泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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G-Band IQ-subharmonic Mixer

RF:200-240GHz/LO:100-120GHz/IF:DC-20GHz Model: TMIQ-200240-0230-04

TMIQ-200240-0230-04 is a G-Band IQ-subharmonic mixer spanning 200 to 240 GHz on the RF and 100 to 120 GHz on the LO ports with an IF from DC to 20 GHz.Up to 20 dBc of image rejection is available due to the excellent phase and amplitude balance of its on-chip LO quadrature hybrid. The multiplier of Talent model TMAM-100115-0610-08 or TMAM-100115-1210-08 can be used as the LO driver for this mixer.

Features:

- RF coverage: 200-240 GHz
- LO coverage: 100-120 GHz
- IF operation: DC-20 GHz
- Conversion loss: 12dB Typ
- LO power : 10dBm Typ
- Suggested LO drive model: TMAM-100115-0610-08 or TMAM-100115-1210-08

Applications:

- Single Sideband and Image Rejection Mixing
- IQ Modulation / Demodulation
- Vector Amplitude Modulation
- Band Shifting

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	200		240	GHz
LO频率 LO Frequency	100		120	GHz
LO驱动功率 LO-Input power	9	10	12	dBm
IF频率 IF Frequency	DC	20	30	GHz
变频损耗 Conversion Loss	11	12	15	dB
I/Q幅度不平衡度 I/Q Amplitude Unbalance		0.5		dB
I/Q相位不平衡度 I/Q Phase Unbalance		3		°
RF回波损耗 RF Return Loss		-12		dB
LO回波损耗 LO Return Loss		-10		dB
IF回波损耗 IF Return Loss		-10		dB

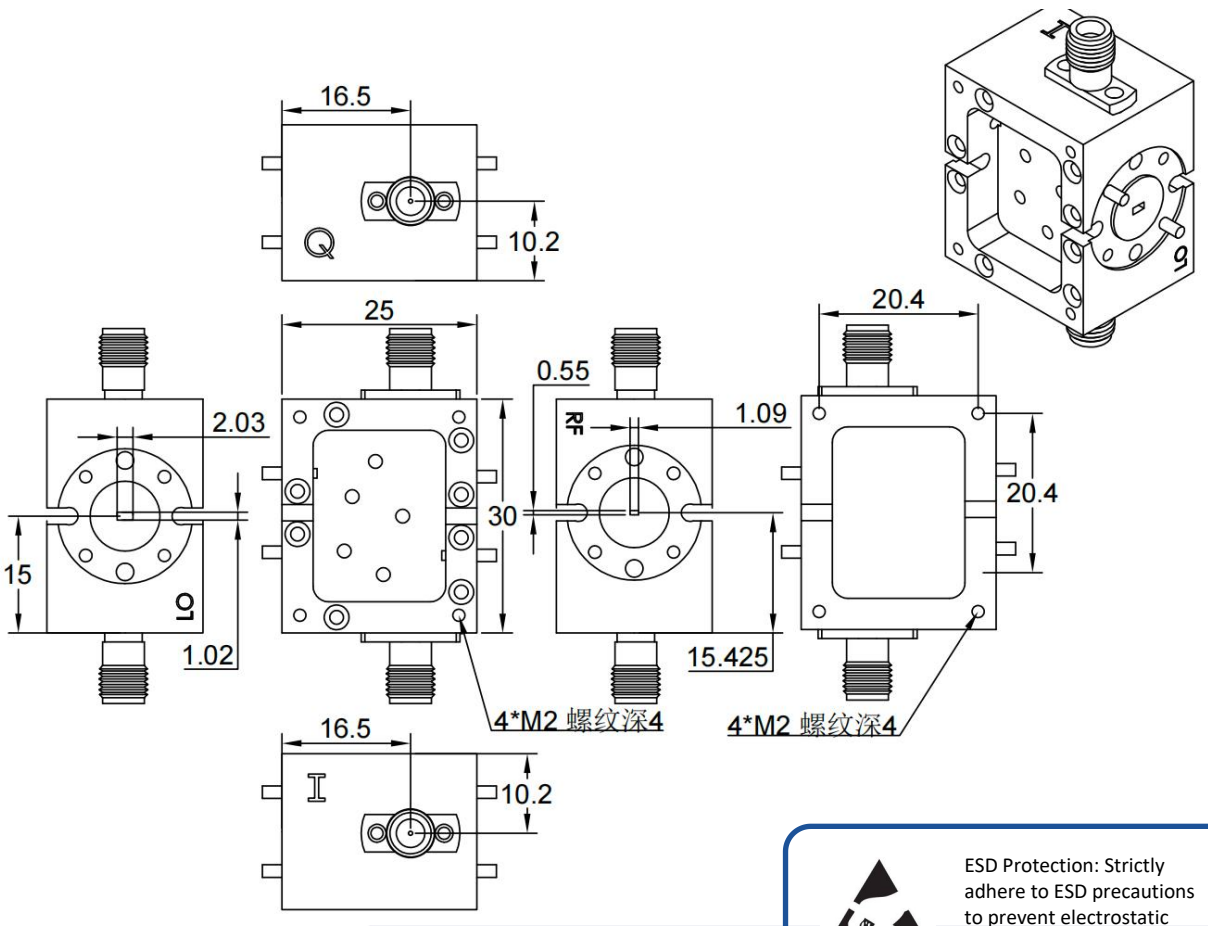
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机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF接口 RF Connector	WR-4.3/UG-387/U	
LO接口 LO Connector	WR-10/UG-387/U	
IF接口 IF Connector	2.92mm Female	
尺寸 Size	32*30*19	mm
重量 Weight	110	g
材质 Material	Cu	

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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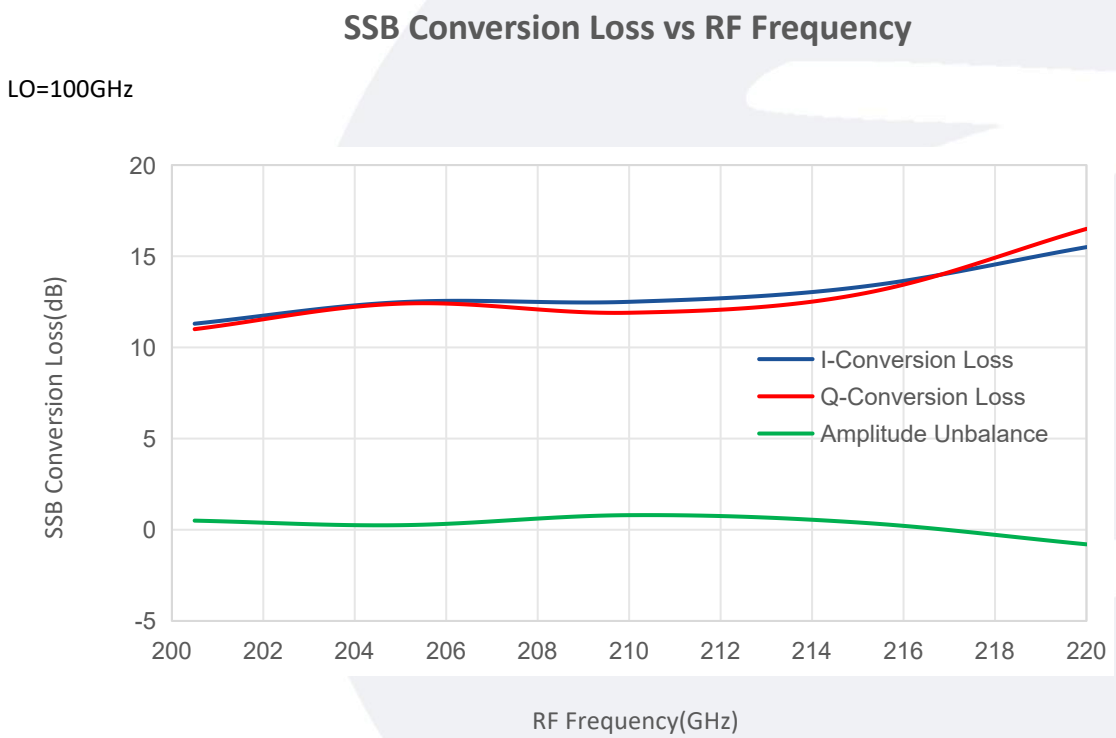
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-25		+65	℃
存储温度 Non-operating Temperature	-65		+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 Description	版本号 Revision
TMIQ-200240-0230-04	G-Band IQ-subharmonic Mixer RF:200-240GHz,LO:100-120GHz,IF:DC-20GHz	Rev.1.1

典型曲线 Typical Performance Data:



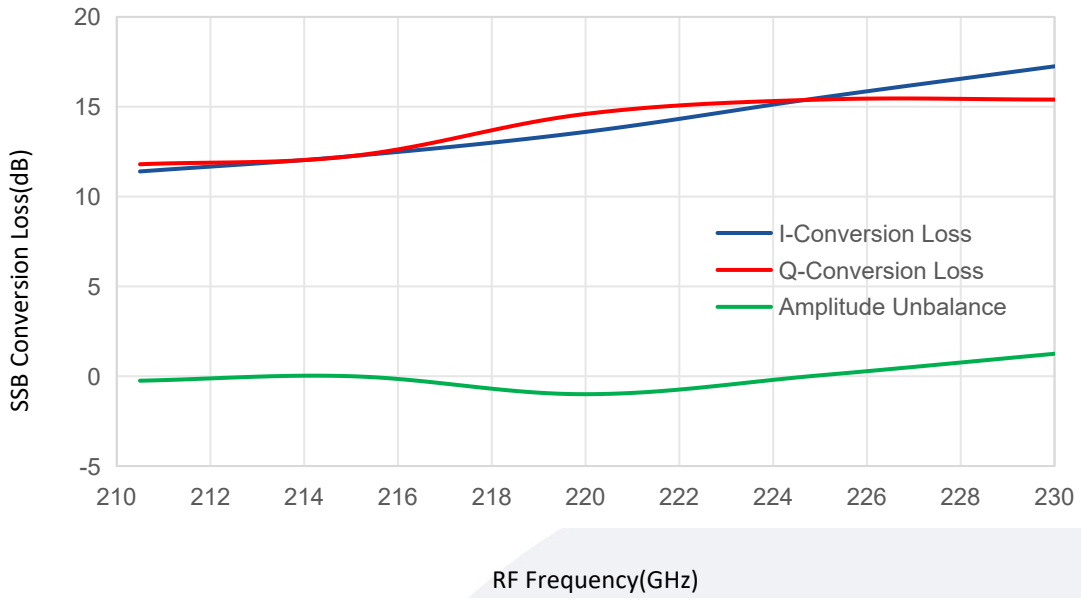
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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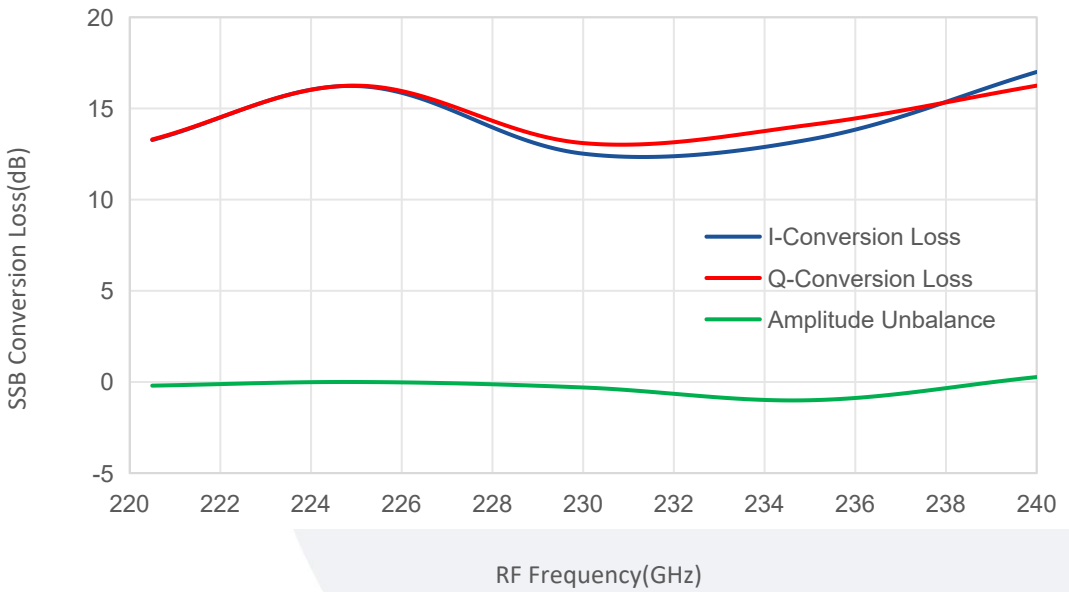
SSB Conversion Loss vs IF Frequency

LO=105GHz



SSB Conversion Loss vs RF Frequency

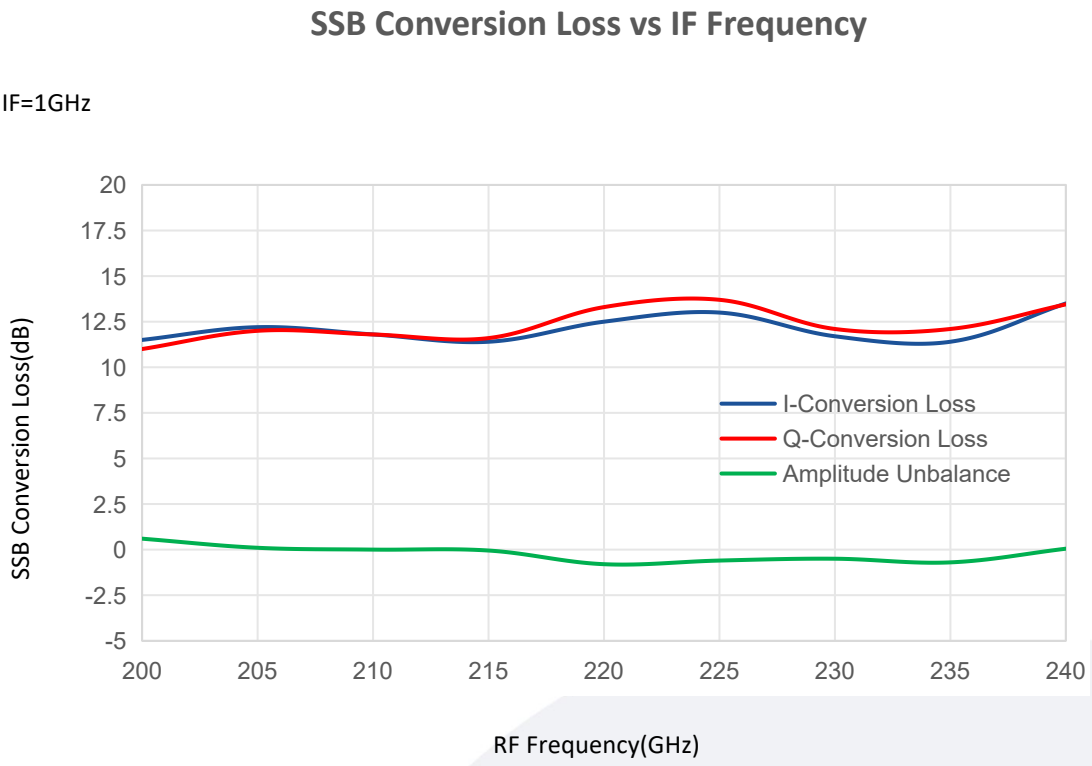
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