

## Low Noise Amplifier

25.5-27GHz/2.7dB NF/48dB Gain/13dBm P1dB

Model: TLLA25.5G27G-48-27

TLLA25.5G27G-48-27 is a low noise amplifier with a typical small signal gain of 48 dB and a nominal noise figure of 2.7 dB across the frequency range of 25.5 to 27 GHz. The DC power requirement for the amplifier is +12 V DC/60 mA. The input port configuration offers coax adapter structure with WR-34 and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 25.5-27GHz
- Gain: 48dB Typ
- Noise Figure: 2.7dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

| Parameter            | Min  | Typ | Max | Units |
|----------------------|------|-----|-----|-------|
| Frequency range      | 25.5 |     | 27  | GHz   |
| Small Signal Gain    |      | 48  |     | dB    |
| Gain Flatness        |      | ±1  |     | dB    |
| Noise Figure         |      | 2.7 |     | dB    |
| Output P1dB          |      | 13  |     | dBm   |
| Rejection@ < 25GHz   | 35   |     |     | dB    |
| Rejection@ > 27.5GHz | 35   |     |     | dB    |
| Input VSWR           |      | 1.6 |     | :1    |
| Output VSWR          |      | 1.6 |     | :1    |
| DC Voltage           |      | +12 |     | V DC  |
| DC Supply Current    |      | 60  |     | mA    |
| Impedance            |      | 50  |     | Ohms  |

### Mechanical Specifications:

| Parameter               | Value           | Units |
|-------------------------|-----------------|-------|
| Input /Output Connector | WR34/SMA Female |       |
| DC Bias                 | Solder Pin      |       |
| Size                    | 48*30*22        | mm    |

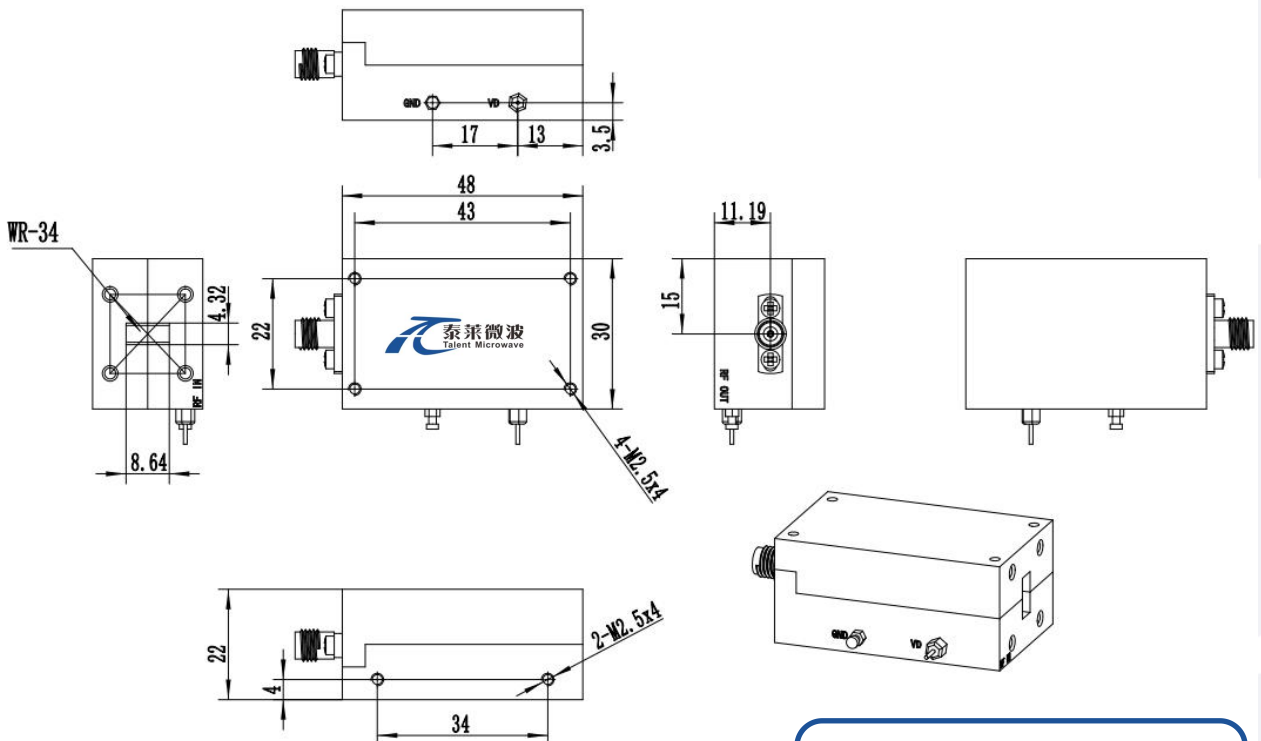
### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | TBD                  |
| RF Input Power        | +5 dBm               |
| 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.

### Environmental Conditions:

| Parameter                       | Min   | Typ | Max  | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature           | -45   |     | +85  | °C    |
| Non-operating Temperature       | -55   |     | +125 | °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  |     |      |       |

### Ordering Information:

| Base Number           | Description  | Revision |
|-----------------------|--|----------|
| TLLA25.5G27G-48-27    | Low Noise Amplifier, 25.5-27GHz, Noise Figure:2.7dB, Gain:48dB,P1dB:13dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLLA25.5G27G-48-27-HS | Low Noise Amplifier, 25.5-27GHz, Noise Figure:2.7dB, Gain:48dB,P1dB:13dBm,+12V DC,With Heatsink    | Rev.1.1  |