

50-110GHz Double Balanced Mixer

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

Model: TLBM-050110-40-1.0

TLBM-050110-40-1.0 is a double balanced mixer. The mixer supports the full waveguide band operation for both 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 10 dB typical and LO input power of 15 dBm typical.

Features:

- Ultra broadband, high linearity
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	50		110	GHz
LO Frequency	50		110	GHz
IF Frequency	DC		40	GHz
LO-Input power		15		dBm
RF Input VSWR			3	:1
SSB Conversion Loss (IF=100MHz)		-10		dB

Mechanical Specifications:

Parameter	Value	Units
RF Connector	1.0mm Female	
LO Connector	1.0mm Female	
IF Connector	2.4mm Female	
Size	34x24.5x10.5	mm

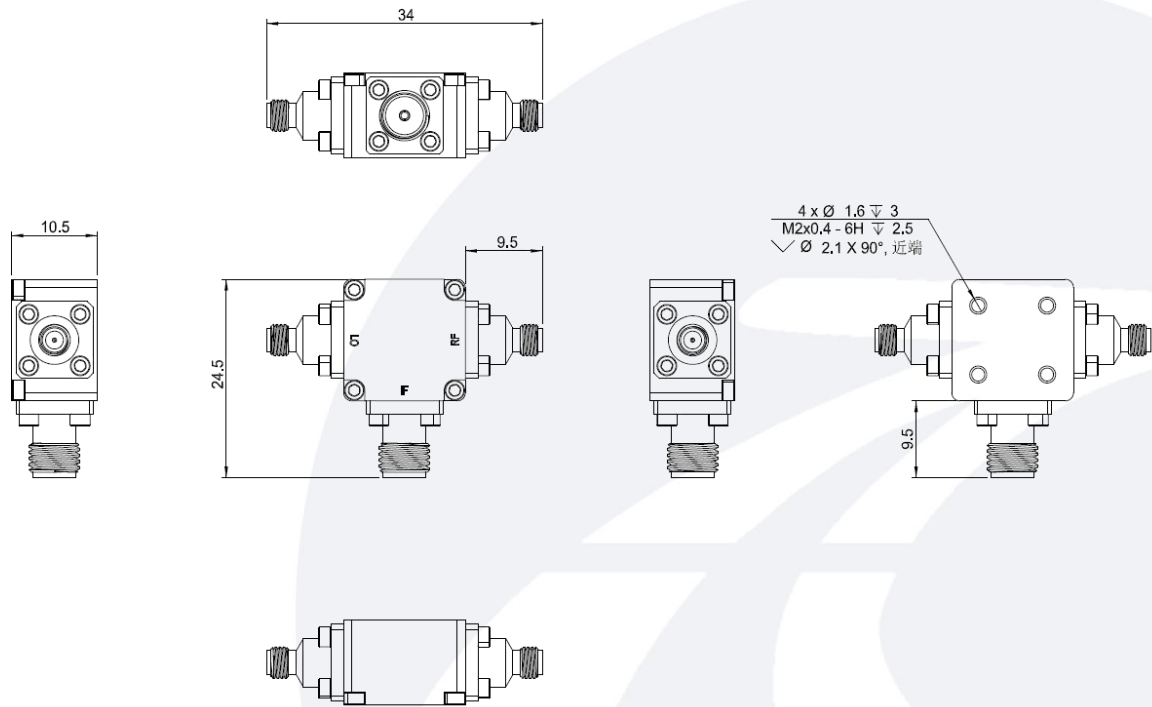
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	30 dBm
IF Input Power	30 dBm
LO Input Power	30 dBm
ESD sensitivity (Hbm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



Environmental Conditions:

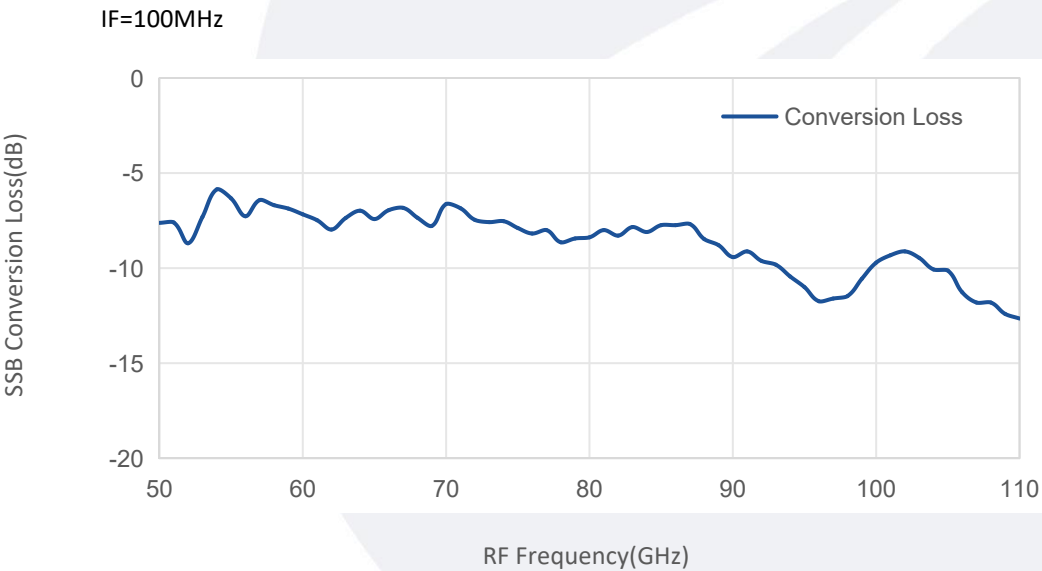
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-050110-40-1.0	50-110GHz Double Balanced Mixer RF:50-110GHz,LO:50-110GHz,IF:DC-40GHz	Rev.1.1

Typical Performance Data:

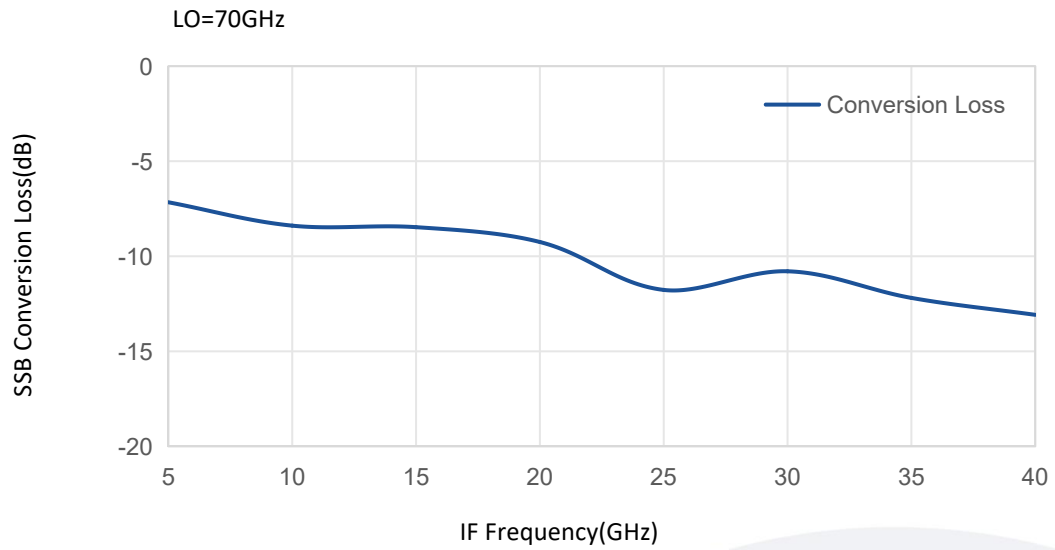
SSB Conversion Loss vs RF Frequency



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



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.