



High Power, Broadband, S Band Solid State RF Amplifier

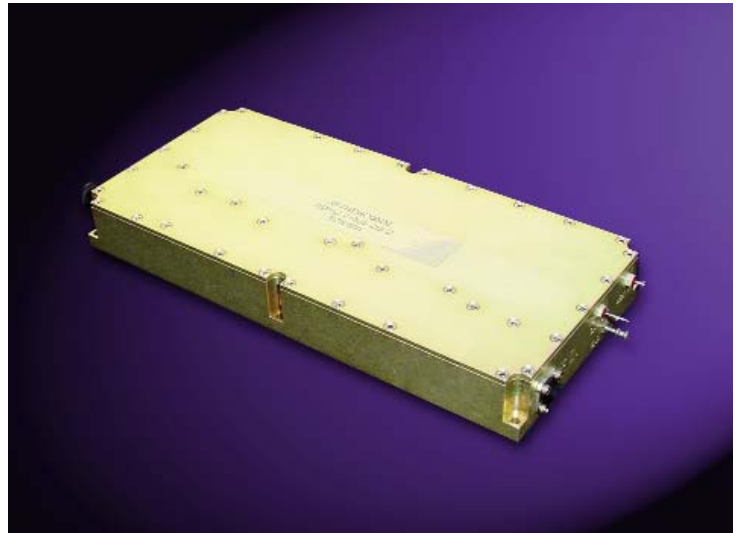
Aethercomm P/N SSPA 2.7-3.5-40 is a high power, S Band, Solid State Power Amplifier that operates from 2.7 to 3.5 GHz. The peak output power at 25C is 40 watts typical with a 200uSec pulse width at a 10% duty cycle. Minimum small signal gain is 37 dB. Noise Figure is 7 dB typical at 25C. Input VSWR is 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 600 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 12 amps. This amplifier operates from -40C to +65C base plate temperature.

This SSPA is ideal for S band radar systems that require high reliability and high power in a rugged

Typical Performance from 2.7 to 3.5 GHz @ 25C

Parameter	Min	Typ	Max
Saturated Gain (dB)	37	40	-
Saturated Gain Flatness (dB)	+/-1.0	+/-2.0	-
Peak Output Power (dBm)	45.0	46.0	48.0
Pulse Width (uSec)	-	200	1000
Duty Cycle (%)	-	10	100
Input Return Loss (dB)	-20.0	-11.0	-9.8
Output Return Loss (dB)	-20.0	-12.0	-9.8
Noise Figure (dB)	5	7	10
Supply Voltage (Vdc)	11.5	12.0	12.5
Quiescent Current Class A Bias (Amps)	11.0	12.0	14.0
Harmonics (dBc)	-	-50	-30
DC Switching On/Off Time (nSecs)	300	600	1000

- Operation across 2.7 to 3.5 GHz min
- 40 watts peak output power typ
- 37 dB min small signal gain
- High speed DC switching circuitry
- 7 dB noise figure typical



and compact module. Standard housing size is approximately 4.0 X 8.0 X 1.0 inches. Mounting is accomplished via through holes in the housing. An SMA female connectors is standard on the RF input port. An SMA female connector is standard on the output port. DC connections are accessible via a 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.