



30HM1G6-45

- 30 Watts
- 0.7-6GHz
- Solid-State, Class A
- +27V DC single bias
- Operating Temperature -20°C to +70°C
- High Reliability and ruggedness
- Soft-fail design
- Over-voltage protection

Features



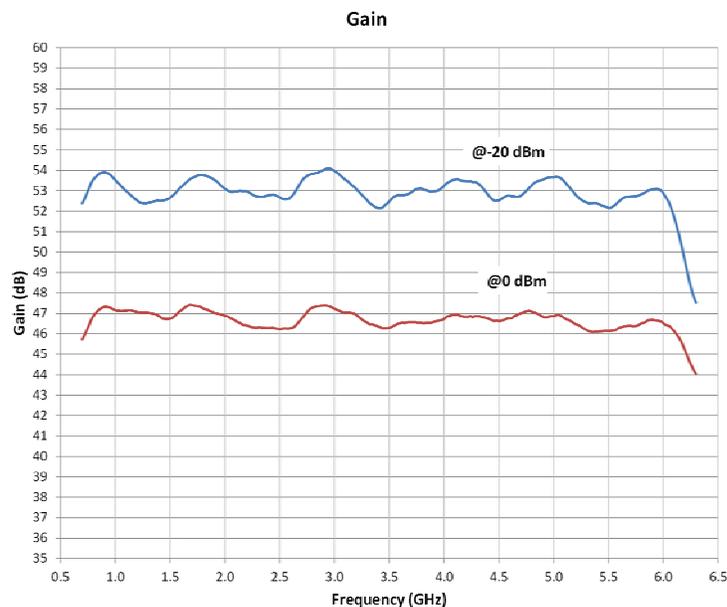
The Model 30HM1G6-45 is a compact, wide-band, hybrid power amplifier module that covers 0.7-6GHz. When used with a sweep generator, the Model 30HM1G6-45 provides a minimum of 30W of RF power instantaneously from 0.7-6 GHz with $RF_{IN} = 0dBm$.

The Model 30HM1G6-45 operates from a single DC voltage (+22V to 28V). It provides 48dB of typical gain with excellent gain flatness, noise figure and low intermodulation distortion. It is designed to have low spurious signals, linearity and is extremely load tolerant which enables it to be used in many RF applications that require linearity, power and wide bandwidth. The circuitry consists of balanced topology which provides good input and output return loss and sta-

bility. 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 thin film substrates. It incorporates plated-thru holes and air bridge technology to ensure optimum RF performance. 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.



AR RF/Microwave
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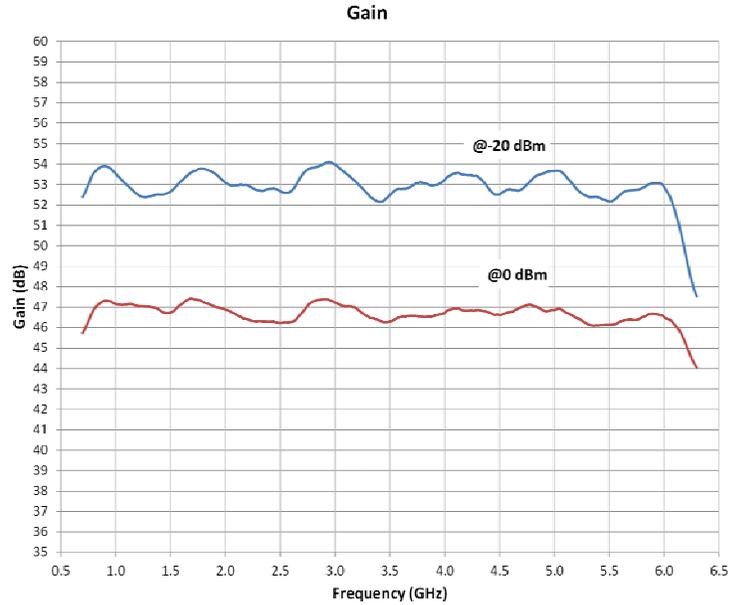
www.arworld.us



30HM1G6-45

- 30 Watts
- 0.7–6GHz

Specifications



Specifications

RATED POWER OUTPUT: 30W minimum

POWER OUTPUT @ 3dB COMPRESSION:
Nominal, 35W; Minimum, 25W

POWER OUTPUT @ 1dB COMPRESSION:
Nominal, 30W; Minimum, 20W

SMALL SIGNAL GAIN FLATNESS: ± 1.0 dB typical; ± 2.0 dB maximum

FREQUENCY RESPONSE: 0.7–6 GHz instantaneously

GAIN: 45 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: 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY: Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

HARMONIC DISTORTION: Minus 20 dBc typical at 25W

THIRD ORDER INTERCEPT POINT: 50 dBm typical

DC POWER: +27V/8.5A

CONNECTORS: SMA female

WEIGHT: 2.85 kg (6.3 lbs)

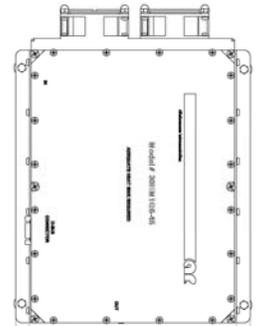
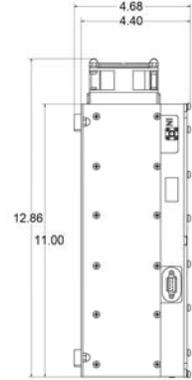
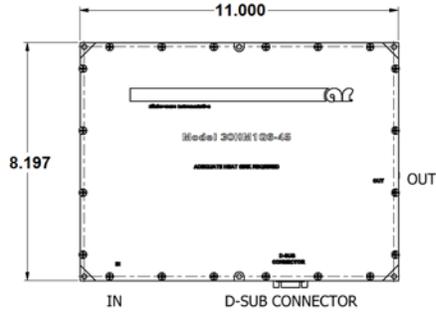
SIZE (W x L x H): 28 x 21 x 2.54 cm (11.25 x 8.25 x 1.0 in)

EXPORT CLASSIFICATION: 3A001

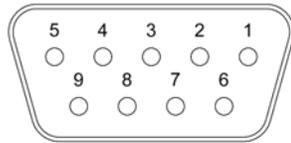
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Specifications



DC VOLTAGE PINOUT



PIN #	FUNCTION
1,2,6,7	+27V
3,8,9	GND
5	FAULT
4	NOT USED*

TTL High: Normal

TTL Low: Fault

*For M1 versions, pin 4 is connected internally to +24V supply for fan.

Model Configurations

Model	RF In/Out Connector	Housing
30HM1G6-45	SMA	Standard
30HM1G6-45M1	SMA	With heatsink and fan