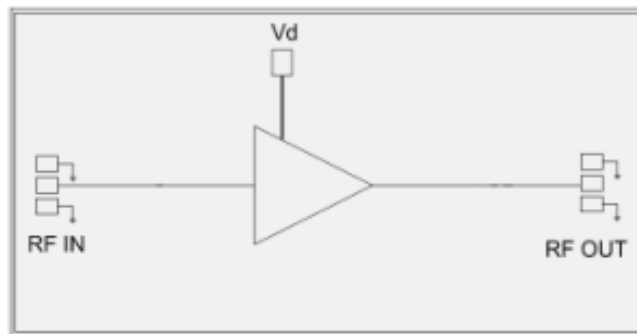


**Features**

- Frequency: 2-18GHz
- Small Signal Gain: 13dB
- P1dB: 27.5dBm
- Psat: 28.5dBm
- Power Supply: +10V/350mA
- Input/Output: 50Ω
- Die Size: 2.25 x 1.45 x 0.1 mm

**Typical Applications**

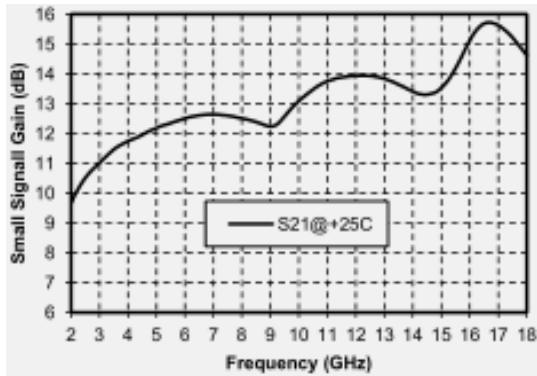
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

**Electrical Specifications**

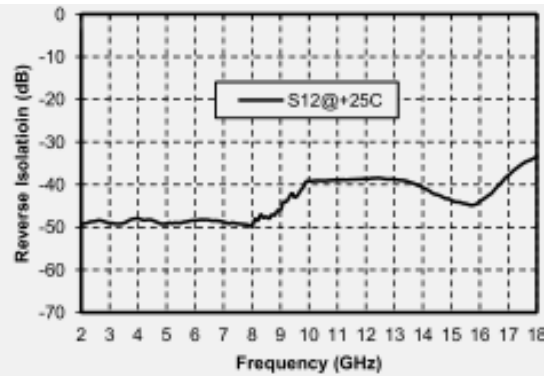
TA = +25°C, Vd = +10V, Ids=350mA

Parameters	Min.	Typ.	Max.	Units
Frequency	2-18			GHz
Small Signal Gain	9.5	13	15.5	dB
Gain Flatness	±3			dB
Output 1dB Compression (P1dB)	26.5	27.5	28.5	dBm
Saturated Output Power (Psat)	27.5	28.5	29.5	dBm
Input Return Loss	15	18	-	dB
Output Return Loss	10	12	-	dB
Thermal Resistance	Basal plate temperature +85°C, RF signal input, Rth=18.5°C/W			

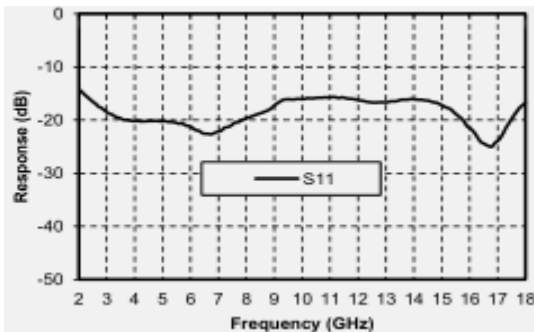
Gain vs. Frequency



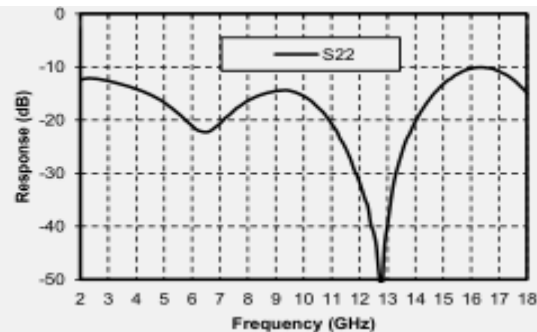
Reverse Isolation vs. Frequency



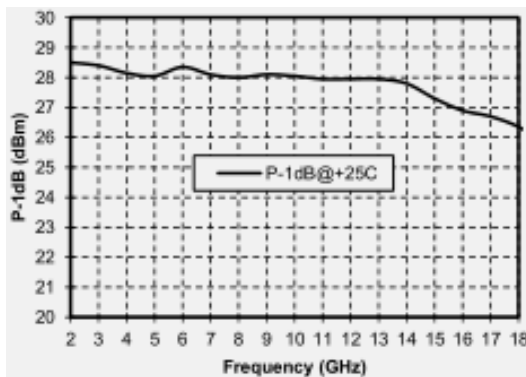
Input Return Loss vs. Frequency



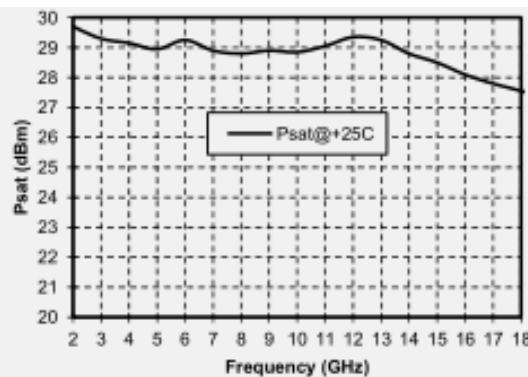
Output Return Loss vs. Frequency



P1dB vs. Frequency



Psat vs. Frequency





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

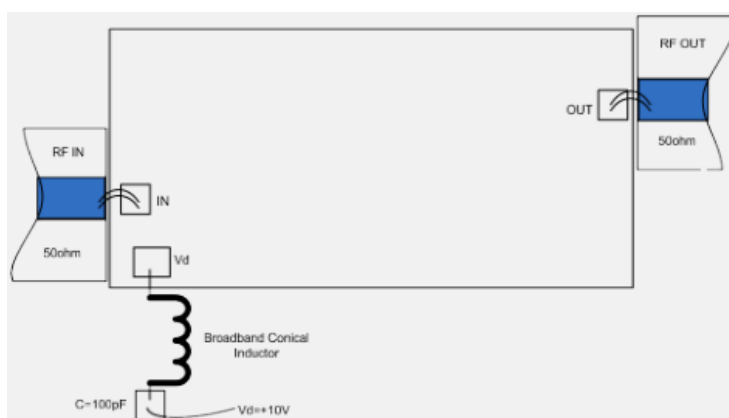


**Pad Description**

Pad	Function	Description	Equivalent Circuit
1	RF IN	Signal input terminal, connected to 50Ω circuit; blocking capacitor required.	
2	RF OUT	Signal output terminal, connected to 50Ω circuit; blocking capacitor required.	
3	Vd	Amplifier drain bias, connected to external wide-band inductor and 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: +14V
2. Maximum gate bias: -3V
3. Maximum input power: +23dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C