

Power Amplifier

2-20GHz/19dB Gain/23dBm Psat

Model: TLPA2G20G-19-23-LC

TLPA2G20G-19-23-LC is a power amplifier with a typical small signal gain of 17 dB and Psat of 23 dBm across the frequency range of 2 to 20 GHz. The DC power requirement for the amplifier is +12 VDC/136mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-20GHz
- Small Signal Gain: 17dB Typ
- Output Power Psat: 23dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	2		20	GHz
小信号增益 Small Signal Gain		17		dB
增益平坦度 Gain Flatness		±2.5		dB
输出P1dB Output P1dB		21		dBm
饱和输出功率 Output Psat		23		dBm
噪声系数 Noise Figure		5.5		dB
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		+12	+15	V DC
直流电流 DC Supply Current		136		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	25*25*9	mm

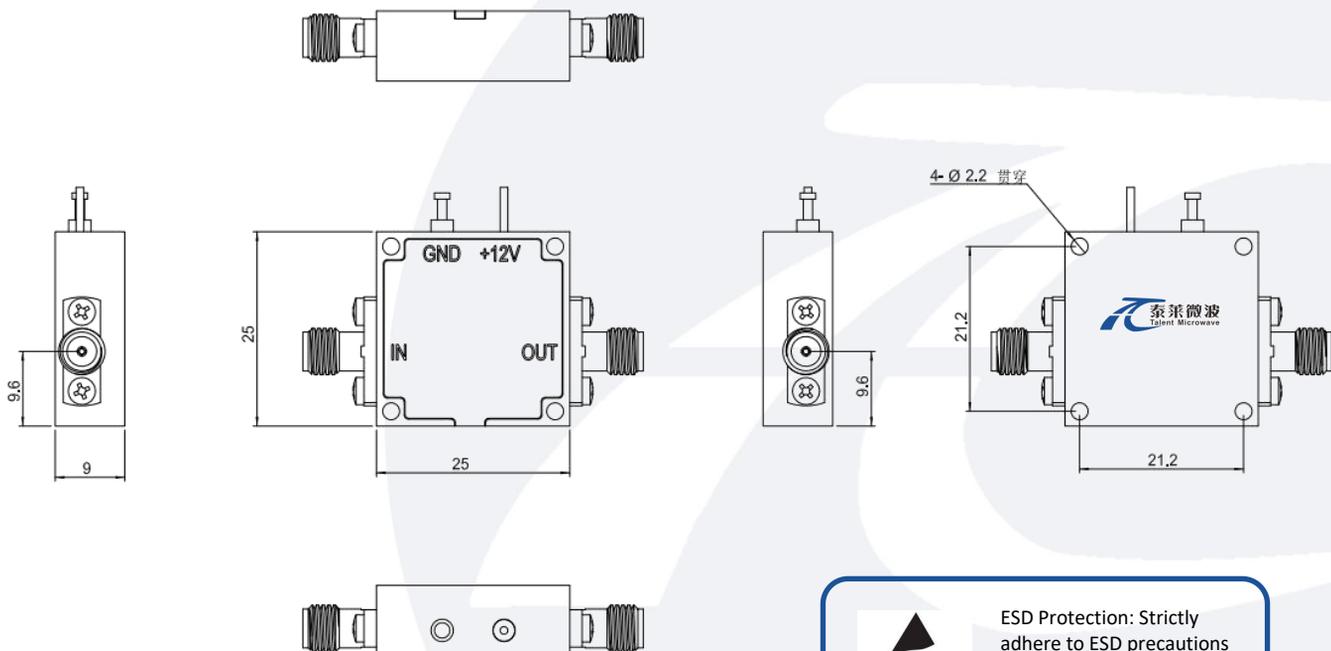
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+20 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



外形图 Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

温度环境 Environmental Conditions:

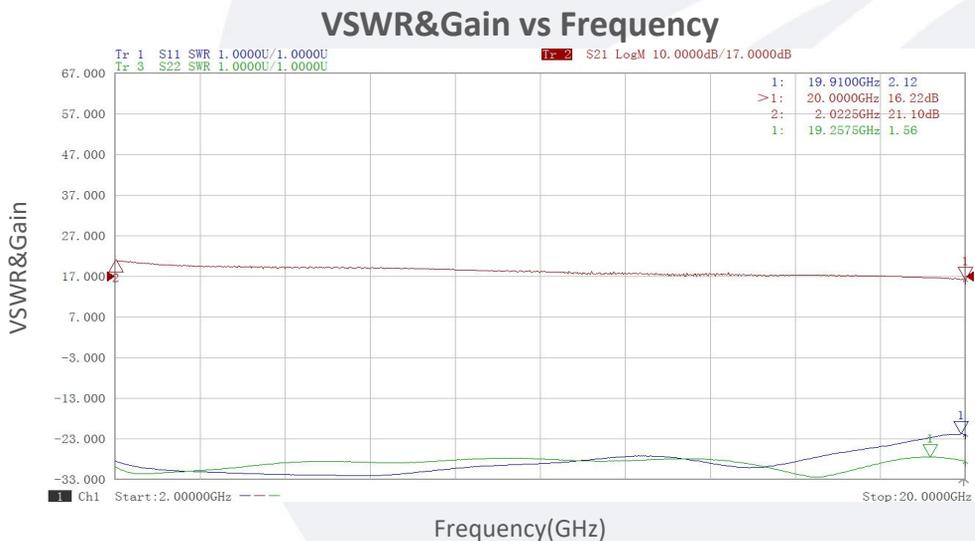
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	°C
存储温度 Non-operating Temperature*	-50		+70	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA2G20G-19-23-LC	Power amplifier 2-20GHz, Gain:17dB,Psat:23dBm,+12V DC,Without Heatsink	Rev.1.1

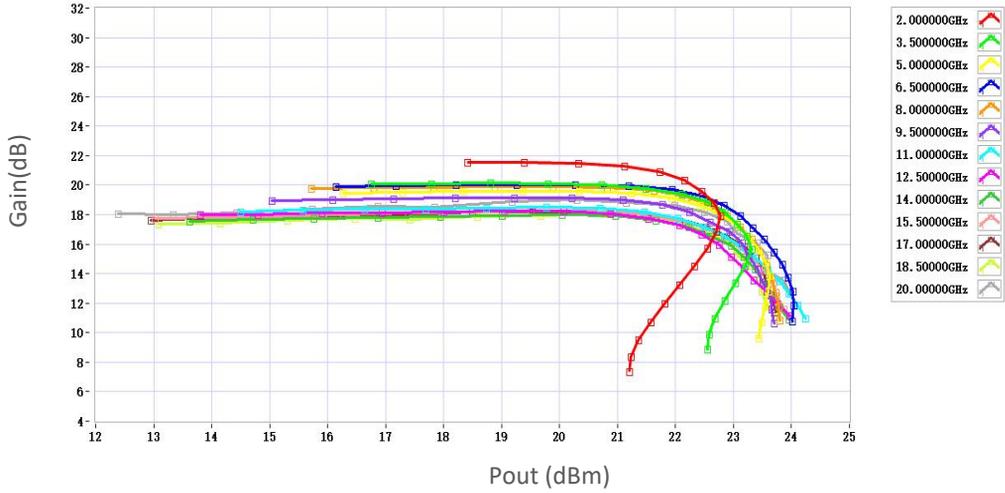
典型曲线 Typical Performance Data:



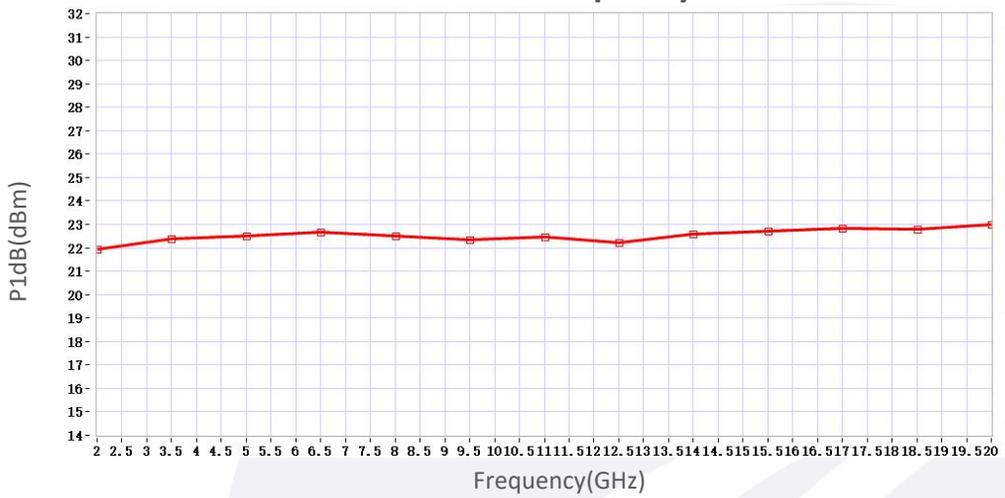
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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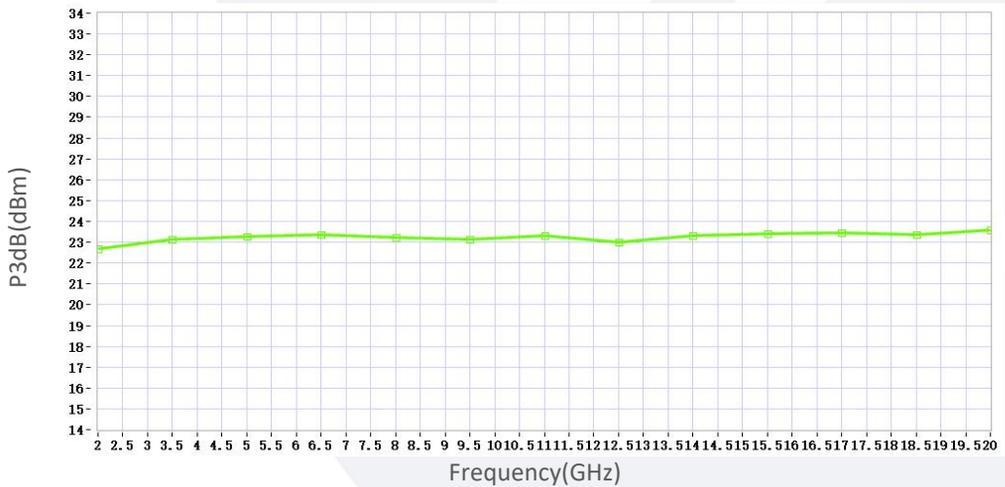
Gain vs Output Power



P1dB vs Frequency



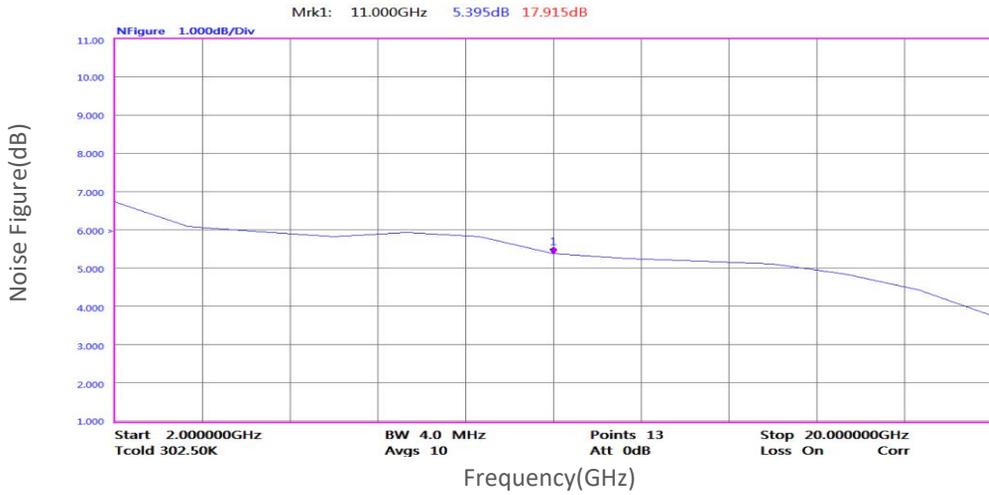
P3dB vs Frequency



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典型曲线 Typical Performance Data:

Noise Figure vs Frequency



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