

V-Band Balance Mixer

RF:50-75 GHz/LO:50-75 GHz/IF:DC-25 GHz

Model: TLBM-050075-25-15

TLBM-050075-25-15 is a V-Band balance mixer. The mixer supports the full waveguide band operation for both LO and RF frequency from 50 to 75 GHz with an extremely broad IF output from DC to 25 GHz. The mixer offers a conversion loss of -10 dB typical@IF=100MHz and LO input power of 18 dBm typical.

Features:

- Low LO Power Requirement
- Balance mixer
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter		Min	Typ	Max	Units
RF Frequency		50		75	GHz
LO Frequency		50		75	GHz
IF Frequency		DC		25	GHz
LO-Input power		16	18	20	dBm
SSB Conversion Loss	@IF=100MHz		-10		dB
	@LO=50GHz		-11		dB

Mechanical Specifications:

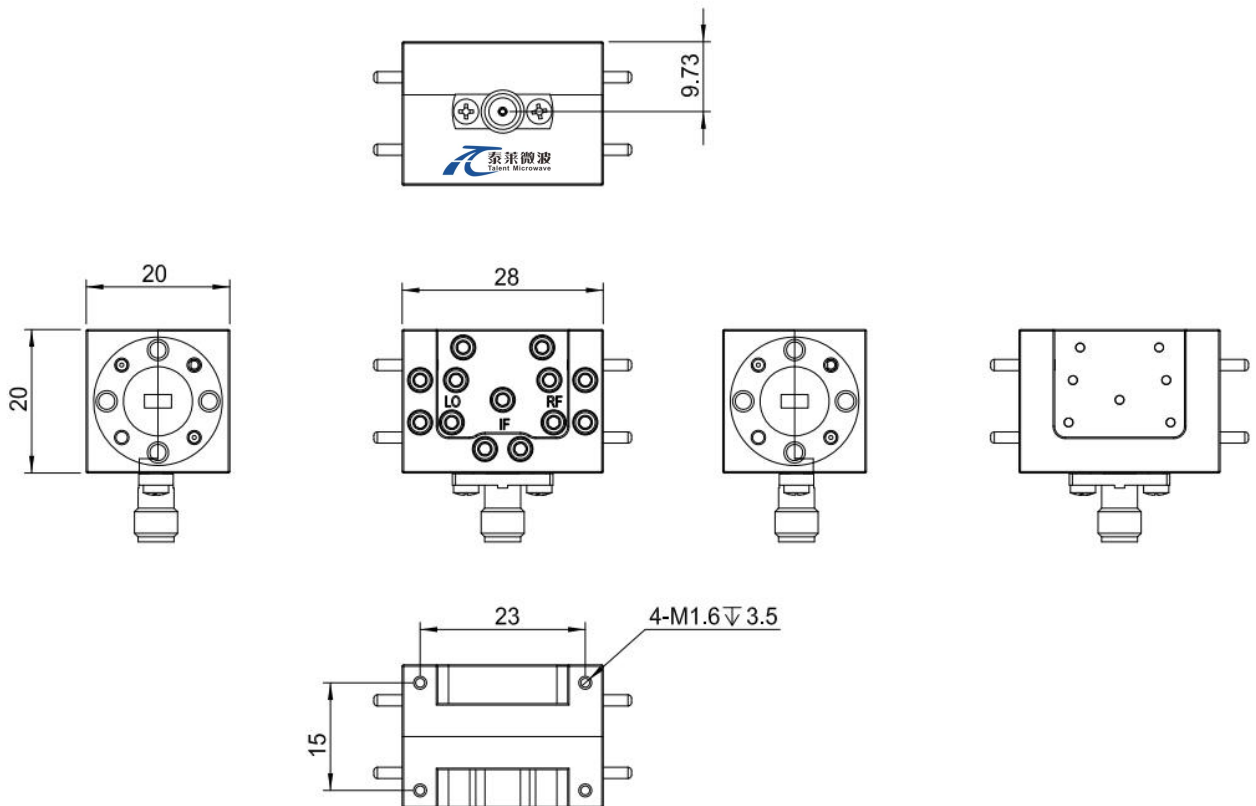
Parameter	Value	Units
RF Connector	WR-15/UG-385/U	
LO Connector	WR-15/UG-385/U	
IF Connector	2.92mm Female	
Size	28*20*20	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	15 dBm
IF Input Power	15 dBm
LO Input Power	21 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Environmental Conditions:

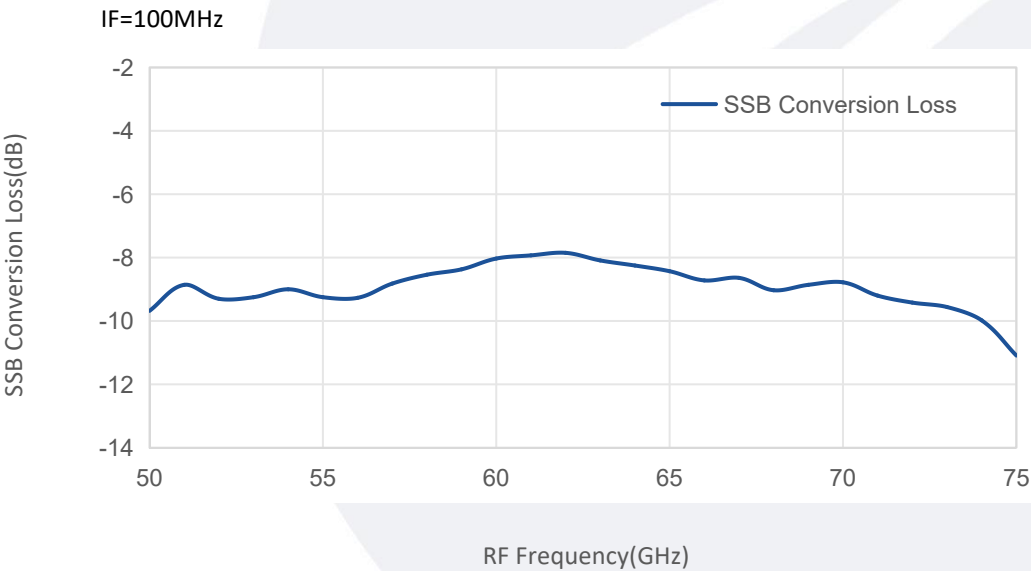
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-050075-25-15	V-Band Balance Mixer RF:50-75GHz,LO:50-75GHz,IF:DC-25GHz	Rev.1.1

Typical Performance Data:

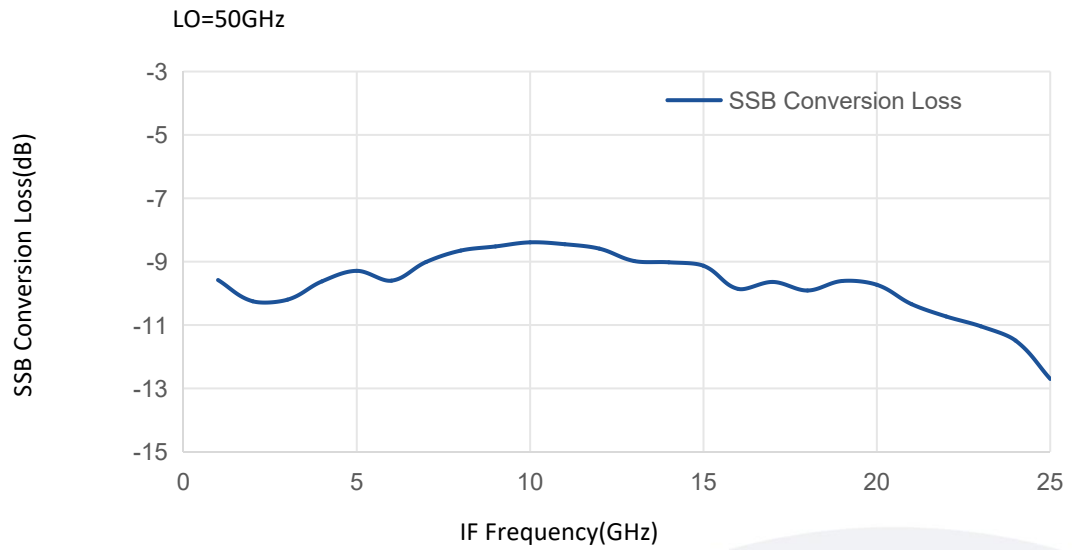
SSB Conversion Loss vs RF Frequency



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.

Typical Performance Data:

SSB Conversion Loss vs IF Frequency



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