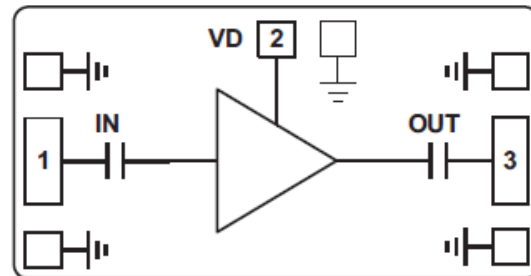


**Features**

- Single Biasing Voltage (Self Biased)
- Gain 9.2dB
- P1dB: +20dBm
- Psat: +22dBm
- Biasing: +5V @ 112mA
- Impedance: 50Ω
- Die Size: 1.9 x 1.2 x 0.1 mm

**Typical Applications**

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

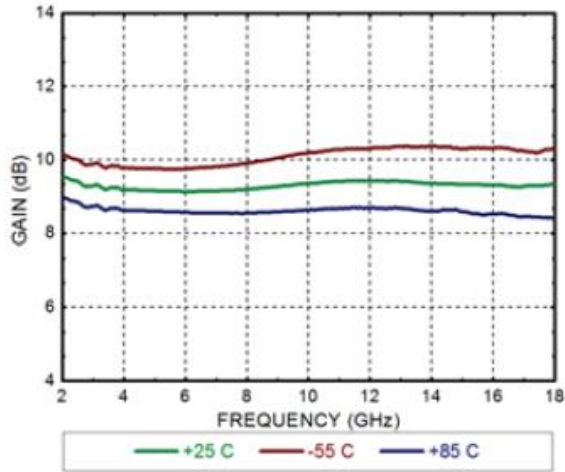
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, Vdd = +5V Idd = 112mA

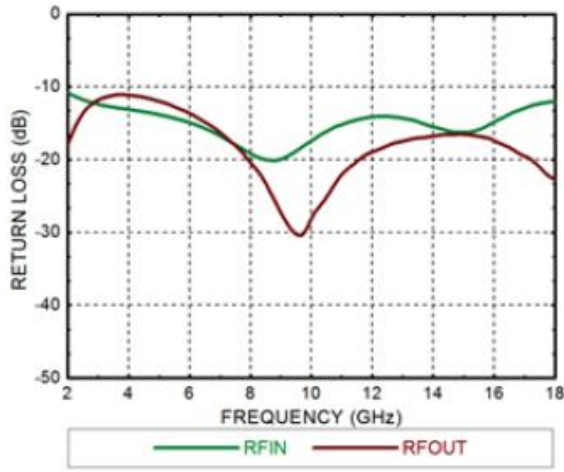
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
<b>Frequency</b>		<b>2 -6</b>		<b>6 -12</b>			<b>12 -18</b>			<b>GHz</b>
<b>Gain</b>		<b>9.3</b>		<b>9.1</b>			<b>9.3</b>			<b>dB</b>
<b>Gain Flatness</b>		<b>±0.2</b>		<b>±0.15</b>			<b>±0.2</b>			<b>dB</b>
<b>Input Return Loss</b>		<b>13</b>		<b>15</b>			<b>14</b>			<b>dB</b>
<b>Output Return Loss</b>		<b>13</b>		<b>15</b>			<b>15</b>			<b>dB</b>
<b>Output 1dB Compression (P1dB)</b>		<b>20.6</b>		<b>20</b>			<b>20</b>			<b>dBm</b>
<b>Current</b>	<b>85</b>	<b>112</b>	<b>139</b>	<b>85</b>	<b>112</b>	<b>139</b>	<b>85</b>	<b>112</b>	<b>139</b>	<b>mA</b>



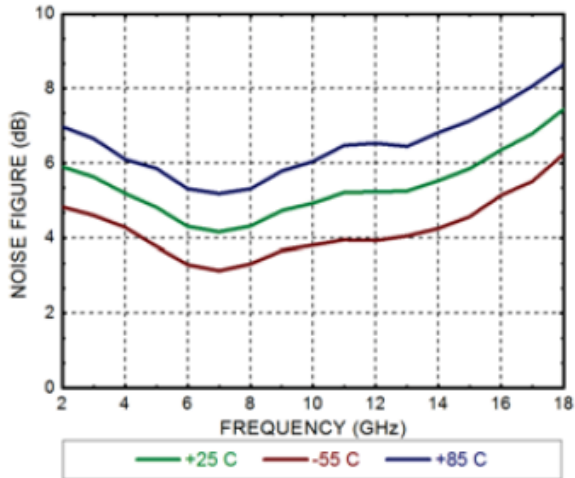
### Gain



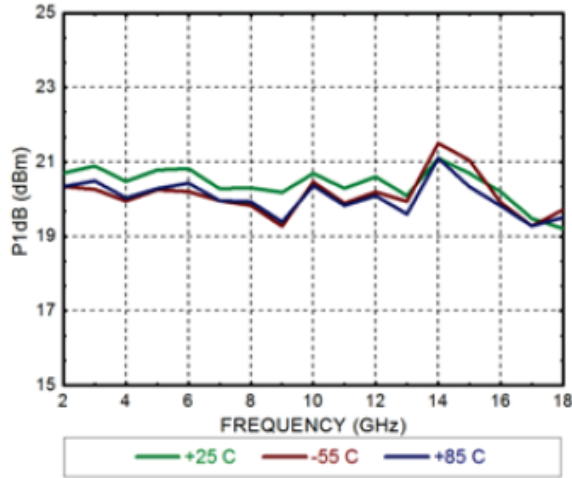
### Return Loss



### Noise Figure



### Output Power $P_{1}$





### Outline Drawing: All Dimensions in mm

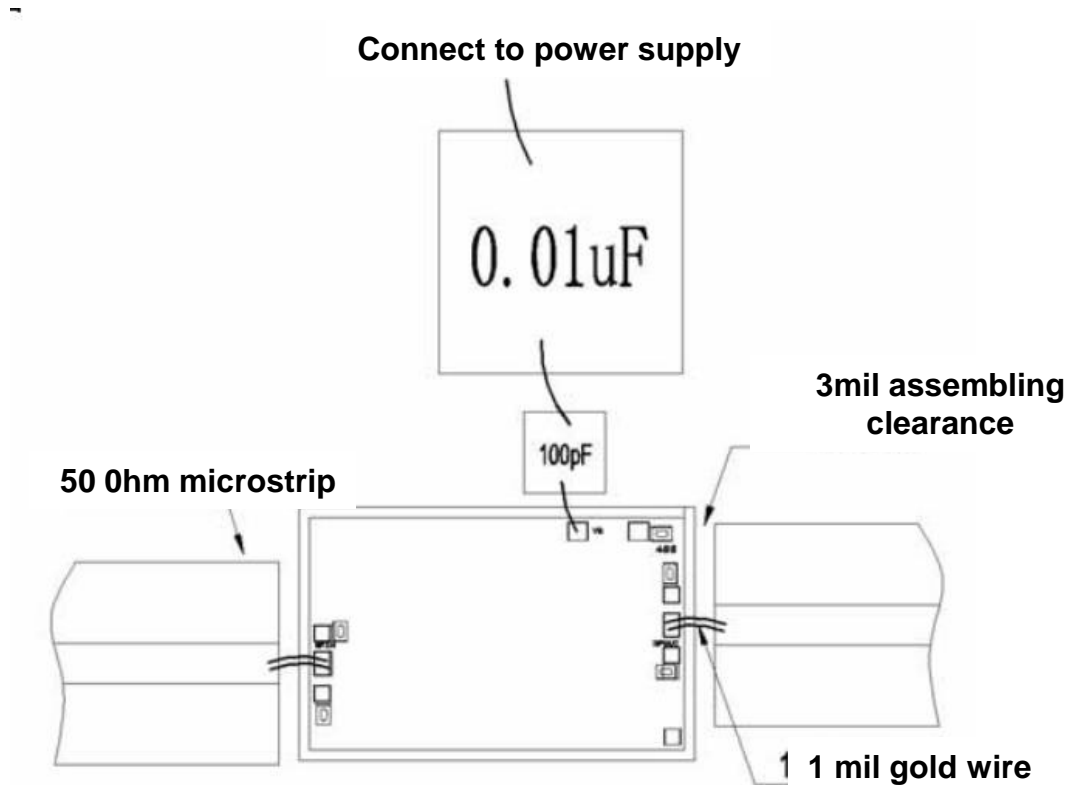


### Pad Description

PAD	Function	Description
1	IN	The pad is AC coupling and matches to 50 ohms.
2	VD	The pad provides the power voltage of the amplifier, which needs to be externally connected with the 100pF bypass capacitance, and the pad to the capacitor cascade is controlled within 600um.
3	OUT	The pad is AC coupling and matches to 50 ohms.
4	VG	The pad can adjust the chip gain, and when normal use is suspended, if the gain can be increased by 0-0.5V voltage, the gain can be reduced to -0.5-0V voltage.
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 +175°C
4. Operating temperature: -55°C to +85°C