

IQ Mixer

RF:75-110GHz/LO:75-110 GHz/IF:DC-25GHz

Model: TMIQ-75110-25-10

TMIQ-75110-25-10 is an ultra-broadband mixer spanning 75 to 110 GHz on the RF and LO ports with an IF from DC to 25 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/LO coverage : 75-110 GHz
- IF operation : DC-25 GHz
- Conversion loss: 14dB Typ
- LO power : 17dBm Typ
- Image Rejection : 20dBc Typ

Applications:

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

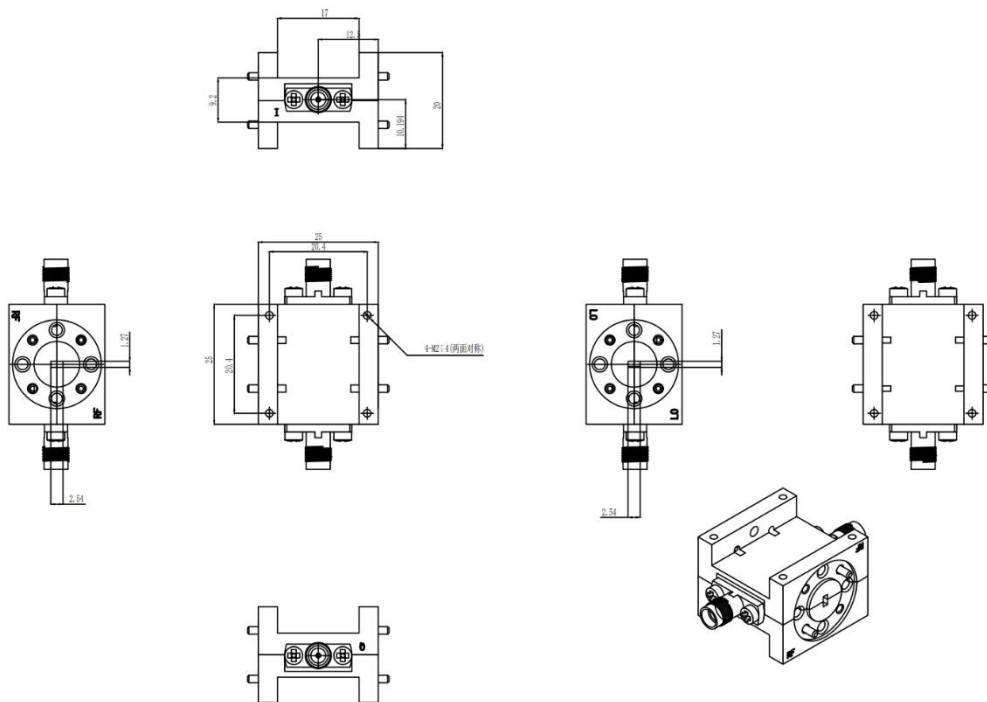
Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	75		110	GHz
LO Frequency	75		110	GHz
LO-Input power	15	17	20	dBm
IF Frequency	DC		25	GHz
IF Rejection@1.9GHz		20		dBc
IF Rejection@2.2GHz		40		dBc
Conversion Loss		14	17	dB
IF Input 1dB Gain Compression Point		-5		dBm
I/Q Amplitude consistency		±1.9		dB
I/Q Phase consistency		±3.0		°
隔离 LO to RF Isolation		40		dB

Parameter	Value	Units
RF Connector	WR-10/UG-387/U	
LO Connector	WR-10/UG-387/U	
IF Connector	2.92mm Female	
Size	25*25*20	mm

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

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
TMIQ-75110-25-10	Image Rejection or I/Q Mixer RF:75-110GHz,LO:75-110GHz,IF:DC-25GHz	Rev.1.1