

Solid State High Power Amplifier Systems

1-500MHz /54dB Gain/54 dBm Psat/220V AC

Model: TLPA1M500M-54-54-BC

TLPA1M500M-54-54-BC is a solid state high power amplifier systems provides high output power and high gain across the 1 to 500 MHz 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:

- Wide Band: 1-500 MHz
- Gain: 54dB Min
- Psat Output Power:54dBm Min
- Protection:Over TEM,over voltage, over current 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	1-500			MHz
功率增益 Power Gain	SSGP	54			dB
增益平坦度 Gain flatness	Δ GL		± 2	± 3	dB
饱和输出功率 Output Psat	Psat	54			dBm
线性输出功率 Output P1dB	P1dB		50		dBm
杂散 Spurious@Pout=54dBm	Spur			-60	dBc
谐波 Harmonics@Pout=54dBm	HAM			-10	dBc
输入驻波 Input VSWR	VSWRin		1.5	2	:1
交流电压 AC Voltage	Vac	110	220		V AC
交流电流 AC Supply Current	Iac		5		A
阻抗 Impedance	I/O-IMP	50			Ohms

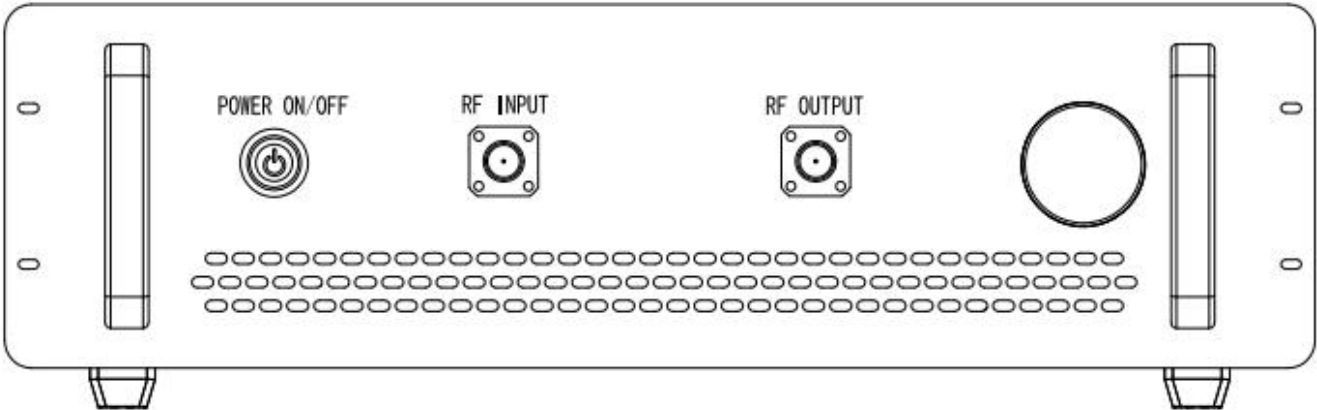
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
尺寸 Size	4U*500 depth	mm
重量 Weight	≤ 10	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



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off 2, ALC automatic level control
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current
监控和控制 Remote control	RS422/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*	-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			

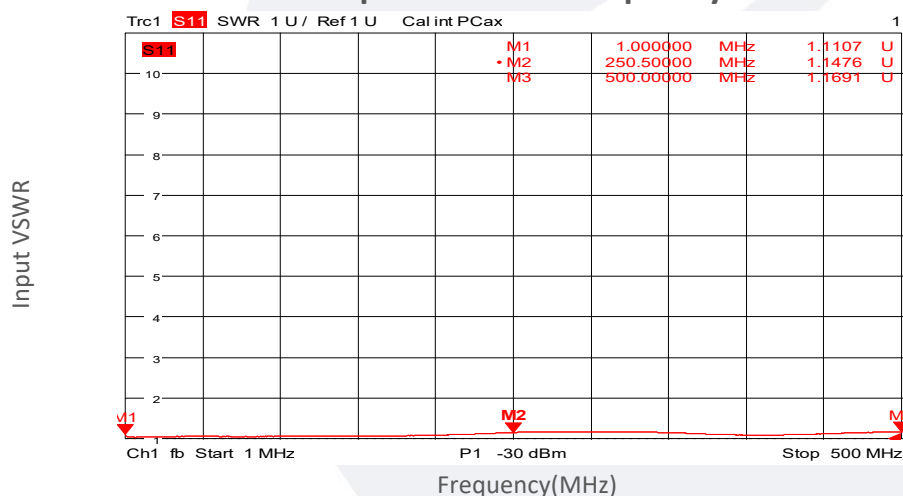
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA1M500M-54-54-BC	Solid State High Power Amplifier Systems 1-500MHz,Gain:54dB,Psat:54 dBm,220V AC,Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

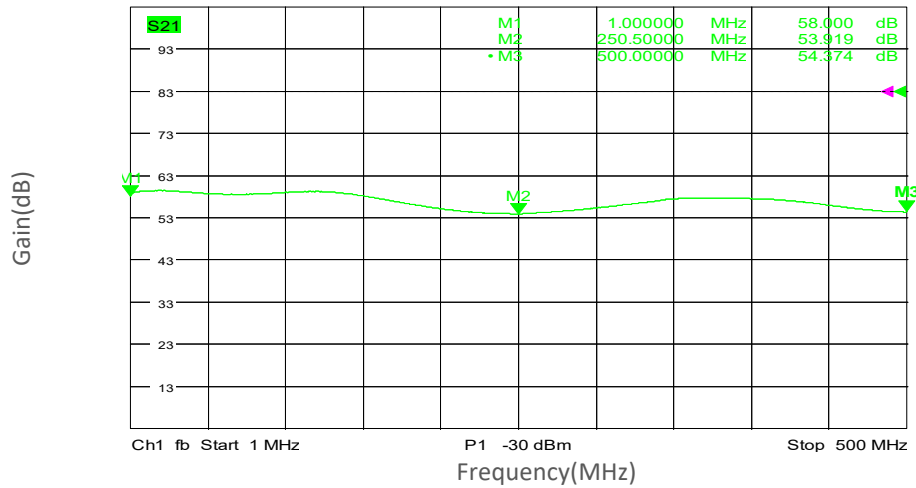
Input VSWR vs Frequency



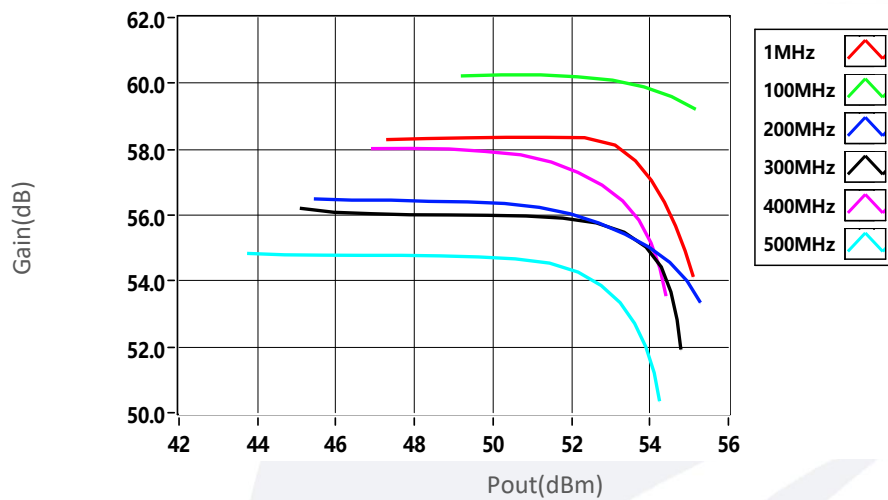
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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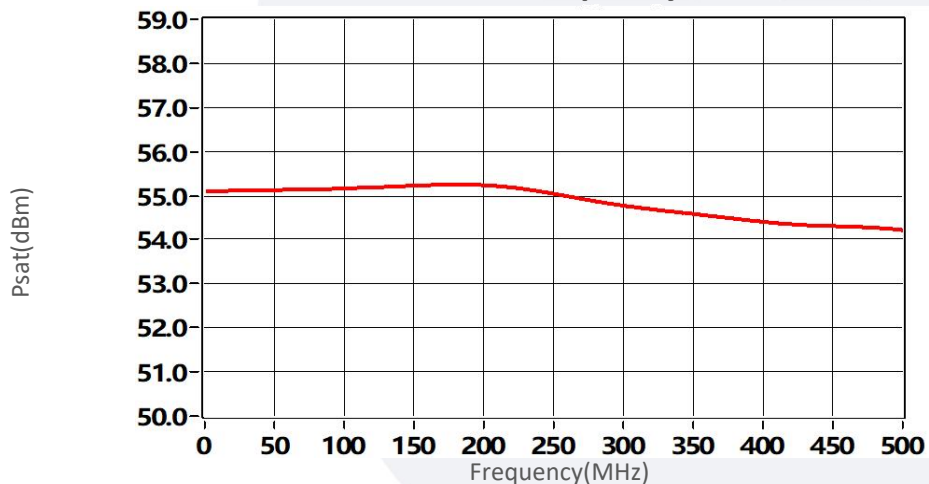
Small Signal Gain vs Frequency



Gain vs Output Power

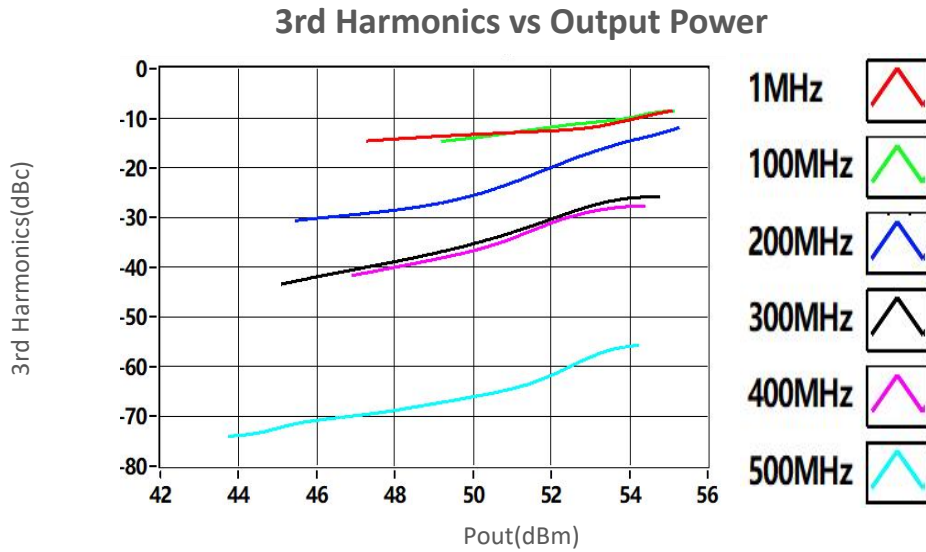


Psat vs Frequency



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