



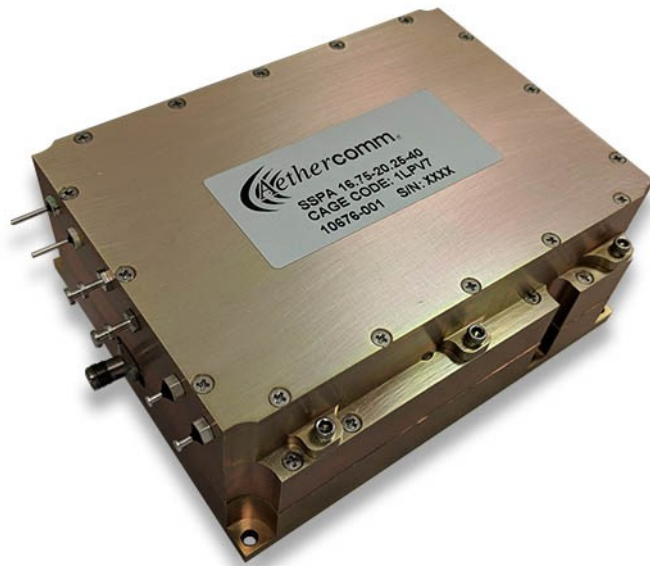
High Power, Broadband, SSPA

SSPA 16.0-20.0-40

Aethercomm Model Number SSPA 16.0-20.0-40 is a high power, Gallium Nitrate (GaN) solid state power amplifier that operates from 16.0 to 20.0 GHz. It is packaged in an enclosure that is optimized for high shock and vibration requirements. Nominal output power is 40 watts typical. Typical power gain is 40 dB typical. This SSPA operates from a +28Vdc power supply. Standard features include reverse polarity protection and output short and open circuit protection. This power amplifier module operates from -40°C to $+60^{\circ}\text{C}$ baseplate temperature. There is also an over-temperature shut down feature to protect the amplifier.

This high power SSPA, as pictured herein, can be employed in any system that requires high power at Ku band. The housing volume is approximately 4.0" (w) x 5.0" (l) x 2.0" (h). DC and logic connections are accessible via feed through pins. The RF input connector is an SMA female. The RF output connector is WR-51 waveguide. Typical transmit test data appears on the second page at room temperature. The maximum weight is 2.5 lbs. For mounting and heat sink instructions, further test data or operation and logic and pin out requirements, please contact the factory.

- Operation from 16.0 to 20.0 MHz
- GaN Technology
- +40 Watts CW Output Power typ.
- 28 Vdc Operation
- 10uSec max. Switching Speed
- OIP3 of 51 dBm min.



Aethercomm designs and manufactures high performance, high power CW or pulsed SSPA's for commercial, military and satellite applications.

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 16.0-20.0-40 Performance at 25C with a CW Stimulus and an Applied Voltage of +28 Vdc

<u>Frequency</u> <u>(GHz)</u>	<u>Pin</u> <u>(dBm)</u>	<u>Pout</u> <u>(dBm)</u>	<u>Pout</u> <u>(Watts)</u>	<u>Current</u> <u>(A)</u>	<u>2nd</u> <u>Harmonic</u> <u>(dBc)</u>	<u>Power</u> <u>Added</u> <u>Efficiency</u> <u>(%)</u>
16.0	5.0	46.3	42.6	11.7	<-30	14.6
16.5	5.0	47.7	58.9	12.5	<-30	19.0
17.0	5.0	47.2	52.5	12.6	<-30	16.8
17.5	5.0	46.1	40.7	11.8	<-30	14.0
18.0	5.0	46.0	40.0	11.1	<-30	14.2
18.5	5.0	46.2	41.7	11.7	<-30	14.4
19.0	5.0	46.6	45.7	12.3	<-30	14.9
19.5	5.0	46.1	40.7	11.7	<-30	13.9
20.0	5.0	45.7	37.2	11.6	<-30	12.7