

IQ Mixer

RF:4-8 GHz/LO:4-8 GHz/IF:DC-2 GHz

Model: TLIQ-4G8G-02-S

TLIQ-4G8G-02-S is an ultra-broadband mixer spanning 4 to 8 GHz on the RF and LO ports with an IF from DC to 2 GHz. Up to 30 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 : 4-8 GHz
- IF operation : DC-2 GHz
- Conversion loss: 9dB Typ
- LO power : 16dBm Typ
- Image Rejection : 30dBc 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	4		8	GHz
LO Frequency	4		8	GHz
LO-Input power		16		dBm
IF Frequency	DC		2	GHz
Image Rejection		30		dBc
Conversion Loss		9		dB
Input 1 dB Gain Compression Point		14		dBm
LO to IF Isolation		30		dB
LO to RF Isolation		50		dB
RF to IF Isolation		40		dB

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
Weight	100	g

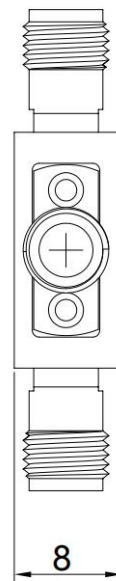
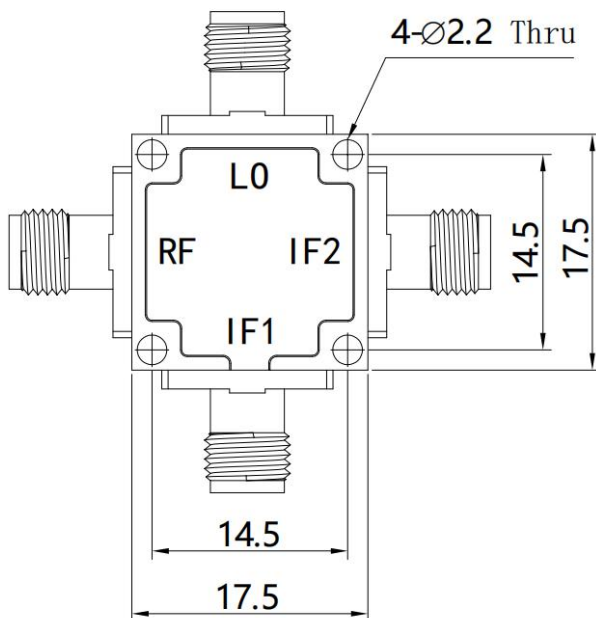
Absolute Maximum Ratings:

Parameter	Value
Power Handling, at any Port	+20 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.

Environmental Conditions:

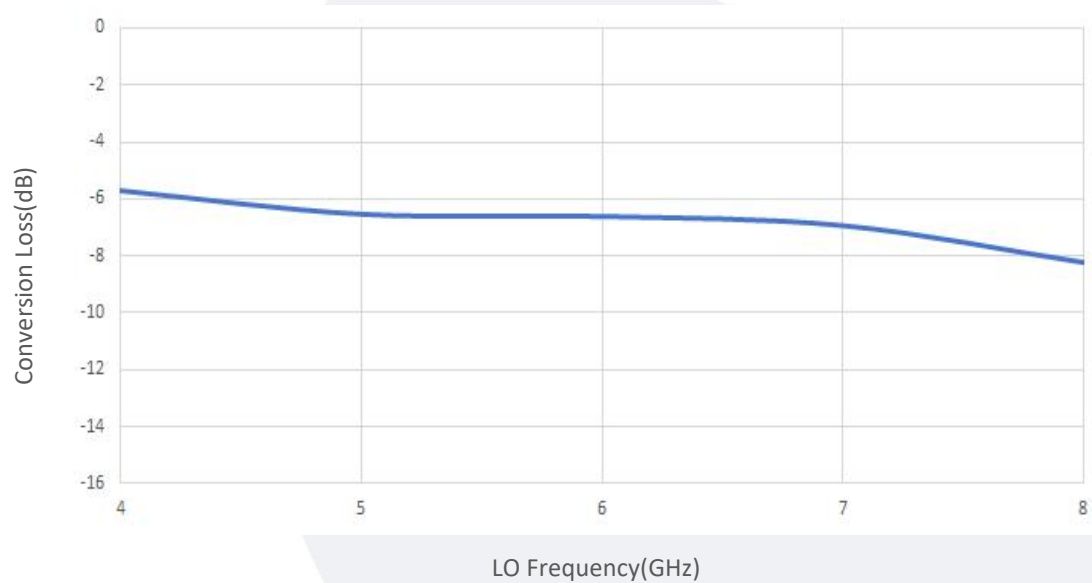
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+100	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLIQ-4G8G-02-S	Image Rejection or I/Q Mixer RF:4-8GHz,LO:4-8GHz,IF:DC-2GHz	Rev.1.1

Typical Performance Data:

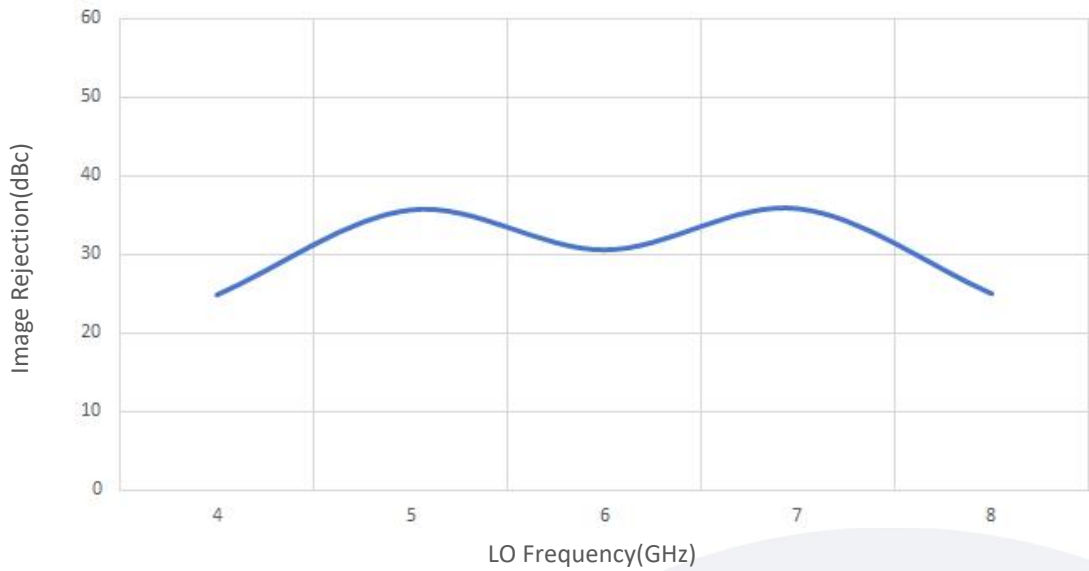
Conversion Loss vs LO Frequency



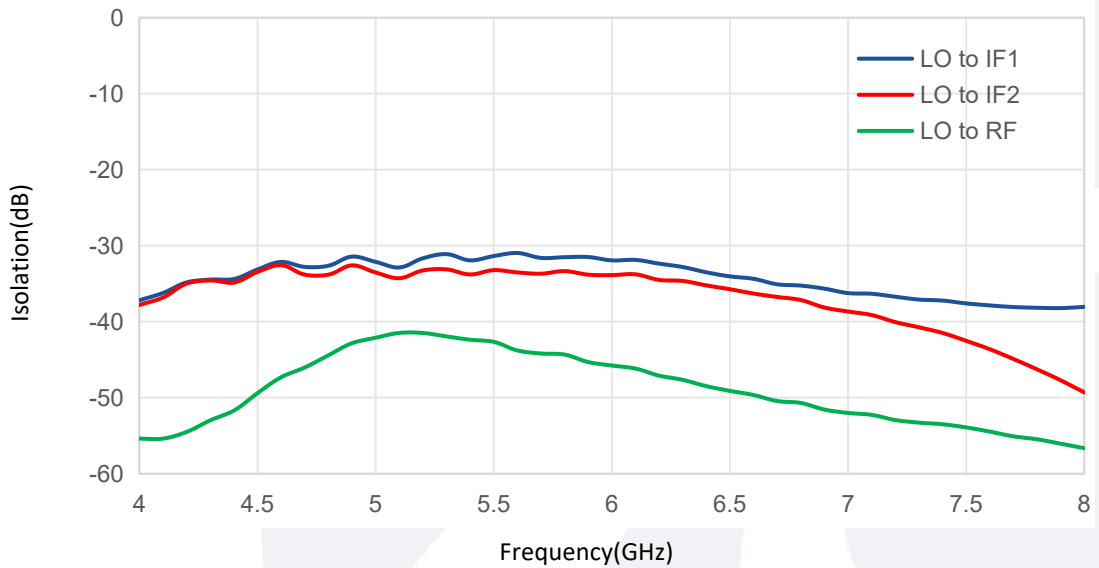
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Image Rejection vs LO Frequency

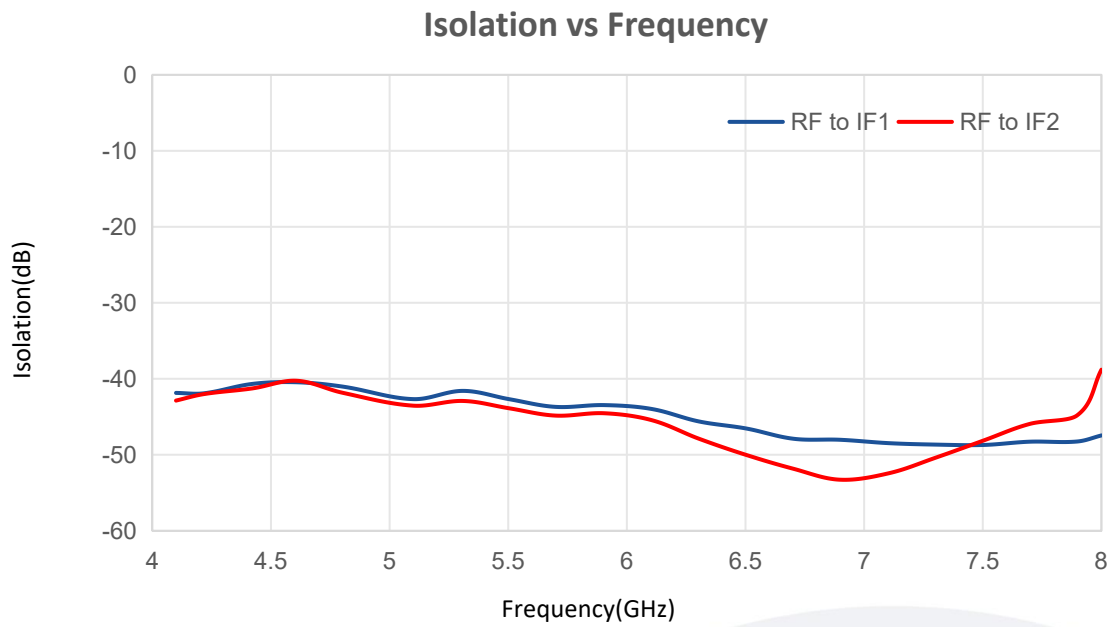


Isolation vs Frequency



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典型曲线 Typical Performance Data:



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