

## Solid State High Power Amplifier Systems

80MHz-1GHz /63dB Gain/63dBm Psat/380V AC

Model: TLPA80M1G-63-63-BC

TLPA80M1G-63-63-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 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: 80MHz-1GHz
- Gain: 63dB Min
- Psat Output Power:63dBm Min
- Protection:Over TEM,over voltage, over current ,over VSWR,open/circuit break,overexcitation protection
- 50 Ohm Matched Input / Output

### Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	80MHz-1GHz			
Power Gain	GP	63			dB
Gain flatness	$\Delta$ GL			$\pm 5$	dB
Output Psat	@80-400MHz	Psat	2000		W
	@400MHz-1GHz		1000		
Output P1dB	@80-400MHz	P1dB	1600		W
	@400MHz-1GHz		800		
Spurious	Spur			-50	dBc
Harmonics	HAM			-18	dBc
Input VSWR	VSWR <sub>in</sub>			2	:1
AC Voltage	Vac		380		V AC
Power Consumption	Pdiss			10	KW
Impedance	I/O-IMP	50			Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	N Female/7/16 DIN Female (optional)	
Forward/Reverse Coupling	N Female/ N Female (optional)	
Size	800*1200*1400/19 Inch*1400	mm
Weight	≤180	Kg

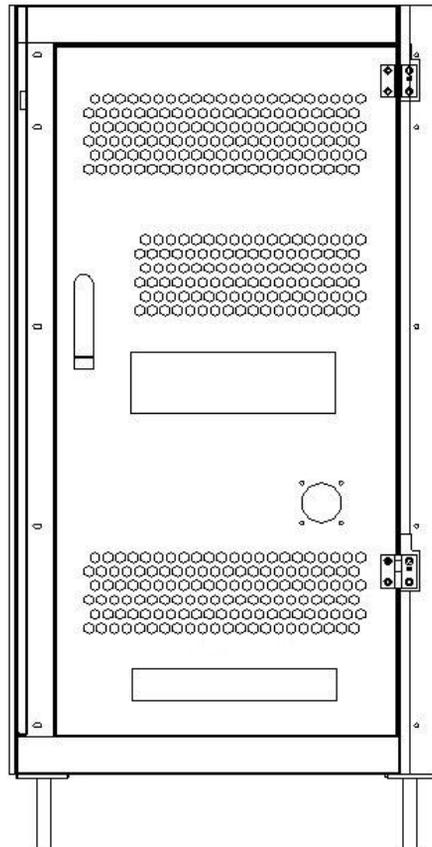
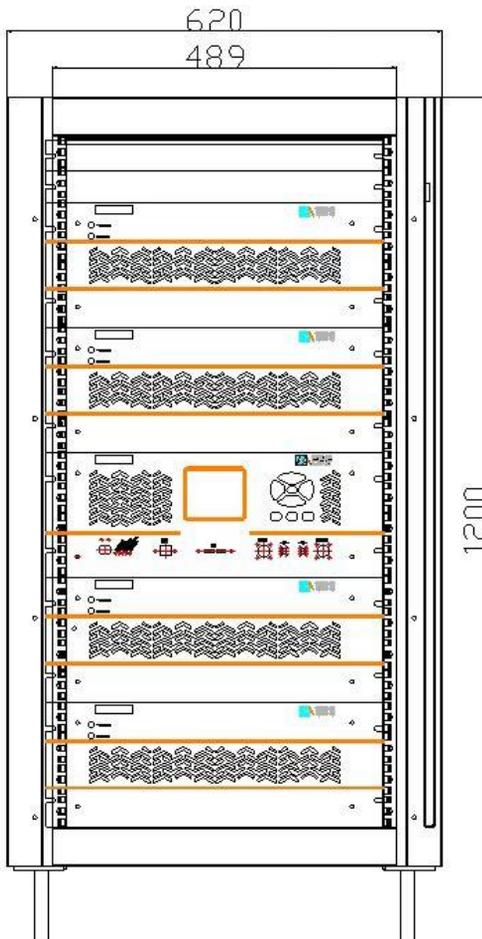
Note: Dual directional coupler can be selected as built-in or external.

### Absolute Maximum Ratings:

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

### Outline Drawing:

Unit:mm



## Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, Gain adjustable, supporting manual or software control (Paid option features)
Protection functions	1, Over TEM: 70°C 2, Over voltage 3, Over current 4, Over VSWR: 5:1 (adjustable) 5, Open/circuit break 6, Overexcitation: 2300W@80-400MHz; 1300W@400MHz-1GHz
Display function	Power Amplifier Status Monitoring (Paid option features)
Remote control	GPIO/Ethernet
Cooling system	Built in Cooling system, forced air cooling

## Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	0		40	°C
Non-operating Temperature*	-15		+65	°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			

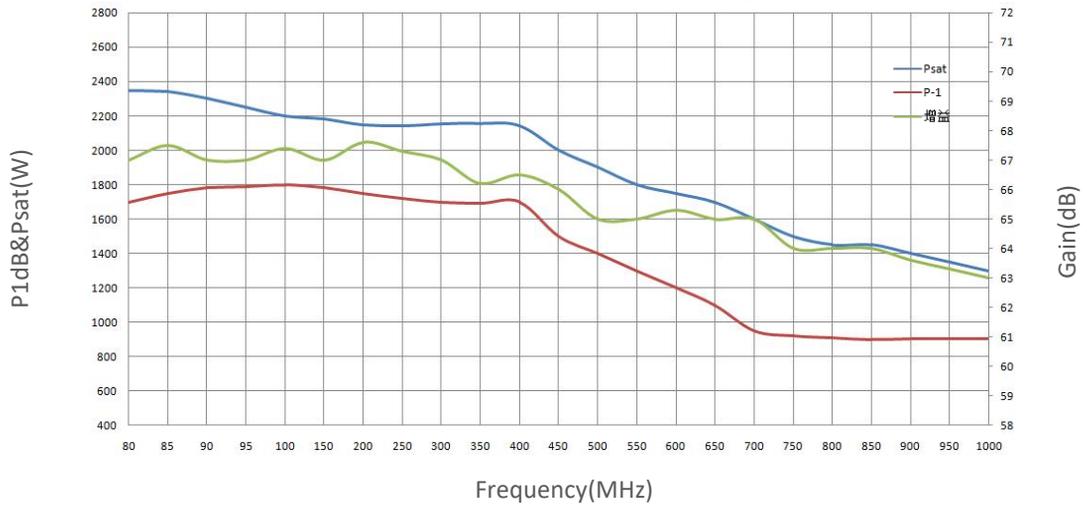
\*Note: For a wider temperature range, please consult the manufacturer.

## Ordering Information:

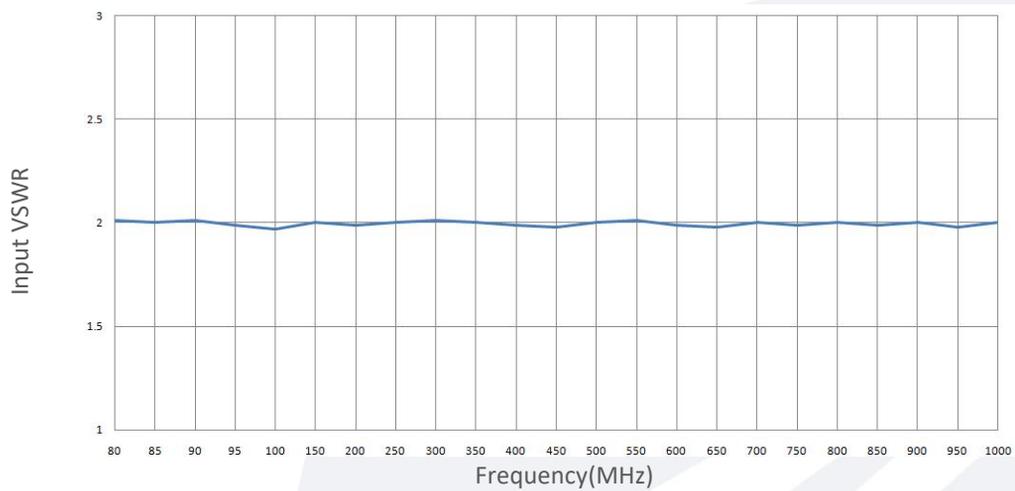
Base Number	Description	Revision
TLPA80M1G-63-63-BC	Solid State High Power Amplifier Systems 0.08-1GHz, Gain: 63dB, Psat: 63 dBm, 380V AC, Built in Fan Cooling	Rev.1.1

## Typical Performance Data:

### Power Gain&P1dB&Psat vs Frequency



### Input VSWR vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.