

# ZHM 1000-2500/50 MIL GRADE HIGH POWER AMPLIFIER 800 MHz TO 2.5 GHz



This is a high power, broadband, Gallium Nitride (GaN) RF amplifier that operates from 1.0 to 2.5 GHz. This unit will operate down to 800 MHz with no degradation in performance, ideal for broadband military platforms as well as commercial applications. This RF module employs temperature compensation to keep the gain constant over the temperature extremes. The power response changes by a  $\pm 0.75$  dB typical over temperature. This amplifier operates with a base plate temperature of 85C with no degradation in the MTBF for the GaN devices inside.

It is packaged in a modular, robust housing that is approximately 2.5" (W) by 6.4" (L) by 1.0 (H)". This amplifier has a typical P1dB of 35 watts at room temperature. Saturated output power across the band is typically 50 watts. Noise figure at room temperature is 8.0dB typical. This amplifier offers a typical gain of 50 dB with a typical gain flatness of  $\pm 2.0$ dB. Class AB current is approximately 4.0 amps typical employing a +28.0 Vdc supply. This amplifier operates from -40C to +85 base plate.

- **Gallium Nitride Broadband Power Amplifier**
- **Operation from 800 MHz to 2.5 GHz min.**
- **Small Signal Gain 50 dB typ.**
- **57 dBm OIP3 typ.**
- **50 Watts PSat typ.**

Freq (MHz)	P1dB (dBm)	Current @ P1dB (Amps)	Pout @ Pin = 1 dBm (dBm)	Current @ PSat (Amps)	SS Gain (dB)
800	45.0	7.7	46.5	9.4	54.0
1000	44.9	7.5	46.7	9.3	54.4
1150	45.1	7.8	46.8	9.1	54.6
1300	46.0	8.3	46.5	8.1	55.6
1450	45.3	7.5	46.9	8.7	54.3
1600	46.1	7.5	47.8	8.9	54.0
1750	48.7	8.7	49.0	8.9	56.1
1900	48.3	7.9	49.3	8.8	57.6
2050	46.9	6.7	48.8	8.4	57.0
2200	46.6	7.3	47.9	8.4	54.5
2350	46.1	7.4	47.0	8.1	54.3
2500	45.6	7.6	46.2	8.1	53.9