泰莱微波 Talent Microwave

Suzhou Talent Microwave,Inc
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Low Noise Amplifier

0.03-6GHz /3.0dB NF/25dB Gain/15 dBm P1dB Model: TLLA0.03G6G-25-30

TLLA0.03G6G-25-30 is a low noise amplifier with a typical small signal gain of 27 dB and a max noise figure of 3.0 dB across the frequency range of 0.03 to 6 GHz. The DC power requirement for the amplifier is +12 V DC/130 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band:0.03-6 GHz
- Gain: 27dB Typ
- Noise Figure: 3.0dB 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	0.03		6	GHz
小信号增益 Small Signal Gain	25	30		dB
增益平坦度 Gain Flatness		±2.5		dB
噪声系数 Noise Figure			3	dB
线性输出功率 Output P1dB	15			dBm
输入驻波 Input VSWR				:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		12		V DC
直流电流 DC Supply Current		80		mA
阻抗 Impedance		50		Ohms

The noise figure and VSWR will deteriorate at the 2450MHz frequency point.

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	32.1*29.2*11	mm
重量 Weight	≤45	g

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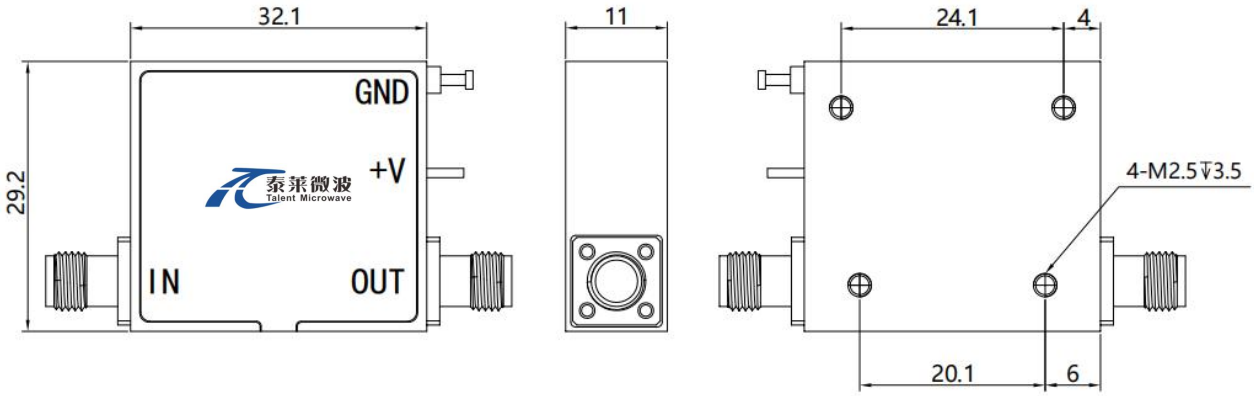
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+10 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			
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 Desciption	版本号 Revision
TLLA0.03G6G-25-30	Low Noise Amplifier, 0.03-6GHz, Noise Figure:3.0dB, Gain:27dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.03G6G-25-30-HS	Low Noise Amplifier, 0.03-6GHz, Noise Figure:3.0dB, Gain:27dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

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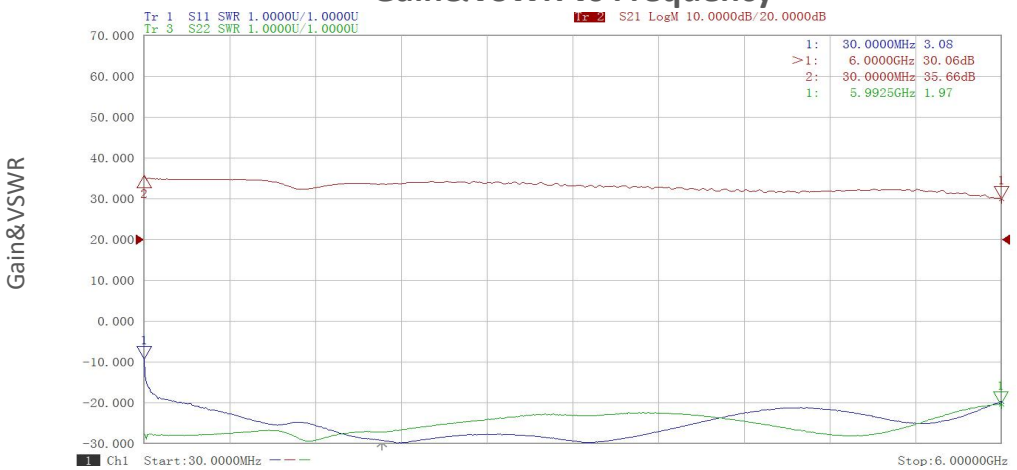
典型曲线 Typical Performance Data:

Gain&VSWR vs Frequency



Gain&VSWR

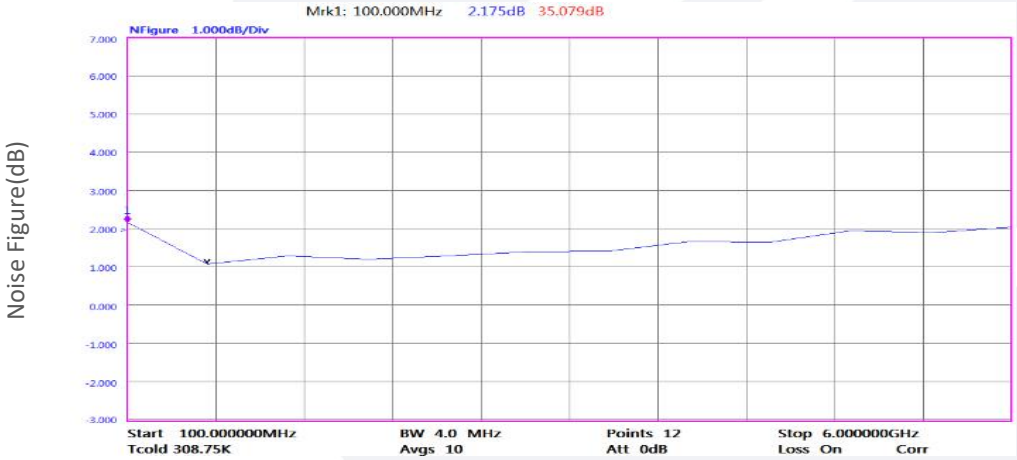
Frequency(GHz)

Noise Figure vs Frequency

Noise Figure(dB)

Frequency(GHz)

Noise Figure vs Frequency



Noise Figure(dB)

Frequency(GHz)

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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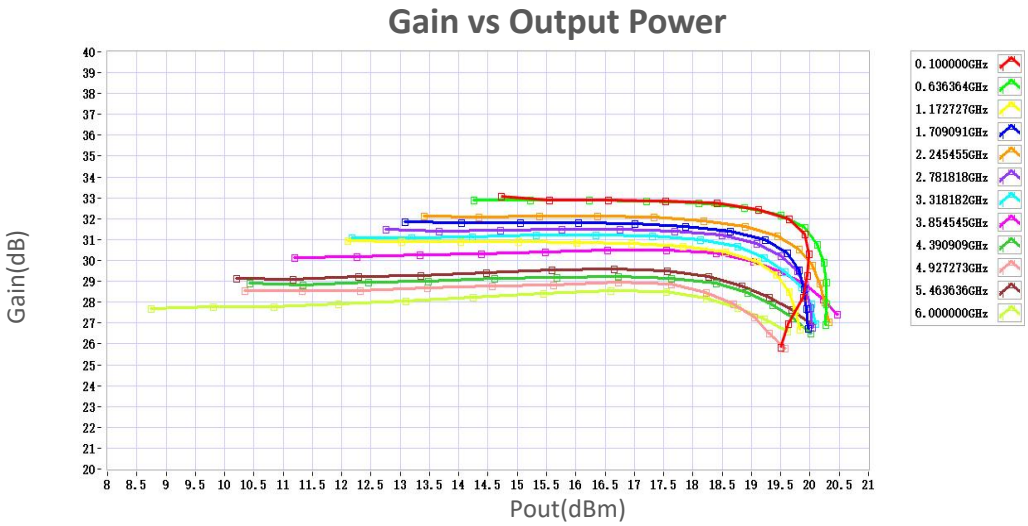

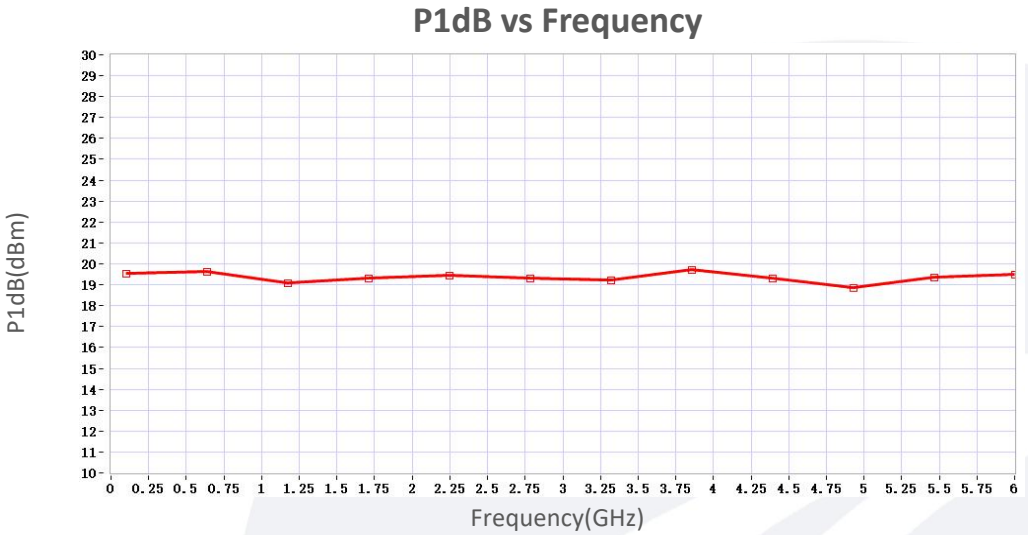

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