



100HM1G6AB-50

- 100 Watts
- 1-6GHz
- Solid-State, Class AB
- +28V DC single bias
- Operating Case Temperature -20°C to +60°C
- High Reliability and ruggedness
- Over-voltage protection

Features



The Model 100HM1G6AB-50 is a compact, wide-band, hybrid power amplifier module that covers 1-6 GHz. When used with a sweep generator, the Model 100HM1G6AB-50 provides a minimum of 90W of RF power instantaneously from 1-6 GHz with $RF_{IN} = 0\text{dBm}$. Max RF input is 13 dBm.

The Model 100HM1G6AB-50 operates from a single DC voltage (+28V) and shuts off if the voltage exceeds 30V. It provides 64dB of typical small signal gain with excellent gain flatness, noise figure and low intermodulation distortion.

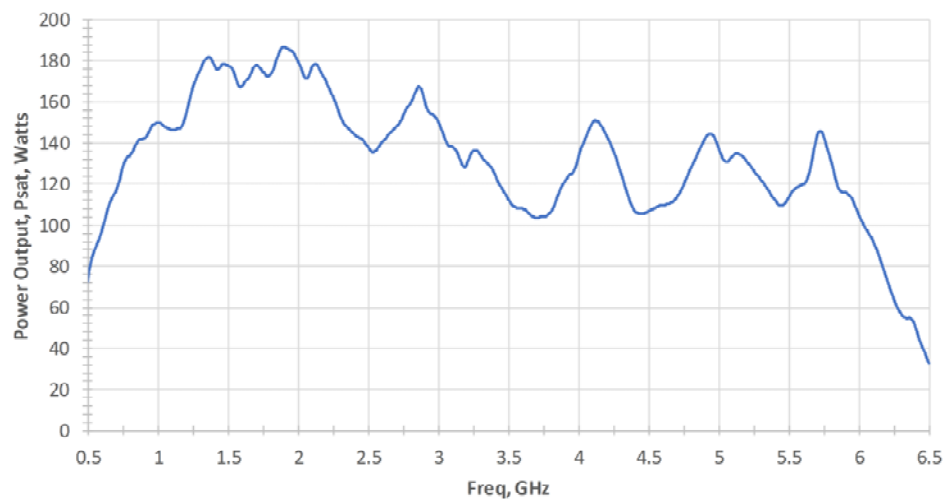
The Model 100HM1G6AB-50 can be used in many RF applications that require high power

and wide bandwidth. It is a 50 ohm, cascadable building block and can be used as a microwave power amplifier for both the military and commercial industries.

The amplifier circuitry is based on the latest developments in semiconductor device technology. The active devices are in chip form, eutectic-die attached and wire-bonded, providing solid-state reliability and long operating life. Special materials and process techniques were selected to achieve excellent thermo-dissipation and capability for meeting stringent military-environment test requirements. The module should be bolted to a heat sink for good heat dissipation and have a proper cooling fan to keep case temperature below 60°C. If case temperature exceeds 80°C, there will be a thermal shutdown to protect the module.

The export classification for this equipment is 3A001. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

100HM1G6AB-50 Typical Psat



AR RF/Microwave
Instrumentation
160 School House Rd
Souderton, PA 18964
215-723-8181

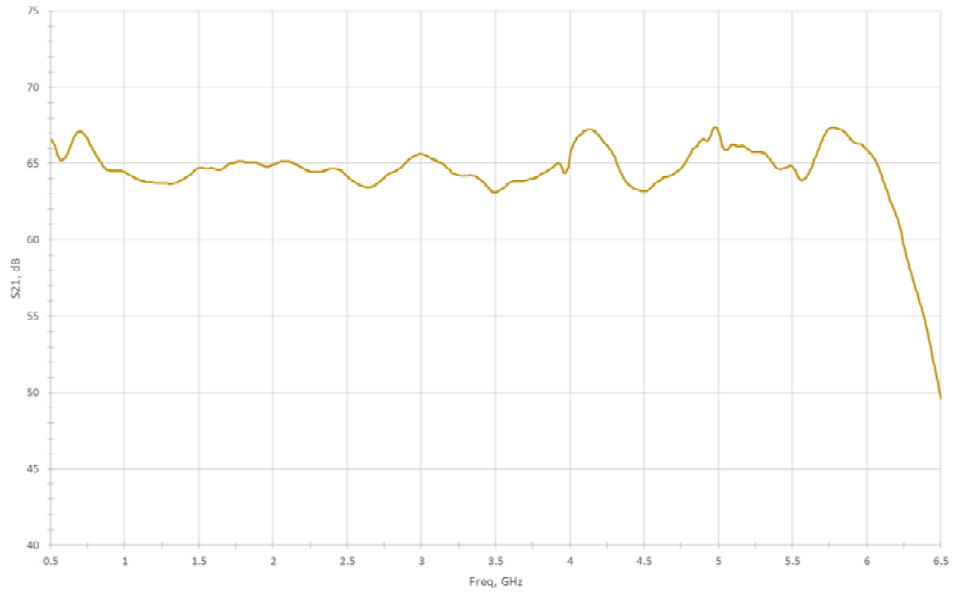
For an applications engineer call: 800.933.8181

www.arworld.us

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100HM1G6AB-50 Typical Gain



Specifications

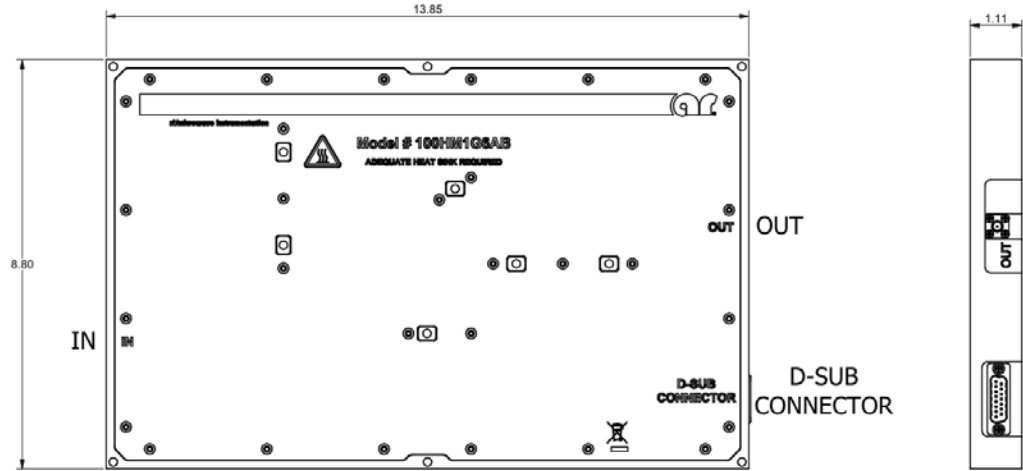
- RATED POWER OUTPUT:** 90W minimum
- SMALL SIGNAL GAIN FLATNESS:** ±2.5 dB typical; ±3.0 dB maximum
- MAX INPUT LEVEL:** +13dBm
- FREQUENCY RESPONSE:** 1-6 GHz instantaneously
- GAIN:** 50 dB minimum
- NOISE FIGURE:** 8.5 dB typical
- INPUT IMPEDANCE:** 50 ohms, VSWR 2.0:1 maximum
- OUTPUT IMPEDANCE:** 50 ohms, VSWR 2.0:1 maximum
- MISMATCH TOLERANCE @ RATED Pout:** 3:1 at all load phase.
- MODULATION CAPABILITY:** Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.
- HARMONIC DISTORTION:** Minus 15 dBc typical at 100W

- THIRD ORDER INTERCEPT POINT:** 52 dBm typical
- DC POWER:** +28V/26.5A max (@P_{IN}=0dBm)
- CONNECTORS:** SMA female
- SIZE (W x L x H):** 35 x 22 x 2.54 cm (13.8 x 8.8 x 1.0 in)
- WEIGHT:**
 - Amp:** 4.76 kg (10.5 lbs)
 - Amp & Heatsink (M1):** 13.15 kg (29 lbs)
- EXPORT CLASSIFICATION:** 3A001

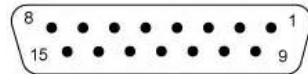
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DC VOLTAGE PINOUT



PIN #	FUNCTION
1,2,9,10	+28V
4	TTL Inhibit (TTL low=normal operation; TTL high=inhibit DC supply)
5	Fault (TTL high=normal; TTL low=fault)
3*,6,11,13	Not Used
7,8,14,15	GND
12	Gain Control
TTL High:	Normal
TTL Low:	Fault

*For M1 version, Pin 3 is connected internally to +28V supply for fans.

Model Configurations

Model	RF In/Out Connector	Housing
100HM1G6AB-50	SMA	Standard
100HM1G6AB-50M1	SMA	With heatsink and fan