Coaxial

Ultra Low Noise Amplifier (LNA) with Integrated LDO LNA700M6GR

50Ω Wideband 700 to 6000 MHz with Integrated LDO

Case PN: 6UDE2W6S1A2

Features:

* **Frequency Range: 700 MHz to 6 GHz;**
* **Noise Figure: typical 0.4 dB @ 1.95 GHz**
* **Gain: 20 dB Gain at 1.95 GHz**
* **Output P1dB: +22 dBm CW**
* **Output IP3: +35 dBm**
* **DC Voltage: +5 to +15V**
* **Operating Current: 70 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**
* **Test Instrumentation**

Product Overview:

LNA700M6GR is a high-linearity, ultra low noise amplifier in a small 15/16”x1-1/8”x0.59” shielded RF enclosure (PN: 6UDE2W6S1A2). It has integrated LDO Linear Regulator with industrial leading low noise (11µv rms). At 1.95 GHz, the amplifier typically provides 20 dB gain, +35 dBm OIP3 at a 70 mA bias setting, and 0.4 dB noise figure. The LNA can be biased from a single supply +5V to +15V. It can be powered by wide categories of power supplies (e.g., USB, Car Battery etc.).

Electrical Specifications:

Item	Parameter	Conditions	Min	Typ	Max	Units
1	Operational Frequency Range		700		6000	MHz
2	Test Frequency			1950		MHz
3	Gain		18.5	20.0	21.5	dB
4	Input Return Loss			10		dB
5	Output Return Loss			11		dB
6	Noise Figure			0.40	0.65	dB
7	Output P1dB			+20		dBm
8	Output IP3	Pout =+5 dBm/tone, Δf =1 MHz	+32	+35		dBm
9	Current, I_{DD}		40	70	90	mA

Test Conditions: V_{DD}=+5V, I_{dd} = 70 mA (typ.) Temp = +25 °C, 50Ω system.

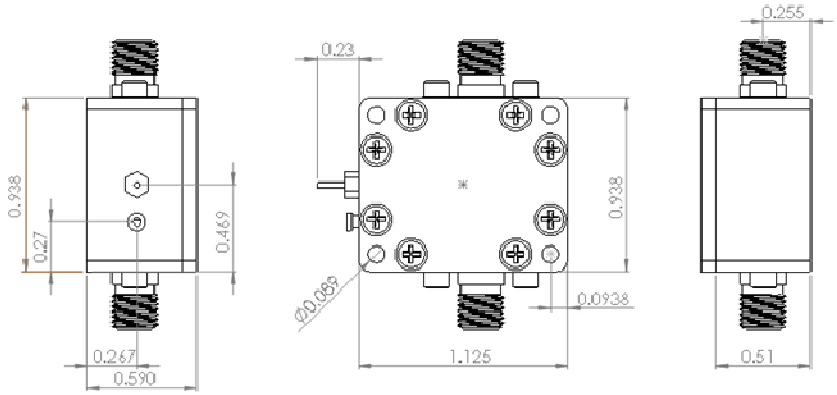
Absolute Maximum Ratings

Item	Parameter	Rating	UNITS
1	Max Device Current	100	mA
2	Max Device Voltage	+40	V
3	Max RF input Power	+22	dBm
4	Operating Temperature	-40 to +85	°C
5	Max Storage Temperature	-65 to +150	°C

Noise Parameters

Item	Parameter	Typical Values								UNITS
	Frequency	900	1700	1950	2300	2600	3000	4500	5500	MHz
1	Noise Figure	0.4	0.36	0.41	0.43	0.53	0.6	0.8	1.0	dB

Outline Drawing (inch)



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