

Solid State High Power Amplifier Systems

2-4GHz/57dB Gain/57dBm Psat/220V AC

Model: TLPA2G4G-57-57-BC

TLPA2G4G-57-57-BC is a solid state high power amplifier systems provides high output power and high gain across the 2 to 4 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: 2-4GHz
- Gain: 57dB Min
- Psat Output Power: 500W Min
- Protection: Over TEM, over voltage, over current ,infinite 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	2-4			GHz
功率增益 Power Gain	GP	57	58		dB
增益平坦度 Gain flatness	Δ GL		± 3	± 4	dB
增益调节范围 Gain adjust Range	Δ GR				dB
增益调节步进 Gain adjust Step	Δ GS				dB
线性输出功率 Output P1dB	P1dB		200		W
饱和输出功率 Output Psat	Psat	500	550		W
杂散 Spurious@Pout=500W	Spur			-50	dBc
谐波 Harmonics@Pout=500W	HAM		-15	-10	dBc
输入驻波 Input VSWR	VSWRin		1.5	2	:1
交流电压 AC Voltage	Vac	110	220		V AC
功耗 Power Consumption	Pdiss			4000	W
阻抗 Impedance	I/O-IMP	50			Ohms

机械特性 Mechanical Specifications:

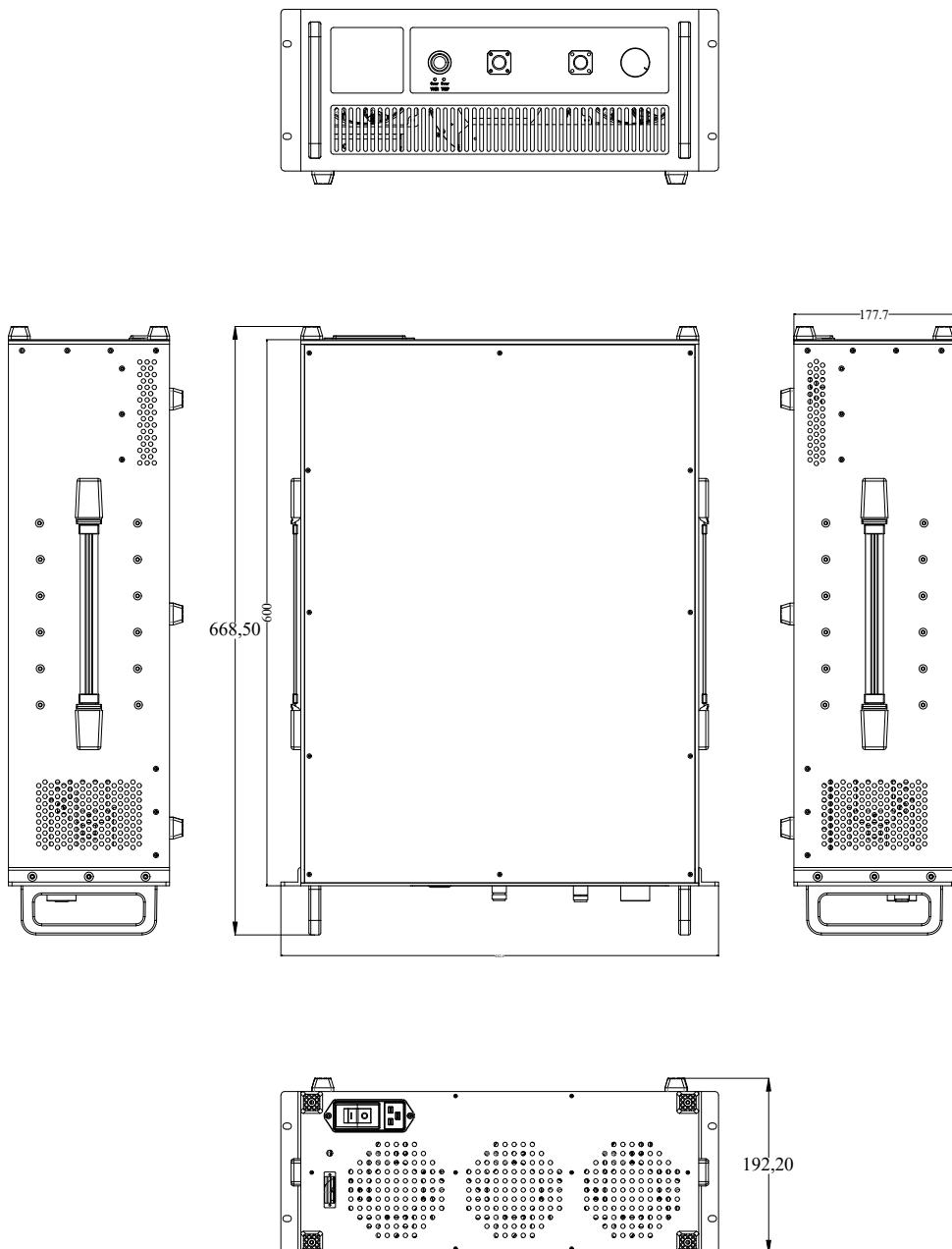
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/7/16 DIN Female	
尺寸 Size	482.6*133.2*668.5	mm
重量 Weight	≤ 40	Kg

绝对最大值 Absolute Maximum Ratings:

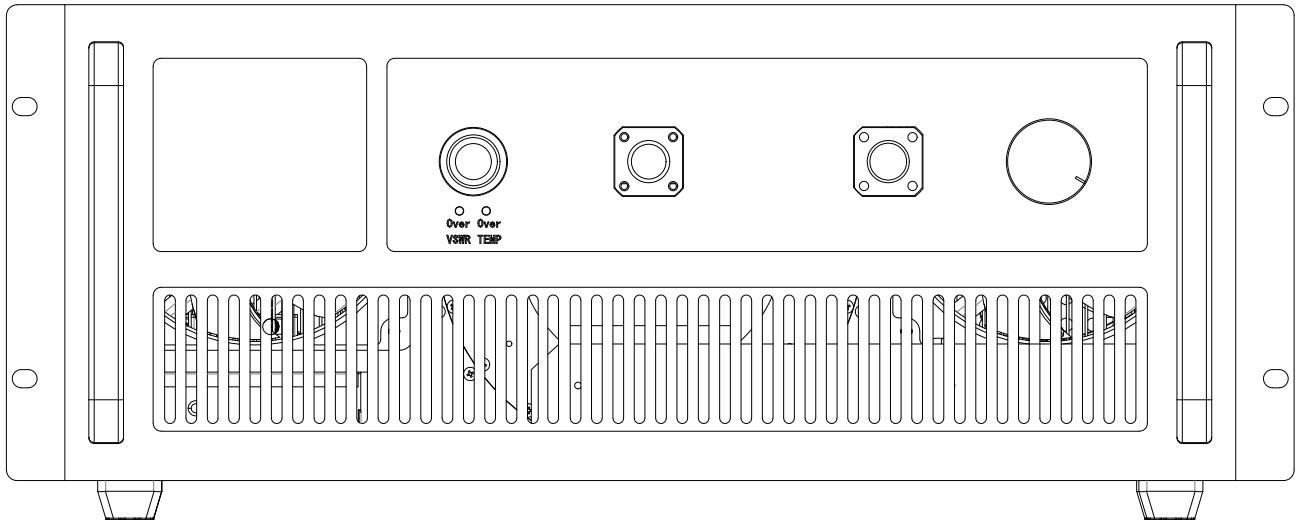
参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



外形图 Outline Drawing: Unit:mm



监控及控制接口 Monitor and control interface,D-sub15 Female:

Pin	Description	Specification
1	FWD	Forward detected power (analog voltage: 0 – 5 Volt)
2	REV	Reverse detected power (analog voltage: 0 – 5 Volt)
3	Summary Fault	Summary Fault: Active TTL Logic Low ($\leq 0.7V$) = Fault (Internally Pulled-High)
4	Shutdown	Amplifier Disable: TTL Logic Low ($\leq 0.7V$) (Internally Pulled-High)
5	Over Temp	TTL Logic High (2V-5V) = Fault (Internally Pulled-Low)
6	Over RF IN	TTL Logic High (2V-5V) = Fault (Internally Pulled-Low)
7	infinite VSWR	TTL Logic High (2V-5V) = Fault (Internally Pulled-Low)
8	GND	Ground
9-15	NC	No Connection

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, Input overdrive: $\geq 10\text{dBm}$, shutdown 2, Infinite VSWR: $\geq 4:1$, shutdown 3, Thermal – graceful degradation: ambient 50°C
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	$^{\circ}\text{C}$
存储温度 Non-operating Temperature*	-30		+50	$^{\circ}\text{C}$
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
TLPA2G4G-57-57-BC	Solid State High Power Amplifier Systems 2-4GHz, Gain: 57dB, Psat: 57dBm, 220V AC, Built in Fan Cooling	Rev.1.1