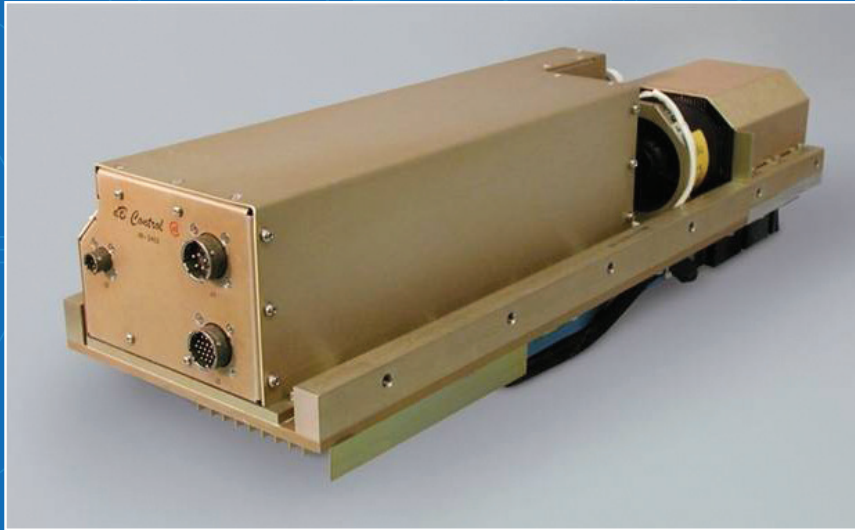


## dB-3708P1 TWT Amplifier



**8000W Peak**  
**8 – 12 GHz**



The dB-3708P1 is a pod-mounted, pulsed TWT Amplifier (TWTA) operating in the frequency range of 8 to 12 GHz and providing 8000 Watts peak power at a minimum duty cycle of 5%. A periodic permanent magnet (PPM)-focused, conduction-cooled TWT is used for power amplification. The high-voltage power supply (HVPS) section uses modular architecture and low-noise power supply topology utilizing high-efficiency solidstate power-conversion circuits. A highly stable, solid-state modulator is used for pulsing the TWT Grid.

### Features

- High band TWTA
- 8 to 12 GHz, 8 kW, 5% duty cycle
- Qualified for military airborne applications

### Applications

- Airborne radar
- EW threat simulation

# dB-3708P1 TWT Amplifier

**Reliability by Design®**

## Electrical

Frequency Range	8 to 12.5 GHz
Output Power, Peak	
9-10.5 GHz	8 kW
8.5-11 GHz	6.5 kW
8-12 GHz	4 kW
Duty Cycle	5%
PRF	200 kHz, max.
Pulse Width	0.2 to 50 msec
Gain at Rated Power	60 dB (with SSA driver option)
RF Drive for Rated Power	0 dBm
Harmonics	-6 dBc, max.
Spurious	-50 dBc
RF Rise and Fall Times	20 nsec
Input VSWR	1.5:1 (50 Ω Impedance)
Load VSWR	1.5:1
Input Pulse (PRF)	TTL, into 50 Ω
Delay, PRF to RF pulse	300 nsec (leading edges, 50% points)
Prime Power	115 VAC, 400 Hz, Three Phase, 4 Wire
Protection	Helix Over-Current/Arc Cathode Over-Voltage Over-Temperature (TWT and Power Supply) Excessive PRF, Pulse width or duty cycle Phase Loss

## Mechanical

Connectors:	
RF Input	SMA (F)
RF Output	WR90 waveguide flange
Pulse Input	SMA (F)
Prime Power	MS3474-L-14-5P
Control/Status	MS3474-L-14-18S
Size	24" x 8" x 7"
Weight	60 lbs
Cooling	Forced air with integral fan

## Environmental

Vibration	10 to 1000 Hz, 0.02 g <sup>2</sup> /Hz
Operating Temperature	-40° C to +65° C
Operating Altitude	Up to 40,000 feet
Humidity	Up to 100% RH

## Options

- Different prime power input
- Custom interface protocols
- RF gain control
- Solid-state driver amplifier

*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 52,100-square-foot facilities in Fremont, California. [www.dBControl.com](http://www.dBControl.com)

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