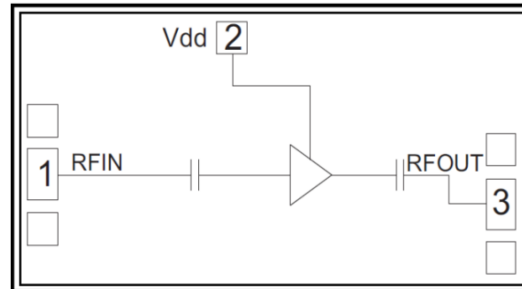


Features

- Frequency: 30-40GHz
- Small Signal Gain: 22dB
- Noise Figure: 2.0 dB typ./2.1dB max.
- P1dB: 4dBm
- Power Supply: +5V/12mA
- Input/Output: 50Ω
- Die Size: 1.6 x 0.8 x 0.09 mm

Functional Block Diagram

Typical Applications

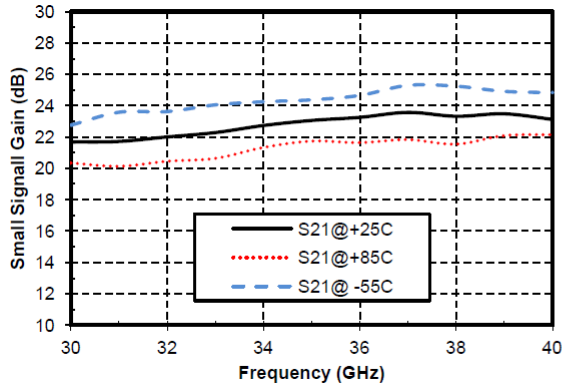
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

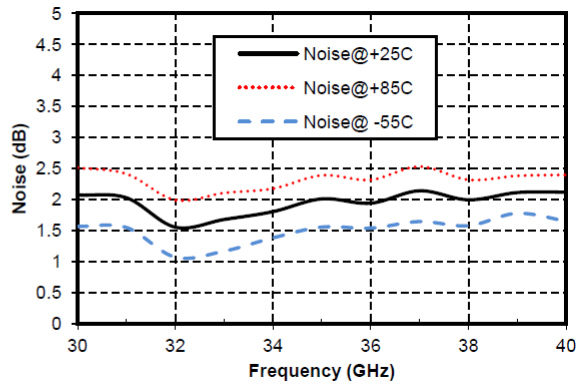
TA = +25°C, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency	30-40			GHz
Small Signal Gain	21.5	22	23	dB
Gain Flatness		±0.75		dB
Noise Figure	1.6	2.0	2.1	dB
Output 1dB Compression (P1dB)	2	4	5	dBm
Saturated Output Power (Psat)	3.5	5	6.5	dBm
Input Return Loss	11	14	-	dB
Output Return Loss	10	15	-	dB
Static current		12		mA

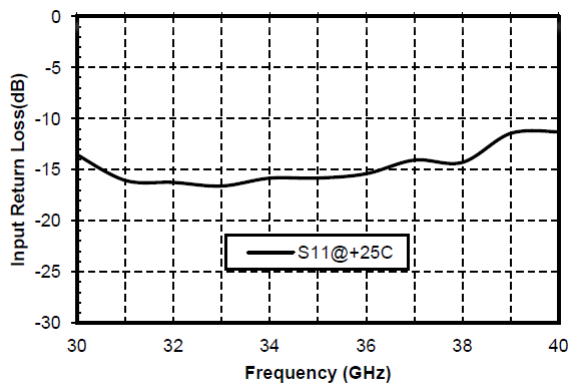
Gain vs. Frequency



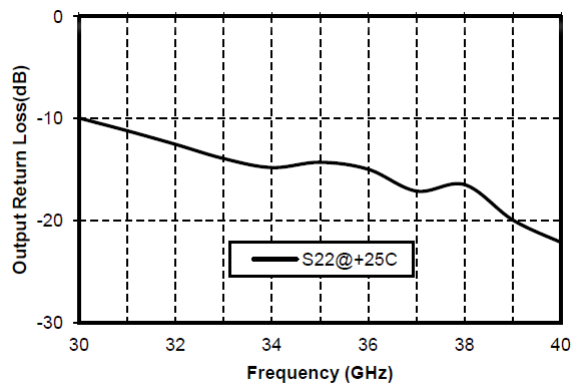
Noise Figure vs. Frequency



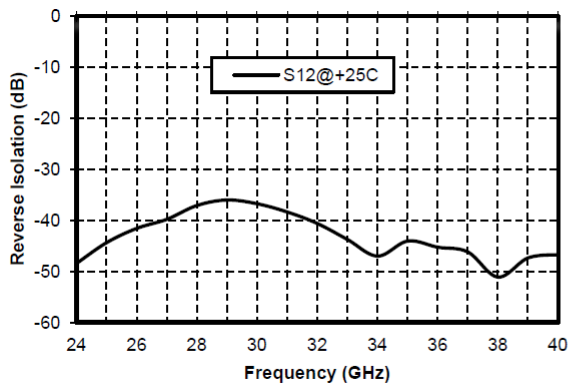
Input Return Loss vs. Frequency



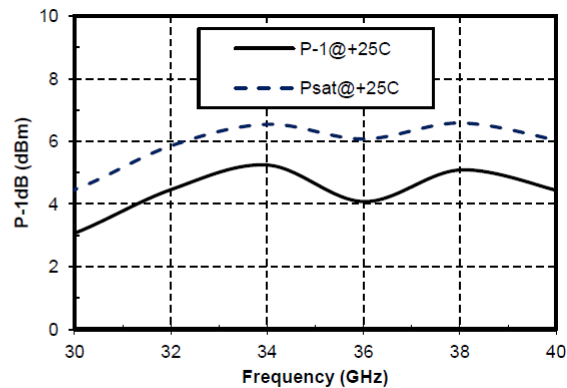
Output Return Loss vs. Frequency



Reverse Isolation vs. Frequency

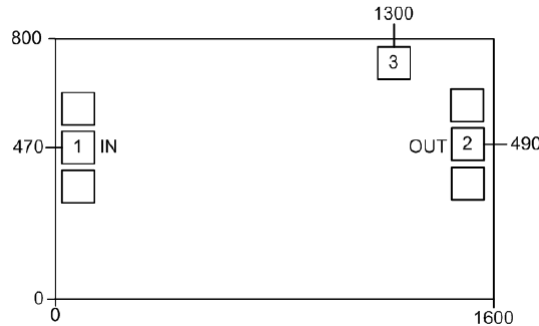


P1dB/Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

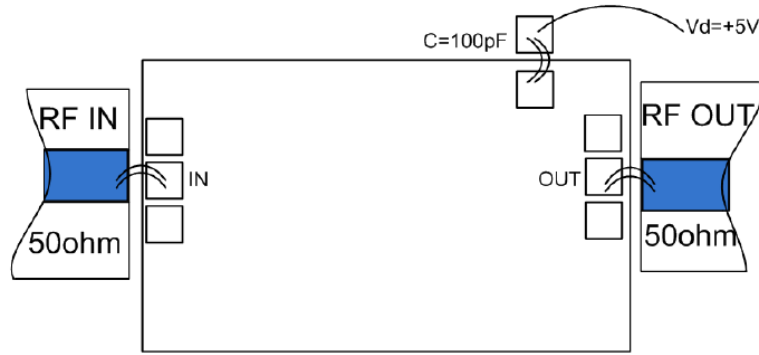


Pad Description

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
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C