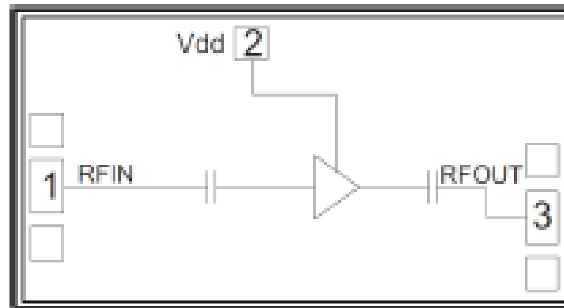
Features

- Single Biasing Voltage (Self Biased)
- Frequency: 2-20GHz
- Small Signal Gain: 19.5dB
- Gain Flatness: ≤±1.0dB
- P1dB: 21dBm
- Psat: 22dBm
- Power Supply: +5V/130mA
- Input/Output: 50Ω
- Die Size: 1.65 x 1.15 x 0.1 mm

Functional Block Diagram



Typical Applications

Test Instrumentation

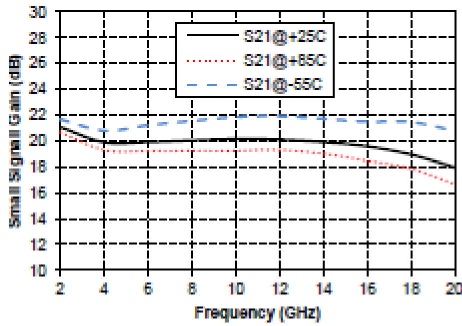
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

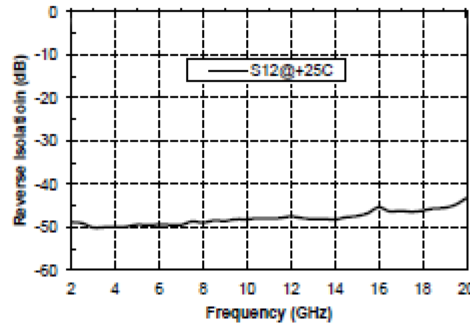
TA = +25ºC, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		**2-20**		**GHz**
Small Signal Gain	**18**	**19.5**	**20**	**dB**
Gain Flatness		**±1.0**		**dB**
Output 1dB Compression (P1dB)	**20.5**	**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**

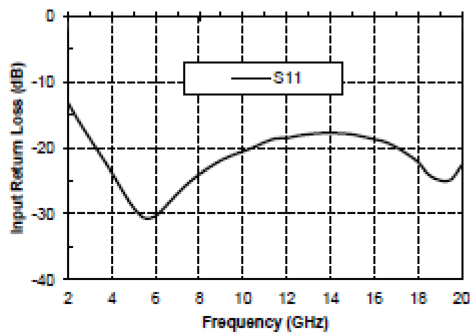
Gain vs. Frequency



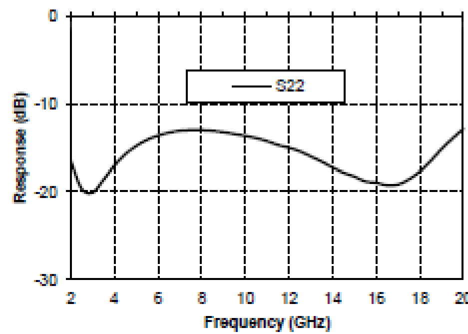
Reverse Isolation vs. Frequency



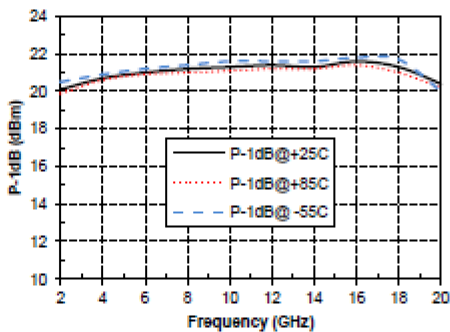
Input Return Loss vs. Frequency



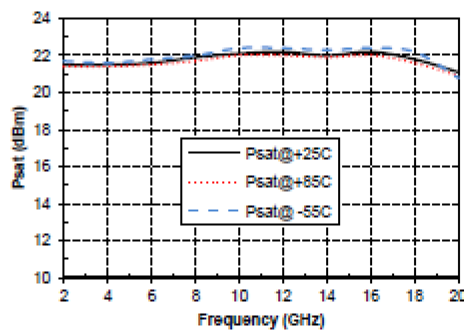
Output Return Loss vs. Frequency



P1dB vs. Frequency

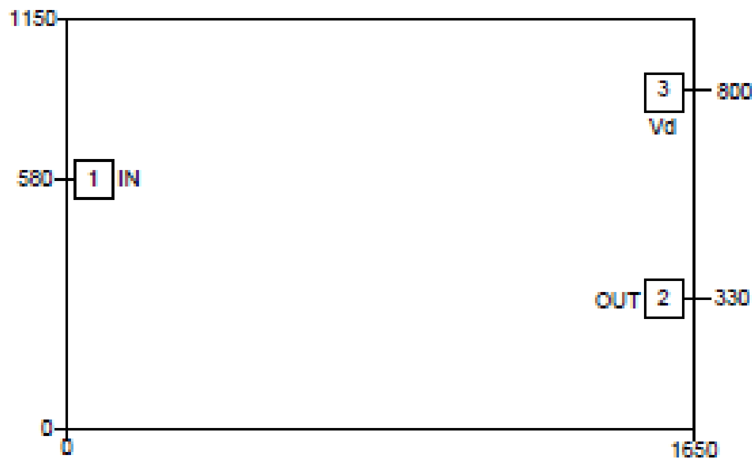


Psat vs. Frequency



Outline Drawing:

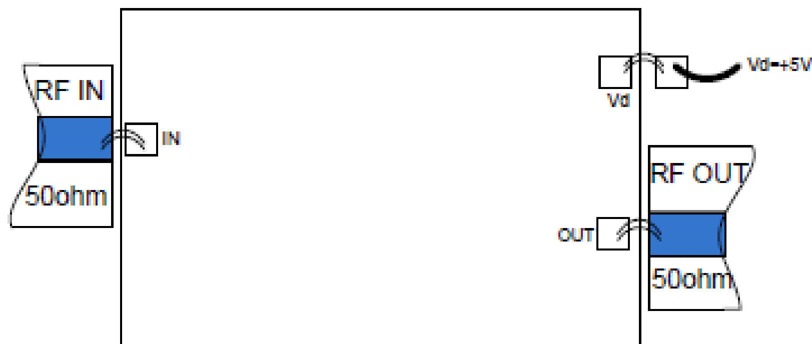
All Dimensions in µm



Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal; no blocking capacitor required.	
5	RF OUT	RF signal output terminal; no blocking capacitor required.	
8	Vd	Amplifier drain bias; external 100pF bypass capacitor required.	
Die bottom	GND	Die bottom must be connected to RF/DC ground.	GND

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℃ to +85℃
5. Storage temperature: -65℃ to +150℃