

## Solid State High Power Amplifier Systems

2-18GHz /56dB Gain/56 dBm Psat/220V AC

Model: TLPA2G18G-56-56-P-BC

TLPA2G18G-56-56-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 2 to 18 GHz frequency range. The amplifier features a built-in 220V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

### Features:

- Frequency range: 2-18GHz
- Gain: 56dB Min
- Psat Output Power:56dBm Min
- Protection:Over TEM,over voltage, over current ,over VSWR protection
- 50 Ohm Matched Input / Output

### 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	2-18			GHz
工作模式 Working Mode	MOD	Pulse only			
功率增益 PowerGain	GP	56			dB
增益平坦度 Gain flatness	$\Delta$ GL		$\pm 3$		dB
饱和输出功率 Output Psat	Psat	56			dBm
杂散 Spurious@Pout=400W	Spur			-55	dBc
谐波 Harmonics@Pout=400W	HAM		-15	-10	dBc
调制信号电平 Modulation Signal Level	TTL	0		5	V
调制频率 Modulation Frequency	MF	1		100	KHz
脉冲宽度 Pulse Width	T	0.3		500	us
占空比 Duty Cycle	$\tau$	0.1		20	%
上升/下降沿 Rise/Fall Time	Tr		50	100	ns
脉冲输入 Pulse Input	TTL level, 50 ohm nominal termination				
顶降 Pulse Drop@T=100us	Pdrop		0.5	1	dB
启动延迟 Star Delay	DSU		150		ns
关断延迟 Shutoff Delay	TOF		250		ns
输入驻波 Input VSWR	VSWR		1.5	2	:1

## 电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
交流电压 AC Voltage	Vac	220 VAC(±10%), Single phase, 50Hz(±10%)			V AC
20%占空比功耗 Power consumption@20%	Pdiss	700/1200			W
输出功率控制 Output power control (Power Variation)	OPC		20		dB
阻抗 Impedance	I/O-IMP	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	N Female/N Female	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
脉冲输入接口 Pulse Input Connector	BNC Female	
通信接口 Communication Connector	DB9/RJ-45	
尺寸 Size	19 Inch 8U*800 depth	mm
重量 Weight	≤100	Kg

## 绝对最大值 Absolute Maximum Ratings:

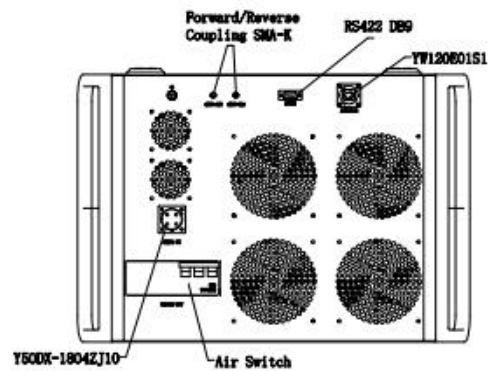
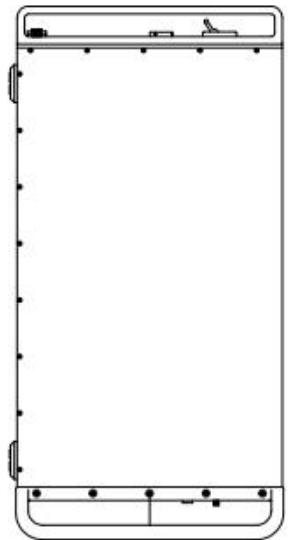
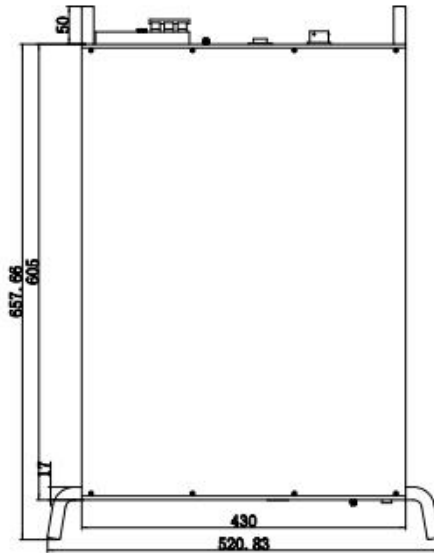
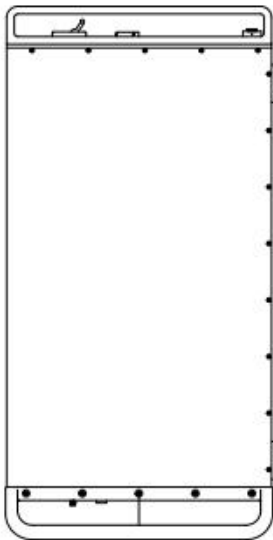
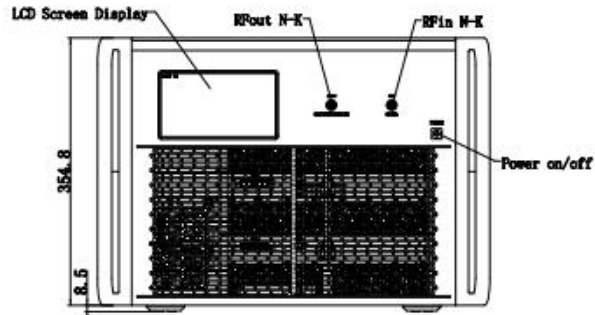
参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

## 主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off
内置保护功能 Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
监控和控制 Remote control	RS422/LAN, LCD Screen Display
冷却系统 Cooling system	Front to back forced air cooling fans makes this ideal for usage in test equipment racks

外形图 Outline Drawing:

Unit:mm



## 温度环境 Environmental Conditions:

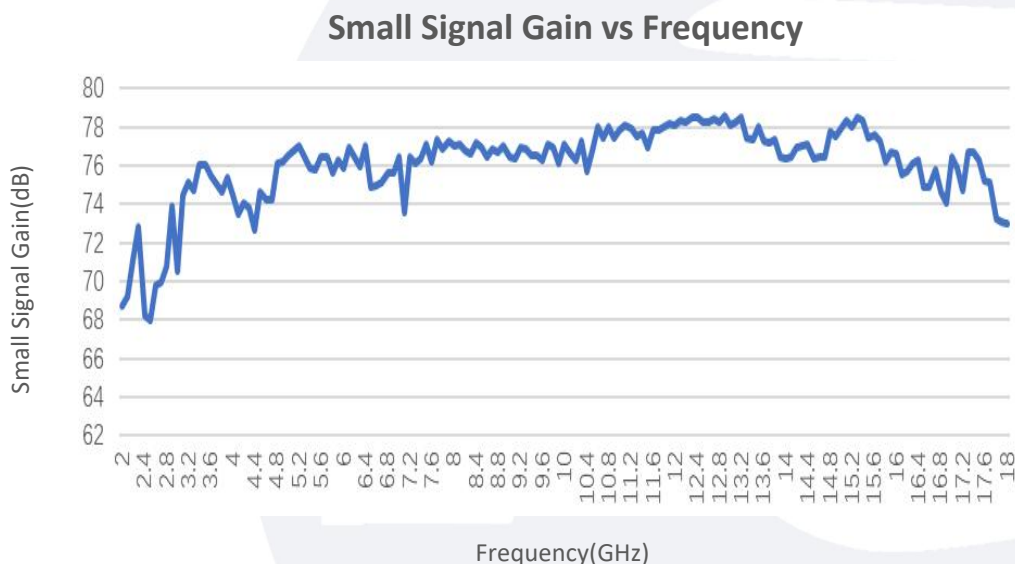
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	°C
存储温度 Non-operating Temperature*	-30		+50	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

## 订货信息 Ordering Information:

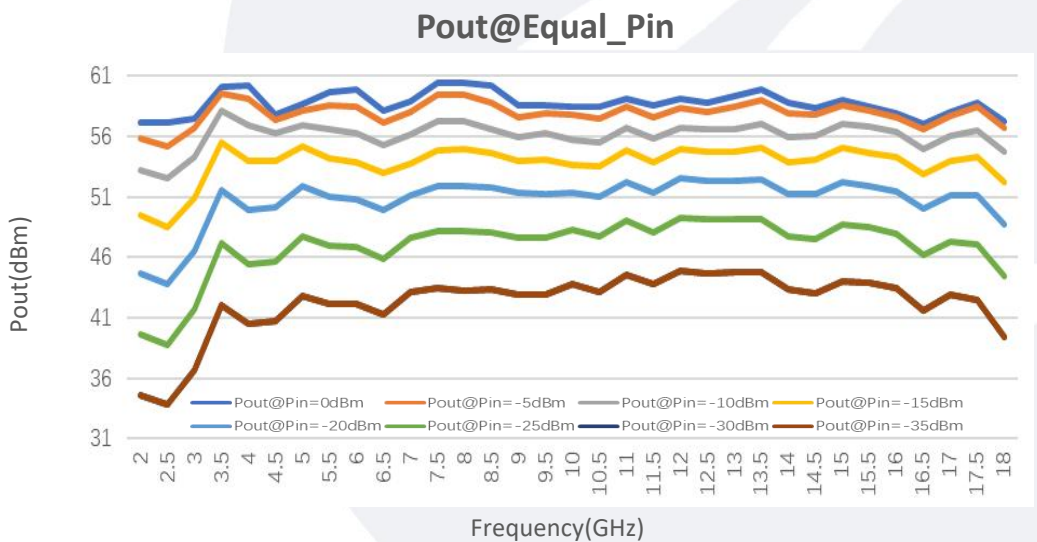
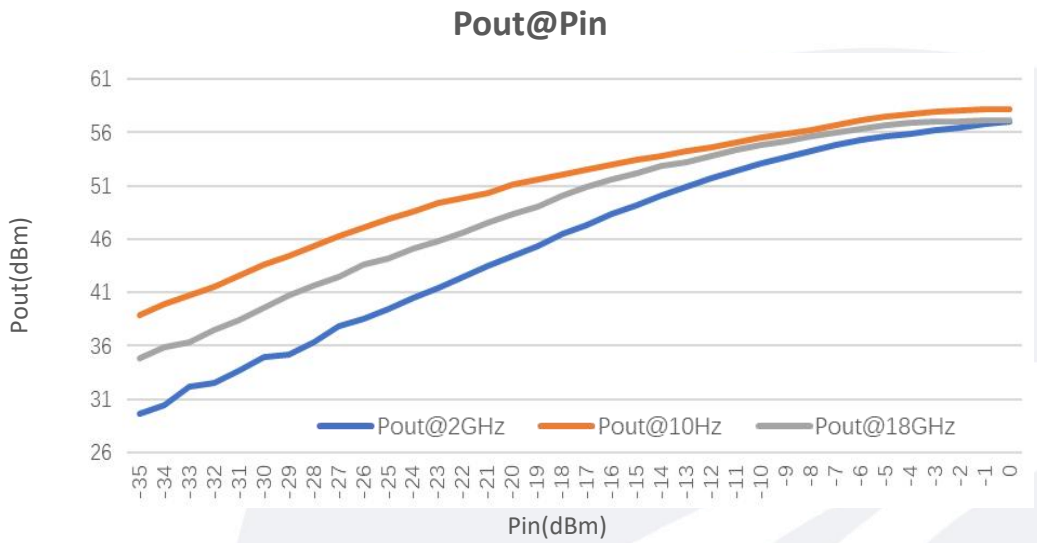
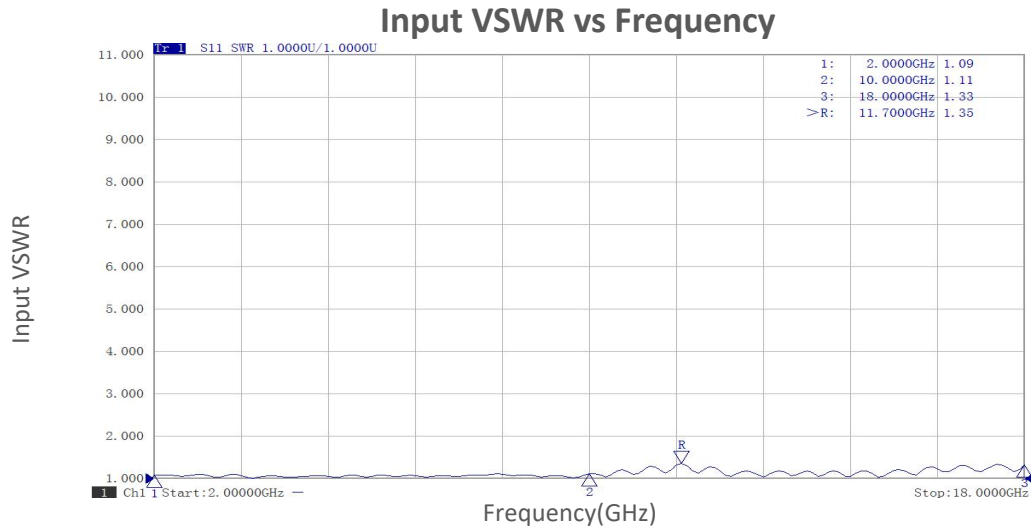
标准型号 Base Number	描述 Description	版本号 Revision
TLPA2G18G-56-56-P-BC	Solid State High Power Amplifier Systems 2-18GHz, Gain:56dB, Psat:56 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

## 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.

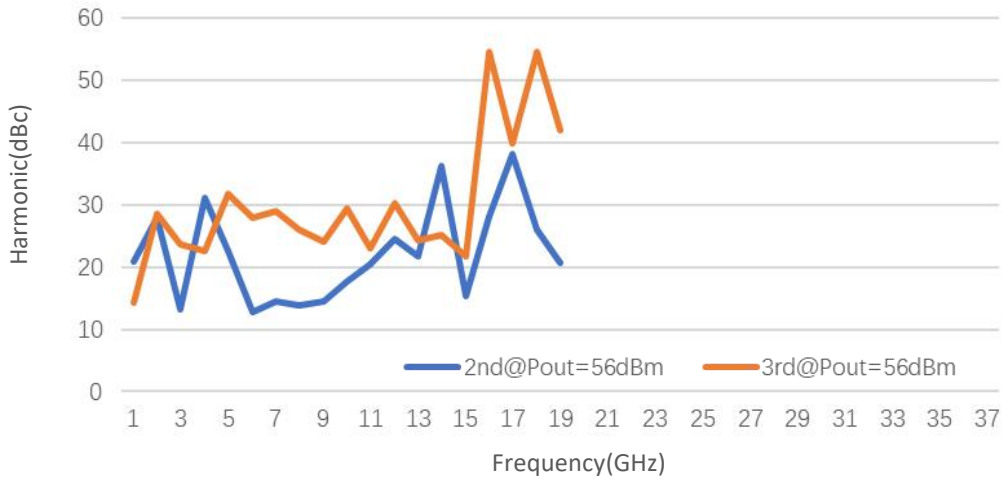
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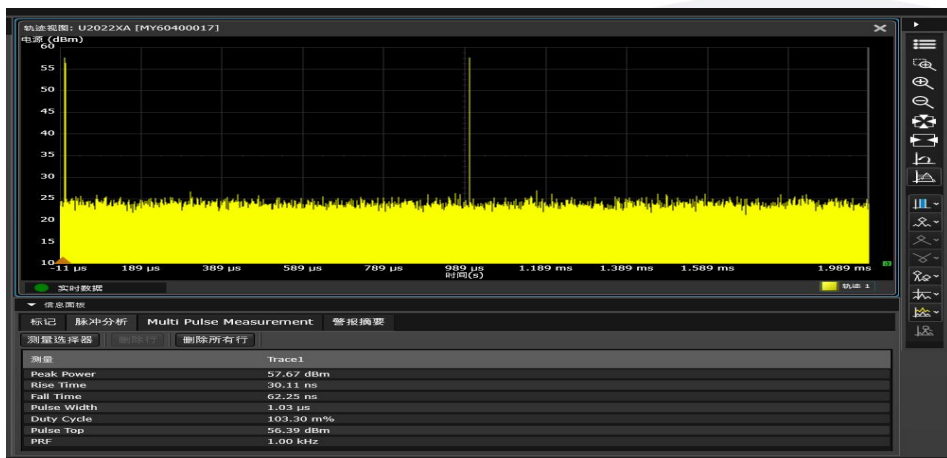
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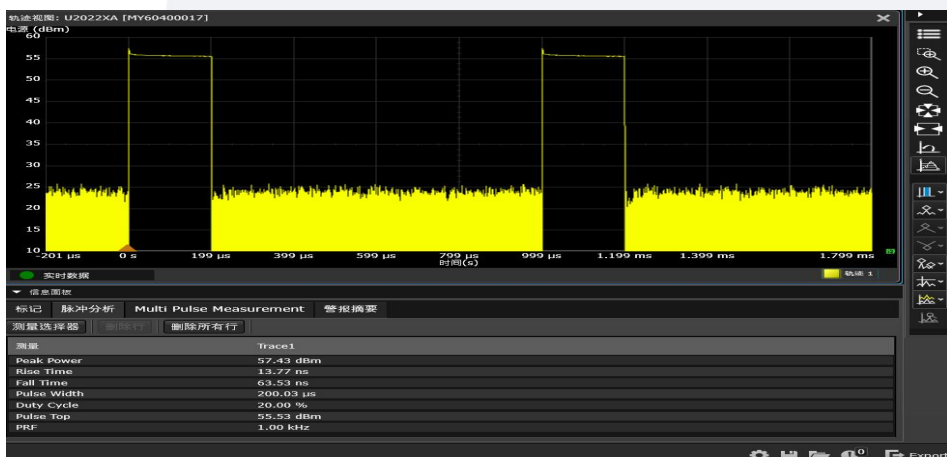
### Harmonic vs Frequency



### Rise/Fall Time @1KHz\_0.1% Duty Cycle



### Rise/Fall Time @1KHz\_20% Duty Cycle



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## 典型曲线 Typical Performance Data:

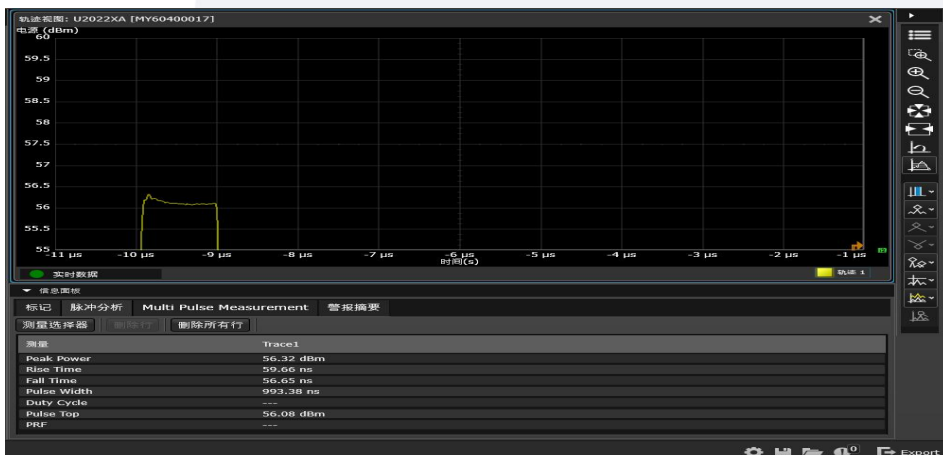
### Rise/Fall Time @100KHz\_3% Duty Cycle



### Rise/Fall Time @100KHz\_10% Duty Cycle



### Pulse Drop @100KHz\_10% Duty Cycle



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## 典型曲线 Typical Performance Data:

### Rise/Fall Time @100KHz\_20% Duty Cycle



### Rise/Fall Time @10GHz\_10KHz\_10% Duty Cycle



### Pulse Drop @10GHz\_10KHz\_10% Duty Cycle



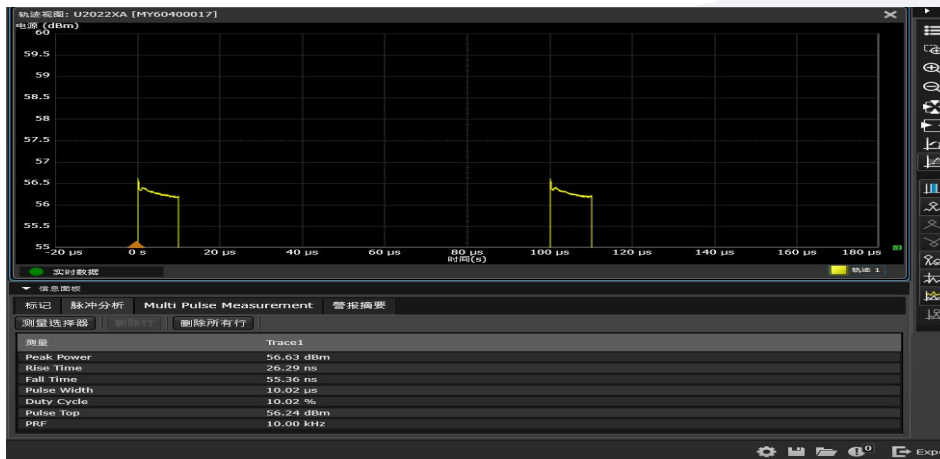
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## 典型曲线 Typical Performance Data:

### Rise/Fall Time @18GHz\_10KHz\_10% Duty Cycle



### Pulse Drop @18GHz\_10KHz\_10% Duty Cycle



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.