Coaxial

Low Noise Amplifier (LNA) with Low Dropout Regulator (LDO) LNA50M4GR

50Ω Wideband 50 to 4000 MHz

Case PN: 6UDE2W6S1A2

Features:

* **Frequency Range: 50 MHz to 4 GHz;**
* **Noise Figure: 0.8 dB @ 900 MHz, typical <1dB**
* **Gain: 18 dB Gain at 900MGHz**
* **Output P1dB: +22 dBm CW**
* **Output IP3: +33 dBm**
* **DC Voltage: +6 to 15V (LDO integrated)**
* **Operating Current: 45 mA**
* **Stainless Steel SMA Female Connector**
* **High Quality Isola-Tera RF PCB**

(very low loss and high thermal performance)

* **ROHS Compliant**

Applications:

* **Repeaters/DAS**
* **Mobile Infrastructure**
* **LTE/WCDMA/CDMA/GSM**
* **General Purpose Wireless**
* **SDR & Ham Radio**

Product Overview:

LNA50M4GR is a high-linearity, low noise amplifier designed for operation from 50MHz to 4GHz in a small 15/16”x1-1/8”x0.59” shielded RF enclosure (PN: 6UDE2W6S1A2). At 900 MHz, the amplifier typically provides 18 dB gain, +33 dBm OIP3 at a 54 mA bias setting, and 0.8 dB noise figure. The LNA can be biased from a single supply +6V to +15V (with integrated LDO).

Electrical Specifications:

Item	Parameter	Condition	Electrical Specification			
			MIN	TYP	MAX	UNITS
1	Small Signal Power Gain	0.9 GHz	16.7	18.2	19.7	dB
		1.9 GHz	11.4	12.9	14.4	dB
2	Output Power at 1dB Compression	0.9 GHz	17.4	22.6		dBm
		1.9 GHz		22.7		dBm
3	Output Third Order Intercept Point	0.9 GHz	30.0	33.0		dBm
		1.9 GHz		35.0		dBm
4	Noise Figure	0.9 GHz		0.8	1.0	dB
		1.9 GHz		0.8		dB
5	Input Return Loss	0.9 GHz	13.0	16.0		dB
		1.9 GHz		17.5		dB
6	Output Return Loss	0.9 GHz	14.5	17.5		
		1.9 GHz		16.5		
7	Reverse Isolation	0.9 GHz		23.5		
		1.9 GHz		19.0		
8	Operating Voltage		6		15	V
9	Operating Current (Quiescent)			40		mA

Test Conditions: V=5V, I = 46mA

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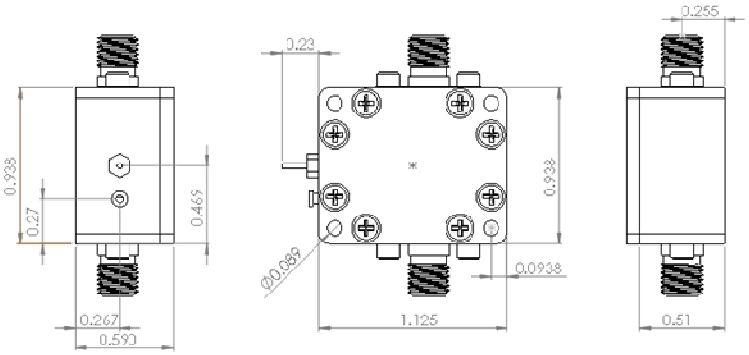
Absolute Maximum Ratings

Item	Parameter	Rating	UNITS
1	Max Device Current	100	mA
2	Max Device Voltage	16	V
3	Max RF input Power	25	dBm
4	Max Dissipated Power	330	mW
5	Operating Temp.	-40 to +85	°C
6	Max Storage Temp.	-65 to +150	°C



S-Parameters

Outline Drawing (inch)