

Power Amplifier

8-12GHz/45dB Gain/45dBm Psat

Model: TLPA8G12G-45-45

TLPA8G12G-45-45 is a power amplifier with a minimum power gain of 45 dB and a typical Psat of 45 dBm across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +28 VDC/1.7 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 8-12GHz
- Gain: 45dB Min
- Output Power Psat: 45dBm 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	8		12	GHz
功率增益 Power Gain	45			dB
增益平坦度 Gain Flatness		±3		dB
饱和输出功率 Output Psat		45		dBm
杂散 Spurious@Pout=45dBm			-60	dBc
谐波抑制 Harmonic@Pout=45dBm			-30	dBc
输入驻波 Input VSWR		1.5		:1
直流电压 DC Voltage		28		V DC
直流电流 DC Current		1.7		A
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 Femlae/SMA Female	
直流偏置 DC Bias	Feedthru capacitors	
尺寸 Size	60*60*11(Without heatsink) 165.4*90*101(With heatsink)	mm
重量 Weight	≤200	g

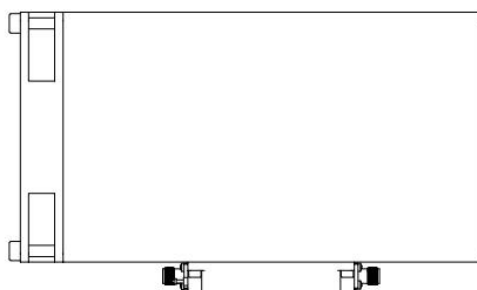
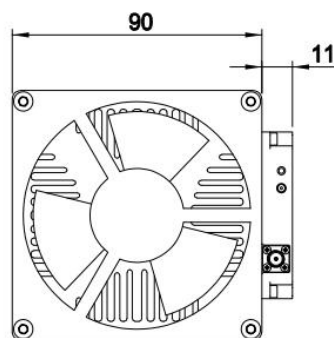
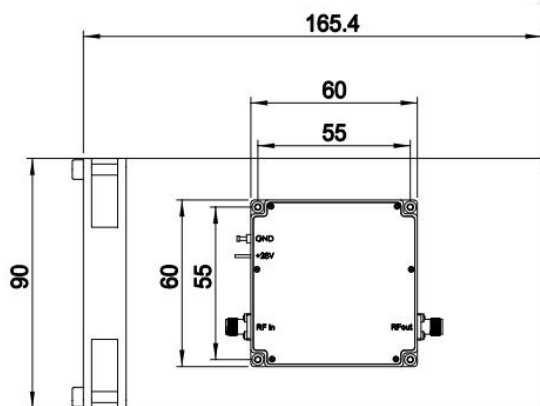
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+29 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; Tolerance:±0.1mm



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

温度环境 Environmental Conditions:

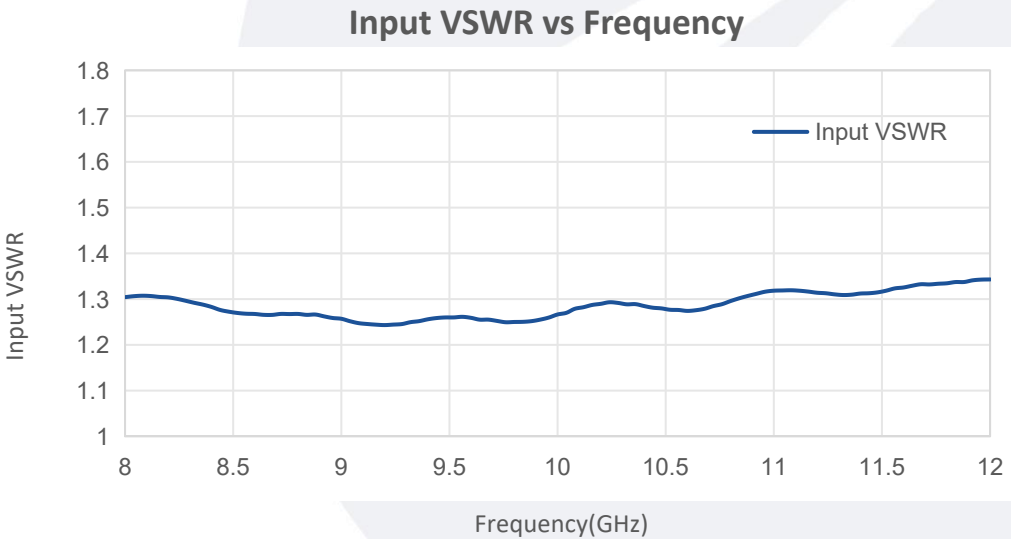
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+50	℃
存储温度 Non-operating Temperature*	-50		+60	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLPA8G12G-45-45	Power amplifier 8-12GHz, Gain:45dB,Psat:45dBm,+28V DC,Without Heatsink	Rev.1.2
TLPA8G12G-45-45-HS	Power amplifier 8-12GHz, Gain:45dB,Psat:45dBm,+28V DC,With Heatsink	Rev.1.2

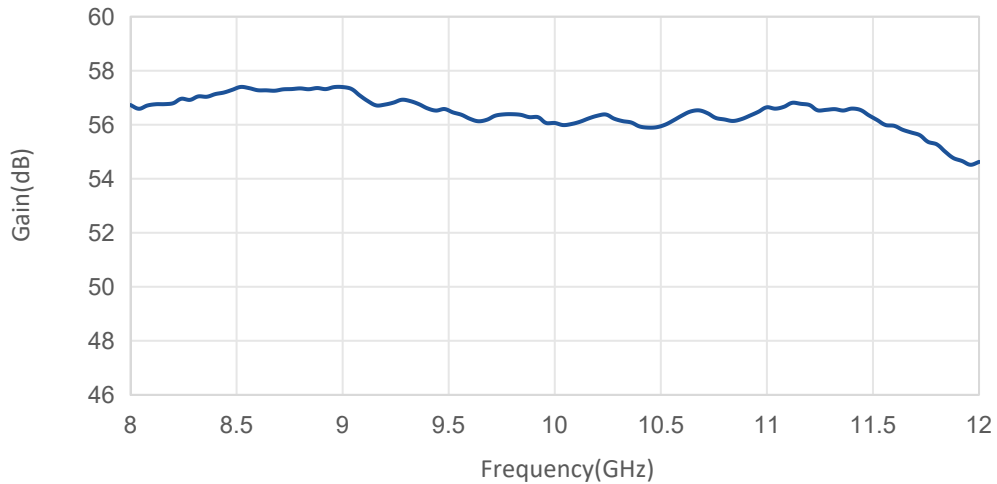
典型曲线 Typical Performance Data:



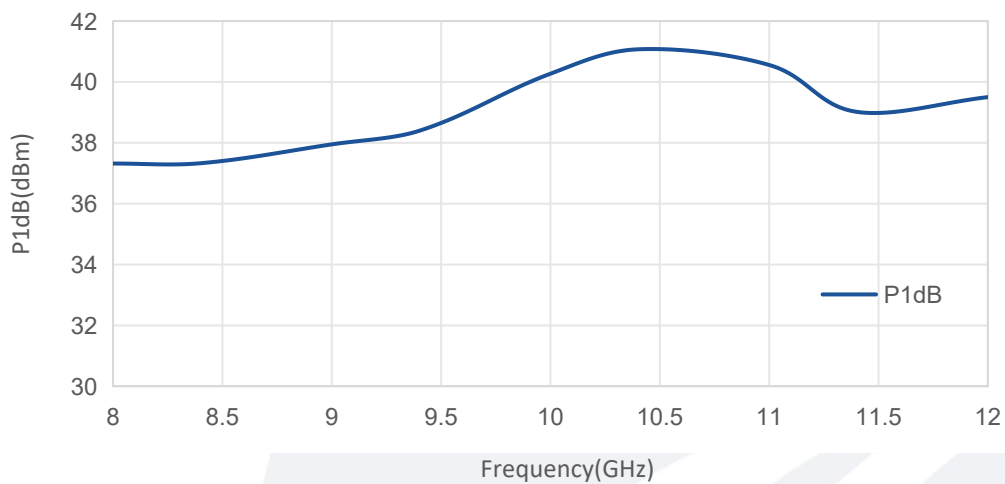
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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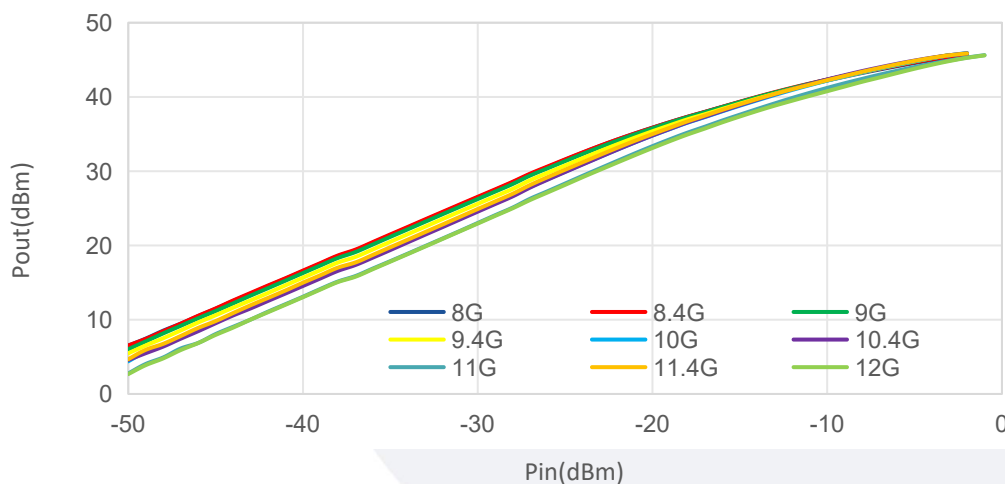
Small Signal Gain vs Frequency



P1dB vs Frequency



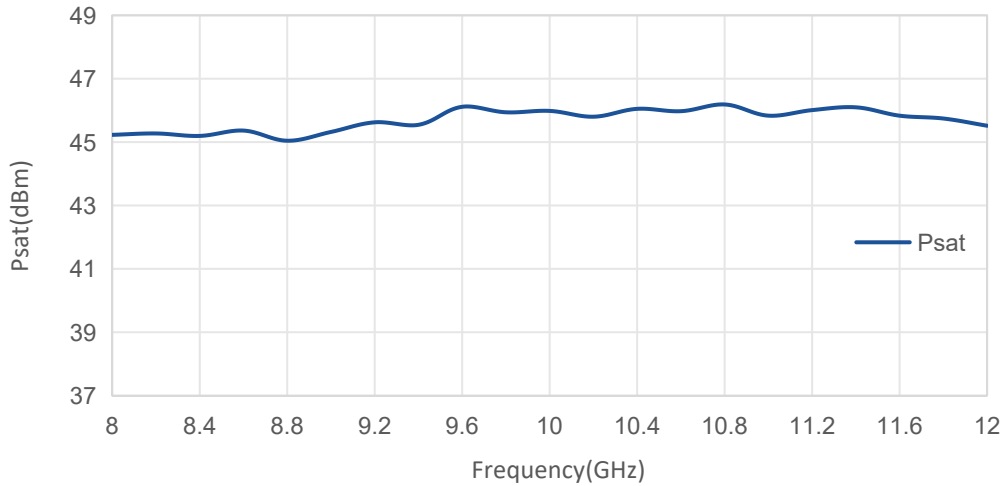
Pout@Pin



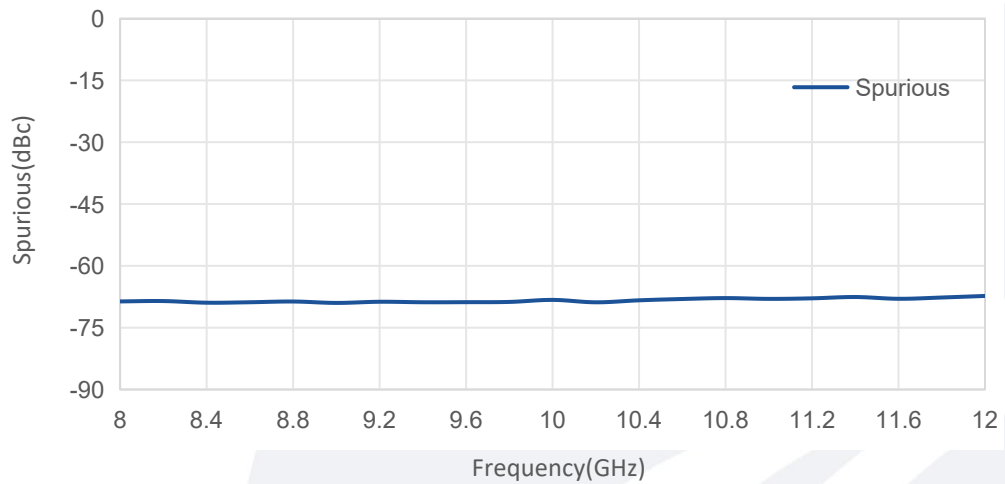
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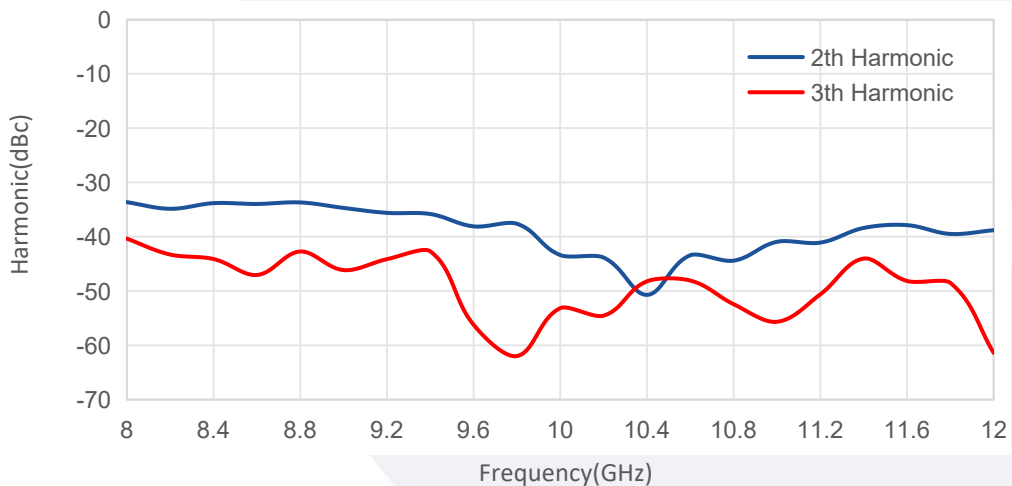
Psat vs Frequency



Spurious vs Frequency



Harmonic vs Frequency



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