



High Power, Broadband, X Band Solid State RF Amplifier

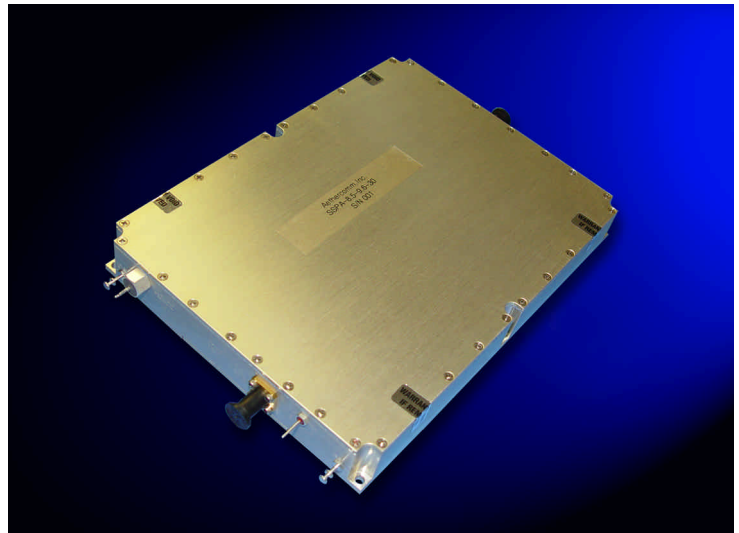
Aethercomm P/N SSPA 8.5-9.6-30 is a high power, X Band, Solid State Power Amplifier that operates from 8.5 to 9.6 GHz. The P1dB at 25C is 30 Watts typical. The saturated output power is 40 watts typical at 25C. Typical small signal gain is 58 dB. Noise Figure is 6 dB typical at 25C. Input VSWR is 2.0:1 maximum. Output VSWR is 2.0:1 maximum. This unit is equipped with Aethercomm's proprietary 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, and an integrated DC-DC converter with over/under voltage protection. This power amplifier operates from a +12 Vdc power supply with a class A bias of typically 22.0 amps. This amplifier operates from -40C to +65C base plate temperature.

This SSPA is ideal for X Band Radar and Communication Systems that require high reliability, excellent linearity and high power in a rugged and compact module.

Typical Performance from 8.5 to 9.6 GHz @ 25 C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	50	58	-
Small Signal Gain Flatness (dB)	+/-1.0	+/-2.0	-
Saturated Output Power (dBm)	44.5	46.0	49.0
P1dB (dBm)	44.0	44.8	47.0
OIP3 (dBm)	50.0	53.0	56.0
Input Return Loss (dB)	-20.0	-14.9	-10.0
Output Return Loss (dB)	-20.0	-14.9	-10.0
Noise Figure (dB)	-	6	9
Supply Voltage (Vdc)	11.5	12.0	12.5
Quiescent Current Class A Bias (Amps)	18.0	22.0	24.0
Harmonics (dBc)	-80	-40	-30
DC Switching On/Off Time (nSecs)	500	900	1000

- Operation across 8.5 to 9.6 GHz
- 30 watts P1dB typ
- 44 dB typ small signal gain
- High speed DC switching circuitry
- 40 watts saturated output power typ



Standard housing size is approximately 4.75 X 7.75 X 1.00 inches not including the mounting flange. SMA female connectors are standard in the RF input and output ports. DC, command/control signals are accessible via DC feed through capacitors.

This is an example of an Aethercomm standard product. Aethercomm designs and manufactures high performance, high power CW or pulsed SSPA's for commercial, military and satellite communications customers.

Aethercomm Inc. reserves the right to make changes without further notice. Aethercomm recommends that before these items herein are specified into a system or critical application that the performance characteristics be verified by contacting the factory.