



**communications**

Electron Devices

# M1000 Low Band Microwave Power Module

- **Features:**
- **50-100 Watts Output Power**
- **20-35% Efficiency**
- **240 Cubic Inches**



### Performance Characteristics

Frequency .....	2.0 to 8.0 GHz
RF Output Power.....	50 Watts (min)
RF Input Power*.....	10 to 28 dBm
Small Signal Gain.....	22 dB (min)
PRF*.....	Up to 10 KHz
Harmonics .....	0 dBc @ 2GHz
.....	-7 dBc @ 3GHz
AM/PM Conversion .....	6°/dB (max)
Spurious .....	-50 dBc (max)
Spectral Purity.....	-50 dBc (max)

### Environment

Temperature.....	-30 to +55° C
.....	+70°C under TWT collector
Cooling .....	Conduction
Altitude .....	25,000 ft
Humidity .....	Up to 95% with condensation
Shock .....	10g, 11 msec
Acceleration .....	10 g's
Vibration .....	0.1g <sup>2</sup> /Hz from 5 to 20 Hz
.....	0.02g <sup>2</sup> /Hz from 20 to 2 KHz

### Mechanical Description

Dimensions .....	12.0" x 10.5" x 2.0"
Weight .....	12.0 lbs/5.3 kgs. (max)
RF Input Connector .....	SMA
RF Output Connector .....	TNC
Control Input.....	15-Pin D-Subminiature

### Interface

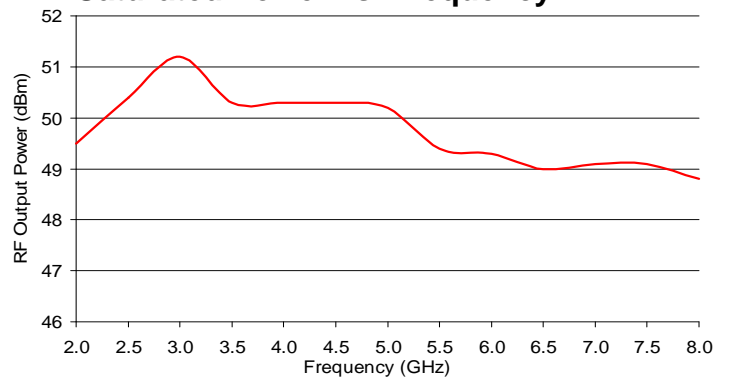
Prime Power.....	90-260 VAC 50/60 Hz, Single phase with power factor correction, 350 Watts (max)
Controls.....	Standby/Operate/RF On
Indicators .....	Warm-up Complete Operate Fault
Monitor .....	Helix Current
Low Voltage Output.....	+5 V, 75 mA

The M1000 represents the state of the art in low noise, compact, high efficiency, RF amplifiers for instrumentation and simulation applications. This MPM contains a TWT and power supply within a single conduction-cooled package for a variety of platforms.

\*NOTE: A built-in SSA with equalizer which provides for  $0 \pm 1$  dBm input power is optional at additional cost. Also optional is a modulator with a PRF up to 10 KHz.

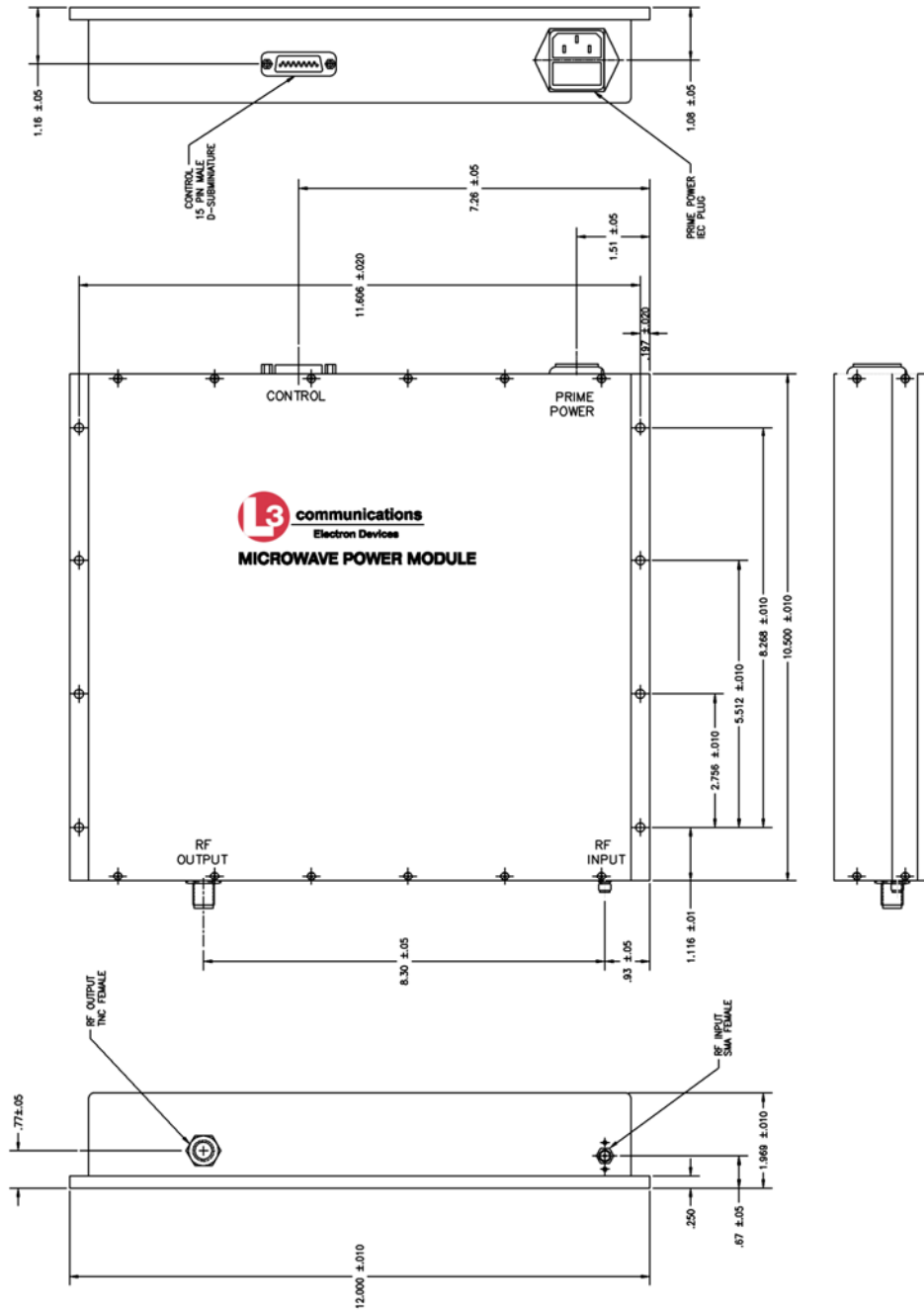
DSM10000209

### Saturated Power vs. Frequency



Cleared by OSR for public release under 09-S-1148 dated 3/17/09

# M1000 Outline Drawing



Current detailed outline drawings are available on request. Specifications and features are subject to change without notice.



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