

## 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



### Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	13.75-14.5			GHz
Power Gain	GP	55			dB
Gain flatness	$\Delta$ GL	$\pm 0.2$ @any 40MHz; $\pm 2$ @any 500MHz			dB
Gain adjust Range	$\Delta$ GR	20			dB
Gain stability@-20~+40°C	Gstb		$\pm 3$		dB
Output P1dB	P1dB				dBm
Output Psat	Psat	55			dBm
Spurious@Pout=55dBm	Spur			-60	dBc
Output IM3@5MHz space	IM3	-25 max at total power 51dBm			dBc
Group delay	Gd	0.03 ns/MHz 0.003 ns/MHz <sup>2</sup> 1.0 ns peak to peak			ns
Ample phase transformation	AM/PM	3.5 max at pout=51dBm			°/dB
Output coupling	Coup		-50		dB
VSWR	VSWR			1.5	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			2000	W
Impedance	I/O-IMP	50			Ohms

## Mechanical Specifications:

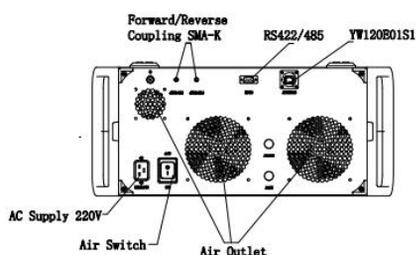
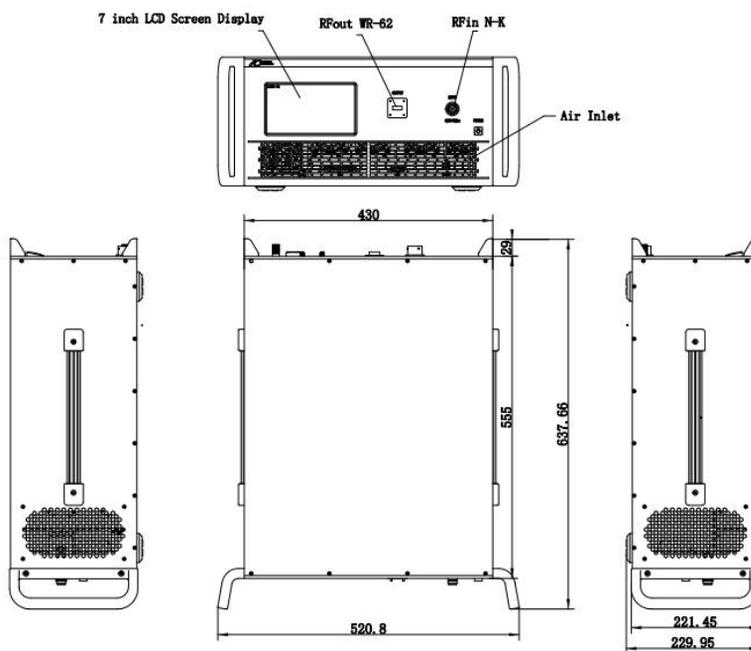
Parameter	Value	Units
Input /Output Connector	N Female/WR62	
Forward/Reverse Coupling	SMA Female/ SMA Female	
Communication Connector	DB9/RJ45	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 5U*550	mm
Weight	≤35	Kg

## Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

## Outline Drawing:

Unit:mm



### Key Features:

Parameter	Advantages
Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
Remote control	RS422
Cooling system	Built in Cooling system,forced air 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
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