



## L Band Radar Pulsed Power Amplifier Solid State RF Amplifier

Aethercomm Model Number SSPA 1.2-1.4-800-RM is a high power pulsed L band solid-state power amplifier that operates over the 1200 to 1400 MHz band. This PA was designed to support military L band radars and L band linear accelerators. The peak RF power is 800 watts typical. Power flatness across the entire band is  $\pm 1.0$  dB typical. Typical small signal gain is 50 dB. Input VSWR is 1.5:1 maximum. Output VSWR is 2.0:1 maximum. Noise Figure is 7 dB typical. Harmonics are -50dBc typical. This amplifier offers an external PA turn-on and turn-off command that enables and disables the PA in 2000 nSecs maximum. RF pulse rise and fall times are 50nSec maximum. This model operates from 120VAC with a typical average current of 1.8 Amps at full power. This rack mount amplifier is offered in a standard 19" rack that is 3u high. Please contact the factory for custom features.

The input RF connector is SMA female. The output RF connector is N type female. The DC enable command is

### SSPA 1.2-1.4-800-RM Operational Performance @ 25C Base Plate Temperature from 1200 to 1400 MHz

Parameter	Min	Typ	Max
Peak Output Power (dBm)	57.0	58.0	-
Small Signal Gain (dB)	50	53.0	-
Small Signal Gain Variation Over Frequency (dB)	$\pm 0.50$	$\pm 1.0$	$\pm 2.0$
Noise Figure (dB)	4.0	5.0	10.0
Input Return Loss (dB)	-30.0	-18.0	-14.9
Output Return Loss (dB)	-30.0	-15.0	-9.8
Harmonics (dBc)	-70	-40	-30
Pulse Width (uSec)	-	100	1000
120VAC Average Current @ Rated Power Out (Amps)	-	1.8	-
DC Turn-on/off time (nSecs)	250	1000	2000
Duty Cycle (%)	-	10	-

- High Power L Band Radar Pulsed Amplifier
- 800 Watts typical Peak Output Power
- 50 dB typ gain
- Typical Pulse Width is 100uSec to 1000 uSec
- Typical Duty Cycle is 10%



accessible via a BNC connector. There are RF sample ports for forward and reflected power via SMA female connectors. There is an over temperature alarm on the front panel of the rack mount assembly. The rack is fused for over current conditions with the fuses easily accessible. The PA is protected from an open or short-circuited placed on the output RF port of the unit.

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.*