

## Low Noise Amplifier

4-8GHz/1dB NF/22dB Gain/-2dBm P1dB

Model: TLLA4G8G-22-10

TLLA4G8G-22-10 is a low noise amplifier with a typical small signal gain of 22 dB and a nominal noise figure of 1 dB across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +2 V DC/10 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 4-8GHz
- Gain: 22dB Typ
- Noise Figure: 1dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

## 电气特性 Electrical Characteristics:

| 参数 Parameter            | Min | Typ | Max | 单位 Units |
|-------------------------|-----|-----|-----|----------|
| 频率范围 Frequency range    | 4   |     | 8   | GHz      |
| 小信号增益 Small Signal Gain |     | 22  |     | dB       |
| 增益平坦度 Gain Flatness     |     | ±1  |     | dB       |
| 噪声系数 Noise Figure       |     | 1   |     | dB       |
| 线性输出功率 Output P1dB      |     | -2  |     | dBm      |
| 输入驻波 Input VSWR         |     | 2.5 |     | :1       |
| 输出驻波 Output VSWR        |     | 2   |     | :1       |
| 直流电压 DC Voltage         |     | +2  |     | V DC     |
| 直流电流 DC Supply Current  |     | 10  |     | mA       |
| 阻抗 Impedance            |     | 50  |     | Ohms     |

## 机械特性 Mechanical Specifications:

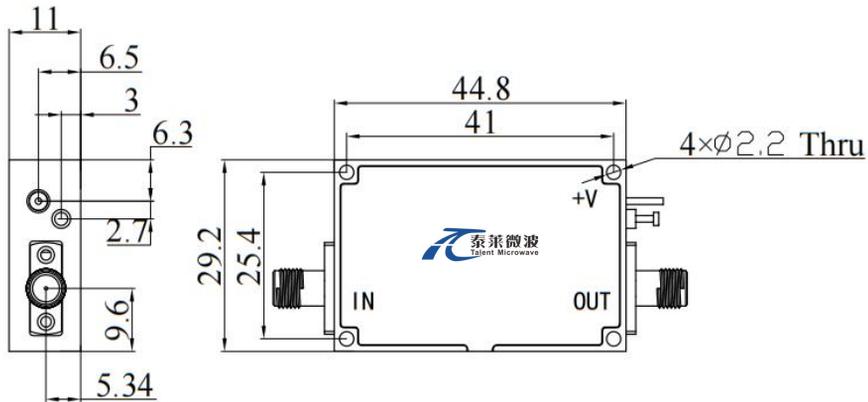
| 参数 Parameter                    | 指标 Value              | 单位 Units |
|---------------------------------|-----------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female/SMA Female |          |
| 直流偏置 DC Bias                    | Solder Pin            |          |
| 尺寸 Size                         | 44.8*29.2*11          | mm       |

### 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +7 V                 |
| 输入功率 RF Input Power          | +20 dBm              |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

### 外形图 Outline Drawing:

Unit:mm



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



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

### 温度环境 Environmental Conditions:

| 参数 Parameter                       | Min   | Typ | Max  | 单位 Units |
|------------------------------------|---|-----|------|----------|
| 操作温度 Operating Temperature         | -45   |     | +85  | °C       |
| 存储温度 Non-operating Temperature     | -55   |     | +125 | °C       |
| 相对湿度 Relative humidity             |   | 95  |      | %        |
| 海拔 Altitude                        | 10,000  |     |      | feet     |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |      |          |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |      |          |

## 订货信息 Ordering Information:

| 标准型号 Base Number  | 描述 Description   | 版本号 Revision |
|-------------------|--|--------------|
| TLLA4G8G-22-10    | Low Noise Amplifier, 4-8GHz, Noise Figure:1dB, Gain:22dB,P1dB: -2dBm,+2V DC,Without Heatsink | Rev.1.1      |
| TLLA4G8G-22-10-HS | Low Noise Amplifier, 4-8GHz, Noise Figure:1dB, Gain:22dB,P1dB: -2dBm,+2V DC,With Heatsink    | Rev.1.1      |