Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

# Low Noise Amplifier

## 1-2GHz/1.5dB NF/52dB Gain/16 dBm P1dB  Model: TLLA1G2G-50-15

TLLA1G2G-50-15 is a low noise amplifier with a typical small signal gain of 52 dB and a nominal noise figure of 1.5 dB across the frequency range of 1 to 2 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

## Features:

- Frequency range:1-2GHz
- Gain: 52dB Typ
- Noise Figure: 1.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

## Applications:

- Communication systems

## Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | 1 | | 2 | GHz |
| Small Signal Gain | 50 | 52 | | dB |
| Gain Flatness | | ±0.5 | | dB |
| Noise Figure | | 1.5 | 2 | dB |
| Output P1dB | 10 | 16 | | dBm |
| Output IP3 | | 23 | | dBm |
| Input VSWR | | 1.3 | 1.8 | :1 |
| Output VSWR | | 1.3 | 1.8 | :1 |
| DC Voltage | | 12 | | V DC |
| DC Supply Current | | 200 | | mA |
| Impedance | 50 | | | Ohms |

## Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 50*40*10 | mm |

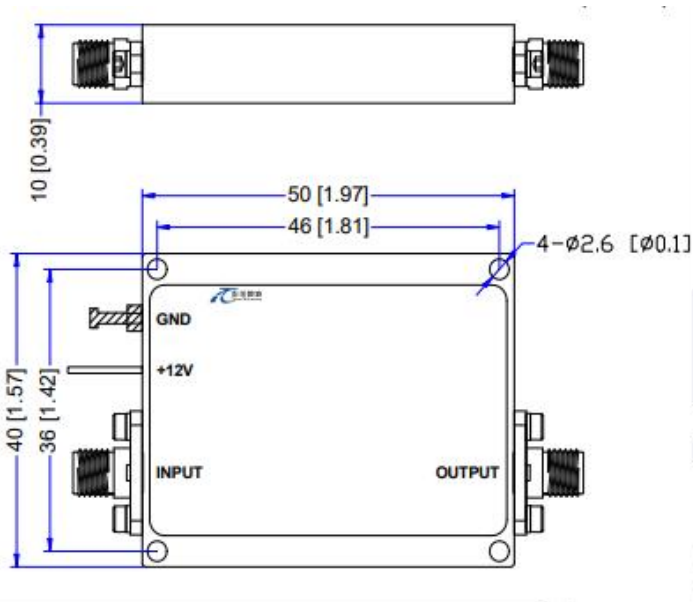
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

## Absolute Maximum Ratings:

| Parameter | Value |
|---|---|
| Supply Bias Voltage | +15 V |
| 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 | ℃ |
| Non-operating Temperature | -55 | | +125 | ℃ |
| 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 | | | |

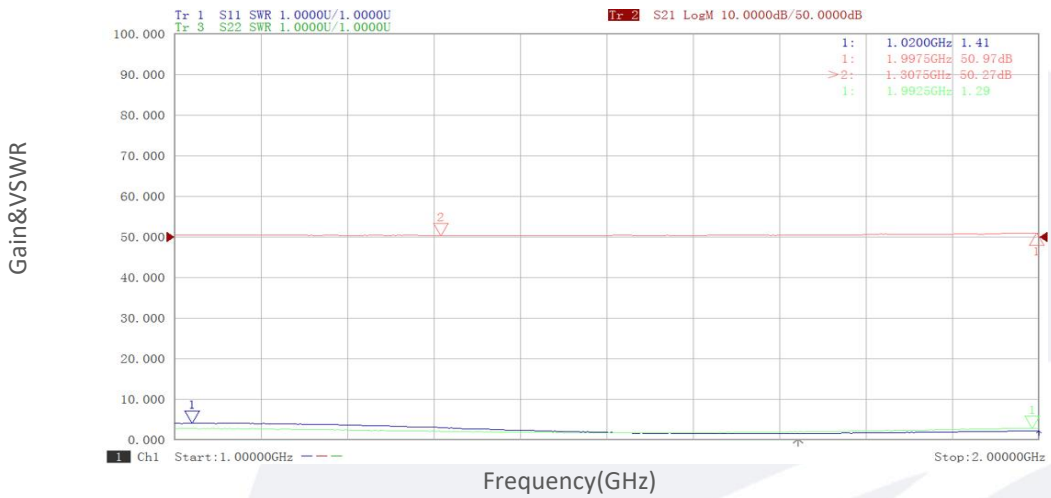
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

## Ordering Information:

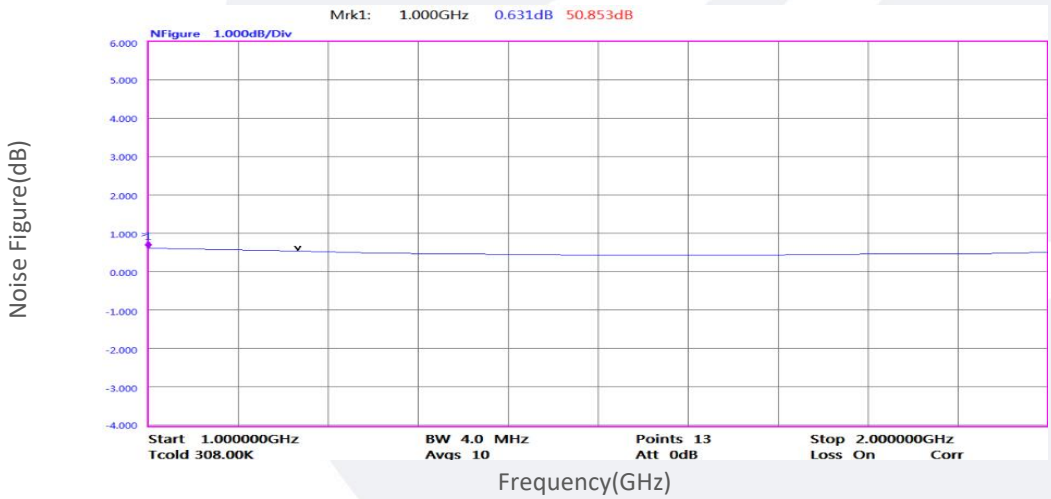
| Base Number | Desciption | Revision |
|---|---|---|
| TLLA1G2G-50-15 | Low Noise Amplifier, 1-2GHz, Noise Figure:2.0dB, Gain:50 dB,P1dB:16dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA1G2G-50-15-HS | Low Noise Amplifier, 1-2GHz, Noise Figure:2.0dB, Gain:50 dB,P1dB:16dBm,+12V DC,With Heatsink | Rev.1.1 |

## Typical Performance Data:

### Gain&VSWR vs Frequency




### Noise Figure vs Frequency




Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.