

# High Power Pulsed Amplifiers

Aethercomm designs and manufactures high power class A, AB and C amplifiers for military radar and pulse data communications systems. Aethercomm also employs other high efficiency classes of amplification for pulsed amplifiers as required. See our High Efficiency Amplifier section for more details. Aethercomm is an industry leader in producing S- and X-band ground and airborne radar power amplifiers and L-band high power pulsed amplifiers for use in data link systems and radars. We have extensive experience with military radar and navigational systems. Aethercomm military amplifiers are designed for the highest reliability and for operation in the most extreme environments.

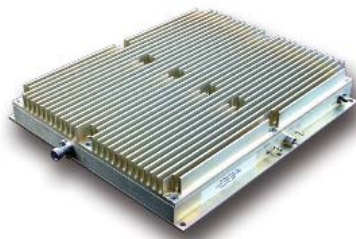
The list of high power pulsed amplifiers below is a sampling of Aethercomm's standard offerings. We design and fabricate amplifiers in this category with frequencies from 10 MHz to 40 GHz. The majority of pulsed amplifiers Aethercomm develops have frequencies in the 30 MHz to 18 GHz range, with power levels from 1 watt to over 1000 watts. Aethercomm employs GaAs, LDMOS, Silicon Bipolar, SiC, GaN and MMIC technologies as required to maximize performance.

## High power pulsed amplifier custom features include:

- operation from 12, 28, 36 or 48 Vdc supplies, or any power supply specified
- high-speed DC blanking function of 1000 nSec maximum
- internal DC-DC converter
- self protect functions
- system protect functions
- BIT telemetry options
- rack mounting
- modulator circuitry design
- high-speed digital interface
- microprocessor control
- other high performance options upon request

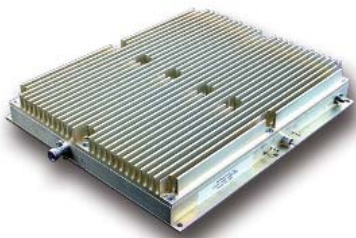
If you do not see the product you need in the standard offerings listed below, please contact the factory with your specific requirements. Aethercomm will design and manufacture your custom amplifier at to your exacting specifications. All of the amplifiers in this short form catalog can be configured for pulsed operation. All data presented is at room temperature. Visit [www.aethercomm.com](http://www.aethercomm.com) for a complete list of datasheets.

### SSPA 0.96-1.22-800



- Operation from 960 MHz to 1220 MHz min
- High power TACAN band pulsed amplifier
- 600 watts min peak envelope power
- 52 dB typ gain
- Typ pulse width is 3.5 uSec gaussian pulses
- Typ duty cycles are 10%

### SSPA 1.03-1.09-800



- Operation from 960 MHz to 1220 MHz min
- High power IFF band pulsed amplifier
- 600 watts min peak envelope power
- 52 dB typ gain
- Typ pulse width is 150 to 250 uSec
- Typ duty cycles are 2-18%

**SSPA 1.030-4000**



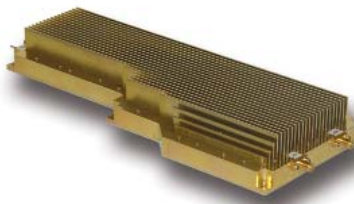
- Operation from 1030 MHz to 1090 MHz min
- 4000 watts peak output power
- Long Mode S transmitter system
- +34 Vdc operation
- Airborne or ground platforms

**SSPA 1.2-1.4-200**



- High power L band Radar amplifier
- Operation from 1200 MHz to 1400 MHz min
- Output power control employed
- Designed for fighter aircraft platform
- 200 watts peak output power min

**SSPA 1.2-1.4-200-2**



- Operation from 1.2 GHz to 1.4 GHz min
- 50-60% power added efficiency
- 200 watts output power
- 48 Vdc operation
- Gallium nitride power amplifier

**SSPA 1.2-1.4-250**



- Operation from 1.2 GHz to 1.4 GHz min
- 250 watts peak output power typ
- Military L-band radar amplifier
- High speed DC blanking of 1000 nSec
- 36 Vdc operation

**SSPA 1.2-1.4-500**



- Operation from 1.2 GHz to 1.4 GHz min
- 500 watts peak output power typ
- Military L-band radar amplifier
- High speed DC blanking of 1000 nSec
- 36 Vdc operation

**SSPA 2.7-3.5-40**



- Operation from 2.7 GHz to 3.5 GHz min
- 40 watts peak output power typ
- S-band radar power amplifier
- High speed DC blanking of 1000 nSec
- +12 Vdc operation

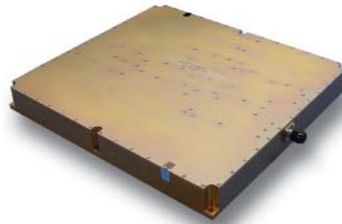
## >>High Power Pulsed Amplifiers

### SSPA 2.9-3.5-100



- Operation from 2.9 GHz to 3.5 GHz
- Pulsed or CW operation
- 100 watts Pout typ
- +36 Vdc operation with internal energy stage
- Gallium nitride power amplifier

### SSPA 2.80-3.15-100



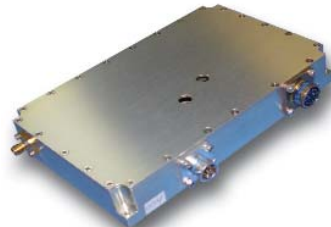
- Operation from 2.80 GHz to 3.15 GHz min
- 130 watts peak output power
- 7.0 dB noise figure typ
- High speed DC blanking of 1000 nSec
- +12 Vdc operation

### SSPA 8.4-9.4-10



- Operation from 8.4 GHz to 9.4 GHz min
- 10 watts peak output power
- Internal variable attenuator
- High speed DC blanking of 1000 nSec
- +15 Vdc operation

### SSPA 9.0-9.2-10



- Operation from 9.0 GHz to 9.2 GHz min
- 8 watts peak output power typ
- 34 dB small signal gain min
- High speed DC switching circuitry
- 7.0 dB noise figure typ

### SSPA 9.0-9.2-50



- Operation from 9.0 GHz to 9.2 GHz min
- Scaleable operation from 8.5-9.6 GHz
- 50 watts peak output power typ
- High speed DC blanking of 1000 nSec
- +15 Vdc operation

### SSPA 9.5-9.8-50



- Operation from 9.5 GHz to 9.8 GHz min
- 50 watt X-band radar power amplifier
- High speed DC blanking of 1000 nSec
- +28 Vdc operation

**SSPA 9.5-10.5-25**



- Operation from 9.5 GHz to 10.5 GHz min
- 20 watts P1dB typ
- 50 dB min small signal gain
- High speed DC switching circuitry
- 30 watts saturated output power typ

**SSPA 9.5-10.5-80**



- Operation from 9.5 GHz to 10.5 GHz min
- 80 watts peak output power typ
- 44 dB nominal gain
- 28 Vdc operation