

Low Noise Amplifier

1-18GHz /1.9dB NF/34dB Gain/10 dBm P1dB

Model: TLLA1G18G-34-19-LC

TLLA1G18G-34-19-LC is a low noise amplifier with small signal gain of 34 dB and noise figure of 1.9 dB across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +5 V DC/100 mA. The input and output port configuration offers coax adapter structure with SMA Female.

Features:

- Frequency range:1-18GHz
- Gain: 34dB Typ
- Noise Figure: 1.9dB 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		18	GHz
小信号增益 Small Signal Gain		34		dB
增益平坦度 Gain Flatness		±1.5		dB
噪声系数 Noise Figure		1.9		dB
输出1dB压缩点 Output P-1 dB		10		dBm
输入驻波 Input VSWR		2.0		:1
输出驻波 Output VSWR		2.0		:1
直流电压 DC Voltage		+5		V DC
直流电流 DC Supply Current		100		mA
阻抗 Impedance	50			Ohms

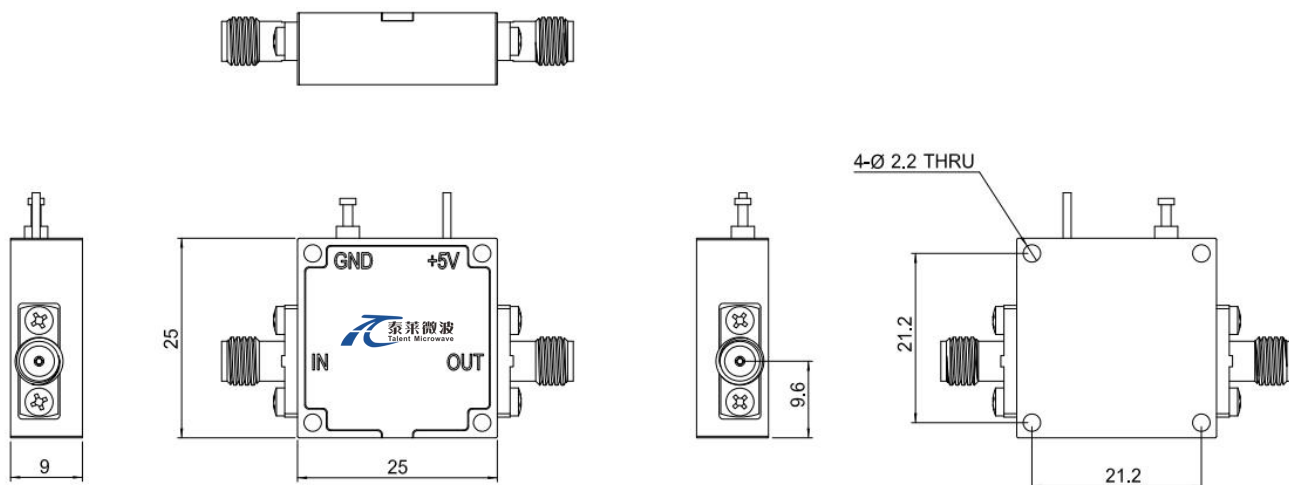
机械特性 Mechanical Specifications:

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	25*25*9	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+5.5 V
输入功率 RF Input Power	+17 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



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

温度环境 Environmental Conditions:

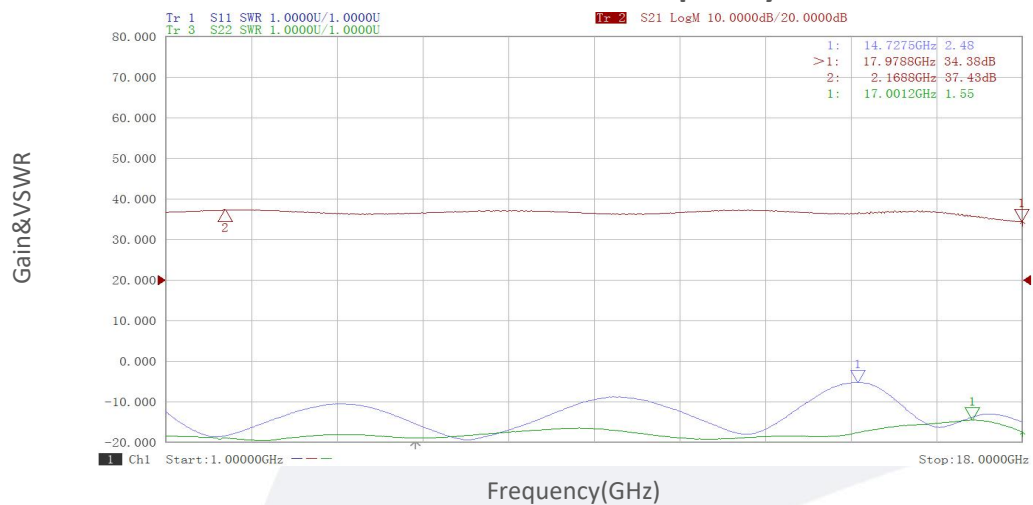
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc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

订货信息 Ordering Information:

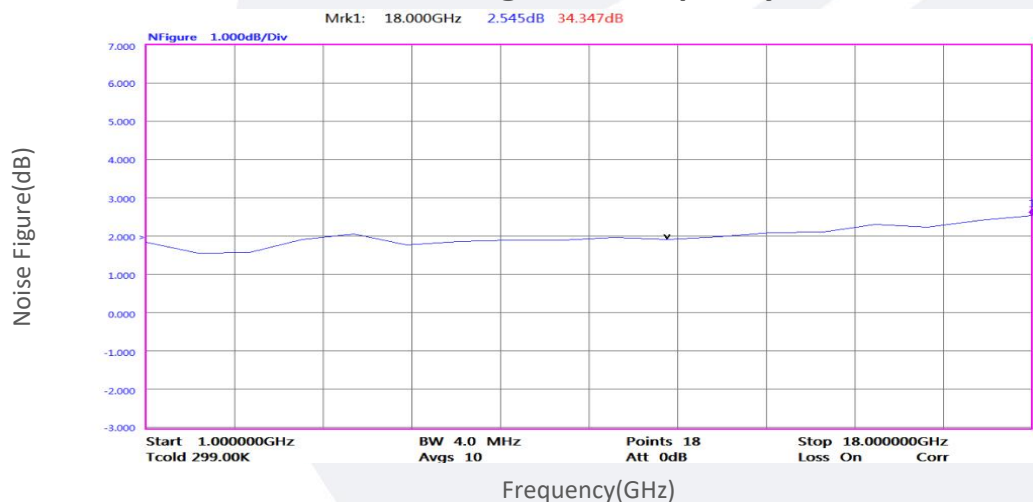
标准型号 Base Number	描述 Description	版本号 Revision
TLLA1G18G-34-19-LC	Low Noise Amplifier, 1-18GHz, Noise Figure:1.9dB, Gain:34 dB,P1dB:10dBm,+5V DC,With Heatsink	Rev.1.0

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.

典型曲线 Typical Performance Data:

P1dB vs Frequency



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