CAPABILITIES & SHORT FORM PRODUCT LISTING

RF Amplifiers
RF Subsystems
RF Systems
Research & Development
High Volume Manufacturing
In the first quarter of 2009, Aethercomm, Inc. will be relocating into a brand new, high technology research and development building located in Carlsbad, California approximately 4-5 miles from our current location.
Aethercomm, Inc., designs and manufactures RF amplifiers, RF subsystems and RF systems with frequencies ranging from 10 MHz to 40 GHz. Our products and services include:

- Linear High Power Amplifiers
- Broadband High Power Amplifiers
- High Power Pulsed Amplifiers
- Low Noise and Medium Power Amplifiers
- Transmitters, Receivers and Subsystems
- Rack Mounted High Power Amplifiers and Systems
- High Efficiency Amplifiers
- High Power Microwave Systems
- High Power Amplifier Assemblies
- Specialty Amplifiers
- System Refurbishment and Modernization.

Many Aethercomm products are combat-proven and operate in the harshest of environments. Several of our products have been credited in helping save the lives of United States military personnel.

Customers and Platforms

Aethercomm high power products are employed worldwide by all branches of the U.S. Armed Forces and by allied militaries. We supply hardware to many of the nation’s largest defense contractors, including Northrop Grumman, Lockheed Martin and Raytheon. Platforms include fast-moving fighter/attack aircraft; slow-moving rotary-wing and command/control aircraft; UAV and target drones; Humvee-mounted radar and communication systems; ground-based communication and navigation systems; and ground and airborne electronic warfare systems.

Manufacturing Capabilities

Aethercomm engineers produce sophisticated designs using the latest design and prototyping tools to ensure first-pass success. We have a highly qualified staff of RF, analog, digital, mechanical, reliability and quality engineers.

Aethercomm has extensive manufacturing capabilities. We use the latest manufacturing and test aids to help meet strict quality standards and scheduling. We are capable of delivering thousands of amplifiers per week, and have manufactured more than 30,000 products in the last 7 years. Aethercomm manufactures prototype, small, medium (100 to 250 pieces) and high volume (multi-thousand unit) builds with outstanding quality and delivery rates.
Technical and Design Philosophy

Aethercomm engineers employ the latest modeling software and prototyping tools to help ensure first-pass success. Our high volume manufacturing projects begin with a robust, reliable design. The design is simulated and prototyped and design verification tests are completed. The design next goes to layout where the project is captured by a designer using surface mount parts that can be populated on the circuit board with pick and place machines. Aethercomm’s design methodology enables us to deliver high volume, reliable and repeatable hardware on time and on budget.

The majority of our products are custom in nature. Aethercomm or our customer generates a Source Control Drawing (SCD) that will govern the design and development of the product or system. We then design to this document. Aethercomm uses appropriate technologies to comply with the SCD and to deliver the highest quality, most reliable and cost effective solution. We use the latest in transistor technology to meet stringent customer specifications.

>> Aethercomm utilizes state-of-the-art test equipment to characterize our high technology products.

Aethercomm employs Gallium Arsenide (GaAs), Laterally Diffused Metal Oxide Semiconductor (LDMOS), Vertical Diffused Metal Oxide Semiconductor (VDMOS), Silicon Carbide (SiC), Silicon Bipolar, Gallium Nitride (GaN) and MMIC devices as required to meet the technical and cost demands of our customers.

Aethercomm began employing Wide Band Gap (WBG) Semiconductors into our standard product lines (SiC and GaN transistors) several years ago. Today, we have over 30 standard amplifier models that use SiC and GaN devices. These amplifiers, many of which are included in this catalog, typically operate over multi-octave bandwidths and several models operate over decade bandwidths. WBG devices offer a higher mean time between failure (MTBF) over conventional GaAs and LDMOS solutions. WBG devices offer better power added efficiencies over extremely large bandwidths.
Work Force

Aethercomm employs a highly qualified, experienced staff. Over twenty-five percent of our work force holds a degree in Engineering. Our assembly and test personnel have an average of 15 years of experience each. In addition, Aethercomm’s Chief Technologist and Director of Research and Development are both IEEE Fellows.

Facilities

Aethercomm’s North San Diego County facilities house our corporate headquarters and the engineering, assembly, testing and drafting divisions. The majority of our floor space is dedicated to manufacturing. We modernize our facilities as needed to ensure we have the technology to deliver high quality hardware to our customers on time. Aethercomm’s engineering facilities include comprehensive prototyping capabilities and the latest design tools to enable first-pass success. We have a Class 10,000 clean room for Microwave Integrated Circuit (MIC) manufacturing and testing. Aethercomm is ISO 9001:2000 certified.

In Q1 2009, Aethercomm will move into a brand new 47,000 square foot facility in Carlsbad, CA approximately 4-5 miles from our current location. Aethercomm will consolidate all our current operations under one roof.

>> Aethercomm employs a highly skilled and educated work force.

<< Aethercomm hardware on patrol in Afghanistan.

<< Aethercomm employees are trained in the latest revisions of military assembly and testing specifications.
Military and High Reliability Program Support

Aethercomm products are used in numerous combat-proven military systems. We provide components, systems and subsystems to all branches of the U.S. military. Products include high power pulsed and CW amplifiers used in ground and airborne radar, communication links, navigational equipment and training systems, and electronic warfare systems. Typical operational frequencies are between 30 MHz and 20 GHz. Power levels range from 1 watt to over 5000 watts.

Aethercomm designs new components and subsystems and refurbishes existing hardware by replacing and updating obsolete components. Refurbishment work includes a complete redesign of the existing hardware using state-of-the-art technologies to ensure an extremely reliable product with parts that will be available for years to come. The newly designed product offers the same form, fit and function as the original, often at a much lower cost. The table below demonstrates Aethercomm's contributions to military and high reliability programs.* Please contact the factory with any questions you may have.

* This is not a complete list but is shown here to demonstrate our experience as a defense contractor.

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<thead>
<tr>
<th>Military or High Reliability Program / Customer</th>
<th>Program Descriptions</th>
<th>Aethercomm Participation on Program</th>
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</thead>
<tbody>
<tr>
<td>Multi-Service Target &amp; Control System (MSTCS); Cubic Defense</td>
<td>Training pods for the U.S. Army, Navy and Air Force</td>
<td>Designed and manufactured the L-band front-end assembly for MSTCS</td>
</tr>
<tr>
<td>AN/TPN-30 Radar; USMC</td>
<td>High power TACAN system used for aircraft identification &amp; navigation</td>
<td>Redesigned the AN/TPN-30 Radar HPA. This L-band PA is a 300 watt 962-1215 MHz amplifier.</td>
</tr>
<tr>
<td>AN/TPN-22 Precision Approach Radar (PAR); USMC</td>
<td>High power TACAN system used for aircraft identification &amp; navigation</td>
<td>Redesigned the intermediate power, VHF amplifier in the AN/TPN-22 PAR receive section</td>
</tr>
<tr>
<td>USAFE Rangeless Instrumentation Training System (URITS); DRS Technologies</td>
<td>Pilot training &amp; evaluation system</td>
<td>Designed and built the 100 watt S-band power amplifier for URITS</td>
</tr>
<tr>
<td>Deep Space Network (DSN); National Aeronautics &amp; Space Administration (NASA) &amp; Jet Propulsion Laboratory (JPL)</td>
<td>International network of antennas that supports interplanetary spacecraft missions</td>
<td>Designed the DSN X-band high power driver amplifier</td>
</tr>
<tr>
<td>AN/TSC-85B Satellite Communication Terminal; U.S. Army Communications Electronics Command (CECOM)</td>
<td>Satellite ground station equipment for the Special Forces</td>
<td>Redesigned the X-band medium power amplifier for AN/TSC-85B</td>
</tr>
<tr>
<td>AN/TSC-94A Satellite Communication Terminal; U.S. Army CECOM</td>
<td>Satellite ground station equipment for the Special Forces</td>
<td>Redesigned the AN/TSC-94A X-band medium power amplifier</td>
</tr>
<tr>
<td>Lightweight Counter-Mortar Radar (LCMR); Syracuse Research Corporation &amp; U.S. Army Special Forces</td>
<td>Extremely rugged and portable L-band phased array radar used to identify unfriendly mortar locations</td>
<td>Designed power and phase matched dual 60-80 watt output amplifiers for LCMR</td>
</tr>
</tbody>
</table>
### Military Platforms

Aethercomm hardware can be found on numerous platforms throughout the U.S. Military and Allied Militaries. Below is a short list of where you can find Aethercomm products.*

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<tr>
<td><strong>Fighter / Attack Aircraft</strong></td>
<td><strong>UAV’s</strong></td>
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<tr>
<td>F15 Eagle</td>
<td>RQ-4 Global Hawk</td>
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<tr>
<td>F16 Fighting Falcon</td>
<td>MQ-1 Predator</td>
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<tr>
<td>F18 Hornet and Super Hornet</td>
<td>WK-450 Watchkeeper</td>
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<tr>
<td>AVAB Harrier II</td>
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<td></td>
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<tr>
<td>Panavia Tomato GR4</td>
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<tr>
<td><strong>Ground Vehicular</strong></td>
<td><strong>Space</strong></td>
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</tr>
<tr>
<td>Humvee</td>
<td>S Band Mission on a Sounding Rocket</td>
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<tr>
<td>MIA2 Abrams</td>
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<tr>
<td>Stryker Vehicle</td>
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</tr>
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* This is only a partial list. Contact the factory for further platform heritage.

### Fighter / Attack Aircraft

- **F15 Eagle**
- **F16 Fighting Falcon**
- **F18 Hornet and Super Hornet**
- **AVAB Harrier II**
- **Panavia Tomato GR4**

### UAV’s

- **RQ-4 Global Hawk**
- **MQ-1 Predator**
- **WK-450 Watchkeeper**

### Ground Vehicular

- **Humvee**
- **MIA2 Abrams**
- **Stryker Vehicle**

### Space

- **S Band Mission on a Sounding Rocket**

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<th><strong>Military Platforms</strong></th>
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Linear High Power Amplifiers

Aethercomm designs and manufactures high power class A and AB linear amplifiers to transmit voice, data and video for military systems, wireless customers and industrial applications. The narrowband amplifiers listed on pages 7 - 14 are designed to operate in extremely demanding environments such as high performance aircraft, high altitude UAV platforms, shipboard applications and ground-based combat communication systems. Aethercomm military amplifiers are designed for the highest reliability and many are combat proven. We employ GaAs, LDMOS, Silicon Bipolar, SiC, GaN and MMIC technologies as required to maximize performance.

The list of linear high power amplifiers below is a sampling of Aethercomm’s standard offerings; each can be used in pulsed systems with excellent performance. We design and manufacture high power linear amplifiers with frequencies ranging from 10 MHz to 40 GHz, with the majority between 30 MHz and 18 GHz. Power levels range from 1 watt to over 1000 watts.

Linear high power amplifiers custom features include:

- operation from 12 or 28 Vdc supplies, or any power supply specified
- high-speed DC blanking function of 1000 nSec typical
- internal DC-DC converter
- self protect functions
- system protect functions
- BIT telemetry options
- rack mounting
- linearization
- low noise figure
- 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 to your exacting specifications.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

SSPA 0.225-0.400-250

- Operation from 225 MHz to 400 MHz min
- 250 watt P1dB min in the SATCOM band
- 30 amps max current @ Pout = 250 watts
- 300 watts Psat min
- Gain flatness +/- 1.0 dB typ

SSPA 0.7-0.9-50

- Operation from 700 MHz to 900 MHz
- 50 watts P1dB min at 25C
- 45 dB min small signal gain
- High speed DC switching circuitry
- 60 watts saturated output power typ
SSPA 0.80-1.45-20
- Operation across 800 MHz to 1.45 GHz min
- 20 watts P1dB min at 25°C
- 45 dB min small signal gain
- High speed DC switching circuitry
- 25 watts saturated output power typ

SSPA 1.2-1.6-25
- Operation across 1.2 GHz to 1.6 GHz min
- 20 watts P1dB min at 25°C
- 44 dB min small signal gain
- High speed DC switching circuitry
- 53 dBm OIP3 typ

SSPA 1.2-1.6-50
- Operation across 1.2 GHz to 1.6 GHz min
- 50 watts P1dB min at 25°C
- 50 dB min small signal gain
- 57 dBm OIP3 typ

SSPA 1.5-1.9-300
- Operation across 1.5 GHz to 1.9 GHz min
- Small signal gain 55 dB typ
- 300 watts P1dB typ
- 63 dBm OIP3 typ
- 10 dB noise figure typ

SSPA 1.5-2.0-80
- Operation across 1.5 GHz to 2.0 GHz min
- +28 Vdc operation
- Small signal gain 50 dB typ
- 58 dBm OIP3 typ
- 80 watts PSat typ

SSPA 1.7-2.5-20
- Operation across 1.7 GHz to 2.5 GHz min
- 20 watts P1dB min at 25°C
- 45 dB typ small signal gain
- High speed DC switching circuitry
- 53 dBm OIP3 typ
>>Linear High Power Amplifiers

**SSPA 2.2-2.4-40**
- Operation from 2.2 to 2.4 GHz
- P3dB is 46 dBm min
- 17 dB min small signal gain
- External on/off command
- Small compact module

**SSPA 2.3-2.4-400**
- Operation across 2.30-2.40 GHz min
- 802.16e OFDM WIMAX amplifier
- 42 dBc ACPR @ Pout = 50 watts typ
- 53 dB +/- 0.1 dB small signal gain typ

**SSPA 2.3-2.6-80**
- Operation from 2.3 GHz to 2.6 GHz min
- Small signal gain 40 dB typ
- 80 watts P1dB typ
- 90 watts PSat typ
- 6.0 dB noise figure typ

**SSPA 2.496-2.700-400**
- Operation across 2.496-2.700 GHz min
- 802.16e OFDM WIMAX amplifier
- 42 dBc ACPR @ Pout = 50 watts typ
- 56 dB +/- 0.5 dB small signal gain typ

**SSPA 2.7-3.5-40**
- Operation from 2.7 GHz to 3.5 GHz min
- 40 watts peak output power typ
- 37 dB min small signal gain
- High speed DC switching circuitry
- 7.0 dB noise figure typ

**SSPA 3.0-3.5-50**
- Operation across 3.0 GHz to 3.5 GHz min
- 50 watts P1dB min
- 40 dB min small signal gain
- High speed DC switching circuitry
- 60 watts saturated output power typ
SSPA 4.0-5.0-20
- Operation from 4.0 GHz to 5.0 GHz min
- Small signal gain 57 dB typ
- 53 dBm OIP3 typ
- 20 watts P1dB typ

SSPA 4.4-5.1-30
- Operation from 4.4 GHz to 5.1 GHz
- 30 watts P1dB min / 50 watts P1dB typ
- 55 watts PSat typ
- 58 dBm OIP3 typ
- +/- 1.0 dB gain flatness typ

SSPA 5.0-6.2-20
- Operation across 5.0 GHz to 6.2 GHz min
- 30 watts P1dB min at 25°C
- 48 dB min small signal gain
- High speed DC switching circuitry
- 40 watts saturated output power typ

SSPA 5.25-8.85-50
- Operation from 5.25 GHz to 5.85 GHz min
- 50 watts typ output power @ ambient
- 55 dB min small signal gain
- 5.0 dB typ noise figure

SSPA 5.6-5.9-20
- Operation from 5.6 GHz to 5.9 GHz
- Small signal gain 44 dB typ
- 20 watts P1dB min
- 30 watts PSat typ
- 6.0 dB noise figure typ

SSPA 5.9-6.4-40
- Operation from 5.9 to 6.4 GHz min
- 40 watts P1dB min
- Small signal gain 58 dB typ
- 56 dBm OIP3 typ
- 7.0 dB noise figure typ
<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>P1dB (Min)</th>
<th>Small Signal Gain</th>
<th>OIP3 (Typ)</th>
<th>Noise Figure (Typ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPA 5.9-6.5-10</td>
<td>5.9 GHz to 6.4 GHz</td>
<td>10 watts</td>
<td>40 dB typ</td>
<td>50 dBm</td>
<td>3.0 dB</td>
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</tr>
<tr>
<td>SSPA 5.9-6.5-10-28</td>
<td>5.9 GHz to 6.5 GHz</td>
<td>10 watts</td>
<td>43 dB typ</td>
<td>51 dBm</td>
<td></td>
</tr>
<tr>
<td>SSPA 5.9-7.2-20</td>
<td>5.9 GHz to 7.2 GHz</td>
<td>20 watts</td>
<td></td>
<td>53 dBm</td>
<td></td>
</tr>
<tr>
<td>SSPA 5.9-7.4-20</td>
<td>5.9 GHz to 7.4 GHz</td>
<td>20 watts P1dB</td>
<td>40 dB min</td>
<td>25 watts</td>
<td></td>
</tr>
<tr>
<td>SSPA 6.4-7.2-25</td>
<td>6.4 GHz to 7.2 GHz</td>
<td>20 watts P1dB</td>
<td>40 dB min</td>
<td>30 watts</td>
<td></td>
</tr>
<tr>
<td>SSPA 7.1-8.5-30</td>
<td>7.1 GHz to 8.5 GHz</td>
<td>30 watts P1dB</td>
<td>50 dB typ</td>
<td>40 watts</td>
<td></td>
</tr>
</tbody>
</table>
**SSPA 8.0-9.0-10**
- Operation across 8.0 GHz to 9.0 GHz
- 10 watts P1dB
- 46 dB typ small signal gain
- High speed DC switching circuitry
- 51 dBm OIP3 typ

**SSPA 8.5-9.6-30**
- Operation across 8.5 GHz to 9.6 GHz
- 30 watts P1dB typ
- 44 dB typ small signal gain
- High speed DC switching circuitry
- 51 dBm OIP3 typ

**SSPA 9.0-10.0-40**
- Operation across 9.0 GHz to 10.0 GHz min
- 40 watts saturated output power typ
- 58 dB min small signal gain typ
- Moderate speed DC switching circuitry
- 10.0 dB noise figure typ

**SSPA 9.0-9.6-50**
- Operation across 9.0 GHz to 9.6 GHz min
- 50 watts saturated output power min
- 60 dB min small signal gain
- Moderate speed DC switching circuitry
- 4.0 dB noise figure typ

**SSPA 9.5-10.5-25**
- Operation across 9.5 GHz to 10.5 GHz min
- 20 watts saturated output power 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 across 9.5 GHz to 10.5 GHz min
- 80 watts saturated output power typ
- 43 dB min small signal gain
- High speed DC switching circuitry
- 6.5 dB noise figure
## Linear High Power Amplifiers

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range</th>
<th>P1dB typ</th>
<th>Small Signal Gain</th>
<th>DC Switching Circuitry</th>
<th>Saturated Output Power typ</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPA 9.8-10.8-10</td>
<td>9.8 GHz to 10.8 GHz</td>
<td>10 watts</td>
<td>46 dB</td>
<td>High speed DC switching circuitry</td>
<td>15 watts</td>
</tr>
<tr>
<td>SSPA 13.7-14.5-30</td>
<td>13.7 GHz to 14.5 GHz</td>
<td>26 watts</td>
<td>47 dB</td>
<td>High speed DC switching circuitry</td>
<td>31 watts</td>
</tr>
<tr>
<td>SSPA 14.5-15.4-15</td>
<td>14.5 GHz to 15.4 GHz</td>
<td>15 watts</td>
<td>37 dB</td>
<td>High speed DC switching circuitry</td>
<td>20 watts</td>
</tr>
<tr>
<td>SSPA 14.7-15.7-10</td>
<td>14.7 GHz to 15.7 GHz</td>
<td>10 watts</td>
<td>50 dB</td>
<td>High speed DC switching circuitry</td>
<td>48 dBm OIP3</td>
</tr>
<tr>
<td>SSPA 14.9-15.1-20</td>
<td>14.9 GHz to 15.1 GHz</td>
<td>20 watts</td>
<td>45 dB</td>
<td>External PA enable/disable</td>
<td>28 Vdc aircraft operation</td>
</tr>
</tbody>
</table>
**SSPA 15.35-15.75-10**

- Operation from 15.35 GHz to 15.75 GHz
- Small signal gain 42 dB typ
- 47 dBm OIP3 typ
- 15 watts P1dB typ

**SSPA 29.6-30.5-10**

- Operation from 29.6 GHz to 30.5 GHz
- Small signal gain 37 dB typ
- 40 dBm P1dB typ
- 41 dBm PSat typ
Aethercomm designs and manufactures broadband high power class A and AB amplifiers for military communication systems to transmit voice, data and video. These high power amplifiers are also used by wireless customers and for industrial applications. Aethercomm broadband product offerings include octave, multi-octave and decade bandwidths that have exceptional gain flatness and high output power. We design broadband high power amplifiers to operate in a range of environments, from the laboratory to extremely demanding combat conditions. Aethercomm military amplifiers are designed for the highest reliability and for operation in the most extreme environments. These amplifiers are ideal for broadband electronic warfare (EW) jamming and communication systems.

Aethercomm has delivered over 30,000 broadband amplifiers in the last two years.

The list of broadband high power amplifiers on pages 15 - 20 is a sampling of standard offerings from Aethercomm. We produce high power broadband amplifiers with frequencies from 10 MHz to 40 GHz, the majority being between 30 MHz and 18 GHz. Power levels for octave and multi-octave designs range from 1 watt to over 1000 watts. Aethercomm employs GaAs, LDMOS, Silicon Bipolar, SiC, GaN and MMIC technologies as required to maximize performance.

Broadband high power amplifier custom features include:

- operation from 12 or 28 Vdc supplies, or any power supply specified
- high-speed DC blanking function of 1000 nSec maximum
- low noise figure
- internal DC-DC converter
- self protect functions
- system protect functions
- BIT telemetry options
- rack mounting
- 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 to your exacting specifications.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.
SSPA 0.020-6.000-10

- Operation from 20 MHz to 6000 MHz min
- Small signal gain 50 dB typ
- 5-10 watts PSat typ
- Gallium nitride broadband power amplifier

SSPA 0.020-1.000-20

- Operation from 20 MHz to 1000 MHz min
- Small signal gain 53 dB typ
- 30-40 watts P3dB typ
- 30-60% PAE typ
- Gallium nitride broadband power amplifier

SSPA 0.020-0.520-125

- Operation from 20 MHz to 520 MHz min
- Small signal gain 58 dB typ
- 50+% typ power added efficiency
- 125 watts P3dB typ
- Gallium nitride broadband power amplifier

SSPA 0.020-1.000-100

- Operation from 20 MHz to 1000 MHz min
- Small signal gain 58 dB typ
- 40-60% typ power added efficiency
- 100 watts P3dB typ
- Gallium nitride broadband power amplifier

SSPA 0.020-2.500-20

- Operation from 20 MHz to 2500 MHz min
- Small signal gain 40 dB typ
- 15 watts P1dB typ
- 50 dBm OIP3 typ

SSPA 0.020-2.500-50

- Operation from 20 MHz to 2500 MHz min
- 50-100 watts P3dB typ
- +28 Vdc operation
- 20 uSec DC blanking time
- Gallium nitride broadband power amplifier
Broadband High Power Amplifiers

SSPA 0.2-2.0-5
- Operation from 200 MHz to 2000 MHz min
- 5.0 watts Psat typ
- 50 dB small signal gain typ
- 28 Vdc operation

SSPA 0.5-2.0-20
- Operation from 500 MHz to 2000 MHz min
- Small signal gain 42 dB min
- 53 dBm OIP3 typ
- 20 watts P1dB typ
- Silicon carbide technology

SSPA 0.5-2.5-10
- Operation from 500 MHz to 2500 MHz min
- Small signal gain 47 dB min
- 47 dBm OIP3 typ
- 15 watts P1dB typ
- Silicon carbide broadband power amplifier

SSPA 0.5-2.5-30
- Operation from 500 MHz to 2500 MHz min
- Small signal gain 50 dB min
- 50 dBm OIP3 typ
- 40 watts PSat typ
- Gallium nitride broadband power amplifier

SSPA 0.5-2.5-50
- Operation from 500 MHz to 2500 MHz min
- Small signal gain 53 dB min
- 40-50 watts P3dB typ
- 30-40% PAE typ
- Gallium nitride broadband power amplifier

SSPA 0.5-3.0-50
- Operation from 500 MHz to 3000 MHz min
- Small signal gain 35 dB min
- High speed DC blanking of 5uSecs max
- 70 to 100 watts P3dB typ
- Gallium nitride broadband power amplifier
SSPA 0.6-2.0-20

- Operation from 600 MHz to 2000 MHz min
- 8 watts min output power
- 5 dB noise figure
- 50 dB small signal gain typ

SSPA 0.6-3.0-10

- Operation from 600 MHz to 3000 MHz min
- 2+ octave operational bandwidth
- Saturated output power of 9 watts typ
- High OIP3 across band
- High speed DC switching circuitry

SSPA 0.8-2.5-50

- Operation from 800 MHz to 2500 MHz min
- Small signal gain 45 dB typ
- 58 dBm OIP3 typ
- 70 watts P3dB typ
- Silicon carbide broadband power amplifier

SSPA 0.8-2.5-200

- Operation from 800 MHz to 2500 MHz min
- Small signal gain 47 dB typ
- 60 dBm OIP3 typ
- 100-200 watts P3dB typ
- Gallium nitride broadband power amplifier

SSPA 0.8-3.2-10

- Operation from 800 MHz to 3200 MHz min
- 9 watts typ output power
- +12 Vdc operation
- 46 dBm OIP3 typ
- 30 dB small signal gain typ

SSPA 1.0-2.3-10

- 10 watts P1dB typ
- Operation from 1000 MHz to 2300 MHz min
- Small signal gain 50 dB typ
- 50 dBm OIP3 typ
- 4.0 dB typ noise figure max
## Broadband High Power Amplifiers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSPA 1.0-2.5-20</td>
<td>- Operation from 1.0 GHz to 2.5 GHz min&lt;br&gt;- Small signal gain 49 dB typ&lt;br&gt;- 52 dBm OIP3 typ&lt;br&gt;- 20 watts PSat typ&lt;br&gt;- Silicon carbide broadband power amplifier</td>
</tr>
<tr>
<td>SSPA 1.0-2.5-50</td>
<td>- Operation from 800 MHz to 2500 MHz min&lt;br&gt;- Small signal gain 50 dB typ&lt;br&gt;- 57 dBm OIP3 typ&lt;br&gt;- 50 watts PSat typ&lt;br&gt;- Gallium nitride broadband power amplifier</td>
</tr>
<tr>
<td>SSPA 1.5-3.0-200</td>
<td>- Operation from 1.5 GHz to 3.0 GHz min&lt;br&gt;- Small signal gain 65 dB typ&lt;br&gt;- 200 watts PSat typ&lt;br&gt;- Gallium nitride broadband power amplifier</td>
</tr>
<tr>
<td>SSPA 1.65-2.50-30</td>
<td>- Operation from 1.65 GHz to 2.5 GHz min&lt;br&gt;- Small signal gain 51 dB typ&lt;br&gt;- 30-40 watts P3dB typ&lt;br&gt;- Gallium nitride broadband power amplifier</td>
</tr>
<tr>
<td>SSPA 2.0-4.0-20</td>
<td>- Operation from 2.0 to 4.0 GHz min&lt;br&gt;- Saturated output power is 20 watts typ&lt;br&gt;- 45 dB small signal gain typ&lt;br&gt;- High speed DC switching circuitry&lt;br&gt;- Output short/open circuit protection</td>
</tr>
<tr>
<td>SSPA 2.5-6.0-50</td>
<td>- Operation from 2.5 GHz to 6.0 GHz min&lt;br&gt;- Small signal gain 48 dB typ&lt;br&gt;- 50 watts P3dB typ&lt;br&gt;- Gallium nitride broadband power amplifier</td>
</tr>
</tbody>
</table>
SSPA 3.0-4.0-20

- Operation from 3.0 GHz to 4.0 GHz min
- Small signal gain 60 dB typ
- 55 dBm OIP3 typ
- 30 watts P1dB typ

SSPA 8.0-11.0-10

- Operation from 8.0 GHz to 11.0 GHz min
- 10 watts P1dB min
- 40 dB min small signal gain
- High speed DC switching circuitry
- 15 watts saturated output power typ
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
- 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 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
Low Noise and Medium Power Amplifiers

Aethercomm designs and manufactures low noise and medium power amplifiers for military and wireless applications. Our low noise products are used in the front-ends of radar and communication systems. Our medium power amplifiers serve as driver amplifiers for high power amplifiers in the same types of systems. All military amplifiers are designed for the highest reliability and for operation in the most extreme environments. Most of the standard products listed herein are used on combat aircraft or ground radar systems. They have been proven extremely reliable and robust under combat conditions.

This section provides a sampling of Aethercomm products in this category. We produce low noise and medium power amplifiers with frequencies ranging from 10 MHz to 40 GHz, with the majority from 30 MHz to 18 GHz. Power levels for low noise and medium power products typically go up to 1 watt. Aethercomm employs GaAs, LDMOS, Silicon Bipolar, SiC, GaN and MMIC technologies as required to maximize performance.

Low noise and medium power amplifier custom features include:

- operation from 12 or 28 VDC supplies, or any power supply specified
- 1.0 dB noise figures
- internal high power limiters
- high speed DC blanking function of

1000 nSec maximum
- internal DC-DC converter
- self protect functions
- system protect functions
- BIT telemetry options

- rack mounting
- 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 to your exacting specifications.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

### SSPA 0.1-1.1-2.0

- Operation from 100 MHz to 1100 MHz min
- 2 watts P1dB typ
- 45 dBm OIP3 typ
- 22 to 32 Vdc operation
- High speed DC blanking at 750 nsec

### SSPA 0.3-2.6-1.0

- Operation from 300 MHz to 2600 MHz min
- 1 watt P1dB min
- 43 dBm OIP3 typ
- 22 to 32 Vdc operation
- High speed DC blanking at 1000 nsec
SSPA 0.96-1.22-2.0

- Operation from 960 MHz to 1220 MHz min
- 2 watts peak output power typ
- JTIDS, TACAN, IFF preamplifier
- High speed DC blanking of 1000 nSec
- 21 to 29 Vdc operation

SSPA 4.0-8.0-2.0

- Operation from 4.0 GHz to 8.0 GHz min
- 2 watt P1dB min
- 3.5 watts PSat typ
- 12 Vdc @ 2.5 amps operation
- 7 dB noise figure typ

SSPA 6.0-18.0-4

- Operation from 6.0 GHz to 18.0 GHz min
- 4 watts P3dB typ
- 30 dB typ small signal gain
- Remote on/off function
- 10-15% PAE typ

SSLNA 7.9-8.4-2.0

- Operation from 7.9 GHz to 8.4 GHz min
- 2.0 dB noise figure typ
- 34 dB gain typ
- 32 dBm OIP3 typ
- 15 Vdc @ 400 mA operation

SSLNA 8.4-9.4-3.0

- Operation from 8.4 GHz to 9.4 GHz min
- 2.5 dB noise figure typ
- 28 dB gain typ
- Gain / phase tracking unit to unit
- 15 Vdc @ 330 mA operation
Transmitters, Receivers and Subsystems

Aethercomm is an industry leader in the design and manufacture of L-band data link transmitters for combat aircrew training equipment. We have extensive knowledge and experience in system and subsystem design and produce military subsystems with frequencies up to 40 GHz. Our transmitters and subsystems typically feature receive functions, DC-DC converters for regulation and power conditioning, high-speed DC and RF switching functions, filtering, upconversion and exacting mechanical designs for operation on fighter and attack aircraft. Technologies used in these products include GaAs, LDMOS, Silicon Bipolar, SiC, GaN and MMIC devices.

Aethercomm transmitters, receivers and subsystems are custom in nature. These products have frequencies up to 40 GHz. Transmit power levels are typically several hundred watts, but can exceed several thousand watts depending on the system.

Transmitter, receiver and subsystem custom features include:

- operation from any power supply specified
- low Rx noise figures
- internal high power limiters
- high-speed DC blanking function of 1000 nSec typical
- microprocessor control
- internal DC-DC or AC-DC converter
- self protect functions
- system protect functions
- BIT telemetry options
- high-speed digital interface
- other high performance options as required

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 RF product to your exacting specifications.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

### TR 0.42-0.45-100

- Operation from 420 MHz to 450 MHz min
- Small signal gain 46.5 dB min
- 10 uSec Rx to Tx and Tx to Rx switching time
- Internal transfer switch
- Gallium nitride broadband power amplifier section

### TR 1.35-1.45-20

- Airborne L-band data link T/R module
- 20 watts peak output power min
- 50% transmit duty cycle @ 10 msec pulse width
- 2 dB noise figure
- High speed T/R switch
**TR 1.35-1.45-80**

- Airborne L-band data link T/R module
- 80 watts peak output power min
- 50% transmit duty cycle @ 3 msec pulse width
- 3 dB noise figure
- High speed T/R switch

**TR 1.35-1.45-100**

- Airborne L-band data link T/R module
- 100 watts peak output power min
- 50% transmit duty cycle @ 10 msec pulse width
- 2.0 dB noise figure
- High speed T/R switch

**TR 1.75-1.85-100**

- Airborne L-band data link T/R module
- 100 watts peak output power min
- 50% transmit duty cycle @ 10 msec pulse width
- 3.0 dB noise figure
- High speed T/R switch

**TR 1.75-1.85-125**

- Airborne L-band data link T/R module
- 125 watts peak output power typ
- 10% duty cycle @ 10 msec pulse width
- 3.0 dB noise figure
- Compact and rugged package

**TR 2.3-2.4-5**

- S band T/R module
- 10 dB PAR Tx waveform
- Low noise front end
- 100-200 watt final stage
- +50 Vdc operation

**Rx 9.0-9.2-5.0**

- 9.0 - 9.2 GHz bandwidth
- 4.5 dB noise figure typ
- High power front-end limiter
- High speed RF switch
- High speed DC switching
Rack Mounted Amplifiers and Systems

Aethercomm designs and manufactures rack mounted amplifiers and systems from 10 MHz to 40+ GHz with power levels up to 5000 watts. We can rack mount any of our existing amplifiers or systems or custom design the amplifier and enclosure. Aethercomm also rack mounts system-level designs to include transmitters and receivers with DC and control circuitry.

Rack mounted amplifiers and systems include:

- power amplifier modules with power combining
- AC-DC or DC-DC converters with EMI filtering
- forward/reflected power monitoring
- current and temperature monitoring and reporting
- fans or liquid cooling for optimum performance and high MTBF
- remote controlling/reporting with serial or parallel interfaces
- application-specific labeling
- over-temperature shut-down
- linearization
- internal gain control
- receiver integration
- Transmit/Receive (T/R) module integration
- other high performance options upon request

Standard features on the internal amplifiers for these rack mounted products include:

- over-voltage protection
- reverse polarity protection
- output infinite impedance protection
- high speed DC blanking as required

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 or system to your exacting specifications.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

SSPA 0.35-0.50-100-RM

- Operation from 350 MHz to 500 MHz min
- Can be modified for operation from 20 -1000 MHz
- 200 watts peak output power typ
- 115 Vac operation

SSPA 0.35-0.50-1000-RM

- Operation from 350 MHz to 500 MHz min
- 1000 watts peak output power typ
- 230 Vac, 3 phase operation
- Multiple BIT and protection features on rack
**SSPA 1.03-1.09-1000-RM**
- Operation from 1030 MHz to 1090 MHz min
- 1000 watts peak output power min
- 60 dB saturated gain typ
- 100 μSec pulse width typ
- 1-10% duty cycle typ

**SSPA 1.025-1.150-1000-RM**
- Operation from 1025 MHz to 1150 MHz min
- 1000 watts peak output power min
- 60 dB gain typ
- Typical operational pulses are IFF waveforms
- 10% duty cycle maximum

**SSPA 1.2-1.4-800-RM**
- Operation from 1.2 GHz to 1.4 GHz min
- 800 watts peak output power typ
- 50 dB gain typ
- 100-1000 μSec pulse width typ
- 10% duty cycles typ

**SSPA 3.1-3.5-1300-RM**
- Operation from 3100 MHz to 3500 MHz min
- 50 dB saturated gain typ
- 1300 watts peak output power min
- 208-220 VAC operation
- Gallium nitride power amplifier
High Power Microwave Systems

Aethercomm designs and manufactures high power microwave systems for military, government and commercial customers. Systems include receivers, transmitters, power conditioning circuitry, microprocessor interface modules and other microwave, digital or analog circuitry as needed. The systems listed on this page are custom in nature. We provide complete system- and subsystem-level design; mechanical design and analysis; fabrication and assembly; and testing and characterization. Aethercomm designs these system solutions from 10 MHz to 40 GHz.

High power microwave system custom features include:

- externally combined, phase- and amplitude-matched RF high power modules
- 19” rack-mounted assemblies, aluminum plate mounting or other packaging as requested
- heat sinking via natural convection, forced-air or liquid cooling to maintain a high MTBF
- 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 system at production unit costs and on a competitive delivery schedule.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

X-Band Front End Assembly

- Operation from 9.0 GHz to 9.2 GHz min
- 200 watt transmit section
- Low noise receiver with high power limiter
- Microprocessor interface module
- Power interface module
- Multiple redundant subassemblies to ensure high MTBF
- X-band radar front end assembly

TR 16.0-16.5-50

- Operation from 16.0 GHz to 16.5 GHz min
- 50 - 100 watt transmit section
- Ku-band radar front end
- Low noise receiver
- High power limiter
- 120 VAC, 60 Hz, single phase operation
High Power Amplifier Assemblies

Aethercomm designs and manufactures high power amplifier assemblies for military communication systems to transmit voice, data and video. Our high power assemblies are also used by wireless customers and for industrial applications. The assemblies listed on this page are custom in nature and typically deliver several hundred watts to 10,000 watts of RF energy. Aethercomm offers high power amplifier assemblies from 10 MHz to 40 GHz.

High power amplifier assembly custom features include:

- externally combined, phase- and amplitude-matched RF high power modules
- 19” rack-mounted assemblies, aluminum plate mounting or other packaging as requested
- heat sinking via natural convection, forced-air or liquid cooling to maintain a high MTBF
- 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 assembly at production unit costs and on a competitive delivery schedule.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

**SSPA 1.02-1.15-1000**

- Operation from 1.02 GHz to 1.15 GHz min
- Expandable to 960 MHz to 1220 MHz min
- 1000 watts peak output power min
- 60 dB gain typ
- High directivity directional coupler for forward and reflected power

**SSPA 0.96-1.22-2000**

- Operation from 960 MHz to 1220 MHz min
- 2000 watts output power typ
- 60 dB gain typ
- Transmits a compliant LINK 16 waveform
- Operates from shipborne power
Specialty Amplifiers

Aethercomm introduces new high power specialty amplifiers. Our specialty amplifiers are custom in nature and feature special packaging and/or functionality. Aethercomm specialty amplifiers are used in satellite ground station uplinks requiring antenna hub mounting; outdoor units that need special packaging to survive harsh environmental conditions such as lightning; and other customer-specific sites requiring a robust, reliable design. Aethercomm specialty amplifiers offer multiple functionality. These custom units include multiple amplifiers; AC/DC converters; DC/DC converters; special packaging to isolate the amplifier from the environment and to ensure MIL-STD-461 compliance; filtering; receive functions; self protect features and BIT/FIT circuitry.

Specialty amplifier standard features include:

- over-voltage protection
- reverse polarity protection
- internal DC-DC or AC/DC converter with filtering and regulation
- output infinite impedance protection
- high speed DC blanking
- over-temperature shut-down

Custom features include:

- forward and reflected power monitoring
- linearization
- internal gain control
- receiver integration
- T/R module integration
- 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 production unit costs and on a competitive delivery schedule.

All data presented is at room temperature. Visit www.aethercomm.com for a complete list of datasheets.

**SSPA 0.291-60**

- Operation at 291 MHz
- AM and FM transmitter
- 100 watts peak output power typ
- Excellent harmonic rejection
- Low phase noise

**SSPA 1.3-1.5-50**

- Repeater amplifier for AN/ARC-99A MW radio
- Operation from 1300 MHz to 1500 MHz min
- 47 dB output power min
- Internal Rx noise figure at 4.5 dB max
- 25 uSec Rx/Tx and Tx/Rx switching time max
SSPA 1.75-2.12-100

- L/S band high power amplifier system
- Redundant amplification sections
- Redundant AC/DC converter sections
- Microprocessor controlled
- Multiple system level BIT indicators

SSPA 2.2-2.3-20-ODU

- Operation from 2.2 GHz to 2.3 GHz min
- Outdoor amplifier unit
- Internal AC/DC converter
- Lightning protected
- Multiple integrated assemblies

SSPA 2.3-2.4-400

- Operation across 2.30 GHz to 2.40 GHz min
- 802.16e OFDM WIMAX amplifier
- 42 dBc ACPR @ Pout = 50 watts typ
- 53 dB +/-0.1 dB small signal gain typ

SSPA 2.496-2.700-400

- Operation across 2.496 GHz to 2700 GHz
- 802.16e OFDM WIMAX amplifier
- 42 dBc ACPR @ Pout = 40 watts typ
- 56 dB +/-0.5 dB small signal gain typ
High Efficiency Amplifiers

Aethercomm manufactures high efficiency amplifier modules utilizing the latest in Gallium Nitride (GaN) technology to achieve 50% to 70% power added efficiency (PAE). With lower parasitic capacitance and higher breakdown voltage, commercial GaN devices are ideal for higher efficient amplifier modes. Aethercomm’s success in producing such amplifiers, employing commercial devices, leads the way into future military and commercial system designs. These high efficiency amplifiers are custom in nature and highly proprietary; therefore, limited standard products are displayed. Below are bands with typical power levels and efficiencies with the different classes of amplifiers.

These high efficiency amplifiers are custom in nature and highly proprietary; therefore, limited standard products are displayed. Below are bands with typical power levels and efficiencies with the different classes of amplifiers.

For other frequencies, power levels and more high efficiency amplifiers, please contact the factory with your specific requirements.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Output Power</th>
<th>Efficiencies Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>UHF</td>
<td>200+ watts</td>
<td>50-75% depending on bandwidth</td>
</tr>
<tr>
<td>L Band</td>
<td>200+ watts</td>
<td>50-75% depending on bandwidth</td>
</tr>
<tr>
<td>S Band</td>
<td>100+ watts</td>
<td>50-75% depending on bandwidth</td>
</tr>
</tbody>
</table>

SSPA 0.020-0.520-125

- Operation from 20 MHz to 520 MHz min
- Small Signal Gain 58 dB typ
- 50+% typ Power Added Efficiency
- 125 Watts P3dB typ
- Gallium nitride broadband power amplifier

SSPA 0.020-1.000-100

- Operation from 20 MHz to 1000 MHz min
- Small Signal Gain 58 dB typ
- 40 to 60% typ Power Added Efficiency
- 100 Watts P3dB typ
- Gallium nitride broadband power amplifier
High Volume Manufacturing

Aethercomm supports high volume manufacturing for many of our customers. Aethercomm has delivered up to 1000 amplifiers per week on high volume rapid deployment programs in support of the US Armed forces. We deliver several hundred amplifiers per week on multiple program platforms. Supported platforms include EW Jamming systems, radar systems, communication systems and any other platform that requires an RF amplifier. Most of these high volume programs are Aethercomm designs, but Aethercomm can support high volume build to print designs.

For more information on Aethercomm’s rapid delivery, high volume manufacturing capabilities, please contact the factory.
Aethercomm refurbishes existing systems and modules for the U.S. Armed and Allied Forces. Our high power amplifier products are designed to be identical to the original in form, fit and function but with much improved reliability and performance. Aethercomm updates high power RF amplifiers, transmitters, receivers, RF and DC subsystems and other electronic components. Examples of our refurbished hardware include the DND/CF AN/GRN-516 driver amplifier, the USMC AN/TPN-22 pre-amplifier, and the USMC AN/TPN-30 TACAN and AN/TPS-73 300 watt S-band high power amplifiers. Our engineering staff is highly experienced in military system and product design and is able to update hardware with minimal documentation.

Aethercomm uses state-of-the-art technologies for system refurbishment and modernization. The resulting products offer improved performance, reliability and efficiency - often at a lower cost than the original. The products in this section are examples of Aethercomm’s refurbishment capabilities.

Visit www.aethercomm.com for a complete list of datasheets.

**SSPA 0.96-1.22-50**
- High power TACAN power amplifier
- Same form, fit and function as original
- More reliable than original
- Better efficiency than original
- Lower cost than original

**SSPA 0.962-1.215-150**
- 150 watt TACAN power amplifier
- Same form, fit and function as original
- Extremely more reliable than original
- Better efficiency than original
- Lower cost than original

**SSLNA 0.28-0.30-2.0**
- Low noise amplifier for TACAN system
- Same form, fit and function as original
- More reliable than original
- Better noise figure than original
- Lower cost than original
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