

## Low Noise Amplifier

0.4-50GHz/6.0dB NF/40dB Gain/18dBm P1dB

Model: TLLA0.4G50G-40-60

TLLA0.4G50G-40-60 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 6.0 dB across the frequency range of 0.4 to 50 GHz. The DC power requirement for the amplifier is +12 V DC/500 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 0.4-50GHz
- Gain: 40dB Typ
- Noise Figure: 6.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

| Parameter         | Min | Typ  | Max | Units |
|-------------------|-----|------|-----|-------|
| Frequency range   | 0.4 |      | 50  | GHz   |
| Small Signal Gain |     | 40   |     | dB    |
| Gain Flatness     |     | ±2.5 | ±4  | dB    |
| Noise Figure      |     | 6.0  |     | dB    |
| Output P1dB       |     | 18   |     | dBm   |
| Output IP3        |     | 21   |     | dBm   |
| Spurious          |     | -60  |     | dBc   |
| Input VSWR        |     | 2    | 2.5 | :1    |
| Output VSWR       |     | 2    | 2.5 | :1    |
| 直流DC Voltage      | +8  | +12  |     | V DC  |
| DC Supply Current |     | 500  |     | mA    |
| Impedance         |     | 50   |     | Ohms  |

### Mechanical Specifications:

| Parameter               | Value                     | Units |
|-------------------------|---------------------------|-------|
| Input /Output Connector | 2.4mm Female/2.4mm Female |       |
| DC Bias                 | Solder Pin                |       |
| Size                    | 35.3*40.3*12              | mm    |
| Weight                  | 48                        | g     |

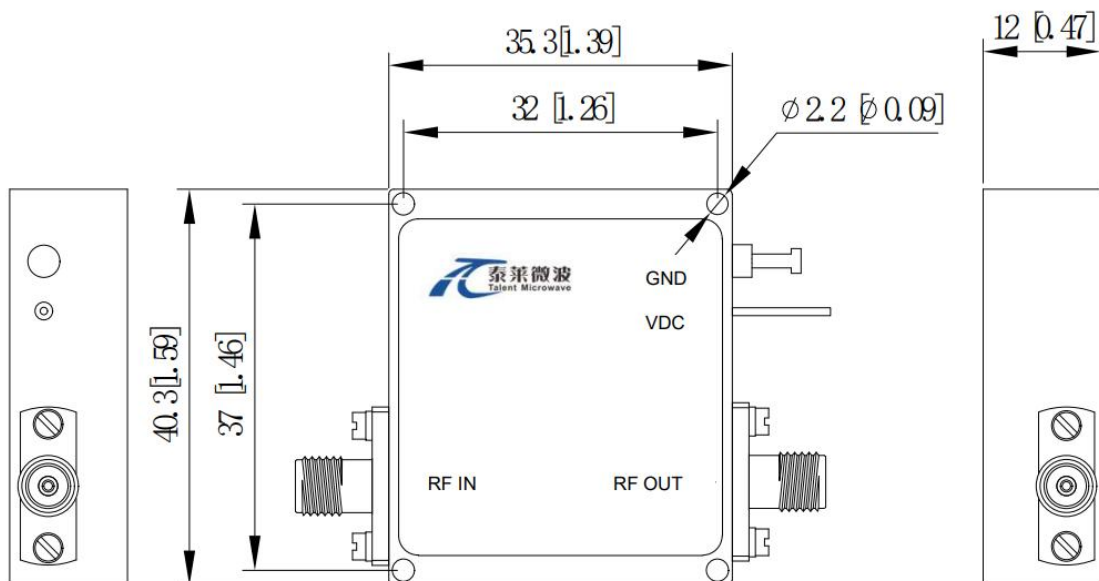
### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | TBD                  |
| RF Input Power        | -15 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 |
|----------------------|--|----------|
| TLLA0.4G50G-40-60    | Low Noise Amplifier, 0.4-50GHz, Noise Figure:6.0dB, Gain: 40dB,P1dB:18dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLLA0.4G50G-40-60-HS | Low Noise Amplifier, 0.4-50GHz, Noise Figure:6.0dB, Gain: 40dB,P1dB:18dBm,+12V DC,With Heatsink    | Rev.1.1  |