



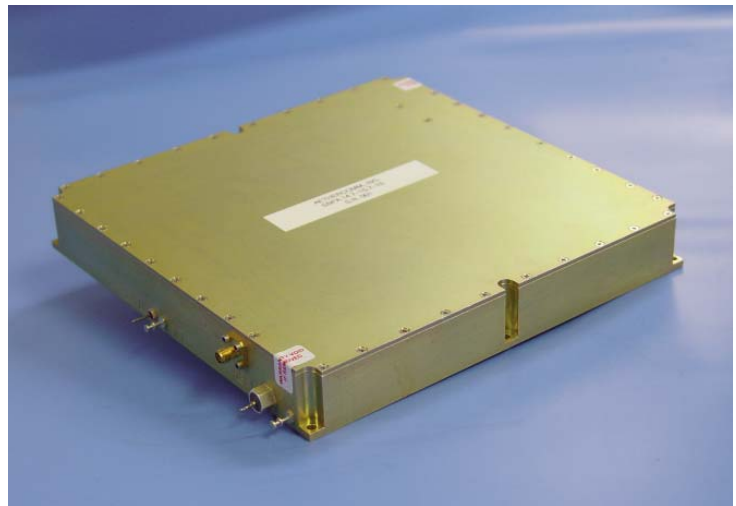
## High Power, Broadband, Ku Band Solid State RF Amplifier

Aethercomm P/N SSPA 14.7-15.7-10 is a high power, Ku band, Solid State Power that operates from 14.7 to 15.7 GHz. The P1dB is 10 watts minimum at 25C. Typical small signal gain is 50 dB. The OIP3 is 48 dBm typical. The OIP2 is 88 dBm typical. Noise figure is 7.7 dB typical at 25C. Input VSWR is 2.0:1 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 900 nSec typically. 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 +28 Vdc power supply with a class A bias of typically 7.5 amps. This unit is also offered as a +12Vdc amplifier. Please contact the factory. This HPA operates from -40C to +65C base plate temperature. Maximum input power with no damage is +10 dBm. The amplifier incorporates an internal 20 dB coupler with a

### Typical Performance from 14.7 to 15.7 GHz @ 25 C

Parameter	Min	Typ	Max
Small Signal Gain (dB)	45	50	-
Small Signal Gain Flatness (dB)	+/-1.0	+/-2.0	-
Saturated Output Power (dBm)	41.0	43.0	-
P1dB (dBm)	40.0	42.0	-
OIP3 (dBm)	46	48	-
OIP2 (dBm)	78	88	-
Input Return Loss (dB)	-	-14.0	-9.0
Output Return Loss (dB)	-	-16.0	-14.0
Noise Figure (dB)	-	7.7	10.0
Supply Voltage (Vdc) (Unit comes with a +12 Vdc option)	27	28	29
Quiescent Current Class A Bias (Amps)	7.0	7.5	9.0
Harmonics (dBc)	-	-40	-30
DC Switching On Time (nSecs)	500	900	1000
DC Switching Off Time (nSecs)	300	400	1000

- Operation across 14.7 to 15.7 GHz
- 10 Watts P1dB min
- 50 dB typ small signal gain
- High speed DC switching circuitry
- 48 dBm OIP3 typ



tolerance of +/-2.0 dB accuracy across the specified bandwidth. The DC current with the PA disabled is 300mA maximum.

This SSPA is ideal for Ku Band Radar and Communication Systems that require high reliability and high power in a rugged and compact module. Standard housing size is approximately 8.0 X 7.25 X 1.85 inches. This PA needs to be heat sunk properly to keep the base plate temperature to +65C maximum. SMA female connectors are standard on the RF ports. DC and command/control signals are accessible via a DC feedthrough capacitors. This HPA is not 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.*