

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	1		2	GHz
小信号增益 Small Signal Gain	50	52		dB
增益平坦度 Gain Flatness		±0.5		dB
噪声系数 Noise Figure		1.5	2	dB
线性输出功率 Output P1dB	10	16		dBm
输出三阶交调 Output IP3		23		dBm
输入驻波 Input VSWR		1.3	1.8	:1
输出驻波 Output VSWR		1.3	1.8	:1
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current		200		mA
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	50*40*10	mm

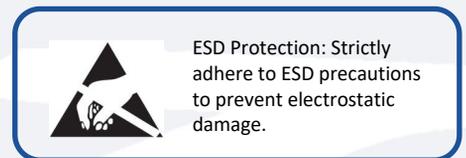
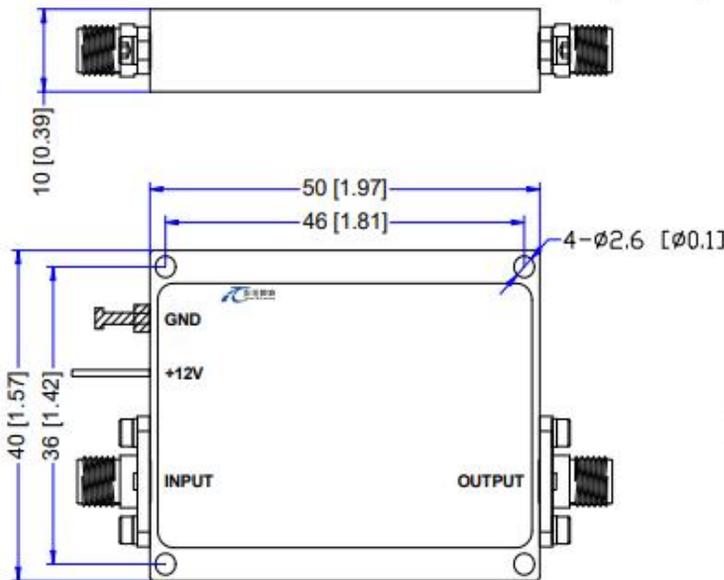
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



外形图 Outline Drawing:

Unit:mm



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

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

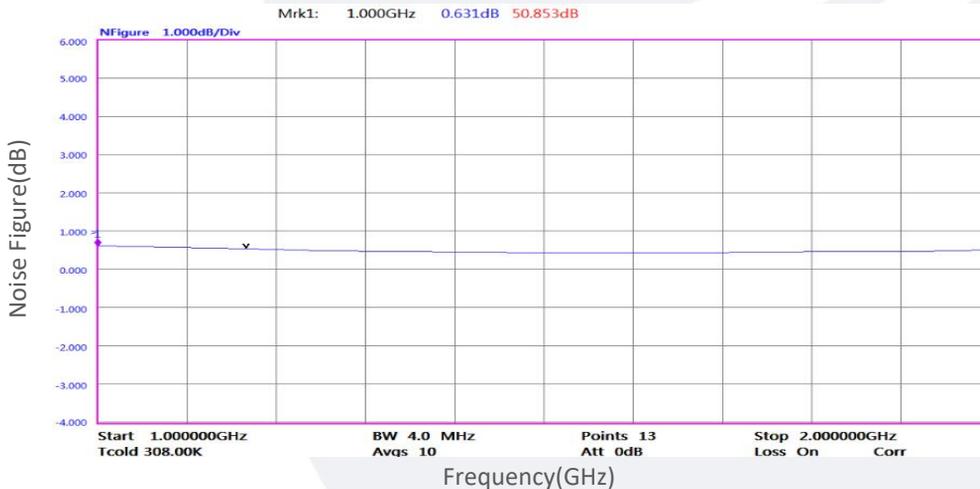
标准型号 Base Number	描述 Description	版本号 Revision
TLLA1G2G-50-15	Low Noise Amplifier, 1-2GHz, Noise Figure:1.5dB, Gain: 52dB,P1dB:16dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G2G-50-15-HS	Low Noise Amplifier, 1-2GHz, Noise Figure:1.5dB, Gain: 52dB,P1dB:16dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 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.