



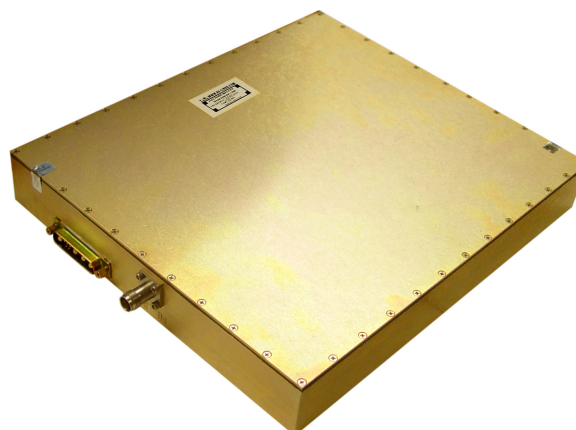
# ZHM-00911-G80

## HIGH POWER 9-11GHz

### MIL GRADE MICROWAVE AMPLIFIER

#### Export restricted item

This ZHM-0911-G80 amplifier is a high power, X band, Solid State Power that operates from 9.5 to 10.5 GHz. The saturated output power is 80 watts typical at 25C. Typical small signal gain is 43 dB. Noise figure is 6.5 dB typical at 25C. Input VSWR is 2.0:1 maximum. Output VSWR is 2.0:1 maximum. This unit is equipped with DC switching circuitry that enables and disables the DC-DC circuitry in 1000 nSec maximum. Standard features include reverse polarity protection, output short and open circuit protection, an over-temperature alarm and an integrated DC-DC converter with over/under voltage protection. This power amplifier operates from a +28 Vdc power supply with a class AB bias of typically 15.0 amps. This unit is also offered as a +12Vdc amplifier in a smaller package. Please contact the factory. This amplifier operates from -40C to +65C base plate temperature. Maximum input power with no damage is +20 dBm.



- Operation across 9.5 to 10.5 GHz
- 80 watts saturated output power typ
- 43 dB typ small signal gain
- High speed DC switching circuitry
- 6.5 dB noise figure

This amplifier is ideal for X Band Radar and Communication Systems that require high reliability and high power in a rugged and compact module. Standard housing size is approximately 9.25 X 11.0 X 1.50 inches. This PA needs to be heat sunk properly to keep the base plate temperature to +65C maximum. TNC female connectors are standard on the RF input and output ports. DC and command/control signals are accessible via a DC connector. This amplifier is environmentally sealed for operation in airborne environment.

#### Typical Performance from 9 to 11 GHz @ 25 C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	40	44	48
Small Signal Gain Flatness (dB)	+/-1.0	+/-2.0	NA
Saturated Output Power (dBm)	47.0	49.0	50.0
P1dB (dBm)	46.0	48.0	49.5
Input Return Loss (dB)	-20.0	-14.9	-9.8
Output Return Loss (dB)	-20.0	-14.9	-9.8
Noise Figure (dB)	4.0	6.5	10.0
Supply Voltage (Vdc) (Unit comes with a +12 Vdc option)	27	28	29
Quiescent Current Class AB Bias (Amps)	14.0	15.0	17.5
Harmonics (dBc)	-80	-60	-40
DC Switching On Time (nSecs)	300	400	1000
DC Switching Off Time (nSecs)	500	800	1000

#### ELECTRICAL SPECIFICATIONS

Low Frequency	9500 MHz
High Frequency	10500 MHz
Small Signal Gain	44 dBm typ
P1db	47 dBm typ
Psat	49 dBm typ
Oip	357 dBm typ
Applied Voltage	28 Vdc
Short Protection	Yes
Over Protection	Yes
Baseplate Temp	-40C to 65C