泰莱微波 Talent Microwave

Suzhou Talent Microwave,Inc
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D-Band Fundamental Mixer

RF:110-170 GHz/LO:110-170 GHz/IF:DC-30 GHz Model: TLBM-110170-30-06

TLBM-110170-30-06 is a D-Band Fundamental mixer. The mixer supports the full waveguide band operation for LO and RF frequency from 110 to 170 GHz with an extremely broad IF output from DC to 30 GHz. The mixer offers a conversion loss of 9dB@IF=1GHz maximum and LO input power of 10 dBm typical. The D-band,X12 multiplier of Talent model TMAM-110170-1208-06 can be used as the LO driver for this mixer.

Features:

- RF Frequency range: 110-170GHz
- LO Frequency range: 110-170GHz
- IF Frequency range: DC-30GHz
- Low LO Power Requirement
- Suggested LO drive model: TMAM-110170-1208-06

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	110		170	GHz
LO频率 LO Frequency	110		170	GHz
IF频率 IF Frequency	DC		30	GHz
LO驱动功率 LO Input Power	7		12	dBm
变频损耗 Conversion Loss@IF=1GHz		9		dB
变频损耗 Conversion Loss@LO=110GHz		10		dB
射频输入P1dB RF Input P1dB		3		dBm
偏置电压 Bias Voltage	-1.2	-1	-0.8	V DC

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF 接口RF Connector	WR-6.5/UG-387/U	
LO 接口LO Connector	WR-6.5/UG-387/U	

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机械特性 Mechanical Specifications:

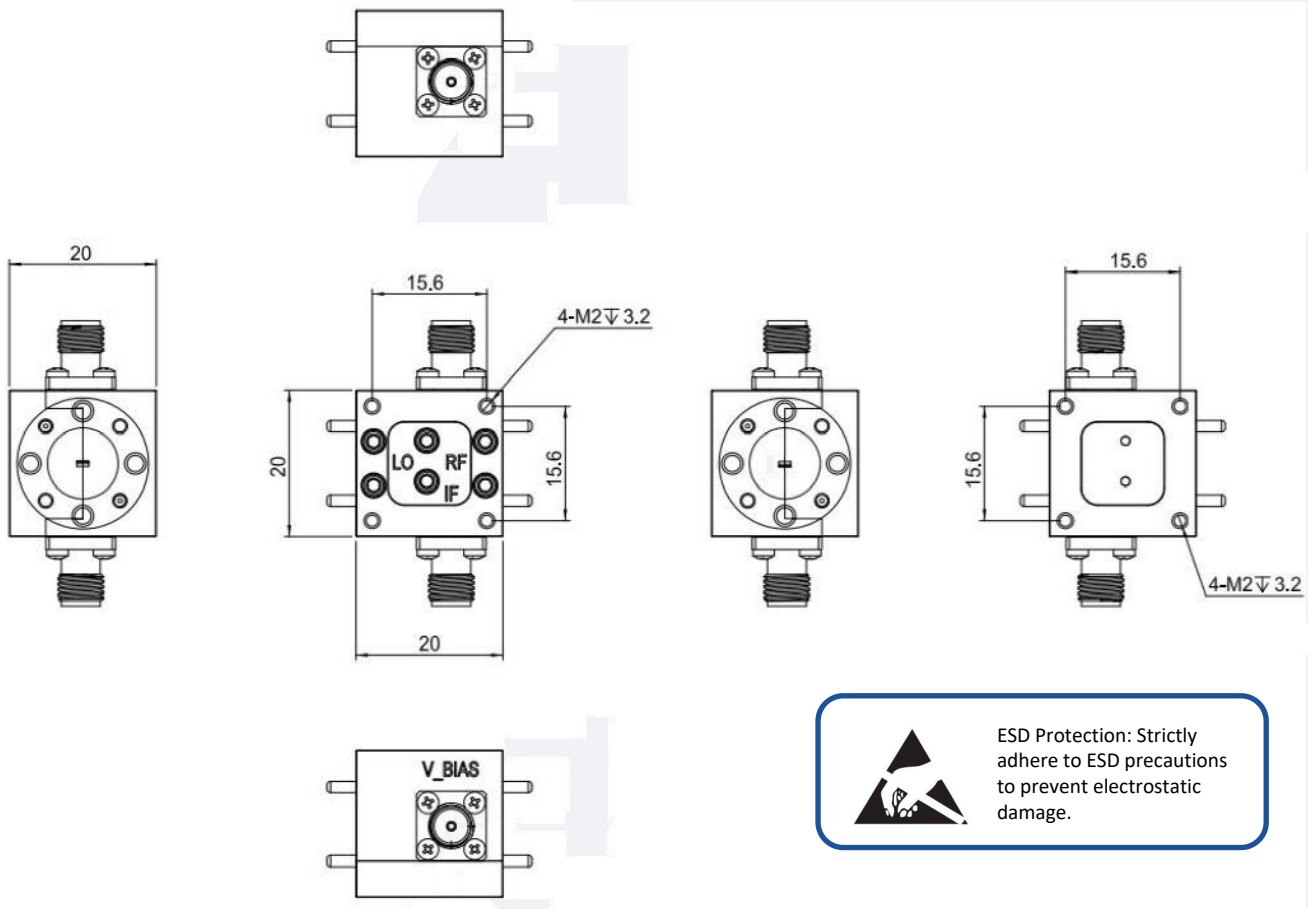
参数 Parameter	指标 Value	单位 Units
IF 接口 IF Connector	2.92mm Female	
偏置 接口 Bias Connector	SMA Female	

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
RF 功率 RF Input Power	13 dBm
IF 功率 IF Input Power	13 dBm
LO 功率 LO Input Power	13 dBm
偏置电压 Bias Voltage	-2V~0V
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.

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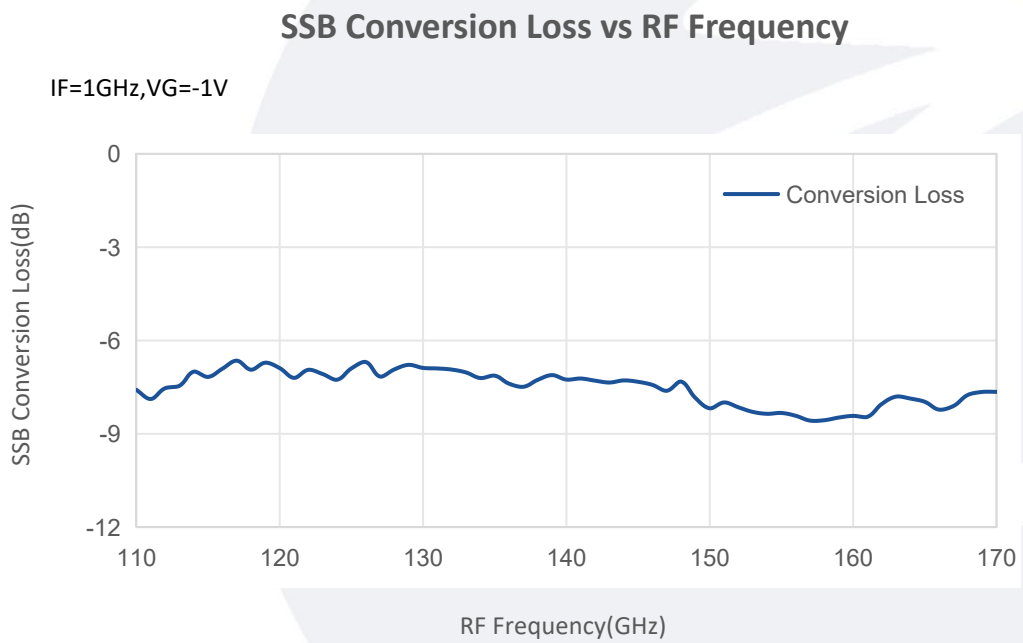
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	℃
存储温度 Non-operating Temperature	-45		+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-110170-30-06	D-Band Fundamental Mixer RF:110-170GHz,LO:110-170GHz,IF:DC-30GHz	Rev.1.1

典型曲线 Typical Performance Data:



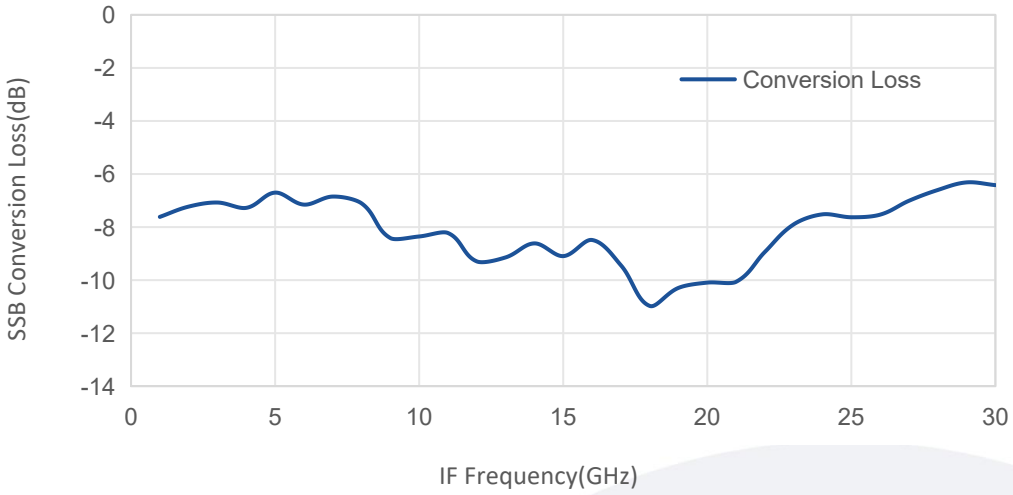
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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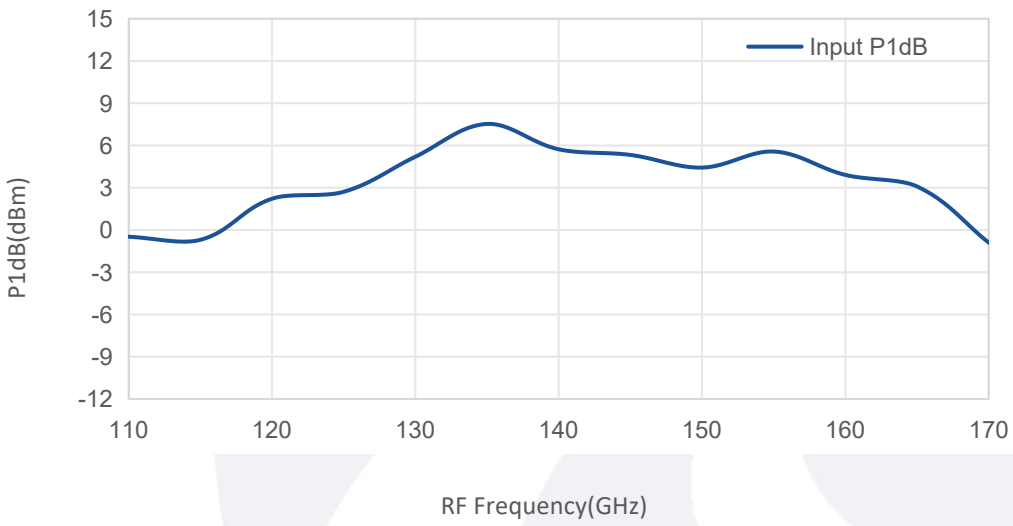
SSB Conversion Loss vs RF Frequency

LO=110GHz,VG=-1V



RF Input P1dB vs RF Frequency

IF=1GHz,VG=-1V



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