RF AMPLIFIER MODEL QB-446

Features
- Ultra High Linearity, IP2: +115 dBm
- Higher Power: +31 dBm
- High IP3: +55 dBm
- Environmental Screening Available

Specifications

### Absolute Maximum (No Damage) Ratings
- Ambient Operating Temperature: 0 °C to +50 °C
- Storage Temperature: -65 °C to +125 °C
- Case Temperature: +125 °C
- DC Voltage: +25 Volts
- Continuous RF Input Power: +20 dBm
- Short Term RF Input Power: +27 dBm (3 μsec Max.)

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- Higher Power: +31 dBm
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### Specifications

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>TYPICAL</th>
<th>MIN/MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>0.5 - 32 MHz</td>
<td>Ta = 25 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ta = 0 °C to +50 °C</td>
</tr>
<tr>
<td>Gain (dB)</td>
<td>16.0 ± 0.5</td>
<td></td>
</tr>
<tr>
<td>Gain vs. Temperature</td>
<td>—</td>
<td>+0.3/-0.3 Max.</td>
</tr>
<tr>
<td>Gain Flatness</td>
<td>0.5</td>
<td>0.5 Max.</td>
</tr>
<tr>
<td>Reverse Isolation (dB)</td>
<td>40</td>
<td>40 Min.</td>
</tr>
<tr>
<td>VSWR In</td>
<td>1.5:1</td>
<td>1.5:1 Max.</td>
</tr>
<tr>
<td>VSWR Out</td>
<td>1.5:1</td>
<td>1.5:1 Max.</td>
</tr>
<tr>
<td>1 dB Compression (dBm)</td>
<td>+31</td>
<td>+31 Min.</td>
</tr>
<tr>
<td>3rd Order (dBm)</td>
<td>+55</td>
<td>+55 Min.</td>
</tr>
<tr>
<td>2nd Order (dBm)</td>
<td>+115</td>
<td>+110 Min.</td>
</tr>
<tr>
<td>Noise Figure (dB)</td>
<td>7.8</td>
<td>8.0 Max.</td>
</tr>
<tr>
<td>Power Vdc mA</td>
<td>+24</td>
<td>450 Max.</td>
</tr>
</tbody>
</table>

### Typical Performance Data

- **Gain (dB)**
- **Reverse Isolation (dB)**
- **Input/Output VSWR +25°C**

### Notes:
1. Specifications are guaranteed when tested in a 50 Ohm system with a DC supply voltage tolerance of ±2%.
2. RF output terminated into 50 Ohms.

### Rev A

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DIMENSIONS ARE IN INCHES [MM].