



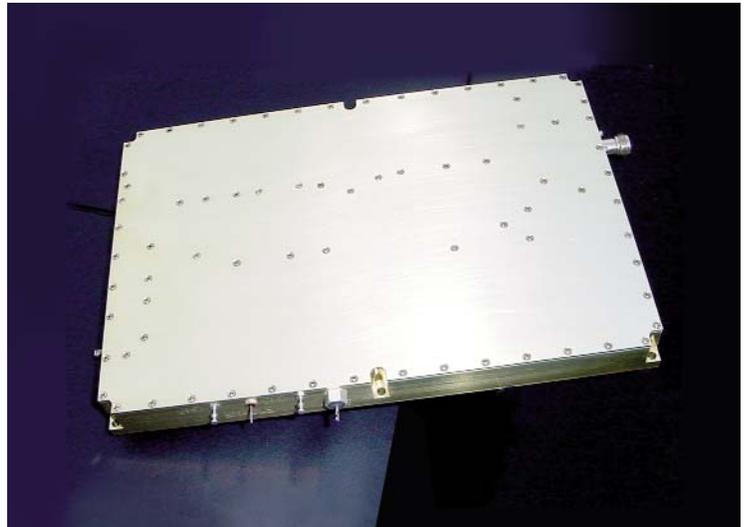
## Solid State Pulsed L Band Radar Solid State High Power RF Amplifier

Aethercomm P/N SSPA 1.2-1.4-500 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. The peak RF power is 500 watts typical. Power flatness across the entire band is +/-1.0 dB typical. Typical small signal gain is 60 dB. Input VSWR is 1.5:1 maximum. Output VSWR is 2.0:1 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 1000 nSecs maximum. RF pulse rise and fall times are 50nSec maximum. This model operates from 36.0 Vdc with a quiescent current of 1.5 amps typical class AB biased. Average current at rated output power is 15.0 amps typical. Approximate size 7.5" by 11" by 1" 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 connector is N type female. Mounting is accomplished via six through holes in the housing. This PA operates from a base plate tem-

### Typical Performance from 1200 to 1400 MHz @ 25C

| Parameter                                       | Min     | Typ    | Max    |
|---|---------|--------|--------|
| Peak Output Power (dBm)                         | 56.0    | 57.0   | 58.0   |
| Small Signal Gain (dB)                          | 55      | 60     | 65     |
| Small Signal Gain Variation Over Frequency (dB) | +/-0.50 | +/-1.0 | +/-2.0 |
| Noise Figure (dB)                               | 5.0     | 7.0    | 10.0   |
| Input Return Loss (dB)                          | -30.0   | -15.0  | -9.8   |
| Output Return Loss (dB)                         | -30.0   | -15.0  | -9.8   |
| Harmonics (dBc)                                 | -70     | -40    | -30    |
| Pulse Width (uSec)                              | -       | 250    | 10,000 |
| 36 Vdc Quiescent Current (Amps)                 | -       | 1.5    | 2.0    |
| Current @ Rated Power Out (Amps)                | -       | 4.5    | 6.0    |
| DC Turn-on/off time (nSecs)                     | 250     | 500    | 1000   |
| Input Power Level (dBm)                         | -       | 5.0    | 10.0   |
| Dynamic Range (dB)                              | 60      | 70     | 80     |
| Duty Cycle (%)                                  | -       | 25     | 50     |

- High power L band radar pulsed amplifier
- 500 watts typical peak output power
- 60 dB typ gain
- Typical pulse width is 150 to 250 uSec
- Typical duty cycles are 10% to 25%



perature 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.*