

## Solid State High Power Amplifier Systems

15-18GHz/60dB Gain/60dBm Psat/220V AC

Model: TLPA15G18G-60-60-BC

TLPA15G18G-60-60-BC is a solid state high power amplifier systems provides high output power and high gain across the 15 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: 15-18GHz
- Gain: 60dB Min
- Psat Output Power: 60dBm 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           | 15-18 |         |           | GHz      |
| 功率增益 Power Gain                              | GP           | 60    |         |           | dB       |
| 增益平坦度 Gain flatness                          | $\Delta GL$  |       | $\pm 3$ |           | dB       |
| 峰值输出功率 Peak Output Power                     | P.P          | 60    |         |           | dB       |
| 输出功率调节范围<br>Output Power adjust Range        | $\Delta PR$  |       | 30      |           | dB       |
| 输出功率调节步进<br>Output Power adjust Step         | $\Delta PS$  |       | 0.5     |           | dB       |
| 峰值输出功率平坦度<br>Peak Output Power flatness      | $\Delta P.P$ |       |         | $\pm 1.5$ | dB       |
| 杂散 Spurious                                  | Spur         |       | -60     | -50       | dBc      |
| 谐波 Harmonics                                 | HAM          |       | -20     |           | dBc      |
| 调制频率 Modulation Frequency                    | MF           |       |         | 100       | KHz      |
| 脉冲宽度 Pulse Width                             | T            | 0.1   |         | 300       | us       |
| 占空比 Duty Cycle                               | $\tau$       |       |         | 20        | %        |
| 上升/下降沿 Rise/Fall Time                        | Tr           |       | 30      | 50        | ns       |
| 输入驻波 Input VSWR                              | VSWR         |       |         | 2         | :1       |
| 交流电压 AC Voltage                              | Vac          |       | 220     |           | V AC     |
| 5%占空比功耗<br>Power consumption@5% duty cycle   | Pdiss        |       |         | 380       | W        |
| 10%占空比功耗<br>Power consumption@10% duty cycle | Pdiss        |       |         | 730       | W        |
| 阻抗 Impedance                                 | I/O-IMP      | 50    |         |           | Ohms     |

## 机械特性 Mechanical Specifications:

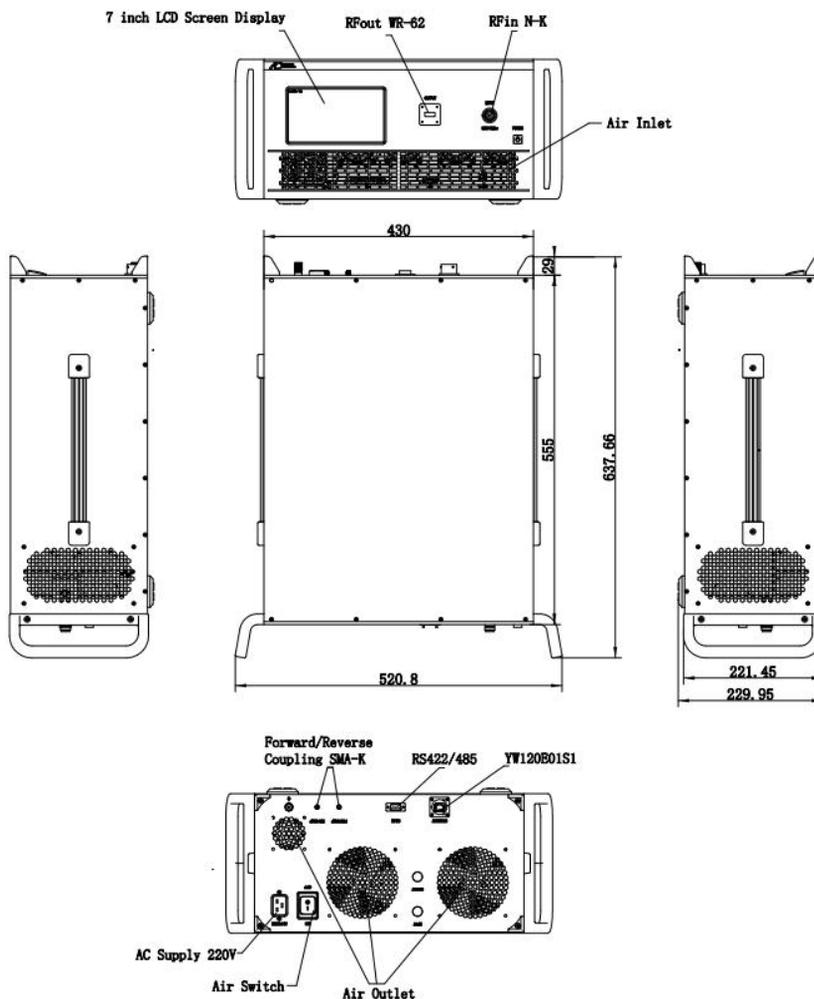
| 参数 Parameter                    | 指标 Value      | 单位 Units |
|---------------------------------|---------------|----------|
| 输入/输出接口 Input /Output Connector | N Female/WR62 |          |
| 通信接口 Communication Connector    | DB9/RJ45      |          |
| 尺寸 Size                         | 19 Inch 5U    |          |
| 重量 Weight                       | ≤45           | Kg       |

## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 输入功率 RF Input Power          | TBD                  |
| 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<br>3, RF ON/OFF<br>4, Gain adjustment<br>5, Real time status query |
| 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   |
| 指示灯 Indications             | 1, AC on/off<br>2, DC on/off<br>3, RF on/off<br>4, Fault   |
| 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   |     | +40 | °C       |
| 存储温度 Non-operating Temperature*    | -30   |     | +50 | °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 |
|---------------------|---|--------------|
| TLPA15G18G-60-60-BC | Solid State High Power Amplifier Systems 15-18GHz, Gain:60dB, Psat:60dBm, 220V AC, Built in Fan Cooling | Rev.1.1      |