泰莱微波
Talent Microwave

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# Low Noise Amplifier

## 8-12GHz /1dB NF/32dB Gain/12 dBm P1dB  Model: TLLA8G12G-32-10

TLLA8G12G-32-10 is a low noise amplifier with small signal gain of 32 dB and a nominal noise figure of 1.0 dB across the frequency range of 8 to 12 GHz. The DC power requirement for the amplifier is +12 V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Ultra Wide Band:8-12GHz
- Gain: 32dB Min
- Noise Figure: 1.0dB 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 | 8 | | 12 | GHz |
| 增益 Gain | 32 | | | dB |
| 增益平坦度 Gain Flatness | | ±1.5 | | dB |
| 噪声系数 Noise Figure | | 1.0 | 1.2 | dB |
| 线性输出功率 Output P1dB | 11 | 12 | | dBm |
| 输入驻波 Input VSWR | | 1.5 | 1.8 | :1 |
| 输出驻波 Output VSWR | | 1.5 | 1.8 | :1 |
| 直流电压 DC Voltage | +6 | +12 | +12 | V DC |
| 直流电流 DC Supply Current | | 50 | | 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 | 20*20*10 | mm |
| 重量 Weight | / | g |

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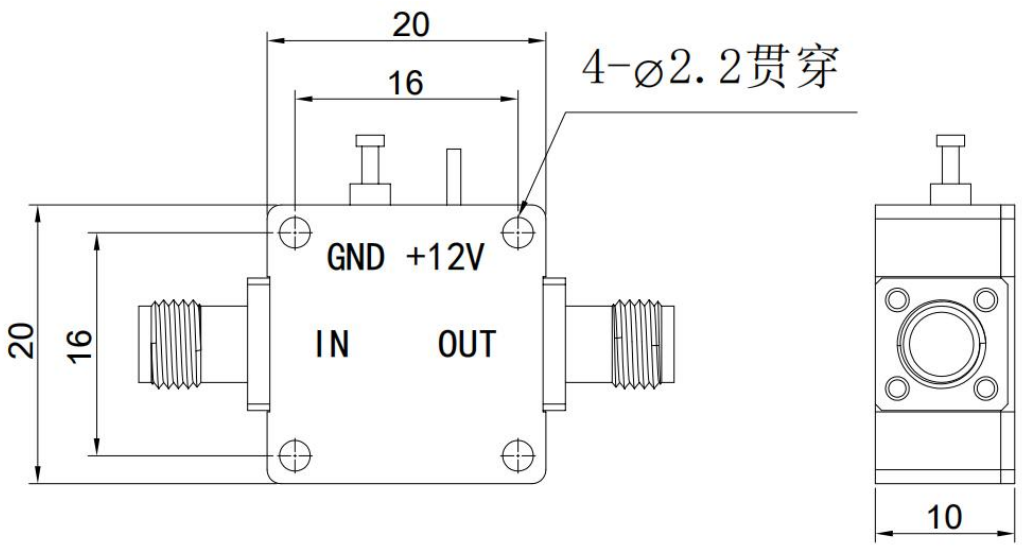
## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|---|---|
| 供电偏置电压 Supply Bias Voltage | +12 V |
| 输入功率 RF Input Power | +10 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing: Unit:mm




***Heat Sink Required During Operation


## 温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|---|---|---|---|---|
| 操作温度 Operating Temperature | -45 | | +85 | ℃ |
| 存储温度 Non-operating Temperature | -55 | | +125 | ℃ |
| 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 | | | |

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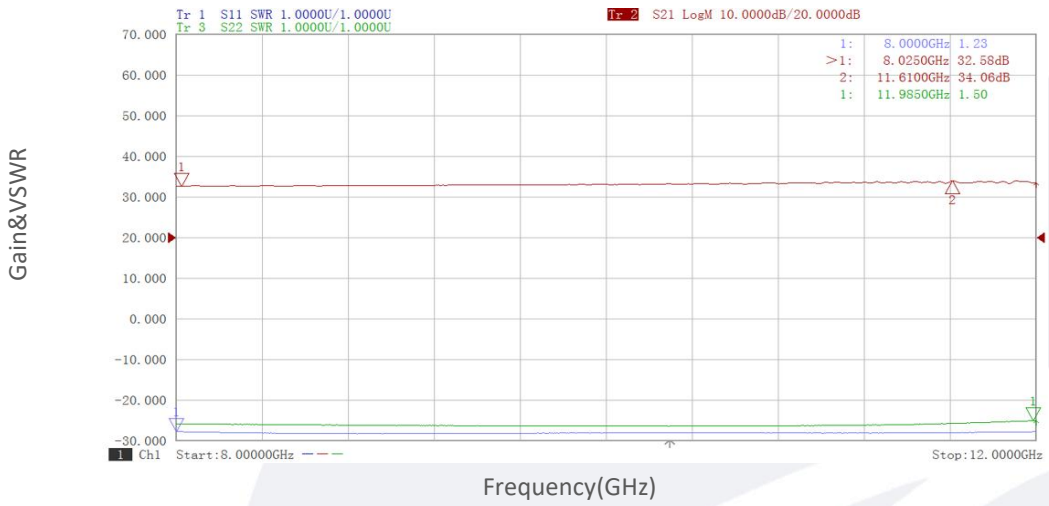
## 订货信息 Ordering Information:

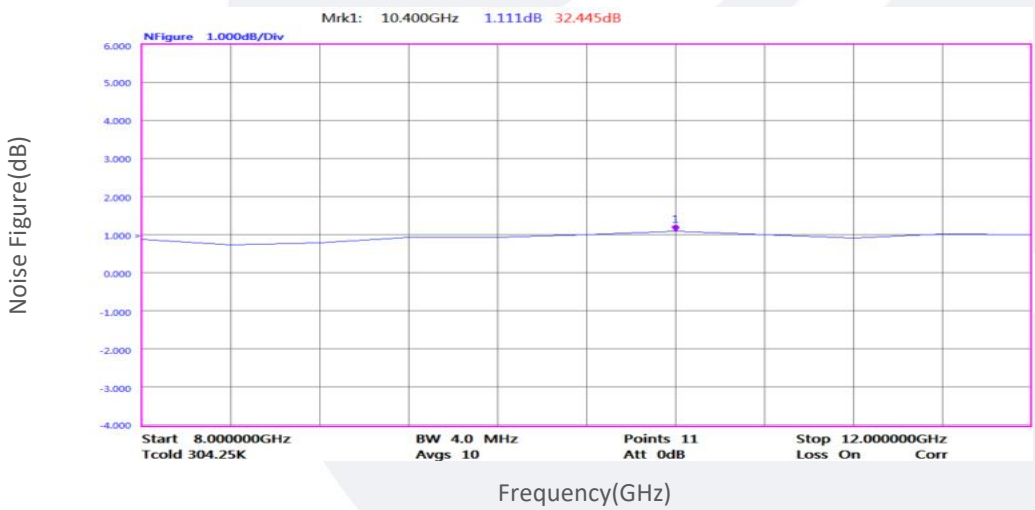
| 标准型号 Base Number | 描述 Desciption | 版本号 Revision |
|---|---|---|
| TLLA8G12G-32-10 | Low Noise Amplifier, 8-12GHz, Noise Figure:1.0dB, Gain:32 dB,P1dB:12dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA8G12G-32-10-HS | Low Noise Amplifier, 8-12GHz, Noise Figure:1.0dB, Gain:32 dB,P1dB:12dBm,+12V DC,With Heatsink | Rev.1.1 |

## 典型曲线 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.

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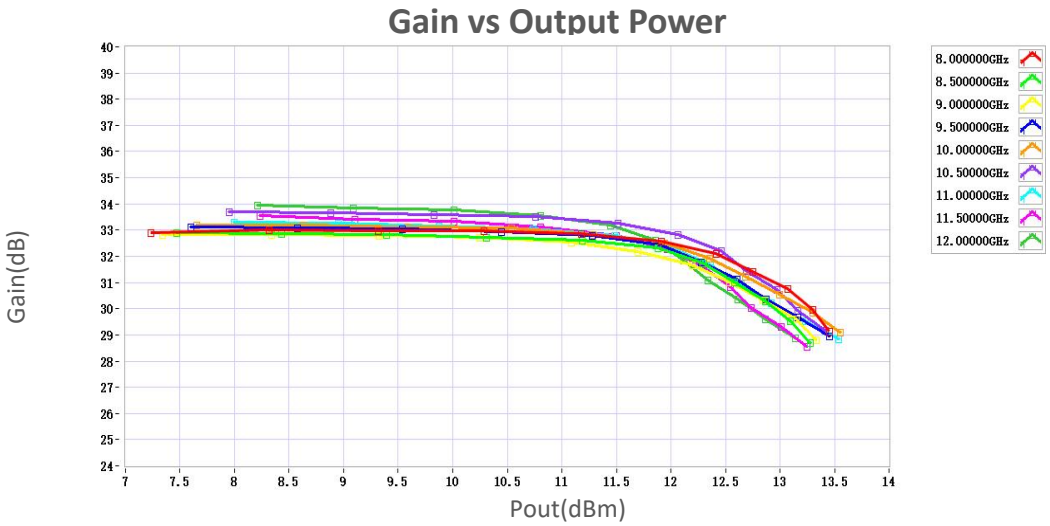


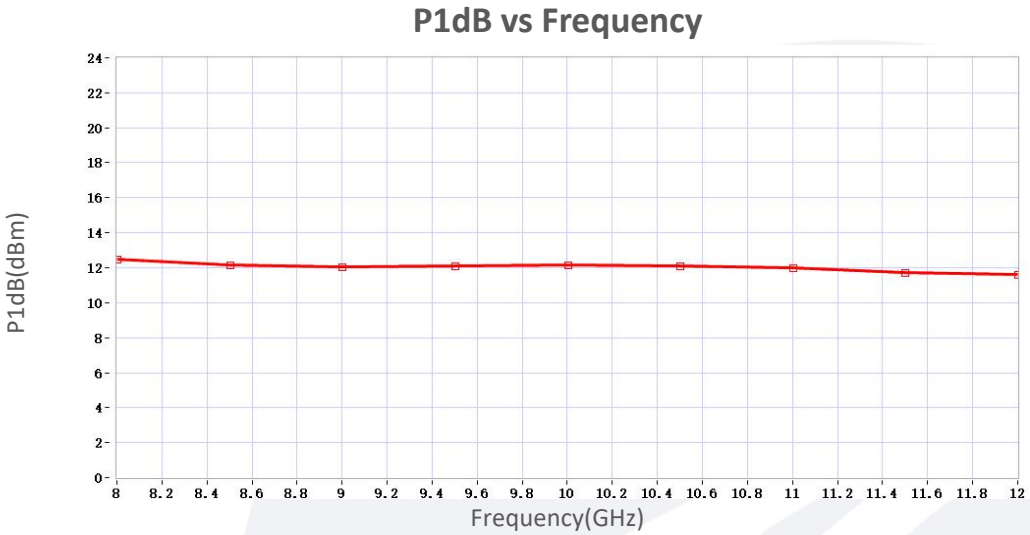


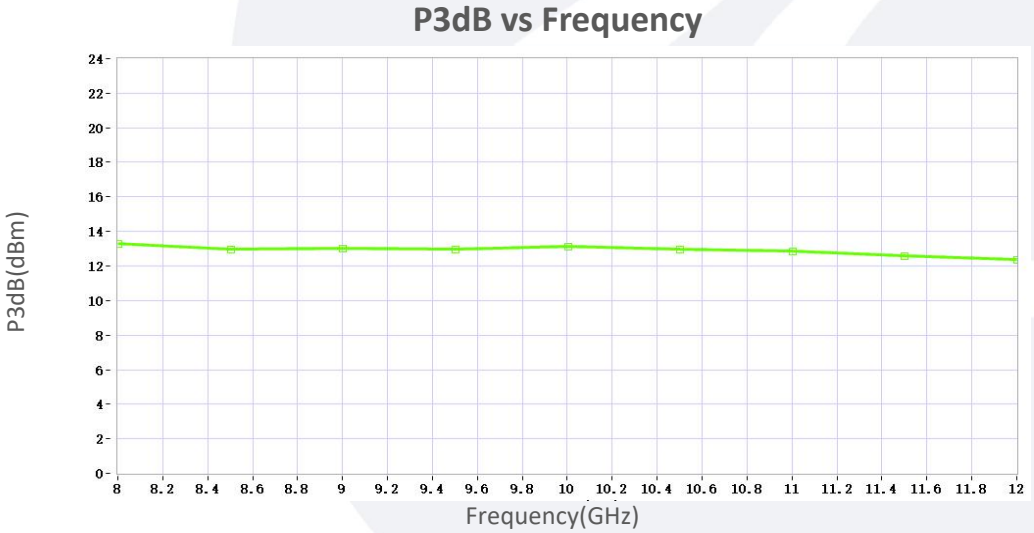


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