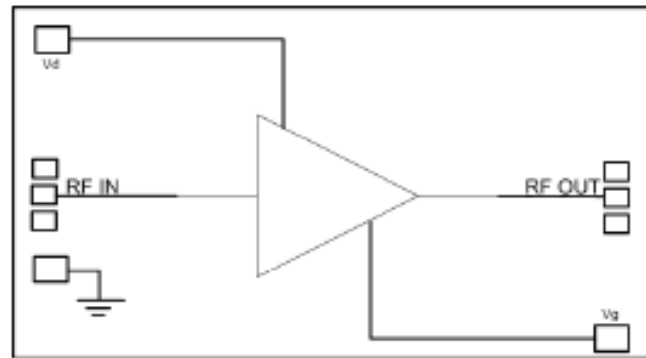


**Features**

- Frequency: 1-18GHz
- Small Signal Gain: 13dB
- Noise Figure: 2.0dB typ./2.5dB max.
- P1dB: 10dBm
- Power supply: +10V/55mA
- Input/Output: 50Ω
- Die Size: 2.25 x 1.55 x 0.1 mm

**Functional Block Diagram**

**Typical Applications**

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

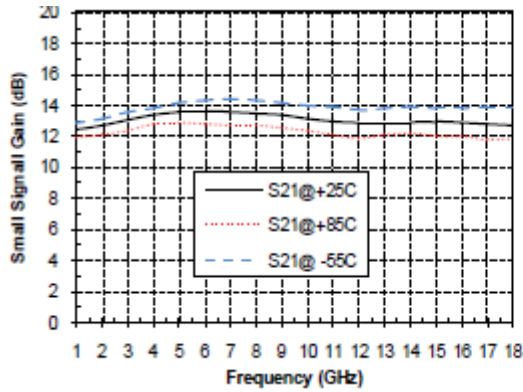
**Electrical Specifications**

TA = +25°C, Vd = +10V, Id=55mA

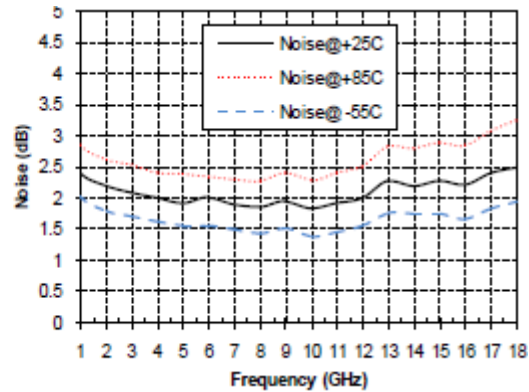
Parameters	Min.	Typ.	Max.	Units
Frequency	1-18			GHz
Small Signal Gain	12.5	13	13.5	dB
Gain Flatness		±0.5		dB
Noise Figure	-	2	2.5	dB
Output 1dB Compression (P1dB)	8.5	10	11.5	dBm
Input Return Loss	11	15	-	dB
Output Return Loss	16	18	-	dB
Vg	0.55	0.62	0.7	V



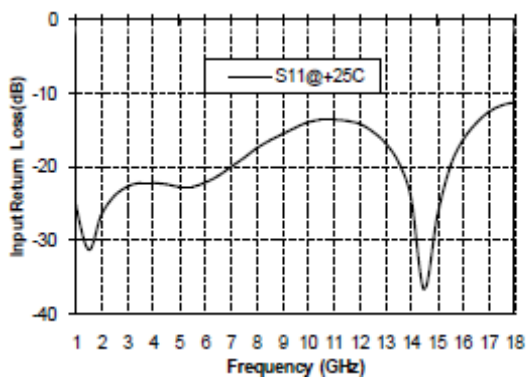
### Gain vs. Frequency



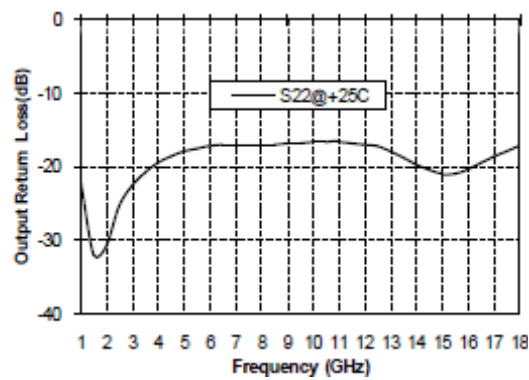
### Noise Figure vs. Frequency



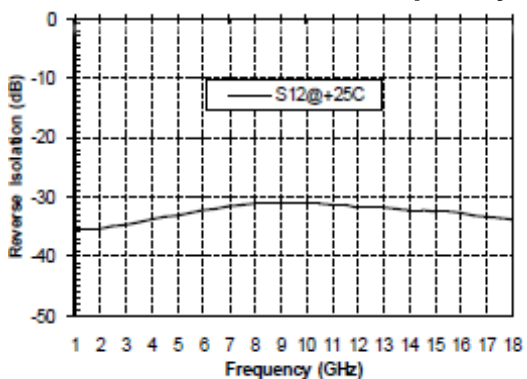
### Input Return Loss vs. Frequency



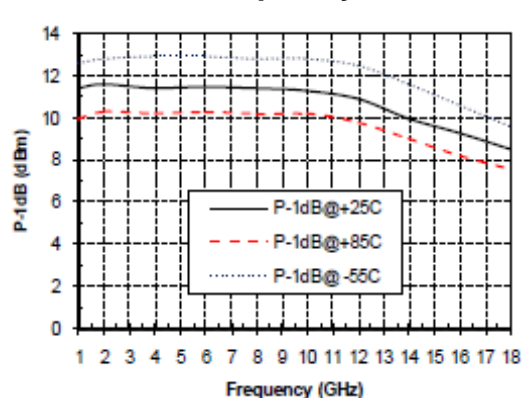
### Output Return Loss vs. Frequency



### Reverse Isolation vs. Frequency

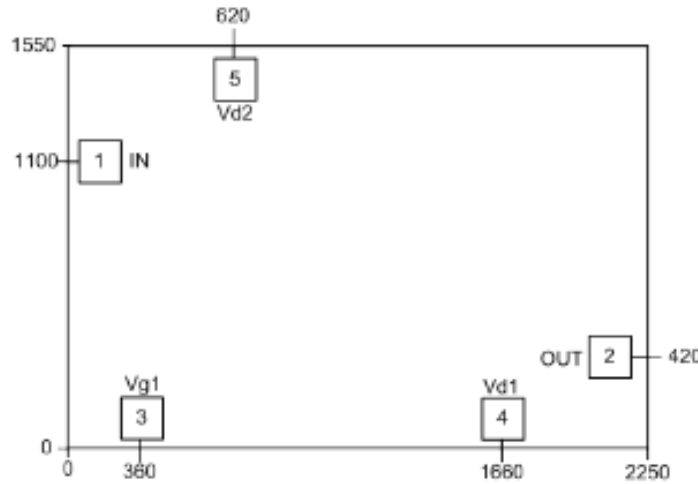


### P1dB vs. Frequency





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

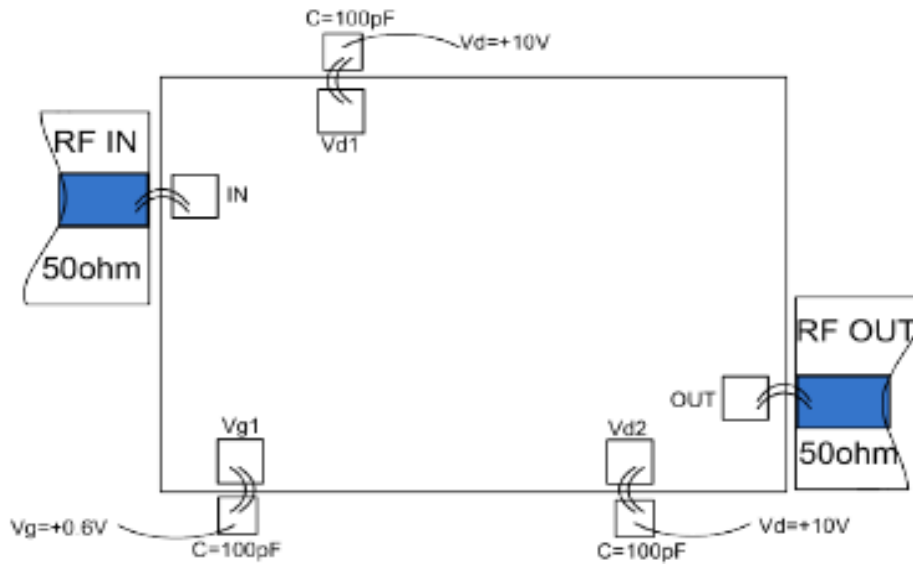


**Pad Description**

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal, no blocking capacitor required.	
2	RF OUT	RF signal output terminal, no blocking capacitor required.	
3	VG	Amplifier gate bias; external 100pF bypass capacitor required.	
4	VD1	Amplifier drain bias; external 100pF bypass capacitor required.	
5	VD2	Amplifier drain bias; external 100pF bypass capacitor required.	
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. Maximum drain voltage: +12V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C