

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

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	500KHz		30MHz	
Small Signal Gain	SSGP	64	67		dB
Gain flatness	Δ GL		± 1	± 2	dB
Gain adjust Range	Δ GR		31.5		dB
Gain adjust Step	Δ GS		0.5		dB
Output P1dB	P1dB	58	59		dBm
Output Psat	Psat	63	64		dBm
Spurious@Pout=63dBm	Spur			-60	dBc
Harmonics@Pout=63dBm	HAM		-15	-8	dBc
Input VSWR	VSWRin			2	:1
AC Voltage	Vac		220		V AC
AC Supply Current	Iac		27	30	A
Power Consumption	Pdiss		5000	6000	W
Impedance	I/O-IMP	50			Ohms

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

Mechanical Specifications:

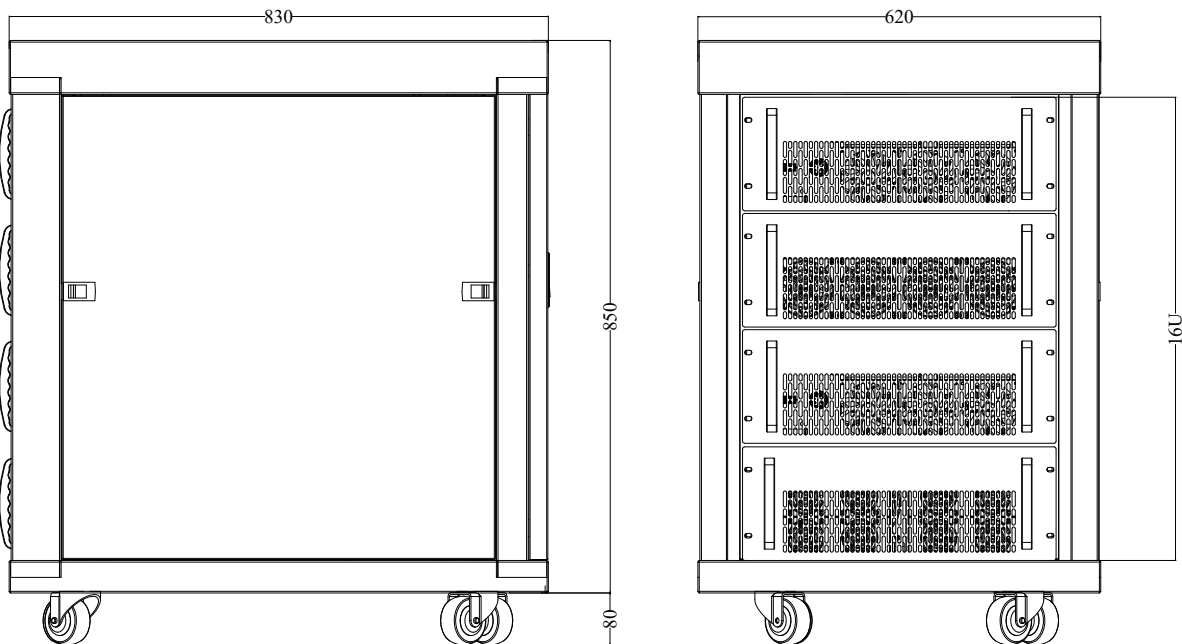
Parameter	Value	Units
Input /Output Connector	N Female/7/16 DIN Female	
Communication Connector	DB15	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 12U*830	mm
Weight	≤200	Kg

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Key Features:

Parameter	Advantages
Control functions	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			

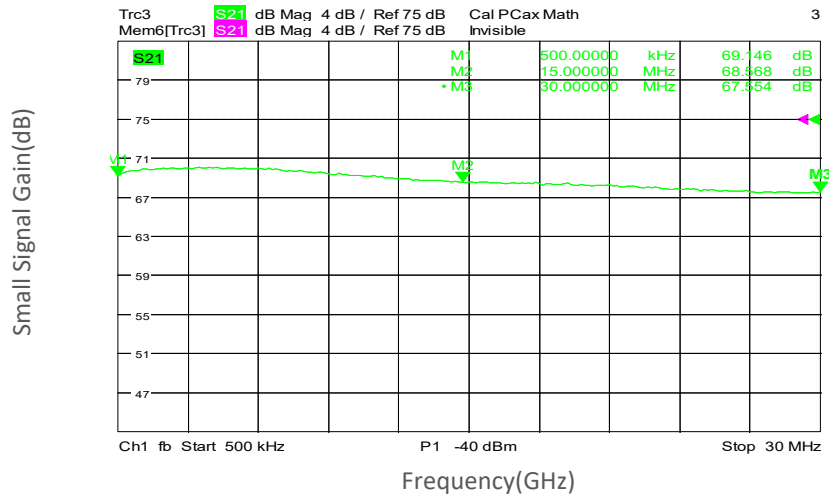
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

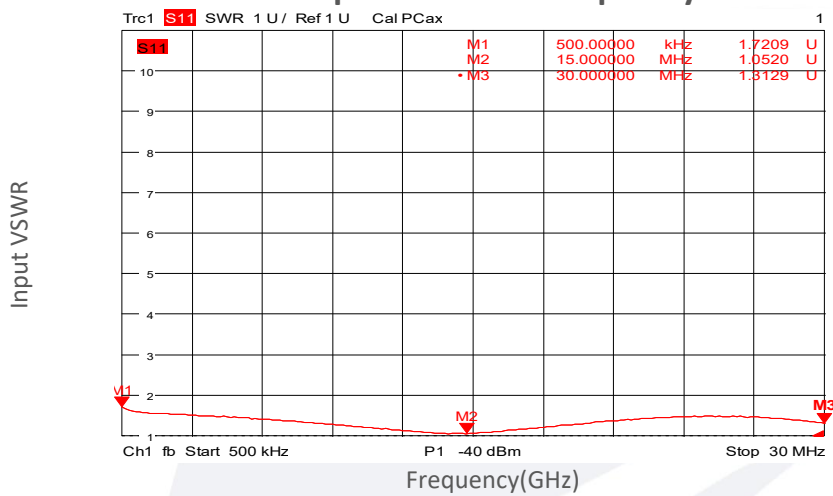
Base Number	Description	Revision
TLPA500K30M-64-64-BC	Solid State High Power Amplifier Systems 500KHz-30MHz,Gain:64dB,Psat:64dBm,220V AC,Built in Fan Cooling	Rev.1.0

Typical Performance Data:

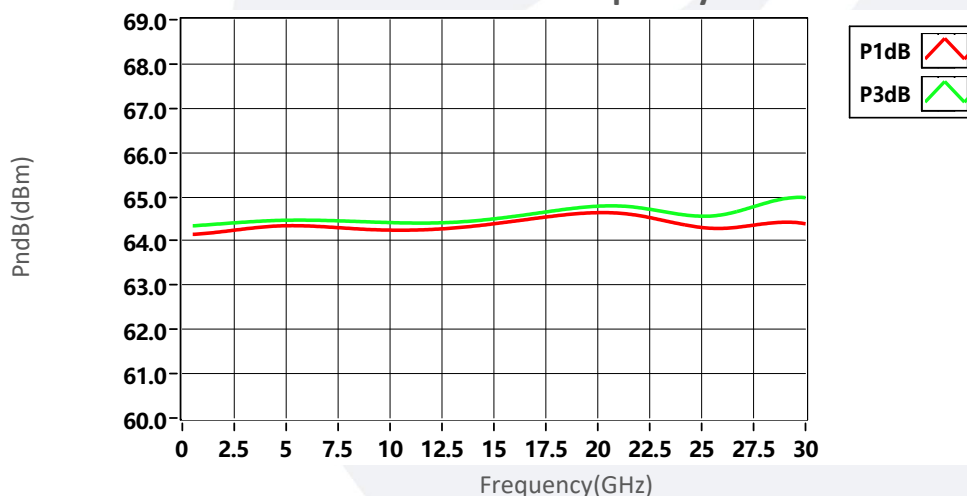
Small Signal Gain vs Frequency



Input VSWR vs Frequency



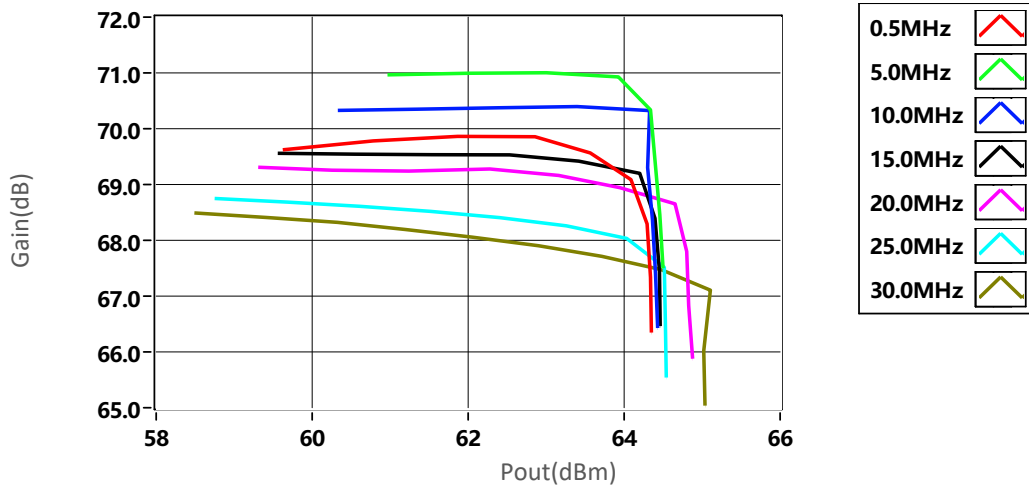
PndB vs Frequency



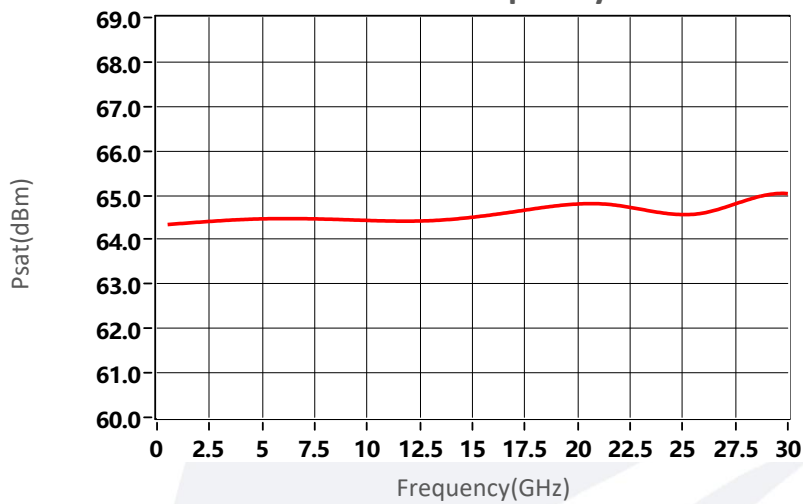
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

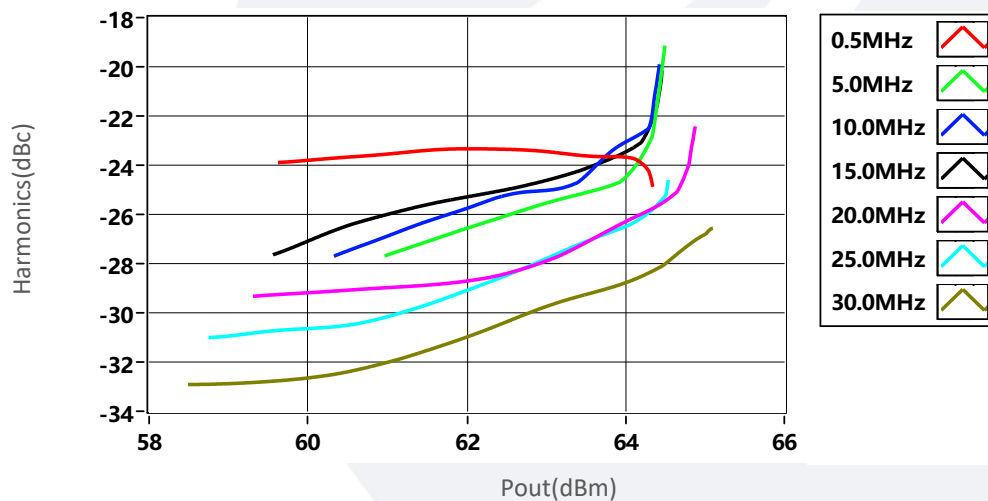
Gain vs Pout



Psat vs Frequency



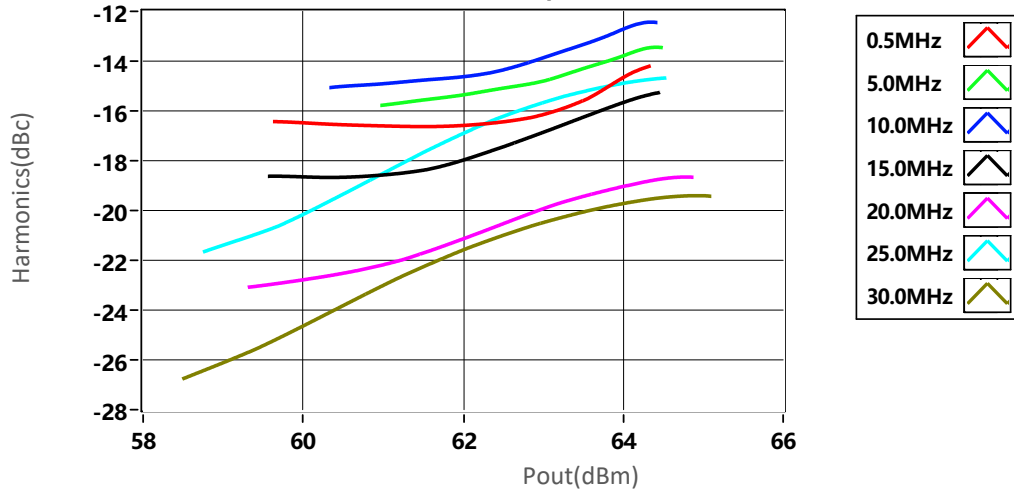
2nd Harmonics vs Frequency



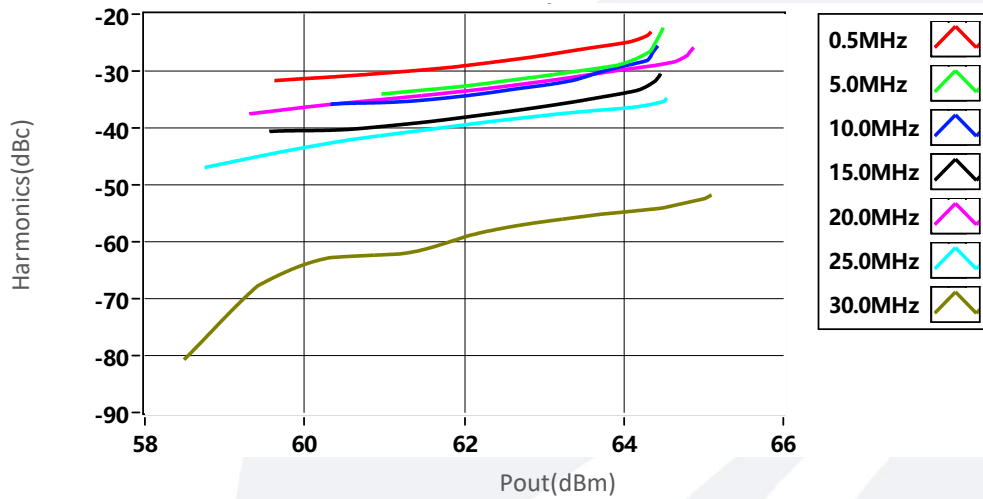
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

3rd Harmonics vs Frequency



4th Harmonics vs Frequency



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