



HPA SERIES LINER POWER SUPPLY AMPLIFIERS

Constant innovation in the pro audio industry has led to the development of new technologies and innovations. High performance in professional loudspeakers demands an equally efficient amplification. For a sound system engineer, whether an installed sound or touring system, the only thing that matters is - the show must go on.

Reliability is the highest priority.

CSC HPA series amplifiers are an answer for both install and touring verticals.

DESIGN PHILOSOPHY

- 1 Sonic performance
- 2 Ease of service
- 3 Reliability

HPA series is a combination of Linear Power Supply mated with high-efficiency Class-D output stage. The PCB design is fairly modular, with on-field replacements as easy as unscrewing a few fasteners, dropping in a new PCB, and you are back in business.

AMPLIFIER TOPOLOGY

HPA Series has a Class-D 7th Generation Post filter feedback Monorail Full-Bridge output stage with Active common-mode error correction. The design ensures a high current output stage with a large dynamic headroom.

The IXYS GenX3 class's output devices are driven, with dedicated isolated drivers having a floating power supply. The Point of load type auxiliary converters in the regulator section ensure simplicity in design. The Triple Stacked Cores inductors in the output stage generate enormous headroom before reaching any saturation current limitations. All these features result in a high-speed transient response ensures adequate cone control

POWER SUPPLY

High current Toroidal transformer coupled with dual bridge rectifiers link the high capacity bus capacitance storage, creating a system

instantaneous power reservoir for fast current dispersion at sustained loads.

PROTECTION

The amplifier has an advanced set of protections for conditions such as short circuits and high temperatures of internal heat sinks. The limiter based automatic gain reduction activates whenever the amplifier detects an overcurrent or output voltage limitations during clipping, swiftly reducing the drive signal keeping the output stage operating area free from distortion.

A mains protection circuit has some great features for third-world countries where power supplies are erratic and unreliable. The CSC amplifier protection circuitry monitors the mains AC voltage and shutdown itself if it falls under 170VAC or exceeds 270VAC. The amp easily sustains voltages of upto 440VAC.

ROBUST AND RELIABLE.

SOME KEY FEATURES

Rugged high current CLASS D amplifier

- ▶ 2U height
- ▶ Stable to 1 ohm.
- ▶ Accurate cone control using 7th generation balanced post-filter feedback circuitry.
- ▶ Drives subwoofers, Thanks to its generous Capacitive reserves.
- ▶ Full power bandwidth 10hz-20 kHz.
- ▶ Reliable Toroidal linear power supply.
- ▶ Temperature controlled air-flow using a pair of fans arranged in push-pull orientation.
- ▶ Speakon used 50A version.
- ▶ Damping factor > 1000
- ▶ Protections against under voltage/over voltage (170-260v). Sustains voltages upto 440v.
- ▶ High pass, low pass filters & subsonic filters
- ▶ K-EQ curve.

The Full-Bridge Output Stage Architecture enhances energy recycling eliminating bus pumping. Ultra-reliable for countries where day temperatures exceed 45 degrees and voltages are unreliable.

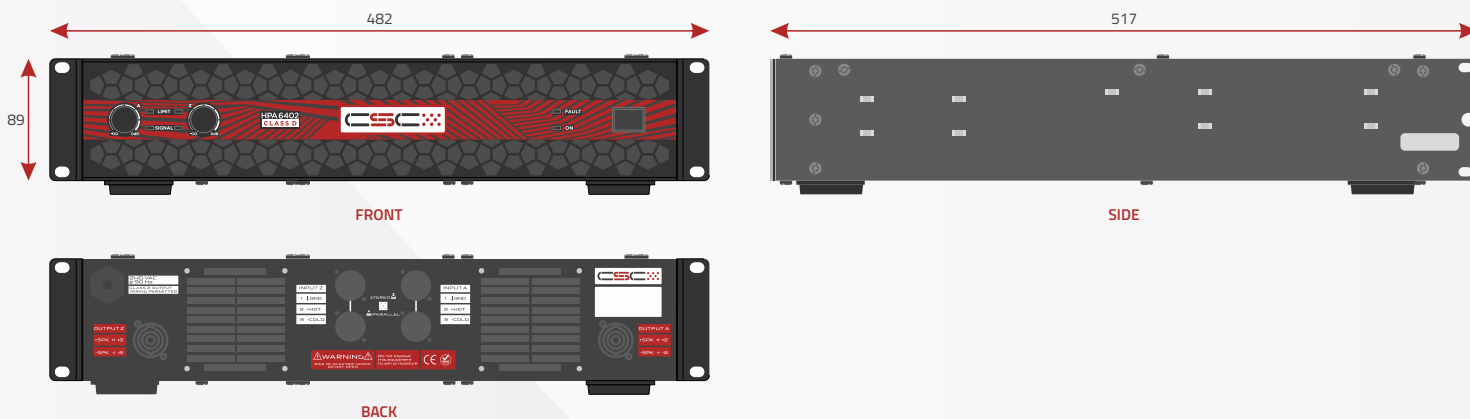


SERIES: HPA series

High current class D linear power supply amplifier

S.No	MODEL NO	HPA 6402	HPA 4802	HPA 3602
Type		Class-D with Post filter feedback with Active Error Correction		
1	Channels	2	2	2
2	Continuous Average Power/Ch @ 4 Ohms [all channels driven] in watts	2400	1800	1200
3	Continuous Average Power/Ch @ 2 Ohms [all channels driven] in watts	3200	2400	1800
4	Peak Power/Ch @ 2 Ohms in watts	4000	3000	2000
5	Full power Frequency response	20 Hz-20 kHz		
6	THD @ Full power Bandwidth	<0.1%		
7	Signal to Noise (20hz--25Khz) 8 Ohm	100dB		
8	Input Sensitivity at Rated power @4 ohm	1.7V	1.4V	1.1V
9	Cross Talk before clip	75dB		
10	Voltage Gain	43X		
11	Damping factor 20hz to 1000hz	>1000		
12	Power requirement from mains			
	a Current draw 1/8 power @ 4ohms [240VAC@50Hz]	10A	7.5A	5A
14	Input impedance	10K		
15	Input clip setting	10V RMS		

Mid highs measured on-axis in full space @ 1 watt/1 meter using band-limited pink noise in the en-deavour to continuously improve the product with design refinements introduced into existing products. Any current CSC product may differ in some respect from its published description. However, this will always equal or exceed the original design specifications. Every CSC product is built to the highest standards and tested to ensure that it meets the performance criteria specified.



SAFETY INSTRUCTIONS

- ▶ Do not use this product near water.
- ▶ Clean only with a dry cloth.
- ▶ Do not block any ventilation openings. Install following the manufacturer's instructions.
- ▶ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- ▶ Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide edge or the third prong is for your safety. If the provided plug does not fit into your outlet, consult an electrician to replace the obsolete outlet.
- ▶ Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- ▶ Unplug the unit during lightning storms or when unused for long periods.
- ▶ Refer all servicing to qualified service personnel. Servicing is required periodically and when the unit is damaged, either mechanically or electrically, or is used in the smoky/dusty environment.
- ▶ Use the mains plug to disconnect the apparatus from the mains.