

**Model: TLLA4G20G-12-65**
**Low Noise Amplifier**  
**4-20GHz, NF:6.5dB, Gain:12dB, P1dB:21dBm**
**Feature:**

- Ultra Wide Band: 4-20GHz
- Gain: 12dB Typ
- Noise Figure: 6.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**电气特性 Electrical Specifications:**

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	4-20			GHz
增益 Gain	11	12		dB
相位噪声 Phase Noise	-162@10kHz			dBc/Hz
噪声系数 Noise Figure		6.5		dB
线性输出功率 Output P1dB		21		dBm
饱和输出功率 Output Psat		22		dBm
输入驻波 Input VSWR		1.8		:1
输出驻波 Output VSWR		1.8		:1
直流电压 DC Voltage	7	8	9	V DC
直流电流 DC Supply Current		135		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	20*28*10	mm
重量 Weight	/	g

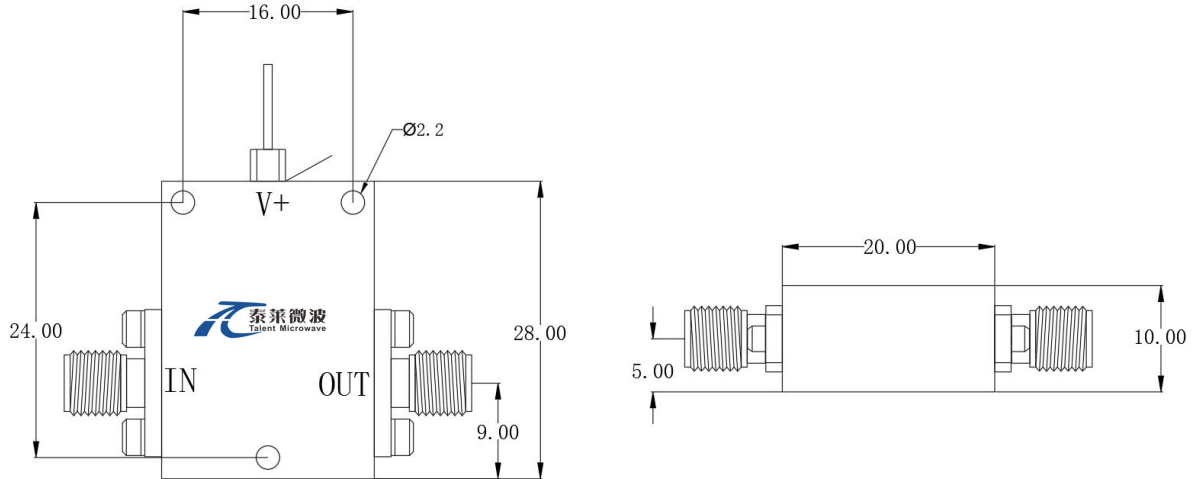
**绝对最大值 Absolute Maximum Ratings:**

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+9 V
输入功率 RF Input Power	5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V


**Available 220V System  
Benchtop Amplifier**

外形尺寸 Outline Drawing:

Unit: mm



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



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

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 Part Number	描述 Description	版本号 Revision
TLLA4G20G-12-65	Low Noise Amplifier, 4-20GHz, Noise Figure:6.5dB, Gain:21 dB,P1dB:22dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA4G20G-12-65-HS	Low Noise Amplifier, 4-20GHz, Noise Figure:6.5dB, Gain:21 dB,P1dB:22dBm,+8V DC,With Heatsink	Rev.1.1