



communications

Electron Devices

M1232

Ku-Band

Microwave Power Module

- **Features**
- **80 Watts Output Power**
- **20 - 35% Efficiency**
- **<75 Cubic Inches**



Performance Characteristics

Frequency.....	12.75 to 14.5 GHz
RF Output Power.....	75 Watts (min)
RF Input Power.....	0 ± 1 dBm
Small Signal Gain.....	50 dB (min)
PRF.....	50 kHz (max)
Harmonics.....	-11 dBc (max)
AM/PM Conversion.....	6°/dB (max)
Spurious.....	-50 dBc (max)
Spectral Purity.....	-45 dBc (max)
Noise Power Density.....	-40 dBm/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

The M1232 represents the state of the art in low noise, compact, high efficiency, Ku-band RF amplifiers for airborne, shipboard, and ground military communication applications. This MPM contains a TWT, an SSA and power supply within a single conduction-cooled package. DS12320304

Mechanical Description

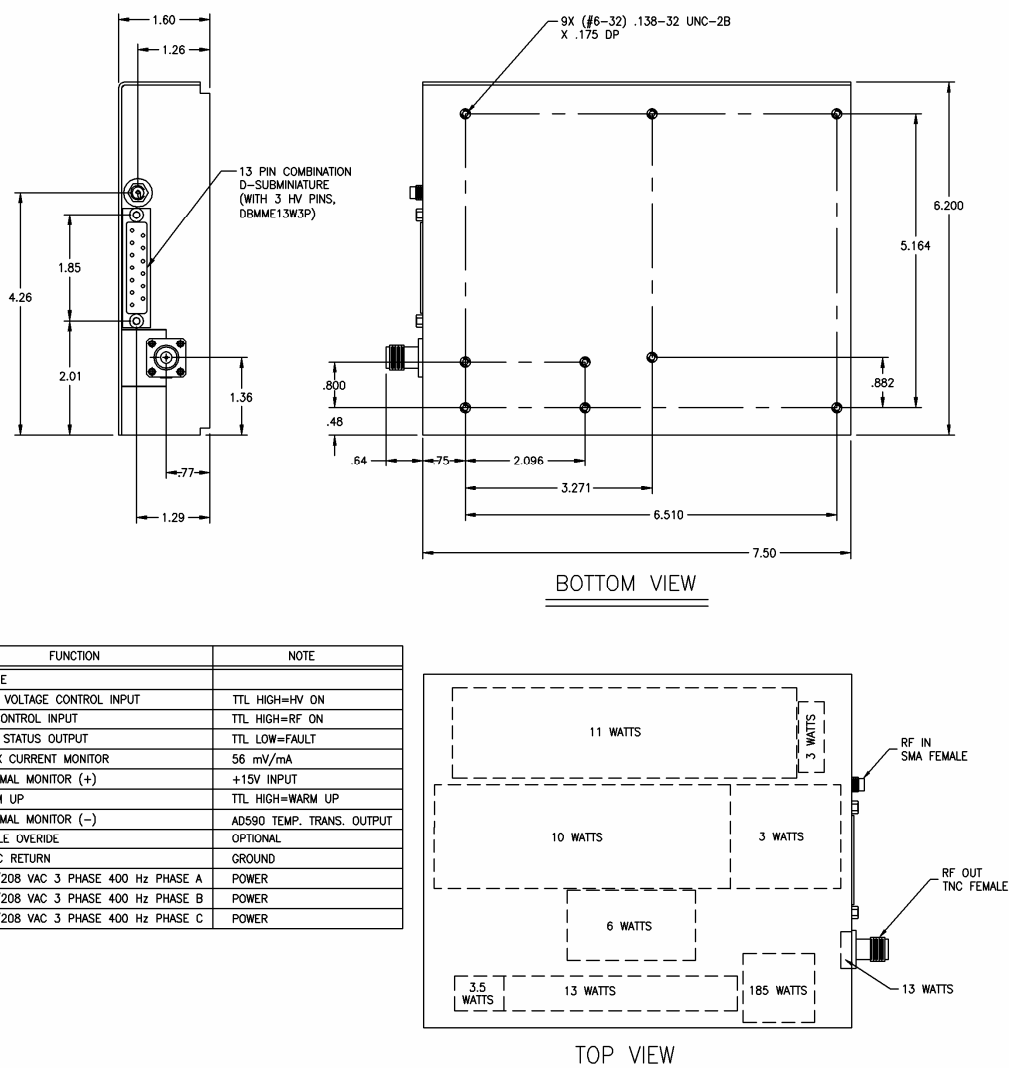
Dimensions.....	7.5" x 6.2" x 1.6"
Weight.....	4.5 lbs (max)
RF Input Connector.....	SMA
RF Output Connector.....	TNC
DC Input.....	15-Pin combo D-Subminiature

Interface

Prime Power, operating.....	115/208 VAC, 3 phase, 400Hz
.....	400 Watts (max)
Prime Power, standby.....	45 Watts (max)
Controls.....	Standby/Operate, Radiate
Digital Indicators.....	Warm-up Complete Indicator
.....	Fault Indicator
Analog Monitor.....	Helix Current

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M1232 Outline Drawing



PIN NUMBER	FUNCTION	NOTE
J1-1	SPARE	
J1-2	HIGH VOLTAGE CONTROL INPUT	TTL HIGH=HV ON
J1-3	RF CONTROL INPUT	TTL HIGH=RF ON
J1-4	MPM STATUS OUTPUT	TTL LOW=FAULT
J1-5	HELIX CURRENT MONITOR	56 mV/ma
J1-6	THERMAL MONITOR (+)	+15V INPUT
J1-7	WARM UP	TTL HIGH=WARM UP
J1-8	THERMAL MONITOR (-)	AD590 TEMP. TRANS. OUTPUT
J1-9	BATTLE OVERRIDE	OPTIONAL
J1-10	LOGIC RETURN	GROUND
J1-A1	115/208 VAC 3 PHASE 400 Hz PHASE A	POWER
J1-A2	115/208 VAC 3 PHASE 400 Hz PHASE B	POWER
J1-A3	115/208 VAC 3 PHASE 400 Hz PHASE C	POWER

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