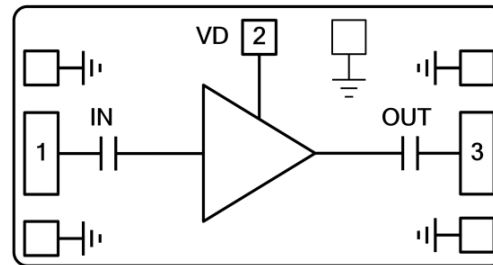


**Features**

- Single Biasing Voltage (Self Biased)
- Operating Frequency: 8-12GHz
- Noise Figure: 1.0dB
- Gain: 28.5dB
- Power Supply: +5V @ 45 mA
- P1dB: +12dBm
- OIP3: +25.5dBm
- Reverse Isolation: 50dB
- Die Size: 1.5 x 1.3 x 0.1 mm

**Typical Applications**

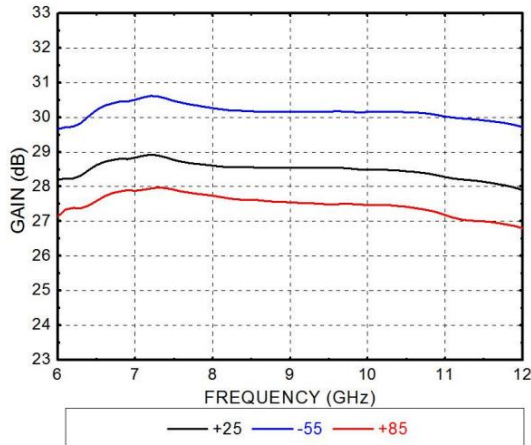
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, Vdd = +5V, Idd = 45mA**

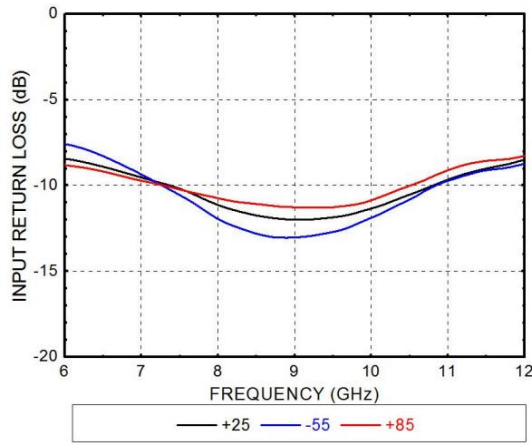
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Gain		28.5		dB
Input Return Loss		11		dB
Output Return Loss		20		dB
Output 1dB Compression (P1dB)		12		dBm
Reverse Isolation		50		dB
Output Third Order Intercept (IP3)		25.5		dBm
Noise Figure		1.0		dB
Operating Current	30	45	55	mA



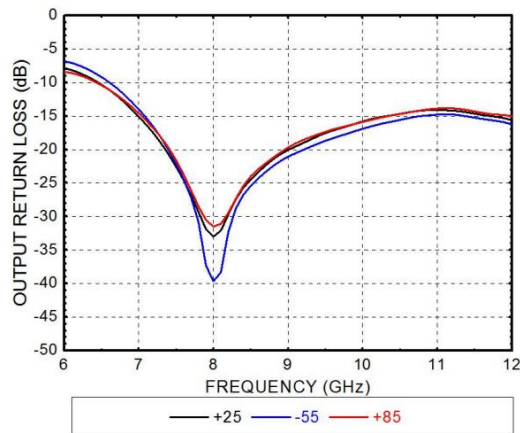
### Gain vs. Temperature



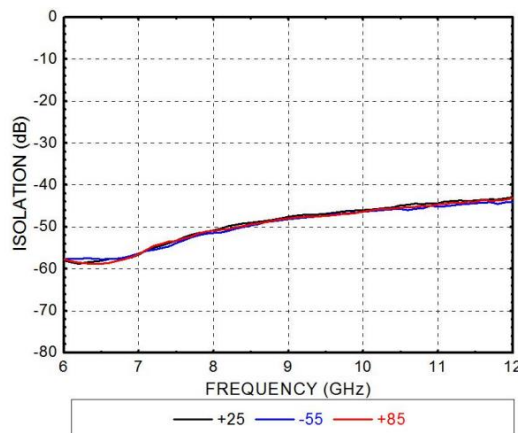
### Input Return Loss vs. Temperature



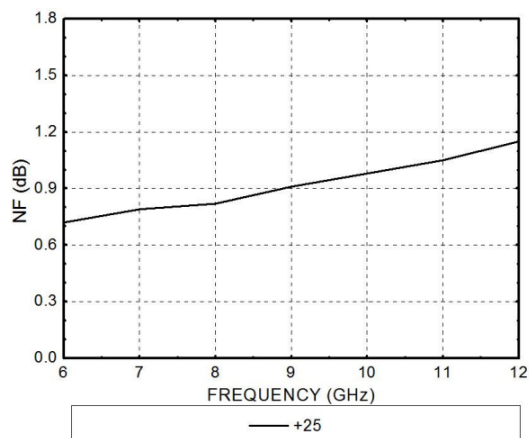
### Output Return Loss vs. Temperature



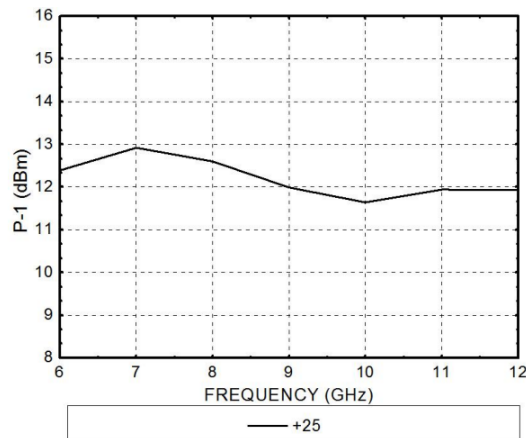
### Reverse Isolation vs. Temperature



### Noise Figure



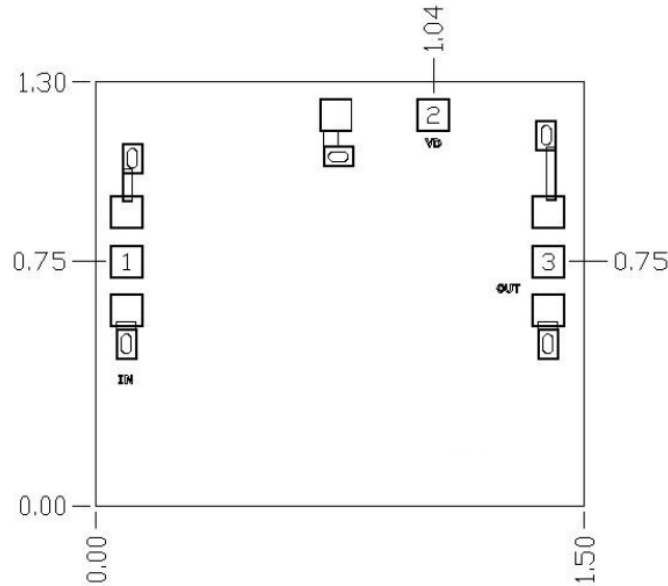
### P1dB





### Outline Drawing:

All Dimensions in mm

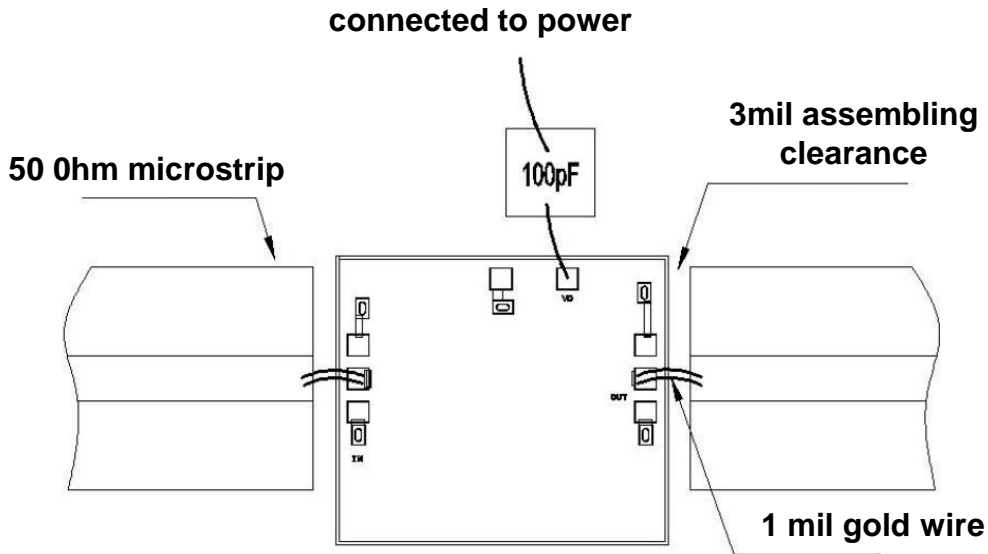


### Pad Description

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 +175°C
4. Operating temperature: -55°C to +85°C