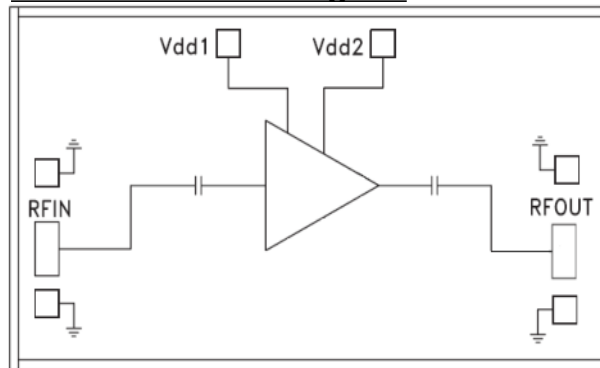


**Features**

- Frequency: 6-20GHz
- Small Signal Gain: 15dB
- Gain Flatness:  $\leq \pm 0.35\text{dB}$
- P1dB: 19.5dBm
- Psat: 20.5dBm
- Power Supply: +5V/110mA
- Input/Output: 50Ω
- Die Size: 1.025 x 1.05 x 0.1 mm

**Functional Block Diagram**

**Typical Applications**

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

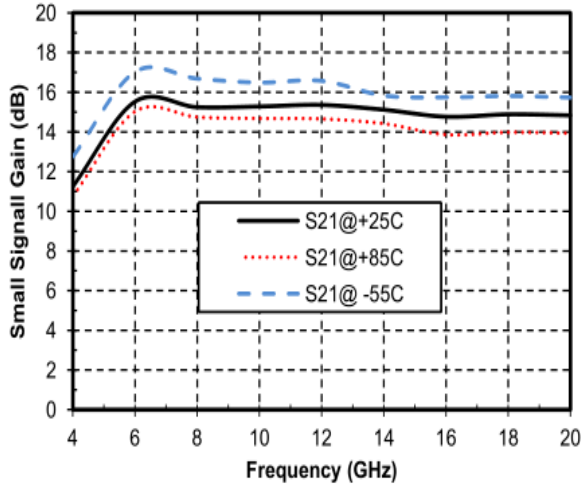
**Electrical Specifications**

TA = +25°C, Vd = +5V

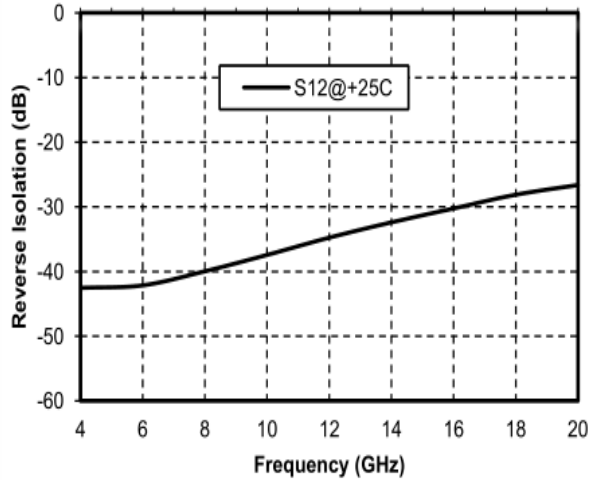
Parameters	Min.	Typ.	Max.	Units
Frequency	6-20			GHz
Small Signal Gain	14.5	15	15.5	dB
Gain Flatness		$\pm 0.35$		dB
Output 1dB Compression (P1dB)	19	19.5	20.5	dBm
Saturated Output Power (Psat)	20	20.5	21	dBm
Input Return Loss	5	19		dB
Output Return Loss	12	18		dB
Static Current		110		mA



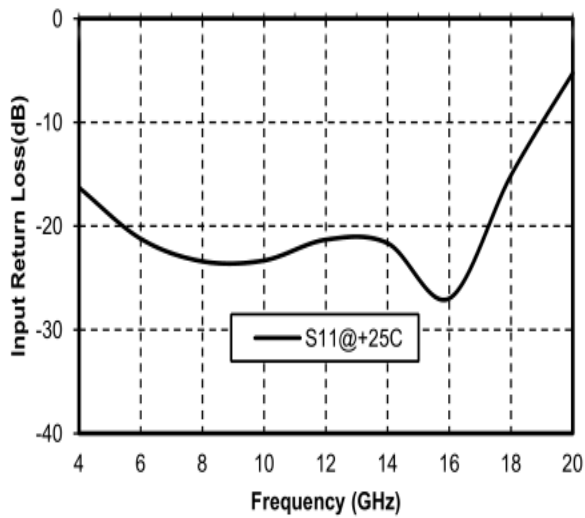
### Gain vs. Frequency



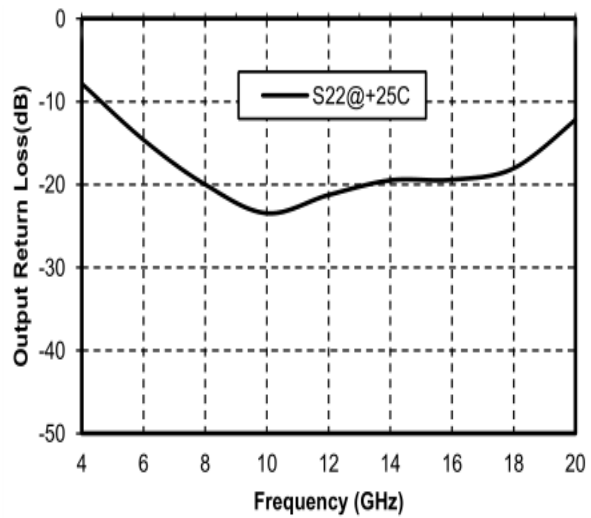
### Reverse Isolation vs. Frequency



### Input Return Loss vs. Frequency

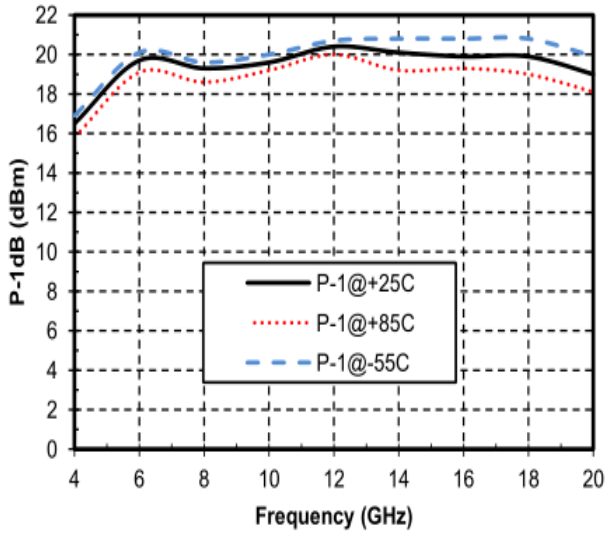


### Output Return Loss vs. Frequency

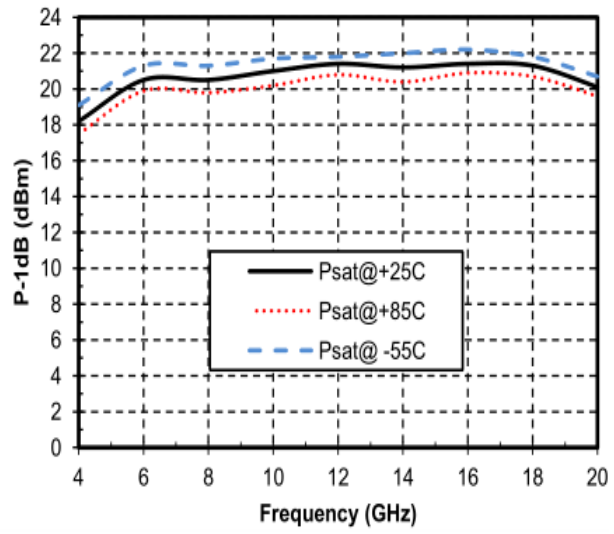




### P-1dB vs. Frequency



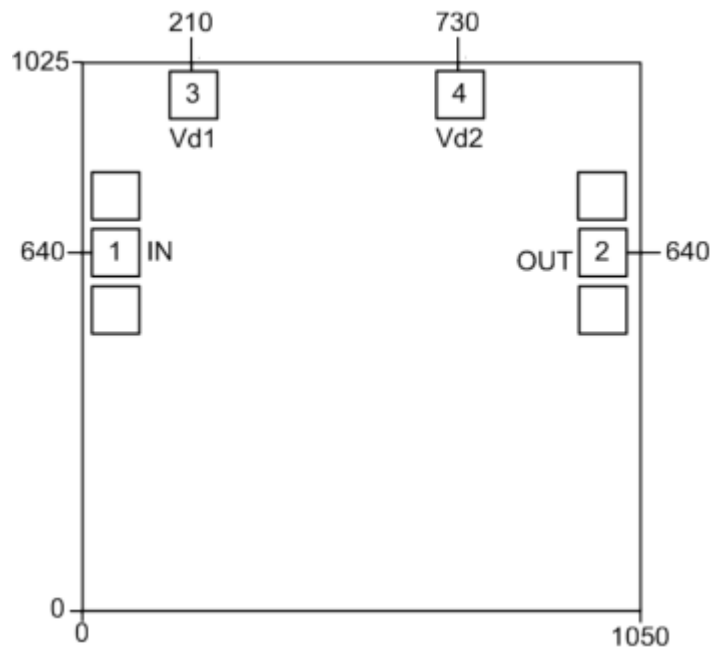
### Psat vs. Frequency





### Outline Drawing:

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

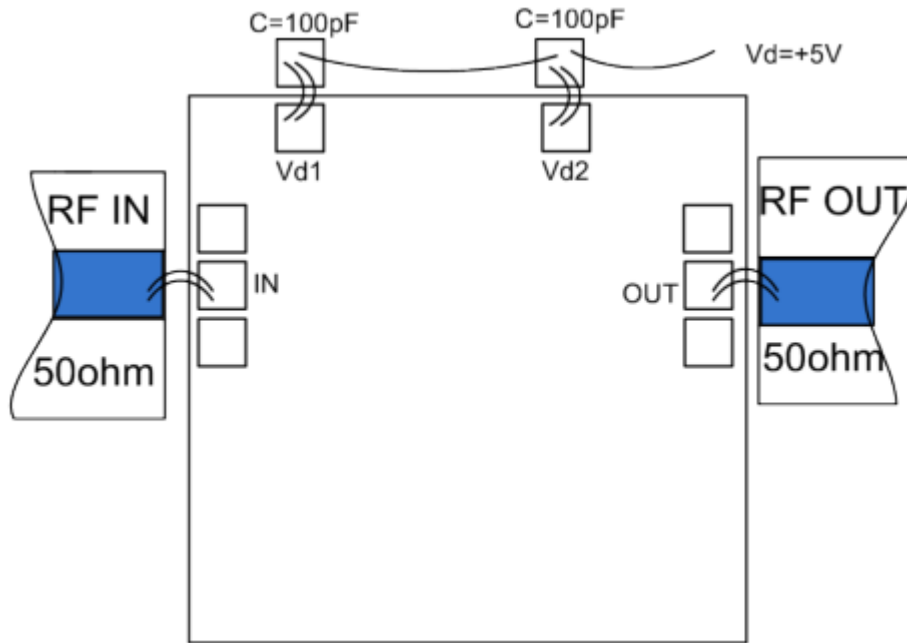


### Pad Description

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, 4	Vd	Amplifier drain bias, connected to external 100pF 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\*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: +7V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C