

Low Noise Amplifier

2.2-2.4GHz/1.0dB NF/36dB Gain/17dBm P1dB

Model: TLLA2.2G2.4G-35-10

TLLA2.2G2.4G-35-10 is a low noise amplifier with a typical small signal gain of 36 dB and a nominal noise figure of 1.0 dB across the frequency range of 2.2 to 2.4 GHz. The DC power requirement for the amplifier is +5.5 V DC/60 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2.2-2.4GHz
- Gain: 36dB Typ
- Noise Figure: 1.0dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|------|------|-------|
| Frequency range | 2.2 | | 2.4 | GHz |
| Small Signal Gain | | 36 | | dB |
| Gain Flatness | | | ±0.5 | dB |
| Noise Figure | | 0.7 | 1 | dB |
| Output P1dB | 16 | 17 | | dBm |
| Output Psat | | 18 | | dBm |
| Input VSWR | | 1.5 | | :1 |
| Output VSWR | | 1.5 | | :1 |
| DC Voltage | | +5.5 | +13 | V DC |
| DC Supply Current | | 60 | | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 28*20*10 | mm |
| Weight | 20 | g |

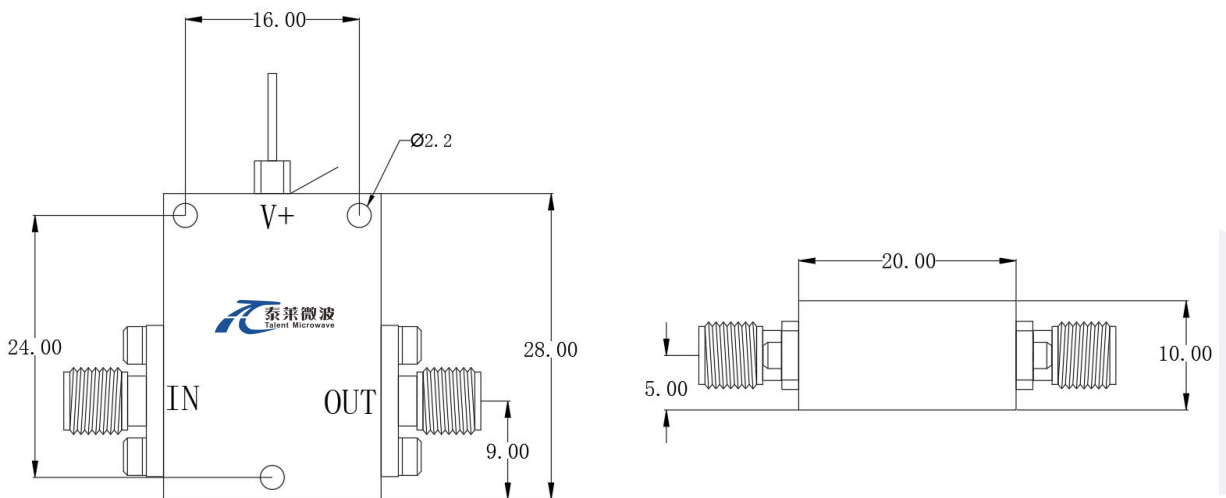
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +13 V |
| RF Input Power | +20 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 |
|-----------------------|---|----------|
| TLLA2.2G2.4G-35-10 | Low Noise Amplifier, 2.2-2.4GHz, Noise Figure:1.0dB, Gain:36dB,P1dB:17dBm,+5.5V DC,Without Heatsink | Rev.1.1 |
| TLLA2.2G2.4G-35-10-HS | Low Noise Amplifier, 2.2-2.4GHz, Noise Figure:1.0dB, Gain:36dB,P1dB:17dBm,+5.5V DC,With Heatsink | Rev.1.1 |