

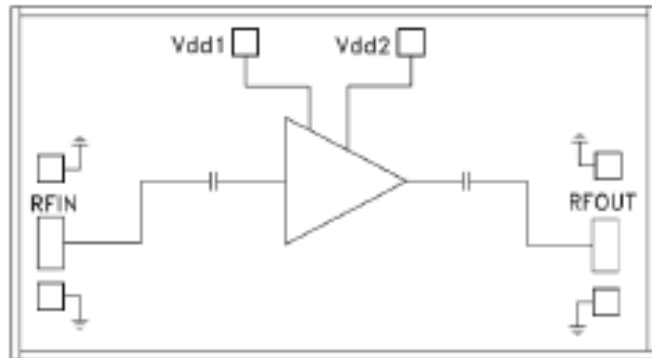
### Features

- Frequency: 6-20GHz
- Small Signal Gain: 15dB
- Gain Flatness:  $\leq \pm 2.0$ dB
- Noise Figure: 5.5dB typ.
- P1dB: 20.5dBm
- Psat: 21dBm
- Power Supply: +5V/107mA
- Input/Output: 50 $\Omega$
- Die Size: 1.025 x 1.05 x 0.1 mm

### Typical Applications

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

### Functional Block Diagram

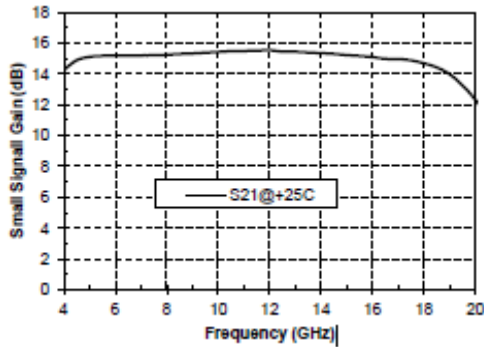


### Electrical Specifications

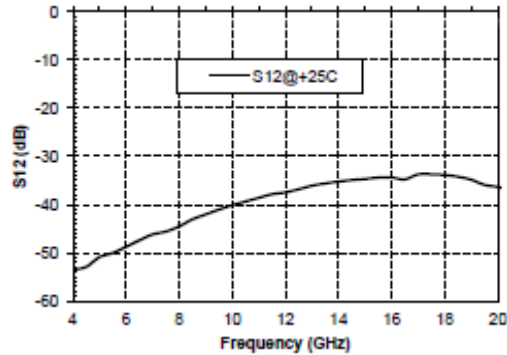
TA = +25°C, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		6-20		GHz
Small Signal Gain		15		dB
Gain Flatness		$\pm 1.0$		dB
Noise Figure	-	5.5		dB
Output 1dB Compression (P1dB)		20.5		dBm
Saturated Output Power (Psat)		21		dBm
Input Return Loss		12		dB
Output Return Loss		15		dB
Static Current		107		mA

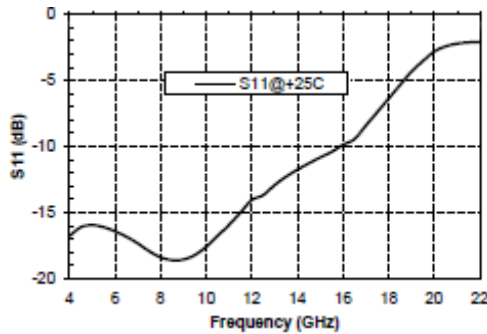
Gain vs. Frequency



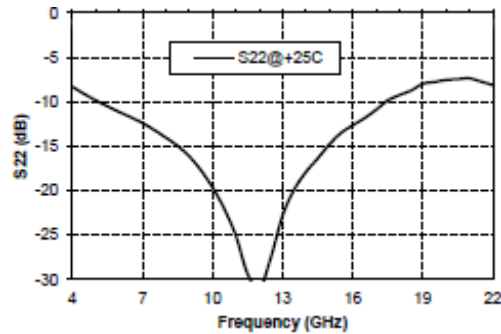
Reverse Isolation vs. Frequency



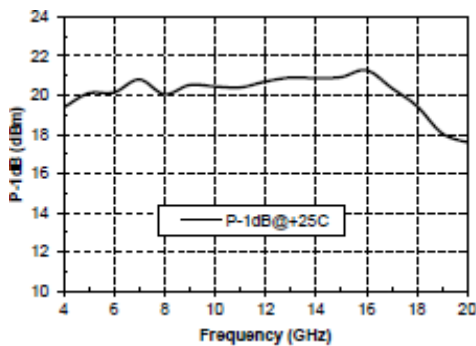
Input Return Loss vs. Frequency



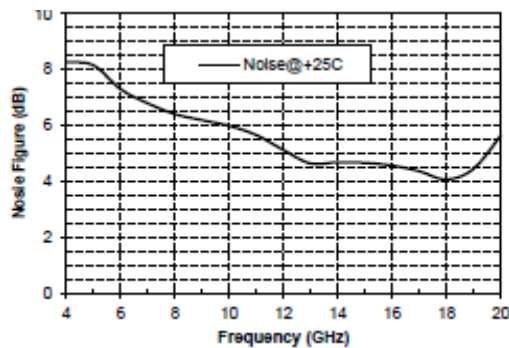
Output Return Loss vs. Frequency



P1dB vs. Frequency

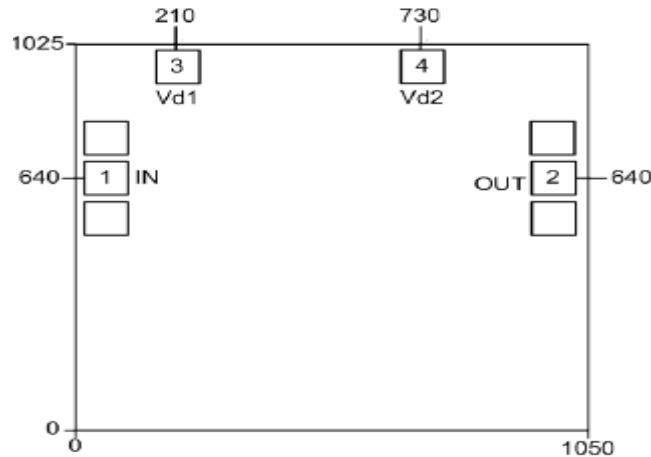


Noise Figure vs. Frequency





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

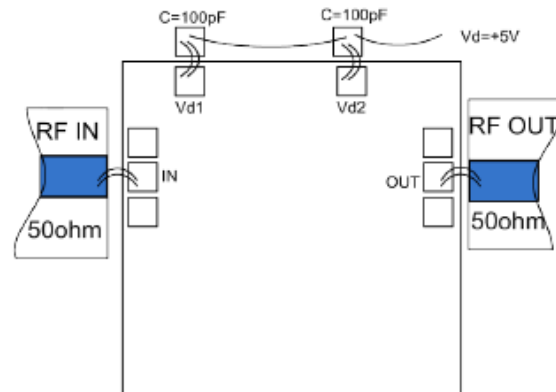


**Pad Description**

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; 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: +7V
2. Maximum input power: +20dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C