

Solid State High Power Amplifier Systems

1-5GHz/60dB Gain/60dBm Psat/220V AC

Model: TLPA1G5G-60-60-P-BC

TLPA1G5G-60-60-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 1 to 5 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: 1-5GHz
- Gain: 60dB Min
- Psat Output Power: 60dBm Min
- Protection: Over TEM, over voltage, over current, infinite 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	1-5			GHz
功率增益 Power Gain@Pout=60dBm	GP	60			dB
饱和输出功率 Output Psat	Psat	60			dBm
杂散 Spurious@Pout=60dBm	Spur			-50	dBc
谐波 Harmonics@Pout=60dBm	HAM		-15	-10	dBc
调制信号电平 Modulation Signal Level	TTL	0		5	V
调制频率 Modulation Frequency	MF	0.5		10	KHz
脉冲宽度 Pulse Width	T	0.5		300	us
占空比 Duty Cycle	τ			10	%
上升/下降沿 Rise/Fall Time	Tr		50	100	ns
顶降 Pulse Drop@T=100us	Pdrop		0.5	1	dB
输入驻波 Input VSWR	VSWR		1.5	2	:1
交流电压 AC Voltage	Vac		220		V ac
静态功耗 Quiescent Power Consumption	QPdiss			2000	W
2%占空比功耗 Power Consumption@2% Duty cycle	Pdiss			2500	W
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/7/16 DIN Female	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
脉冲输入接口 Pulse Input Connector	BNC Female	
通信接口 Communication Connector	DB9/RJ-45	
尺寸 Size	20U	
重量 Weight	≤250	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



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 3, RF setting on/off
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Infinite VSWR (Threshold 4.0)
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	°C
存储温度 Non-operating Temperature*	-30		+50	°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
TLPA1G5G-60-60-P-BC	Solid State High Power Amplifier Systems 1-5GHz, Gain: 60dB, Psat: 60dBm, 220V AC, Built in Fan Cooling	Rev.1.1