

IQ Mixer

RF:2-18 GHz/LO:2-18 GHz/IF:DC-3 GHz

TLIQ-0218-03-S

TURIQ-021803S is an ultra-broadband mixer spanning 2 to 18 GHz on the RF and LO ports with an IF from DC to 3 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 : 2-18 GHz
- IF operation : DC-3 GHz
- Conversion loss: 15dB Typ
- LO power : 15dBm 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	2		18	GHz
LO频率 LO Frequency	2		18	GHz
LO 驱动功率 LO-Input power	13	15	20	dBm
IF频率 IF Frequency	DC		3	GHz
镜像抑制 Image Rejection @RF/LO:2-18GHz,I+Q:0.091GHz		20		dBc
变频损耗 Conversion Loss @RF/LO:2-18GHz,I/Q:DC-3GHz		15		dB
输入P1dB压缩点 Input 1 dB Gain Compression Point		2		dBm
输入3阶交调截止点 Input IP3 @I/Q= 0.091 GHz		20		dBm
输入3阶交调截止点 Input IP3 @IF = 0.091 GHz		23		dBm
LO to IF 隔离 LO to IF Isolation		23		dB
LO to RF 隔离 LO to RF Isolation		45		dB

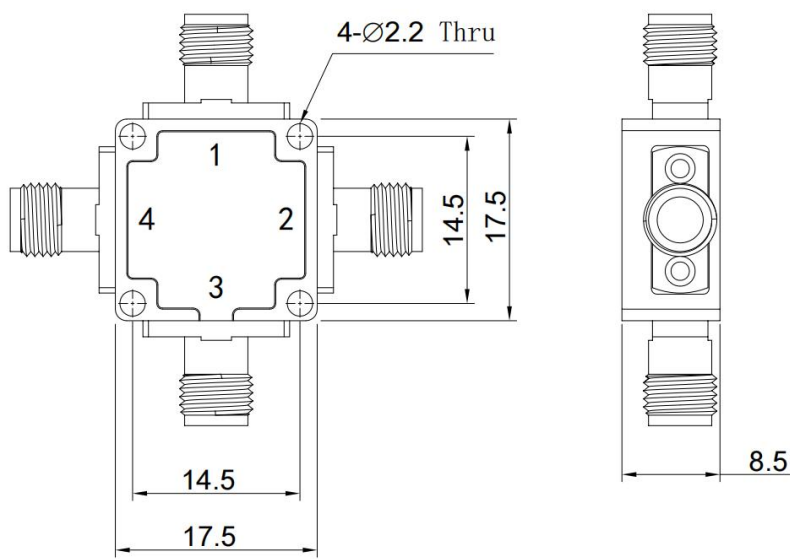
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF接口 RF Connector	SMA Female	
LO接口 LO Connector	SMA Female	
IF接口 IF Connector	SMA Female	
尺寸 Size	17.5*17.5*8.5(Without Connector)	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
LO输入功率 LO Input Power	+20 dBm
RF/IF输入功率 RF/IF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



端口 Port	指标 Value
1	LO
2	I
3	Q
4	RF



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
TURIQ-021803S	Image Rejection or I/Q Mixer RF:2-18GHz,LO:2-18GHz,IF:DC-3GHz	Rev.1.2