

Solid State High Power Amplifier Systems

13.75-14.5GHz/55dB Gain/55dBm Psat/220V AC Model: TLPA13.75G14.5G-55-55-BC

TLPA13.75G14.5G-55-55-BC is a solid state high power amplifier systems provides high output power and high gain across the 13.75 to 14.5 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: 13.75-14.5GHz
- Gain: 55dB Min
- Psat Output Power: 55dBm Min
- Protection: Over TEM, over voltage, over current, over 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	13.75-14.5			GHz
功率增益 Power Gain	GP	55			dB
增益平坦度 Gain flatness	Δ GL	± 0.2 @any 40MHz; ± 2 @any 500MHz			dB
增益调节范围 Gain adjust Range	Δ GR	20			dB
增益稳定度 Gain stability@-20~+40°C	Gstb		± 3		dB
线性输出功率 Output P1dB	P1dB				dBm
饱和输出功率 Output Psat	Psat	55			dBm
杂散 Spurious@Pout=55dBm	Spur			-60	dBc
三阶互调 Output IM3@5MHz space	IM3	-25 max at total power 51dBm			dBc
群时延 Group delay	Gd	0.03 ns/MHz 0.003 ns/MHz ² 1.0 ns peak to peak			ns
幅相变换 Ample phase transformation	AM/PM	3.5 max at pout=51dBm			°/dB
输出耦合度 Output coupling	Coup		-50		dB
驻波 VSWR	VSWR			1.5	:1
交流电压 AC Voltage	Vac		220		V AC
功耗 Power Consumption	Pdiss			2000	W
阻抗 Impedance	I/O-IMP	50			Ohms

机械特性 Mechanical Specifications:

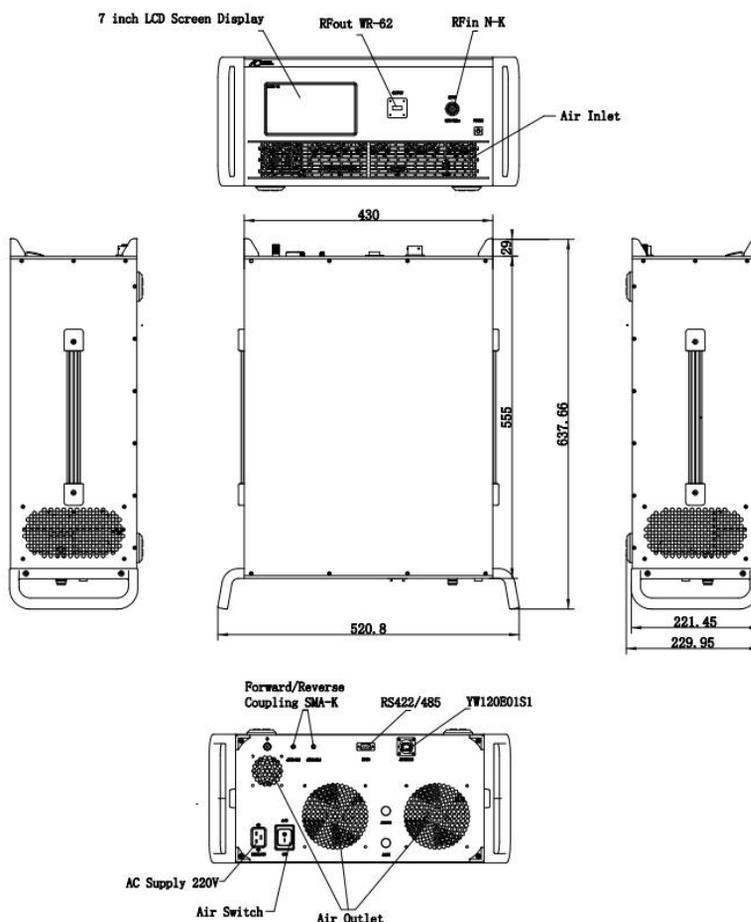
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/WR62	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/ SMA Female	
通信接口 Communication Connector	DB9/RJ45	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
尺寸 Size	19 Inch 5U*550	mm
重量 Weight	≤35	Kg

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
内置保护功能 Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
监控和控制 Remote control	RS422
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
TLPA13.75G14.5G-55-55-BC	Solid State High Power Amplifier Systems 13.5-14.5GHz, Gain:55dB, Psat:55dBm, 220V AC, Built in Fan Cooling	Rev.1.1