

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, over VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	1-5			GHz
Power Gain@Pout=60dBm	GP	60			dB
Output Psat	Psat	60			dBm
Spurious@Pout=60dBm	Spur			-50	dBc
Harmonics@Pout=60dBm	HAM		-15	-10	dBc
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF	0.5		10	KHz
Pulse Width	T	0.5		300	us
Duty Cycle	τ			10	%
Rise/Fall Time	Tr		50	100	ns
Pulse Drop@T=100us	Pdrop		0.5	1	dB
Input VSWR	VSWR		1.5	2	:1
AC Voltage	Vac		220		V ac
Quiescent Power Consumption	QPdiss			2000	W
Power Consumption@2% Duty cycle	Pdiss			2500	W
Impedance	I/O-IMP		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	N Female/7/16 DIN Female	
Forward/Reverse Coupling	SMA Female/SMA Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Pulse Input Connector	BNC Female	
Communication Connector	DB9/RJ-45	
Size	20U	
Weight	≤250	Kg

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

Regulatory Compliance:



Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off 2, ALC automatic level control 3, RF setting on/off
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR (Threshold 4.0)
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	°C
Non-operating Temperature*	-30		+50	°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
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