



communications

Electron Devices

M1021

Ku-Band Microwave Power Module (MPM)

Features:

- **40 Watts Output Power**
- **>25% Efficiency**
- **200 Cubic Inches**



Performance Characteristics

Frequency:

Standard	14.0 to 14.5 GHz
Extended	12.75 to 14.5 GHz
RF Output Power	40 Watts (min)
RF Input Power	22 $\pm$ 2 dBm
Small Signal Gain	30 dB (min)
Gain Var. Vs. Freq.	2.0 dB/500 MHz (max)
Intermodulation	-24 dBc at 7 dB backoff
Noise Power Density	-95 dBW/4 KHz
Group Delay	2 nsec pk-pk (max)
Harmonics	-12 dBc (max)
AM/PM Conversion	5°/dB (max)
Spurious	-60 dBc (max)
Phase Noise	-50 dBc (max)

The M1021 represents the state of the art in low noise, compact, high efficiency, RF amplifiers for satellite communications. This MPM contains a TWT and power supply within a single conduction-cooled package for indoor or outdoor use. Three output power levels are offered for customized use. A forced air cooling option is available. DSM10211102

Environment

Temperature	-30 to +55° C
Cooling	Conduction
Altitude	15,000 feet
Humidity	Up to 95%
Shock & Vibration	Normal Transportation

Interface

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

Mechanical Description

Dimensions	10.3" x 9.6" x 2.0"
	260mm x 240 mm x 50mm
Weight	9.9 lbs/4.5 kgs. (max)
RF Input Connector	SMA
RF Output Connector	TNC
DC Input	15-Pin D-Subminiature

Cleared by DoD/DFOISR for public
release under 02-S-2548 10/2/02