

Solid State High Power Amplifier Systems

2-18GHz/53dB Gain/53dBm Psat/220V AC

Model: TLPA2G18G-53-53-P-BC

TLPA2G18G-53-53-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 2 to 18 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: 2-18GHz
- Gain: 53dB Min
- Psat Output Power: 53dBm 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 | 2-18 | | | GHz |
| Working Mode | MOD | PULSE ONLY | | | |
| Power Gain | GP | 53 | | | dB |
| Gain flatness | Δ GL | | ± 3 | | dB |
| Output Psat | Psat | 53 | | | dBm |
| Spurious@Pout=200W | Spur | | | -55 | dBc |
| Harmonics@Pout=200W | HAM | | -15 | -10 | dBc |
| Modulation Signal Level | TTL | 0 | | 5 | V |
| Modulation Frequency | MF | 1 | | 100 | KHz |
| Pulse Width | T | 0.3 | | 500 | us |
| Duty Cycle | τ | 0.1 | | 20 | % |
| Rise/Fall Time | Tr | | 50 | 100 | ns |
| Pulse Input | TTL level, 50 ohm nominal termination | | | | |
| Pulse Drop@T=100us | Pdrop | | 0.5 | 1 | dB |
| Star Delay | DSU | | 150 | | ns |
| Shutoff Delay | TOF | | 250 | | ns |
| Input VSWR | VSWR | | 1.5 | 2 | :1 |

Electrical Characteristics:

| Parameter | Symbol | Min | Typ | Max | Units |
|--|---------|---|-----|-----|-------|
| AC Voltage | Vac | 220 VAC(±10%), Single phase, 50Hz(±10%) | | | V AC |
| Power consumption@20% | Pdiss | 700/1200 | | | W |
| Output power control (Power Variation) | OPC | | 20 | | dB |
| Impedance | I/O-IMP | 50 | | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|--------------------------------|---------------------------|-------|
| Input /Output Connector | N Female/N Female | |
| Forward/Reverse Coupling | SMA Female/SMA Female | |
| Front Panel LCD Screen Display | 7 inch LCD Screen Display | |
| Pulse Input Connector | BNC Female | |
| Communication Connector | DB9/RJ-45 | |
| Size | 19 Inch 8U*800 depth | mm |
| Weight | ≤100 | Kg |

Absolute Maximum Ratings:

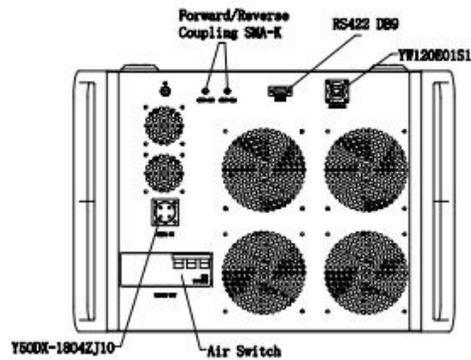
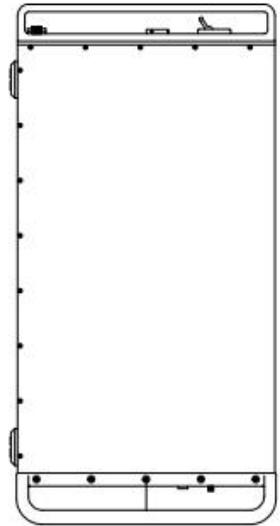
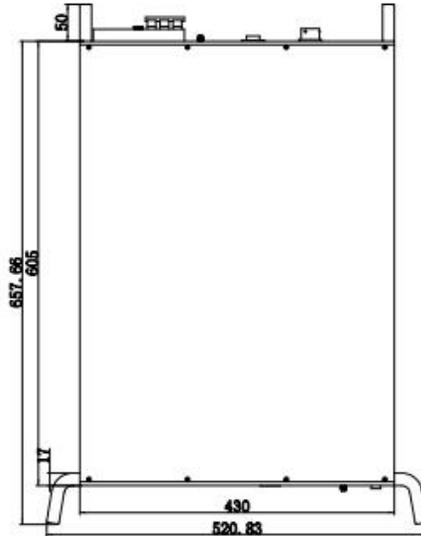
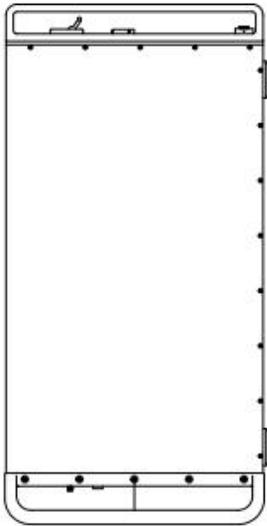
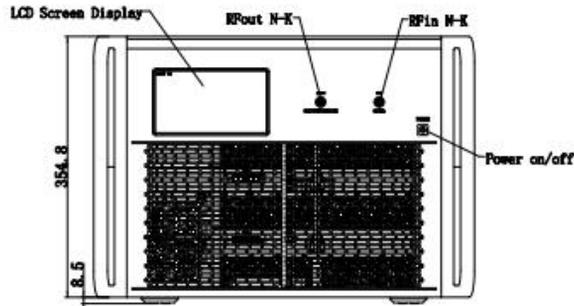
| Parameter | Value |
|-----------------------|----------------------|
| RF Input Power | +5 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Key Features:

| Parameter | Advantages |
|----------------------|---|
| Control functions | 1, Power setting on/off |
| Protection functions | 1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR |
| Remote control | RS422/Ethernet |
| Cooling system | Built in Cooling system,forced air cooling |

Outline Drawing:

Unit:mm



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 |
|----------------------|---|----------|
| TLPA2G18G-53-53-P-BC | Solid State High Power Amplifier Systems 2-18GHz, Gain:53dB, Psat:53 dBm, 220V AC, Built in Fan Cooling | Rev.1.1 |