**Features**
- 1.5dB Positive Slope
- Noise Figure: 2.3dB
- Gain: 17dB
- P1dB: +14dBm
- Biasing: +5V @ 67mA
- Impedance: 50Ω
- Die Size: 2.3 x 1.3 x 0.1 mm

**Typical Applications**
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Electrical Specifications**
TA = +25°C, VDD = +5V  Idd = 67mA

<table>
<thead>
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<tbody>
<tr>
<td>Frequency</td>
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<td>6-12</td>
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<td>12-18</td>
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<td></td>
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<td>Gain</td>
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<td>16.5</td>
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<td>17.2</td>
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<td>dB</td>
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<td>Gain Flatness</td>
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<td>Output 1dB Compression (P1dB)</td>
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<td>13.8</td>
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<td>Saturated Output Power (Psat)</td>
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<td>16.5</td>
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<td>17.5</td>
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<td>dBm</td>
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<td>Output Third Order Intercept (IP3)</td>
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<td>22.5</td>
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<td>Noise Figure</td>
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<td>2.3</td>
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<td>Current</td>
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<td>86</td>
<td>35</td>
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MML010

GaAs pHEMT MMIC
Low Noise Amplifier
2-18 GHz

Gain

Return Loss

Noise Figure

Output Power $P_{1}$

Gain

Return Loss

Noise Figure

Output Power $P_{1}$

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MILLER MMIC LLC.

www.millermmic.com

Sales: sales@millermmic.com
Outline Drawing:
All Dimensions in mm

<table>
<thead>
<tr>
<th>PAD</th>
<th>Function</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>IN</td>
<td>Input AC coupling 50Ω Impedance</td>
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<tr>
<td>2</td>
<td>VD</td>
<td>This pad provides power supply voltage for the amplifier and requires external 100pF and 0.01μF bypass capacitor.</td>
</tr>
<tr>
<td>3</td>
<td>OUT</td>
<td>Output AC coupling 50Ω Impedance</td>
</tr>
<tr>
<td>Die Bottom</td>
<td>GND</td>
<td>Die bottom must be connected to RF/DC ground</td>
</tr>
</tbody>
</table>
Assembly Drawing

Notes:
1. Die thickness: 100um
2. Typical bond pad is 100*100 μm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:
1. Power supply voltage: +6V
2. RF input power: +18dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C