



Low Noise Amplifier

Model: LNA0.5G12G-4020

0.5-12GHz 40dB, Gain 2.0dB, NF

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

Features:

- Frequency range: 0.5-12GHz
- Small Signal Gain: 40dB typ.
- Output P1dB: 18dBm typ.
- Noise Figure: 2.0dB typ.
- Operating voltage/current: +12 VDC/200mA.
- 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 LNA0.5G12G-4020 is a coaxial low noise operating in the 0.5 to 12 GHz frequency range. The amplifier offers a typical noise figure of 2.0 dB, 18 dBm typical of output P1dB and a typical small signal gain of 40 dB with the excellent gain flatness of ± 2 dB nominal. The DC power requirement for the amplifier is +12 VDC/200 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	0.5		12	GHz
Small Signal Gain		40		dB
Small Signal Gain flatness		±2		dB
Noise Figure		2		dB
Output P1dB		18		dBm
Input VSWR		1.6		:1
Output VSWR		1.6		:1
DC Voltage	+8	+12	+15	V DC
DC Supply Current		200		mA
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature	-40°C to +70°C	
Non-operating Temperature	-55°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	44.8 x 29.2 x 11	mm
Weight	55	g

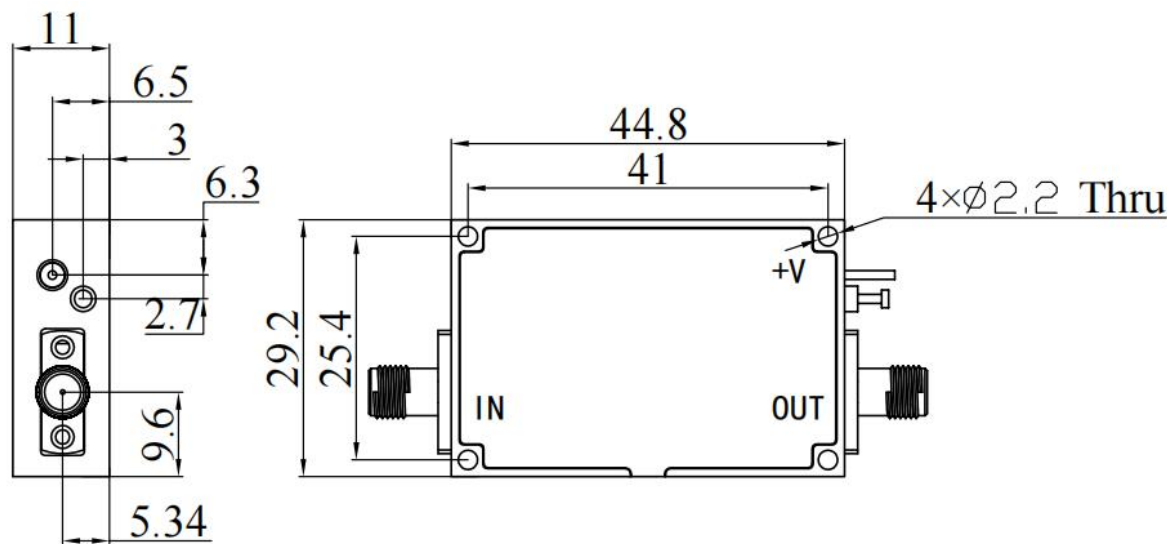
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Ordering Information:

Base Number	Description	Optional
LNA0.5G12G-4020	Low Noise Amplifier, 0.5-12GHz, Gain:40dB,Noise Figure:2.0dB,P1dB:18dBm,+12V DC	Without Heatsink
LNA0.5G12G-4020-HS	Low Noise Amplifier, 0.5-12GHz, Gain:40dB,Noise Figure:2.0dB,P1dB:18dBm,+12V DC	With Heatsink