



## L Band, High Power Amplifier Assembly

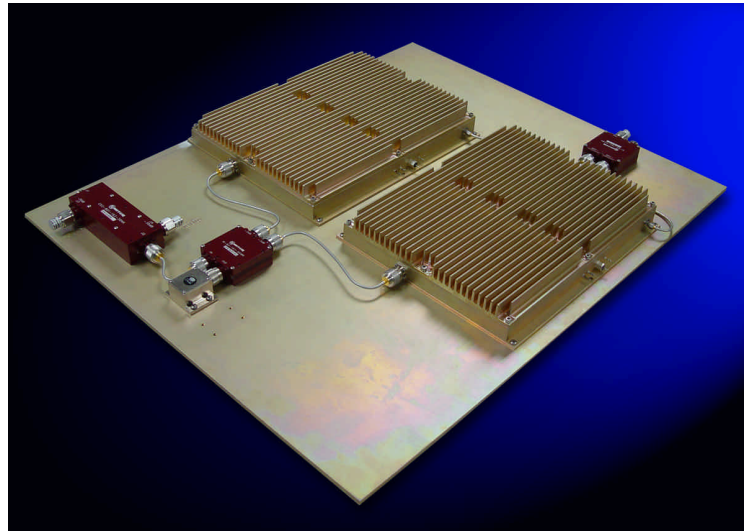
### Pulsed Power Amplifier Assembly

Aethercomm P/N SSPA 1.02-1.15-1000 is a high power pulsed amplifier assembly that operates across the frequency band of 1020 MHz to 1150 MHz. This high power pulsed amplifier assembly includes two 700 watt power amplifier modules with external 90 degree hybrid power splitters and combiners that boost the peak output power to 1000 watts minimum. A high directivity directional coupler is included with this assembly to monitor forward and reflected power. Power flatness across the entire band is +/-0.5 dB typical. Typical saturated gain is 60 dB at 1000 watts peak output power. Input/output VSWR is 1.5:1 maximum. Noise figure is 7 dB typical. Harmonics are -30dBc maximum. This integrated assembly offers an external PA turn-on and turn-off command that enables and disables the PA in 1200 nSecs maximum. RF Pulse rise and fall times are 50nSec maximum. This model operates from 36.0 Vdc with a total quiescent current of 3.4 amps typical class AB biasing for both amplifiers enabled. Average

#### Typical Performance from 1020 - 1150 MHz

Parameter	Min	Typ	Max
Peak Output Power (dBm)	60.0	60.5	61.25
Saturated Gain (dB)	57	60	65
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	-14.9
Output Return Loss (dB)	-	-18.0	-14.9
Pulse Width (uSec)	-	100	1000
36 Vdc Quiescent Current (Amps)	-	3.4	5.0
Average Current @ Rated Power Out with a 10% Duty Cycle (Amps)	-	18.0	24.0
DC Turn-on/off time (nSecs)	-	900	1200
Input Power Level (dBm)	-	0	5.0
Duty Cycle (%)	-	5	10

- High Power Pulsed Amplifier Assembly
- 1000 Watts min Peak Output Power
- 60 dB typ gain
- Typical Operational Pulses are IFF Waveforms
- Max Duty Cycle is 10%



current at rated output power is 18.0 amps typical for the pair. The subassemblies are mounted on a plate with the heat sinking on top of each individual amplifier. The approximate size of the total assembly is 25.25" (W) by 31.0" (L) by 2.5" (H). The input RF connector is N type female. The output RF connector is N type female. This PA operates from a base plate temperature of -20C to 85C and is intended for indoor use. The PA is protected from an open or short circuit placed on the output RF port of the unit. The output directional coupler has forward and reflected coupling values of 30dB +/-1.5 dB and offers 20 dB of directivity minimum. Large external capacitors are required to source the peak currents of each amplifier. Each amplifier sources 45 amps of peak current over the pulse. The unit is delivered with 50 ohm loads on all RF ports except the RF input and output ports.

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.