

Solid State High Power Amplifier Systems

5.8-6.8GHz/63dB Gain/63dBm Psat/380V AC

Model: TLPA5.8G6.8G-63-63-BC

TLPA5.8G6.8G-63-63-BC is a solid state high power amplifier systems provides high output power and high gain across the 5.8 to 6.8 GHz frequency range. The amplifier features a built-in 380V 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: 5.8-6.8GHz
- Gain: 63dB Min
- Psat Output Power: 63dBm Min
- Protection: Over TEM, input overdrive, over voltage, under voltage, load VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	5.8-6.8			GHz
Linear Gain	LGP		75		dB
Linear Gain flatness	Δ GL		± 2		dB
Power Gain	Gp	63			dB
Gain adjust Range	Δ GR		30		dB
Gain adjust Step	Δ GS		0.5		dB
Output Psat	Psat	63	64		dBm
Output Psat flatness	Δ Psat			± 1.5	dB
Spurious@Pout=63dBm	Spur			-60	dBc
Harmonics@Pout=63dBm	HAM			-20	dBc
Gain stability@24h	Gstb			± 0.25	dB
Output IM3*	IM3			-25	dBc
Input VSWR	VSWRin			1.25	:1
Output VSWR	VSWRout			1.5	:1
Load VSWR	LVSWR			3	:1
AC Voltage	Vac		380	420	V AC
Power Consumption@Pout=63dBm	Pdiss		7	7.5	kW
Power Consumption@Psat	Pdiss		8	8.5	kW
Impedance	I/O-IMP	50			Ohms

*test condition: two tone/spacing 5MHz/total output power 55dBm

Mechanical Specifications:

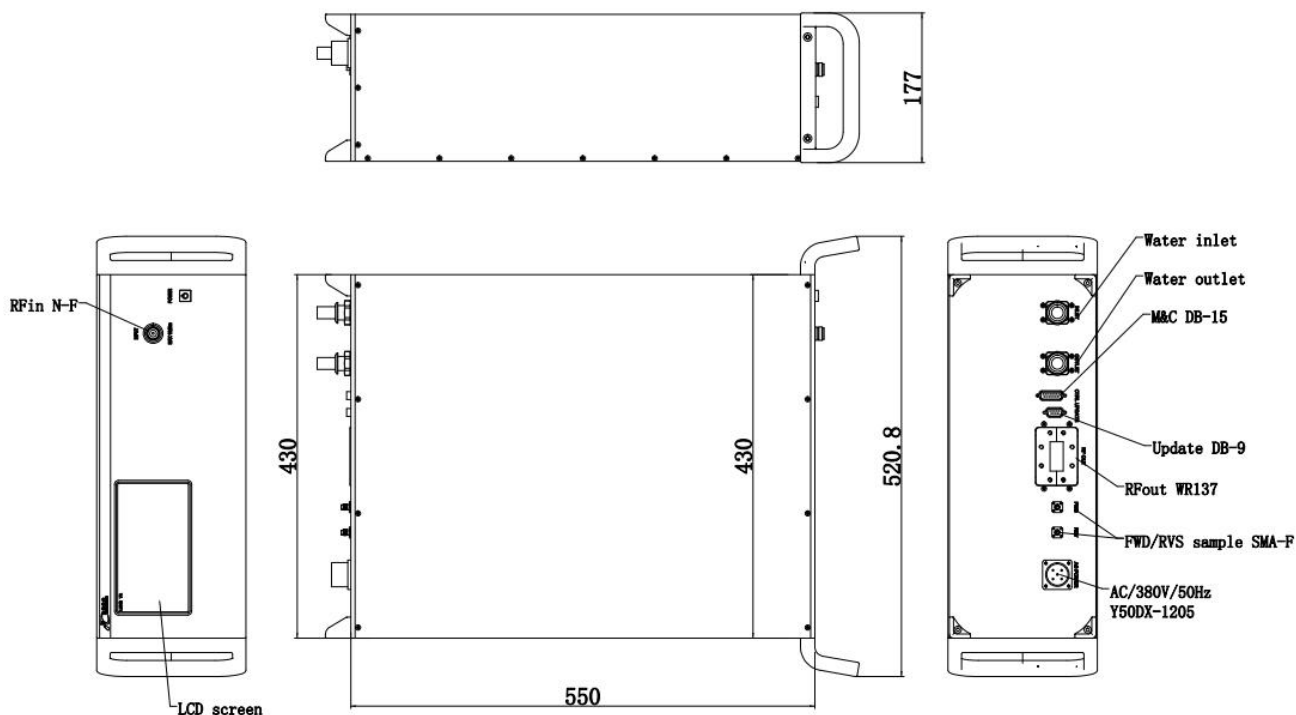
Parameter	Value	Units
Input /Output Connector	N Female/WR137	
Forward/Reverse Coupling	SMA Female/ SMA Female	
Communication Connector	DB-15	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Liquid Interface	Inlet/outlet:ZFS-08	Coolant temp range:0~30℃ Pressure: 1.2 bar Liquid flow: 8L/min
Size	4U*580 depth	mm
Weight	≤50	Kg

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off
Protection functions	1,Over TEM:≥+50°C shutdown 2,Over DC voltage:≥29V shutdown 3,Under DC voltage:≤20V shutdown 4,Input overdrive:≥10dBm shutdown 5,Load VSWR protection:The unit disables RF when reverse power exceeds the safe level of 3:1 VSWR or reduces power by 6dB
Remote control	RS422/485
Cooling system	Built in Cooling system,forced liquid 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
TLPA5.8G6.8G-63-63-BC	Solid State High Power Amplifier Systems 5.8-6.8GHz,Gain:63dB,Psat:63 dBm,380V AC,Built in Fan Cooling	Rev.1.2