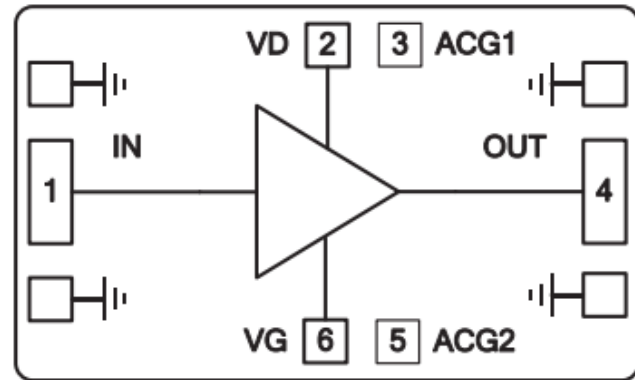


Features

- 2dB Positive Slope
- Noise Figure: 2.5dB
- Gain: 17dB
- P1dB: +16dBm
- Biasing: +8V @ 67 mA
- Impedance: 50Ω
- Die Size: 3 x 1.3 x 0.1 mm

Typical Applications

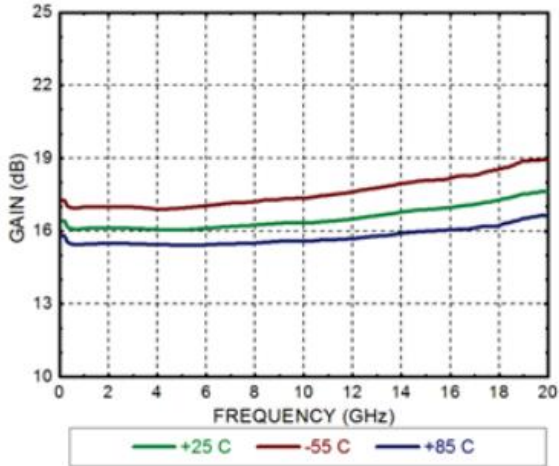
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications
TA = +25°C, VD = +8V VG = -1V * Idd = 67mA *

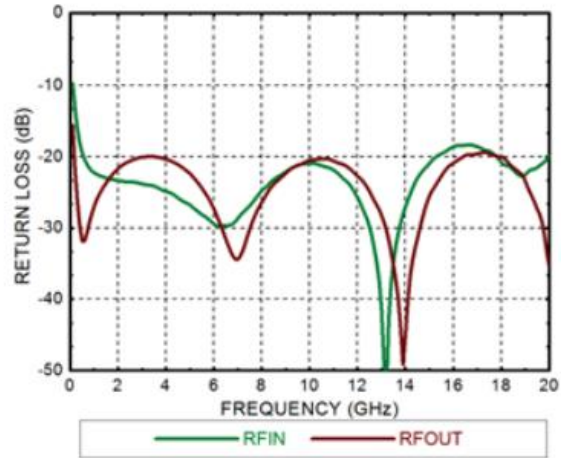
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	DC - 6			6 - 12			12 - 20			GHz
Gain		16.2			16.5			17.3		dB
Gain Flatness		±0.25			±0.4			±0.5		dB
Input Return Loss		20			20			18		dB
Output Return Loss		18			20			18		dB
Output 1dB Compression (P1dB)		17.5			17.5			15.5		dBm
Saturated Output Power (Psat)		20			20			18		dBm
Output Third Order Intercept (IP3)		27			27			25		dBm
Noise Figure		3			2			2.2		dB
Current		67			67			67		mA
Memo	* Adjust VG (-2V~-0V) to obtain device current of near 67mA.									



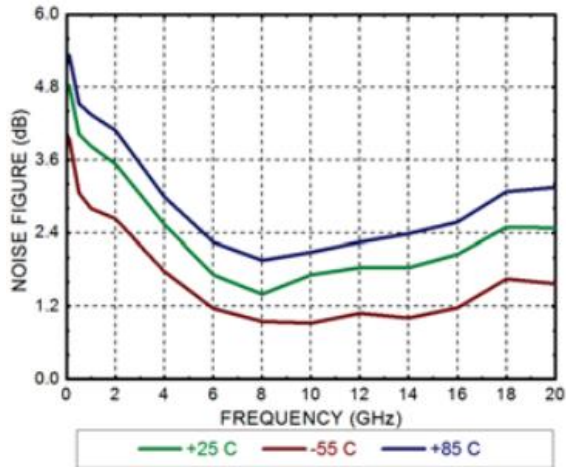
Gain



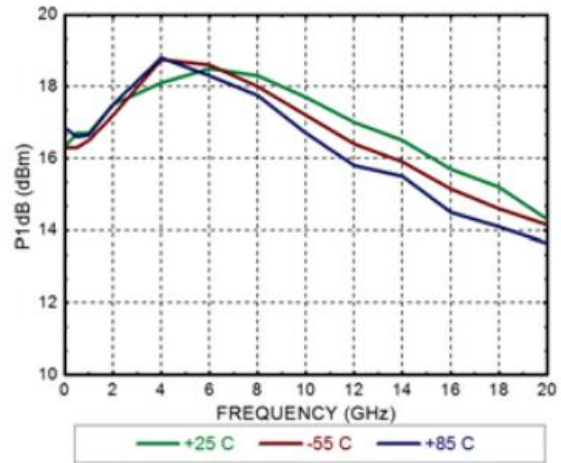
Return Loss



Noise Figure



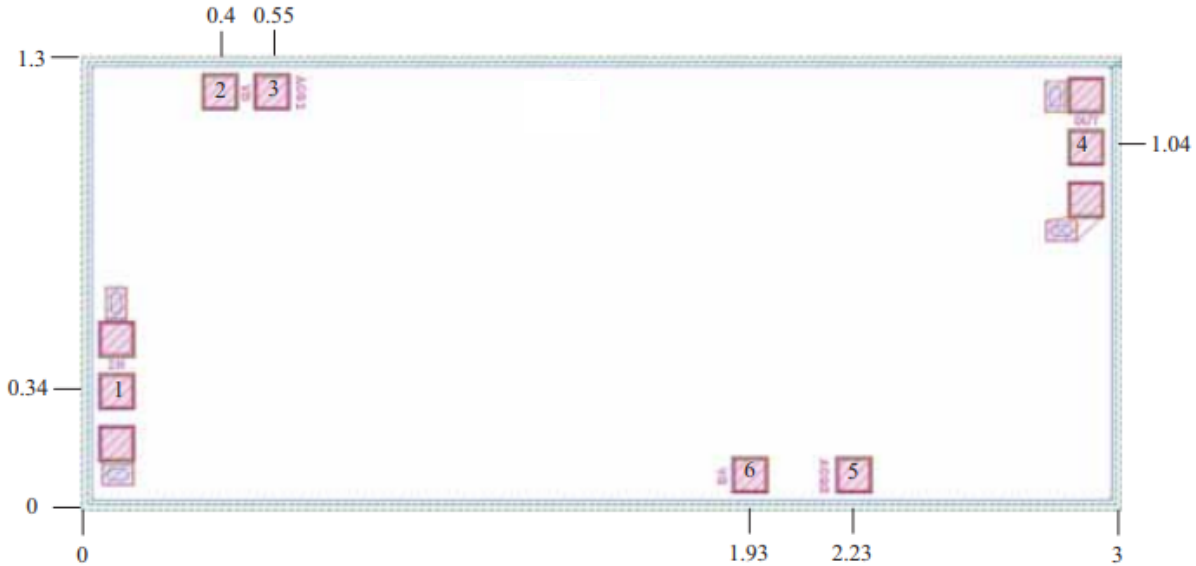
Output Power P_{1dB}





Outline Drawing:

All Dimensions in mm

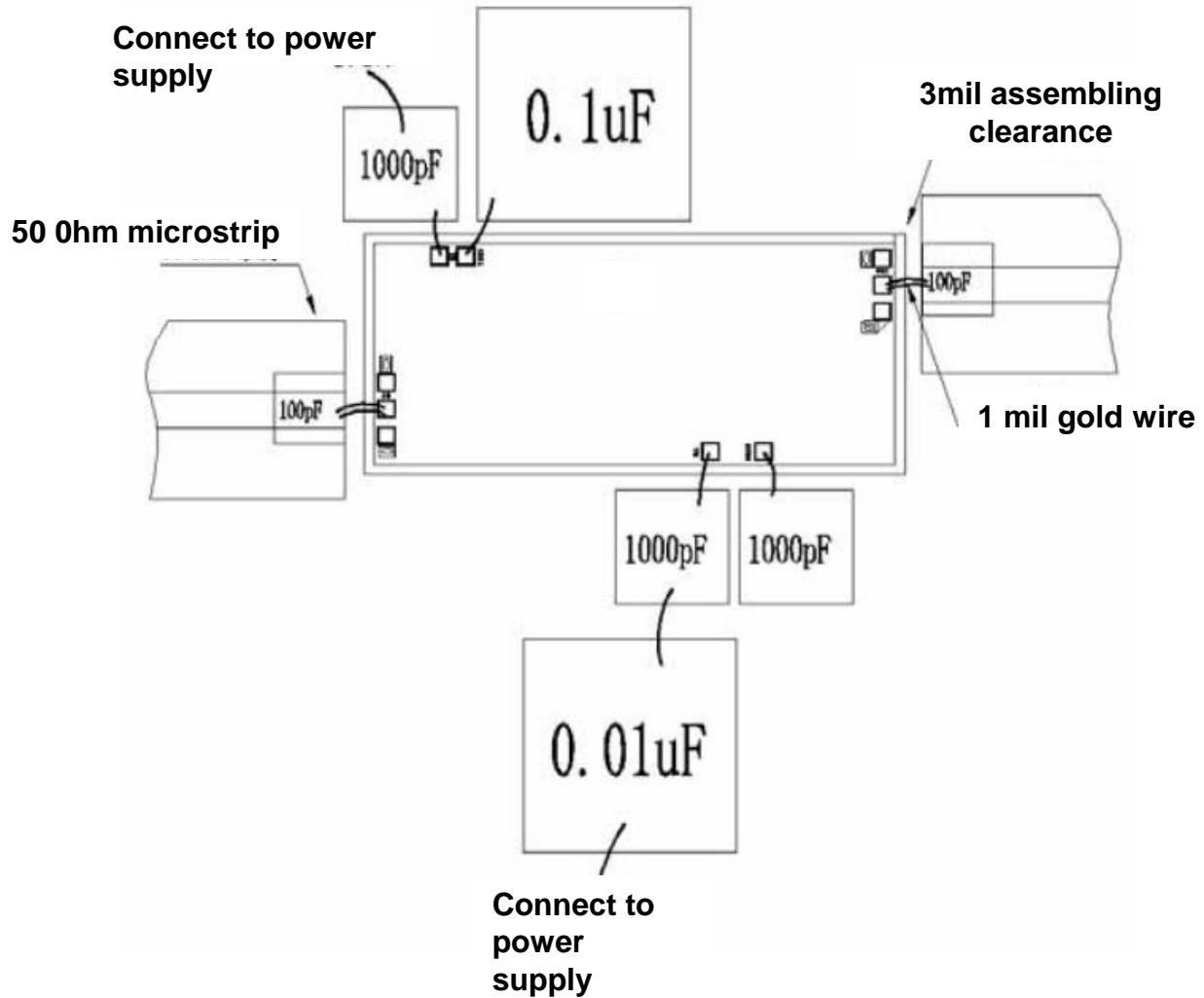


Pad Description

PAD	Function	Description
1	IN	This pad is DC coupling, 50 ohm matching. It needs extra 100pF blocking capacitor.
2	VD	This pad supplies power supply for the amplifier. It needs extra 1000pF bypass capacitor.
3	ACG1	This pad is low frequency signal filter port. It needs extra 0.1uF bypass capacitor.
4	OUT	This pad is DC coupling, 50 ohm matching. It needs extra 100pF blocking capacitor.
5	ACG2	This pad is low frequency signal filter port. It needs extra 1000pF bypass capacitor.
6	VG	This pad supplies gate voltage. It needs extra 1000pF and 0.01uF bypass capacitor.
Die Bottom	GND	Die backside must connect to RF/DC GND.



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is $100 \times 100 \mu\text{m}^2$
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: +9V
2. RF input power: +18dBm
3. Storage temperature: -65°C to $+175^\circ\text{C}$
4. Operating temperature: -55°C to $+85^\circ\text{C}$