

Solid State High Power Amplifier Systems

6-18GHz/50dB Gain/51dBm Psat/220V AC

Model: TLPA6G18G-50-51-BC

TLPA6G18G-50-51-BC is a solid state high power amplifier systems provides high output power and high gain across the 6 to 18 GHz 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: 6-18 GHz
- Gain: 50dB Min
- Psat Output Power: 51dBm Min
- Protection: Over TEM, over voltage, over current, infinite VSWR protection
- 50 Ohm Matched Input / Output



Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	6-18			GHz
Power Gain	GP	50			dB
Gain flatness	ΔGL		± 3.5		dB
Gain adjust Range	ΔGR		31.5		dB
Gain adjust Step	ΔGS		0.5		dB
Output Psat	Psat	50	51		dBm
Spurious	Spur		-60		dBc
Harmonics	HAM		-20		dBc
Input VSWR	VSWR _{in}			2	:1
AC Voltage	Vac		220		V AC
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	N Female/WRD500	
AC Power Interface	Air switch	
Size	19 Inch 4U	mm
Weight	≤30	Kg

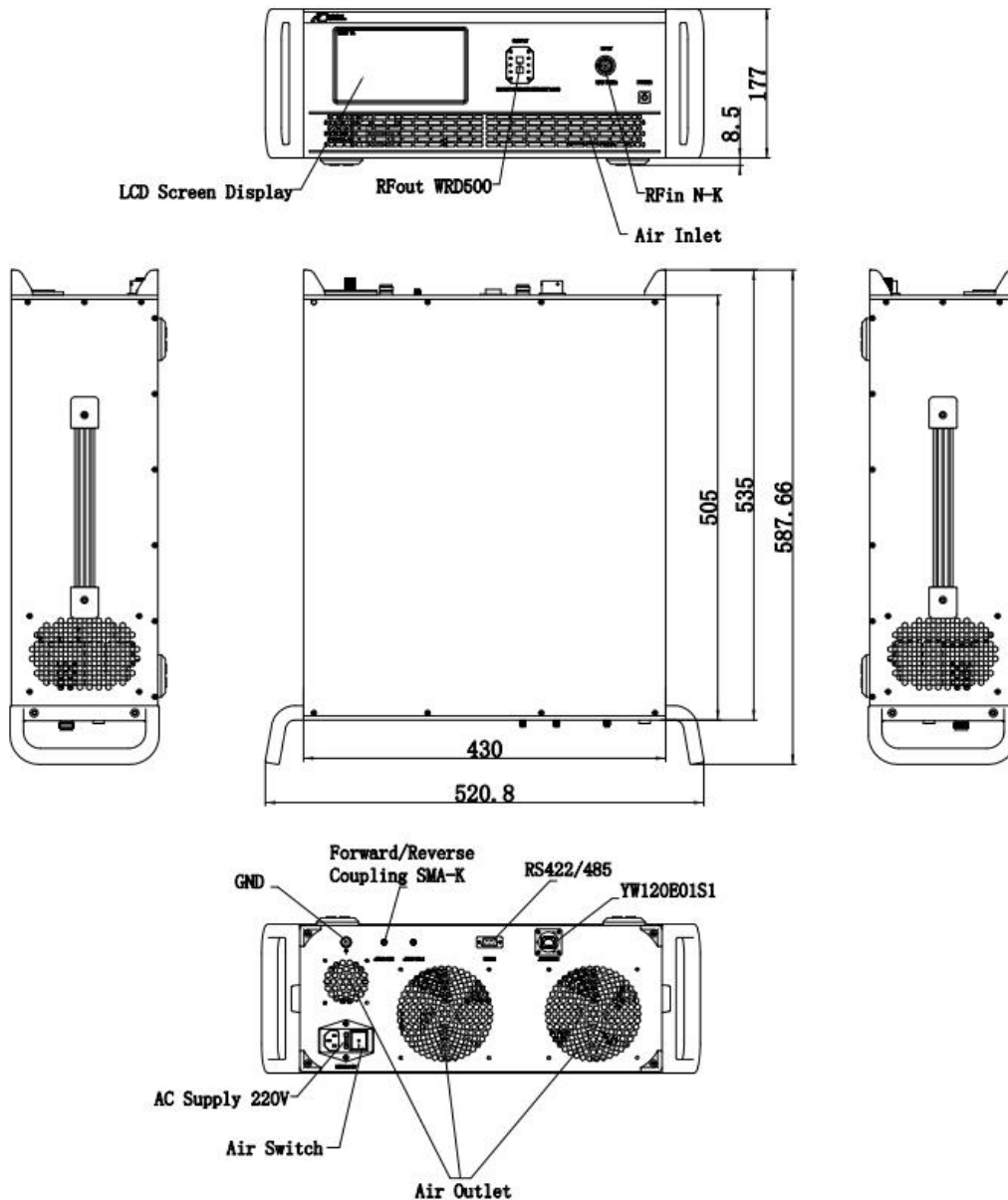
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	260V AC
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



Key Features:

Parameter	Advantages
Remote Control	Ethernet RJ-45 TCP/IP
Monitoring functions	1,Forward Power 2,Temp Fault
Protection functions	1,Over TEM 2,Over voltage 3,Over current protection 4,Infinite VSWR
Control functions	1,Power setting On/Off 2,ALC On/Off
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			

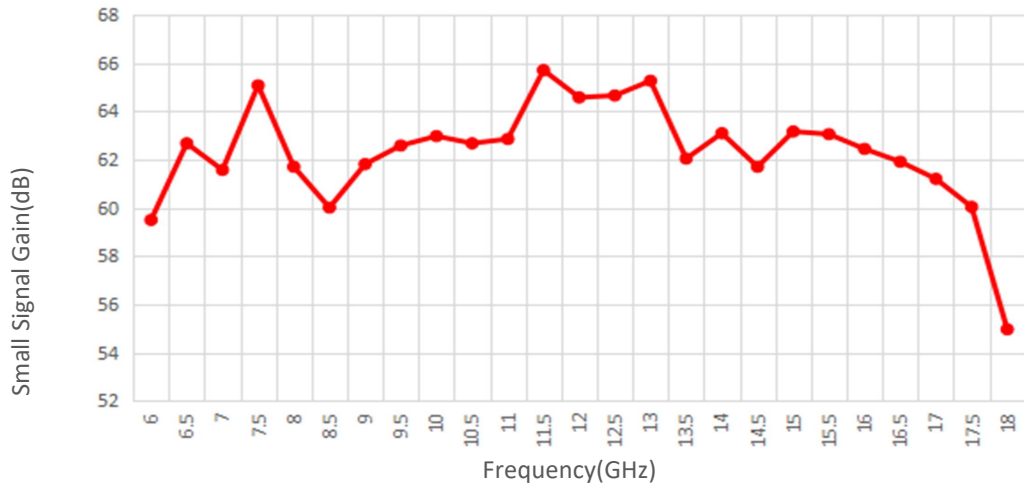
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

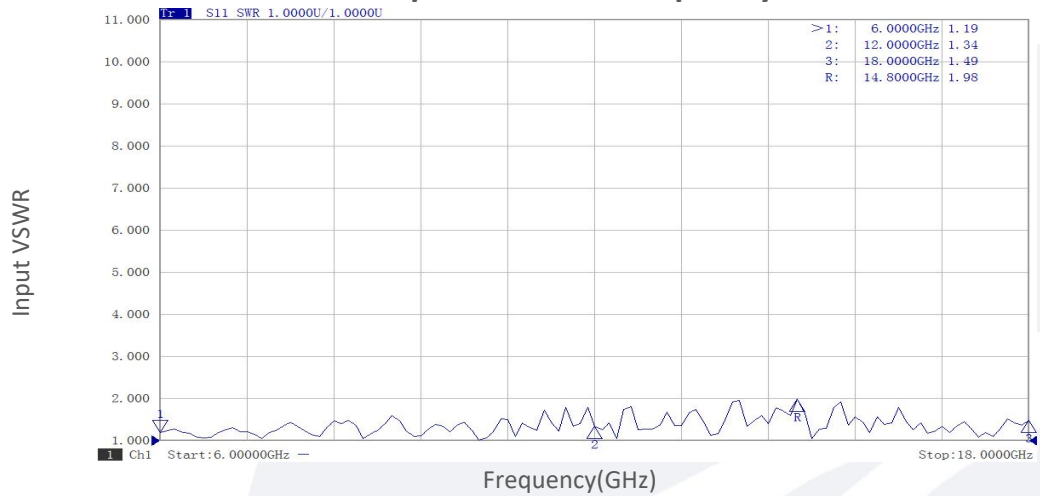
Base Number	Description	Revision
TLPA6G18G-50-51-BC	Solid State High Power Amplifier Systems 6-18GHz,Gain:50dB,Psat:51 dBm,220V AC,Built in Fan Cooling	Rev.1.1

Typical Performance Data:

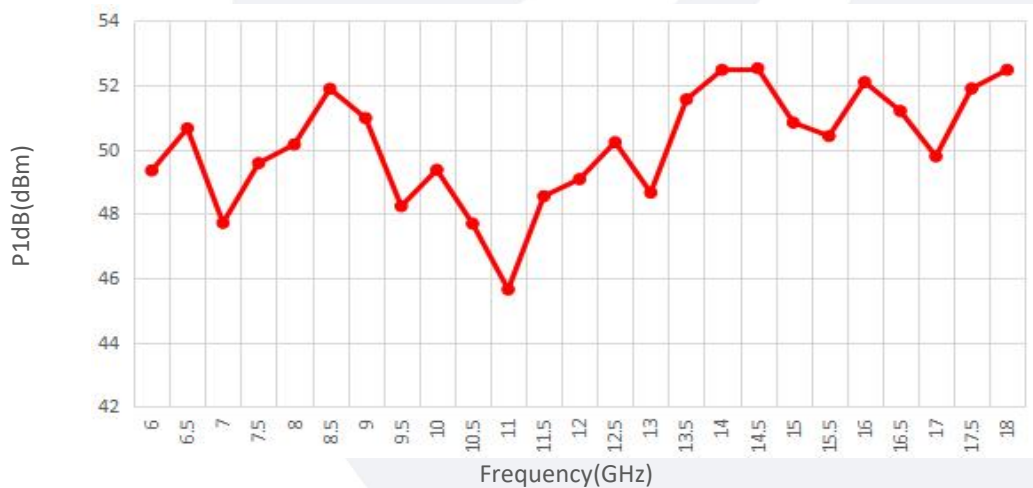
Small Signal Gain vs Frequency



Input VSWR vs Frequency



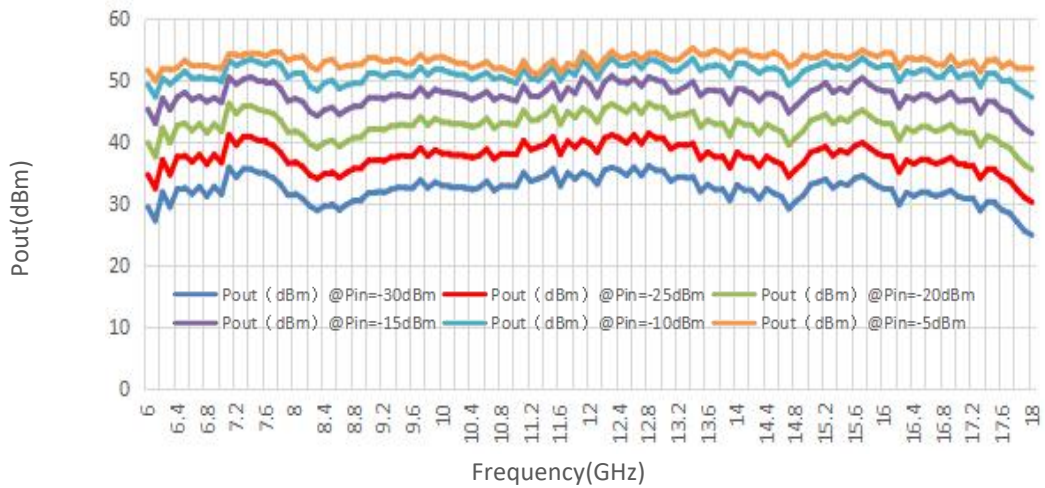
P1dB vs Frequency



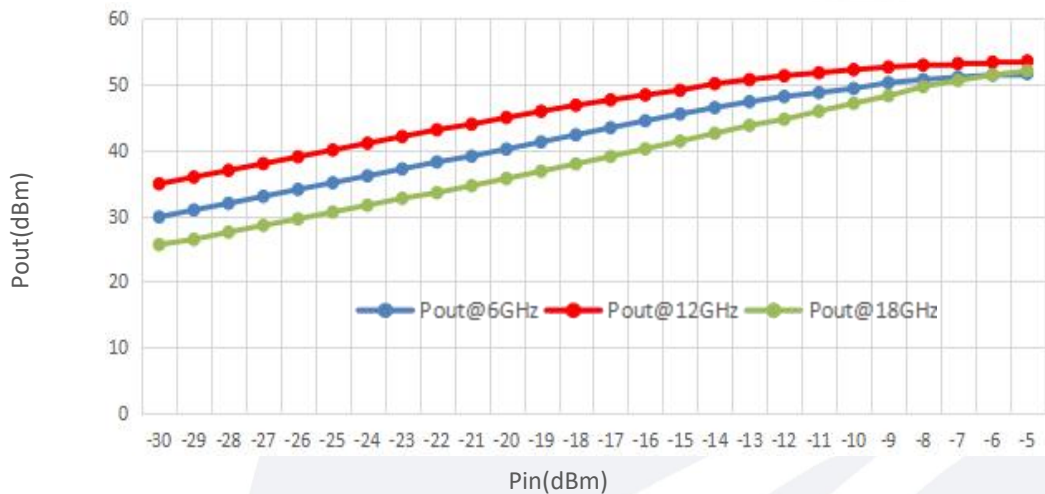
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

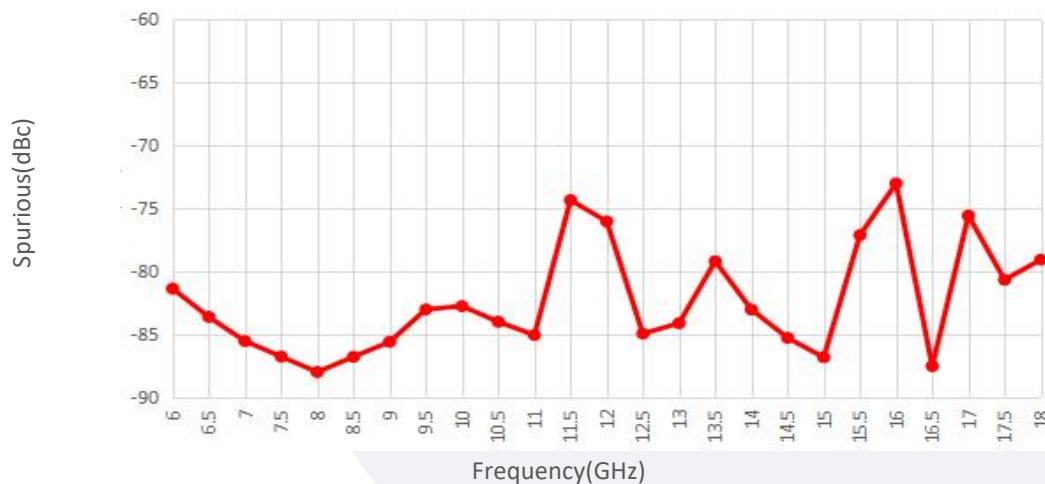
Pout@Equal_Pin



Pout@Pin



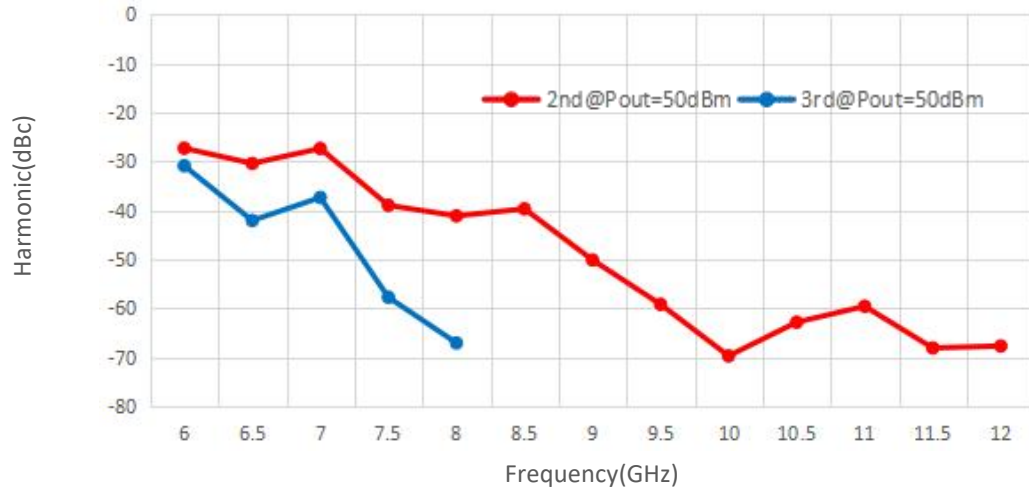
Spurious vs Frequency



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Typical Performance Data:

Harmonic vs Frequency



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