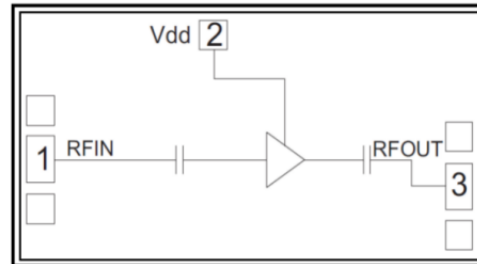


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 26-40GHz
- Small Signal Gain: 21dB (positive slope)
- Noise Figure: 2.0dB typ. / 2.1dB max.
- P1dB: 3dBm
- Power Supply: +5 V/12 mA
- Input/Output: 50Ω
- Die Size: 1.6 x 0.8 x 0.09 mm

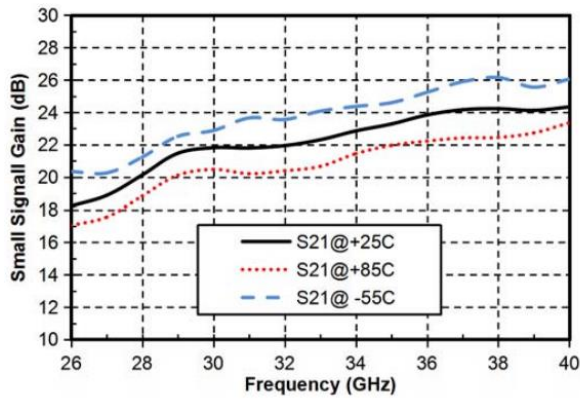
**Functional Block Diagram**

**Typical Applications**

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

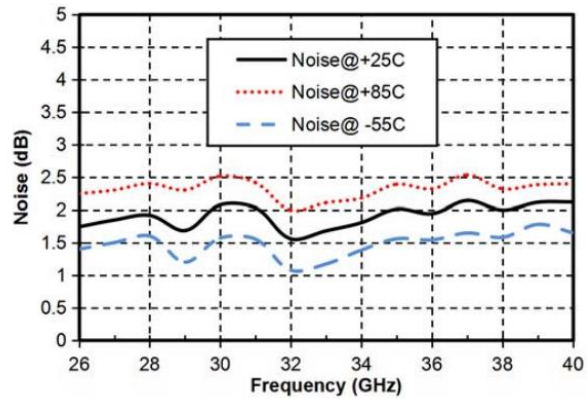
**Electrical Specifications**
**TA = +25°C, Vd = +5V**

Parameters	Min.	Typ.	Max.	Units
<b>Frequency</b>	<b>26-40</b>			<b>GHz</b>
<b>Small Signal Gain</b>	<b>17</b>	<b>21</b>	<b>24.5</b>	<b>dB</b>
<b>Gain Flatness</b>		<b>±4</b>		<b>dB</b>
<b>Noise Figure</b>	<b>1.7</b>	<b>2.0</b>	<b>2.1</b>	<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>dBm</b>
<b>Saturated Output Power (Psat)</b>	<b>3.5</b>	<b>5</b>	<b>6.5</b>	<b>dBm</b>
<b>Input Return Loss</b>	<b>10</b>	<b>13</b>	<b>-</b>	<b>dB</b>
<b>Output Return Loss</b>	<b>10</b>	<b>14</b>	<b>-</b>	<b>dB</b>
<b>Static current</b>		<b>12</b>		<b>mA</b>

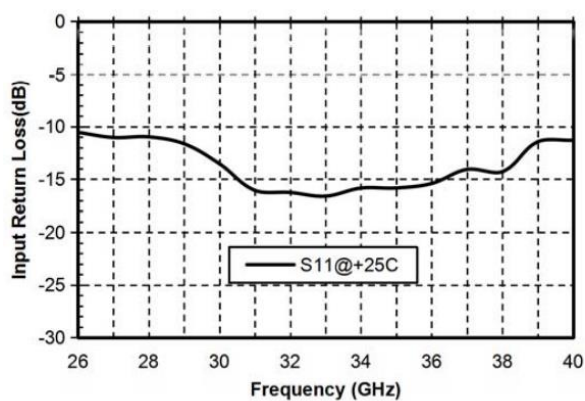
### Gain vs. Temperature



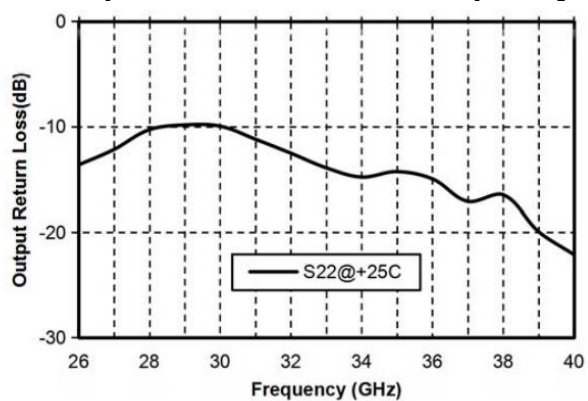
### Noise Figure vs. Temperature



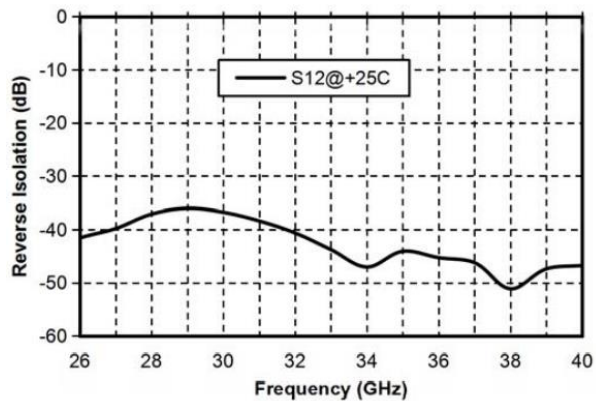
### Input Return Loss vs. Frequency



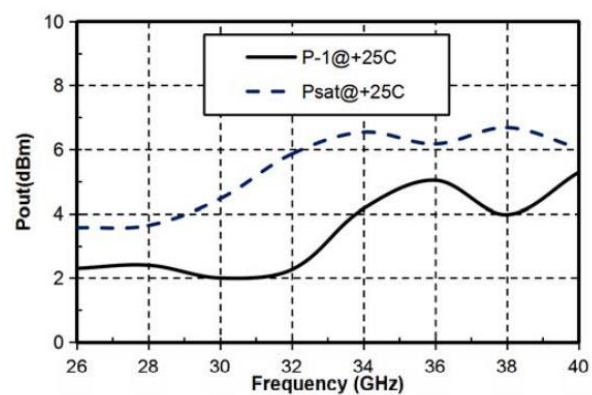
### Output Return Loss vs. Frequency



### Reverse Isolation vs. Frequency

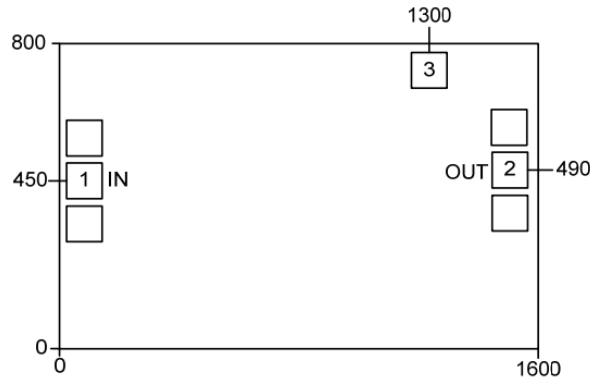


### P1dB. Psat vs. Frequency





### Outline Drawing: All Dimensions in $\mu\text{m}$

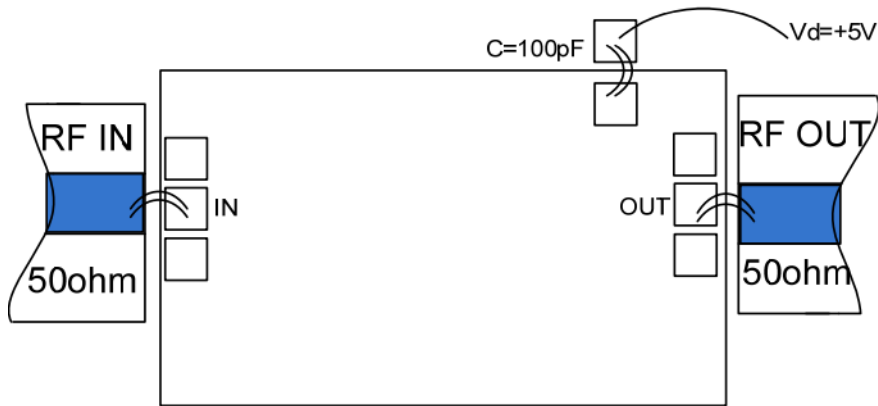


### Pad Description

Pad	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required.
2	RF OUT	RF signal output terminal, no blocking capacitor required.
3	Vd	Amplifier drain bias; external 100pF bypass capacitor required.
Die bottom	GND	Die bottom must be connected to RF/DC ground.



### Assembly Drawing



#### Notes:

1. Die thickness: 100um
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
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