Solid State GaN Power Amplifiers (SSPAs)

CPI Solid State Pulsed Power Amplifiers

- Compact, reliable, and easy to maintain
- High efficiency and excellent pulse fidelity
- Individual amplifiers and complete transmitters

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency</th>
<th>Peak Power</th>
<th>Duty Cycle</th>
<th>Interface</th>
<th>TX Type</th>
<th>Base</th>
<th>Cooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>1.0 to 2.0</td>
<td>2</td>
<td>5</td>
<td>IEEE</td>
<td>PIA</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>L</td>
<td>1.0 to 2.0</td>
<td>4</td>
<td>5</td>
<td>IEEE</td>
<td>PIA</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>L</td>
<td>1.0 to 2.0</td>
<td>8</td>
<td>5</td>
<td>IEEE</td>
<td>PIA</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>S</td>
<td>2.9 to 3.7</td>
<td>1.3</td>
<td>10</td>
<td>EIA-422</td>
<td>Module</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>S</td>
<td>3.1 to 3.5</td>
<td>1.5</td>
<td>10</td>
<td>EIA-422</td>
<td>Module</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>S</td>
<td>3.1 to 3.5</td>
<td>2.1</td>
<td>10</td>
<td>EIA-422</td>
<td>TX</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>S</td>
<td>3.1 to 3.7</td>
<td>13</td>
<td>10</td>
<td>EIA-422</td>
<td>TX</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>C</td>
<td>5.2 to 5.9</td>
<td>1</td>
<td>10</td>
<td>EIA-422</td>
<td>Module</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>C</td>
<td>5.4 to 5.9</td>
<td>4</td>
<td>10</td>
<td>EIA-422</td>
<td>TX</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>C</td>
<td>5.4 to 5.9</td>
<td>16</td>
<td>10</td>
<td>EIA-422</td>
<td>TX</td>
<td>GaN</td>
<td>Liquid</td>
</tr>
<tr>
<td>C</td>
<td>5.4 to 5.9</td>
<td>50</td>
<td>10</td>
<td>EIA-422</td>
<td>TX</td>
<td>GaN</td>
<td>Liquid</td>
</tr>
<tr>
<td>X</td>
<td>9.0 to 10.0</td>
<td>1</td>
<td>10</td>
<td>EIA-422</td>
<td>Module</td>
<td>GaN</td>
<td>Air</td>
</tr>
<tr>
<td>X</td>
<td>9.0 to 10.0</td>
<td>2</td>
<td>10</td>
<td>EIA-422</td>
<td>Module</td>
<td>GaN</td>
<td>Air</td>
</tr>
</tbody>
</table>

Communications & Power Industries SSPAs customized for your application.
With a history of producing high power, high quality products, we can help you with your SSPA questions.
Contact us at BMDMarketing@cpii.com or call us at +1 978-922-6000

For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

©2020 Communications & Power Industries LLC. Company proprietary; use and reproduction is strictly prohibited without written authorization from CPI.

L-Band SSPAs
S-Band SSPAs
C-Band SSPAs
X-Band SSPAs
Communications & Power Industries GaN Solid State Power Amplifiers provide high gain, high efficiency and excellent stability with excellent AM/PM and phase-noise performance

X-Band Solid State Power Amplifiers

X-Band GaN 1.8 kW High Power SSPA
- Frequency range: 9.0 - 10.0 GHz
- BIT and controls
- Pulsed modules at 10% duty
- 1.8 kW peak power
- Easily combined to create high power X-band radar transmitters

X-Band GaN 1.0 kW High Power SSPA
- Frequency range: 9.0 - 10.0 GHz
- BIT and controls
- Pulsed modules at 10% duty
- 1.0 kW peak power
- Easily combined to create high power X-band radar transmitters

C-Band Solid State Power Amplifiers

C-Band GaN 4.0 kW High Power SSPA
- Frequency range: 5.4 - 5.9 GHz
- 1.1 kW pulsed module
- BIT and controls via EIA-422 remote connection
- Easily combined to create high power C-band radar transmitters

C-Band GaN 2.0 kW High Power SSPA
- Frequency range: 5.4 - 5.9 GHz
- 2.0 kW pulsed
- BIT and controls via EIA-422 remote connection
- Graceful power degradation
- Liquid or Air cooled options available

S-Band Solid State GaN Power Amplifiers

• Frequency range: 2.7 to 2.9 GHz
• BIT and controls via EIA-422 remote connection
• 1.3 kW pulsed modules
• Built-in VSWR protection
• Compliant to NTIA regulatory requirements

For use in Air Traffic Control radar systems

S-Band GaN 12 kW High Power Transmitters
- Transmitter cabinet with 12 kW minimum peak output power
- Soft fail by virtue of power combining
- Full redundancy
- >160 dB of power attenuation available
- Designed for ATC shelter applications

S-Band GaN 1.3 kW High Power SSPA
- 1.3 kW pulsed modules that can be power combined for higher peak power output
- Internal processor with BITE monitoring
- Self protecting

For use in Precision Approach Radar Transmitters

S-Band GaN 10 kW High Power Transmitters
- Transmitter with 10 kW minimum peak power output
- Soft fail by virtue of power combining
- Excellent noise performance due to operation off of stored energy during the RF pulse
- Designed for small mobile applications

S-Band GaN 1.3 kW High Power SSPA
- 1.3 kW pulsed modules that can be power combined for higher peak power output
- Internal BIT circuitry via EIA-422 remote connection
- Self protecting

For use in Air Traffic Control radar systems