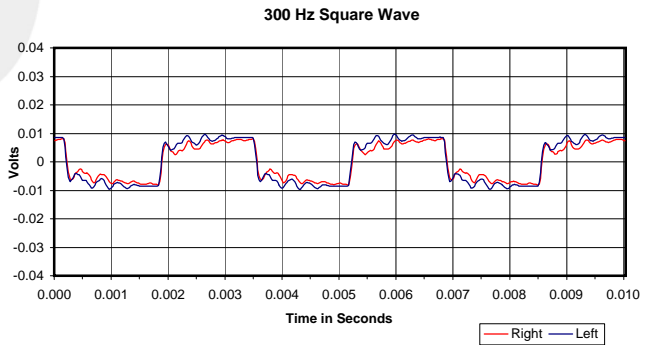
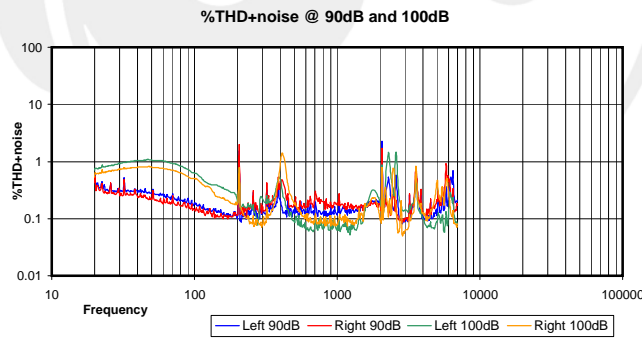
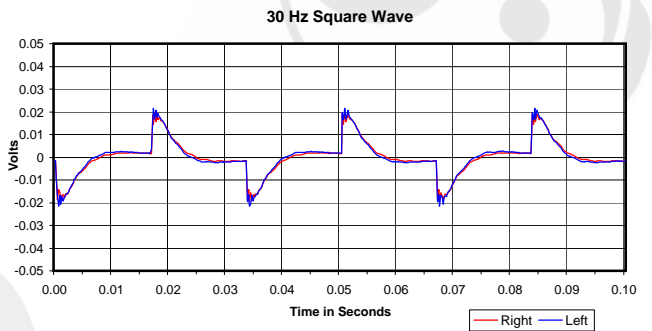
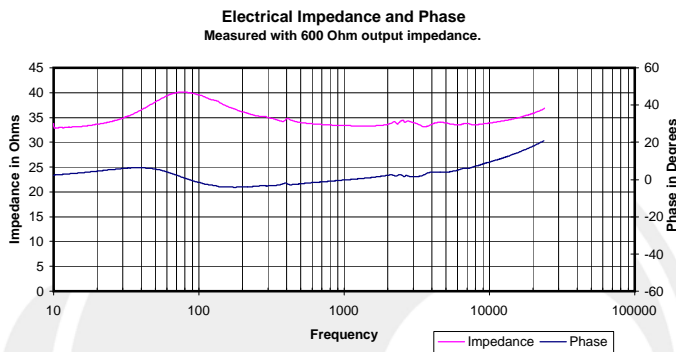
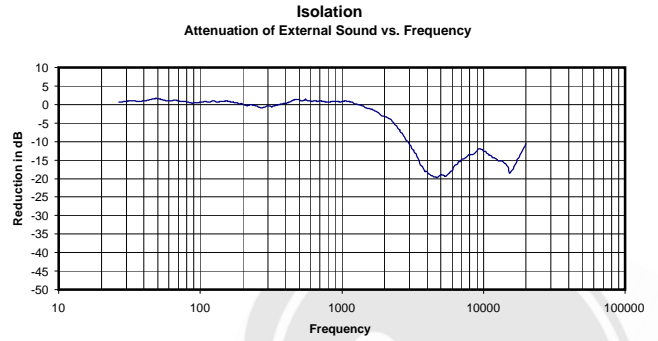
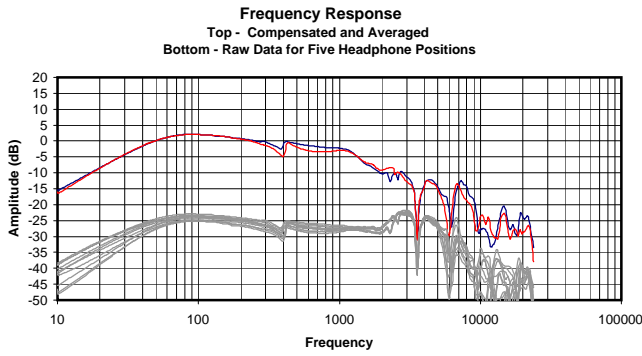
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.039 Vrms
 40 Ohms
 0.04 mW
 -15 dB



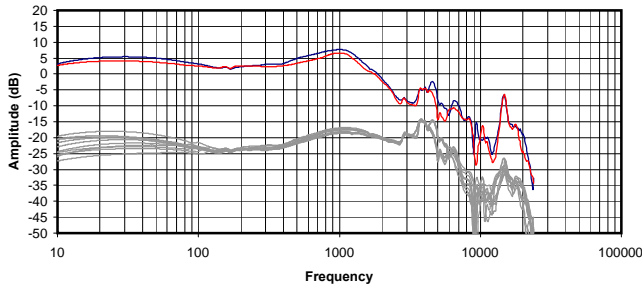


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

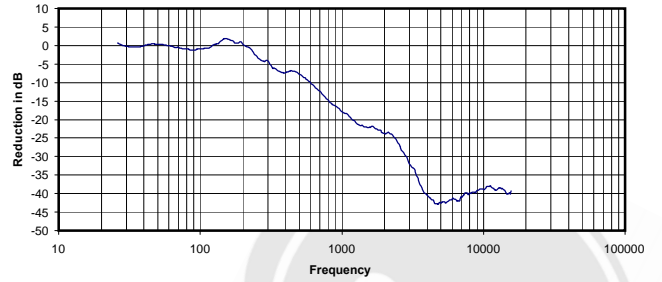
0.034 Vrms
33 Ohms
0.04 mW
-5 dB



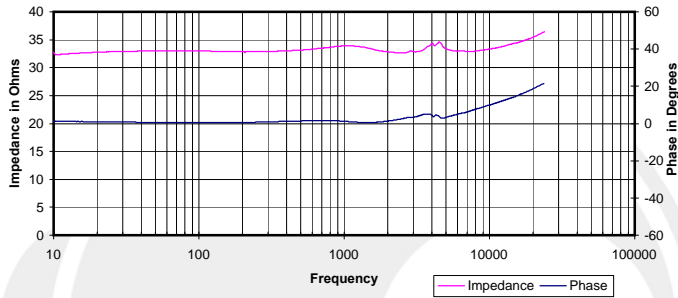
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



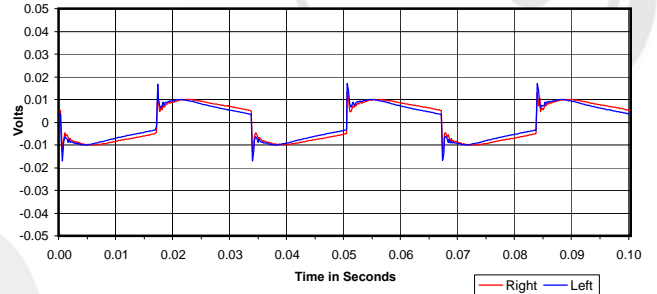
Isolation
Attenuation of External Sound vs. Frequency



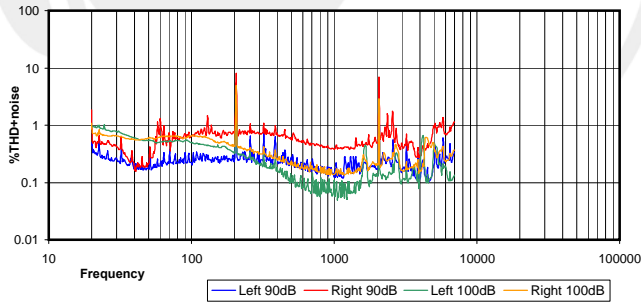
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



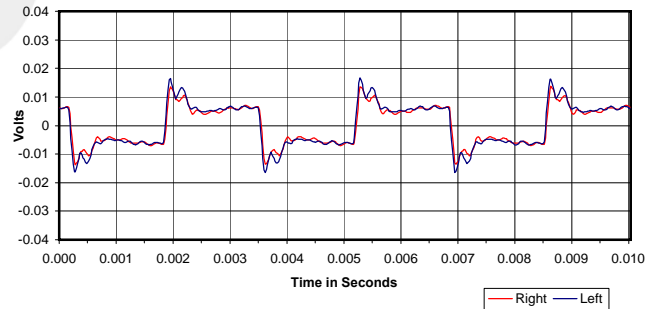
30 Hz Square Wave



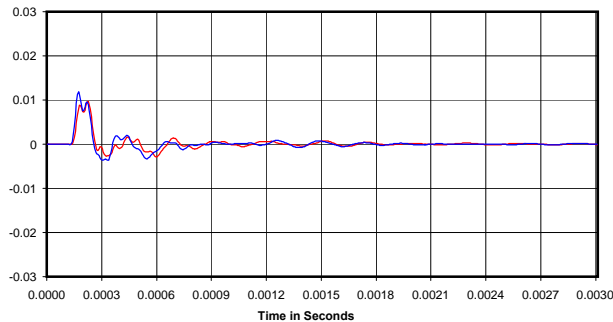
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

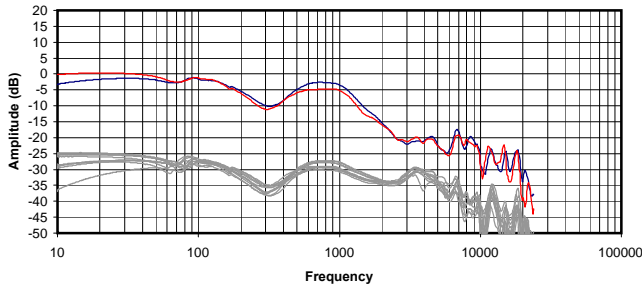


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

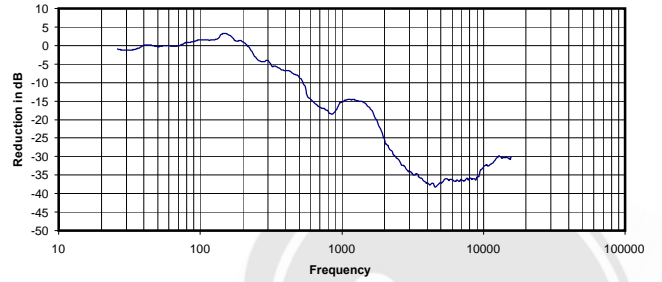
0.027 Vrms
34 Ohms
0.02 mW
-16 dB



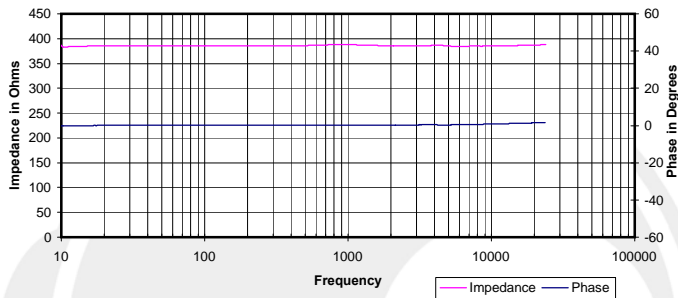
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



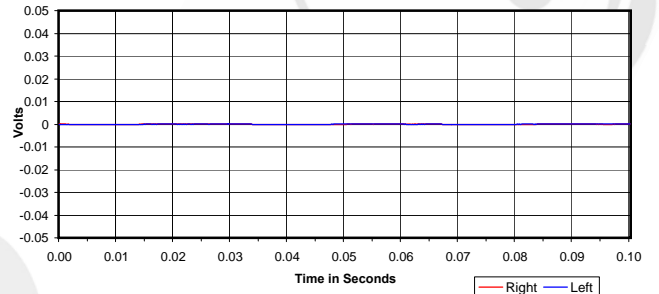
Isolation
 Attenuation of External Sound vs. Frequency



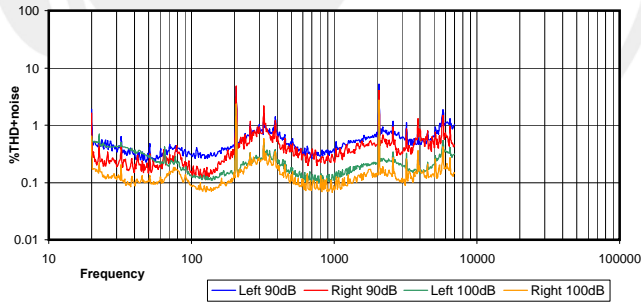
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



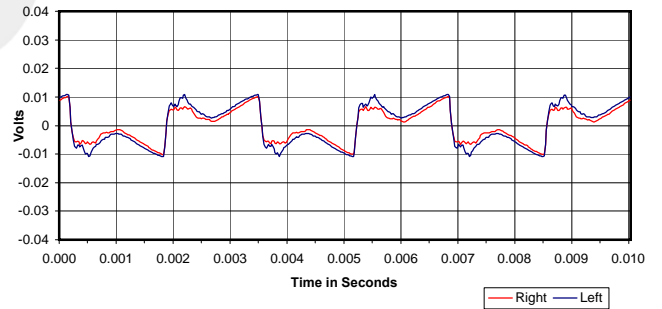
30 Hz Square Wave



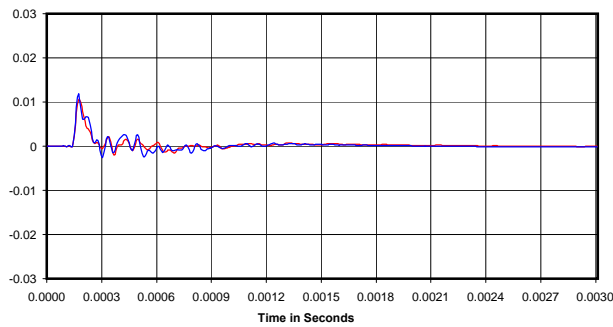
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



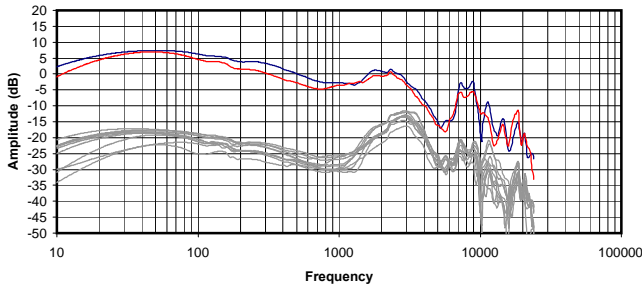
Impulse Response



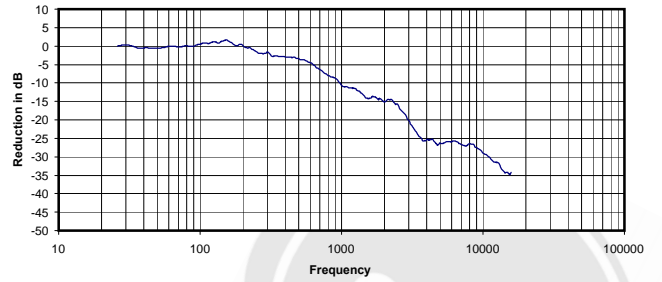
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.181 Vrms
 388 Ohms
 0.08 mW
 -15 dB

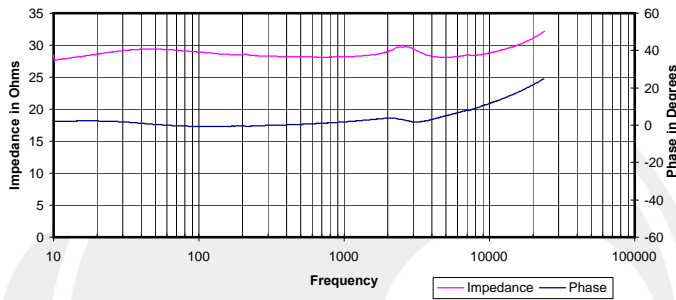
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



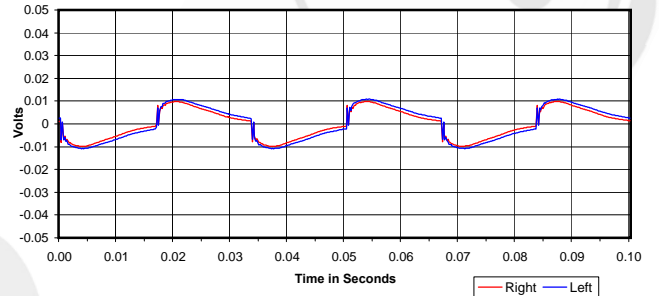
Isolation
 Attenuation of External Sound vs. Frequency



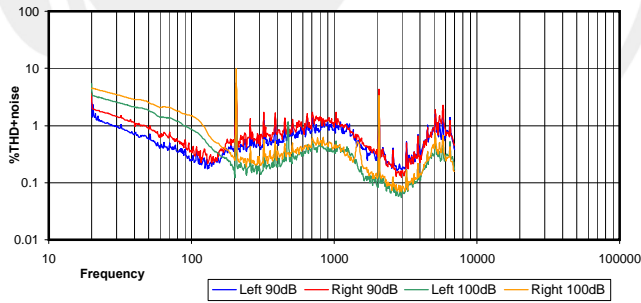
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



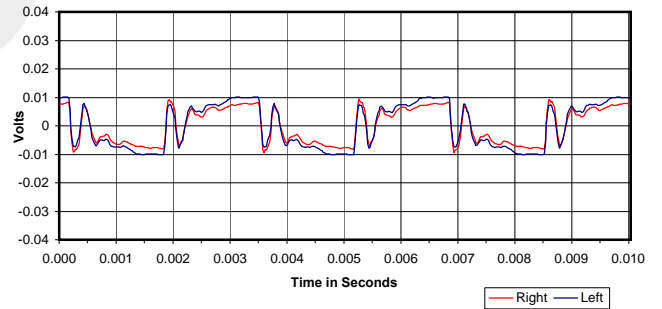
30 Hz Square Wave



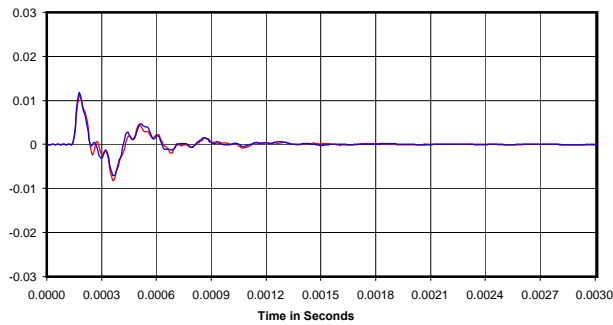
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

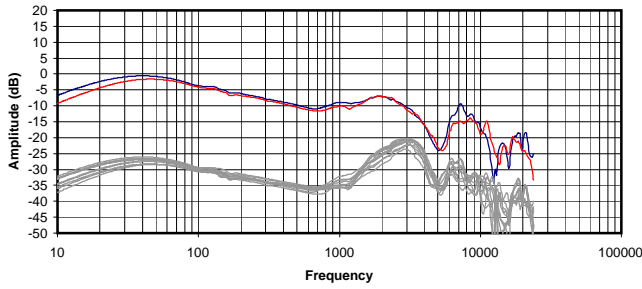


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

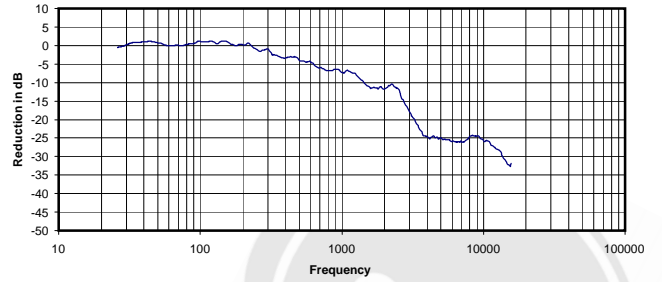
0.139 Vrms
 28 Ohms
 0.69 mW
 -9 dB



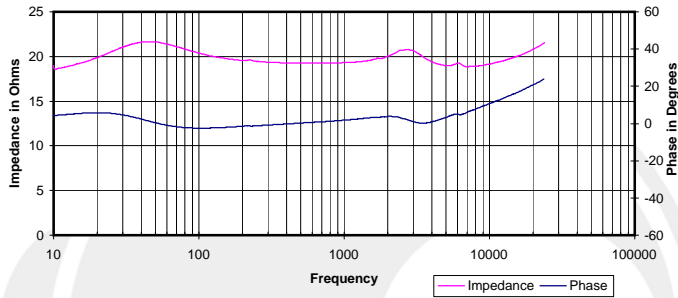
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



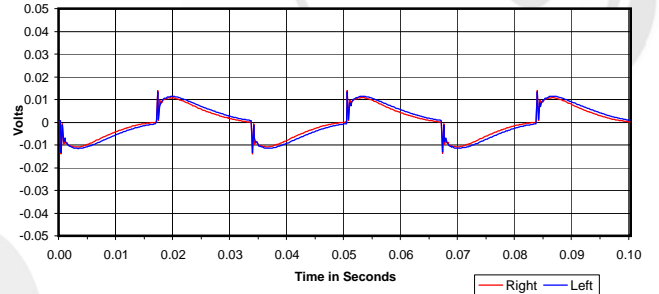
Isolation
 Attenuation of External Sound vs. Frequency



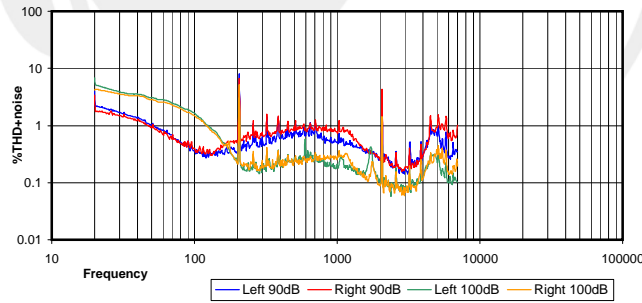
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



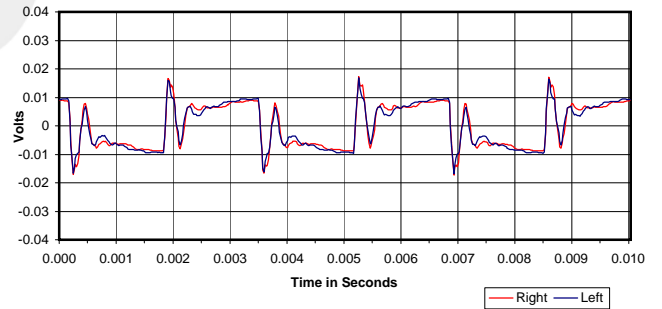
30 Hz Square Wave



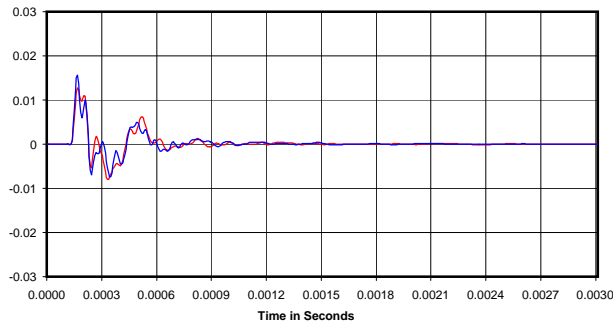
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

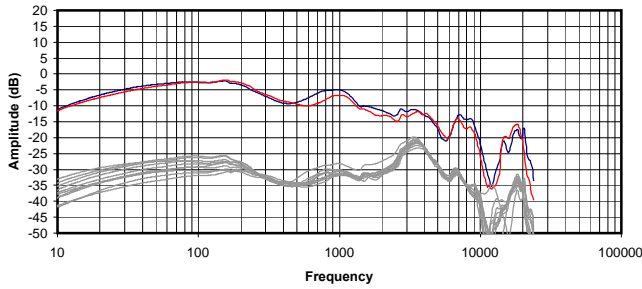


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

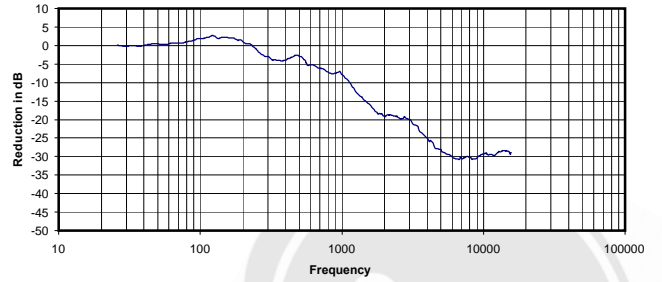
0.052 Vrms
 19 Ohms
 0.14 mW
 -8 dB



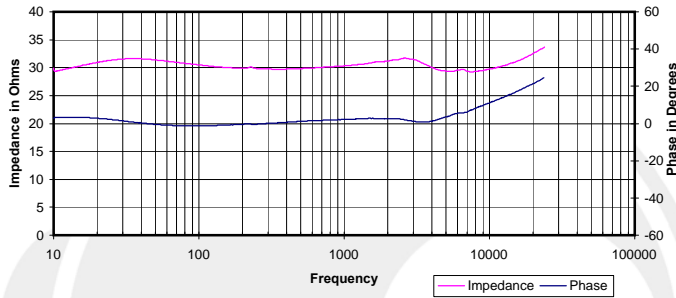
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



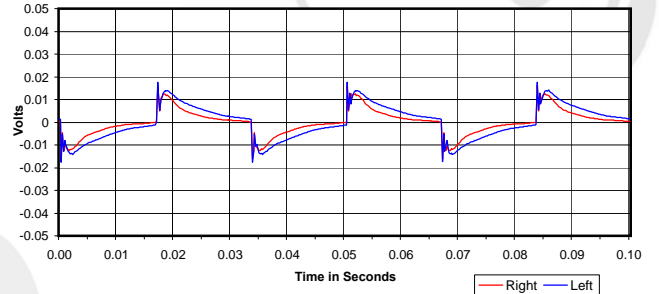
Isolation
 Attenuation of External Sound vs. Frequency



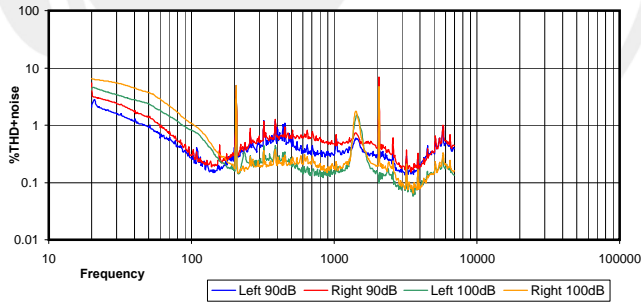
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



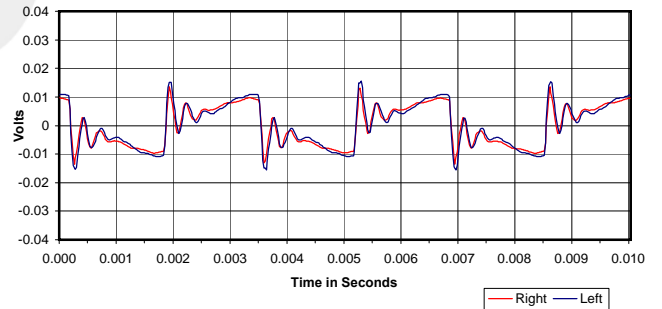
30 Hz Square Wave



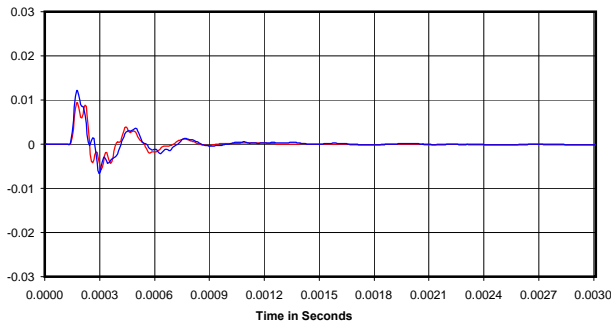
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

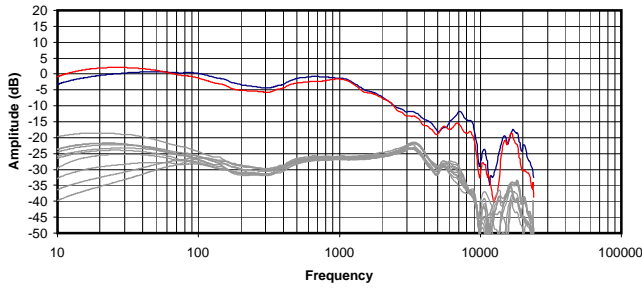


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

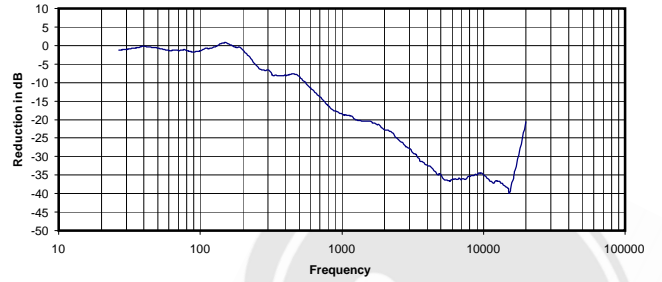
0.052 Vrms
 30 Ohms
 0.09 mW
 -10 dB



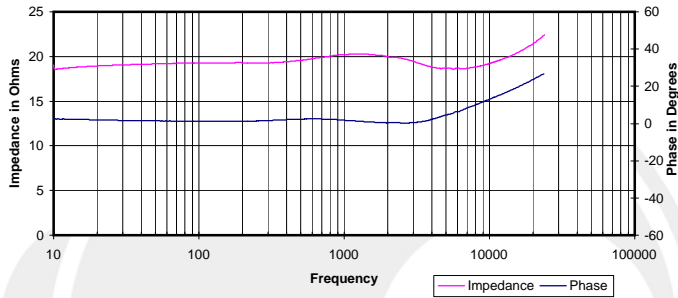
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



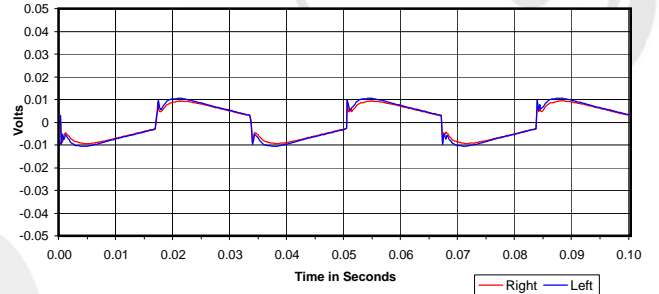
Isolation
Attenuation of External Sound vs. Frequency



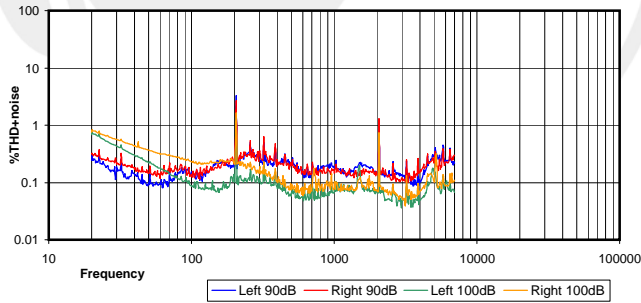
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



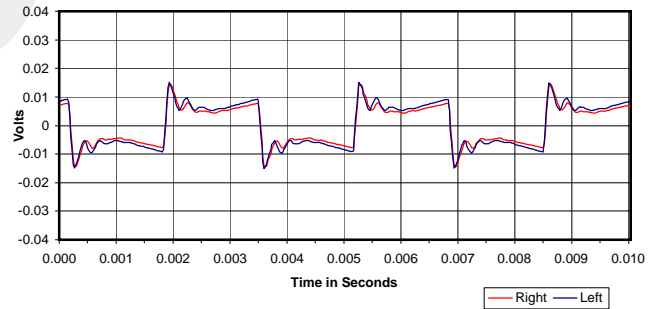
30 Hz Square Wave



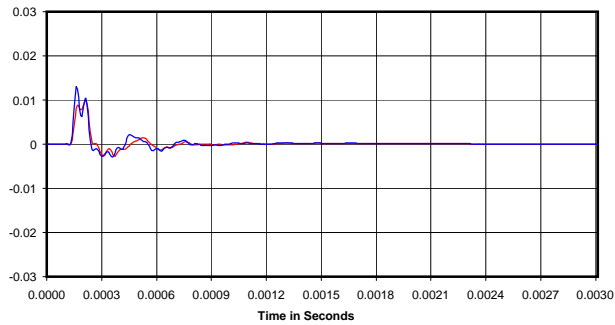
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

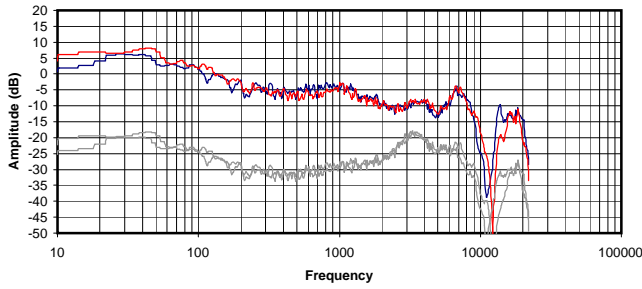


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

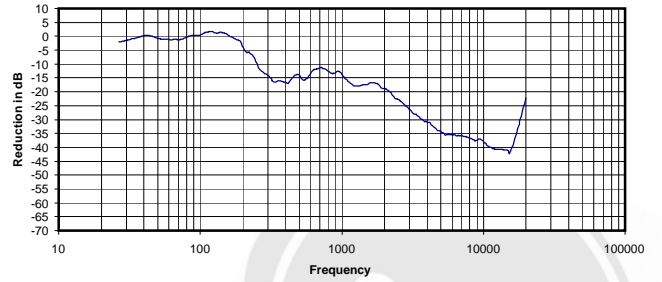
0.027 Vrms
20 Ohms
0.04 mW
-18 dB



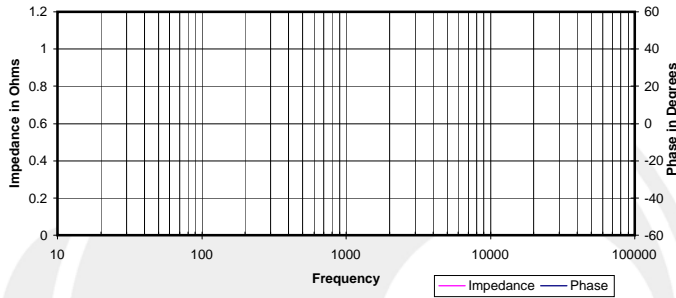
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



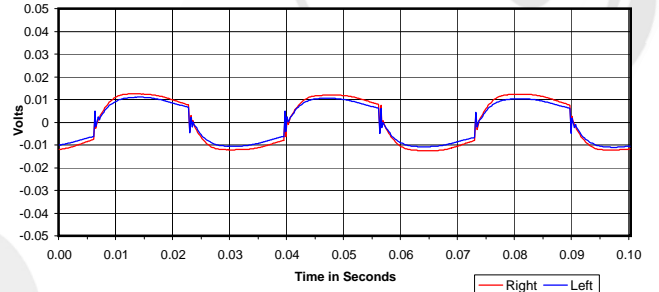
Isolation
Attenuation of External Sound vs. Frequency



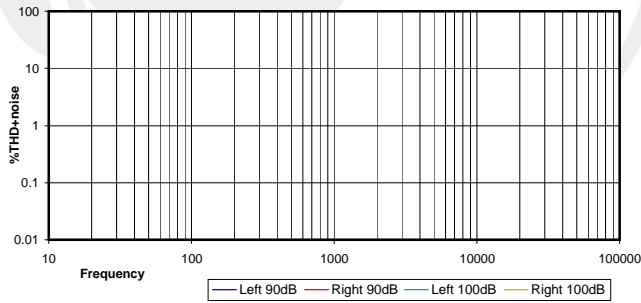
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



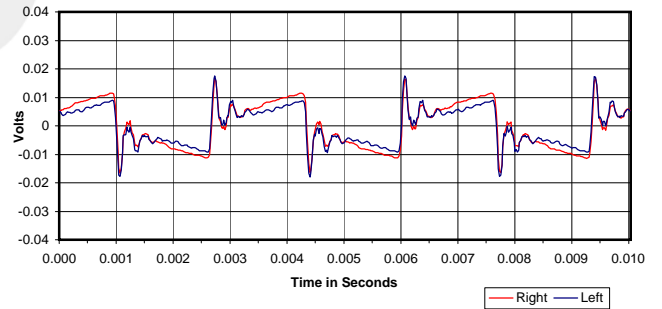
30 Hz Square Wave



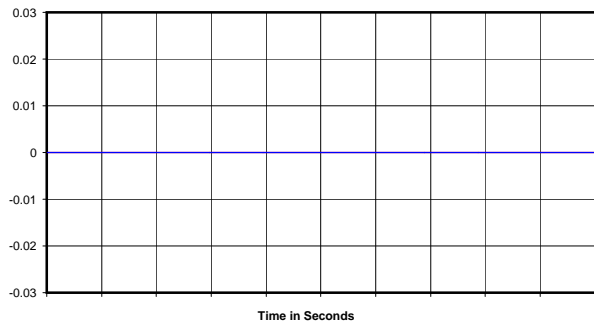
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



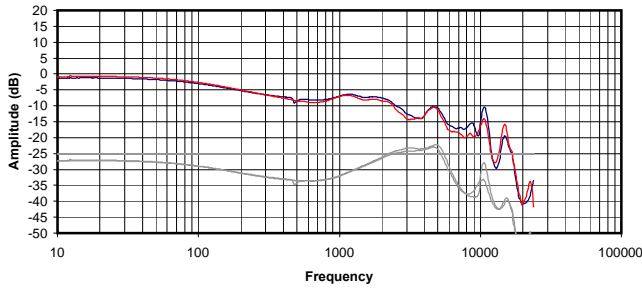
Impulse Response



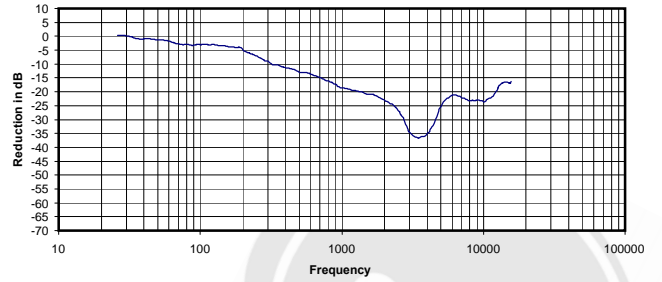
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.000 Vrms
#DIV/0! Ohms
#DIV/0! mW
-18 dB

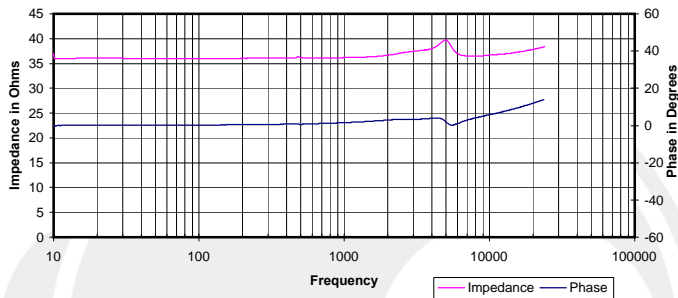
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



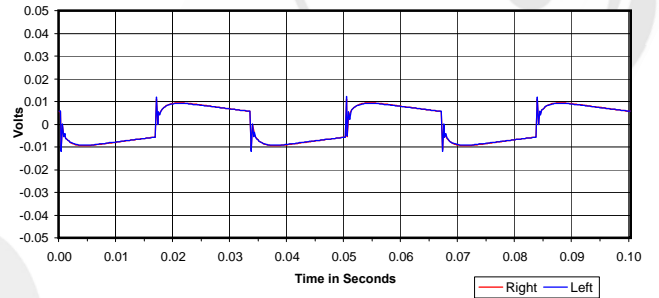
Isolation
Attenuation of External Sound vs. Frequency



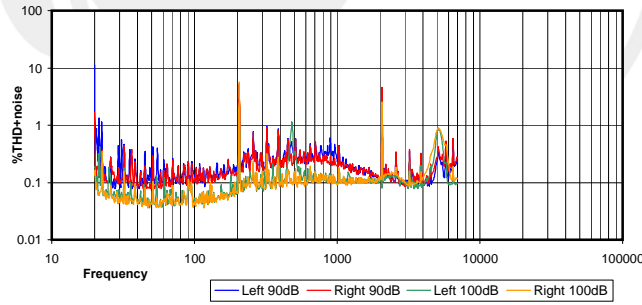
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



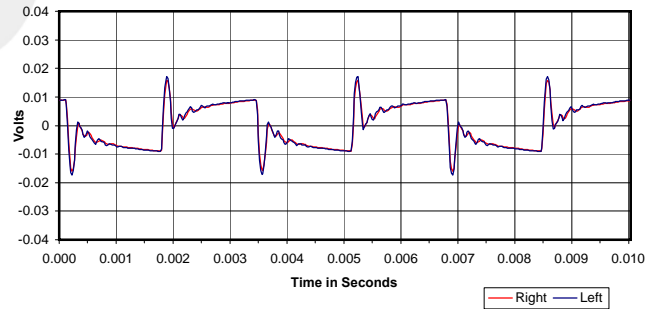
30 Hz Square Wave



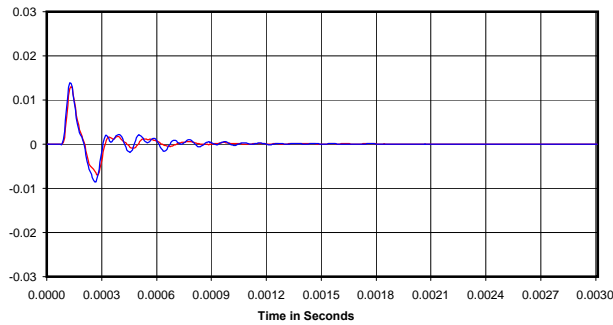
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

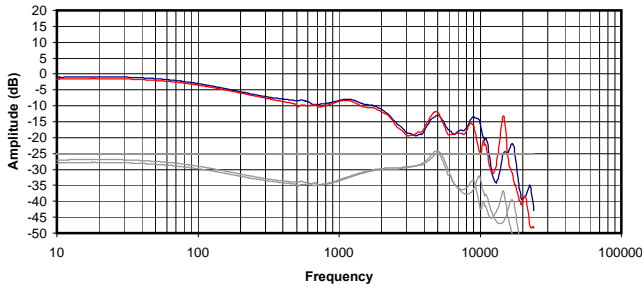


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

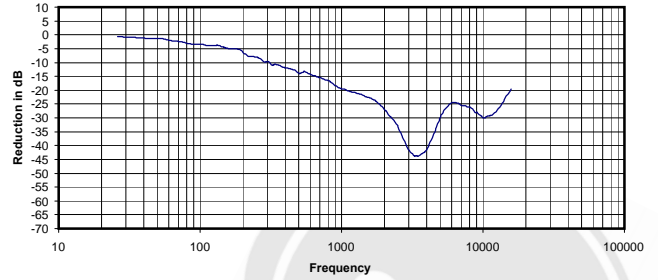
0.039 Vrms
36 Ohms
0.04 mW
-16 dB



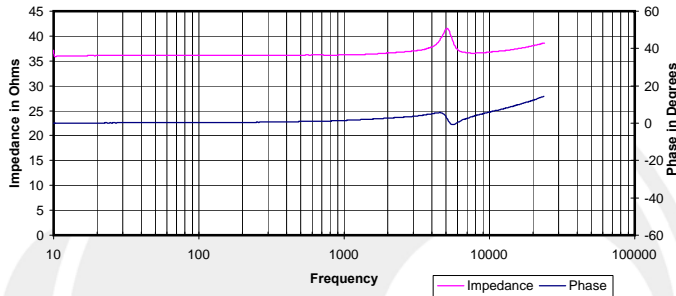
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



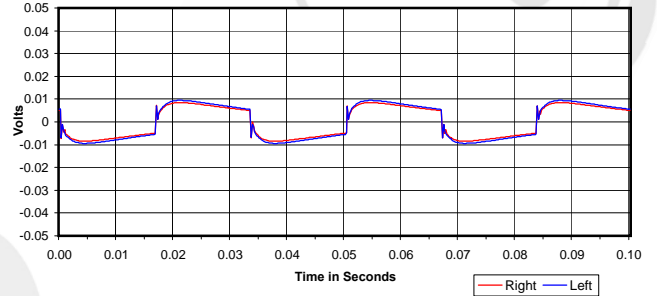
Isolation
Attenuation of External Sound vs. Frequency



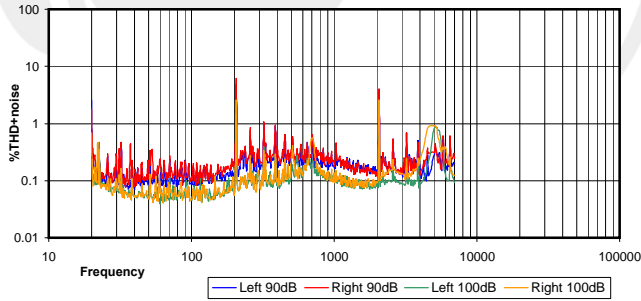
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



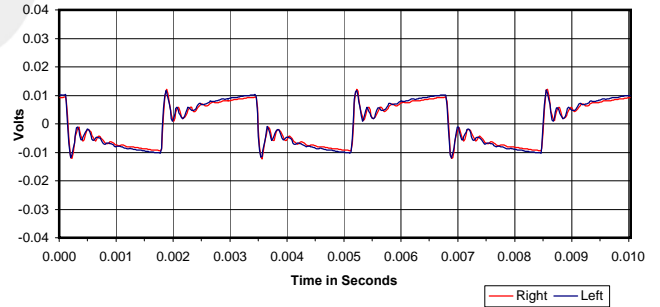
30 Hz Square Wave



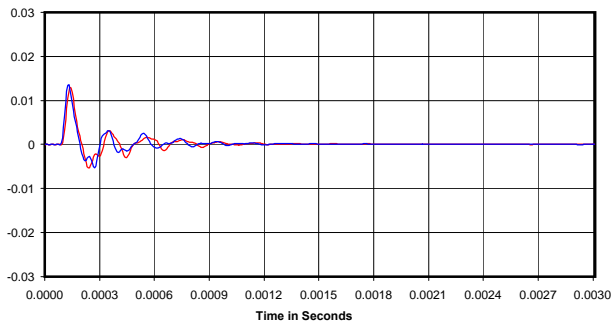
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

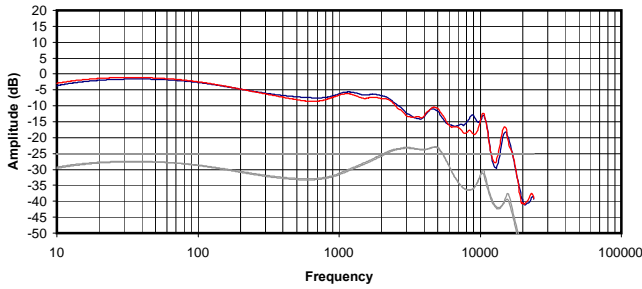


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

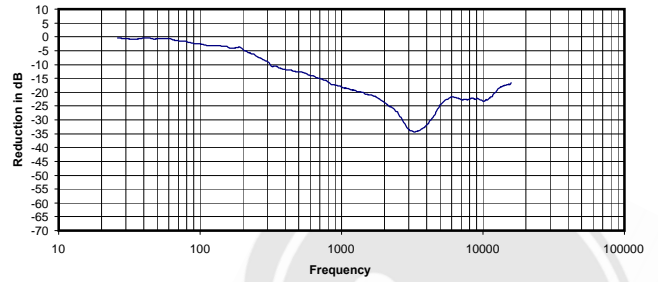
0.046 Vrms
36 Ohms
0.06 mW
-19 dB



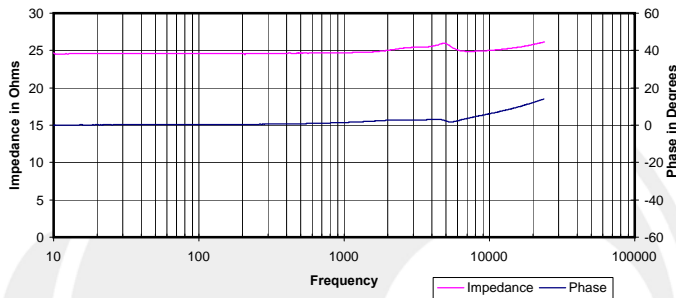
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



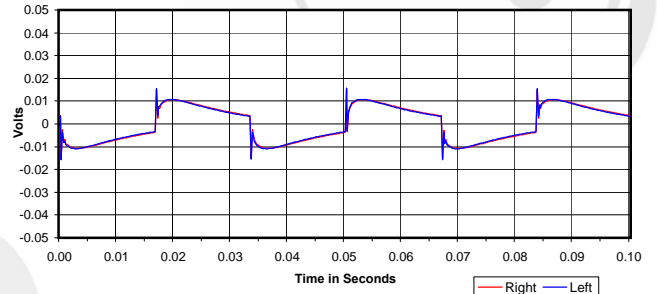
Isolation
Attenuation of External Sound vs. Frequency



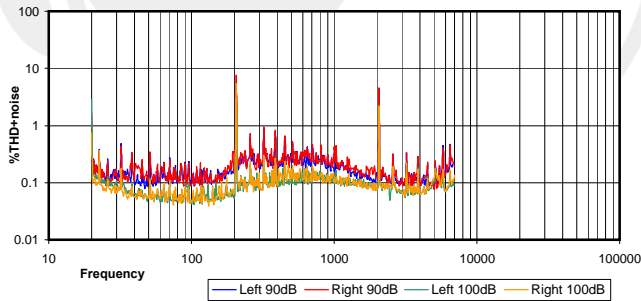
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



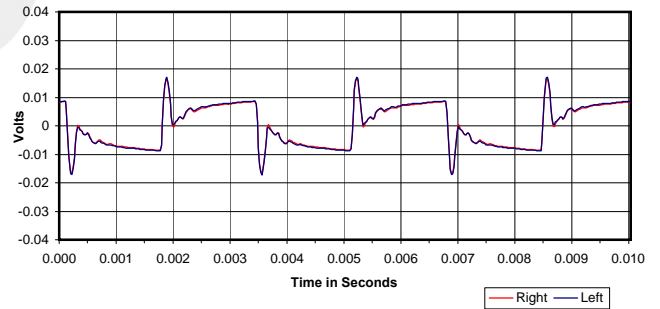
30 Hz Square Wave



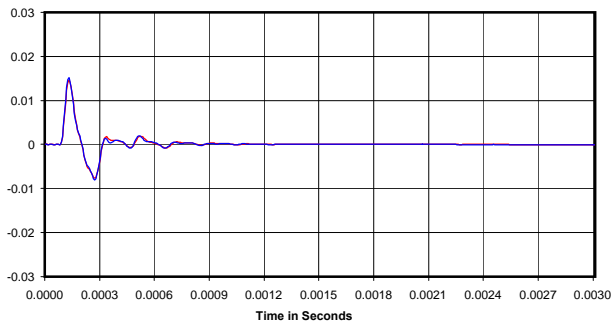
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

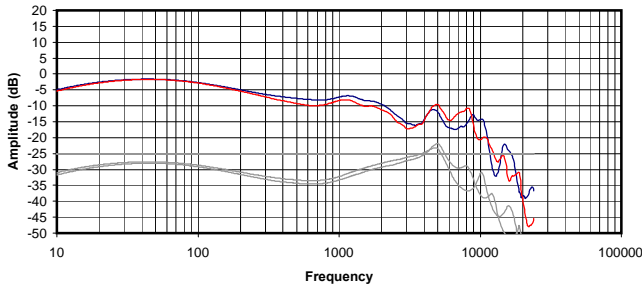


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

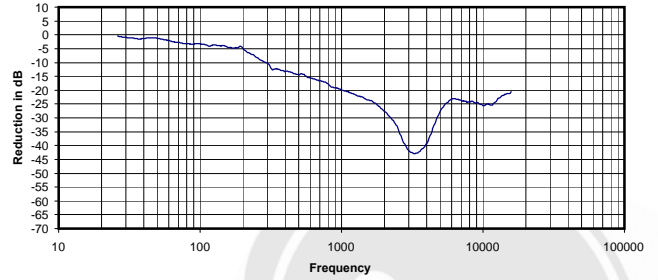
0.034 Vrms
25 Ohms
0.05 mW
-16 dB



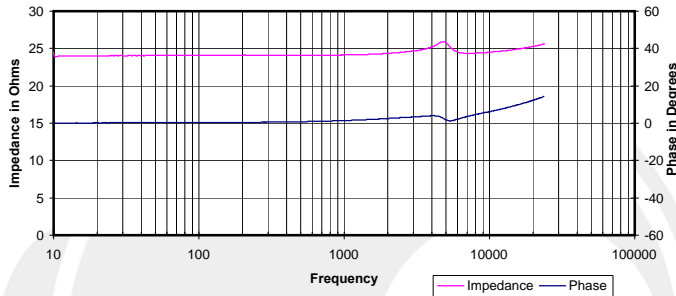
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



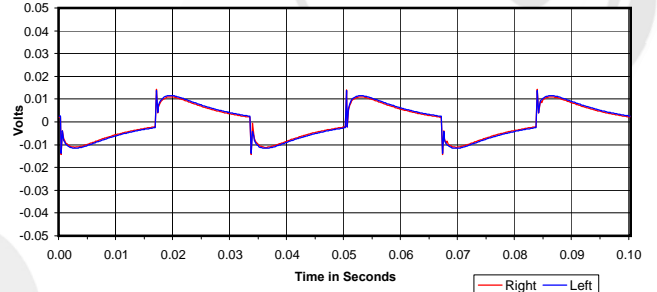
Isolation
Attenuation of External Sound vs. Frequency



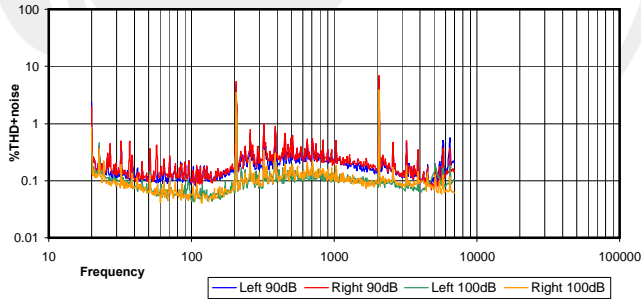
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



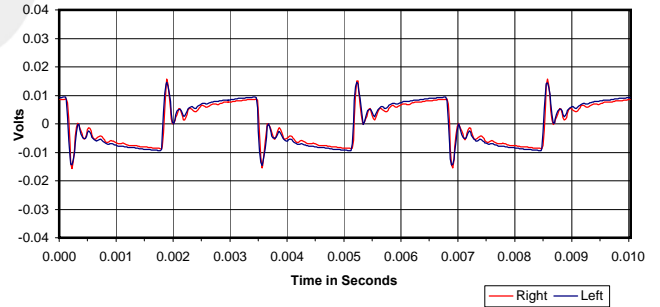
30 Hz Square Wave



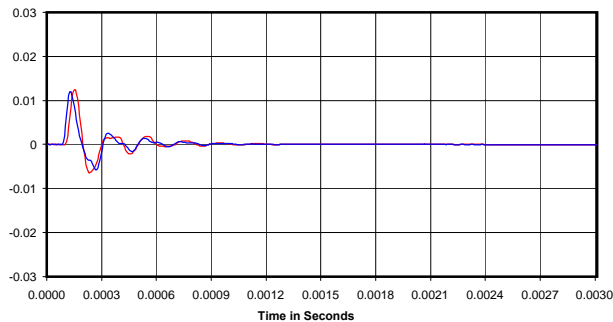
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

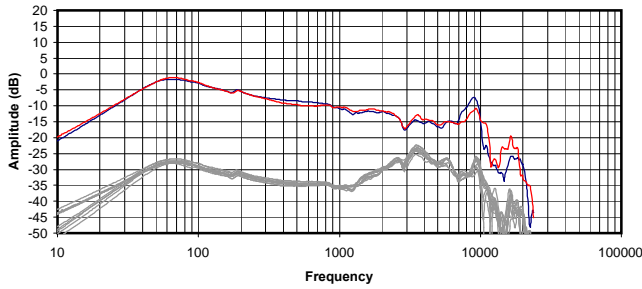


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

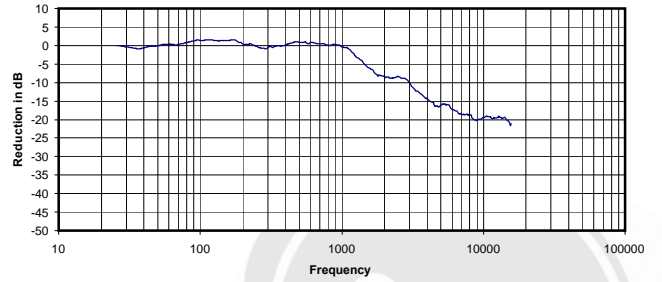
0.044 Vrms
24 Ohms
0.08 mW
-19 dB



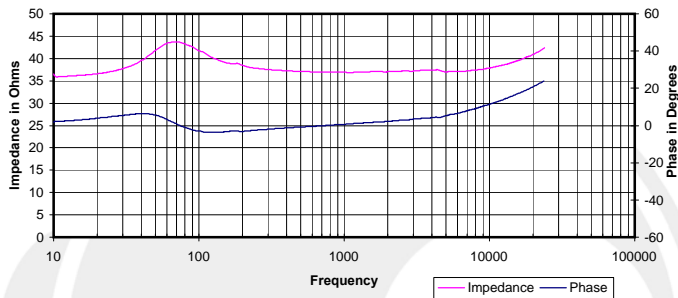
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



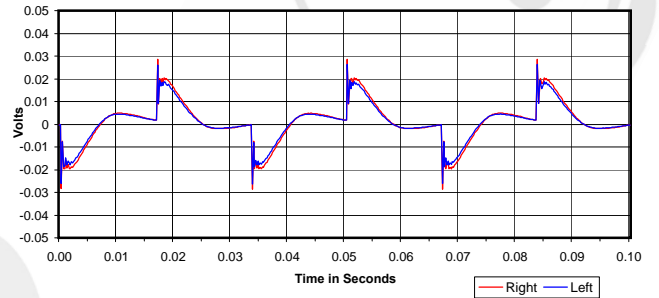
Isolation
 Attenuation of External Sound vs. Frequency



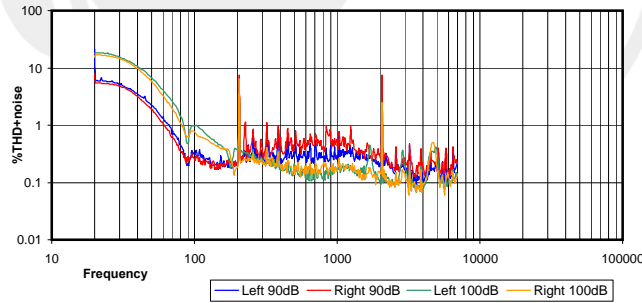
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



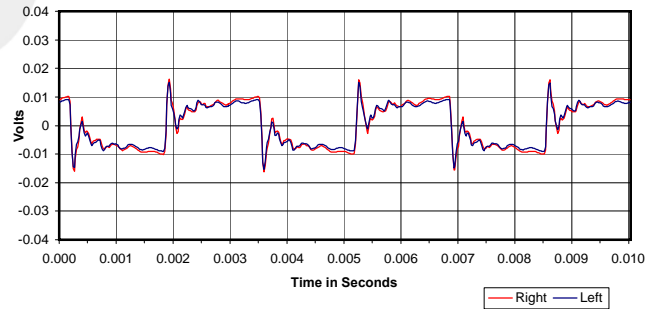
30 Hz Square Wave



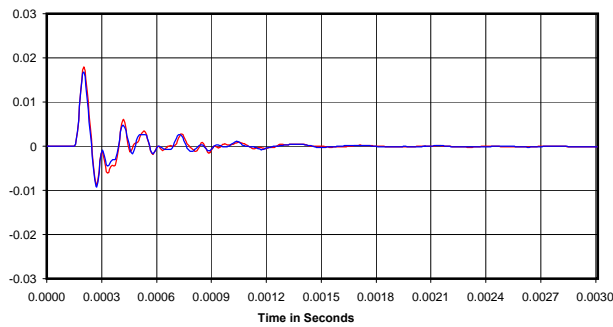
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

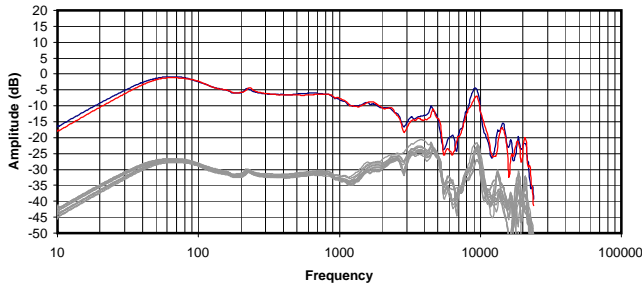


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

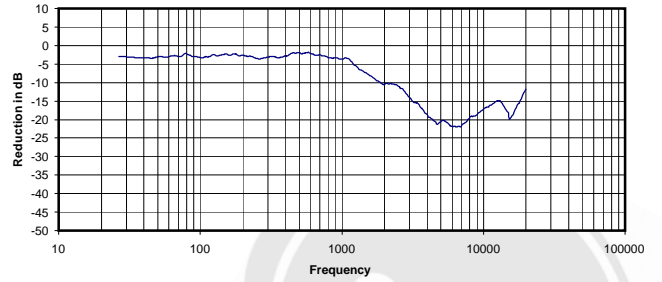
0.181 Vrms
 37 Ohms
 0.89 mW
 -4 dB



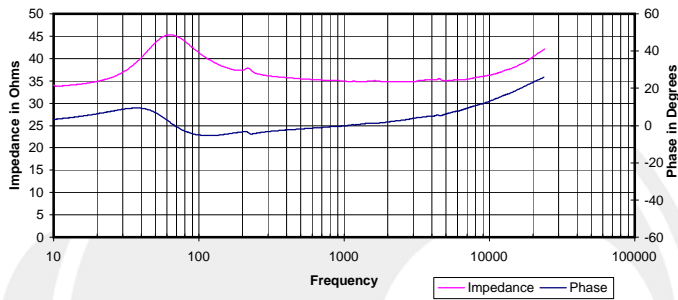
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



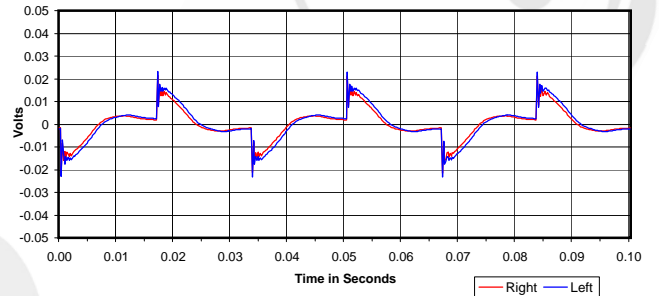
Isolation
 Attenuation of External Sound vs. Frequency



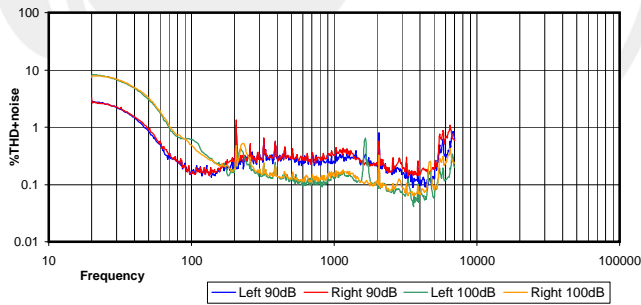
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



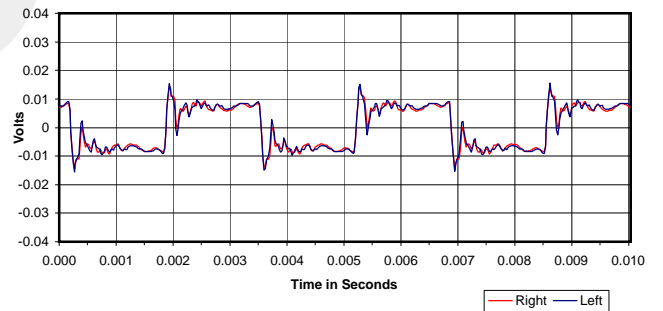
30 Hz Square Wave



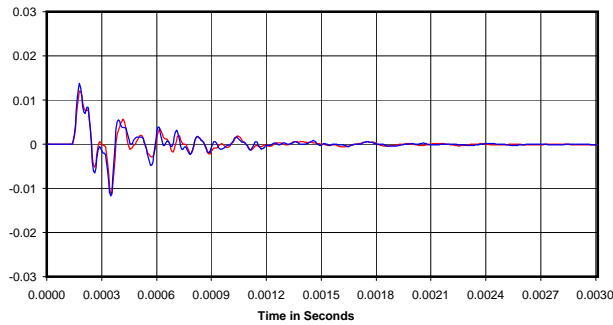
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

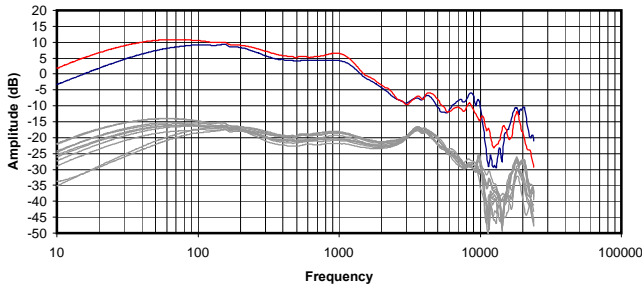


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

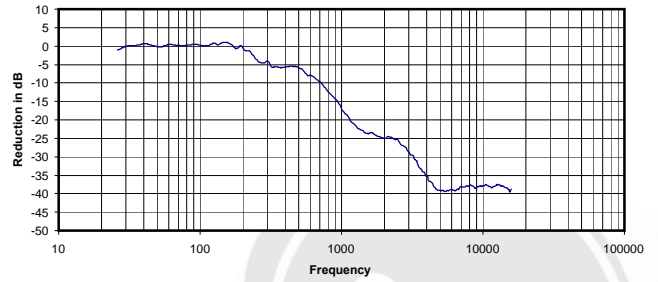
0.089 Vrms
 35 Ohms
 0.23 mW
 -9 dB



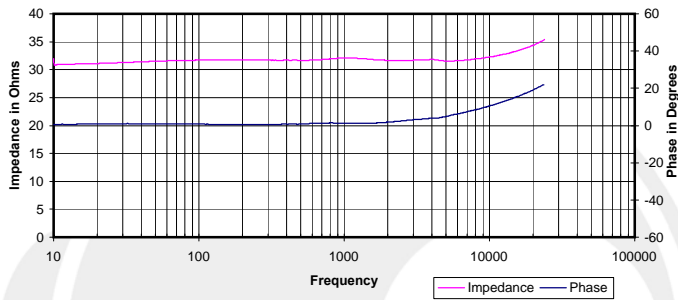
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



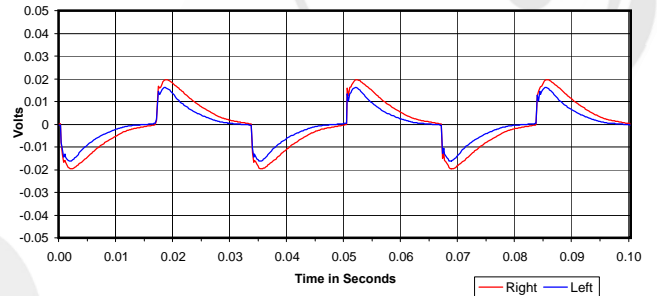
Isolation
 Attenuation of External Sound vs. Frequency



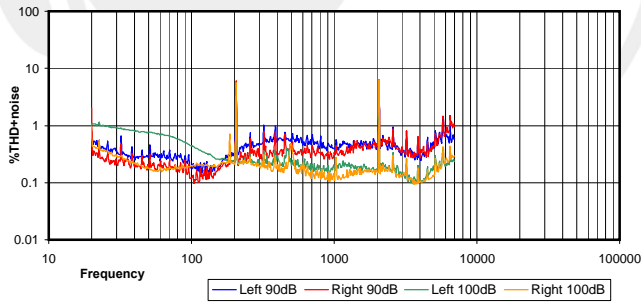
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



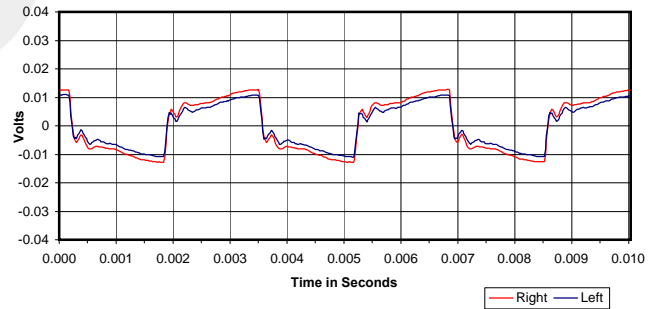
30 Hz Square Wave



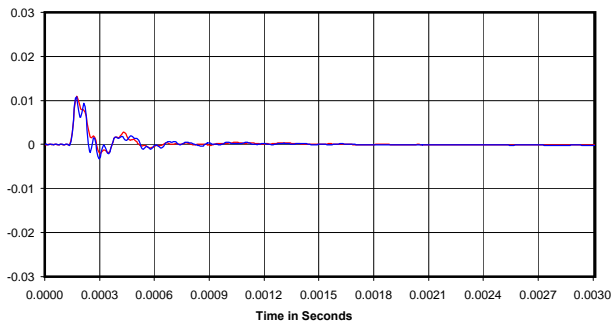
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

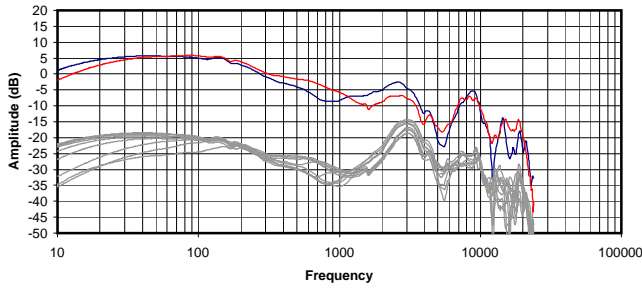


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

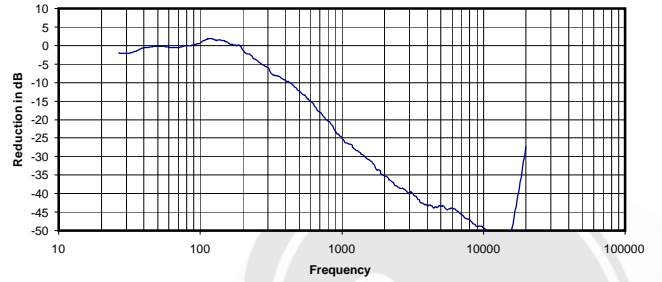
0.062 Vrms
 32 Ohms
 0.12 mW
 -15 dB



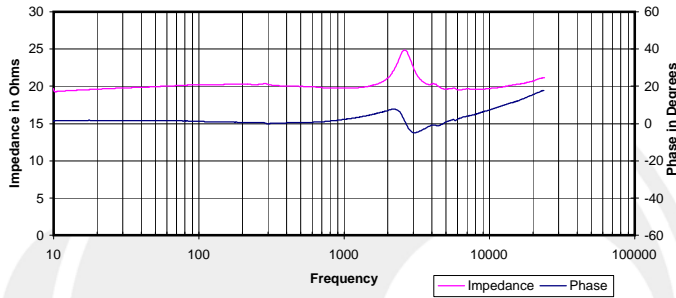
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



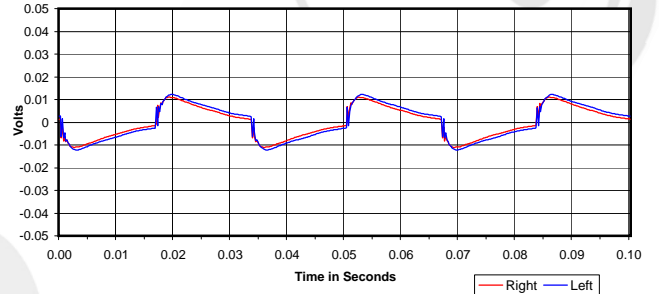
Isolation
 Attenuation of External Sound vs. Frequency



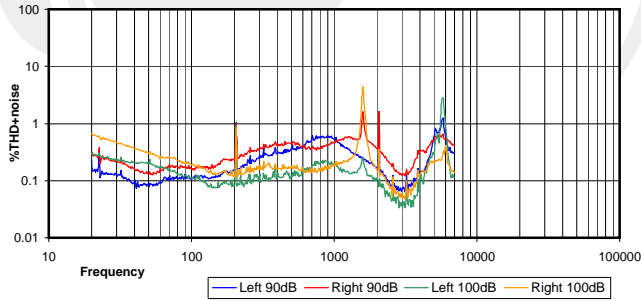
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



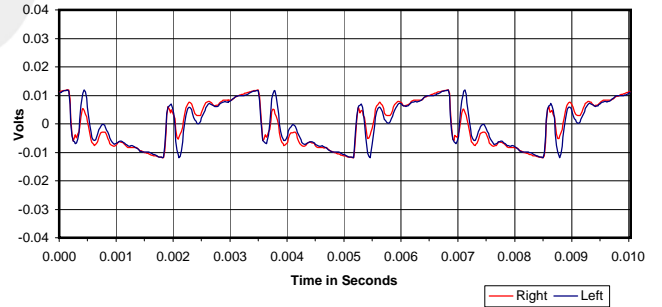
30 Hz Square Wave



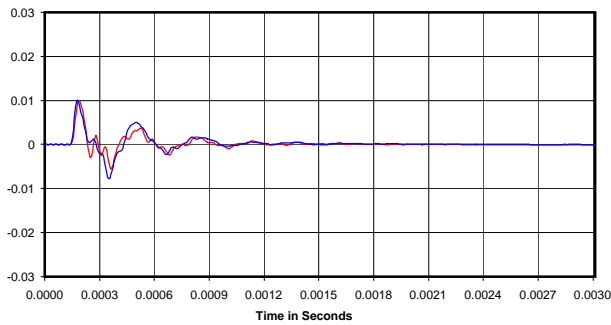
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



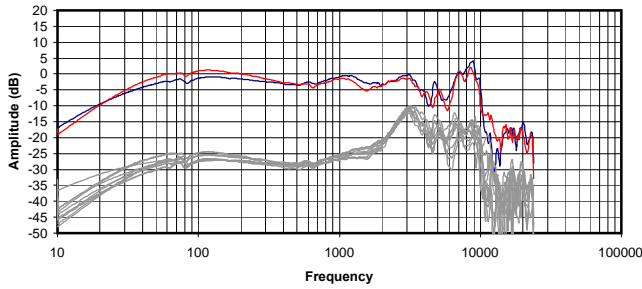
Impulse Response



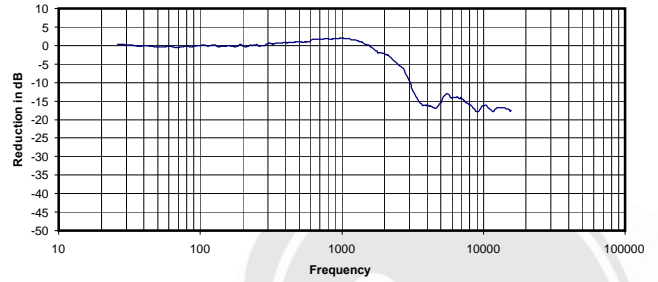
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.068 Vrms
 20 Ohms
 0.23 mW
 -24 dB

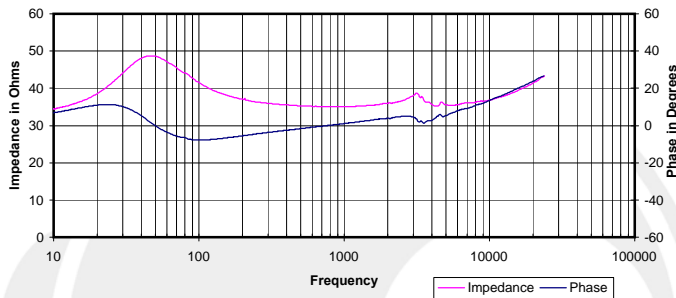
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



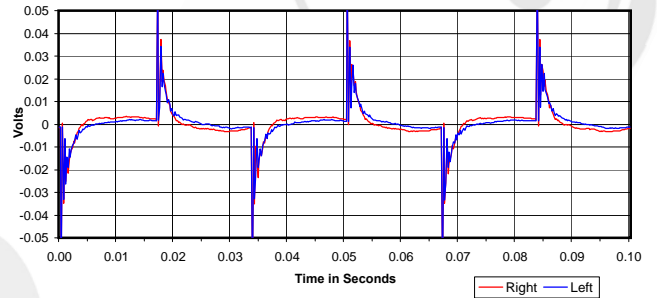
Isolation
 Attenuation of External Sound vs. Frequency



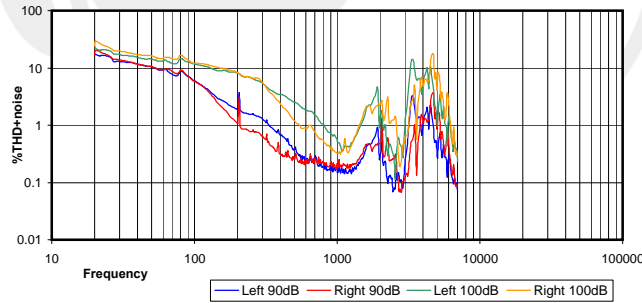
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



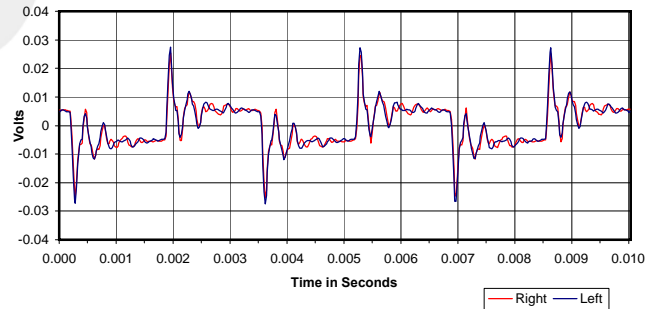
30 Hz Square Wave



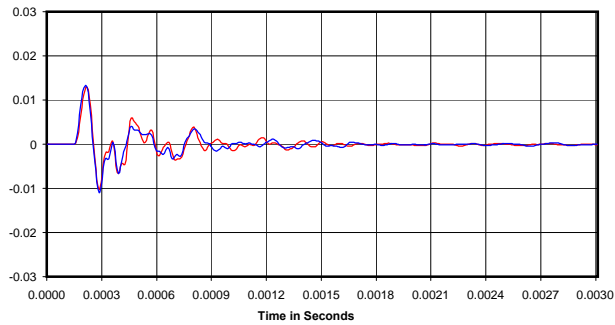
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



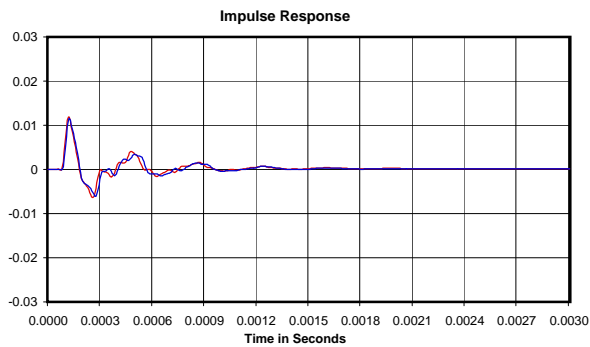
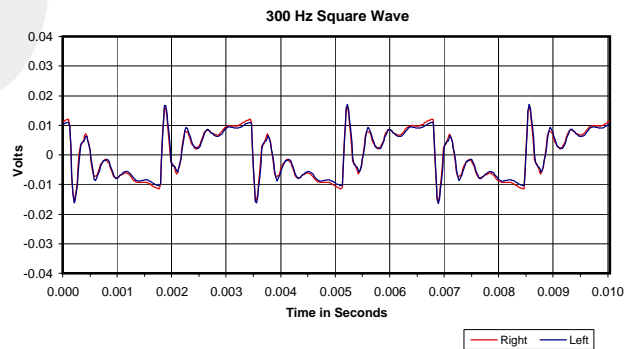
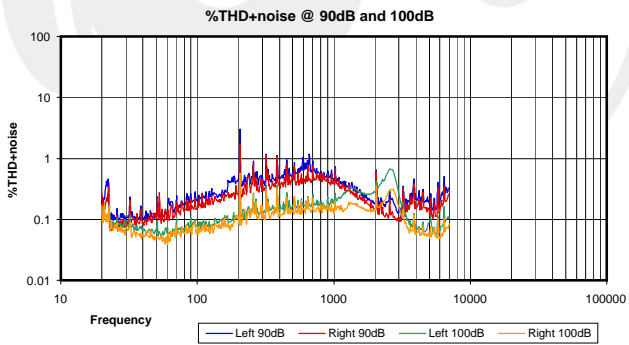
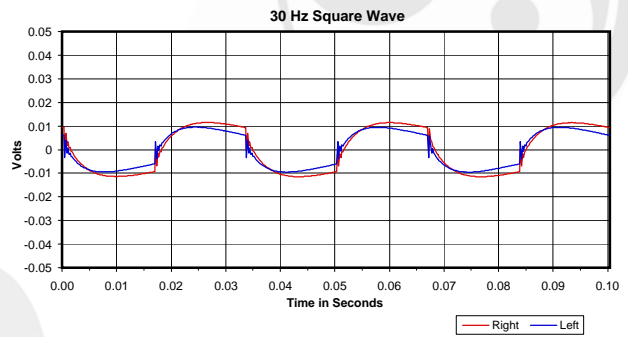
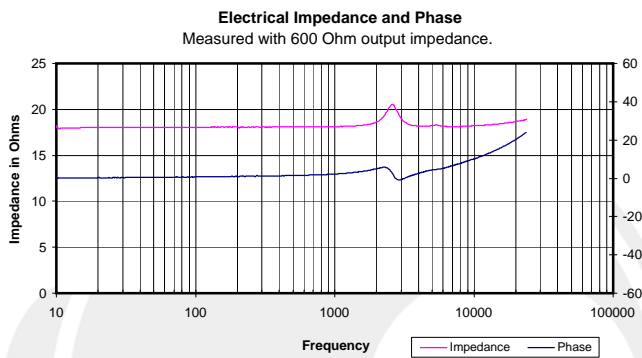
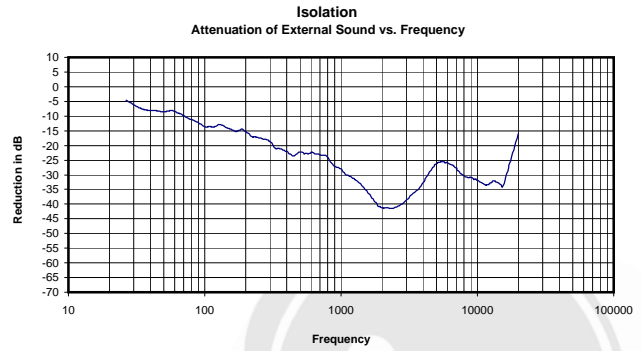
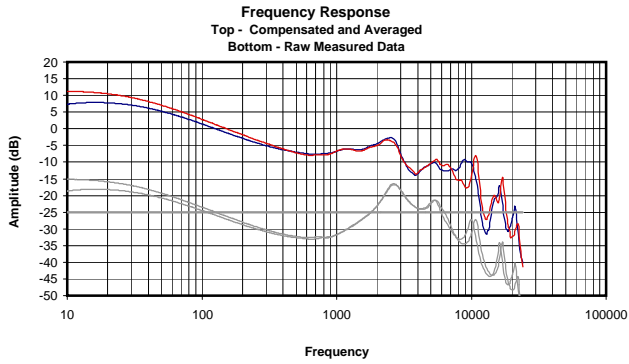
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.082 Vrms
 35 Ohms
 0.19 mW
 -3 dBr

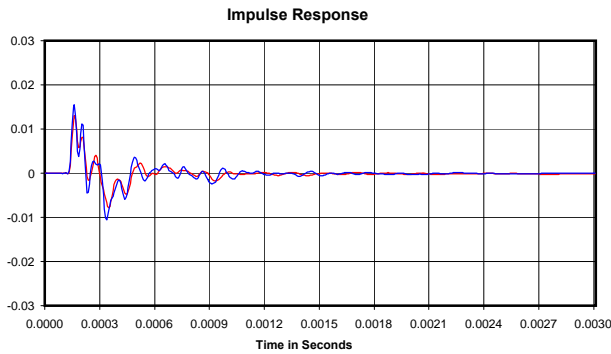
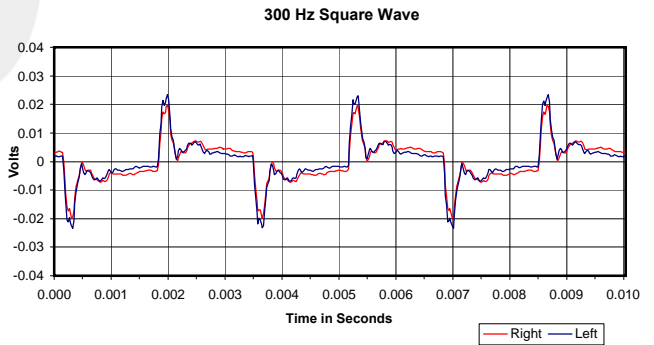
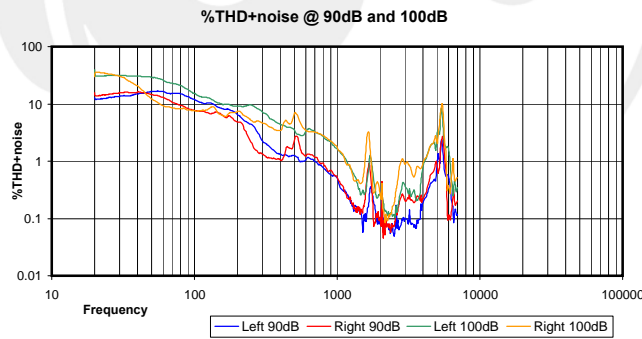
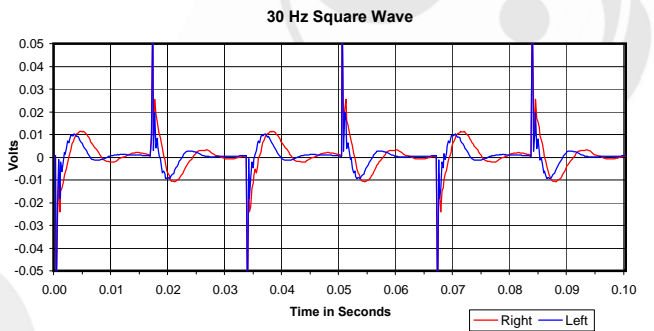
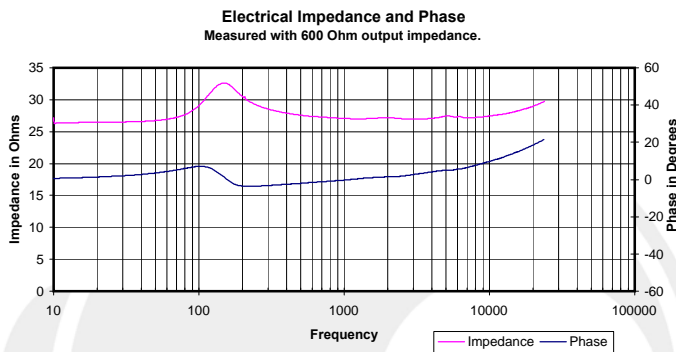
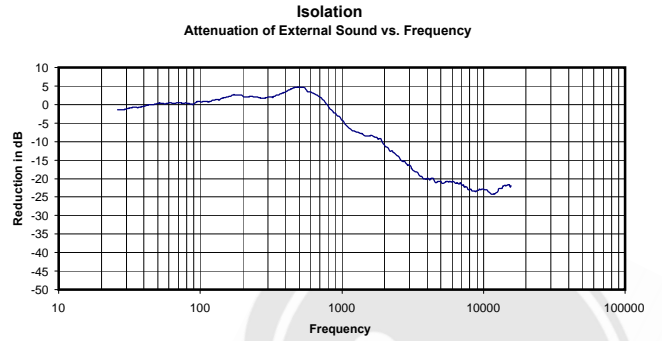
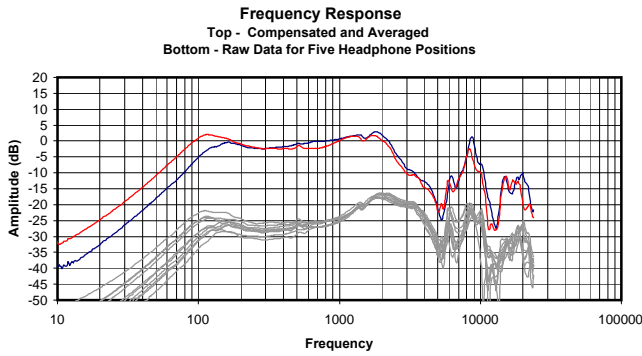




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
18 Ohms
0.10 mW
-26 dB



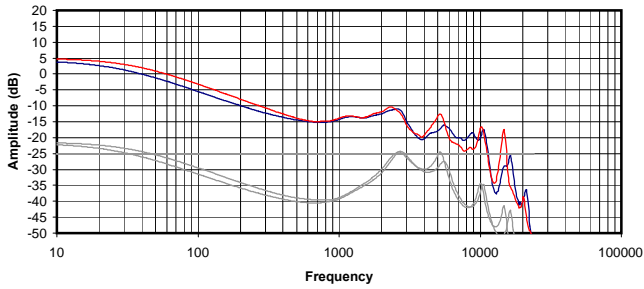


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

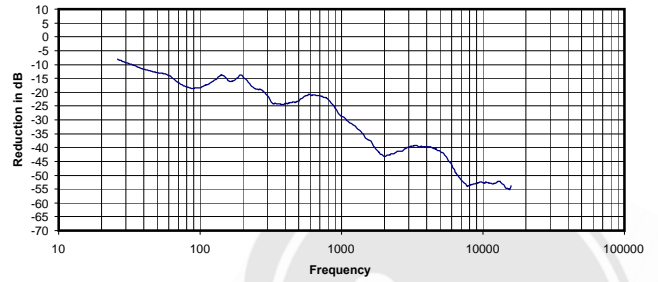
0.051 Vrms
27 Ohms
0.10 mW
-5 dB



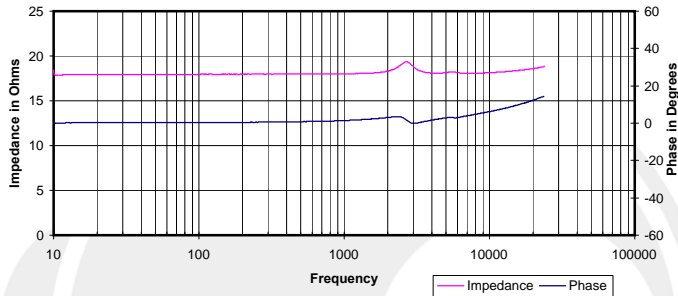
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



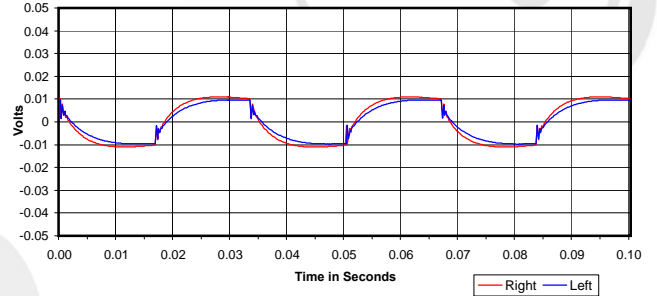
Isolation
Attenuation of External Sound vs. Frequency



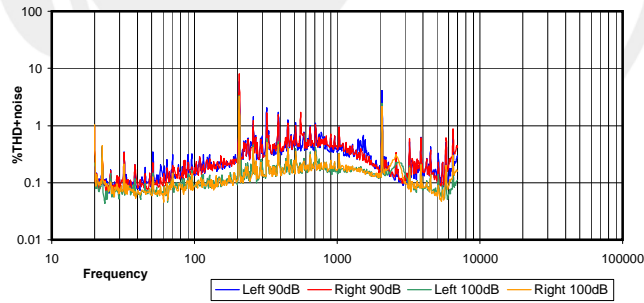
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



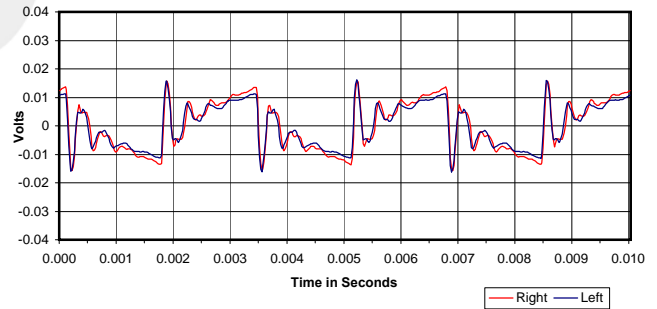
30 Hz Square Wave



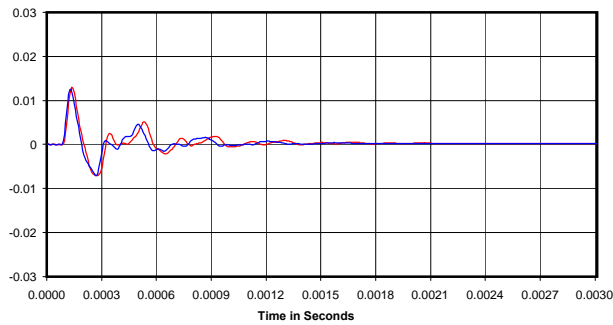
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



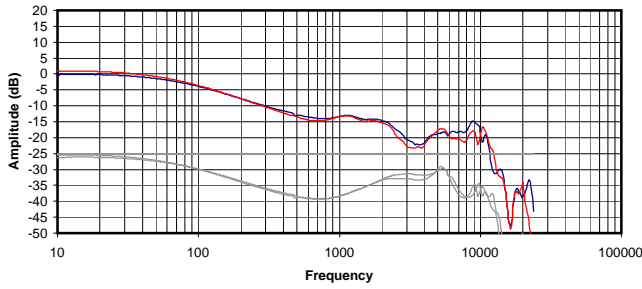
Impulse Response



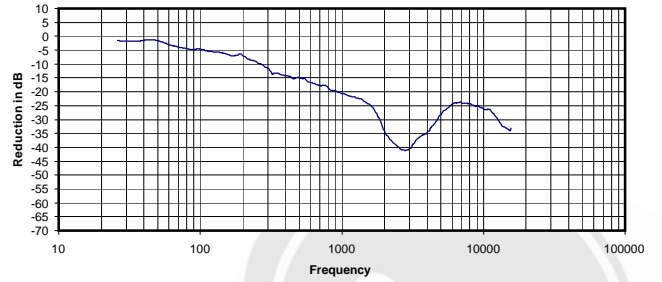
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
18 Ohms
0.08 mW
-28 dB

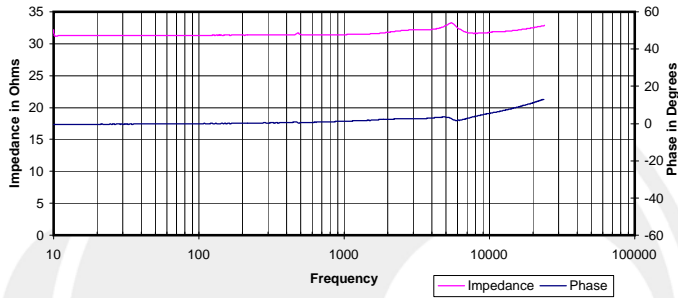
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



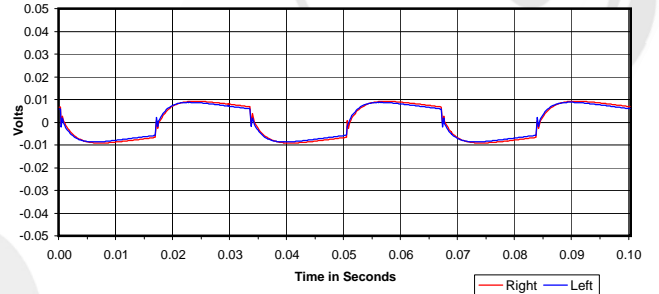
Isolation
Attenuation of External Sound vs. Frequency



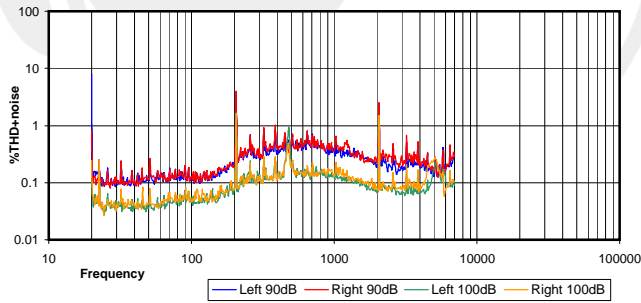
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



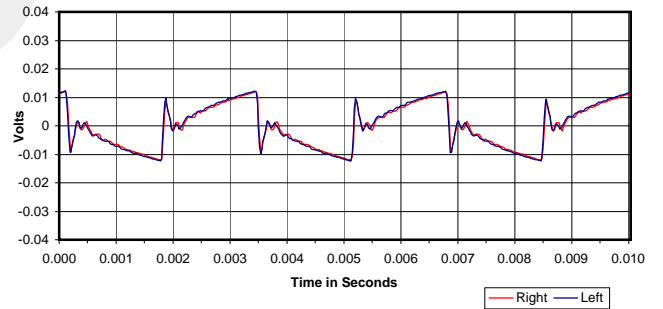
30 Hz Square Wave



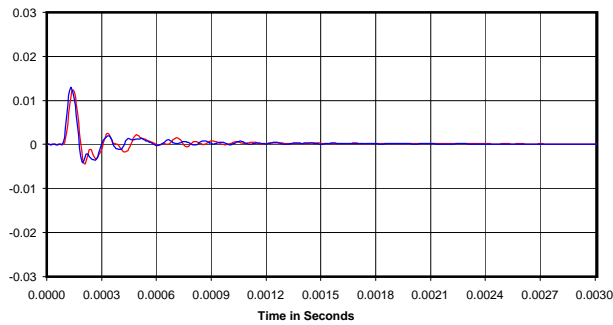
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



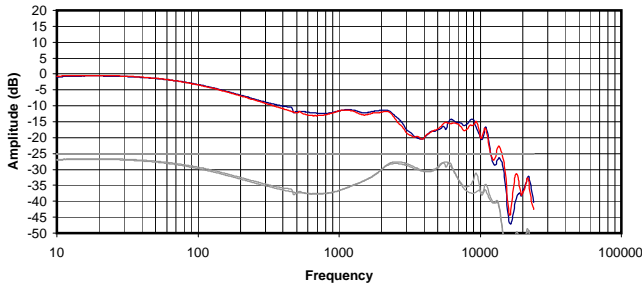
Impulse Response



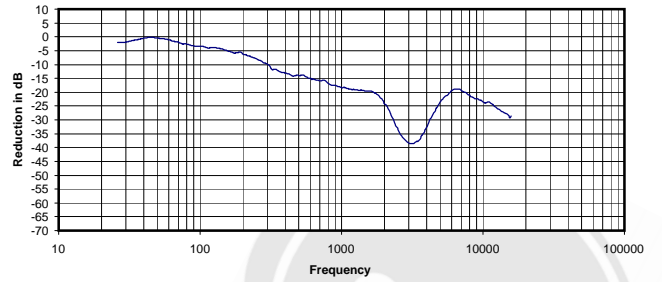
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
31 Ohms
0.05 mW
-20 dB

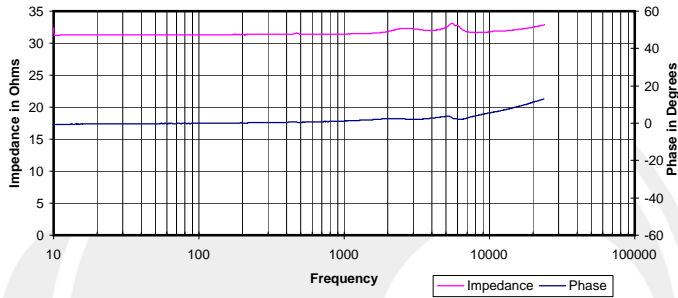
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



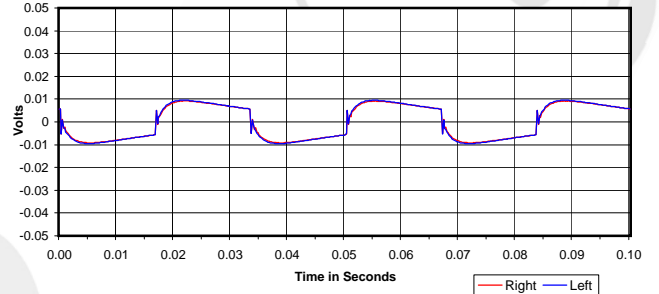
Isolation
Attenuation of External Sound vs. Frequency



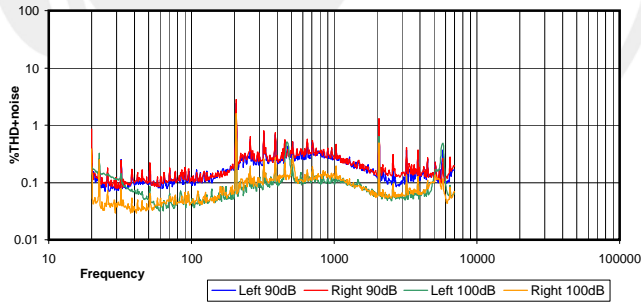
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



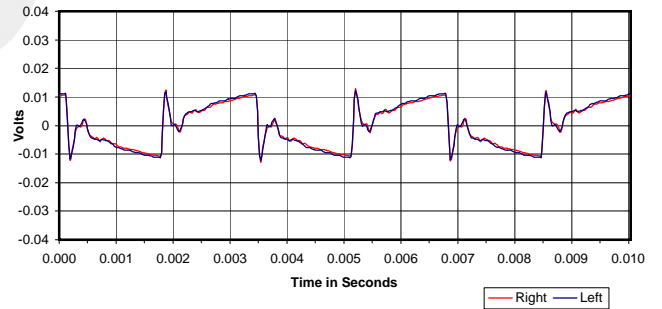
30 Hz Square Wave



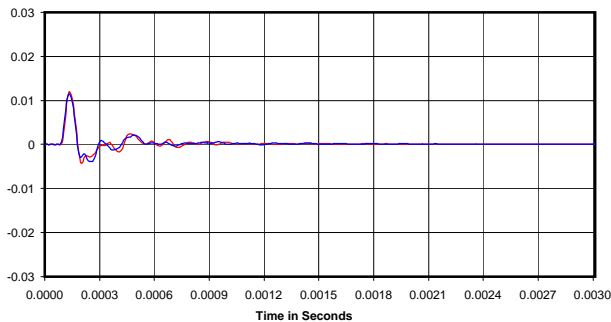
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

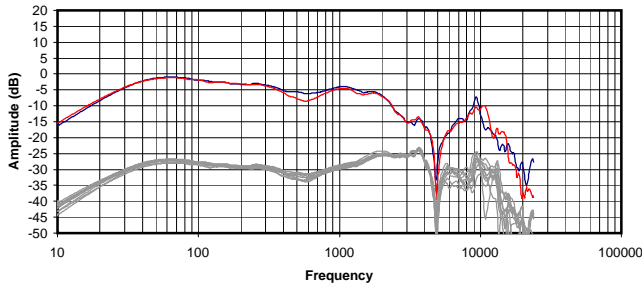


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

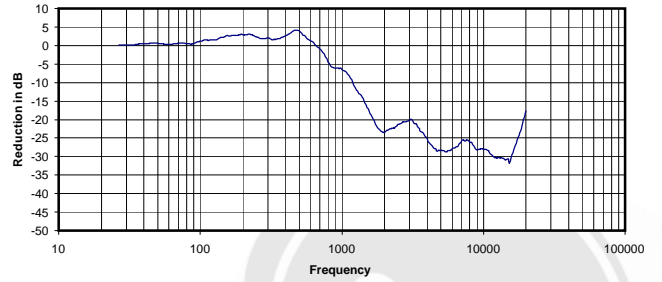
0.036 Vrms
31 Ohms
0.04 mW
-17 dB



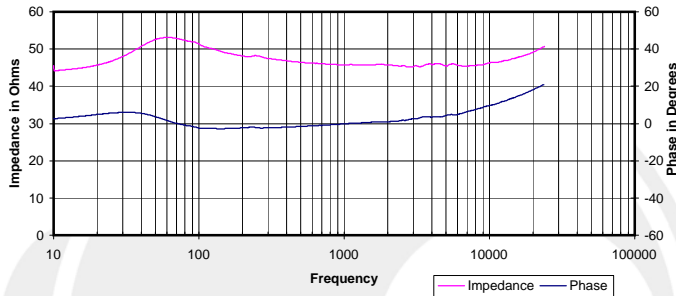
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



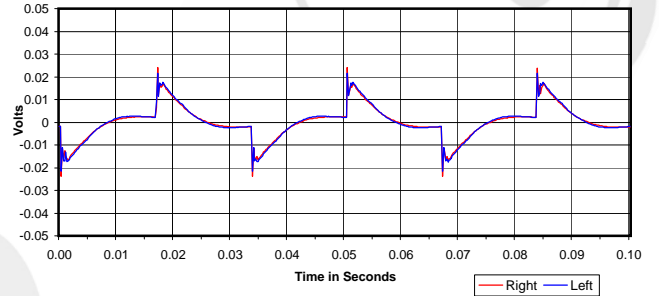
Isolation
 Attenuation of External Sound vs. Frequency



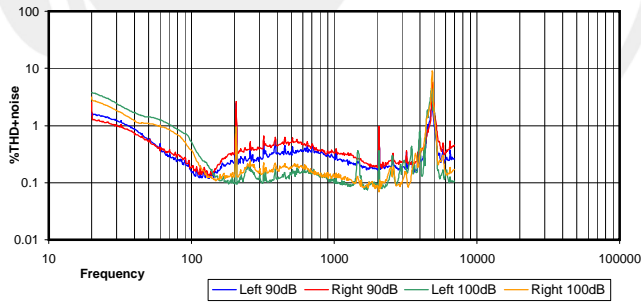
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



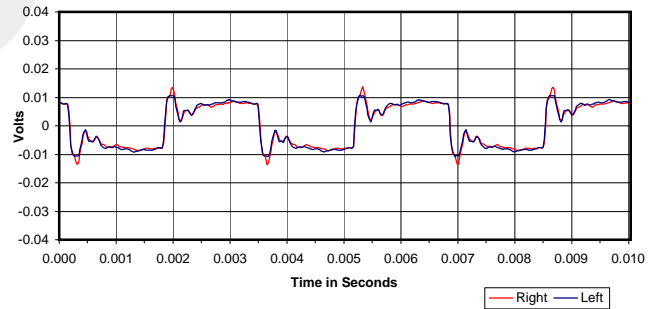
30 Hz Square Wave



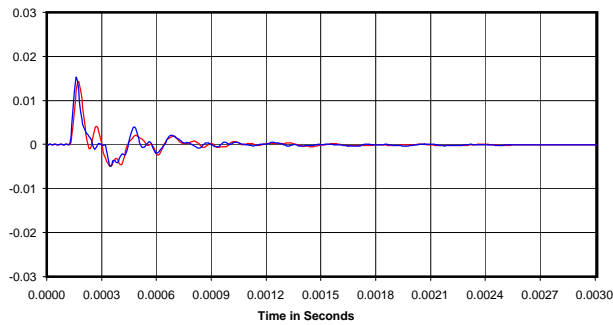
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

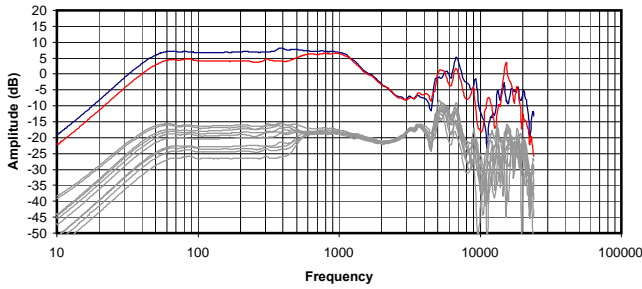


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

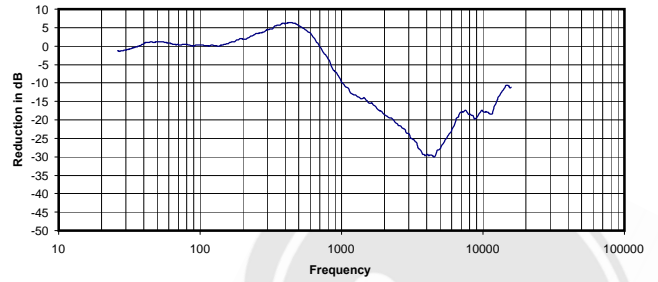
0.036 Vrms
 46 Ohms
 0.03 mW
 -10 dB



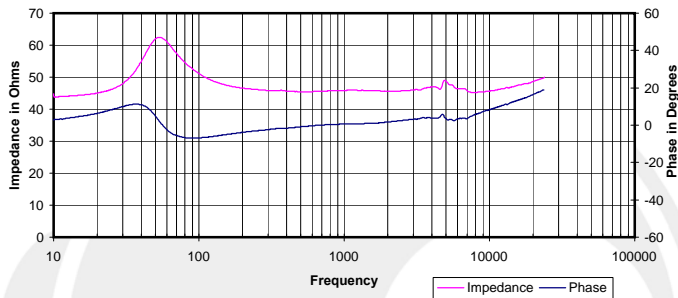
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



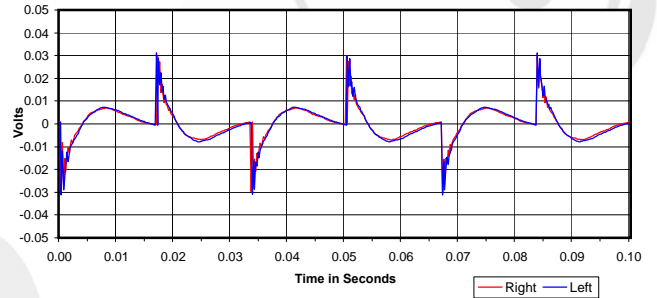
Isolation
 Attenuation of External Sound vs. Frequency



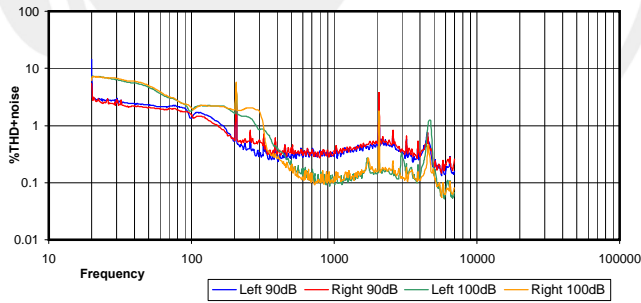
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



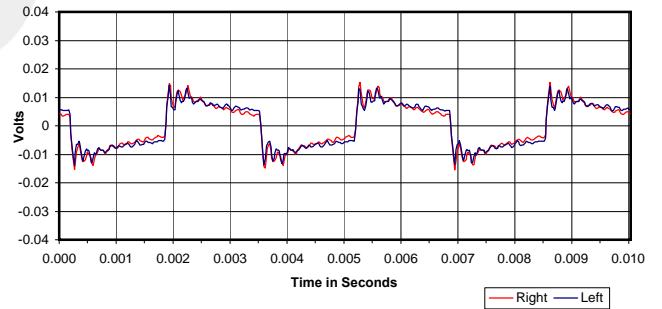
30 Hz Square Wave



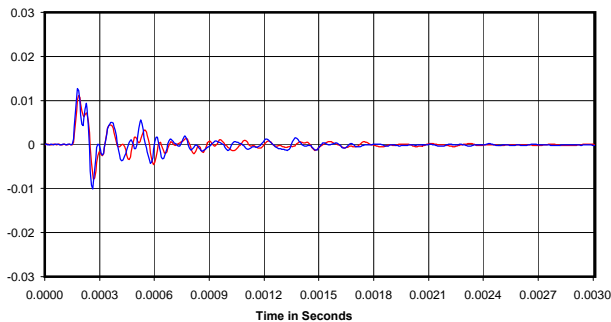
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

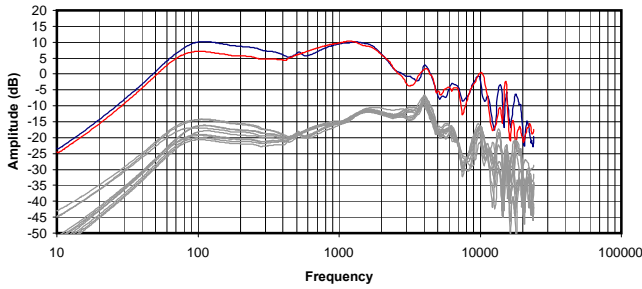


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

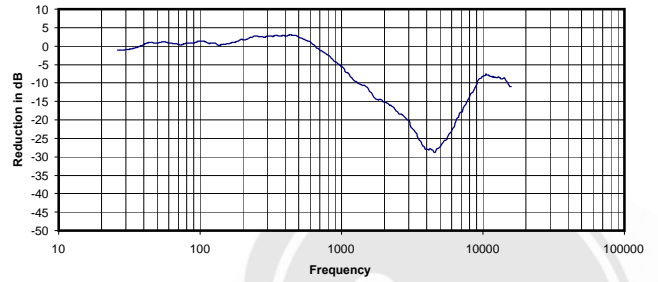
0.036 Vrms
 46 Ohms
 0.03 mW
 -8 dB



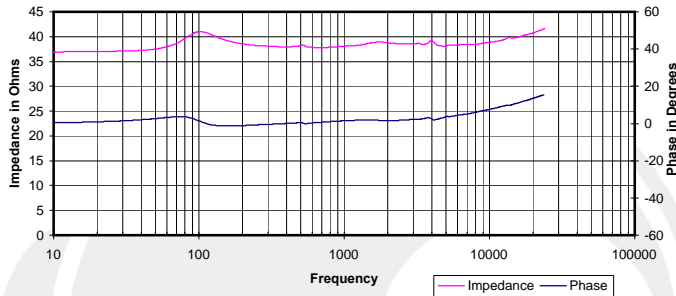
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



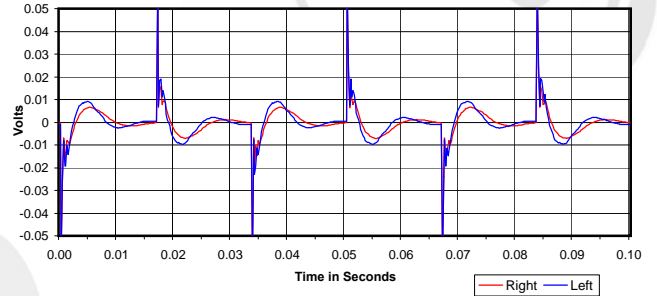
Isolation
 Attenuation of External Sound vs. Frequency



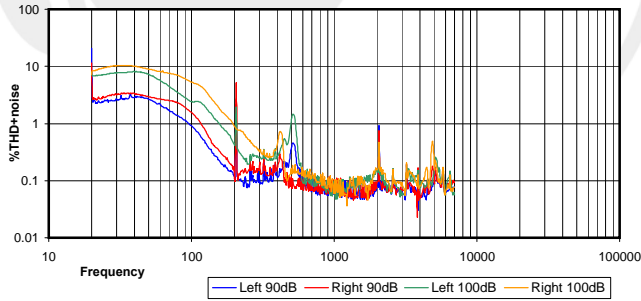
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



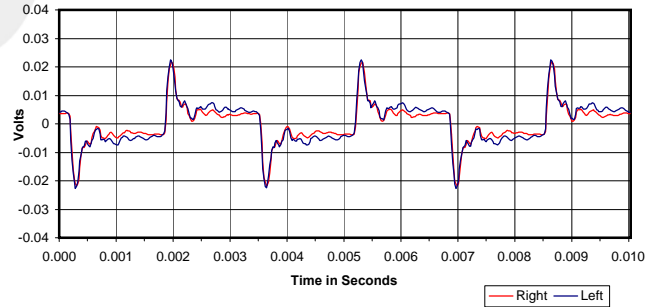
30 Hz Square Wave



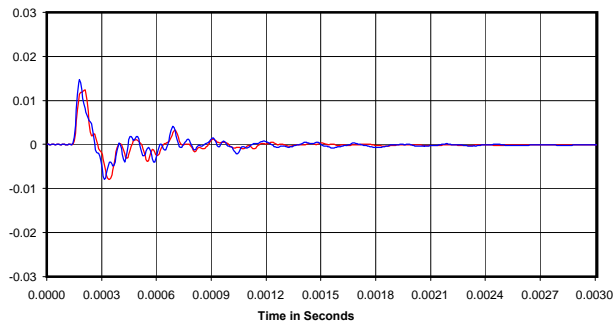
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

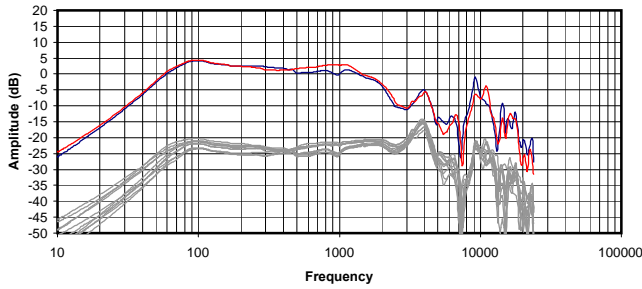


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

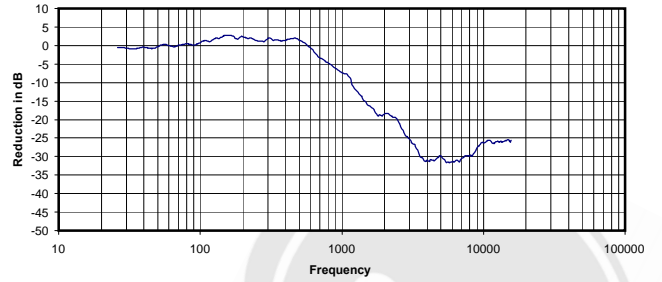
0.037 Vrms
 38 Ohms
 0.04 mW
 -8 dB



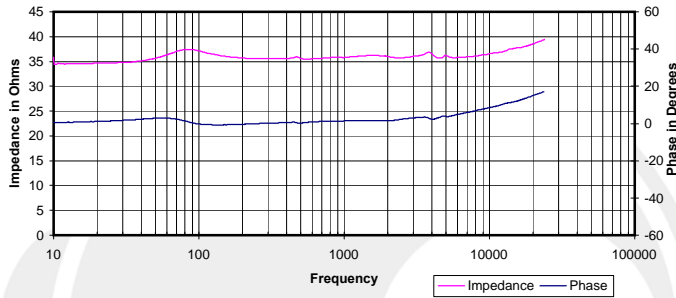
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



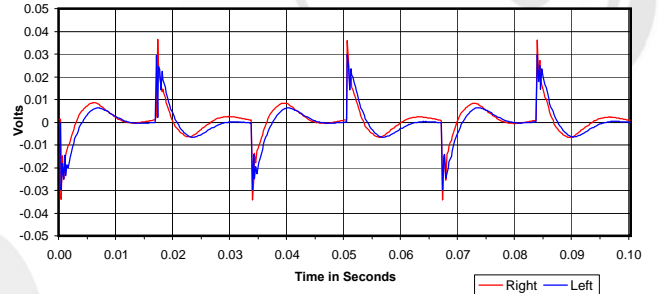
Isolation
 Attenuation of External Sound vs. Frequency



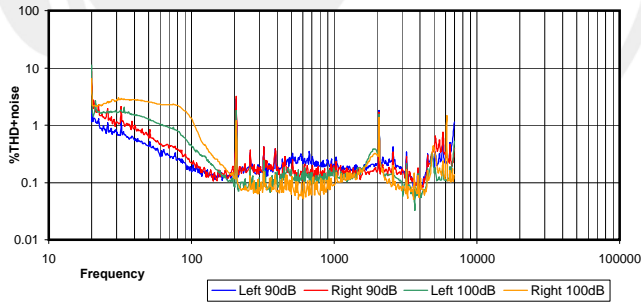
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



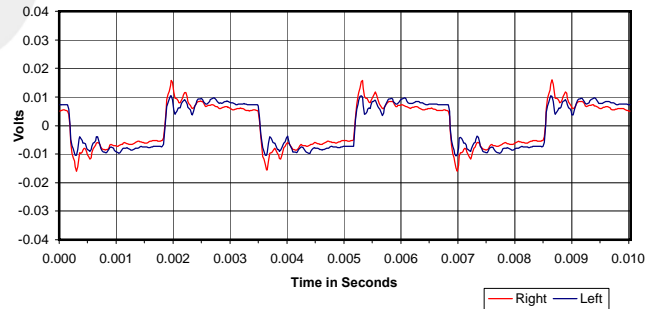
30 Hz Square Wave



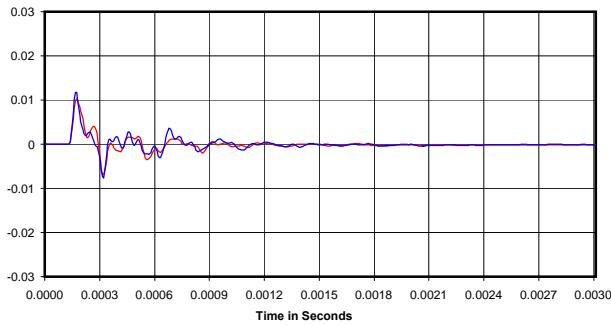
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

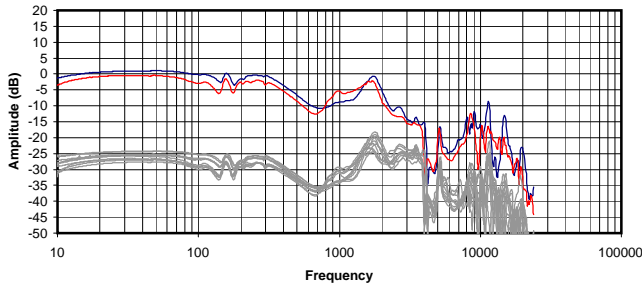


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

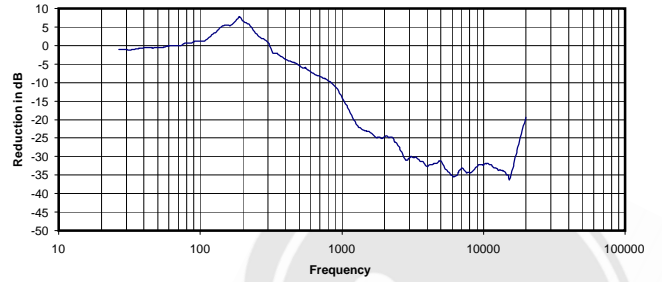
0.049 Vrms
 36 Ohms
 0.07 mW
 -9 dB



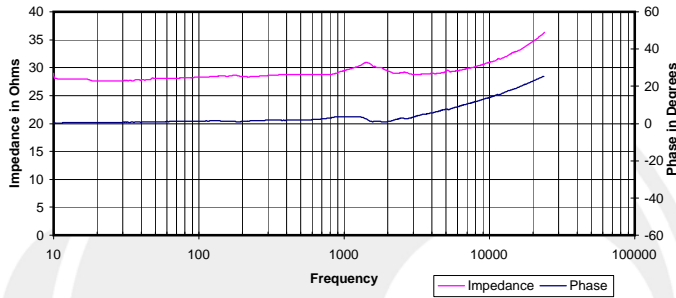
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



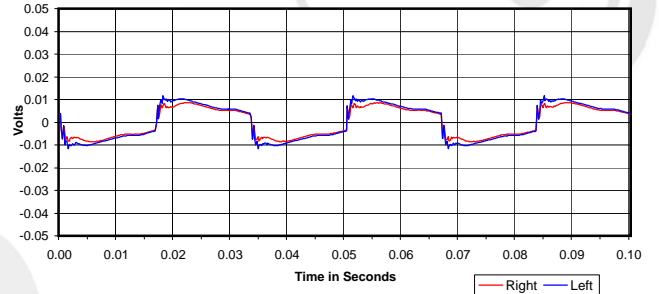
Isolation
 Attenuation of External Sound vs. Frequency



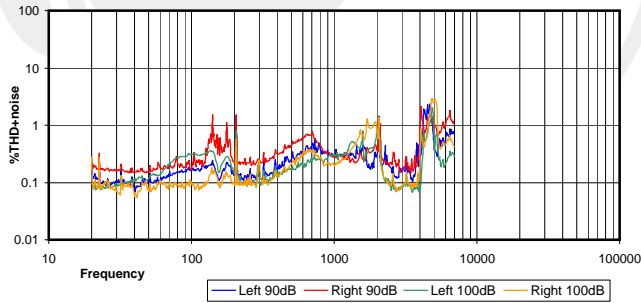
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



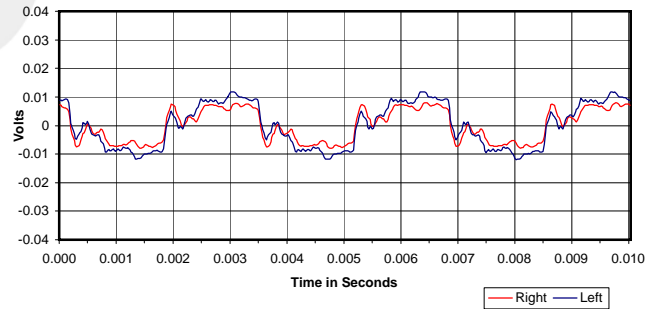
30 Hz Square Wave



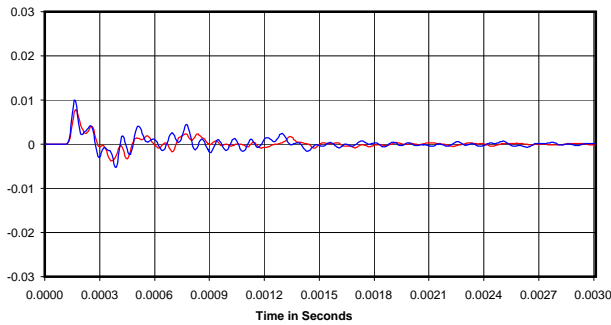
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



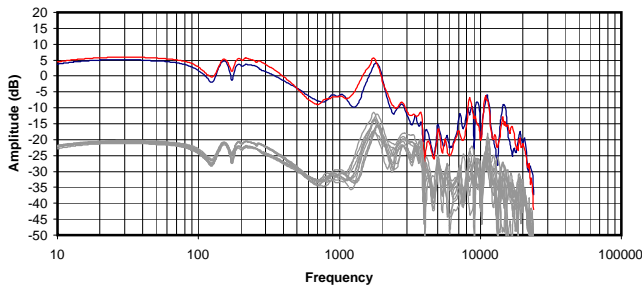
Impulse Response



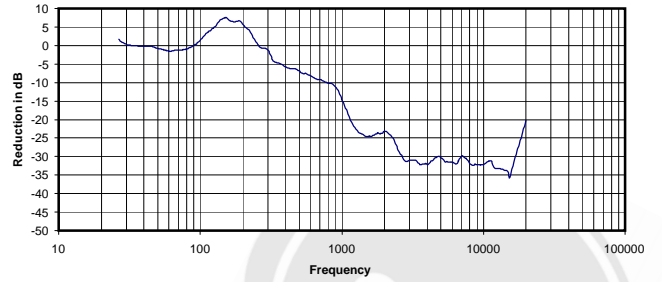
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.055 Vrms
 29 Ohms
 0.10 mW
 -15 dB

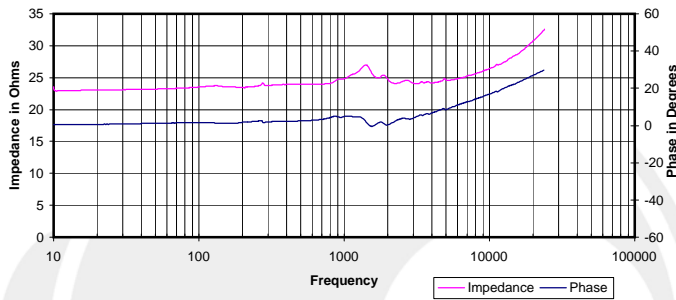
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



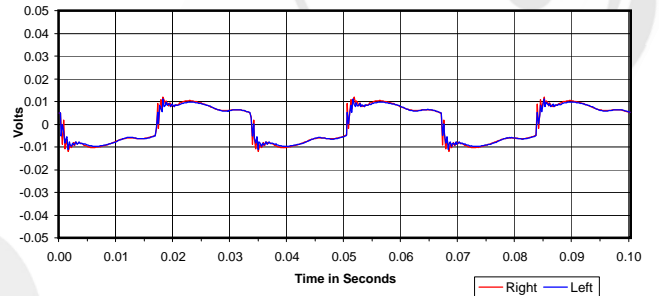
Isolation
 Attenuation of External Sound vs. Frequency



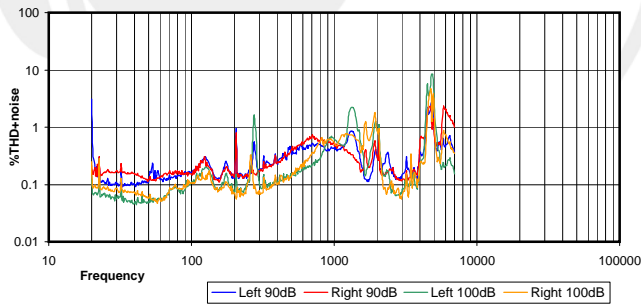
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



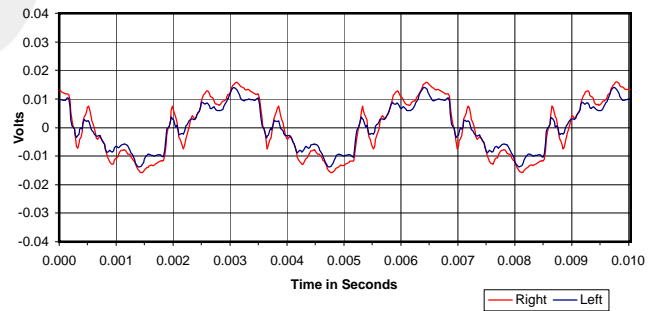
30 Hz Square Wave



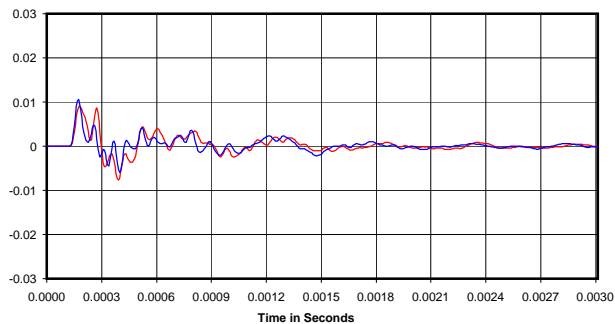
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



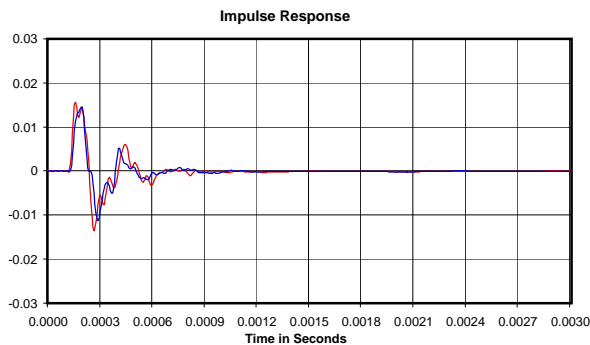
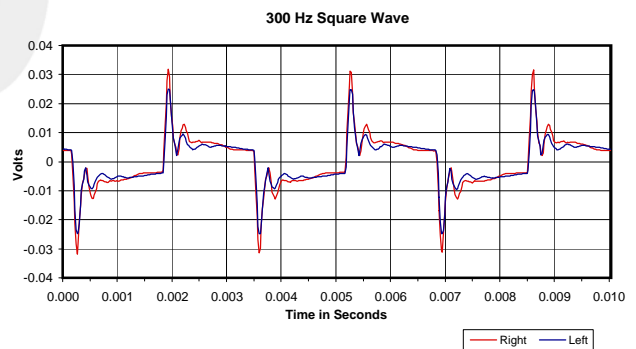
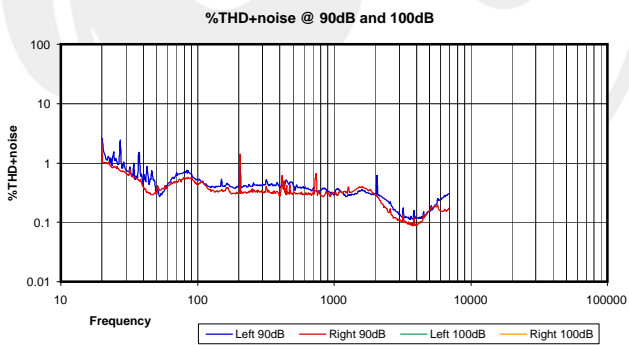
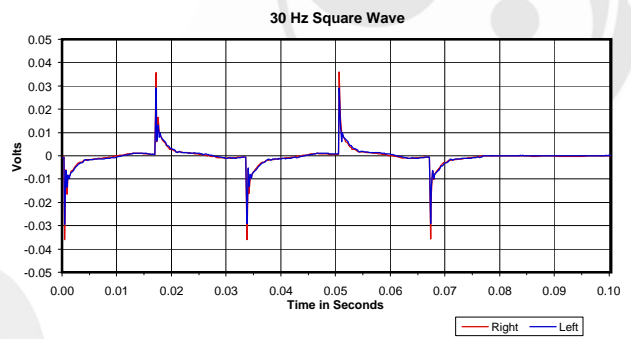
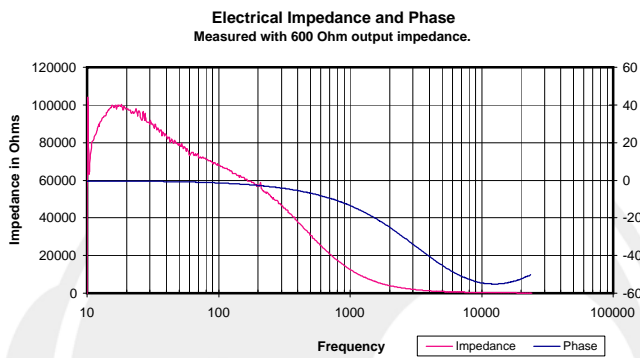
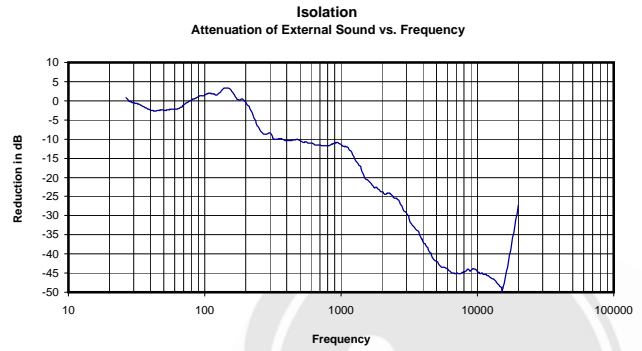
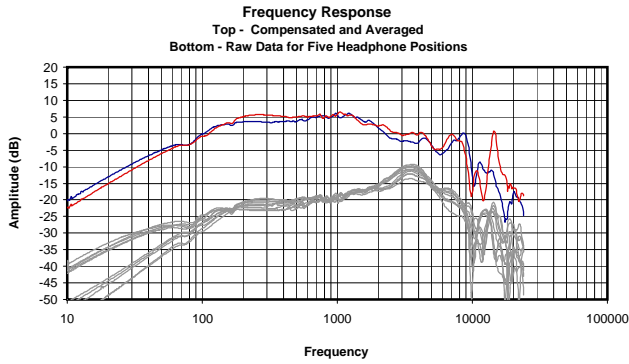
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.048 Vrms
 25 Ohms
 0.09 mW
 -15 dB

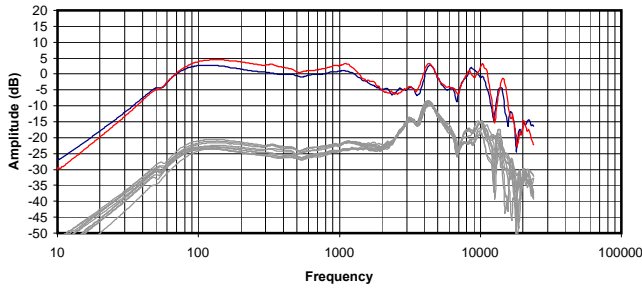




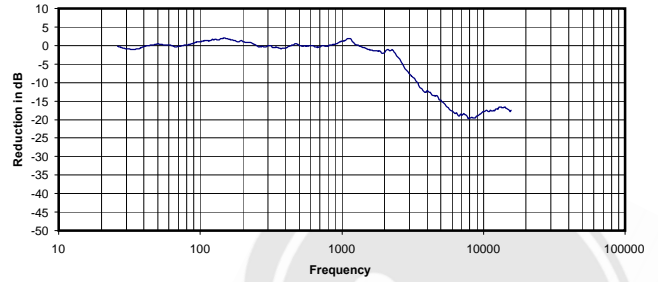
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

1.940 Vrms
12546 Ohms
0.30 mW
-19 dB

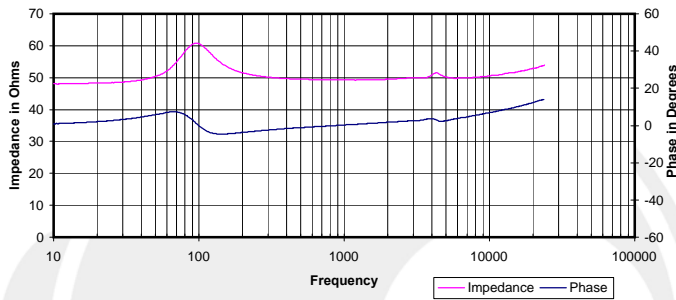
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



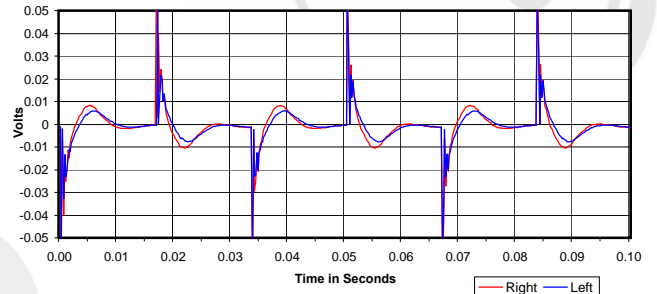
Isolation
 Attenuation of External Sound vs. Frequency



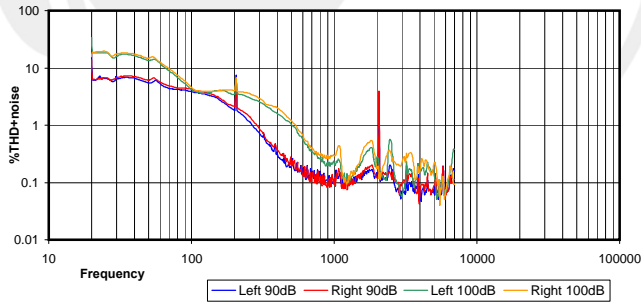
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



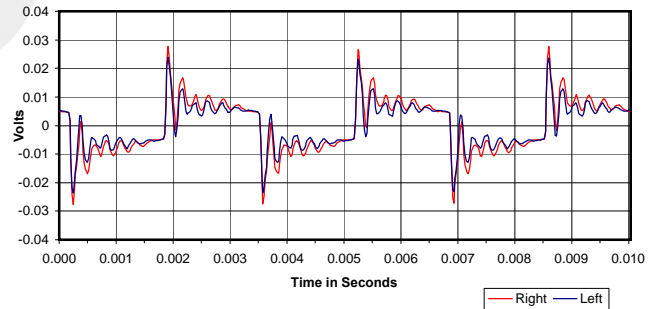
30 Hz Square Wave



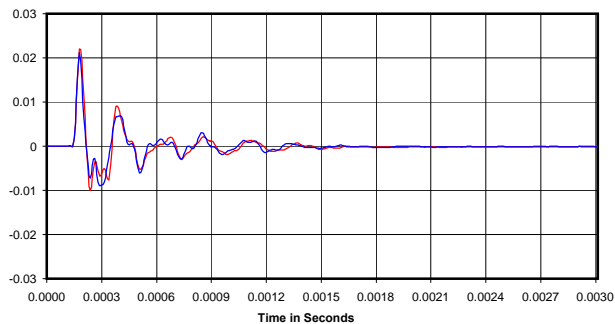
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

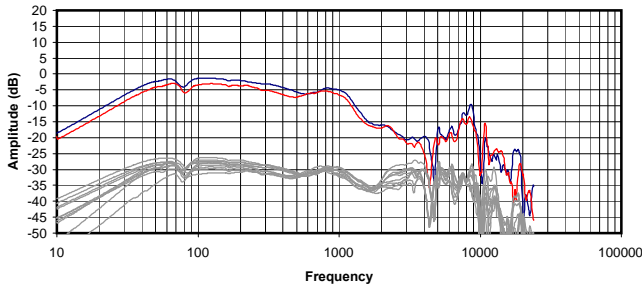


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

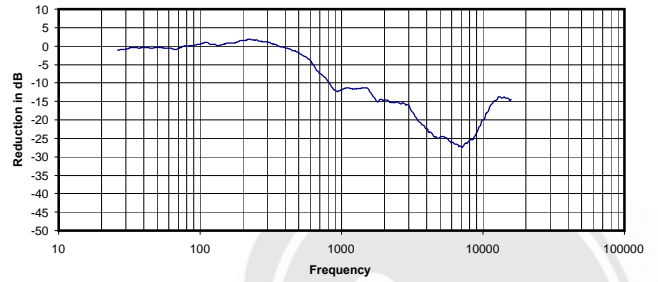
0.010 Vrms
 49 Ohms
 0.00 mW
 -2 dB



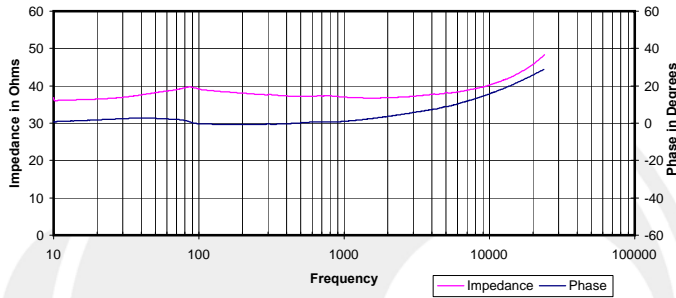
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



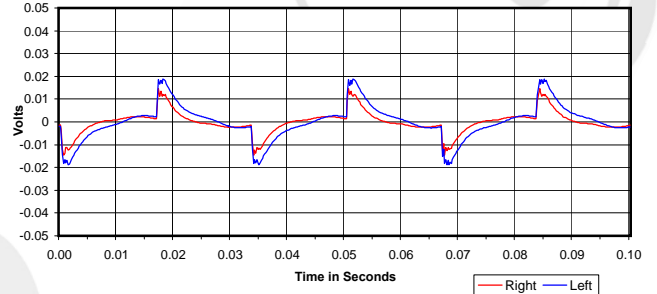
Isolation
Attenuation of External Sound vs. Frequency



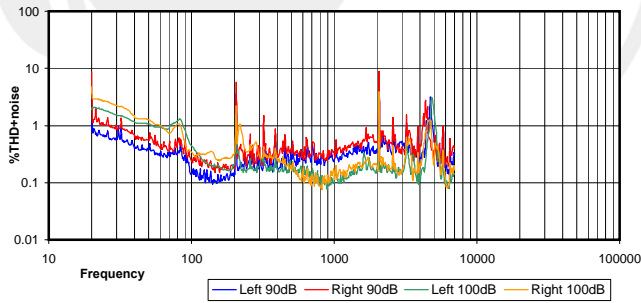
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



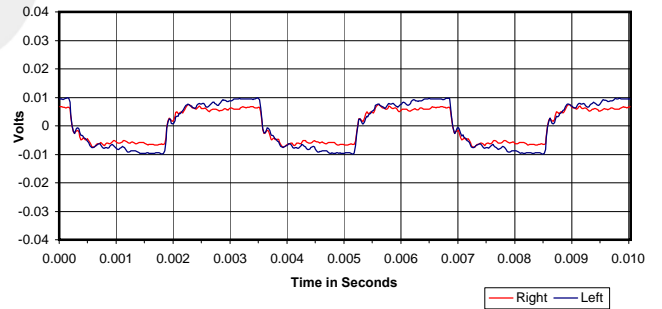
30 Hz Square Wave



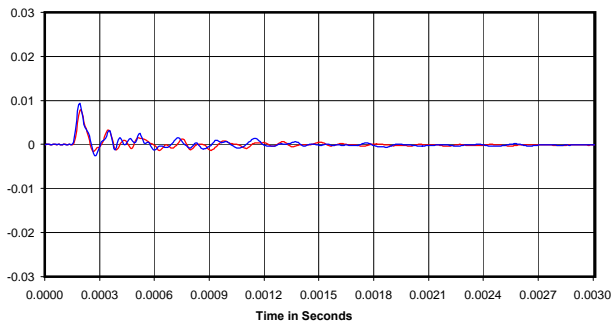
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

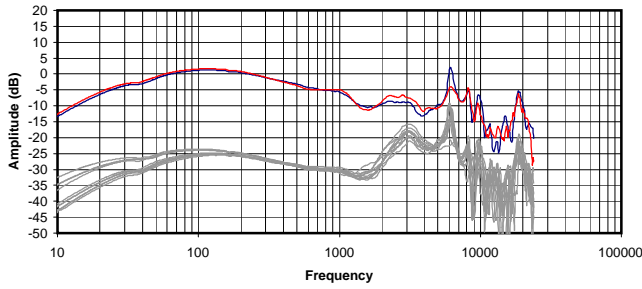


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

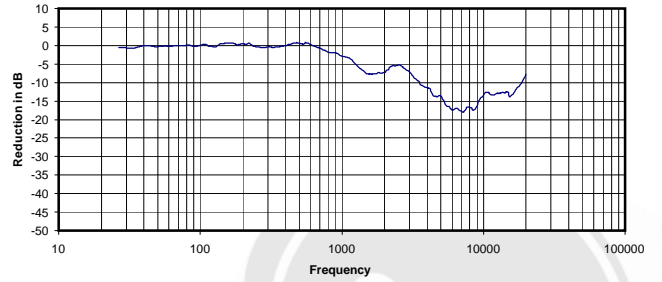
0.091 Vrms
37 Ohms
0.22 mW
-8 dB



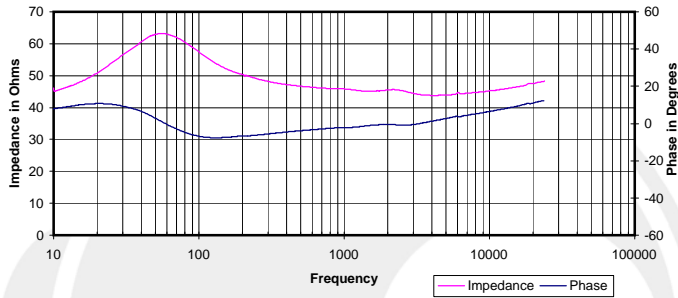
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



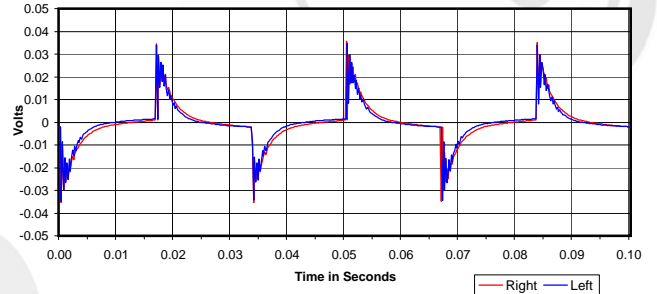
Isolation
Attenuation of External Sound vs. Frequency



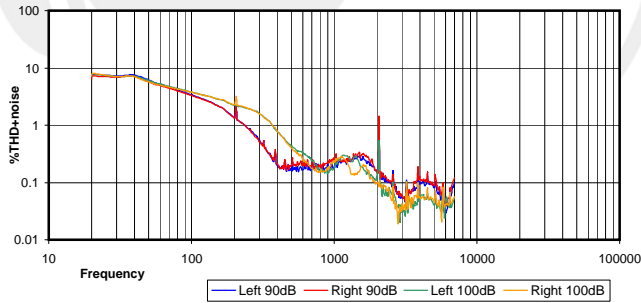
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



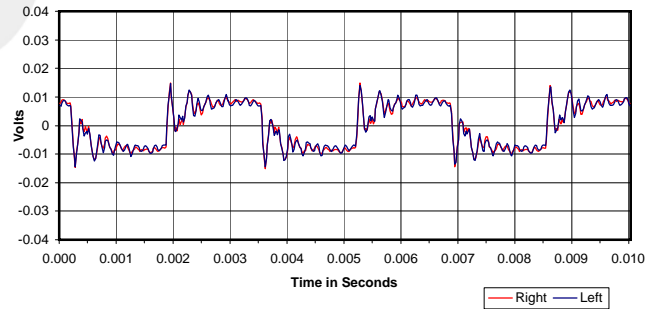
30 Hz Square Wave



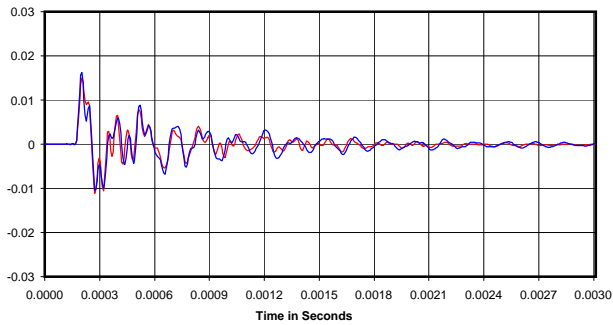
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

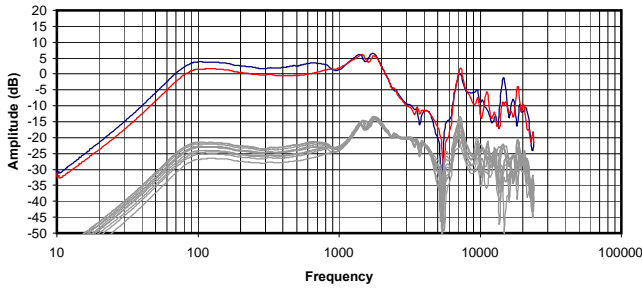


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

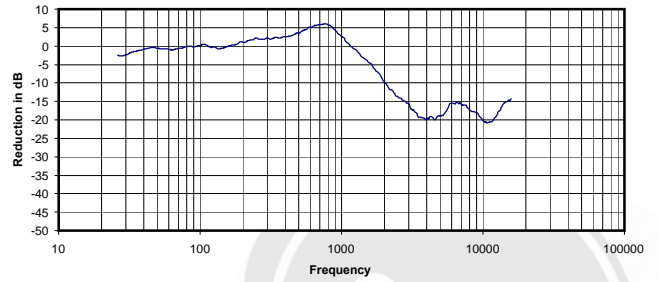
0.134 Vrms
46 Ohms
0.39 mW
-5 dB



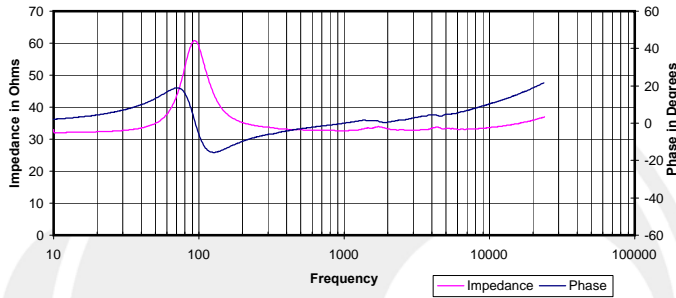
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



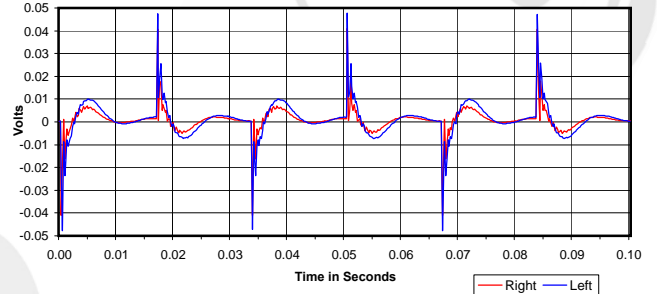
Isolation
Attenuation of External Sound vs. Frequency



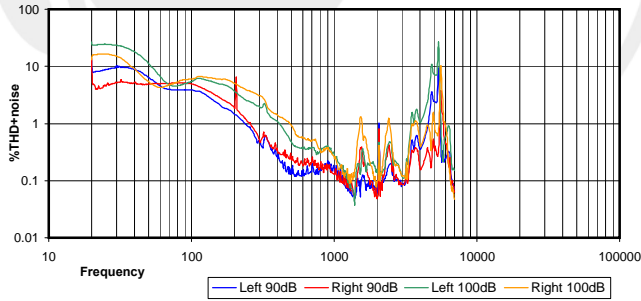
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



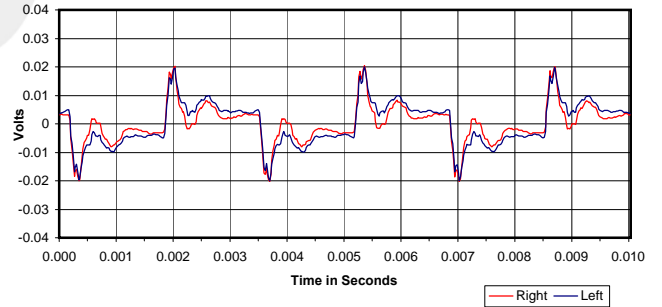
30 Hz Square Wave



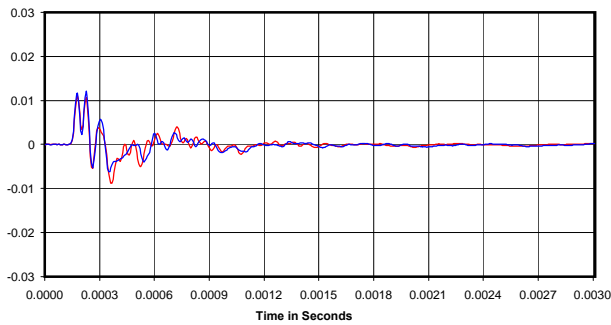
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response



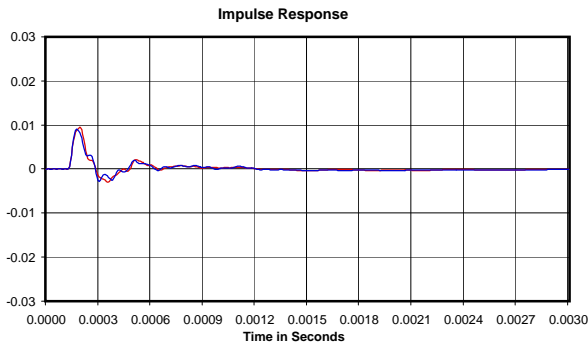
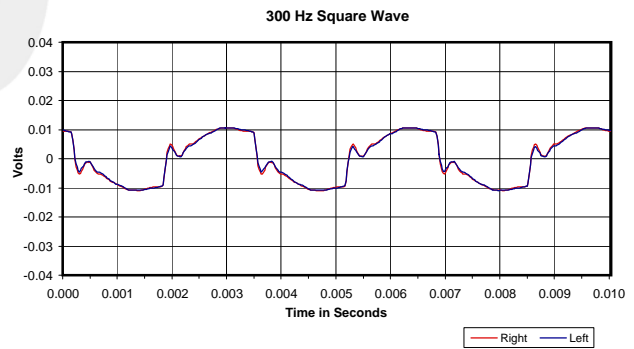
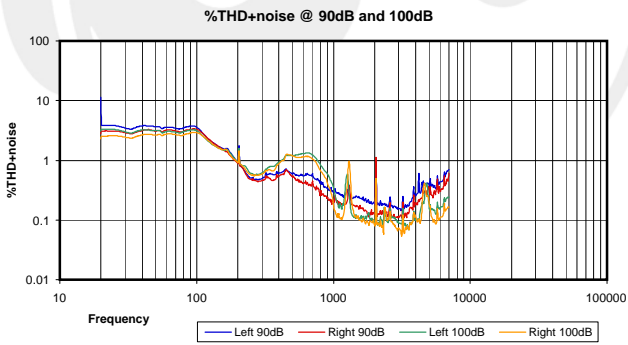
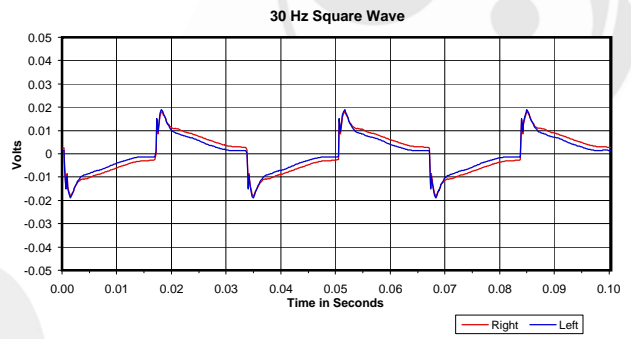
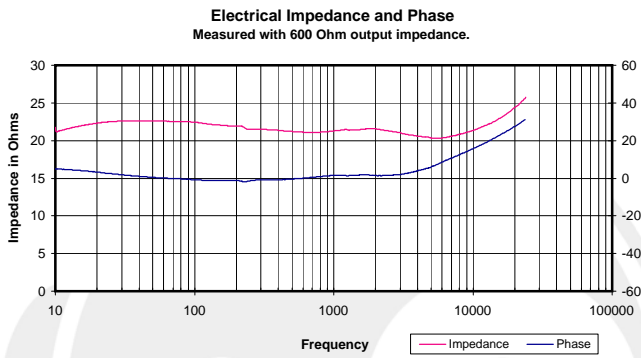
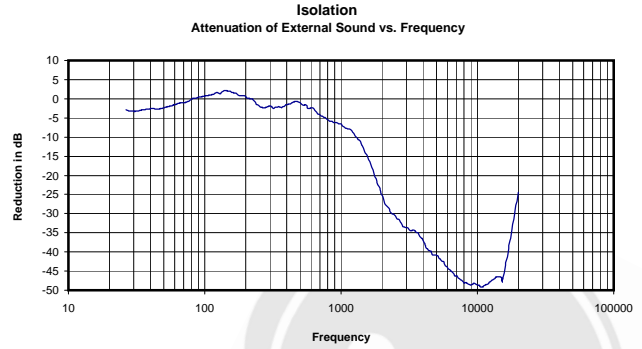
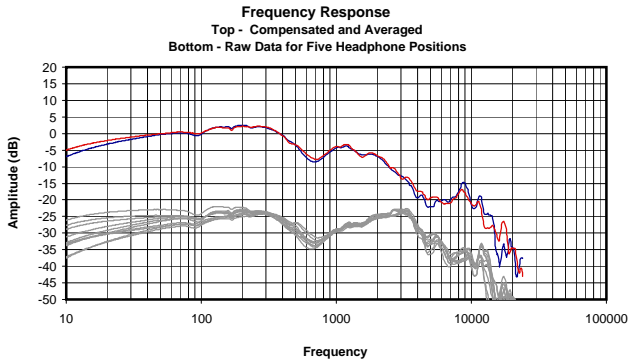
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.054 Vrms
33 Ohms
0.09 mW
-4 dB





Headphone Measurements: **Plugged Crown**

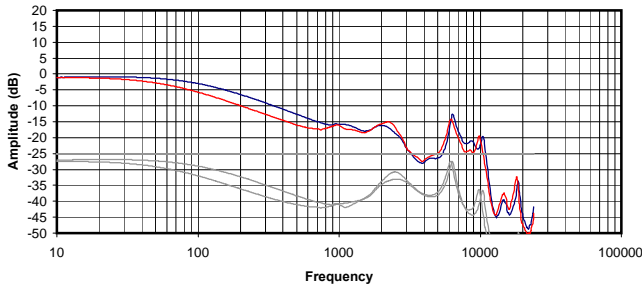


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

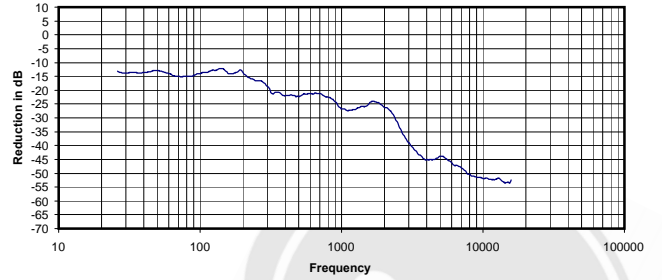
0.038 Vrms
21 Ohms
0.07 mW
-17 dB



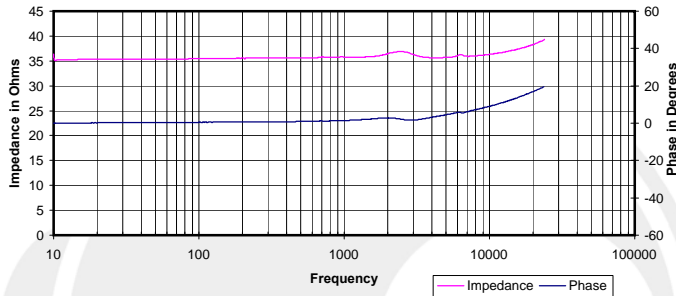
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



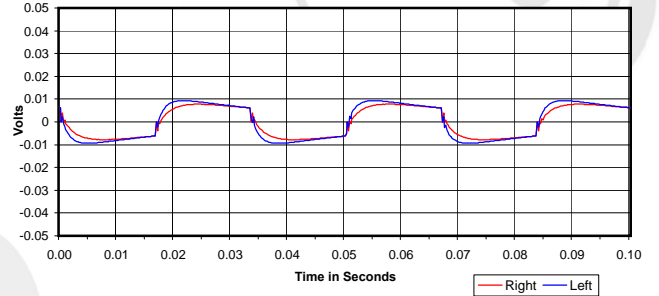
Isolation
Attenuation of External Sound vs. Frequency



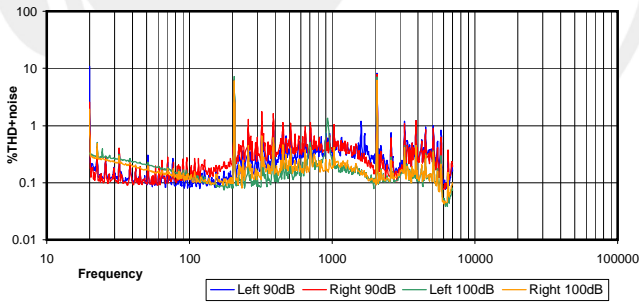
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



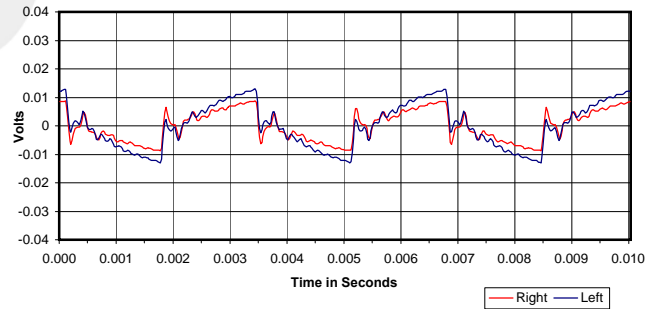
30 Hz Square Wave



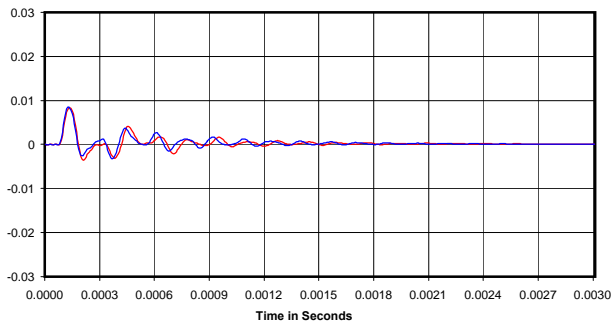
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

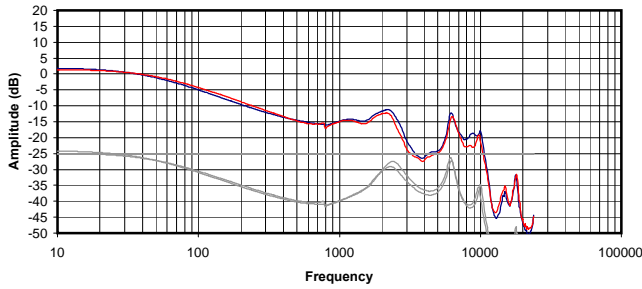


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

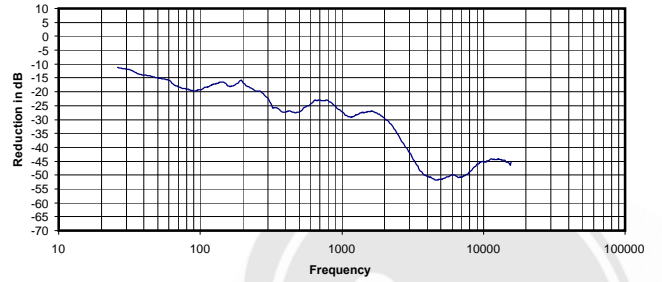
0.050 Vrms
36 Ohms
0.07 mW
-25 dB



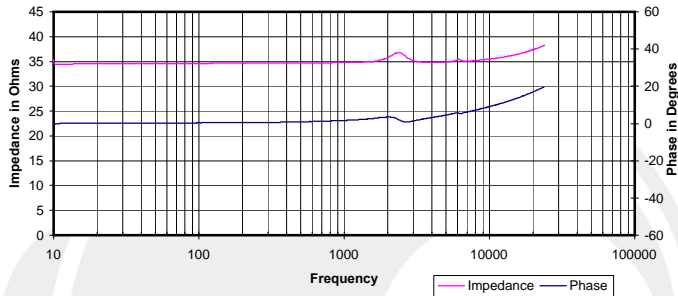
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



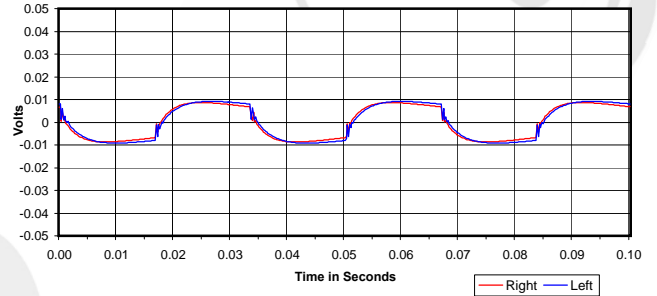
Isolation
Attenuation of External Sound vs. Frequency



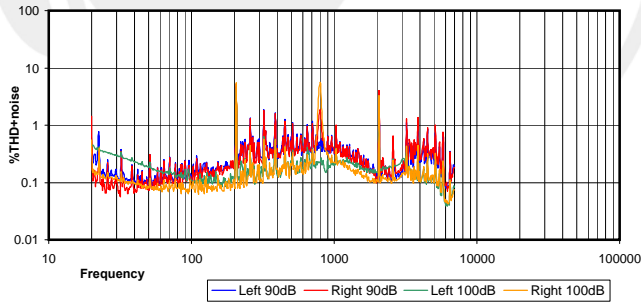
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



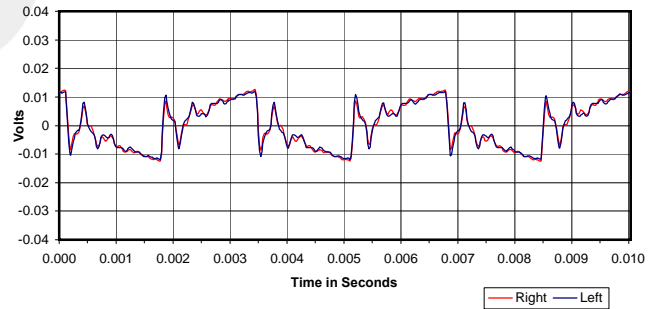
30 Hz Square Wave



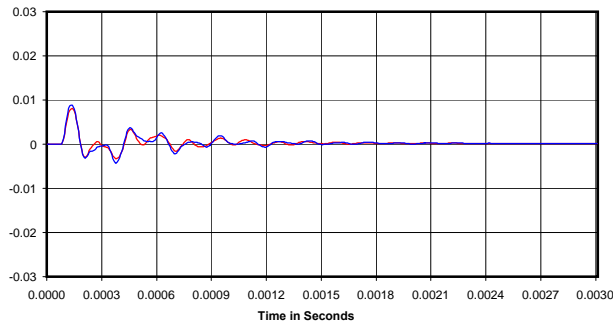
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

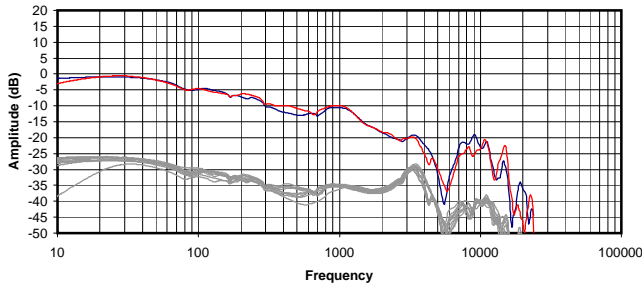


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

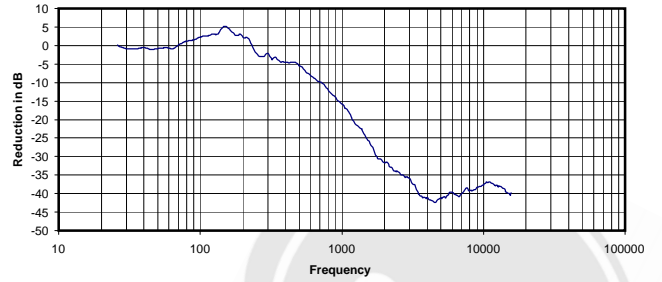
0.057 Vrms
35 Ohms
0.09 mW
-29 dB



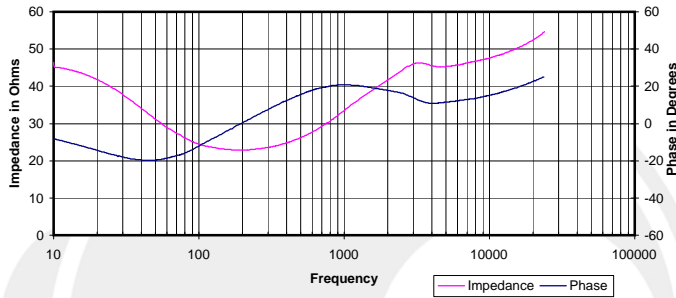
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



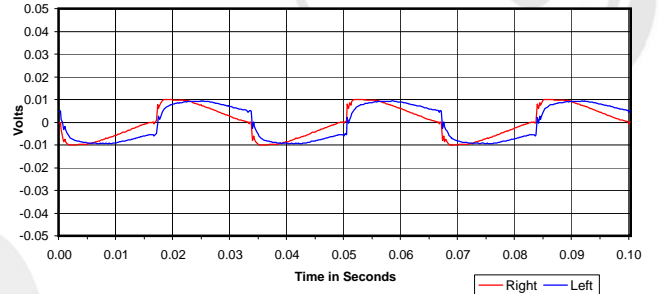
Isolation
Attenuation of External Sound vs. Frequency



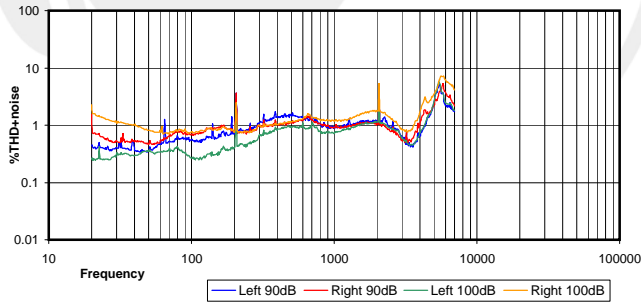
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



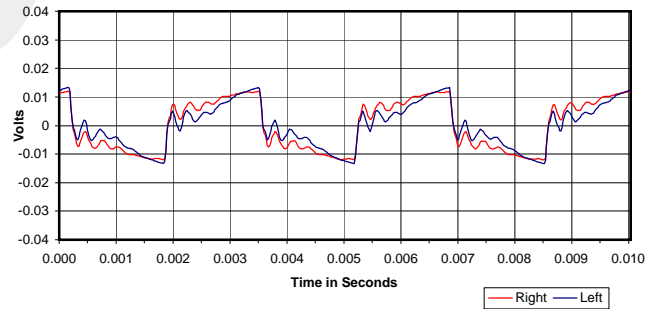
30 Hz Square Wave



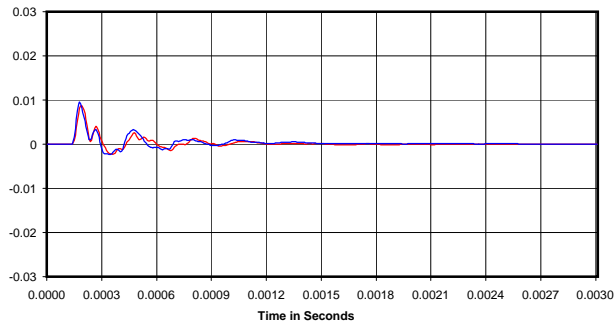
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

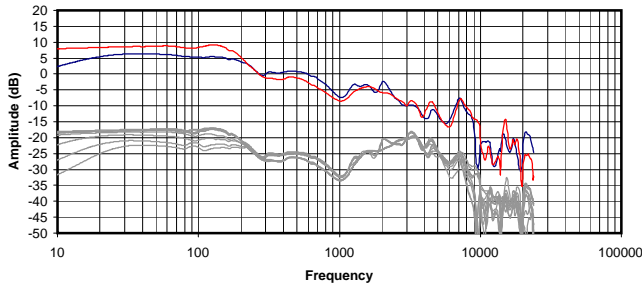


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

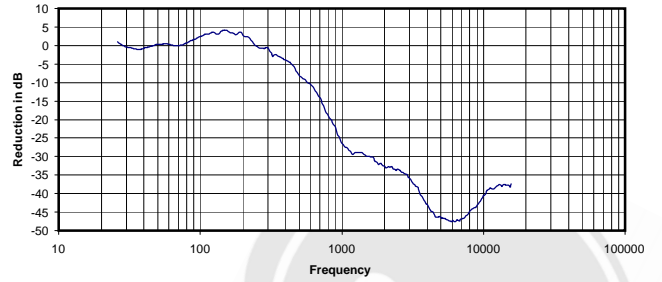
0.040 Vrms
34 Ohms
0.05 mW
-16 dB



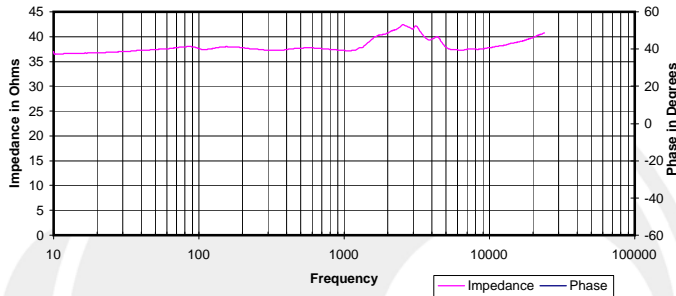
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



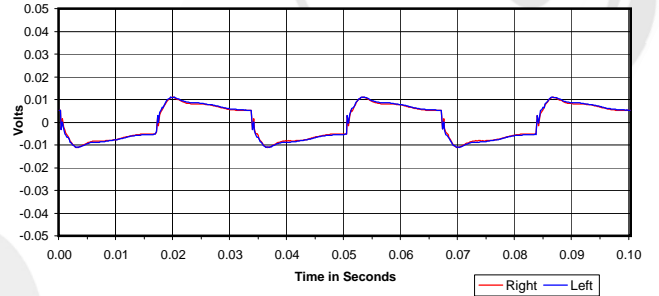
Isolation
 Attenuation of External Sound vs. Frequency



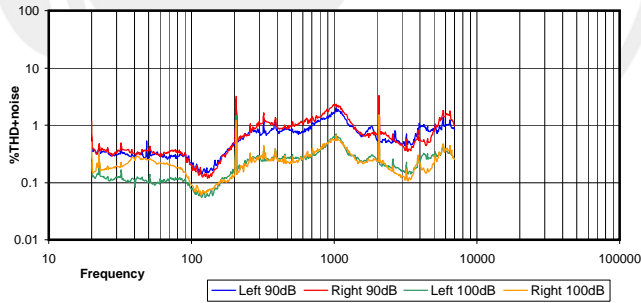
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



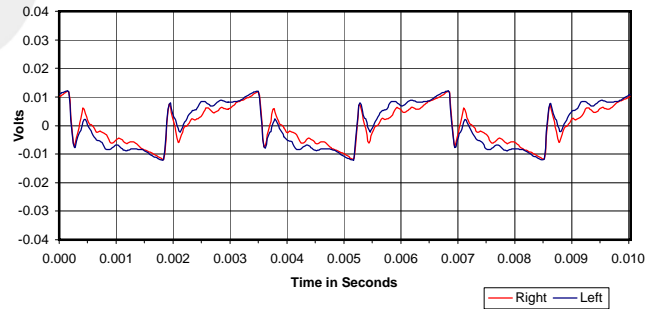
30 Hz Square Wave



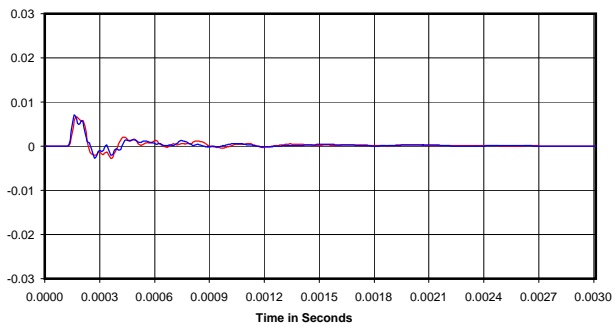
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



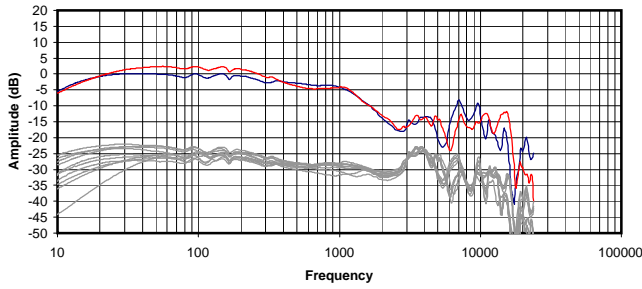
Impulse Response



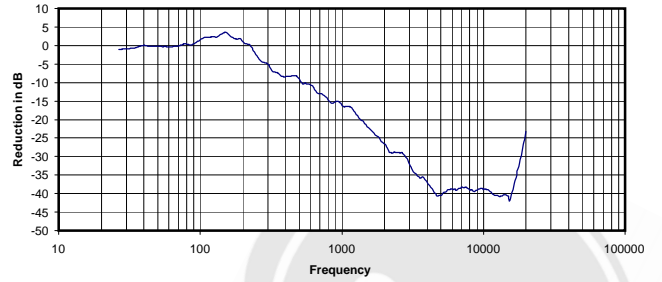
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.064 Vrms
 37 Ohms
 0.11 mW
 -18 dB

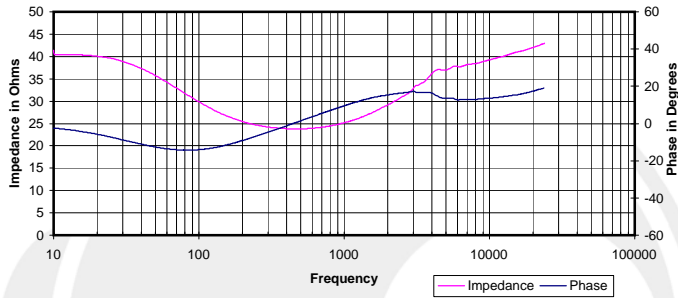
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



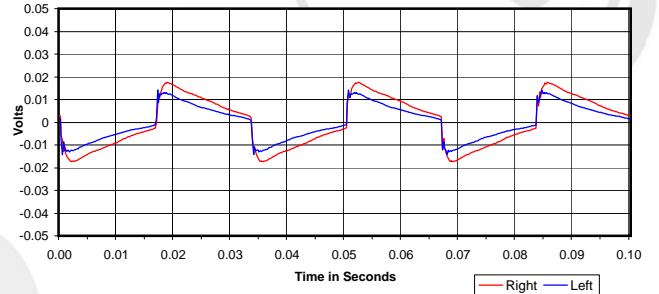
Isolation
Attenuation of External Sound vs. Frequency



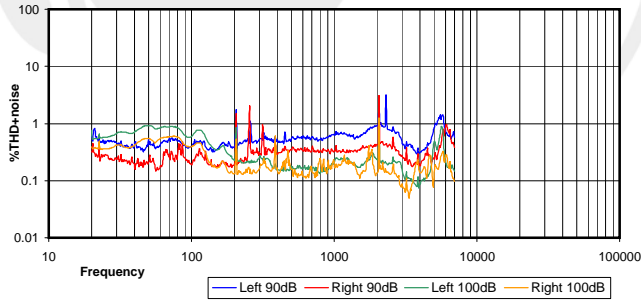
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



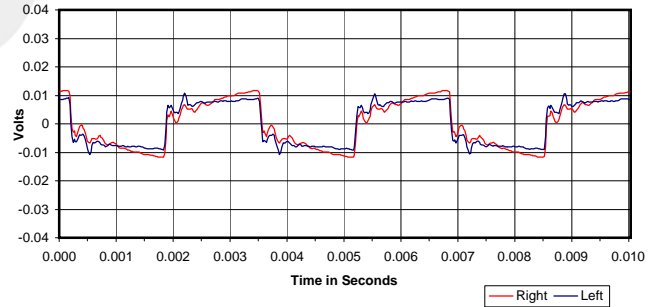
30 Hz Square Wave



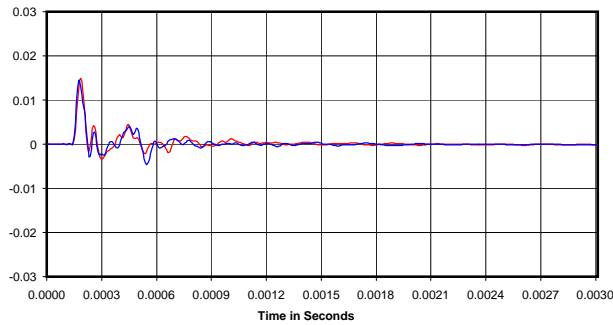
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

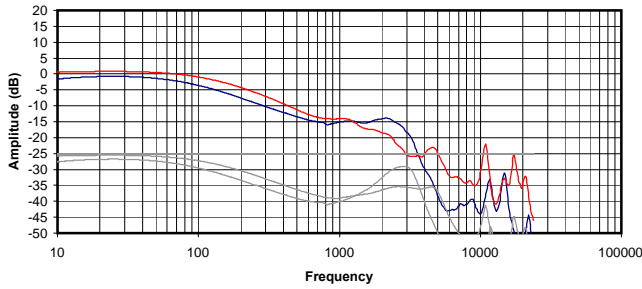


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

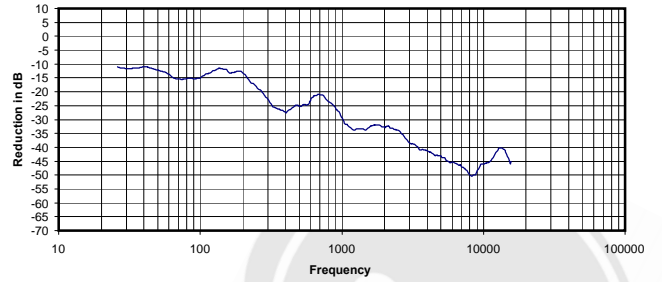
0.048 Vrms
25 Ohms
0.09 mW
-18 dB



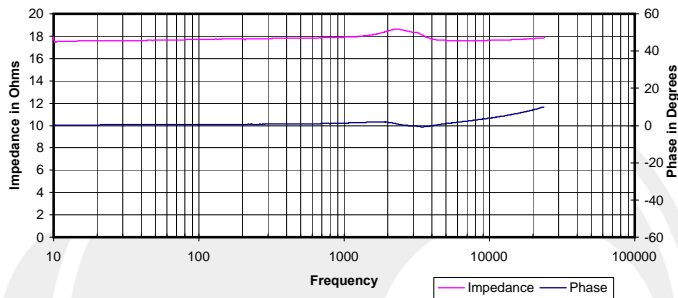
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



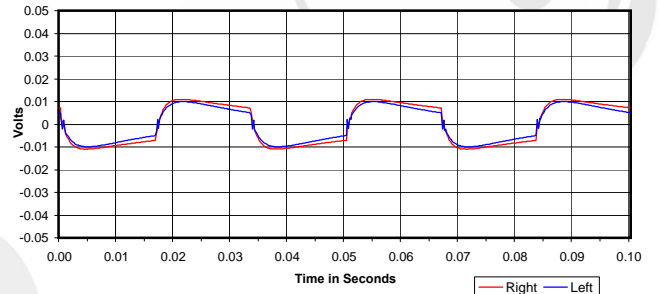
Isolation
Attenuation of External Sound vs. Frequency



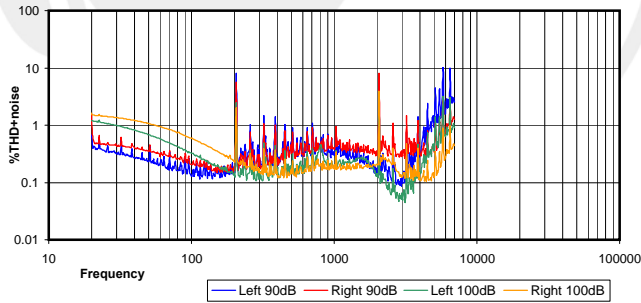
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



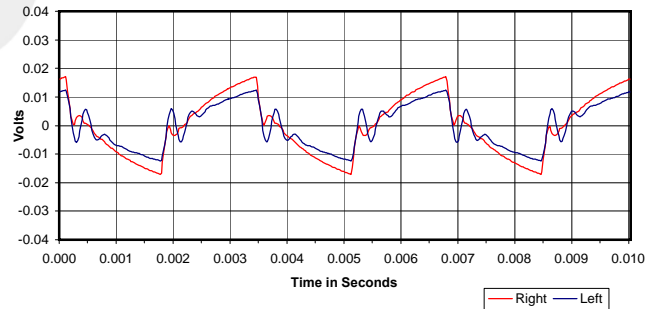
30 Hz Square Wave



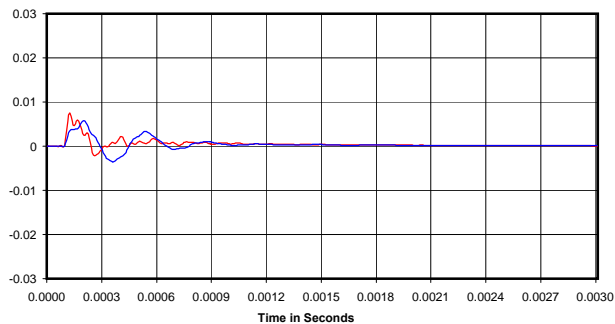
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

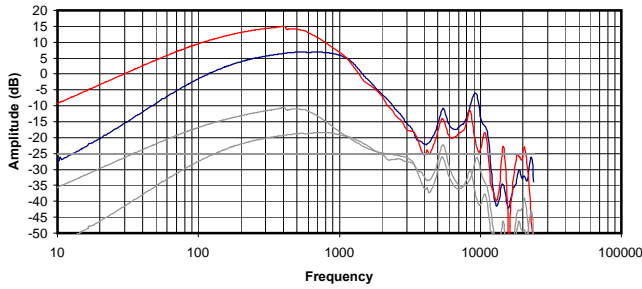


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

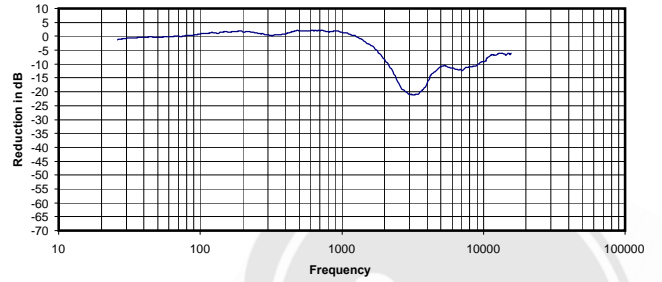
0.032 Vrms
18 Ohms
0.06 mW
-27 dB



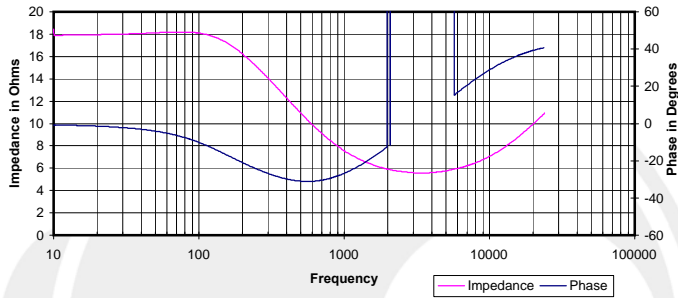
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



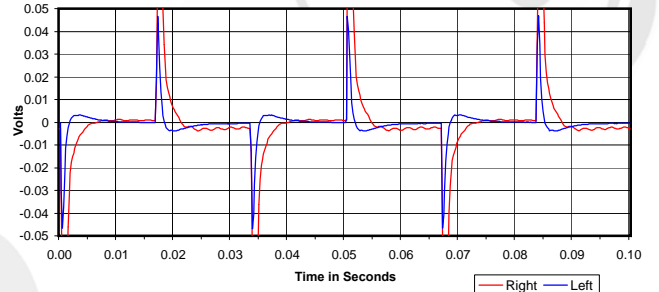
Isolation
Attenuation of External Sound vs. Frequency



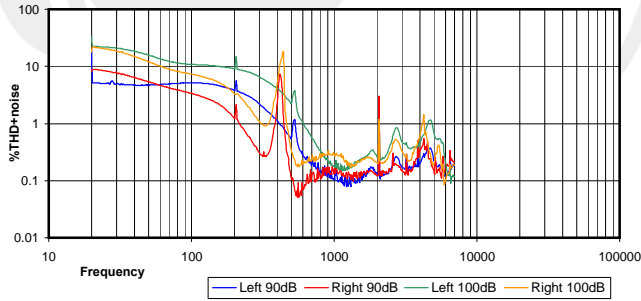
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



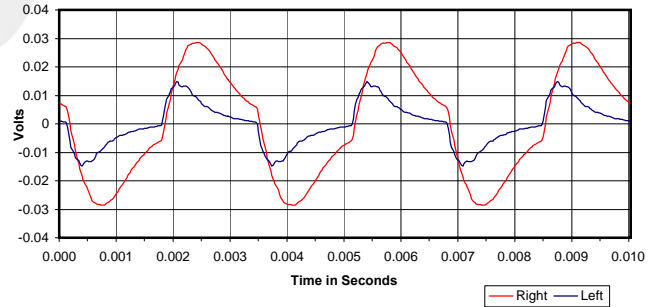
30 Hz Square Wave



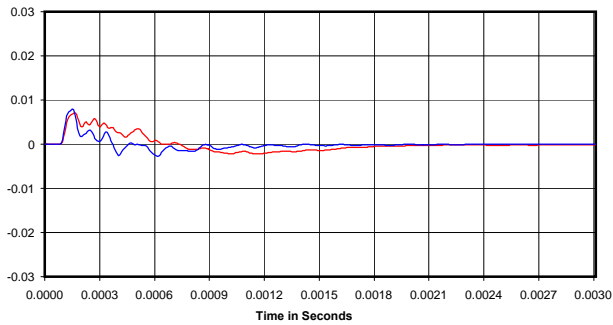
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

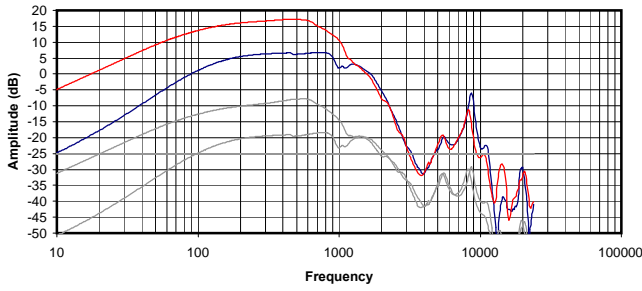


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

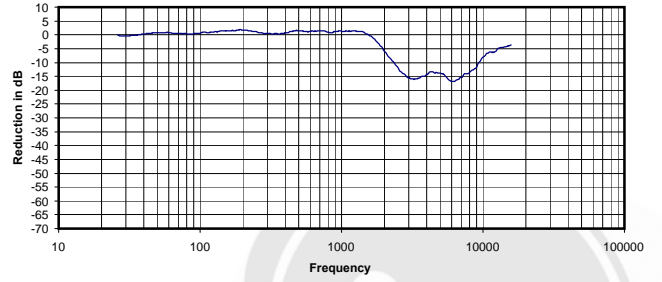
0.013 Vrms
8 Ohms
0.02 mW
-4 dB



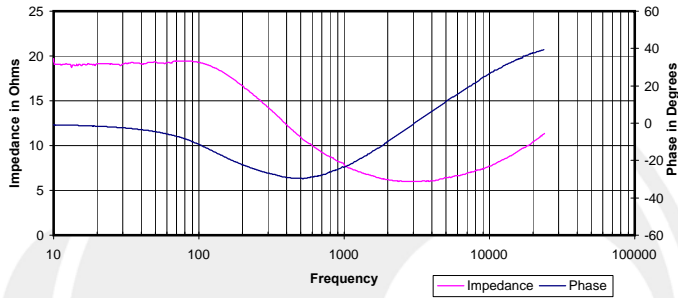
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



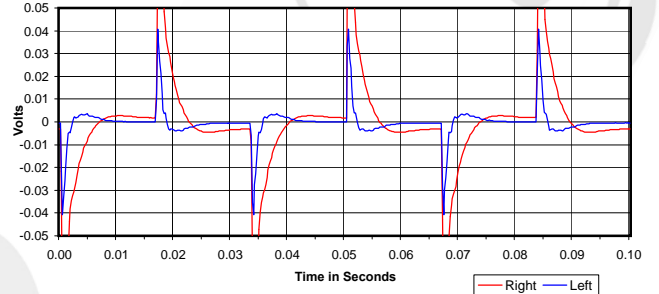
Isolation
Attenuation of External Sound vs. Frequency



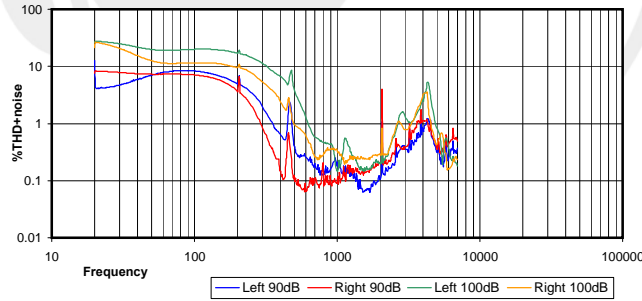
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



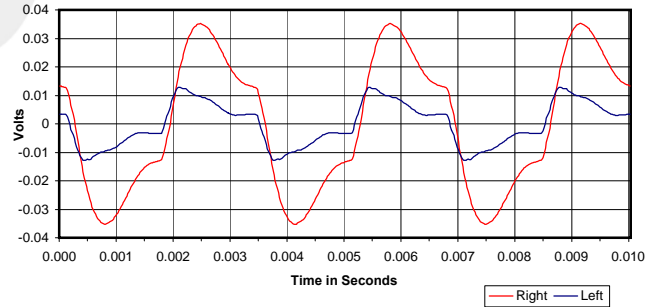
30 Hz Square Wave



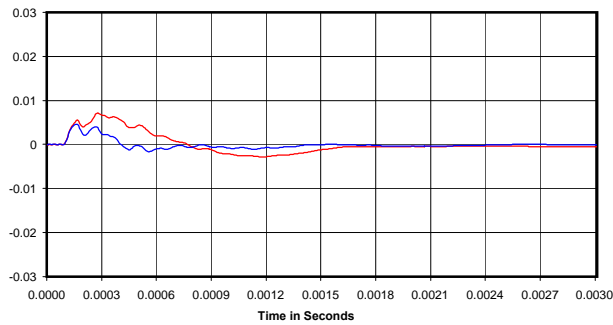
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

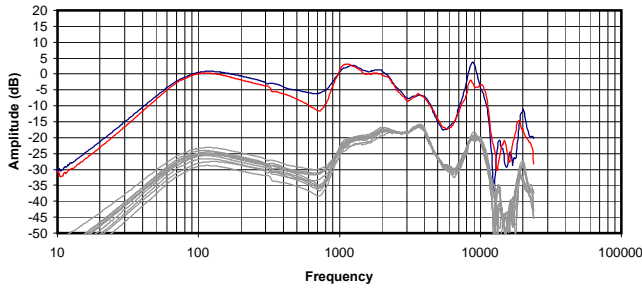


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

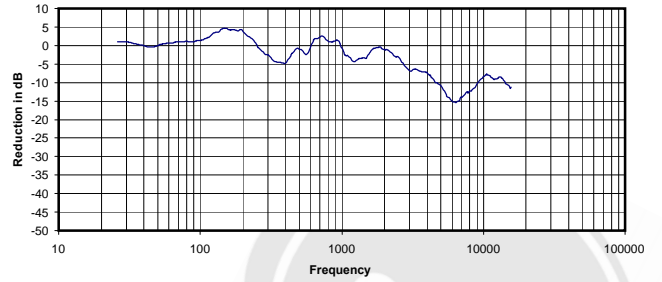
0.033 Vrms
8 Ohms
0.14 mW
-3 dB



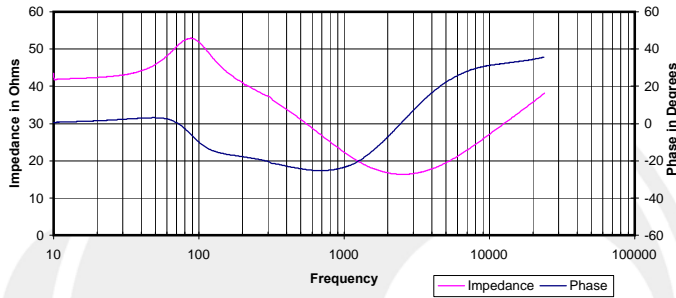
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



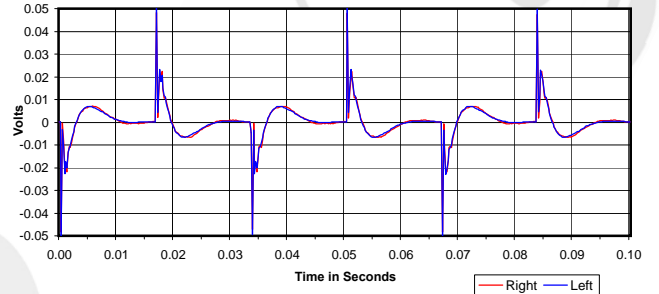
Isolation
 Attenuation of External Sound vs. Frequency



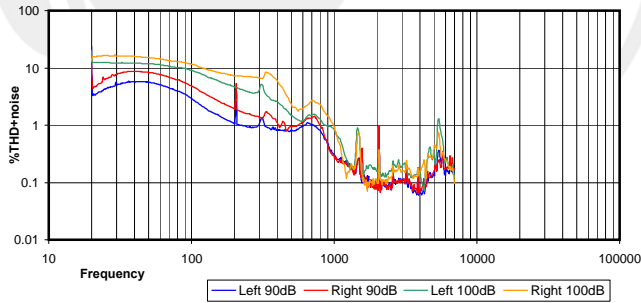
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



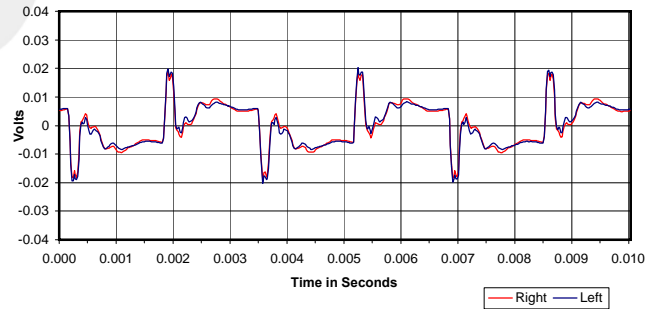
30 Hz Square Wave



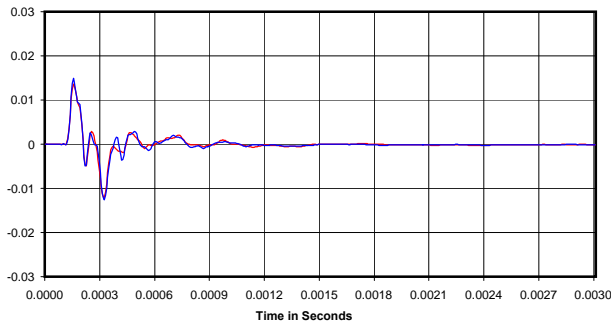
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

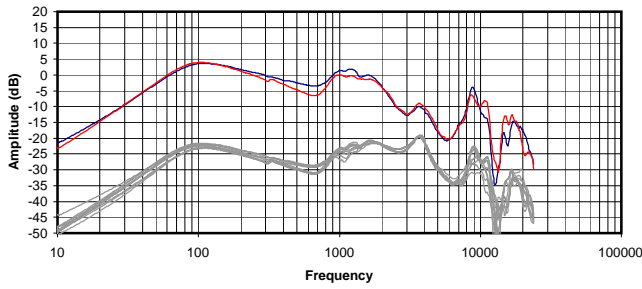


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

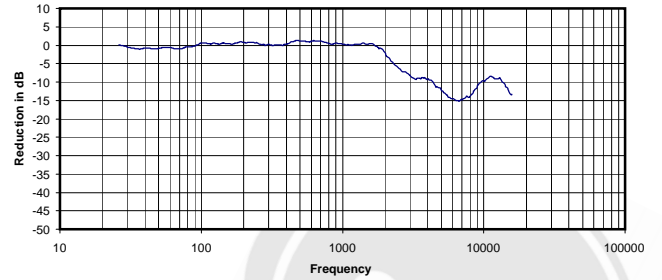
0.078 Vrms
 22 Ohms
 0.27 mW
 -2 dB



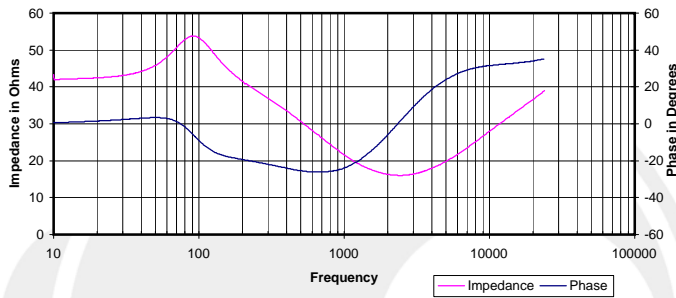
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



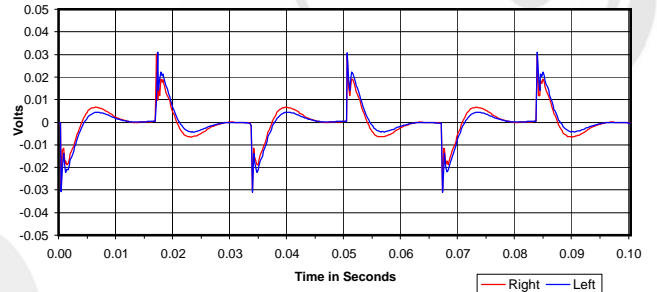
Isolation
Attenuation of External Sound vs. Frequency



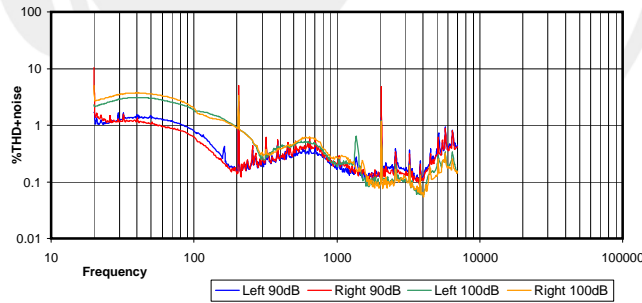
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



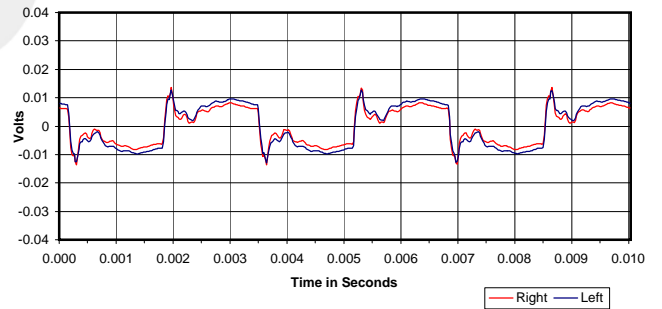
30 Hz Square Wave



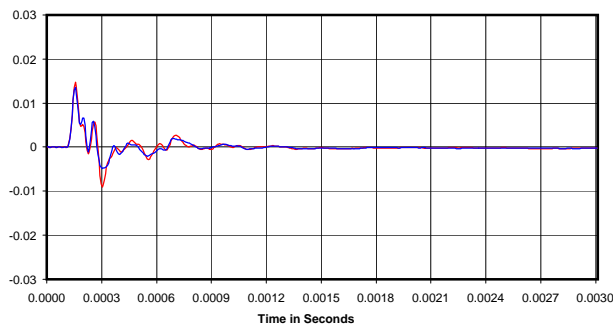
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

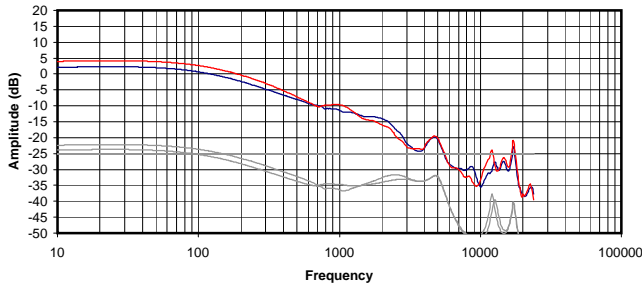


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

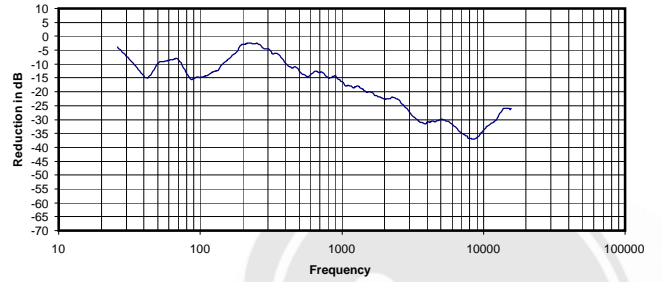
0.044 Vrms
22 Ohms
0.09 mW
-2 dB



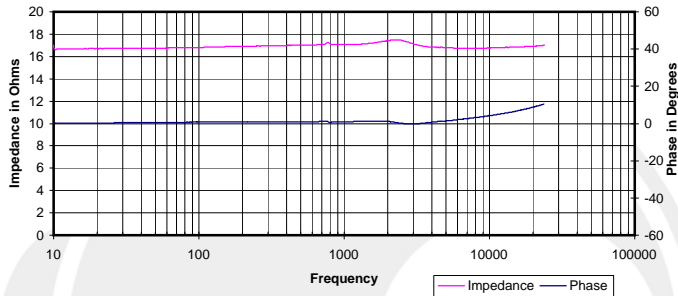
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



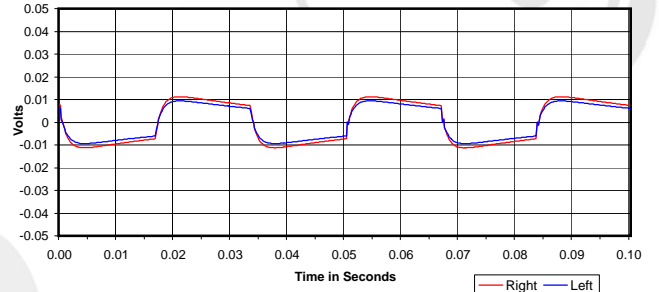
Isolation
Attenuation of External Sound vs. Frequency



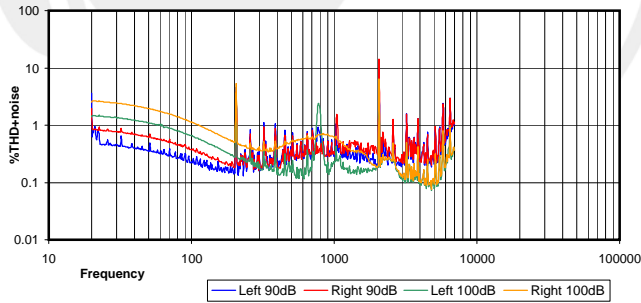
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



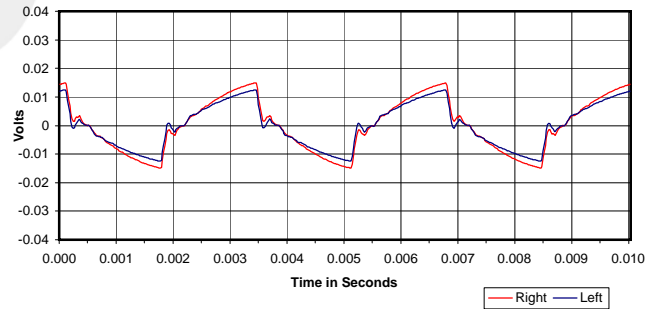
30 Hz Square Wave



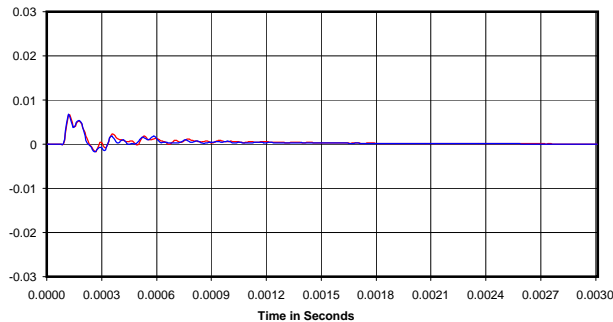
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

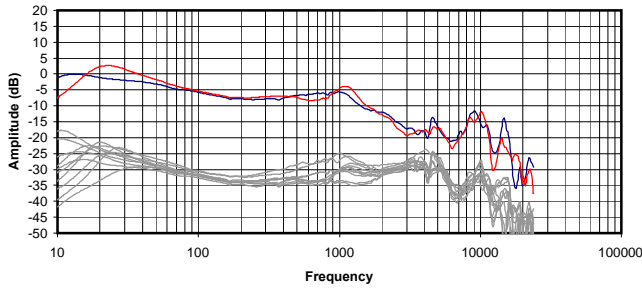


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

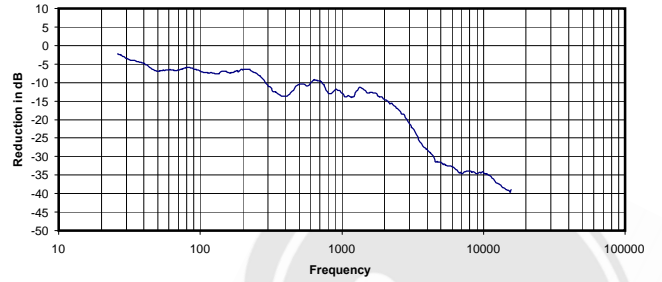
0.030 Vrms
17 Ohms
0.05 mW
-16 dB



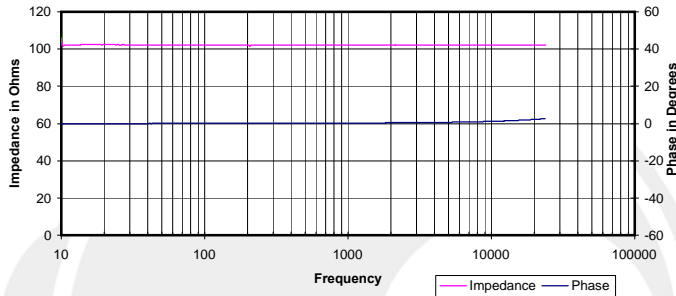
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



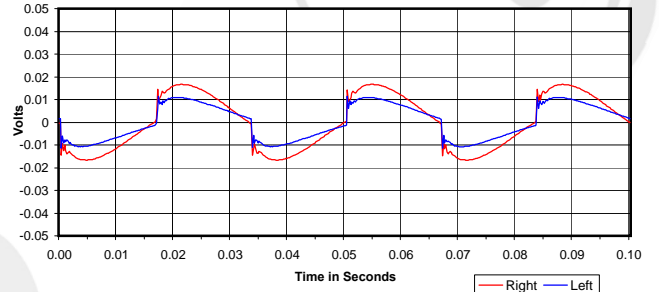
Isolation
 Attenuation of External Sound vs. Frequency



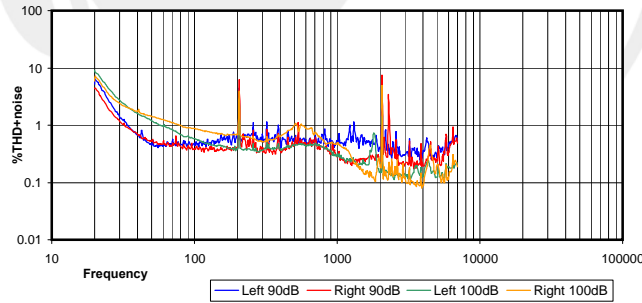
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



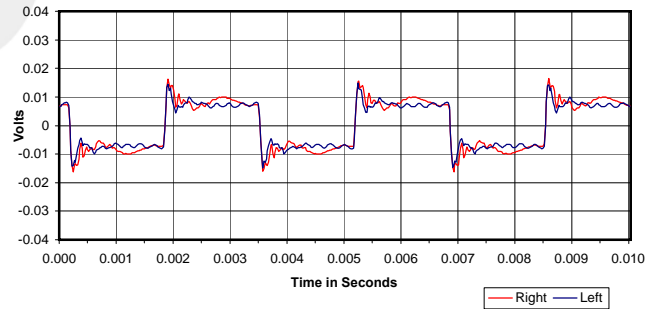
30 Hz Square Wave



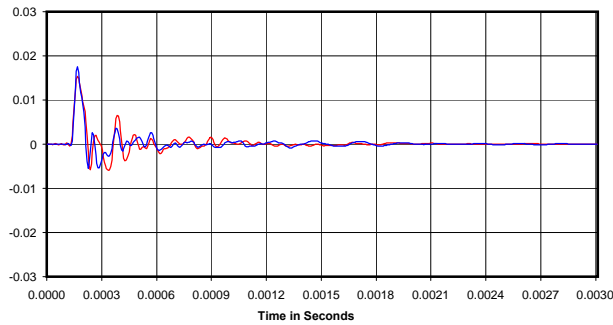
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



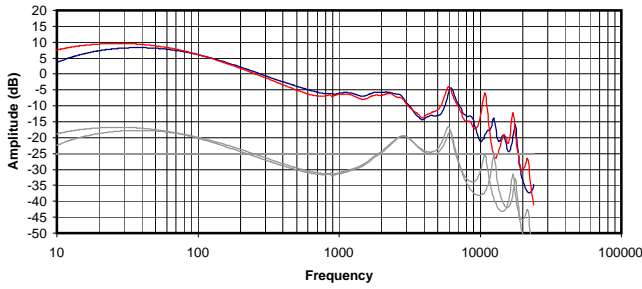
Impulse Response



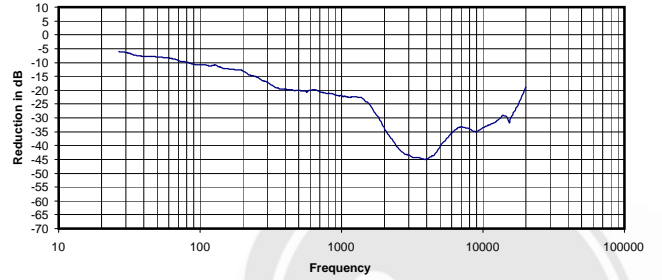
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.041 Vrms
 102 Ohms
 0.02 mW
 -14 dB

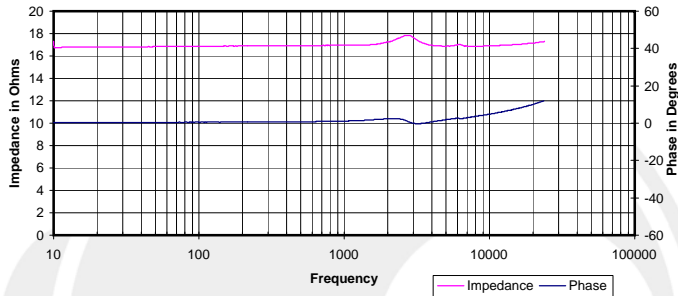
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



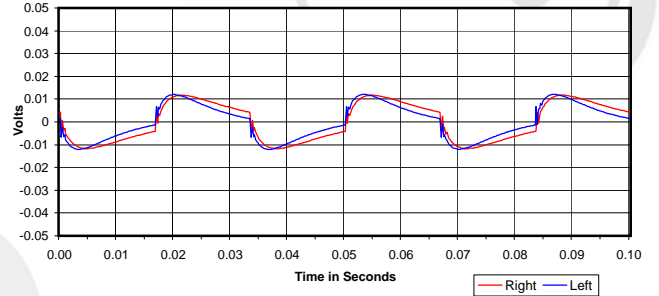
Isolation
Attenuation of External Sound vs. Frequency



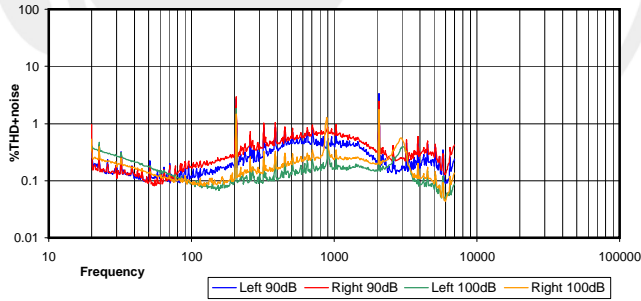
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



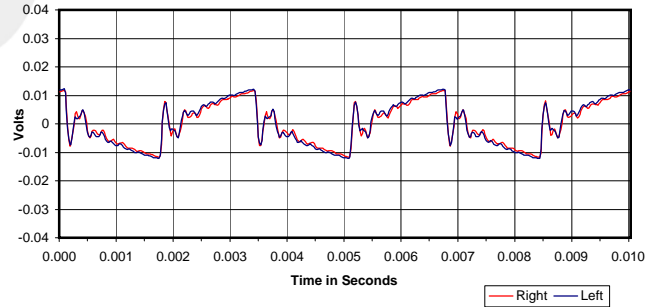
30 Hz Square Wave



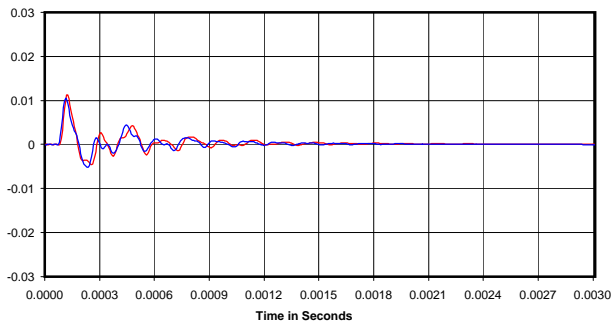
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



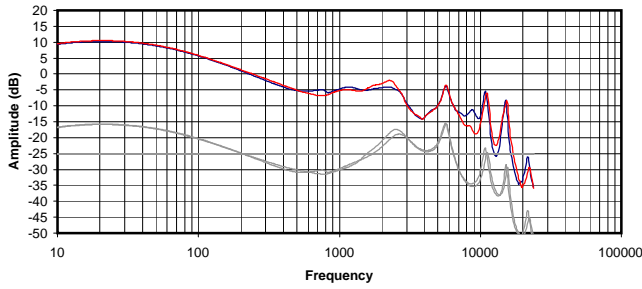
Impulse Response



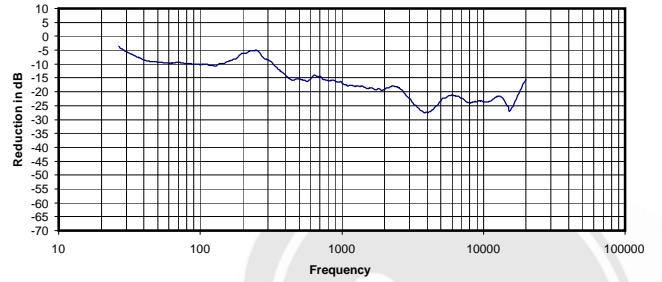
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.036 Vrms
17 Ohms
0.08 mW
-26 dB

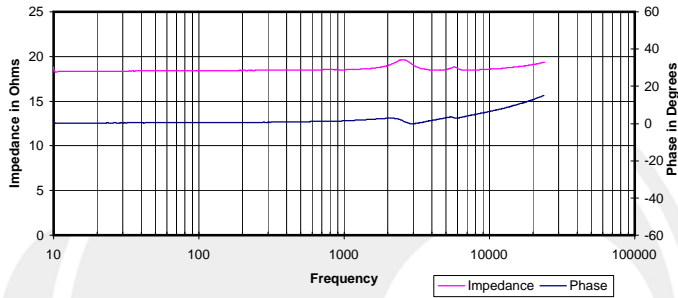
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



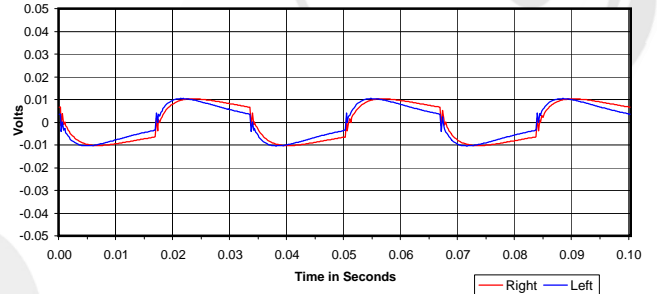
Isolation
Attenuation of External Sound vs. Frequency



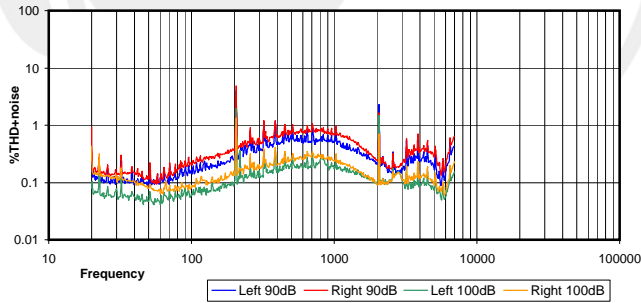
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



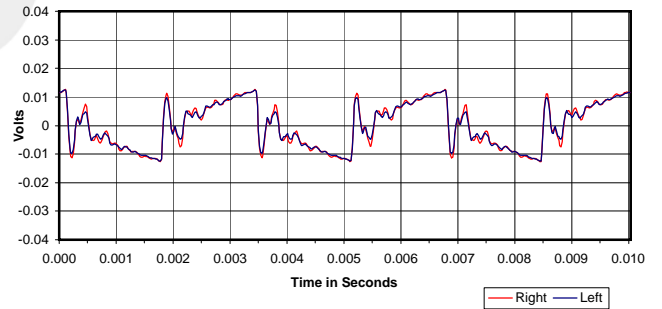
30 Hz Square Wave



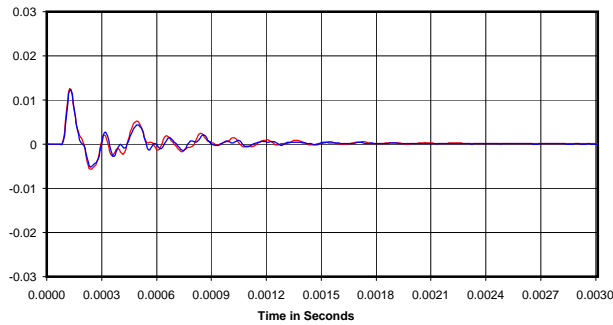
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



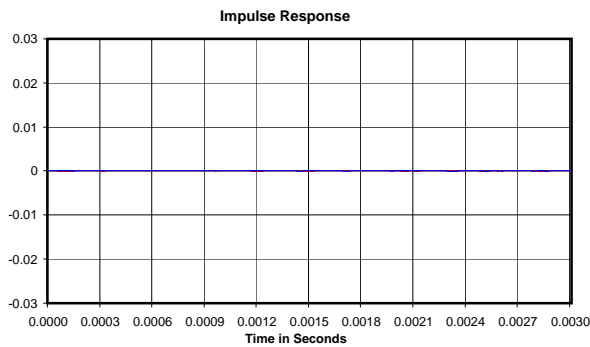
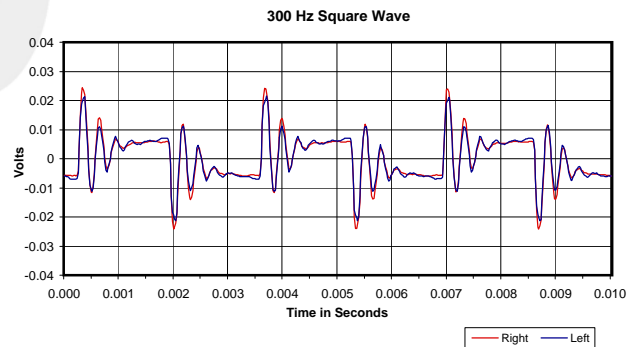
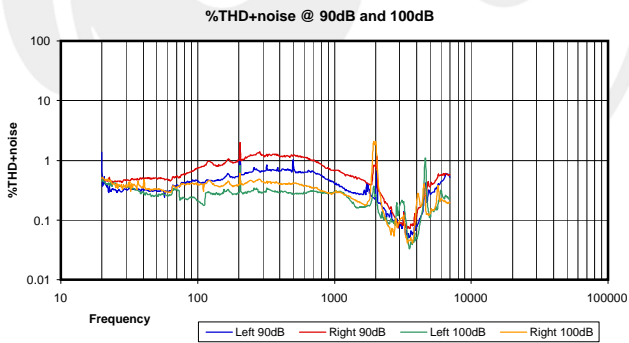
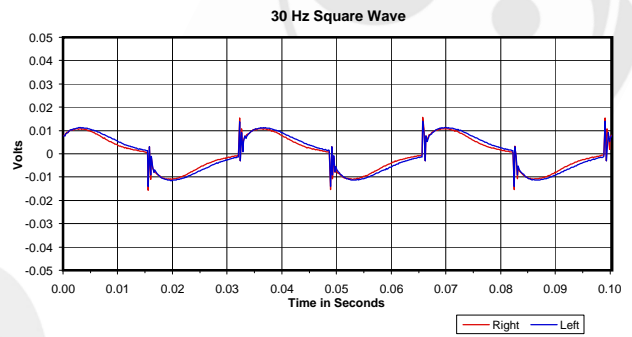
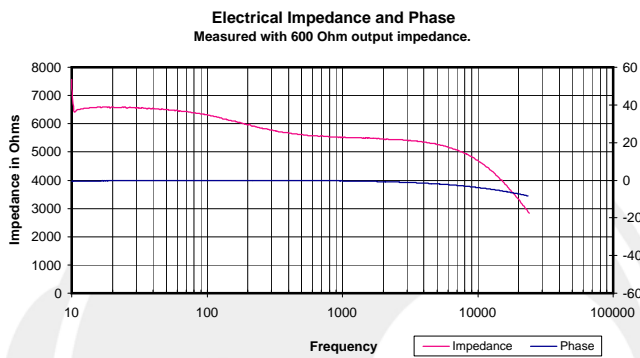
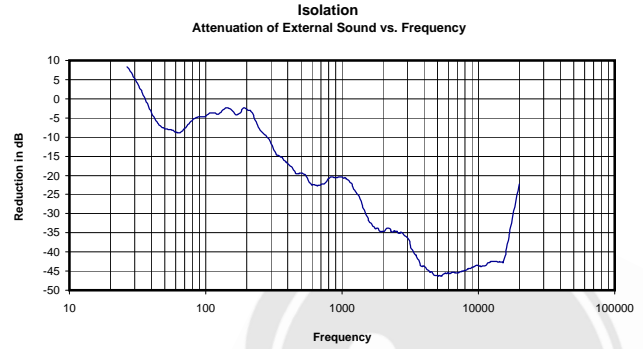
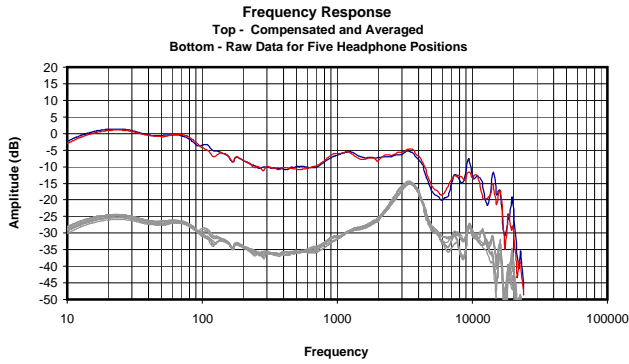
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
19 Ohms
0.04 mW
-17 dB



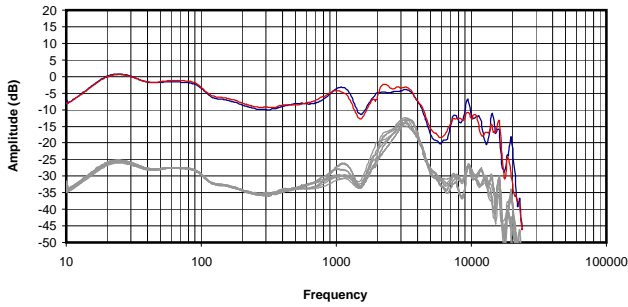


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

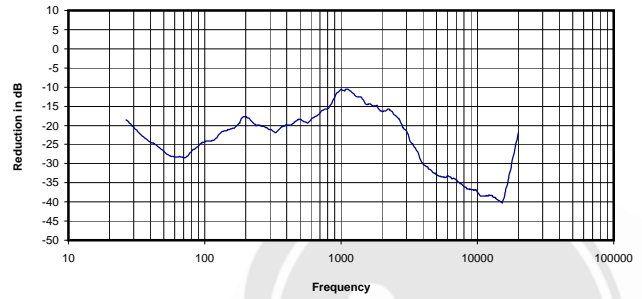
0.020 Vrms
5520 Ohms
0.00 mW
-25 dB



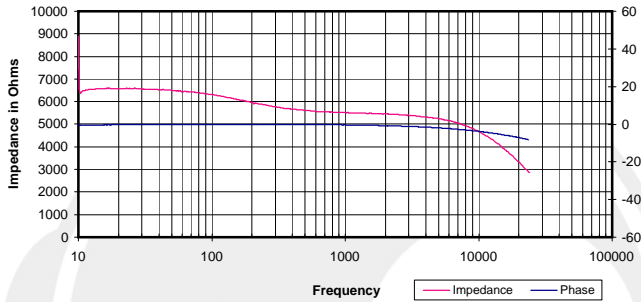
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



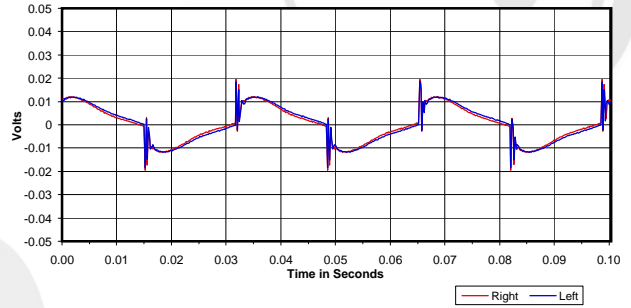
Isolation
Attenuation of External Sound vs. Frequency



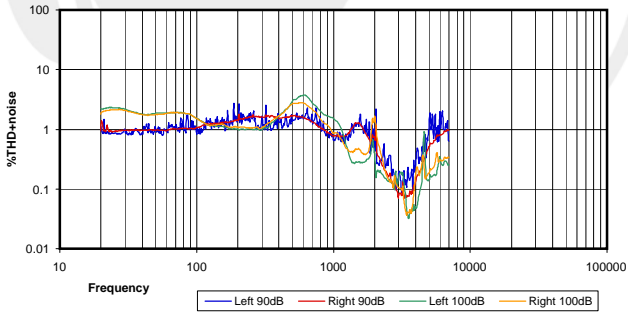
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



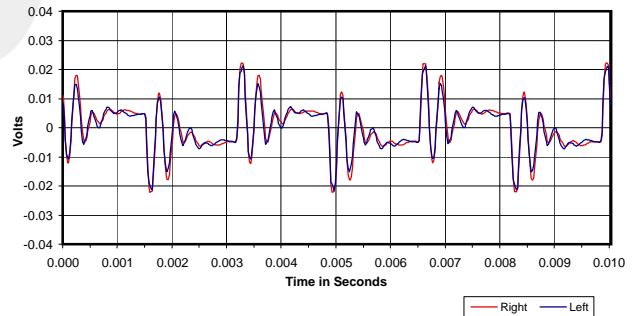
30 Hz Square Wave



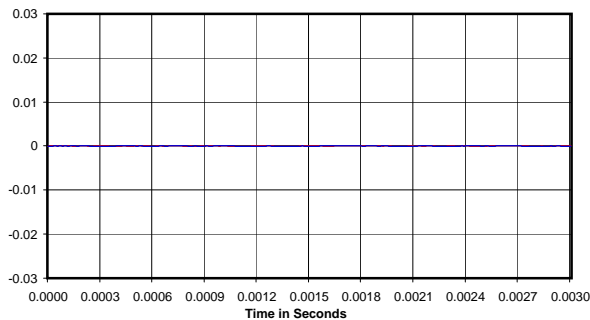
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



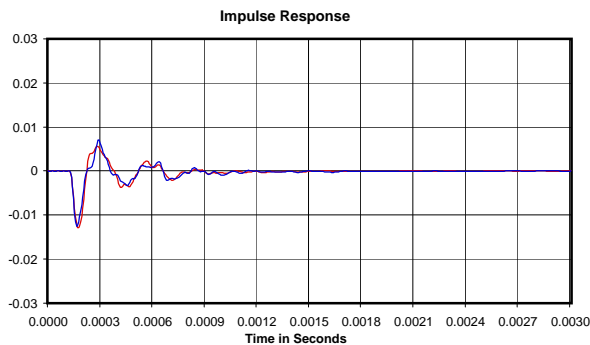
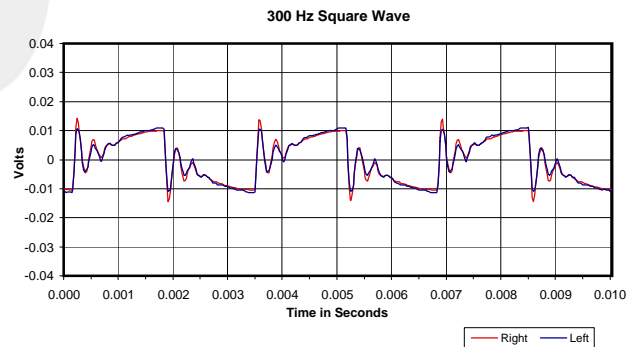
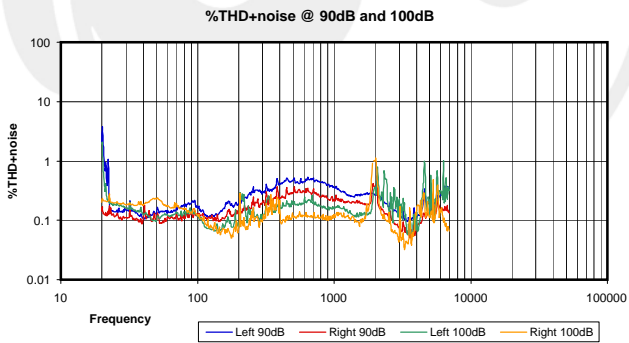
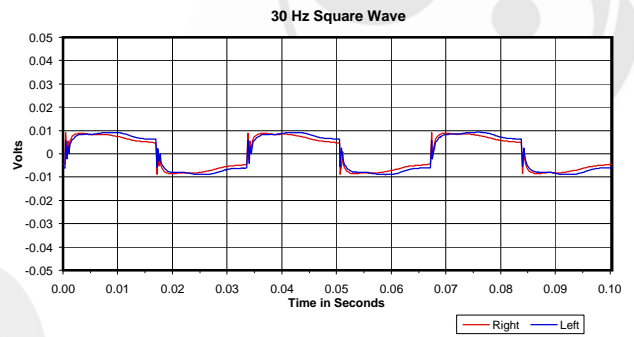
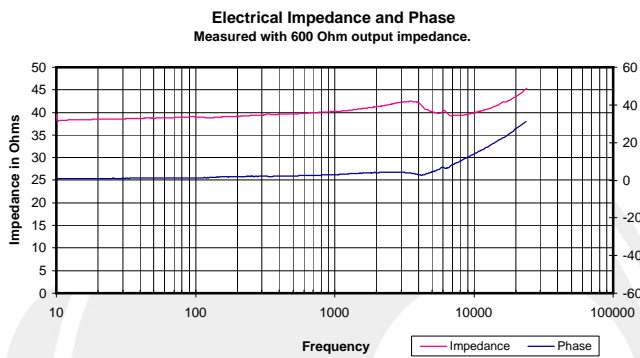
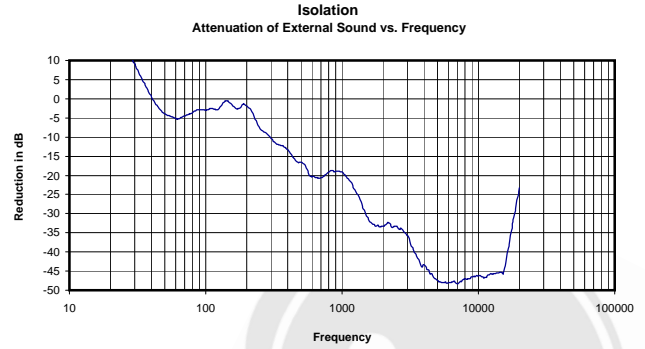
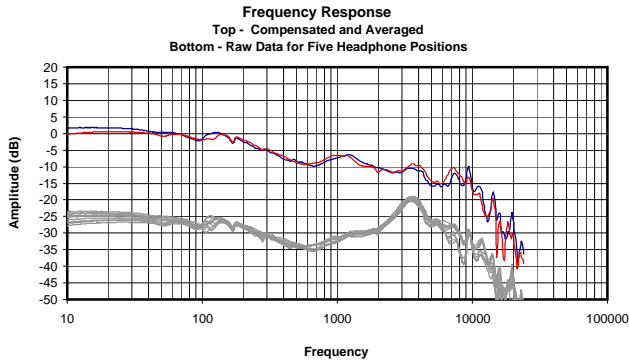
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.013 Vrms
5516 Ohms
0.00 mW
-22 dB



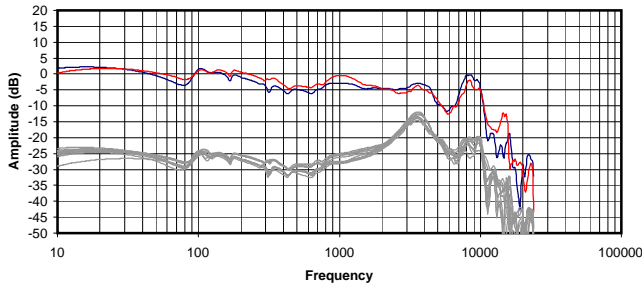


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

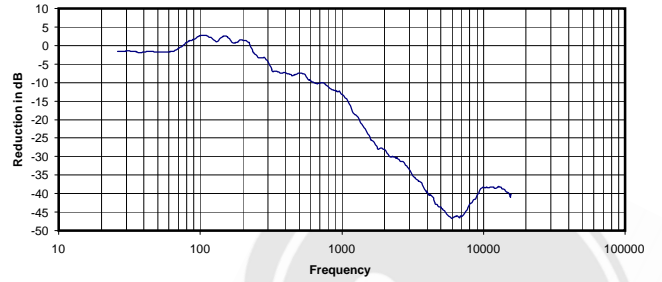
0.043 Vrms
40 Ohms
0.05 mW
-24 dBr



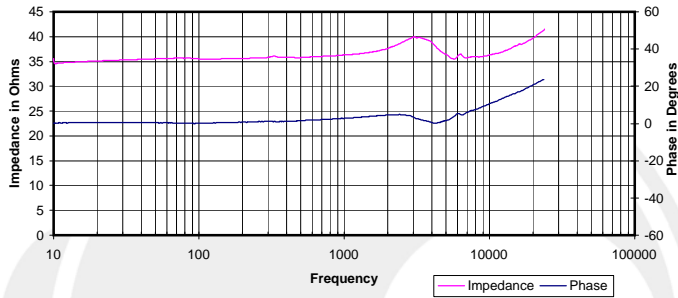
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



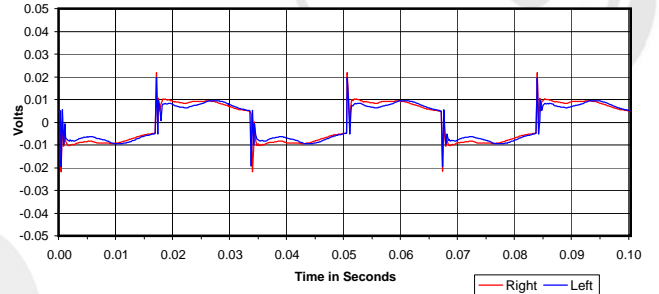
Isolation
 Attenuation of External Sound vs. Frequency



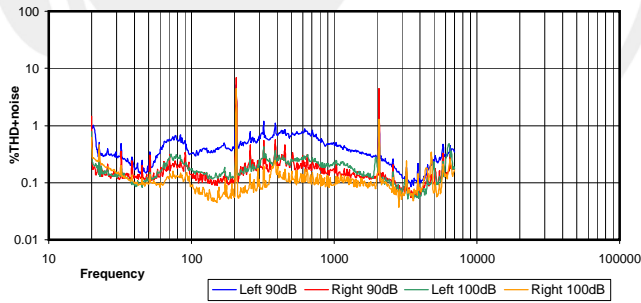
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



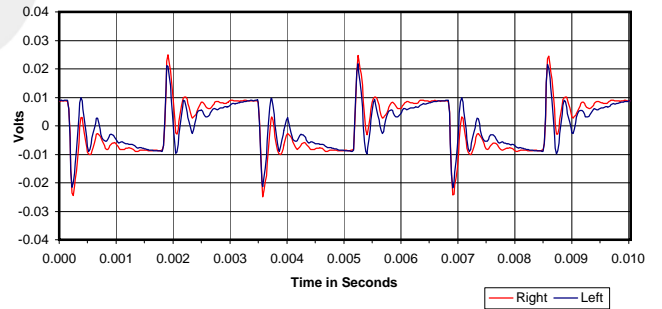
30 Hz Square Wave



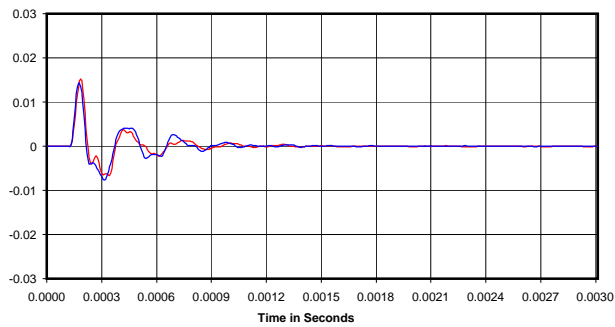
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

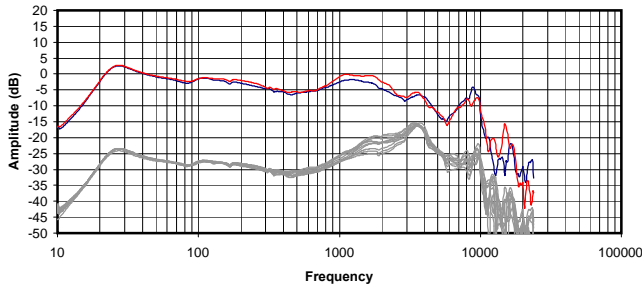


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

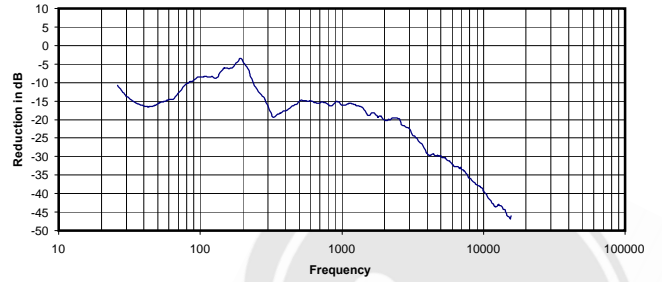
0.045 Vrms
 36 Ohms
 0.06 mW
 -16 dB



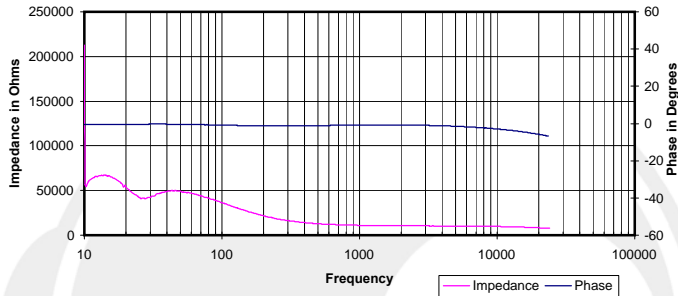
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



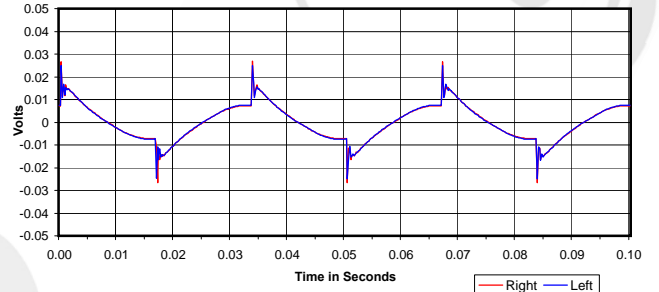
Isolation
Attenuation of External Sound vs. Frequency



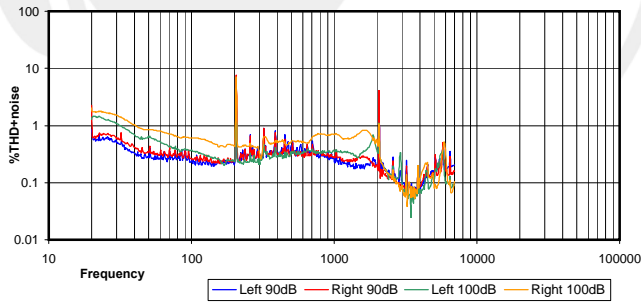
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



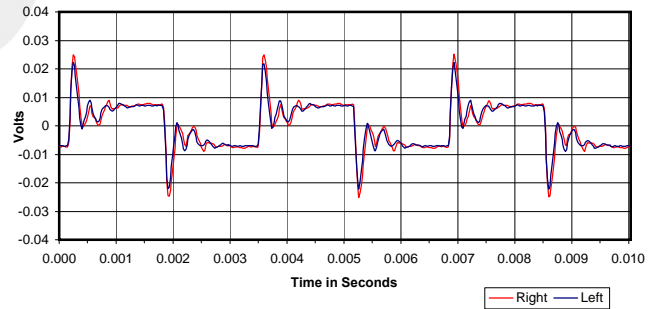
30 Hz Square Wave



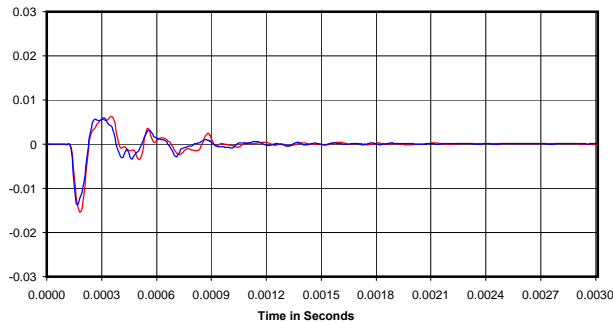
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

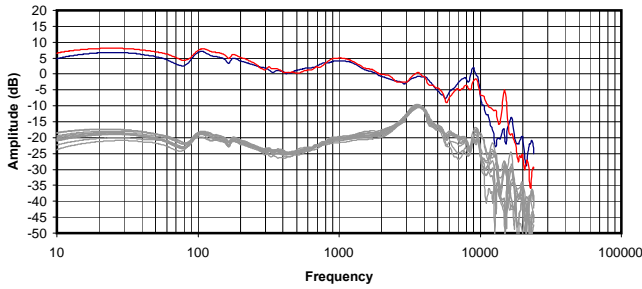


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

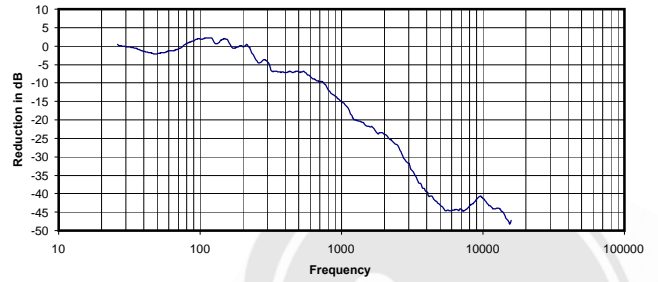
0.021 Vrms
11061 Ohms
0.00 mW
-17 dB



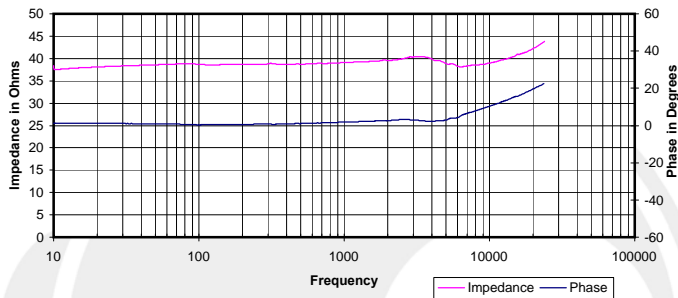
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



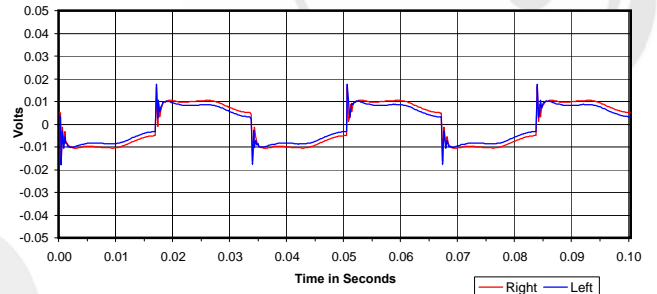
Isolation
 Attenuation of External Sound vs. Frequency



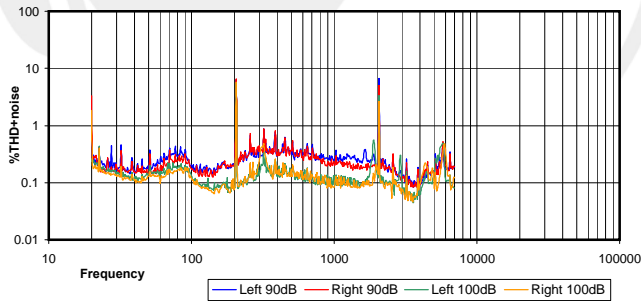
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



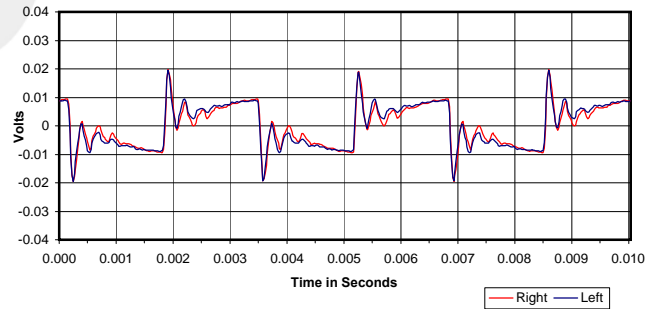
30 Hz Square Wave



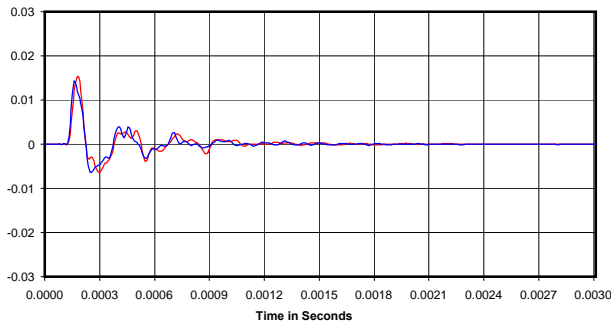
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



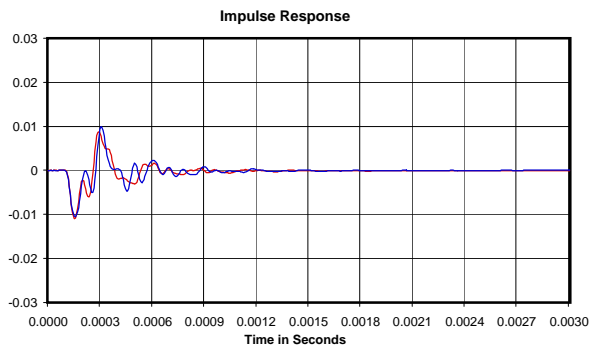
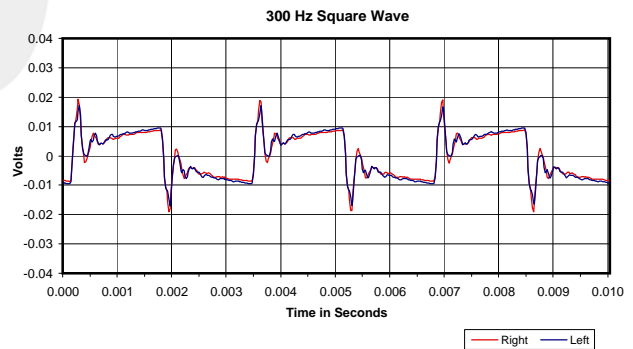
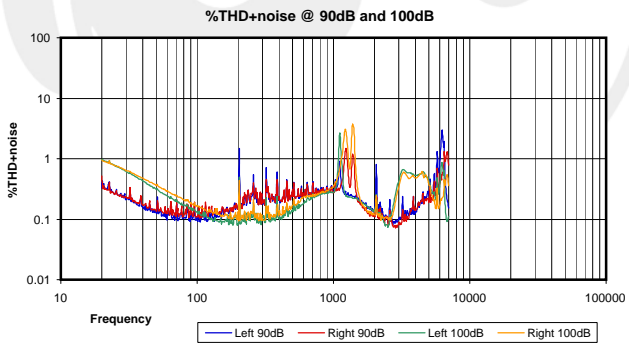
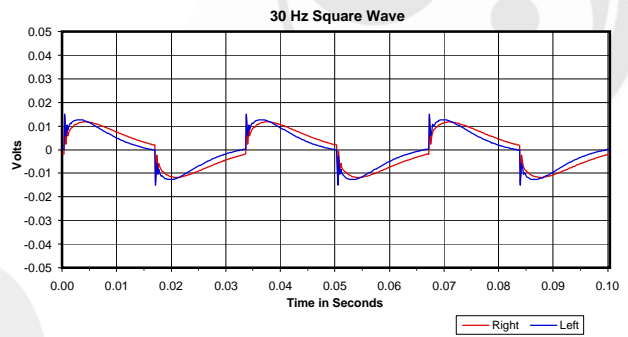
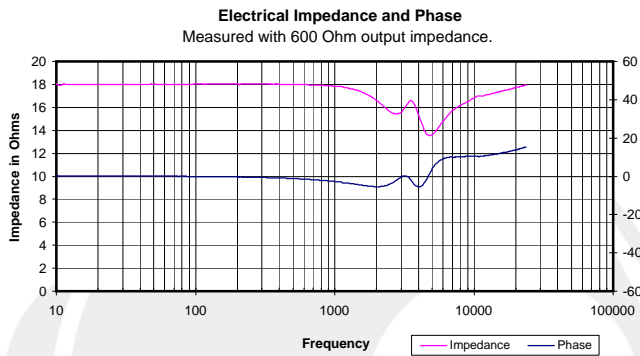
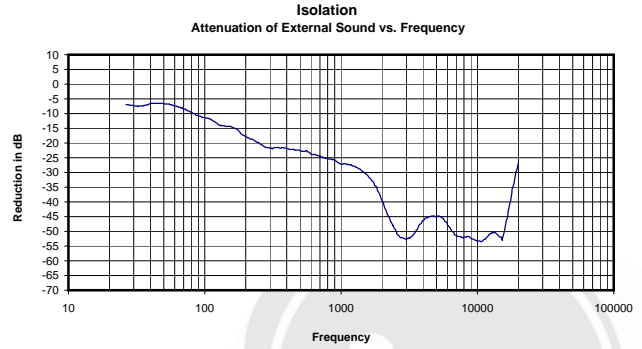
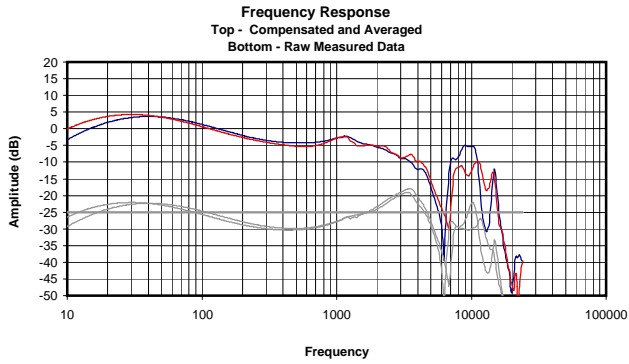
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
 39 Ohms
 0.04 mW
 -16 dB



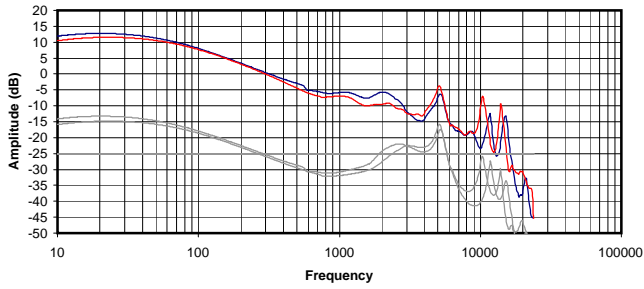


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

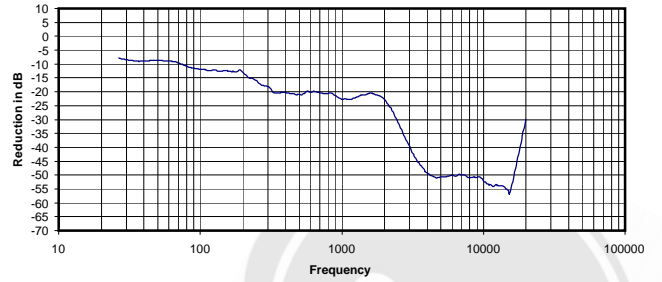
0.045 Vrms
18 Ohms
0.12 mW
-32 dBr



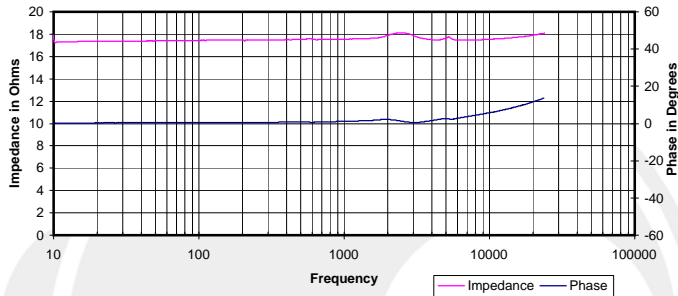
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



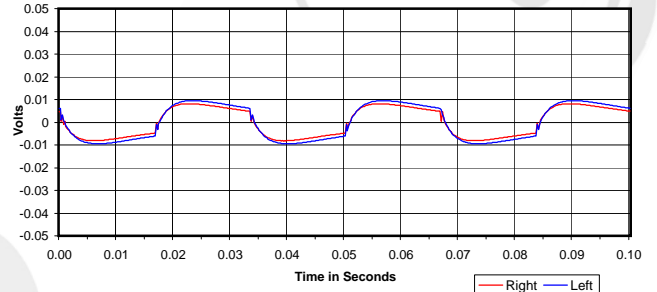
Isolation
Attenuation of External Sound vs. Frequency



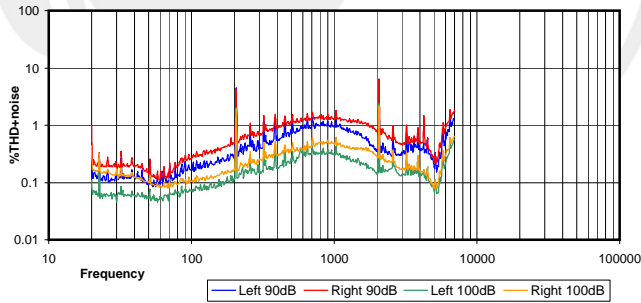
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



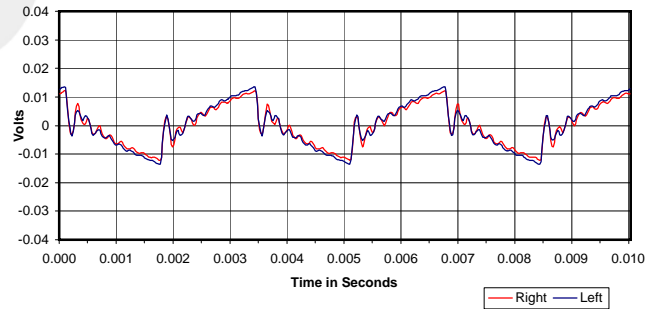
30 Hz Square Wave



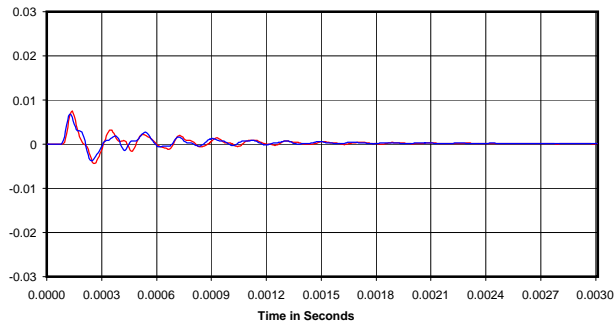
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

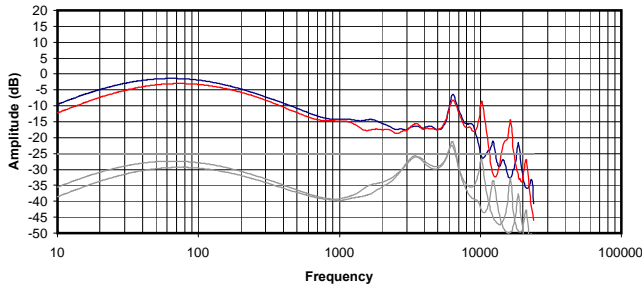


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

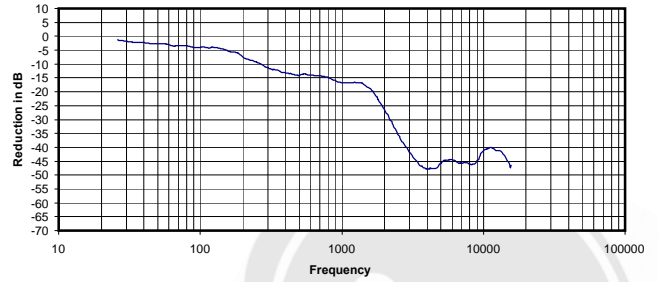
0.029 Vrms
18 Ohms
0.05 mW
-28 dB



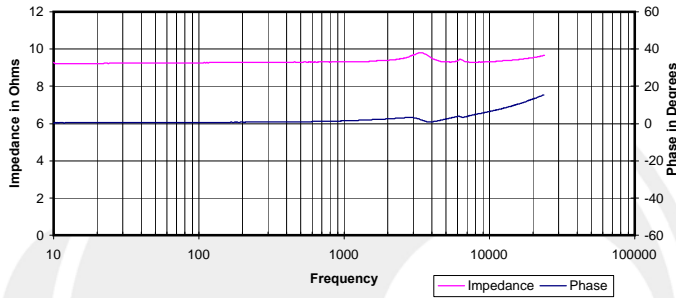
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



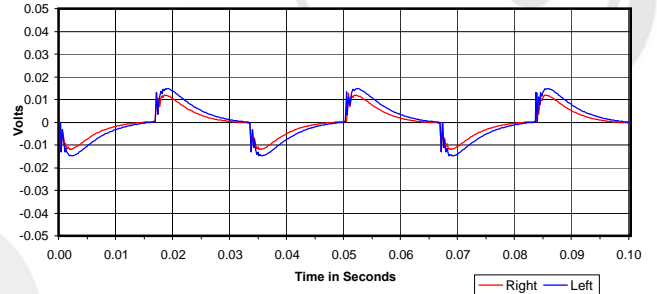
Isolation
Attenuation of External Sound vs. Frequency



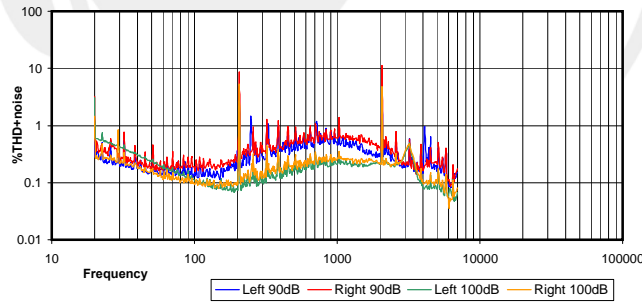
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



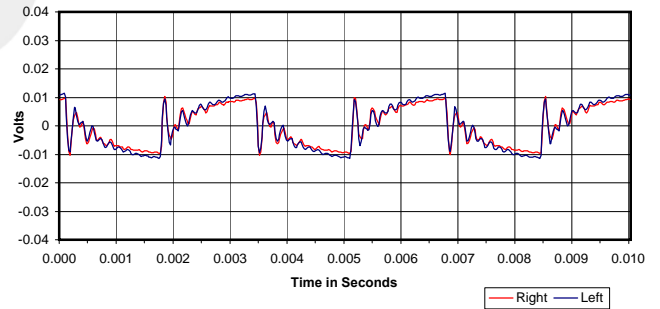
30 Hz Square Wave



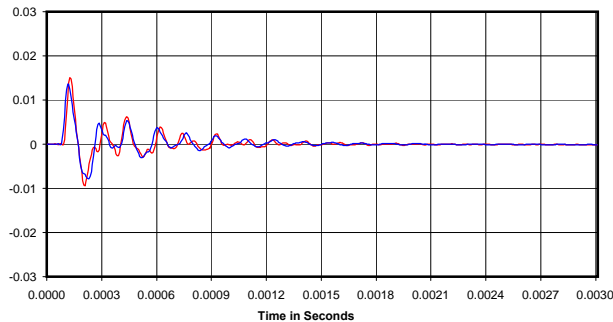
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



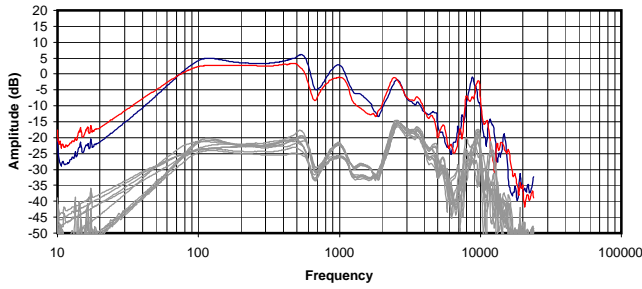
Impulse Response



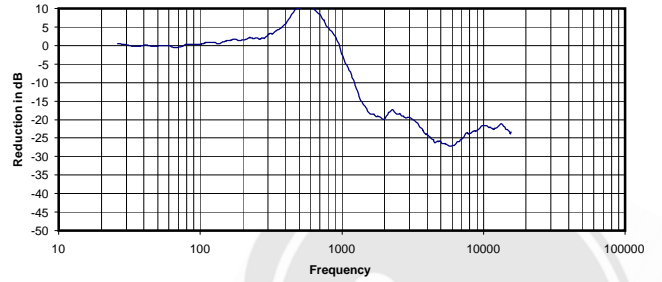
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.032 Vrms
9 Ohms
0.11 mW
-20 dB

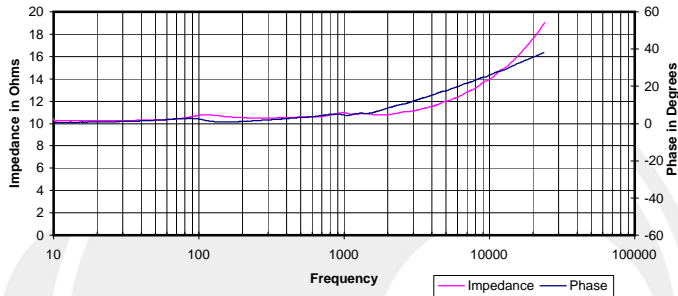
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



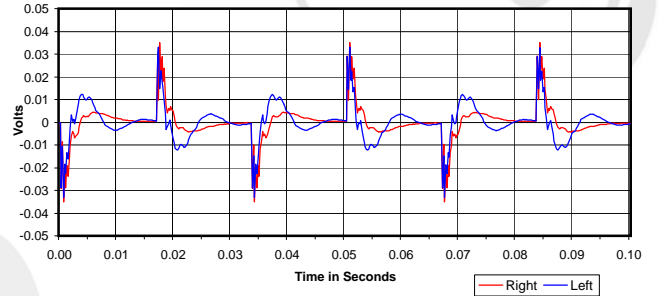
Isolation
Attenuation of External Sound vs. Frequency



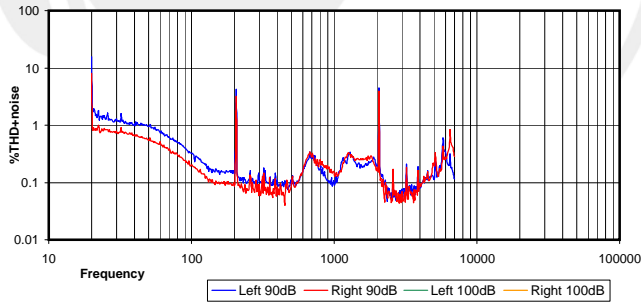
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



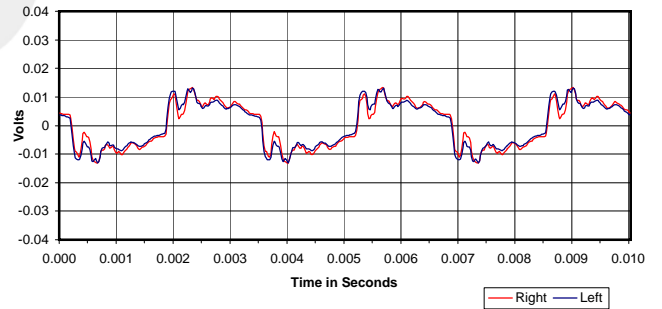
30 Hz Square Wave



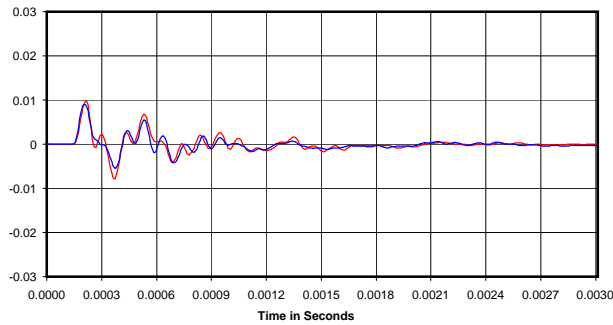
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



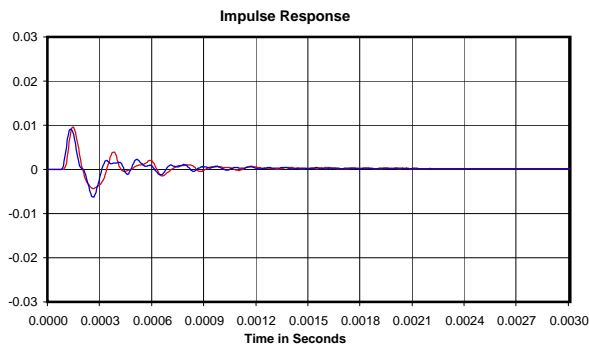
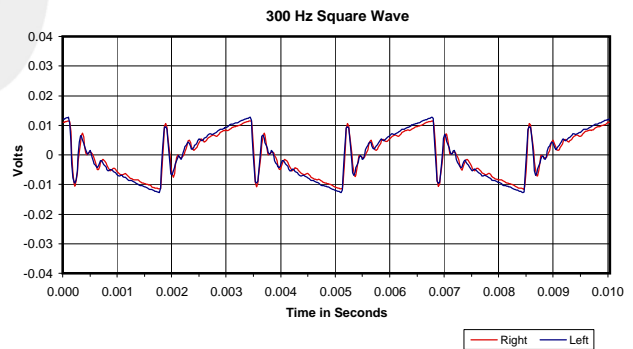
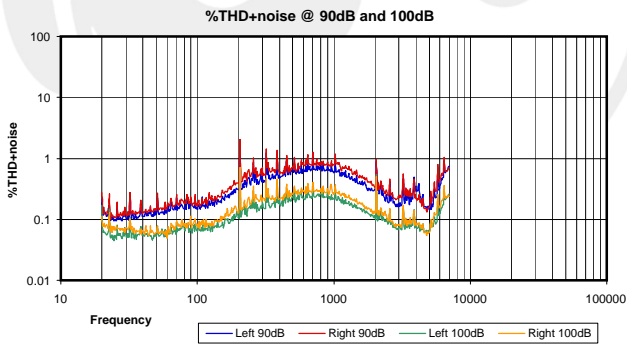
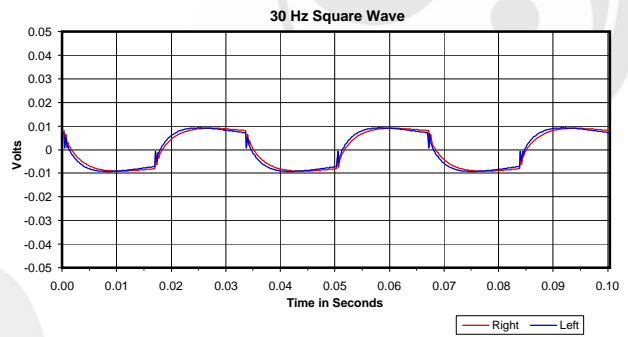
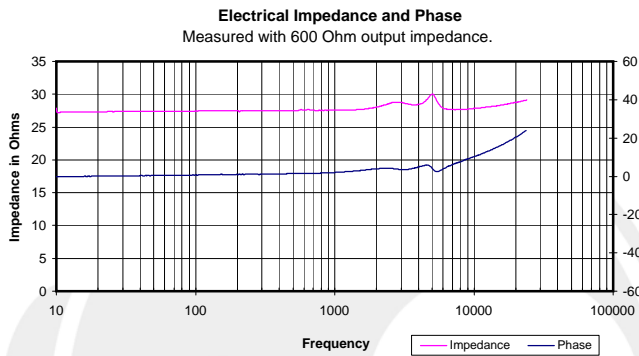
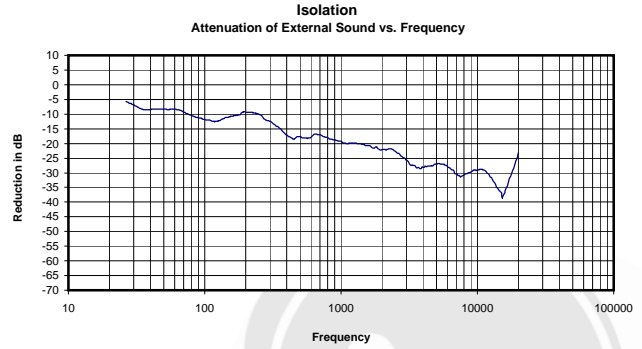
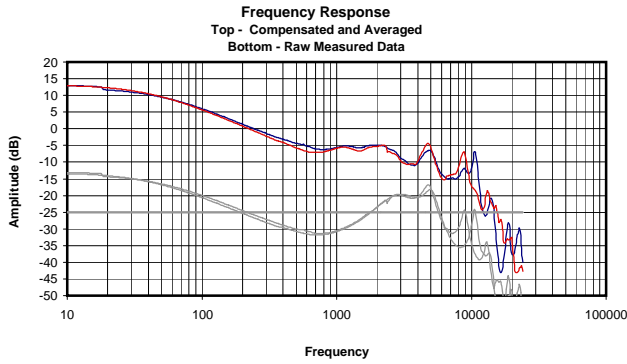
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
11 Ohms
0.05 mW
-6 dB

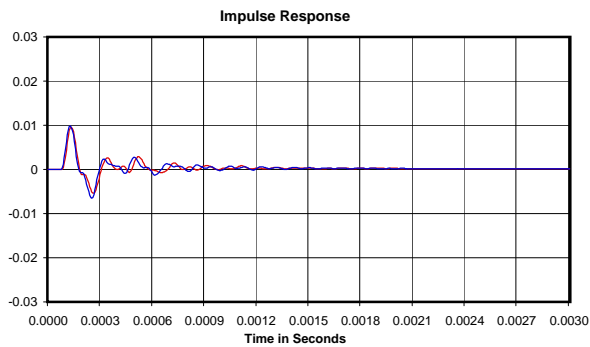
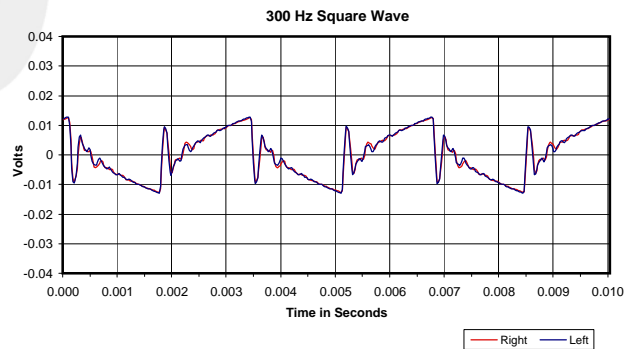
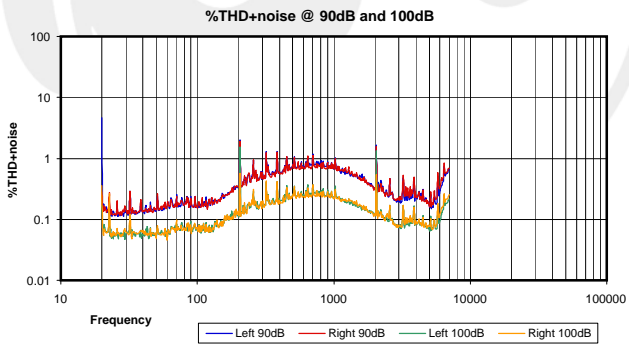
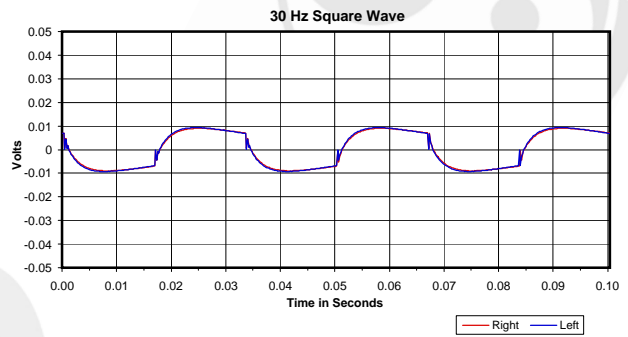
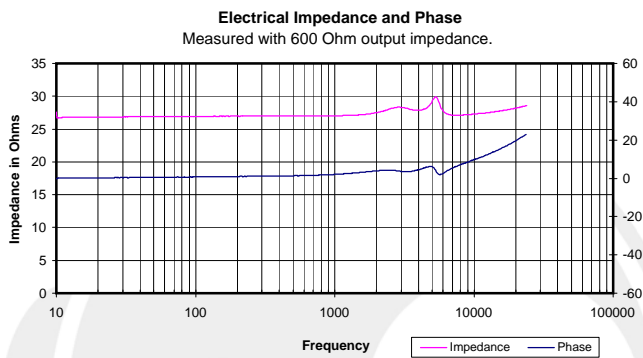
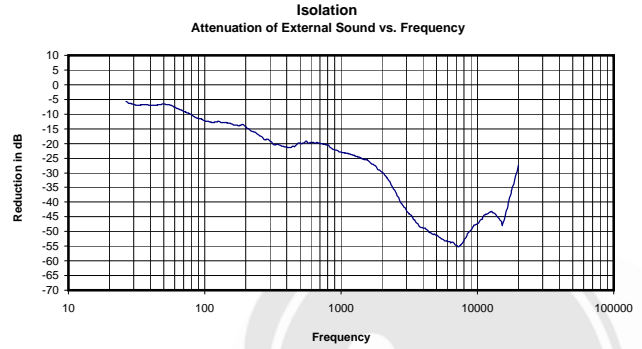
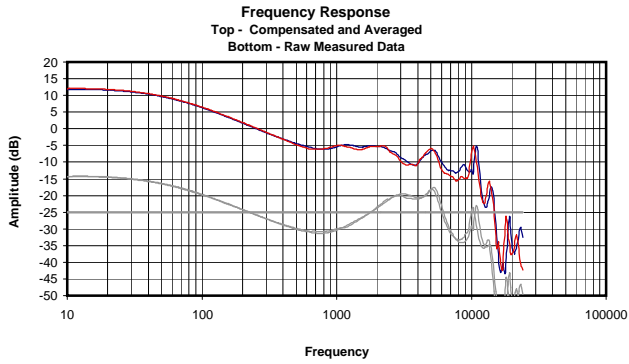




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
28 Ohms
0.03 mW
-20 dBr

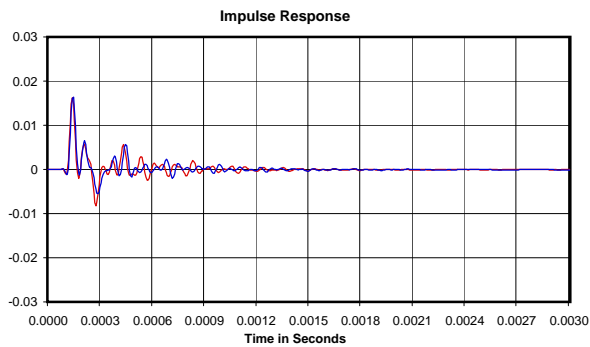
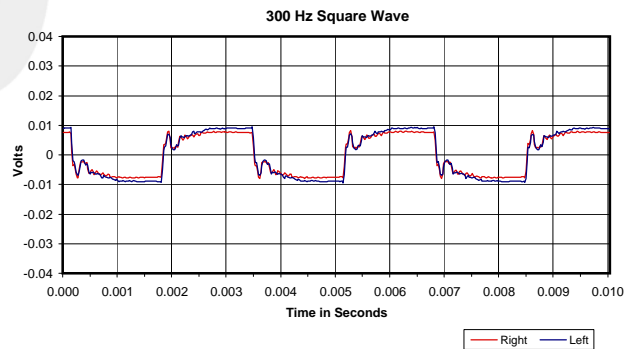
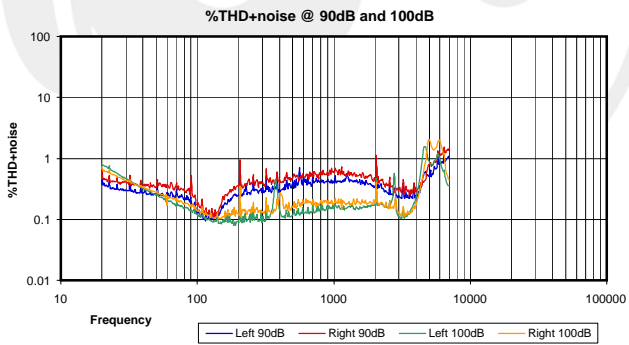
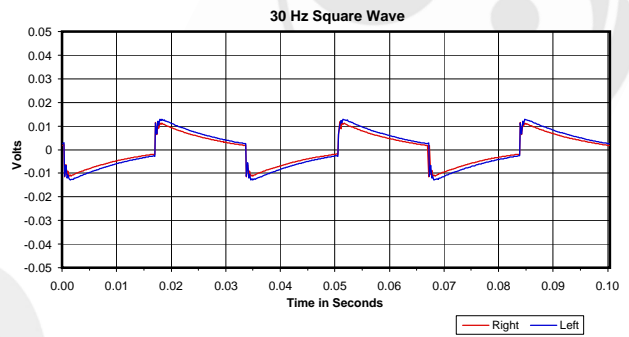
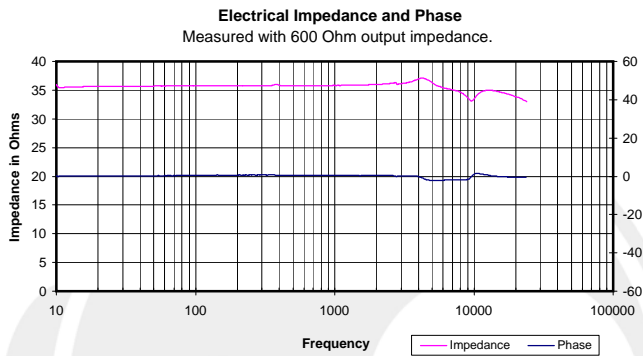
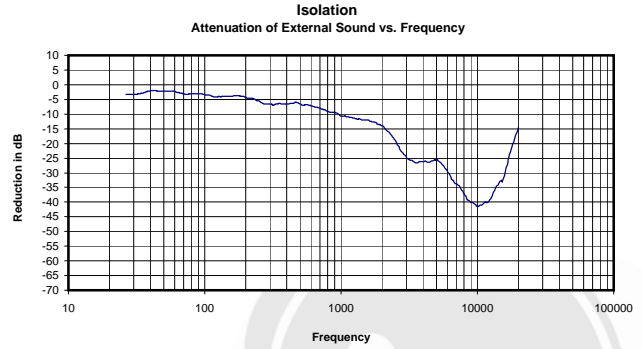
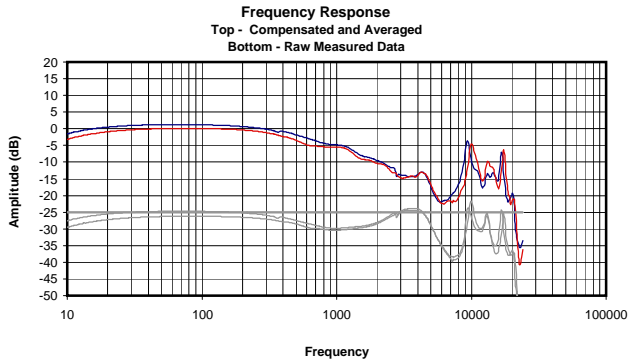




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
27 Ohms
0.03 mW
-29 dBr

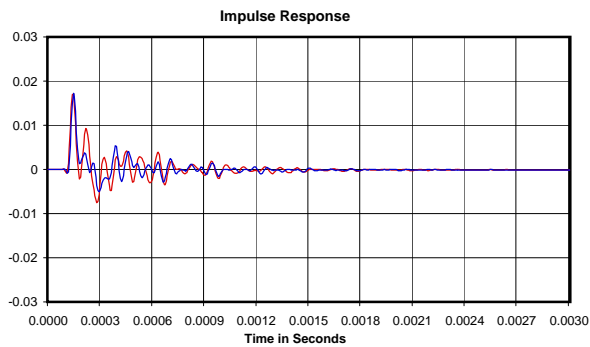
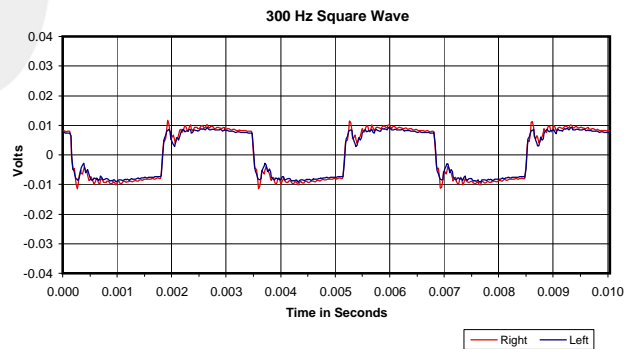
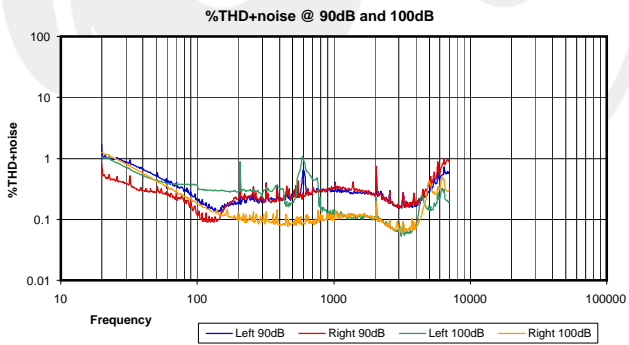
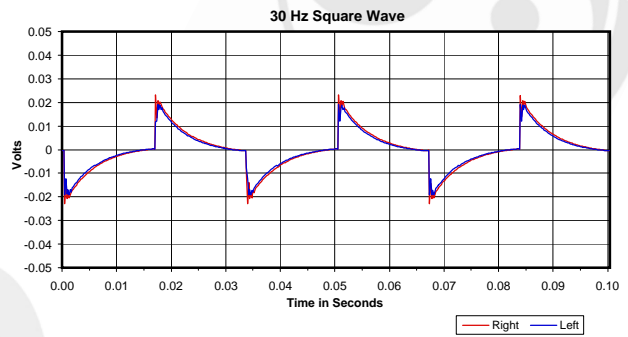
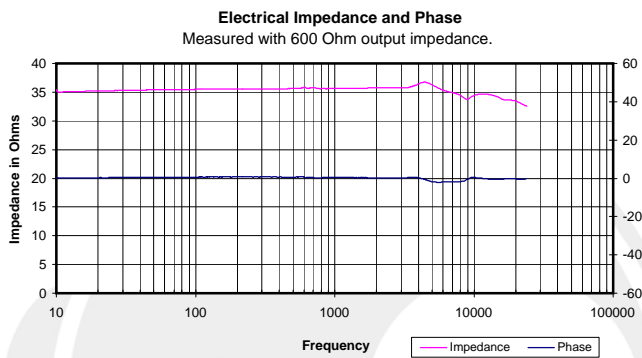
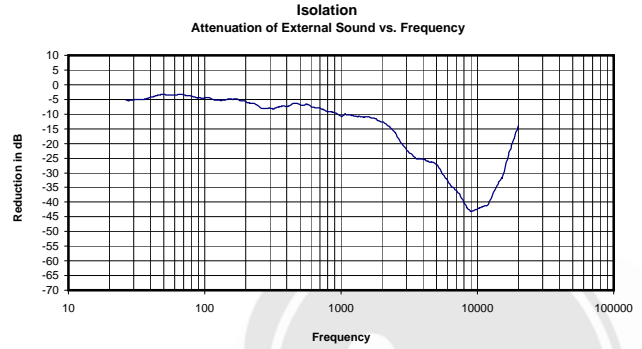
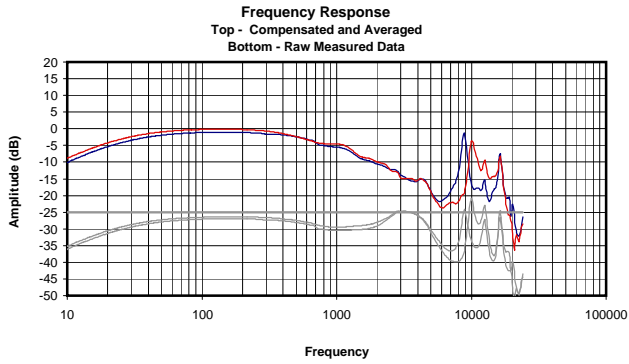




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.038 Vrms
36 Ohms
0.04 mW
-14 dB



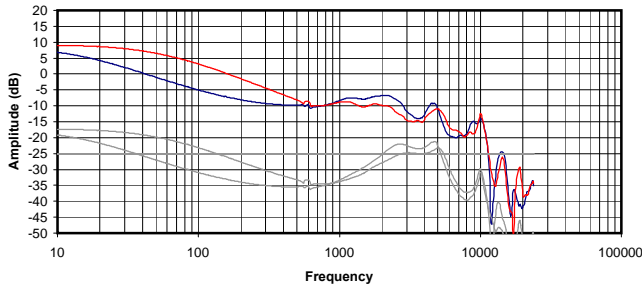


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

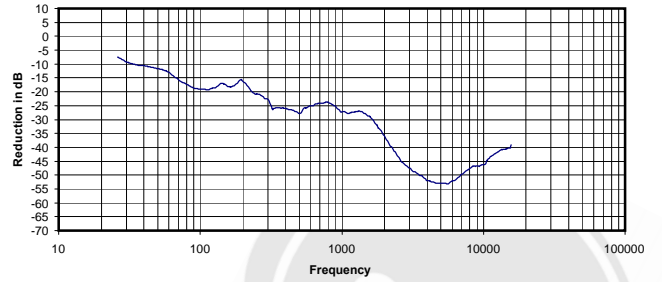
0.072 Vrms
36 Ohms
0.14 mW
-15 dBr



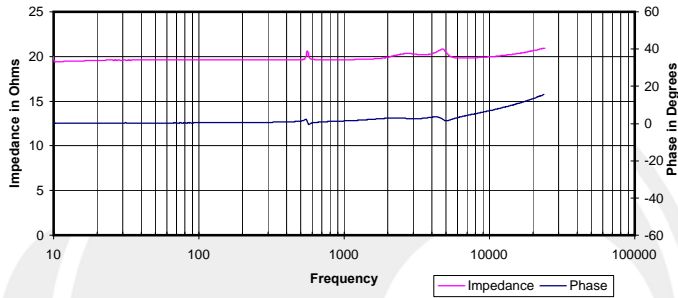
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



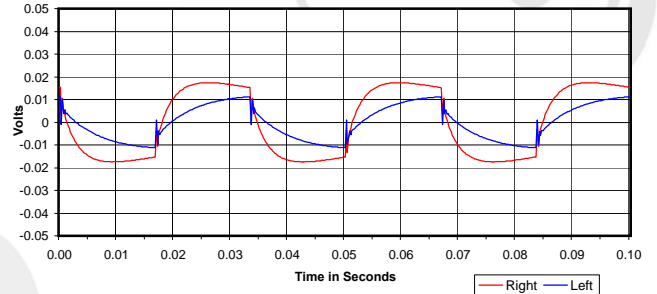
Isolation
Attenuation of External Sound vs. Frequency



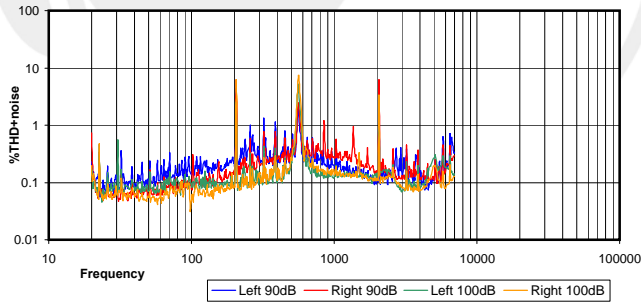
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



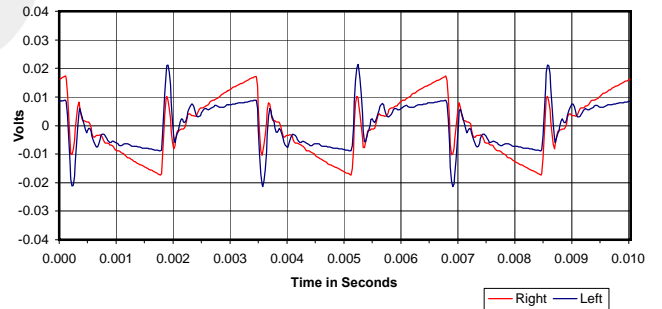
30 Hz Square Wave



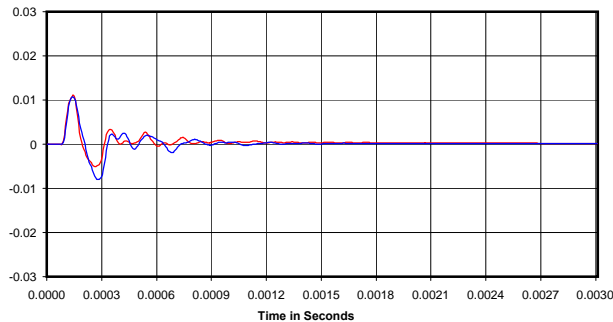
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



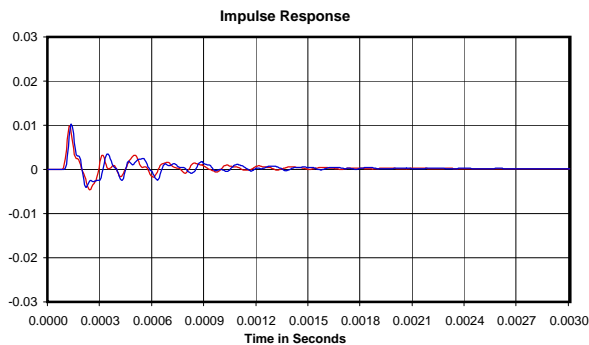
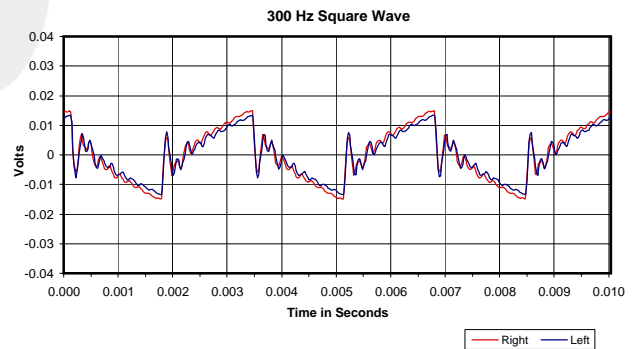
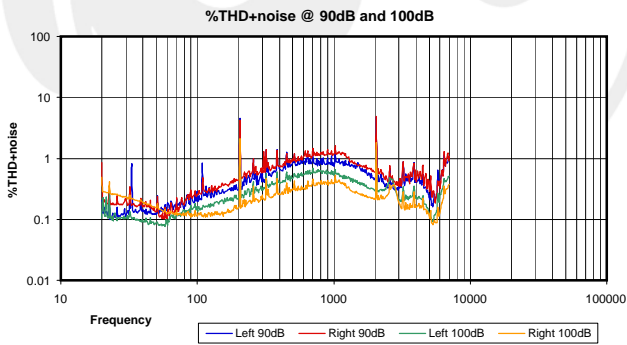
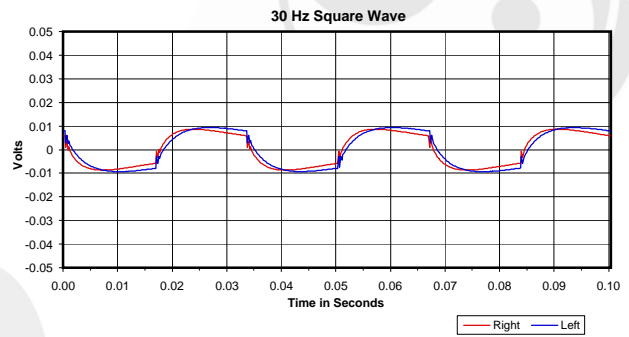
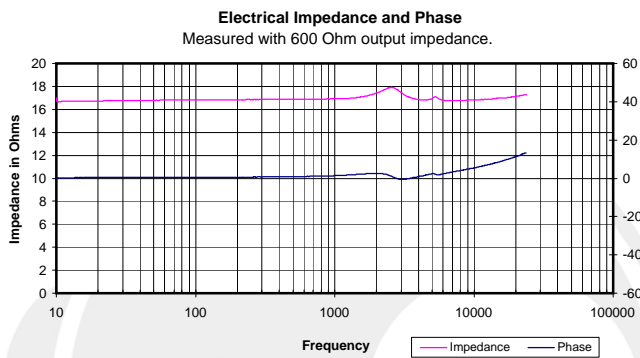
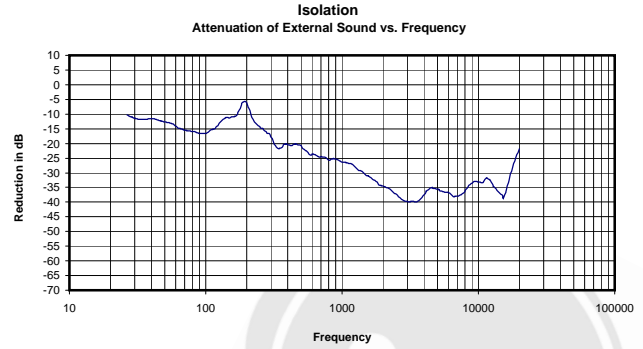
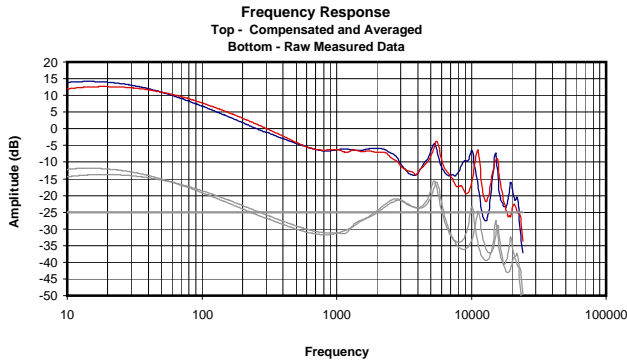
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
20 Ohms
0.05 mW
-31 dB



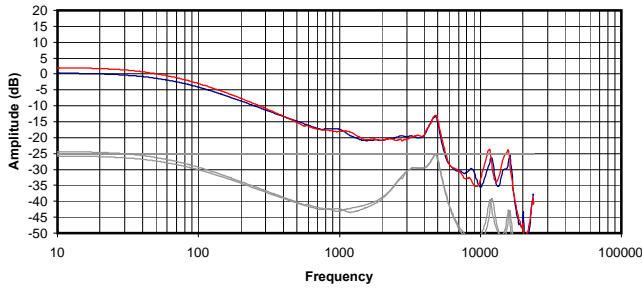


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

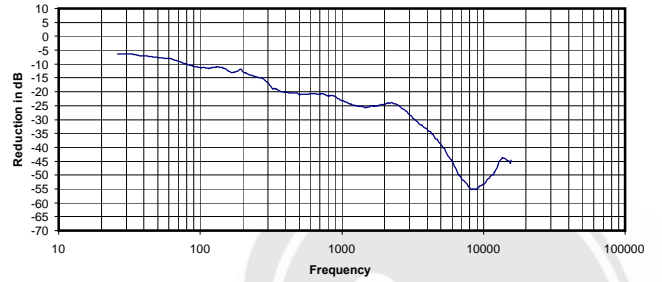
0.037 Vrms
17 Ohms
0.08 mW
-26 dB



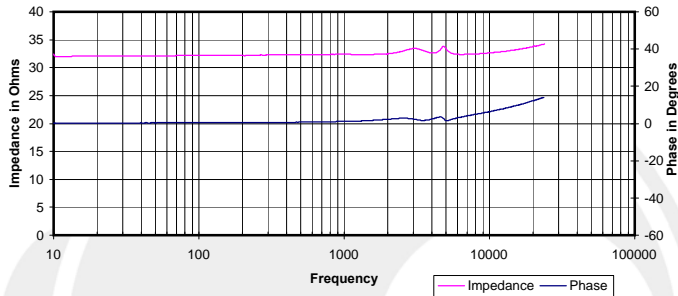
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



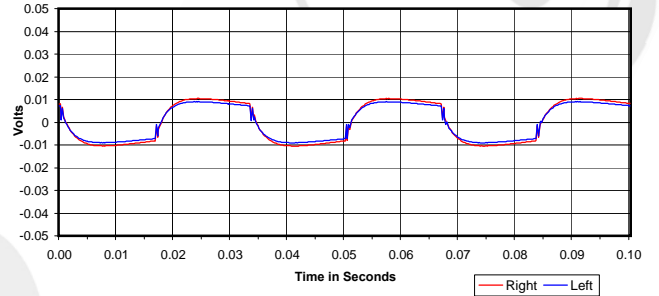
Isolation
Attenuation of External Sound vs. Frequency



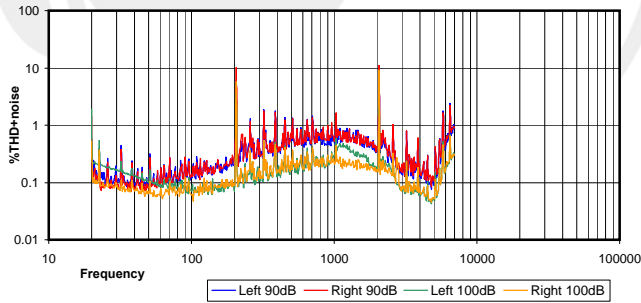
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



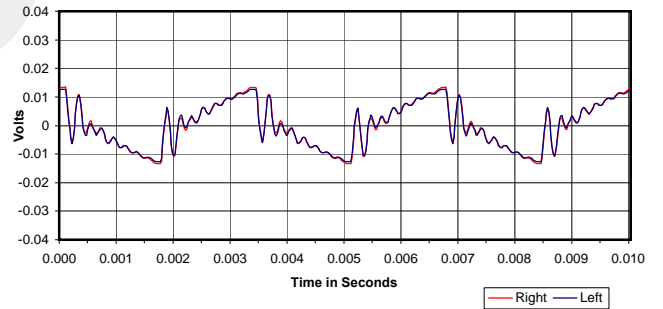
30 Hz Square Wave



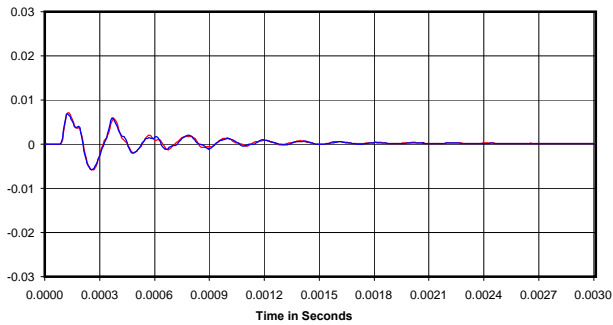
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

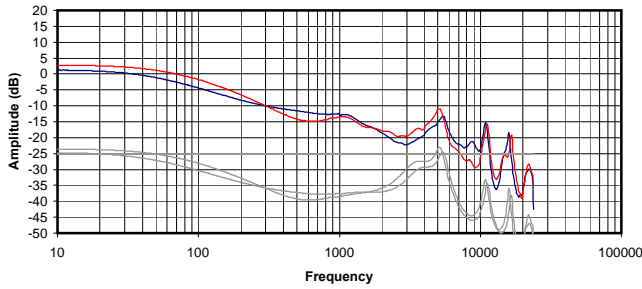


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

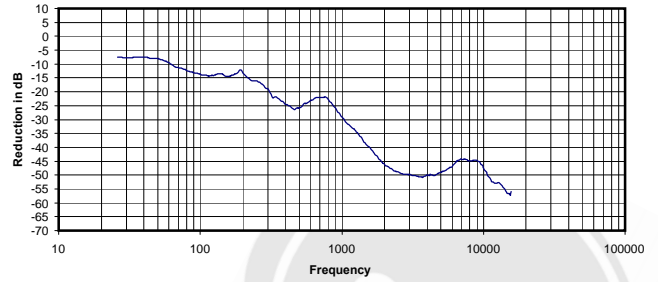
0.045 Vrms
32 Ohms
0.06 mW
-22 dB



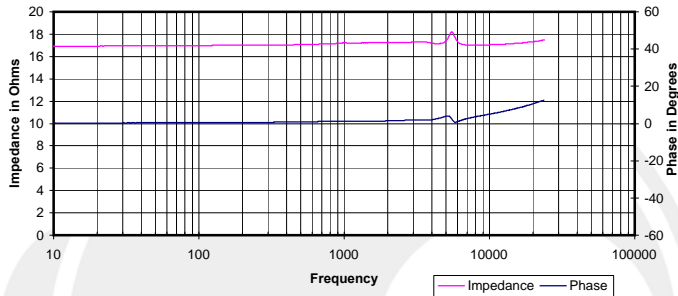
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



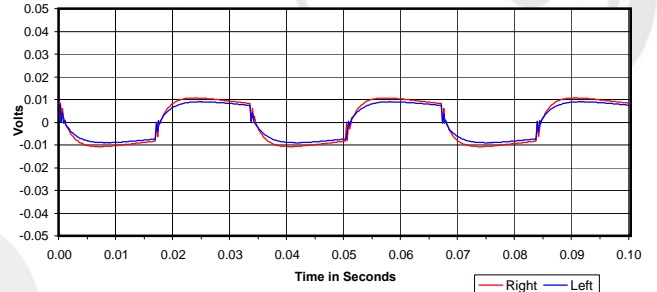
Isolation
Attenuation of External Sound vs. Frequency



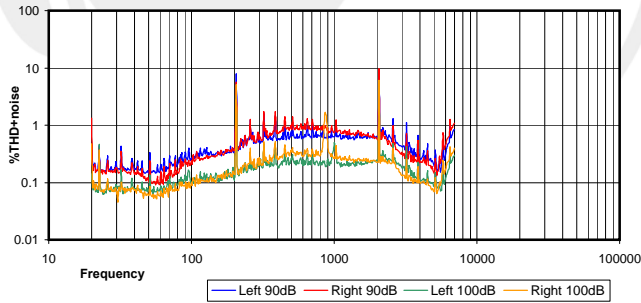
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



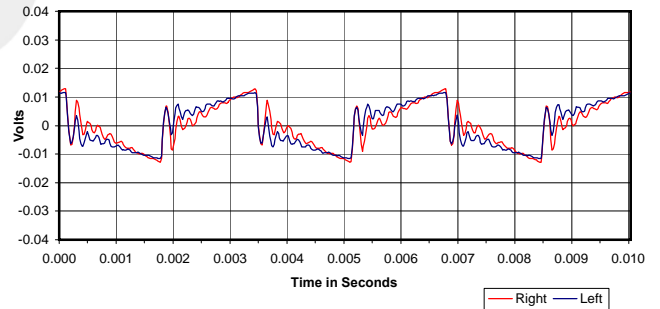
30 Hz Square Wave



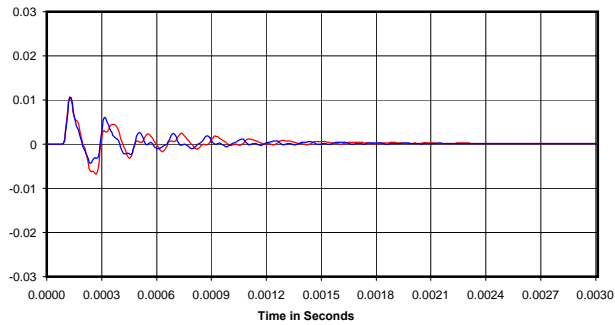
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

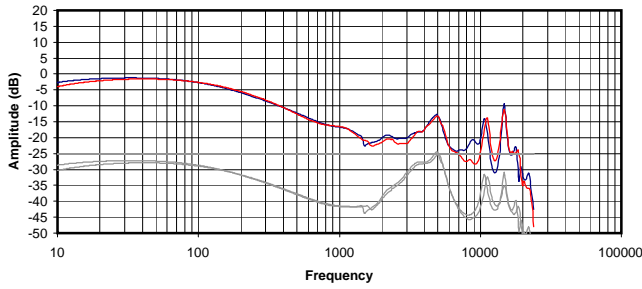


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

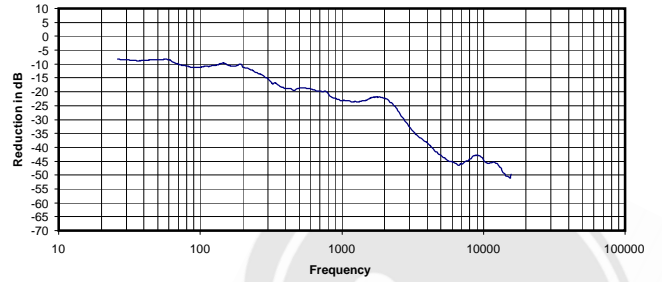
0.020 Vrms
17 Ohms
0.02 mW
-30 dB



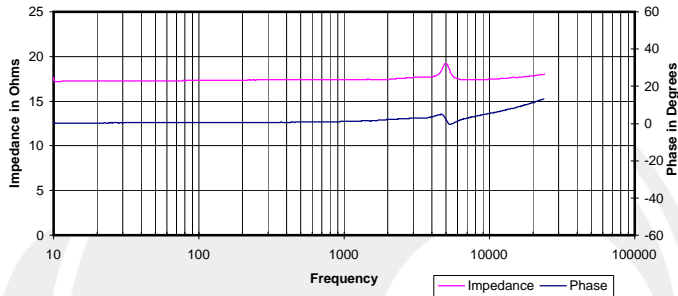
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



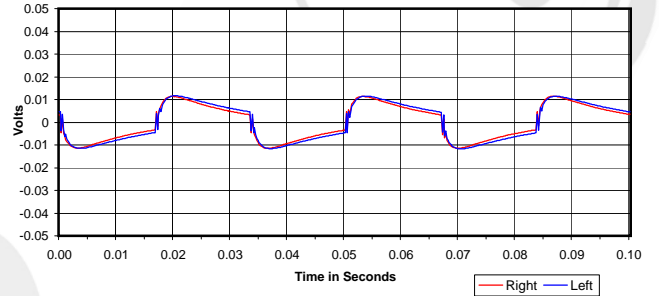
Isolation
Attenuation of External Sound vs. Frequency



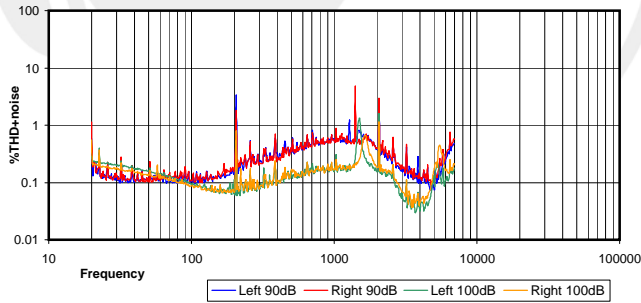
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



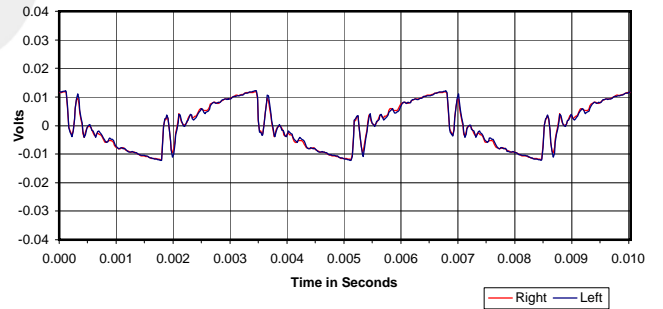
30 Hz Square Wave



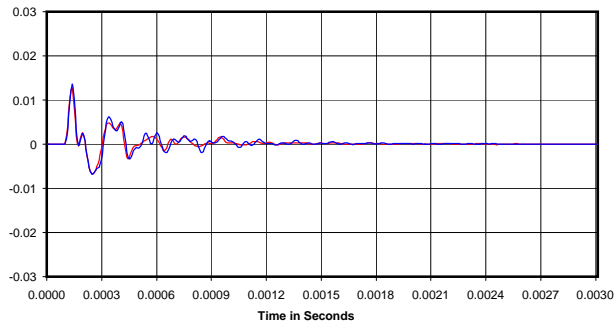
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

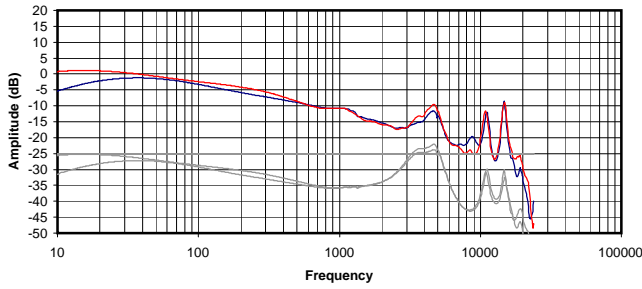


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

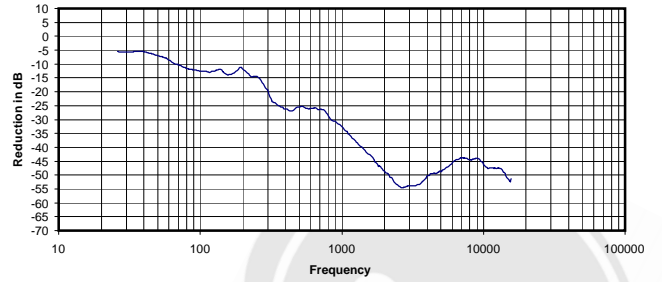
0.041 Vrms
17 Ohms
0.10 mW
-22 dB



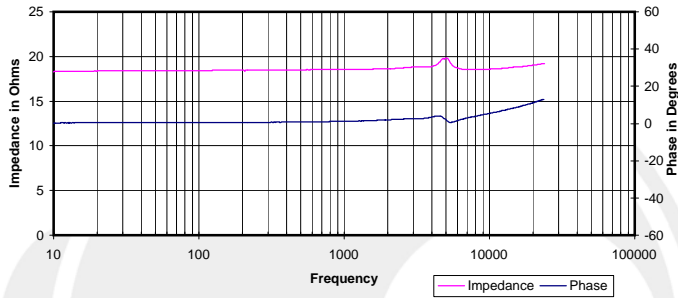
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



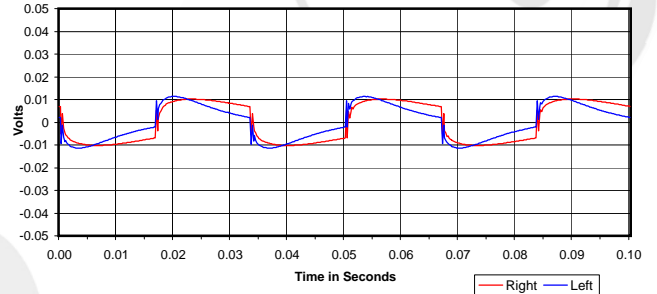
Isolation
Attenuation of External Sound vs. Frequency



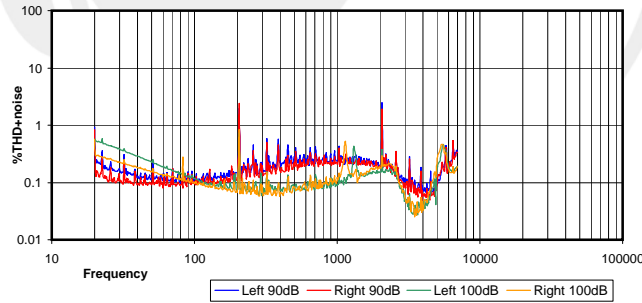
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



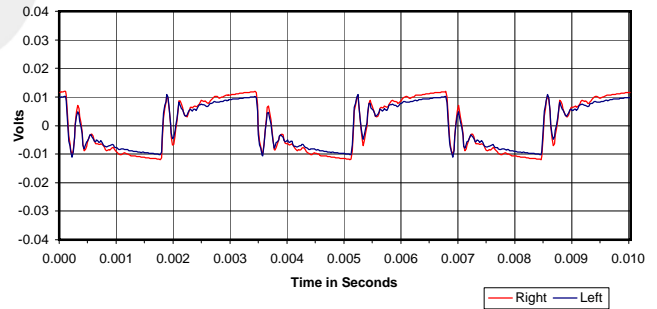
30 Hz Square Wave



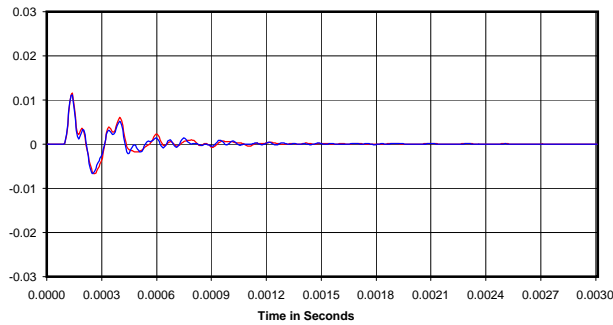
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

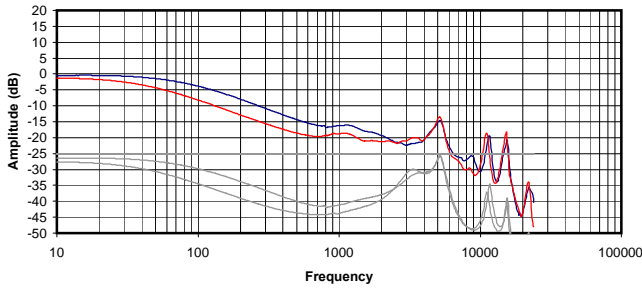


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

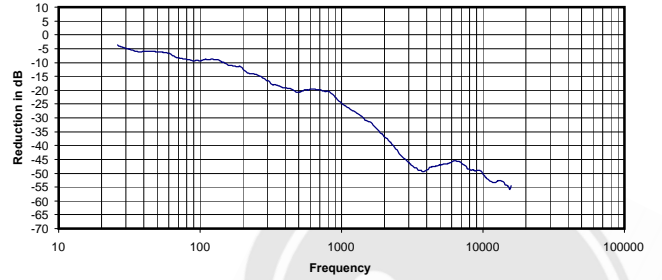
0.032 Vrms
19 Ohms
0.06 mW
-32 dB



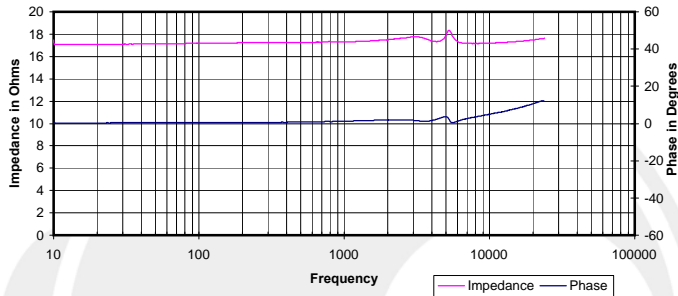
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



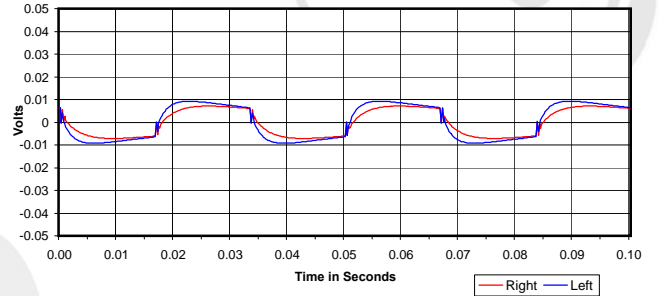
Isolation
Attenuation of External Sound vs. Frequency



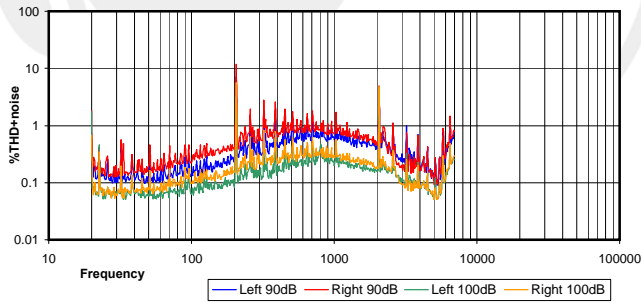
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



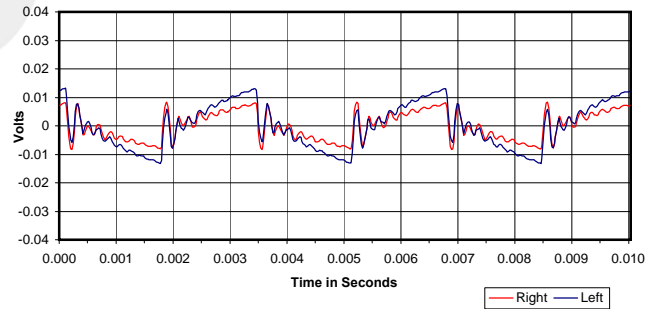
30 Hz Square Wave



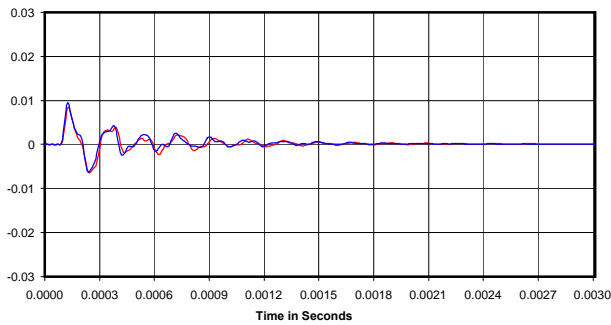
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

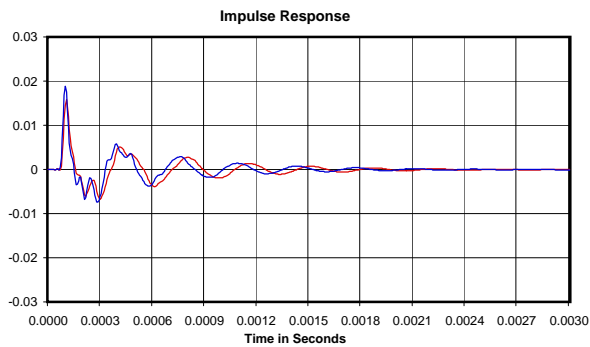
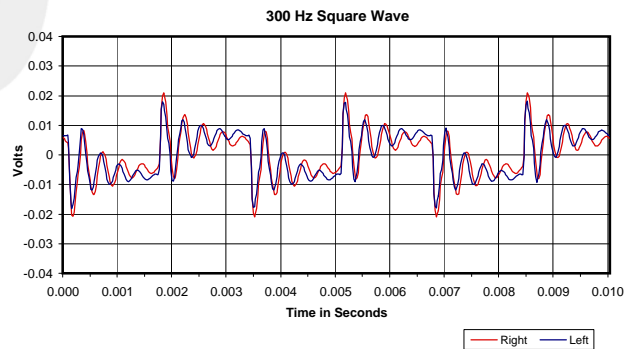
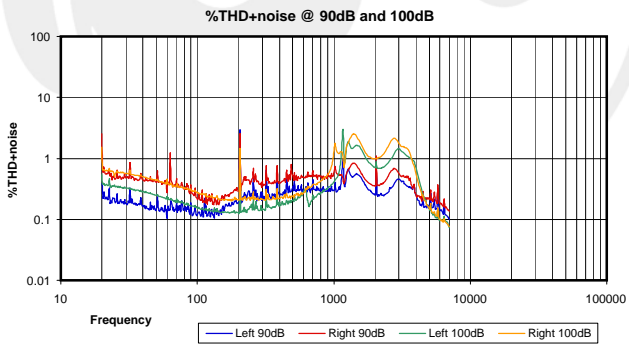
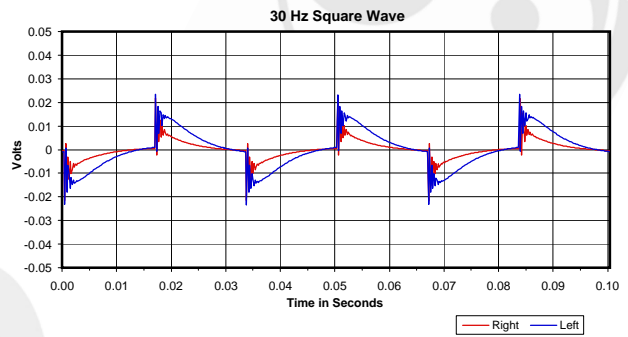
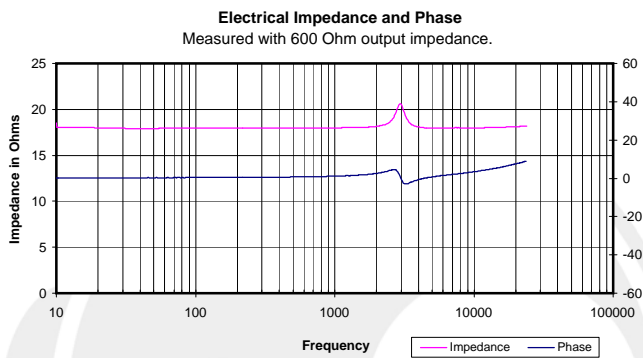
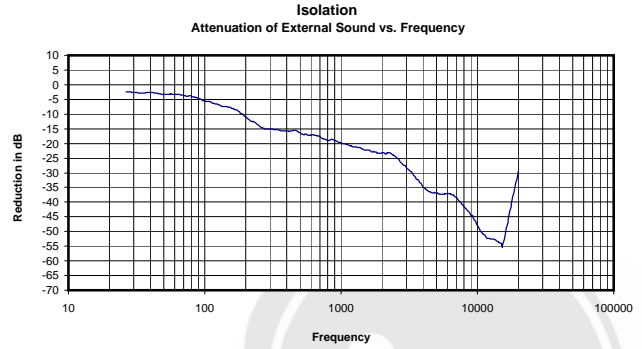
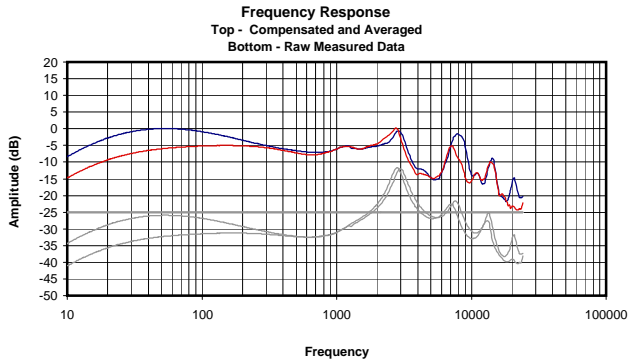


Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.022 Vrms
17 Ohms
0.03 mW
-26 dB

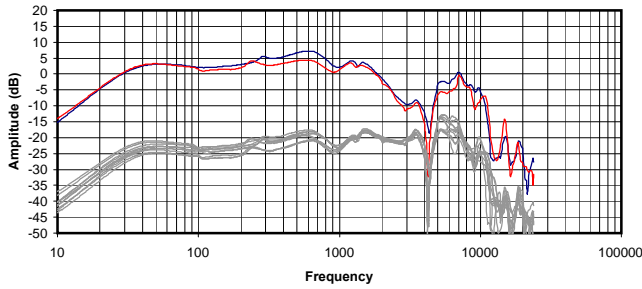


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

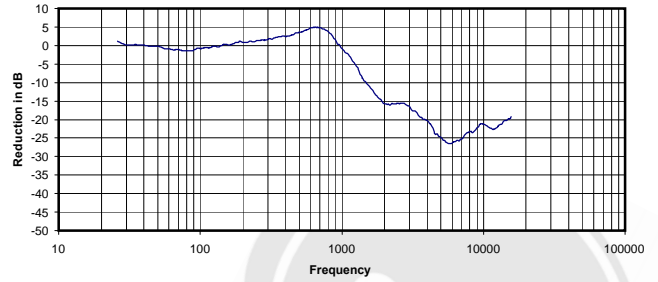
0.060 Vrms
18 Ohms
0.20 mW
-22 dB



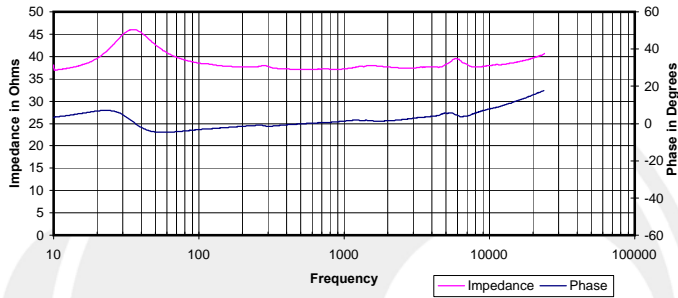
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



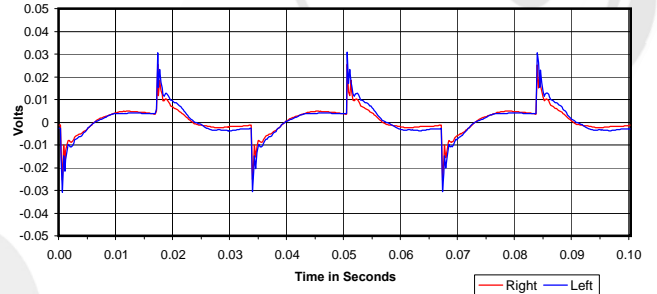
Isolation
 Attenuation of External Sound vs. Frequency



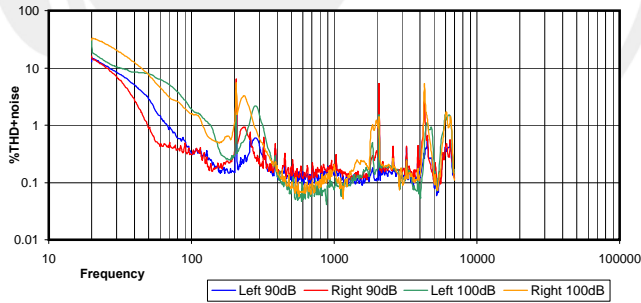
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



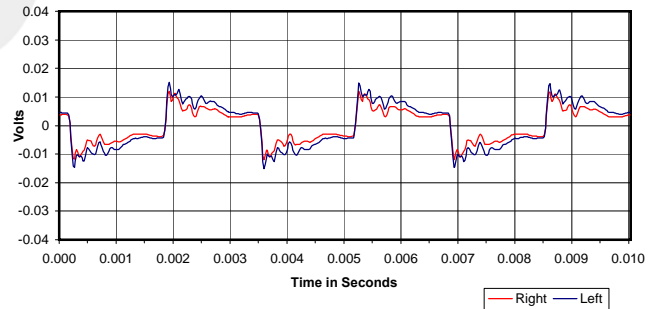
30 Hz Square Wave



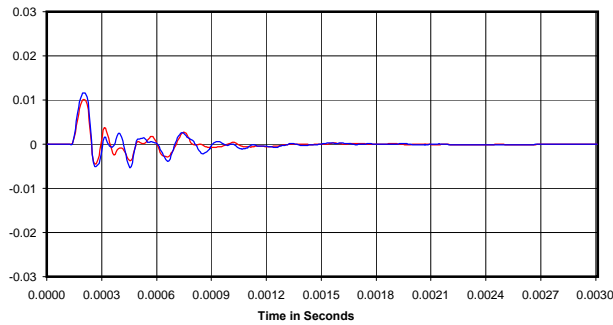
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

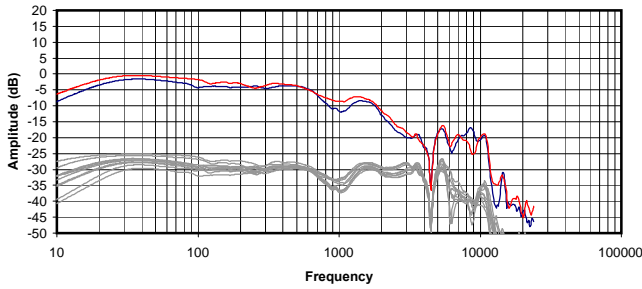


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

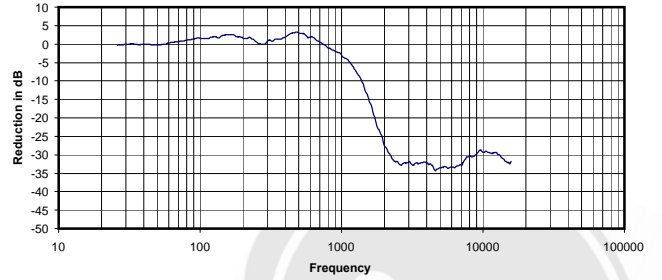
0.049 Vrms
 37 Ohms
 0.07 mW
 -6 dB



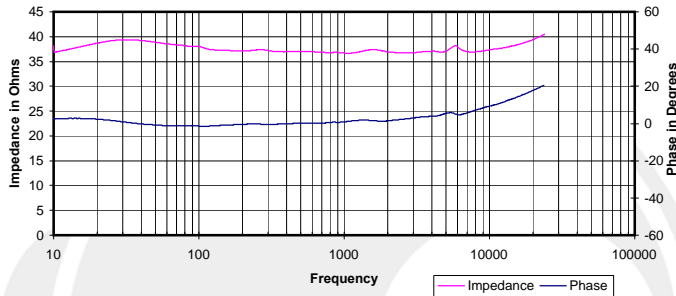
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



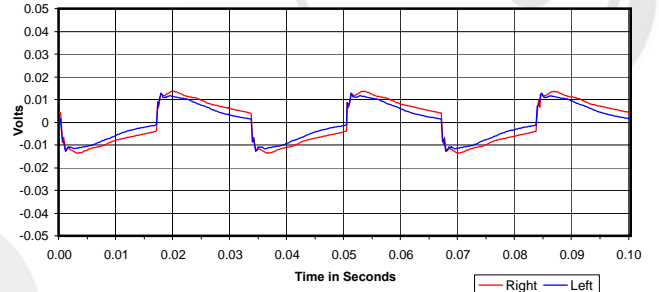
Isolation
 Attenuation of External Sound vs. Frequency



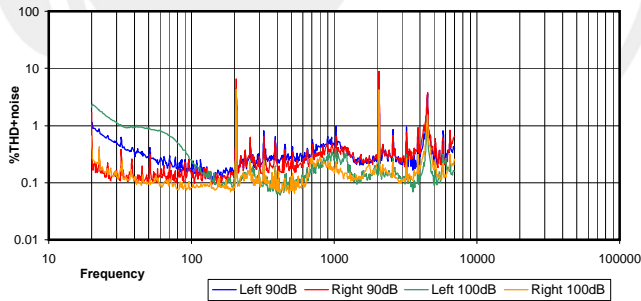
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



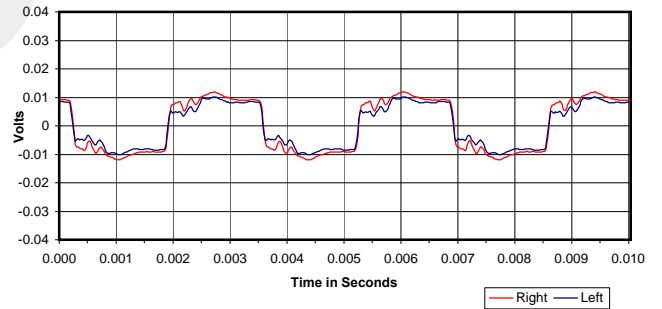
30 Hz Square Wave



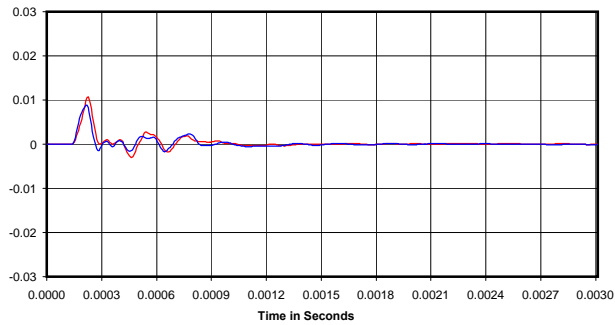
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



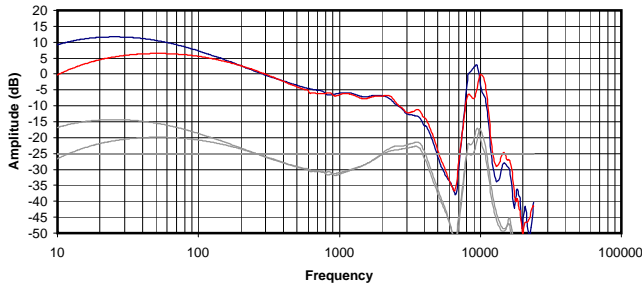
Impulse Response



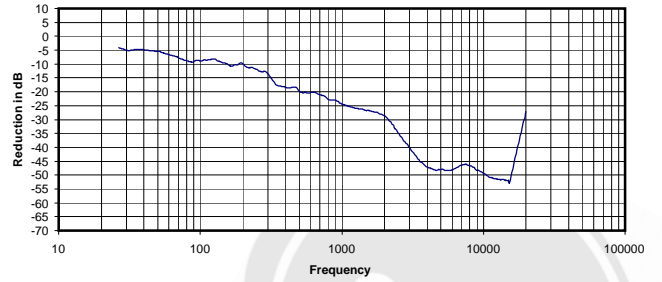
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.062 Vrms
 37 Ohms
 0.10 mW
 -10 dB

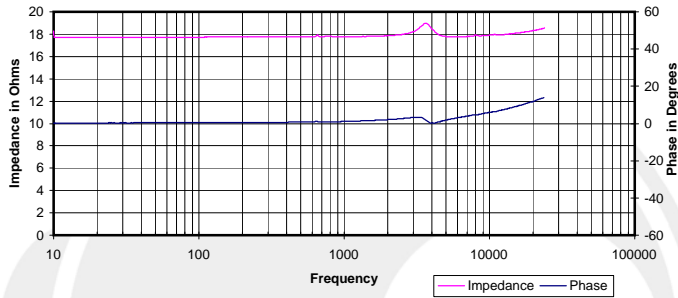
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



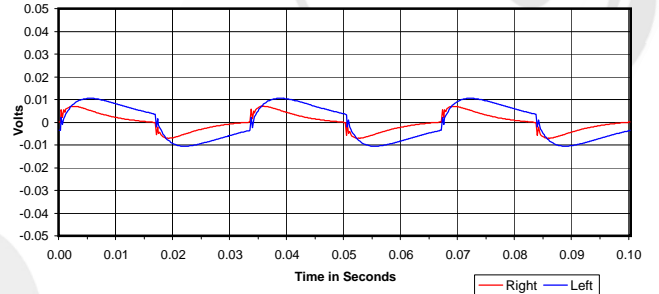
Isolation
Attenuation of External Sound vs. Frequency



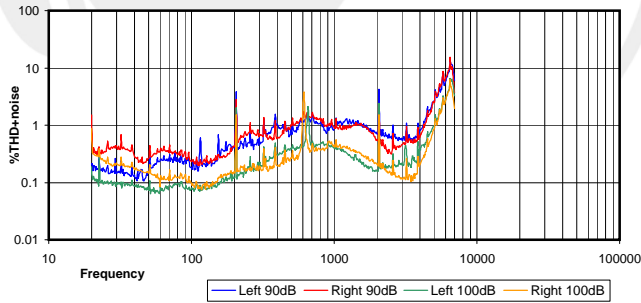
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



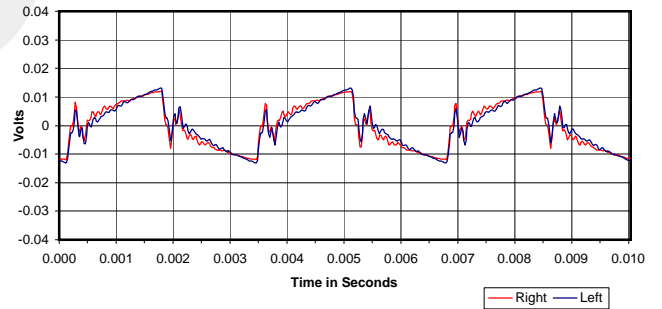
30 Hz Square Wave



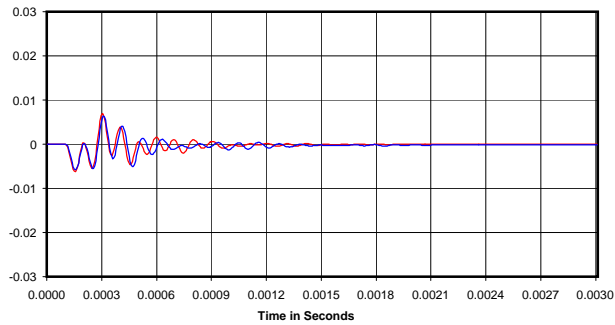
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



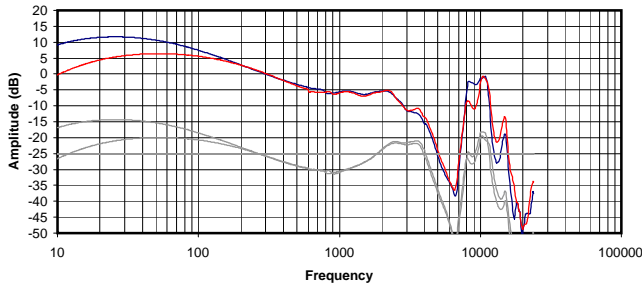
Impulse Response



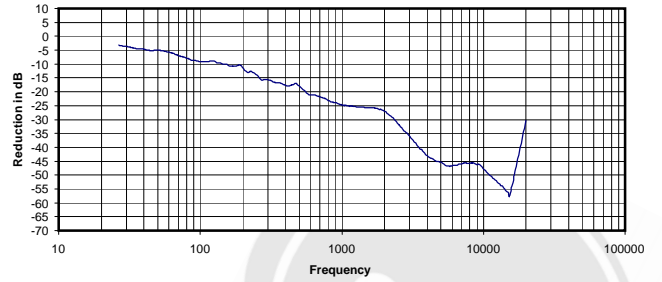
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.050 Vrms
18 Ohms
0.14 mW
-27 dB

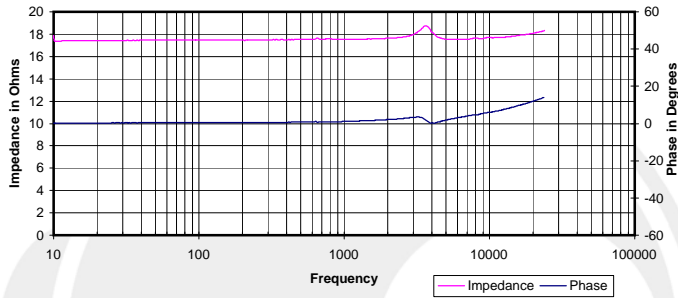
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



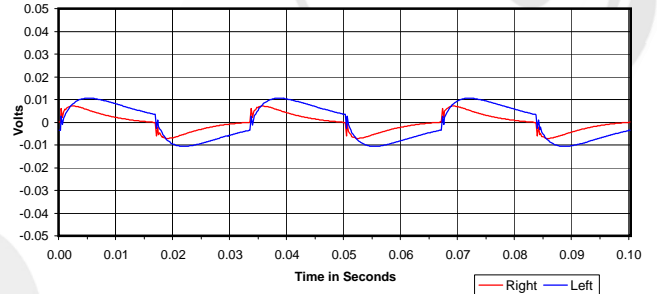
Isolation
Attenuation of External Sound vs. Frequency



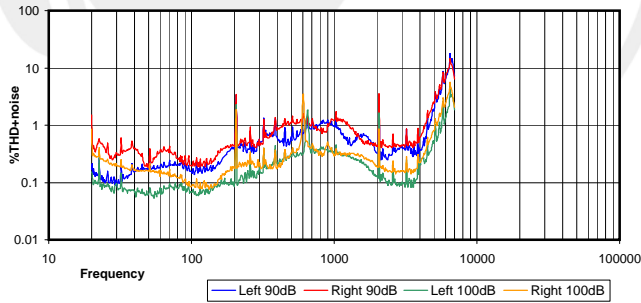
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



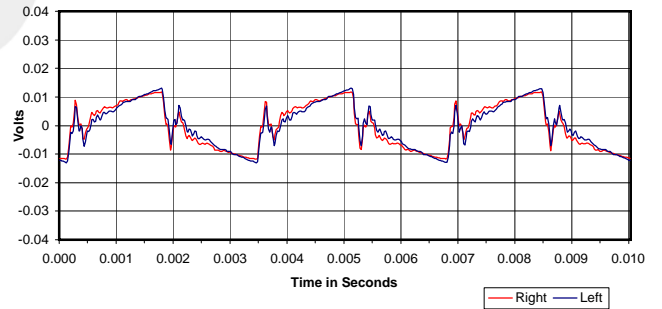
30 Hz Square Wave



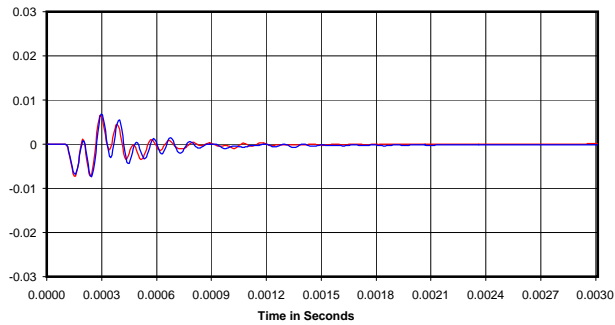
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

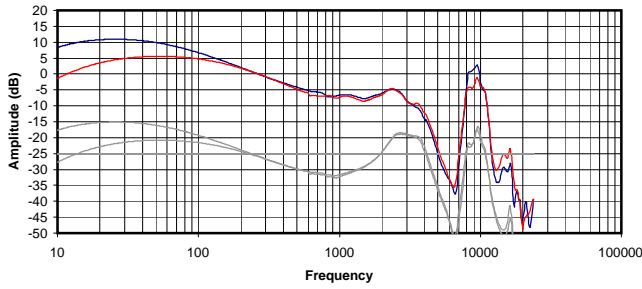


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

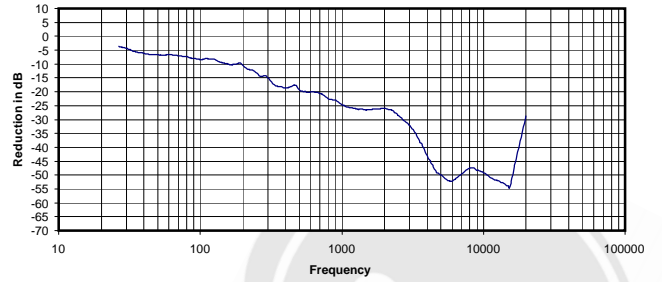
0.046 Vrms
18 Ohms
0.12 mW
-26 dB



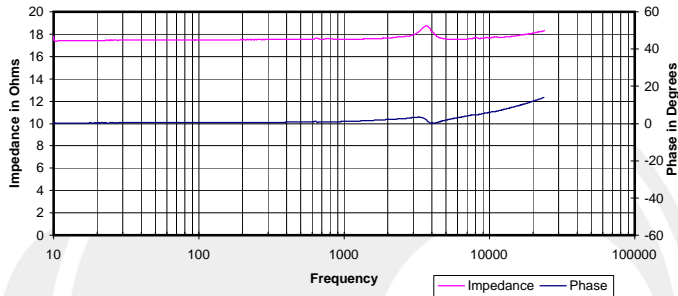
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



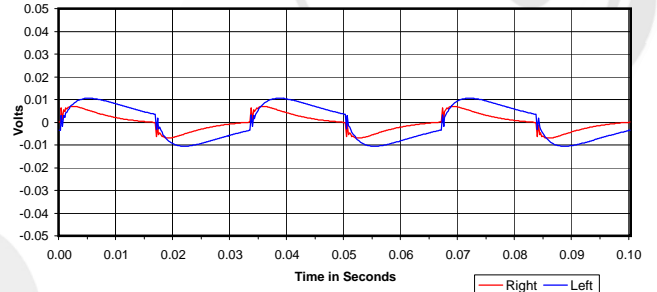
Isolation
Attenuation of External Sound vs. Frequency



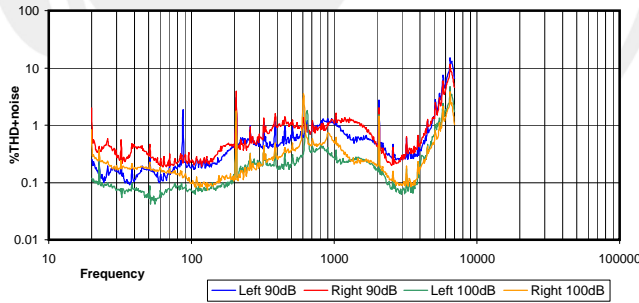
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



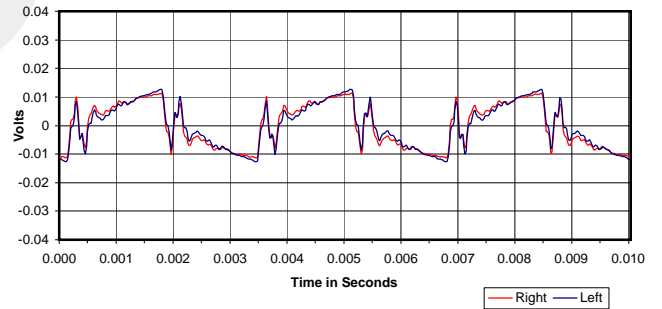
30 Hz Square Wave



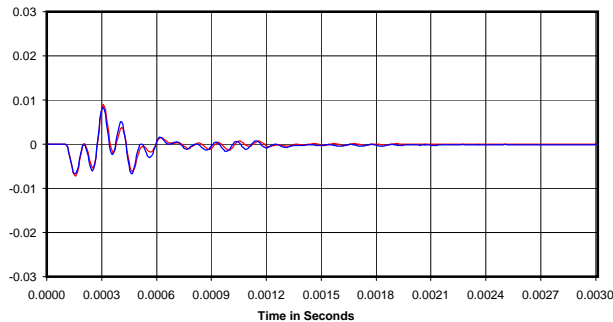
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

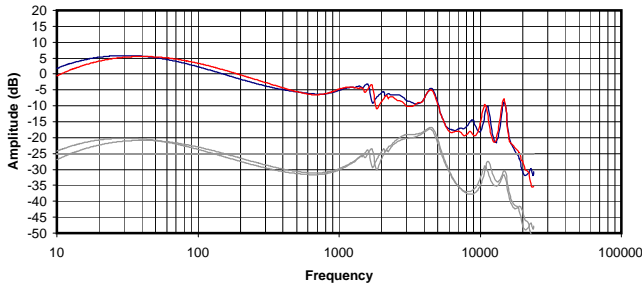


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

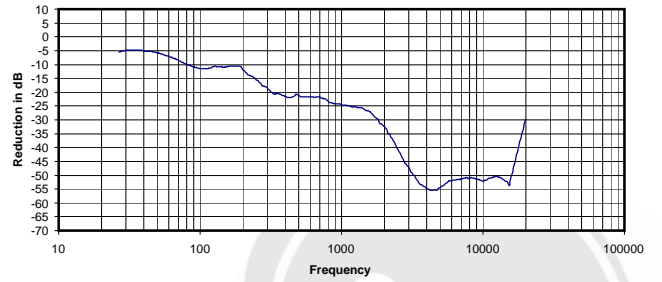
0.048 Vrms
18 Ohms
0.13 mW
-26 dB



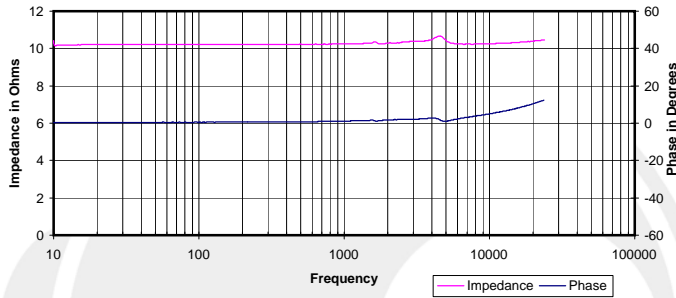
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



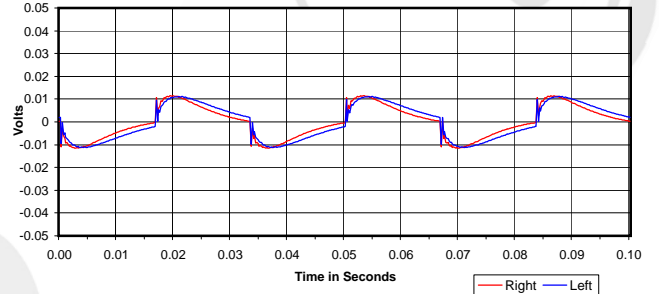
Isolation
Attenuation of External Sound vs. Frequency



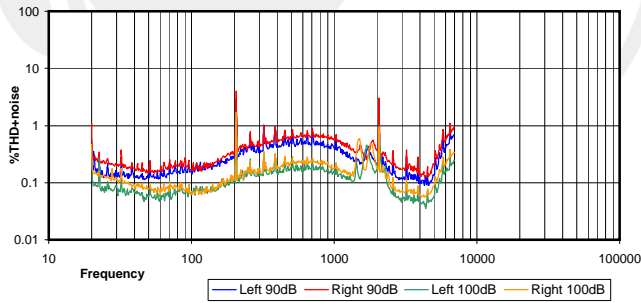
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



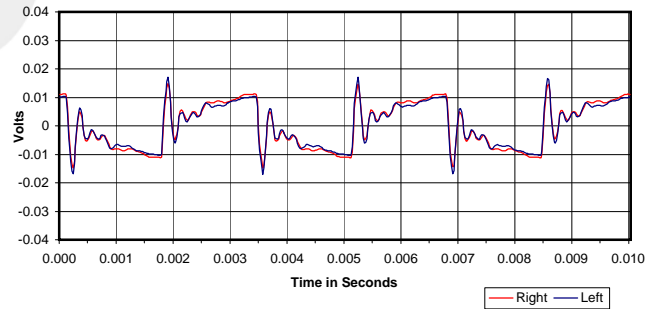
30 Hz Square Wave



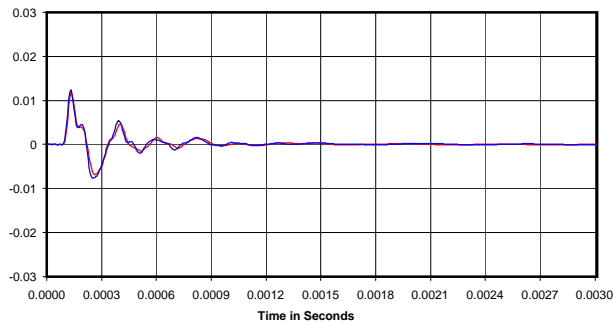
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

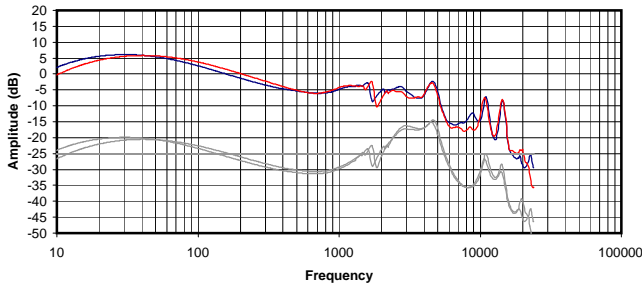


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

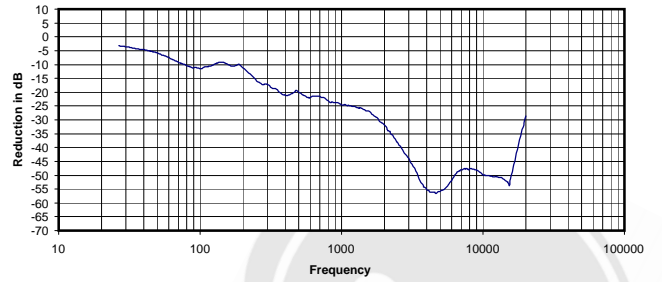
0.031 Vrms
10 Ohms
0.10 mW
-30 dB



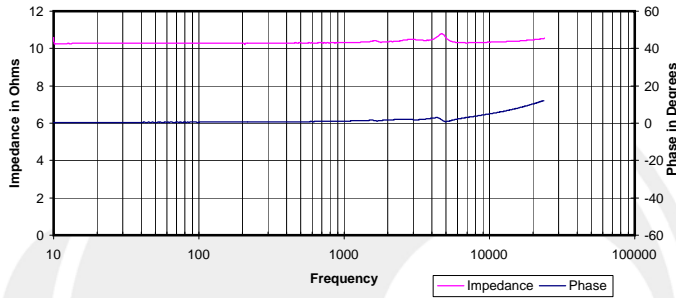
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



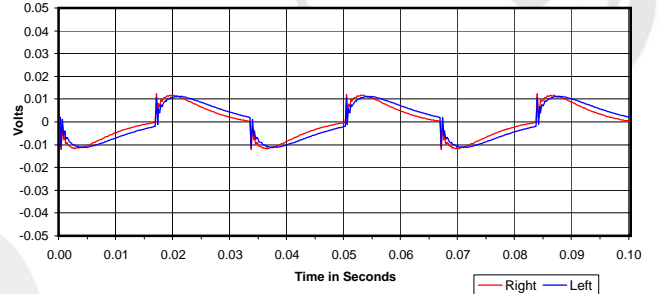
Isolation
Attenuation of External Sound vs. Frequency



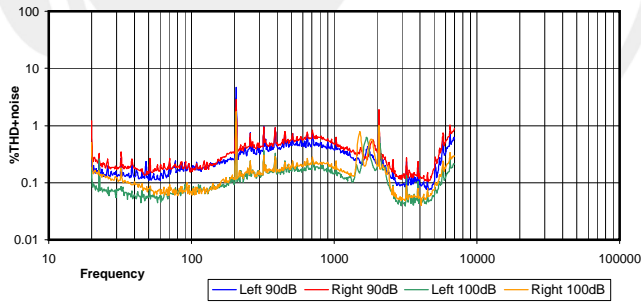
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



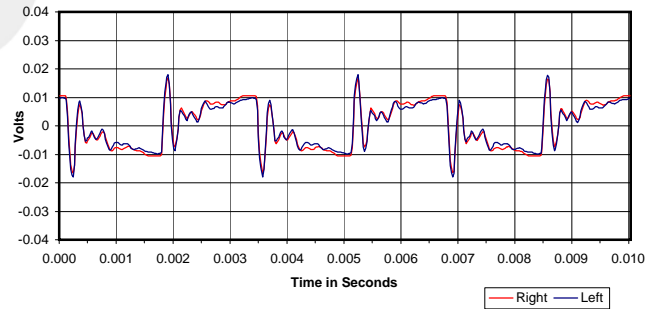
30 Hz Square Wave



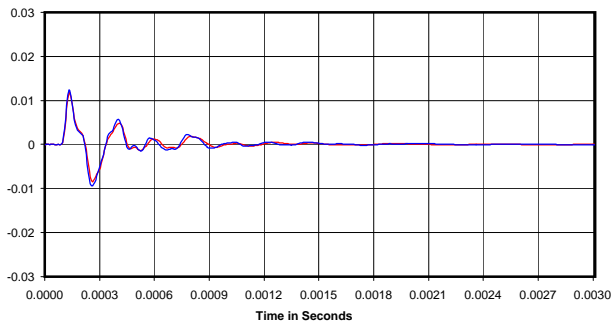
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

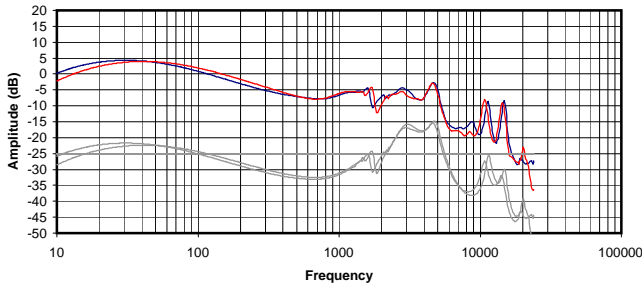


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

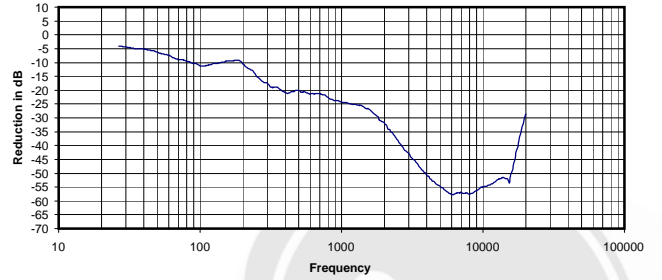
0.031 Vrms
10 Ohms
0.10 mW
-29 dB



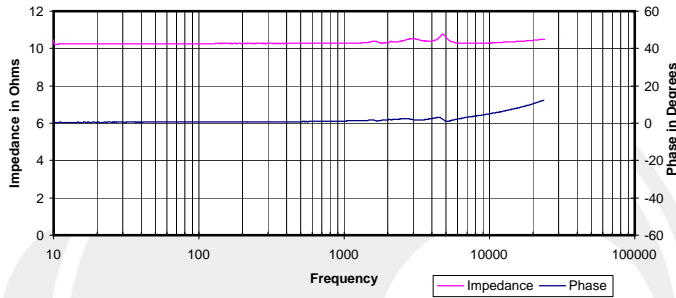
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



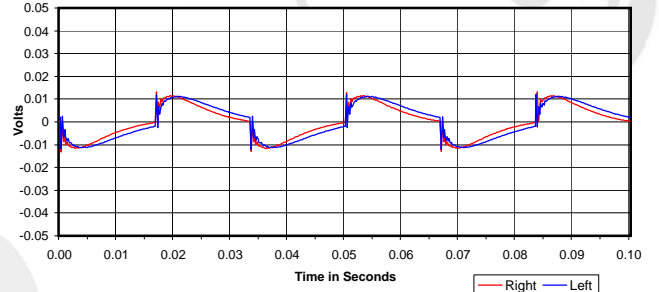
Isolation
Attenuation of External Sound vs. Frequency



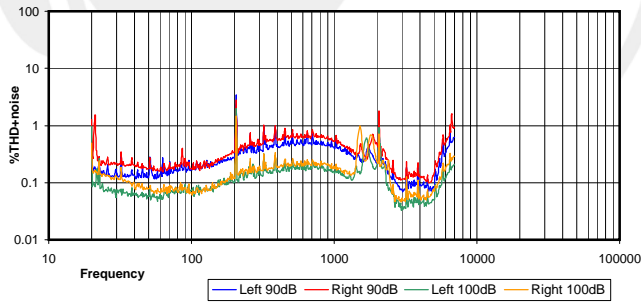
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



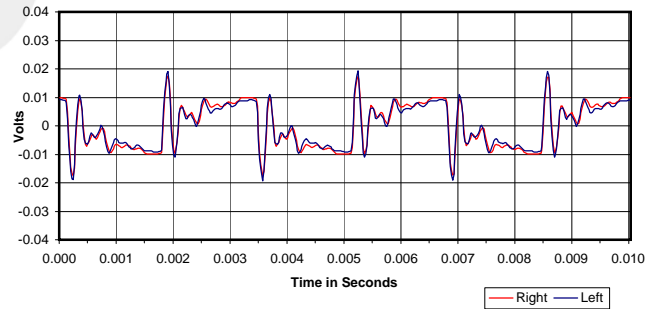
30 Hz Square Wave



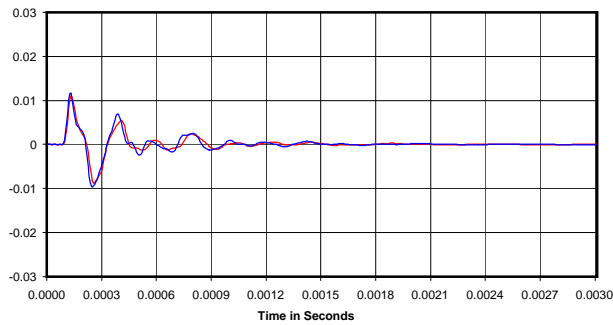
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

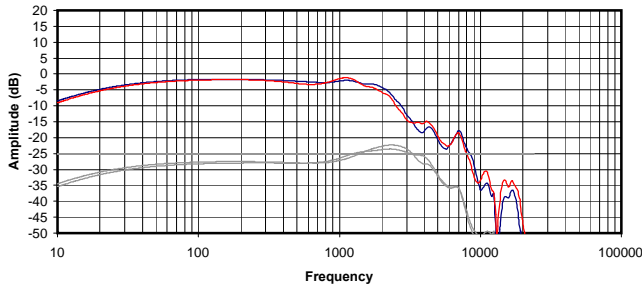


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

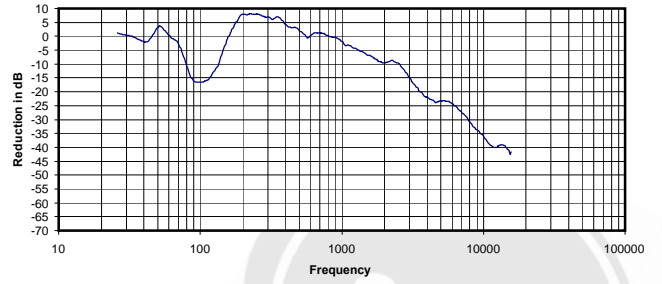
0.031 Vrms
10 Ohms
0.10 mW
-30 dB



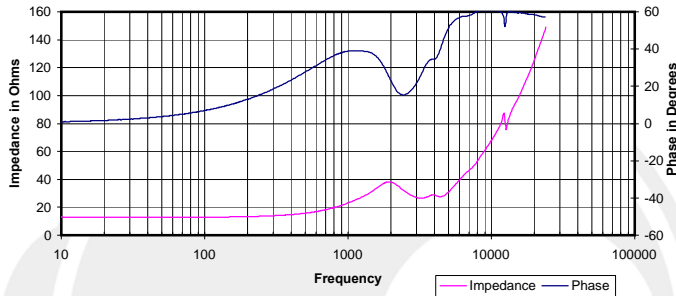
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



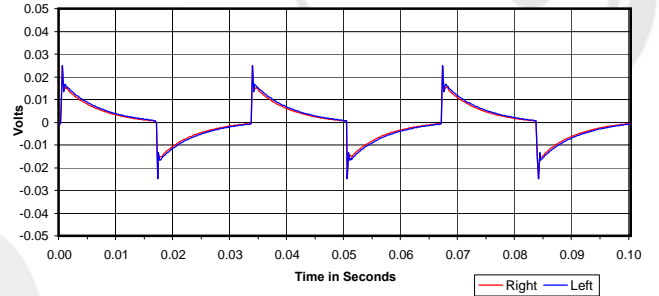
Isolation
Attenuation of External Sound vs. Frequency



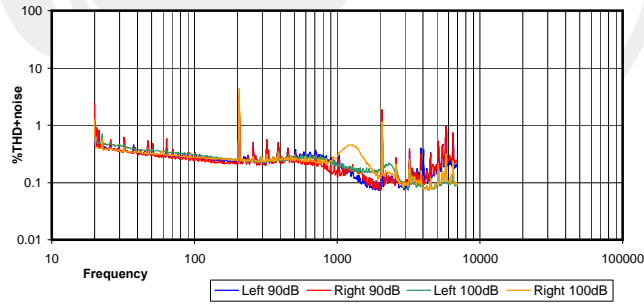
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



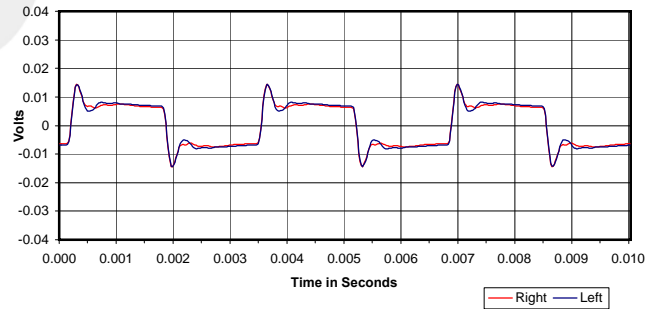
30 Hz Square Wave



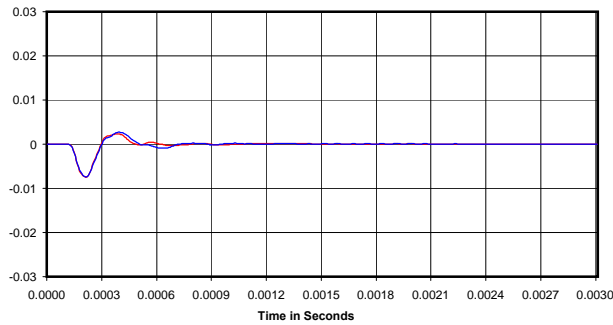
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

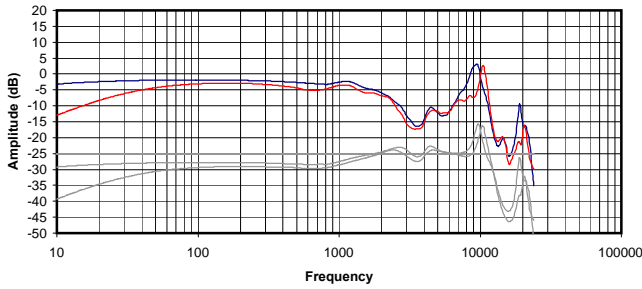


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

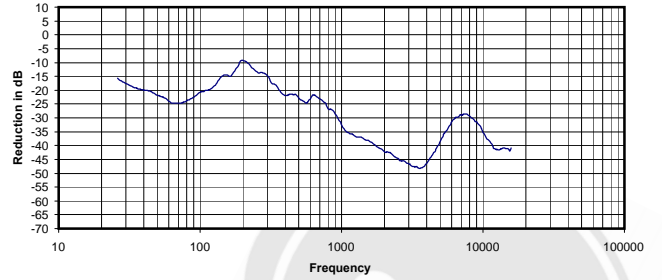
0.011 Vrms
23 Ohms
0.00 mW
-6 dB



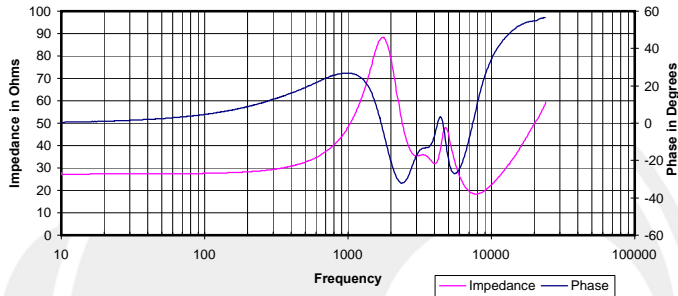
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



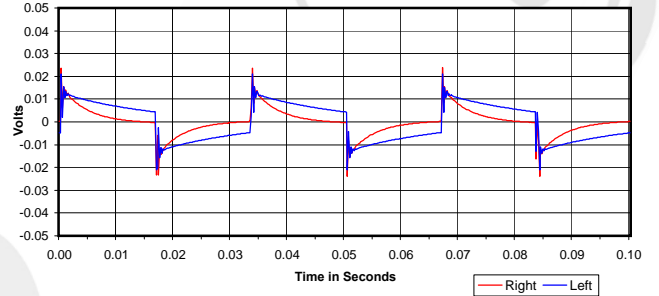
Isolation
Attenuation of External Sound vs. Frequency



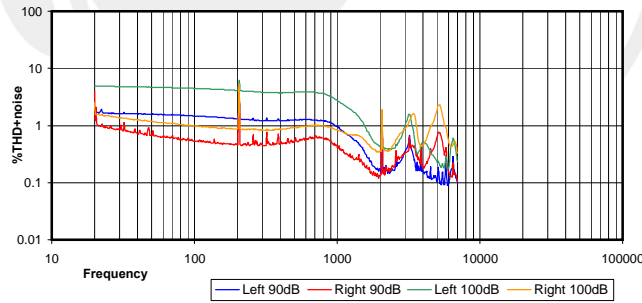
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



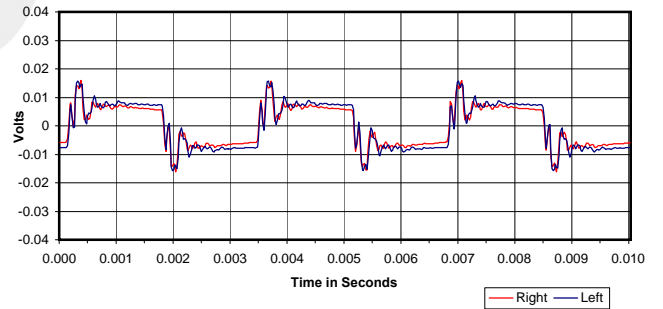
30 Hz Square Wave



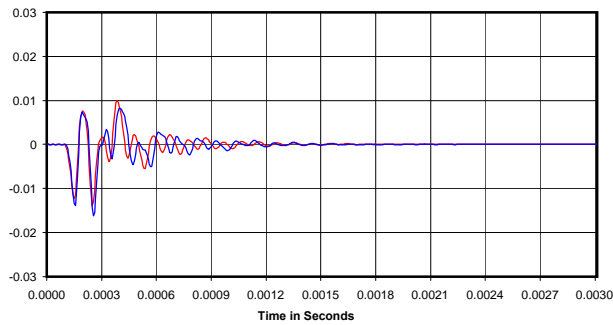
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response



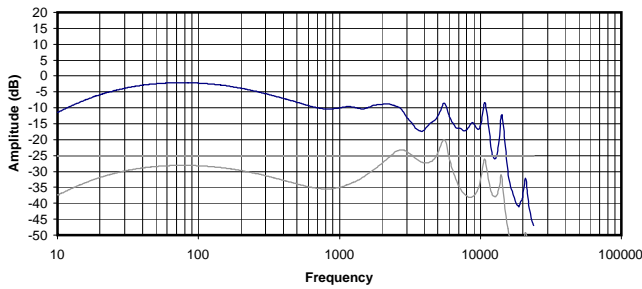
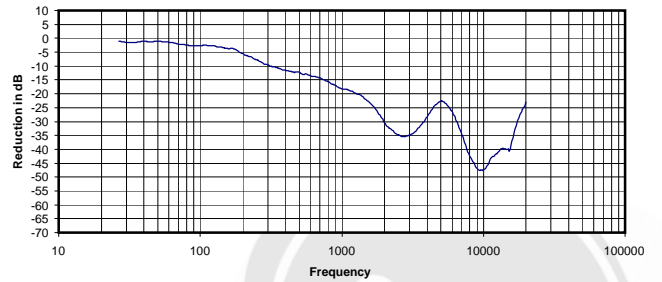
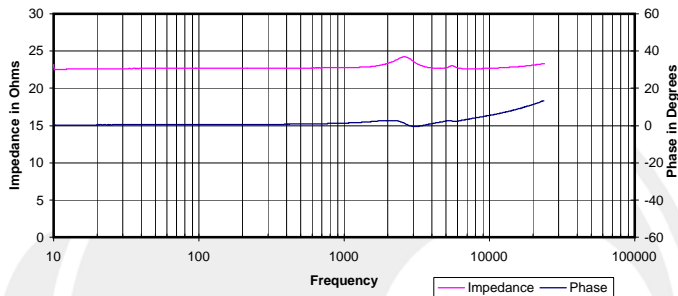
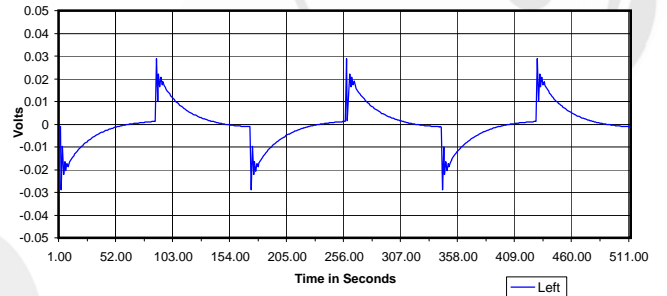
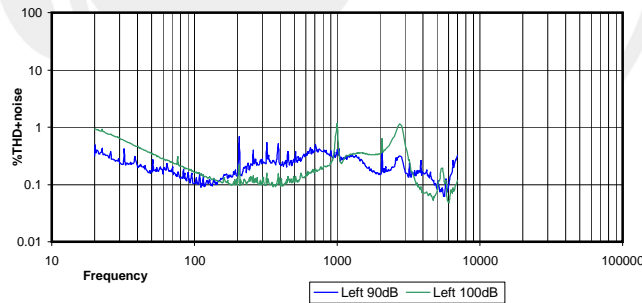
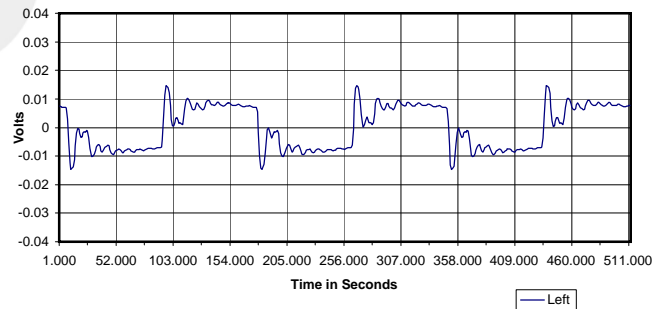
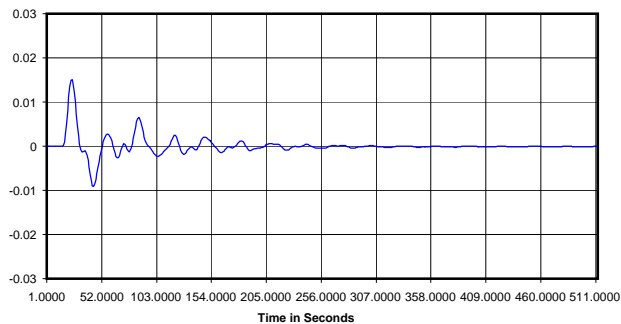
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
48 Ohms
0.02 mW
-29 dB



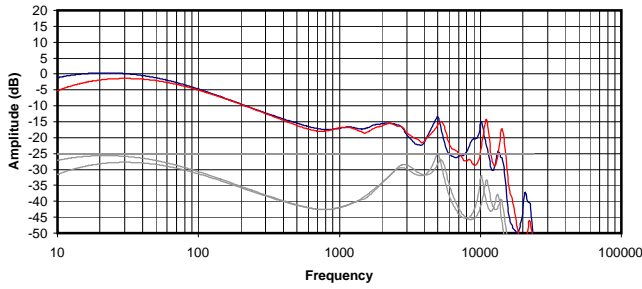
Headphone Measurements:

Rock Jaw Alpha Genus Black Filter (Left Channel Only, black filter in right ear faulty)

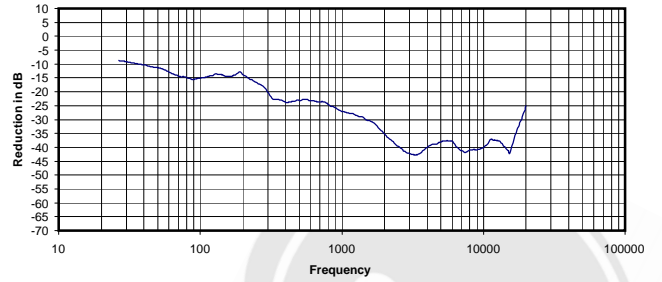
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Measured Data

Isolation
 Attenuation of External Sound vs. Frequency

Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.

30 Hz Square Wave

%THD+noise @ 90dB and 100dB

300 Hz Square Wave

Impulse Response

 Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

 0.042 Vrms
 23 Ohms
 0.08 mW
 -20 dB

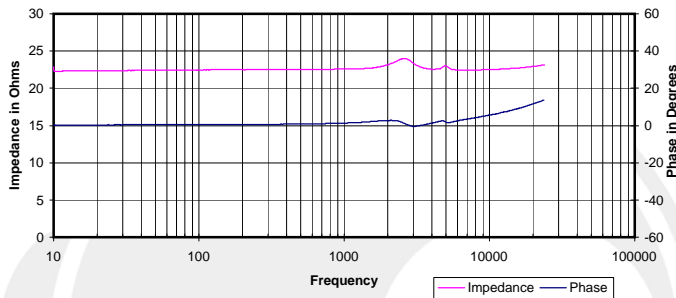
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



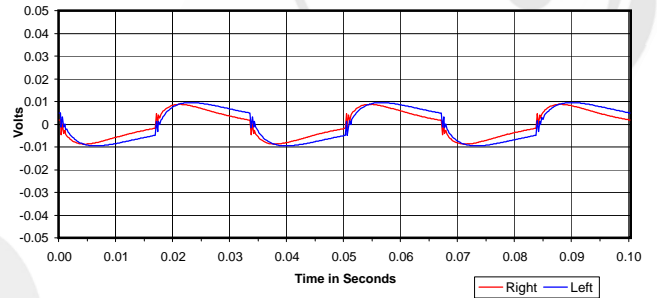
Isolation
Attenuation of External Sound vs. Frequency



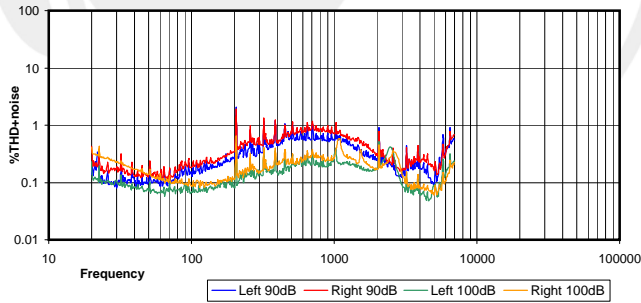
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



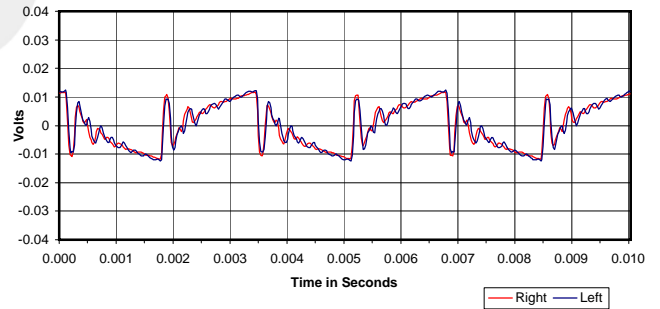
30 Hz Square Wave



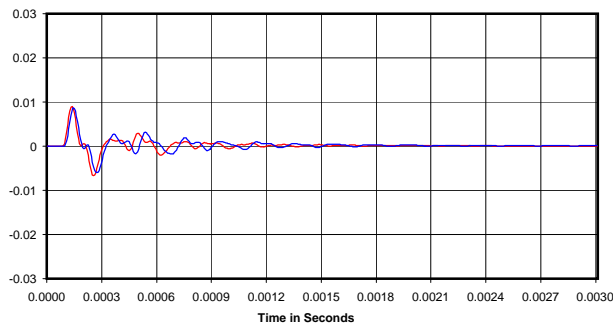
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

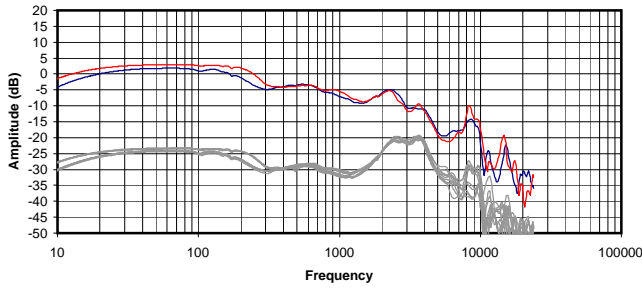


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

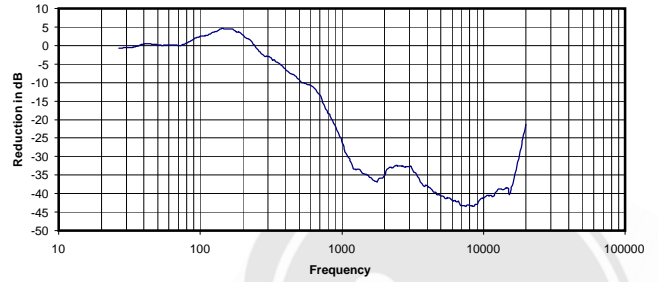
0.042 Vrms
23 Ohms
0.08 mW
-28 dB



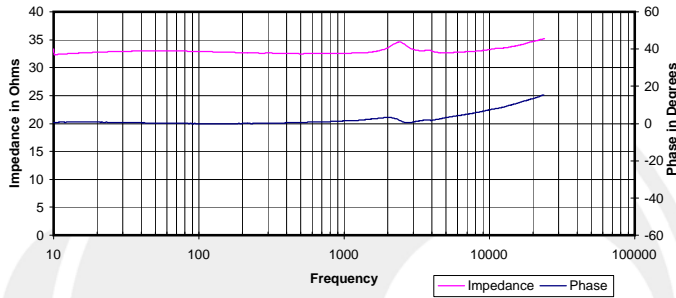
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



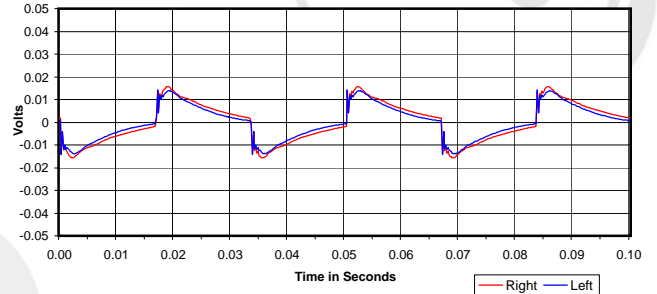
Isolation
Attenuation of External Sound vs. Frequency



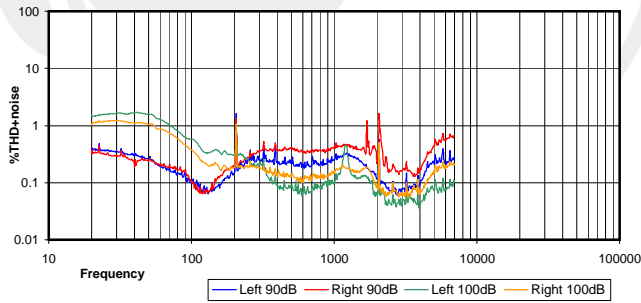
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



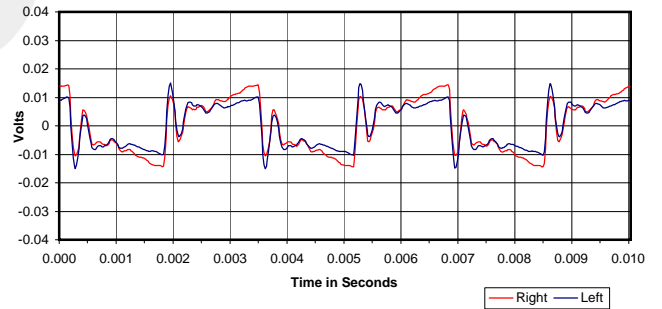
30 Hz Square Wave



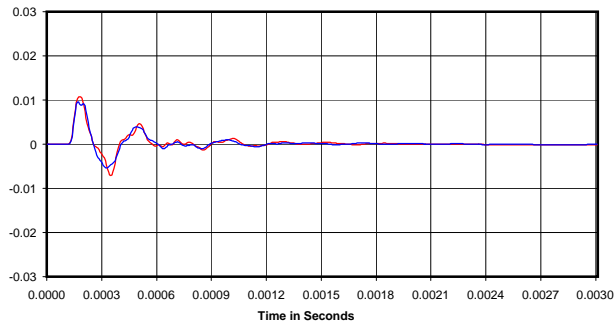
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

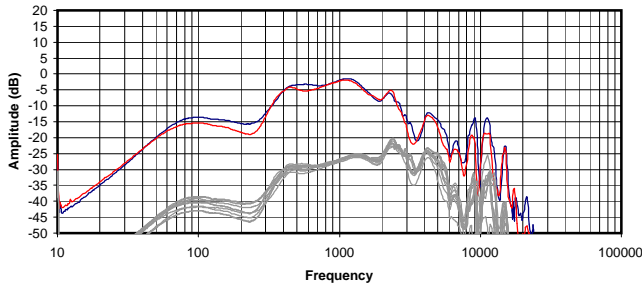


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

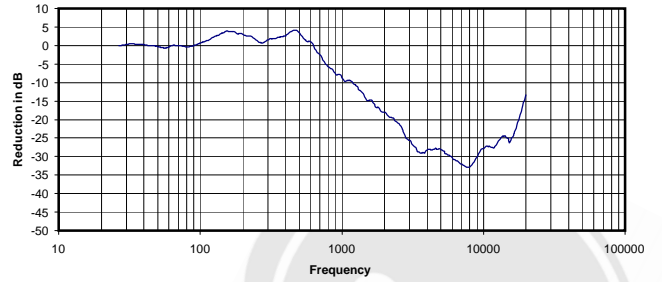
0.049 Vrms
33 Ohms
0.07 mW
-21 dB



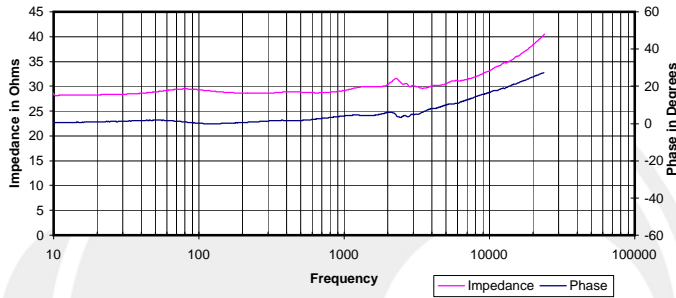
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



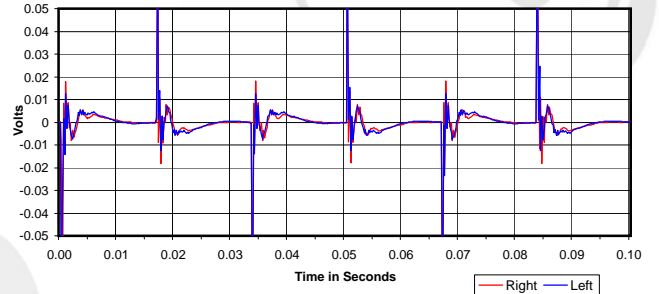
Isolation
 Attenuation of External Sound vs. Frequency



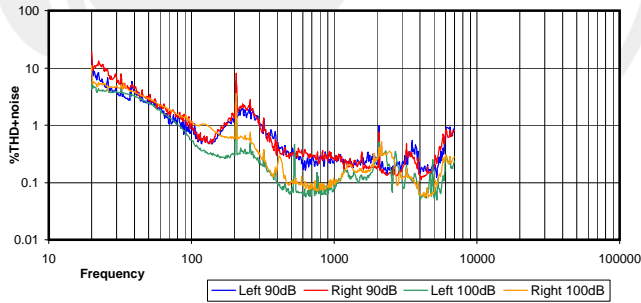
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



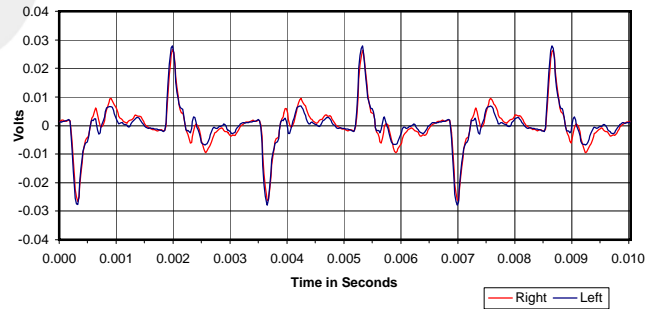
30 Hz Square Wave



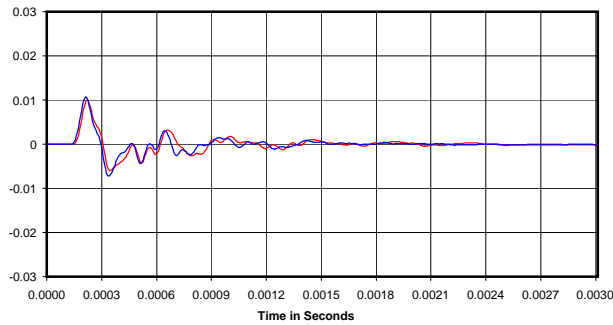
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

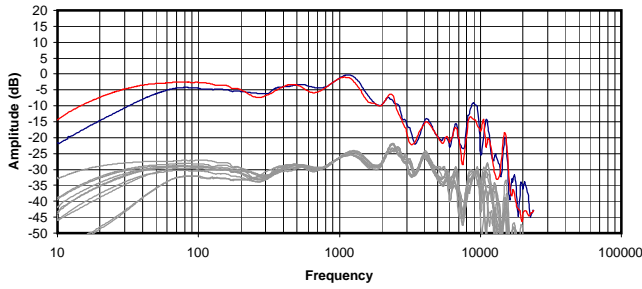


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

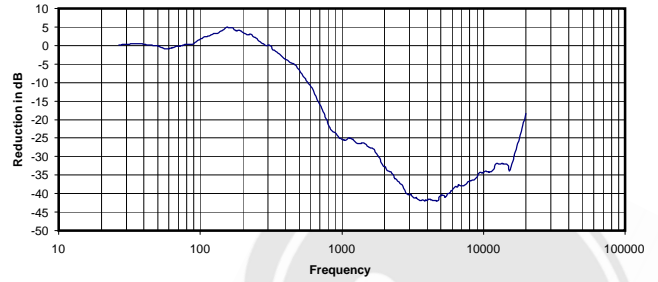
0.017 Vrms
 29 Ohms
 0.01 mW
 -11 dB



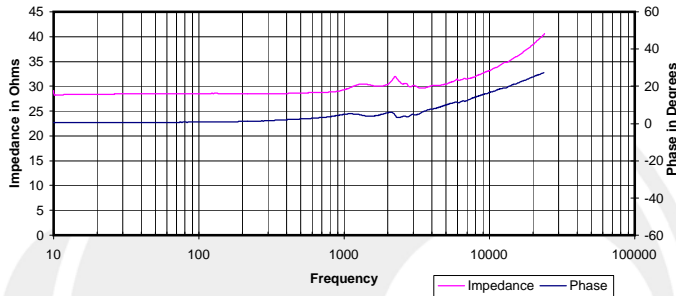
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



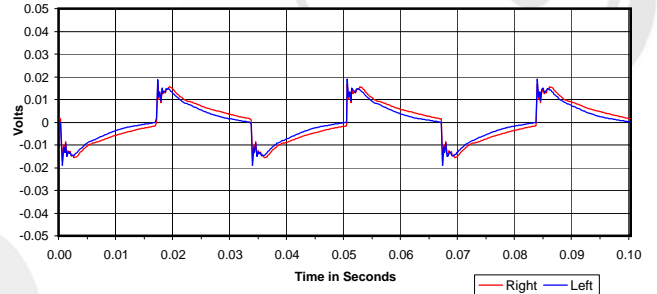
Isolation
 Attenuation of External Sound vs. Frequency



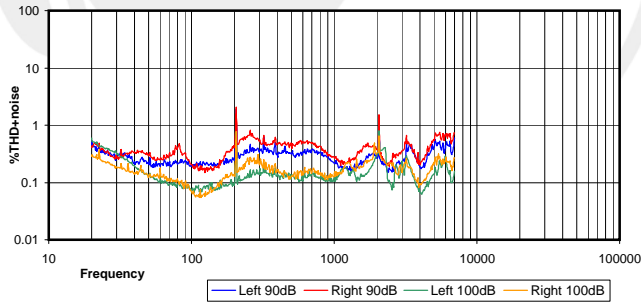
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



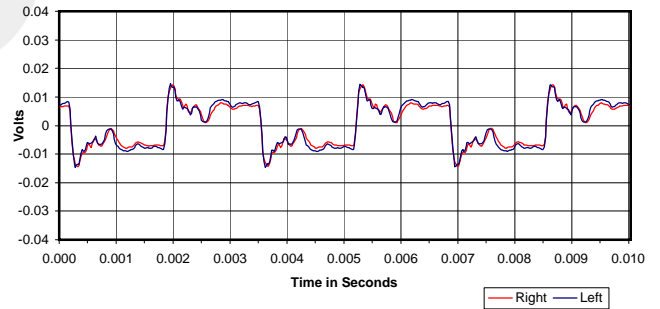
30 Hz Square Wave



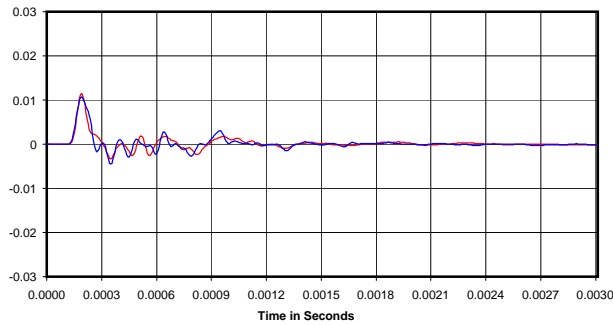
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

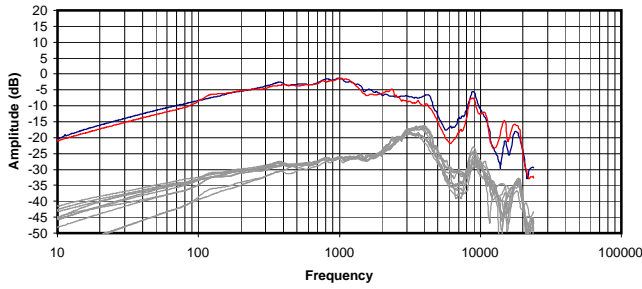


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

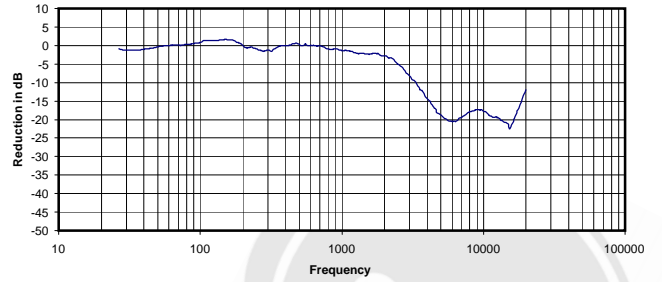
0.016 Vrms
 29 Ohms
 0.01 mW
 -20 dB



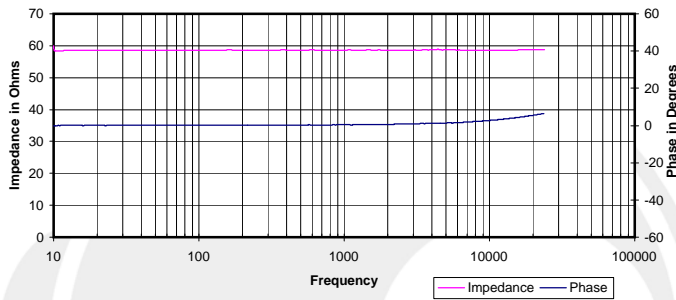
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



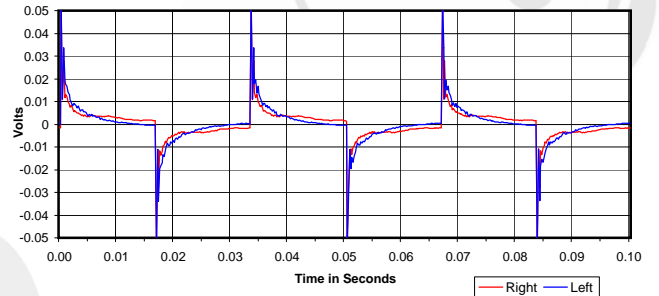
Isolation
 Attenuation of External Sound vs. Frequency



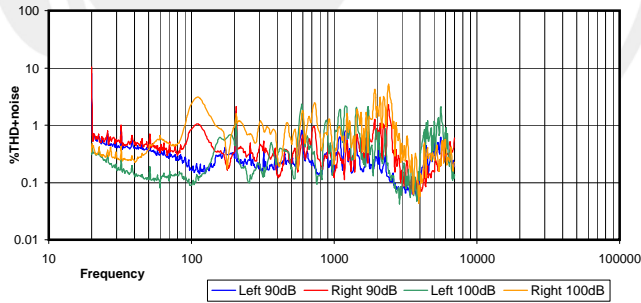
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



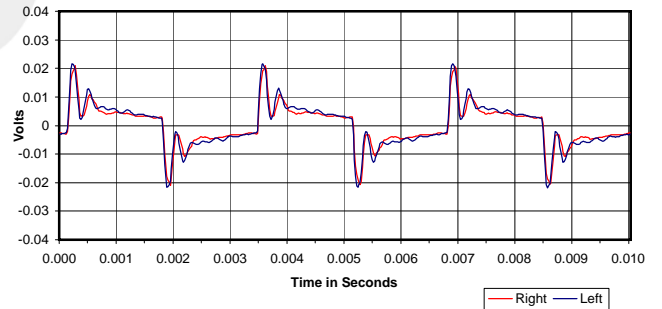
30 Hz Square Wave



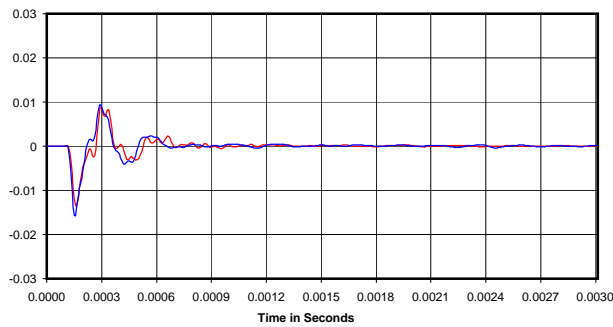
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



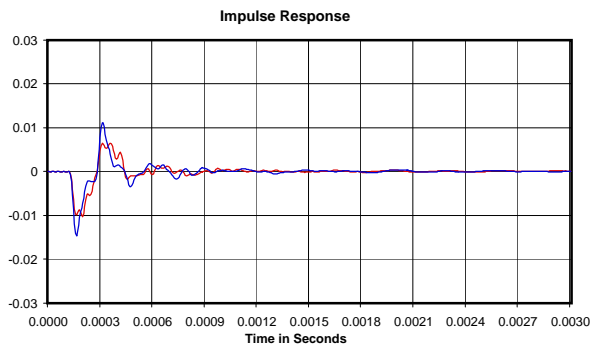
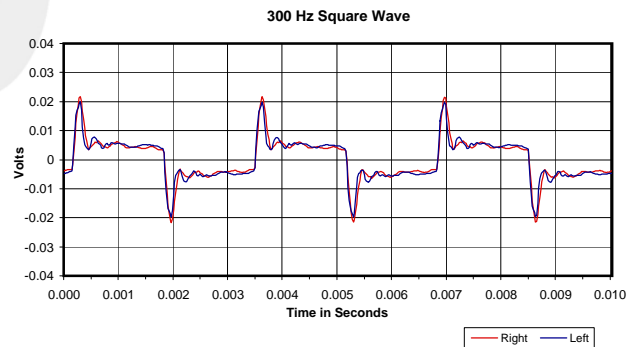
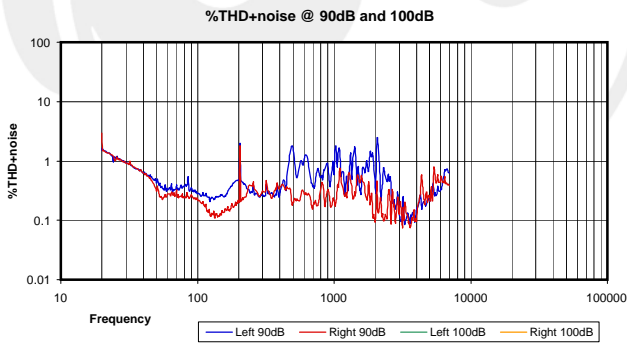
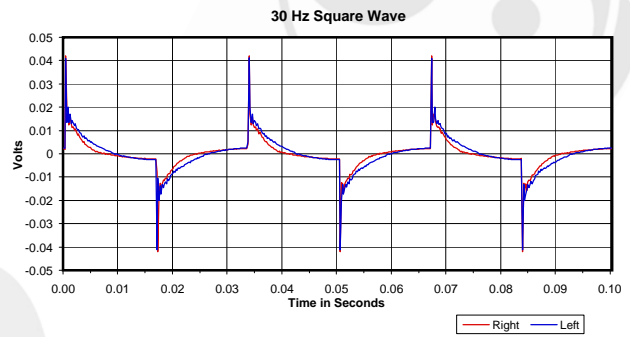
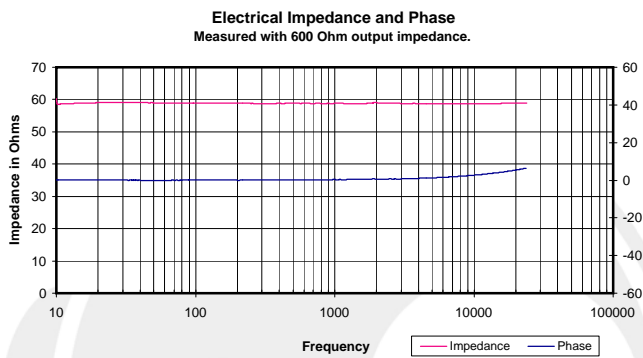
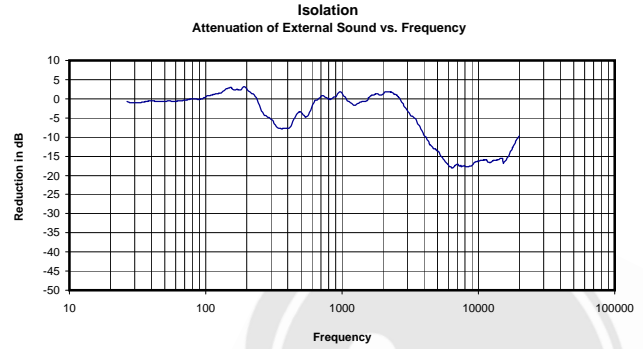
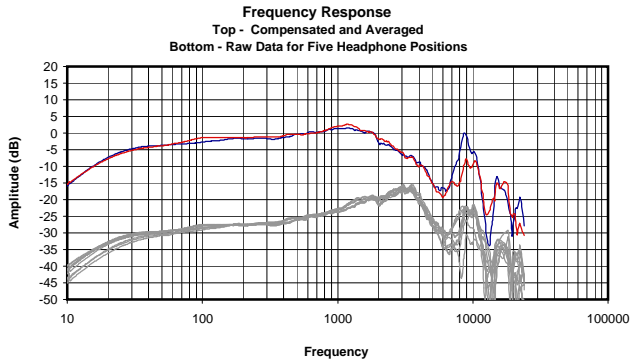
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.153 Vrms
 59 Ohms
 0.40 mW
 -5 dB

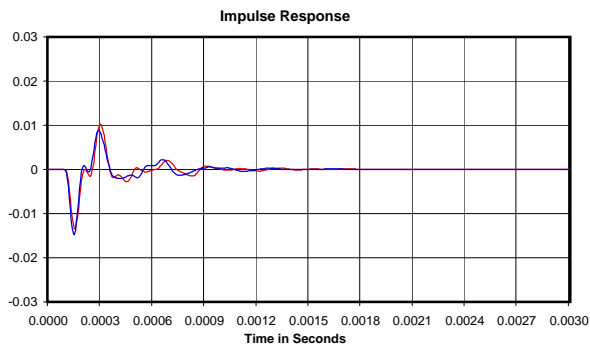
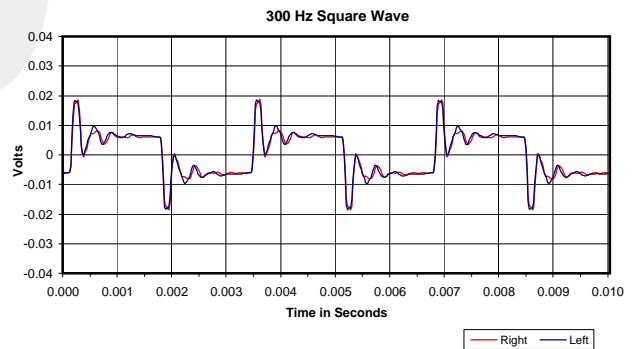
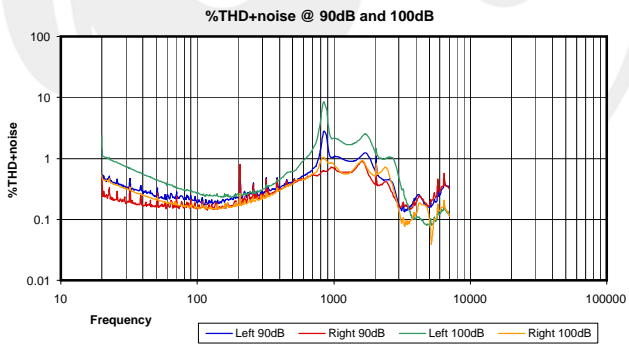
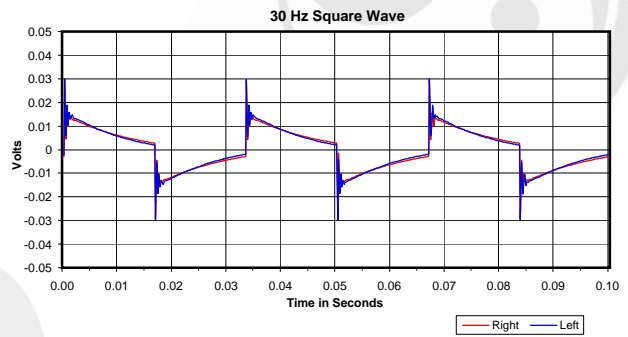
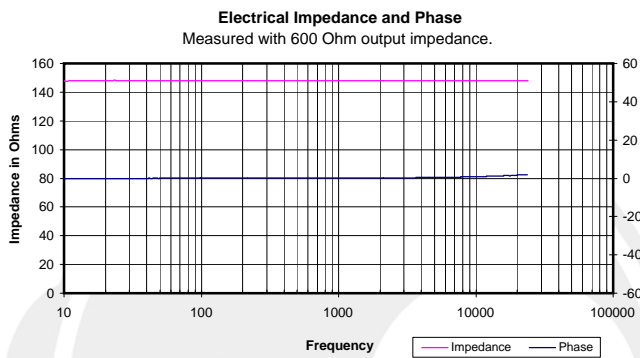
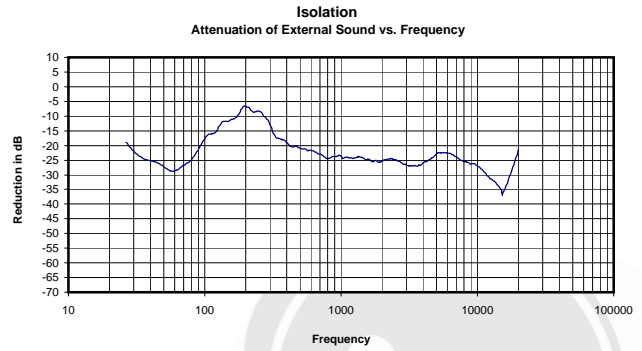
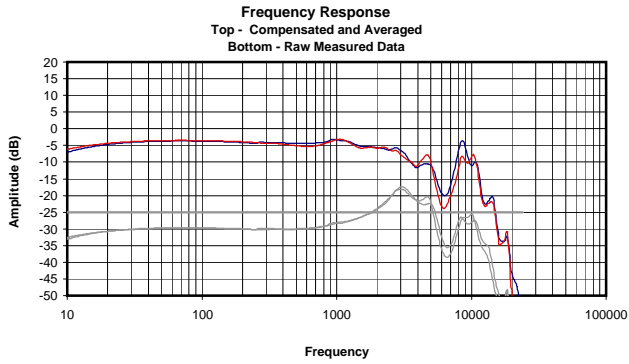




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.152 Vrms
59 Ohms
0.39 mW
-4 dBr

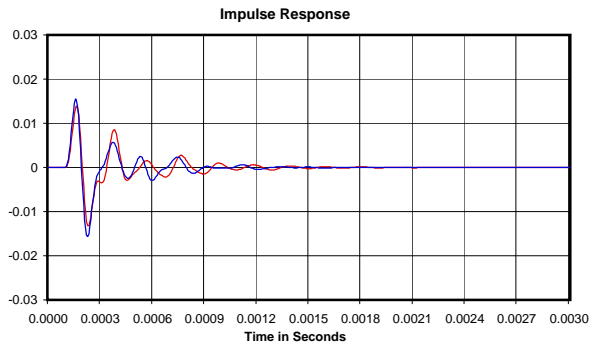
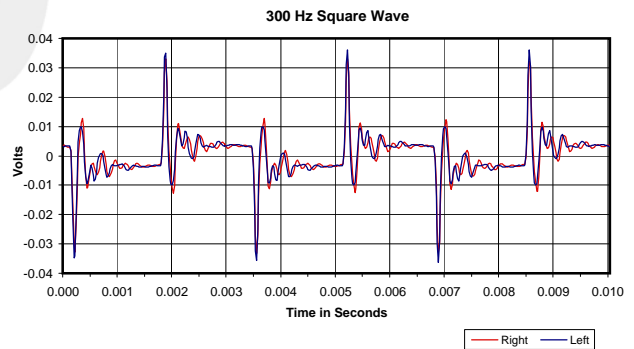
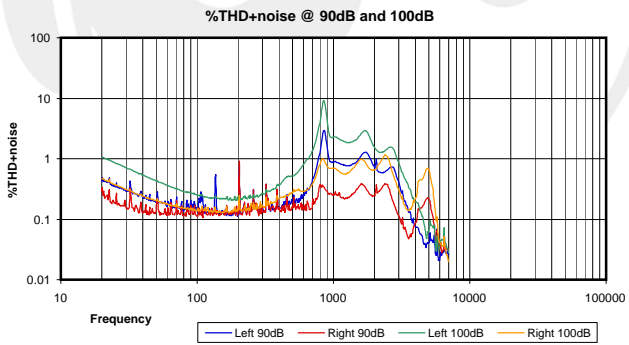
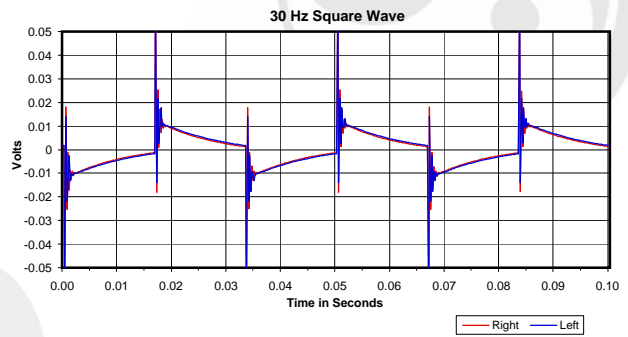
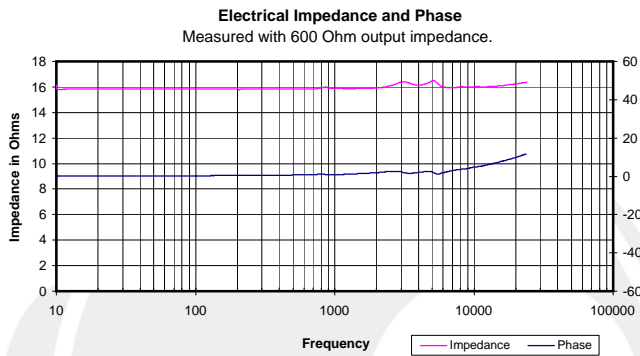
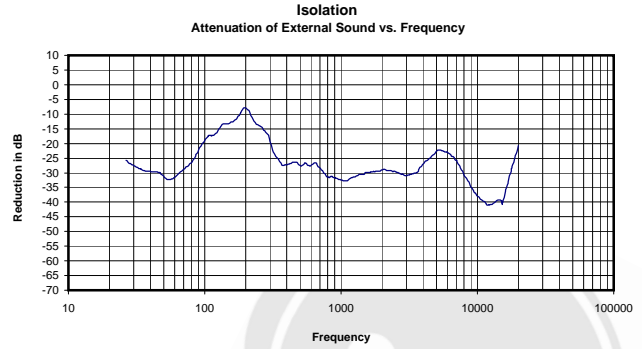
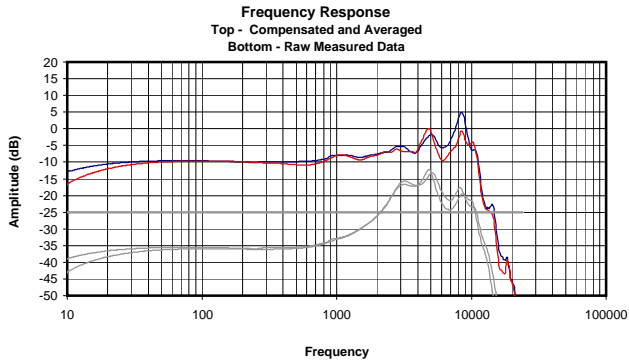




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.033 Vrms
148 Ohms
0.01 mW
-21 dB



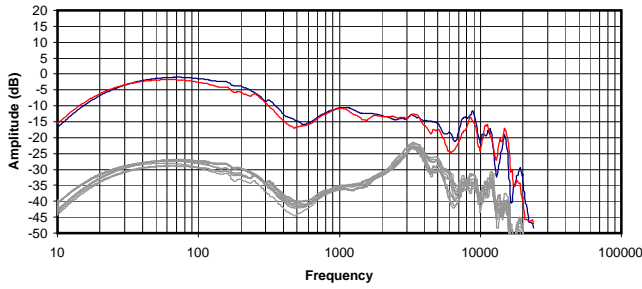


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.058 Vrms
16 Ohms
0.21 mW
-25 dB

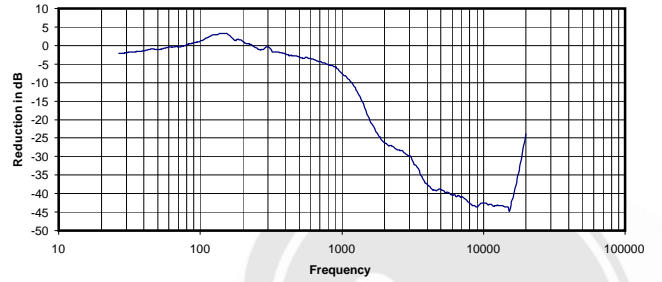


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

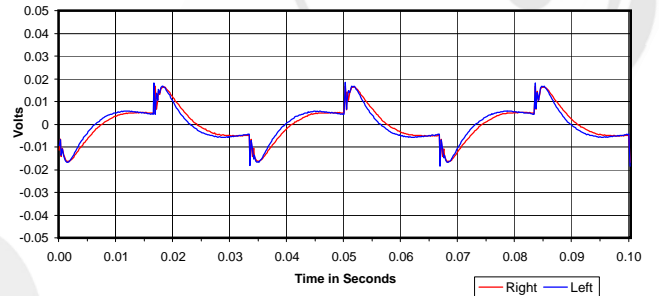


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

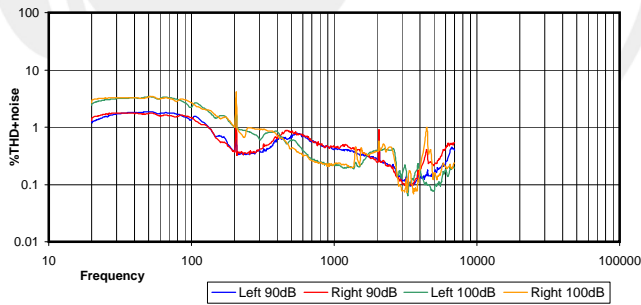
Isolation
 Attenuation of External Sound vs. Frequency



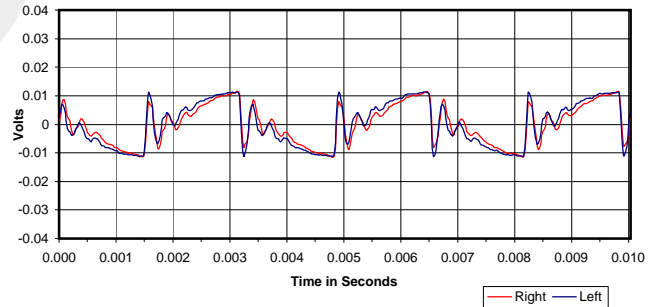
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

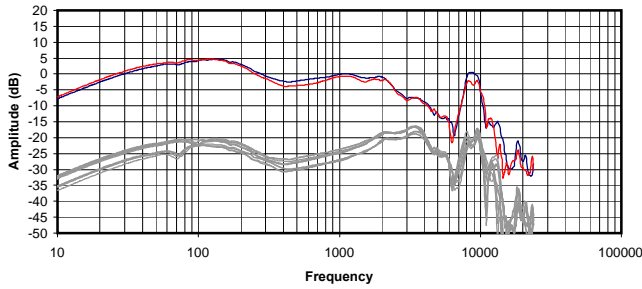


Broadband Isolation in dB (100Hz to 10kHz):

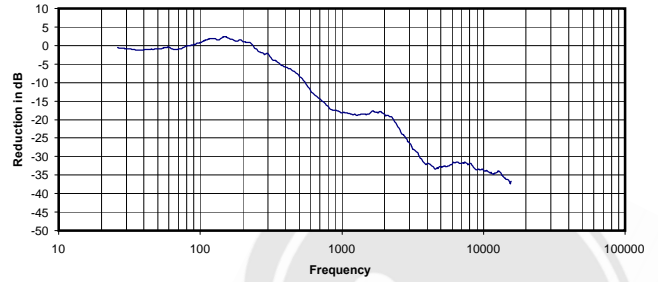
-16 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

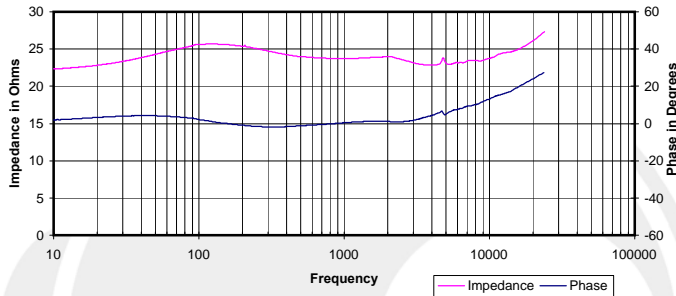
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



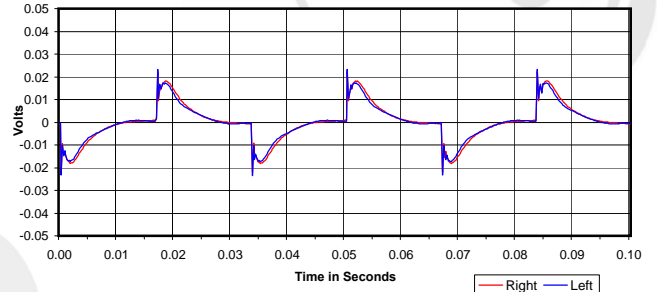
Isolation
 Attenuation of External Sound vs. Frequency



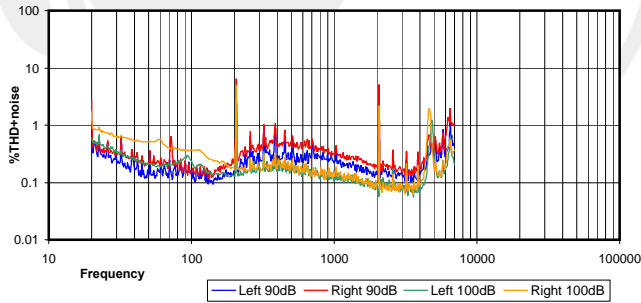
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



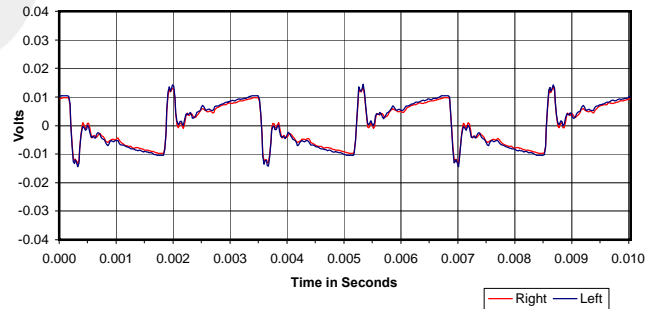
30 Hz Square Wave



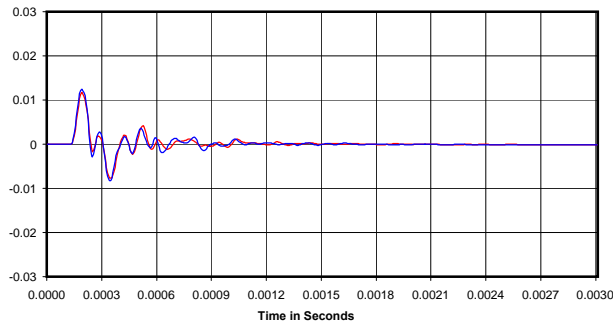
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

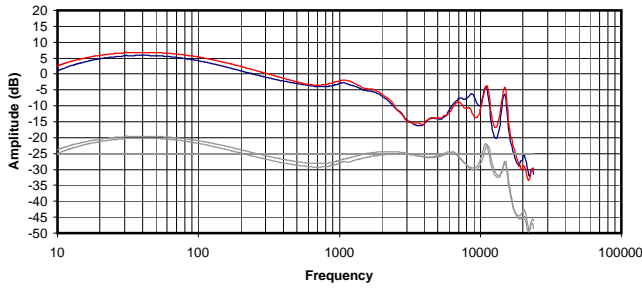


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

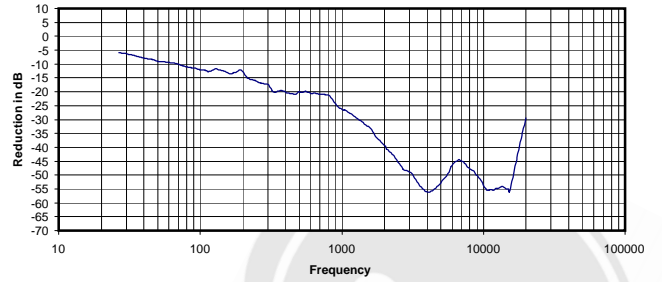
0.024 Vrms
 24 Ohms
 0.02 mW
 -13 dB



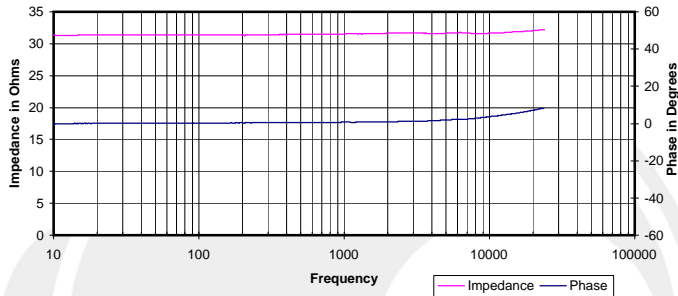
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



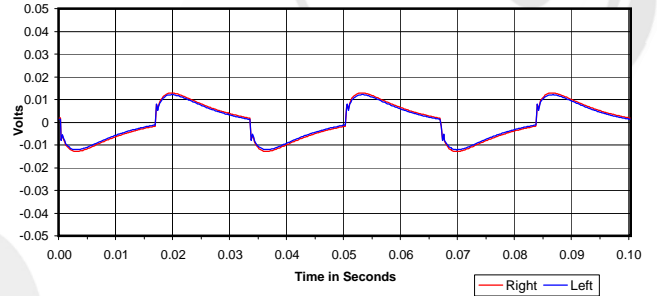
Isolation
Attenuation of External Sound vs. Frequency



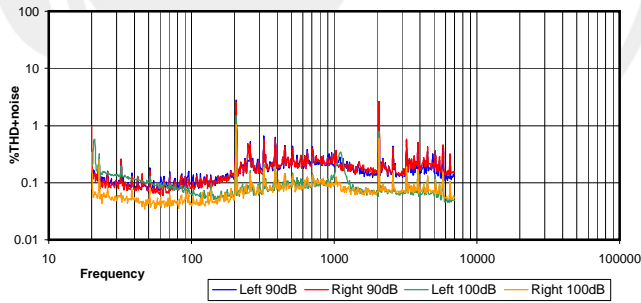
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



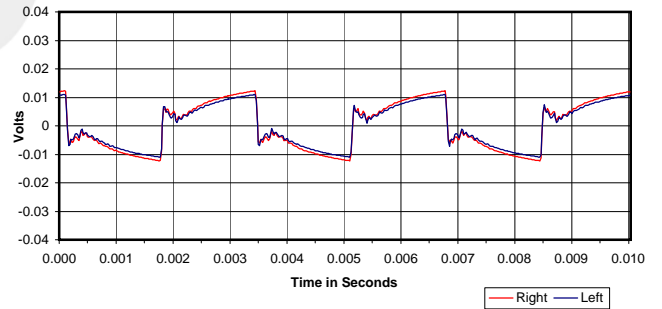
30 Hz Square Wave



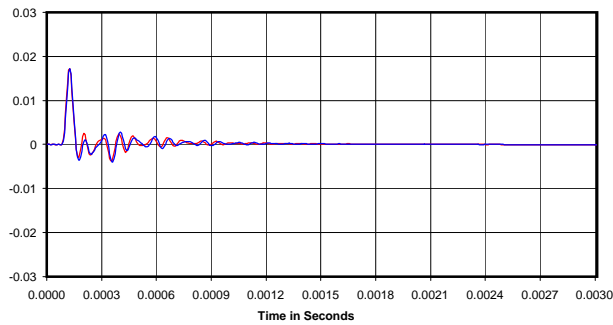
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

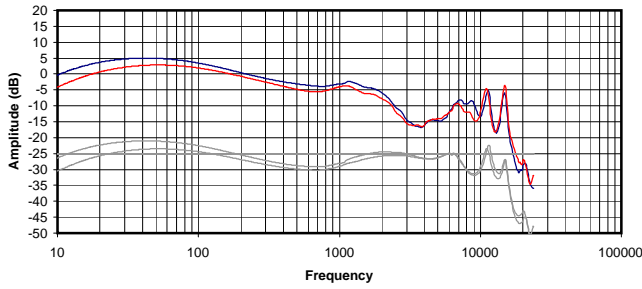


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

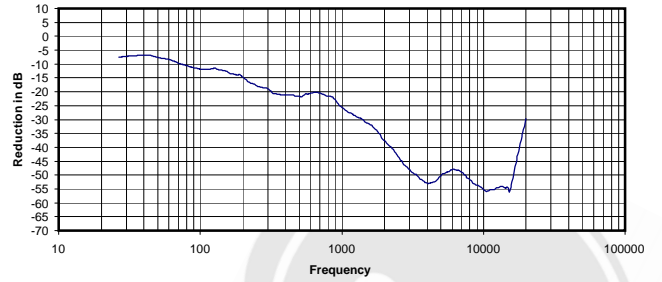
0.047 Vrms
32 Ohms
0.07 mW
-31 dB



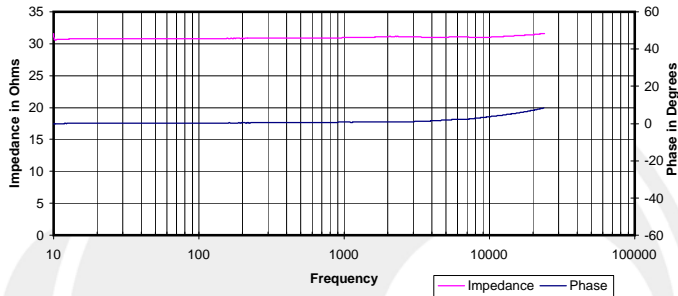
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



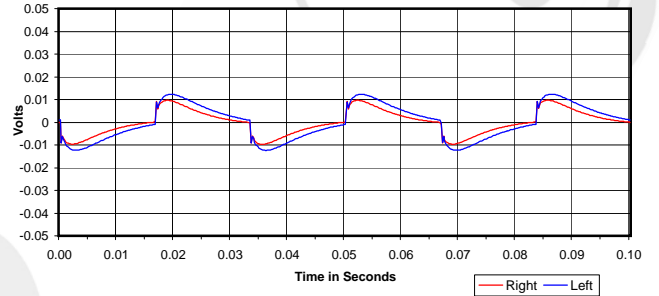
Isolation
Attenuation of External Sound vs. Frequency



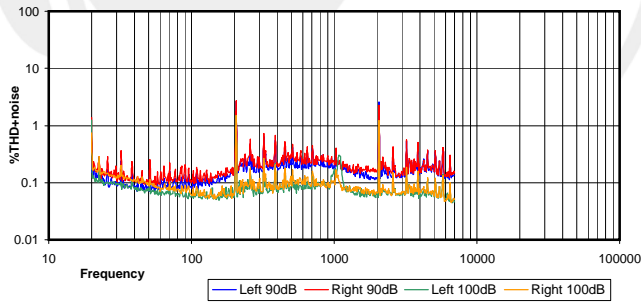
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



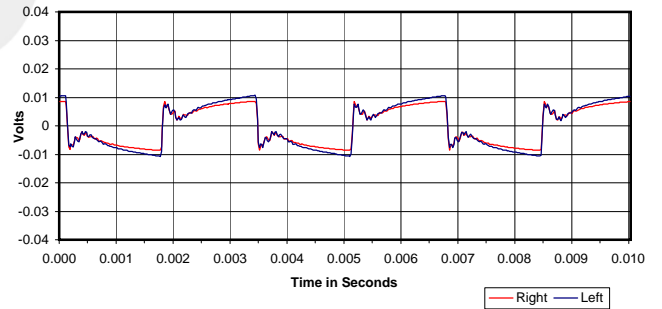
30 Hz Square Wave



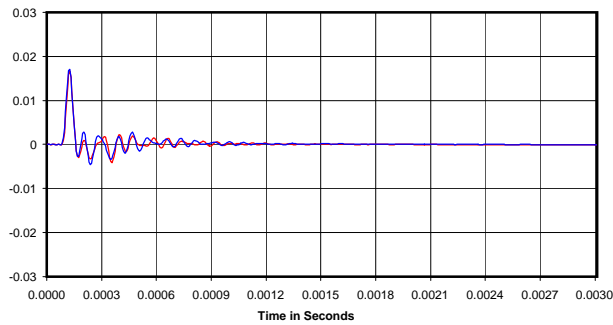
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



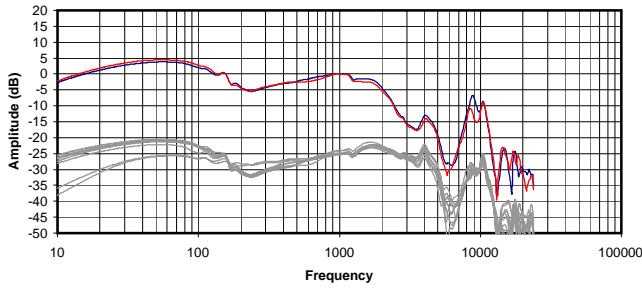
Impulse Response



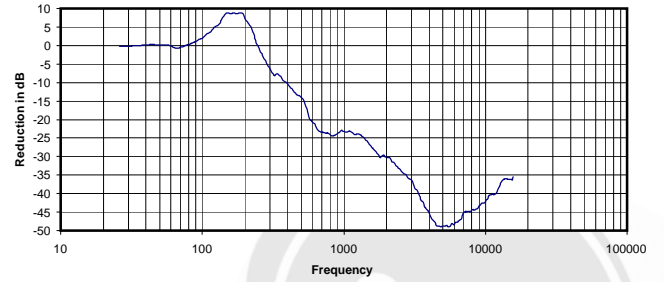
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.042 Vrms
31 Ohms
0.06 mW
-31 dB

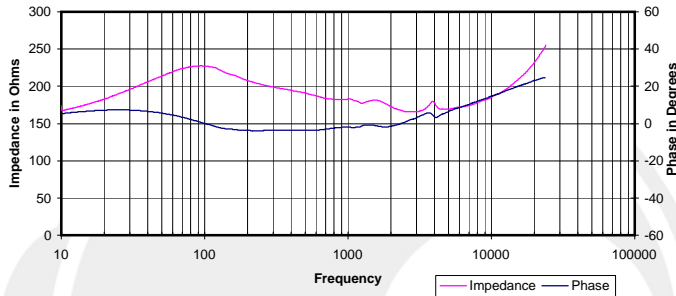
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



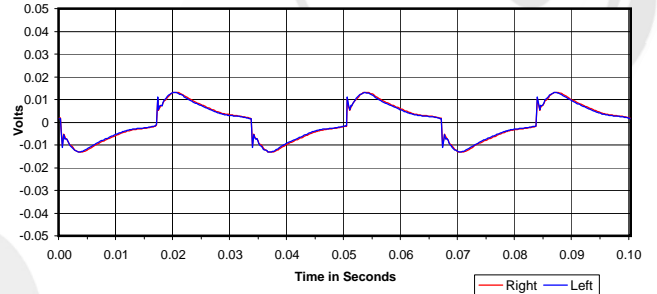
Isolation
 Attenuation of External Sound vs. Frequency



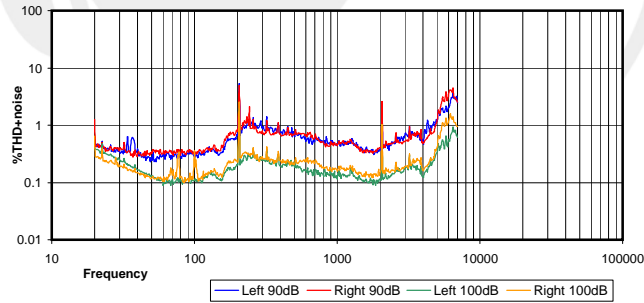
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



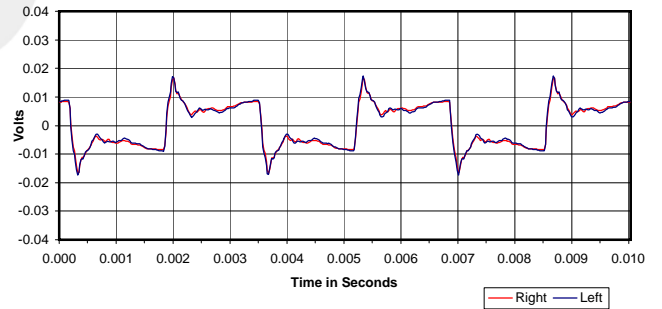
30 Hz Square Wave



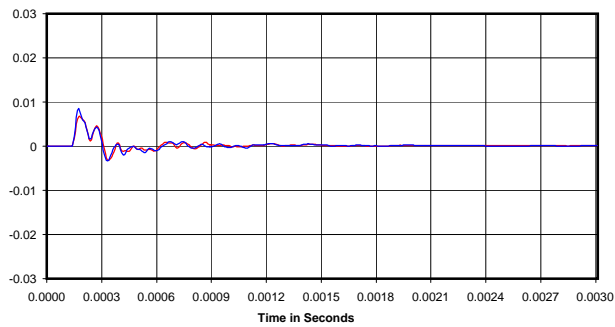
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



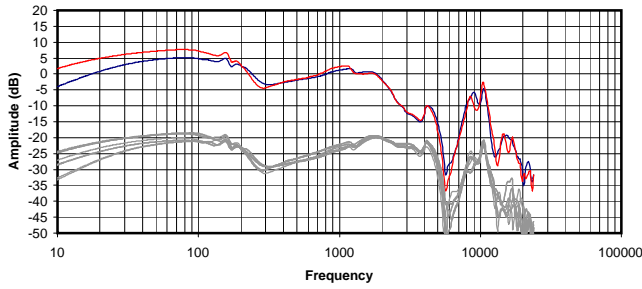
Impulse Response



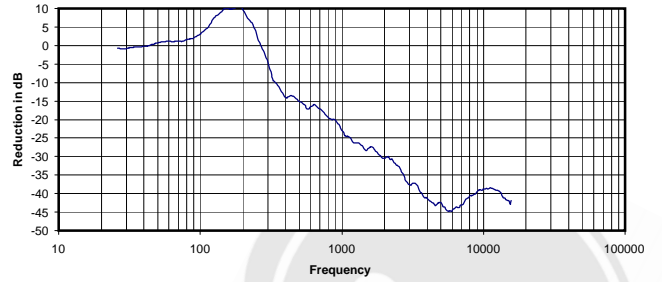
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
 182 Ohms
 0.01 mW
 -19 dB

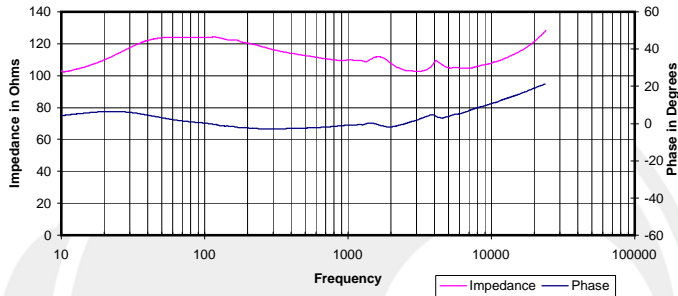
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



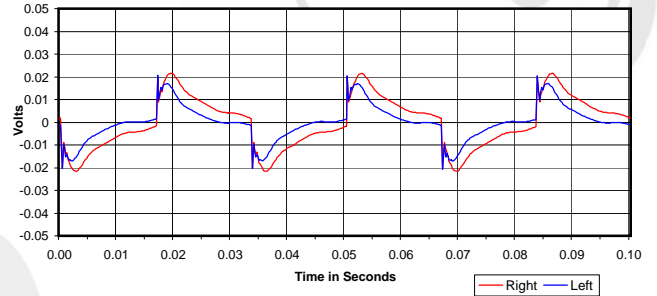
Isolation
Attenuation of External Sound vs. Frequency



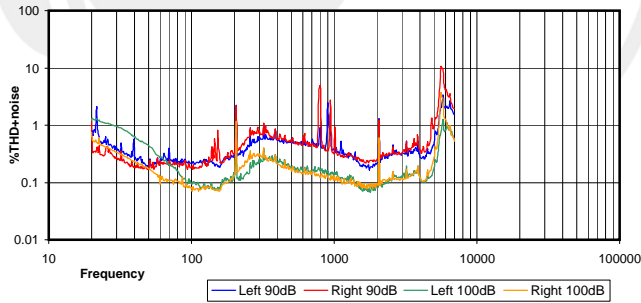
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



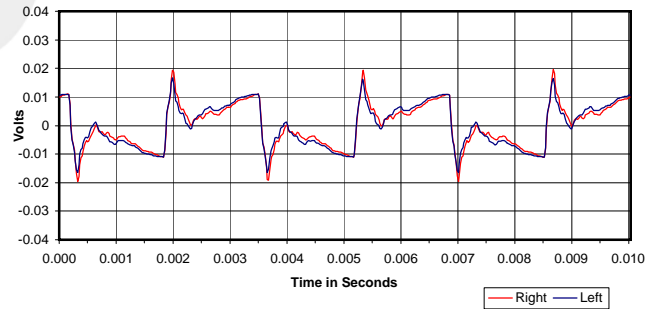
30 Hz Square Wave



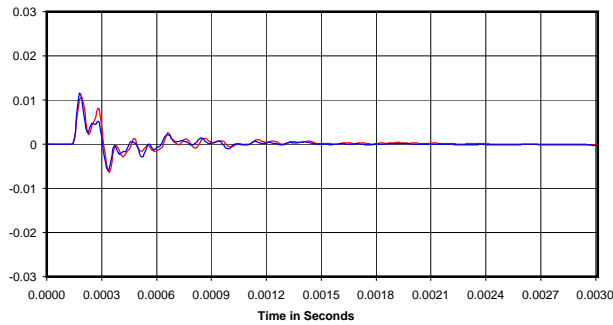
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

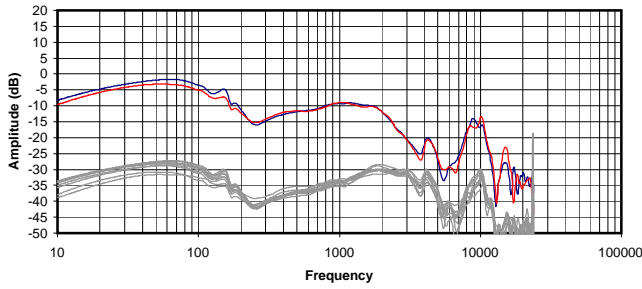


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

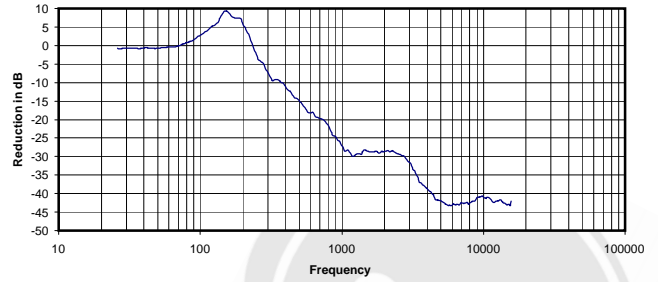
0.035 Vrms
110 Ohms
0.01 mW
-18 dB



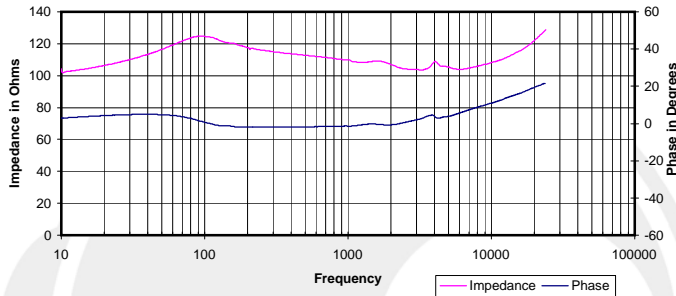
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



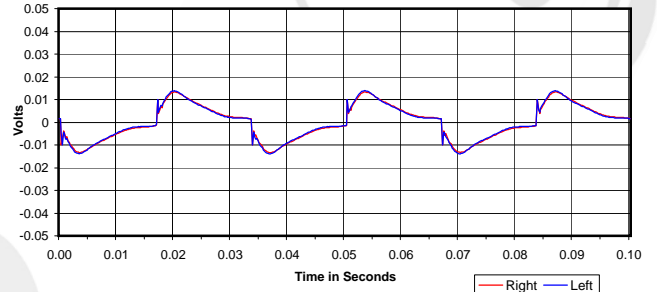
Isolation
 Attenuation of External Sound vs. Frequency



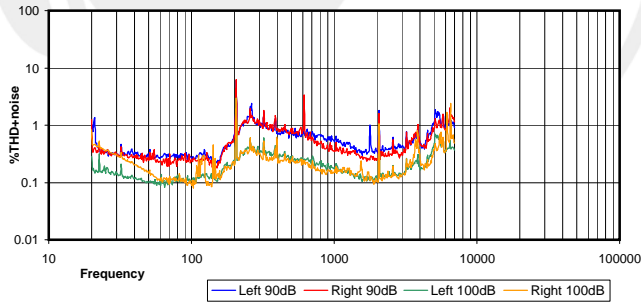
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



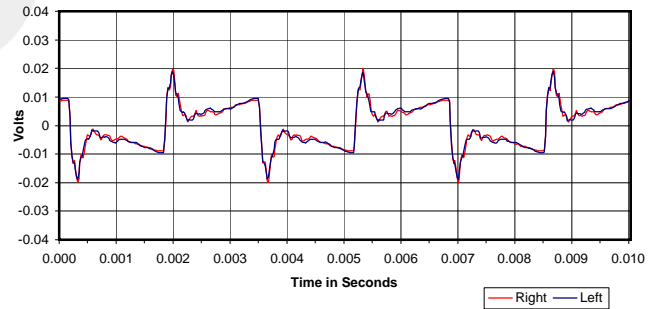
30 Hz Square Wave



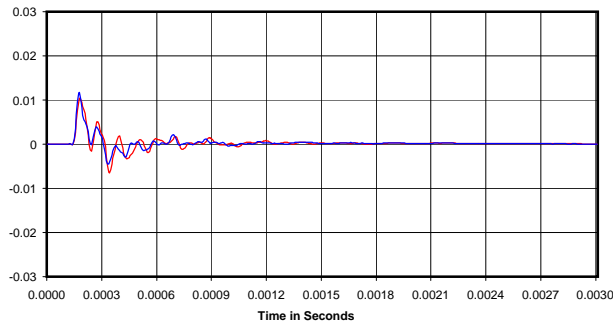
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



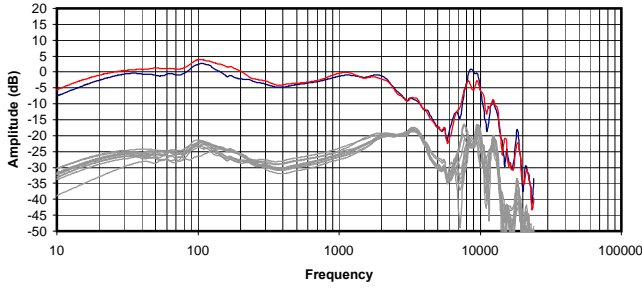
Impulse Response



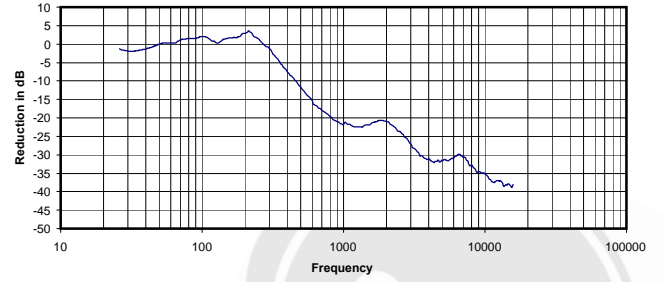
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.051 Vrms
 110 Ohms
 0.02 mW
 -18 dB

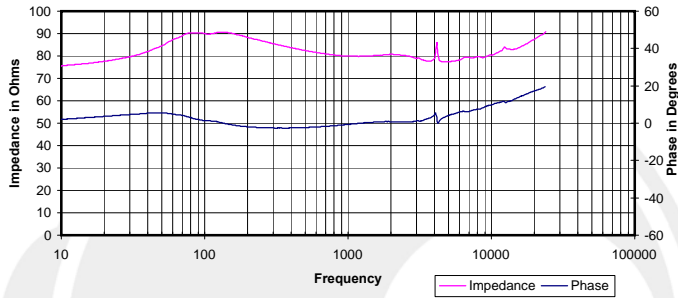
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



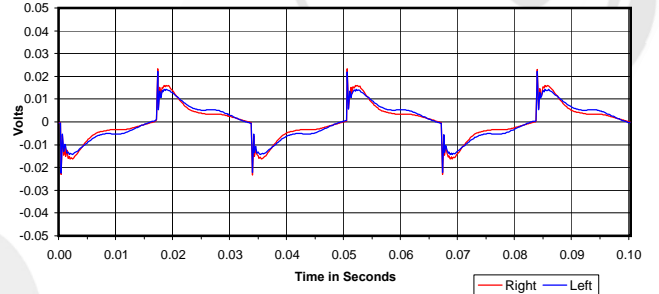
Isolation
 Attenuation of External Sound vs. Frequency



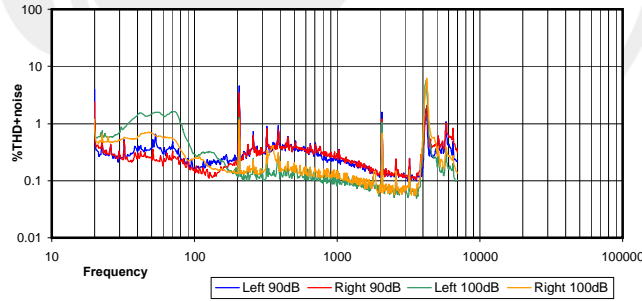
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



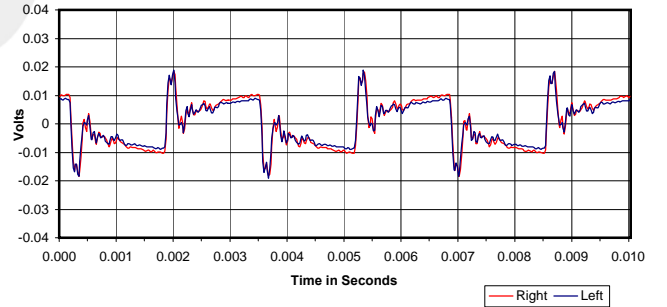
30 Hz Square Wave



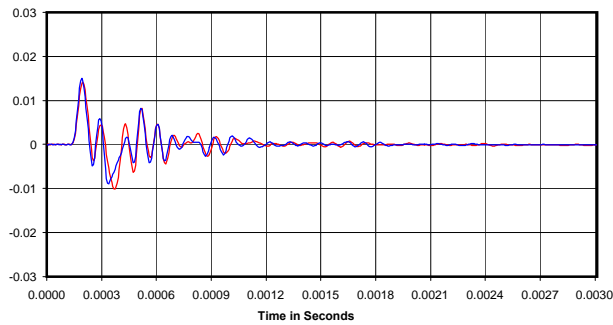
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



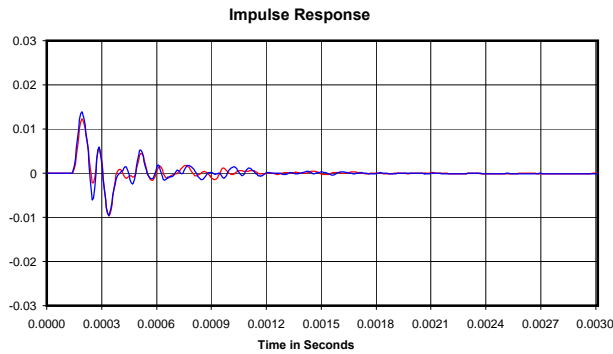
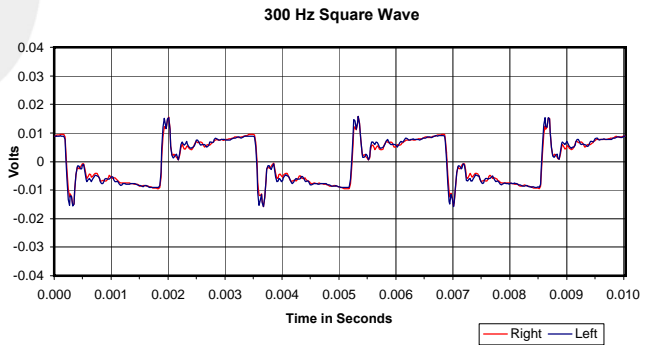
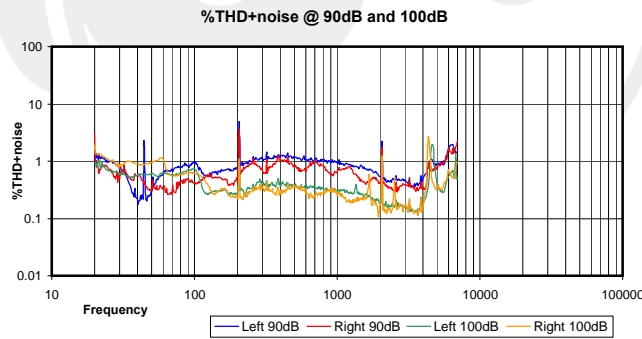
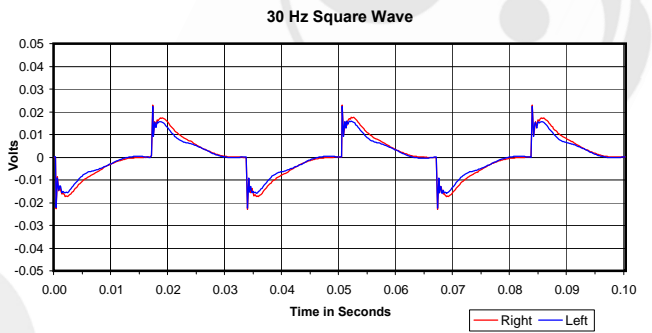
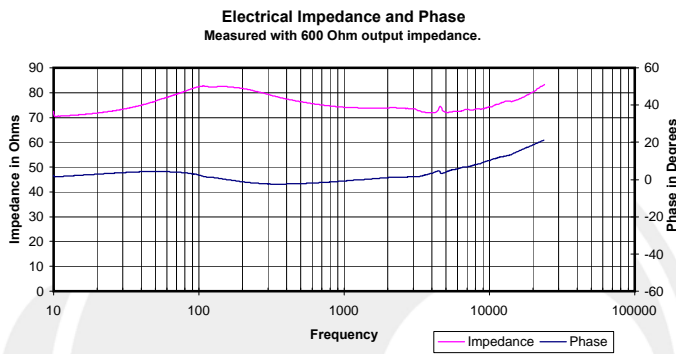
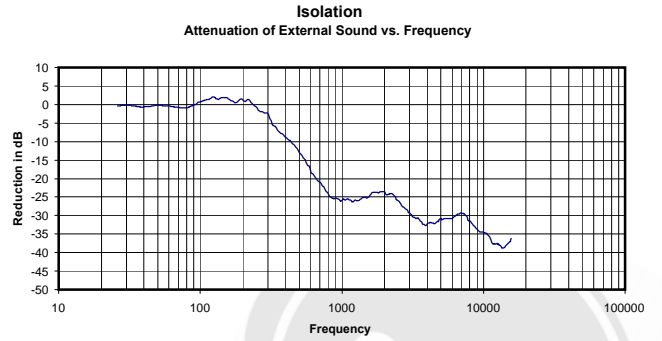
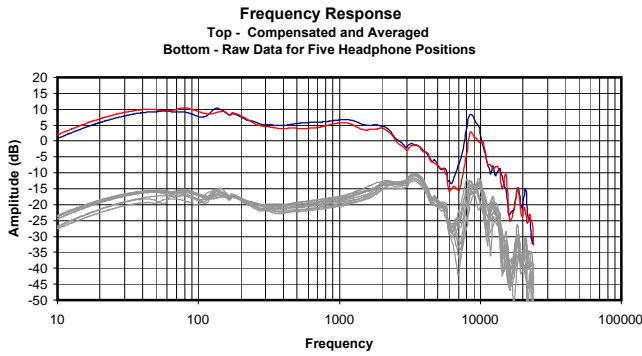
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.048 Vrms
 80 Ohms
 0.03 mW
 -14 dB



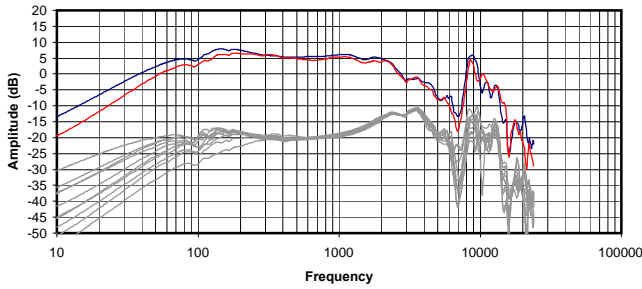


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

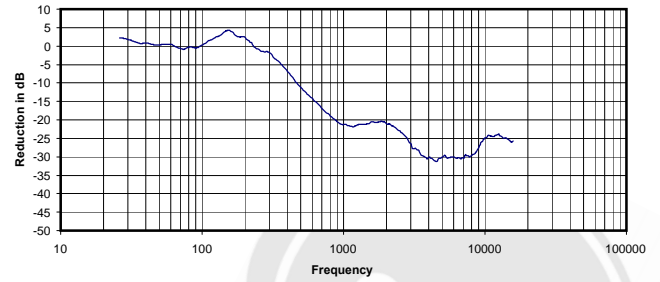
0.055 Vrms
74 Ohms
0.04 mW
-16 dB



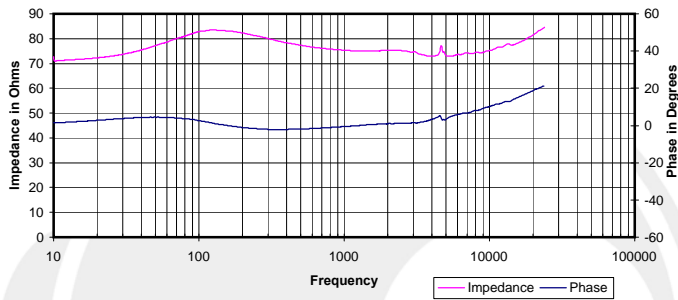
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



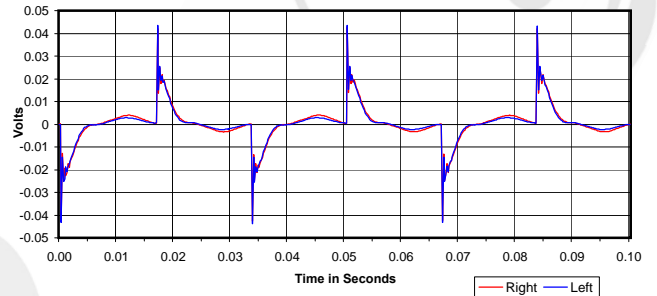
Isolation
Attenuation of External Sound vs. Frequency



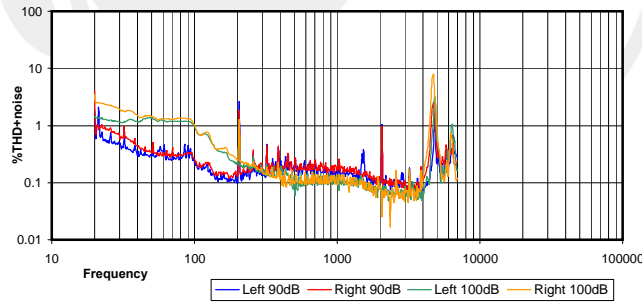
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



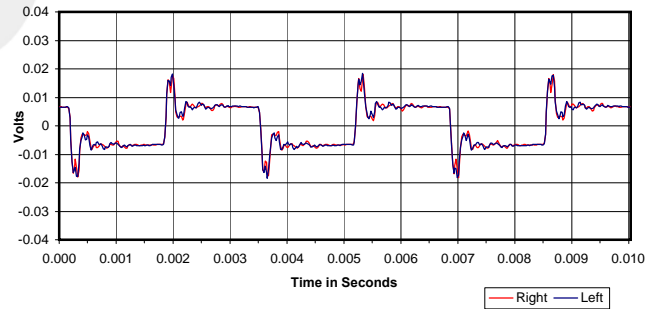
30 Hz Square Wave



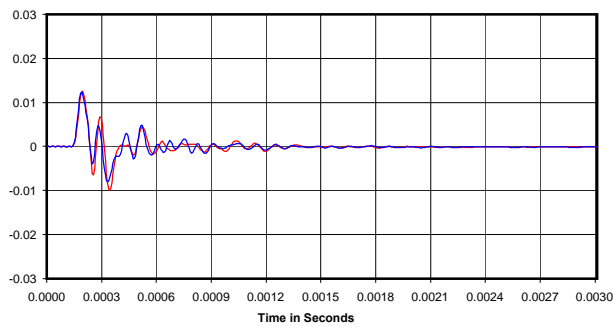
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

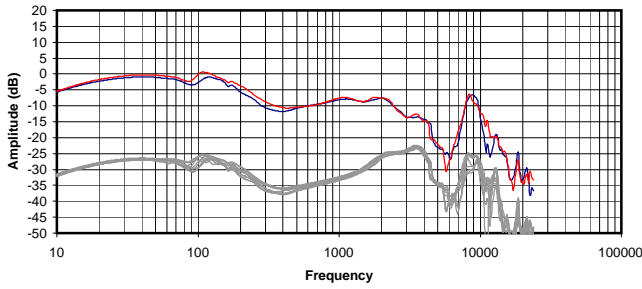


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

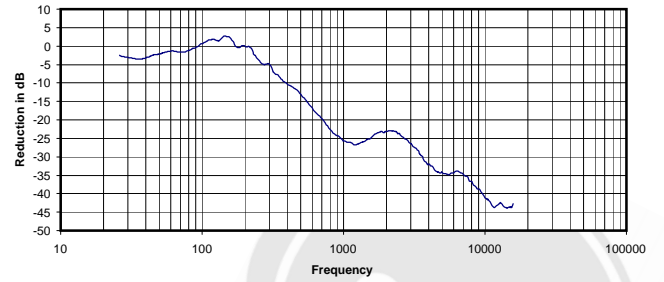
0.051 Vrms
75 Ohms
0.03 mW
-14 dB



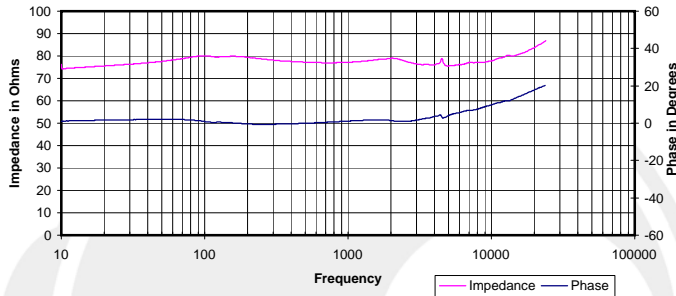
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



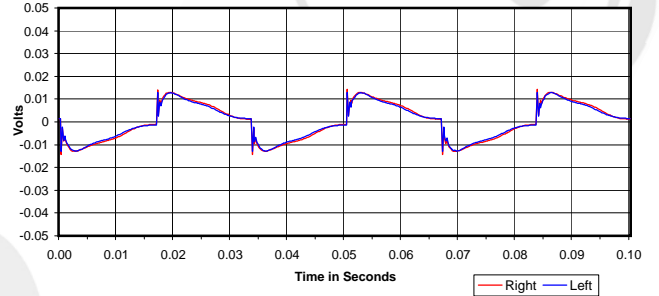
Isolation
 Attenuation of External Sound vs. Frequency



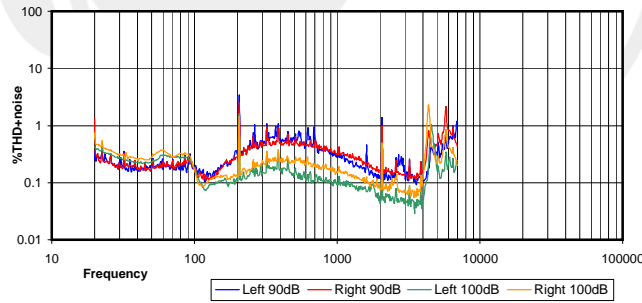
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



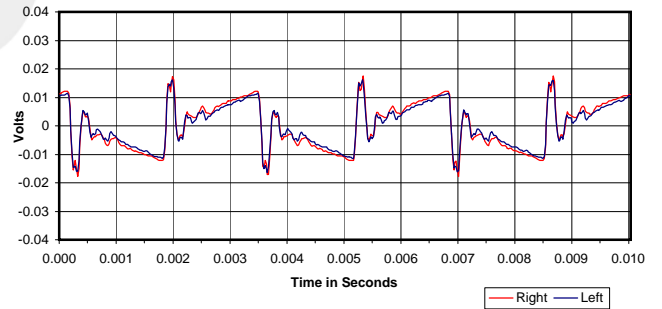
30 Hz Square Wave



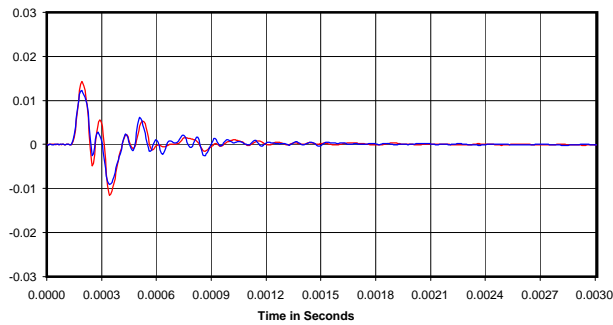
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

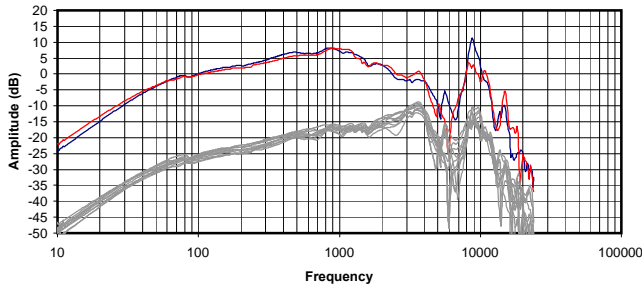


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

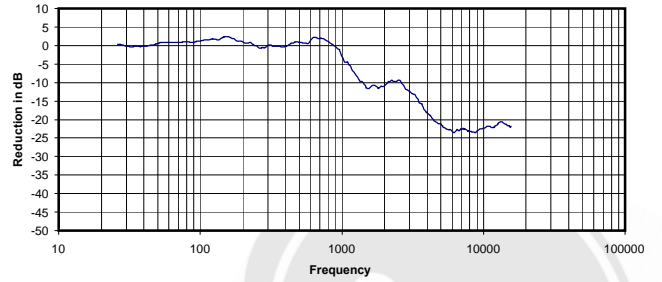
0.059 Vrms
 77 Ohms
 0.04 mW
 -16 dB



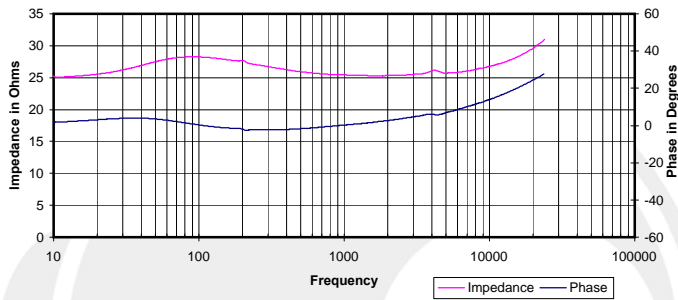
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



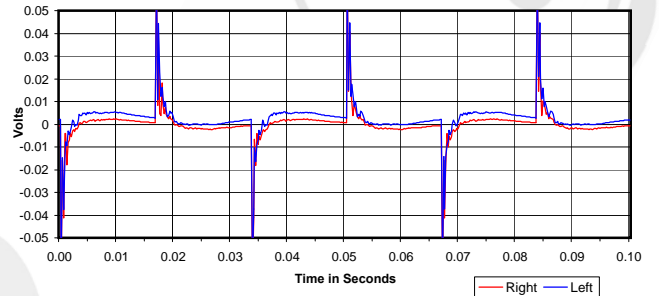
Isolation
 Attenuation of External Sound vs. Frequency



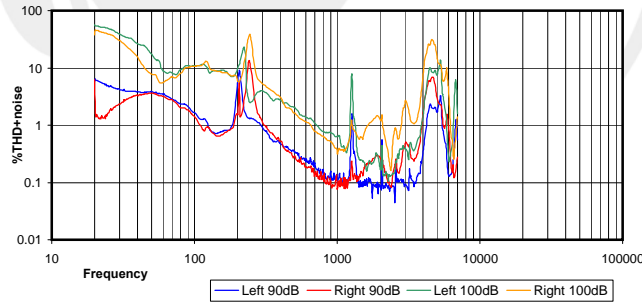
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



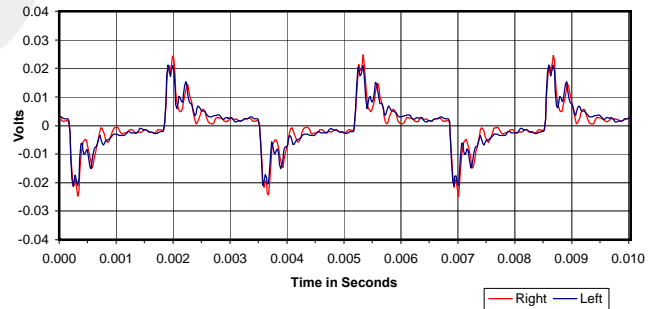
30 Hz Square Wave



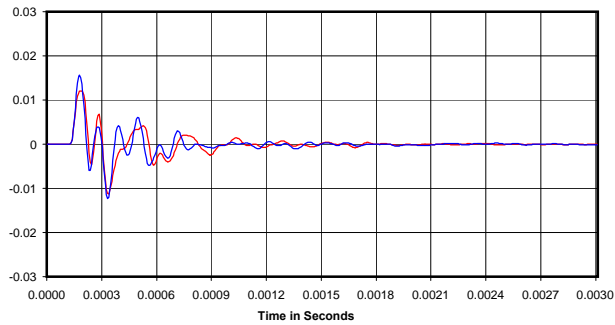
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



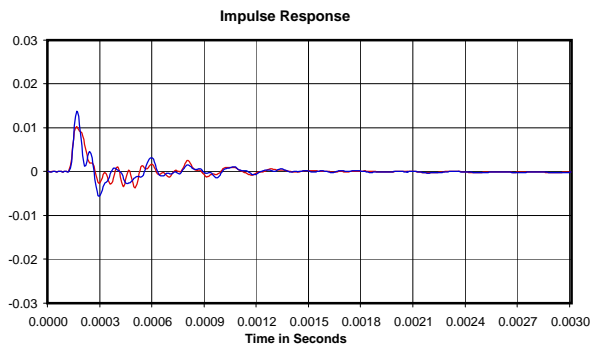
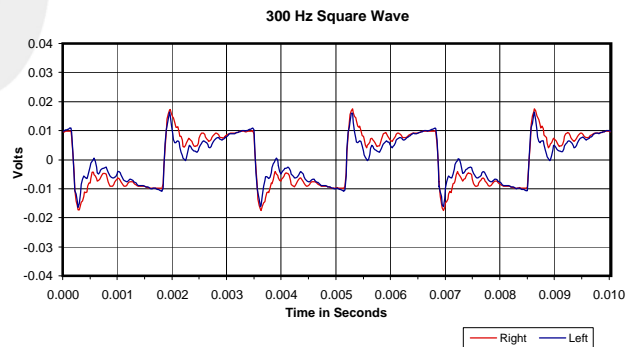
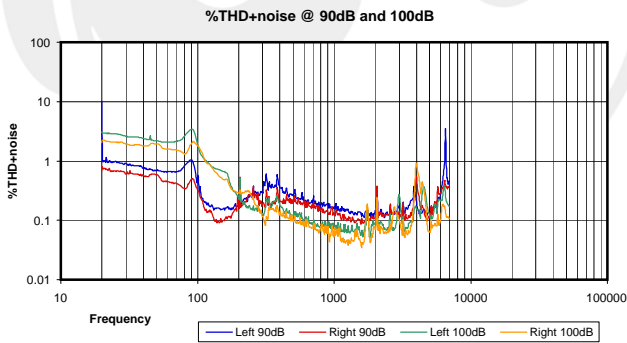
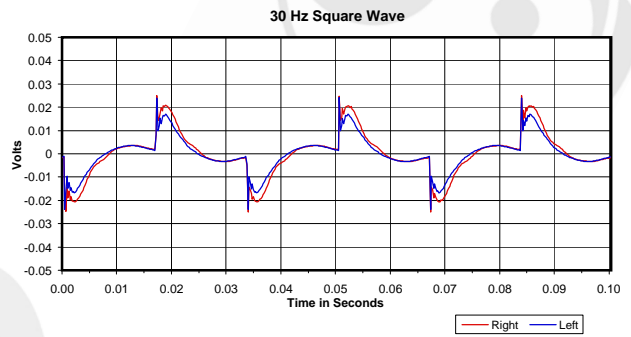
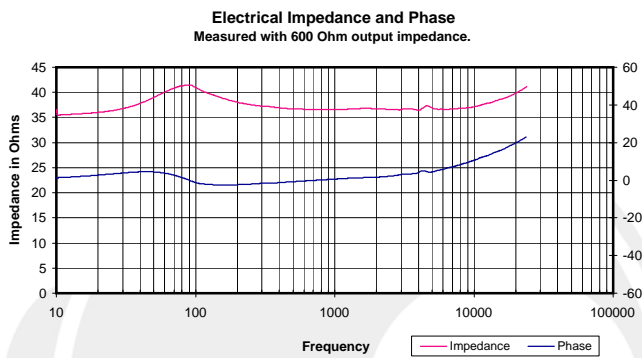
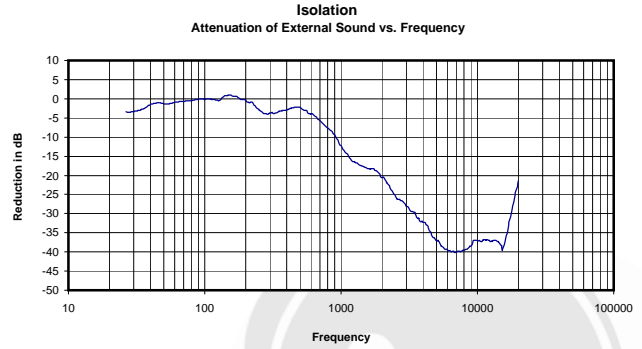
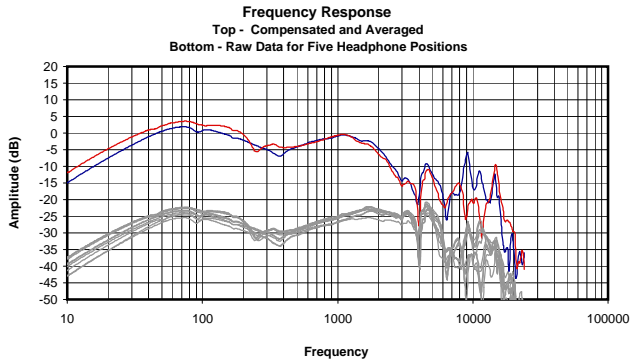
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.074 Vrms
 25 Ohms
 0.22 mW
 -5 dBr



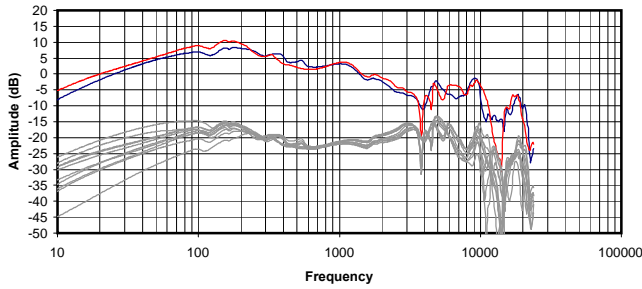


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

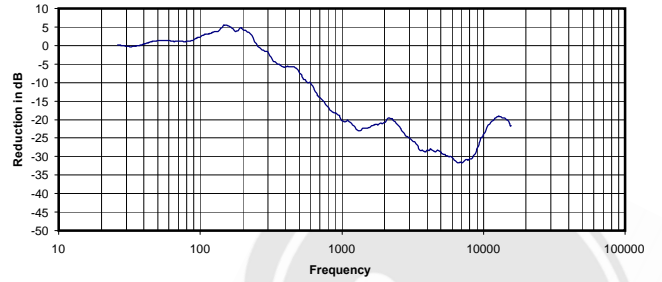
0.032 Vrms
37 Ohms
0.03 mW
-16 dBr



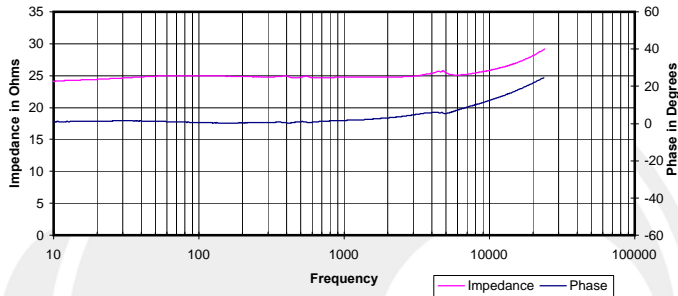
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



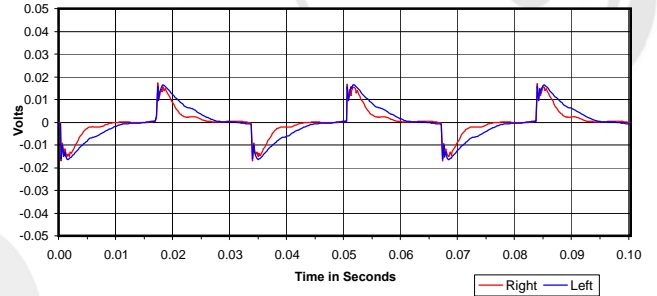
Isolation
 Attenuation of External Sound vs. Frequency



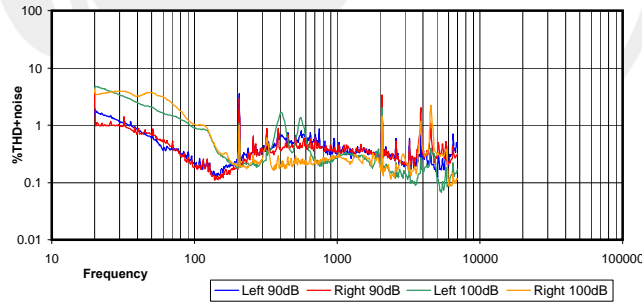
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



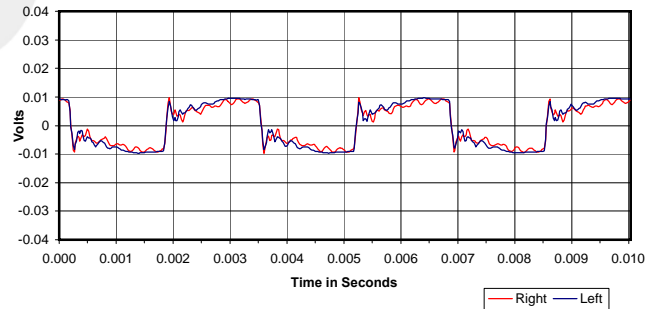
30 Hz Square Wave



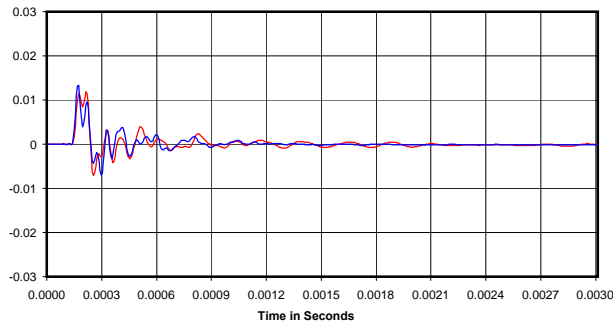
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

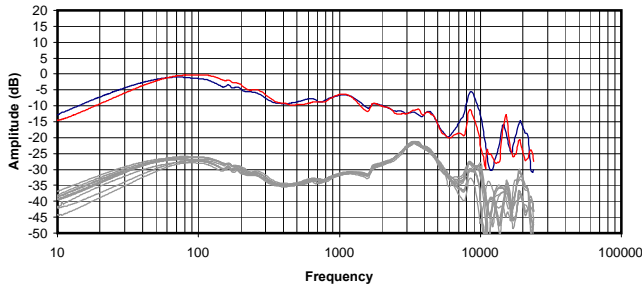


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

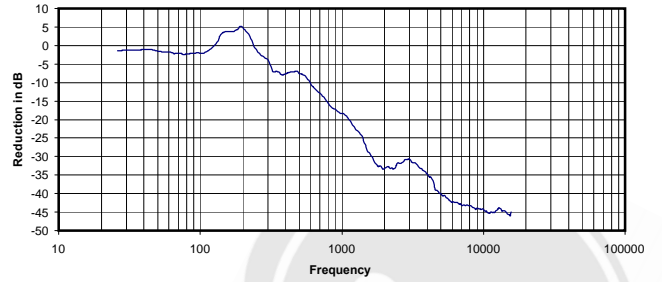
0.097 Vrms
 25 Ohms
 0.38 mW
 -13 dB



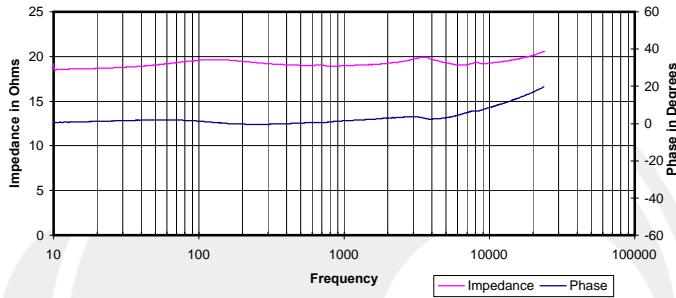
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



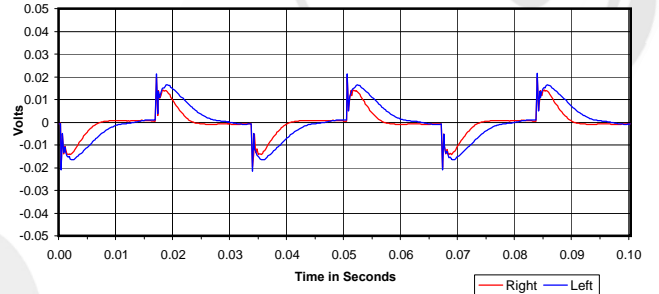
Isolation
 Attenuation of External Sound vs. Frequency



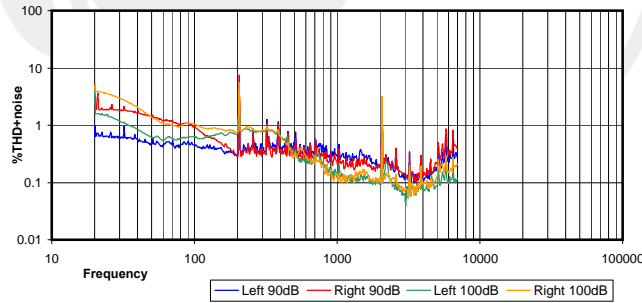
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



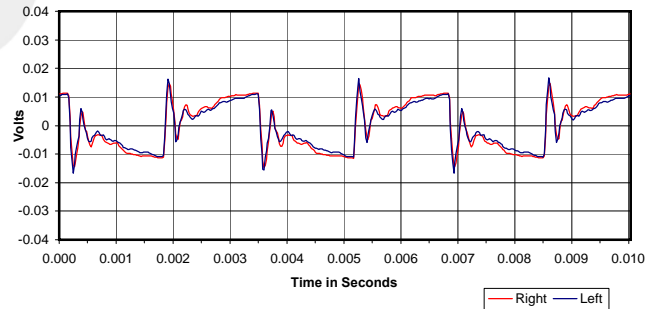
30 Hz Square Wave



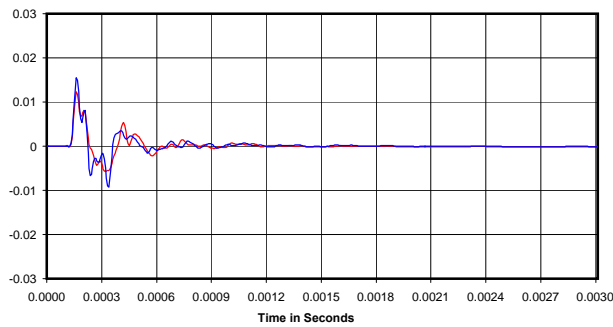
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

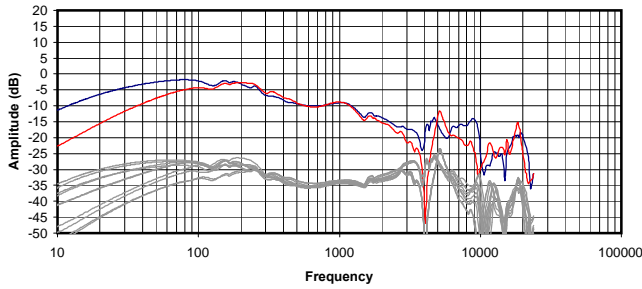


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

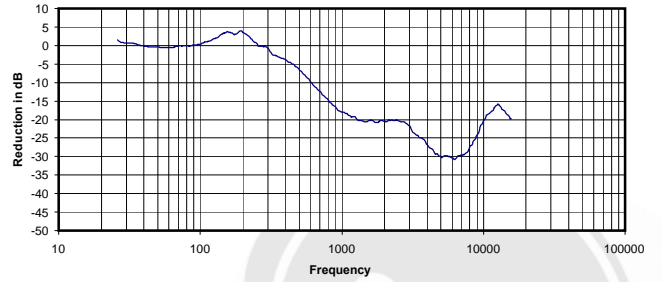
0.055 Vrms
 19 Ohms
 0.16 mW
 -17 dB



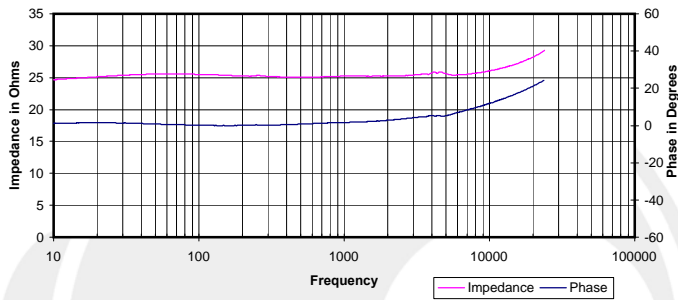
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



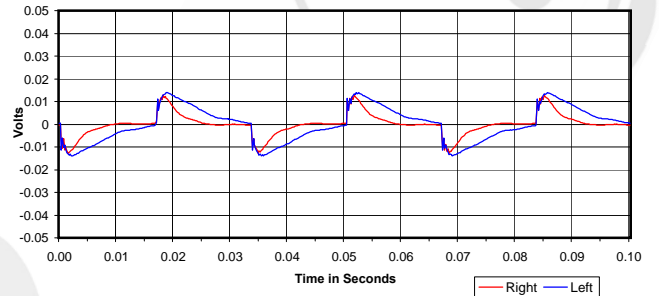
Isolation
 Attenuation of External Sound vs. Frequency



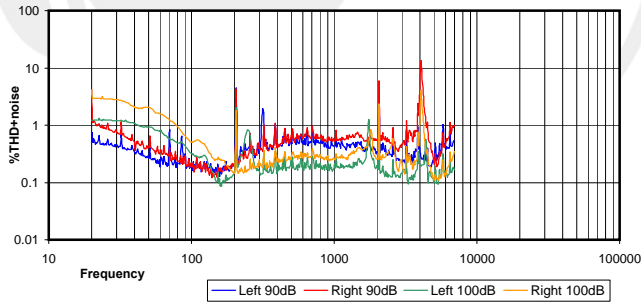
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



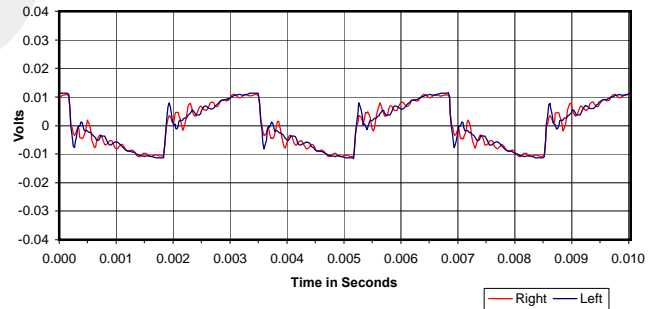
30 Hz Square Wave



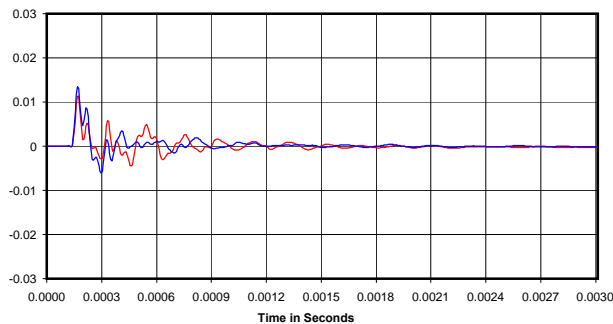
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

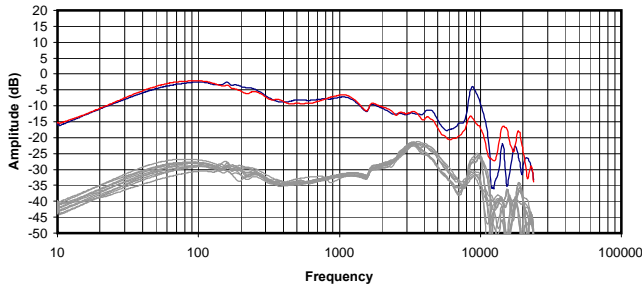


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

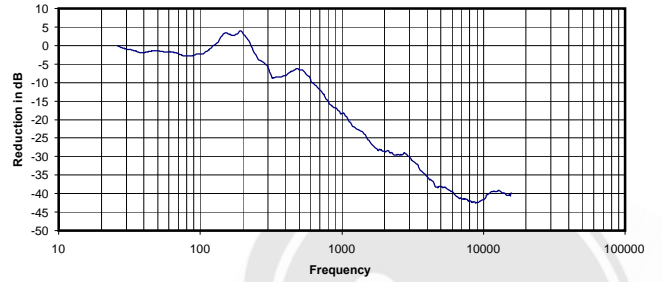
0.097 Vrms
 25 Ohms
 0.37 mW
 -12 dB



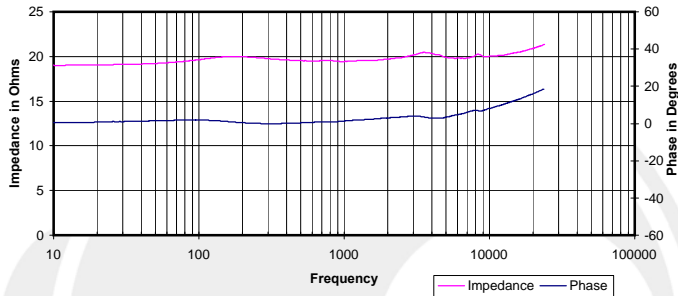
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



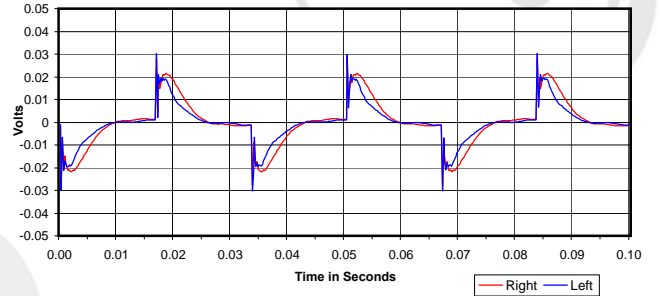
Isolation
 Attenuation of External Sound vs. Frequency



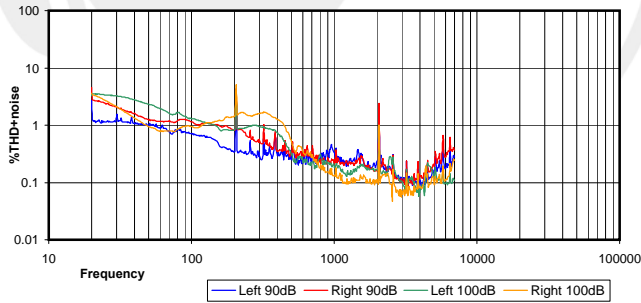
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



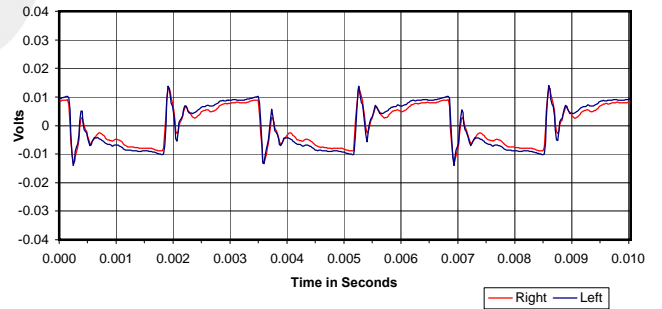
30 Hz Square Wave



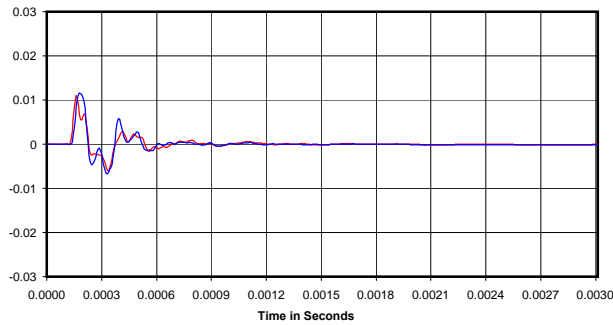
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

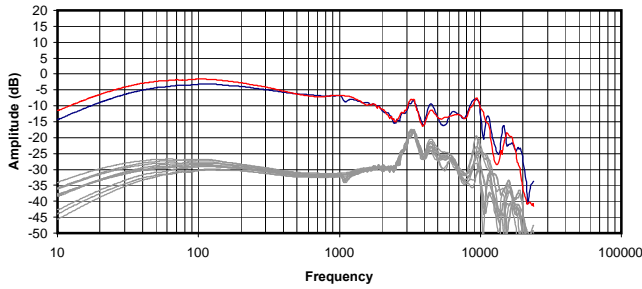


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

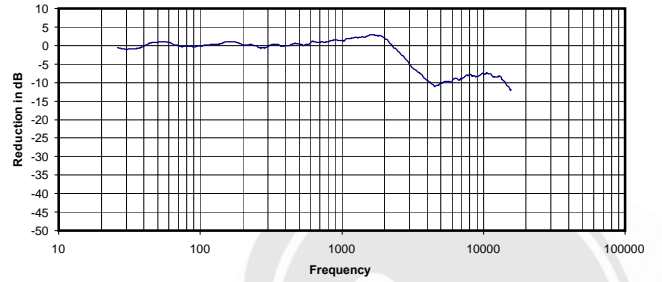
0.055 Vrms
 19 Ohms
 0.16 mW
 -16 dB



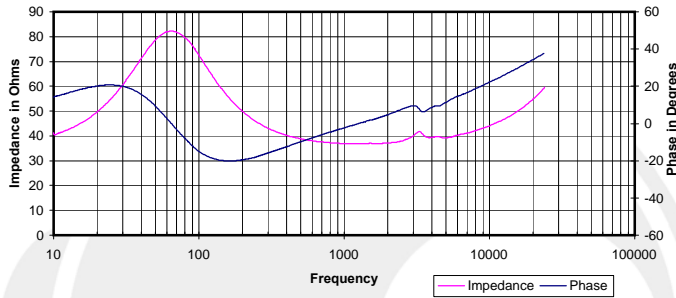
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



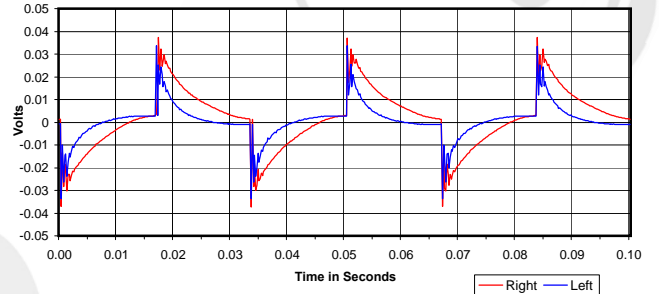
Isolation
 Attenuation of External Sound vs. Frequency



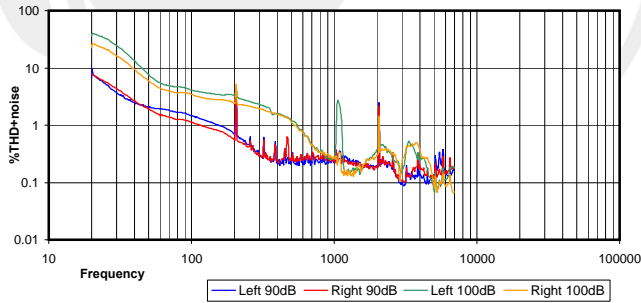
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



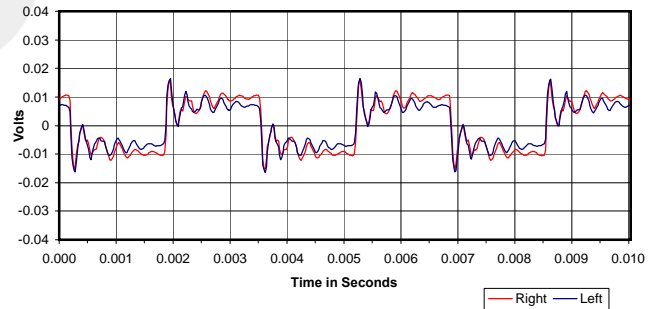
30 Hz Square Wave



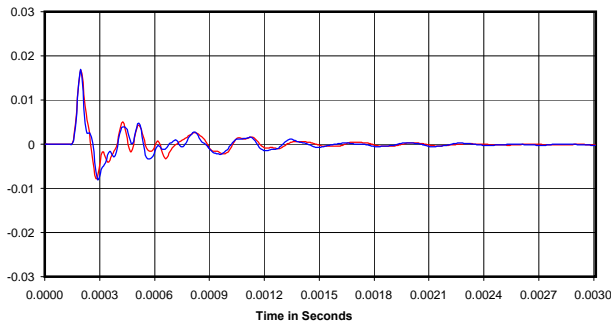
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

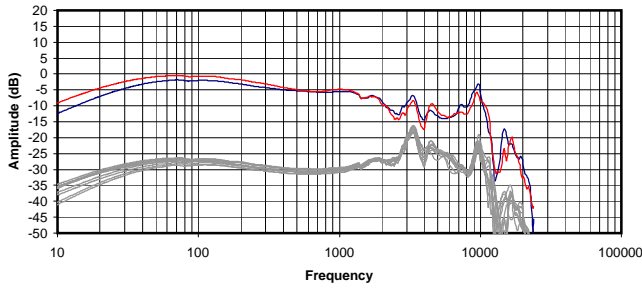


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

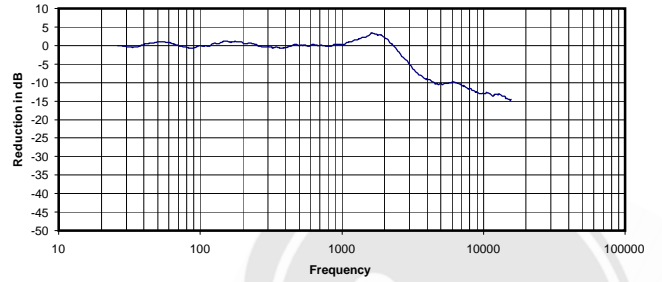
0.119 Vrms
 37 Ohms
 0.38 mW
 -1 dB



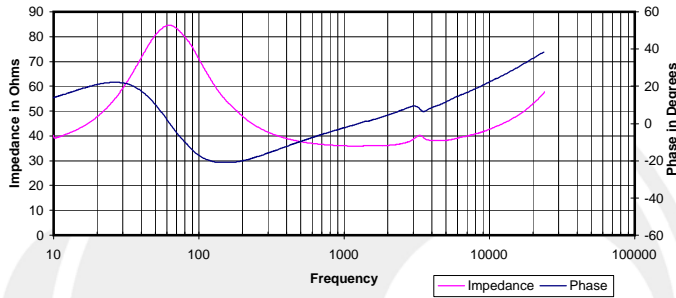
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



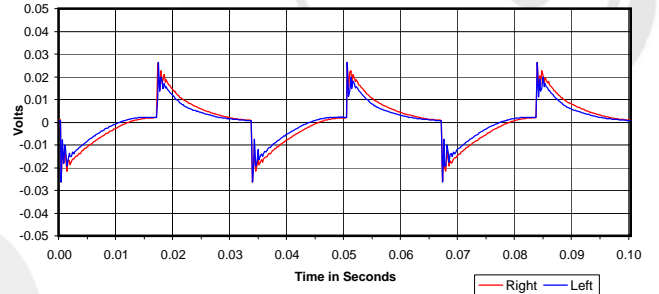
Isolation
 Attenuation of External Sound vs. Frequency



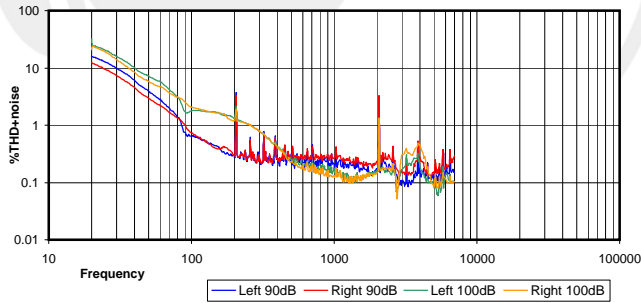
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



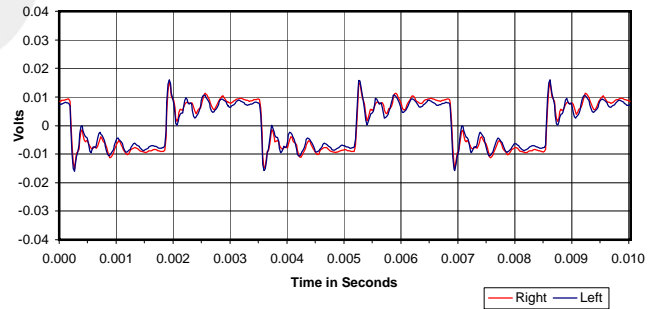
30 Hz Square Wave



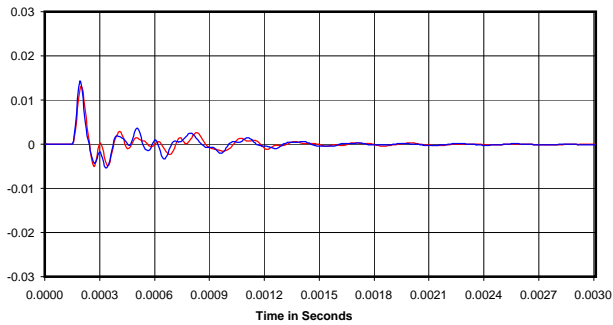
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

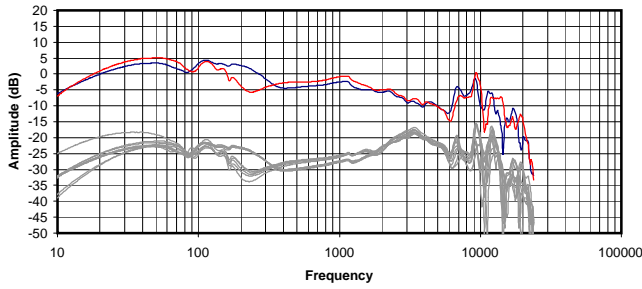


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

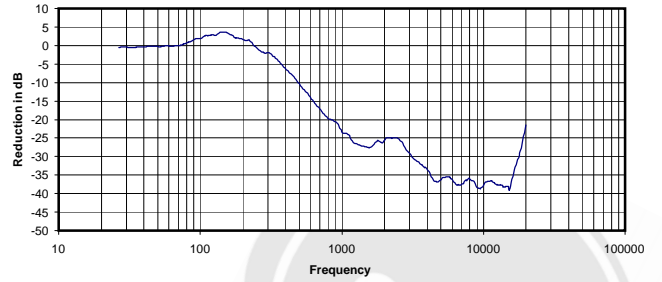
0.115 Vrms
 36 Ohms
 0.37 mW
 -1 dBr



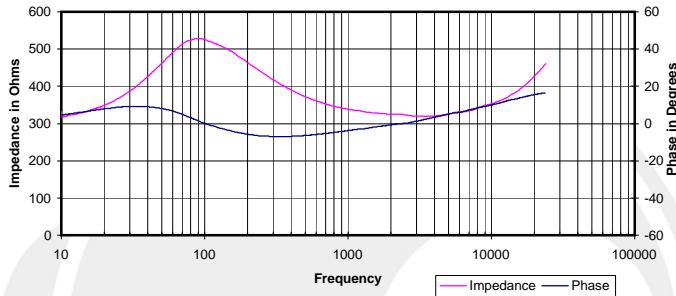
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



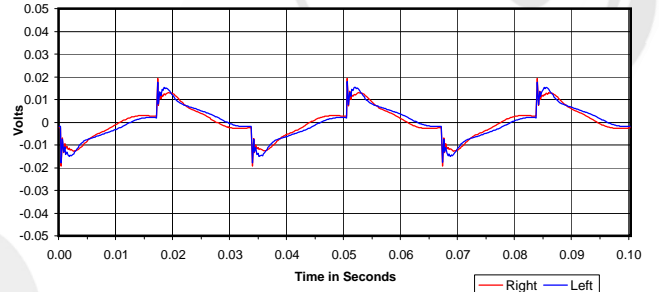
Isolation
 Attenuation of External Sound vs. Frequency



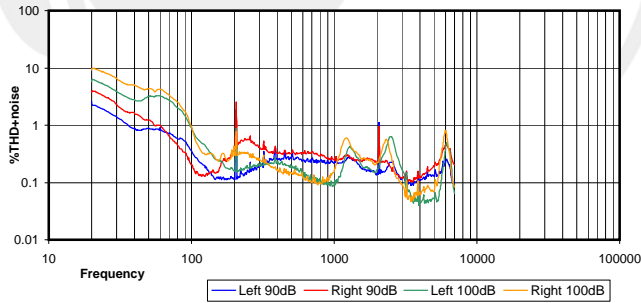
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



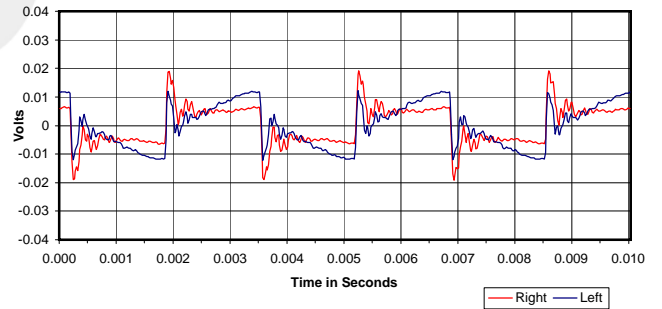
30 Hz Square Wave



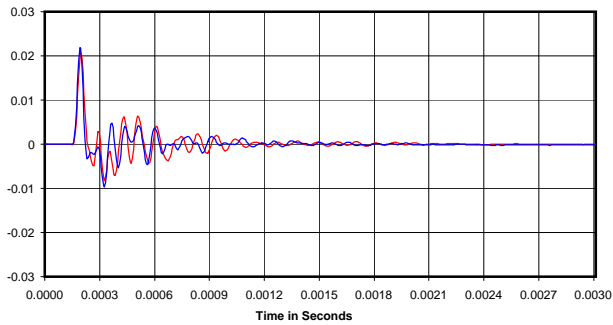
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



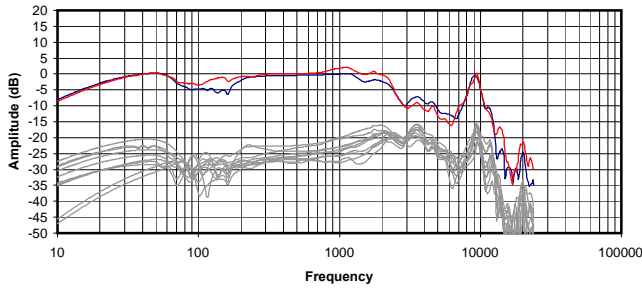
Impulse Response



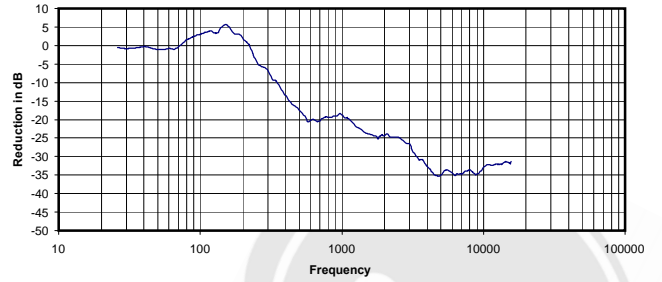
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.258 Vrms
 338 Ohms
 0.20 mW
 -18 dB

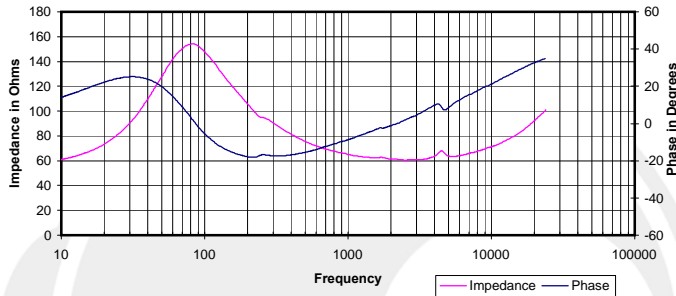
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



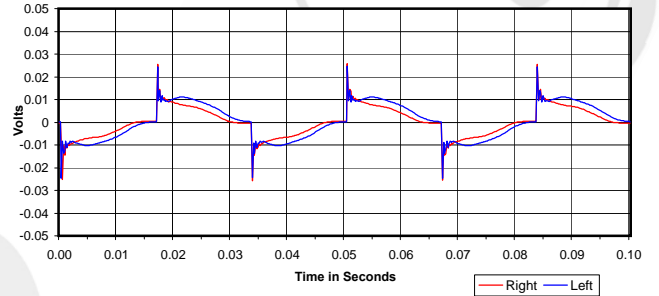
Isolation
Attenuation of External Sound vs. Frequency



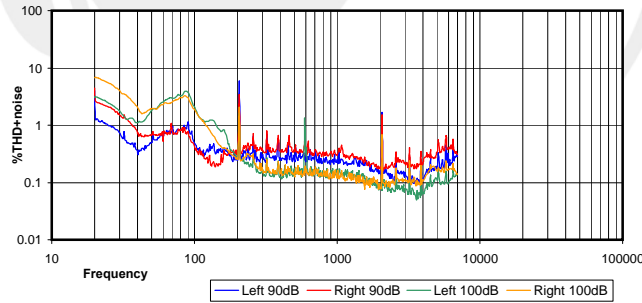
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



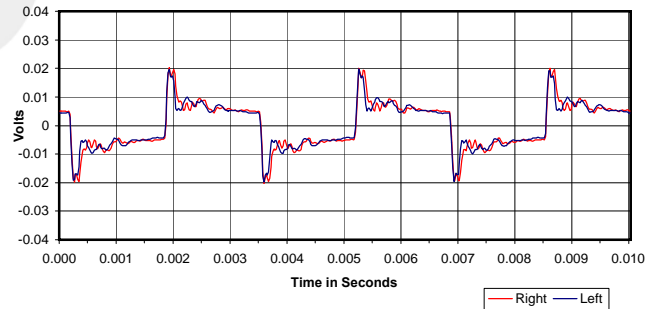
30 Hz Square Wave



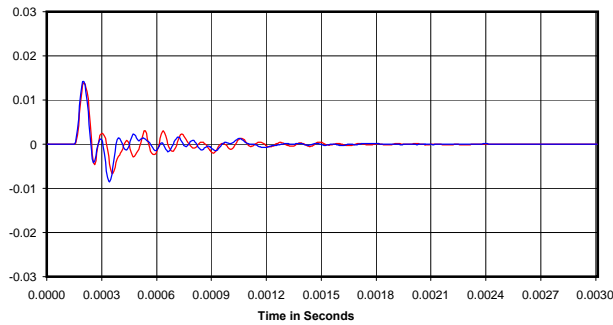
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



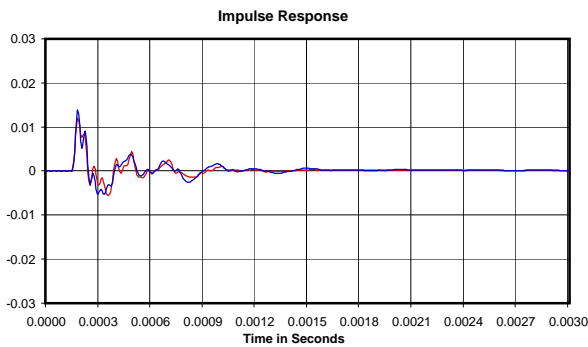
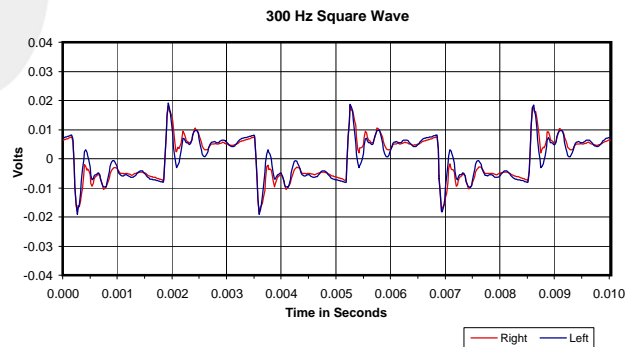
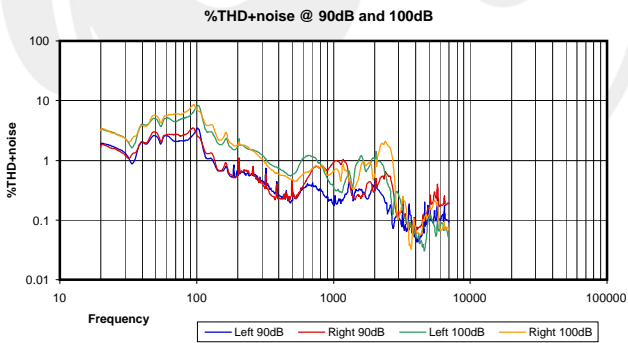
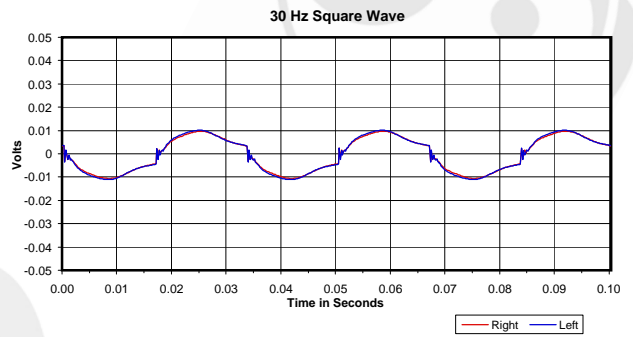
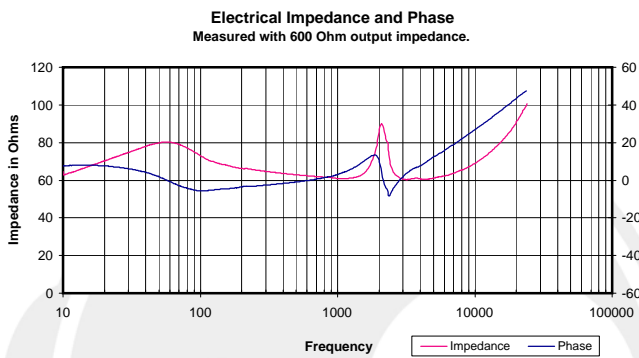
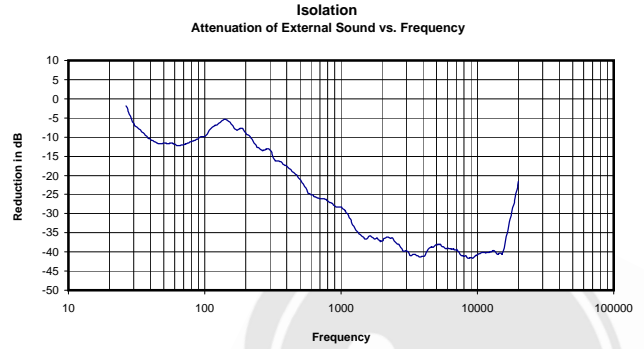
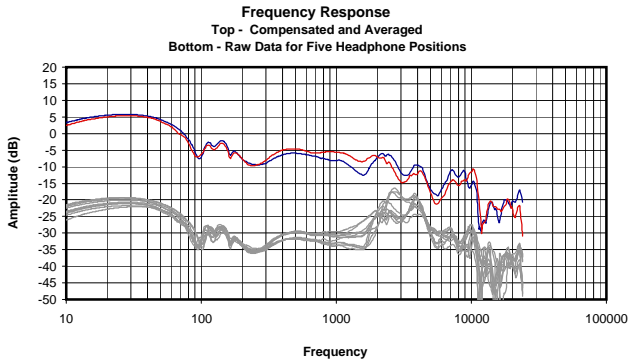
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.061 Vrms
65 Ohms
0.06 mW
-16 dB

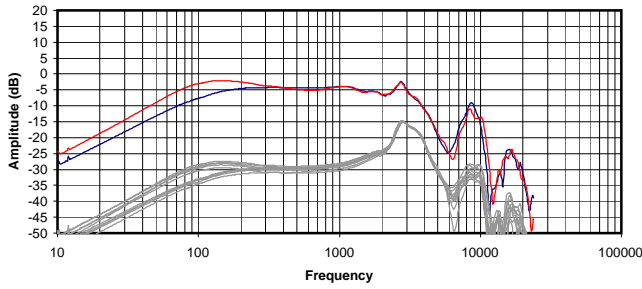




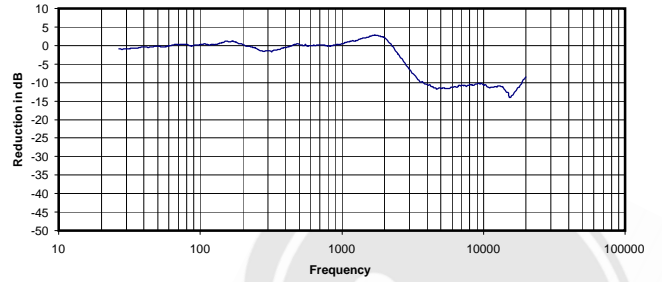
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.310 Vrms
61 Ohms
1.57 mW
-27 dB

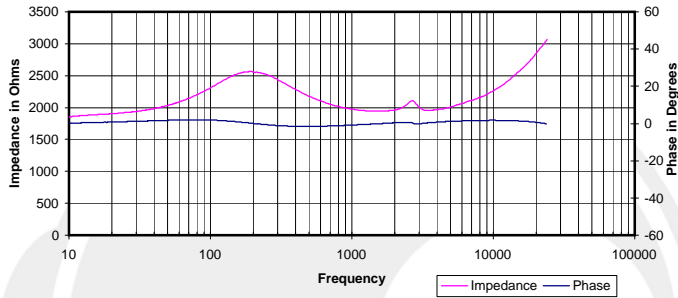
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



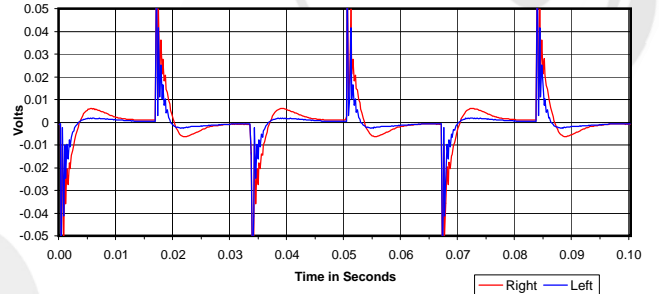
Isolation
 Attenuation of External Sound vs. Frequency



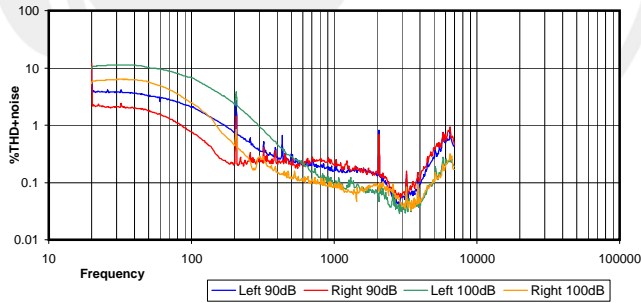
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



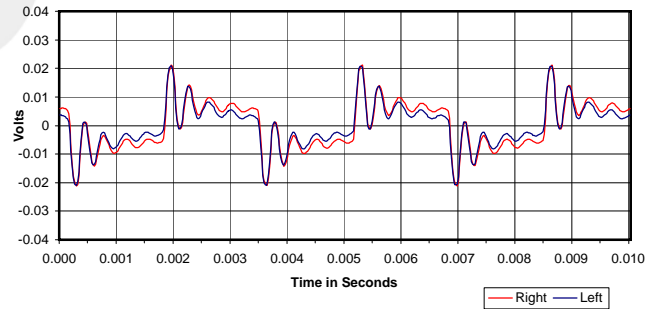
30 Hz Square Wave



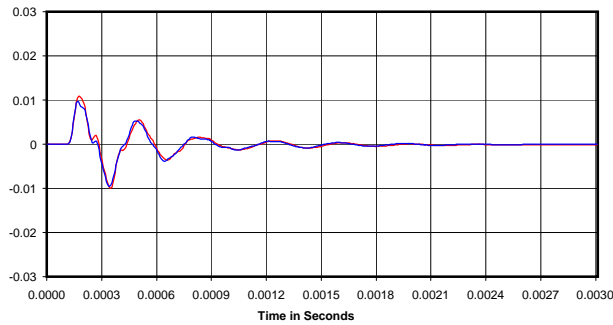
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

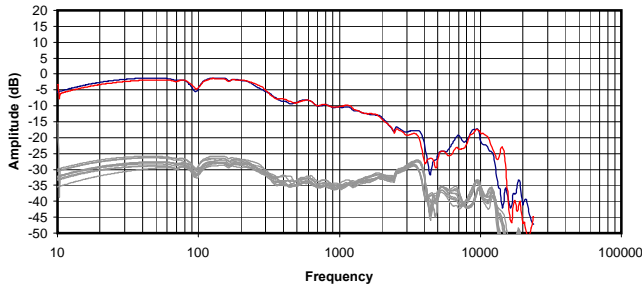


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

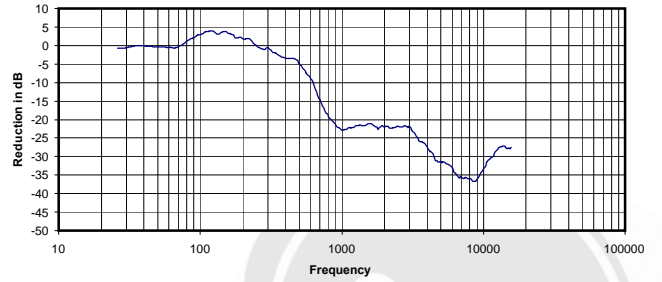
0.323 Vrms
 1974 Ohms
 0.05 mW
 -3 dBr



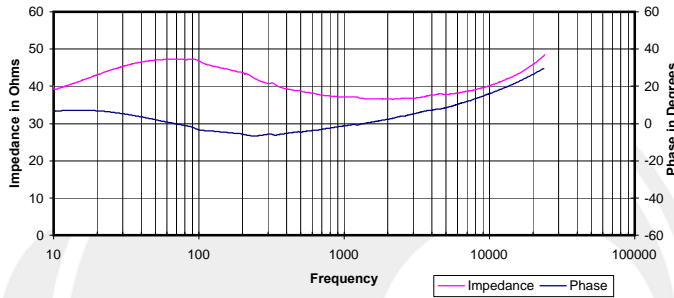
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



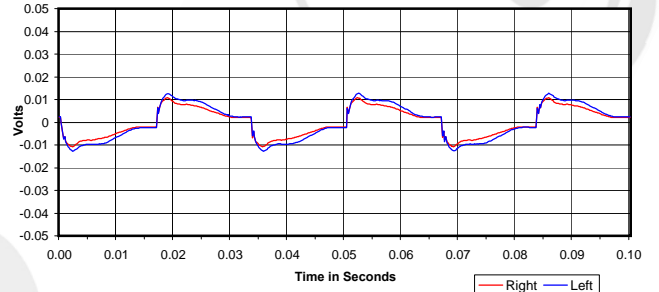
Isolation
 Attenuation of External Sound vs. Frequency



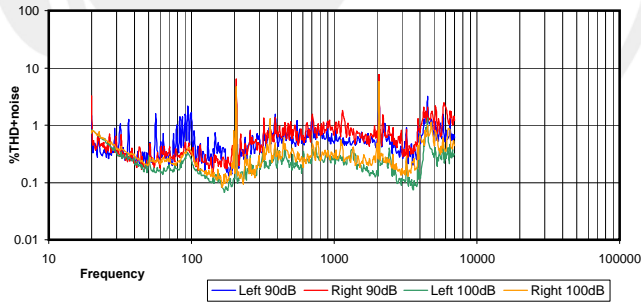
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



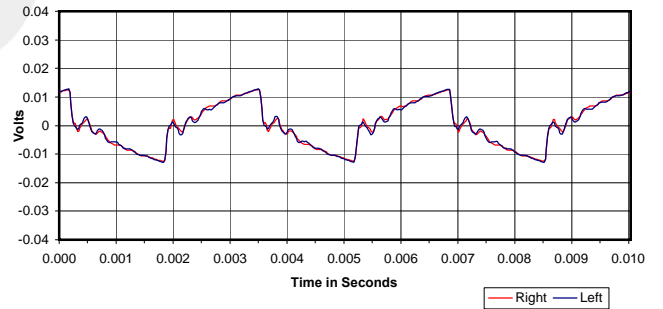
30 Hz Square Wave



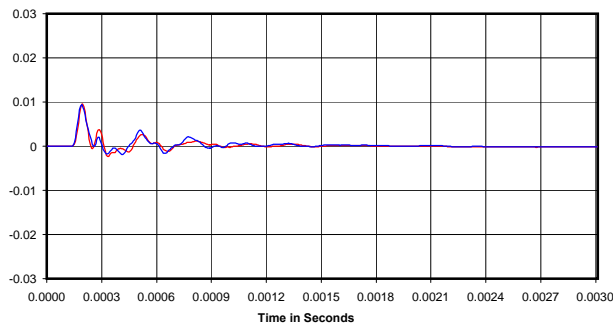
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



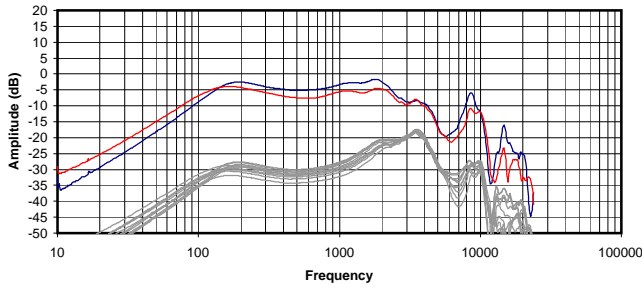
Impulse Response



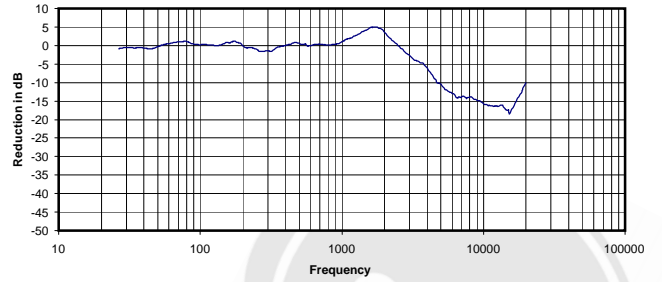
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.081 Vrms
 37 Ohms
 0.18 mW
 -13 dB

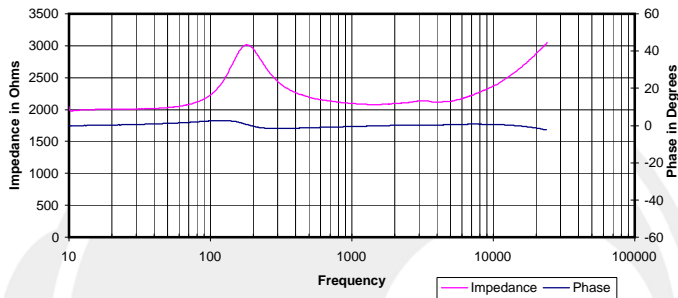
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



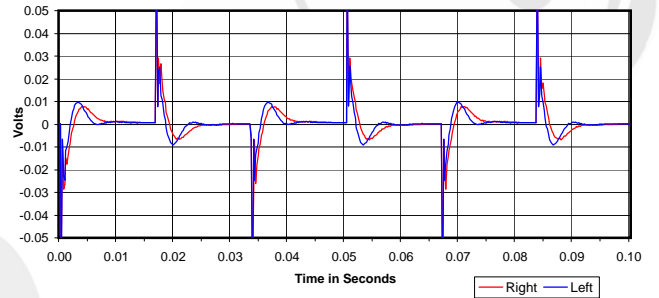
Isolation
 Attenuation of External Sound vs. Frequency



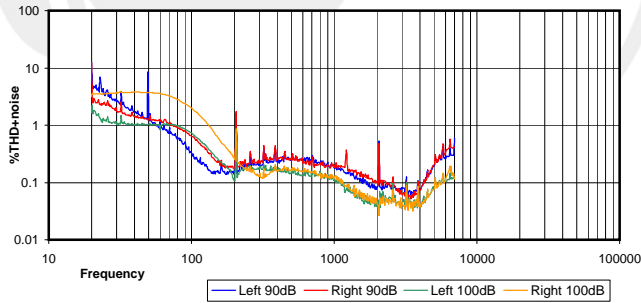
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



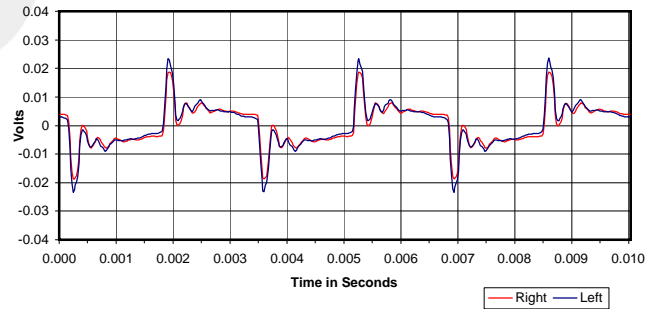
30 Hz Square Wave



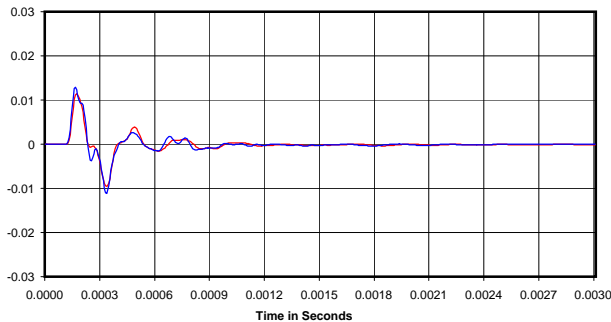
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

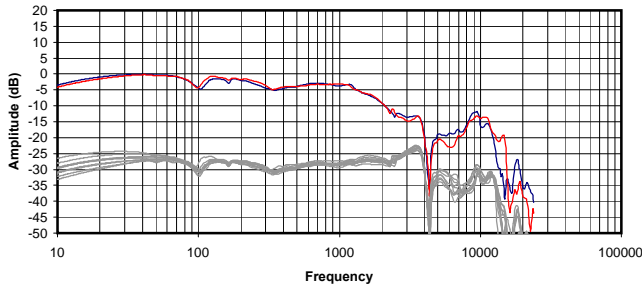


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

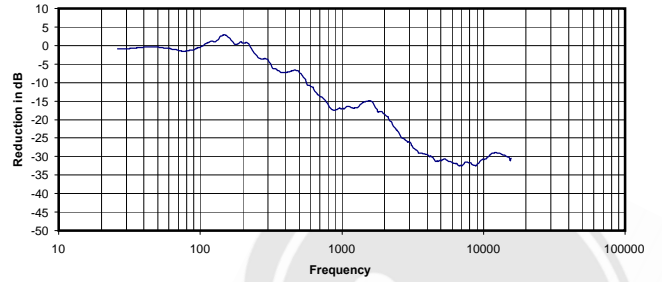
0.405 Vrms
 2096 Ohms
 0.08 mW
 -2 dB



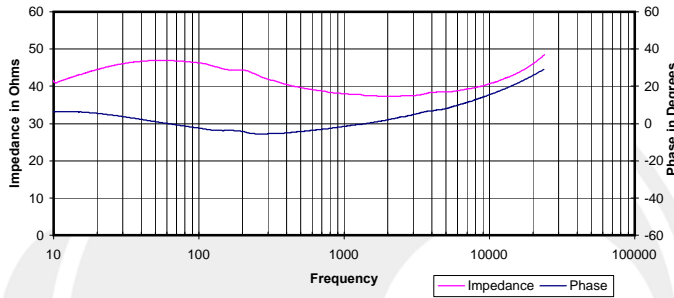
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



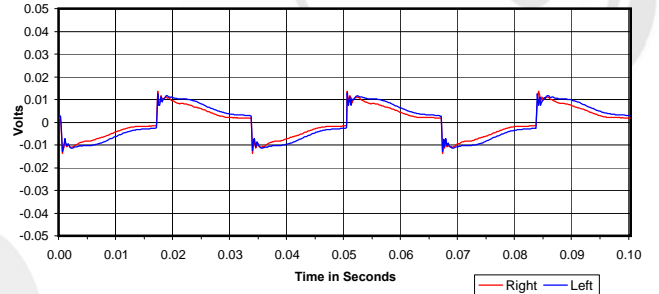
Isolation
 Attenuation of External Sound vs. Frequency



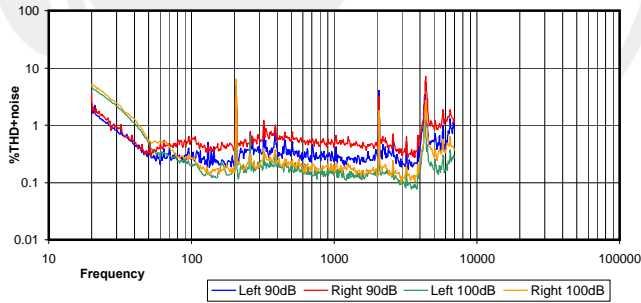
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



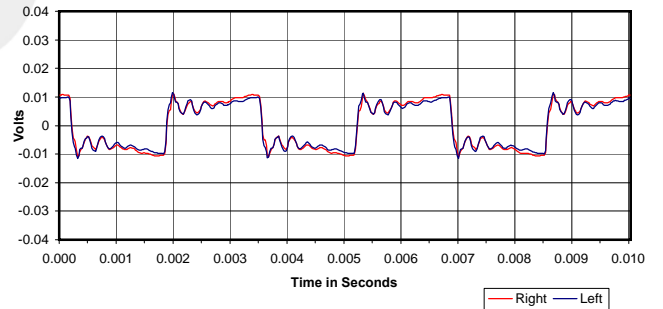
30 Hz Square Wave



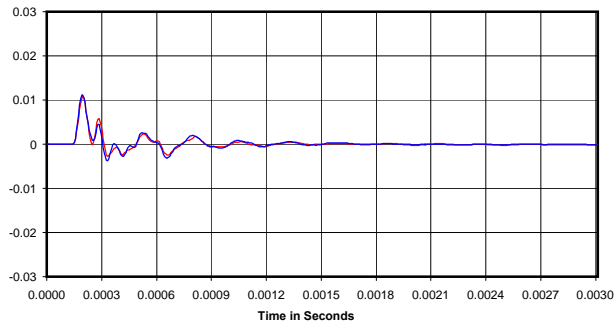
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

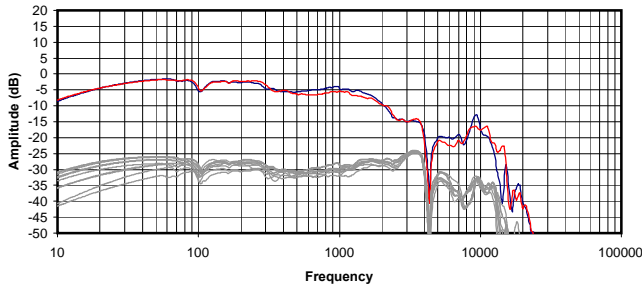


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

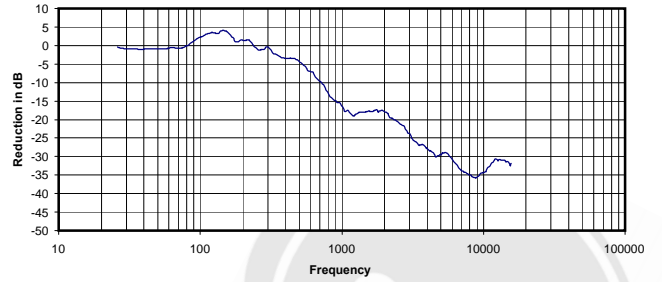
0.061 Vrms
 38 Ohms
 0.10 mW
 -13 dB



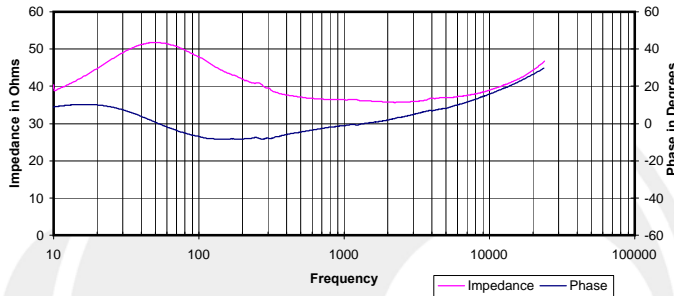
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



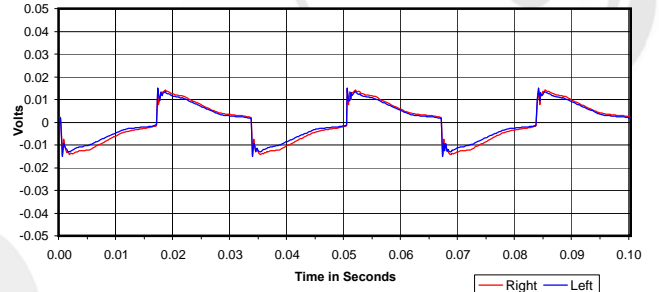
Isolation
 Attenuation of External Sound vs. Frequency



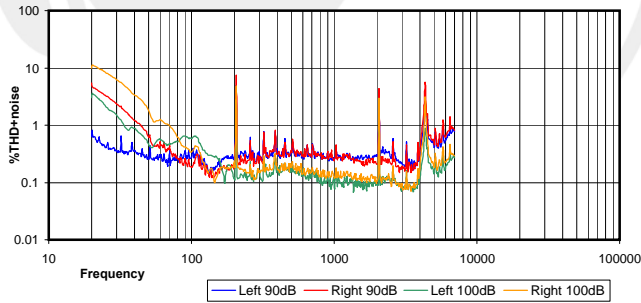
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



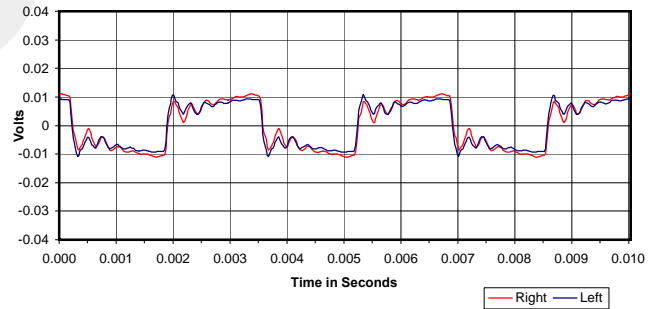
30 Hz Square Wave



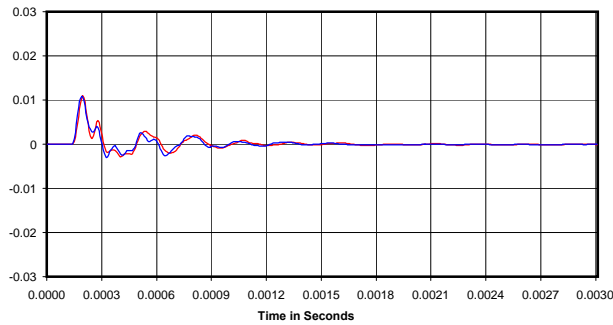
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

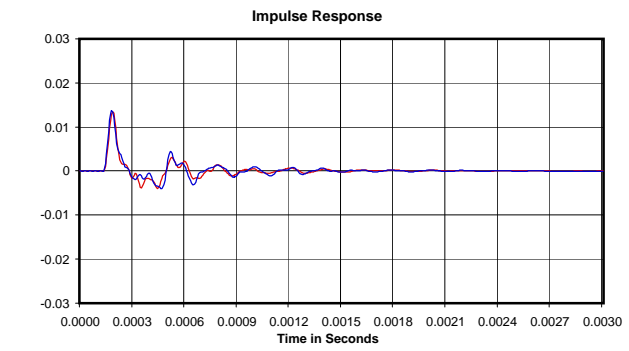
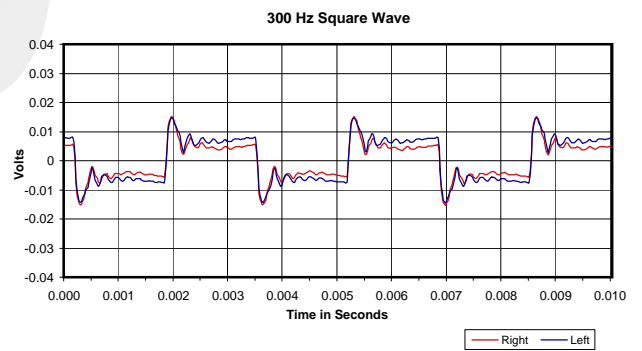
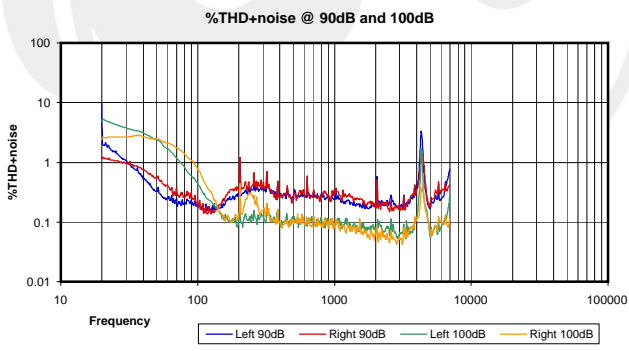
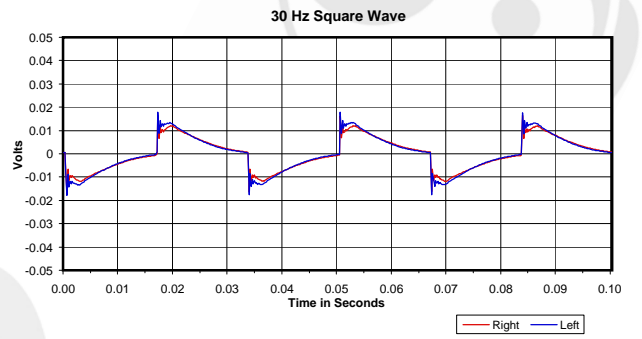
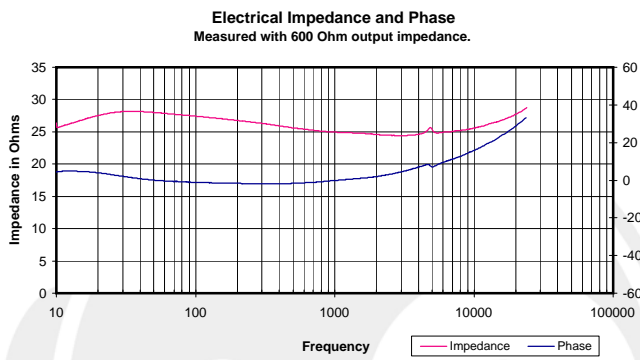
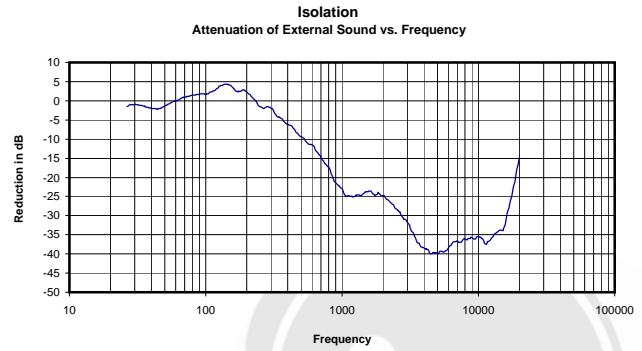
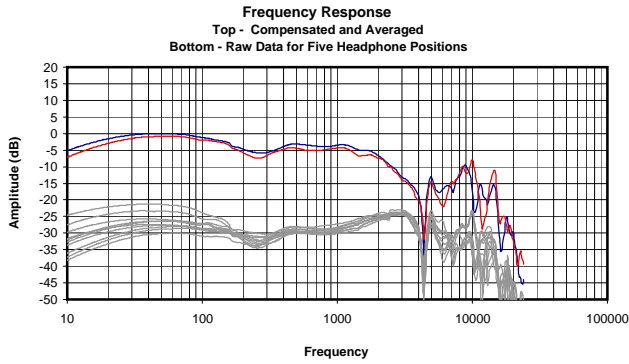


Impulse Response



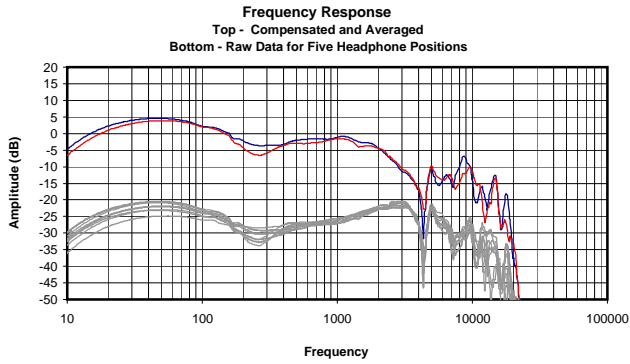
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.047 Vrms
 36 Ohms
 0.06 mW
 -11 dB

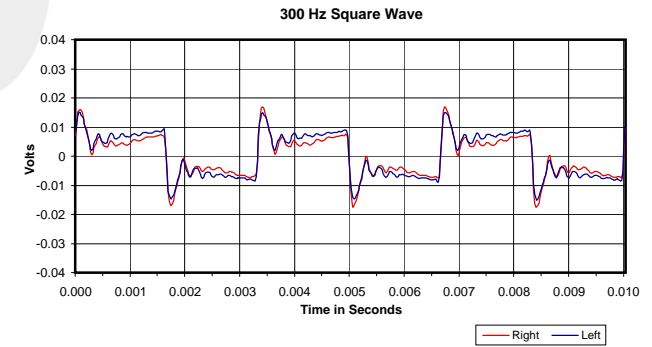
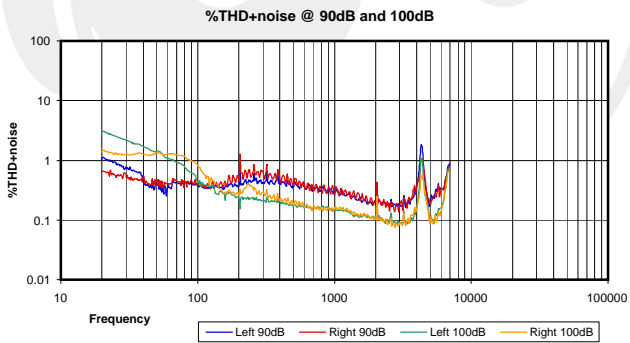
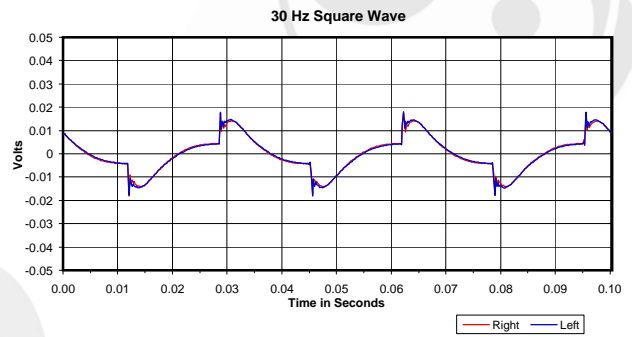
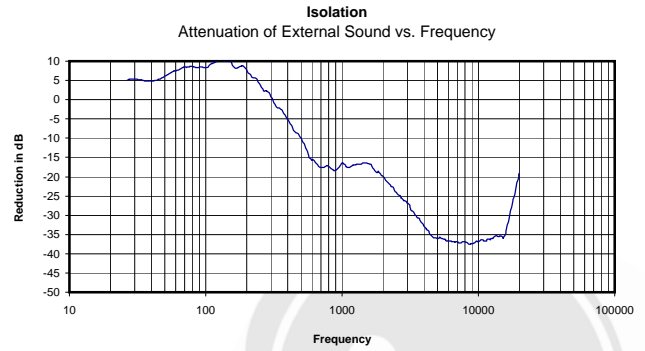


Volts RMS required to reach 90dB SPL: 0.033 Vrms
 Impedance @ 1kHz: 25 Ohms
 Power Needed for 90d BSPL: 0.04 mW
 Broadband Isolation in dB (100Hz to 10kHz): -19 dB





Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

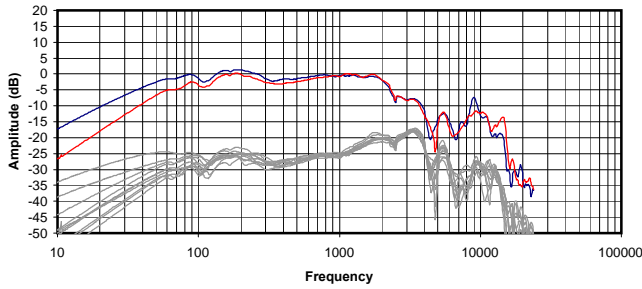


Broadband Isolation in dB (100Hz to 10kHz):

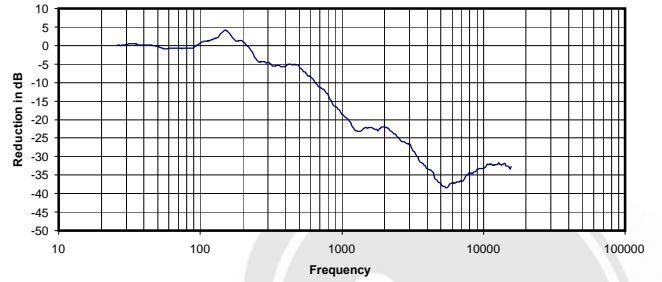
-15 dBr

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

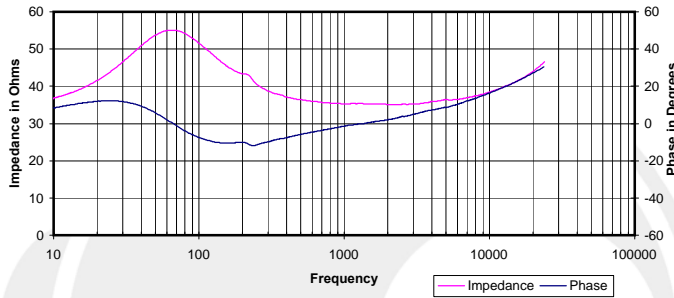
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



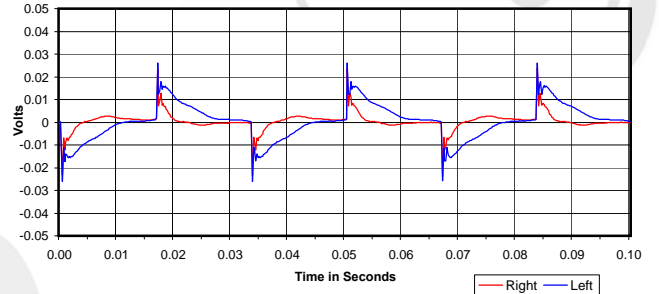
Isolation
 Attenuation of External Sound vs. Frequency



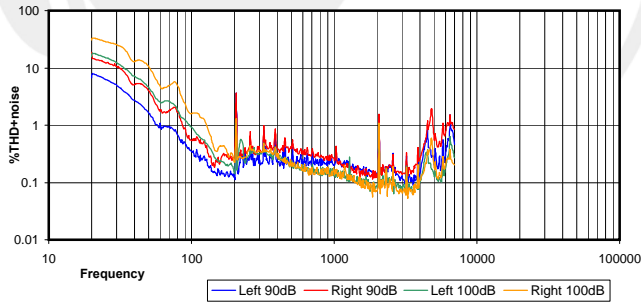
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



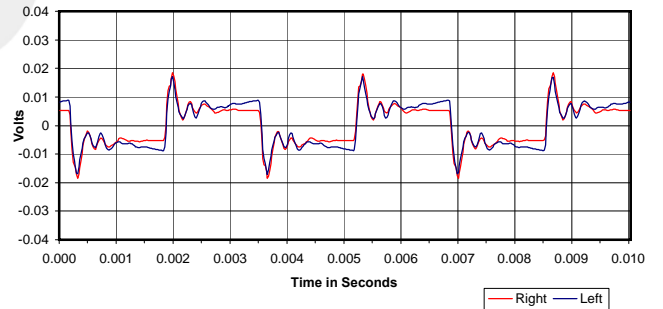
30 Hz Square Wave



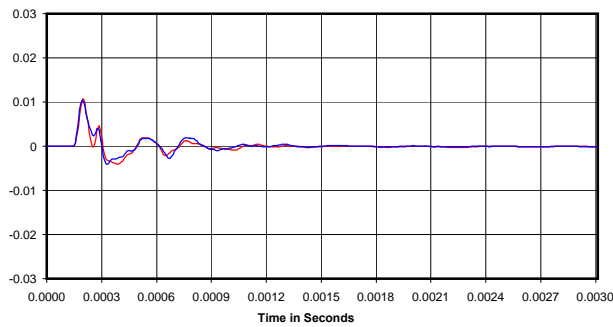
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

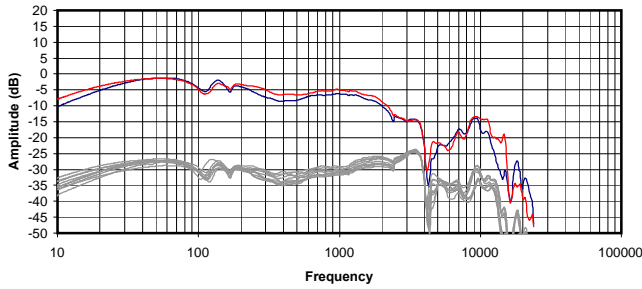


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

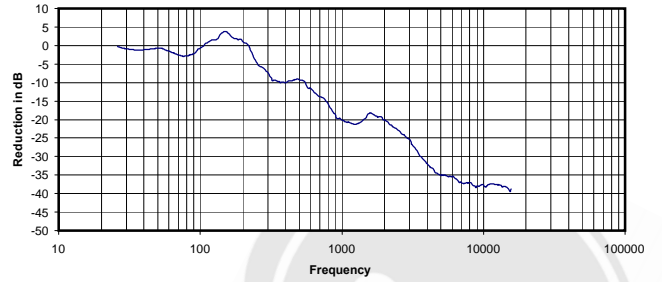
0.059 Vrms
 35 Ohms
 0.10 mW
 -14 dB



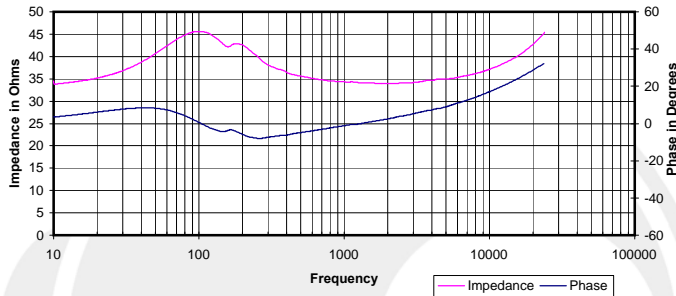
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



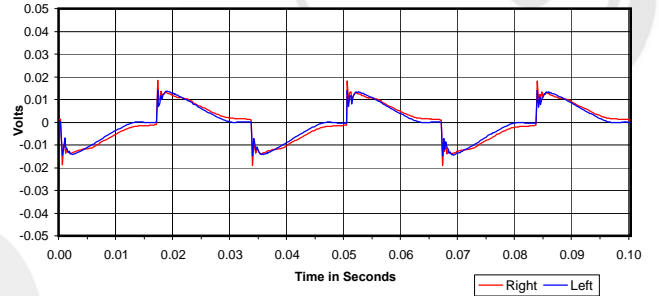
Isolation
 Attenuation of External Sound vs. Frequency



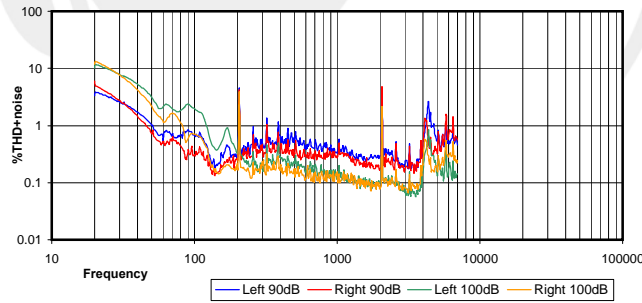
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



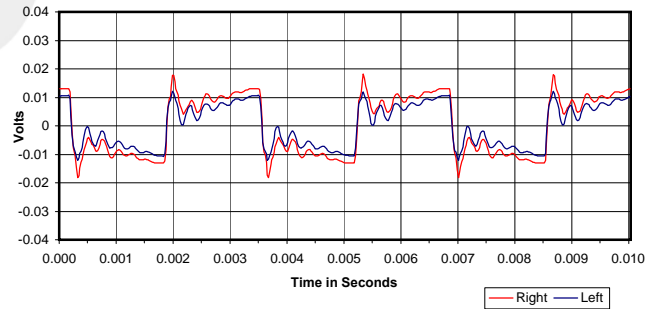
30 Hz Square Wave



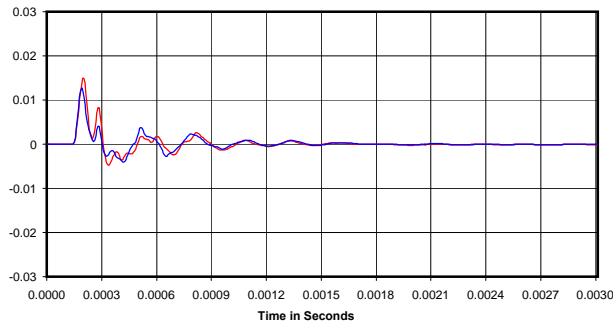
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

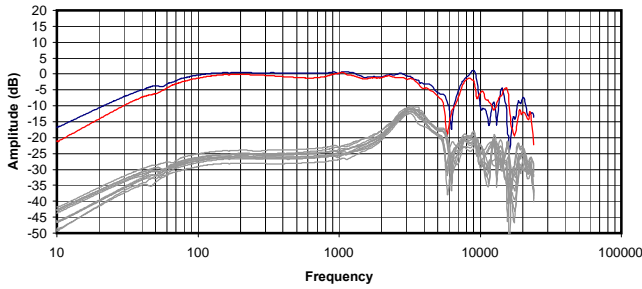


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

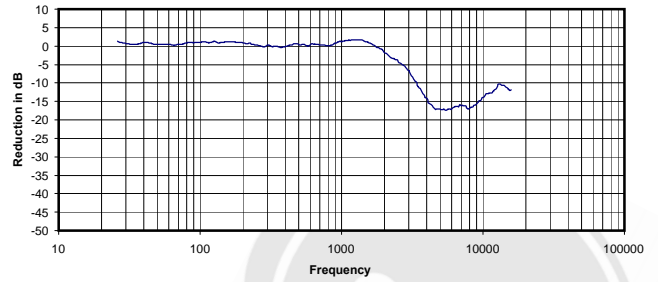
0.070 Vrms
 34 Ohms
 0.14 mW
 -15 dB



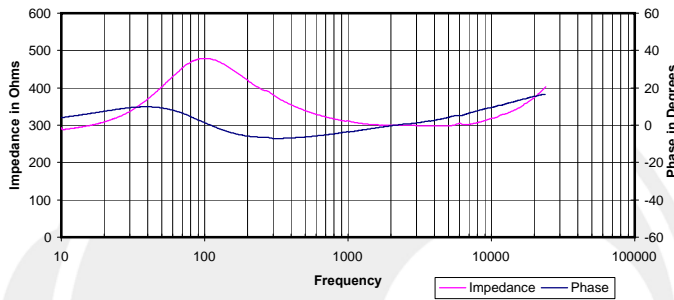
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



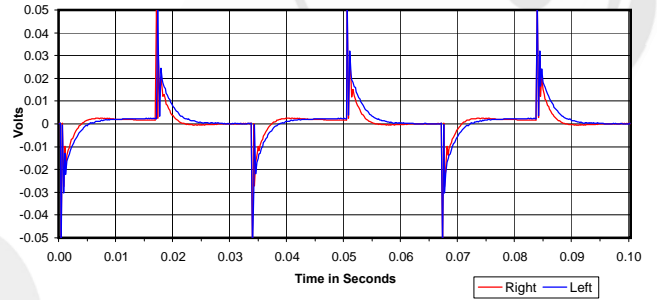
Isolation
 Attenuation of External Sound vs. Frequency



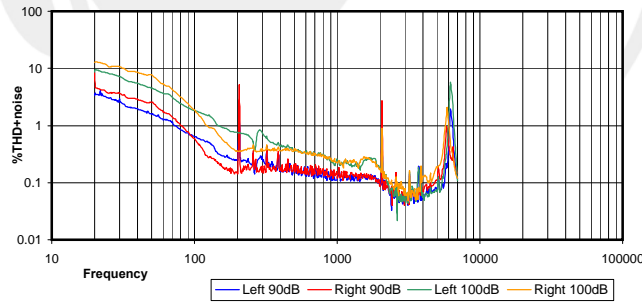
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



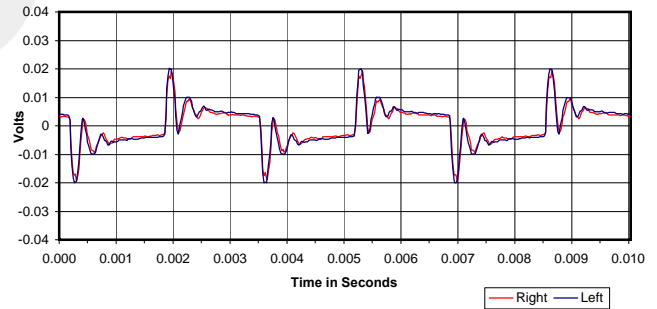
30 Hz Square Wave



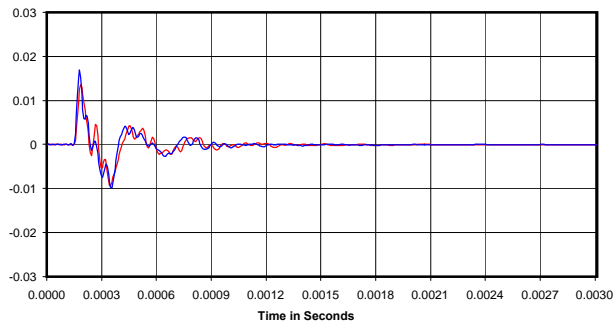
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

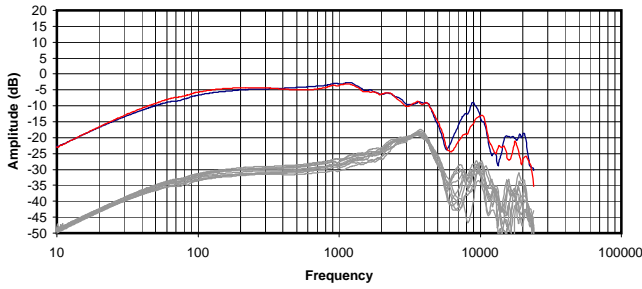


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

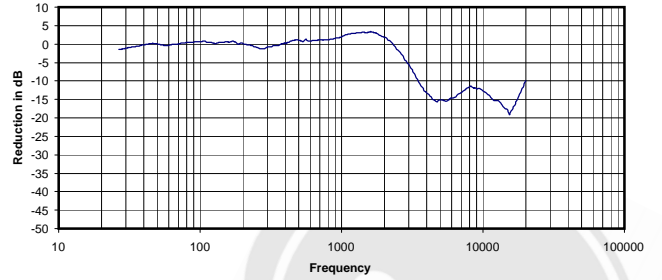
0.257 Vrms
 310 Ohms
 0.21 mW
 -2 dB



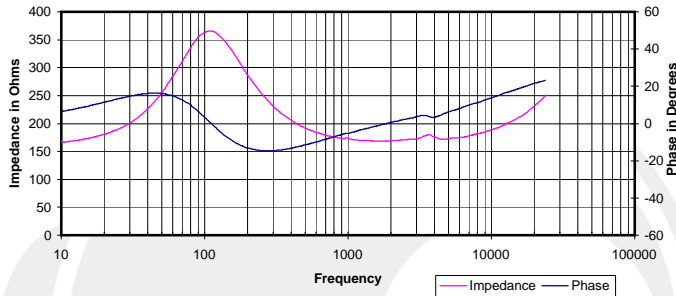
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



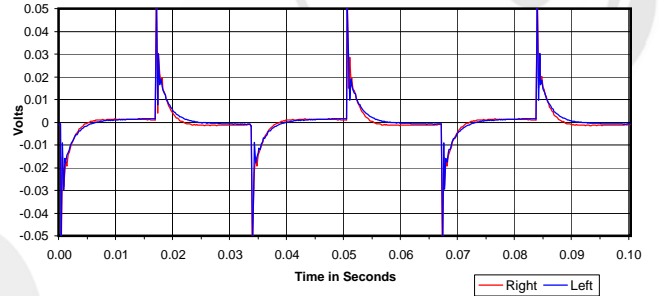
Isolation
 Attenuation of External Sound vs. Frequency



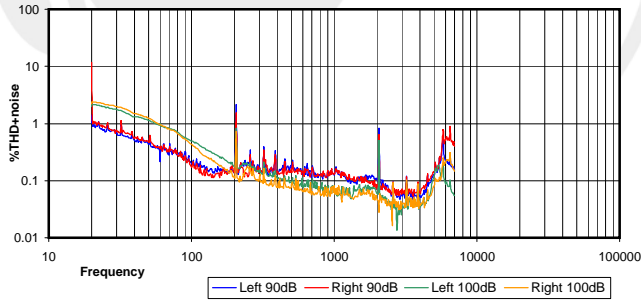
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



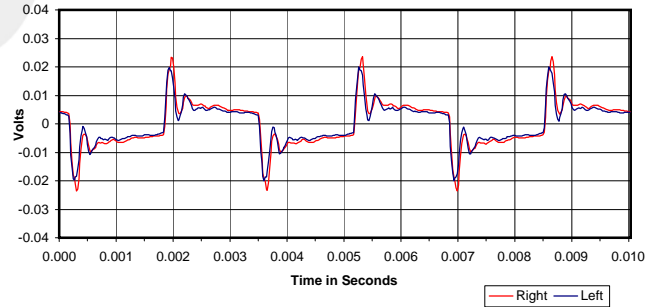
30 Hz Square Wave



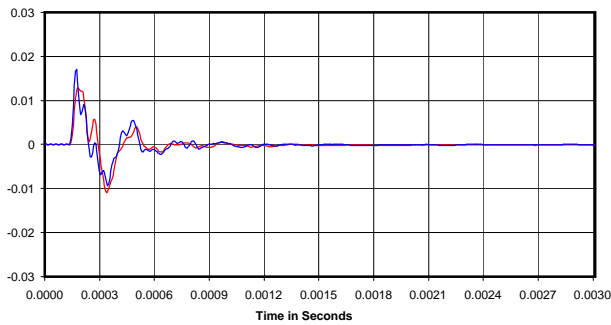
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

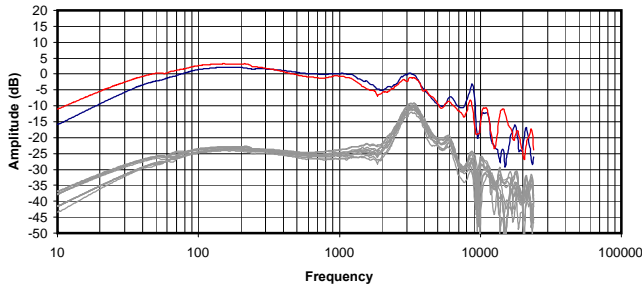


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

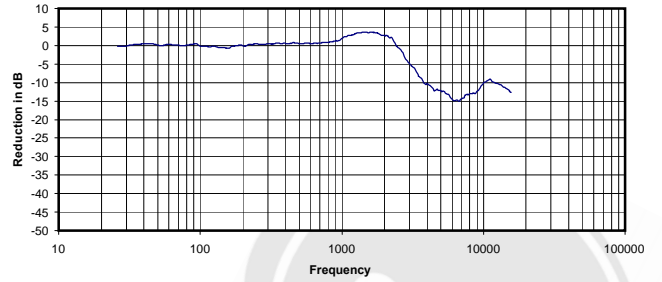
0.105 Vrms
 173 Ohms
 0.06 mW
 -3 dB



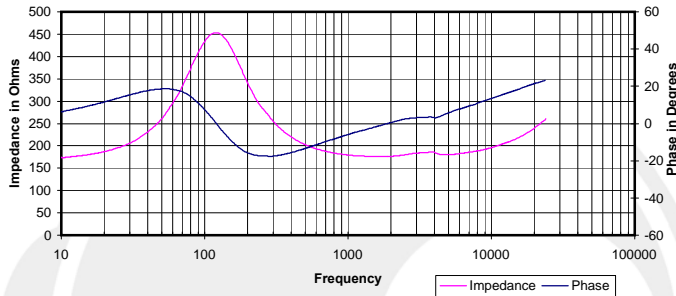
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



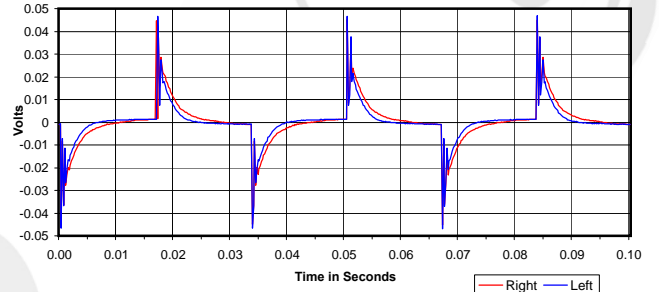
Isolation
 Attenuation of External Sound vs. Frequency



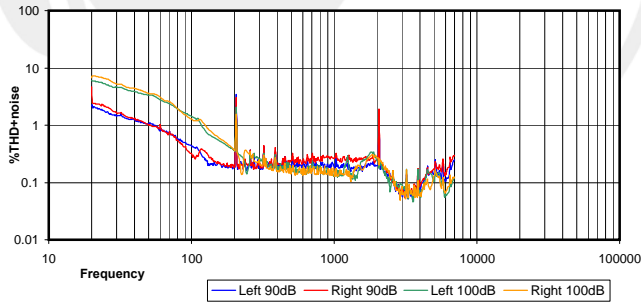
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



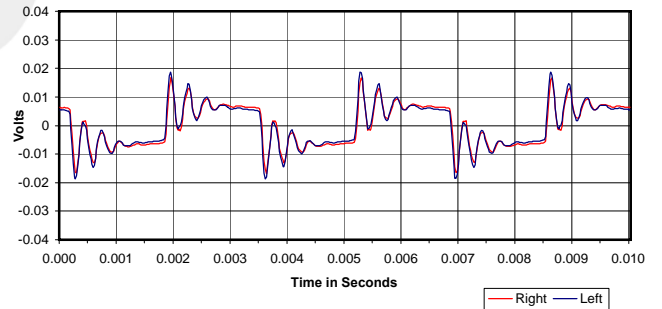
30 Hz Square Wave



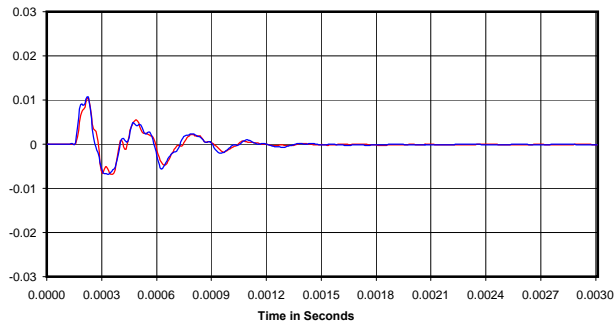
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

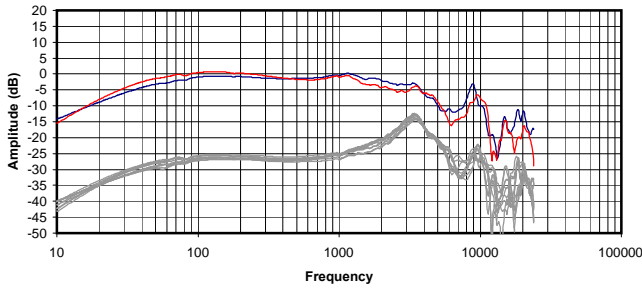


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

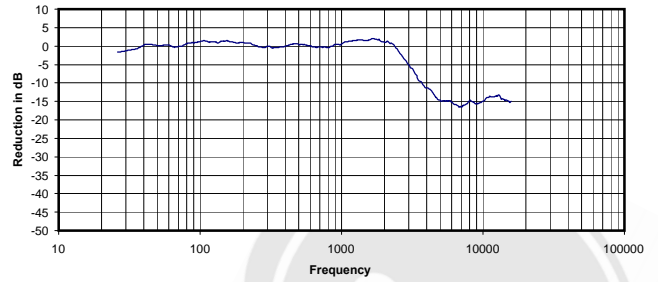
0.156 Vrms
 179 Ohms
 0.14 mW
 -1 dB



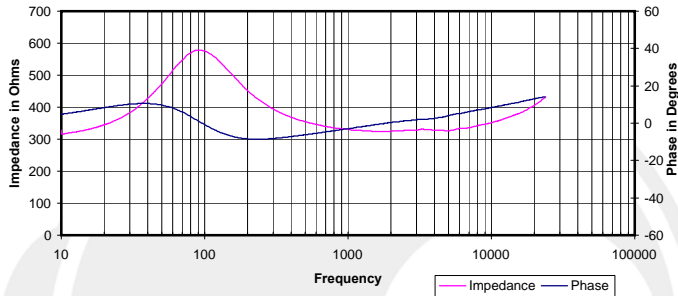
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



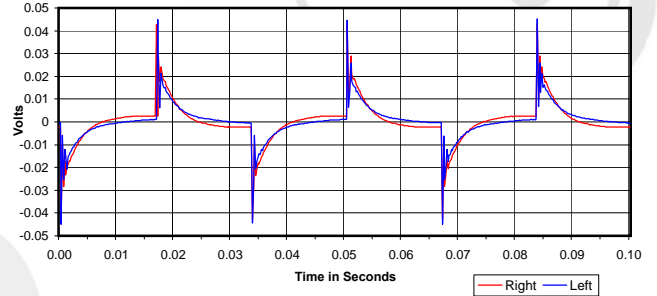
Isolation
Attenuation of External Sound vs. Frequency



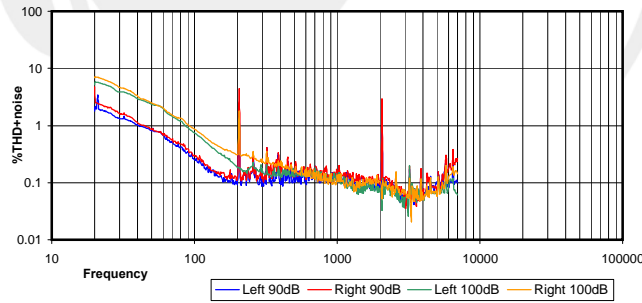
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



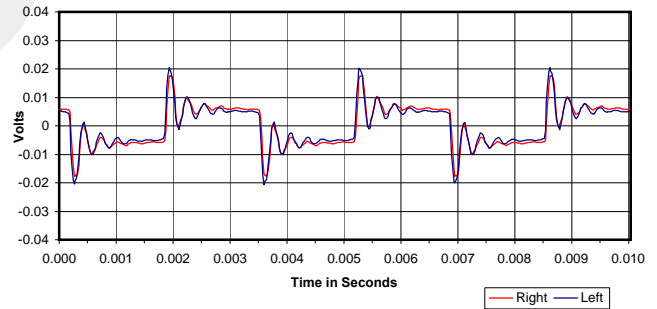
30 Hz Square Wave



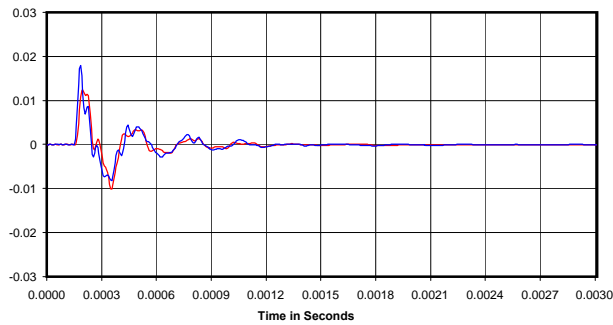
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

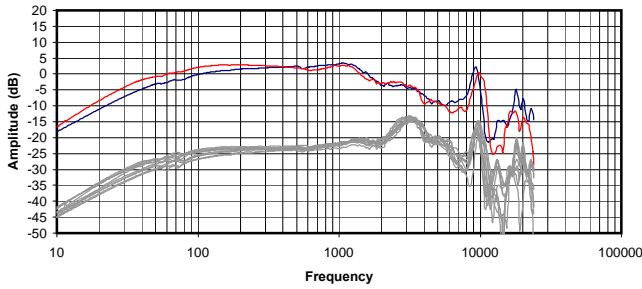


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

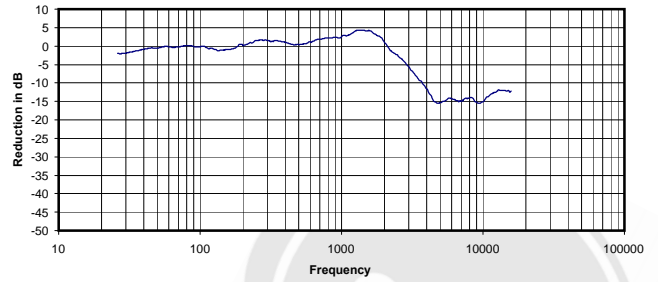
0.173 Vrms
330 Ohms
0.09 mW
-2 dB



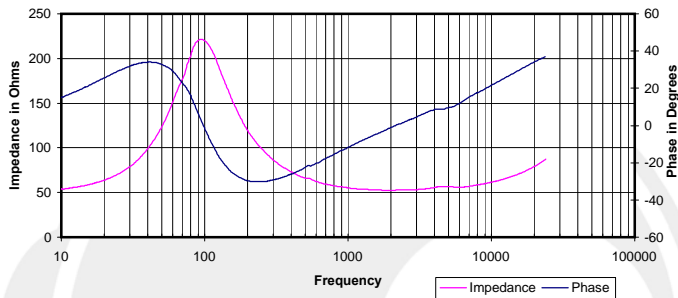
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



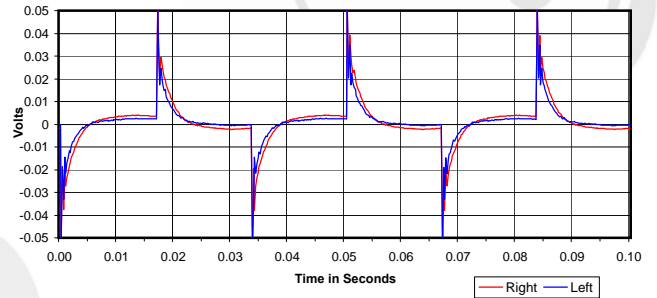
Isolation
 Attenuation of External Sound vs. Frequency



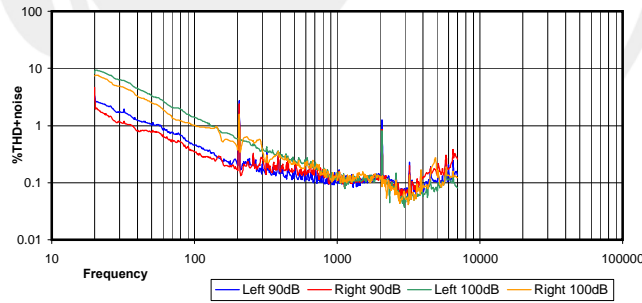
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



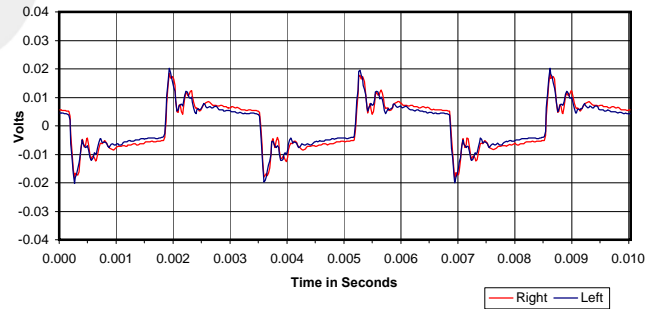
30 Hz Square Wave



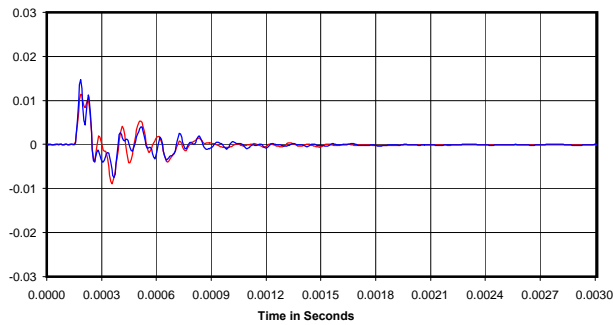
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

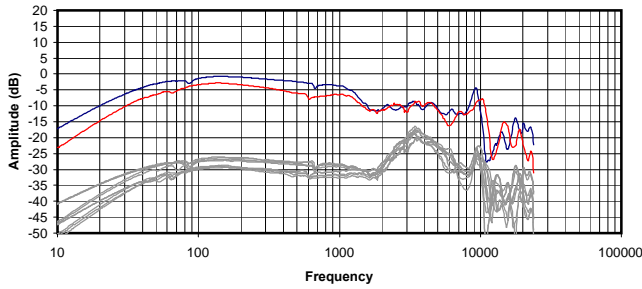


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

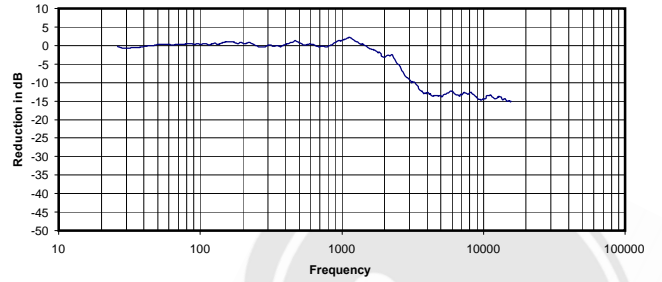
0.055 Vrms
 55 Ohms
 0.05 mW
 -2 dB



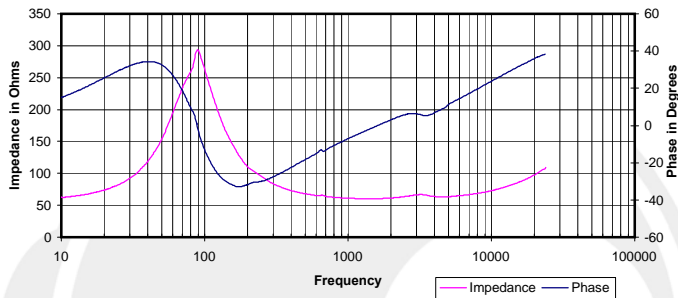
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



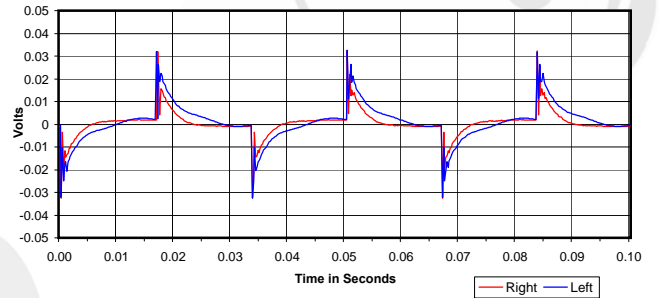
Isolation
 Attenuation of External Sound vs. Frequency



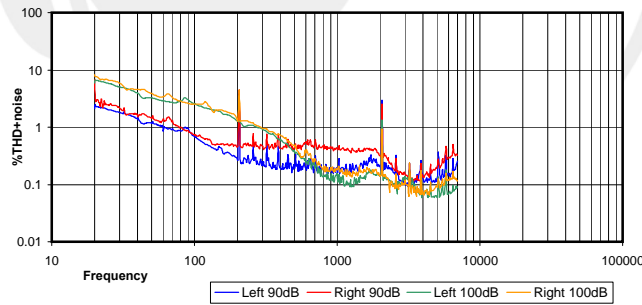
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



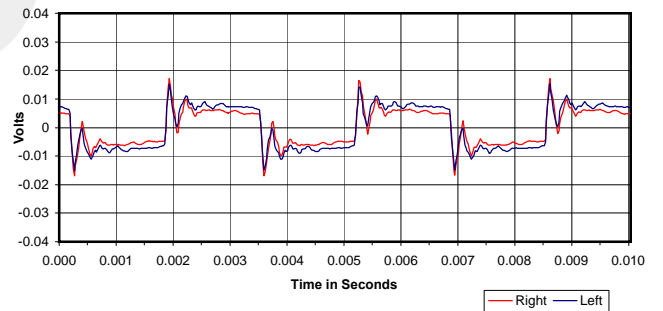
30 Hz Square Wave



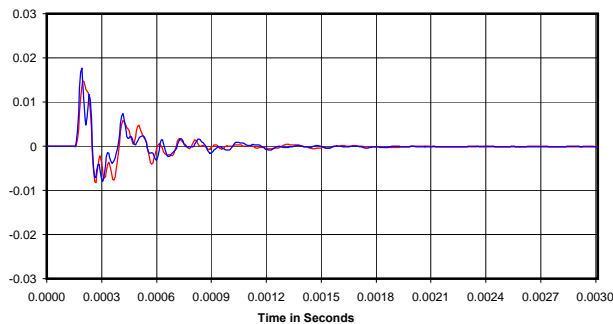
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

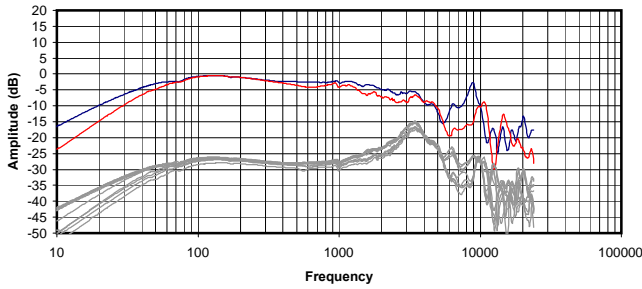


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

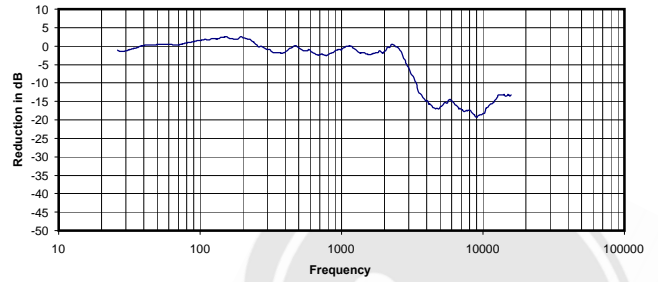
0.090 Vrms
 61 Ohms
 0.13 mW
 -3 dBr



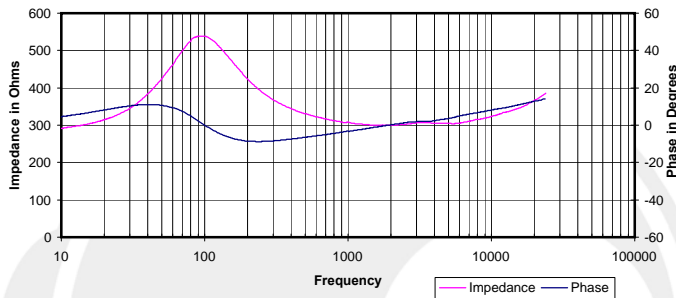
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



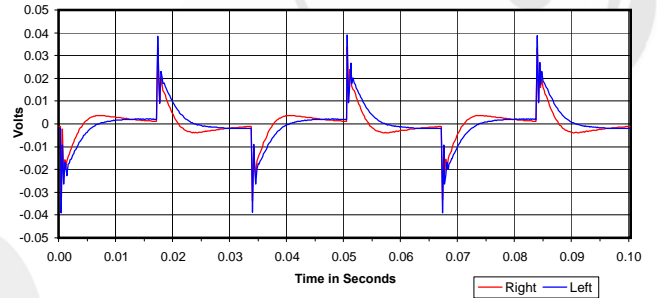
Isolation
 Attenuation of External Sound vs. Frequency



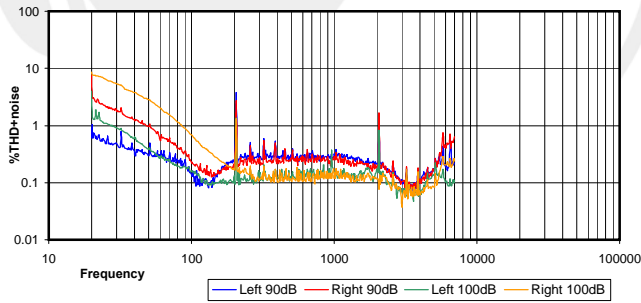
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



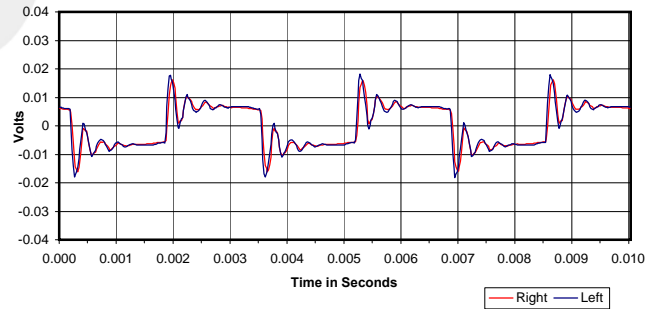
30 Hz Square Wave



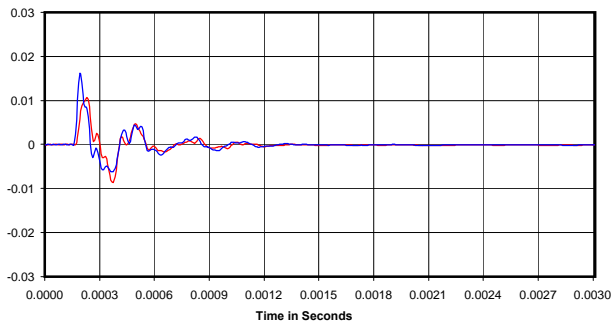
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

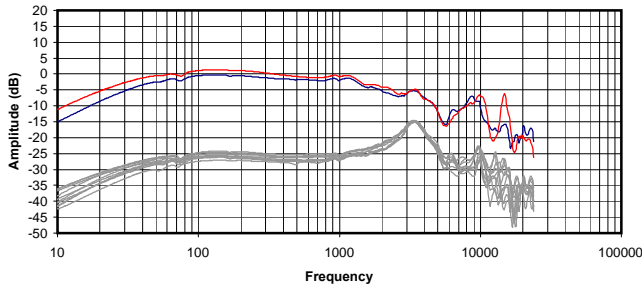


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

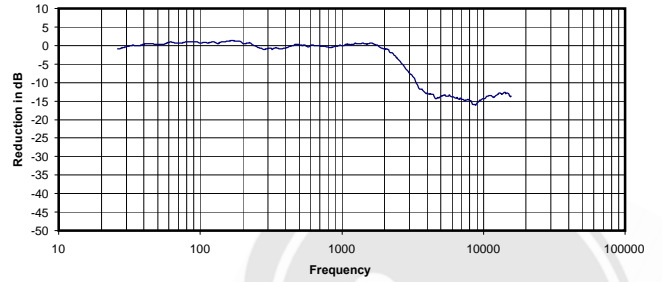
0.230 Vrms
 307 Ohms
 0.17 mW
 -3 dB



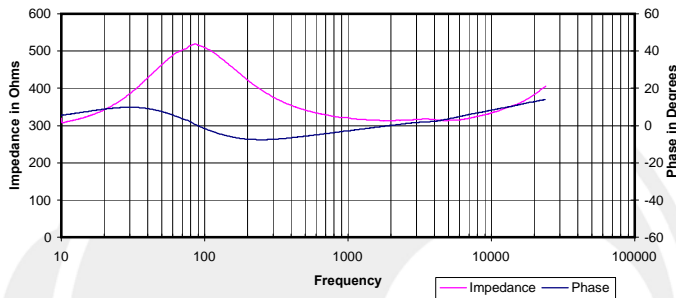
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



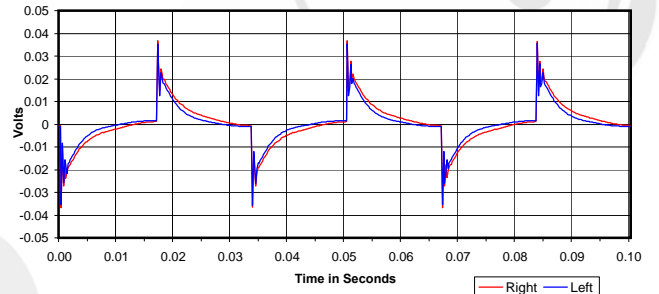
Isolation
 Attenuation of External Sound vs. Frequency



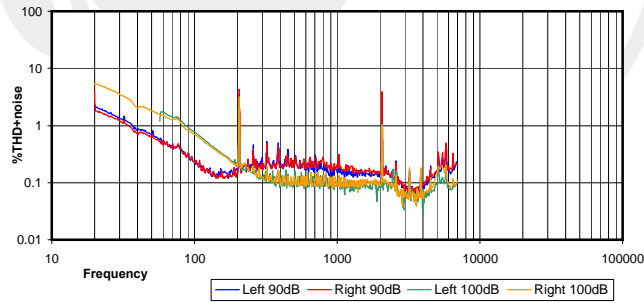
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



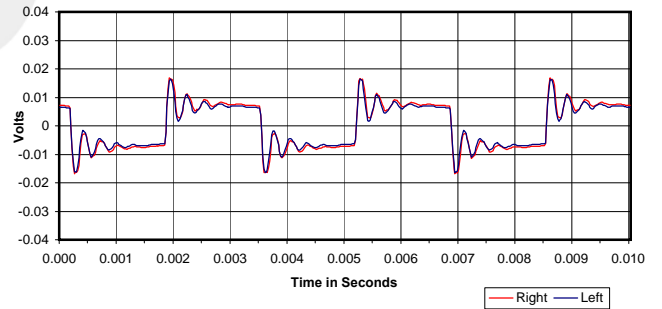
30 Hz Square Wave



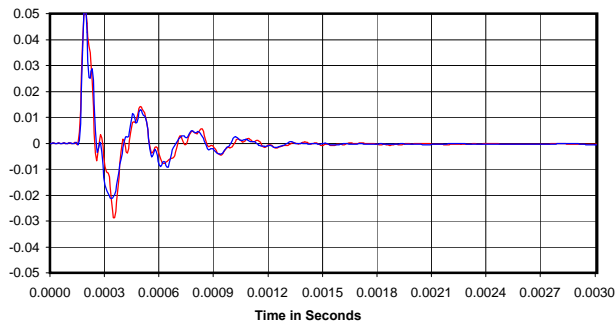
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



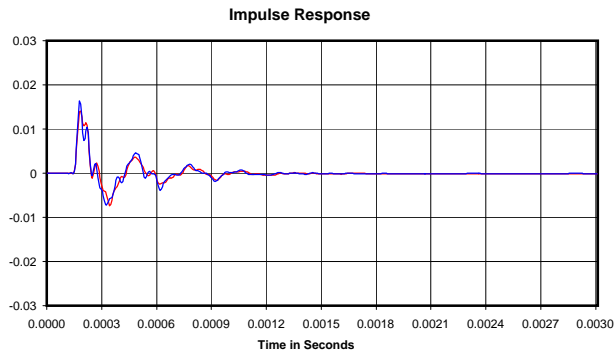
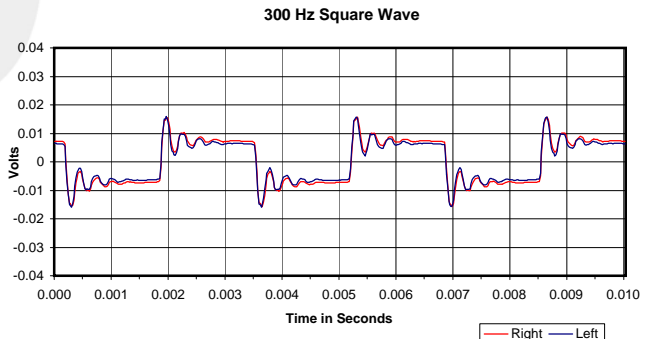
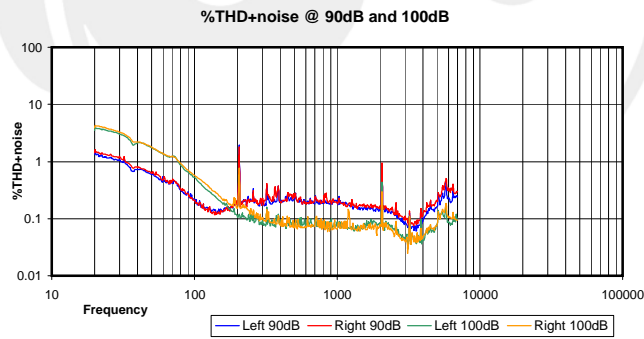
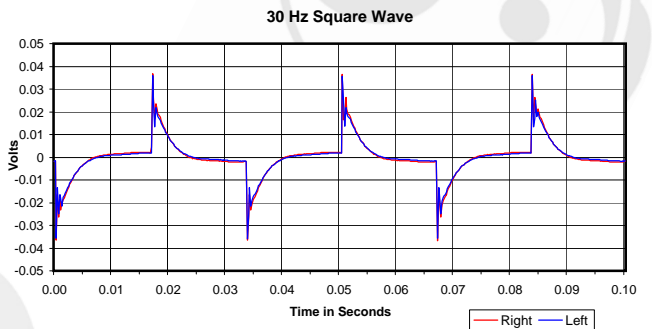
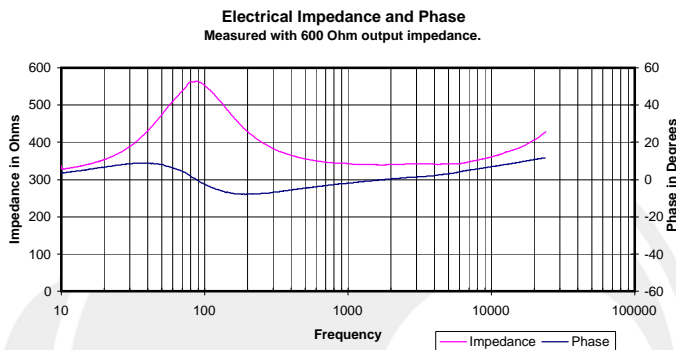
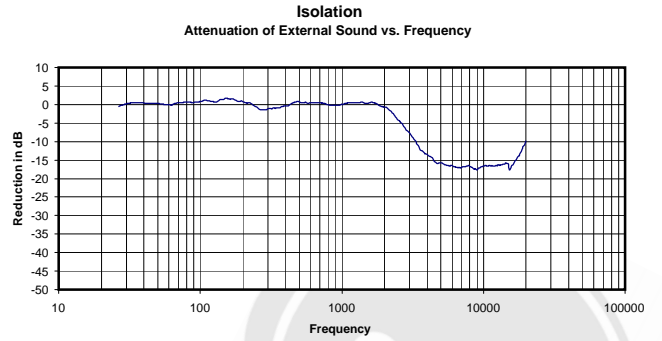
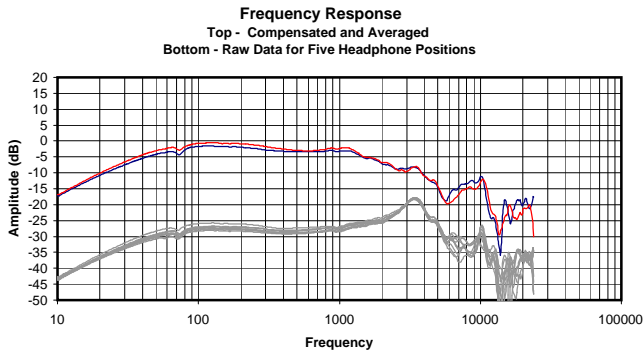
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.205 Vrms
 320 Ohms
 0.13 mW
 -2 dB

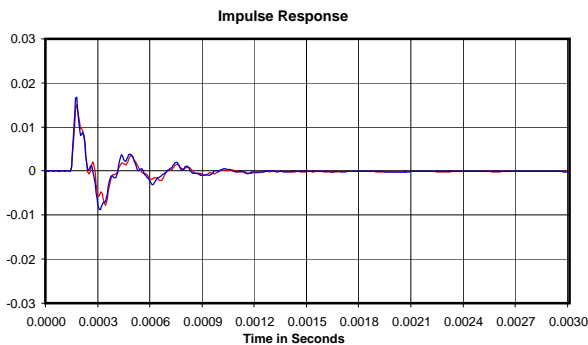
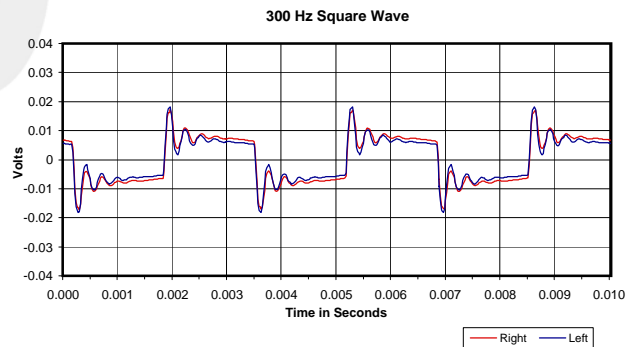
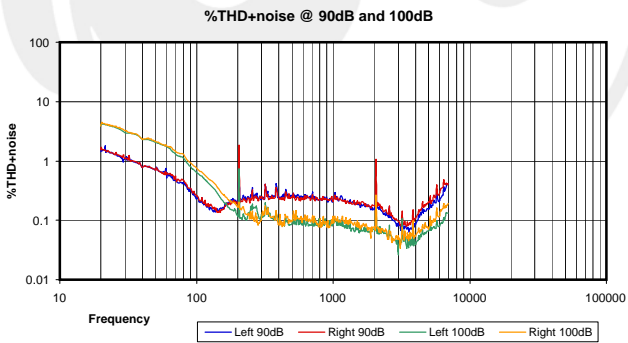
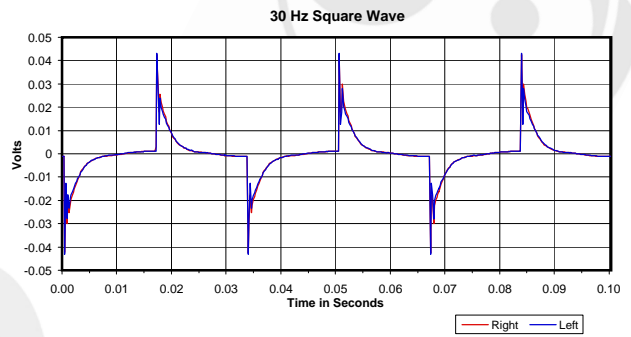
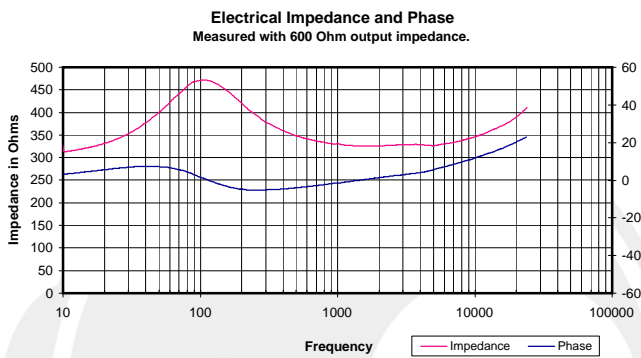
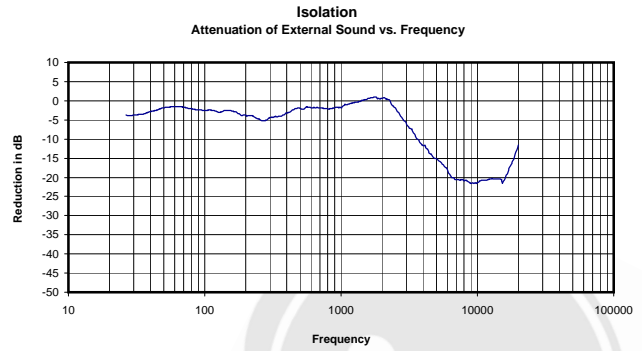
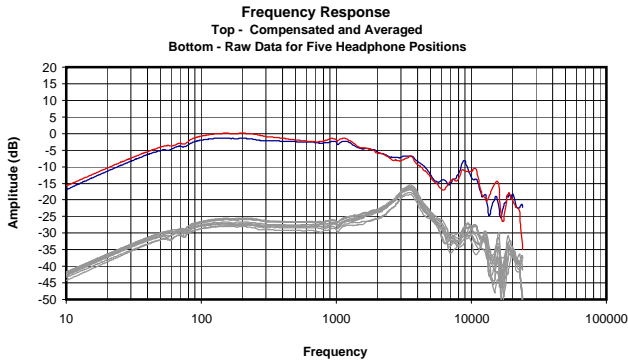




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.156 Vrms
342 Ohms
0.07 mW
-4 dB

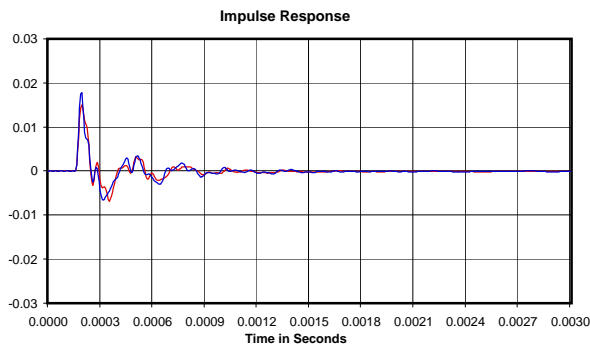
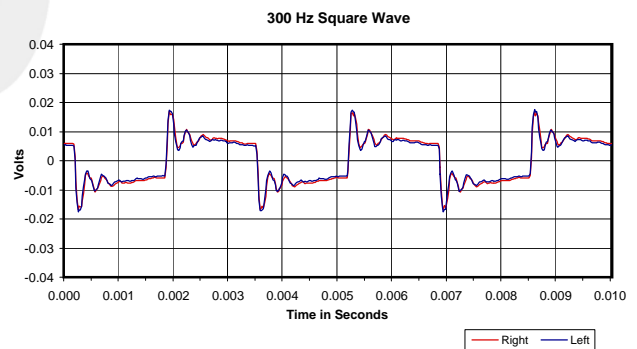
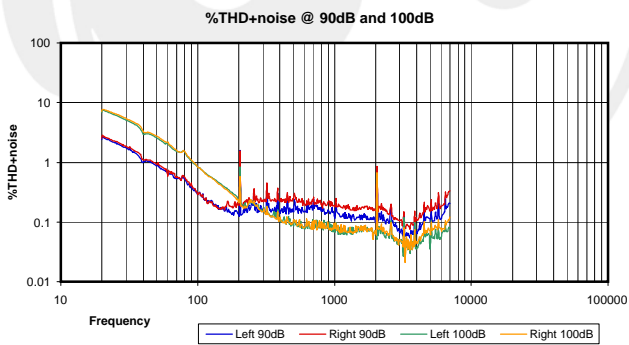
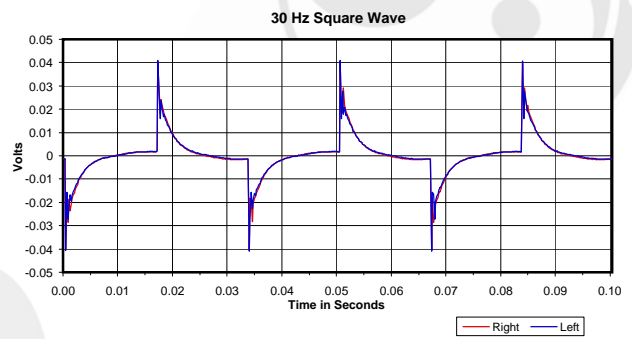
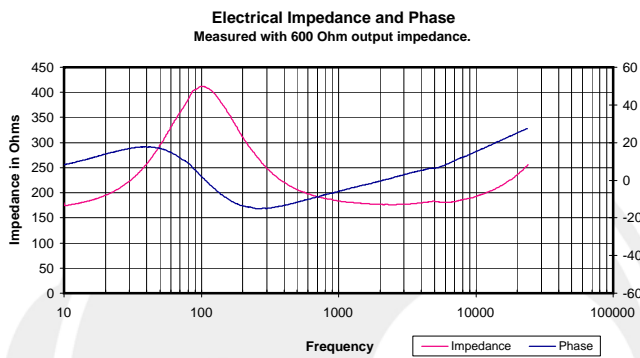
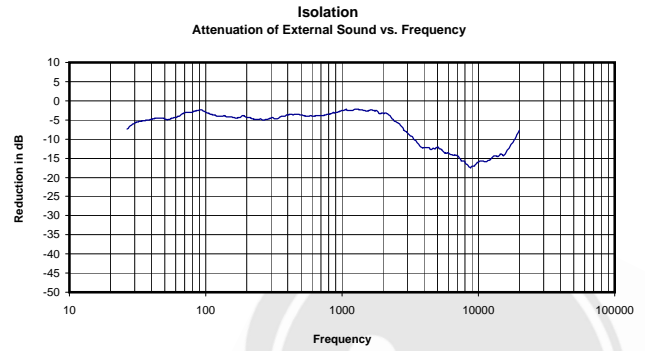
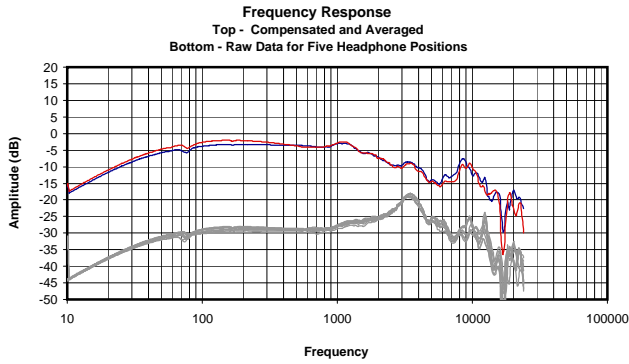




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.172 Vrms
330 Ohms
0.09 mW
-6 dBr



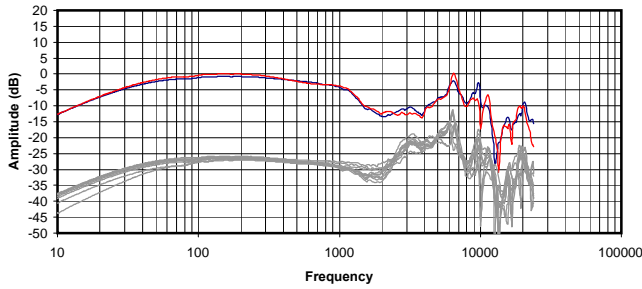


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

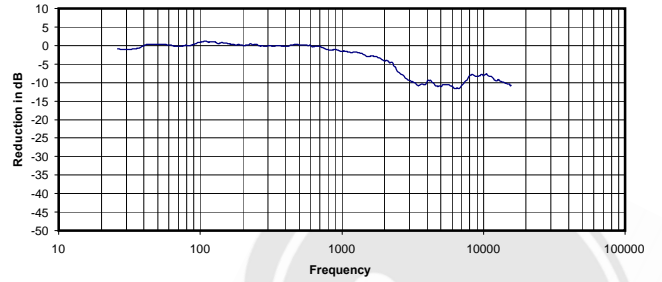
0.144 Vrms
184 Ohms
0.11 mW
-6 dBr



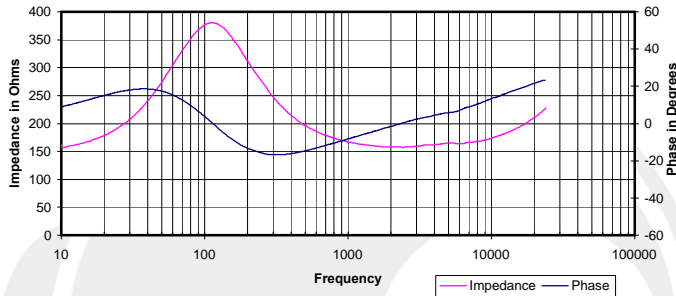
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



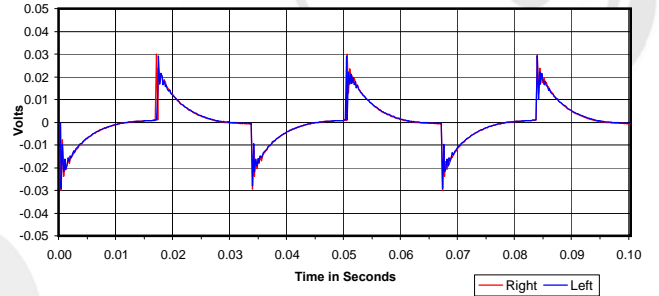
Isolation
 Attenuation of External Sound vs. Frequency



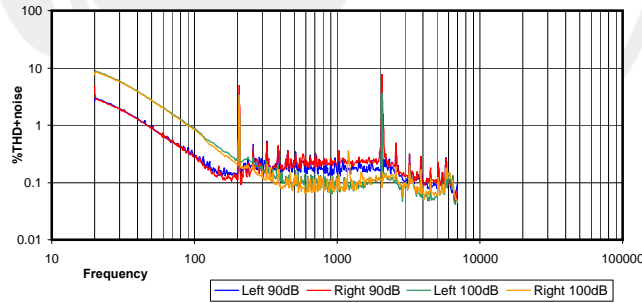
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



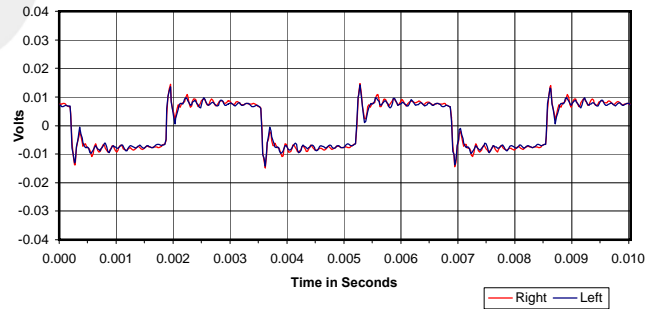
30 Hz Square Wave



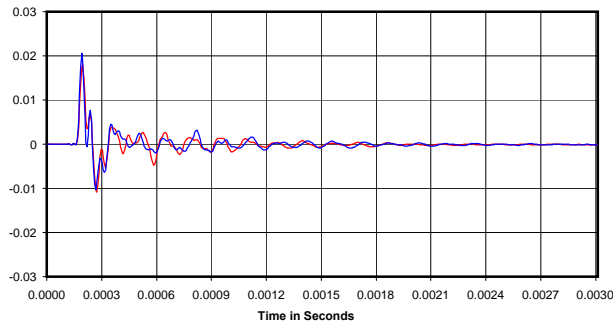
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



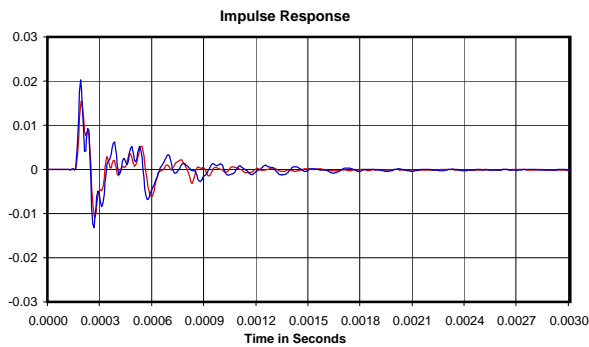
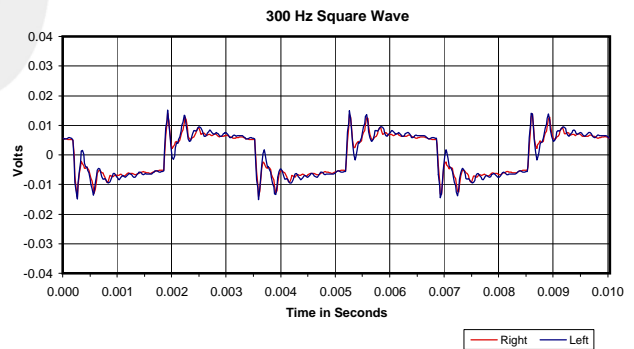
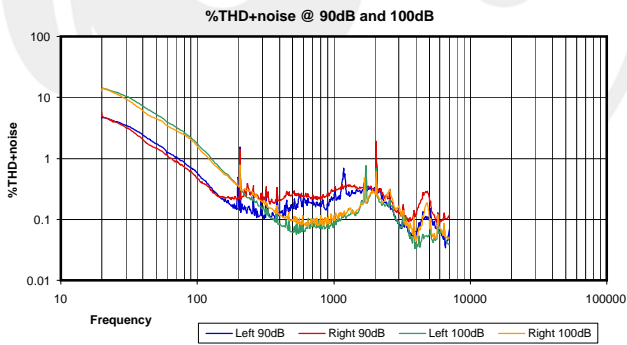
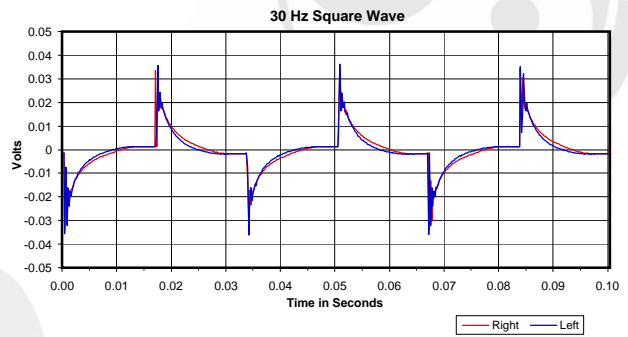
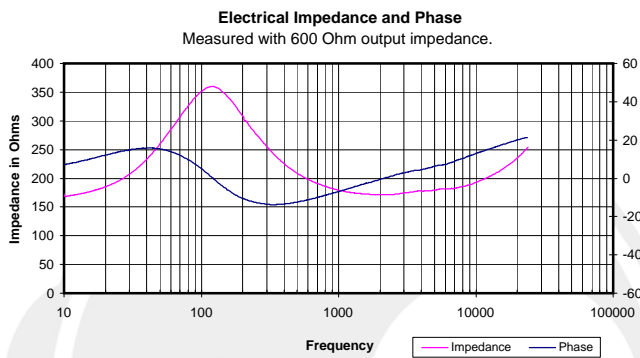
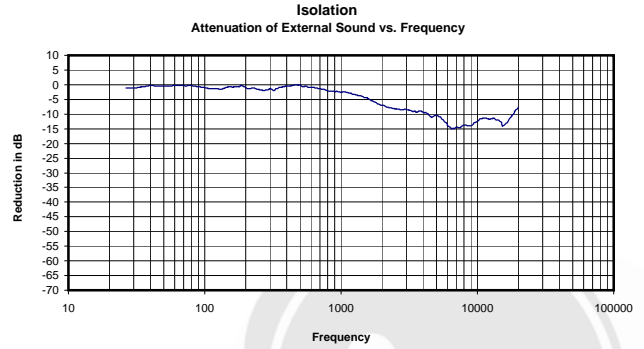
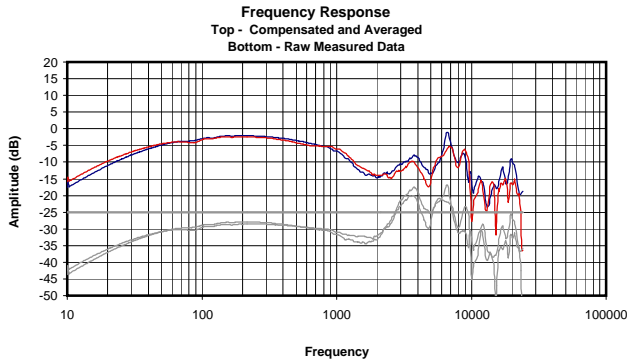
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.153 Vrms
 167 Ohms
 0.14 mW
 -3 dB

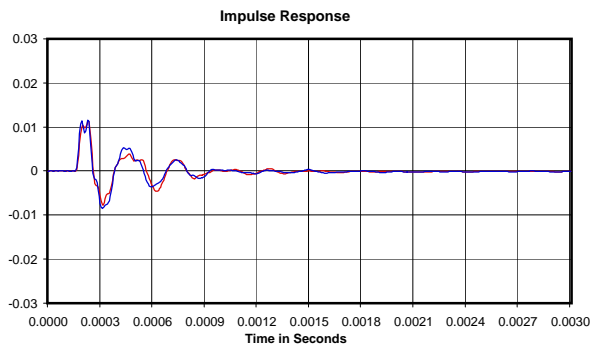
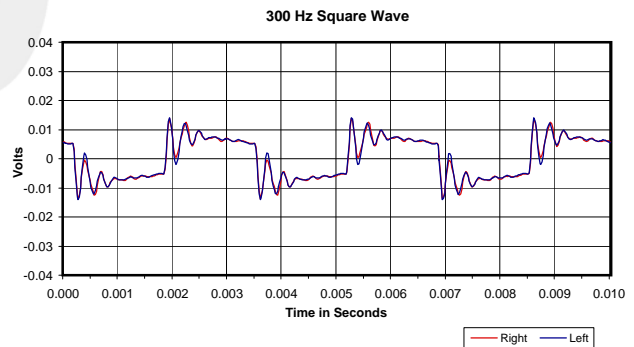
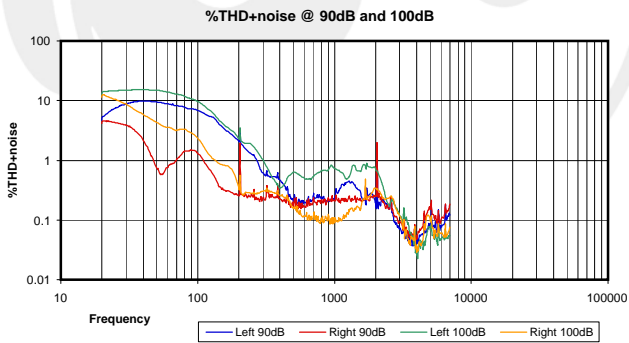
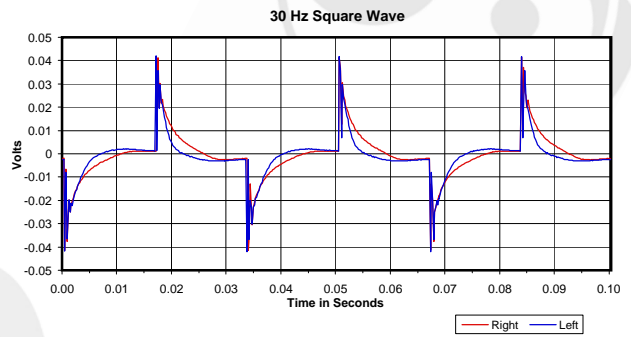
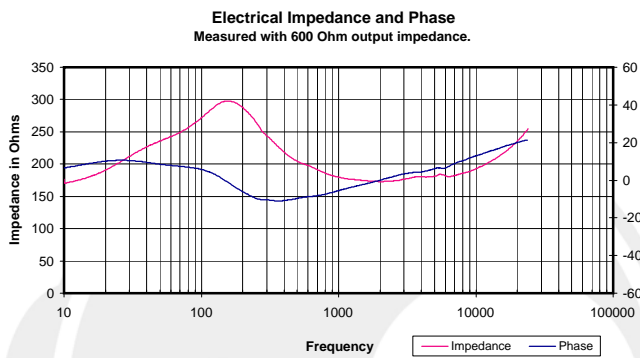
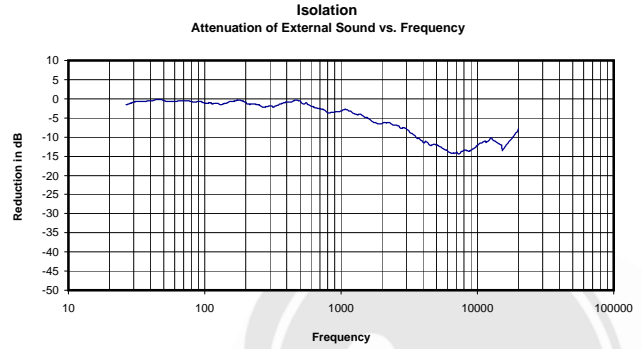
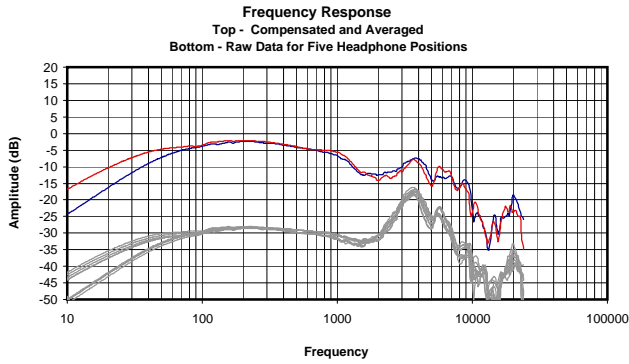




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.210 Vrms
179 Ohms
0.25 mW
-5 dBr



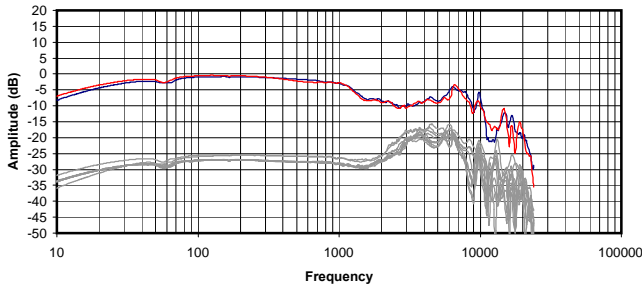


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

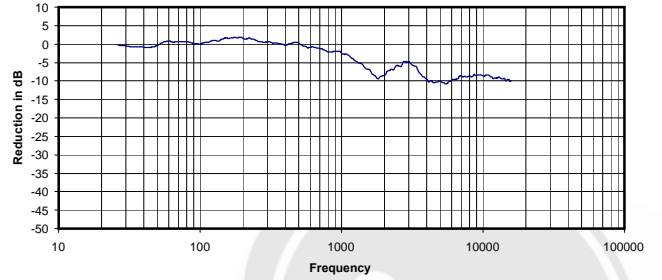
0.262 Vrms
180 Ohms
0.38 mW
-5 dBr



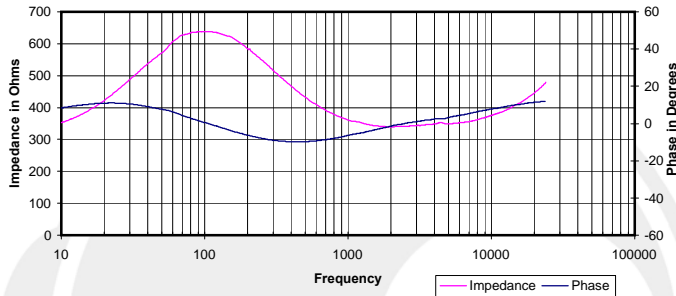
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



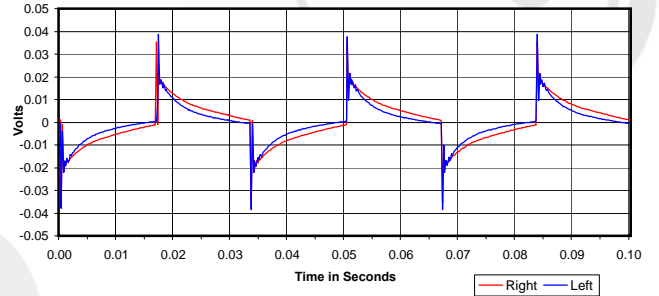
Isolation
 Attenuation of External Sound vs. Frequency



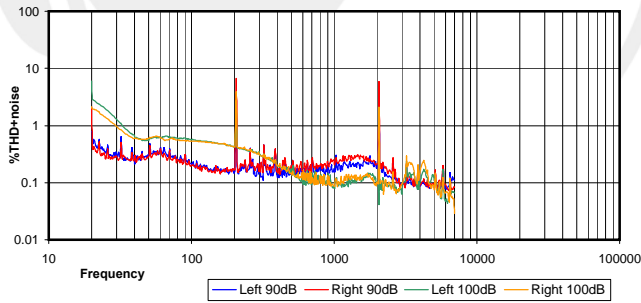
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



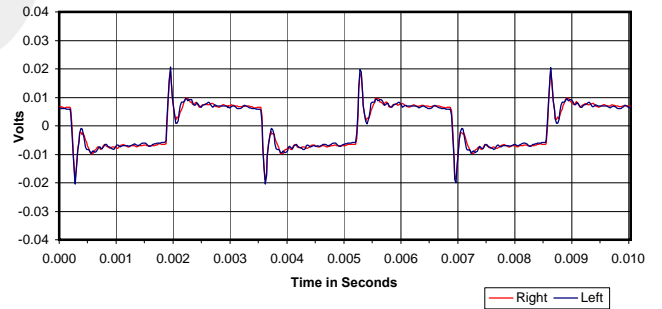
30 Hz Square Wave



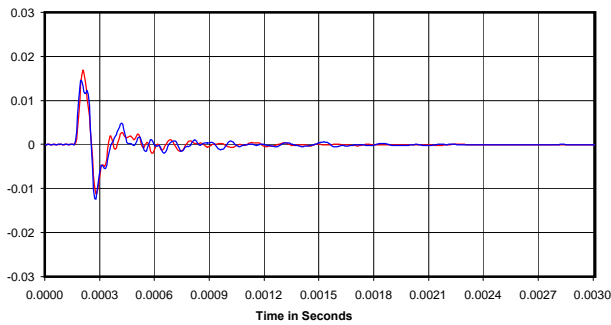
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



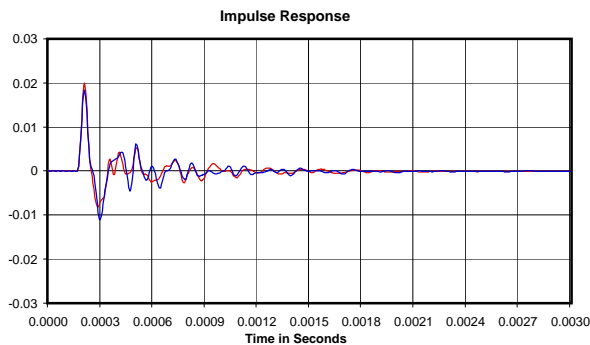
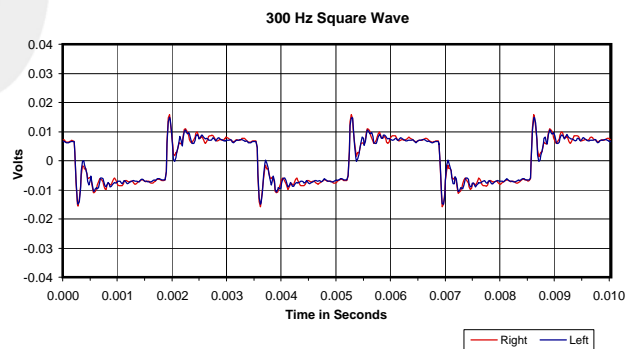
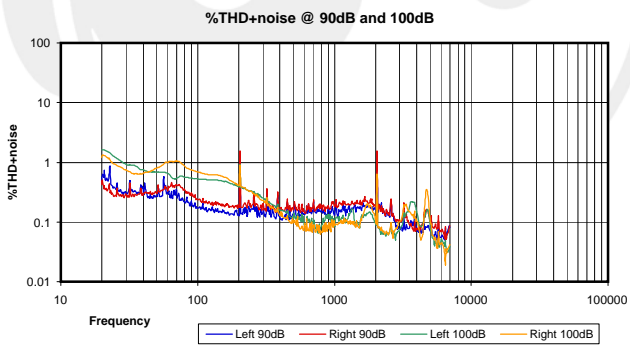
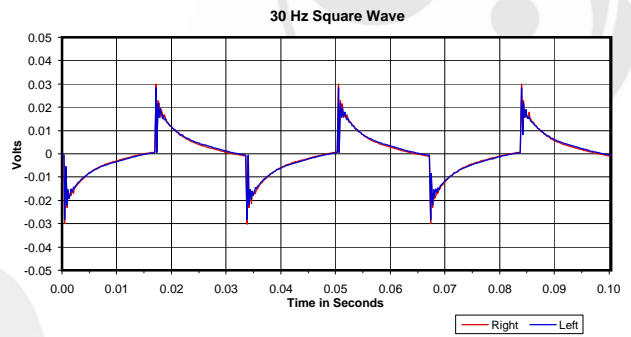
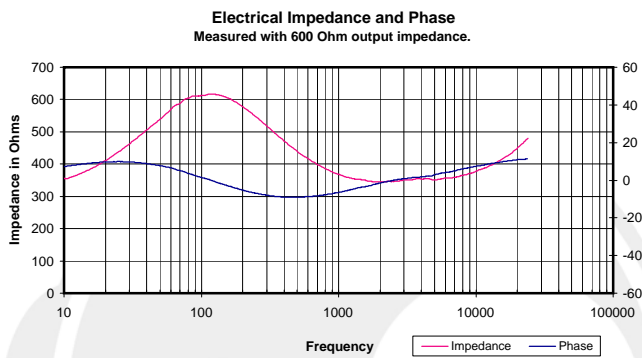
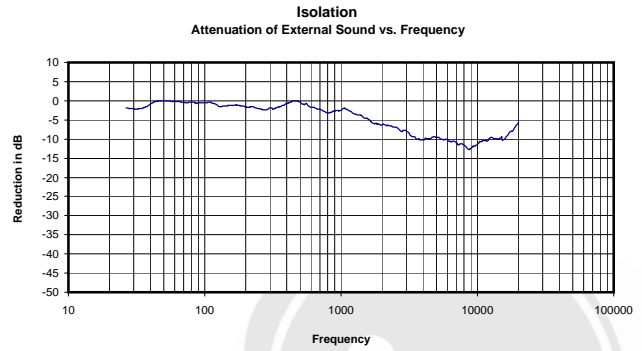
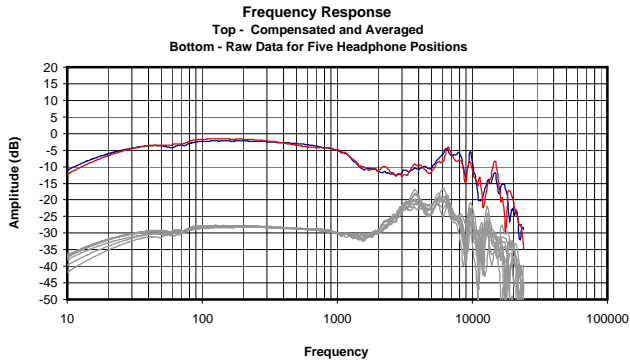
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.242 Vrms
 361 Ohms
 0.16 mW
 -3 dBr

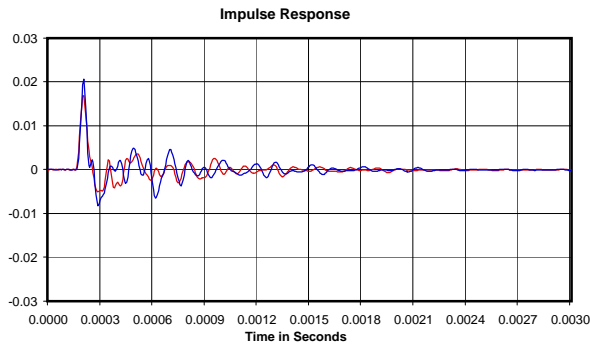
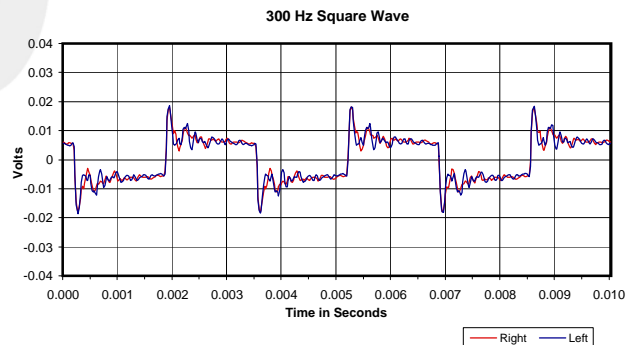
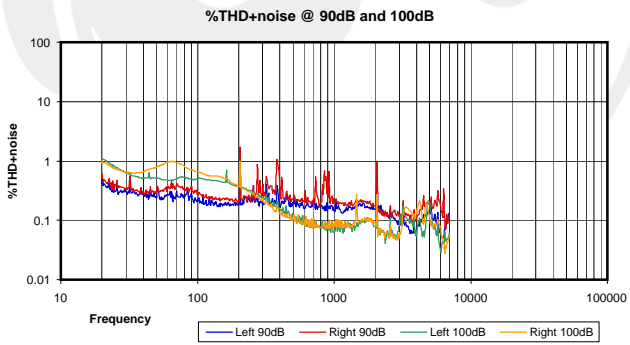
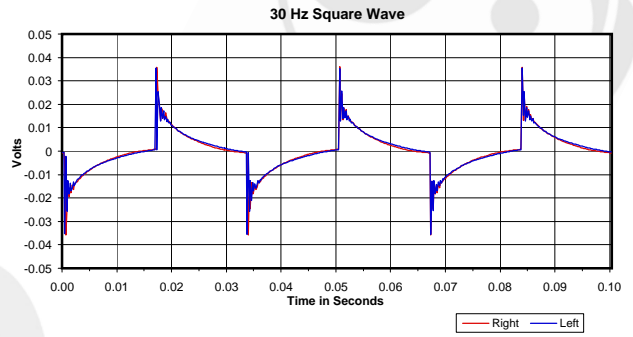
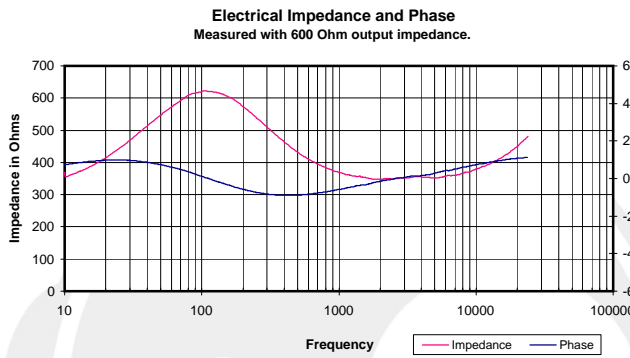
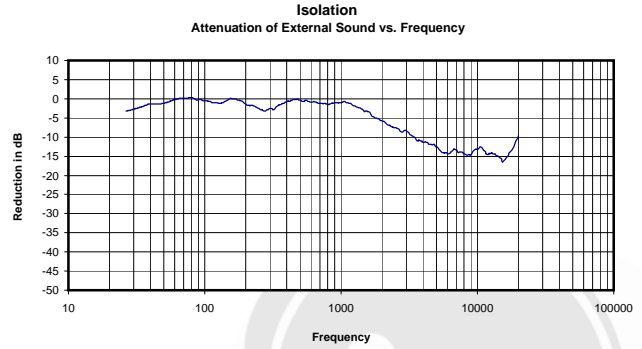
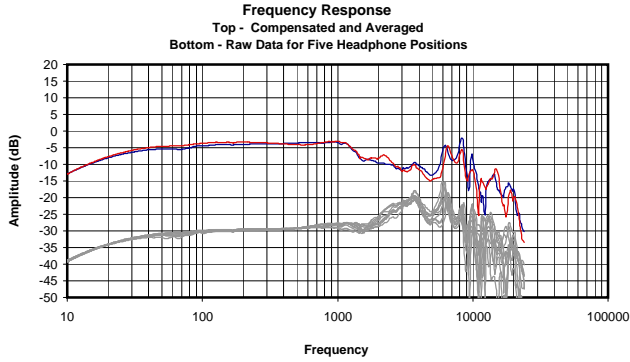




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.257 Vrms
368 Ohms
0.18 mW
-5 dBr

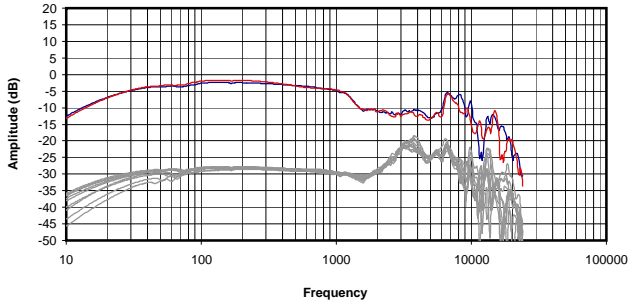




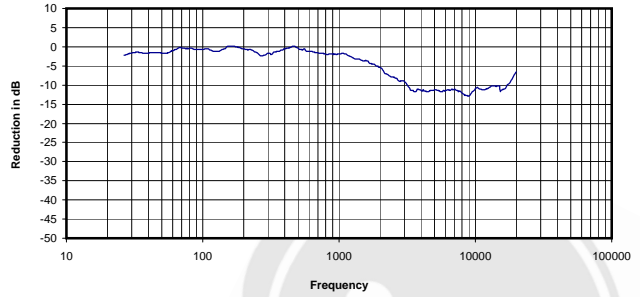
Volts RMS required to reach 90dB SPL: 0.165 Vrms
 Impedance @ 1kHz: 369 Ohms
 Power Needed for 90d BSPL: 0.07 mW
 Broadband Isolation in dB (100Hz to 10kHz): -5 dBr



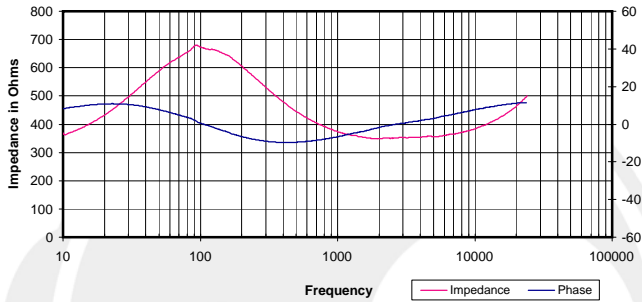
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



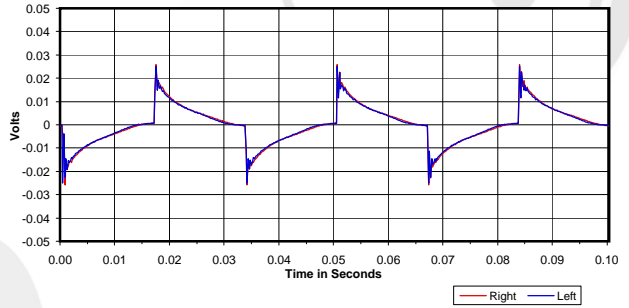
Isolation
Attenuation of External Sound vs. Frequency



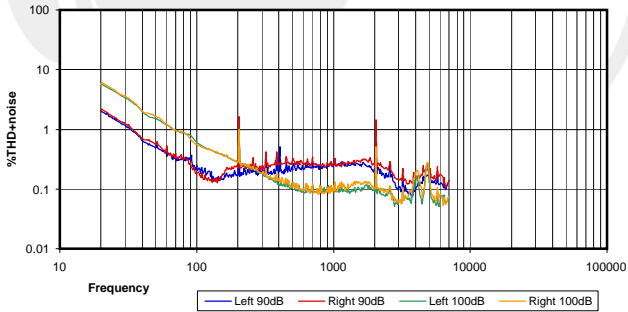
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



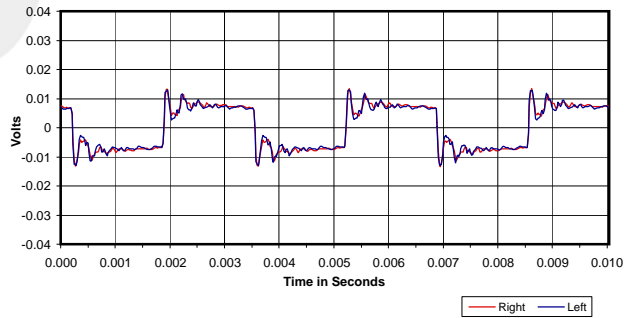
30 Hz Square Wave



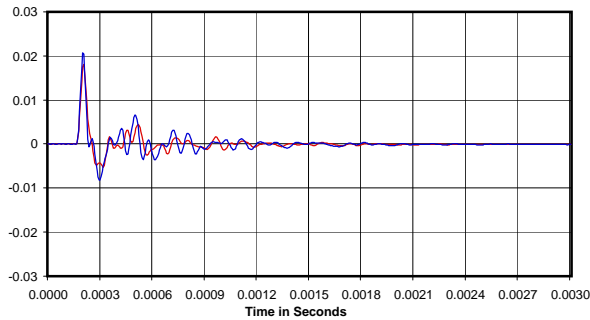
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



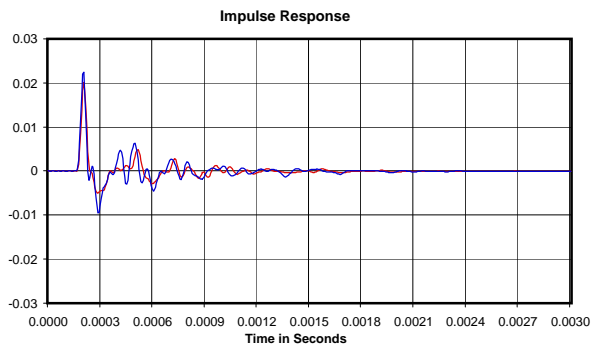
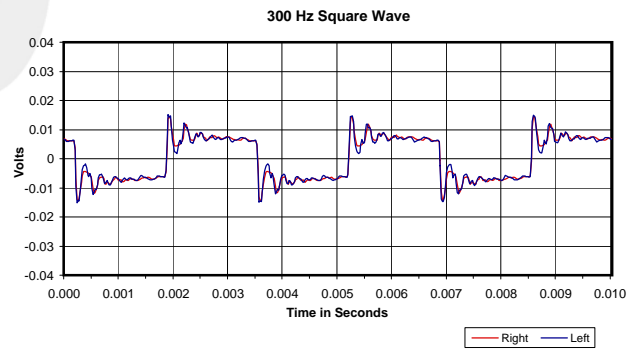
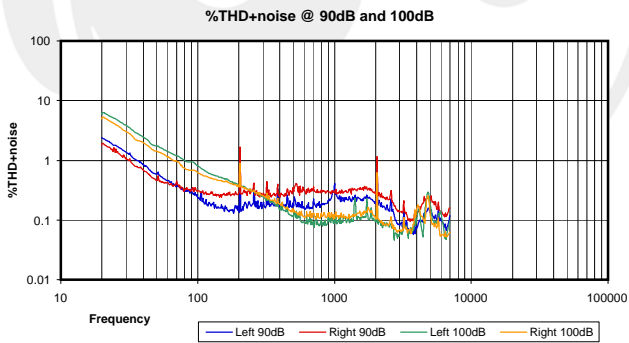
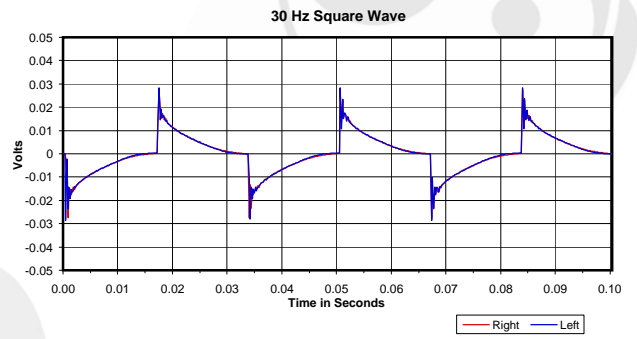
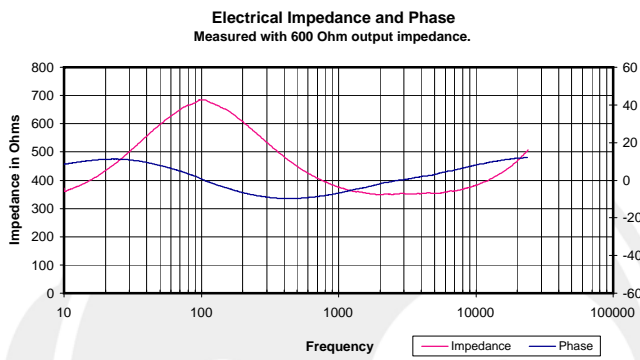
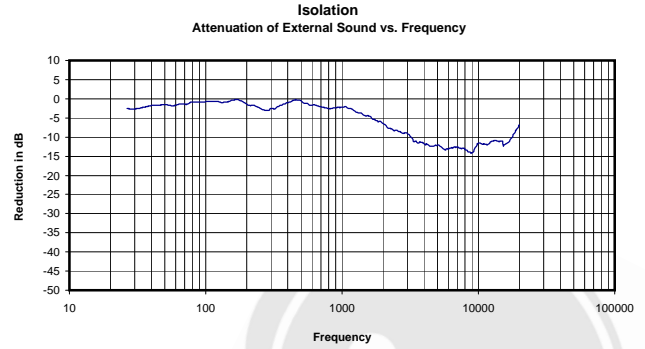
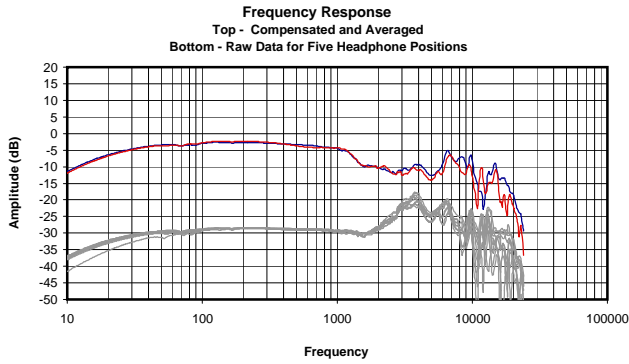
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.000 Vrms
374 Ohms
0.00 mW
-5 dBr



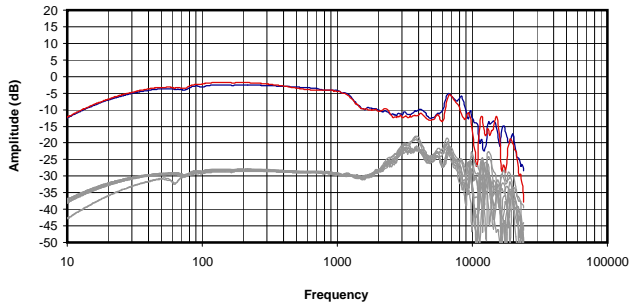


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

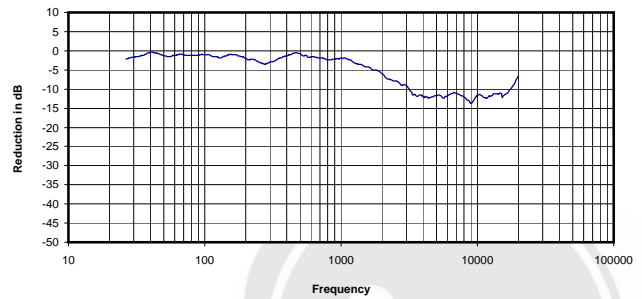
5.863 Vrms
376 Ohms
91.52 mW
-5 dBr



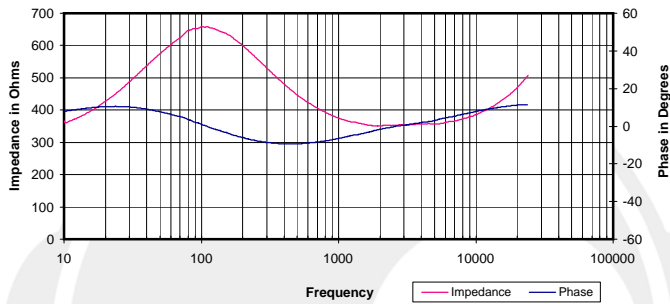
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



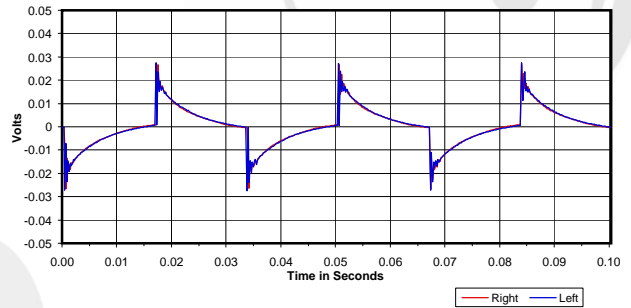
Isolation
Attenuation of External Sound vs. Frequency



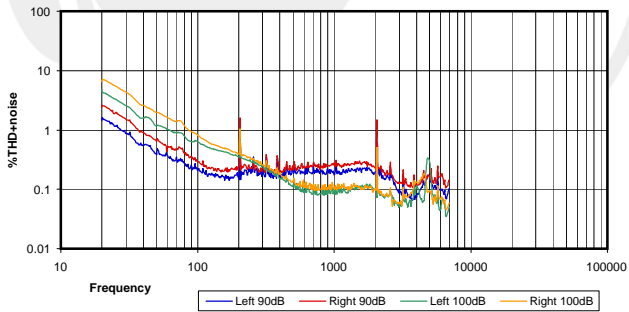
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



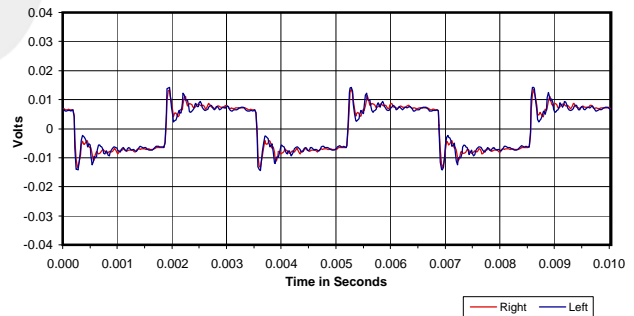
30 Hz Square Wave



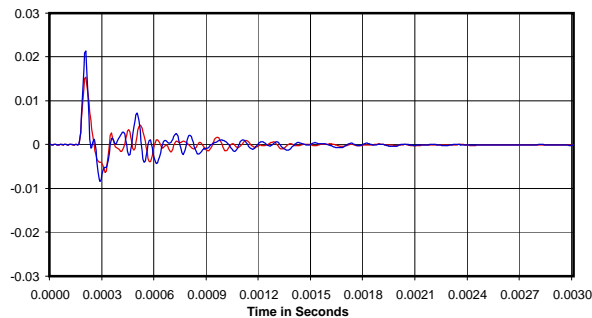
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



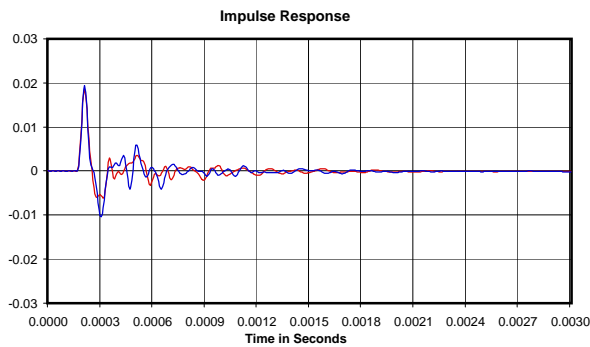
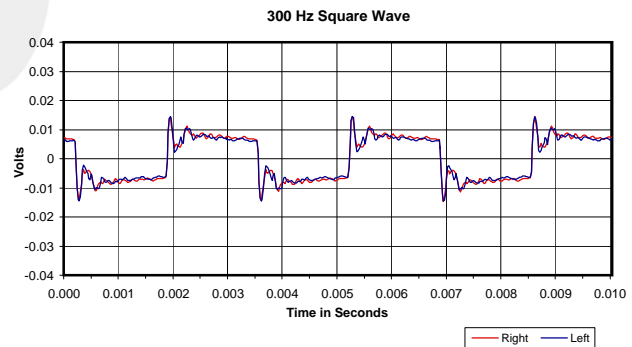
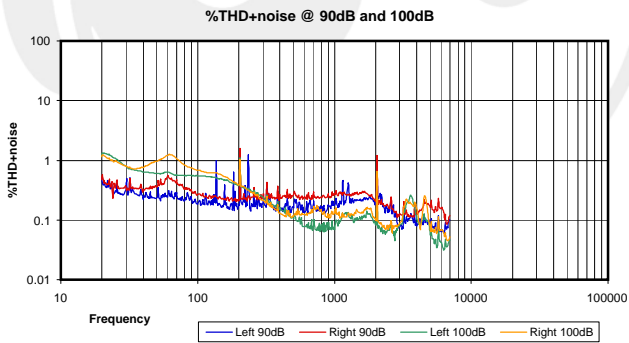
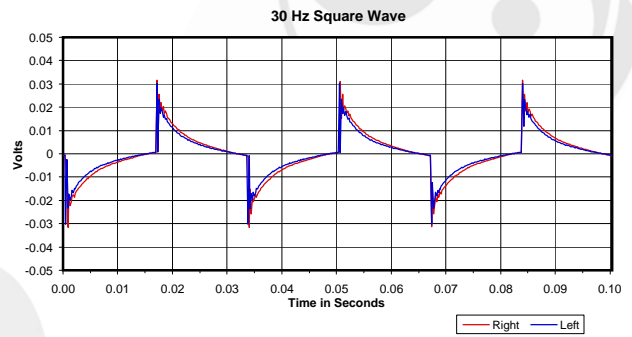
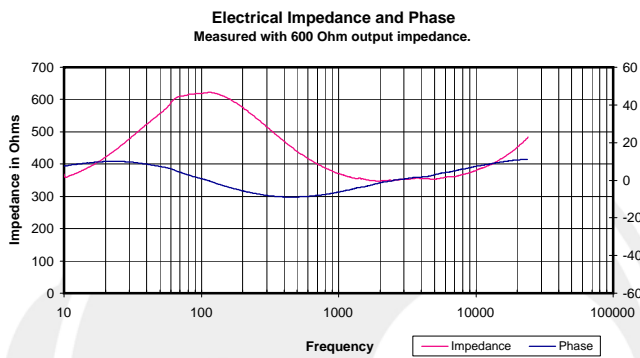
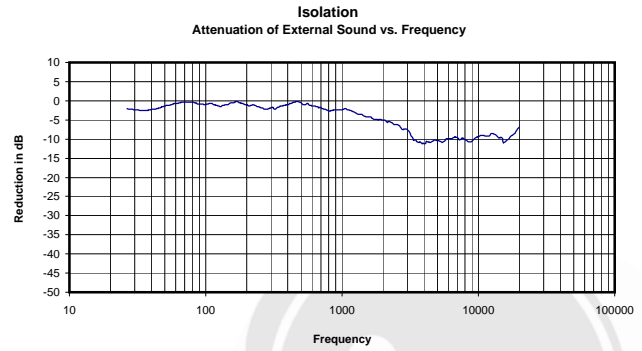
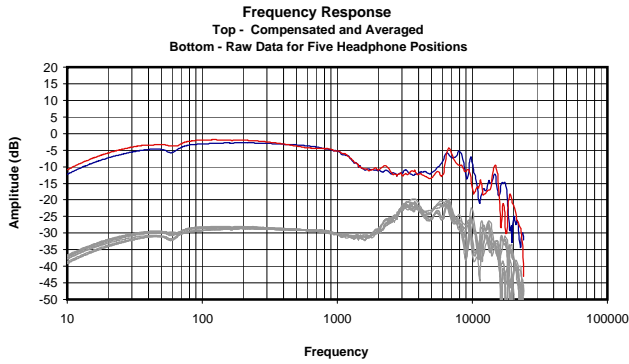
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.224 Vrms
375 Ohms
0.13 mW
-5 dBr



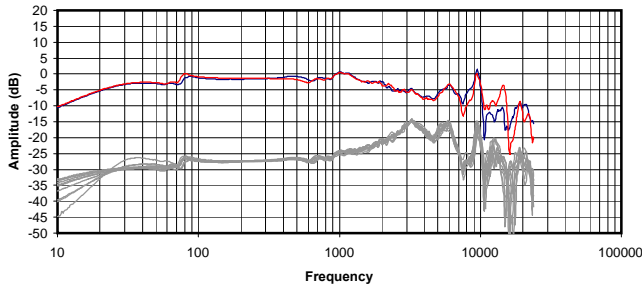


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

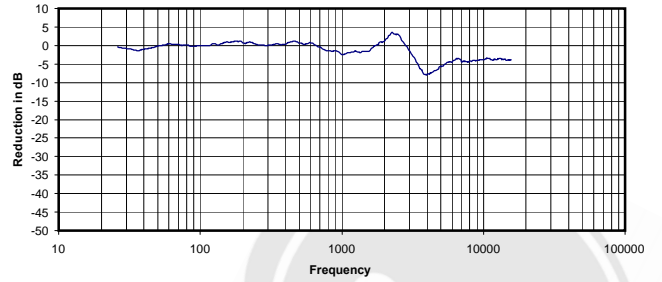
0.257 Vrms
370 Ohms
0.18 mW
-4 dBr



Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

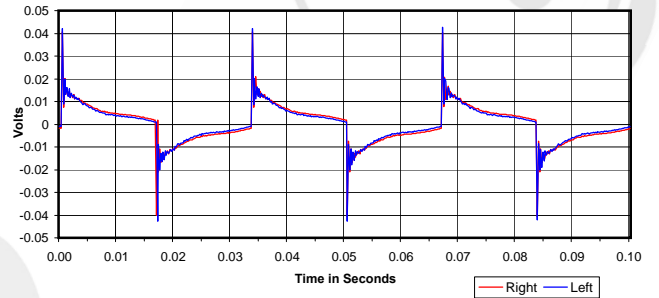


Isolation
 Attenuation of External Sound vs. Frequency

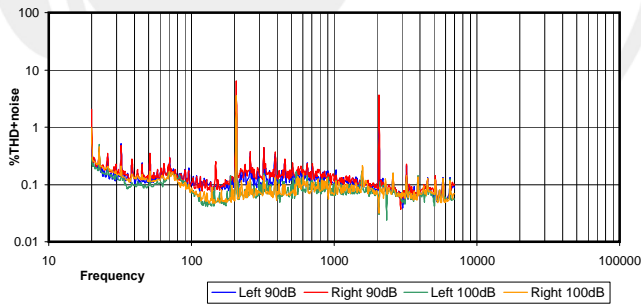


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

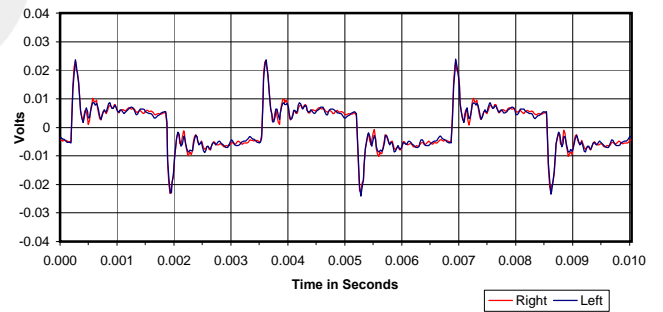
30 Hz Square Wave



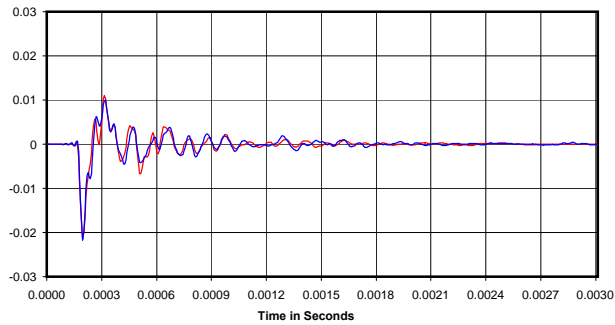
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



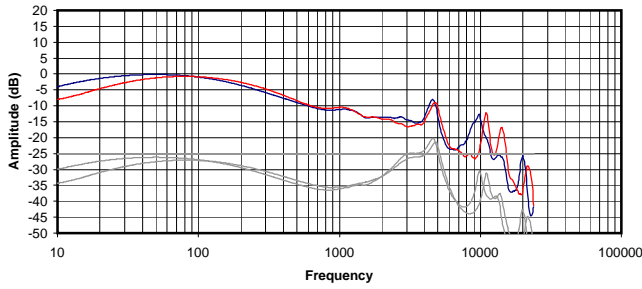
Impulse Response



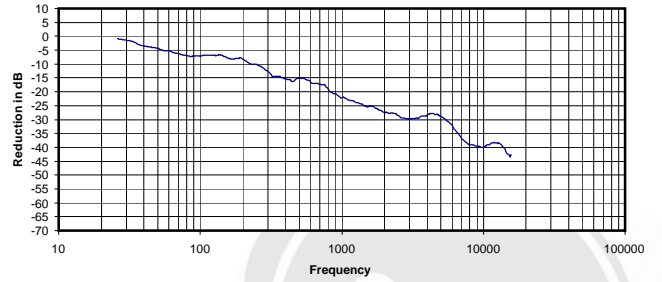
Broadband Isolation in dB (100Hz to 10kHz):

-1 dB

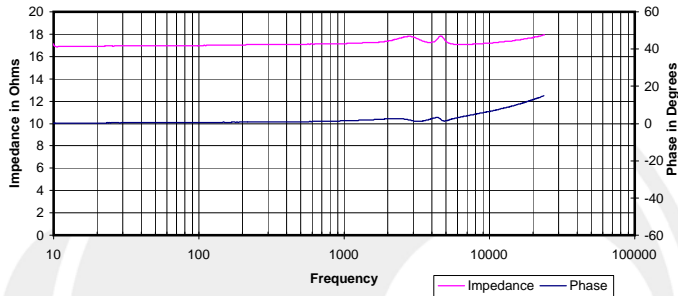
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



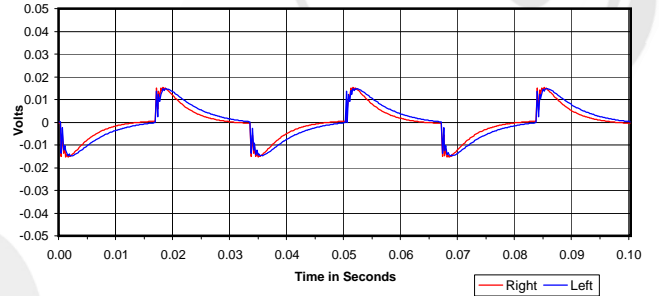
Isolation
Attenuation of External Sound vs. Frequency



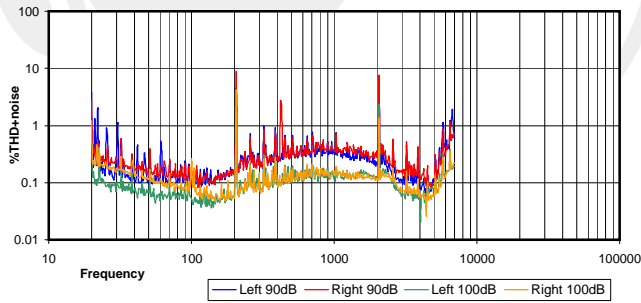
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



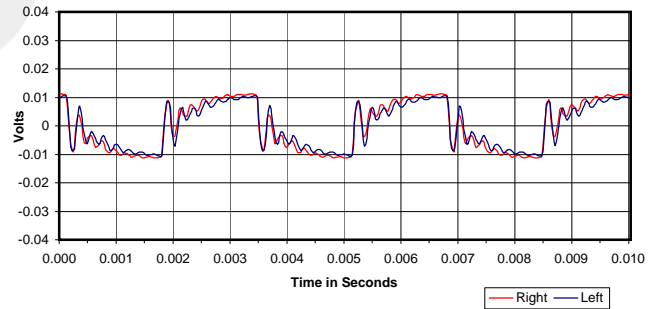
30 Hz Square Wave



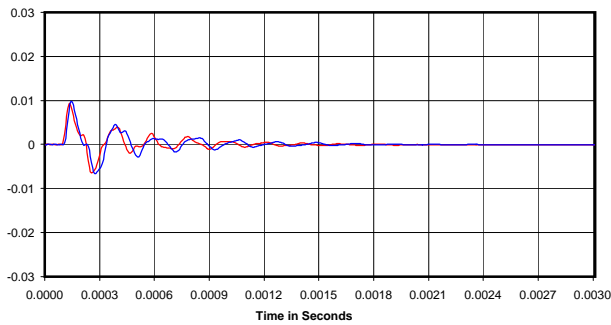
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



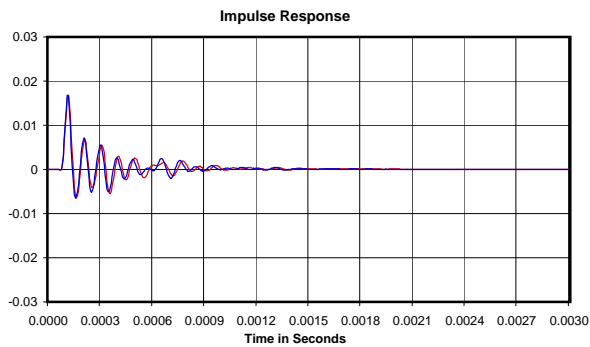
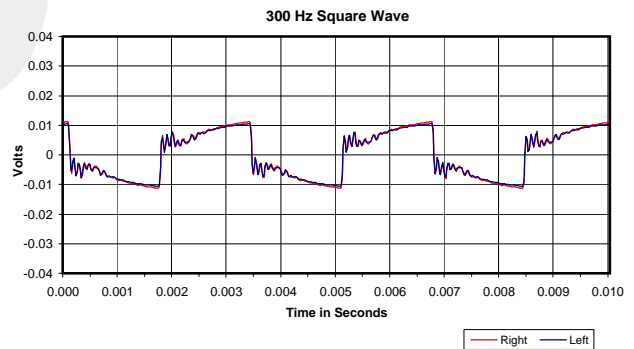
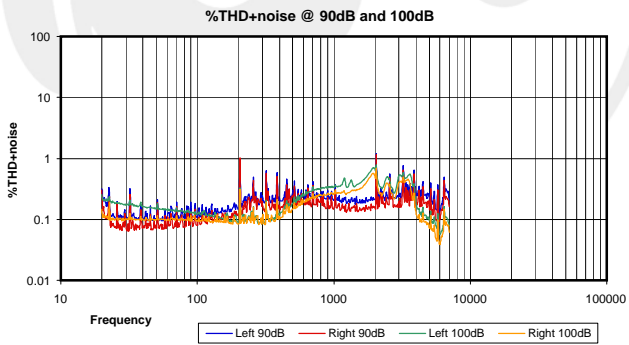
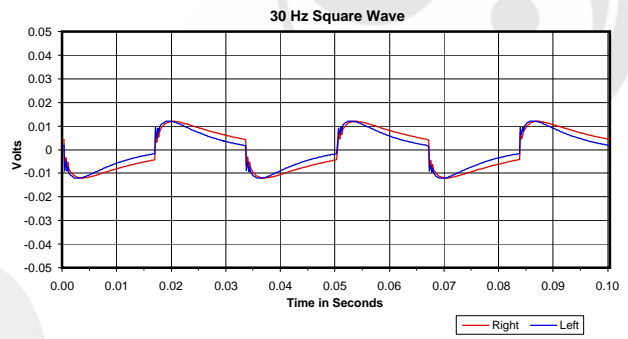
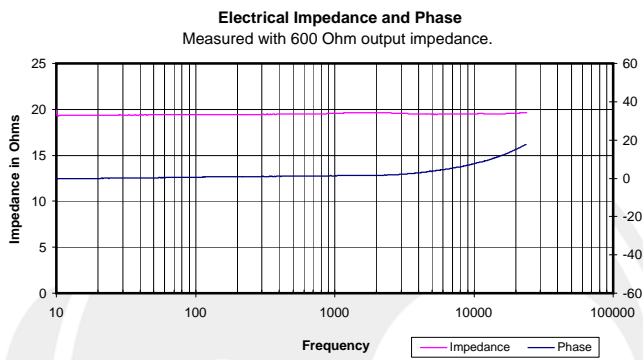
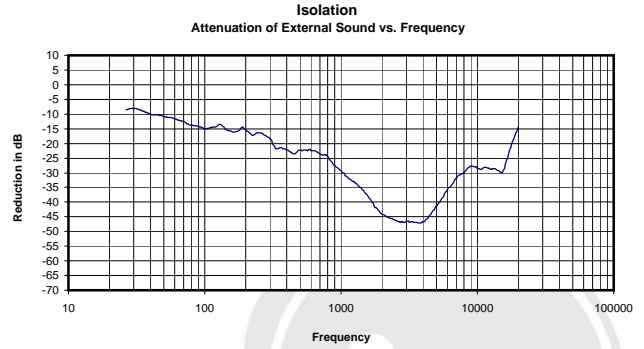
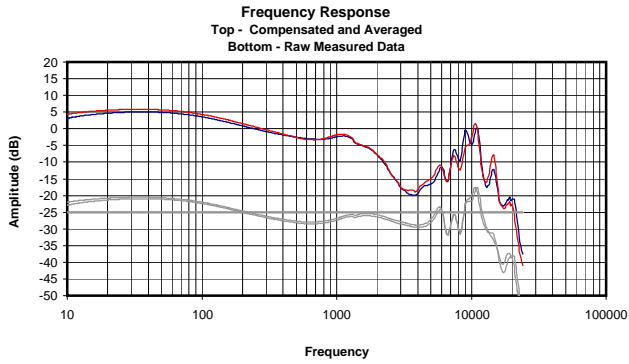
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
17 Ohms
0.04 mW
-19 dB



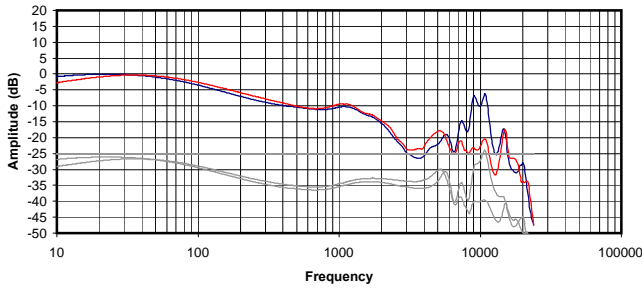


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

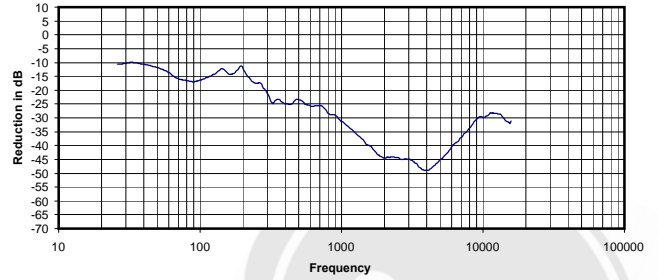
0.036 Vrms
20 Ohms
0.07 mW
-29 dBr



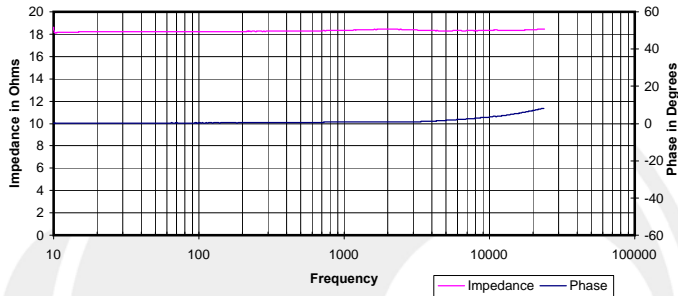
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



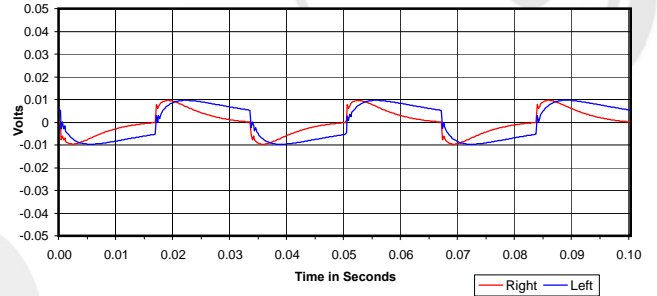
Isolation
Attenuation of External Sound vs. Frequency



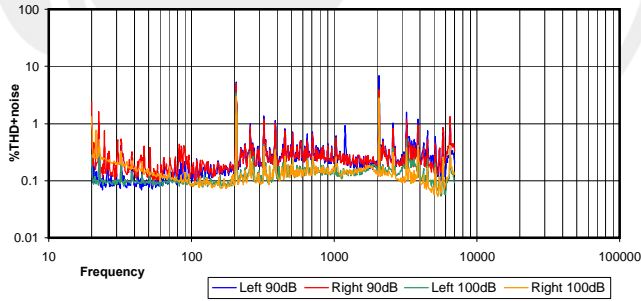
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



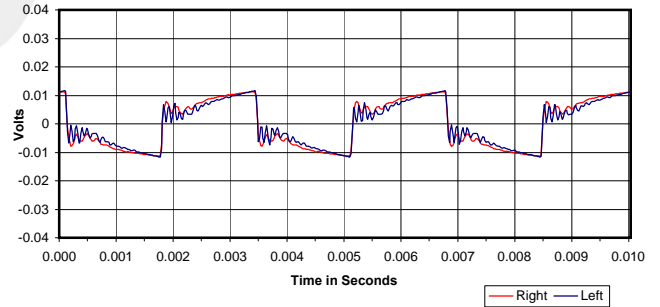
30 Hz Square Wave



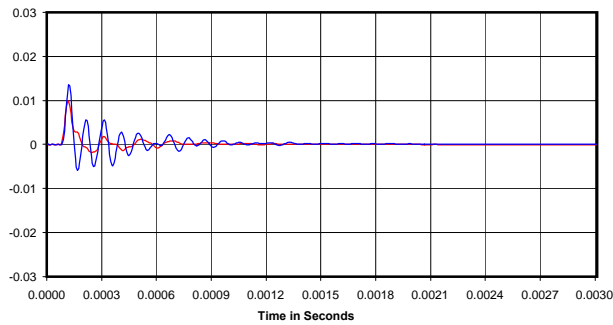
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

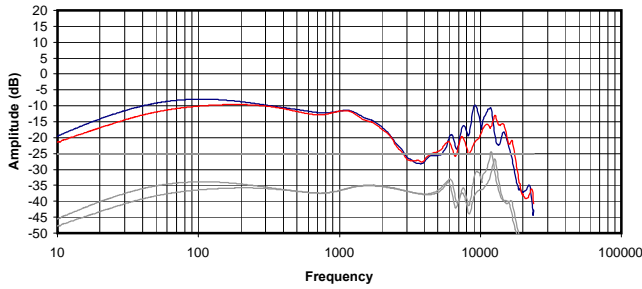


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

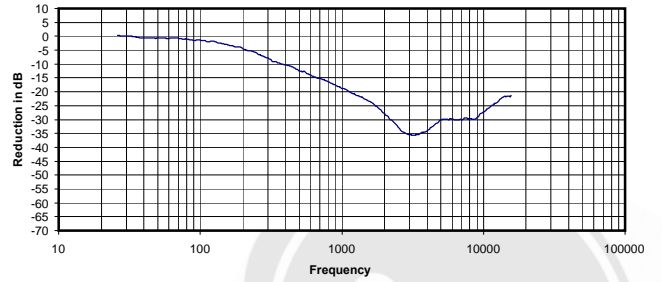
0.036 Vrms
18 Ohms
0.07 mW
-30 dB



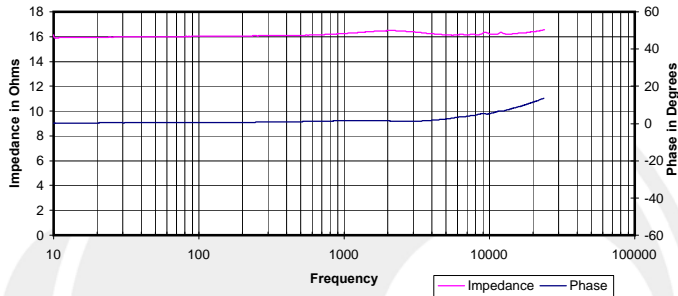
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



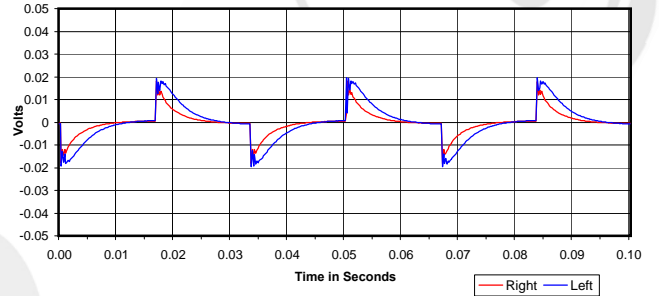
Isolation
Attenuation of External Sound vs. Frequency



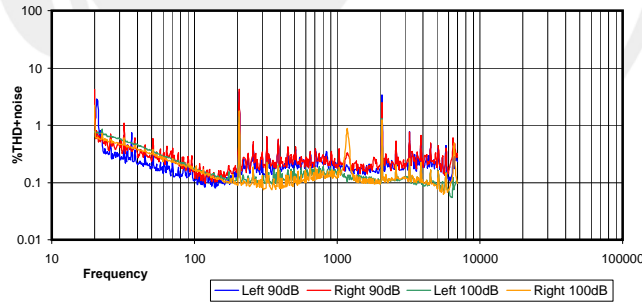
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



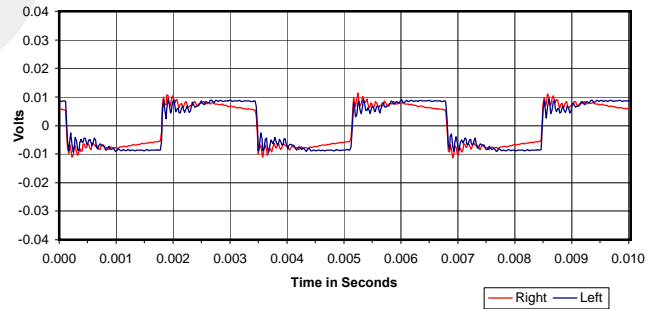
30 Hz Square Wave



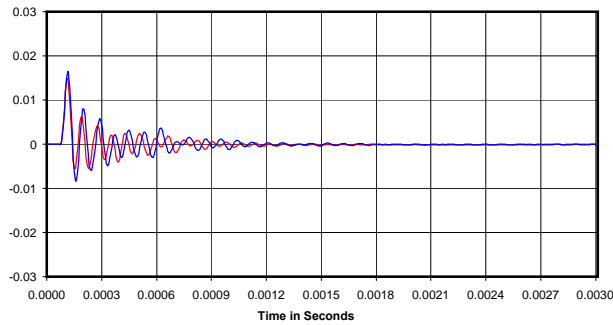
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

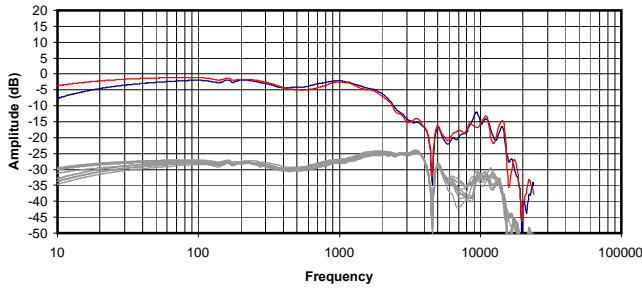


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

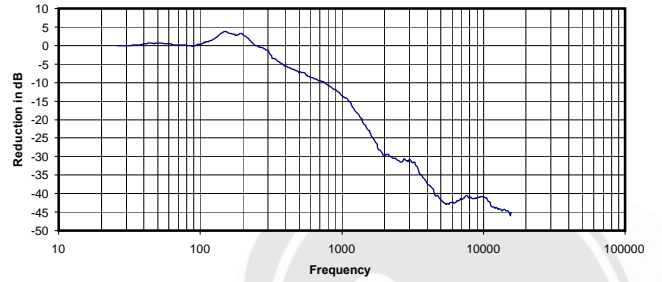
0.020 Vrms
16 Ohms
0.03 mW
-17 dB



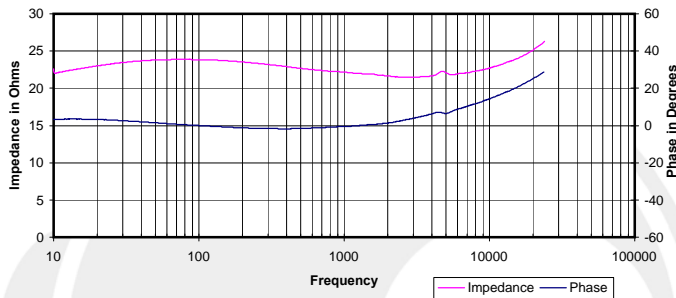
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



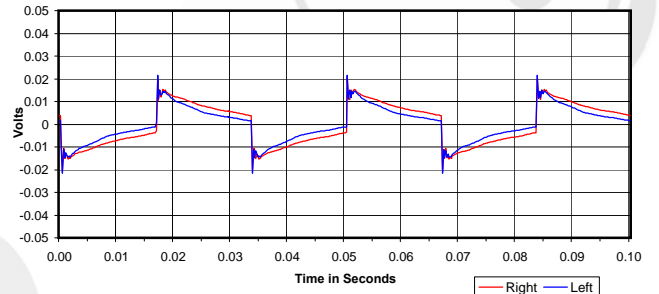
Isolation
 Attenuation of External Sound vs. Frequency



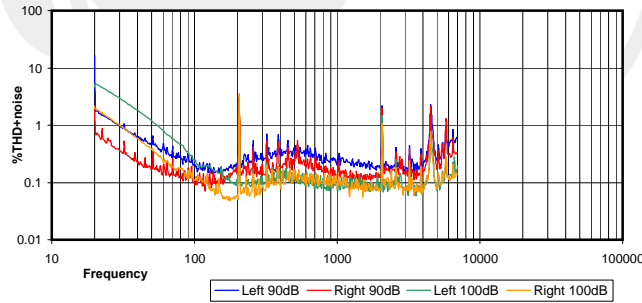
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



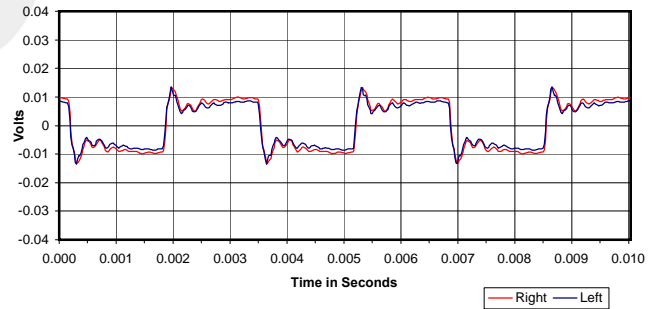
30 Hz Square Wave



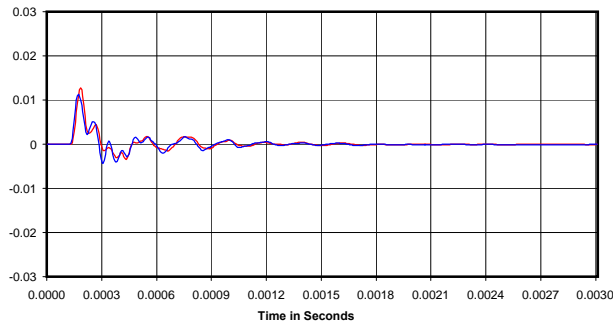
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

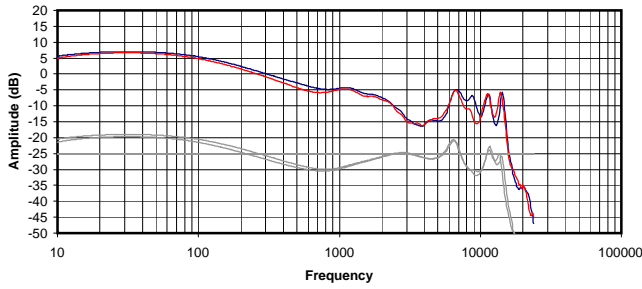


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

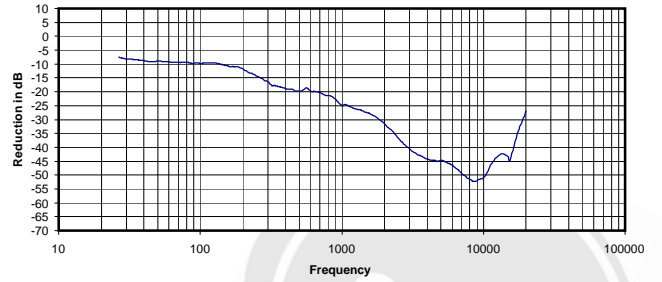
0.022 Vrms
 22 Ohms
 0.02 mW
 -15 dB



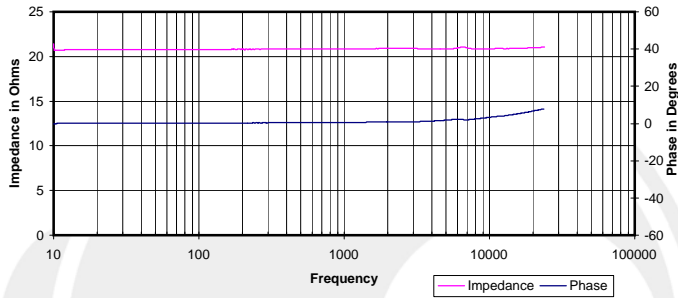
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



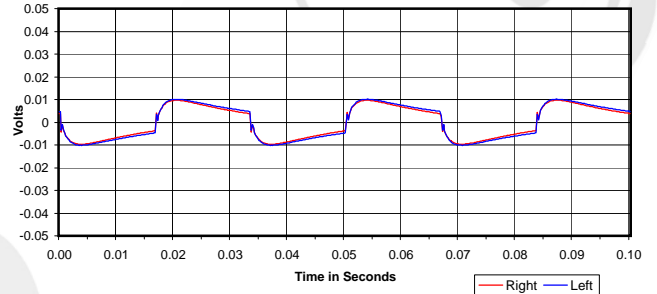
Isolation
Attenuation of External Sound vs. Frequency



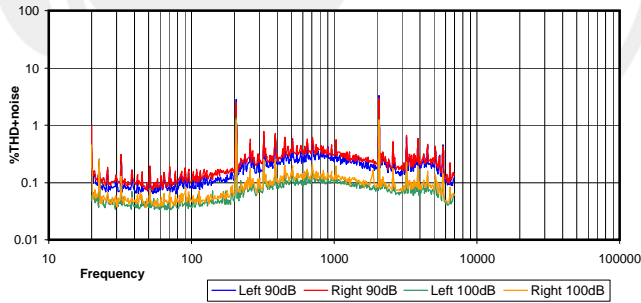
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



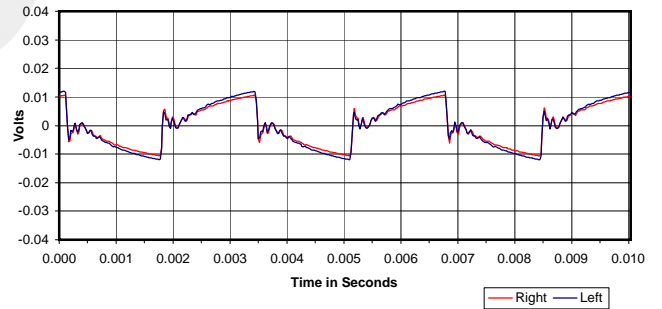
30 Hz Square Wave



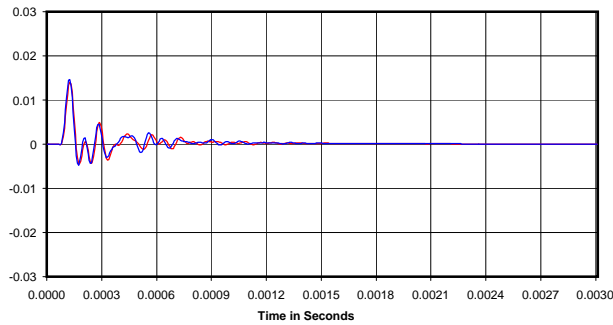
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

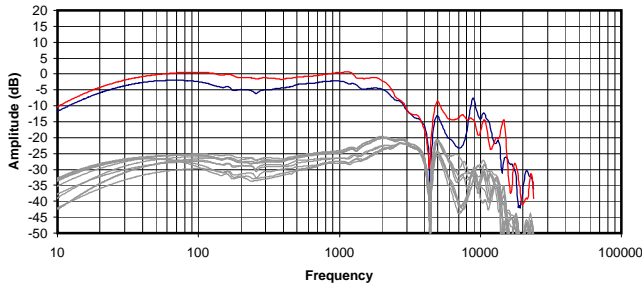


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

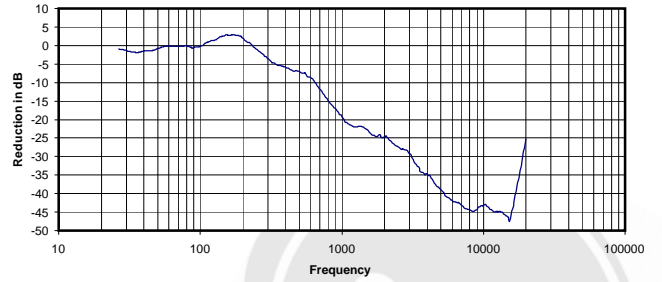
0.043 Vrms
21 Ohms
0.09 mW
-28 dB



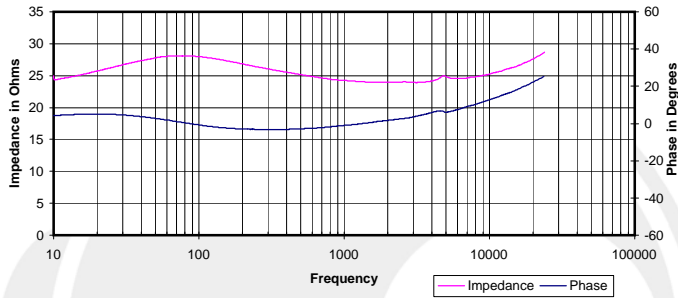
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



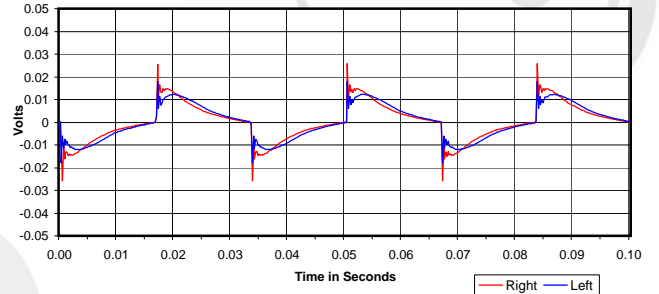
Isolation
 Attenuation of External Sound vs. Frequency



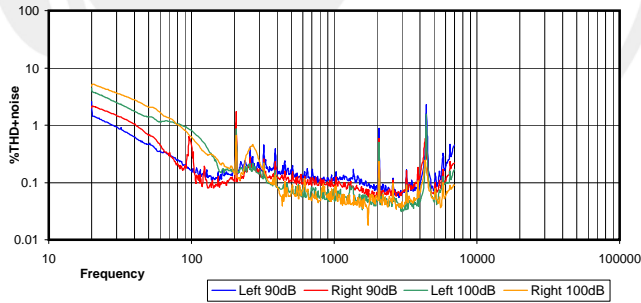
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



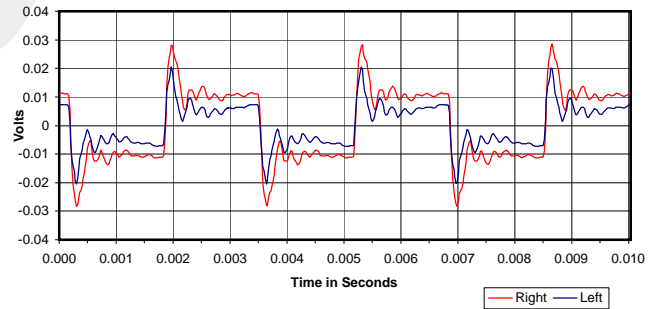
30 Hz Square Wave



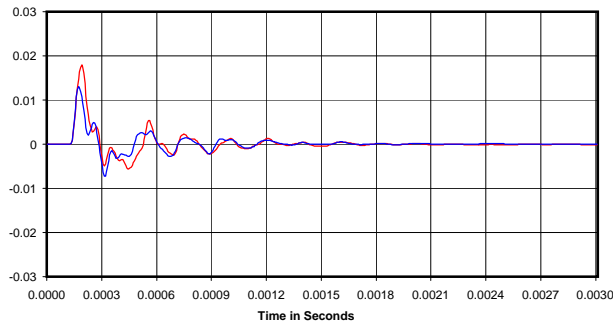
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

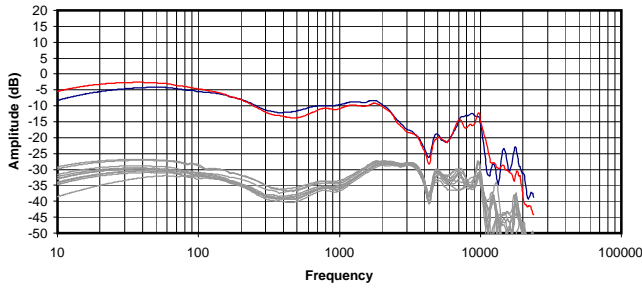


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

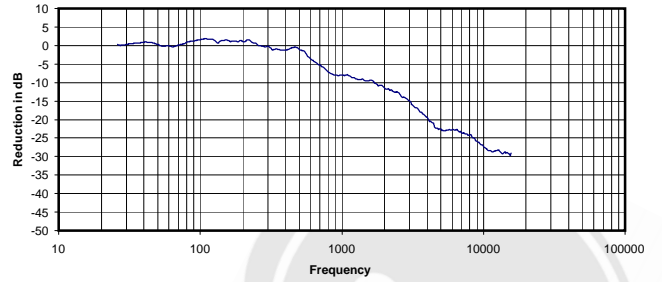
0.030 Vrms
 24 Ohms
 0.04 mW
 -18 dB



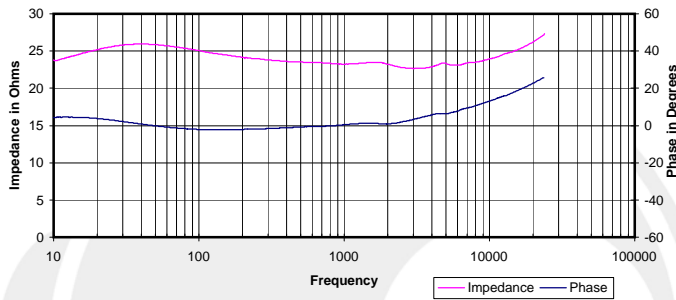
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



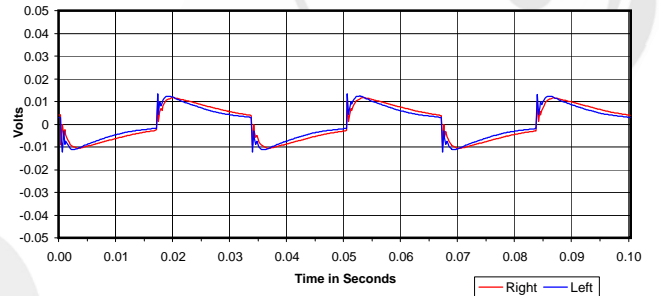
Isolation
 Attenuation of External Sound vs. Frequency



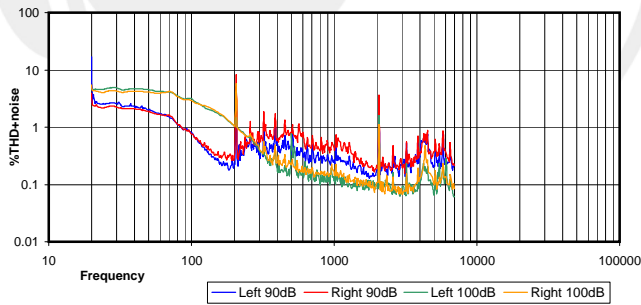
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



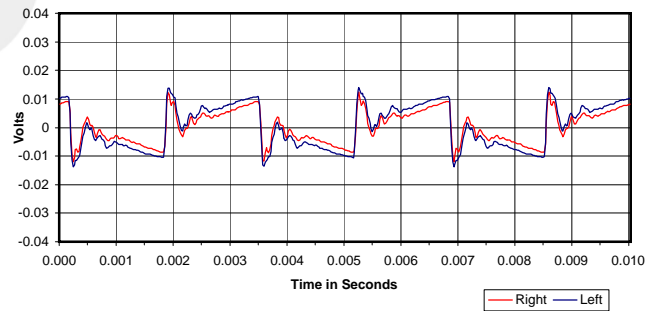
30 Hz Square Wave



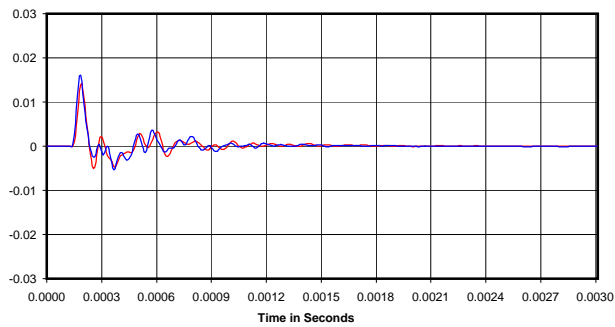
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

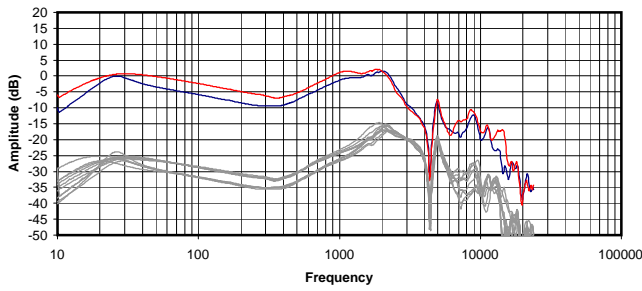


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

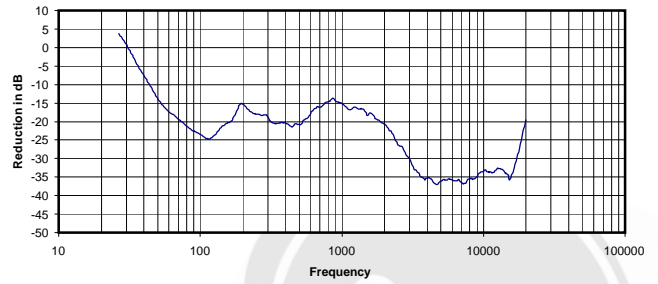
0.050 Vrms
 23 Ohms
 0.11 mW
 -7 dB



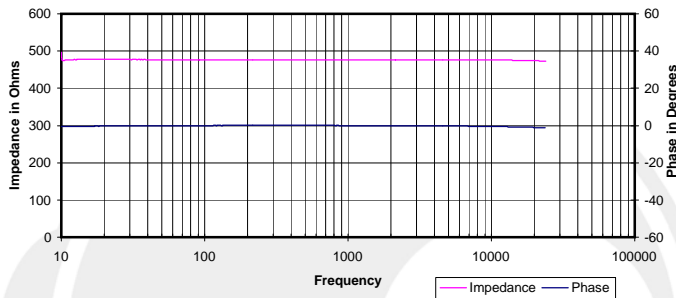
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



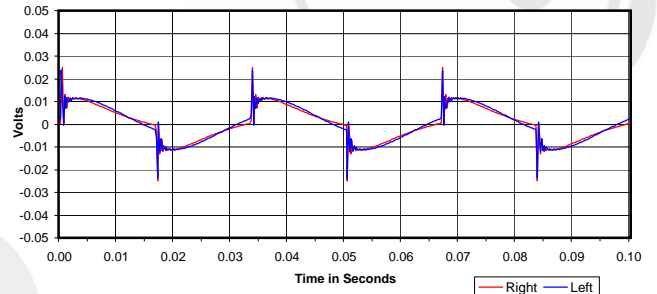
Isolation
Attenuation of External Sound vs. Frequency



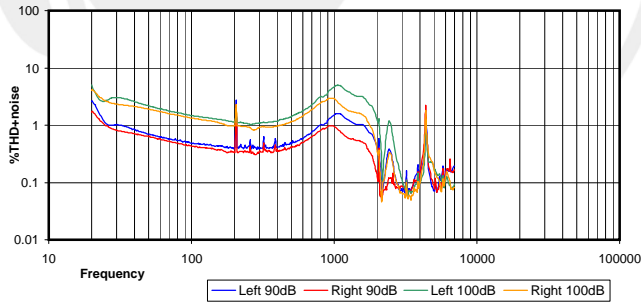
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



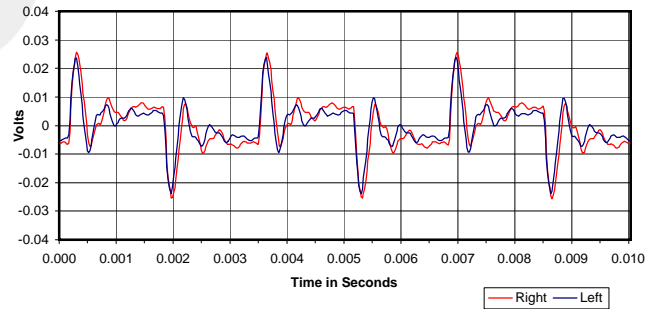
30 Hz Square Wave



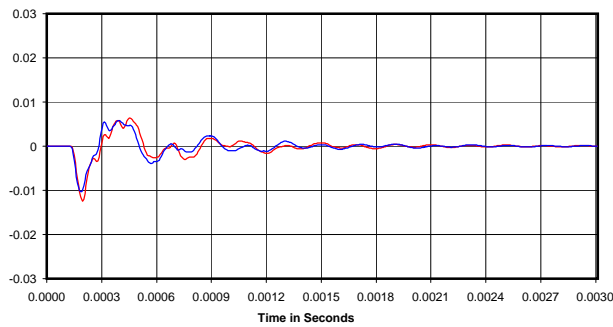
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

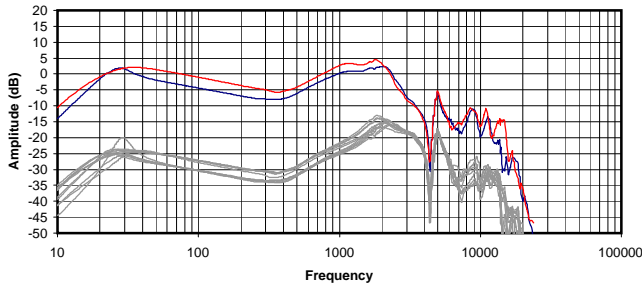


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.036 Vrms
477 Ohms
0.00 mW
-24 dB

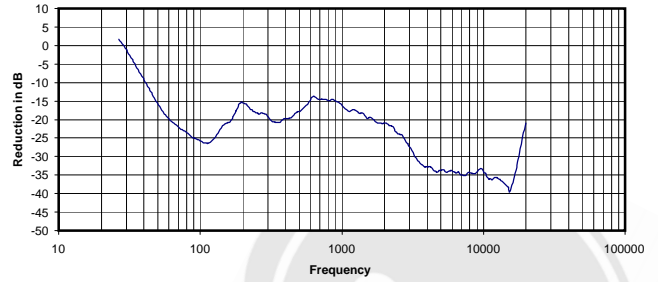


Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

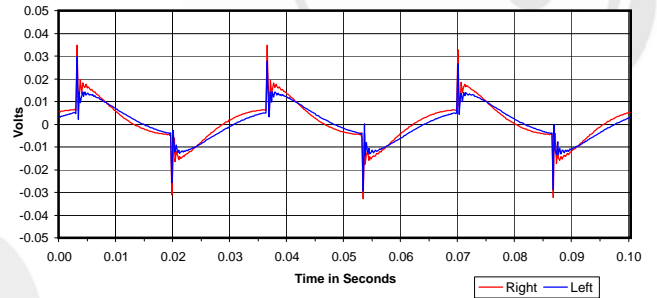


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

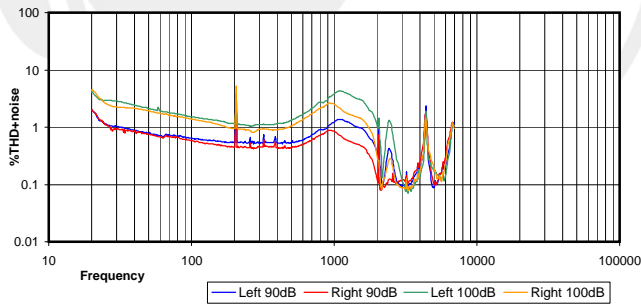
Isolation
 Attenuation of External Sound vs. Frequency



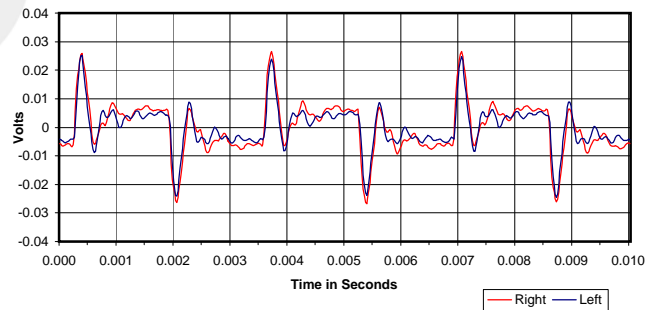
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



300 Hz Square Wave

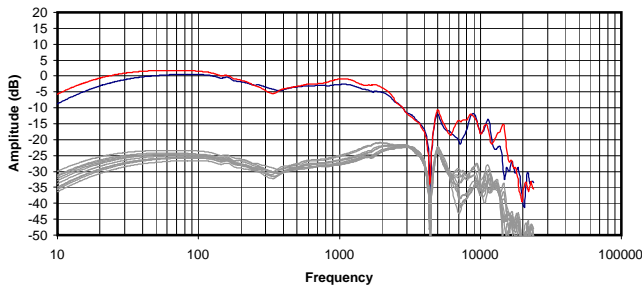


Broadband Isolation in dB (100Hz to 10kHz):

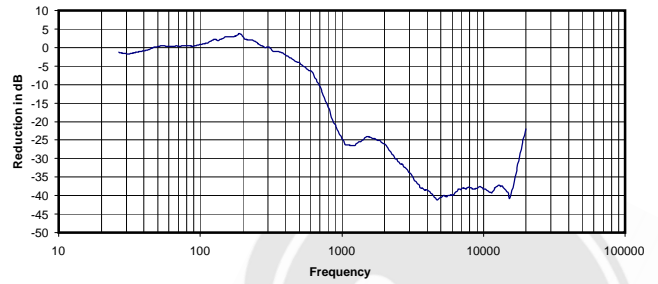
-23 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

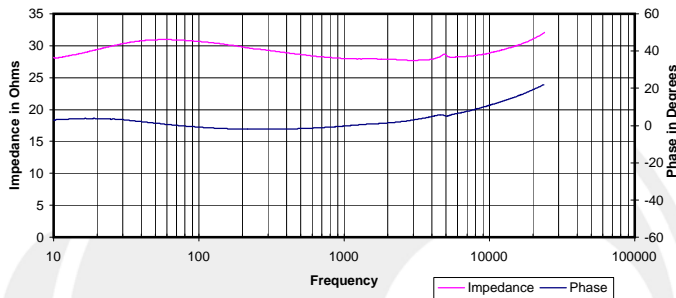
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



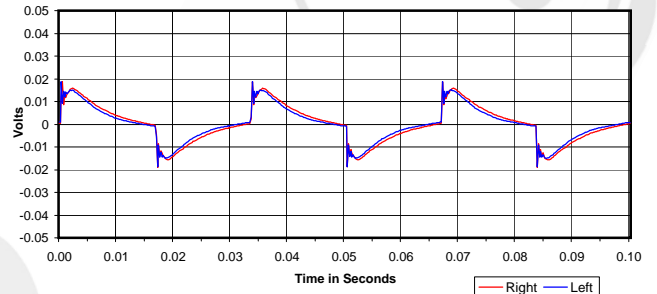
Isolation
 Attenuation of External Sound vs. Frequency



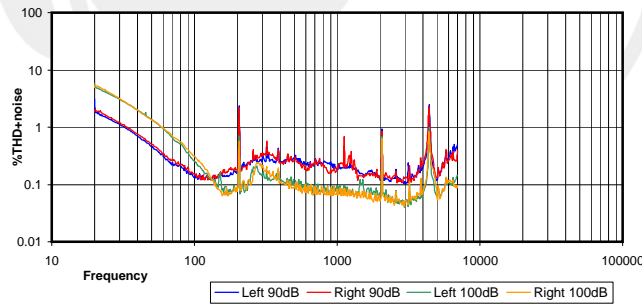
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



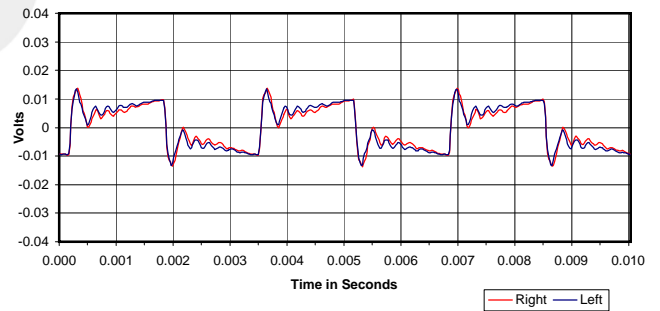
30 Hz Square Wave



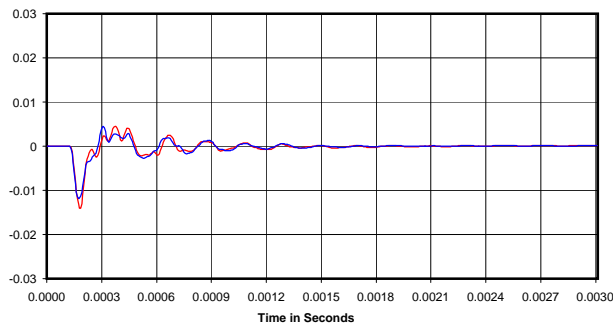
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

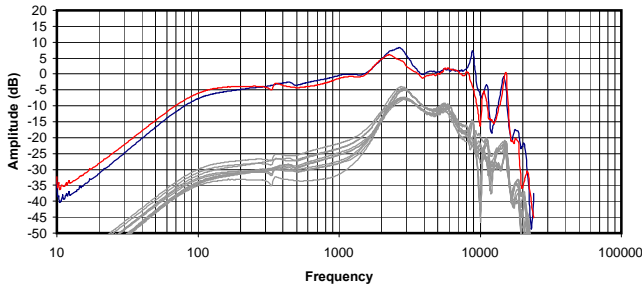


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

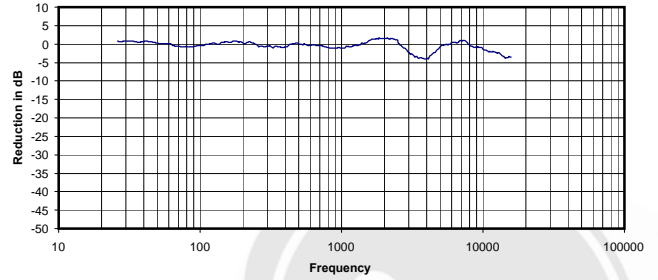
0.035 Vrms
 28 Ohms
 0.04 mW
 -18 dB



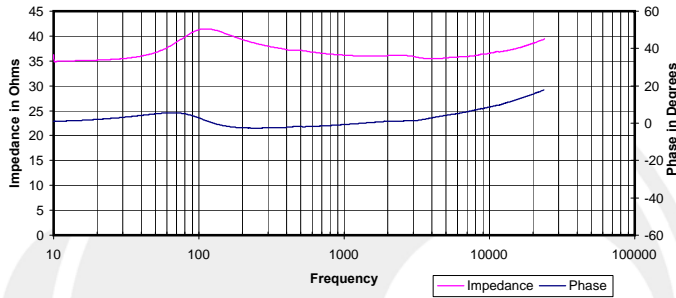
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



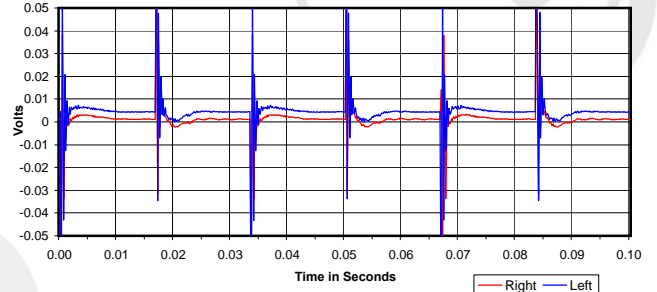
Isolation
 Attenuation of External Sound vs. Frequency



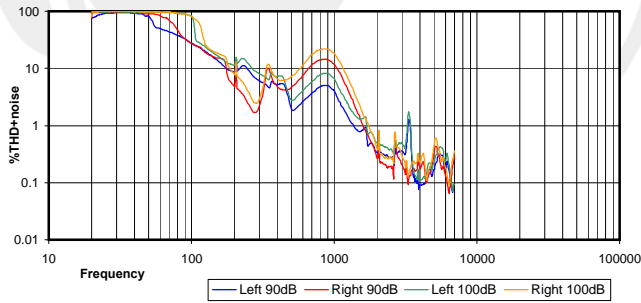
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



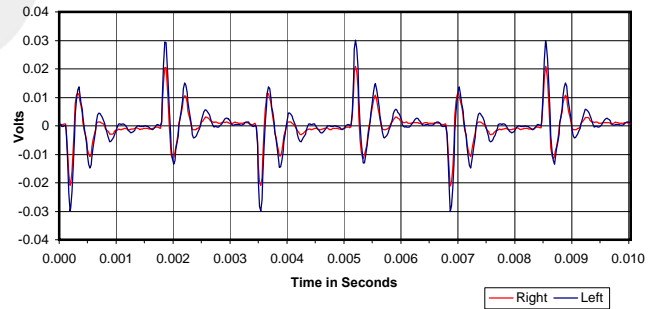
30 Hz Square Wave



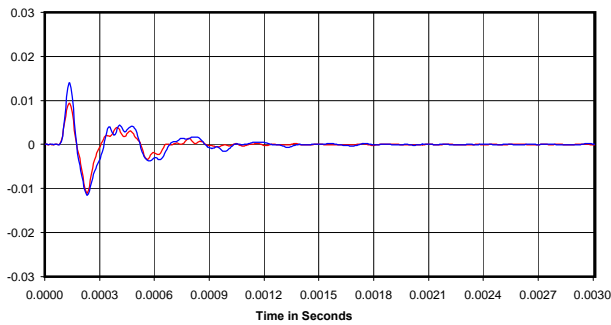
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



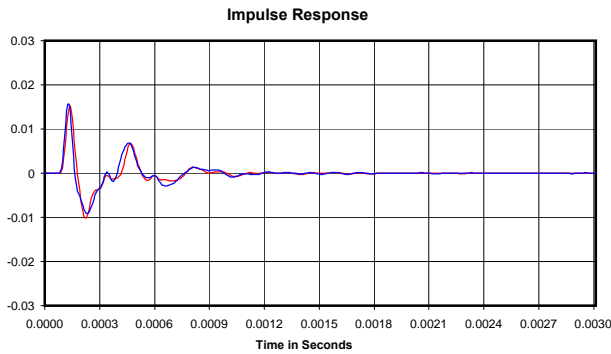
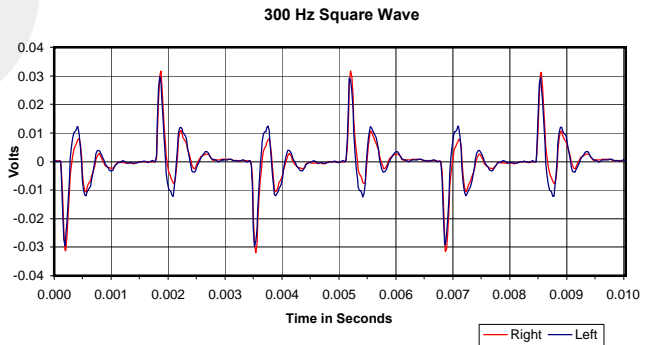
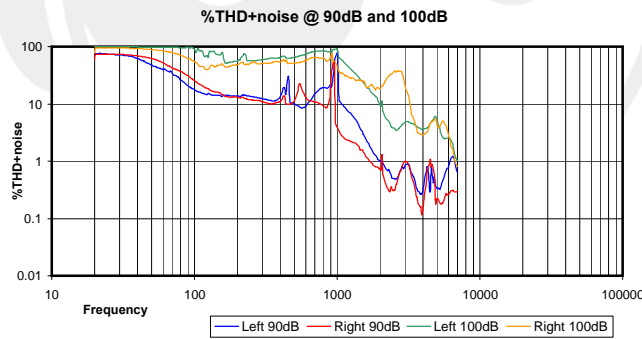
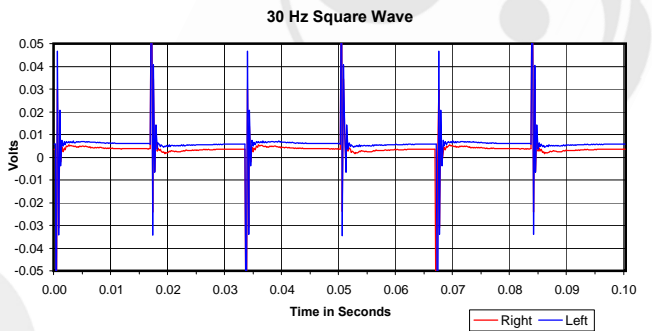
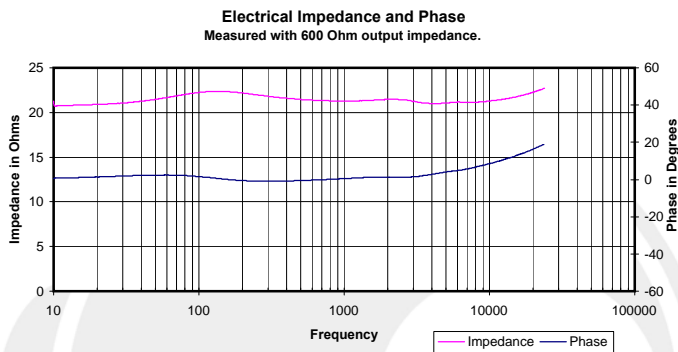
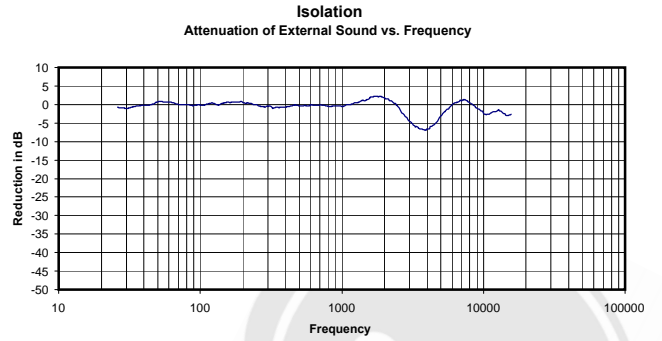
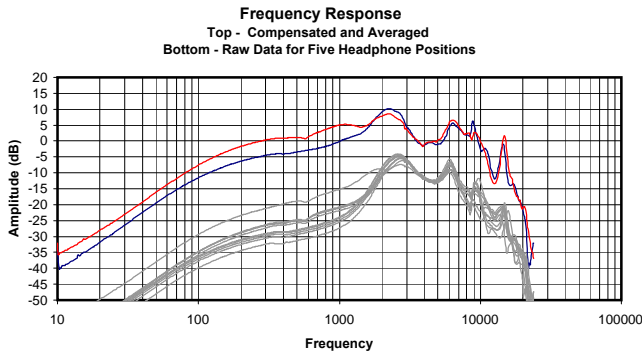
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.140 Vrms
 36 Ohms
 0.54 mW
 0 dB

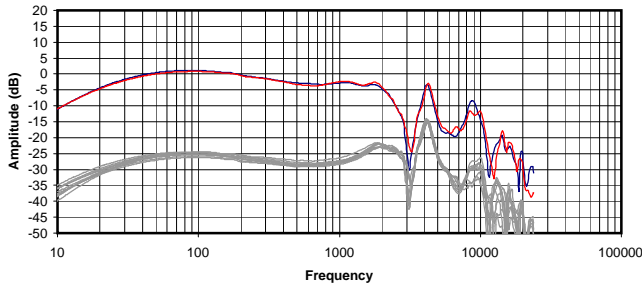




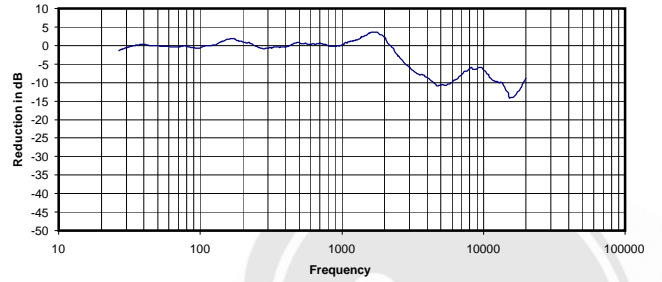
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.105 Vrms
21 Ohms
0.52 mW
-1 dB

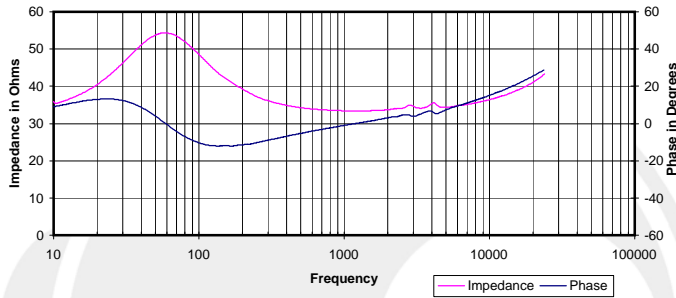
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



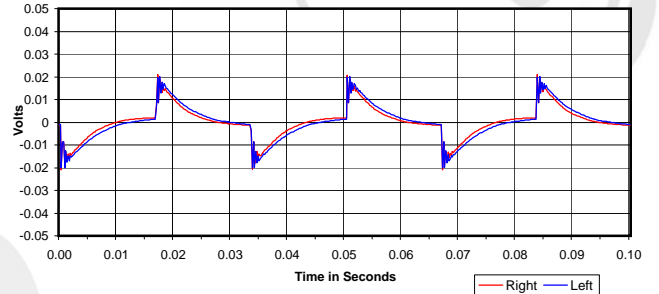
Isolation
 Attenuation of External Sound vs. Frequency



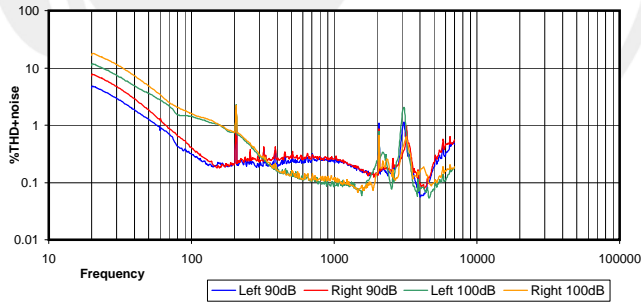
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



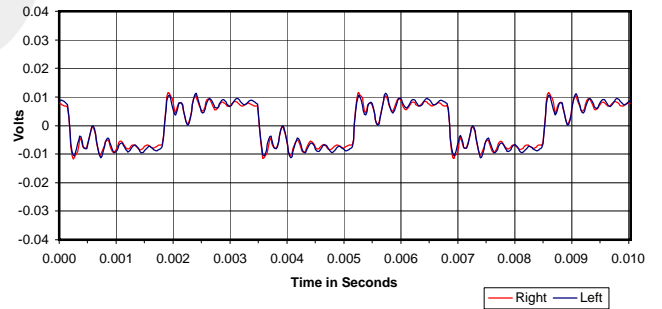
30 Hz Square Wave



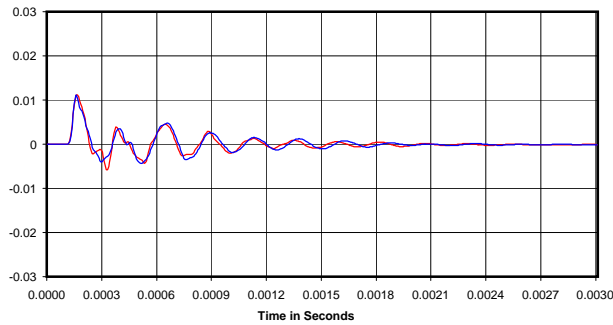
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

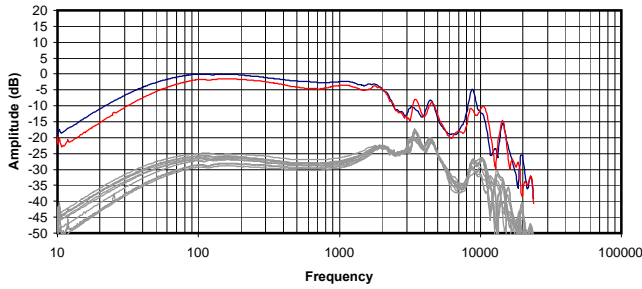


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

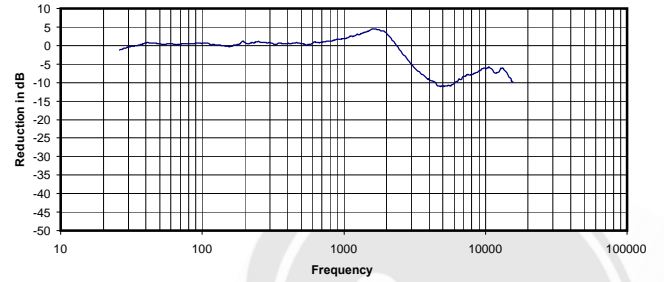
0.050 Vrms
 33 Ohms
 0.07 mW
 -2 dB



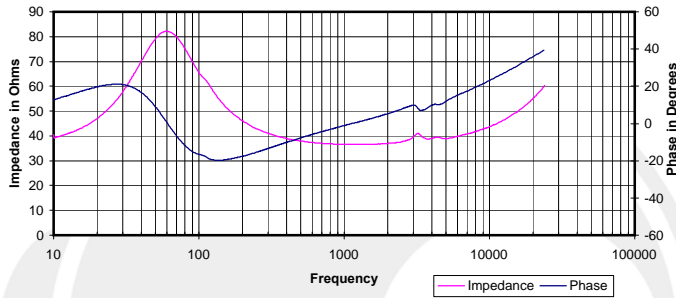
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



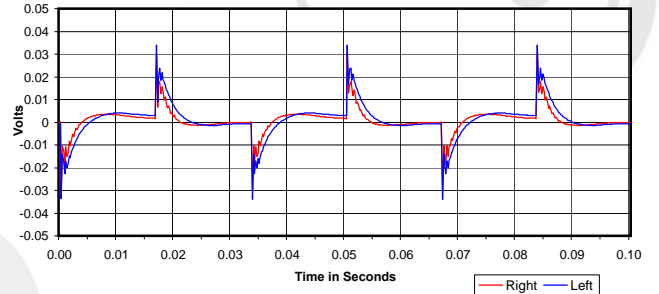
Isolation
 Attenuation of External Sound vs. Frequency



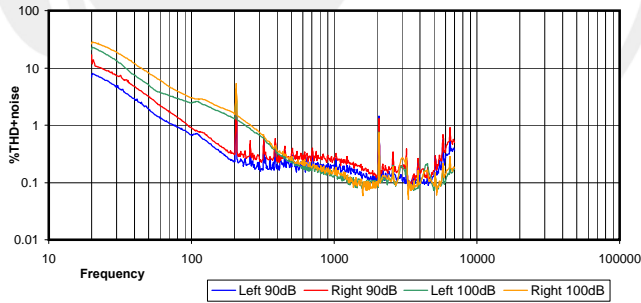
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



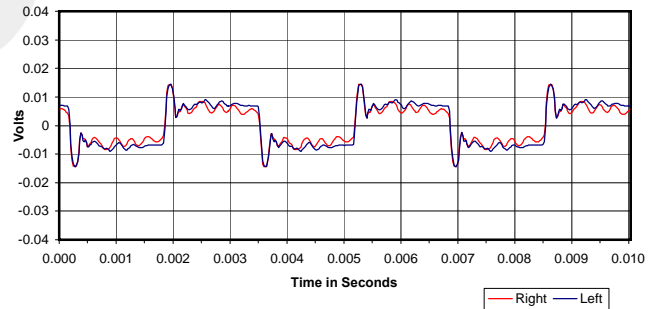
30 Hz Square Wave



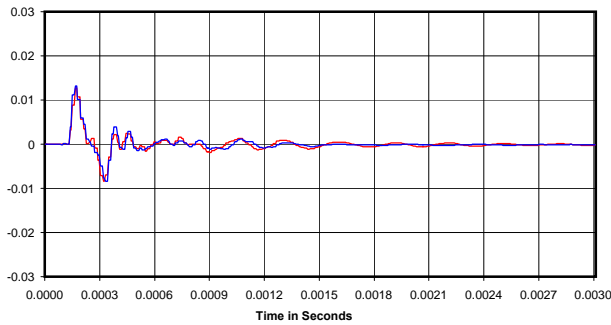
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

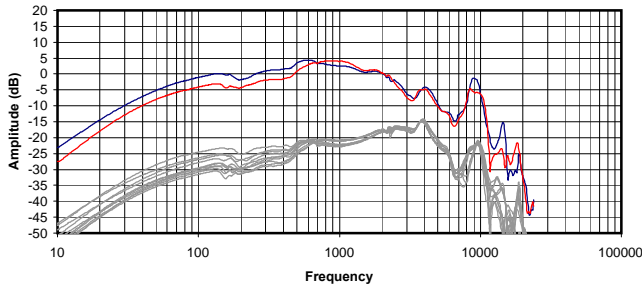


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

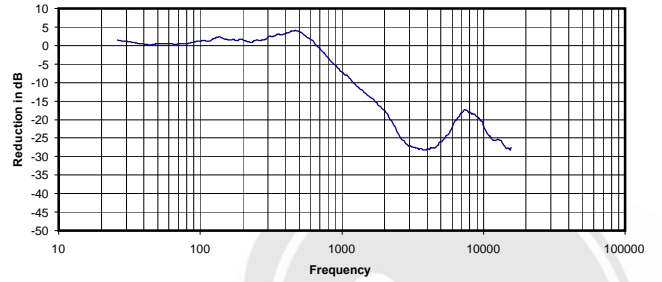
0.054 Vrms
 37 Ohms
 0.08 mW
 -1 dBr



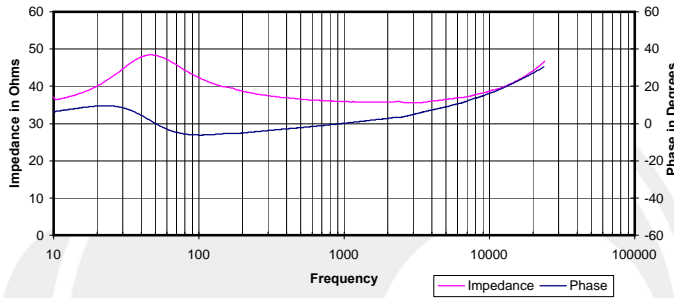
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



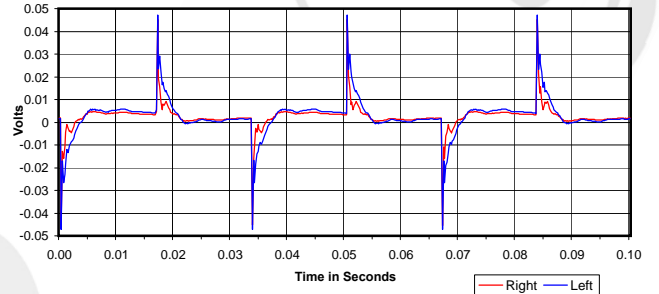
Isolation
Attenuation of External Sound vs. Frequency



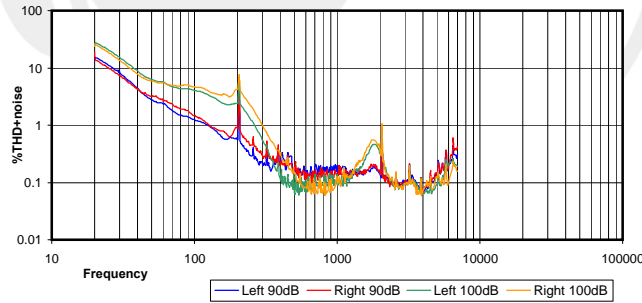
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



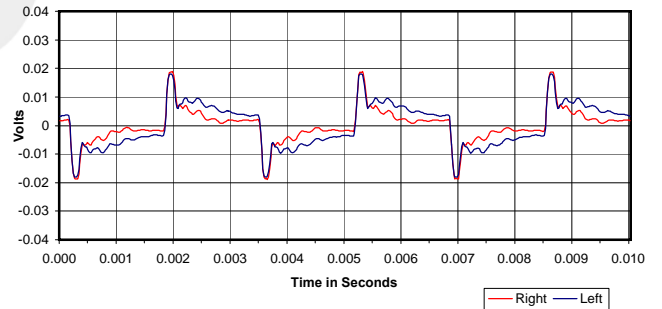
30 Hz Square Wave



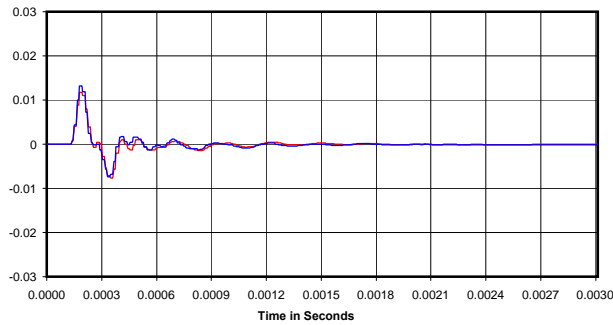
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

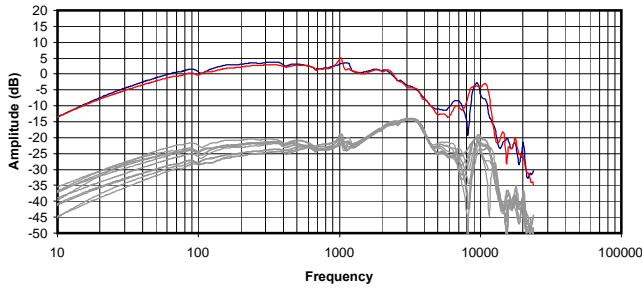


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

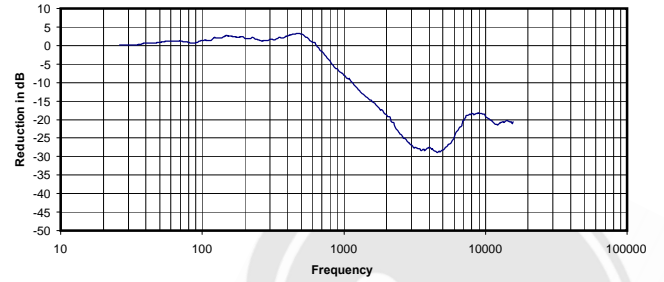
0.052 Vrms
36 Ohms
0.07 mW
-8 dBr



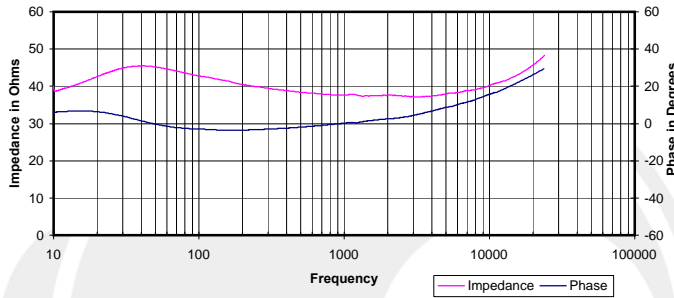
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



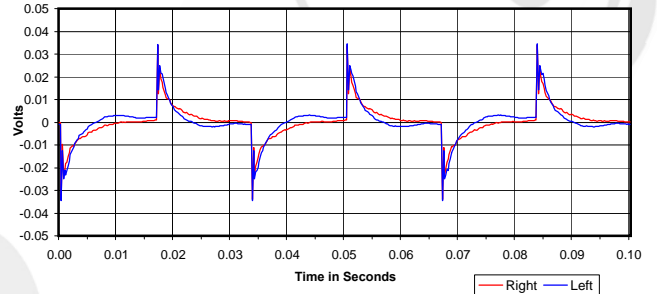
Isolation
 Attenuation of External Sound vs. Frequency



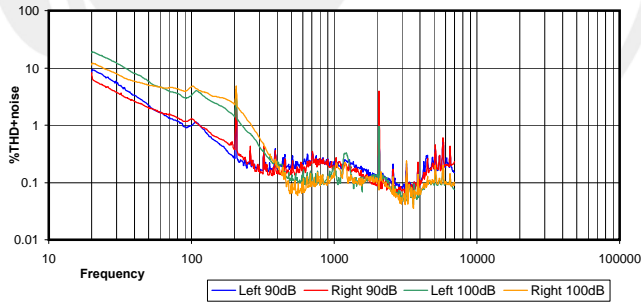
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



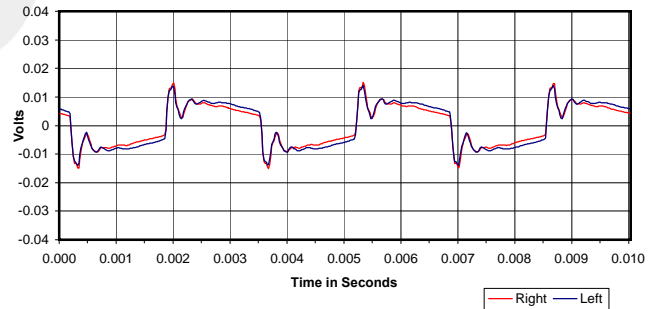
30 Hz Square Wave



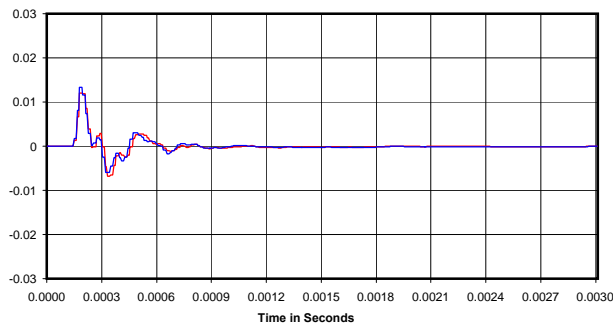
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

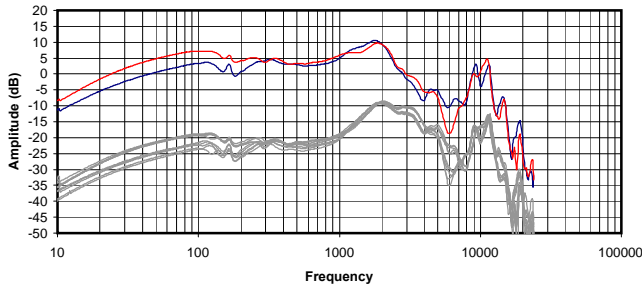


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

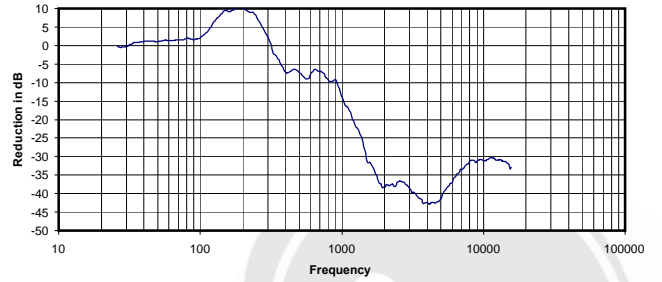
0.055 Vrms
 38 Ohms
 0.08 mW
 -9 dBr



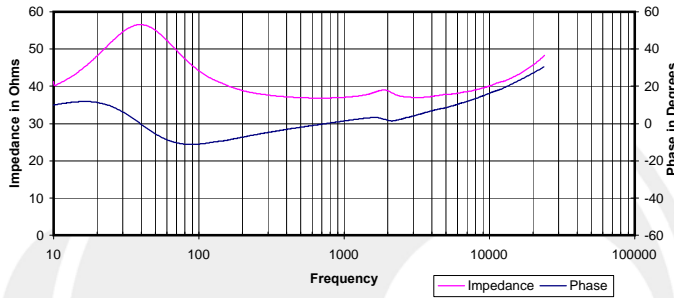
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



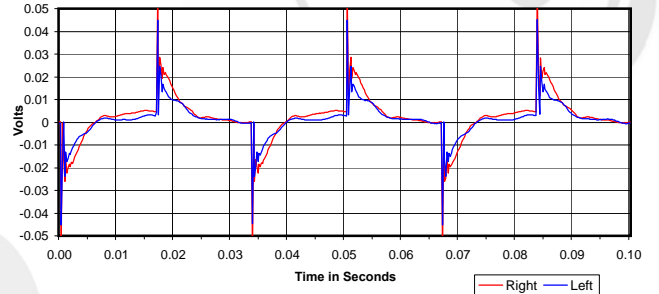
Isolation
 Attenuation of External Sound vs. Frequency



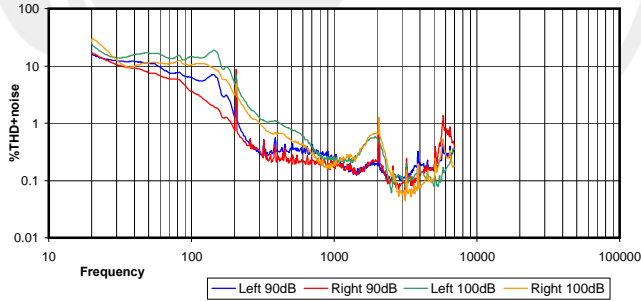
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



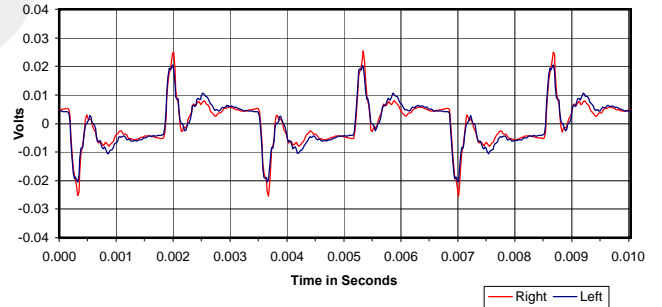
30 Hz Square Wave



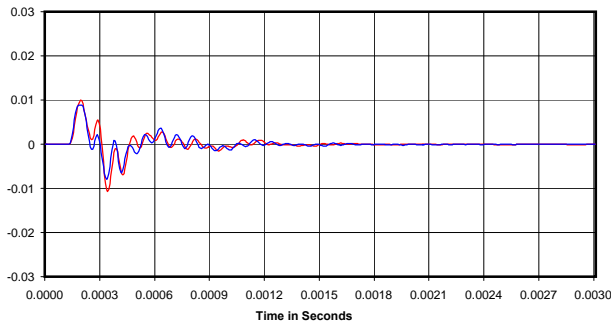
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

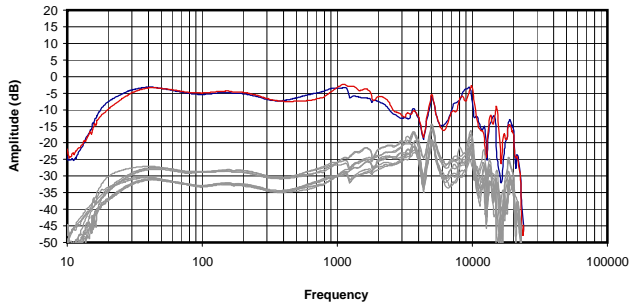


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

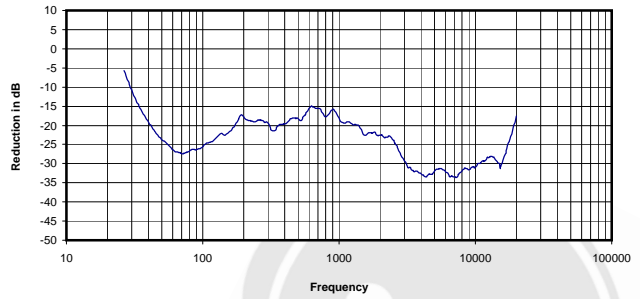
0.079 Vrms
 37 Ohms
 0.17 mW
 -15 dB



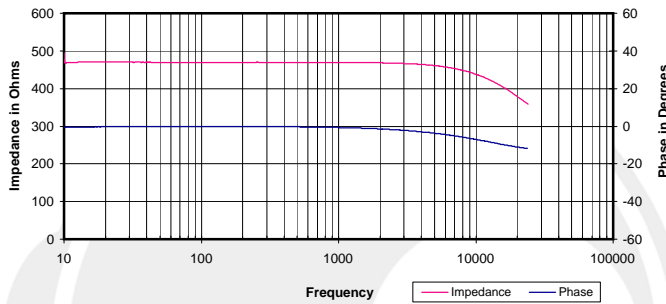
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



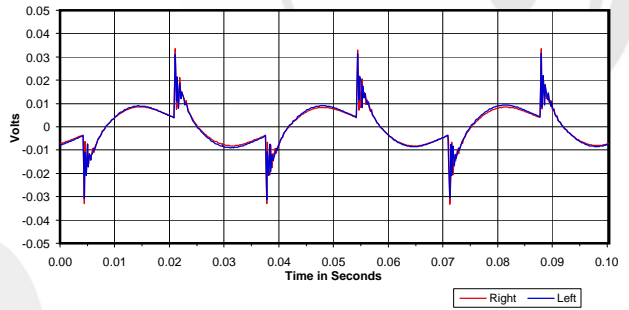
Isolation
 Attenuation of External Sound vs. Frequency



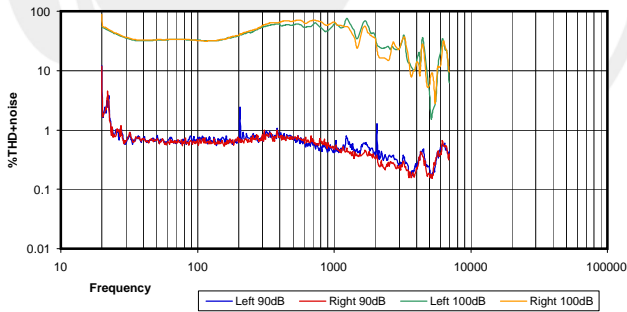
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



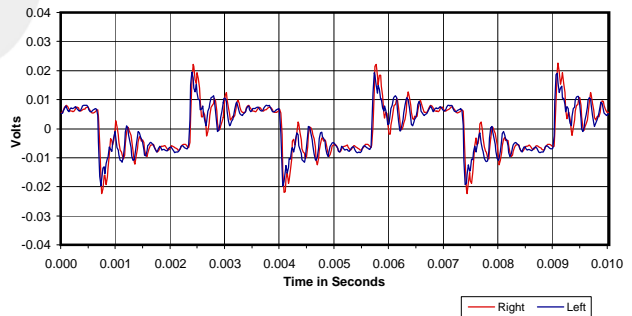
30 Hz Square Wave



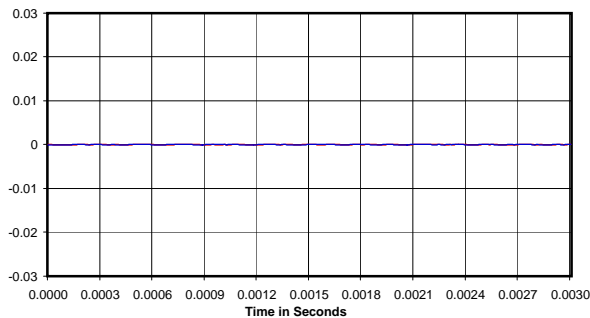
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



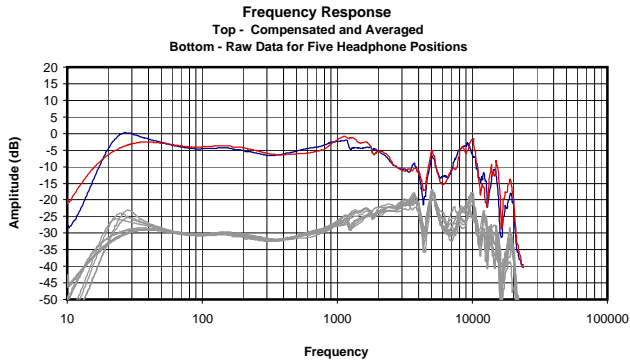
Impulse Response



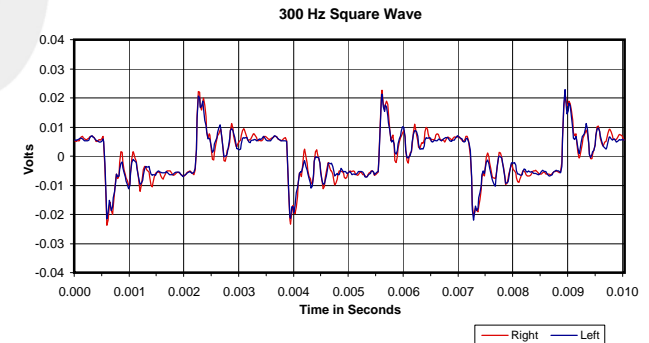
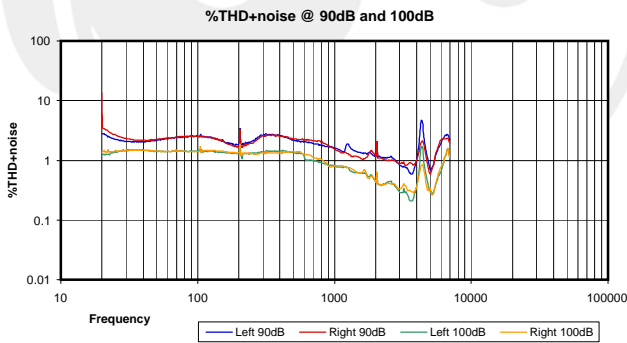
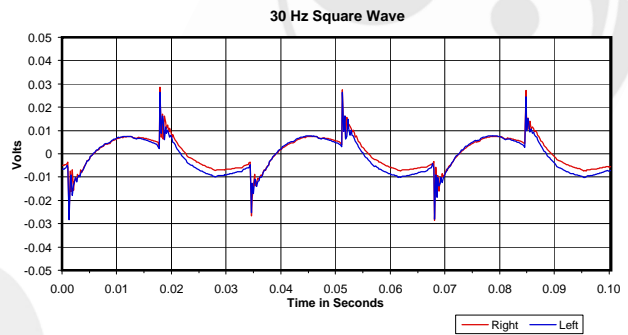
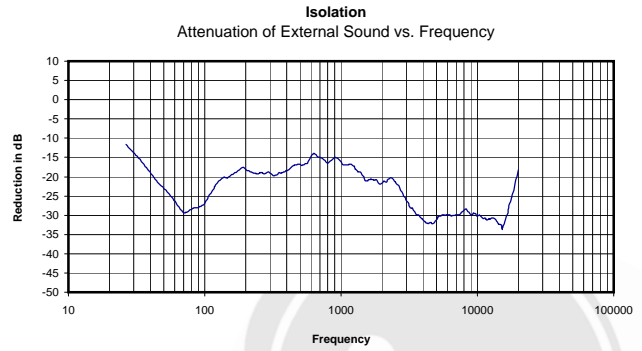
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.468 Vrms
 469 Ohms
 0.47 mW
 -23 dBr





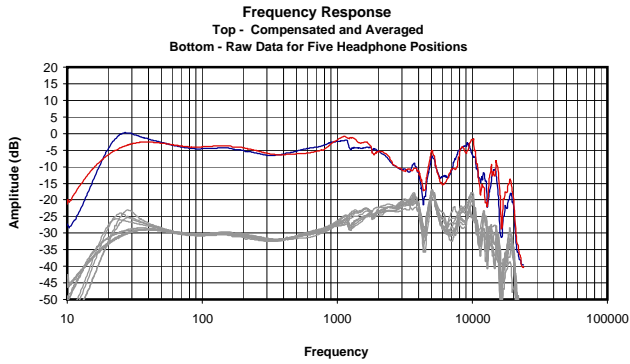
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



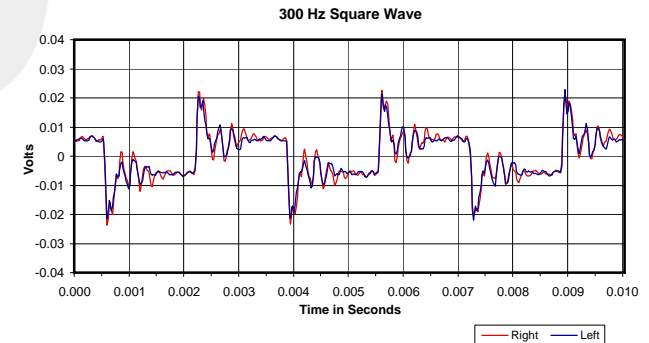
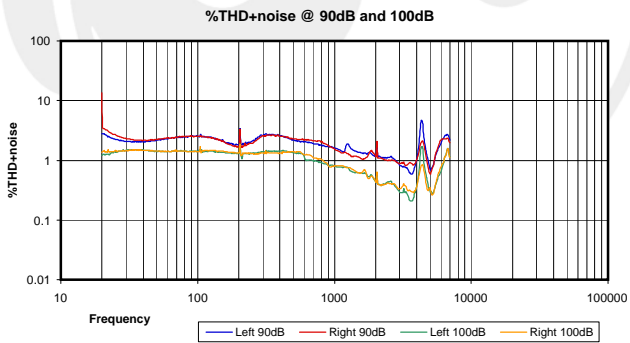
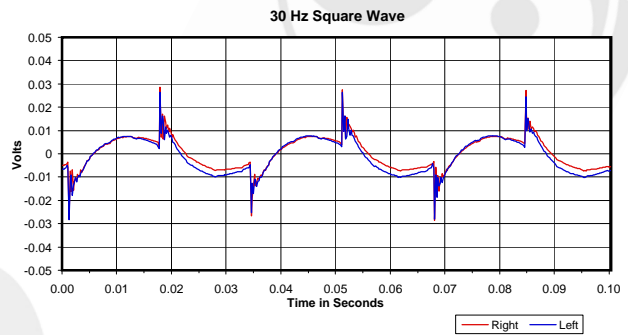
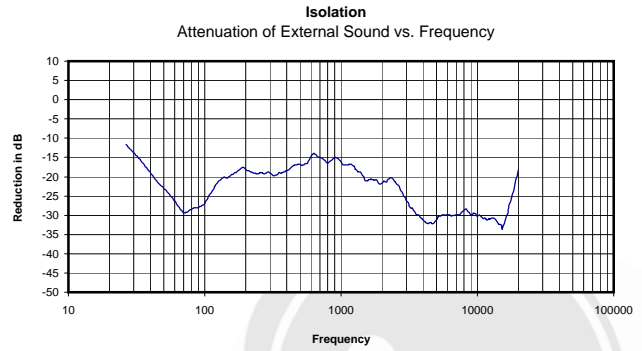
Broadband Isolation in dB (100Hz to 10kHz):

-22 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones

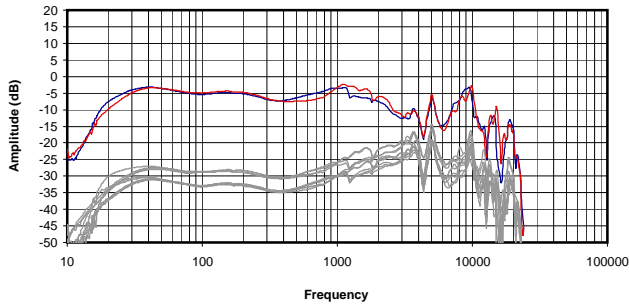


Broadband Isolation in dB (100Hz to 10kHz):

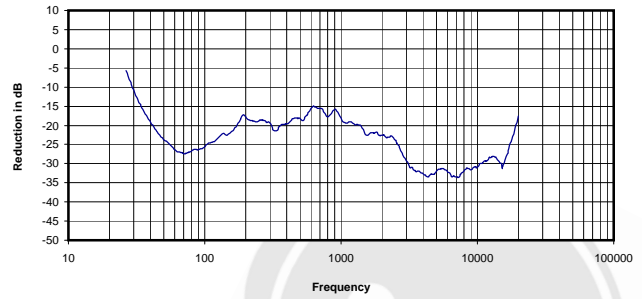
-22 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

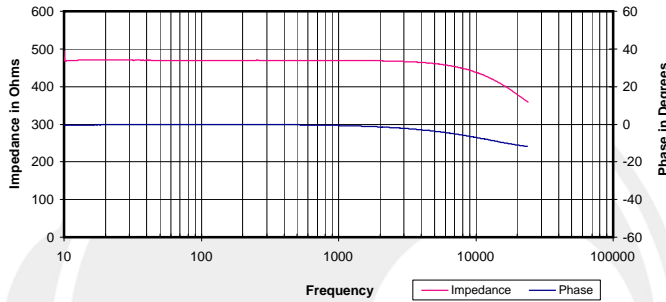
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



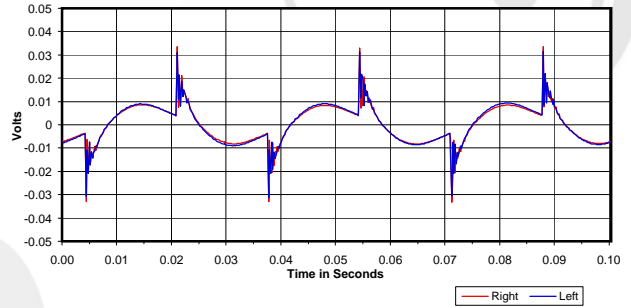
Isolation
Attenuation of External Sound vs. Frequency



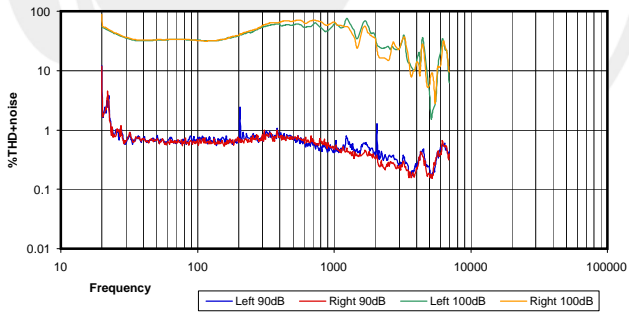
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



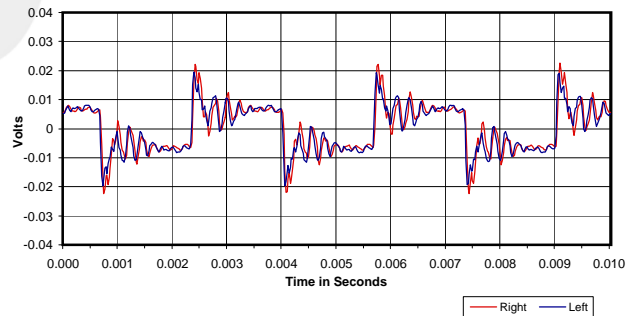
30 Hz Square Wave



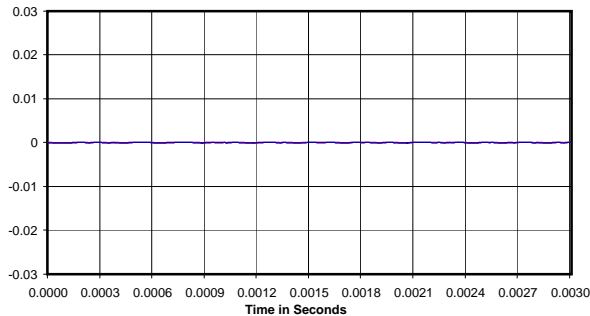
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



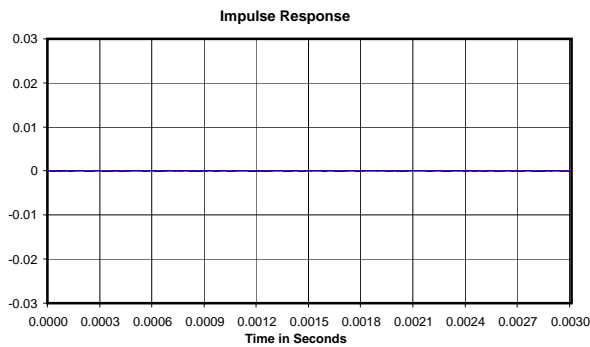
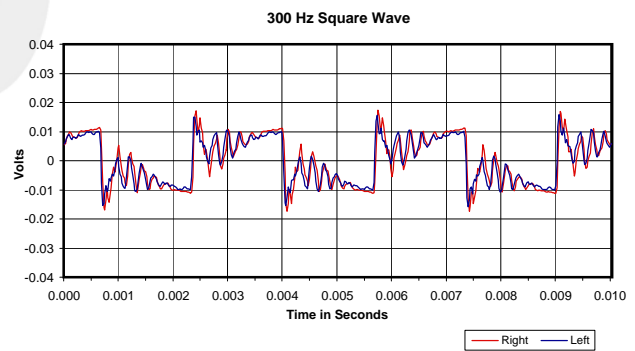
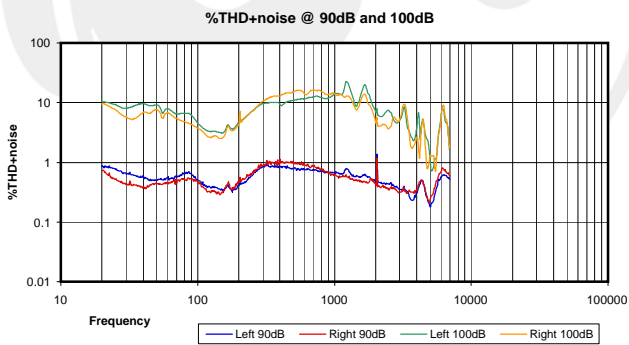
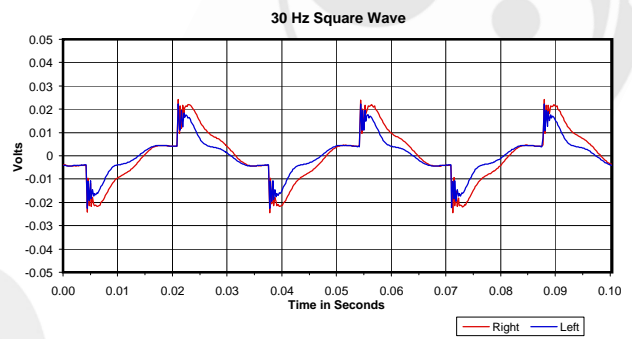
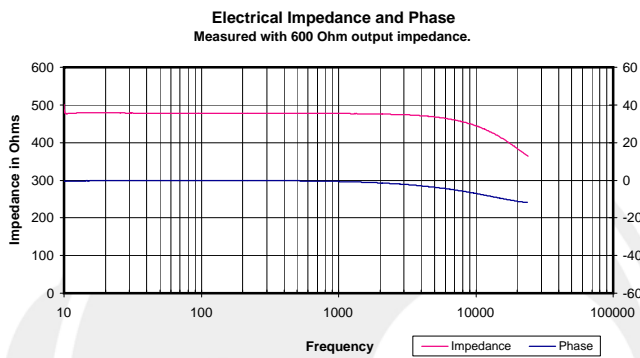
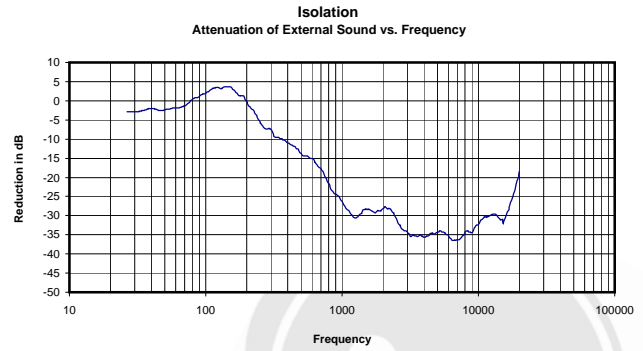
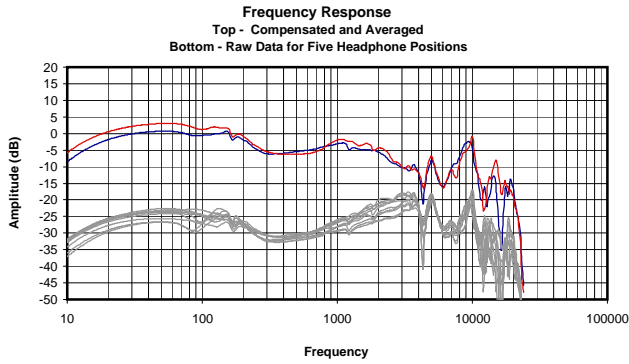
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

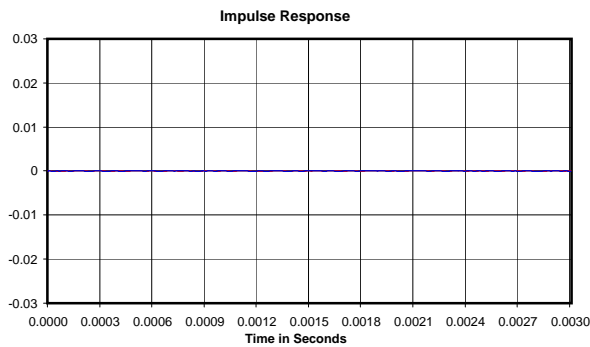
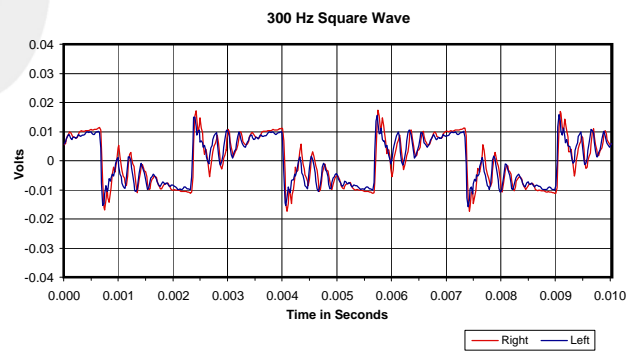
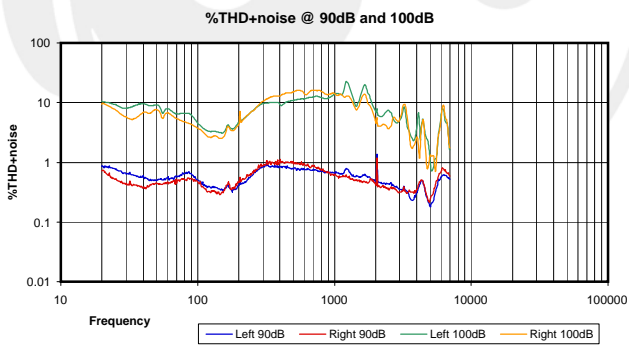
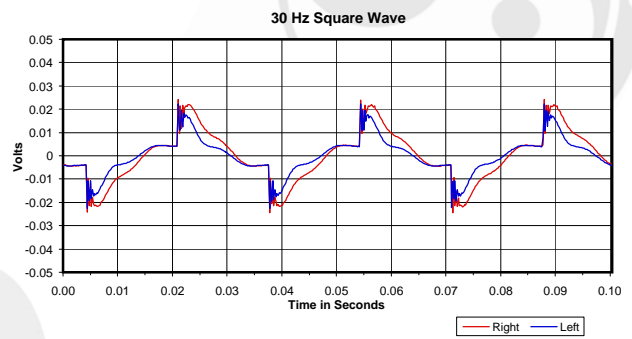
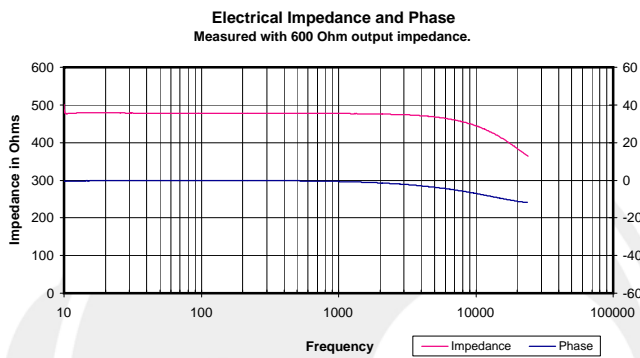
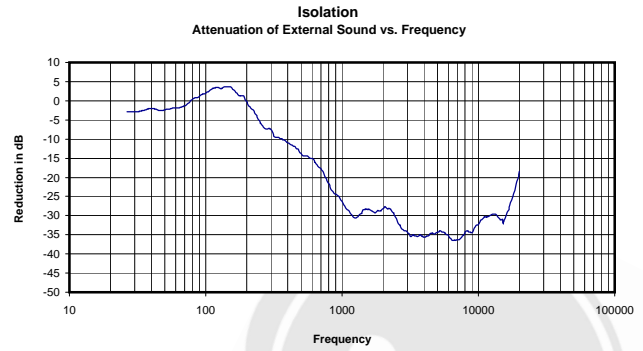
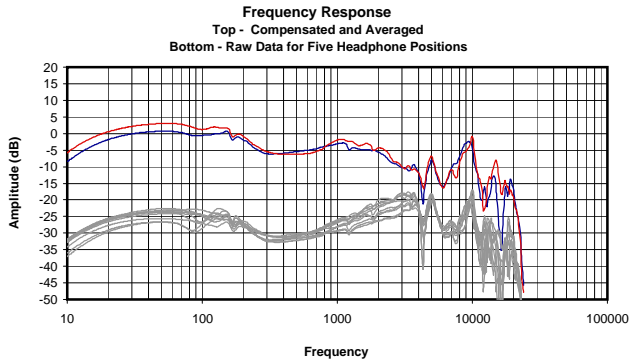
0.468 Vrms
469 Ohms
0.47 mW
-23 dBr





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

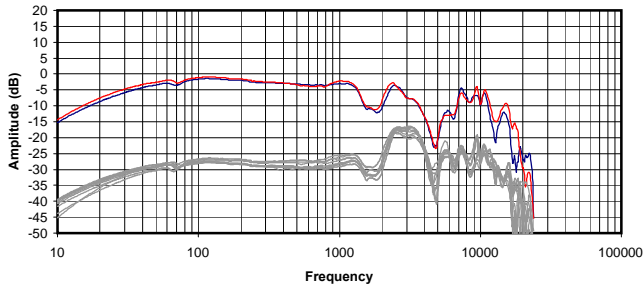
0.351 Vrms
477 Ohms
0.26 mW
-20 dB



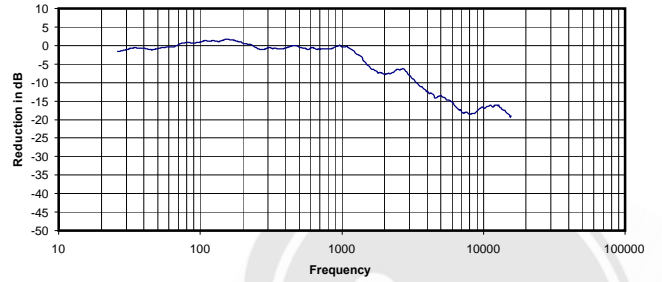
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.351 Vrms
477 Ohms
0.26 mW
-20 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

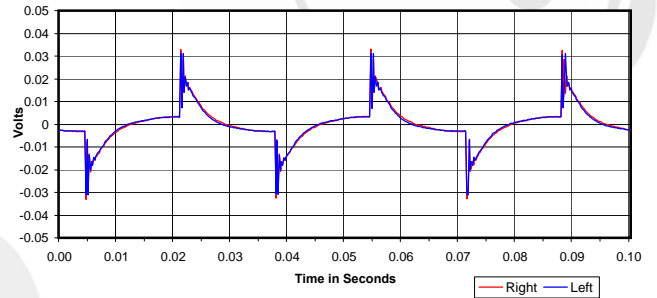


Isolation
 Attenuation of External Sound vs. Frequency

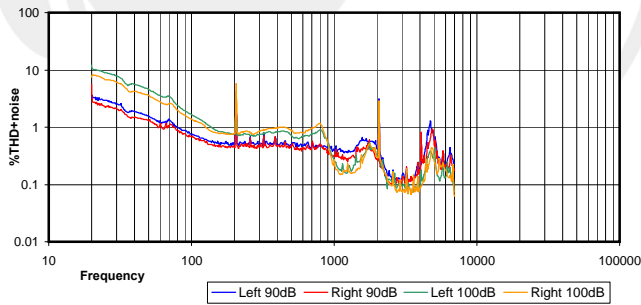


Electrical Impedance and phase measurements unavailable for Electrostatic and Wireless headphones.

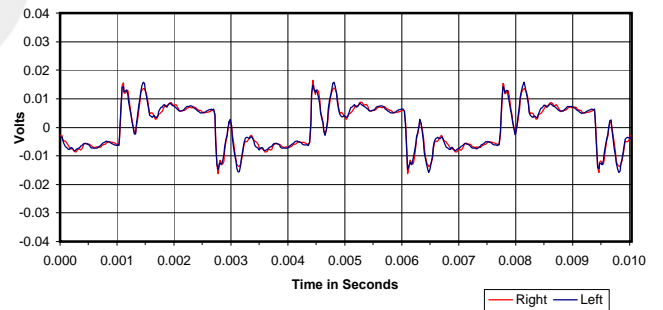
30 Hz Square Wave



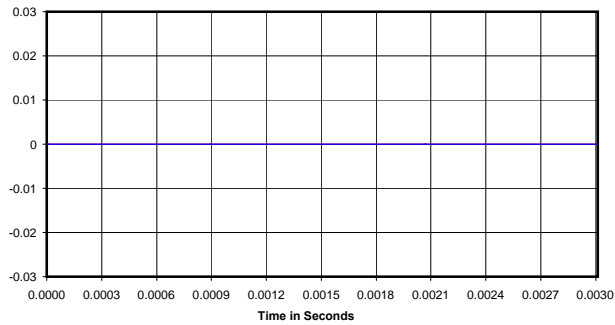
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



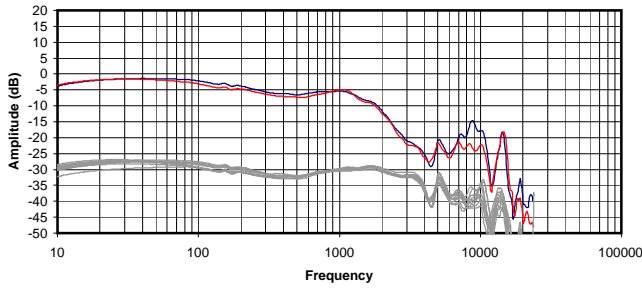
Impulse Response



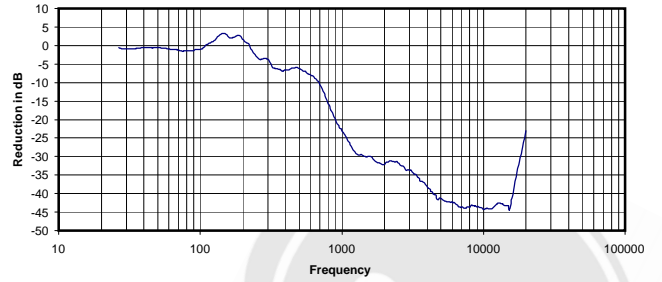
Broadband Isolation in dB (100Hz to 10kHz):

-3 dB

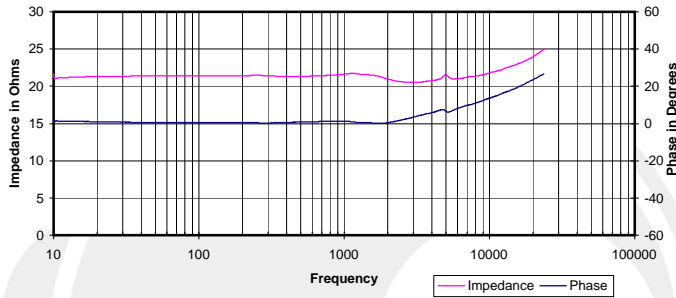
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



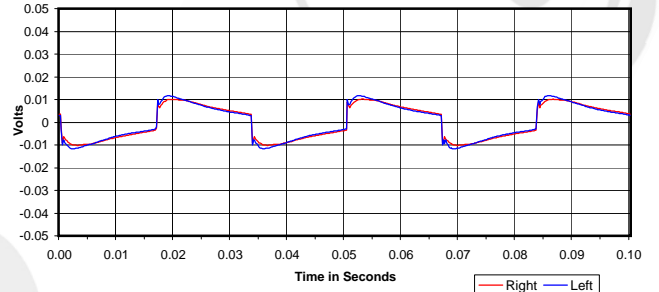
Isolation
Attenuation of External Sound vs. Frequency



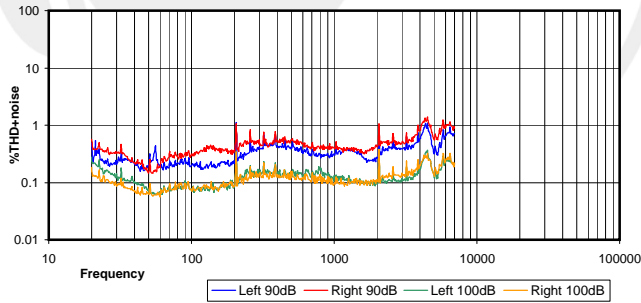
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



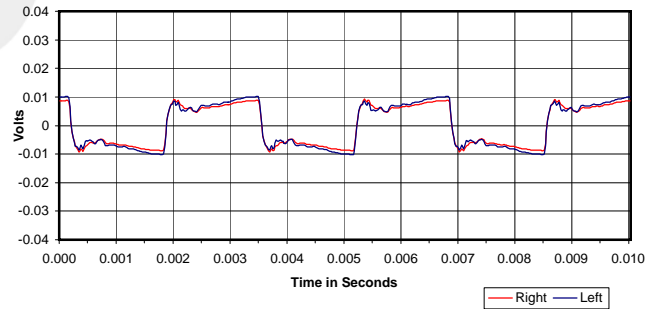
30 Hz Square Wave



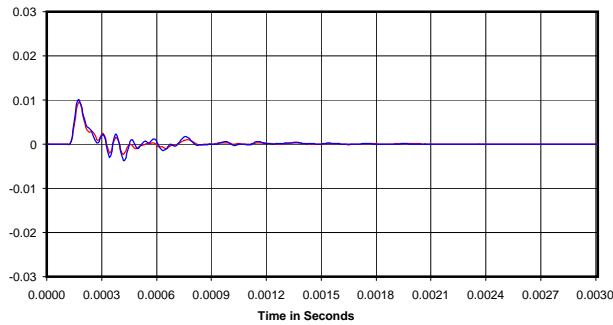
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

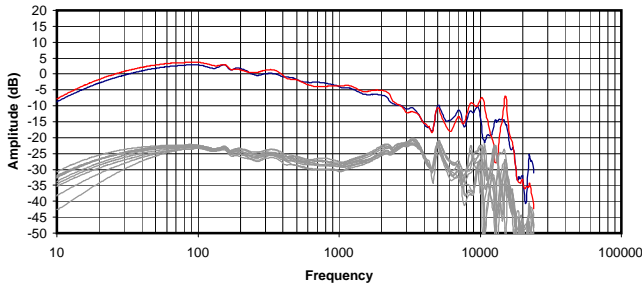


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

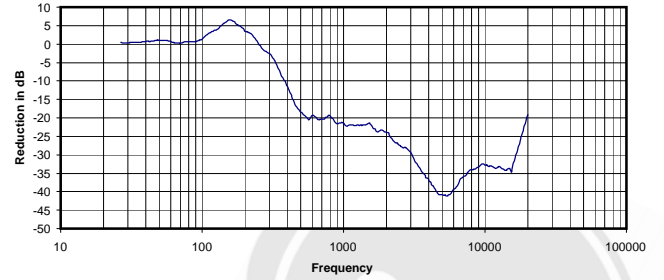
0.018 Vrms
22 Ohms
0.01 mW
-20 dB



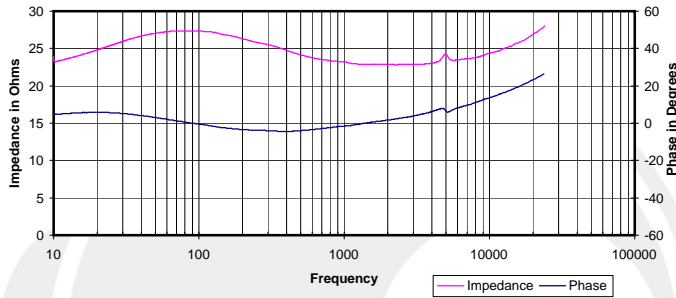
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



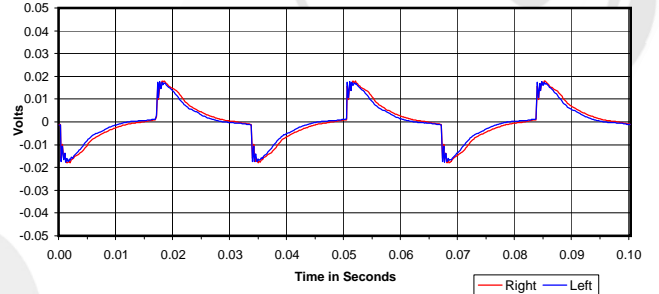
Isolation
 Attenuation of External Sound vs. Frequency



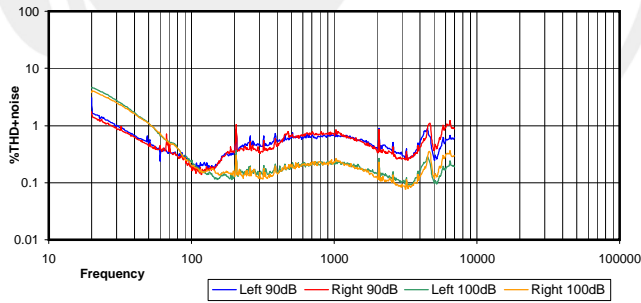
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



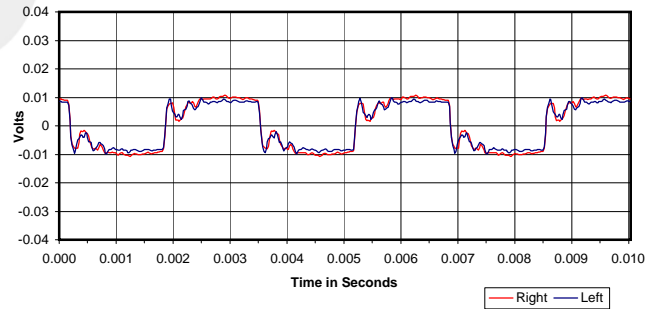
30 Hz Square Wave



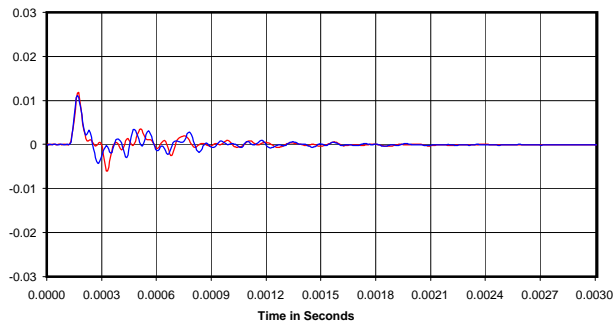
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



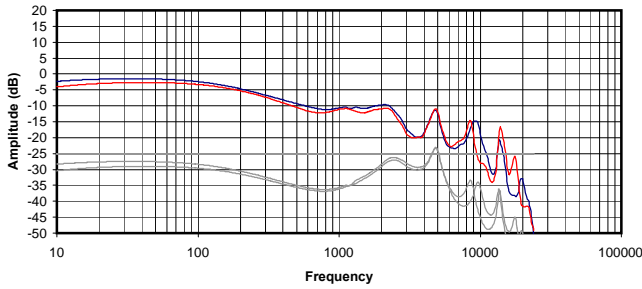
Impulse Response



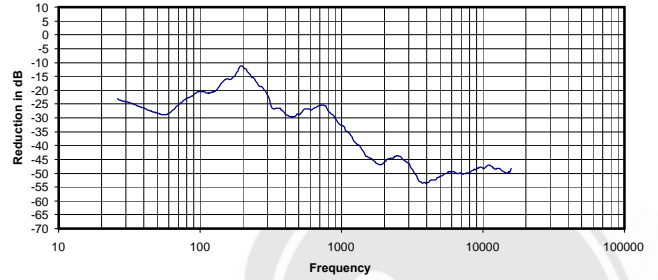
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.041 Vrms
 23 Ohms
 0.07 mW
 -19 dB

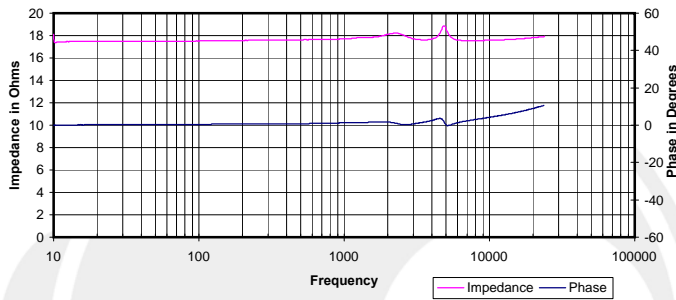
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



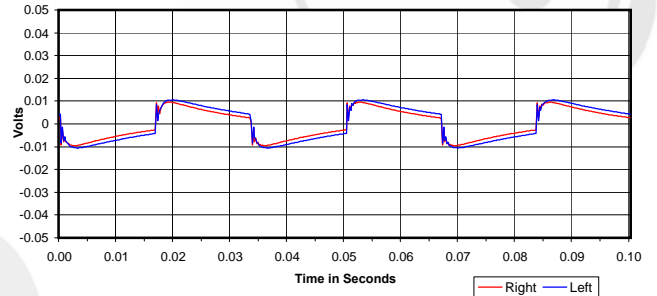
Isolation
Attenuation of External Sound vs. Frequency



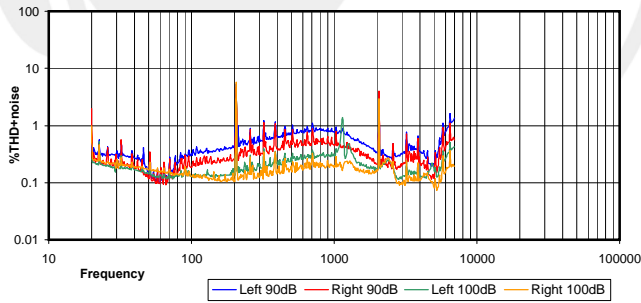
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



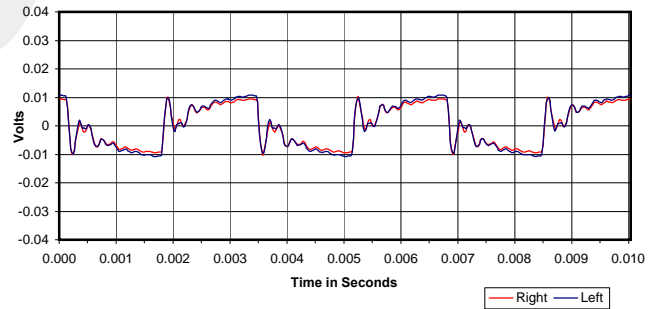
30 Hz Square Wave



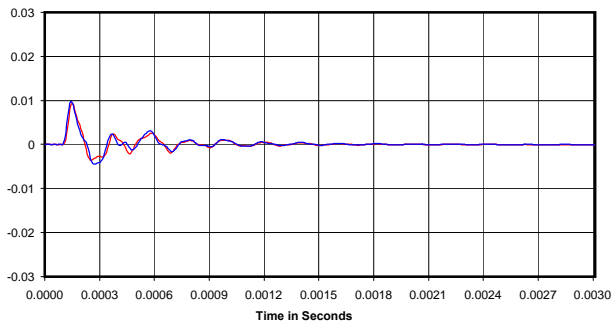
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

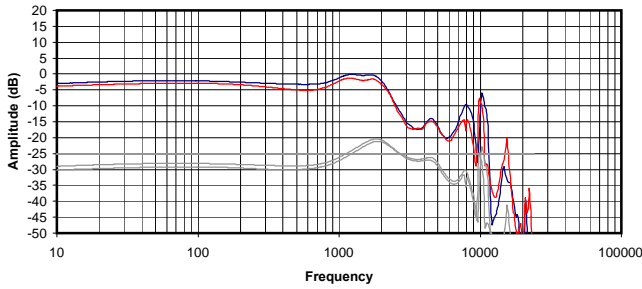


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

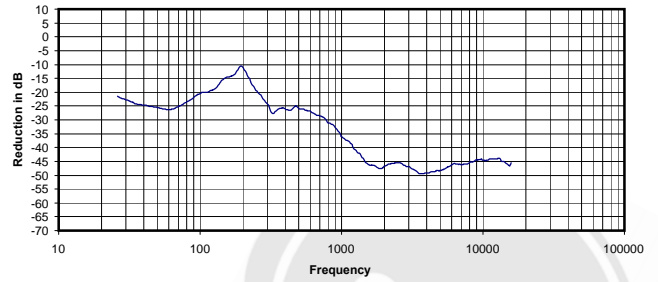
0.032 Vrms
18 Ohms
0.06 mW
-33 dB



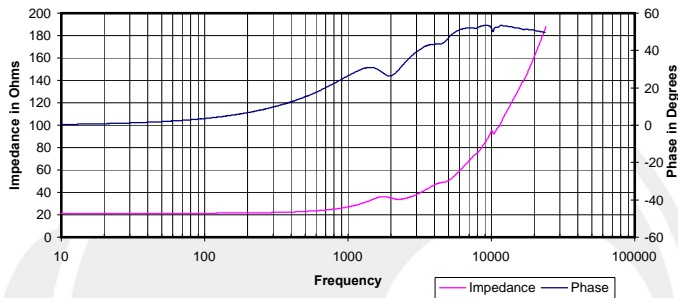
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



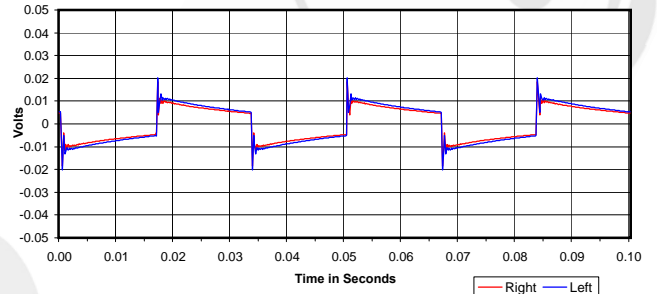
Isolation
Attenuation of External Sound vs. Frequency



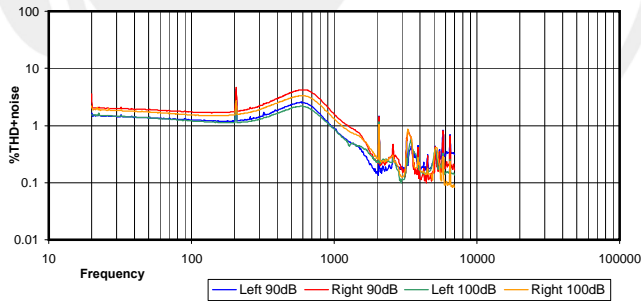
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



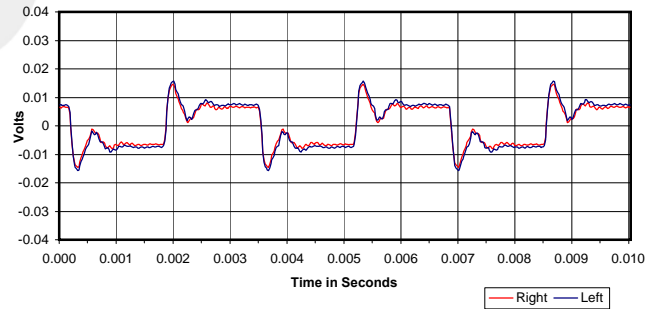
30 Hz Square Wave



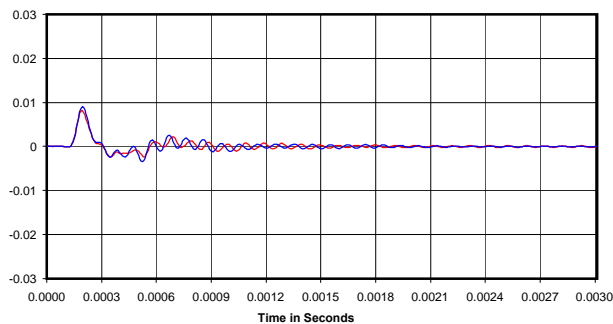
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

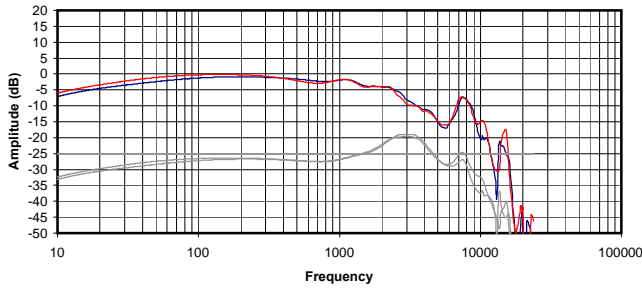


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

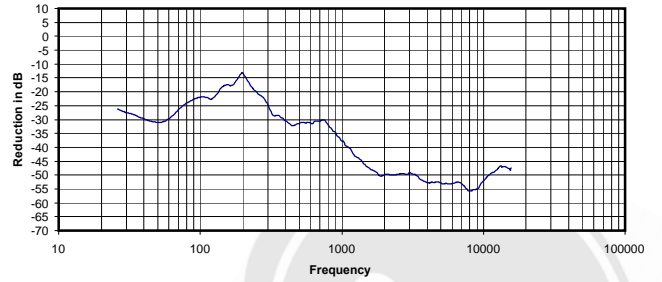
0.013 Vrms
27 Ohms
0.01 mW
-33 dB



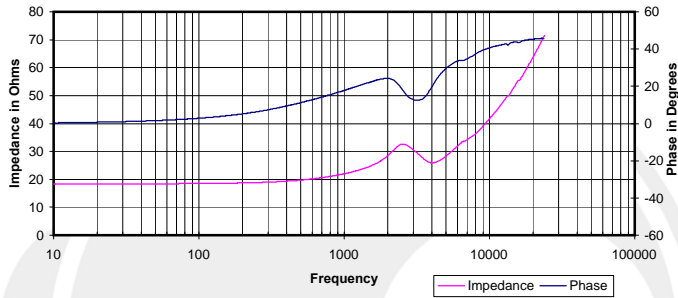
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



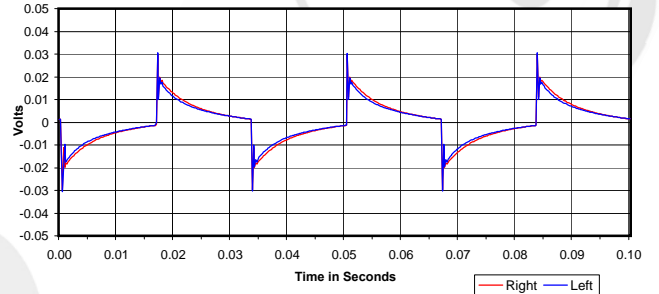
Isolation
Attenuation of External Sound vs. Frequency



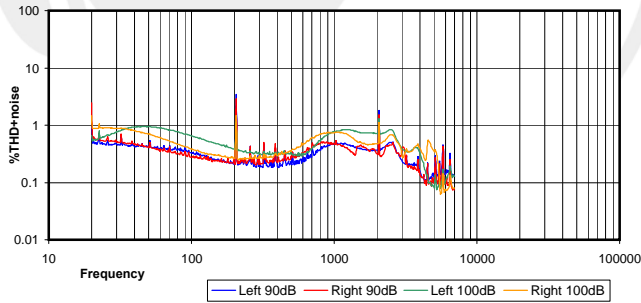
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



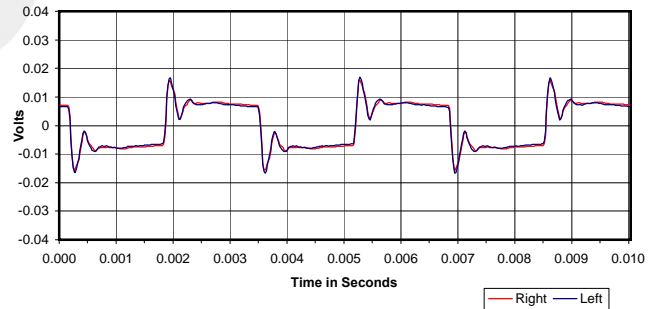
30 Hz Square Wave



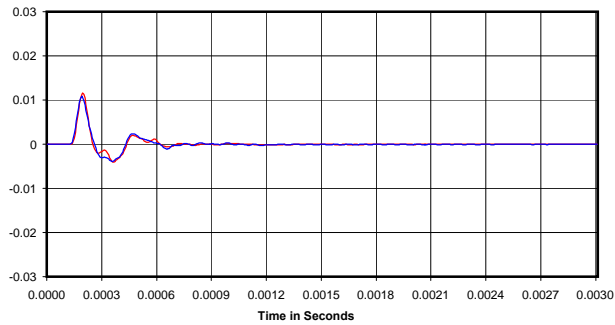
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

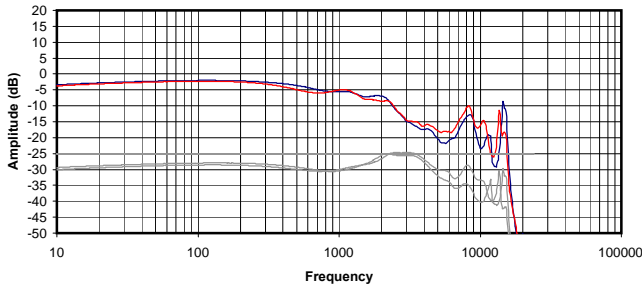


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

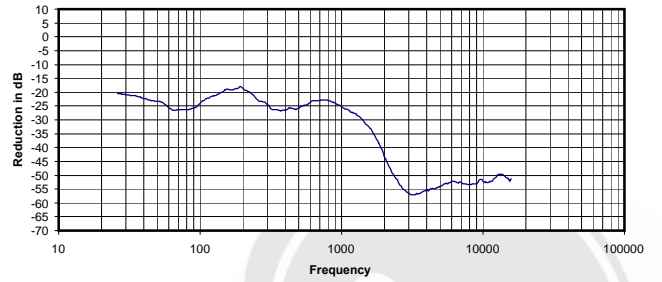
0.020 Vrms
22 Ohms
0.02 mW
-36 dB



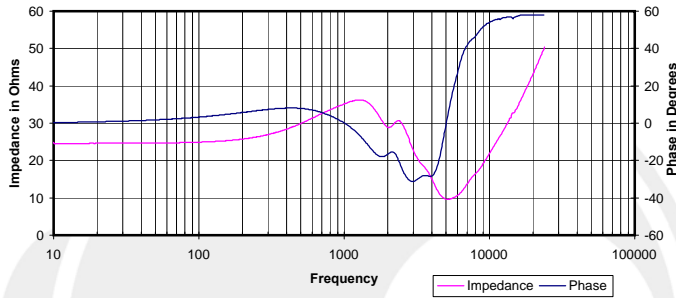
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



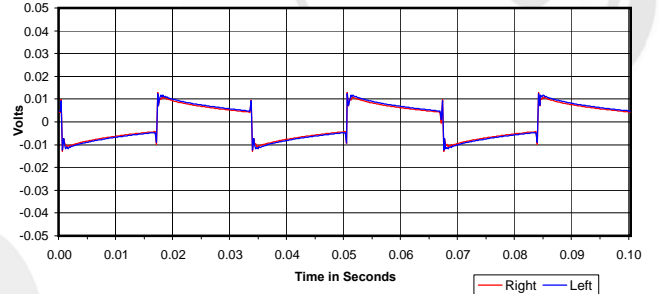
Isolation
Attenuation of External Sound vs. Frequency



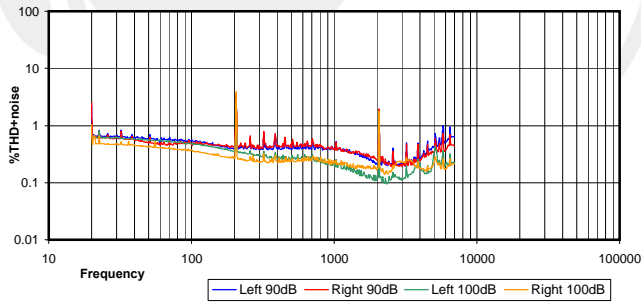
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



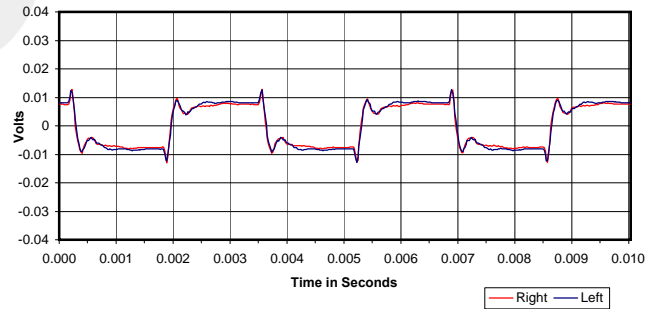
30 Hz Square Wave



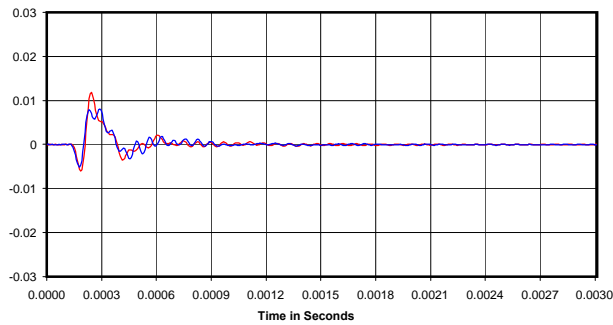
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



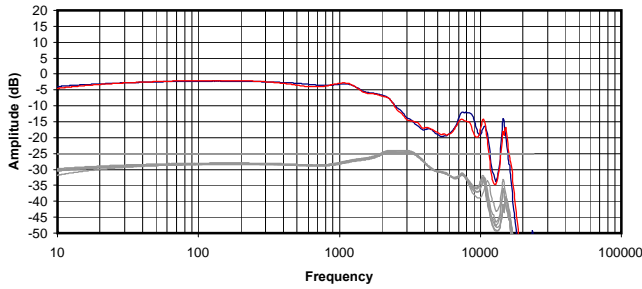
Impulse Response



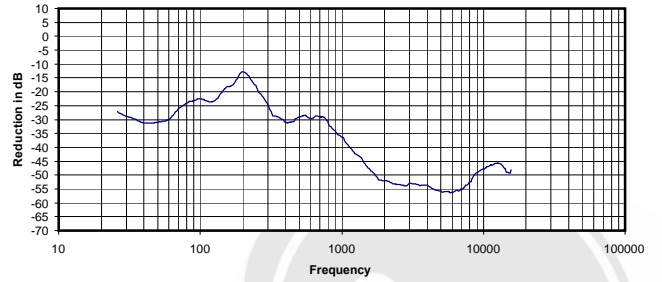
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.011 Vrms
35 Ohms
0.00 mW
-33 dB

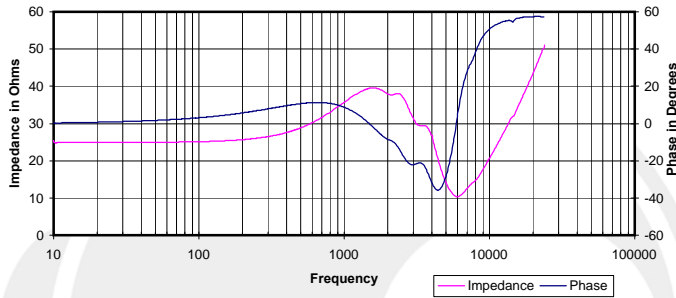
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



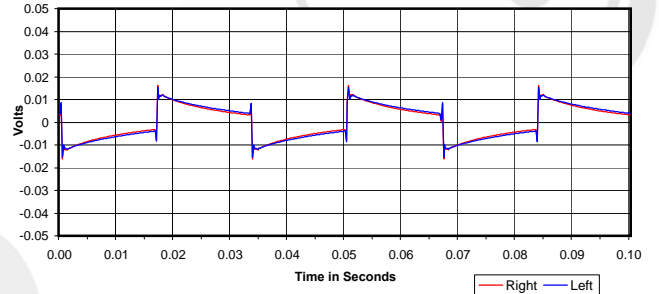
Isolation
 Attenuation of External Sound vs. Frequency



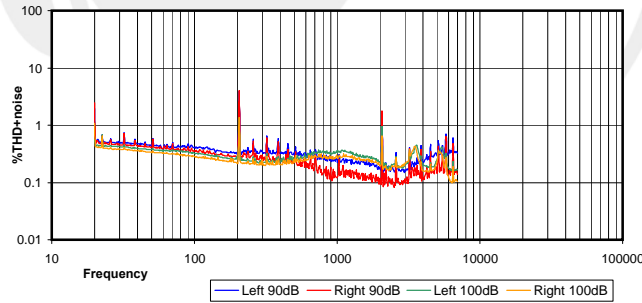
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



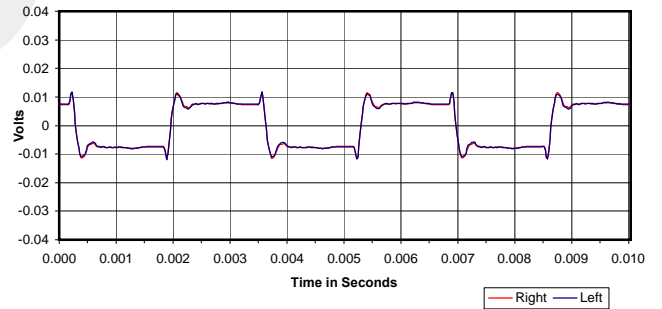
30 Hz Square Wave



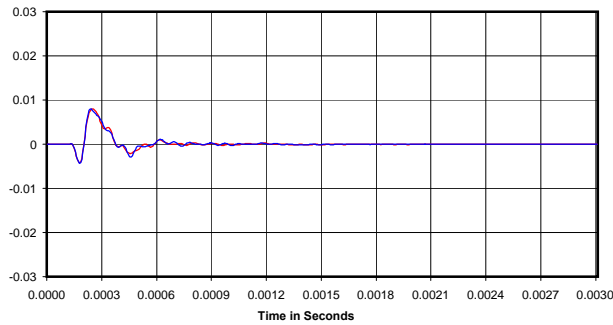
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

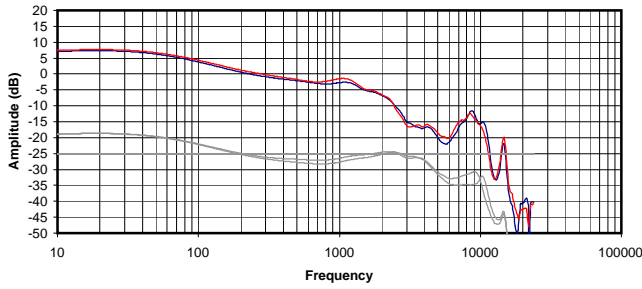


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

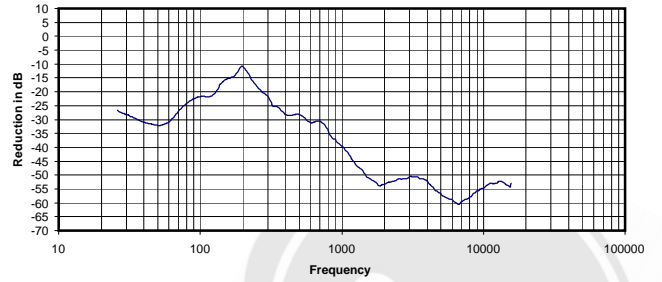
0.012 Vrms
 36 Ohms
 0.00 mW
 -36 dB



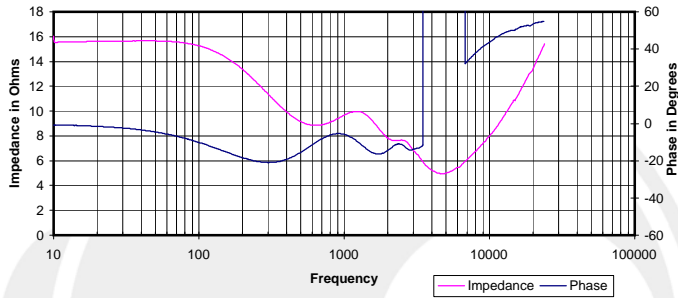
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



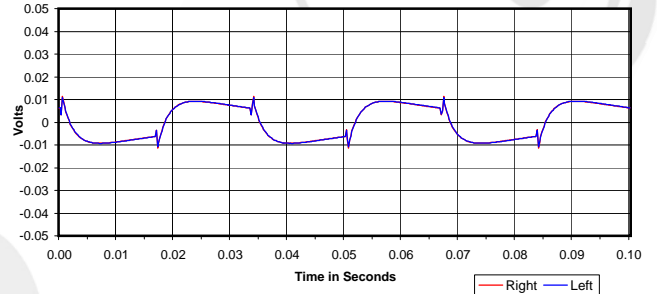
Isolation
Attenuation of External Sound vs. Frequency



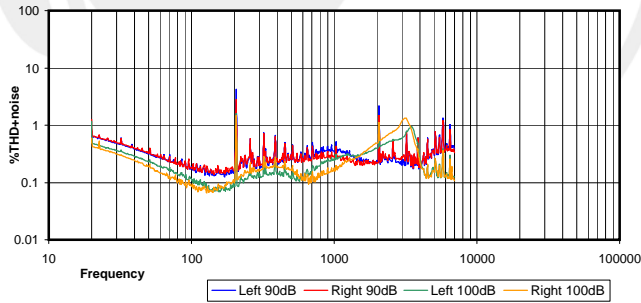
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



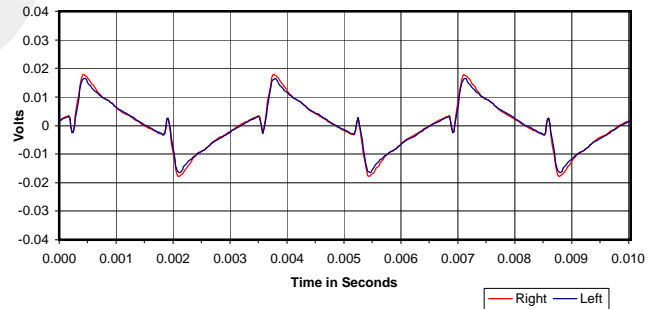
30 Hz Square Wave



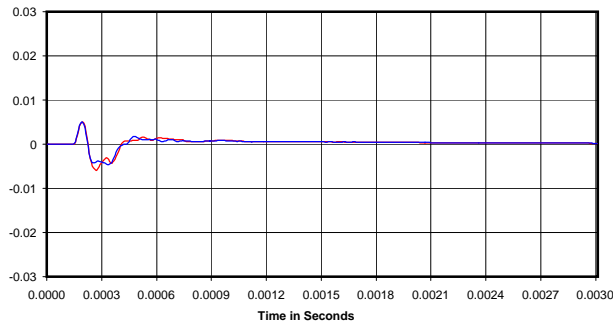
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

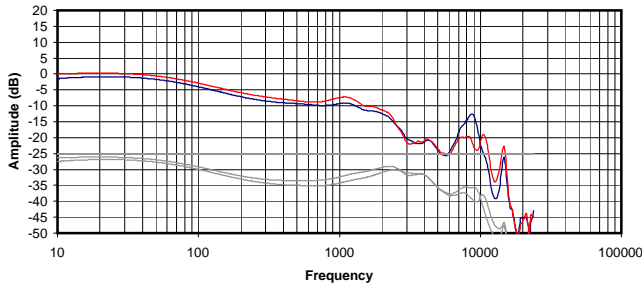


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

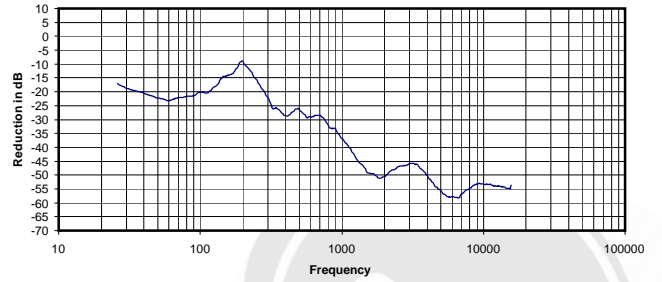
0.015 Vrms
10 Ohms
0.02 mW
-36 dB



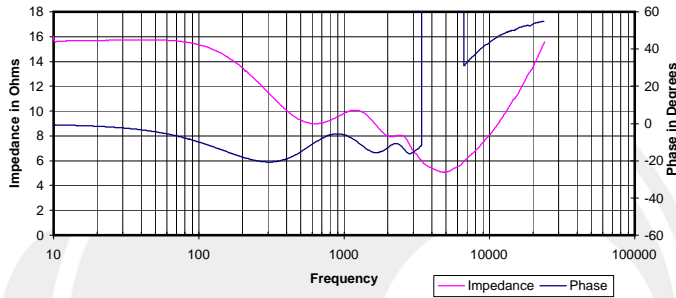
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



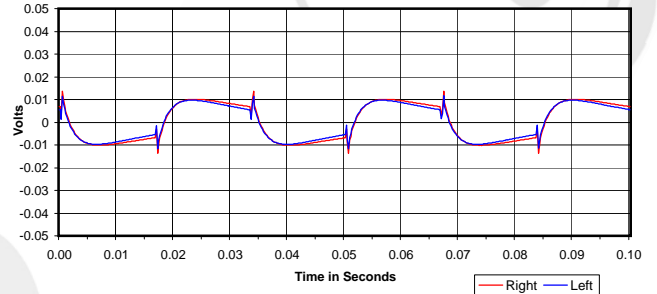
Isolation
Attenuation of External Sound vs. Frequency



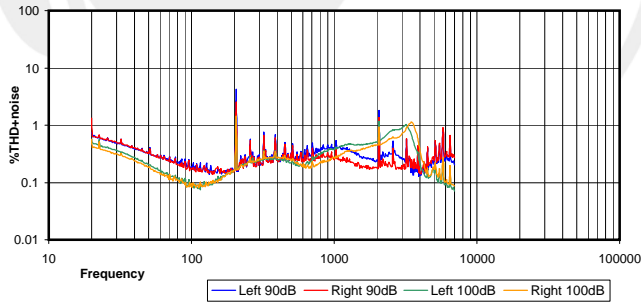
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



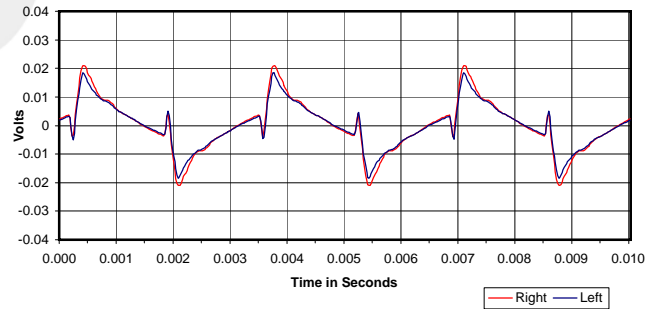
30 Hz Square Wave



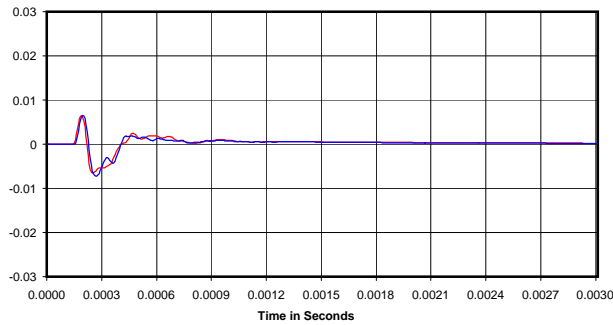
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

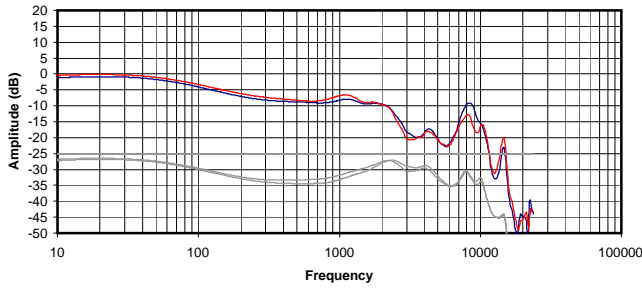


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

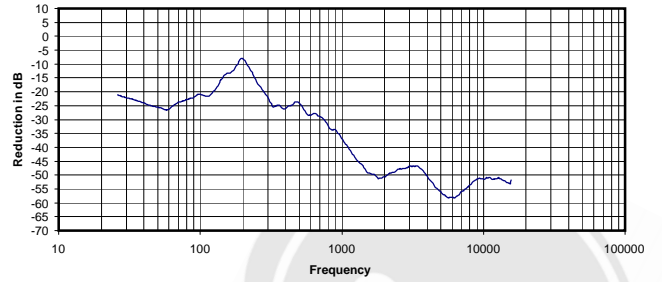
0.014 Vrms
10 Ohms
0.02 mW
-34 dB



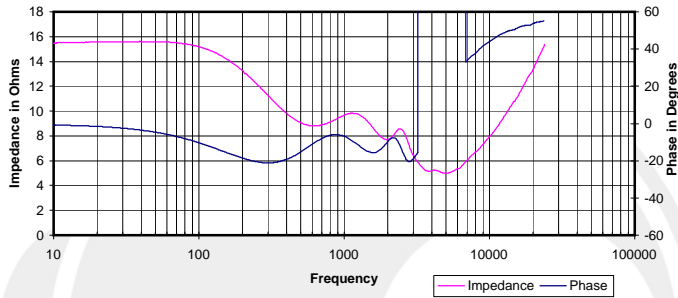
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



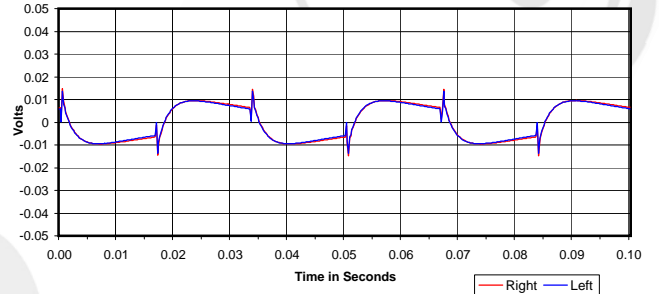
Isolation
Attenuation of External Sound vs. Frequency



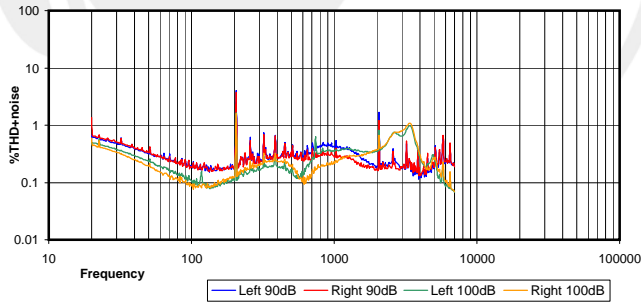
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



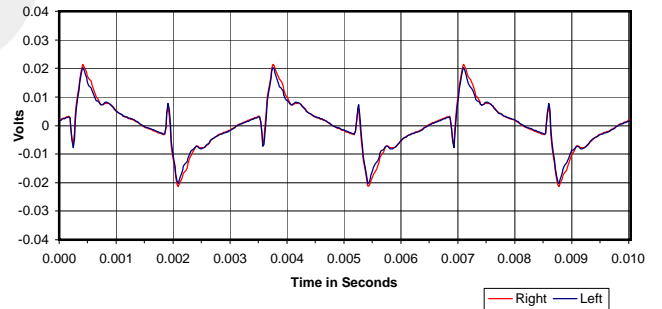
30 Hz Square Wave



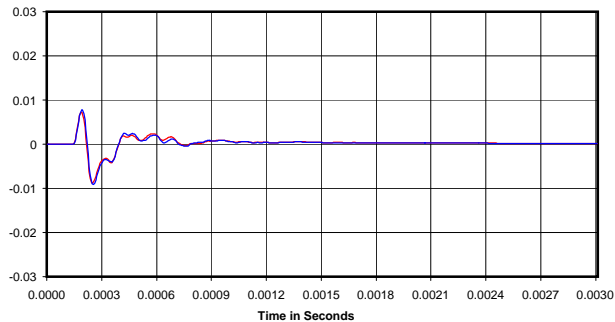
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

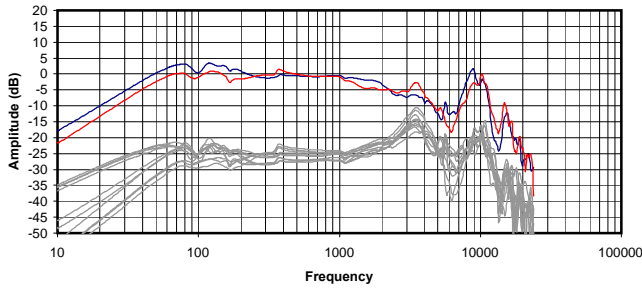


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

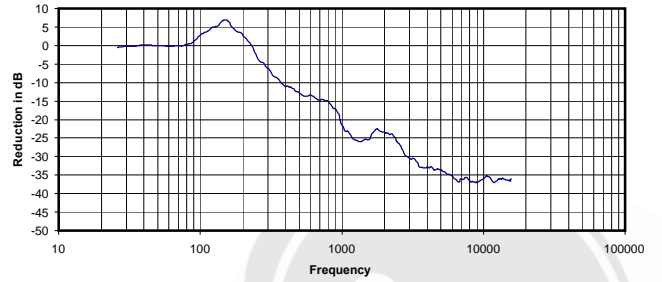
0.012 Vrms
10 Ohms
0.01 mW
-34 dB



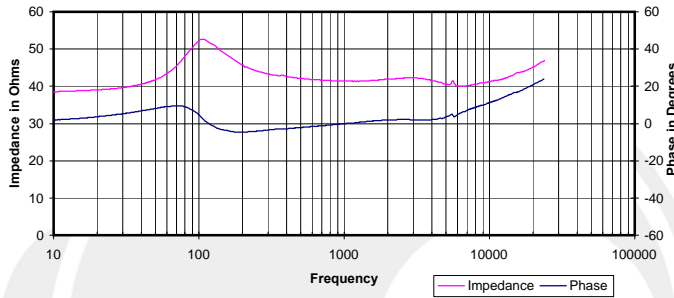
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



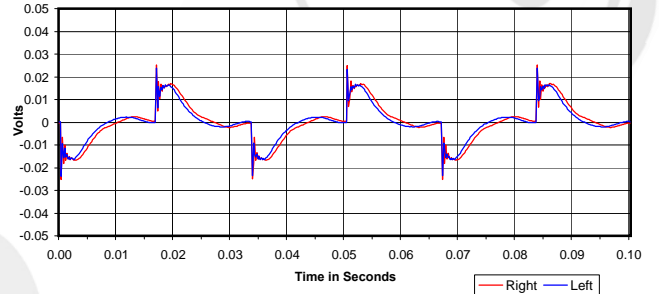
Isolation
Attenuation of External Sound vs. Frequency



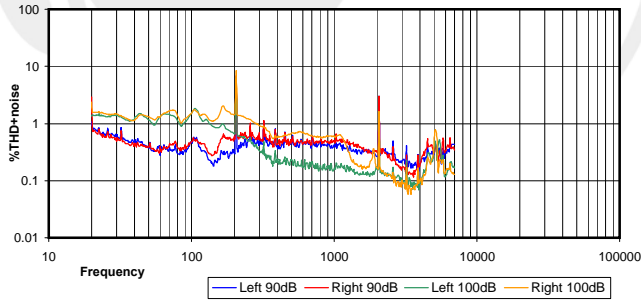
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



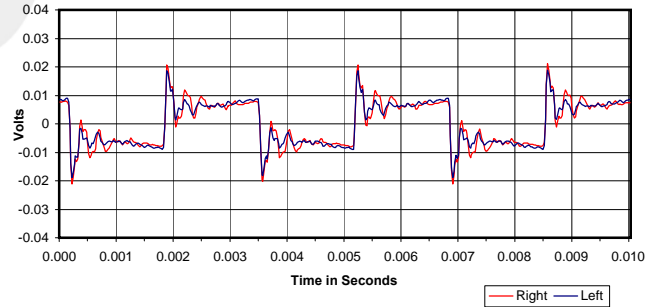
30 Hz Square Wave



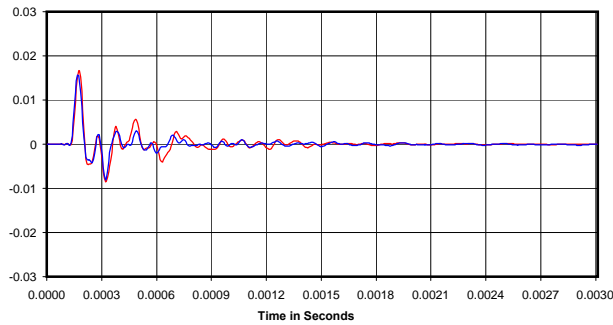
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

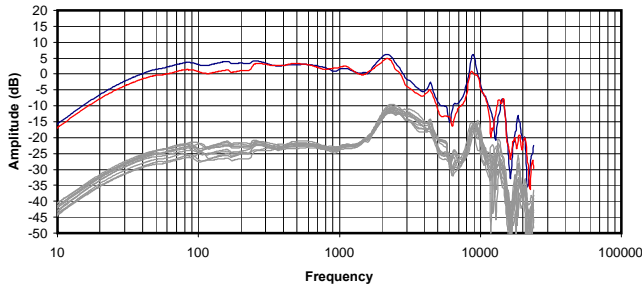


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

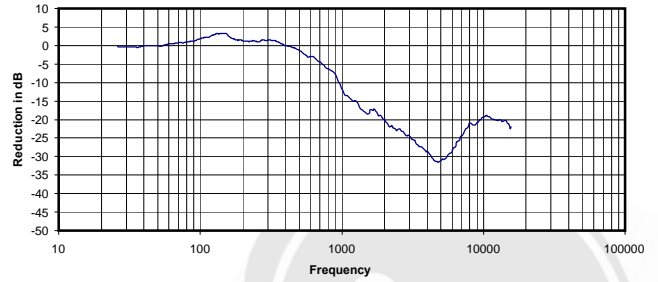
0.050 Vrms
41 Ohms
0.06 mW
-15 dB



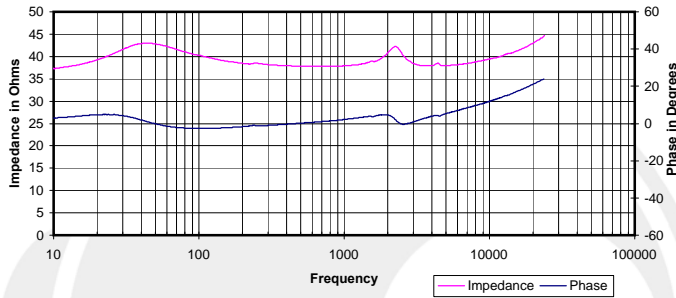
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



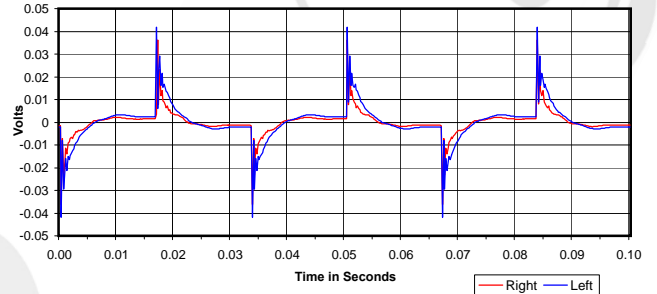
Isolation
 Attenuation of External Sound vs. Frequency



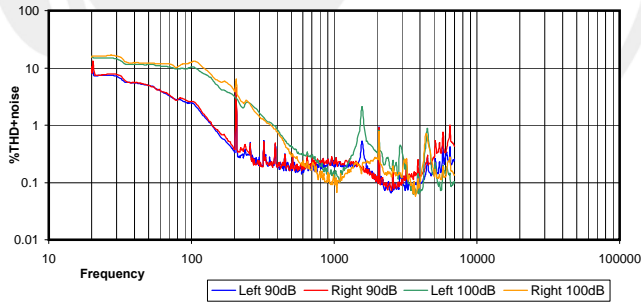
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



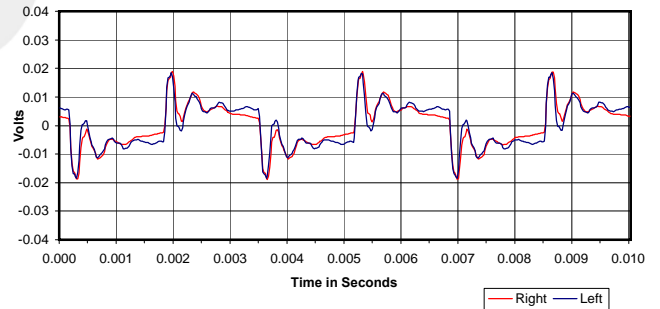
30 Hz Square Wave



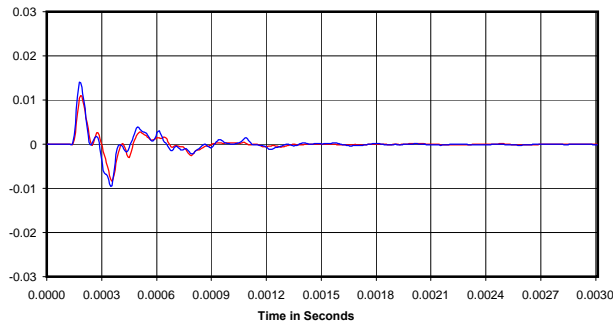
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

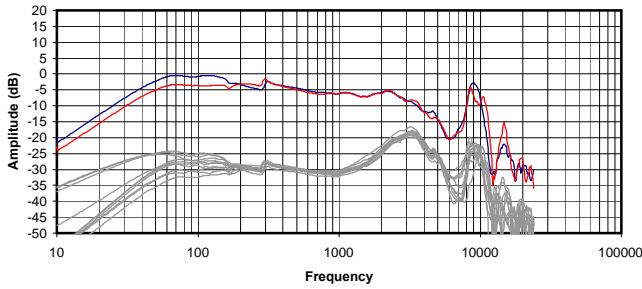


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

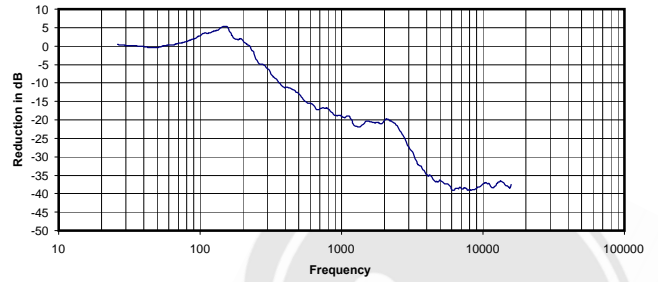
0.087 Vrms
 38 Ohms
 0.20 mW
 -10 dB



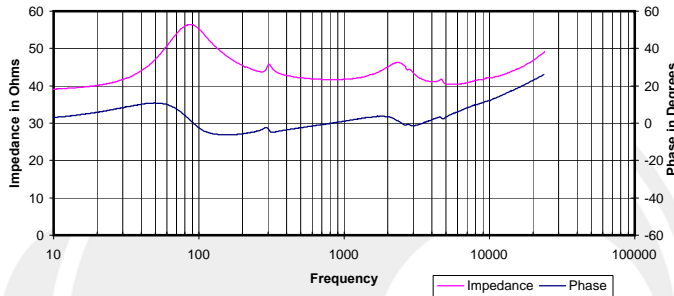
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



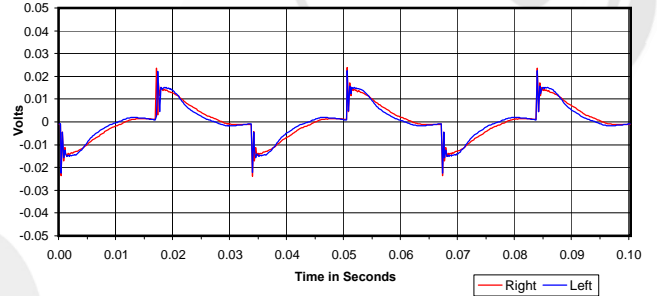
Isolation
 Attenuation of External Sound vs. Frequency



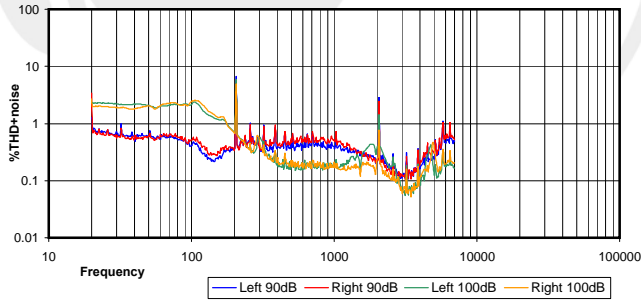
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



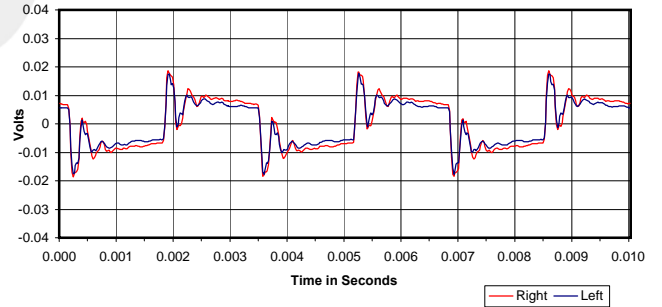
30 Hz Square Wave



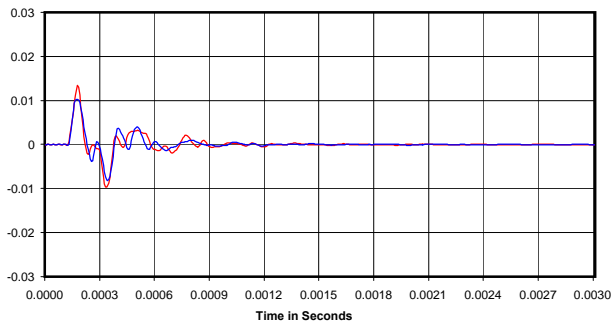
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

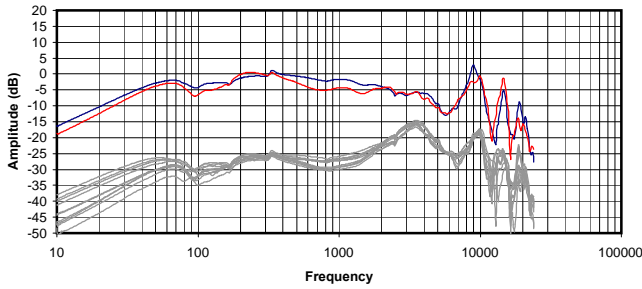


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

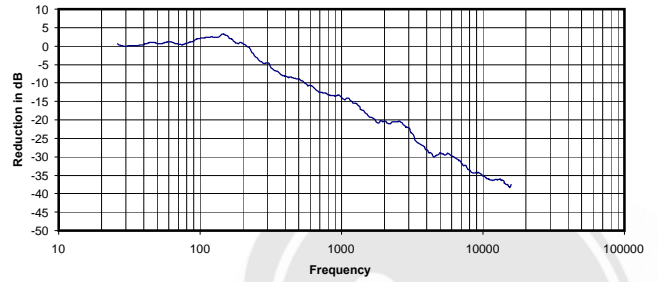
0.066 Vrms
 42 Ohms
 0.11 mW
 -15 dB



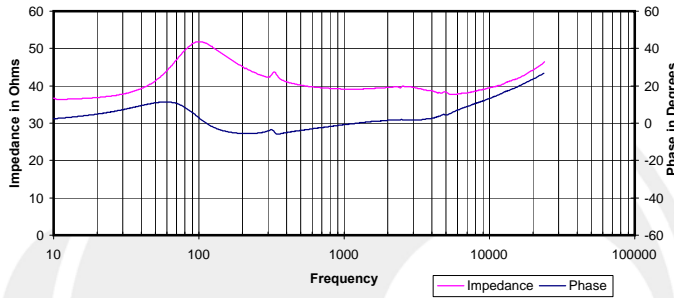
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



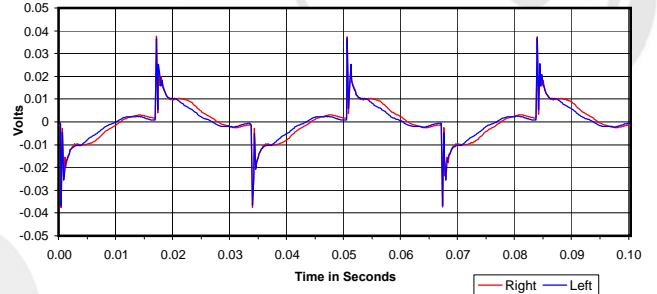
Isolation
Attenuation of External Sound vs. Frequency



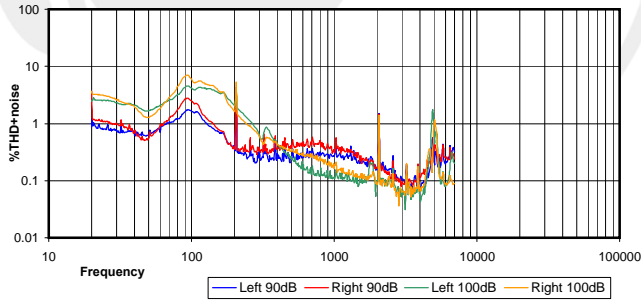
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



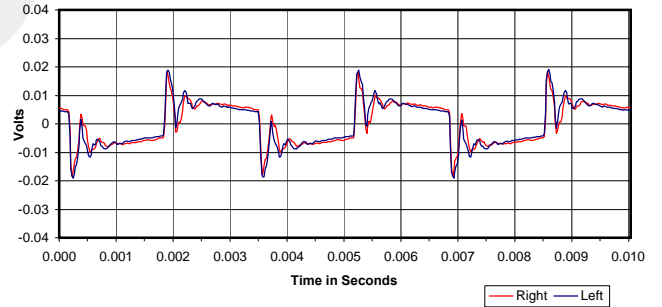
30 Hz Square Wave



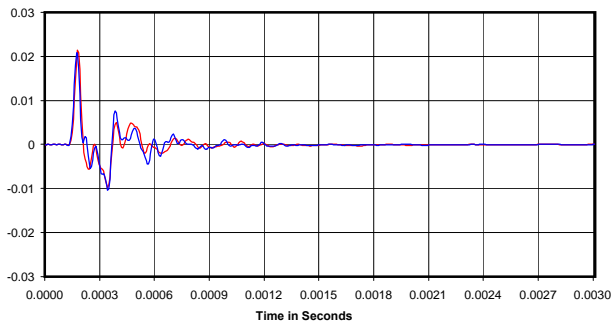
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

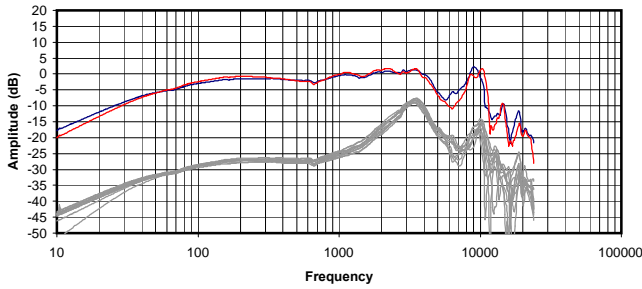


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

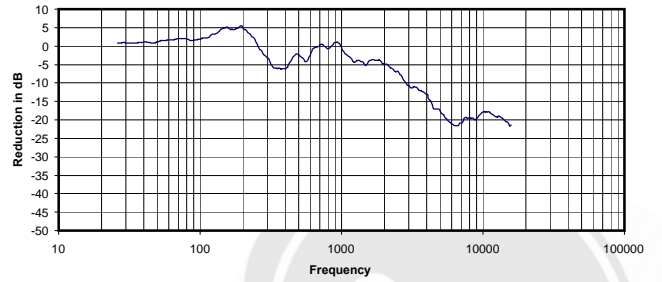
0.066 Vrms
39 Ohms
0.11 mW
-12 dB



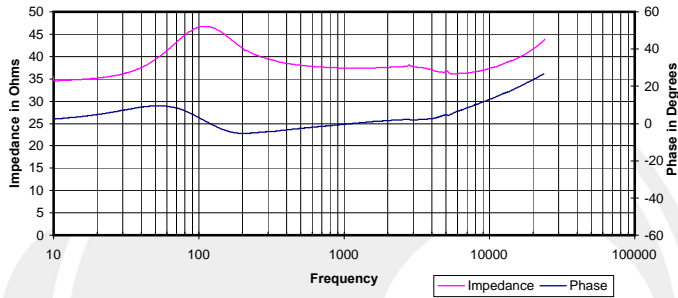
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



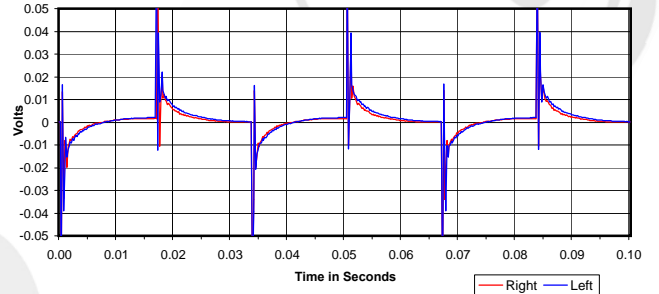
Isolation
 Attenuation of External Sound vs. Frequency



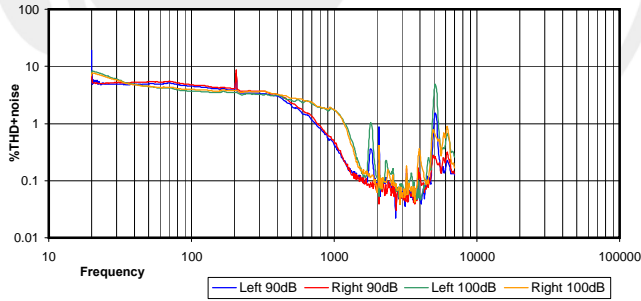
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



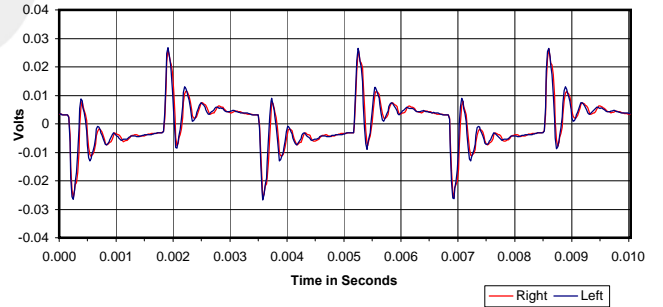
30 Hz Square Wave



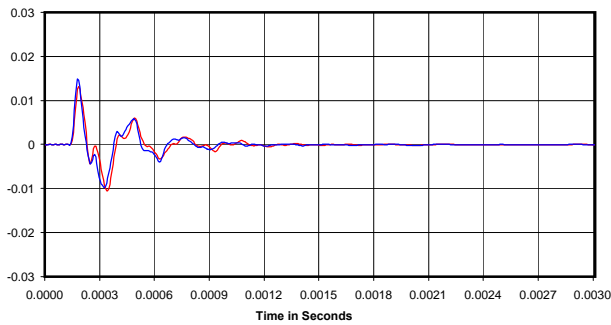
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

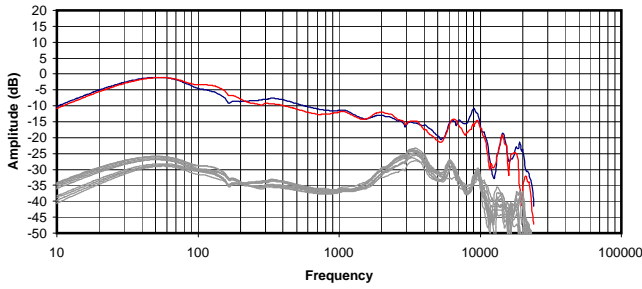


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

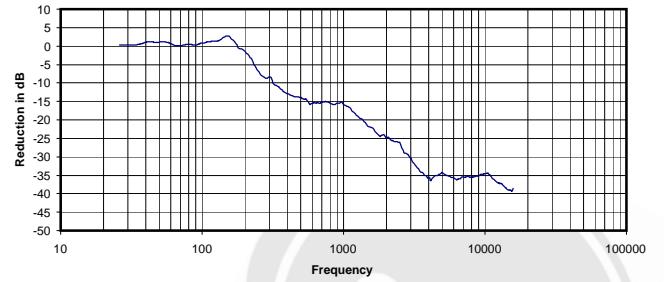
0.098 Vrms
 37 Ohms
 0.26 mW
 -4 dB



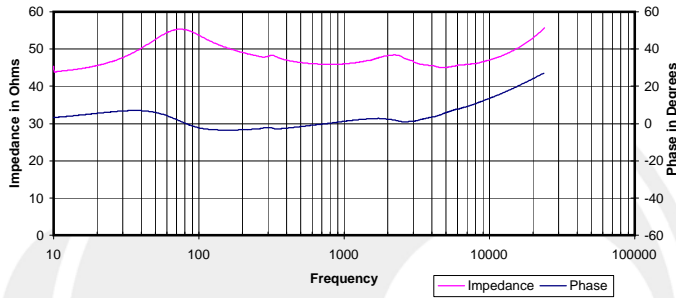
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



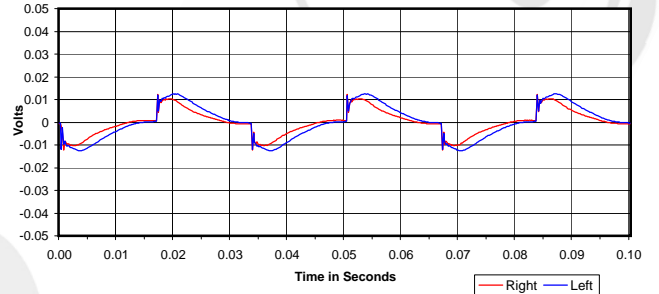
Isolation
 Attenuation of External Sound vs. Frequency



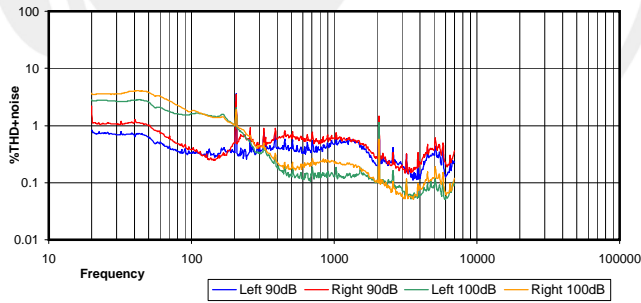
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



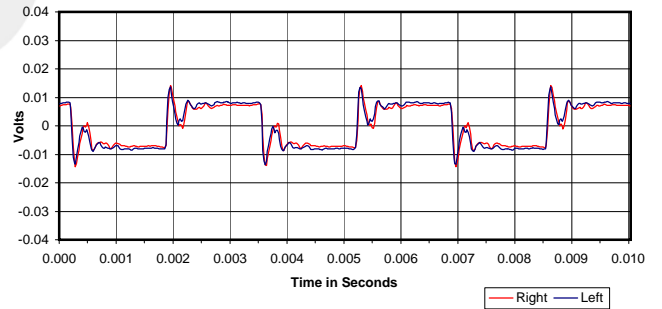
30 Hz Square Wave



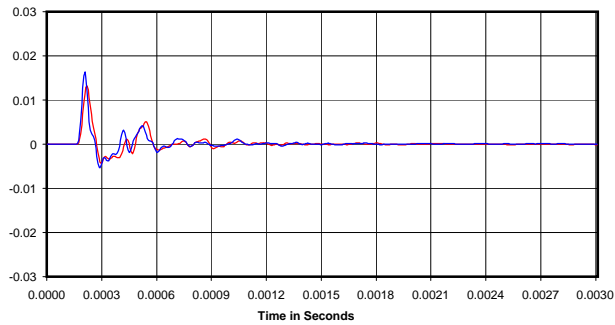
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

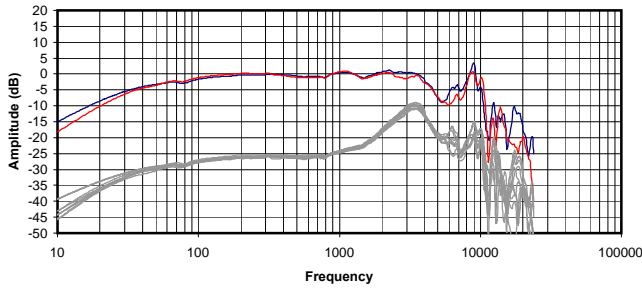


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

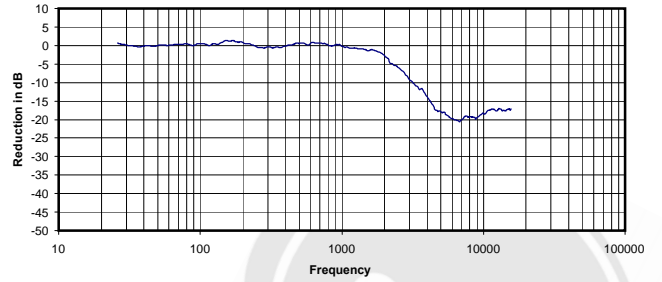
0.109 Vrms
 46 Ohms
 0.26 mW
 -16 dB



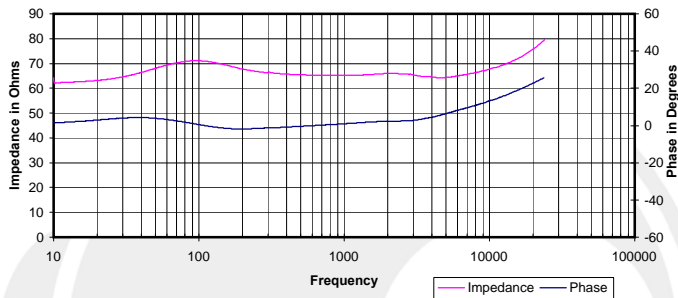
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



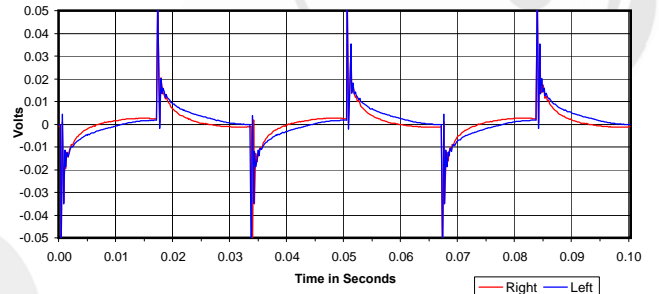
Isolation
 Attenuation of External Sound vs. Frequency



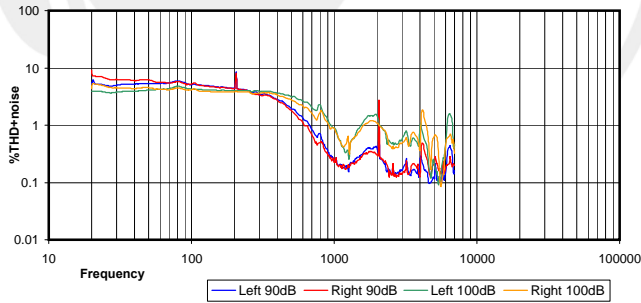
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



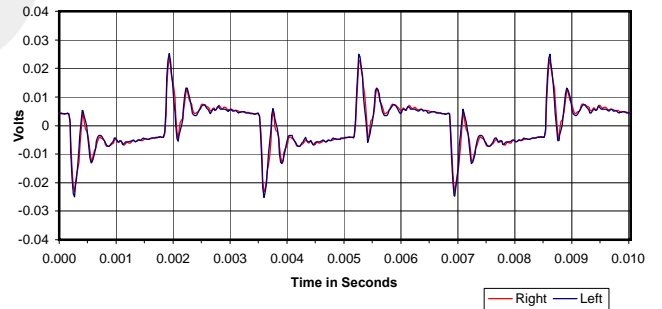
30 Hz Square Wave



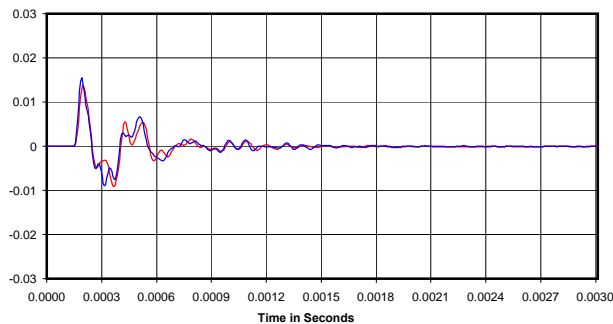
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

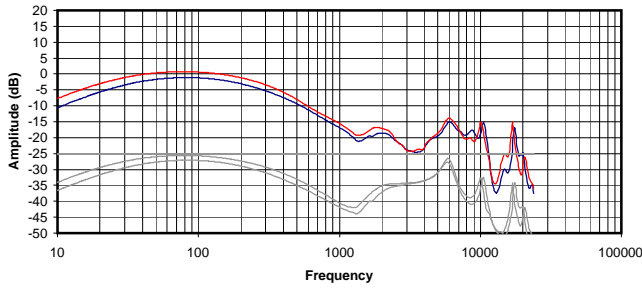


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

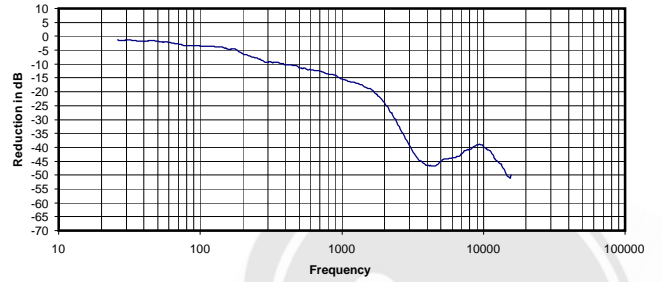
0.160 Vrms
 65 Ohms
 0.39 mW
 -3 dB



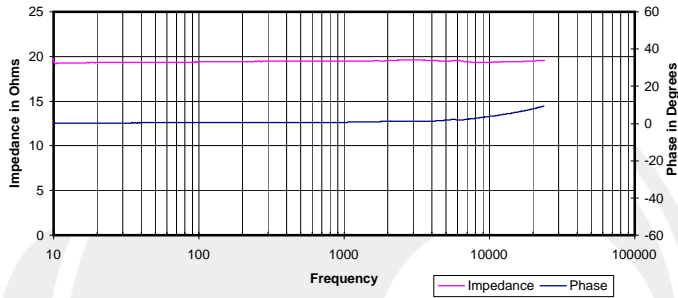
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



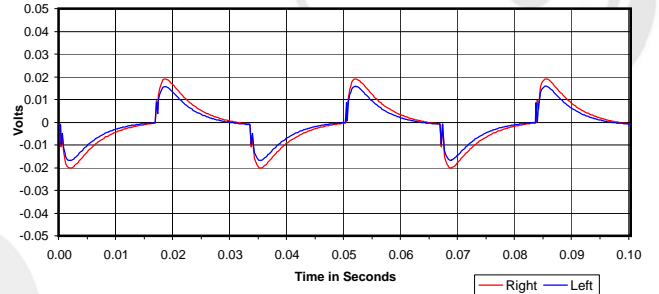
Isolation
Attenuation of External Sound vs. Frequency



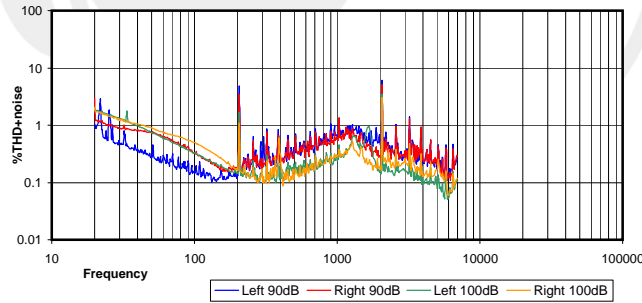
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



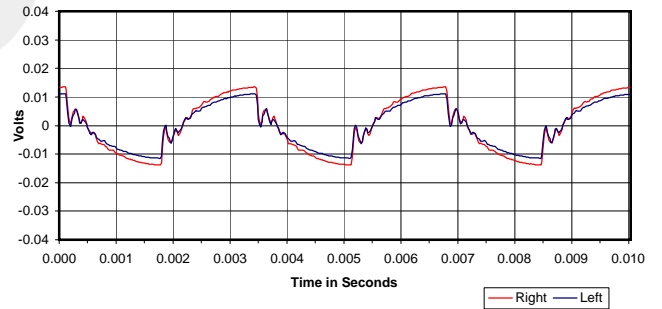
30 Hz Square Wave



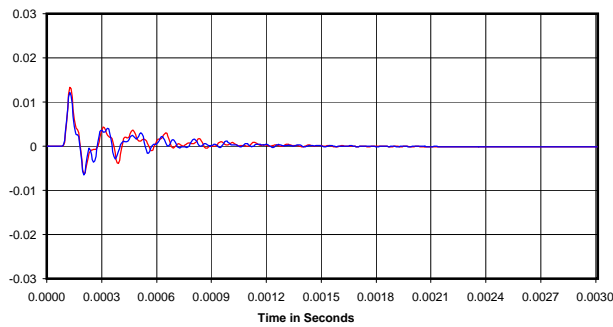
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



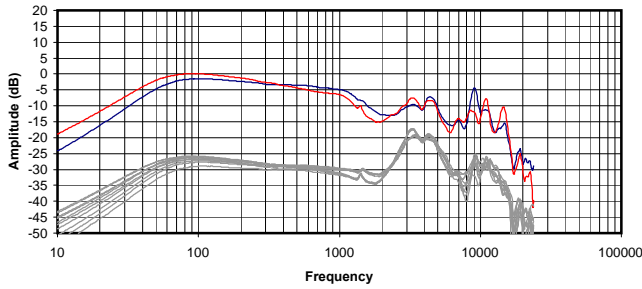
Impulse Response



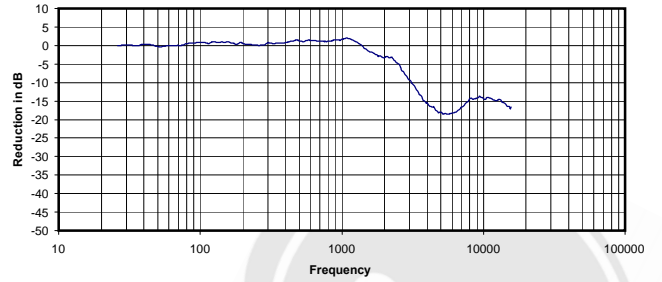
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.058 Vrms
19 Ohms
0.17 mW
-19 dB

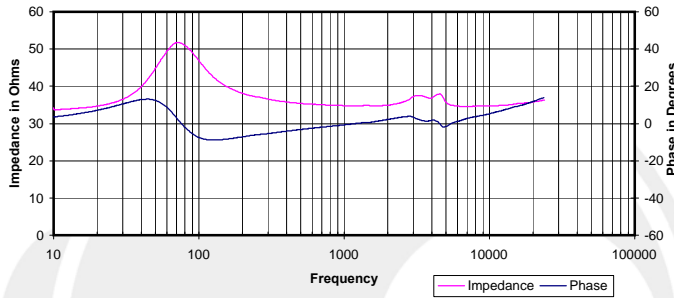
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



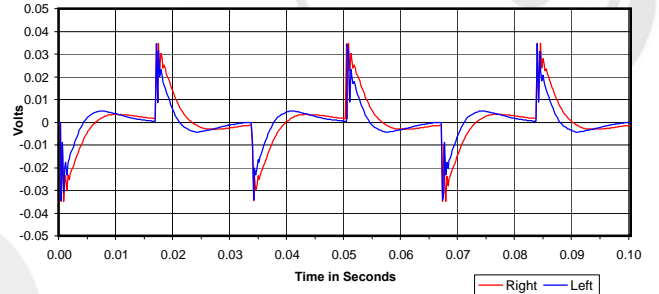
Isolation
Attenuation of External Sound vs. Frequency



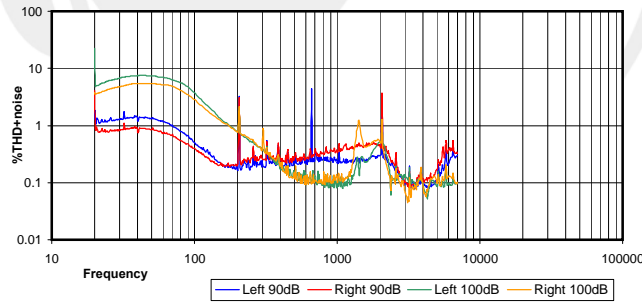
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



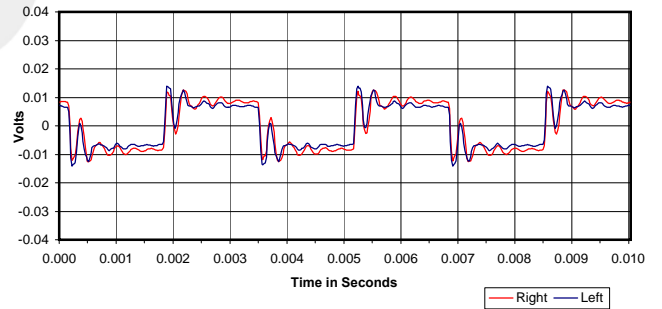
30 Hz Square Wave



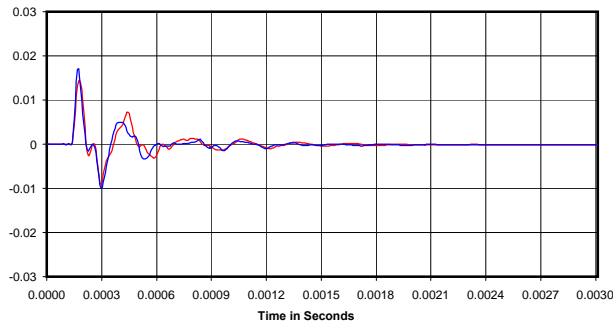
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

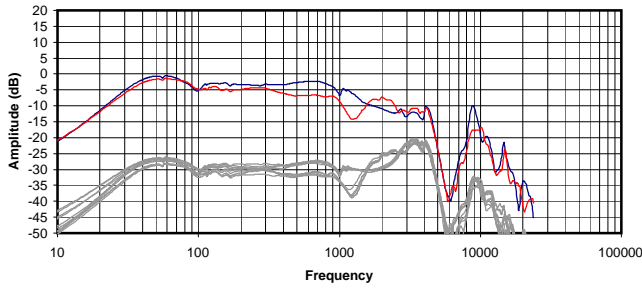


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

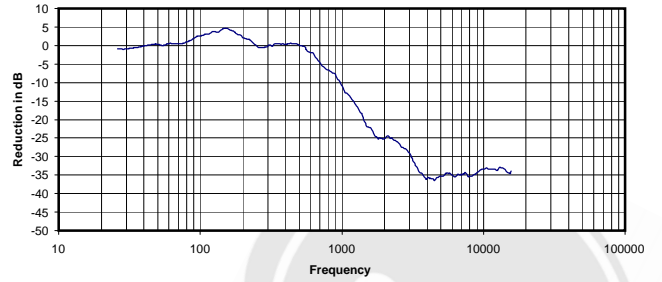
0.037 Vrms
35 Ohms
0.04 mW
-3 dB



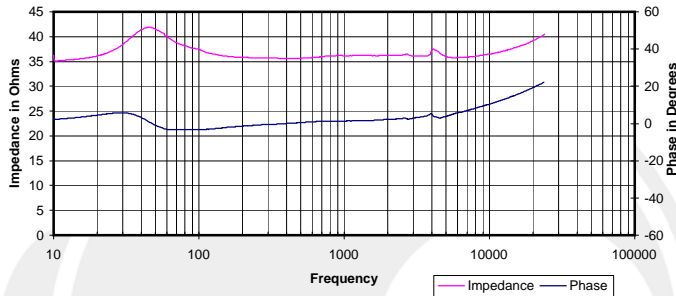
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



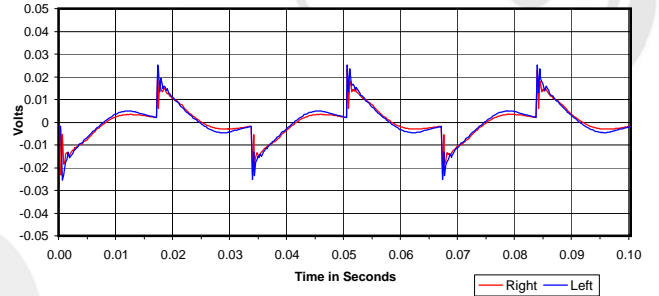
Isolation
 Attenuation of External Sound vs. Frequency



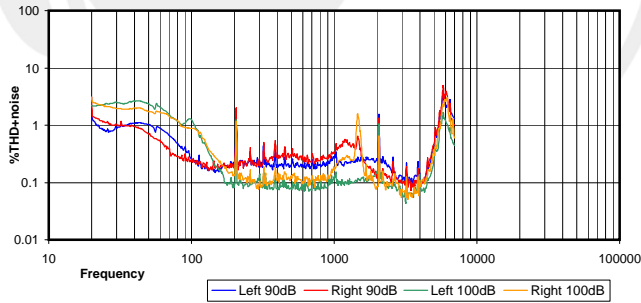
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



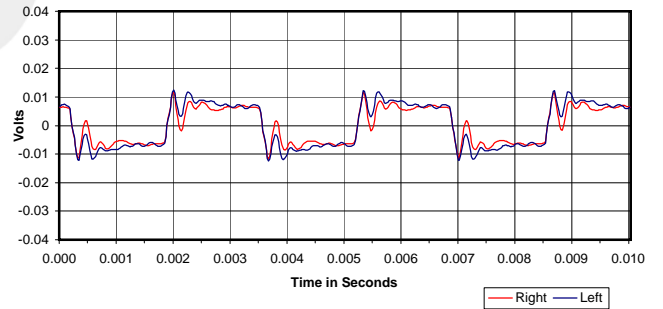
30 Hz Square Wave



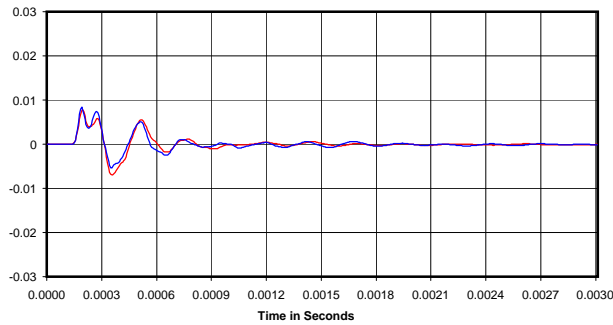
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



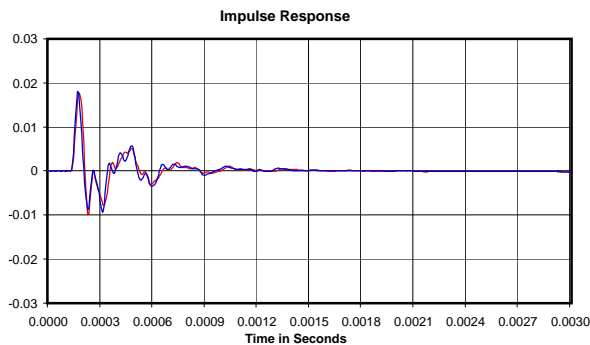
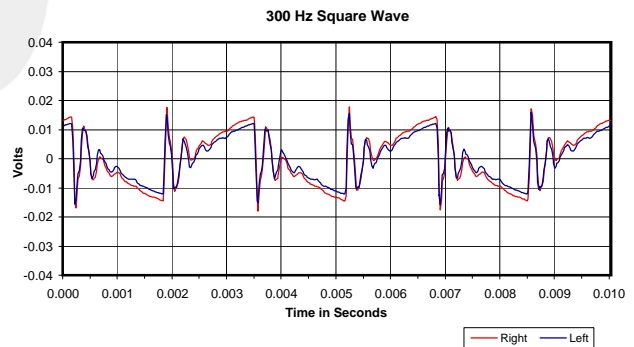
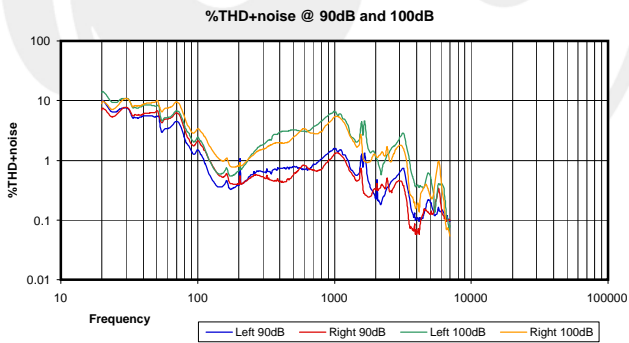
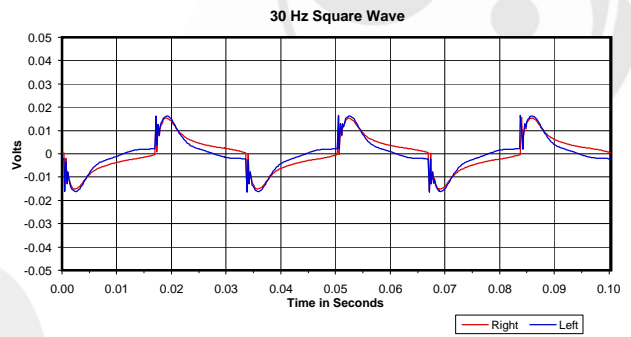
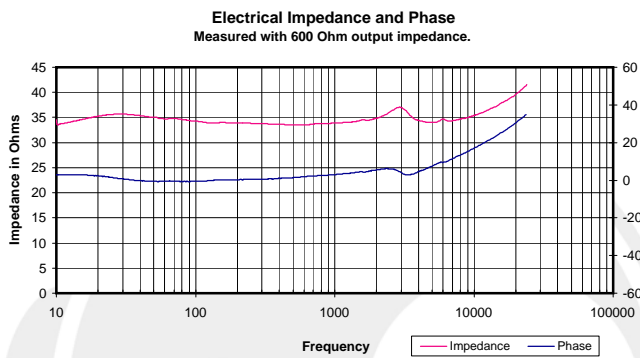
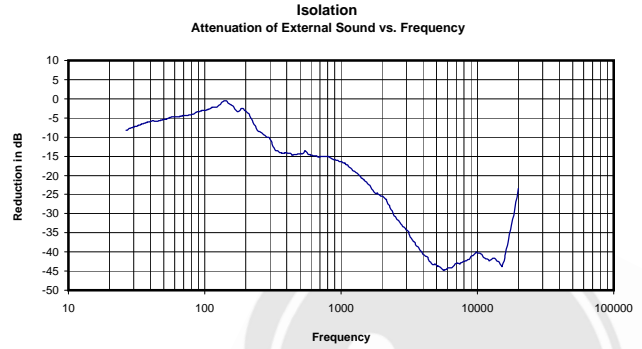
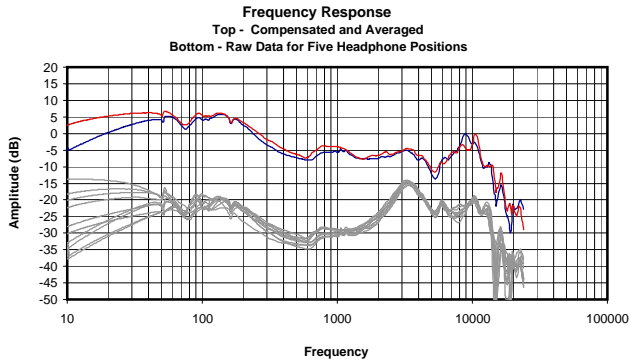
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.043 Vrms
 36 Ohms
 0.05 mW
 -12 dB



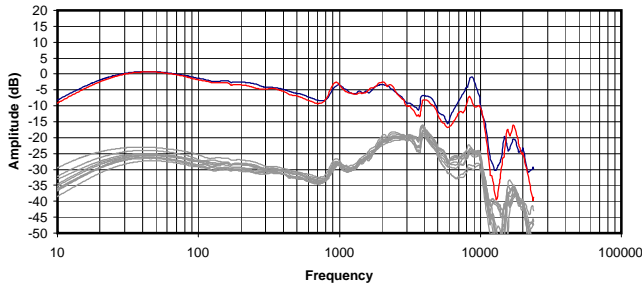


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

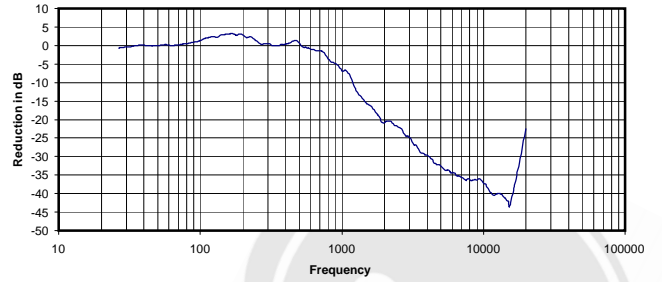
0.117 Vrms
34 Ohms
0.40 mW
-21 dB



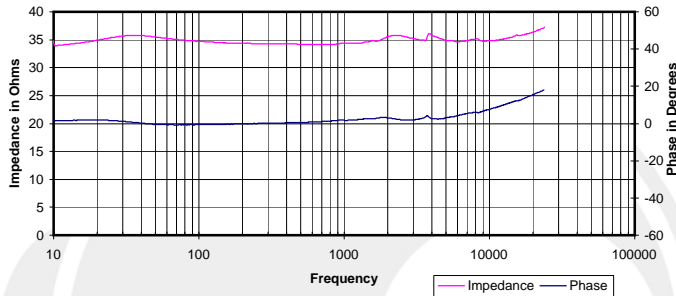
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



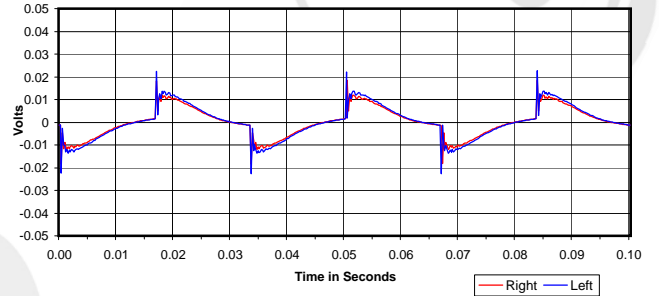
Isolation
Attenuation of External Sound vs. Frequency



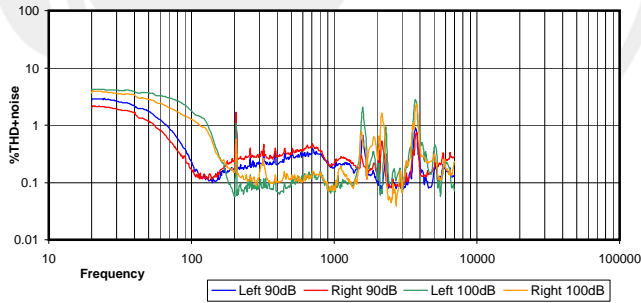
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



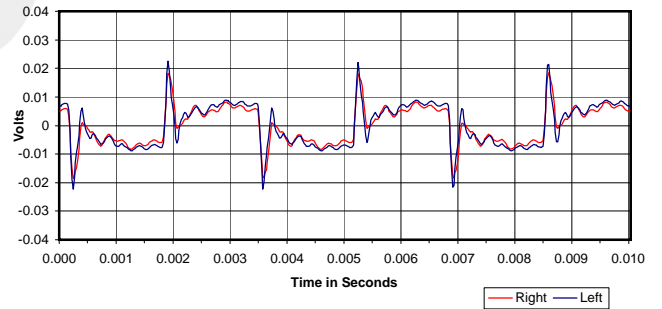
30 Hz Square Wave



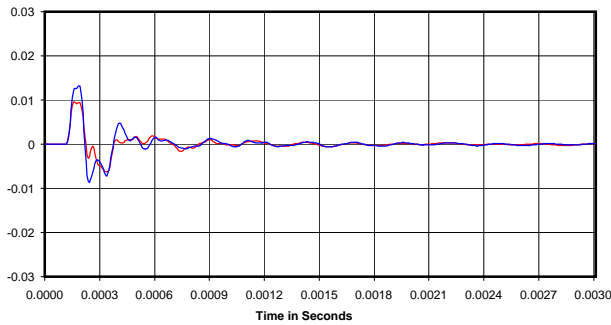
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

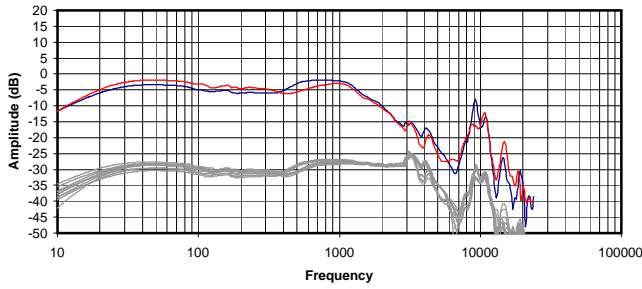


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

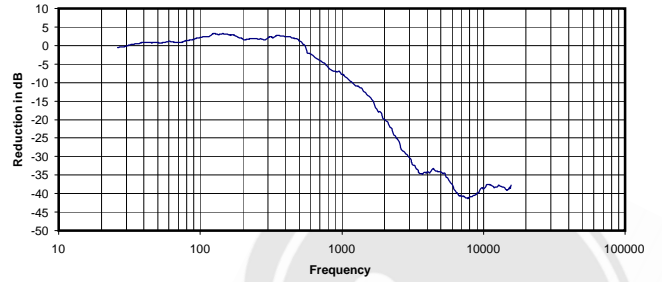
0.049 Vrms
34 Ohms
0.07 mW
-12 dB



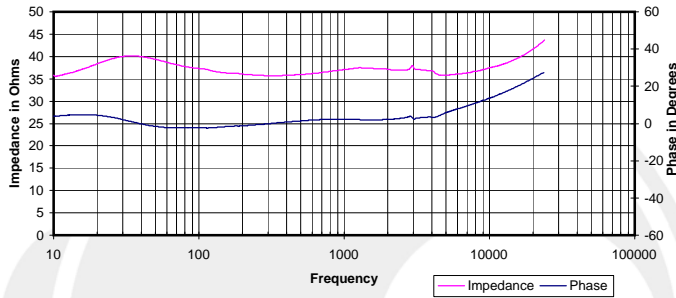
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



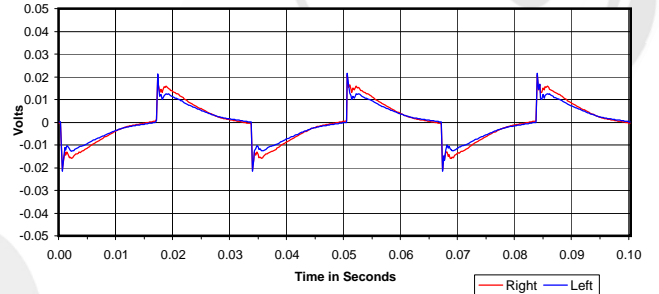
Isolation
 Attenuation of External Sound vs. Frequency



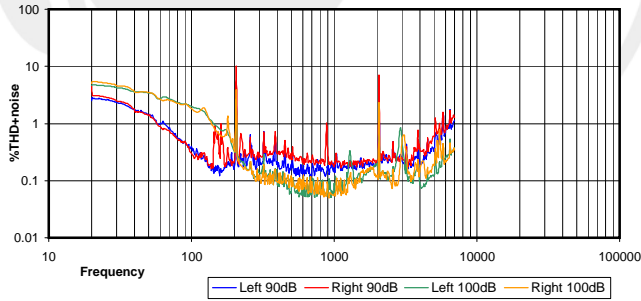
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



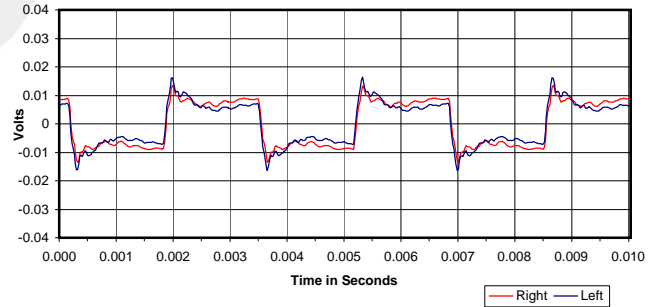
30 Hz Square Wave



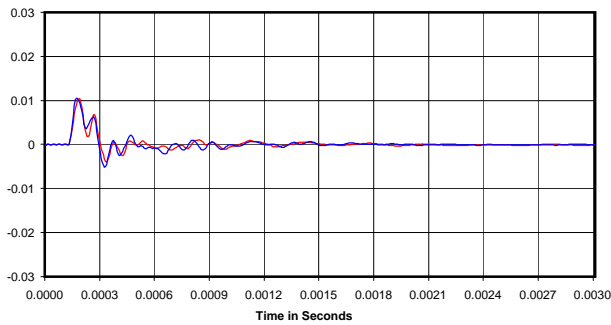
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

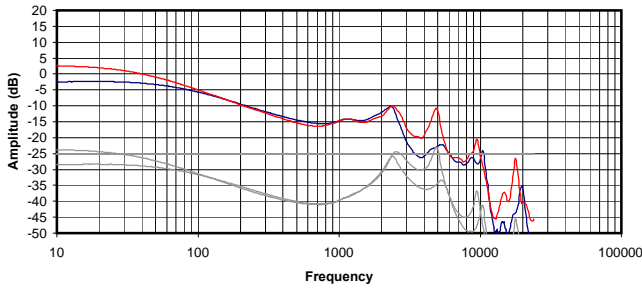


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

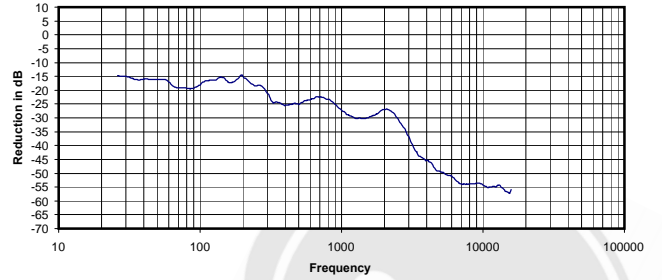
0.020 Vrms
 37 Ohms
 0.01 mW
 -10 dB



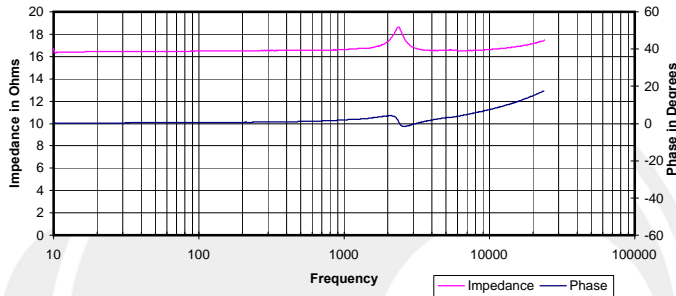
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



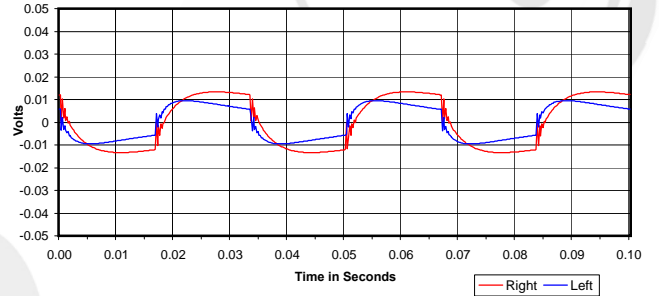
Isolation
Attenuation of External Sound vs. Frequency



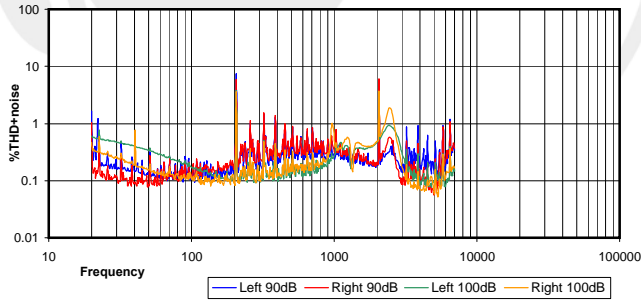
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



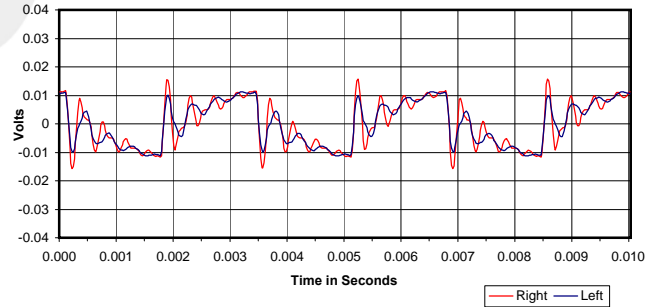
30 Hz Square Wave



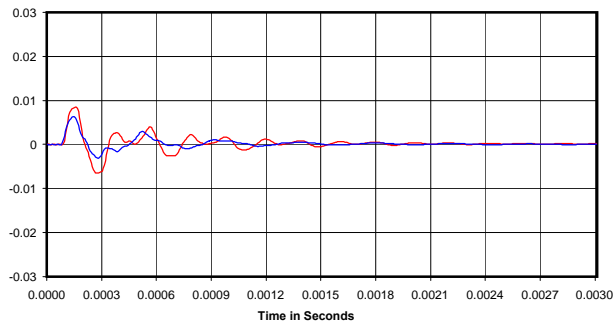
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

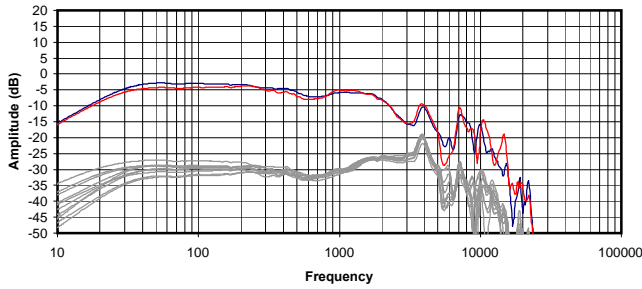


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

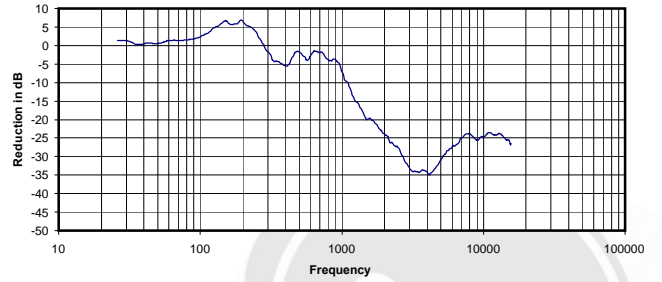
0.035 Vrms
17 Ohms
0.08 mW
-28 dB



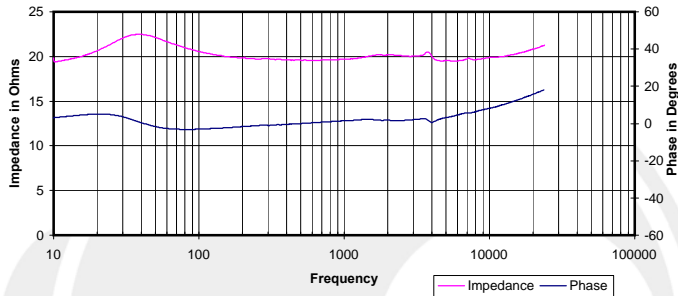
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



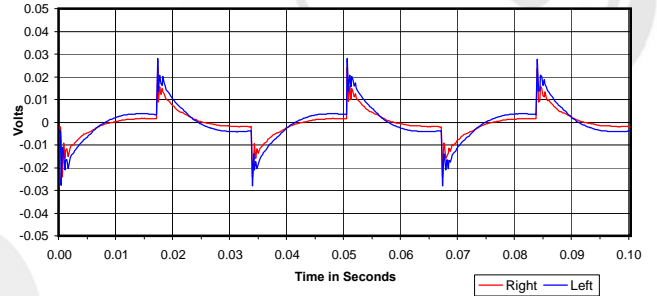
Isolation
 Attenuation of External Sound vs. Frequency



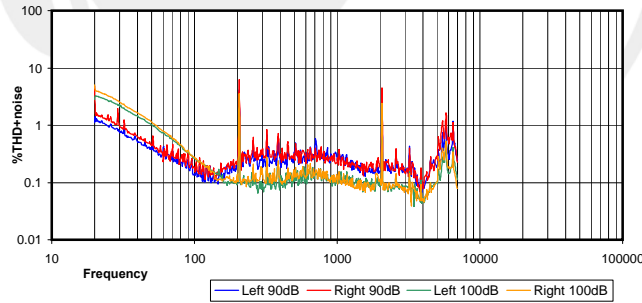
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



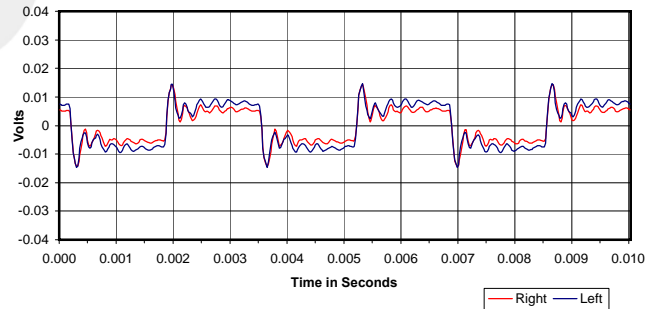
30 Hz Square Wave



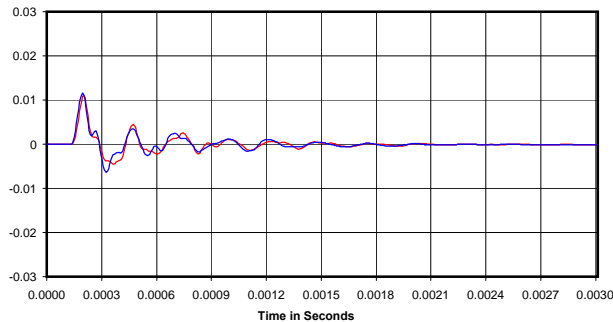
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

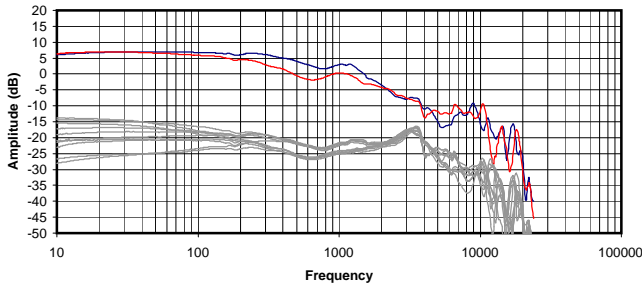


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

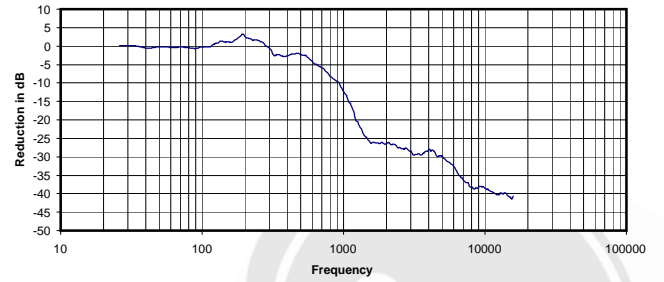
0.027 Vrms
 20 Ohms
 0.04 mW
 -11 dB



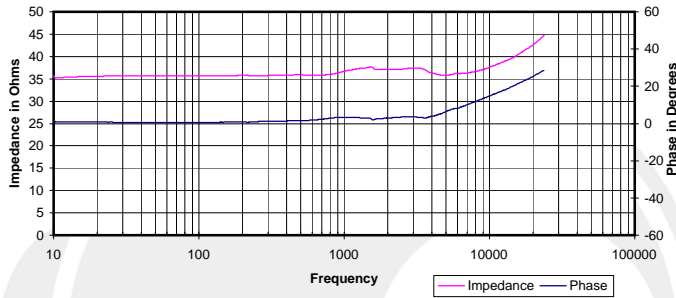
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



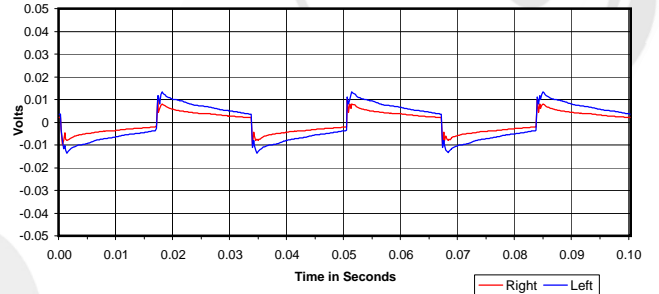
Isolation
 Attenuation of External Sound vs. Frequency



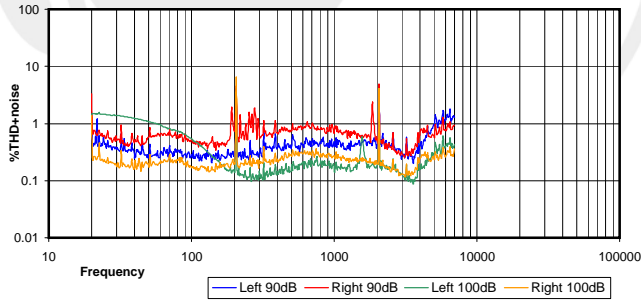
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



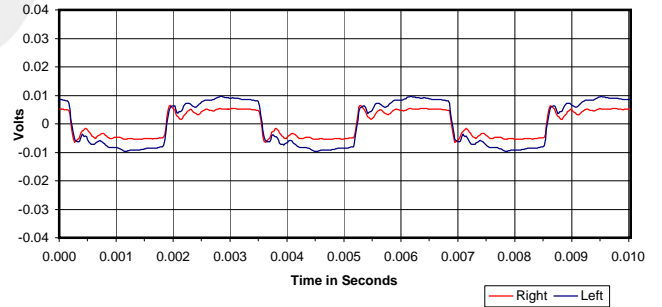
30 Hz Square Wave



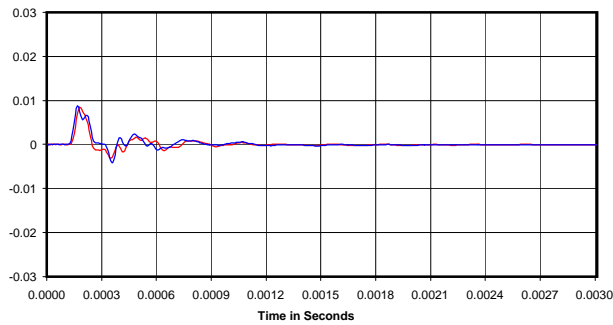
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

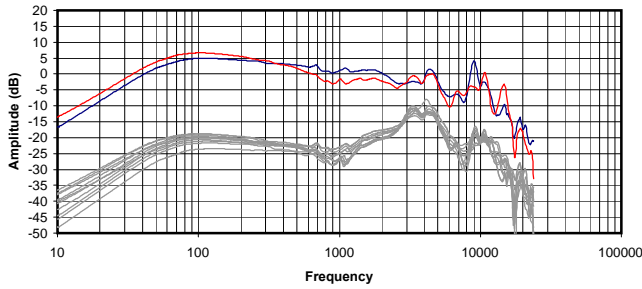


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

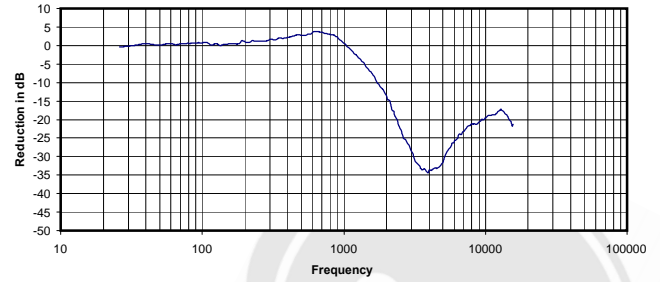
0.005 Vrms
 37 Ohms
 0.00 mW
 -12 dB



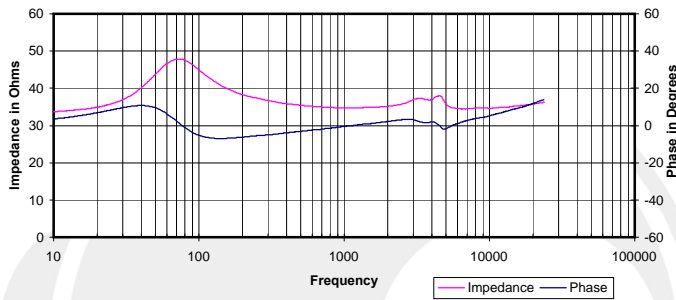
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



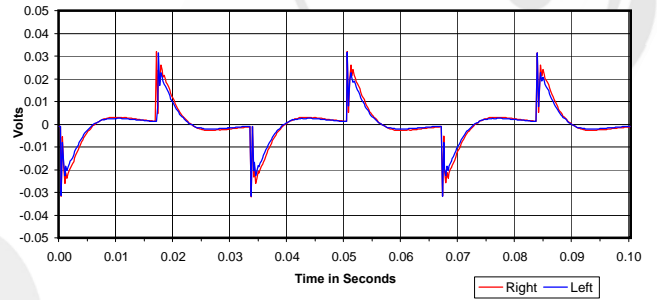
Isolation
 Attenuation of External Sound vs. Frequency



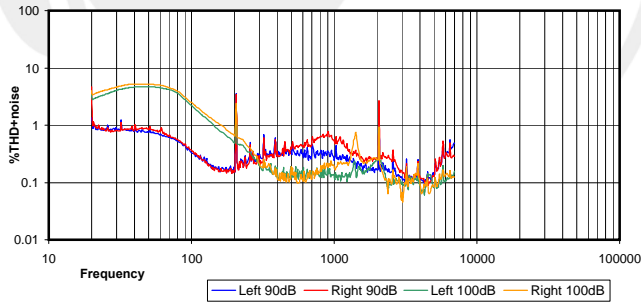
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



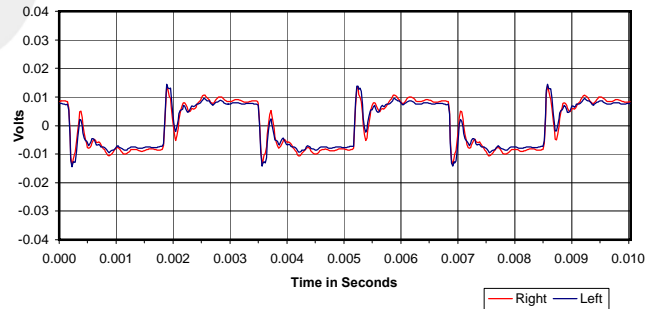
30 Hz Square Wave



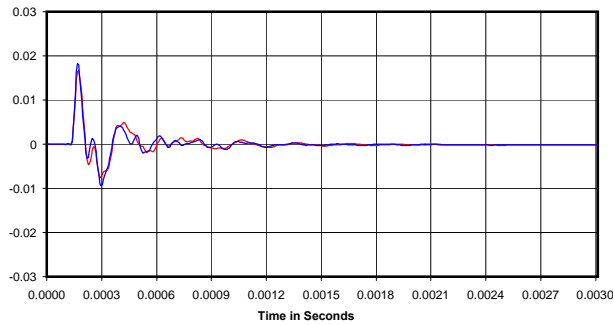
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

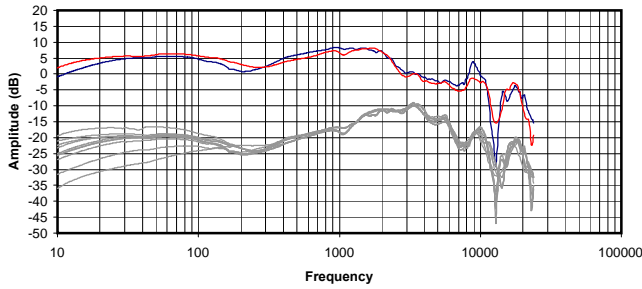


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

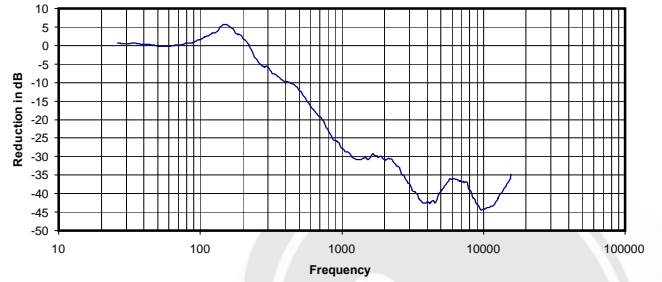
0.055 Vrms
 35 Ohms
 0.09 mW
 -8 dB



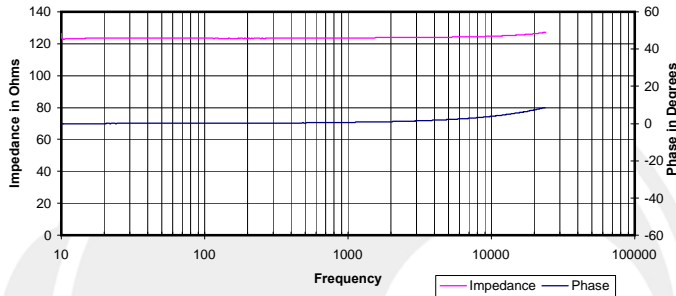
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



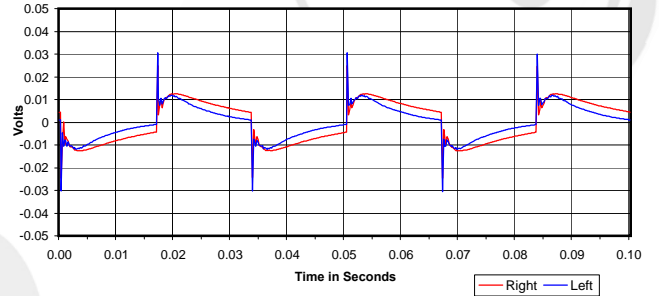
Isolation
Attenuation of External Sound vs. Frequency



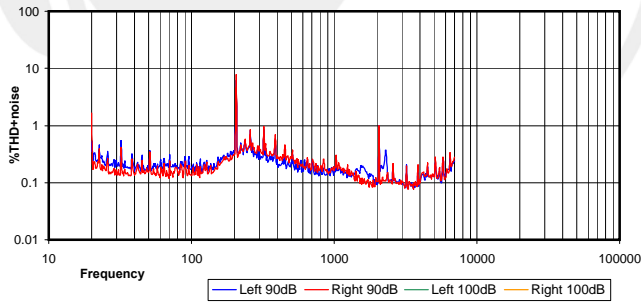
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



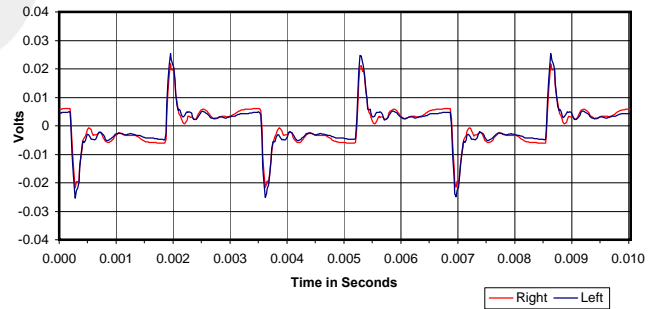
30 Hz Square Wave



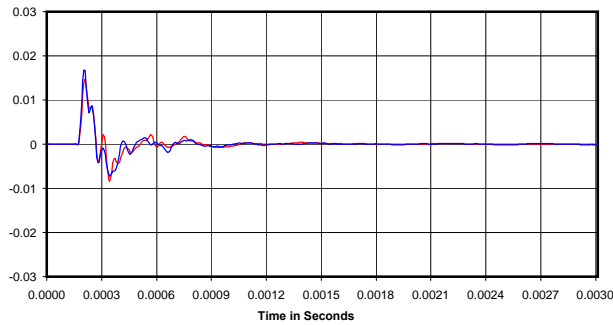
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

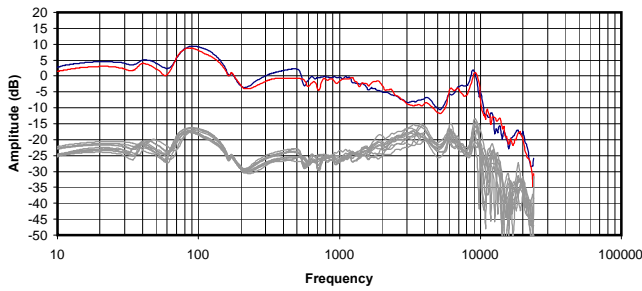


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

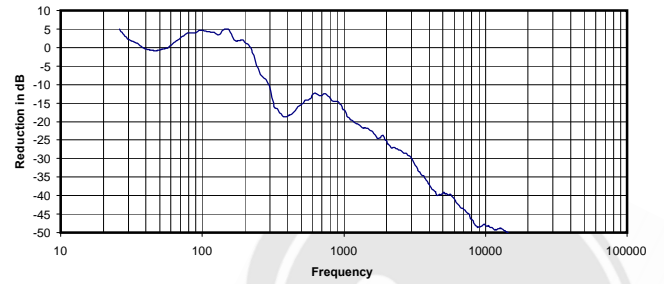
0.426 Vrms
123 Ohms
1.47 mW
-19 dB



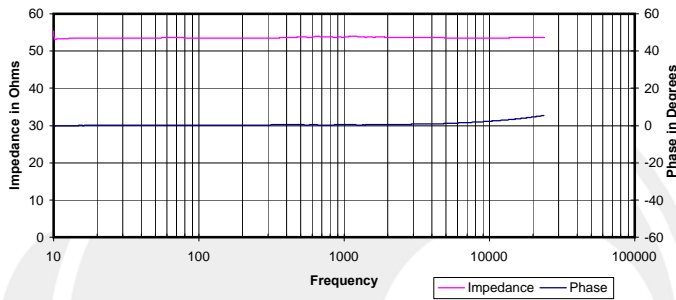
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



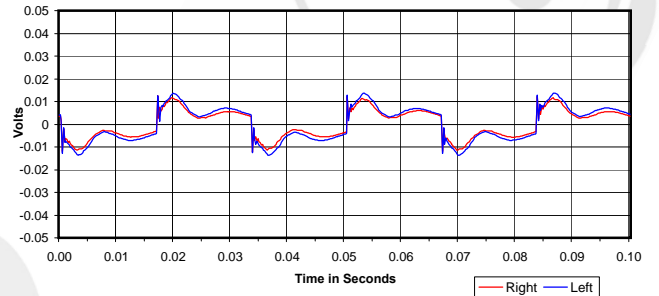
Isolation
Attenuation of External Sound vs. Frequency



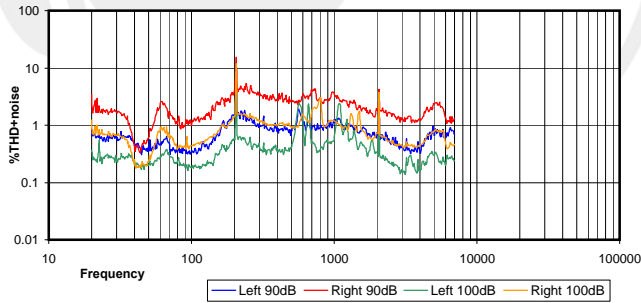
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



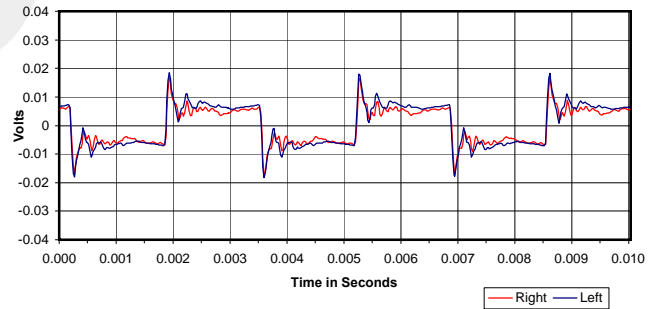
30 Hz Square Wave



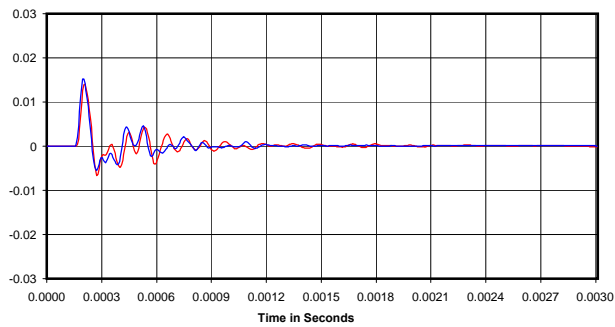
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

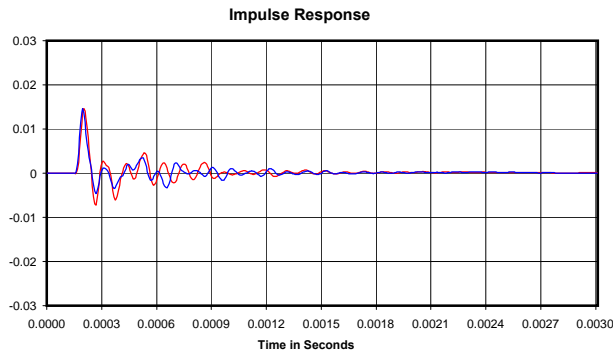
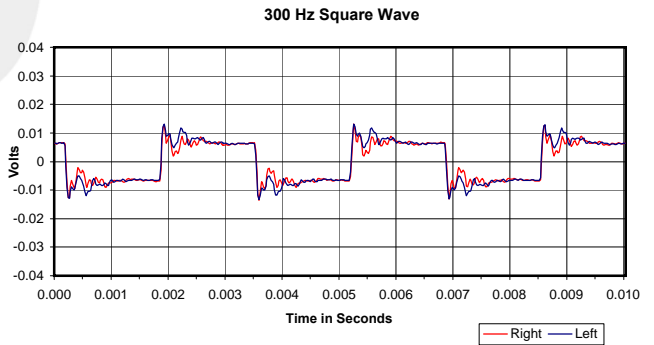
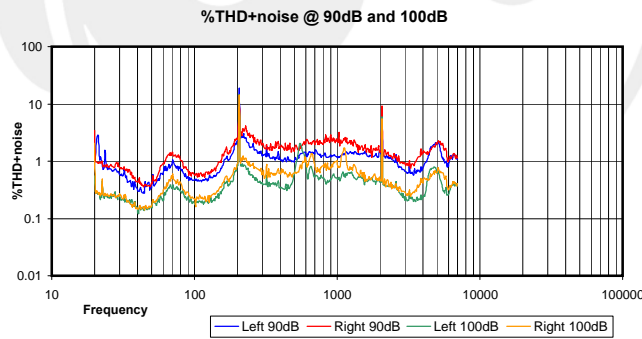
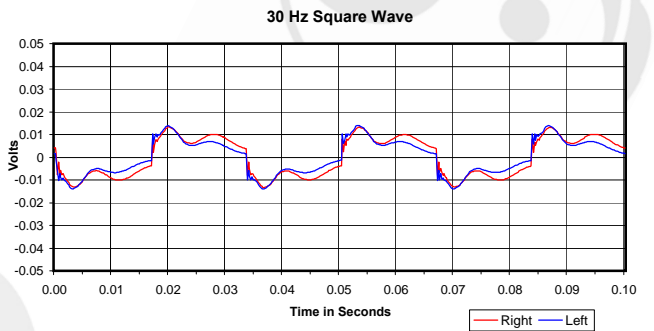
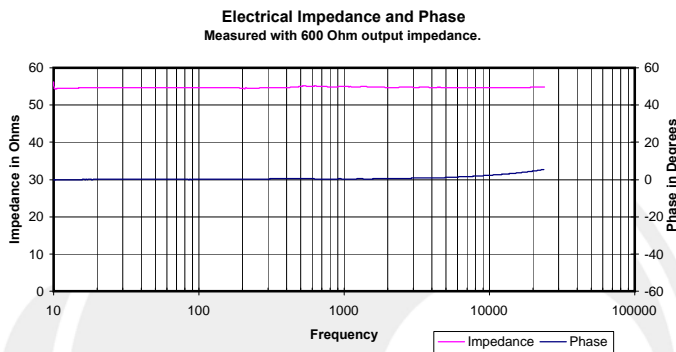
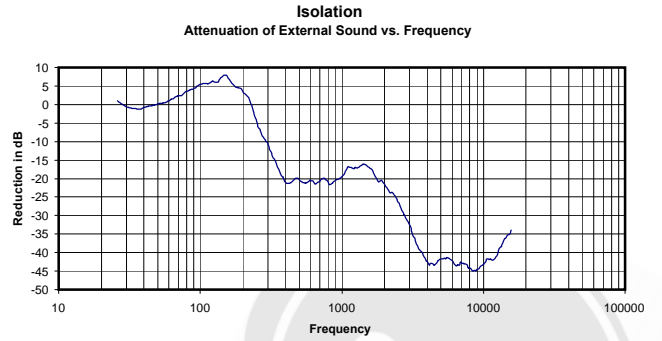
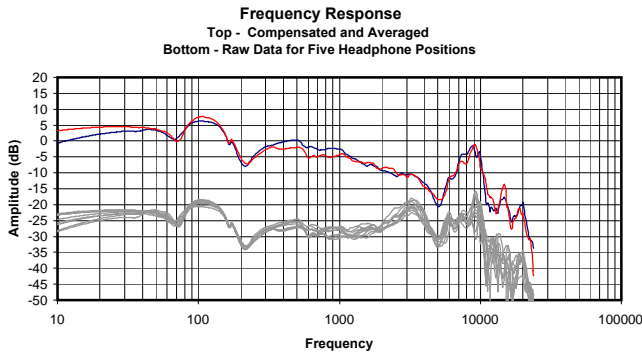


Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.333 Vrms
54 Ohms
2.06 mW
-17 dB

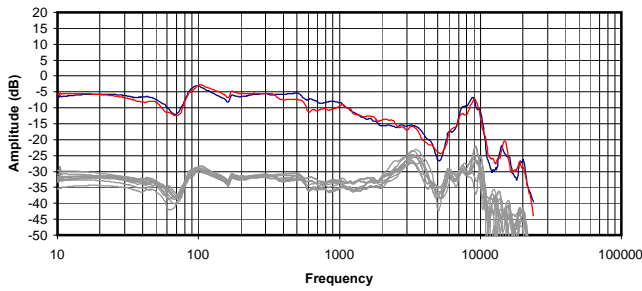


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

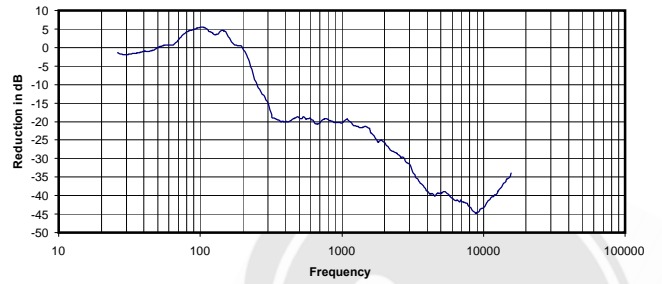
0.242 Vrms
55 Ohms
1.07 mW
-17 dB



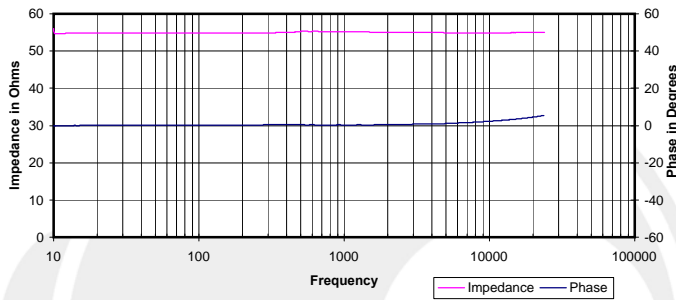
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



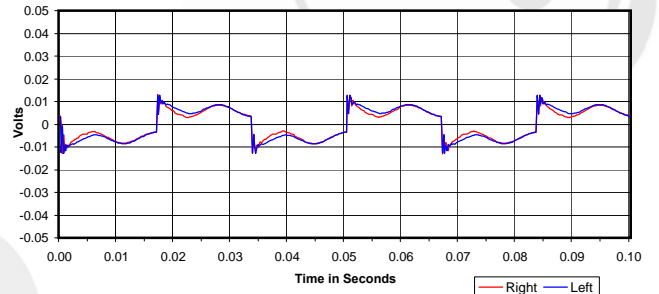
Isolation
Attenuation of External Sound vs. Frequency



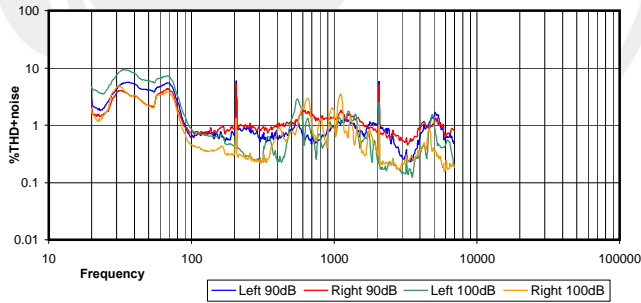
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



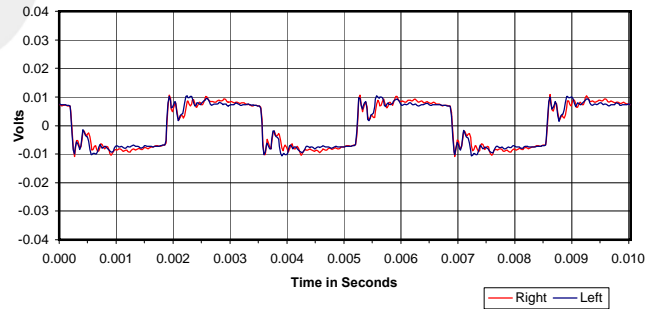
30 Hz Square Wave



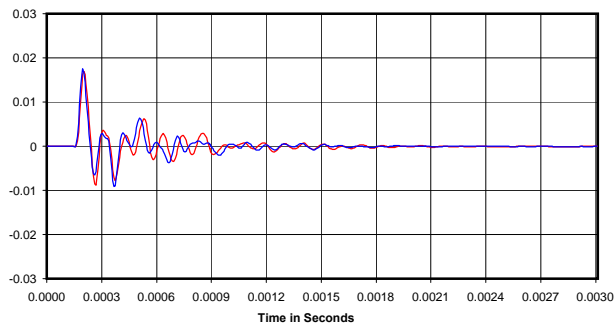
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



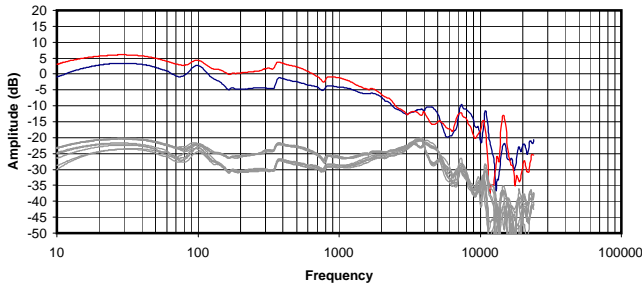
Impulse Response



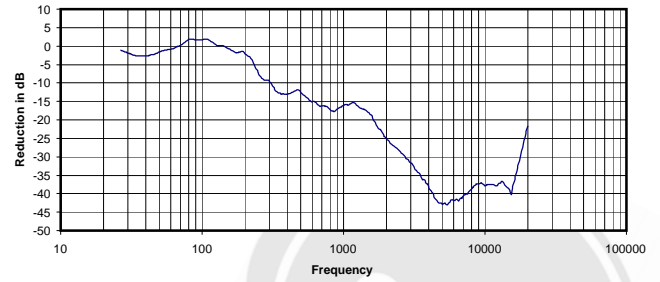
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.269 Vrms
55 Ohms
1.31 mW
-19 dB

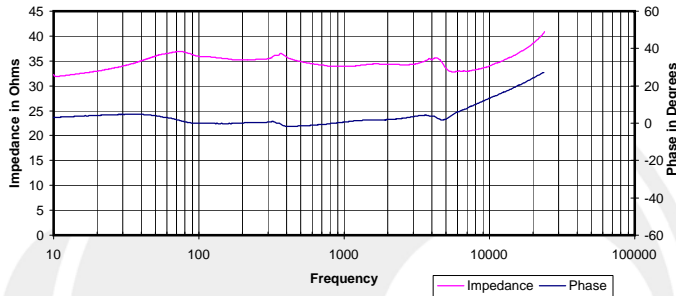
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



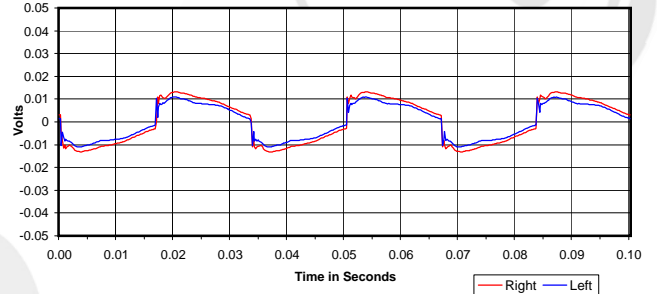
Isolation
 Attenuation of External Sound vs. Frequency



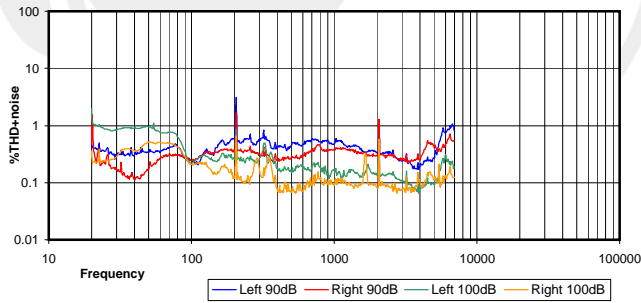
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



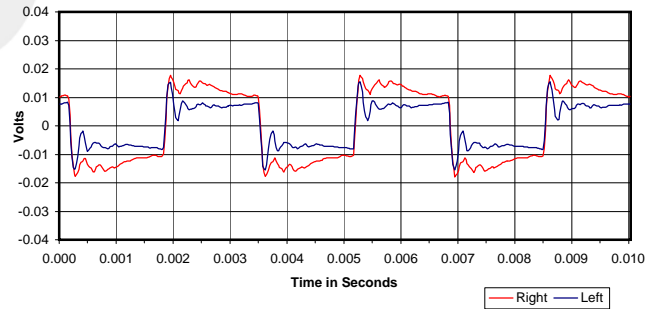
30 Hz Square Wave



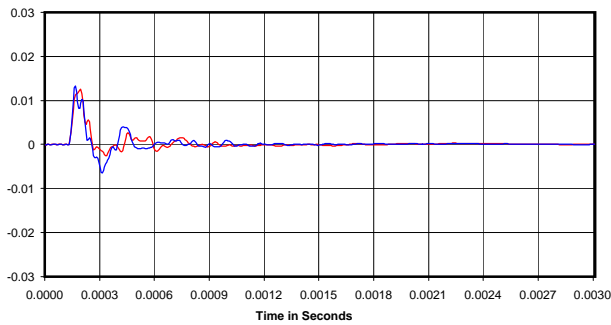
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

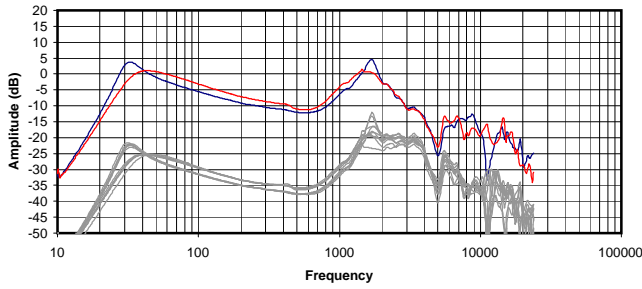


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

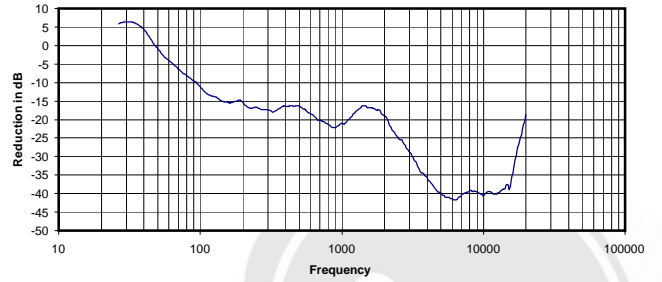
0.039 Vrms
 34 Ohms
 0.04 mW
 -20 dB



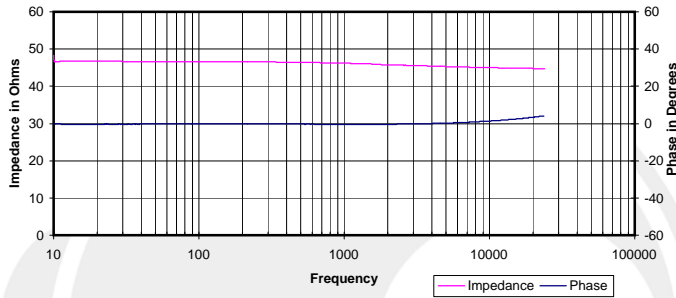
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



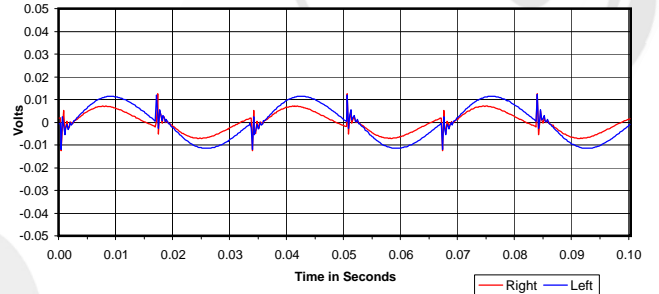
Isolation
Attenuation of External Sound vs. Frequency



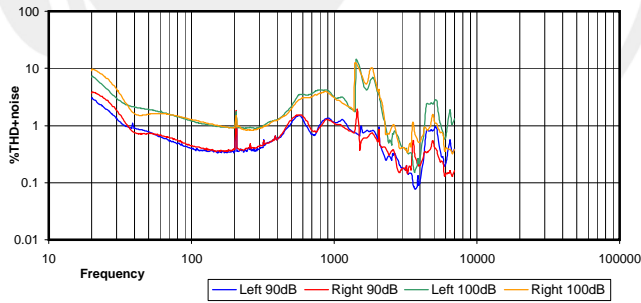
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



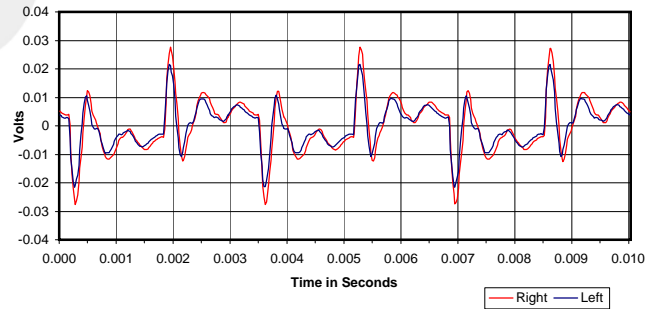
30 Hz Square Wave



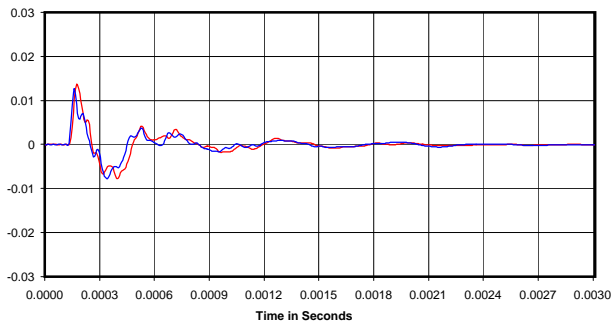
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

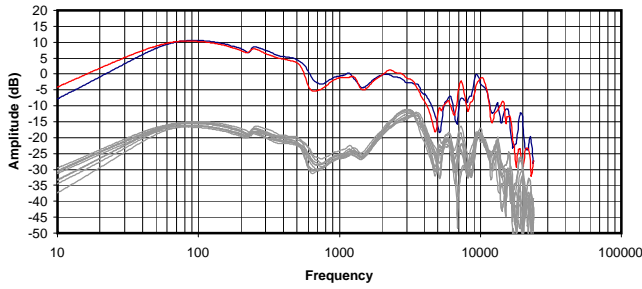


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

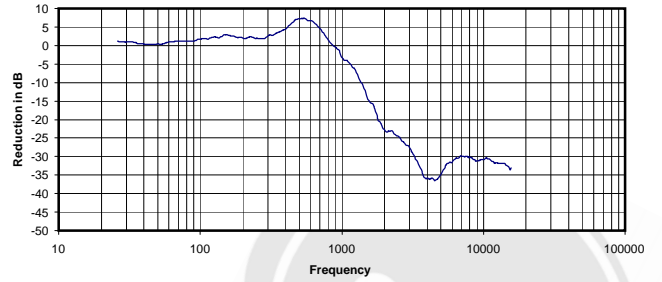
0.057 Vrms
46 Ohms
0.07 mW
-23 dB



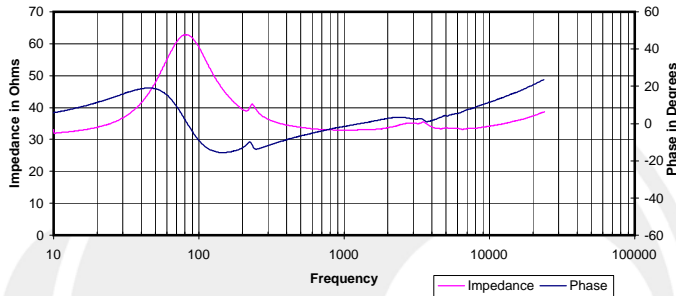
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



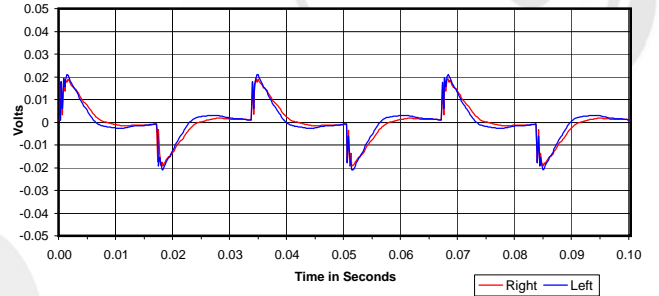
Isolation
 Attenuation of External Sound vs. Frequency



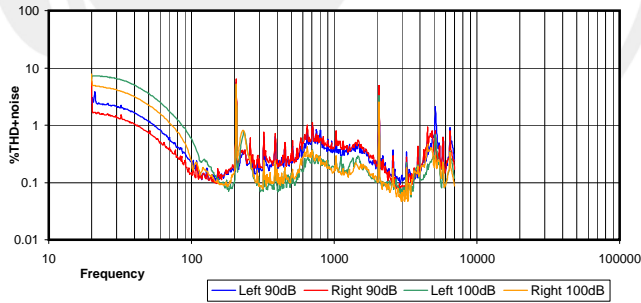
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



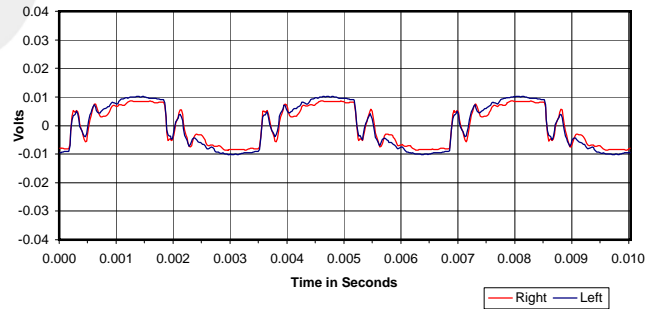
30 Hz Square Wave



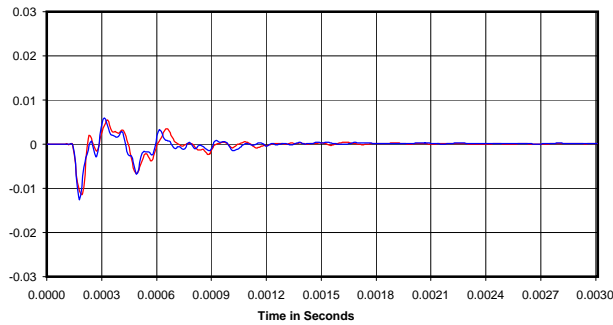
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

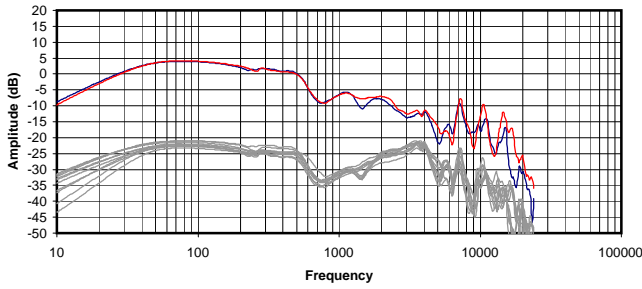


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

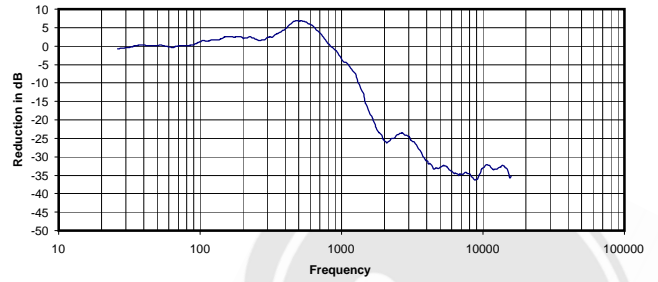
0.061 Vrms
 33 Ohms
 0.11 mW
 -8 dB



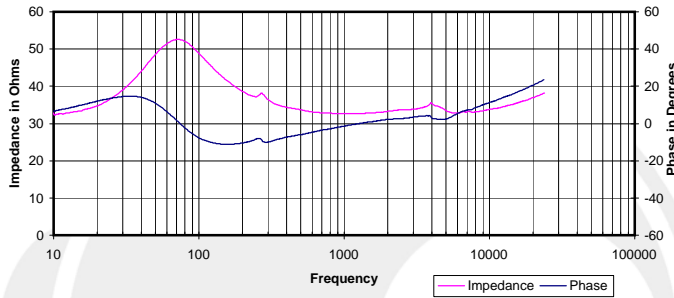
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



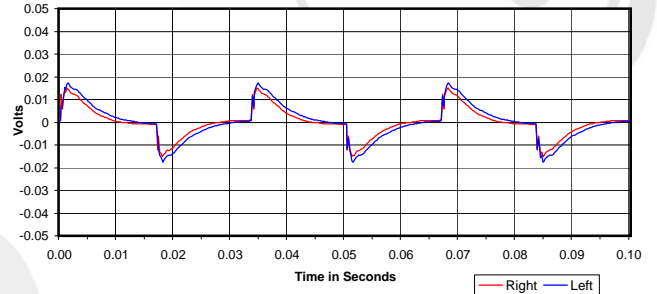
Isolation
 Attenuation of External Sound vs. Frequency



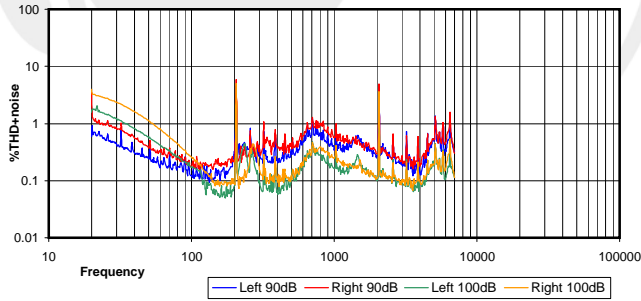
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



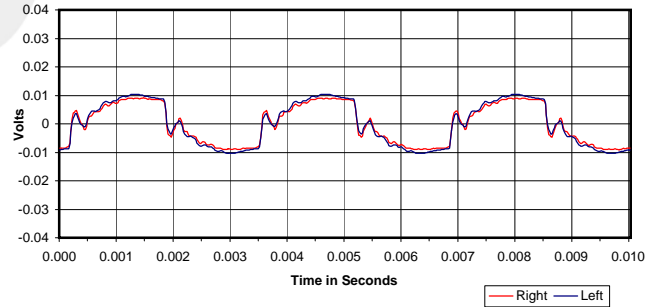
30 Hz Square Wave



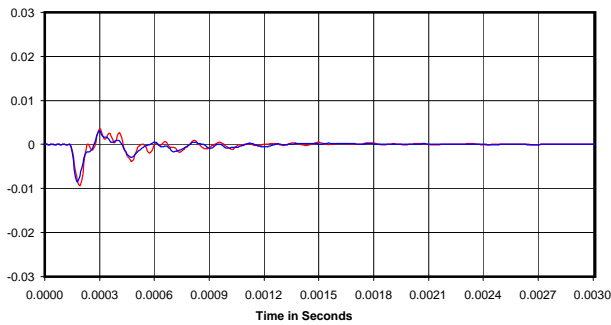
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

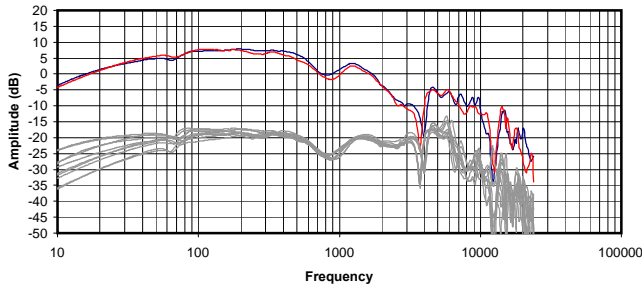


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

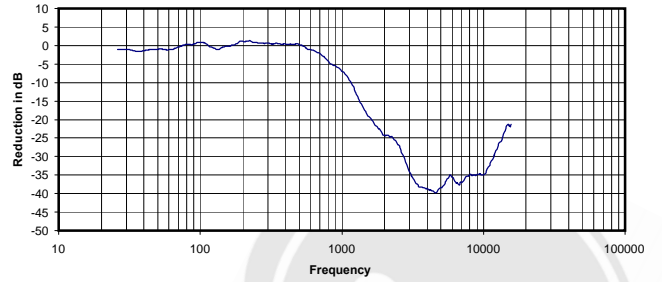
0.047 Vrms
 33 Ohms
 0.07 mW
 -9 dB



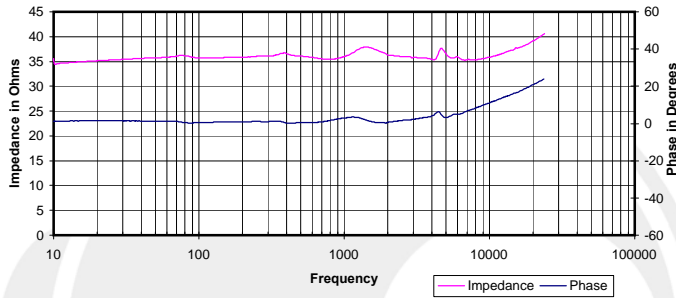
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



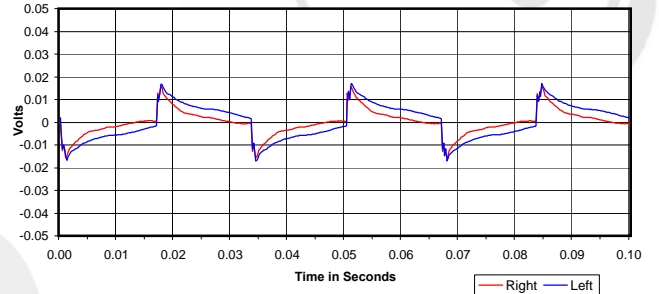
Isolation
Attenuation of External Sound vs. Frequency



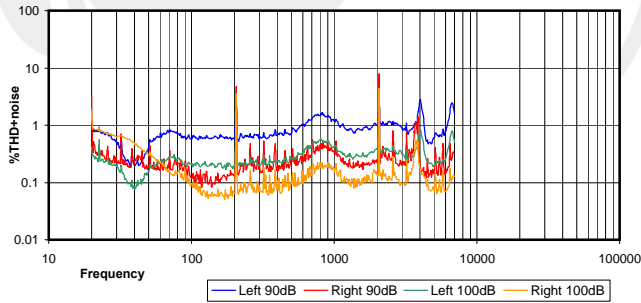
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



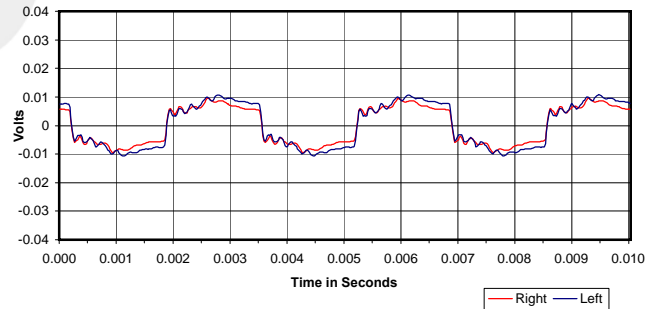
30 Hz Square Wave



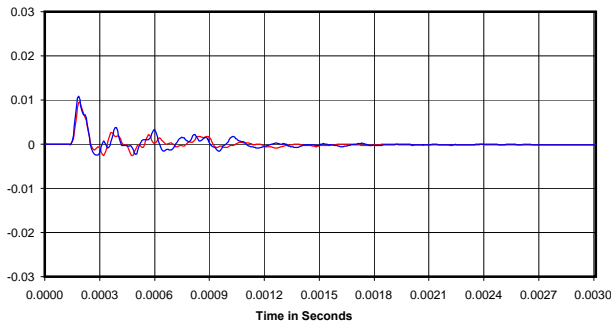
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

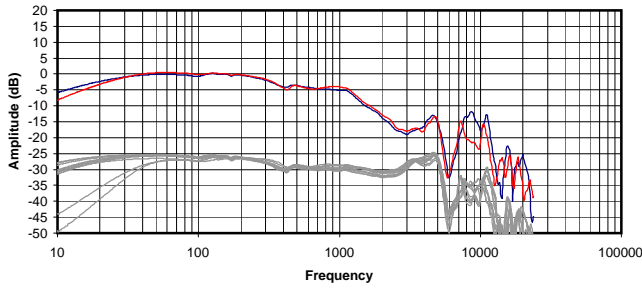


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

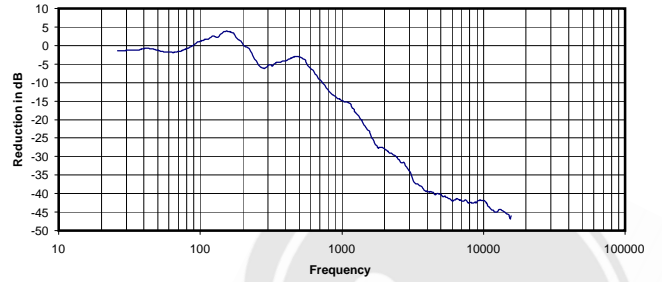
0.031 Vrms
36 Ohms
0.03 mW
-12 dB



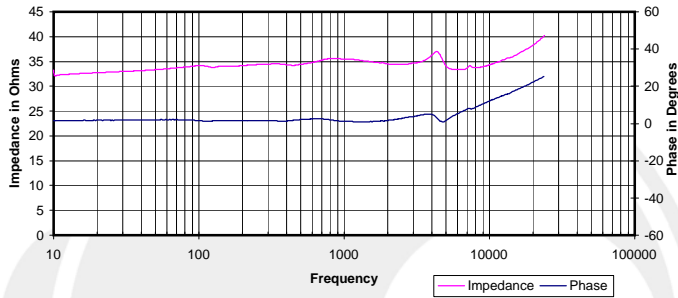
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



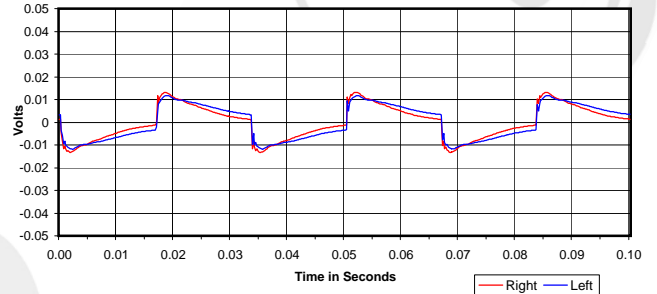
Isolation
Attenuation of External Sound vs. Frequency



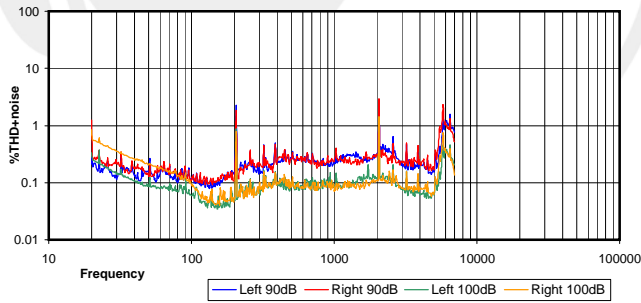
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



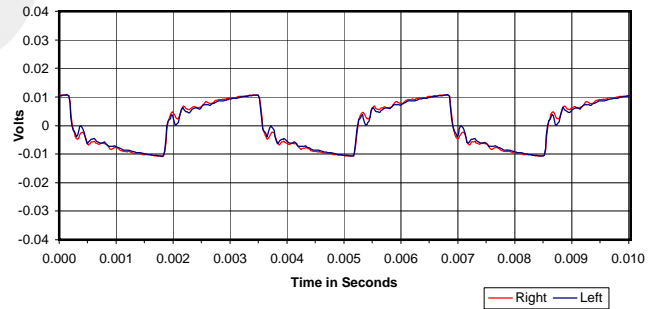
30 Hz Square Wave



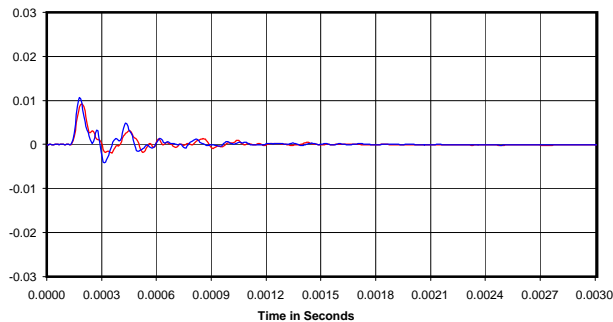
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

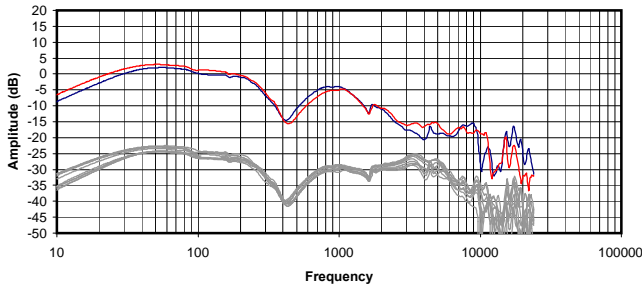


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

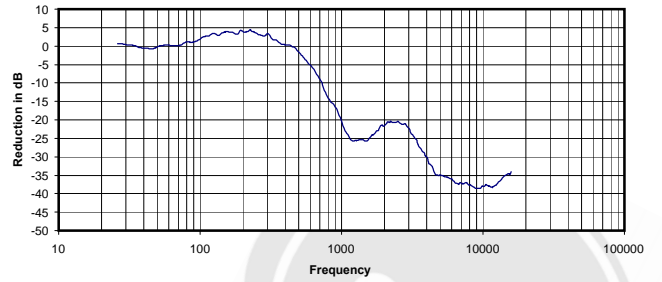
0.020 Vrms
35 Ohms
0.01 mW
-15 dB



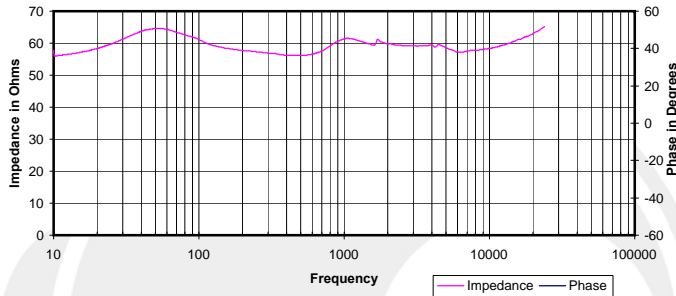
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



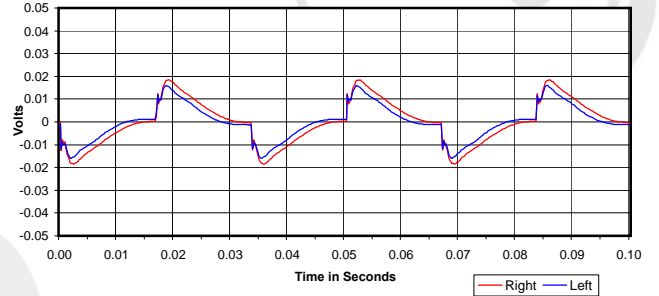
Isolation
 Attenuation of External Sound vs. Frequency



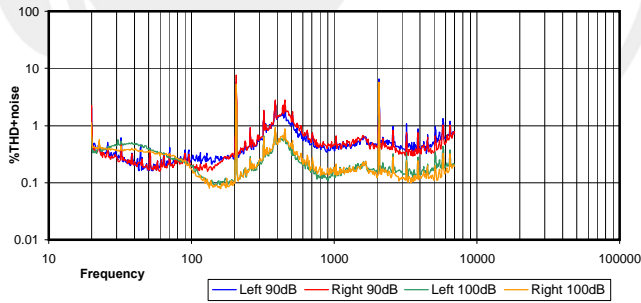
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



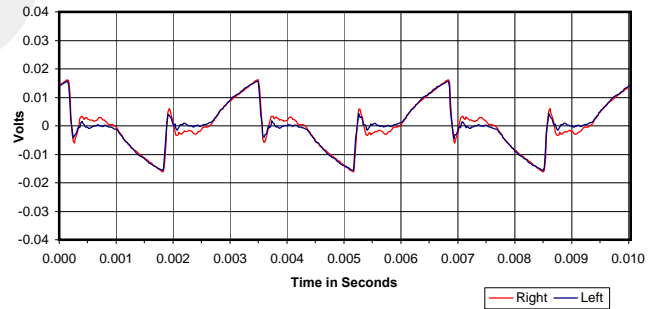
30 Hz Square Wave



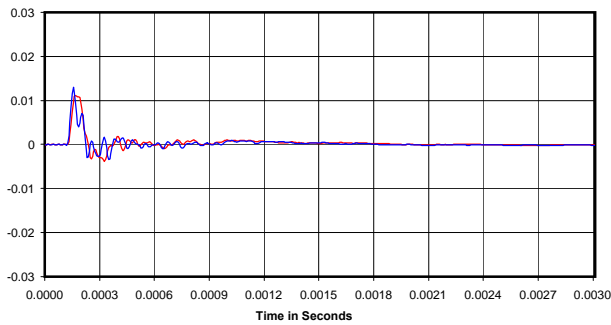
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

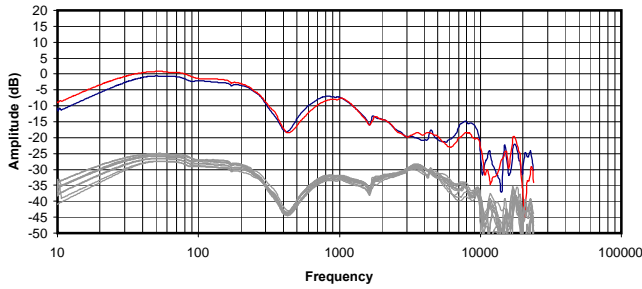


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

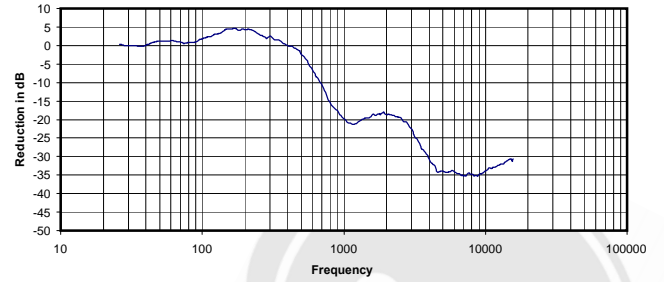
0.040 Vrms
 61 Ohms
 0.03 mW
 -12 dB



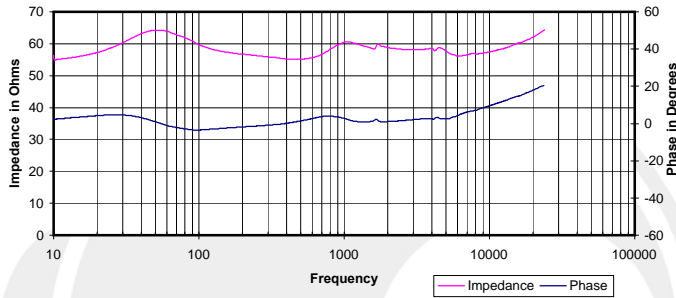
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



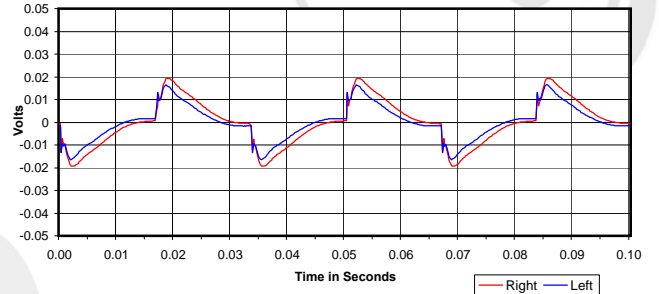
Isolation
Attenuation of External Sound vs. Frequency



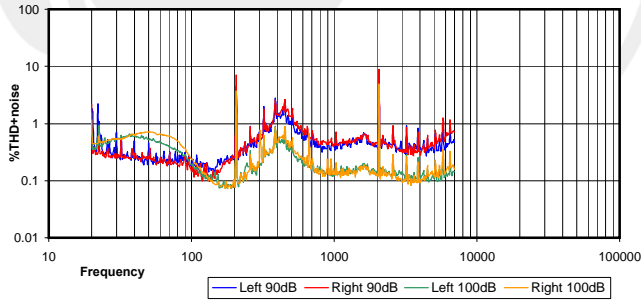
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



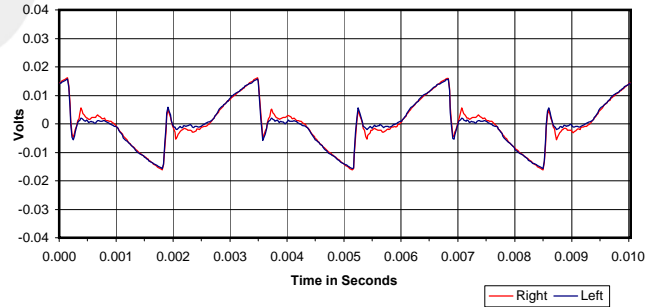
30 Hz Square Wave



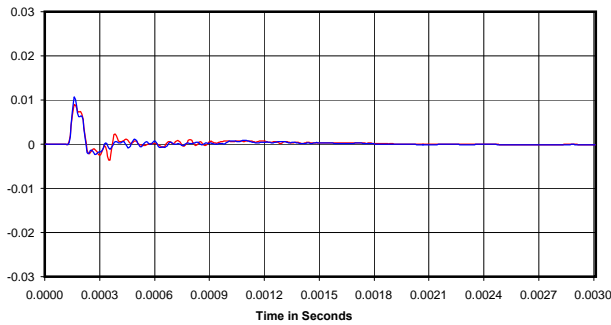
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



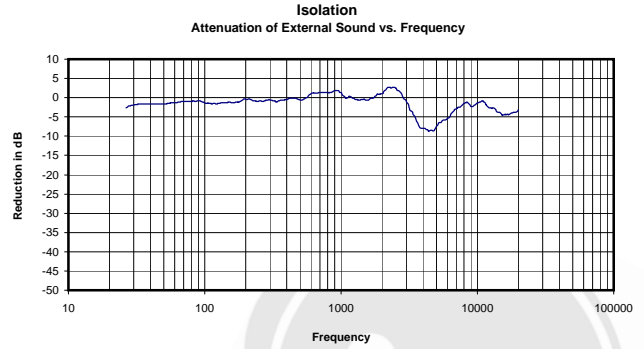
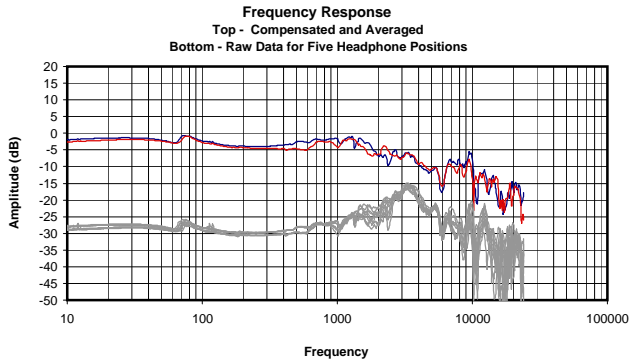
Impulse Response



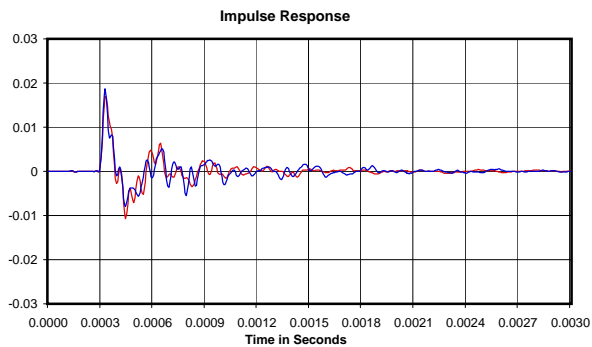
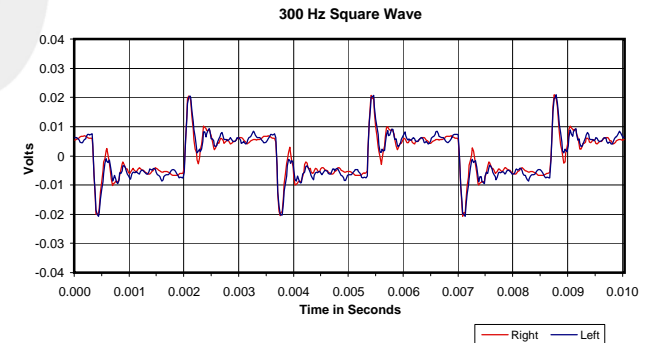
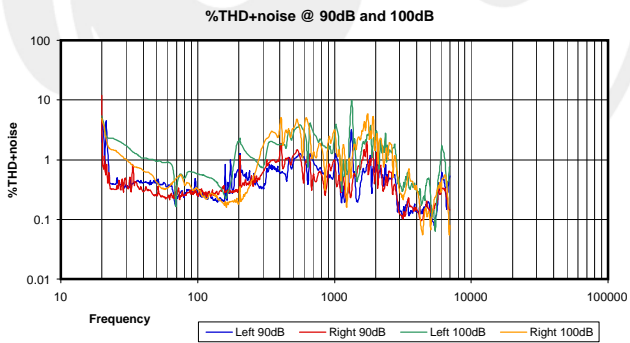
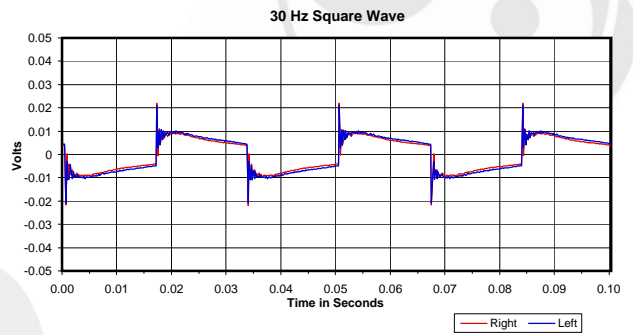
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.042 Vrms
60 Ohms
0.03 mW
-11 dB





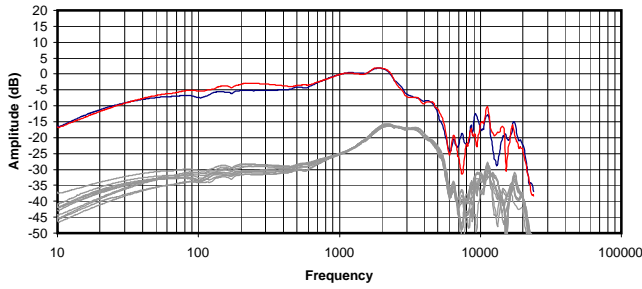
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



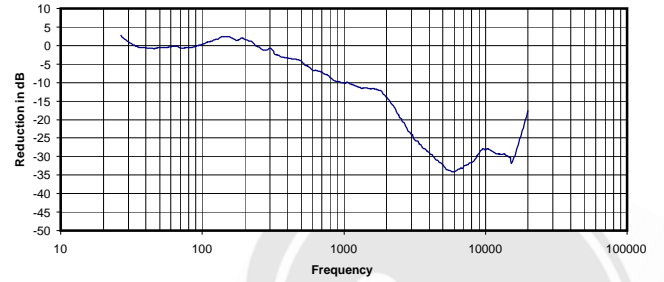
Broadband Isolation in dB (100Hz to 10kHz):

-1 dBr

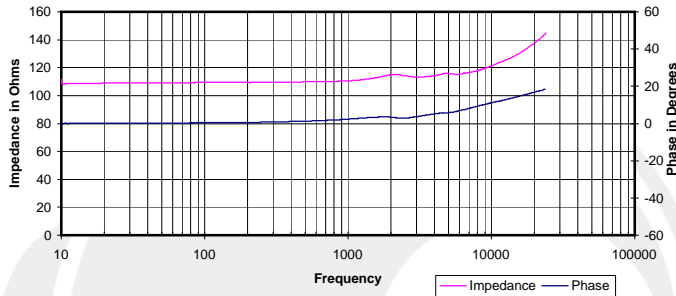
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



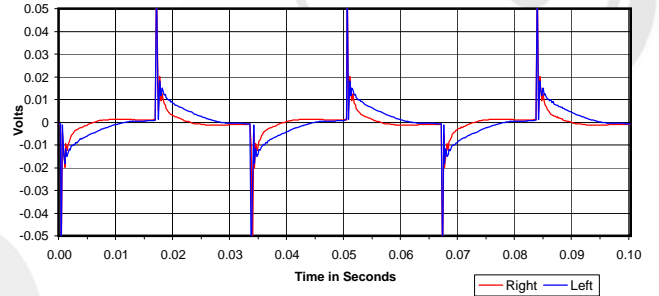
Isolation
 Attenuation of External Sound vs. Frequency



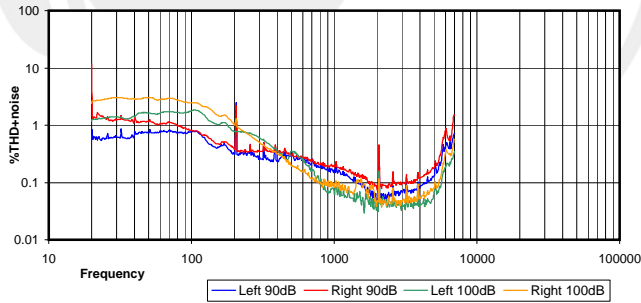
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



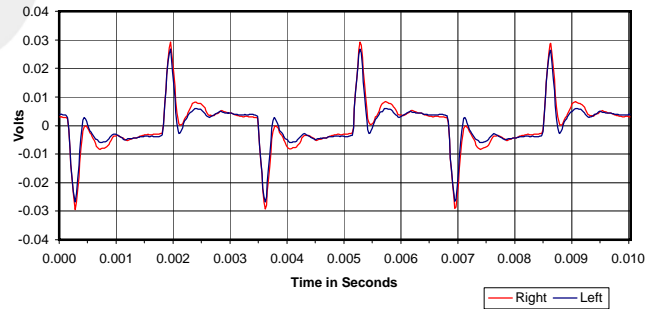
30 Hz Square Wave



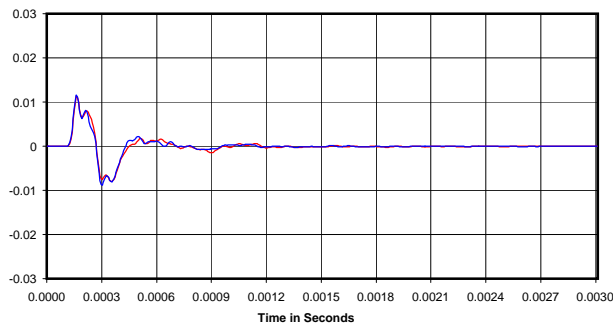
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

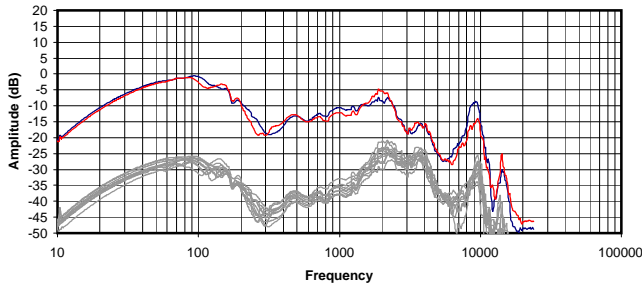


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.063 Vrms
 111 Ohms
 0.04 mW
 -13 dB

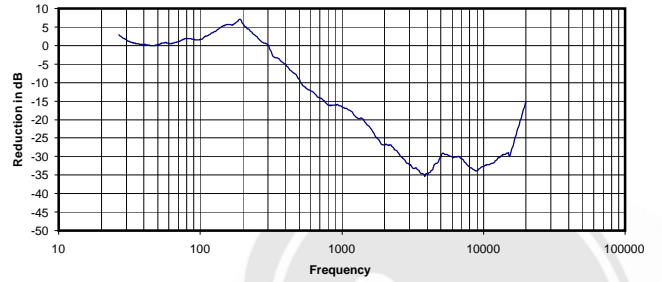


Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions

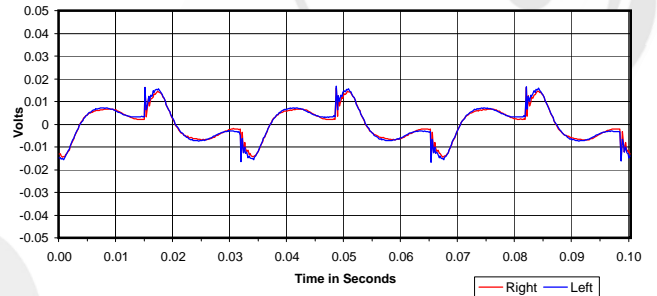


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

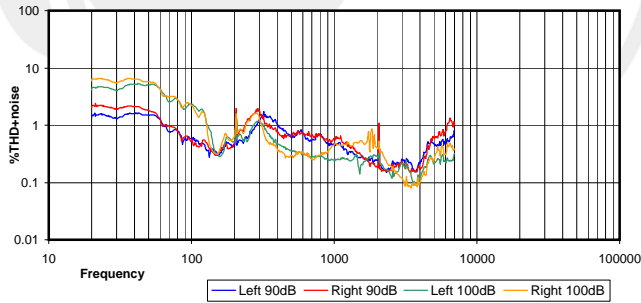
Isolation
Attenuation of External Sound vs. Frequency



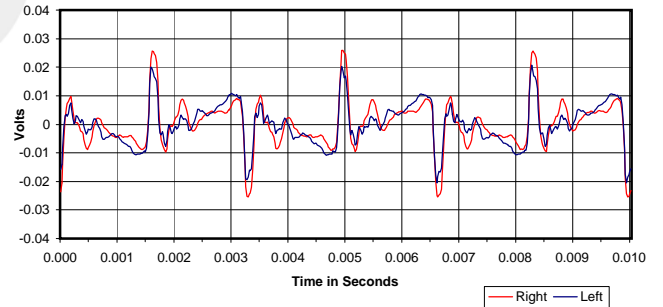
30 Hz Square Wave



%THD+noise @ 90dB and 100dB



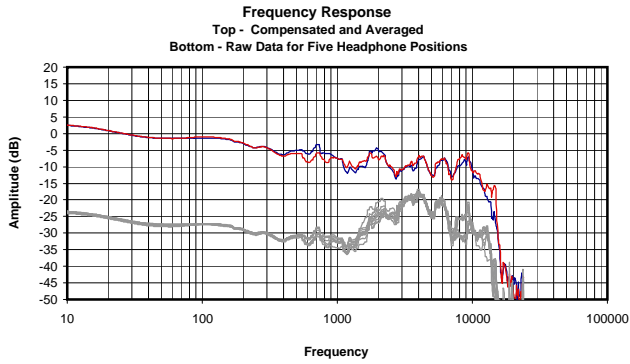
300 Hz Square Wave



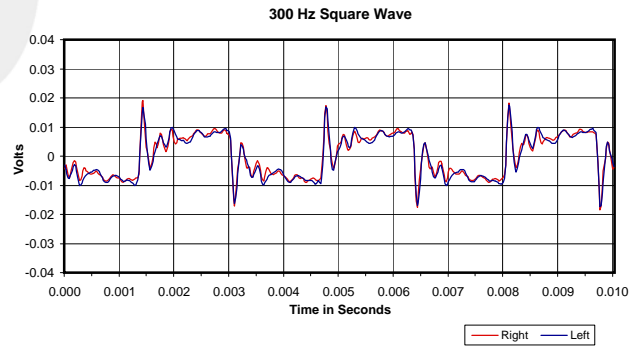
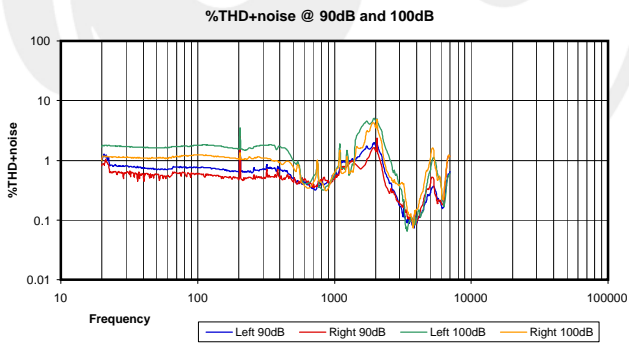
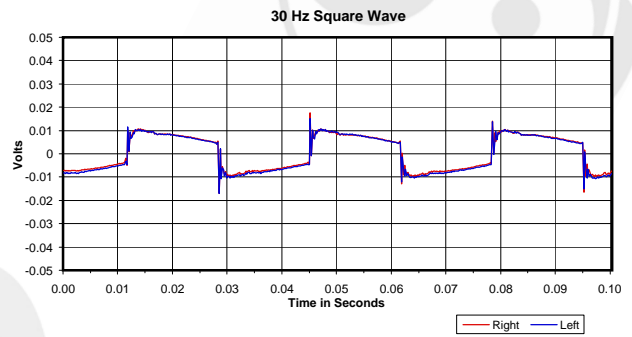
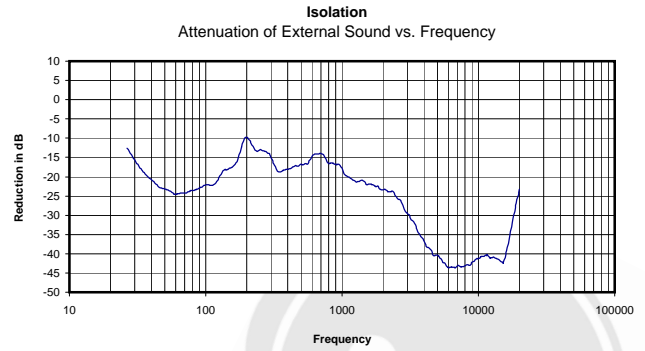
Broadband Isolation in dB (100Hz to 10kHz):

-16 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



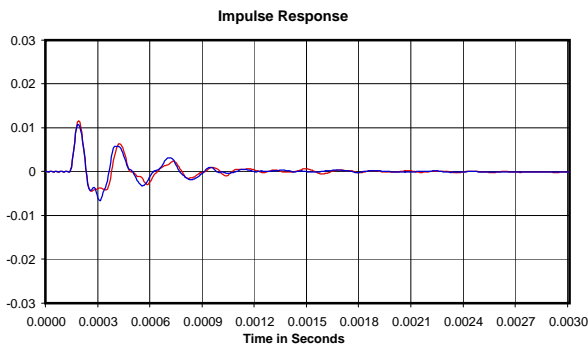
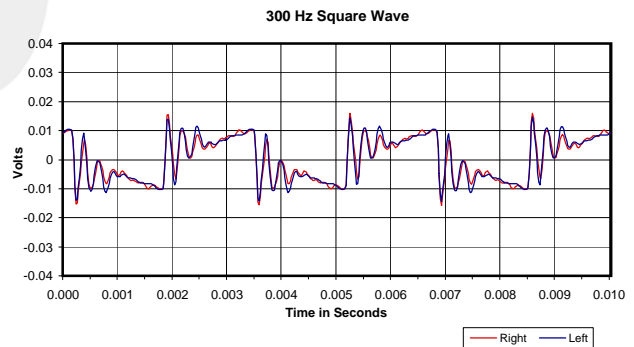
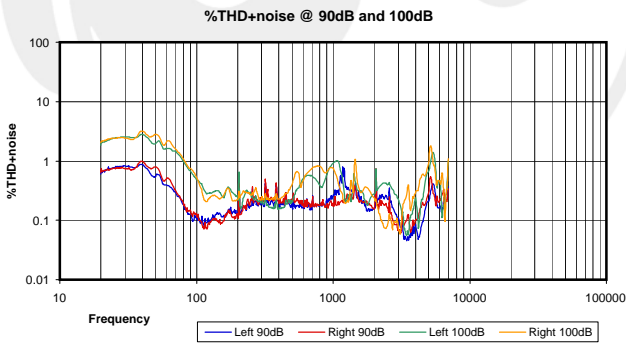
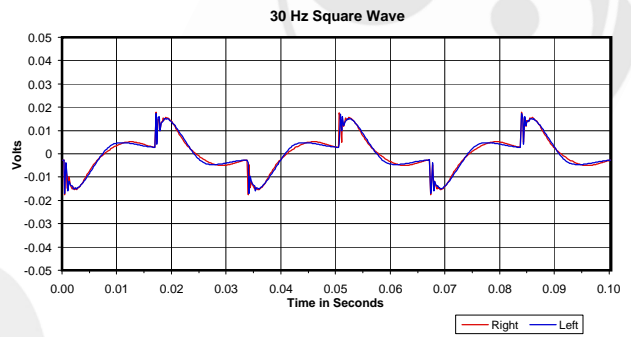
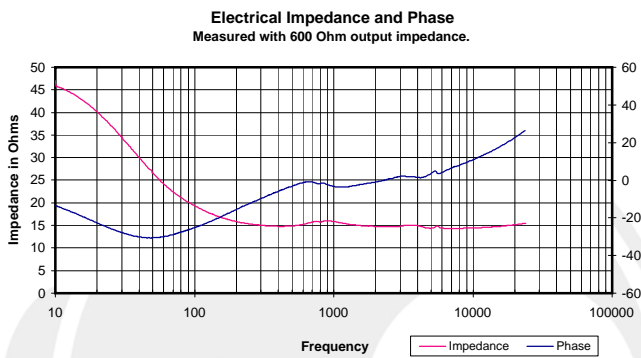
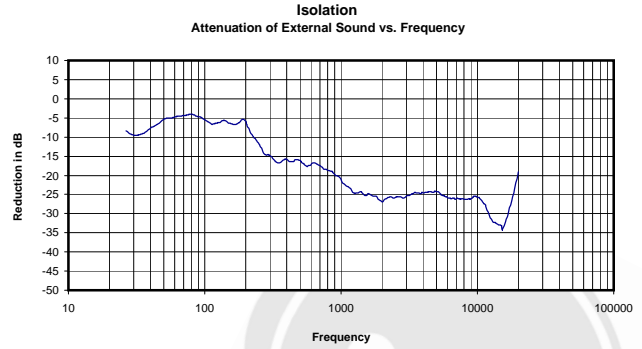
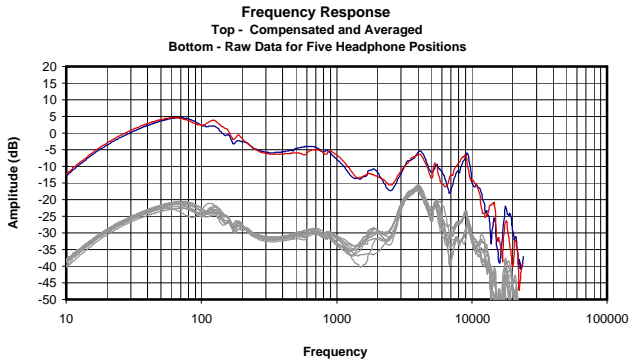
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

-24 dBr

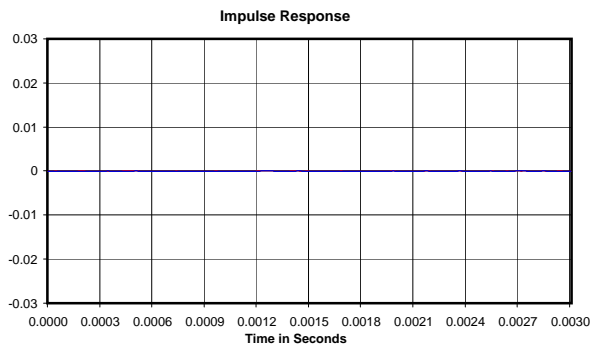
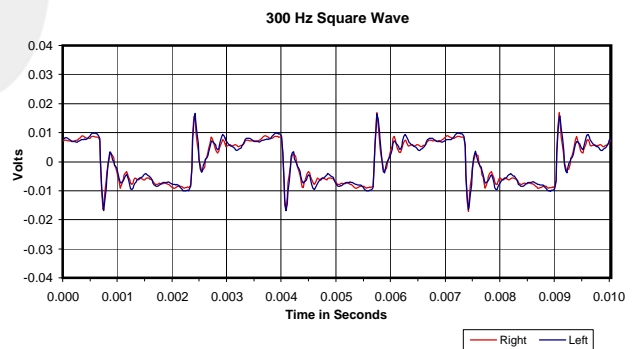
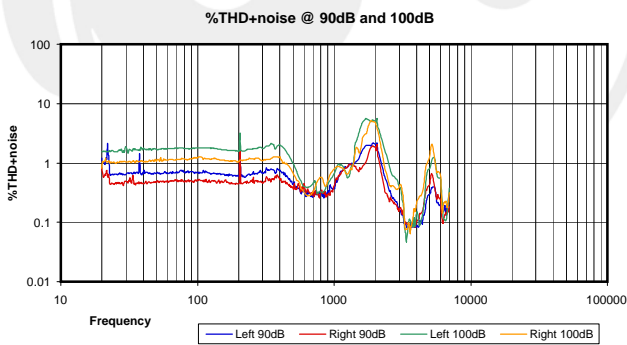
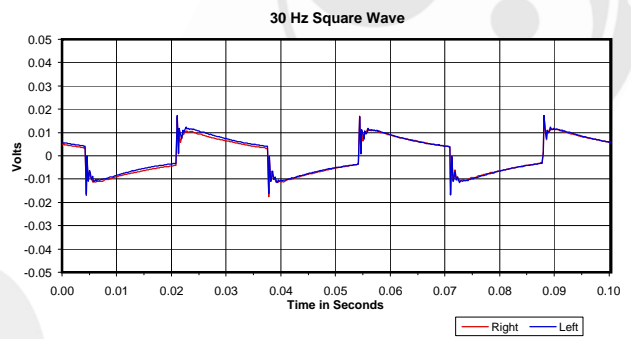
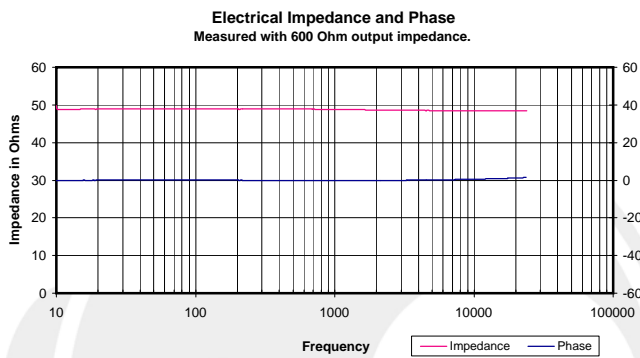
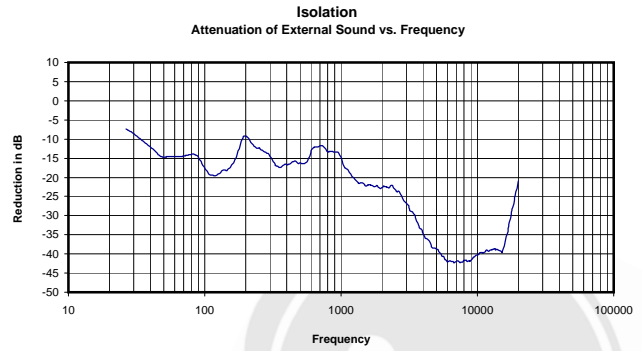
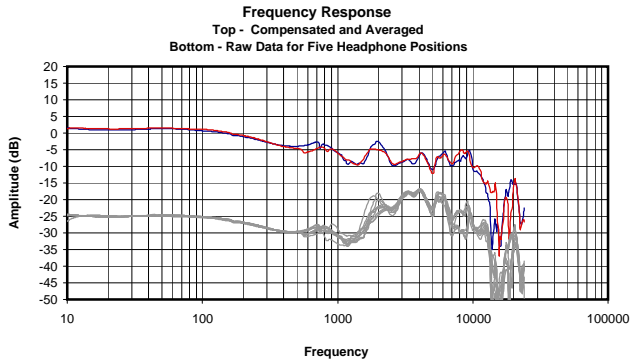
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.110 Vrms
16 Ohms
0.77 mW
-19 dBr



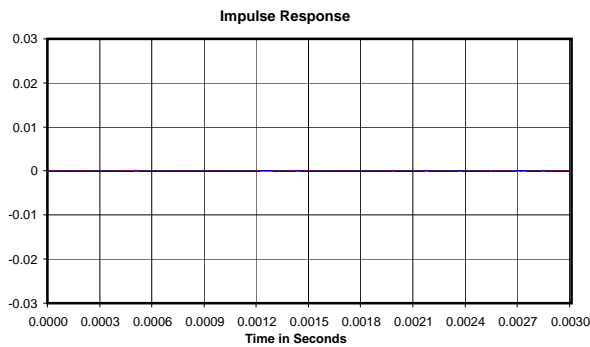
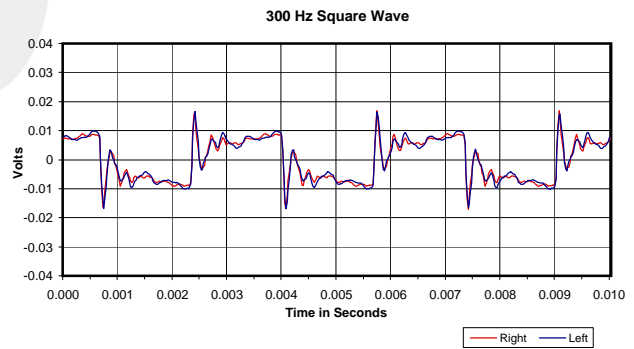
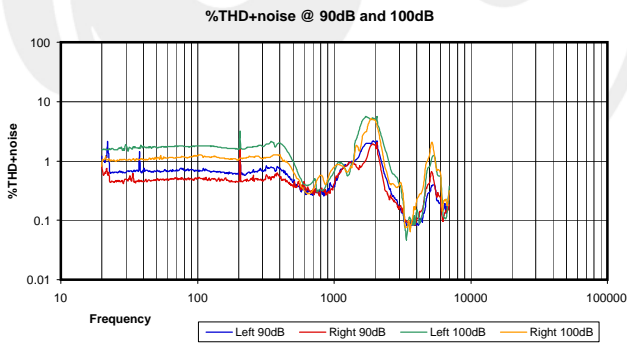
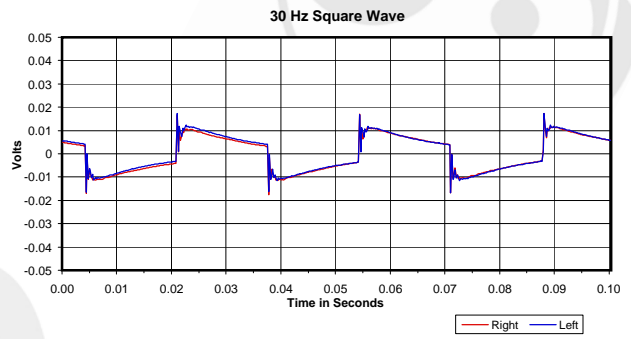
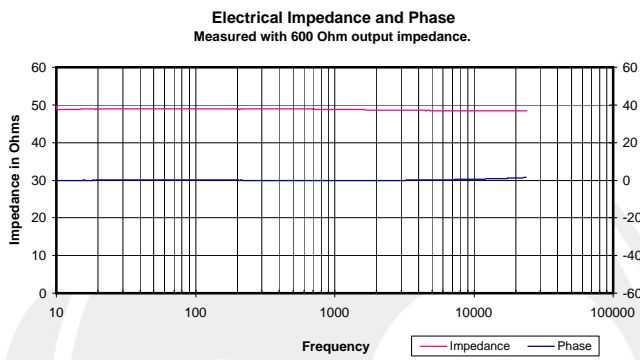
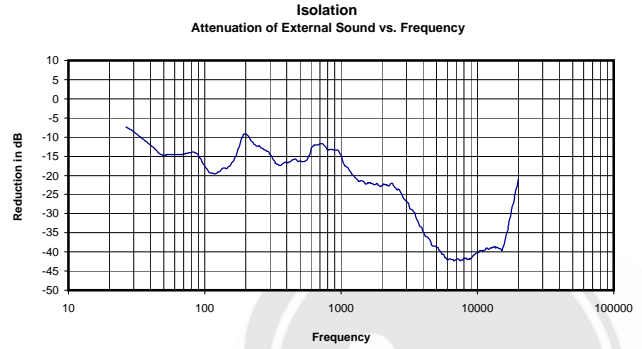
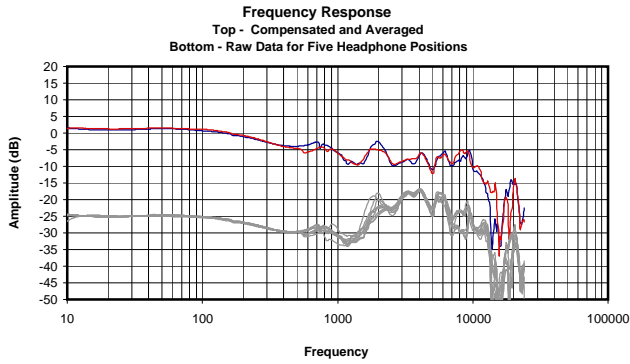


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.008 Vrms
49 Ohms
0.00 mW
-23 dBr



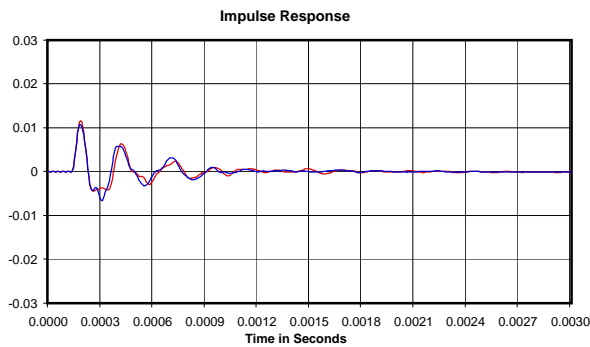
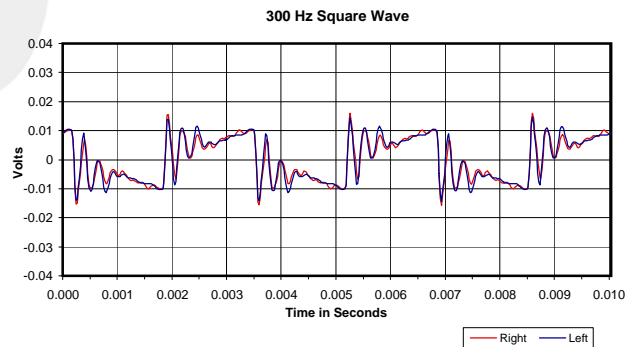
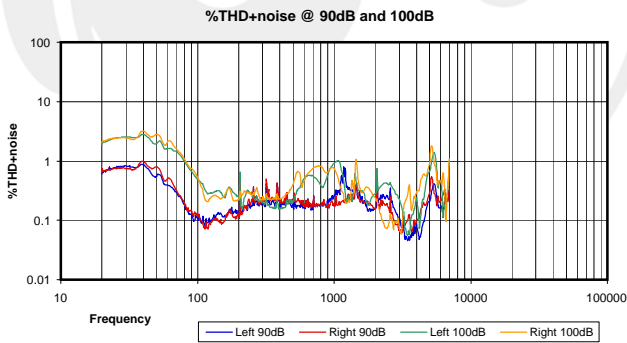
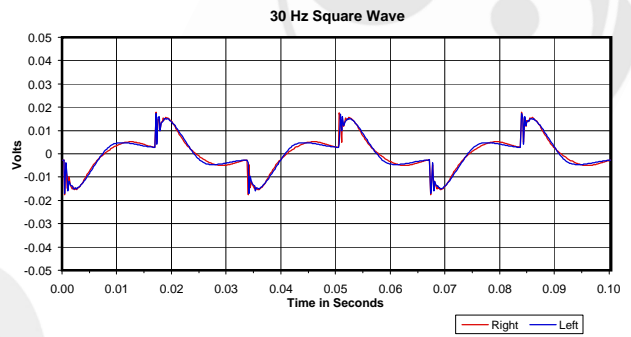
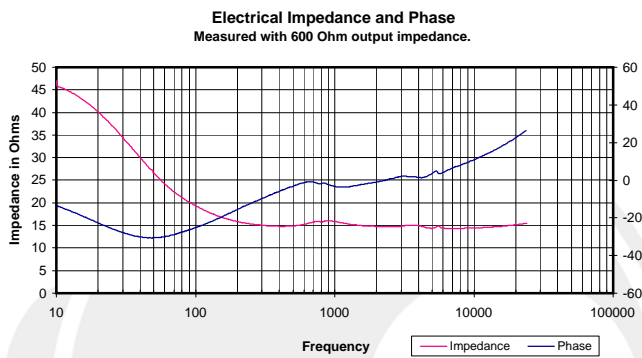
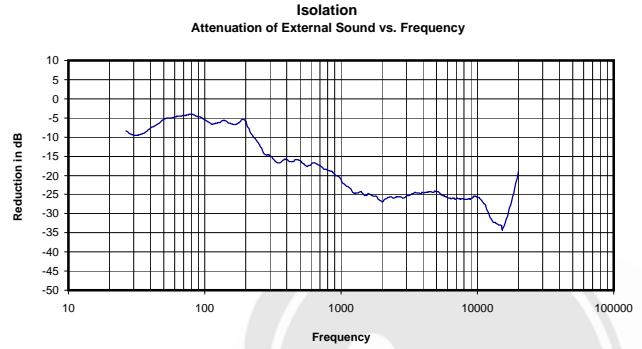
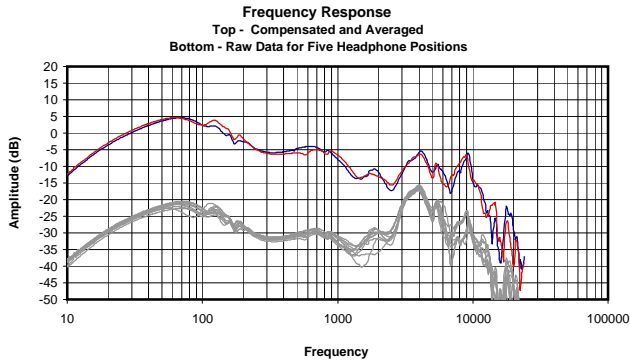
Headphone Measurements: Sony MDR 1000X Wired NC Active



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.008 Vrms
49 Ohms
0.00 mW
-23 dBr

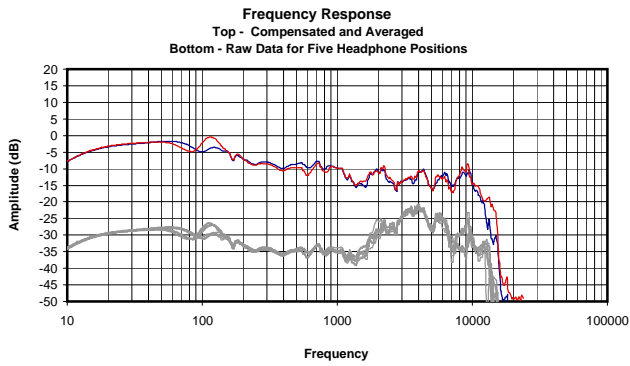




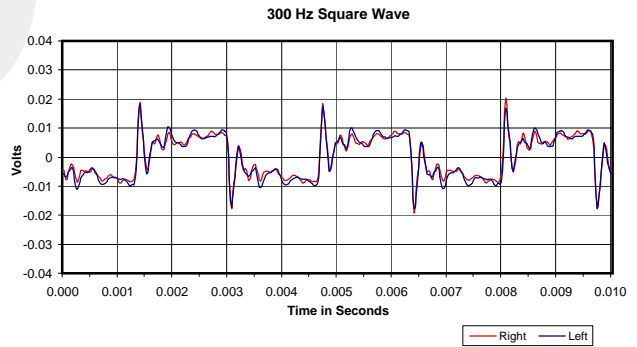
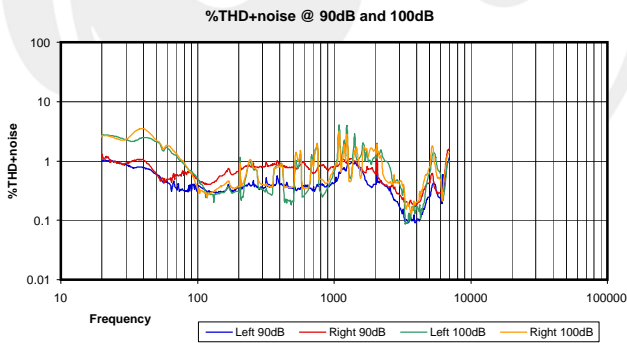
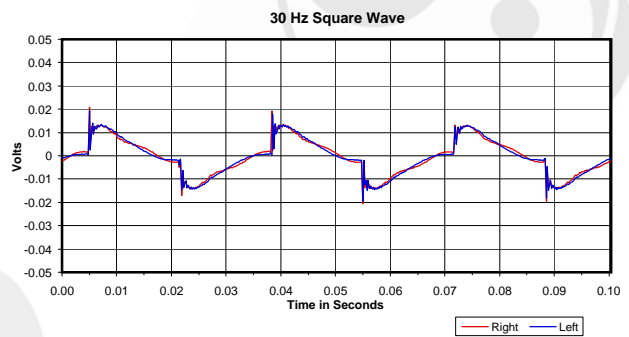
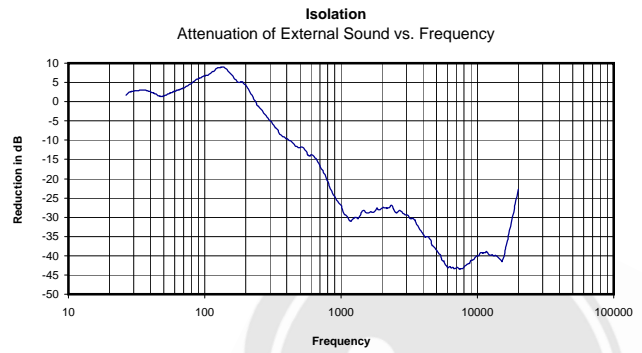
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.110 Vrms
16 Ohms
0.77 mW
-19 dBr





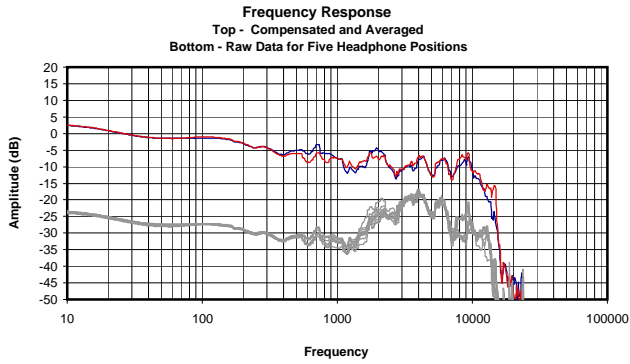
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



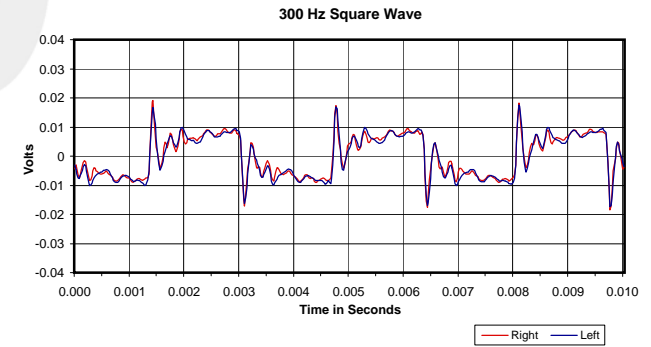
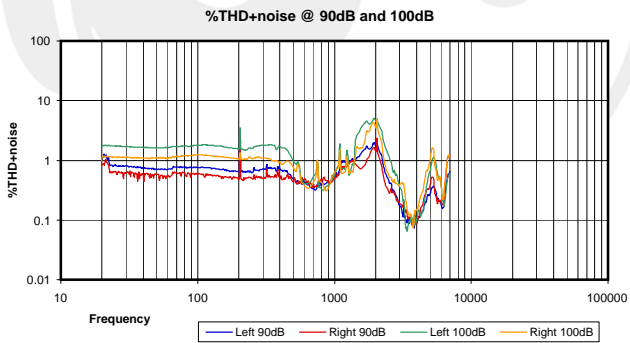
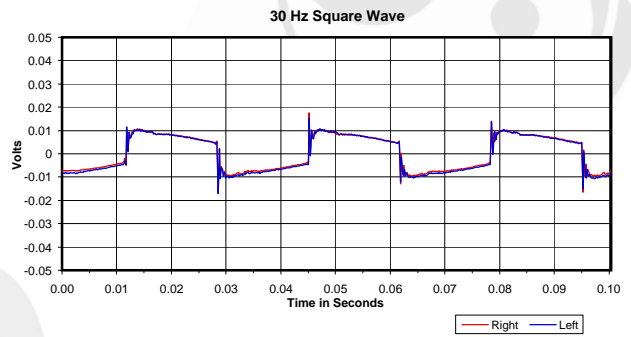
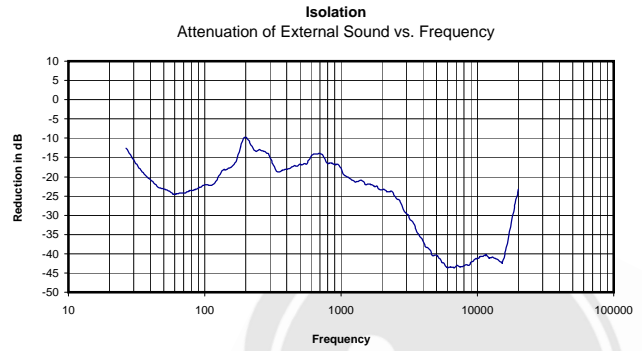
Broadband Isolation in dB (100Hz to 10kHz):

-20 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



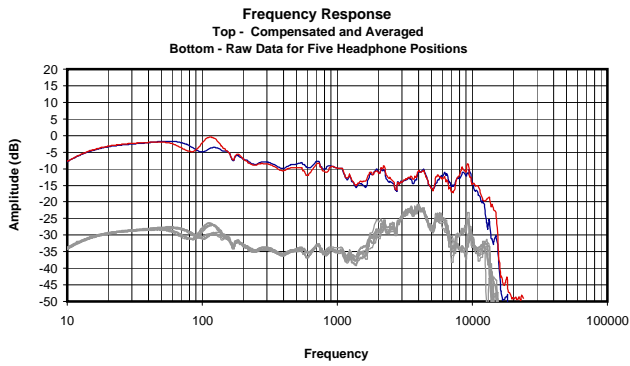
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



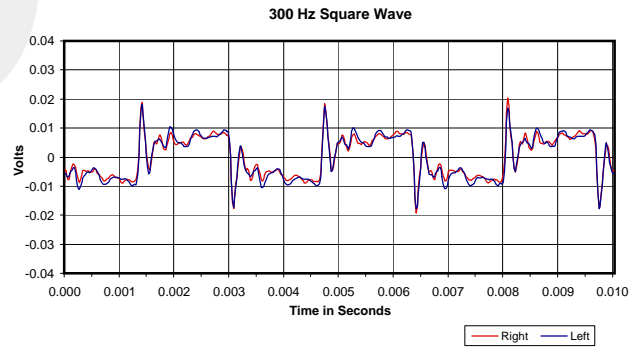
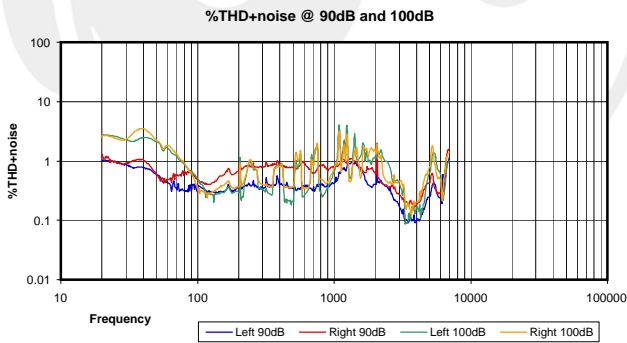
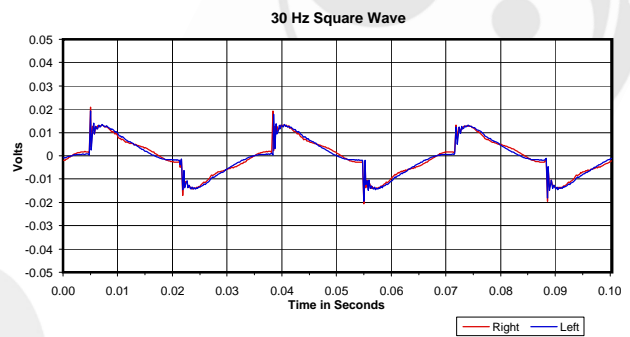
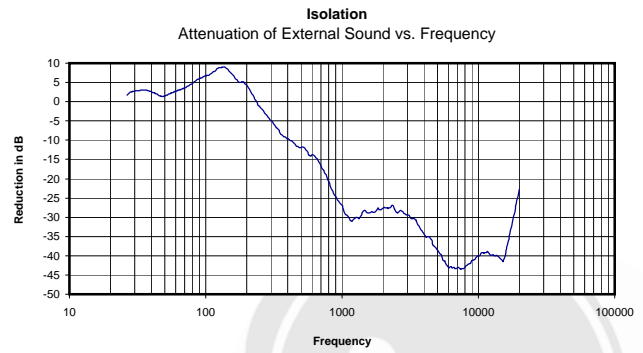
Broadband Isolation in dB (100Hz to 10kHz):

-24 dBr

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



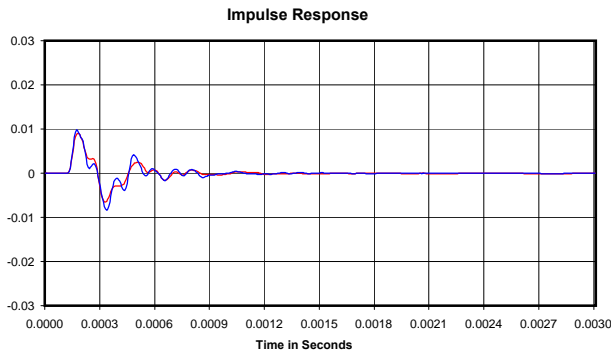
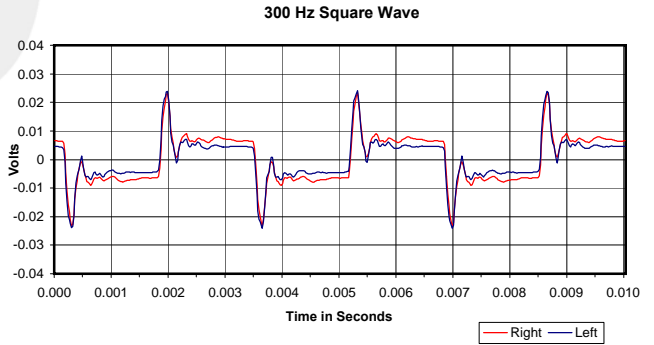
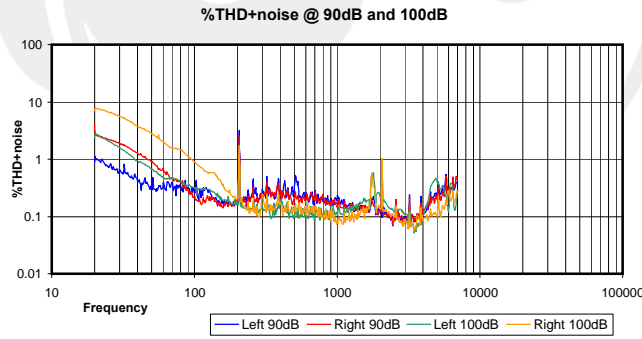
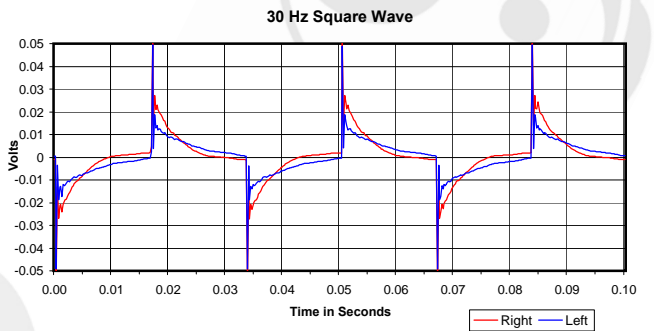
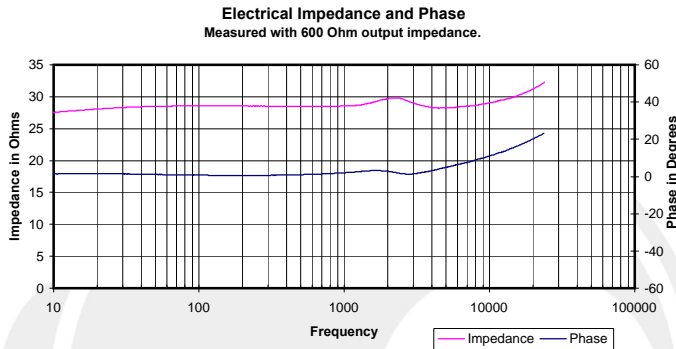
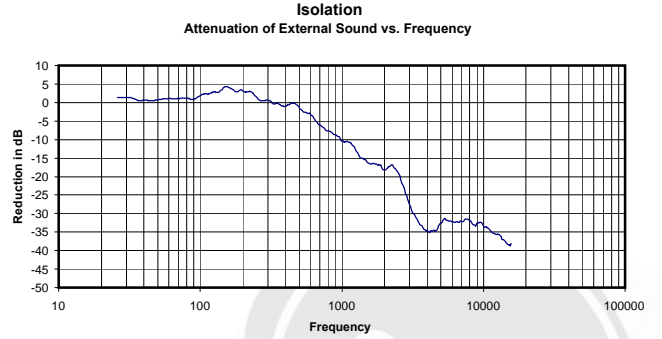
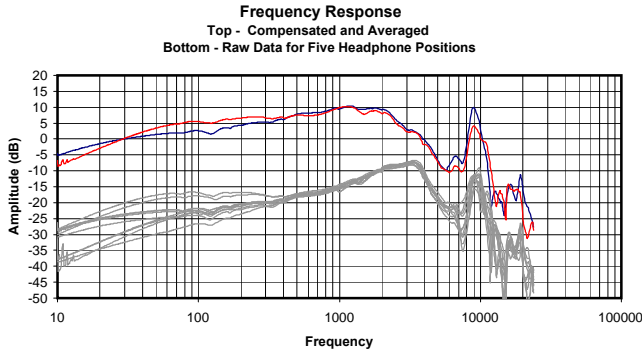
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

-20 dB

Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.

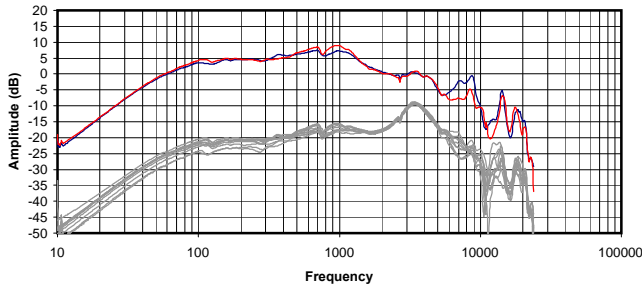


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

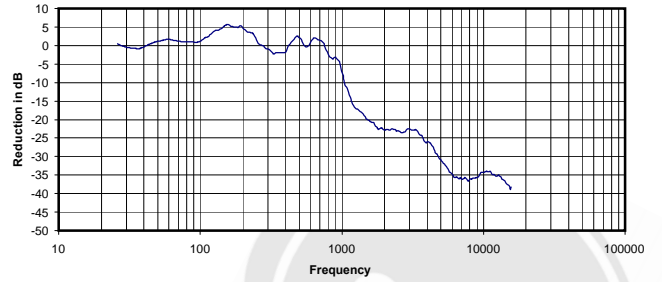
0.042 Vrms
29 Ohms
0.06 mW
-10 dB



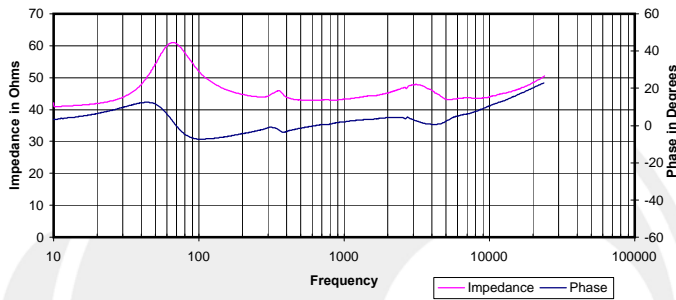
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



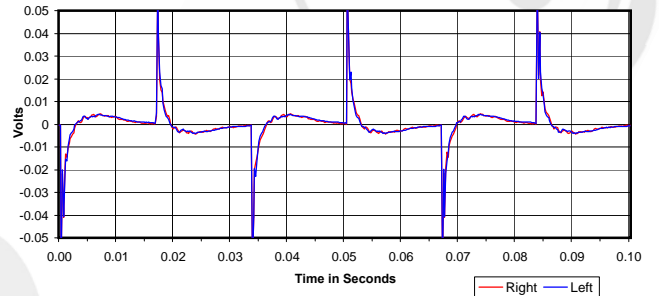
Isolation
 Attenuation of External Sound vs. Frequency



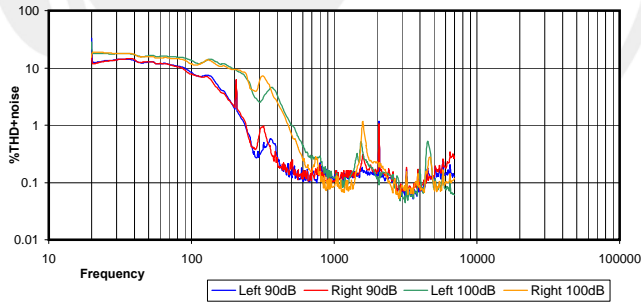
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



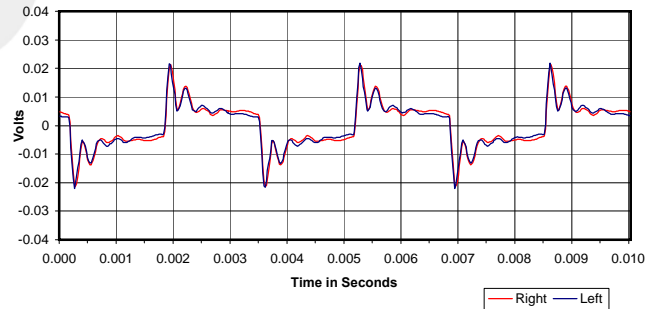
30 Hz Square Wave



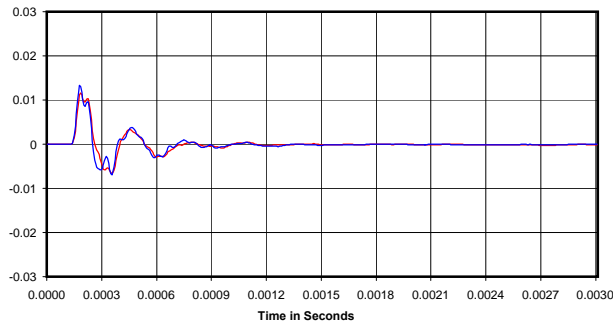
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



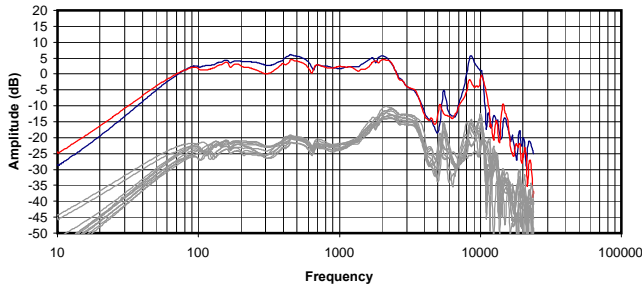
Impulse Response



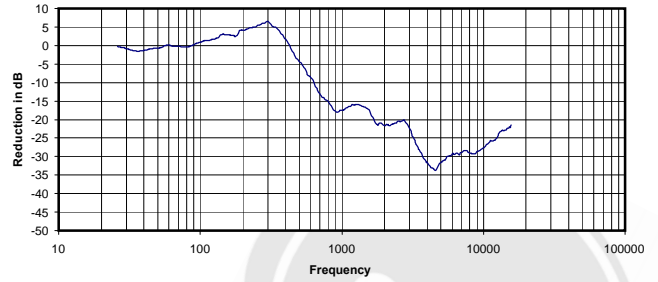
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.035 Vrms
 43 Ohms
 0.03 mW
 -9 dB

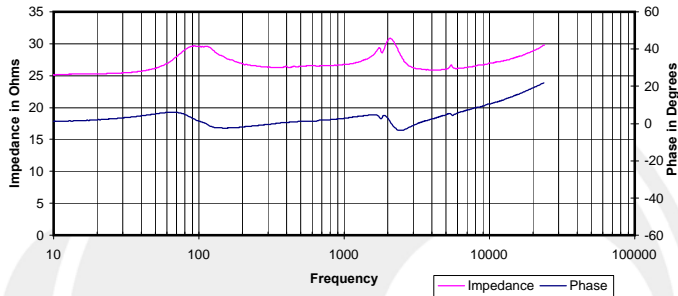
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



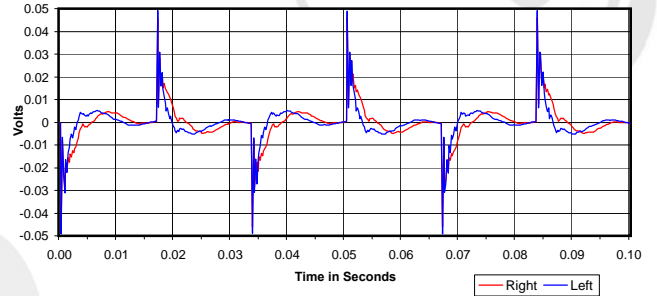
Isolation
 Attenuation of External Sound vs. Frequency



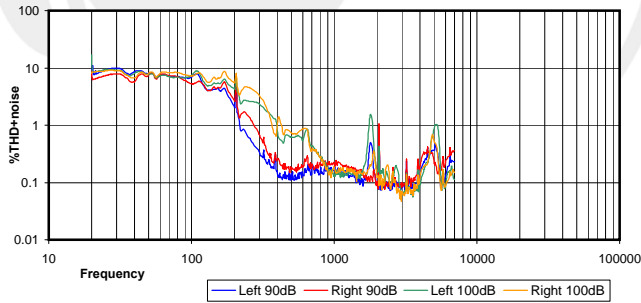
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



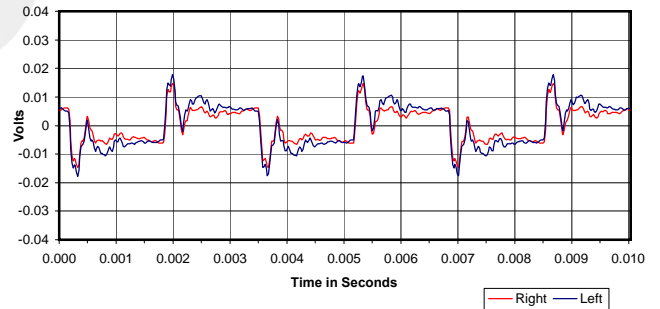
30 Hz Square Wave



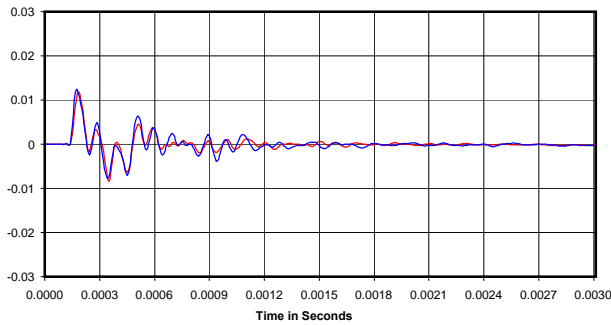
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

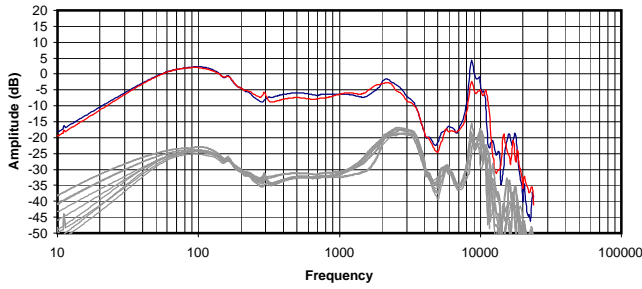


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

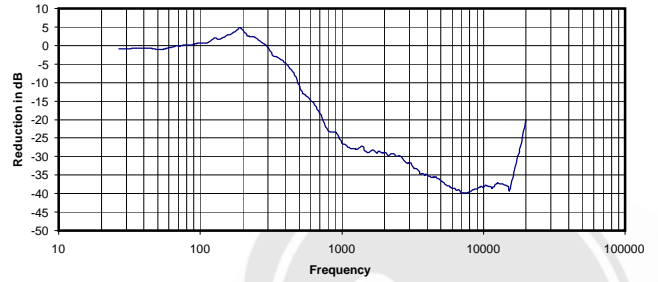
0.049 Vrms
 27 Ohms
 0.09 mW
 -11 dB



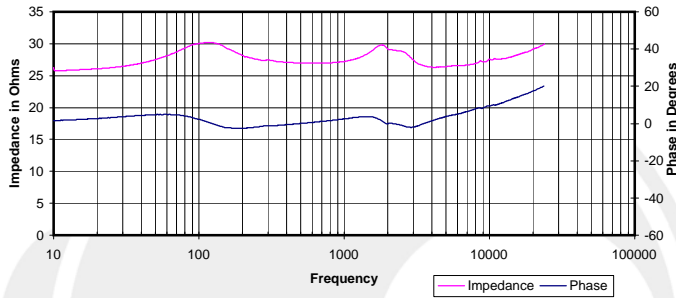
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



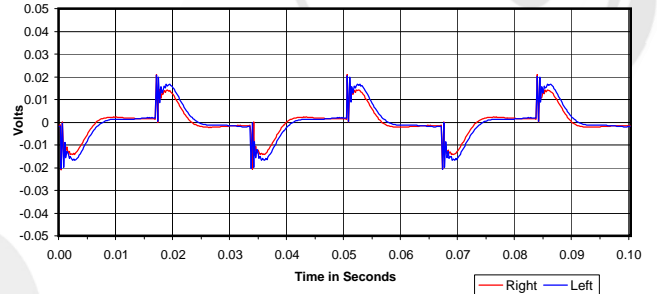
Isolation
 Attenuation of External Sound vs. Frequency



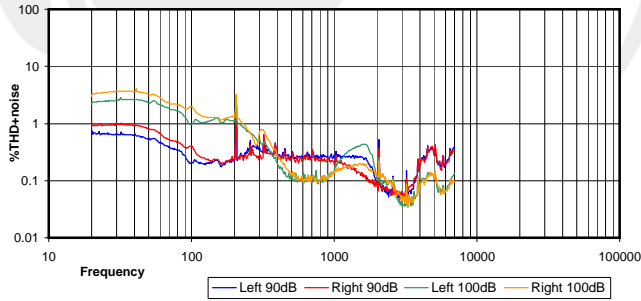
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



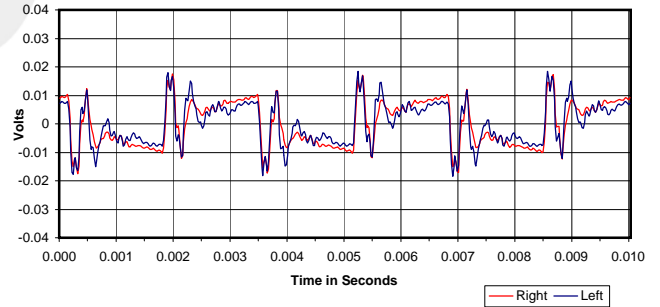
30 Hz Square Wave



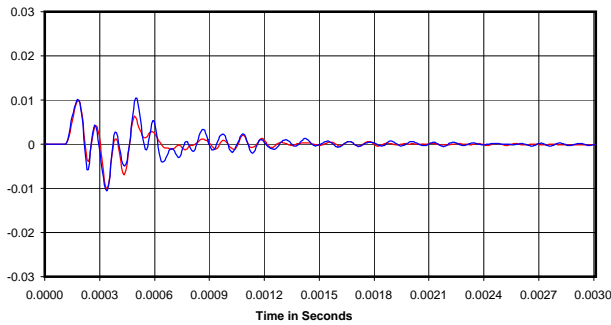
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

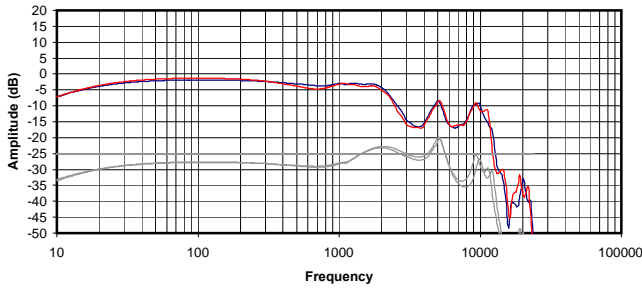


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

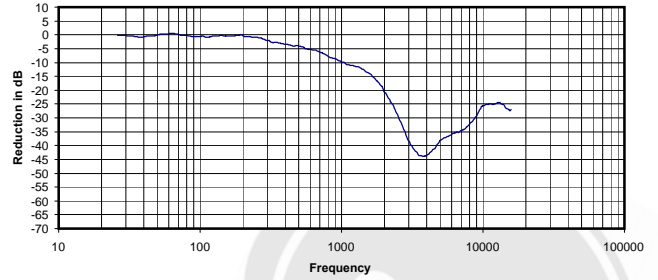
0.055 Vrms
 27 Ohms
 0.11 mW
 -20 dB



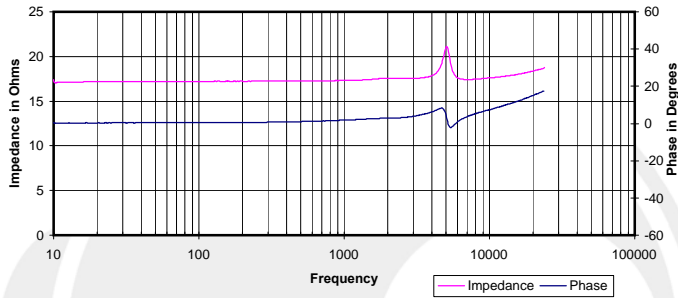
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



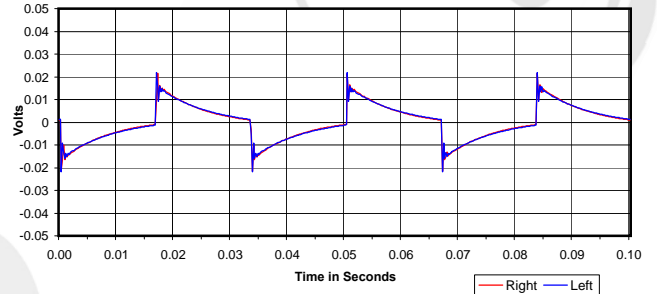
Isolation
Attenuation of External Sound vs. Frequency



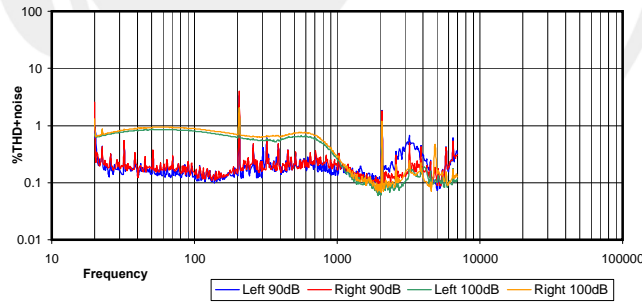
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



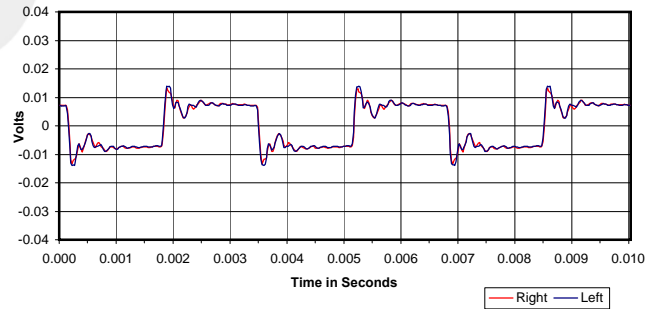
30 Hz Square Wave



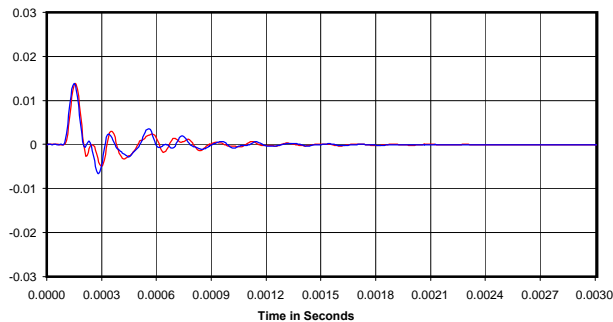
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



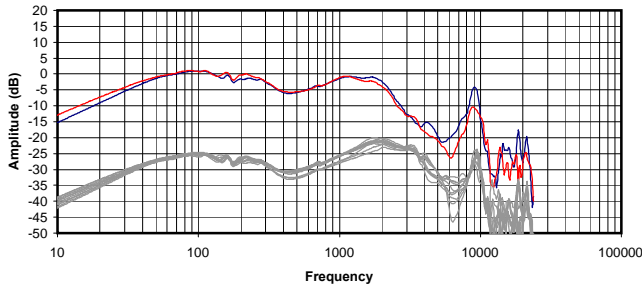
Impulse Response



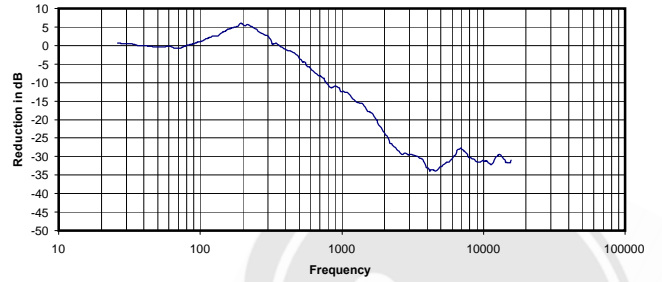
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.018 Vrms
17 Ohms
0.02 mW
-14 dB

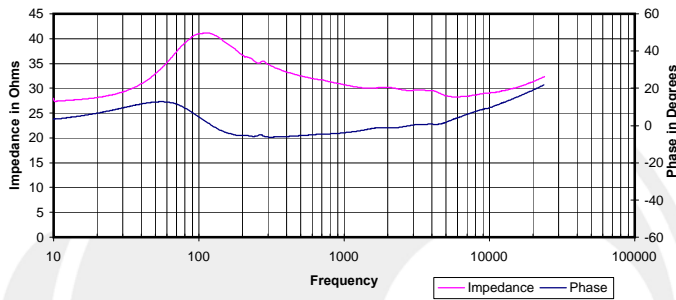
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



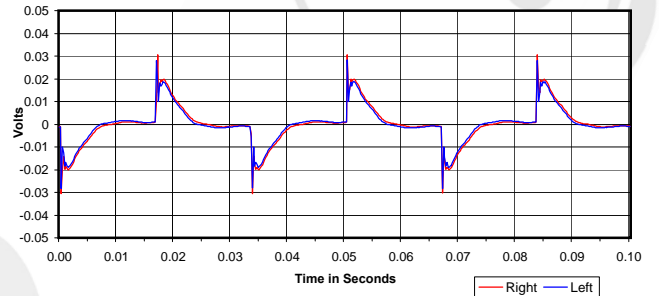
Isolation
 Attenuation of External Sound vs. Frequency



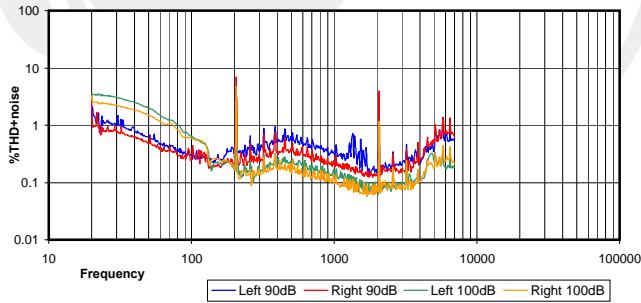
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



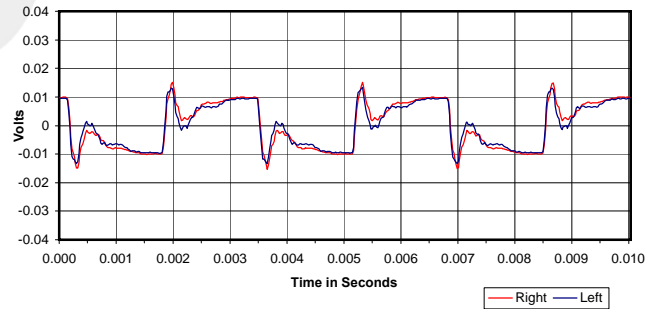
30 Hz Square Wave



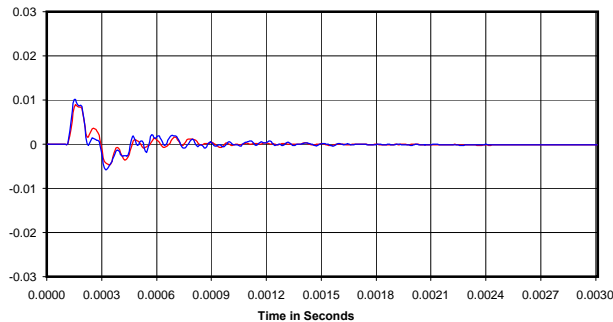
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

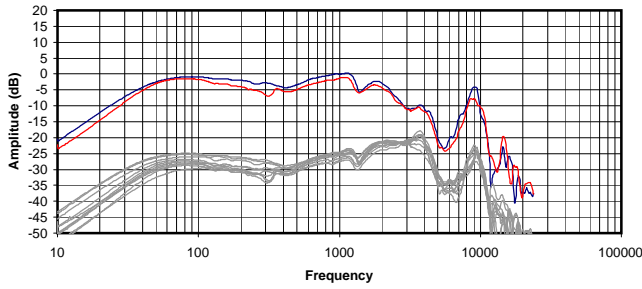


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

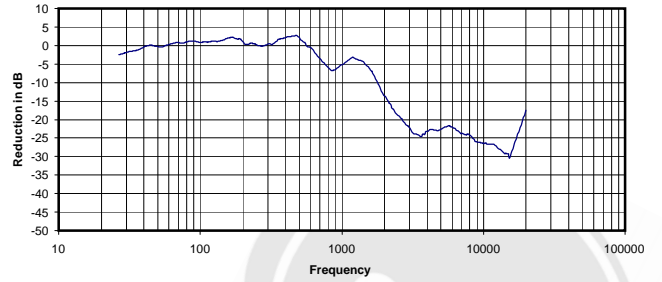
0.024 Vrms
 31 Ohms
 0.02 mW
 -11 dB



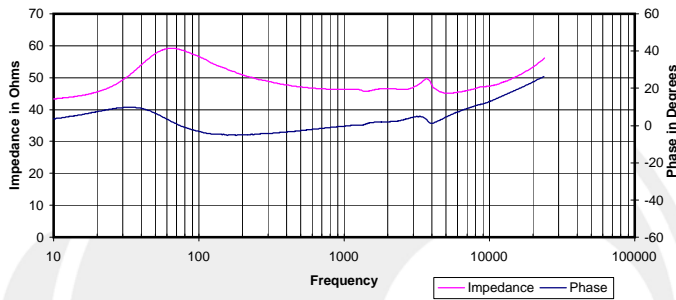
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



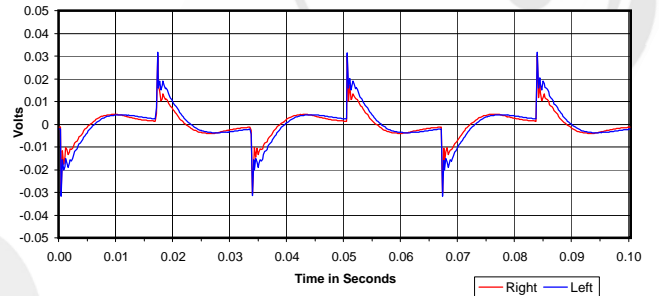
Isolation
 Attenuation of External Sound vs. Frequency



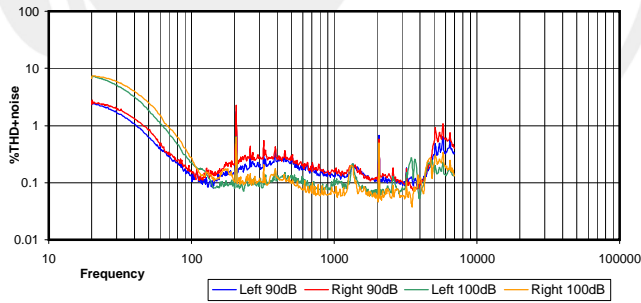
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



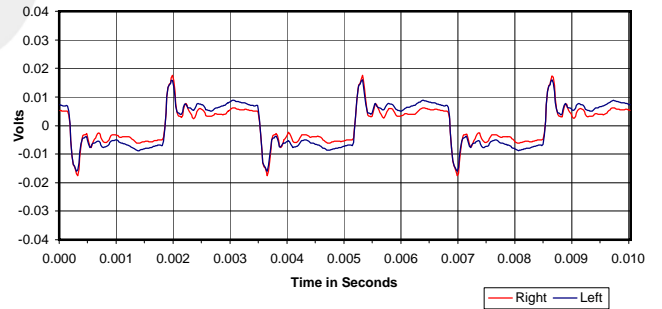
30 Hz Square Wave



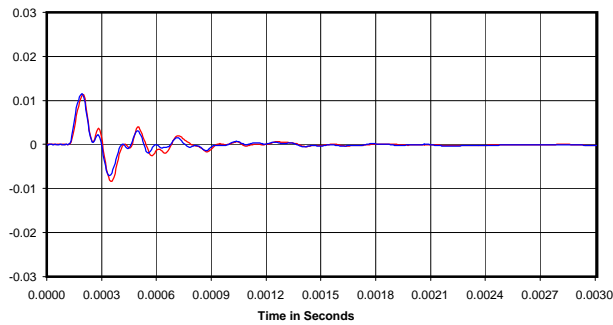
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

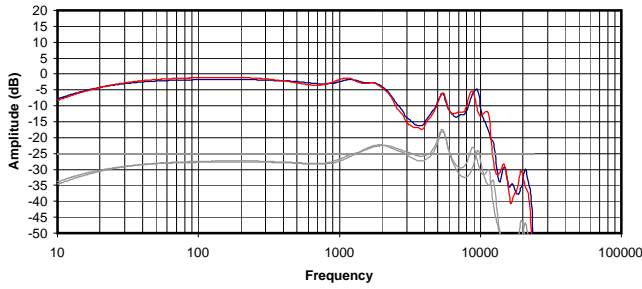


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

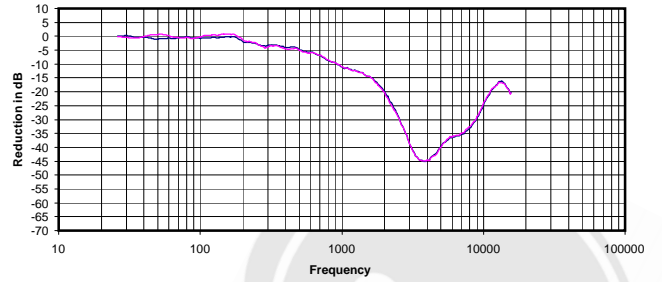
0.025 Vrms
 46 Ohms
 0.01 mW
 -9 dB



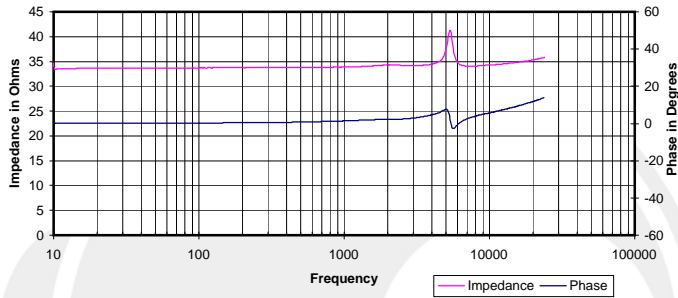
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



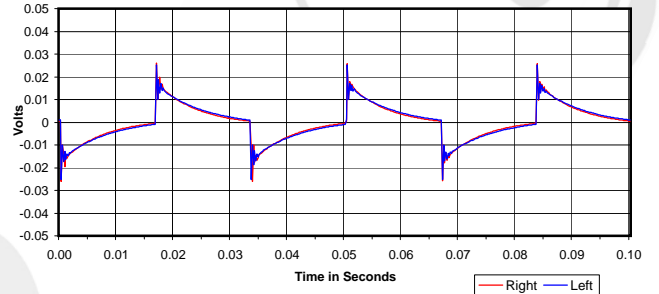
Isolation
Attenuation of External Sound vs. Frequency



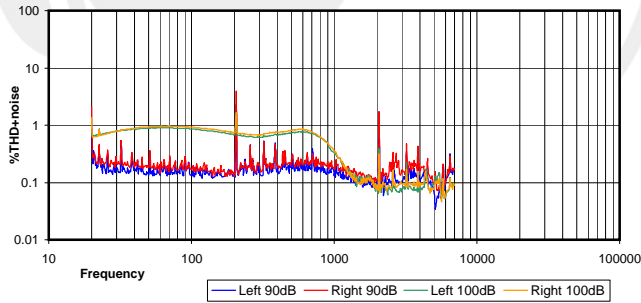
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



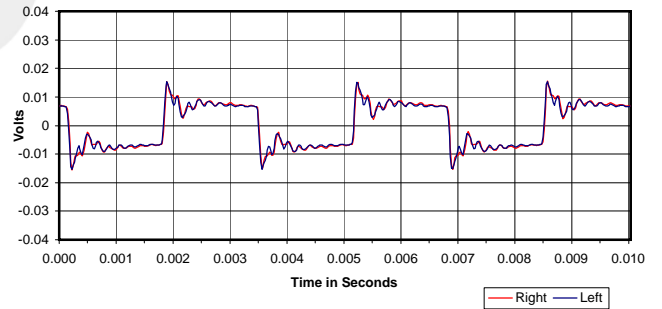
30 Hz Square Wave



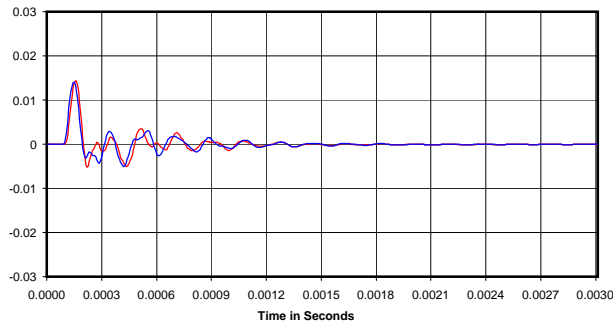
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

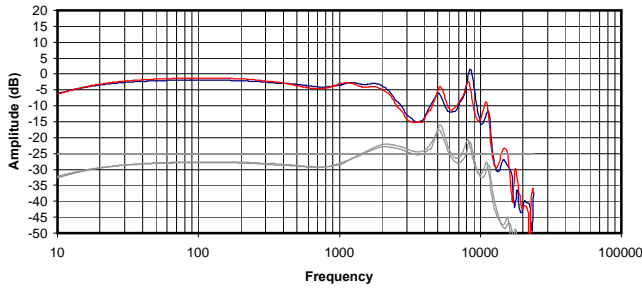


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

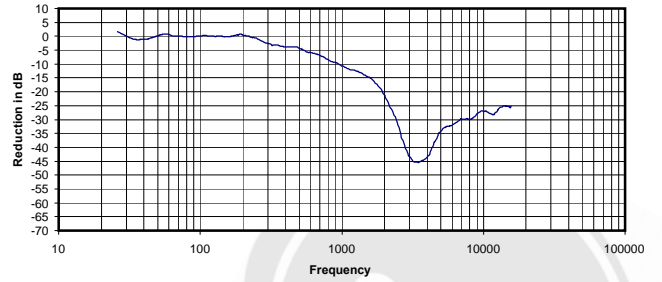
0.027 Vrms
34 Ohms
0.02 mW
-14 dB



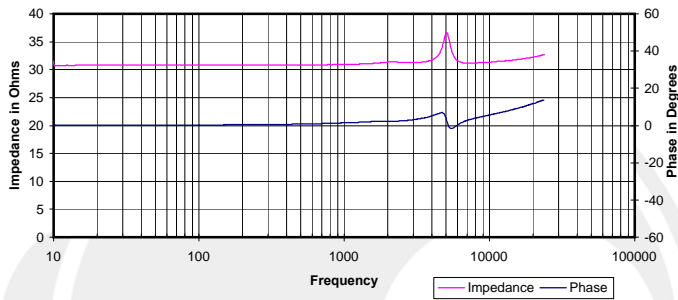
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



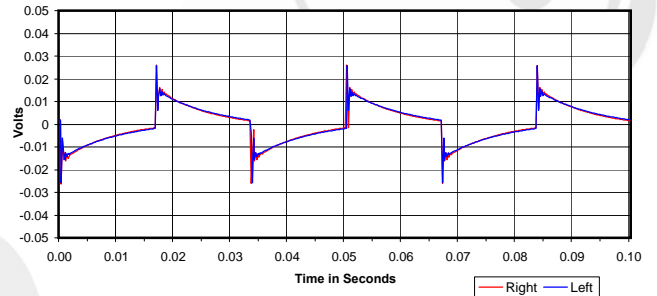
Isolation
Attenuation of External Sound vs. Frequency



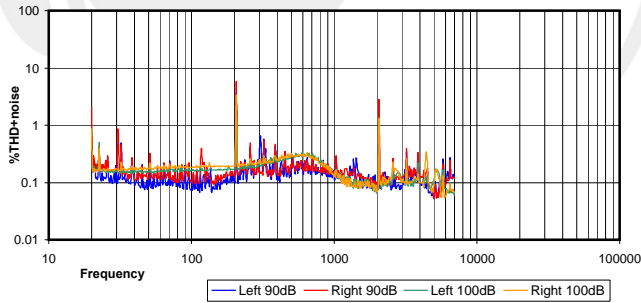
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



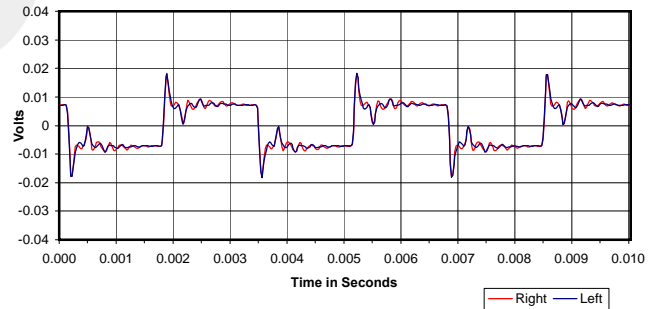
30 Hz Square Wave



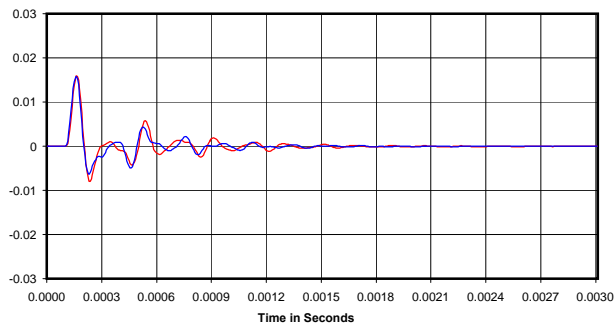
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



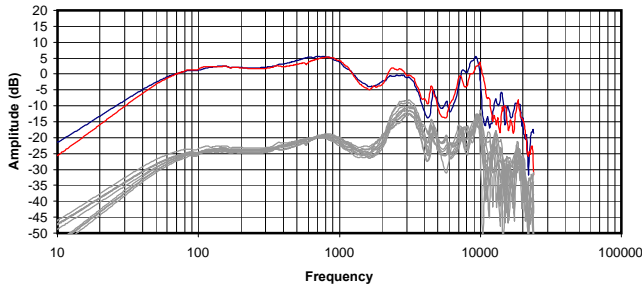
Impulse Response



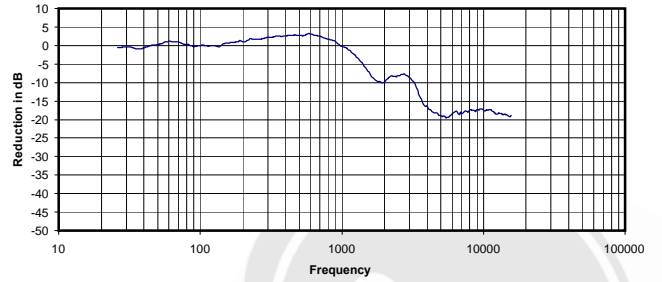
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.032 Vrms
31 Ohms
0.03 mW
-14 dB

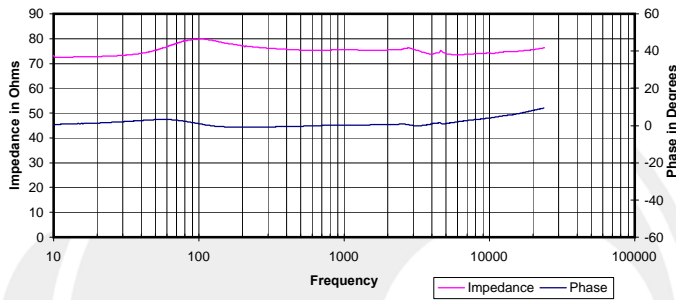
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



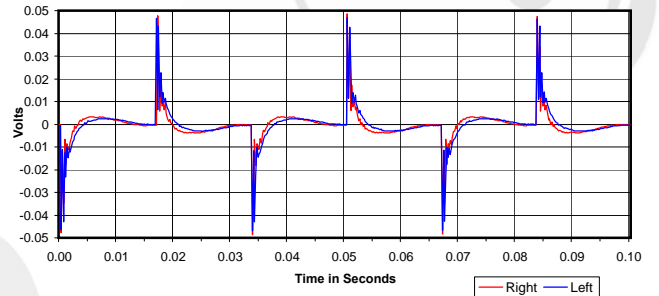
Isolation
 Attenuation of External Sound vs. Frequency



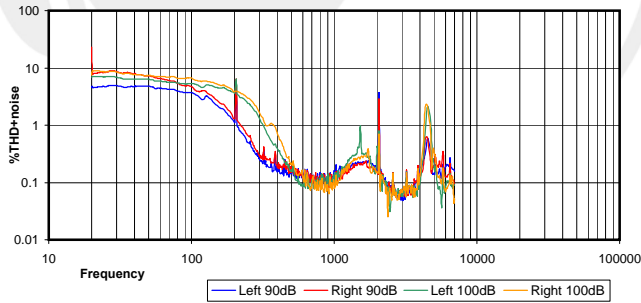
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



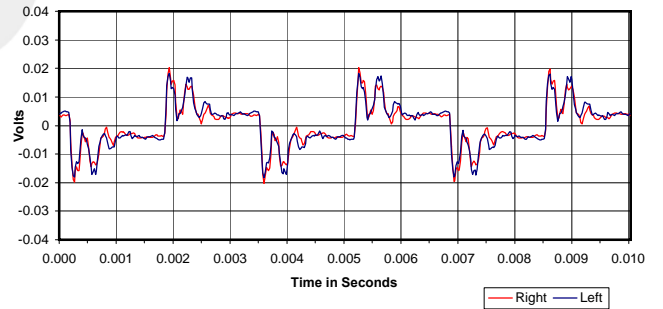
30 Hz Square Wave



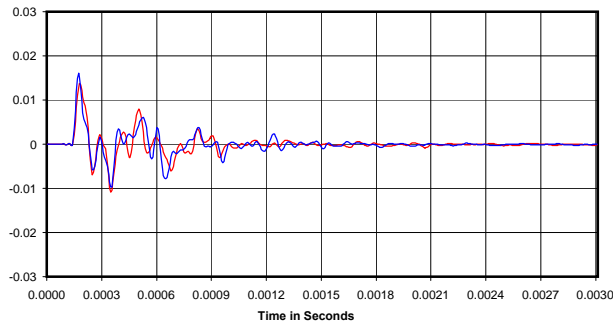
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

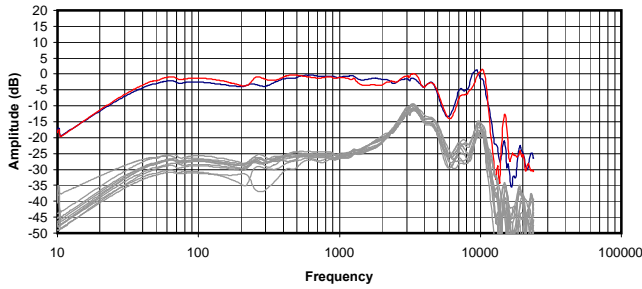


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

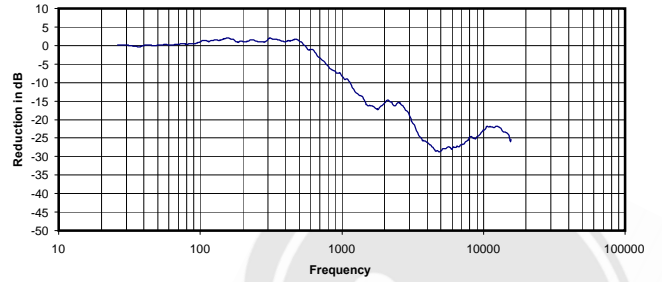
0.093 Vrms
 76 Ohms
 0.11 mW
 -4 dBr



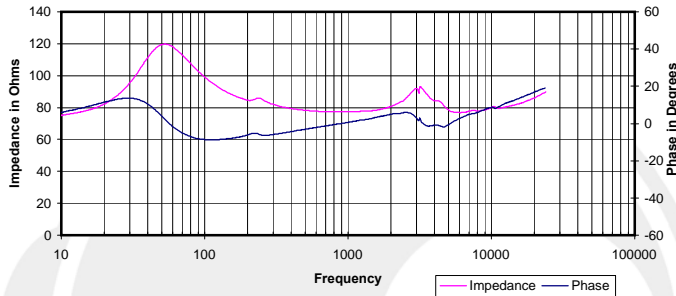
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



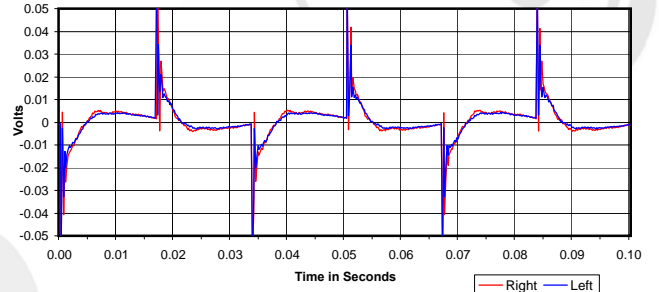
Isolation
 Attenuation of External Sound vs. Frequency



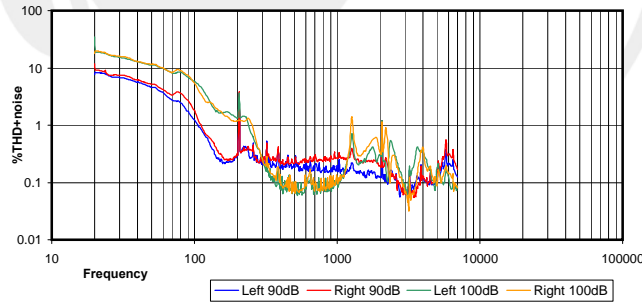
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



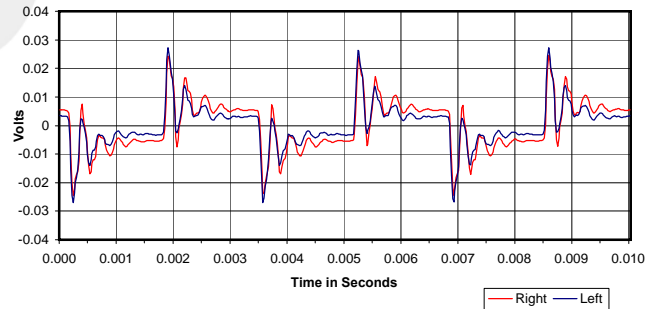
30 Hz Square Wave



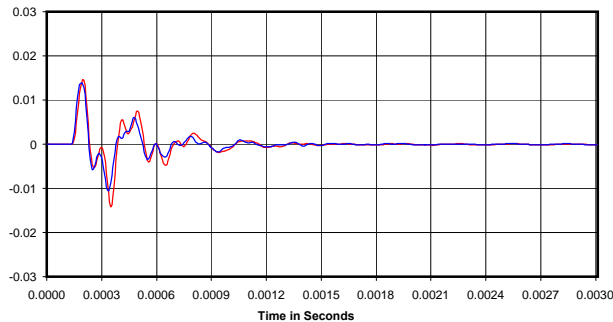
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

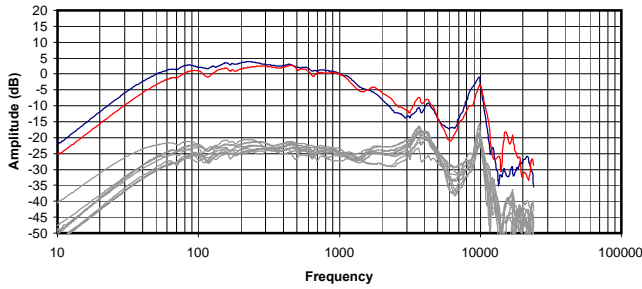


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

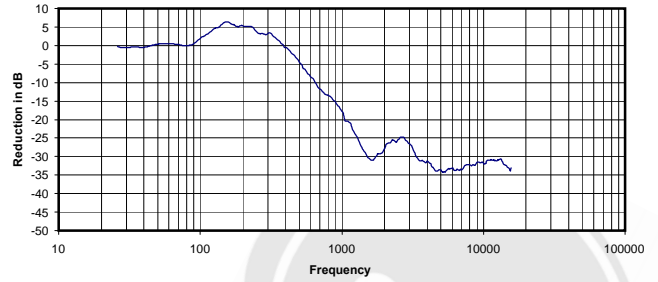
0.061 Vrms
 77 Ohms
 0.05 mW
 -8 dBr



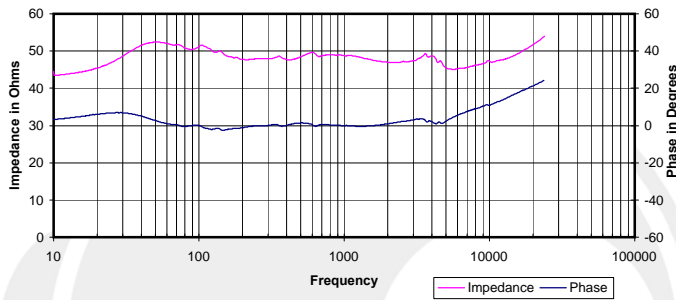
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



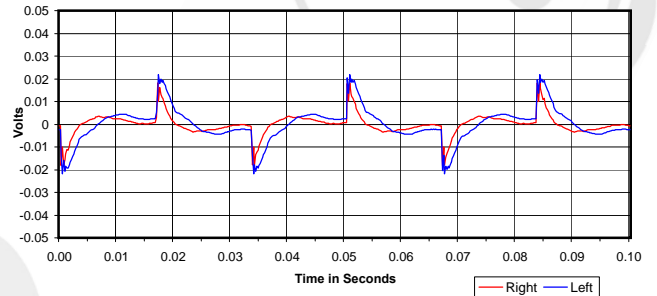
Isolation
Attenuation of External Sound vs. Frequency



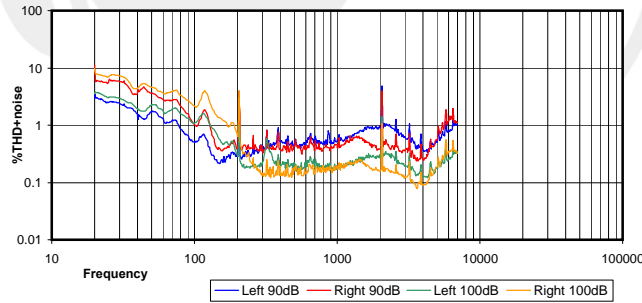
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



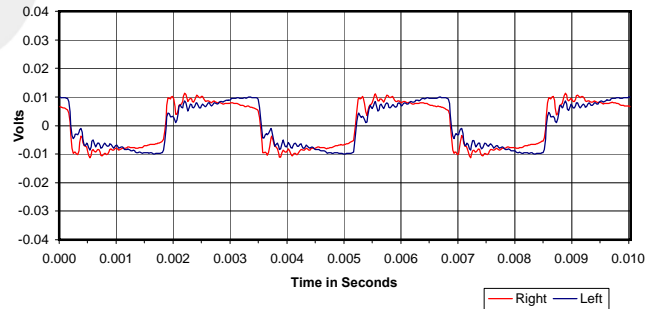
30 Hz Square Wave



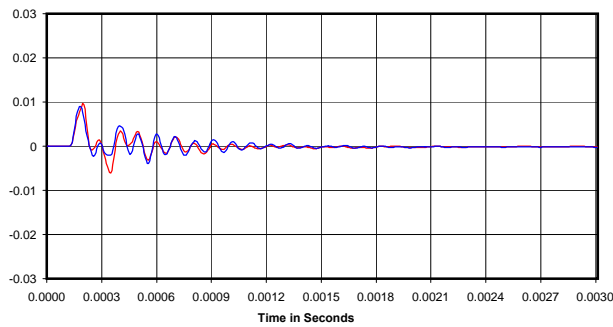
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



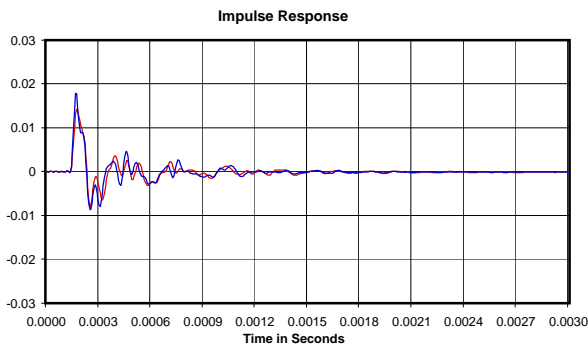
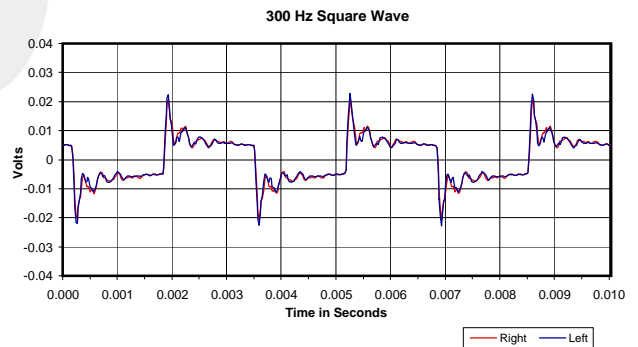
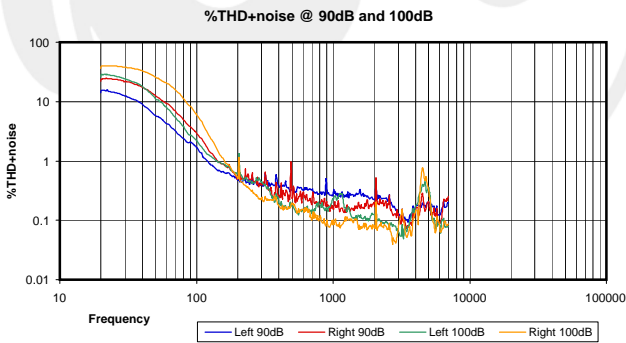
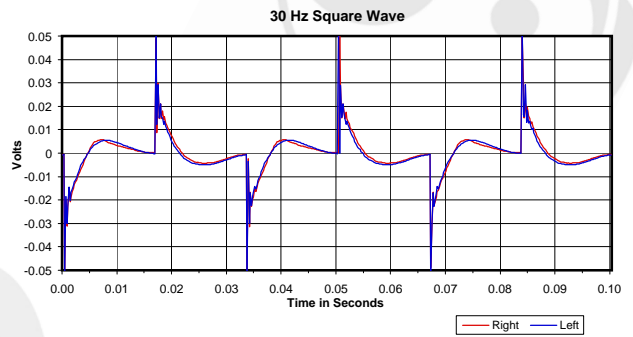
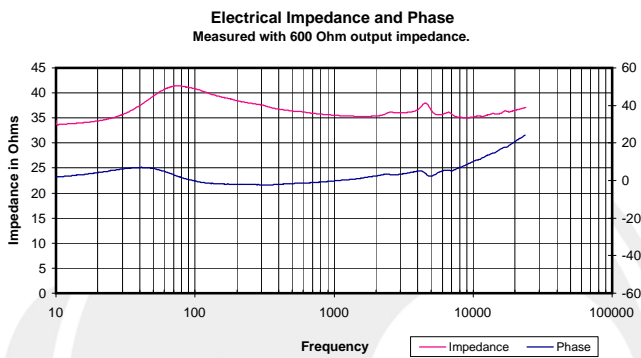
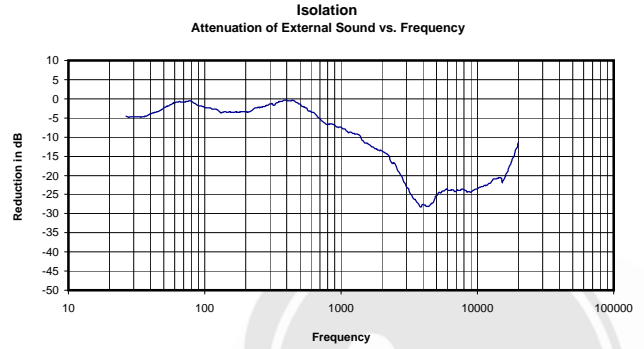
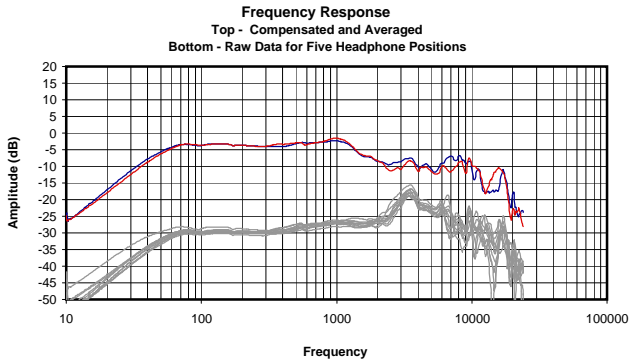
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.030 Vrms
49 Ohms
0.02 mW
-13 dB



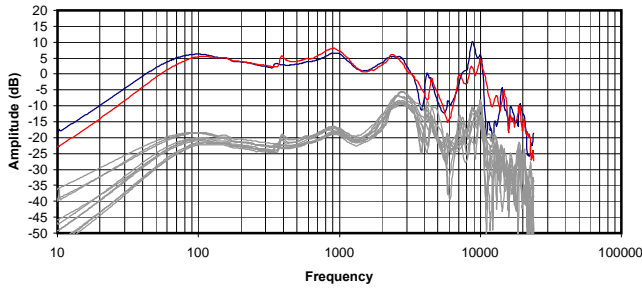


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

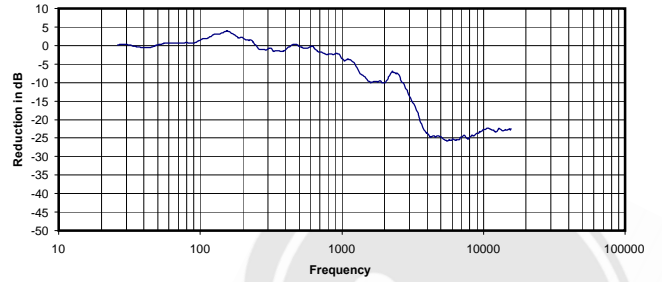
0.045 Vrms
36 Ohms
0.06 mW
-11 dB



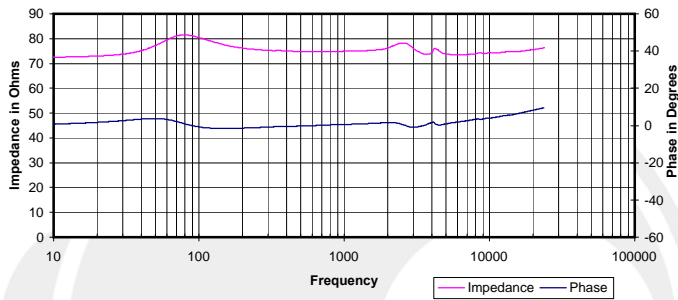
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



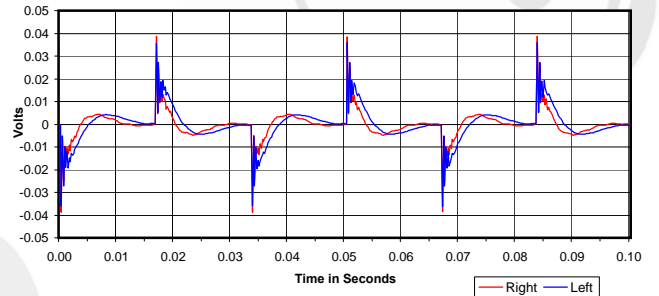
Isolation
 Attenuation of External Sound vs. Frequency



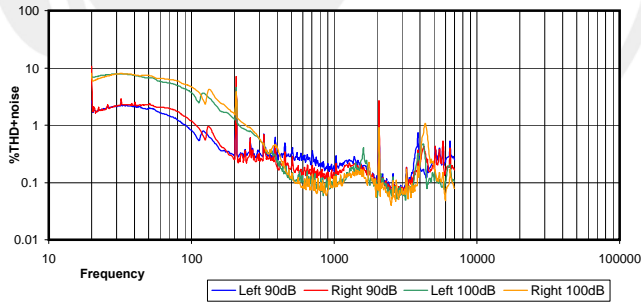
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



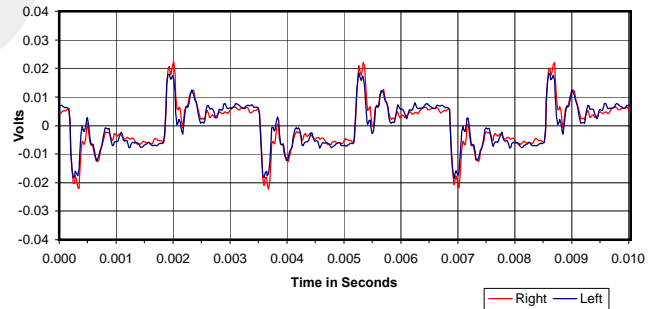
30 Hz Square Wave



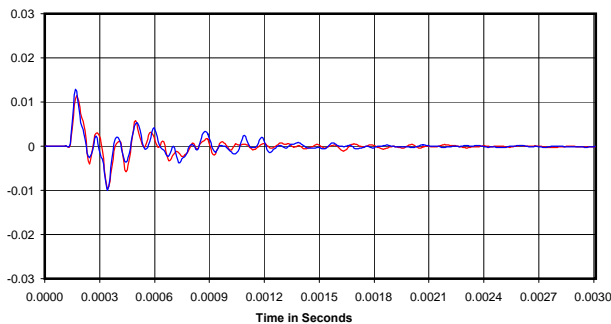
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

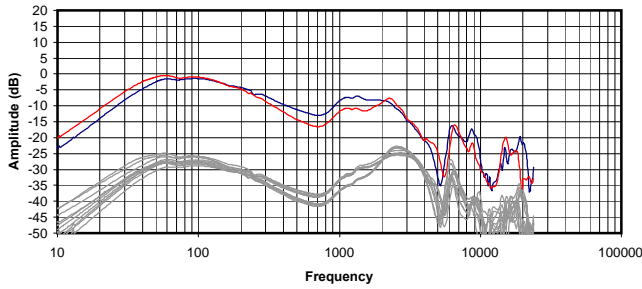


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

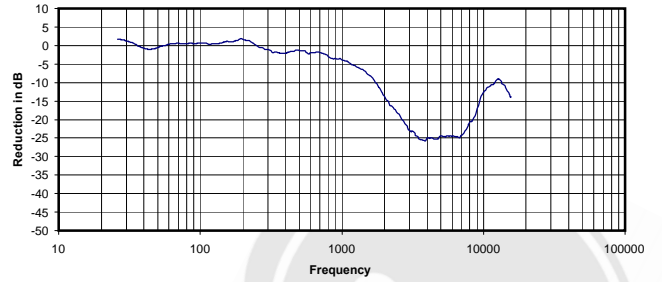
0.080 Vrms
 75 Ohms
 0.09 mW
 -6 dBr



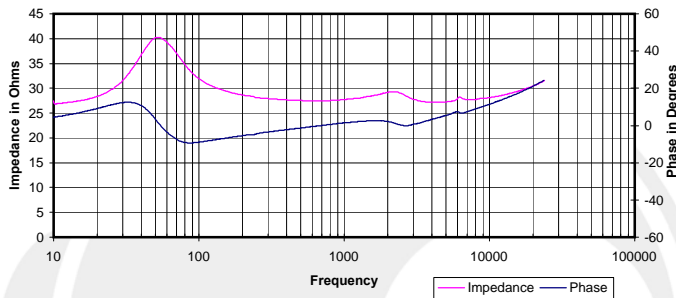
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



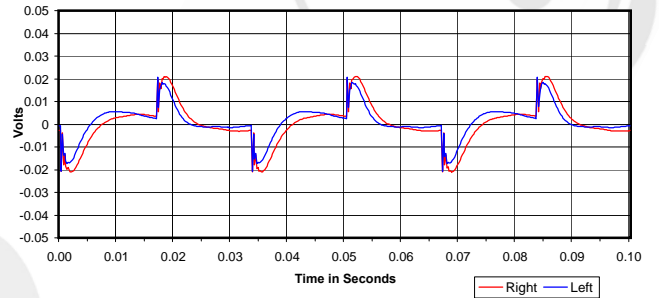
Isolation
 Attenuation of External Sound vs. Frequency



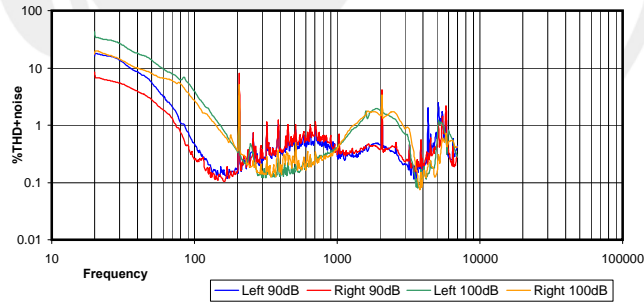
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



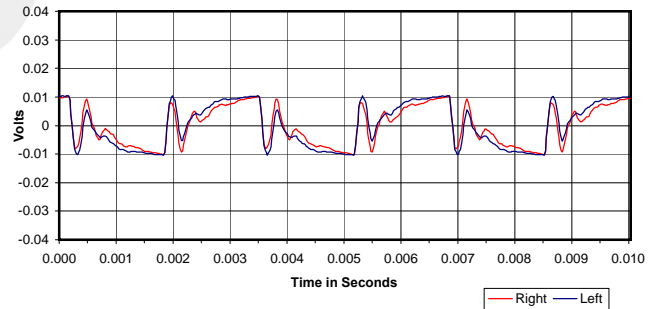
30 Hz Square Wave



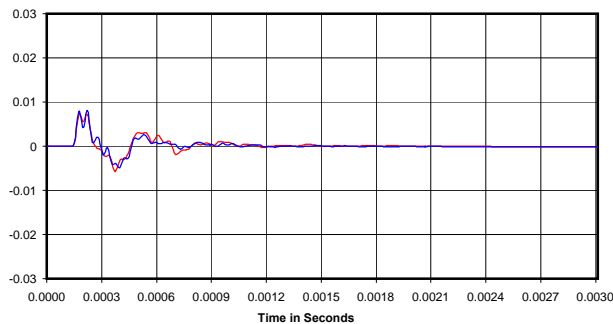
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

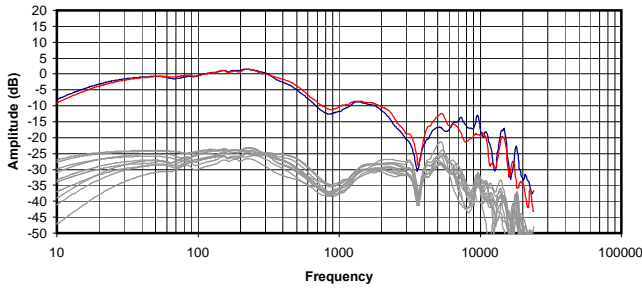


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

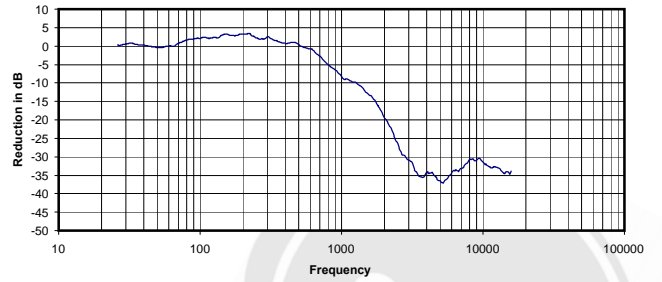
0.073 Vrms
 28 Ohms
 0.19 mW
 -8 dBr



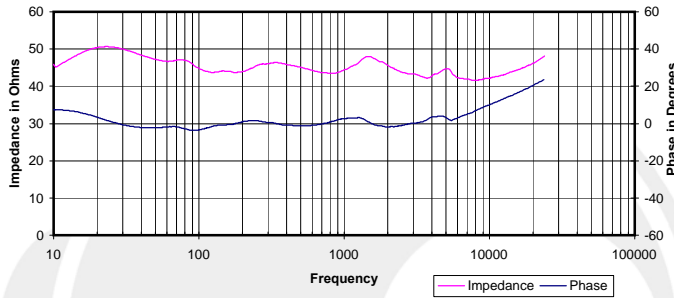
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



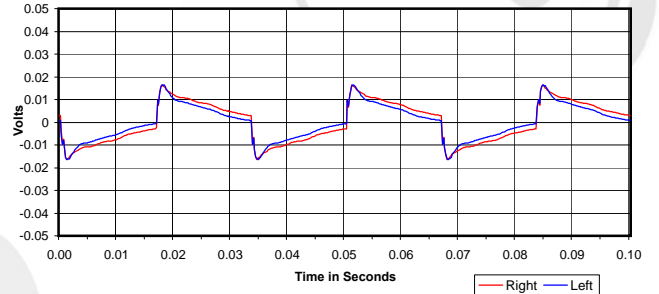
Isolation
 Attenuation of External Sound vs. Frequency



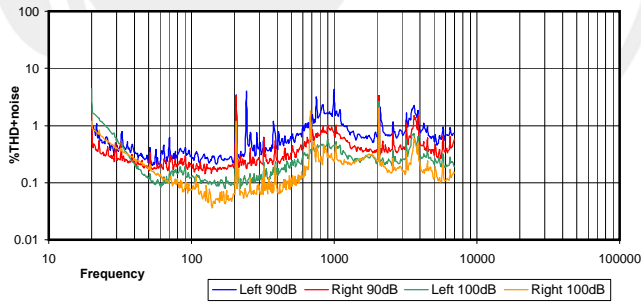
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



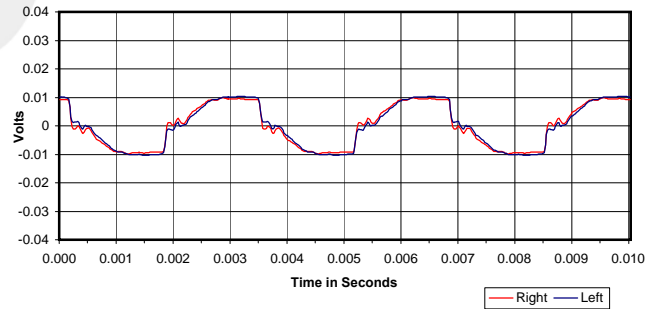
30 Hz Square Wave



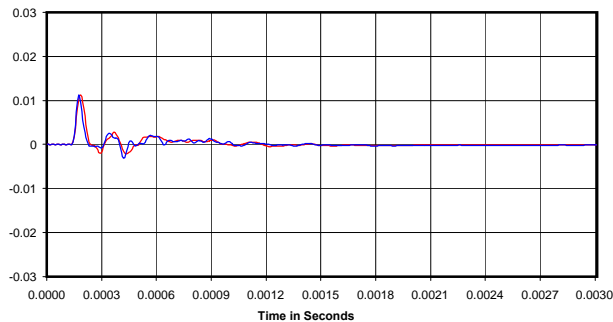
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



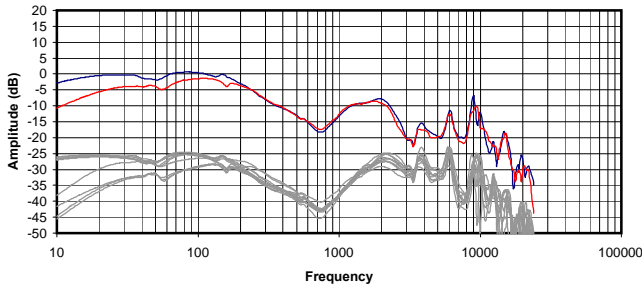
Impulse Response



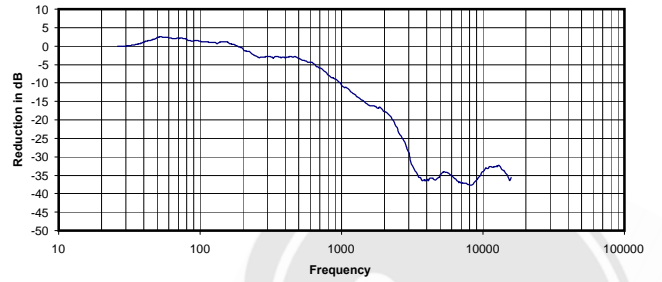
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.046 Vrms
 44 Ohms
 0.05 mW
 -10 dB

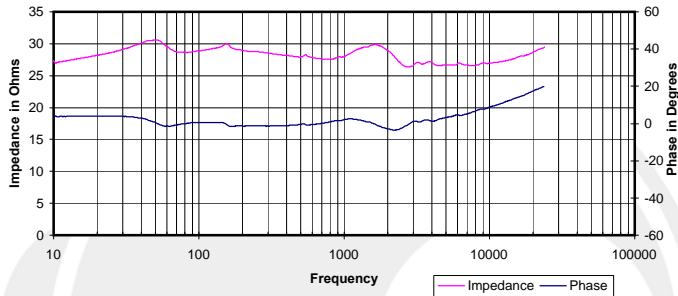
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



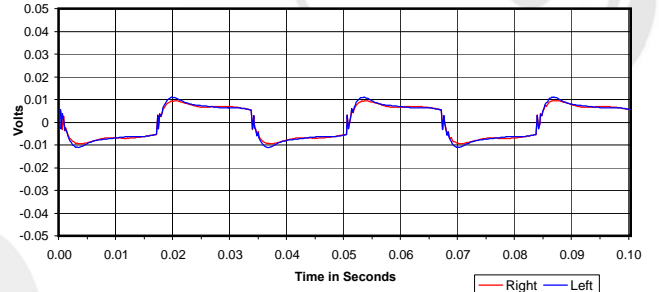
Isolation
 Attenuation of External Sound vs. Frequency



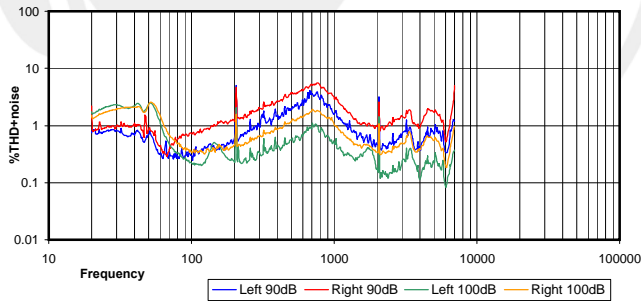
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



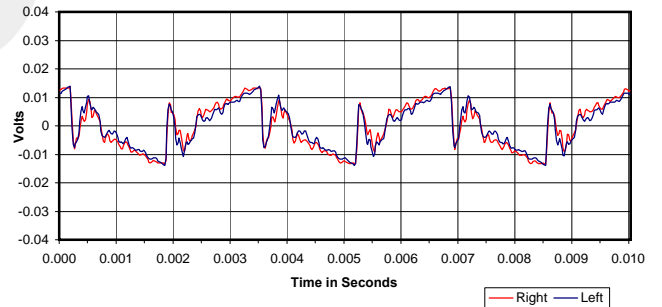
30 Hz Square Wave



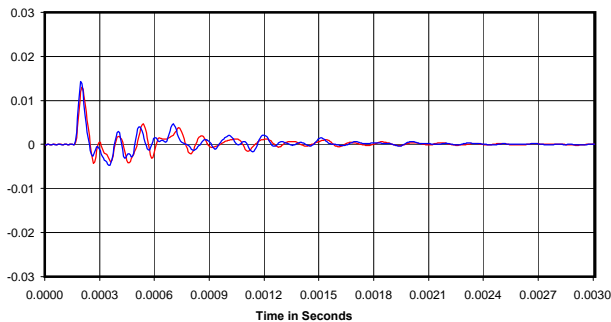
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

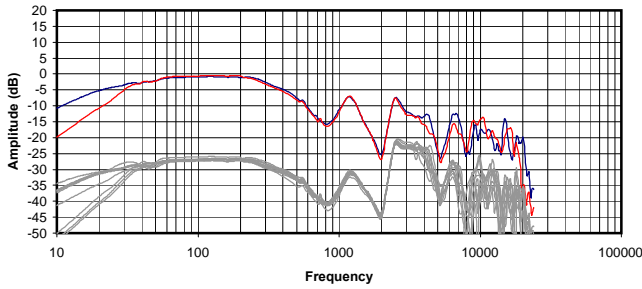


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

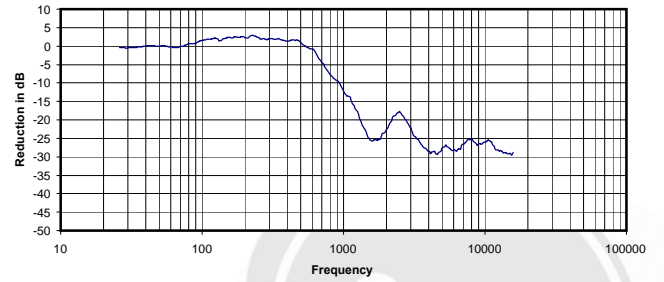
0.072 Vrms
 28 Ohms
 0.19 mW
 -12 dB



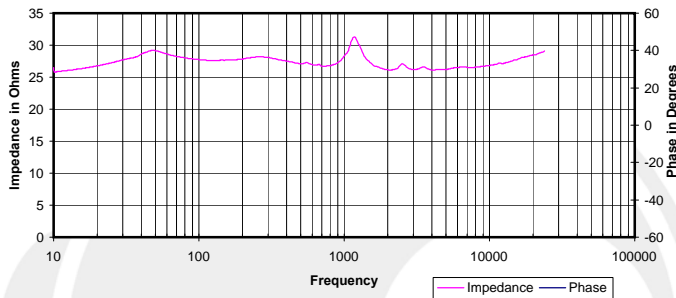
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



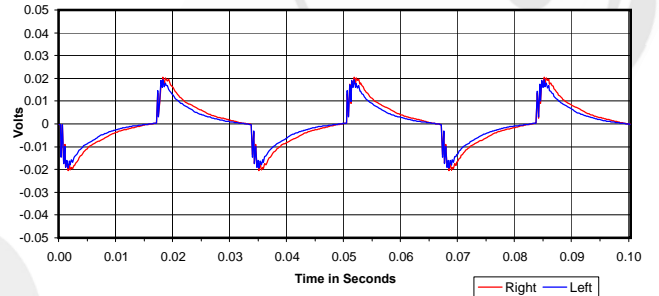
Isolation
 Attenuation of External Sound vs. Frequency



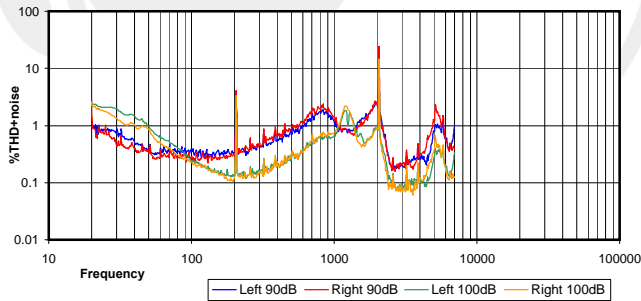
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



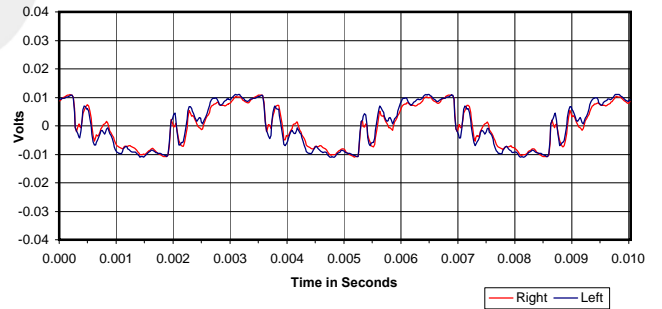
30 Hz Square Wave



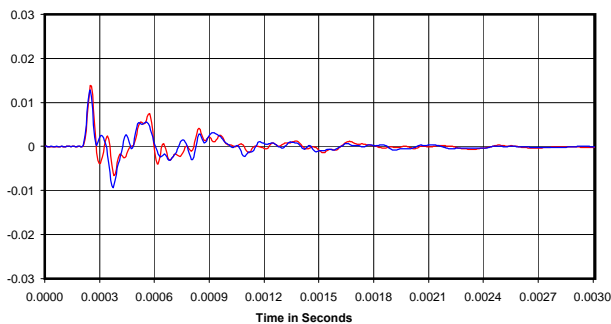
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



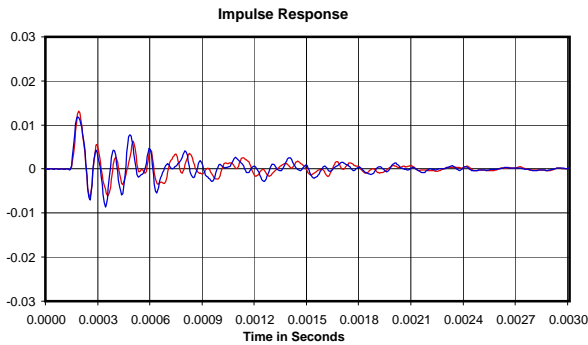
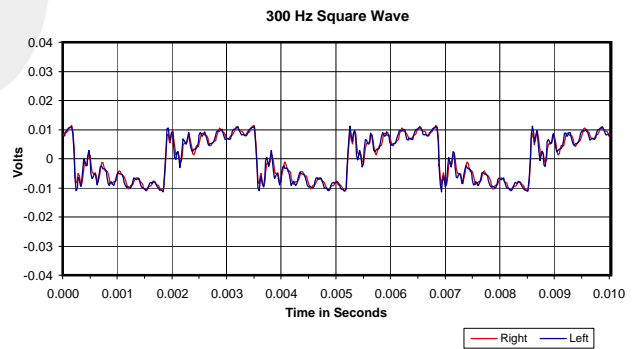
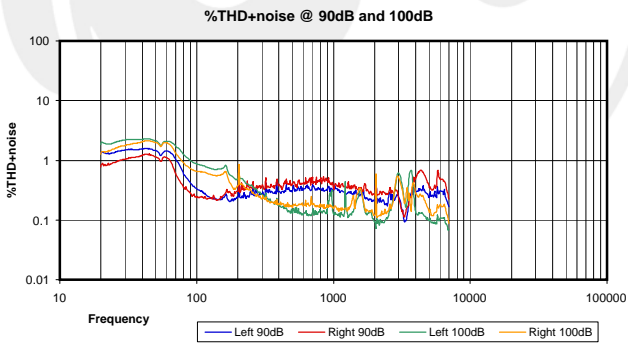
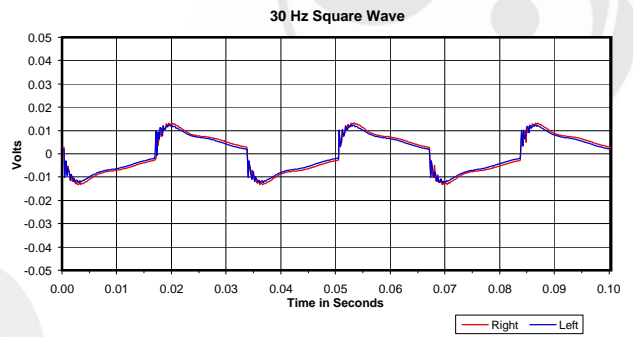
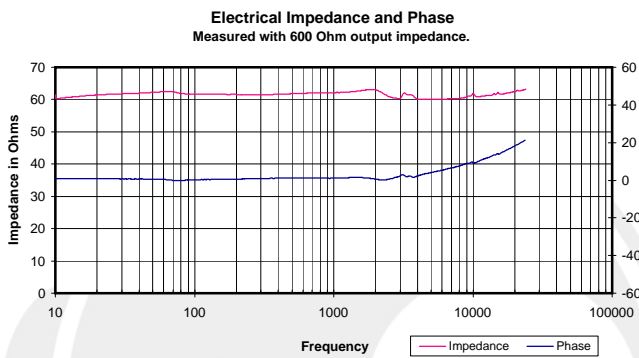
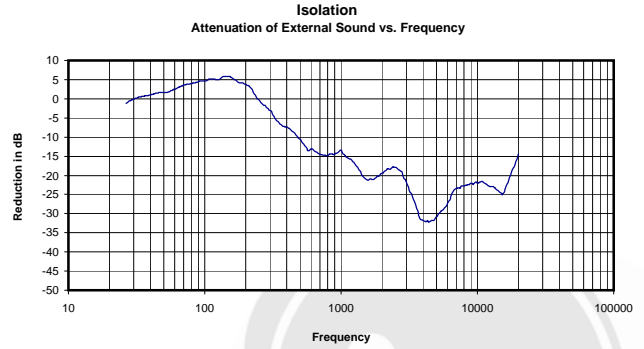
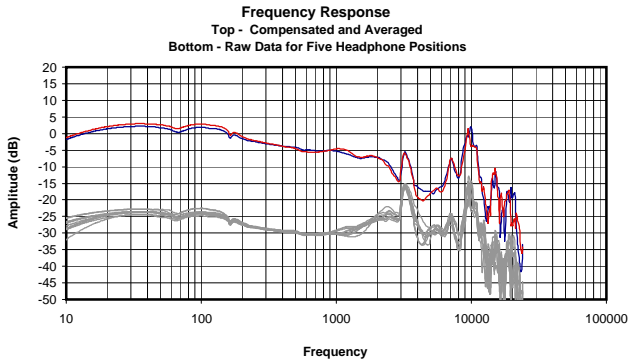
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.090 Vrms
 28 Ohms
 0.28 mW
 -10 dB



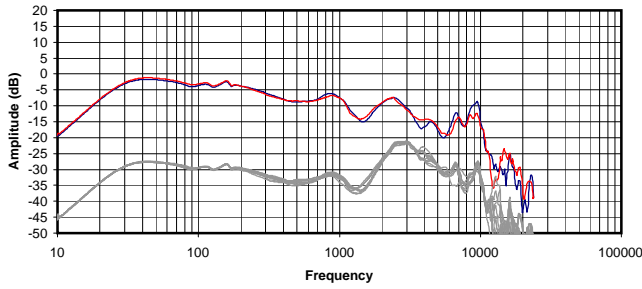


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

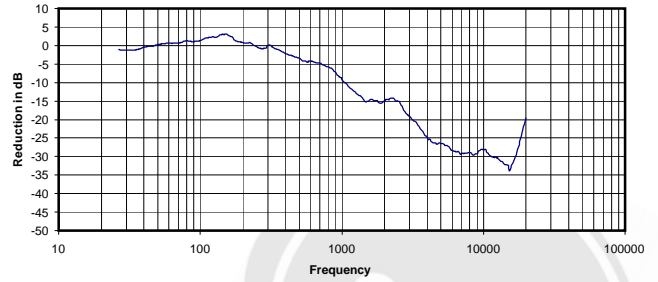
0.106 Vrms
62 Ohms
0.18 mW
-14 dBr



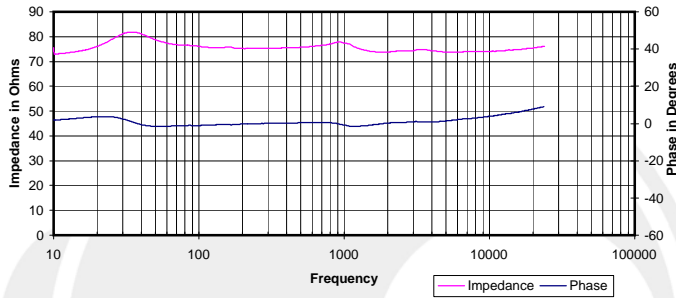
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



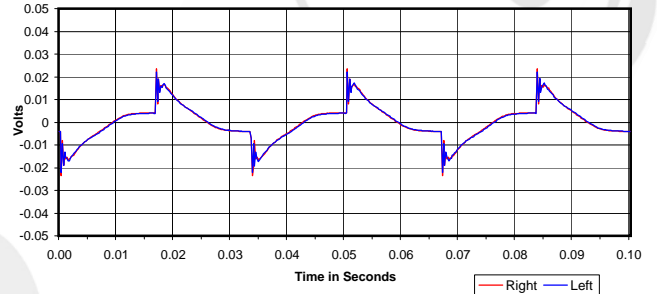
Isolation
 Attenuation of External Sound vs. Frequency



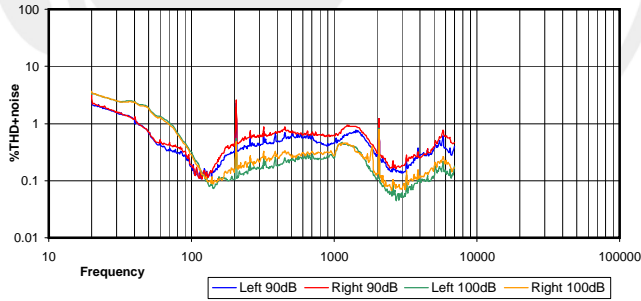
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



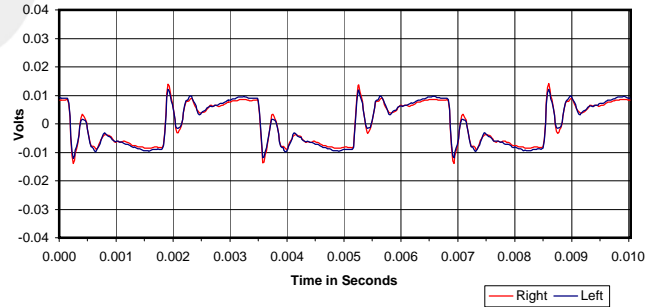
30 Hz Square Wave



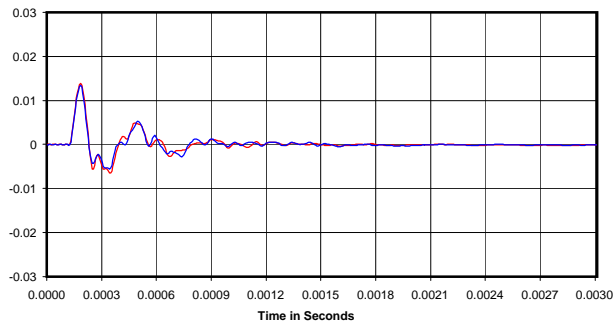
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

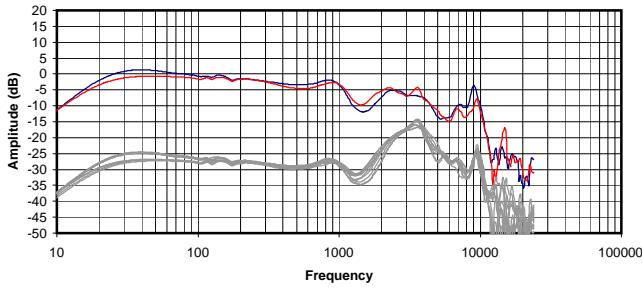


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

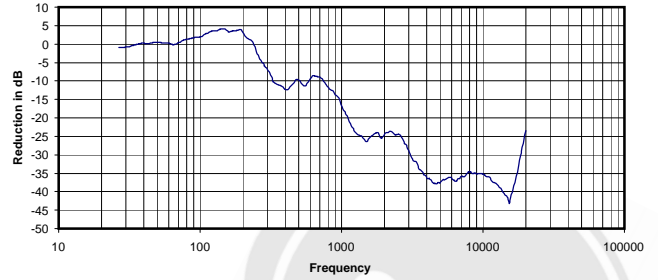
0.072 Vrms
 77 Ohms
 0.07 mW
 -11 dB



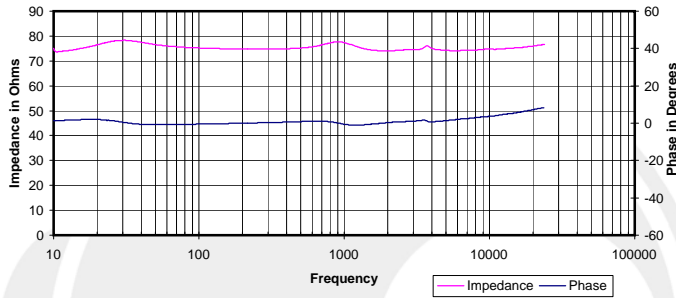
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



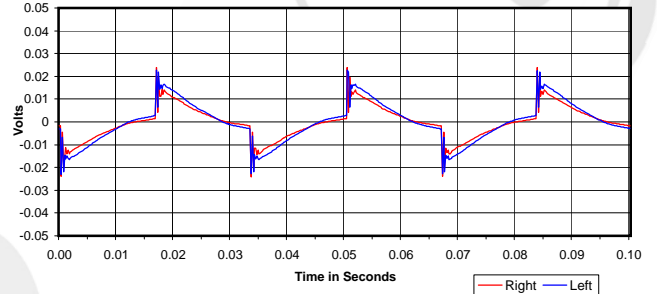
Isolation
 Attenuation of External Sound vs. Frequency



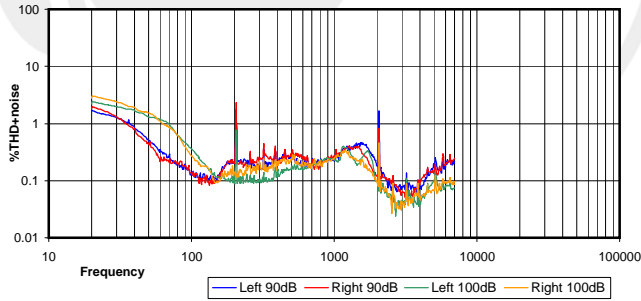
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



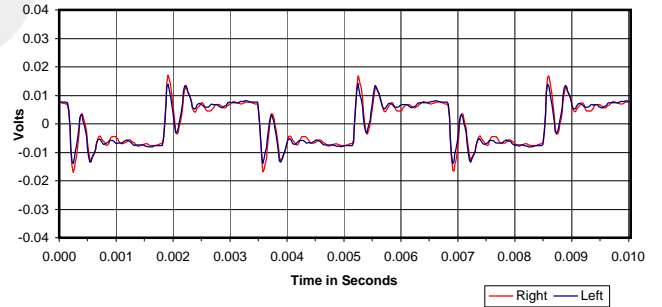
30 Hz Square Wave



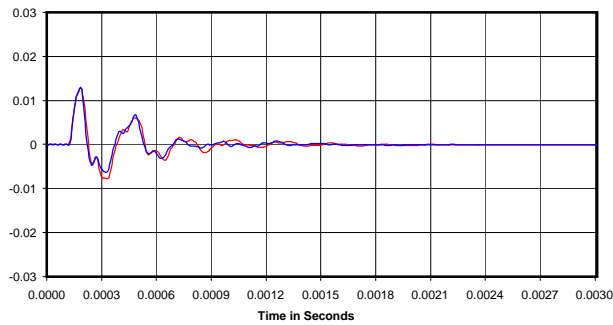
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



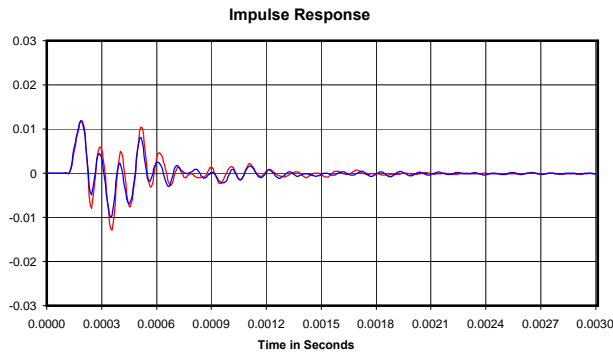
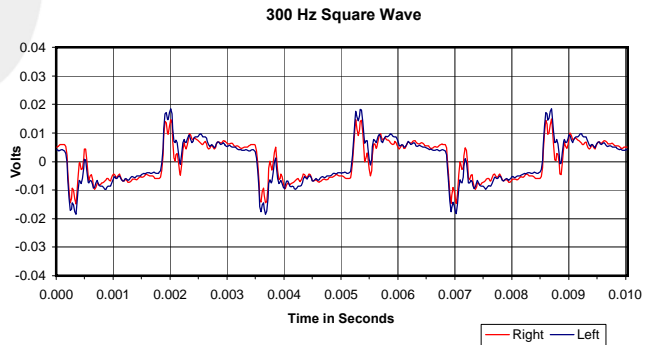
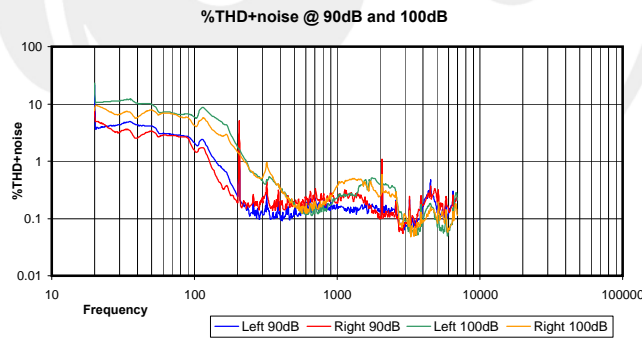
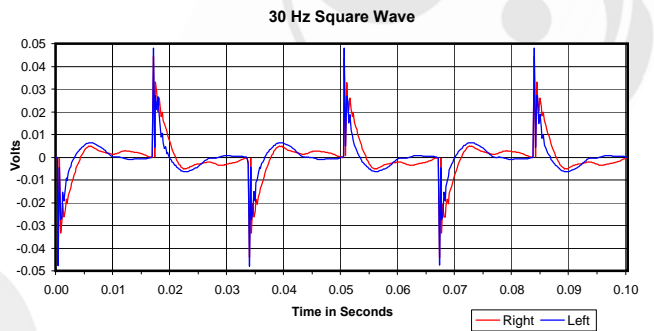
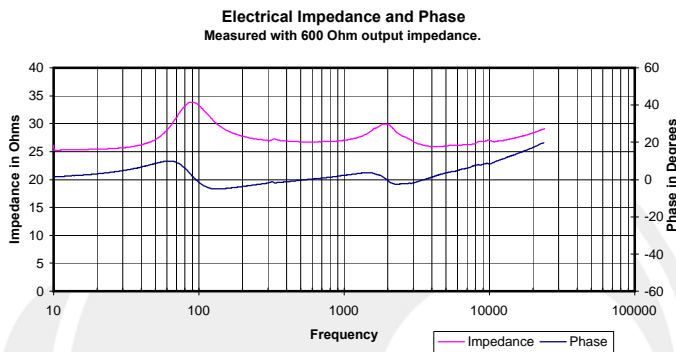
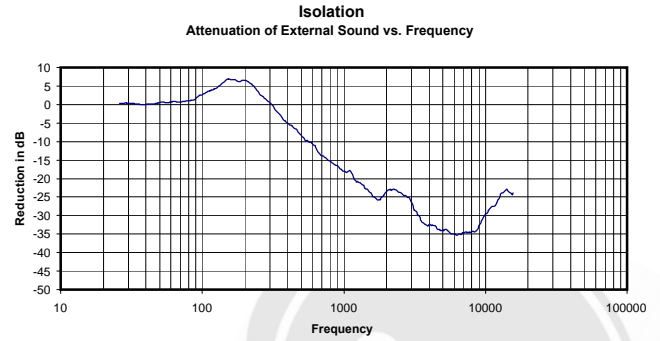
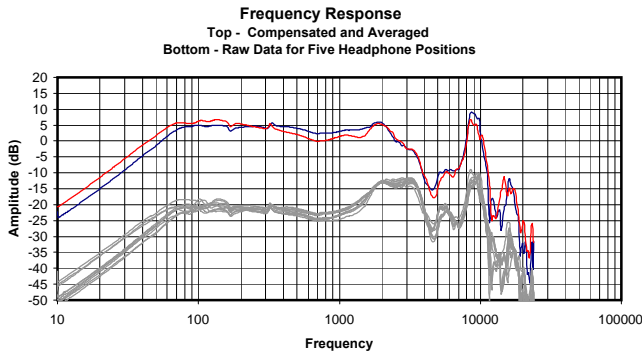
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.095 Vrms
 77 Ohms
 0.12 mW
 -18 dB



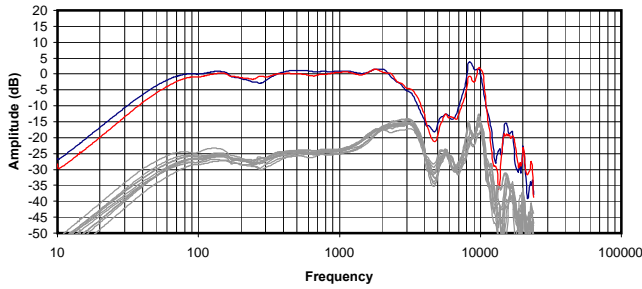


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

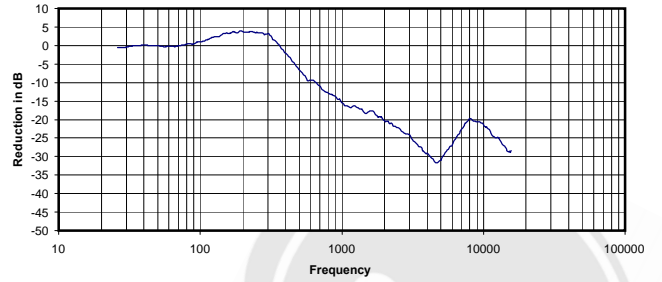
0.040 Vrms
27 Ohms
0.06 mW
-13 dB



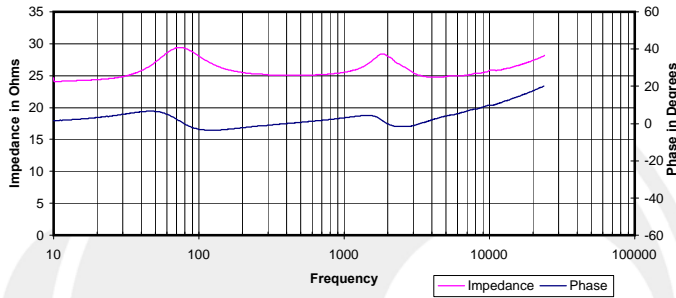
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



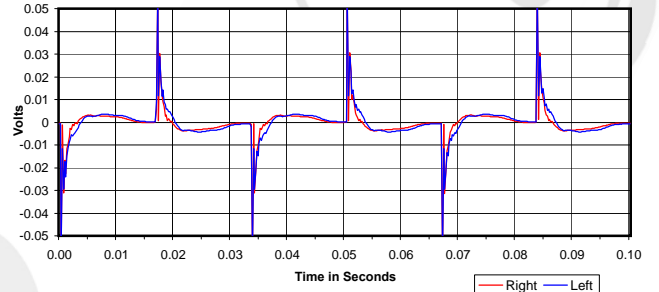
Isolation
 Attenuation of External Sound vs. Frequency



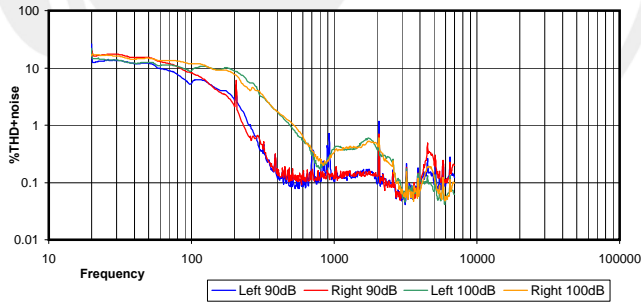
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



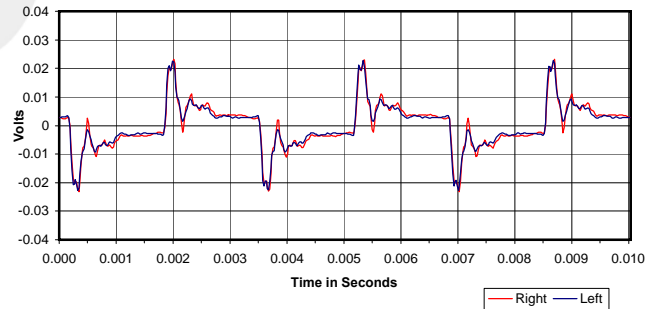
30 Hz Square Wave



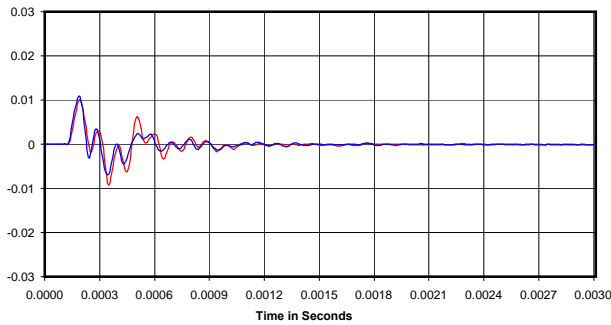
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

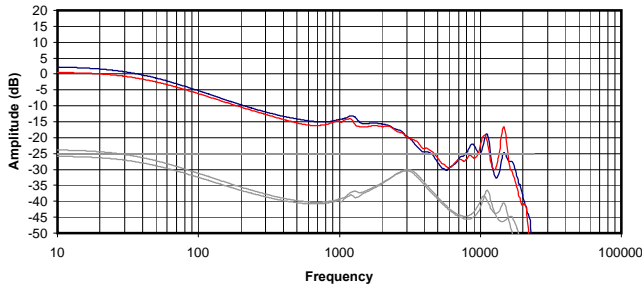


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

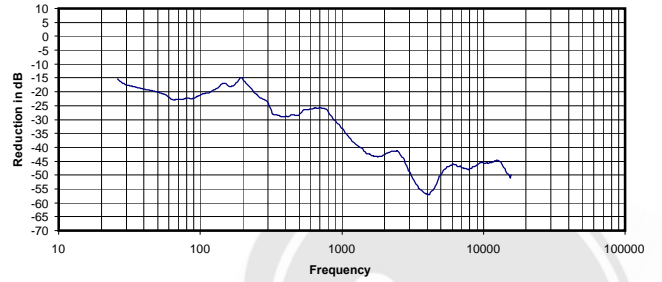
0.034 Vrms
 26 Ohms
 0.05 mW
 -11 dB



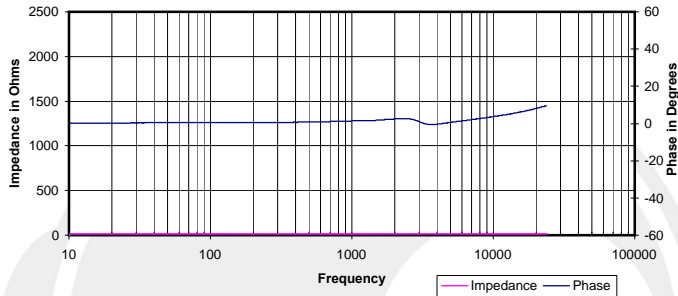
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



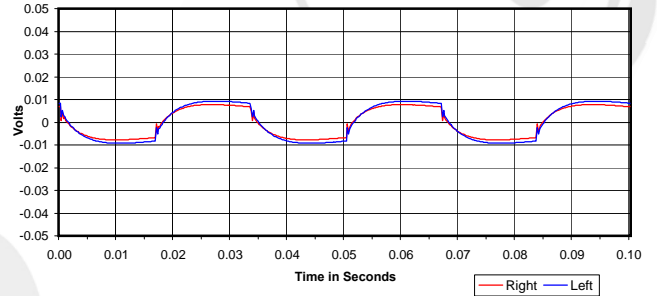
Isolation
Attenuation of External Sound vs. Frequency



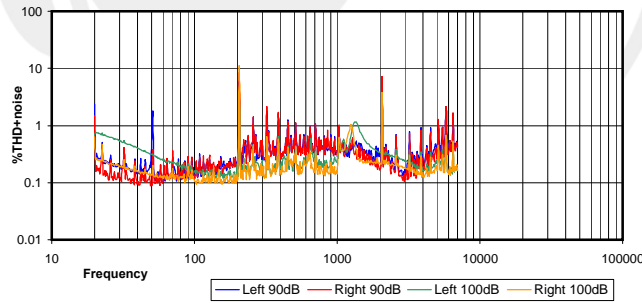
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



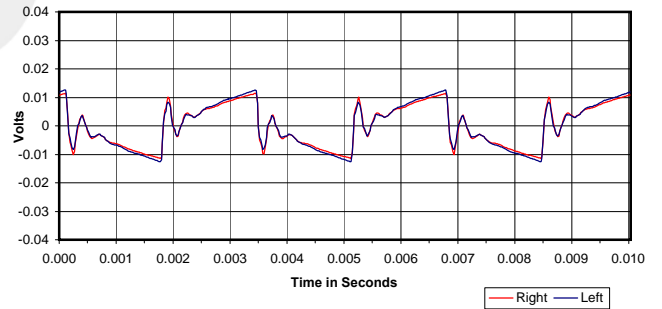
30 Hz Square Wave



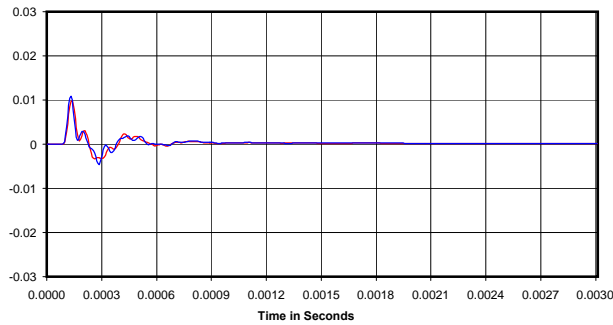
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

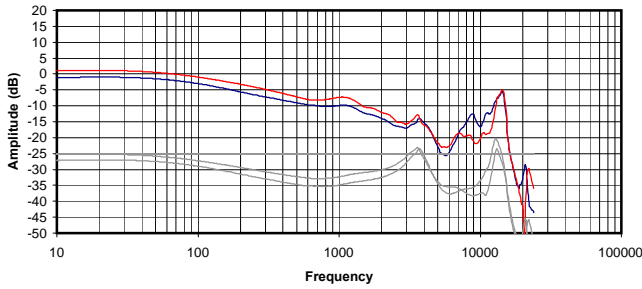


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

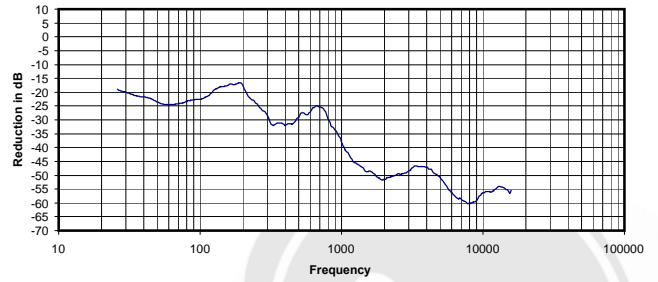
0.047 Vrms
16 Ohms
0.14 mW
-33 dB



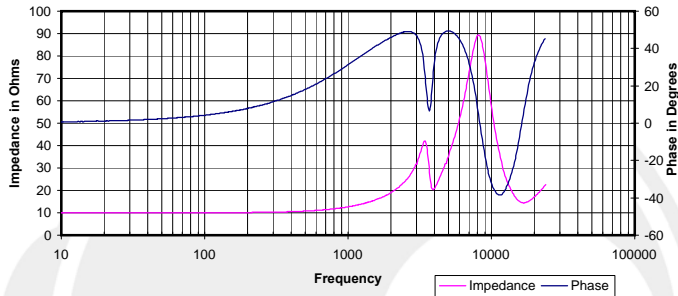
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



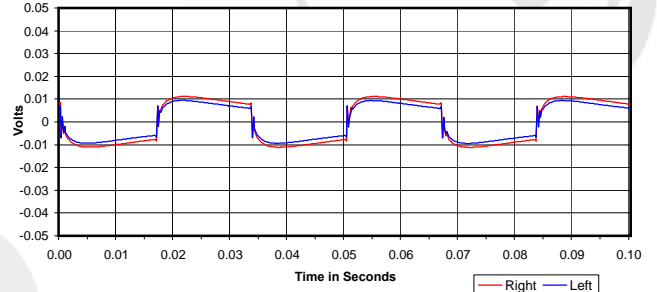
Isolation
Attenuation of External Sound vs. Frequency



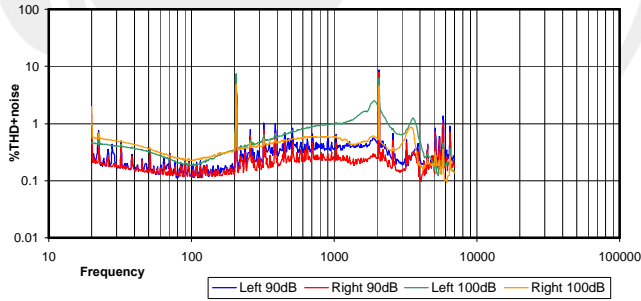
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



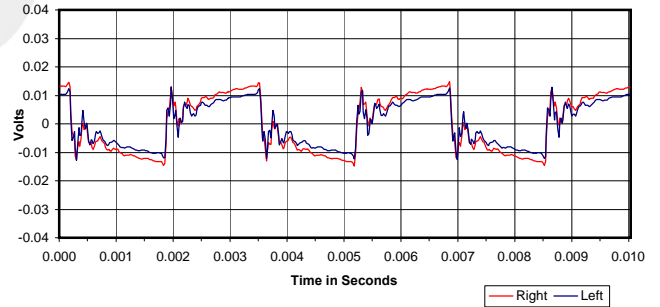
30 Hz Square Wave



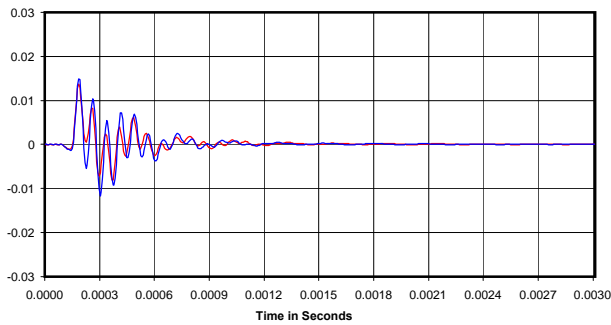
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

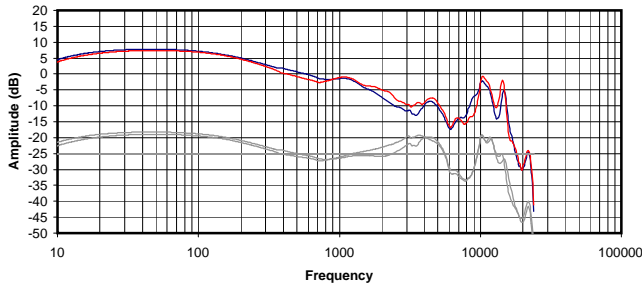


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

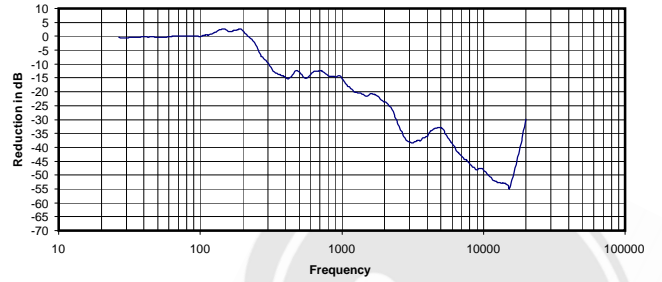
0.058 Vrms
13 Ohms
0.27 mW
-36 dB



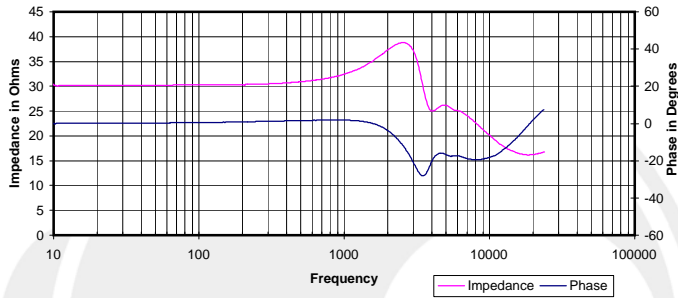
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



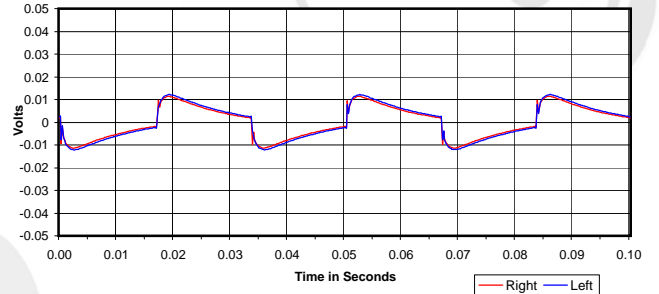
Isolation
Attenuation of External Sound vs. Frequency



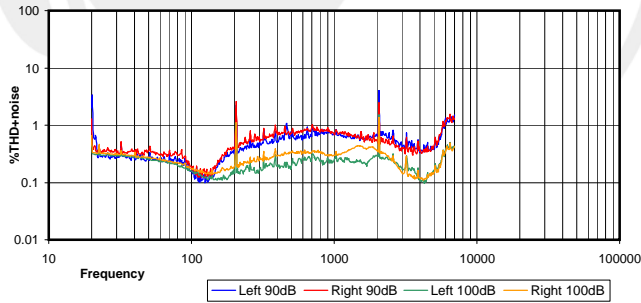
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



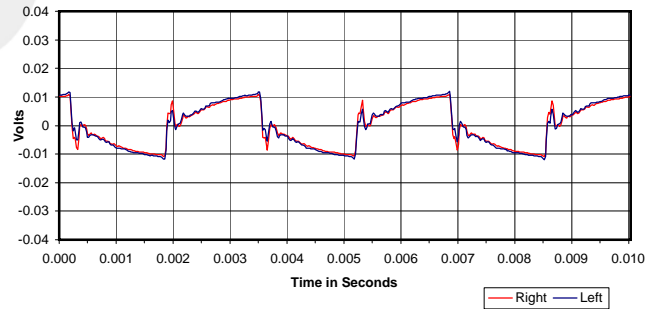
30 Hz Square Wave



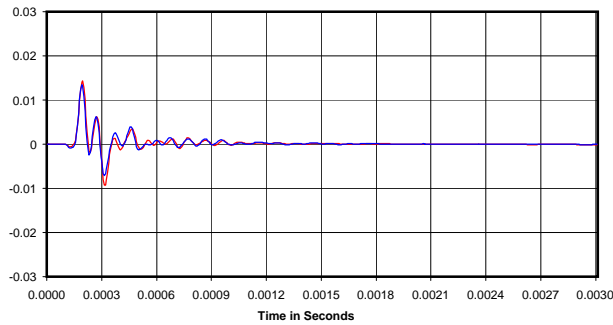
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

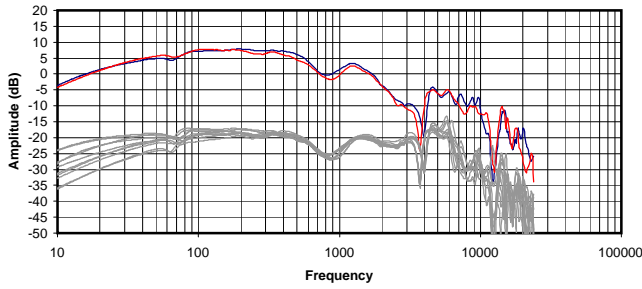


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

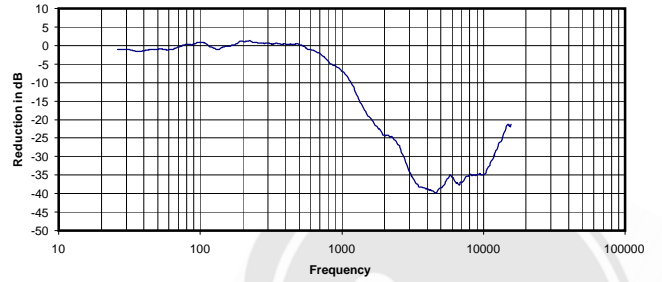
0.044 Vrms
32 Ohms
0.06 mW
-20 dB



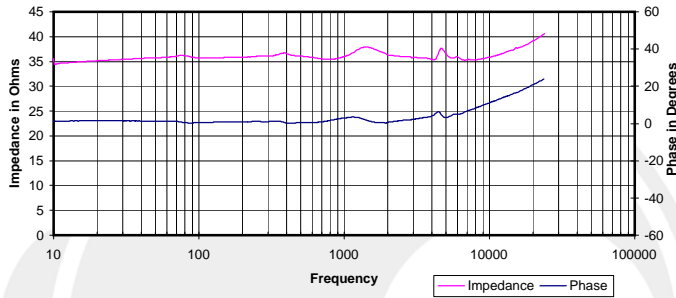
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



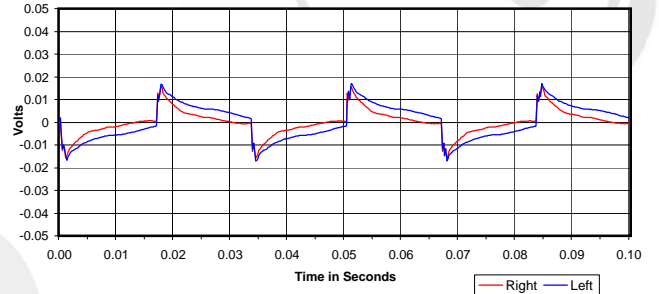
Isolation
Attenuation of External Sound vs. Frequency



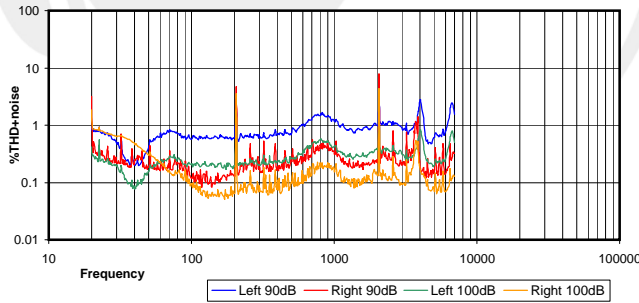
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



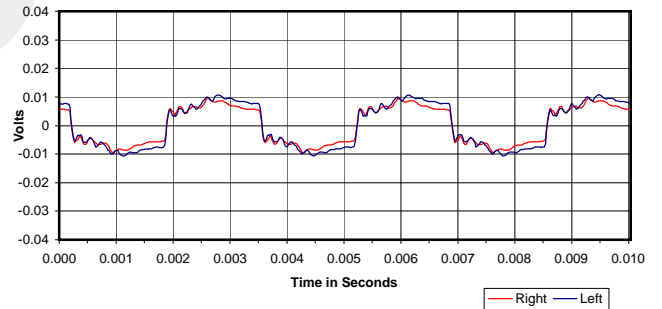
30 Hz Square Wave



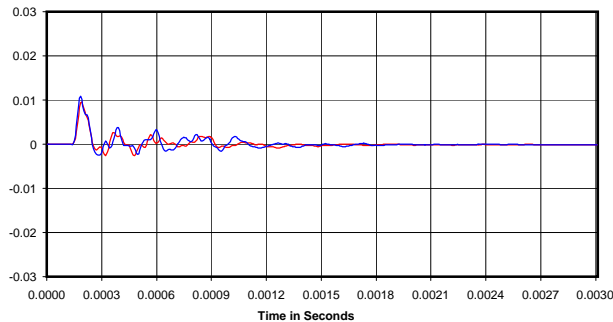
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

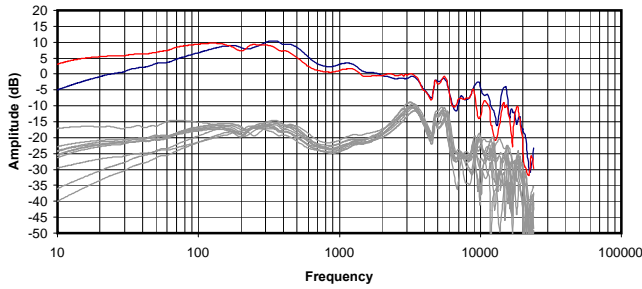


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

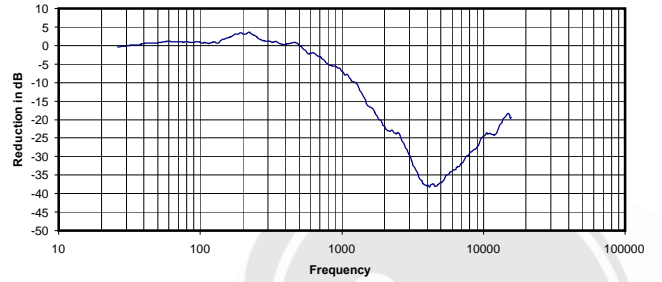
0.031 Vrms
36 Ohms
0.03 mW
-12 dB



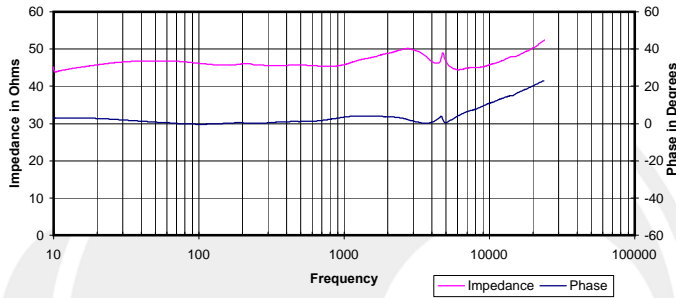
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



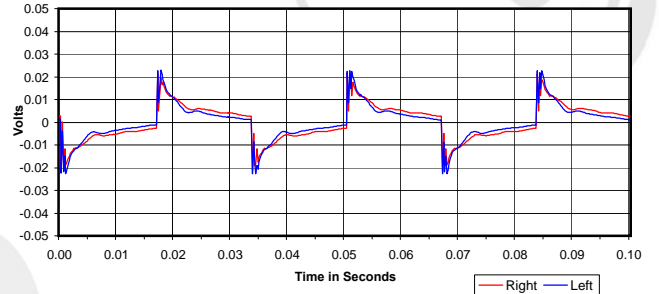
Isolation
 Attenuation of External Sound vs. Frequency



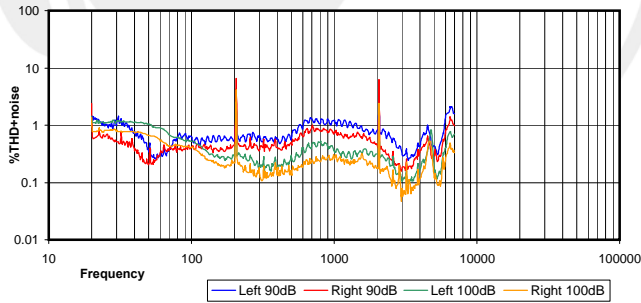
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



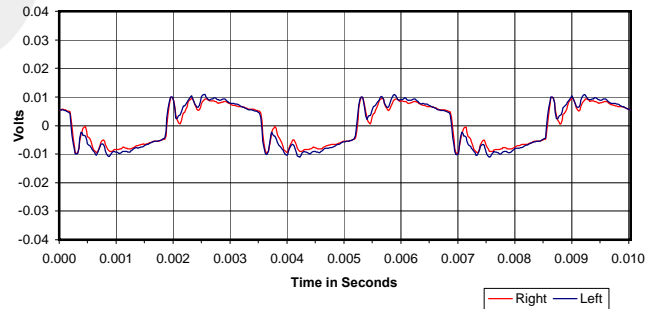
30 Hz Square Wave



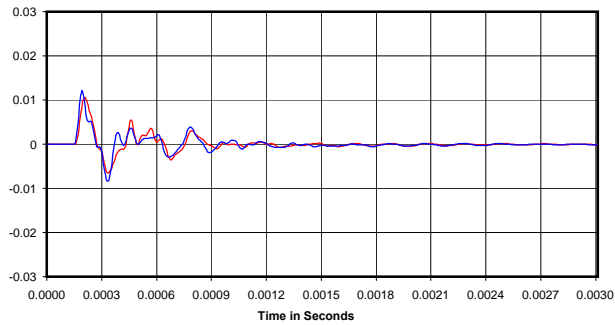
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



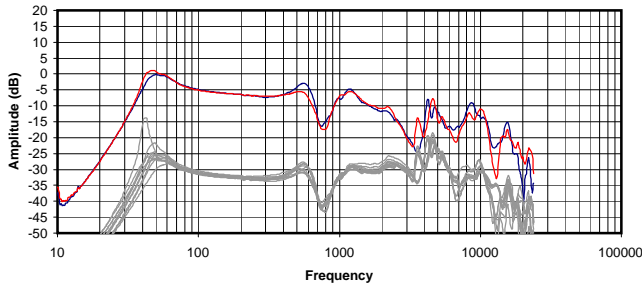
Impulse Response



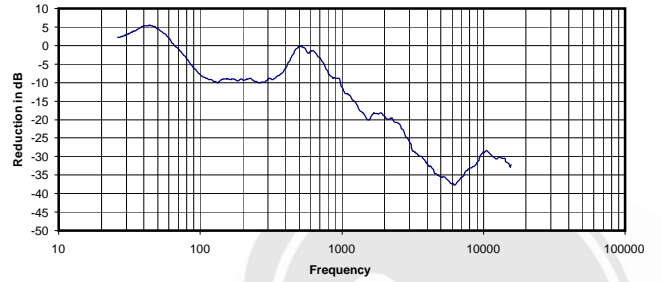
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.040 Vrms
 46 Ohms
 0.03 mW
 -11 dB

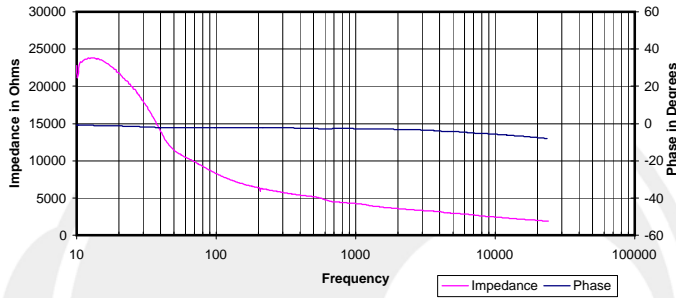
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



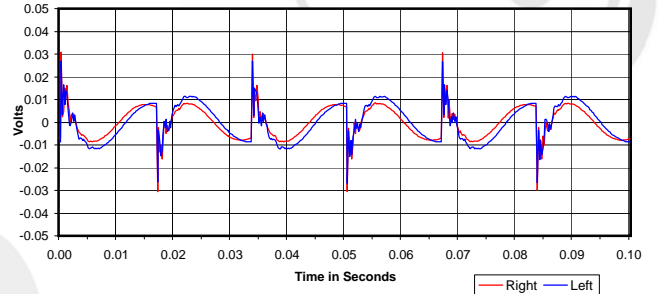
Isolation
 Attenuation of External Sound vs. Frequency



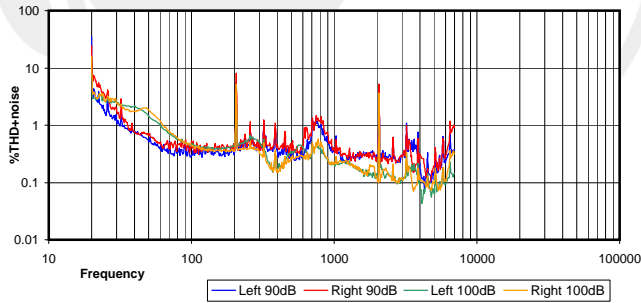
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



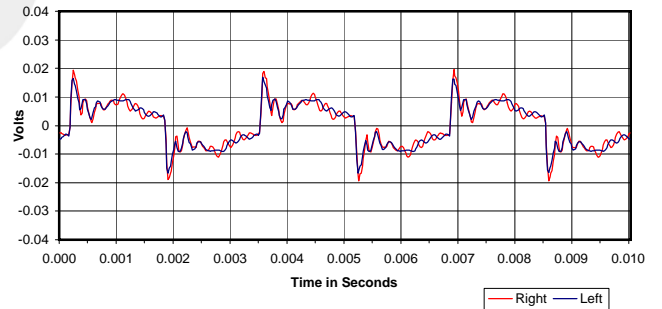
30 Hz Square Wave



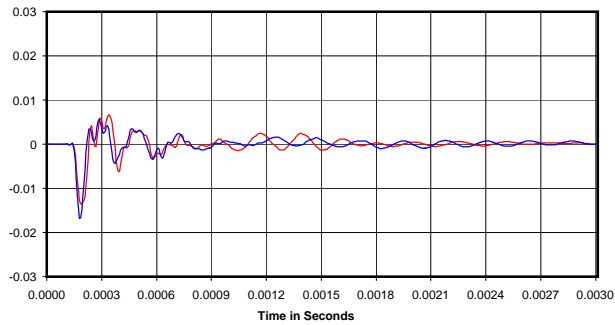
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

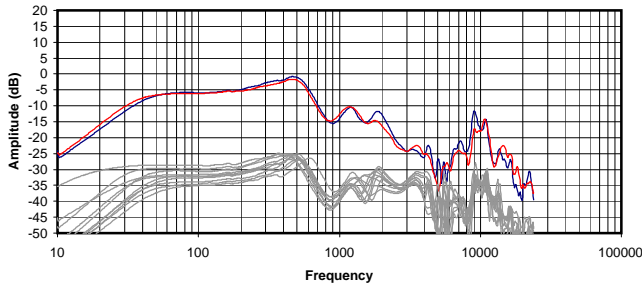


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

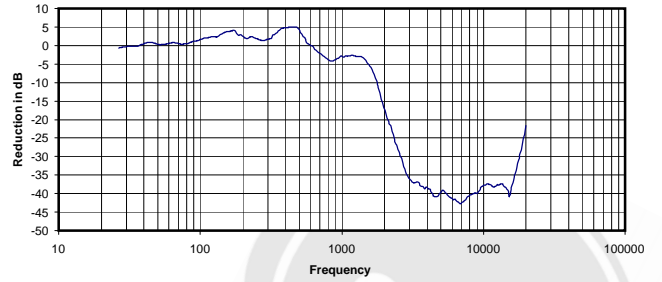
0.032 Vrms
 4230 Ohms
 0.00 mW
 -15 dB



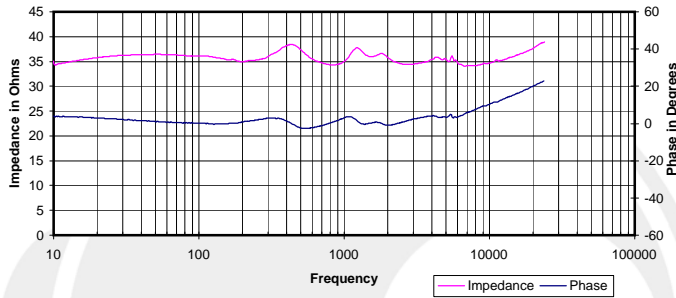
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



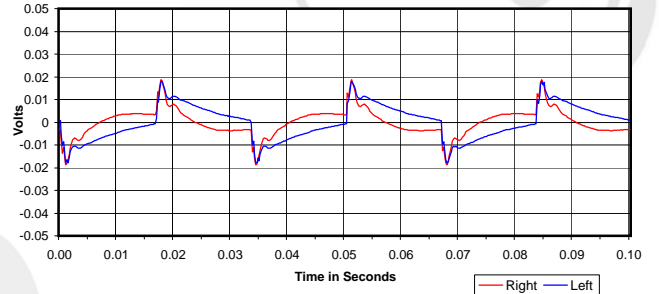
Isolation
Attenuation of External Sound vs. Frequency



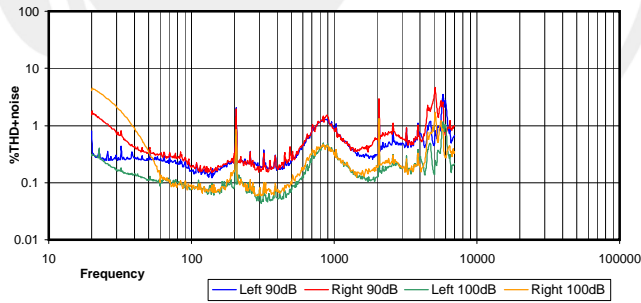
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



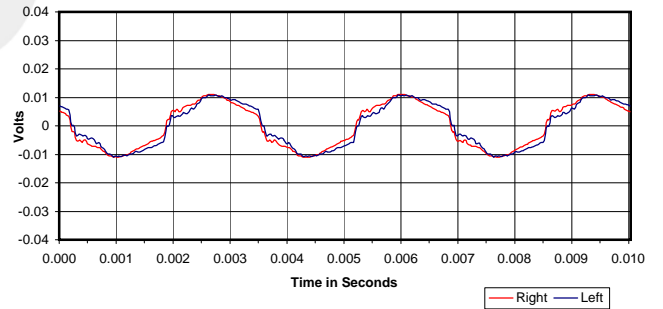
30 Hz Square Wave



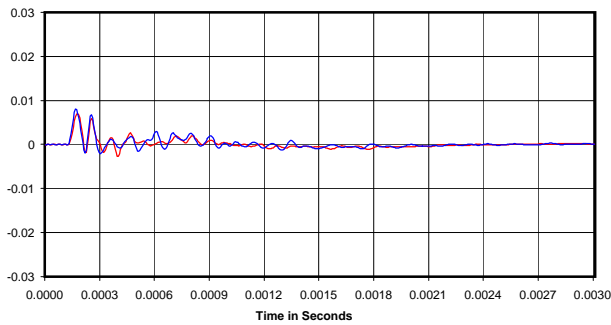
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

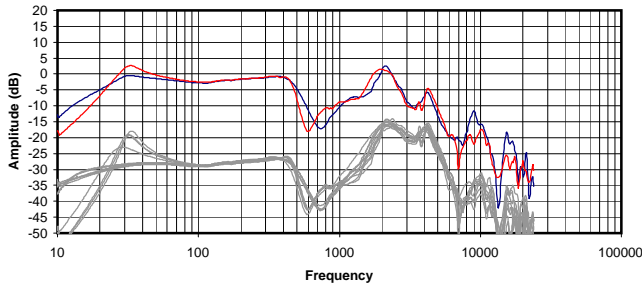


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

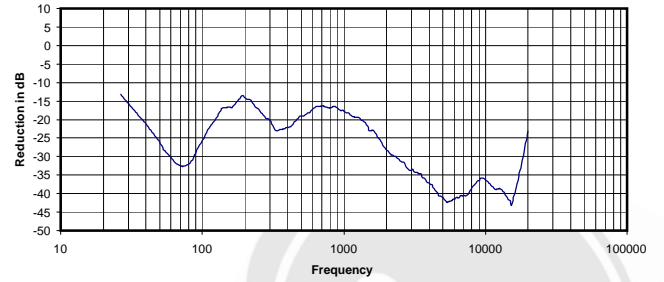
0.041 Vrms
35 Ohms
0.05 mW
-13 dB



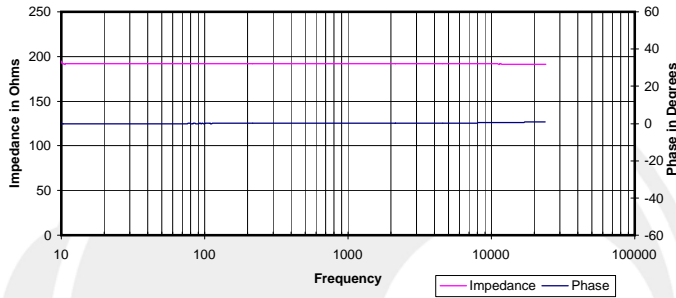
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



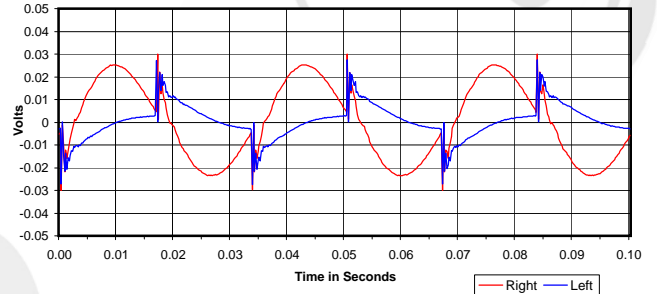
Isolation
Attenuation of External Sound vs. Frequency



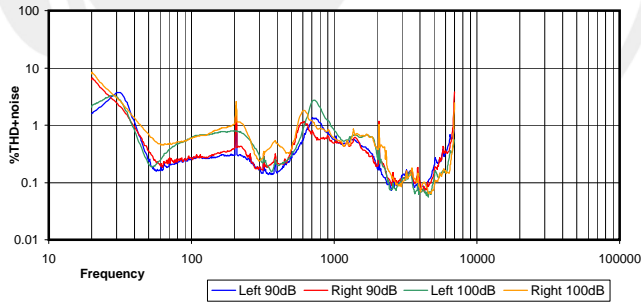
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



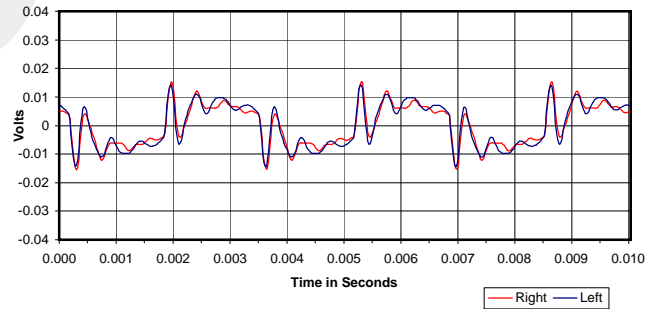
30 Hz Square Wave



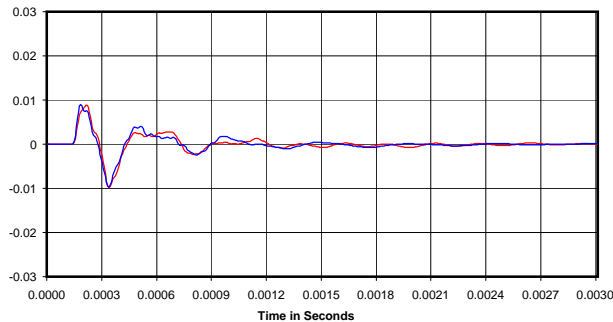
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

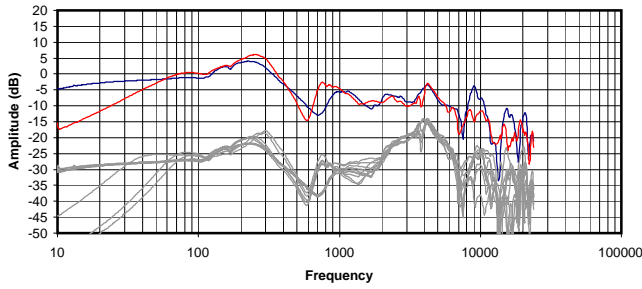


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

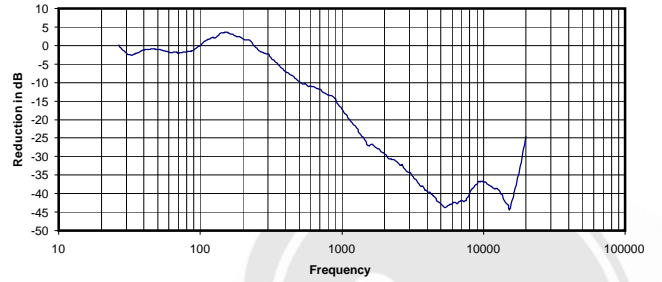
0.121 Vrms
192 Ohms
0.08 mW
-25 dB



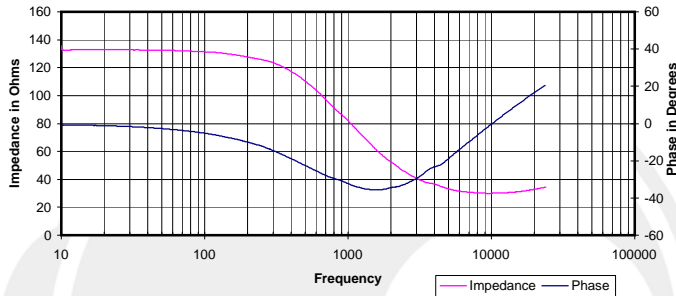
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



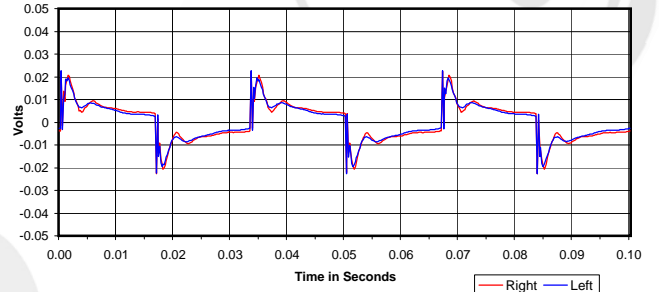
Isolation
Attenuation of External Sound vs. Frequency



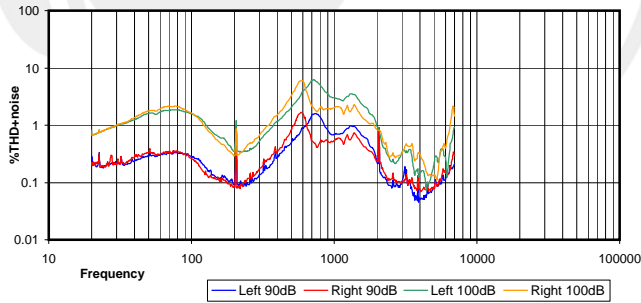
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



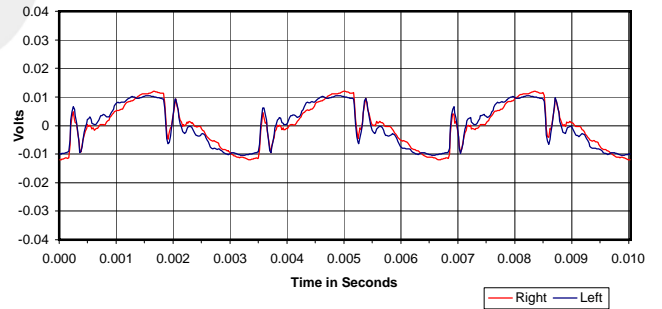
30 Hz Square Wave



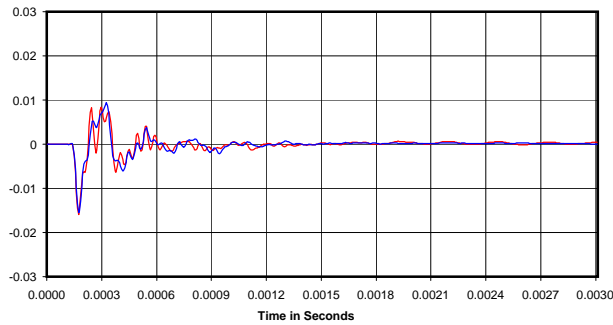
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



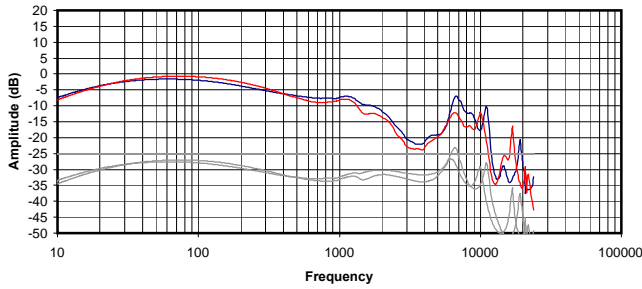
Impulse Response



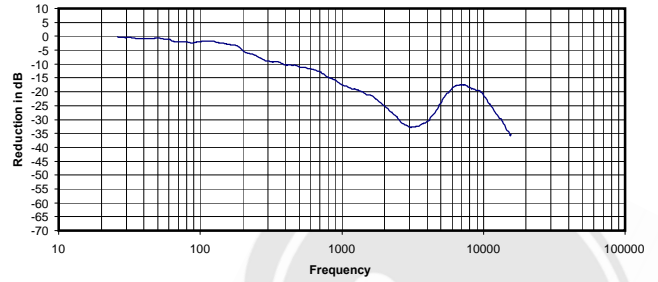
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.206 Vrms
82 Ohms
0.52 mW
-19 dB

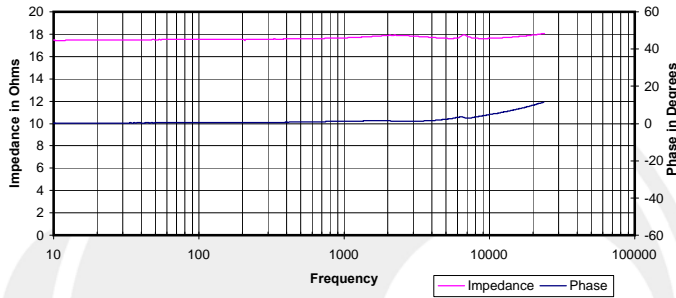
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



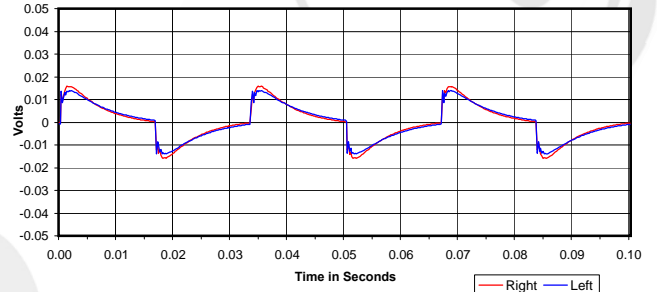
Isolation
Attenuation of External Sound vs. Frequency



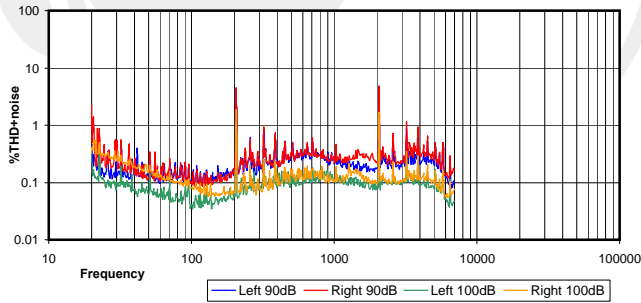
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



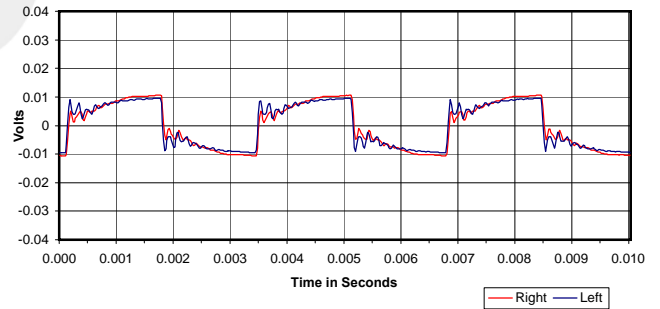
30 Hz Square Wave



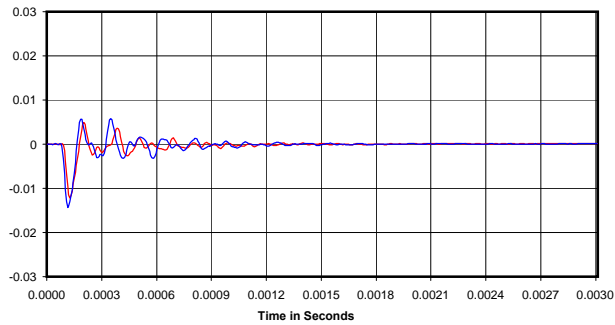
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

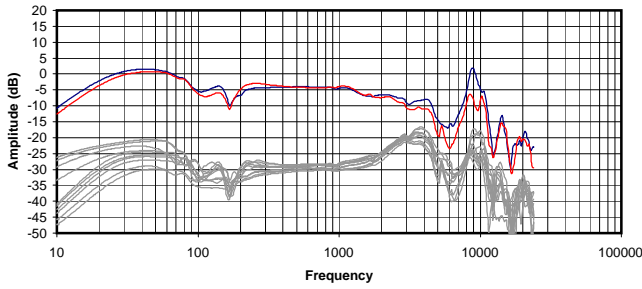


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

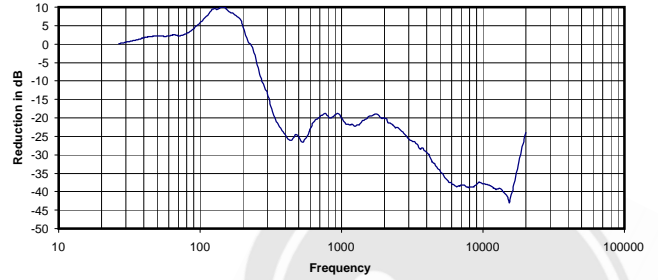
0.019 Vrms
18 Ohms
0.02 mW
-15 dB



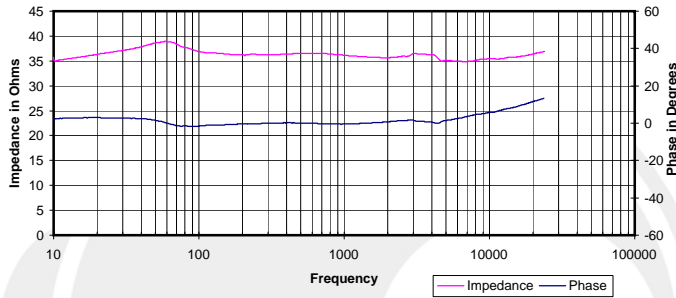
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



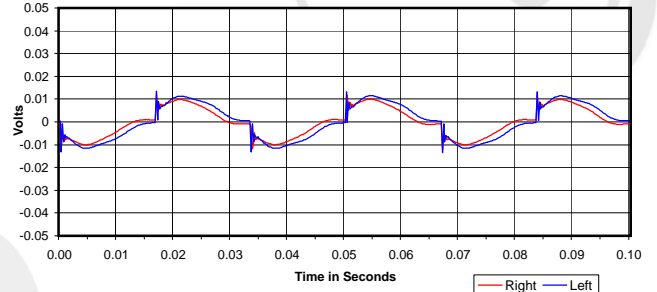
Isolation
 Attenuation of External Sound vs. Frequency



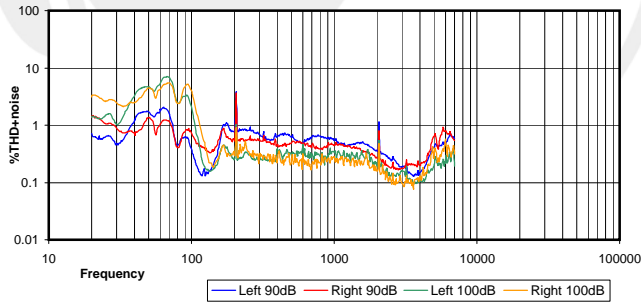
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



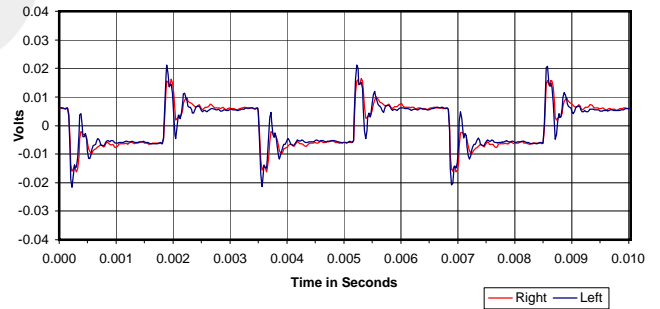
30 Hz Square Wave



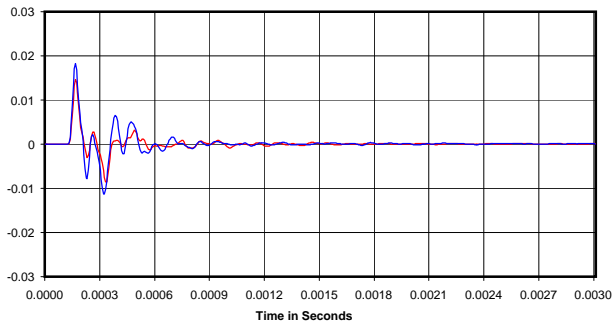
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

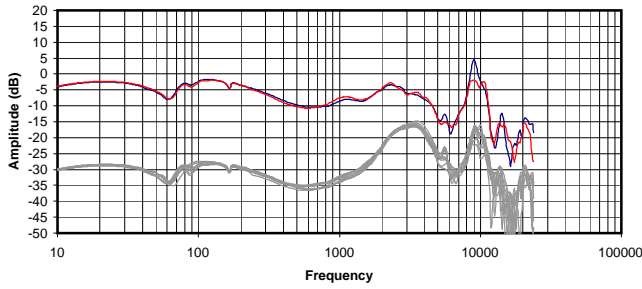


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

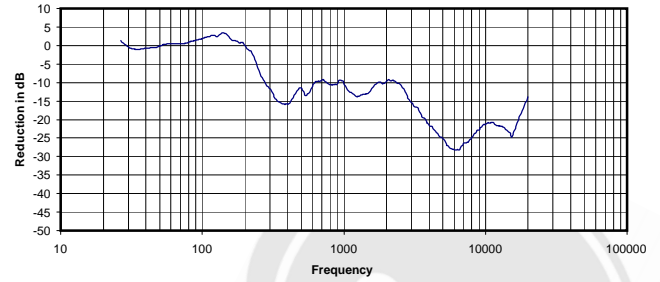
0.069 Vrms
 36 Ohms
 0.13 mW
 -19 dB



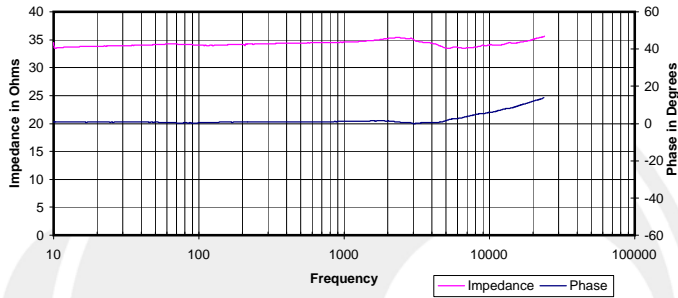
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



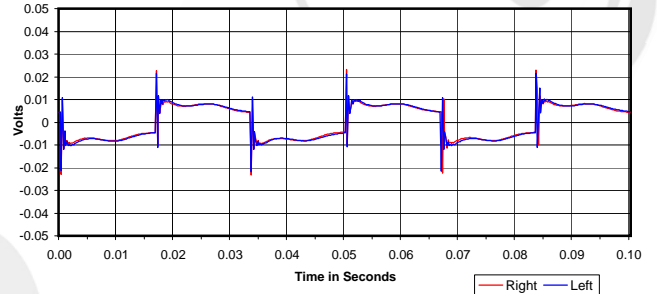
Isolation
 Attenuation of External Sound vs. Frequency



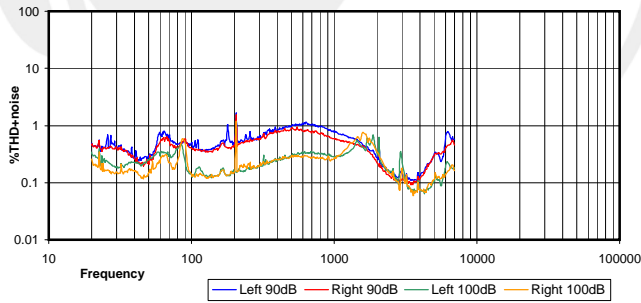
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



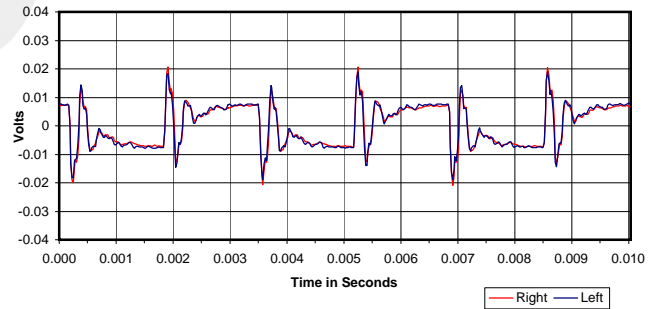
30 Hz Square Wave



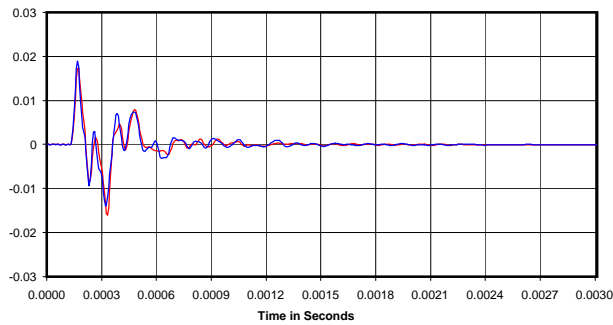
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

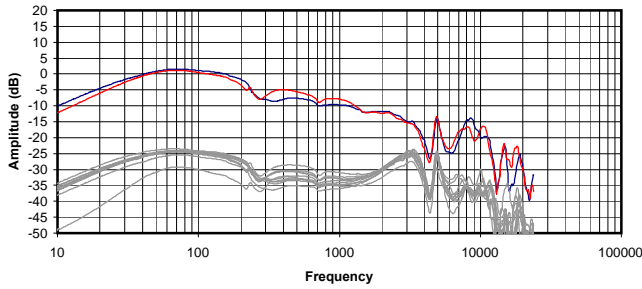


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

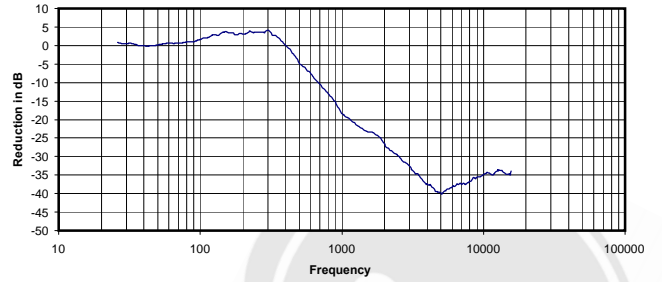
0.110 Vrms
 35 Ohms
 0.35 mW
 -12 dB



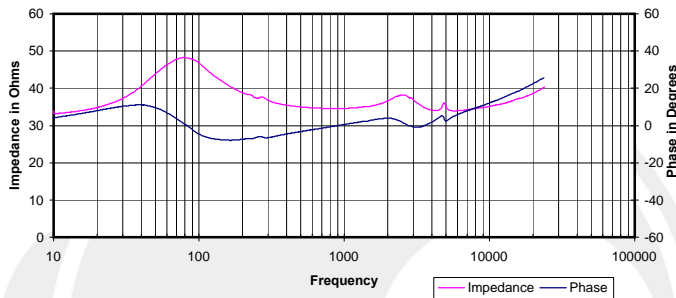
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



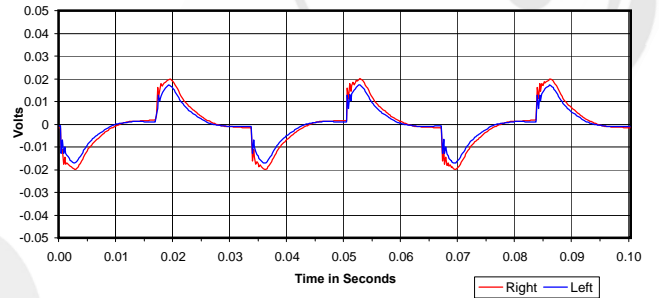
Isolation
 Attenuation of External Sound vs. Frequency



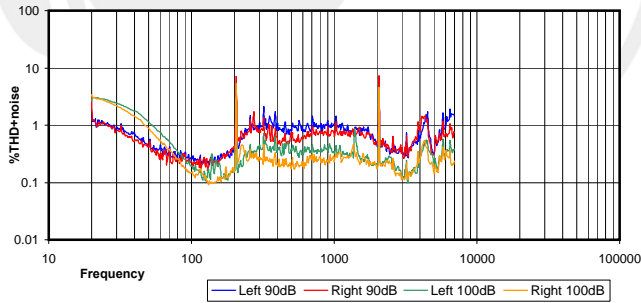
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



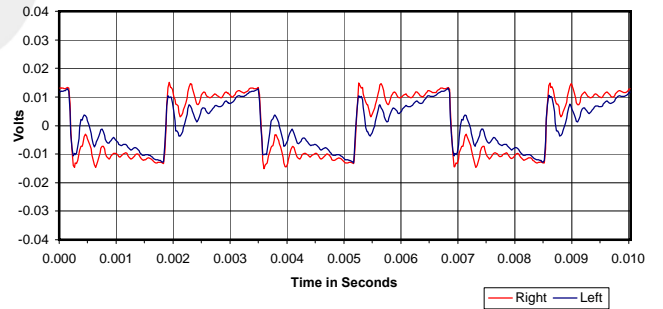
30 Hz Square Wave



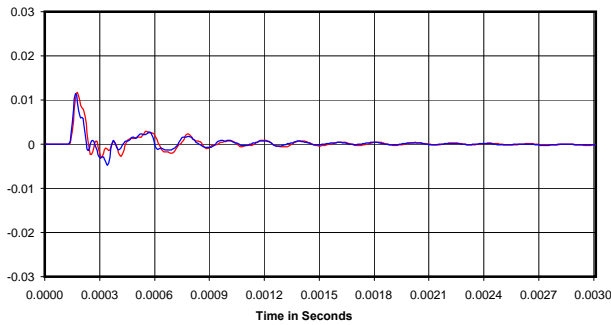
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

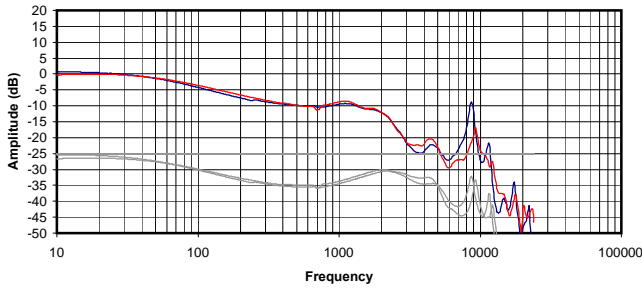


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

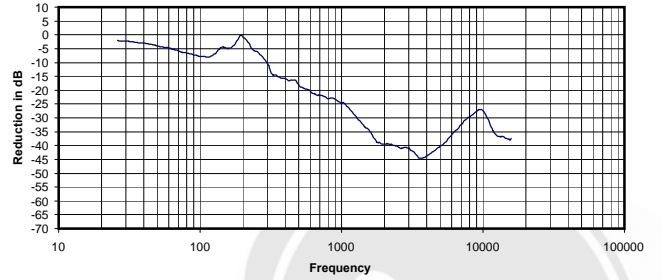
0.044 Vrms
 35 Ohms
 0.06 mW
 -14 dB



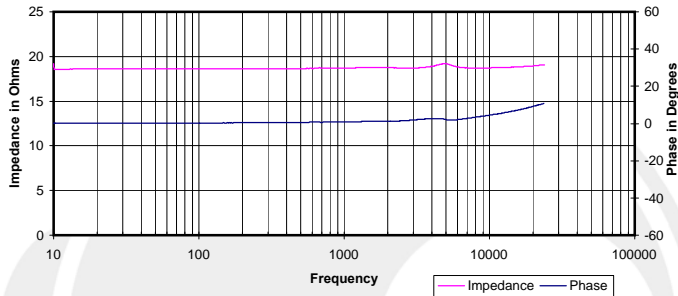
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



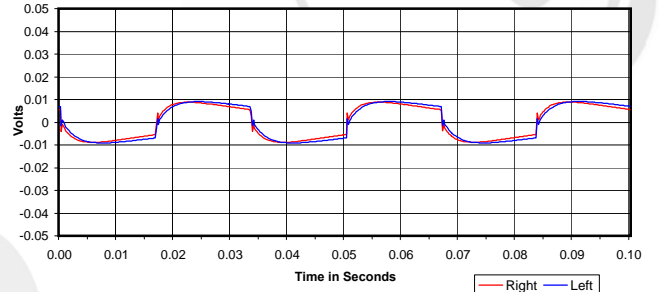
Isolation
Attenuation of External Sound vs. Frequency



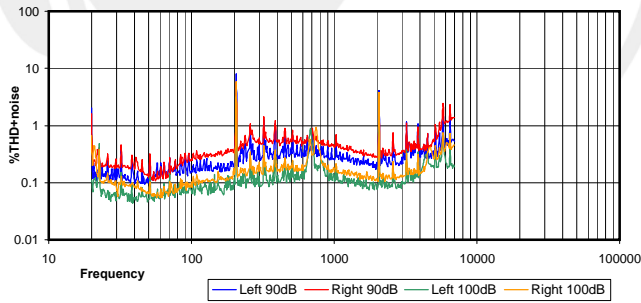
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



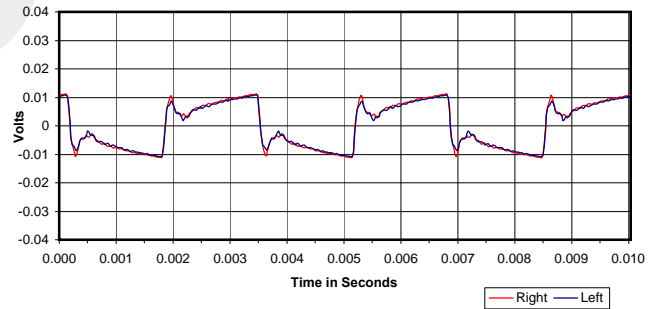
30 Hz Square Wave



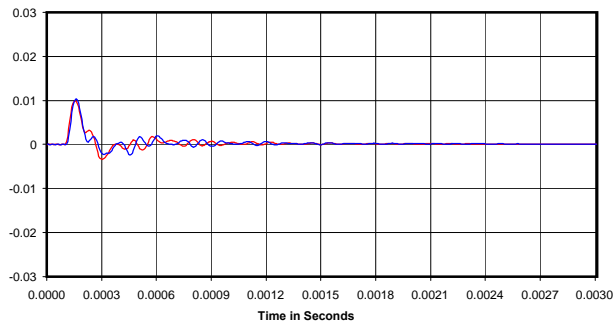
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



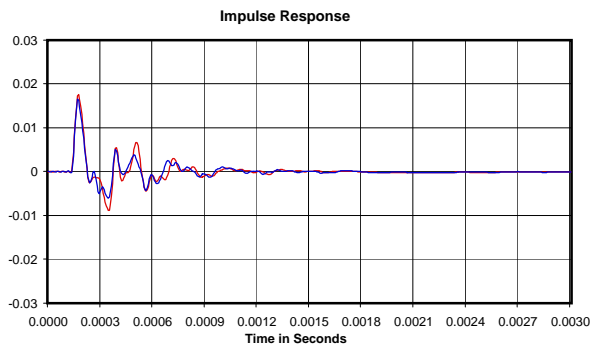
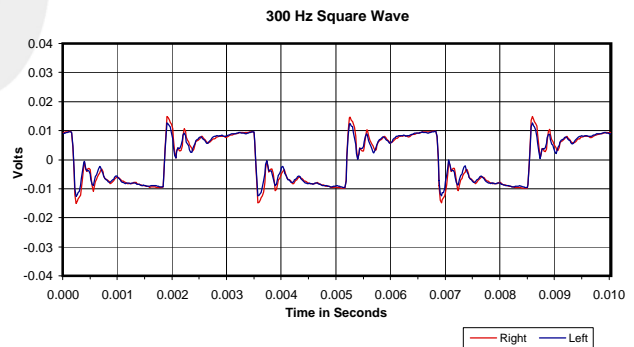
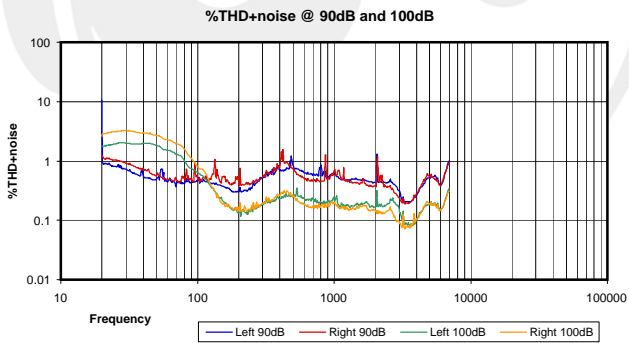
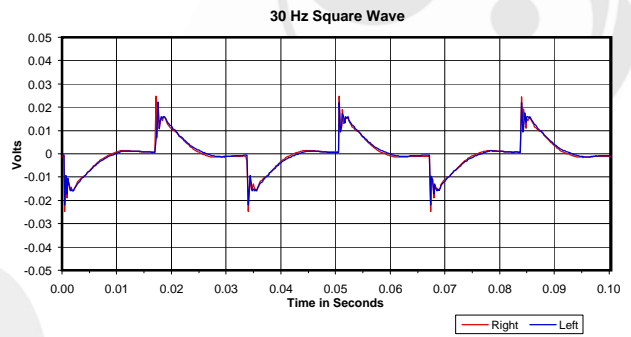
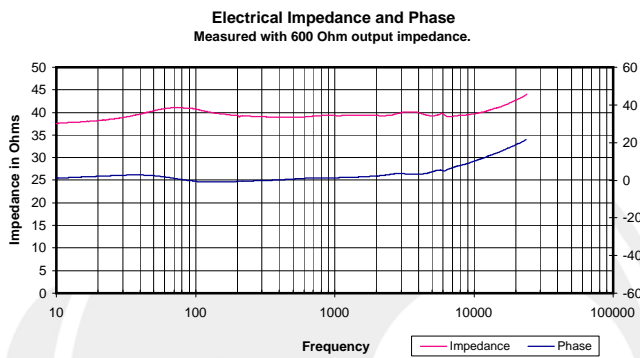
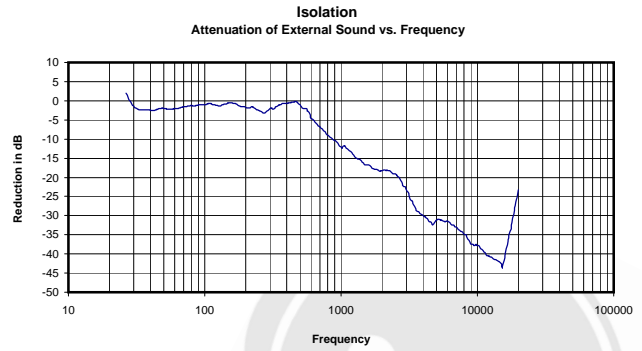
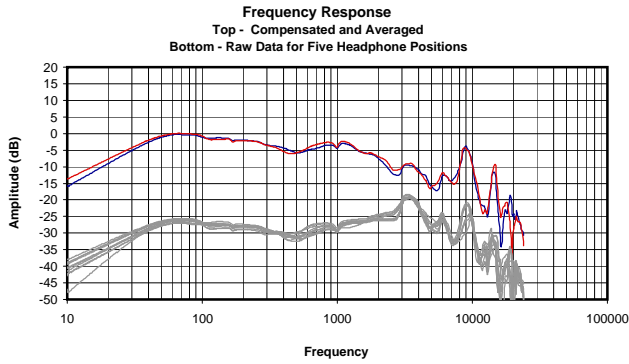
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

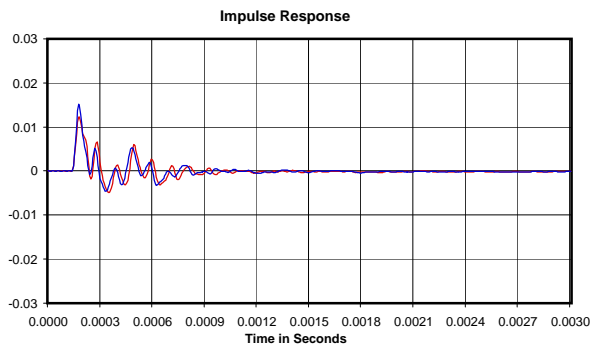
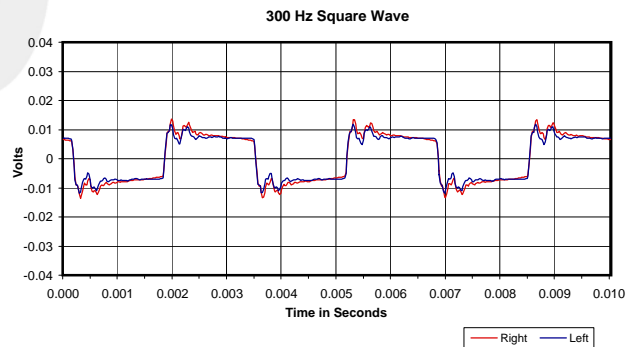
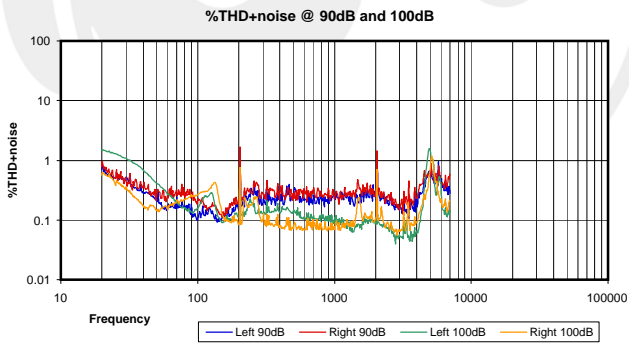
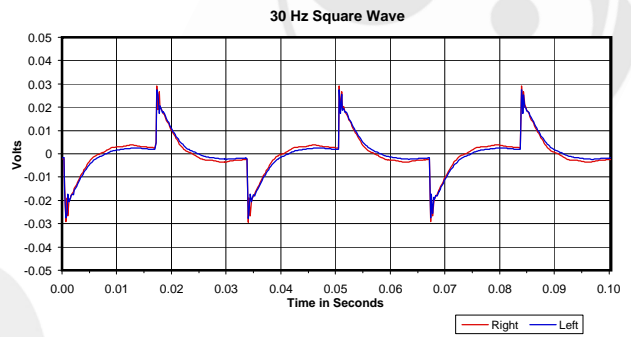
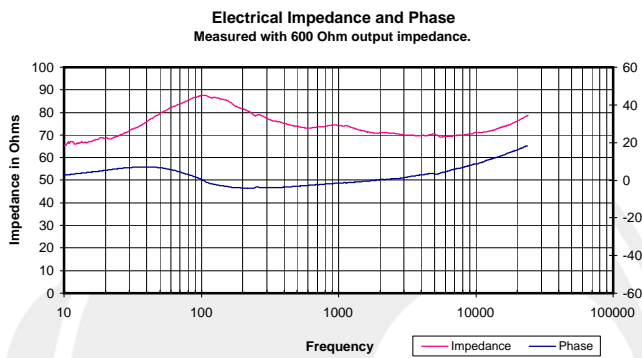
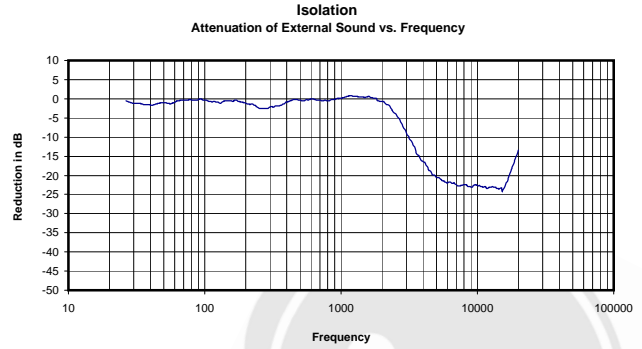
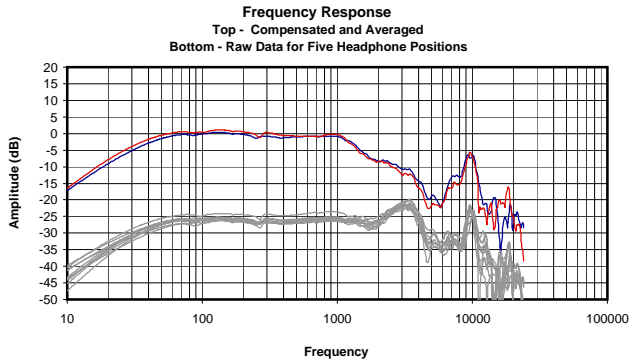
0.024 Vrms
19 Ohms
0.03 mW
-23 dB





Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

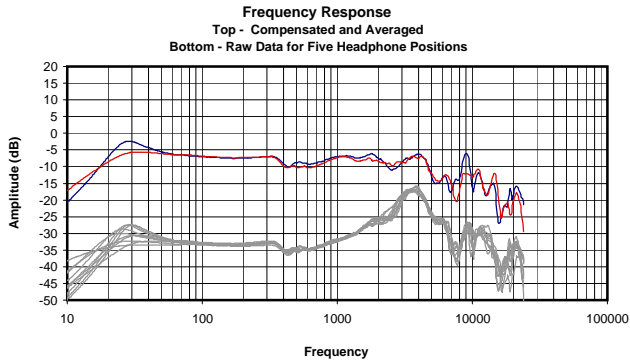
0.068 Vrms
39 Ohms
0.12 mW
-14 dBr



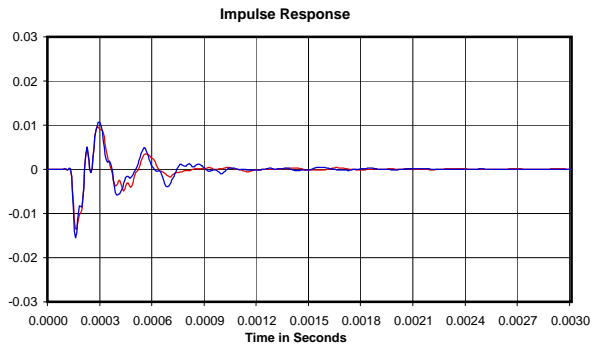
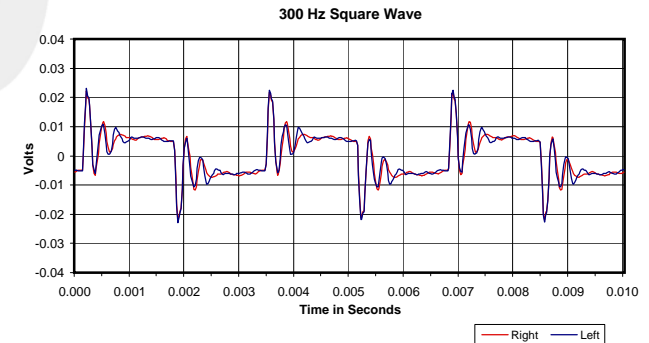
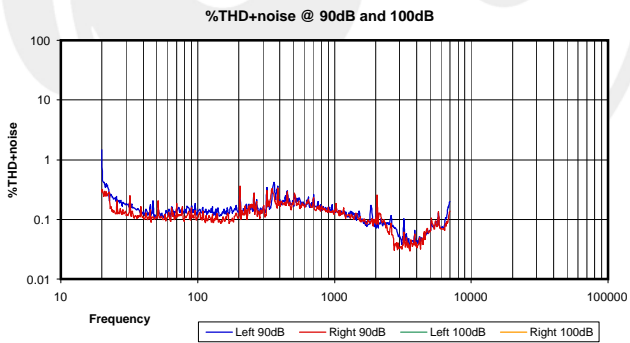
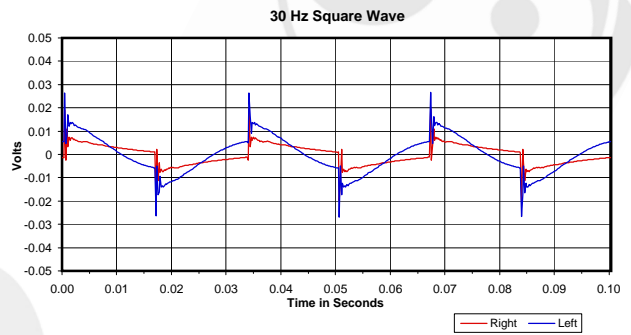
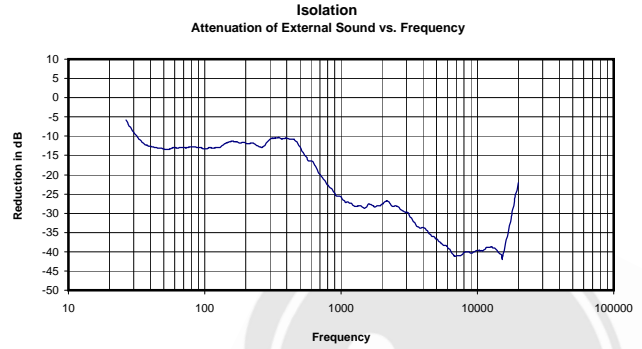
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.008 Vrms
 74 Ohms
 0.00 mW
 -6 dB



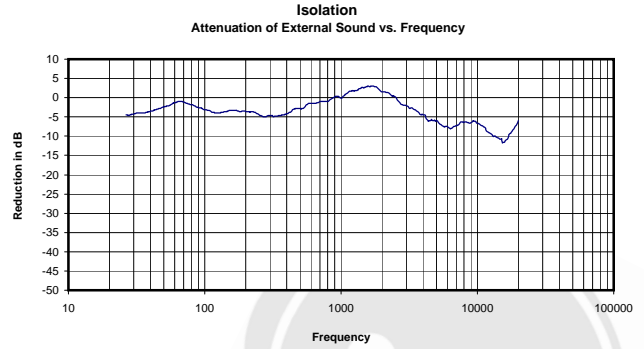
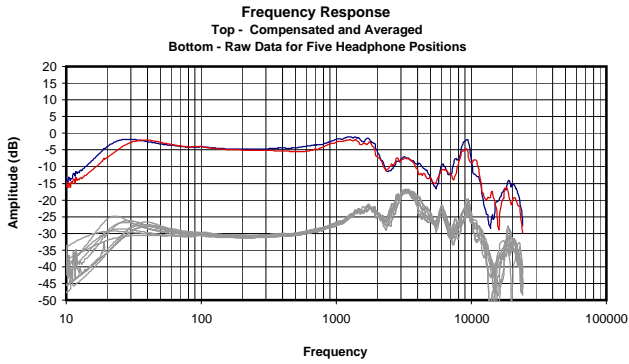


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

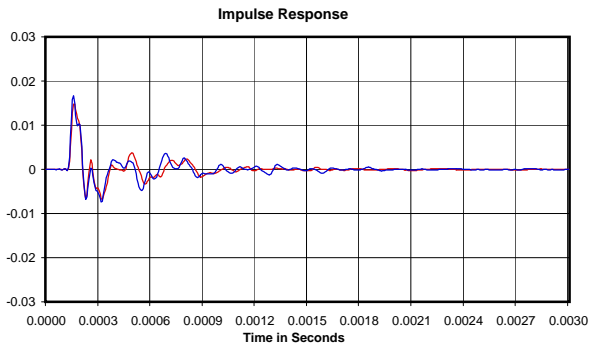
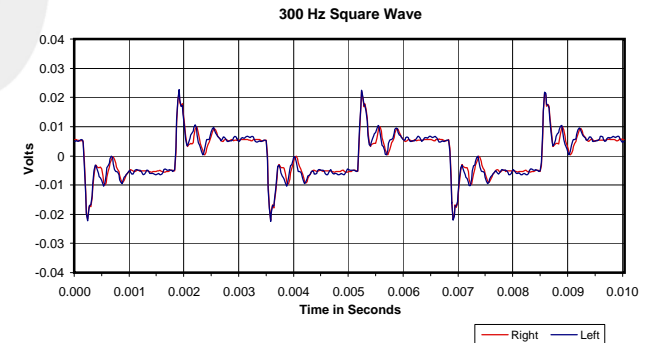
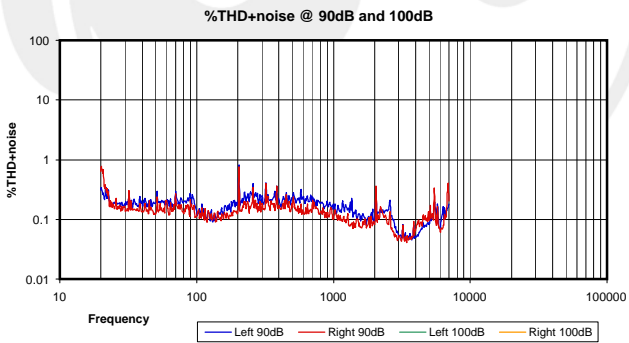
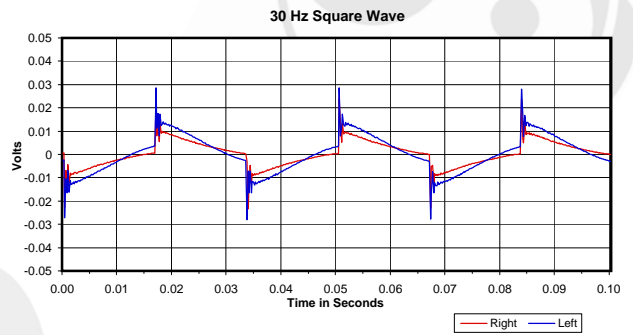


Broadband Isolation in dB (100Hz to 10kHz):

-24 dBr



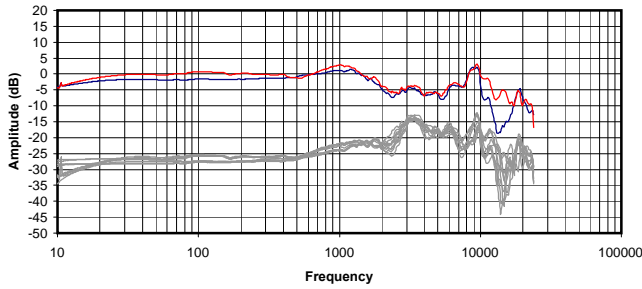
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



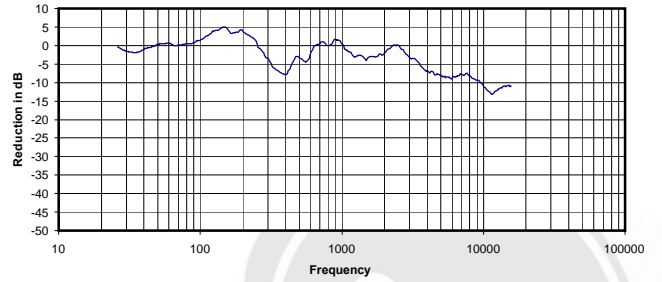
Broadband Isolation in dB (100Hz to 10kHz):

-3 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

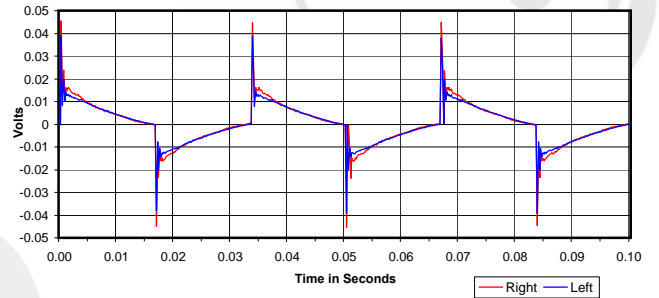


Isolation
 Attenuation of External Sound vs. Frequency

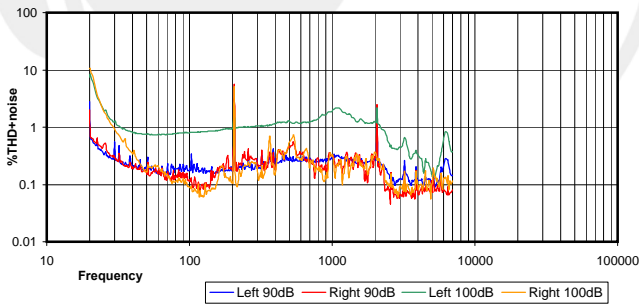


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

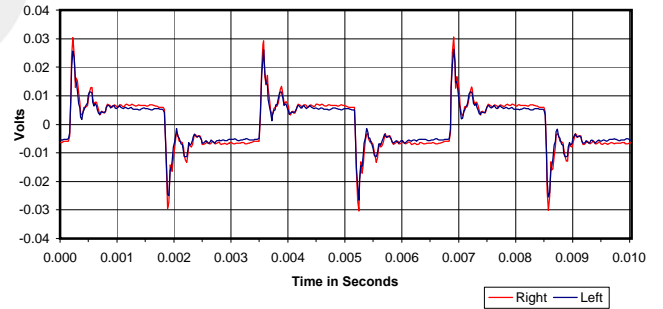
30 Hz Square Wave



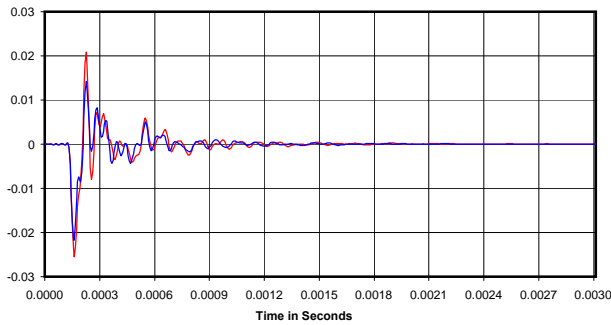
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

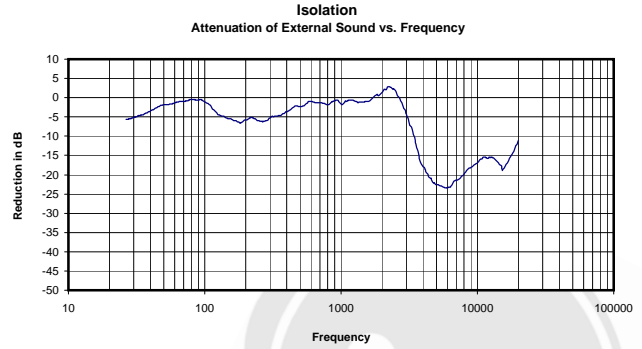
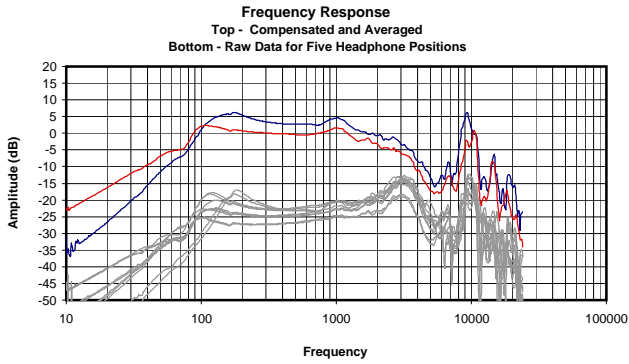


Impulse Response

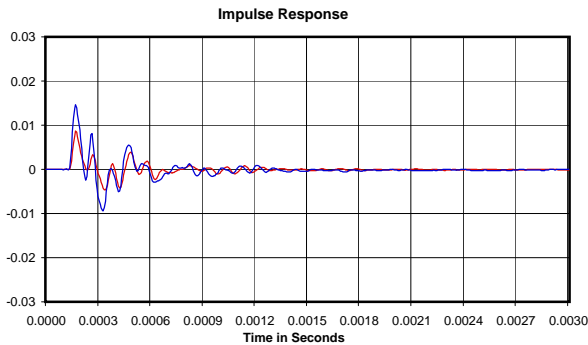
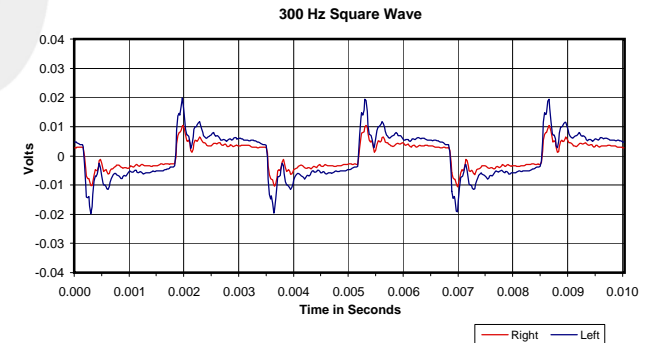
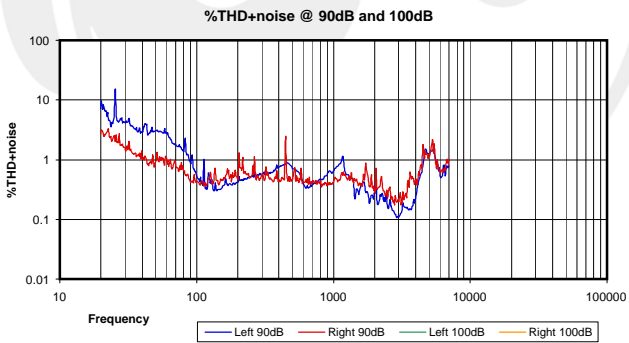
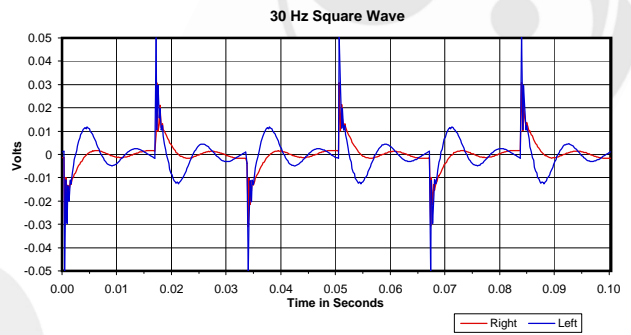


Broadband Isolation in dB (100Hz to 10kHz):

-2 dB

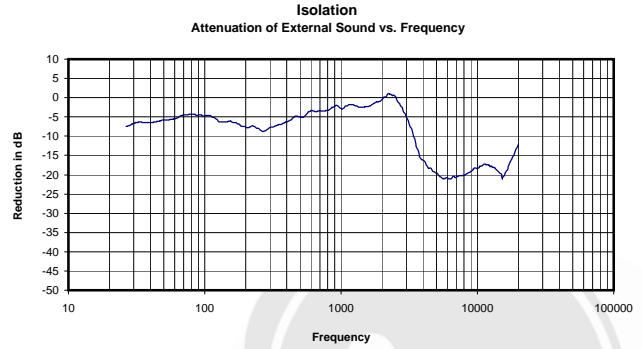
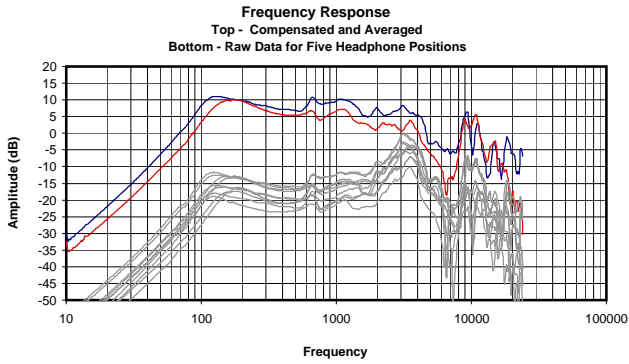


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

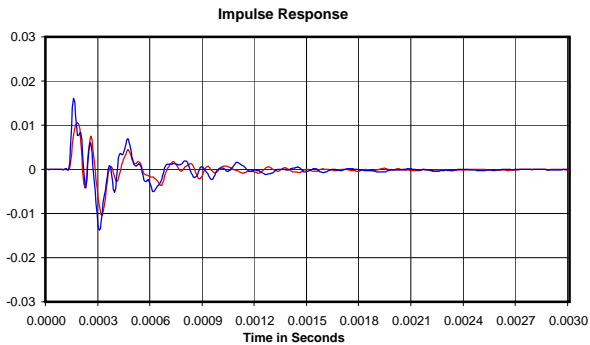
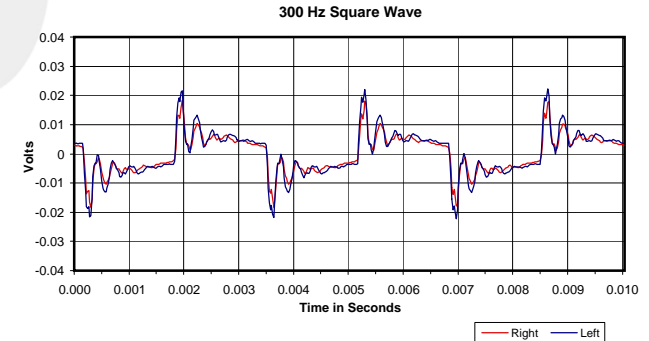
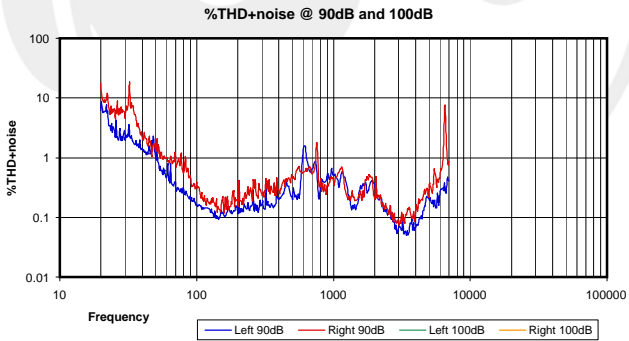
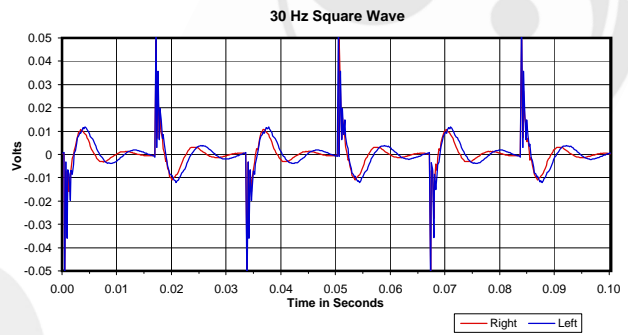


Broadband Isolation in dB (100Hz to 10kHz):

-7 dB



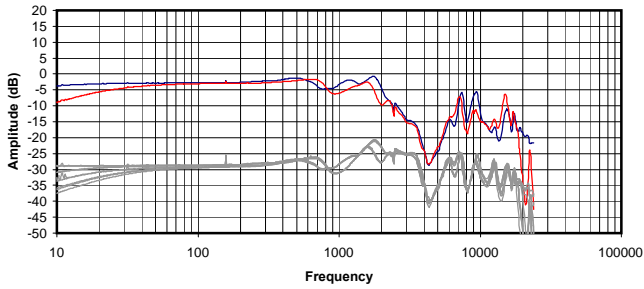
Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



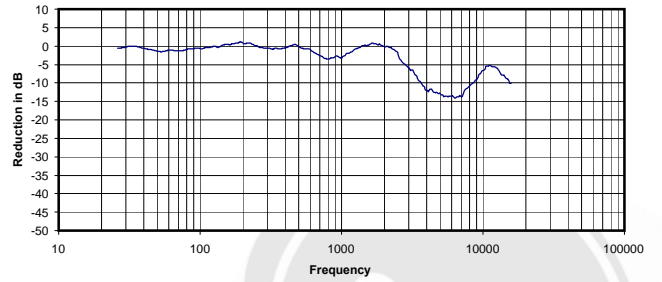
Broadband Isolation in dB (100Hz to 10kHz):

-8 dBr

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

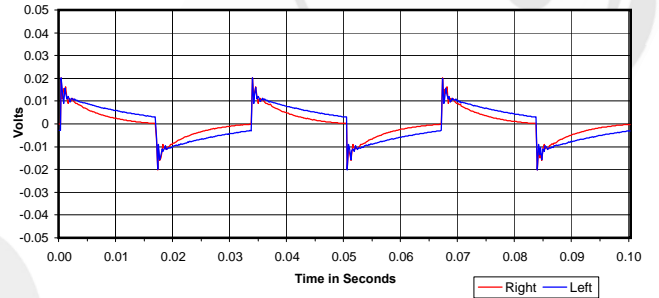


Isolation
 Attenuation of External Sound vs. Frequency

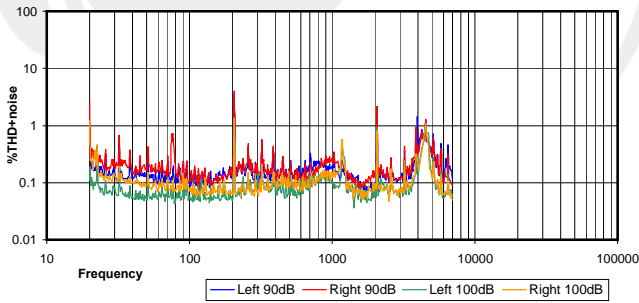


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

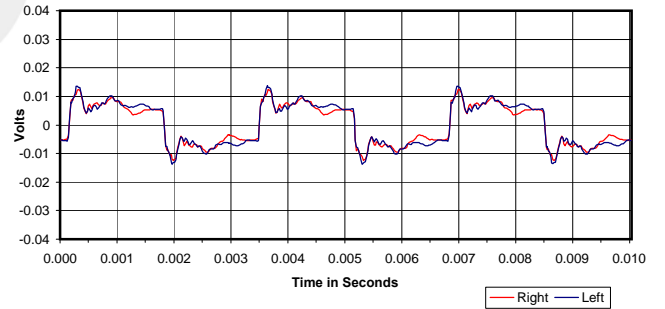
30 Hz Square Wave



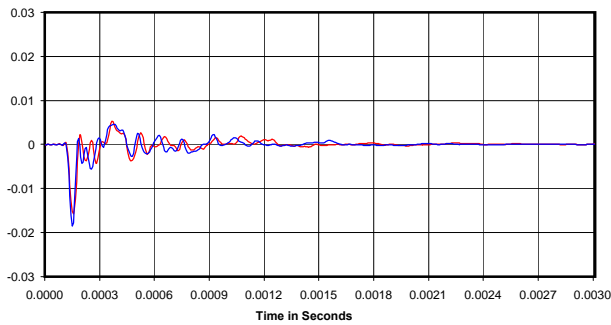
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



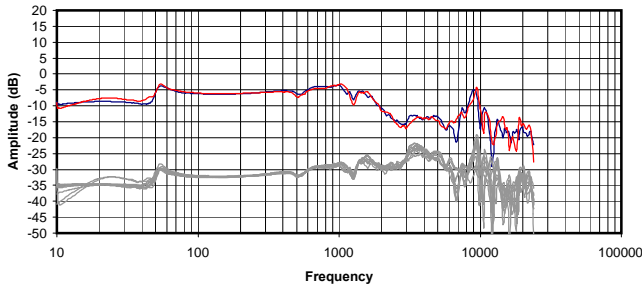
Impulse Response



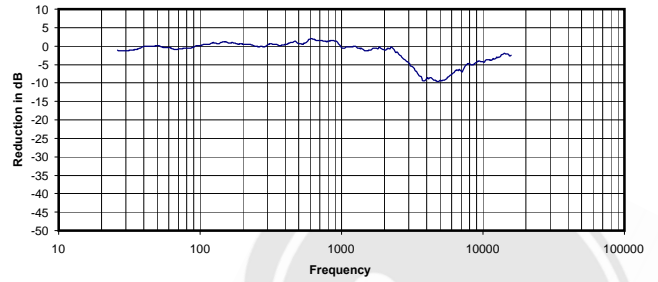
Broadband Isolation in dB (100Hz to 10kHz):

-3 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

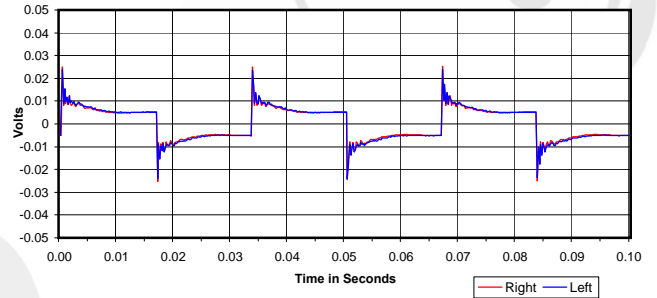


Isolation
 Attenuation of External Sound vs. Frequency

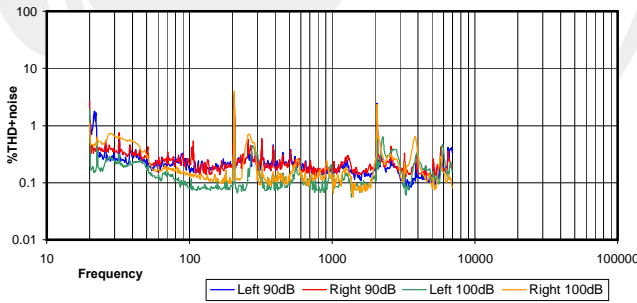


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

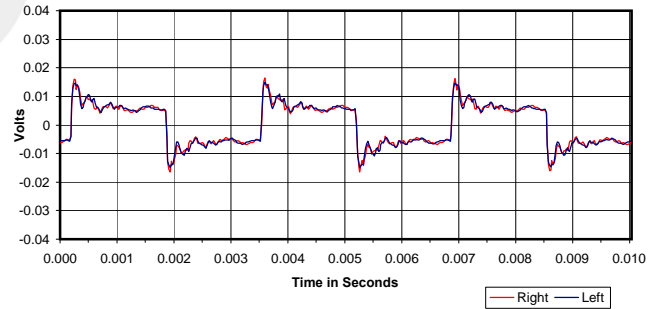
30 Hz Square Wave



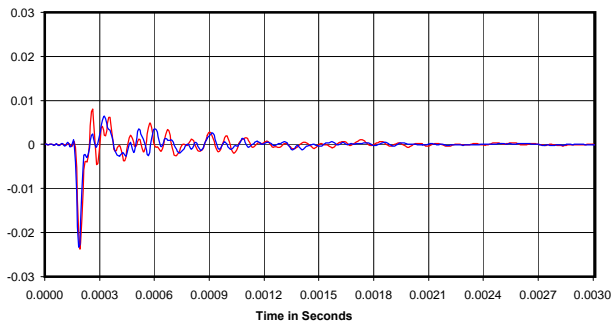
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



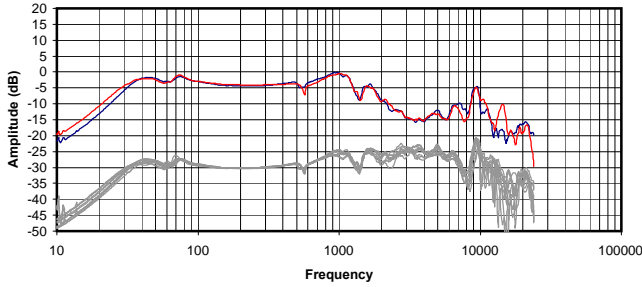
Impulse Response



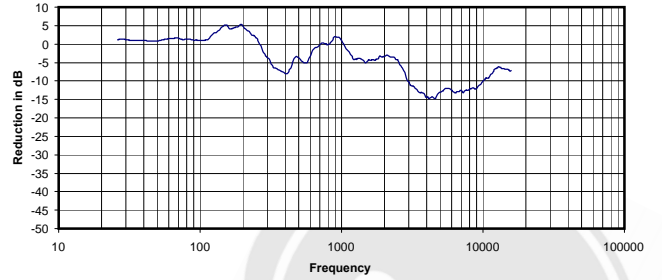
Broadband Isolation in dB (100Hz to 10kHz):

-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

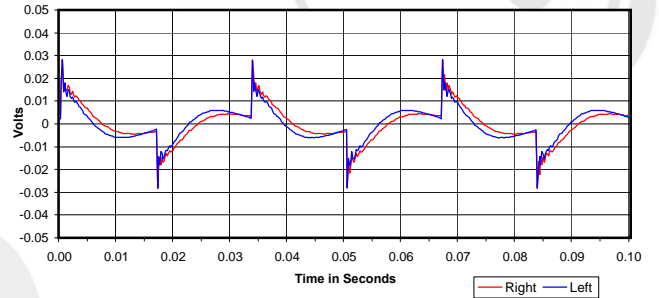


Isolation
 Attenuation of External Sound vs. Frequency

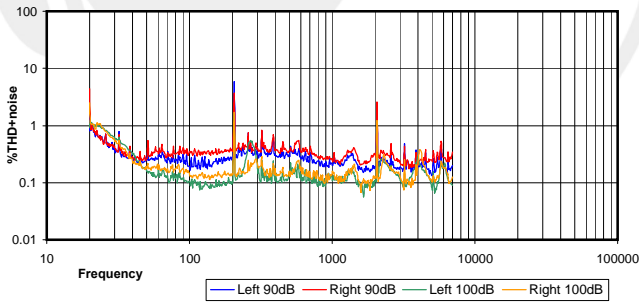


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

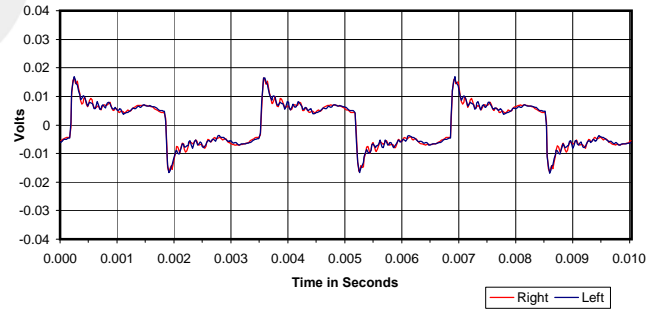
30 Hz Square Wave



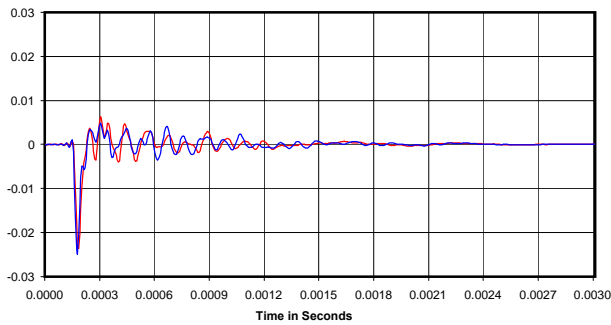
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



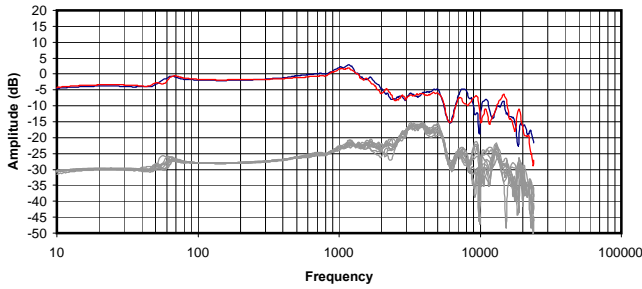
Impulse Response



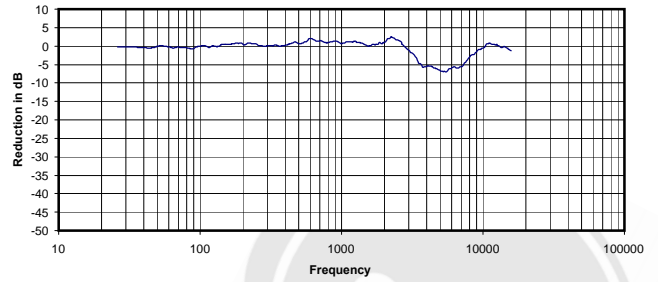
Broadband Isolation in dB (100Hz to 10kHz):

-4 dB

Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions

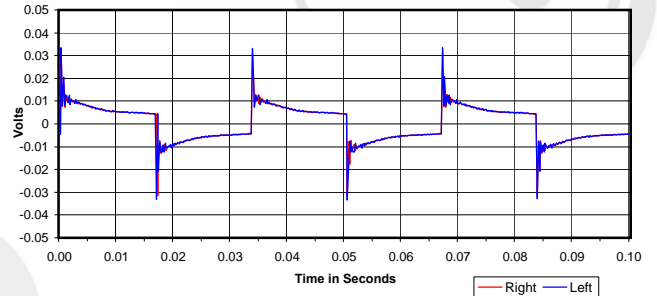


Isolation
Attenuation of External Sound vs. Frequency

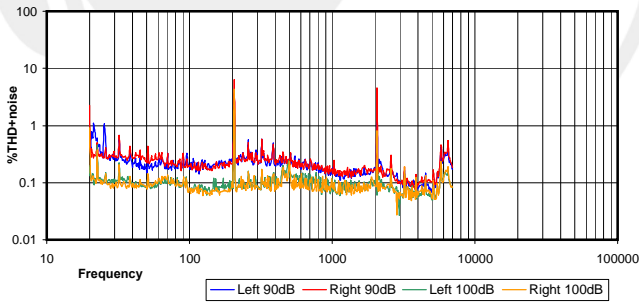


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

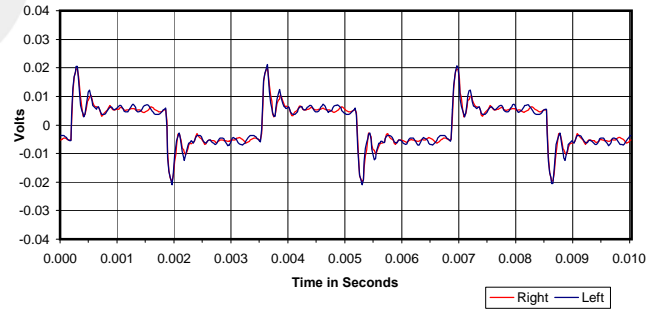
30 Hz Square Wave



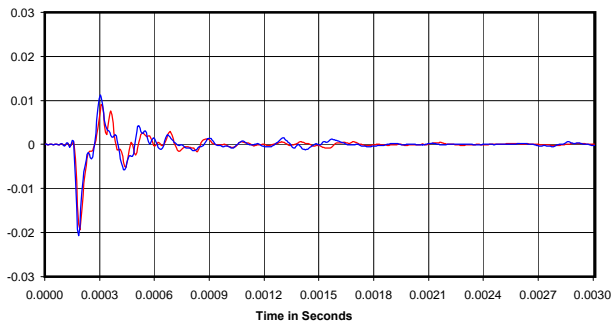
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

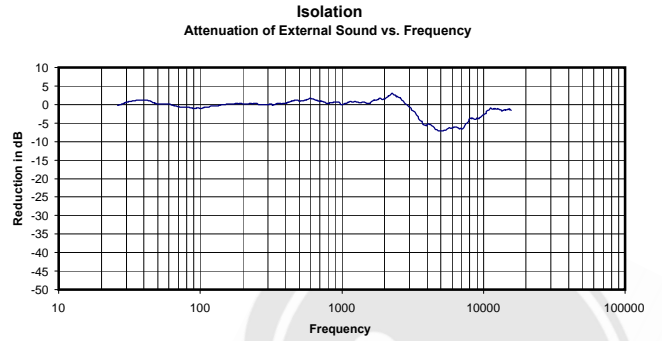
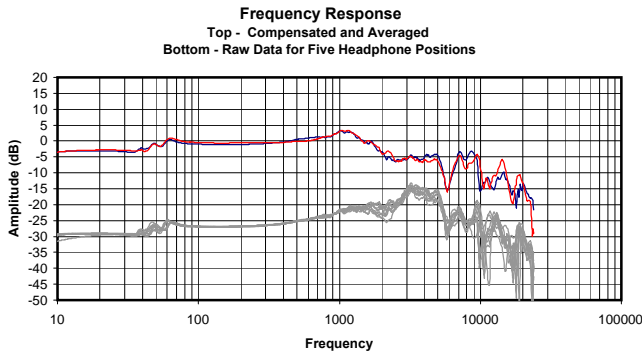


Impulse Response

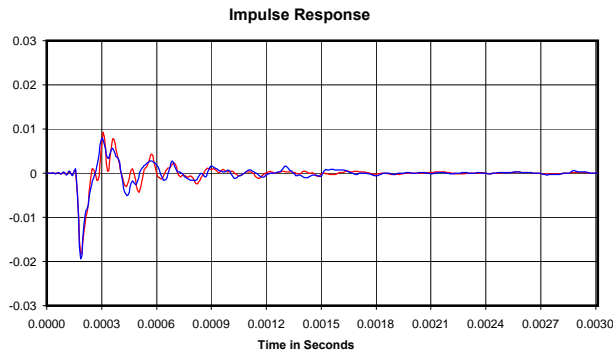
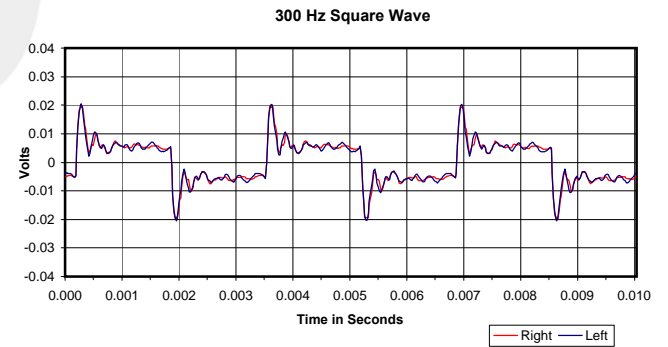
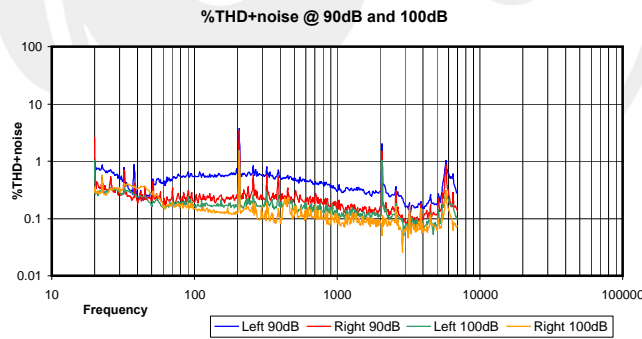
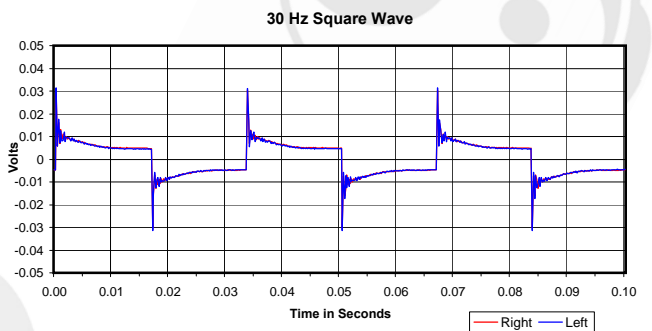


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.000 Vrms
#DIV/0! Ohms
#DIV/0! mW
0 dBr



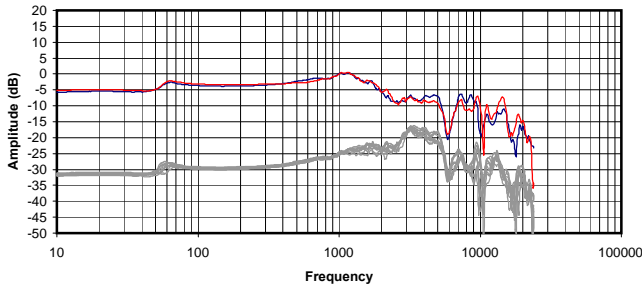
Electrical Impedance and phase measurements unavailable for Electrostatic headphones.



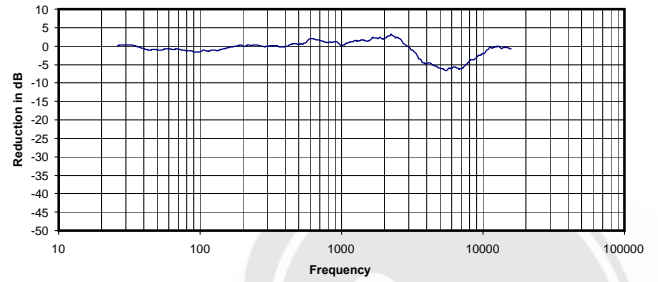
Broadband Isolation in dB (100Hz to 10kHz):

-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

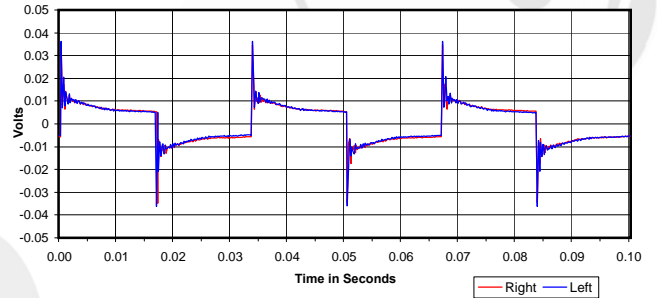


Isolation
 Attenuation of External Sound vs. Frequency

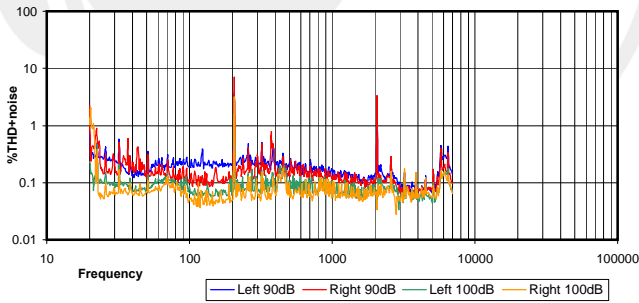


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

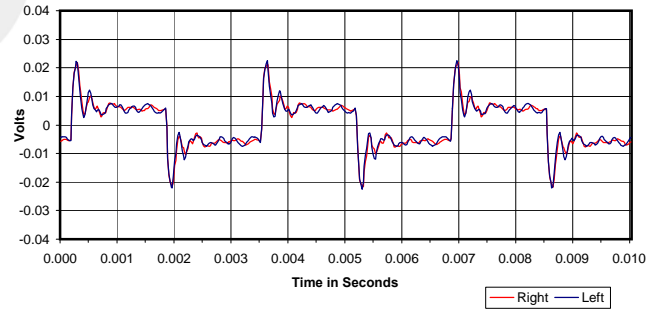
30 Hz Square Wave



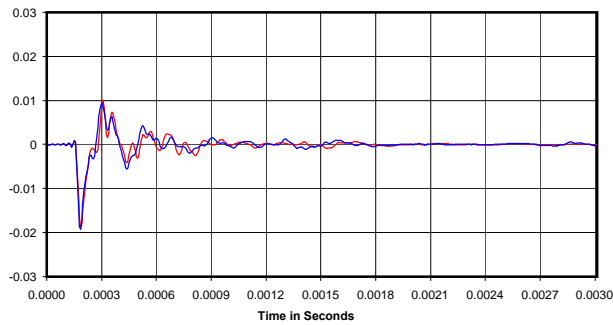
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

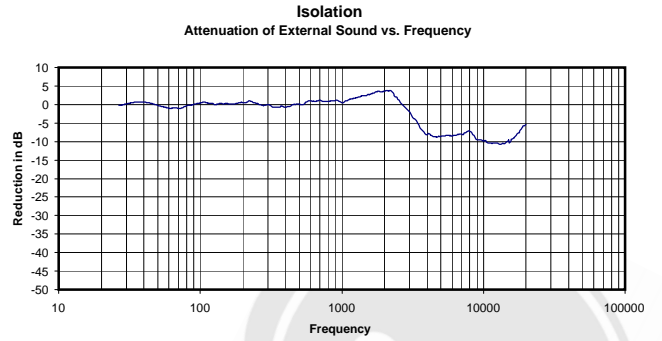
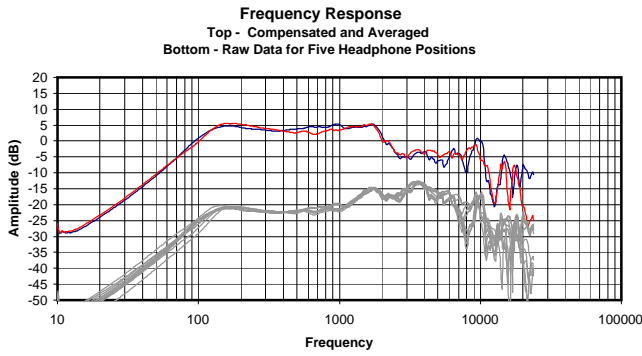


Impulse Response

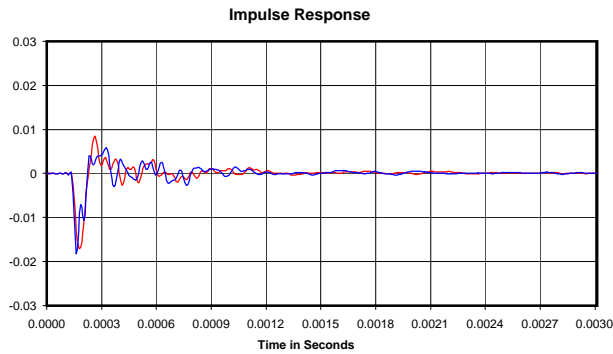
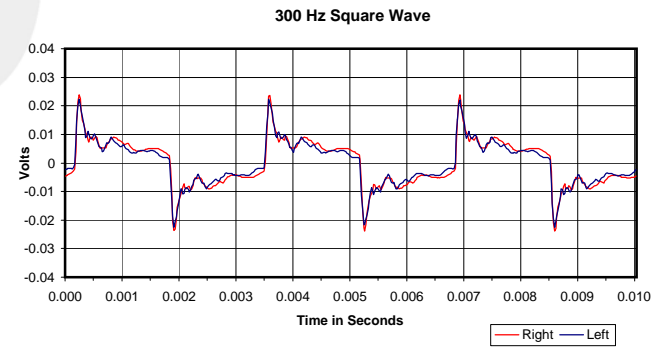
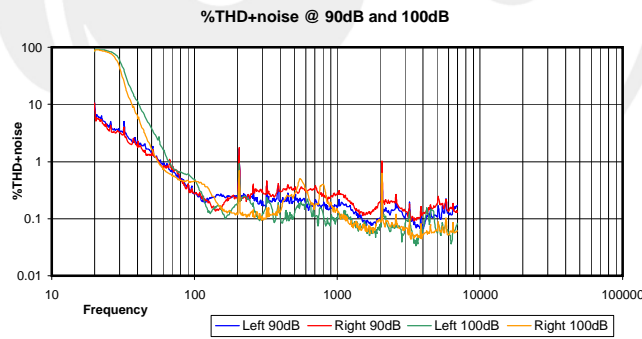
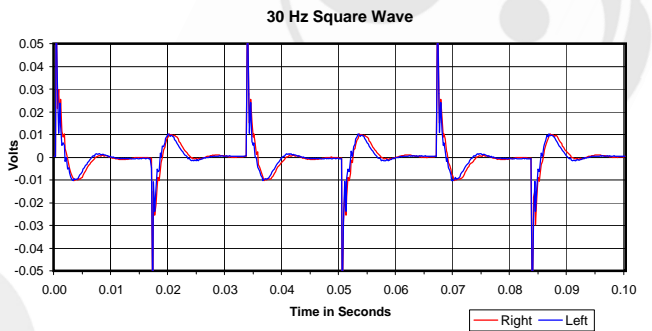


Broadband Isolation in dB (100Hz to 10kHz):

0 dB



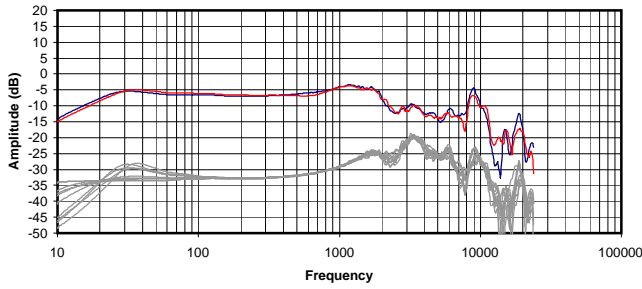
Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz):

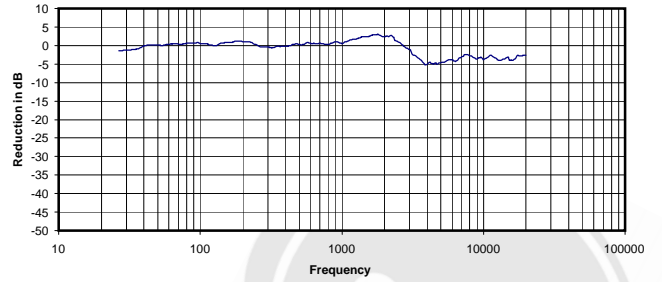
-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

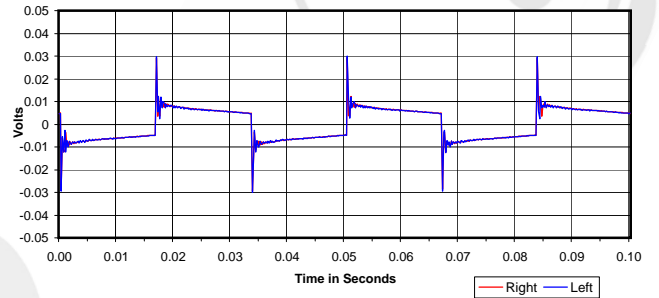


Electrical Impedance and phase measurements
 unavailable for electrostatic and wireless headphones

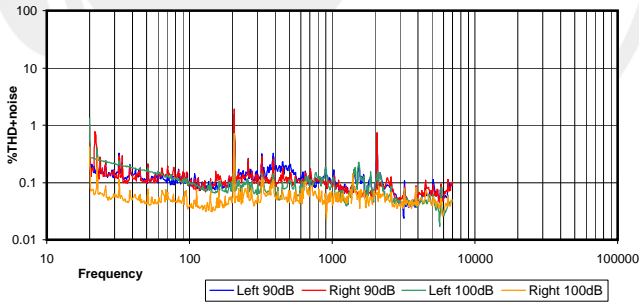
Isolation
 Attenuation of External Sound vs. Frequency



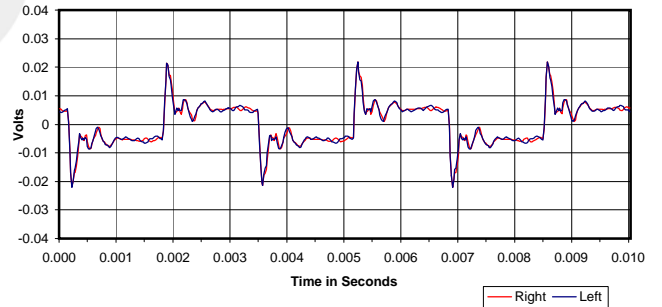
30 Hz Square Wave



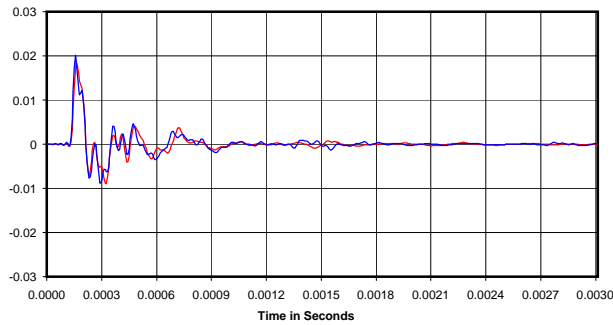
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



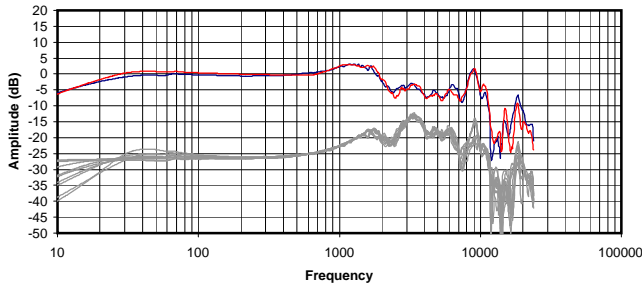
Impulse Response



Broadband Isolation in dB (100Hz to 10kHz):

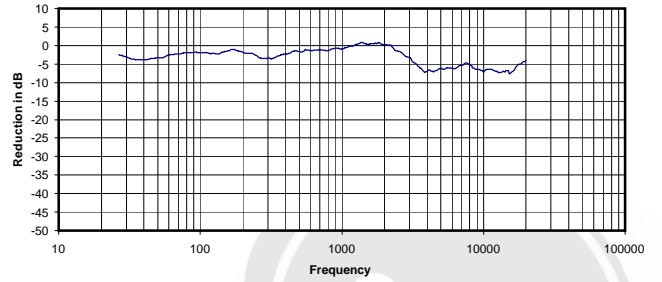
0 dBr

Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions

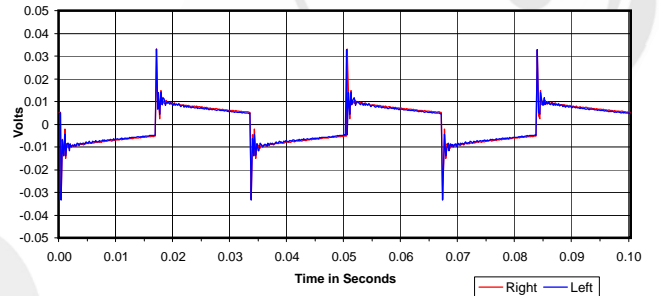


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

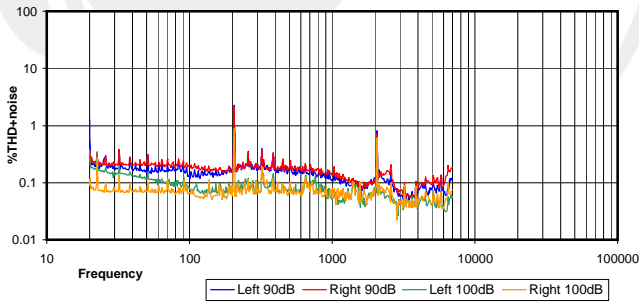
Isolation
Attenuation of External Sound vs. Frequency



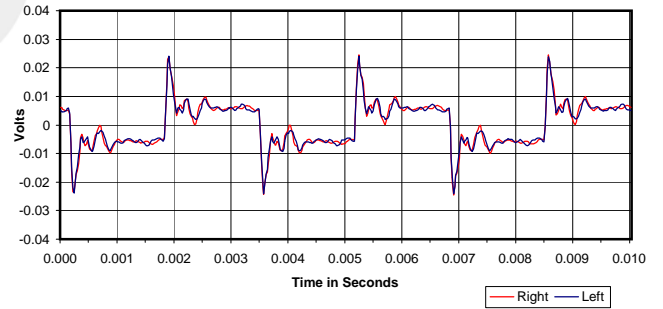
30 Hz Square Wave



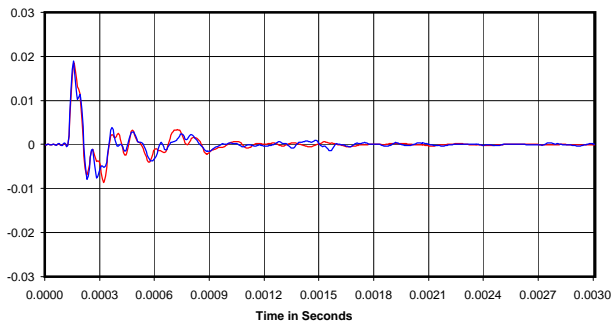
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

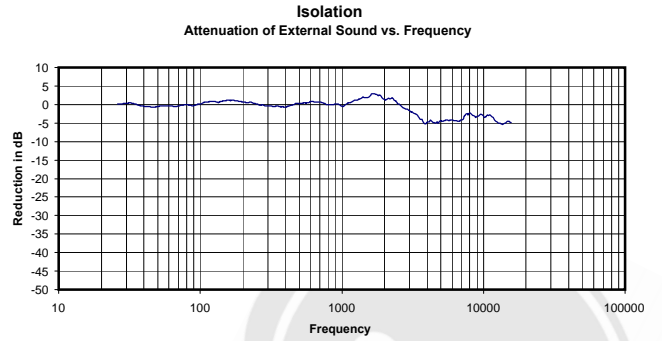
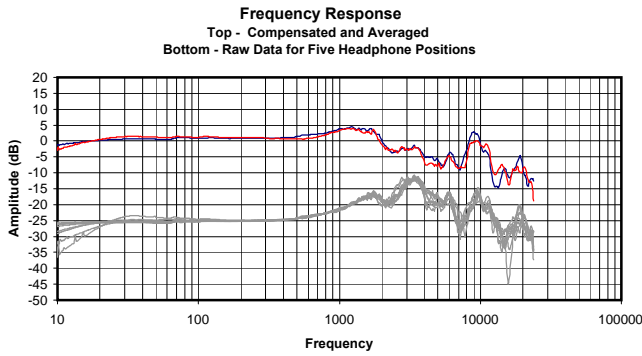


Impulse Response

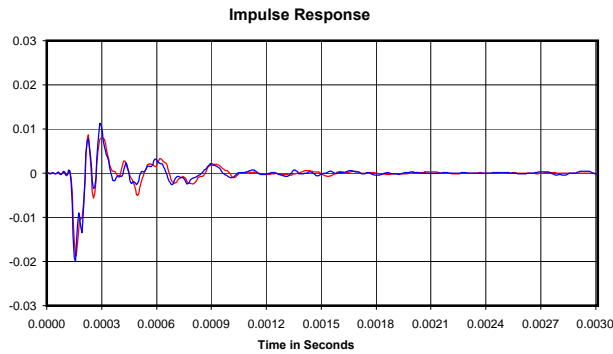
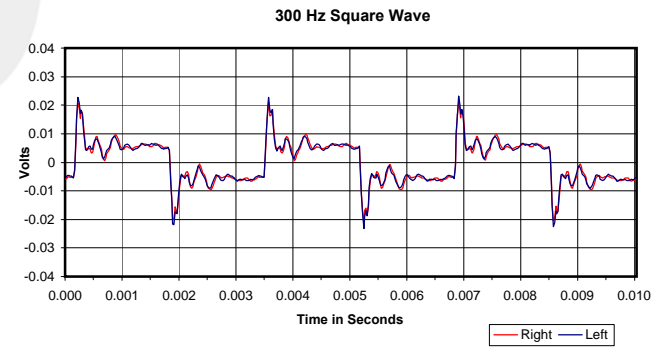
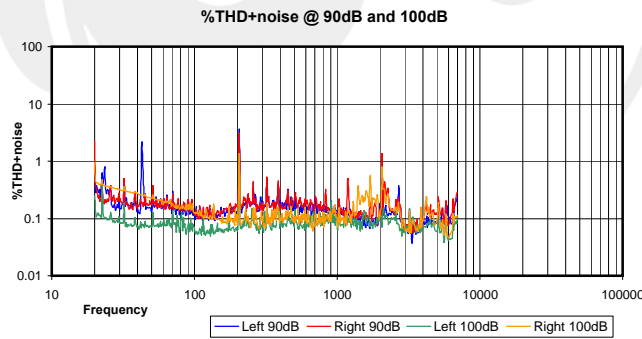
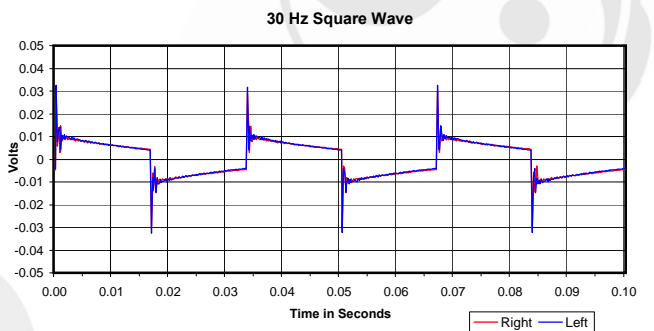


Broadband Isolation in dB (100Hz to 10kHz):

-3 dB

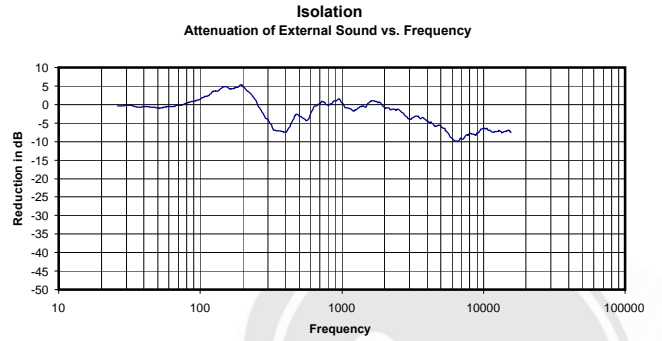
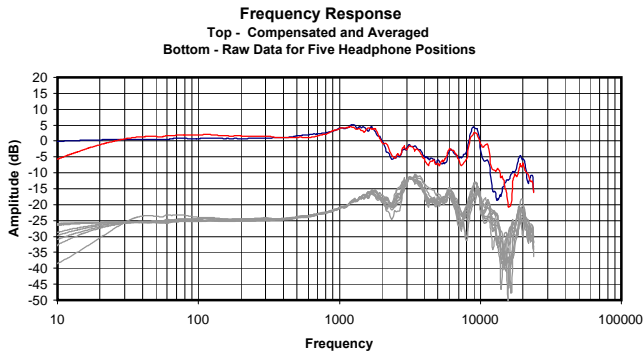


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

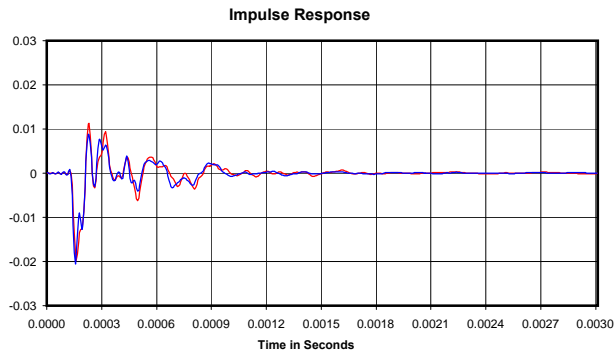
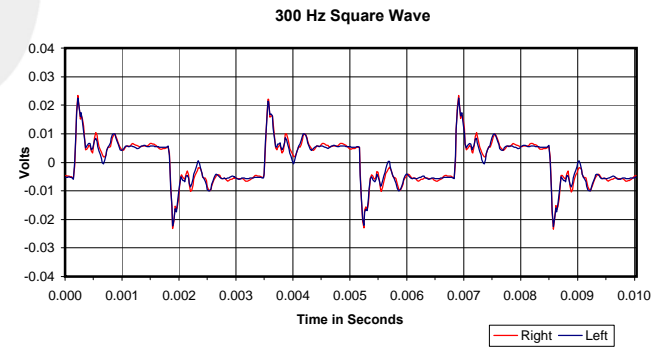
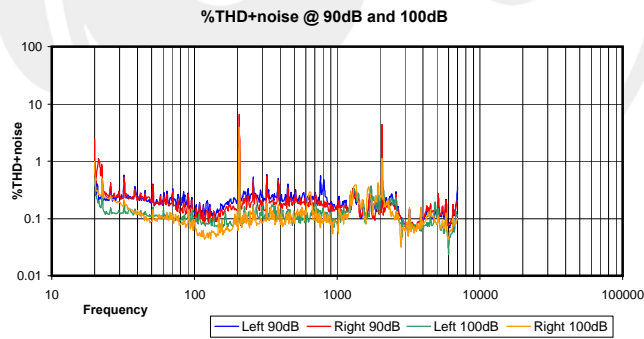
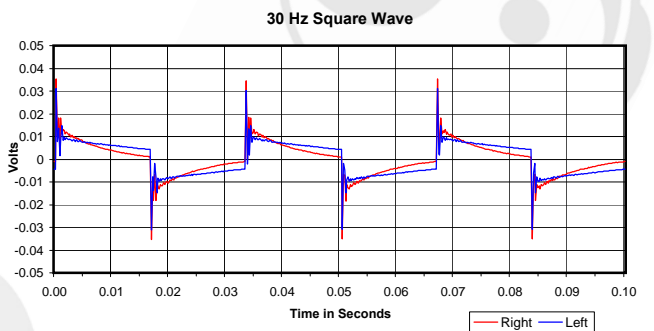


Broadband Isolation in dB (100Hz to 10kHz):

0 dB



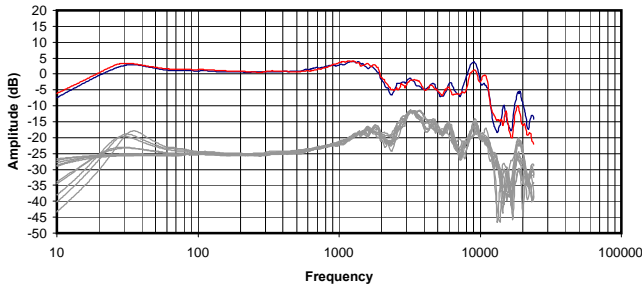
Electrical Impedance and phase measurements unavailable for Electrostatic headphones.



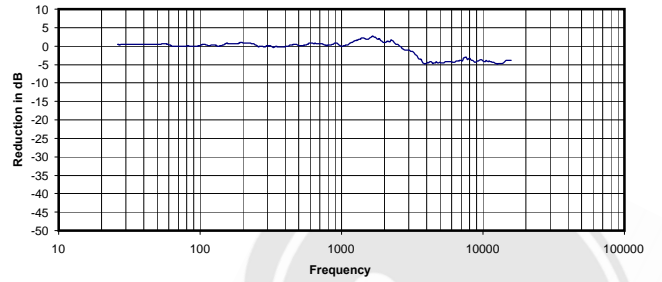
Broadband Isolation in dB (100Hz to 10kHz):

-1 dB

Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions

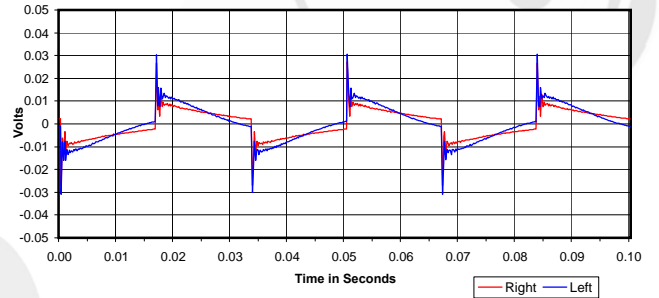


Isolation
 Attenuation of External Sound vs. Frequency

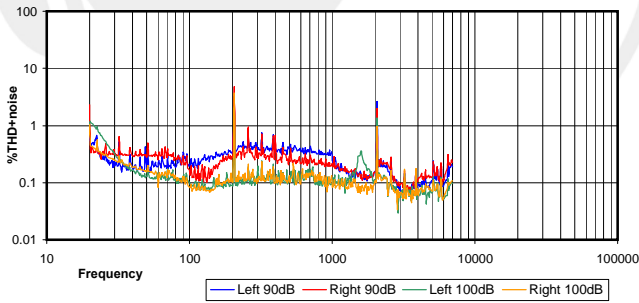


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

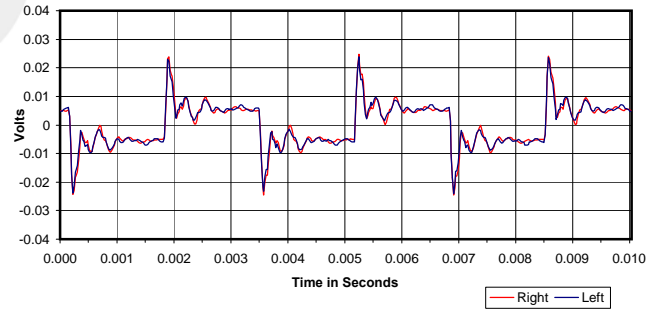
30 Hz Square Wave



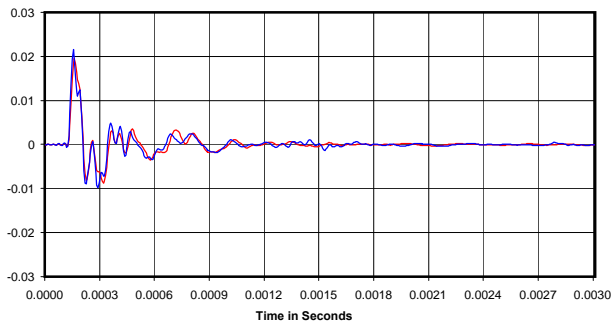
%THD+noise @ 90dB and 100dB



300 Hz Square Wave

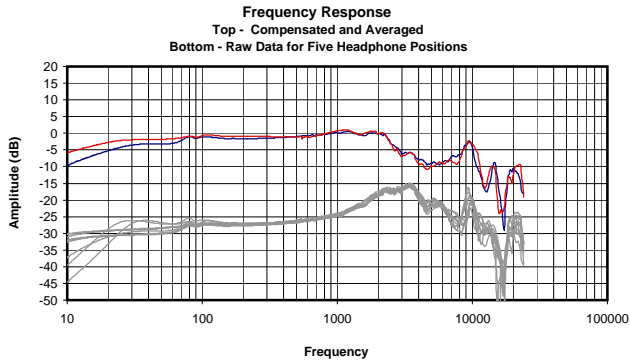


Impulse Response

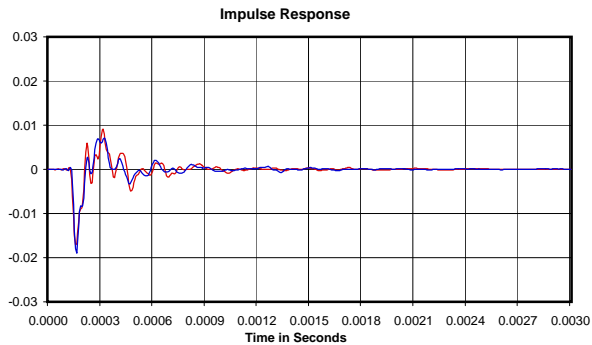
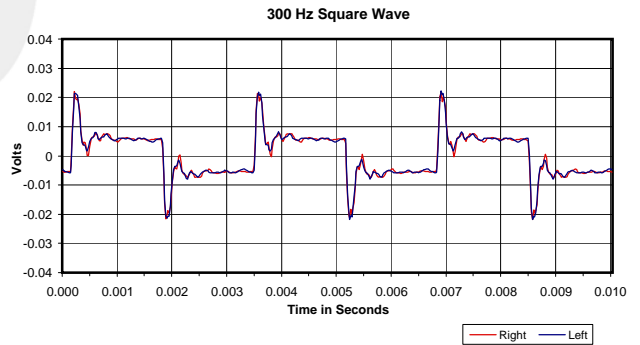
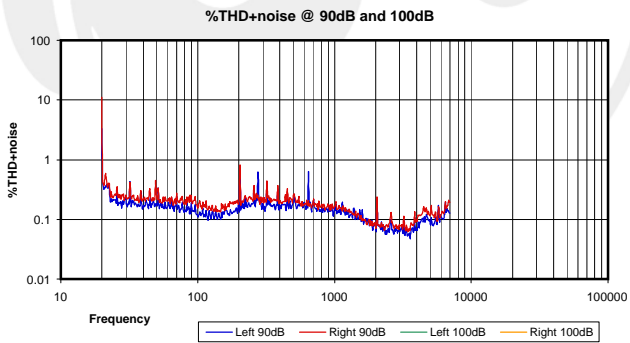
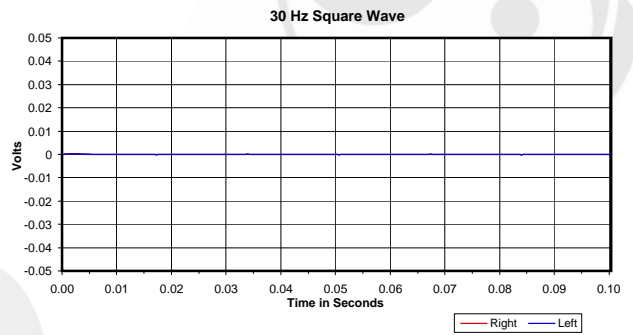
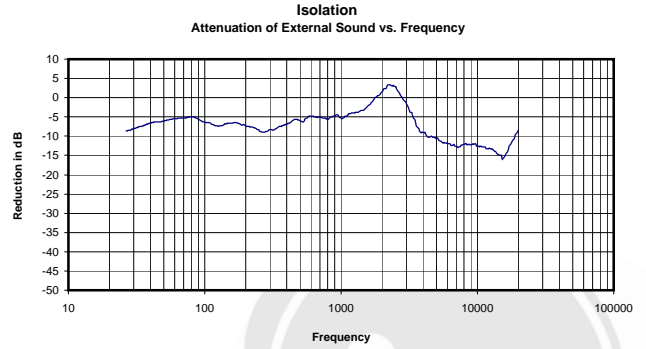


Broadband Isolation in dB (100Hz to 10kHz):

0 dBr

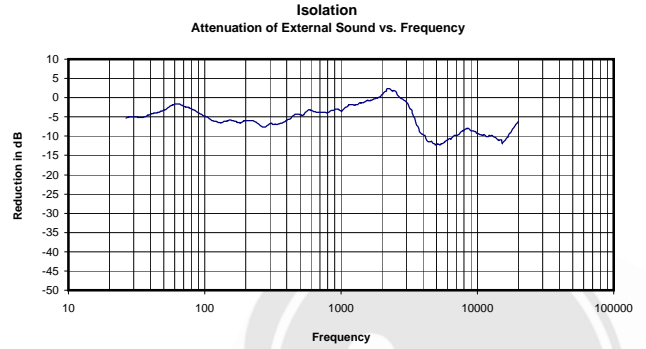
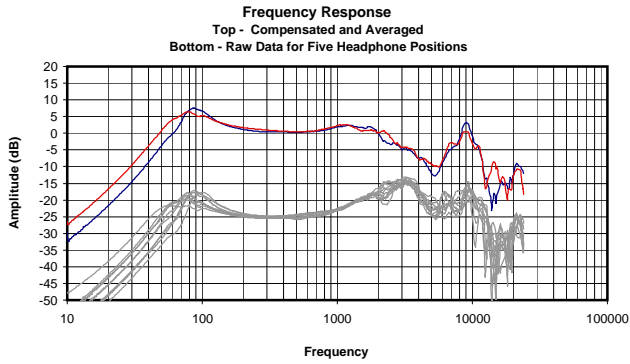


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

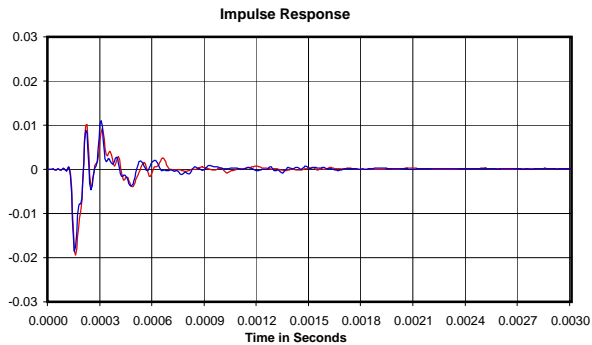
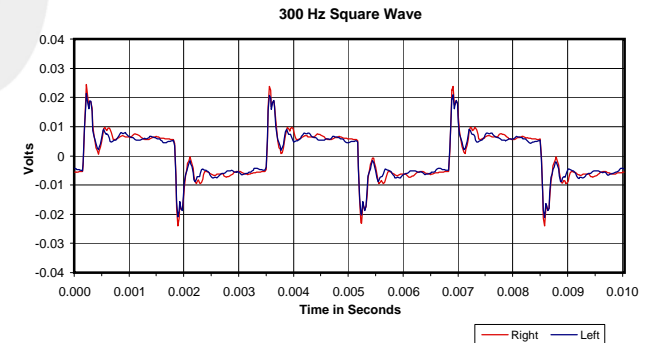
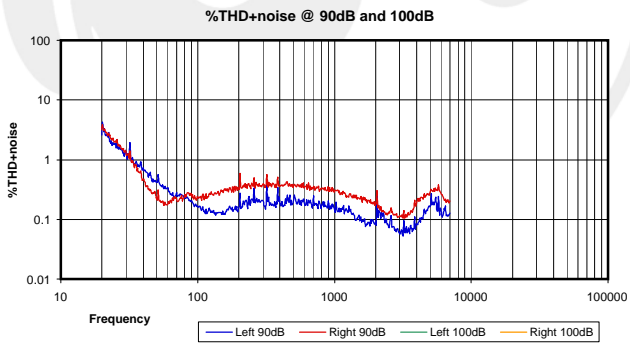
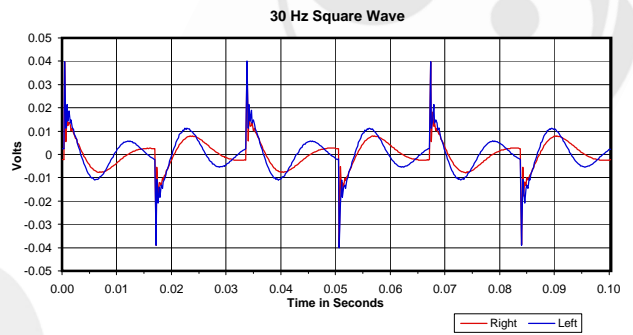


Broadband Isolation in dB (100Hz to 10kHz):

-6 dB

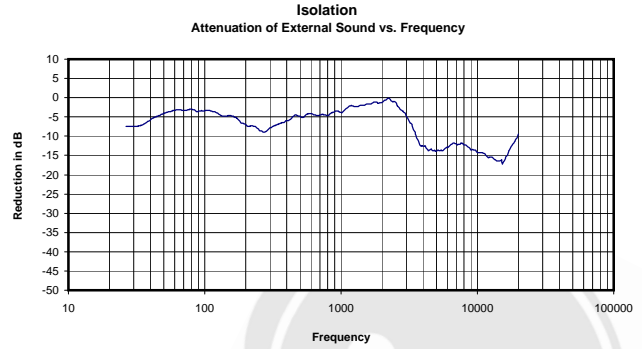
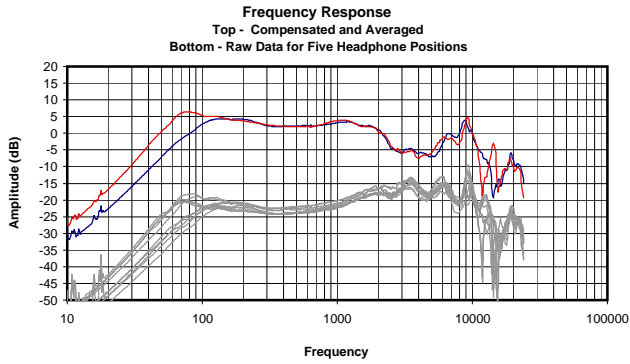


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

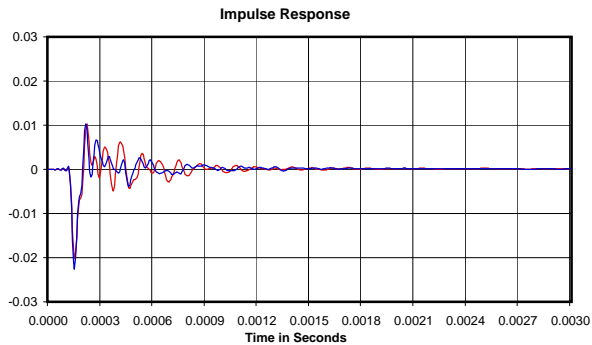
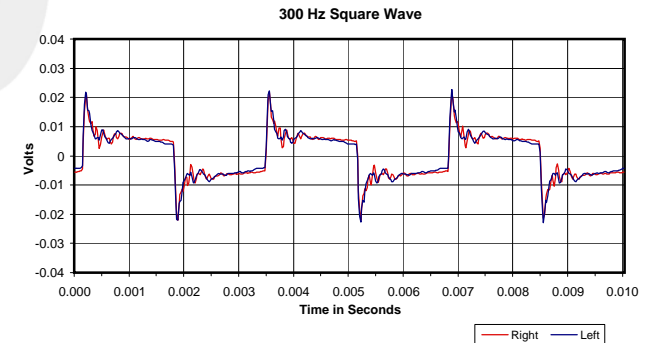
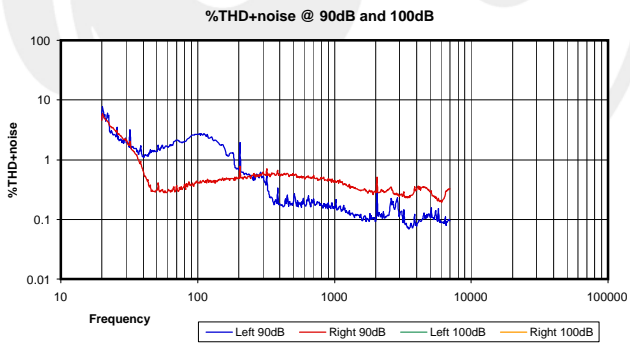
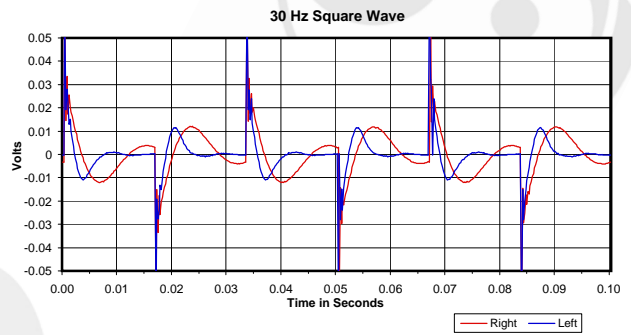


Broadband Isolation in dB (100Hz to 10kHz):

-5 dBr

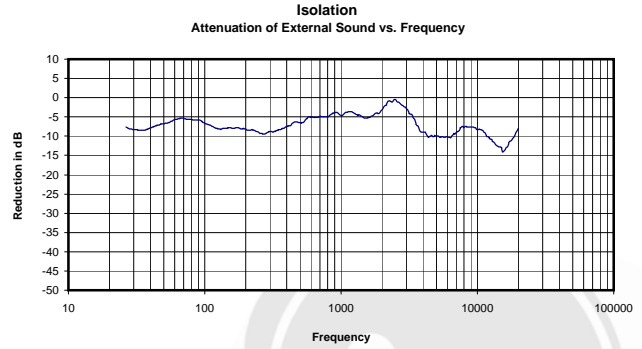
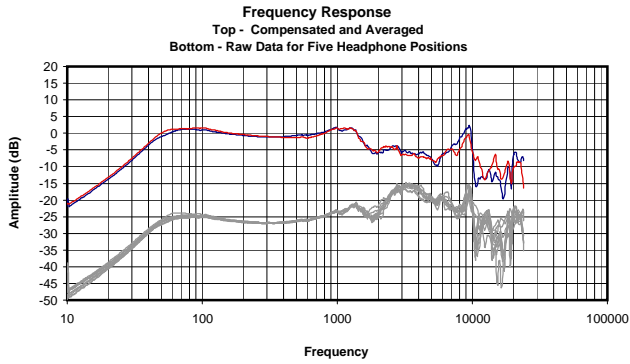


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

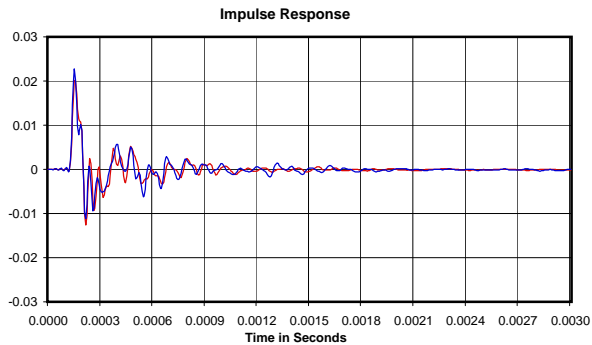
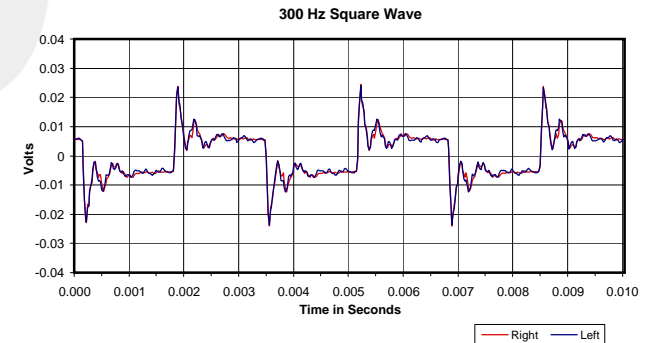
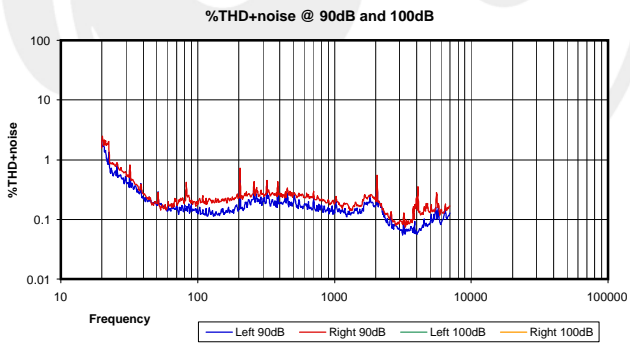
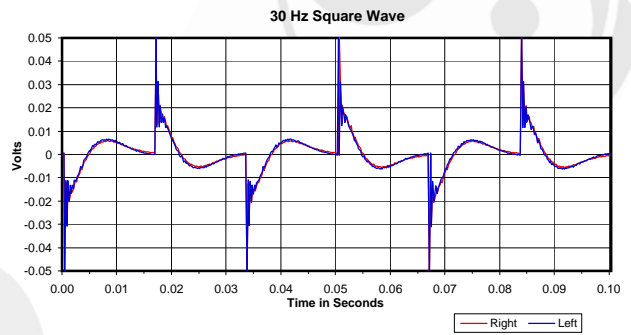


Broadband Isolation in dB (100Hz to 10kHz):

-6 dBr

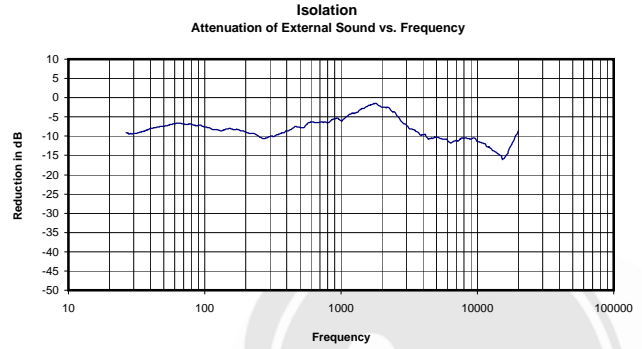
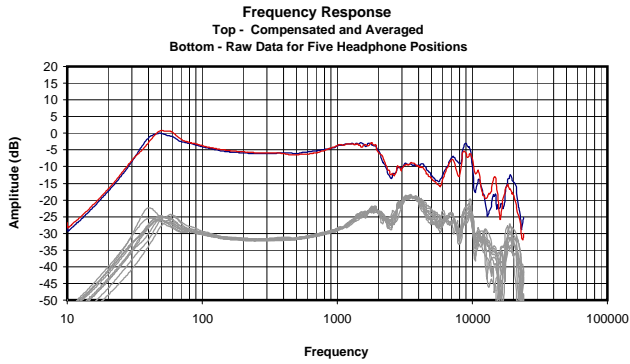


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

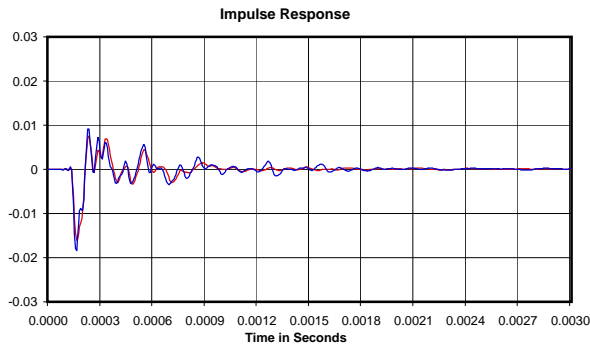
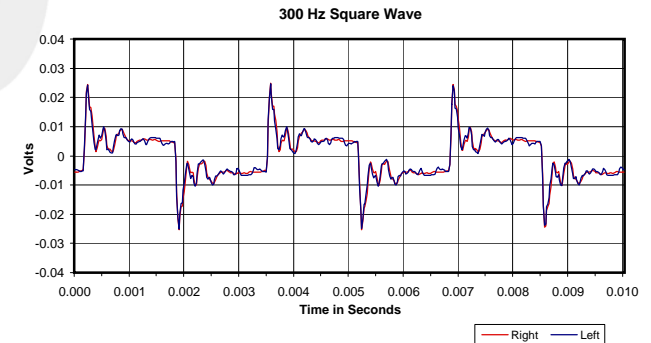
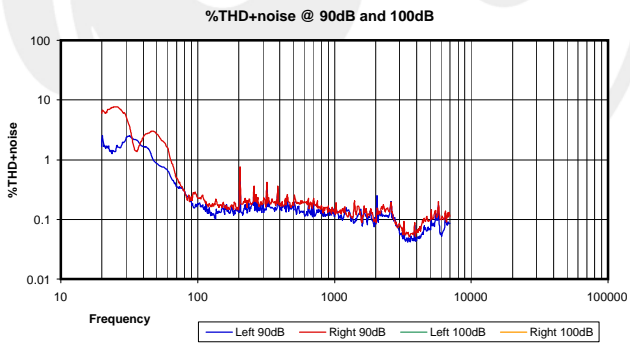
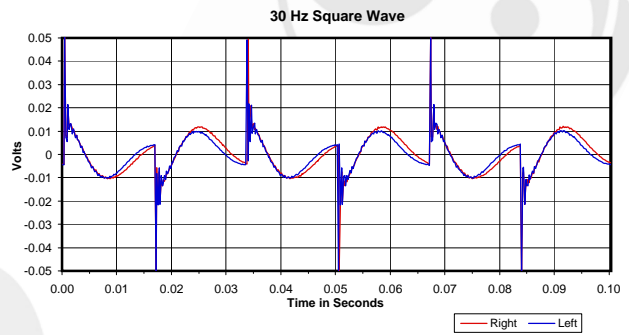


Broadband Isolation in dB (100Hz to 10kHz):

-7 dBr

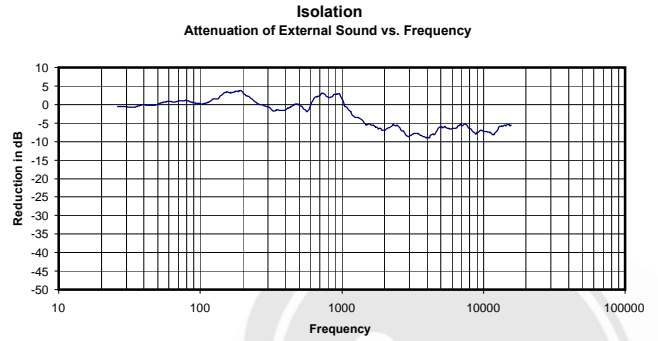
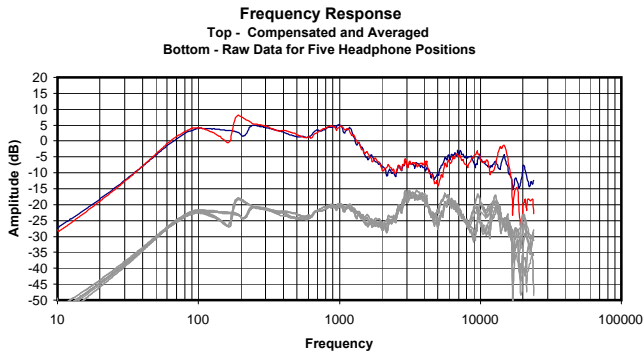


Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones

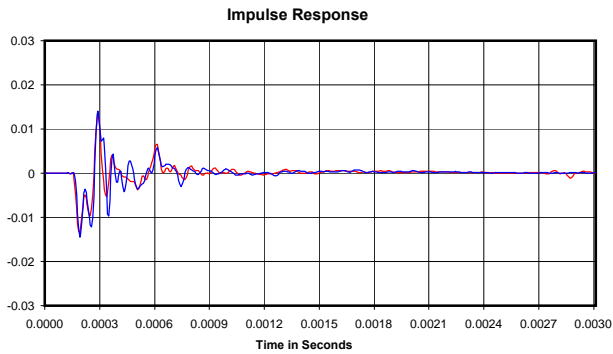
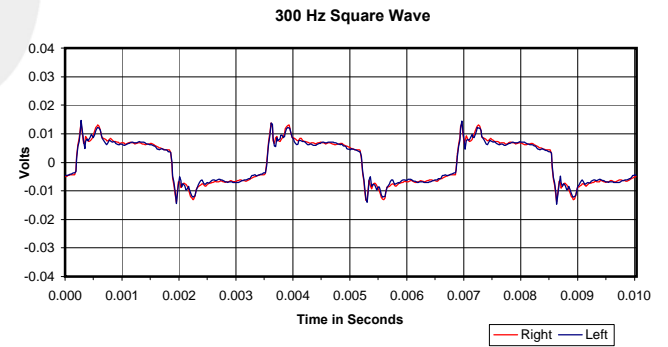
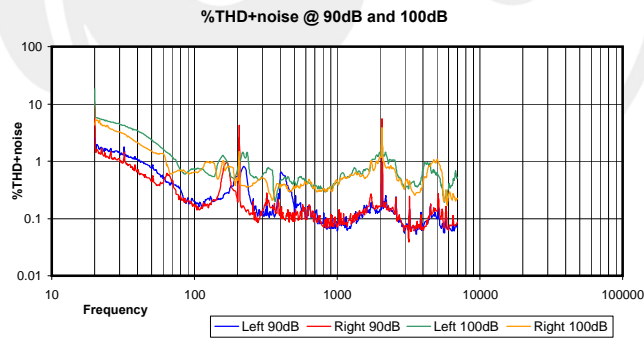
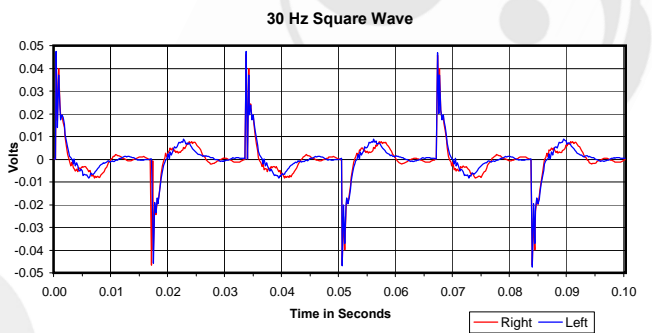


Broadband Isolation in dB (100Hz to 10kHz):

-8 dB

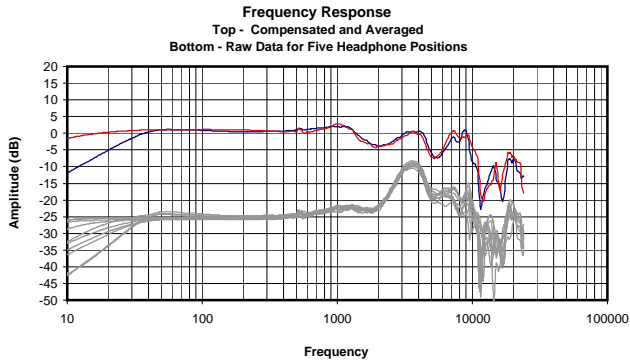


Electrical Impedance and phase measurements unavailable for Electrostatic headphones.

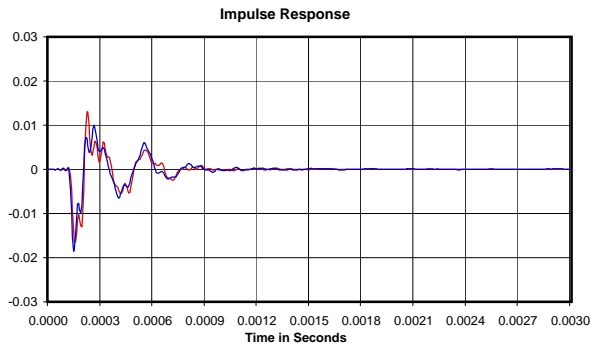
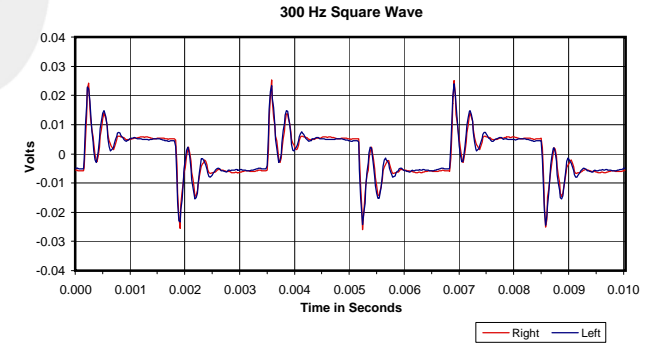
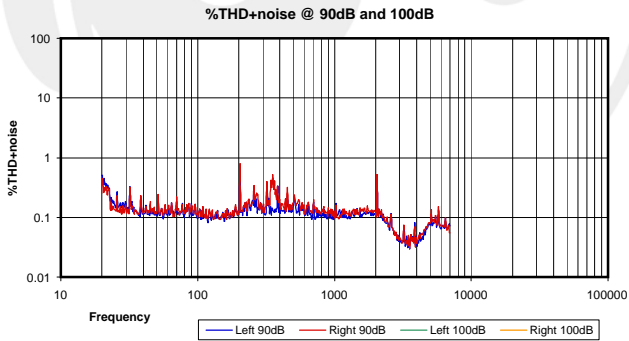
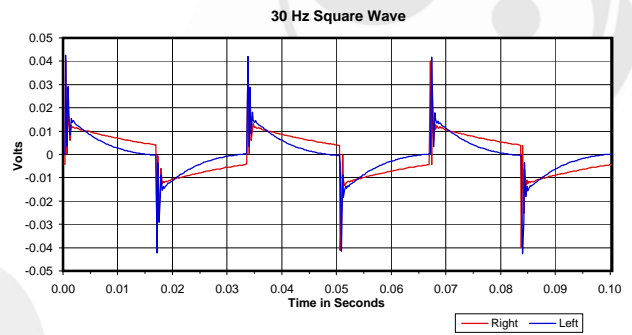
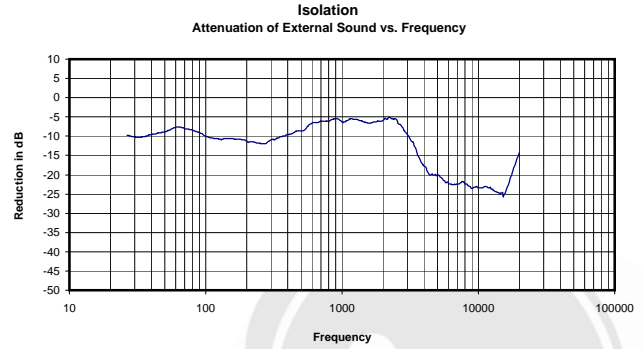


Broadband Isolation in dB (100Hz to 10kHz):

-2 dB



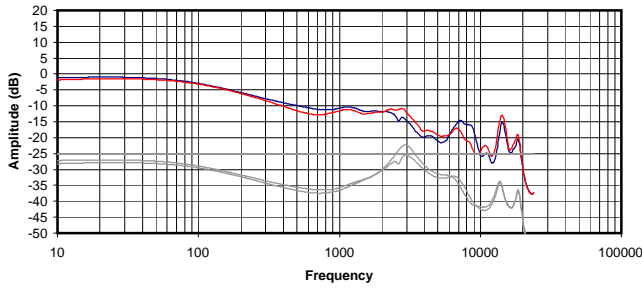
Electrical Impedance and phase measurements
unavailable for electrostatic and wireless headphones



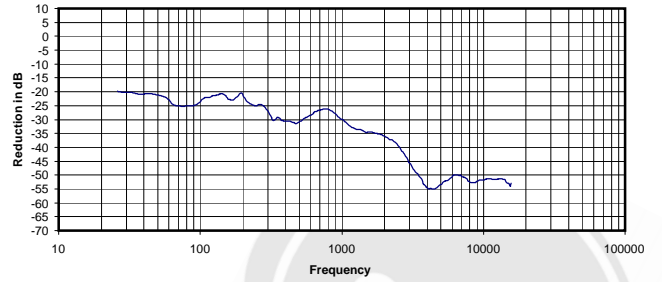
Broadband Isolation in dB (100Hz to 10kHz):

-11 dB

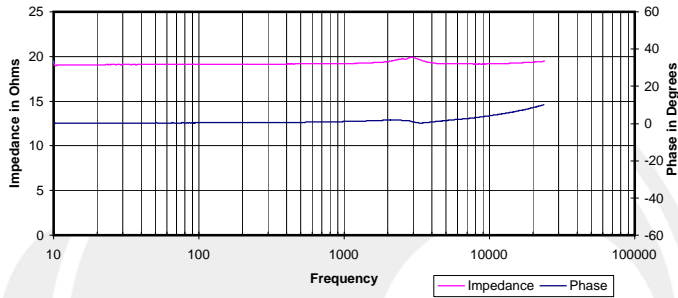
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



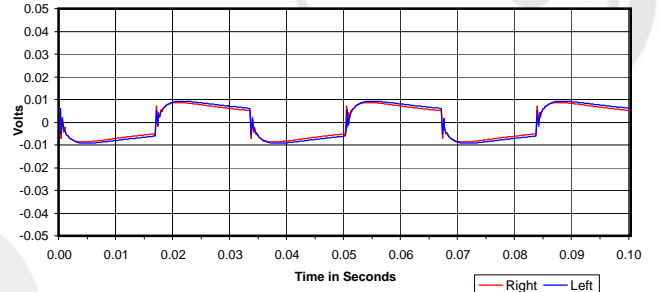
Isolation
Attenuation of External Sound vs. Frequency



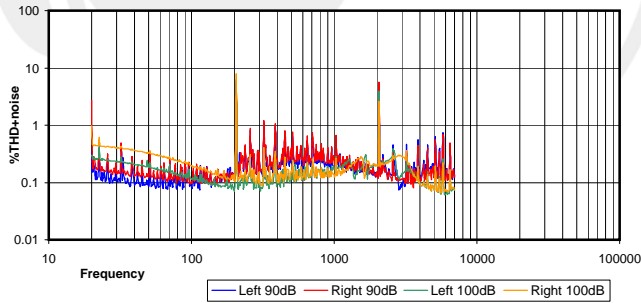
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



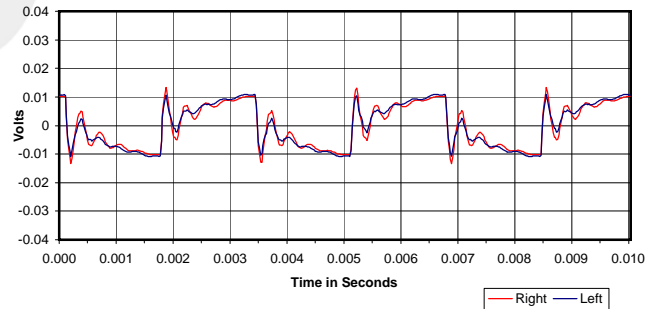
30 Hz Square Wave



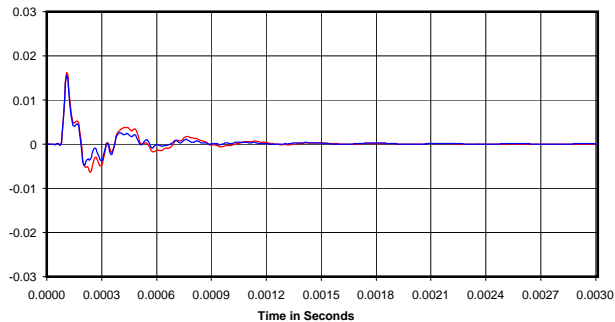
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

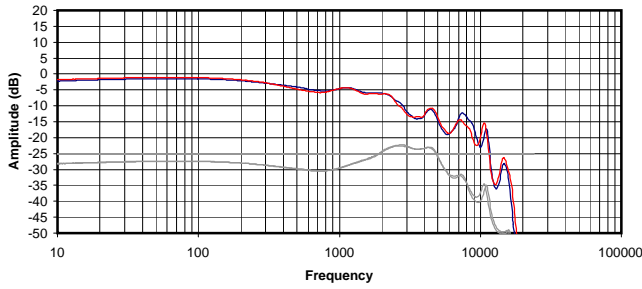


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

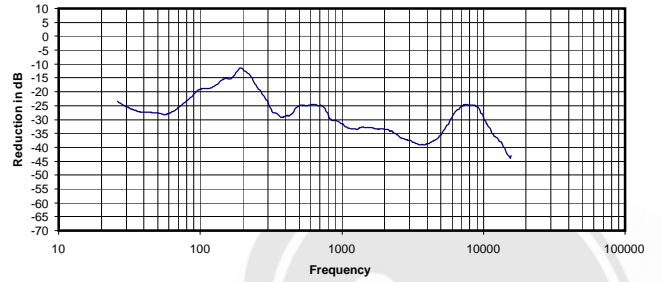
0.052 Vrms
19 Ohms
0.14 mW
-33 dB



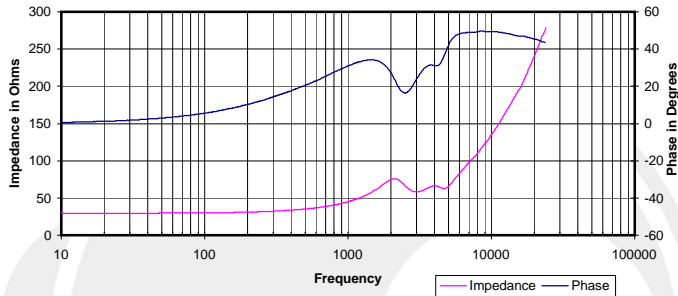
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



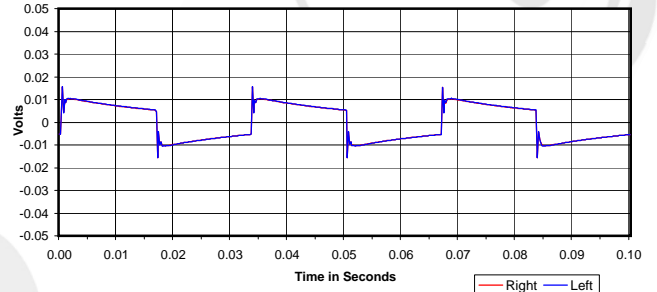
Isolation
Attenuation of External Sound vs. Frequency



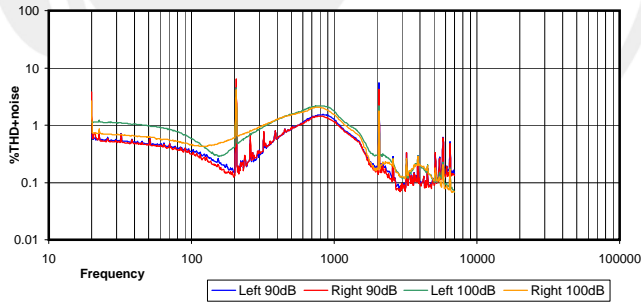
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



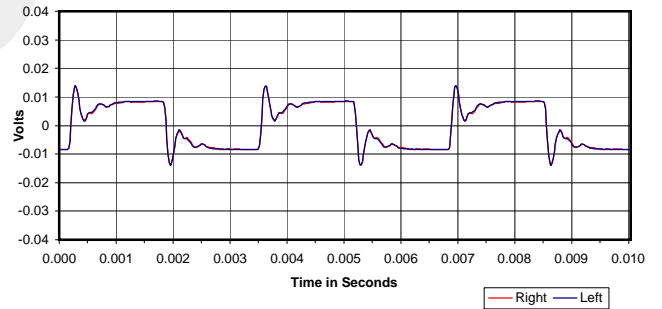
30 Hz Square Wave



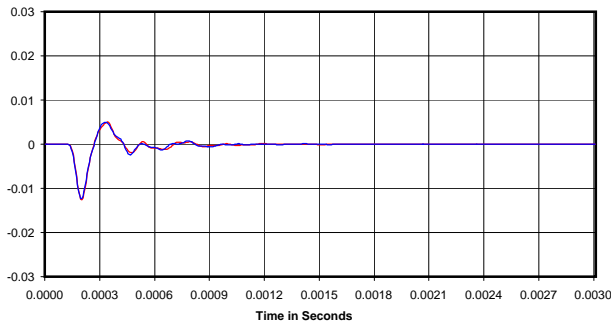
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

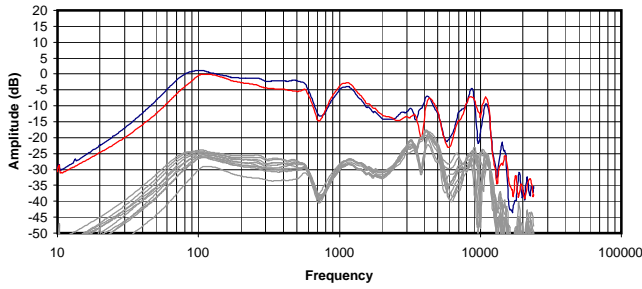


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

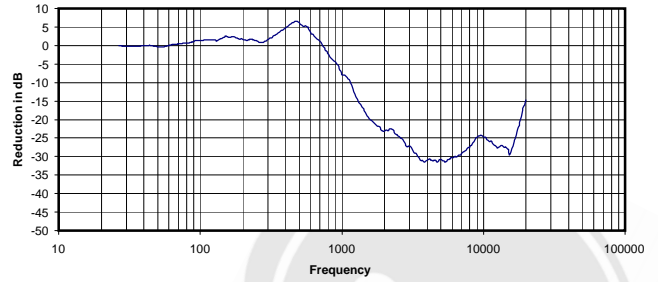
0.023 Vrms
45 Ohms
0.01 mW
-28 dB



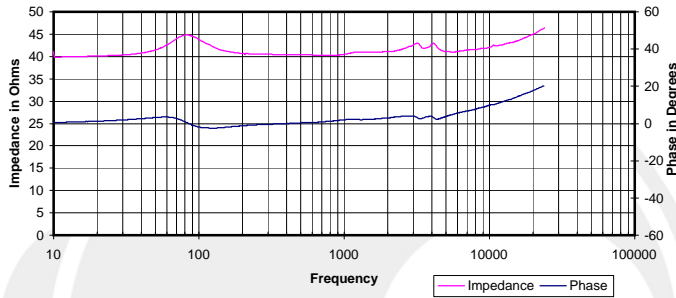
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



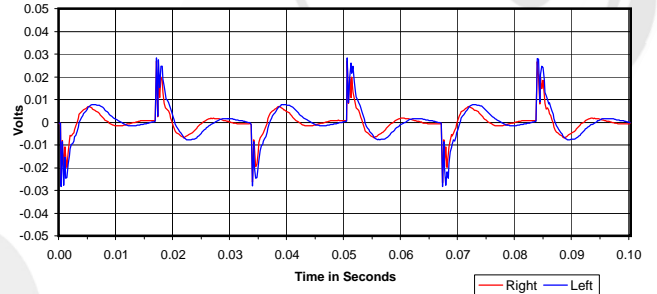
Isolation
 Attenuation of External Sound vs. Frequency



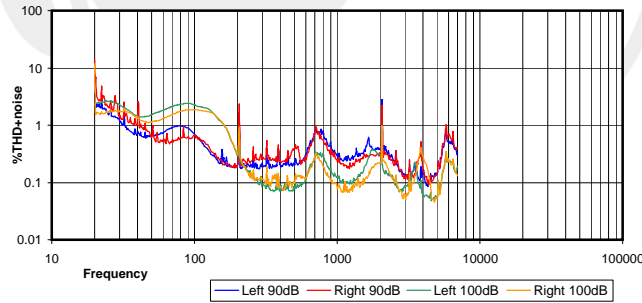
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



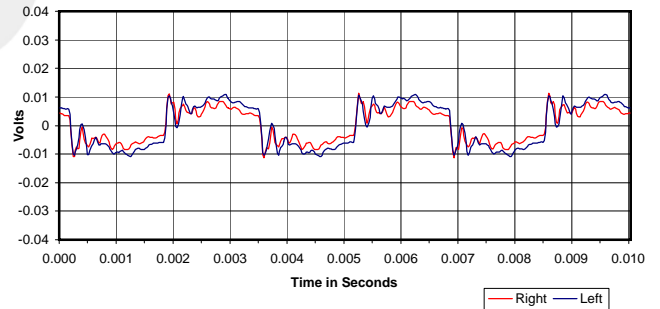
30 Hz Square Wave



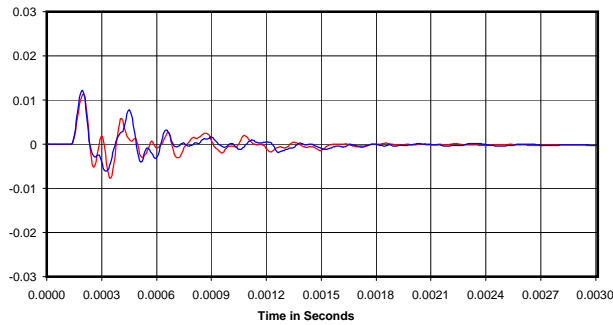
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



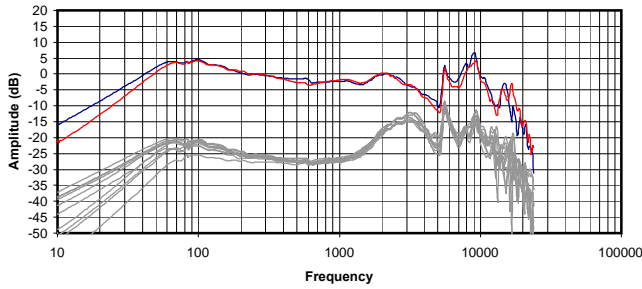
Impulse Response



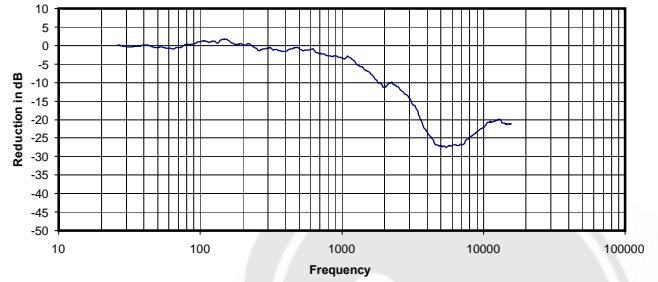
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.047 Vrms
 40 Ohms
 0.05 mW
 -11 dB

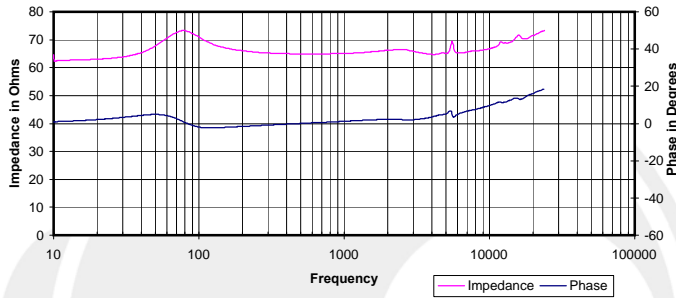
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



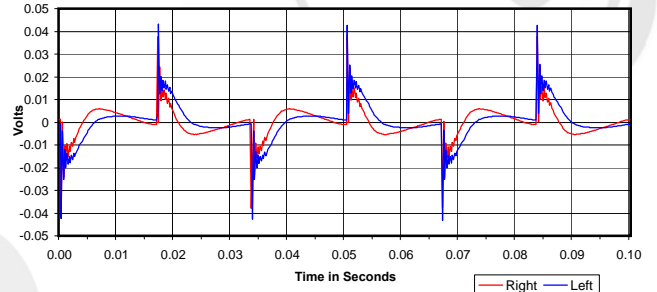
Isolation
 Attenuation of External Sound vs. Frequency



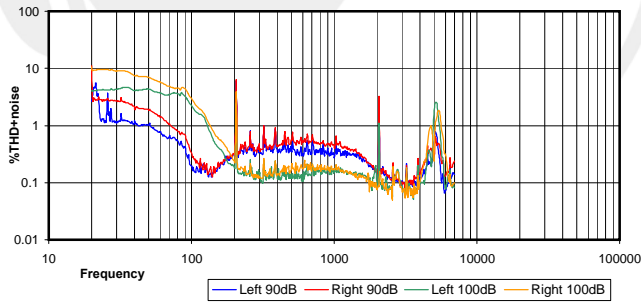
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



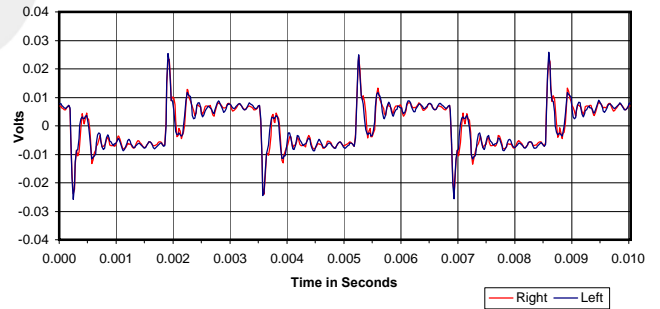
30 Hz Square Wave



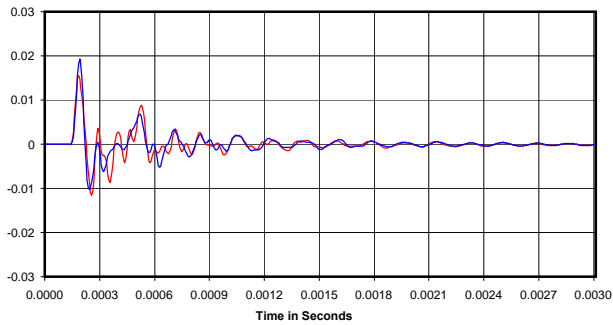
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

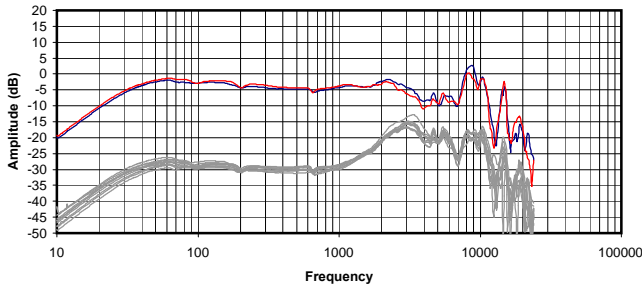


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

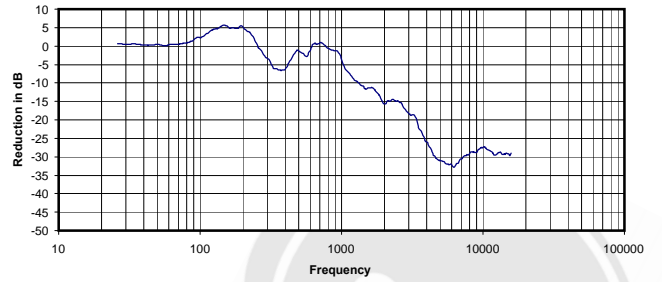
0.181 Vrms
 65 Ohms
 0.50 mW
 -7 dB



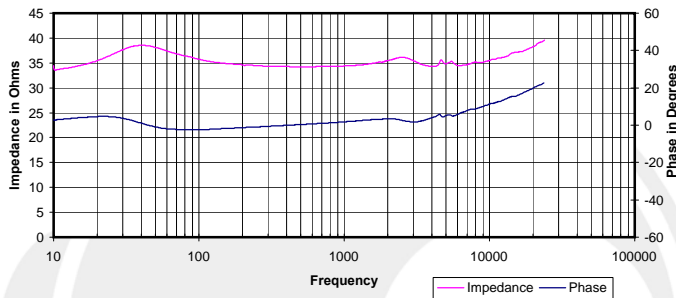
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



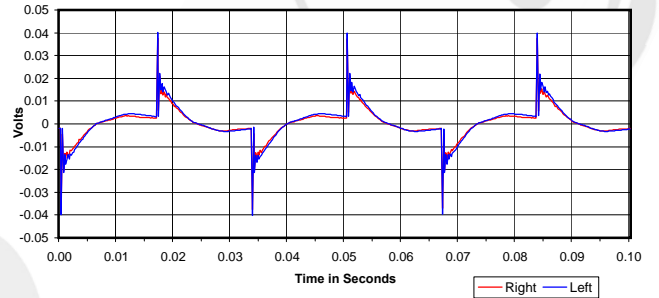
Isolation
Attenuation of External Sound vs. Frequency



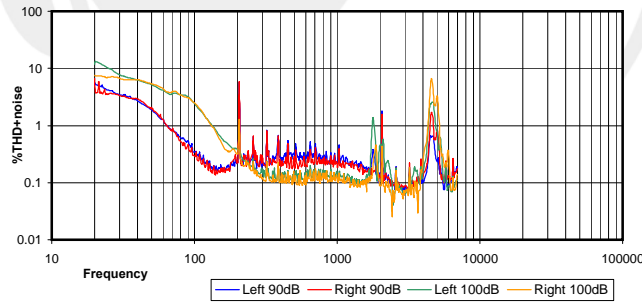
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



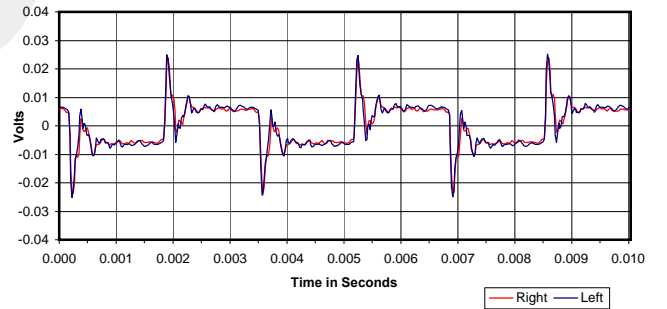
30 Hz Square Wave



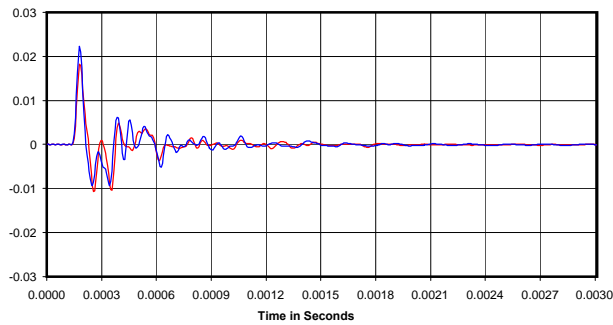
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

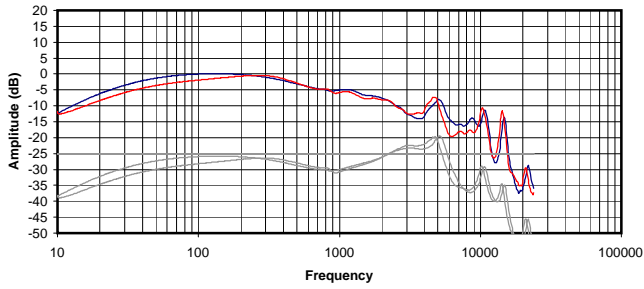


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

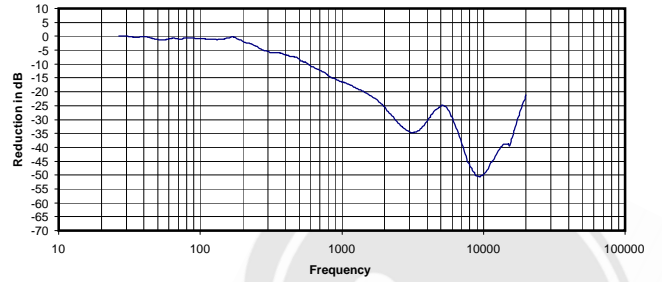
0.110 Vrms
34 Ohms
0.35 mW
-8 dB



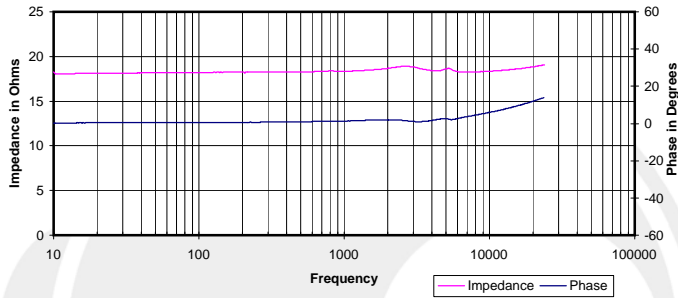
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



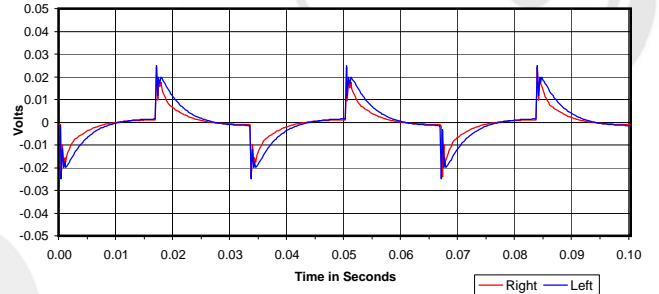
Isolation
Attenuation of External Sound vs. Frequency



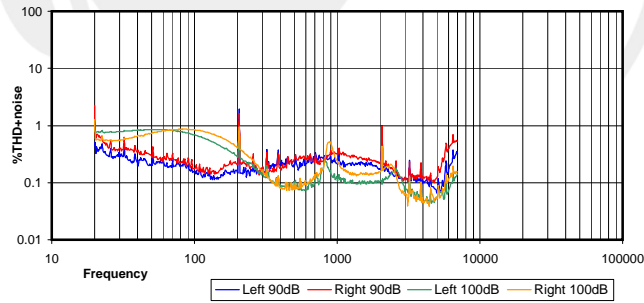
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



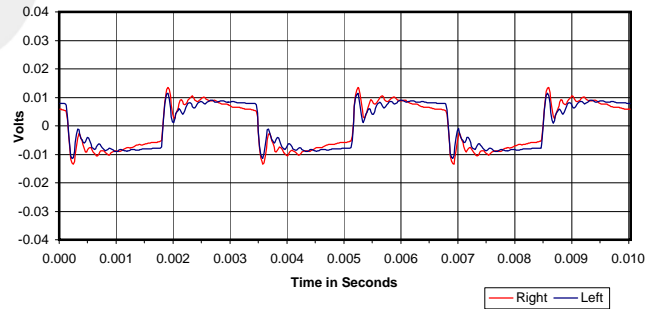
30 Hz Square Wave



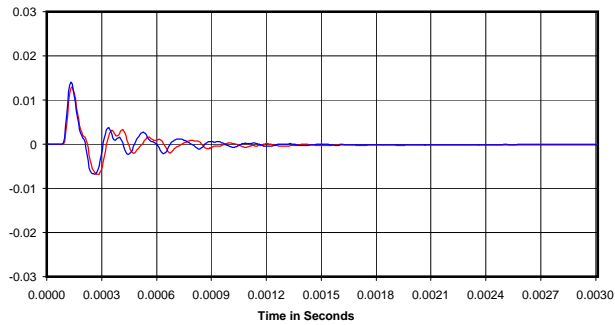
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



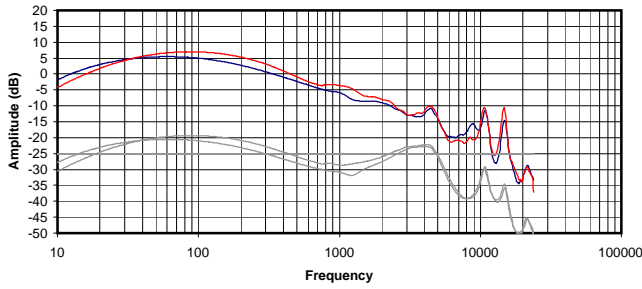
Impulse Response



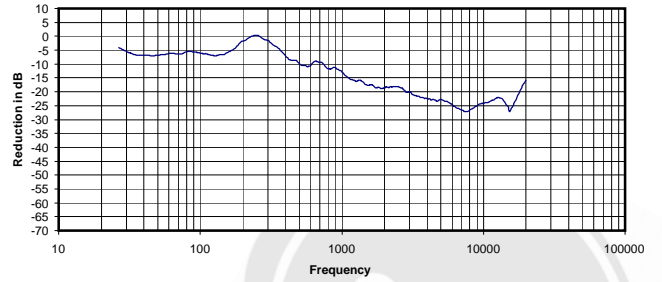
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.024 Vrms
18 Ohms
0.03 mW
-18 dB

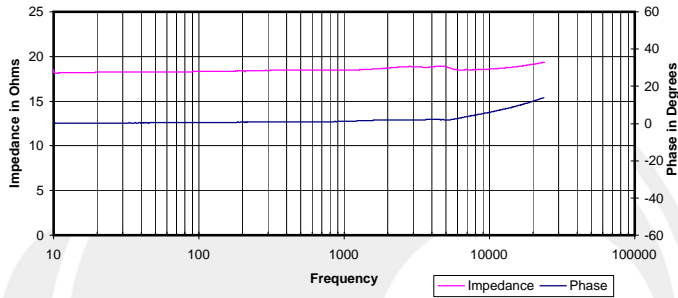
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



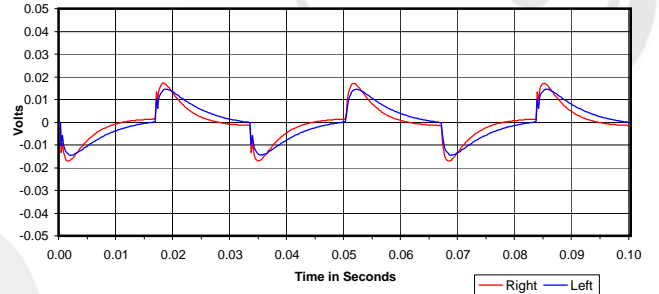
Isolation
Attenuation of External Sound vs. Frequency



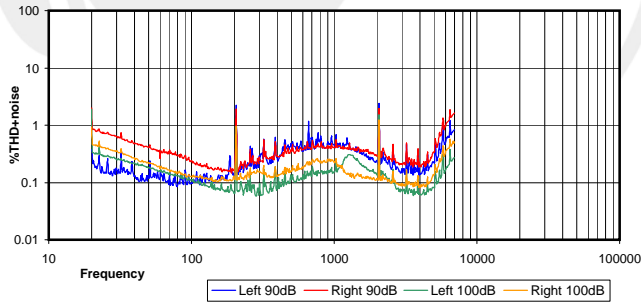
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



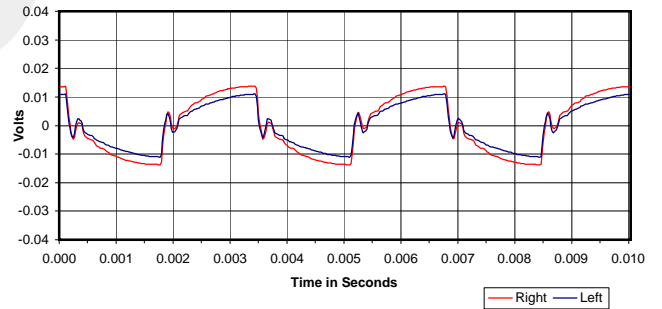
30 Hz Square Wave



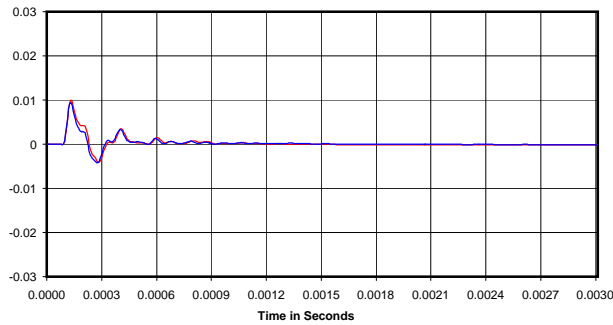
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



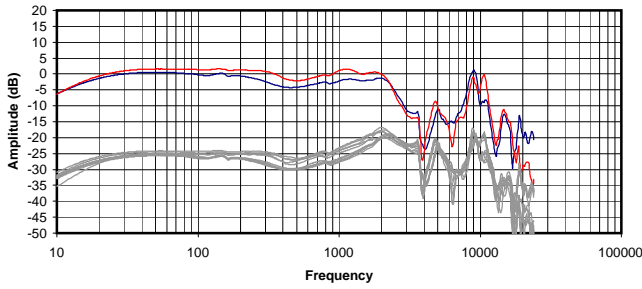
Impulse Response



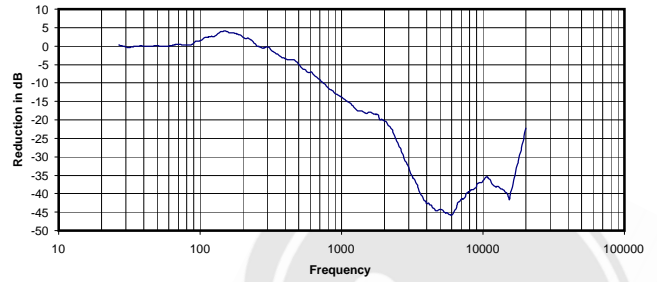
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.028 Vrms
19 Ohms
0.04 mW
-14 dB

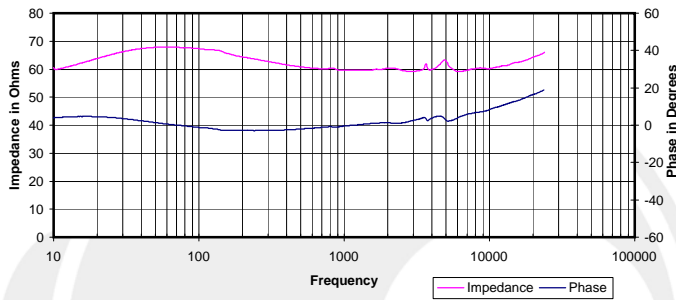
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



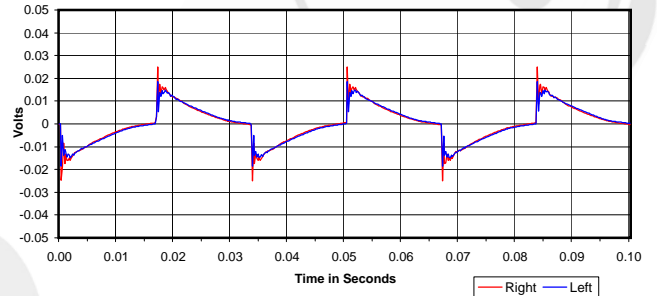
Isolation
 Attenuation of External Sound vs. Frequency



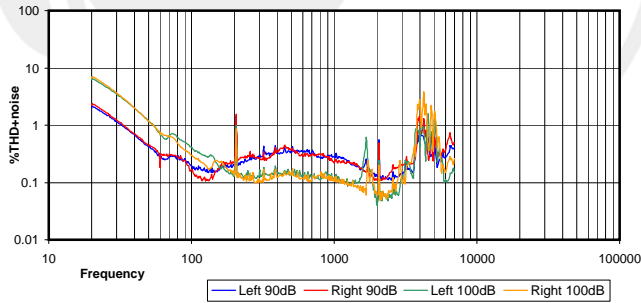
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



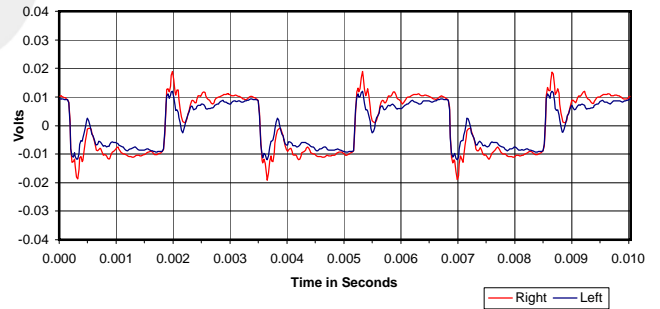
30 Hz Square Wave



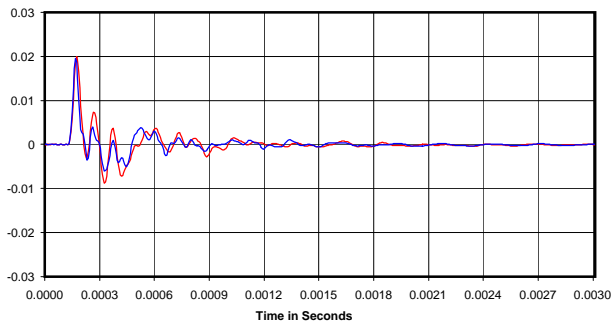
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

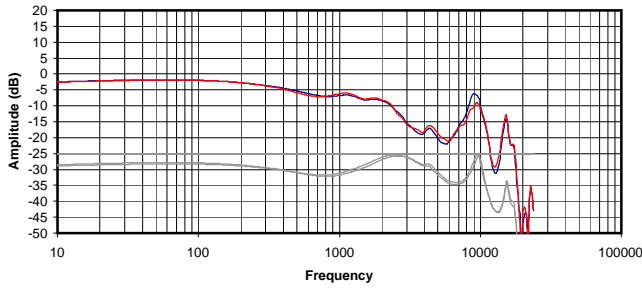


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

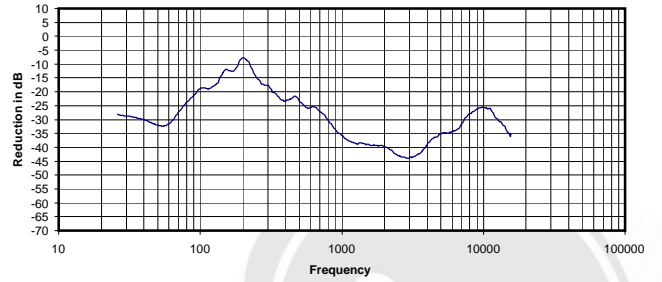
0.042 Vrms
 60 Ohms
 0.03 mW
 -17 dB



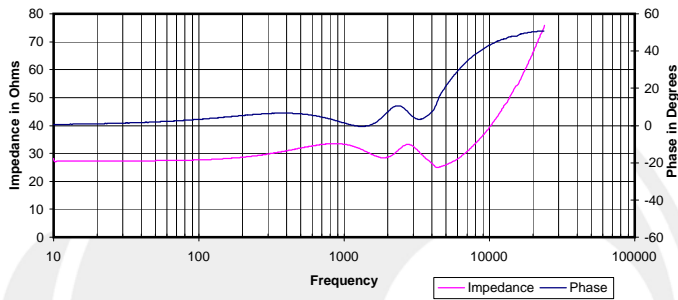
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



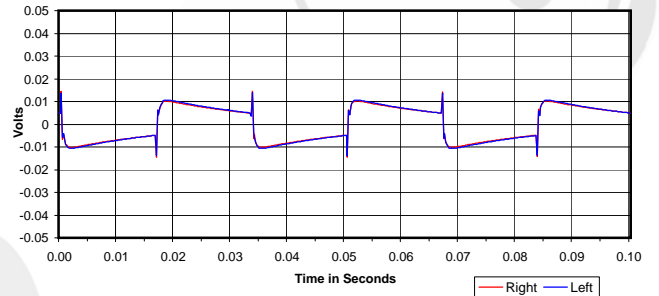
Isolation
Attenuation of External Sound vs. Frequency



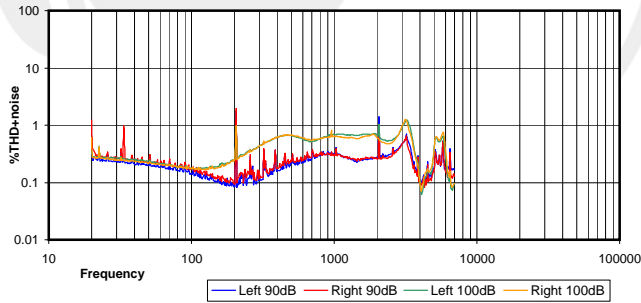
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



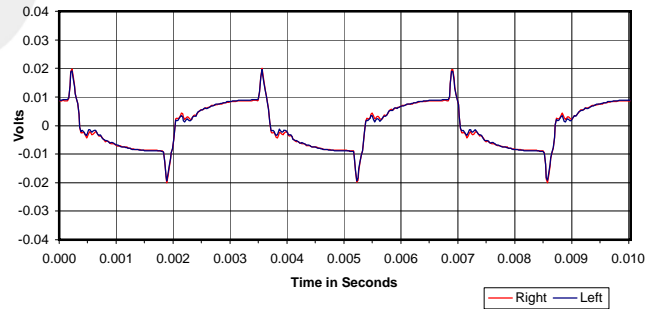
30 Hz Square Wave



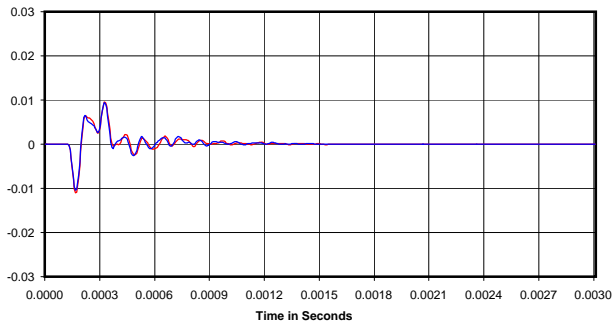
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

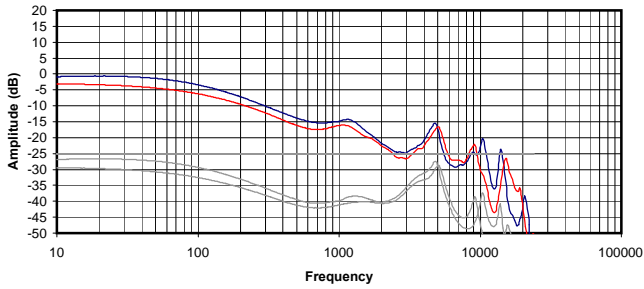


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

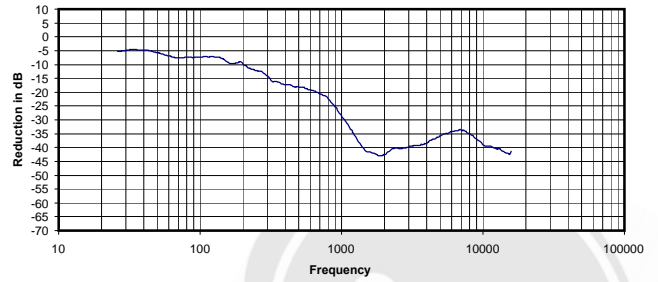
0.036 Vrms
33 Ohms
0.04 mW
-28 dB



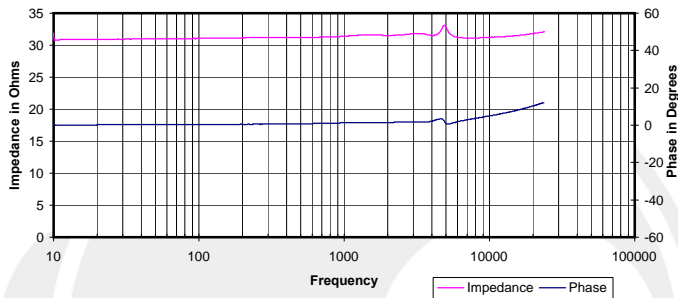
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



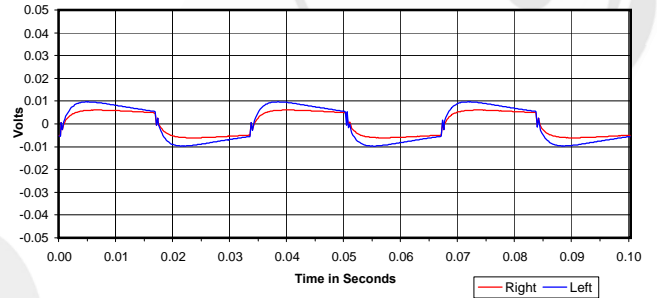
Isolation
Attenuation of External Sound vs. Frequency



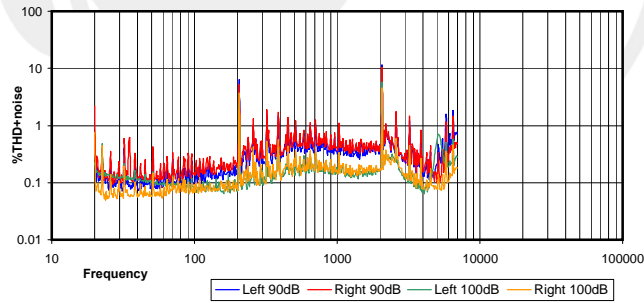
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



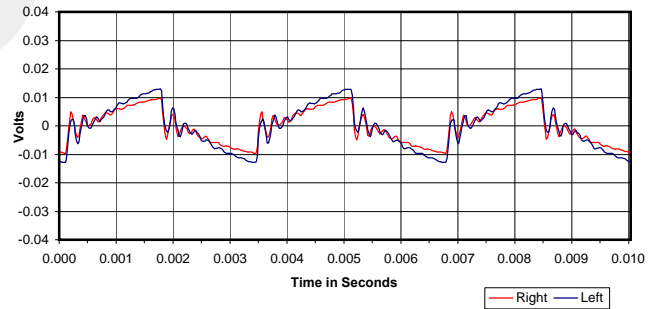
30 Hz Square Wave



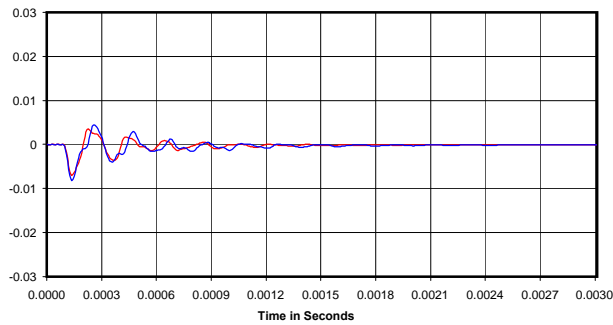
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

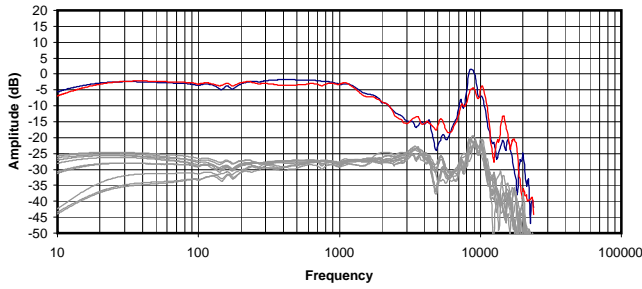


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

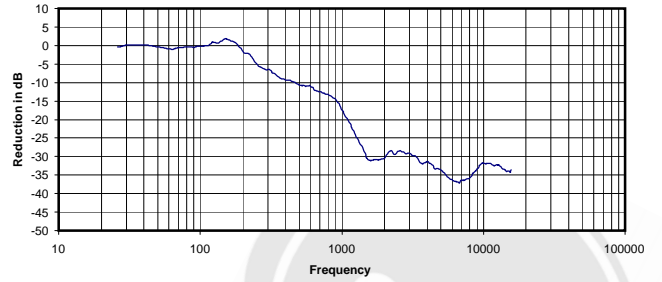
0.031 Vrms
31 Ohms
0.03 mW
-25 dB



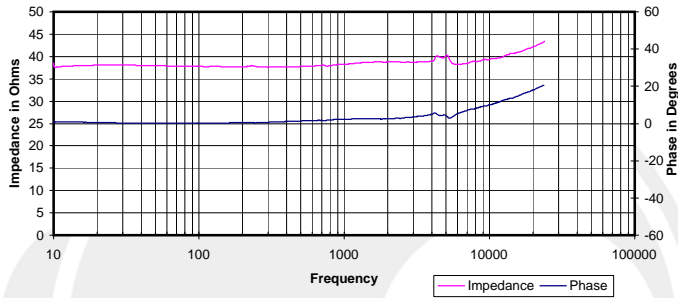
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



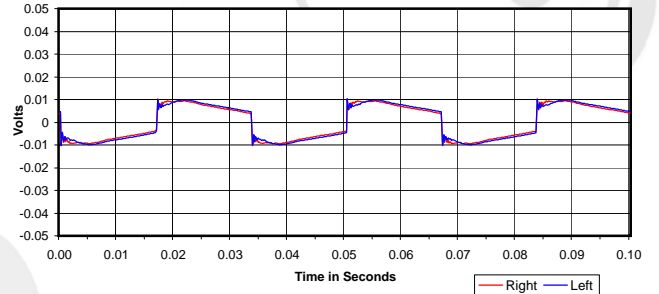
Isolation
Attenuation of External Sound vs. Frequency



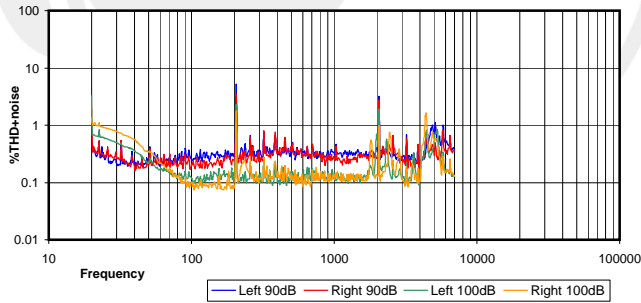
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



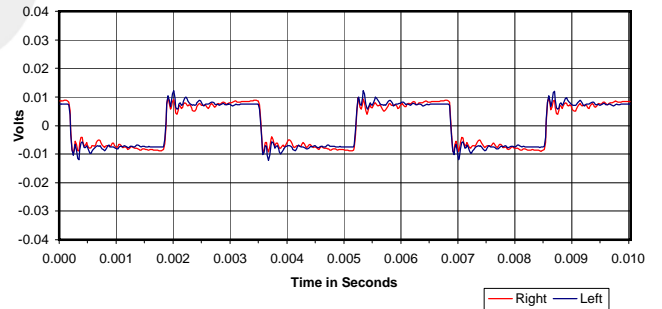
30 Hz Square Wave



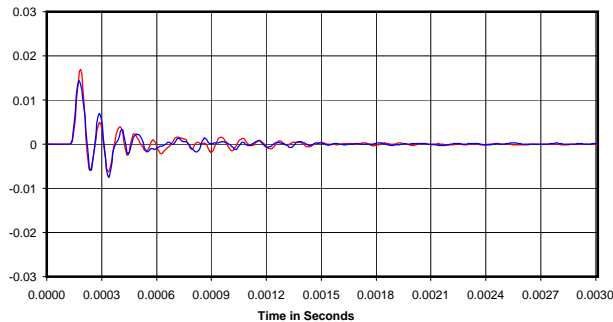
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

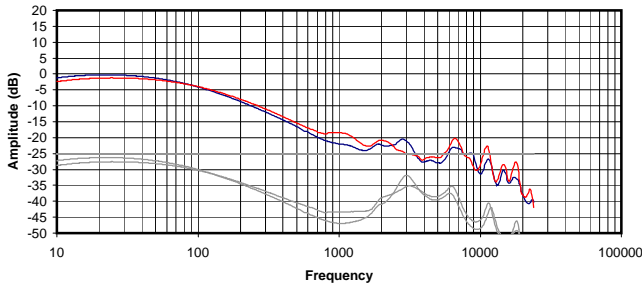


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

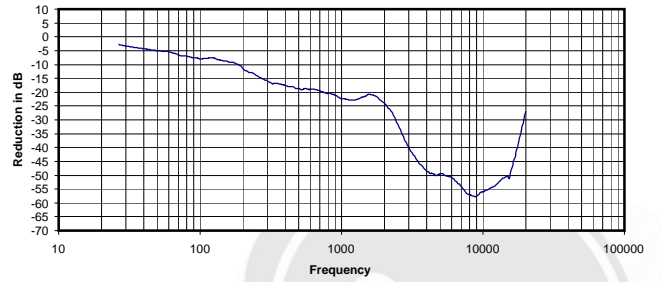
0.035 Vrms
38 Ohms
0.03 mW
-16 dB



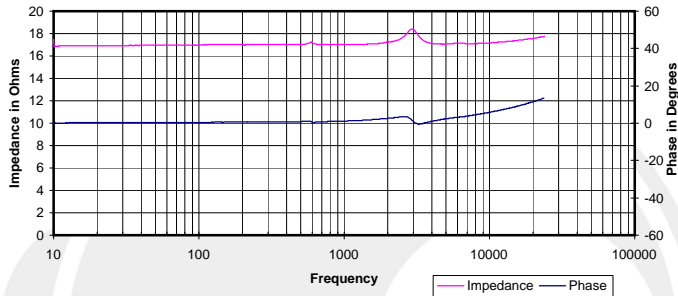
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



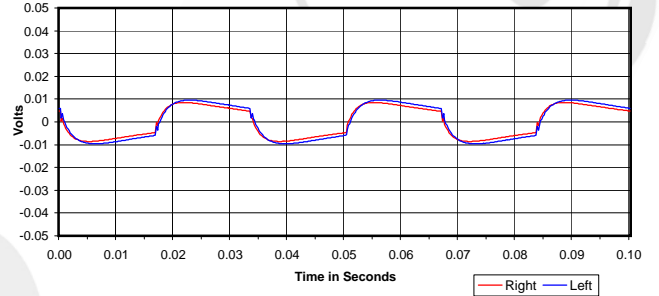
Isolation
Attenuation of External Sound vs. Frequency



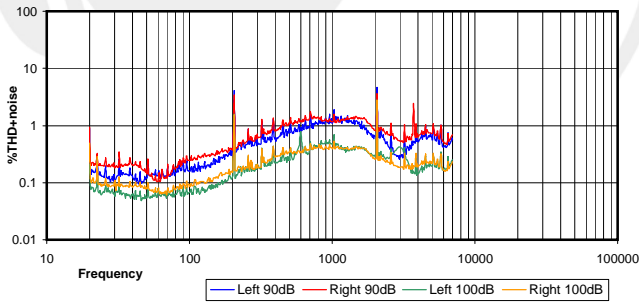
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



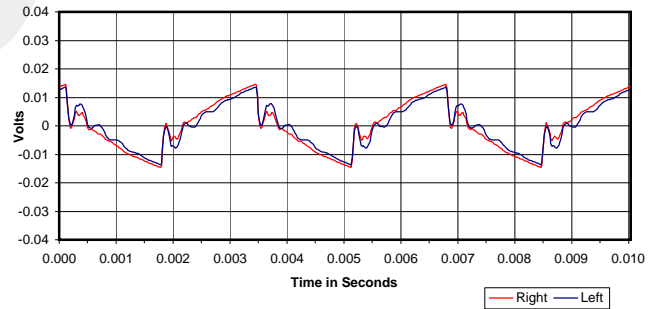
30 Hz Square Wave



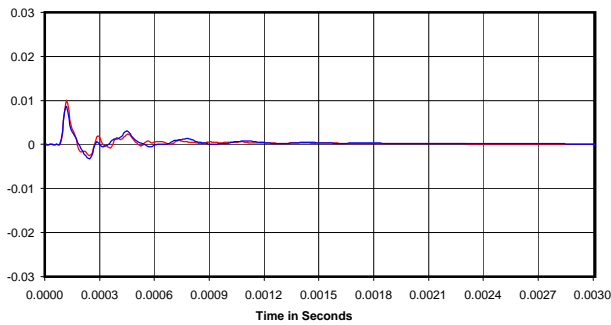
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

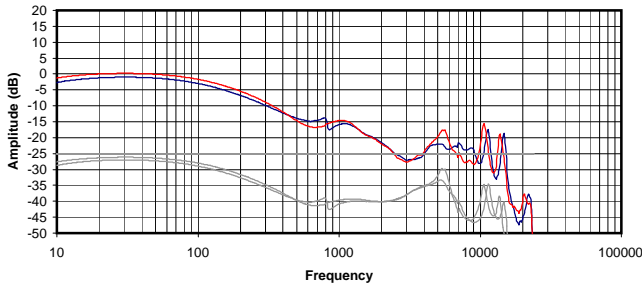


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

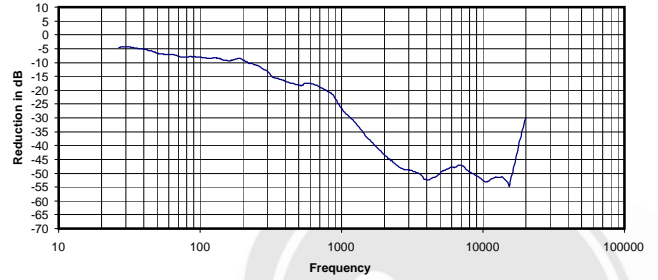
0.044 Vrms
17 Ohms
0.12 mW
-27 dB



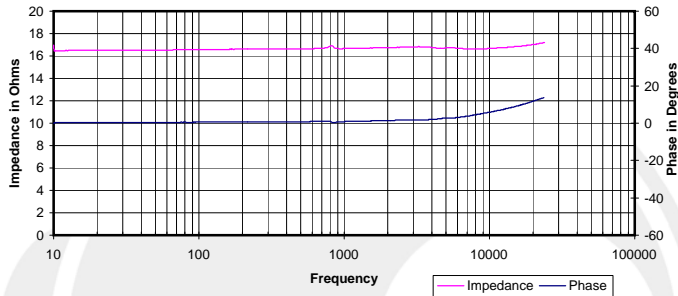
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



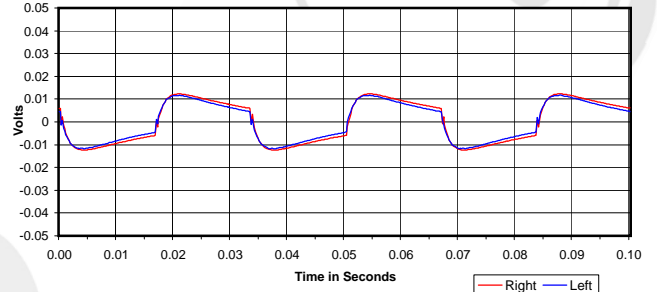
Isolation
Attenuation of External Sound vs. Frequency



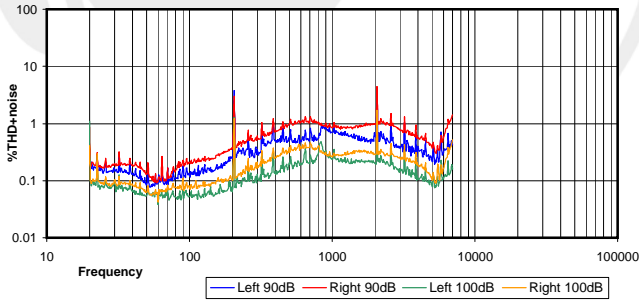
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



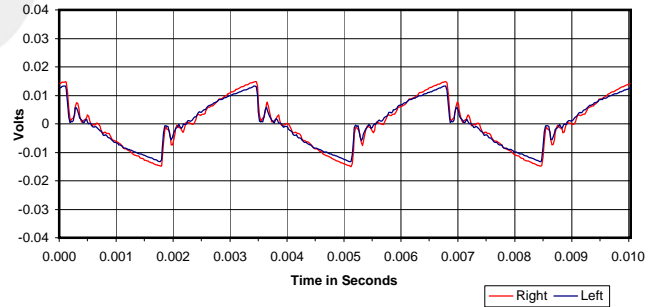
30 Hz Square Wave



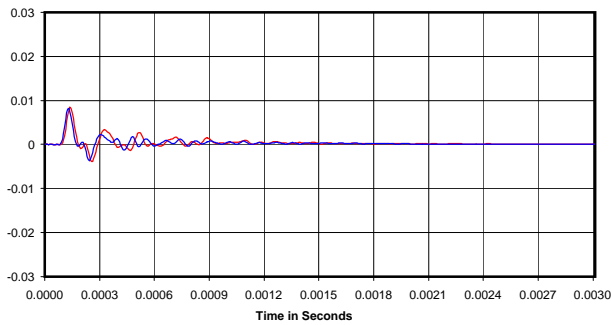
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

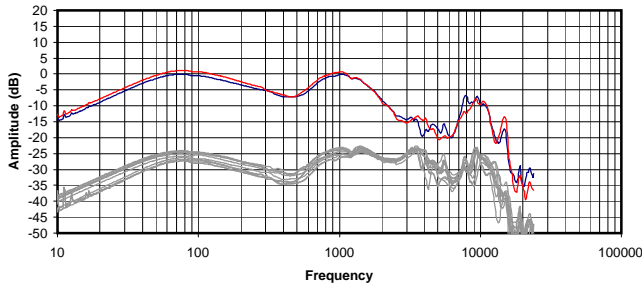


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

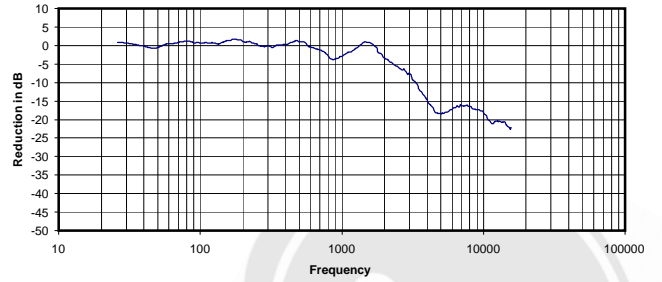
0.026 Vrms
17 Ohms
0.04 mW
-30 dB



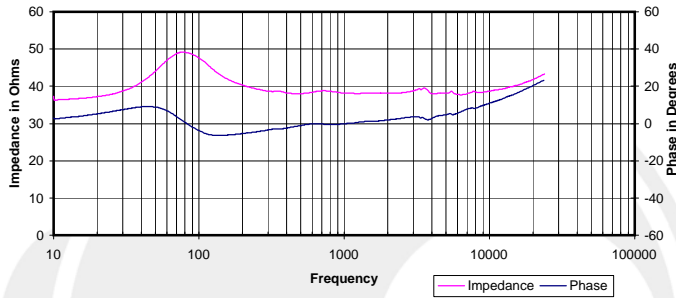
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



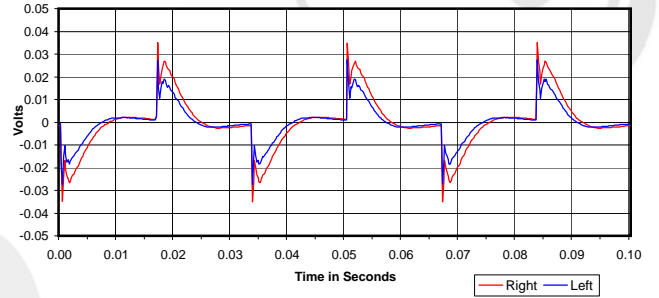
Isolation
 Attenuation of External Sound vs. Frequency



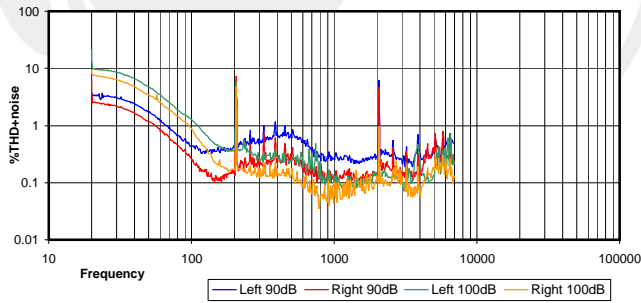
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



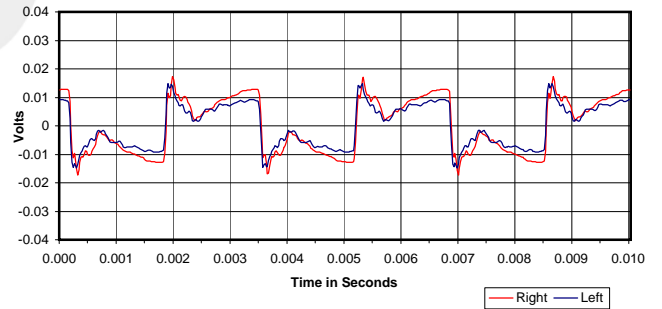
30 Hz Square Wave



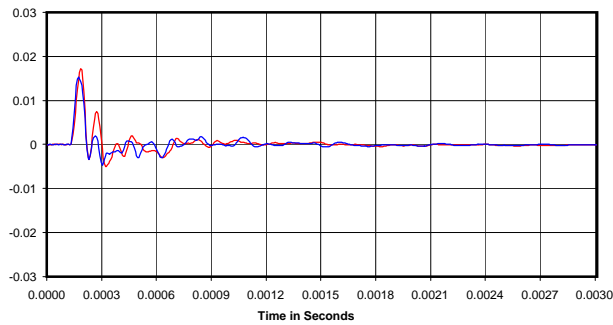
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



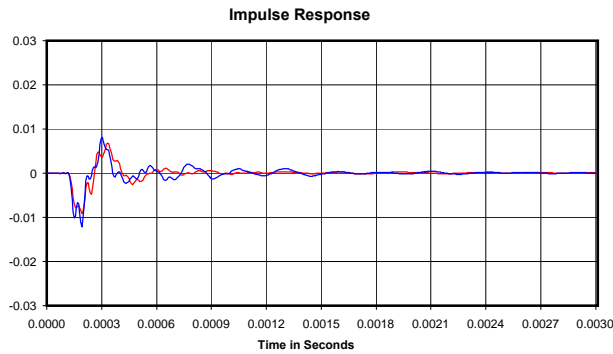
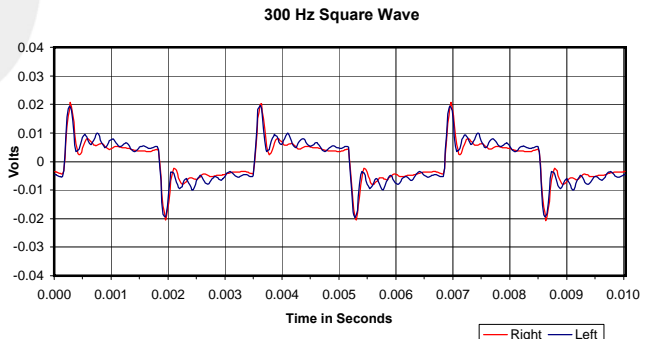
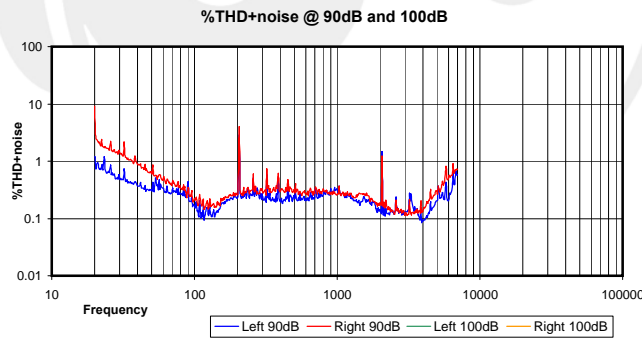
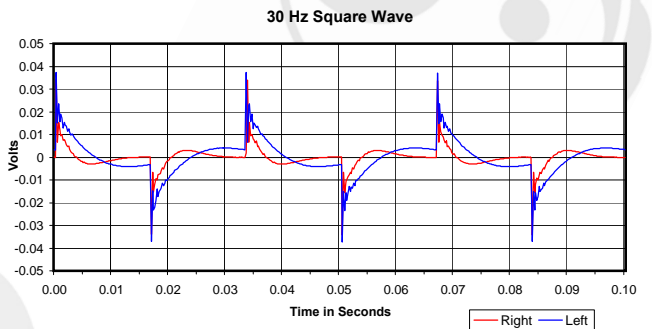
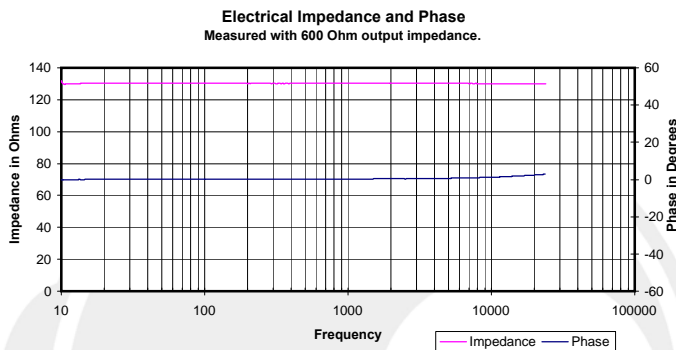
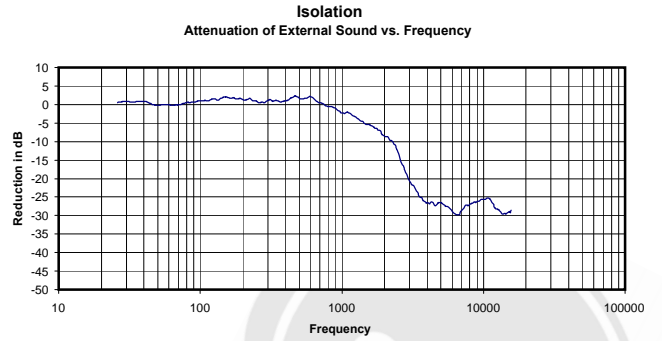
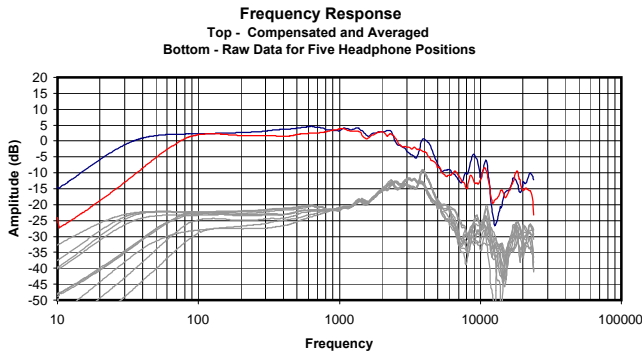
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.029 Vrms
 38 Ohms
 0.02 mW
 -3 dB



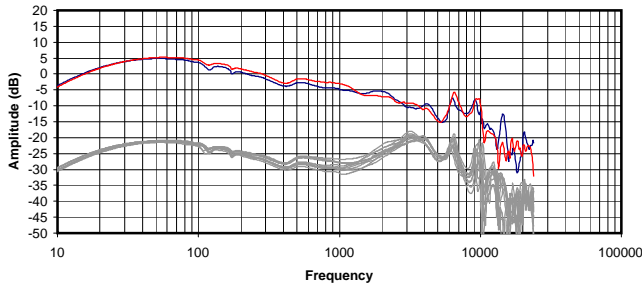


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

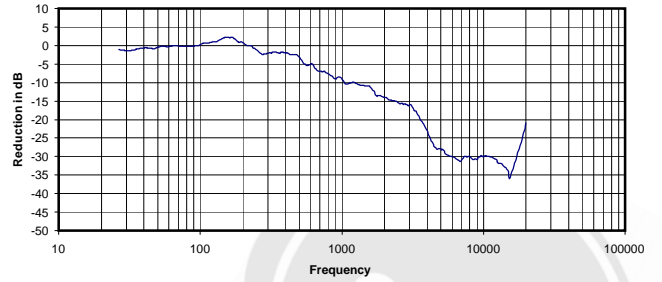
0.346 Vrms
130 Ohms
0.92 mW
-6 dB



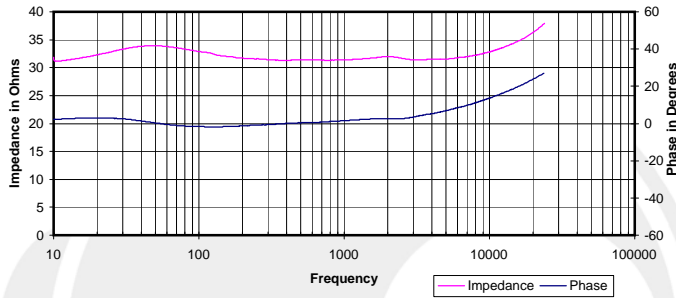
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



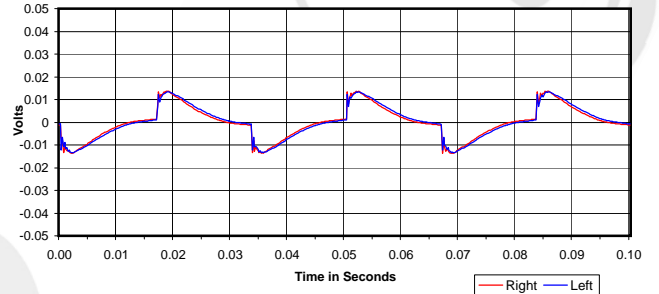
Isolation
 Attenuation of External Sound vs. Frequency



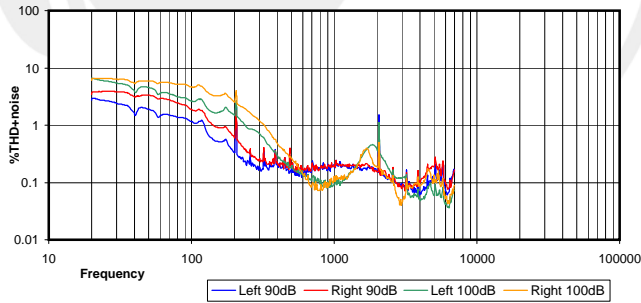
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



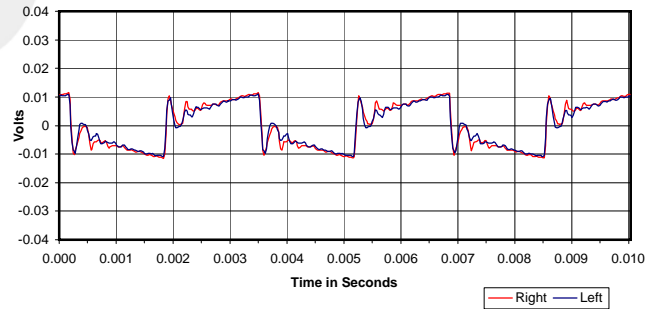
30 Hz Square Wave



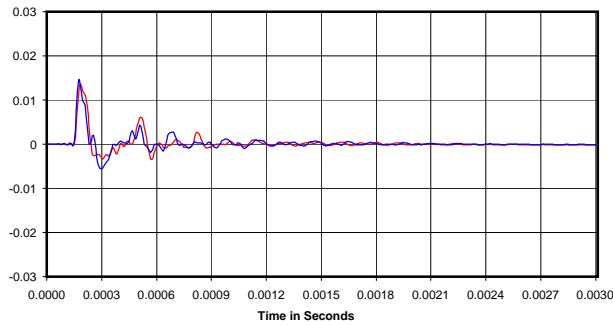
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

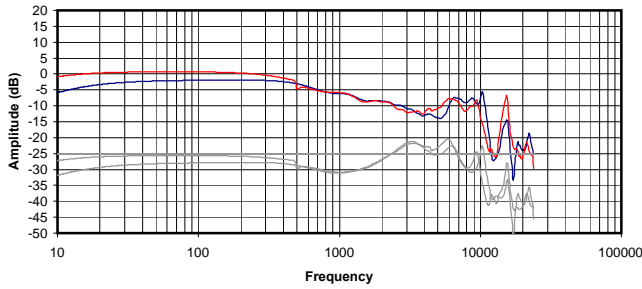


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

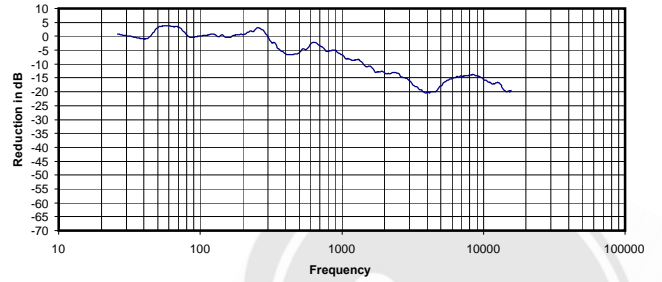
0.140 Vrms
 31 Ohms
 0.63 mW
 -11 dB



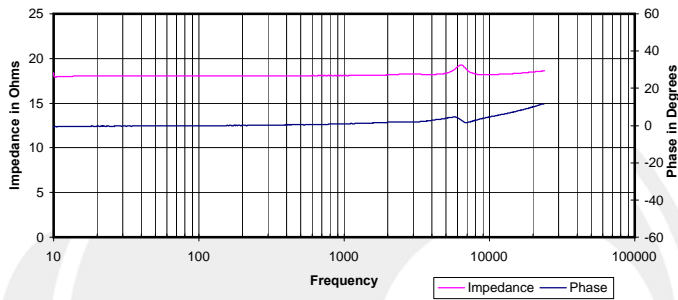
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



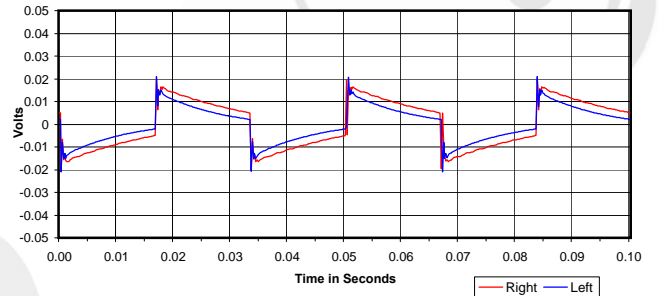
Isolation
Attenuation of External Sound vs. Frequency



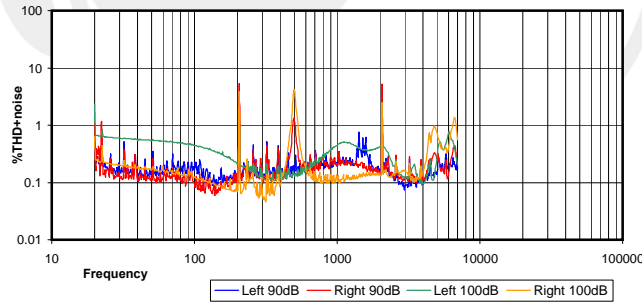
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



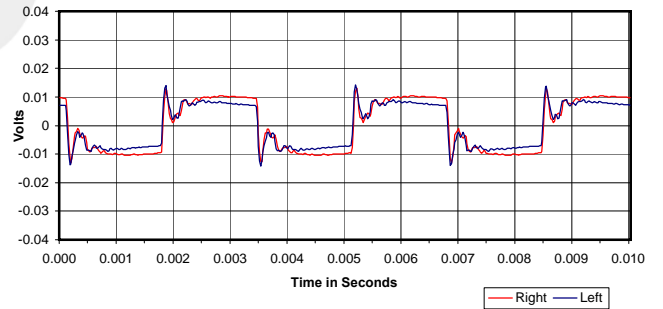
30 Hz Square Wave



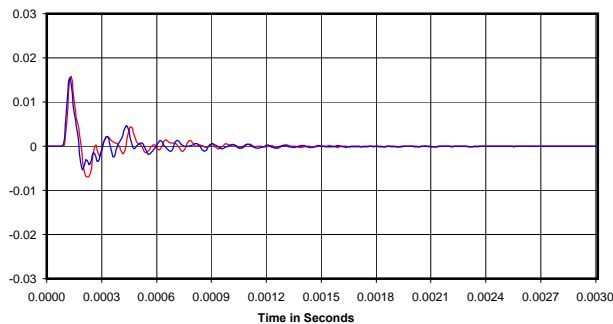
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

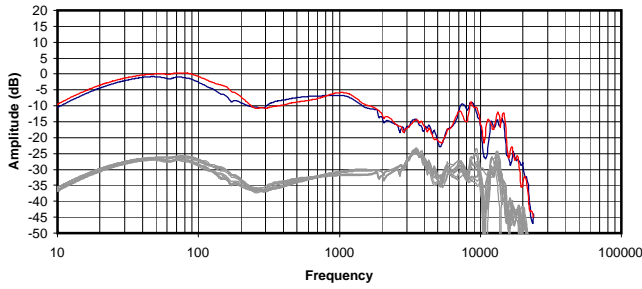


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

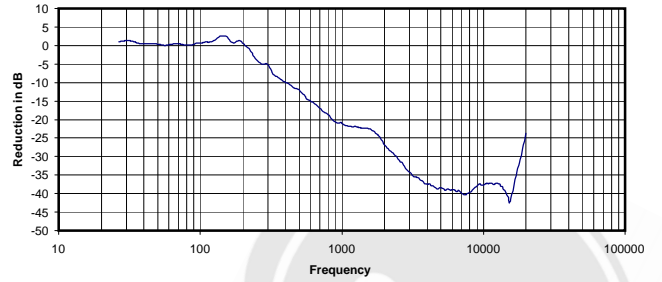
0.034 Vrms
18 Ohms
0.06 mW
-7 dB



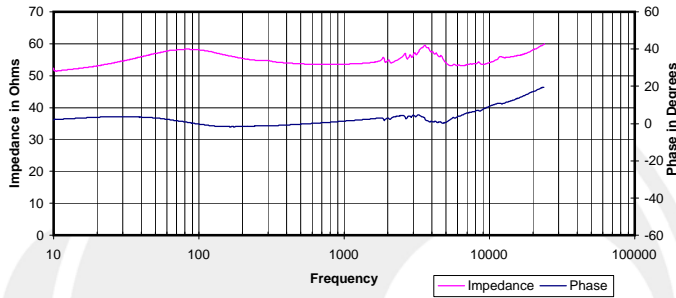
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



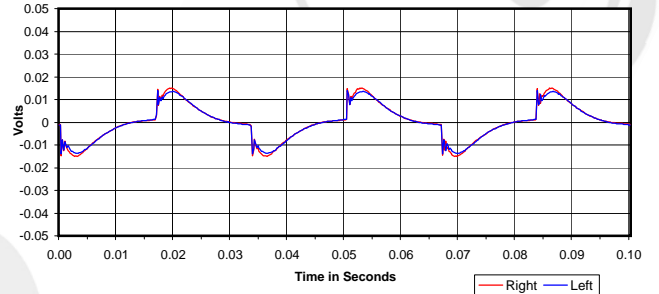
Isolation
 Attenuation of External Sound vs. Frequency



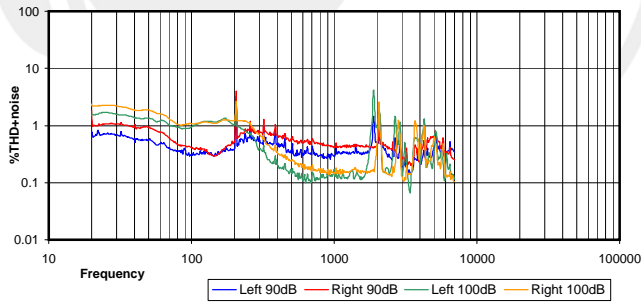
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



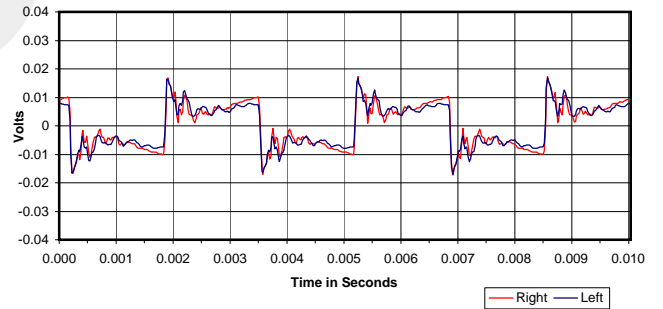
30 Hz Square Wave



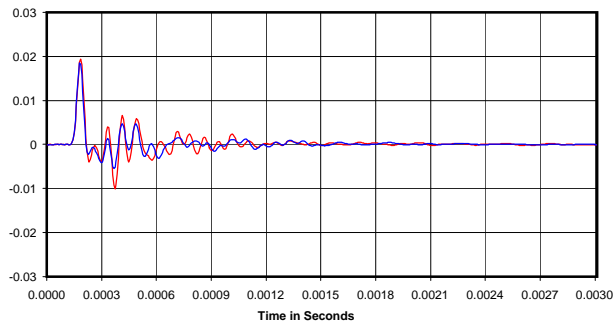
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



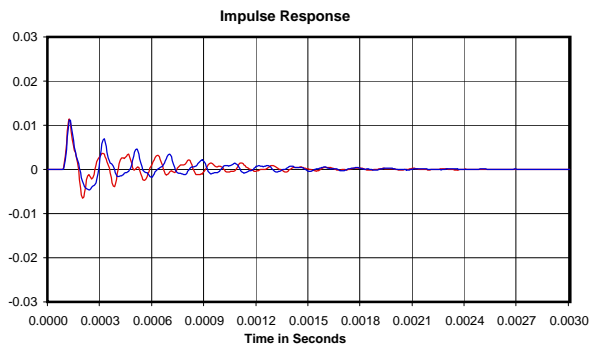
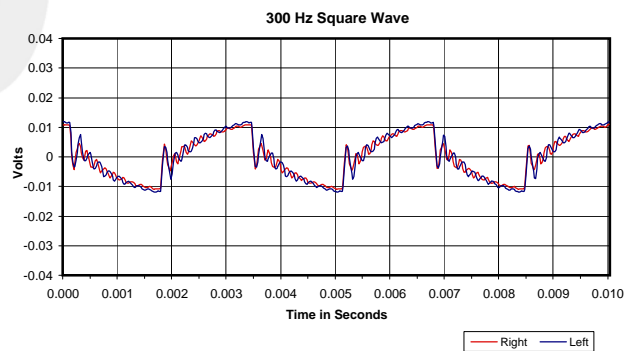
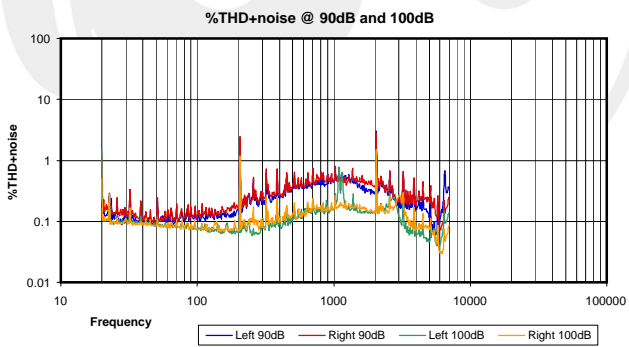
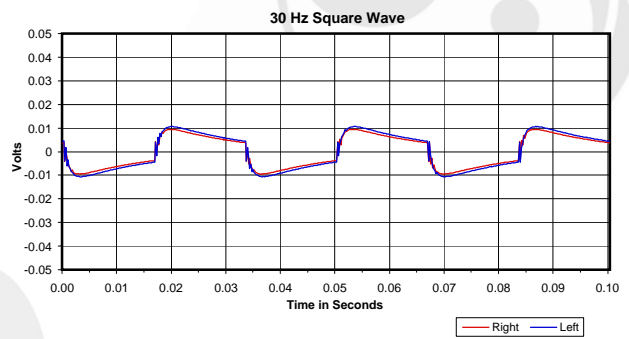
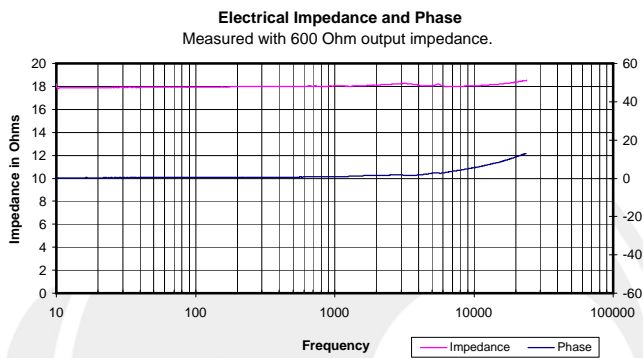
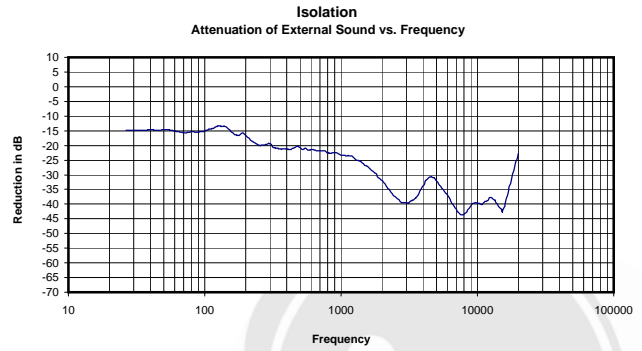
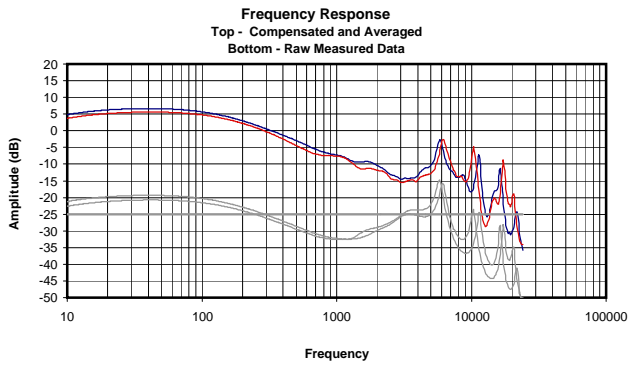
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.041 Vrms
 54 Ohms
 0.03 mW
 -20 dB



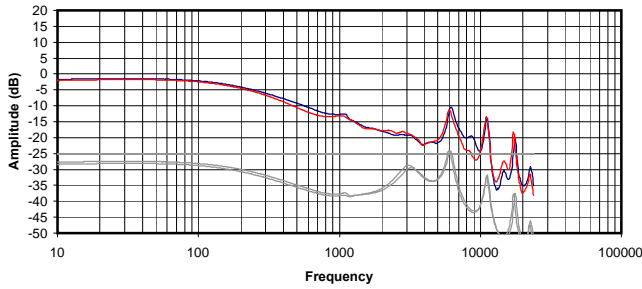


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

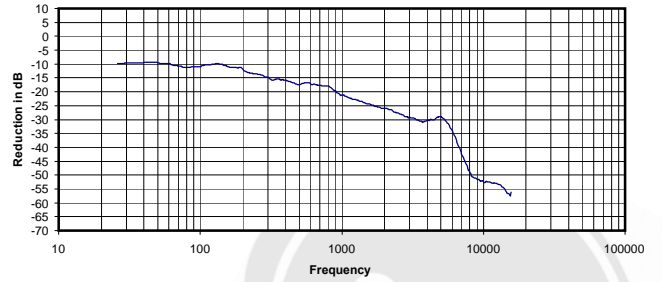
0.055 Vrms
18 Ohms
0.17 mW
-27 dB



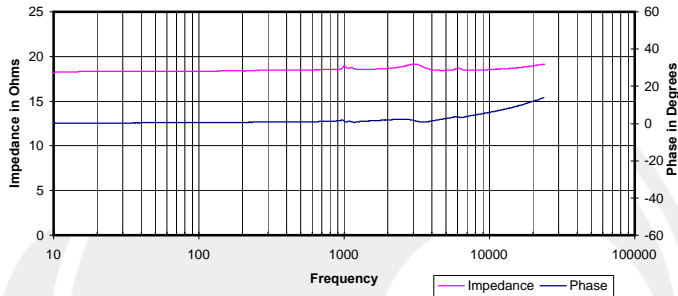
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



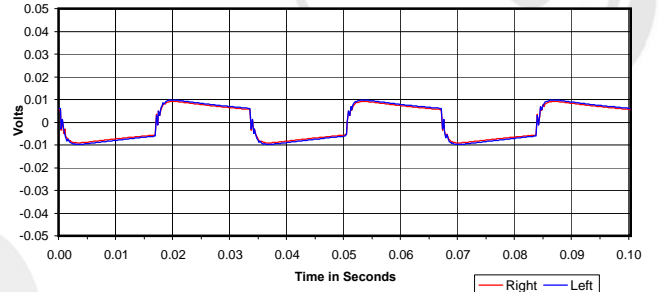
Isolation
Attenuation of External Sound vs. Frequency



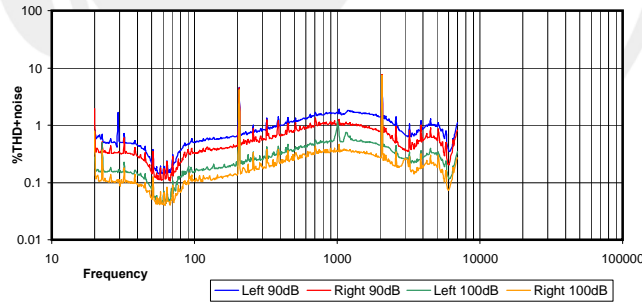
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



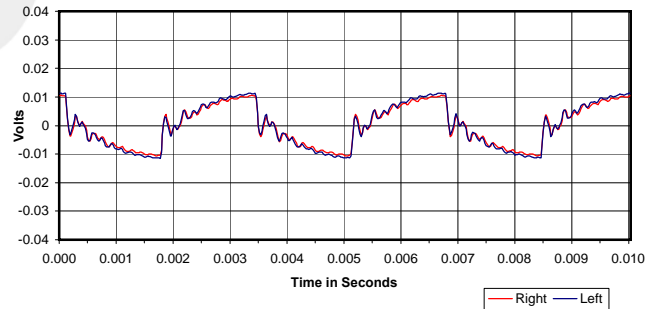
30 Hz Square Wave



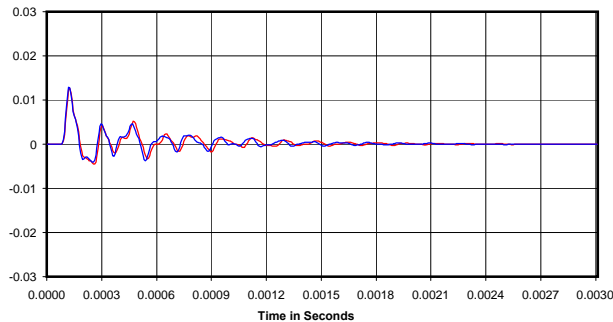
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



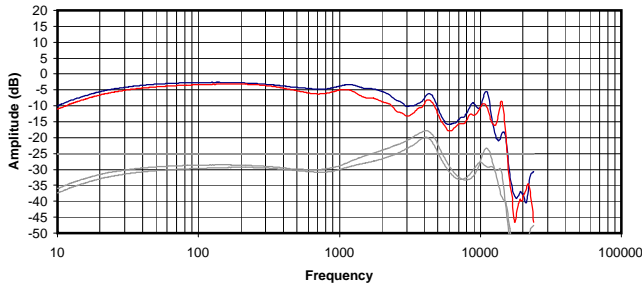
Impulse Response



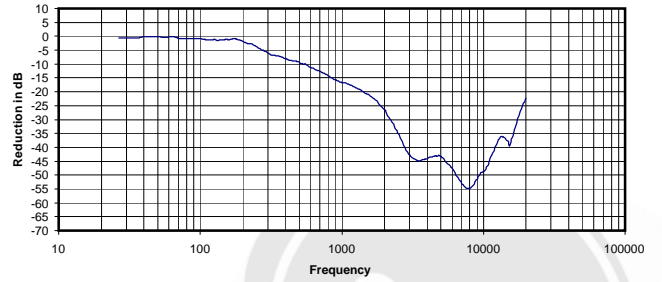
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.026 Vrms
19 Ohms
0.04 mW
-20 dB

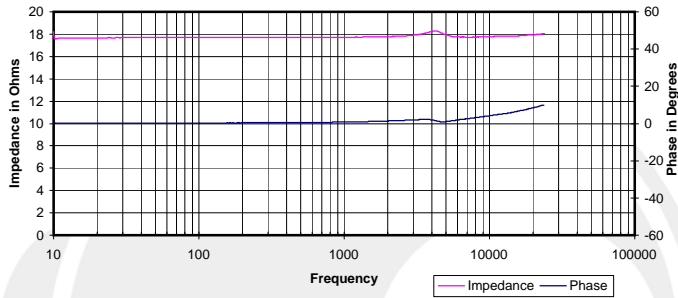
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



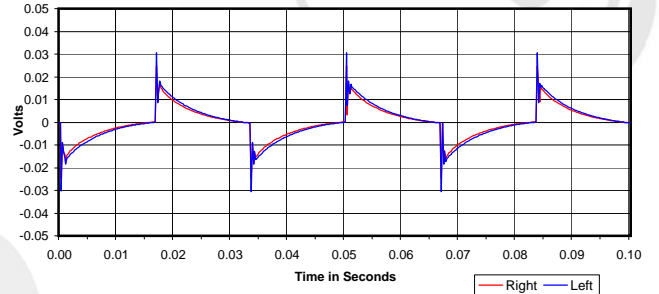
Isolation
Attenuation of External Sound vs. Frequency



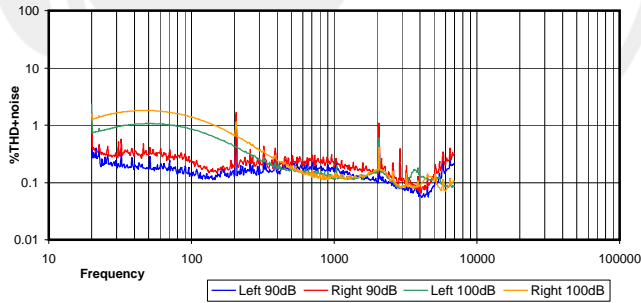
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



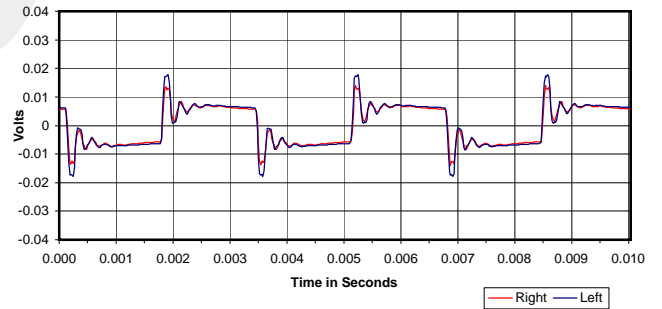
30 Hz Square Wave



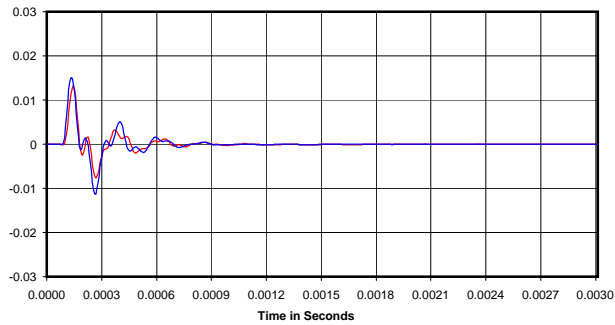
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



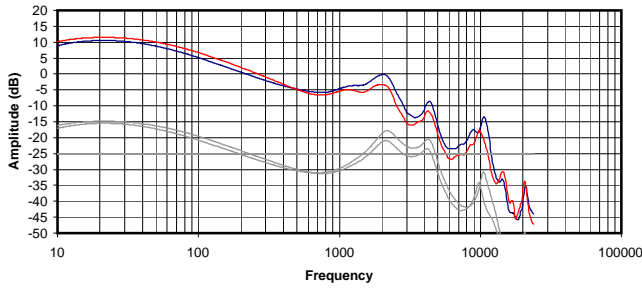
Impulse Response



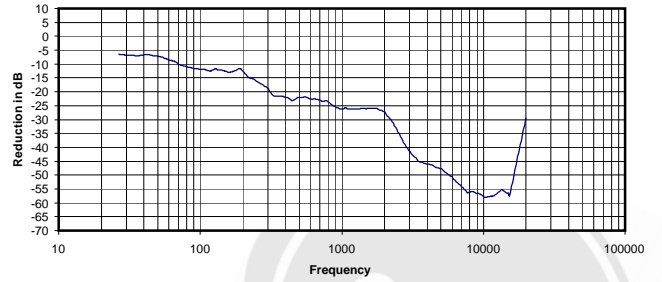
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.071 Vrms
18 Ohms
0.29 mW
-22 dB

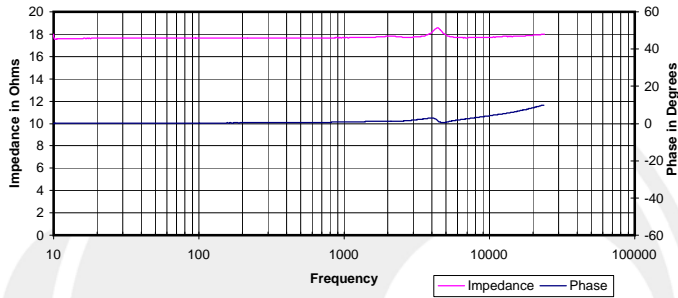
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



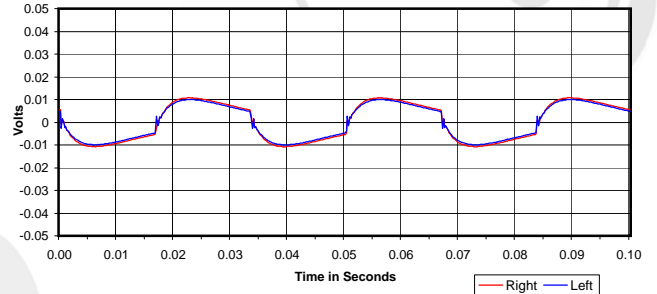
Isolation
Attenuation of External Sound vs. Frequency



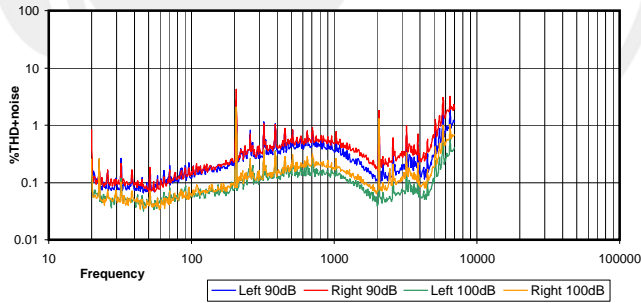
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



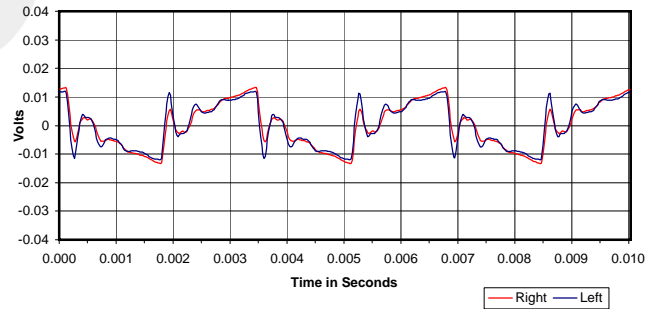
30 Hz Square Wave



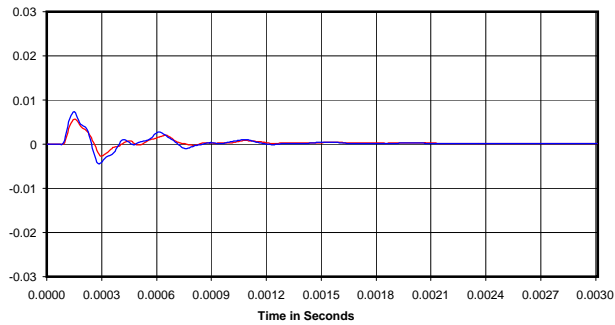
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

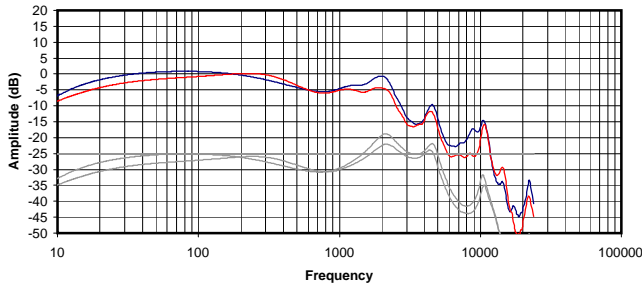


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

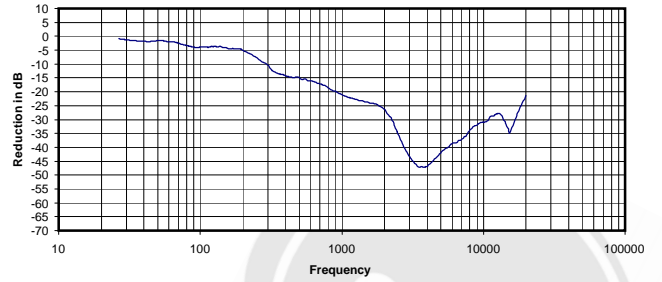
0.049 Vrms
18 Ohms
0.14 mW
-29 dB



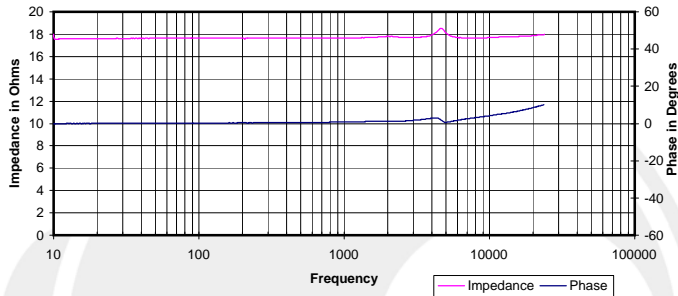
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



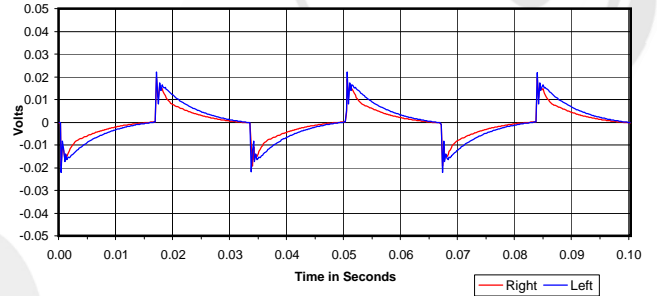
Isolation
Attenuation of External Sound vs. Frequency



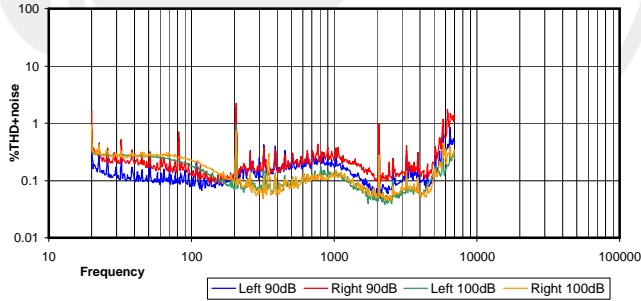
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



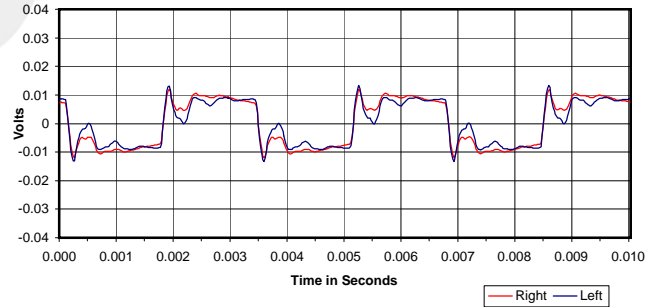
30 Hz Square Wave



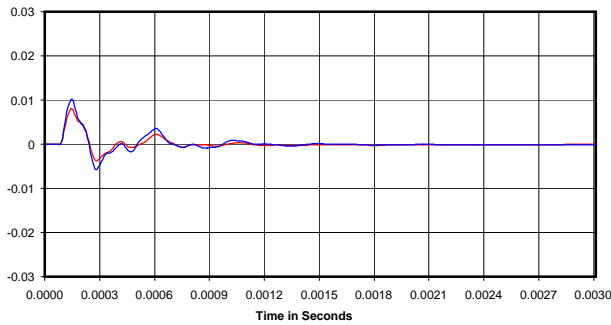
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

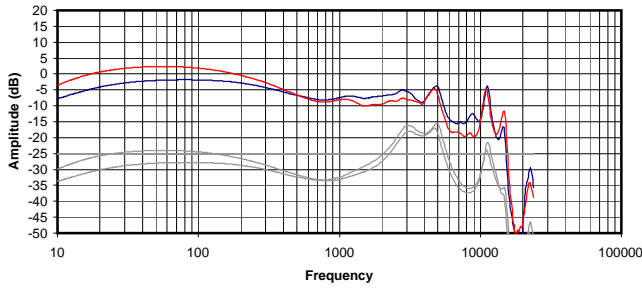


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

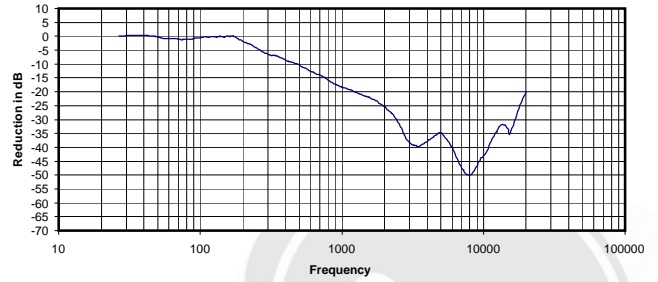
0.051 Vrms
18 Ohms
0.14 mW
-23 dB



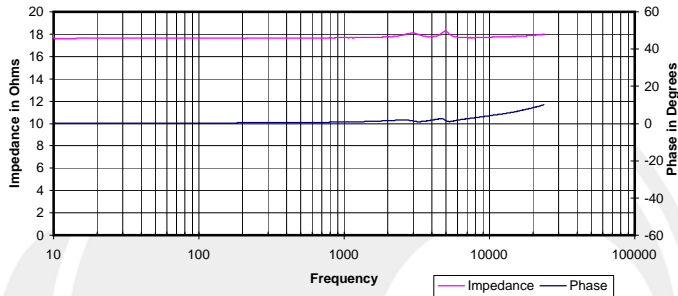
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



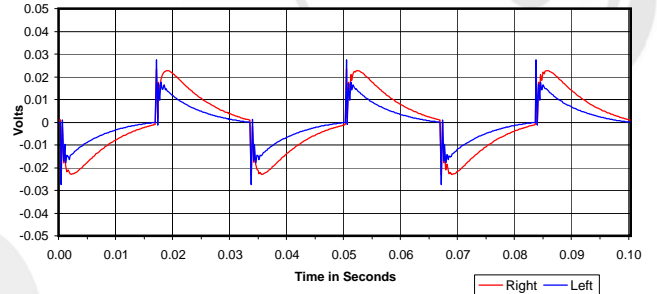
Isolation
Attenuation of External Sound vs. Frequency



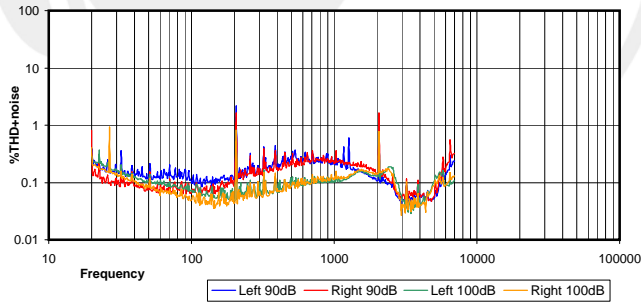
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



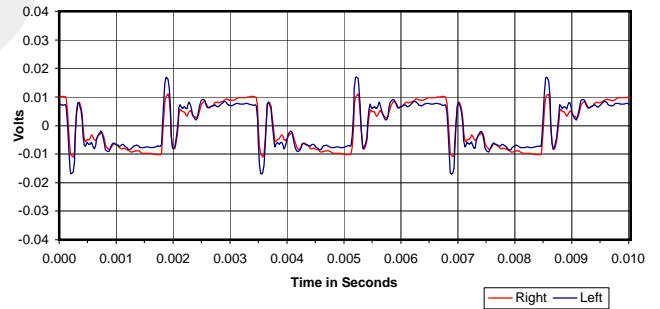
30 Hz Square Wave



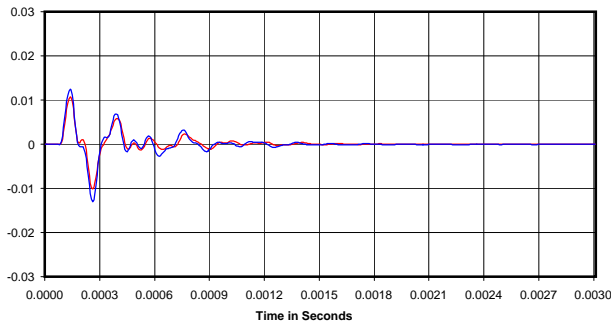
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



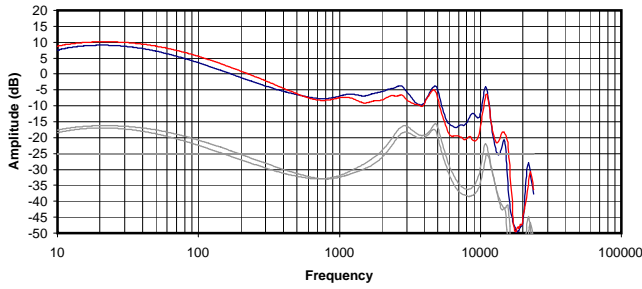
Impulse Response



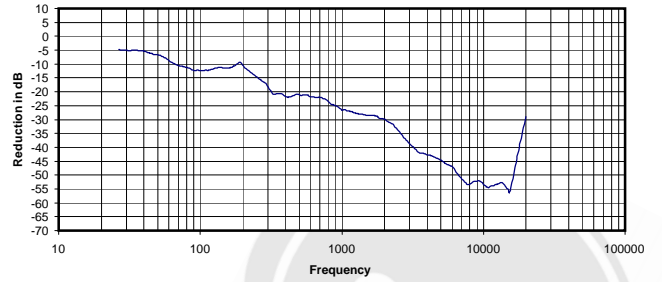
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.053 Vrms
18 Ohms
0.16 mW
-21 dB

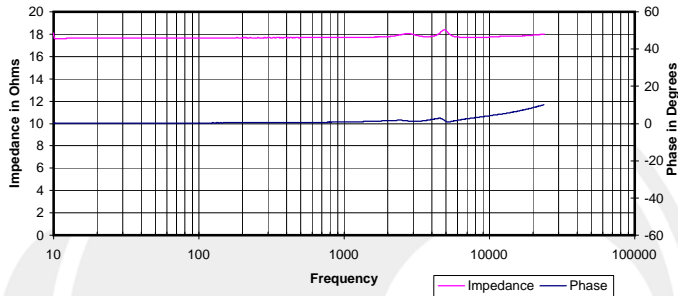
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



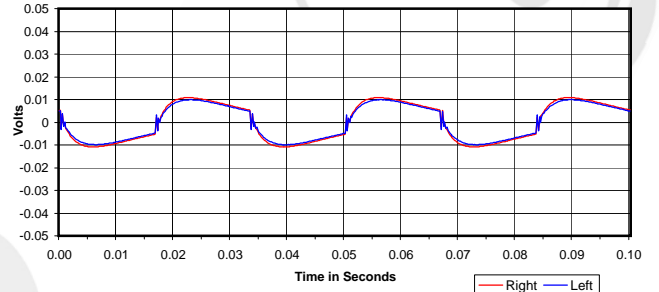
Isolation
Attenuation of External Sound vs. Frequency



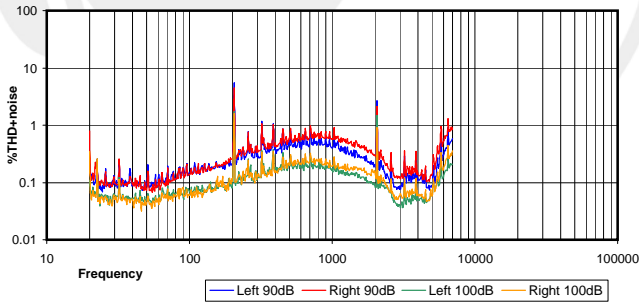
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



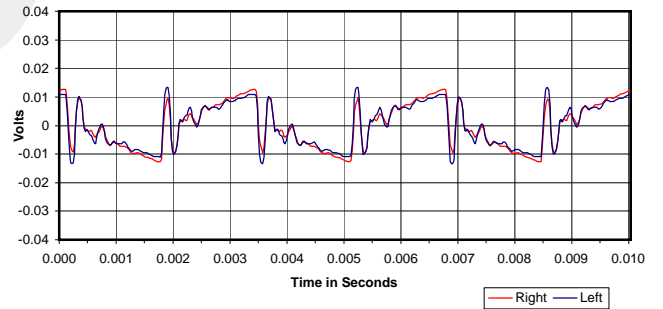
30 Hz Square Wave



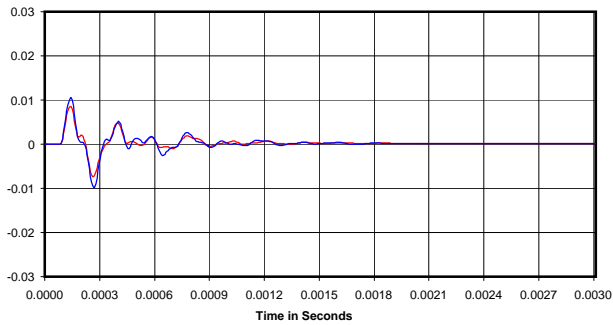
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

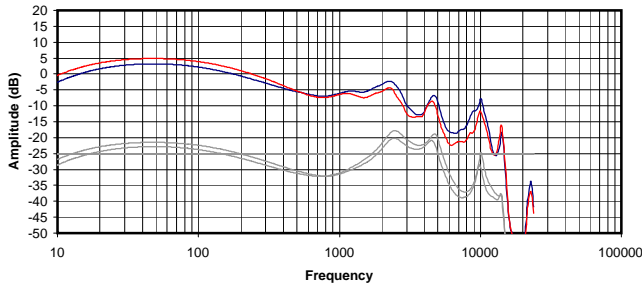


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

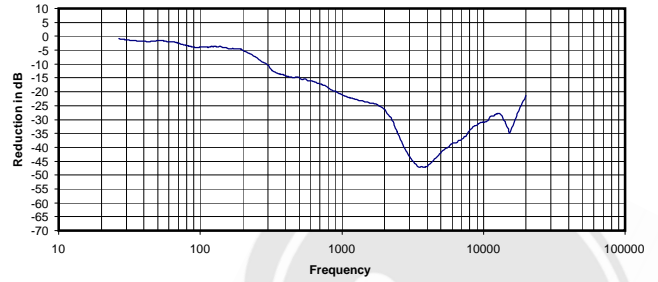
0.053 Vrms
18 Ohms
0.16 mW
-28 dB



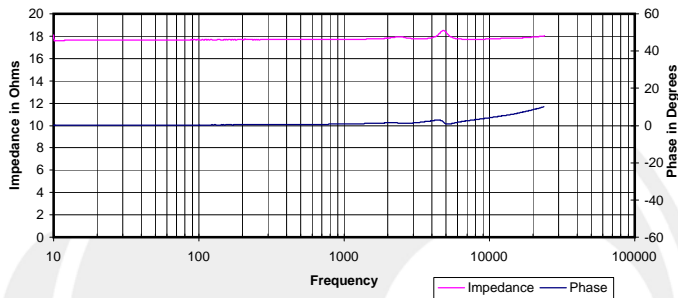
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



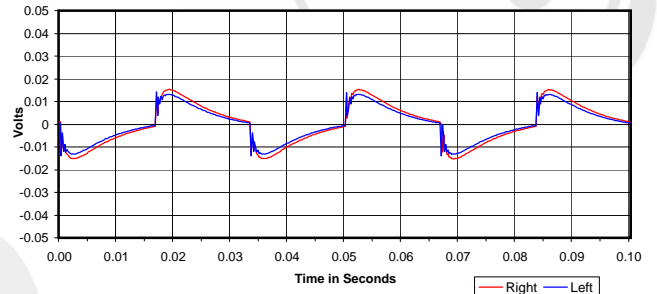
Isolation
Attenuation of External Sound vs. Frequency



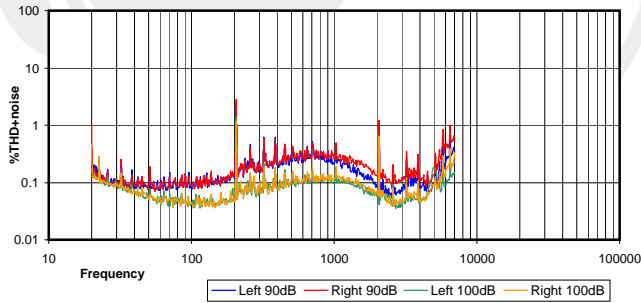
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



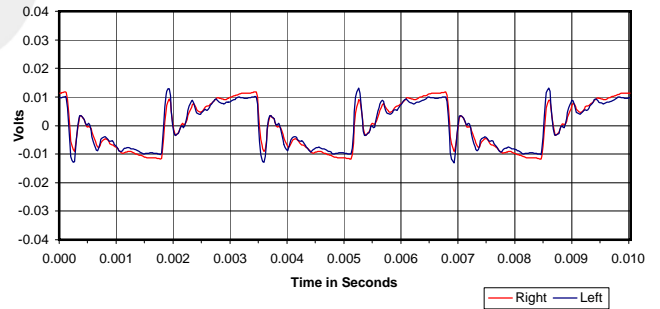
30 Hz Square Wave



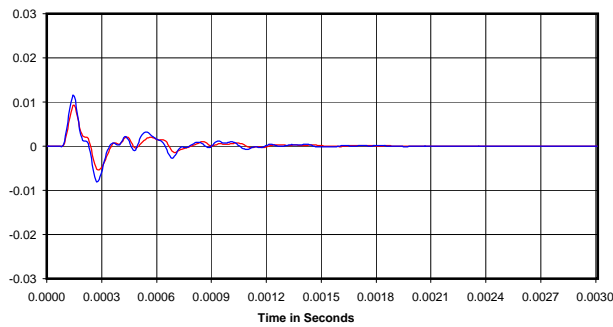
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

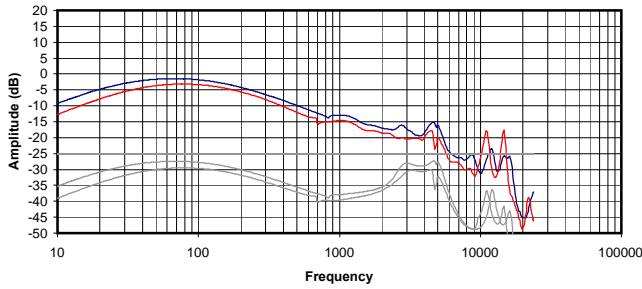


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

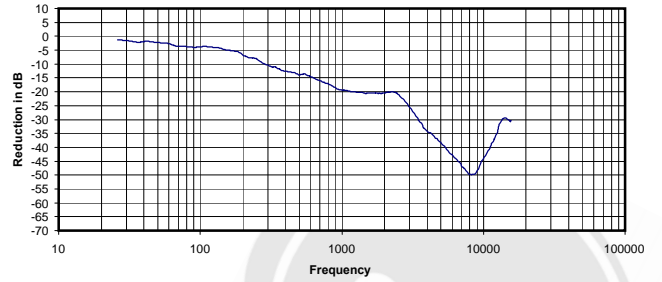
0.007 Vrms
18 Ohms
0.00 mW
-23 dB



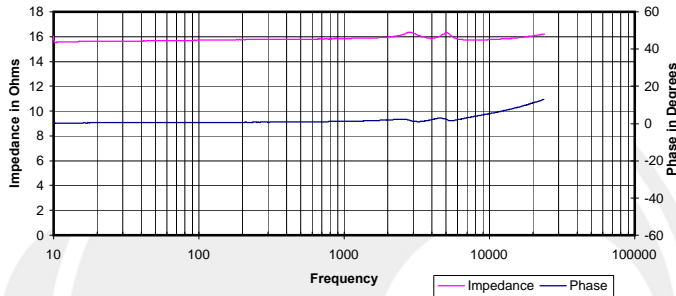
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



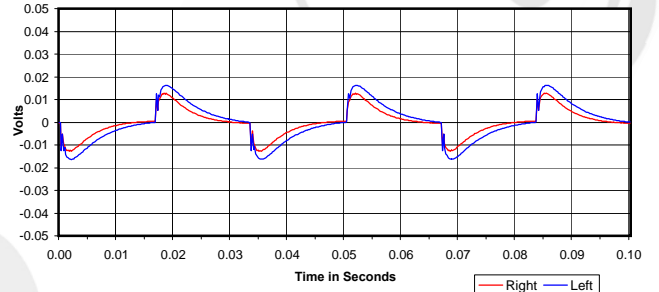
Isolation
Attenuation of External Sound vs. Frequency



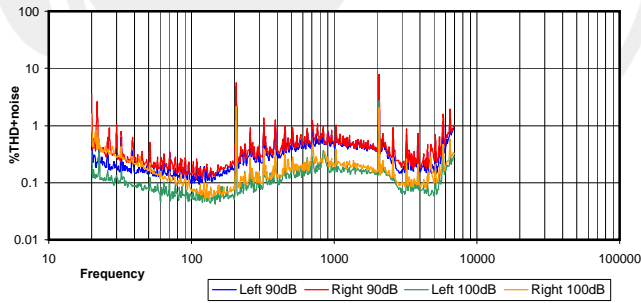
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



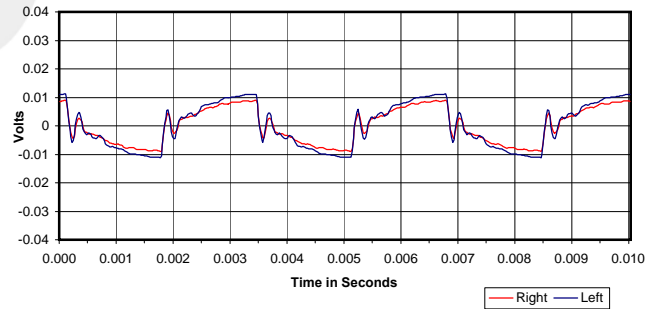
30 Hz Square Wave



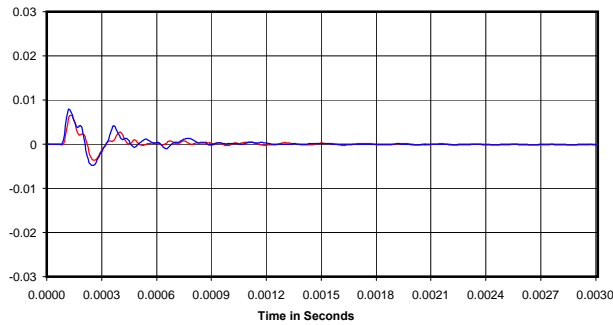
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



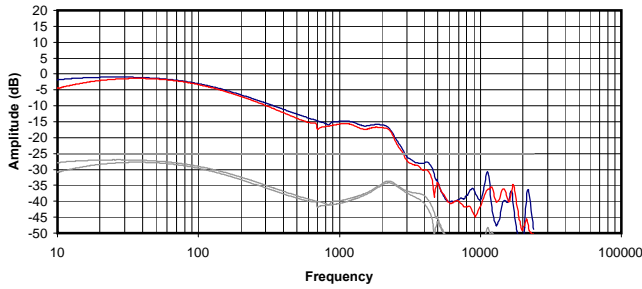
Impulse Response



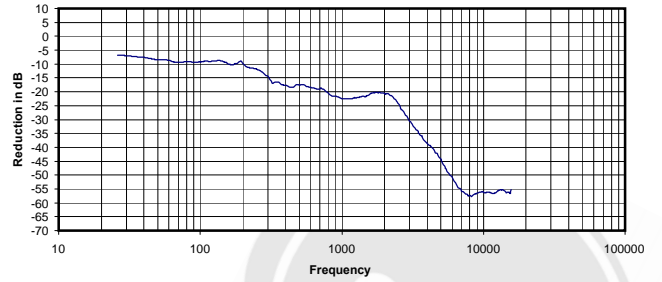
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
16 Ohms
0.03 mW
-17 dB

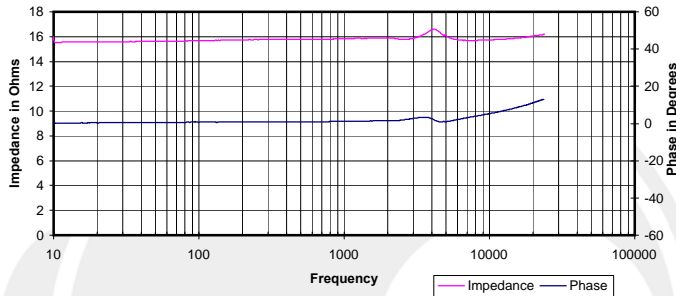
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



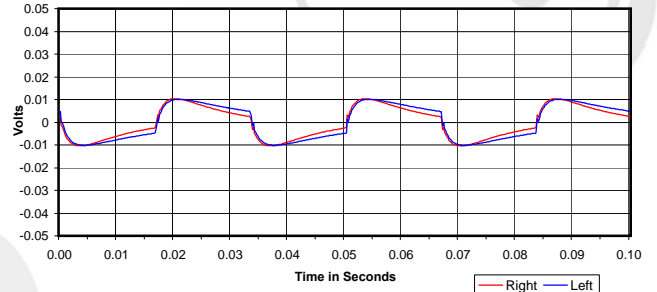
Isolation
Attenuation of External Sound vs. Frequency



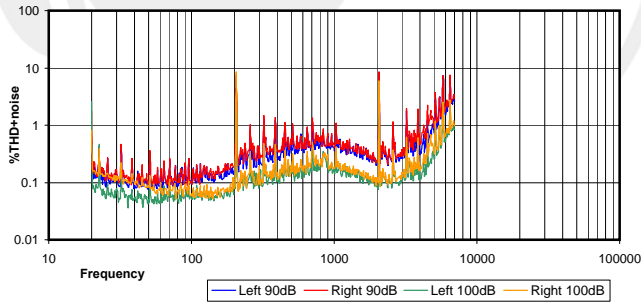
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



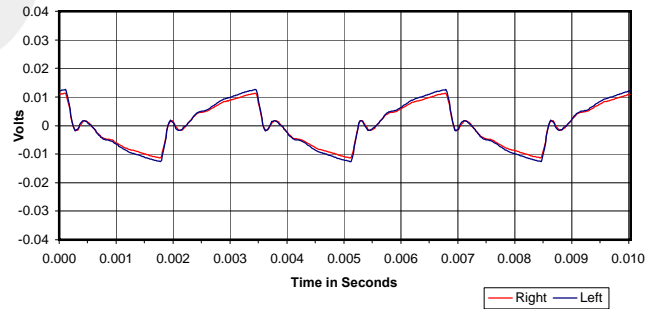
30 Hz Square Wave



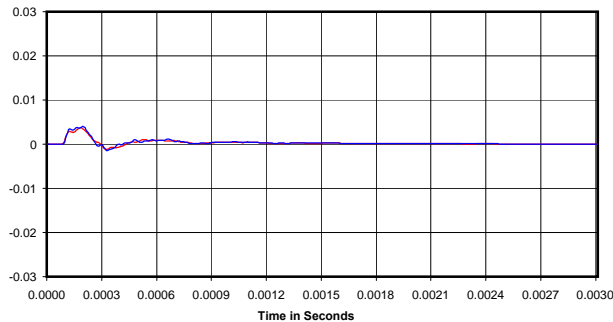
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

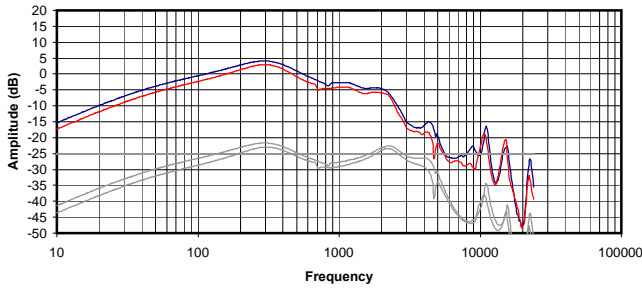


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

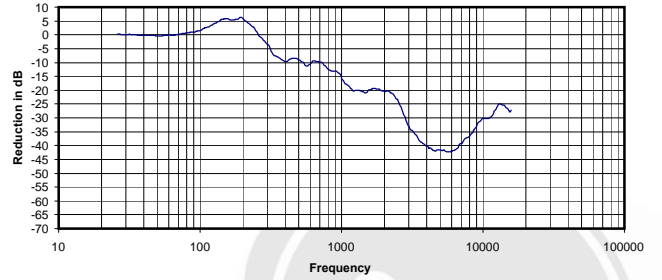
0.021 Vrms
16 Ohms
0.03 mW
-21 dB



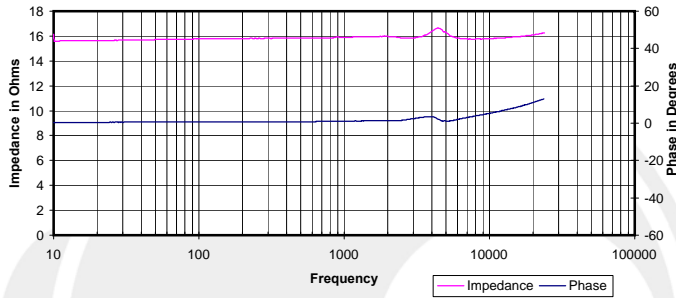
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



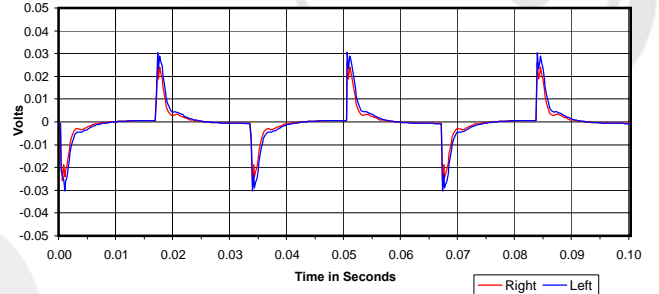
Isolation
Attenuation of External Sound vs. Frequency



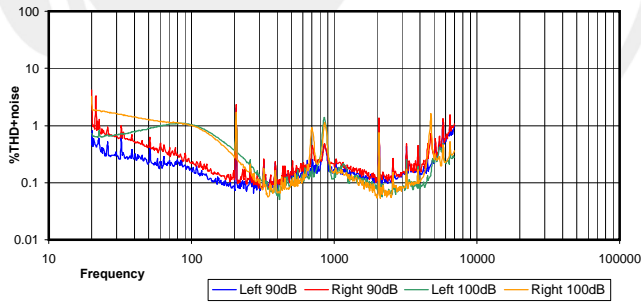
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



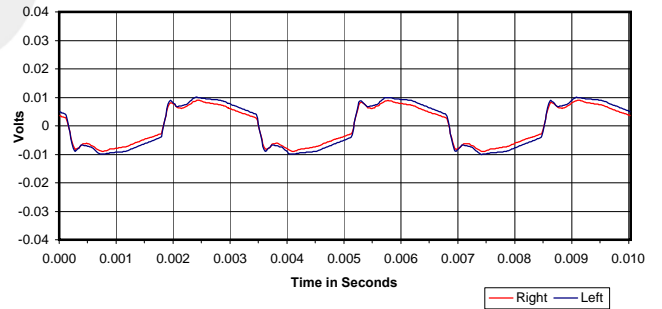
30 Hz Square Wave



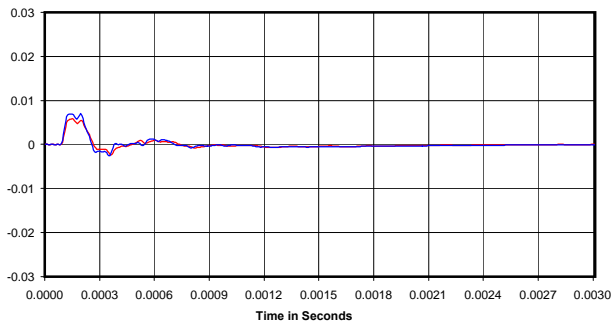
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



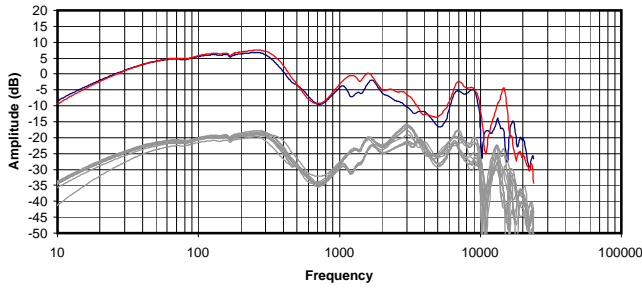
Impulse Response



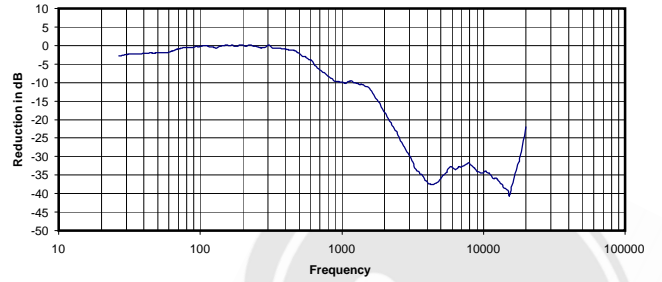
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.022 Vrms
16 Ohms
0.03 mW
-15 dB

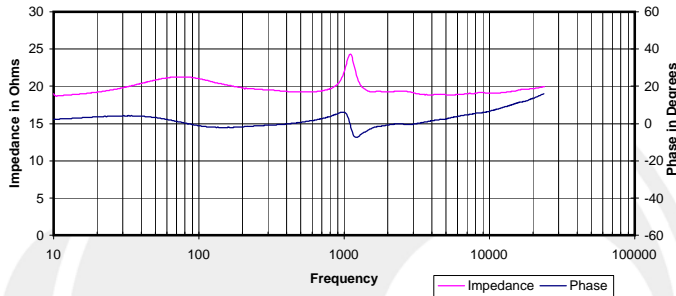
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



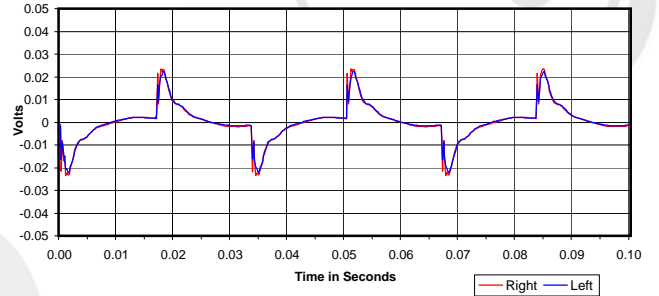
Isolation
 Attenuation of External Sound vs. Frequency



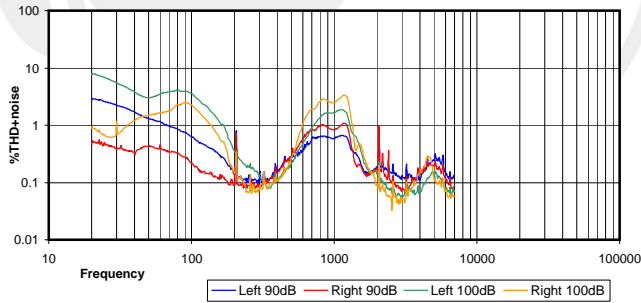
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



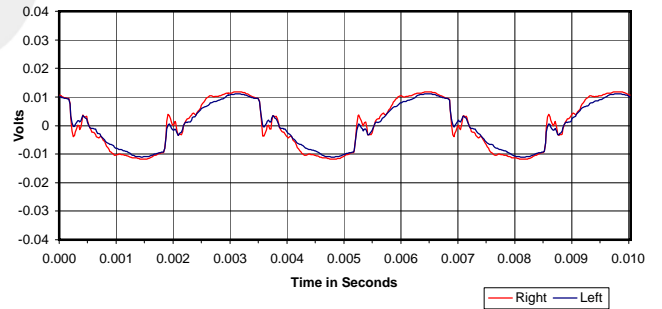
30 Hz Square Wave



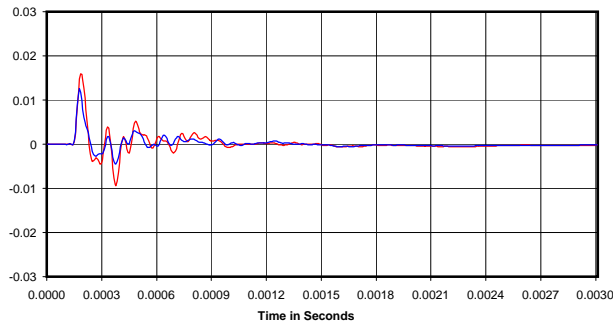
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



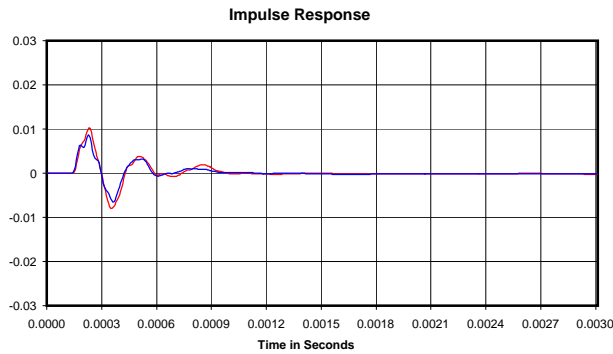
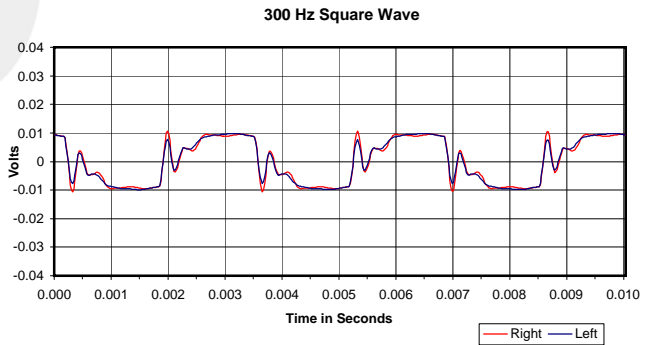
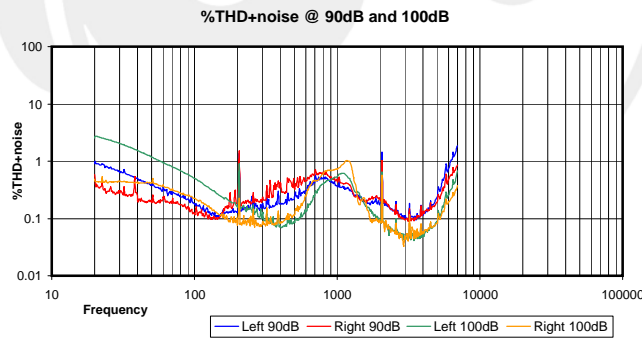
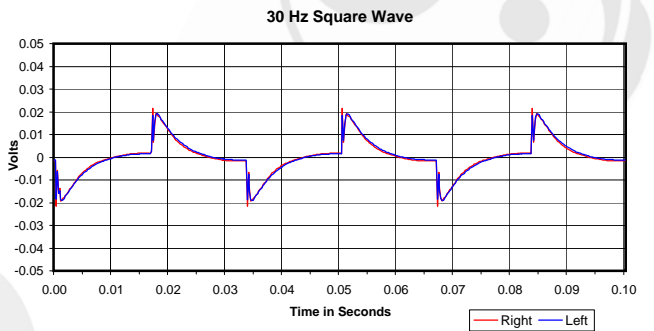
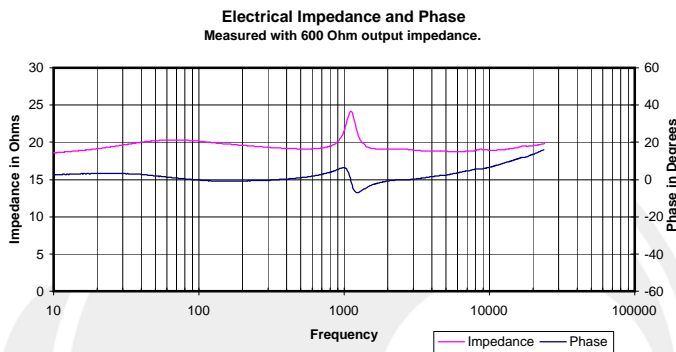
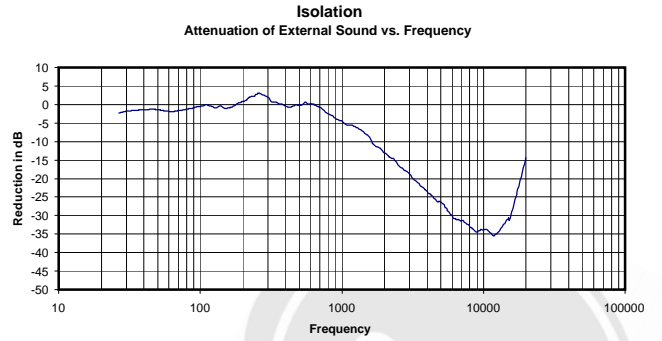
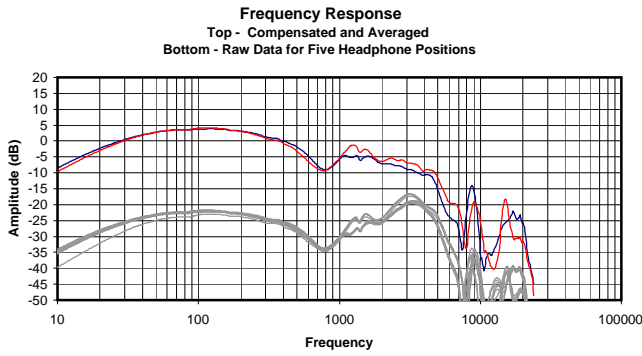
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.096 Vrms
 22 Ohms
 0.42 mW
 -14 dB

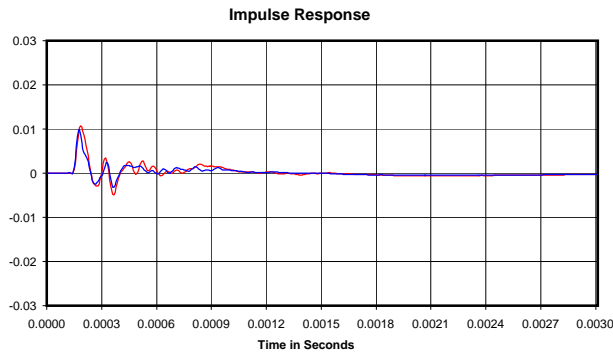
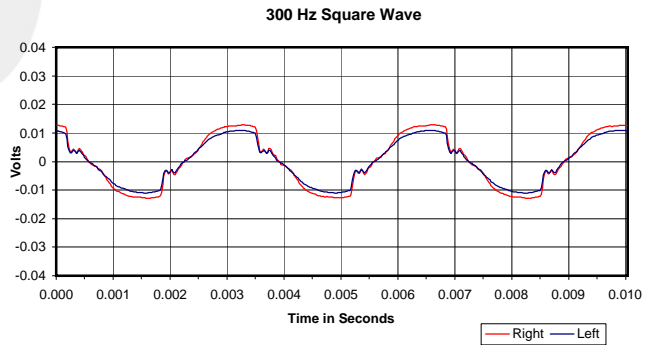
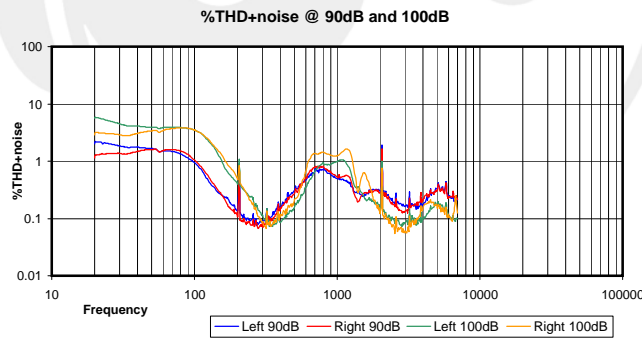
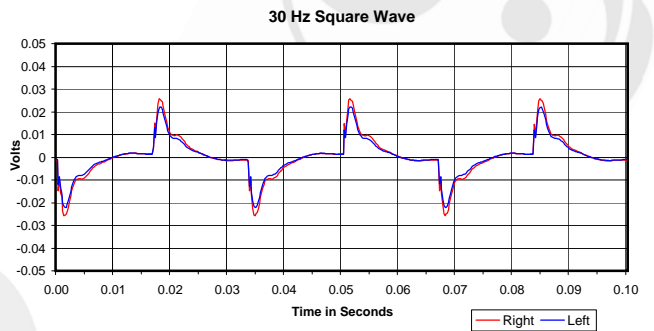
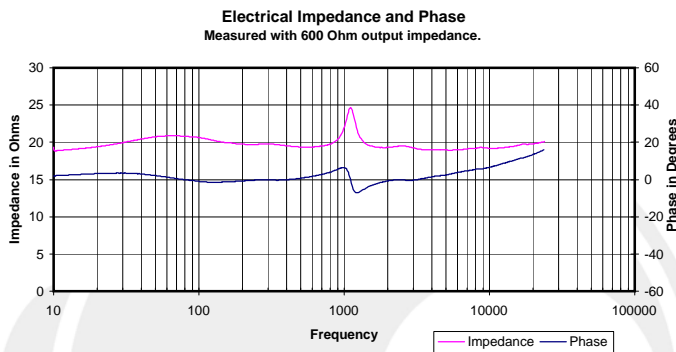
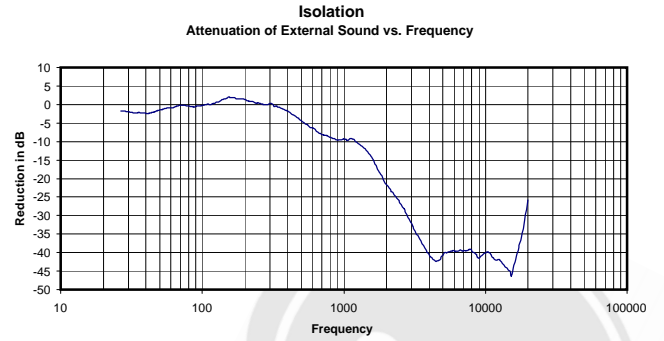
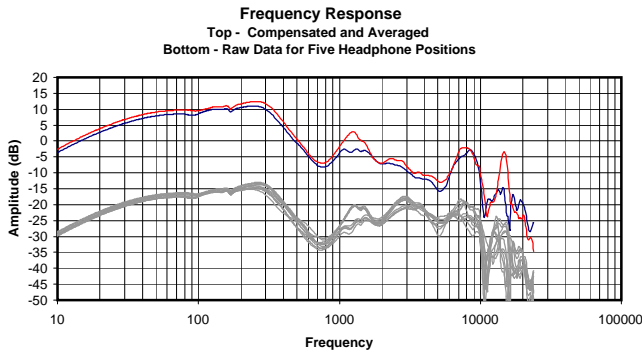




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.053 Vrms
22 Ohms
0.13 mW
-10 dB



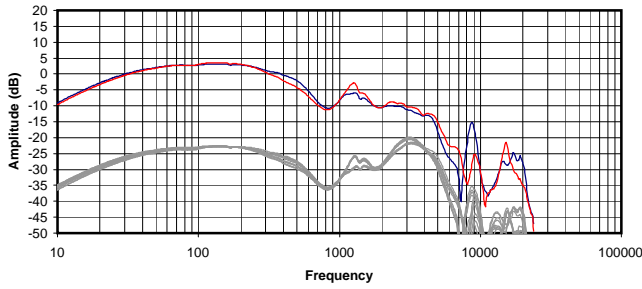


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

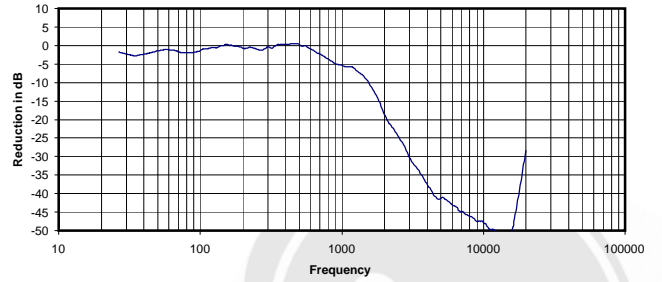
0.088 Vrms
22 Ohms
0.34 mW
-16 dB



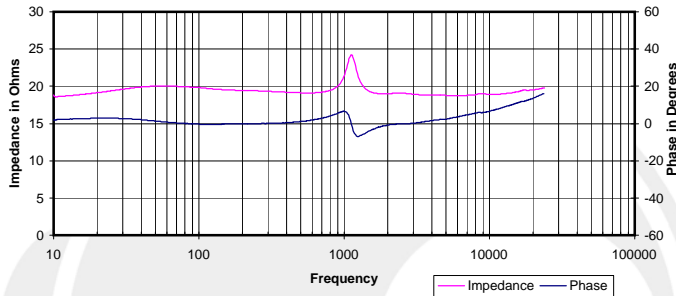
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



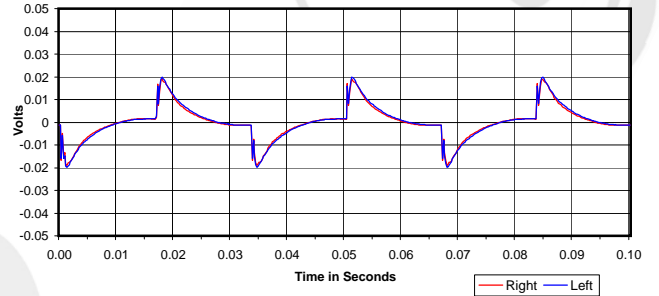
Isolation
Attenuation of External Sound vs. Frequency



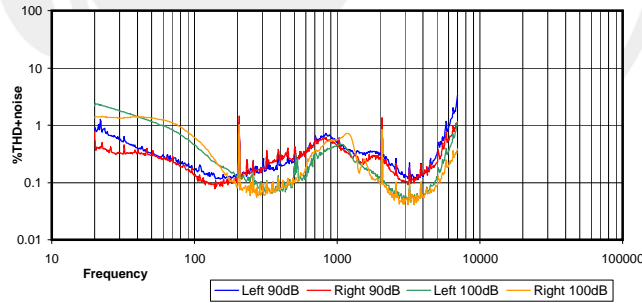
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



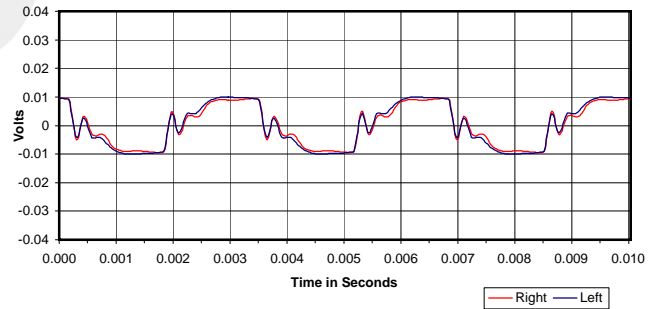
30 Hz Square Wave



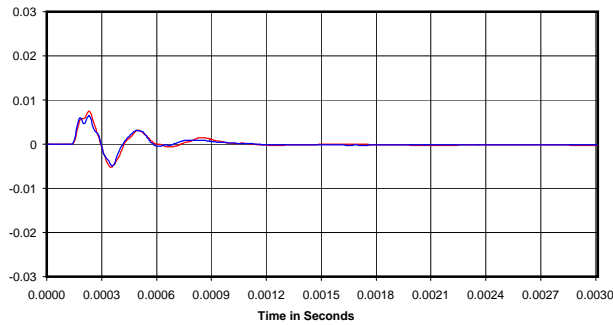
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



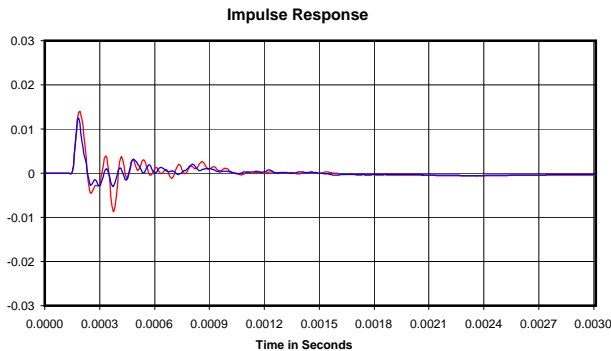
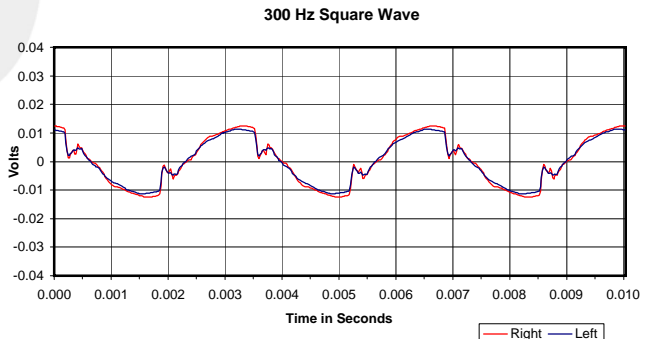
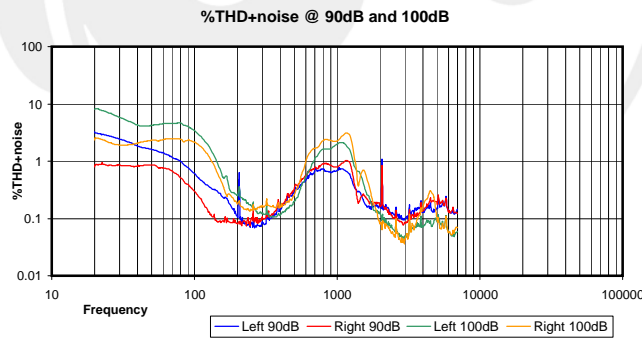
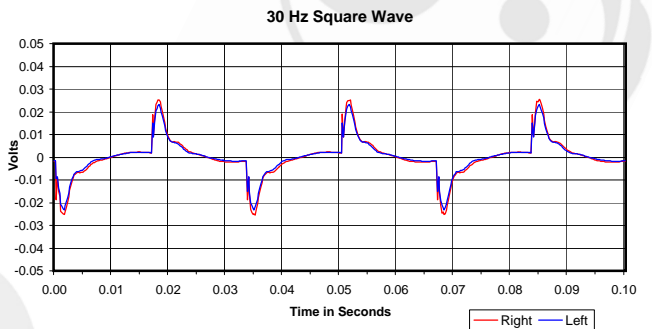
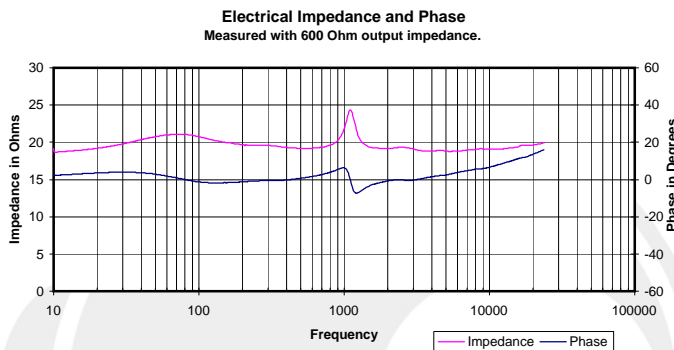
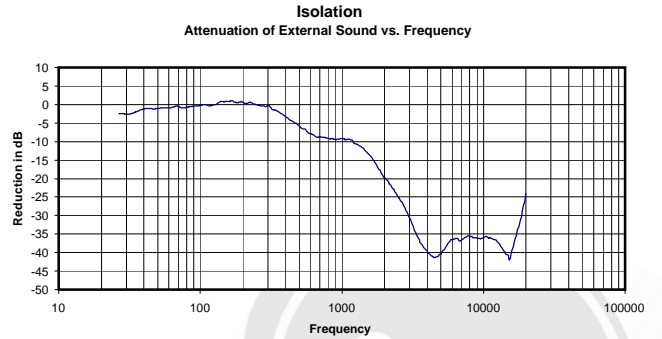
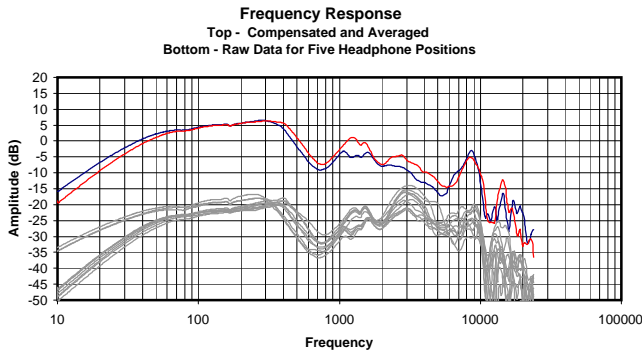
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.057 Vrms
22 Ohms
0.15 mW
-15 dB

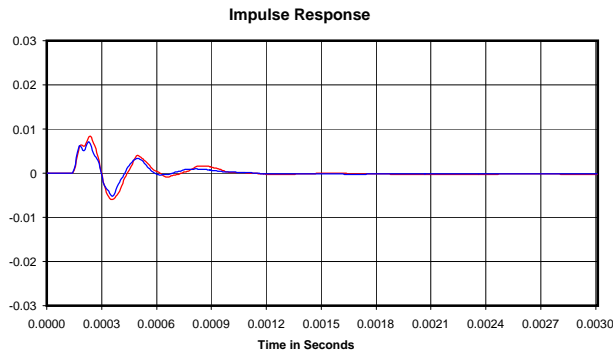
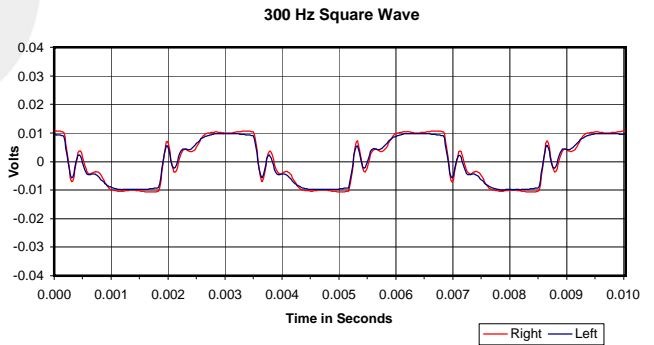
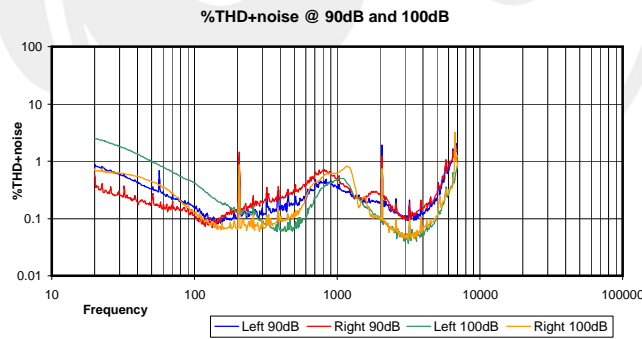
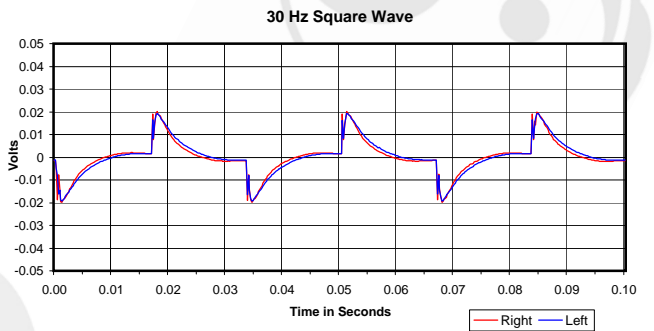
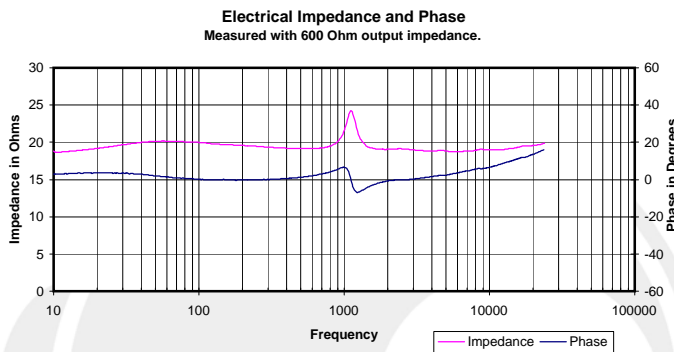
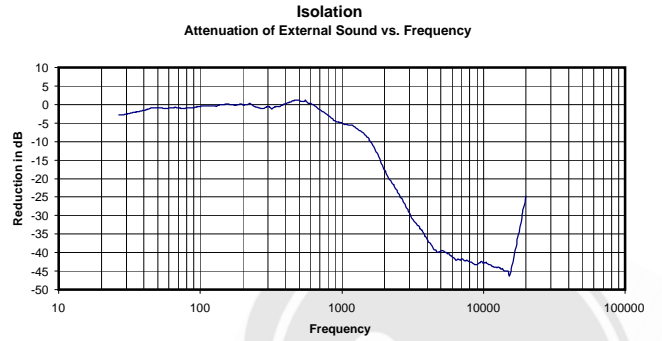
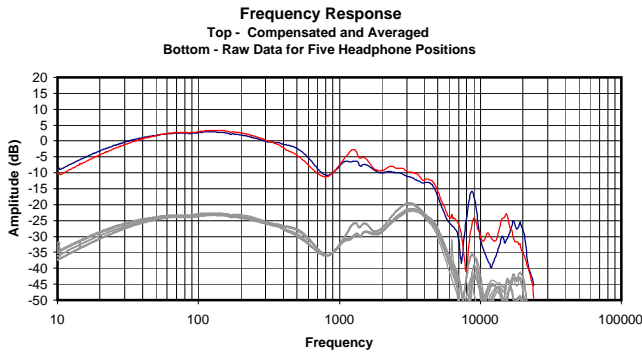




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

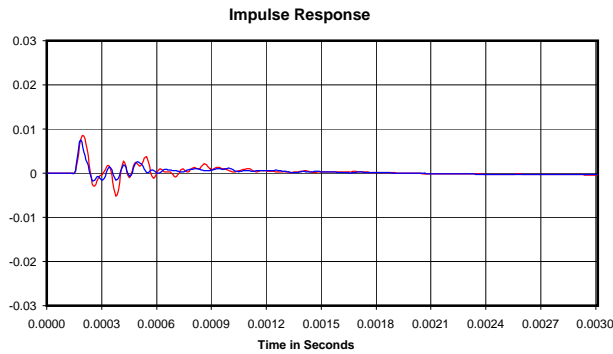
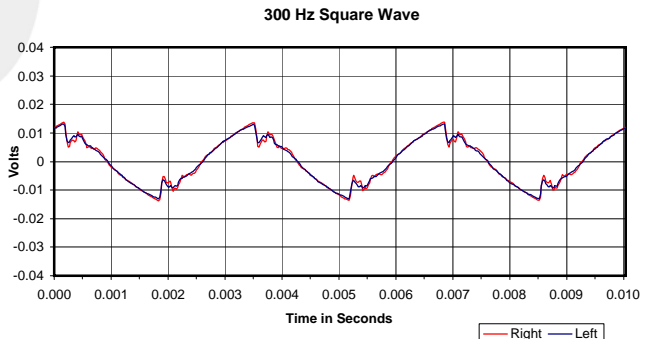
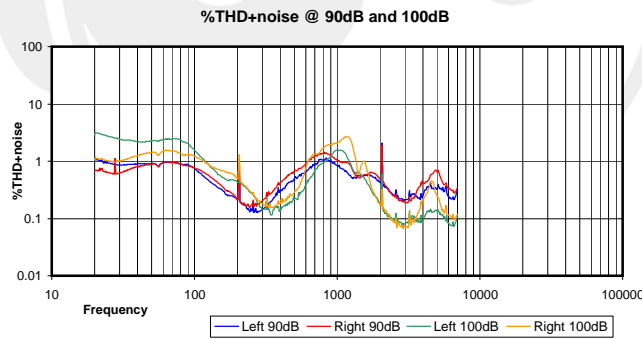
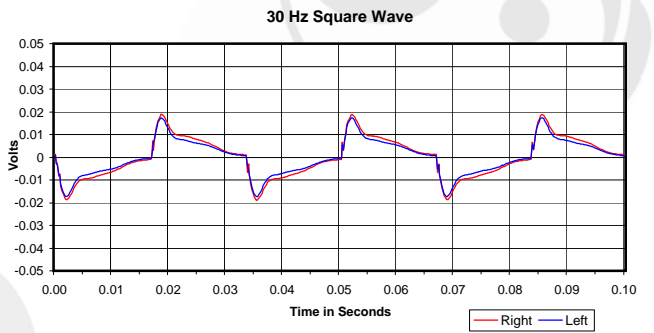
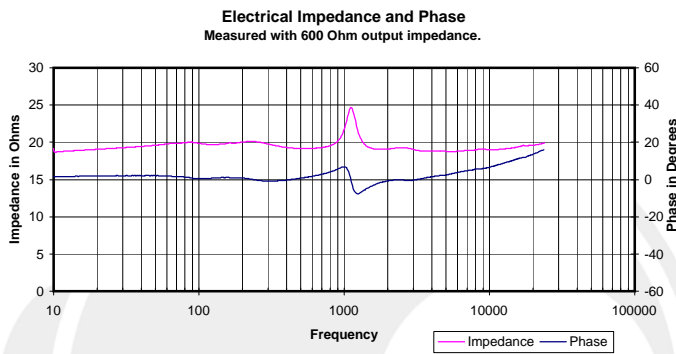
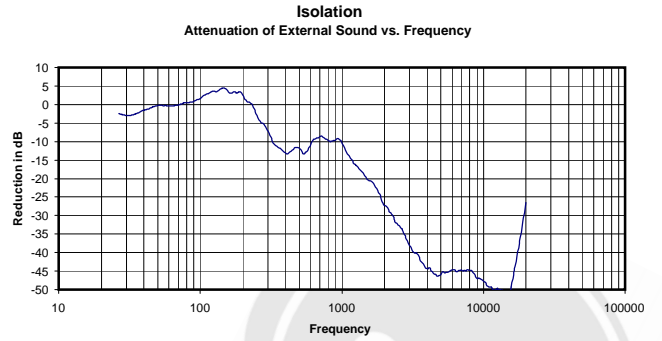
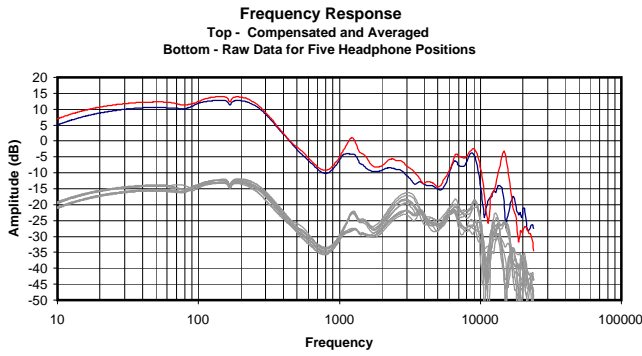
0.112 Vrms
22 Ohms
0.57 mW
-15 dB





Volts RMS required to reach 90dB SPL: 0.057 Vrms
 Impedance @ 1kHz: 22 Ohms
 Power Needed for 90d BSPL: 0.15 mW
 Broadband Isolation in dB (100Hz to 10kHz): -14 dB

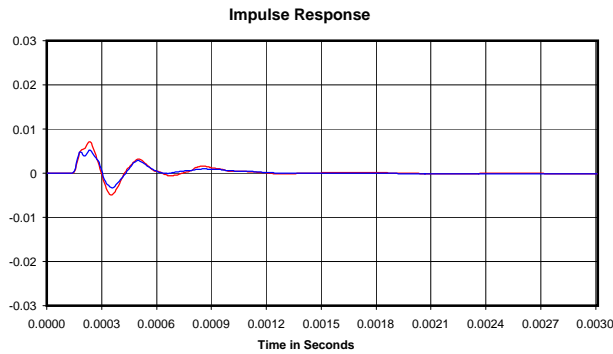
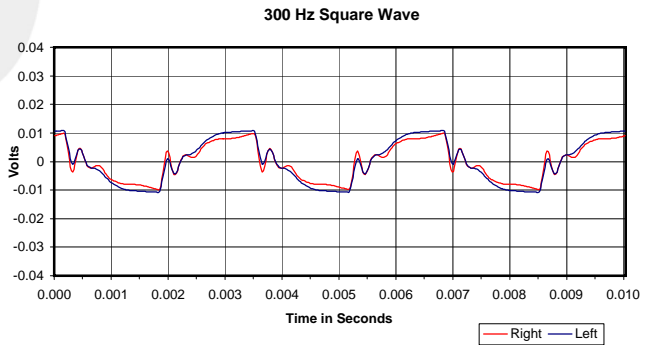
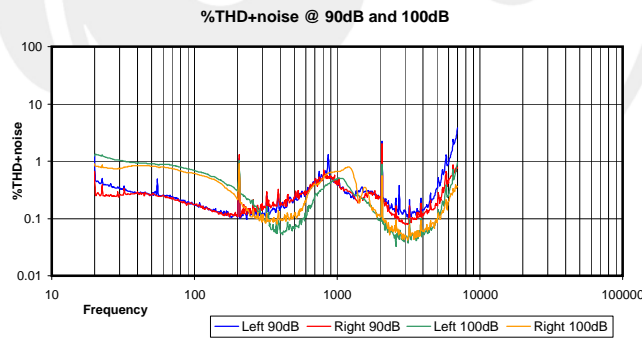
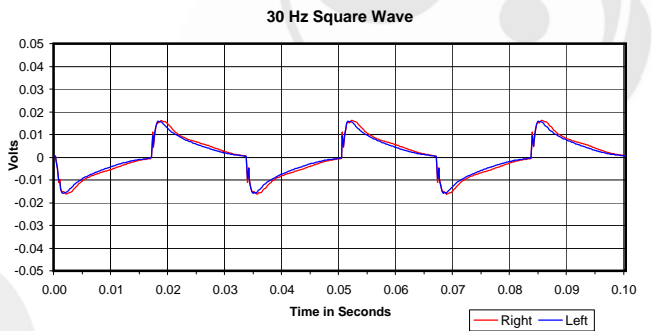
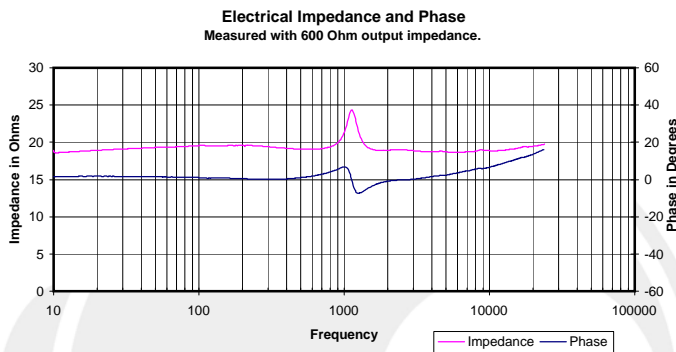
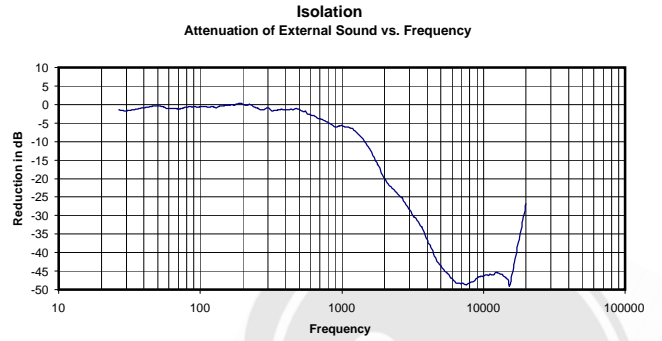
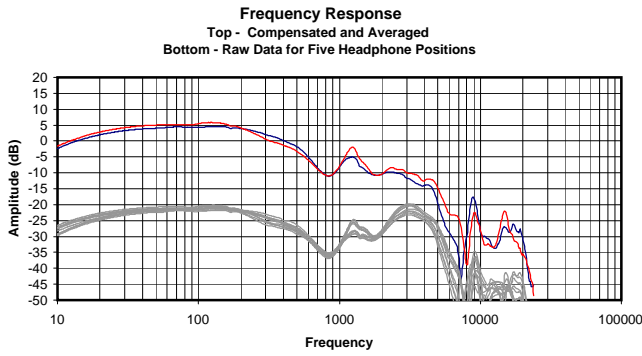




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.117 Vrms
22 Ohms
0.63 mW
-20 dB



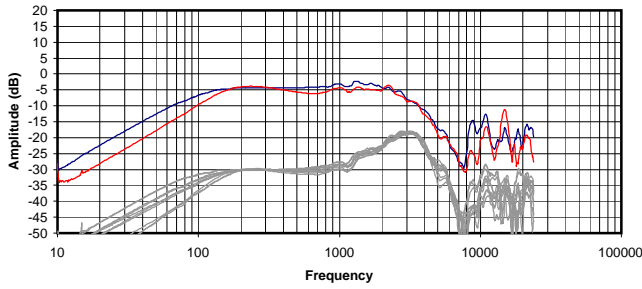


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

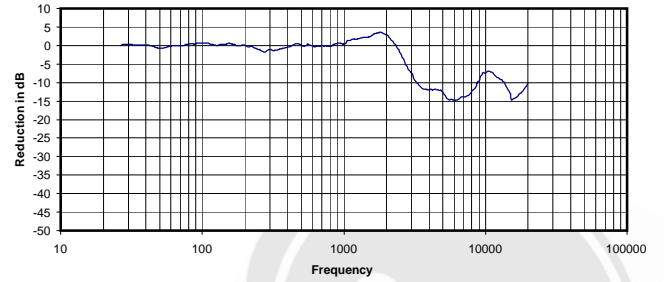
0.062 Vrms
22 Ohms
0.17 mW
-16 dB



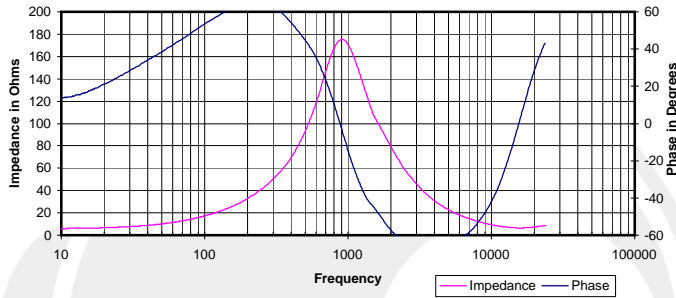
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



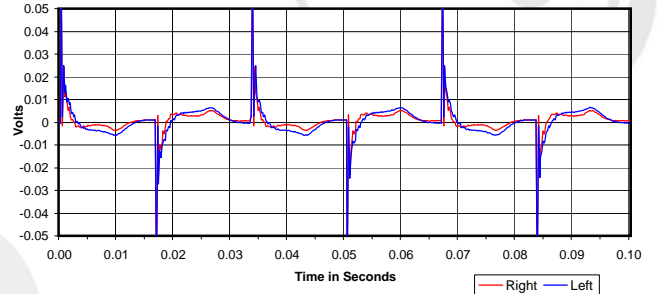
Isolation
 Attenuation of External Sound vs. Frequency



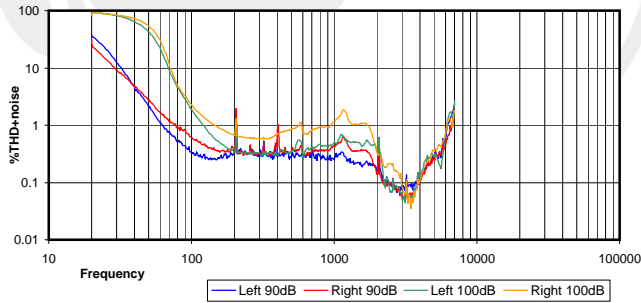
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



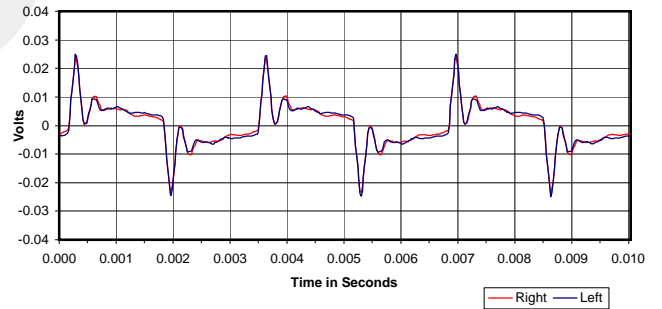
30 Hz Square Wave



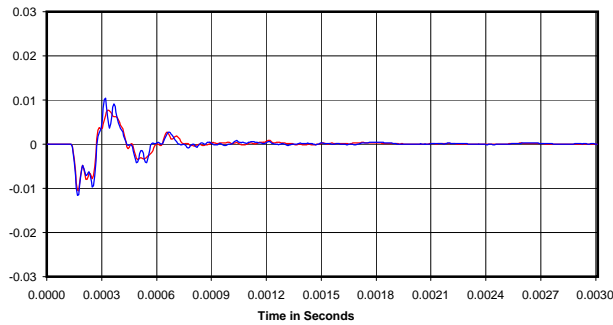
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

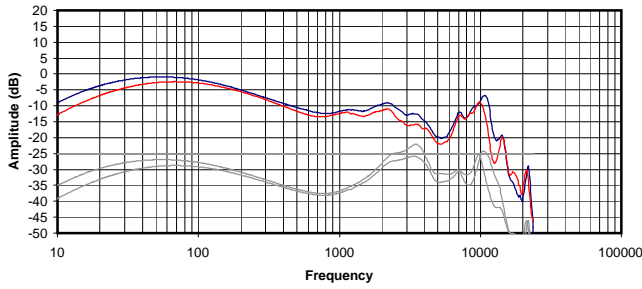


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

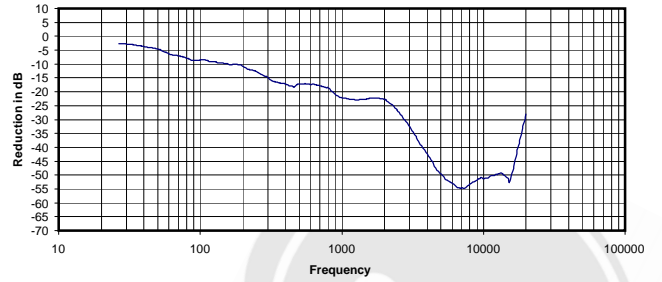
0.313 Vrms
 169 Ohms
 0.58 mW
 -3 dB



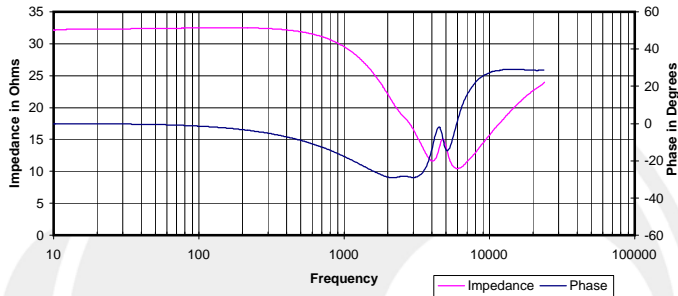
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



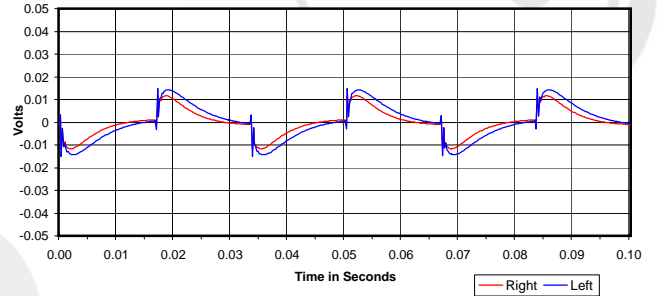
Isolation
Attenuation of External Sound vs. Frequency



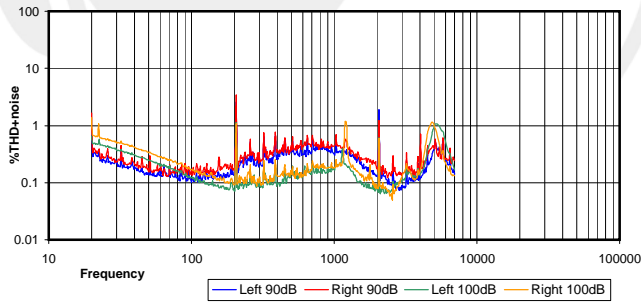
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



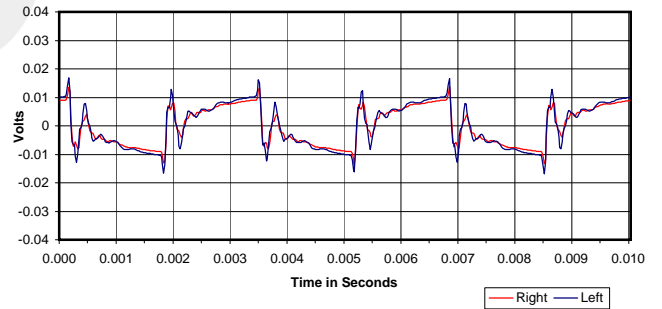
30 Hz Square Wave



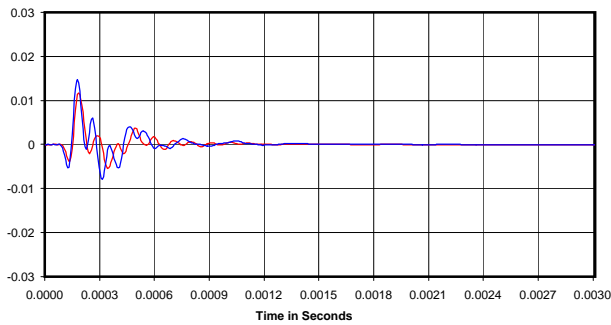
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

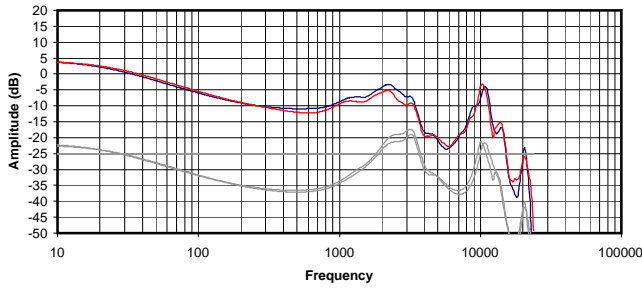


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

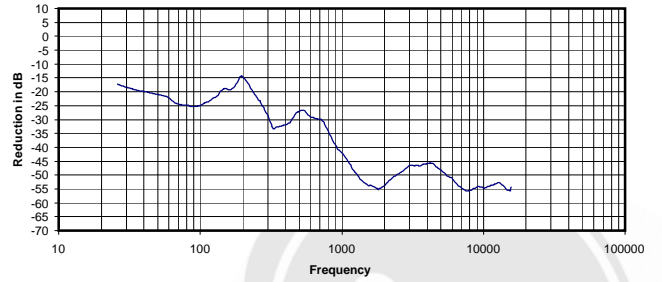
0.034 Vrms
30 Ohms
0.04 mW
-26 dB



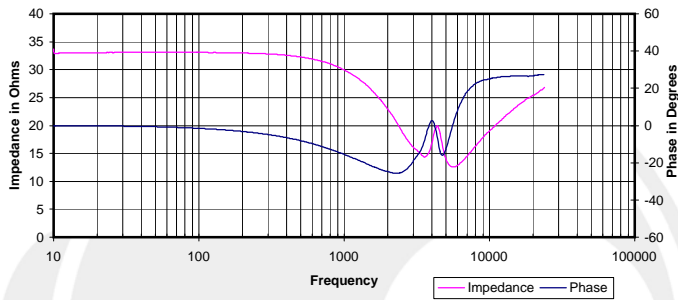
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



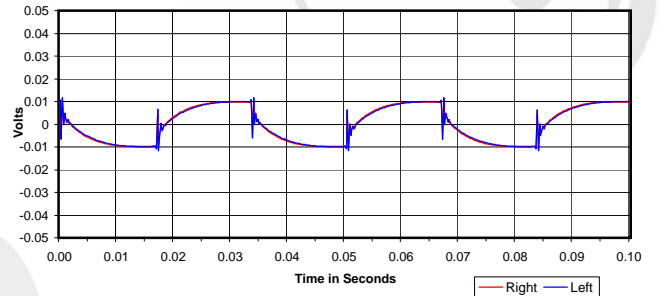
Isolation
Attenuation of External Sound vs. Frequency



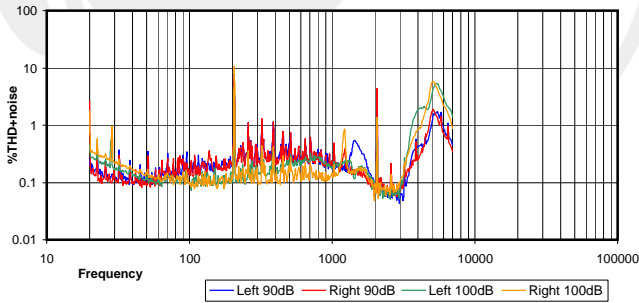
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



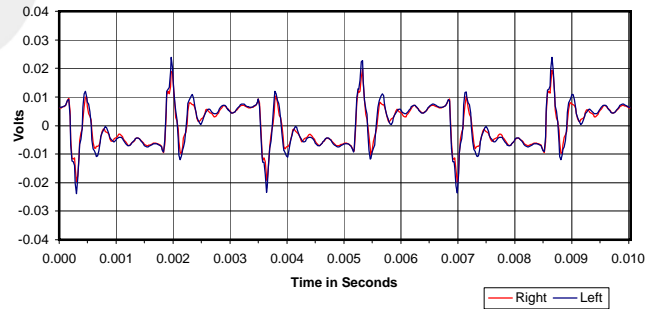
30 Hz Square Wave



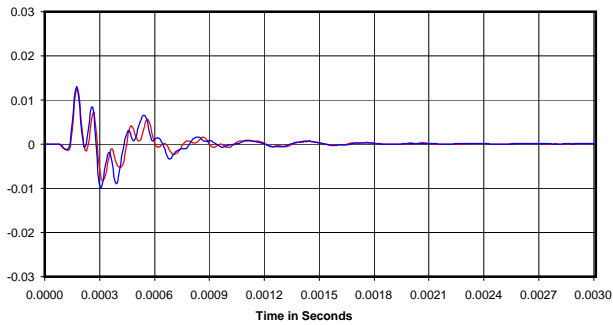
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

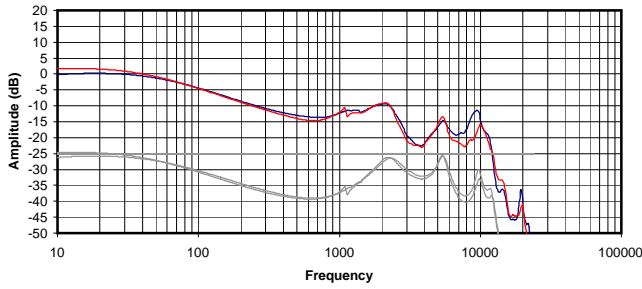


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

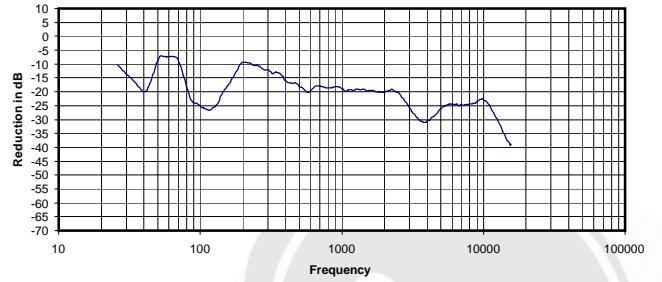
0.037 Vrms
30 Ohms
0.05 mW
-36 dB



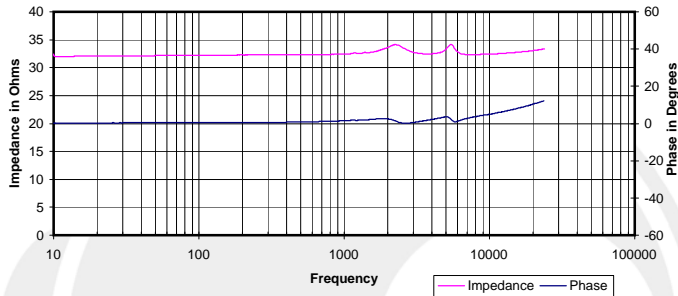
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



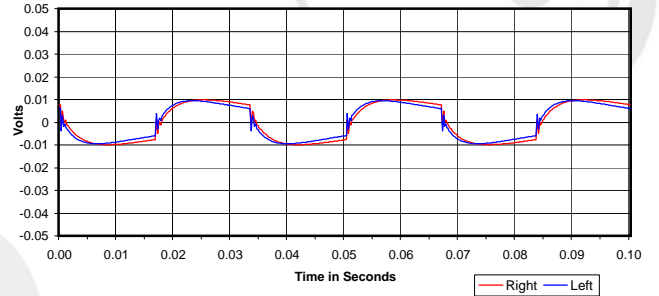
Isolation
Attenuation of External Sound vs. Frequency



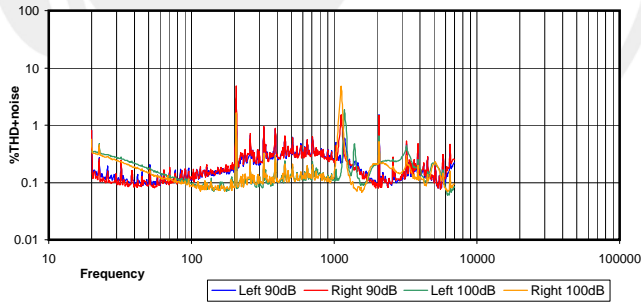
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



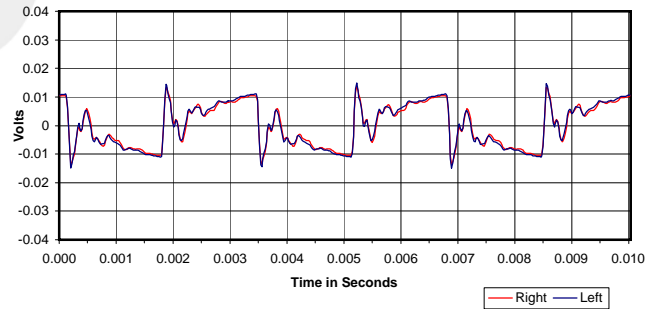
30 Hz Square Wave



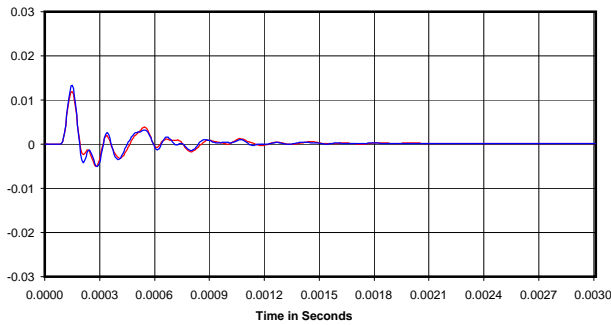
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

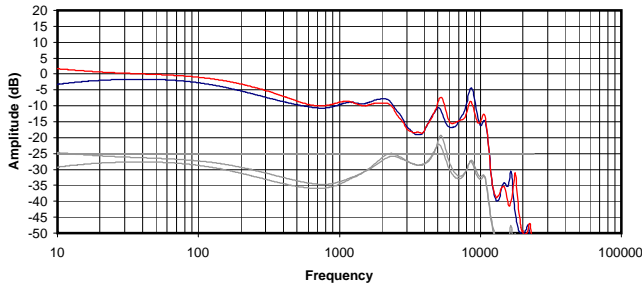


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

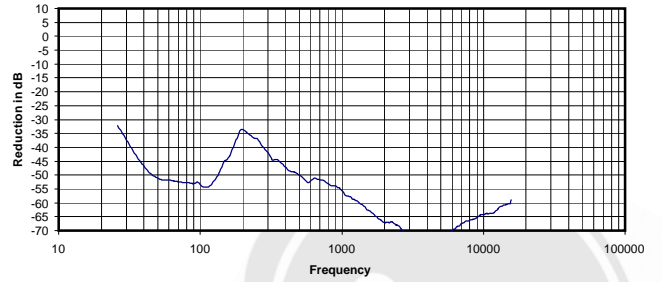
0.042 Vrms
32 Ohms
0.06 mW
-20 dB



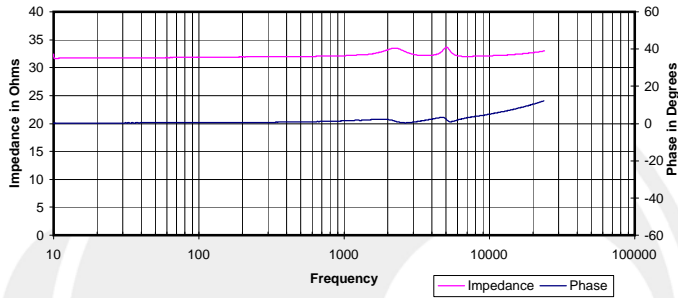
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



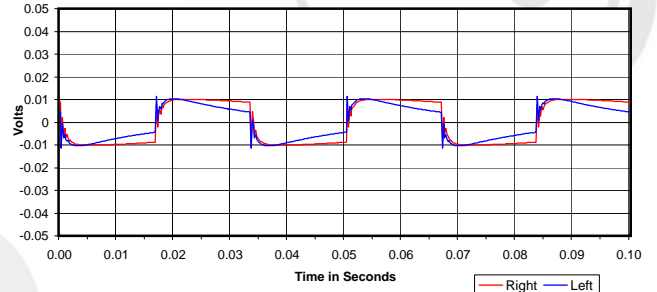
Isolation
Attenuation of External Sound vs. Frequency



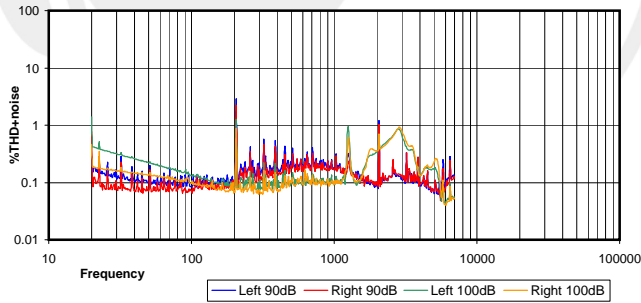
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



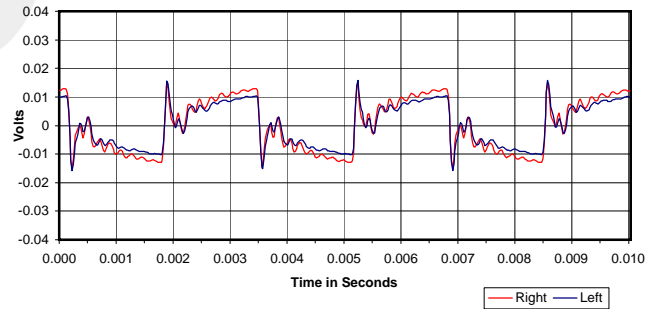
30 Hz Square Wave



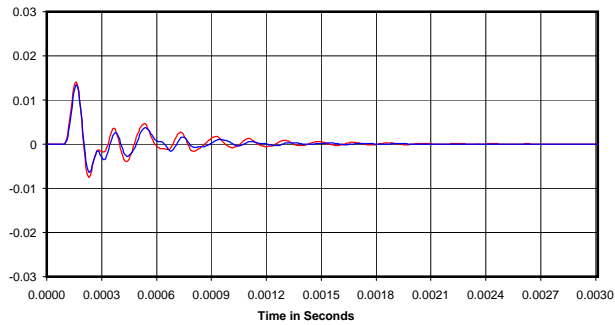
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

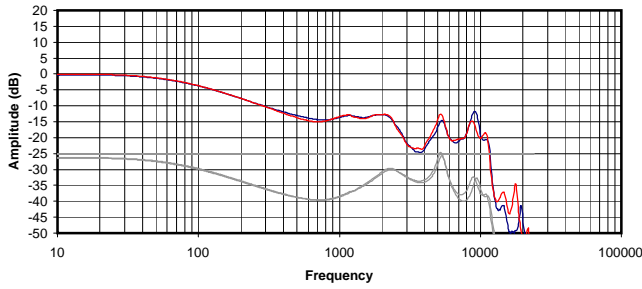


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

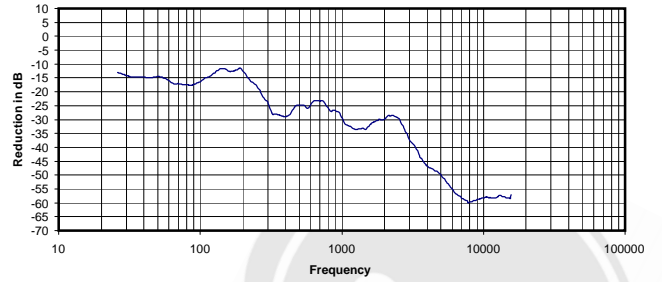
0.043 Vrms
32 Ohms
0.06 mW
-56 dB



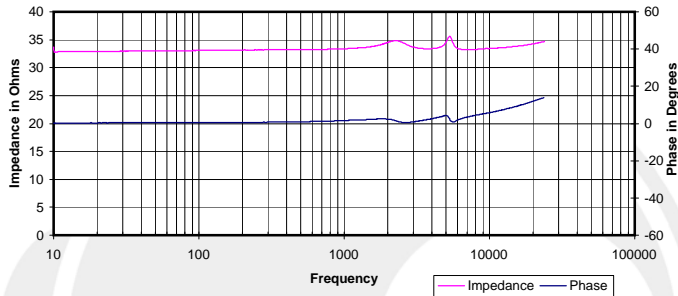
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



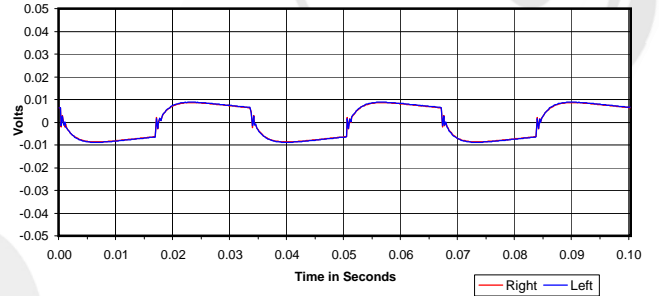
Isolation
Attenuation of External Sound vs. Frequency



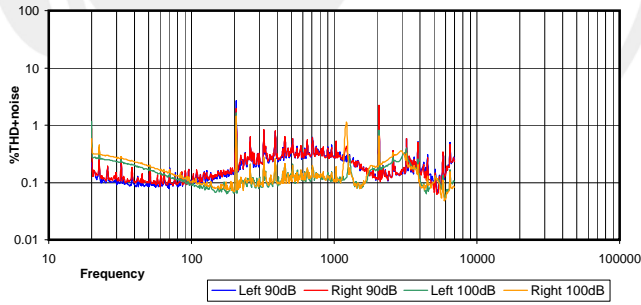
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



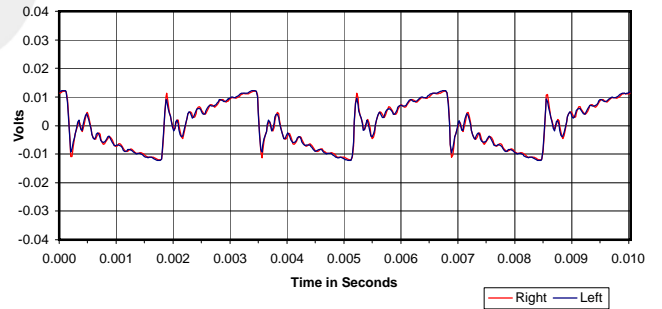
30 Hz Square Wave



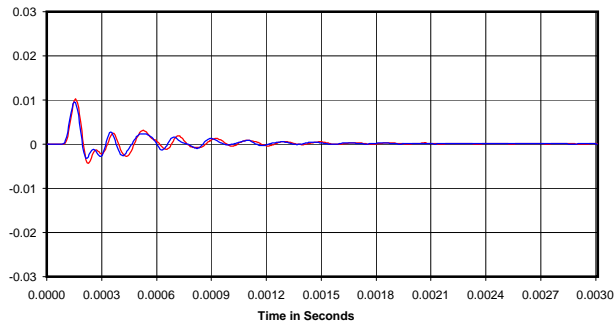
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

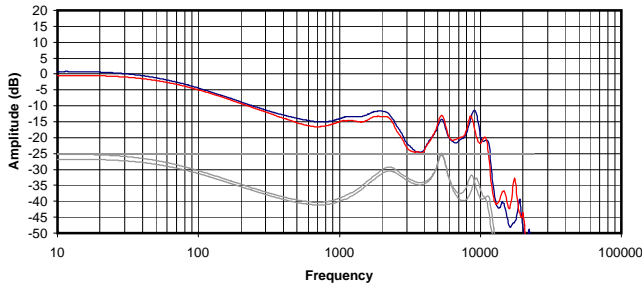


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

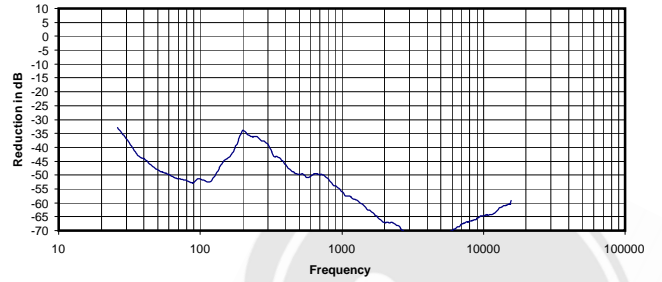
0.039 Vrms
33 Ohms
0.05 mW
-28 dB



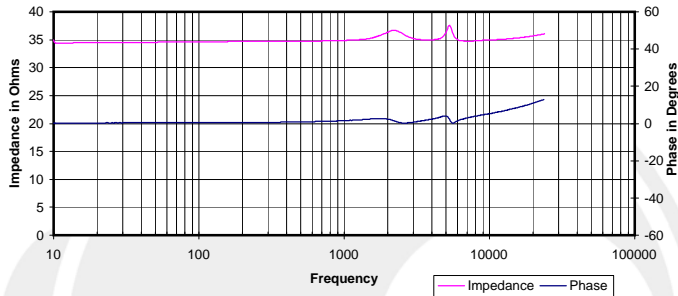
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



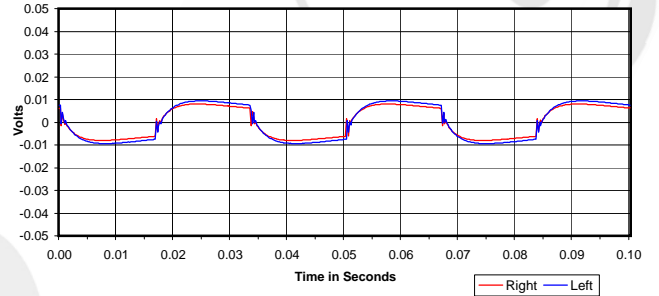
Isolation
Attenuation of External Sound vs. Frequency



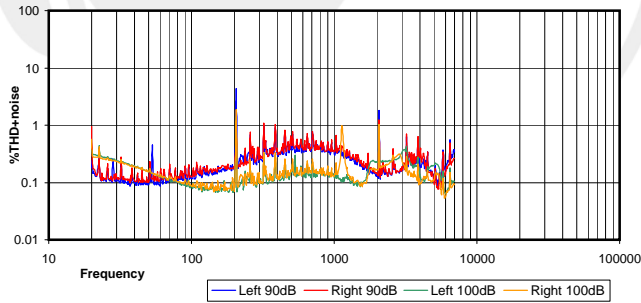
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



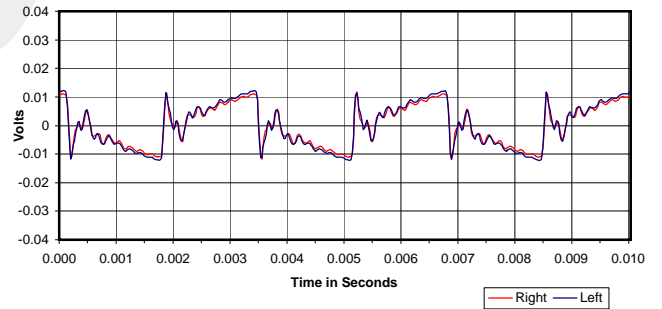
30 Hz Square Wave



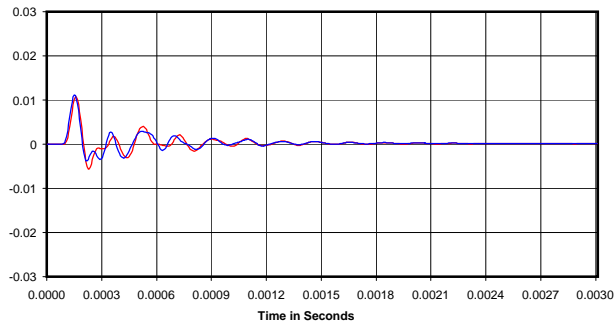
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

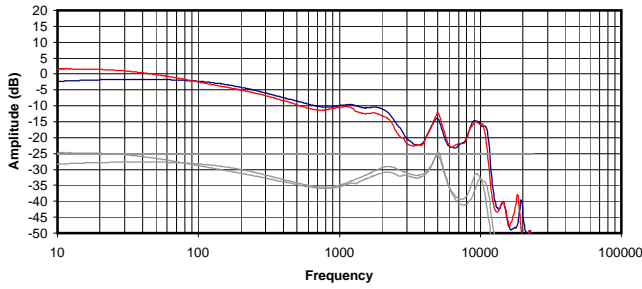


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

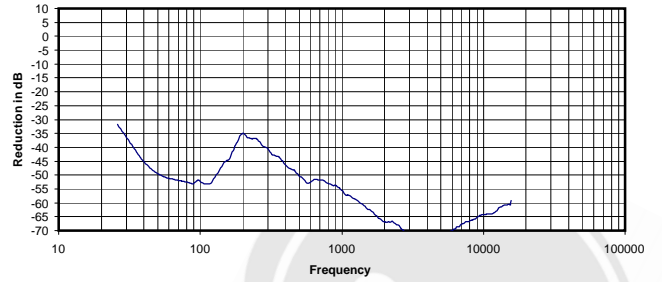
0.041 Vrms
35 Ohms
0.05 mW
-56 dB



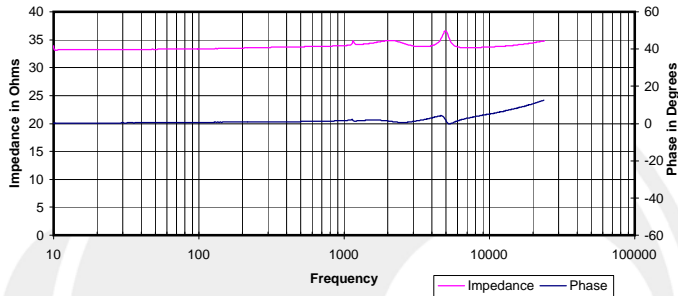
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



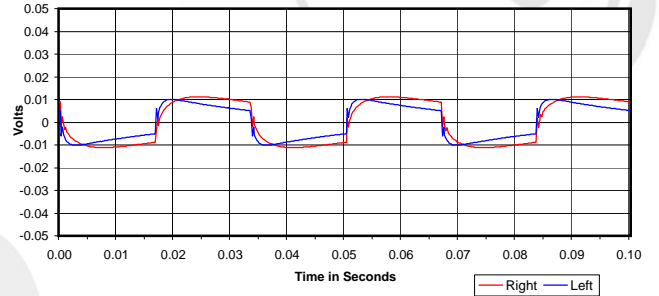
Isolation
Attenuation of External Sound vs. Frequency



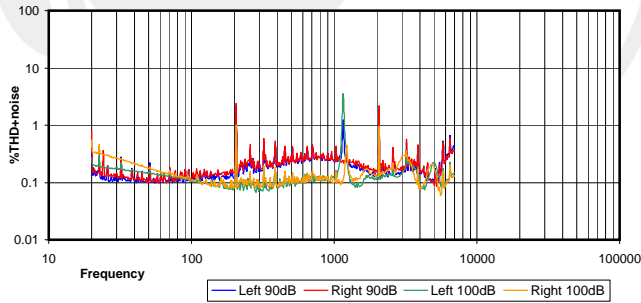
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



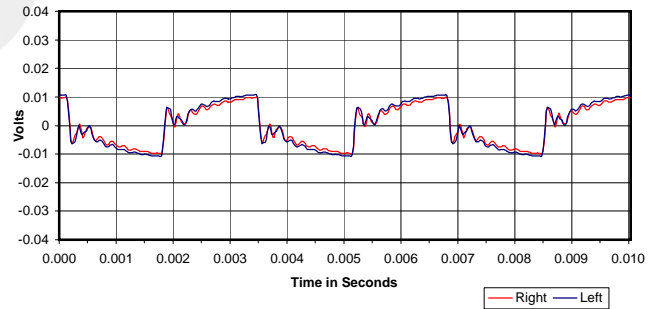
30 Hz Square Wave



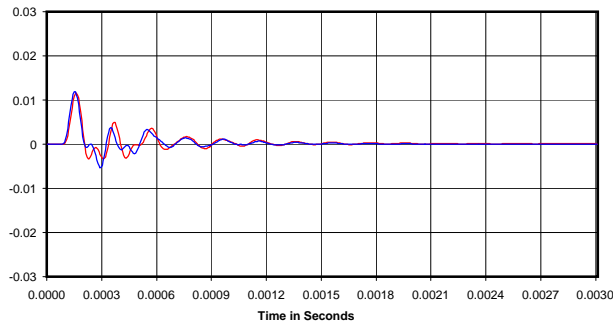
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

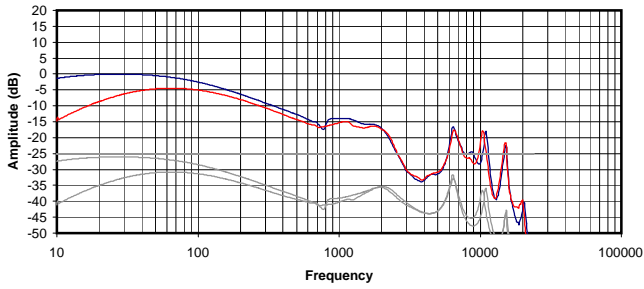


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

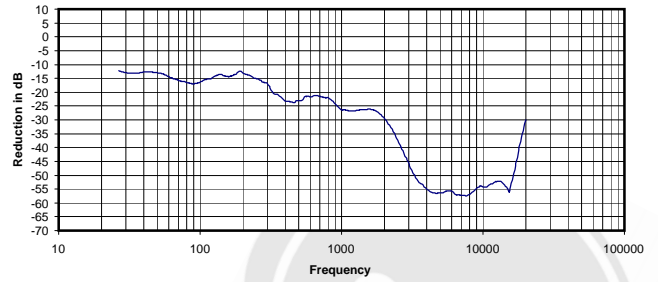
0.032 Vrms
34 Ohms
0.03 mW
-56 dB



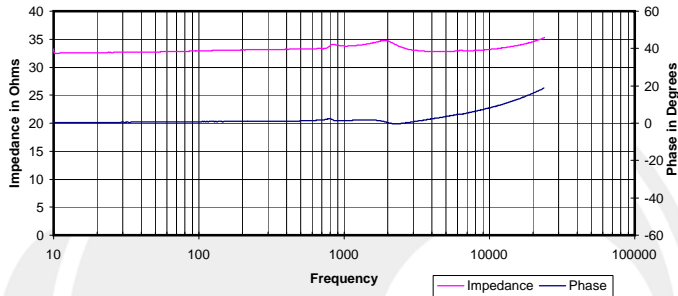
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



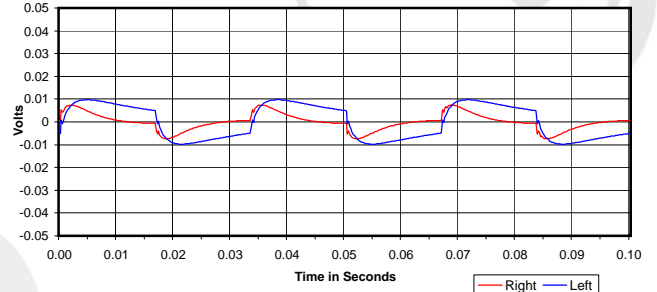
Isolation
Attenuation of External Sound vs. Frequency



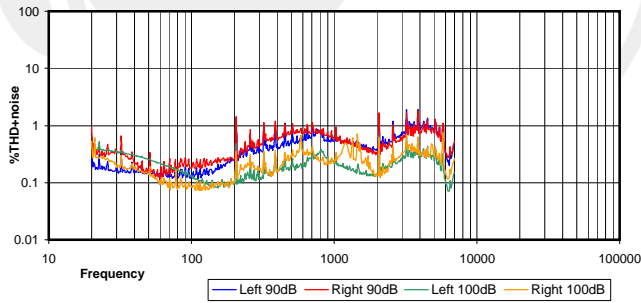
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



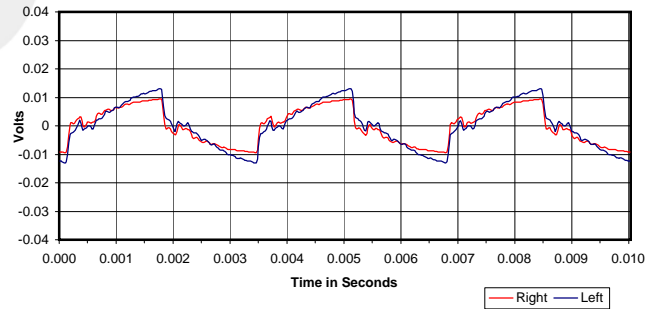
30 Hz Square Wave



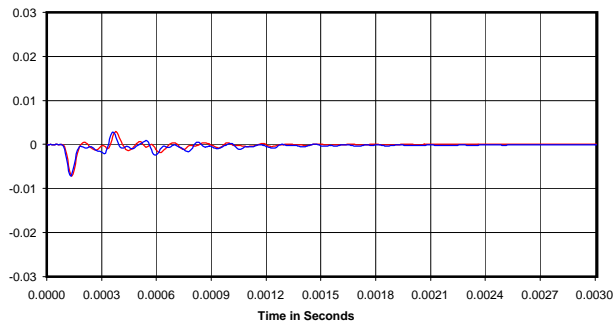
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

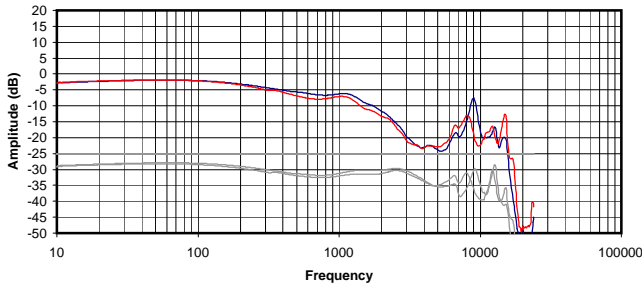


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

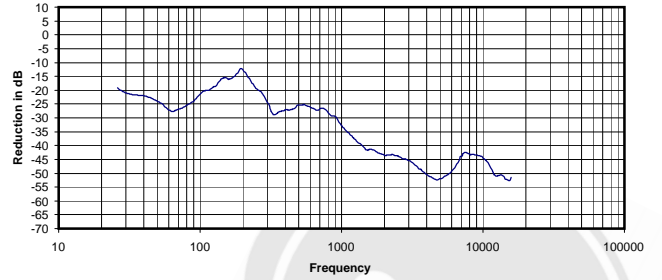
0.030 Vrms
34 Ohms
0.03 mW
-31 dB



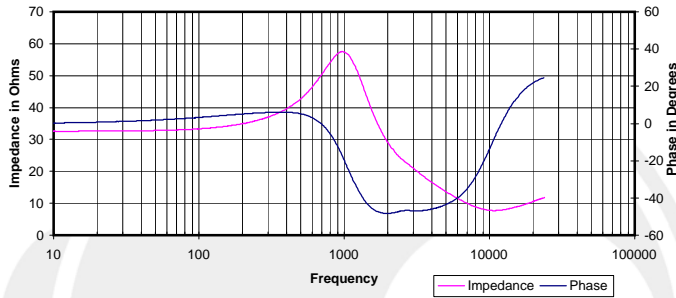
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



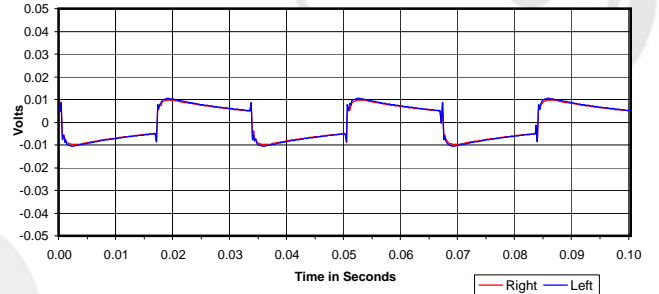
Isolation
Attenuation of External Sound vs. Frequency



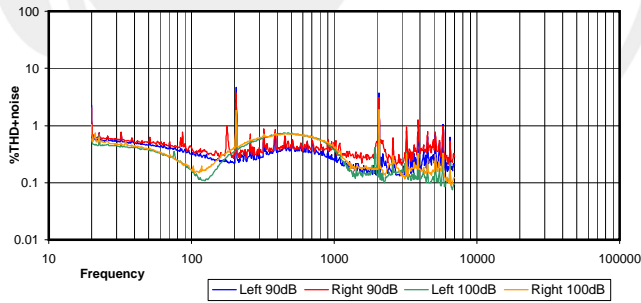
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



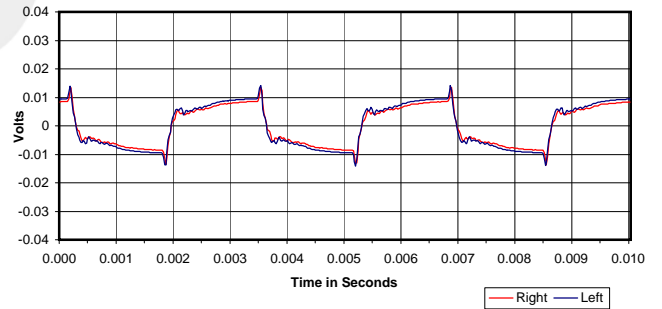
30 Hz Square Wave



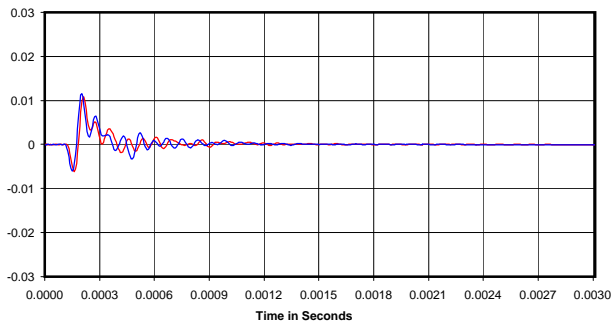
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

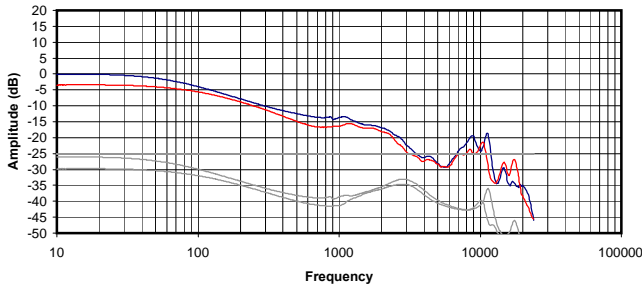


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

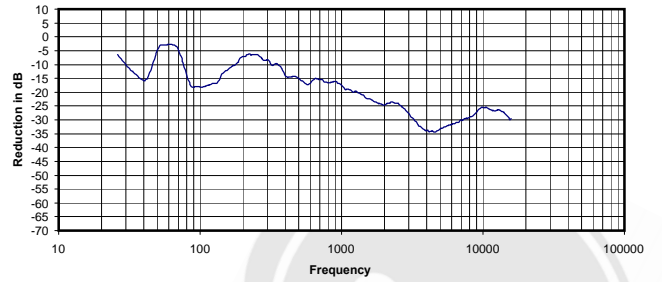
0.015 Vrms
57 Ohms
0.00 mW
-32 dB



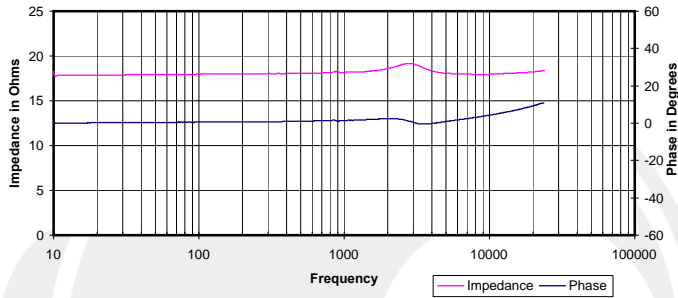
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



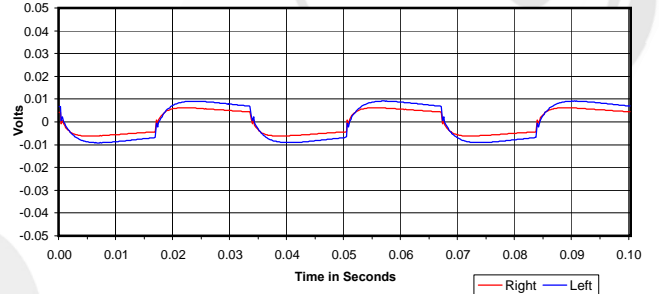
Isolation
Attenuation of External Sound vs. Frequency



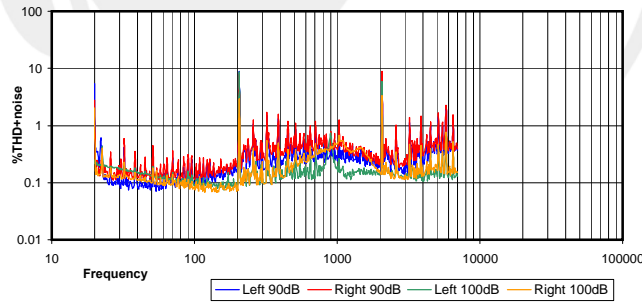
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



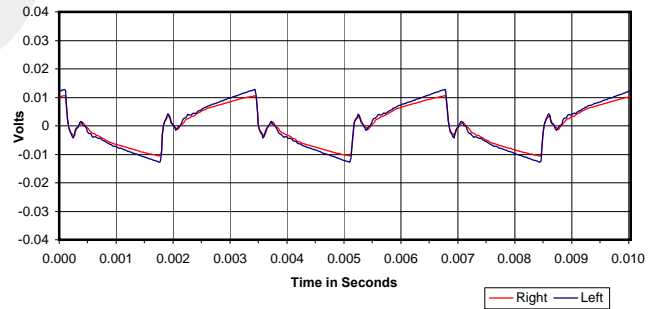
30 Hz Square Wave



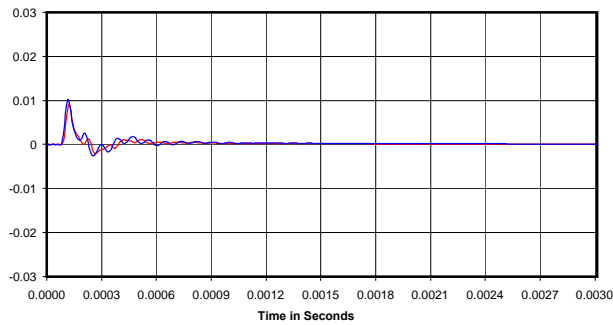
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



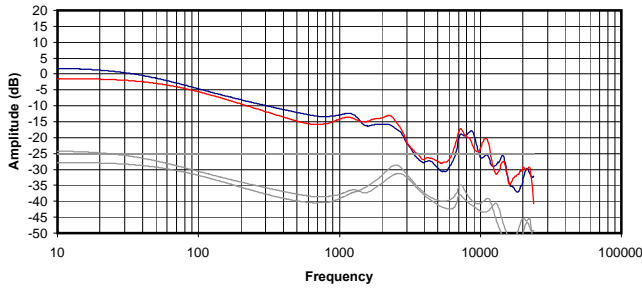
Impulse Response



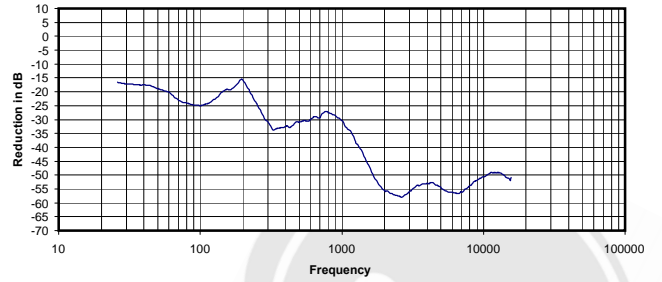
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
18 Ohms
0.04 mW
-19 dB

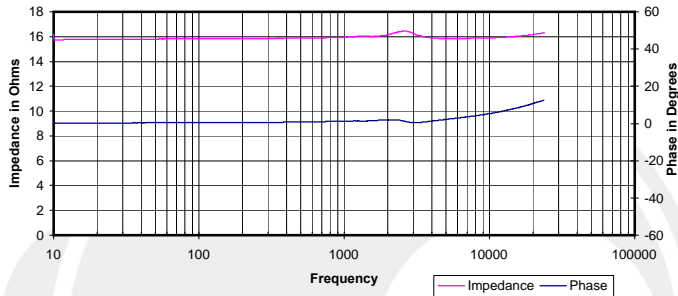
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



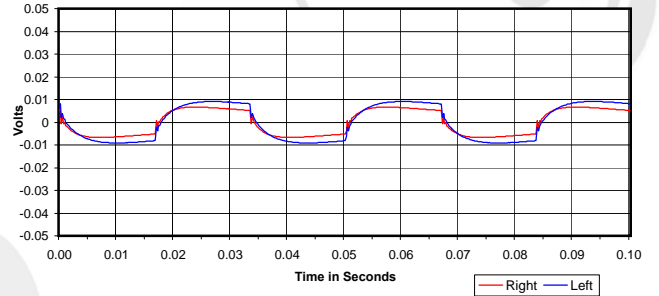
Isolation
Attenuation of External Sound vs. Frequency



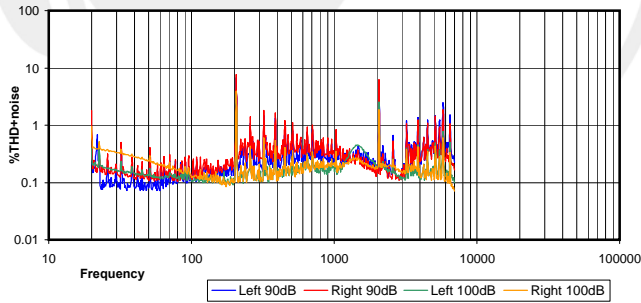
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



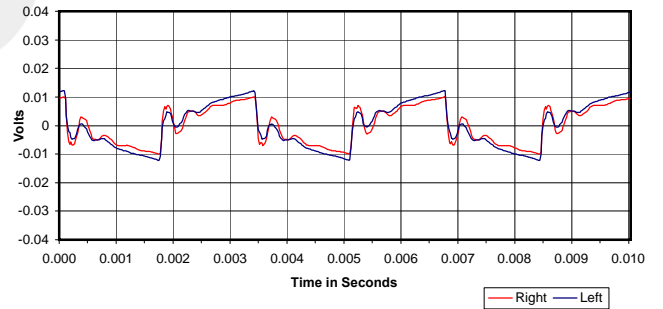
30 Hz Square Wave



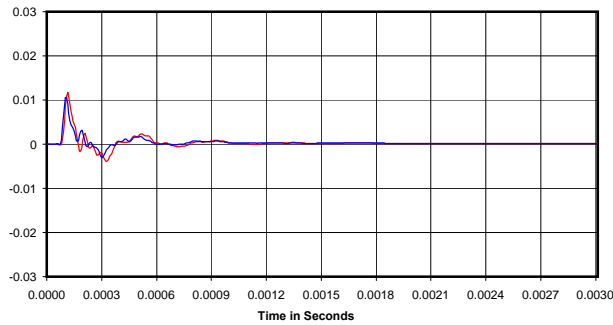
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

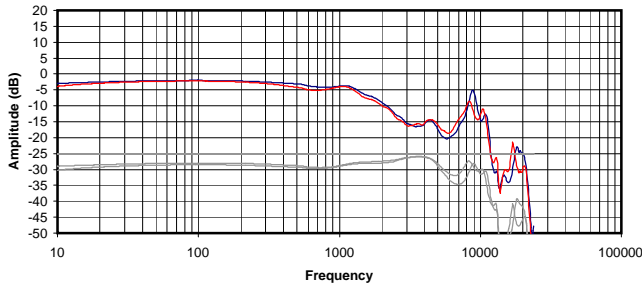


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

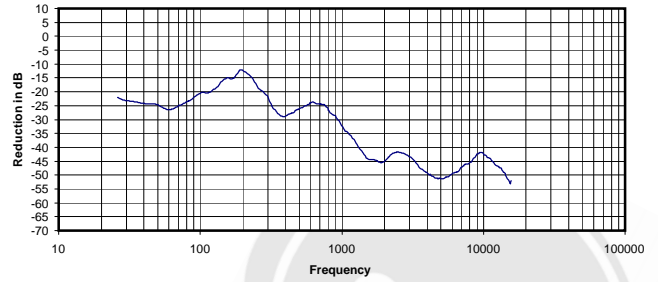
0.037 Vrms
16 Ohms
0.09 mW
-37 dB



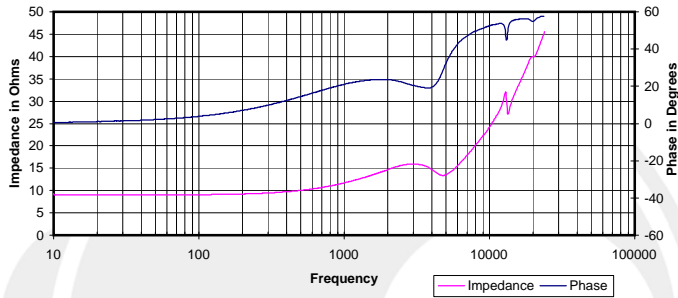
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



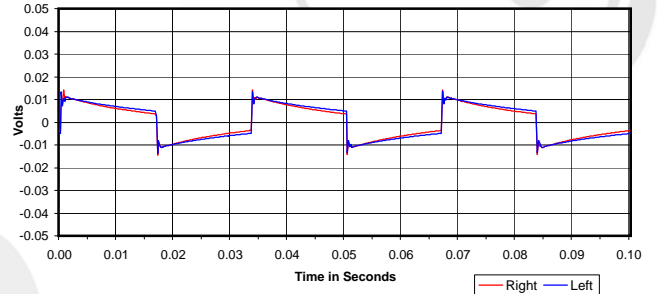
Isolation
Attenuation of External Sound vs. Frequency



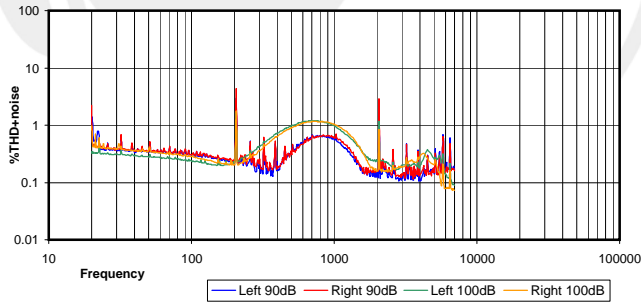
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



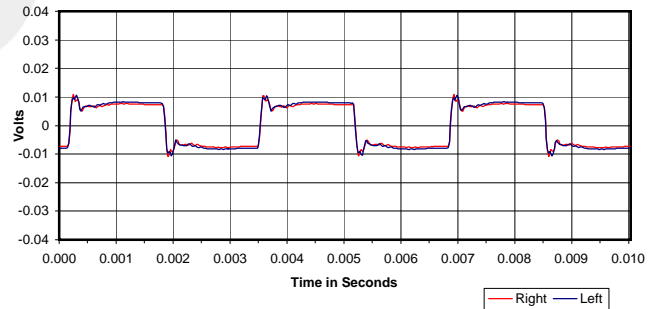
30 Hz Square Wave



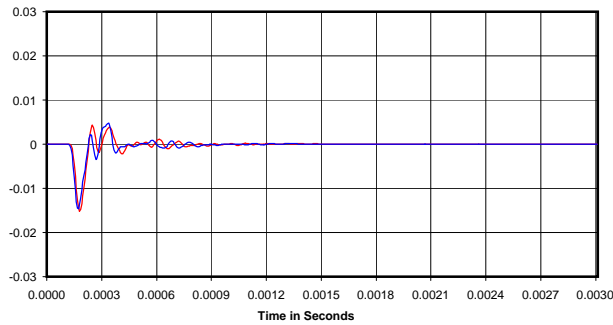
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

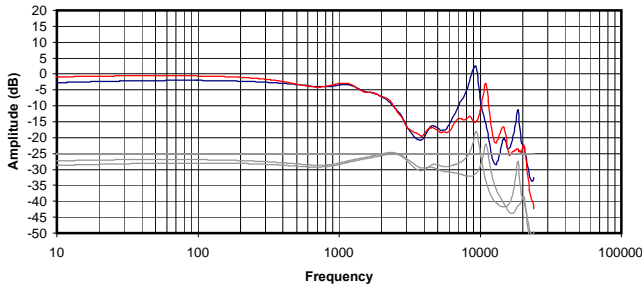


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

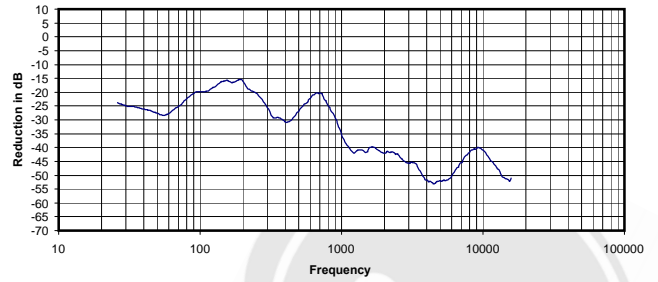
0.011 Vrms
12 Ohms
0.01 mW
-32 dB



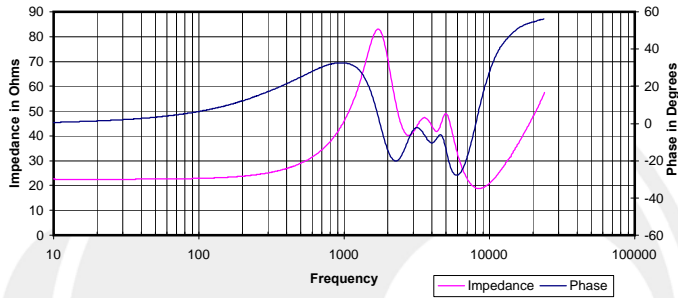
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



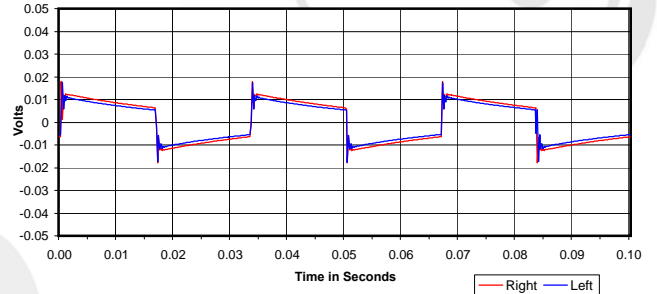
Isolation
Attenuation of External Sound vs. Frequency



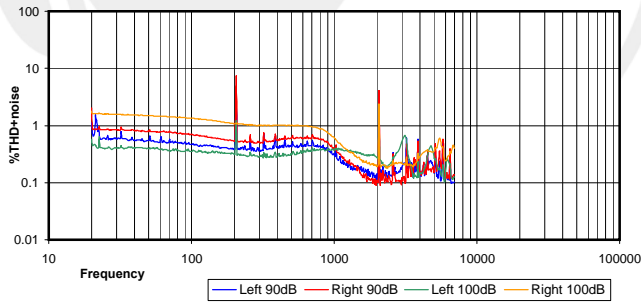
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



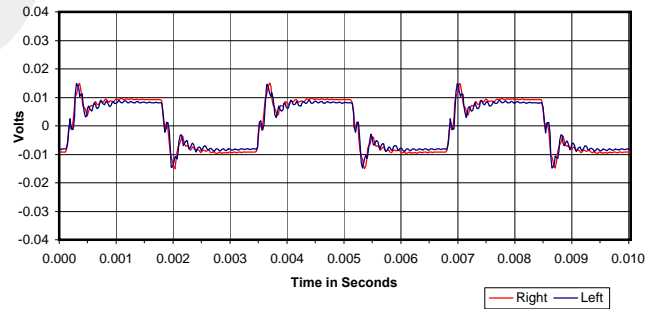
30 Hz Square Wave



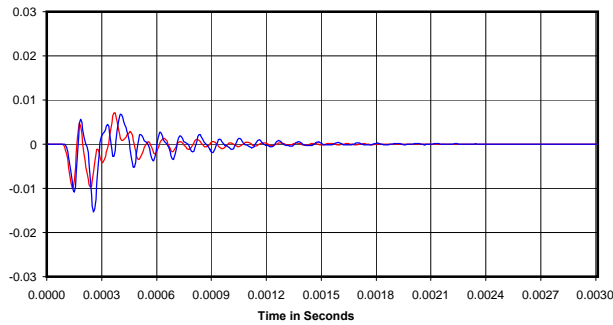
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

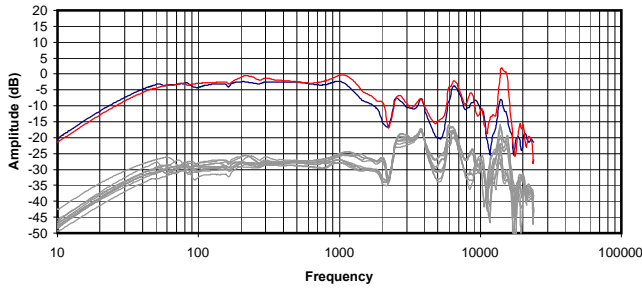


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

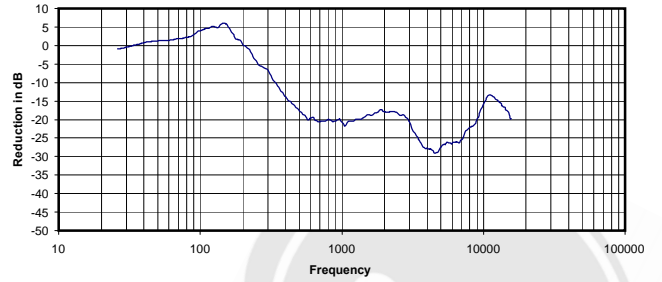
0.024 Vrms
46 Ohms
0.01 mW
-32 dB



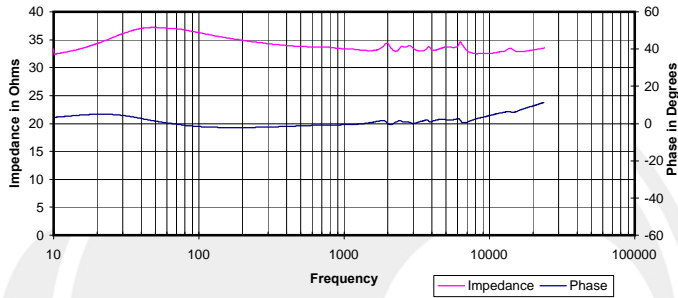
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



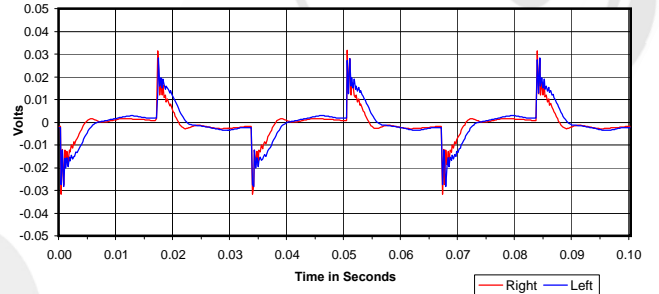
Isolation
 Attenuation of External Sound vs. Frequency



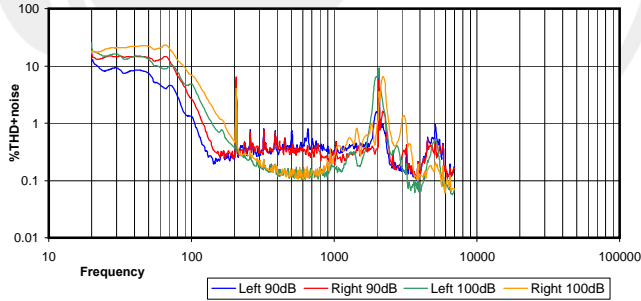
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



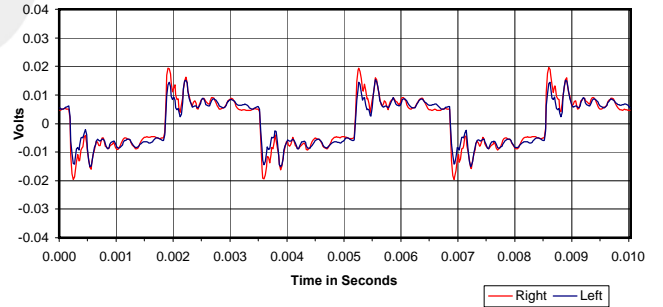
30 Hz Square Wave



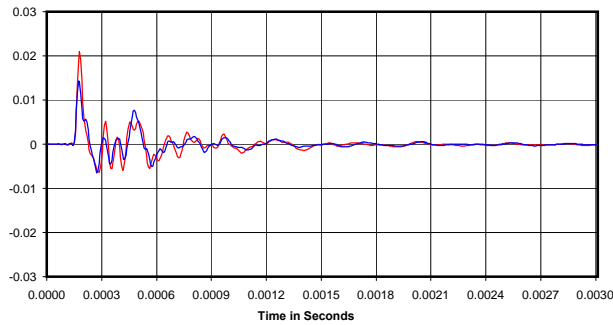
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

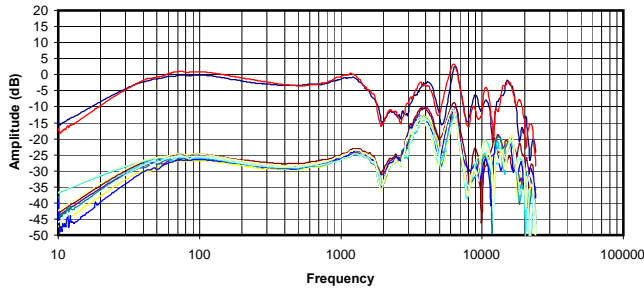


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

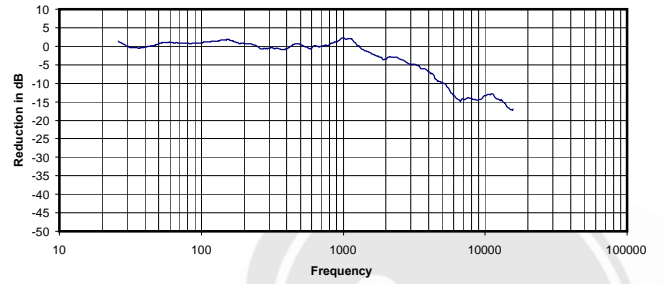
0.065 Vrms
 33 Ohms
 0.13 mW
 -14 dB



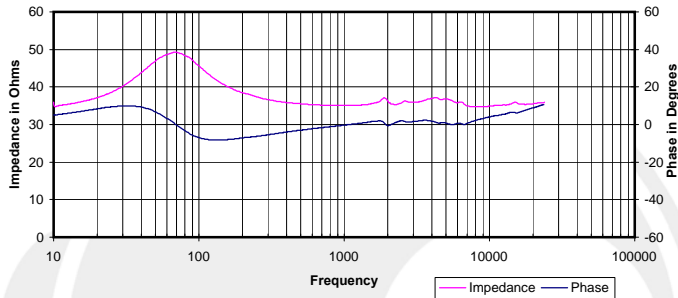
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



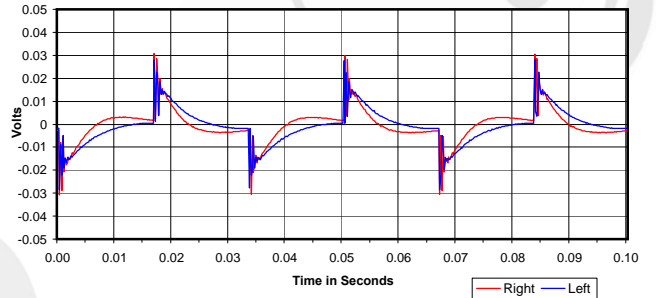
Isolation
 Attenuation of External Sound vs. Frequency



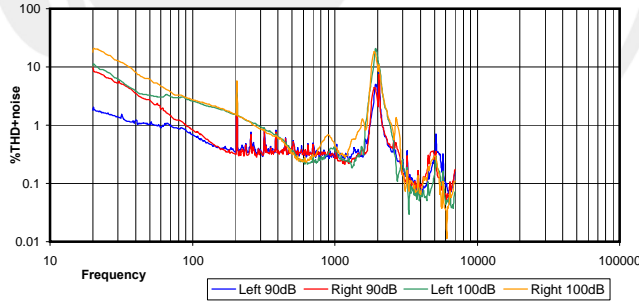
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



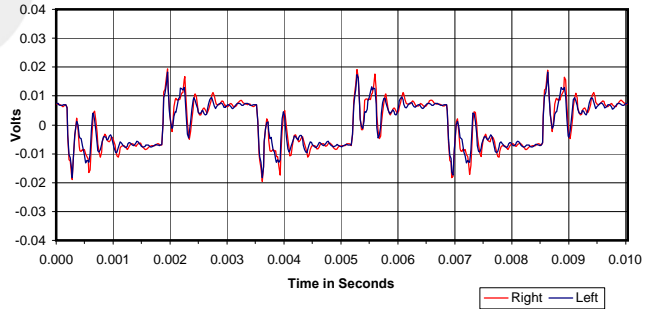
30 Hz Square Wave



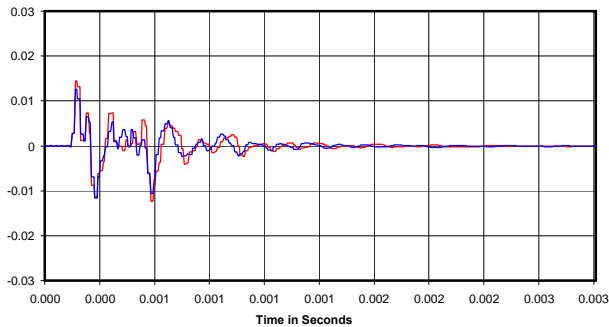
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

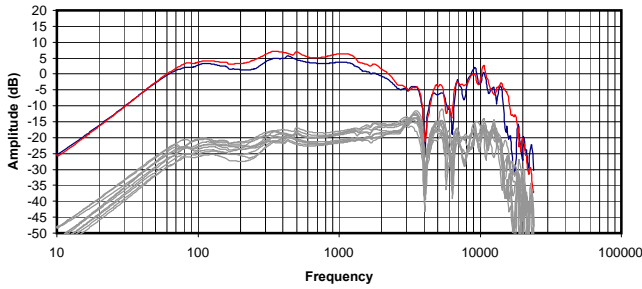


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

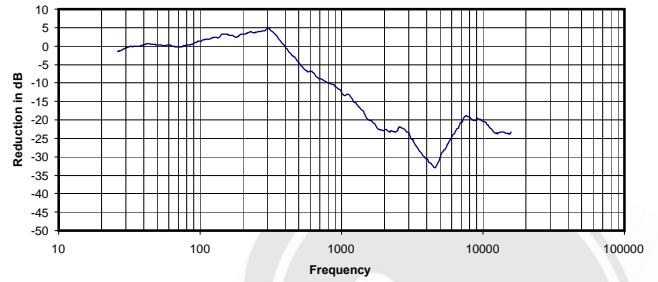
0.121 Vrms
 35 Ohms
 0.42 mW
 -2 dB



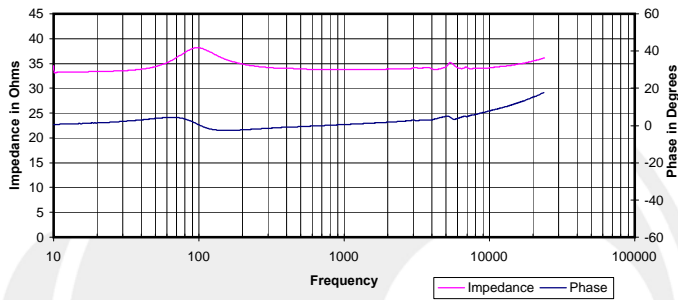
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



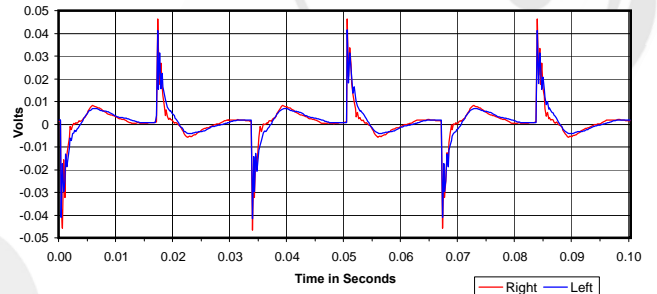
Isolation
Attenuation of External Sound vs. Frequency



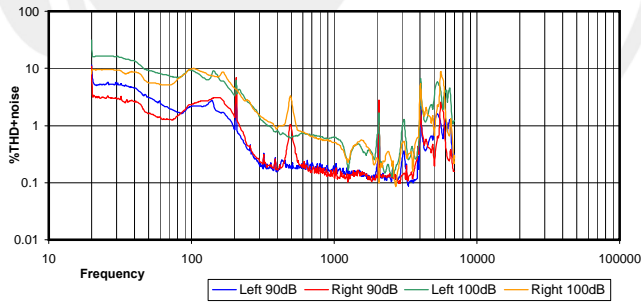
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



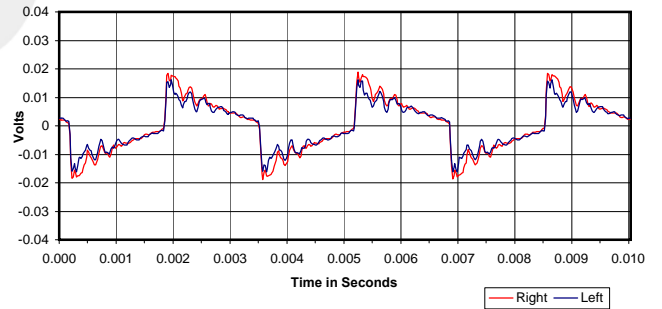
30 Hz Square Wave



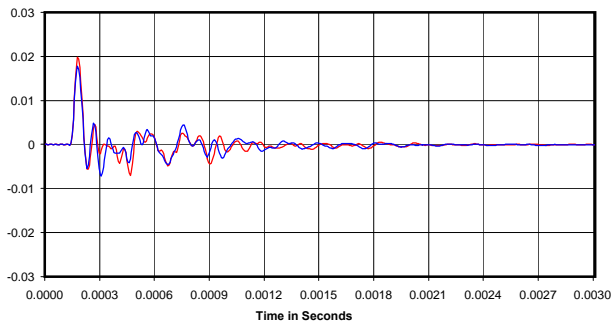
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

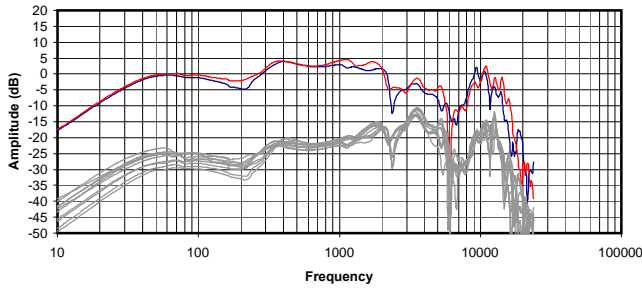


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

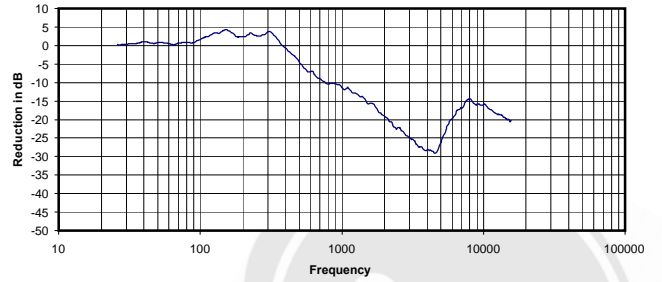
0.091 Vrms
34 Ohms
0.25 mW
-11 dB



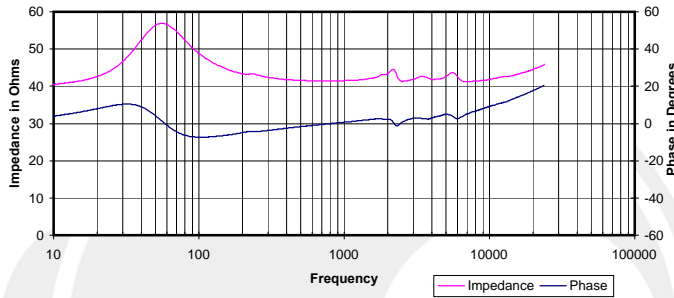
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



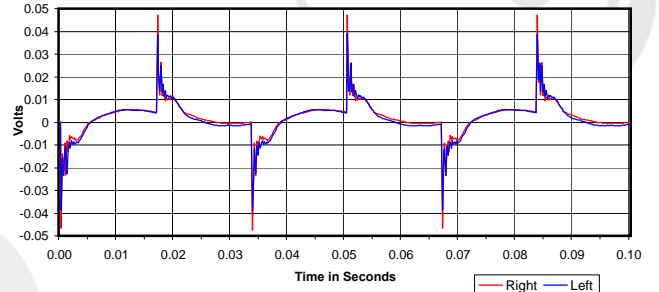
Isolation
 Attenuation of External Sound vs. Frequency



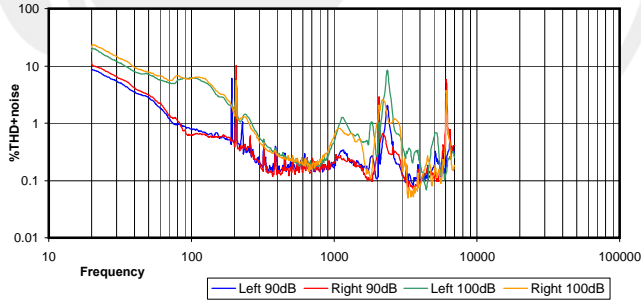
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



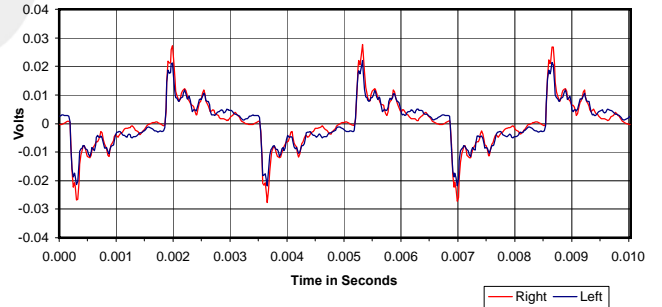
30 Hz Square Wave



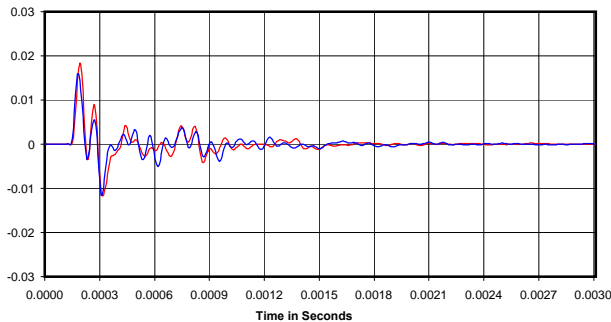
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

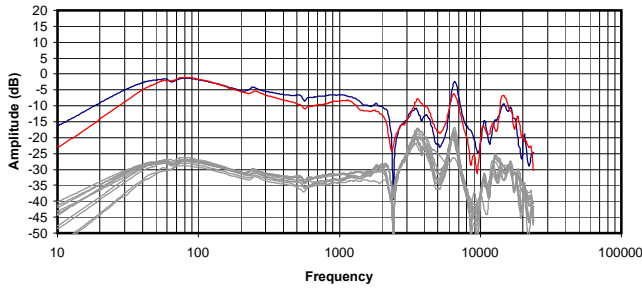


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

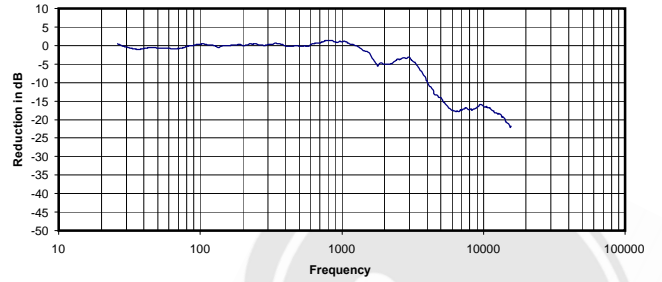
0.061 Vrms
 42 Ohms
 0.09 mW
 -10 dB



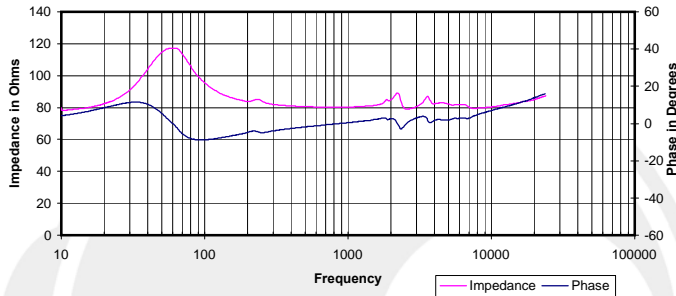
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



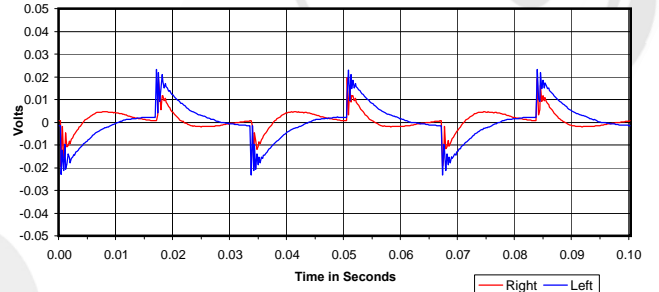
Isolation
 Attenuation of External Sound vs. Frequency



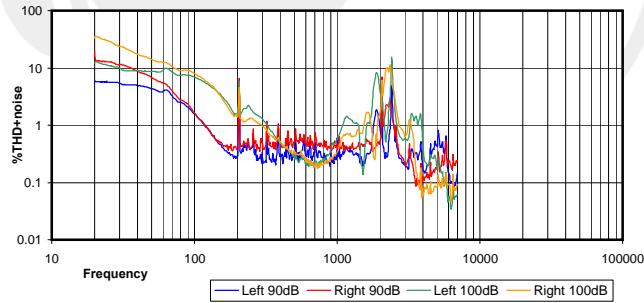
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



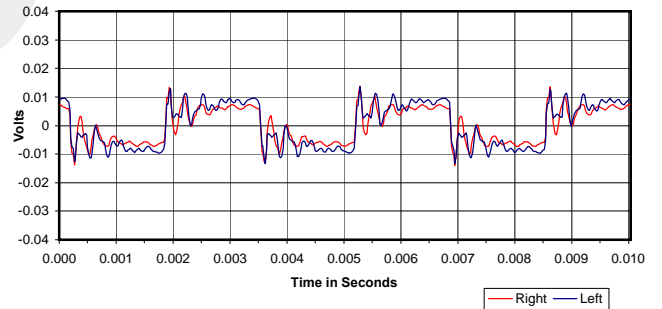
30 Hz Square Wave



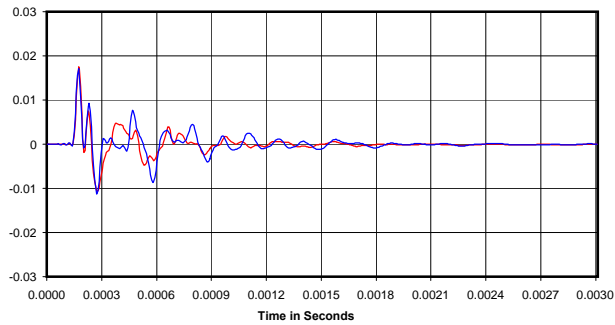
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

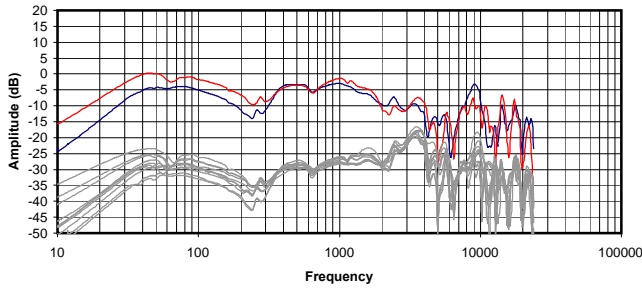


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

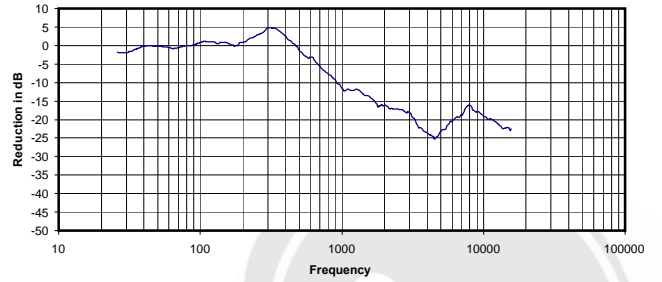
0.162 Vrms
 80 Ohms
 0.33 mW
 -2 dB



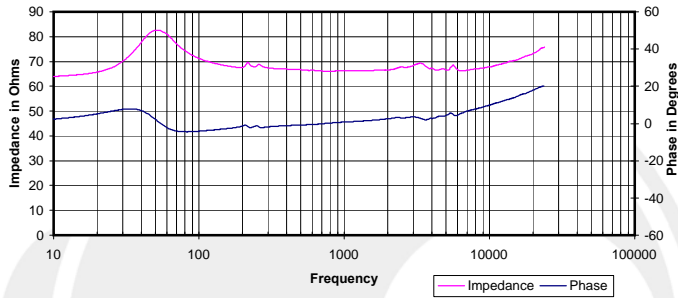
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



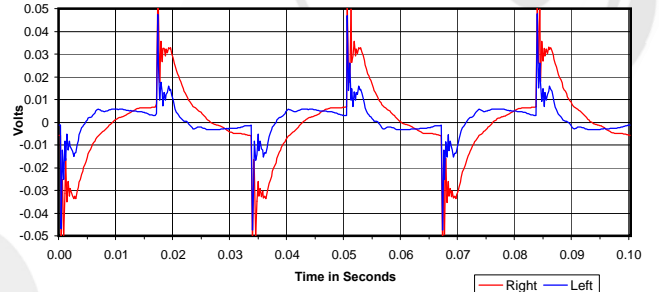
Isolation
 Attenuation of External Sound vs. Frequency



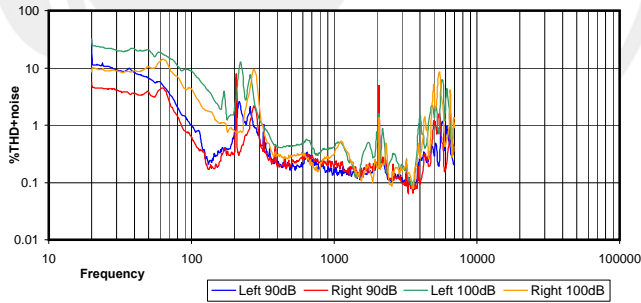
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



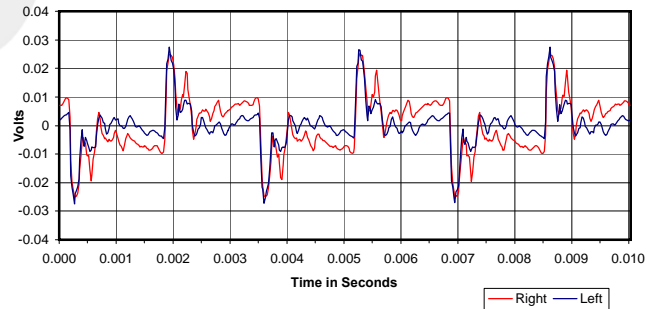
30 Hz Square Wave



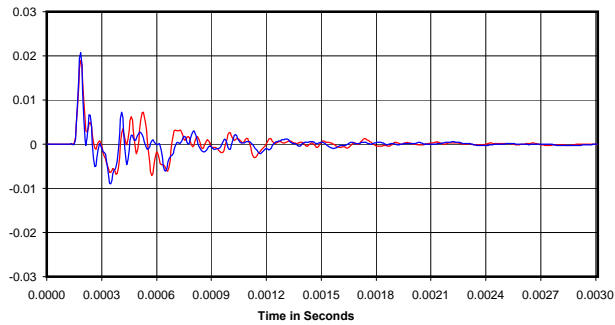
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

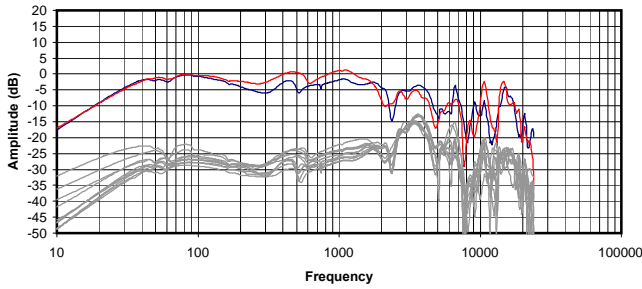


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

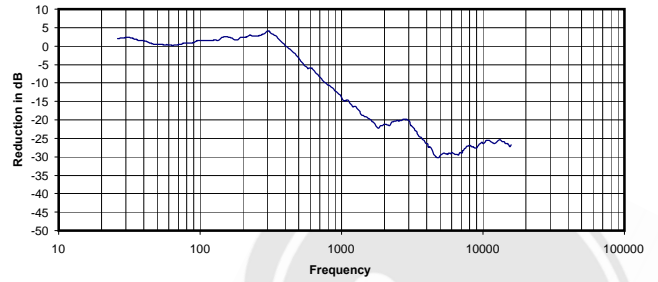
0.083 Vrms
 66 Ohms
 0.10 mW
 -8 dBr



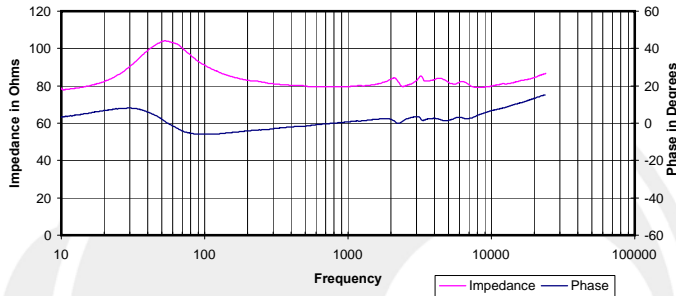
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



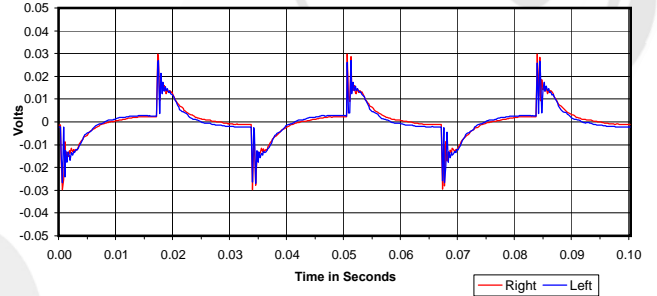
Isolation
 Attenuation of External Sound vs. Frequency



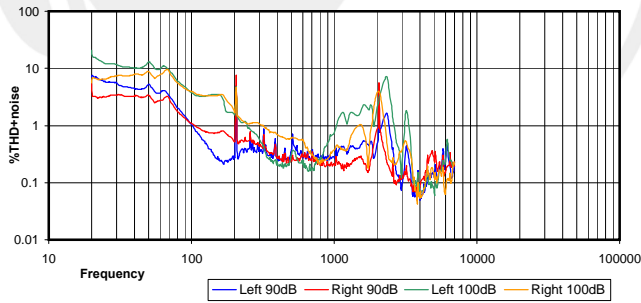
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



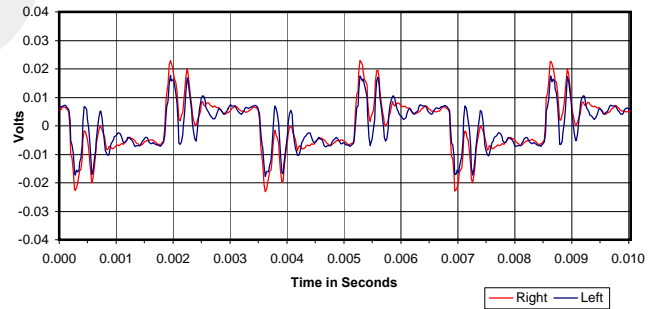
30 Hz Square Wave



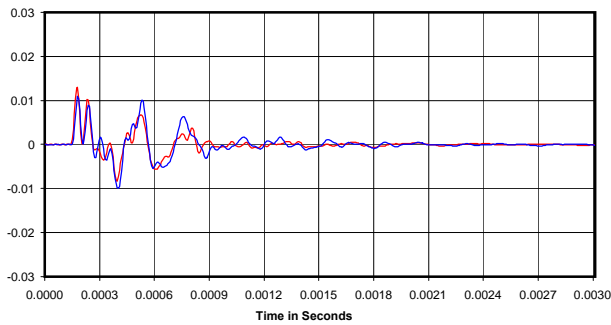
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

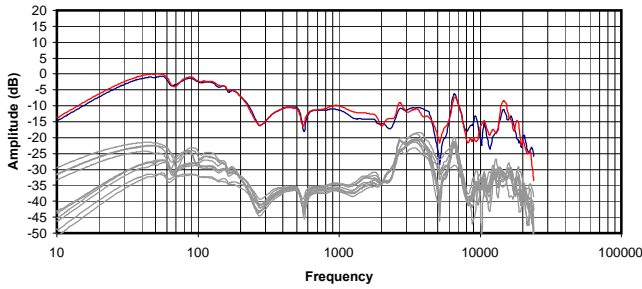


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

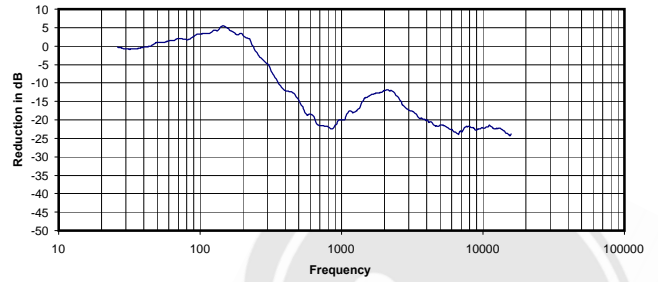
0.129 Vrms
 80 Ohms
 0.21 mW
 -10 dB



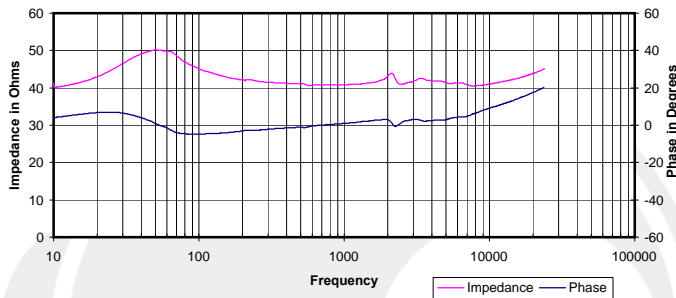
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



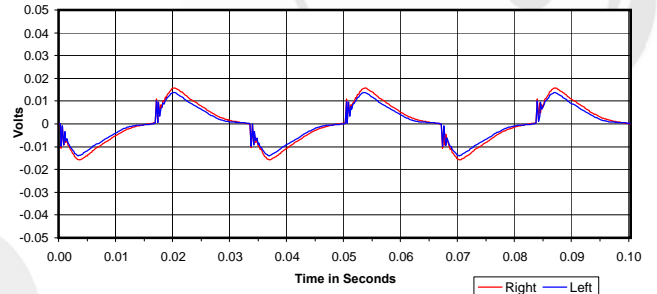
Isolation
 Attenuation of External Sound vs. Frequency



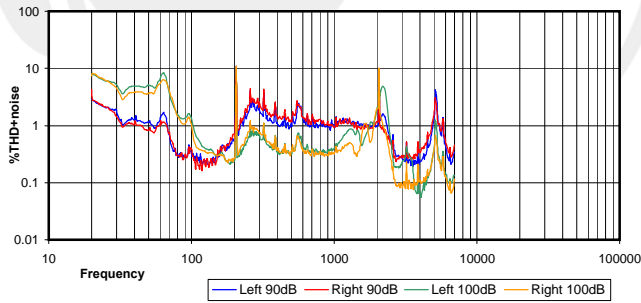
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



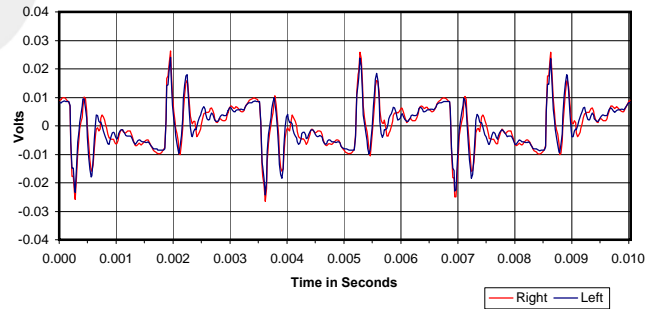
30 Hz Square Wave



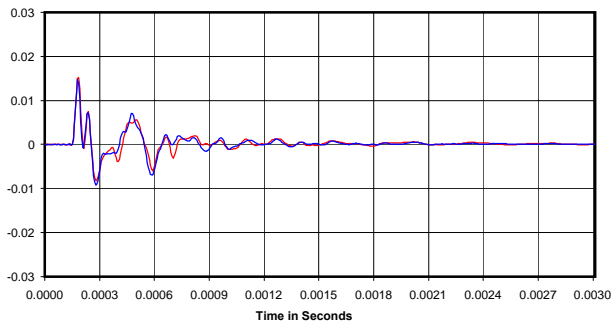
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

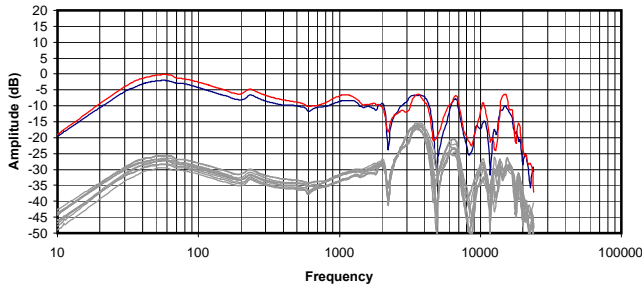


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

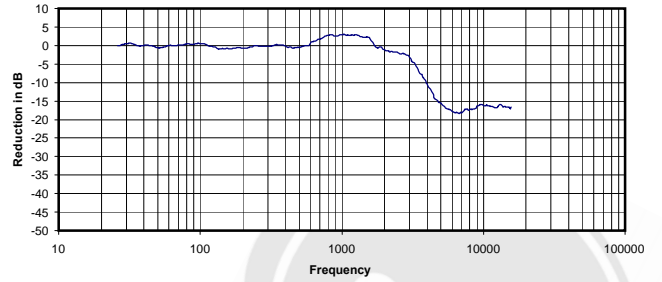
0.175 Vrms
 41 Ohms
 0.75 mW
 -11 dB



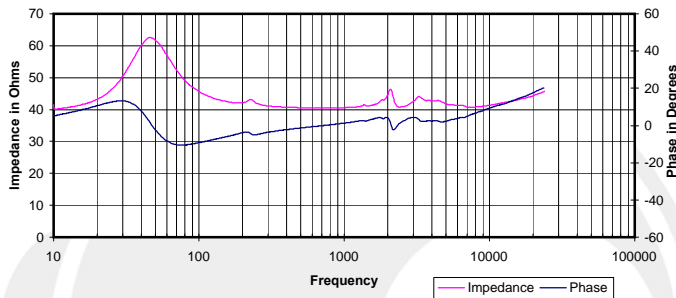
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



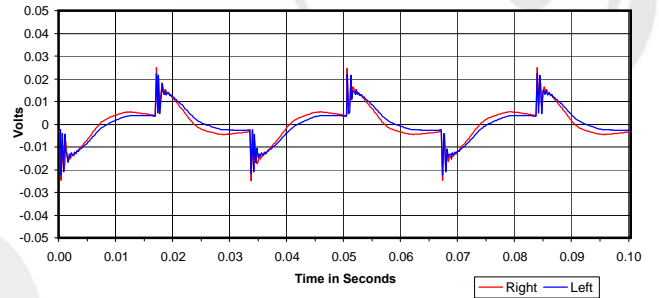
Isolation
 Attenuation of External Sound vs. Frequency



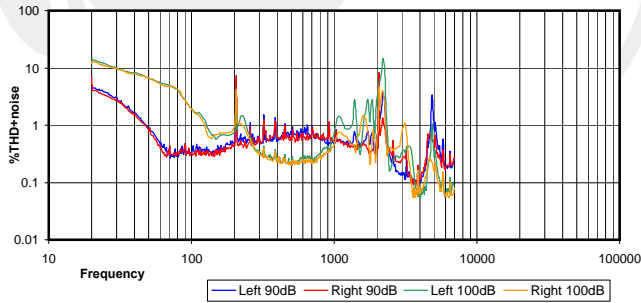
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



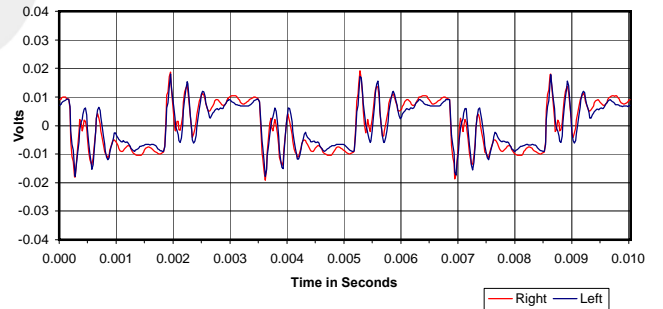
30 Hz Square Wave



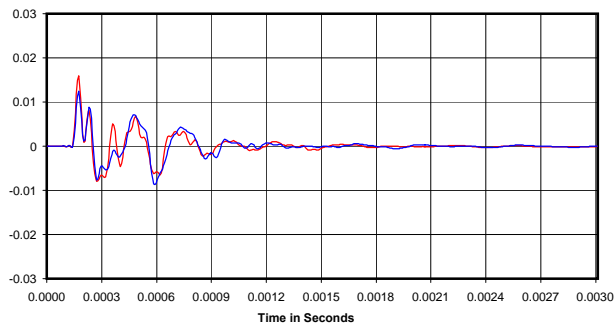
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

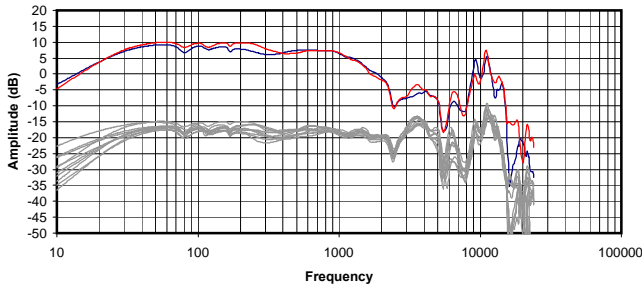


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

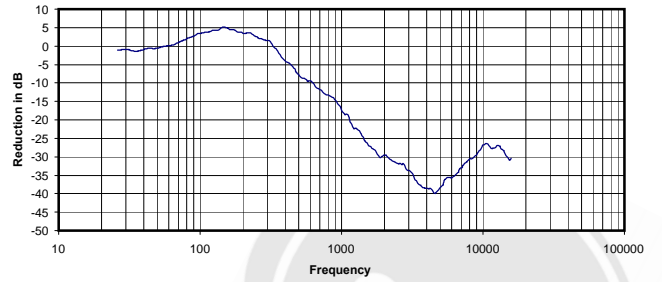
0.131 Vrms
 41 Ohms
 0.42 mW
 -2 dB



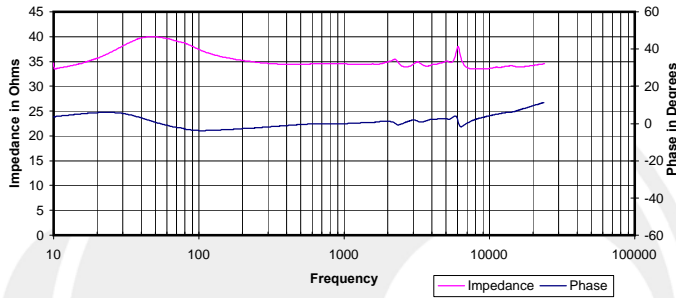
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



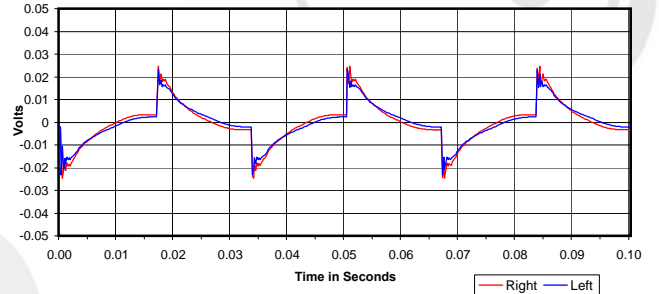
Isolation
 Attenuation of External Sound vs. Frequency



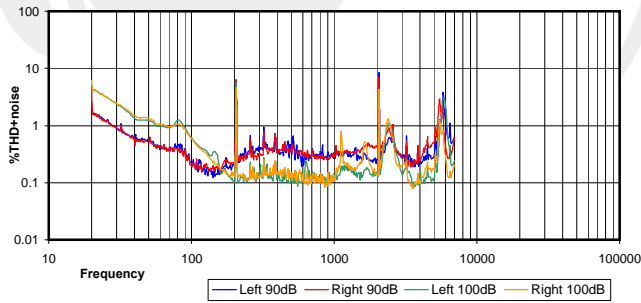
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



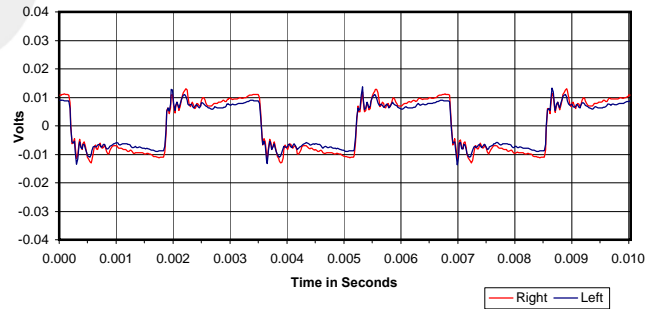
30 Hz Square Wave



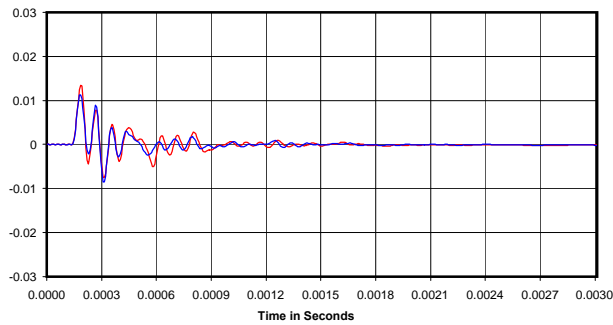
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

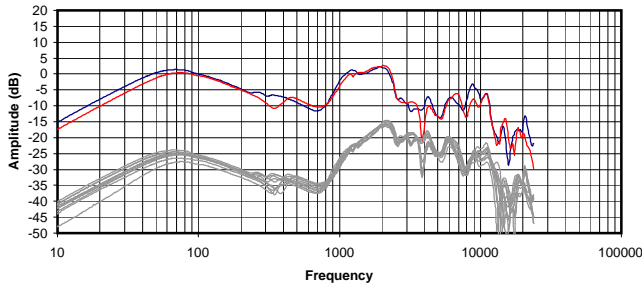


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

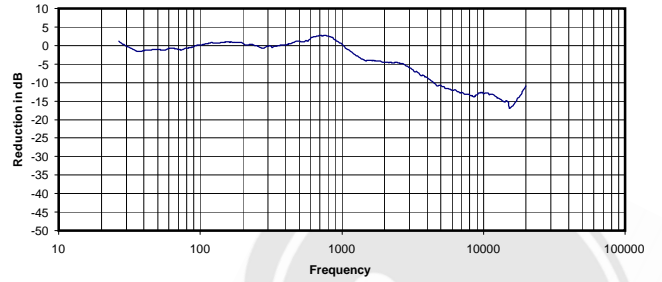
0.033 Vrms
 35 Ohms
 0.03 mW
 -15 dB



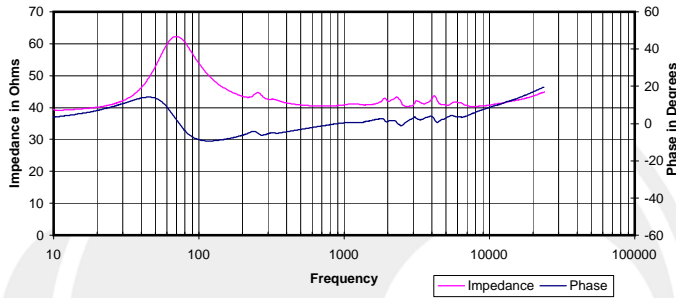
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



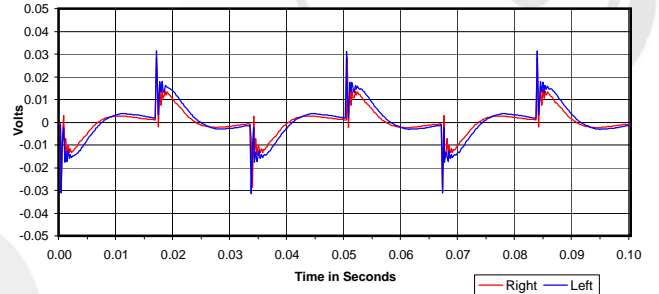
Isolation
Attenuation of External Sound vs. Frequency



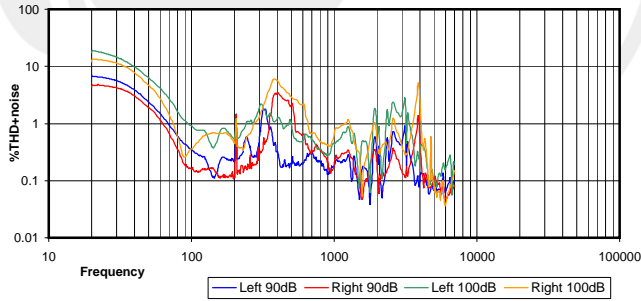
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



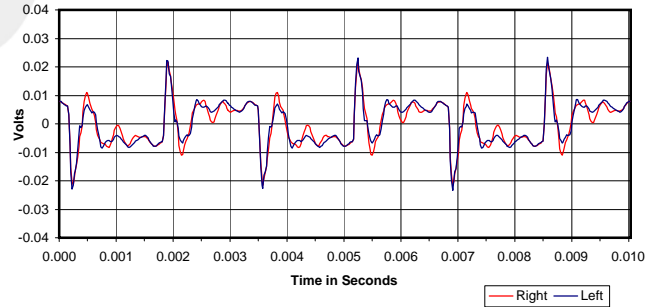
30 Hz Square Wave



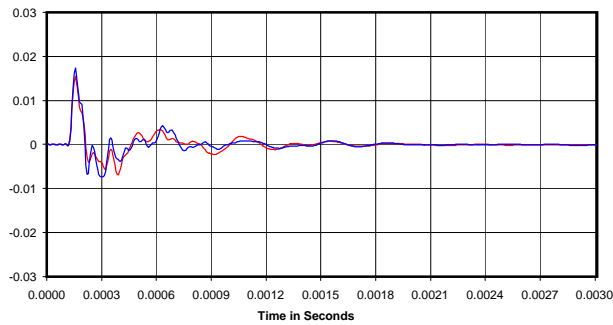
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

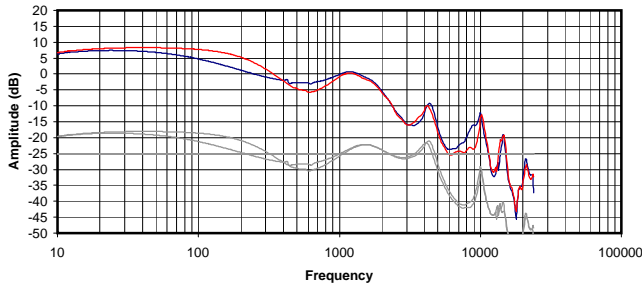


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

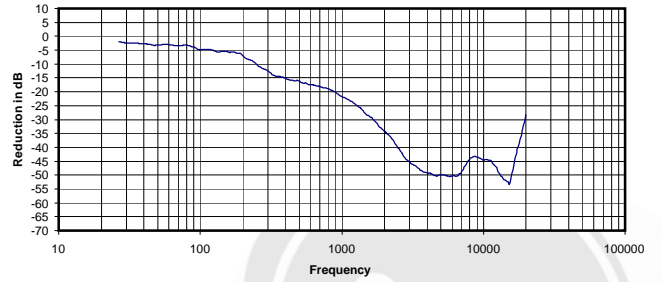
0.094 Vrms
41 Ohms
0.22 mW
-3 dB



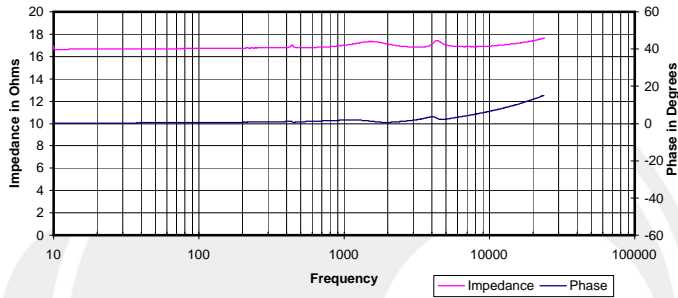
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



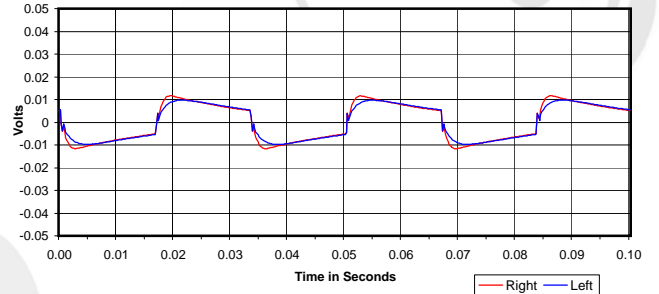
Isolation
Attenuation of External Sound vs. Frequency



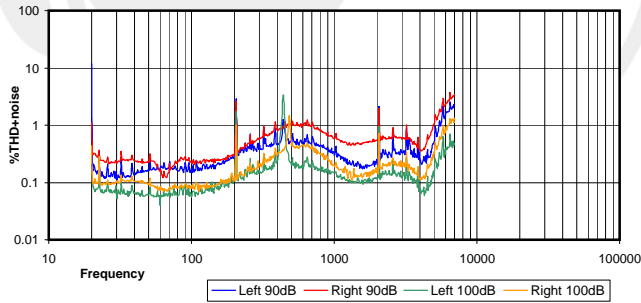
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



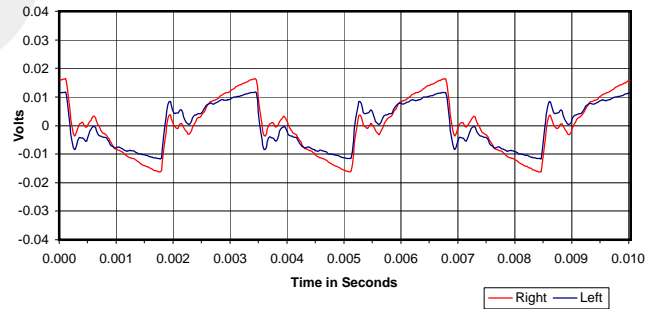
30 Hz Square Wave



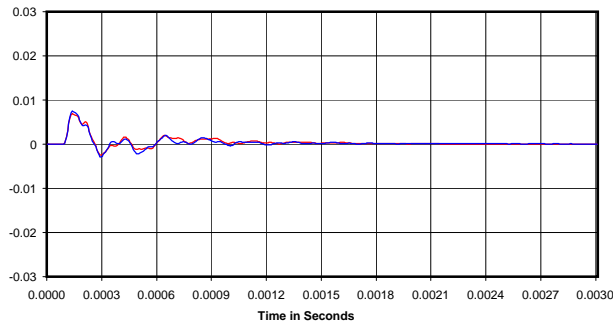
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

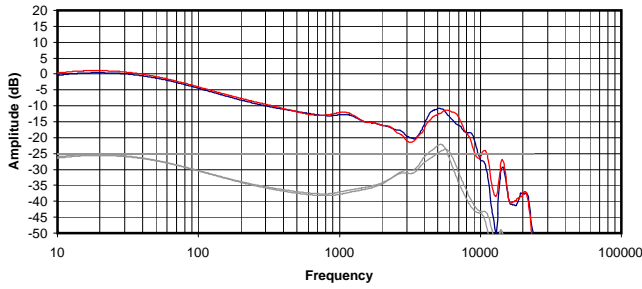


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

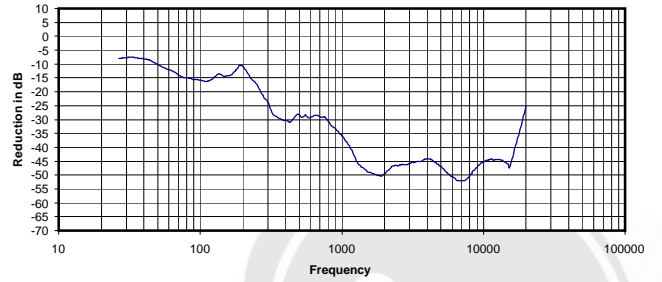
0.009 Vrms
17 Ohms
0.01 mW
-26 dB



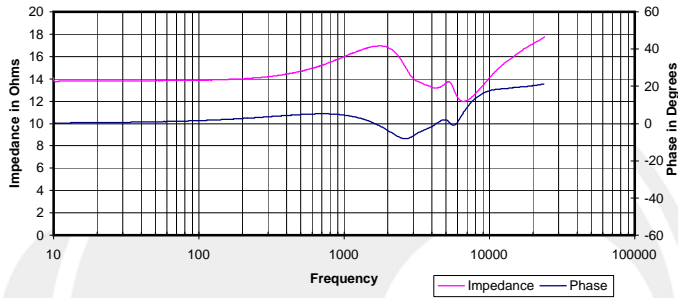
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



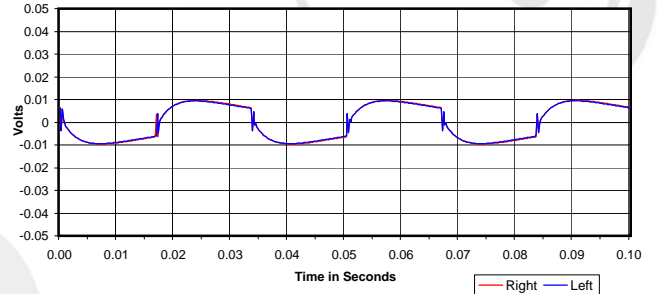
Isolation
Attenuation of External Sound vs. Frequency



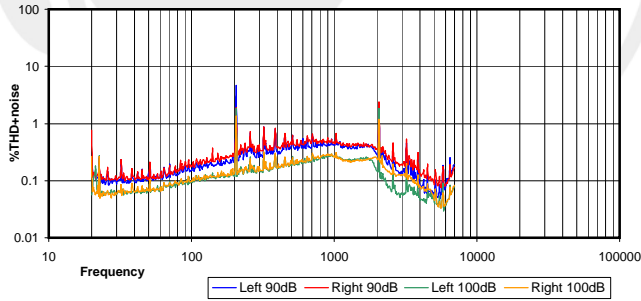
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



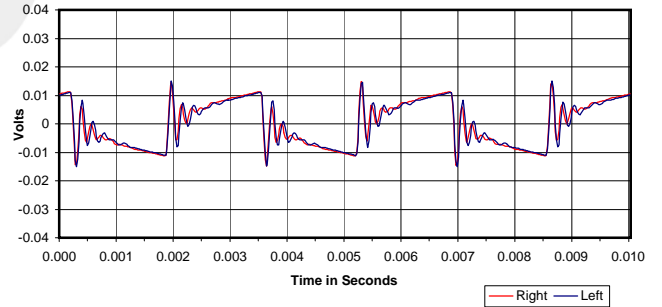
30 Hz Square Wave



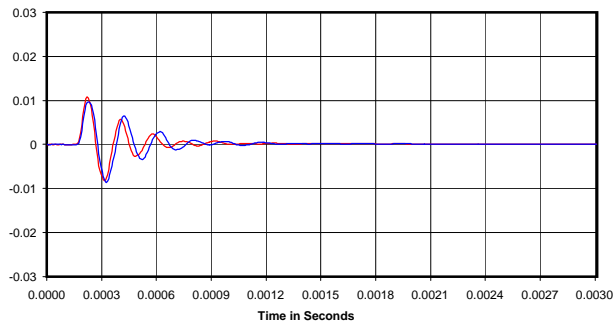
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

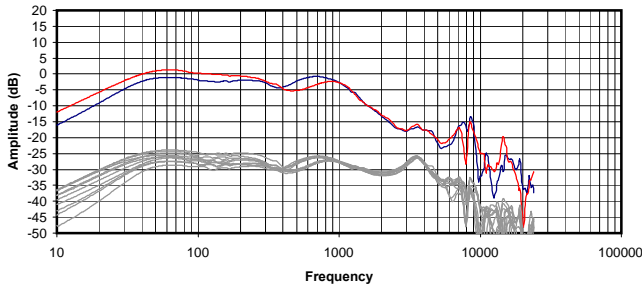


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

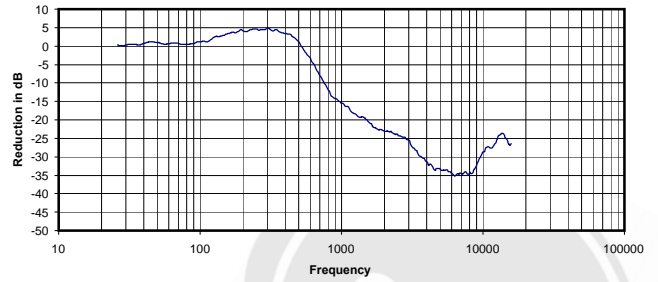
0.029 Vrms
16 Ohms
0.05 mW
-35 dB



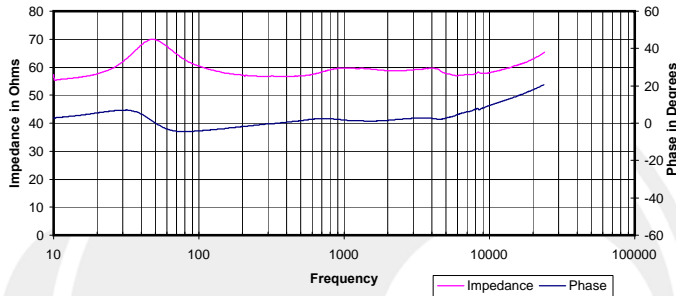
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



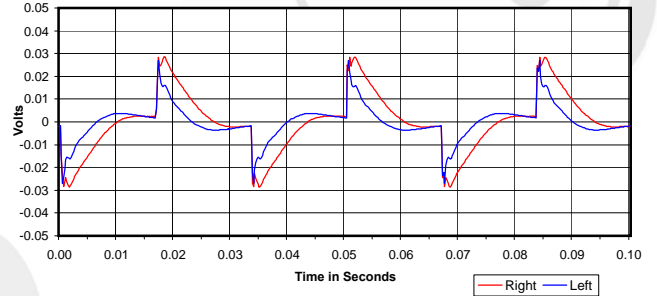
Isolation
 Attenuation of External Sound vs. Frequency



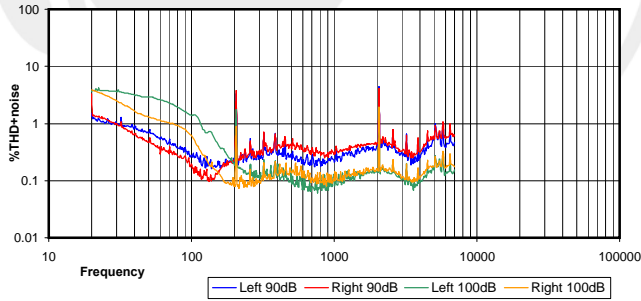
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



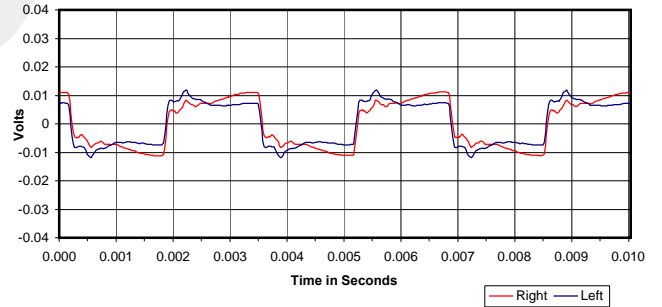
30 Hz Square Wave



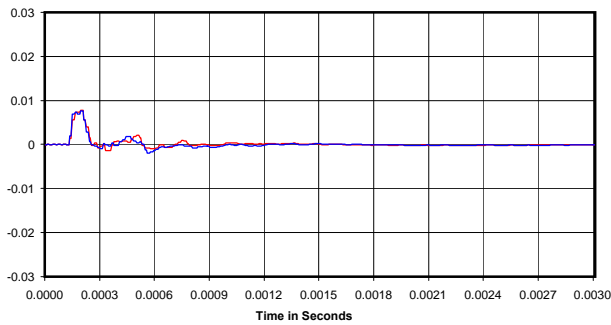
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



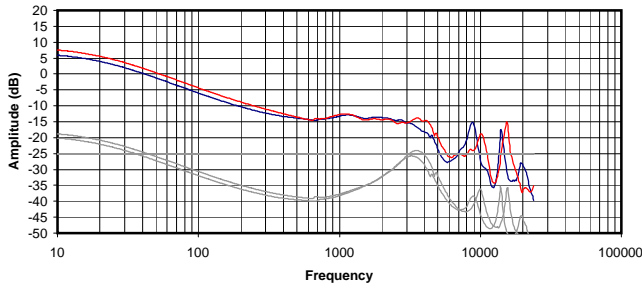
Impulse Response



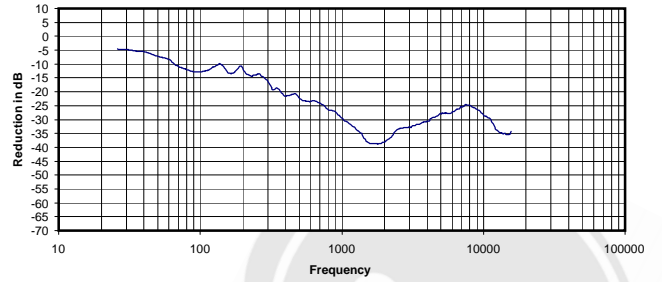
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.023 Vrms
 60 Ohms
 0.01 mW
 -11 dB

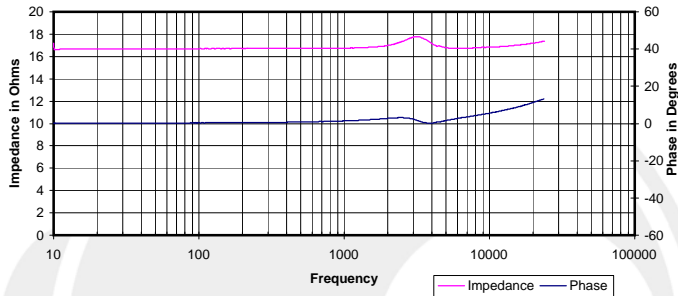
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



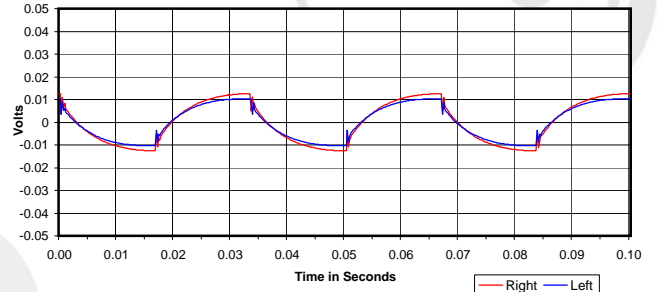
Isolation
Attenuation of External Sound vs. Frequency



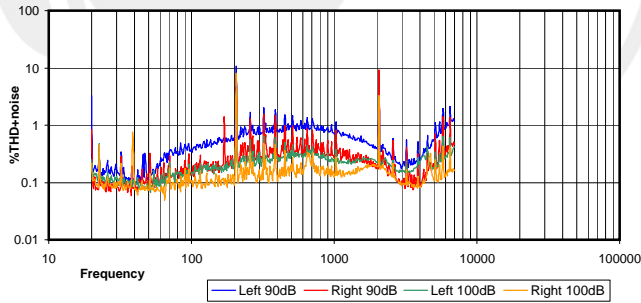
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



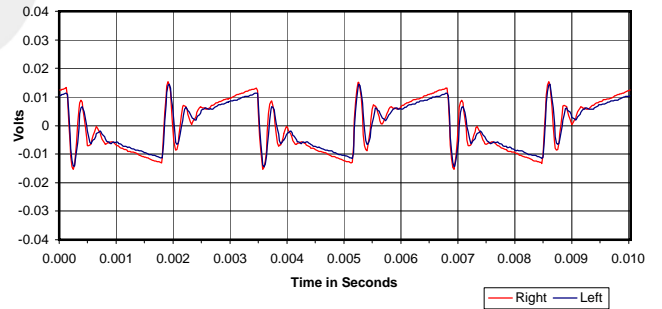
30 Hz Square Wave



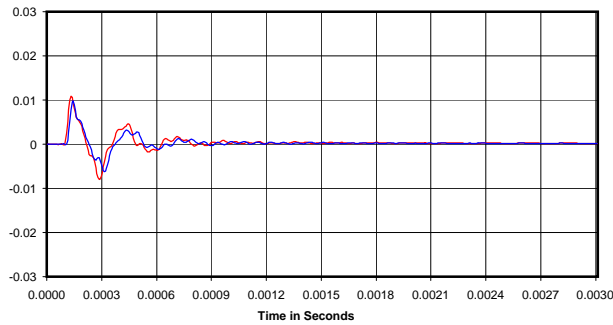
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



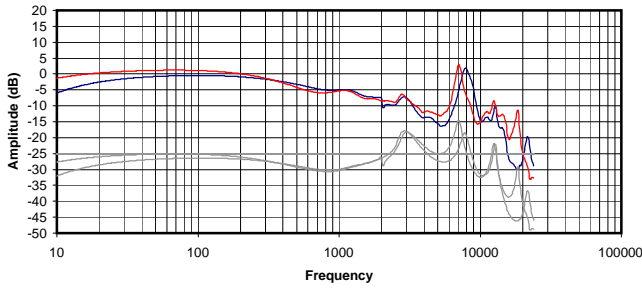
Impulse Response



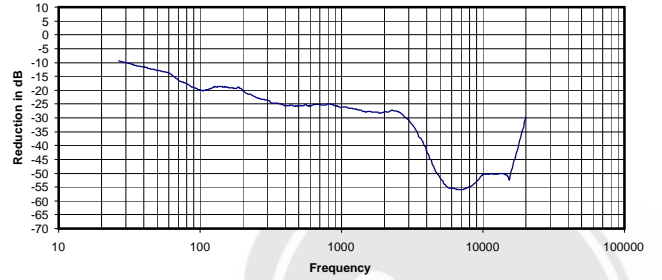
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.046 Vrms
17 Ohms
0.13 mW
-24 dB

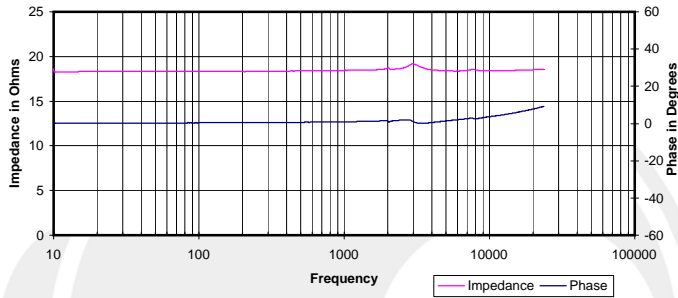
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



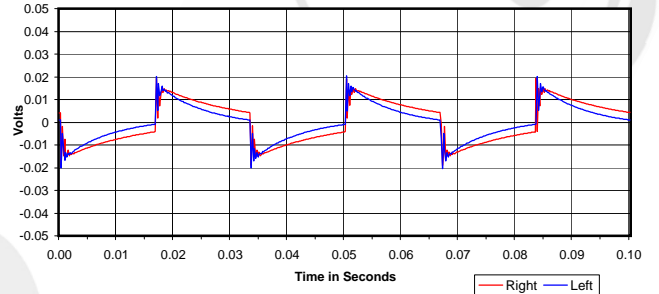
Isolation
Attenuation of External Sound vs. Frequency



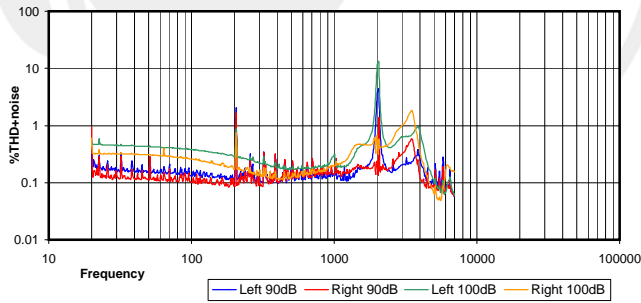
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



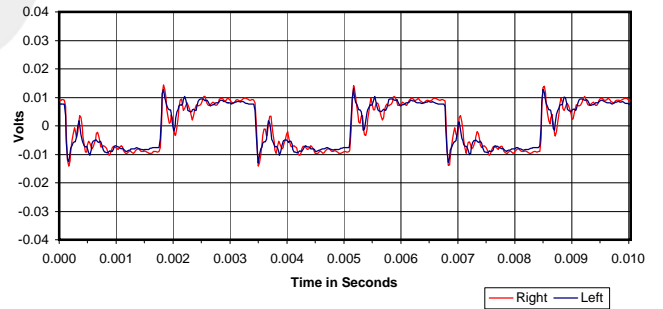
30 Hz Square Wave



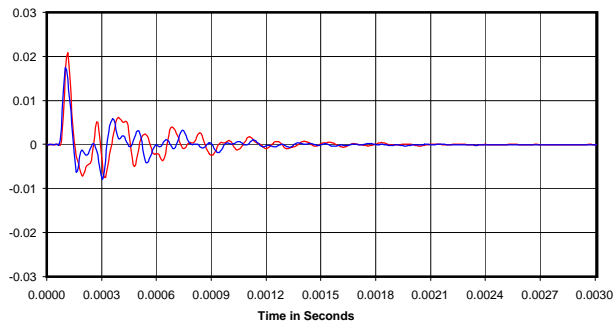
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



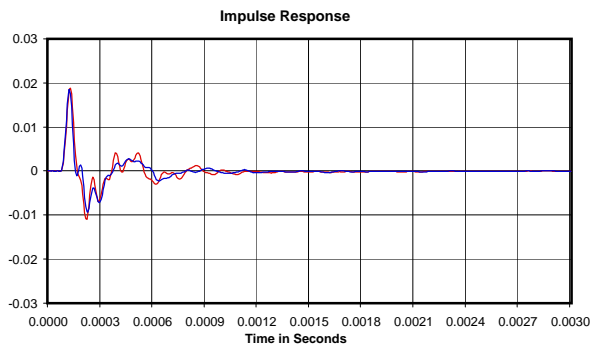
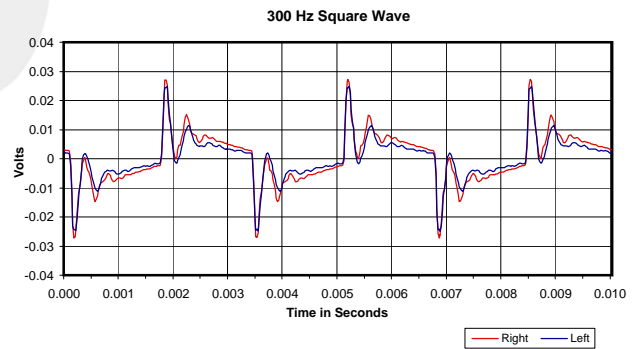
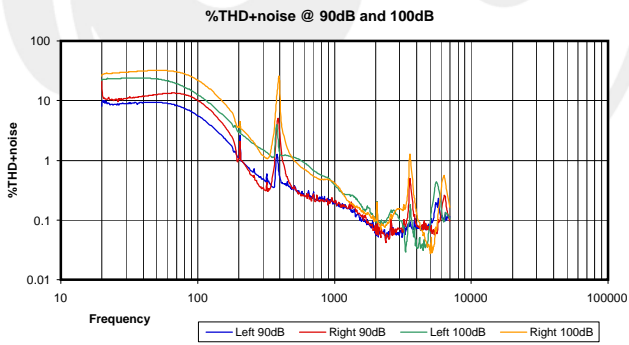
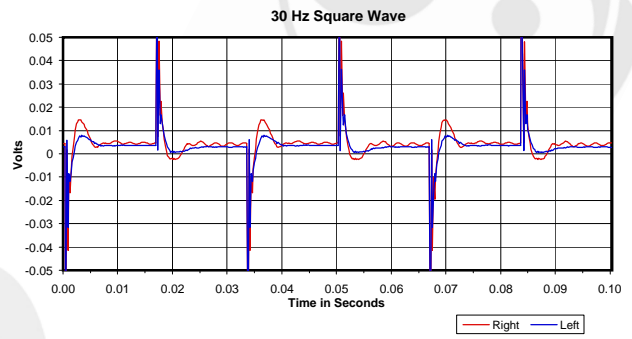
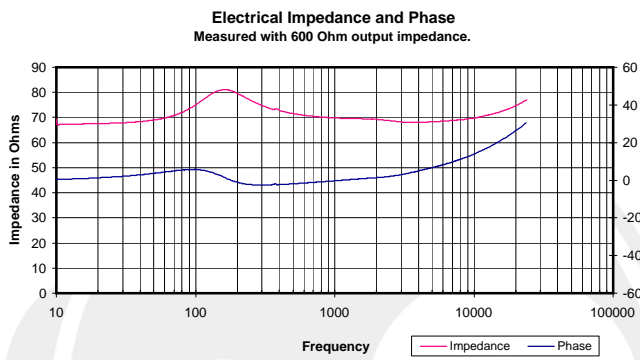
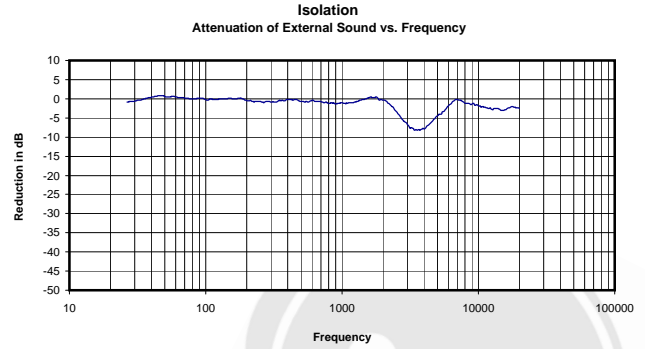
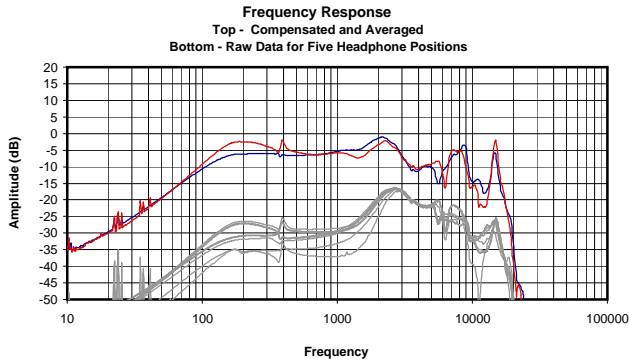
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.053 Vrms
18 Ohms
0.15 mW
-31 dB



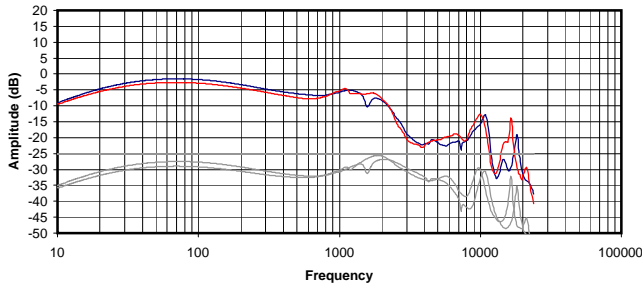


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

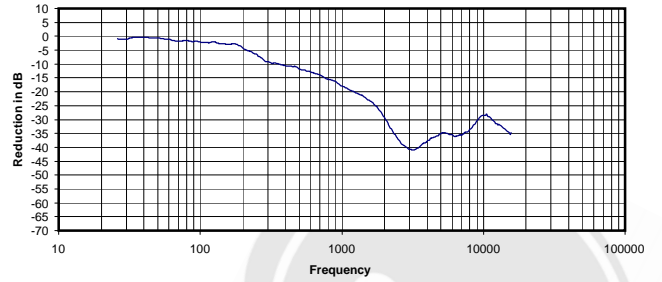
7.588 Vrms
70 Ohms
824.63 mW
-2 dB



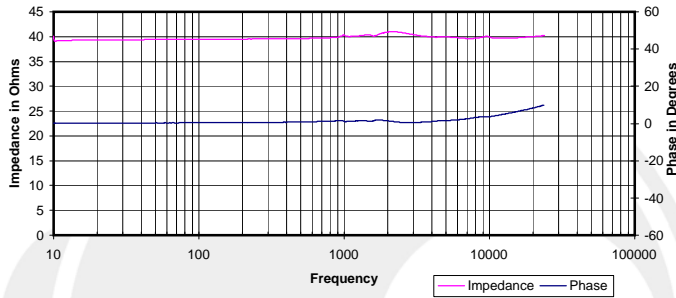
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



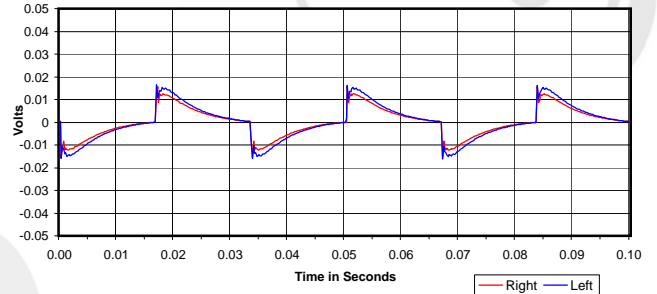
Isolation
Attenuation of External Sound vs. Frequency



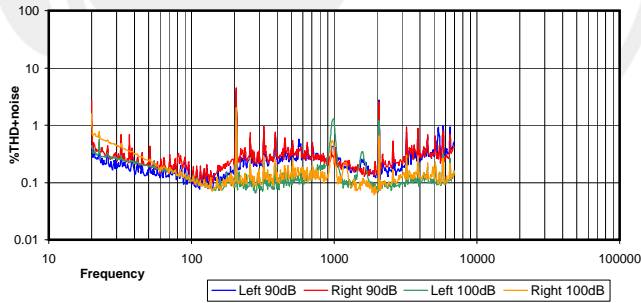
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



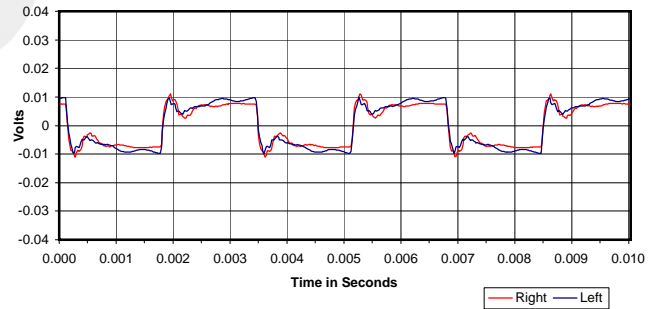
30 Hz Square Wave



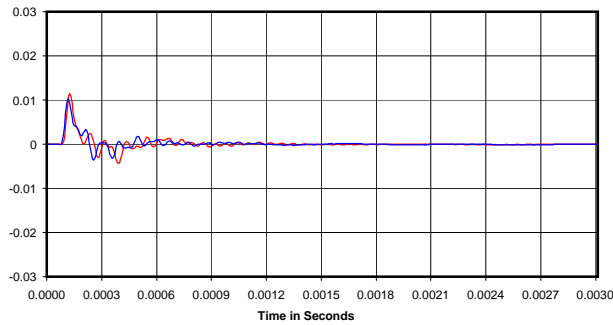
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



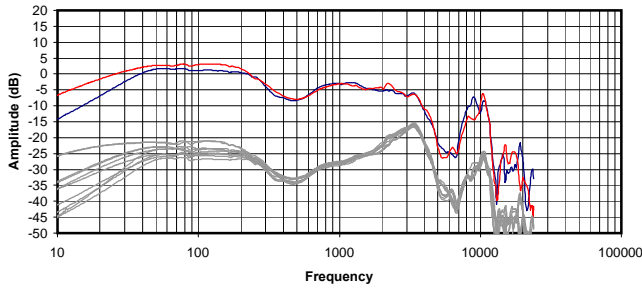
Impulse Response



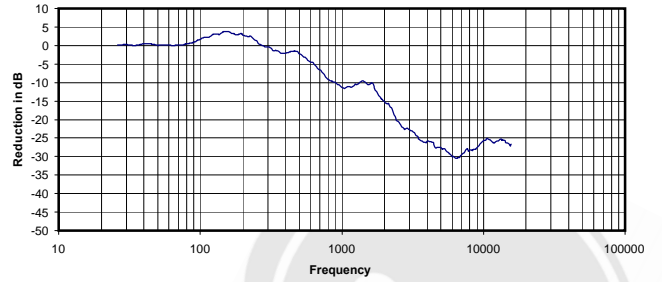
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.021 Vrms
40 Ohms
0.01 mW
-18 dB

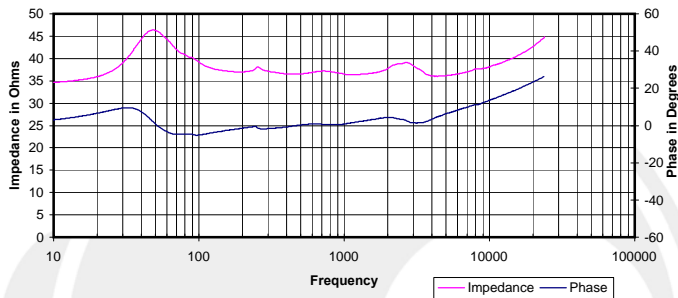
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



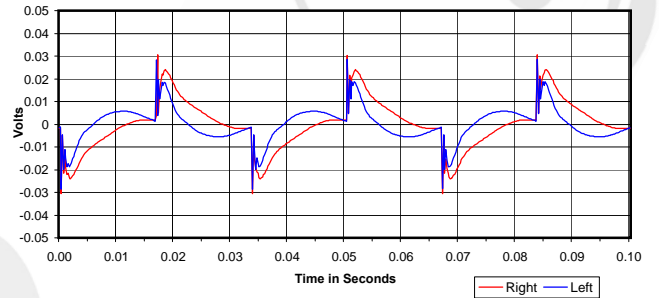
Isolation
 Attenuation of External Sound vs. Frequency



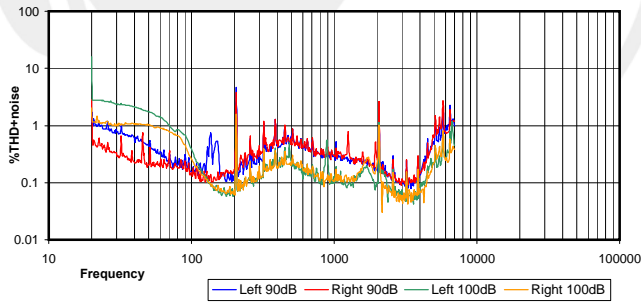
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



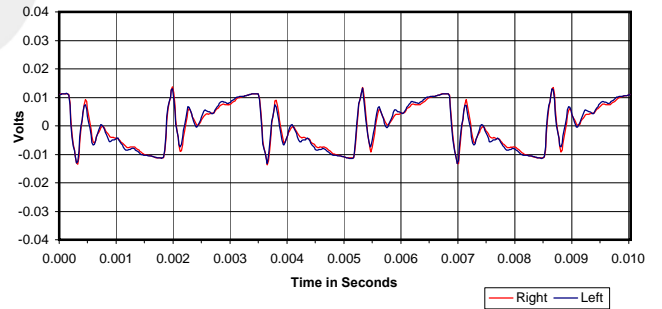
30 Hz Square Wave



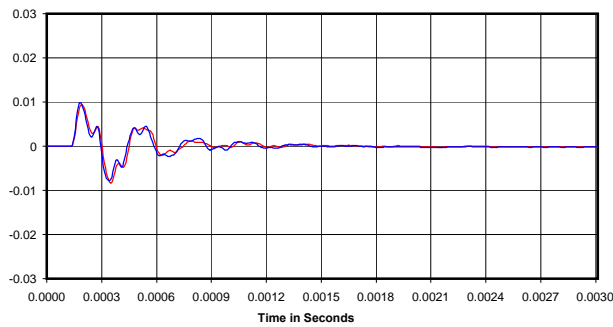
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

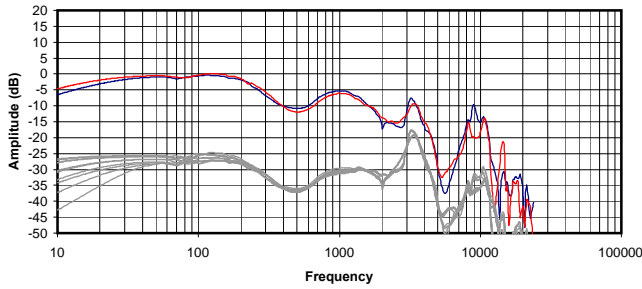


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

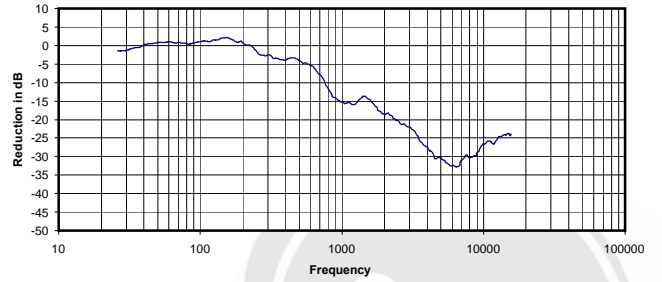
0.034 Vrms
 37 Ohms
 0.03 mW
 -9 dB



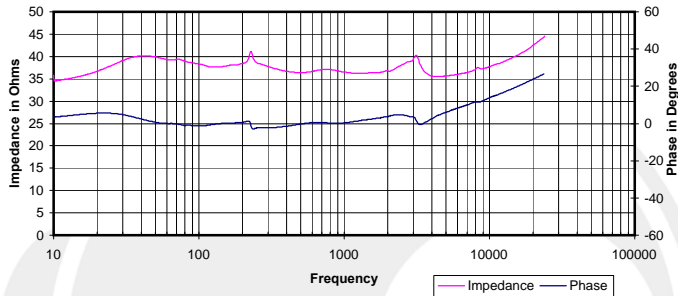
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



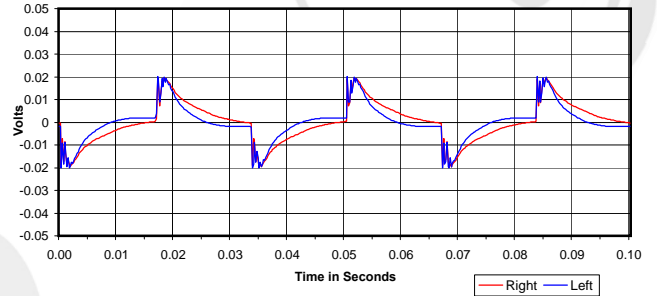
Isolation
 Attenuation of External Sound vs. Frequency



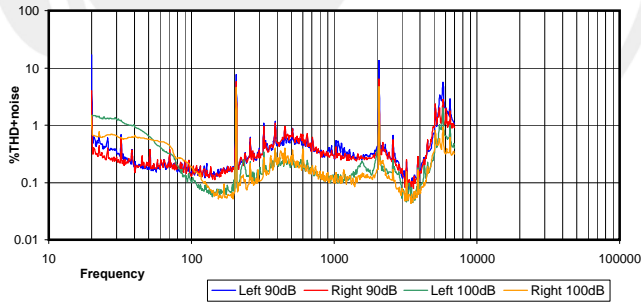
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



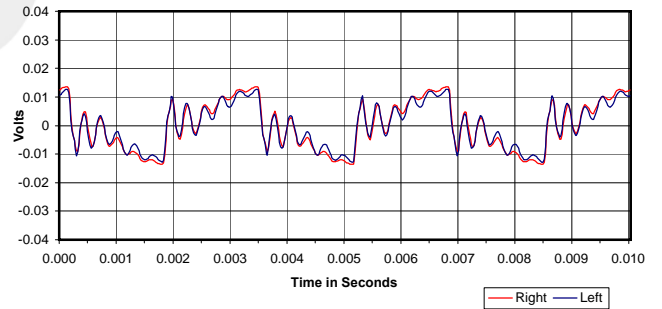
30 Hz Square Wave



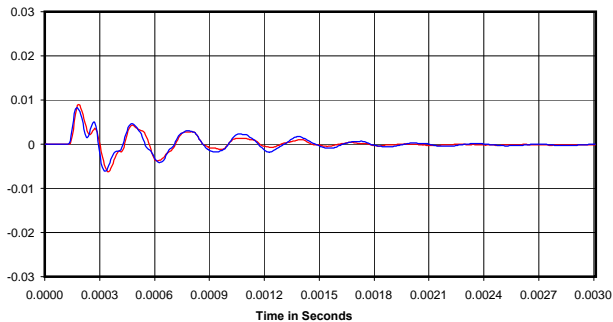
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response



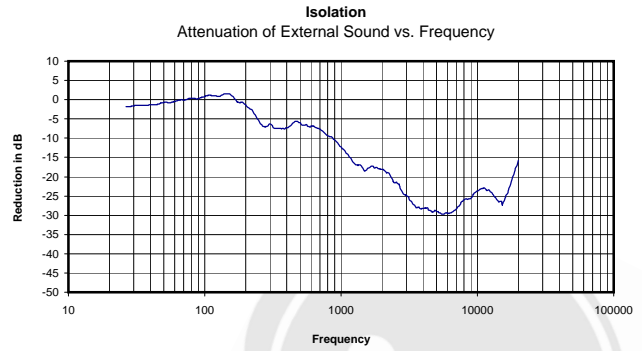
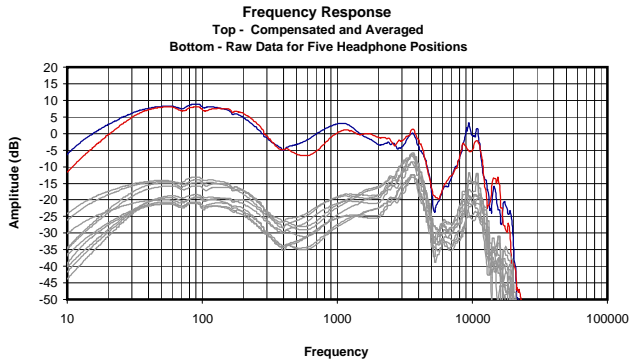
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.026 Vrms
 37 Ohms
 0.02 mW
 -11 dB

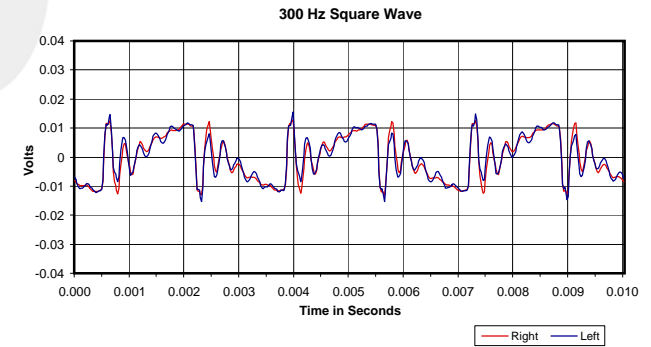
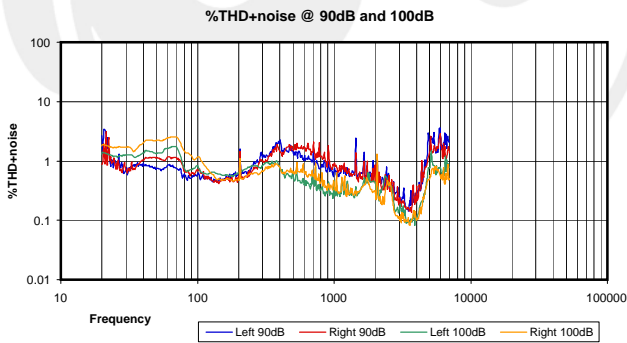
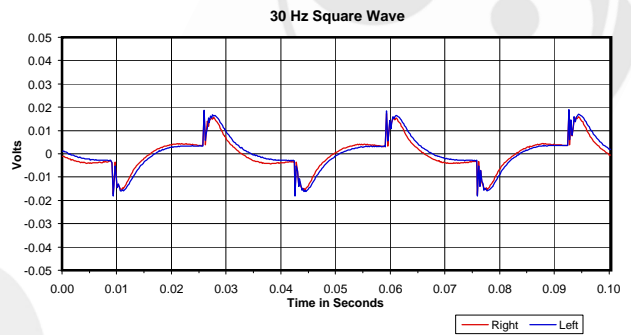




Headphone Measurements: VMODA Crossfade Wireless Bluetooth

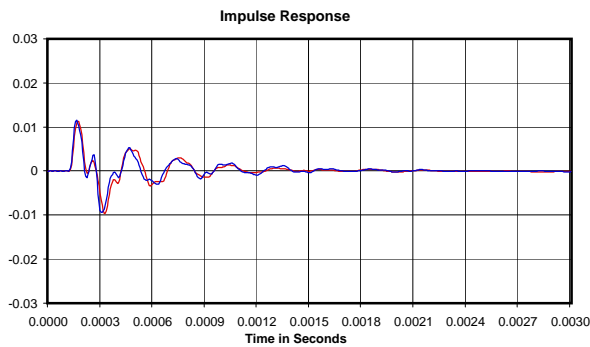
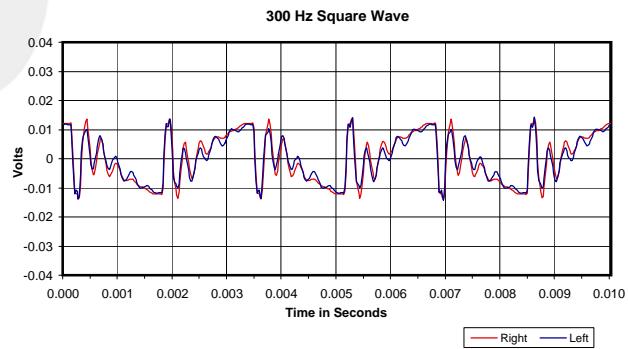
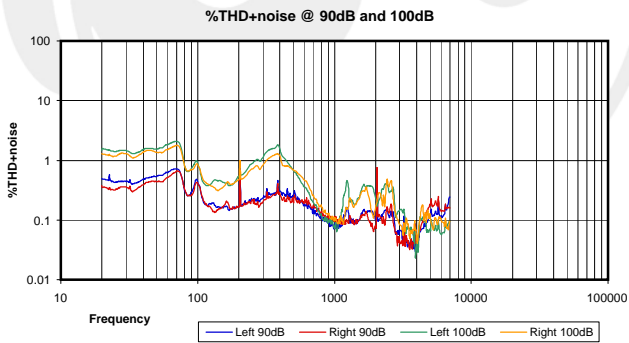
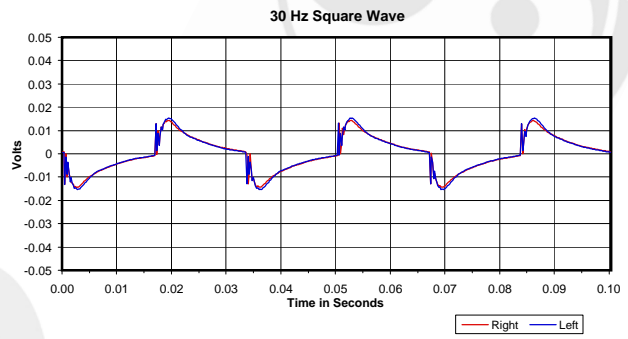
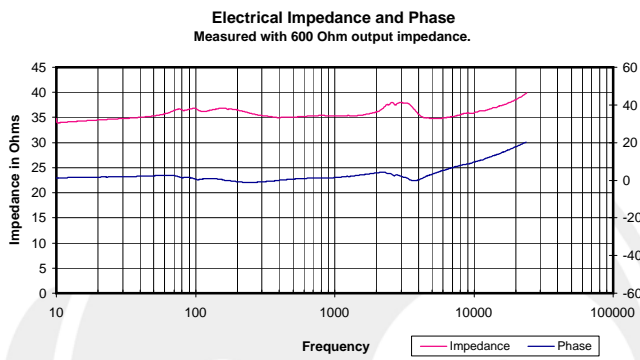
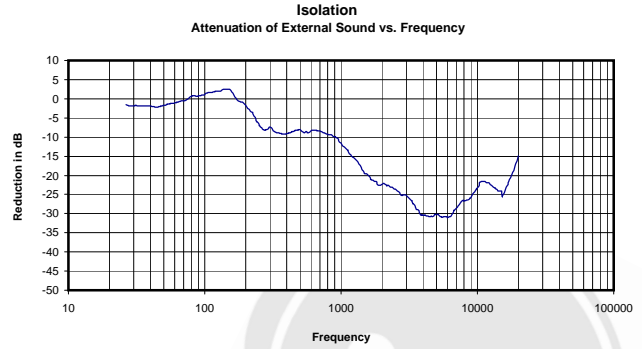
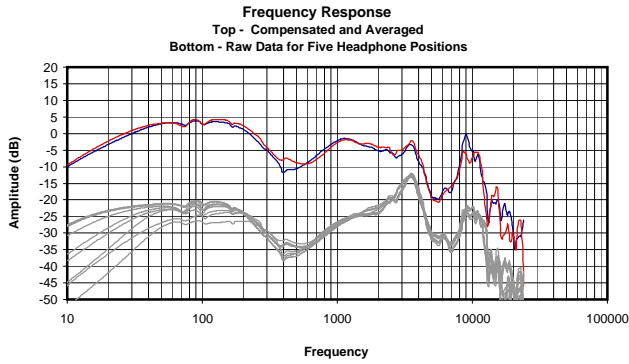


Electrical Impedance and phase measurements unavailable for electrostatic and wireless headphones



Broadband Isolation in dB (100Hz to 10kHz): -14 dBr

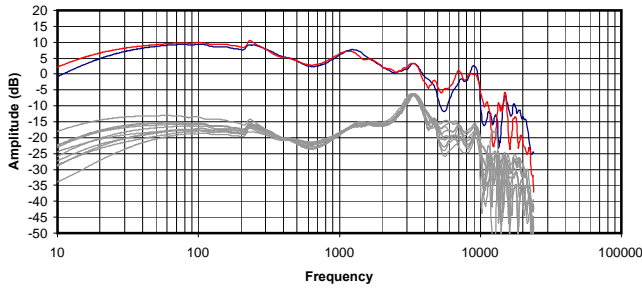
Impulse response unavailable for Bluetooth headphones due to latency synchronization problems.



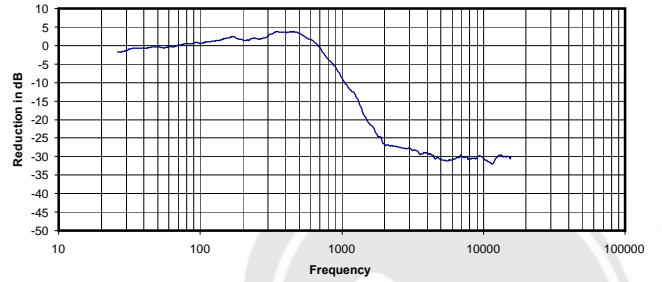
Volts RMS required to reach 90dB SPL: 0.035 Vrms
 Impedance @ 1kHz: 35 Ohms
 Power Needed for 90d BSPL: 0.03 mW
 Broadband Isolation in dB (100Hz to 10kHz): -15 dB



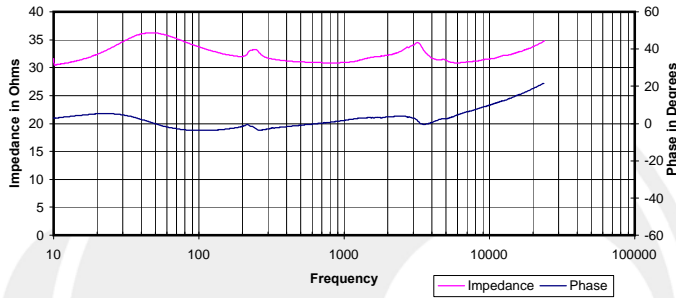
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



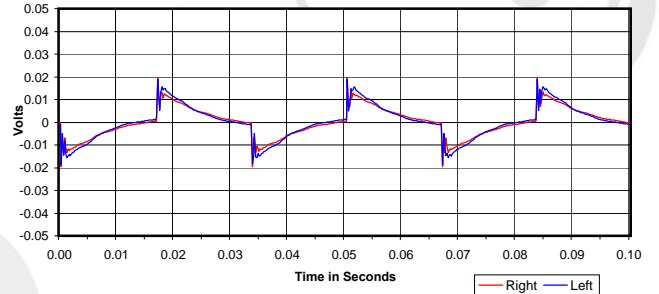
Isolation
 Attenuation of External Sound vs. Frequency



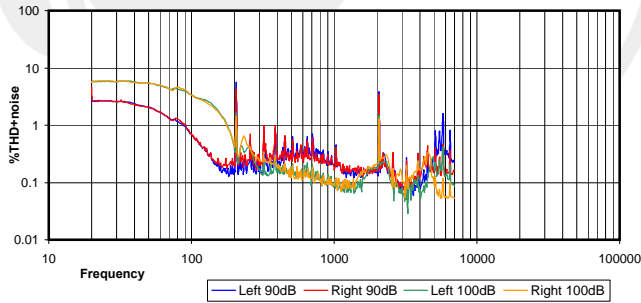
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



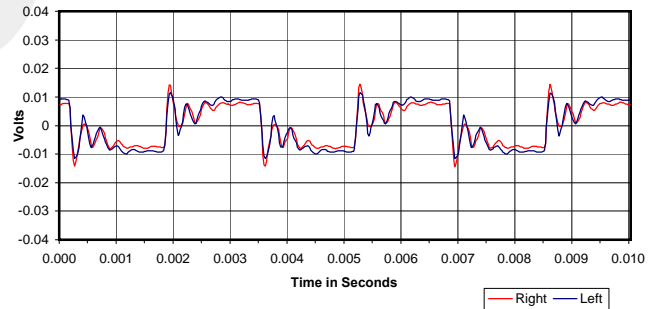
30 Hz Square Wave



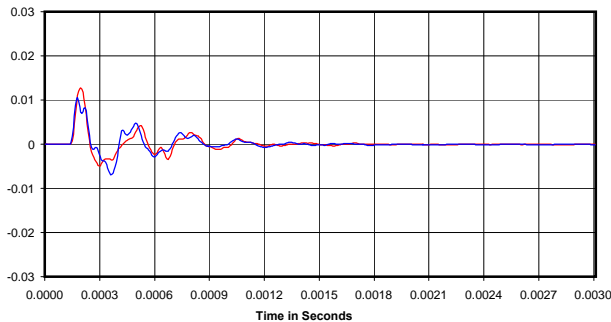
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

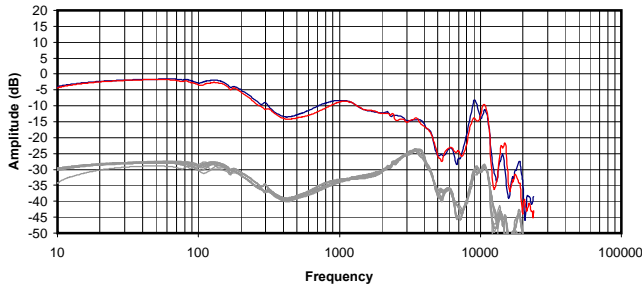


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

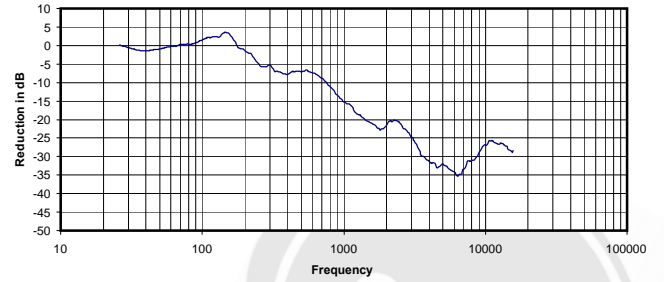
0.039 Vrms
 31 Ohms
 0.05 mW
 -10 dB



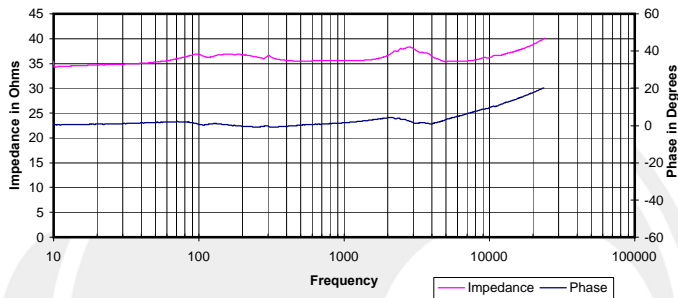
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



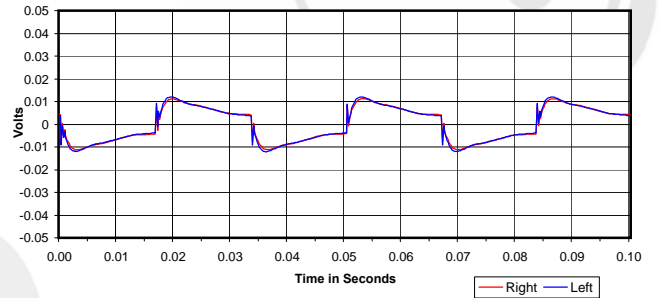
Isolation
 Attenuation of External Sound vs. Frequency



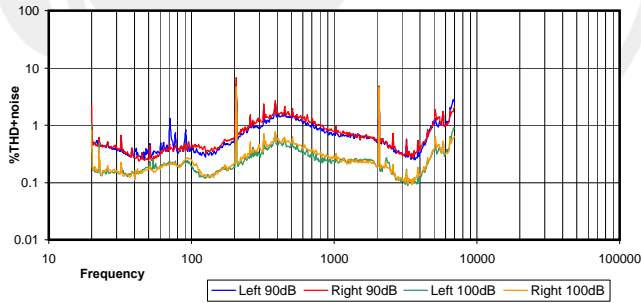
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



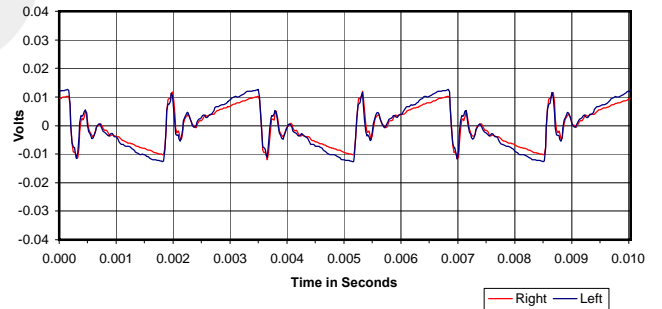
30 Hz Square Wave



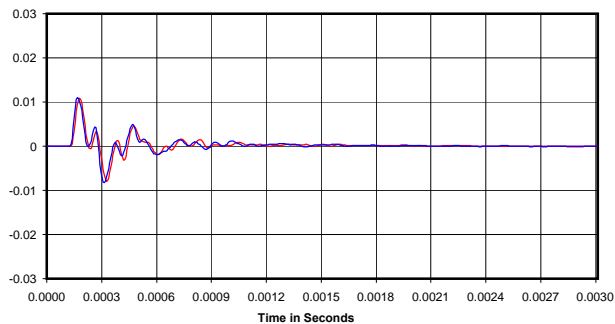
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



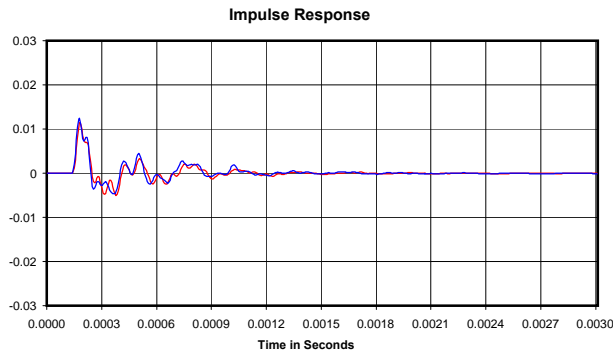
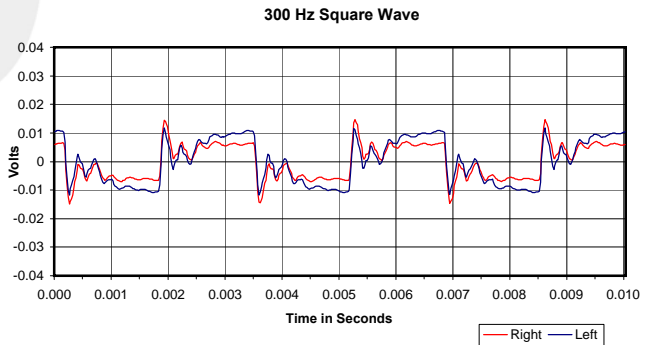
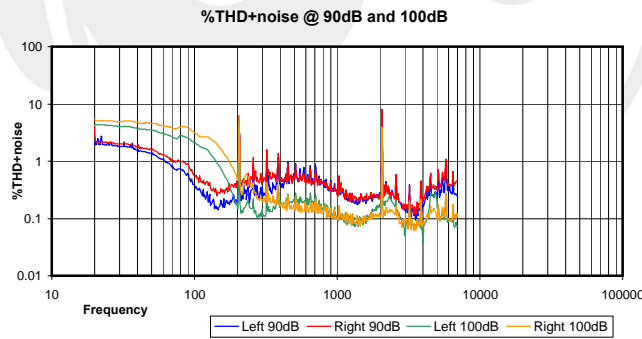
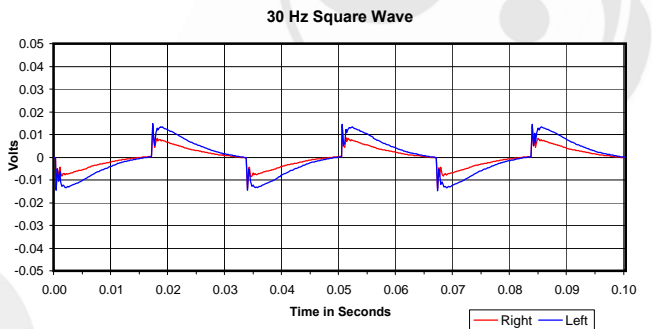
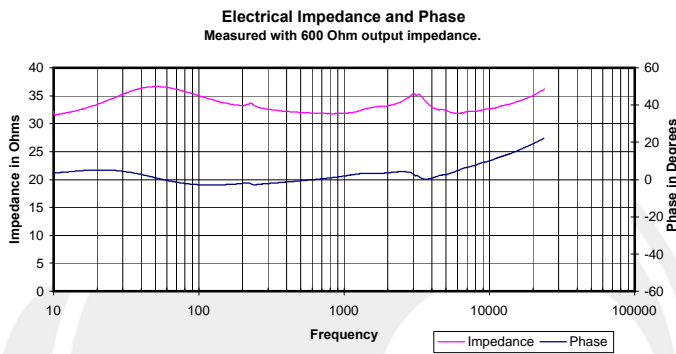
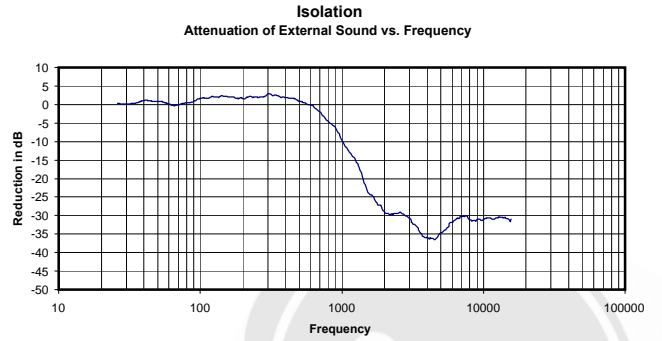
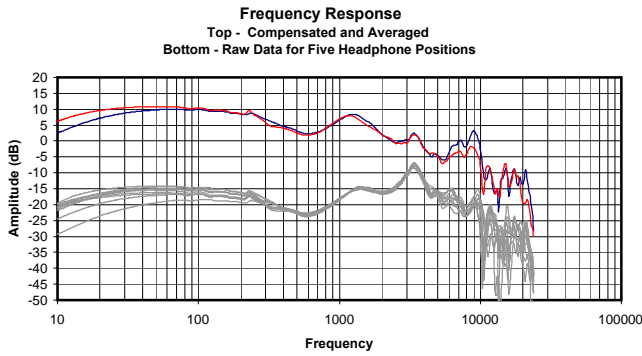
Impulse Response



Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.031 Vrms
 36 Ohms
 0.03 mW
 -13 dB



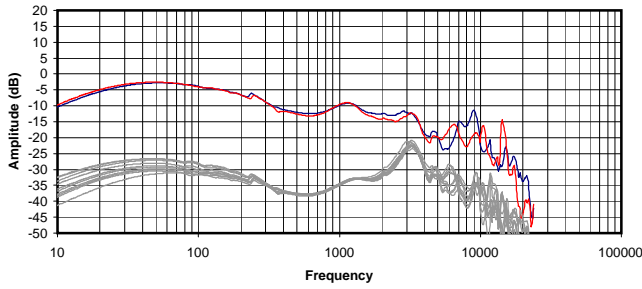


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

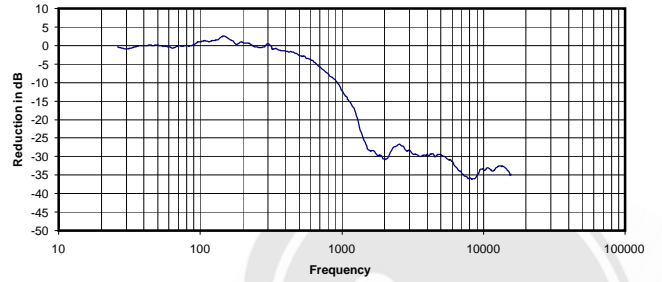
0.037 Vrms
32 Ohms
0.04 mW
-12 dB



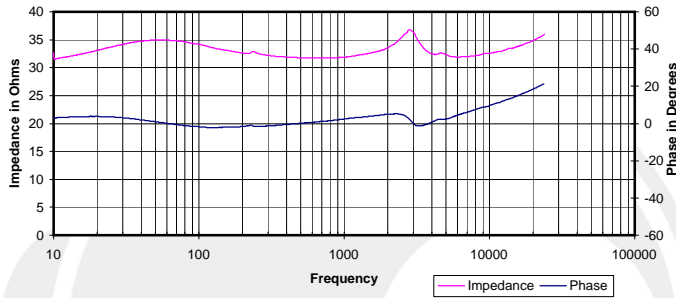
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



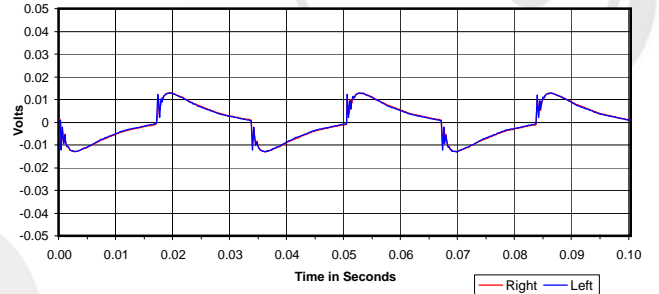
Isolation
 Attenuation of External Sound vs. Frequency



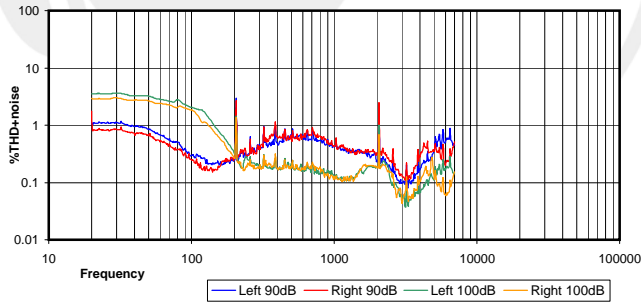
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



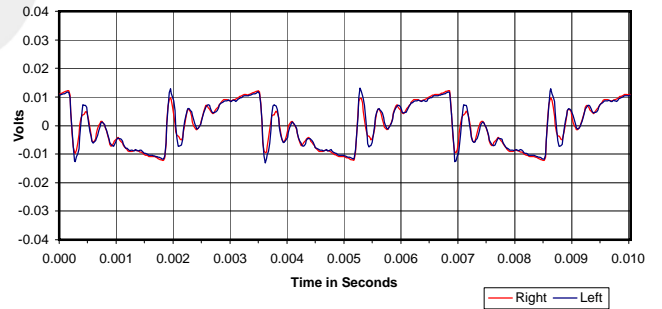
30 Hz Square Wave



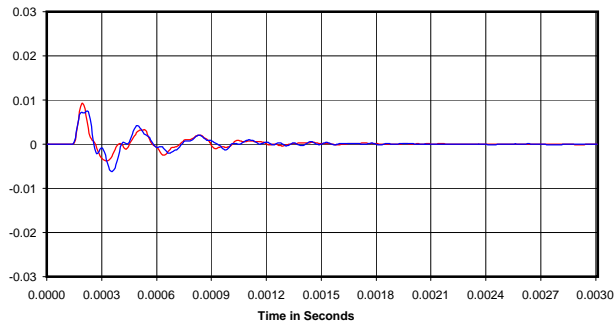
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

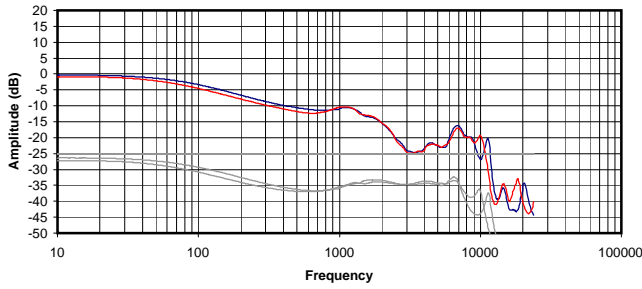


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

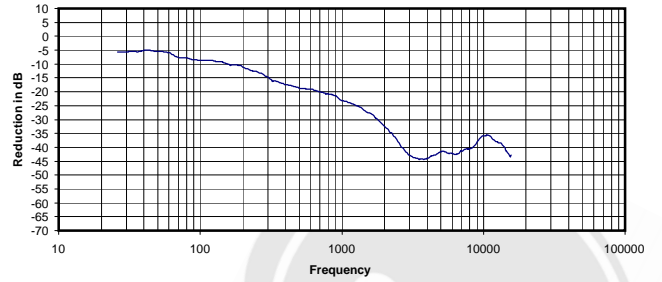
0.036 Vrms
 32 Ohms
 0.04 mW
 -13 dB



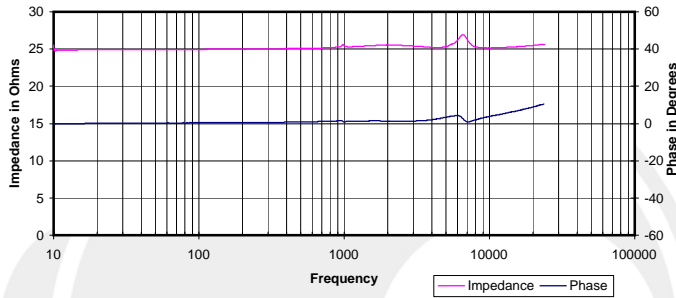
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



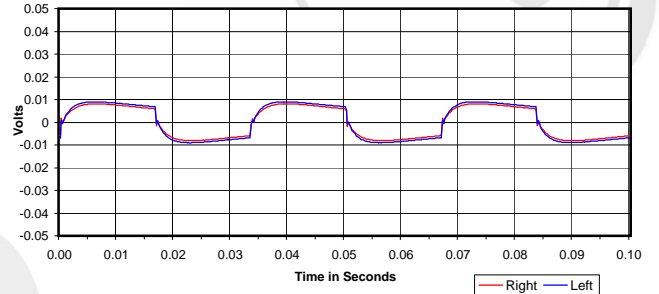
Isolation
Attenuation of External Sound vs. Frequency



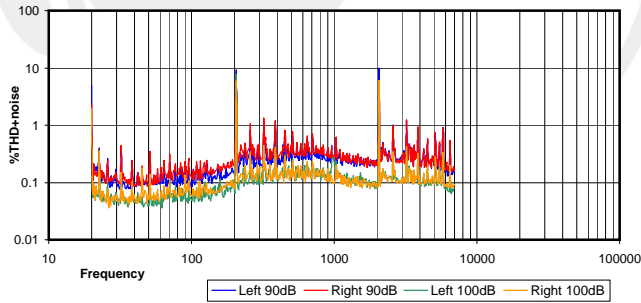
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



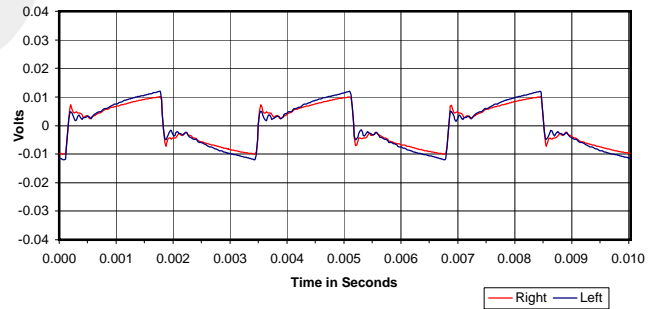
30 Hz Square Wave



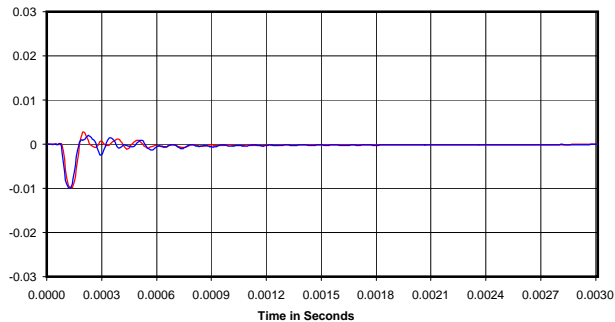
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



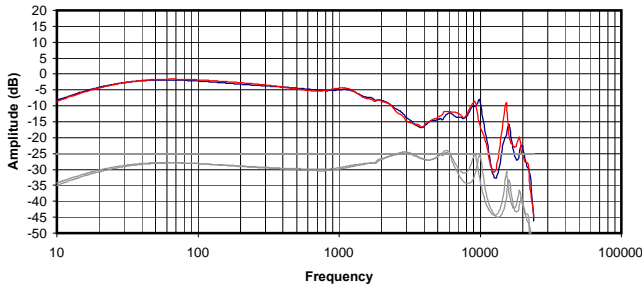
Impulse Response



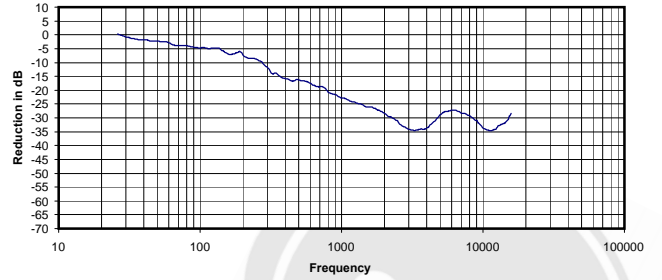
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.017 Vrms
25 Ohms
0.01 mW
-24 dB

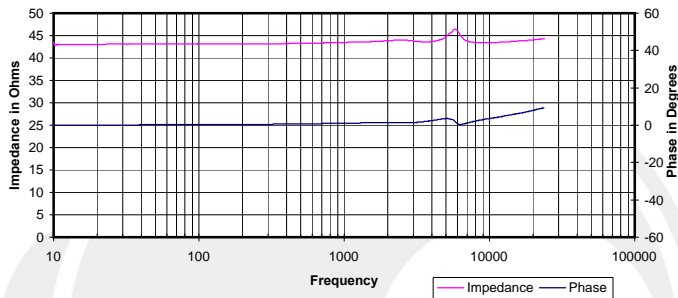
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



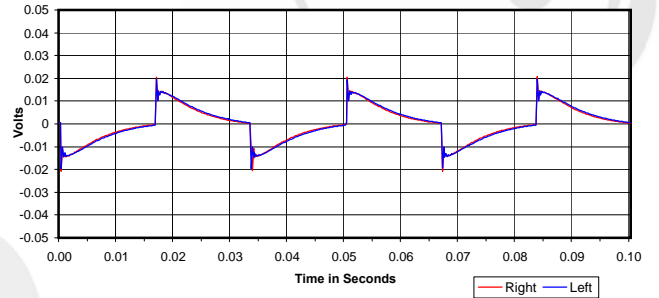
Isolation
Attenuation of External Sound vs. Frequency



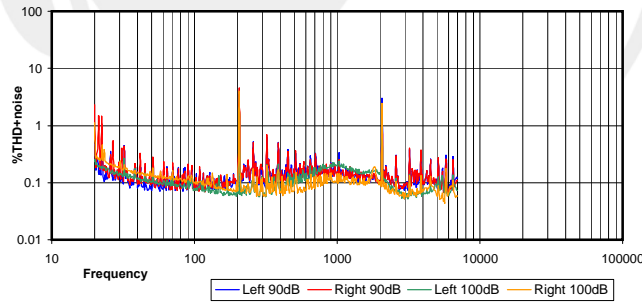
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



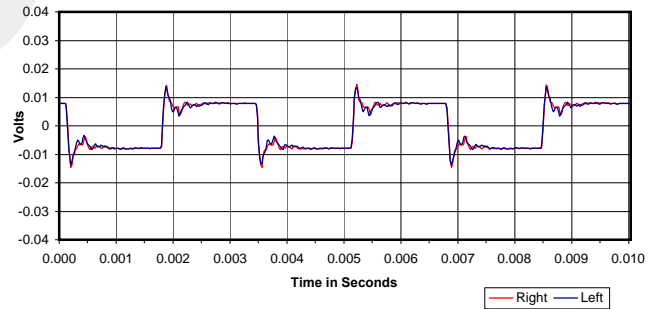
30 Hz Square Wave



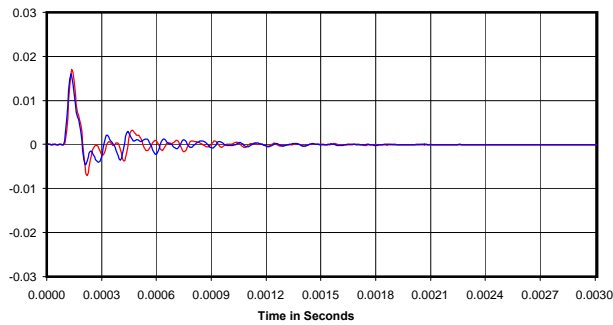
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

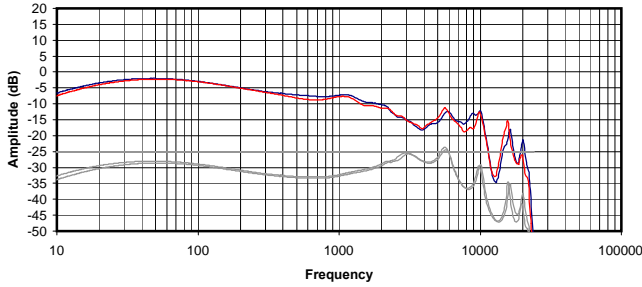


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90dB BSPL
Broadband Isolation in dB (100Hz to 10kHz):

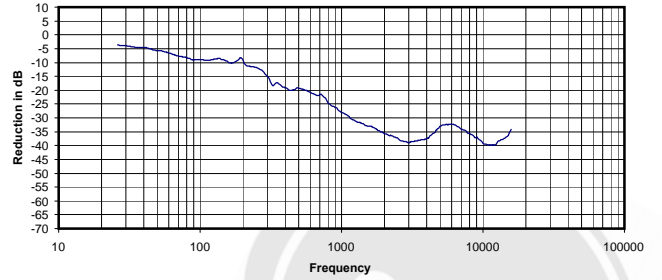
0.033 Vrms
43 Ohms
0.03 mW
-19 dB



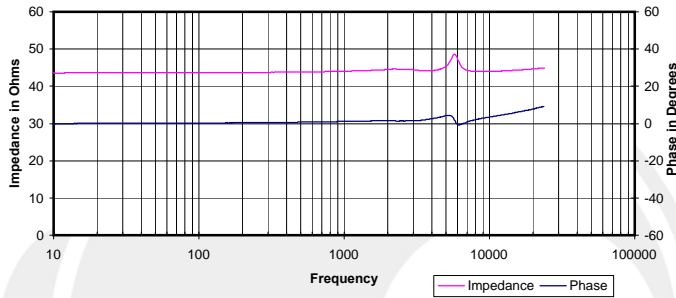
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



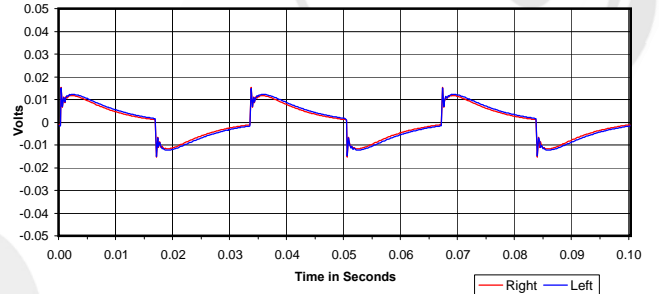
Isolation
Attenuation of External Sound vs. Frequency



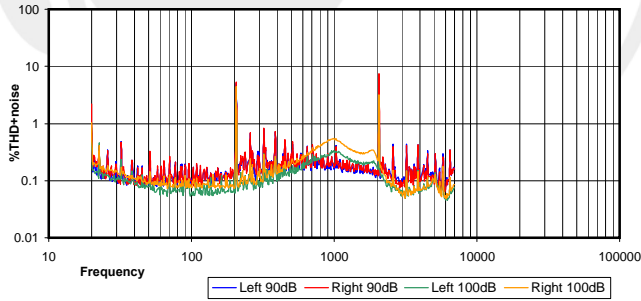
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



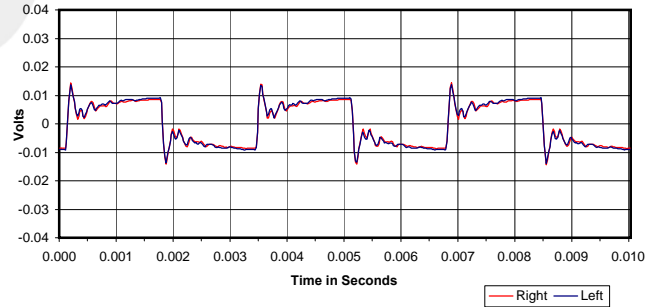
30 Hz Square Wave



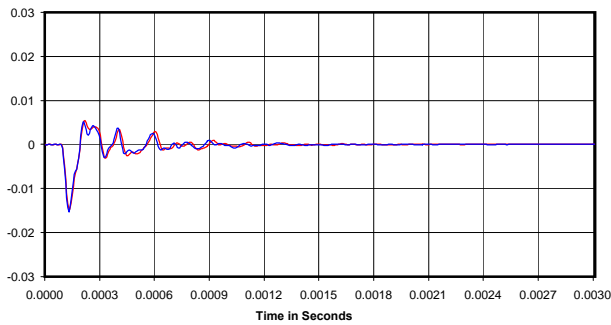
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

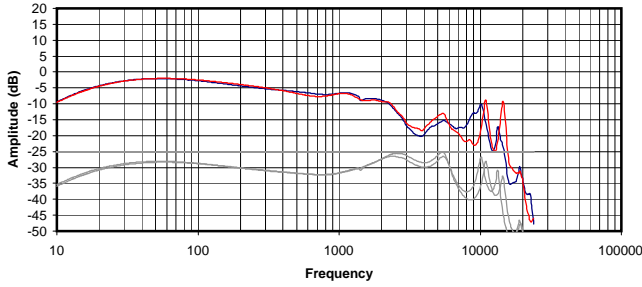


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

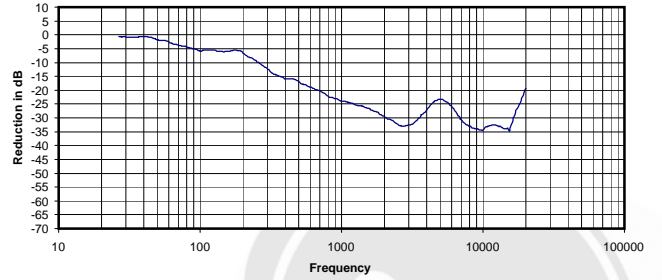
0.034 Vrms
44 Ohms
0.03 mW
-24 dB



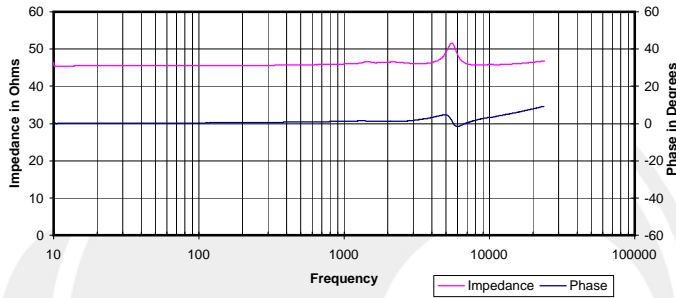
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



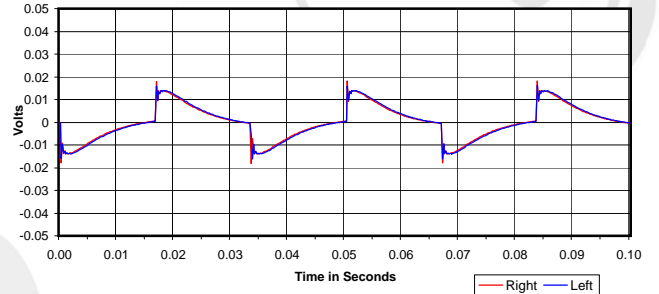
Isolation
Attenuation of External Sound vs. Frequency



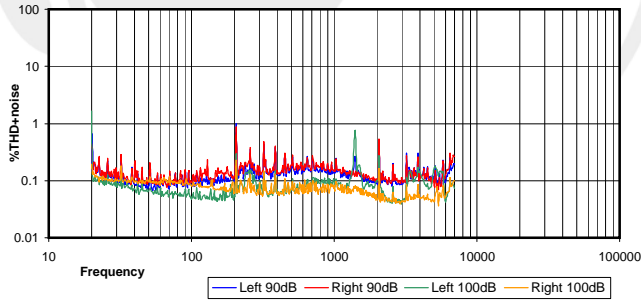
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



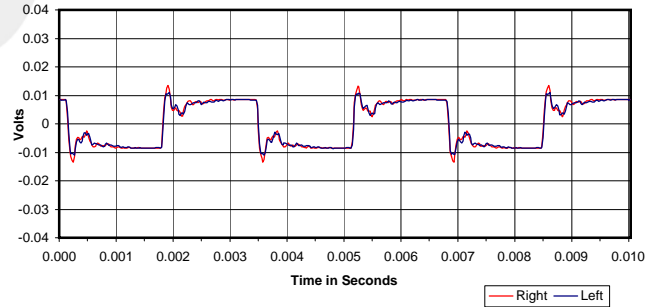
30 Hz Square Wave



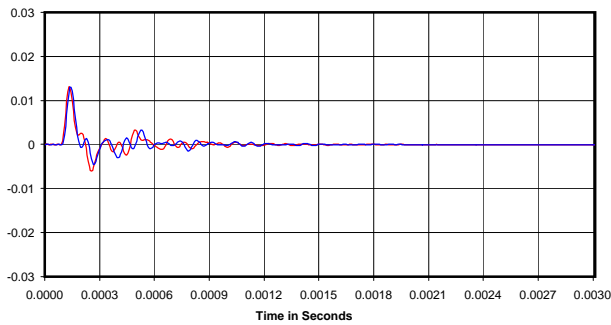
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

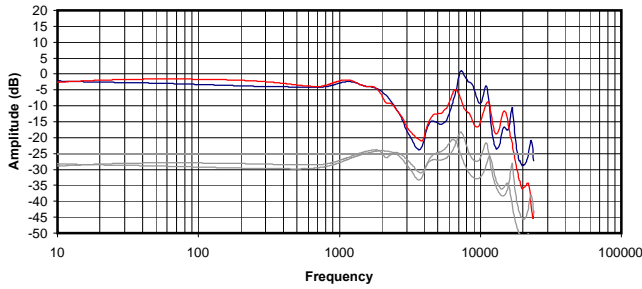


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

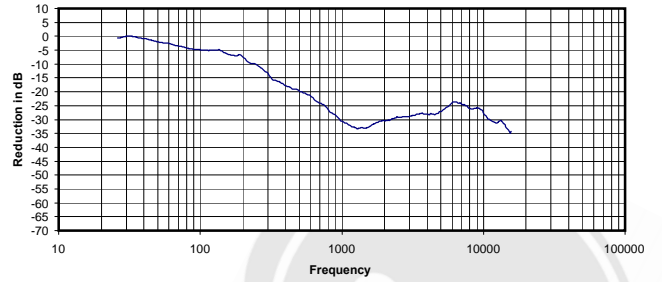
0.027 Vrms
46 Ohms
0.02 mW
-21 dB



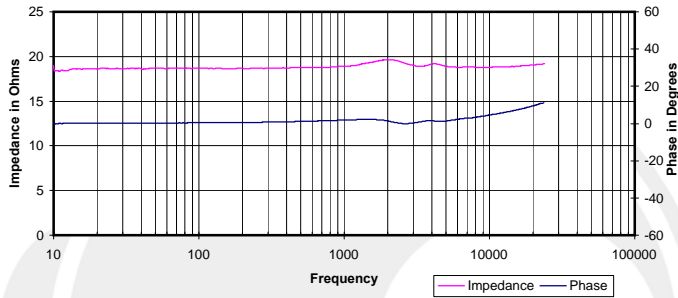
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



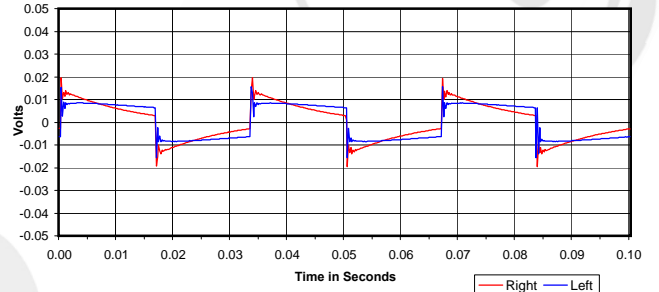
Isolation
Attenuation of External Sound vs. Frequency



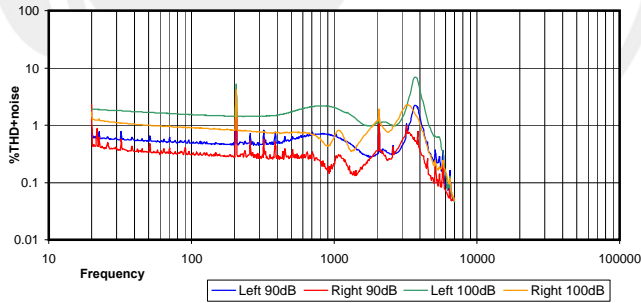
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



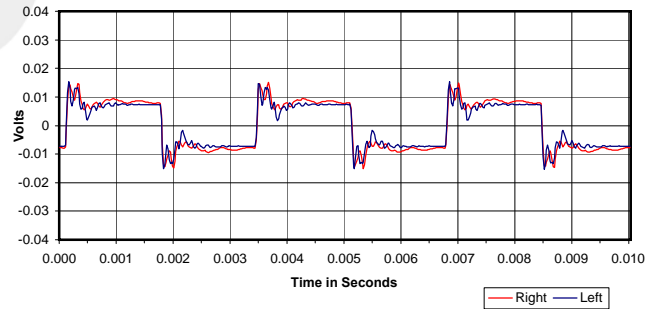
30 Hz Square Wave



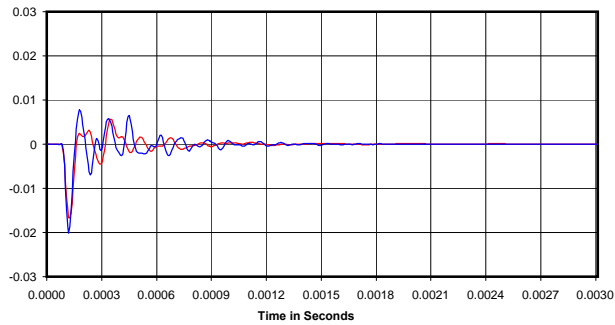
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

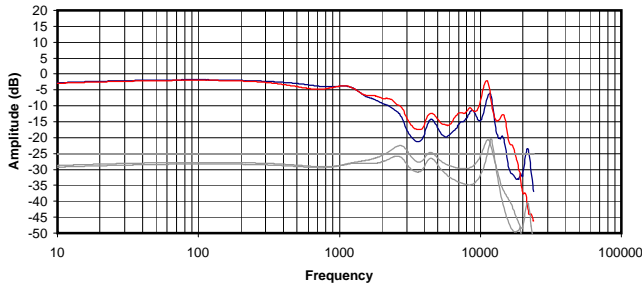


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

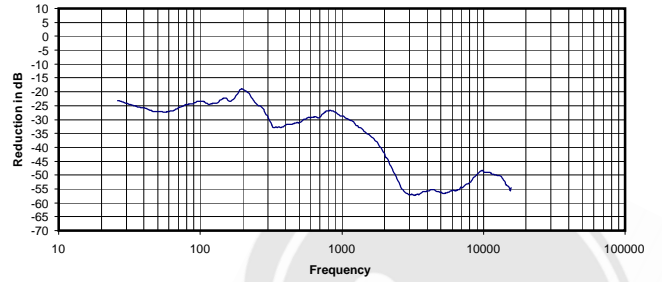
0.036 Vrms
19 Ohms
0.07 mW
-21 dB



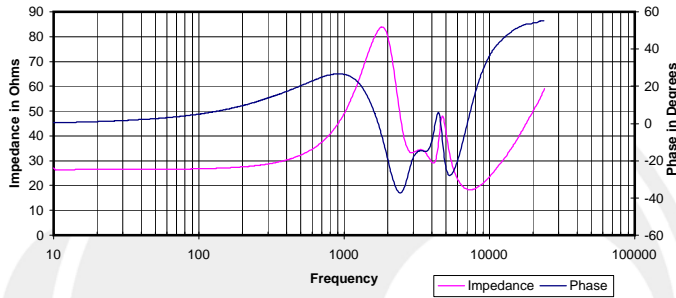
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



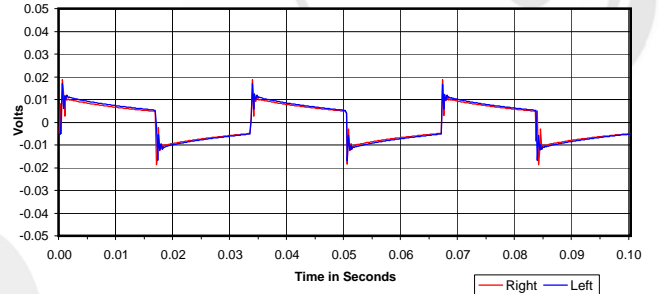
Isolation
Attenuation of External Sound vs. Frequency



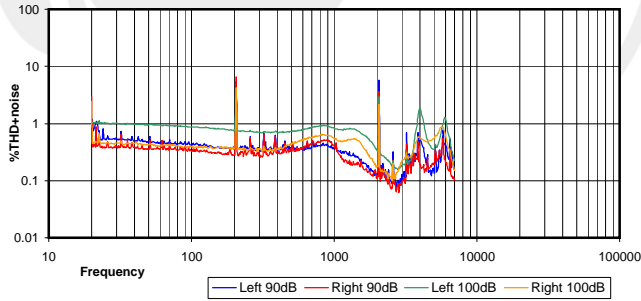
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



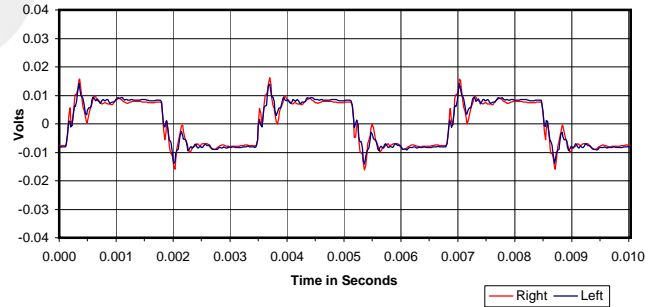
30 Hz Square Wave



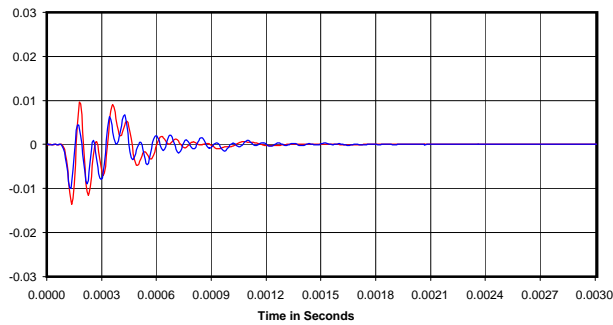
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

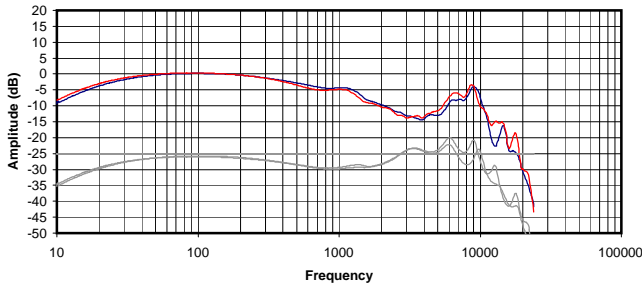


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

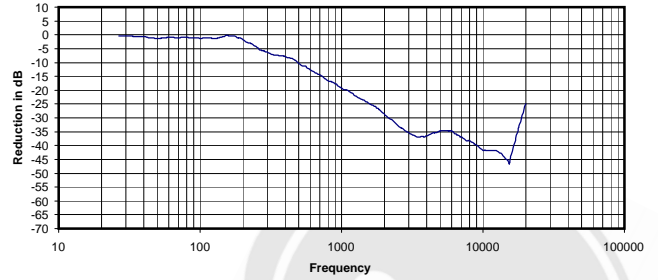
0.031 Vrms
49 Ohms
0.02 mW
-35 dB



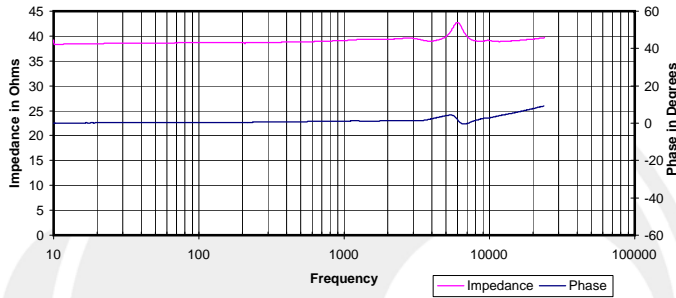
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



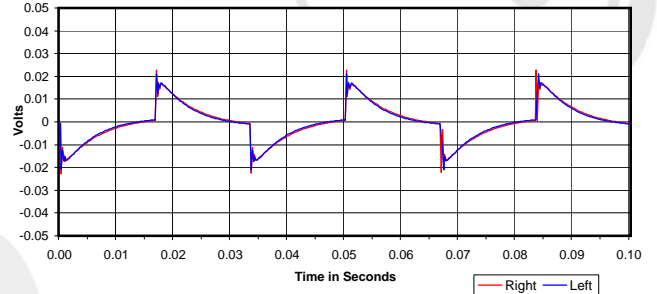
Isolation
Attenuation of External Sound vs. Frequency



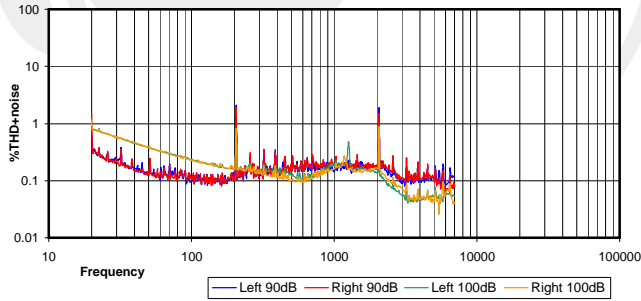
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



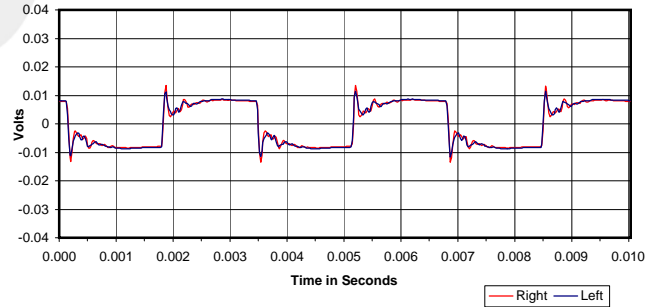
30 Hz Square Wave



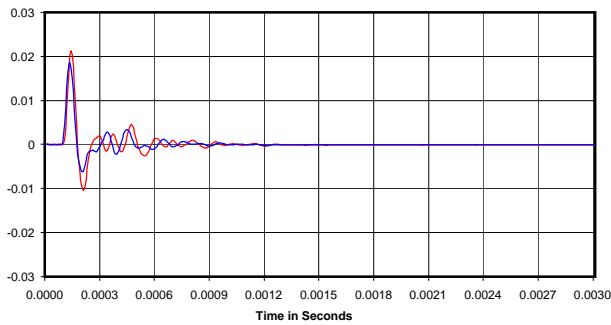
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

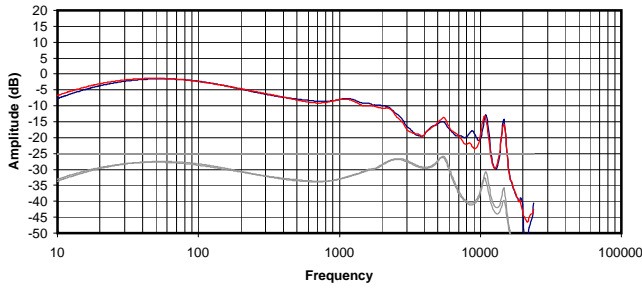


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

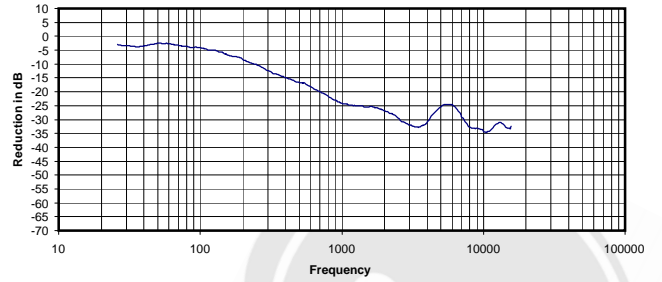
0.026 Vrms
39 Ohms
0.02 mW
-20 dB



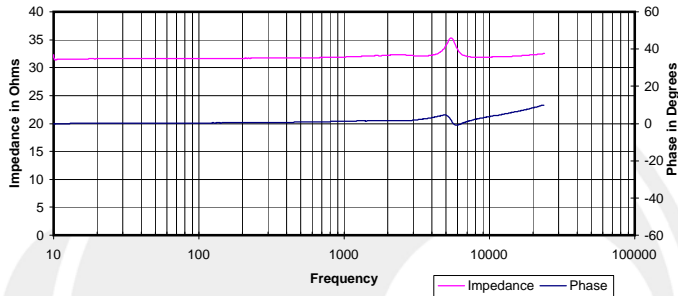
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



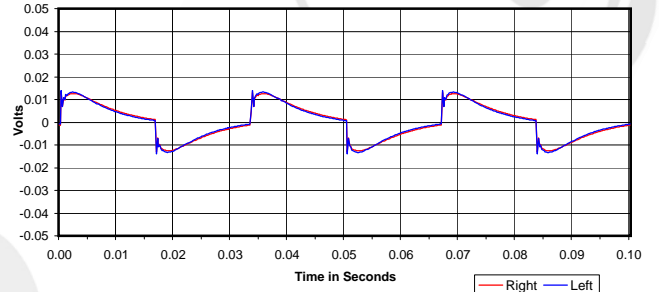
Isolation
Attenuation of External Sound vs. Frequency



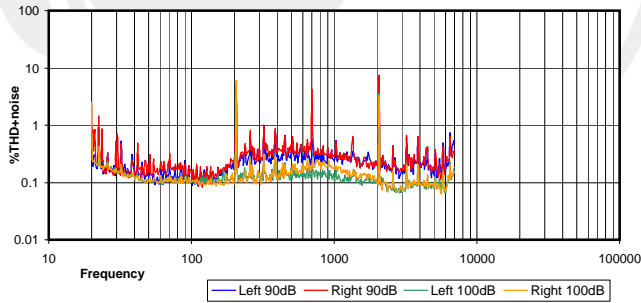
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



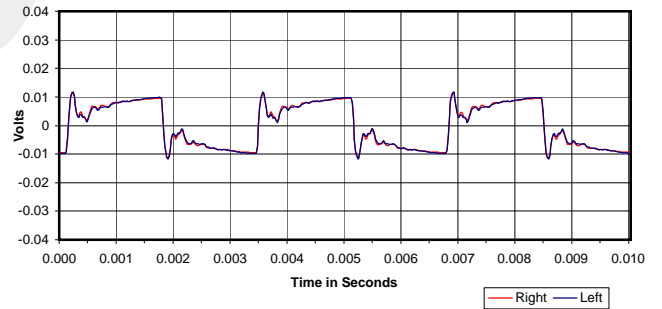
30 Hz Square Wave



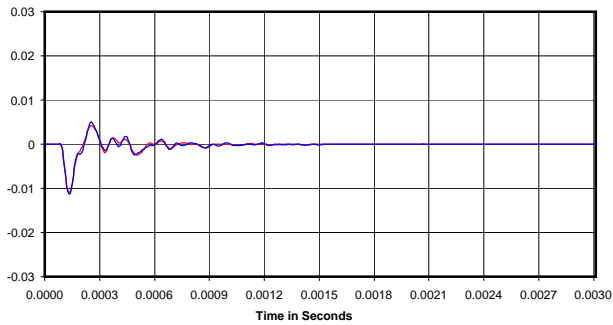
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

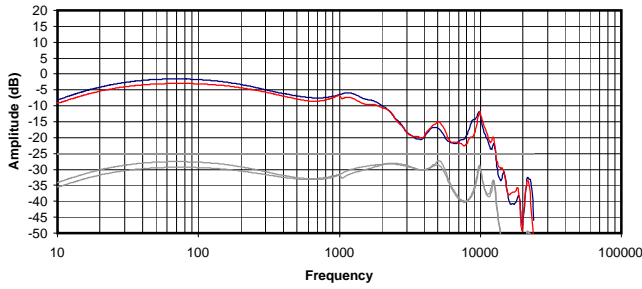


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

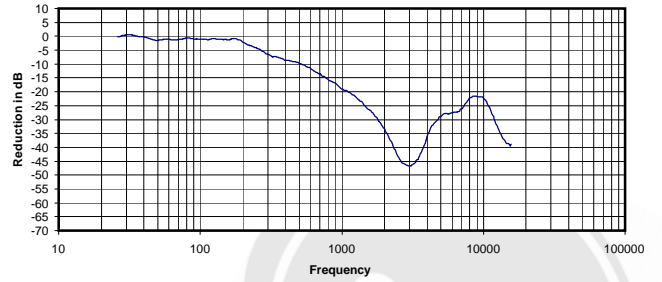
0.025 Vrms
32 Ohms
0.02 mW
-19 dB



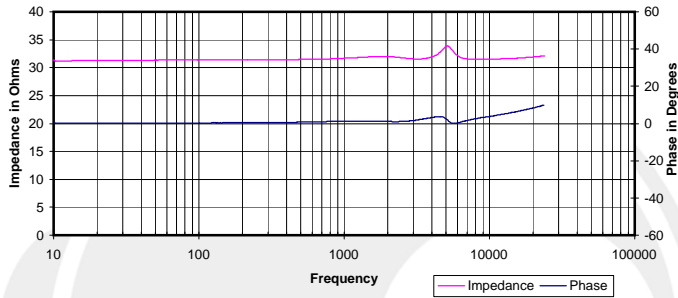
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



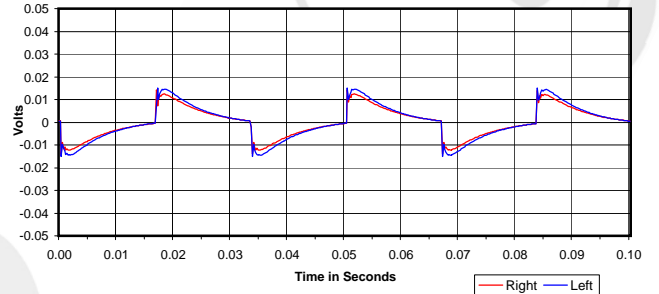
Isolation
Attenuation of External Sound vs. Frequency



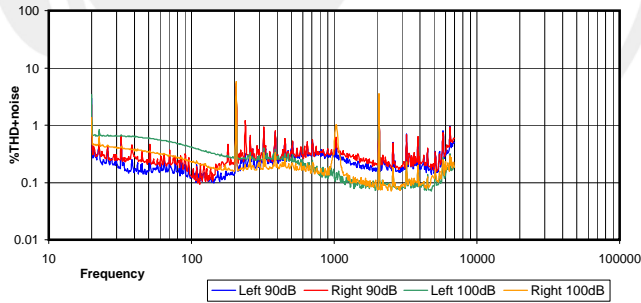
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



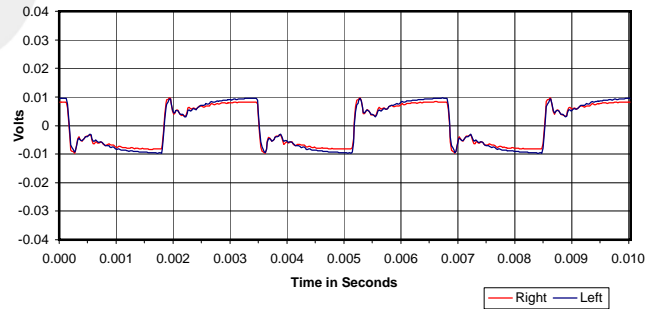
30 Hz Square Wave



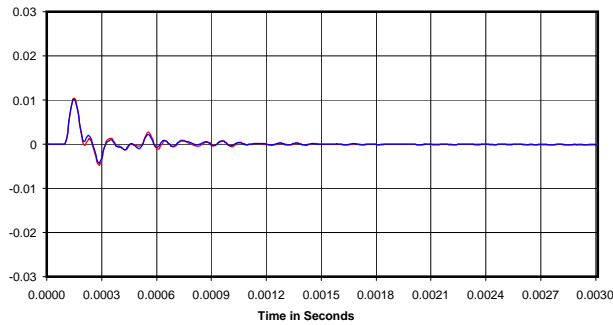
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



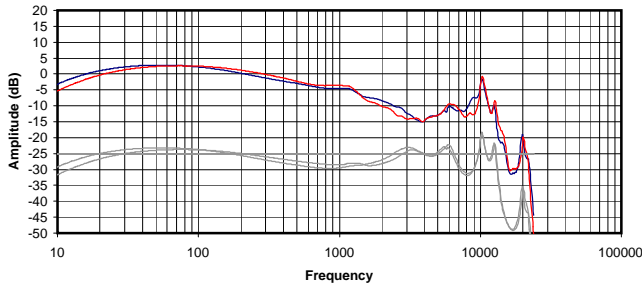
Impulse Response



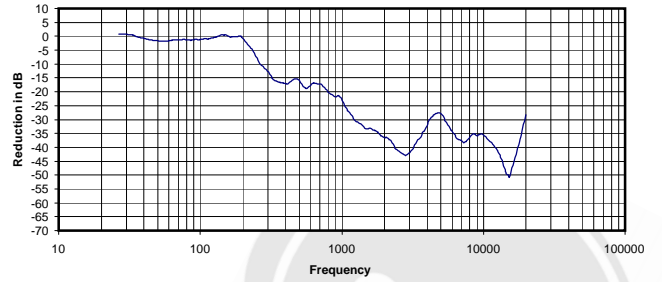
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.020 Vrms
32 Ohms
0.01 mW
-18 dB

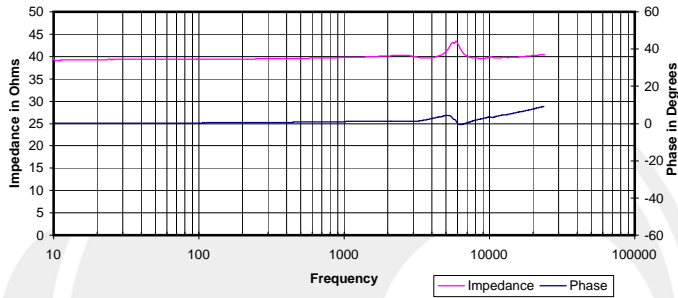
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



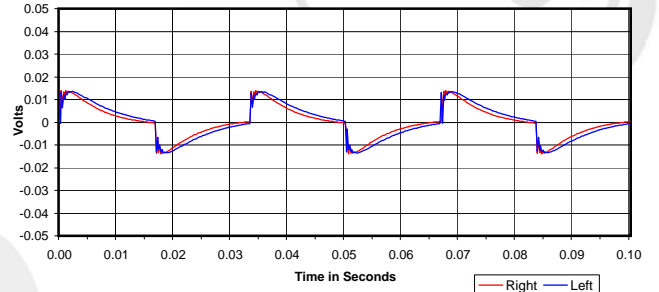
Isolation
Attenuation of External Sound vs. Frequency



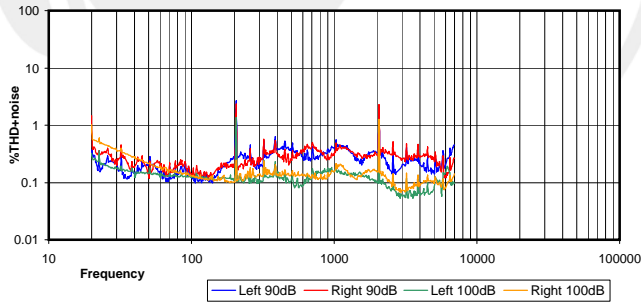
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



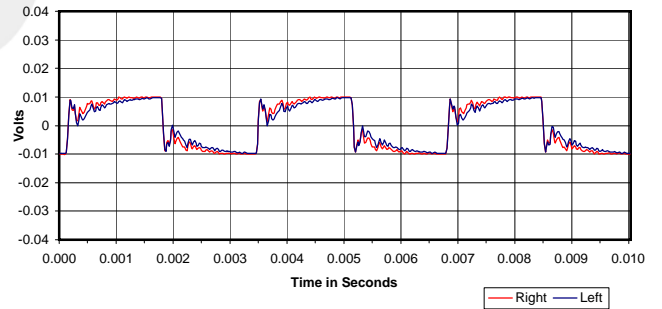
30 Hz Square Wave



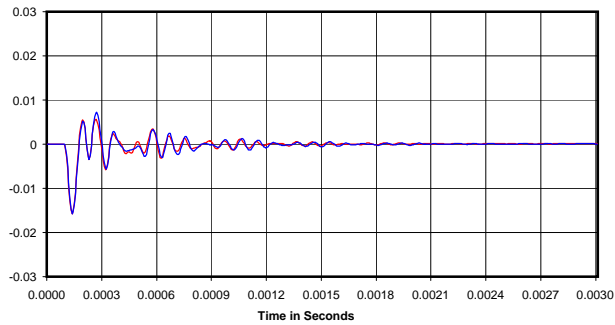
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

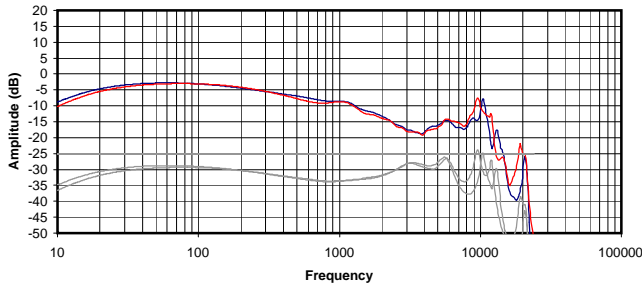


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

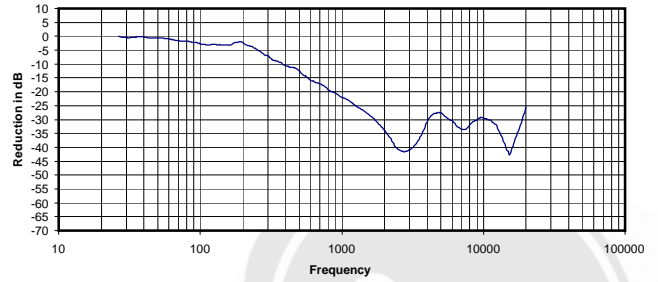
0.027 Vrms
40 Ohms
0.02 mW
-23 dB



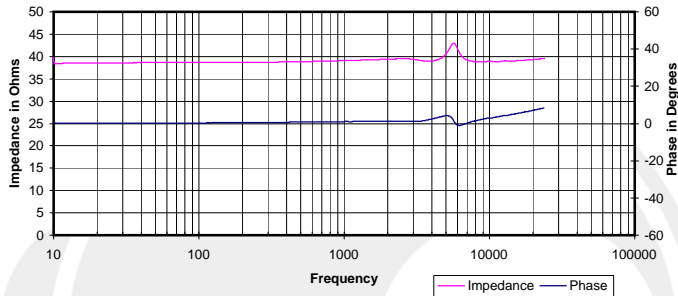
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



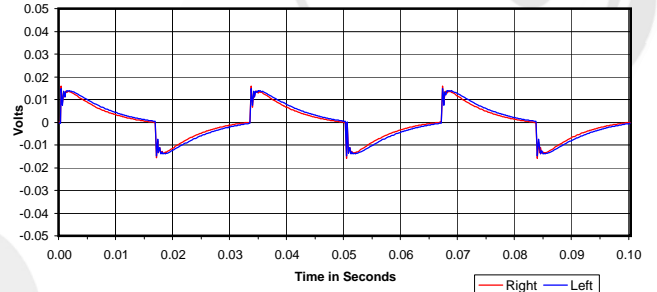
Isolation
Attenuation of External Sound vs. Frequency



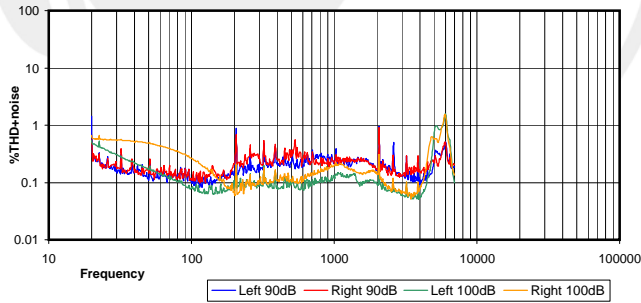
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



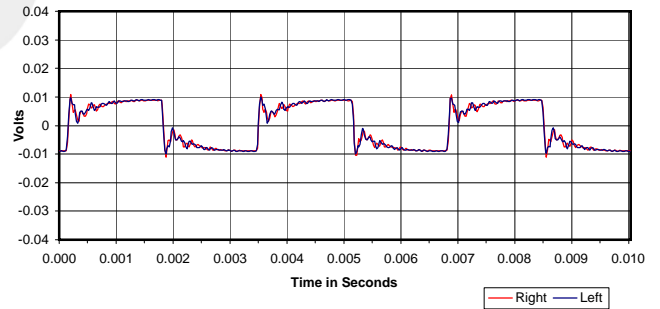
30 Hz Square Wave



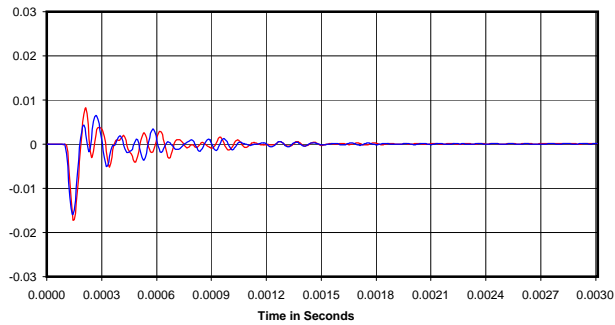
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

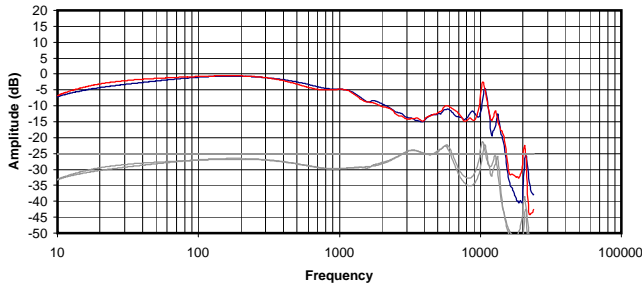


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

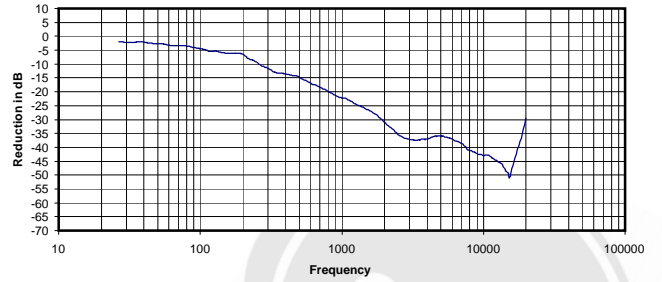
0.026 Vrms
39 Ohms
0.02 mW
-21 dB



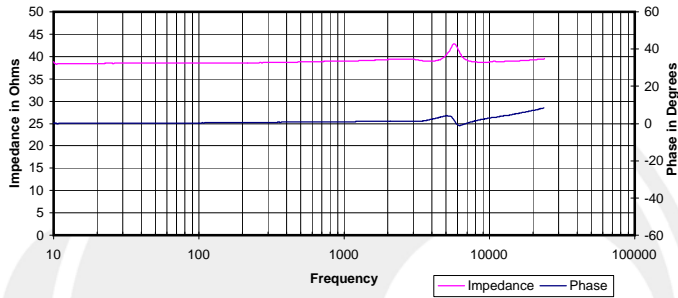
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



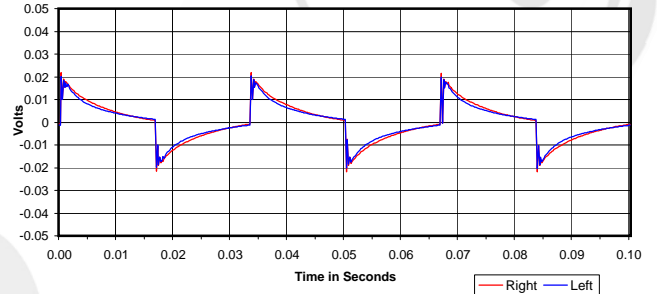
Isolation
Attenuation of External Sound vs. Frequency



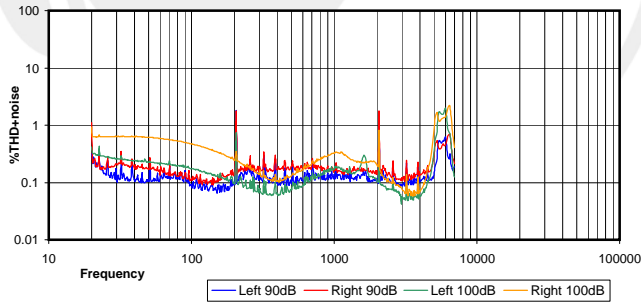
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



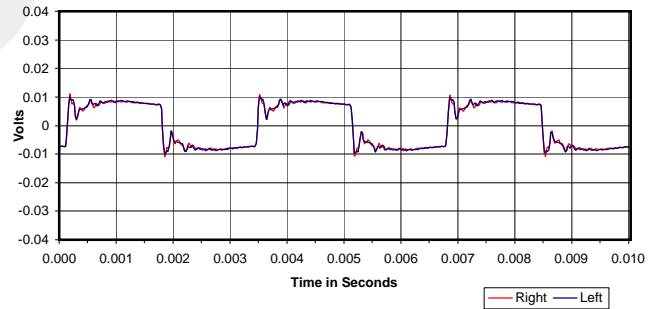
30 Hz Square Wave



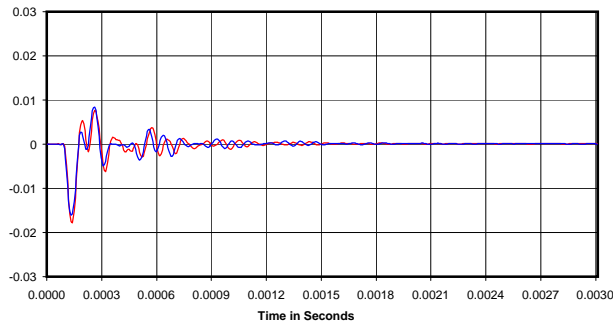
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

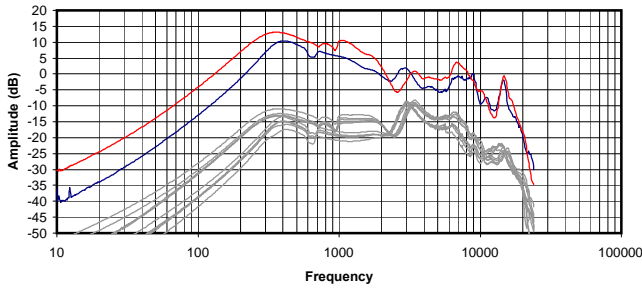


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

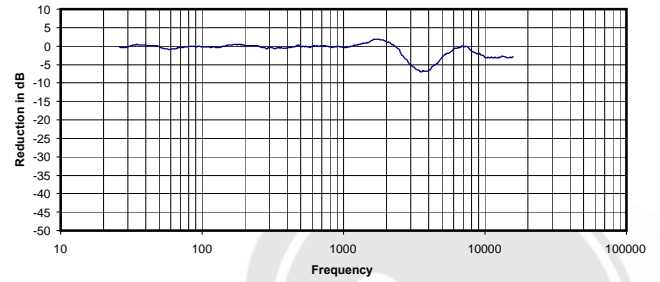
0.026 Vrms
39 Ohms
0.02 mW
-23 dB



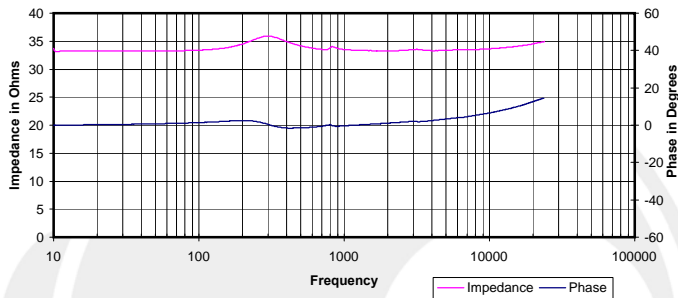
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



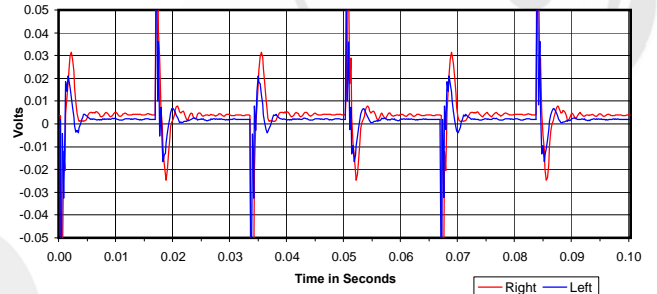
Isolation
 Attenuation of External Sound vs. Frequency



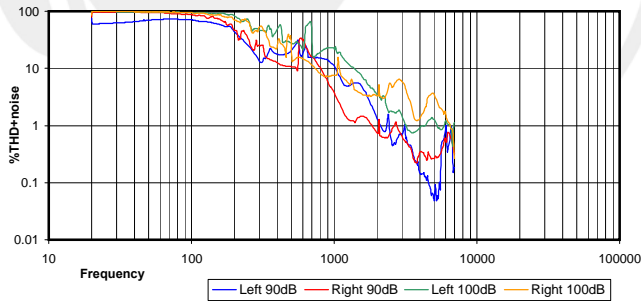
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



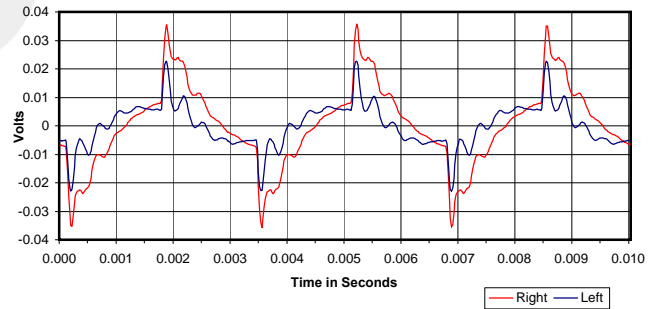
30 Hz Square Wave



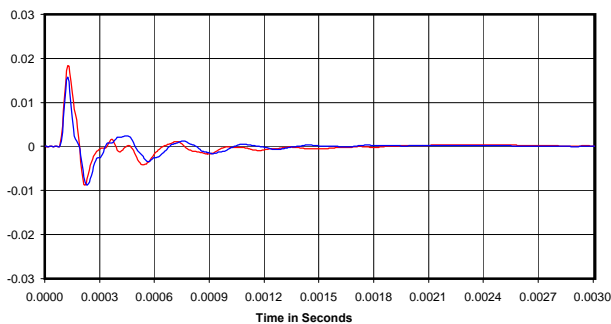
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

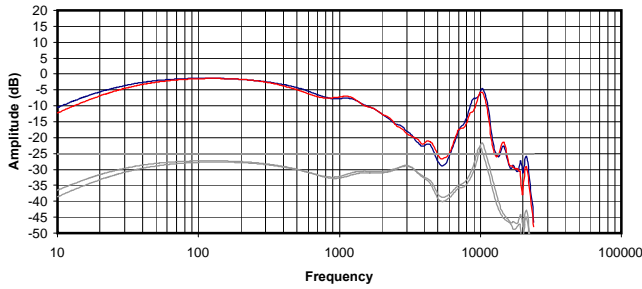


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

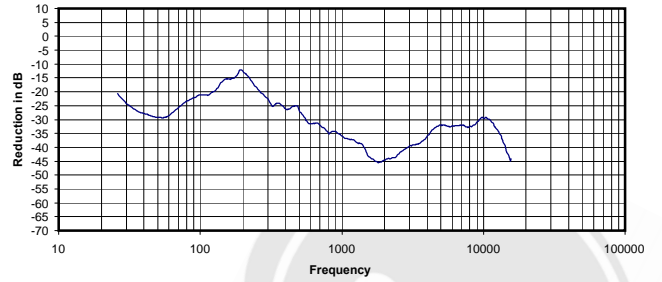
0.130 Vrms
 34 Ohms
 0.50 mW
 -1 dB



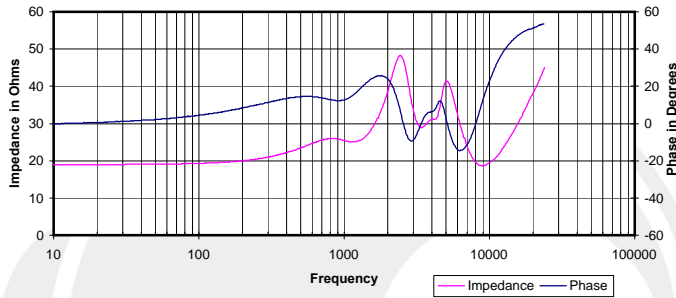
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



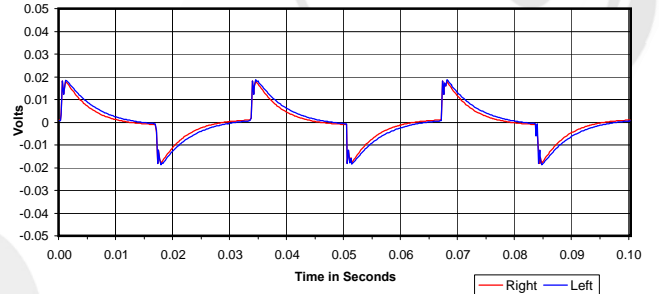
Isolation
Attenuation of External Sound vs. Frequency



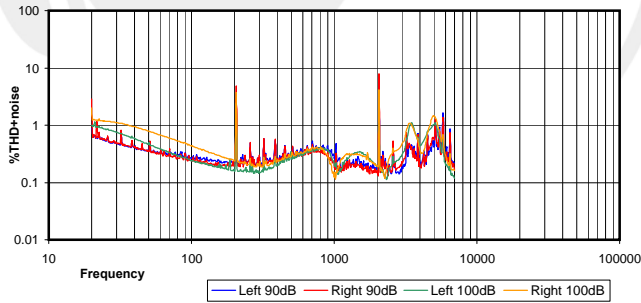
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



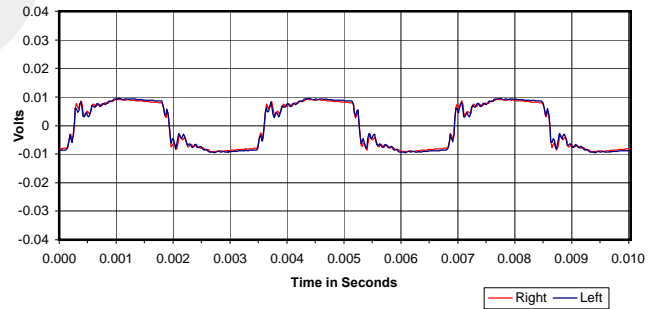
30 Hz Square Wave



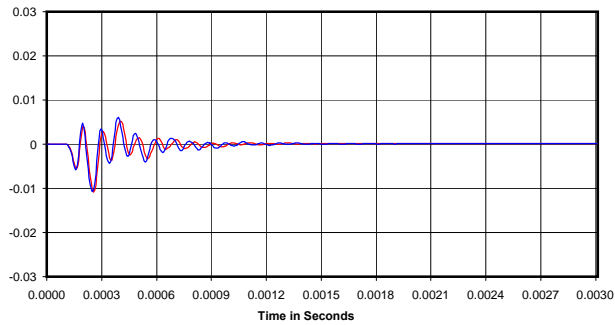
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

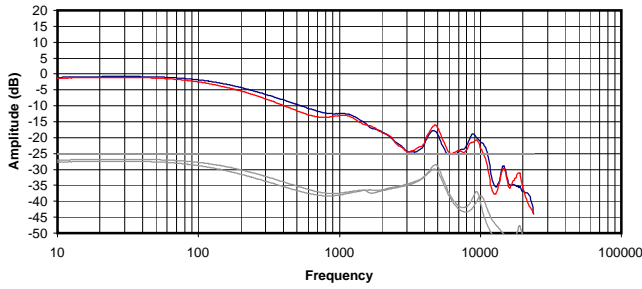


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

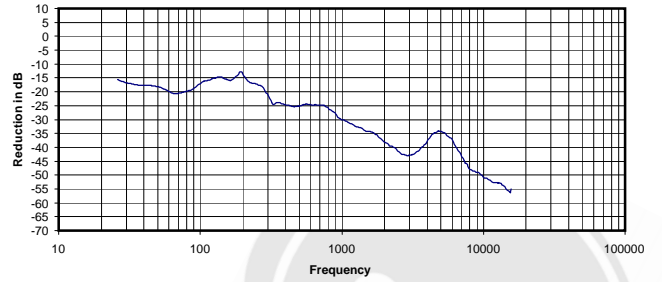
0.024 Vrms
25 Ohms
0.02 mW
-30 dB



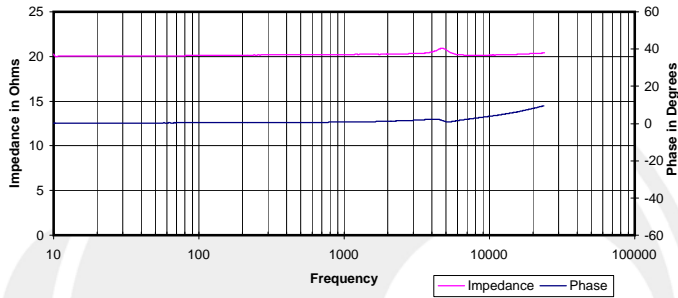
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



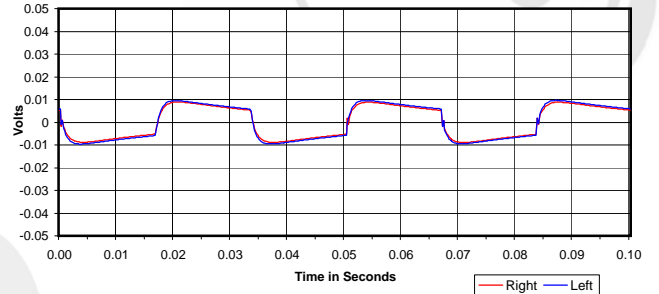
Isolation
Attenuation of External Sound vs. Frequency



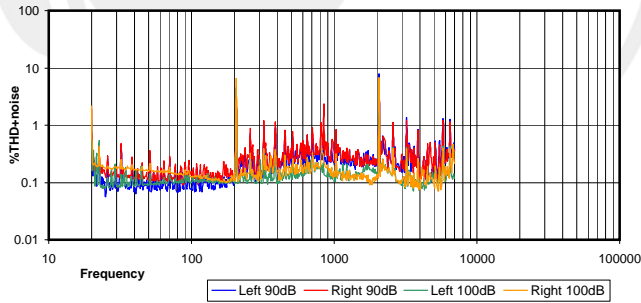
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



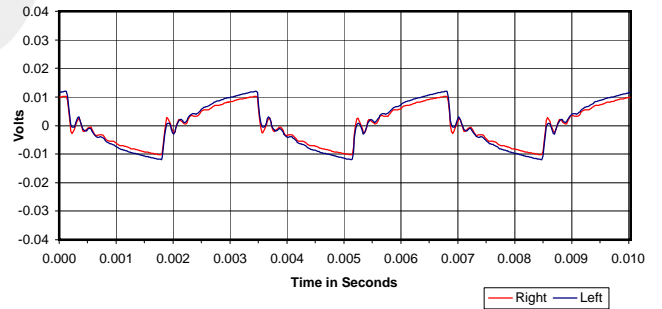
30 Hz Square Wave



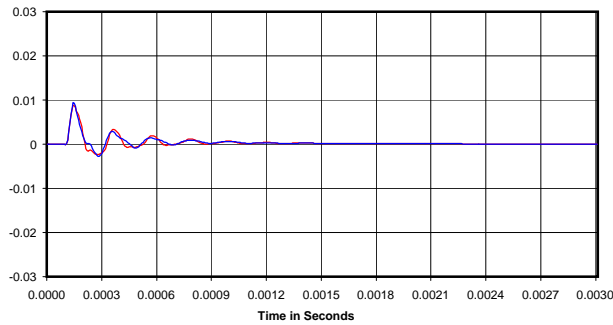
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

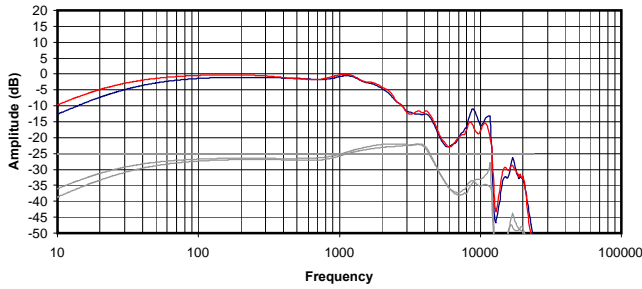


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

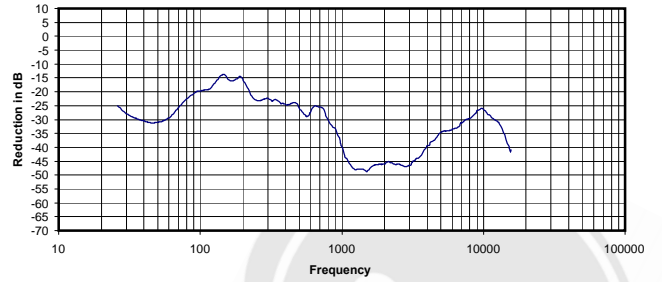
0.054 Vrms
20 Ohms
0.14 mW
-28 dB



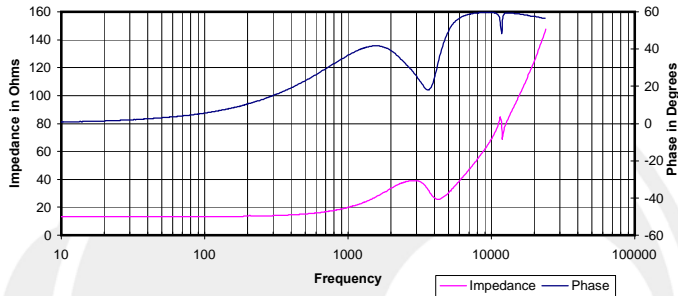
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



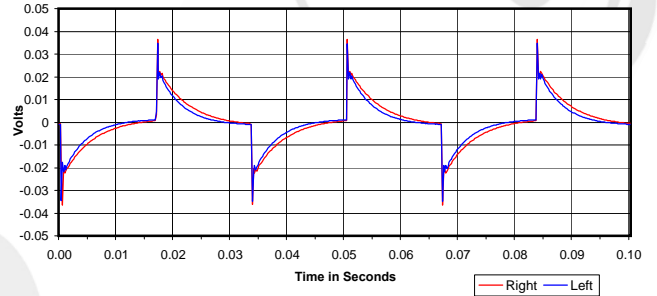
Isolation
Attenuation of External Sound vs. Frequency



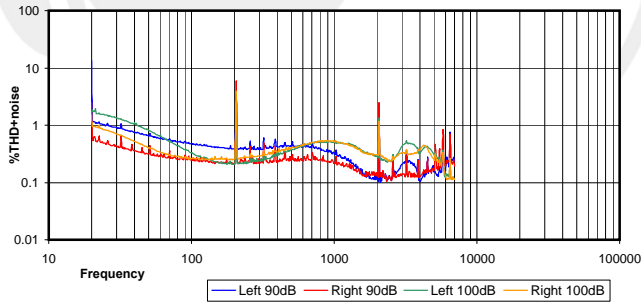
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



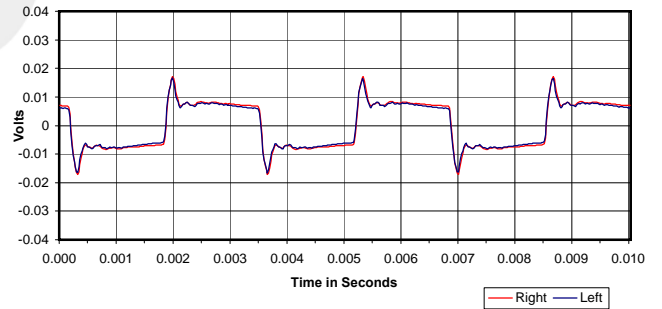
30 Hz Square Wave



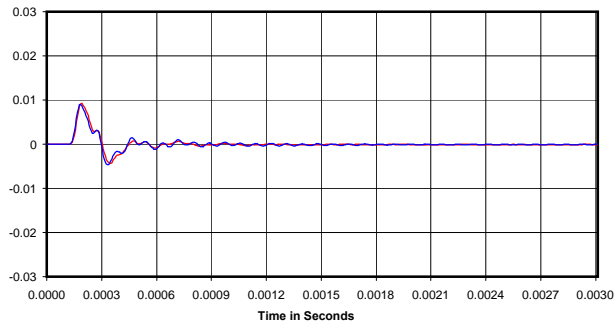
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

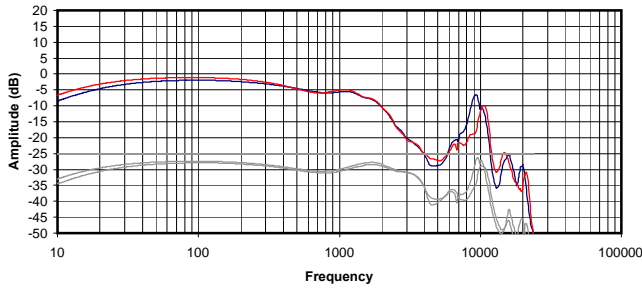


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

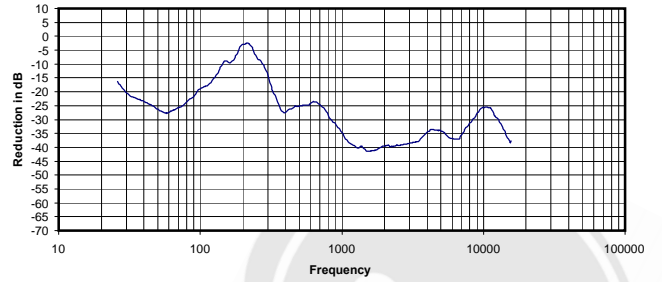
0.013 Vrms
20 Ohms
0.01 mW
-32 dB



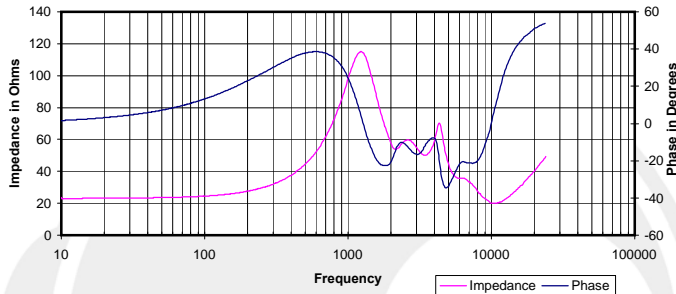
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



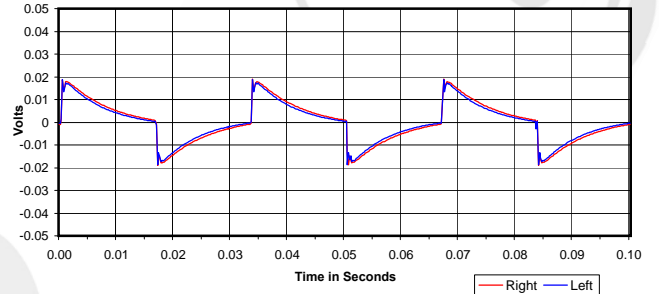
Isolation
Attenuation of External Sound vs. Frequency



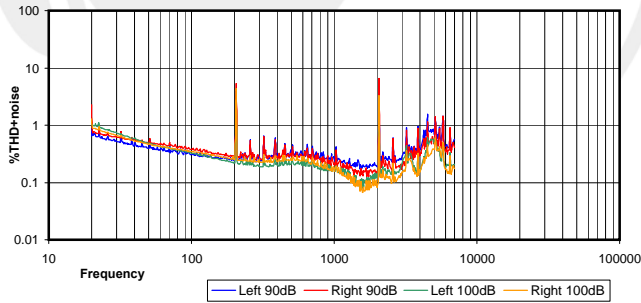
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



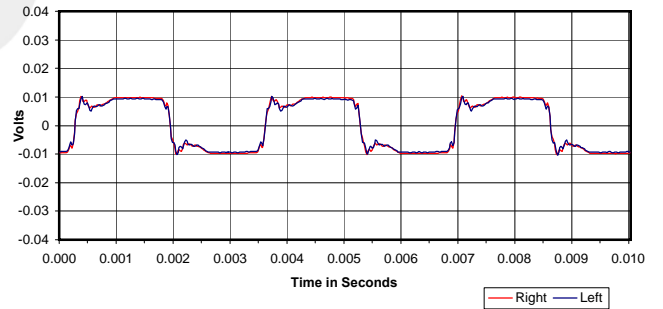
30 Hz Square Wave



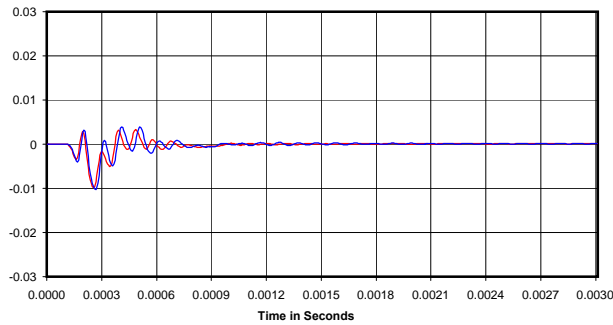
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

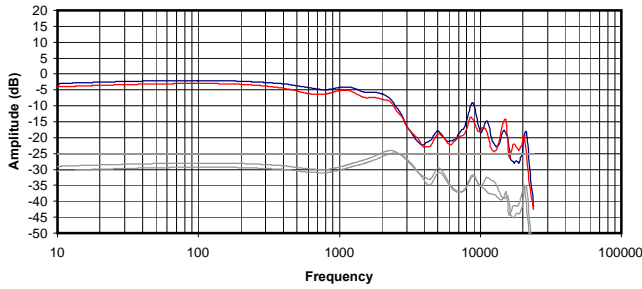


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

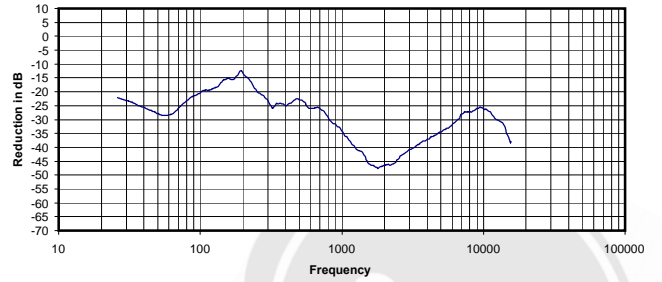
0.011 Vrms
98 Ohms
0.00 mW
-27 dB



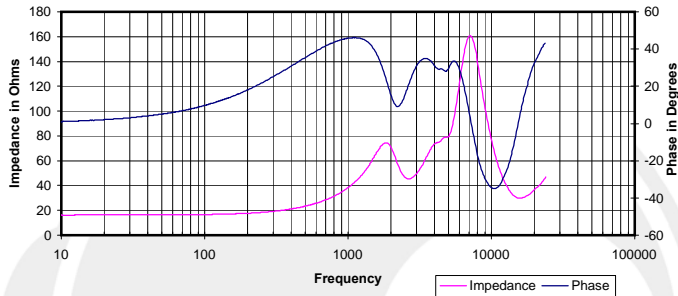
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



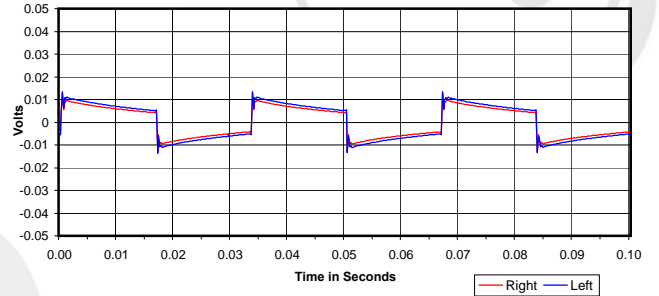
Isolation
Attenuation of External Sound vs. Frequency



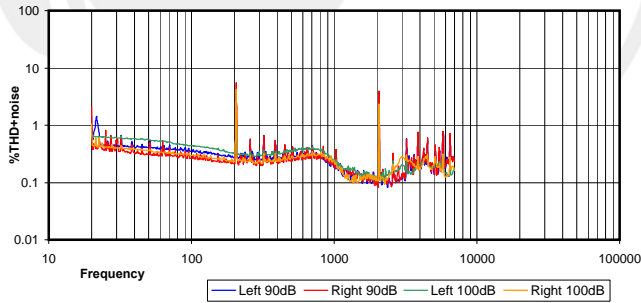
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



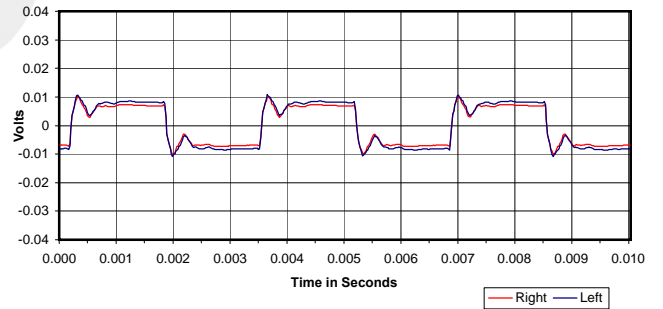
30 Hz Square Wave



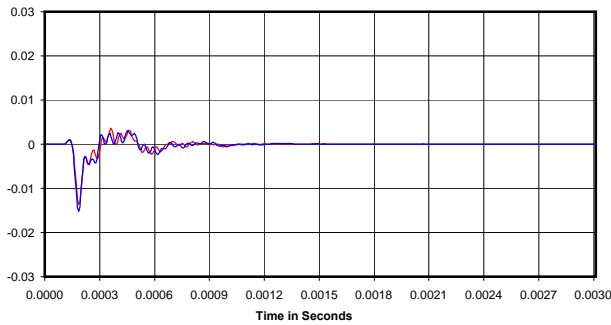
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

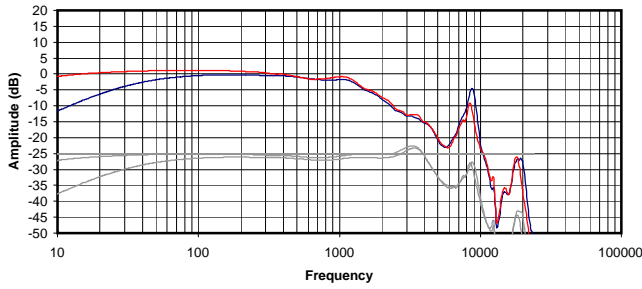


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

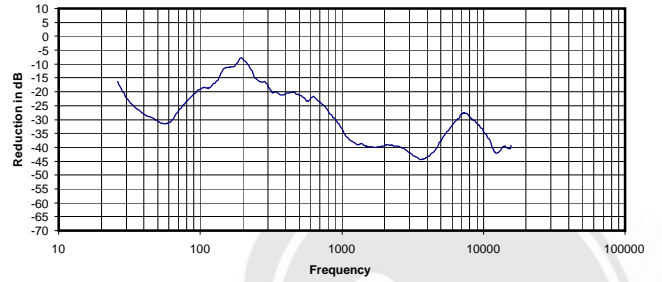
0.015 Vrms
38 Ohms
0.01 mW
-30 dB



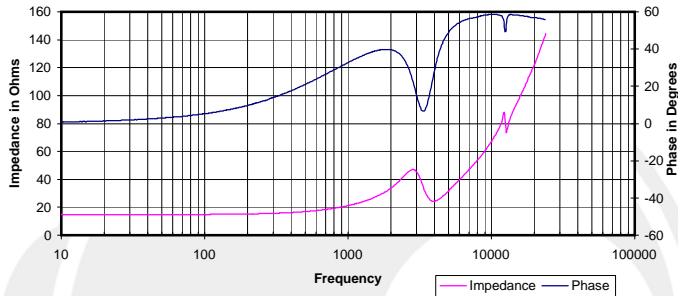
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



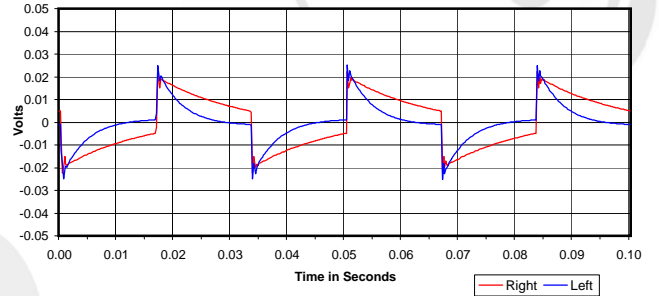
Isolation
Attenuation of External Sound vs. Frequency



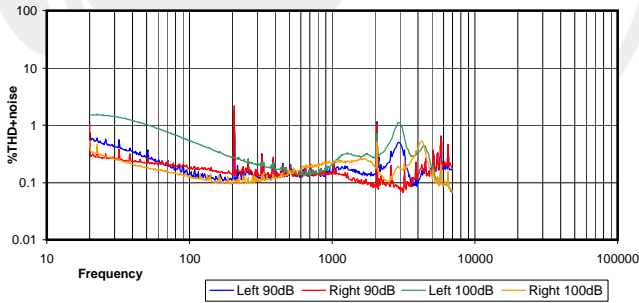
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



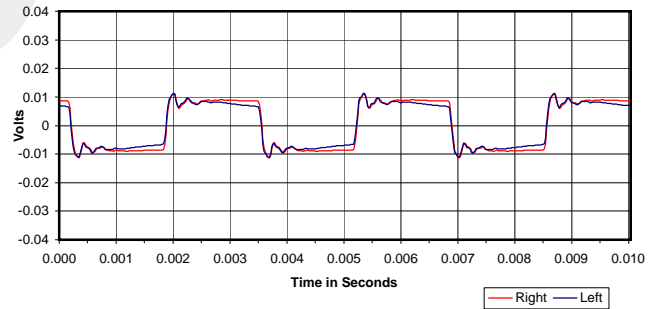
30 Hz Square Wave



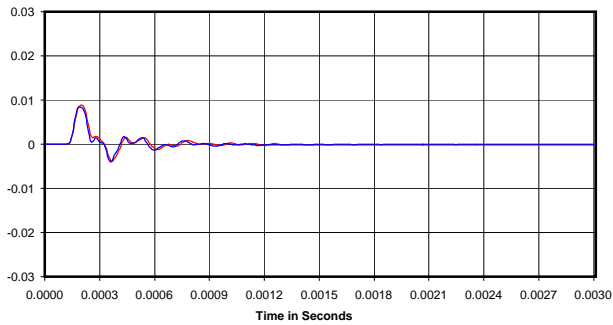
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

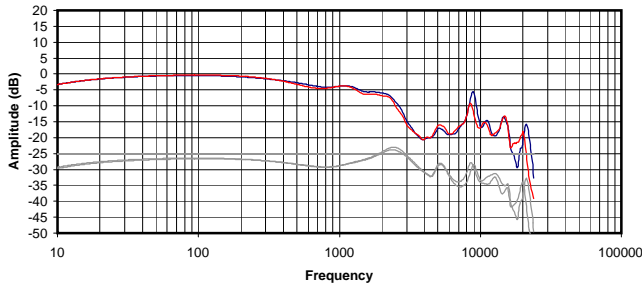


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

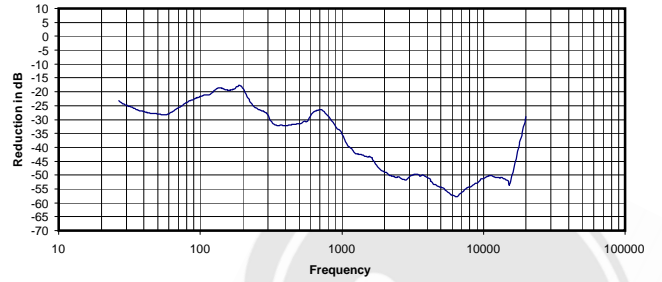
0.018 Vrms
21 Ohms
0.02 mW
-28 dB



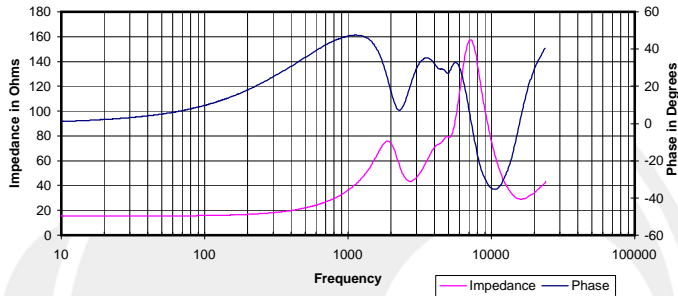
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



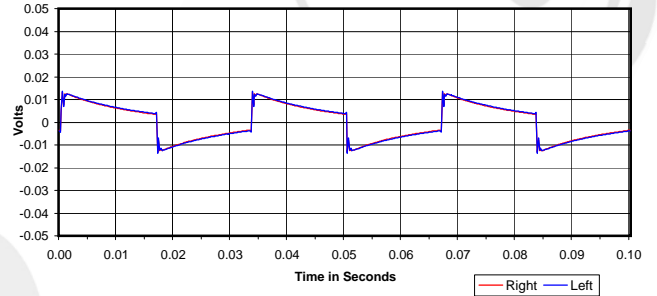
Isolation
Attenuation of External Sound vs. Frequency



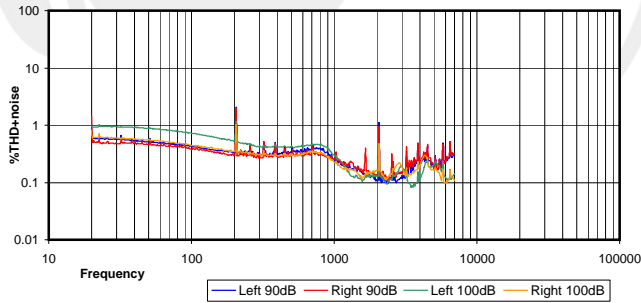
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



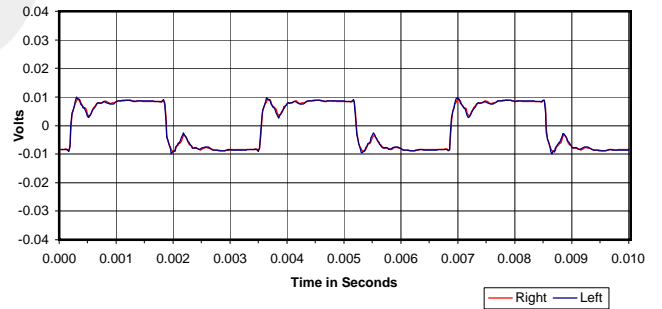
30 Hz Square Wave



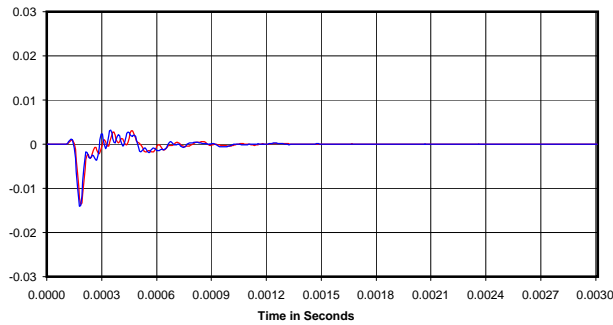
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

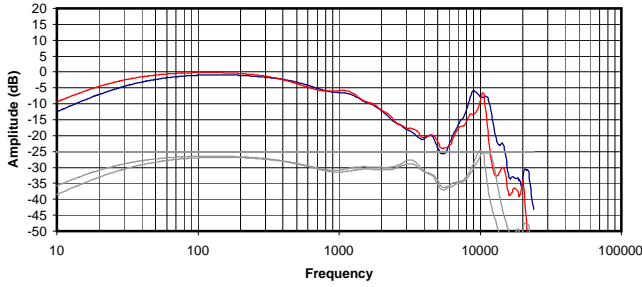


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

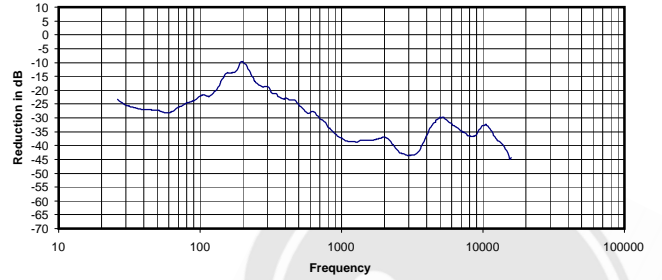
0.016 Vrms
36 Ohms
0.01 mW
-38 dB



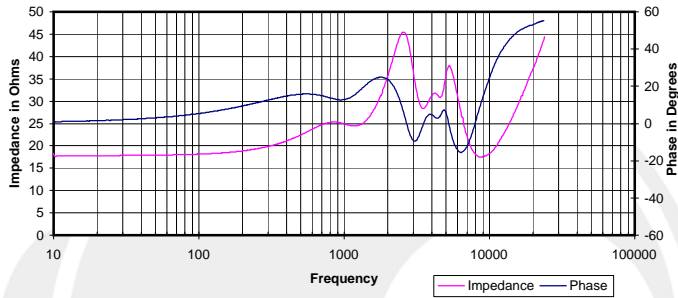
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



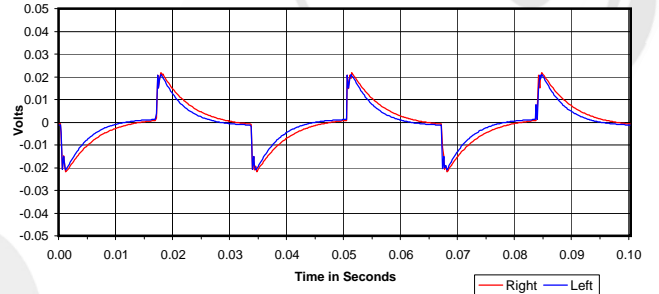
Isolation
Attenuation of External Sound vs. Frequency



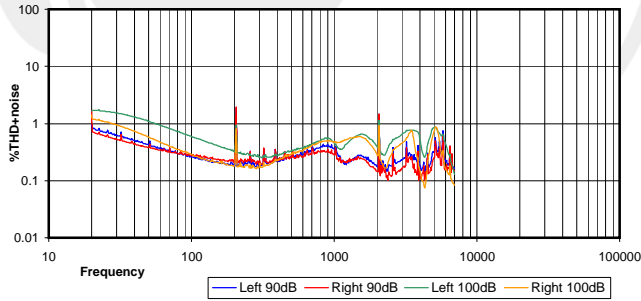
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



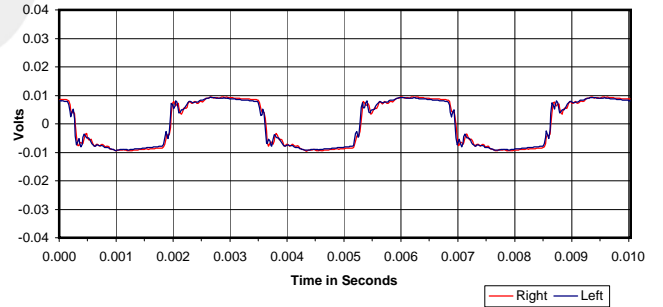
30 Hz Square Wave



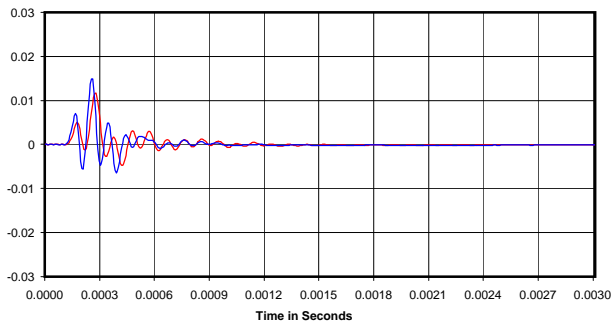
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

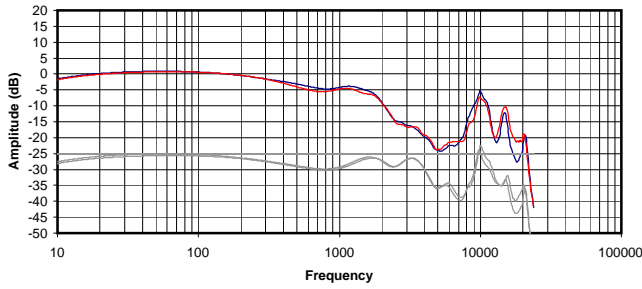


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

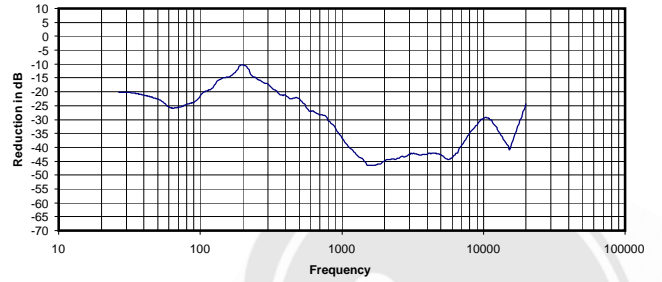
0.022 Vrms
25 Ohms
0.02 mW
-29 dB



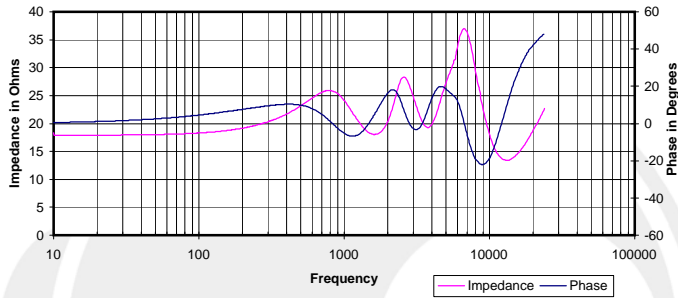
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



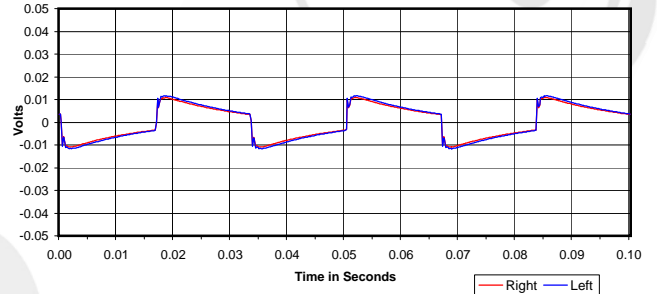
Isolation
Attenuation of External Sound vs. Frequency



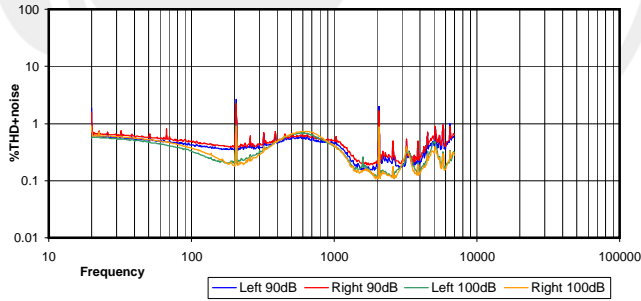
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



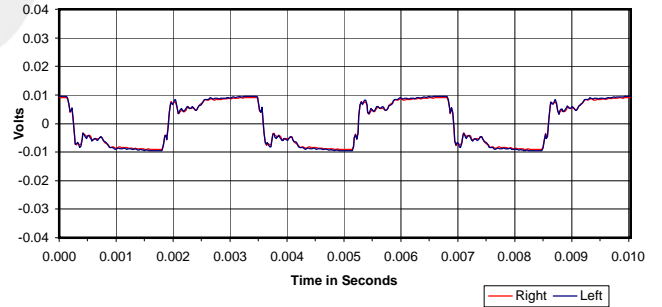
30 Hz Square Wave



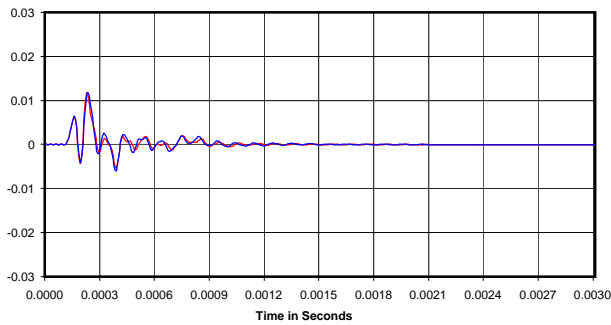
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

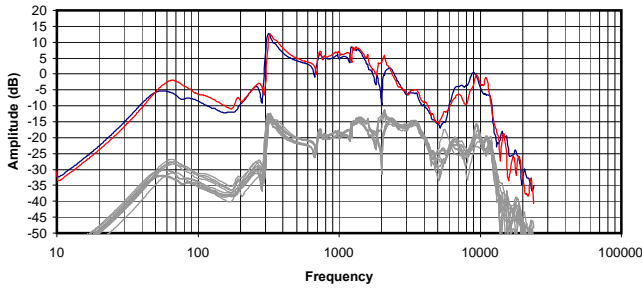


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

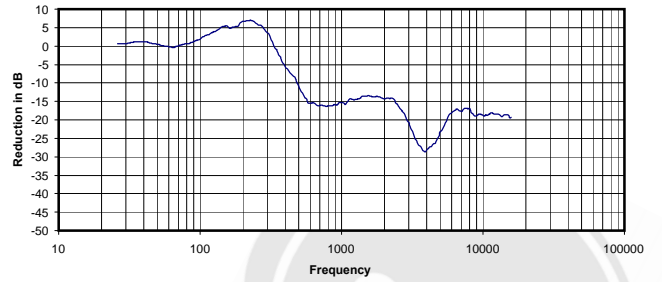
0.015 Vrms
24 Ohms
0.01 mW
-31 dB



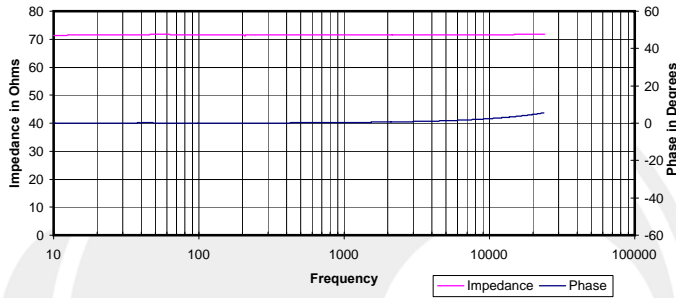
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



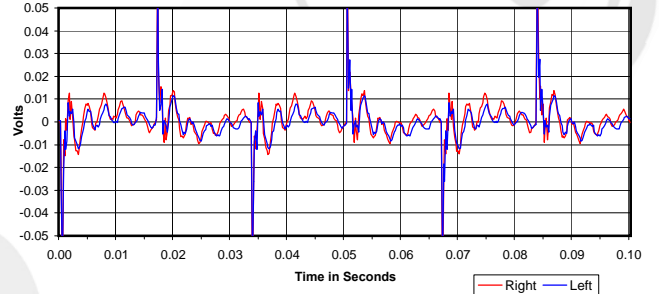
Isolation
Attenuation of External Sound vs. Frequency



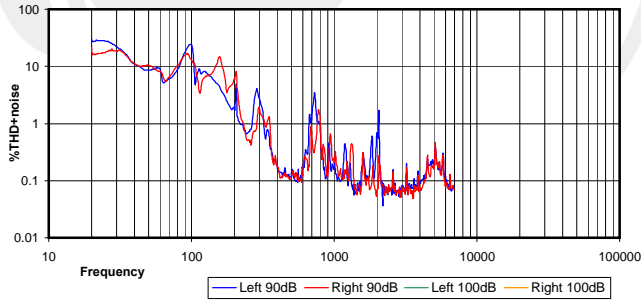
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



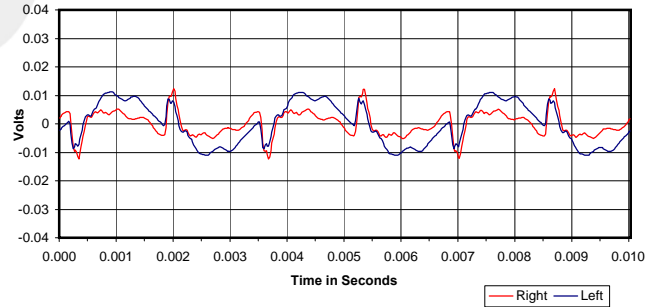
30 Hz Square Wave



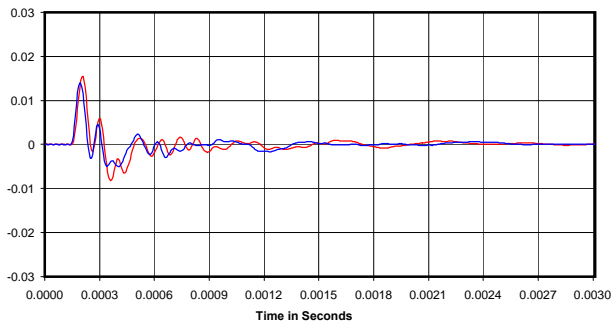
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

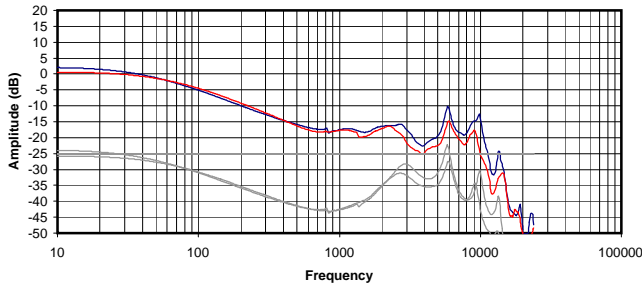


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

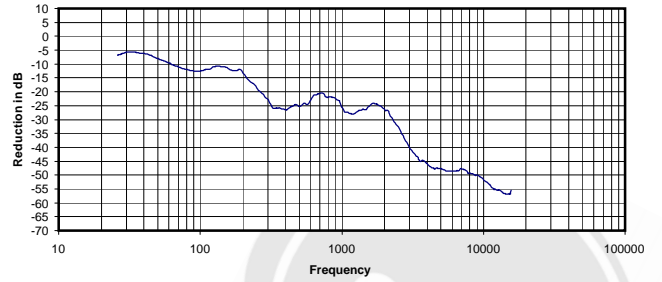
0.894 Vrms
71 Ohms
11.19 mW
-10 dB



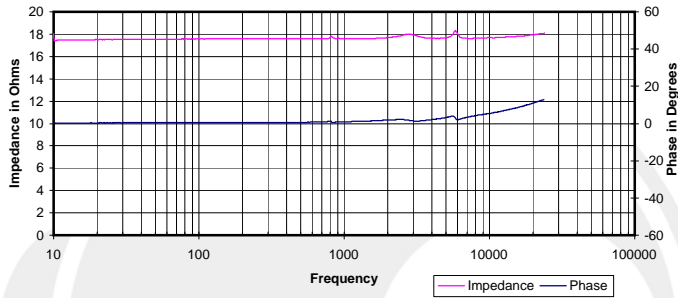
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



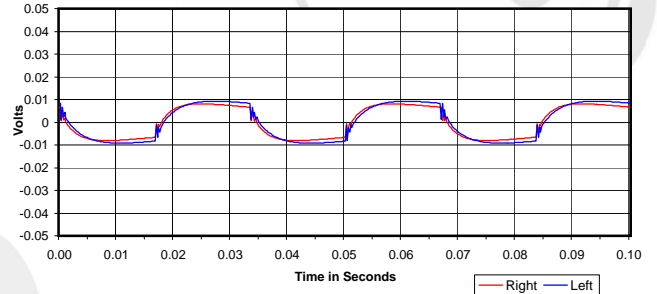
Isolation
Attenuation of External Sound vs. Frequency



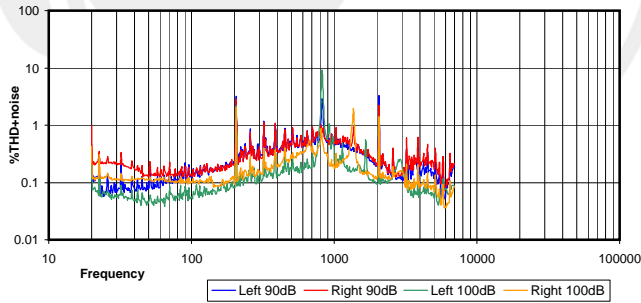
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



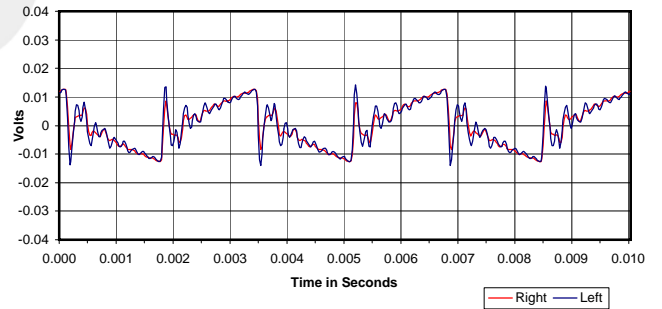
30 Hz Square Wave



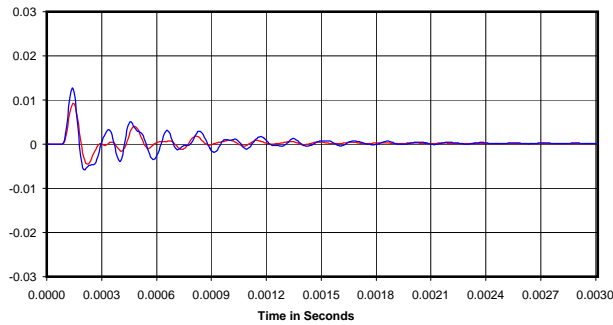
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

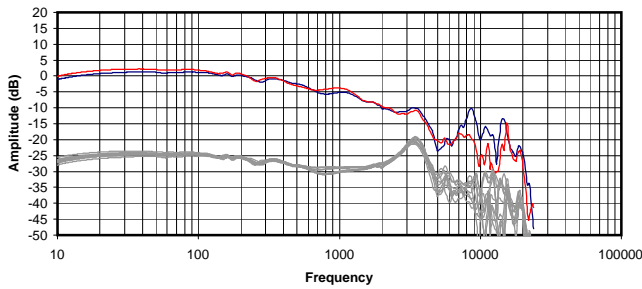


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

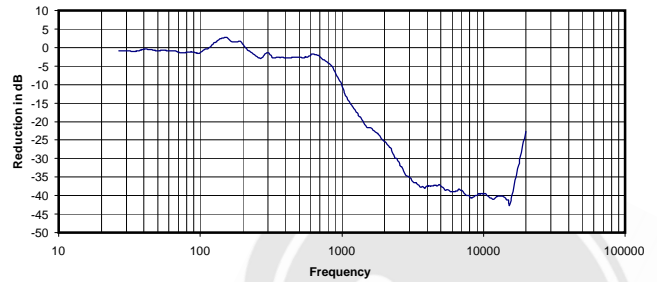
0.051 Vrms
18 Ohms
0.15 mW
-26 dB



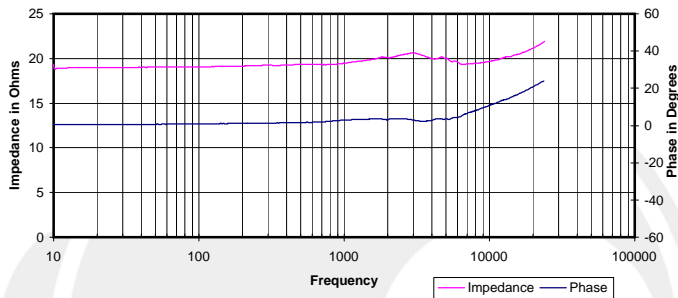
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



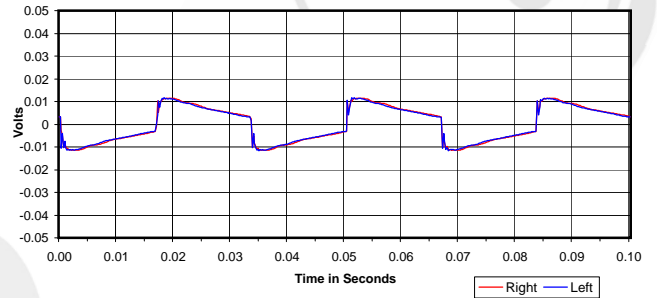
Isolation
 Attenuation of External Sound vs. Frequency



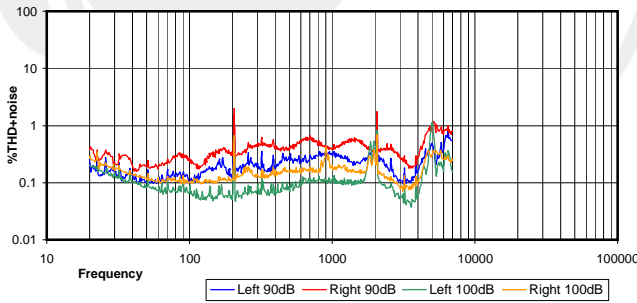
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



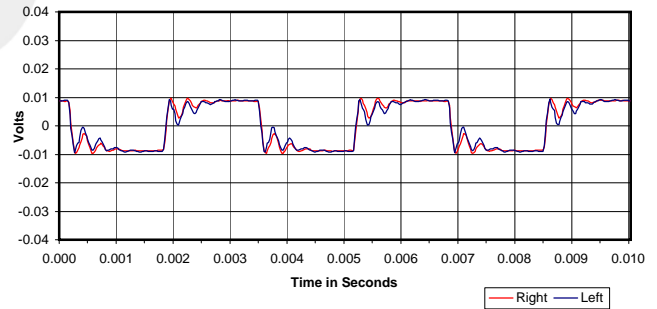
30 Hz Square Wave



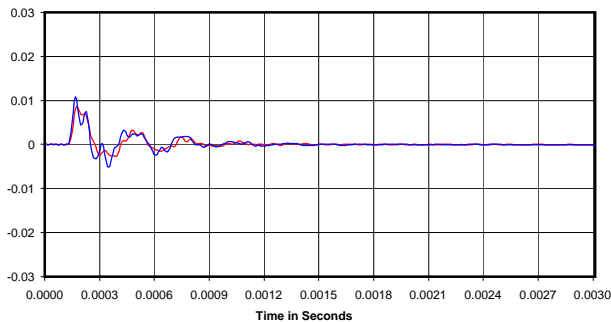
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

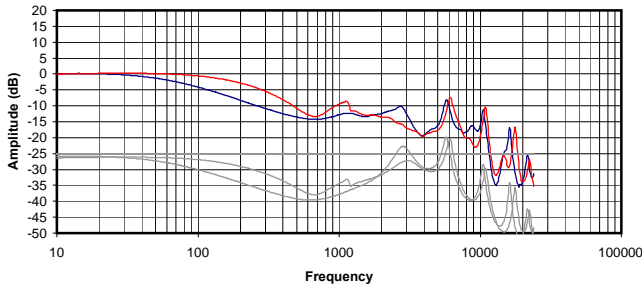


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

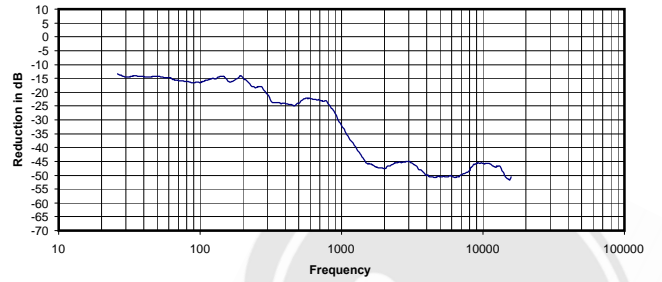
0.026 Vrms
 19 Ohms
 0.03 mW
 -16 dB



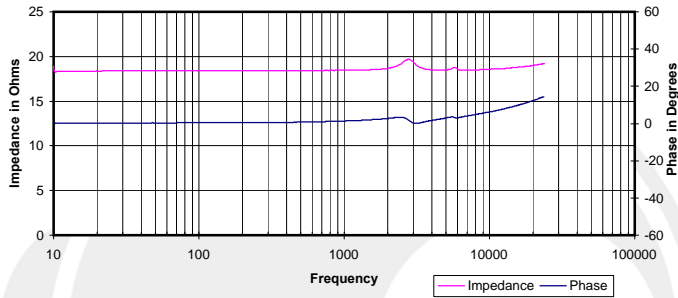
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



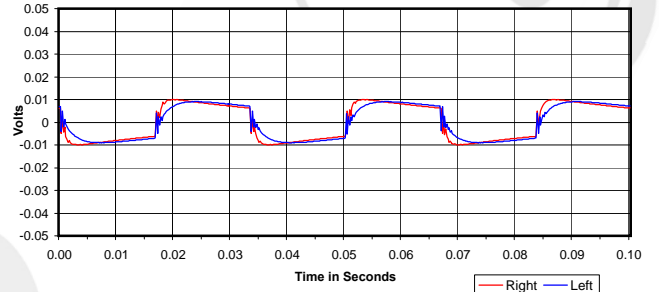
Isolation
Attenuation of External Sound vs. Frequency



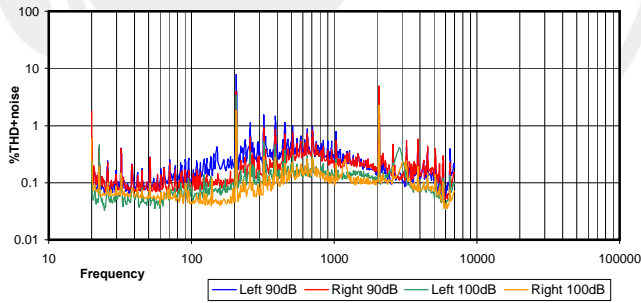
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



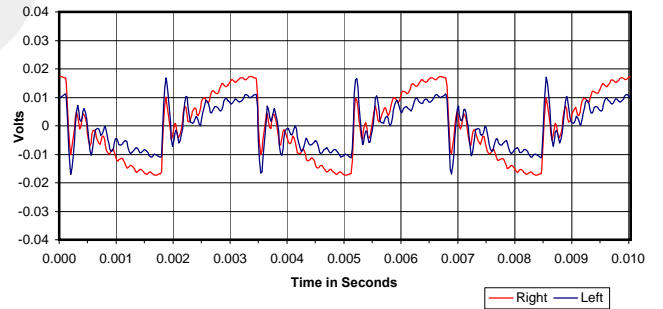
30 Hz Square Wave



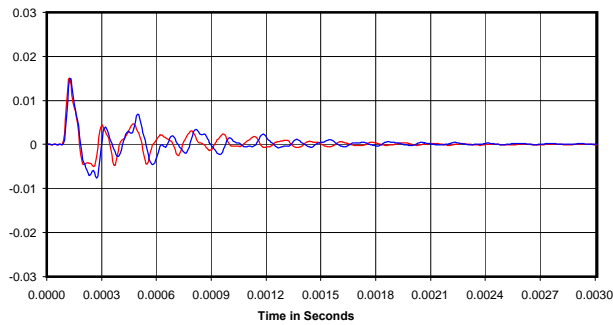
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

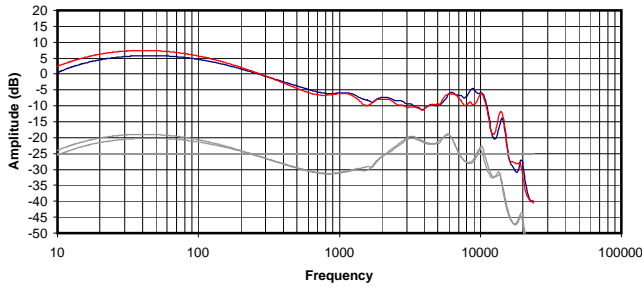


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

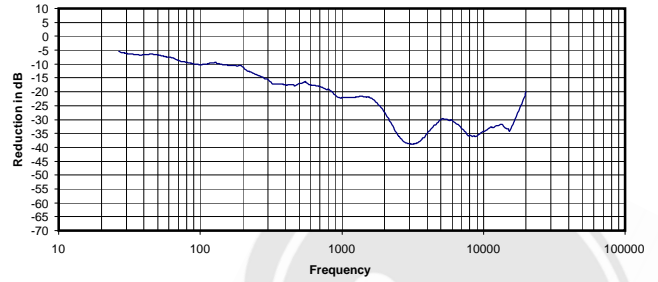
0.036 Vrms
18 Ohms
0.07 mW
-31 dB



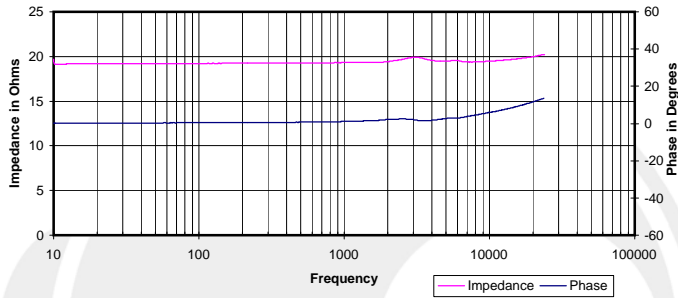
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



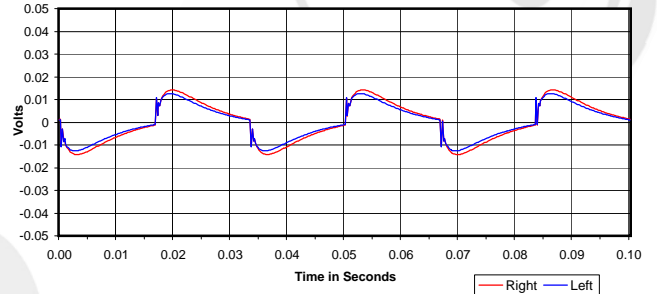
Isolation
Attenuation of External Sound vs. Frequency



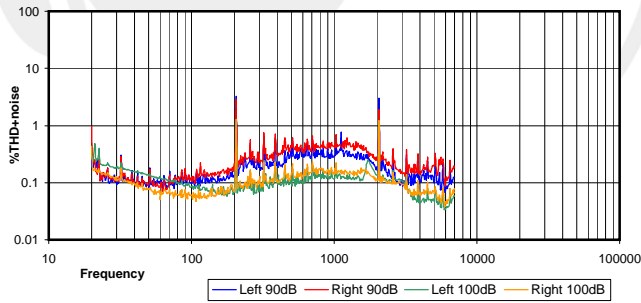
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



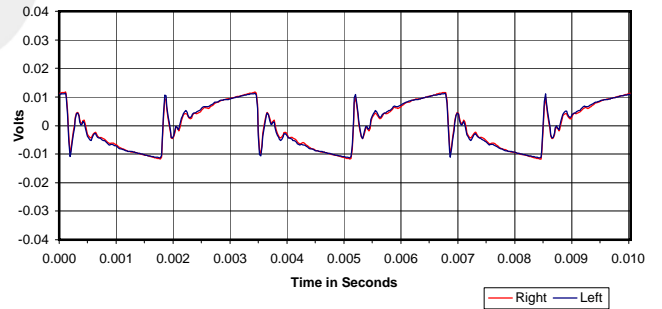
30 Hz Square Wave



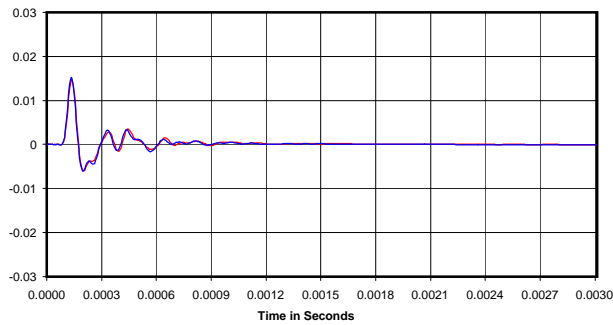
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



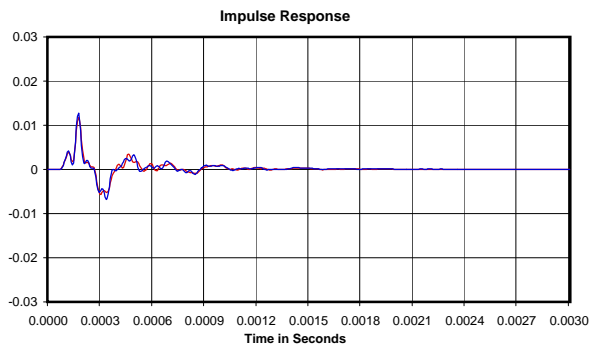
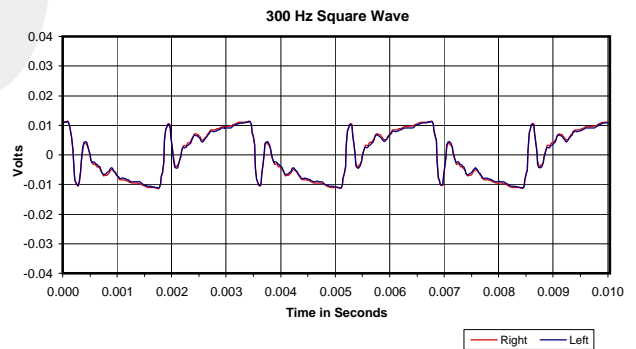
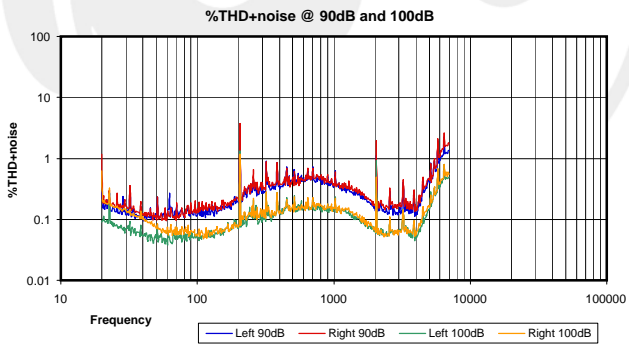
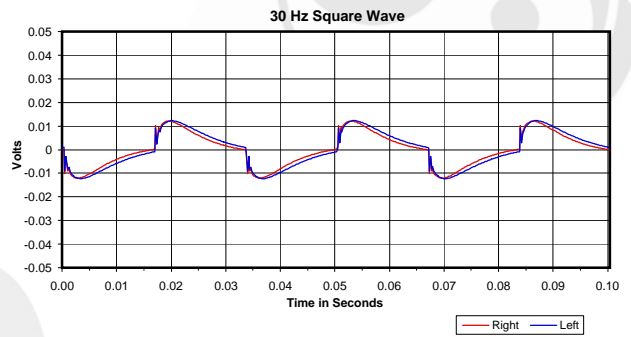
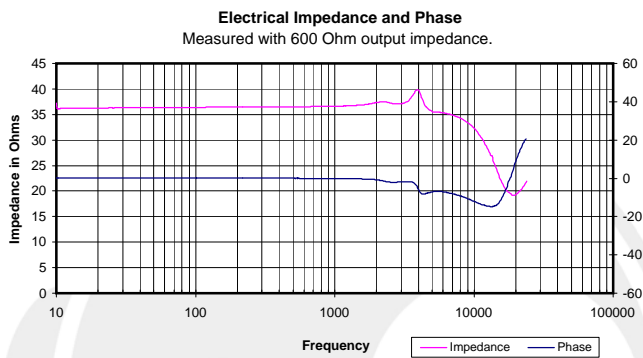
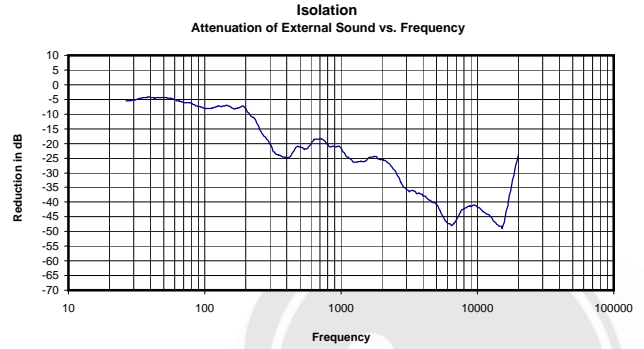
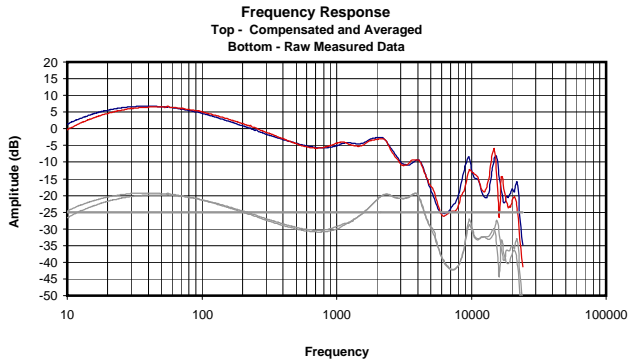
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.044 Vrms
19 Ohms
0.10 mW
-23 dB



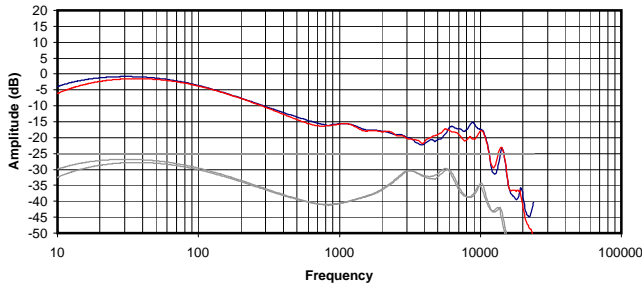


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

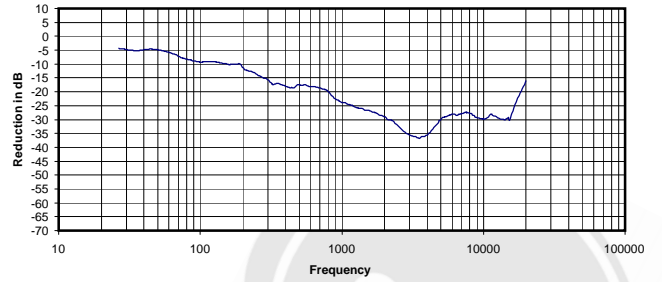
0.039 Vrms
37 Ohms
0.04 mW
-25 dBr



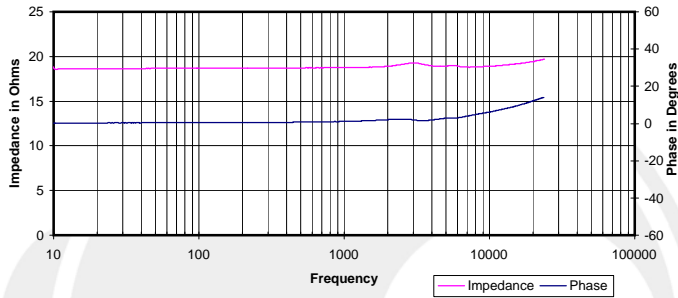
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



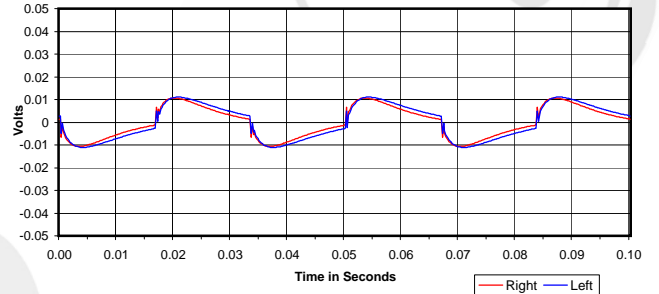
Isolation
Attenuation of External Sound vs. Frequency



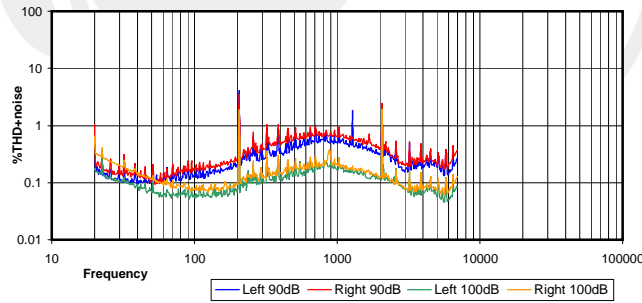
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



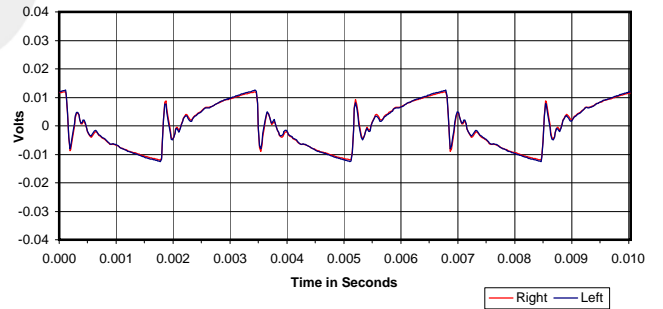
30 Hz Square Wave



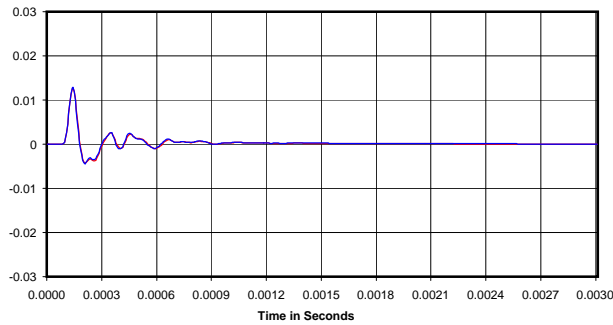
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

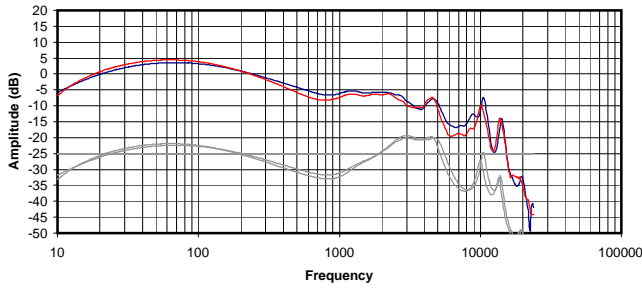


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

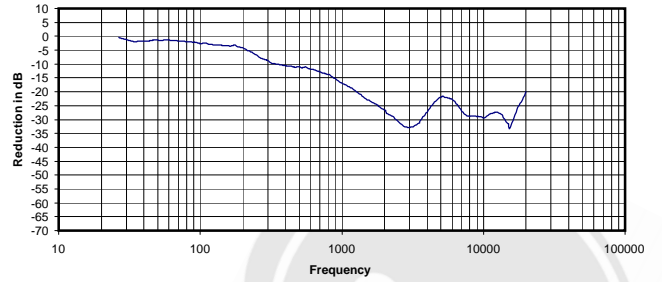
0.041 Vrms
19 Ohms
0.09 mW
-22 dB



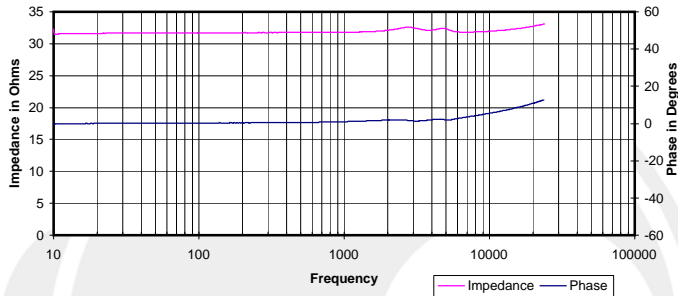
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



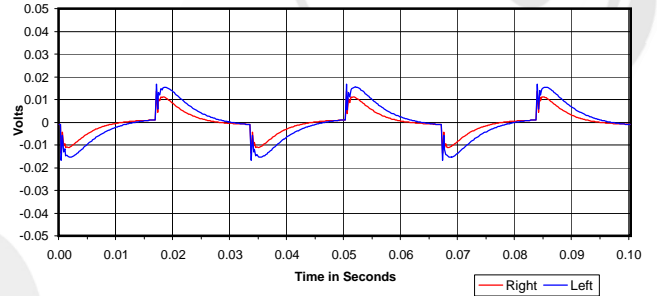
Isolation
Attenuation of External Sound vs. Frequency



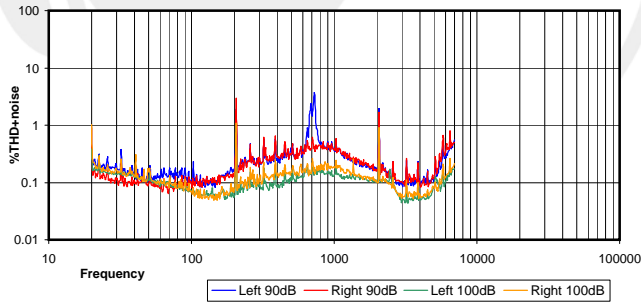
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



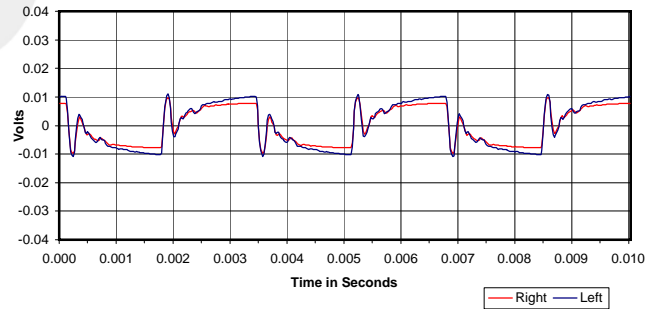
30 Hz Square Wave



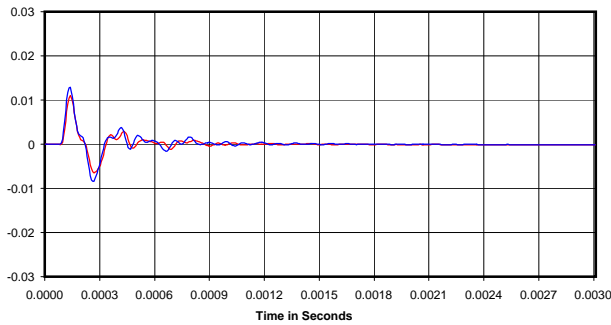
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

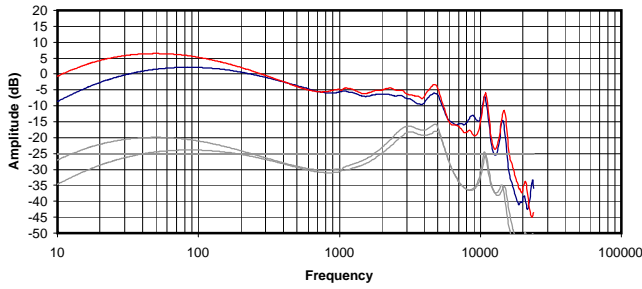


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

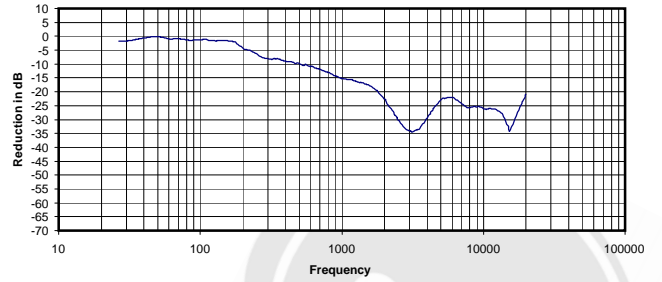
0.054 Vrms
32 Ohms
0.09 mW
-17 dB



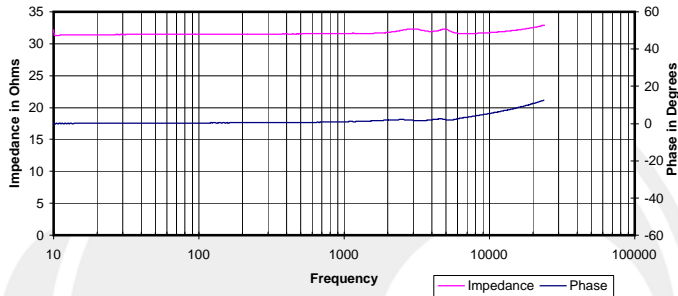
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



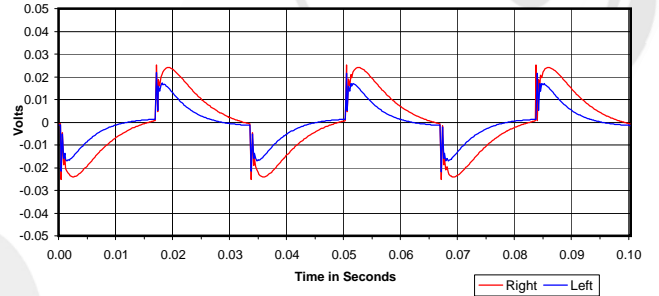
Isolation
Attenuation of External Sound vs. Frequency



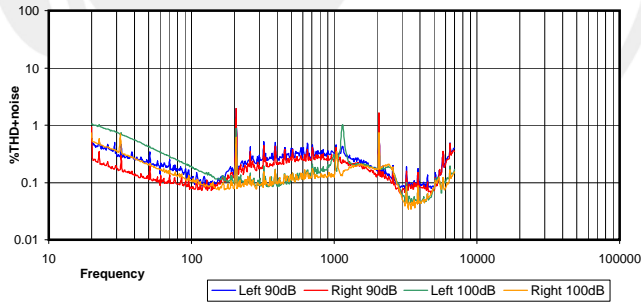
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



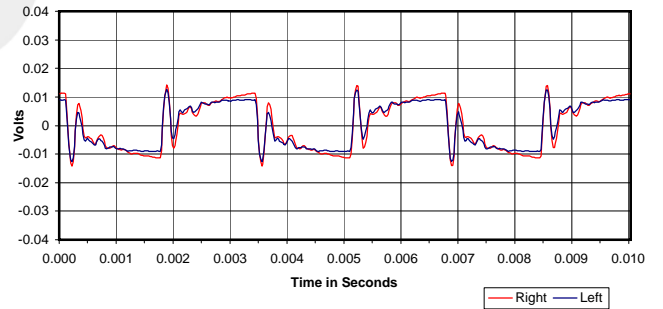
30 Hz Square Wave



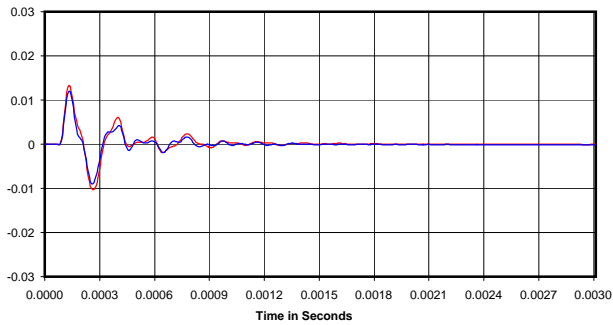
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

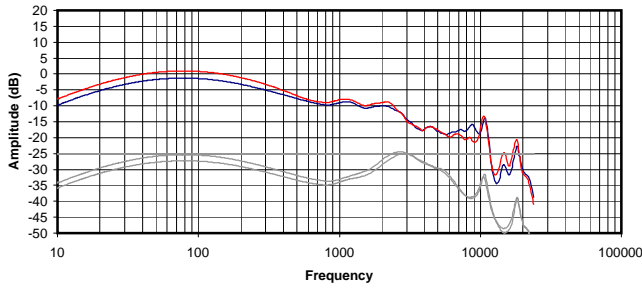


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

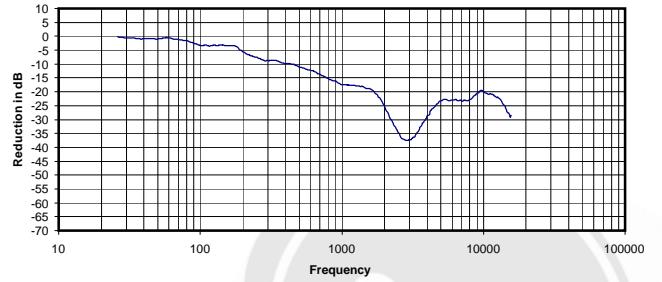
0.057 Vrms
32 Ohms
0.10 mW
-16 dB



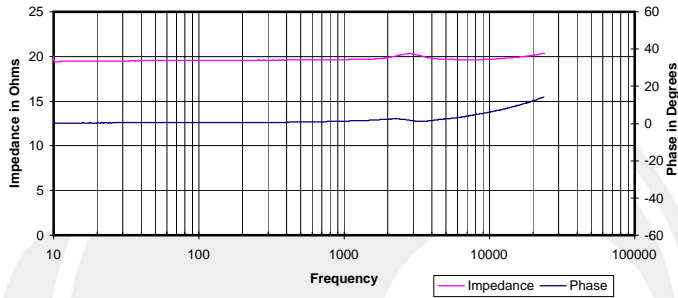
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



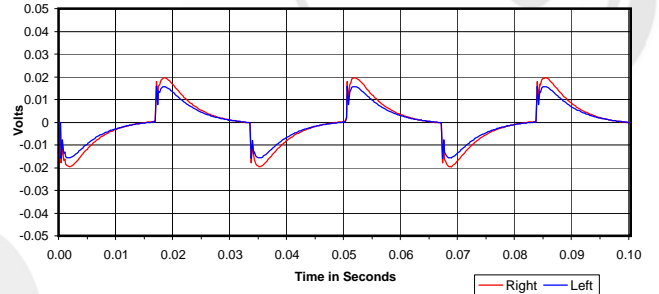
Isolation
Attenuation of External Sound vs. Frequency



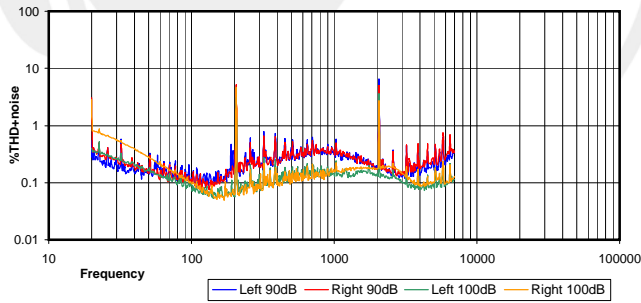
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



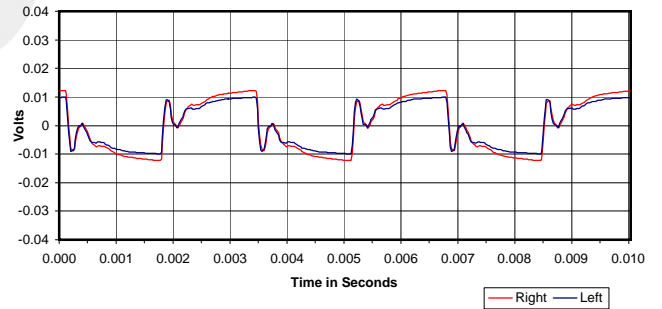
30 Hz Square Wave



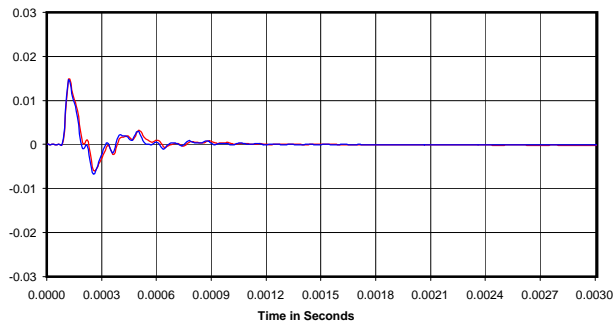
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



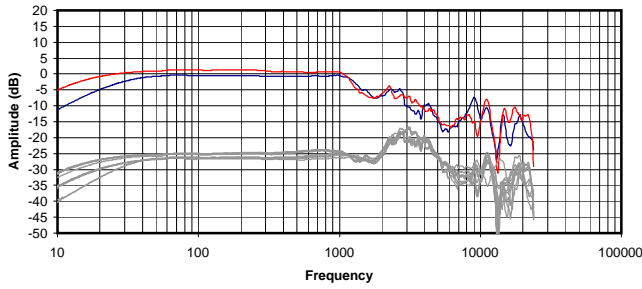
Impulse Response



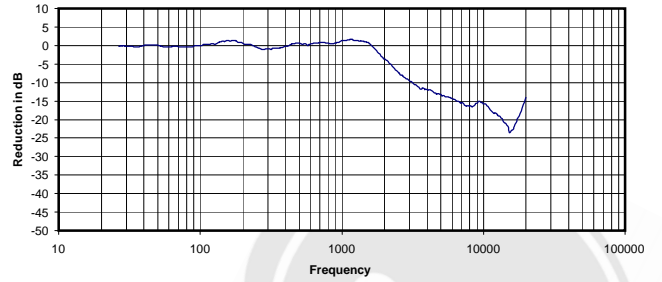
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.045 Vrms
20 Ohms
0.10 mW
-16 dB

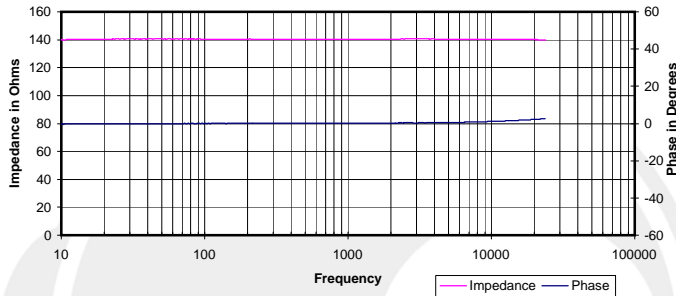
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



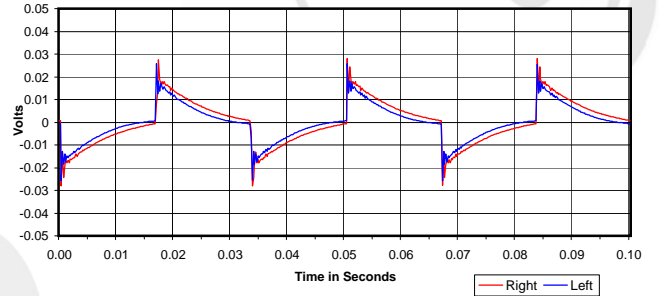
Isolation
 Attenuation of External Sound vs. Frequency



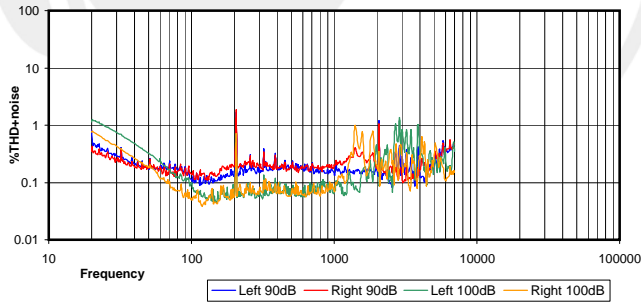
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



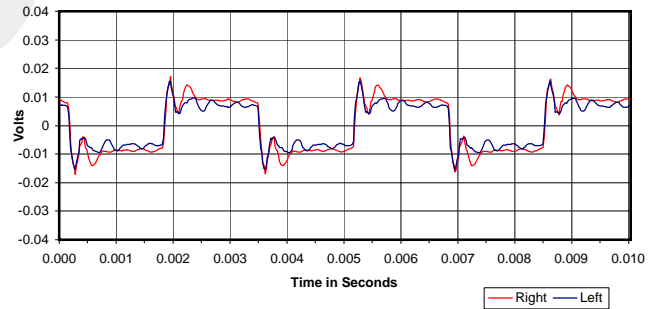
30 Hz Square Wave



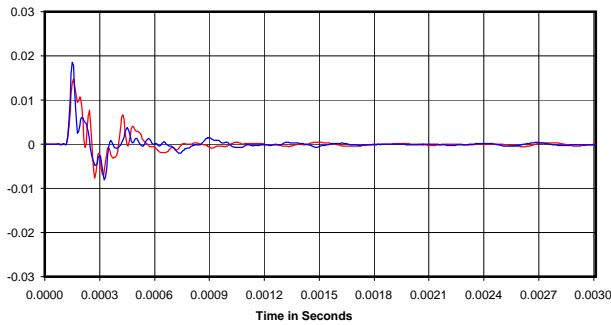
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



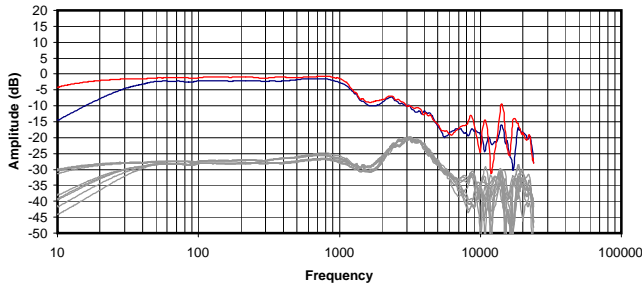
Impulse Response



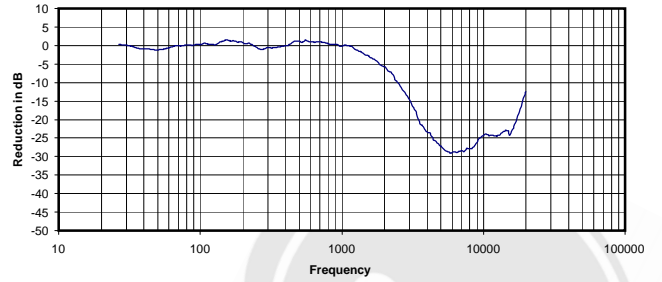
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.381 Vrms
 140 Ohms
 1.03 mW
 -4 dB

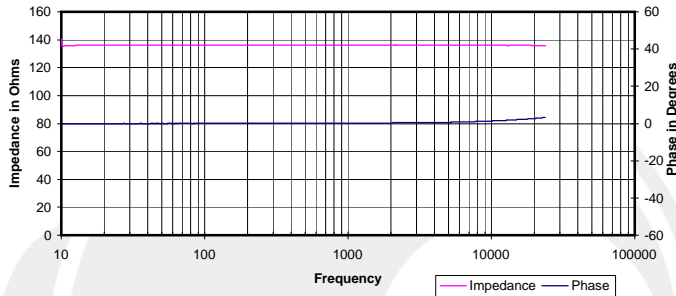
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



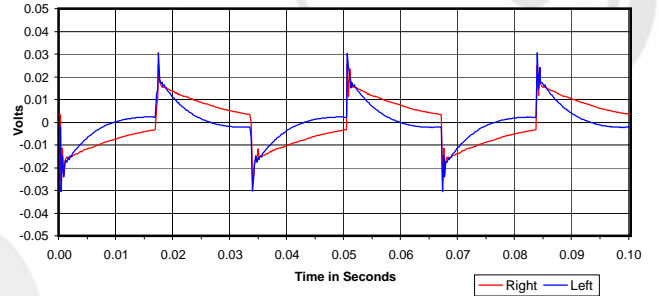
Isolation
 Attenuation of External Sound vs. Frequency



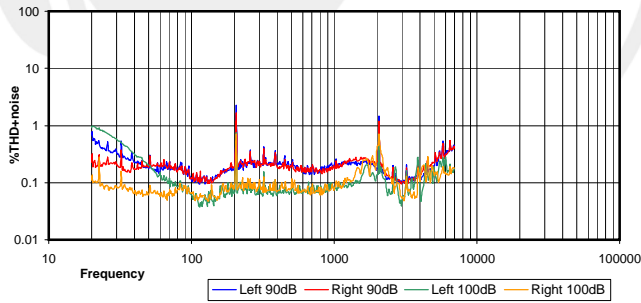
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



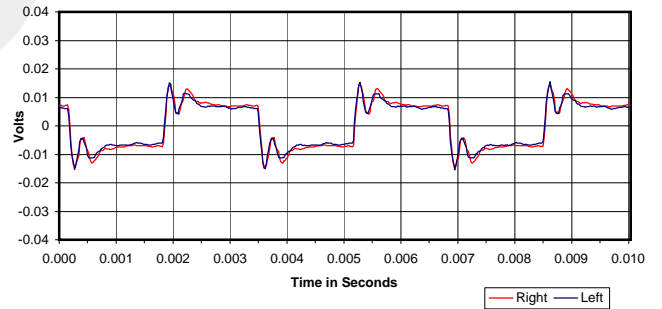
30 Hz Square Wave



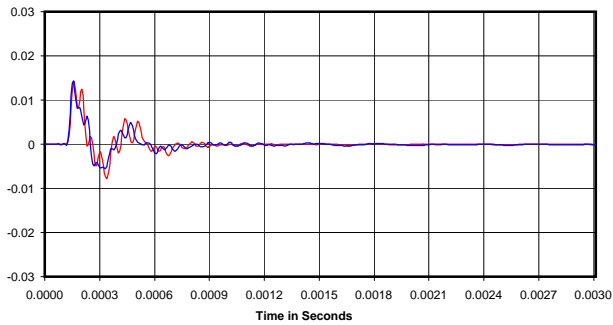
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

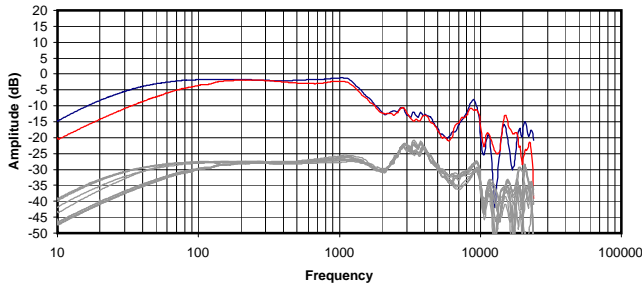


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

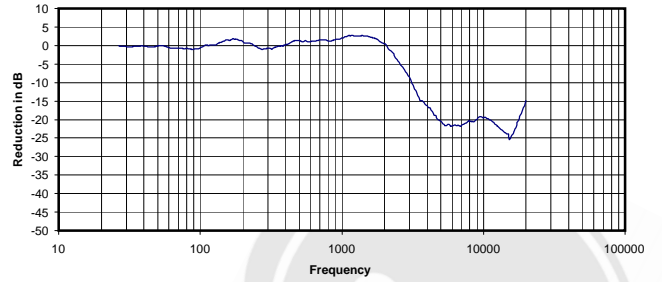
0.268 Vrms
 136 Ohms
 0.53 mW
 -8 dBr



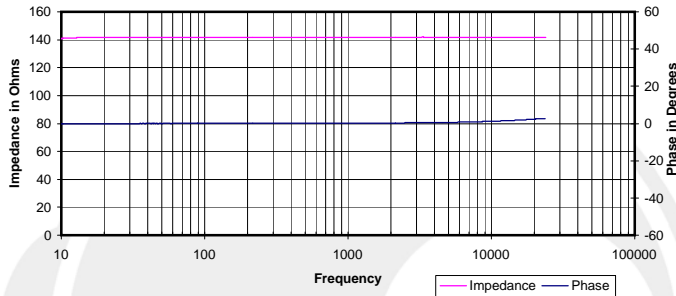
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



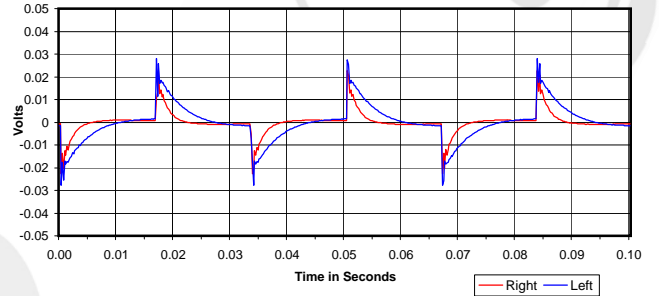
Isolation
 Attenuation of External Sound vs. Frequency



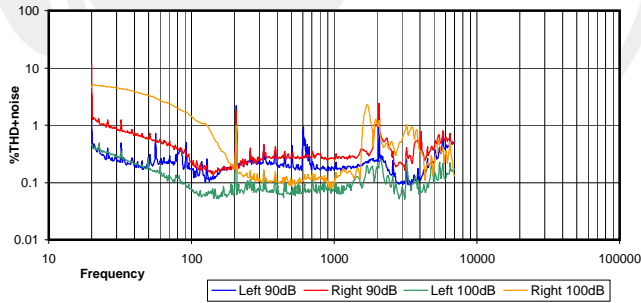
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



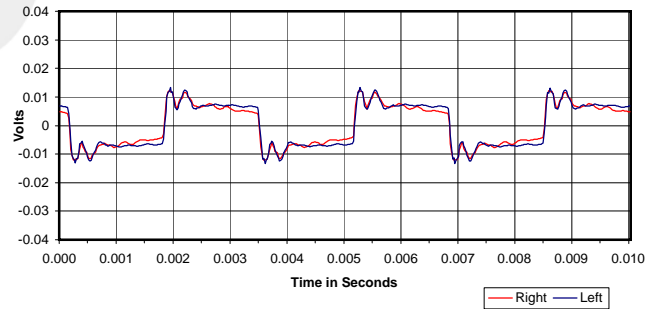
30 Hz Square Wave



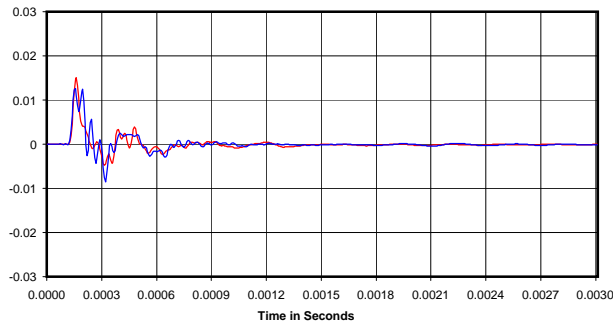
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

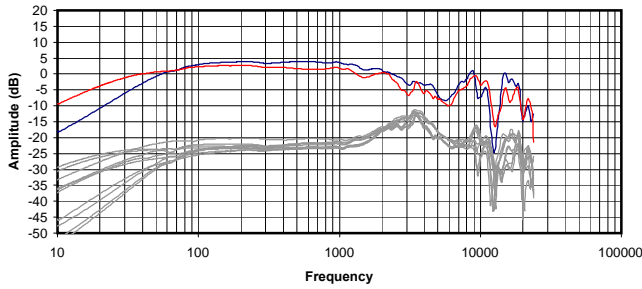


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

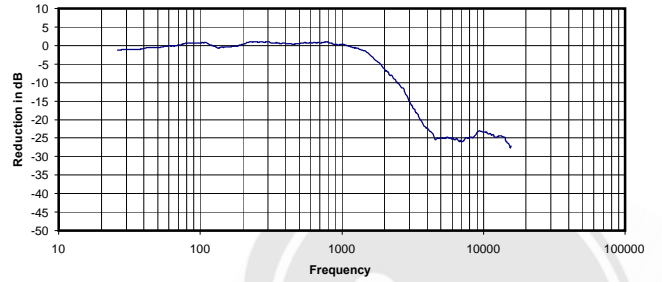
0.254 Vrms
 142 Ohms
 0.46 mW
 -5 dB



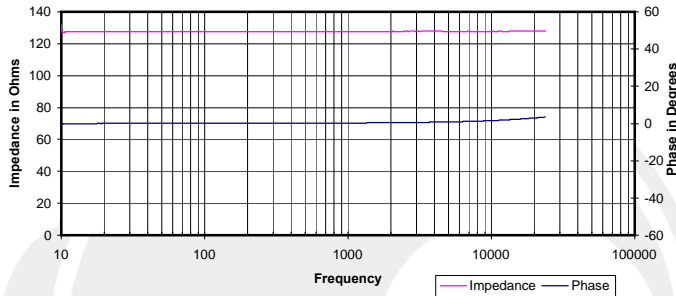
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Data for Five Headphone Positions



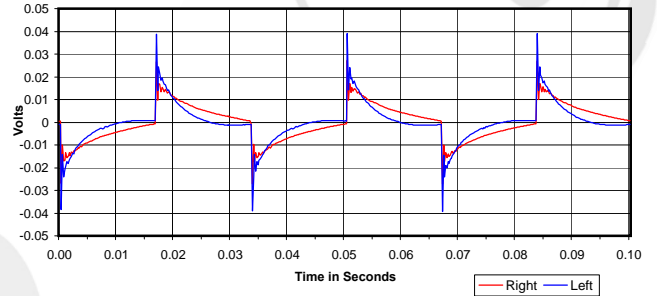
Isolation
Attenuation of External Sound vs. Frequency



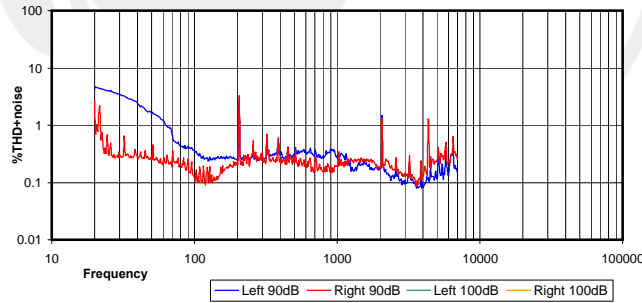
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



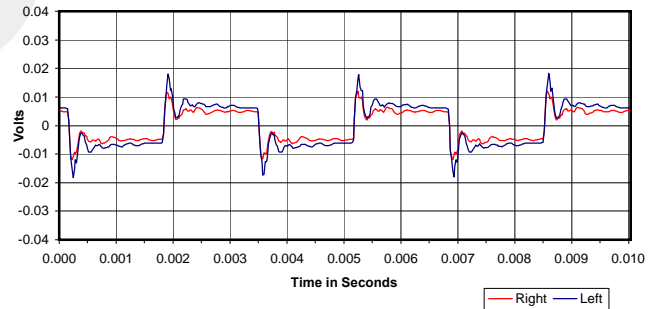
30 Hz Square Wave



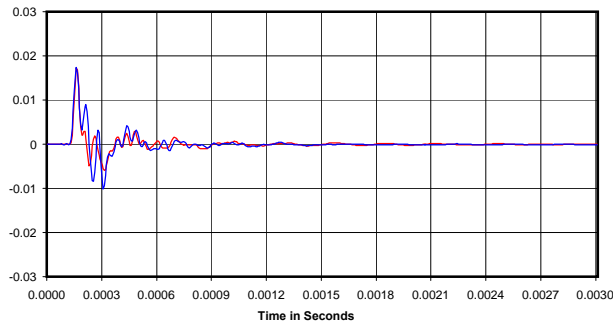
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



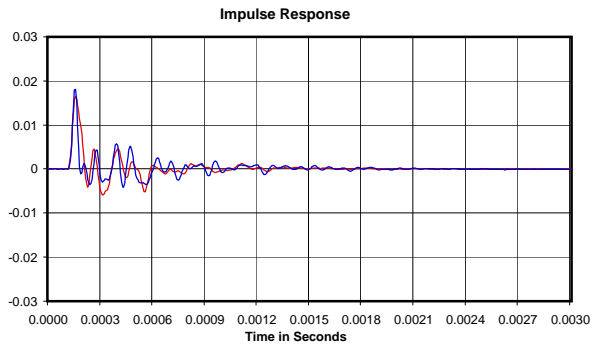
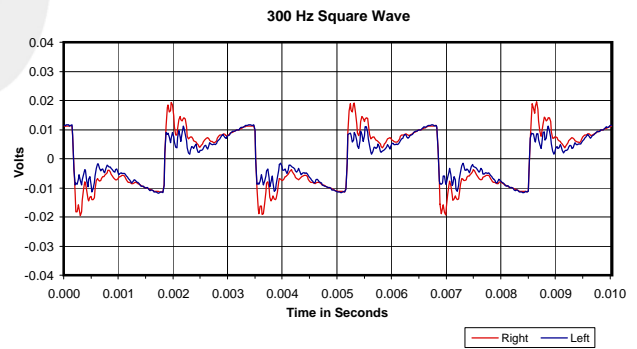
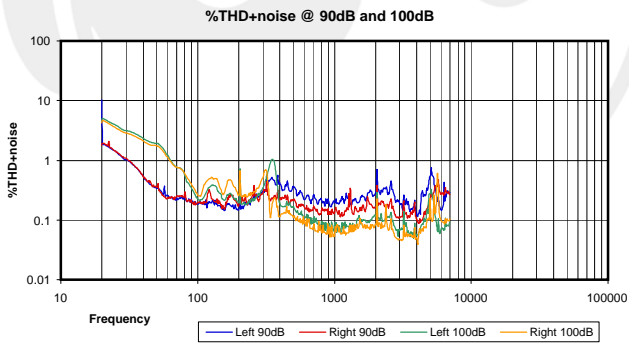
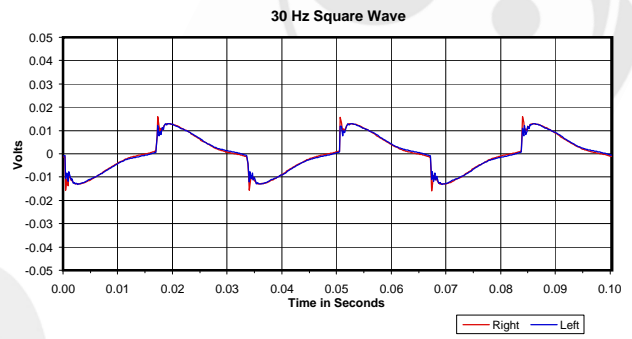
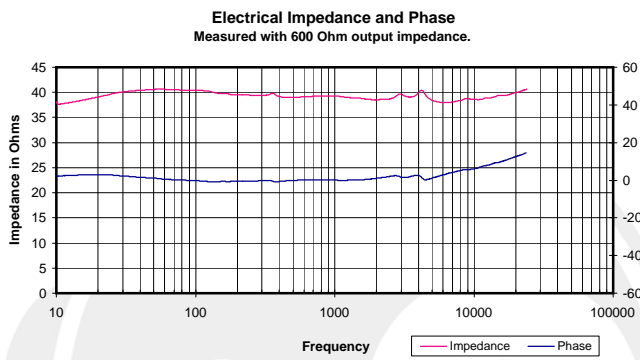
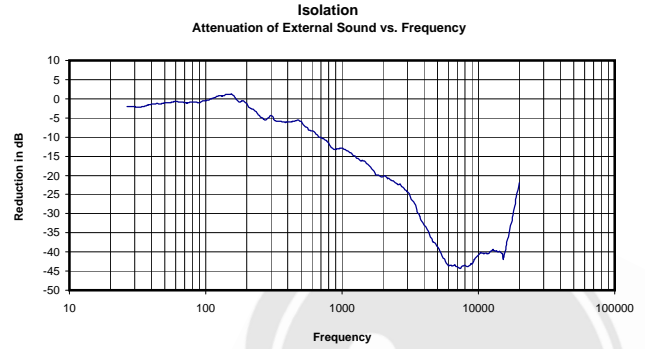
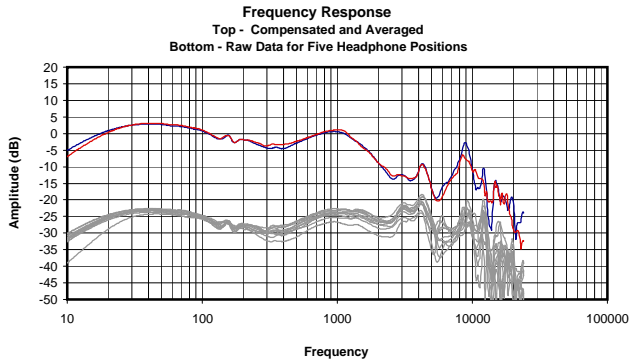
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.440 Vrms
128 Ohms
1.52 mW
-5 dBr



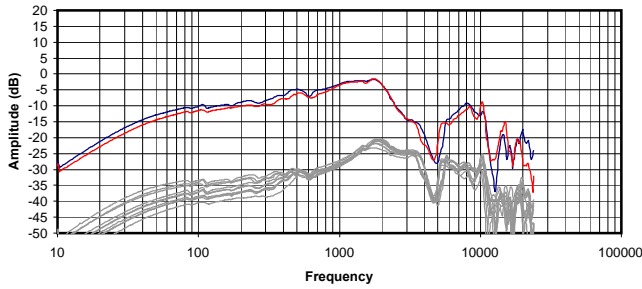


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

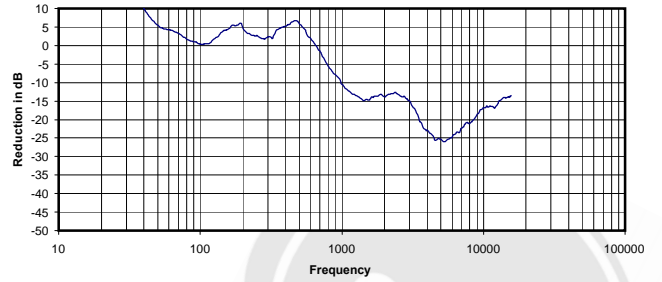
0.037 Vrms
39 Ohms
0.03 mW
-17 dB



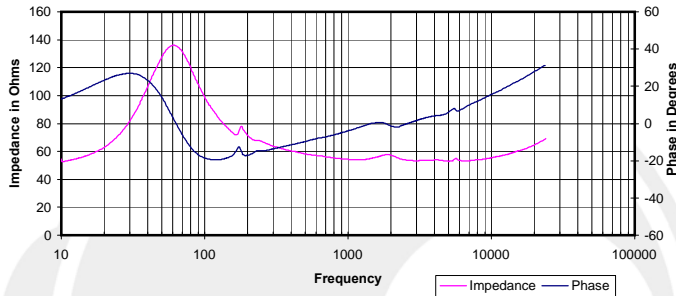
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



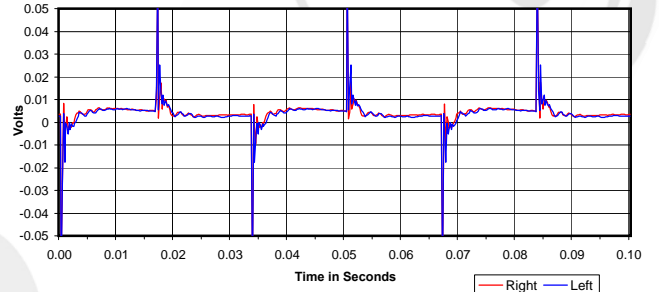
Isolation
 Attenuation of External Sound vs. Frequency



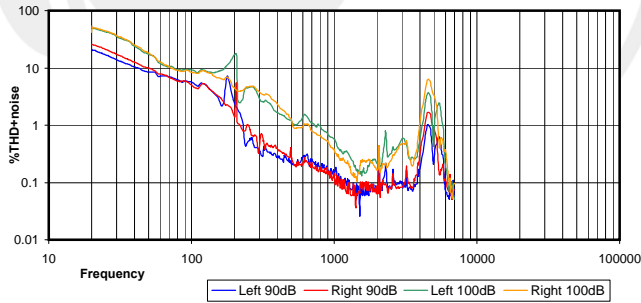
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



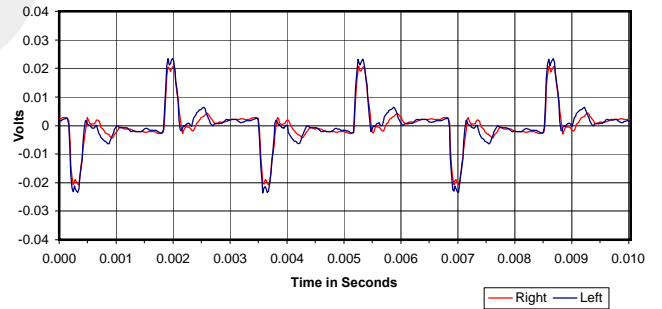
30 Hz Square Wave



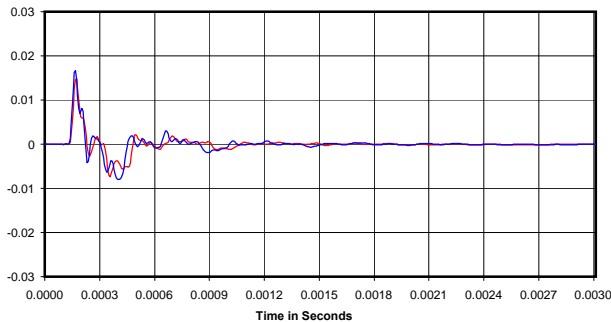
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

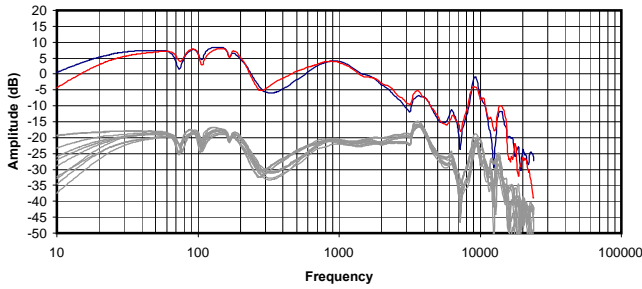


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

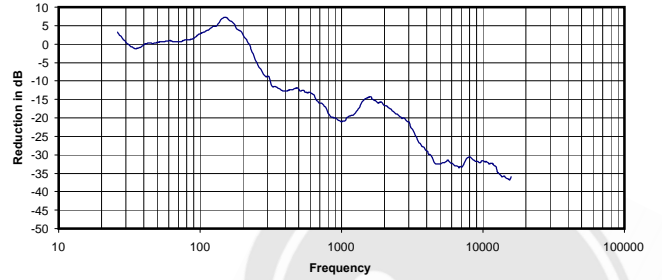
0.039 Vrms
 54 Ohms
 0.03 mW
 -6 dBr



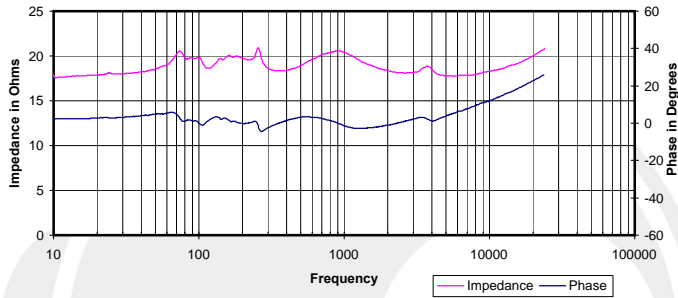
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



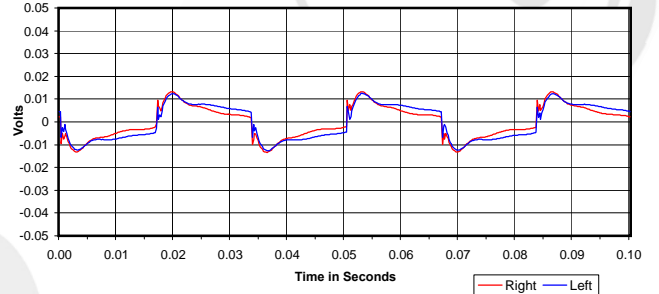
Isolation
 Attenuation of External Sound vs. Frequency



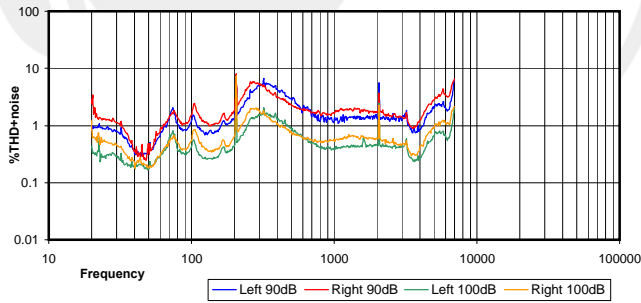
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



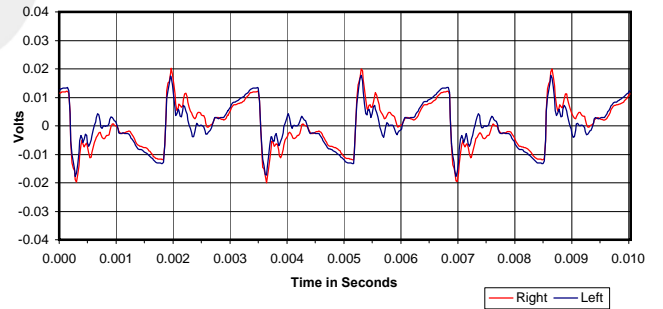
30 Hz Square Wave



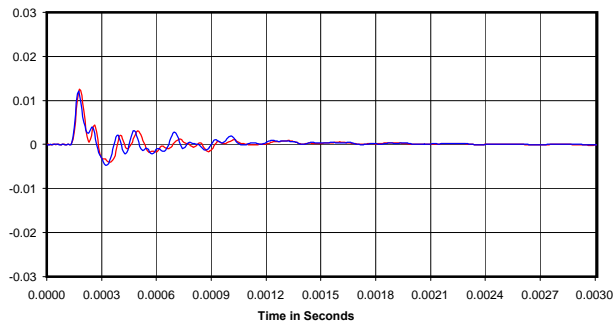
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

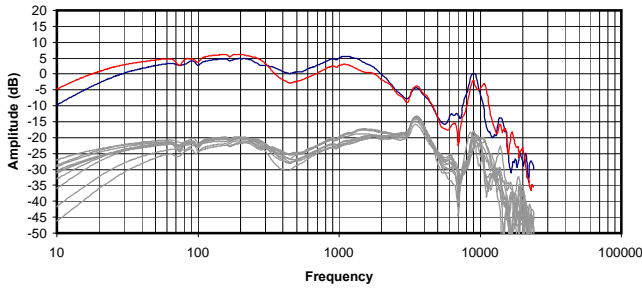


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

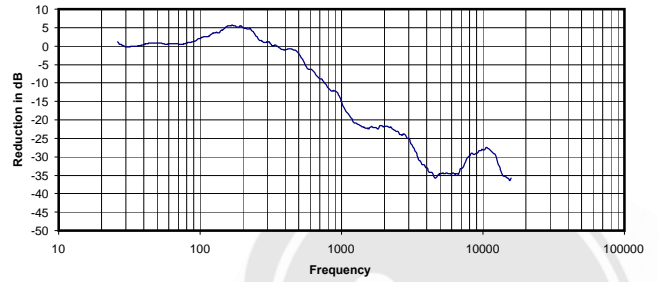
0.016 Vrms
 20 Ohms
 0.01 mW
 -13 dB



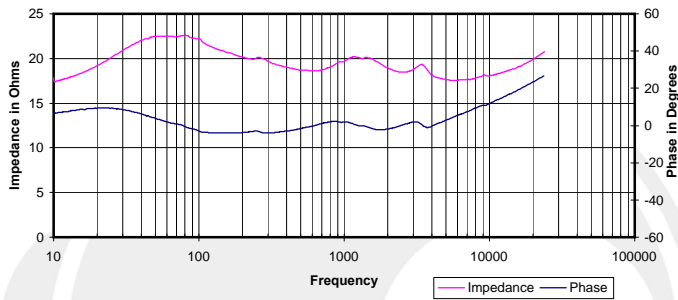
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



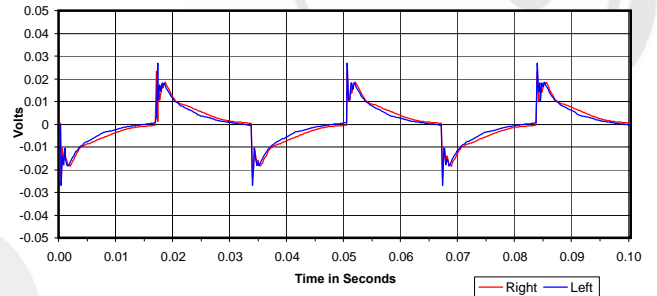
Isolation
 Attenuation of External Sound vs. Frequency



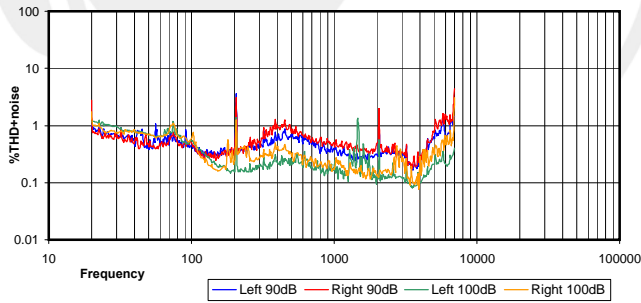
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



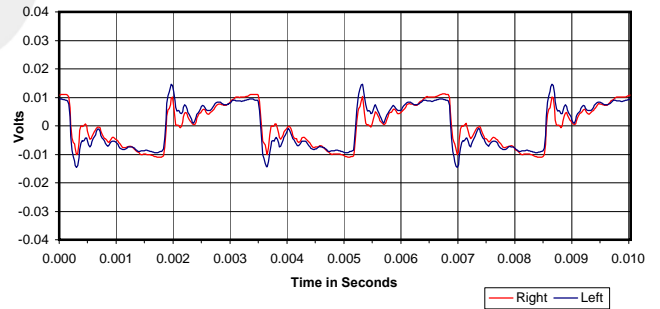
30 Hz Square Wave



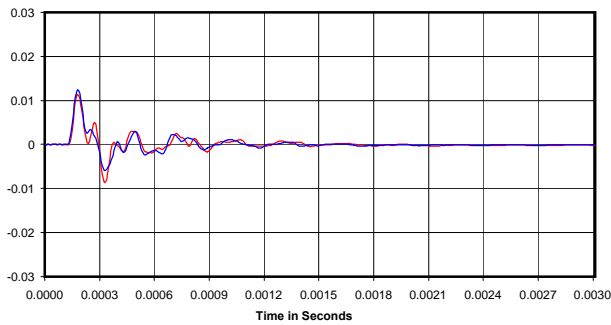
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

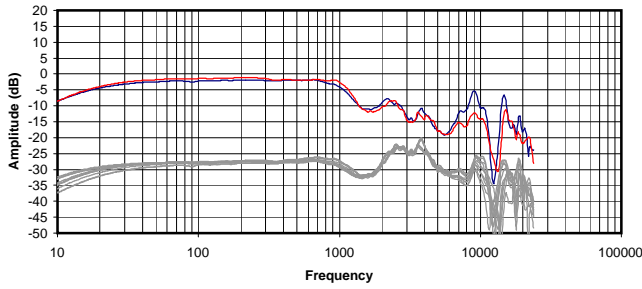


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

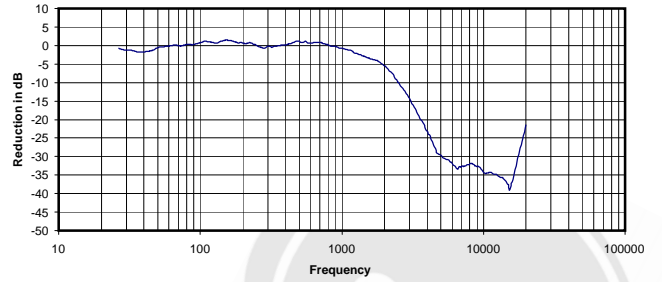
0.013 Vrms
 20 Ohms
 0.01 mW
 -12 dB



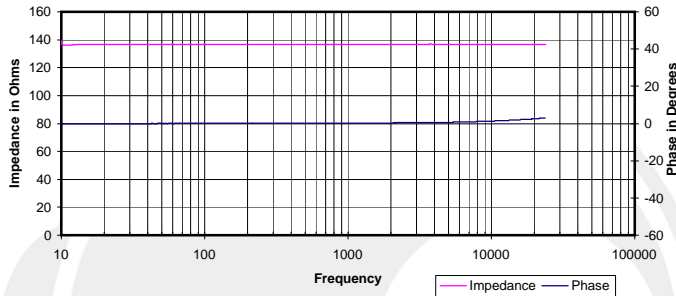
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



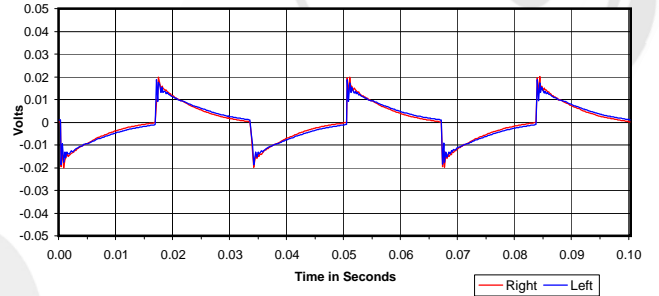
Isolation
 Attenuation of External Sound vs. Frequency



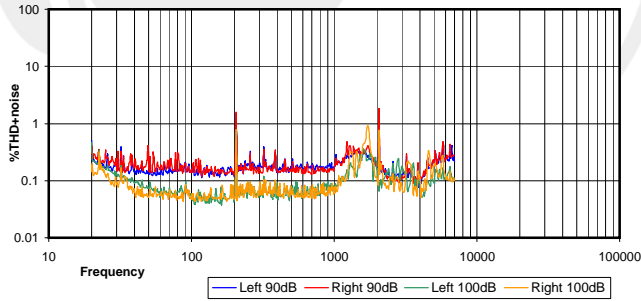
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



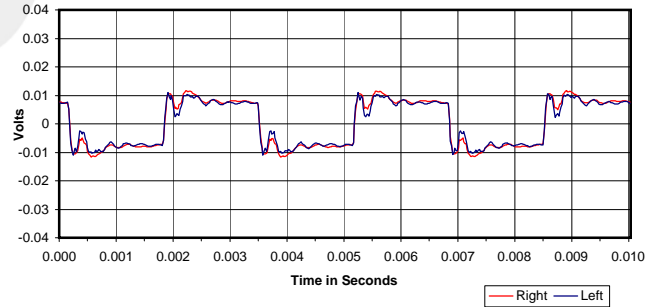
30 Hz Square Wave



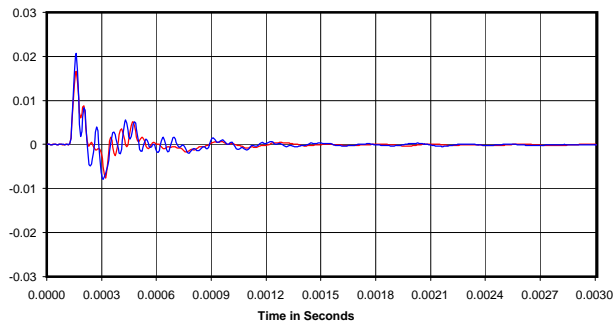
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



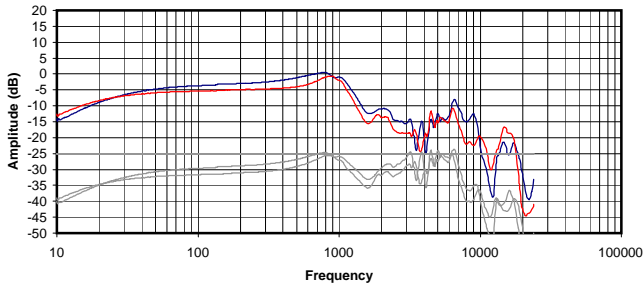
Impulse Response



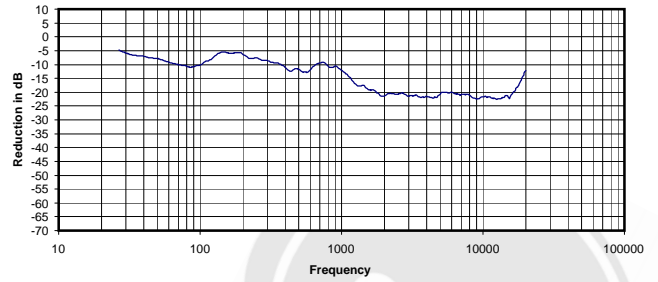
Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

0.389 Vrms
 137 Ohms
 1.11 mW
 -8 dB

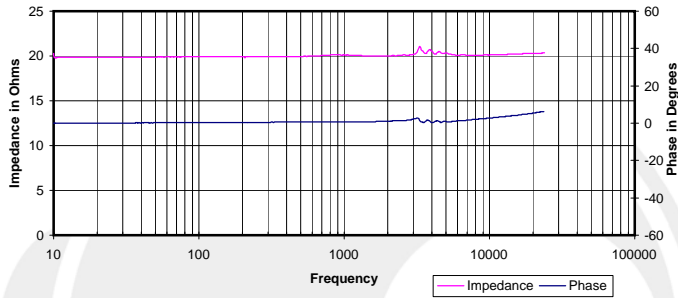
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



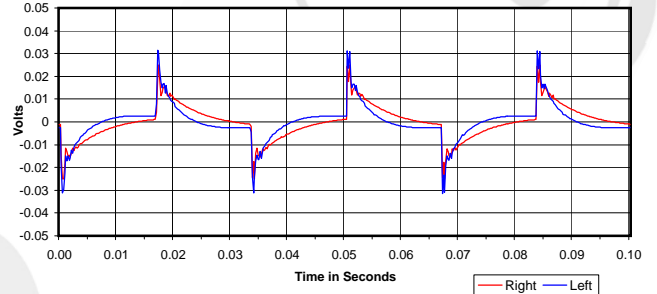
Isolation
Attenuation of External Sound vs. Frequency



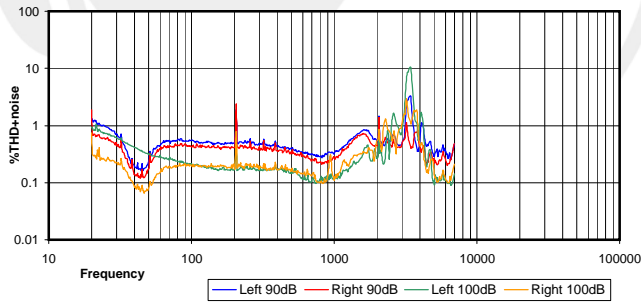
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



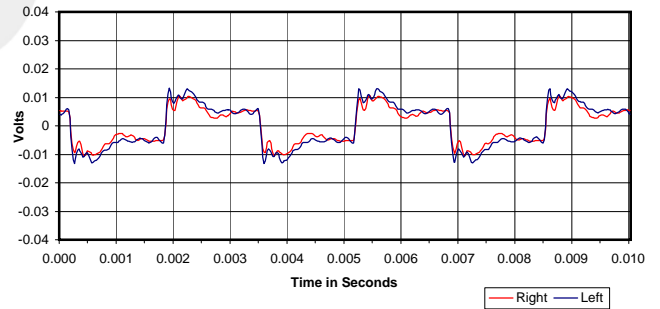
30 Hz Square Wave



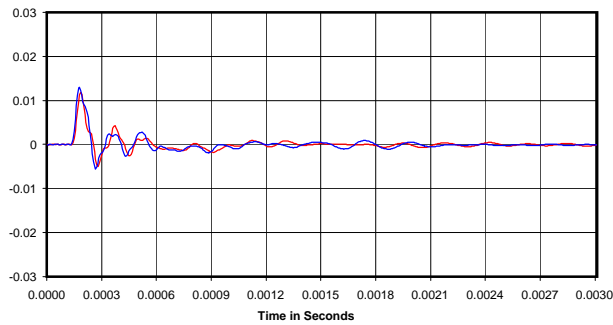
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



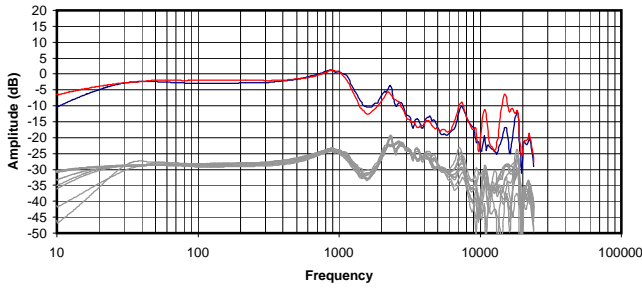
Impulse Response



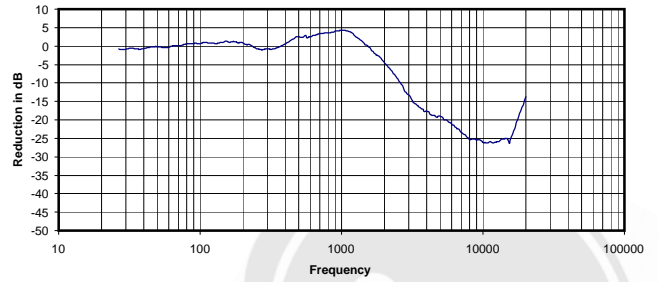
Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.013 Vrms
20 Ohms
0.01 mW
-15 dB

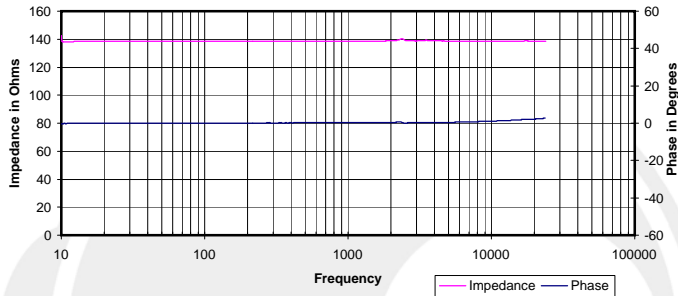
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



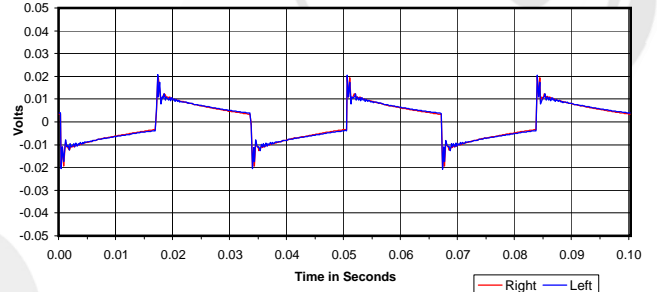
Isolation
 Attenuation of External Sound vs. Frequency



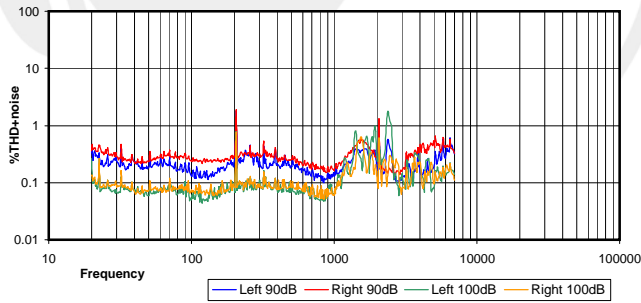
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



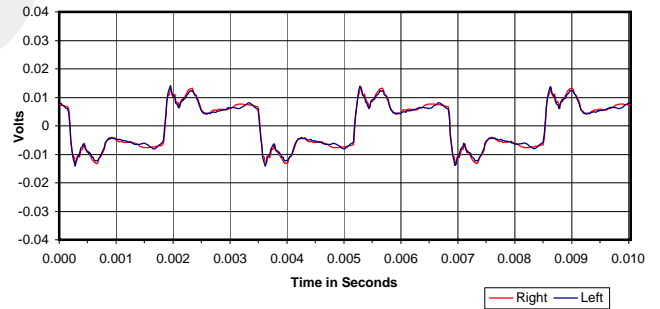
30 Hz Square Wave



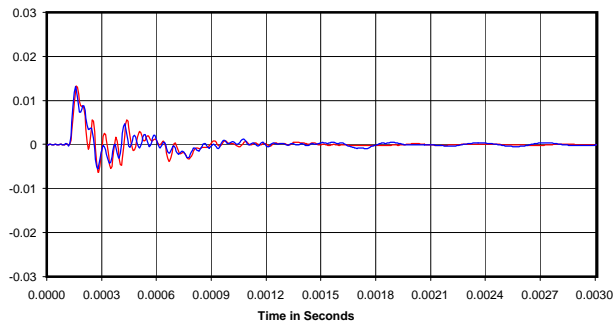
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

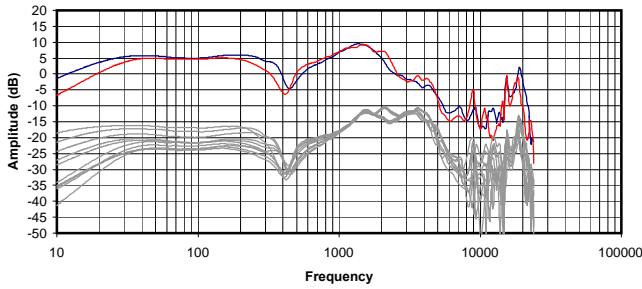


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

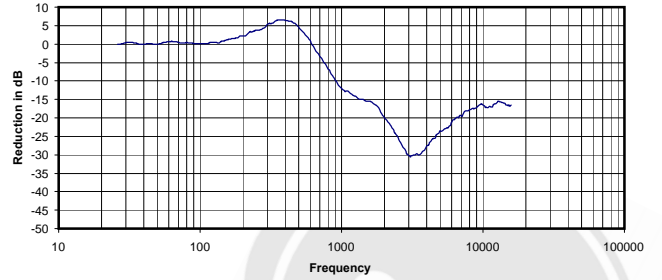
0.121 Vrms
 139 Ohms
 0.11 mW
 -5 dB



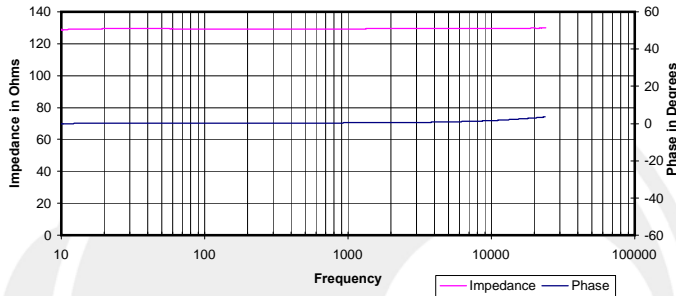
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



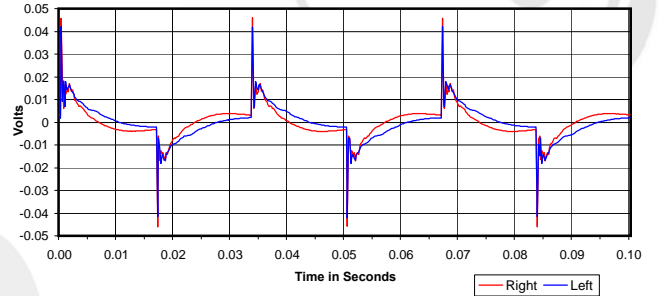
Isolation
 Attenuation of External Sound vs. Frequency



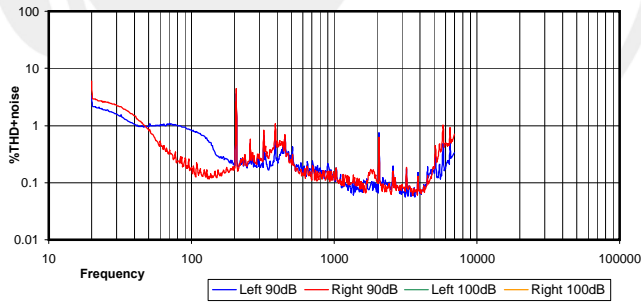
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



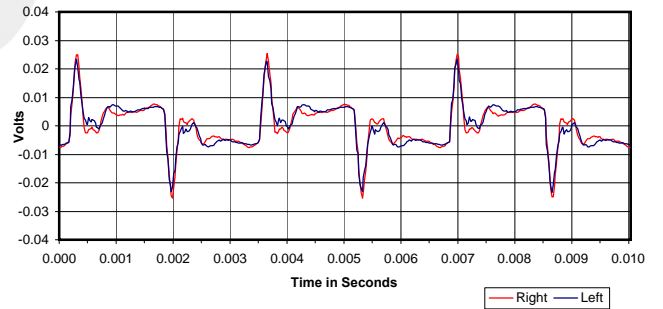
30 Hz Square Wave



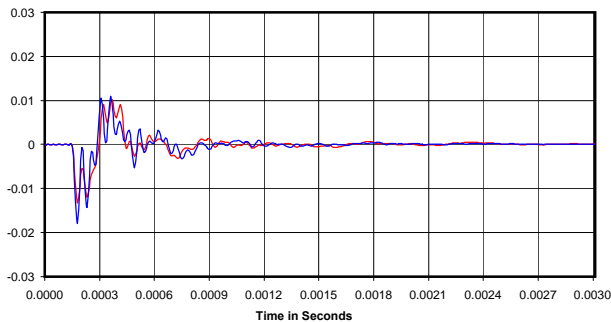
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

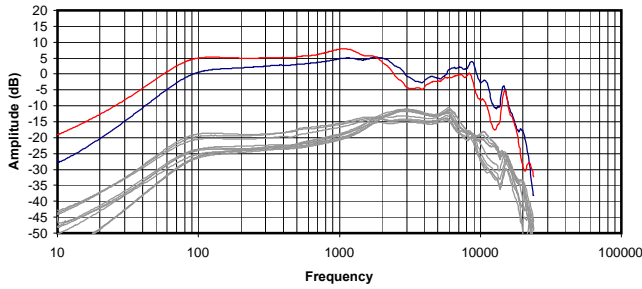


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90dB BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

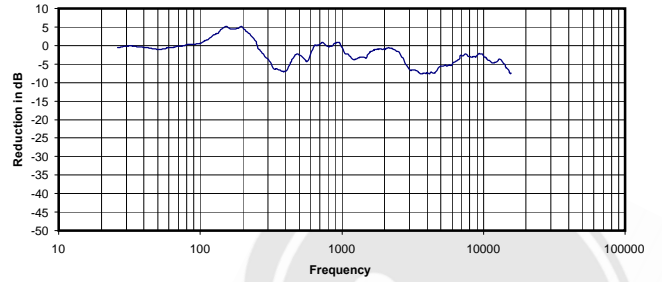
0.233 Vrms
 129 Ohms
 0.42 mW
 -9 dB



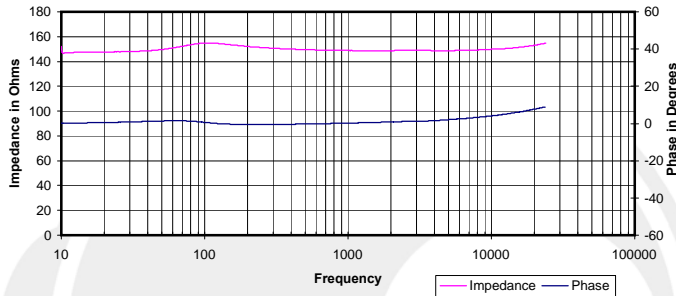
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



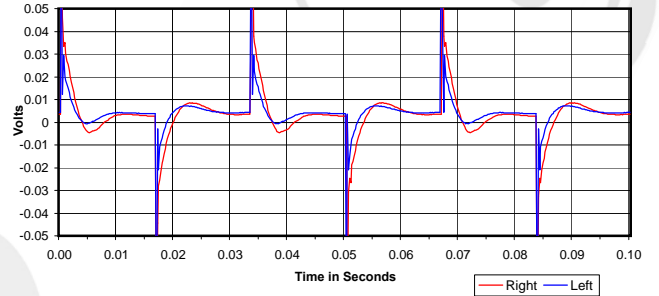
Isolation
 Attenuation of External Sound vs. Frequency



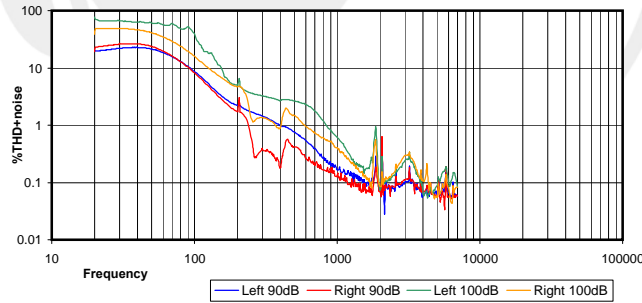
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



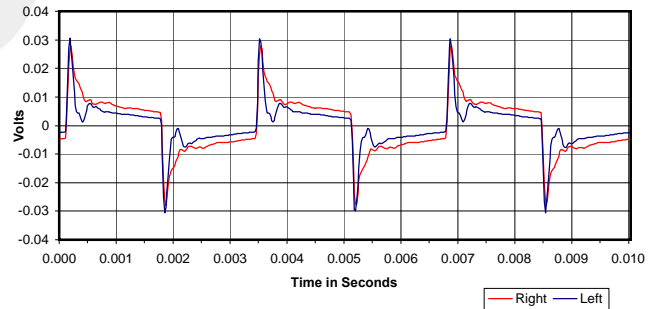
30 Hz Square Wave



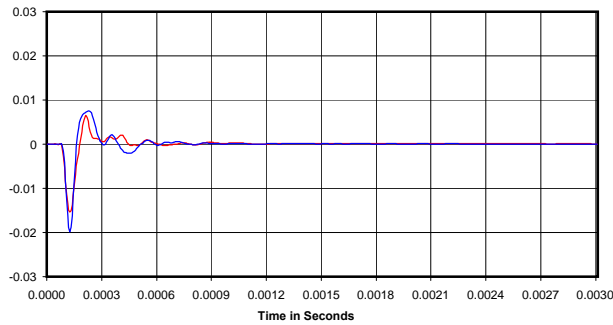
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

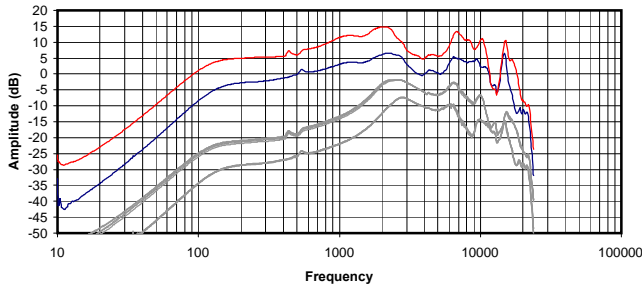


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

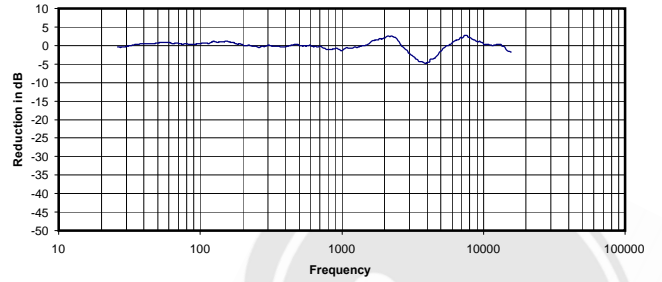
0.167 Vrms
 149 Ohms
 0.19 mW
 -2 dB



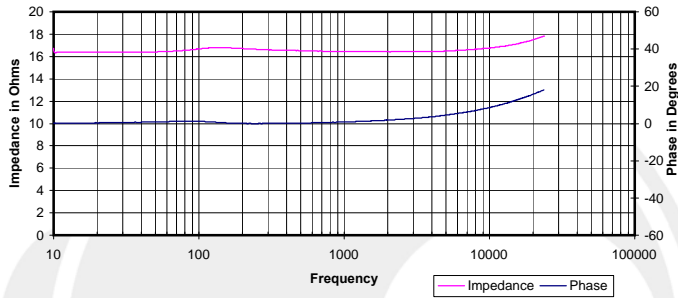
Frequency Response
 Top - Compensated and Averaged
 Bottom - Raw Data for Five Headphone Positions



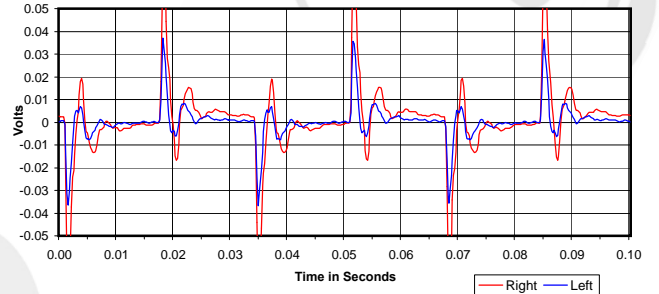
Isolation
 Attenuation of External Sound vs. Frequency



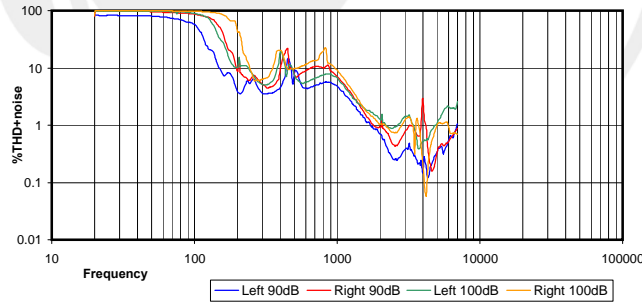
Electrical Impedance and Phase
 Measured with 600 Ohm output impedance.



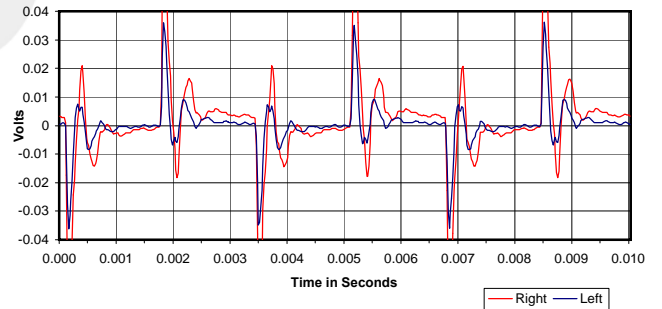
30 Hz Square Wave



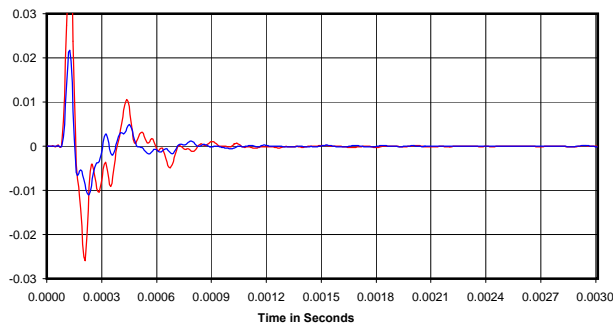
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

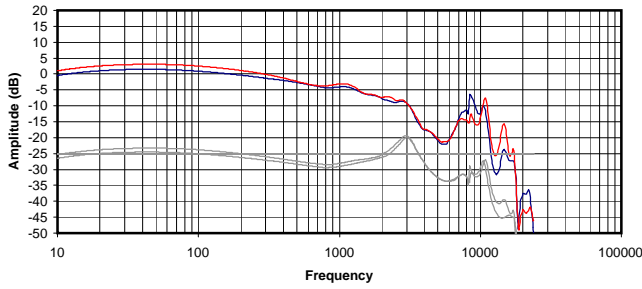


Volts RMS required to reach 90dB SPL:
 Impedance @ 1kHz:
 Power Needed for 90d BSPL
 Broadband Isolation in dB (100Hz to 10kHz):

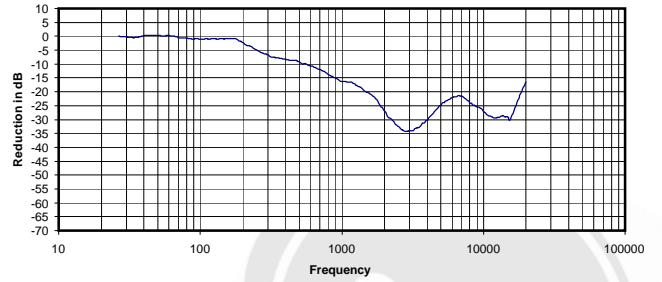
0.144 Vrms
 16 Ohms
 1.25 mW
 0 dBr



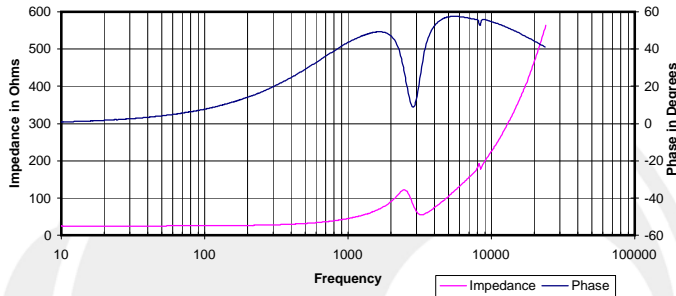
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



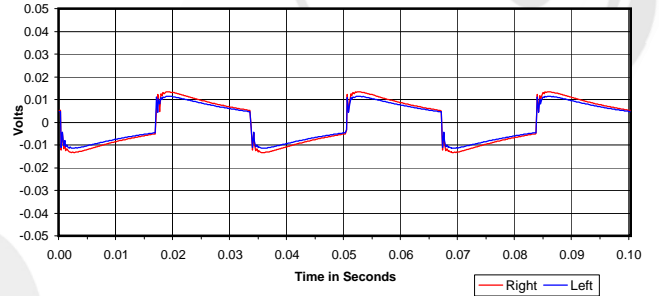
Isolation
Attenuation of External Sound vs. Frequency



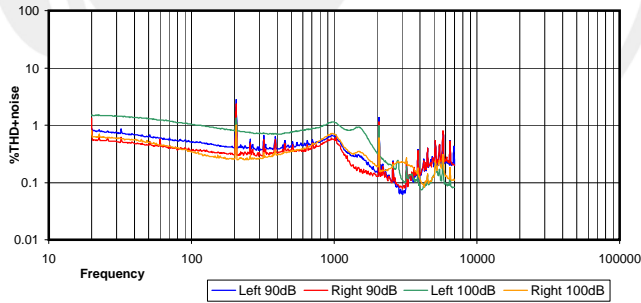
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



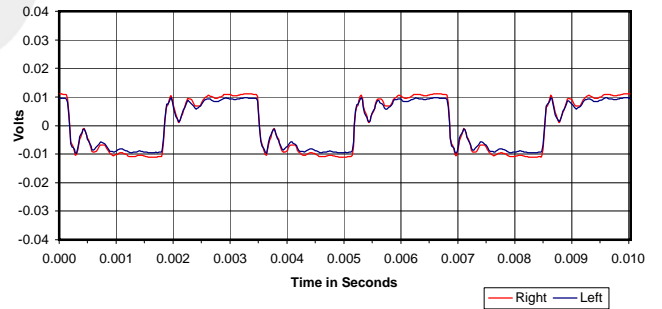
30 Hz Square Wave



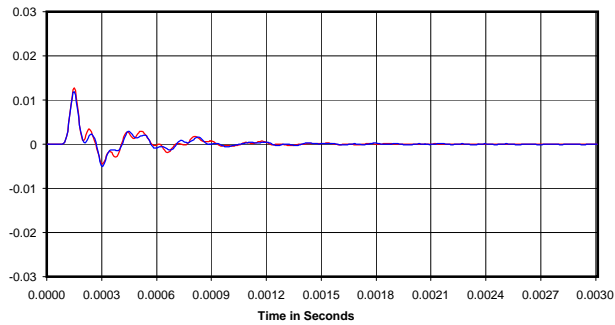
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

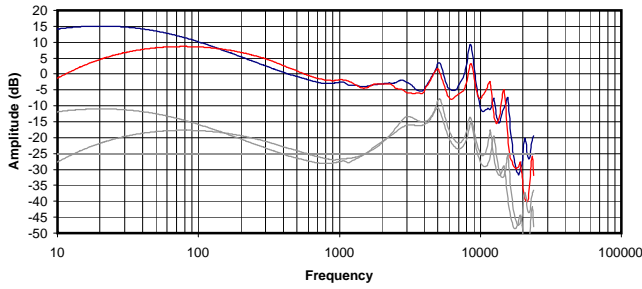


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

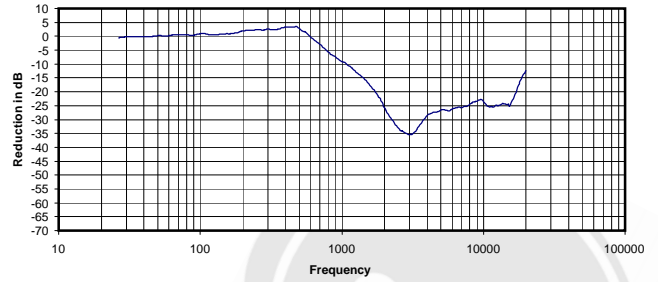
3.319 Vrms
45 Ohms
246.38 mW
-16 dB



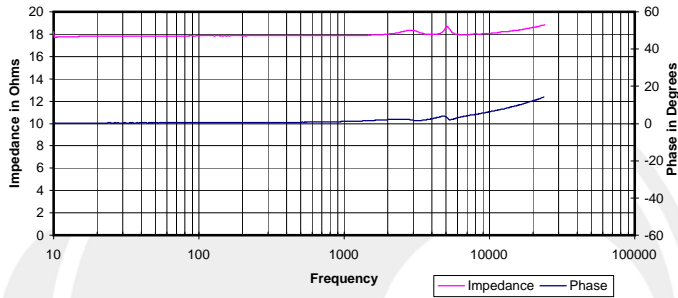
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



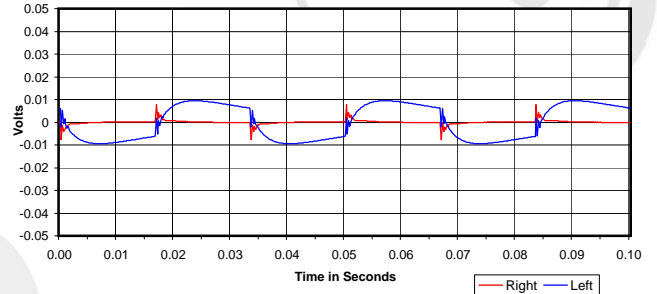
Isolation
Attenuation of External Sound vs. Frequency



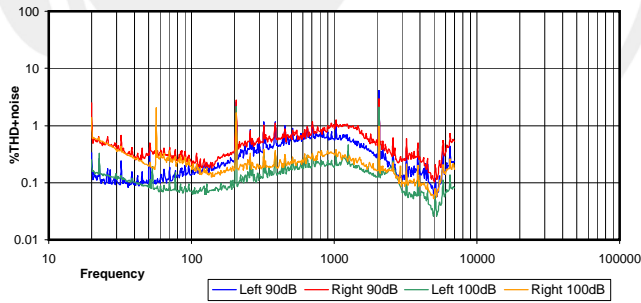
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



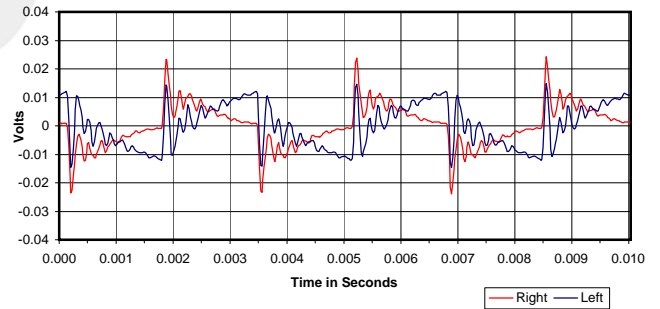
30 Hz Square Wave



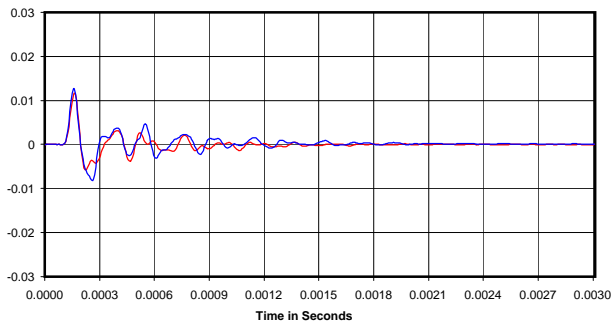
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



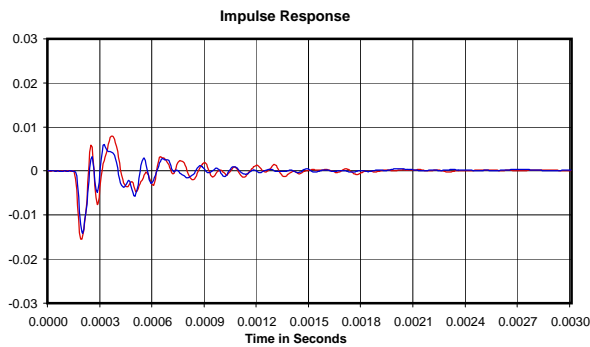
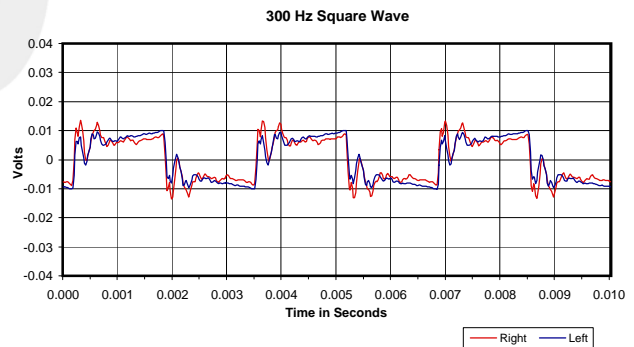
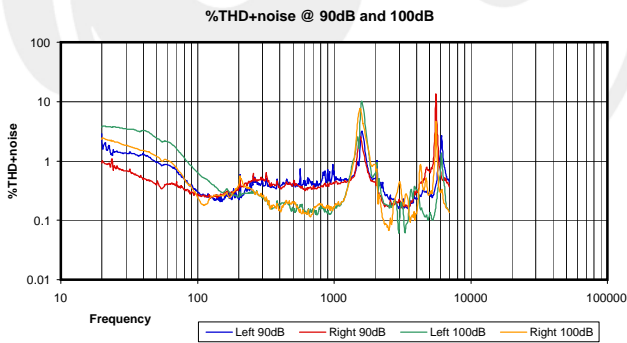
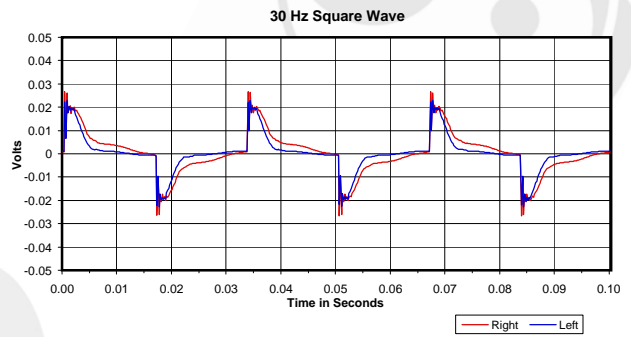
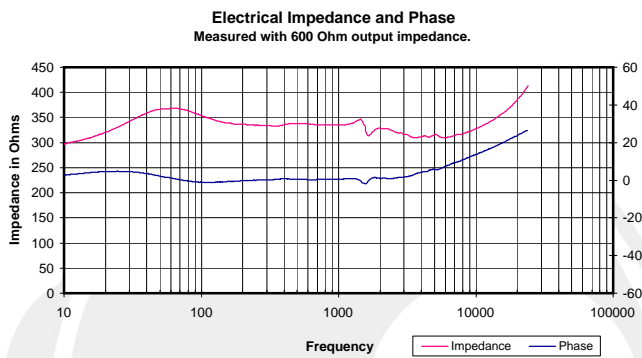
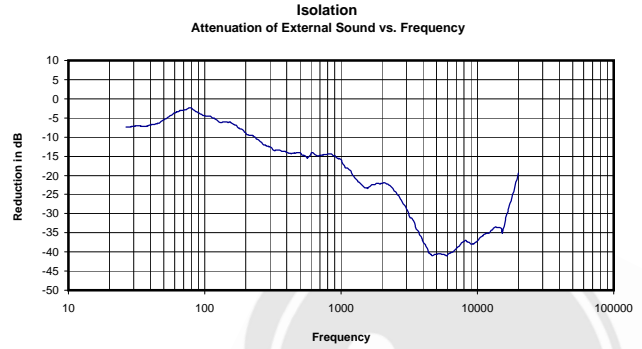
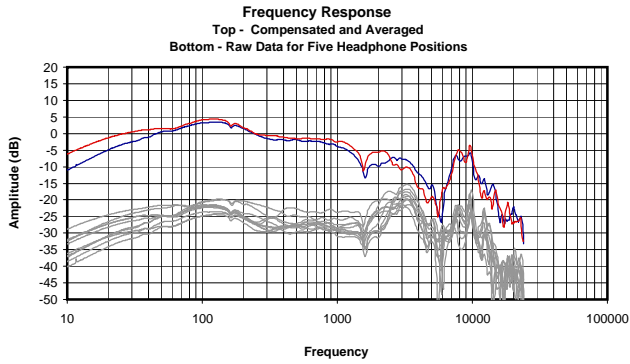
Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.034 Vrms
18 Ohms
0.07 mW
-12 dB

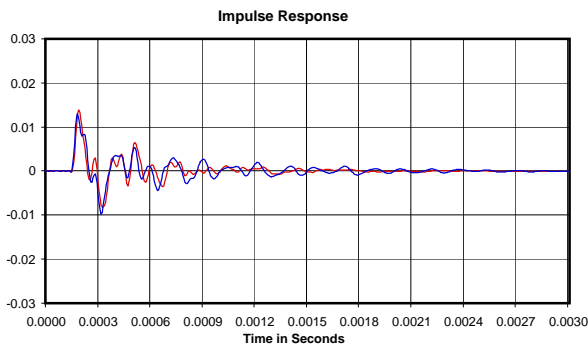
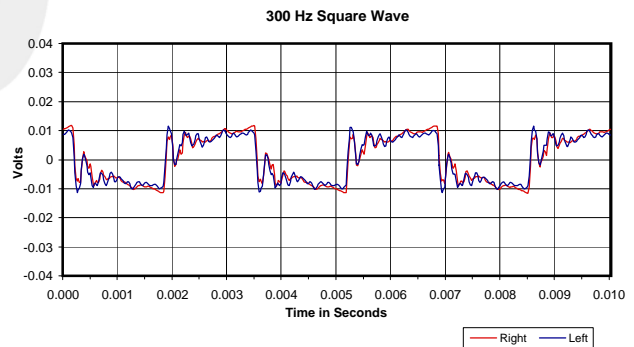
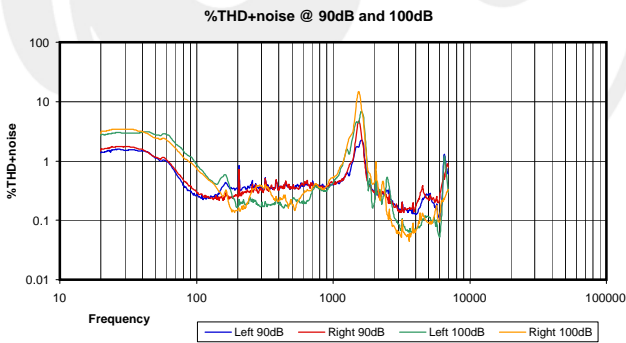
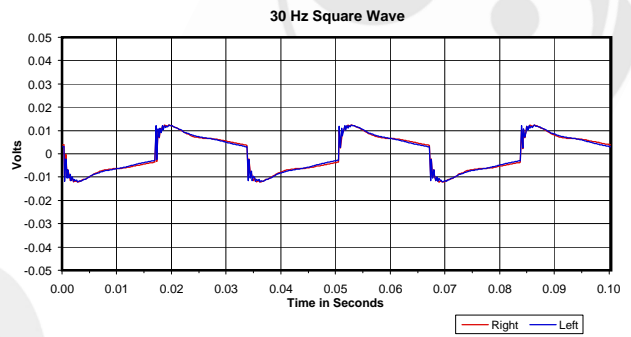
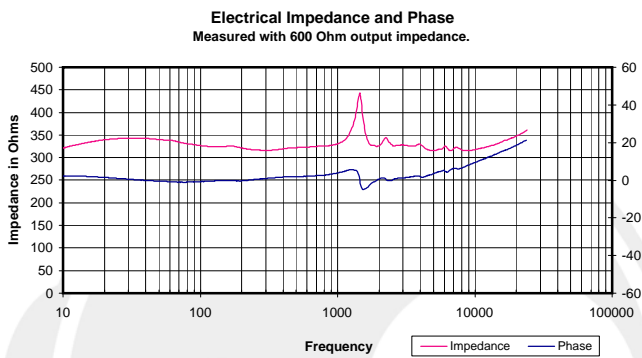
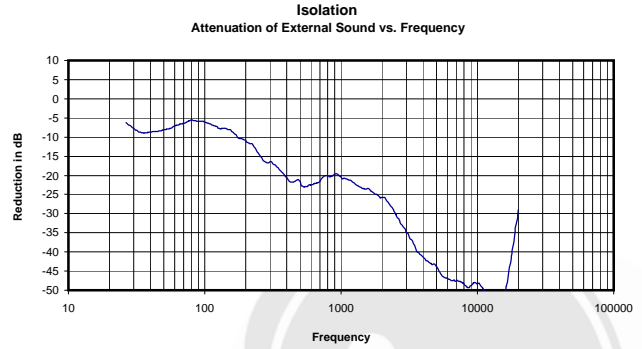
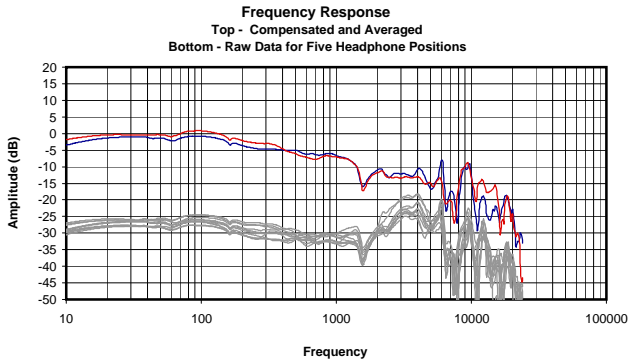




Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.238 Vrms
335 Ohms
0.17 mW
-21 dB



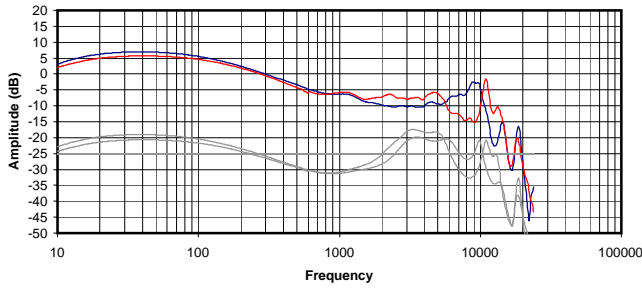


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

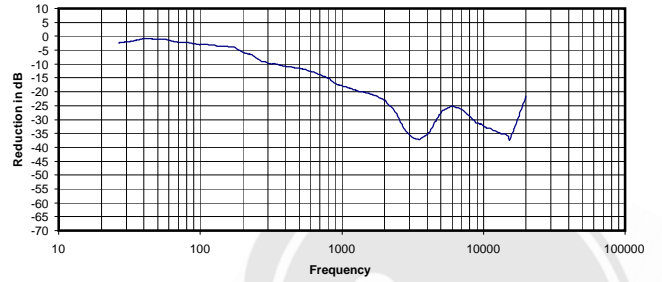
0.291 Vrms
331 Ohms
0.25 mW
-26 dB



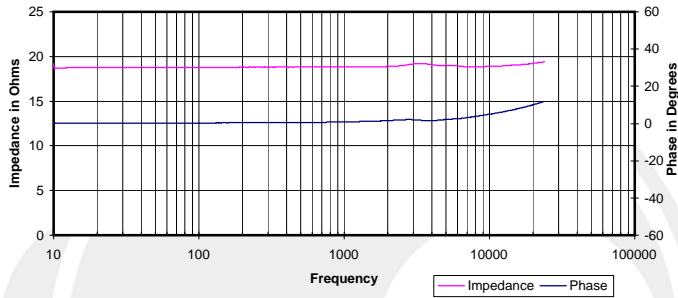
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



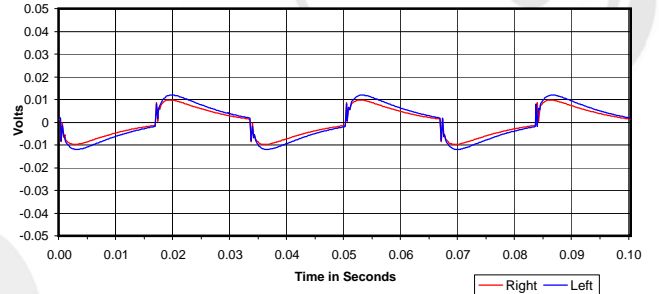
Isolation
Attenuation of External Sound vs. Frequency



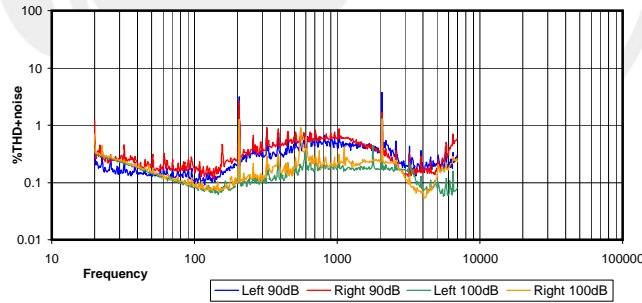
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



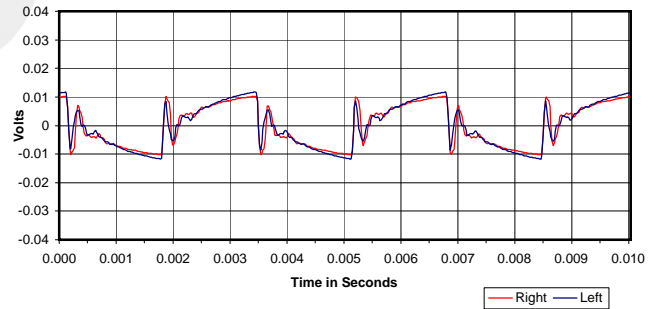
30 Hz Square Wave



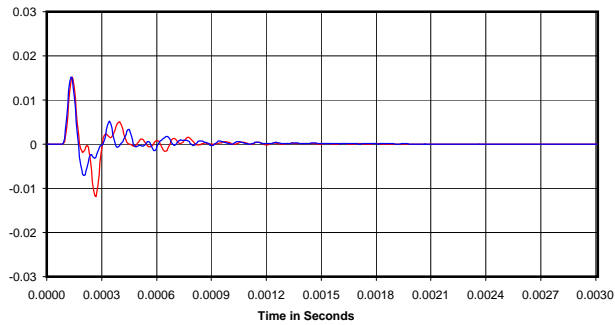
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response

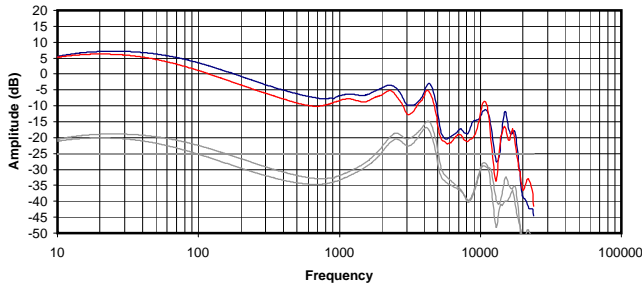


Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

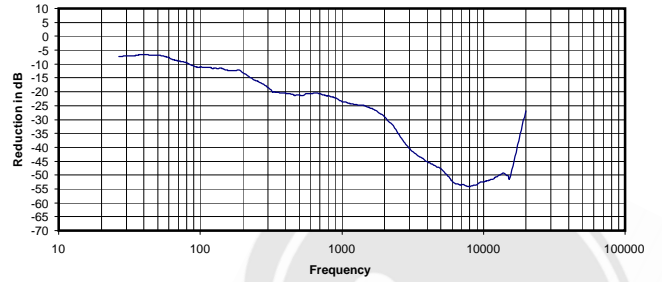
0.058 Vrms
19 Ohms
0.18 mW
-18 dB



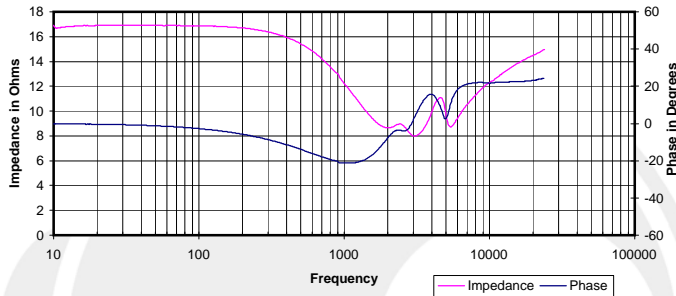
Frequency Response
Top - Compensated and Averaged
Bottom - Raw Measured Data



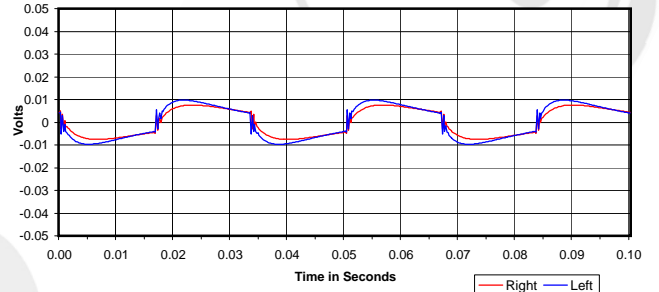
Isolation
Attenuation of External Sound vs. Frequency



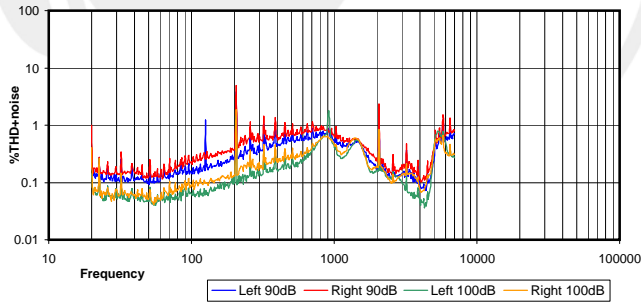
Electrical Impedance and Phase
Measured with 600 Ohm output impedance.



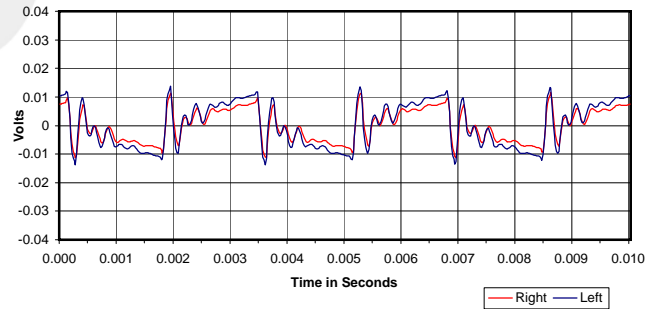
30 Hz Square Wave



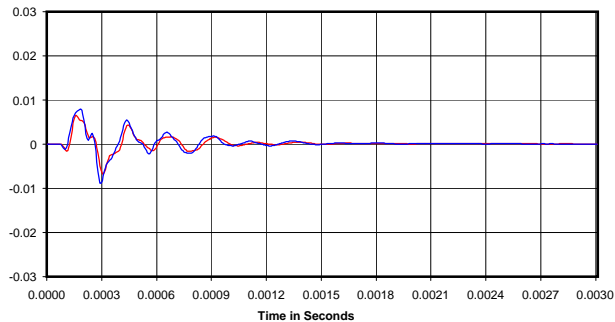
%THD+noise @ 90dB and 100dB



300 Hz Square Wave



Impulse Response



Volts RMS required to reach 90dB SPL:
Impedance @ 1kHz:
Power Needed for 90d BSPL
Broadband Isolation in dB (100Hz to 10kHz):

0.027 Vrms
12 Ohms
0.06 mW
-28 dB

