

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

dB-4127-10 High Band Single Output MPM Specifications

Reliability by Design®

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 TWT 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

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.

Specifications subject to change without notice.



dB Control Products

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