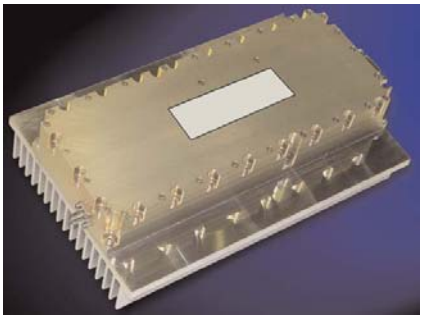
Amplifier, Solid State, Broadband

800-2500MHz, 54dB Gain, SMA Female Connectors, 125 Watts



RAMP-800-2500M-54d-SMA(f)-125W-P3dB-g6

- **Gallium Nitride Broadband Power Amplifier**
- **Operation from 800 MHz to 2500 MHz min**
- **Small Signal Gain 54 dB typical**
- **30 to 40% Power Added Efficiency typical**
- **125 Watts P3dB typical**

Freq (MHz)	Small Signal Gain (dB)	Pout @ PSat (dBm)	Current @ PSat from a 48 Vdc Supply (Amps)	2nd Harmonic @ Pout=10 Watts (dBc)	3rd Harmonic @ Pout=10 Watts (dBc)	Power Added Efficiency @ PSat (%)
800	57.9	51.8	8.2	-25.6	-20.9	38.5
1000	54.2	51.1	8.7	-25	-30	31.1
1200	54	51.6	7.7	-22.9	-29.8	38.7
1400	54.3	51.8	7.2	-24.1	-31.4	44.3
1600	55.2	51.1	7.4	-34.2	-40	36.8
1800	52.4	50.7	6.9	-38.6	-34.1	35.5
2000	54.2	50	7.5	-41	-41.6	27.8
2200	54.3	50.3	6.7	-46	-46	33.3
2400	53.8	50.2	7.2	-46.2	-46.2	30
2500	54.9	51.2	7.3	-50.1	-50.1	37.7

RADITEK's RAMP-800-2500M-54d-SMA(f)-125W-P3dB-g6 is a high power, broadband, Gallium Nitride (GaN) RF amplifier that operates from 800 MHz to 2500 MHz. This PA is ideal for broadband military platforms as well as commercial applications because it is robust and offers high power over a multi-octave bandwidth with decent power added efficiency.

This amplifier was designed for high efficiency applications and is displayed with a heat sink that is offered as an option. 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 housing that is approximately 3.4" (width) by 8.3" (long) by 1.3" (height).

This amplifier has a typical P3dB of 125 watts at room temperature. Noise figure at room temperature is 10.0 dB maximum and offers a typical gain of 54 dB with a typical gain flatness of ± 2.0 dB. Input VSWR is 2.0:1 maximum. Class AB quiescent current is ~0.40 amps typical employing a +48 Vdc supply. This PA operates from a +48 Vdc, a +12Vdc and a -5.0Vdc input voltages. Typical harmonic values can be found on the first page of this data sheet.

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This SSPA includes an external DC blanking command that enables and disables the module in 20 uSec maximum. A logic low or open circuit enables the amplifier. A logic high will disable the amplifier. Standard features include over/under voltage protection and reverse polarity protection. The output is fully protected from an open or short circuit presented to this port with no damage. Input/output RF connectors are SMA female. DC and command voltages are accessible via a DSUB connector. Contact the factory with any questions you may have.

This amplifier operates from -40C to +85C base plate. Summary test data is found on sheet one of this data sheet at room temperature. This is an example of a **RADITEK** standard product.

RADITEK designs and manufactures high performance, high power CW or pulsed SSPA's for commercial, military and satellite communications customer.

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