

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

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	80MHz		1GHz	
Small Signal Gain	SSGP	50	53		dB
Gain flatness	Δ GL		± 2	± 3	dB
Gain adjust Range	Δ GR		31.75		dB
Gain adjust Step	Δ GS		0.25		dB
Output P1dB	P1dB	45	46		dBm
Output Psat	Psat	50	50.5		dBm
Spurious@Pout=50dBm	Spur			-60	dBc
Harmonics@Pout=50dBm	HAM		-15	-9	dBc
Input VSWR	VSWRin			2	:1
AC Voltage	Vac		220		V AC
AC Supply Current	Iac		1.8		A
Power Consumption	Pdiss		400	450	W
Impedance	I/O-IMP		50		Ohms

Mechanical Specifications:

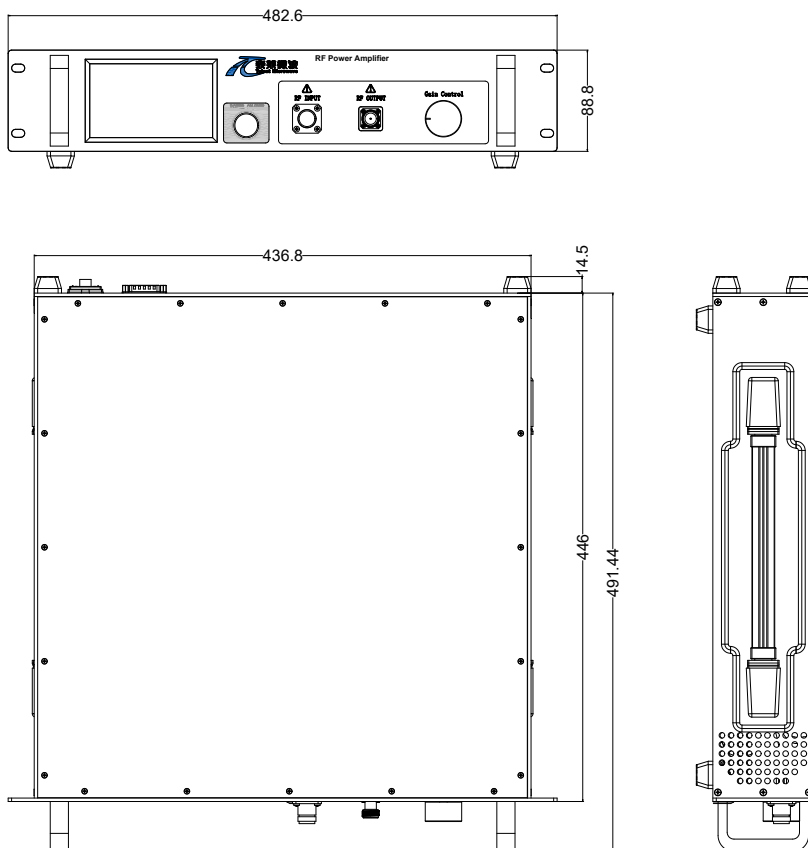
Parameter	Value	Units
Input /Output Connector	N Female/N Female	
Communication Connector	DB15	
Front Panel LCD Screen Display	5 inch LCD Screen Display	
Size	19 Inch 2U*446	mm
Weight	≤20	Kg

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Control Connector(DSUB-15 Female):

Pin	Name	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

Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off
Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
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
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