Features:

- 10 - 3000 MHz Freq Range
- 16 dB Gain
- 2.0:1.0 VSWR
- +27.0 dBm P1dB
- Single Positive Bias
- Leadless Surface Mount Package (02)

Description:

The MPS-0030H16-02 is an internally matched wide band modular amplifier. It is designed for both military and commercial applications such as LO driver, buffer amplifier, and as a medium power gain block. It is ideal for satellite up and down converter and telemetry applications, and for digital radio communications for military electronic systems and wireless communications. It requires a single 7 volt positive bias and only draws 240 MA DC current. The P1 dB is typically 27 dBm and the gain is 16 dB typically. It is available in a low cost Leadless surface mount package.

Electrical Specifications:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETERS</th>
<th>Min</th>
<th>Typical</th>
<th>Max</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Freq.</td>
<td>Frequency Range</td>
<td>10</td>
<td></td>
<td>3000</td>
<td>MHz</td>
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<tr>
<td>SSG</td>
<td>Small Signal Gain</td>
<td>14.5</td>
<td>16.0</td>
<td></td>
<td>dB</td>
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<tr>
<td>P1 dB</td>
<td>Pout at 1 dB Comp Point</td>
<td>25.5</td>
<td>27</td>
<td></td>
<td>dBm</td>
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<tr>
<td>IP3</td>
<td>Third-Order Intercept</td>
<td>33.5</td>
<td></td>
<td></td>
<td>dBm</td>
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<tr>
<td>VSWR</td>
<td>VSWR (Input/Output)</td>
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<td>2.0:1</td>
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<tr>
<td>GOF</td>
<td>Gain Var. over Frequency</td>
<td>±0.5</td>
<td>±0.8</td>
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<td>dB</td>
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<tr>
<td>GOT</td>
<td>Gain Var. over Temp</td>
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<td></td>
<td>dB/°C</td>
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<td>Idd</td>
<td>DC Current</td>
<td>240</td>
<td>270</td>
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<td>mA</td>
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<td>Rth</td>
<td>Thermal Resistance</td>
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<td>55</td>
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<td>°C/W</td>
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</tbody>
</table>

Absolute Maximum Ratings

- Maximum Bias Voltage: 8.0 V
- Maximum RF Input Power: 500 mW
- Maximum Channel Temperature: +175 °C
- Maximum Storage Temperature: - 65 °C to + 150 °C
MPS-0030H16-02
10 - 3000 MHz Linear Amplifier
Preliminary Data Sheet
June 2006

Gain @ 25C

Return Losses @ 25C

Outline Diagram (Package 02)

Application Circuit
(300-3000 MHz)

C1 100 pF    Chip Capacitor
C2 22 uF     Capacitor
L1 160 nH    Printed or Wound Coil
CR1 8.0 V    Zener Diode

50 ohm Microstrip Line

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