

## Solid State High Power Amplifier Systems

8-12GHz/65dB Gain/53dBm Psat/220V AC

Model: TLPA8G12G-65-53-BC

TLPA8G12G-65-53-BC is a solid state high power amplifier systems provides high output power and high gain across the 8 to 12 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: 8-12GHz
- Gain: 65dB Typ
- Psat Output Power: 53dBm Typ
- Protection: Over TEM, over voltage, over current, over VSWR protection
- 50 Ohm Matched Input / Output

### Electrical Characteristics:

| Parameter                   | Symbol      | Min | Typ     | Max | Min | Typ     | Max | Units |
|-----------------------------|-------------|-----|---------|-----|-----|---------|-----|-------|
| Frequency range             | BW          | 8   |         | 9   | 8   |         | 12  | GHz   |
| Small Signal Gain           | GP          | 60  | 65      |     | 60  | 65      |     | dB    |
| Gain flatness               | $\Delta GL$ |     | $\pm 1$ |     |     | $\pm 1$ |     | dB    |
| Gain adjust Range           | $\Delta GR$ |     |         | 30  |     |         | 30  | dB    |
| Gain adjust Step            | $\Delta GS$ | 0.5 |         |     | 0.5 |         |     | dB    |
| Output P1dB                 | P1dB        |     | 48      |     |     | 48      |     | dBm   |
| Output Psat                 | Psat        | 53  | 53.5    |     | 52  | 53      |     | dBm   |
| Noise Figure                | NF          |     | 4       |     |     | 4       |     | dB    |
| Spurious                    | Spur        |     |         | -60 |     |         | -60 | dBc   |
| Harmonics                   | HAM         |     |         | -20 |     |         | -20 | dBc   |
| Input VSWR                  | VSWRin      |     | 1.5     | 2.0 |     | 1.5     | 2.0 | :1    |
| AC Supply Current (220V AC) | Iac         |     | 2.5     | 5   |     | 2.5     | 5   | A     |
| Impedance                   | I/O-IMP     | 50  |         |     |     |         |     | Ohms  |

## Mechanical Specifications:

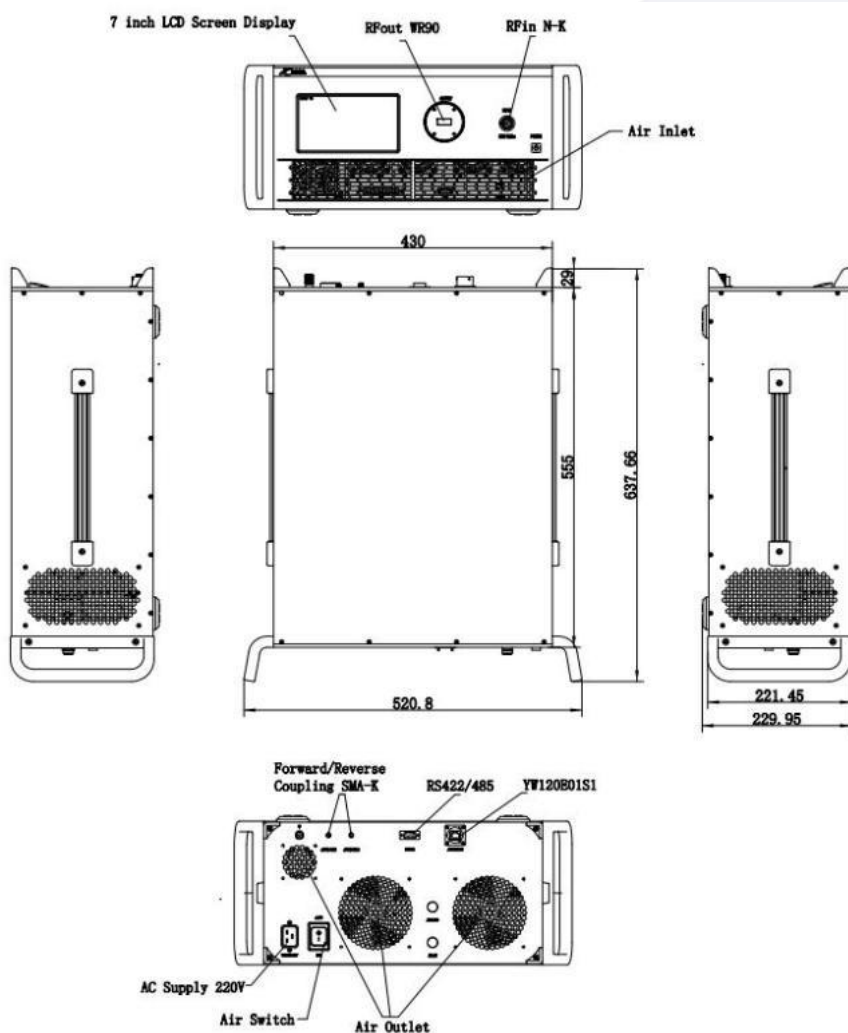
| Parameter                      | Value                     | Units |
|--------------------------------|---------------------------|-------|
| Input /Output Connector        | SMA-Male/WR-90            |       |
| Forward/Reverse Coupling       | SMA-Female/ SMA-Female    |       |
| Communication Connector        | USB/LAN                   |       |
| Front Panel LCD Screen Display | 7 inch LCD Screen Display |       |
| Size                           | 19 Inch 3U*555            | mm    |
| Weight                         | ≤35                       | Kg    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| RF Input Power        | -10 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       | USB/Ethernet                                                      |
| Cooling system       | Built in Cooling system, forced air cooling                       |

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | 0                                                   |     | +40 | °C    |
| Non-operating Temperature*      | -40                                                 |     | +85 | °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 |
|--------------------|--------------------------------------------------------------------------------------------------------|----------|
| TLPA8G12G-65-53-BC | Solid State High Power Amplifier Systems 8-12GHz, Gain:65dB, Psat:53dBm, 220V AC, Built in Fan Cooling | Rev.1.0  |