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Low Noise Amplifier

6-18GHz/2.0dB NF/12dB Gain/18dBm P1dB Model: TLLA6G18G-12-20

TLLA6G18G-12-20 is a low noise amplifier with a typical small signal gain of 12 dB and a nominal noise figure of 2.0 dB across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +5 V DC/60 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 6-18GHz
- Gain: 12dB Typ
- Noise Figure: 2.0dB 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	6		18	GHz
小信号增益 Small Signal Gain	9	12		dB
增益平坦度 Gain Flatness		±2.0		dB
噪声系数 Noise Figure		2	2.8	dB
线性输出功率 Output P1dB	16	18		dBm
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		+5	+12	V DC
直流电流 DC Supply Current		60		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	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	

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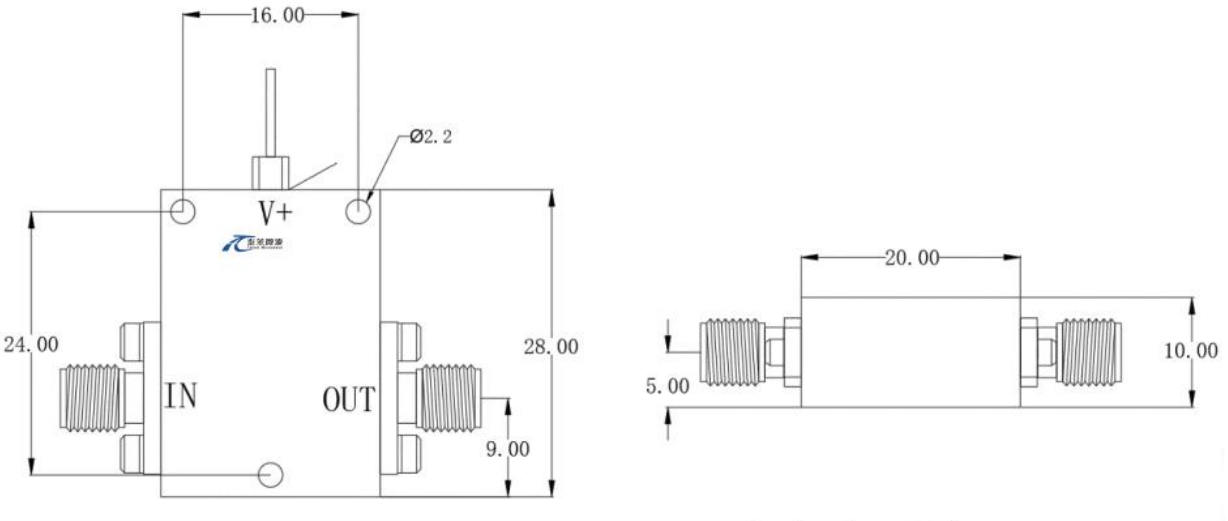
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
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	-40		+85	℃
存储温度 Non-operating Temperature	-55		+125	℃
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			

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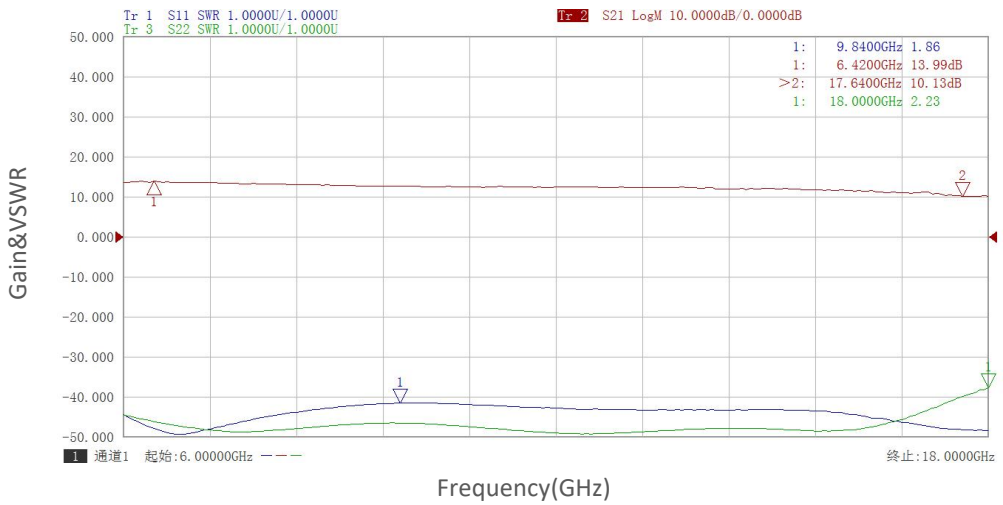
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLLA6G18G-12-20	Low Noise Amplifier, 6-18GHz, Noise Figure:2.0dB, Gain:12dB,P1dB:18dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA6G18G-12-20-HS	Low Noise Amplifier, 6-18GHz, Noise Figure:2.0dB, Gain:12dB,P1dB:18dBm,+5V 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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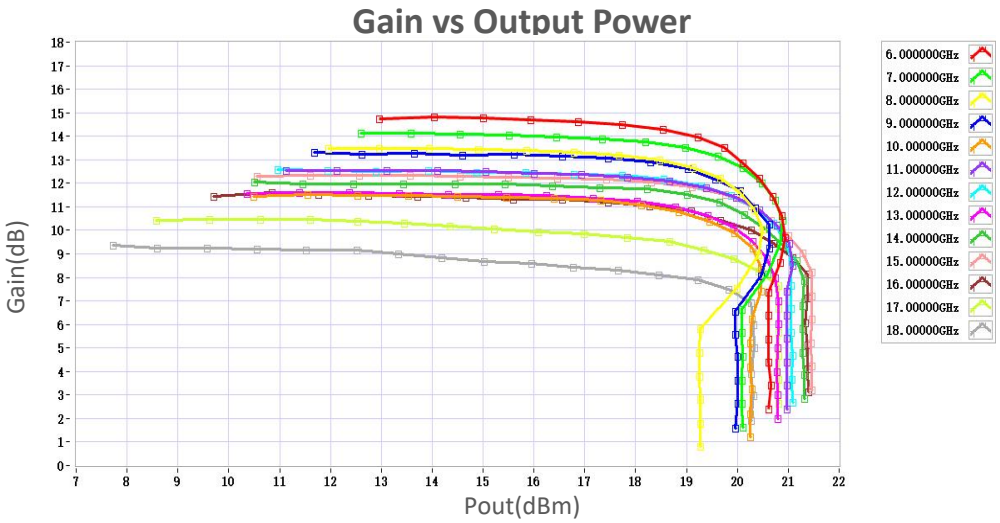

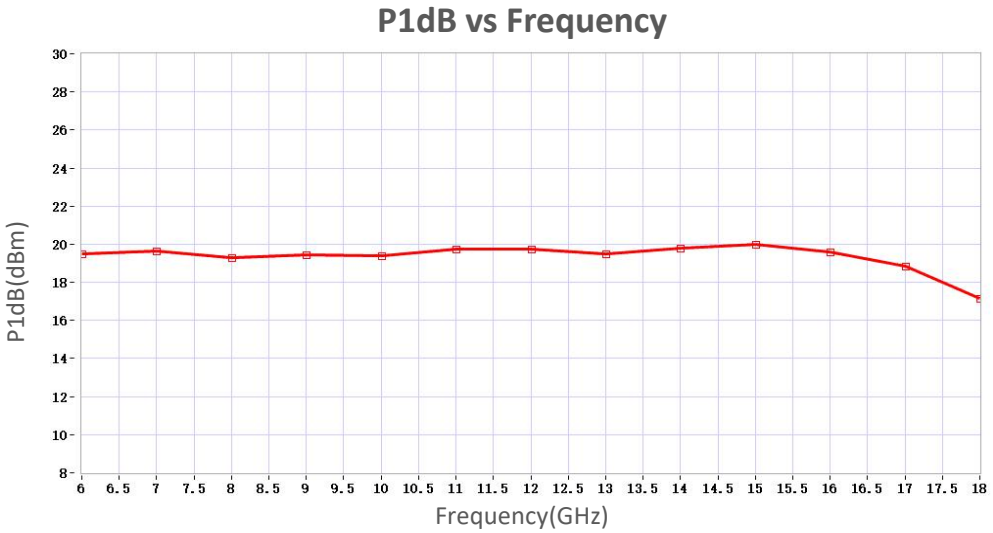

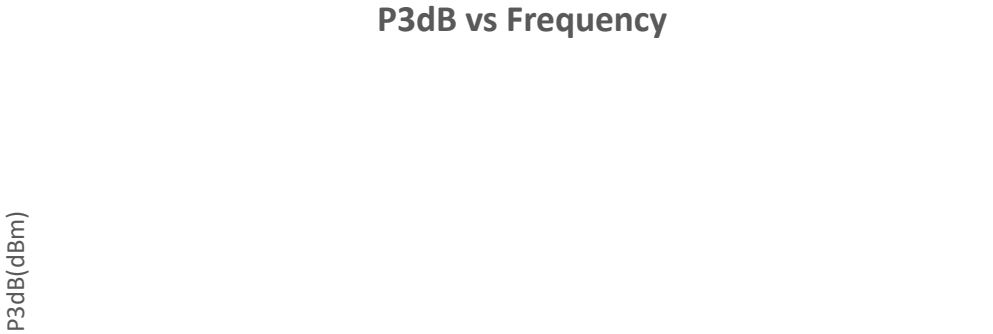

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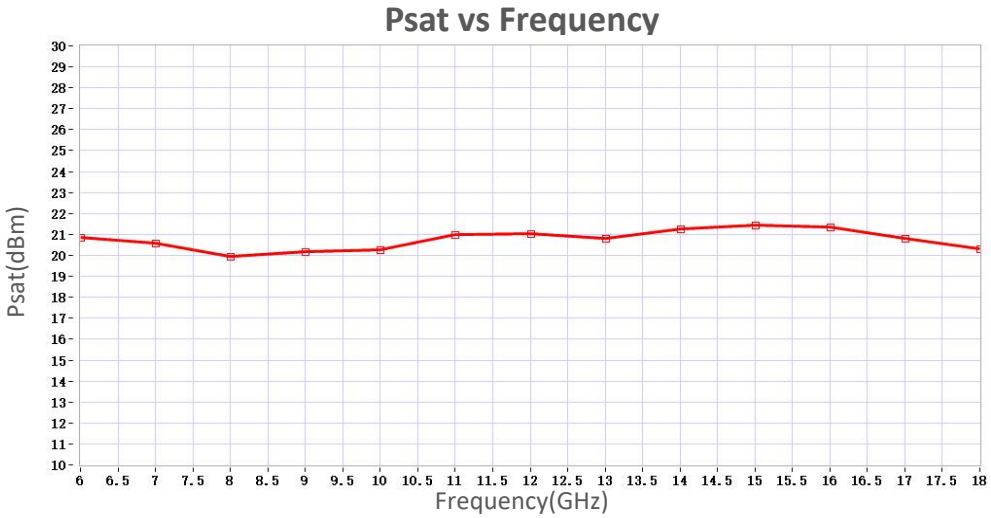

Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.