Features
- Singles Basing Voltage (Self Biased)
- Frequency: 6-18GHz
- Small Signal Gain: 22dB
- Noise Figure: 1.4dB typ. / 1.7dB max.
- P1dB: 2dBm
- Power Supply: +5 V/10 mA
- Input/Output: 50Ω
- Die Size: 1.85 x 0.95 x 0.09 mm

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

Electrical Specifications
TA = +25°C, Vd = +5V

<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>6-18</td>
<td></td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Small Signal Gain</td>
<td>21.5</td>
<td>22</td>
<td>23.5</td>
<td>dB</td>
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<tr>
<td>Gain Flatness</td>
<td>±1.0</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Noise Figure</td>
<td>-</td>
<td>1.4</td>
<td>1.7</td>
<td>dB</td>
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<tr>
<td>Output 1dB Compression (P1dB)</td>
<td>2</td>
<td></td>
<td></td>
<td>dBm</td>
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<tr>
<td>Saturated Output Power (Psat)</td>
<td>4</td>
<td></td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>18</td>
<td>20</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>17</td>
<td>20</td>
<td>-</td>
<td>dB</td>
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<tr>
<td>Static current</td>
<td>10</td>
<td></td>
<td></td>
<td>mA</td>
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</table>
GaAs MMIC
Low Noise Amplifier
6-18GHz

Gain vs. Temperature
Noise Figure vs. Temperature
Input Return Loss vs. Frequency
Output Return Loss vs. Frequency
Reverse Isolation vs. Frequency
P1dB vs. Temperature

Gain (dB)
Noise Figure (dB)
Input Return Loss (dB)
Output Return Loss (dB)
Reverse Isolation (dB)
P1dB (dBm)

S11@+25C
S11@+55C
S12@+25C
P-1@+25C
P-1@+55C

Frequency (GHz)
Frequency (GHz)
Frequency (GHz)
Frequency (GHz)
### Outline Drawing:
All Dimensions in μm

![Outline Drawing Image](image-url)

### Pad Description

<table>
<thead>
<tr>
<th>Pad</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RF IN</td>
<td>RF signal input terminal, no blocking capacitor required.</td>
</tr>
<tr>
<td>2</td>
<td>RF OUT</td>
<td>RF signal output terminal, no blocking capacitor required.</td>
</tr>
<tr>
<td>3</td>
<td>Vd</td>
<td>Amplifier drain bias; external 100pF bypass capacitor required.</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. Maximum drain voltage: +7V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C