

## Low Noise Amplifier

1-40GHz/4.0dB NF/42dB Gain/18dBm P1dB

Model: TLLA1G40G-42-40

TLLA1G40G-42-40 is a low noise amplifier with a typical small signal gain of 42 dB and a nominal noise figure of 4.0 dB across the frequency range of 1 to 40 GHz. The DC power requirement for the amplifier is +12 V DC/420 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 1-40GHz
- Gain: 42dB 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	1		40	GHz
小信号增益 Small Signal Gain	40	42		dB
增益平坦度 Gain Flatness		±3.5		dB
噪声系数 Noise Figure		4	5	dB
线性输出功率 Output P1dB	@1~30GHz	18		dBm
	@30~40GHz		16	dBm
输入驻波 Input VSWR		1.8		:1
输出驻波 Output VSWR		1.8		:1
直流电压 DC Voltage	+9	+12	+16	V DC
直流电流 DC Supply Current		420		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	
壳体材质 Shell Material	Aluminum	
尺寸 Size	50*60*12	mm

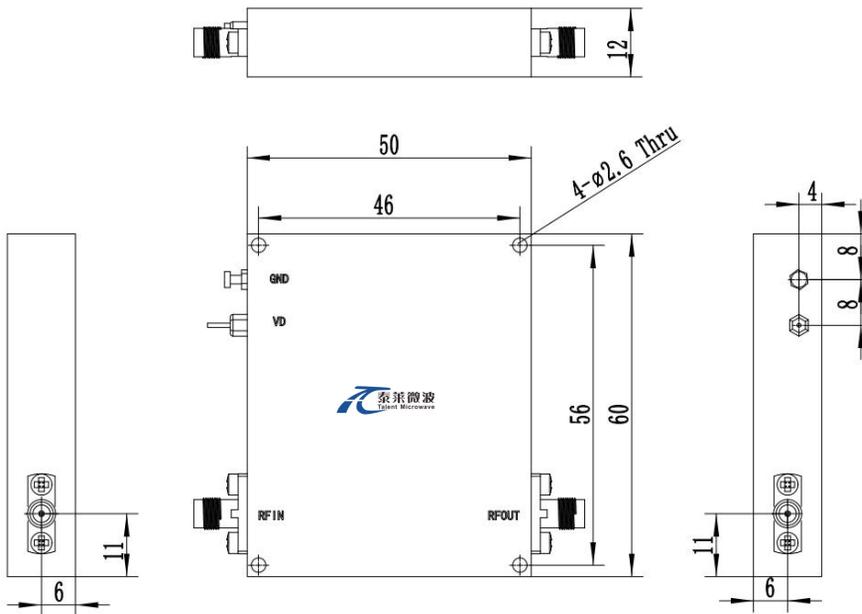
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+16V
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
TLLA1G40G-42-40	Low Noise Amplifier, 1-40GHz, Noise Figure:4.0dB, Gain:42 dB, P1dB:18dBm, +12V DC, Without Heatsink	Rev.1.1
TLLA1G40G-42-40-HS	Low Noise Amplifier, 1-40GHz, Noise Figure:4.0dB, Gain:42 dB, P1dB:18dBm, +12 DC, With Heatsink	Rev.1.1