

## Solid State High Power Amplifier Systems

6-18GHz/60dB Gain/60dBm Psat/380V AC

Model: TLPA6G18G-60-60-BC

TLPA6G18G-60-60-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 380V 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: 6-18GHz
- Gain: 60dB Min
- Psat Output Power: 60dBm 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	60			dB
Gain flatness@Pout=60dBm	$\Delta$ GL		$\pm 4.5$		dB
Output P1dB	P1dB	58			dBm
Output Psat	Psat	60			dBm
Spurious@Pout=60dBm	Spur			-60	dBc
Harmonics@Pout=60dBm	HAM			-15	dBc
Harmonics@Pout=57dBm	HAM			-20	dBc
Input VSWR	VSWRin			2.0	:1
AC Voltage	Vac		380		V AC
Power Consumption	Pdiss			25000	W
Impedance	I/O-IMP	50			Ohms

## Mechanical Specifications:

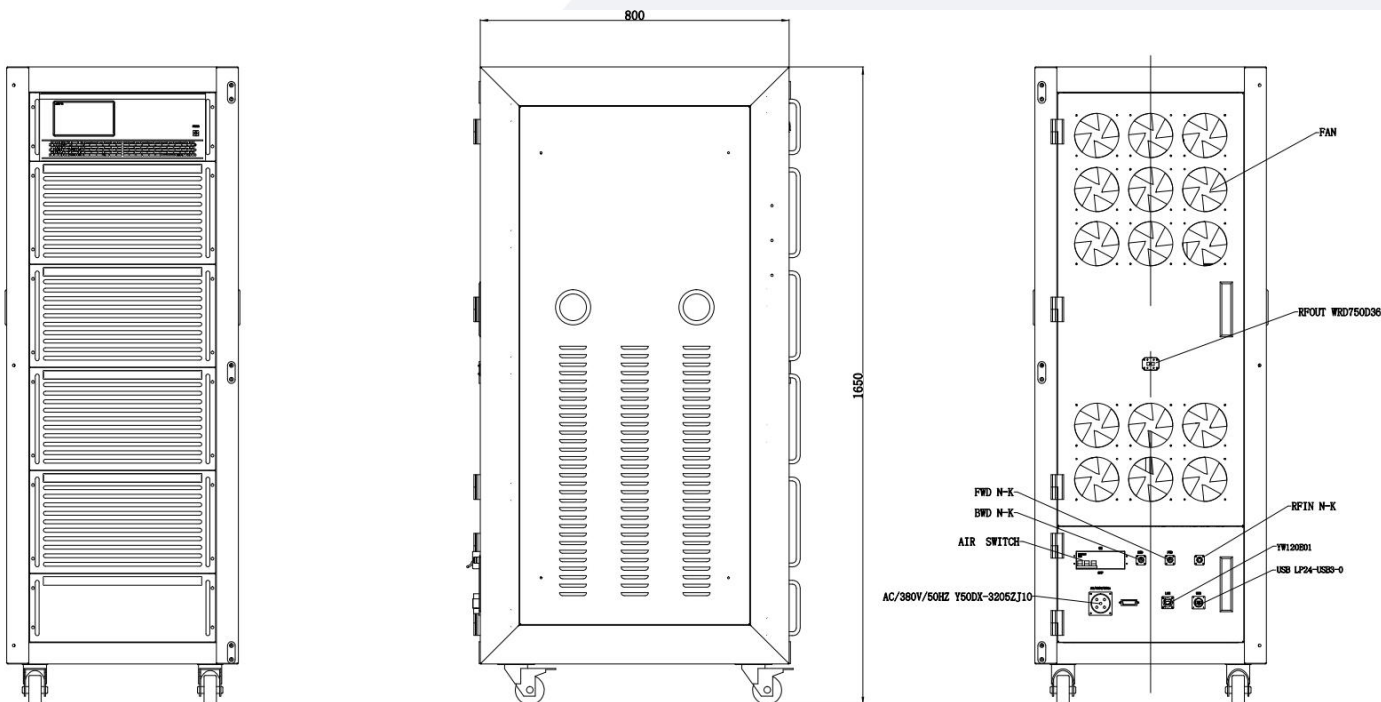
Parameter	Value	Units
Input /Output Connector	N Female/WRD750	
Forward/Reverse Coupling	N Female/N Female	
Communication Connector	DB9/RJ45	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	32U*800 depth	mm
Weight	≤500	Kg

## Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+5 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 3, Gain 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			

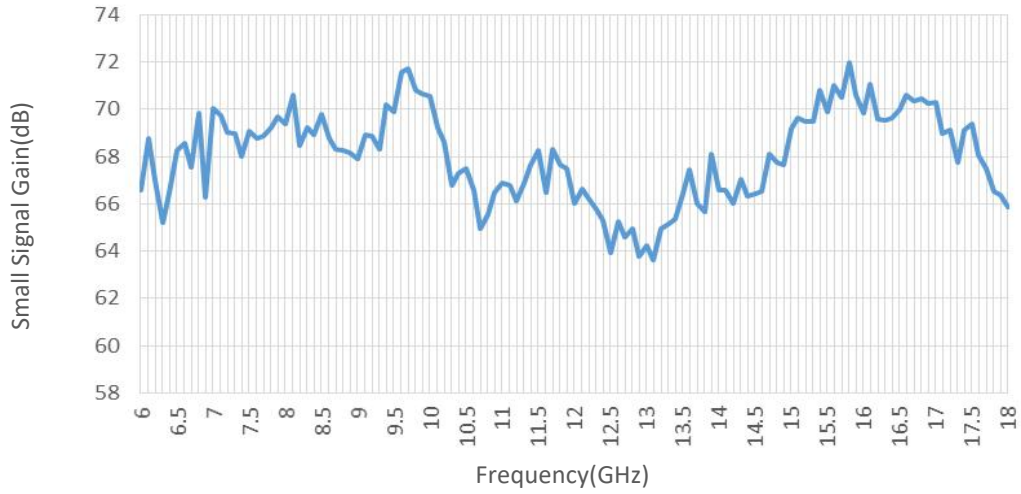
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

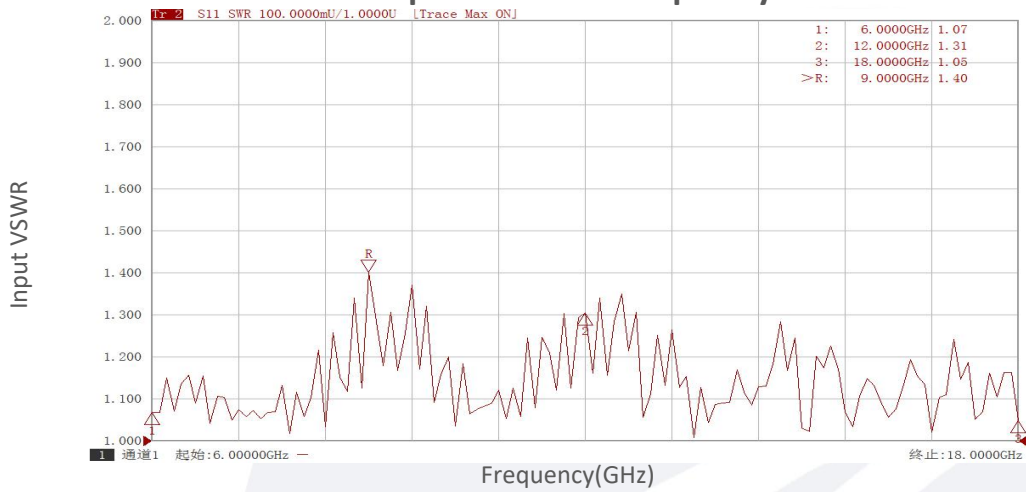
Base Number	Description	Revision
TLPA6G18G-60-60-BC	Solid State High Power Amplifier Systems 6-18GHz, Gain:60dB, Psat:60dBm, 380V AC, Built in Fan Cooling	Rev.1.1

**Typical Performance Data:**

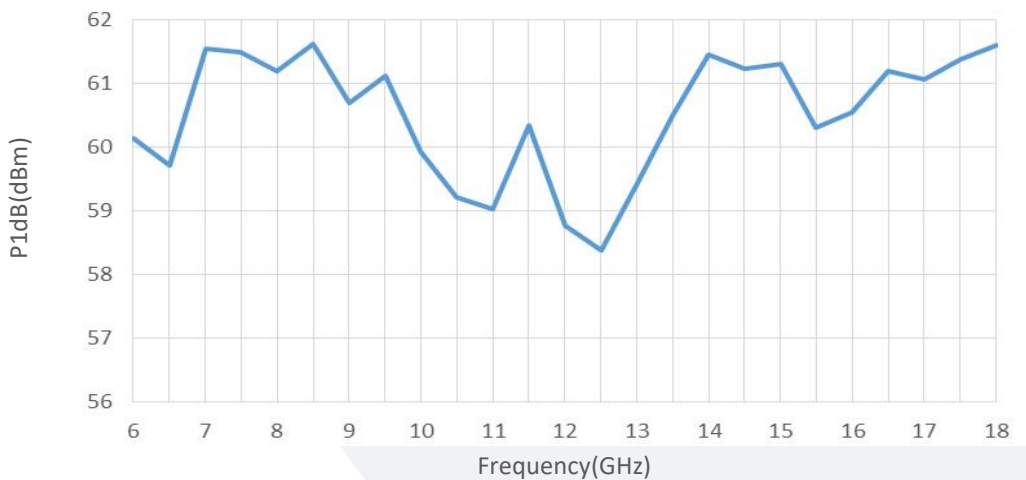
**Small Signal Gain vs Frequency**



**Input VSWR vs Frequency**



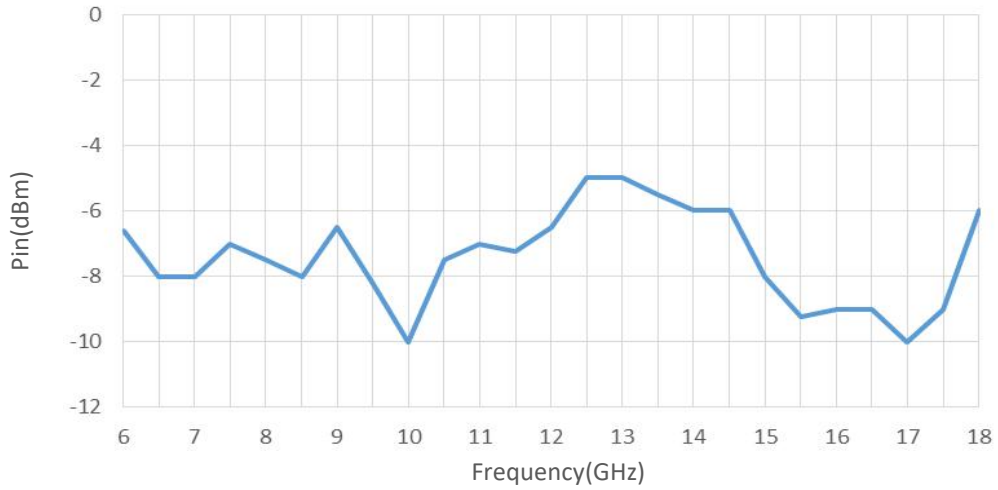
**P1dB vs Frequency**



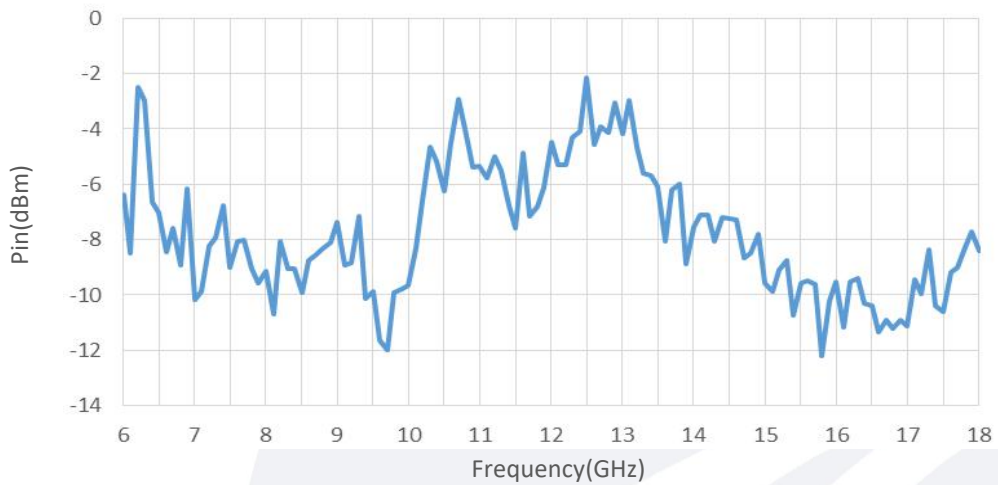
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

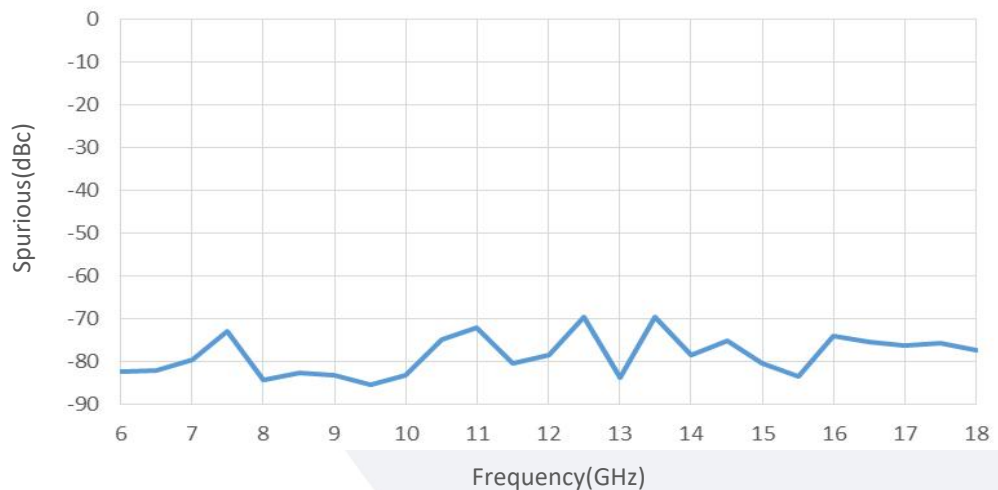
**Pin@P1dB vs Frequency**



**Pin@Pout=60.1dBm vs Frequency**



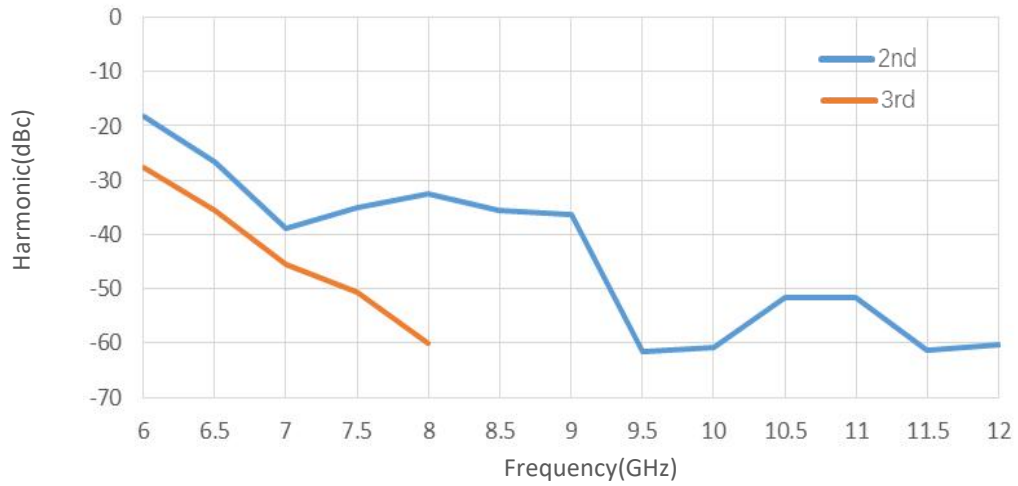
**Spurious vs Frequency**



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**Typical Performance Data:**

**Harmonic vs Frequency**



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