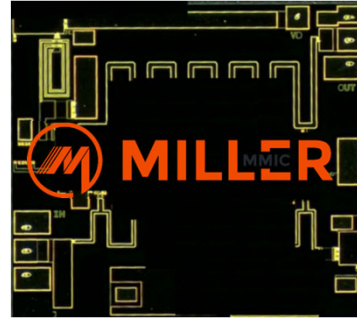


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 5-50GHz
- Gain: 11dB
- Noise Figure: 2.7~4.3dB
- Input /Output Return Loss:>14dB/>14dB
- P1dB: 9~12dBm
- IP3: 22dBm
- Power Supply: +5 V@43 mA
- Die Size: 1.54 x 1.38 x 0.1 mm


**Typical Applications**

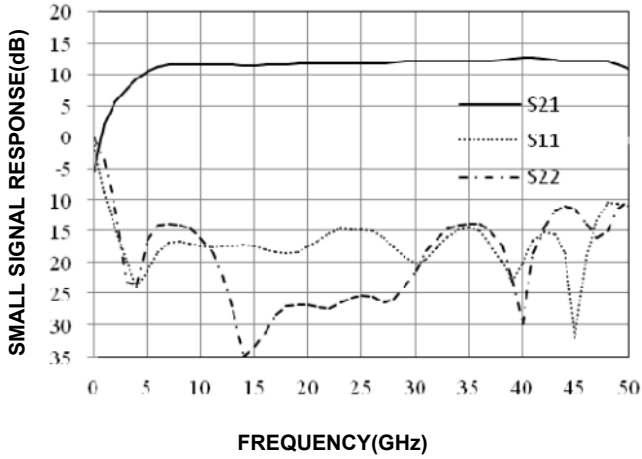
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Electrical Specifications**
**TA = +25°C, Vd = +5V**

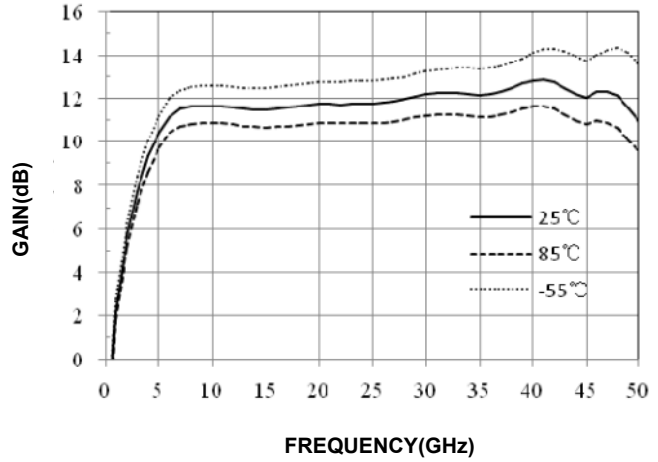
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	5-20			20-40			40-50			GHz
Gain	10.0	11.0	12.0	11.5	12.0	12.5	11.5	12.0	12.5	dB
Noise Figure	2.8	3.0	3.5	2.8	3.5	4.5	4.0	5.0	6.0	dB
P1dB	12.0	12.5	13.0	9.0	11.0	12.0	6.0	8.0	9.0	dBm
Input RL		20.0			15.0			16.0		dB
Output RL		15.0			16.0			7.0		dB



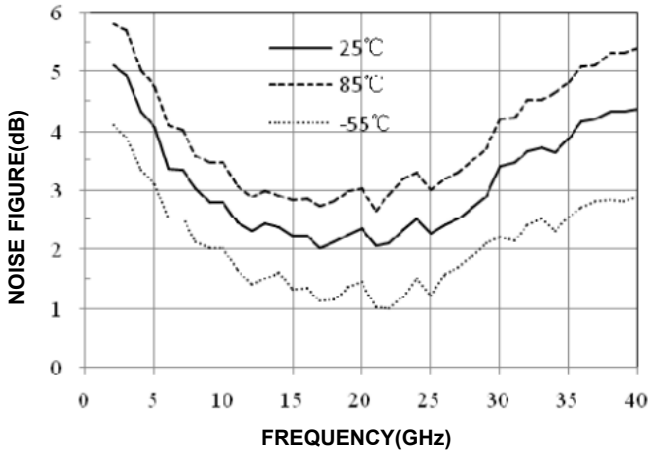
### Small Signal Response (25°C)



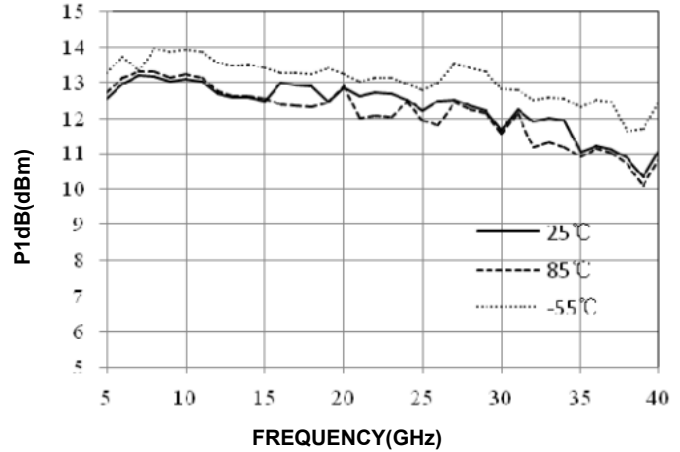
### Gain vs. Temperature



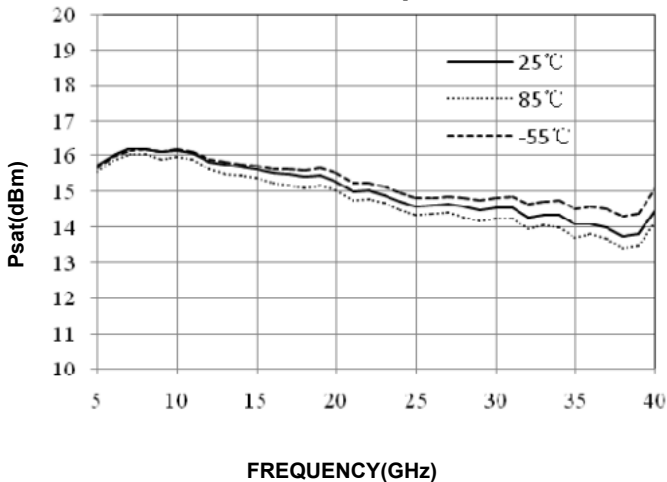
### Noise Figure vs. Temperature



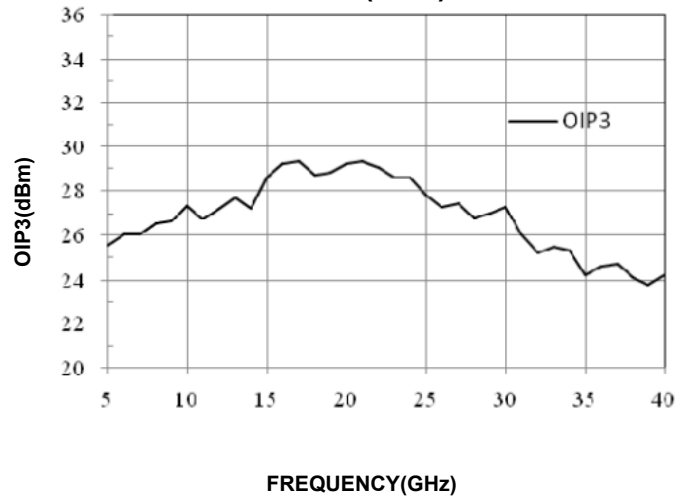
### P1dB vs. Temperature



### Psat vs. Temperature



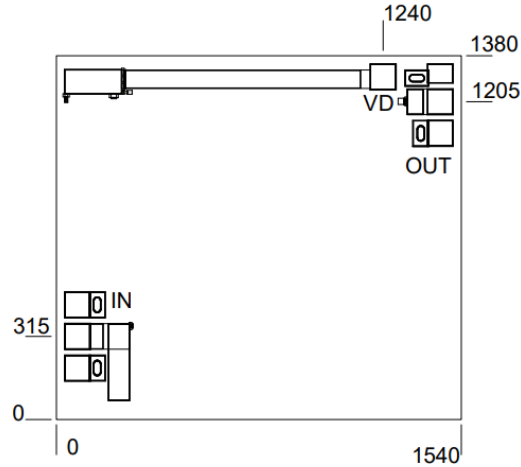
### OIP3 (25°C)



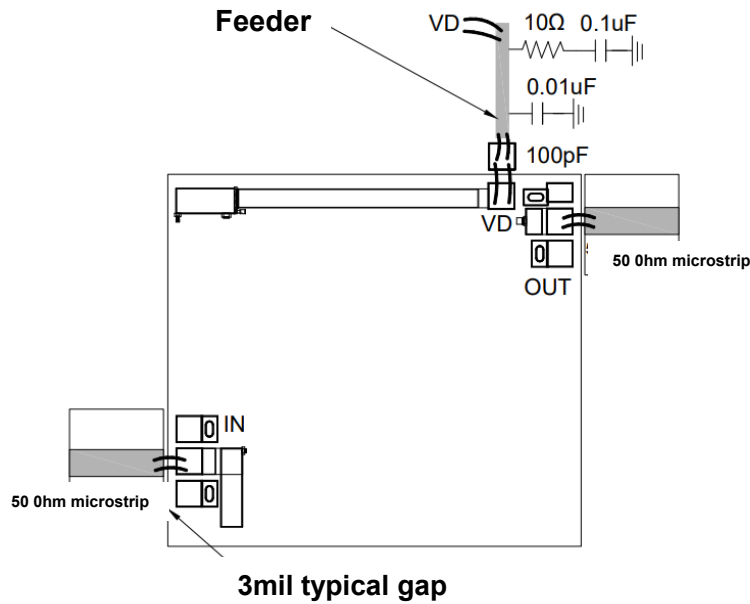


### Outline Drawing:

All Dimensions in  $\mu\text{m}$



### Assembly Drawing



#### Notes:

1. Die thickness: 100 $\mu\text{m}$
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
7. Input and output has DC Block.
8. Input/Output use two 25 $\mu\text{m}$  gold wire, length less than 250 $\mu\text{m}$  is recommended.

#### Maximum Ratings:

1. Control voltage: +9V
2. Input power: +23dBm
3. Operating temperature: -55°C to +125°C
4. Storage temperature: -65°C to +150°C