High Power, Broadband, S Band

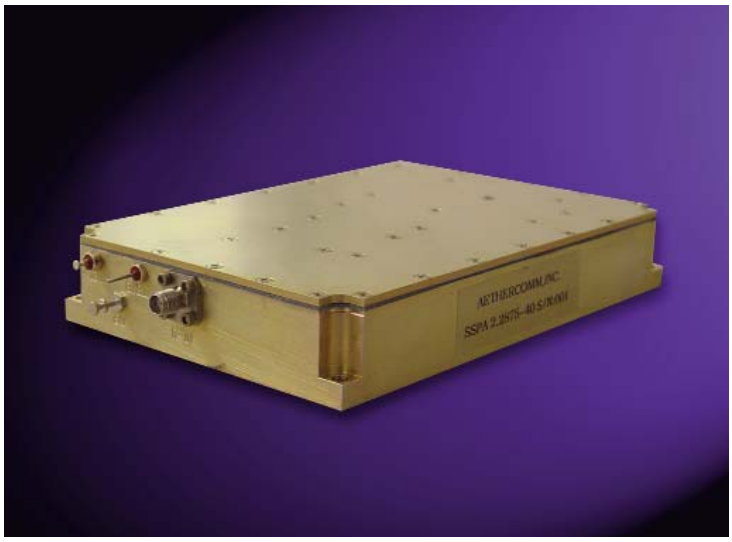
Solid State RF Amplifier

Aethercomm P/N SSPA 2.2-2.4-40 is a high power, S Band, Solid State Power Amplifier that operates from 2.2-2.4 GHz minimum. This amplifier can be easily tweaked for operation anywhere from 1.7 to 2.5 GHz. Contact the factory for custom variations on this product. The P3dB at 25°C is 40 watts minimum. Minimum small signal gain is 17 dB. Noise Figure is 7 dB typical at 25°C. Input VSWR is 1.5:1 maximum. Output VSWR is 1.5:1 maximum. This unit is equipped with an external TTL enable to command the module on and off as required with a switching time of 0.25 seconds typical. 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 14.2 amps. This amplifier operates from -40C to +65C base plate temperature.

Typical Performance from 2.2 to 2.4 GHz @ 25 C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	19.0	22.0	-
Small Signal Gain Flatness (dB)	±0.5	±1.0	-
Saturated Output Power (dBm)	46.0	46.5	-
Saturated Gain (dB)	17.0	18.0	-
OIP3 (dBm)	51.0	55.0	-
Input Return Loss (dB)	-	-20.0	-14.0
Output Return Loss (dB)	-	-15.0	-14.0
Power Added Efficiency in Saturation (%)	27.5	33.5	-
Supply Voltage (Vdc)	11.5	12.0	12.5
Quiescent Current Class A Bias (Amps)	-	14.0	15.5
Harmonics (dBc)	-	-40.0	-30.0

- **Narrow Band Operation from 2.2 to 2.4 GHz**
- **P3dB is 46 dBm min**
- **17 dB min Small Signal Gain**
- **External On/Off Command**
- **Small Compact Module**



This SSPA is ideal for S Band Communication/Telemetry Systems that require high reliability, excellent linearity and high power in a rugged and compact module. Standard housing size is approximately 4.000(w) X 6.000(l) X 1.018(h) inches. Mounting is accomplished via four 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 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.

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