

Low Noise Amplifier

2-8GHz/0.9dB NF/50dB Gain/13dBm P1dB

Model: TLLA2G8G-50-9

TLLA2G8G-50-9 is a low noise amplifier with a typical small signal gain of 50 dB and a nominal noise figure of 0.9 dB across the frequency range of 2 to 8 GHz. The DC power requirement for the amplifier is +5 V DC/80 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-8GHz
- Gain: 50dB 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	2		8	GHz
小信号增益 Small Signal Gain		50		dB
增益平坦度 Gain Flatness		±2.5		dB
噪声系数 Noise Figure		0.9	1	dB
线性输出功率 Output P1dB		13		dBm
饱和输出功率 Output Psat		14		dBm
输入驻波 Input VSWR		1.8		:1
输出驻波 Output VSWR		1.8		:1
直流电压 DC Voltage		+5	+8	V DC
直流电流 DC Supply Current		80		mA
阻抗 Impedance		50		Ohms

机械特性 Mechanical Specifications:

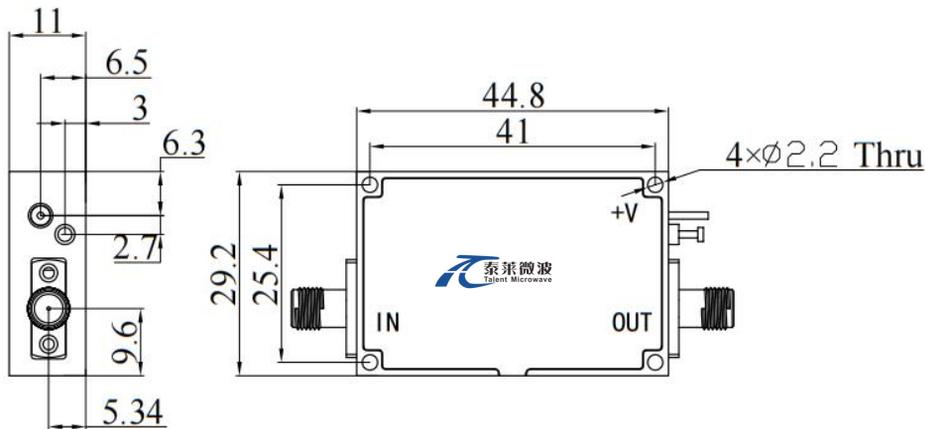
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+8 V
输入功率 RF Input Power	+5 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:

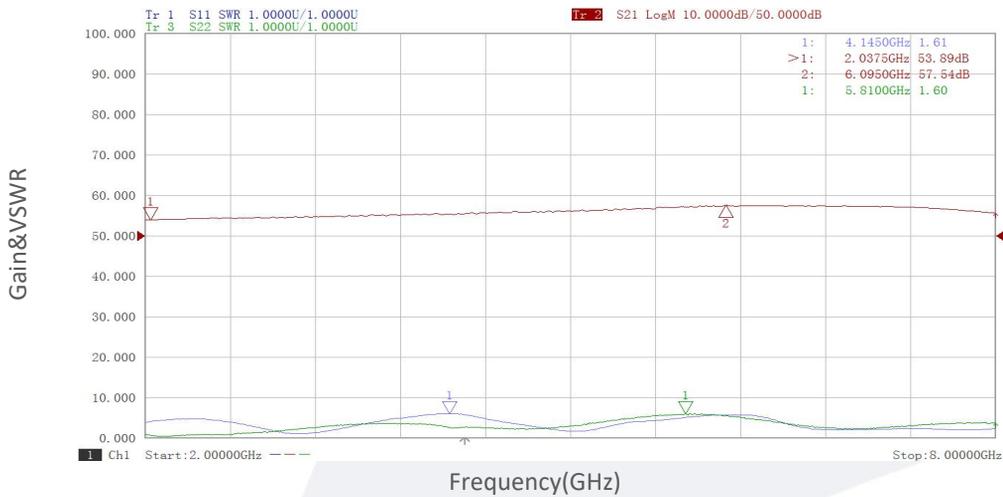
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

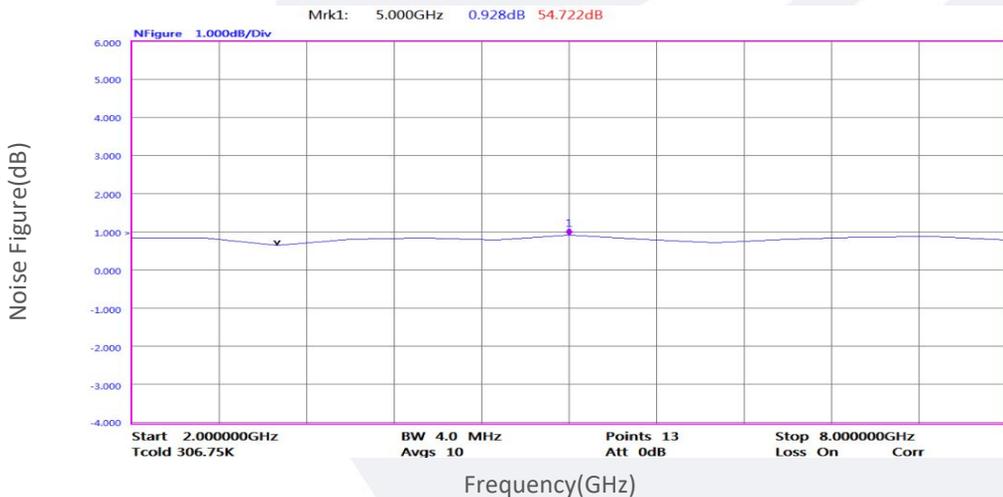
标准型号 Base Number	描述 Description	版本号 Revision
TLLA2G8G-50-9	Low Noise Amplifier, 2-8GHz, Noise Figure:0.9dB, Gain:50 dB,P1dB:13dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA2G8G-50-9-HS	Low Noise Amplifier, 2-8GHz, Noise Figure:0.9dB, Gain:50 dB,P1dB:13dBm,+5V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

Gain&VSWR vs Frequency



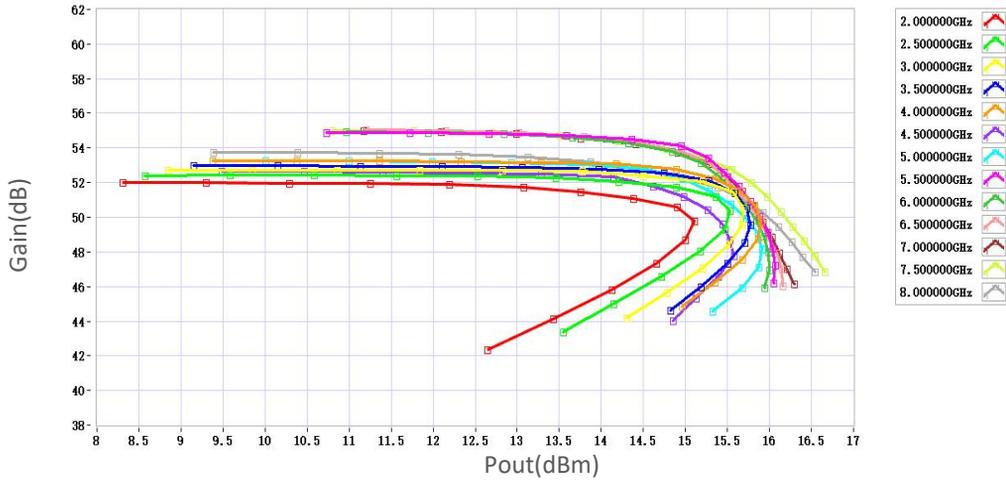
Noise Figure vs Frequency



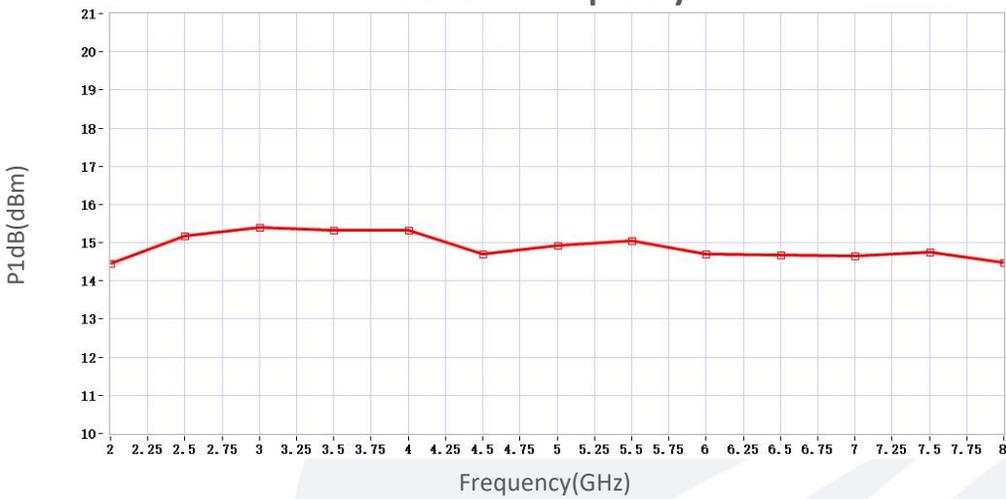
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

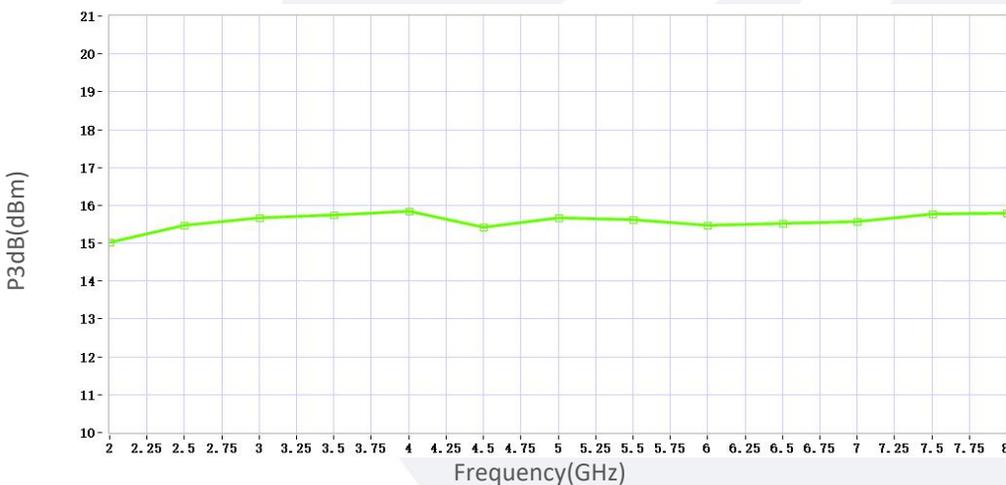
Gain vs Output Power



P1dB vs Frequency

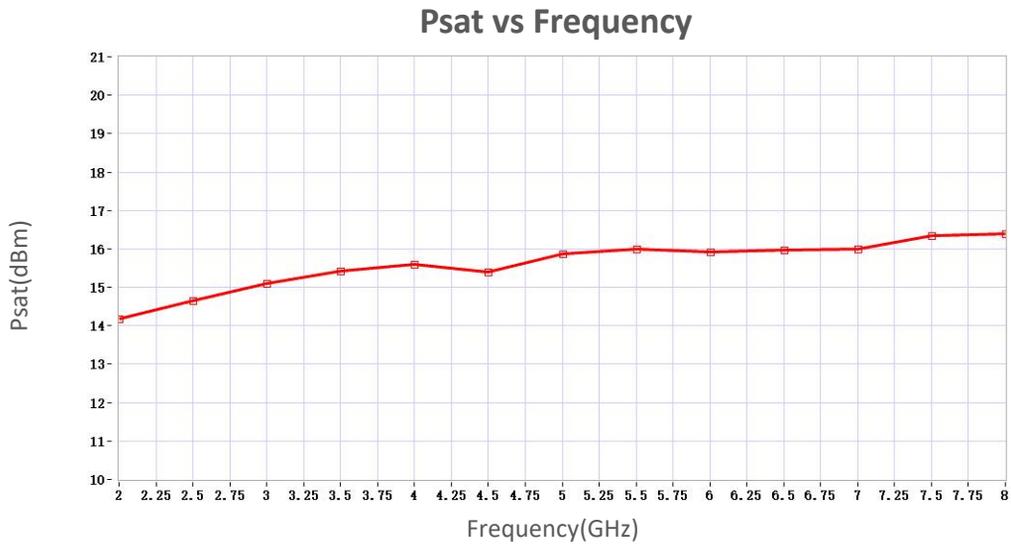


P3dB vs Frequency



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