

## Power Amplifier

**1-18GHz/43dB Gain/43dBm Psat**

**Model: TLPA1G18G-43-43**

TLPA1G18G-43-43 is a power amplifier with a minimum power gain of 43 dB and a normal Psat of 43 dBm across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/2 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 1-18GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm 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    | 1-18 |     |     | GHz   |
| Power Gain         | 43   |     |     | dB    |
| Gain Flatness      |      | ±3  | ±4  | dB    |
| Output P1dB        | 39   | 40  |     | dBm   |
| Output Psat        | 42.5 | 43  |     | dBm   |
| Input VSWR         |      | 1.5 | 2   | :1    |
| DC Voltage         |      | 28  | 30  | V DC  |
| Static Current     |      | 2   |     | A     |
| Saturation current |      | 2   | 6   | A     |
| Impedance          | 50   |     |     | Ohms  |

## Mechanical Specifications:

| Parameter               | Value                                                         | Units |
|-------------------------|---------------------------------------------------------------|-------|
| Input /Output Connector | SMA Femlae/SMA Female                                         |       |
| DC Bias                 | Solder pin                                                    |       |
| Size                    | 170*110*24.5(Without heatsink)<br>232*140*86.5(With heatsink) | mm    |
| Weight                  | 700                                                           | g     |

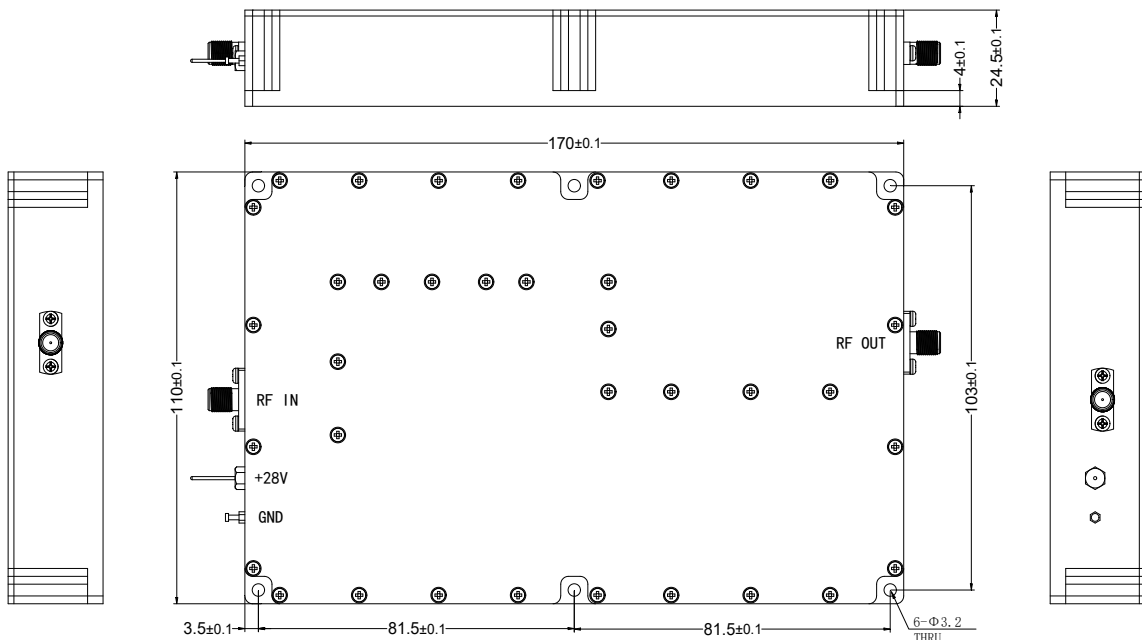
## Absolute Maximum Ratings:

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

## Outline Drawing:

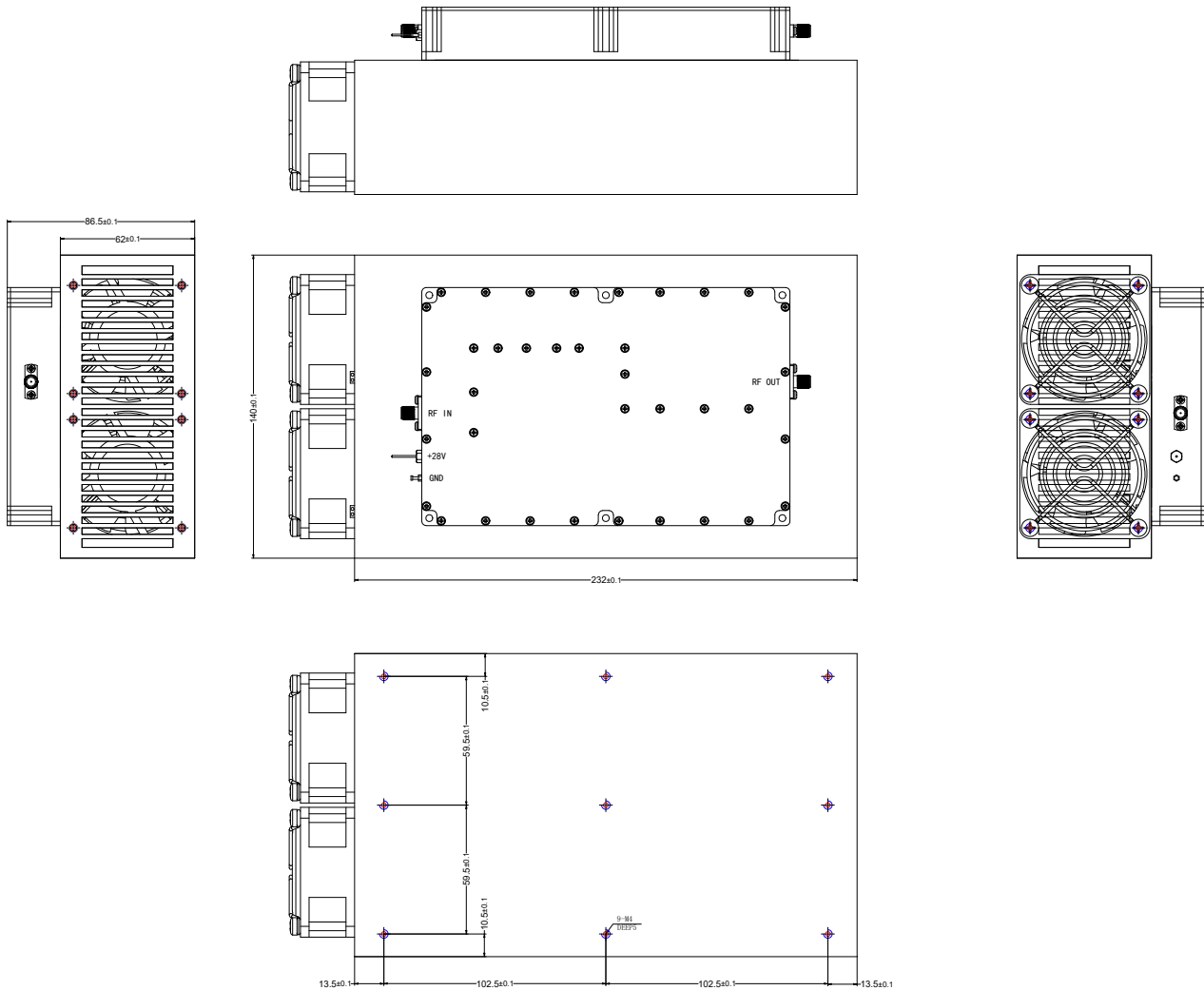
Unit:mm

## Regulatory Compliance:



## Outline Drawing:

Unit:mm



### Fan power supply

|            |                                                          |
|------------|----------------------------------------------------------|
| Red line   | Power supply positive, +24.0-28.0VDC<br>DC current: 0.3A |
| Black line | Ground                                                   |



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

## 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 |
|--------------------|---------------------------------------------------------------------------|----------|
| TLPA1G18G-43-43    | Power amplifier 1-18GHz,<br>Gain:43dB,Psat:43dBm,+28V DC,Without Heatsink | Rev.1.1  |
| TLPA1G18G-43-43-HS | Power amplifier 1-18GHz,<br>Gain:43dB,Psat:43dBm,+28V DC,With Heatsink    | Rev.1.1  |