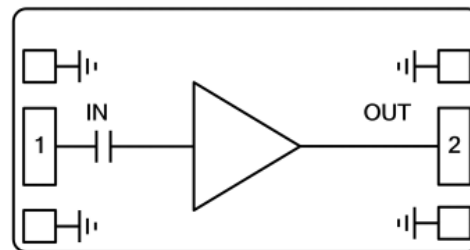


Features

- Single Biasing Voltage(Self Biased)
- Frequency: 0.8-20GHz
- Gain: 13dB
- P1dB: +29.5 dBm @ VDD=12V
- Psat: +30.5 dBm @ VDD=12V
- Power Supply: Self-biased +8/+10/+12 V @ 250 mA
- Input/Output: 50Ω
- Die Size: 2.5 × 1 × 0.1mm

Functional Block Diagram

Typical Applications

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

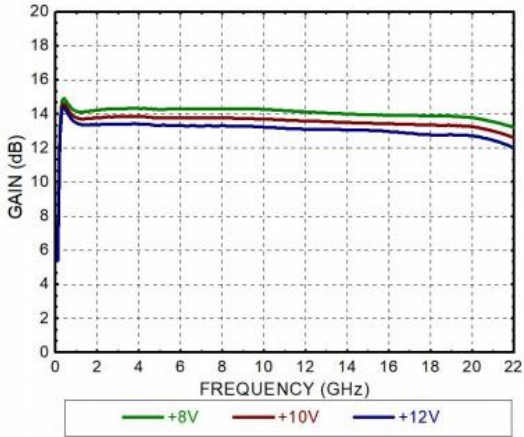
Electrical Specifications

TA = +25°C, VDD = +8/+10/+12 V

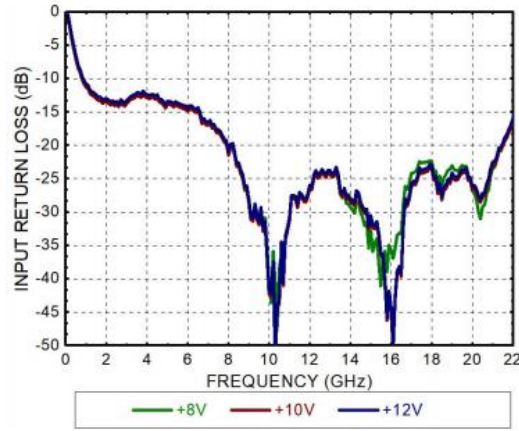
Parameters	VDD=+8V			VDD=+10V			VDD=+12V			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Frequency	0.8-20			0.8-20			0.8-20			GHz
Gain		14			13.5			13		dB
Noise Figure		3			3			3		dB
Gain Flatness		±0.2			±0.2			±0.2		dB
P1dB		26.5			28.5			29.5		dBm
Psat		28			29.5			30.5		dBm
Input Return Loss		15			15			15		dB
Output Return Loss		15			15			15		dB
Operating Current	190	240	290	200	250	300	200	260	320	mA



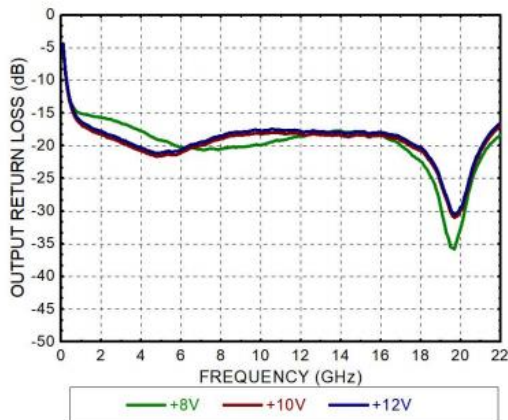
Gain vs. VDD



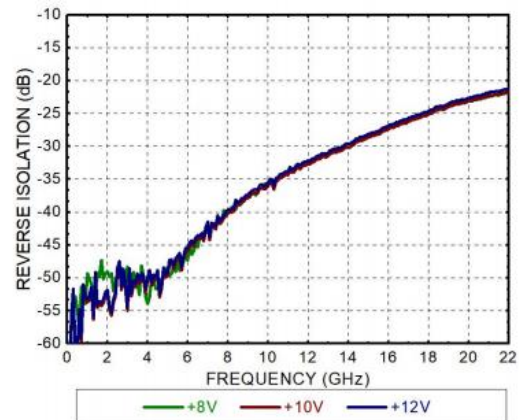
Input Return Loss vs. VDD



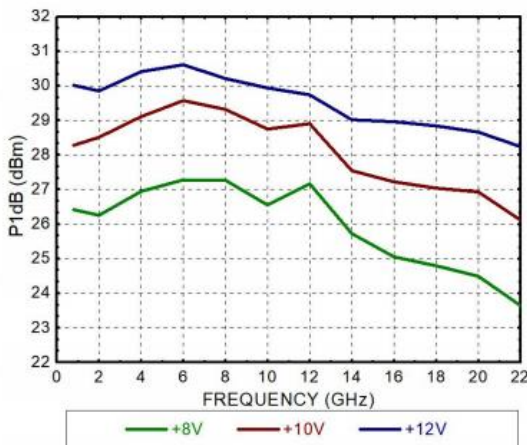
Output Return Loss vs. VDD



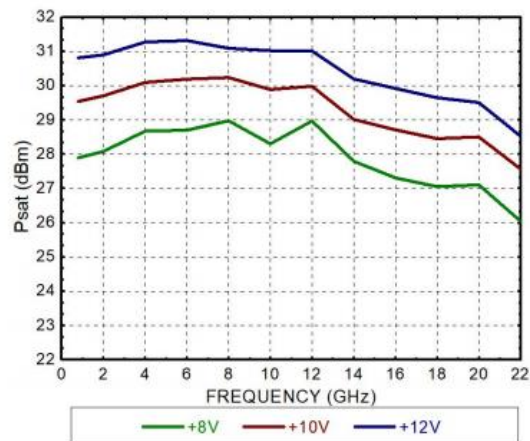
Reverse Isolation VDD



P1dB vs. VDD

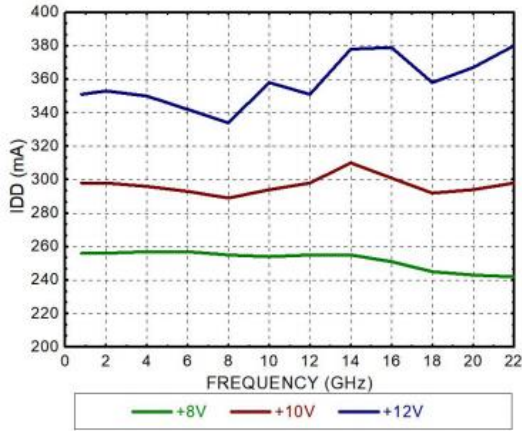


Psat vs. VDD

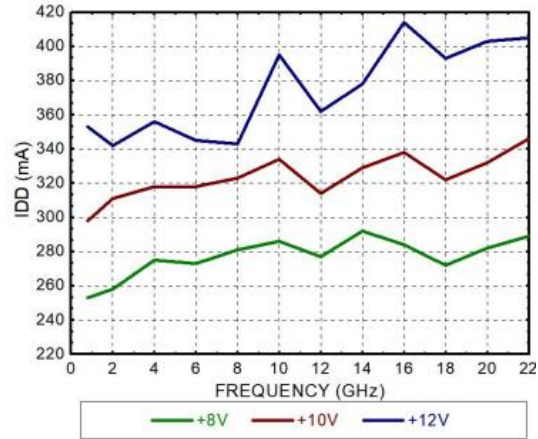




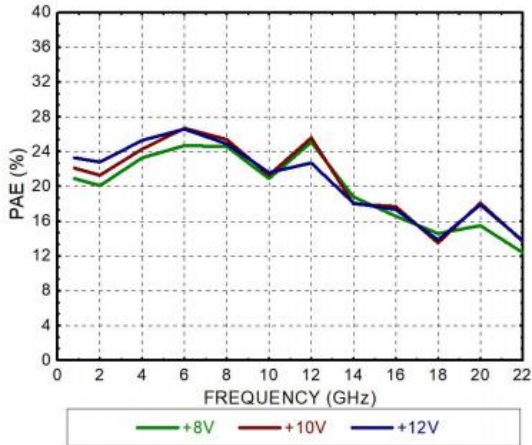
Dynamic current @P1dB



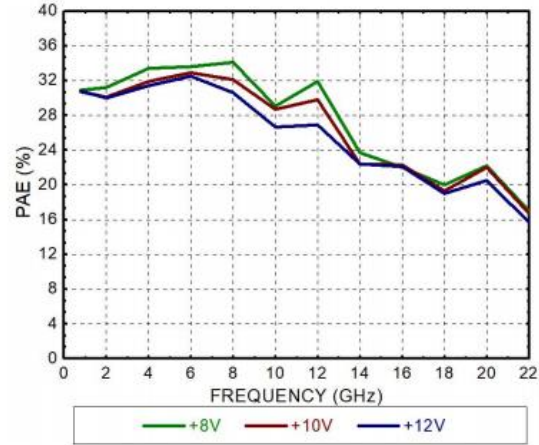
Dynamic current @ Psat



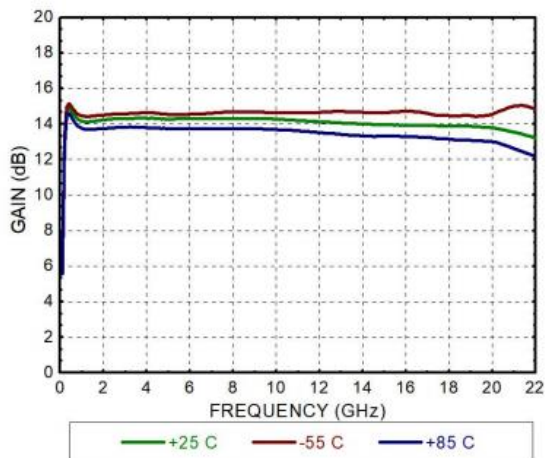
PAE @ P1dB



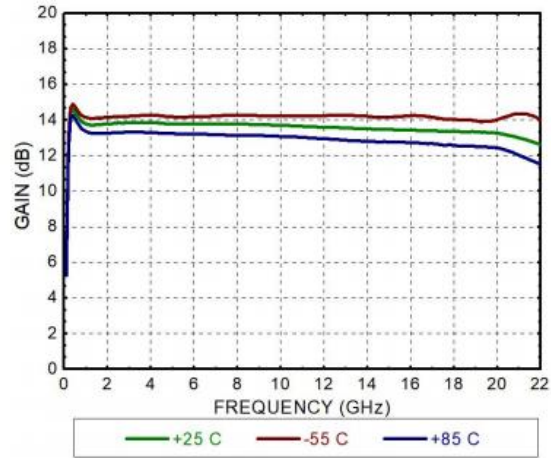
PAE @ Psat



Gain vs. Temperature @ VDD+8V

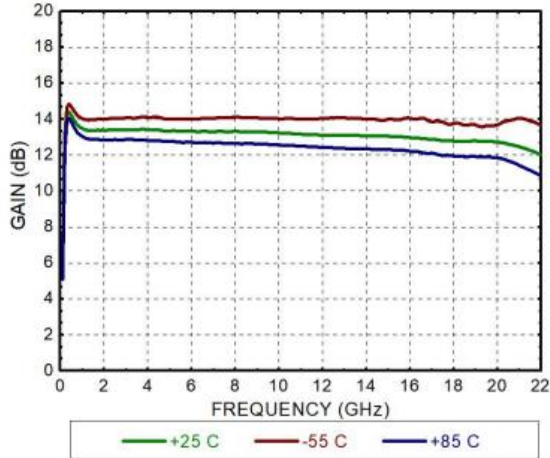


Gain vs. Temperature @ VDD+10V

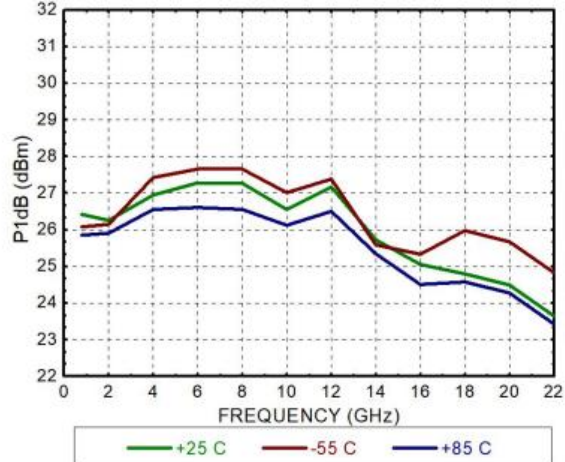




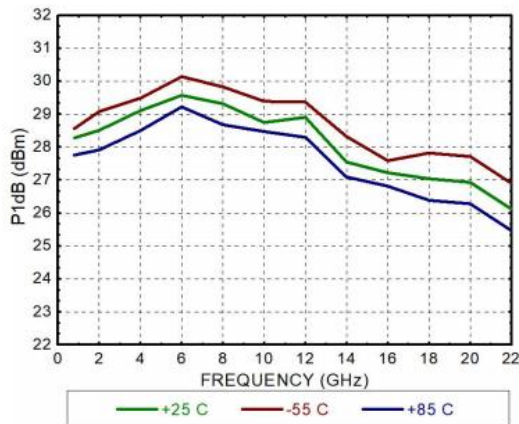
Gain vs. Temperature @ VDD+12V



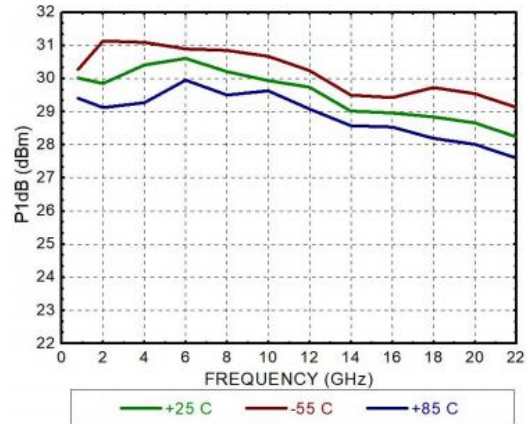
P1dB vs. Temperature @ VDD+8V



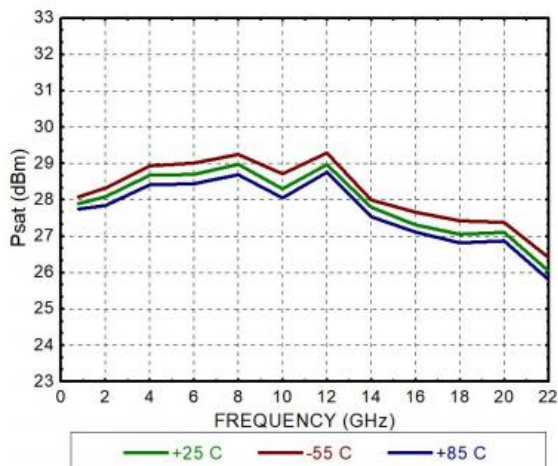
P1dB vs. Temperature @ VDD+10V



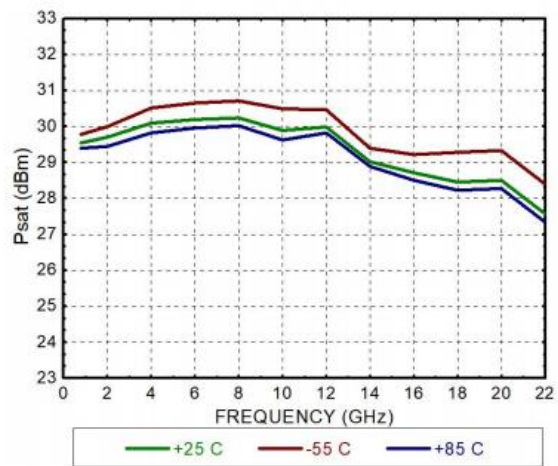
P1dB vs. Temperature @ VDD+12V



Psat vs. Temperature @ VDD+8V

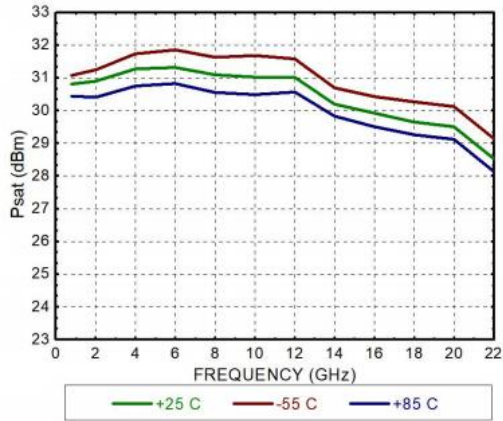


Psat vs. Temperature @ VDD+10V

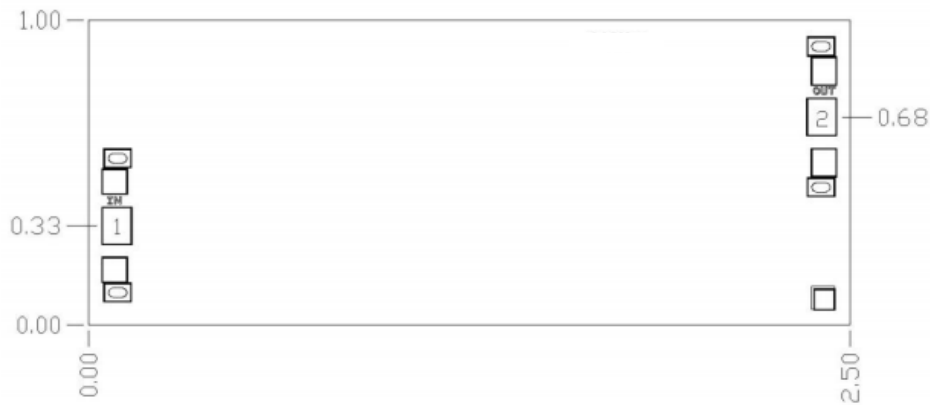




Psat vs. Temperature @ VDD+12V



Outline Drawing: All Dimensions in um

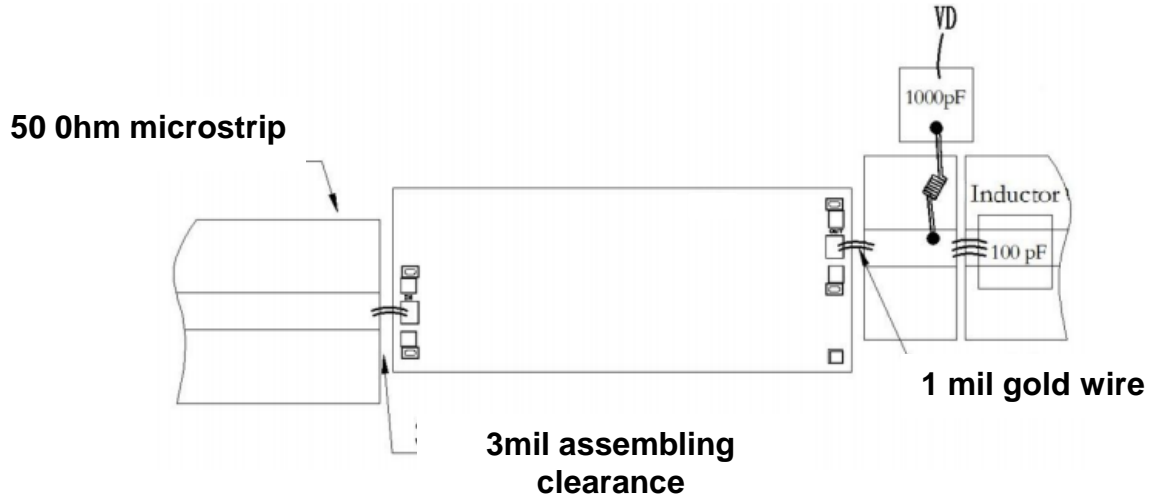


Pad Description

PAD	Function	Description
1	IN	This pad is AC coupling, 50 ohm matched
2	OUT	This pad is DC coupling, 50 ohm matched, bias inductors 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. Power supply voltage: +13V
2. RF input power: +25dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C