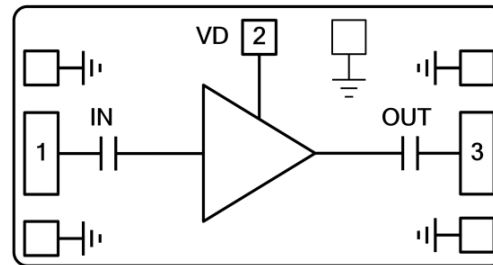


Features

- Single Biasing Voltage (Self Biased)
- Operating Frequency: 8-12GHz
- Noise Figure: 1.0dB
- Gain: 28.5dB
- Power Supply: +5V @ 45 mA
- P1dB: +12dBm
- OIP3: +25.5dBm
- Reverse Isolation: 50dB
- Die Size: 1.5 x 1.3 x 0.1 mm

Typical Applications

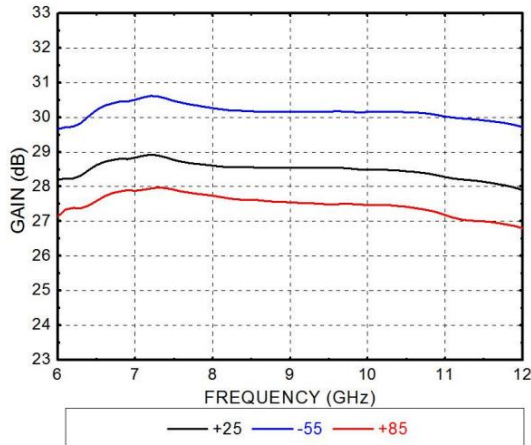
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications
TA = +25°C, Vdd = +5V, Idd = 45mA

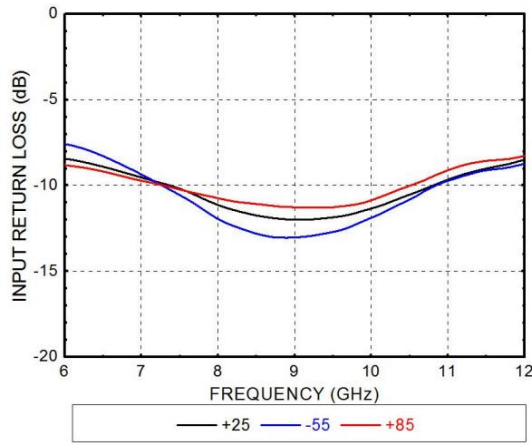
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Gain		28.5		dB
Input Return Loss		11		dB
Output Return Loss		20		dB
Output 1dB Compression (P1dB)		12		dBm
Reverse Isolation		50		dB
Output Third Order Intercept (IP3)		25.5		dBm
Noise Figure		1.0		dB
Operating Current	30	45	55	mA



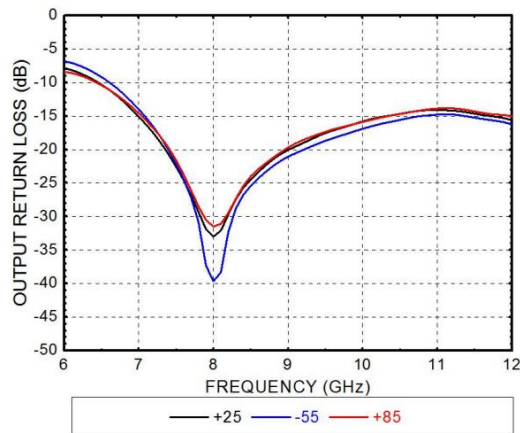
Gain vs. Temperature



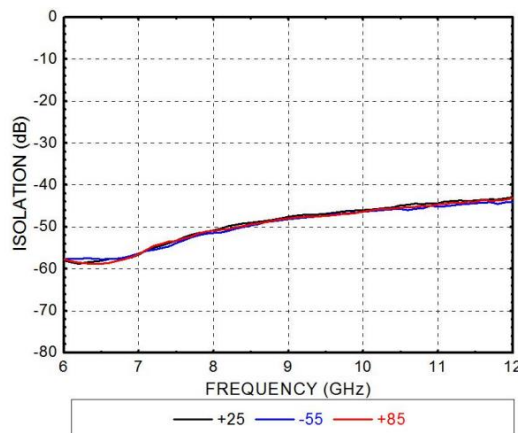
Input Return Loss vs. Temperature



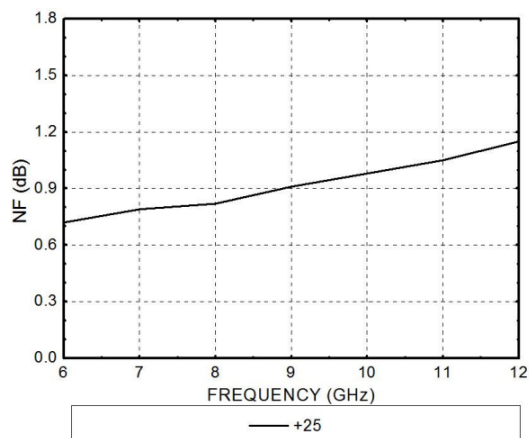
Output Return Loss vs. Temperature



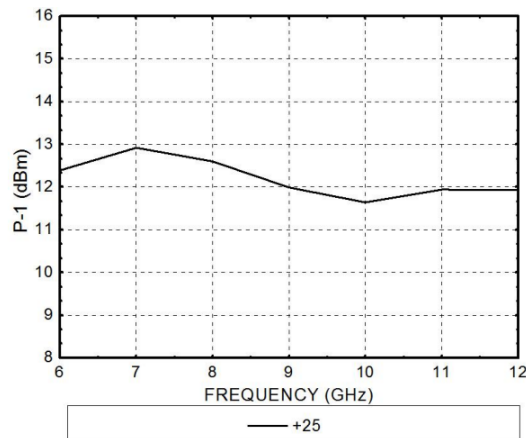
Reverse Isolation vs. Temperature



Noise Figure



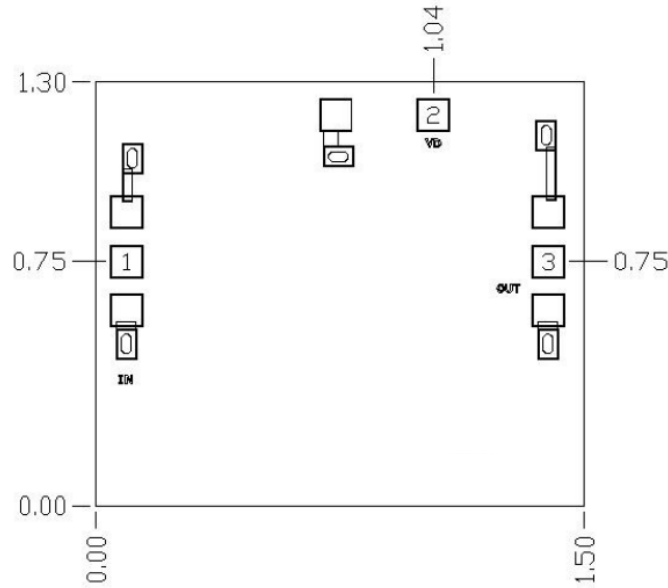
P1dB





Outline Drawing:

All Dimensions in mm

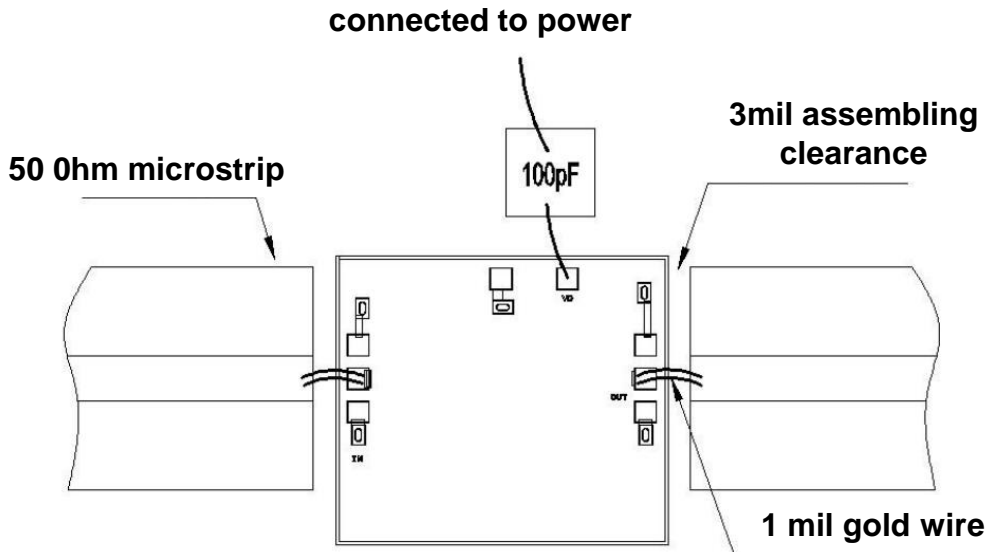


Pad Description

PAD	Function	Description
1	IN	This pad is AC coupling, 50 ohm matched
2	VD	This pad provides the power supply voltage of the amplifier and needs to be externally connected with the 100pF bypass capacitor.
3	OUT	This pad is AC coupling, 50 ohm matched
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: +6V
2. RF input power: +18dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C