

## 50-110GHz Double Balanced Mixer

RF:50-110 GHz/LO:50-110 GHz/IF:DC-40 GHz

Model: TLBM-050110-40-1.0

TLBM-050110-40-1.0 is a double balanced mixer. The mixer supports the full waveguide band operation for both LO and RF frequency from 50 to 110 GHz with an extremely broad IF output from DC to 40 GHz. The mixer offers a conversion loss of 10 dB typical and LO input power of 15 dBm typical.

### Features:

- Ultra broadband, high linearity
- 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                          | 50  |     | 110 | GHz      |
| LO频率 LO Frequency                          | 50  |     | 110 | GHz      |
| IF频率 IF Frequency                          | DC  |     | 40  | GHz      |
| LO 驱动功率 LO-Input power                     |     | 15  |     | dBm      |
| 射频输入驻波 RF Input VSWR                       |     |     | 3   | :1       |
| 单边带变频损耗<br>SSB Conversion Loss (IF=100MHz) |     | -10 |     | dB       |

## 机械特性 Mechanical Specifications:

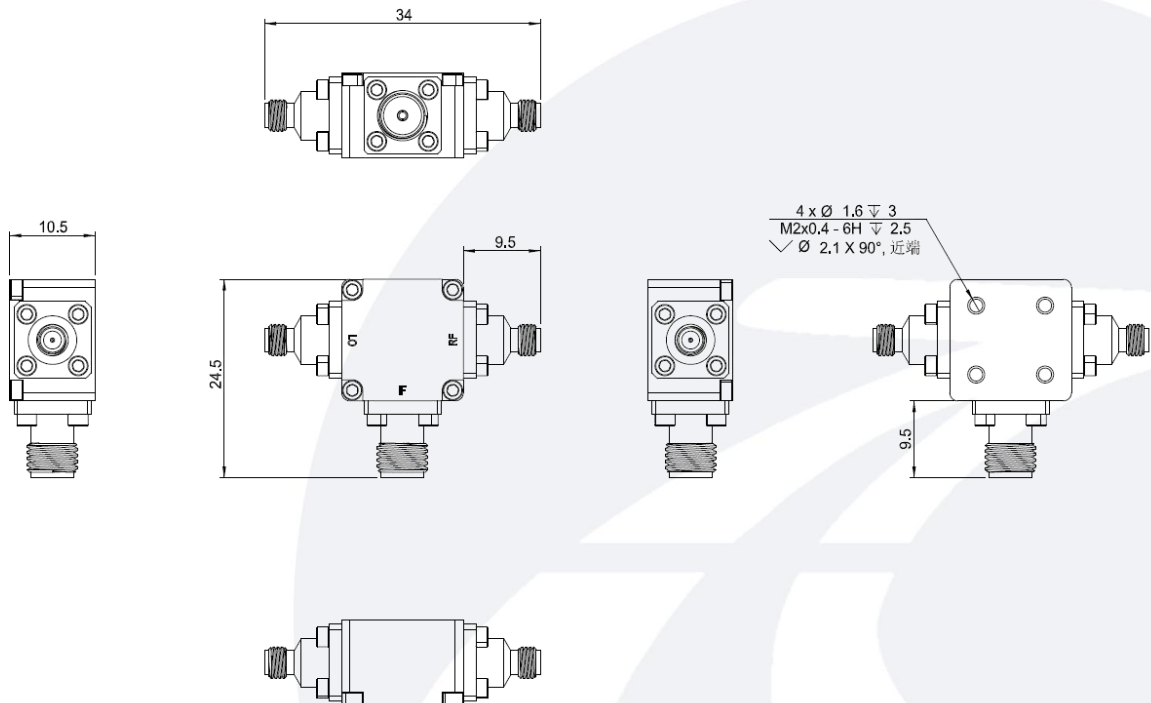
| 参数 Parameter       | 指标 Value     | 单位 Units |
|--------------------|--------------|----------|
| RF 接口 RF Connector | 1.0mm Female |          |
| LO 接口 LO Connector | 1.0mm Female |          |
| IF 接口 IF Connector | 2.4mm Female |          |
| 尺寸 Size            | 34x24.5x10.5 | mm       |
| 重量 Weight          | TBD          | g        |

## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| RF 功率 RF Input Power         | 30 dBm               |
| IF 功率 IF Input Power         | 30 dBm               |
| LO 功率 LO Input Power         | 30 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing:

Unit:mm



温度环境 Environmental Conditions:

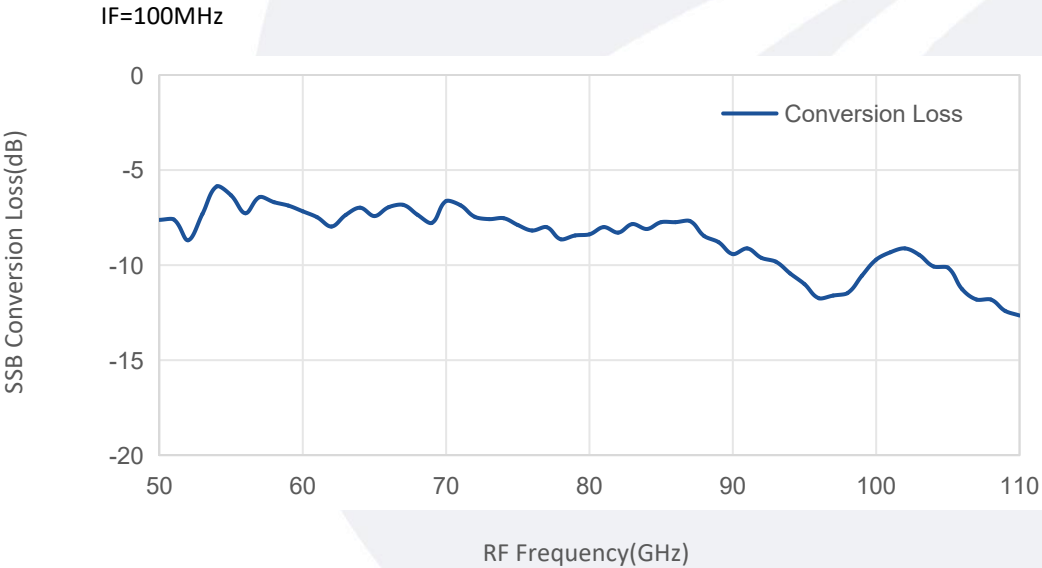
| 参数 Parameter                       | Min                                                 | Typ | Max | 单位 Units |
|------------------------------------|-----------------------------------------------------|-----|-----|----------|
| 操作温度 Operating Temperature         | -10                                                 |     | +65 | ℃        |
| 存储温度 Non-operating Temperature     | -45                                                 |     | +85 | ℃        |
| 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 Desciption                                                            | 版本号 Revision |
|--------------------|--------------------------------------------------------------------------|--------------|
| TLBM-050110-40-1.0 | 50-110GHz Double Balanced Mixer<br>RF:50-110GHz,LO:50-110GHz,IF:DC-40GHz | Rev.1.1      |

典型曲线 Typical Performance Data:

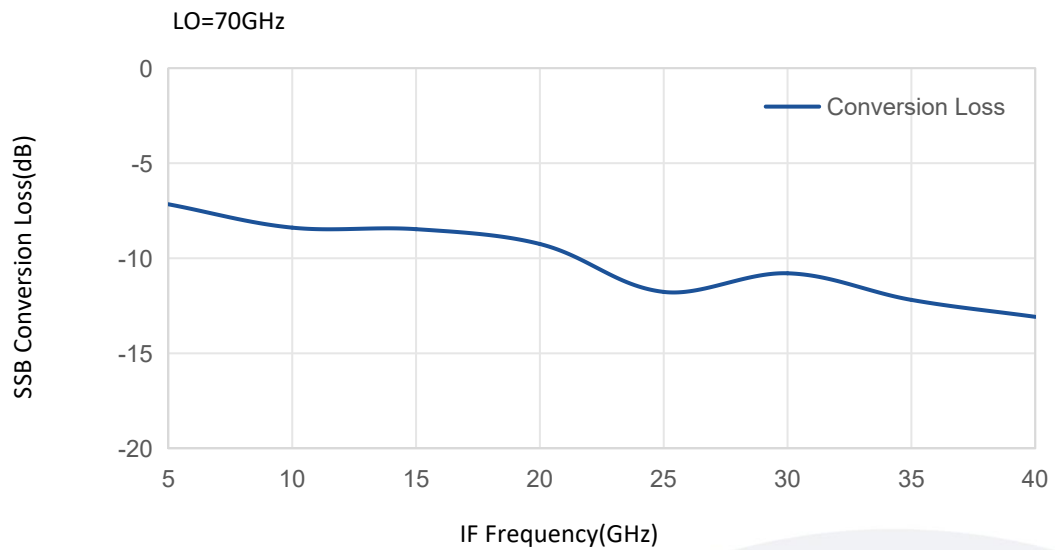
SSB Conversion Loss vs RF Frequency



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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