

Power Amplifier

0.5-3GHz/47dB Gain/47dBm Psat

Model: TLPA0.5G3G-47-47

TLPA0.5G3G-47-47 is a power amplifier with a minimum small signal gain of 47 dB and a minimum Psat of 47 dBm across the frequency range of 0.5 to 3 GHz. The DC power requirement for the amplifier is +32 VDC/10 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.5-3GHz
- Gain: 47dB Min
- Output Power Psat: 47dBm Min
- 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	0.5		3	GHz
小信号增益 Small Signal Gain	47			dB
增益平坦度 Gain Flatness			±3	dB
饱和输出功率 Output Psat	47			dBm
杂散 Spurious@Pout=50dBm			-65	dBc
谐波 Harmonics@Pout=50dBm			-10	dBc
输入驻波 Input VSWR			1.8	:1
直流电压 DC Voltage		+32	+33	V DC
直流电流 DC Supply Current		10		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 Female/SMA Female	
DC加电接口 DC Power Interface	Cap Feed	
尺寸 Size	210*101.3*28.5	mm

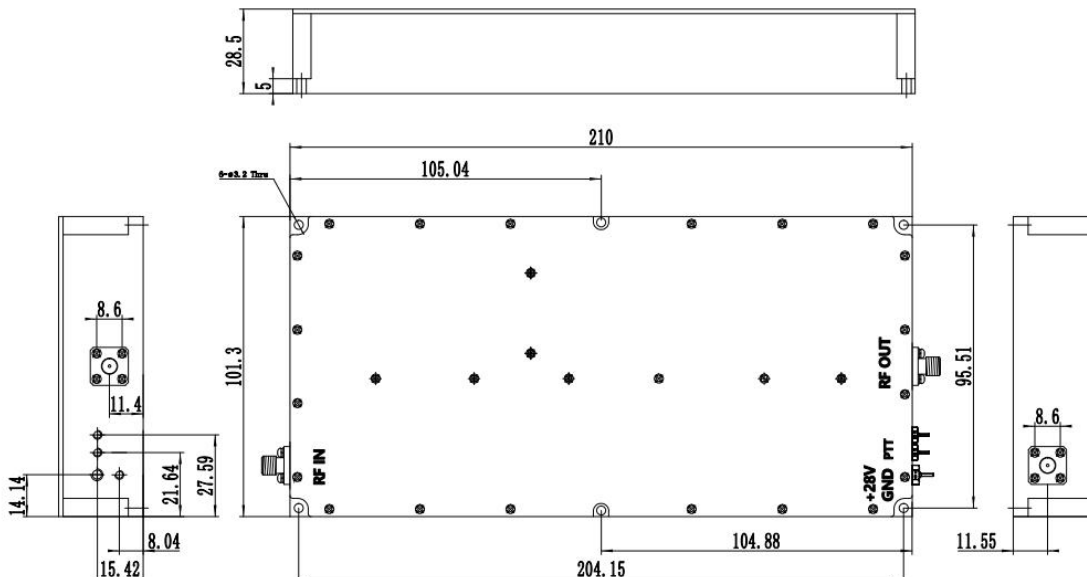
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+33 V
输入功率 RF Input Power	+6 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*	-20		+50	°C
存储温度 Non-operating Temperature*	-30		+60	°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			

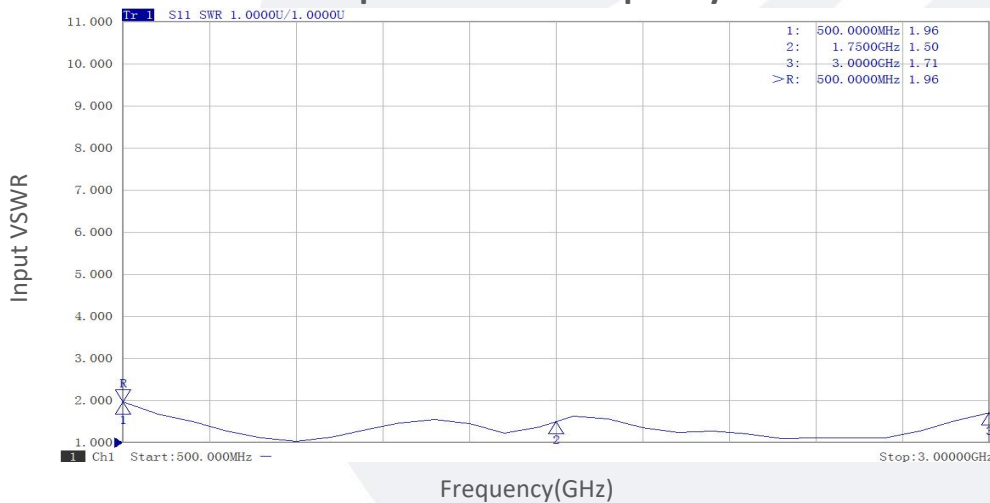
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA0.5G3G-47-47	Power amplifier 0.5-3GHz, Gain:47dB,Psat:47dBm,+32V DC,Without Heatsink	Rev.1.1
TLPA0.5G3G-47-47-HS	Power amplifier 0.5-3GHz, Gain:47dB,Psat:47dBm,+32V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

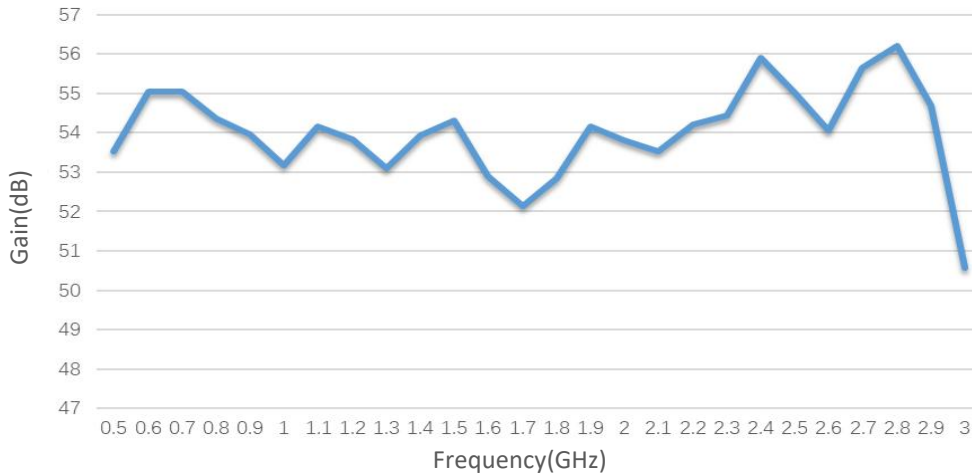
Input VSWR vs Frequency



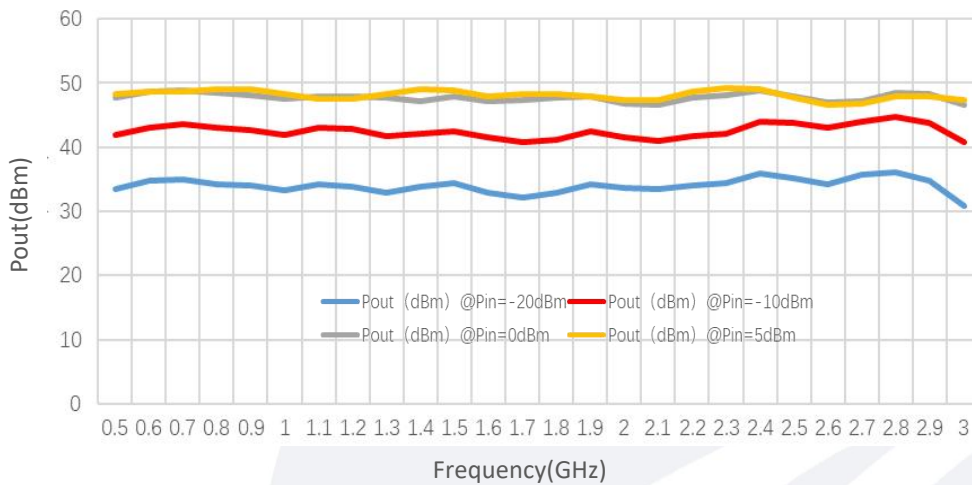
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

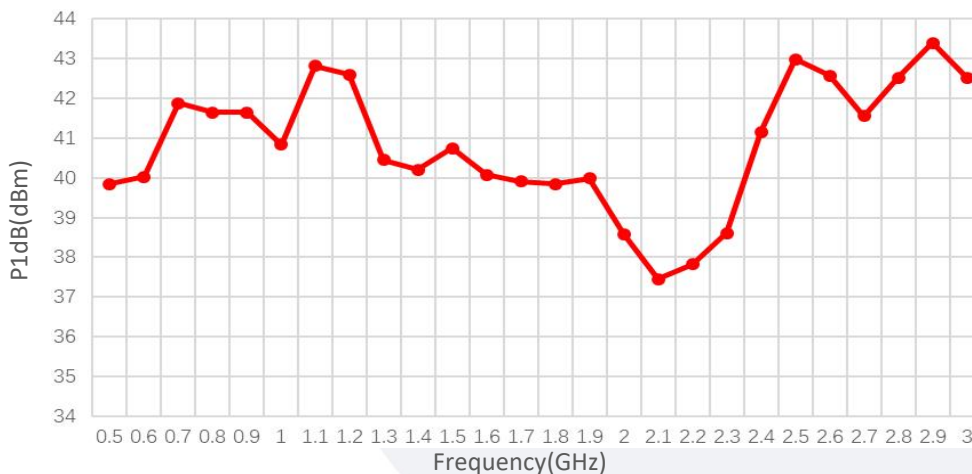
Small Signal Gain vs Frequency



Pout@Equal_Pin



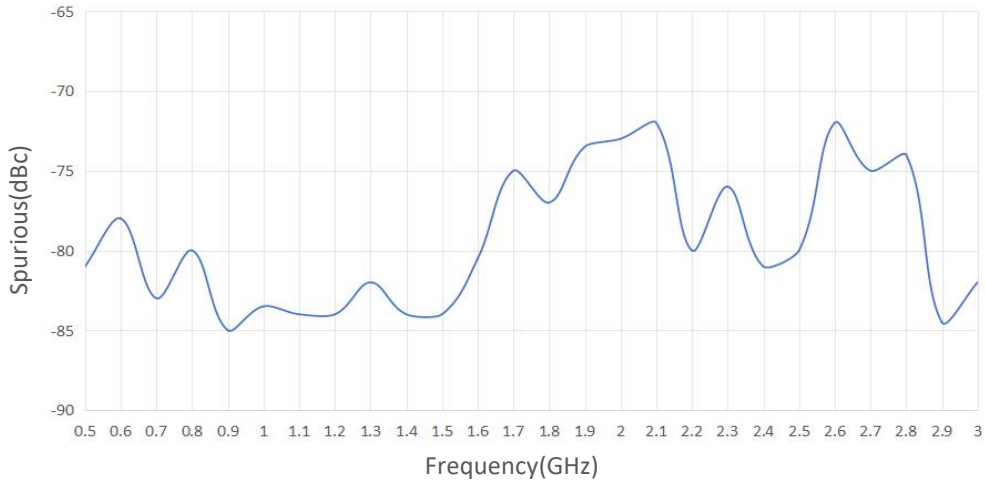
P1dB vs Frequency



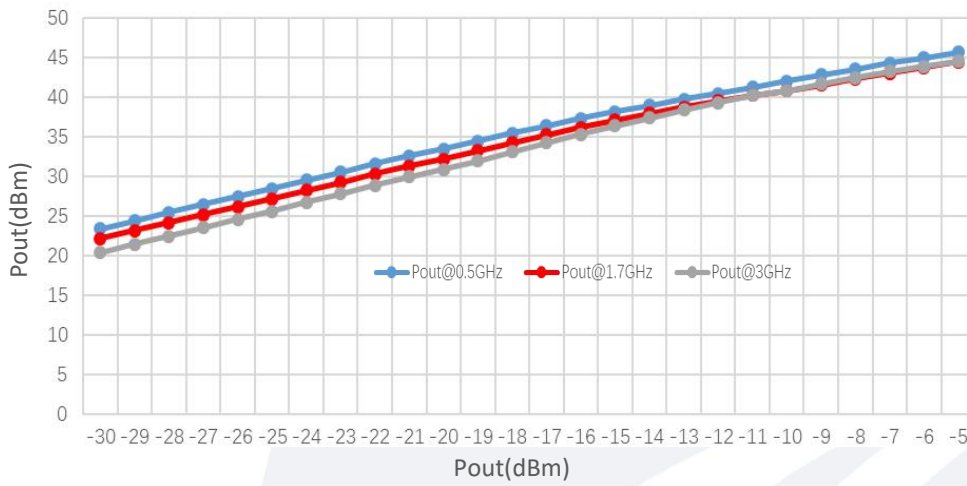
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典型曲线 Typical Performance Data:

Spurious vs Frequency



Pout@Pin



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