

dB-4127-10 High Band Single Output MPM



Microwave Power Module 7.0 - 18.0 GHz, 390W CW

This Microwave Power Module (MPM) operates in the 7.0 to 18.0 GHz frequency band and will deliver 390 Watts output power in CW operation. Two wide band, periodic permanent magnet (PPM) focused, Traveling Wave Tubes (TWTs) are power combined for power amplification. The power supply section uses modular architecture and high efficiency solid state power conversion circuits. This MPM is designed for high performance applications where high reliability are critical to system performance. Additional features include thermal protection. The MPM is packaged in a conduction cooled package and available in air-cooled and liquid cooled options.

Features

- 7.0 to 18 GHz, 390 W, CW
- 270 VDC
- · Small and lightweight
- Conduction cooling

Applications

- Electronic countermeasures (ECM)
- Electronic warfare (EW) and simulations
- Multi-band communication systems

Electrical

Frequency Range 7.0 to 18.0 GHz

Duty Cycle CW/Pulsed

Output Power, CW 390 watts, min (400W goal)

RF Input Power 0 dBm +/- 1.0 dBm Spurious Output -50 dBc, minimum

Harmonics -6 dBc, minimum at 7.0 GHz -10 dBc, minimum at 8.0 GHz

Noise Power Density, Beam ON -35 dBm/MHz, minimum

Noise Power Density, Beam OFF -90 dBm/MHz, minimum

Input VSWR 2.5:1, maximum

Output VSWR 2.5:1, maximum

Load VSWR 1.5:1, max., Full Spec Compliance

2.5:1, max, No Damage

Prime Input Voltage 270 VDC, +/- 10%

Power Consumption 1500 Watts maximum

Warm up Time 180 seconds maximum

Protection Helix Over-Current
Cathode Over Voltage

Over Temperature
Reverse Power Fault

Monitored Signals TWT/Power Supply Over-Temp

TWTA Status, Faults

Mechanical

Size 15.1" (L) x 10.0" (W) x 6.5" (H)

384mm (L) x 254mm (W) x 165mm (H)

Weight 40 Lbs (18.1 Kg)
Cooling Conduction

Connectors:

 Prime Power
 MS3112E14-5P

 Control/Status
 MS27508E12B35P

 RF Input
 Type SMA (F)

RF Output WRD-650 Waveguide

RF Sample Type SMA (F)

Environmental

Altitude Up to 50,000 Feet above Sea Level

Temperature, Operating -40 to +71 Degree C Storage Temperature -54 to +85 Degree C

Humidity Up to 95%, Non-Condensing

Options

- Prime Input Voltage 110 VAC, 3 phase, 400 Hz
- Forced Air Cooling

Specifications subject to change without notice.



dB Control Products

Reliability by Design®



About dB Control

Established in 1990, dB Control Corp., a subsidiary of the Electronic Technologies Group (ETG) of HEICO Corp., supplies mission-critical, often sole-source, products worldwide to military organizations, as well as to major defense contractors and commercial manufacturers. dB Control designs and manufactures reliable high-power TWT Amplifiers (TWTAs), microwave power modules (MPMs), transmitters and power supplies with modulators for radar, electronic countermeasures (ECM) and data link applications. The company's high-power amplifiers use solid state, as well as vacuum electron devices and cover the 1 to 50 GHz frequency range. The modularity of dB Control's designs enables rapid configuration of custom products for a variety of platforms, including ground-based and high-altitude military manned and unmanned aircraft. dB Control has an outstanding record of successfully repairing, refurbishing and replacing tightly packaged high-voltage transformers, assemblies and power supplies. The company offers specialized contract manufacturing, transformer winding and testing, full vacuum encapsulation, pressure cure, conformal coating and repair depot services from its modern 40,000 square foot facilities in Fremont, California, www.dBControl.com AS-9100D and ISO-9001:2015 Certified.

