

# dB-8059 Solid State Power Amplifier



**GaN Solid State Power Amplifier**  
**100/200W CW 2.0 – 18.0 GHz**

The dB-8059 is a GaN Solid State Power Amplifier operating in the frequency range of 2 to 18 GHz providing up to 100/200 Watts at midband. The power supply topology uses proprietary low-noise, high-efficiency designs to operate the RF signal path. An embedded micro-controller provides the interface, control and protection functions and status indication for the Amplifier. Standard interface protocol for remote operation is RS-485. Other protocols such as RS-232, RS-422, Ethernet, CANBUS or custom interfaces are available as options. The SSPA is encased in an environmentally sealed package for outdoor and antenna pedestal mounted applications, and uses integral forced-air cooling for thermal management.

## Features

- Wideband GaN SSPA
- 2.0 to 18 GHz, 100/200 W, CW
- 270 VDC
- Small and lightweight
- Forced Aircooling with integrated fans

## Applications

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



dB-8059 Datasheet

# dB-8059 Solid State Power Amplifier Specifications

**Reliability by Design®**

## Electrical

Frequency Range	2.0 to 18.0 GHz
Output Power CW	150 watts from 2 to 4 GHz 200 watts from 4 to 9 GHz 150 watts from 9 to 16 GHz 100 watts from 16 to 18 GHz
Small Signal Gain	50 dB, min.
RF Input Power for Saturation	0 +/- 1 dBm
Duty Cycle	100% (CW)
Input VSWR	2.0:1, max.
Output VSWR	2.0:1, max.
Load VSWR	1.5:1, max. Full Spec Compliance
Load VSWR	2.5:1, max. No Damage
Prime Input Voltage	270 VDC
Prime Power	1600W max. (1400W typical)
Interface Control	RS-485

## Mechanical

Dimensions	15.0" L x 13.0" W x 12.0" H (inches) 381 L x 330 W x 305 H (mm)
Weight	100 lbs. (45 kg) nominal
Cooling	Built in forced air cooling
Connectors:	
Prime Power	MS3112 series
Control/Status	MS3112E14-18
RF Input	Type SMA (F)
RF Output	Type N (F)

## Environment

Ambient Temperature	-40° C to +40° C
Storage Temperature	-54° C to +90° C
Operating Altitude	Up to 15,000 feet ASL
Humidity	Mil-Std 810
Salt Fog	Mil-Std 810
Rain	Mil-Std 810

## Options

Prime Input Voltage	28 VDC 110 VAC 3 phase 400 Hz
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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](http://www.dBControl.com) AS-9100D and ISO-9001:2015 Certified.



dB Control Products

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