

Power Amplifier

0.5-6GHz /50dB Gain/50 dBm Psat

Model: TLPA0.5G6G-50-50-WATERPROOF

TLPA0.5G6G-50-50-WATERPROOF is a power amplifier with a power gain of 50 dB and a nominal Psat of 50 dBm across the frequency range of 0.5 to 6 GHz. The DC power requirement for the amplifier is +36 VDC/800 W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N Female.

Features:

- Ultra Wide Band: 0.5-6GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm 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	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW		0.5-6		GHz
工作模式 Operating Mode	OPM		CW/PULSE compatible		
功率增益 Power Gain	GP	50			dB
增益平坦度 Gain flatness	ΔGL		±3.5		dB
饱和输出功率 Output Psat	Psat	50			dBm
杂散 Spurious@Pout=50dBm	Spur			-60	dBc
二次谐波 2rd Harmonics@Pout=50dBm	HAM		-10		dBc
输入驻波 Input VSWR	VSWRin			2	:1
直流电压 DC Voltage	Vdc		36		V DC
功耗 Power Consumption	Pdiss			800	W

防护等级

机械特性 Mechanical Specifications:

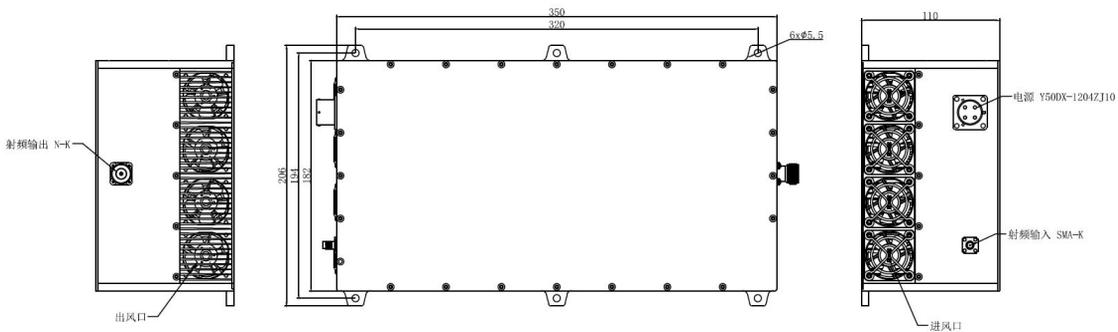
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/N Female	
尺寸 Size	350*206*110	mm
重量 Weight	≤7.5	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



OBSERVE PRECAUTIONS
 ELECTROSTATIC SENSITIVE
 DEVICES

DC加电接口 DC Interface Connector(Y50DX-1204ZJ10):

Pin #	Description	Specification
1	VCC	+36 V DC
2	VCC	+36 V DC
3	GND	Ground

实物图 Physical picture:



温度环境 Environmental Conditions:

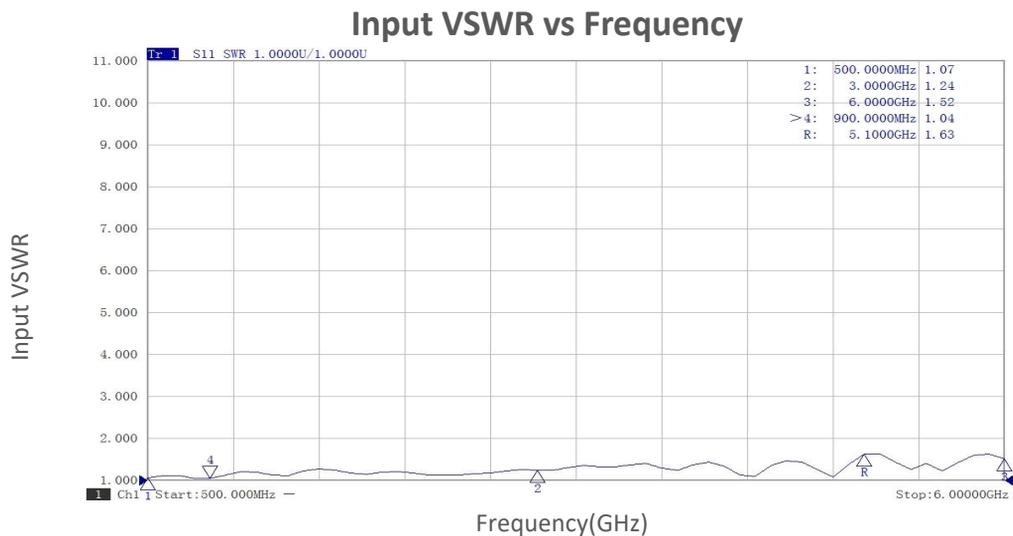
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	-30		+60	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc 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
TLPA0.5G6G-50-50-WATERPROOF	Power amplifier 0.5-6GHz,Gain:50dB,Psat:50dBm,+36V DC,With Heatsink	Rev.1.1

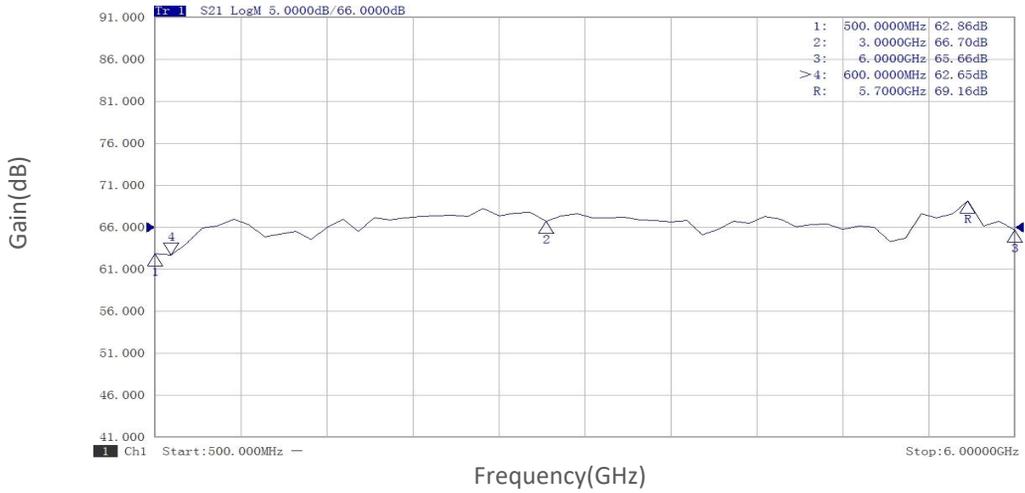
典型曲线 Typical Performance Data:



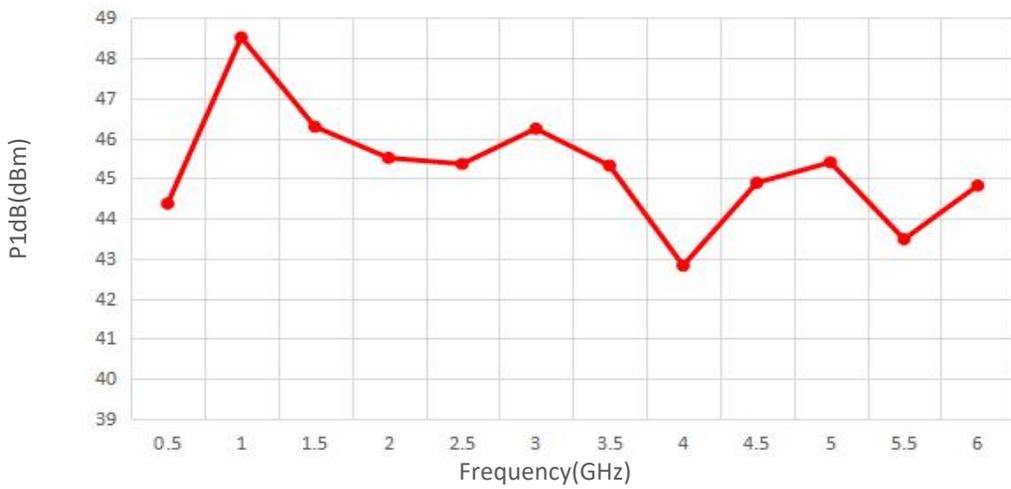
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Small Signal Gain vs Frequency



P1dB vs Frequency



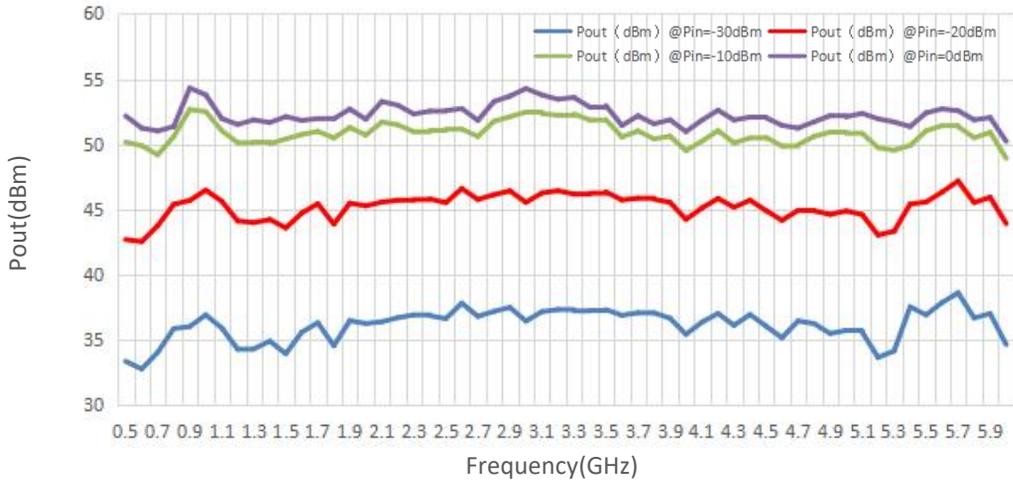
Pout@Pin

—●— Pout@0.5GHz —●— Pout@3GHz —●— Pout@6GHz

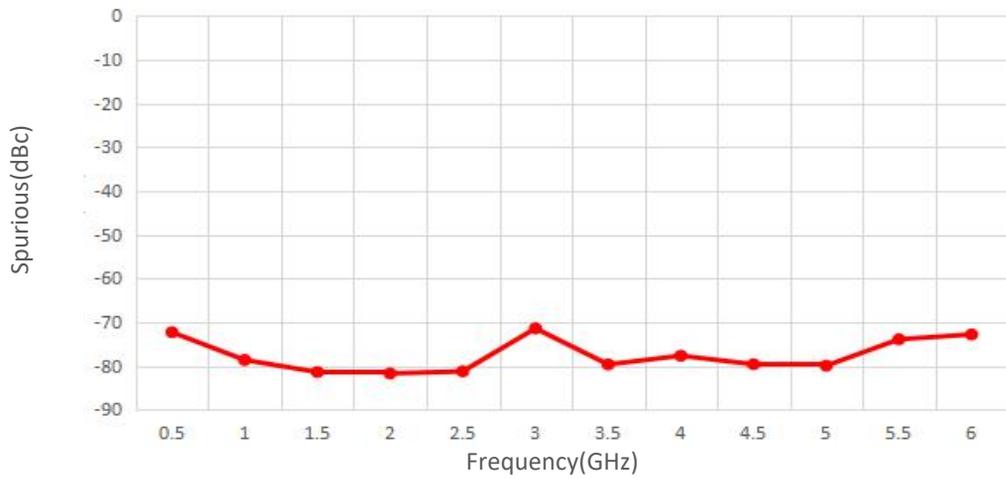
Pout(dBm)

典型曲线 Typical Performance Data:

Pout@Equal_Pin



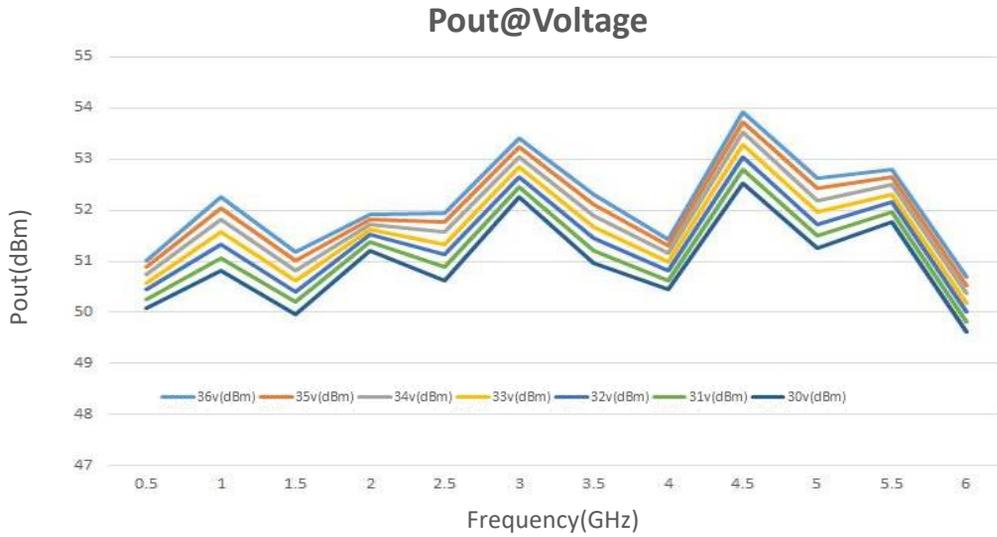
Spurious vs Frequency



Harmonic vs Frequency



Typical Performance Data:



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