



## L Band Rack Mounted High Power Amplifier Solid State RF Amplifier

Aethercomm P/N SSPA 1.03-1.09-1000-RM is a high power rack mounted L Band solid-state power amplifier that operates over the 1030 and 1090 MHz bands. This rack mounted PA was designed for secondary surveillance radars and supports IFF interrogator challenge and transponder reply waveforms at 1030 and 1090 MHz. The peak RF power is 1000 watts minimum. Power flatness across the entire band is  $\pm 0.5$  dB typical. Minimum saturated signal gain is 60 dB. Input VSWR is 1.5:1 maximum. Output VSWR is 1.5:1 maximum. Noise Figure is 10 dB maximum. Harmonics are -30dBc maximum. This amplifier offers a manual PA turn-on and turn-off command that enables and disables the internal PA's. RF Pulse rise and fall times are 50nSec maximum. This model operates from 115 VAC, 60 Hz power from the infinite bus. This rack mounted assembly is offered in a standard 19 inch rack that is 5u high. The input RF connector is N type female.

### SSPA 1.03-1.09-1000-RM Operational Performance @ 25C Ambient Temperature From 1030 to 1090 MHz @ 1% Duty Cycle

Parameter	Min	Typ	Max
Peak Output Power (dBm)	60.0	61.3	63.0
Saturated Gain (dB)	60.0	61.3	63.0
Power Variation Over Frequency (dB)	+/-0.25	+/-0.50	+/-1.0
Noise Figure (dB)	5.0	7.0	10.0
Input Return Loss (dB)	-	-18.0	-14.0
Output Return Loss (dB)	-	-18.0	-14.0
Harmonics (dBc)	-	-40	-30
Pulse Width (uSec)	-	100	1000
Input Voltage(VAC)	90	115	140
Input Power Level (dBm)	-	0.0	5.0
Dynamic Range (dB)	60	70	80
Duty Cycle (%)	-	1.0	10.0

- High Power IFF Band Power Amplifier
- 1000 Watts min Peak Output Power
- 60 dB typ Saturated Gain
- Typical Pulse Width is 100uSec
- Typical Duty Cycles are 1% to 10%



The output RF connector is N type female. Contact the factory for mechanical drawings. This rack mounted unit typically operates from 0C to 50C ambient operating conditions. The PA is protected from an open or short-circuit placed on the output RF port of the unit. There is an AC on/off switch with illuminated indicator. Other protection features include an input AC fuse and duty cycle limiting. The internal AC/DC converter also includes EMI filtering. A fan is included to cool the internal assemblies.

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.*