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LVC623 LINEAR AMPLIFIER



APPLICATION

The LVC 623 is a general purpose, medium voltage, high continuous current, linear power amplifier. It works best when driving loads of 1 - 4ohms. The LVC 623 works well with continuous test signals. The LVC 623 has two (2) separate channels that can be operated independently or combined for greater maximum voltage or current. In bridge-mono mode the available output voltage doubles. In parallel-mono mode the amplifier operates with double the output current.

FEATURES

- Output of 8.0 amperes rms, or 16 volts rms, per channel into a 2 ohm load.
- Frequency bandwidth of DC to 20 kHz at full power, DC to 100kHz at reduced power.
- Controlled Voltage or Controlled Current operation.
- User-adjustable voltage or current limiting.
- Remote force to standby mode by contact closure.
- External buffered monitoring of voltage and current output.
- Protection provided against, input overloads, improper output connection (including shorts and improper loads), excessive temperature, voltage or current, and under voltage conditions.
- Shipped ready to operate using single-phase, 120-volt, 20Amp or 230V, 10Amp AC mains.
- Installs easily into a standard 19 inch rack, or stands alone for bench top operations.

OPTIONS - User Configurable

- Variable voltage and current limiting
- DC Coupled (DC Enabled) or AC Coupled (DC Blocked)
- Controlled Voltage or Controlled Current Operation
- In Voltage mode - Fixed gain (20, 44.5, 79.5) or Variable (0 - 20, 0 - 44.5, 0 - 79.5)
- In Current mode - Fixed Trans-conductance (20) or Variable (0 - 20)
- Channel configuration - two independent channels, two channels paralleled to Mono, two channels bridged to Mono



INDICATORS AND CONTROLS

- Front panel LEDs indicate signal presence and output overload.
- A pushbutton power "On/Off" located on the front panel.
- Two gain controls on the front panel for controlled voltage applications.
- Two circuit breaker resets on the back panel.
- A back panel slide switch to choose between 2 channel, bridge mono and parallel mono operation.

PERFORMANCE (One hour continuous ratings)

Frequency response: +/- 0.1 dB from DC to 20 kHz at 1 watt.

Phase Response: +/- 10 Degrees (10 Hz to 20 kHz at 1 watt).

Signal-to-Noise Ratio: At Voltage gain of 20, better than 105 dB (A-weighted) below full output.

OUTPUT POWER

Measurements taken at 1 kHz at .05% THD with amplifiers operating in controlled voltage mode.

One Channel Driven

Ohms	40mSec Burst, RMS			1 Hour Continuous, RMS		
	Watts	Volts	Amps	Watts	Volts	Amps
2	354	27	13	144	17	8
4	240	31	8	240	31	8
8	148	34	4	145	34	4
16	89	38	2	89	37.78	2

Two Channel Bridged to Mono

THD: Less than 0.05% from 20 Hz to 1 kHz increasing linearly to 0.1% at 20 kHz at full output.

I.M. Distortion: <0.05% from 410 milliwatts to full output with a voltage gain of 20dB into an 8 ohm load.

Slew Rate: >13V per microsecond.

Load Impedance: Rated for 16, 8, 4, 2 and 1 ohm use. Safe with all load types, including reactive loads.

Input Impedance: Greater than 10K ohms, balanced, and 5K ohms unbalanced.

Output Impedance: Less than 10 milliohms in series with less than 2 microhenries.

PHYSICAL CHARACTERISTICS

Chassis: The amplifier is designed for stand alone, or rack mounted, operation. The Chassis is black steel with a silver finished aluminum front panel. The unit occupies two EIA 19-inch-wide units.

Weight: 52 lbs. (23.5 kg), Shipping 66 lbs. (30 kg)

AC Power: Single phase, 120 volts, 60 Hz, 20 amperes AC service.

Cooling: Forced air cooling from the front, through removable filters, to side panels.

Dimensions: 19 in. x 16 in. x 3.5 in (48.3 cm x 40.3.0 cm x 8.9 cm)

Ohms	40mSec Burst, RMS			1 Hour Continuous, RMS		
	Watts	Volts	Amps	Watts	Volts	Amps
4	538	46.4	12	256	32	8
8	431	58.7	7	431	58.7	7
16	290	68	4	290	68	4

Two Channel Paralleled to Mono

Ohms	40mSec Burst, RMS			1 Hour Continuous, RMS		
	Watts	Volts	Amps	Watts	Volts	Amps
1	520	22.8	23	256	16	16
2	430	29	14	418	28.9	14
4	289	34	9	289	34	9
8	166	36	5	165	36	5

SUPPORT

When you purchase an AE Techron amplifier, a full complement of technical and factory support personnel join your team. AE Techron provides:

- Applications engineering for your technical questions and customized product needs.
- A one year limited warranty to protect your equipment investment.
- A fully equipped service center to keep your amplifier operating at original performance requirements.



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