

Solid State High Power Amplifier Systems

1-6GHz/50dB Gain/52dBm Psat/240V AC

Model: TLPA1G6G-50-50-BC-P1

TLPA1G6G-50-50-BC-P1 is a solid state high power amplifier systems provides high output power and high gain across the 1 to 6 GHz frequency range. The amplifier features a built-in 240V 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: 1-6GHz
- Gain: 50dB Min
- Psat Output Power:52dBm Typ
- Protection:Over TEM,over voltage, over current ,over VSWR,output mismatch protection
- 50 Ohm Matched Input / Output



Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	1		6	GHz
Power Gain	GP	50			dB
Gain flatness	ΔGL			± 4	dB
Output Psat	Psat		52		dBm
Output P1dB	P1dB	50			dBm
Spurious@Pout=50dBm	Spur			-60	dBc
Harmonics@Pout=50dBm	HAM			-15	dBc
Input VSWR	VSWRin			2.0	:1
AC Voltage	Vac	240VAC $\pm 10\%$, single phase, 50Hz			V AC
Power Consumption	Pdiss			1000	W
Impedance	I/O-IMP	50			Ohms

Supported AM.FM or pulse input signal modulation and support both local and remote modes of control selectable through physical means on the amplifier facia.

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	N Female/N Female	
Forward/Reverse Coupling	N Female/N Female	
Communication Connector	DB9/RJ45	
Remote Control Interfaces	LAN,IEEE-488-GPIB	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 5U*550	mm
Weight	≤40	Kg

Absolute Maximum Ratings:

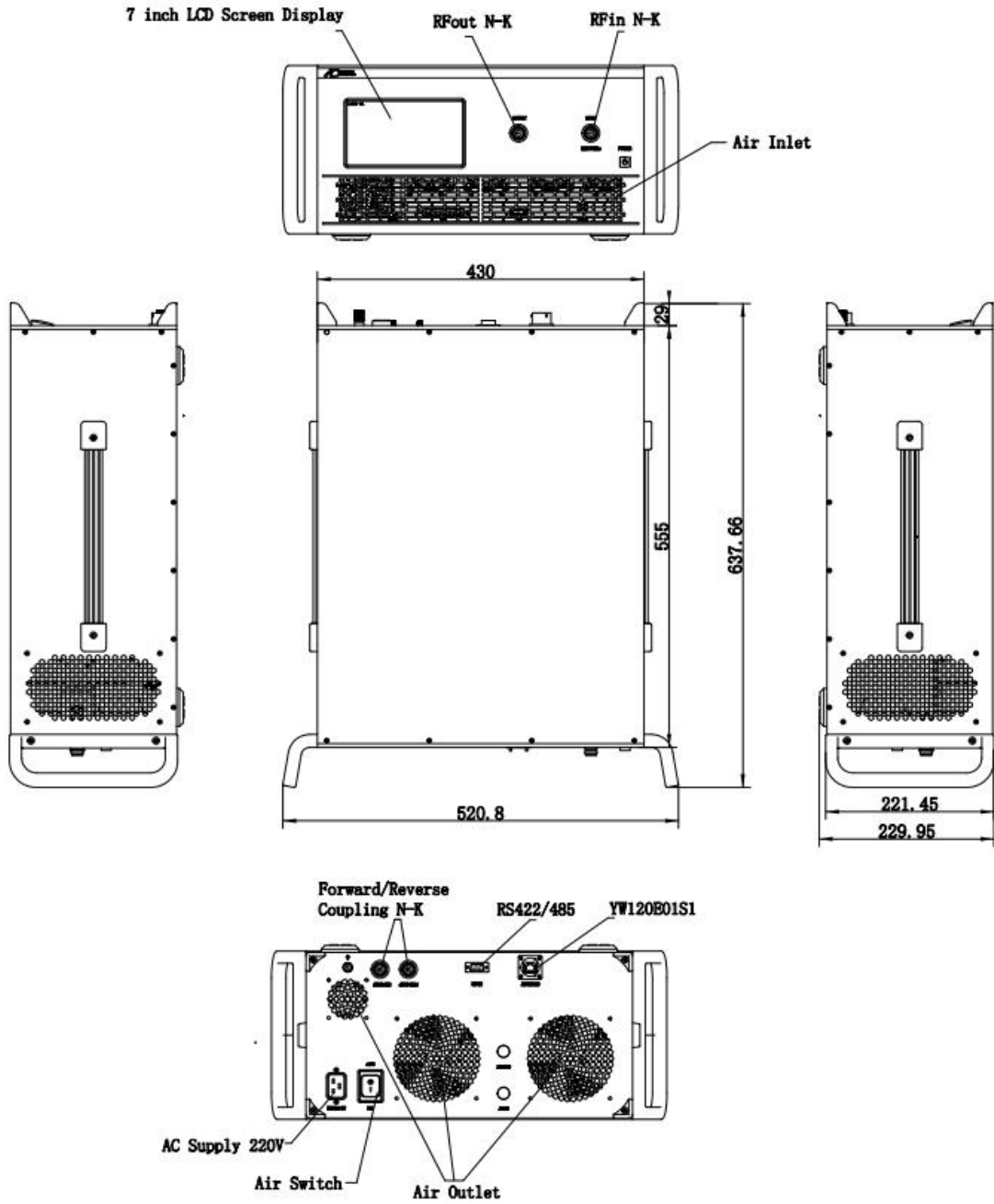
Parameter	Value
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

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 5, Output mismatch protection
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

Outline Drawing:

Unit:mm



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:

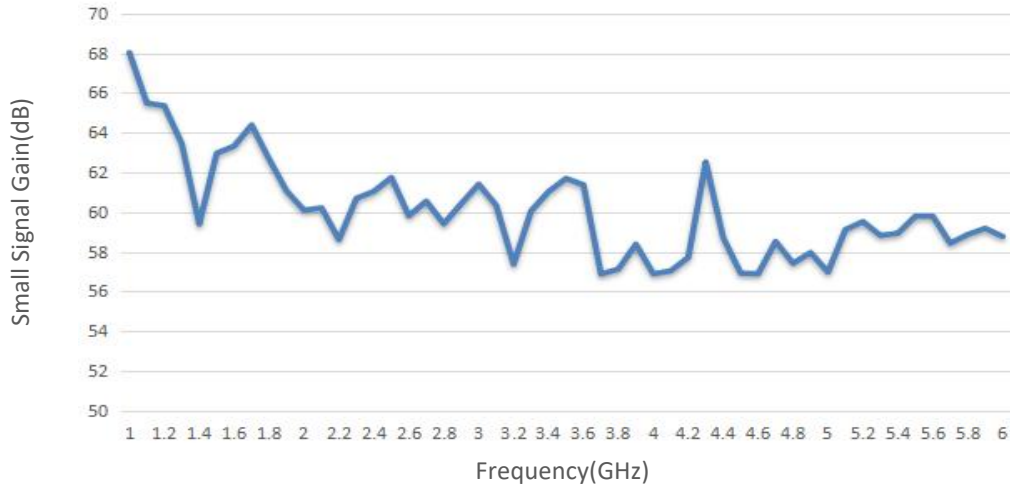
Base Number	Description	Revision
TLPA1G6G-50-50-BC-P1	Solid State High Power Amplifier Systems 1-6GHz,Gain:50dB,Psat:52 dBm,240V AC,Built in Fan Cooling	Rev.1.0

Components Included:

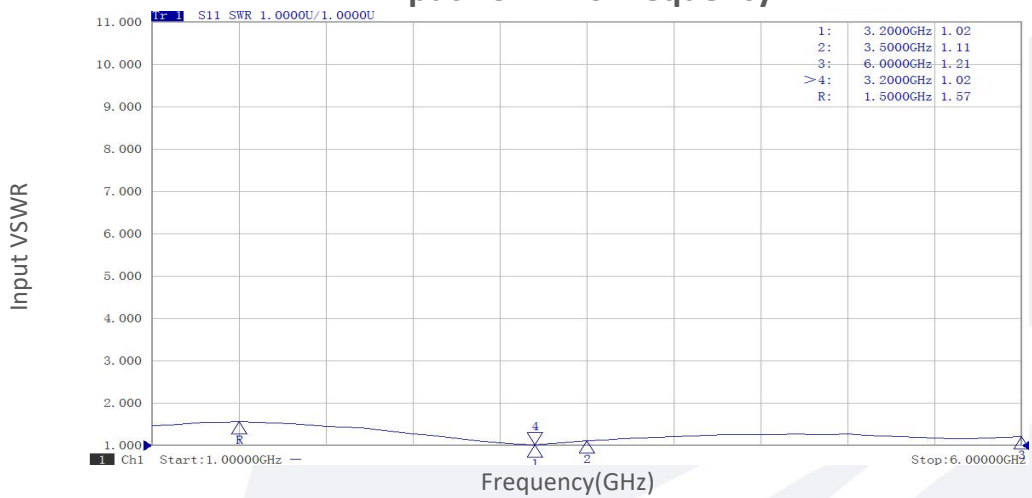
Part Number	Description	Quantity
1	IEEE-488-GPIB to USB	1PCS

Typical Performance Data:

Small Signal Gain vs Frequency



Input VSWR vs Frequency



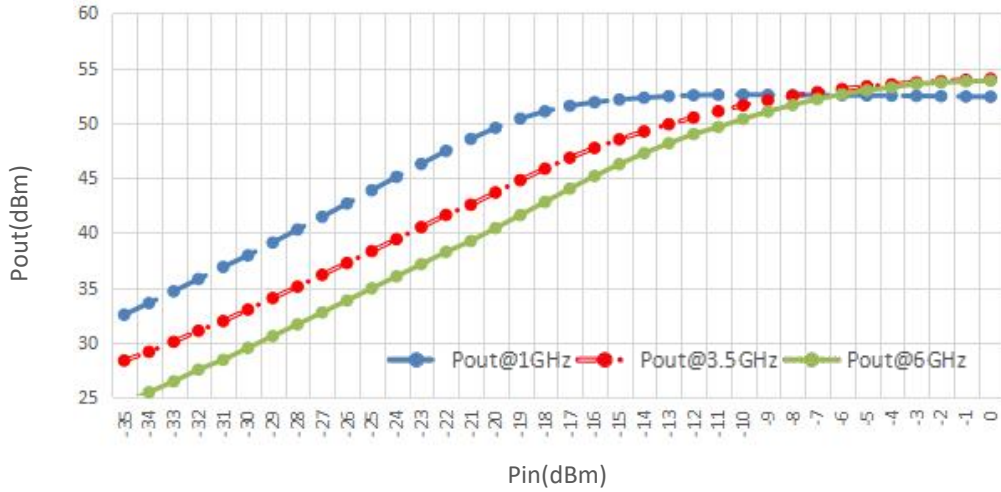
P1dB vs Frequency



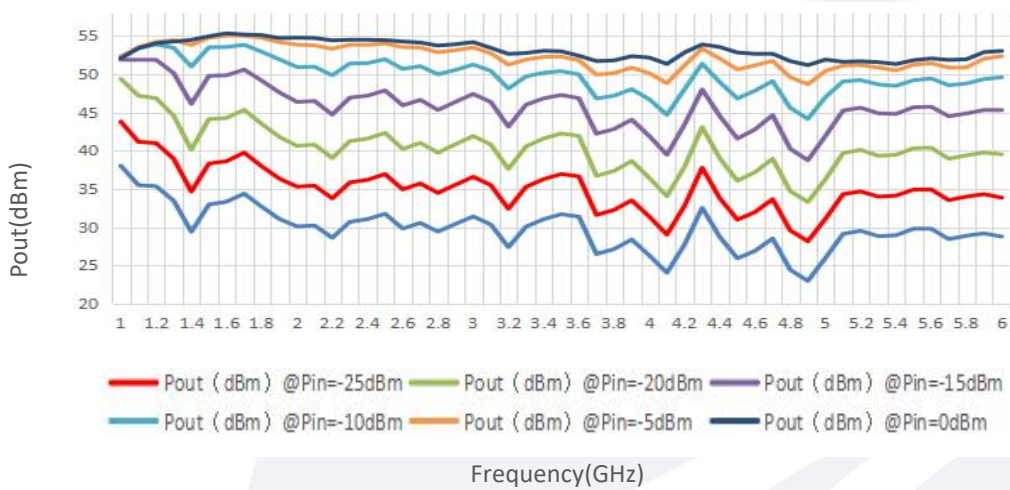
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

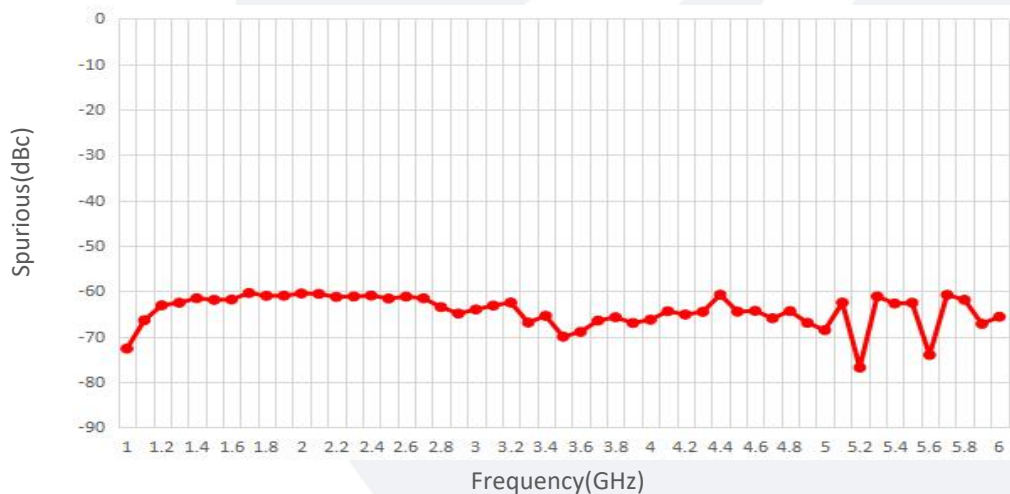
Pout@Pin



Pout@Equal_Pin



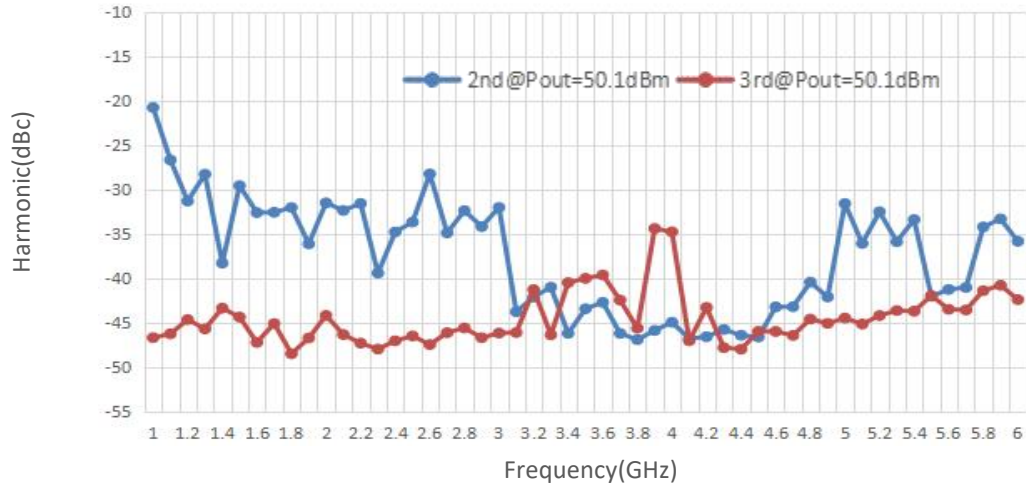
Spurious vs Frequency



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Typical Performance Data:

Harmonic vs Frequency



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