

## dB-9003 Integrated Stabilized RF Source



I and Ka-Band Frequency Range  
Four Modes of Frequency  
Modulation



The dB-9003 is a custom-mounted Integrated Stabilized RF Source (ISRFS) operating in the I and Ka-band frequency range providing highly accurate RF Source at high frequency switching speeds. The ISRFS can be controlled and set up with a digital port. The ISRFS units are packaged in a custom configuration with conduction cooling.

### Features

- I and Ka-Band Frequency Range
- 8 to 12 and 30 to 36 GHz
- Four modes of frequency modulation
- High accuracy
- Wide temperature operating range

### Applications

- Radars
- Radar simulation
- Electronic countermeasures (ECM)
- Electronic warfare (EW) threat simulation
- Test and measurement

# dB-9003 ISRFS Specifications

**Reliability by Design®**

## Electrical

Frequency Range	2 to 12 and 30 to 36 GHz
Nominal Output Power	+17 dBm
Frequency Measurement Accuracy	Open Loop Mode: $\pm 9$ MHz max., $\pm 4$ MHz typical over the entire temperature range Closed Loop Mode: $\pm 1$ MHz max., $\pm 0.2$ MHz typical over the entire temperature range
Frequency Switching Speed	1 $\mu$ s to be within $\pm 1$ MHz accuracy
Modulation Types	Four modes of Digital Frequency Modulations: $\pm 100$ KHz $\pm 10$ MHz $\pm 100$ MHz $\pm 500$ MHz
Amplitude Control Pulse	Digital Amplitude Control: 8-bit control Word with LSB of 0.125dB, total of 50dB max.
Shaping Modulations	Digital pulse control (RF ON/OFF) with max. output of -60dBm when off
Spurs	Below -60 dBm
Nominal Power Consumption	30W

## Mechanical

Connectors:	
FM Input	Type SMA (F)
RF Output	Type SMA (F)
Digital Control and DC In	VMA
Dimensions	7.0" (L) x 4.0" (W) x 1.0" (H)
Weight	1.8 lbs.
Cooling	Conduction

## Environmental

Operating Temperature	-40° C to +71° C, ambient
Operating Altitude	Up to 40,000 feet ASL
Humidity	Up to 95% RH non-condensing

## Options

- Custom frequency bands and output power
- Different prime power input
- Custom frequency, amplitude measurement accuracy
- Custom pulse width measurement accuracy
- Custom modulation types
- Customizable digital interface for control/communication
- Digital noise generator/source

*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)

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