

## Power Amplifier

4-8GHz/46dB Gain/46dBm Psat

Model: TLPA4G8G-46-46

TLPA4G8G-46-46 is a power amplifier with a minimum small signal gain of 46 dB and a minimum Psat of 46 dBm across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +28 VDC/2 A. The input port configuration offers coax adapter structure with SMA female and N output port configuration offers coax adapter structure with female .

### Features:

- Frequency range: 4-8GHz
- Gain: 46dB Min
- Output Power Psat: 46dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Electrical Characteristics:

| Parameter          | Min | Typ  | Max | Units |
|--------------------|-----|------|-----|-------|
| Frequency range    | 4-8 |      |     | GHz   |
| Small Signal Gain  | 46  | 50   |     | dB    |
| Gain Flatness      |     | ±2   | ±3  | dB    |
| Output P1dB        | 45  | 45.5 |     | dBm   |
| Output Psat        | 46  | 46.5 |     | dBm   |
| Input VSWR         |     | 1.5  | 2.0 | :1    |
| DC Voltage         |     | 28   | 30  | V DC  |
| Static Current     |     | 2    |     | A     |
| Saturation current |     | 7    | 8   | A     |
| Impedance          | 50  |      |     | Ohms  |

## Mechanical Specifications:

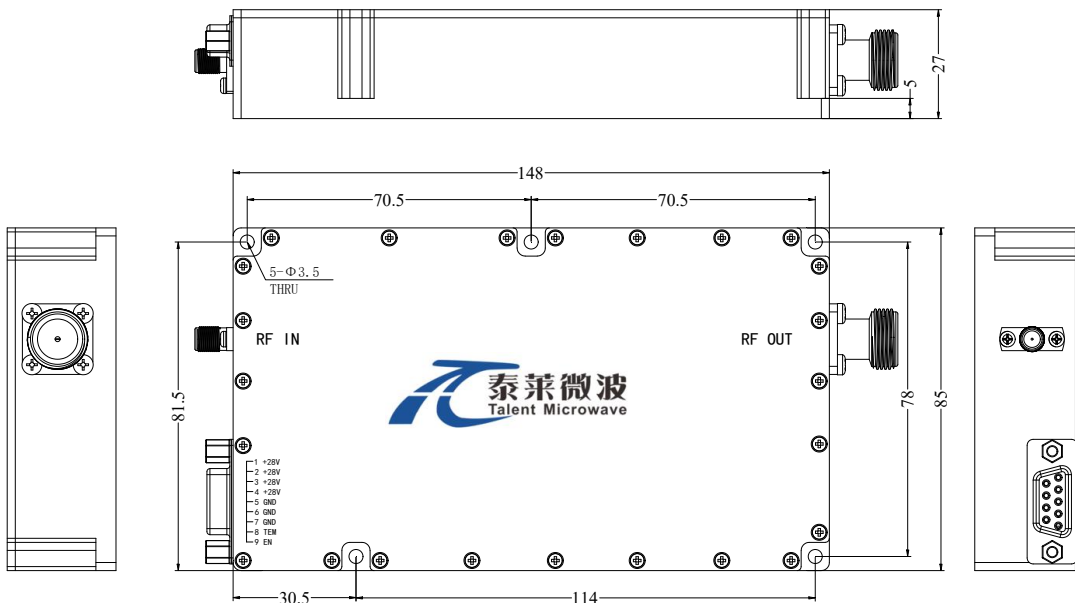
| Parameter               | Value               | Units |
|-------------------------|---------------------|-------|
| Input /Output Connector | SMA Female/N Female |       |
| DC Bias                 | D-SUB-9Pin          |       |
| Size                    | 148*85*27           | mm    |
| Weight                  | 600                 | g     |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +30 V                |
| RF Input Power        | +5 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



**\*\*\*Heat Sink Required During Operation**

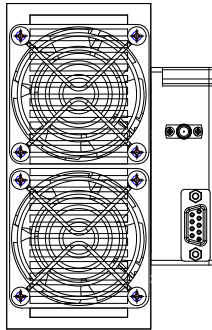
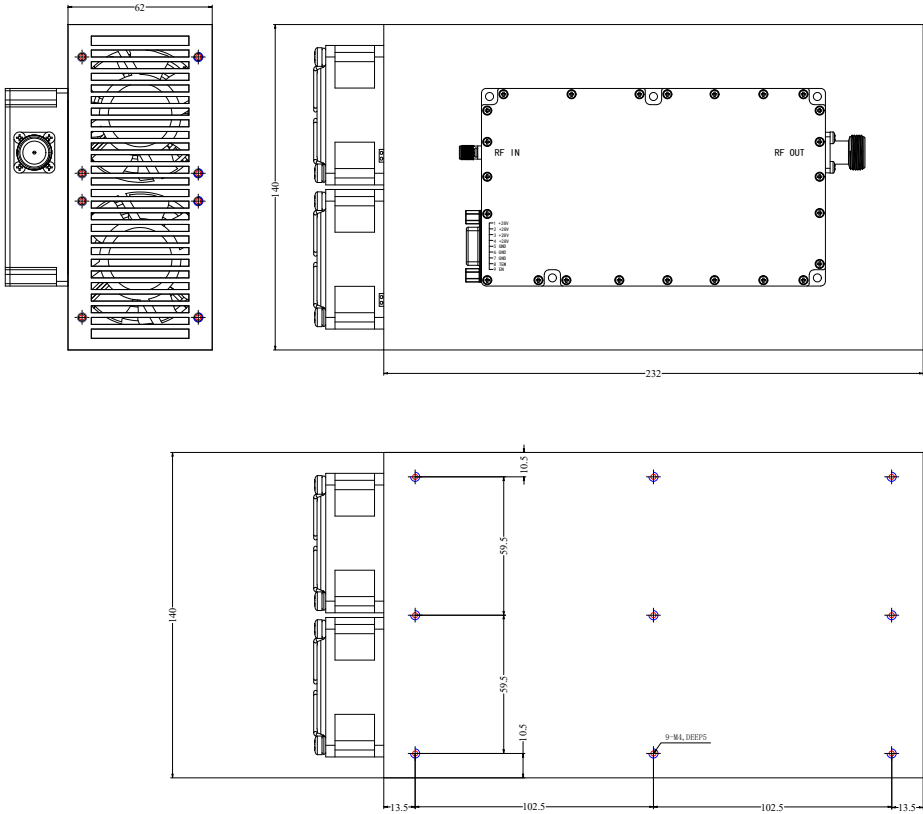


OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

## Outline Drawing:

Unit:mm

## Regulatory Compliance:



## DC Supply Connector (DSUB-9 Female):

| Pin | Name     | Function                                                                                                                                                                                                                                             |
|-----|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1~4 | VCC      | Power supply positive, +26.0-30.0VDC                                                                                                                                                                                                                 |
| 5~7 | GND      | Ground                                                                                                                                                                                                                                               |
| 8   | Over TEM | When the temperature of the case exceeds 75 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low. |
| 9   | EN       | Amplifier Enable: TTL High (5V) (Internally Pulled-High)<br>Amplifier Disable: Short to ground                                                                                                                                                       |

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | -40                                                 |     | +50 | °C    |
| Non-operating Temperature*      | -50                                                 |     | +60 | °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 |
|-------------------|--------------------------------------------------------------------------|----------|
| TLPA4G8G-46-46    | Power amplifier 4-8GHz,Gain:46dB,Psat:46dBm,<br>+28V DC,Without Heatsink | Rev.1.0  |
| TLPA4G8G-46-46-HS | Power amplifier 4-8GHz,Gain:46dB,Psat:46dBm,<br>+28V DC,With Heatsink    | Rev.1.0  |