



## High Power, Broadband, X Band Solid State RF Amplifier

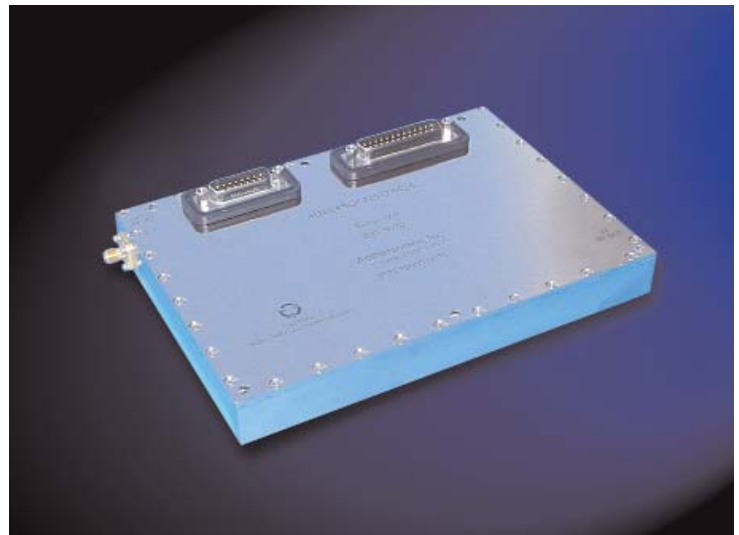
Aethercomm P/N SSPA 8.4-9.4-10 is a high power, X band, Solid State Power that operates from 8.4 to 9.4 GHz. Typical peak output power is 10 Watts at the minimum attenuator setting. The onboard 6-bit attenuator allows for the increase or decrease of the PA's output power in 0.50 dB steps. Typical small signal gain at minimum attenuation is 30 dB. Noise Figure is 10 dB max at min attenuation. Input VSWR is 1.5:1 max. Output VSWR is 2.0:1 max. Harmonics of this PA are -55 dBc maximum. RF Pulse rise and fall times are 100 nSecs max. This unit is equipped with Aethercomm's proprietary DC switching circuitry that enables and disables the DC-DC converter in 1000 nSec maximum. Standard features include reverse polarity protection, input/output short and open circuit protection, RF power telemetry for input power level and transmitted power level, a 6 BIT variable attenuator and an integrated DC-DC converter with over/under voltage protection.

This SSPA is ideal for X Band Radar Systems that require high reliability and high power in a rugged and

### Typical Performance from 8.4 to 9.4 GHz @ 25 deg. C

Parameter	Min	Typ	Max
SS Gain with Attenuator at Min (dB)	26	28	31
SS Gain Flatness (dB)	+/-0.5	+/-1.0	+/-2.0
Saturated Peak Output Power (Watts)	9	10	20
Input Return Loss (dB)	-20.0	-17.0	-14.9
Output Return Loss (dB)	-20.0	-14.9	-10.0
Noise Figure	8	9	10
Supply Voltage (Vdc)	15	15	15
Quiescent Current (Amps)	7.0	8.0	10.0
Harmonics (dBc)	-70	-60	-55
DC Switching On/Off Time (nSecs)	500	800	1000

- **10 watts peak power typ**
- **Operation across 8.4 to 9.4 GHz**
- **28 dB typ small signal gain**
- **6 BIT Gain / Power Control Attenuator**
- **32 dB of attenuation / 0.5 dB steps**



compact module. Standard housing size is approximately 5.0 X 7.0 X 1.0 inches. SMA female connectors are standard in the RF input and output ports. DC, command/control and telemetry signals are accessible through two D type subminiature connectors. Housing is environmentally sealed.

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.