

## 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

### Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	0.5-3			GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	63			dB
Gain flatness@Pout=63dBm	$\Delta GP$		$\pm 4$		dB
Output Psat	Psat	63			dBm
Spurious@Pout=63dBm	Spur			-60	dBc
Harmonics@Pout=63dBm	HAM		-10		dBc
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF	1		100	KHz
Pulse Width	T	0.3		100	us
Duty Cycle	$\tau$			5	%
Rise/Fall Time	Tr		100		ns
Pulse Drop@T=100us	Pdrop		0.5		dB
Pulse Delay	Pd		250		ns
Pulse off isolation	Piso		80		dBc
Pulse Width Distortion	PWd		$\pm 50$		ns
Input VSWR	VSWR			1.5	:1

## Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Noise Floor@pulse on	NL1	-55	-70		dBm/Hz
Noise Floor@pulse off	NL2		-140		dBm/Hz
AC Voltage	Vac		220		V AC
Power consumption@5% duty cycle	Pdiss		3500		W
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.

## Mechanical Specifications:

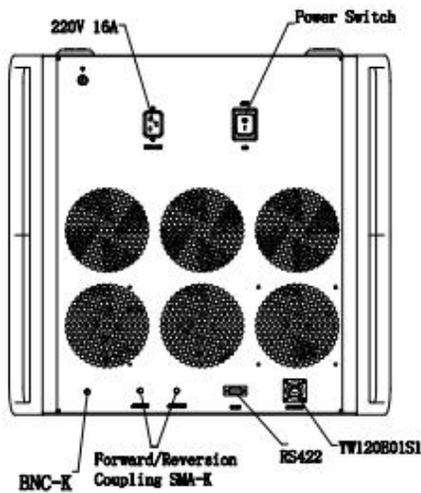
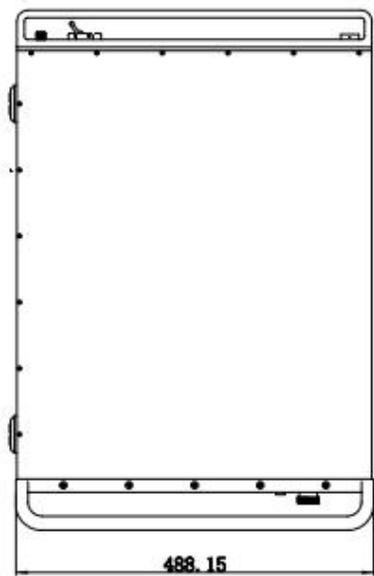
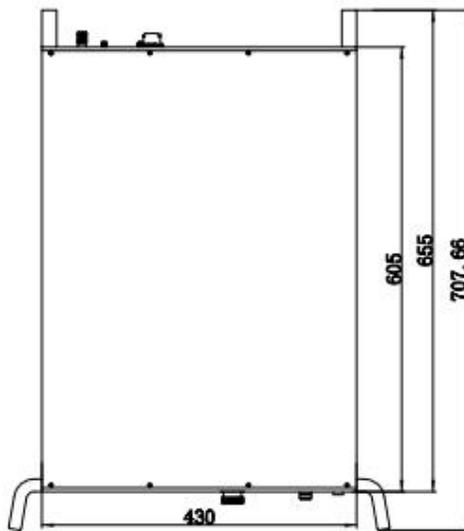
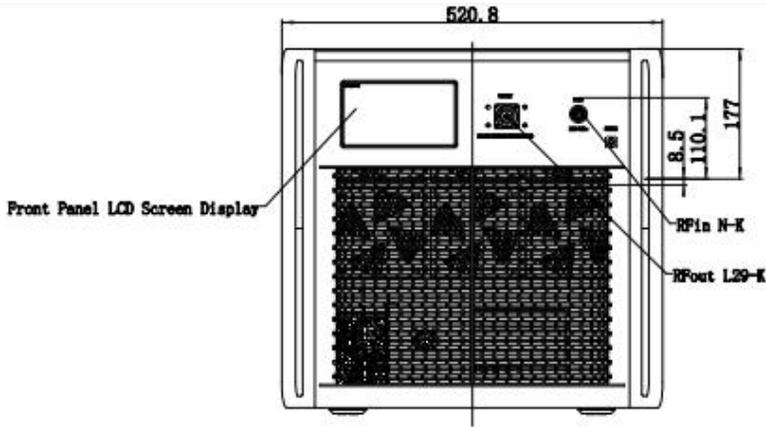
Parameter	Value	Units
Input /Output Connector	N Female/L29 Female	
Forward/Reverse Coupling	SMA Female/SMA Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Pulse Input Connector	BNC Female	
Communication Connector	DB9/RJ-45	
Size	11U*600 depth	mm
Weight	≤80	Kg

## Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

**Outline Drawing:**

Unit:mm



### Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off 2, RF setting on/off 3, ALC automatic level control 4, Gain Control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR 5, Over pulse width 6, over PRF
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

### Environmental Conditions:

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

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

### Ordering Information:

Base Number	Description	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