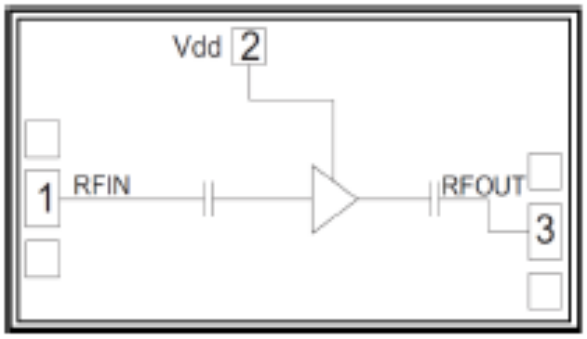
Features

- Single Biasing Voltage (Self Biased)
- Frequency: 8-12GHz
- Small Signal Gain: 21.5dB
- Noise Figure: 0.9 dB max.
- P1dB: 8dBm
- Power supply: +5V/30mA
- Input/Output: 50Ω
- Die Size: 2.0 x 1.25 x 0.1 mm

Functional Block Diagram



Typical Applications

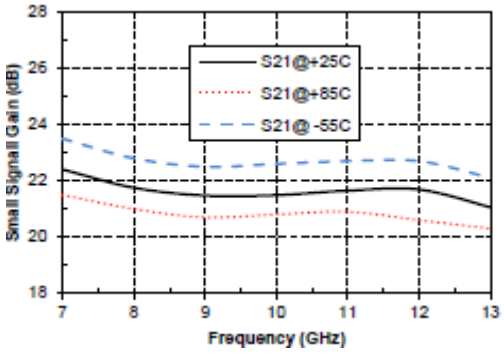
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

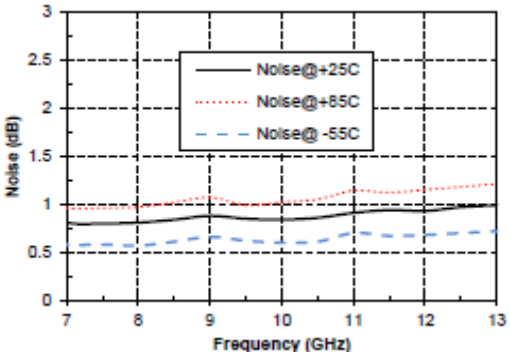
TA = +25ºC, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Small Signal Gain	-	21.5	-	dB
Gain Flatness		±0.2		dB
Noise Figure	-	-	0.9	dB
Output 1dB Compression (P1dB)	6.5	8	9	dBm
Input Return Loss	11	15	-	dB
Output Return Loss	2	25	-	dB
Static current		32		mA

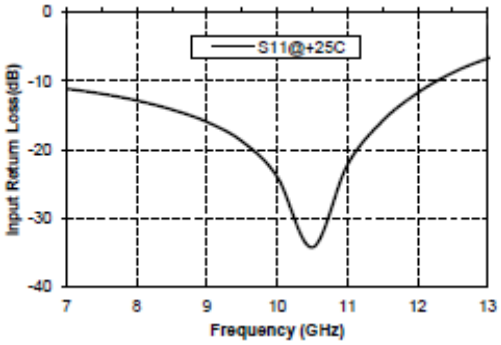
Gain vs. Frequency



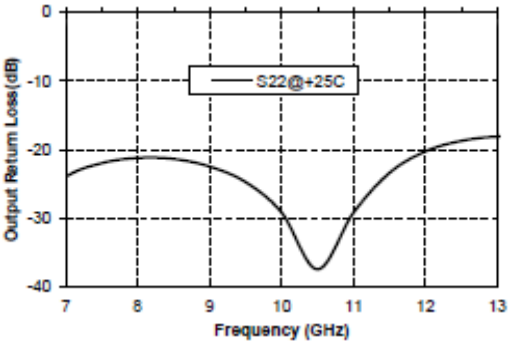
Noise Figure vs. Frequency



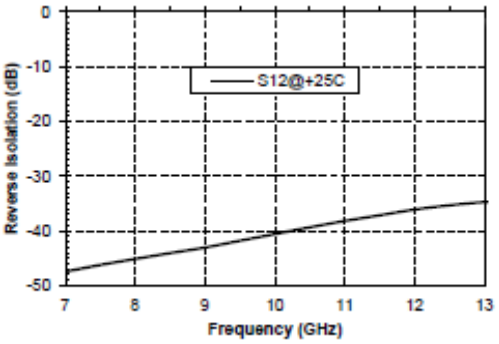
Input Return Loss vs. Frequency



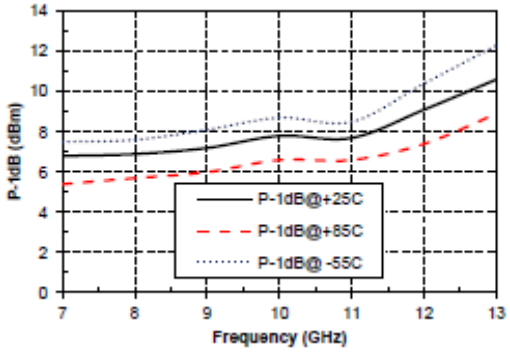
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency



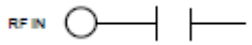
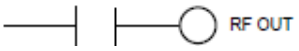
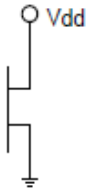
P1dB vs. Frequency



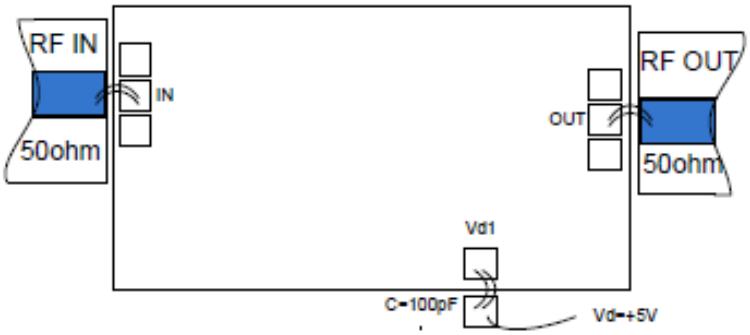
Outline Drawing:

All Dimensions in µm

Pad Description

Pad	Function	Description	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	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℃ to +85℃
4. Storage temperature: -65℃ to +150℃