

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:

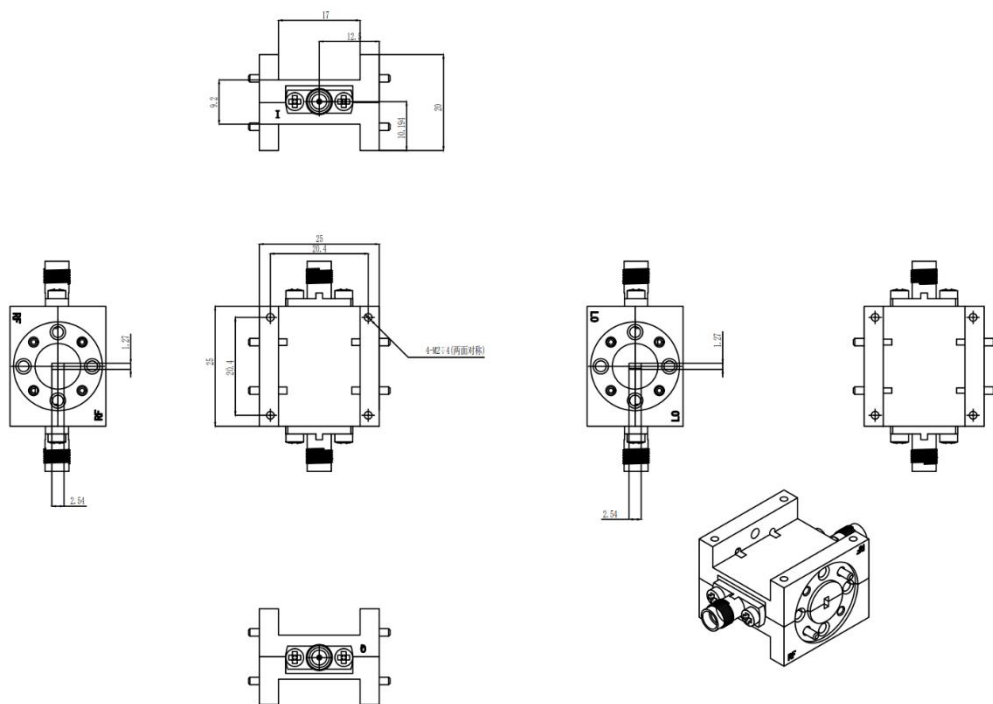
- Single Sideband and Image Rejection Mixing
- IQ Modulation / Demodulation
- Vector Amplitude Modulation
- Band Shifting

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	75		110	GHz
LO频率 LO Frequency	75		110	GHz
LO 驱动功率 LO-Input power	15	17	20	dBm
IF频率 IF Frequency	DC		25	GHz
中频带外抑制 IF Rejection@1.9GHz		20		dBc
中频带外抑制 IF Rejection@2.2GHz		40		dBc
变频损耗 Conversion Loss		14	17	dB
IF输入P1dB压缩点 IF Input 1dB Gain Compression Point		-5		dBm
I/Q幅度一致性 I/Q Amplitude consistency		±1.9		dB
I/Q相位一致性 I/Q Phase consistency		±3.0		°
LO to RF 隔离 LO to RF Isolation		40		dB

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

参数 Parameter	指标 Value
所有接口输入功率 Power Handling,at any Port	+25 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



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

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	℃
存储温度 Non-operating Temperature	-55		+100	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TMIQ-75110-25-10	Image Rejection or I/Q Mixer RF:75-110GHz,LO:75-110GHz,IF:DC-25GHz	Rev.1.1