泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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www.talentmw.com

IQ Mixer

RF:5-20 GHz/LO:5-20 GHz/IF:DC-6 GHz

Model: TLIQ-5G20G-06-S

TLIQ-5G20G-06-S is an ultra-broadband mixer spanning 5 to 20 GHz on the RF and LO ports with an IF from DC to 6 GHz.Up to 35 dBc of image rejection is available due to the excellent phase and amplitude balance of its on-chip LO quadrature hybrid.

Features:

- RF/LO coverage : 5-20 GHz
- IF operation : DC-6 GHz
- Conversion loss: 14dB Typ
- LO power : 9dBm Typ
- Image Rejection : 35dBc 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	5		20	GHz
LO Frequency	5		20	GHz
LO-Input power	5	9	13	dBm
IF Frequency	DC		6	GHz
Image Rejection @RF/LO:5-20GHz,I/Q:DC-0.2GHz		35		dBc
Conversion Loss @RF/LO:5-20GHz,I/Q:DC-0.2GHz		13	15	
Conversion Loss @RF/LO:5-20GHz,I/Q:0.2-6GHz		15		dB
Input 1 dB Gain Compression Point,I		2		dBm
Input 1 dB Gain Compression Point,Q		3		
LO to IF Isolation		45		dB
LO to RF Isolation		45		dB
RF to IF Isolation		35		dB

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Mechanical Specifications:

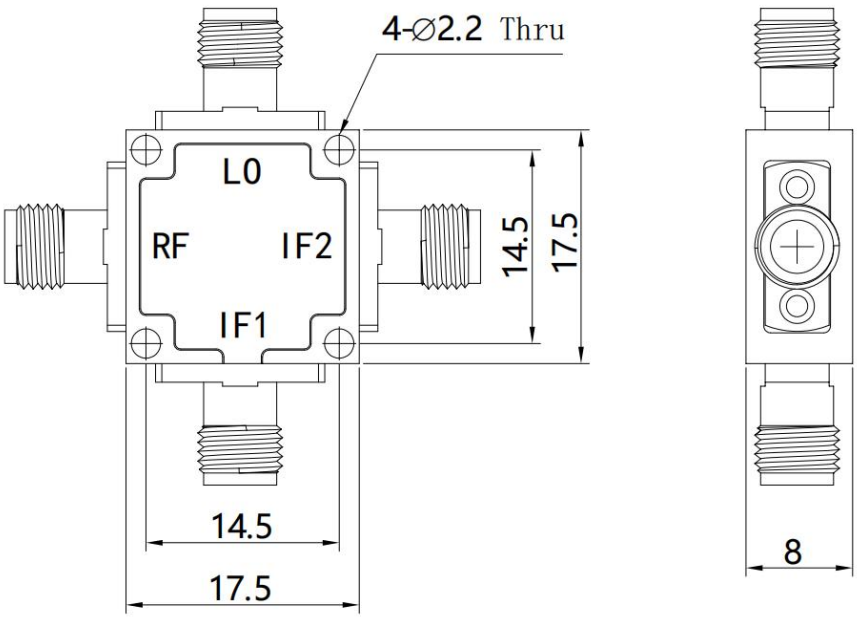
Parameter	Value	Units
RF Connector	SMA Female	
LO Connector	SMA Female	
IF Connector	SMA Female	
Size	17.5*17.5*8(Without Connector)	mm

Absolute Maximum Ratings:

Parameter	Value
Power Handling,at any Port	+25 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Regulatory Compliance:

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

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Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+100	℃
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			

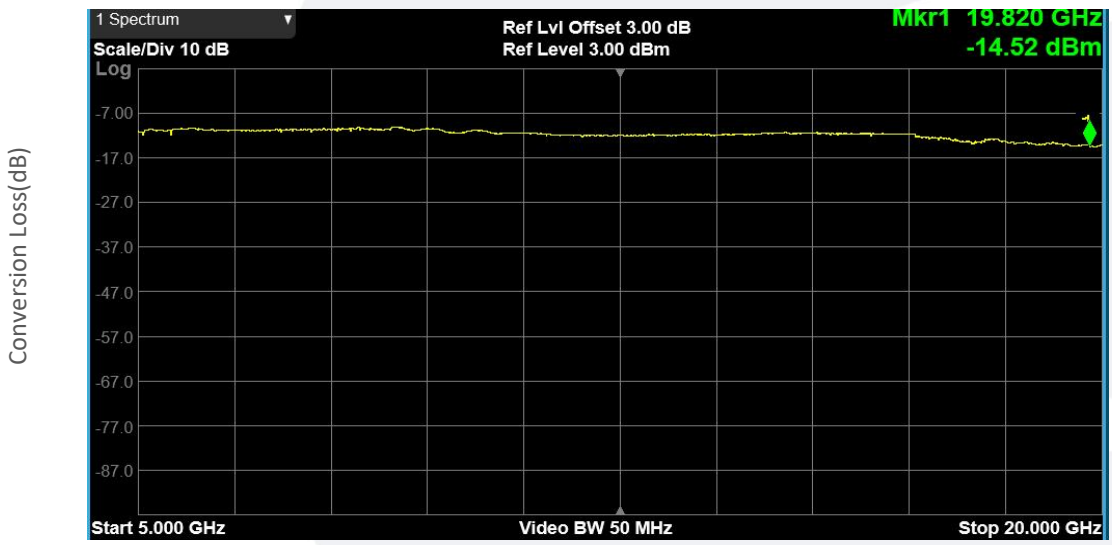
Ordering Information:

Base Number	Desciption	Revision
TLIQ-5G20G-06-S	Image Rejection or I/Q Mixer RF:5-20GHz,LO:5-20GHz,IF:DC-6GHz	Rev.1.1

Typical Performance Data:

Coversion Loss vs LO Frequency

I=200MHz



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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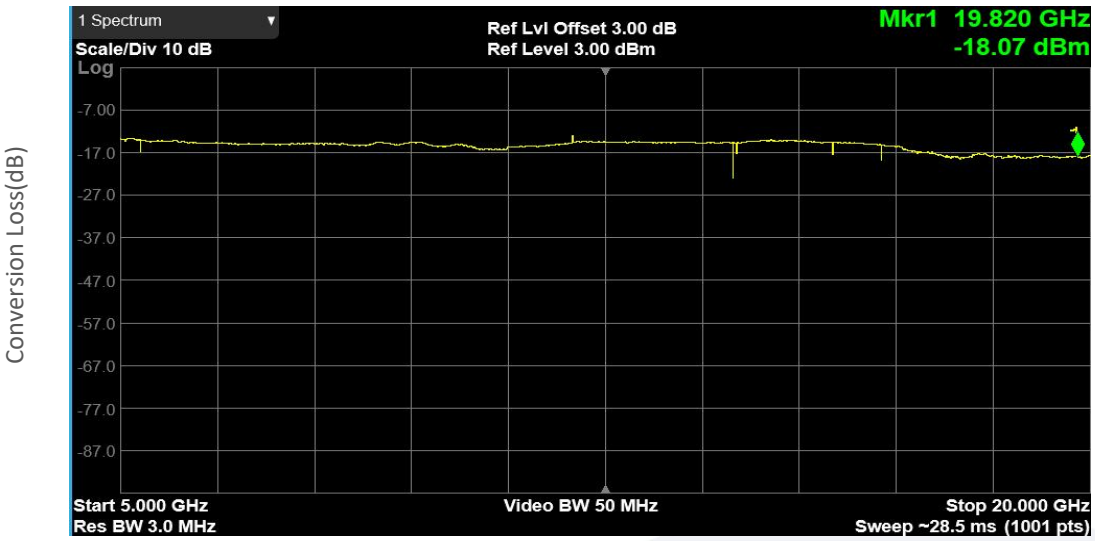
Typical Performance Data:

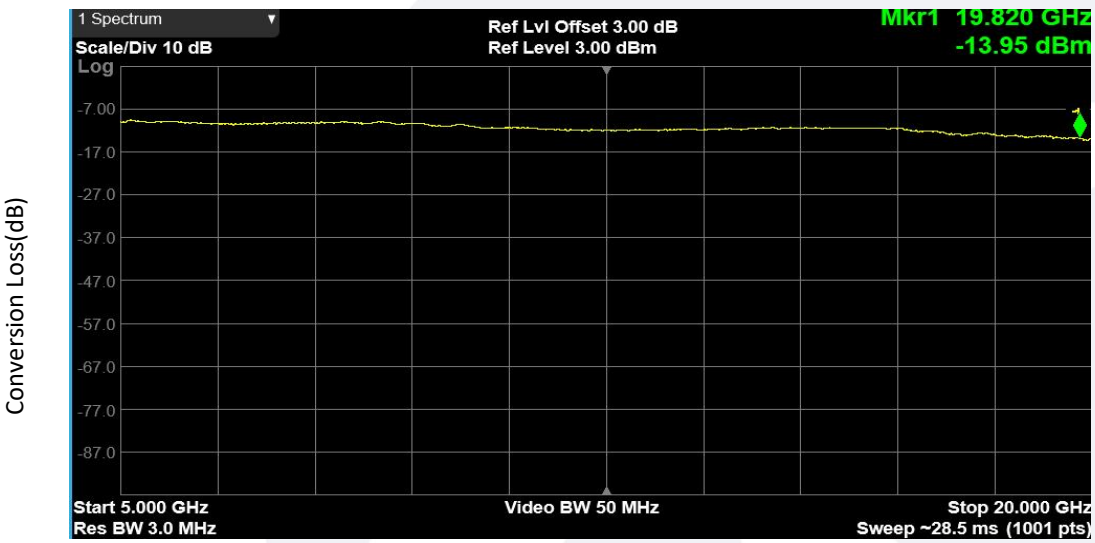
Coversion Loss vs LO Frequency

I=6GHz



Coversion Loss vs LO Frequency

Q=200MHz



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Typical Performance Data:

Coversion Loss vs LO Frequency

Q=6GHz

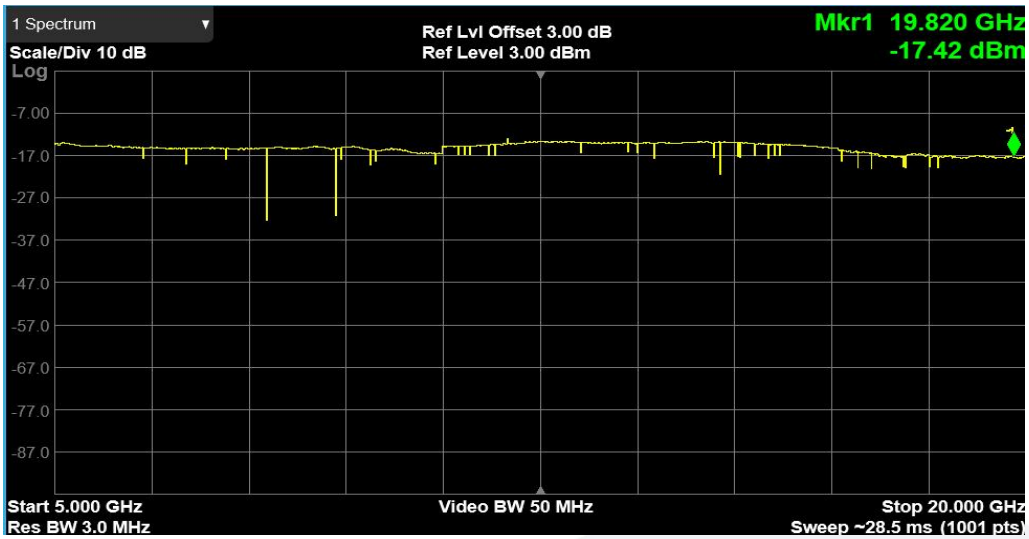
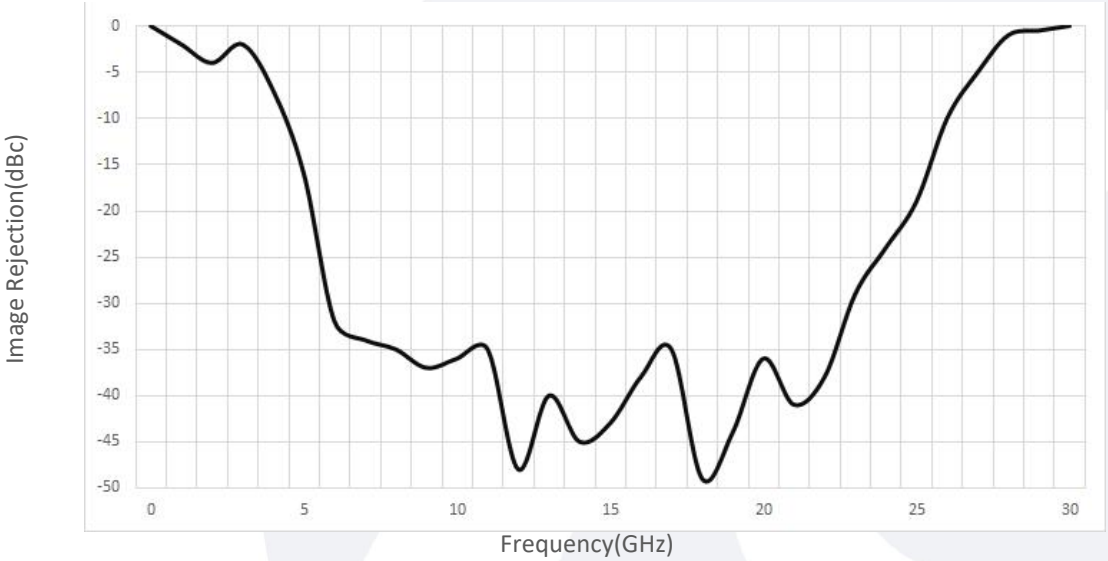


Image Rejection vs Frequency



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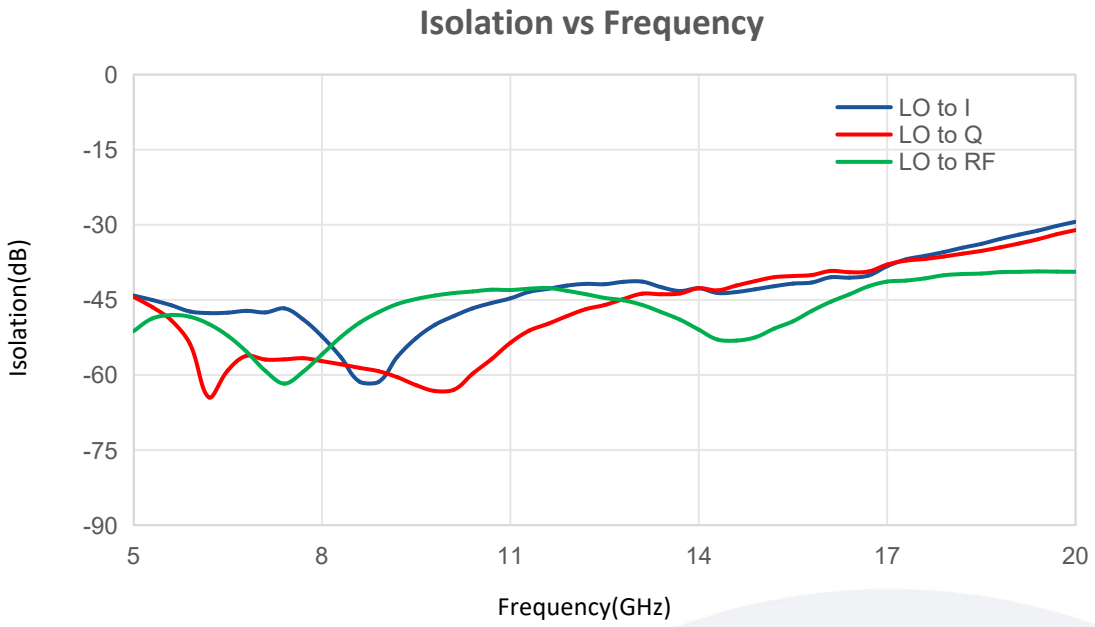

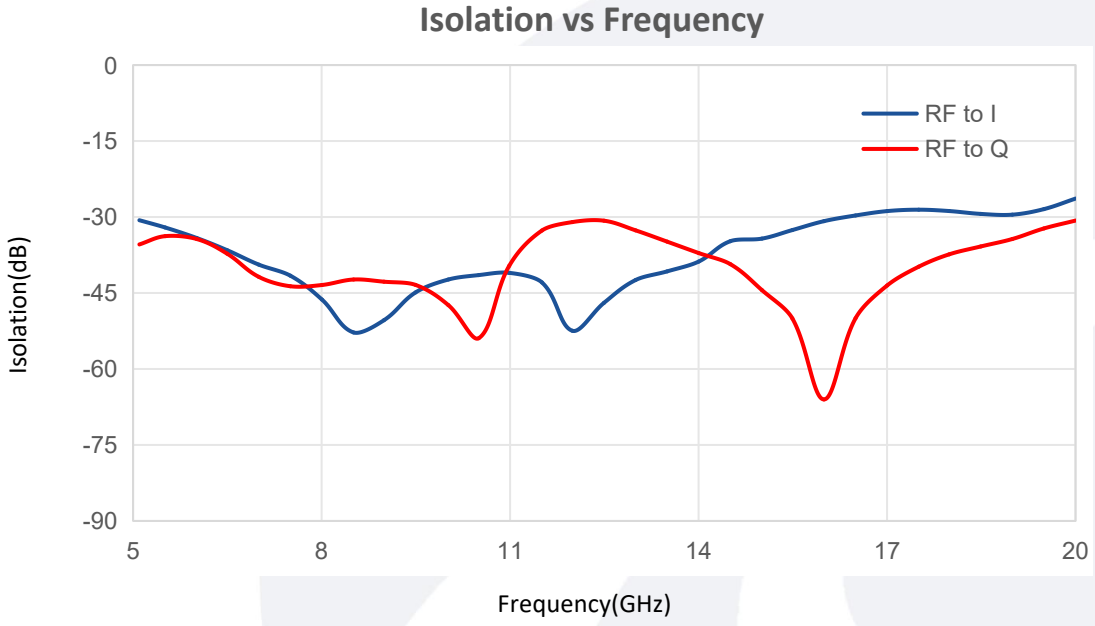

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