Analog Devices Welcomes Hittite Microwave Corporation

NO CONTENT ON THE ATTACHED DOCUMENT HAS CHANGED
Typical Applications
- Commercial Radar
- Military Radar
- Electronic Warfare
- Test Equipment

Solid State Microwave Power Modules

General Description
The KHPA-0811 8000WPA X-band power amplifiers provide four times the power density of our past product. Because our amplifiers are “off” between pulses, the receiving signal-to-noise ratio and dynamic range are greatly improved, providing superior radar resolution and range.

High power in a small package, our Dodecahedron package (DDH) is designed to pack a considerable amount of power in a small footprint plus cover a wide bandwidth. Only 2.3” x 2.5” dia., these DDHs are modular so that they can be combined in Solid-State Microwave Power Module housings. One DDH will provide 500W, two DDHs will provide 1000W and four DDHs will provide 2000W pulsed output in the X-Band. In this case, four 2000W Solid-State Microwave Power Modules (SSMPMs) are combined to obtain 8 kW output.

Features
- Highest Power
- Smallest Footprint
- Lightest Weight

Table 1. Specifications

<table>
<thead>
<tr>
<th>Input Power</th>
<th>DC Power</th>
<th>48VDC</th>
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</thead>
<tbody>
<tr>
<td>Output Specifications [ @ 25° C ]</td>
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<tr>
<td>Frequency Range</td>
<td>8 -11 GHz</td>
<td></td>
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<tr>
<td>Saturated Power Output</td>
<td>8000 Watts (4 SSMPMs)</td>
<td></td>
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<tr>
<td>Rise/Fall Time</td>
<td>200 nsec Max</td>
<td></td>
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<tr>
<td>Pulse Width</td>
<td>.05 to 100 µsec</td>
<td></td>
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<tr>
<td>Duty Cycle</td>
<td>20%</td>
<td></td>
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<tr>
<td>In/Out VSWR</td>
<td>1.5:1</td>
<td></td>
</tr>
<tr>
<td>Out of Band Spurious Noise</td>
<td>-70.0 dBc Max</td>
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<tr>
<td>2nd Harmonic</td>
<td>-40.0 dBc Max</td>
<td></td>
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</tbody>
</table>

Connectors
- RF Input | SMA Female |
- RF Output | Waveguide |

Mechanical
- Size approx. 16”x12”x8”
- Compact Aluminum or Copper Housings
- Depending on Duty Cycle
- Chassis Grounded
- Conduction Cooling

Environmental
- Operating Temperature | -20° to 75° C |
- Storage Temperature | -40° to 50° C |
- Relative Humidity | 5 to 95% non-condensing |

MTBF
200,000 hours