

# High Power Mono Series

## 1 x 2000 Watt 2 Ohm Class D Audio Amplifier Board -LV (AA-AB31382)



### Key Features:

- Output Power  
2000W@ 2Ohm 100V DC THD+N 10%
- Wide Power Supply Range from DC48V - 120V
- Signal Level Sensor System
- Flexible Input Sensitivity
- Flexible Load Characteristic
- Power and Clip Indicator
- Weight: 892g/1.97 lbs (±10%)
- Size: 6 x 4.5 Inches PCB Size

### Electrical Specifications

Specifications typical @ +25°C, Powered by 100V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units	
Number of Channels	-	-	1	-	-	
Minimum Load Impedance	-	-	1.5	-	Ω	
Efficiency	2000W@2Ohm	-	90	-	%	
Nominal Power Requirement	@100V, 2Ohm	-	2100	-	W	
Operating Voltage	-	48	100	120	V	
Idle Power	Signal detected (Load 2 Ohm)	FAN ON	-	25	-	W
		FAN OFF	-	24.3	-	
	No Signal detected	-	3.5	-	W	
Switching Frequency	SD Floating@100V	-	600	-	kHz	
Power Consumption	1/4 of max output power@2Ohm,120V	-	600	-	W	
	1/8 of max output power@2Ohm,120V	-	300	-	W	
Control	Standby (Low = inputs enabled)	High-level Input Voltage	3.3	-	5.5	V
		Low-level Input Voltage	-	-	0.4	V
Standby Power	SD short to GND, only when low power module available	-	3.5	-	W	
Under Voltage Protection	-	-	41	-	V	

### Distributors:



All these boards are pre-tested with our power supply solution to comply with RoHS. Any Requirement of FCC and CE, please contact us. 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:

# RoHS

### Contact info

- Email:  
info@sure-electronics.com

### Audio Performance

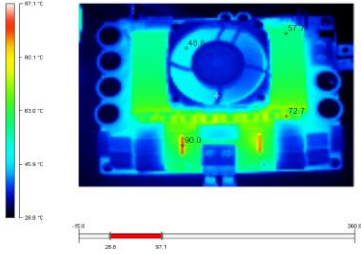
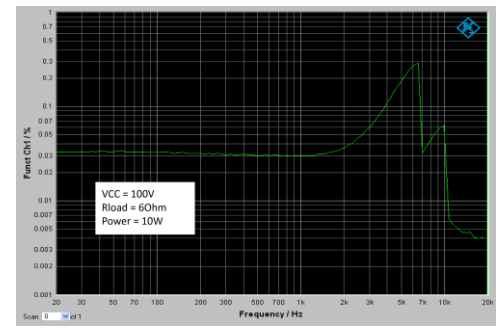
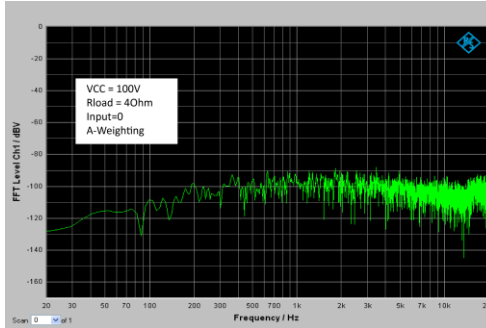
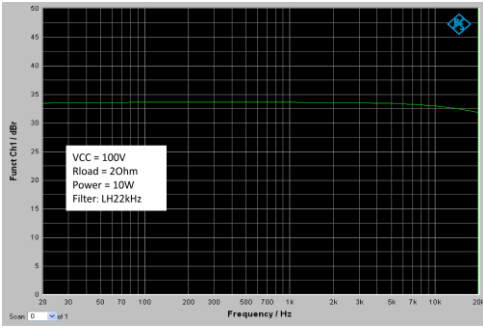
Specifications typical @ +25°C, Powered by 100V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Sensitivity	2000W@2Ohm, 1kHz	-	1.4	-	Vrms
SNR	400W@2Ohm, A-weighting	-	100	-	dB
THD+N	10W@4Ohm, 1kHz	-	0.04	-	%
	100W@4Ohm, 1kHz	-	0.08	-	%
Input Impedance	-	-	10	-	kΩ
Output Noise Level	A-weighting, Input Connected to GND	-	450	-	uV
DC Offset	-	-	50	-	mV
Bandwidth	-	20	-	20k	Hz
Gain	@2Ohm, 1kHz	-	33	-	dB

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)



# Typical Performance Graphs

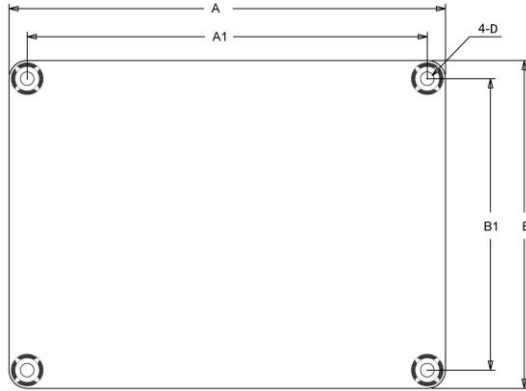


Ta = 27°C  
VCC = 100V  
Rload = 20Ohm  
Time = 5min  
2000W for 30s  
500W for 30s  
Cycle: 1min  
F<sub>input</sub> = 1kHz

Test	Temperature		Duration/ Operation
Burn In Test	25°C	25°C	48hours
Low Temperature, Operating	0°C	0°C	Checking startup performance
High Temperature, Operating	55°C	55°C	2hours
Change of Temperature, Operating	0°C	50°C	On customers' requirement

The tests above are carried out under regular conditions. Please contact us directly if you require test reports under extreme conditions, especially for industrial and military purpose.

## Mechanical Dimensions

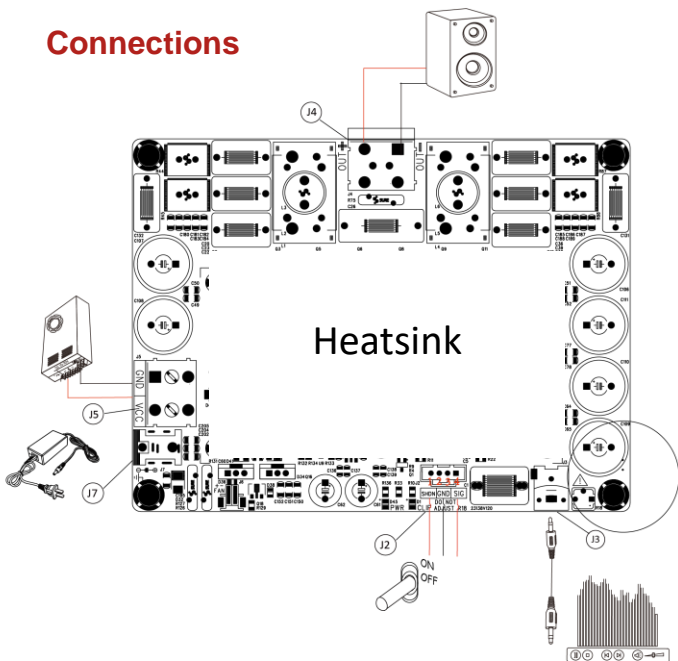


Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
#1	6.00/152.40	5.60/142.24	4.50/114.3	4.10/104.14	0.14/3.60

### Notes:

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

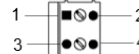
## Connections



### Switching Power Supply Connector:

- J5

Pin	Function
1	GND
2	
3	VCC
4	



### Power Adapter Connector:

- J7 DC Jack ID 2.5mm x OD 5.5 mm

### Audio Input Connector:

- J3 RCA Jack

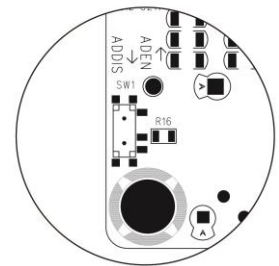
### Audio Output Connector:

- J4 Molex-4Pin-3mm

### Control Connector:

- J2

Pin	Function
1	SHDN
2, 3	GND
4	SIG



SW1 on the backboard can be used to turn off the Signal Detection Function. When the switch is turned to ADDIS, the signal detection function will be turned off. Take the silkscreen on board for reference.



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www.sure-electronics.com  
www.wondom.com  
Mail: store@surrelectronics.com  
Skype: surewebstore