

## Low Noise Amplifier

20-50GHz/5.5dB NF/30dB Gain/21dBm P1dB

Model: TLLA20G50G-30-55

TLLA20G50G-30-55 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5.5 dB across the frequency range of 20 to 50 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 20-50GHz
- Gain: 30dB Typ
- Noise Figure: 5.5dB 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	20		50	GHz
小信号增益 Small Signal Gain	27	30		dB
噪声系数 Noise Figure		5.5		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		1.6		:1
输出驻波 Output VSWR		1.8		:1
直流电压 DC Voltage		+12	+16	V DC
直流电流 DC Supply Current		200		mA
阻抗 Impedance		50		Ohms

## 机械特性 Mechanical Specifications:

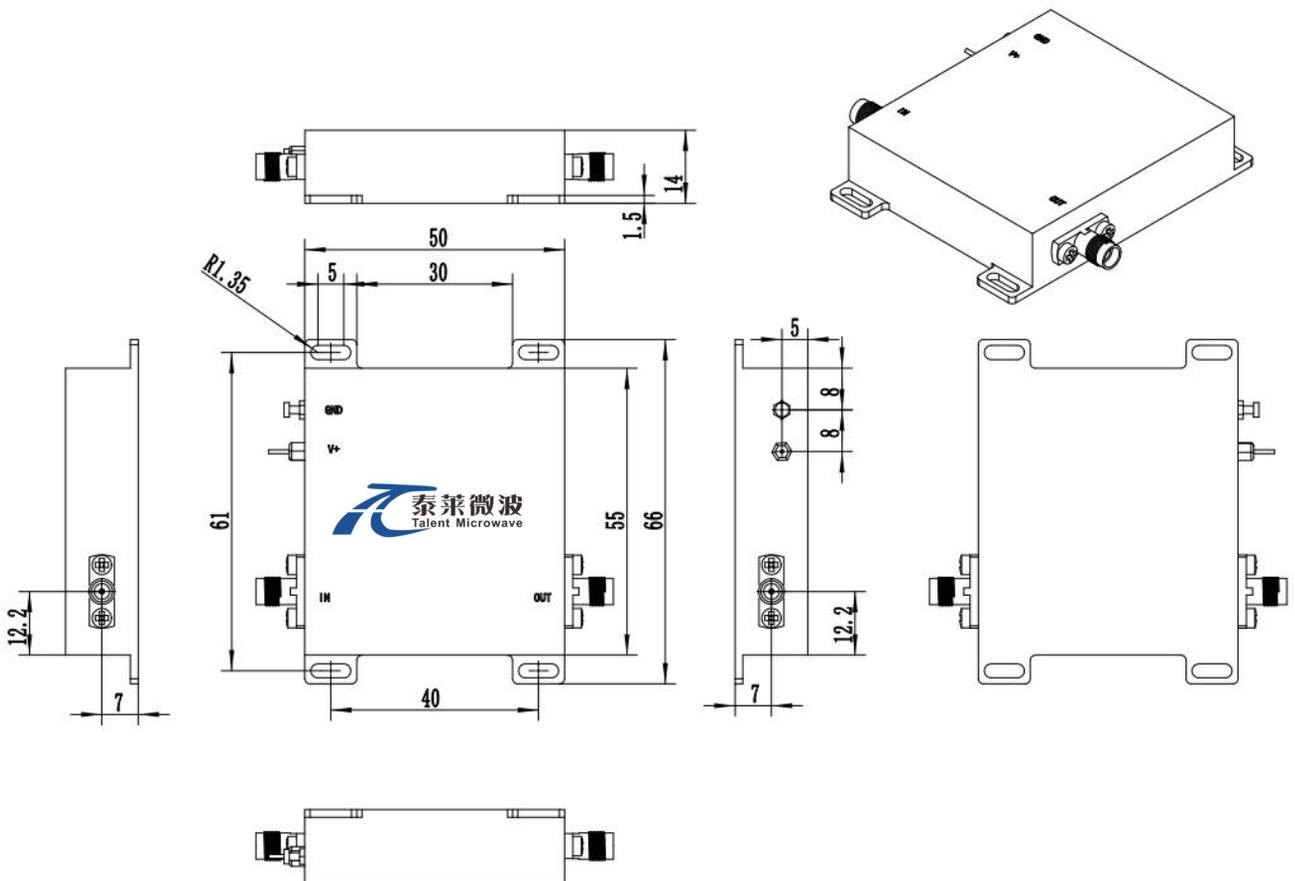
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.4mm Female/2.4mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	50*55*14	mm

### 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+16 V
输入功率 RF Input Power	+5 dBm
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	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
TLLA20G50G-30-55	Low Noise Amplifier, 20-50GHz, Noise Figure:5.5dB, Gain:30 dB,P1dB:21dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA20G50G-30-55-HS	Low Noise Amplifier, 20-50GHz, Noise Figure:5.5dB, Gain:30 dB,P1dB:21dBm,+12V DC,With Heatsink	Rev.1.1