



Low Noise Amplifier

Model: LNA0.1G18G-1230

0.1-18GHz 12dB, Gain 3.0dB, NF

Ultrabroad frequency range, high small signal gain, low noise figure and good gain flatness

Features:

- Frequency range: 0.1-18GHz
- Small Signal Gain: 12dB min.
- Output P1dB: 8dBm min.
- Noise Figure: 3.0dB max.
- Operating voltage/current: +15 VDC/125mA.
- Simple 220V system available SAC option.
- 50 Ohm Matched Input / Output.

Applications:

- Laboratory Applications
- R&D Labs
- Radar Systems
- ISM
- Test Instrumentation

Product Overview:

The LNA0.1G18G-1230 is a coaxial low noise operating in the 0.1 to 18 GHz frequency range. The amplifier offers a maximum noise figure of 3.0 dB, 8 dBm minimum of output P1dB and a minimum small signal gain of 12 dB with the excellent gain flatness of ± 2.0 dB maximum. The DC power requirement for the amplifier is +15 VDC/125 mA. The input and output port configuration offers coax adapter structure with SMA female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		18	GHz
Small Signal Gain	12			dB
Small Signal Gain flatness			±2.0	dB
Noise Figure			3.0	dB
Output P1dB	8			dBm
Input VSWR		2.0	2.5	:1
Output VSWR		2.0	2.5	:1
DC Voltage		+15		V DC
DC Supply Current		125		mA
Impedance		50		Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature	-30°C to +75°C	
Non-operating Temperature	-45°C to +85°C	
Relative humidity	95	%
RF Input/Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Altitude	10,000	feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	17.78 x 10.9 x 4.57	mm

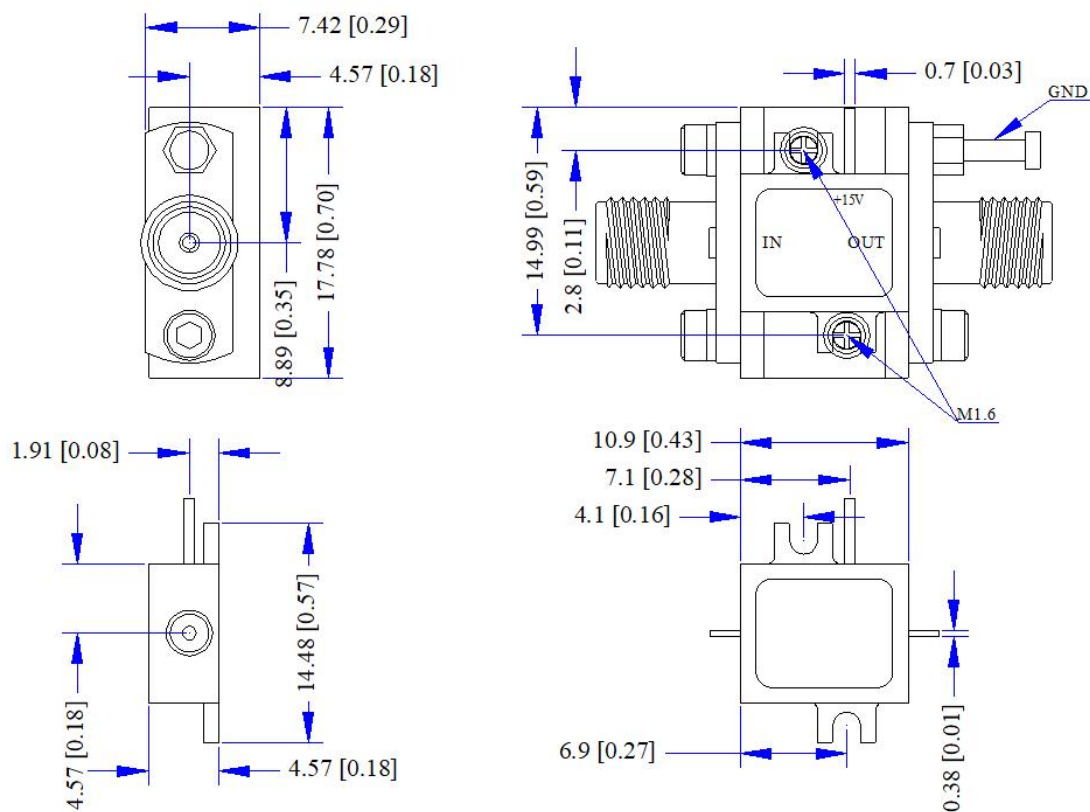
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Ordering Information:

Base Number	Description	Optional
LNA0.1G18G-1230	Low Noise Amplifier, 0.1-18GHz, Gain:12dB,Noise Figure:3.0dB,P1dB:8dBm,+15V DC	Without Heatsink
LNA0.1G18G-1230-HS	Low Noise Amplifier, 0.1-18GHz, Gain:12dB,Noise Figure:3.0dB,P1dB:8dBm,+15V DC	With Heatsink