

BMA/PMA 500.1 1x500 Watt

Class GH Subwoofer Amplifier

Oct 20th 2009

Output Power (RMS) @ 1% 100Hz 14.4V CEA 2006
 Mono @ 4 Ohms 1x312 Watts @ 28A Eff. 76%
 Mono @ 2 Ohms 1x509 Watts @ 48A Eff. 74%
 Mono @ 1 Ohm NA Watts @ A Eff. %

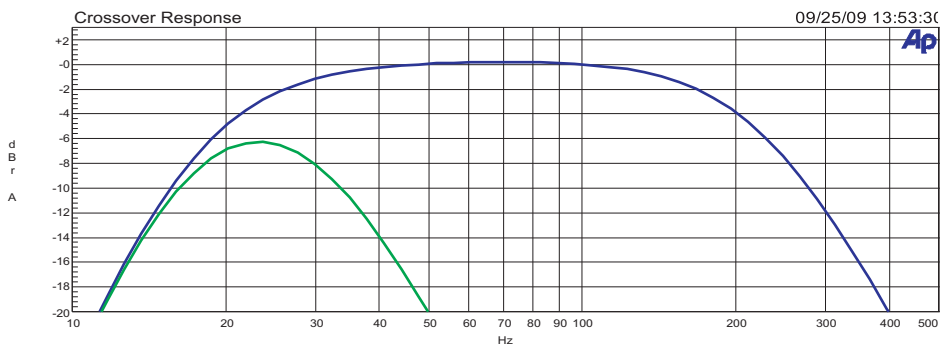
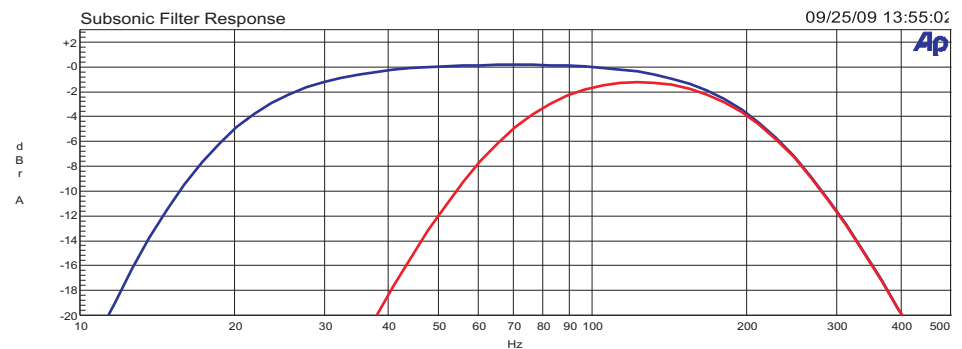
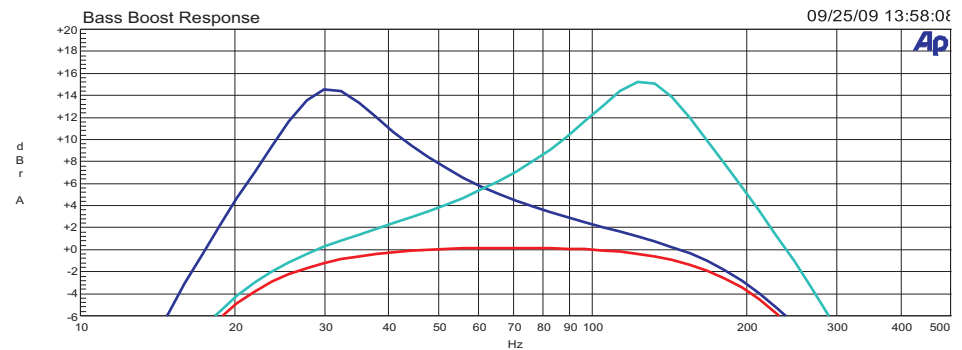
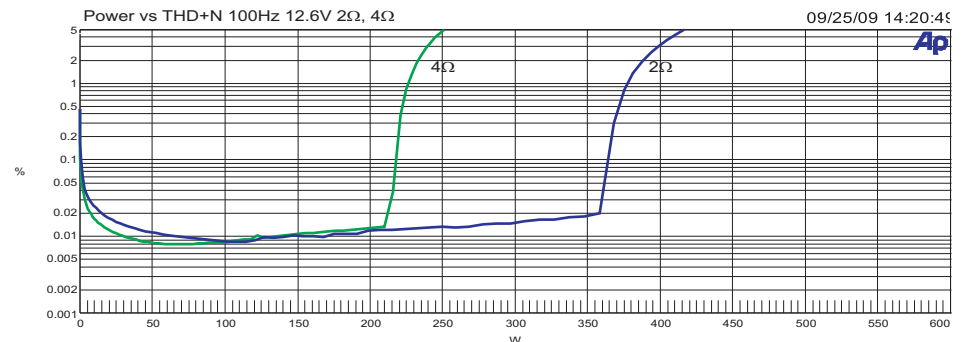
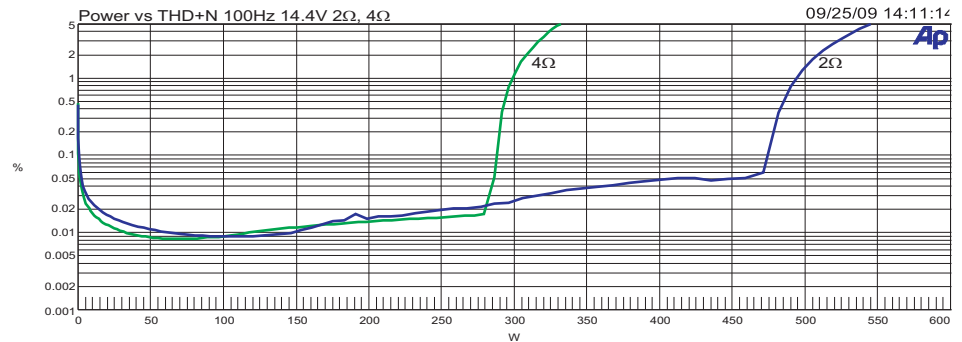
Frequency Response -3dB 20Hz - 200Hz
 Crossover Range 30Hz - 200Hz
 Sub Sonic Range 20Hz - 80Hz
 Bass Boost 0-15dB @ 30Hz - 125Hz

S/N Ratio (A wtg) Separation Ref 1 Watt 4Ω Ref 300Wx1 4Ω
 >57dB >82dB
 NA NA

Input Sensitivity Low Level 0.3V - 3.5V

Input Impedance 10KΩ

Damping Factor 25W 4Ω 1000Hz >1000



Features:

High efficiency Class GH Hybrid Design Provides the clean sound of a class AB amplifier and much of the efficiency of a Class D.

Class GH Features vs. Class D

Damping factor 20 x higher

Distortion 20 x lower (< .01 %)

Very low EMI radiation. Leads to easier CE approval

Sanken output devices

Multi-speed fan for efficient cooling of internal components.

Full control of Bass Boost amplitude (0-15dB) and Frequency

(30 - 125Hz) allows for greater control of bass sub woofer response then Q only crossover controls

Two layer PCB with 2 Oz final copper weight on top and bottom layers.

Microprocessor controlled protection and diagnostics. With Lights to show error

Lead Free

Strap to a 2nd amplifier for 1x1000W 4ohm Amplifier

Control a string of amplifiers with the same controls of the first master amplifier

Thermal Trip points.

85C = Thermal Protection.

78C = Amp resumes from thermal protection condition

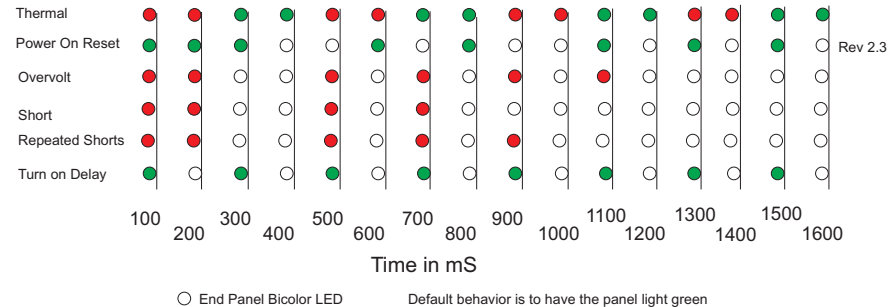
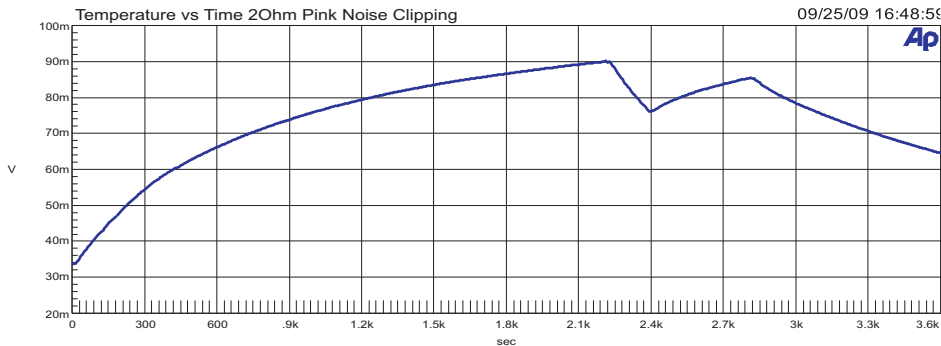
56C Fan speed increases to aid in cooling

52C and below. Amp is in normal operating conditions


Overvoltage Points

17.1V Overvolt Protection

15.8V Amplifier Resumes



VAMP(H) Rail	VAMP(L) Rail	Vop Rail	Vdrv
57V	33V	17V	63V
Switching Frequency	Idle Current	Bias across	
28kHz	1.4A	0.05Ω Resistors 1 mV	
Transformer Turns Ratios			
Choke Turns Ratios			
NA			

Model	Board Revision	Testing Sample Level & Serial Number
BMA500.1	1.04A	Prototype SN:P2
Document Revision	Testing Date	
1.2	Sept 24 th 2009	
Document Date	Signature	
Oct 20 th 2009	 Richard Greenway	