

Low Power Stereo Series

2 x 2 Watt 4 Ohm Class D Audio Amplifier Board - PAM8803 (AA-AB32131)



Key Features:

- Output Power
2W @ 40hm 12V DC THD+N 10%
- Power Indicator
- Support Rotary Encoder Board
- Heat Dissipation through PCB Copper
- Overcurrent Protection
- Overtemperature Protection
- On-board Tactile Switches for Volume
- Weight: 131g/ 0.29 lbs (±10%)
- Size: 3 x 2 x 0.67 inches

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	J9 (Power Adapter)	4.5	12	-	VDC
	J1 (Battery)	3	5	-	VDC
Idle Power	SD Floating	-	0.008	0.2	W
Standby Power	SD Connected to GND	-	0.006	0.1	W
Maximum Current	4W @ 40hm	-	0.46	-	A
Efficiency	2W @ 40hm	70	-	75	%
Minimum Load Impedance	-	-	4	-	Ω
Switching Frequency	SD Floating	-	210	-	KHz

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	-	-75	-	23.8	dB
Input Sensitivity(RMS)	@4Ω, 2W, 1KHz	-	300	-	mV
Input Impedance	-	-	10	-	KΩ
Output Power	@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	1W@4Ω THD+N 1%	-	84	-	dB



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:

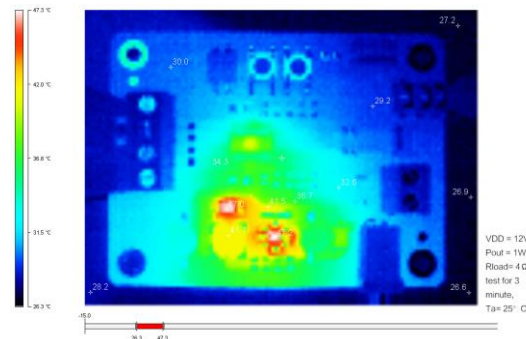
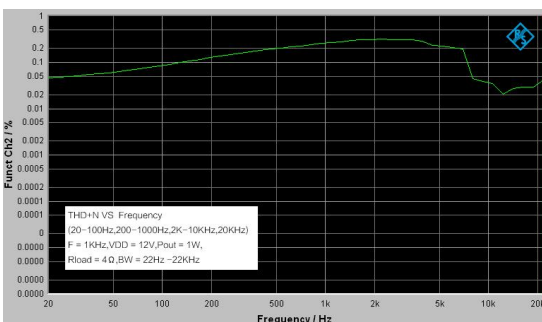
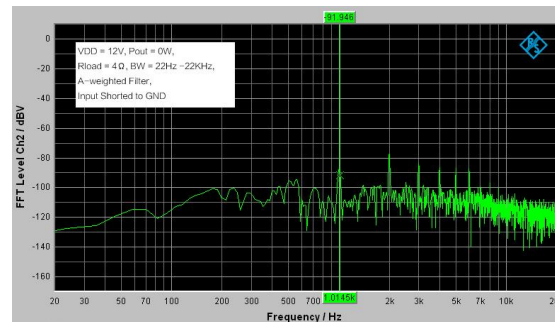
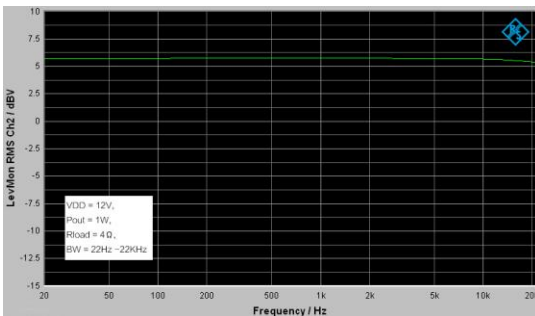


Contact info

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Typical Performance Graphs



All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and Audio Precision 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)

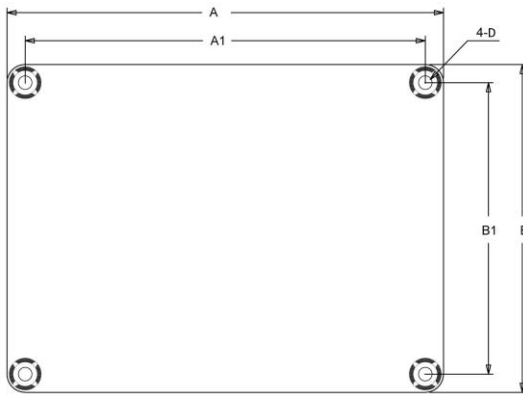
Model Selection Guide

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-AB32231	2 X 8Watt	DC8-19V	8Ω	TPA3110	3"X2"
AA-AB32992	2 x 15Watt	DC10-24V	8Ω	MAX9736A	3.6"X2.7" #2
AA-AB32996	2 X 15Watt	DC10-24V	8Ω	TPA3110	3.6"X2.7"
AA-AB32155	2 X 15Watt	DC10-14V	4Ω	TA2024	3.6"X2.7"
AA-AB32254	2 X 20Watt	DC10-28V	8Ω	MAX98400A	3.6"X2.7"
AA-AB32166	2 X 25Watt	DC10-26V	8Ω	TDA7492P	3.6"X2.7"
AA-AB32167	2 X 25Watt	DC10-30V	4Ω	TPA3123	3.6"X2.7"
AA-AB32165	2 X 25Watt	DC14-19V	6Ω	TDA7492	4.8"X3.6" #3

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 promises all standard products life cycle more than 5 years. Sure Electronics reserves 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.
- Suggested power supply solution:
Huntkey HKA02412020-8D 12V 2A 24W AC/DC Power Adapter (PS-SP11502)
If you have other power supply requirements, please feel free to contact us.

Mechanical Dimensions

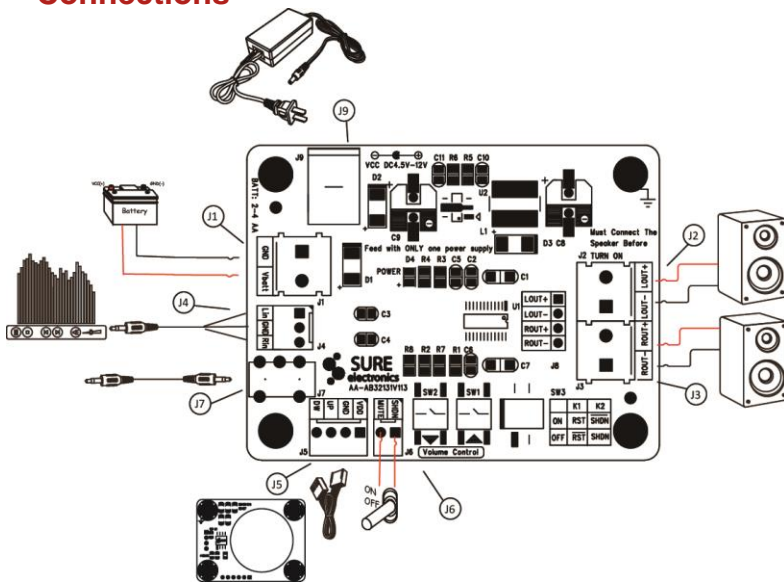


Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
#1	3.0/76.2	2.7/68.58	2.0/50.8	1.7/43.18	0.12/3.1
#2	3.6/91.44	3.3/83.82	2.7/68.58	2.4/60.96	0.14/3.6
#3	4.80/121.92	4.40/111.76	3.60/91.44	3.20/81.28	0.15/3.8

Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)
- Height:
1) AA-AB32554: 0.80inch/20.2mm
2) AA-AB32165: 0.95inch/24.2mm
Other models: 0.67inch/16.9mm

Connections



Power Supply Connector:

- J9 DC Jack 5.5mm/2.1mm
- J1 Terminal Block RJ128 (optional)

Pin	Function
■	GND
●	Vbatt

Shutdown/ Mute (connected to GND) Control Connector:

- J6 2Pin 2510 Connector

Pin	Function
■	Shutdown
●	Mute

Audio Input Connector:

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

Pin	Function
■	Lin
●	GND
●	Rin

Rotary Encoder Board Socket

- J5 4Pin 2510 Connector

Pin	Function
■	VDD
●	GND
●	UP
●	DW

Speaker Output Connector:

- J2, J3 Terminal Block RJ128

	Pin	Function
J2	■	LOUT-
	●	LOUT+
J3	■	ROUT-
	●	ROUT+

On-board Control Switch: SW3

When K1 of SW3 is set to ON, the gain will be reset to 18dB; keep K1 OFF when users want to adjust the volume. When K2 of SW3 is set to ON, the amplifier will enter into shutdown mode.



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