

## Solid State High Power Amplifier Systems

6-18GHz/43dB Gain/43dBm Psat/220V AC

Model: TLP6G18G-43-43-BC

TLP6G18G-43-43-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: 43dB Min
- Psat Output Power: 43dBm 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          | 43   |         |           | dB    |
| Gain flatness        | $\Delta$ GL |      | $\pm 4$ |           | dB    |
| ALC accuracy         | ALC         |      |         | $\pm 0.5$ | dB    |
| Output Psat          | Psat        | 43   |         |           | dBm   |
| Spurious@Pout=43dBm  | Spur        |      |         | -60       | dBc   |
| Harmonics@Pout=43dBm | HAM         |      |         | -15       | dBc   |
| Input VSWR           | VSWRin      |      |         | 2.0       | :1    |
| AC Voltage           | Vac         |      | 220     |           | V AC  |
| Power Consumption    | Pdiss       |      |         | 400       | W     |
| Impedance            | I/O-IMP     | 50   |         |           | Ohms  |

### Mechanical Specifications:

| Parameter                  | Value                  | Units |
|----------------------------|------------------------|-------|
| Input /Output Connector    | SMA Female/ SMA Female |       |
| Network port Communication | RS422/RJ-45            |       |
| Size                       | 19 Inch 2U             |       |
| Weight                     | $\leq 20$              | Kg    |

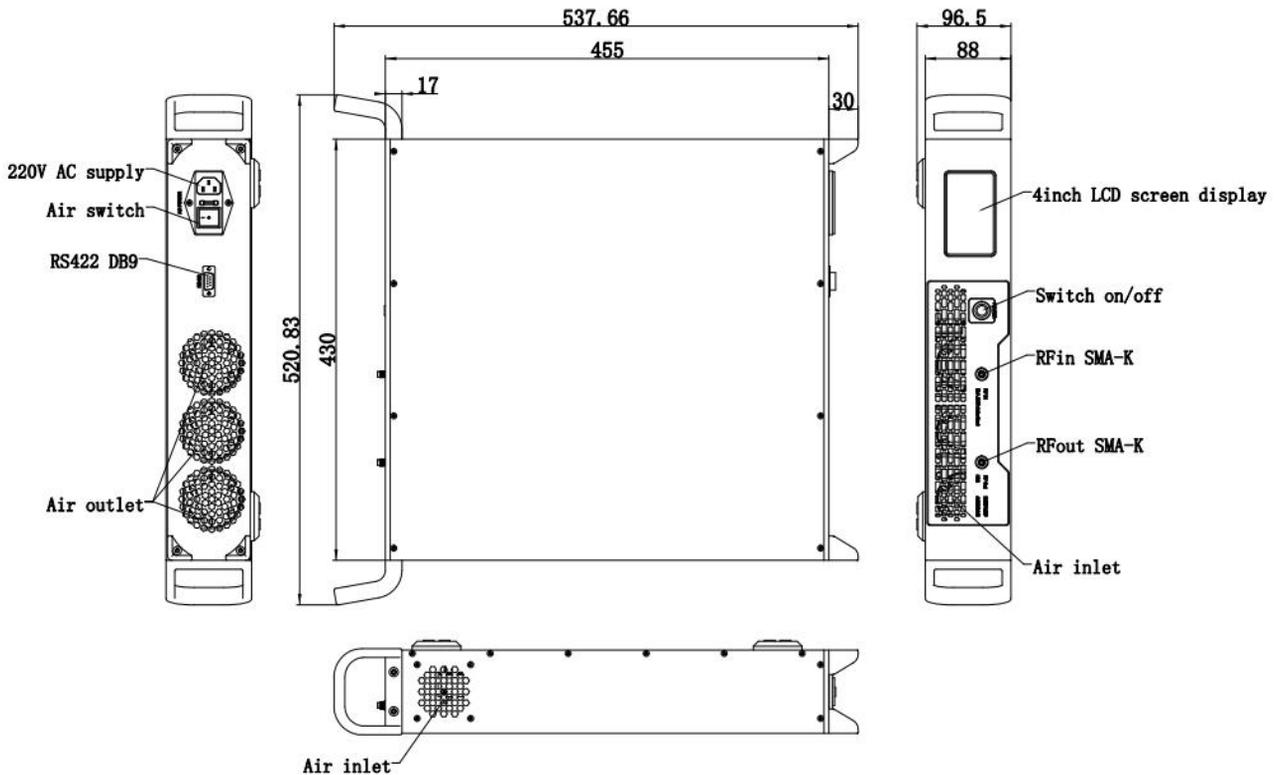
### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| RF Input Power        | +5 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

### Outline Drawing:

Unit:mm

### Regulatory Compliance:



### Key Features:

| Parameter            | Advantages  |
|----------------------|---|
| Control functions    | 1, Power setting On/Off<br>2, ALC automatic level control         |
| Display functions    | 1, Output Power<br>2, Reflect Power<br>3, Fault informations      |
| Protection functions | 1, Over TEM<br>2, Over voltage<br>3, Over current<br>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   |     | +50 | °C    |
| Non-operating Temperature*      | -30   |     | +60 | °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 |     |     |       |

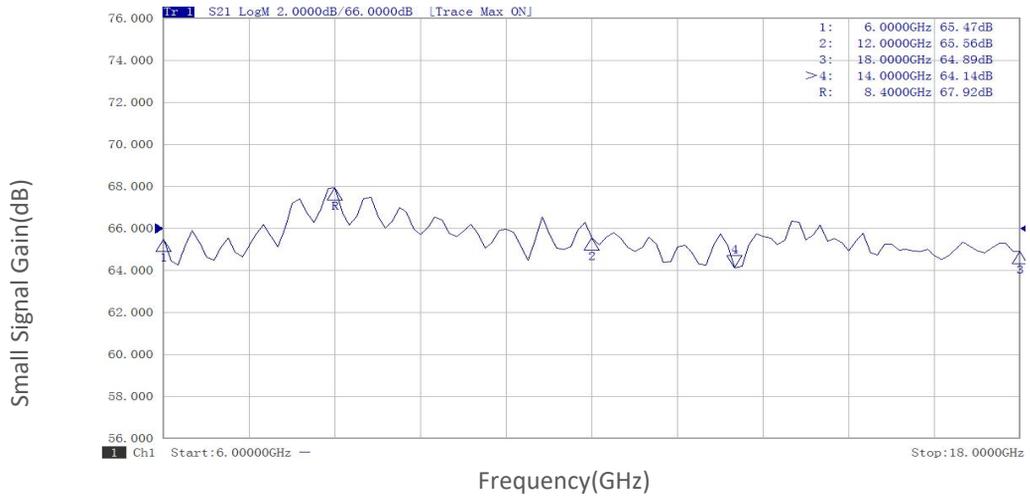
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

| Base Number        | Description  | Revision |
|--------------------|--|----------|
| TLPA6G18G-43-43-BC | Solid State High Power Amplifier Systems 6-18GHz, Gain:43dB, Psat:43dBm, 220V AC, Built in Fan Cooling | Rev.1.1  |

## Typical Performance Data:

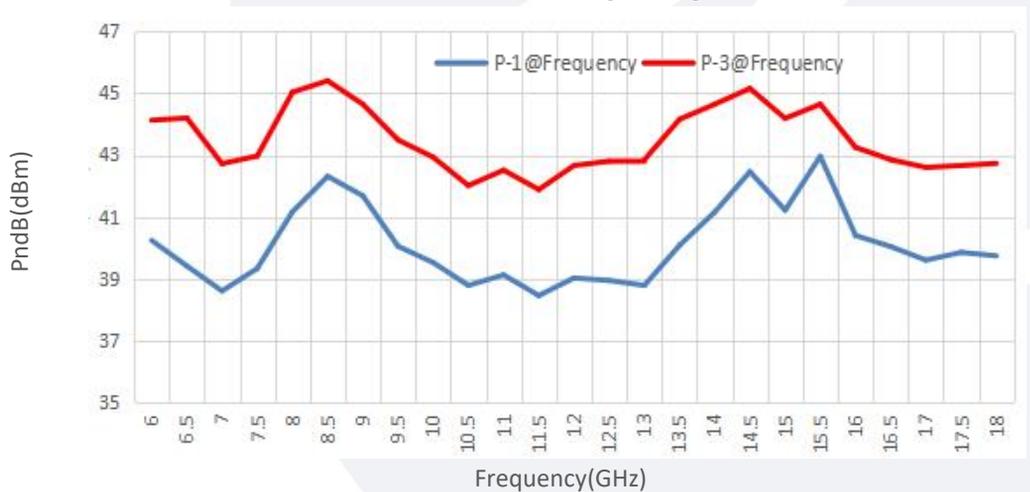
### Small Signal Gain vs Frequency



### Input VSWR vs Frequency



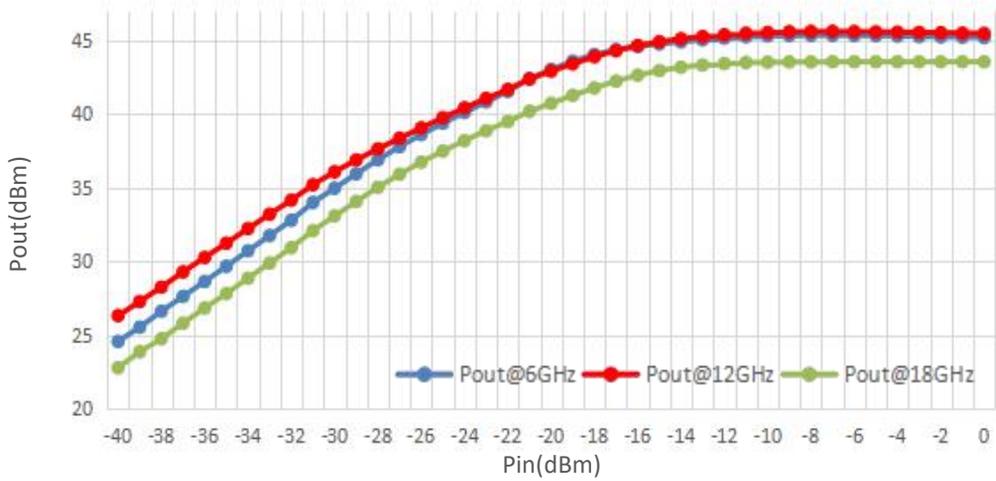
### PndB vs Frequency



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:**

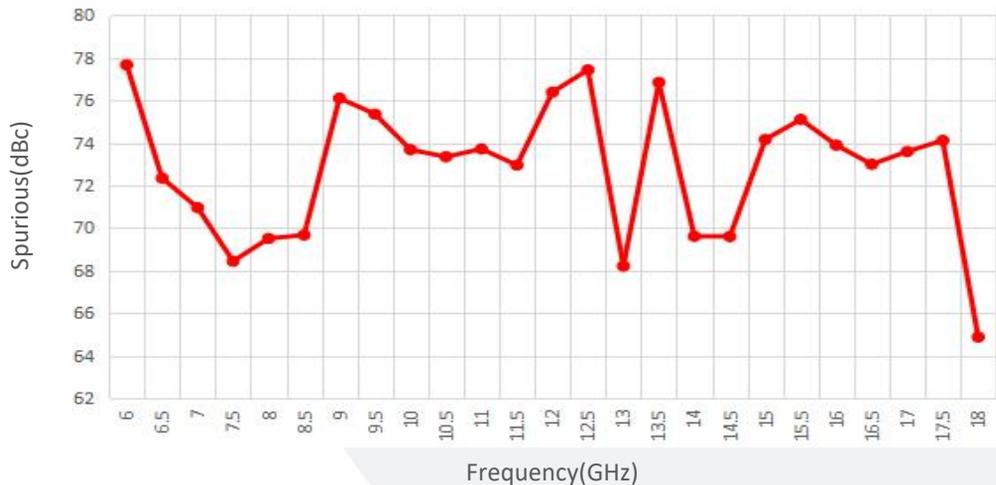
**Pout@Pin**



**Pout@Equal\_Pin**



**Spurious vs Frequency**



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