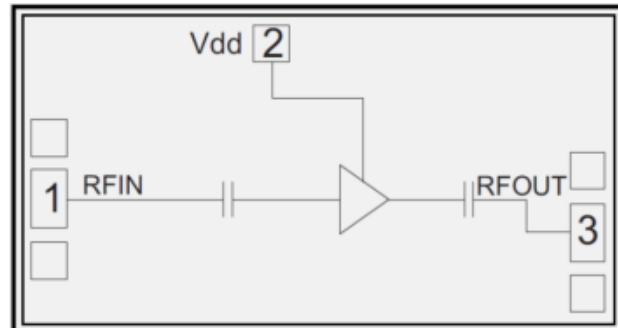


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 5-12GHz
- Small Signal Gain: 12.5dB
- Gain Flatness:  $\leq \pm 0.5$ dB
- Noise Figure: 2.2dB
- P1dB: 20dBm
- Psat: 21dBm
- Power Supply: +5V/77mA
- Input/Output: 50Ω
- Die Size: 1.2 x 1.15 x 0.1 mm

**Typical Applications**

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

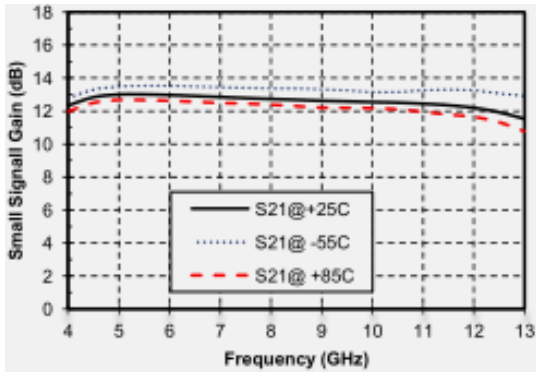
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, Vd = +5V

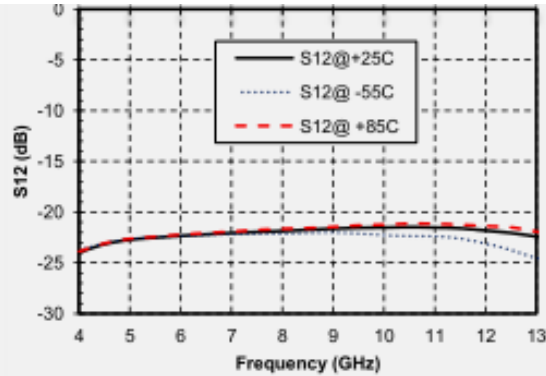
Parameters	Min.	Typ.	Max.	Units
Frequency		5-12		GHz
Small Signal Gain	11.5	12.5	14	dB
Gain Flatness		$\pm 0.5$		dB
Noise Figure		2.2		dB
Output 1dB Compression (P1dB)		20		dBm
Saturated Output Power (Psat)		21		dBm
Input Return Loss		17		dB
Output Return Loss		17		dB
Static Current	65	77	90	mA



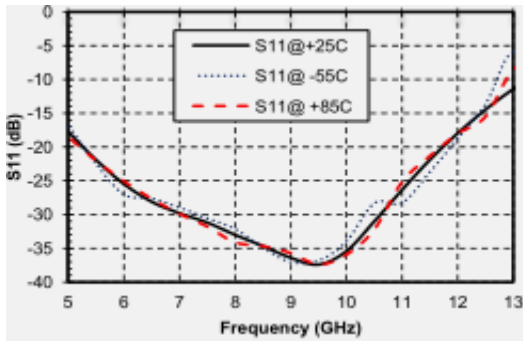
### Gain vs. Frequency



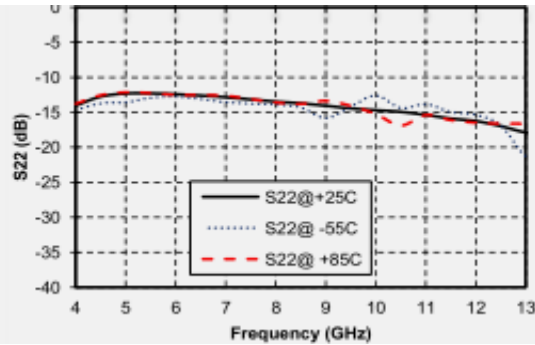
### Reverse Isolation & Frequency



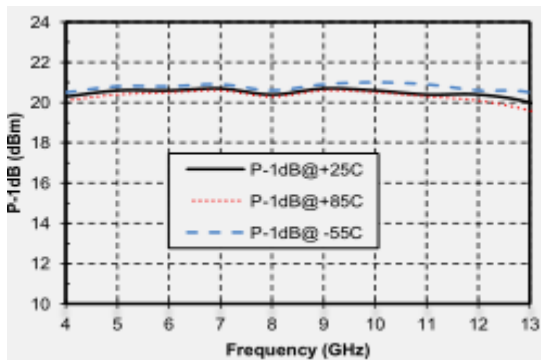
### Input Return Loss vs. Frequency



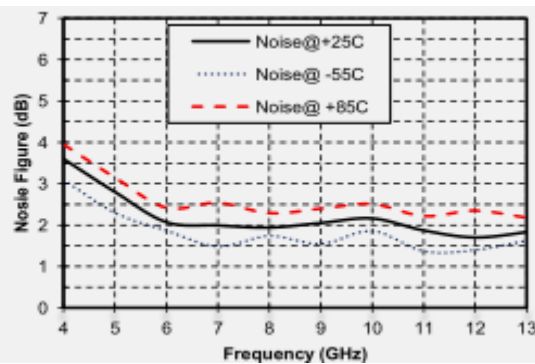
### Output Return Loss vs. Frequency



### P1dB vs. Frequency

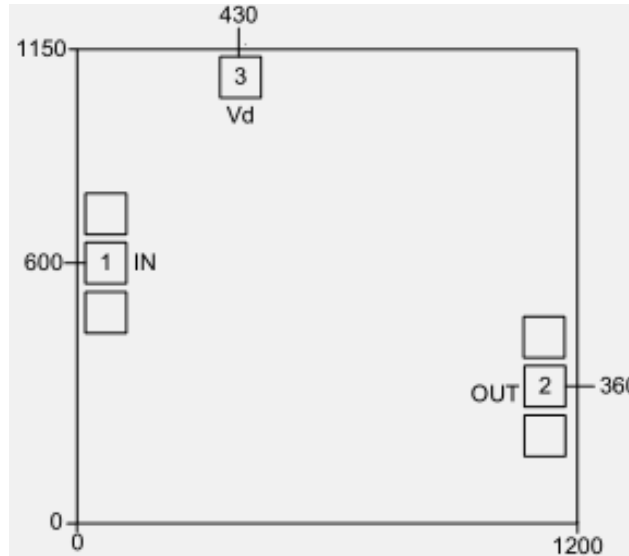


### Noise Figure vs. Frequency





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

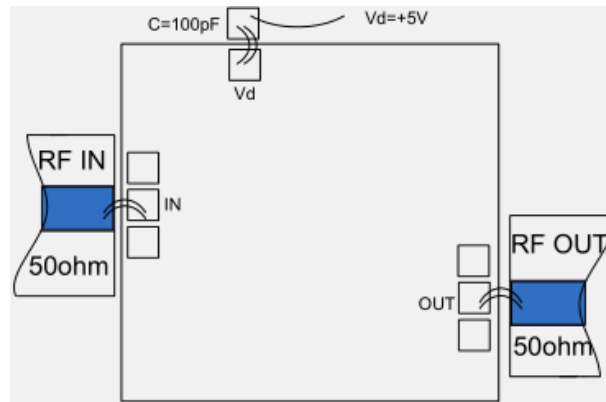


**Pad Description**

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	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
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C