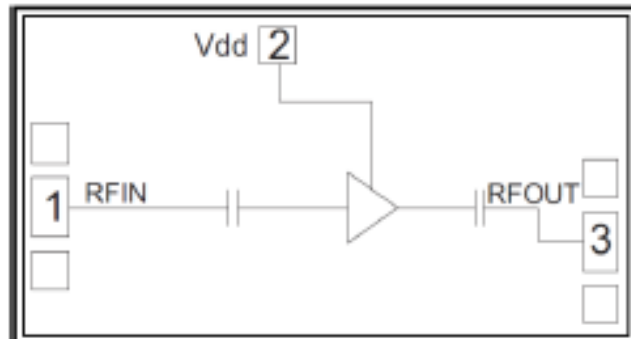


Features

- Single Biasing Voltage (Self Biased)
- Frequency: 6-18GHz
- Small Signal Gain: 19.5dB
- Gain Flatness: $\leq \pm 0.5$ dB
- P1dB: 21dBm
- Psat: 22dBm
- Power Supply: +5V/130mA
- Input/Output: 50 Ω
- Die Size: 1.65 x 1.15 x 0.1 mm

Typical Applications

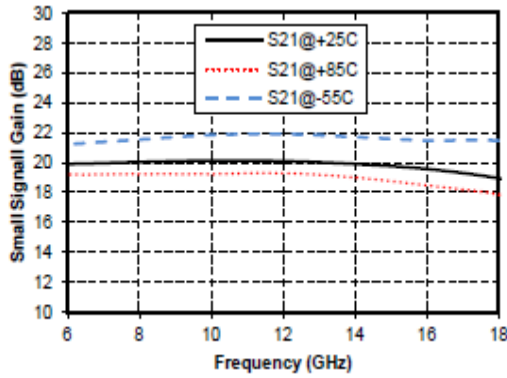
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications

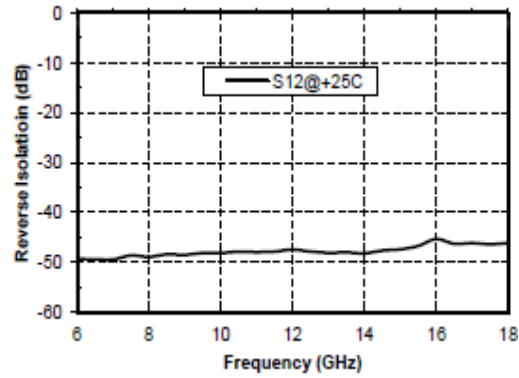
TA = +25°C, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency	6-18			GHz
Small Signal Gain	19	19.5	20	dB
Gain Flatness	± 0.5			dB
Output 1dB Compression (P1dB)	21	21	21.5	dBm
Saturated Output Power (Psat)	21.5	22	22.5	dBm
Input Return Loss	17	22	-	dB
Output Return Loss	12	15	-	dB
Static Current		130		mA

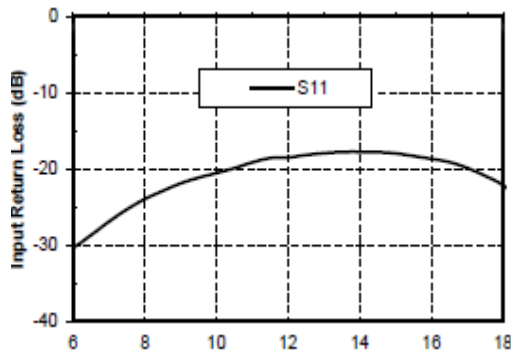
Gain vs. Frequency



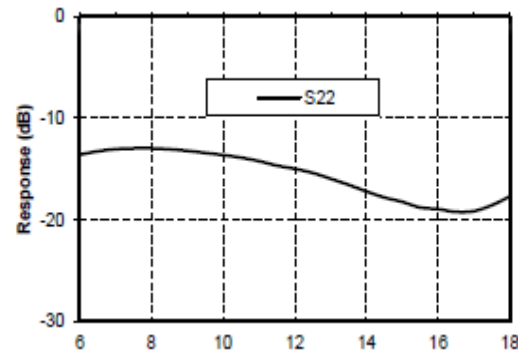
Reverse Isolation vs. Frequency



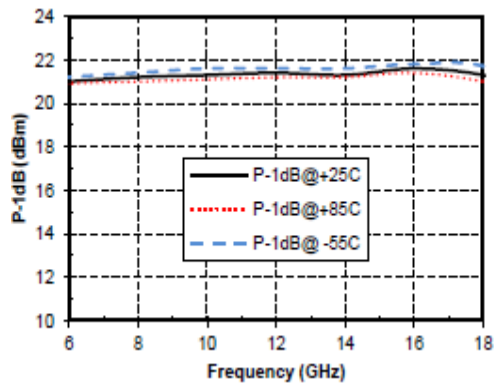
Input Return Loss vs. Frequency



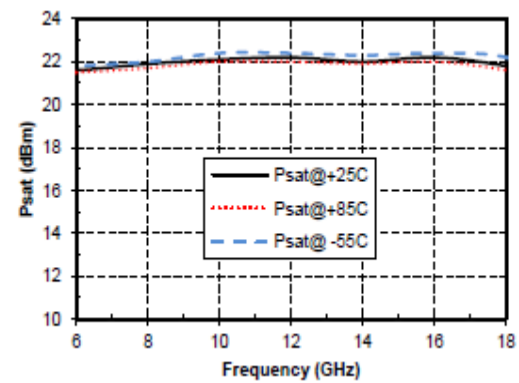
Output Return Loss vs. Frequency



P1dB vs. Frequency

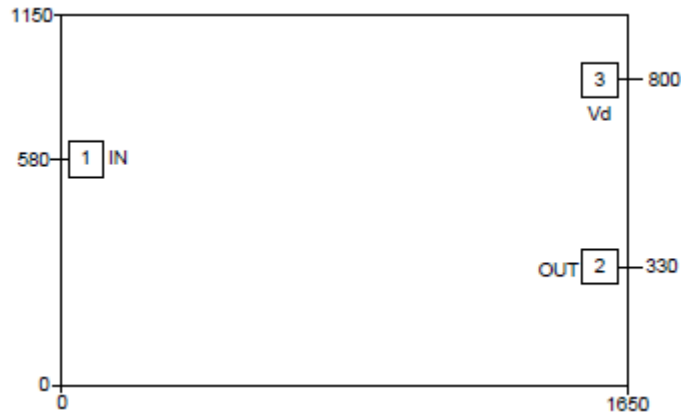


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm



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 μm^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