

IQ Mixer

RF: 30-120GHz/LO: 30-120GHz/IF: DC-30GHz

Model: TLIQ-30120-30-1.0

TLIQ-30120-30-1.0 is an ultra-broadband mixer spanning 30 to 120 GHz on the RF and LO ports with an IF from DC to 30GHz. Up to 25 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: 30-120GHz
- IF operation: DC-30GHz
- Conversion loss: 15dB Typ
- LO power: 19dBm Typ
- Image Rejection : 25dBc 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	30		120	GHz
LO频率 LO Frequency	30		120	GHz
LO 驱动功率 LO-Input power	17	19	25	dBm
IF频率 IF Frequency	DC		30	GHz
镜像抑制 Image Rejection		25		dBc
变频损耗 Conversion Loss		15		dB
I/Q幅度平衡 I/Q Amplitude Balance		1.5		dB
I/Q相位误差 I/Q Phase Error		5		°
RF端口驻波 RF Port VSWR			4	:1
LO端口驻波 LO Port VSWR			4	:1
输入P1dB压缩点 Input 1 dB Gain Compression Point		7		dBm
LO to IF 隔离 LO to IF Isolation		30		dB
LO to RF 隔离 LO to RF Isolation		35		dB
RF to IF 隔离 RF to IF Isolation		35		dB

机械特性 Mechanical Specifications:

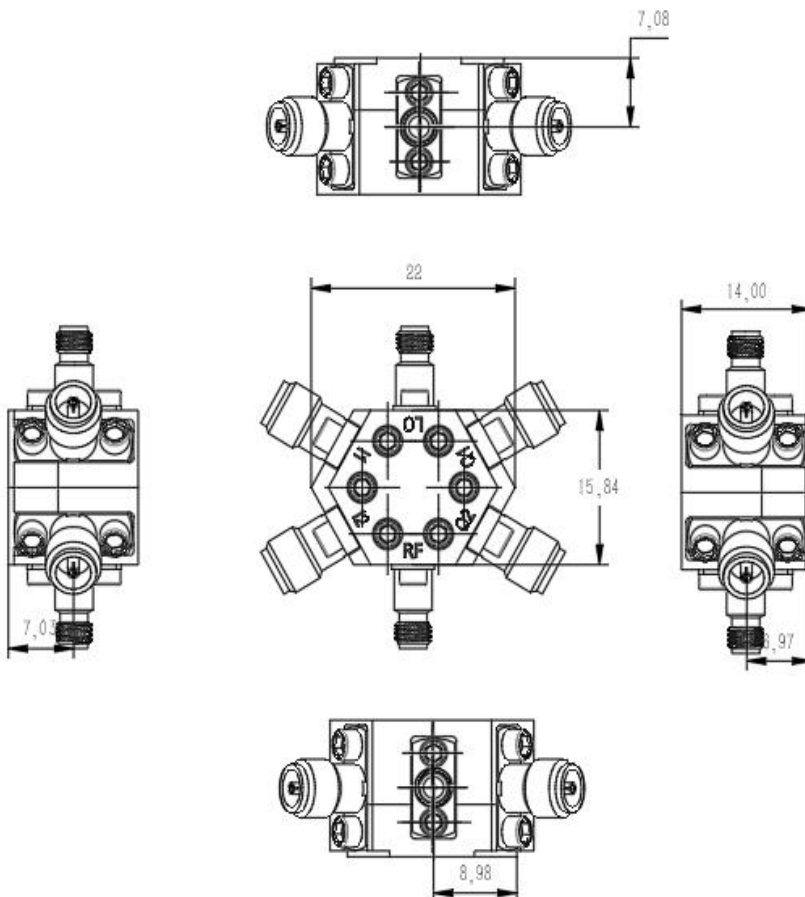
参数 Parameter	指标 Value	单位 Units
RF接口 RF Connector	1.0mm Female	
LO接口 LO Connector	1.0mm Female	
IF接口 IF Connector	2.92mm Female	
尺寸 Size	22*15.84*14	mm

绝对最大值 Absolute Maximum Ratings:

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

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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	°C
存储温度 Non-operating Temperature	-55		+125	°C
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
TLIQ-30120-30-1.0	Image Rejection or I/Q Mixer RF:30-120GHz,LO:30-120GHz,IF:DC-30GHz	Rev.1.0