

Solid State High Power Amplifier Systems

0.5-3GHz/63dB Gain/63dBm Psat/220V AC

Model: TLPA0.5G3G-63-63-P-BC

TLPA0.5G3G-63-63-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.5 to 3 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: 0.5-3GHz
- Gain: 63dB Min
- Psat Output Power: 63dBm Min
- Protection: Over TEM, over voltage, over current, over VSWR, over pulse width, over PRF 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	0.5-3			GHz
工作模式 Working Mode	MOD	PULSE ONLY			
功率增益 Power Gain	GP	63			dB
增益平坦度 Gain flatness@Pout=63dBm	ΔGP		±4		dB
饱和输出功率 Output Psat	Psat	63			dBm
杂散 Spurious@Pout=63dBm	Spur			-60	dBc
谐波 Harmonics@Pout=63dBm	HAM		-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		100	us
占空比 Duty Cycle	τ			5	%
上升/下降沿 Rise/Fall Time	Tr		100		ns
顶降 Pulse Drop@T=100us	Pdrop		0.5		dB
脉冲延迟 Pulse Delay	Pd		250		ns
脉冲关断隔离 Pulse off isolation	Piso		80		dBc
脉宽失真 Pulse Width Distortion	PWd		±50		ns
输入驻波 Input VSWR	VSWR			1.5	:1

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
底噪 Noise Floor@pulse on	NL1	-55	-70		dBm/Hz
底噪 Noise Floor@pulse off	NL2		-140		dBm/Hz
交流电压 AC Voltage	Vac		220		V AC
5%占空比功耗 Power consumption@5% duty cycle	Pdiss		3500		W
阻抗 Impedance	I/O-IMP	50			Ohms

*Note: If the input signal is a pulse, the modulated TTL can always be high, but the pulse parameter limit of the input pulse signal is again shown in the table above.

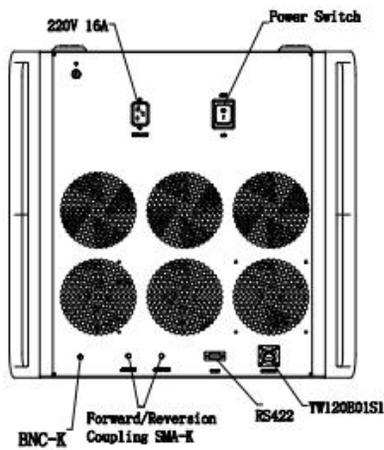
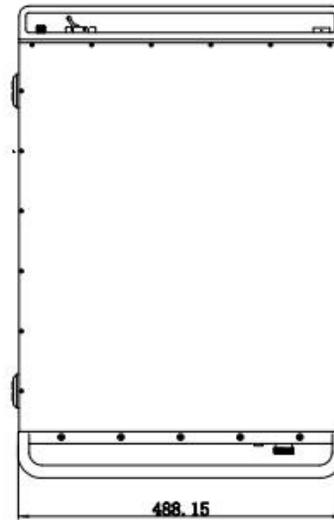
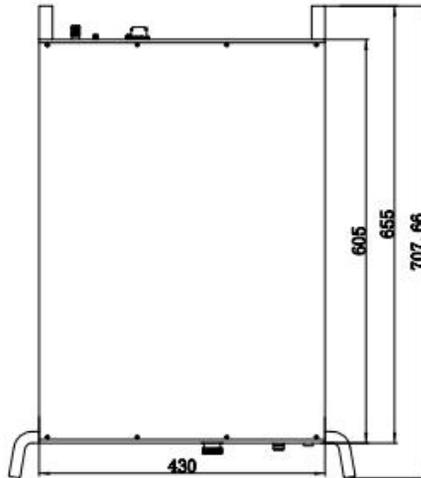
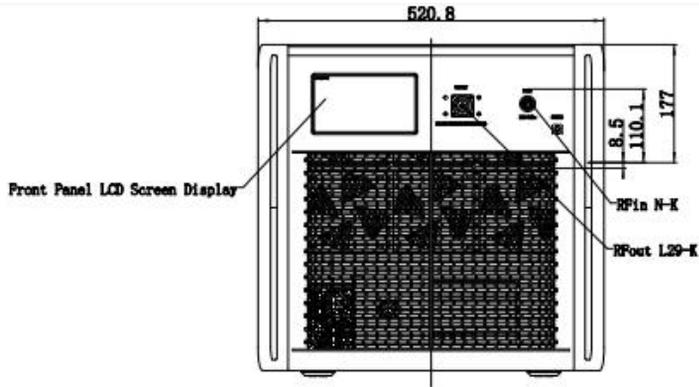
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/L29 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	11U*600 depth	mm
重量 Weight	≤80	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

外形图 Outline Drawing: Unit:mm



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting on/off 2, RF setting on/off 3, ALC automatic level control 4, Gain Control
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR 5, Over pulse width 6, over PRF
监控和控制 Remote control	RS422/Ethernet
冷却系统 Cooling system	Built in Cooling system, forced air cooling

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
TLPA0.5G3G-63-63-P-BC	Solid State High Power Amplifier Systems 0.3-3GHz, Gain:63dB, Psat:63dBm, 220V AC, Built in Fan Cooling	Rev.1.0