Low Noise Amplifier

3-8GHz/0.9dB NF/21dB Gain/17dBm P1dB   Model: TLLA3G8G-21-09

TLLA3G8G-21-09 is a low noise amplifier with a typical small signal gain of 21 dB and a nominal noise figure of 0.9 dB across the frequency range of 3 to 8 GHz. The DC power requirement for the amplifier is +8 V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 3-8GHz
- Gain: 21dB Typ
- Noise Figure: 0.9dB 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	3		8	GHz
小信号增益 Small Signal Gain	20	21		dB
增益平坦度 Gain Flatness		±1.0		dB
噪声系数 Noise Figure		0.9		dB
线性输出功率 Output P1dB	16	17		dBm
饱和输出功率 Output Psat	17	18		dBm
输入驻波 Input VSWR		2.5		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage	+5.5	+8	+12	V DC
直流电流 DC Supply Current		50		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	
尺寸 Size	28*20*10	mm

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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	+12 V
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

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			

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订货信息 Ordering Information:

| 标准型号 Base Number	描述 Description	版本号 Revision
TLLA3G8G-21-09	Low Noise Amplifier, 3-8GHz, Noise Figure:0.9dB, Gain:21dB,P1dB:17dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA3G8G-21-09-HS	Low Noise Amplifier, 3-8GHz, Noise Figure:0.9dB, Gain:21dB,P1dB:17dBm,+8V DC,With Heatsink	Rev.1.1

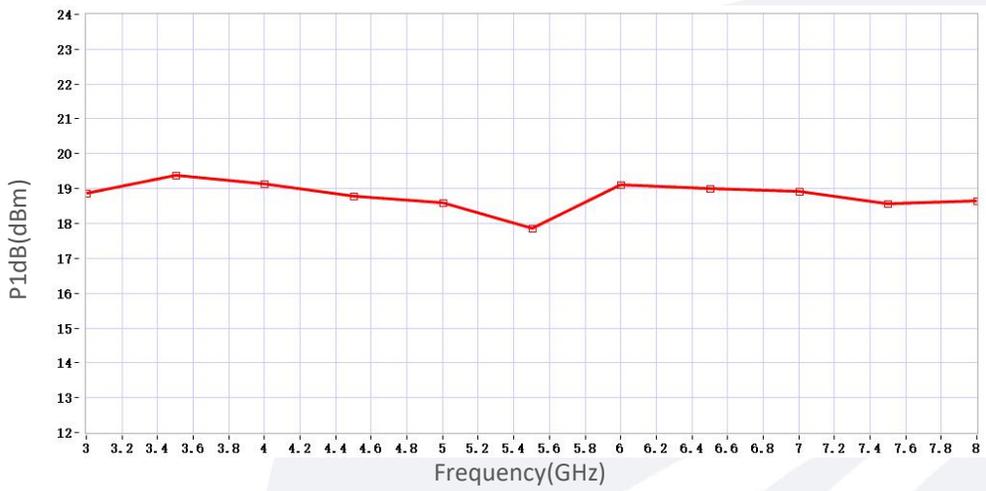## 典型曲线 Typical Performance Data:

Gain&VSWR vs Frequency

Noise Figure vs Frequency

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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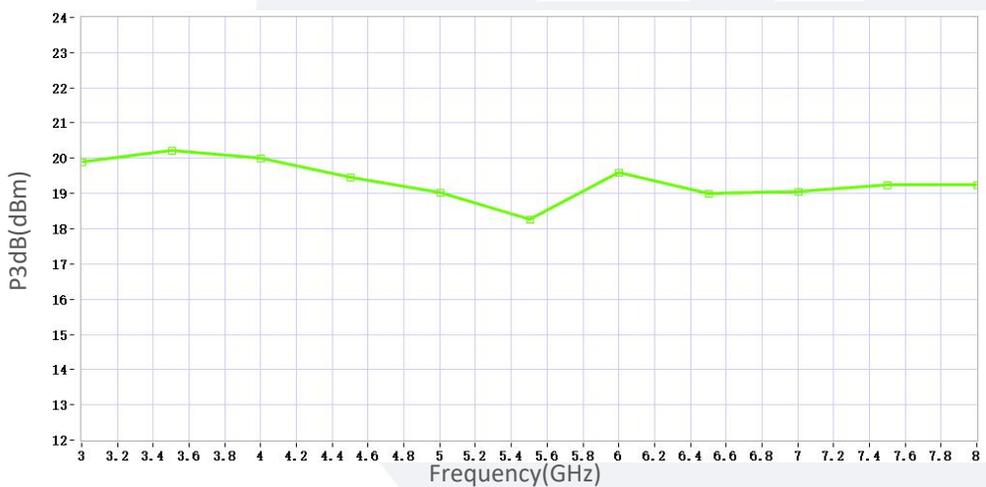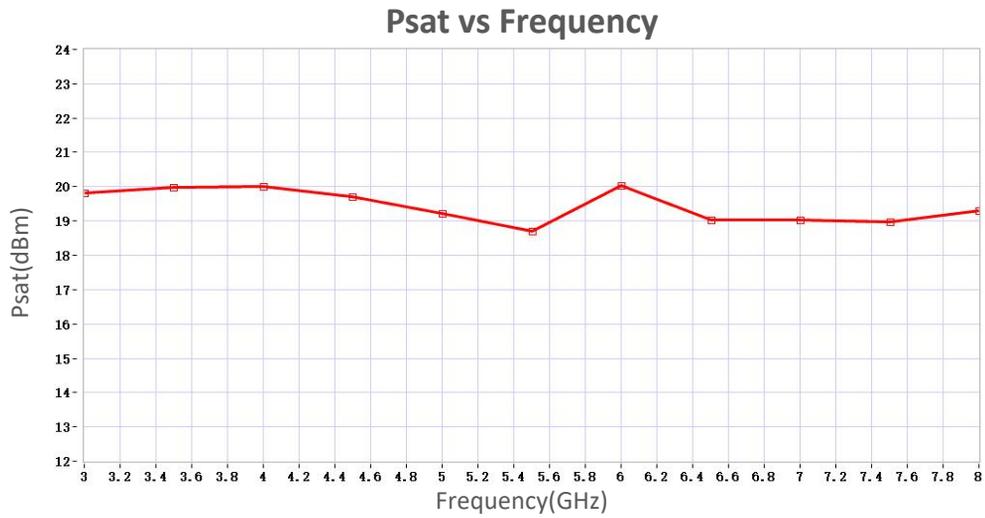
典型曲线 Typical Performance Data:

Gain vs Output Power
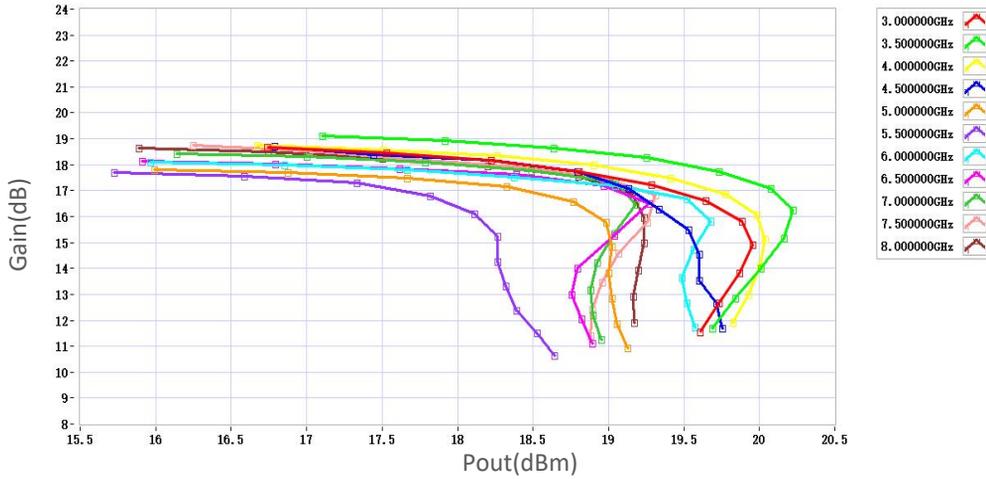
P1dB vs Frequency

P3dB vs Frequency

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典型曲线 Typical Performance Data:

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