泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Low Noise Amplifier

0.5-40GHz/5dB NF/43dB Gain/18dBm P1dB Model: TLLA0.5G40G-40-50

TLLA0.5G40G-40-50 is a low noise amplifier with a typical small signal gain of 43 dB and a nominal noise figure of 5 dB across the frequency range of 0.5 to 40 GHz. The DC power requirement for the amplifier is +12 V DC/350 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 0.5-40GHz
- Gain: 43dB Typ
- Noise Figure: 5dB 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	0.5		40	GHz
小信号增益 Small Signal Gain		43		dB
增益平坦度 Gain Flatness		±2.5		dB
噪声系数 Noise Figure		5		dB
线性输出功率 Output P1dB		18		dBm
饱和输出功率 Output Psat		21		dBm
杂散 Spurious		-60		dBc
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	8	12		V DC
直流电流 DC Supply Current		350		mA
阻抗 Impedance		50		Ohms

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机械特性 Mechanical Specifications:

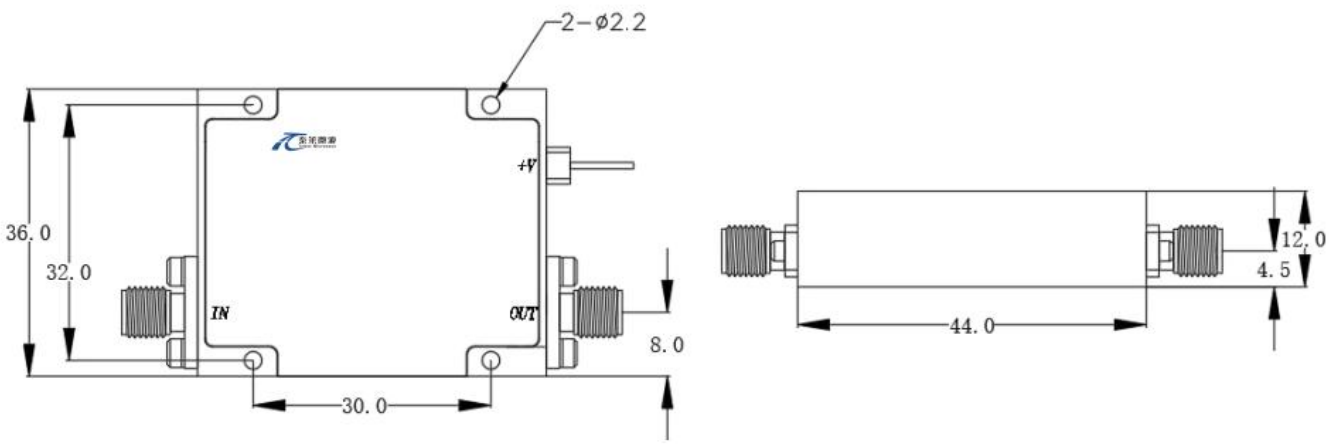
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/2.92mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44*36*12(Without heatsink) 44*50*32(With heatsink)	mm

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



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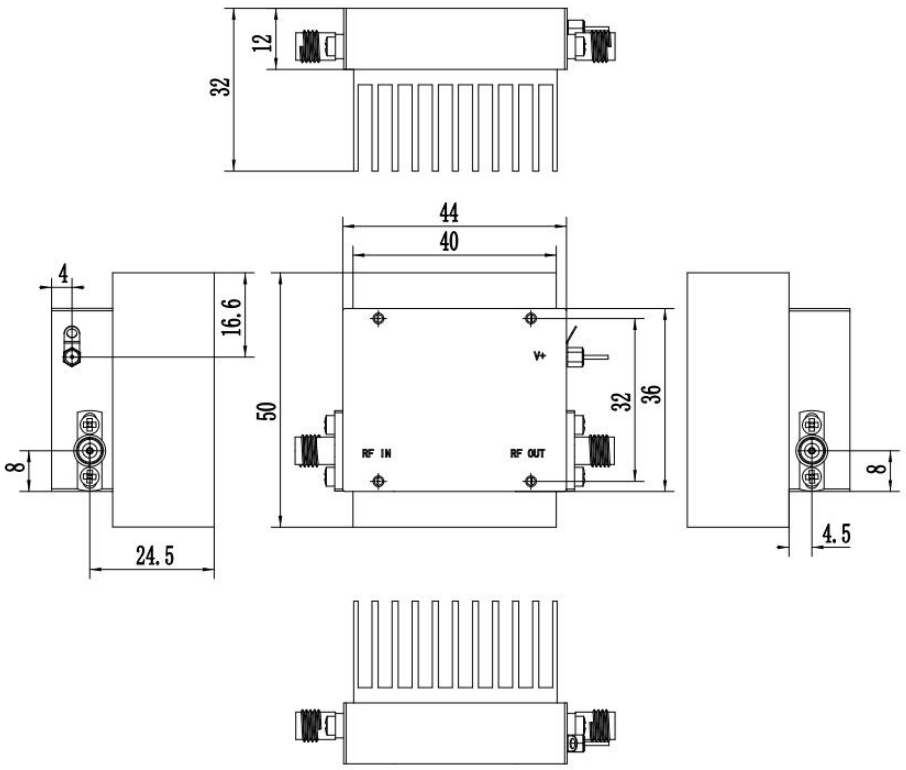

***Heat Sink Required During Operation

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			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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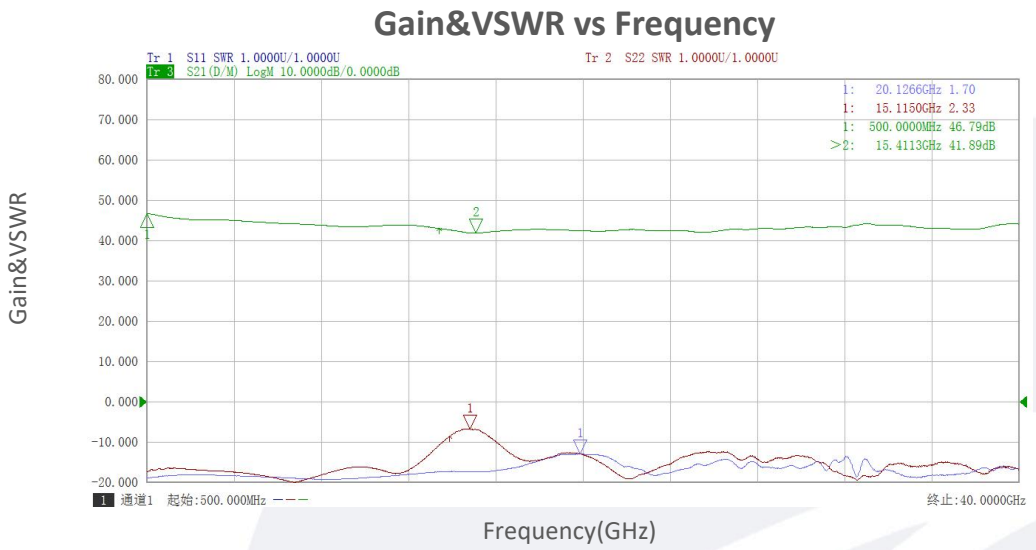
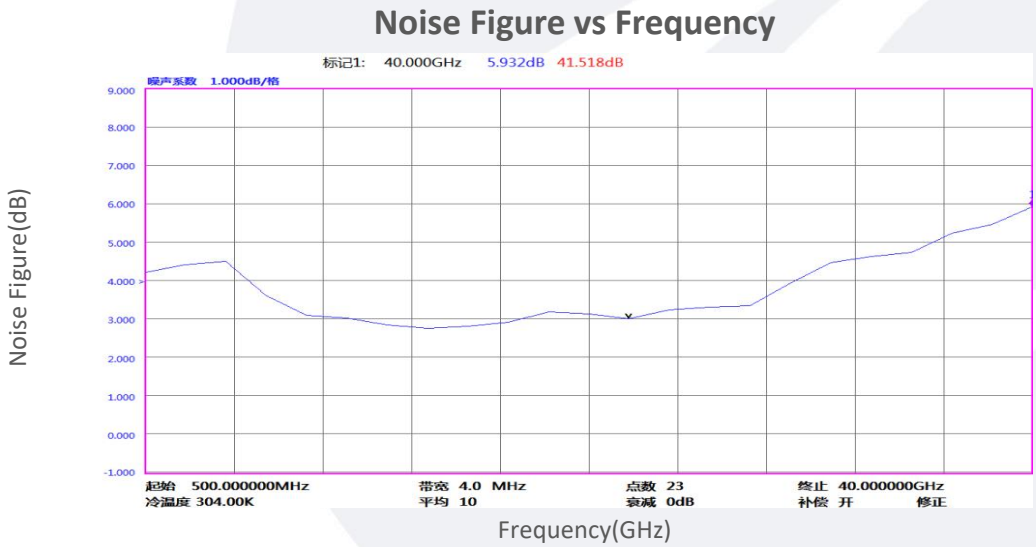
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLLA0.5G40G-40-50	Low Noise Amplifier, 0.5-40GHz, Noise Figure:5dB, Gain:43dB,P1dB:18dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.5G40G-40-50-HS	Low Noise Amplifier, 0.5-40GHz, Noise Figure:5dB, Gain:43dB,P1dB:18dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:





Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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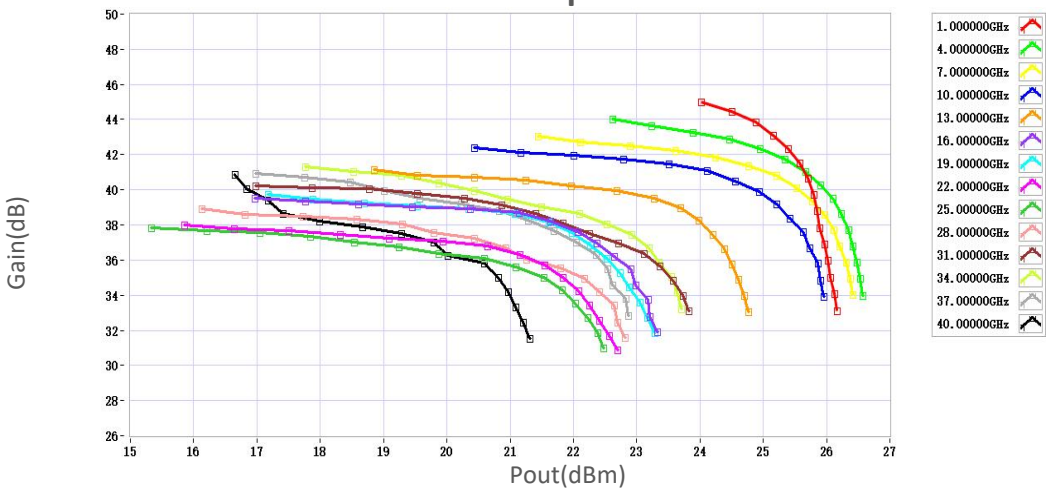
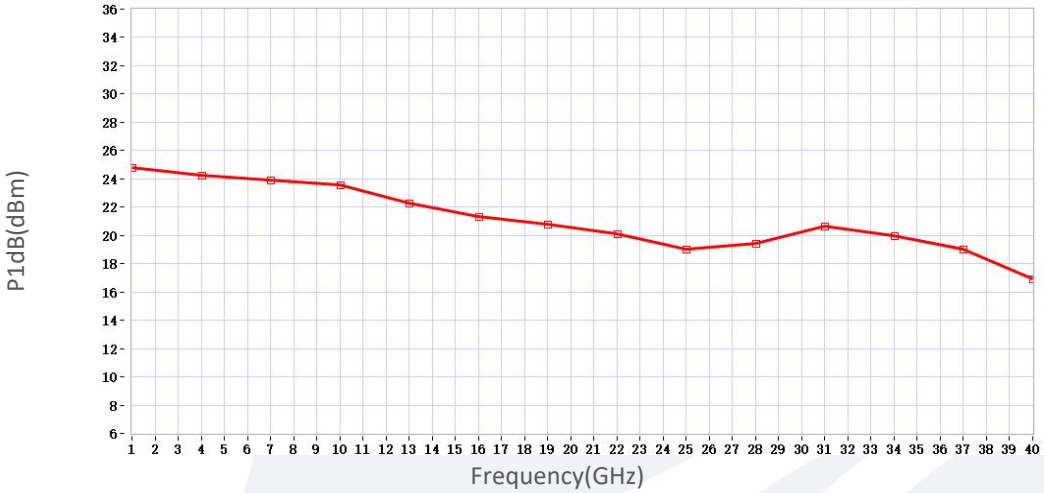
典型曲线 Typical Performance Data:

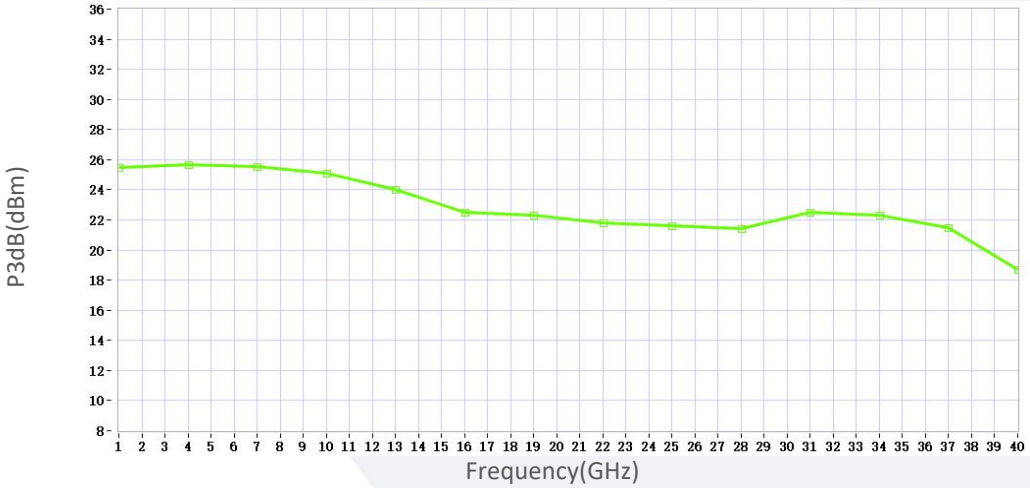
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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