

# Mid Power Stereo Series

## 2 x 250Watt 8 Ohm

## Class D

## Audio Amplifier Board - IRS2092

### (AA-AB32291)



### Key Features:

- Output Power  
250W @8ohm ±70V DC THD+N 10%  
180W @8ohm ±70V DC THD+N 1%
- Working Indicator
- Overcurrent Protection
- Overtemperature Protection
- Optimized Heatsink Design
- 4-screw Easy Installation
- Weight: 576g/ 1.27 lbs (±10%)
- Size: 6.00 x 4.50 x 2.5 inches

### Electrical Specifications

Specifications typical @ +25°C, powered by ±70V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	±60	±70	±80	VDC
Idle Power	SD Floating	-	12.6	20	W
Maximum Current	500W @8Ohm	-	8	-	A
Efficiency	250W @8Ohm	87	-	92	%
Minimum Load Impedance	-	-	2	-	Ω
Switching Frequency	SD Floating	-	285/240	-	KHz
Under voltage protection	-	-	51	-	V
Over voltage protection	-	-	91	-	V
Over Temperature protection	-	-	100	-	°C

### Audio Performance

Specifications typical @ +25°C, powered by ±70V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	-	29	31	33	dB
Input Sensitivity(RMS)	@8Ω, 250W, 1KHz	-	1.17	-	V
Input Impedance	-	-	100	-	KΩ
Output Power	@8Ω THD+N 1% @8Ω THD+N 10%	-	180	-	W
Bandwidth @ ±3dB	@8Ω	20	-	20K	Hz
THD	@8Ω, 1W, 1KHz @8Ω, 10W, 1KHz	-	0.004	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	355	-	μV
SNR	180W @8Ω THD+N 1%	-	82	-	dB

### Distributors:



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:

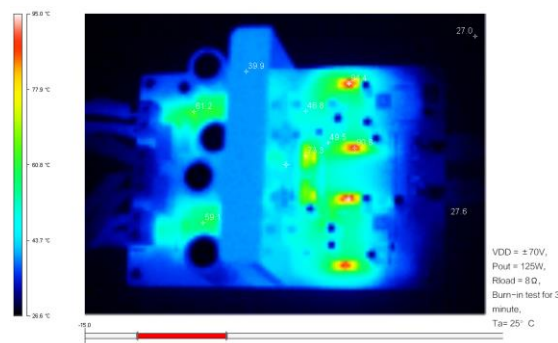
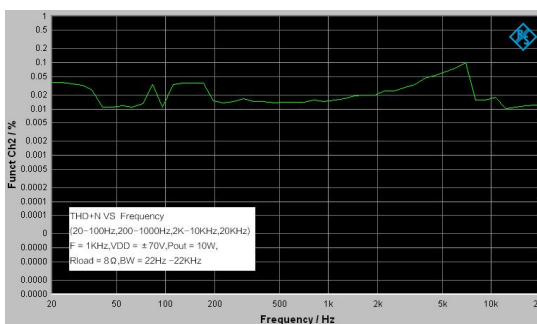
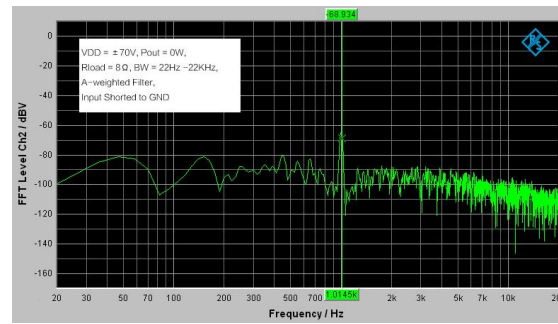
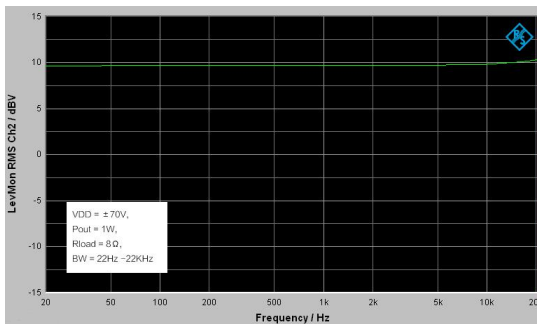


### Contact info

• Email:  
info@sure-electronics.com



### Typical Performance Graphs

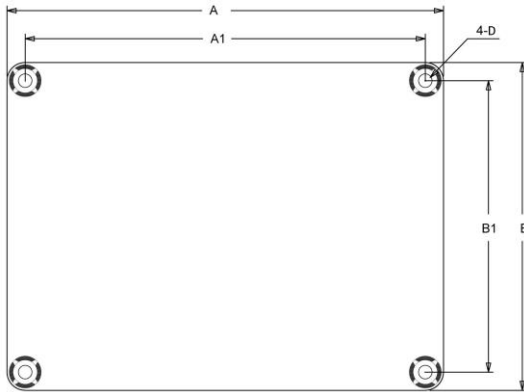


All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and Audio Precision AUX0025 filter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail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

## Model Selection Guide

Model Number	Output Power	Power Supply Range	Typical Load	Amplifier IC	Dimensions
AA-AB32189	2 X 100Watt	DC 15-36V	6Ω	TDA7498	4.8"X3.6" <sup>#1</sup>
AA-AB32361	2 X 160Watt	DC 15-36V	4Ω	TDA7498E	4.8"X3.6"
AA-AB32971	2 X 100Watt	DC 15-27V	4Ω	T-AMP	4.8"X3.6"
AA-AB32281	2 X 200Watt	DC 15-36V	3Ω	T-AMP	4.8"X3.6"
AA-AB32195	2 X 300Watt	DC 15-40V	3Ω	T-AMP	4.8"X3.6"
AA-AB32313	2 X 400Watt	DC 15-48V	3Ω	T-AMP	4.8"X3.6"
AA-AB32512	2 X 500Watt	DC 25-50V	3Ω	T-AMP	4.8"X3.6"
AA-AB32192	2 X 300Watt	DC 25-48V	4Ω	TAS5630B	4.8"X3.6"
AA-AB32221	2 X 150Watt	DC 20-36V	4Ω	TAS5613	6"X4.5" <sup>#2</sup>
AA-AB32191	2 X 300Watt	DC 25-52V	4Ω	TAS5630B	6"X4.5"
AA-AB32196 <sup>#2</sup>	2 X 300Watt	DC 24-40V	3Ω	T-AMP	6"X4.5"
AA-AB32314 <sup>#2</sup>	2 X 400Watt	DC 24-44V	3Ω	T-AMP	6"X4.5"
AA-AB32514 <sup>#2</sup>	2 X 500Watt	DC 24-50V	3Ω	T-AMP	6"X4.5"
AA-AB32432	2 X 750Watt	DC 60-80V	4Ω	T-AMP	6"X4.5"
AA-AB32321	2 X 125Watt	DC ±45-±60V	8Ω	IRS2092	6"X4.5"
AA-AB32291	2 X 250Watt	DC ±60-±80V	8Ω	IRS2092	6"X4.5"
AA-AB32511 <sup>#1</sup>	2 X 500Watt	DC ±55-±65V	4Ω	IRS2092	6"X9" <sup>#3</sup>
AA-AB32431 <sup>#1</sup>	2 X 750Watt	DC ±55-±75V	4Ω	IRS2092	6"X9"

## Mechanical Dimensions



Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
#1	4.80/121.92	4.40/111.76	3.60/91.44	3.20/81.28	0.14/3.60
#2	6.00/152.40	5.60/142.24	4.50/114.3	4.10/104.14	0.14/3.60
#3	6.00/152.40	5.90/149.86	9.00/228.60	8.60/218.44	0.14/3.60

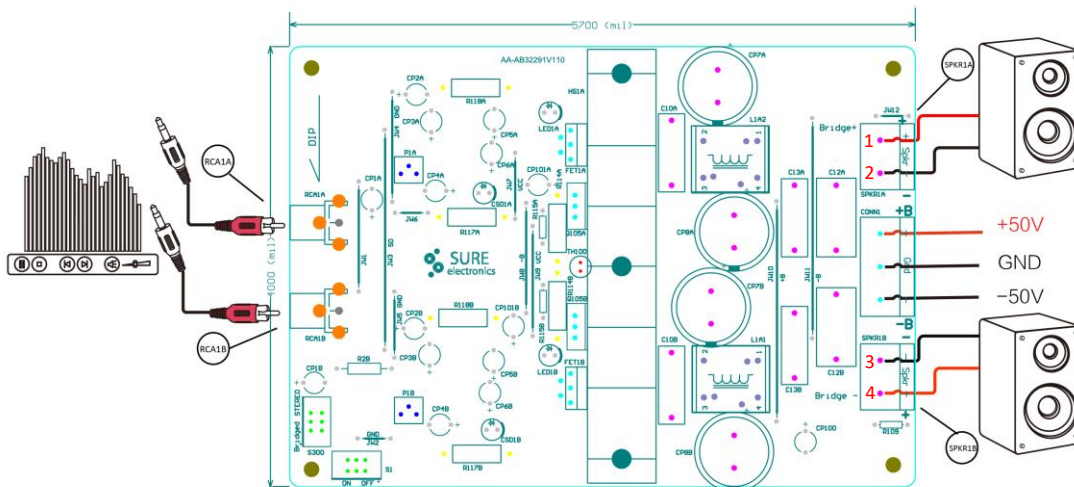
### Notes:

- All dimensions are typical in inches/ mm
- Tolerance x.xx = ±0.02(±0.50)

### Height:

AA-AB32321, AA-AB32291, AA-AB32511, AA-AB32431: 2.5inch/ 61.3mm  
Others: 1.53inch/ 37.5mm

## Connections



### Power Supply Connector:

- CONN1 Terminal Block

Pin	Function
1	+70V
2	GND
3	-70V

### Speaker Output Connector:

- SPKR1A, SPKR1B Terminal Block RJ128

Pin	Function
1	SPKR1A+
2	SPKR1A -
3	SPKR1B-
4	SPKR1B+

### Audio Input Connector:

- RCA1A, RCA1B RCA Jack

### 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.
- If any model within product series is out of stock, another model with compatible size and function, featuring more rating output power will be sent as the substitute without notice. For example, \*1 AA-AB32511's alternative model is AA-AB32431. \*2 AA-AB32196's alternative model is AA-AB32314.
- 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:  
1000VA Hand Made Toroidal Transformer (PS-RT11111)  
30A/75V 18,800Uf Rectifier Board (AA-AB41121)  
Please kindly be noticed that the board needs dual power supplies. If you have other power supply requirements, please feel free to contact us.



# Sure Electronics

Make Your Audio Application Simple!

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