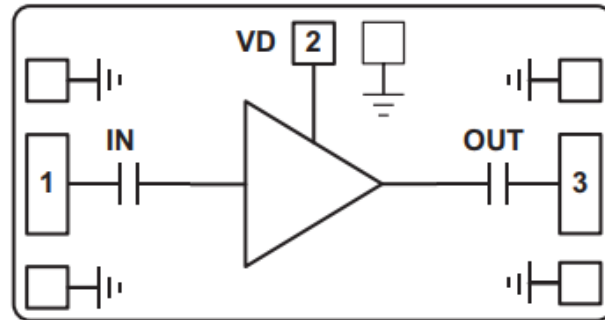


Features

- Single Biasing Voltage (Self Biased)
- 2dB Positive Slope
- Noise Figure: 2.5dB
- Gain: 17dB
- P1dB: +16dBm
- Biasing +5V @ 64 mA
- Impedance: 50Ω
- Die Size: 3 x 1.3 x 0.1 mm

Typical Applications

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

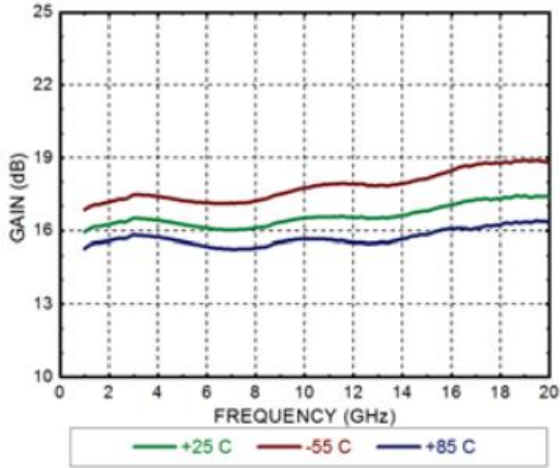
Functional Block Diagram

Electrical Specifications

TA = +25°C, Vdd = +5V, Idd = 64mA

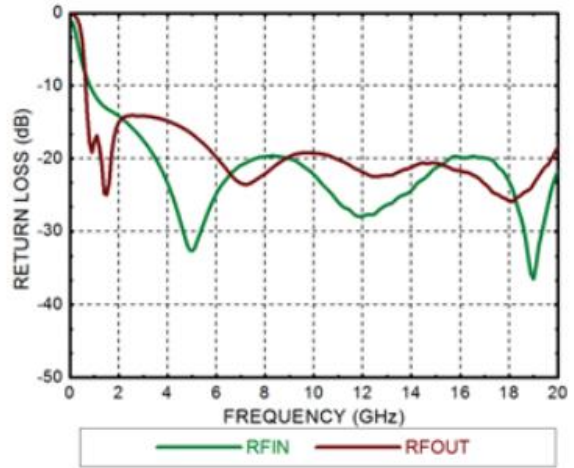
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	1 - 6			6-12			12-20			GHz
Gain		16.3			16.4			17		dB
Gain Flatness		±0.4			±0.4			±0.5		dB
Input Return Loss		15			20			20		dB
Output Return Loss		15			15			15		dB
Output 1dB Compression (P1dB)		17			16			14.5		dBm
Saturated Output Power (Psat)		19			18			16.5		dBm
Output Third Order Intercept (IP3)		26			26			24		dBm
Noise Figure		3			2.0			2.5		dB
Current	36	64	85	36	64	85	36	64	85	mA



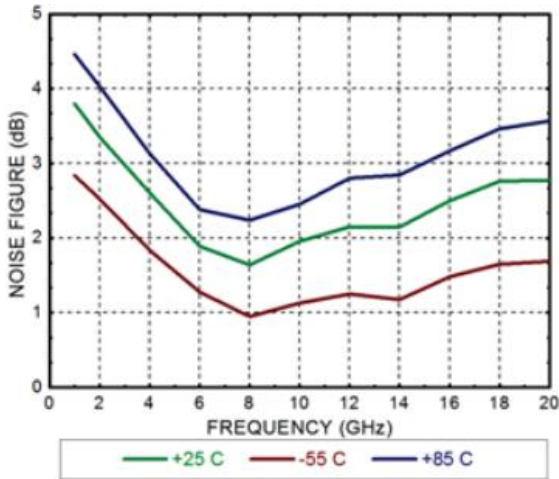
Gain



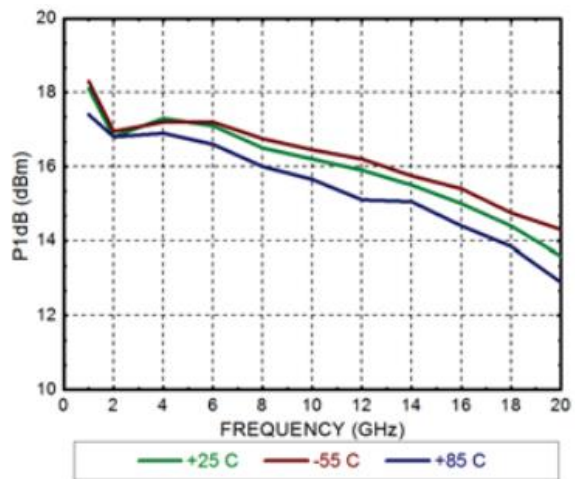
Return Loss



Noise Figure



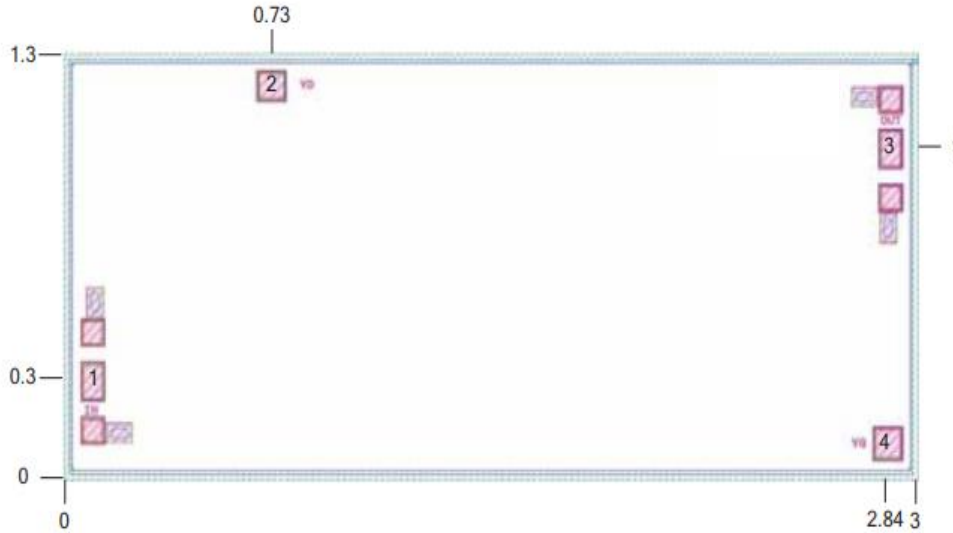
Output Power P_{1dB}





Outline Drawing:

All Dimensions in mm

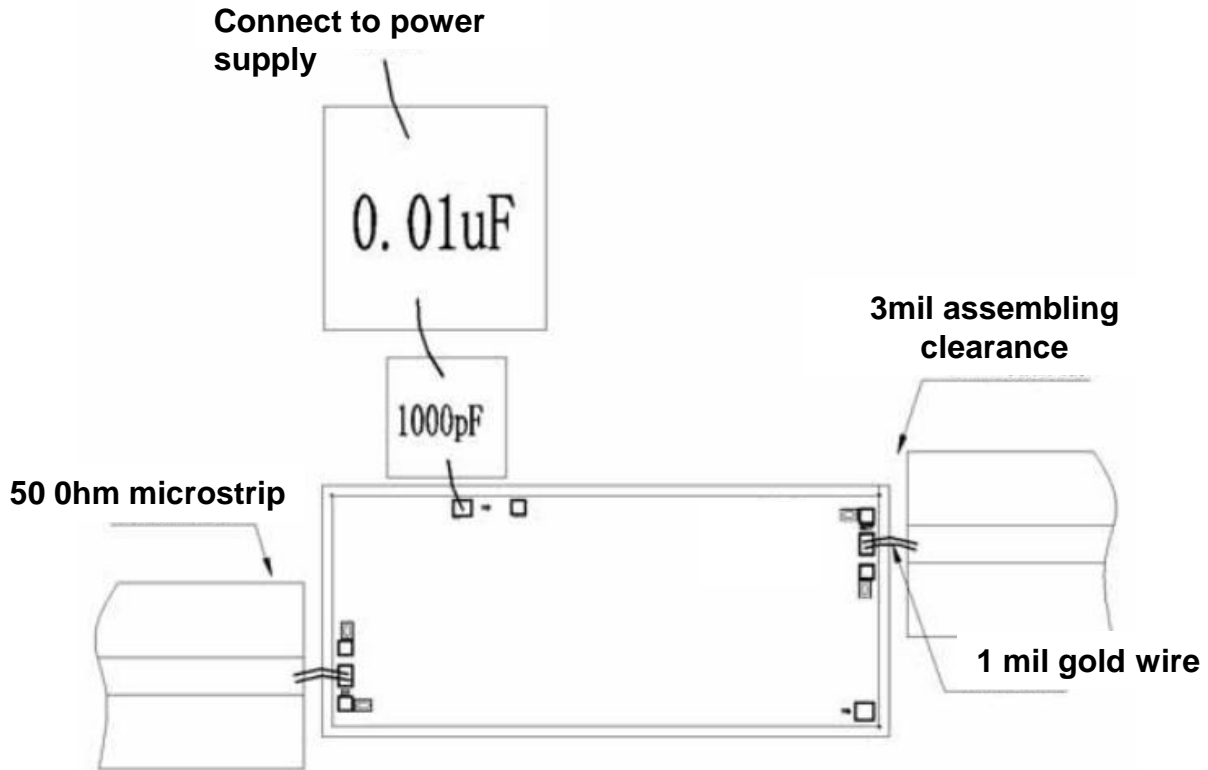


Pad Description

PAD	Function	Description
1	IN	Input AC coupling 50Ω Impedance
2	VD	This pad provides power supply voltage for the amplifier and requires external 100pF and 0.01 μF bypass capacitor. The pad is controlled within 500um by the 1000pF capacitor cascade.
3	OUT	Output AC coupling 50Ω Impedance.
4	VG	The pad can adjust the chip gain, and when normal use is suspended, if the gain can be increased by 0-0.5V voltage, the gain can be reduced to -0.5V-0V voltage.
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