

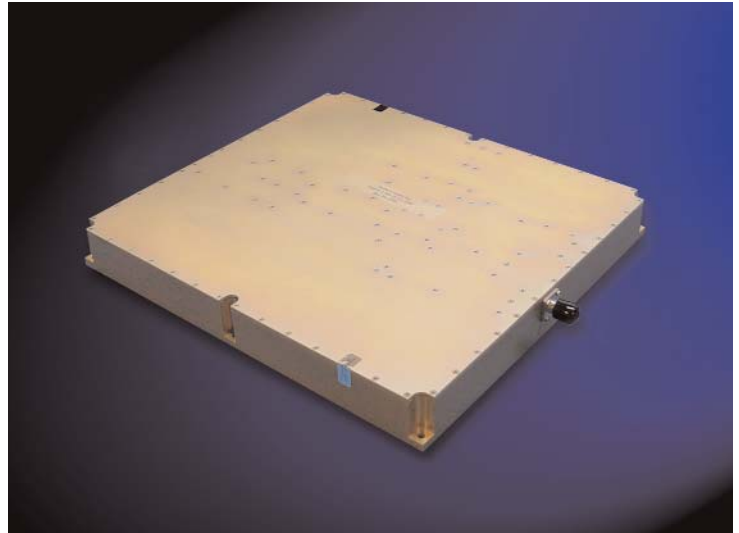


S band, High Power Amplifier

Solid State RF Amplifier

Aethercomm Model Number SSPA 2.80-3.15-100 is a high power, S Band, pulsed RF amplifier that operates from 2.80 to 3.15 GHz. This amplifier can be operated CW if required. The bandwidth can also be stretched from 2.6 GHz up to 3.5 GHz in narrow bands or broader bands as required. This PA is ideal for military radar platforms as it delivers high power over the S Band Radar band. This amplifier is approved for military aircraft flight and is sealed from the environment. It is packaged in a modular housing that is approximately 11.00" by 12.00" by 1.40". This amplifier has a typical peak output power of 125 watts at room temperature. Minimum peak output power is 100 watts across the stated band. Noise figure at room temperature is 7.0 dB typical. This amplifier offers a minimum gain of 43.0 dB with a typical power flatness of ± 0.5 dB across the band. Input and Output VSWR is 1.5:1 typical. Class AB quiescent current is 8.0 amps typical employing a +28Vdc supply. This unit will operate with an input supply from +18Vdc to +36Vdc. Worst case harmonic values are -20 dBc. This SSPA includes an external DC blanking command that enables and disables the module in 600nSec typical. Standard features include over/under voltage protection, reverse polarity protection and two regulated DC-DC converters. This high power module can be used CW if required with no damage. The input RF connector is SMA female. The output RF connector is TNC female on the standard product. DC and Command voltages are accessible via DC pins. This amplifier operates from -40C to +85C base plate. A summary of the acceptance test data appears on sheet 2.

- **S Band High Power Pulsed Amplifier**
- **Operation from 2.80 GHz to 3.15 GHz min**
- **Small Signal Gain 43 dB min**
- **Peak Output Power is 125 Watts typ**



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 customer.

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.

SSPA 2.80-3.15-100

SSPA 2.80-3.15-100 Typical Performance @ 25°C with a 500uSec Pulse Width at a 10% Duty Cycle

| Freq (GHz) | Peak Output Power (dBm) | Input VSWR (ratio) | Output VSWR (ratio) | Noise Figure (dB) | DC Blanking Enable Speed (nSec) | DC Blanking Disable Speed (nSec) | SS Gain (dB) | Peak Current @ rated Pout (amps) |
|---------------|-------------------------------|--------------------------|---------------------------|-------------------------|---------------------------------------|--|-----------------|--|
| 2.80 | 51.4 | 1.25:1 | 1.30:1 | 7.0 | 400 | 600 | 48.0 | 27.0 |
| 2.90 | 51.6 | 1.25:1 | 1.32:1 | 6.7 | 400 | 600 | 49.0 | 26.5 |
| 3.00 | 51.6 | 1.30:1 | 1.35:1 | 6.8 | 400 | 600 | 48.1 | 26.8 |
| 3.10 | 51.5 | 1.27:1 | 1.37:1 | 6.7 | 400 | 600 | 47.4 | 27.0 |
| 3.15 | 51.0 | 1.25:1 | 1.40:1 | 6.8 | 400 | 600 | 46.8 | 27.0 |