

IQ Mixer

RF:1-4 GHz/LO:1-4 GHz/IF:DC-1 GHz

Model: TLIQ-0104-01-S

TLIQ-0104-01-S is an ultra-broadband mixer spanning 1 to 4 GHz on the RF and LO ports with an IF from DC to 1 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 : 1-4 GHz
- IF operation : DC-1 GHz
- Conversion loss: 10dB Typ
- LO power : 18dBm 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	1		4	GHz
LO Frequency	1		4	GHz
LO-Input power	16	18	20	dBm
IF Frequency	0.01		1	GHz
Image Rejection @RF/LO:1-4GHz,I+Q:0.1GHz		30		dBc
Conversion Loss @RF/LO:1-4GHz,I/Q:DC-1GHz		10		dB
Input 1 dB Gain Compression Point		13		dBm
LLO to IF Isolation		40		dB
LO to RF Isolation		45		dB
RF to IF Isolation		35		dB

Mechanical Specifications:

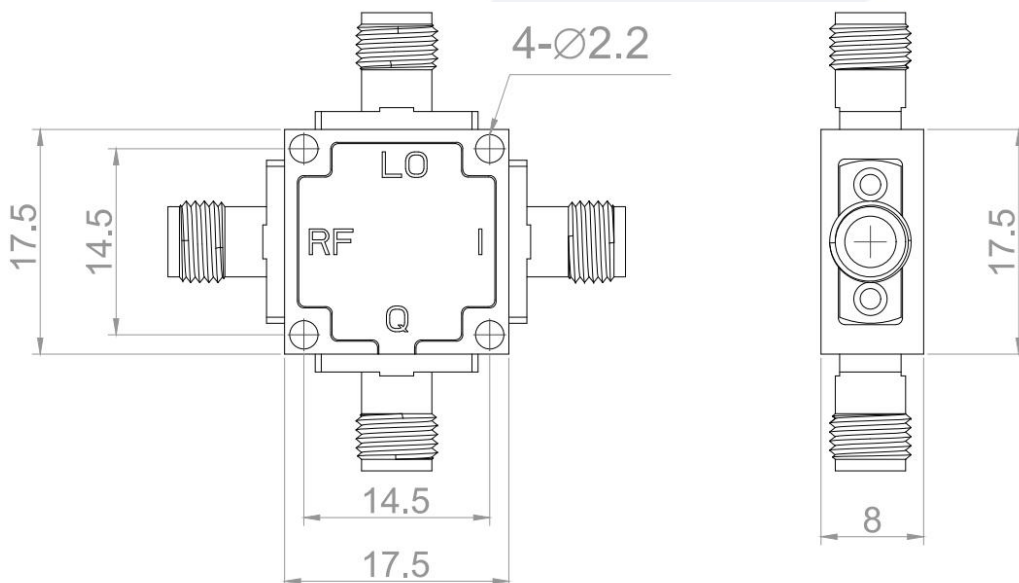
Parameter	Value	Units
RF Connector	SMA Female	
LO Connector	SMA Female	
IF Connector	SMA Female	
Size	17.5*17.5*8(Without Connector)	mm
Weight	/	g

Absolute Maximum Ratings:

Parameter	Value
LO Input Power	+20 dBm
IF Input Current	±2mA
RF/IF Input Power	+5dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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-0104-01-S	Image Rejection or I/Q Mixer RF:1-4GHz,LO:1-4GHz,IF:DC-1GHz	Rev.1.1