

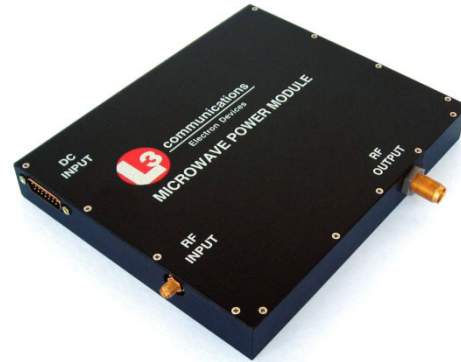


communications

Electron Devices

M1220 High Band Microwave Power Module

- **Features**
- **60-100 Watts Output Power**
- **20 - 35% Efficiency**
- **<50 Cubic Inches**



Performance Characteristics

Frequency.....	6.0 to 18.0 GHz
RF Output Power.....	60-100 Watts (min)
RF Input Power.....	0 ± 1 dBm
Small Signal Gain.....	50 dB (min)
PRF.....	50 kHz (max)
Harmonics @ 6 GHz.....	-3 dBc (max)
@ 8 GHz.....	-5 dBc (max)
@10 GHz.....	-11 dBc (max)
AM/PM Conversion.....	6°/dB (max)
Spurious.....	-50 dBc (max)
Spectral Purity.....	-45 dBc (max)
Noise Power Density.....	-38dBm/MHz (max)

Environment

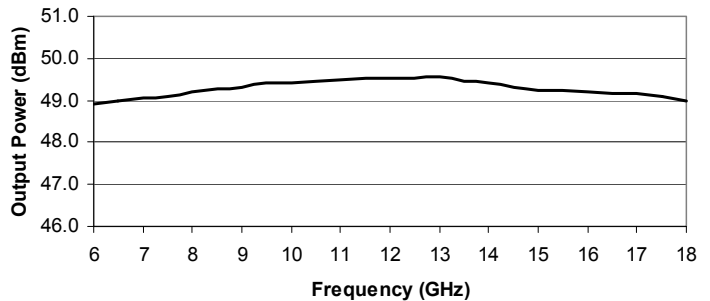
Temperature.....	-54 to +85°C
Underneath TWT Collector.....	+95°C max
Cooling.....	Conduction
Altitude.....	70,000 feet
Humidity.....	Up to 100%, with condensation
Shock.....	20 g, 11 msec
Acceleration.....	10 g's
Vibration.....	0.04 g ² /Hz from 80 to 350 Hz
	-3dB/octave 20 to 80 Hz
	-3dB/octave 350 to 2000 Hz

Mechanical Description

Dimensions.....	7.5" x 6.25" x 1.0"
Weight.....	3.75 lbs (max)
RF Input Connector.....	SMA
RF Output Connector.....	TNC
DC Input.....	15-Pin D-Subminiature

The M1220 represents the state of the art in low noise, compact, high efficiency, wideband RF amplifiers for airborne, shipboard, and ground military applications. This MPM contains a TWT, an SSA and power supply within a single conduction-cooled package. DS1220_0209

Typical Saturated Power vs. Frequency

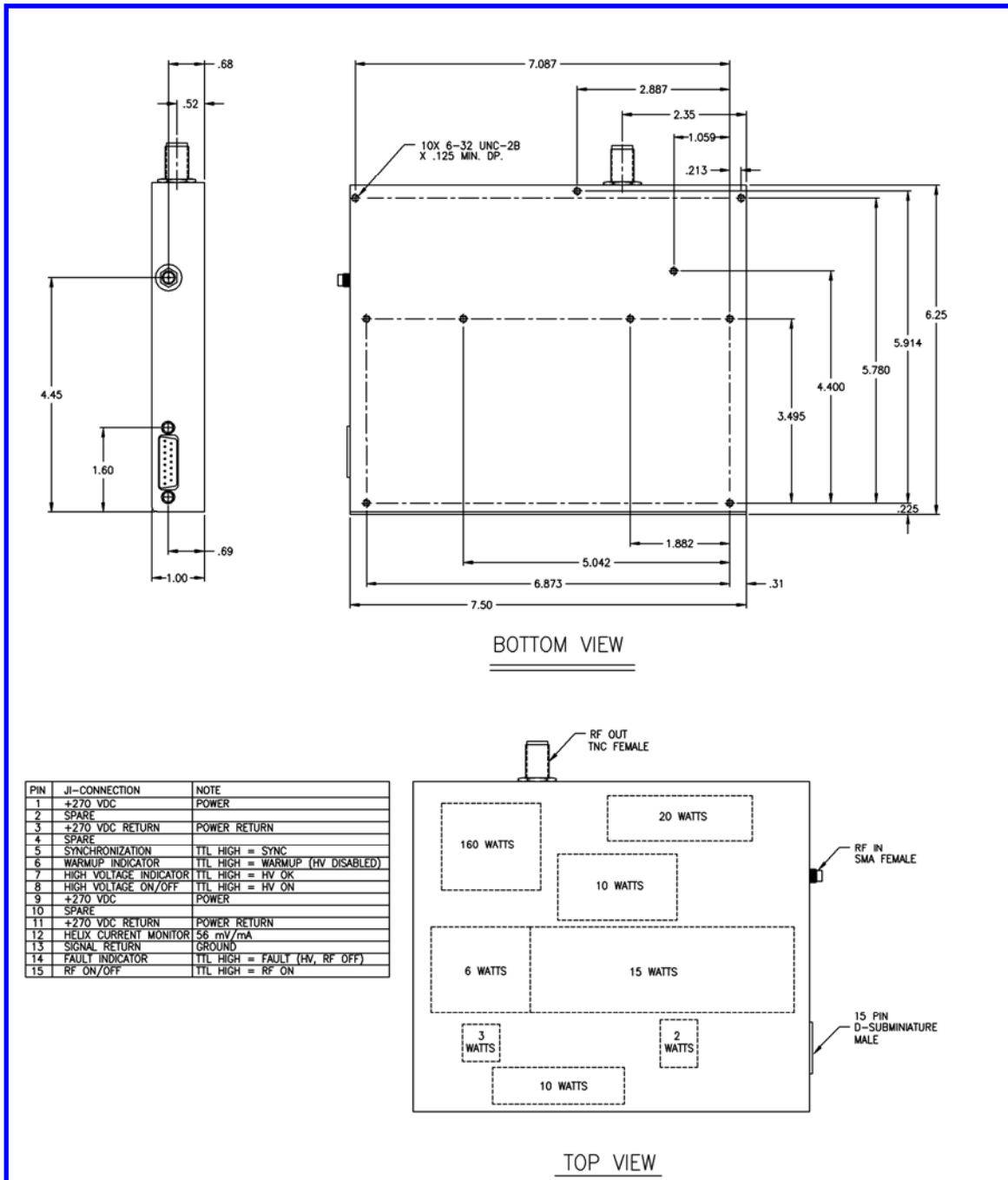


Interface

Prime Power, operating.....	270 VDC
.....	375 Watts (max)
Prime Power, standby.....	40 Watts (max)
Controls.....	Standby/Operate, Radiate
Digital Indicators.....	Warm-up Complete Indicator
	Fault Indicator
	High Voltage Indicator
Analog Monitor.....	Helix Current

Cleared by DOD/OSR for public release
under 09-S-1150 dated 3/10/09

M1220 Outline Drawing



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