

Solid State High Power Amplifier Systems

8-12GHz/60dB Gain/65dBm Psat/380V AC

Model: TLPA8G12G-60-65-P-BC

TLPA8G12G-60-65-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 8 to 12 GHz frequency range. The amplifier features a built-in 380V 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: 8-12GHz
- Gain: 60dB Min
- Psat Output Power: 65dBm Min
- Protection: input overdrive, over/under voltage, over TEM ,over duty circle, over pulse width, load VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	8		12	GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	60			dB
Gain flatness	ΔGL			± 1.5	dB
Gain Stability@24h	GS			± 0.25	dB
Gain adjust Range	ΔGR	20			dB
Gain adjust Step	ΔGS		0.5		dB
Output Psat	Psat	65			dBm
Spurious	Spur			-60	dBc
Input Signal Mode	IPS_MOD	CW/PULSE			
Harmonics@Pout=65dBm	HAM			-20	dBc
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF			50	KHz
Pulse Width	T			1	ms
Duty Cycle	τ			20	%
Rise/Fall Time	Tr		30	50	ns
Pulse Drop@T=100us	Pdrop		0.5	1	dB
Input VSWR	VSWR			1.5	:1

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
AC Voltage	Vac		380	420	V AC
Power consumption@20% duty cycle	Pdiss		2.5		KW
Power consumption@20% duty cycle	Pdiss		5		KW
Power consumption@Psat	Pdiss		5.5	6	KW
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

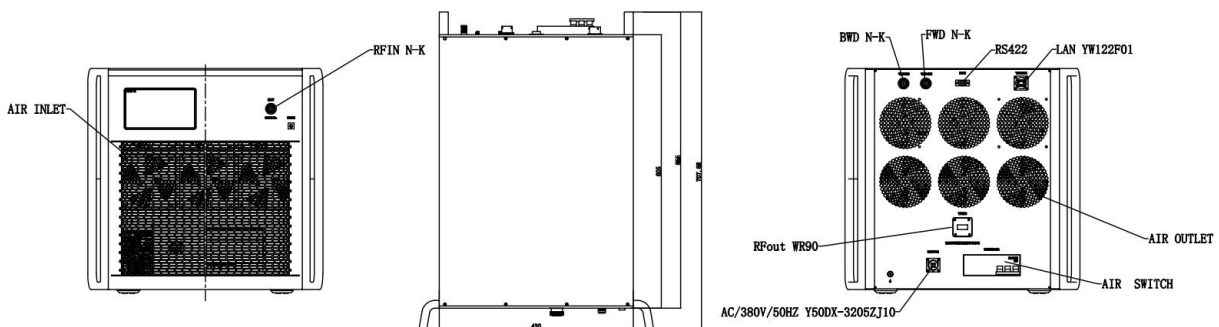
Parameter	Value	Units
Input /Output Connector	N Female/WRD750	
Forward/Reverse Coupling	N Female/N Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Communication Connector	RS422/RJ-45	
Size	19 Inch 11U*800 depth	mm
Weight	≤80	Kg

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off 2, ALC automatic level control
Protection functions	1, Input overdrive: $\geq 10\text{dBm}$ shutdown 2, Over voltage: $\geq 29\text{V}$ shutdown 3, Under voltage: $\leq 20\text{V}$ shutdown 4, Over temp: $\geq +45^{\circ}\text{C}$ shutdown 5, Over duty circle: $\geq 25\%$ shutdown 6, Over pulse width: $\geq 1.1\text{ms}$ -shutdown 7, Load VSWR protection: The unit disables RF when reverse power exceeds the safe level of 3:1 VSWR or reduces power by 6dB
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system,forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	$^{\circ}\text{C}$
Non-operating Temperature*	-30		+50	$^{\circ}\text{C}$
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
TLPA8G12G-60-65-P-BC	Solid State High Power Amplifier Systems 8-12GHz, Gain:60dB, Psat: 65dBm, 380V AC, Built in Fan Cooling	Rev.1.0