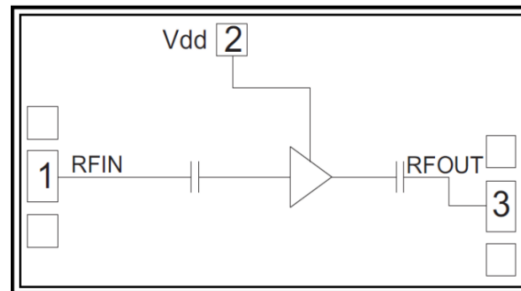


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 2-4GHz
- Small Signal Gain: 29dB
- Noise Figure: 0.6dB max.
- P1dB: 7dBm
- Power Supply: +5V/15mA
- Input/Output: 50Ω
- Die Size: 1.85 x 1.25 x 0.1 mm

**Functional Block Diagram**



**Typical Applications**

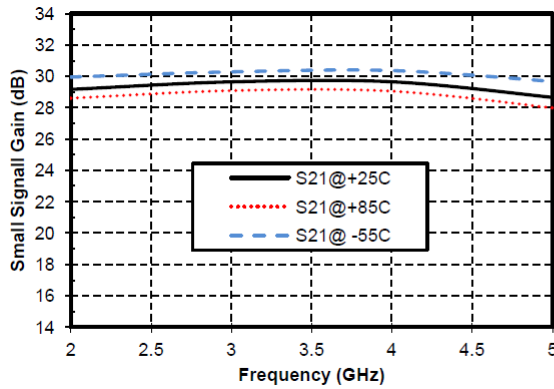
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Electrical Specifications**

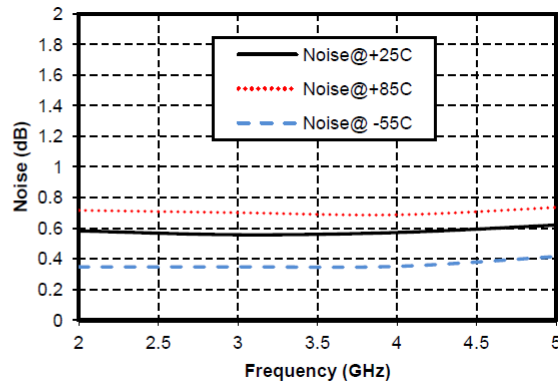
TA = +25°C, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency	2-4			GHz
Small Signal Gain		29		dB
Gain Flatness		±0.25		dB
Noise Figure			0.6	dB
Output 1dB Compression (P1dB)	6.5	7	7.5	dBm
Saturated Output Power (Psat)	8	8.5	9	dBm
Input Return Loss	10	14	-	dB
Output Return Loss	18	24	-	dB
Static current		15		mA

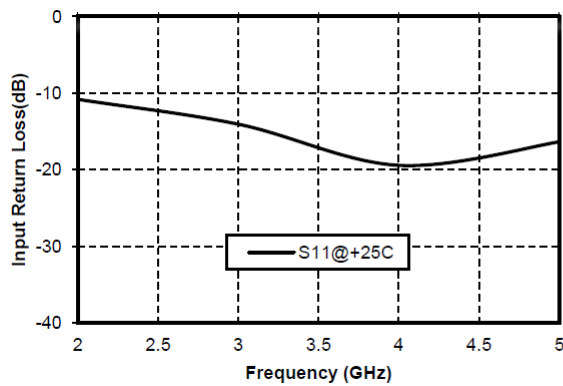
### Gain vs. Frequency



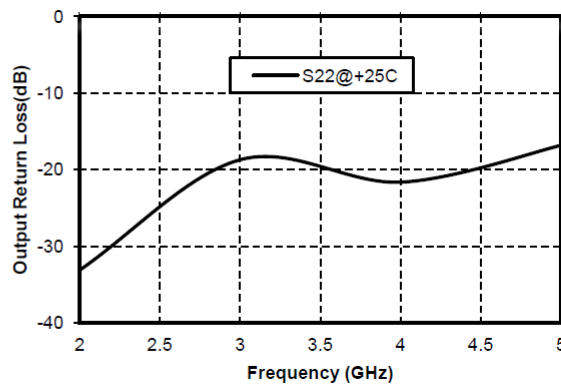
### Noise Figure vs. Frequency



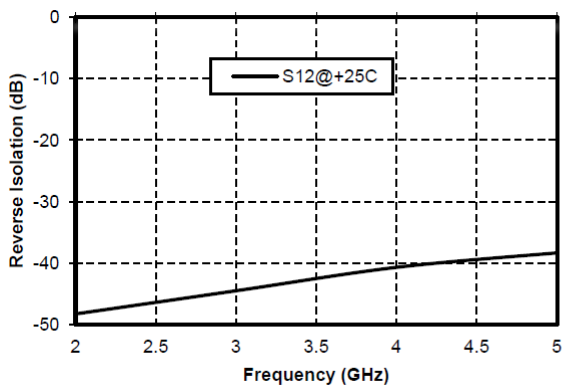
### Input Return Loss vs. Frequency



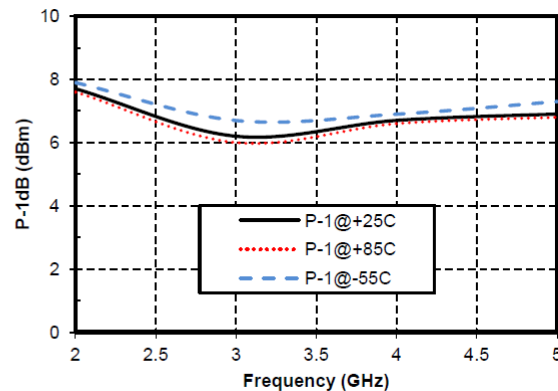
### Output Return Loss vs. Frequency



### Reverse Isolation vs. Frequency

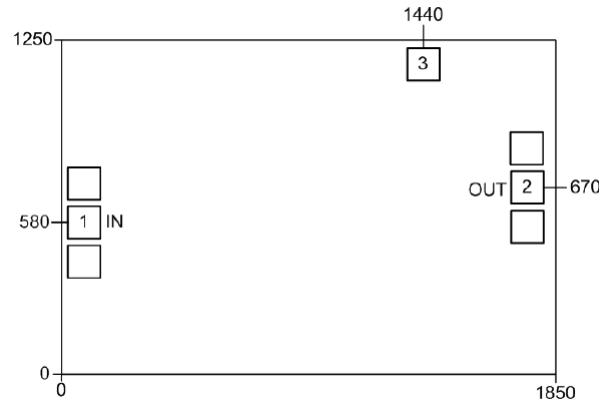


### P1dB vs. Frequency





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

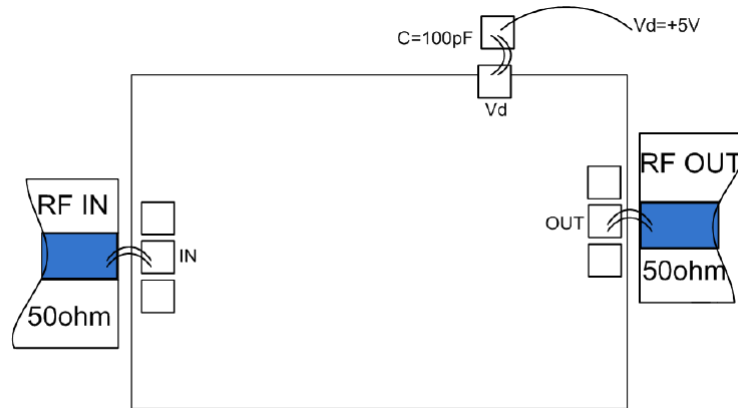


**Pad Description**

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	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