Features
- Operating Frequency: 2-8GHz
- Gain: 13dB
- P1dB: +19dBm
- Psat: +21dBm
- Noise Figure: 2dB
- Self-biasing: +5V @ 52mA
- Input/Output: 50Ω
- Die Size: 1.2 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 = 52mA

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
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<tbody>
<tr>
<td>Frequency</td>
<td>2-8</td>
<td></td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Gain</td>
<td>13</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Gain Flatness</td>
<td>±0.2</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>15</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>15</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Output 1dB Compression (P1dB)</td>
<td>19</td>
<td></td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Saturated Output Power (Psat)</td>
<td>21</td>
<td></td>
<td></td>
<td>dBm</td>
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<tr>
<td>Output Third Order Intercept (OIP3)</td>
<td>29</td>
<td></td>
<td></td>
<td>dBm</td>
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<tr>
<td>Noise Figure</td>
<td>2</td>
<td></td>
<td></td>
<td>dB</td>
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<tr>
<td>Operating Current</td>
<td>30</td>
<td>52</td>
<td>70</td>
<td>mA</td>
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</tbody>
</table>
MM3025
GaAs pHEMT MMIC Driver Amplifier 2-8GHz

Gain

Return Loss

Noise Figure

Output Power $P_{1d}$

Gain (dB)

Return Loss (dB)

Noise Figure (dB)

Output Power (dBm)

FREQUENCY (GHz)

FREQUENCY (GHz)

FREQUENCY (GHz)

FREQUENCY (GHz)

Temperature:
+25 C  -55 C  +85 C

Temperature:
RFIN  RFOUT

Temperature:
+25 C  -55 C  +85 C
**MM3025**

**GaAs pHEMT MMIC**

**Driver Amplifier**

2-8GHz

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**Outline Drawing:**

All Dimensions in mm

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**Pad Description**

<table>
<thead>
<tr>
<th>PAD</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IN</td>
<td>Input AC coupling 50Ω impedance</td>
</tr>
<tr>
<td>2</td>
<td>VD</td>
<td>It is used to provide power supply voltage for the amplifier. Attach 100pF 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>
**Notes:**
1. Die thickness: 100um
2. Typical bond pad is 100*125 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: +15dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C