

**Model: TLLA2G12G-30-12**
**Low Noise Amplifier**  
**2-12GHz, NF:1.2dB, Gain:30dB, P1dB:15dBm**
**Feature:**

- Ultra Wide Band: 2-12GHz
- Gain: 30dB Min
- Noise Figure: 1.2dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**Electrical Specifications:**

| Parameter         | Min  | Typ | Max | Units |
|-------------------|------|-----|-----|-------|
| Frequency range   | 2-12 |     |     | GHz   |
| Gain              | 30   |     |     | dB    |
| Gain Flatness     |      | ±1  | ±2  | dB    |
| Noise Figure      |      | 1.2 | 1.8 | dB    |
| Output P1dB       | 13   | 15  |     | dBm   |
| Output IP3        |      | 25  |     | dBm   |
| Input VSWR        |      | 1.8 | 2   | :1    |
| Output VSWR       |      | 1.5 | 2   | :1    |
| DC Voltage        |      | 12  |     | V DC  |
| DC Supply Current |      | 150 |     | mA    |
| Impedance         | 50   |     |     | Ohms  |

**Mechanical Specifications:**

| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female |       |
| DC Bias                 | Solder Pin            |       |
| Size                    | 30*30*10.2            | mm    |
| Weight                  | /                     | g     |

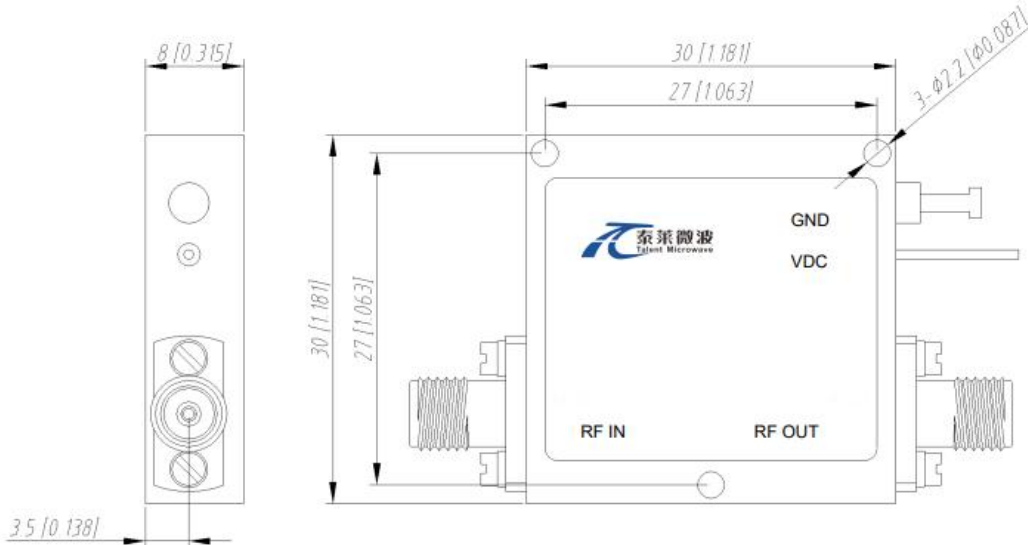
**Absolute Maximum Ratings:**

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | TBF                  |
| RF Input Power        | -10 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |


**Available 220V System  
 Benchtop Amplifier**

**Outline Drawing:**

Unit: mm(inches)



**\*\*\*Heat Sink Required During Operation**



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**Environmental Conditions:**

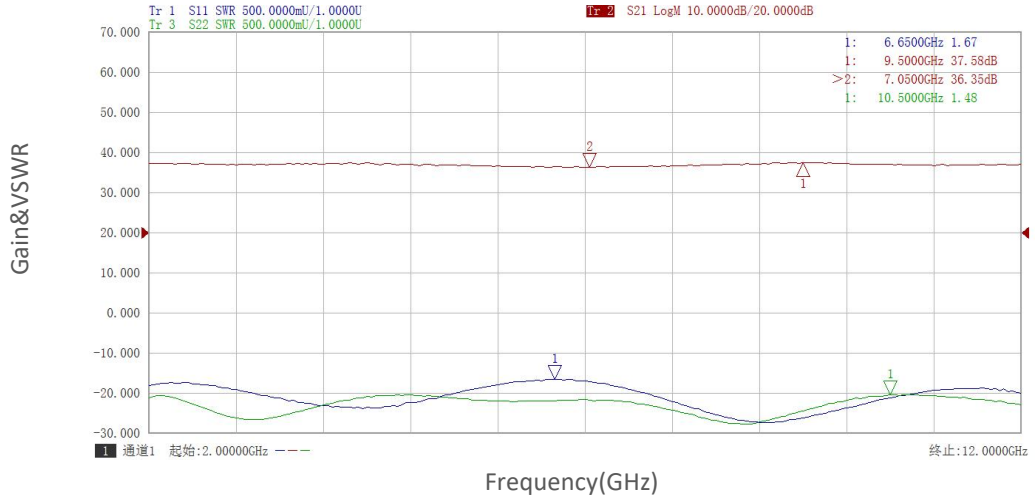
| Parameter                       | Min   | Typ | Max  | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature           | -45   |     | +85  | °C    |
| Non-operating Temperature       | -55   |     | +125 | °C    |
| Relative humidity               |   | 95  |      | %     |
| 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:**

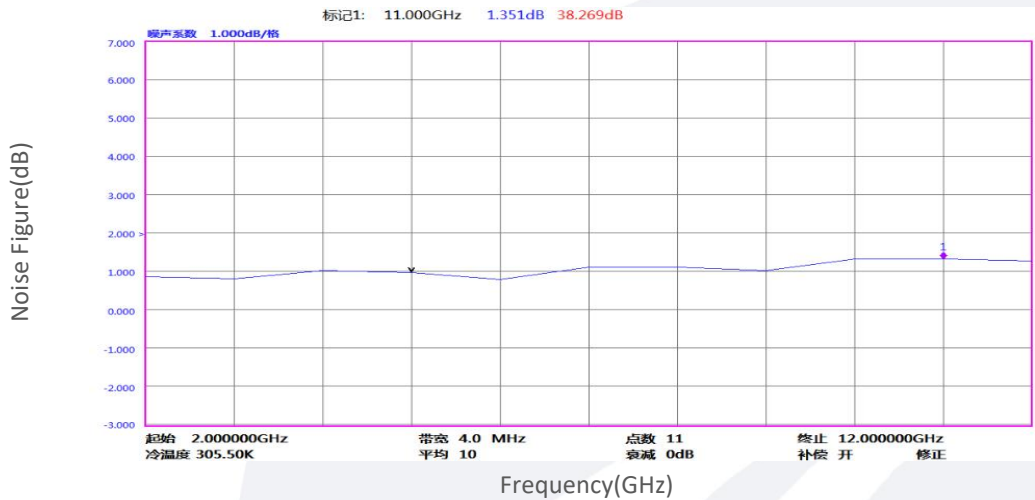
| Part Number        | Description  | Revision |
|--------------------|--|----------|
| TLLA2G12G-30-12    | Low Noise Amplifier, 2-12GHz, Noise Figure:1.2dB, Gain:30 dB,P1dB:15dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLLA2G12G-30-12-HS | Low Noise Amplifier, 2-12GHz, Noise Figure:1.2dB, Gain:30 dB,P1dB:15dBm,+12V DC,With Heatsink    | Rev.1.1  |

Typical Performance Data:

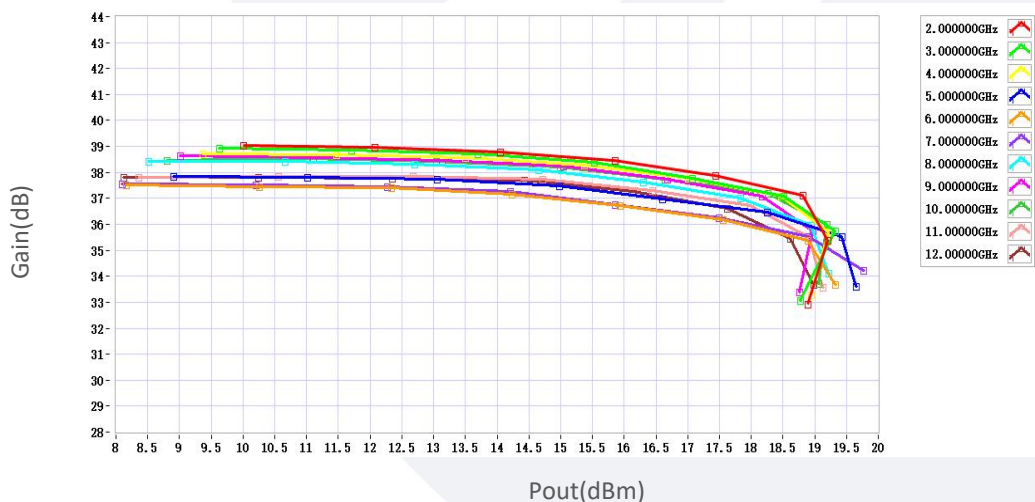
Gain&VSWR vs Frequency



Noise Figure vs Frequency

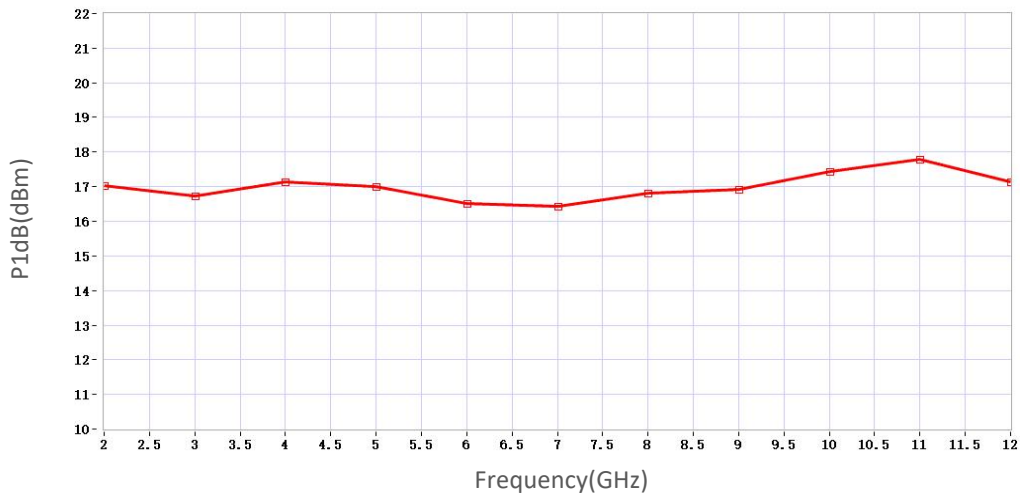


Gain vs Output Power



Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency

