

# Low Power Stereo Series

## 2 x 2 Watt 4 Ohm

## Class D

## Audio Amplifier Board - PAM8803

## (AA-AB32131)



### Key Features:

- Output Power  
2W@4Ohm 12V DC THD+N 10%
- Power and Clip Indicator
- Support Volume Control Board
- Temperature Control Fan (Optional)
- Full Protection
- 4-screw Easy Installation
- Weight: 54g/0.12 lbs (±10%)
- Size: 3.00inch X 2.00inch X 0.65inch

### Electrical Specifications

Specifications typical @ +25°C, Powered by 12V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	-	12	-	VDC
Idle Power	SD Floating, FAN ON	-	-	-	W
	SD Floating, FAN OFF	-	0.008	0.2	W
Standby Power	SD Connected to GND, FAN OFF	-	0.006	0.1	W
Maximum Current	4W @ 4Ohm	-	0.46	-	A
Efficiency	2W @ 4Ohm	70	-	75	%
Minimum Load Impedance	-	-	4	-	Ω
Switching Frequency	SD Floating	-	-	-	KHz
Fan Active @ Temperature	-	-	-	-	°C

### Audio Performance

Specifications typical @ +25°C, Powered by 12V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	-	20	22	24	dB
Input Sensitivity(RMS)	@4Ω, 2W, 1KHz	-	300	-	mV
Input Impedance	-	-	-	-	KΩ
Output Power	@4Ω THD+N 1%	-	-	-	W
	@4Ω THD+N 10%	-	2	-	W
Bandwidth @ ±3dB	@4Ω	20	-	20K	Hz
THD	@4Ω, 1W, 1KHz	-	0.22	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	97	-	μV
SNR	@4Ω THD+N 1%	-	84	-	dB

### Environmental Conditions:

- Humidity: 5-85% RH Non-condensing
- Operating Temperature Ambient: 0°C to +55°C
- Storage Temperature: -40°C to 85°C

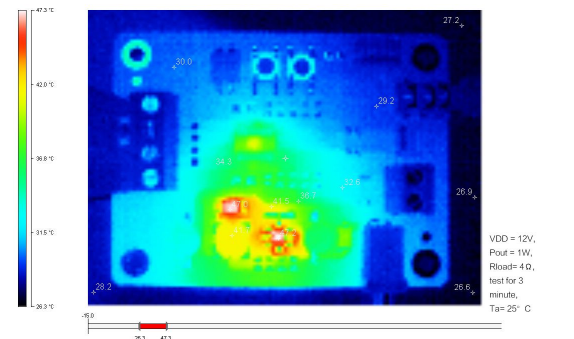
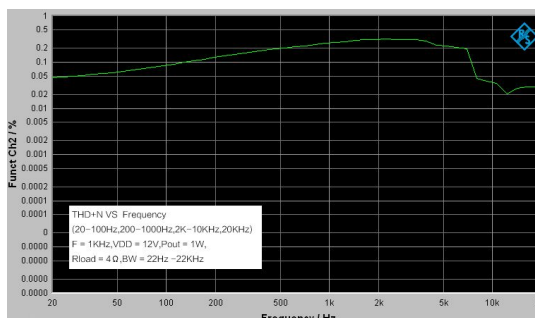
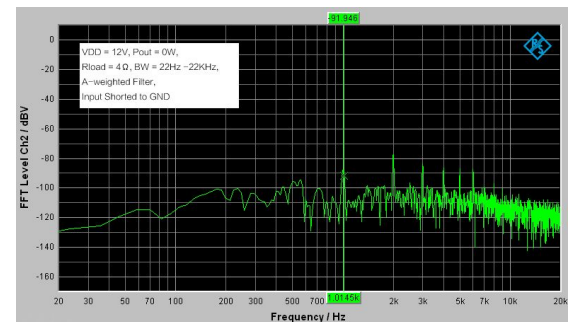
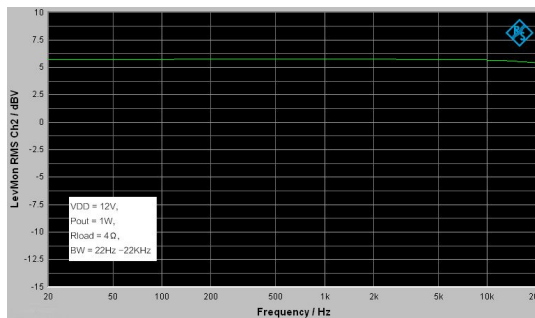
All these boards are per-tested with our power supply solution to comply with FCC and CE. For all customers who need those information, please contact our distributor or Sure Electronics. RoHS compliant will need an MOQ of 1000pcs per order.

Ready for:



RoHS

### Typical Performance Graphs



All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and AP AUX0025 filter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)



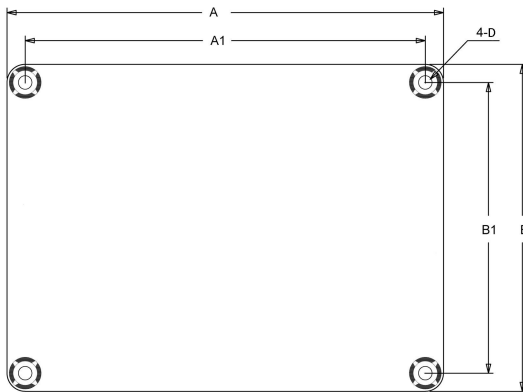
## Model Selection Guide

Model Number	Output Power	Power Supply Range	Typical Load	Amplifier IC	Dimension
AA-AB32131	2 X 2Watt	DC6-12V	4Ω	PAM8803	3"X2", #1
AA-AB32232	2 X 10Watt	DC7-15V	8Ω	PAM8610	3"X2"
AA-AB32999	2 X 15Watt	DC10-26V	4Ω	PAM8615	3"X2"
AA-AB32231	2 X 8Watt	DC8-19V	8Ω	TPA3110	3"X2"
AA-AB32233	2 X 10Watt	DC7-18V	4Ω	SSM3302	3.6"X2.7", #2
AA-AB32992	2 x 15Watt	DC8-28V	4Ω	MAX9736A	3.6"X2.7"
AA-AB32993	2 X 15Watt	DC10-28V	4Ω	MP7740	3.6"X2.7"
AA-AB32996	2 X 15Watt	DC8-26V	8Ω	TPA3110	3.6"X2.7"
AA-AB32155	2 X 15Watt	DC9-14V	4Ω	TA2024	3.6"X2.7"
AA-AB32254	2 X 20Watt	DC8-28V	8Ω	MAX98400A	3.6"X2.7"
AA-AB32166	2 X 25Watt	DC8-26V	6Ω	TDA7492P	3.6"X2.7"
AA-AB32165	2 X 25Watt <sup>1</sup>	DC14-19V	6Ω	TDA7492	4.8"X3.6", #3
AA-AB32174	2 X 50Watt <sup>1</sup>	DC8-26V	6Ω	TDA7492	4.8"X3.6"
AA-AB32179	2 X 50Watt	DC8-26V	6Ω	TDA7492	3.6"X2.7"
AA-AB32167	2 X 25Watt	DC10-27V	4Ω	TPA3123	3.6"X2.7"
AA-AB32472	2 X 30Watt	DC8-26V	8Ω	TPA3118	3.6"X2.7"
AA-AB32178	2 X 50Watt	DC8-26V	4Ω	TPA3116	3.6"X2.7"

### Notes:

- The output power is rated at the condition THD+N 10%, 1kHz sine wave.
- All amplifier boards don't employ power supply reverse polarity protection. Stresses beyond the power supply range maximum ratings may cause permanent damage.
- None typical load may cause rating power reduction.
- Dimensions mean length and width of PCB only, excluding excessive part out of the PCB outline.
- All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and AP AUX0025 filter. Linear Power Supply units were used for testing.
- Sure Electronics promise all standard products life cycle more than 5 years. Sure Electronics reserve the right to update the version without notice. All the products sent to retail customers are the latest version. We will provide back-to-order service (100 Pieces MOQ needed) for our distributors in 5 years.

## Mechanical Dimensions

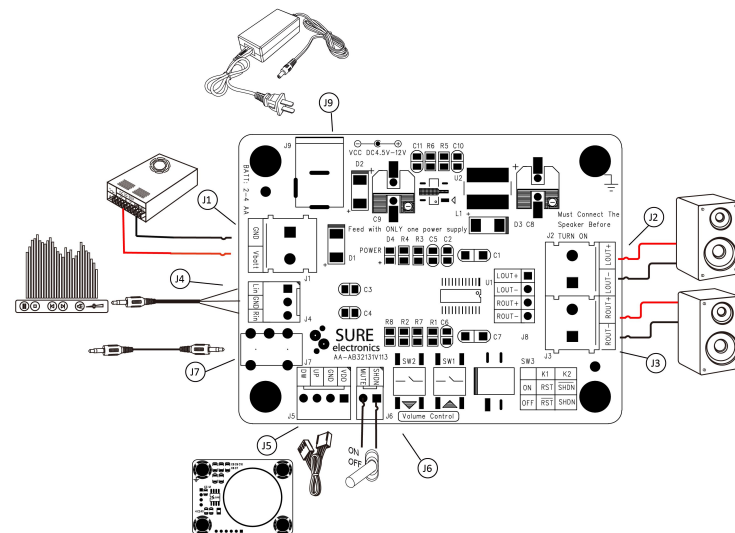


Dimension	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	R (inch/mm)
#1	3.00/76.2	2.70/68.6	2.00/50.8	1.70/43.2	0.14/3.6
#2	3.60/91.4	3.30/83.8	2.70/68.6	2.40/61.0	0.14/3.6
#3	4.80/121.9	4.40/111.8	3.60/91.4	3.20/81.3	0.15/3.8

### Notes:

- All dimensions are typical in inches (mm)
  - Tolerance x.xx = ±0.02 (±0.50)
- Height:
- AA-AB32178, AA-AB32179: 0.94inch/23.9mm
  - AA-AB32174: 1.53inch/37.5mm
  - AA-AB32165: 0.94inch/23.1mm
- Other models 0.65inch/16.5mm

## Connections



### Power Supply Connector:

- J9 DC Jack 5.5mm/2.5mm
- J1 Terminal Block RJ128 (optional)

Pin	Function
1	GND
2	Vbatt

### Shutdown/Mute Control Connector:

- J6 2Pin 2510 Connector

Pin	Function
1	Shutdown
2	Mute

### Volume Control Board Socket

- J5 4Pin 2510 Connector

Pin	Function	Pin	Function
1	VDD	2	DW
3	UP	4	GND

### Audio Input Connector:

- J7 3.5mm Jack
- J4 Audio Input Header (optional)

Pin	Function
1	L
2	GND
3	R

### Speaker Output Connector:

- J2, J3 Terminal Block RJ128

Pin	Function
1	OUT-
2	OUT+

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