

## Low Noise Amplifier

1-1.6GHz/0.5dB NF/32dB Gain/13dBm P1dB

Model: TLLA1G1.6G-32-13

TLLA1G1.6G-32-13 is a low noise amplifier with a typical small signal gain of 32 dB and a maximum noise figure of 0.5 dB across the frequency range of 1 to 1.6 GHz. The DC power requirement for the amplifier is +5 V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 1-1.6GHz
- Gain: 32dB Typ
- Noise Figure: 0.5dB Max
- 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		1.6	GHz
小信号增益 Small Signal Gain	27	32		dB
增益平坦度 Gain Flatness		±1.0	±1.75	dB
噪声系数 Noise Figure			0.5	dB
线性输出功率 Output P1dB	12	13		dBm
输入驻波 Input VSWR		1.4	1.8	:1
输出驻波 Output VSWR		1.4	1.8	:1
直流电压 DC Voltage	+4.85	+5	+6	V DC
直流电流 DC Supply Current		50	60	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	17.8*20*8.35	mm
重量 Weight	11	g

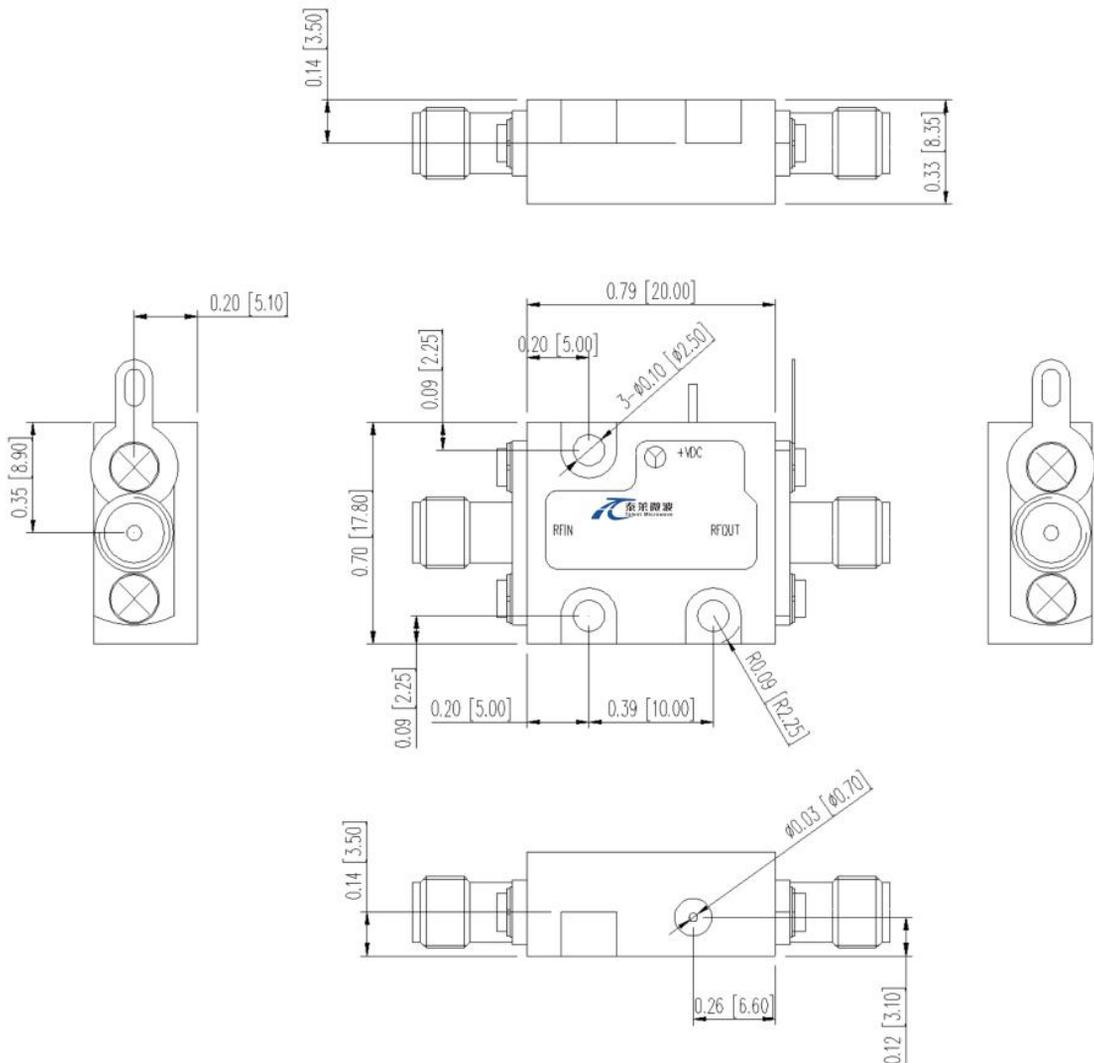
## 绝对最大值 Absolute Maximum Ratings:

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



## 外形图 Outline Drawing:

Unit:mm



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



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	50,000			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
TLLA1G1.6G-32-13	Low Noise Amplifier, 1-1.6GHz, Noise Figure:0.5dB, Gain: 32dB,P1dB:13dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA1G1.6G-32-13-HS	Low Noise Amplifier, 1-1.6GHz, Noise Figure:0.5dB, Gain: 32dB,P1dB:13dBm,+5V DC,With Heatsink	Rev.1.1