

**Features**

- Frequency: DC~20GHz
- Gain: 19dB
- Noise Figure: 1.5~4.0dB
- Input /Output Return Loss:>17dB/>10dB
- P1dB: 12.4~19.4dBm
- IP3: 28dBm
- Power Supply: +8 V@118 mA
- Die Size: 3.12 x 1.38 x 0.1 mm

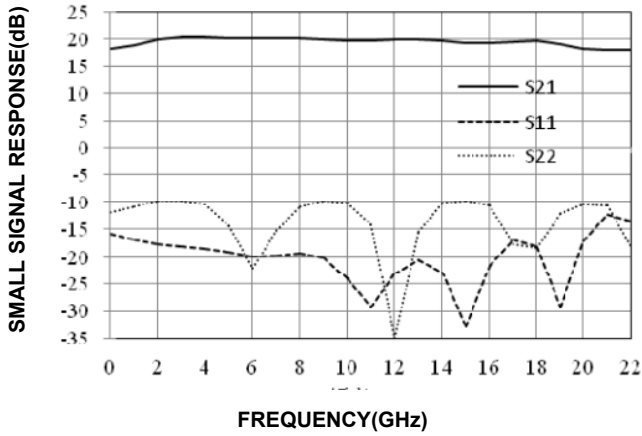
**Typical Applications**

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

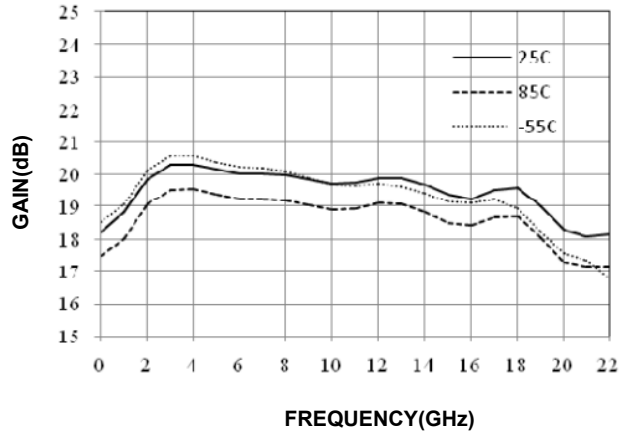

**Electrical Specifications**
**TA = +25°C, Vd = +8V, Vg=-0.25V**

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	DC-2.5			2.5-14			14-20			GHz
Gain	18.0	19.0	20.0	19.5	20.0	20.5	17.0	18.5	20.0	dB
Noise Figure	2.5	3.0	3.5	1.5	2.0	2.5	2.5	3.0	3.5	dB
P1dB	16.5	17.0	18.0	16.0	18.0	19.0	14.0	15.0	16.0	dBm
Input RL		16.0			25.0			17.0		dB
Output RL		11.0			10.0			7.0		dB

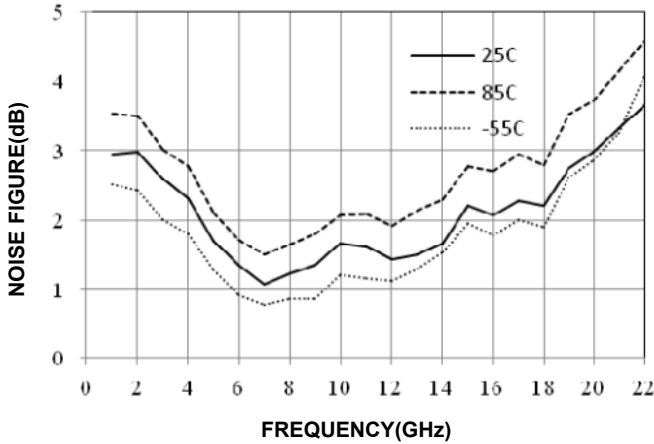
Small Signal Response (25°C)



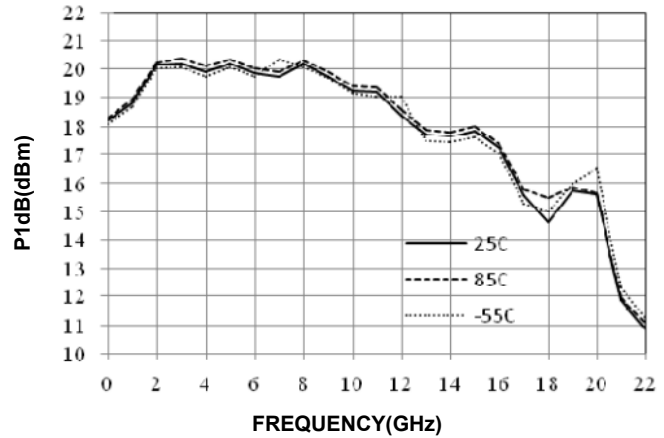
Gain vs. Temperature



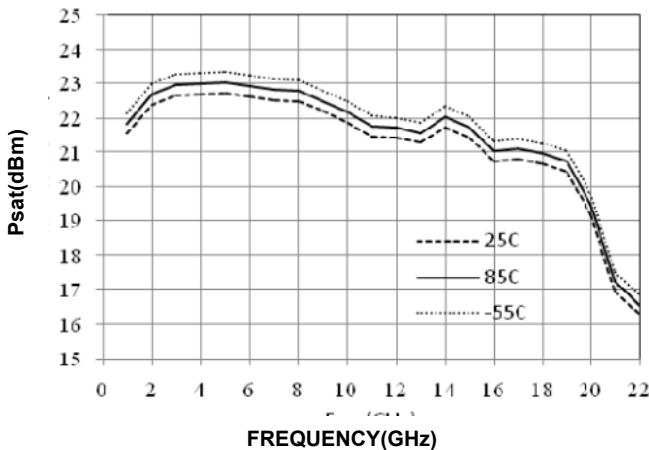
Noise Figure vs. Temperature



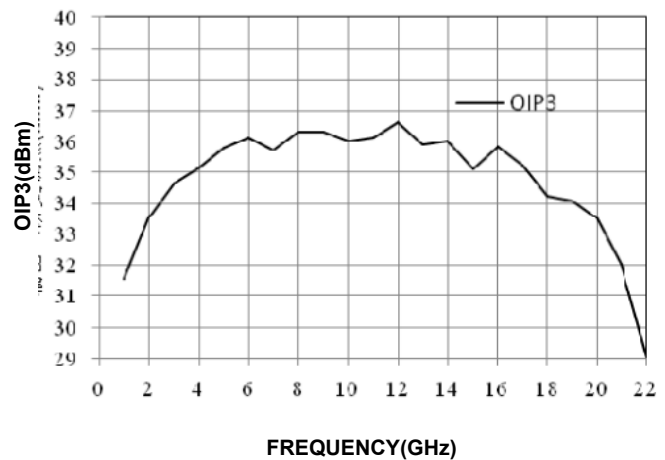
P1dB vs. Temperature



Psat vs. Temperature

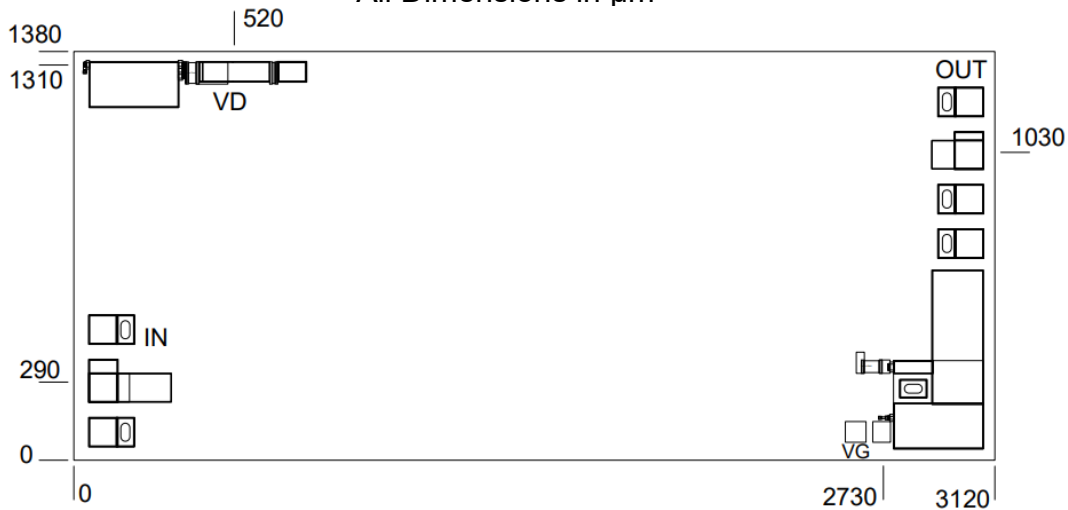


OIP3 (25°C)

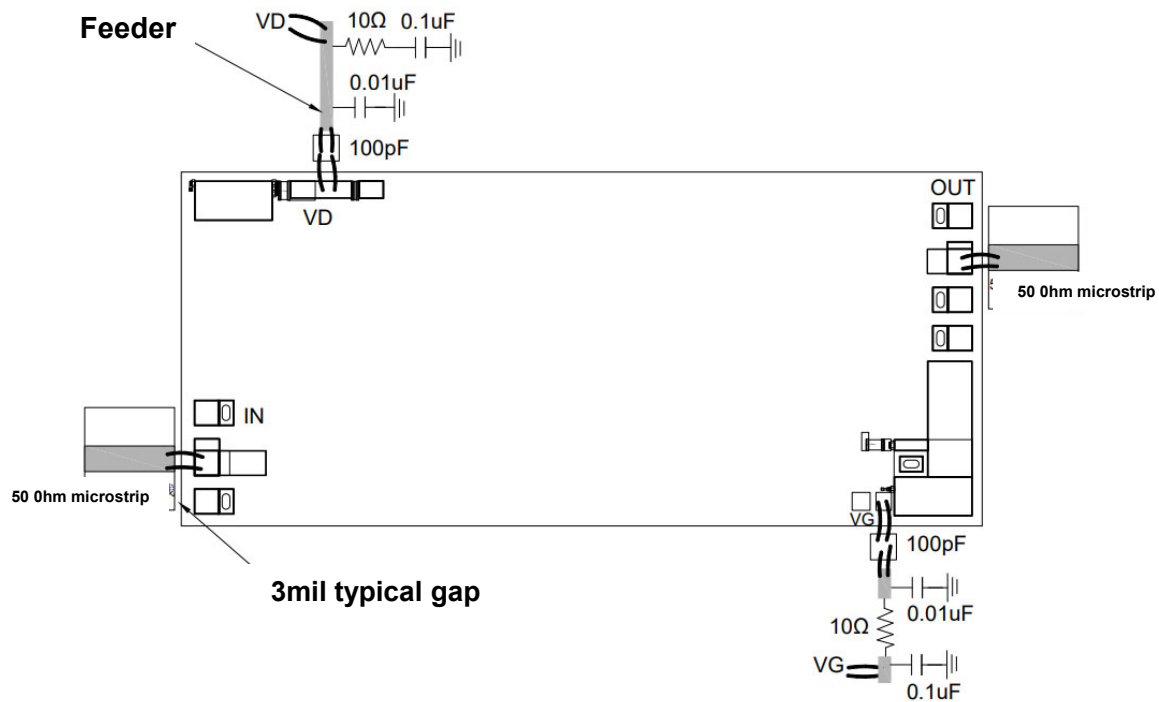




### Outline Drawing: All Dimensions in $\mu\text{m}$



### 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. No 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