

Low Noise Amplifier

WR-6.5/110-170GHz/6.5dB NF/33dB Gain

Model: TMLA-110170-3370-06

TMLA-110170-3370-06 is a D-Band low noise amplifier with a typical small signal gain of 33 dB and a nominal noise figure of 6.5 dB across the frequency range of 110 to 170 GHz. The DC power requirement for the amplifier is +12 VDC /36 mA. The input and output port configuration offers an inline structure with WR-6.5 waveguides and UG-387/U-M anti-cocking flanges.

Features:

- Frequency range: 110-170GHz
- Gain: 33dB Typ
- Noise Figure: 6.5dB Typ
- Unconditional stability

Applications:

- Passive Imaging
- 5G Systems

电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|-------------------------|-----|-----|-----|----------|
| 频率范围 Frequency range | 110 | | 170 | GHz |
| 小信号增益 Small Signal Gain | | 33 | | dB |
| 噪声系数 Noise Figure | | 6.5 | | dB |
| 输出功率1dB压缩点 Output P1dB | | -3 | | dBm |
| 直流电压 DC Voltage | | 12 | | V DC |
| 直流电流 DC Supply Current | | 36 | | mA |

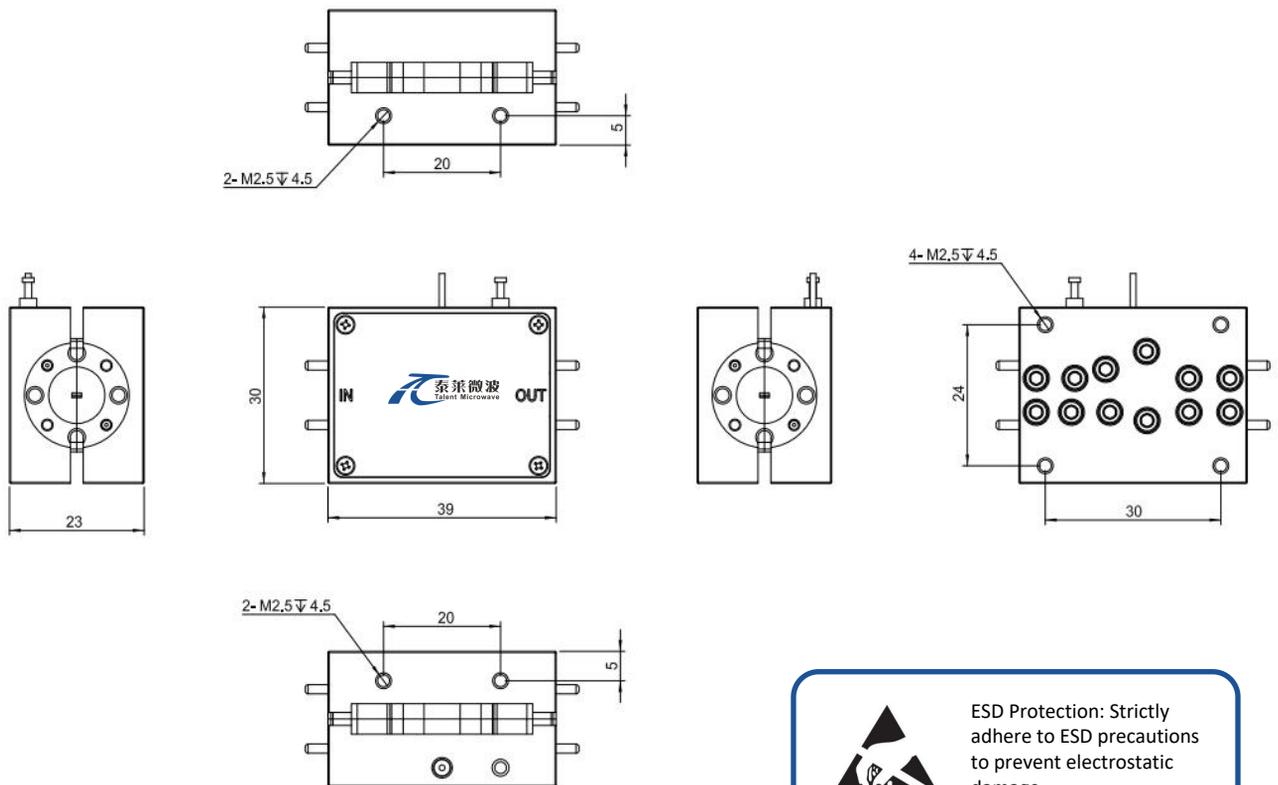
机械特性 Mechanical Specifications:

| 参数 Parameter | 指标 Value | 单位 Units |
|-----------------------|------------------|----------|
| 输入接口 Input Connector | WR-6.5/ UG-387/U | |
| 输出接口 Output Connector | WR-6.5/ UG-387/U | |
| 供电引脚 Power Supply Pin | Solder Pin | |
| 尺寸 Size | 39*30*23 | mm |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +15 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



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

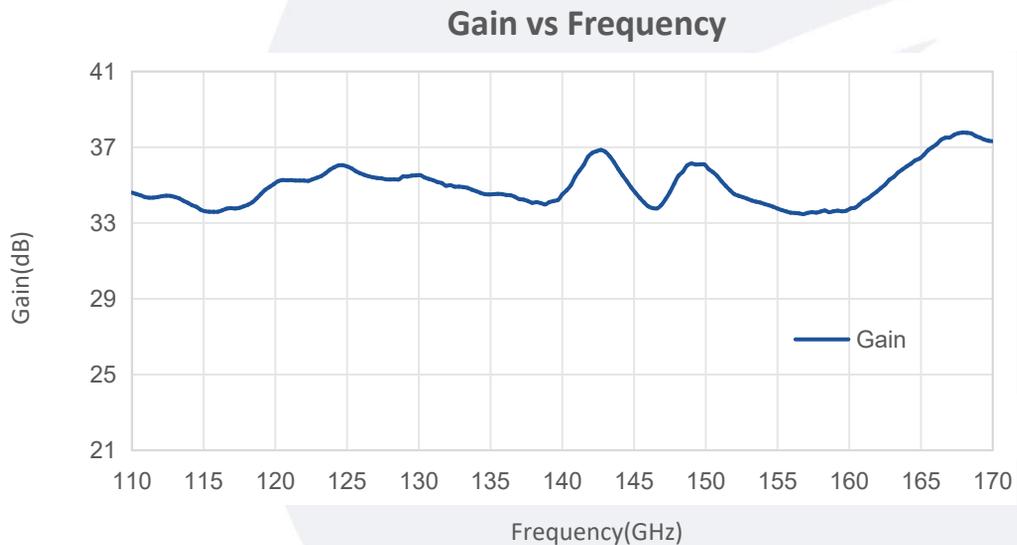
温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature | -10 | | +65 | °C |
| 存储温度 Non-operating Temperature | -45 | | +85 | °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 |
|---------------------|--|--------------|
| TMLA-110170-3370-06 | Low Noise Amplifier,110-170GHz, Noise Figure:6.5dB, Gain:33dB,+12V DC,WR-6.5 | Rev.1.1 |

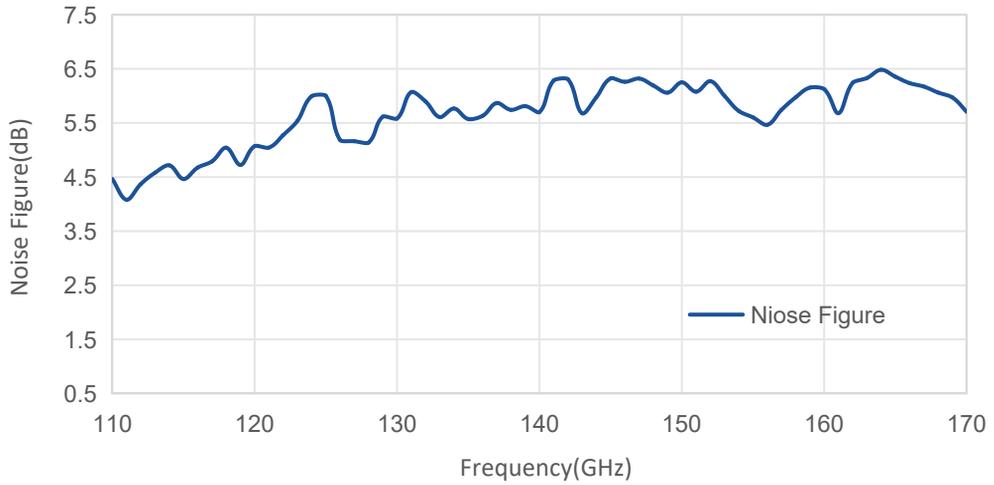
典型曲线 Typical Performance Data:



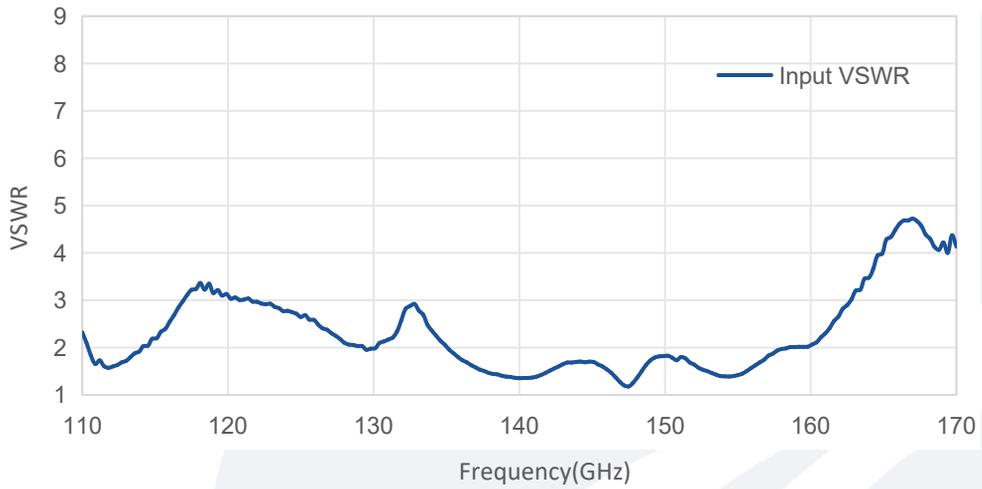
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Noise Figure vs Frequency



VSWR vs Frequency



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