

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

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	
功率增益 Power Gain		GP	63			dB
增益平坦度 Gain flatness		ΔGL			±5	dB
饱和输出功率 Output Psat	@80-400MHz	Psat	2000			W
	@400MHz-1GHz		1000			
线性输出功率 Output P1dB	@80-400MHz	P1dB	1600			W
	@400MHz-1GHz		800			
杂散 Spurious		Spur			-50	dBc
谐波 Harmonics		HAM			-18	dBc
输入驻波 Input VSWR		VSWRin			2	:1
交流电压 AC Voltage		Vac		380		V AC
功耗 Power Consumption		Pdiss			10	KW
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 (optional)	
正向/反向耦合 Forward/Reverse Coupling	N Female/ N Female (optional)	
尺寸 Size	600*800*1650/19 Inch*1400	mm
重量 Weight	≤180	Kg

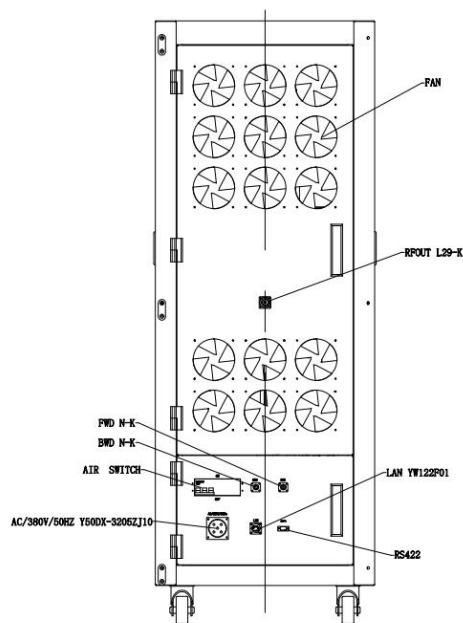
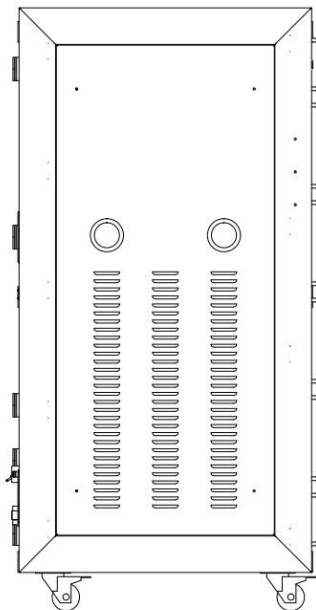
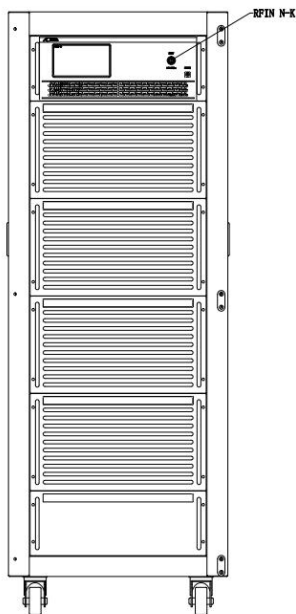
Note: Dual directional coupler can be selected as built-in or external.

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off 2, Gain adjustable, supporting manual or software control (Paid option features)
内置保护功能 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
显示功能 Display function	Power Amplifier Status Monitoring (Paid option features)
监控和控制 Remote control	GPIB/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*	0		40	°C
存储温度 Non-operating Temperature*	-15		+65	°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			

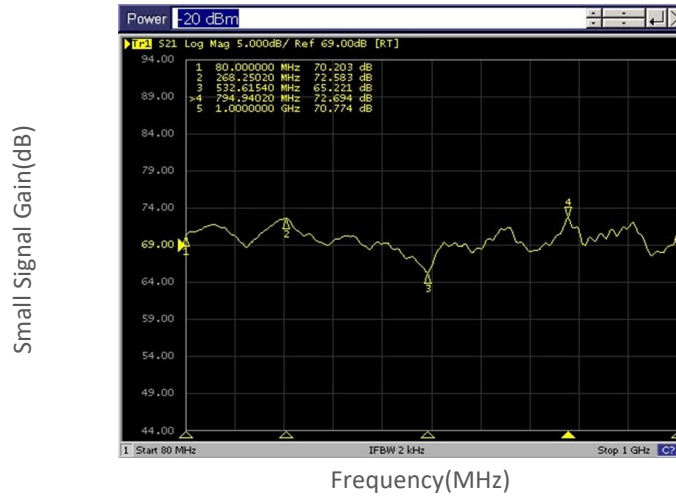
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

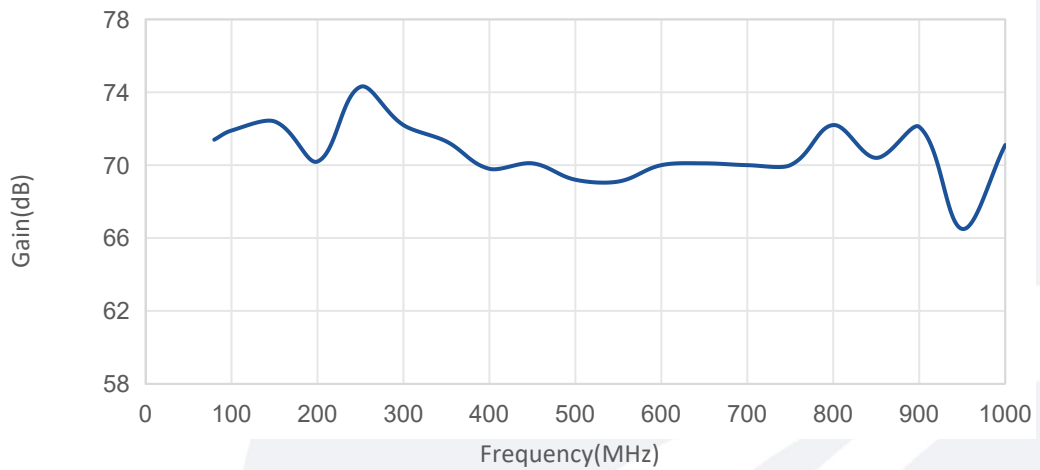
标准型号 Base Number	描述 Description	版本号 Revision
TLPA80M1G-63-63-BC	Solid State High Power Amplifier Systems 0.08-1GHz, Gain: 63dB, Psat: 63 dBm, 380V AC, Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

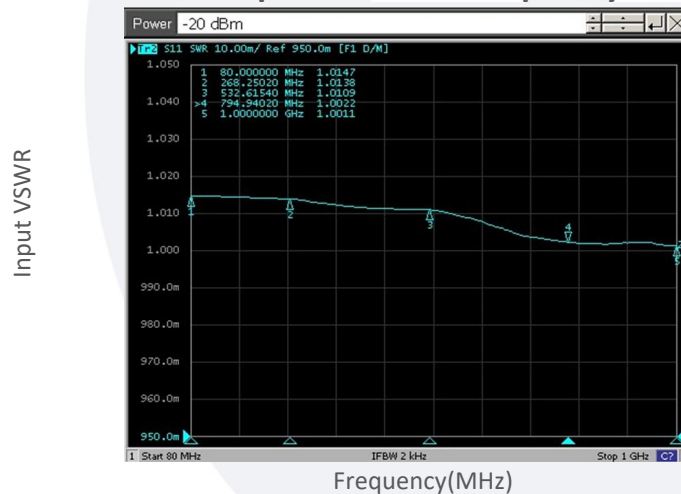
Small Signal Gain vs Frequency



Power Gain vs Frequency



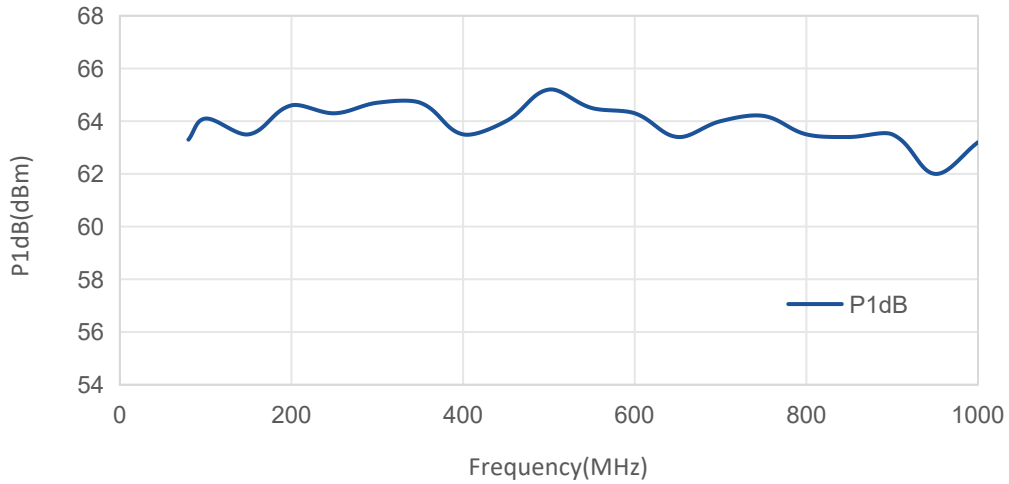
Input VSWR vs Frequency



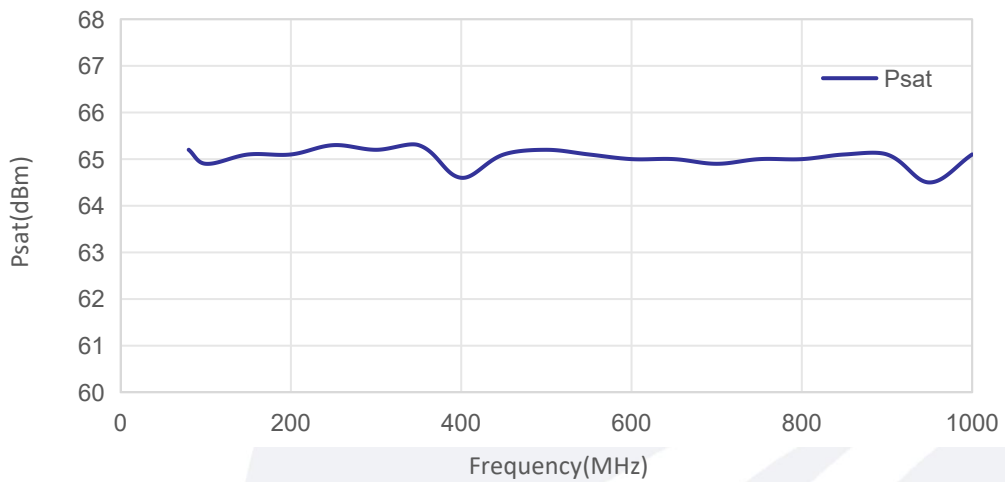
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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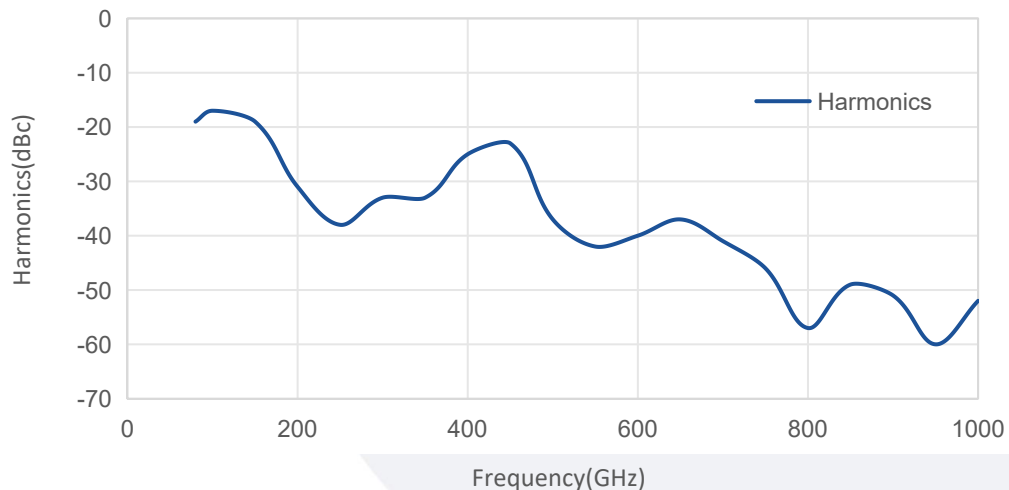
P1dB vs Frequency



Psat vs Frequency



Harmonics vs Frequency



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