泰莱微波 Talent Microwave

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# W-Band 18th Harmonic Mixer

## RF:75-110GHz/LO:4.16-6.12GHz/IF:DC-1.8GHz Model: TLHM-075110-18-10-2

TLHM-075110-18-10-2 is a W-Band 18th harmonic mixer. The mixer supports the full waveguide band operation for LO frequency from 4.16 to 6.12 GHz and RF frequency from 110 to 170 GHz with an extremely broad IF output from DC to 1.8 GHz. The mixer offers a conversion loss of 32 dB typical and LO input power of 14 dBm typical.

### Features:

- Low LO Power Requirement
- Subharmonic mixer
- Compact Package

### Applications:

- Radar Systems
- Communication Systems
- Test Equipment

### 电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|---|---|---|---|---|
| RF频率 RF Frequency | 75 | | 110 | GHz |
| RF输入功率 RF Input Power | | | 0 | dBm |
| LO频率 LO Frequency | 4.16 | | 6.12 | GHz |
| IF频率 IF Frequency | DC | | 1.8 | GHz |
| LO驱动功率 LO-Input power | 13 | 14 | 15 | dBm |
| 倍频次数 Multiply Factor | | 18 | | |
| 变频损耗 Conversion Loss | | 32 | | dB |

### 机械特性 Mechanical Specifications:

| 参数 Parameter | 指标 Value | 单位 Units |
|---|---|---|
| RF 接口 RF Connector | WR-10/UG-387/U | |
| LO 接口 LO Connector | SMA Female | |
| IF 接口 IF Connector | SMA Female | |
| 尺寸 Size | 77.6*37.6*24(With interface) | mm |
| 重量 Weight | 200 | g |

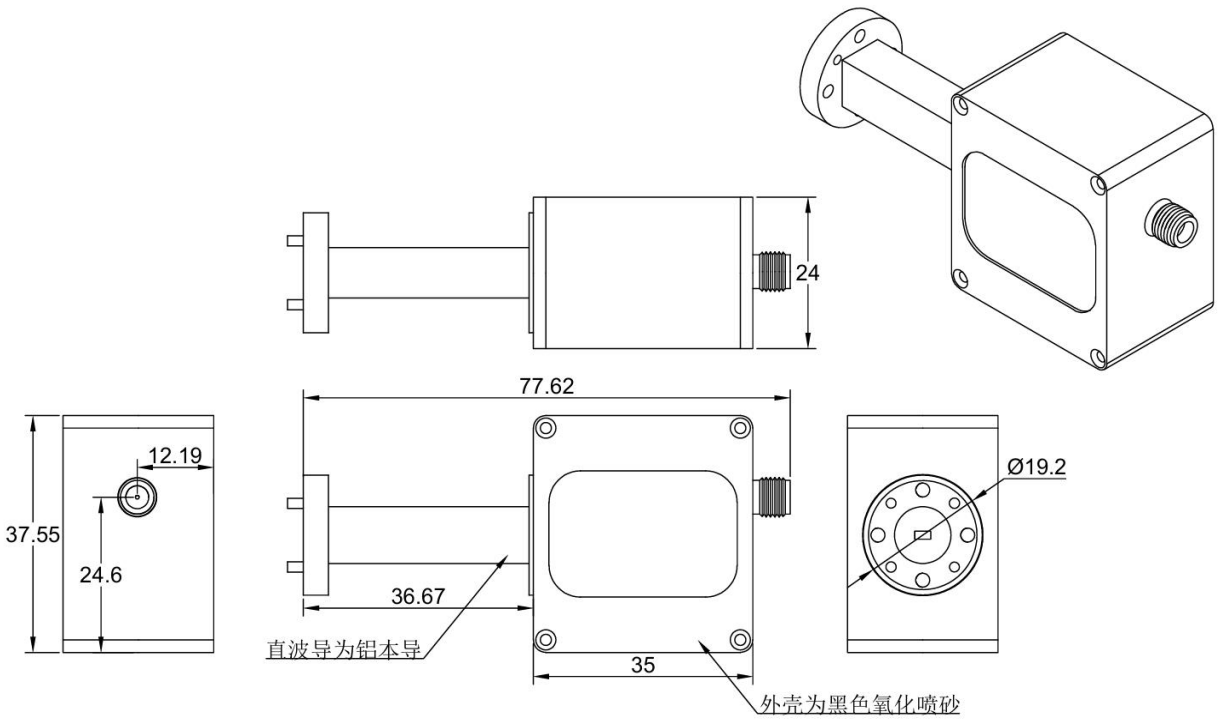
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## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|---|---|
| RF功率 RF Input Power | 0 dBm |
| IF功率 IF Input Power | 0 dBm |
| LO功率 LO Input Power | 15 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm




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

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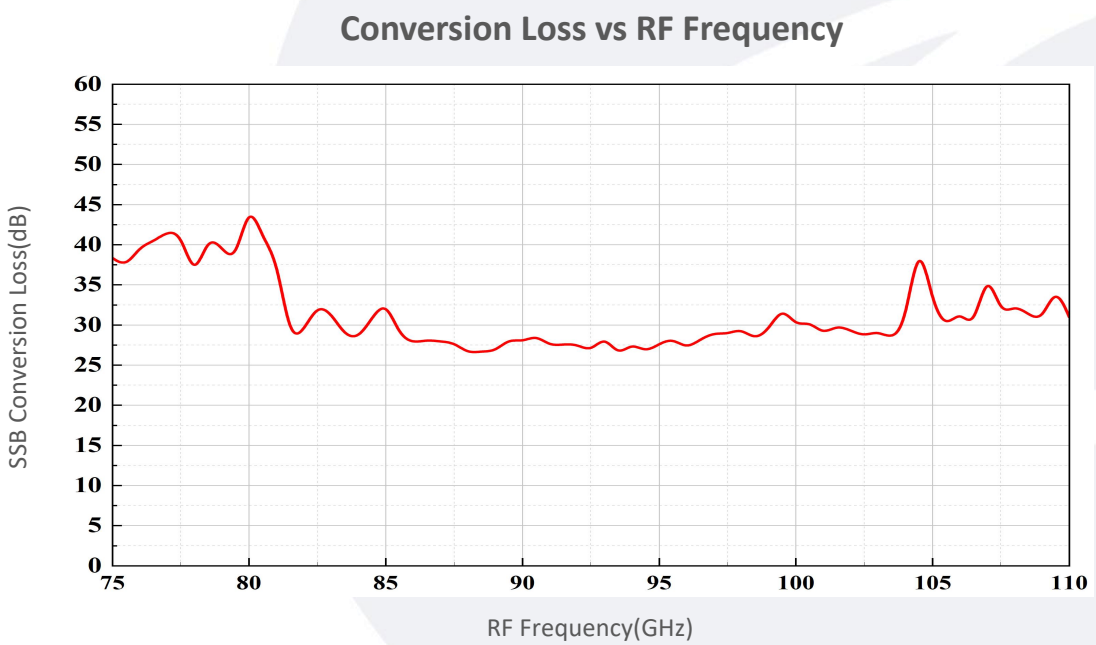
## 温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|---|---|---|---|---|
| 操作温度 Operating Temperature | -20 | | +50 | ℃ |
| 存储温度 Non-operating Temperature | -30 | | +60 | ℃ |
| 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 |
|---|---|---|
| TLHM-075110-18-10-2 | W-Band 18th Harmonic Mixer<br>RF:75-110GHz,LO:4.16-6.12GHz,IF:DC-1.8GHz | 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.