

## Power Amplifier

5.7-5.9GHz/50dB Gain/50dBm Psat

Model: TLPA5.7G5.9G-50-50

TLPA5.7G5.9G-50-50 is a power amplifier with a minimum small signal gain of 50 dB and a nominal Psat of 50 dBm across the frequency range of 5.7 to 5.9GHz. The DC power requirement for the amplifier is +28 VDC/9 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

### Features:

- Frequency range: 5.7-5.9GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Typ
- 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    | 5.7  |     | 5.9 | GHz   |
| Small Signal Gain  | 50   | 53  |     | dB    |
| Gain Flatness      |      | ±1  | ±2  | dB    |
| Output P1dB        |      | 46  |     | dBm   |
| Output Psat        | 49.5 | 50  |     | dBm   |
| Input VSWR         |      | 1.5 | 2.0 | :1    |
| DC Voltage         | +26  | +28 | +30 | V DC  |
| Static Current     |      | 2   |     | A     |
| Saturation Current |      | 9   | 12  | A     |
| Impedance          |      | 50  |     | Ohms  |

### Mechanical Specifications:

| Parameter                 | Value               | Units |
|---------------------------|---------------------|-------|
| Input /Output Connector   | SMA Female/N Female |       |
| DC Power Supply Connector | D-SUB-9Pin          |       |
| Size                      | 168*75*23.5         | mm    |
| Weight                    | 500                 | g     |

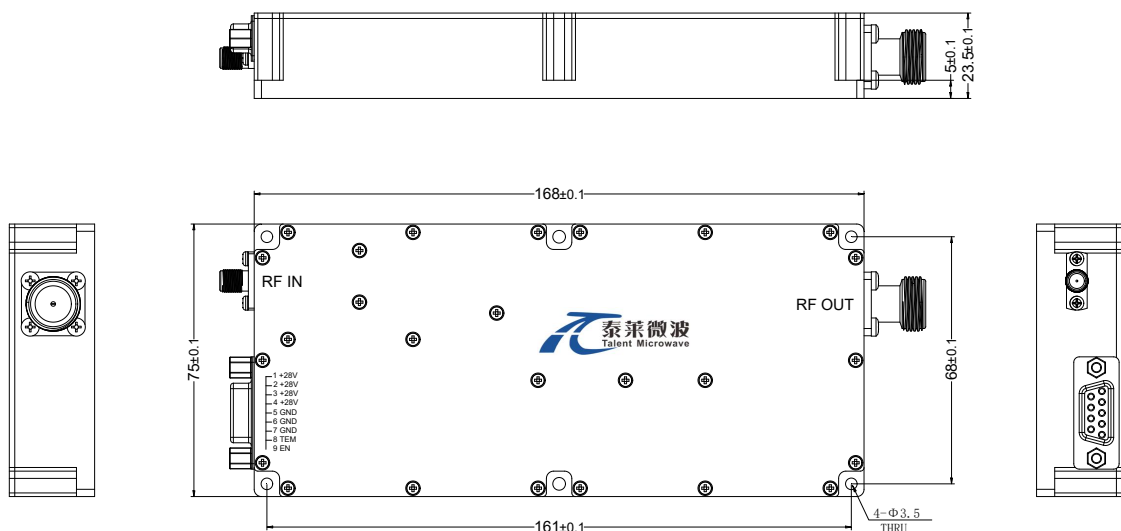
### Absolute Maximum Ratings:

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



### Outline Drawing:

Unit:mm



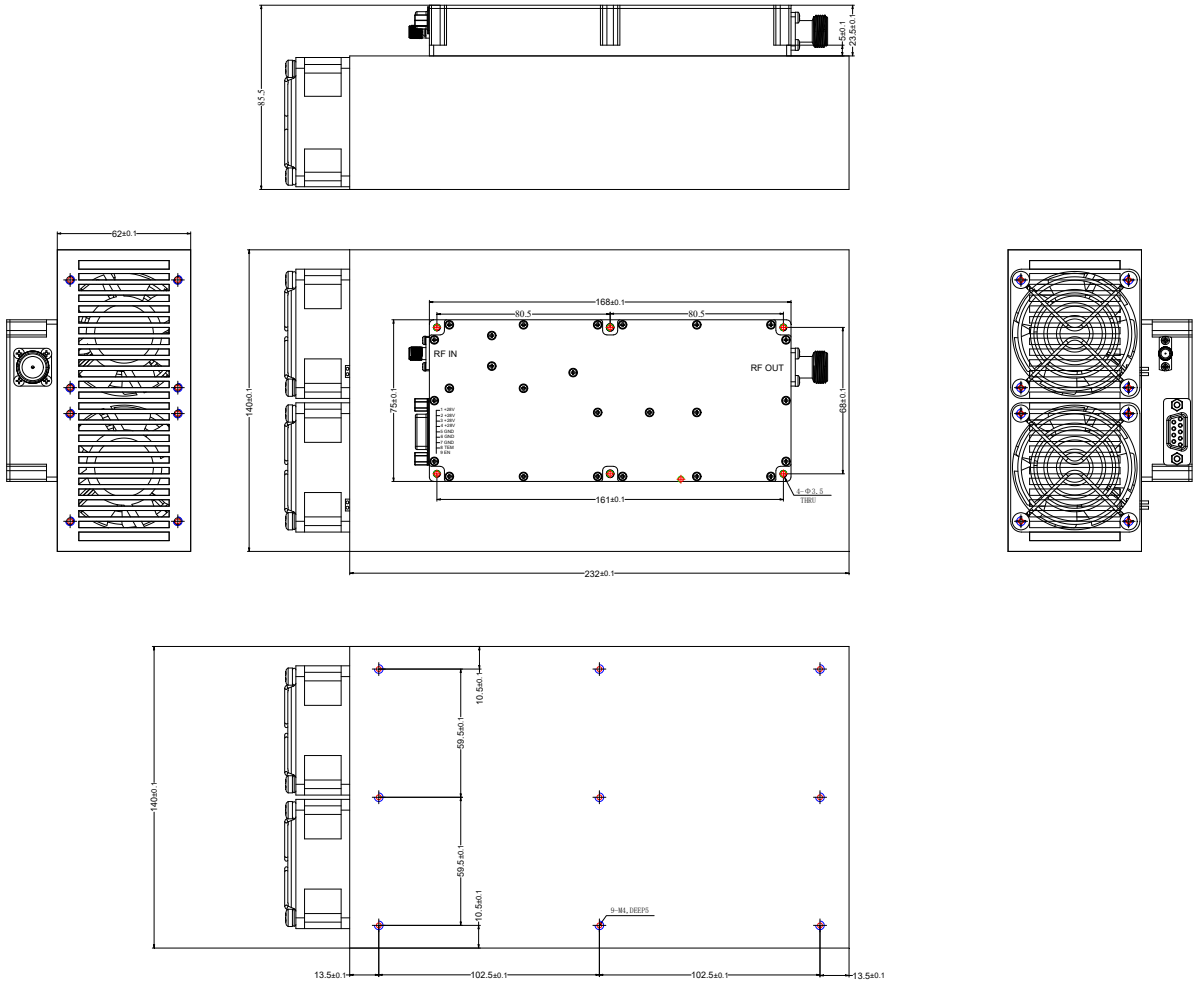
**\*\*\*Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

**Outline Drawing:**

Unit:mm



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

| Pin | Name | Function                            |
|-----|------|-------------------------------------|
| 1   | Vcc  | Power supply positive,+26.0-30.0VDC |
| 2   | Vcc  | Power supply positive,+26.0-30.0VDC |
| 3   | Vcc  | Power supply positive,+26.0-30.0VDC |
| 4   | Vcc  | Power supply positive,+26.0-30.0VDC |

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

| Pin | Name     | Function   |
|-----|----------|--|
| 5   | GND      | Ground   |
| 6   | GND      | Ground   |
| 7   | GND      | Ground   |
| 8   | Over TEM | When the temperature of the case exceeds 85 °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*          | -20   |        | +50 | °C    |
| Non-operating Temperature*      | -30   |        | +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 |
|-----------------------|--|----------|
| TLPA5.7G5.9G-50-50    | Power amplifier 5.7-5.9GHz,<br>Gain:50dB,Psat:50dBm,+28V DC,Without Heatsink | Rev.1.0  |
| TLPA5.7G5.9G-50-50-HS | Power amplifier 5.7-5.9GHz,<br>Gain:50dB,Psat:50dBm,+28V DC,With Heatsink    | Rev.1.0  |