

Power Amplifier

5.1-5.9GHz/50dB Gain/50dBm Psat

Model: TLPA5.1G5.9G-50-50

TLPA5.1G5.9G-50-50 is a power amplifier with a minimum small signal gain of 50 dB and a minimum Psat of 50 dBm across the frequency range of 5.1 to 5.9GHz. The DC power requirement for the amplifier is +28VDC/12 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: 5.1-5.9GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm 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 | 5.1 | | 5.9 | GHz |
| Small Signal Gain | 50 | 53 | | dB |
| Gain Flatness | | ±1 | ±2 | dB |
| Output P1dB | 46 | 47 | | dBm |
| Output Psat | 50 | 50.5 | | dBm |
| Input VSWR | | 1.5 | 2.0 | :1 |
| DC Voltage | +26 | +28 | +30 | V DC |
| Static Current | | 2 | | A |
| Saturation Current | | 12 | 13 | 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 |

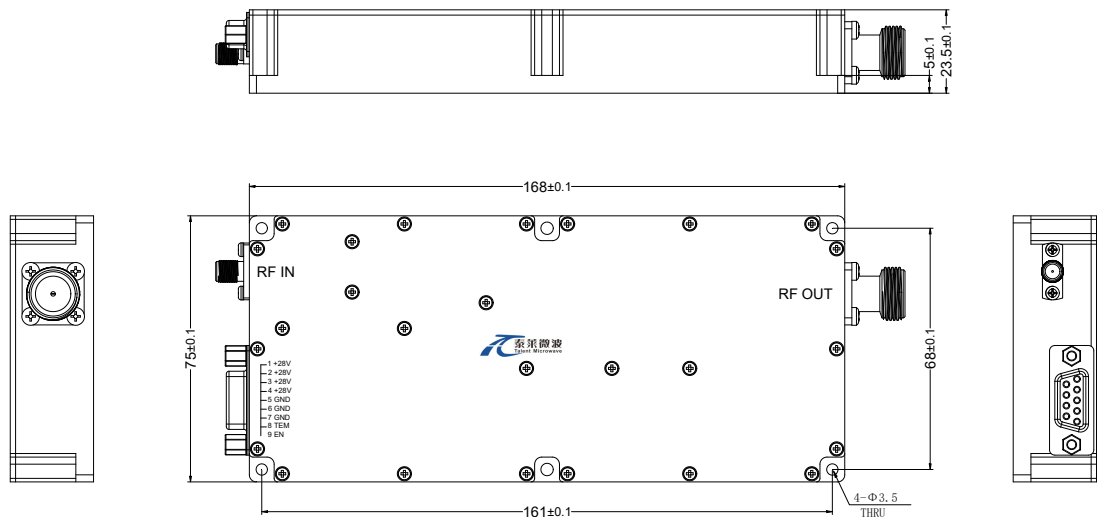
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm



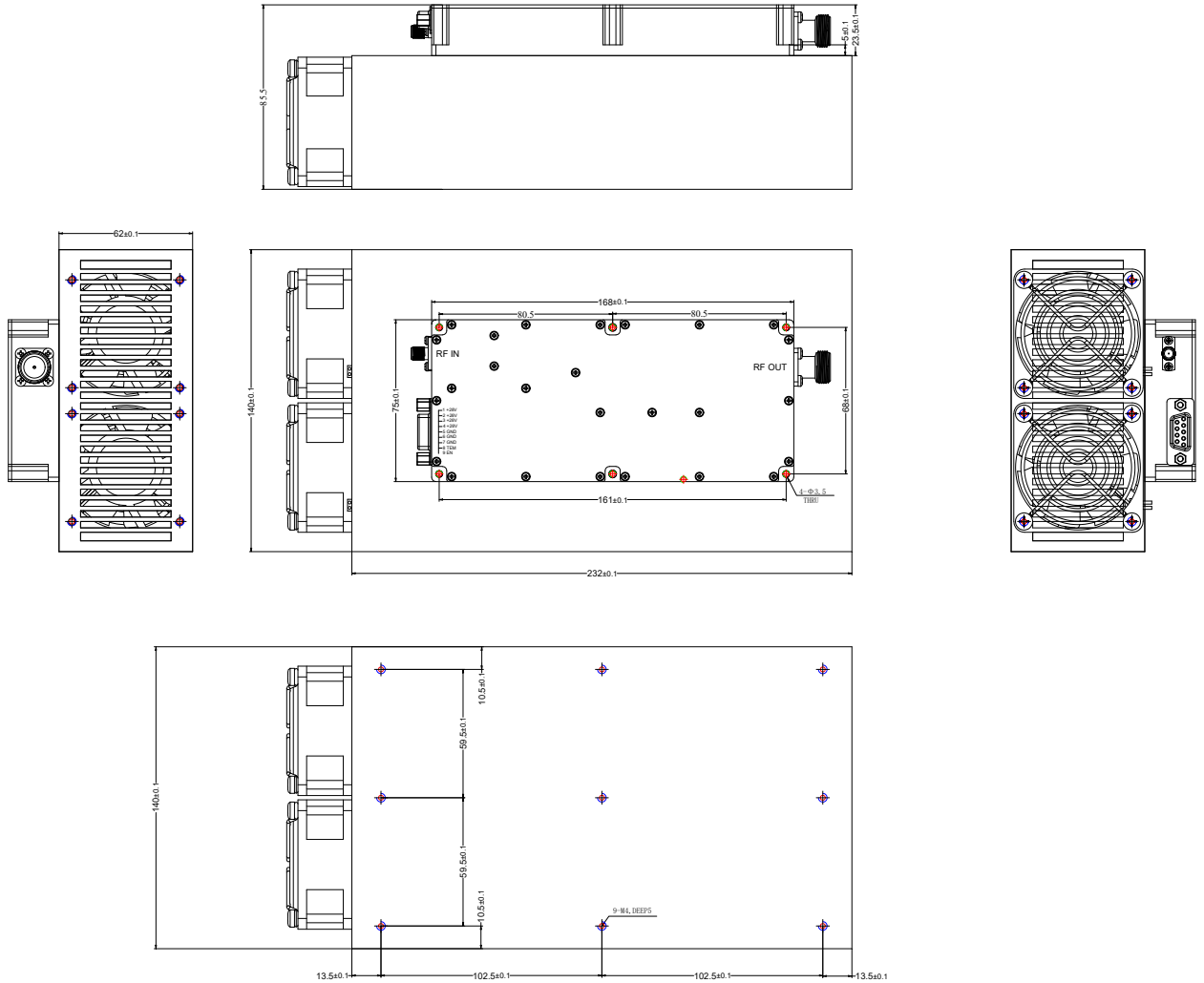
*****Heat Sink Required During Operation**



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 |
| 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) 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 |
|-----------------------|--|----------|
| TLPA5.1G5.9G-50-50 | Power amplifier 5.1-5.9GHz, Gain:50dB,Psat:50dBm,+28V DC,Without Heatsink | Rev.2.0 |
| TLPA5.1G5.9G-50-50-HS | Power amplifier 5.1-5.9GHz, Gain:50dB,Psat:50dBm,+28V DC,With Heatsink | Rev.2.0 |