

Solid State High Power Amplifier Systems

2-18GHz/55dB Gain/55dBm Psat/220V AC

Model: TLPA2G18G-55-55-P-BC

TLPA2G18G-55-55-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: 55dB Min
- Psat Output Power: 55dBm 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 Power Gain	GP	55			dB
增益平坦度 Gain flatness	Δ GL		± 3		dB
饱和输出功率 Output Psat	Psat	55			dBm
杂散 Spurious@Pout=316W	Spur			-55	dBc
谐波 Harmonics@Pout=316W	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	τ	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:

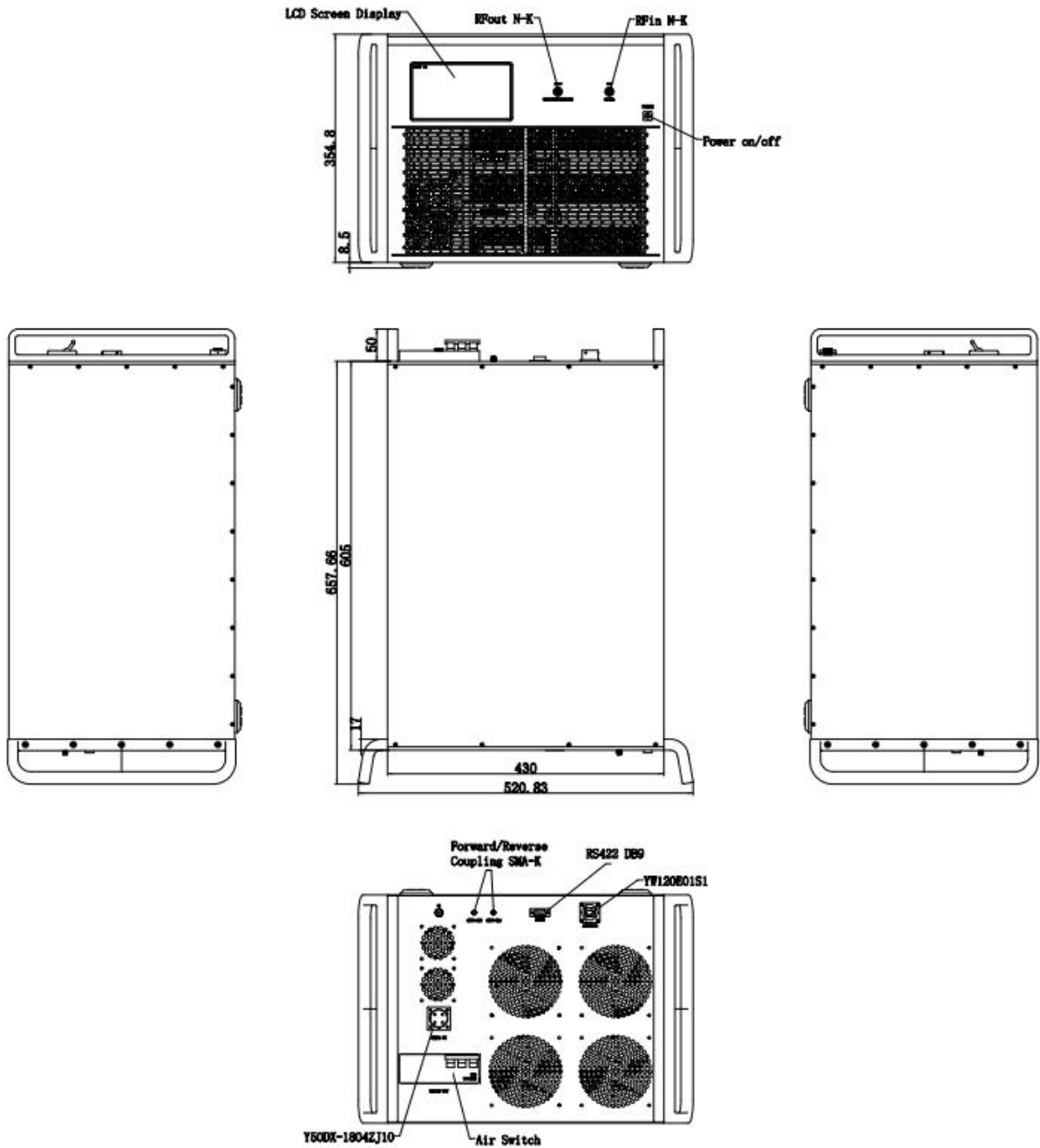
参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

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/Ethernet
冷却系统 Cooling system	Built in Cooling system,forced air cooling

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			

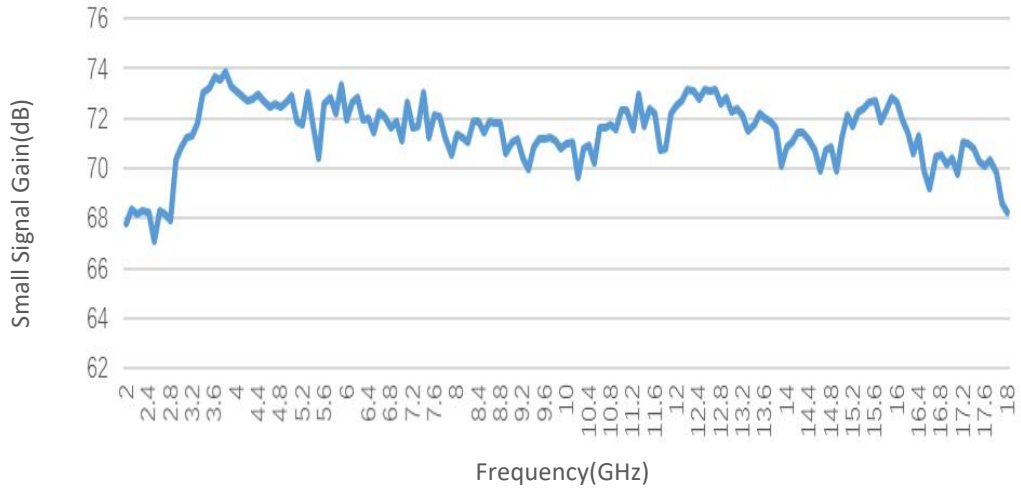
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

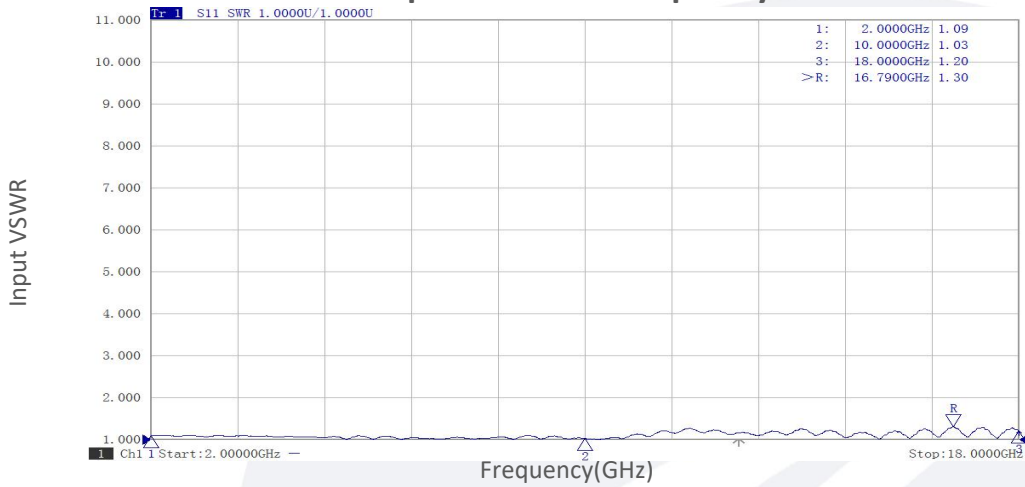
标准型号 Base Number	描述 Description	版本号 Revision
TLPA2G18G-55-55-P-BC	Solid State High Power Amplifier Systems 2-18GHz, Gain:55dB, Psat:55dBm, 220V AC, Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

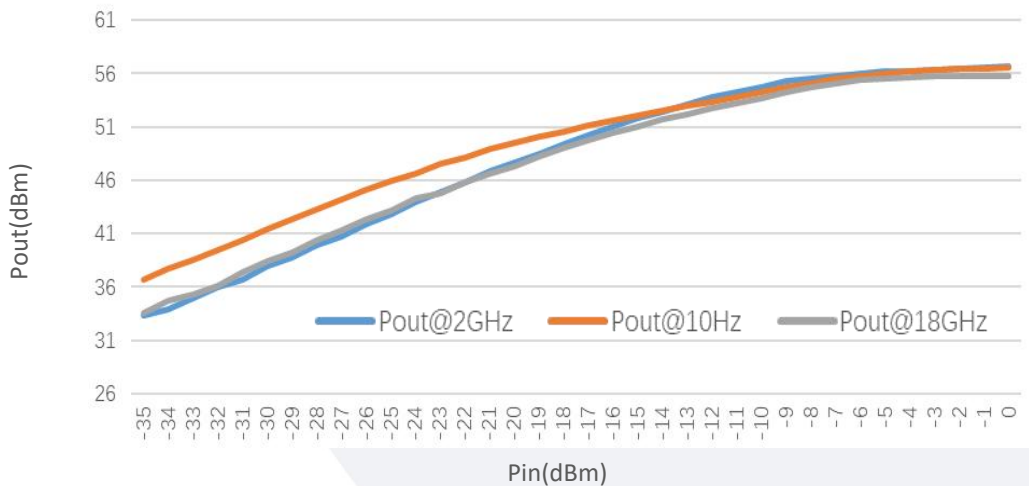
Small Signal Gain vs Frequency



Input VSWR vs Frequency

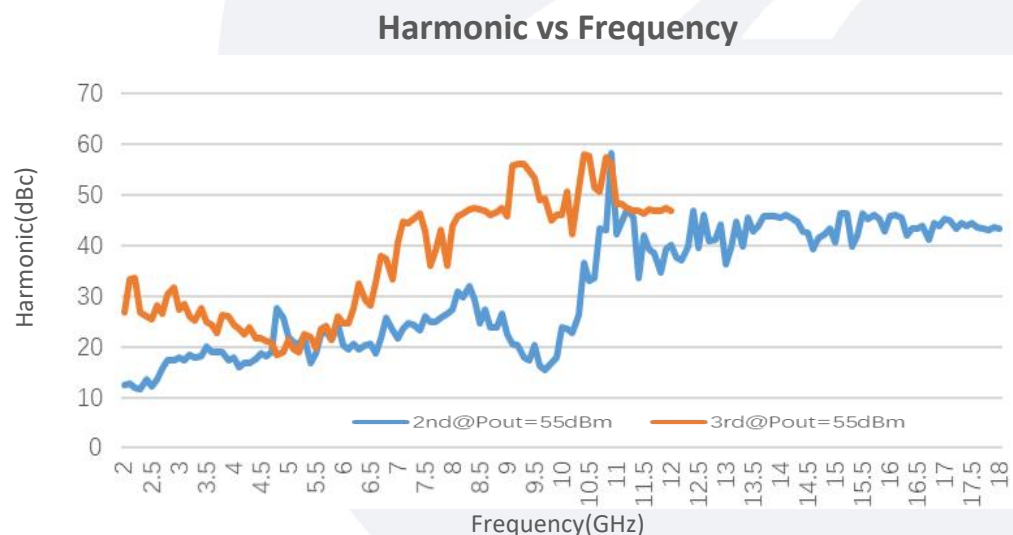
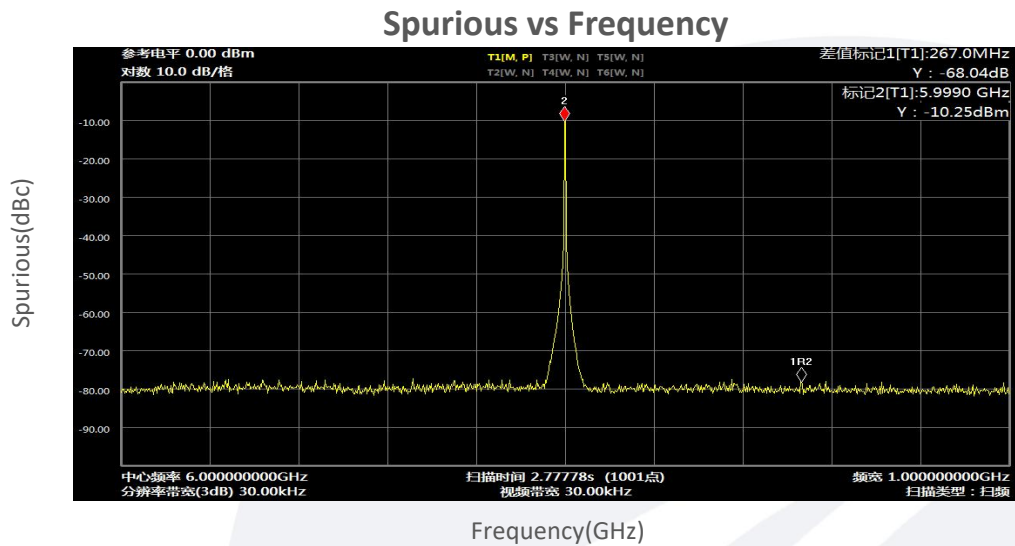
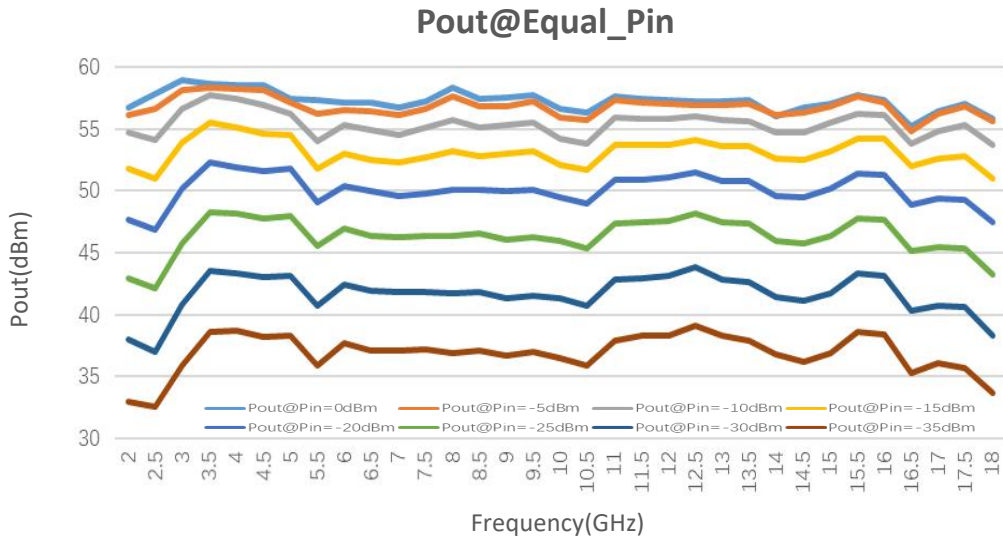


Pout@Pin



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.

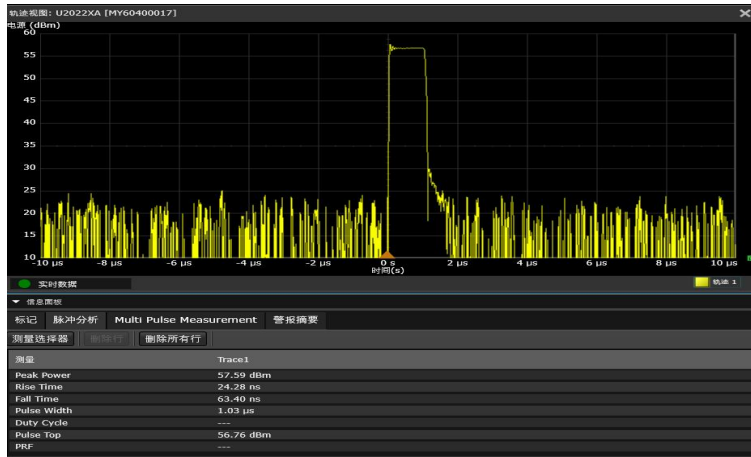
典型曲线 Typical Performance Data:



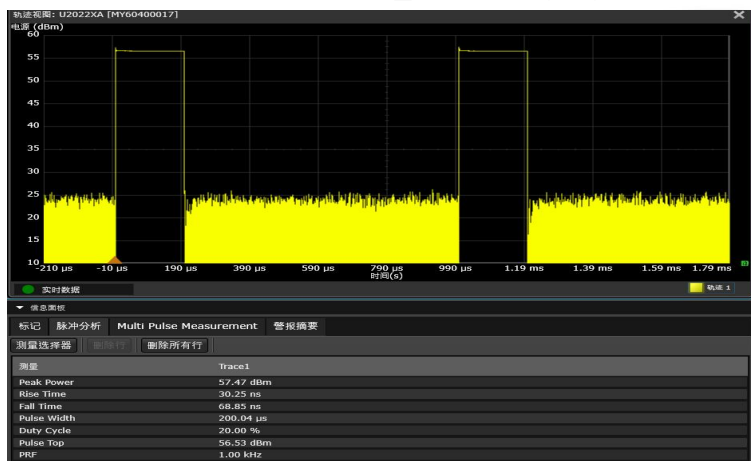
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

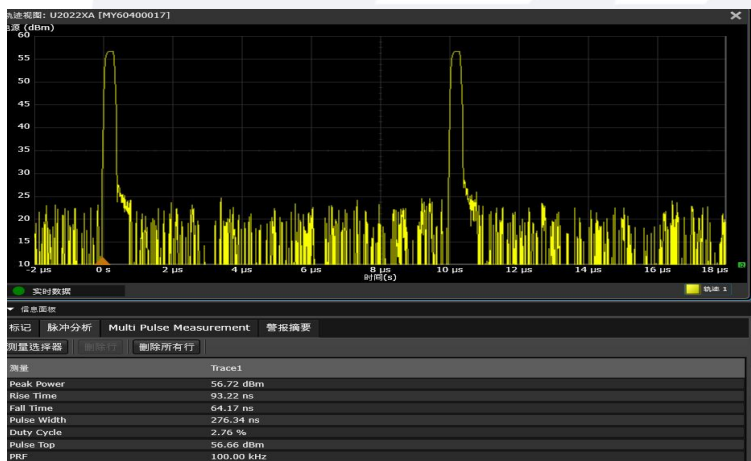
Rise/Fall Time @1KHz_0.1% Duty Cycle



Rise/Fall Time @1KHz_20% Duty Cycle



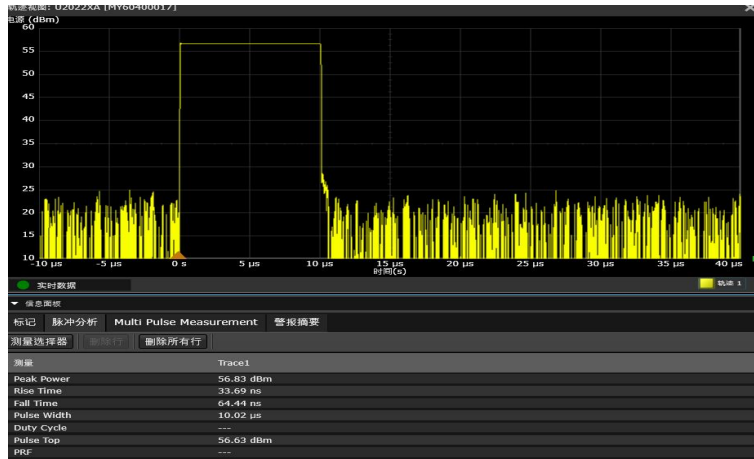
Rise/Fall Time @100KHz_3% Duty Cycle



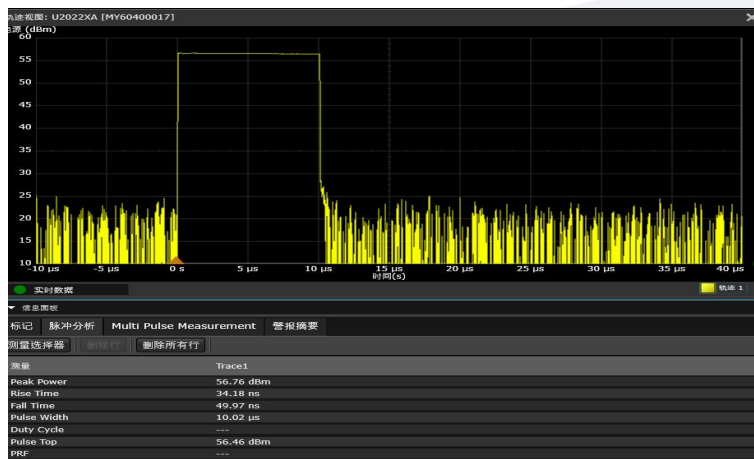
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

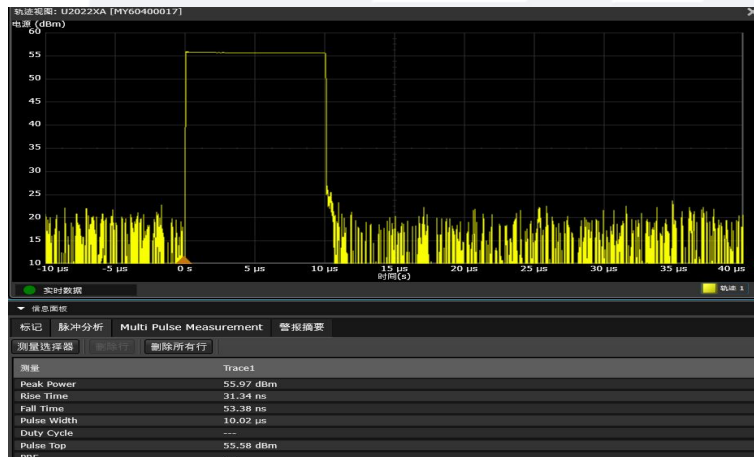
Rise/Fall Time @2GHz_10KHz_10% Duty Cycle



Rise/Fall Time @10GHz_10KHz_10% Duty Cycle



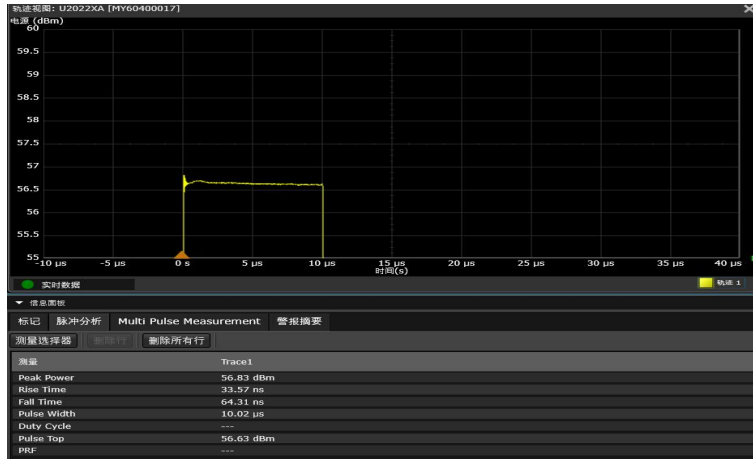
Rise/Fall Time @18GHz_10KHz_10% Duty Cycle



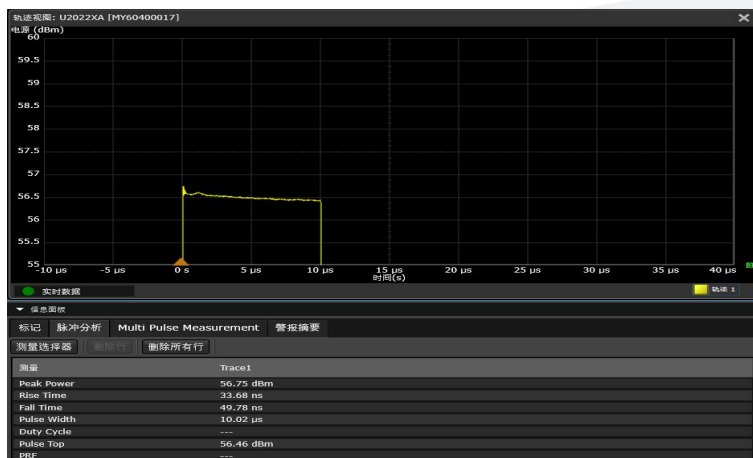
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

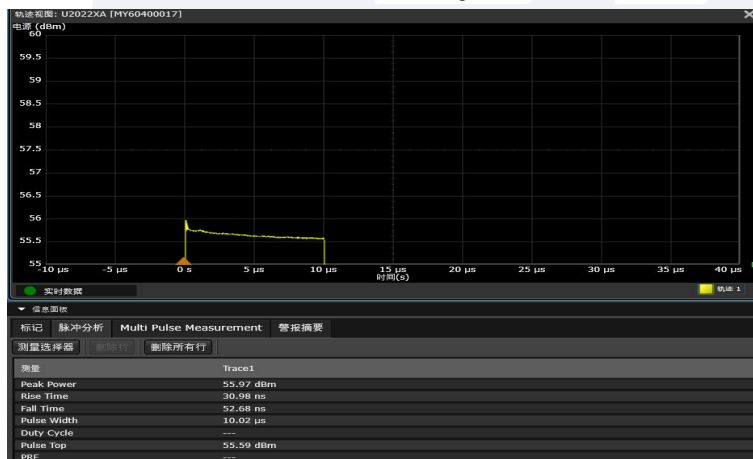
Pulse Drop



Pulse Drop



Pulse Drop



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:

Delay



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.