

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

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW	8		12	GHz
工作模式 Working Mode	MOD	PULSE ONLY			
功率增益 Power Gain	GP	60			dB
增益平坦度 Gain flatness	ΔGL			±1.5	dB
增益稳定度 Gain Stability@24h	GS			±0.25	dB
增益调节范围 Gain adjust Range	ΔGR	20			dB
增益调节步进 Gain adjust Step	ΔGS		0.5		dB
饱和输出功率 Output Psat	Psat	65			dBm
杂散 Spurious	Spur			-60	dBc
输入信号体制 Input Signal Mode	IPS_MOD	CW/PULSE			
谐波 Harmonics@Pout=65dBm	HAM			-20	dBc
调制信号电平 Modulation Signal Level	TTL	0		5	V
调制频率 Modulation Frequency	MF			50	KHz
脉冲宽度 Pulse Width	T			1	ms
占空比 Duty Cycle	τ			20	%
上升/下降沿 Rise/Fall Time	Tr		30	50	ns
顶降 Pulse Drop@T=100us	Pdrop		0.5	1	dB
输入驻波 Input VSWR	VSWR			1.5	:1

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
交流电压 AC Voltage	Vac		380	420	V AC
10%占空比功耗 Power consumption@20% duty cycle	Pdiss		2.5		KW
20%占空比功耗 Power consumption@20% duty cycle	Pdiss		5		KW
饱和占空比功耗 Power consumption@Psat	Pdiss		5.5	6	KW
阻抗 Impedance	I/O-IMP	50			Ohms

机械特性 Mechanical Specifications:

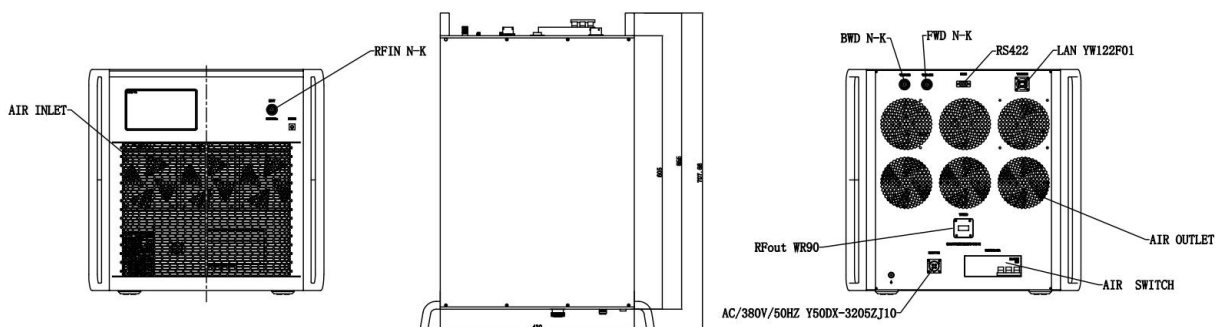
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/WRD750	
正向/反向耦合 Forward/Reverse Coupling	N Female/N Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
通信接口 Communication Connector	RS422/RJ-45	
尺寸 Size	19 Inch 11U*800 depth	mm
重量 Weight	≤80	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting on/off 2, ALC automatic level control
内置保护功能 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
监控和控制 Remote control	RS422/Ethernet
冷却系统 Cooling system	Built in Cooling system,forced air cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	$^{\circ}\text{C}$
存储温度 Non-operating Temperature*	-30		+50	$^{\circ}\text{C}$
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA8G12G-60-65-P-BC	Solid State High Power Amplifier Systems 0.5-6GHz,Gain:51dB,Psat:51 dBm,220V AC,Built in Fan Cooling	Rev.1.0