

**Model: TLLA50K20G-30-30**
**Low Noise Amplifier**
**50KHz-20GHz, NF:3.0dB, Gain:30dB, P1dB:15dBm**
**Feature:**

- Ultra Wide Band: 50KHz-20GHz
- Gain: 30dB Typ
- Noise Figure: 3.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**电气特性 Electrical Specifications:**

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	50KHz-20GHZ			GHz
增益 Gain		30		dB
增益平坦度 Gain Flatness		±1.5		dB
噪声系数 Noise Figure		3		dB
线性输出功率P1dB	15	16		dBm
输入驻波 Input VSWR		1.8	2	:1
输出驻波 Output VSWR		1.8	2	:1
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current		180		mA
阻抗 Impedance	50			Ohms

**机械特性 Mechanical Specifications:**

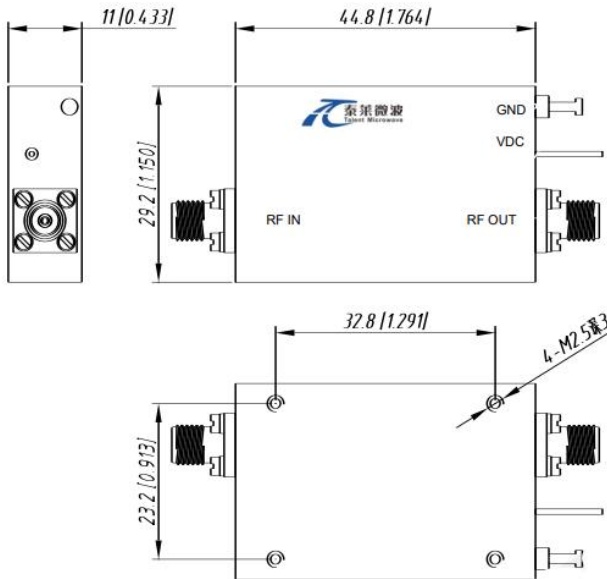
参数 Parameter	指标 Value	单位 Units
输入输出接口 Input /Output Connector	SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm
重量 Weight	55	g


**绝对最大值 Absolute Maximum Ratings:**

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15V
输入功率 RF Input Power	15 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形尺寸 Outline Drawing:

Unit: mm(inches)



**\*\*\*Heat Sink Required During Operation**



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

温度环境 Environmental Conditions:

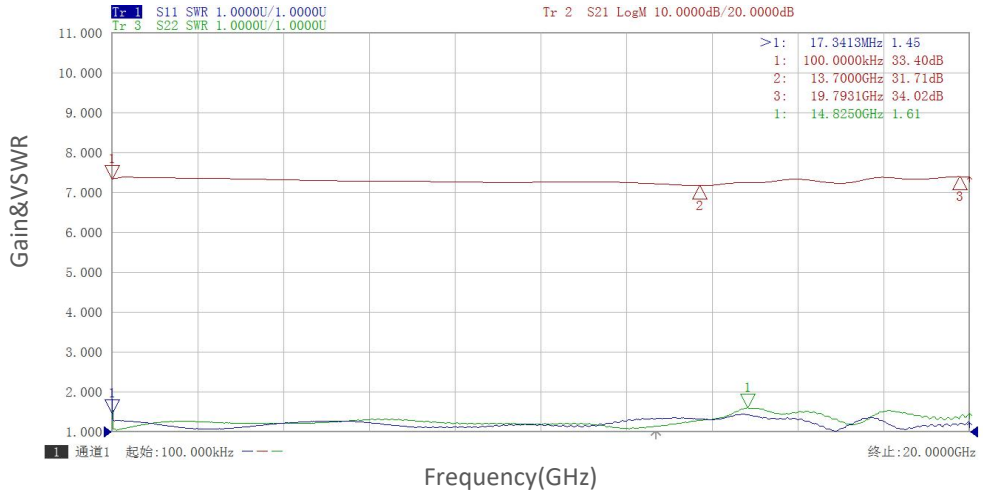
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-40		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	50,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

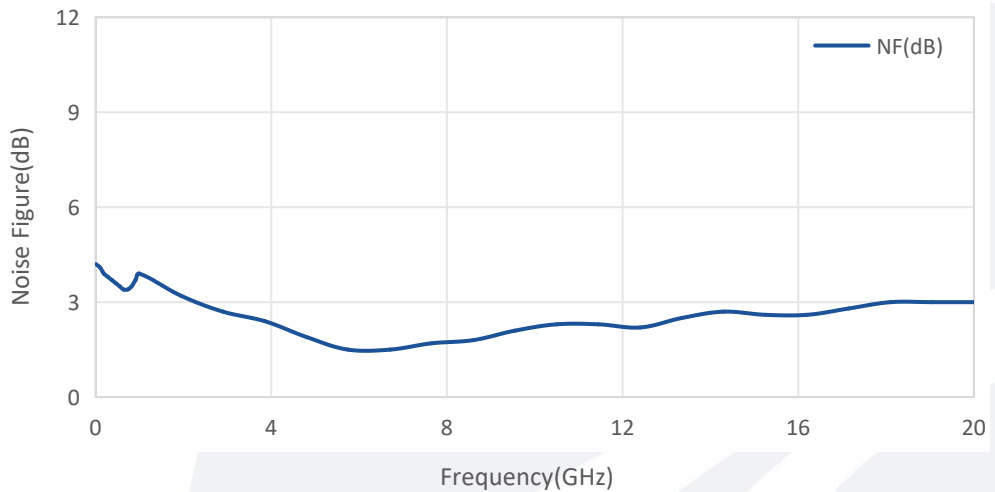
标准型号 Part Number	描述 Description	版本号 Revision
TLLA50K20G-30-30	Low Noise Amplifier, 50K-20GHz, Noise Figure:3.0dB, Gain:30 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA50K20G-30-30-HS	Low Noise Amplifier, 50K-20GHz, Noise Figure:3.0dB, Gain:30 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

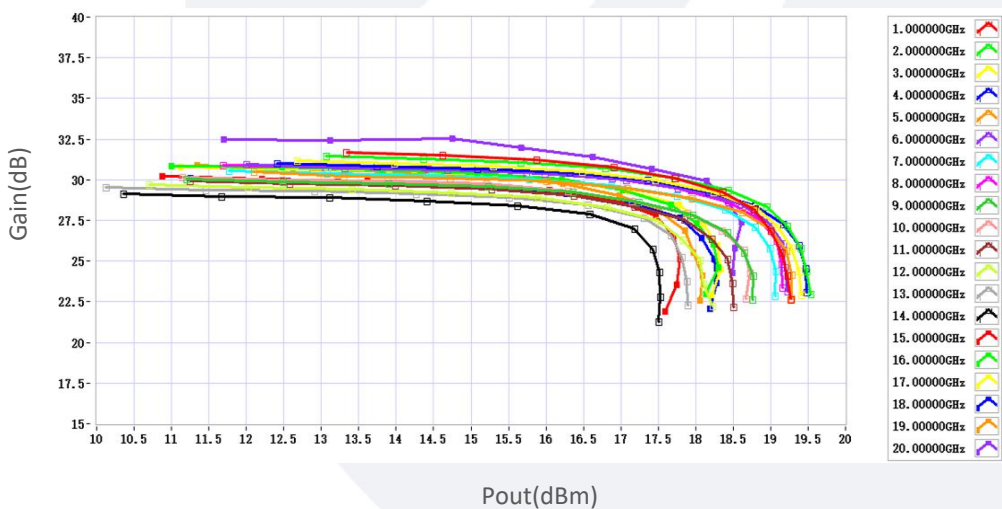
Gain&VSWR vs Frequency



Noise Figure vs Frequency

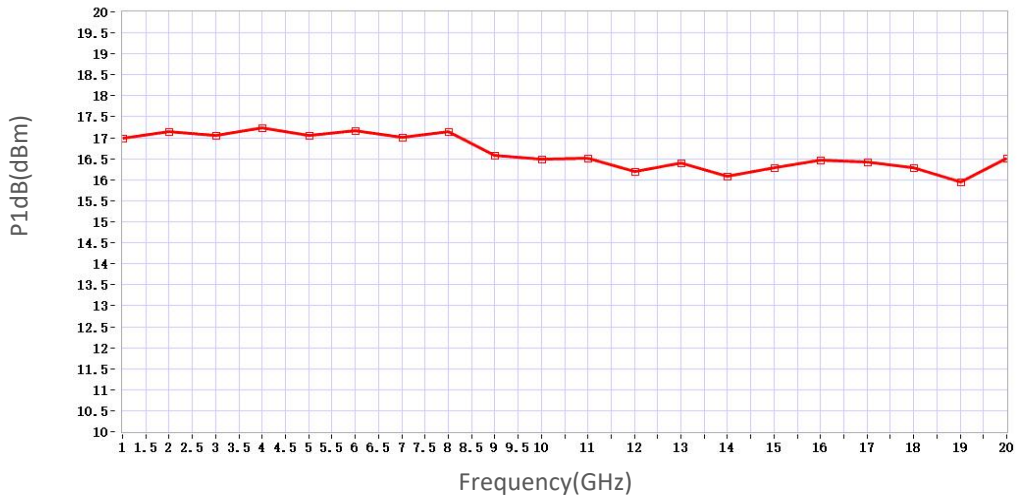


Gain vs Output Power

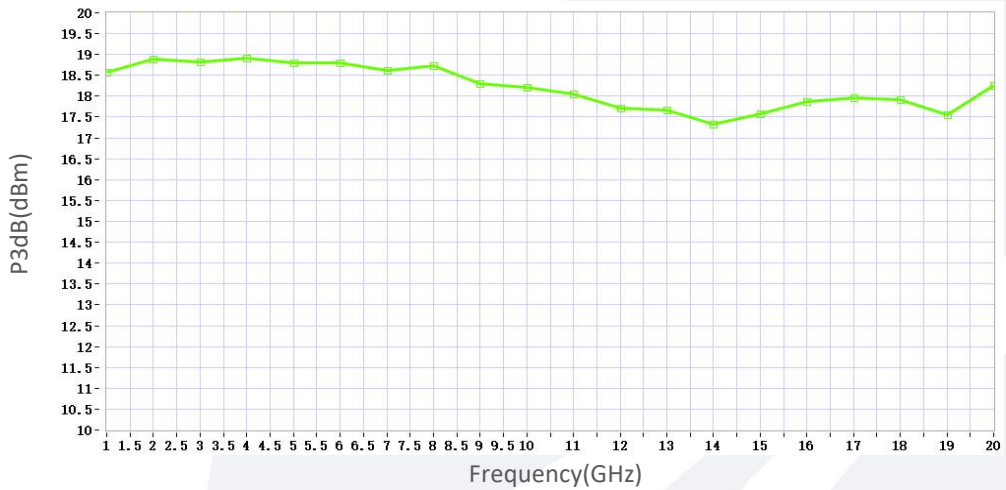


典型曲线 Typical Performance Data:

**P1dB vs Frequency**



**P3dB vs Frequency**



**Psat vs Frequency**

