Suzhou Talent Microwave,Inc
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W-Band Balance Mixer

RF:75-110GHz/LO:75-110GHz/IF:DC-35GHz Model: TLBM-075110-30-10

TLBM-075110-30-10 is a W-Band balance mixer. The mixer supports the full waveguide band operation for both LO and RF frequency from 75 to 110 GHz with an extremely broad IF output from DC to 35 GHz. The mixer offers a conversion loss of -10 dB typical@IF=100MHz and LO input power of 13 dBm typical. The W-band,X6 multiplier of Talent model TMAM-070115-0612-10-E can be used as the LO driver for this mixer.

Features:

- RF/LO coverage : 75-110GHz
- IF operation : DC-35GHz
- Conversion loss: 10dB Typ
- High LO to RF isolation
- Suggested LO drive model: TMAM-070115-0612-10-E

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
RF Frequency		75		110	GHz
LO Frequency		75		110	GHz
IF Frequency		DC		35	GHz
LO-Input power		13	15	16	dBm
RF Input P1dB			6		dBm
SSB Conversion Loss	@IF=100MHz		10		dB
	@LO=75GHz		12		

Mechanical Specifications:

Parameter	Value	Units
RF Connector	WR-10/UG-387/U	
LO Connector	WR-10/UG-387/U	
IF Connector	2.92mm Female	
Size	28*20*20	mm

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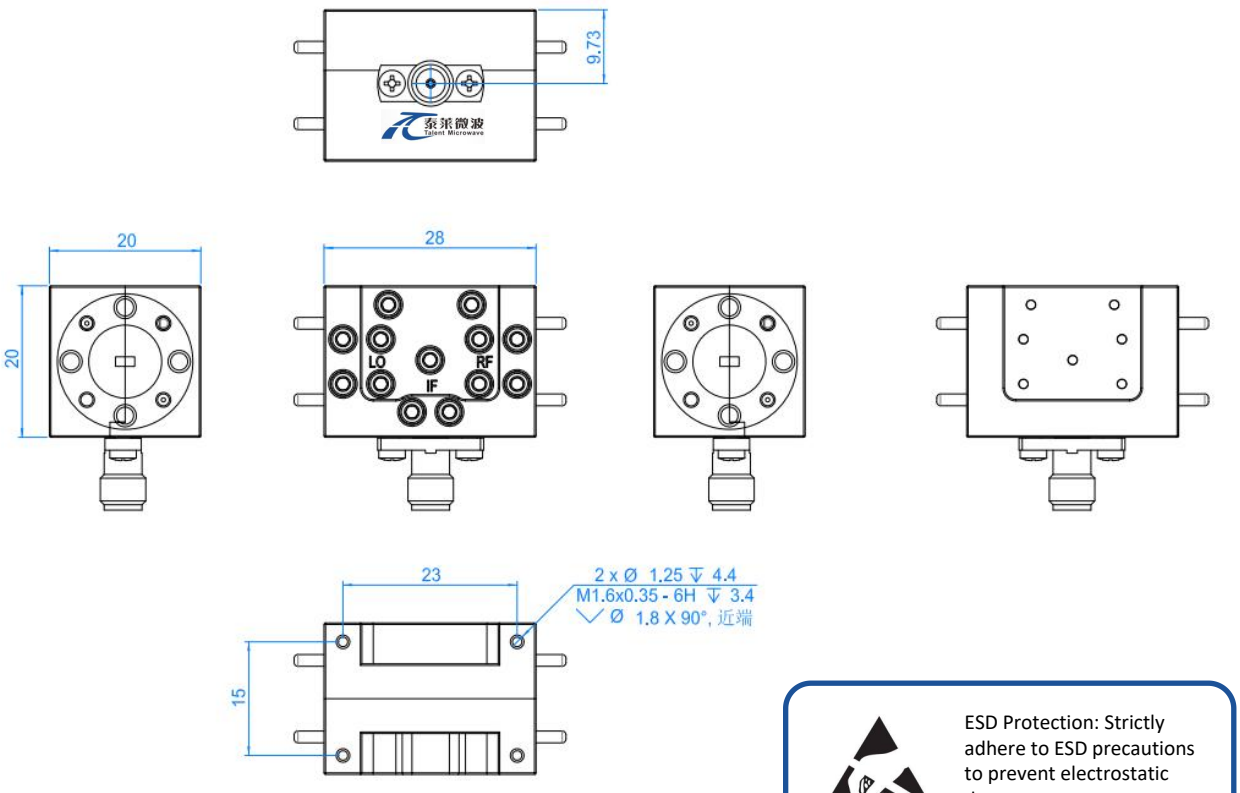
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+13 dBm
IF Input Power	+13 dBm
LO Input Power	+18 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

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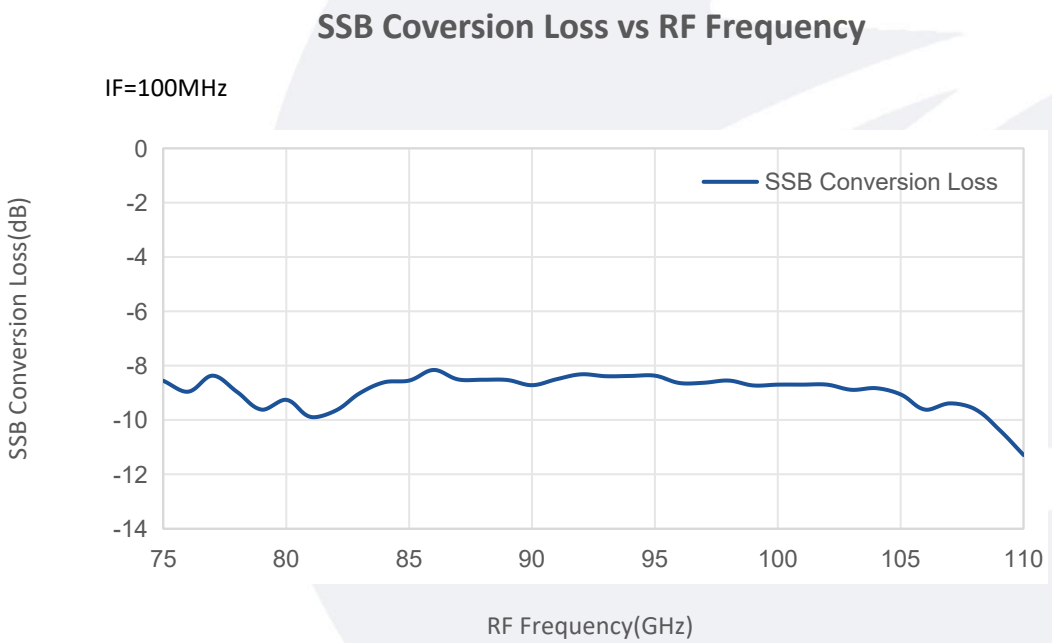
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-075110-30-10	W-Band Balance Mixer RF:75-110GHz,LO:75-110GHz,IF:DC-35GHz	Rev.1.1

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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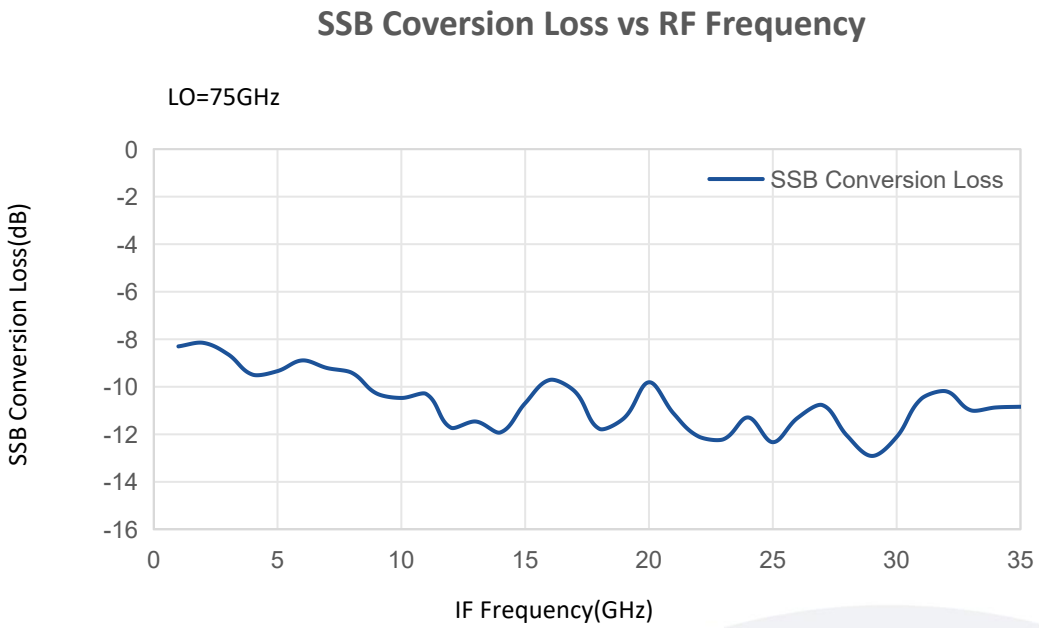

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