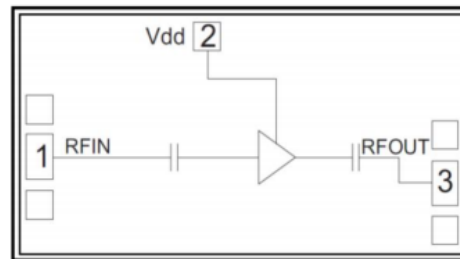


Features

- Single Biasing Voltage(Self Biased)
- Frequency: 0.5-20GHz
- Small Signal Gain: 13dB
- Noise Figure: 1.9dB typ.
- P1dB: 13.5dBm
- Power supply: +5V/20mA(Static)
- Input/Output: 50Ω
- Die Size: 1.6 x 0.95 x 0.1 mm

Typical Applications

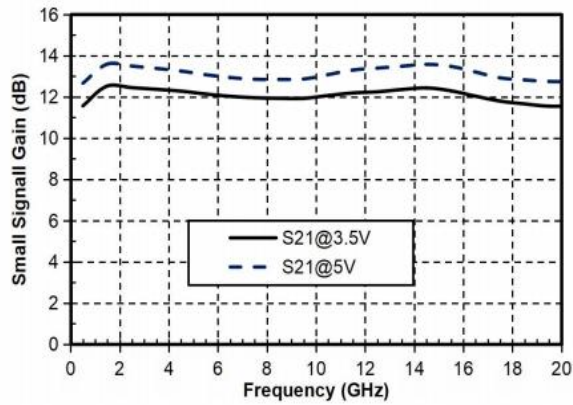
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications
TA = +25°C, Vd = +5V

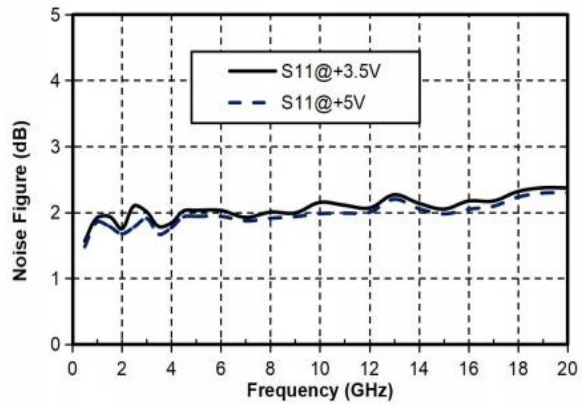
Parameters	Min.	Typ.	Max.	Units
Frequency	0.5-20			GHz
Small Signal Gain	-	13	-	dB
Gain Flatness		±0.5		dB
Noise Figure	-	1.9	-	dB
Output 1dB Compression (P1dB)	-	13.5	-	dBm
Psat		17		dBm
Input Return Loss	-	15	-	dB
Output Return Loss	-	15	-	dB
Static current	-	20	-	mA
P-1 current		30		mA
*The noise figure test instrument is a noise meter.				

***+3.5V Operating Quiescent Current 15mA.**

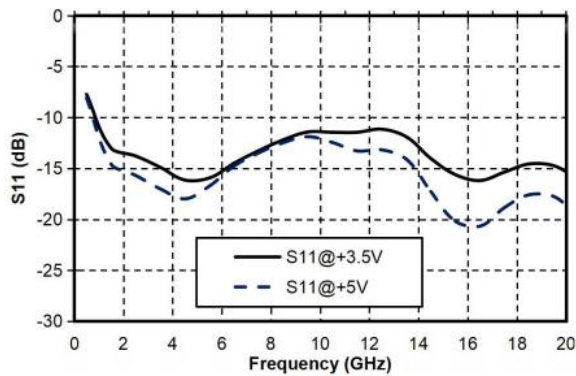
Gain vs. Frequency



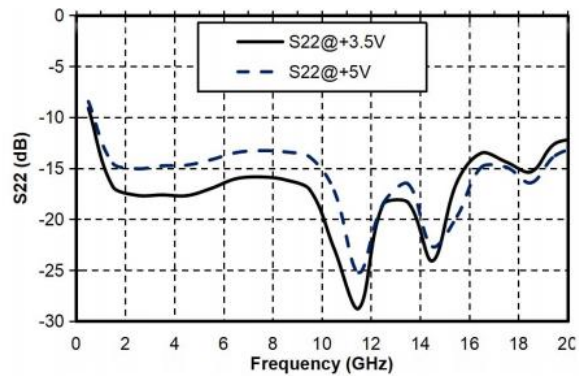
Noise Figure vs. Frequency



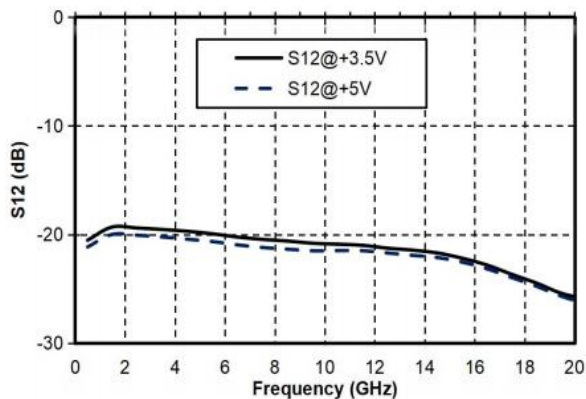
Input Return Loss vs. Frequency



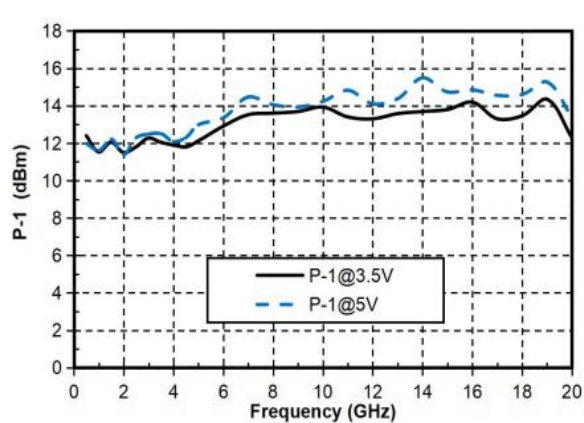
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

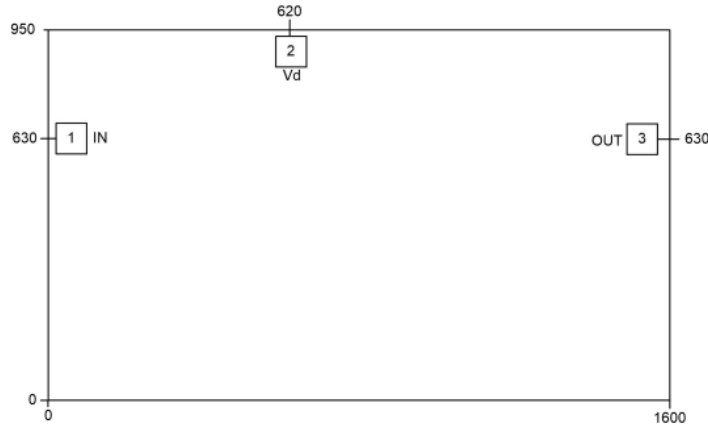


P1dB vs. Frequency





Outline Drawing: All Dimensions in μm

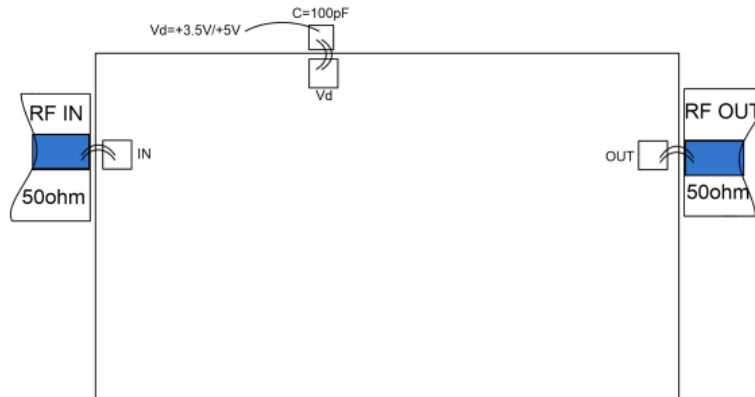


Pad Description

Pad	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required.
3	RF OUT	RF signal output terminal, no blocking capacitor required.
2	VDD	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
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C