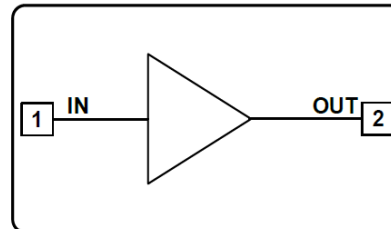


Features

- Single Biasing Voltage (Self Biased)
- Operating Frequency: 0.1-18GHz
- Noise Figure: 1.6dB
- Gain: 15dB
- P1dB: +16dBm
- Self Biasing +5V @ 36 mA
- Input/Output: 50Ω matched
- Die Size: 1.0 x 0.8 x 0.1 mm

Typical Applications

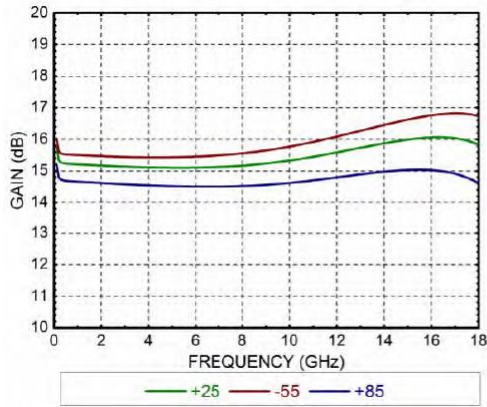
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Functional Block Diagram

Electrical Specifications
TA = +25°C, Vdd = +5V, Idd = 36mA

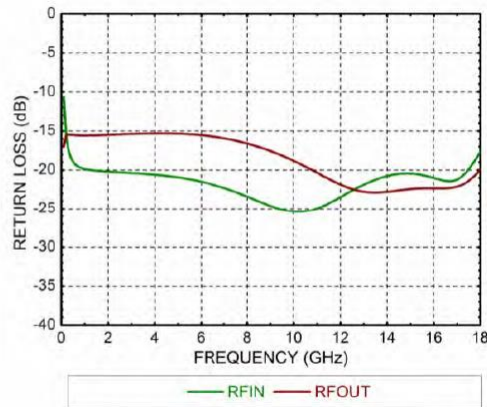
Parameters	Min.	Typ.	Max.	Units
Frequency	0.1-18			GHz
Gain		15		dB
Input Return Loss		20		dB
Output Return Loss		15		dB
Isolation		20		dB
Output 1dB Compression (P1dB)		16		dBm
Saturated Output Power (Psat)		17.5		dBm
Noise Figure		1.6		dB
Operating Current	20	36	60	mA



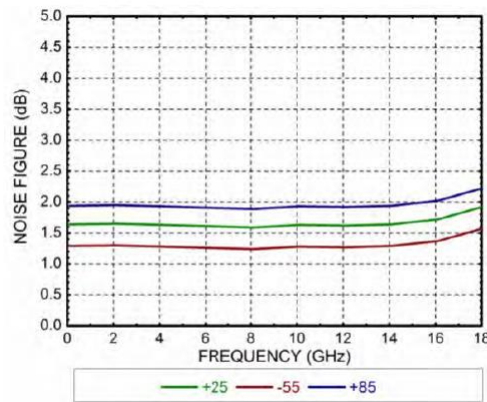
Gain



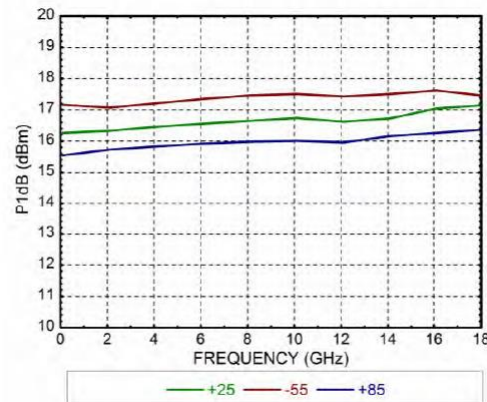
Return Loss



Noise Figure



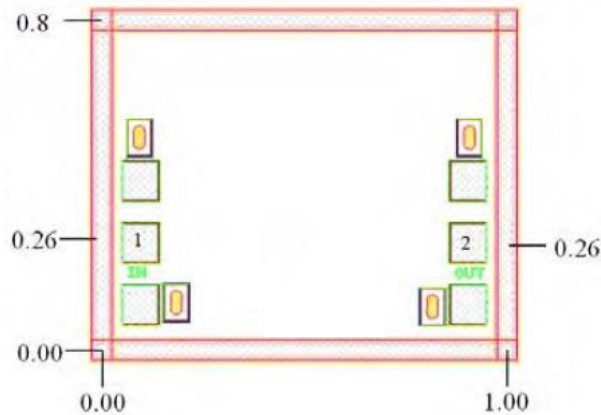
Output Power P₁





Outline Drawing:

All Dimensions in mm

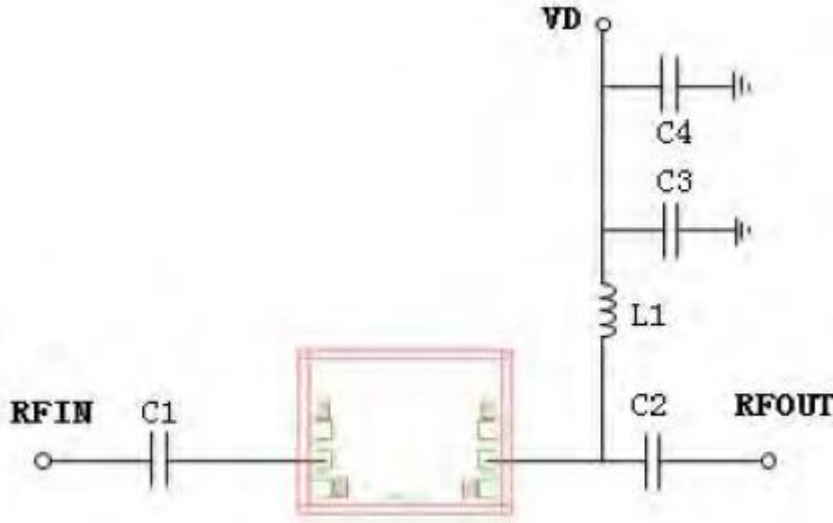


Pad Description

PAD	Function	Description
1	IN	This pad is DC coupling, no DC blocking capacitor on chip, 50Ω matched.
2	OUT	This pad is DC coupling, no DC blocking capacitor on chip, 50Ω matched.
Die Bottom	GND	Die bottom must be connected to RF/DC ground.



Assembly Drawing



Frequency	20MHz	100MHz	1GHz	2GHz
L1(nH)	820	270	82	47
C1/C2(pF)	100000	10000	1000	100
C3/C4(uF)	0.001/0.01			

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: +15dBm
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C