

Solid State High Power Amplifier Systems

500KHz-30MHz/64dB Gain/64dBm Psat/220V AC Model: TLPA500K30M-64-64-BC

TLPA500K30M-64-64-BC is a solid state high power amplifier systems provides high output power and high gain across the 500KHz to 30MHz 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: 500KHz-30MHz
- Gain: 64dB Min
- Psat Output Power: 64dBm Typ
- 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	500KHz		30MHz	
小信号增益 Small Signal Gain	SSGP	64	67		dB
增益平坦度 Gain flatness	ΔGL		±1	±2	dB
增益调节范围 Gain adjust Range	ΔGR		31.5		dB
增益调节步进 Gain adjust Step	ΔGS		0.5		dB
线性输出功率 Output P1dB	P1dB	58	59		dBm
饱和输出功率 Output Psat	Psat	63	64		dBm
杂散 Spurious@Pout=63dBm	Spur			-60	dBc
谐波 Harmonics@Pout=63dBm	HAM		-15	-8	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		27	30	A
功耗 Power Consumption	Pdiss		5000	6000	W
阻抗 Impedance	I/O-IMP	50			Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

机械特性 Mechanical Specifications:

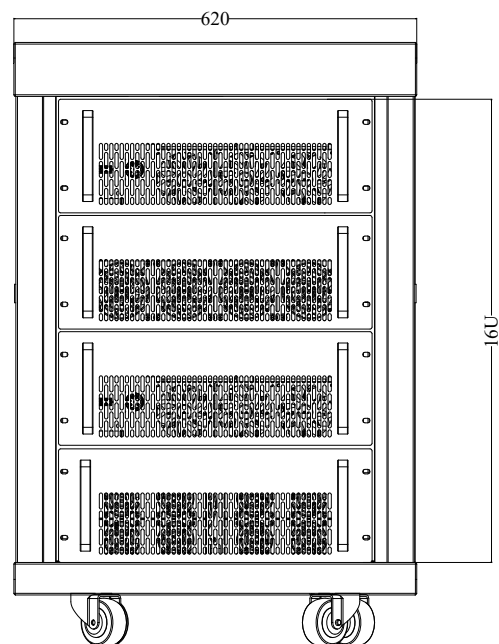
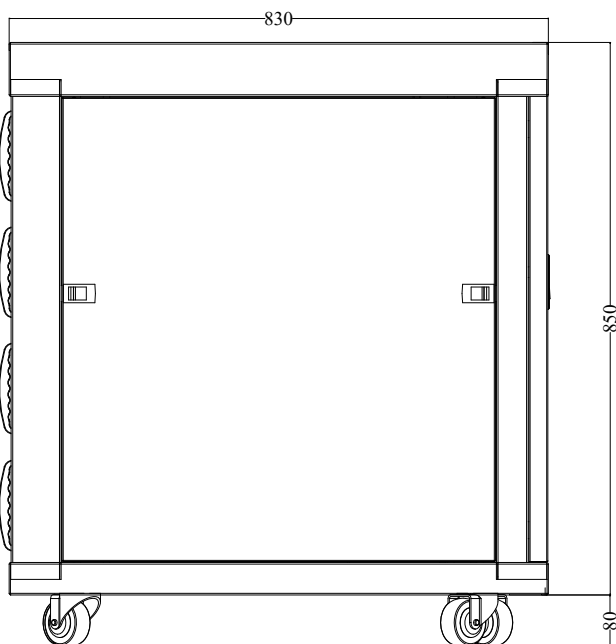
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/7/16 DIN Female	
通信接口 Communication Connector	DB15	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
尺寸 Size	19 Inch 12U*830	mm
重量 Weight	≤200	Kg

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



主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	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	℃
存储温度 Non-operating Temperature*	-30		+50	℃
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			

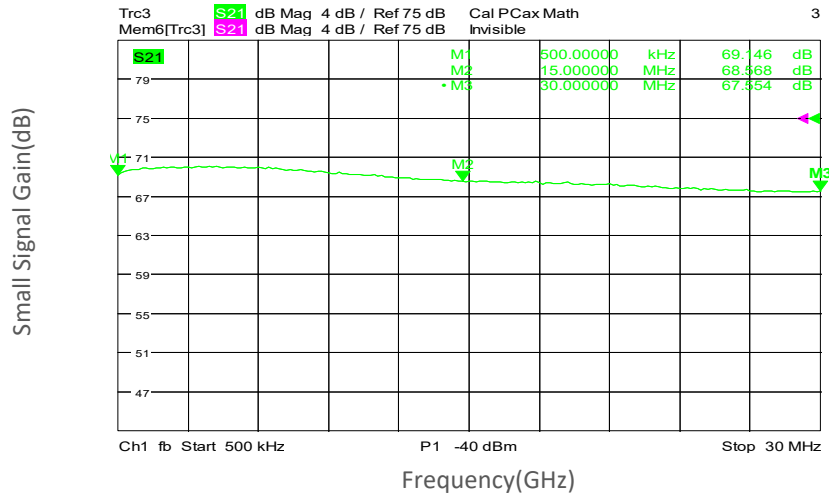
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

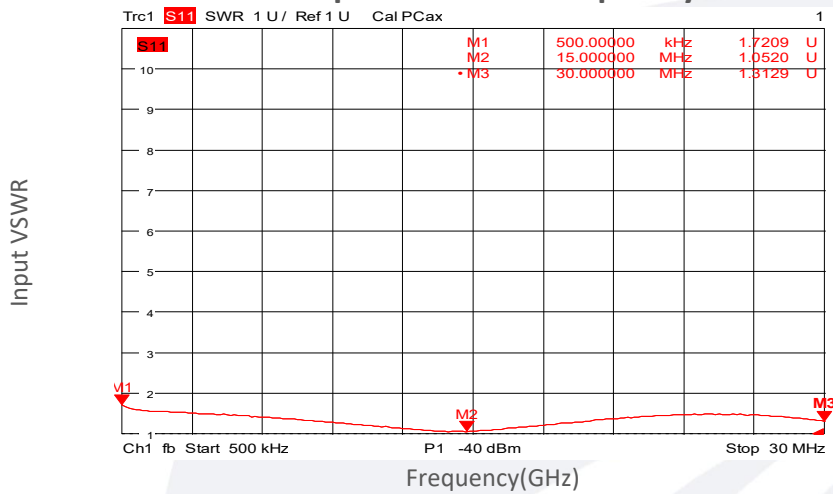
标准型号 Base Number	描述 Description	版本号 Revision
TLPA500K30M-64-64-BC	Solid State High Power Amplifier Systems 500KHz-30MHz,Gain:64dB,Psat:64dBm,220V AC,Built in Fan Cooling	Rev.1.0

典型曲线 Typical Performance Data:

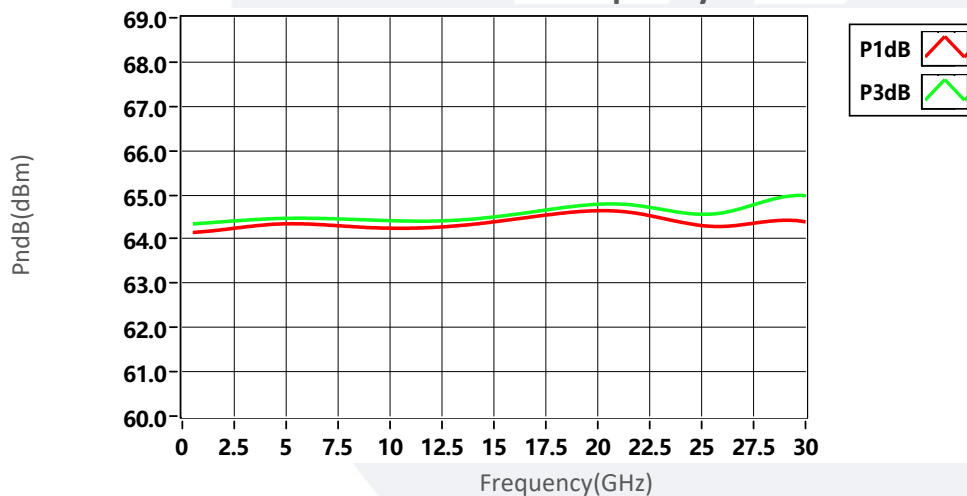
Small Signal Gain vs Frequency



Input VSWR vs Frequency



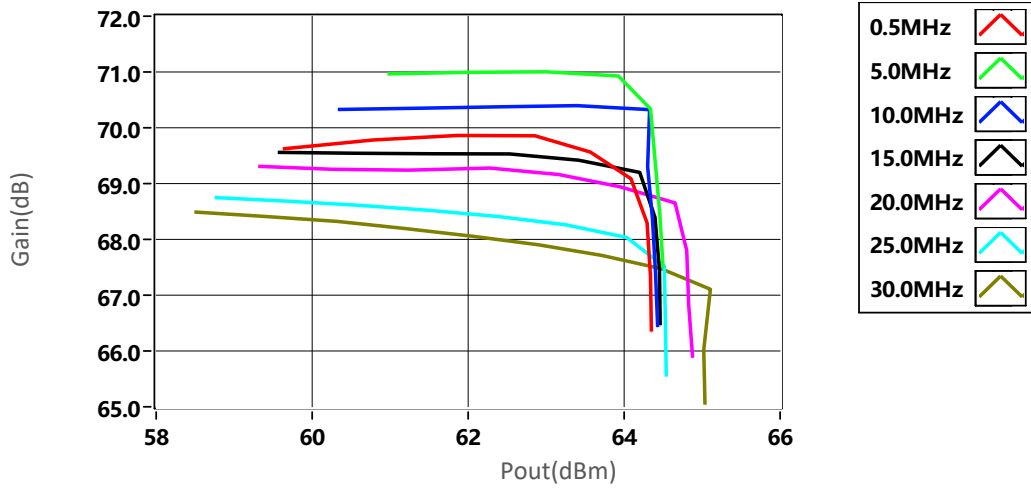
PndB vs Frequency



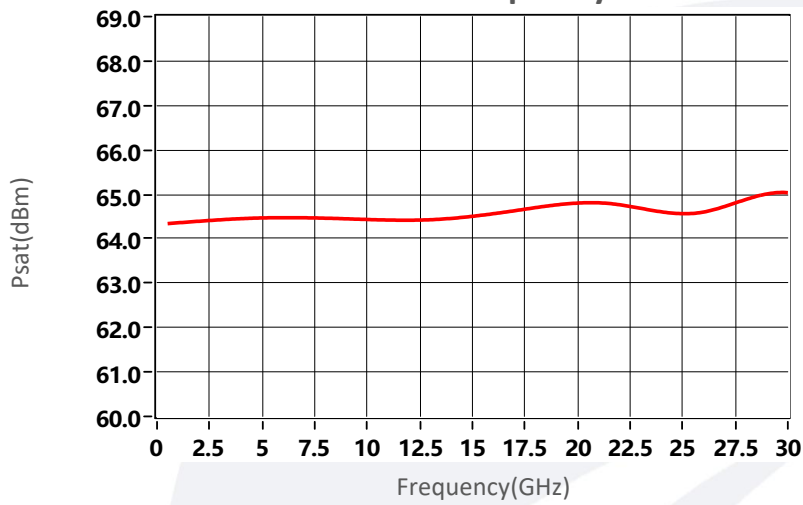
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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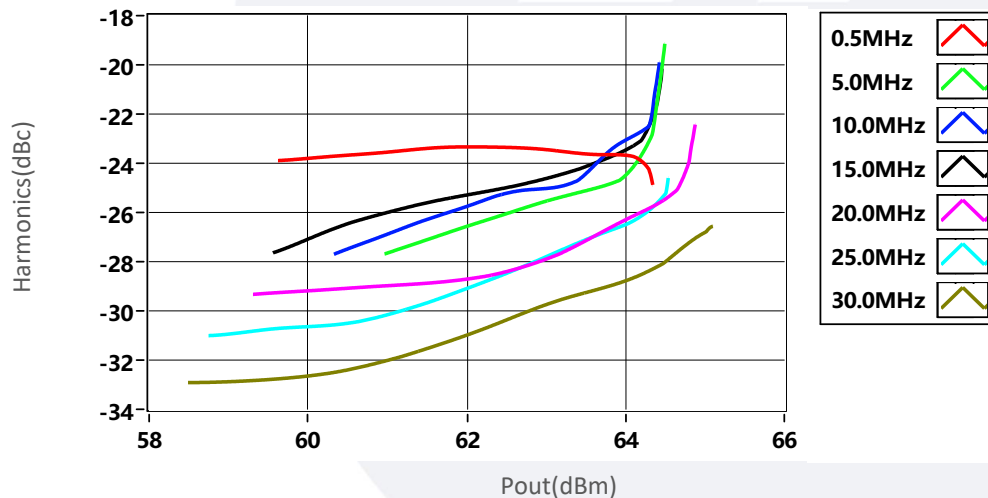
Gain vs Pout



Psat vs Frequency

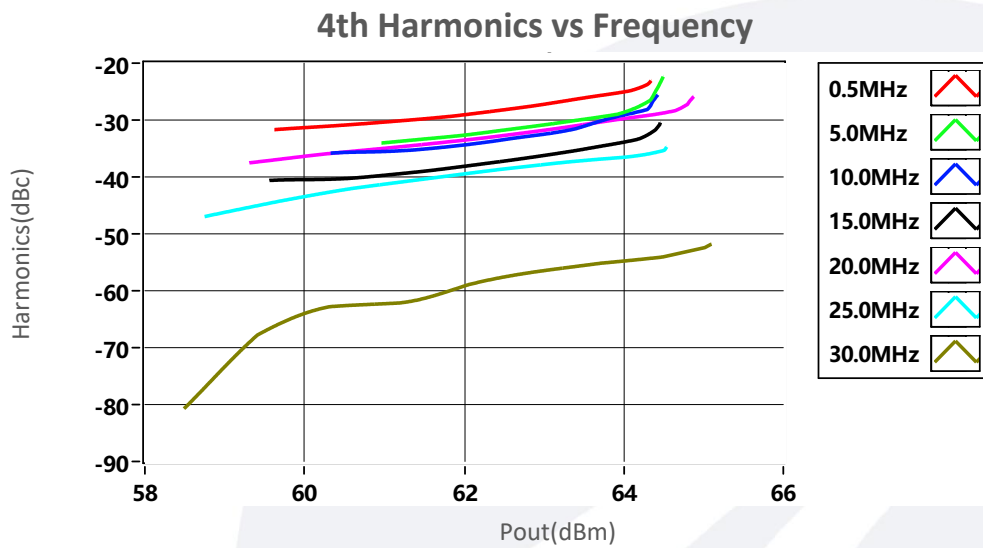
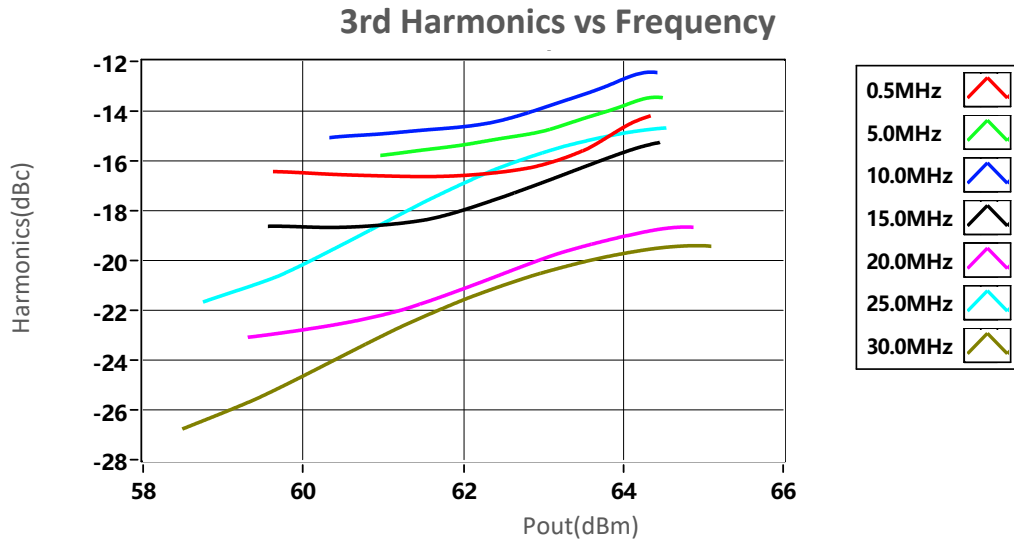


2nd Harmonics vs Frequency



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