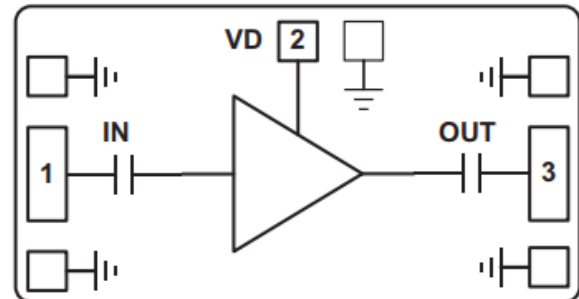


**Features**

- Single Biasing Voltage (Self Biased)
- 1dB Positive Slope
- Noise Figure: 3dB
- Gain: 21dB
- P1dB: +14dBm
- Biasing +5V @ 42 mA
- Impedance: 50Ω
- Die Size: 2.7 x 1.3 x 0.1 mm

**Typical Applications**

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

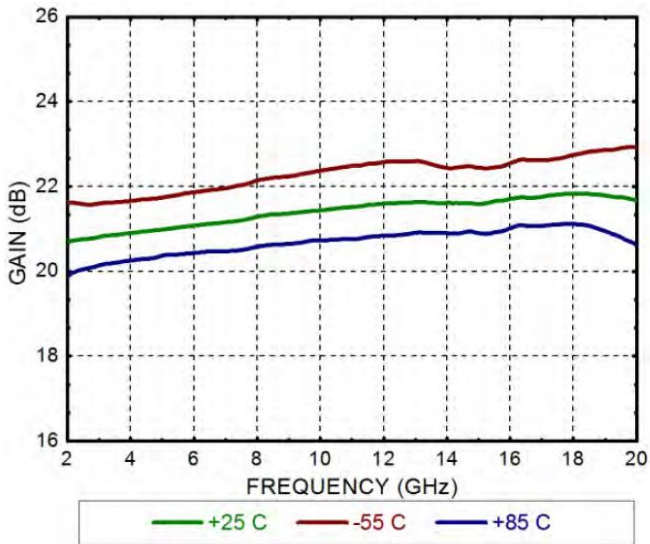
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, Vdd = +5V Idd = 42mA

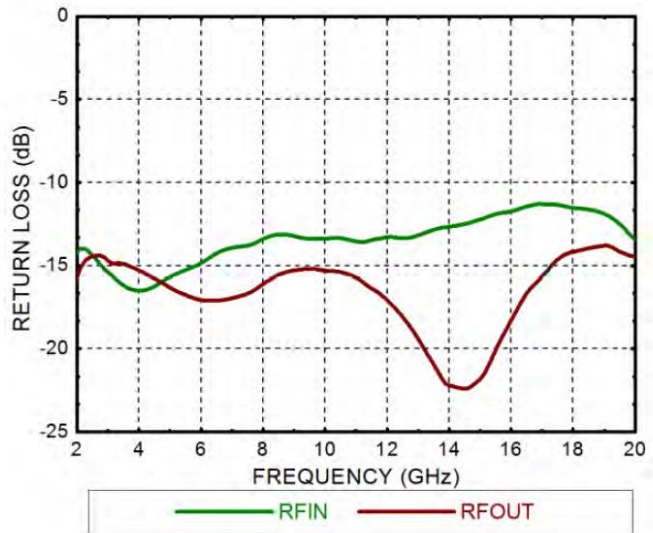
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	2 -6			6-12			12-20			GHz
Gain		20.8			21.3			21.7		dB
Gain Flatness		±0.2			±0.3			±0.1		dB
Input Return Loss		15			12			12		dB
Output Return Loss		15			15			15		dB
Output 1dB Compression (P1dB)		15			14.5			14		dBm
Saturated Output Power (Psat)		17.5			17			16		dBm
Output Third Order Intercept (IP3)		24			23.5			23		dBm
Noise Figure		3.2			3			2.5		dB
Current	30	42	70	30	42	70	30	42	70	mA



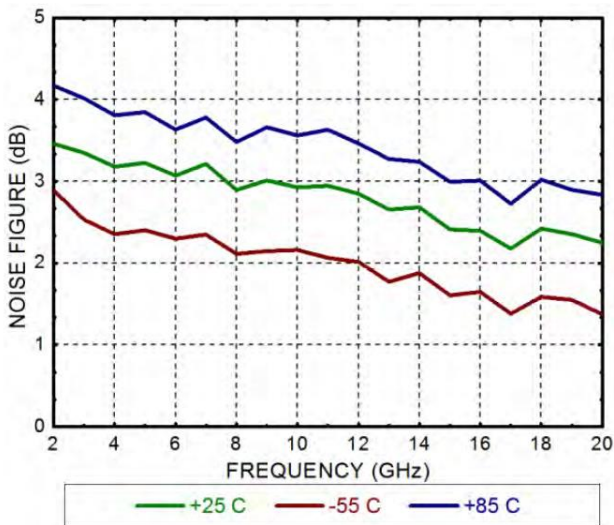
### Gain



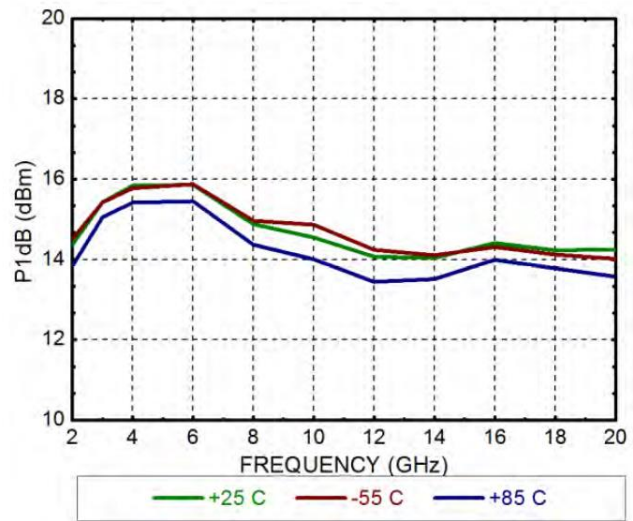
### Return Loss



### Noise Figure



### Output Power





### Outline Drawing: All Dimensions in mm

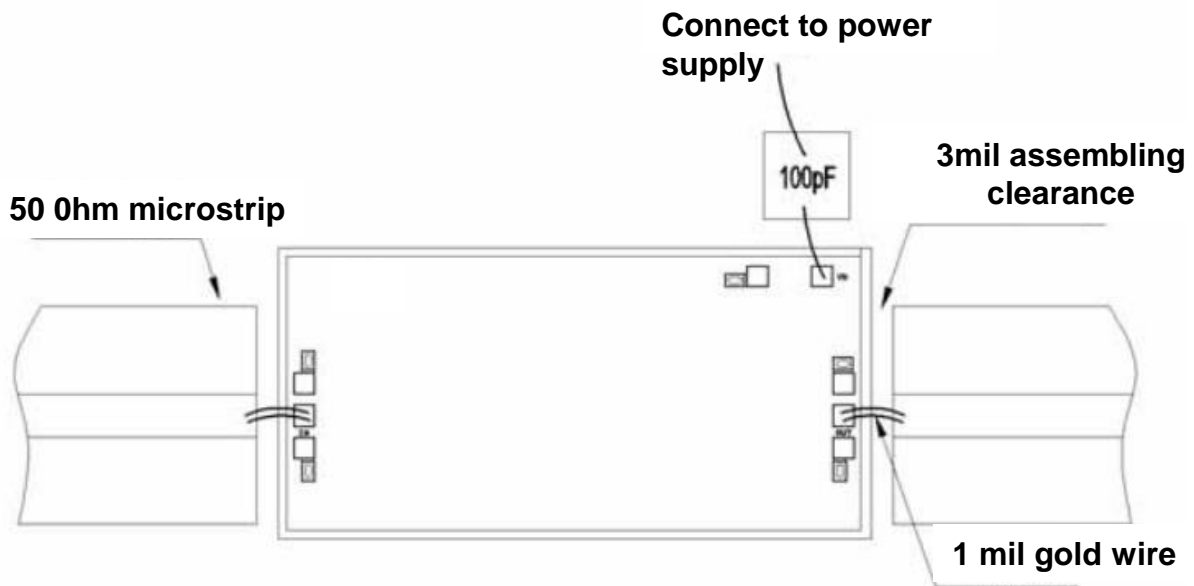


### Pad Description

PAD	Function	Description
1	IN	Input AC coupling 50Ω Impedance
2	VD	This pad provides power supply voltage for the amplifier and external 100pF bypass capacitor is required.
3	OUT	Output AC coupling 50Ω Impedance
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: +17dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C