

Solid State High Power Amplifier Systems

6-18GHz/54dB Gain/54dBm Psat/220V AC

Model: TLP6G18G-54-54-BC

TLPA6G18G-54-54-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: 6-18GHz
- Gain: 54dB Min
- Psat Output Power: 54dBm 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 | 54 | | | dB |
| Gain flatness | Δ GL | | ± 4.5 | | dB |
| Gain adjust Range | Δ GR | | 31.5 | | dB |
| Gain adjust Step | Δ GS | | 0.5 | | dB |
| Output Psat | Psat | 54 | | | dBm |
| Output P1dB | P1dB | | 49 | | dBm |
| Spurious@Pout=54dBm | Spur | | | -60 | dBc |
| Harmonics@Pout=54dBm | HAM | | -20 | | dBc |
| Input VSWR | VSWRin | | | 2.0 | :1 |
| AC Voltage | Vac | | 220 | | V AC |
| Impedance | I/O-IMP | 50 | | | Ohms |

Mechanical Specifications:

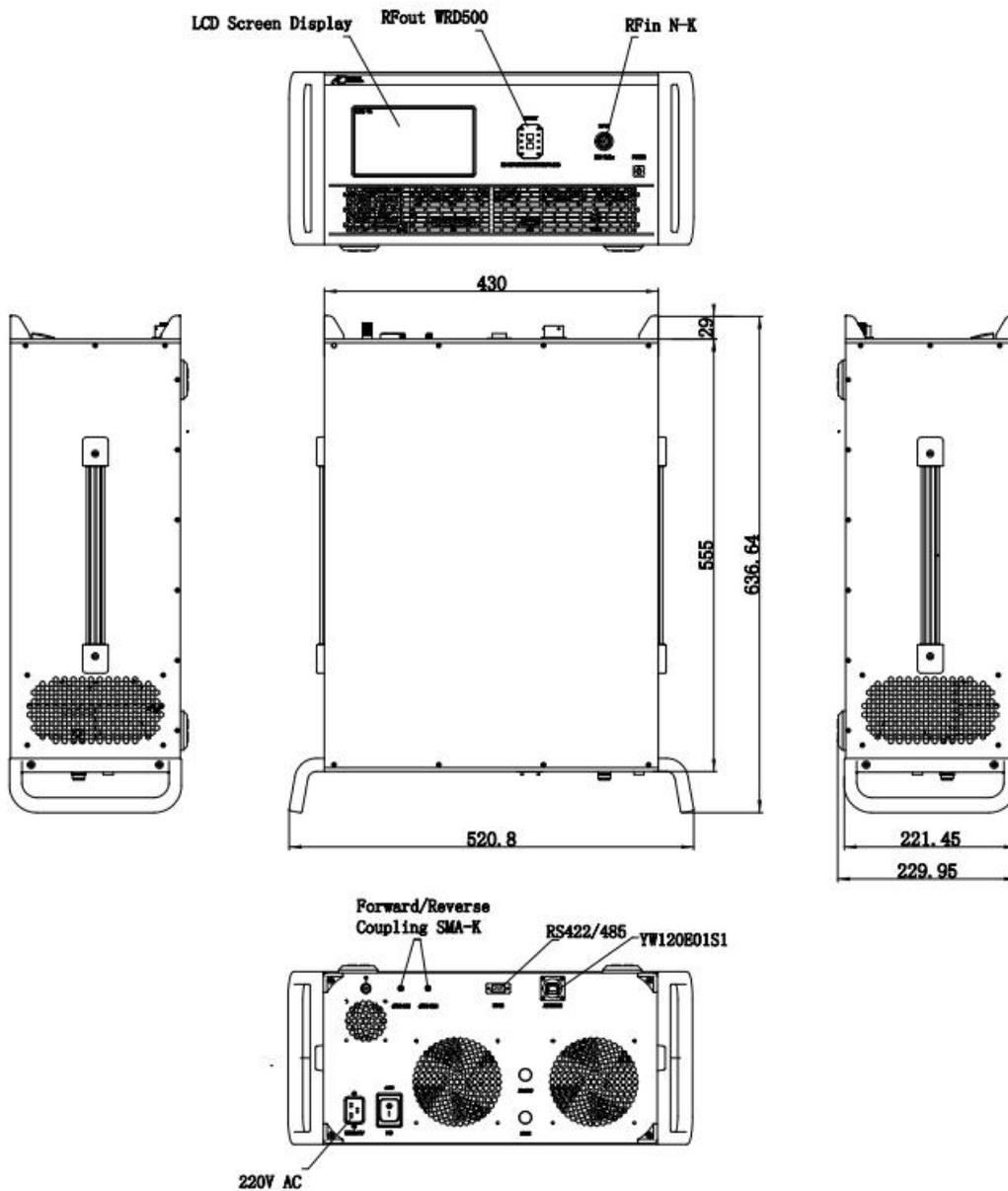
| Parameter | Value | Units |
|--------------------------|------------------------|-------|
| Input /Output Connector | N Female/WRD500 | |
| Forward/Reverse Coupling | SMA Female/ SMA Female | |
| Size | 19 Inch 5U | |
| Weight | ≤ 45 | Kg |

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 |
| 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 | | | |

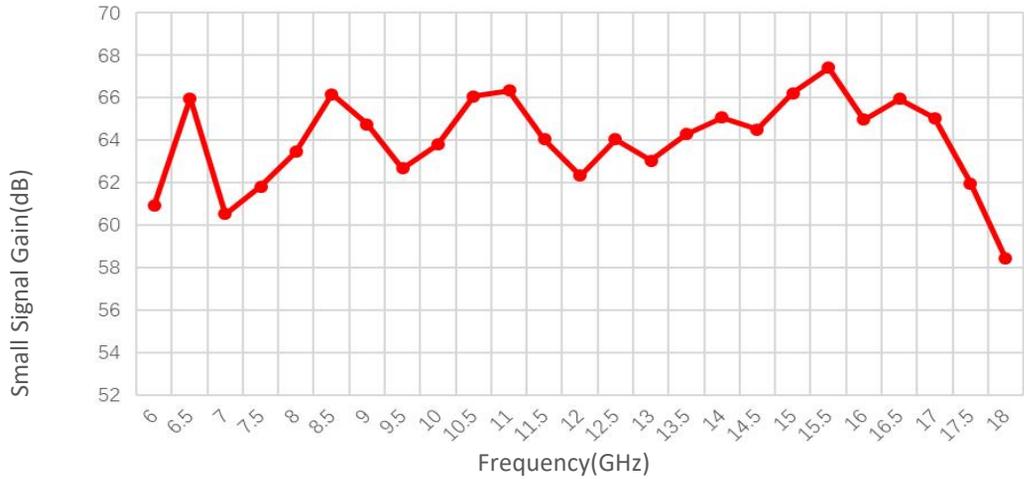
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

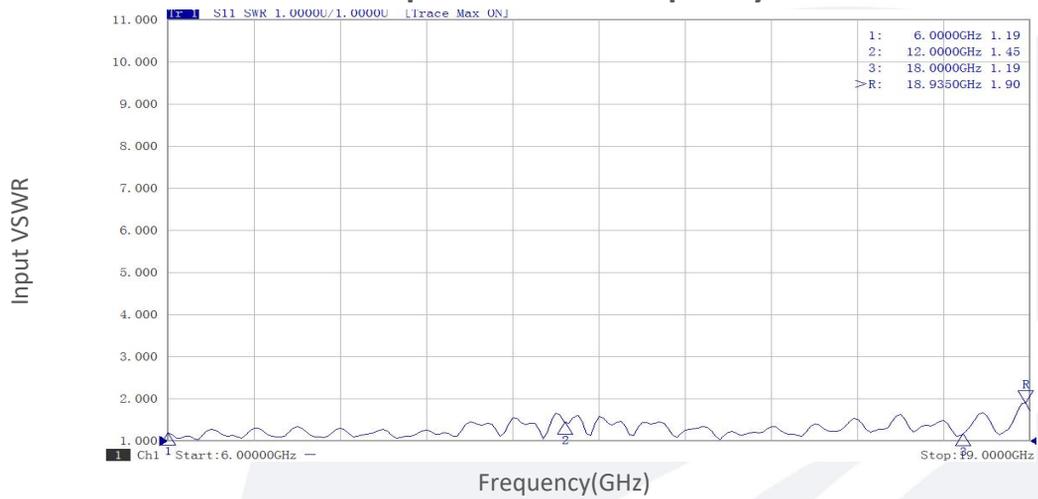
| Base Number | Description | Revision |
|--------------------|--------------------------------------------------------------------------------------------------------|----------|
| TLPA6G18G-54-54-BC | Solid State High Power Amplifier Systems 6-18GHz, Gain:54dB, Psat:54dBm, 220V AC, Built in Fan Cooling | Rev.1.1 |

Typical Performance Data:

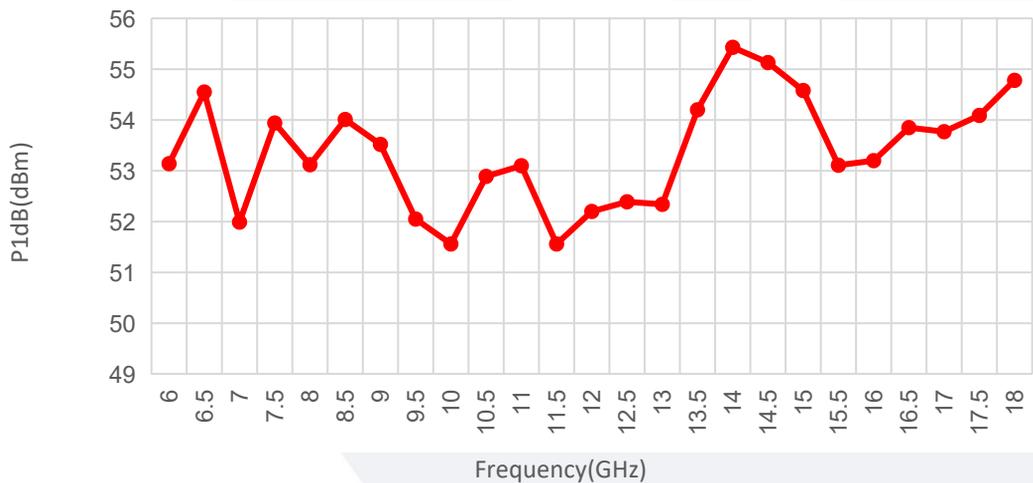
Small Signal Gain vs Frequency



Input VSWR vs Frequency

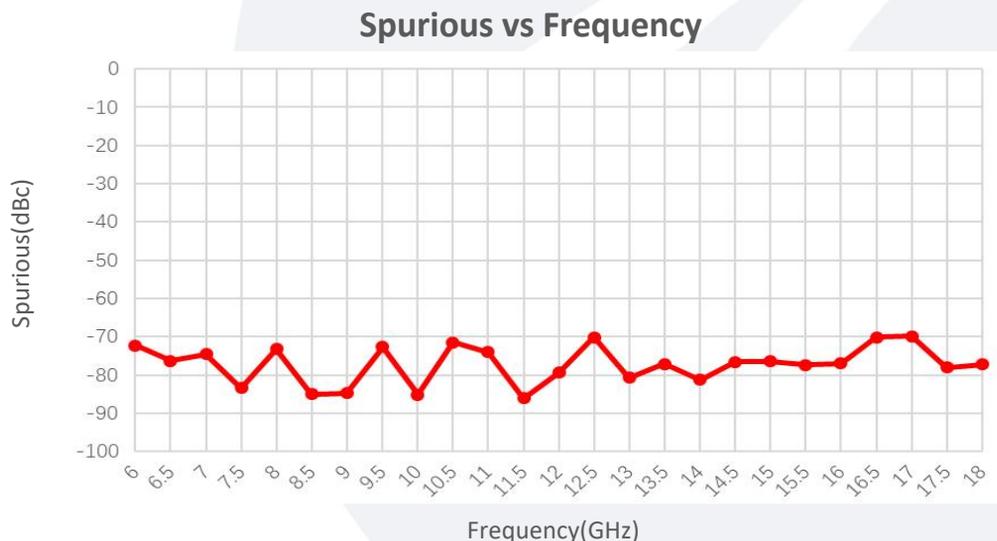
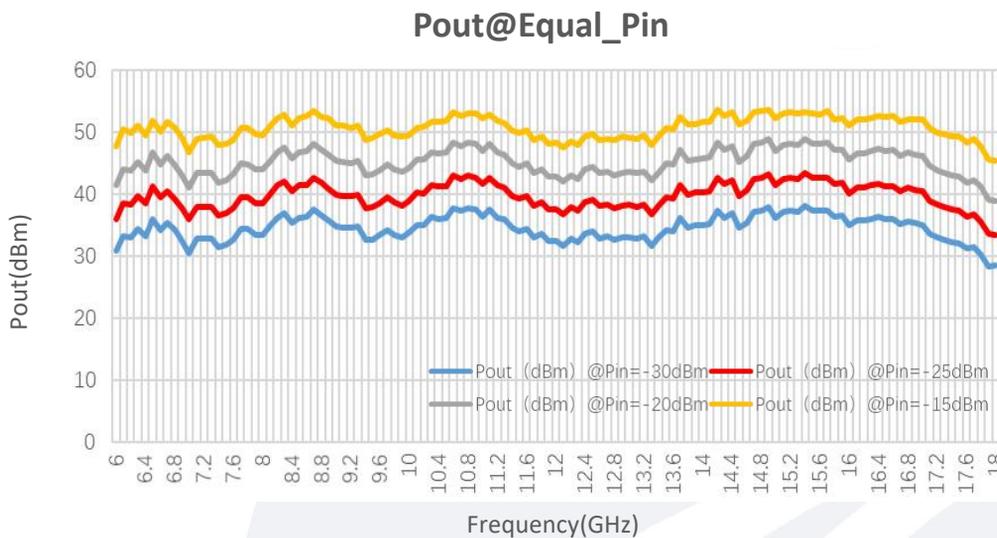
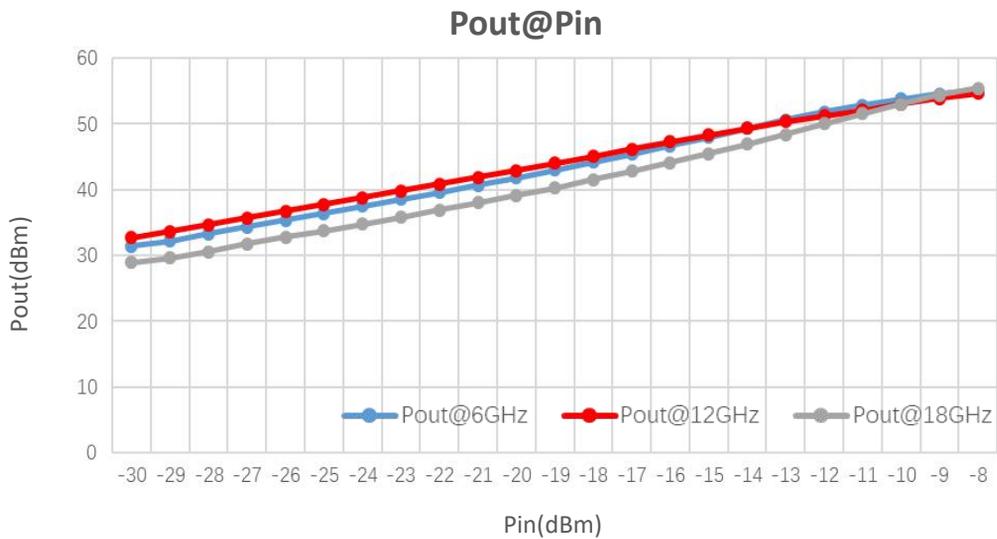


P1dB vs Frequency



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.

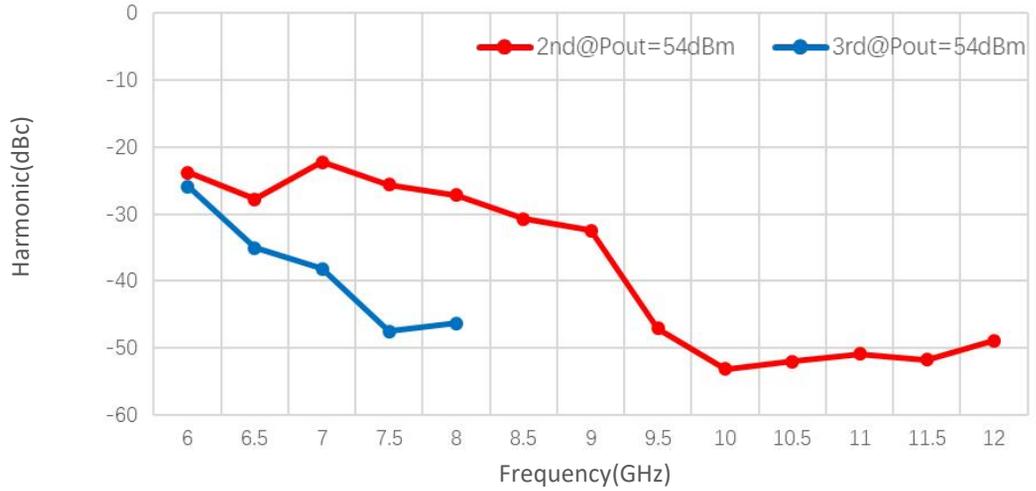
Typical Performance Data:



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Typical Performance Data:

Harmonic vs Frequency



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