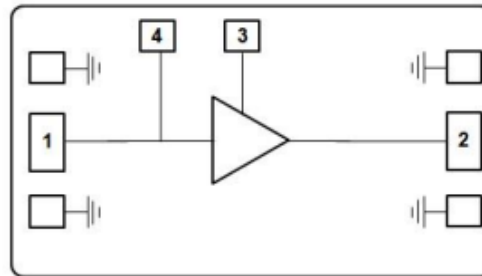


**Features**

- Single Biasing Voltage(Self Biased)
- Frequency: 0.5-6GHz
- Gain: 21dB@55mA
- Noise Figure: 0.6dB
- OP1dB: 20dBm@55mA
- Power supply: +5V@55mA
- OIP3: 35dBm@55mA
- Input/Output: 50Ω
- Die Size: : 1.0×1.0× 0.1 mm

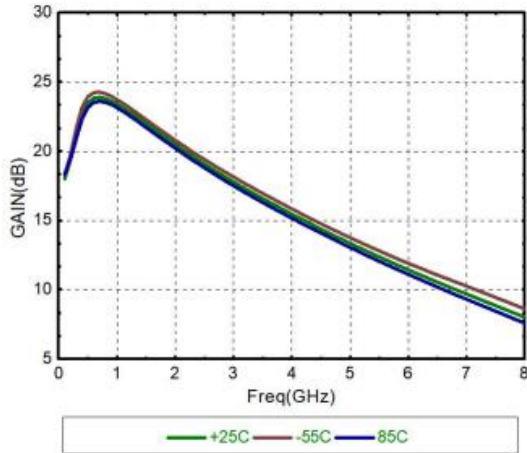
**Typical Applications**

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

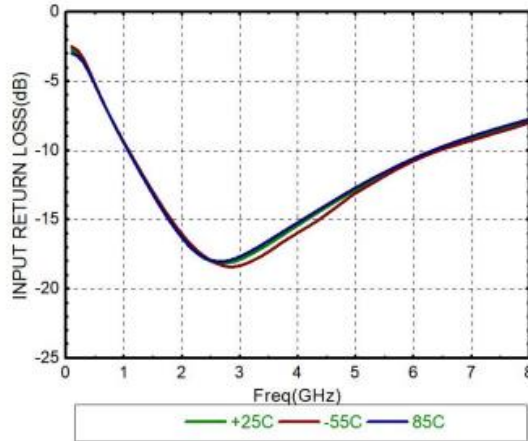
**Functional Block Diagram**

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

Parameters	VC Grounded			
	Min.	Typ.	Max.	Units
<b>Frequency</b>	<b>0.5-6</b>			<b>GHz</b>
<b>Gain</b>		<b>21</b>		<b>dB</b>
<b>Noise Figure</b>		<b>0.6</b>		<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>		<b>20</b>		<b>dBm</b>
<b>Psat</b>		<b>21</b>		<b>dBm</b>
<b>OIP3</b>		<b>35</b>		<b>dBm</b>
<b>Input Return Loss</b>		<b>15</b>		<b>dB</b>
<b>Output Return Loss</b>		<b>15</b>		<b>dB</b>
<b>Reverse Isolation</b>		<b>30</b>		<b>dB</b>
<b>Operating Current</b>	<b>35</b>	<b>55</b>	<b>75</b>	<b>mA</b>

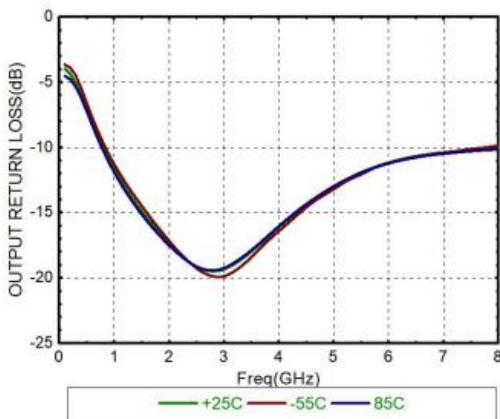
**Gain**



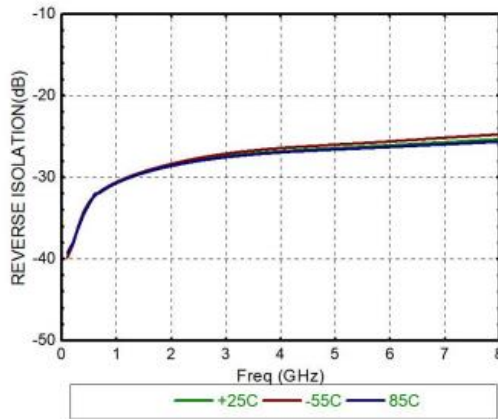
**Input Return Loss**



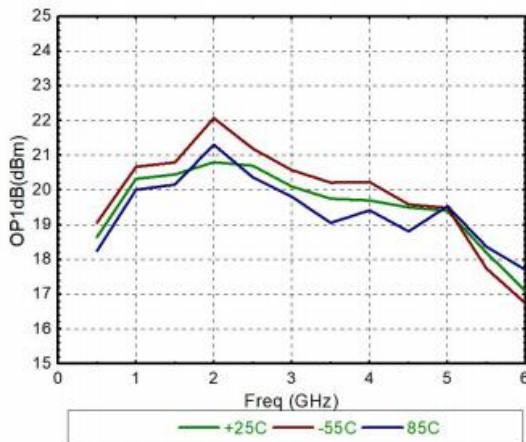
**Output Return Loss**



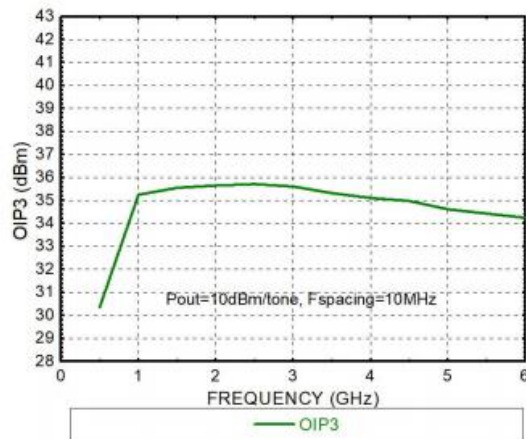
**Reverse Isolation**



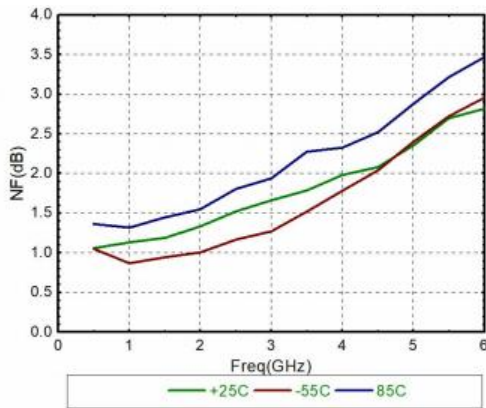
**P1dB**



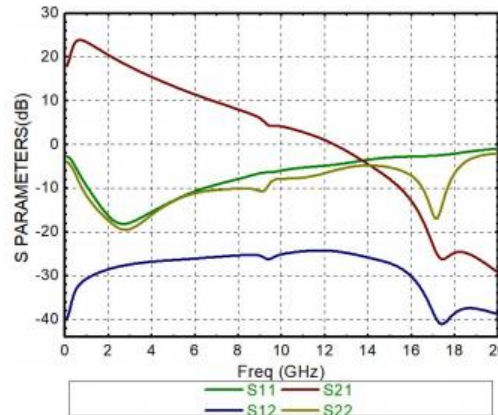
**OIP3**



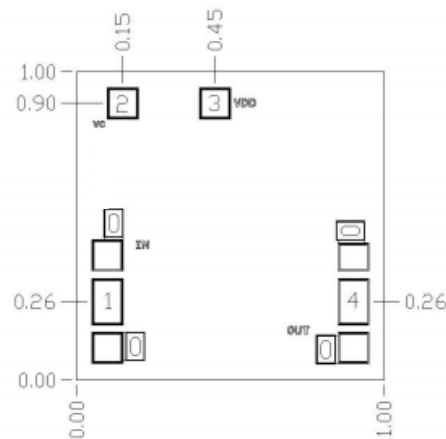
Noise Figure



S-Parameters



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

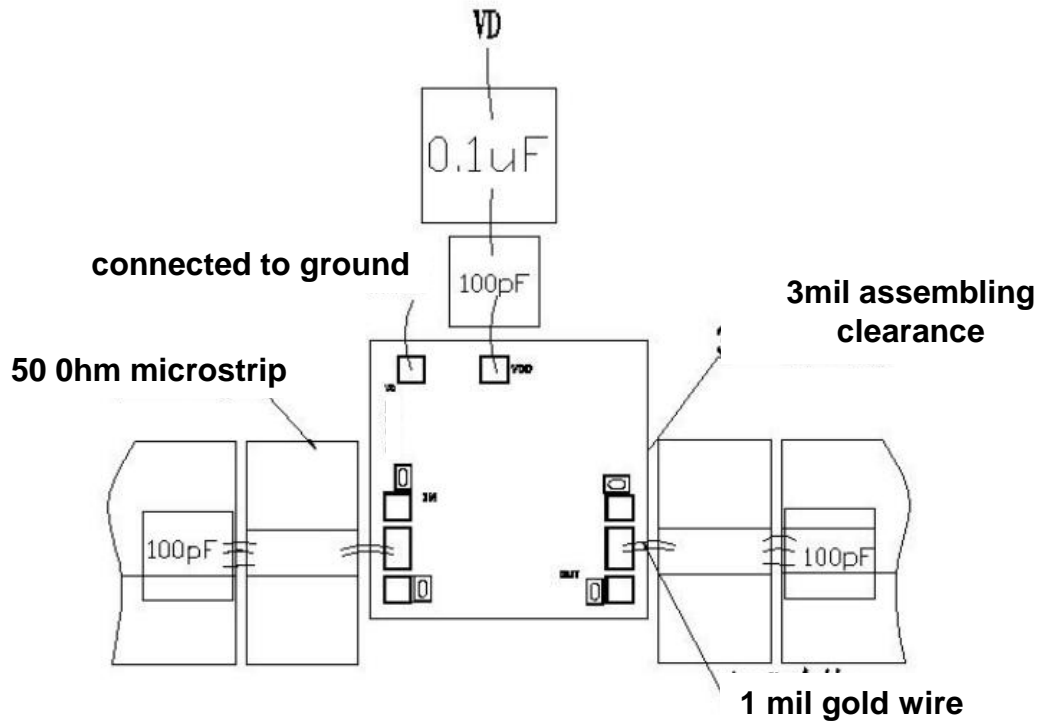


**Pad Description**

Pad	Function	Description
1	IN	This pad is RF coupling, no blocking capacitor required, 50 ohm matched
2	OUT	This pad is AC coupling, no blocking capacitor required, 50 ohm matched
3	VD	Supply voltage
4	VC	Connected to ground
Die bottom	GND	Die bottom must be connected to RF/DC ground.



### Assembly Drawing



#### Notes:

1. Die thickness:  $100\mu\text{m}$
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:  $+7\text{V}$
2. RF input power:  $+20\text{dBm}$
3. Operating temperature:  $-55^\circ\text{C}$  to  $+85^\circ\text{C}$
4. Storage temperature:  $-65^\circ\text{C}$  to  $+150^\circ\text{C}$