

## Solid State High Power Amplifier Systems

9-10GHz/62dB Gain/62dBm Psat/28V DC

Model: TLPA9G10G-62-62-P-BC

TLPA9G10G-62-62-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 9 to 10 GHz frequency range. The amplifier features +28V DC 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: 9-10GHz
- Gain: 62dB Min
- Psat Output Power:62dBm Min
- Protection:Over TEM,over voltage, over current 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          | 9-10 |         |           | GHz      |
| 功率增益 Power Gain                           | GP          | 62   |         |           | dB       |
| 小信号增益平坦度<br>Small Signal Gain flatness    | $\Delta GL$ |      | $\pm 4$ | $\pm 4.5$ | dB       |
| 功率增益平坦度<br>Power Gain flatness@Pout=62dBm | $\Delta GP$ |      | $\pm 4$ | $\pm 4.5$ | dB       |
| 饱和输出功率 Output Psat                        | Psat        | 62   |         |           | dBm      |
| 杂散 Spurious@Pout=62dBm                    | Spur        |      |         | -60       | dBc      |
| 谐波 Harmonics@Pout=62dBm                   | HAM         |      |         | -30       | dBc      |
| 底噪 Ground Noise                           | NL          |      |         | -80       | dBm/Hz   |
| 调制信号电平 Modulation Signal Level            | TTL         | 0    |         | 5         | V        |
| 调制频率 Modulation Frequency                 | MF          | 0.5  |         | 100       | KHz      |
| 脉冲宽度 Pulse Width                          | T           | 0.3  |         | 500       | us       |
| 占空比 Duty Cycle                            | $\tau$      |      |         | 10        | %        |
| 上升/下降沿 Rise/Fall Time                     | Tr          |      | 50      | 100       | ns       |
| 顶降 Pulse Drop@T=100us                     | Pdrop       |      | 0.5     |           | dB       |
| 直流供电 DC Supply Voltage                    | Vdc         |      | 28      |           | V        |
| 启动冲击电流<br>Inrush Impulse Current@10%      | IPC         |      |         | 20        | A        |
| 输入驻波 Input VSWR                           | VSWRin      |      |         | 1.5       | :1       |
| 输出驻波 Output VSWR                          | VSWRout     |      |         | 2         | :1       |

## 电气特性 Electrical Characteristics:

| 参数 Parameter             | 代码 Symbol | Min | Typ | Max | 单位 Units |
|--------------------------|-----------|-----|-----|-----|----------|
| 功耗 Power consumption@5%  | Pdiss     |     |     | 450 | W        |
| 功耗 Power consumption@10% | Pdiss     |     |     | 900 | W        |

## 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/WRD90      | Height-reduced WR 90      |
| 正向/反向耦合 Forward/Reverse Coupling | SMA Female/SMA Female | 40±2dB                    |
| 直流供电连接器 DC Supply Interface      | DSUB-8W8              | Pin1~4:+28V<br>Pin5~8:GND |
| 控制接口 Control Connector           | J30J-15ZKP            |                           |
| 尺寸 Size                          | 398*320*149           | mm                        |
| 重量 Weight                        | /                     | Kg                        |

## 绝对最大值 Absolute Maximum Ratings:

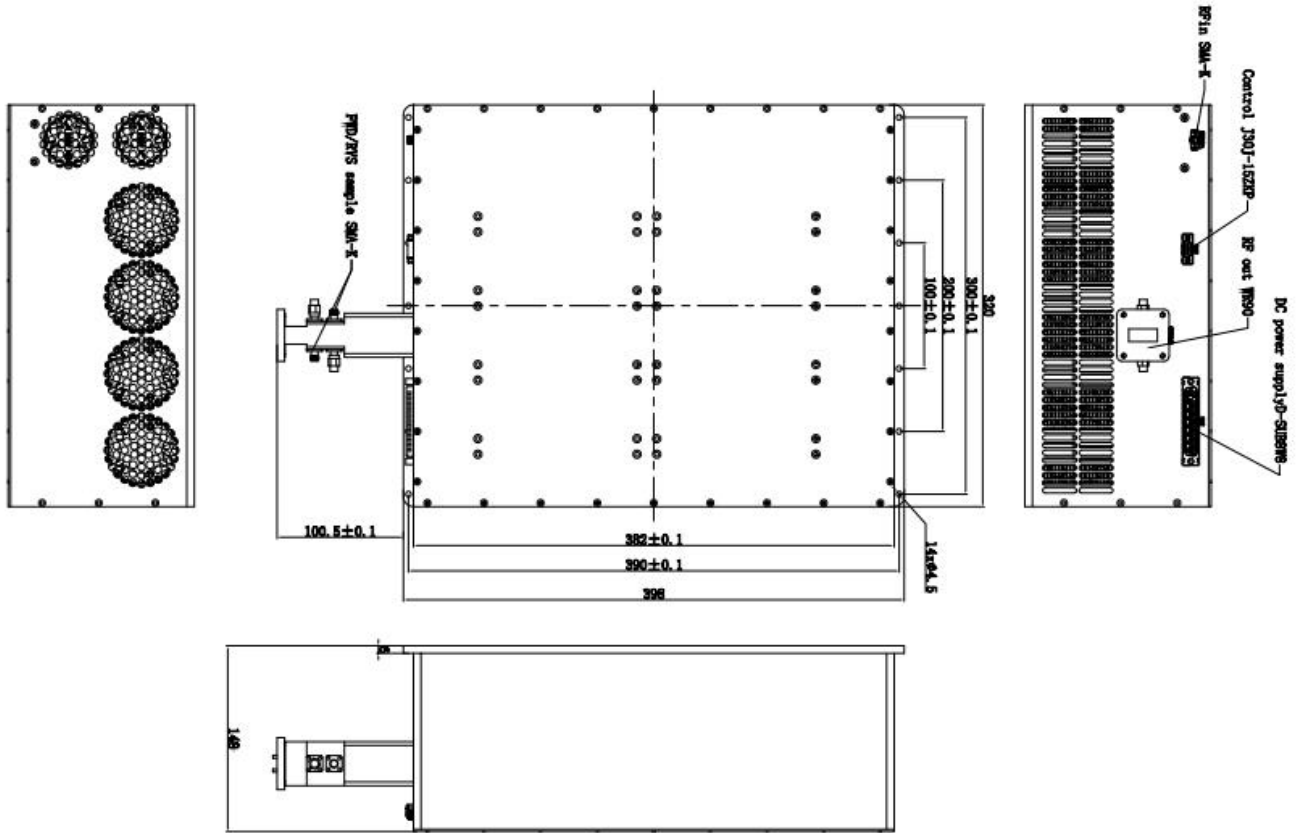
| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 输入功率 RF Input Power          | +10 dBm              |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 控制接口 Control Connector(J30J-15ZKP):

| 引脚 Pin  | 功能 Function            |
|---------|------------------------|
| Pin1    | TTL(Modulating signal) |
| Pin2    | GND(Modulating signal) |
| Pin3    | 0.5dB Attenuation Bit  |
| Pin4    | 1dB Attenuation Bit    |
| Pin5    | 2dB Attenuation Bit    |
| Pin6    | 4dB Attenuation Bit    |
| Pin7    | 8dB Attenuation Bit    |
| Pin8    | 16dB Attenuation Bit   |
| Pin9~15 | GND                    |

## 外形图 Outline Drawing:

Unit:mm



## 主要功能 Key Features:

| 参数 Parameter                | 特点 Advantages                                                  |
|-----------------------------|----------------------------------------------------------------|
| 内置保护功能 Protection functions | 1,Over TEM<br>2,Over voltage<br>3,Over current<br>4,Over VSWR* |
| 冷却系统 Cooling system         | Built in Cooling system,forced air cooling                     |

\*Note: This function can be provided according to customer requirements..

## 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 |
|----------------------|---------------------------------------------------------------------------------------------------------|--------------|
| TLPA9G10G-62-62-P-BC | Solid State High Power Amplifier Systems 9-10GHz, Gain:62dB, Psat:60 dBm, +28V DC, Built in Fan Cooling | Rev.1.1      |