

Solid State High Power Amplifier Systems

27.5-30GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA27.5G30G-50-50-BC

TLPA27.5G30G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 27.5 to 30 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: 27.5-30GHz
- Gain: 50dB Min
- Psat Output Power: 50dBm 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	27.5-30			GHz
Power Gain	GP	50			dB
Gain flatness	Δ GL	± 1.5 @Bandwidth=200MHz			dB
Gain Stability	Gstb	± 3 @Full temperature range			dB
Output Psat	Psat	50	51		dBm
Output IM3	IM3		-30	-25	dBc
Spurious	Spur			-60	dBc
Noise PSD	ND		-90		dBm/Hz
Input VSWR	VSWRin			2.0	:1
Output VSWR	VSWRout		1.5	1.8	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			1200	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

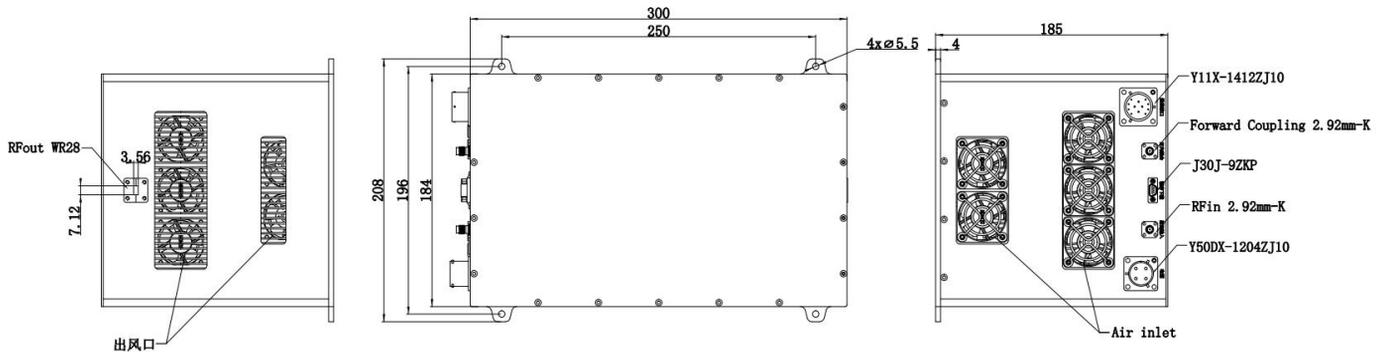
Parameter	Value	Units
Input /Output Connector	2.92mm Female WR28	
Forward/Reverse Coupling	2.92mm Female/2.92mm Female	
Size	300*208*185	mm
Weight	≤ 25	Kg

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
Control functions	1, Power setting on/off 2, ALC automatic level control
Monitor functions	1, Operating voltage, current, temperature 2, Transmitting power and reflected power
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422/LAN
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
TLPA27.5G30G-50-50-BC	Solid State High Power Amplifier Systems 27.5-30GHz, Gain:50dB, Psat:50dBm, 220V AC, Built in Fan Cooling	Rev.1.1