

dB-4139 TWT Amplifier



200W CW
6 – 18 GHz



The dB-4139 is a traveling wave tube amplifier (TWTA) operating in the frequency range of 6 to 18 GHz. This TWTA is a power amplifier that provides 200 Watts CW RF output power. The RF signal path consists of a solid state amplifier and a TWT. The power supply topology uses proprietary low-noise, high-efficiency designs to operate the RF signal path. This compact, forced-air cooled TWTA is designed to operate in extreme military environments.

Features

- High-band TWTA
- 6 to 18 GHz, 200 W, CW
- Prime input voltage 115 VAC, 400 Hz
- Excellent reliability

Applications

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

dB-4139 TWT Amplifier Specifications

Reliability by Design®

Electrical

Frequency Range	6 to 18 GHz
Output Power	200 Watts CW min.
Gain at Rated Power	53 dB min.
Harmonics	-2 dBc @ 6.0 GHz max. -4 dBc @ 6.5 GHz max.
Spurious	-50 dBc max.
Noise Power Density	-35 dBm/mHz max.
Input VSWR	2.0:1 max. (50 Ω Impedence)
Output VSWR	2.5:1 max.
Load VSWR	1.5:1 max. for full specification compliance
Prime Power Input	115/208 VAC, 3 phase, 400 Hz
Power Consumption	700 Watts, max.
TWTA Protection	Helix Over-Current, Cathode Over-Voltage, Over-Temperature
Status/Indication	Equipment status, faults
Interface Control	Discrete logic

Mechanical

Connectors:	
RF Input	SMA (F)
RF Output	WR-650 Waveguide
Prime Power	MS3112E14-5P
Control/Pulse Input	MS3112E14-18P
Dimensions	16.0" (L) x 6.0" (W) x 5.0" (H)
Weight	21.0 lbs.
Cooling	Forced-air cooling

Environmental

Operating Temperature	-40° C to +55° C (Base Plate Temperature)
Storage Temperature	-54° C to +75° C
Operating Altitude	Up to 50,000 feet
Humidity	Up to 95% RH Non-Condensing

Options

- Ethernet Interface
- Pulse Modulation

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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