

## Solid State High Power Amplifier Systems

2.5-7.5GHz /57dB Gain/57 dBm Psat/380V AC

Model: TLPA2.5G7.5G-57-57-BC

TLPA2.5G7.5G-57-57-BC is a solid state high power amplifier systems provides high output power and high gain across the 2.5 to 7.5 GHz frequency range. The amplifier features a built-in 380V 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: 2.5-7.5GHz
- Gain: 57dB Min
- Psat Output Power: 57dBm 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          | 2.5-7.5 |         |      | GHz      |
| 功率增益 Power Gain        | GP          | 57      |         |      | dB       |
| 增益平坦度 Gain flatness    | $\Delta$ GL |         | $\pm 4$ |      | dB       |
| 饱和输出功率 Output Psat     | Psat        | 57      |         |      | dBm      |
| 杂散 Spurious@Pout=57dBm | Spur        |         | -60     | -50  | dBc      |
| 谐波 Harmonics           | HAM         |         | -15     | -10  | dBc      |
| 输入驻波 Input VSWR        | VSWRin      |         |         | 2.0  | :1       |
| 交流电压 AC Voltage        | Vac         |         | 380     |      | V AC     |
| 功耗 Power Consumption   | Pdiss       |         |         | 5000 | W        |
| 阻抗 Impedance           | I/O-IMP     | 50      |         |      | Ohms     |

### 机械特性 Mechanical Specifications:

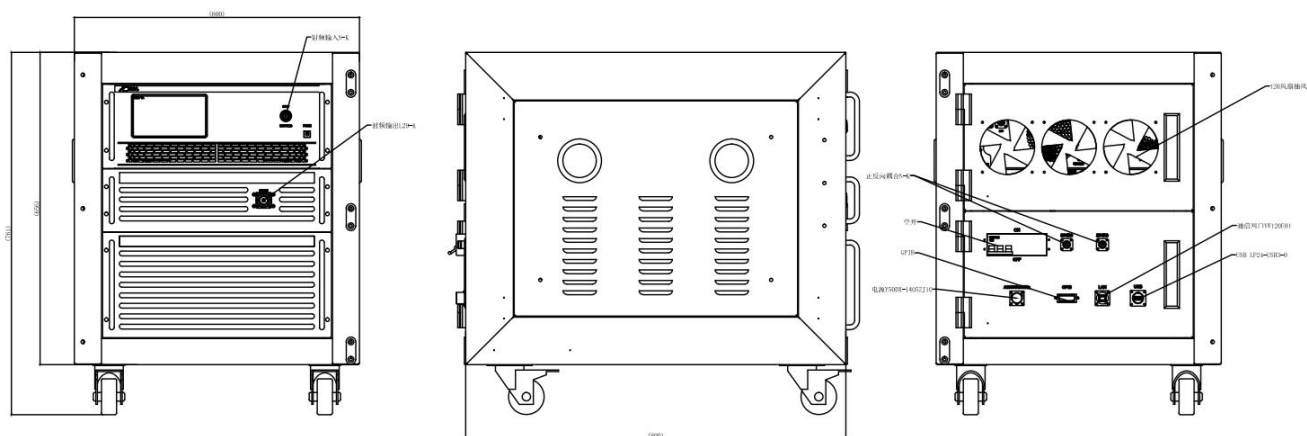
| 参数 Parameter                    | 指标 Value                      | 单位 Units |
|---------------------------------|-------------------------------|----------|
| 输入/输出接口 Input /Output Connector | N Female/L29 Female or WRD250 |          |
| 尺寸 Size                         | 12U                           |          |
| 重量 Weight                       | $\leq 150$                    | Kg       |

### 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 输入功率 RF Input Power          | 0 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<br>3,RF setting On/Off |
| 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 | ℃        |
| 存储温度 Non-operating Temperature*    | -30                                                 |     | +50 | ℃        |
| 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  |     |     |          |

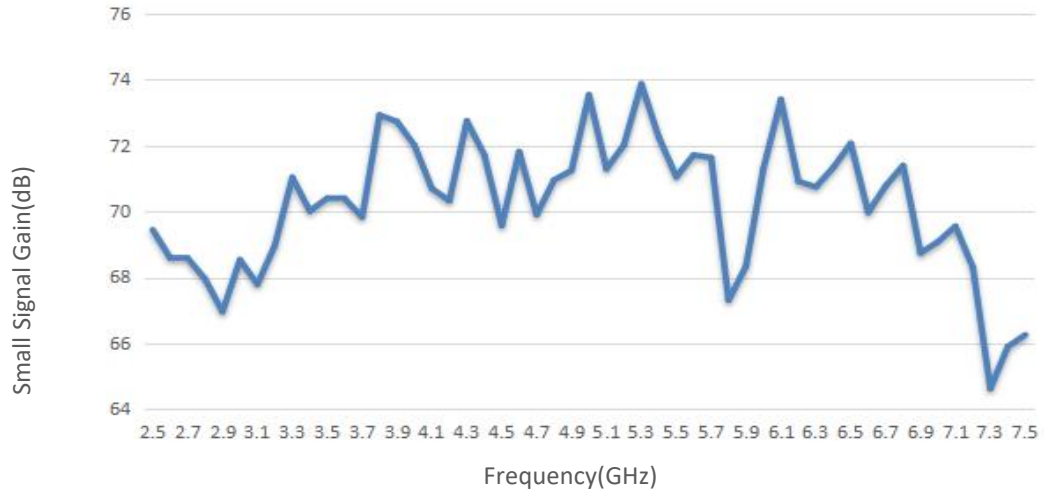
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

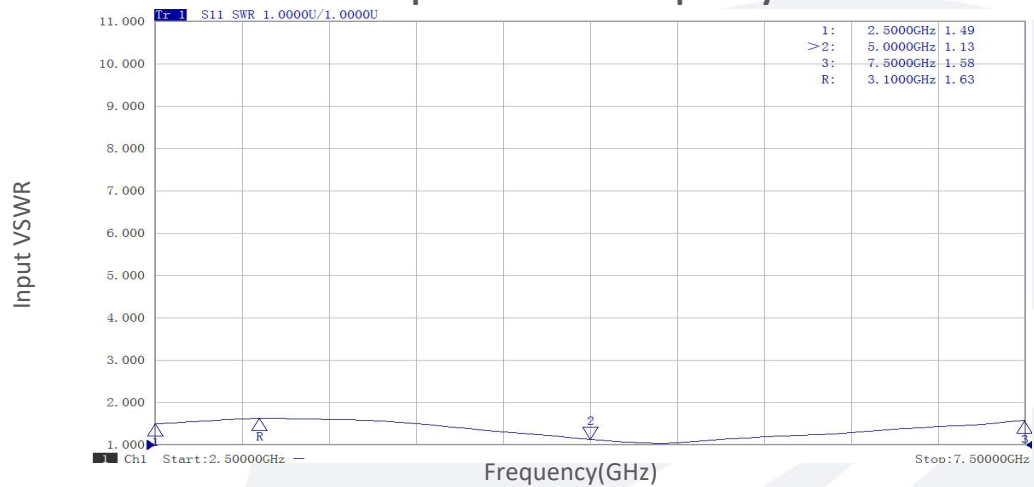
| 标准型号 Base Number      | 描述 Description                                                                                         | 版本号 Revision |
|-----------------------|--------------------------------------------------------------------------------------------------------|--------------|
| TLPA2.5G7.5G-57-57-BC | Solid State High Power Amplifier Systems 2.5-7.5GHz,Gain:57dB,Psat:57 dBm,380V AC,Built in Fan Cooling | Rev.1.1      |

## 典型曲线 Typical Performance Data:

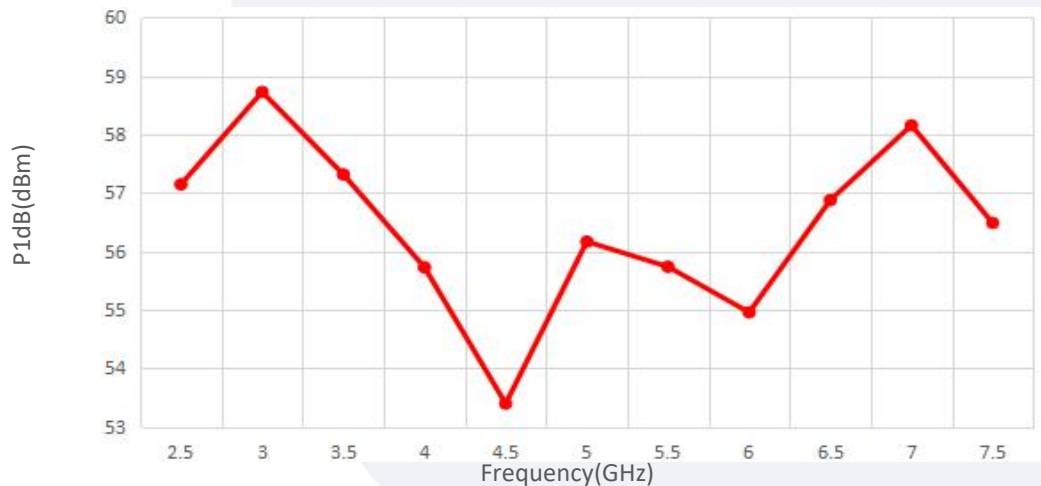
### Small Signal Gain vs Frequency



### Input VSWR vs Frequency



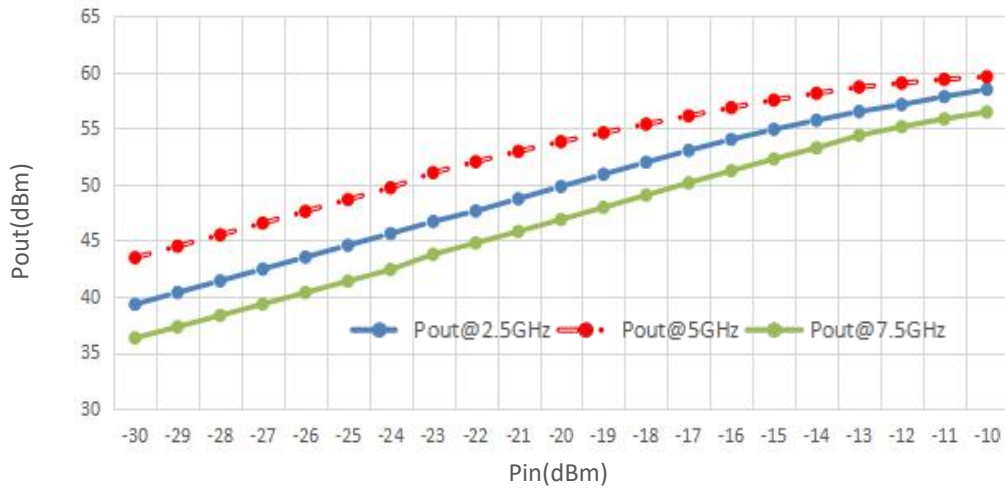
### P1dB vs Frequency



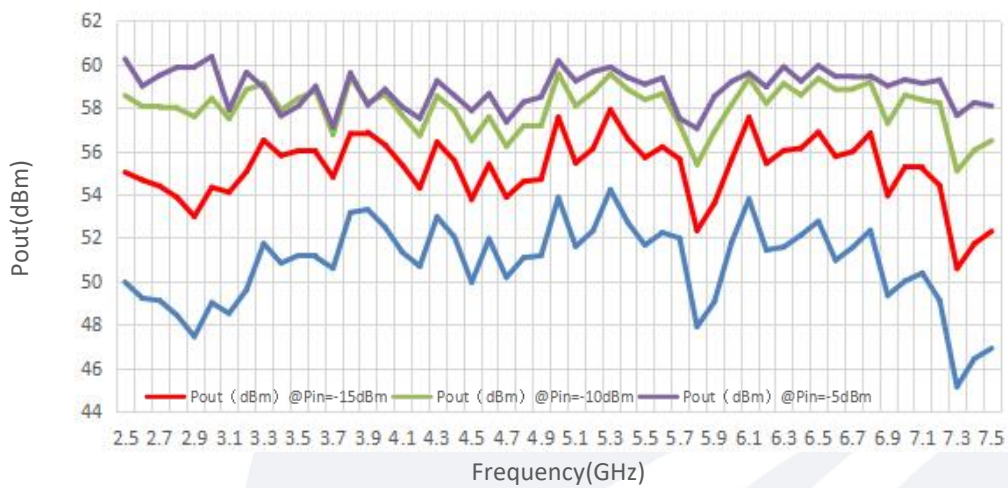
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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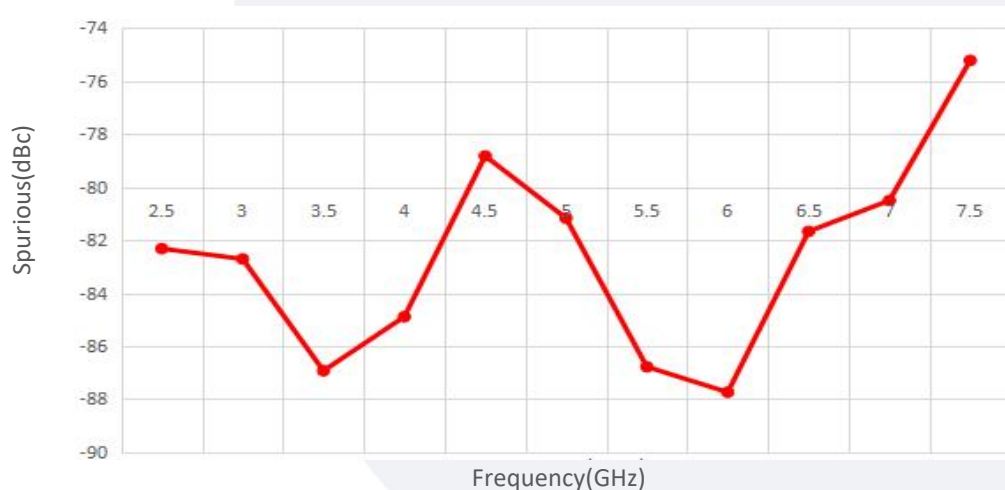
Pout@Pin



Pout@Equal\_Pin

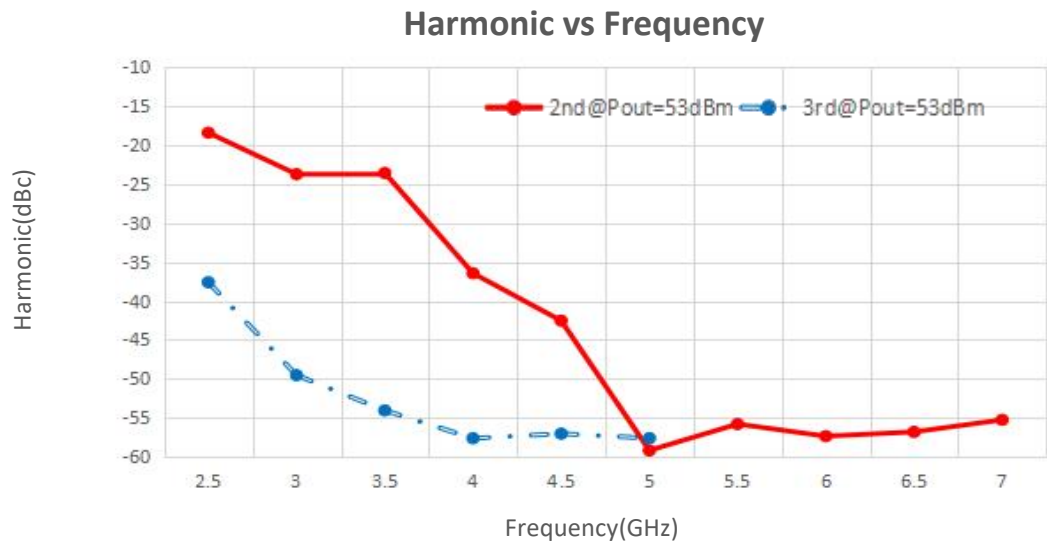


Spurious vs Frequency



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