

Low Noise Amplifier

24-44GHz/5.0dB NF/40dB Gain/21dBm P1dB

Model: TLLA24G44G-40-50-2

TLLA24G44G-40-50-2 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 5.0 dB across the frequency range of 24 to 44 GHz. The DC power requirement for the amplifier is +12 V DC/750 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 24-44GHz
- Gain: 40dB Typ
- Noise Figure: 5.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|------|------|-------|
| Frequency range | 24 | | 44 | GHz |
| Small Signal Gain | 38 | 40 | | dB |
| Gain Flatness | | ±3.0 | ±4.0 | dB |
| Noise Figure | | 5 | 6 | dB |
| Output P1dB | 20 | 21 | | dBm |
| Output Psat | | 22 | | dBm |
| Spurious | | -60 | | dBc |
| Output IP3 | | 30 | | dBm |
| Input VSWR | | 1.8 | 2.5 | :1 |
| Output VSWR | | 1.8 | 2.5 | :1 |
| DC Voltage | | +12 | | V DC |
| DC Supply Current | | 750 | | 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 | 50 | g |

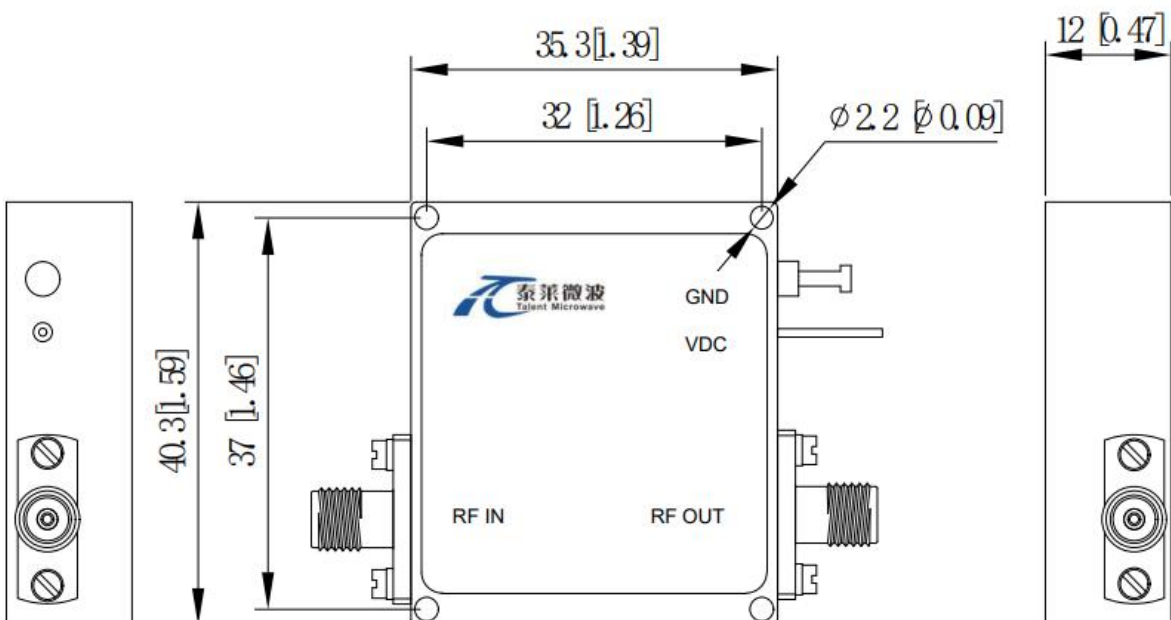
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +18 V |
| 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 | 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 |
|-----------------------|--|----------|
| TLLA24G44G-40-50-2 | Low Noise Amplifier, 24-44GHz, Noise Figure:5.0dB, Gain:40dB,P1dB:21dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA24G44G-40-50-2-HS | Low Noise Amplifier, 24-44GHz, Noise Figure:5.0dB, Gain:40dB,P1dB:21dBm,+12V DC,With Heatsink | Rev.1.1 |