

Low Noise Amplifier

12-18GHz/1.1dB NF/24dB Gain/13dBm P1dB

Model: TLLA12G18G-24-11

TLLA12G18G-24-11 is a low noise amplifier with small signal gain of 24 dB and a nominal noise figure of 1.1 dB across the frequency range of 12 to 18 GHz. The DC power requirement for the amplifier is +8 V DC/35 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 12-18GHz
- Gain: 24dB Typ
- Noise Figure: 1.1dB 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	12		18	GHz
小信号增益 Small Signal Gain	20	24		dB
增益平坦度 Gain Flatness		±1.6	±2	dB
噪声系数 Noise Figure		1.1	1.6	dB
线性输出功率 Output P1dB	10	13		dBm
饱和输出功率 Output Psat		14		dBm
输入驻波 Input VSWR		1.8	2.0	:1
输出驻波 Output VSWR		1.8	2.0	:1
直流电压 DC Voltage	+5	+8	+12	V DC
直流电流 DC Supply Current		35		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

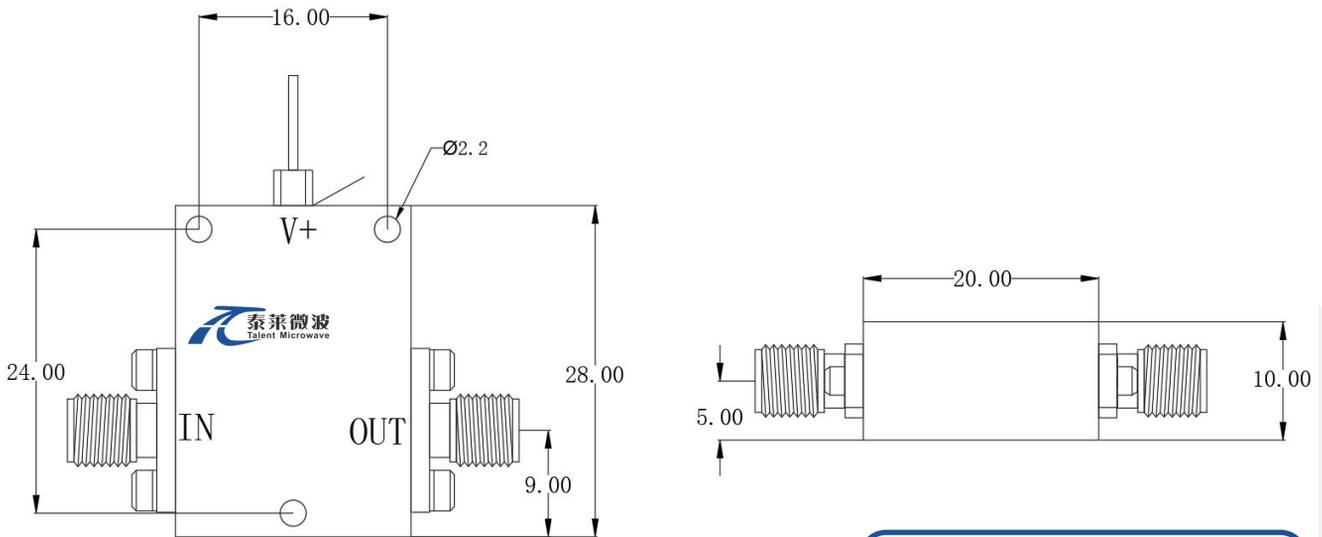
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+12 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
TLLA12G18G-24-11	Low Noise Amplifier, 12-18GHz, Noise Figure:1.1dB, Gain:24dB,P1dB:13dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA12G18G-24-11-HS	Low Noise Amplifier, 12-18GHz, Noise Figure:1.1dB, Gain:24dB,P1dB:13dBm,+8V DC,With Heatsink	Rev.1.1