

dB-3205 Microwave Power Module



80W CW

43.5 – 45.5 GHz

The dB-3205 is a microwave power module (MPM) operating in the frequency range of 43.5 to 45.5 GHz. This MPM is a power amplifier that provides 80 Watts 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. This compact, conduction-cooled MPM is designed to operate in extreme military environments.

Features

- Millimeter Wave MPM
- 43.5 to 45.5 GHz, 80 W, CW
- Excellent reliability

Applications

- Datalink

dB-3205 Microwave Power Module Specifications

Reliability by Design®

Electrical

Frequency Range	43.5 to 45.5 GHz
Output Power	80 Watts CW min.
Gain at Rated Power	49 dB min.
Gain Variation	2.5 dB over any 1GHz Band
Gain Stability	±0.25 dB over 24 hours
Harmonics	-10 dBc max.
Noise Power	-70 dBw/4KHz max. Transmit and Recieve Bands
Spurious	-50 dBc max.
Phase Noise	12 dB below IESS phase noise profile
Input VSWR	2.0:1 max.
Output VSWR	2.5:1 max.
Load VSWR	1.5:1 max. for full specification compliance
Prime Power Input	270 VDC
Power Consumption	900 W 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	Type-K/2.9mm, (F)
RF Output	WR-22 Waveguide
Power	CBD17W2M2000
Control	TBD
Dimensions	11" (L) x 9.38" (W) x 2.38" (H)
Weight	12 lbs.
Cooling	Conduction

Environmental

Vibration	10 to 1000 Hz, 0.02g ² /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

Options

- Ethernet interface (new outline)
- Serial interface (new outline)
- Prime power input

Specifications subject to change without notice.



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

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