RF/Microwave Amplifier

**Features**
- High +25 dBm Output Power
- Wide 20 – 3000 MHz Bandwidth
- Environmental Screening Available
- Unconditionally Stable

**Technical Specifications**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>TYPICAL Ta = +25 ºC</th>
<th>MIN/MAX Ta = -55ºC to +85 ºC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>20 – 3000 MHz</td>
<td>20 – 3000 MHz</td>
</tr>
<tr>
<td>Gain (dB)</td>
<td>12</td>
<td>10.5 Min.</td>
</tr>
<tr>
<td>Power @ 1 dB Comp. (dBm)</td>
<td>+25</td>
<td>+23 Min.</td>
</tr>
<tr>
<td>Reverse Isolation (dB)</td>
<td>-19</td>
<td>--</td>
</tr>
<tr>
<td>VSWR In</td>
<td>1.8:1</td>
<td>2.0:1 Max.</td>
</tr>
<tr>
<td>VSWR Out</td>
<td>1.8:1</td>
<td>2.0:1 Max.</td>
</tr>
<tr>
<td>Noise Figure (dB)</td>
<td>3.5</td>
<td>4.2 Max.</td>
</tr>
<tr>
<td>Power Vdc</td>
<td>+15</td>
<td>+15</td>
</tr>
<tr>
<td>mA</td>
<td>190</td>
<td>220 Max.</td>
</tr>
</tbody>
</table>

1) Care should always be taken to effectively ground the case of each unit
2) Typical values are measured at 25 ºC, but not guaranteed.
3) Package drawings below are for reference only.

**Typical Intermodulation Performance at 25 ºC**

- Second Order Harmonic Intercept Point: +57 dBm (Typ.)
- Second Order Two Tone Intercept Point: +54 dBm (Typ.)
- Third Order Two Tone Intercept Point: +41 dBm (Typ.)

**Absolute Maximum (No Damage) Ratings**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-55ºC to +100 ºC</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-62ºC to +125 ºC</td>
</tr>
<tr>
<td>Case Temperature</td>
<td>+125 ºC</td>
</tr>
<tr>
<td>DC Voltage</td>
<td>+18 Volts</td>
</tr>
<tr>
<td>Continuous RF Input Power</td>
<td>+17 dBm</td>
</tr>
<tr>
<td>Short Term RF Input Power</td>
<td>200 Milliwatts</td>
</tr>
<tr>
<td></td>
<td>(1 Minute Max.)</td>
</tr>
<tr>
<td>Maximum Peak Power</td>
<td>0.5 Watt</td>
</tr>
<tr>
<td></td>
<td>(3 µsec Max.)</td>
</tr>
</tbody>
</table>

**Note:** Measured at 1500 MHz.

**Outline Drawing**
Typical Performance Graphs

**Gain (dB)**

![Gain Graph]

**Noise Figure (dB)**

![Noise Figure Graph]

**1 dB Compression (dBm)**

![1 dB Compression Graph]

**Reverse Isolation (dB)**

![Reverse Isolation Graph]

**3rd Order Intercept (dBm)**

![3rd Order Intercept Graph]

**2nd Order Intercept (dBm)**

![2nd Order Intercept Graph]
Typical Performance Graphs

Model # TM3117

Instructions

<table>
<thead>
<tr>
<th>Grounding Instructions</th>
<th>Care should be taken to effectively ground each unit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revisions</td>
<td>API reserves the right to make revisions to both product and/or the information contained within their datasheets without advanced notice.</td>
</tr>
<tr>
<td>Min./Max. Values</td>
<td>Specifications are guaranteed when tested in a 50 Ω (ohm) system.</td>
</tr>
<tr>
<td></td>
<td>Typical performance graphs and values are measured at 25°C, but not guaranteed.</td>
</tr>
</tbody>
</table>

1) Outlines drawings below are for reference only.