

## D-Band IQ-subharmonic mixer

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

Model: TMIQ-120160-0230-06

TMIQ-120160-0230-06 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 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:

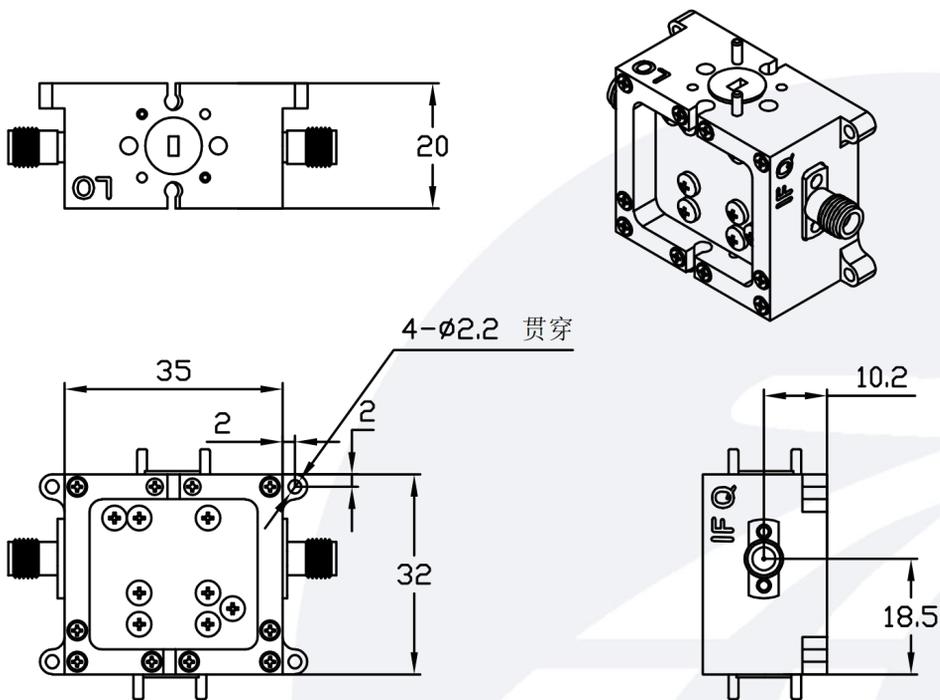
参数 Parameter	指标 Value	单位 Units
RF接口 RF Connector	WR-6.5/UG-387/U	
LO接口 LO Connector	WR-12/UG-387/U	
IF接口 IF Connector	2.92mm Female	
尺寸 Size	35*32*20	mm

### 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 Power	0 dBm
LO输入功率 LO Input Power	13 dBm
ESD灵敏度 ESD sensitivity (HBm)	TBD

### 外形图 Outline Drawing:

Unit:mm



## 温度环境 Environmental Conditions:

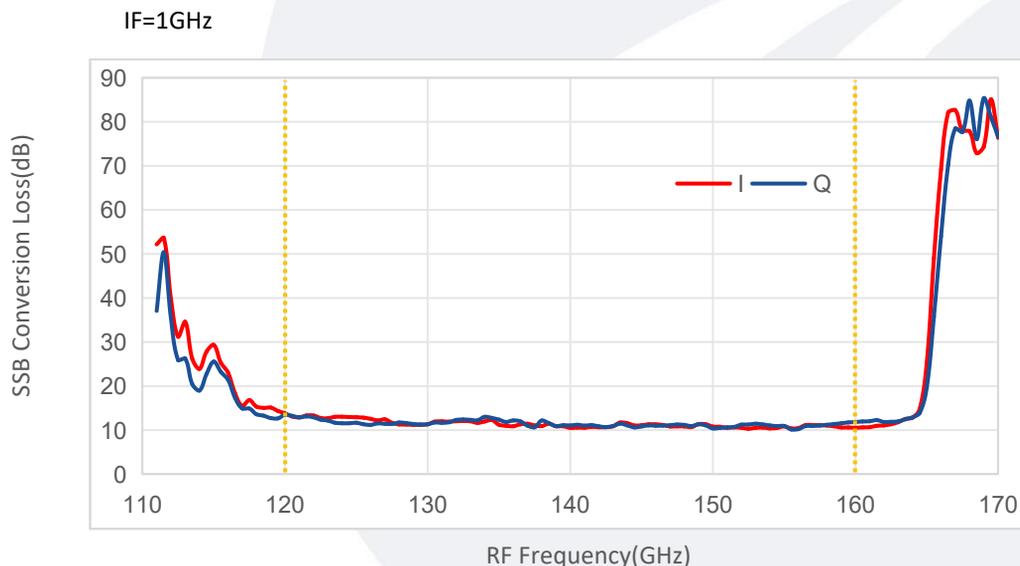
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TMIQ-120160-0230-06	D-Band IQ-Subharmonic Mixer RF:120-160GHz,LO:60-80GHz,IF:DC-30GHz	Rev.1.1

## 典型曲线 Typical Performance Data:

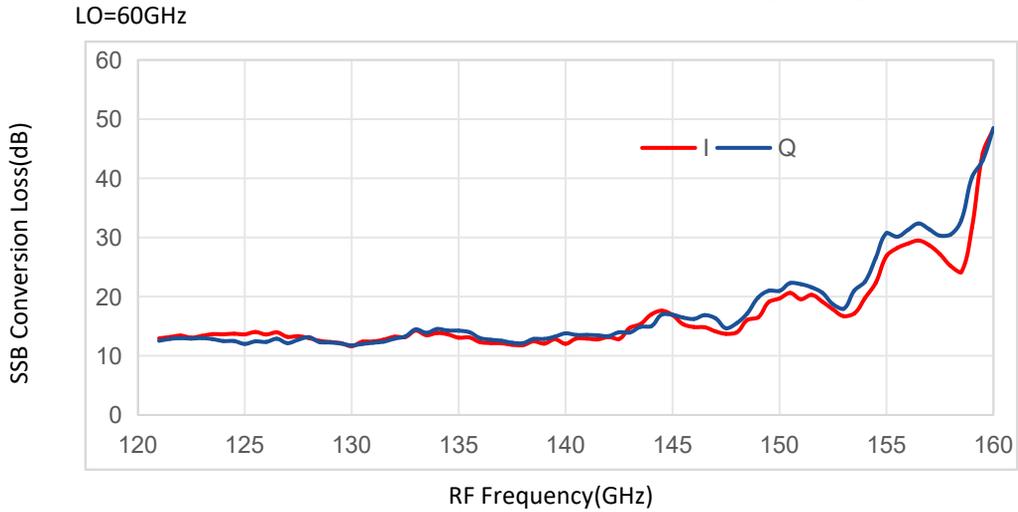
### SSB Conversion Loss vs RF Frequency



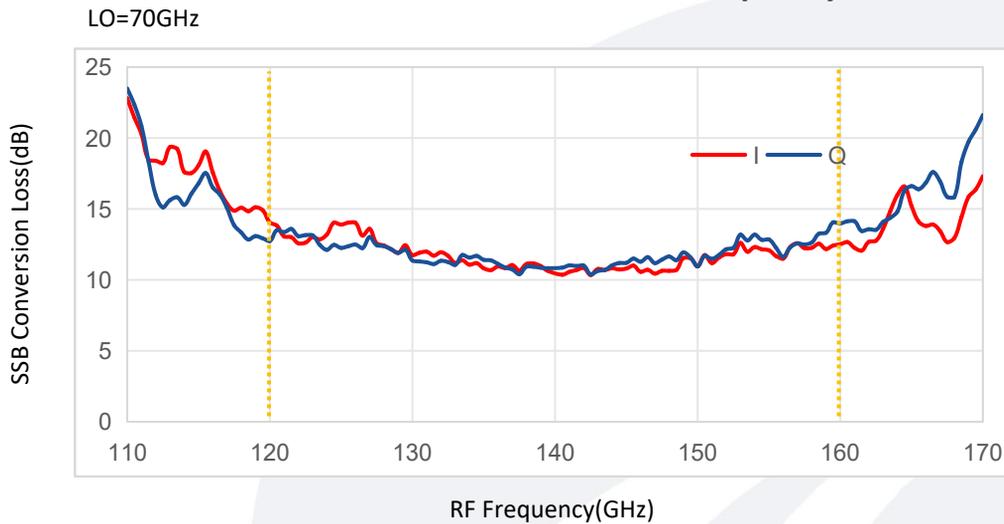
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

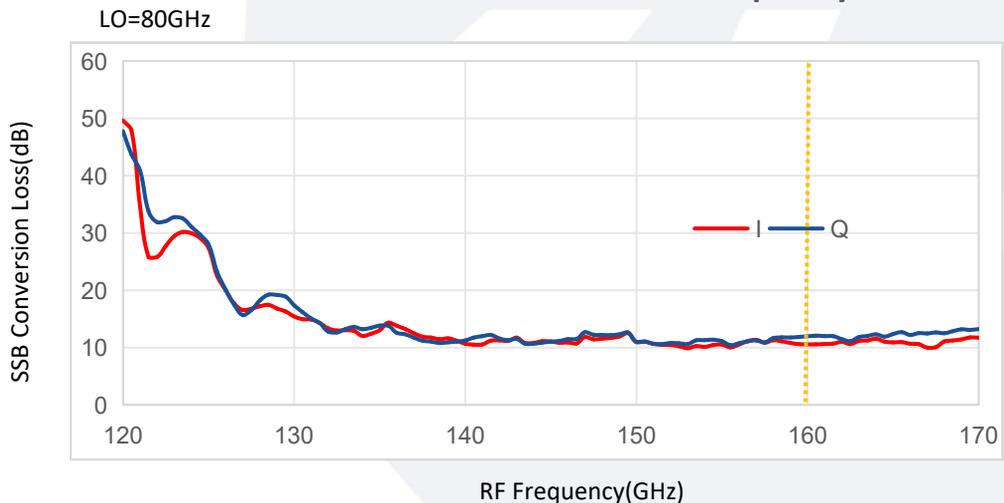
**SSB Conversion Loss vs RF Frequency**



**SSB Conversion Loss vs RF Frequency**



**SSB Conversion Loss vs RF Frequency**



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