

## Solid State High Power Amplifier Systems

18-26.5GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA18G26.5G-50-50-BC

TLPA18G26.5G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 18 to 26.5 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:

- Frequency range: 18-26.5GHz
- 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          | 18-26.5 |         |      | GHz   |
| Power Gain           | GP          | 50      |         |      | dB    |
| Gain flatness        | $\Delta GL$ |         | $\pm 3$ |      | dB    |
| Output Psat          | Psat        | 50      |         |      | dBm   |
| Spurious@Pout=50dBm  | Spur        |         |         | -60  | dBc   |
| Harmonics@Pout=50dBm | HAM         |         |         | -20  | dBc   |
| Input VSWR           | VSWRin      |         |         | 2.0  | :1    |
| AC Voltage           | Vac         |         | 220     |      | V AC  |
| Power Consumption    | Pdiss       |         |         | 1200 | W     |
| Impedance            | I/O-IMP     | 50      |         |      | Ohms  |

### Mechanical Specifications:

| Parameter               | Value              | Units |
|-------------------------|--------------------|-------|
| Input /Output Connector | 2.92mm Female/WR12 |       |
| Communication Connector | DB9/RJ45           |       |
| Size                    | 19 Inch 4U         |       |
| Weight                  | $\leq 35$          | Kg    |

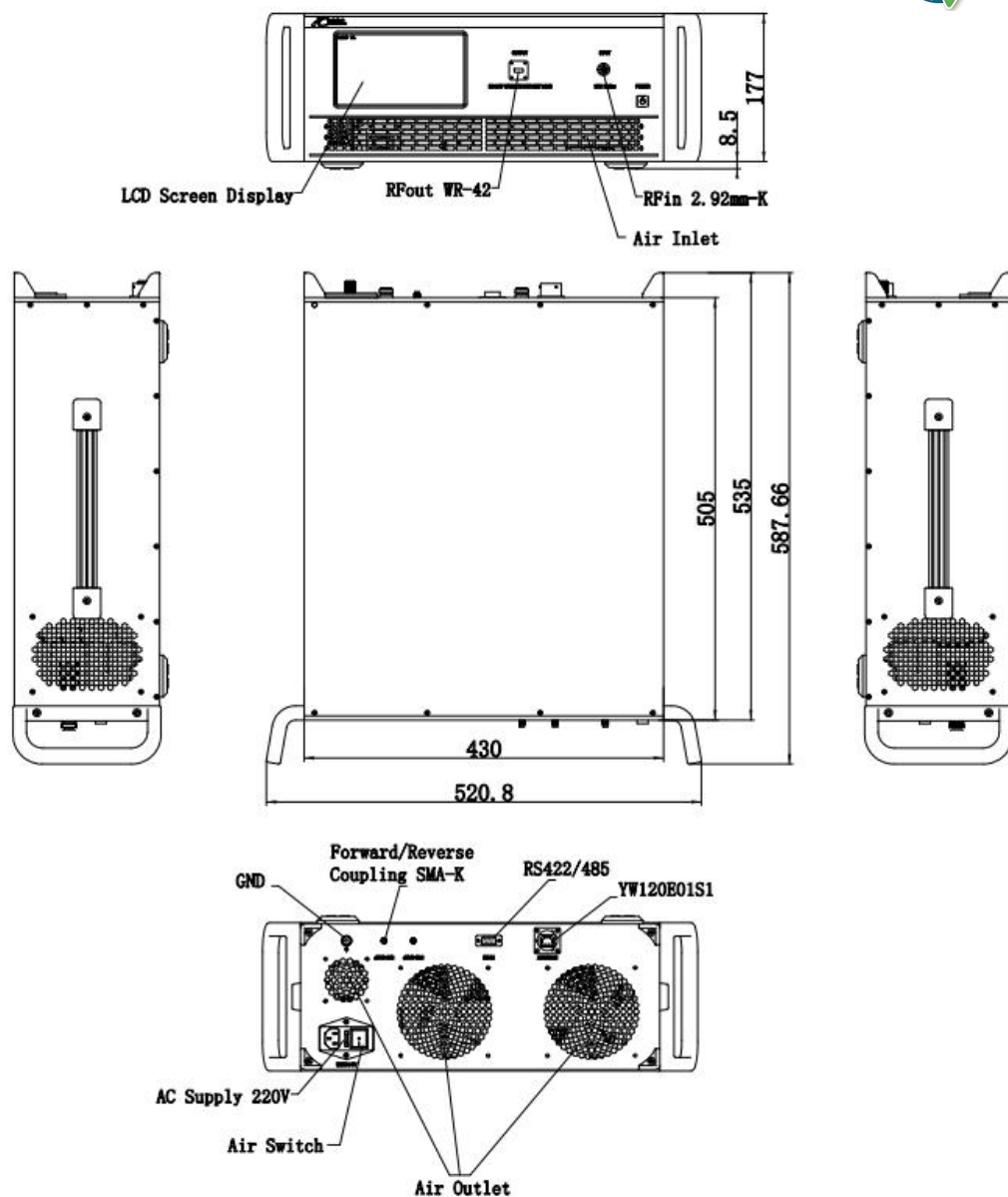
## Absolute Maximum Ratings:

| 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 setting on/off<br>2, ALC automatic level control         |
| Display functions    | 1, Output/reflected power<br>2, Fault informations                |
| 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 |     |     |       |

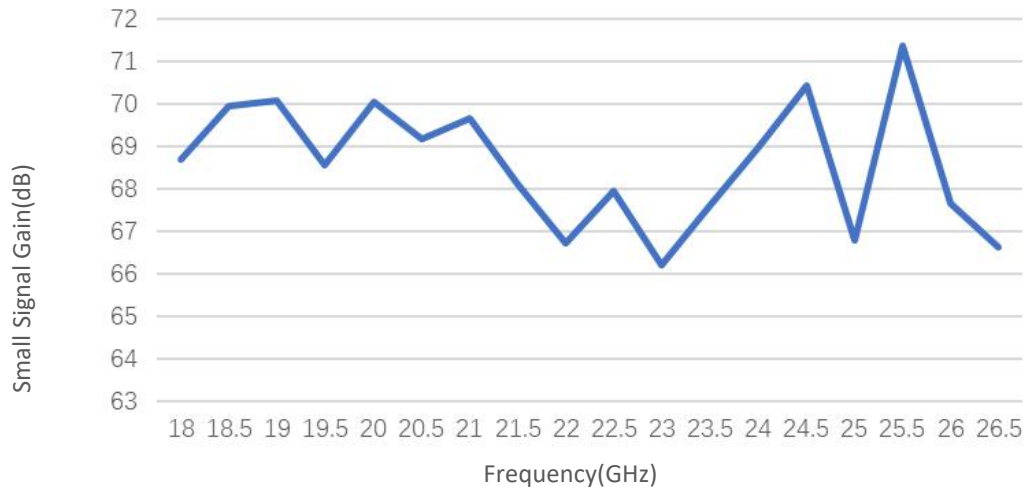
\*Note: For a wider temperature range, please consult the manufacturer.

## Ordering Information:

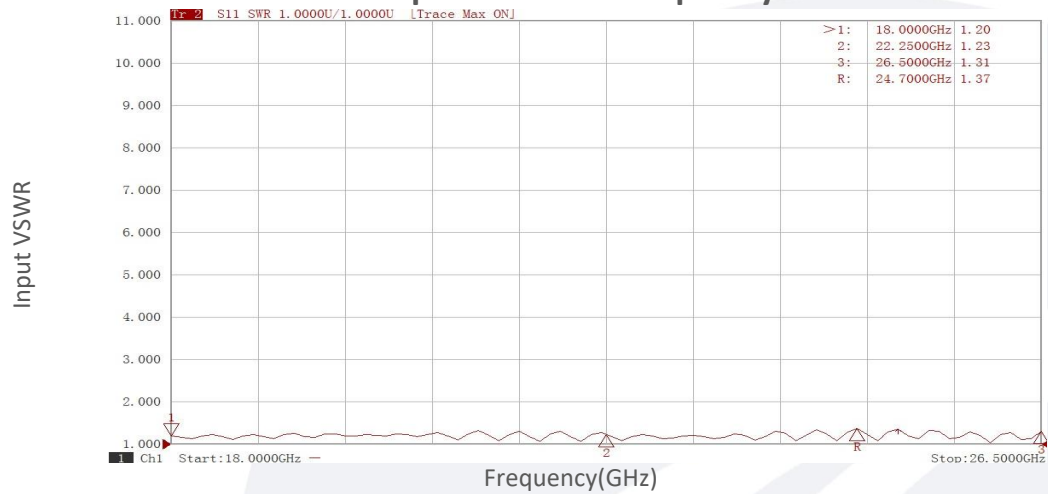
| Base Number           | Description                                                                                              | Revision |
|-----------------------|----------------------------------------------------------------------------------------------------------|----------|
| TLPA18G26.5G-50-50-BC | Solid State High Power Amplifier Systems 0.5-6GHz, Gain:51dB, Psat:51 dBm, 220V AC, Built in Fan Cooling | Rev.1.1  |

## Typical Performance Data:

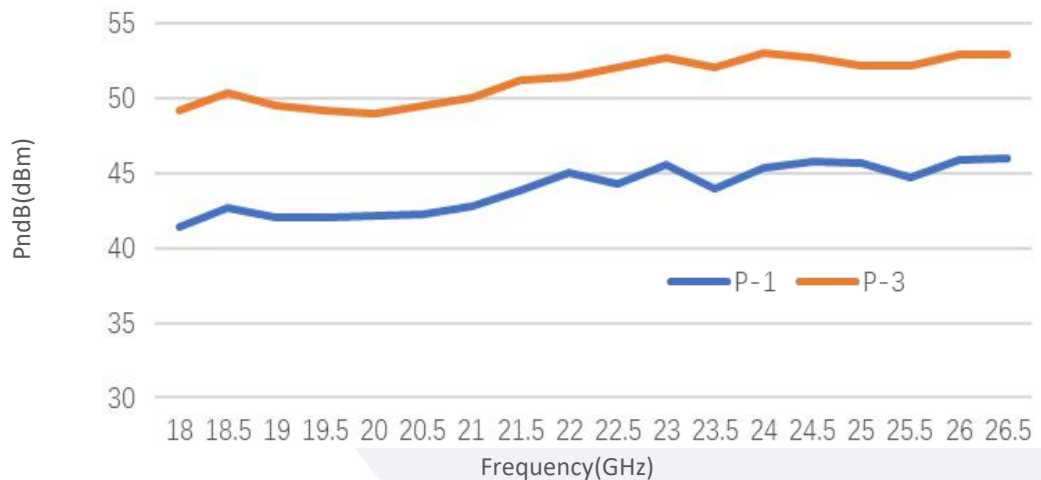
### Small Signal Gain vs Frequency



### Input VSWR vs Frequency

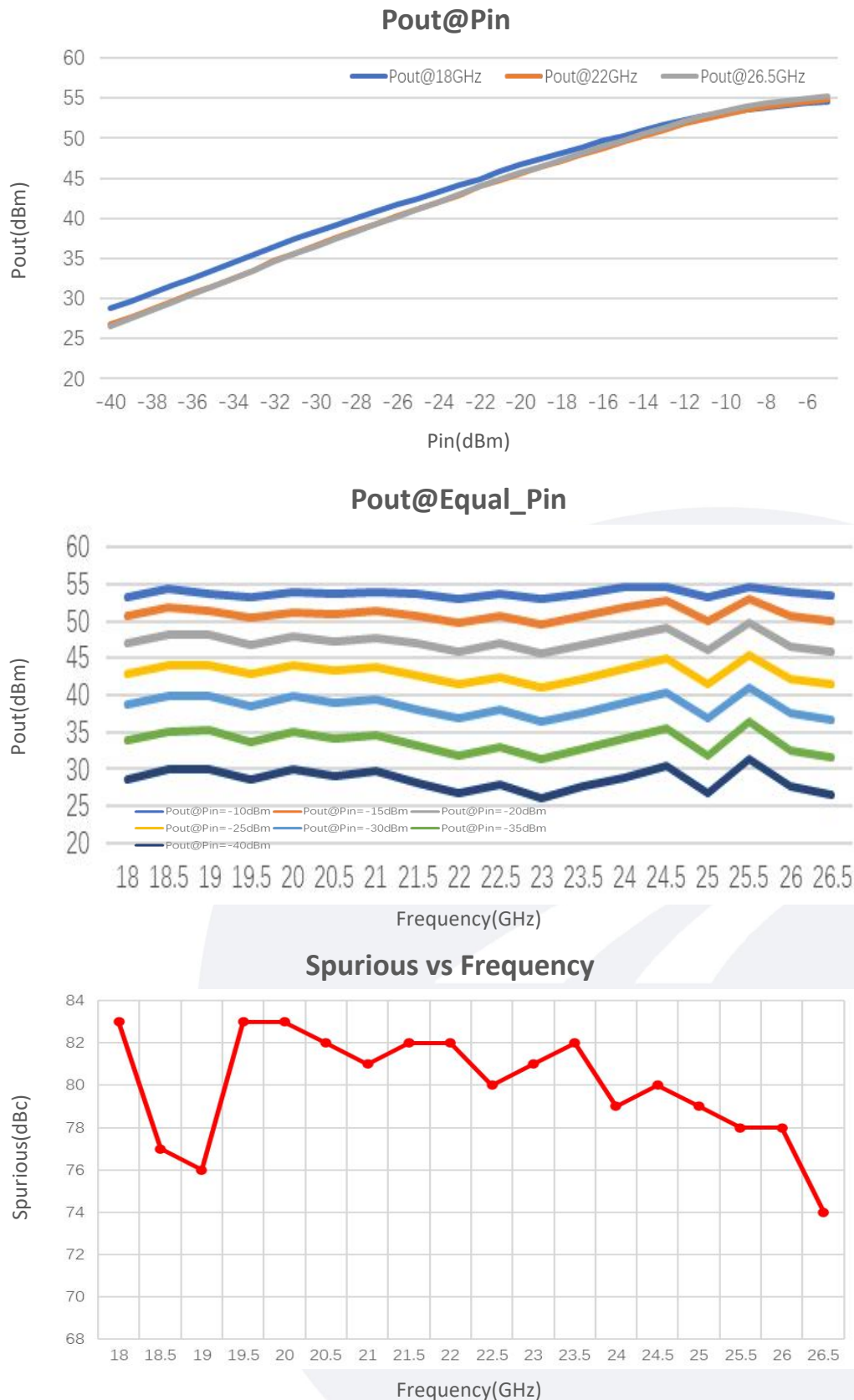


### PndB vs Frequency



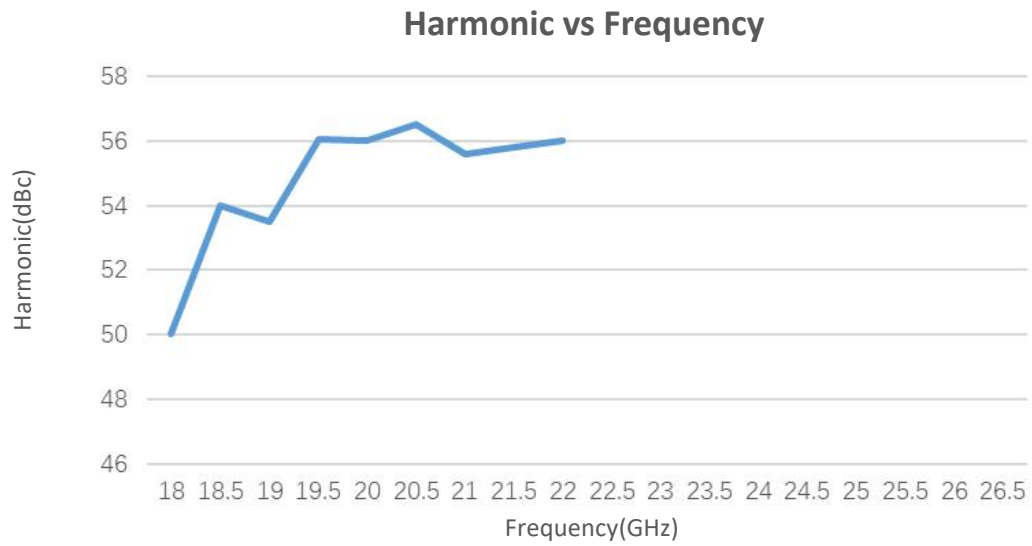
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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