

Solid State High Power Amplifier Systems

27.5-30GHz/46dB Gain/46dBm Psat/220V AC

Model: TLPA27.5G30G-46-46-BC

TLPA27.5G30G-46-46-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: 46dB Min
- Psat Output Power: 46dBm Min
- Protection: Over TEM, over voltage, over current, infinite VSWR protection
- 50 Ohm Matched Input / Output



Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	27.5-40			GHz
Power Gain	GP	46			dB
Gain flatness	ΔGL	±1.5@Bandwidth=200MHz			dB
Gain Stability	Gstb	±3@full temperature range			dB
Output IM3	IM3		-30	-25	dBc
Output Psat	Psat	46	47		dBm
Spurious@Pout=46dBm	Spur			-60	dBc
Noise PSD	ND		-90		dBm/Hz
Input VSWR	VSWRin			1.5	:1
Output VSWR	VSWRout		1.5	1.8	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			500	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

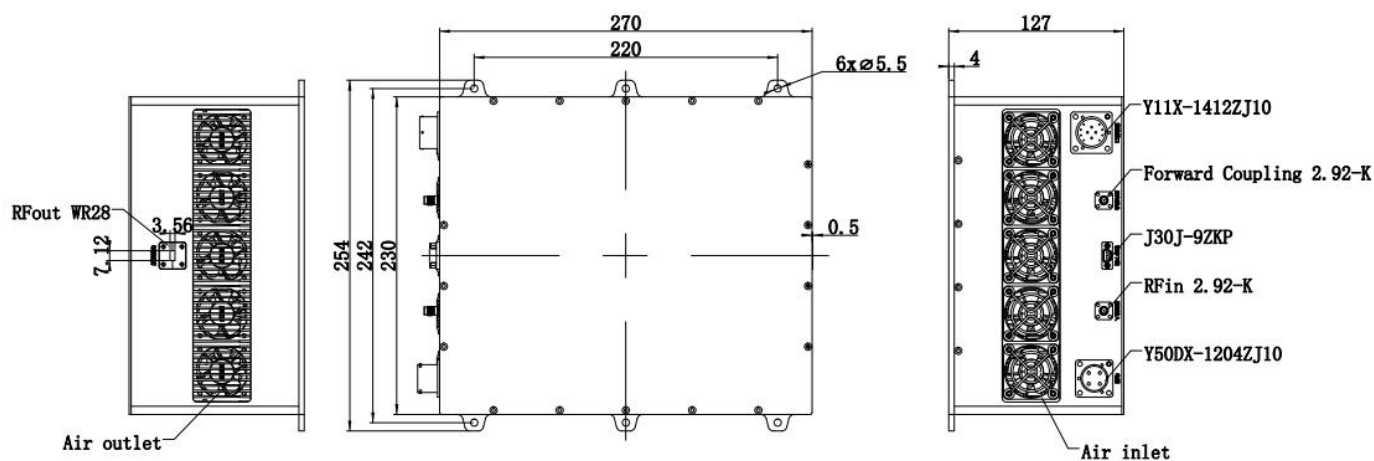
Parameter	Value	Units
Input /Output Connector	2.92mm Female WR28	
Forward Coupling	2.92mm Female	
Size	270*254*127	mm
Weight	≤15	Kg

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	TBD
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off
Monitor functions	Operating voltage, current, temperature, transmitting power and reflection power
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Infinite VSWR
Remote control	RS422/LAN
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+50	°C
Non-operating Temperature*	-50		+60	°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-46-46-BC	Solid State High Power Amplifier Systems 27.5-30GHz, Gain:46dB, Psat:46dBm, 220V AC, Built in Fan Cooling	Rev.1.1