

Low Noise Amplifier

18-42GHz/4.0dB NF/28dB Gain/15dBm P1dB

Model: TLLA18G42G-22-40

TLLA18G42G-22-40 is a low noise amplifier with a typical small signal gain of 28 dB and a nominal noise figure of 4.0 dB across the frequency range of 18 to 42 GHz. The DC power requirement for the amplifier is +5 V DC/240 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-42GHz
- Gain: 28dB Typ
- Noise Figure: 4.0dB 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	18		42	GHz
小信号增益 Small Signal Gain	22	28		dB
增益平坦度 Gain Flatness		±2.0	±2.5	dB
噪声系数 Noise Figure		4	5.5	dB
线性输出功率 Output P1dB	13	15		dBm
输出三阶交调 Output IP3		25		dBm
输入驻波 Input VSWR		2	2.5	:1
输出驻波 Output VSWR		2	2.5	:1
直流电压 DC Voltage		+5		V DC
直流电流 DC Supply Current		240		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	2.92mm Female/2.92mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	10.92*18.8*8.9	mm

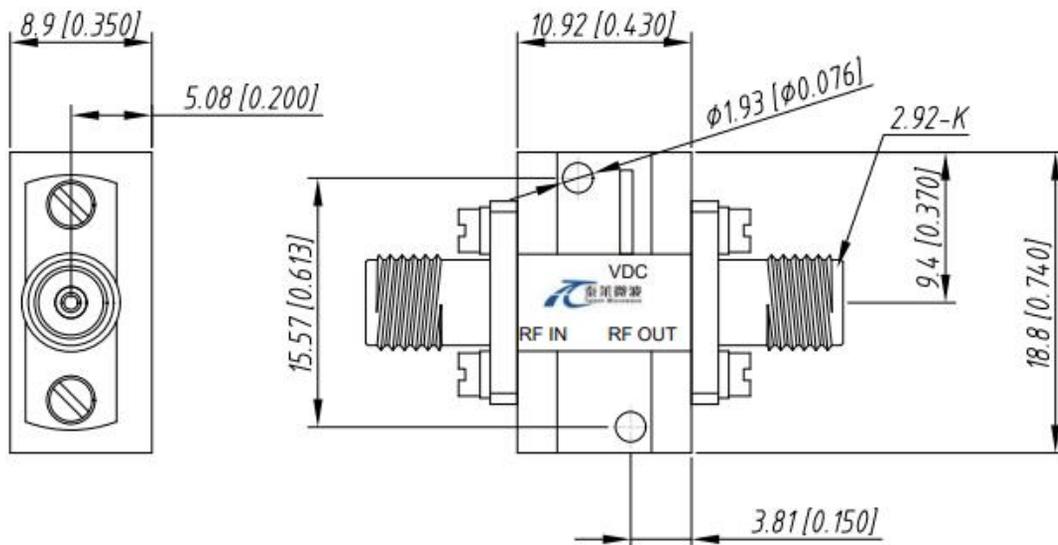
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
输入功率 RF Input Power	-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	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
TLLA18G42G-22-40	Low Noise Amplifier, 18-42GHz, Noise Figure:4.0dB, Gain:28 dB,P1dB:15dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA18G42G-22-40-HS	Low Noise Amplifier, 18-42GHz, Noise Figure:4.0dB, Gain:28 dB,P1dB:15dBm,+5V DC,With Heatsink	Rev.1.1