

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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	10		44	GHz
LO Frequency	10		44	GHz
LO-Input power	11	15	20	dBm
IF Frequency	DC		14	GHz
Input P1dB		10		dBm
Conversion Loss@IF=100MHz		10		dB
RF to IF Isolation		28		dB
RF to LO Isolation		38		dB
LO to IF Isolation		28		dB

Mechanical Specifications:

Parameter	Value	Units
Connector 1	2.4mm Female	
Connector 3	2.4mm Female	
Connector 2	SMA Female	
Size	22.2*14.4*8	mm

Connector Functions:

Apply 1

Port	Function
Connector 3	LO
Connector 2	IF
Connector 1	RF

Apply 2

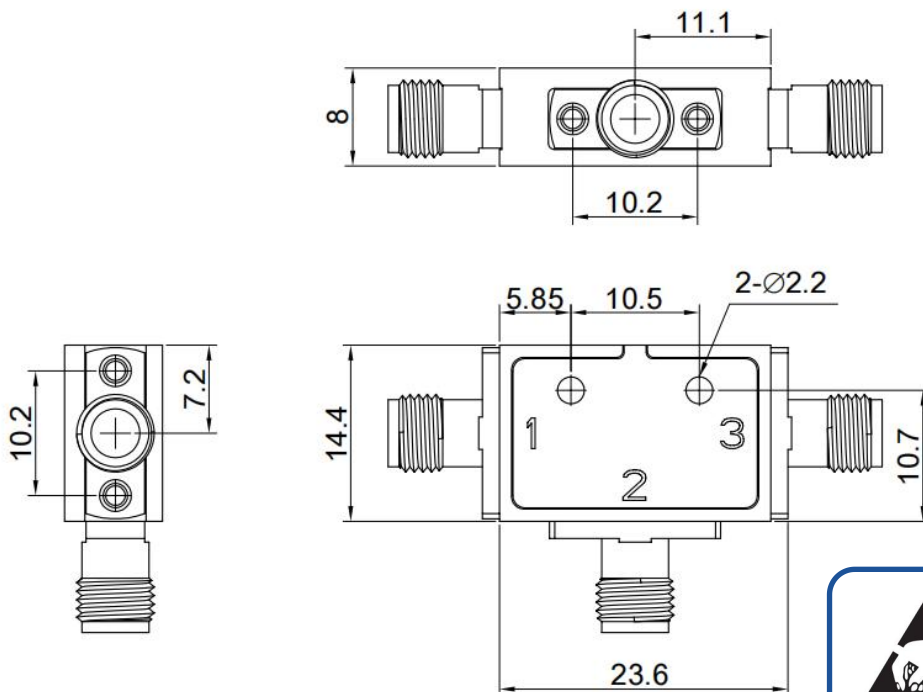
Port	Function
Connector 3	RF
Connector 2	IF
Connector 1	LO

Absolute Maximum Ratings:

Parameter	Value
LO Input Power	20 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.

Environmental Conditions:

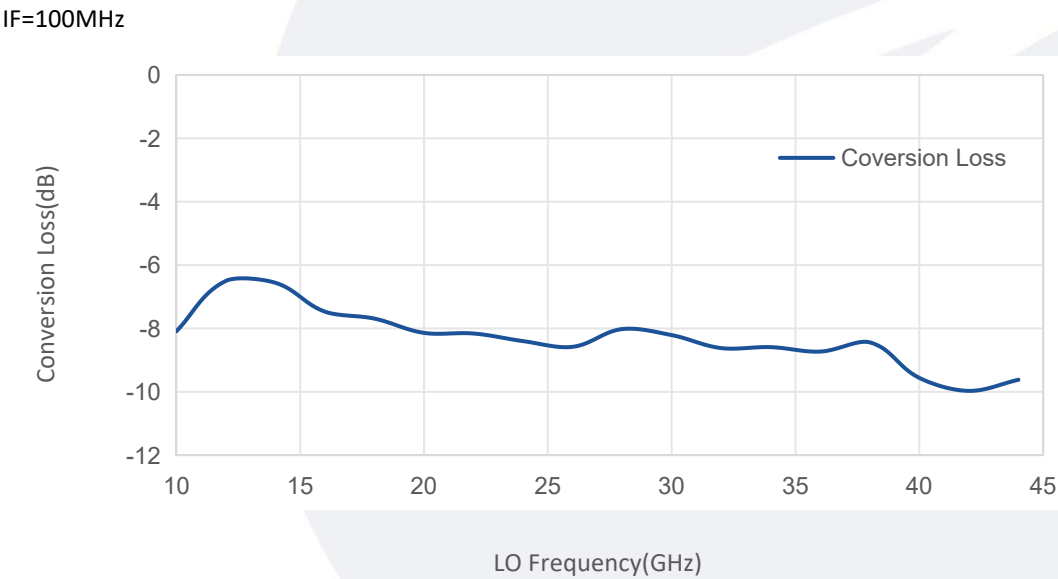
Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+70	°C
Non-operating Temperature	-55		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-1044-HS	Dual Balanced Mixer RF:10-44GHz,LO:10-44GHz,IF:DC-14GHz	Rev.1.2

Typical Performance Data(Apply 2):

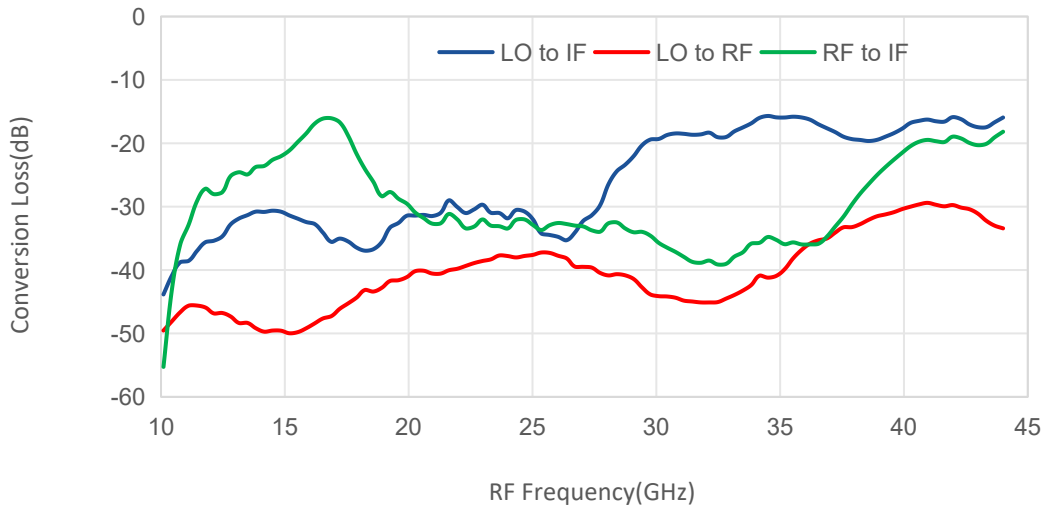
Conversion Loss vs RF Frequency



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.

Typical Performance Data:

Isolation 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.