

Features

- Single Biasing Voltage (Self Biased)
- Operating Frequency: 18-40GHz
- Gain: 16dB@+5V; 16dB@+4V
- P1dB: +16dBm@+5V; +15dBm@+4V
- Psat:17.5 dBm @ +5 V; +16.5 dBm @ +4 V;
- Noise figure:2.5 dB @ +5 V; 2.3 dB @ +4 V;
- Self Bias Power Supply:
+5 V @ 67 mA
+4 V @ 50 mA
- Input/Output: 50Ω
- Die Size: 1.5x 0.8x 0.1 mm

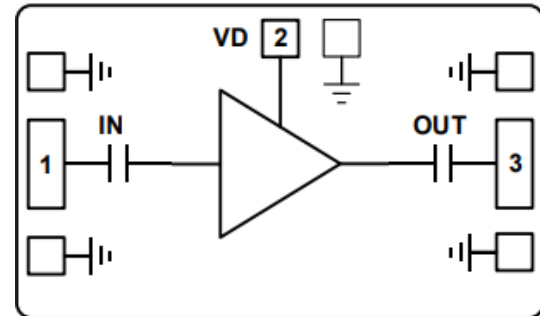
Typical Applications

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

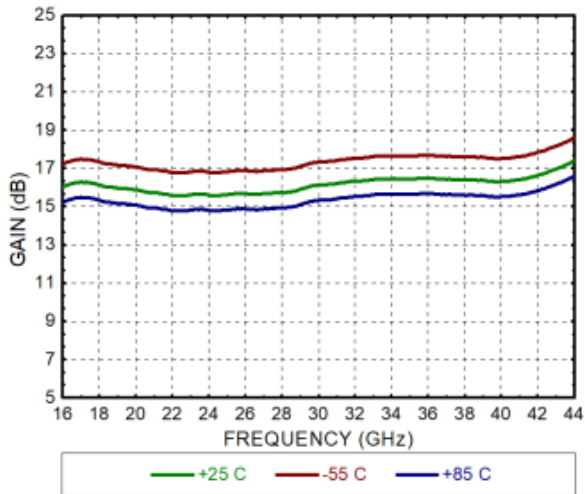
Electrical Specifications

TA = +25°C

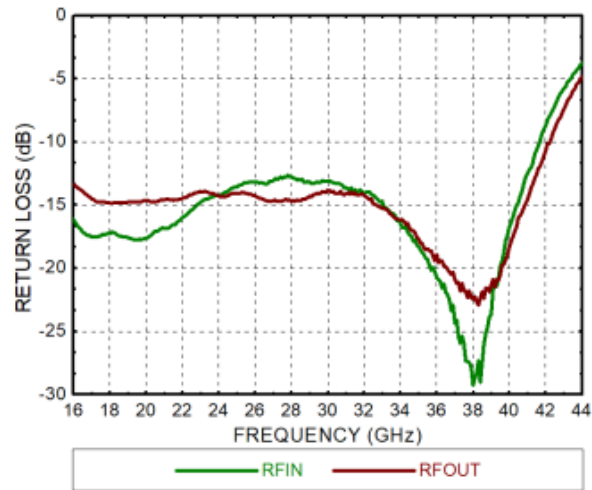
Parameters	VDD=+5V			VDD=+4V			Units
	Min	Typ.	Max	Min	Typ.	Max	
Frequency	18-40			18-40			GHz
Gain		16			16		dB
Gain Flatness		±0.5			±0.4		dB
Input Return Loss		15			15		dB
Output Return Loss		15			15		dB
P1dB		16			15		dBm
Psat		17.5			16.5		dBm
OIP3		26			25		dBm
NF		2.5			2.3		dB
Operating Current	53	67	83	35	50	66	mA

Functional Block Diagram


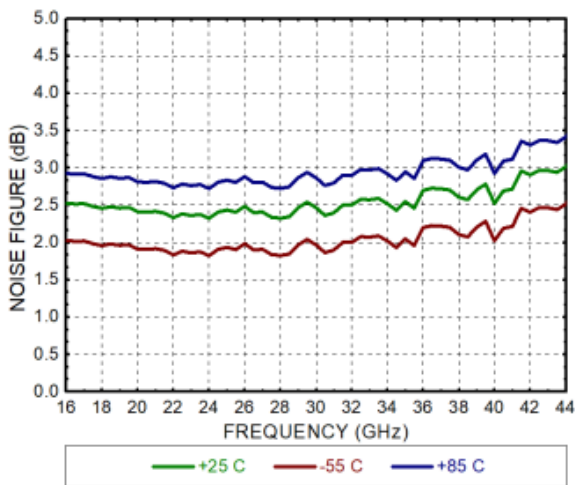
Gain@VDD=+5V



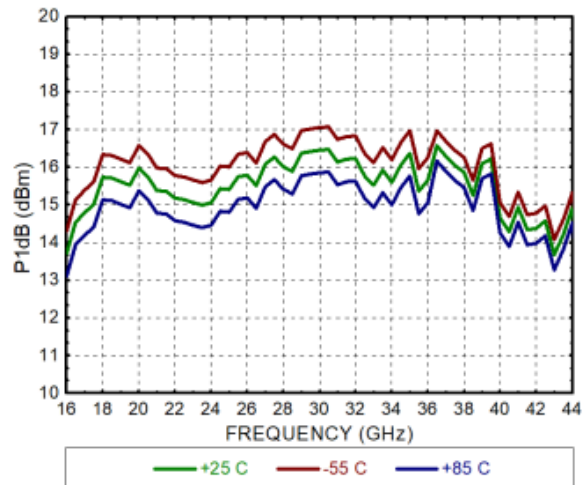
Return Loss@VDD=+5V



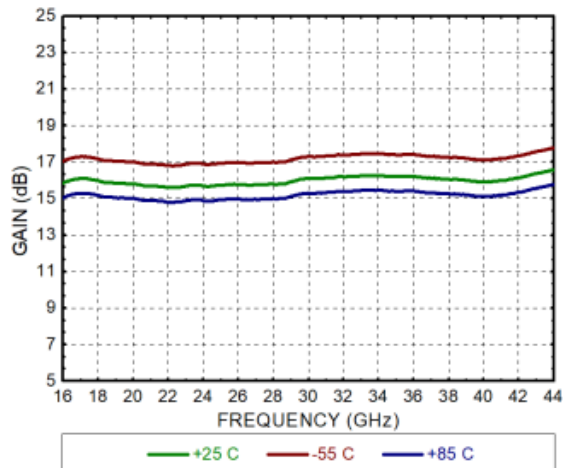
NF@VDD=+5V



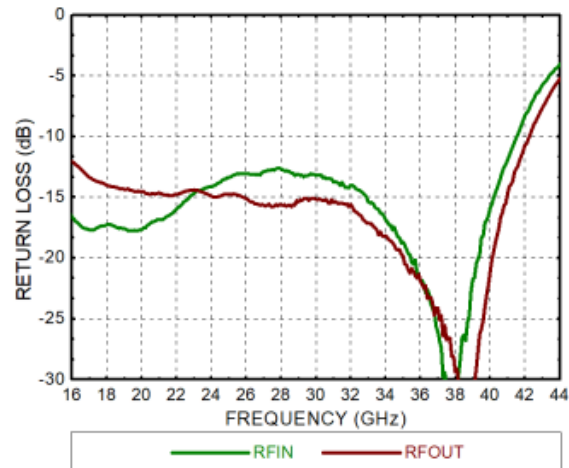
Output Power P-1@VDD=+5V



Gain@VDD=+4V

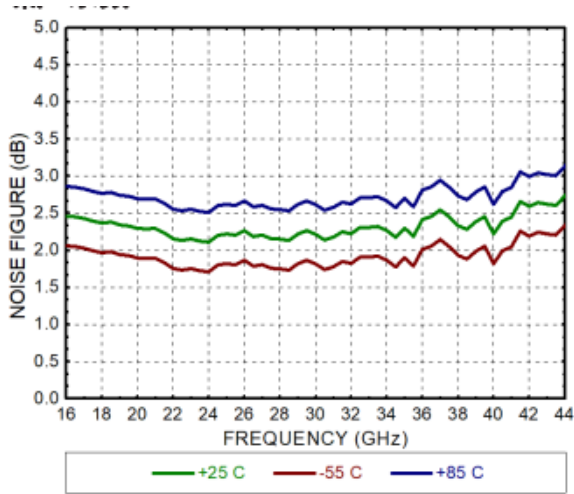


Return Loss@VDD=+4V

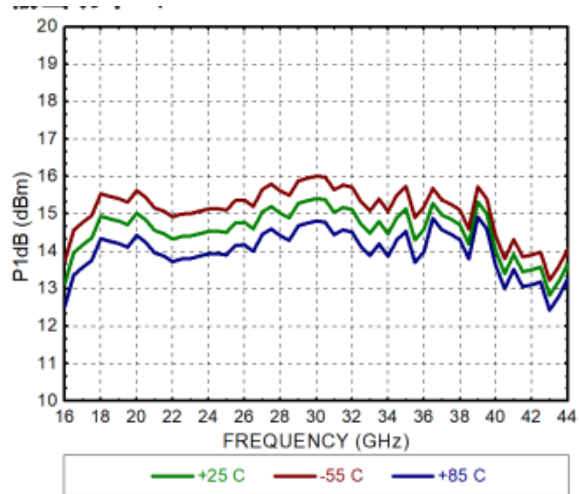




NF@VDD=+4V

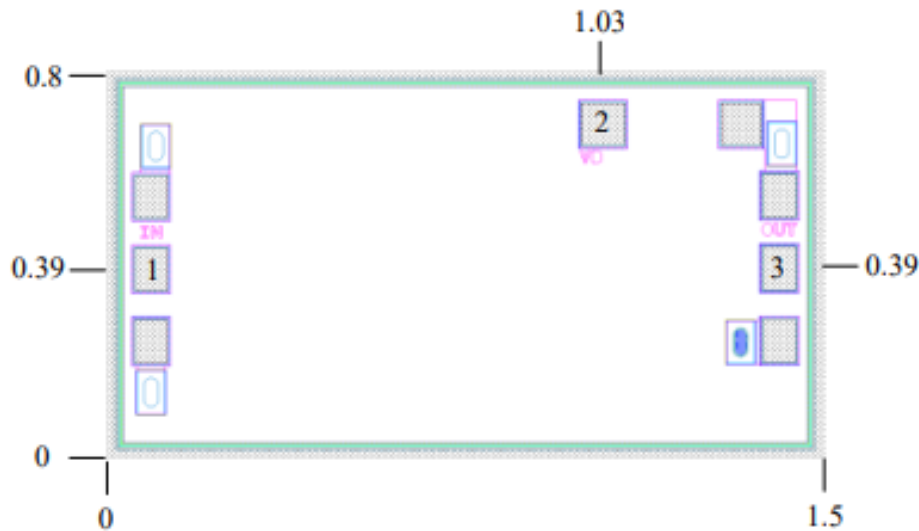


Output Power P-1 @VDD=+4V





Outline Drawing: All Dimensions in mm

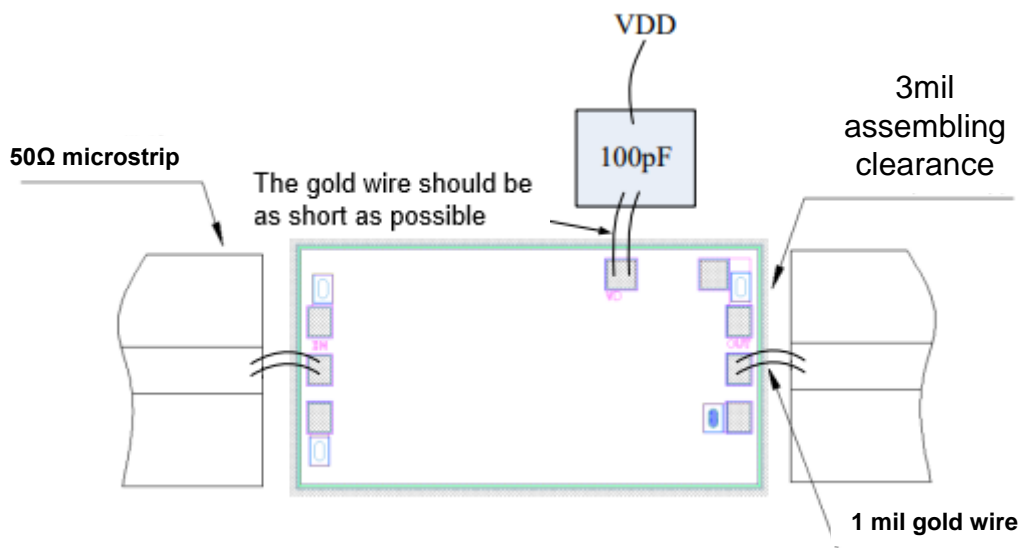


Pad Description

PAD	Function	Description
1	IN	AC coupling, matched to 50Ω
2	VD	Supply voltage to amplifier, connected to external 100pF bypass capacitor
3	OUT	AC coupling, matched to 50Ω
Back	GND	Die bottom must be connected to RF/DC ground



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. RF input power: +15dBm
2. Power supply voltage: +6V
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C