HPA2602

2-Channel High Power Multi-Impedance Amplifier

Features

- 70.7V/100V and 2Ω, 4Ω, and 8Ω Output
  - 70.7V 2 x 1300W
  - 8Ω 2 x 800W
  - 4Ω 2 x 1300W
  - 2Ω 2 x 1800W
  - 8Ω BRIDGED 1 x 2500W
  - 4Ω BRIDGED 1 x 3200W
- Balanced Inputs Euro Block Phoenix Style Connector
- Remote Turn On
- Accessory Card Slot for Optional Dante™ Digital Network Audio Card
- Fault Reporting
- Soft Clip Limiter Protection
- Stepped Attenuators with Security Covers
- Stereo, Bridge, or Parallel Operating Modes
- Selectable Input Sensitivity
- High Efficiency Fan Cooling
- Auto Sensing 120V/220V AC Mains Power Supply
- Meets Energy Star Standards for 1W Standby Mode

Applications

The HPA2602 can be used for most audio applications whether it is for commercial installed 70V/100V distributed systems or professional high performance sound reinforcement applications. The HPA series will provide efficient, stable, reliable power making them the perfect choice for Night Clubs, House of Worship Systems, Portable Sound Systems, Convention Centers, Sports Venues, Hotels and Retail Centers.

General Description

The AtlasIED High Power Amplifier "HPA" Series model HPA2602 has been designed to be versatile for use in both commercial 70V/100V distributed systems and professional applications that require amplifiers to handle 4 and 2 ohm loads.

The HPA Series features generation II Class I Output topology that provides efficiency similar to a Class D amplifier with the sound quality of a Class AB amplifier. The power supply is a switch mode global auto sensing generation 3 design that maintains a stable output during fluctuating power conditions. The power supply and output stage collectively are designed to deliver exceptional dynamic high output voltage and current to virtually any loudspeaker load.

The HPA Series features front panel stepped level controls with a security cover, remote turn on, balanced line inputs with sensitivity settings, fault reporting and an accessory card slot for an optional Dante™ 2-channel digital audio interface. Cooling is not an issue because of the unique output stage low resistance direct couple thermal transfer design. HPA also is energy efficient and meets Energy Star 1W standby mode standards.

Whether the application is a large distributed constant voltage sound system or a high SPL sound reinforcement system, the AtlasIED HPA Series is the answer for high power/cost effective reliable amplification requirements.

System	
Type	Power Amplifier, 2 Channel
Power Supply Type	Auto Switch Mode 120V / 220V
Amp Topology	Class I
Number of Fixed Inputs	2
Accessory Inputs	2
Optional Card Slot	Yes
Output Power	
100V x 2 CH	N/A - See Note 4
70.7V x 2 CH	2 x 1300W
8Ω x 2 CH	2 x 800W
4Ω x 2 CH	2 x 1300W
2Ω x 2 CH	2 x 1800W
8Ω Bridged	1 x 2500W
4Ω Bridged	1 x 3200W
Factory Default Settings (As Shipped)	
Amplifier Configuration	2 CH
Level Controls	Front Panel
Control Ports (Rear Panel)	Remote Turn On / Off, Enable On
Input Sensitivity	.775 / 0dBu
Inputs	
Input Quantity	2-Balanced Inputs, Expandable to 4 via Acccessory Card
Input Type (Line Balanced or Unbalanced)	Balanced
Input Impedance	20KΩ (Balanced) 10KΩ (Unbalanced)
Input Sensitivity	775mV / 1.0V / 32dB (Selectable)
Input Connectors Type	3.5mm Euro Block
Accessory Slot	2 Input Dante™ Digial Card (HPA-DAC2)
Level Control	
Front Panel Manual	Stepped Attenuators with Security Cover
Status Indicators	
Power	Blue Indicator
Standby	Amber
AC Mains Out of Safe Operating Range	Red
Temp	Yellow
Ready	Green
Signal	Green
Output Limit	Yellow
Output Protect	Red
Bridge	Yellow (Rear Panel)
GPIO Ports (Rear Panel)	
Number of Ports	Qty 5
Type of Connector	Euro Block 3.5mm
Functions	Remote Turn ON via Contact Closure
Functions	Remote Turn ON via DC Voltage 5-24V
Functions	Fault Report Contact - NC Under Safe Operating Conditions, NO When Fault is Detected, No AC Mains Power, Thermal, Shorted Output, Over Current

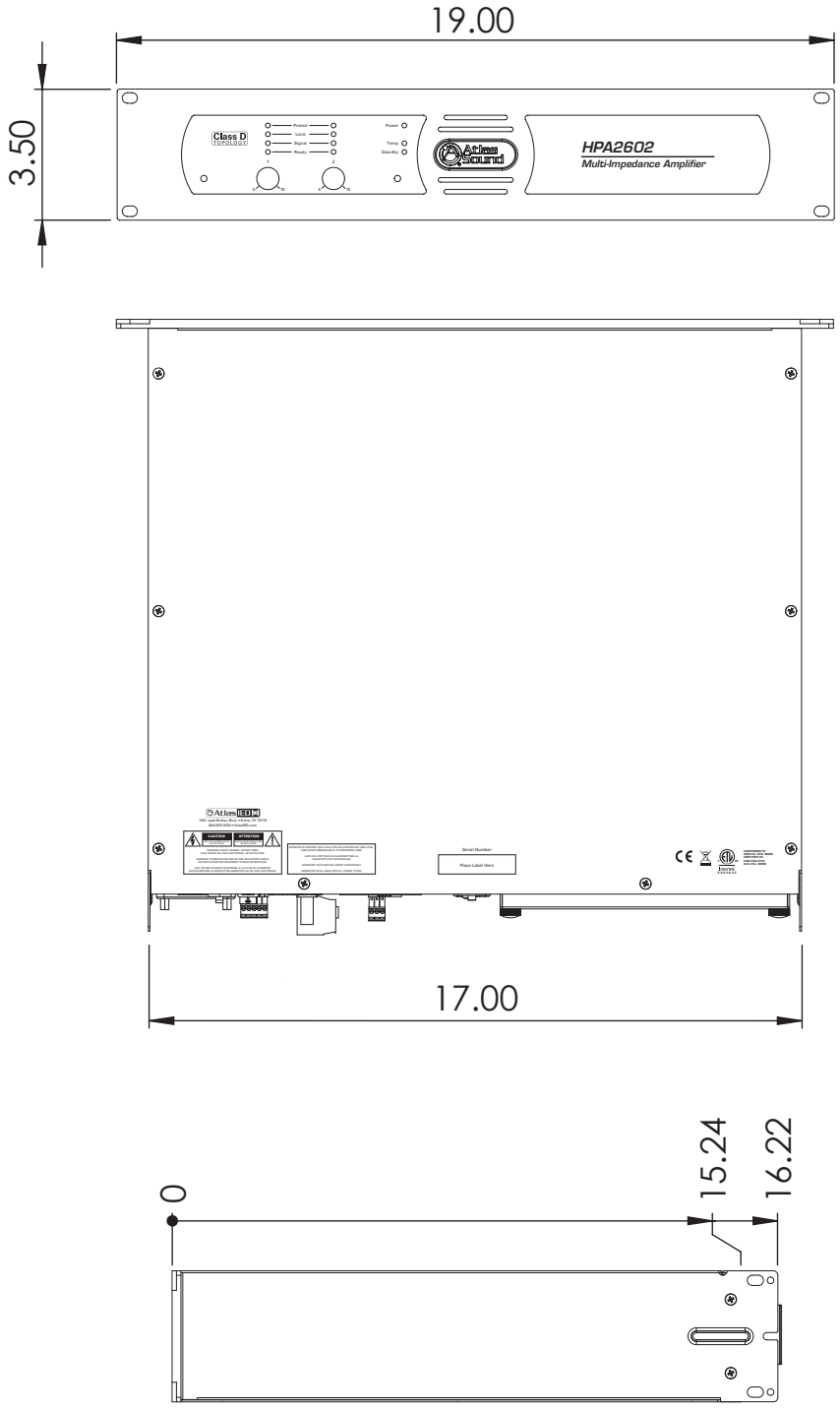
Output Terminals (Speaker)			
Output Connectors Type	Removable Euro Block, 10.16mm Pitch, Locking		
Output Connectors Number of Terminals	4 Position		
Wire Size	6-18 Gauge (Class 3 Wire)		
Current Rating	57A per Terminal		
Electrical Specifications (General)			
Total Harmonic Distortion 1 kHz and 1 dB Below Rated Power	0.05%		
Signal to Noise Ratio	>85dB Below Rated Output (A-Weighted)		
Frequency Response	20Hz - 20kHz (+0/-1.5dB)		
Input Sensitivity	0.775V / 1.0V / 32dB (Selectable)		
Slew Rate	>10V / µs		
Damping Factor (20Hz to 400Hz)	>800		
Gain	40dB (8Ω Factory Ship or 32dB Assignable)		
Crosstalk CH1-2 & CH 2-1	>70dB		
Max Voltage Per Output 8Ω	82V		
Max Current per Output 4Ω	16.6A		
Protection	Soft Start, Input RF, DC, Short Circuit, Current Overload, Clip Limit, AC Mains Under / Over Voltage Shut Off, Peak Current Limit, Over Temp		
AC Power Requirements			
Operating Voltage Auto Switch, 50/60Hz	88V-135V & 180V -264V		
Minimum Power-Up Voltage	88V		
Maximum Operating Voltage	264V		
Mains Connector	C20 IEC Receptacle / Locking		
Power Cord (Ships With)	IEC 12-Gauge 1.5M Cord w/ NEMA 5-20 Male Plug		
Power Consumption & Current Draw @ 120V AC Mains			
Standby Mode	330mA	.6W	2 BTU
Idle Active	1.48A	85W	267 BTU
Average Power 4 Ohm, All CH Driven	13A	1560W	3121 BTU
Average Power 70.7V, All CH Driven	13.1A	1572W	3134 BTU
Max Power 4 Ohm, All CH Driven	18A	2160W	4857 BTU
Max Power 70V, All CH Driven	18.4A	2208W	4751 BTU
Cooling			
Cooling System	Fan (Varible With Temerature)		
Air Inlet Filter	Yes, Rear, Washable		
Cooling Air Flow Direction	Rear to Front		
Dimensions and Weight			
Rack Mount Requirements	2 RU, 19"		
Dimensions - Unit	19"W x 3.5"H x 15"D (483mm x 89mm x 381mm)		
Dimensions - Shipping	23"W x 6.5"H x 22"D (584mm x 165mm x 558mm)		
Weight - Unit	28.5 lbs. (12.8kg)		
Weight - Shipping	34.5 lbs. (15.5kg)		
Agency Approvals			
North America Agency	ETL		
Testing Standard North America	60065		
FCC Class A (Conducted & Radiated Emissions)	Part 15 of the FCC Rules		
CE	Yes (Includes RoHS & WEEE)		

Optional Accessories	
HPA-DAC2 - Dante™ Digital Audio Interface	2 Channel Receive (Only) - Field Installable

NOTES:

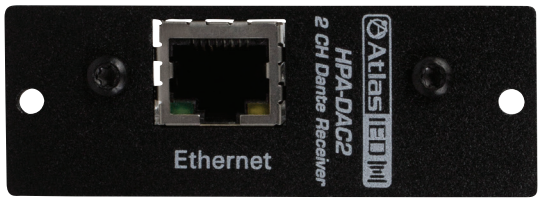
1. Power level measurment is define as follows: 1Hz Sine wave signal burst of 20 cycles (20mS) at 1% THD+N, followed by 480 cycles of a 1kHz sine wave at 10% of the max power. Other power measurements are available upon requests.
2. Average Power is defined as Pink Noise input signal applied to achieve 1/4 of the 4 Ohm or 70.7V power rating.
3. Max Power is defined as 1 KHz input signal applied to achieve the maxium power output before clipping into a 4 Ohm or 70.7V load.
4. HPA2602 maximum voltage output is 85V.

Dimensional Drawings



Optional Accessories

HPA-DAC2 - Dante™ Two-Channel Receiver Card



Architect and Engineer Specifications

The power amplifier shall be a 2-channel second generation Class I multi-impedance amplifier capable of driving 70.7V, 8Ω, 4Ω, 2Ω, 8Ω bridged, and 4Ω bridged load conditions. The amplifier shall have multiple internal circuits to protect itself and connected speakers from Input RF, output DC, output short circuits, current overload, clipping, AC mains under or over voltage, peak current limit, and thermal overload. A variable speed fan shall provide rear to front airflow for dynamic cooling. The universal auto-switch 50/60Hz power supply operating range shall be 88V-135V & 180V-264V. The AC Mains inlet shall be C20 IEC Locking Receptacle and ship with a IEC 12-guage 1.5M cord with a fixed NEMA 5-20 Male Plug. The HPA2602 shall meet Energy Star 1W Standby Mode Standards. Power ratings shall equal or exceed 1300W x 2 @ 70.7V or 800W x 2 @ 8 Ohms. Each balanced Line input channel shall have a selectable input sensitivity of 0.775V, 1.0V, or 32dB, and frequency response shall be 20Hz–20kHz (+0/-1.5dB) with a Signal to Noise Ratio of >85dB below rated output (A-Weighted). Front panel indicators shall include ready, signal present, limiter, and protection LEDs. Front panel level controls shall be stepped attenuators with security covers included. Input terminations shall be removable 3.5mm Phoenix style connectors and loudspeaker outputs shall be a removable 4-position Phoenix style connector capable of accepting up to 6 AWG wire. A switch on the rear panel shall provide selection of stereo, parallel or bridge modes of operation. Rear panel 5 position Phoenix style GPIO ports shall provide Remote Turn On and Fault Reporting for each channel. The amplifier shall have one (1) rear mounted Accessory Card slot. This slot shall be for an HPA-DAC2, a 2-channel Dante™ Digital Audio Input Card. Dimensions shall be 2 RU, 3.5" x 19" x 15" (89mm x483mm x 381mm) and the amplifier shall weigh 28.5lbs (12.8kg).

The amplifier shall be AtlasIED HPA2602.