

Dual Balance Mixer

RF:10-44 GHz/LO:10-44 GHz/IF:DC-14 GHz

Model: TLBM-1044-HS

TLBM-1044-HS is a dual balance mixer. The mixer covers the LO and RF frequency from 10 to 44 GHz with an extremely broad IF output from DC to 14 GHz. The mixer offers a conversion loss of 10 dB typical and LO input power from 11 dBm to 20 dBm.

Features:

- RF/LO coverage : 10-44 GHz
- IF operation : DC-14 GHz
- Conversion loss: 10dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	10		44	GHz
LO频率 LO Frequency	10		44	GHz
LO驱动功率 LO-Input power	11	15	20	dBm
IF频率 IF Frequency	DC		14	GHz
输入P1dB Input P1dB		10		dBm
变频损耗 Conversion Loss@IF=100MHz		10		dB
RF至IF隔离度 RF to IF Isolation		28		dB
RF至LO隔离度 RF to LO Isolation		38		dB
LO至IF隔离度 LO to IF Isolation		28		dB

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
端口1 Connector 1	2.4mm Female	
端口3 Connector 3	2.4mm Female	
端口2 Connector 2	SMA Female	
尺寸 Size	22.2*14.4*8	mm

接口定义 Connector Functions:

Apply 1

端口 Port	功能 Function
Connector 3	LO
Connector 2	IF
Connector 1	RF

Apply 2

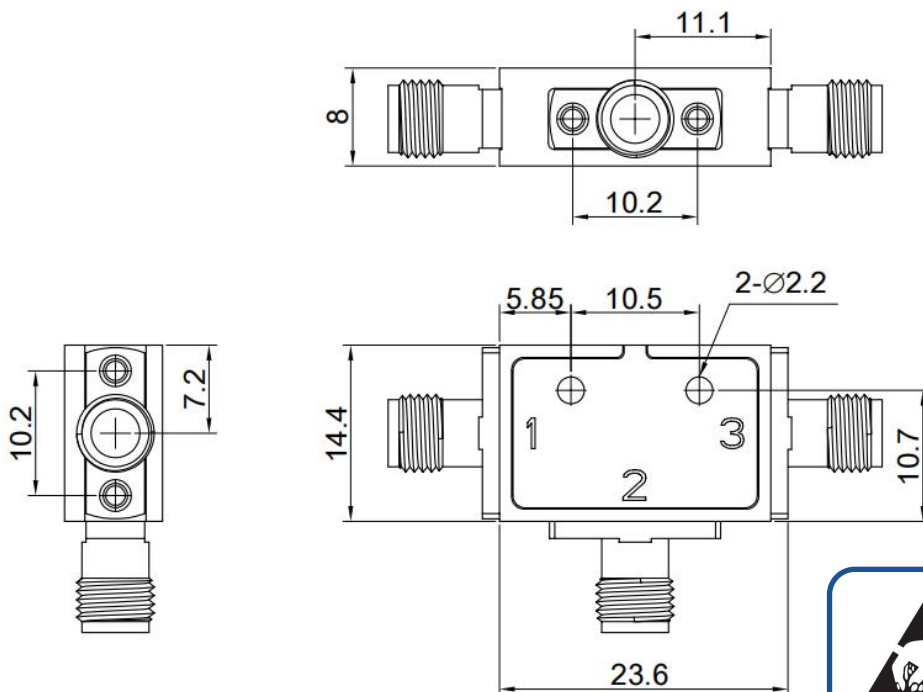
端口 Port	功能 Function
Connector 3	RF
Connector 2	IF
Connector 1	LO

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
LO功率 LO Input Power	20 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:

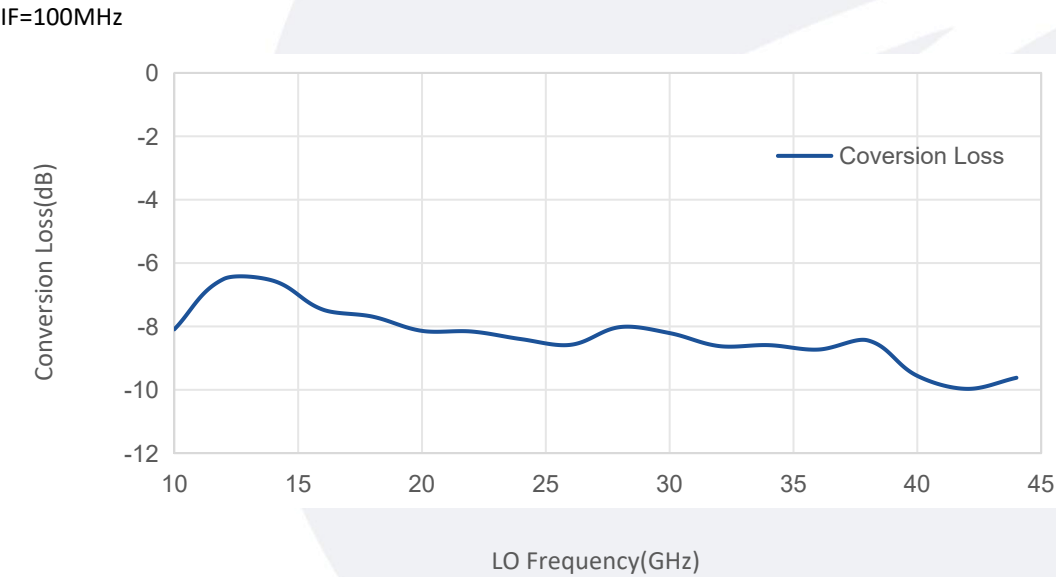
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-40		+70	℃
存储温度 Non-operating Temperature	-55		+85	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLBM-1044-HS	Dual Balanced Mixer RF:10-44GHz,LO:10-44GHz,IF:DC-14GHz	Rev.1.2

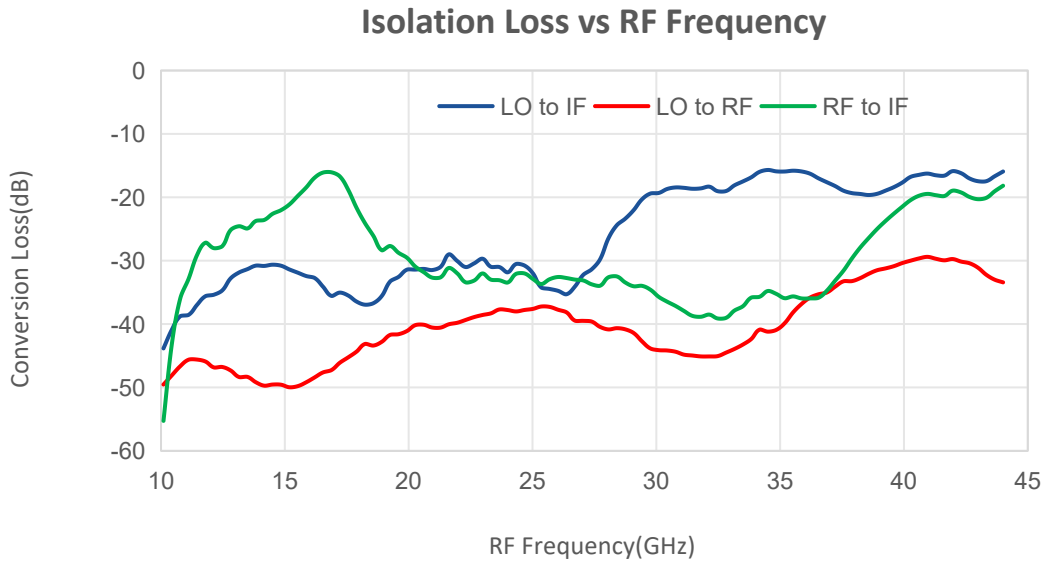
典型曲线 Typical Performance Data(Apply 2):

Conversion Loss vs RF Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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