

## Low Noise Amplifier

33-37GHz/3.5dB NF/18dB Gain/18dBm P1dB

Model: TLLA33G37G-18-35

TLLA33G37G-18-35 is a low noise amplifier with a typical small signal gain of 18 dB and a nominal noise figure of 3.5 dB across the frequency range of 33 to 37 GHz. The DC power requirement for the amplifier is +5 V DC/200 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 33-37GHz
- Gain: 18dB Typ
- Noise Figure: 3.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

| Parameter         | Min | Typ  | Max | Units |
|-------------------|-----|------|-----|-------|
| Frequency range   | 33  |      | 37  | GHz   |
| Small Signal Gain | 16  | 18   | 20  | dB    |
| Gain Flatness     |     | ±0.5 | ±1  | dB    |
| Noise Figure      |     | 3.5  | 4.5 | dB    |
| Output P1dB       | 16  | 18   |     | dBm   |
| Output Psat       |     | 18   |     | dBm   |
| Input VSWR        |     | 1.6  | 1.8 | :1    |
| Output VSWR       |     | 1.6  | 1.8 | :1    |
| DC Voltage        |     | +5   |     | V DC  |
| DC Supply Current |     | 200  |     | mA    |
| Impedance         |     | 50   |     | Ohms  |

### Mechanical Specifications:

| Parameter               | Value                       | Units |
|-------------------------|-----------------------------|-------|
| Input /Output Connector | 2.92mm Female/2.92mm Female |       |
| DC Bias                 | Solder Pin                  |       |
| Size                    | 30*30*8                     | mm    |

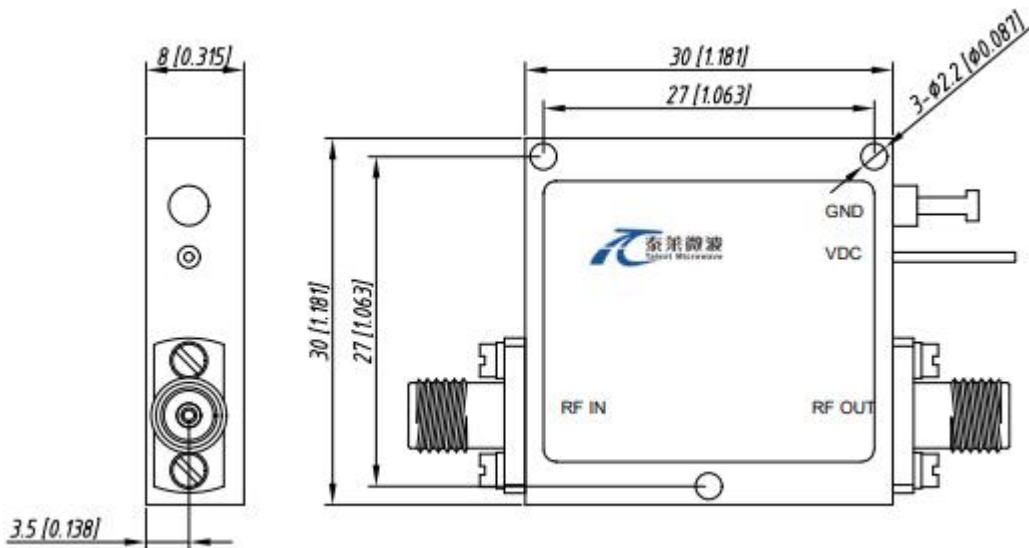
### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | TBD                  |
| RF Input Power        | 10 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                        | 50,000  |     |      | 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 |
|---------------------|---|----------|
| TLLA33G37G-18-35    | Low Noise Amplifier, 33-37GHz, Noise Figure:3.5dB, Gain:18dB,P1dB:18dBm,+5V DC,Without Heatsink | Rev.1.1  |
| TLLA33G37G-18-35-HS | Low Noise Amplifier, 33-37GHz, Noise Figure:3.5dB, Gain:18dB,P1dB:18dBm,+5V DC,With Heatsink    | Rev.1.1  |