

Solid State High Power Amplifier Systems

8-12GHz/60dB Gain/59dBm Psat/380V AC

Model: TLPA8G12G-60-59-BC

TLPA8G12G-60-59-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: 59dBm Min
- Protection: input overdrive, over/under voltage, over TEM , load VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	8		12	GHz
Power Gain	GP	60			dB
Gain flatness	Δ GL			± 1.5	dB
Gain Stability@24h	GS			± 0.25	dB
Gain adjust Range	Δ GR	20			dB
Gain adjust Step	Δ GS		0.5		dB
Output P1dB	P1dB		54		dBm
Output Psat	Psat	59			dBm
Spurious	Spur			-60	dBc
Harmonics@Pout=59dBm	HAM			-20	dBc
Input VSWR	VSWRin			1.5	:1
AC Voltage	Vac		380	420	V AC
Power consumption@Pout=59dBm	Pdiss		5		KW
Power consumption@Psat	Pdiss		5.5	6	KW
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

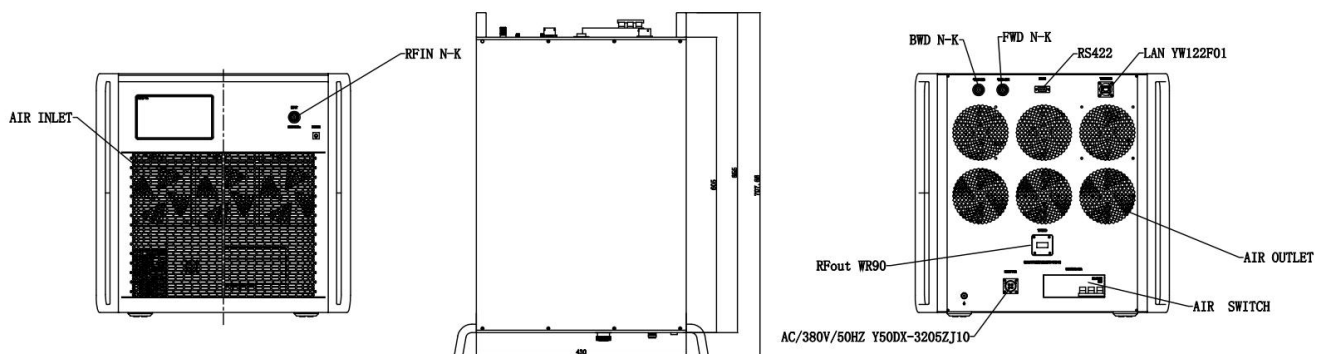
Parameter	Value	Units
Input /Output Connector	N Female/WRD750	
Forward/Reverse Coupling	N Female/N Female	
Communication Connector	RS422/RJ45	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 11U*800 depth	mm
Weight	≤80	Kg

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, 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-60-59-BC	Solid State High Power Amplifier Systems 8-12GHz, Gain: 60dB, Psat: 59dBm, 380V AC, Built in Fan Cooling	Rev.1.0