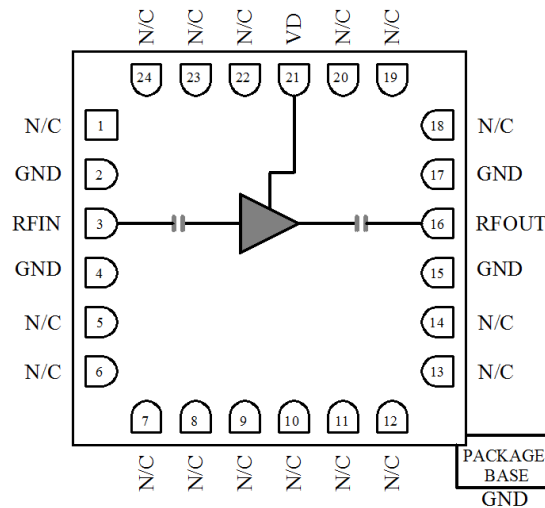


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 1-9GHz
- Small Signal Gain: 28dB Typical
- Gain Flatness:  $\pm 0.5$ dB Typical
- Noise Figure: 0.7dB Typical
- P1dB: 14dBm Typical
- Power Supply: +5V/67mA
- Input/Output: 50 $\Omega$
- Package Size : 4 x 4x 0.8mm

**Typical Applications**

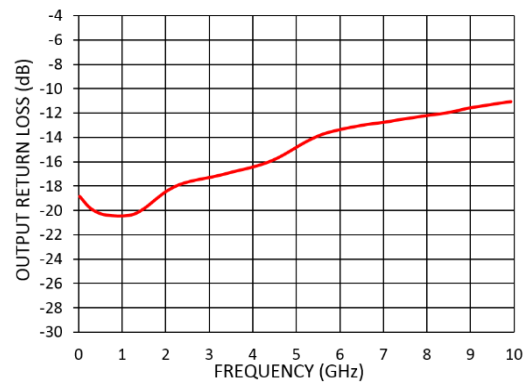
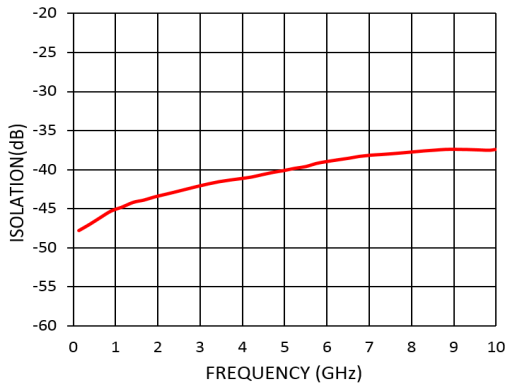
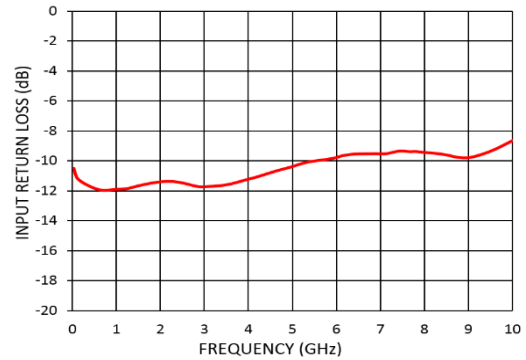
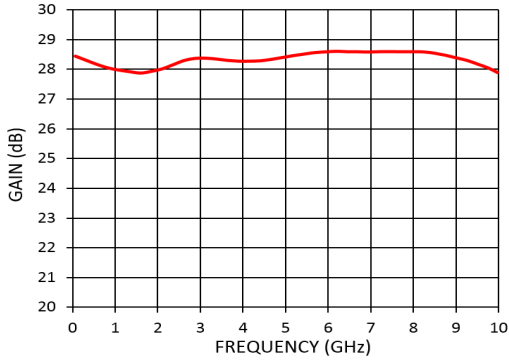
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Functional Block Diagram**

**Electrical Specifications**
**TA = +25°C, VD = +5V, IDD = 67mA Typical**

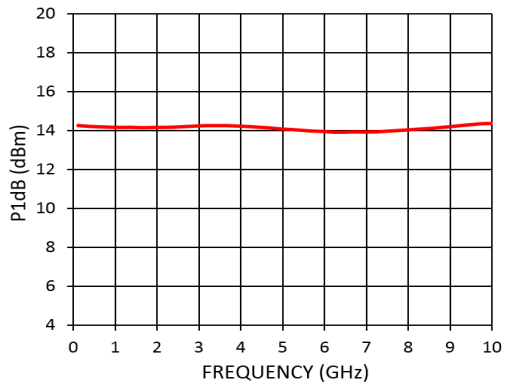
Parameters	Min.	Typ.	Max.	Units
Frequency	1		9	GHz
Small Signal Gain	27	28		dB
Gain Flatness		$\pm 0.5$		dB
Noise Figure		0.7		dB
P1dB - Output 1dB Compression	12	14		dBm
Psat - Saturated Output Power		15		dBm
OIP3 - Output Third Order Intercept		23		dBm
Input Return Loss		-10		dB
Output Return Loss		-12		dB



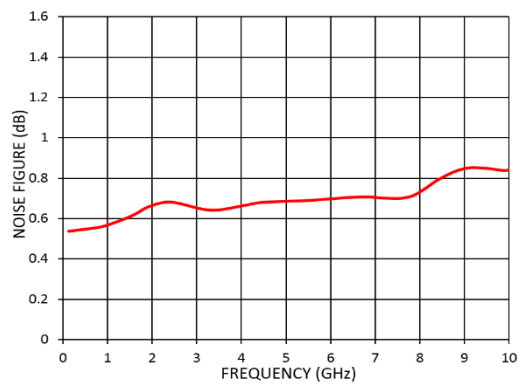
### Measurement Plots: S-parameters



### Measurement Plots: P1dB



### Measurement Plots: Noise Figure



**Absolute Maximum Ratings**

Drain Bias Voltage (VD)	+7V
RF Input Power (RFIN)(VD=+5V)	+20dBm
Channel Temperature	175°C
Continuous Pdiss (T = 85 °C) (derate 6.2mW/°C above 85 °C)	0.56W
Thermal Resistance (channel to die bottom)	50°C/W
Operating Temperature	-55°C to +85 °C
Storage Temperature	-55°C to +150 °C

**Typical Supply Current vs. VD**

VD (V)	IDD (mA)
+5	67

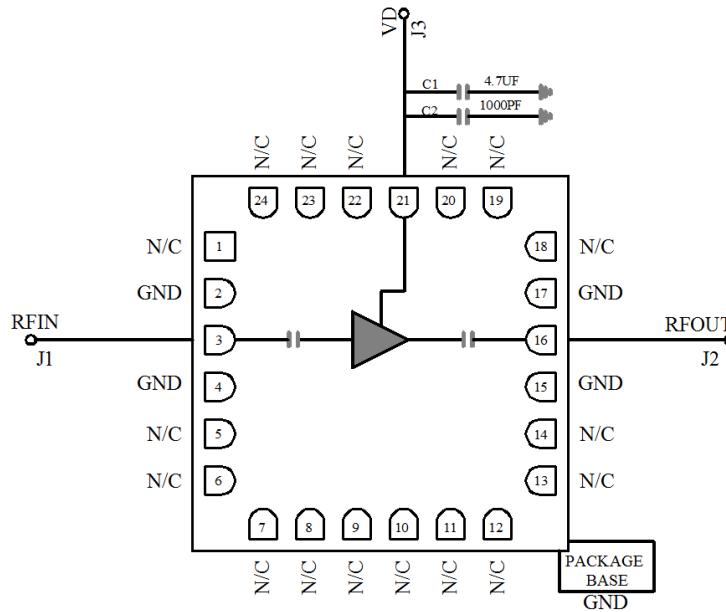


ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS



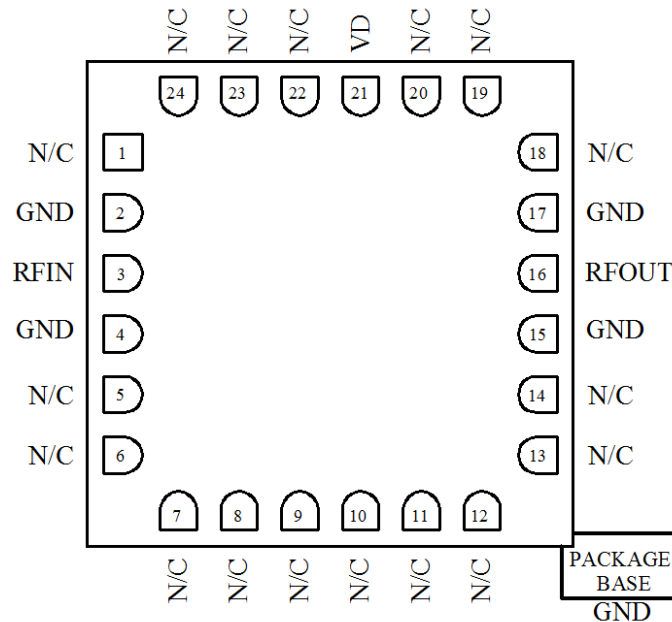


### Assembly Drawing



### Pin Descriptions

No	Function	Description
1,5,6,7,8,9,10,11,12,13,14,18,19,20,22,23,24	NC	No connection. These pins may be connected to RF ground. Performance will not be affected.
3	RF IN	RF Signal Input. This pad is ac-coupled and matched to 50 Ω.
16	RF OUT	RF Signal Output. This pad is ac-coupled and matched to 50 Ω.
21	VD	Connect to external 1000pf and 4.7uf bypass capacitors.
2,4,15,17	GND	These pins & exposed ground paddle must be connected to RF/DC ground
	GND	Package bottom must be connected to RF/DC ground



## Biasing and Operation

### Turn ON procedure:

1. Connect GND to RF and dc ground.
2. Apply positive drain voltage  $V_D$  and set to +5.0 V .
3. Apply RF signal.

### Turn OFF procedure:

1. Turn off the RF signal.
2. Turn off the positive drain voltage  $V_D$ .

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