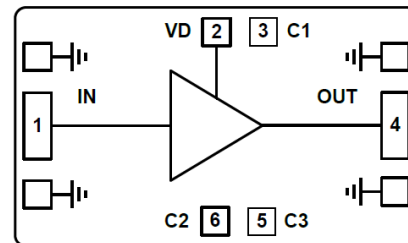


Features

- Single Biasing Voltage (Self Biased)
- Frequency: DC-20GHz
- Noise Figure: 2.3dB
- Gain: 19dB@+8V, 17dB@+5V
- P1dB: 16dBm@+8V, 11dBm@+5V
- Power Supply: +8V@70mA, +5V@38mA
- Input/Output: 50Ω
- Die Size: 3 x 1 x 0.1 mm

Functional Block Diagram

Typical Applications

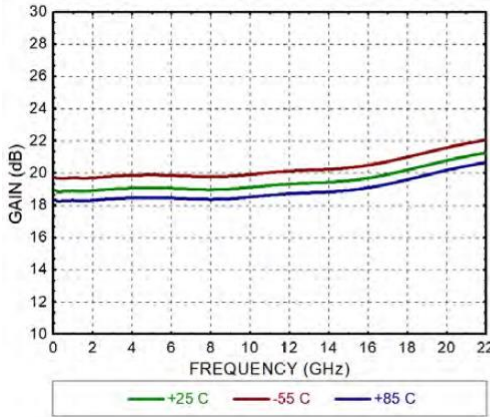
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

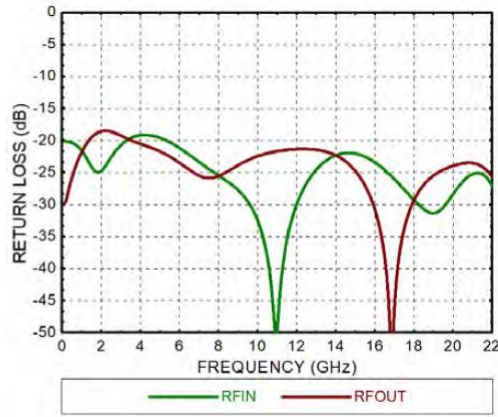
TA = +25°C

Parameters	VG is floating			VG connected to GND			Units
	Min.	Typ.	Max.	Min.	Typ.	Max.	
Frequency	DC-20			DC-20			GHz
Gain		19			17		dB
Gain Flatness		±1			±1		dB
Input Return Loss		20			20		dB
Output Return Loss		20			20		dB
Output 1dB Compression (P1dB)		16			11		dBm
Psat		18			13		dBm
Output IP3		26			21		dBm
Noise Figure		2.3			2.3		dB
Operating current	50	70	90	25	38	53	mA

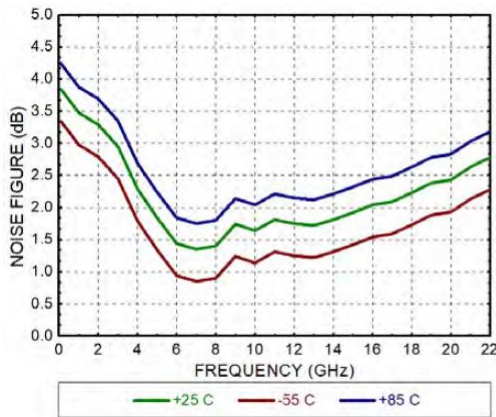
Gain (VDD=+8V)



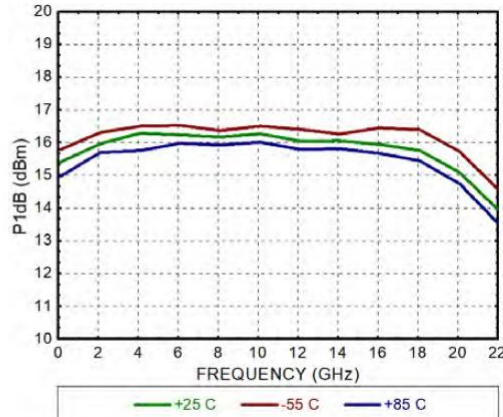
Return Loss (VDD=+8V)



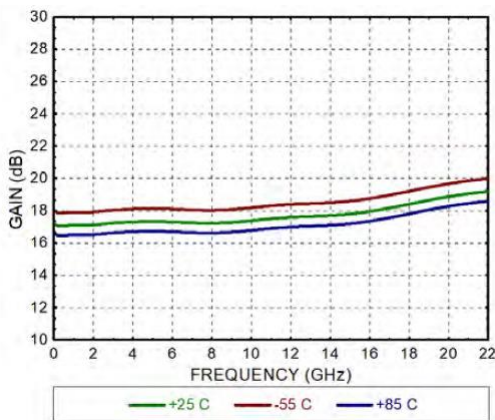
Noise Figure (VDD=+8V)



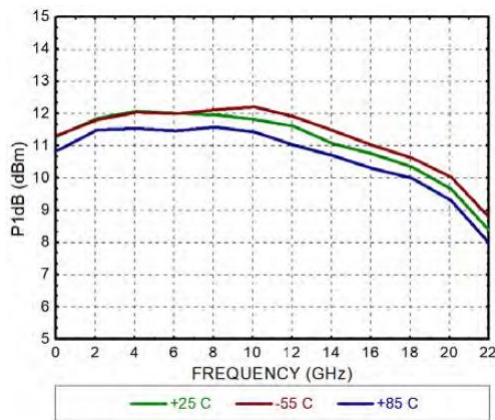
P1dB (VDD=+8V)



Gain (VDD=+5V)

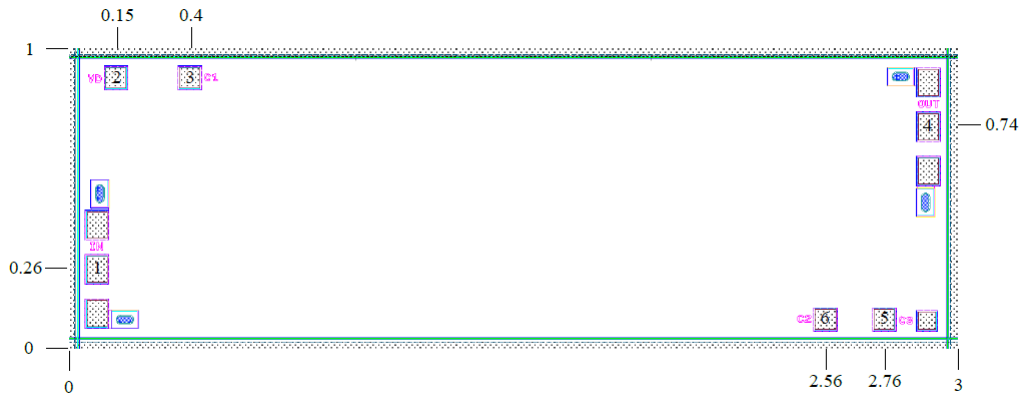


P1dB (VDD=+5V)





Outline Drawing: All Dimensions in mm

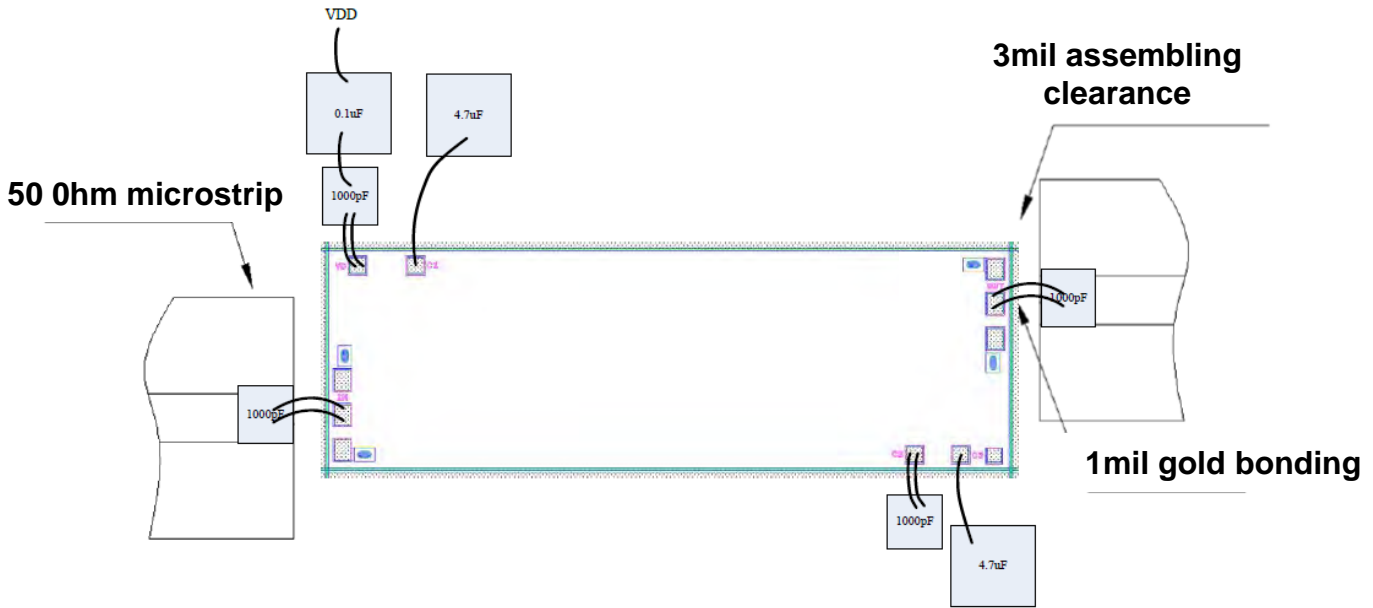


Pad Description

PAD	Function	Description
1	IN	This pad is DC coupling, 50 ohm matched, external DC blocking capacitor required.
2	VD	This pad provides power supply for the amplifier. It should be connected to extra 1000pF bypass capacitor.
3,5,6	C1,C3,C2	These pads are low-frequency signal filtering ports . It should be connected to extra bypass capacitor.
4	OUT	This pad is DC coupling, 50 ohm matched, external DC blocking capacitor required.
Die Bottom	GND	Die backside must connect to RF/DC GND.



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*80 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. Maximum drain voltage: +9V
2. Maximum input power: +15dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C