

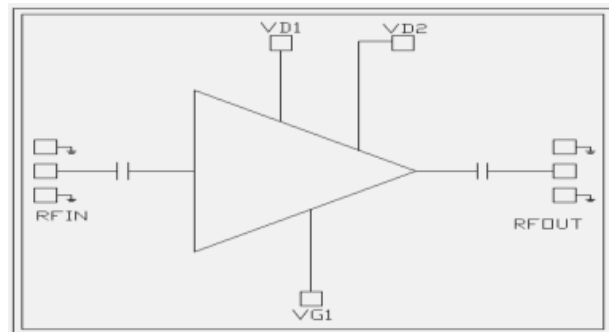
### Features

- Frequency: 6-18GHz
- Small Signal Gain: 17dB
- Noise Figure: 2.2dB
- P1dB: 25dBm
- Psat: 26dBm
- Power Supply: +7V/290mA
- Input/Output: 50Ω
- Die Size: 1.35 x 1.025 x 0.1 mm

### Typical Applications

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

### Functional Block Diagram



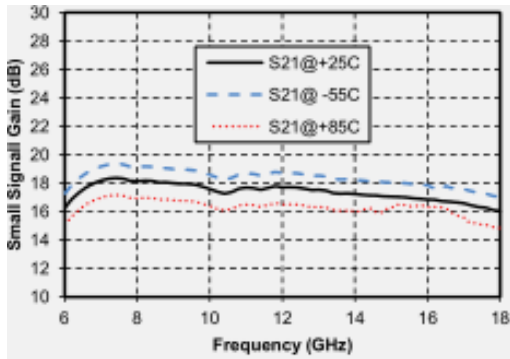
### Electrical Specifications

TA = +25°C, Vd = +7V

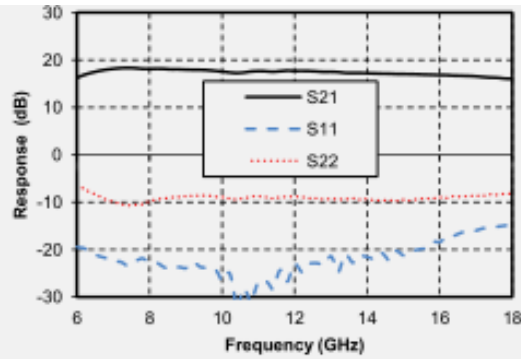
Parameters	Min.	Typ.	Max.	Units
Frequency	6-18			GHz
Small Signal Gain	16	17	18	dB
Gain Flatness	-	±1.0	-	dB
Noise Figure		2.2	-	dB
Output 1dB Compression (P1dB)	19	25	25.5	dBm
Psat	21	26	26.5	dBm
OIP3		32		dBm
Input Return Loss		18		dB
Output Return Loss		8		dB
Static Current		290		mA
* Adjust VG (-2V-0V) to obtain device current of 290mA.				



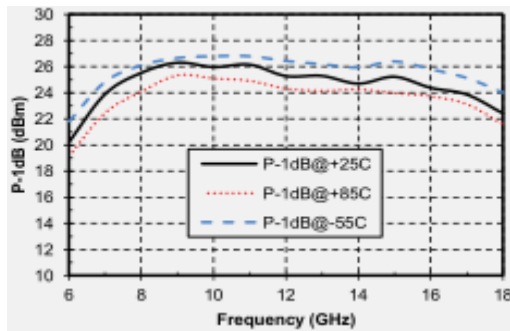
### Gain vs. Frequency



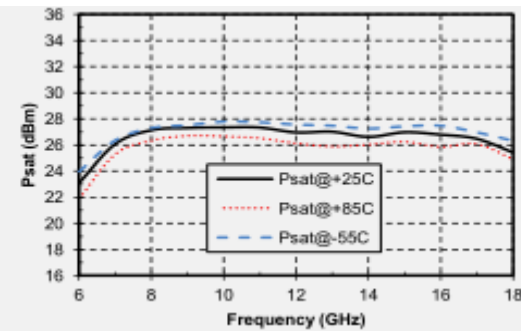
### Input/Output Return Loss vs. Frequency



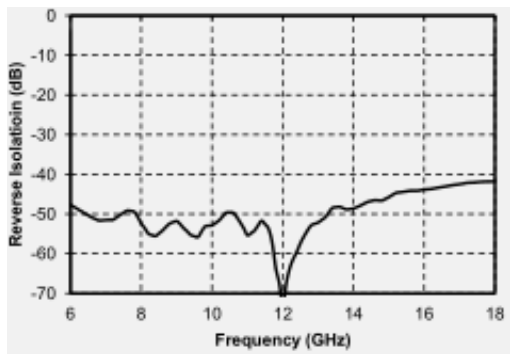
### P1dB vs. Frequency



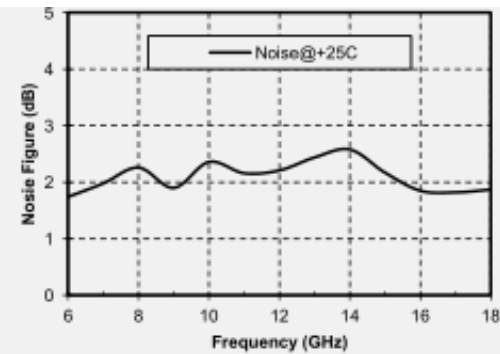
### Psat vs. Frequency



### Reverse Isolation vs. Frequency



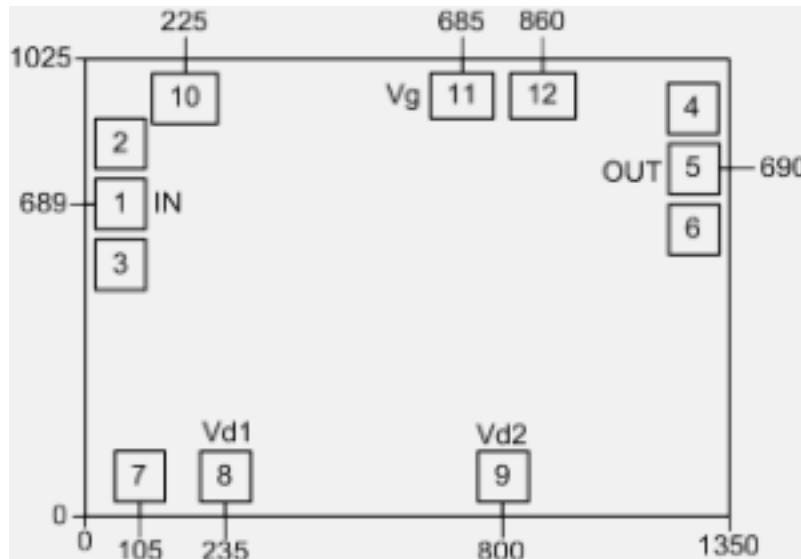
### Noise Figure vs. Frequency





## Outline Drawing:

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

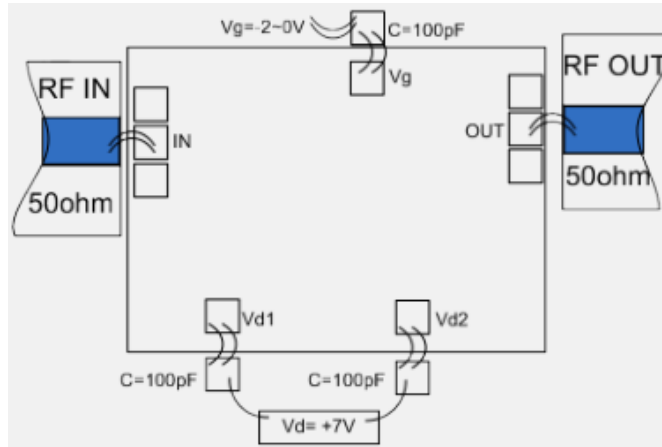


## Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal; no blocking capacitor required.	
5	RF OUT	RF signal output terminal; no blocking capacitor required.	
8	Vd1	Amplifier drain bias; external 100pF bypass capacitor required.	
9	Vd2	Amplifier drain bias; external 100pF bypass capacitor required.	
11	Vg	Amplifier gate bias; external 100pF bypass capacitor required.	
2, 3, 4, 6, 10, 12	GND	Ground point for probe test.	
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: +9V
2. Maximum gate bias: -3V
3. Maximum input power: +15dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C