

## Solid State High Power Amplifier Systems

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

Model: TLPA6G18G-43-43-BC

TLPA6G18G-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



### 电气特性 Electrical Characteristics:

| 参数 Parameter            | 代码 Symbol   | Min  | Typ     | Max       | 单位 Units |
|-------------------------|-------------|------|---------|-----------|----------|
| 频率范围 Frequency range    | BW          | 6-18 |         |           | GHz      |
| 功率增益 Power Gain         | GP          | 43   |         |           | dB       |
| 增益平坦度 Gain flatness     | $\Delta$ GL |      | $\pm 4$ |           | dB       |
| ALC 精度 ALC accuracy     | ALC         |      |         | $\pm 0.5$ | dB       |
| 饱和输出功率 Output Psat      | Psat        | 43   |         |           | dBm      |
| 杂散 Spurious@Pout=43dBm  | Spur        |      |         | -60       | dBc      |
| 谐波 Harmonics@Pout=43dBm | HAM         |      |         | -15       | dBc      |
| 输入驻波 Input VSWR         | VSWRin      |      |         | 2.0       | :1       |
| 交流电压 AC Voltage         | Vac         |      | 220     |           | V AC     |
| 功耗 Power Consumption    | Pdiss       |      |         | 400       | W        |
| 阻抗 Impedance            | I/O-IMP     | 50   |         |           | Ohms     |

### 机械特性 Mechanical Specifications:

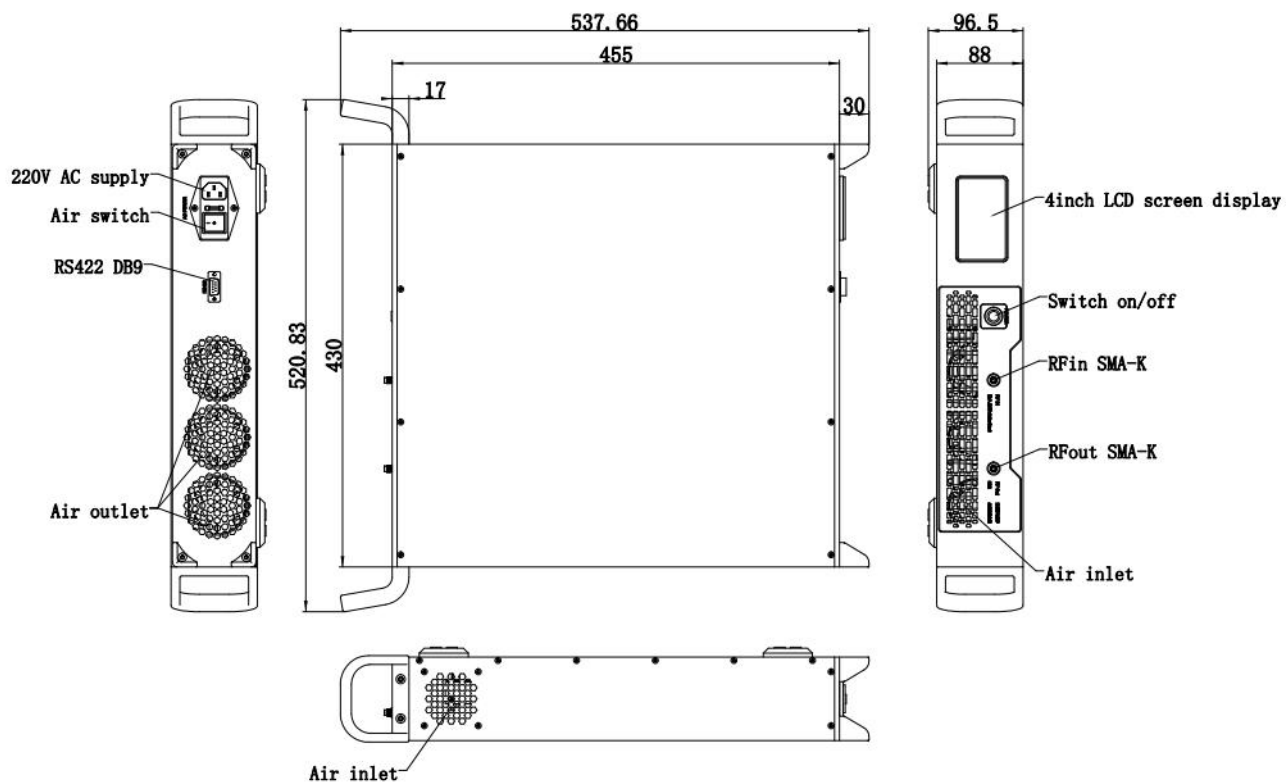
| 参数 Parameter                    | 指标 Value               | 单位 Units |
|---------------------------------|------------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female/ SMA Female |          |
| 程控接口 Network port Communication | RS422/RJ-45            |          |
| 尺寸 Size                         | 19 Inch 2U             |          |
| 重量 Weight                       | $\leq 20$              | Kg       |

## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 输入功率 RF Input Power          | +5 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing:

Unit:mm



## 主要功能 Key Features:

| 参数 Parameter                | 特点 Advantages                                                     |
|-----------------------------|-------------------------------------------------------------------|
| 控制功能 Control functions      | 1, Power setting On/Off<br>2, ALC automatic level control         |
| 显示功能 Display functions      | 1, Output Power<br>2, Reflect Power<br>3, Fault informations      |
| 内置保护功能 Protection functions | 1, Over TEM<br>2, Over voltage<br>3, Over current<br>4, Over VSWR |
| 监控和控制 Remote control        | RS422/Ethernet                                                    |
| 冷却系统 Cooling system         | Built in Cooling system, forced air cooling                       |

## 温度环境 Environmental Conditions:

| 参数 Parameter                       | Min                                                 | Typ | Max | 单位 Units |
|------------------------------------|-----------------------------------------------------|-----|-----|----------|
| 操作温度 Operating Temperature*        | -20                                                 |     | +50 | °C       |
| 存储温度 Non-operating Temperature*    | -30                                                 |     | +60 | °C       |
| 相对湿度 Relative humidity             |                                                     | 95  |     | %        |
| 海拔 Altitude                        | 10,000                                              |     |     | feet     |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |     |          |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave, 3 axis both directions |     |     |          |

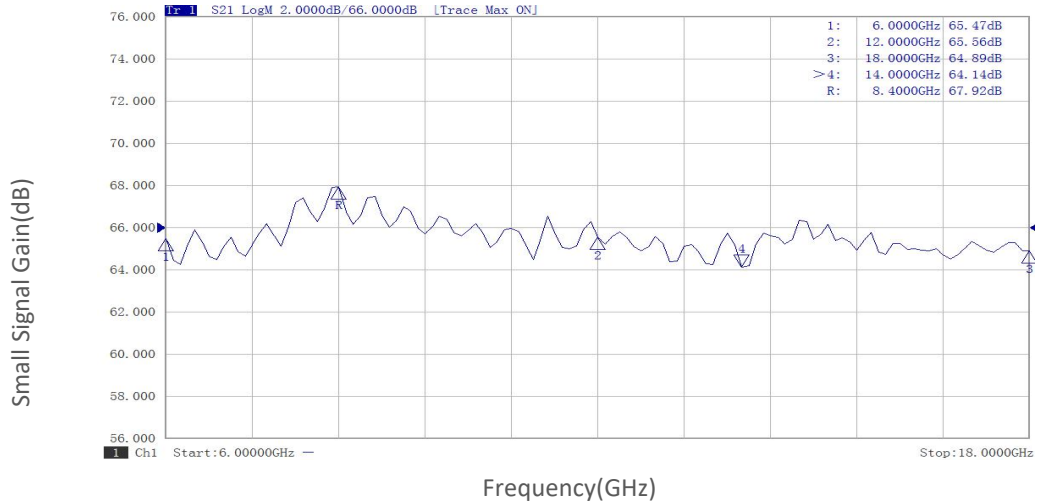
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

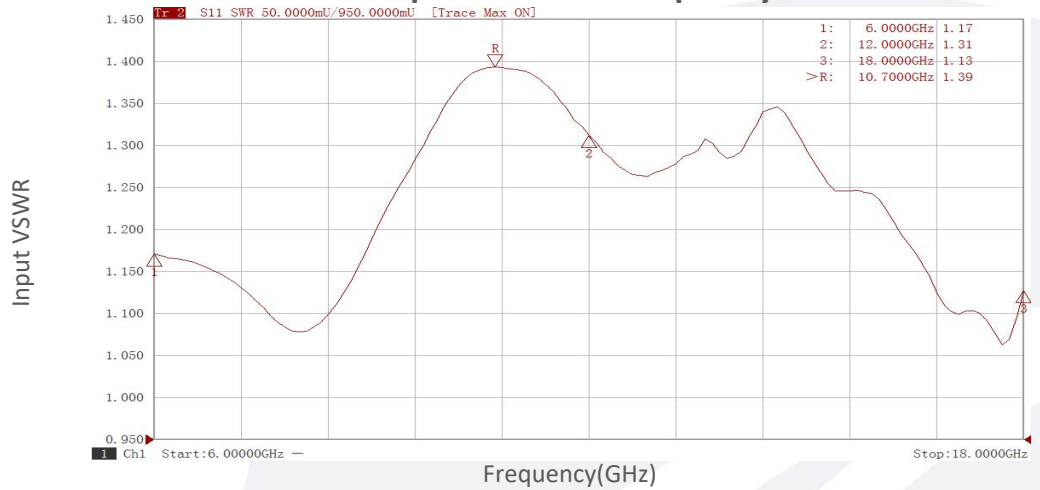
| 标准型号 Base Number   | 描述 Description                                                                                         | 版本号 Revision |
|--------------------|--------------------------------------------------------------------------------------------------------|--------------|
| TLPA6G18G-43-43-BC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

## 典型曲线 Typical Performance Data:

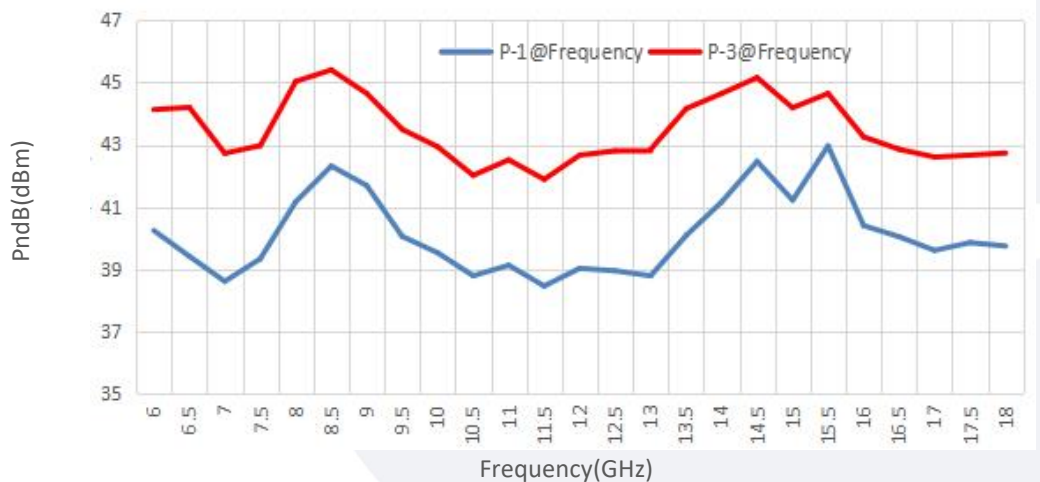
### Small Signal Gain vs Frequency



### Input VSWR vs Frequency



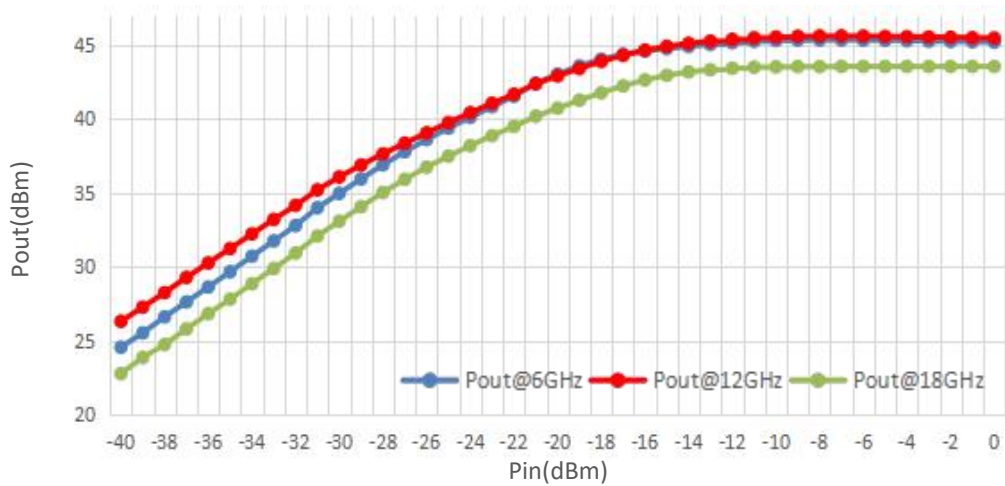
### PndB vs Frequency



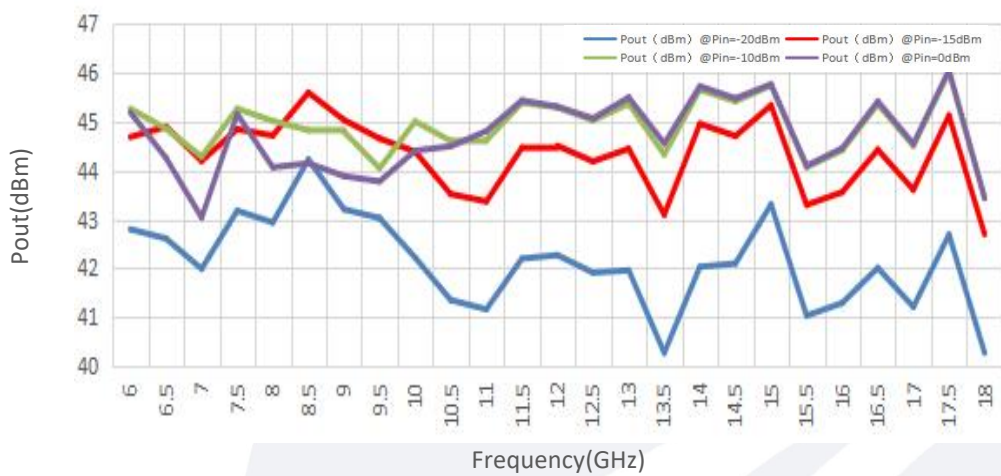
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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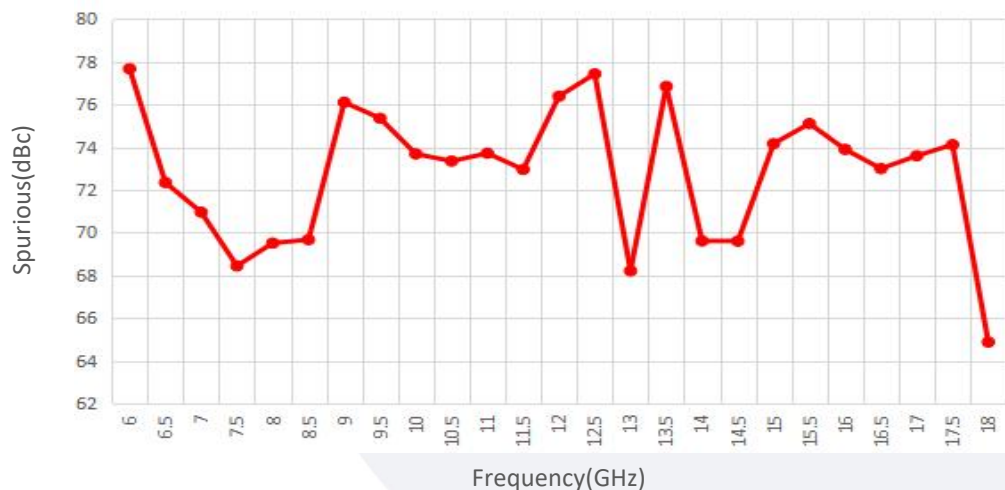
Pout@Pin



Pout@Equal\_Pin



Spurious vs Frequency



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