

**Model: TLLA0.5G6G-50-18**
**Low Noise Amplifier**
**0.5-6GHz, NF:1.8dB, Gain:50dB, P1dB:10dBm**
**Feature:**

- Ultra Wide Band: 0.5-6GHz
- Gain: 50dB Min
- Noise Figure: 1.8dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**Electrical Specifications:**

| Parameter         | Min   | Typ  | Max | Units |
|-------------------|-------|------|-----|-------|
| Frequency range   | 0.5-6 |      |     | GHz   |
| Gain              | 50    |      |     | dB    |
| Gain Flatness     |       | ±2.8 |     | dB    |
| Noise Figure      |       | 1.8  | 2   | dB    |
| Output P1dB       | 10    |      |     | dBm   |
| Input VSWR        |       | 2.2  | 2.5 | :1    |
| Output VSWR       |       | 2.2  | 2.5 | :1    |
| DC Voltage        |       | 8    |     | V DC  |
| DC Supply Current |       | 250  |     | mA    |
| Impedance         | 50    |      |     | Ohms  |

**Mechanical Specifications:**

| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female |       |
| DC Bias                 | Solder Pin            |       |
| Size                    | 44.8*29.2*11          | mm    |
| Weight                  | 50                    | g     |

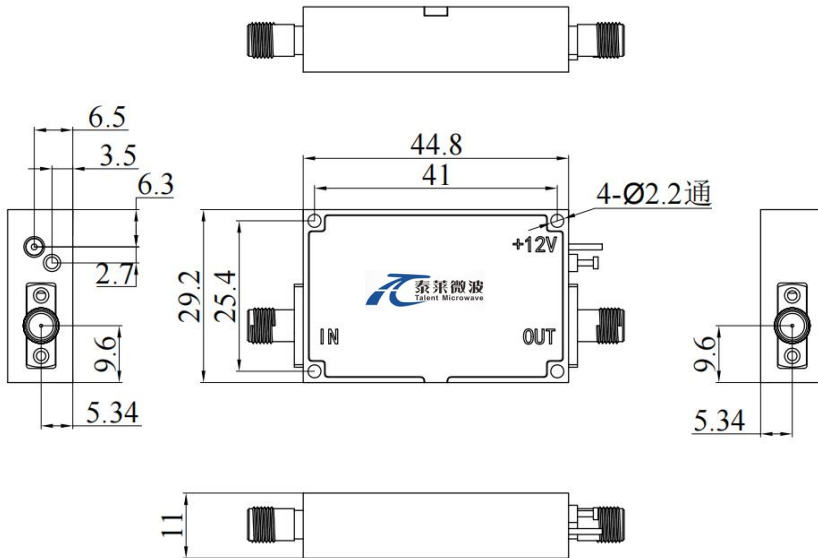
**Absolute Maximum Ratings:**

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +12V                 |
| 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:**

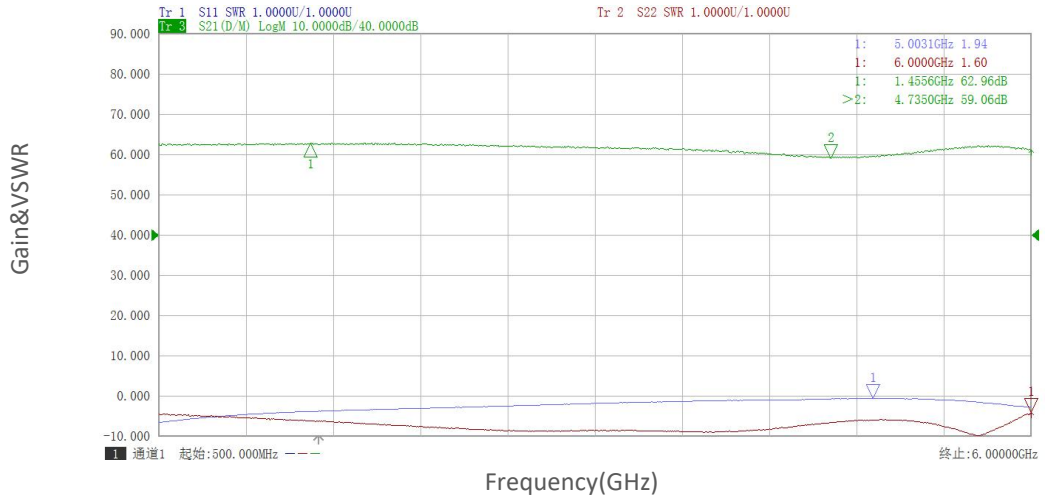
| Parameter                       | Min   | Typ | Max  | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature           | -45   |     | +85  | °C    |
| Non-operating Temperature       | -55   |     | +125 | °C    |
| Relative humidity               |   | 95  |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

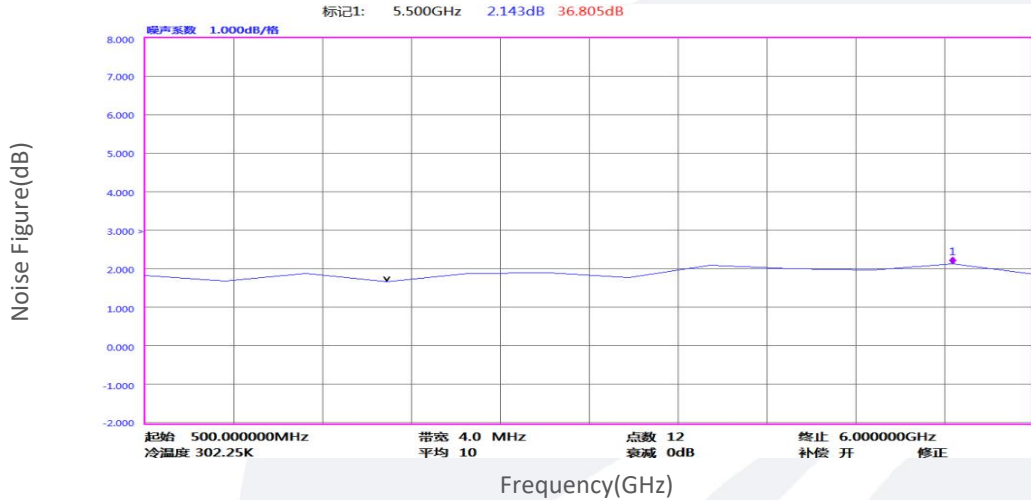
| Part Number         | Description  | Revision |
|---------------------|--|----------|
| TLLA0.5G6G-50-18    | Low Noise Amplifier, 0.5-6GHz, Noise Figure:1.8dB, Gain:50 dB,P1dB:10dBm,+8V DC,Without Heatsink | Rev.1.1  |
| TLLA0.5G6G-50-18-HS | Low Noise Amplifier, 0.5-6GHz, Noise Figure:1.8dB, Gain:50 dB,P1dB:10dBm,+8V DC,With Heatsink    | Rev.1.1  |

Typical Performance Data:

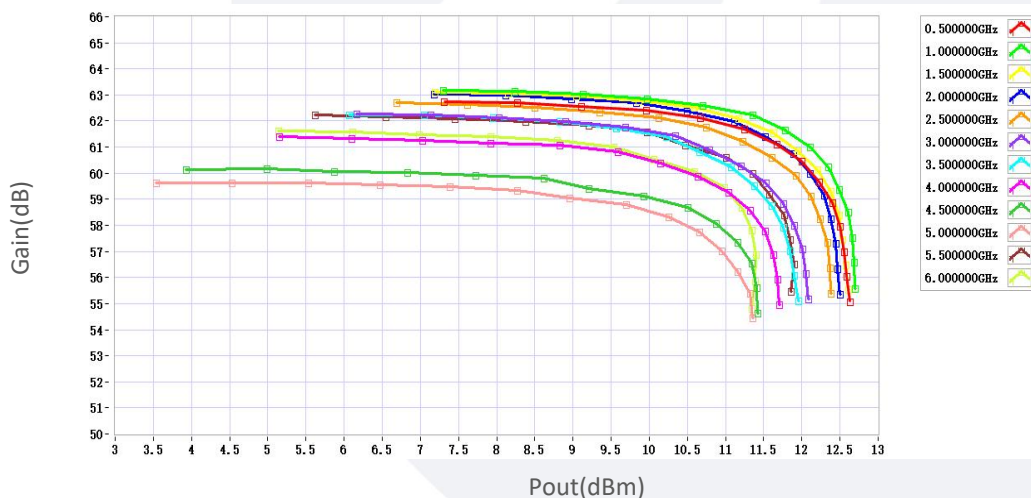
Gain&VSWR vs Frequency



Noise Figure vs Frequency

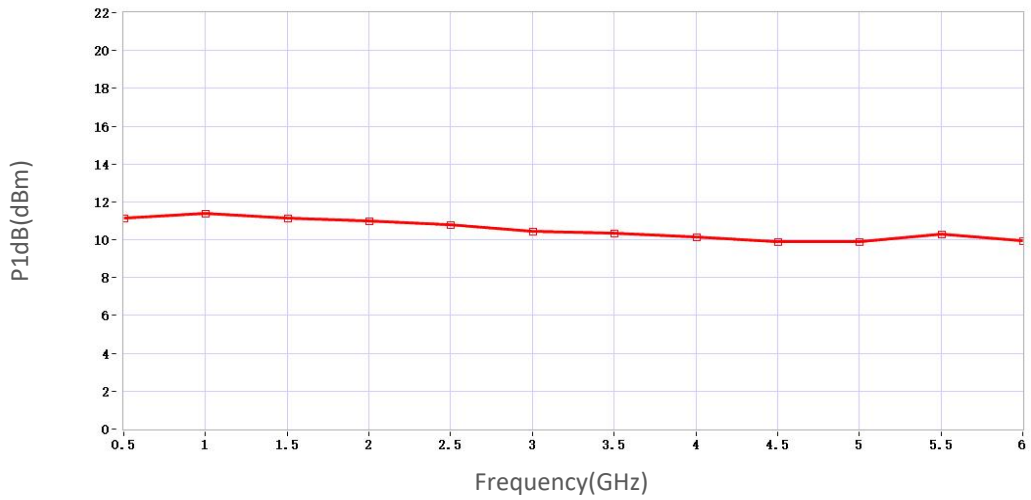


Gain vs Output Power



Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency

