

Solid State High Power Amplifier Systems

80MHz-1GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA80M1G-50-50-BC

TLPA80M1G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 80MHz to 1GHz 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: 80MHz-1GHz
- Gain: 50dB Min
- Psat Output Power: 50dBm Min
- Protection: Over TEM, over voltage, over current, over 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	80MHz		1GHz	
小信号增益 Small Signal Gain	SSGP	50	53		dB
增益平坦度 Gain flatness	Δ GL		± 2	± 3	dB
增益调节范围 Gain adjust Range	Δ GR		31.75		dB
增益调节步进 Gain adjust Step	Δ GS		0.25		dB
线性输出功率 Output P1dB	P1dB	45	46		dBm
饱和输出功率 Output Psat	Psat	50	50.5		dBm
杂散 Spurious@Pout=50dBm	Spur			-60	dBc
谐波 Harmonics@Pout=50dBm	HAM		-15	-9	dBc
输入驻波 Input VSWR	VSWRin			2	:1
交流电压 AC Voltage	Vac		220		V AC
交流电流 AC Supply Current	Iac		1.8		A
功耗 Power Consumption	Pdiss		400	450	W
阻抗 Impedance	I/O-IMP		50		Ohms

机械特性 Mechanical Specifications:

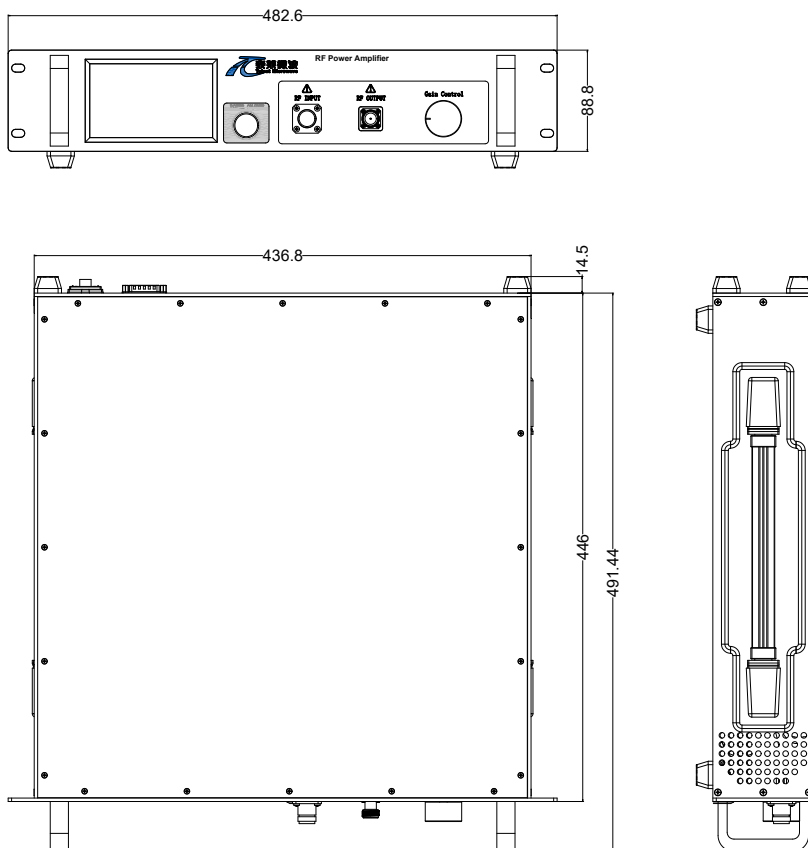
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
通信接口 Communication Connector	DB15	
液晶显示屏 Front Panel LCD Screen Display	5 inch LCD Screen Display	
尺寸 Size	19 Inch 2U*446	mm
重量 Weight	≤20	Kg

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



控制接口 Control Connector(DSUB-15 Female):

引脚 Pin	名称 Name	功能 Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
2	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)
3	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
4	Over TEM	Temperature FAULT:(TTL High= Fault, TTL Low =Normal)
5	Over VSWR	VSWR FAULT:(TTL High= Fault, TTL Low =Normal)
6	Reset	Resets PA when logic LOW is applied and released (Internally Pulled-High)
7	GND	Ground
8~15	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting on/off
内置保护功能 Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
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
TLPA80M1G-50-50-BC	Solid State High Power Amplifier Systems 80MHz-1GHz, Gain:50dB, Psat:50dBm, 220V AC, Built in Fan Cooling	Rev.1.0