

## Solid State High Power Amplifier Systems

4-8GHz/60dB Gain/60dBm Psat/220V AC

Model: TLPA4G8G-60-60-BC

TLPA4G8G-60-60-BC is a solid state high power amplifier systems provides high output power and high gain across the 4 to 8 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: 4-8GHz
- Gain: 60dB Min
- Psat Output Power: 60dBm Typ
- 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        | 4-8 |     |      | GHz      |
| 功率增益 Power Gain                              | GP        | 60  |     |      | dB       |
| 增益平坦度 Gain flatness                          | ΔGL       |     | ±3  |      | dB       |
| 输出功率调节范围<br>Output Power adjust Range        | ΔPR       |     | 30  |      | dB       |
| 输出功率调节步进<br>Output Power adjust Step         | ΔPS       |     | 0.5 |      | dB       |
| 峰值输出功率 Peak Output Power                     | P.P       | 59  | 60  |      | dBm      |
| 峰值功率平坦度<br>Peak Power flatness               | ΔP.PL     |     |     | ±0.5 | dB       |
| 杂散 Spurious                                  | Spur      |     | -60 | -50  | dBc      |
| 谐波 Harmonics                                 | HAM       |     | -15 | -12  | dBc      |
| 调制频率 Modulation Frequency                    | MF        | 0.5 |     | 100  | KHz      |
| 脉冲宽度 Pulse Width                             | T         | 0.3 |     | 300  | us       |
| 占空比 Duty Cycle                               | τ         |     |     | 10   | %        |
| 上升/下降沿 Rise/Fall Time                        | Tr        |     | 50  | 100  | 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     |     |     | 430  | W        |
| 20%占空比功耗<br>Power consumption@20% duty cycle | Pdiss     |     |     | 850  | W        |
| 阻抗 Impedance                                 | I/O-IMP   | 50  |     |      | Ohms     |

## 机械特性 Mechanical Specifications:

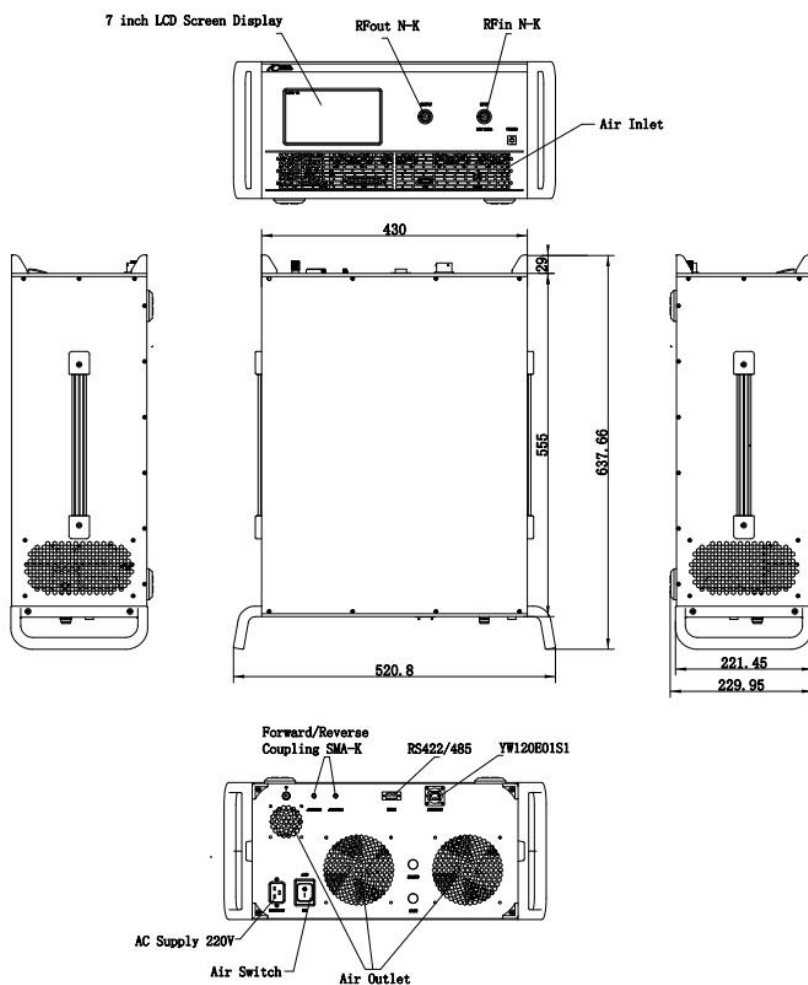
| 参数 Parameter                    | 指标 Value          | 单位 Units |
|---------------------------------|-------------------|----------|
| 输入/输出接口 Input /Output Connector | N Female/N Female |          |
| 控制接口 Control Connector          | RS422/LAN         |          |
| 尺寸 Size                         | 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 setting 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                                                                                                                       |
| 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 |
|-------------------|-------------------------------------------------------------------------------------------------------|--------------|
| TLPA4G8G-60-60-BC | Solid State High Power Amplifier Systems 4-8GHz, Gain:60dB, Psat:60dBm, 220V AC, Built in Fan Cooling | Rev.1.1      |