泰莱微波
Talent Microwave

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# Solid State High Power Amplifier Systems

## 4-8GHz/47dB Gain/47dBm Psat/220V AC  Model: TLPA4G8G-47-47-BC

TLPA4G8G-47-47-BC is a solid state high power amplifier systems provides high output power and high gain across the 4 to 8 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: 4-8GHz
- Gain: 47dB Min
- Psat Output Power: 47dBm 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 | 4 | | 8 | GHz |
| Small Signal Gain | SSGP | 47 | 48 | | dB |
| Gain flatness | ΔGL | | ±2 | ±3 | dB |
| Gain adjust Range | ΔGR | | 31.75 | | dB |
| Gain adjust Step | ΔGS | | 0.25 | | dB |
| Output Psat | Psat | 47 | 47.5 | | dBm |
| Output P1dB | P1dB | 43 | 44 | | dBm |
| Spurious@Pout=50W | Spur | | | -60 | dBc |
| Harmonics@Pout=50W | HAM | | -15 | | dBc |
| Input VSWR | VSWRin | | | 2.0 | :1 |
| AC Voltage | Vac | | 220 | | V AC |
| AC Supply Current | Iac | | 1 | | A |
| Power Consumption | Pdiss | | 220 | 300 | W |
| Impedance | I/O-IMP | | 50 | | Ohms |

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## Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input /Output Connector | N Female/N Female | |
| Communication Connector | DB9/RJ45 | |
| Front Panel LCD Screen Display | 5 inch LCD Screen Display | |
| Size | 19 Inch 2U*446 depth | mm |
| Weight | ≤20 | 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<br>2,Over voltage<br>3,Over current<br>4,Over VSWR |
| Cooling system | Built in Cooling system,forced air cooling |

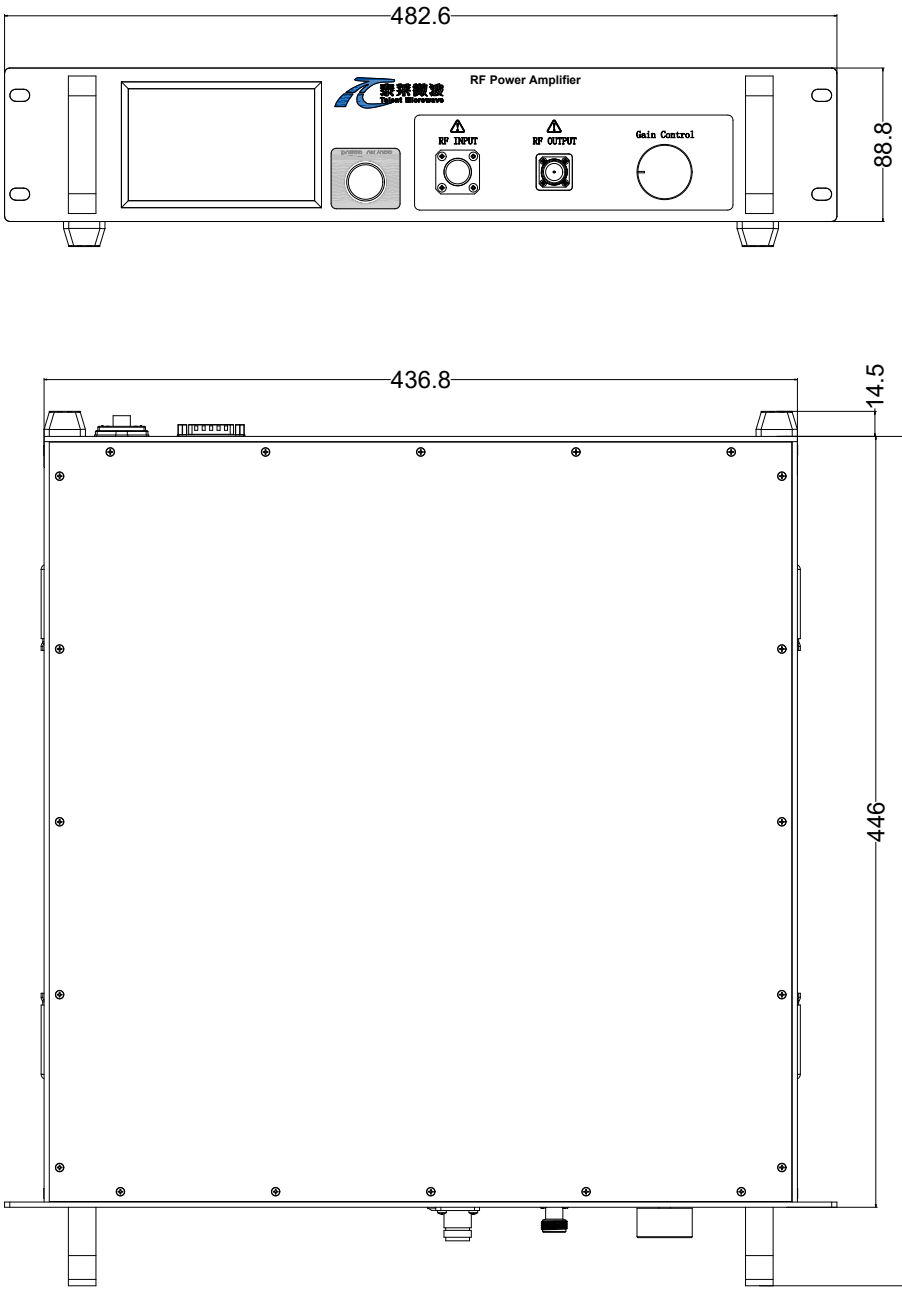
## DC Supply Connector(DSUB-15 Female):

| Pin | Name | Function |
|---|---|---|
| 1 | EN | Amplifier Enable: TTL High (5V) (Internally Pulled-High)<br>Amplifier Disable: Short to ground |
| 2 | Over Voltage | Voltage FAULT:(TTL High= Fault, TTL Low =Normal) |
| 3 | Over Current | Current FAULT:(TTL High= Fault, TTL Low =Normal) |
| 4 | Over TEM | Temperature FAULT:(TTL High= Fault, TTL Low =Normal) |
| 5 | Over VSWR | VSWR FAULT:(TTL High= Fault, TTL Low =Normal) |
| 6 | Reset | Resets PA when logic LOW is applied and released(Internally Pulled-High) |
| 7 | GND | Ground |
| 8~15 | NC | Not connected |

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## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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## Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature* | -20 | | +40 | ℃ |
| Non-operating Temperature* | -30 | | +50 | ℃ |
| 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 |
|---|---|---|
| TLPA4G8G-47-47-BC | Solid State High Power Amplifier Systems 4-8GHz,Gain:47dB,Psat:47dBm,220V AC,Built in Fan Cooling | Rev.1.1 |