

Balance Mixer

RF: 50-110GHz/LO: 50-110GHz/IF: DC-40GHz

Model: TLBM-050110-40-1.0

TLBM-050110-40-1.0 is a balance mixer. The mixer covers the LO and RF frequency from 50 to 110 GHz with an extremely broad IF output from DC to 40 GHz. The mixer offers a conversion loss of 9 dB typical and LO input power of 15 dBm typical.

Features:

- RF/LO coverage : 50-110GHz
- IF operation : DC-40GHz
- Conversion loss: 9dB Typ
- High LO to RF isolation
- 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	50		110	GHz
LO频率 LO Frequency	50		110	GHz
LO驱动功率 LO-Input power	12	15		dBm
IF频率 IF Frequency	DC		40	GHz
变频损耗 Conversion Loss@IF=100MHz		-9		dB
变频损耗 Conversion Loss@LO=50GHz		-10		dB

机械特性 Mechanical Specifications:

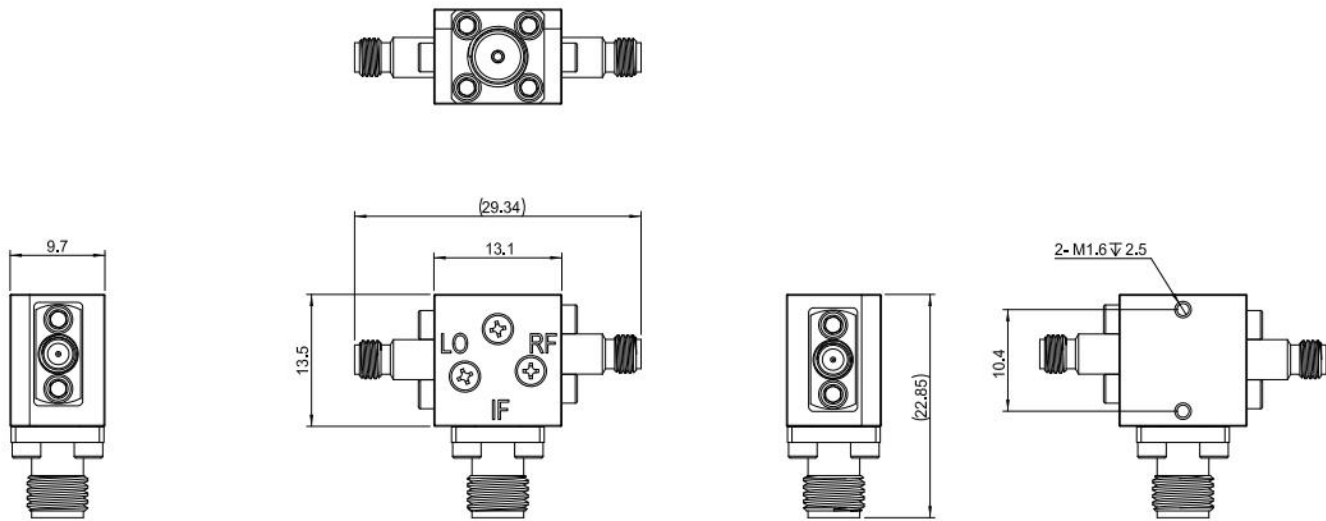
参数 Parameter	指标 Value	单位 Units
RF端口 RF Connector	1.0mm Female	
LO端口 LO Connector	1.0mm Female	
IF端口 IF Connector	2.92mm Female	
尺寸 Size	13*13.5*9.7	mm

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
LO功率 LO Input Power	TBD
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



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

温度环境 Environmental Conditions:

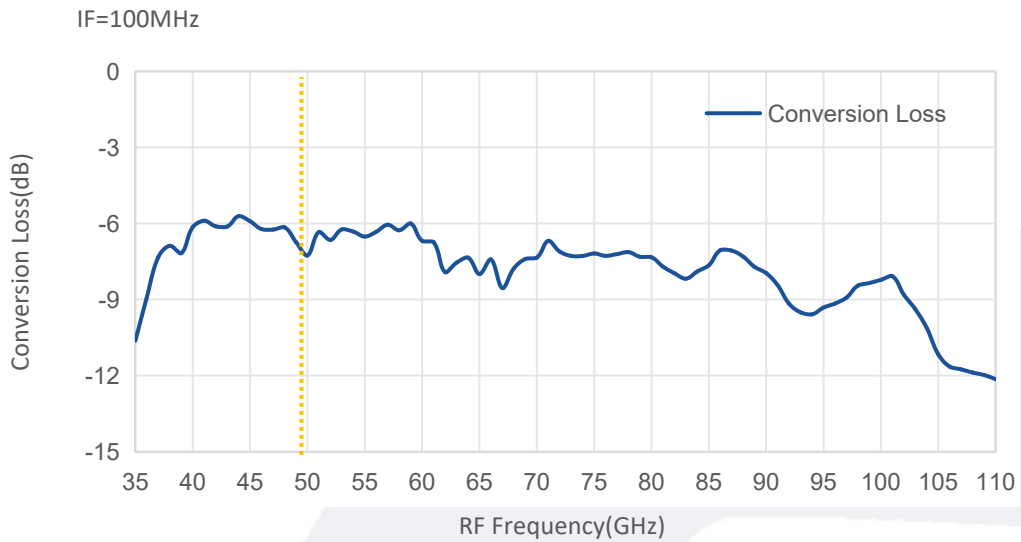
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

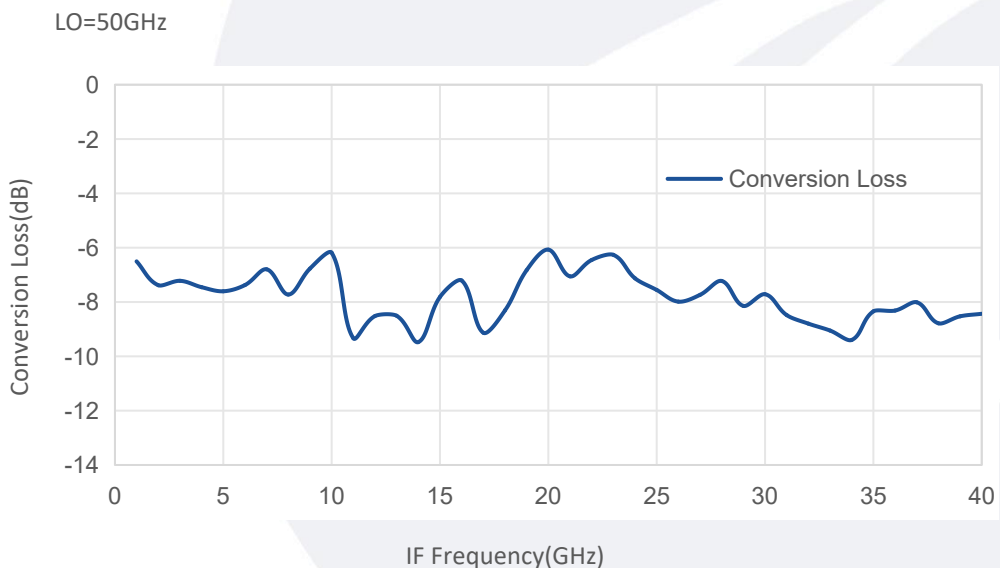
标准型号 Base Number	描述 Description	版本号 Revision
TLBM-050110-40-1.0	Balanced Mixer RF:50-110GHz,LO:50-110GHz,IF:DC-40GHz	Rev.1.0

典型曲线 Typical Performance Data:

Conversion Loss vs RF Frequency



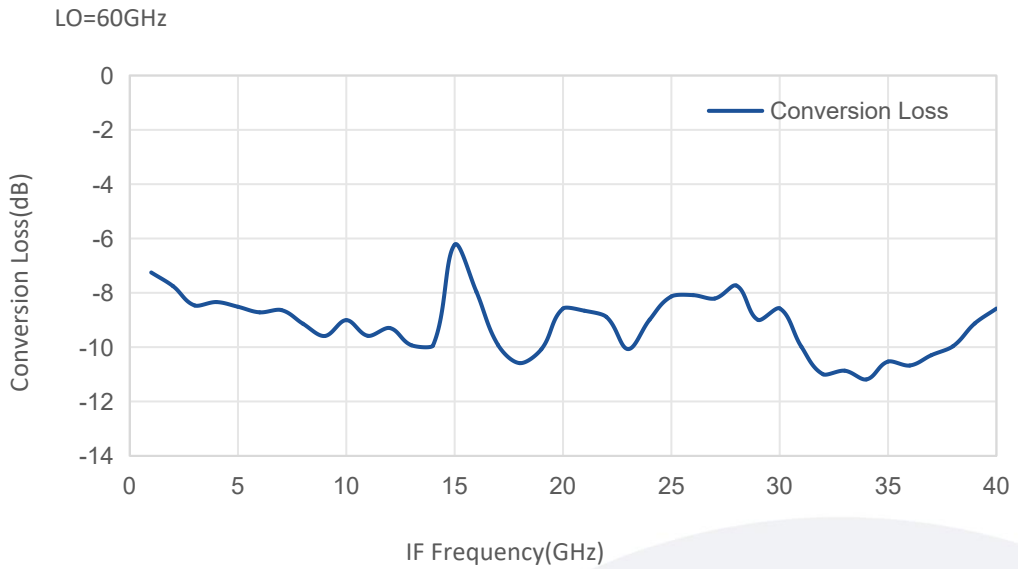
Conversion Loss vs IF Frequency



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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