

Low Noise Amplifier

2-20GHz/2.7dB NF/30dB Gain/10dBm P1dB

Model: TLLA2G20G-30-27

TLLA2G20G-30-27 is a low noise amplifier with a minimum small signal gain of 30 dB and a maximum noise figure of 2.7 dB across the frequency range of 2 to 20 GHz. The DC power requirement for the amplifier is +15 V DC/250 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-20GHz
- Gain: 30dB Min
- Noise Figure: 2.7dB 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	2		20	GHz
小信号增益 Small Signal Gain	30			dB
增益平坦度 Gain Flatness			±2.25	dB
噪声系数 Noise Figure			2.7	dB
线性输出功率 Output P1dB	10			dBm
输入驻波 Input VSWR			2.3	:1
输出驻波 Output VSWR			2.3	:1
直流电压 DC Voltage		+15		V DC
直流电流 DC Supply Current		250		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	44.8*29.2*11	mm
重量 Weight	55	g

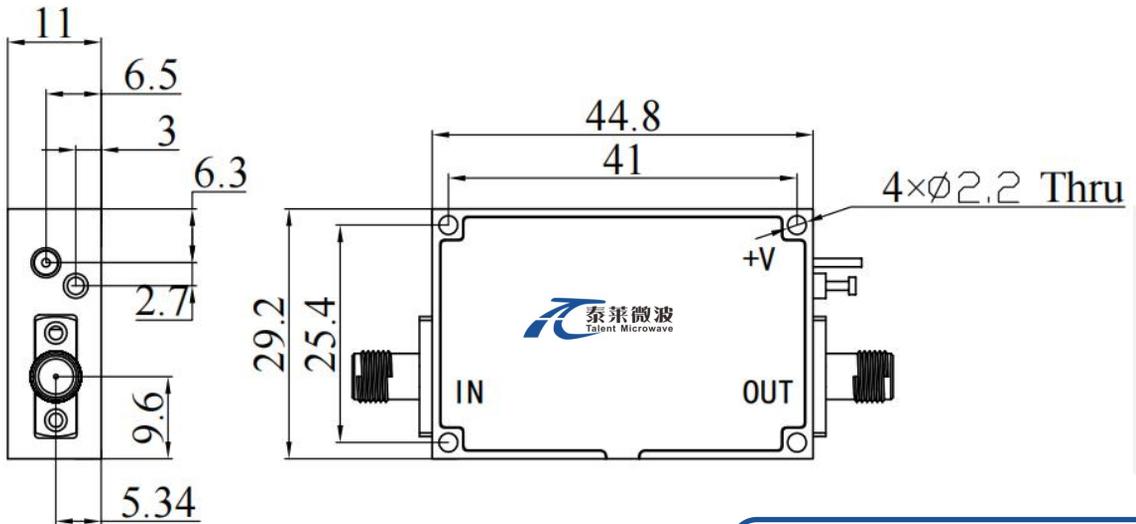
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+10 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
TLLA2G20G-30-27	Low Noise Amplifier, 2-20GHz, Noise Figure:2.7dB, Gain:30 dB,P1dB:10dBm,+15V DC,Without Heatsink	Rev.1.1
TLLA2G20G-30-27-HS	Low Noise Amplifier, 2-20GHz, Noise Figure:2.7dB, Gain:30 dB,P1dB:10dBm,+15V DC,With Heatsink	Rev.1.1