

High Power Mono Series

1 x 2500 Watt 6 Ohm Class D Audio Amplifier Board -HV (AA-AB31492)



Key Features:

- Output Power
2500W@ 6Ohm 168V DC THD+N 10%
- Wide Power Supply Range from
DC48V - 174V
- Signal Level Sensor System
- Flexible Input Sensitivity
- Flexible Load Characteristic
- Power and Clip Indicator
- Weight: 920g/2.03 lbs (±10%)
- Size: 6 x 4.5 Inches PCB Size

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

Electrical Specifications

Specifications typical @ +25°C, Powered by 168V DC, unless otherwise noted. Specifications subject to change without notice.

| Parameter | Conditions | Min. | Typ. | Max. | Units | |
|---------------------------|---|--------------------------|------|------|-------|---|
| Number of Channels | - | - | 1 | - | - | |
| Minimum Load Impedance | - | - | 3 | - | Ω | |
| Efficiency | 2500W@6Ohm | - | 90 | - | % | |
| Nominal Power Requirement | @168V, 60hm | - | 2700 | - | W | |
| Operating Voltage | - | 48 | 168 | 174 | V | |
| Idle Power | Signal detected (Load 6 Ohm) | FAN ON | - | 25 | - | W |
| | | FAN OFF | - | 24.3 | - | |
| | No Signal detected | - | 4 | - | W | |
| Switching Frequency | SD Floating@168V | - | 400 | - | kHz | |
| Power Consumption | 1/4 of max output power@60hm, 174V | - | 700 | - | W | |
| | 1/8 of max output power@60hm, 174V | - | 350 | - | 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 | |

Audio Performance

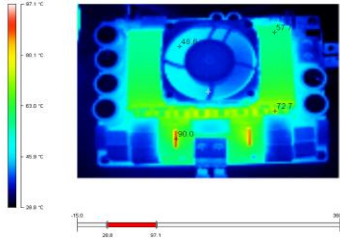
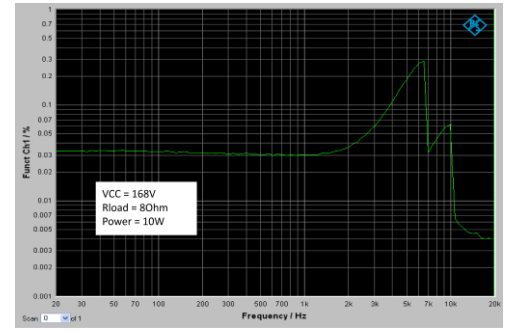
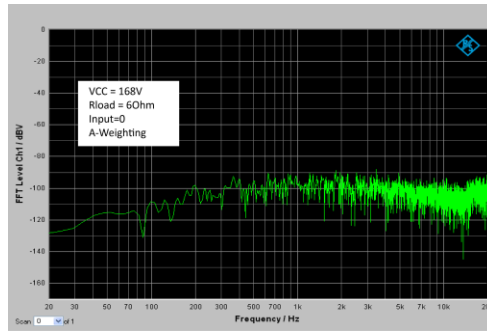
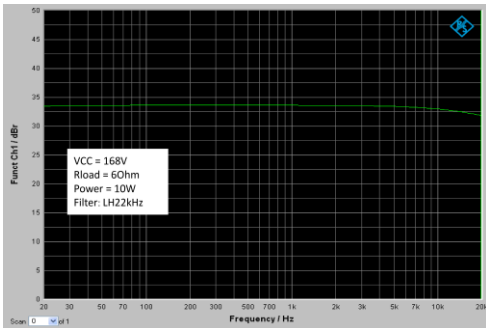
Specifications typical @ +25°C, Powered by 168V DC, unless otherwise noted. Specifications subject to change without notice.

| Parameter | Conditions | Min. | Typ. | Max. | Units |
|--------------------|-------------------------------------|------|------|------|-------|
| Input Sensitivity | 2500W@60hm, 1kHz | - | 1.7 | - | Vrms |
| SNR | 400W@60hm, A-weighting | - | 100 | - | dB |
| THD+N | 10W@80hm, 1kHz | - | 0.04 | - | % |
| | 100W@80hm, 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 | @60hm, 1kHz | - | 37 | - | 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

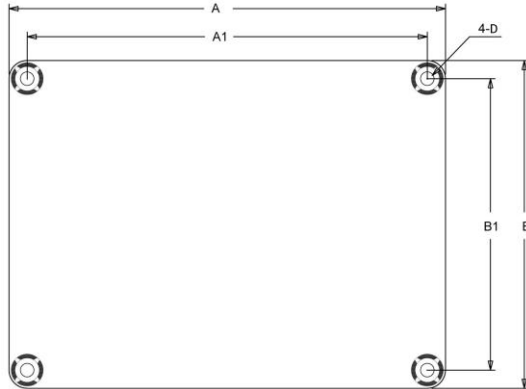


Ta = 27°C
VCC = 168V
Rload = 60hm
Time = 5min
2500W for 30s
625W for 30s
Cycle: 1min
F_{input} = 1kHz

| 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

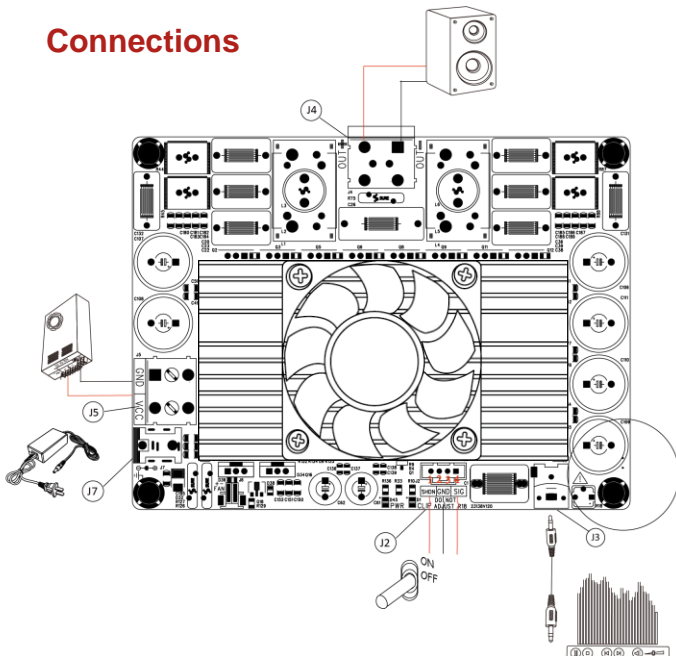


| Dimension | A (inch/mm) | A1 (inch/mm) | B (inch/mm) | B1 (inch/mm) | D (inch/mm) |
|-----------|----------------|-----------------|----------------|-----------------|----------------|
| | 6.00/152.40 | 5.60/142.24 | 4.50/114.3 | 4.10/104.14 | 0.15/3.8 |

Notes:

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

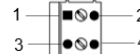
Connections



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

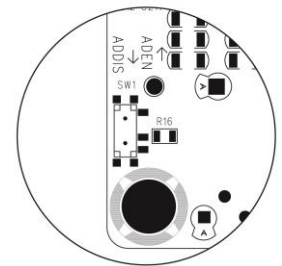
Audio Output Connector:

- 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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