

Low Noise Amplifier

1-2GHz/1.5dB NF/52dB Gain/16dBm P1dB

Model: TLLA1G2G-50-15

TLLA1G2G-50-15 is a low noise amplifier with a typical small signal gain of 52 dB and a nominal noise figure of 1.5 dB across the frequency range of 1 to 2 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range:1-2GHz
- Gain: 52dB Typ
- Noise Figure: 1.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		2	GHz
Small Signal Gain	50	52		dB
Gain Flatness		±0.5		dB
Noise Figure		1.5	2	dB
Output P1dB	10	16		dBm
Output IP3		23		dBm
Input VSWR		1.3	1.8	:1
Output VSWR		1.3	1.8	:1
DC Voltage		+12		V DC
DC Supply Current		200		mA
Impedance	50			Ohms

Mechanical Specifications:

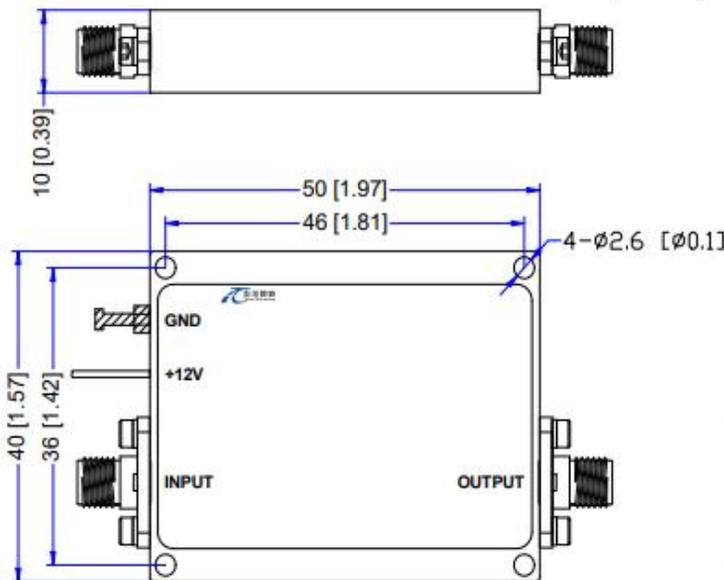
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	50*40*10	mm

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



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

*****Heat Sink Required During Operation**

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
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			

Ordering Information:

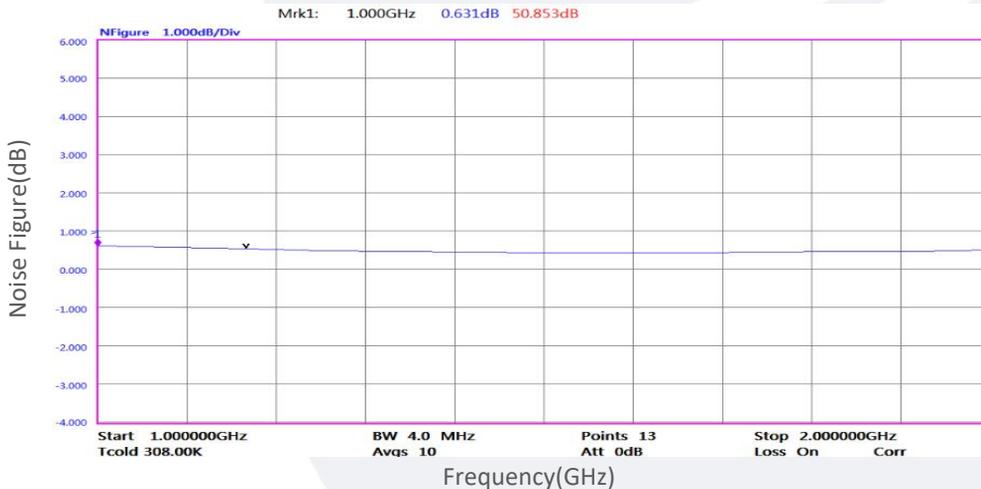
Base Number	Description	Revision
TLLA1G2G-50-15	Low Noise Amplifier, 1-2GHz, Noise Figure:1.5dB, Gain:52 dB,P1dB:16dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G2G-50-15-HS	Low Noise Amplifier, 1-2GHz, Noise Figure:1.5dB, Gain:52 dB,P1dB:16dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



Noise Figure vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.