



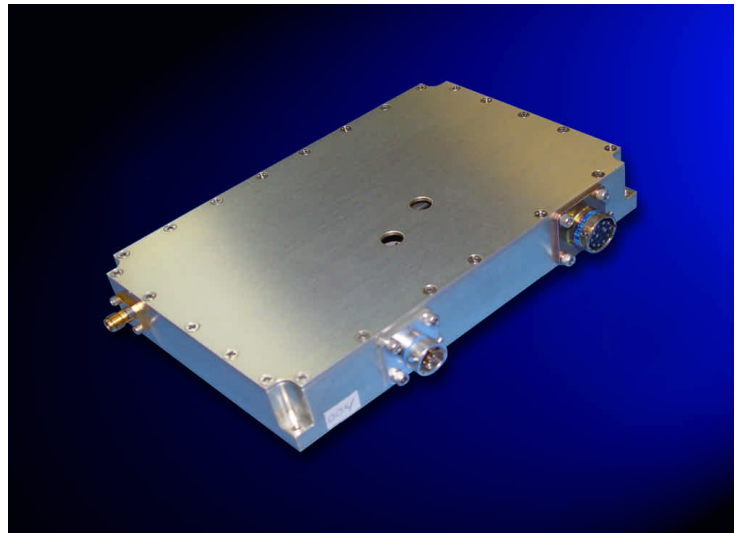
## High Power, Pulsed X Band Solid State RF Amplifier

Aethercomm P/N SSPA 9.0-9.2-10 is a high power, X band, solid state pulsed power amplifier that operates from 9.0 to 9.2 GHz. The peak output power is 38 dBm minimum at 25C. Typical small signal gain is 34.5 dB. Noise Figure is 7.0 dB typical at 25C. Input VSWR is 1.5:1 maximum. Output VSWR is 1.5:1 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, an over-temperature alarm with shutdown, an integrated DC-DC converter with over/under voltage protection, DC current telemetry and a battlefield short to over-ride the over-temperature shut down. This power amplifier operates from a +15 Vdc power supply with a class A bias of typically 5.0 amps. This is a pulsed amplifier and the total average current will be reduced by the duty cycle that is applied the enable pin. This HPA operates from -40C to +65C base plate temperature. This unit exhibits excellent pulse characteristics to include pulse droop, amplitude change pulse to pulse, phase change pulse to pulse and linear phase across the pulse.

### Typical Performance from 9.0 to 9.2 GHz @ 25 C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	34.0	34.5	35.0
Small Signal Gain Flatness (dB)	-	+/-0.25	+/-0.50
Peak Output Power (dBm)	38.0	39.0	41.0
Input Return Loss (dB)	-	-20.0	-14.0
Output Return Loss (dB)	-	-20.0	-14.0
Noise Figure (dB)	-	7.0	7.5
Supply Voltage (Vdc)	14.5	15.0	15.5
Harmonics (dBc)	-	-60	-40
DC Switching On Time (nSecs)	-	350	1000
DC Switching Off Time (nSecs)	-	400	1000
Pulse Droop for 5uSec PW (dB)	-	0.15	0.25

- Operation across 9.0 to 9.2 GHz
- 8 Watts peak output power Typical
- 34 dB small signal gain minimum
- High speed DC switching circuitry
- 7.0 dB noise figure typical



This SSPA is ideal for X Band Radar and Communication Systems that require high reliability and high power in a rugged and compact module. Standard housing size is approximately 3.75 X 6.02 X 1.00 inches. This PA needs to be heat sunk properly to keep the base plate temperature to +65C maximum. SMA female connectors are standard on all RF ports. DC and command/control signals are accessible via two mil-circular DC connectors.

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.