

## Solid State High Power Amplifier Systems

0.5-6GHz/57dB Gain/57dBm Psat/380V AC

Model: TLPA0.5G6G-57-57-BC

TLPA0.5G6G-57-57-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.5 to 6 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: 0.5-6GHz
- Gain: 57dB Min
- Psat Output Power: 57dBm 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                 | 0.5-6 |         |     | GHz   |
| Power Gain           | GP                 | 57    |         |     | dB    |
| Gain flatness        | $\Delta$ GL        |       | $\pm 3$ |     | dB    |
| Gain adjust Range    | $\Delta$ GR        |       | 30      |     | dB    |
| Gain adjust Step     | $\Delta$ GS        |       | 0.5     |     | dB    |
| Output Psat          | Psat               | 57    |         |     | dBm   |
| Spurious@Pout=57dBm  | Spur               |       |         | -60 | dBc   |
| Harmonics@Pout=57dBm | HAM                |       | -10     |     | dBc   |
| Input VSWR           | VSWR <sub>in</sub> |       |         | 2.0 | :1    |
| AC Voltage           | Vac                |       | 380     |     | V AC  |
| Impedance            | I/O-IMP            | 50    |         |     | Ohms  |

### Mechanical Specifications:

| Parameter                | Value                    | Units |
|--------------------------|--------------------------|-------|
| Input /Output Connector  | N Female/7/16 DIN Female |       |
| Forward/Reverse Coupling | N Female/ N Female       |       |
| Communication Connector  | DB9/RJ45                 |       |
| Size                     | 12U                      | mm    |
| Weight                   | ≤150                     | Kg    |

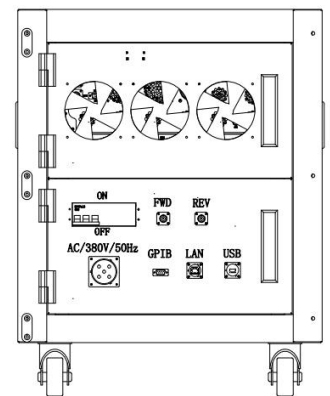
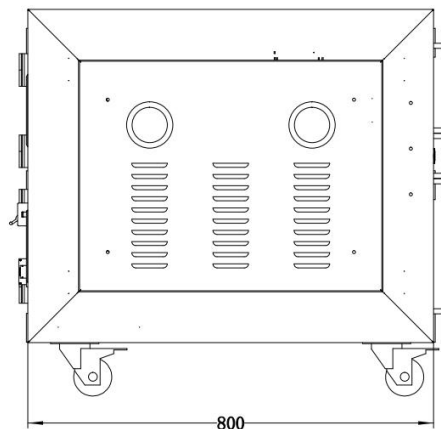
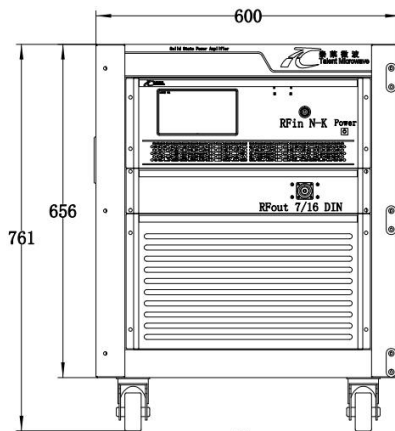
## Absolute Maximum Ratings:

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

## Outline Drawing:

Unit:mm

## Regulatory Compliance:



## Key Features:

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

### Environmental Conditions:

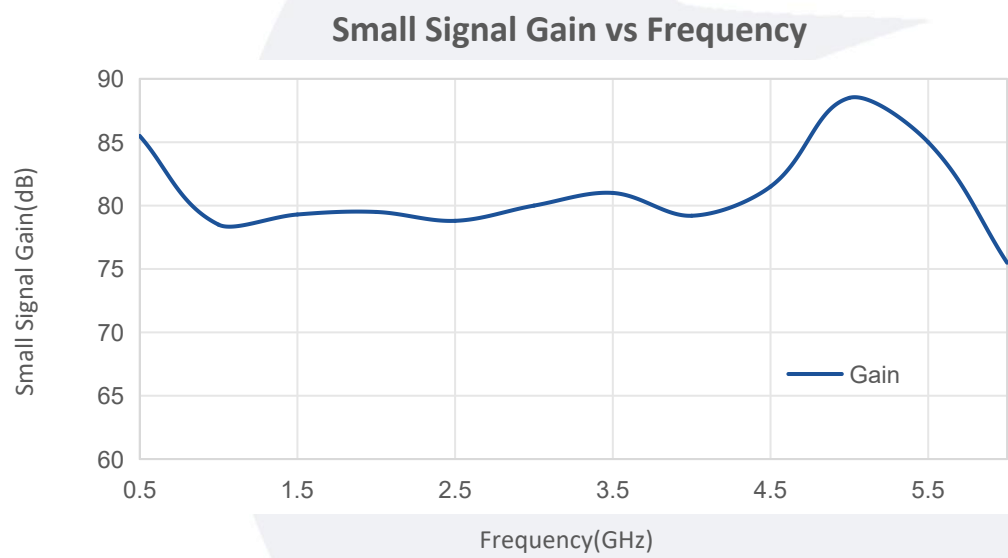
| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | -20                                                 |     | +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 |
|---------------------|------------------------------------------------------------------------------------------------------|----------|
| TLPA0.5G6G-57-57-BC | Solid State High Power Amplifier Systems 0.5-6GHz,Gain:57dB,Psat:57 dBm,220V AC,Built in Fan Cooling | Rev.1.1  |

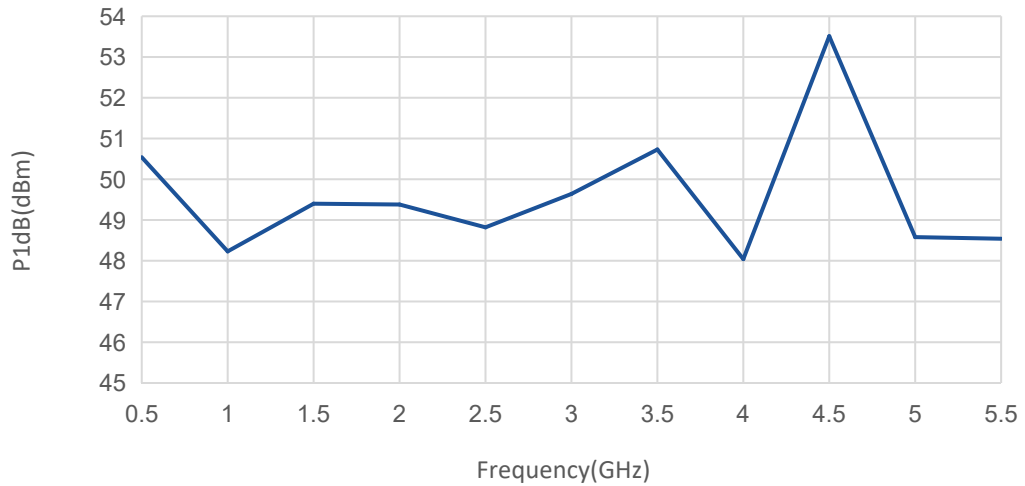
### 典型曲线 Typical Performance Data:



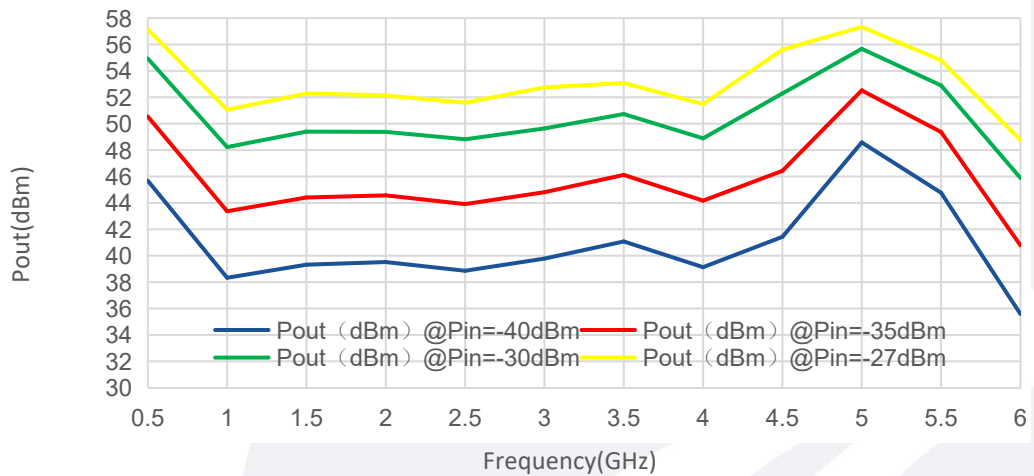
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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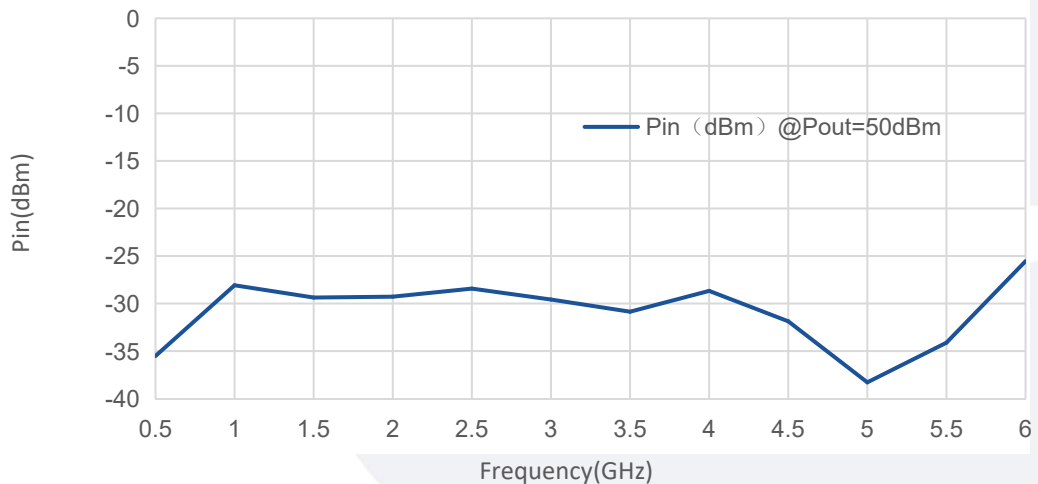
### P1dB vs Frequency



### Pout@Equal\_Pin



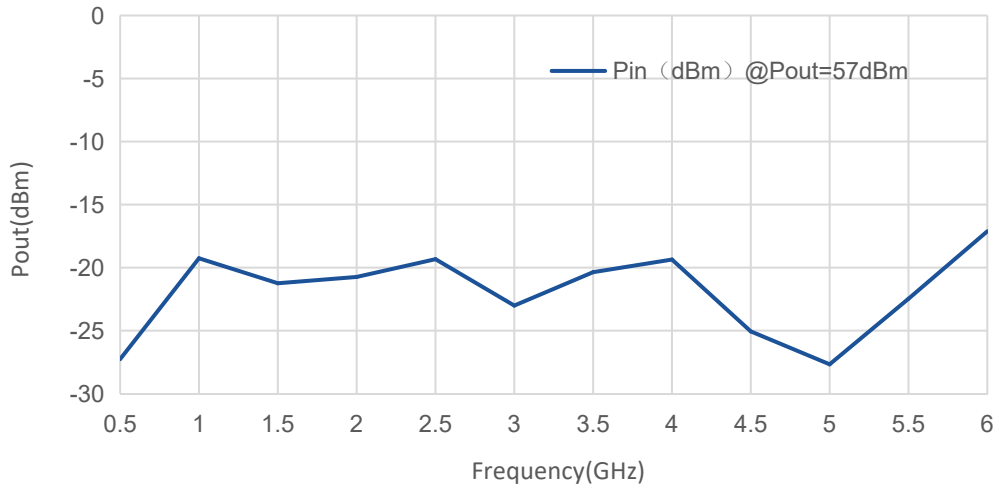
### Pin@Equal\_Pout



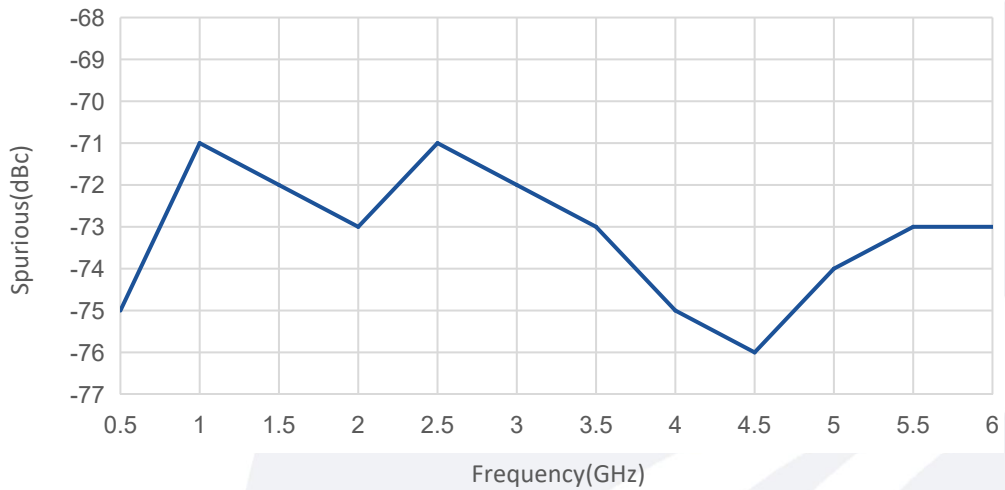
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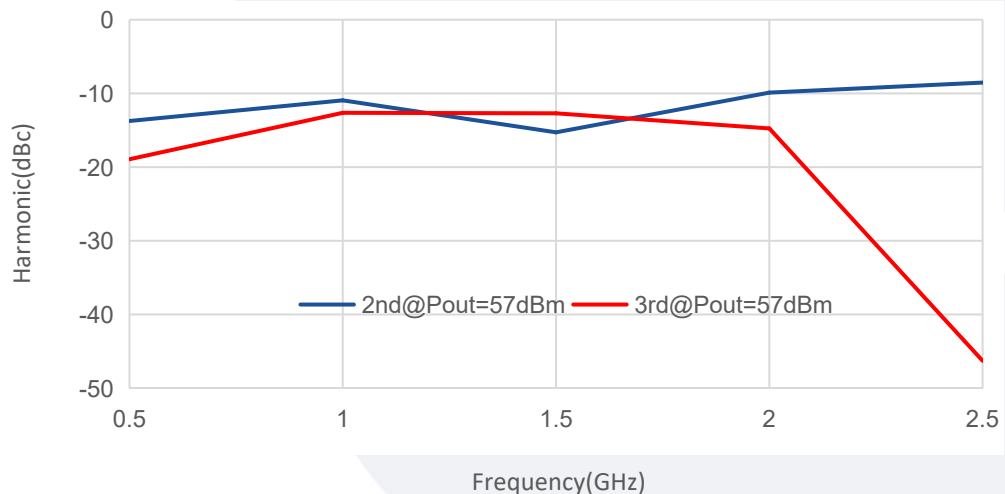
### Pin@Equal\_Pout



### Spurious vs Frequency



### Harmonic vs Frequency



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