



High Power, Broadband Solid State RF Amplifier

Aethercomm P/N SSPA 0.8-1.45-20 is a high power, broadband, L band, solid state power amplifier that operates from 0.80 to 1.45 GHz. The P1dB at 25C is 20 watts typical. The saturated output power is 25 watts typical at 25C. Minimum small signal gain is 45 dB. Noise figure is 4 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 300 nSec typical on this unit. 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 15 amps. This amplifier operates from -40C to +65C base plate temperature.

This SSPA is ideal for L band radar and communication systems that require high reliability, excellent linearity and high power in a rugged and compact module. Standard housing size is approximately 4.5 X 8.0 X

Typical Performance from 0.8 to 1.45 GHz at 25 deg. C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	45	48	-
Small Signal Gain Flatness (dB)	+/-1.0	+/-2.0	-
Saturated Output Power (dBm)	43.5	44.0	46.0
P1dB (dBm)	42.0	43.0	44.0
OIP3 (dBm)	50.0	53.0	54.0
Input Return Loss (dB)	-20.0	-11.0	-9.8
Output Return Loss (dB)	-20.0	-12.0	-9.8
Noise Figure (dB)	3	4	7
Supply Voltage (Vdc)	11.5	12.0	12.5
Quiescent Current Class A Bias (Amps)	14.0	15.0	16.0
Harmonics (dBc)	-80	-50	-30
DC Switching On/Off Time (nSecs)	250	300	400

- Operation across 800 MHz to 1.45 GHz min
- 20 watts P1dB typ
- 45 dB min small signal gain
- High speed DC switching circuitry
- 25 watts saturated output power typ



1.0 inches. Mounting is accomplished via six through holes in the housing. An SMA female connectors is standard on the RF input port. An SMA male connector is standard on the output port. DC connections are accessible via a DC feed through capacitor. The TTL Switching command is applied via an SMC male connector.

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.