

dB-3201 Microwave Power Module



100/125W CW 26.5 - 40.0 GHz



The dB-3201 is a microwave power module (MPM) operating in the frequency range of 26.5 to 40.0 GHz. This MPM is a power amplifier that provides 100/125 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. This compact, conduction-cooled MPM is designed to operate in extreme military environments.

Features

- Millimeter Wave MPM
- 26.5 to 40.0 GHz, 100/125 W, pulsed to CW
- High PRF pulse modulation
- · Excellent reliability

Applications

- Electronic countermeasures (ECM)
- Electronic warfare (EW) simulation

Electrical

Frequency Range 26.5 to 40.0 GHz

100 Watts CW min. from 26.5 to 28.0 GHz
Output Power 125 Watts CW min. from 28.0 to 36.0 GHz

100 Watts CW min. from 36.0 to 40.0 GHz

Pulse Operation PRF: 10KHz max.

Pulse width: 1.0 µsec to CW

Gain at Rated Power 51 dB

Harmonics -10 dBc max.

Spurious -50 dBc max.

Noise Power -20 dBm/mHz max.

Density Input VSWR 2.5:1 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-28 Waveguide
Power CBD17W2M2000

Control/Pulse Input TBD

Dimensions $11" (L) \times 9.38" (W) \times 2.38" (H)$

Weight 12 lbs.
Cooling Conduction

Environmental

Vibration 10 to 1000 Hz, $0.02g^2/Hz$ Shock 15 g, 11 msec, Half Saw Tooth

OperatingTemperature -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

- Prime Power input
- Ethernet interface (new outline)

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 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

