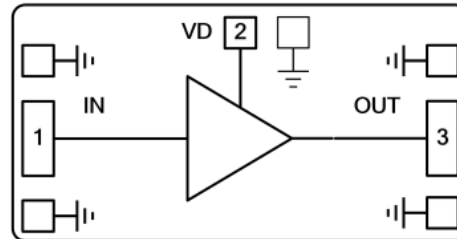


**Features**

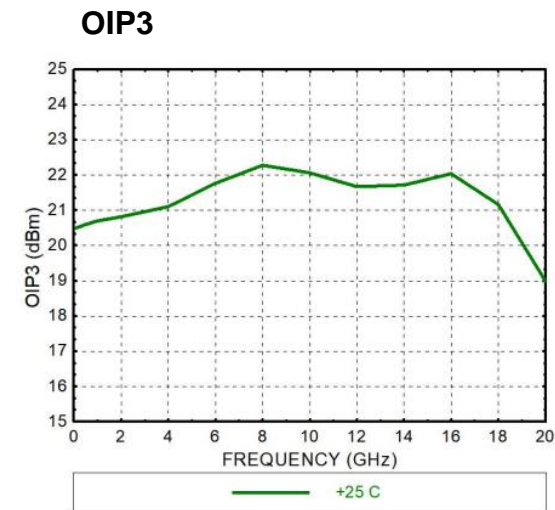
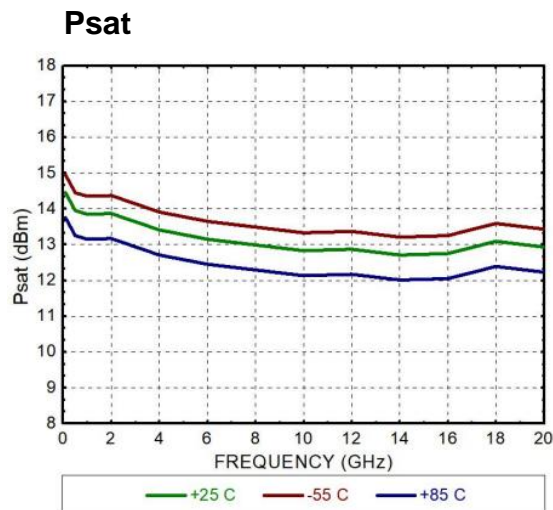
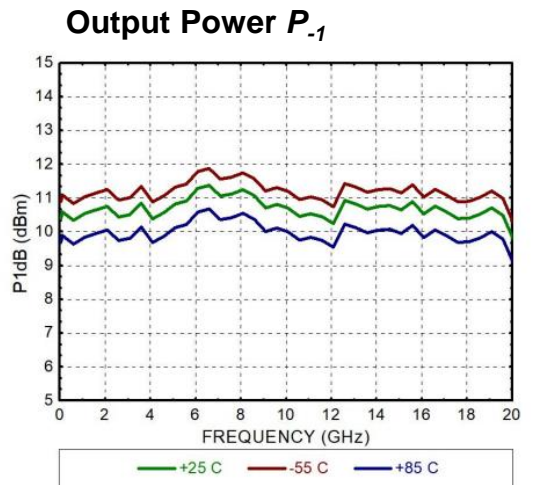
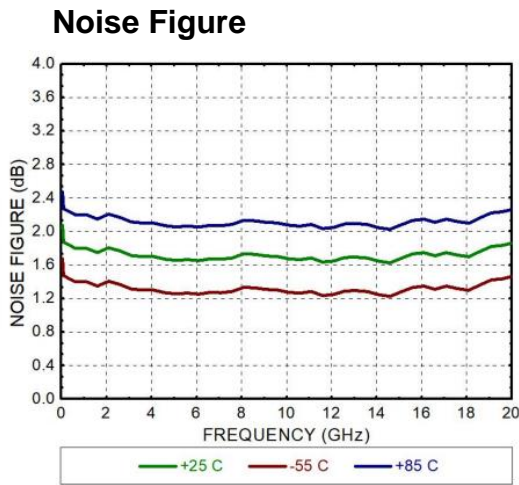
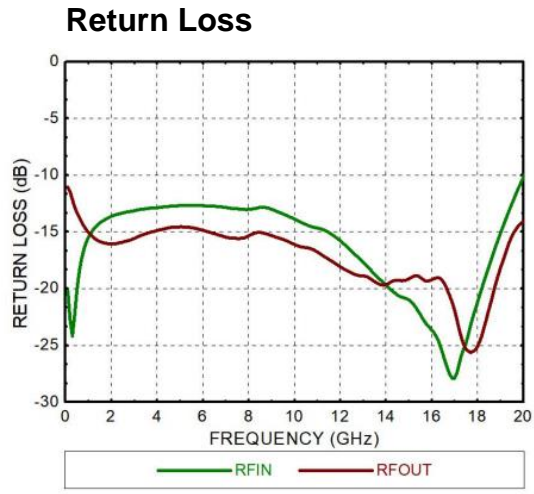
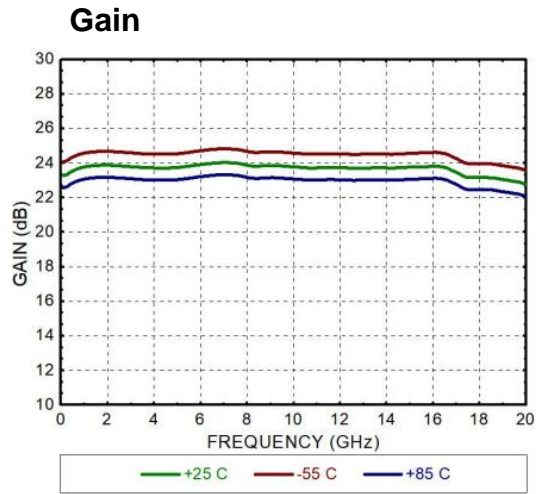
- Single Biasing Voltage (Self Biased)
- Self-biased power supply, no external inductor required
- Operating Frequency: 0.05-20GHz
- Noise Figure: 1.7dB
- Gain: 23.5dB
- P1dB: +11dBm
- Self Biasing +5V @ 55 mA
- Input/Output: 50Ω matched
- Die Size: 1.5 x 0.8 x 0.1 mm

**Typical Applications**

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

**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, Vdd = +5V, Idd = 55mA**

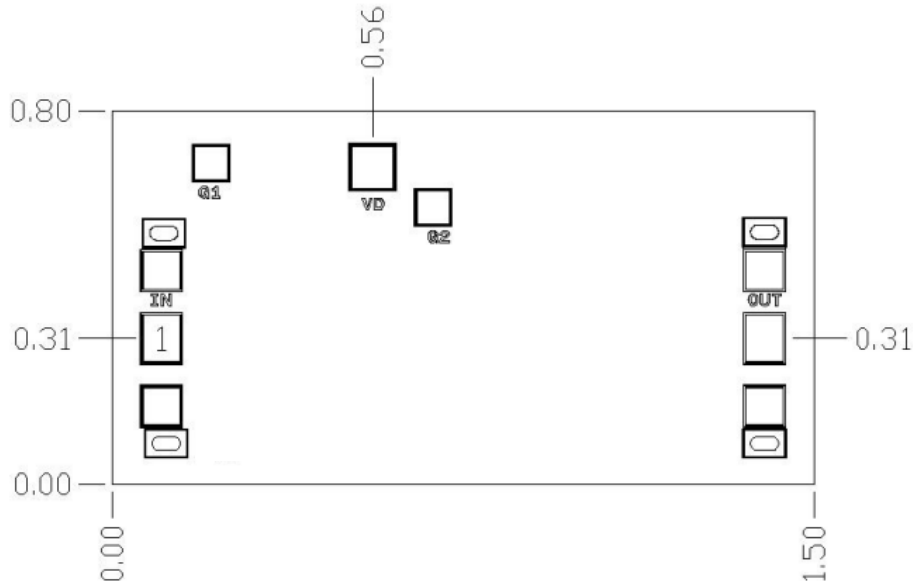
Parameters	Min.	Typ.	Max.	Units
Frequency	0.05-20			GHz
Gain		23.5		dB
Gain Flatness		±0.5		dB
Input Return Loss		13		dB
Output Return Loss		15		dB
Output 1dB Compression (P1dB)		11		dBm
Saturated Output Power (Psat)		13		dBm
Output Third Order Intercept (IP3)		21		dBm
Noise Figure		1.7		dB
Operating Current	42	55	73	mA





### Outline Drawing:

All Dimensions in mm

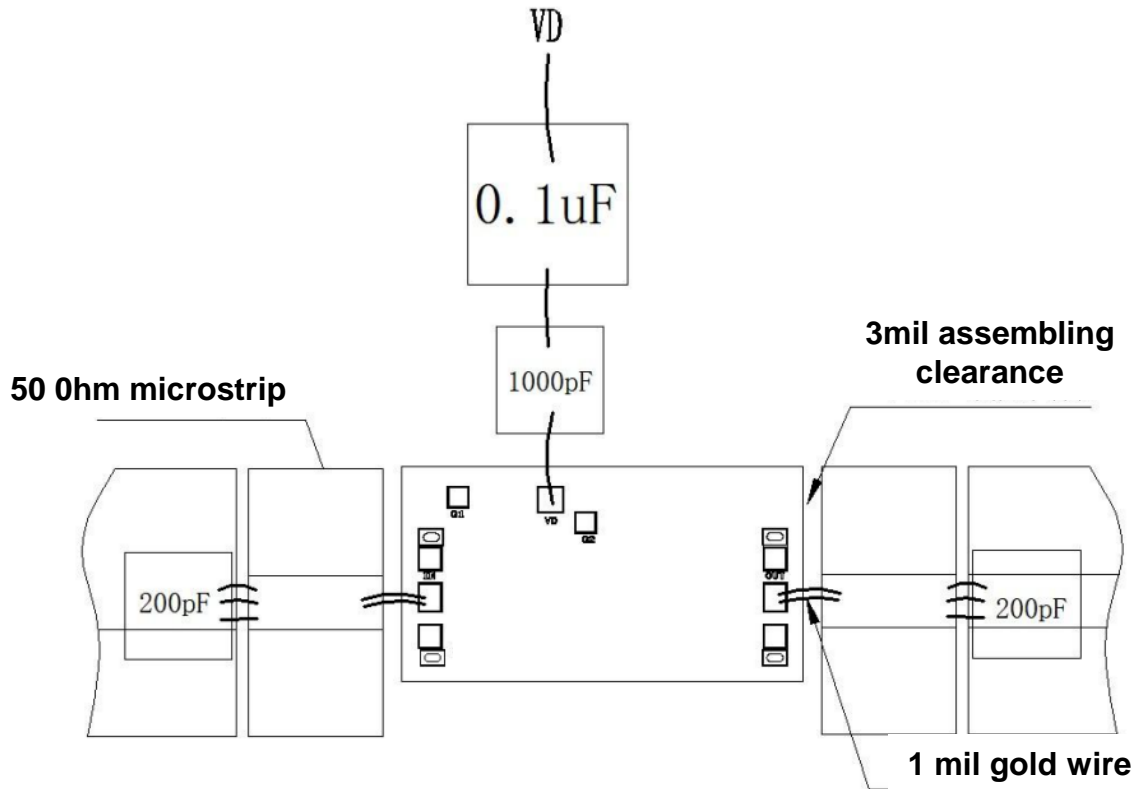


### Pad Description

PAD	Function	Description
1	IN	This pad is DC coupling, 50 ohm matched and needs to be externally connected with the 200pF bypass capacitor.
2	VD	This pad provides the power supply voltage of the amplifier and needs to be externally connected with the 1000pF bypass capacitor.
3	OUT	This pad is DC coupling, 50 ohm matched and needs to be externally connected with the 200pF bypass capacitor.
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\*80  $\mu\text{m}^2$
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 +150°C
4. Operating temperature: -55°C to +85°C