



High Power Super Broadband GaN Amplifier Solid State RF Amplifier

Aethercomm Model Number SSPA 6.000-18.000-50 is a high power, super broadband, Gallium Nitride (GaN) RF amplifier that operates from 6.0 to 18.0 GHz. This PA offers high power over a multi-decade bandwidth with excellent power added efficiency. This super broadband RF amplifier operates at a base plate temperature -40°C to +55°C for maximum performance. It is packaged in a modular housing that is 8.50(w)" by 3.50(l)" by 1.38(h)". This amplifier has a typical P3dB of 40 Watts at room temperature with a minimum of 25 Watts. Noise figure at room temperature is 12.0 dB typical. This amplifier offers a typical power gain of 47 dB with a typical gain flatness of ± 1.0 dB. The power and gain flatness across the band is

SSPA 6.0-18.0-50 Performance Specifications

Parameter	Min	Typ	Max
Operating Frequency (GHz)	6		18
Power Output (Watts)	25	40	50
Power Gain (dB)	47		
Input Power @ Psat (dBm)		0	
Gain Flatness		±1.0	±1.5
Small Signal Gain @-20dBm (dB)		52	
Input Return Loss - S11 (dB)			-10
Output Load VSWR		2:1	
Harmonics - In Band (dBc)			-12
Spurious (dBc)		-70	-60
Operating Voltage (VDC)	25.5	26	27
Current @ Pout = 49 W (Amps)			16
Standby Current (Amps)			10.5
Noise Power Output (dBm/Hz)		-105	
Switching Time (µSec)			20
Efficiency (%)		12	
Operating Temperature (°C)	-40		+55
Size (inches)		8.5x3.5x1.38	
Weight (lbs.)		2.6	

- Gallium Nitride Power Amplifier
- Operation from 6.0 GHz to 18.0 GHz Minimum
- Large Signal Gain 47 dB typical
- 25 to 50 Watts PSat typical



extremely flat for the bandwidth. Input VSWR is 2.0:1 maximum. Class AB quiescent current is 8.5 amps typical employing a +26 Vdc supply. This SSPA includes an external DC blanking command that enables and disables the module in less than 20.0 uSec. A logic low or open circuit commands the PA OFF. A logic high commands this amplifier ON. Standard features include over/under voltage protection and reverse polarity protection. Input and output RF connectors are SMA female. DC and command voltages are accessible via a DSUB connector.

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.