



5100L POWER AMPLIFIER

100 Watts
RF Power
For:

- Communications
 - Testing
 - Laboratory use
-
- 1.5 MHz to 400 MHz
 - Instantaneous Bandwidth
 - 100 W 1dB Compression
 - Solid State
 - Air Cooled

The 5100L Amplifier is a rugged source of RF power, useful for Nuclear Magnetic Resonance (NMR) Spectroscopy and Communications transmitters and general laboratory applications. The 5100L represents E&I's commitment to providing RF power amplifiers of the highest quality, durability and ruggedness.

FLEXIBILITY:

The 5100L produces 100 Watts of class A linear power output over the entire frequency range from 1.5 MHz to 400 MHz. It has very low harmonic distortion along with low IMD products. Operation over the band is achieved without the need for any band switching or indeed any adjustments. The power gain is rated at 50 dB with a typical gain flatness of +/- 1.5 dB

The 5100L is compatible with most signal generators, frequency synthesizers, sweep generators and other laboratory signal sources. It accurately reproduces all waveforms within its power and frequency ranges: AM, FM, SSB, pulsed and other complex modulation schemes.

RUGGEDNESS:

The 5100L is built to withstand a 13 dBm input (1.0 Volt RMS) for any VSWR load condition. The internal switched mode power supply is very conservatively rated, in order to facilitate operation over a large range of line conditions and temperatures. The forced air cooling provides for low internal temperatures, providing long term reliability. The RF power is delivered by rugged Bipolar transistors, de-rated to provide for excellent MTBF figures.

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Class of Operation

Class A

Frequency Range

1.5 MHz to 400 MHz

Rated Power Output

100 Watts (P1dB) 1.5 – 300 MHz
80 Watts (P1dB) 300 – 400 MHz

Saturated Power Output

1.5 MHz to 300 MHz > 125 W
10 MHz to 100 MHz > 150 W
300 MHz – 400 MHz > 80 W

Gain

50 dB (nominal)

Gain Flatness

+/- 2.5 dB

Input Power for rated Pout

1 mW

Input Impedance / VSWR

50Ω / 1.5:1 maximum

Output Impedance / VSWR

50Ω / 2:1 maximum

Harmonic Level

< -20dBc

Ruggedness

∞:1 VSWR

Stability

Unconditional into any passive linear load.

Protection

Input: Unit will withstand input signal of +13 dBm without damage (1.0 V rms) max. and infinite load VSWR.

Third Order Intercept Point

IP3 ~ 60 dBm

AC Input

104 – 240 Volts 47 - 63

Temperature Range

0 – 40 C

Cooling

Forced air.

Weight

100 lbs (45.4 Kg)

Dimensions

16 x 17.5 x 20 (H x W x D) Inches
40.64 x 44.45 x 50.8 (H x W x D) Cm



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