



D-Band IQ-subharmonic mixer

RF:120-160 GHz/LO:60-80 GHz/IF:DC-30 GHz

TMIQ-120160-0230-06

TURIQ-120160023006 is a subharmonic IQ mixer in the 120-160 GHz frequency band suitable for D-band point-to-point communication, instrumentation, sensing, security and high resolution imaging applications.The mixer has high image rejection, low input/output return loss and flat conversion response

- Features:
- RF Frequency:120-160GHz
  - Compact Package
  - Low Conversion Loss

- Applications:
- Point-to-point communication
  - Instrumentation

电气特性 Electrical Characteristics:

| 参数 Parameter                      | Min | Typ  | Max | 单位 Units |
|-----------------------------------|-----|------|-----|----------|
| RF频率 RF Frequency                 | 120 |      | 160 | GHz      |
| LO频率 LO Frequency                 | 60  |      | 80  | GHz      |
| IF频率 IF Frequency                 | DC  | 20   | 30  | GHz      |
| LO 驱动功率 LO-Input power            | 8   | 10   | 12  | dBm      |
| SSB变频损耗 SSB Conversion Loss       |     | 11   |     | dB       |
| I/Q幅度一致性<br>I/Q Amplitude Balance |     | ±0.6 |     | dB       |
| I/Q相位一致性 I/Q Phase Balance        |     | ±4   |     | °        |
| RF驻波 RF VSWR                      |     | 1.5  |     | :1       |
| LO驻波 LO VSWR                      |     | 3.0  |     | :1       |

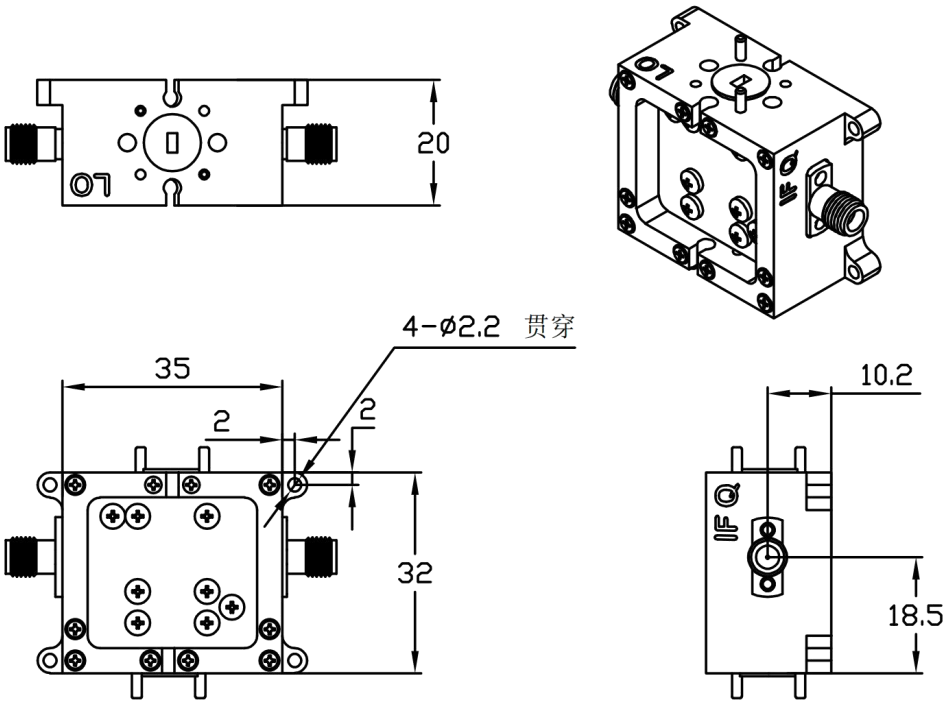
机械特性 Mechanical Specifications:

| 参数 Parameter      | 指标 Value        | 单位 Units |
|-------------------|-----------------|----------|
| RF接口 RF Connector | WR-6.5/UG-387/U |          |
| LO接口 LO Connector | WR-12/UG-387/U  |          |
| IF接口 IF Connector | 2.92mm Female   |          |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value |
|------------------------------|----------|
| RF输入功率 RF Input Power        | 0 dBm    |
| IF输入功率 IF Input Powe         | 0 dBm    |
| LO输入功率 LO Input Powe         | 13 dBm   |
| ESD灵敏度 ESD sensitivity (HBm) | TBD      |

外形图 Outline Drawing: Unit:mm



温度环境 Environmental Conditions:

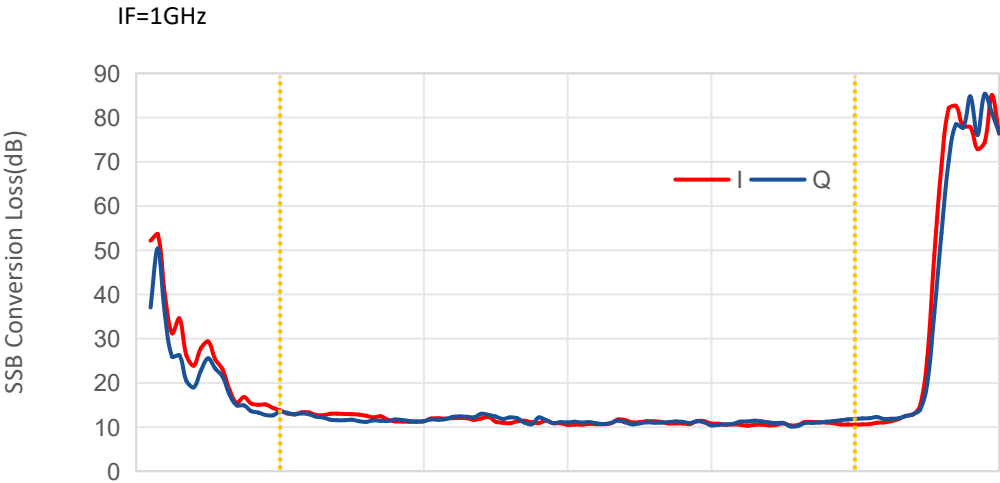
| 参数 Parameter                       | Min                                                 | Typ | Max | 单位 Units |
|------------------------------------|-----------------------------------------------------|-----|-----|----------|
| 操作温度 Operating Temperature         | -10                                                 |     | +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 |
|--------------------|----------------------------------------------------------------------|--------------|
| TURIQ-120160023006 | D-Band IQ-Subharmonic Mixer<br>RF:120-160GHz,LO:60-80GHz,IF:DC-30GHz | Rev.1.1      |

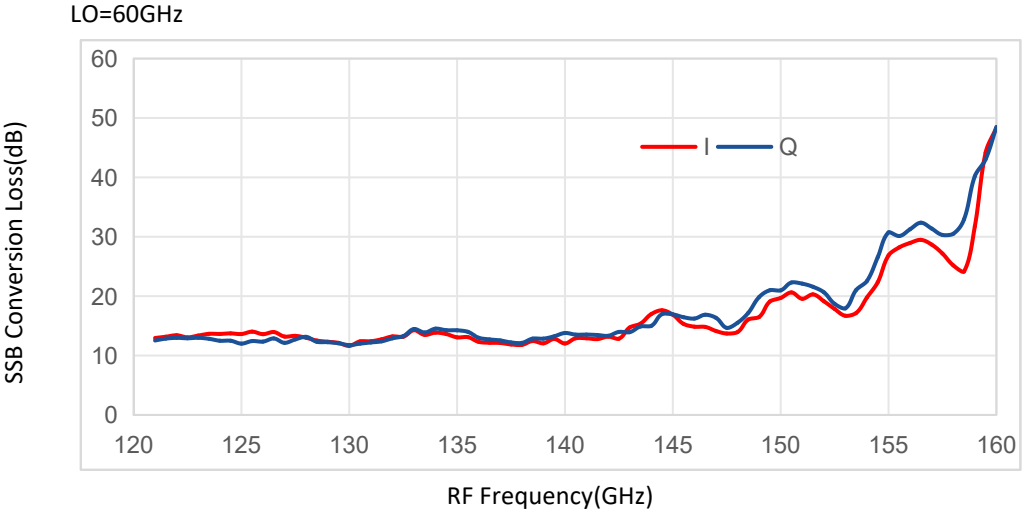
典型曲线 Typical Performance Data:

SSB Conversion Loss vs RF Frequency

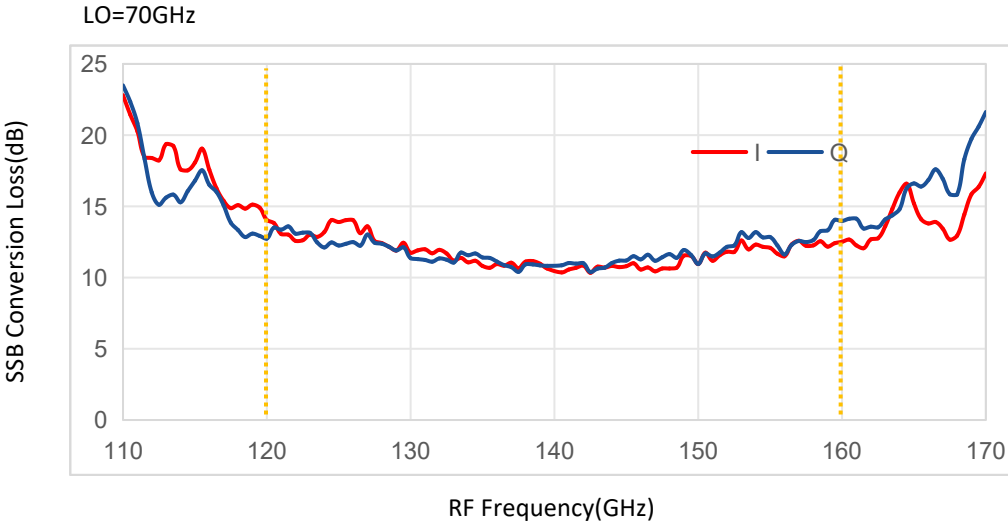


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