

Low Noise Amplifier

0.1-14GHz/3dB NF/26dB Gain/13dBm P1dB

Model: TLLA0.1G14G-26-25-LC

TLLA0.1G14G-26-25-LC is a low noise amplifier with small signal gain of 26 dB and noise figure of 3 dB across the frequency range of 0.1 to 14 GHz. The DC power requirement for the amplifier is +5V DC/80 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-14GHz
- Gain: 26dB Typ
- Noise Figure: 3dB 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	0.1		14	GHz
小信号增益 Small Signal Gain		26		dB
增益平坦度 Gain Flatness		±1.5		dB
噪声系数 Noise Figure		3		dB
输出1dB压缩点 Output P1 dB		12		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		80		mA
阻抗 Impedance	50			Ohms

机械特性 Mechanical Specifications:

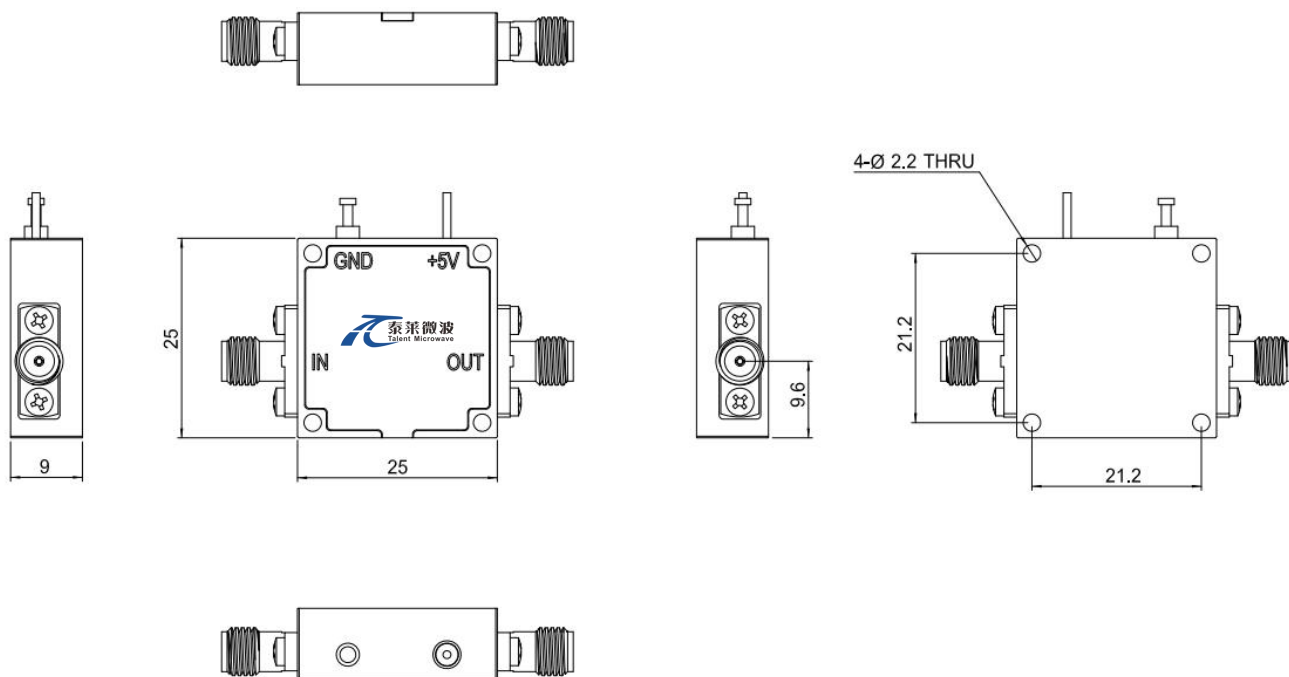
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	25*25*9	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+8 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:

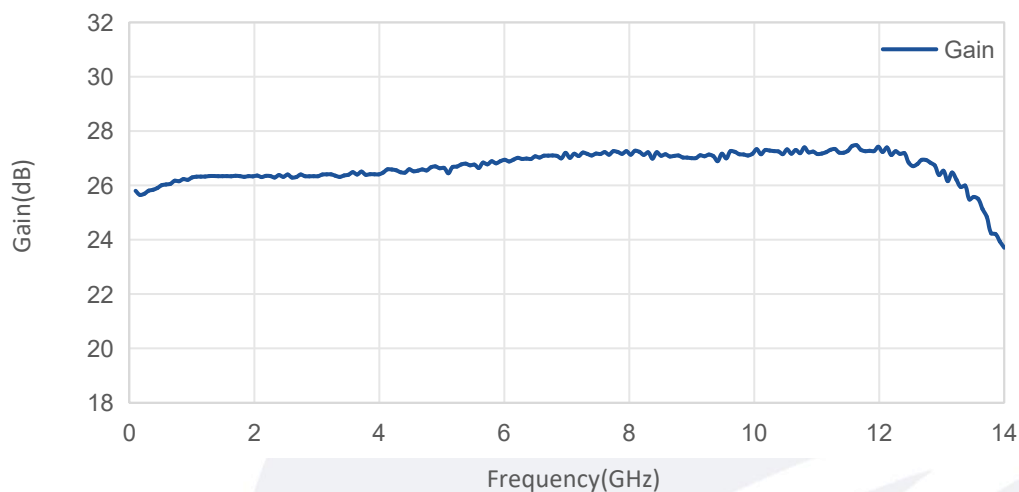
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc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

订货信息 Ordering Information:

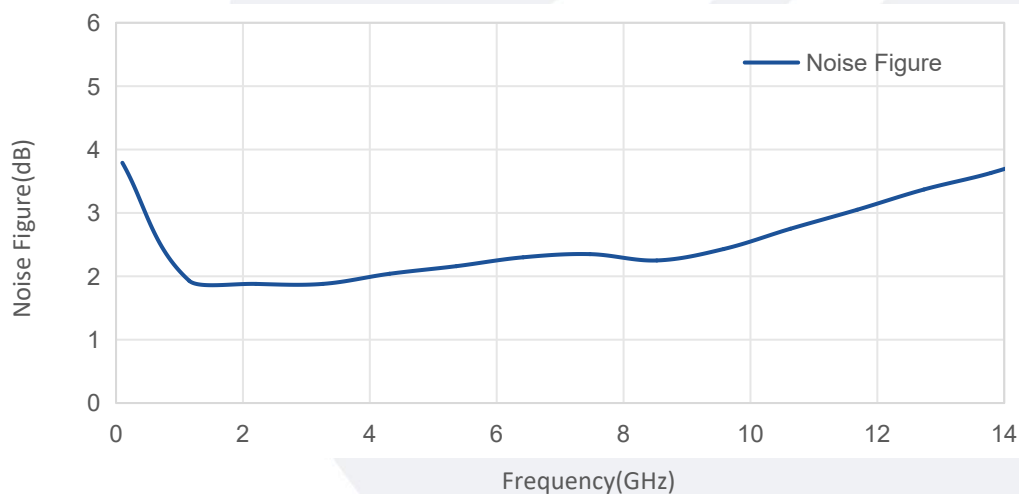
标准型号 Base Number	描述 Description	版本号 Revision
TLLA0.1G14G-26-25-LC	Low Noise Amplifier, 0.1-14GHz, Noise Figure:3dB, Gain:26 dB,P1dB:12dBm,+5V DC,Without Heatsink	Rev.1.0

典型曲线 Typical Performance Data:

Gain vs Frequency



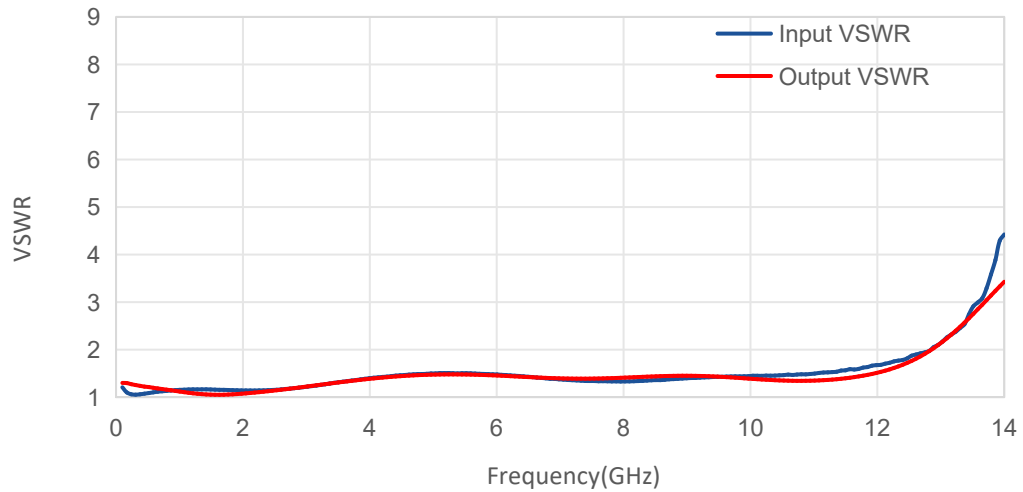
Noise Figure vs Frequency



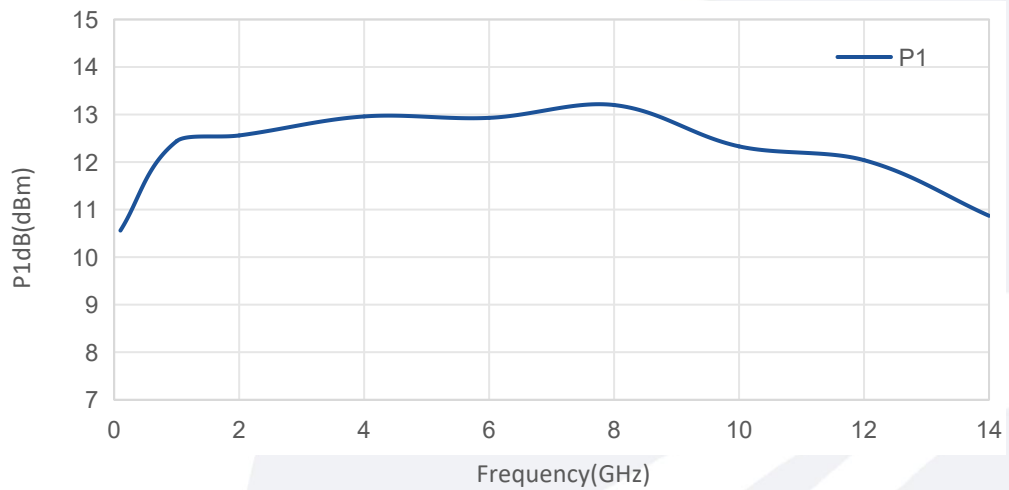
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

VSWR vs Frequency



P1dB vs Frequency



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