

## 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, over 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	$\Delta$ GL		$\pm 3.5$		dB
Gain adjust Range	$\Delta$ GR		31.5		dB
Gain adjust Step	$\Delta$ GS		0.5		dB
Output Psat	Psat	50	51		dBm
Spurious	Spur		-60		dBc
Harmonics	HAM		-20		dBc
Input VSWR	VSWRin			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	$\leq 30$	Kg

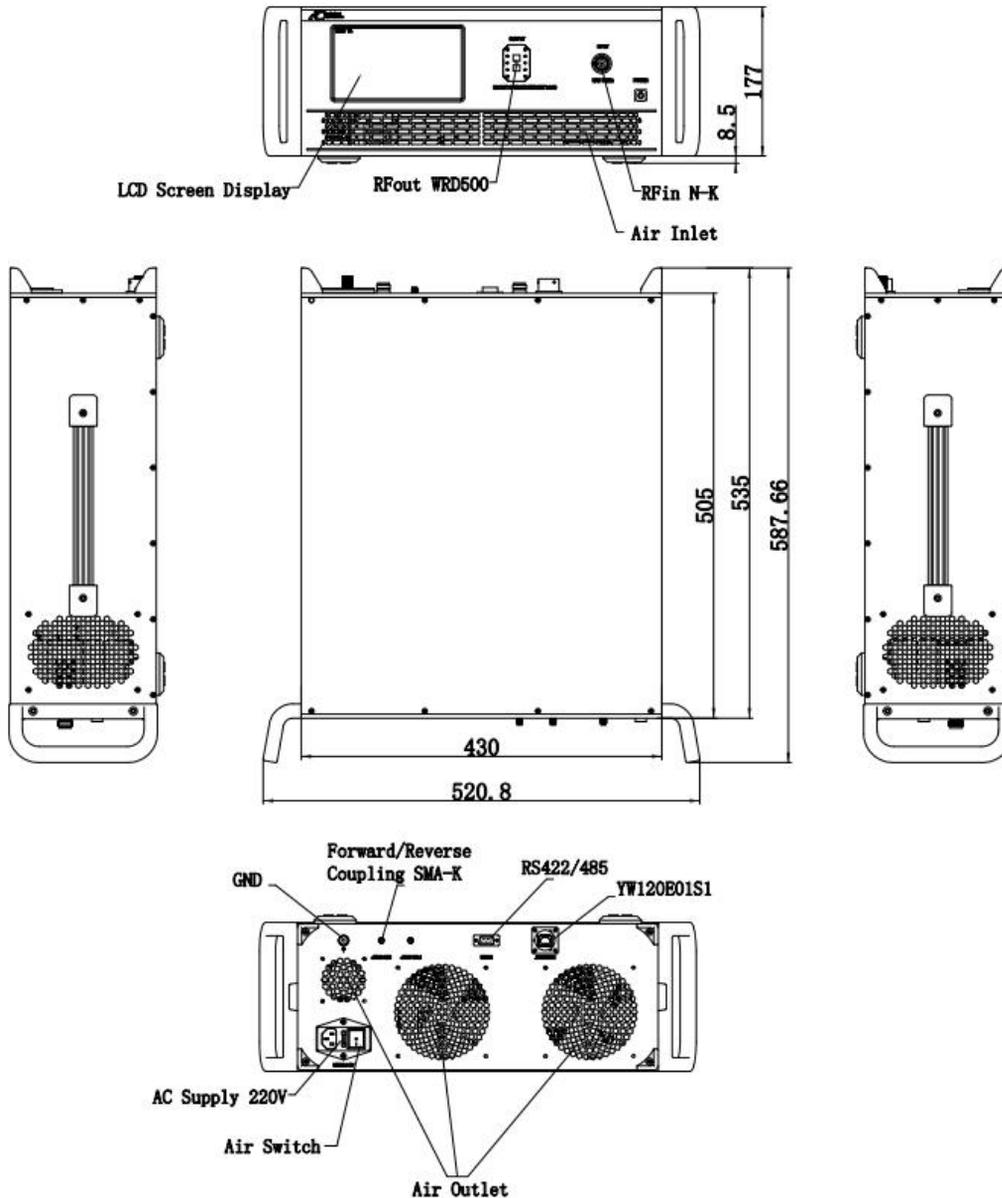
### Absolute Maximum Ratings:

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,Over 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			

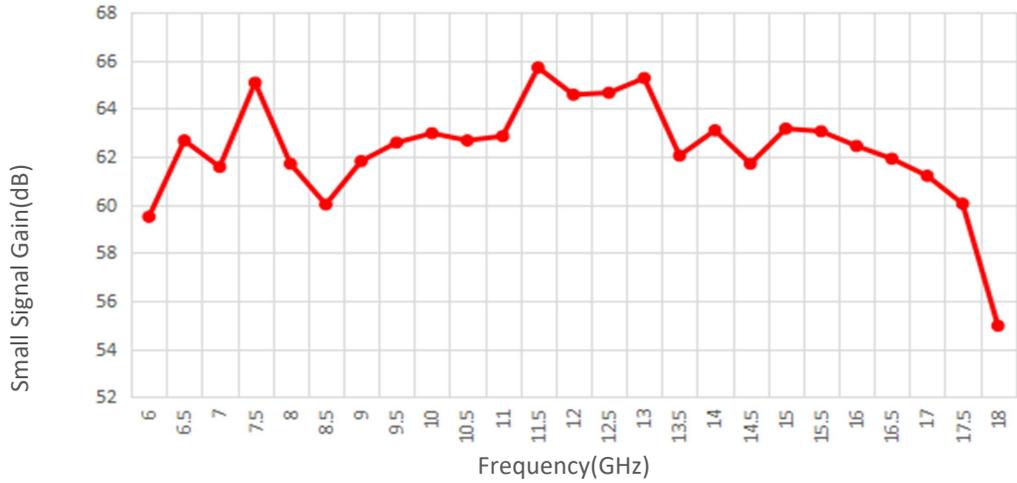
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

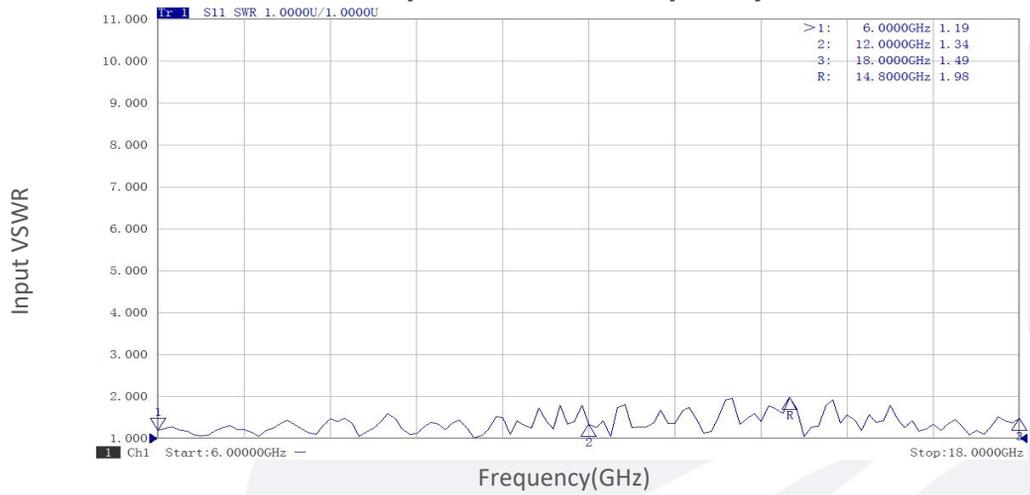
Base Number	Description	Revision
TLPA6G18G-50-51-BC	Solid State High Power Amplifier Systems 6-18GHz,Gain:50dB,Psat:51 dBm,220V AC,Built in Fan Cooling	Rev.1.1

**Typical Performance Data:**

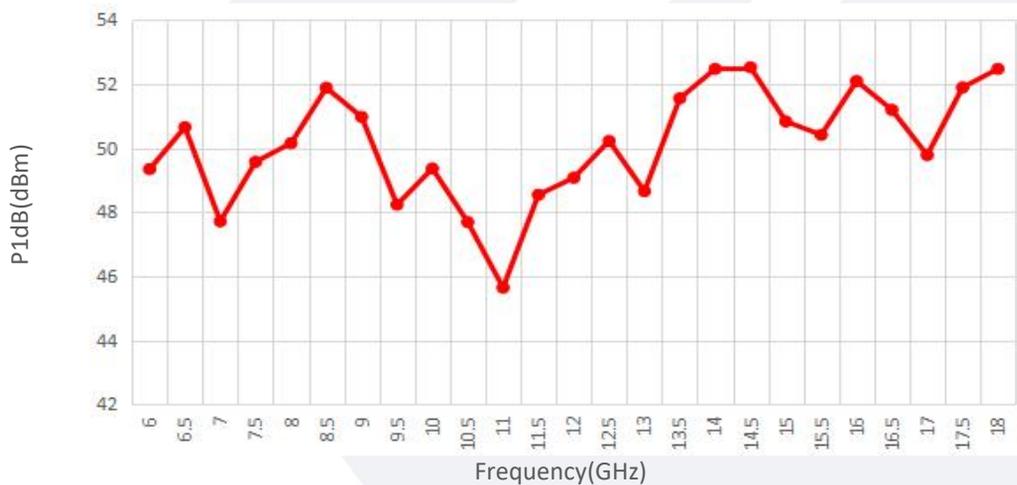
**Small Signal Gain vs Frequency**



**Input VSWR vs Frequency**



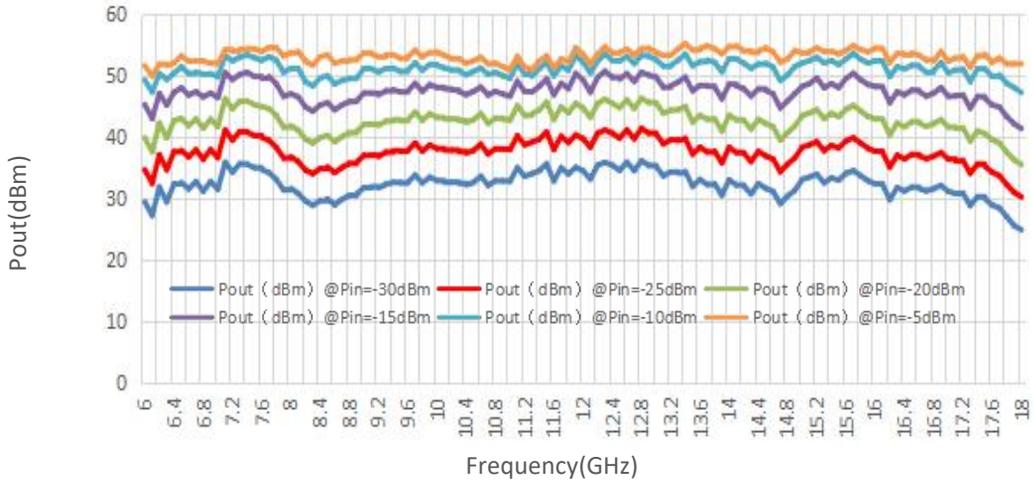
**P1dB vs Frequency**



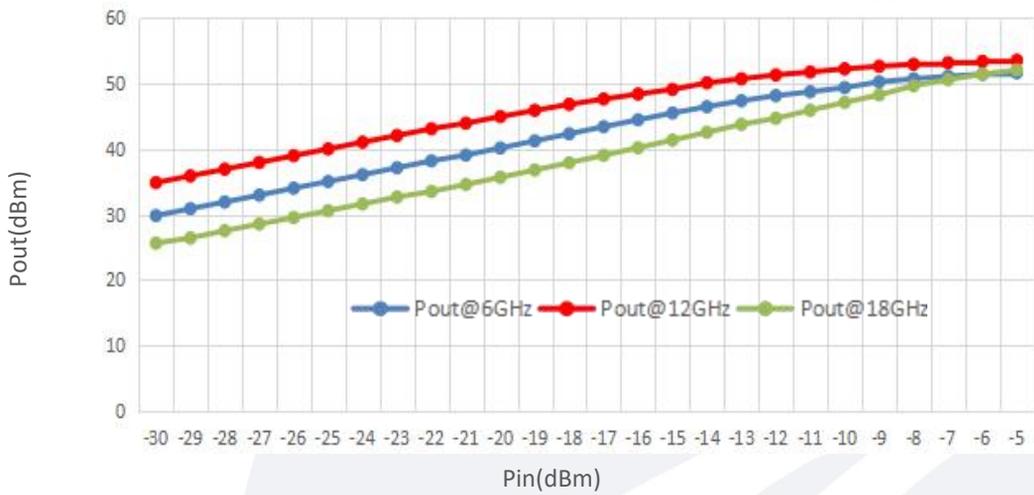
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

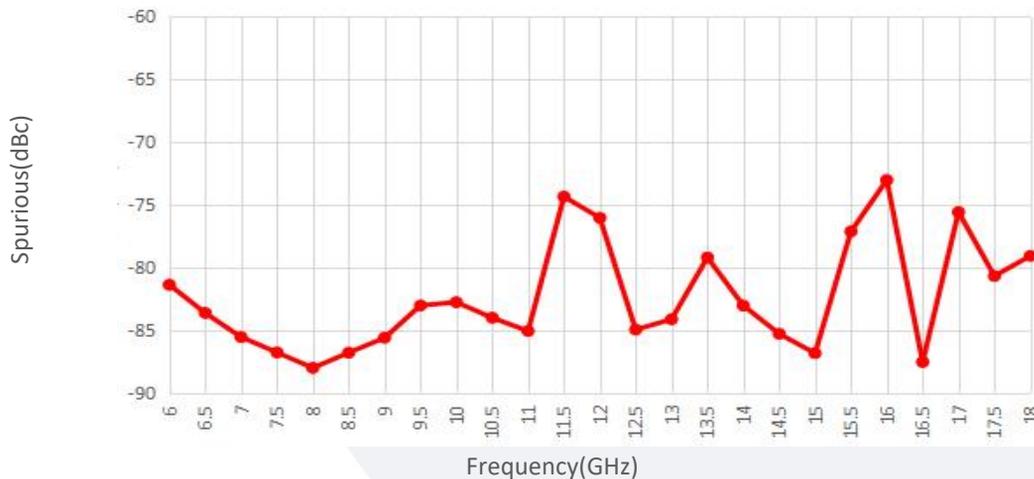
**Pout@Equal\_Pin**



**Pout@Pin**



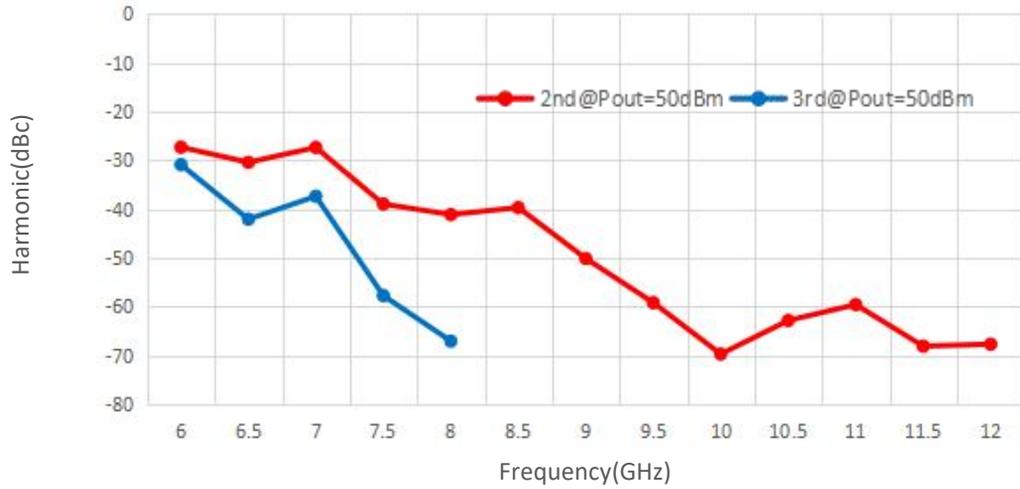
**Spurious vs Frequency**



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:**

**Harmonic 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.