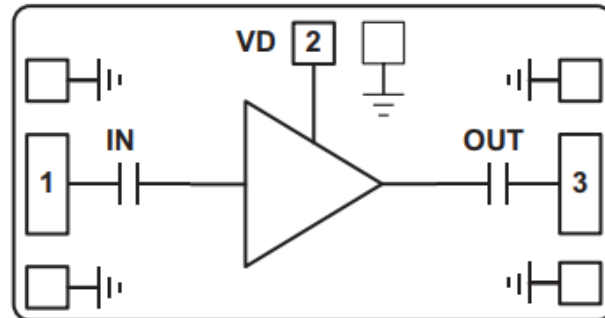


**Features**

- Single Biasing Voltage (Self Biased)
- 2dB Positive Slope
- Noise Figure: 2.5dB
- Gain: 17dB
- P1dB: +16dBm
- Biasing +5V @ 64 mA
- Impedance: 50Ω
- Die Size: 3 x 1.3 x 0.1 mm

**Typical Applications**

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

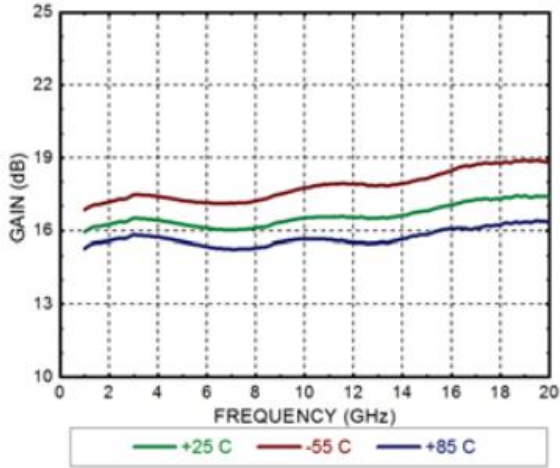
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, Vdd = +5V, Idd = 64mA

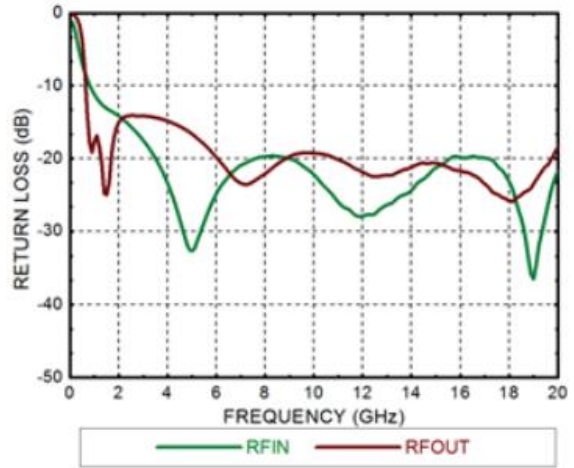
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	1 - 6			6-12			12-20			GHz
Gain		16.3			16.4			17		dB
Gain Flatness		±0.4			±0.4			±0.5		dB
Input Return Loss		15			20			20		dB
Output Return Loss		15			15			15		dB
Output 1dB Compression (P1dB)		17			16			14.5		dBm
Saturated Output Power (Psat)		19			18			16.5		dBm
Output Third Order Intercept (IP3)		26			26			24		dBm
Noise Figure		3			2.0			2.5		dB
Current	36	64	85	36	64	85	36	64	85	mA



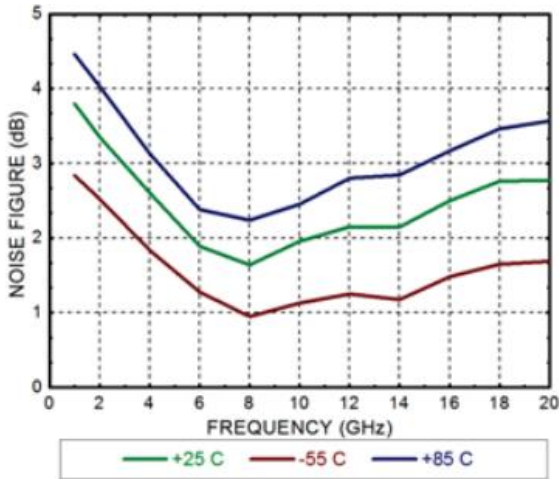
### Gain



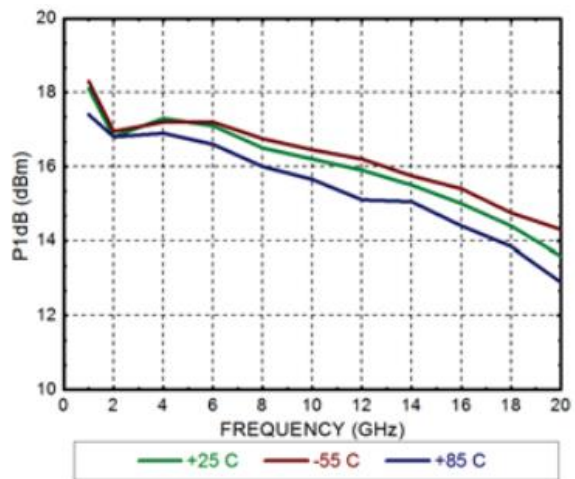
### Return Loss



### Noise Figure



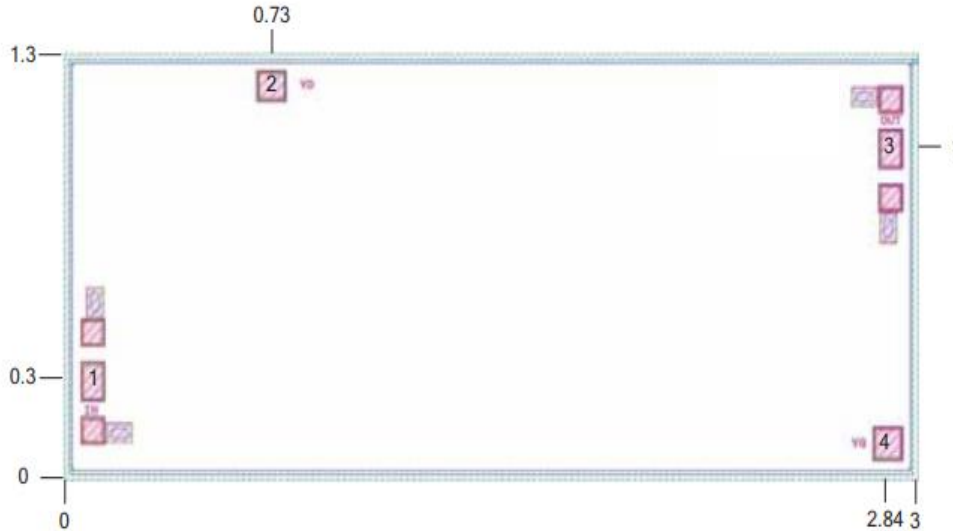
### Output Power $P_{1dB}$





### Outline Drawing:

All Dimensions in mm

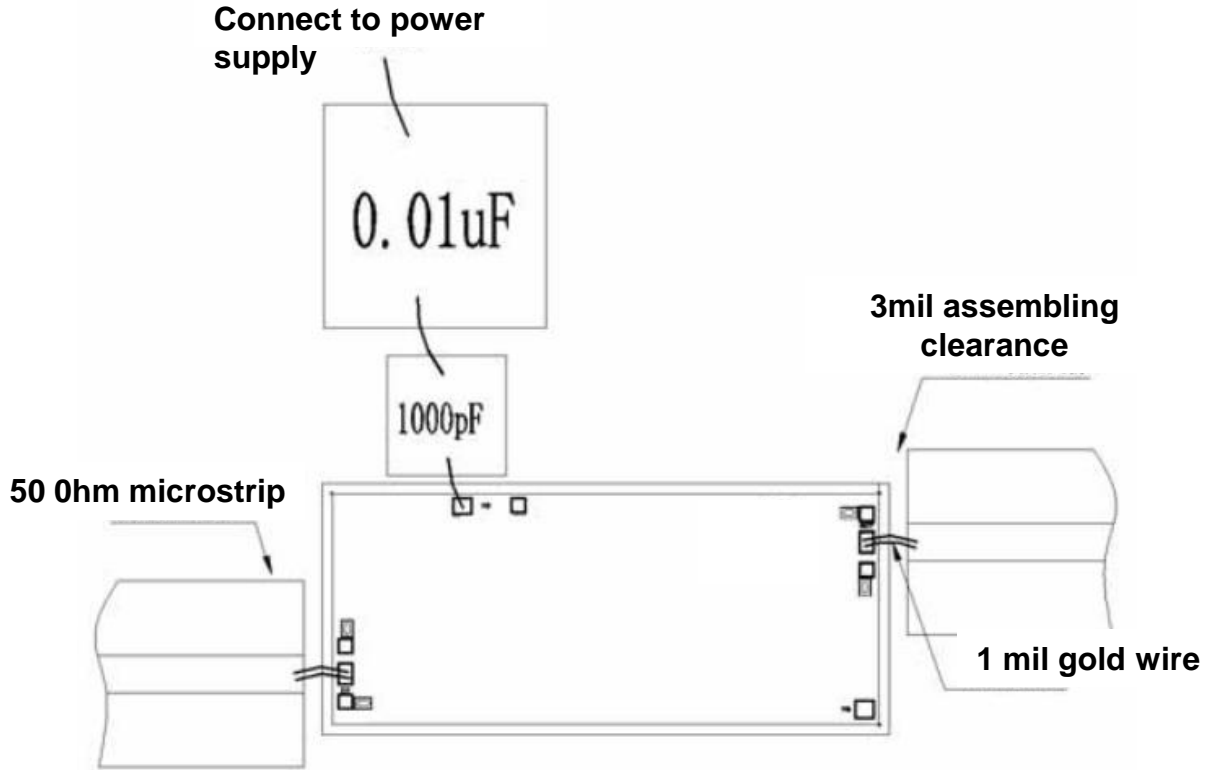


### Pad Description

PAD	Function	Description
1	IN	Input AC coupling 50Ω Impedance
2	VD	This pad provides power supply voltage for the amplifier and requires external 100pF and 0.01 μF bypass capacitor. The pad is controlled within 500um by the 1000pF capacitor cascade.
3	OUT	Output AC coupling 50Ω Impedance.
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 -0.5V-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