Turpanic Co, Ltd
Email: johnny@turpanic.com
Mob/WeChat/WhatsApp: +8613088887527

Low Noise Amplifier

15-30GHz/4.0dB NF/50dB Gain/14dBm P1dB Model: TLLA15G30G-50-40

TLLA15G30G-50-40 is a low noise amplifier with a minimum small signal gain of 50 dB and a maximum noise figure of 4.0 dB across the frequency range of 15 to 30 GHz. The DC power requirement for the amplifier is +12 V DC/160 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 15-30GHz
- Gain: 50dB Min
- Noise Figure: 4.0dB 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	15		30	GHz
小信号增益 Small Signal Gain	50			dB
增益平坦度 Gain Flatness		±2.0		dB
噪声系数 Noise Figure			4.0	dB
线性输出功率 Output P1dB	14	16		dBm
输入驻波 Input VSWR		2.0	2.2	:1
输出驻波 Output VSWR		2.0	2.2	:1
直流电压 DC Voltage	+8	+12	+15	V DC
直流电流 DC Supply Current		160		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	

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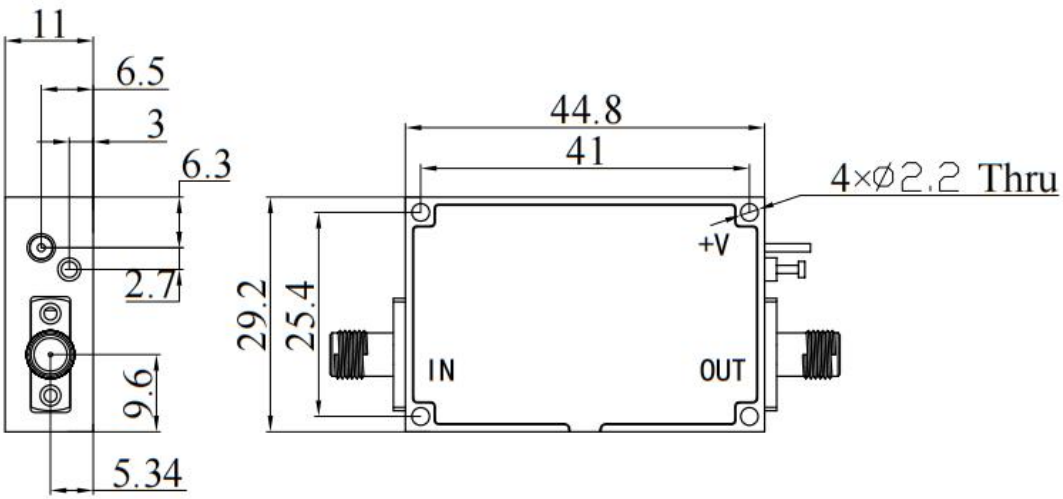
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+15 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	℃
存储温度 Non-operating Temperature	-55		+125	℃
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			

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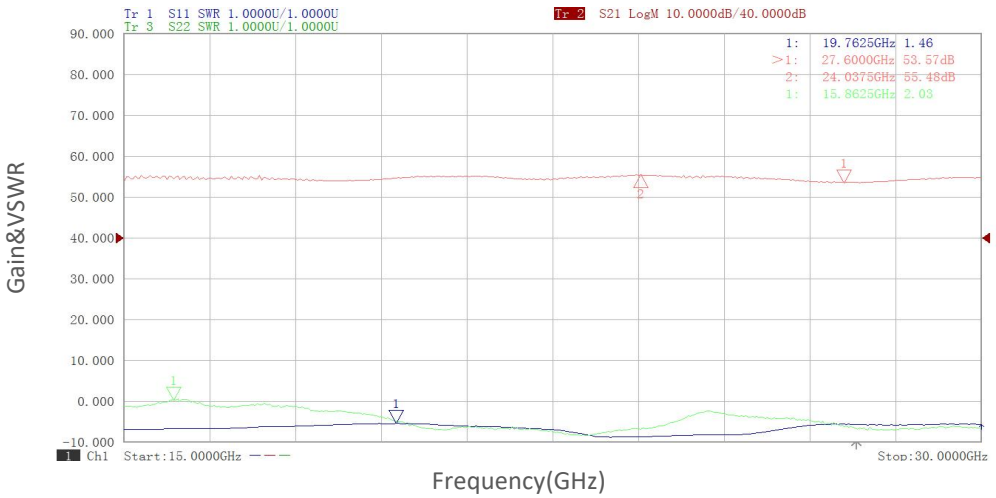
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLLA15G30G-50-40	Low Noise Amplifier, 15-30GHz, Noise Figure:4.0dB, Gain:50dB,P1dB:14dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA15G30G-50-40-HS	Low Noise Amplifier, 15-30GHz, Noise Figure:4.0dB, Gain:50dB,P1dB:14dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

Gain&VSWR vs Frequency



Noise Figure vs Frequency

Noise Figure(dB)

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典型曲线 Typical Performance Data: