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.

Features:

- RF coverage: 200-240 GHz
- LO coverage: 100-120 GHz
- IF operation: DC-20 GHz
- Conversion loss: 12dB Typ
- LO power : 10dBm Typ

Applications:

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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	200		240	GHz
LO Frequency	100		120	GHz
LO-Input power	9	10	12	dBm
IF Frequency	DC	20	30	GHz
Conversion Loss	11	12	15	dB
I/Q Amplitude Unbalance		0.5		dB
I/Q Phase Unbalance		3		°
RF Ruturn Loss		-12		dB
LO Ruturn Loss		-10		dB
IF Ruturn Loss		-10		dB

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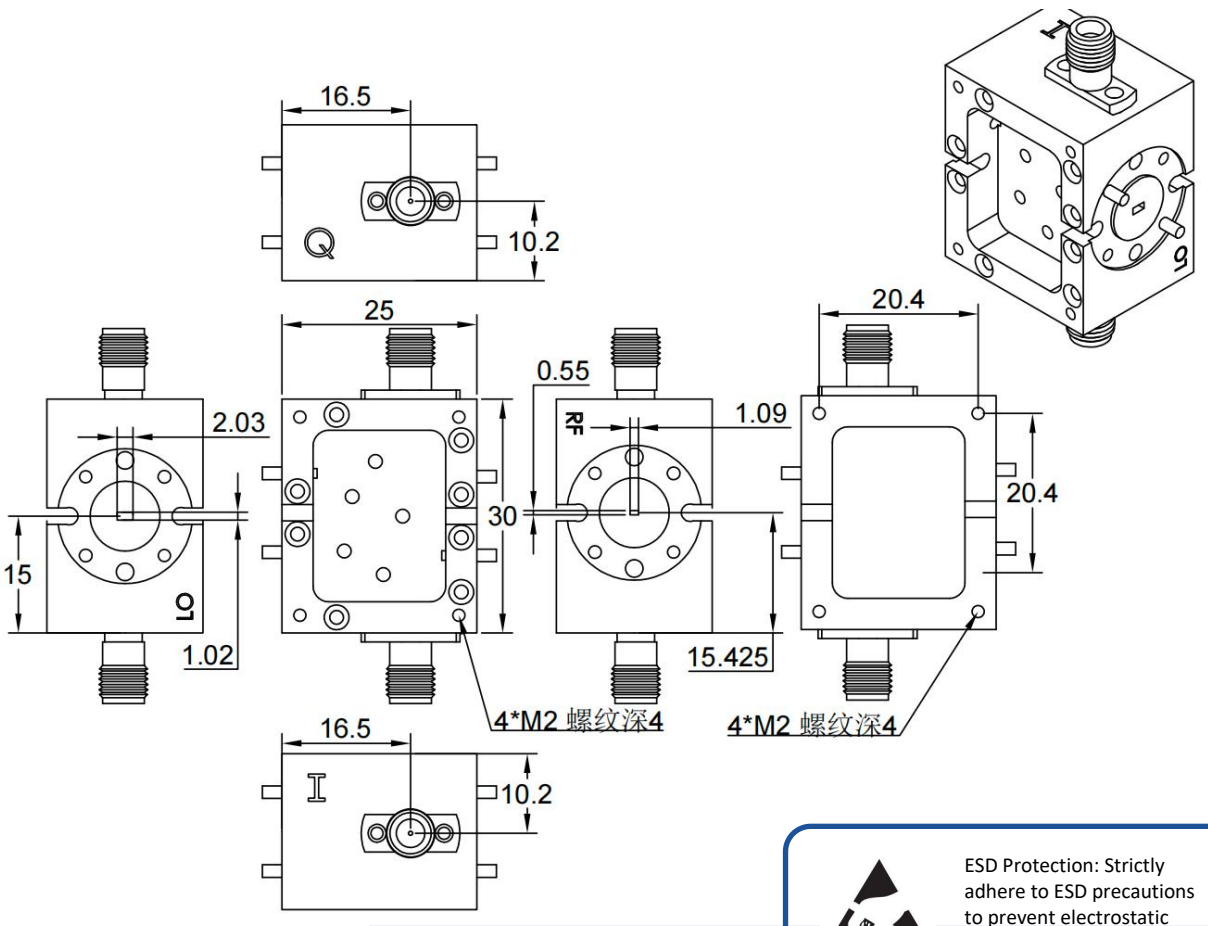
Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-4.3/UG-387/U	
LO Connector	WR-08/UG-387/U	
IF Connector	2.4mm Female	
Size	32*30*19	mm
Weight	110	g
Material	Cu	

Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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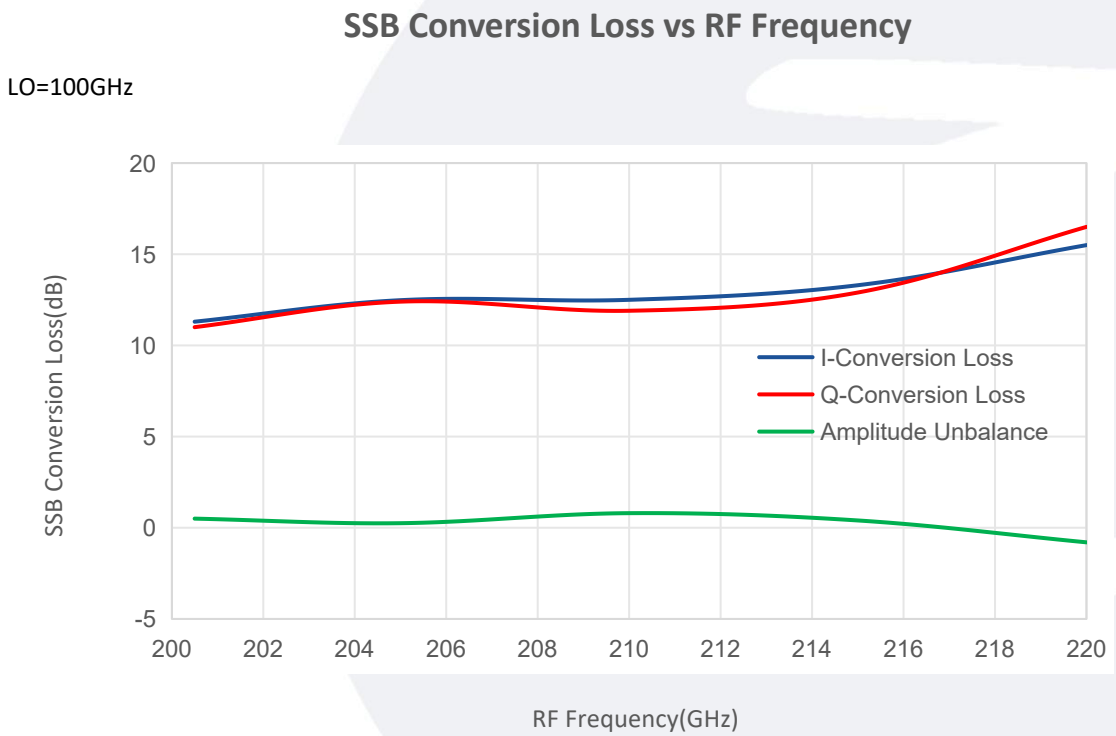
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-25		+65	℃
Non-operating Temperature	-65		+85	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TMIQ-200240-0230-04	G-Band IQ-subharmonic Mixer RF:200-240GHz,LO:100-120GHz,IF:DC-20GHz	Rev.1.1

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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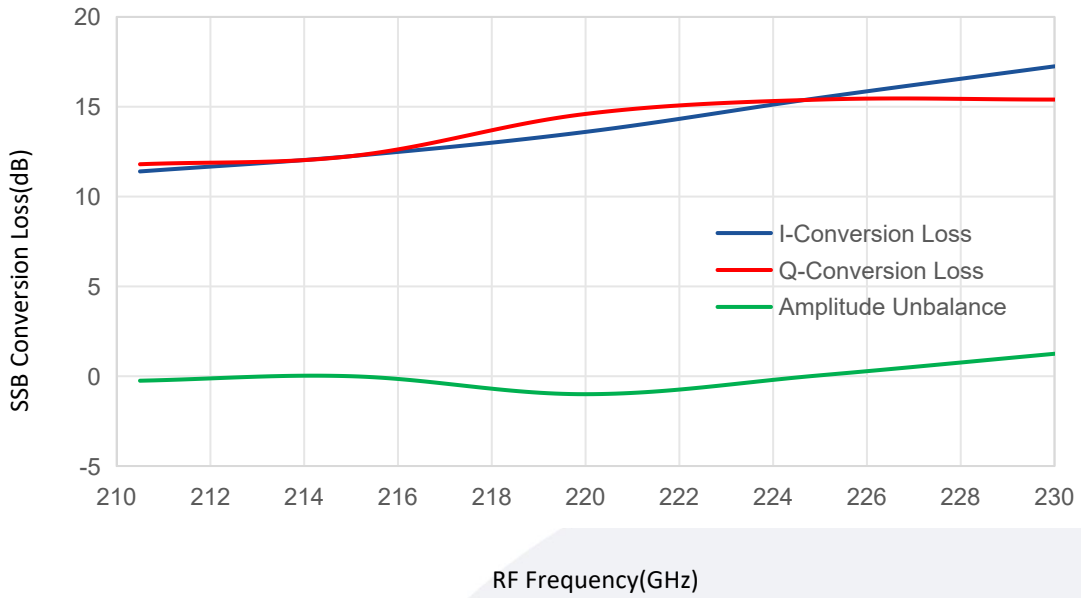
Typical Performance Data:

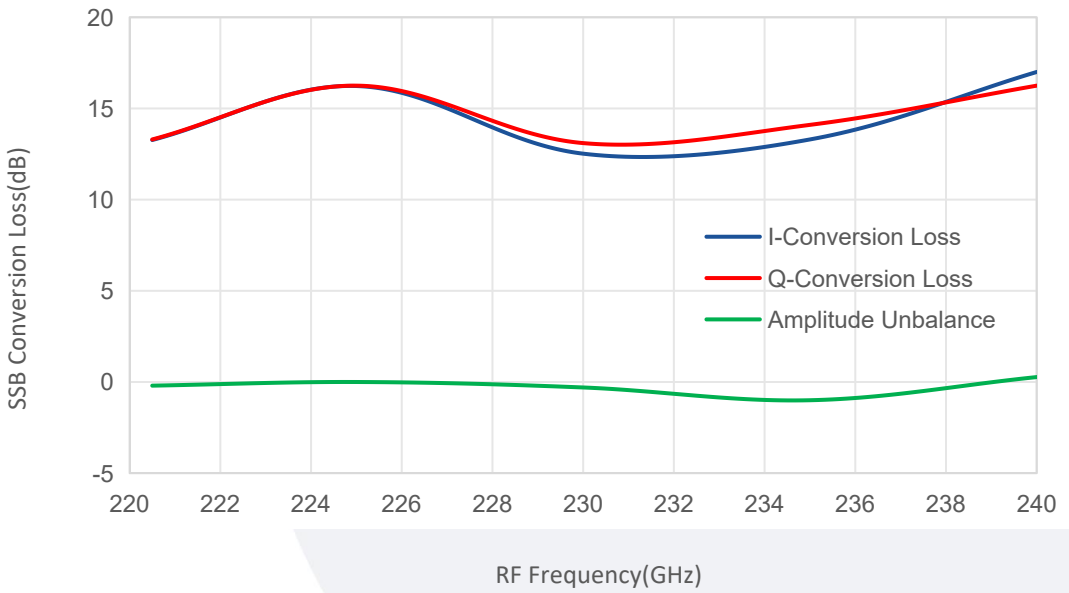
SSB Conversion Loss vs IF Frequency

LO=105GHz



SSB Conversion Loss vs RF Frequency

LO=110GHz



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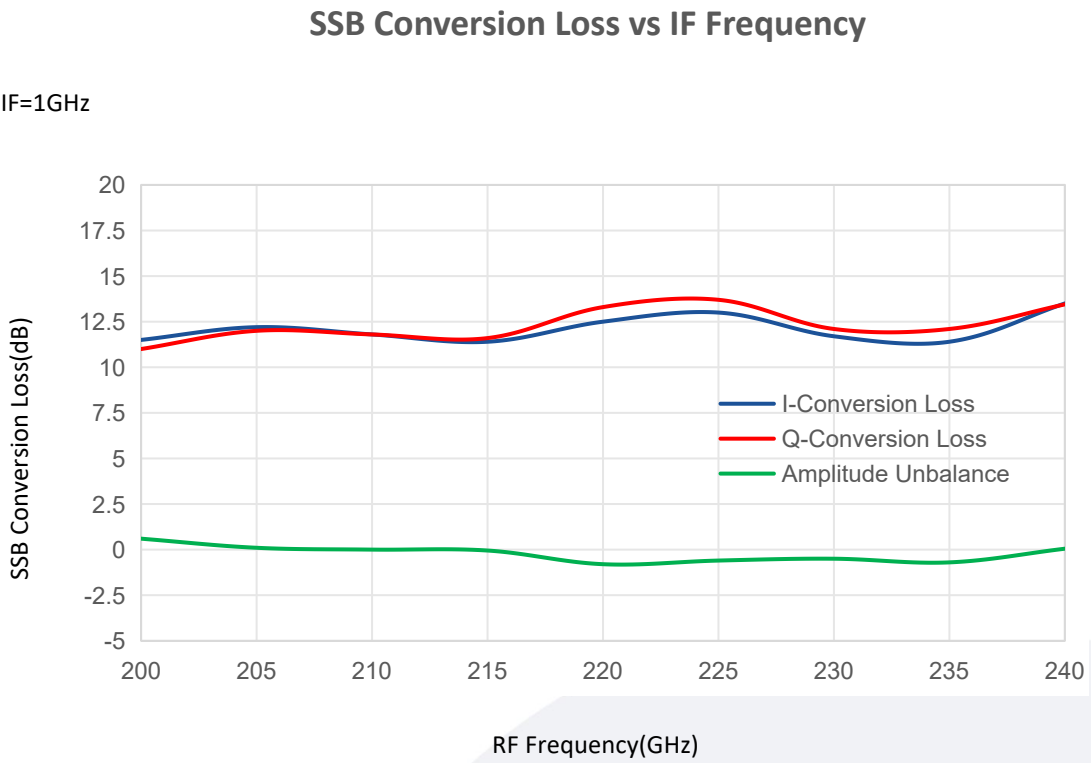

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