



Low Noise Amplifier

Model: LNA20G50G-3055

20-50GHz 30dB, Gain 5.5dB, NF

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

Features:

- Frequency range: 20-50GHz
- Small Signal Gain: 30dB typ.
- Output P1dB: 21dBm typ.
- Noise Figure: 5.5dB 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 LNA20G50G-3055 is a coaxial low noise operating in the 20 to 50 GHz frequency range. The amplifier offers a typical noise figure of 5.5 dB, 21 dBm typical of output P1dB and a typical small signal gain of 30 dB . The DC power requirement for the amplifier is +12 VDC/200 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	20		50	GHz
Small Signal Gain	27	30		dB
Noise Figure		5.5		dB
Output P1dB		21		dBm
Output Psat		22		dBm
Input VSWR		1.6		:1
Output VSWR		1.8		:1
DC Voltage		+12	+16	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	2.4mm Female/2.4mm 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	50 x 55 x 14	mm

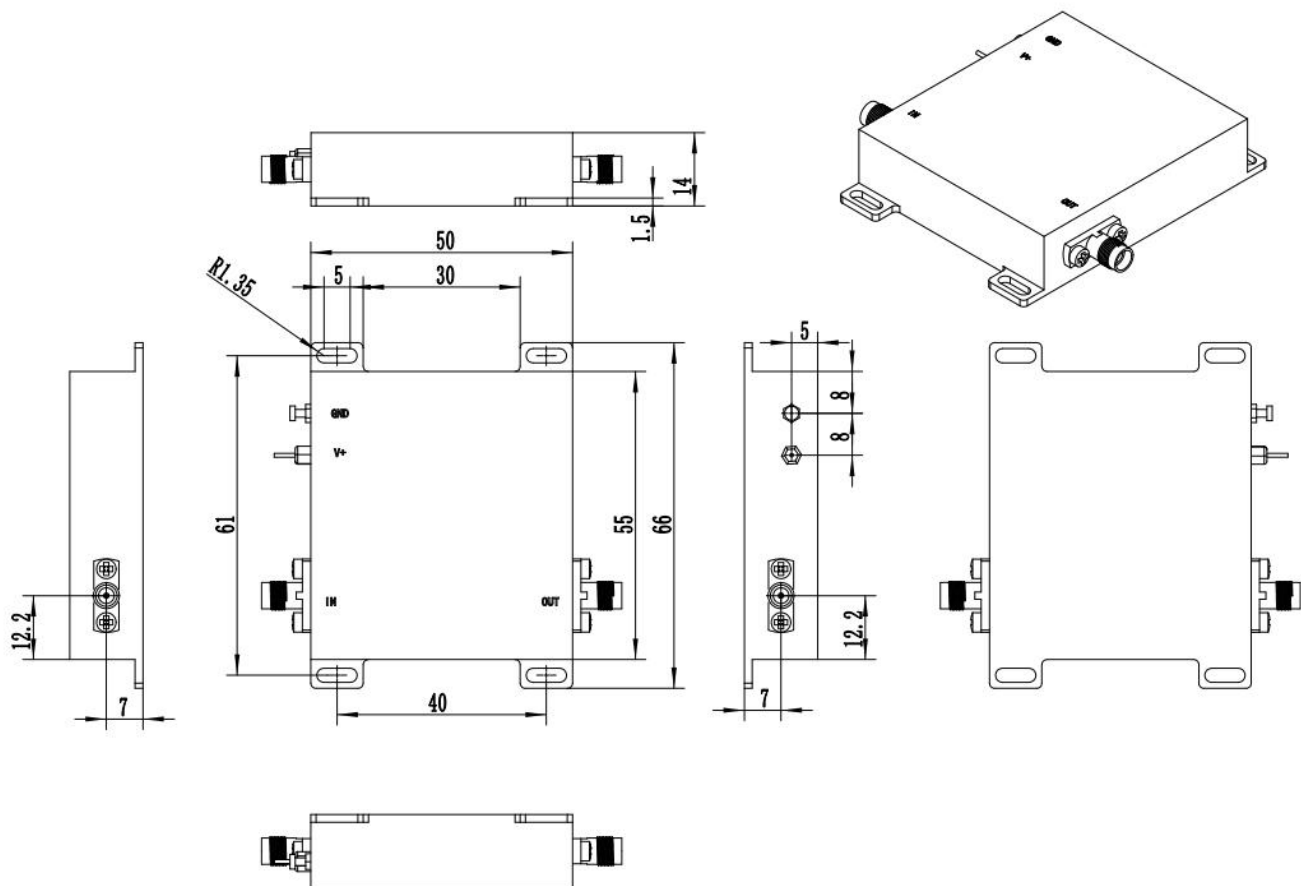
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+16 V
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
LNA20G50G-3055	Low Noise Amplifier, 20-50GHz, Gain:30dB,Noise Figure:5.5dB,P1dB:21dBm,+12V DC	Without Heatsink
LNA20G50G-3055-HS	Low Noise Amplifier, 20-50GHz, Gain:30dB,Noise Figure:5.5dB,P1dB:21dBm,+12V DC	With Heatsink