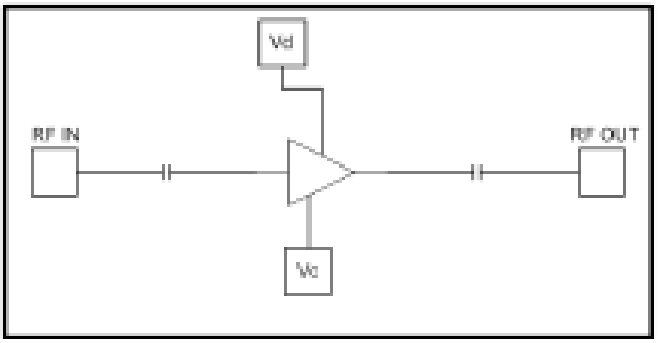
Features

- Frequency: 2-20GHz
- Small Signal Gain: 16dB
- Noise Figure: 2.0dB typ./3.5dB max.
- P1dB: 13dBm
- Power supply: +5V/50mA
- Input/Output: 50Ω
- Die Size: 2.5 x 1.6 x 0.1 mm

Functional Block Diagram



Typical Applications

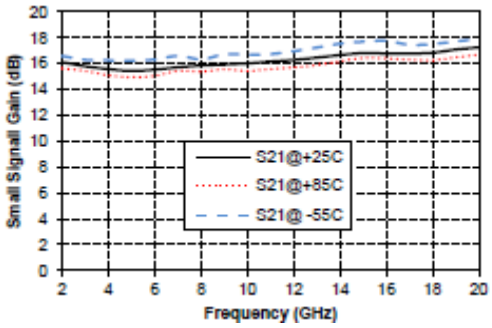
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

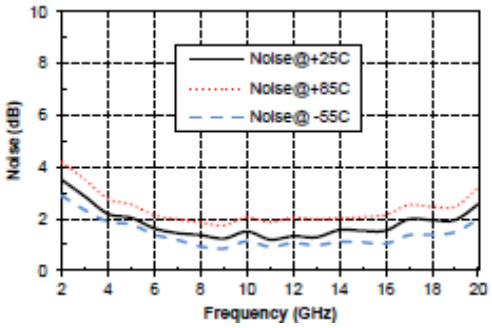
TA = +25ºC, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		2-20		GHz
Small Signal Gain	15.5	16	17.5	dB
Gain Flatness		±1.0		dB
Noise Figure	-	2.0	3.5	dB
Output 1dB Compression (P1dB)	11	13	17.5	dBm
Saturated Output Power (Psat)	12.5	14	20	dBm
Input Return Loss		16		dB
Output Return Loss		14		dB
Static current		50		mA

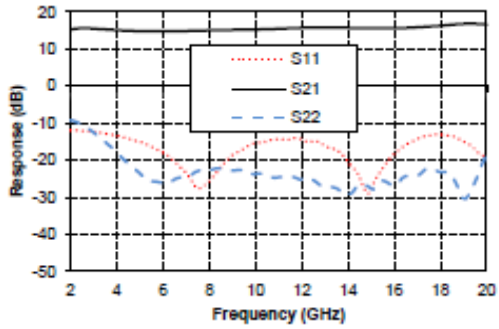
Gain vs. Frequency



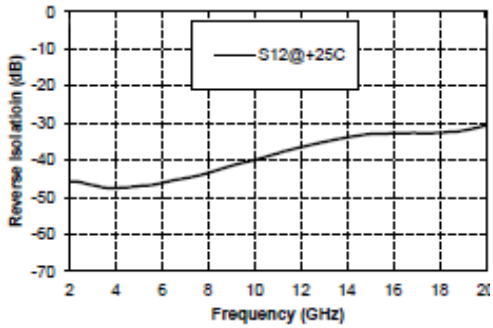
Noise Figure vs. Frequency



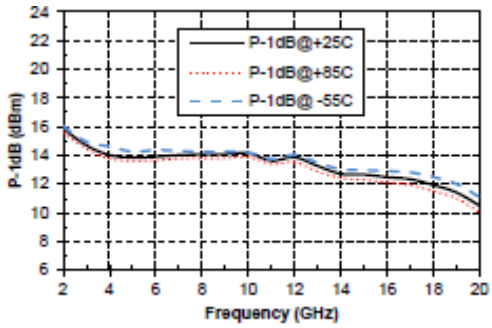
Gain&Input Return Loss vs. Frequency



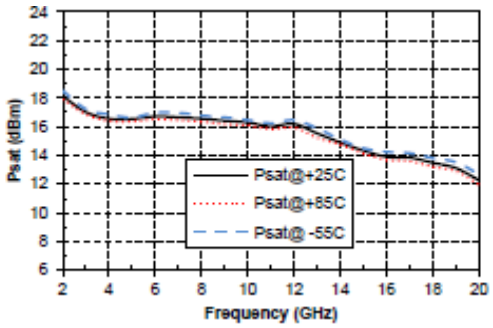
Reverse Isolation vs. Frequency



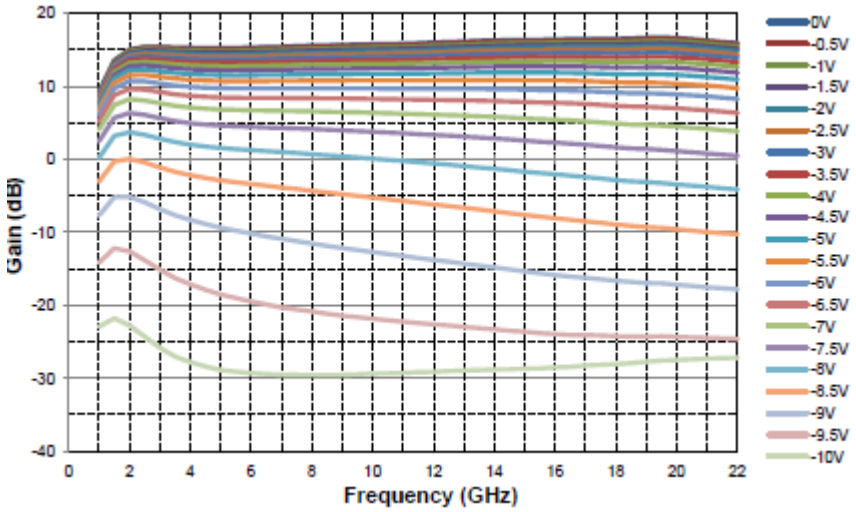
P1dB vs. Frequency



Psat vs. Frequency



Gain vs. Frequency



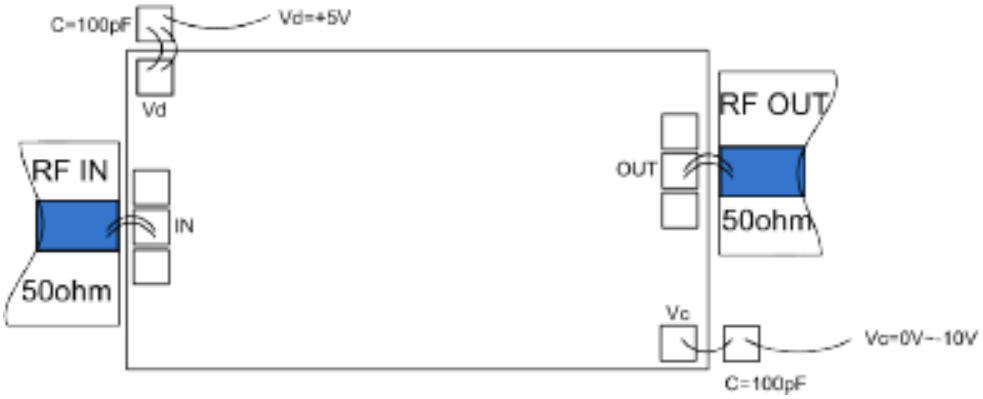
Outline Drawing:

All Dimensions in µm

Pad Description

Pad	Function	Description
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.
4	VC	Gain controller; 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: +9V
2. Maximum input power: +18dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃