

dB-4120E Microwave Power Module



130/150W CW
2 - 6 GHz



The dB-4120E is a microwave power module (MPM) operating in the frequency range of 2 to 6 GHz. This MPM is a power amplifier that provides 130/150 Watts pulsed/CW RF output power. The RF signal path consists of a solid state amplifier and a vacuum power booster. The power supply topology uses proprietary low-noise, high-efficiency designs to operate the RF signal path. A high-speed modulator is incorporated for pulse modulation of up to 10 KHz to CW. This compact, conduction-cooled MPM is designed to operate in extreme military environments.

Features

- High Band MPM
- 2 to 6 GHz, 130/150 W, pulsed to CW
- High PRF pulse modulation
- Excellent reliability

Applications

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

dB-4120E Microwave Power Module Specifications

Electrical

Frequency Range	2 to 6 GHz
Output Power	130 Watts CW @ 2.0 to 2.5 GHz 150 Watts CW @ 2.6 to 6.0 GHz
Pulse Operation	PRF: 10 KHz max. Pulse width: 1.0 µsec to CW
Gain at Rated Power	51 dB
Harmonics	+1 dBc @ 2.0 GHz
Spurious	-50 dBc
Input VSWR	2.0:1 (50 Ω Impedance)
Output VSWR	2.5:1 max
Load VSWR	1.5:1, max. for full specification compliance
Load VSWR	3.0:1 no damage
Prime Power Input	270 VDC (or 28 VDC option)
Power Consumption	1000 Watts max.
TWTA Protection	Helix Over-Current, Cathode Over-Voltage, Over-Temperature
Status/Indication	Equipment status, faults
Interface Control	Discrete logic
Modulation Control	Differential or TTL

Mechanical

Connectors:	
RF Input	SMA (F)
RF Output	Type TNC
Prime Power	MS3112E14-5P
Control/Pulse Input	MS3112E14-18P
Dimensions	11.9" (L) x 10.53" (W) x 3" (H)
Weight	16.0 lbs.
Cooling	Conduction

Environmental

Vibration	10 to 1000 Hz, 0.02g _{rms} /Hz
Shock	15 g, 11 msec, Half Saw Tooth
Operating Temperature	-40° C to +75° C (Base Plate Temperature)
Storage Temperature	-54° C to +85° C
Operating Altitude	Up to 50,000 feet
Humidity	Up to 95% RH Non-Condensing

Specifications subject to change without notice.

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 solesource, 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

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