

## Solid State High Power Amplifier Systems

1.5GHz /65dB Gain/65 dBm Psat/48V AC

Model: TLPA1.5G-65-65-P

TLPA1.5G-65-65-P is a solid state high power amplifier systems provides high output power and high gain across the 1.5 GHz frequency range. The amplifier features a built-in 48V 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:

- Wide Band: 1.5GHz
- Power Gain: 65dB Min
- Psat Output Power:65dBm 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        | 1.5                                   |     |      | GHz      |
| 工作模式 Working Mode              | MOD       | PULSE ONLY                            |     |      |          |
| 功率增益 Power Gain@Pout=65dBm     | GP        | 65                                    |     |      | dB       |
| 饱和输出功率 Output Psat             | Psat      | 65                                    | 66  |      | dBm      |
| 杂散 Spurious@Pout=65dBm         | Spur      |                                       |     | -60  | dBc      |
| 谐波 Harmonics@Pout=65dBm        | HAM       |                                       |     | -20  | dBc      |
| 输入信号体制 Input Signal Mode       | IPS_MOD   | CW/PULSE                              |     |      |          |
| 调制信号电平 Modulation Signal Level | TTL       | 0                                     |     | 5    | V        |
| 调制频率 Modulation Frequency      | MF        | 1                                     |     | 100  | KHz      |
| 脉冲宽度 Pulse Width               | T         | 1                                     |     | 500  | us       |
| 占空比 Duty Cycle                 | $\tau$    | 0.1                                   |     | 30   | %        |
| 上升/下降沿 Rise/Fall Time          | Tr        |                                       | 50  | 100  | ns       |
| 脉冲输入 Pulse Input               |           | TTL level, 50 ohm nominal termination |     |      |          |
| 顶降 Pulse Drop@T=100us          | Pdrop     |                                       | 0.5 | 1    | dB       |
| 启动延迟 Star Delay                | DSU       |                                       | 150 |      | ns       |
| 关断延迟 Shutoff Delay             | TOF       |                                       | 250 |      | ns       |
| 输入驻波 Input VSWR                | VSWRin    |                                       |     | 1.5  | :1       |
| 输出驻波 Output VSWR               | VSWRout   |                                       |     | 2    | :1       |
| 供电电压 Supply Voltage            | V         | +48(It can be changed to 220 V AC)    |     |      | V AC     |
| 功耗 Power Consumption           | Pdiss     |                                       |     | 2000 | W        |
| 阻抗 Impedance                   | I/O-IMP   | 50                                    |     |      | Ohms     |

## 机械特性 Mechanical Specifications:

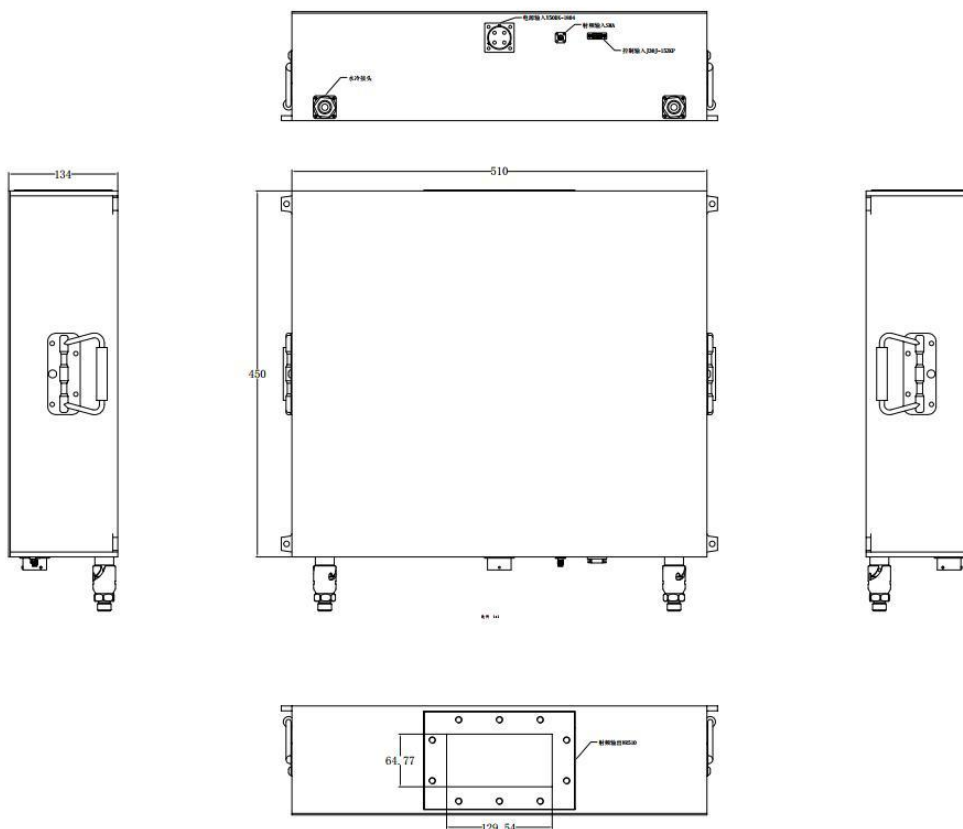
| 参数 Parameter                                  | 指标 Value       | 单位 Units |
|-----------------------------------------------|----------------|----------|
| 输入/输出接口 Input /Output Connector               | N Female/WR510 |          |
| 供电接口 Supply Connector                         | Y50DX-1804     |          |
| 调制信号输入接口<br>Modulation Signal Input Connector | J30J-15ZKP     |          |
| 尺寸 Size                                       | 510*450*134    | mm       |
| 重量 Weight                                     | ≤35            | 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         |
| 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                                                             |
| 冷却系统 Cooling system         | Built in Cooling system, liquid 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 |
|------------------|----------------------------------------------------------------------------------------------------------------|--------------|
| TLPA1.5G-65-65-P | Solid State High Power Amplifier Systems<br>1.5GHz, Gain: 65dB, Psat: 65 dBm, +48V AC, Built in Liquid Cooling | Rev.1.1      |