

# LA 10

## 3 to 1000 MHz LINEAR AMPLIFIER



**10 Watts of Linear RF Power From 3 MHz to 1 GHz For Industrial, Laboratory, Communication and Medical Applications.**

**FEATURING:**

- 3 MHz to 1000 MHz
- 10 W Linear
- 15 W Saturated
- Linear Output of 10 W with  $h3 \leq -25$  dBc

**INTRODUCTION**

Amplifier Model LA 10 is a robust source of RF power for ultrasonic, laser modulation, RFI/EMI, plasma generation, laboratory and general industrial applications.

Featuring leading edge solid state design in all RF amplifier stages this unit provides everything for a reliable RF power delivery system. It reflects the ongoing T&C commitment to provide RF power products of the highest quality.

**OPERATION**

The LA 10 produces 10 Watts of linear power over a frequency range from less than 3 MHz to more than 1000 MHz, with low harmonic and intermodulation distortion. It operates over the entire frequency range without band switching or adjustments.

Gain is rated at 40 dB with a typical gain flatness of  $\pm 2$  dB.

The LA 10 is compatible with most signal and function generators, computer synthesizer cards and accurately reproduces all waveforms within its output and bandwidth limits.

The Forced-air cooling system and the internal power supply are designed to permit operation over a wide range of temperature and global AC line conditions.

The LA 10 is built to withstand a +5 dBm (2Vp-p) Input signal. The unit amplifies the inputs of AM, FM, SSB, pulse and other complex modulations with  $< -25$  dBc (h3) harmonic distortion and output power stability.

**GENERAL**

T&C's products are designed to be reliable, compact and light in weight. The use of conservatively rated components ensures high reliability and eliminates the need for periodic calibration.

**Class Of Operation**  
Class A

**Frequency Of Operation**  
3 MHz to 1000 MHz

**RF Power Output**  
15 W saturated

**Gain**  
40 dB  $\pm 2$  dB

**RF Input Drive**  
Typical range -20 dBm to 5 dBm

**Input Drive Source**  
Signal or function generator, analog computer input capable of up to 2 Vp-p @ 50 Ohm within amplifier output and bandwidth limits.

**Input and Output Impedance**  
50 Ohm

**Input VSWR**  
2:1 max

**Output VSWR**  
3:1 max

**Load Mismatch**  
All phase angles

**Typical Third Order Intercept**  
+ 54 dBm

**Harmonic Level @ 10 W**  
Better then - 25 dBc for 3rd harmonic, any other  $> -30$  dBc

**RF Connectors**  
N Female: Front Panel

**AC Power Source**

100 - 120 VAC, 200 - 240 VAC  
 $\pm 10\%$ , 47 - 63 Hz

**AC Power Connection**  
IEC Standard Power Entry

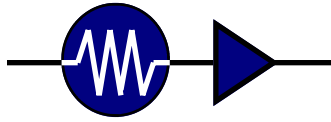
**Cooling**  
Forced air

**Dimensions**  
H 95mm x W 480 mm x L 420mm  
( 3.75" x 19" x 16.5" )

**Weight**  
4.2 kg, ( 9 lbs. )

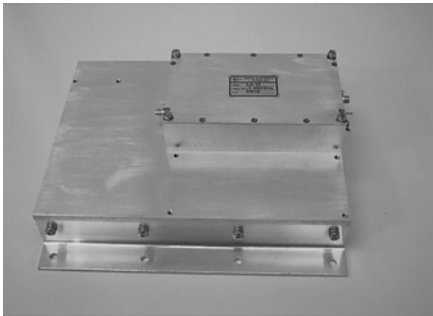
**Mounting**  
Stand alone unit. Front Panel fits Rack Mount.

**Environmental conditions**  
**Temp:** 0° to 35° C ambient air  
**Humidity:** 80%



# LA 10 M

## 3 to 1000 MHz LINEAR AMPLIFIER MODULE



**10 Watts of Linear RF Power From 3 MHz to 1000 MHz For Industrial, Laboratory, Communication and Medical Applications.**

**FEATURING:**

- 3 MHz to 1000 MHz
- 10 W Linear
- 15 W Saturated
- Linear Output of 10W with  $h_{3\leq} -25$  dBc

**Class Of Operation**  
Class A

**Frequency Of Operation**  
3 MHz to 1000 MHz

**RF Power Output**  
15 W saturated

**Gain**  
40 dB  $\pm 2$  dB

**RF Input Drive**  
Typical range -20 dBm to 5 dBm

**Input Drive Source**  
Signal or function generator, analog computer input capable of up to 2 Vp-p @ 50 Ohm within amplifier output and bandwidth limits.

**Input and Output Impedance**  
50 Ohm

**Input VSWR**  
2:1 max

**Output VSWR**  
3:1 max

**Load Mismatch**  
All phase angles

**Harmonic Level @ 10 W**  
Better then - 25 dBc for 3rd harmonic, any other > -30 dBc

**RF Connectors**  
SMA Females

**Power Source**  
28 VDC, 4A

**Power Connection**  
RFI Filter solder stud

**Cooling**  
Forced Air Required

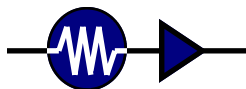
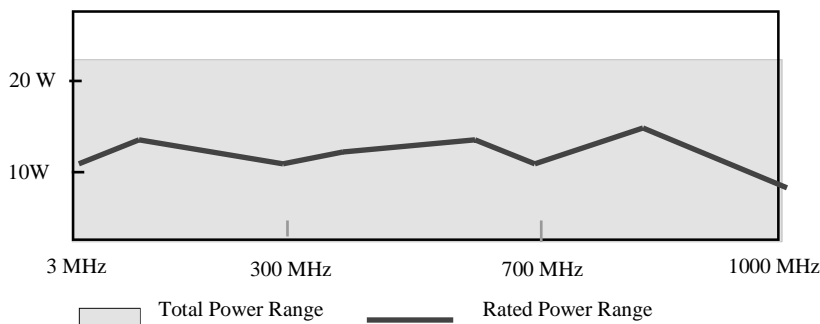
**Module Dimensions**  
(H 70 x W 208 x L 240) mm  
( 2.8" x 8.2" x 9.05" )

**Weight**  
~ 1.8 kg, ( 4 lbs. )

**Mounting**  
Right Angle Brackets with 7.4" side to side hole pattern. 2.75" between holes on bracket

**Environmental conditions**  
**Temp:** 0° to 35° C ambient air  
**Humidity:** 80%

**LA 10M Performance Chart**



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