

# High Power Stereo Series

## 2 x 2500Watt 2 Ohm Class D Audio Amplifier Board - IRS2092 (AA-AB32491)



### Key Features:

- Output Power  
2500W @2ohm ±92V DC THD+N 10%  
2230W @2ohm ±92V DC THD+N 1%
- Working Indicator
- Overcurrent Protection
- Overtemperature Protection
- BTL and Stereo Mode Switchable
- Optimized Heatsink Design
- Temperature Control
- Weight: 1584g /3.49 lbs (±10%)
- Size: 9.00 x 6.00 x 2.50 inches

### Electrical Specifications

Specifications typical @ +25°C, powered by ±92V DC, unless otherwise noted. Specifications subject to change without notice.

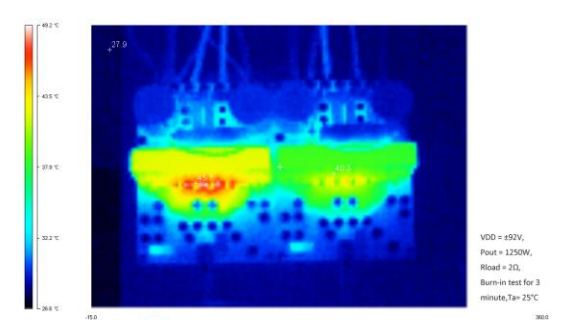
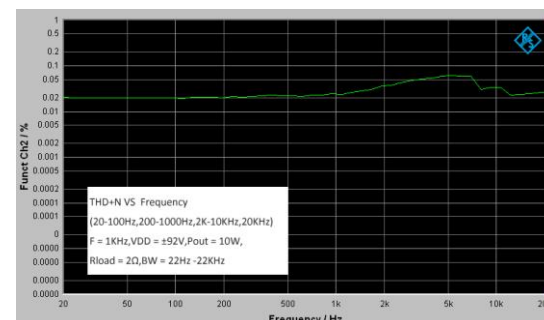
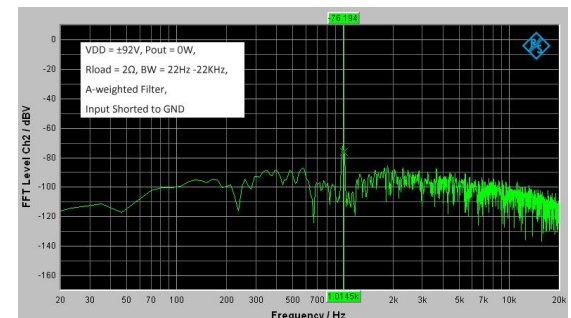
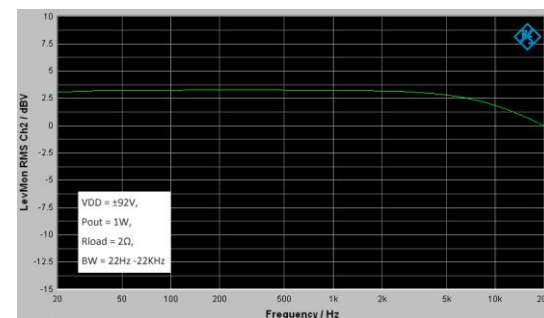
Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	±55	±92	±95	VDC
Idle Power	SD Floating, FAN ON	-	19.4	-	W
	SD Floating, FAN OFF	-	17.9	-	W
Standby Power	SD Connected to GND, FAN OFF	-	1.3	-	W
Maximum Current	5000W @2Ohm	-	57.2	-	A
Efficiency	2500W @2Ohm	-	95	-	%
Minimum Load Impedance	-	-	1	-	Ω
Switching Frequency	SD Floating	-	357	-	KHz
Under Voltage Protection	-	-	±50	-	V
Over Voltage Protection	-	-	±100	-	V
Over Temperature Protection	-	-	100	-	°C
Fan Active @ Temperature	-	-	50	-	°C

### Audio Performance

Specifications typical @ +25°C, powered by ±92V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	-	-	31	-	dB
Input Sensitivity(RMS)	@2Ω, 2500W, 1KHz	-	2.35	-	V
Input Impedance	-	-	3.3	-	KΩ
Output Power	@2Ω THD+N 1%	-	2230	-	W
	@2Ω THD+N 10%	-	2500	-	W
Bandwidth @ ±3dB	@2Ω	20	-	20K	Hz
THD	@2Ω, 1W, 1KHz	-	0.02	-	%
	@2Ω, 10W, 1KHz	-	0.035	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	276	-	μV
SNR	2230W @2Ω THD+N 1%	-	96	-	dB

### 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)



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



## Model Selection Guide

Model Number	Output Power	Power Supply Range	Typical Load	Amplifier IC	Dimensions
AA-AB32392	2 X 1000Watt	DC ±72-±120V	4Ω	T-AMP	6"X4.5" #1
AA-AB32391 <sup>*1</sup>	2 X 1000Watt	DC ±55-±65V	2Ω	IRS2092	6"X9" #2
AA-AB32411 <sup>*1</sup>	2 X 1500Watt	DC ±55-±75V	2Ω	IRS2092	6"X9"
AA-AB32381 <sup>*2</sup>	2 X 2000Watt	DC ±55-±85V	2Ω	IRS2092	6"X9"
AA-AB32491 <sup>*2</sup>	2 X 2500Watt	DC ±55-±95V	2Ω	IRS2092	6"X9"

1. Suggested power supply solution:

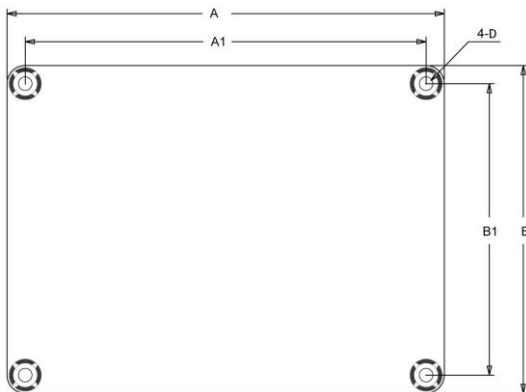
2000VA Hand Made Toroidal Transformer (PS-RT11112)

30A 100V 16000uF Fast Recovery Rectifier Capacitor Bank Board – L (AA-AB41122)

Please kindly be noticed that the board needs dual power supplies.

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	6.00/152.40	5.60/142.24	4.50/114.3	4.10/104.14	0.14/3.60
#2	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: 2.50inch /61.3mm

### Notes:

2. The output power is rated at the condition THD+N 10%, 1kHz sine wave.

3. All amplifier boards don't employ power supply reverse polarity protection. Stresses beyond the power supply range maximum ratings may cause permanent damage.

4. None typical load may cause rating power reduction.

5. Dimensions mean length and width of PCB only, excluding excessive part out of the PCB outline.

6. 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,

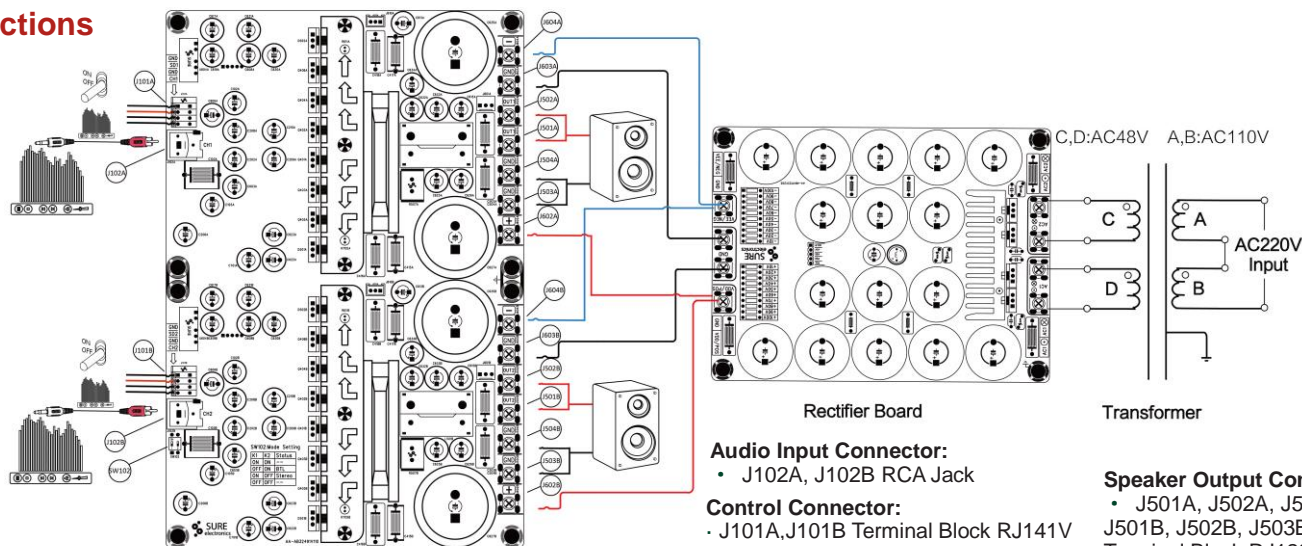
\*1 AA-AB32391's alternative model is AA-AB32411.

\*2 AA-AB32381's alternative model is AA-AB32491.

7. 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.

8. 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.

## Connections



### Power Supply Connector:

- J602A, J603A, J604A, J602B, J603B, J604B Terminal Block

### Mode Setting Switch:

- SW102

Pin	Function	K1	K2	Status	Function
J602A, J602B	+	OFF	ON	BTL	Mono Mode
J604A, J604B	-	ON	OFF	Stereo	Stereo Mode
J603A, J603B	GND				

### Audio Input Connector:

- J102A, J102B RCA Jack

### Control Connector:

- J101A, J101B Terminal Block RJ141V

	Pin	Function
J101A	■	GND
	●	SD1
	●	GND
	●	CH1
J101B	■	GND
	●	SD2
	●	GND
	●	CH2

### Speaker Output Connector:

- J501A, J502A, J503A, J504A, J501B, J502B, J503B, J504B Terminal Block RJ128

Pin	Function
J501A, J502A	OUT1
J503A, J504A	GND
J501B, J502B	OUT2
J503B, J504B	GND



# Sure Electronics

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