

TURAMCM-075110042010

TURAMCM-075110042010 is an up and down fundamental mixer integrated with x4 active frequency multiplier chain. The converter has an input LO frequency of 18.75 to 27.5 GHz with a typical input power of 5 dBm. RF frequency can range from 75 to 110 GHz, and IF port can range from DC to 20GHz with 2.92mm connector. The DC power requirement for the multiplier is +12 V DC.

Features:

- RF Frequency: 75-110GHz
- LO Frequency: 18.75-27.5GHz
- IF Frequency: DC-20GHz
- Low Conversion Loss

Applications:

- Test Equipment
- Radar System
- W-band Imaging

电气特性 Electrical Characteristics:

| 参数 Parameter                    | Min   | Typ | Max  | 单位 Units |
|---------------------------------|-------|-----|------|----------|
| RF频率 RF Frequency               | 75    |     | 110  | GHz      |
| 4XLO频率 4XLO Frequency           | 75    |     | 110  | GHz      |
| LO频率 LO Frequency               | 18.75 |     | 27.5 | GHz      |
| IF频率 IF Frequency               | DC    |     | 20   | GHz      |
| LO 驱动功率 LO-Input power          | 3     | 5   | 7    | dBm      |
| LO倍频次数 LO Multiplier factor     |       | 4   |      |          |
| 中频输入P1dB IF Input P1dB          |       | 6   |      | dBm      |
| 射频输入P1dB RF Input P1dB          |       | 6   |      | dBm      |
| 变频损耗 Conversion Loss(IF=1GHz)   |       | -10 |      | dB       |
| 变频损耗 Conversion Loss(LO=9.5GHz) |       | -12 |      | dB       |
| 直流电压 DC Supply Voltage          |       | 12  |      | V DC     |

机械特性 Mechanical Specifications:

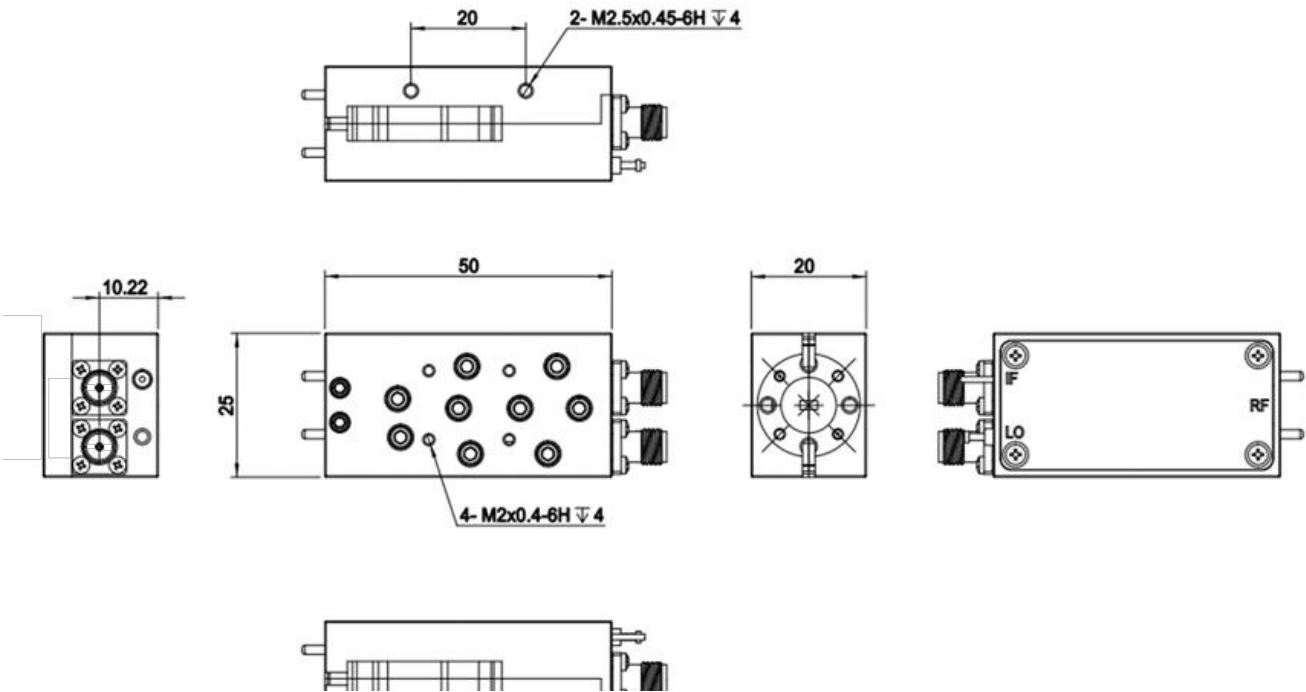
| 参数 Parameter       | 指标 Value       | 单位 Units |
|--------------------|----------------|----------|
| RF 接口 RF Connector | WR-10/UG-387/U |          |
| LO 接口 LO Connector | SMA Female     |          |
| IF 接口 IF Connector | 2.92mm Female  |          |
| 尺寸 Size            | 50*25*20       | mm       |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| RF输入功率 RF Input Power        | 12 dBm               |
| LO输入功率 LO Input Power        | 10 dBm               |
| IF输入功率 IF Input Power        | 12 dBm               |
| 直流电压 DC Supply Voltage       | +15 V                |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形图 Outline Drawing:

Unit:mm



温度环境 Environmental Conditions:

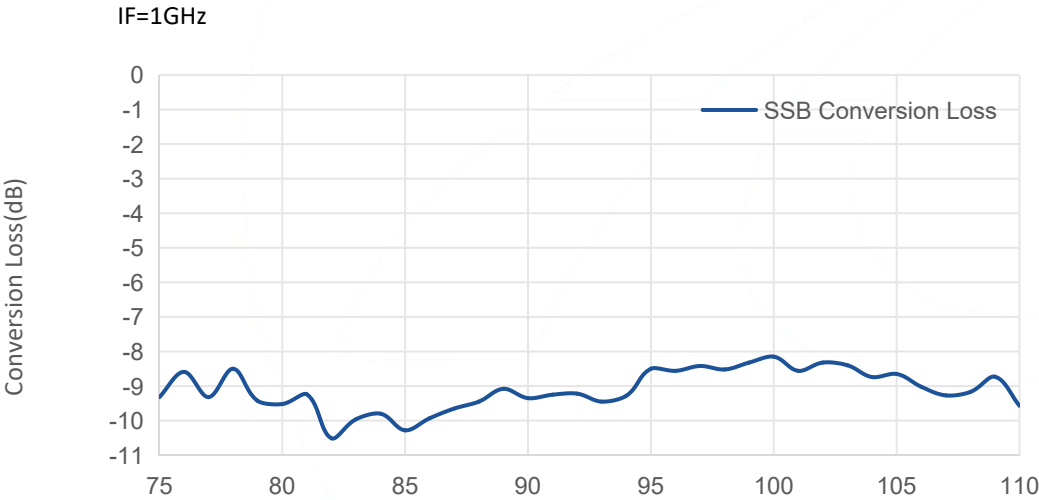
| 参数 Parameter                       | Min                                                 | Typ | Max | 单位 Units |
|------------------------------------|-----------------------------------------------------|-----|-----|----------|
| 操作温度 Operating Temperature         | 0                                                   |     | +50 | °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 Desciption                                                          | 版本号 Revision |
|----------------------|------------------------------------------------------------------------|--------------|
| TURAMCM-075110042010 | W-band Active Tx/Rx Converter,<br>Conversion Loss:-10dB,WR-10/UG-387/U | Rev.1.1      |

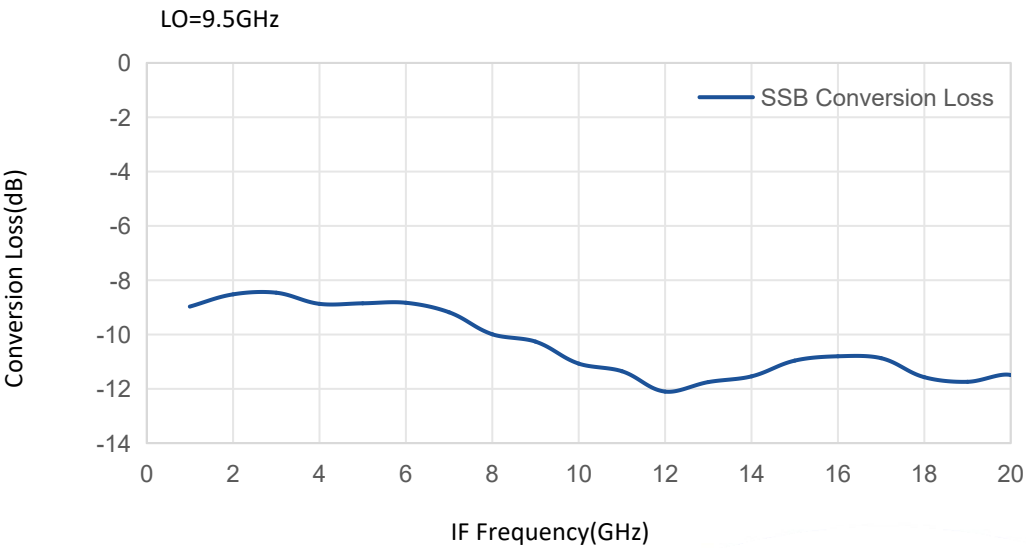
典型曲线 Typical Performance Data:

Coverison Loss vs RF Frequency



典型曲线 Typical Performance Data:

Conversion Loss vs IF 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.