



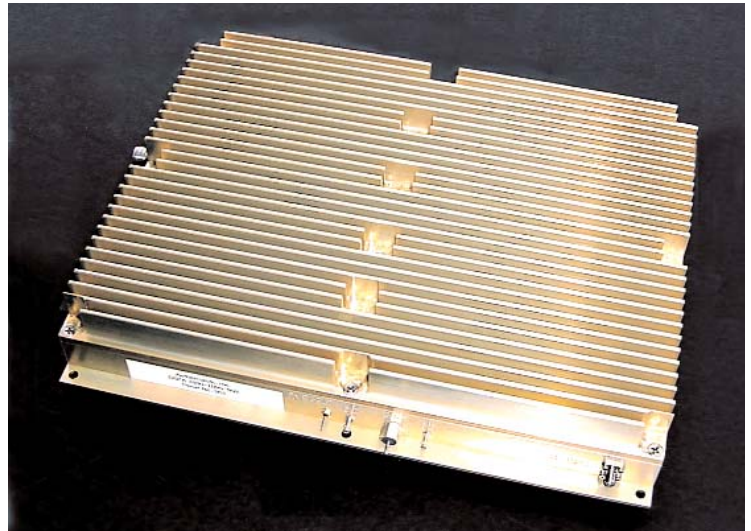
## Solid State Pulsed L Band Solid State High Power RF Amplifier

Aethercomm P/N SSPA 1.03-1.09-800 is a high power pulsed L Band solid-state power amplifier that operates over the 1030 and 1090 MHz bands. This 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 800 watts typical. Power flatness across the entire band is +/-0.5 dB typical. Typical small signal gain is 52 dB. Input VSWR is 1.5:1 maximum. Output VSWR is 1.5:1 maximum. Noise Figure is 7 dB typical. Harmonics are -30dBc maximum. This amplifier offers an external PA turn-on and turn-off command that enables and disables the PA in 2500 nSecs maximum. RF Pulse rise and fall times are 50nSec maximum. This model operates from 36.0 Vdc with a quiescent current of 2.5 amps typical class AB biased. Average current at rated output power is 7.0 amps typical at a 10% duty cycle. Approximate size 11" by 13.5" by 2" and is offered with a bolt-on heat sink. Please contact the factory for heat sink sizes. The input RF connector is SMA female. The output RF

### Typical Performance from 1030 to 1090 MHz @ 25C

Parameter	Min	Typ	Max
Peak Output Power (dBm)	57.8	59.0	60.0
Small Signal Gain (dB)	50	52	65
Small Signal Gain Variation Over Frequency (dB)	+/-0.25	+/-0.50	+/-1.0
Noise Figure (dB)	5.0	7.0	10.0
Input Return Loss (dB)	-30.0	-18.0	-14.0
Output Return Loss (dB)	-30.0	-18.0	-14.9
Harmonics (dBc)	-70	-40	-30
Pulse Width (uSec)	-	250	10,000
36 Vdc Quiescent Current (Amps)	-	2.5	5.0
Current @ Rated Power Out (Amps)	-	7.0	10.0
DC Turn-on/off time (nSecs)	-	1900	2500
Input Power Level (dBm)	-	5.0	10.0
Dynamic Range (dB)	60	70	80
Duty Cycle (%)	-	10	20

- High power IFF band pulsed amplifier
- 600 watts min peak output power
- 52 dB typ gain
- Typical pulse width is 150 to 250 uSec
- Typical duty cycles are 25%



connector is N type female. Mounting is accomplished via six through holes in the housing. This PA operates from a base plate temperature of -40C to 85C. 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.