

## Low Noise Amplifier

4-8GHz/0.9dB NF/26dB Gain/15dBm P1dB

Model: TLLA4G8G-26-07

TLLA4G8G-26-07 is a low noise amplifier with a typical small signal gain of 26 dB and a nominal noise figure of 0.9 dB across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +8 V DC/35 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 4-8GHz
- Gain: 26dB Typ
- Noise Figure: 0.9dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

| Parameter         | Min | Typ  | Max  | Units |
|-------------------|-----|------|------|-------|
| Frequency range   | 4   |      | 8    | GHz   |
| Small Signal Gain | 25  | 26   |      | dB    |
| Gain Flatness     |     | ±1.0 | ±1.5 | dB    |
| Noise Figure      |     | 0.9  |      | dB    |
| Output P1dB       | 15  |      |      | dBm   |
| Output IP3        |     | 25   |      | dBm   |
| Input VSWR        |     | 1.5  | 2    | :1    |
| Output VSWR       |     | 1.5  | 2.2  | :1    |
| DC Voltage        |     | +8   |      | V DC  |
| DC Supply Current |     | 35   |      | 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                  | 55                    | g     |

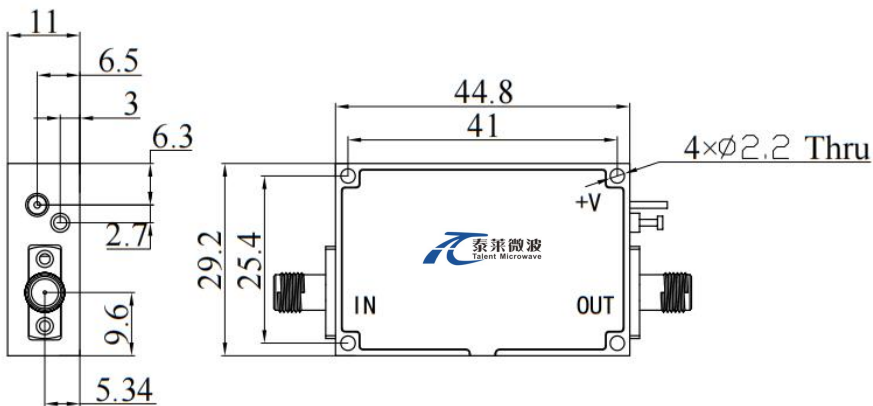
## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +15 V                |
| RF Input Power        | +2 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |



## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

## Environmental Conditions:

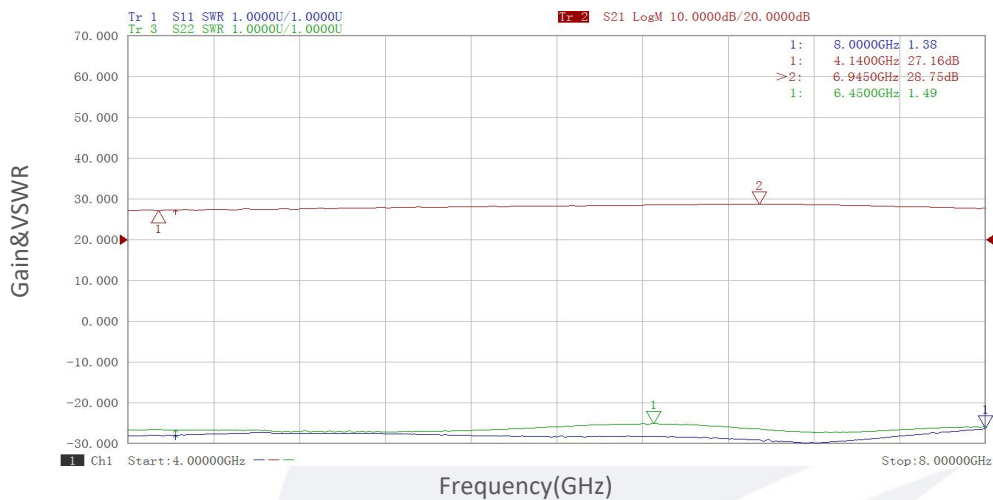
| Parameter                       | Min                                                 | Typ | Max  | Units |
|---------------------------------|-----------------------------------------------------|-----|------|-------|
| Operating Temperature           | -45                                                 |     | +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:

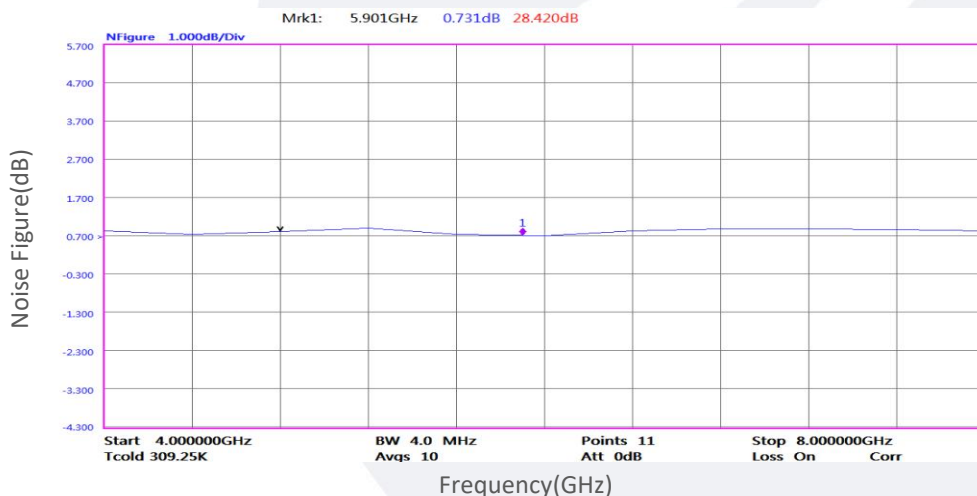
| Base Number       | Description                                                                                   | Revision |
|-------------------|-----------------------------------------------------------------------------------------------|----------|
| TLLA4G8G-26-07    | Low Noise Amplifier, 4-8GHz, Noise Figure:0.9dB, Gain:26dB,P1dB:15dBm,+8V DC,Without Heatsink | Rev.1.1  |
| TLLA4G8G-26-07-HS | Low Noise Amplifier, 4-8GHz, Noise Figure:0.9dB, Gain:26dB,P1dB:15dBm,+8V DC,With Heatsink    | Rev.1.1  |

## Typical Performance Data:

### Gain&VSWR vs Frequency



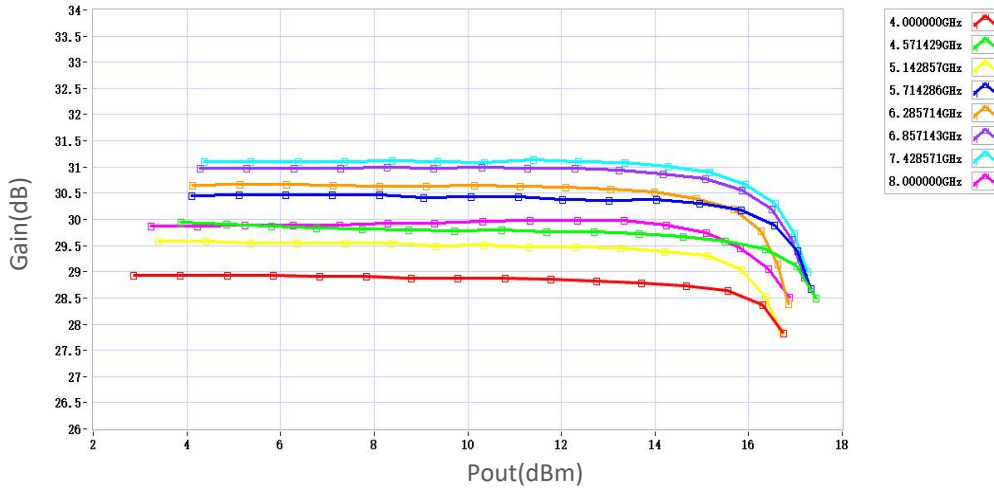
### Noise Figure vs Frequency



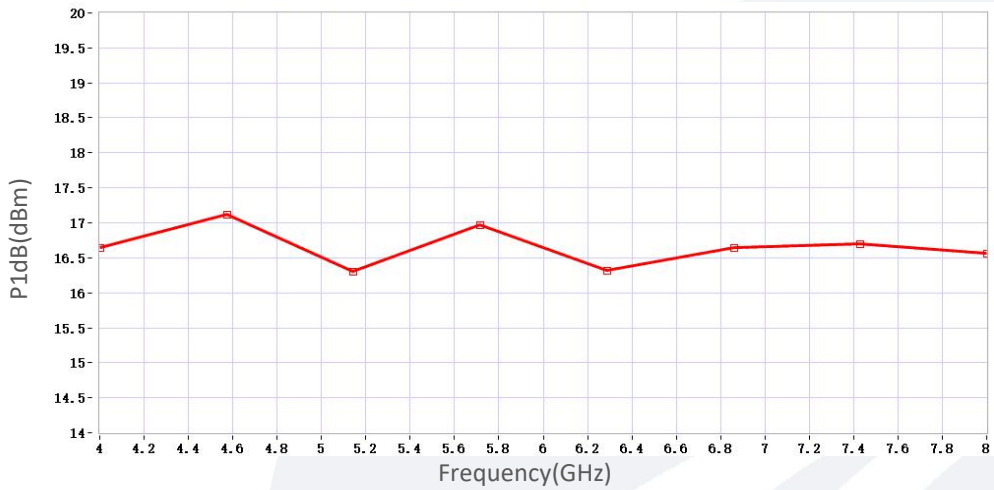
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### Gain vs Output Power



### P1dB 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.