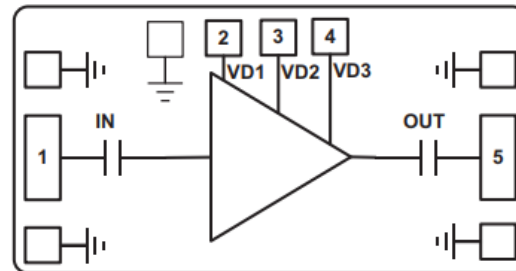


**Features**

- Noise Figure: 3.5dB
- Gain: 20dB
- P1dB: +8dBm
- Biasing +3V @ 38 mA
- Impedance: 50Ω
- Die Size: 2 x 1.3 x 0.1 mm

**Typical Applications**

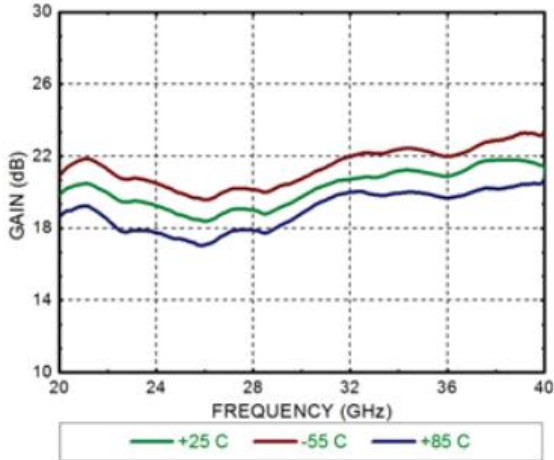
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, Vdd = +3V Idd = 38mA**

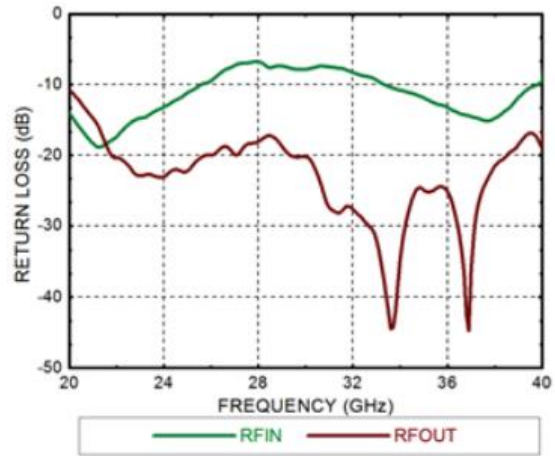
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
<b>Frequency</b>	<b>20 - 30</b>		<b>30 - 40</b>				<b>GHz</b>
<b>Gain</b>		<b>19</b>			<b>21</b>		<b>dB</b>
<b>Gain Flatness</b>		<b>±1</b>			<b>±1</b>		<b>dB</b>
<b>Input Return Loss</b>		<b>10</b>			<b>10</b>		<b>dB</b>
<b>Output Return Loss</b>		<b>20</b>			<b>20</b>		<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>		<b>8</b>			<b>8</b>		<b>dBm</b>
<b>Saturated Output Power (Psat)</b>		<b>10.5</b>			<b>10.5</b>		<b>dBm</b>
<b>Output Third Order Intercept (IP3)</b>		<b>19</b>			<b>19</b>		<b>dBm</b>
<b>Noise Figure</b>		<b>3.8</b>			<b>3.5</b>		<b>dB</b>
<b>Current</b>	<b>25</b>	<b>38</b>	<b>63</b>	<b>25</b>	<b>38</b>	<b>63</b>	<b>mA</b>



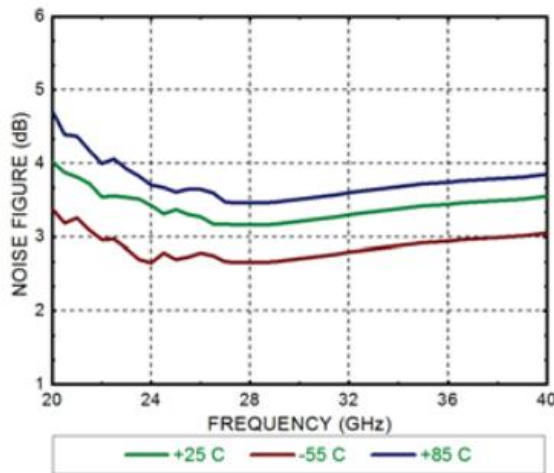
### Gain



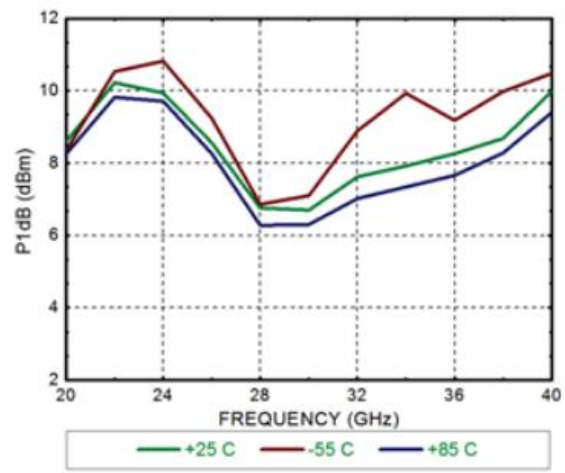
### Return Loss



### Noise Figure



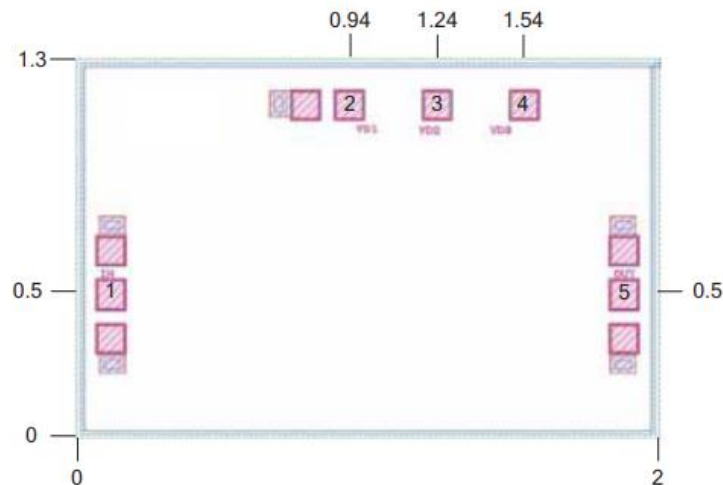
### Output Power $P_{1dB}$





### Outline Drawing:

All Dimensions in mm

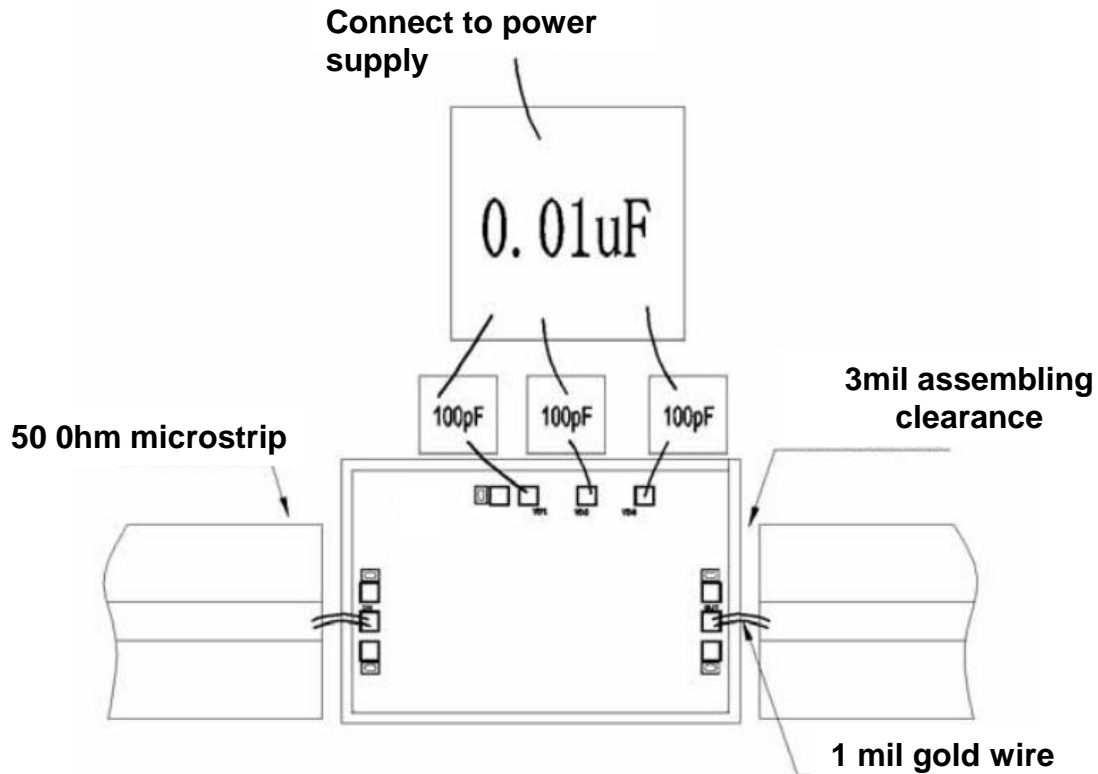


### Pad Description

PAD	Function	Description
1	IN	Input AC coupling 50Ω Impedance
2, 3, 4	VD	This pad provides power supply voltage for the amplifier and requires external 100pF and 0.01uf bypass capacitor.
5	OUT	Output AC coupling 50Ω Impedance
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. Power supply voltage: +6V
2. RF input power: +16dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C