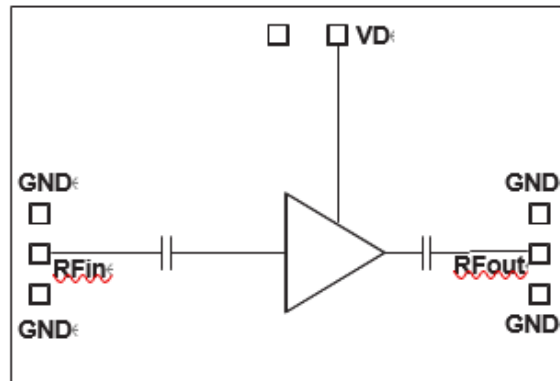


**Features**

- Single Biasing Voltage(Self Biased)
- Frequency: 33-37GHz
- Gain: 25dB
- Noise Figure: 1.9dB
- P1dB: 11dBm
- Die Size: 1.4 x 0.835 mm

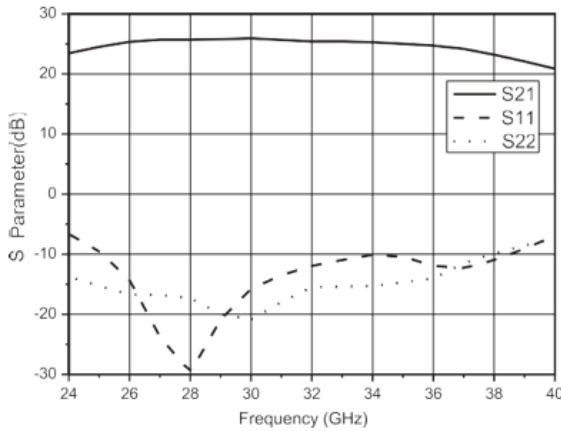
**Functional Block Diagram**

**Typical Applications**

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

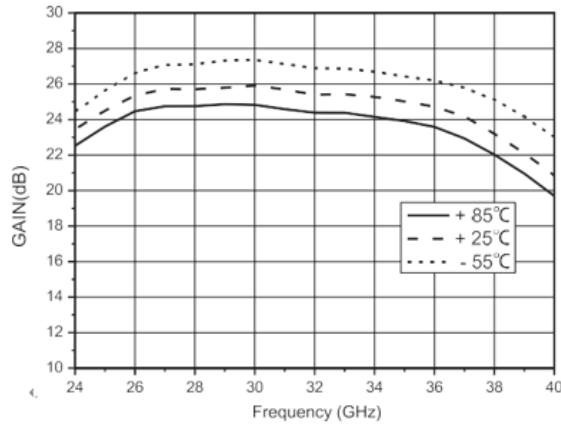
**Electrical Specifications**
**TA = +25°C, Vdd = +5V (On-wafer Measurement Results)**

Parameters	Min.	Typ.	Max.	Units
<b>Frequency</b>	<b>33-37</b>			<b>GHz</b>
<b>Gain</b>		<b>25</b>		<b>dB</b>
<b>Gain Flatness</b>		<b>±0.6</b>		<b>dB</b>
<b>Noise Figure</b>		<b>1.9</b>		<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>		<b>11</b>		<b>dBm</b>
<b>Input Return Loss</b>		<b>11</b>		<b>dB</b>
<b>Output Return Loss</b>		<b>14</b>		<b>dB</b>
<b>Operating Current</b>		<b>18</b>		<b>mA</b>

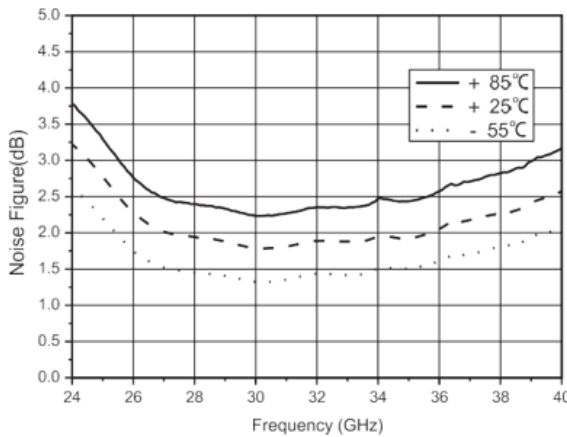
### S-Parameter vs. Frequency



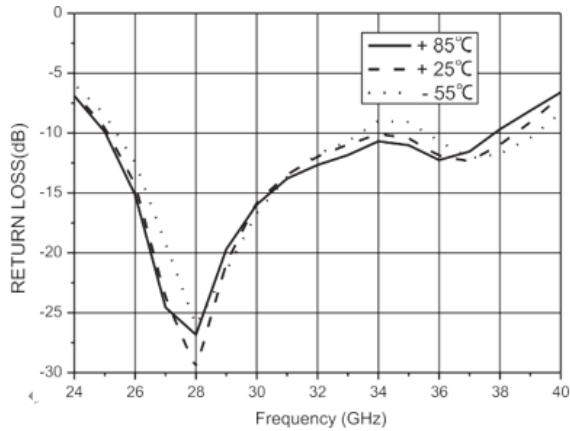
### Gain vs. Frequency



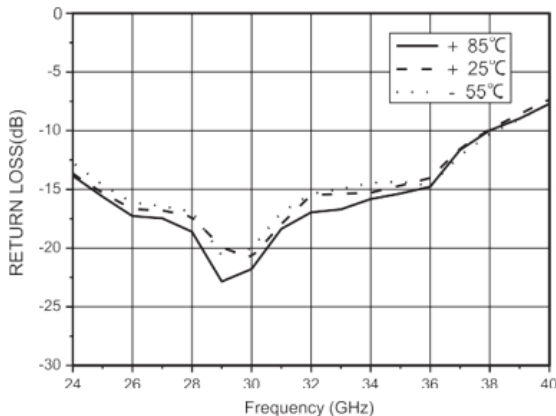
### Noise Figure vs. Frequency



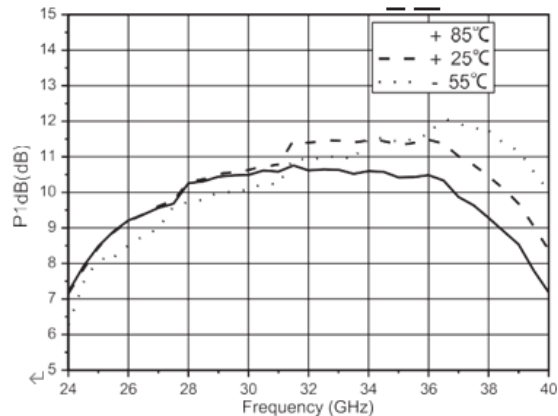
### Input Return Loss vs. Frequency



### Output Return Loss vs. Frequency

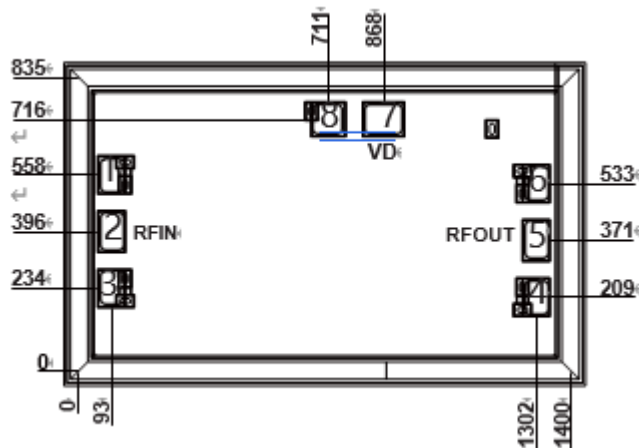


### P1dB vs. Frequency





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

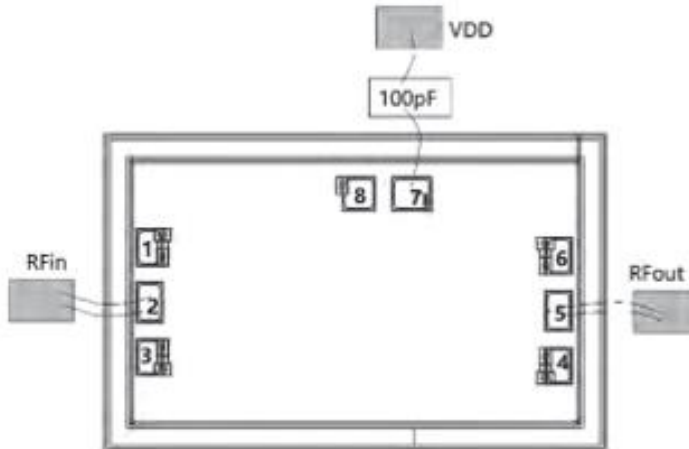


**Pad Description**

Pad	Function	Description
2	RF IN	RF signal input terminal, blocking capacitor required, matched to 50Ohm.
5	RF OUT	RF signal output terminal, blocking capacitor required, matched to 50Ohm.
7	Vdd	Supply voltage
1,3,4,6,8	GND	Die bottom must be connected to RF/DC ground.



### Assembly Drawing (Bond testing)



#### 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. Supply voltage: +6V
2. RF input power: +15dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C