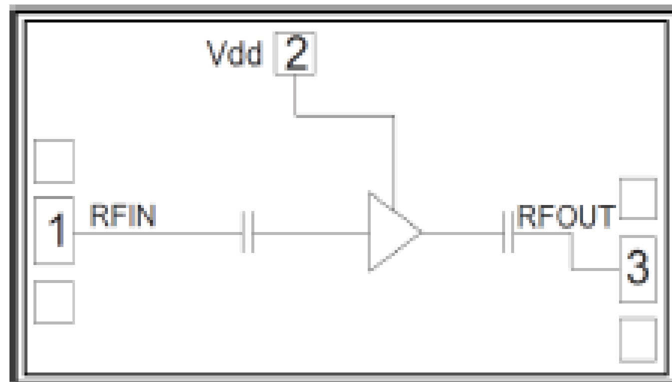
Features

- Frequency: 11-13GHz
- Small Signal Gain: 25dB
- Noise Figure: 1.1 dB typ.
- P1dB: 3dBm
- Power Supply: +5V/10mA
- Input/Output: 50Ω
- Die Size: 1.75 x 0.8 x 0.09 mm

Functional Block Diagram



Typical Applications

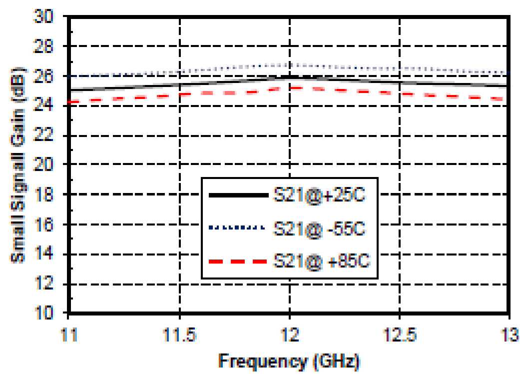
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

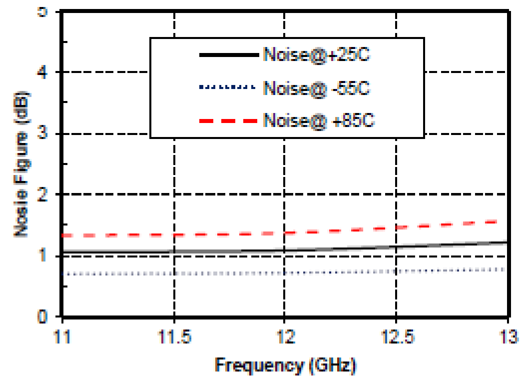
TA = +25°C, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		11-13		GHz
Small Signal Gain	-	25	-	dB
Gain Flatness		-		dB
Noise Figure	-	1.1	1.2	dB
Output 1dB Compression (P1dB)	2.5	3	3.5	dBm
P-3dB	4	4.5	5	dBm
Input Return Loss	11	14	-	dB
Output Return Loss		11		dB
Static Current		10		mA

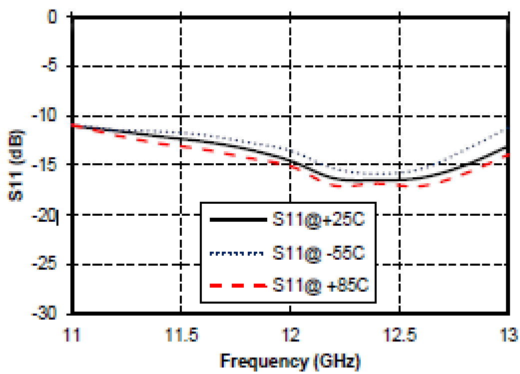
Gain vs. Frequency



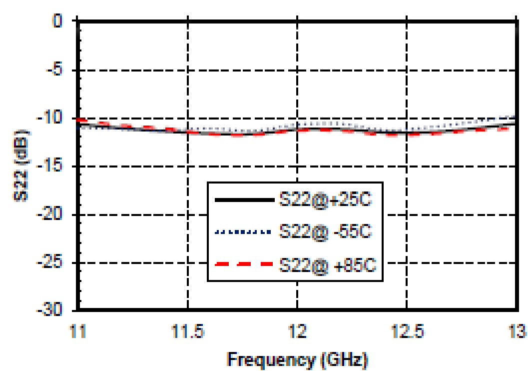
Noise Figure vs. Frequency



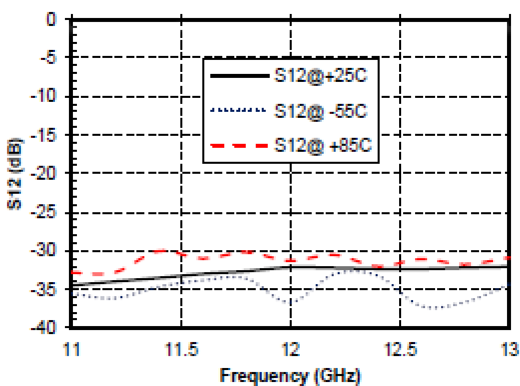
Input Return Loss vs. Frequency



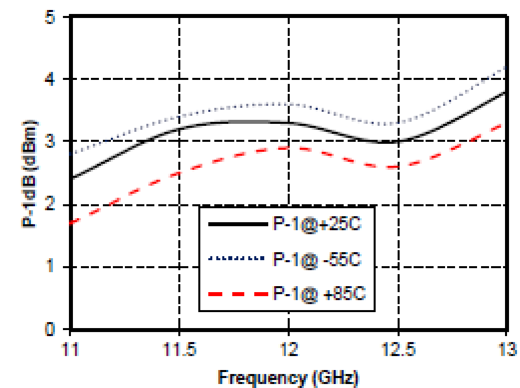
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

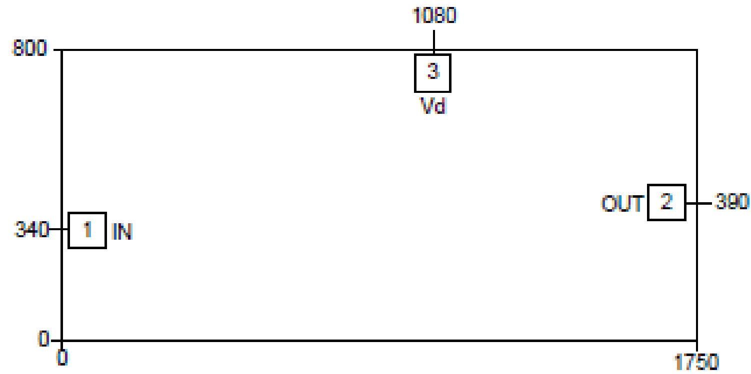


P1dB vs. Frequency



Outline Drawing:

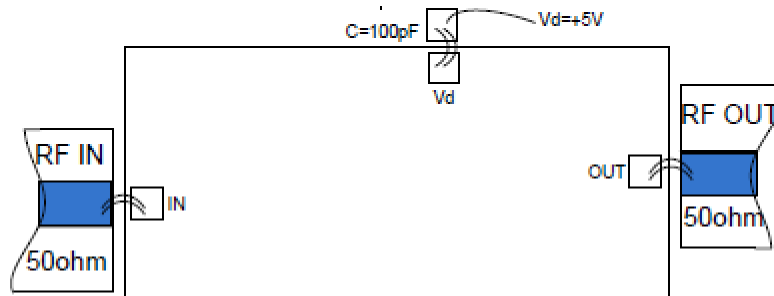
All Dimensions in µm



Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal, no blocking capacitor required.	RF IN
2	RF OUT	RF signal output terminal, no blocking capacitor required.	RF OUT
3	VDD	Amplifier drain bias; external 100pF bypass capacitor required.	Vdd
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 μm²
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℃