

## Solid State High Power Amplifier Systems

1-1.3GHz /50dB Gain/50 dBm Psat/220V AC

Model: TLPA1G1.3G-50-50-BC

TLPA1G1.3G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 1 to 1.3 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:

- Wide Band: 1-1.3GHz
- Gain: 50dB Min
- Psat Output Power:50dBm Min
- Protection:Over TEM,over voltage, over current ,over VSWR protection
- 50 Ohm Matched Input / Output



### Electrical Characteristics:

| Parameter            | Symbol      | Min   | Typ     | Max | Units |
|----------------------|-------------|-------|---------|-----|-------|
| Frequency range      | BW          | 1-1.3 |         |     | GHz   |
| Power Gain           | GP          | 50    |         |     | dB    |
| Gain flatness        | $\Delta GL$ |       | $\pm 2$ |     | dB    |
| Output Psat          | Psat        | 50    |         |     | dBm   |
| Spurious@Pout=50dBm  | Spur        |       |         | -60 | dBc   |
| Harmonics@Pout=50dBm | HAM         |       |         | -15 | dBc   |
| 输入驻波 Input VSWR      | VSWRin      |       |         | 2   | :1    |
| 交流电压 AC Voltage      | Vac         |       | 220     |     | V AC  |
| 功耗 Power Consumption | Pdiss       |       | 400     |     | W     |
| 阻抗 Impedance         | I/O-IMP     | 50    |         |     | Ohms  |

### Mechanical Specifications:

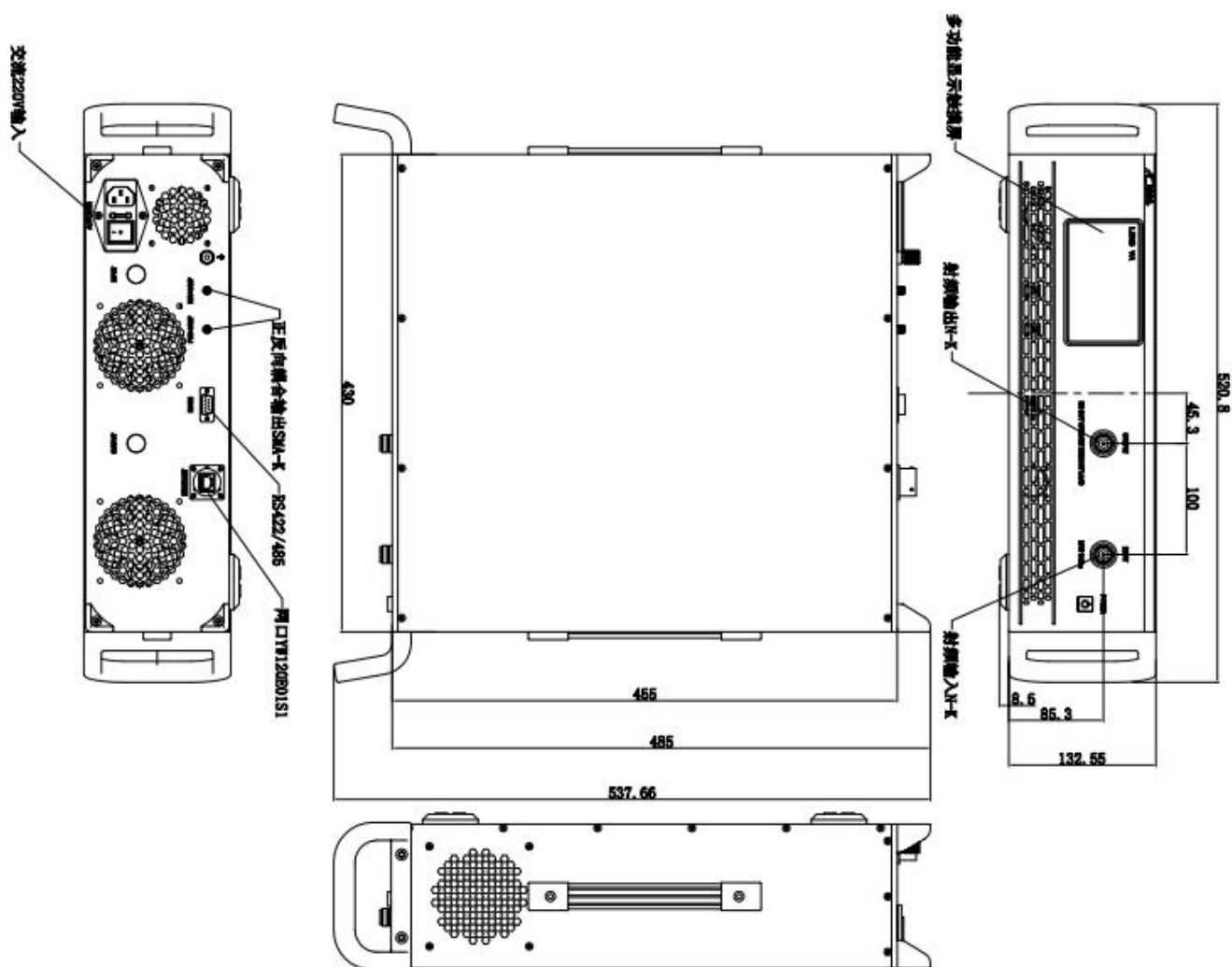
| Parameter                      | Value                     | Units |
|--------------------------------|---------------------------|-------|
| Input /Output Connector        | N Female/N Female         |       |
| Front Panel LCD Screen Display | 7 inch LCD Screen Display |       |
| Size                           | 19 Inch 3U*550            | mm    |
| Weight                         | ≤35                       | Kg    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| RF Input Power        | +5 dBm               |
| ESD sensitivity (HBM) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



## Key Features:

| Parameter            | Advantages                                                        |
|----------------------|-------------------------------------------------------------------|
| Control functions    | 1, Power setting On/Off<br>2, ALC automatic level control         |
| Protection functions | 1, Over TEM<br>2, Over voltage<br>3, Over current<br>4, Over VSWR |
| Remote control       | RS422/Ethernet                                                    |
| Cooling system       | Built in Cooling system, forced air cooling                       |

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | -20                                                 |     | +40 | °C    |
| Non-operating Temperature*      | -30                                                 |     | +50 | °C    |
| Relative humidity               |                                                     | 95  |     | %     |
| Altitude                        | 10,000                                              |     |     | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |     |       |
| Shock(non operating)            | 20G for 11msc half sin wave, 3 axis both directions |     |     |       |

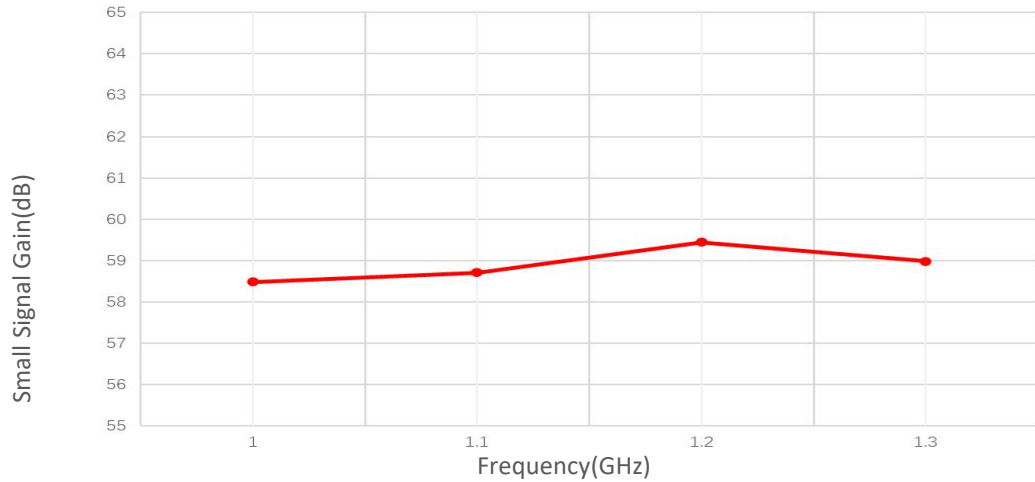
\*Note: For a wider temperature range, please consult the manufacturer.

## Ordering Information:

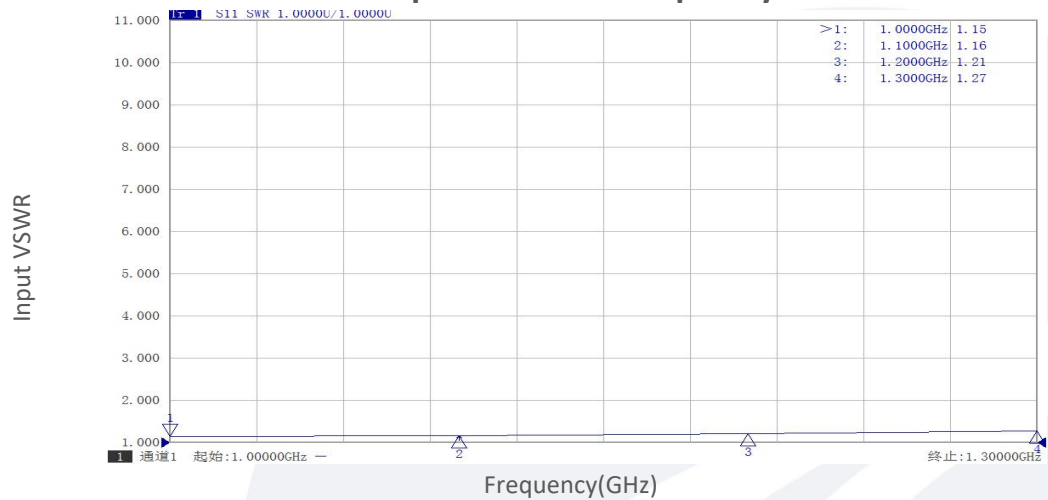
| Base Number         | Description                                                                                              | Revision |
|---------------------|----------------------------------------------------------------------------------------------------------|----------|
| TLPA1G1.3G-50-50-BC | Solid State High Power Amplifier Systems 1-1.3GHz, Gain:50dB, Psat:50 dBm, 220V AC, Built in Fan Cooling | Rev.1.1  |

## Typical Performance Data:

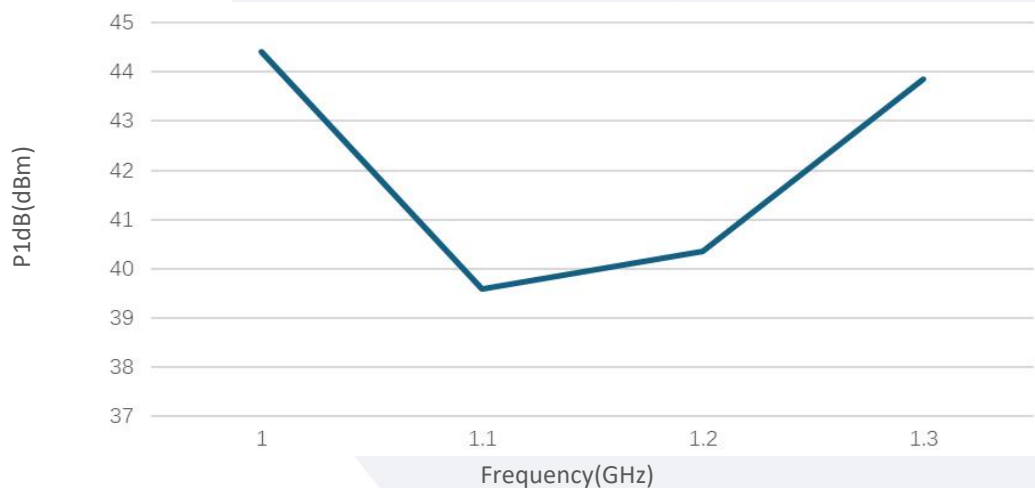
### Small Signal Gain vs Frequency



### Input VSWR vs Frequency

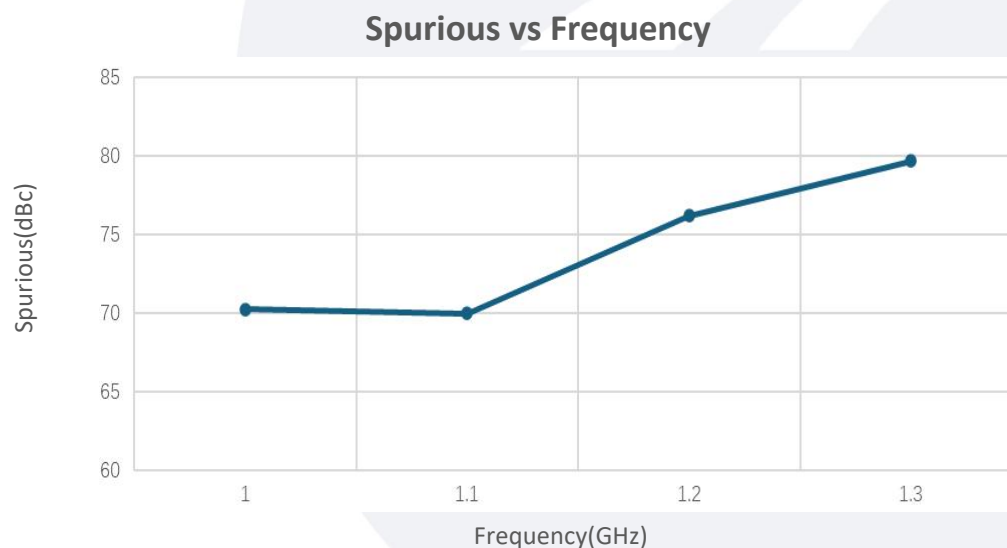
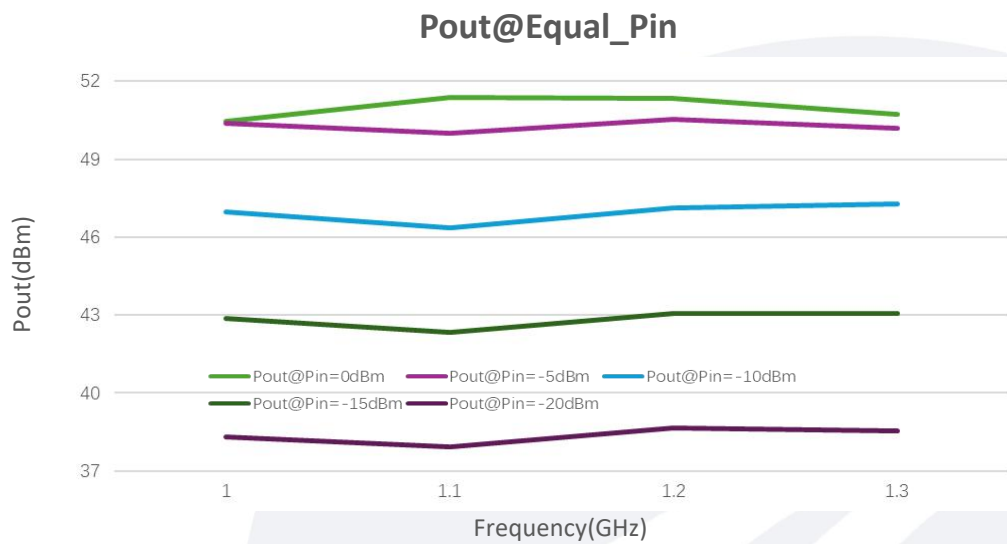
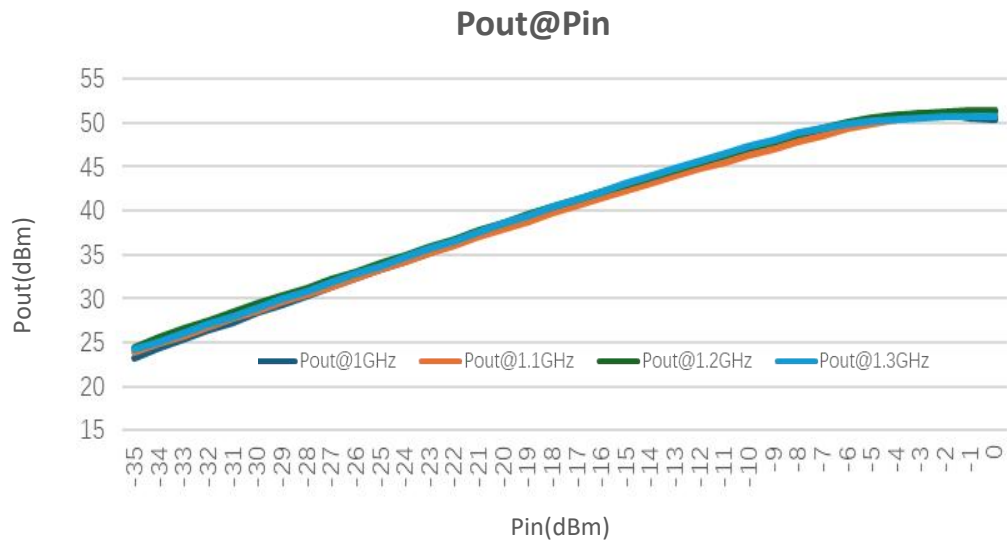


### P1dB vs Frequency



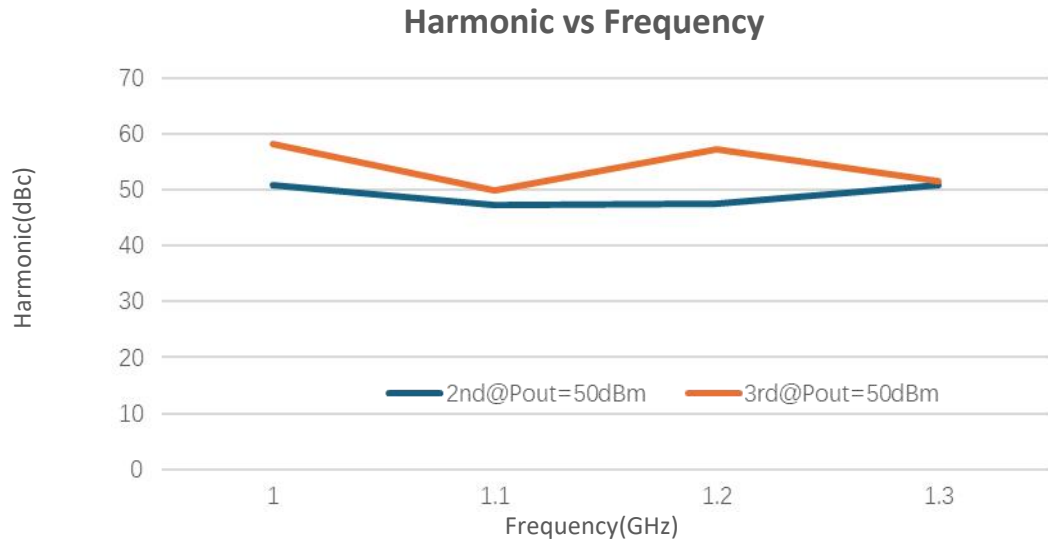
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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