

Q-Band Dual Balance Mixer

RF:33-50 GHz/LO:33-50 GHz/IF:DC-17 GHz

Model: TLBM-033055-21-22

TLBM-033055-21-22 is a dual balance mixer. The mixer covers the LO and RF frequency from 33 to 50 GHz with an extremely broad IF output from DC to 17 GHz. The mixer offers a conversion loss of 7 dB typical and LO input power of 15 dBm typical. The Q-band,X4 multiplier of Talent model TMAM-033050-0415-22 can be used as the LO driver for this mixer.

Features:

- RF/LO coverage : 33-50 GHz
- IF operation : DC-17 GHz
- Conversion loss: 7dB Typ
- High LO to RF isolation
- Dual Balanced Mixer
- Suggested LO drive model: TMAM-033050-0415-22

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	33		50	GHz
LO Frequency	33		50	GHz
LO-Input power		15		dBm
IF Frequency	DC		17	GHz
RF Input P1dB		8		dBm
SSB Conversion Loss		7		dB

Mechanical Specifications:

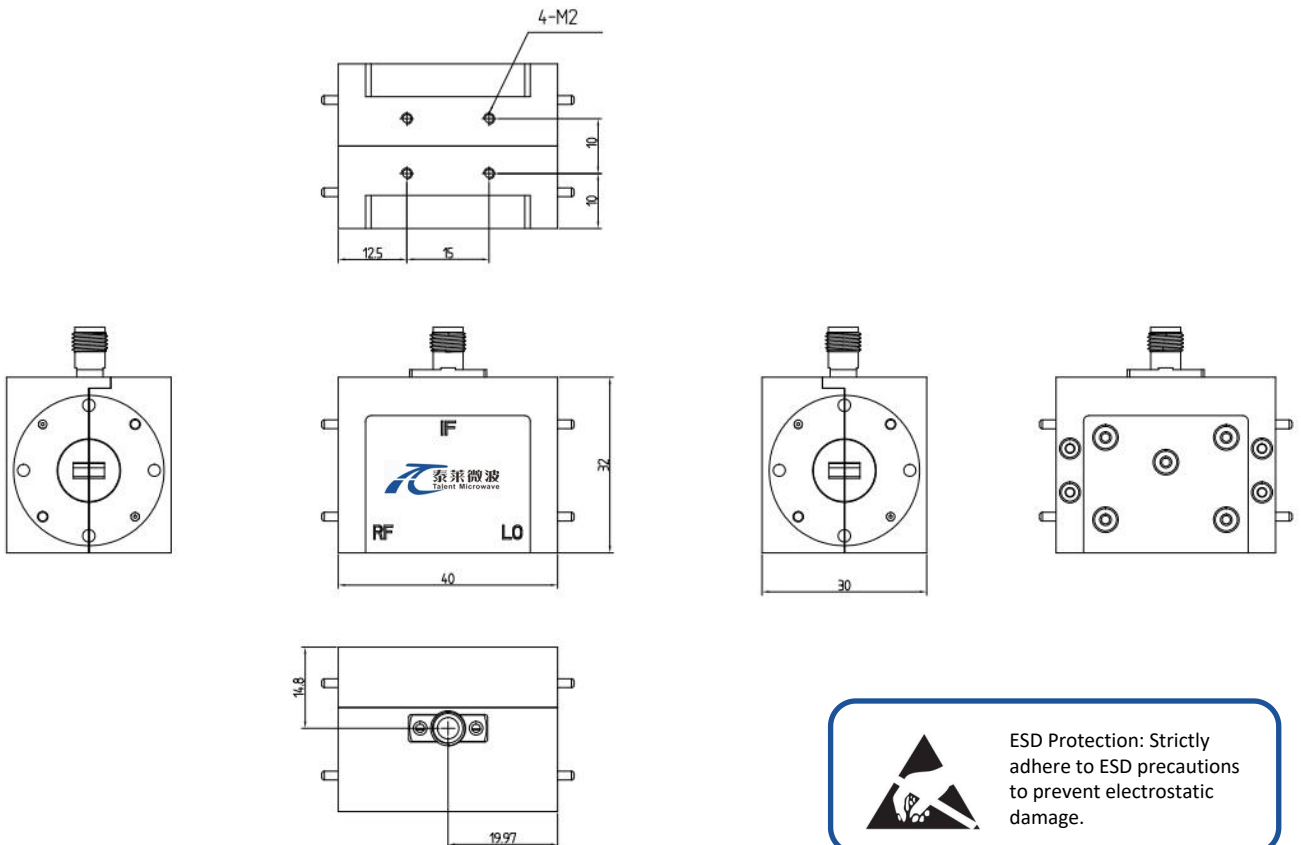
Parameter	Value	Units
RF Connector	WR-22/UG-383/U	
LO Connector	WR-22/UG-383/U	
IF Connector	SMA Female	
Size	40*32*30	mm

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	27 dBm
IF Input Power	27 dBm
LO Input Power	27 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:

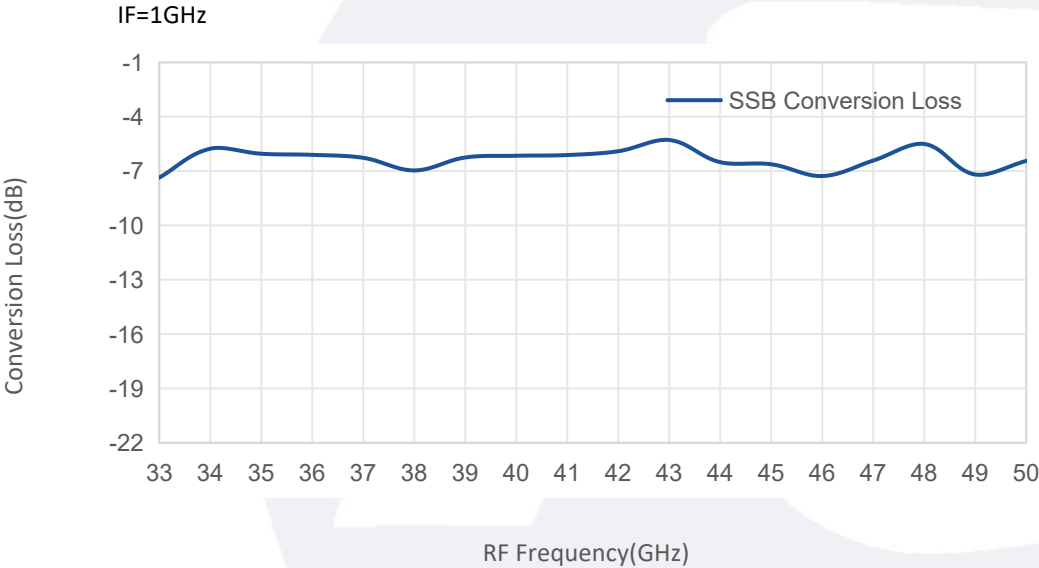
Parameter	Min	Typ	Max	Units
Operating Temperature	-25		+50	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-033055-21-22	Q-Band Dual Balanced Mixer RF:33-50GHz,LO:33-50GHz,IF:DC-17GHz	Rev.1.1

Typical Performance Data:

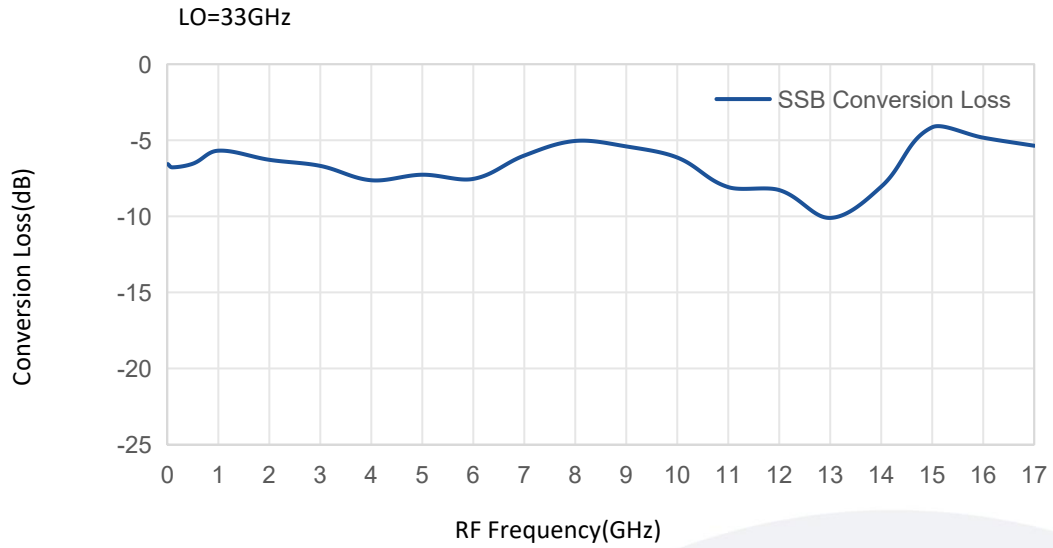
Coverison Loss vs RF Frequency



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:

Conversion Loss vs RF Frequency



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