

# High Power Mono Series

## 1 X 1000 Watt 1.5 Ohm Class D Audio Amplifier Board - T-AMP (AA-AB31392)



### Key Features:

- Output Power  
1000W@1.5Ohm 50V DC THD+N 10%  
632W@1.5Ohm 50V DC THD+N 1%
- Power and Clip Indicator
- Support Volume Control Board (VC01)
- BTL Architecture
- Temperature Control Fan
- Overcurrent Protection
- Optimized Heatsink Design
- Overtemperature Protection
- Weight: 708g/1.56 lbs (±10%)
- Size: 6.00 x 4.50 x 1.53 inches

### Electrical Specifications

Specifications typical @ +25°C, powered by 50V DC, unless otherwise noted. Specifications subject to change without notice.

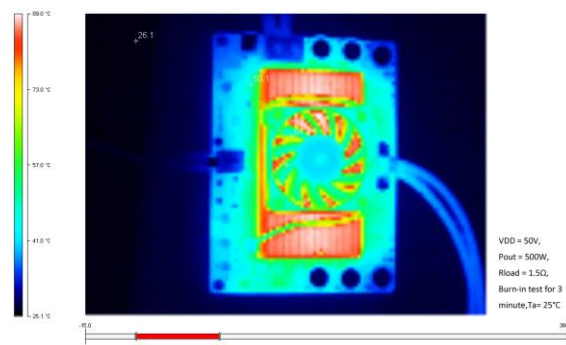
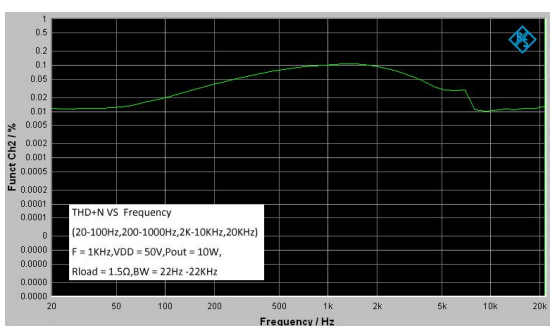
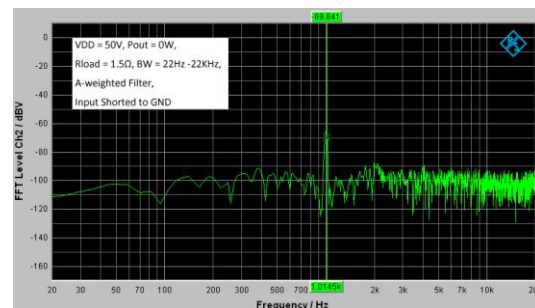
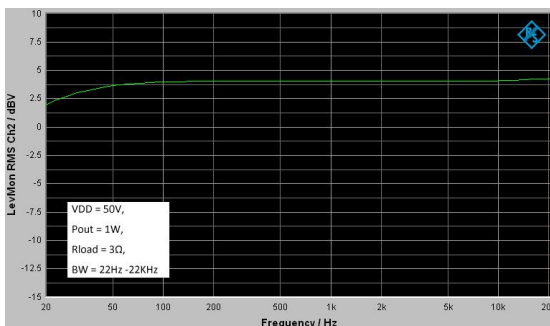
Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	25	50	-	VDC
Idle Power	SD Floating, FAN ON	-	13.5	18	W
	SD Floating, FAN OFF	-	12.5	16	W
Standby Power	SD Connected to GND, FAN OFF	-	1	3	W
Maximum Current	1000W @ 1.5Ohm	-	21.3	-	A
Efficiency	1000W @ 1.5Ohm	91	-	96	%
Minimum Load Impedance	-	-	1.5	-	Ω
Switching Frequency	SD Floating	-	680	-	KHz
Fan Active @ Temperature	-	-	50	-	°C

### Audio Performance

Specifications typical @ +25°C, powered by 50V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	-	28	30	32	dB
Input Sensitivity(RMS)	@ 1.5Ω, 1000W, 1KHz	-	1.48	-	V
Input Impedance	-	-	10	-	KΩ
Output Power	@ 1.5Ω THD+N 1%	-	632	-	W
	@ 1.5Ω THD+N 10%	-	1000	-	W
Bandwidth @ ±3dB	@ 1.5Ω	20	-	20K	Hz
THD	@ 3Ω, 1W, 1KHz	-	0.064	-	%
	@ 3Ω, 10W, 1KHz	-	0.074	-	%
Output Noise Level	A-weighting, Input Connected to GND	-	334	-	μV
SNR	632W @ 1.5Ω THD+N 1%	-	95	-	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)

### Distributors:



All these boards are pre-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 1000 pieces per order.

Ready for:



### Contact info

• Email:  
info@sure-electronics.com



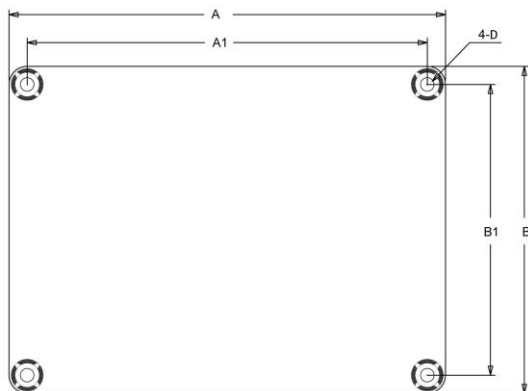
## Model Selection Guide

Model Number	Output Power	Power Supply Range	Typical Load	Amplifier IC	Dimensions
AA-AB31392	1 X 1000Watt	DC25-50V	1.5Ω	T-AMP	6" X 4.5" #1
AA-AB31413	1 X 1500Watt	DC72-90V	2Ω	T-AMP	6" X 4.5"
AA-AB31382	1 X 2000Watt	DC72-120V	2Ω	T-AMP	6" X 4.5"
AA-AB31391 <sup>*1</sup>	1 X 1000Watt	±55-±65V	2Ω	IRS2092	6" X 4.5"
AA-AB31411 <sup>*1</sup>	1 X 1500Watt	±55-±75V	2Ω	IRS2092	6" X 4.5"
AA-AB31381 <sup>*2</sup>	1 X 2000Watt	±55-±85V	2Ω	IRS2092	6" X 4.5"
AA-AB31491 <sup>*2</sup>	1 X 2500Watt	±55-±95V	2Ω	IRS2092	6" X 4.5"
AA-AB31341	1 X 3000Watt	±55-±75V	4Ω	IRS2092	6" X 9" #2
AA-BK31391	1X1000Watt	DC30-52V	1.5Ω	T-AMP	3.9" X 3.9" #3
AA-BK31381	1X2000Watt	DC72-120V	2Ω	T-AMP	3.9" X 3.9"

### 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.
- one 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-AB31391's alternative model is AA-AB31411. \*2 AA-AB31381's alternative model is AA-AB31491.
- 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:  
Mean Well MW 48V 20.8A 1000W AC/DC Switching Power Supply SE-1000-48 (PS-SP11192)  
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	5.60/142.24	9.00/228.60	8.60/218.44	0.14/3.60
#3	3.90/99.06	3.50/88.90	3.90/99.06	3.50/88.90	0.14/3.60

### Notes:

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

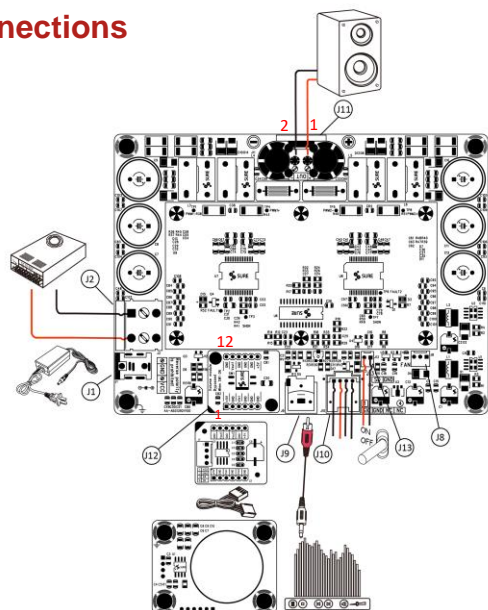
AA-AB31392, AA-AB31413, AA-AB31382: 1.53inch/37.5mm

AA-BK31391: 1.97inch/50mm

AA-BK31381: 2.58inch/65.5mm

Other models: 2.50inch/61.3mm

## Connections



### Audio Input Connector:

- J9 RCA Jack
- J10 Molex Connector (optional)

Pin	Function
1	SIG
2	GND
3,4	NC

### Power Supply Connector:

- J1 DC Jack 5.5mm/2.5mm
- J2 Terminal Block RJ128 (optional)

Pin	Function
■	GND
●	VCC

### Shutdown Control Connector:

- J13 2Pin 2510 Socket

Pin	Function
■	GND
●	SD

### Speaker Output Connector:

- J11 Terminal Block RJ128

Pin	Function
1	OUT+
2	OUT-

### Volume Control Board Socket (Volume module bypassed when SW1 ON)

- J12

Pin	Function	Pin	Function
1, 7	+5V	3	Vin1
2, 4, 5, 6, 8, 9, 10, 12	GND	11	Vout1



# Sure Electronics

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NO.9, Weidi Road, Xianlin University City, Qixia District,  
Nanjing, Jiangsu Province, P.R.C

www.sure-electronics.com

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Skype: surewebstore