



Low Noise Amplifier

Model: LNA0.5G18G-3140

0.5-18GHz 31dB, Gain 4.0dB, NF

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

Features:

- Frequency range: 0.5-18GHz
- Small Signal Gain: 31dB typ.
- Output P1dB: 15dBm typ.
- Noise Figure: 4.0dB typ.
- Operating voltage/current: +12 VDC/140mA.
- 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 LNA0.5G18G-3140 is a coaxial low noise operating in the 0.5 to 18 GHz frequency range. The amplifier offers a typical noise figure of 4.0 dB, 15 dBm typical of output P1dB and a typical small signal gain of 31 dB with the excellent gain flatness of ± 1.0 dB nominal. The DC power requirement for the amplifier is +12 VDC/140 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		18	GHz
Small Signal Gain	26	31		dB
Small Signal Gain flatness		±1	±2	dB
Noise Figure		4.0	5.5	dB
Output P1dB	13	15		dBm
Output IP3		26		dBm
Input VSWR		1.8	2	:1
Output VSWR		1.8	2	:1
DC Voltage		+12		V DC
DC Supply Current		140		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	30 x 30 x 8	mm

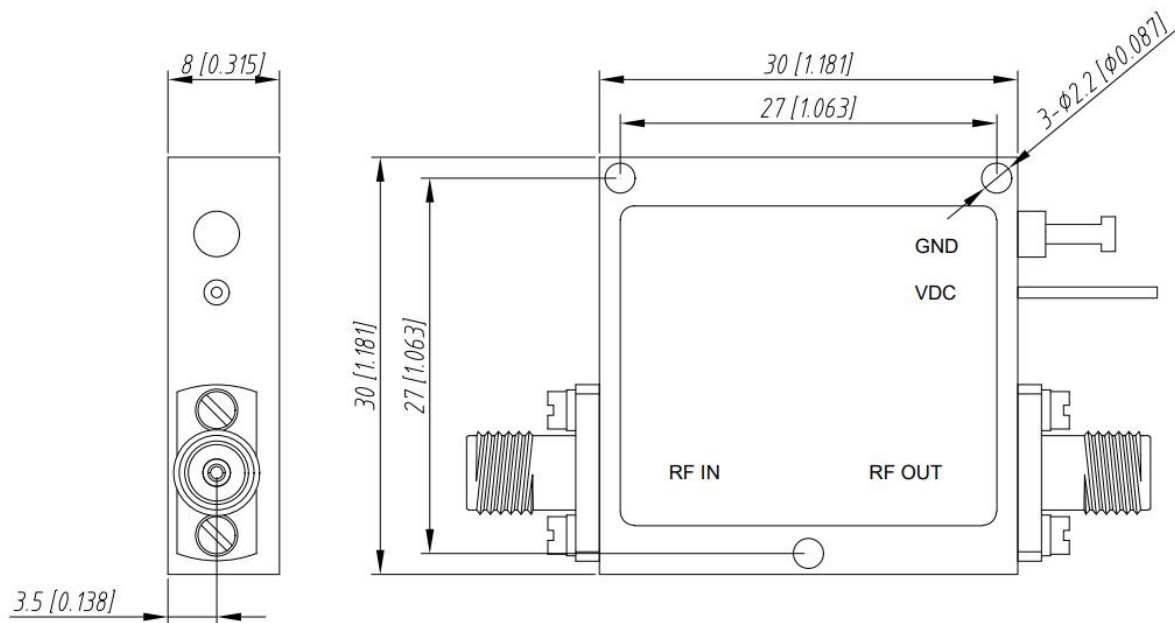
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
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
LNA0.5G18G-3140	Low Noise Amplifier, 0.5-18GHz, Gain:31dB,Noise Figure:4.0dB,P1dB:15dBm,+12V DC	Without Heatsink
LNA0.5G18G-3140-HS	Low Noise Amplifier, 0.5-18GHz, Gain:31dB,Noise Figure:4.0dB,P1dB:15dBm,+12V DC	With Heatsink