

Solid State High Power Amplifier Systems

300-500KHz/50dB Gain/49dBm Psat/220V AC

Model: TLPA300K500K-50-49-BC

TLPA300K500K-50-49-BC is a solid state high power amplifier systems provides high output power and high gain across the 300 to 500KHz 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: 300-500KHz
- Gain: 50dB Min
- Psat Output Power: 49dBm Min
- 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	300-500			KHz
Power Gain	GP	50	52		dB
Gain flatness	Δ GL		± 0.5	± 1	dB
Output P1dB	P1dB	47	48		dBm
Output Psat	Psat	49	50		dBm
Spurious	Spur			-60	dBc
Harmonics	HAM		-15		dBc
Input VSWR	VSWR _{in}		1.5	2	:1
AC Voltage	V _{ac}	110	220		V AC
AC Supply Current	I _{ac}		3		A
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

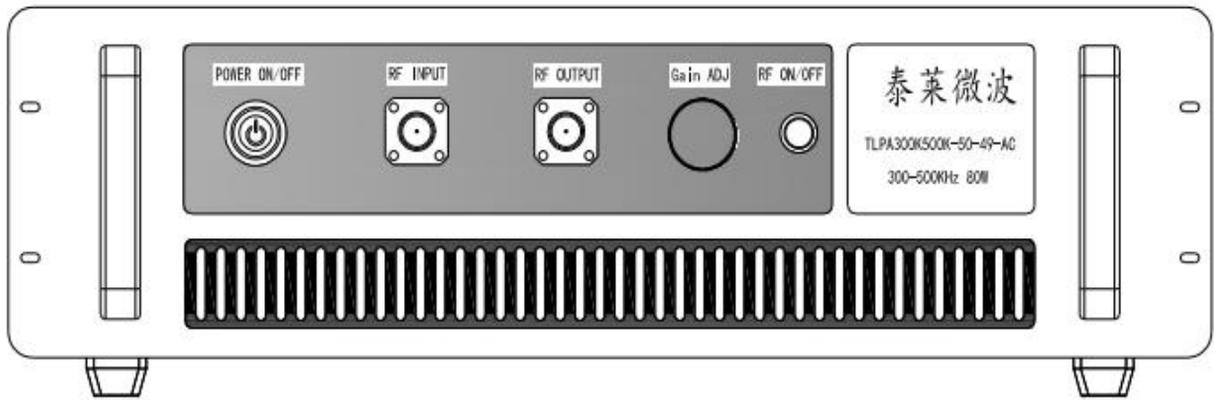
Parameter	Value	Units
Input /Output Connector	N Female/N Female	
Communication Connector	DB15	
Size	3U*500	mm
Weight	≤ 10	Kg

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, ALC automatic level control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422/Ethernet
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			

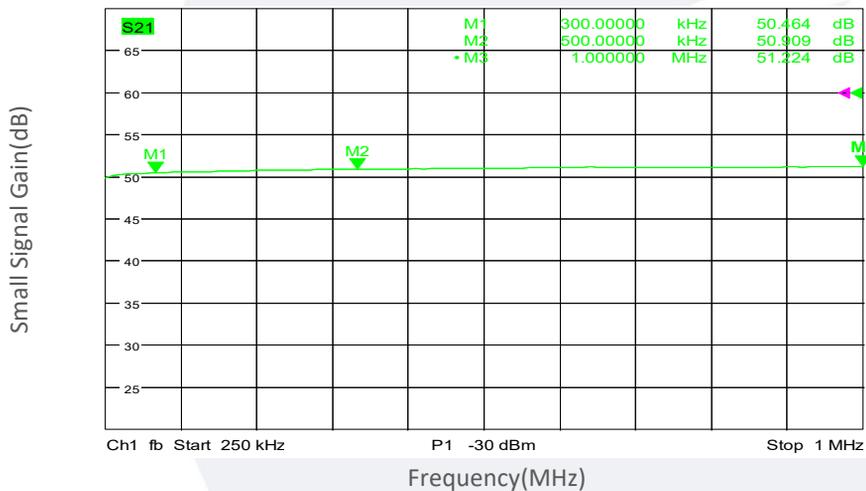
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA300K500K-50-49-BC	Solid State High Power Amplifier Systems 300-500KHz,Gain:50dB,Psat:49dBm,220V AC,Built in Fan Cooling	Rev.1.1

Typical Performance Data:

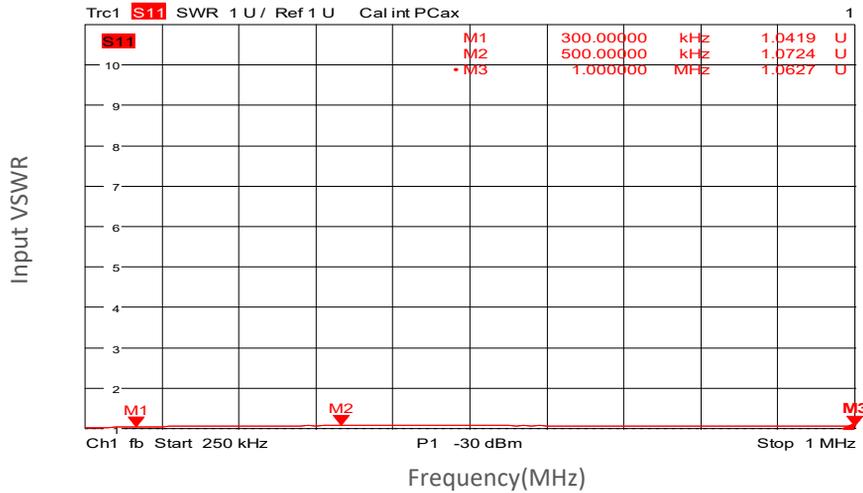
Small Signal Gain vs Frequency



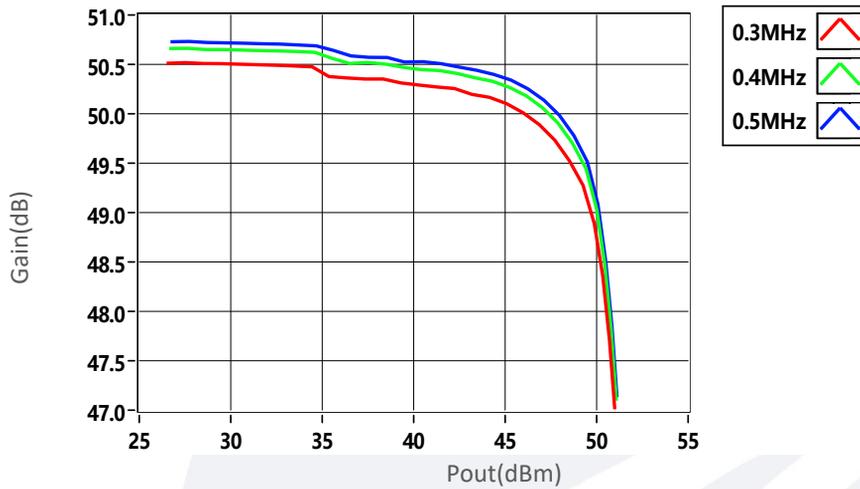
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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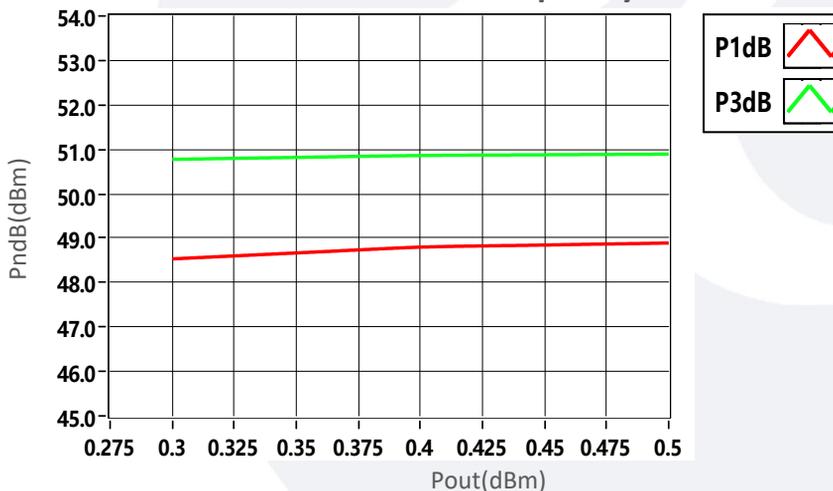
Input VSWR vs Frequency



Gain vs Output Power



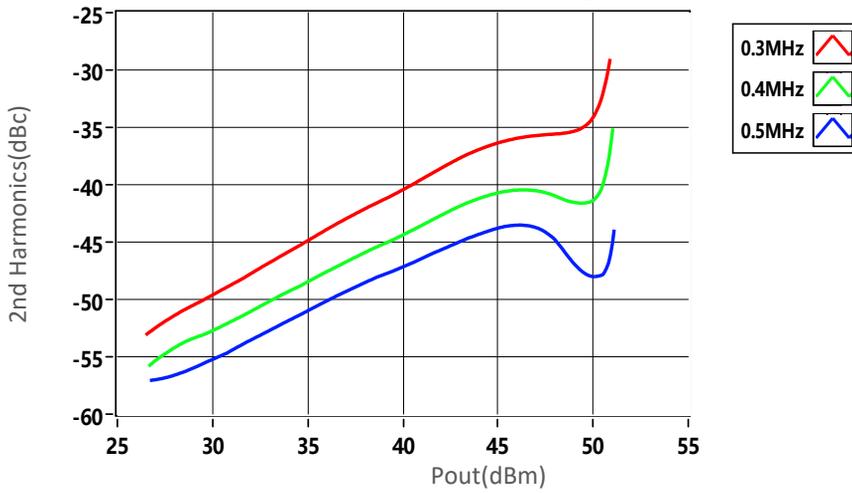
PndB vs Frequency



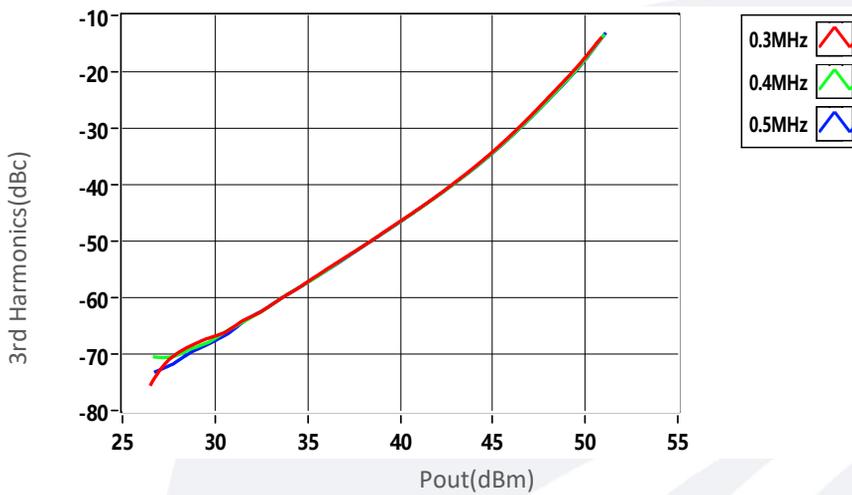
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Typical Performance Data:

2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



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