Wolfspeed X-Band GaN on SiC Solutions

Wolfspeed's GaN on SiC solutions are well suited for pulsed and CW X-Band applications. With a variety of power levels, high gain/stage, and high power-added efficiency (PAE), Wolfspeed’s solutions support continuous improvements in SWaP-C benchmarks.

PORTFOLIO BRIEF

Wolfspeed X-Band GaN on SiC Solutions

Airborne Radar
Marine Radar
Fire Control
Weather Radar
Port Security
Test Instrumentation
Air Traffic Control

X-BAND LINE-UP SOLUTIONS
We have GaN on SiC devices for each stage of amplification: pre-driver, driver, and output stages. Here are some suggestions for X-Band applications:

40 V, 400 W, 8.3–9.6 GHz

CGHV1F025S
CGHV96100F2
4x CGH96100F2

22 dB Total Gain

KEY BENEFITS
» Multiple stages of gain to minimize BOM
» Ease of layout and assembly
» High PAE reduces thermal load & simplifies cooling system
» Overmold QFN solutions offers small footprints and environmental robustness

KEY FEATURES
» Multiple platforms to optimize system architecture
» Variety of power levels to optimize system performance
» Backend support tools to assist in system design and integration

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## PORTFOLIO BRIEF

### 100 W, 7.9–9.6 GHz

%!PORTFOLIO BRIEF - 100 W, 7.9–9.6 GHz%

<table>
<thead>
<tr>
<th>SKU</th>
<th>Frequency</th>
<th>Saturated Output Power</th>
<th>Gain</th>
<th>Efficiency</th>
<th>Operating Voltage</th>
<th>Device Type</th>
<th>Package Type</th>
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<tbody>
<tr>
<td>CGHV1J006D</td>
<td>DC - 18 GHz</td>
<td>6 W</td>
<td>17 dB</td>
<td>60%</td>
<td>40 V</td>
<td>Transistor</td>
<td>Die</td>
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<tr>
<td>CGHV1F006S</td>
<td>DC - 15 GHz</td>
<td>6 W</td>
<td>10 dB</td>
<td>52%</td>
<td>40 V</td>
<td>Transistor</td>
<td>Surface Mount</td>
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<tr>
<td>CGHV1J025D</td>
<td>DC - 18 GHz</td>
<td>25 W</td>
<td>17 dB</td>
<td>60%</td>
<td>40 V</td>
<td>Transistor</td>
<td>Die</td>
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<td>CGHV1F025S</td>
<td>DC - 15 GHz</td>
<td>25 W</td>
<td>11 dB</td>
<td>51%</td>
<td>40 V</td>
<td>Transistor</td>
<td>Surface Mount</td>
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<td>40 V</td>
<td>Transistor</td>
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<tr>
<td>CMPA901A020S*</td>
<td>9 - 10 GHz</td>
<td>20 W</td>
<td>31 dB</td>
<td>45%</td>
<td>28 V</td>
<td>MMIC</td>
<td>Surface Mount</td>
</tr>
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<td>CMPA601C025D</td>
<td>6 - 12 GHz</td>
<td>25 W</td>
<td>32 dB</td>
<td>32%</td>
<td>28 V</td>
<td>MMIC</td>
<td>Die</td>
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<td>CMPA601C025F</td>
<td>6 - 12 GHz</td>
<td>25 W</td>
<td>33 dB</td>
<td>32%</td>
<td>28 V</td>
<td>MMIC</td>
<td>Flange</td>
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<td>40 W</td>
<td>20 dB</td>
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<td>28 V</td>
<td>MMIC</td>
<td>Flange</td>
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<td>Flange</td>
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<td>100 W</td>
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<td>40 V</td>
<td>IMFET</td>
<td>Flange</td>
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<td>Flange</td>
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</table>

*Released Jan 2021

## INDUSTRY LEADING DESIGN SOLUTIONS & SUPPORT

- Free, Extremely Accurate Large Signal Models
- Evaluation Board Hardware
- Sample Products
- Application Notes & Technical Articles
- Applications Engineering

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