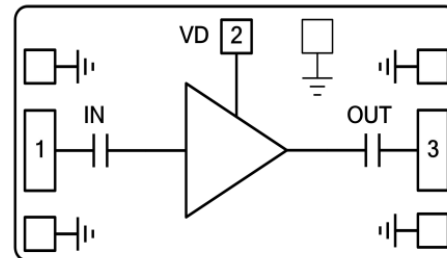


**Features**

- Single Biasing Voltage (Self Biased)
- Operating Frequency: 2-4GHz
- Noise Figure: 0.6dB
- Gain: 29dB
- P1dB: +14dBm
- Self Biasing +5V @ 33 mA
- Input/Output: 50Ω matched
- Die Size: 1.5 x 1.0 x 0.1 mm

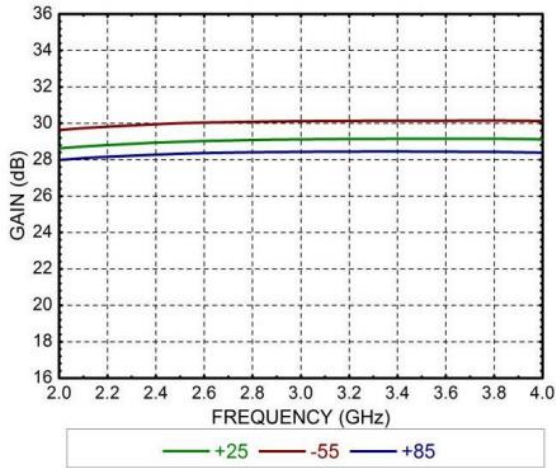
**Typical Applications**

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

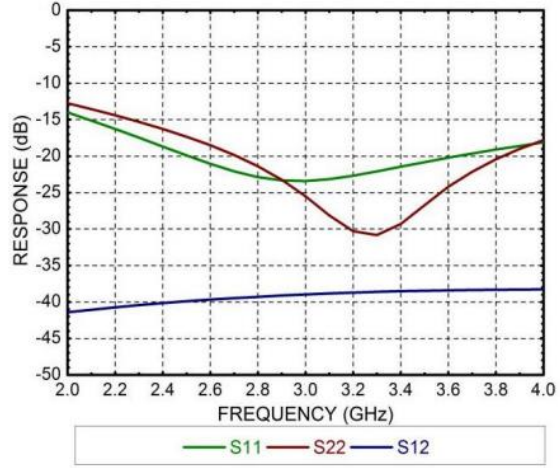
**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, Vdd = +5V, Idd = 33mA**

Parameters	Min.	Typ.	Max.	Units
<b>Frequency</b>		<b>2-4</b>		<b>GHz</b>
<b>Gain</b>		<b>29</b>		<b>dB</b>
<b>Gain Flatness</b>		<b>±0.3</b>		<b>dB</b>
<b>Input Return Loss</b>		<b>17</b>		<b>dB</b>
<b>Output Return Loss</b>		<b>17</b>		<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>		<b>14</b>		<b>dBm</b>
<b>Saturated Output Power (Psat)</b>		<b>15</b>		<b>dBm</b>
<b>Output Third Order Intercept (IP3)</b>		<b>23</b>		<b>dBm</b>
<b>Noise Figure</b>		<b>0.6</b>		<b>dB</b>
<b>Operating Current</b>	<b>20</b>	<b>33</b>	<b>50</b>	<b>mA</b>

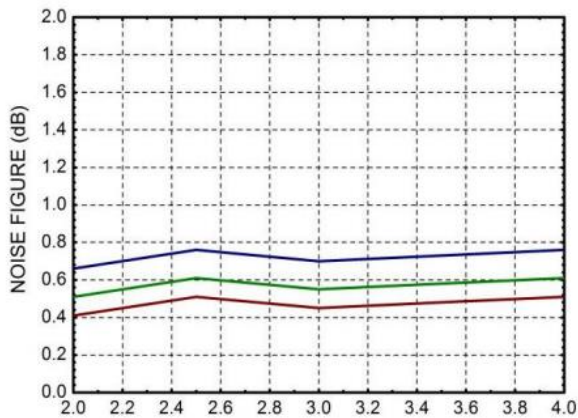
**Gain**



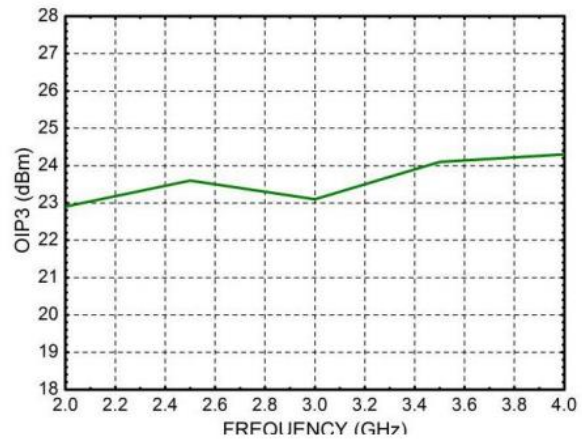
**Return Loss & Reverse Isolation**



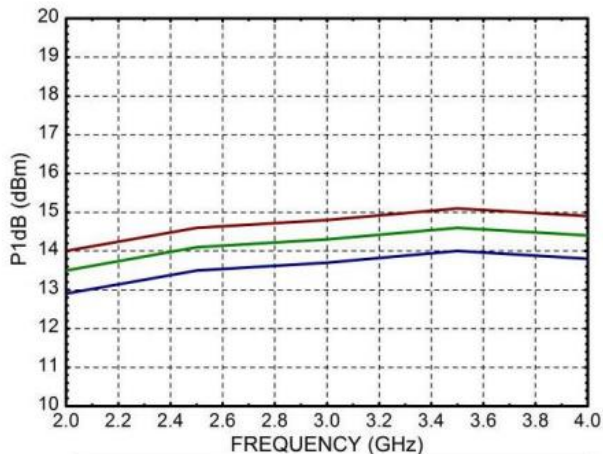
**Noise Figure**



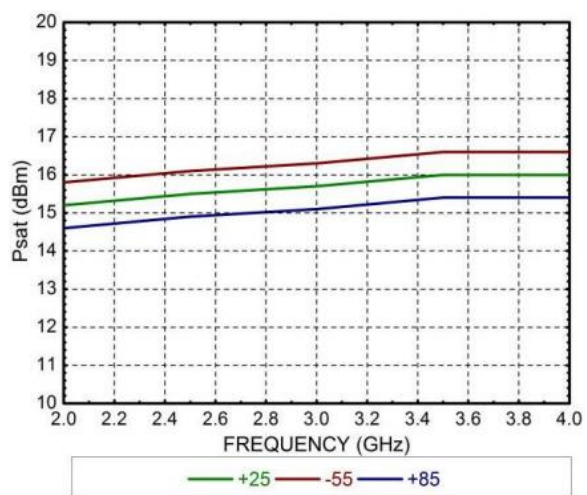
**OIP3**



**Output Power P-1**



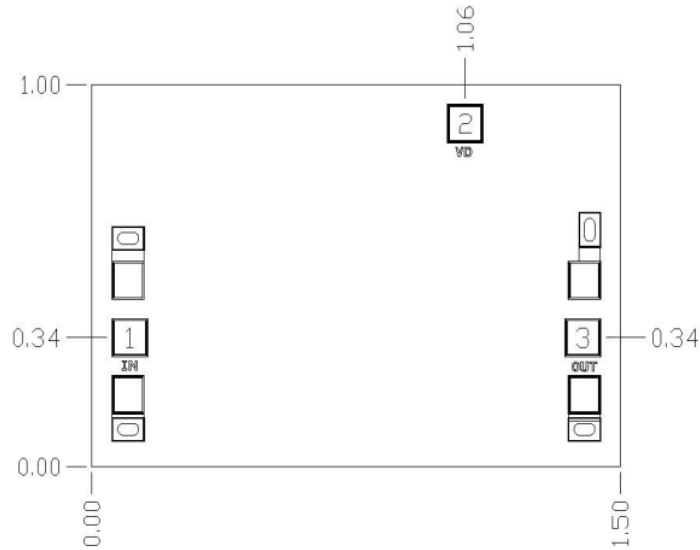
**Psat**





### Outline Drawing:

All Dimensions in mm

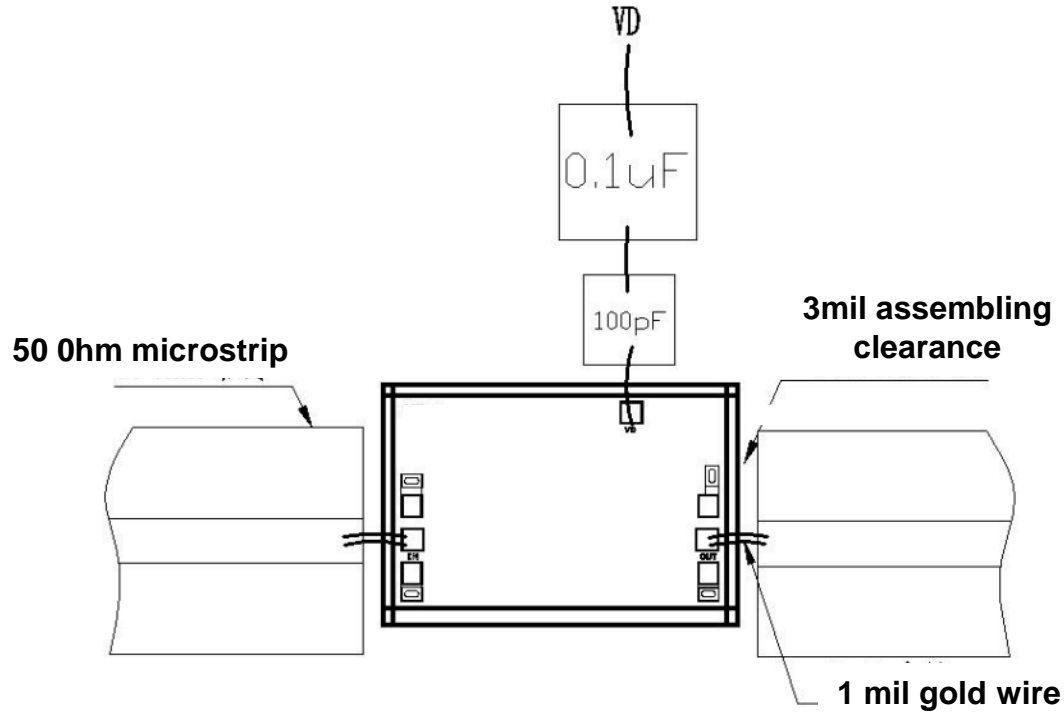


### Pad Description

PAD	Function	Description
1	IN	This pad is AC coupling, 50 ohm matched
2	VD	This pad provides the power supply voltage of the amplifier and needs to be externally connected with the 100pF bypass capacitor.
3	OUT	This pad is AC coupling, 50 ohm matched
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: +18dBm
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C