

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

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	5.8-6.8			GHz
线性增益 Linear Gain	LGP		75		dB
线性增益平坦度 Linear Gain flatness	ΔGL		±2		dB
功率增益 Power Gain	Gp	63			dB
增益调节范围 Gain adjust Range	ΔGR		30		dB
增益调节步进 Gain adjust Step	ΔGS		0.5		dB
饱和输出功率 Output Psat	Psat	63	64		dBm
饱和输出功率平坦度 Output Psat flatness	ΔPsat			±1.5	dB
杂散 Spurious@Pout=63dBm	Spur			-60	dBc
谐波 Harmonics@Pout=63dBm	HAM			-20	dBc
增益稳定度 Gain stability@24h	Gstb			±0.25	dB
输出IM3 Output IM3*	IM3			-25	dBc
输入驻波 Input VSWR	VSWRin			1.25	:1
输出驻波 Output VSWR	VSWRout			1.5	:1
负载驻波 Load VSWR	LVSWR			3	:1
交流电压 AC Voltage	Vac		380	420	V AC
功耗 Power Consumption@Pout=63dBm	Pdiss		7	7.5	kW
功耗 Power Consumption@Psat	Pdiss		8	8.5	kW
阻抗 Impedance	I/O-IMP	50			Ohms

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

机械特性 Mechanical Specifications:

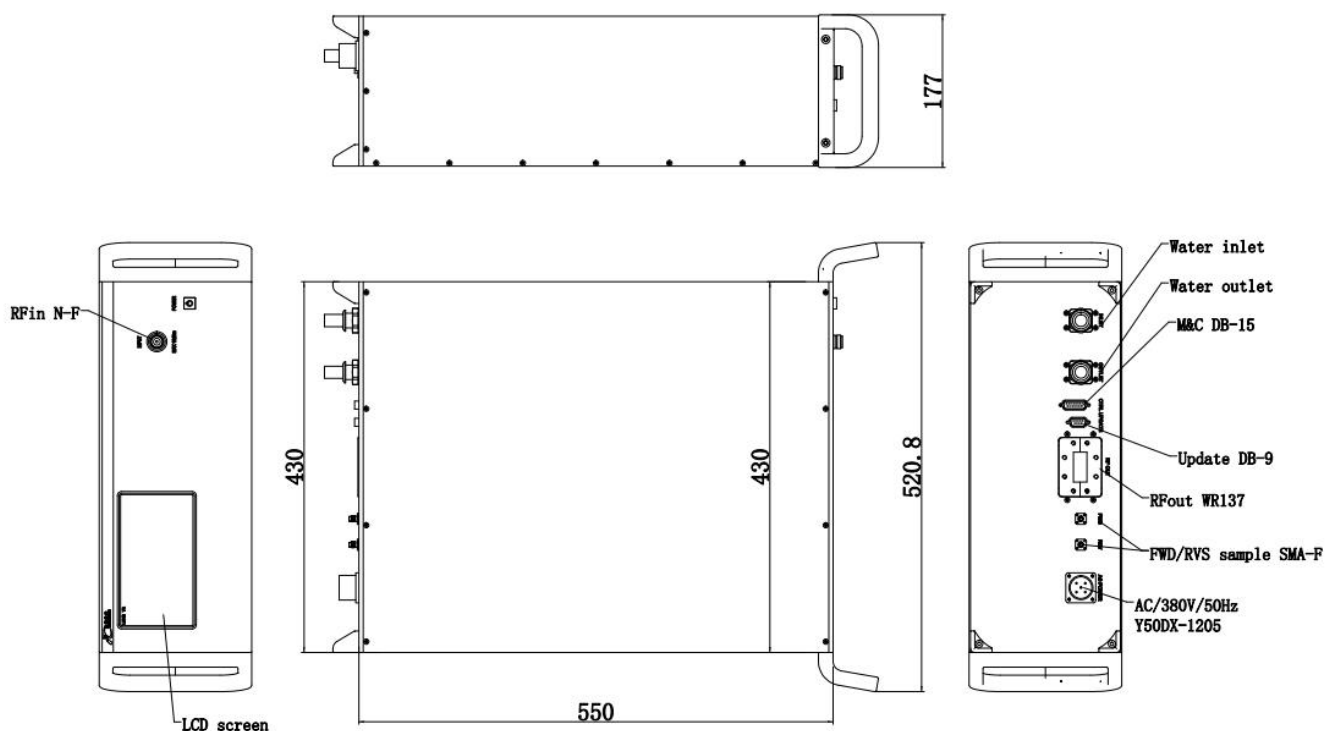
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/WR137	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/ SMA Female	
通信接口 Communication Connector	DB-15	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
液冷接口 Liquid Interface	Inlet/outlet:ZFS-08	Coolant temp range:0~30℃ Pressure: 1.2 bar Liquid flow: 8L/min
尺寸 Size	4U*580 depth	mm
重量 Weight	≤50	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+10 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
内置保护功能 Protection functions	1,Over TEM:≥+50℃ 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
监控和控制 Remote control	RS422/485
冷却系统 Cooling system	Built in Cooling system,forced liquid cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	℃
存储温度 Non-operating Temperature*	-30		+50	℃
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
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