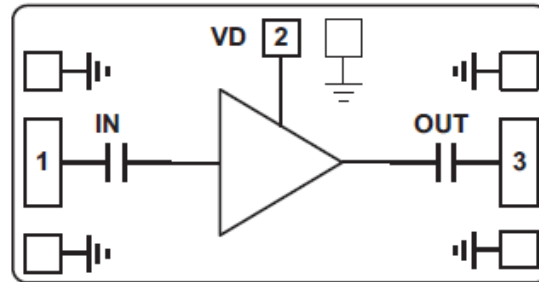


Features

2 dB Positive Slope

- Single Biasing Voltage (Self Biased)
- Gain :19.5dB
- P1dB: +22dBm
- Psat :+24dBm
- Biasing +7V @ 130 mA
- Impedance: 50Ω
- Die Size: 3 x 1.3 x 0.1 mm

Functional Block Diagram

Typical Applications

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

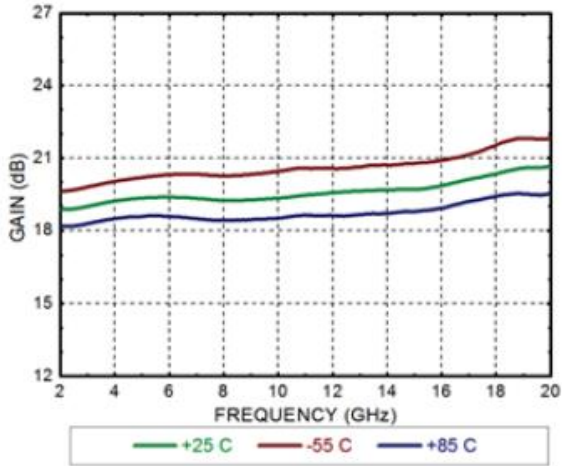
Electrical Specifications

TA = +25°C, Vdd = +7V Idd = 130mA

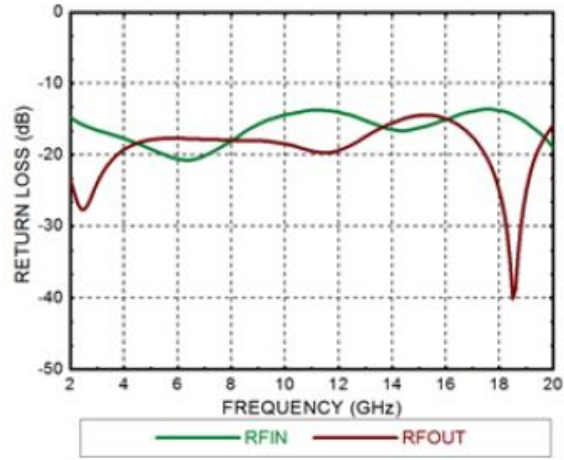
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	2 - 6		6 - 12		12 - 20					GHz
Gain		19			19.5			20		dB
Gain Flatness		±0.3			±0.2			±0.5		dB
Input Return Loss		15			15			15		dB
Output Return Loss		15			15			15		dB
Output 1dB Compression (P1dB)		22			22			21		dBm
Saturated Output Power (Psat)		24			24			23		dBm
Output Third Order Intercept (IP3)		31			31			30		dBm
Noise Figure		3			2			2.5		dB
Current	100	130	180	100	130	180	100	130	180	mA



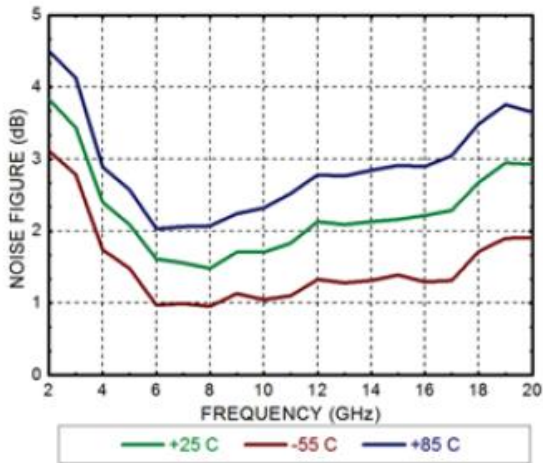
Gain



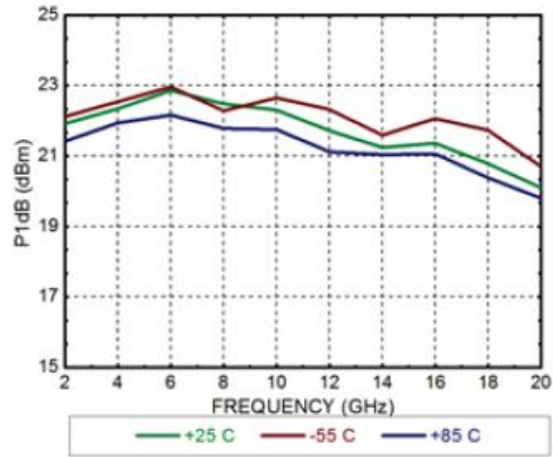
Return Loss



Noise Figure



Output Power P_{1dB}





Outline Drawing: All Dimensions in mm

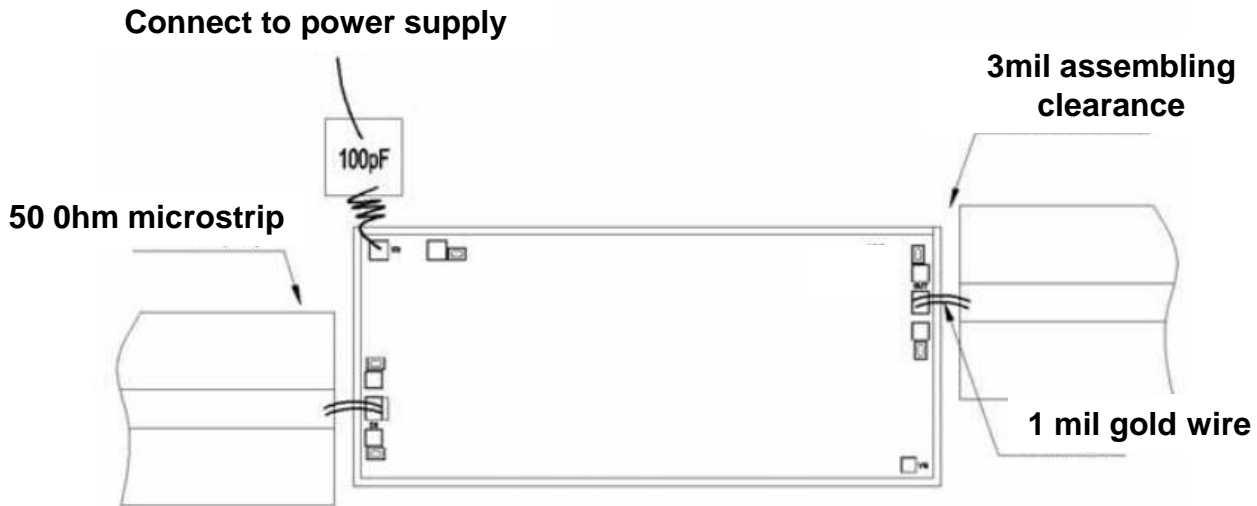


Pad Description

PAD	Function	Description
1	IN	Input AC coupling 50Ω Impedance
2	VD	The pad provides the power supply voltage amplifier and requires an external 100 RF bypass capacitor; assembling the pad to the capacitor needs to use the wire winding inductance connection - recommend wire diameter 25 um, coil turn number 7, 300 um coil diameter, coil length 1,200 um
3	OUT	Output AC coupling 50Ω Impedance
4	VG	The pad can adjust the current, which can be suspended in normal use. If the current can be increased to 0-1v voltage, if the current can be reduced, the current can be connected to -1-0V 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: +8V
2. RF input power: +18dBm
3. Storage temperature: -65°C to +175°C
4. Operating temperature: -55°C to +85°C