

Solid State High Power Amplifier Systems

13.75-14.5GHz/47dB Gain/47dBm Psat/220V AC Model: TLPA13.75G14.5G-47-47-BC

TLPA13.75G14.5G-47-47-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: 47dB Min
- Psat Output Power: 47dBm 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	47			dB
增益平坦度 Gain flatness	@40MHz	Δ GL		± 0.5		dB
	@full band			± 2		
饱和输出功率 Output Psat		Psat	47			dBm
杂散 Spurious@Pout=47dBm		Spur			-60	dBc
谐波 Harmonics@Pout=47dBm		HAM			-25	dBc
三阶互调 Output IM3*		IM3		-25		dBc
输入驻波 Input VSWR		VSWRin			1.5	:1
输出驻波 Output VSWR		VSWRout			1.8	:1
匹配负载驻波 Load VSWR		VSWRL			3	:1
交流电压 AC Voltage		Vac		220		V AC
功耗 Power Consumption		Pdiss		400		W
阻抗 Impedance		I/O-IMP	50			Ohms

*Note: The two-tone interval is 5MHz, and the total power of two-tone synthesis is 44dBm.

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	
输出接口 Output Connector	N Female or WR75 or 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	5 inch LCD Screen Display	
尺寸 Size	19 Inch 3U*550 depth	mm
重量 Weight	≤25	Kg

绝对最大值 Absolute Maximum Ratings:

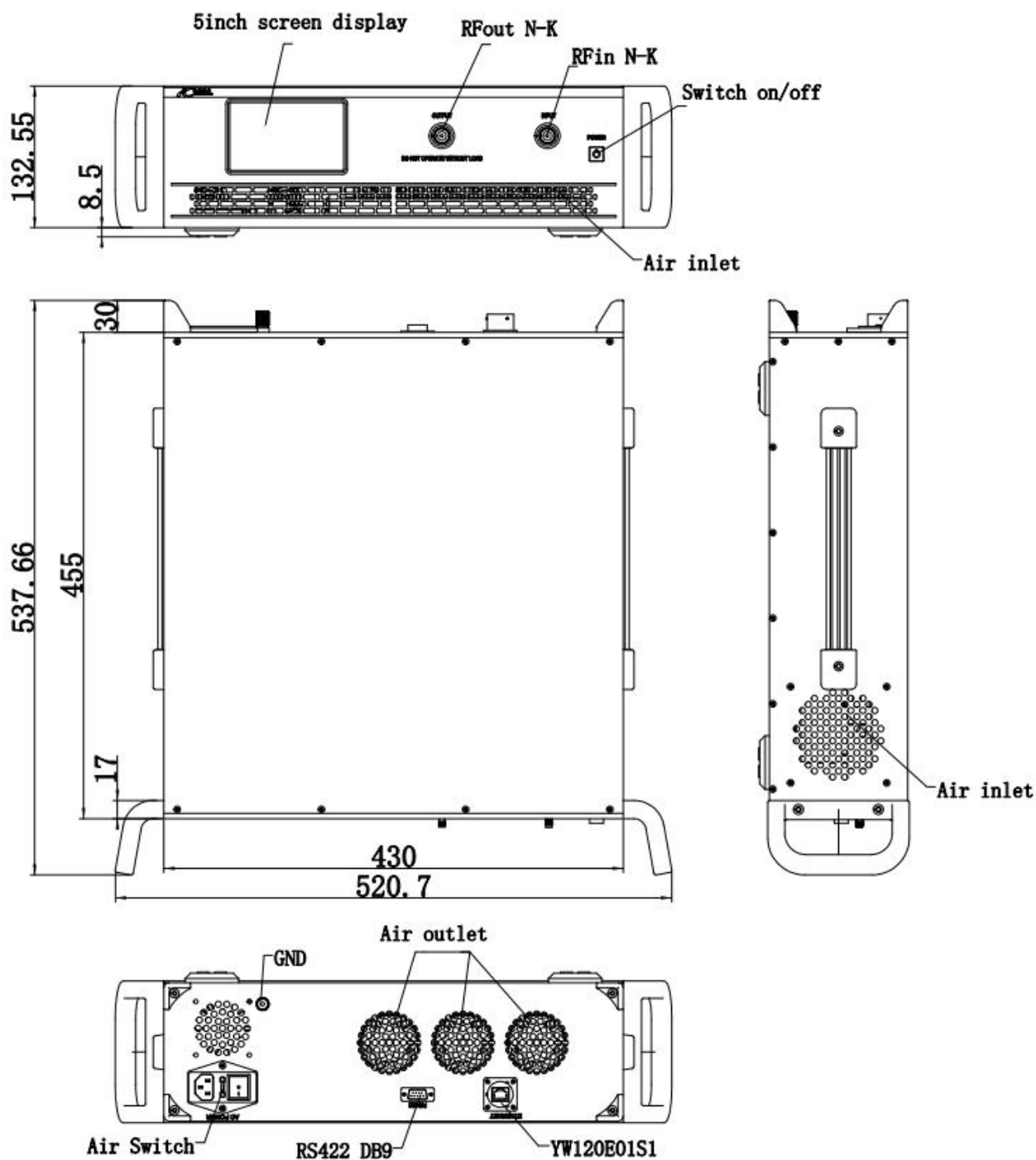
参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting on/off 2, ALC automatic level control
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/Ethernet
冷却系统 Cooling system	Built in Cooling system,forced air cooling

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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-47-47-BC	Solid State High Power Amplifier Systems 13.75-14.5GHz, Gain:47dB, Psat:47dBm, 220V AC, Built in Fan Cooling	Rev.1.0