

Solid State High Power Amplifier Systems

27.5-31GHz/52dB Gain/52dBm Psat/220V AC

Model: TLPA27.5G31G-52-52-BC-IP54-T

TLPA27.5G31G-52-52-BC-IP54-T is a solid state high power amplifier systems provides high output power and high gain across the 27.5 to 31GHz 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: 27.5-31GHz
- Gain: 52dB Min
- Psat Output Power: 52dBm 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	27.5-31			GHz
Power Gain	GP	51			dB
Gain flatness	Δ GL		± 3	± 4	dB
Gain fluctuation@Full TEMP range	Δ G2		± 3		dB
Output Psat	Psat	52			dBm
Spurious	Spur			-60	dBc
Output IM3*	IM3			-25	dBc
Input VSWR	VSWRin		1.5		:1
Output VSWR	VSWRout		1.5		:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			1450	W
Ingress Protection Grade	IPG	IP-54			
Impedance	I/O-IMP	50			Ohms

*Note:

Two-tone interval is 5 MHz, The total power of the two-tone synthesis is 48 dBm.

The default waveguide only has waterproof gasket and no pressure window. If the pressure window is needed, consult with the manufacturer

Mechanical Specifications:

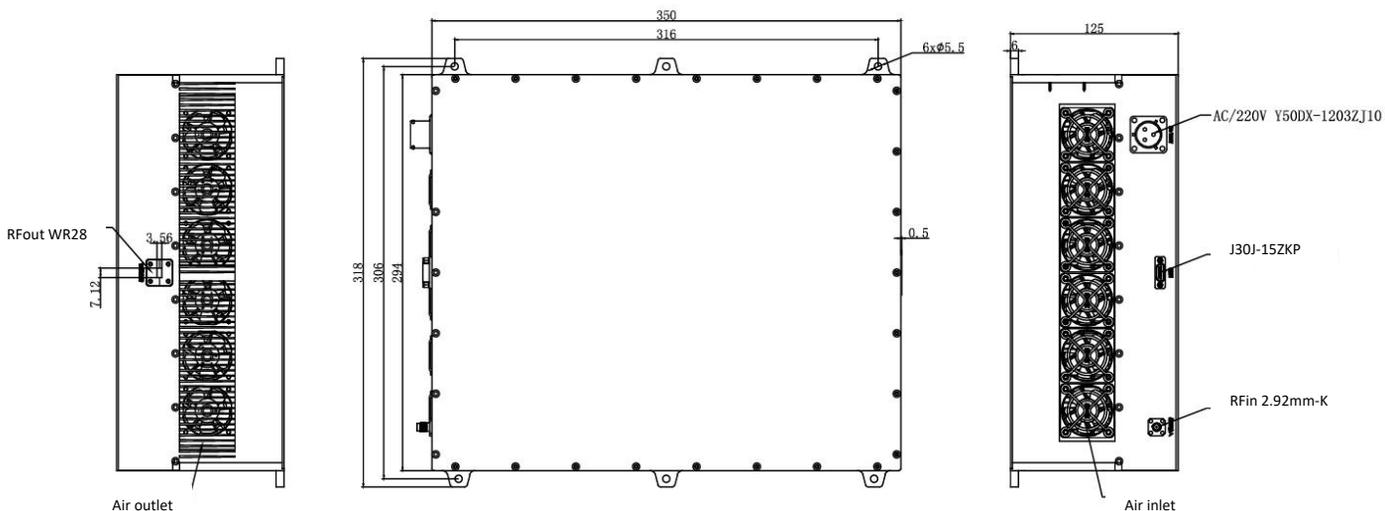
Parameter	Value	Units
Input /Output Connector	2.92mm Female/WR28	
Communication Connector	J30J-15ZKP	
Power Supply Connector	Y50DX-1203	A1:L, A2:N, A3:GND
Size	350*318*125	mm
Weight	≤20	Kg

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
Monitor functions	1, TEM 2, Voltage 3, Current 4, Output/reflected power
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
TLPA27.5G31G-52-52-BC-IP54-T	Solid State High Power Amplifier Systems 27.5-31GHz, Gain:52dB, Psat:52dBm, 220V AC, Built in Fan Cooling	Rev.1.1