

Low Noise Amplifier

24-42GHz/3.5dB NF/19dB Gain/11dBm P1dB

Model: TLLA24G42G-20-20-LC

TLLA24G42G-20-20-LC is a low noise amplifier with small signal gain of 19 dB and noise figure of 3.5 dB across the frequency range of 24 to 42 GHz. The DC power requirement for the amplifier is +5V DC/40mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range:24-42GHz
- Gain: 19dB Typ
- Noise Figure: 3.5dB 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	24		42	GHz
小信号增益 Small Signal Gain		19		dB
增益平坦度 Gain Flatness		±1.5		dB
噪声系数 Noise Figure		3.5		dB
输出1dB压缩点 Output P1dB		11		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		40		mA
阻抗 Impedance	50			Ohms

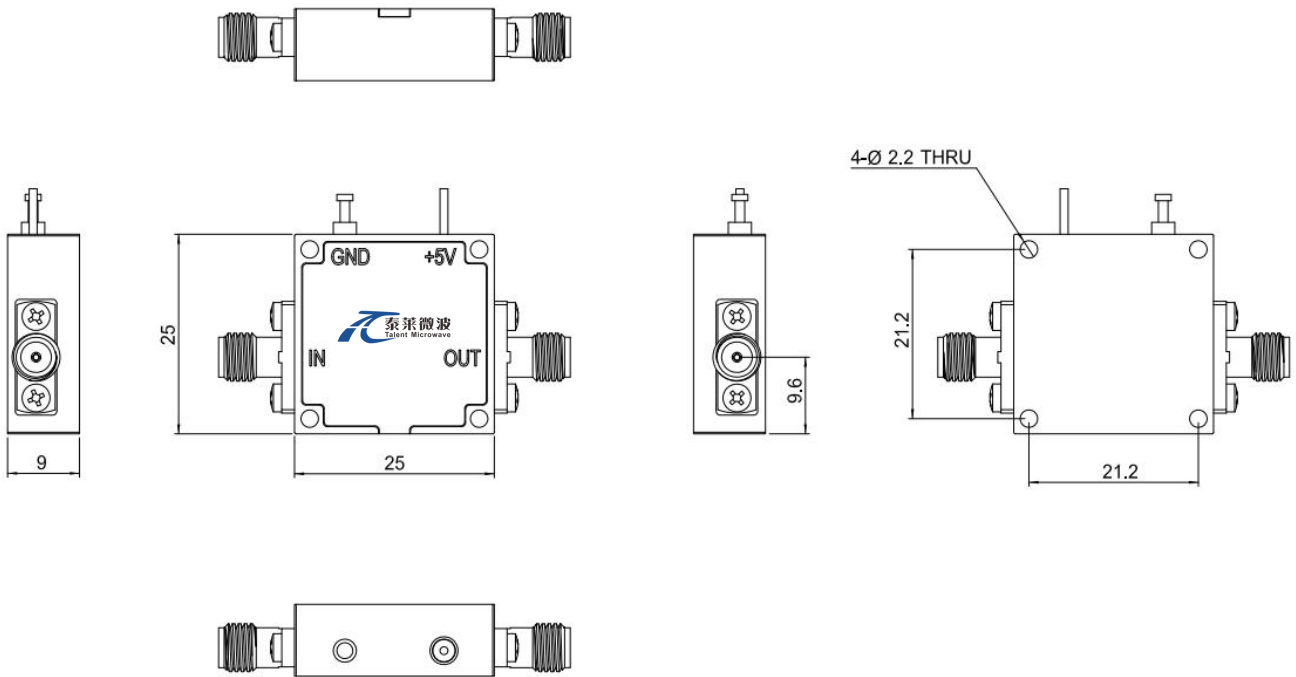
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/2.92mm 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:

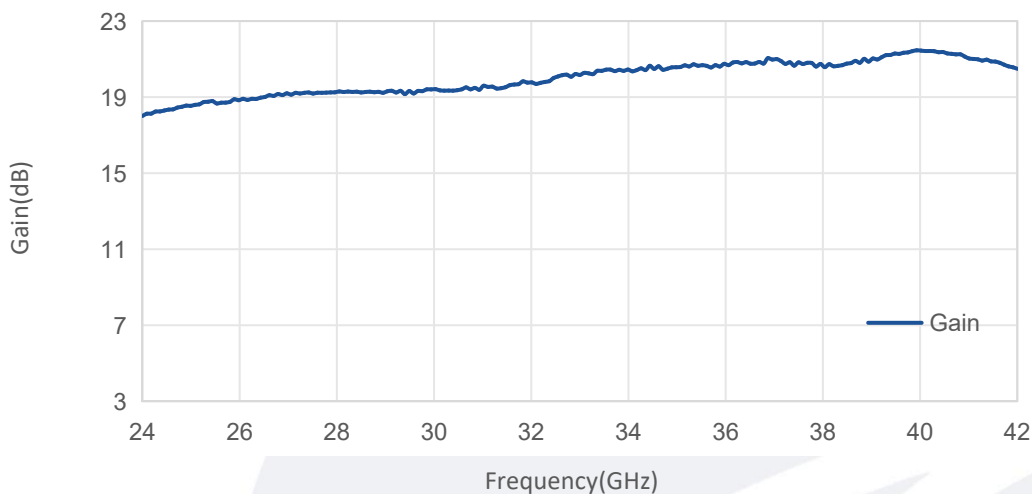
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc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

订货信息 Ordering Information:

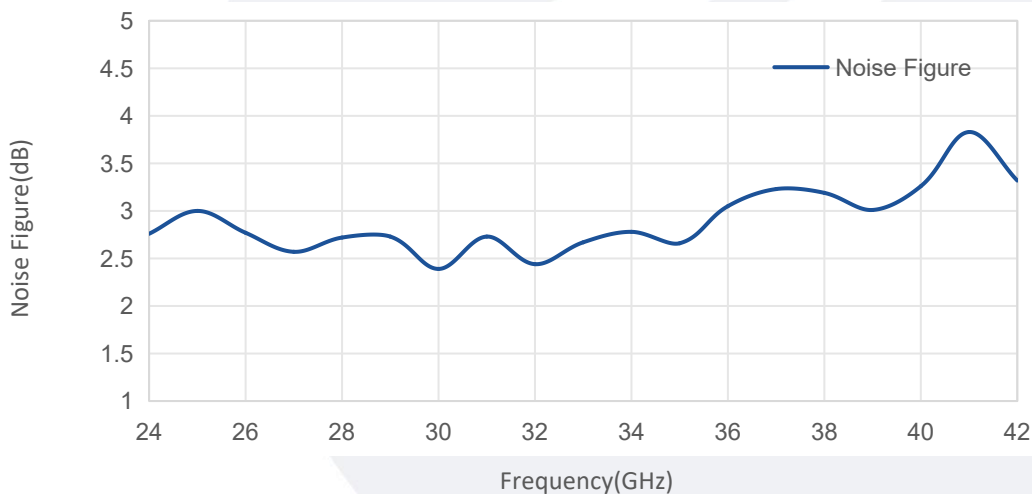
标准型号 Base Number	描述 Description	版本号 Revision
TLLA24G42G-20-20-LC	Low Noise Amplifier, 24-42GHz, Noise Figure:3.5dB, Gain:19dB,P1dB:11dBm,+5V DC,Without Heatsink	Rev.1.0

典型曲线 Typical Performance Data:

Gain vs Frequency



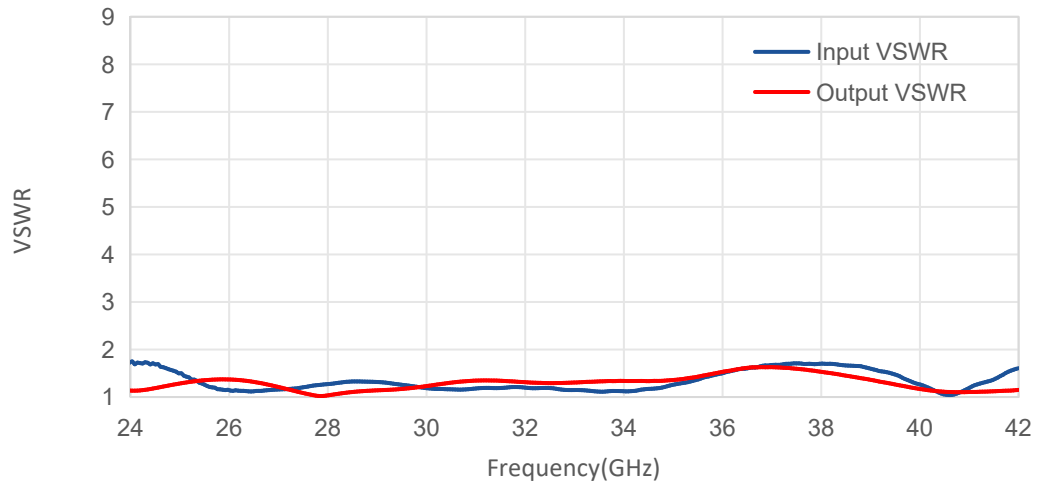
Noise Figure vs Frequency



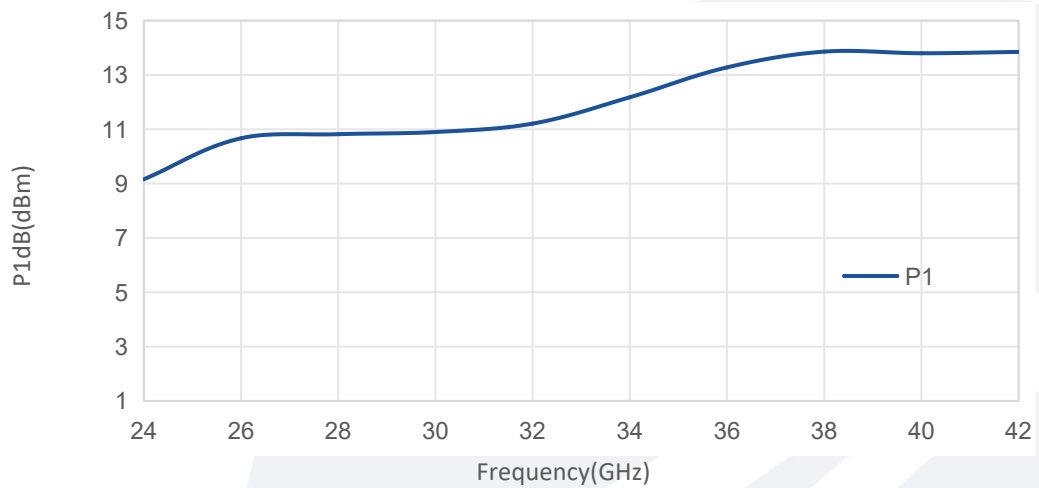
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

VSWR vs Frequency



P1dB vs Frequency



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