



Low Noise Amplifier

Model: LNA10M50G-5065

10MHz-50GHz 50dB, Gain 6.5dB, NF

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

Features:

- Frequency range: 10MHz-50GHz
- Small Signal Gain: 50dB typ.
- Output P1dB: 13dB min.
- Noise Figure: 6.5dB max.
- Operating voltage/current: +12 VDC/500mA.
- 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 LNA10M50G-5065 is a coaxial low noise operating in the 10MHz to 50GHz frequency range. The amplifier offers a maximum noise figure of 6.5 dB, 13 dBm minimum of output P1dB and a typical small signal gain of 50 dB with the excellent gain flatness of ± 3 dB nominal. The DC power requirement for the amplifier is +12 VDC/500 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	10MHz		50GHz	
Small Signal Gain	46	50		dB
Small Signal Gain flatness		±3		dB
Noise Figure		5	6.5	dB
Output P1dB	13			dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage	+8	+12		V DC
DC Supply Current		500		mA
Impedance		50		Ohms

Parameters degrade below 100MHz and above 40GHz.

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	76.2 x 50.8 x 12.7	mm

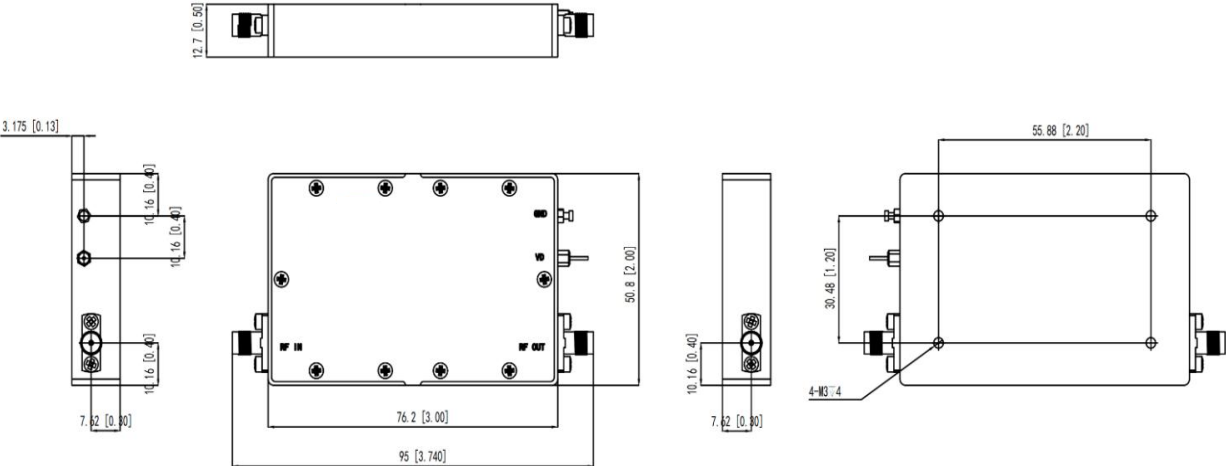
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+13V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Ordering Information:

Base Number	Description	Optional
LNA10M50G-5065	Low Noise Amplifier, 10MHz-50GHz, Gain:50dB,Noise Figure:6.5dB,P1dB:13dBm,+12V DC	Without Heatsink
LNA10M50G-5065-HS	Low Noise Amplifier, 10MHz-50GHz, Gain:50dB,Noise Figure:6.5dB,P1dB:13dBm,+12V DC	With Heatsink