

Low Noise Amplifier

24-44GHz/5.0dB NF/40dB Gain/21dBm P1dB

Model: TLLA24G44G-40-50-2

TLLA24G44G-40-50-2 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 5.0 dB across the frequency range of 24 to 44 GHz. The DC power requirement for the amplifier is +12 V DC/750 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 24-44GHz
- Gain: 40dB Typ
- Noise Figure: 5.0dB 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	24		44	GHz
小信号增益 Small Signal Gain	38	40		dB
增益平坦度 Gain Flatness		±3.0	±4.0	dB
噪声系数 Noise Figure		5	6	dB
线性输出功率 Output P1dB	20	21		dBm
饱和输出功率 Output Psat		22		dBm
杂散 Spurious		-60		dBc
输出三阶交调 Output IP3		30		dBm
输入驻波 Input VSWR		1.8	2.5	:1
输出驻波 Output VSWR		1.8	2.5	:1
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current		750		mA
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

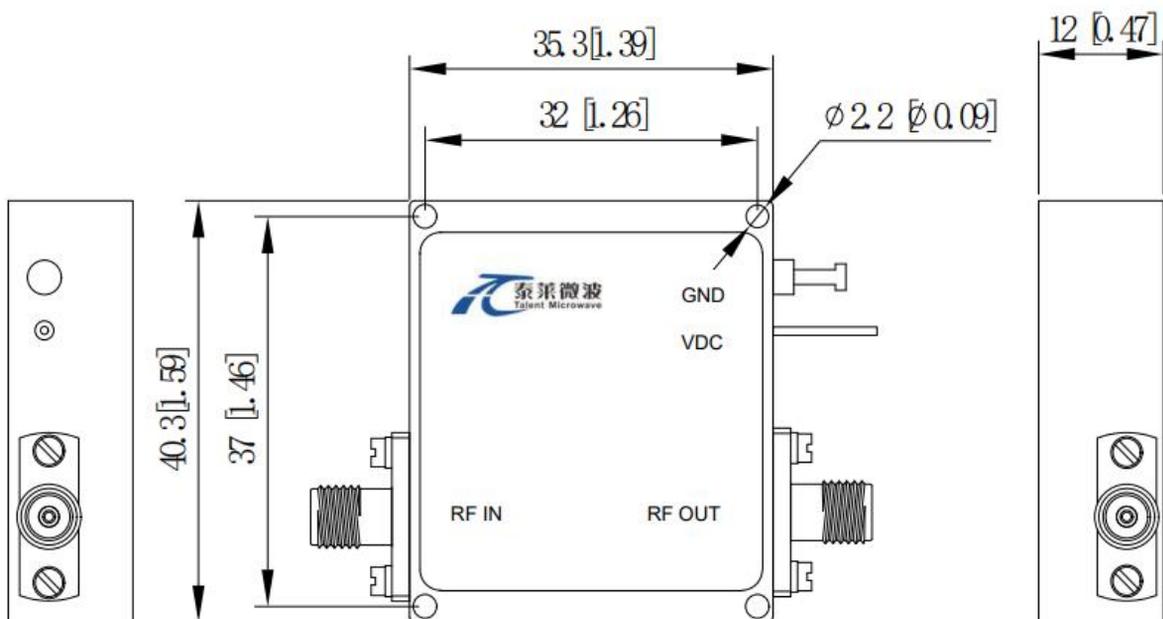
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.4mm Female/2.4mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	35.3*40.3*12	mm
重量 Weight	50	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+18 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	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
TLLA24G44G-40-50-2	Low Noise Amplifier, 24-44GHz, Noise Figure:5.0dB, Gain:40dB,P1dB:21dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA24G44G-40-50-2-HS	Low Noise Amplifier, 24-44GHz, Noise Figure:5.0dB, Gain:40dB,P1dB:21dBm,+12V DC,With Heatsink	Rev.1.1