

Dual Balance Mixer

RF:18-57GHz/LO:18-57GHz/IF:DC-21GHz

Model: TLBM-1857-LS

TLBM-1857-LS is a dual balance mixer. The mixer covers the LO and RF frequency from 18 to 57 GHz with an extremely broad IF output from DC to 21 GHz. The mixer offers a conversion loss of 9 dB typical and LO input power of 15 dBm typical.

Features:

- RF/LO coverage: 18-57GHz
- IF operation: DC-21GHz
- Conversion loss: 9dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	18		57	GHz
LO Frequency	18		57	GHz
LO-Input power	11	15	20	dBm
IF Frequency	DC		21	GHz
Input P1dB		8		dBm
Conversion Loss		9		dB
RF to IF Isolation		35		dB
RF to LO Isolation		40		dB
LO to IF Isolation		25		dB

Mechanical Specifications:

Parameter	Value	Units
Connector1	1.85mm Female	
Connector 2	SMA Female	
Connector 3	1.85mm Female	
Size	23.6*14.4*8	mm
Weight	12.8	g

Connector Functions:

Apply A:

Port	Function
Connector 1	RF
Connector 2	IF
Connector 3	LO

Apply B:

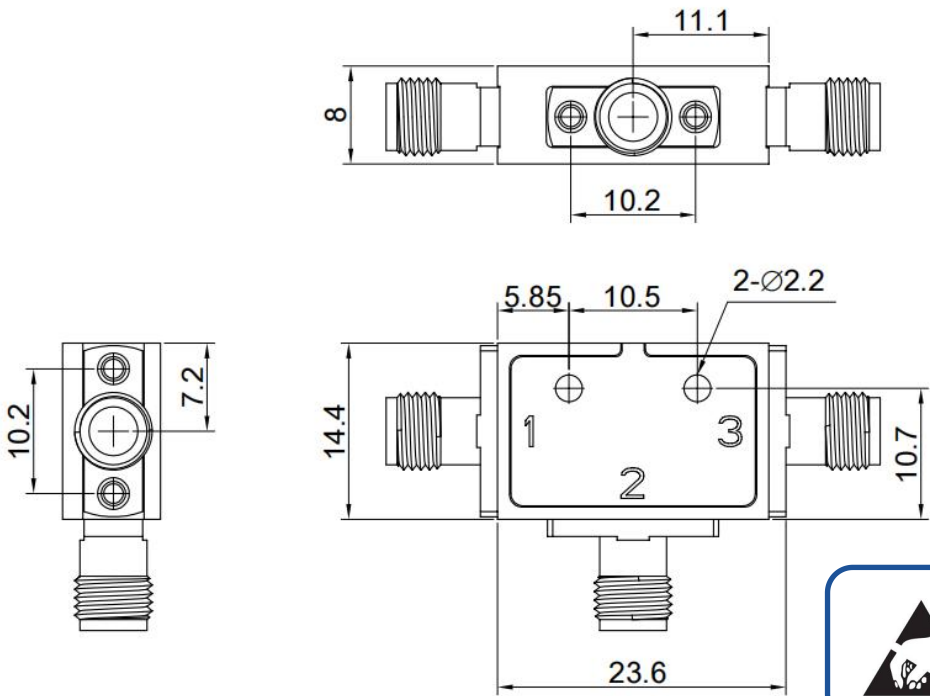
Port	Function
Connector 1	LO
Connector 2	IF
Connector 3	RF

Absolute Maximum Ratings:

Parameter	Value
RF/LO Input Power	21 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			

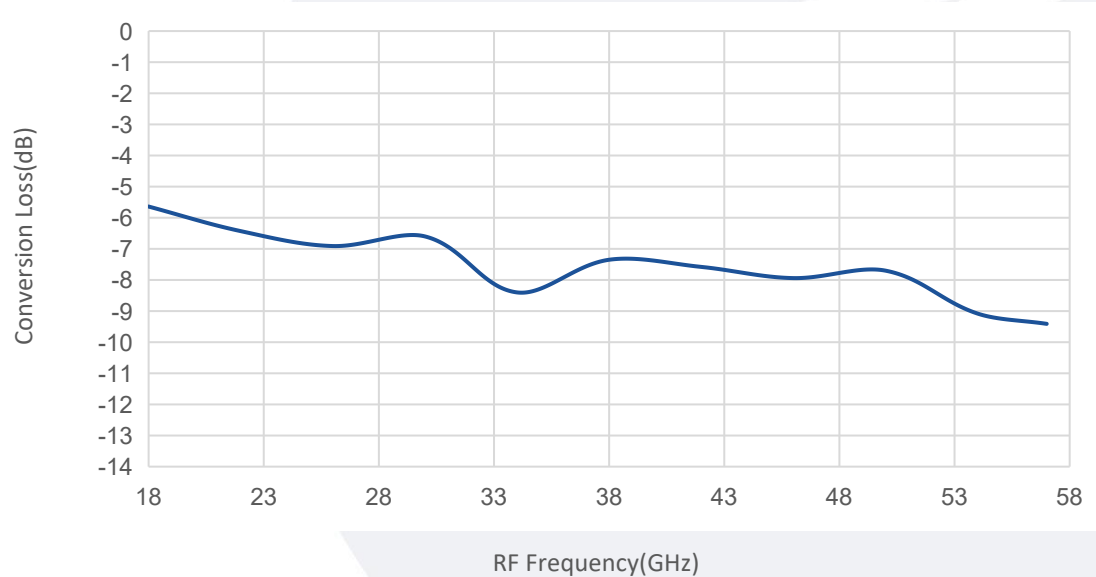
Ordering Information:

Base Number	Description	Revision
TLBM-1857-LS	Dual Balanced Mixer RF:18-57GHz,LO:18-57GHz,IF:DC-21GHz	Rev.1.1

Typical Performance Data:

Coverison Loss@IF=1GHz vs RF Frequency

By apply B

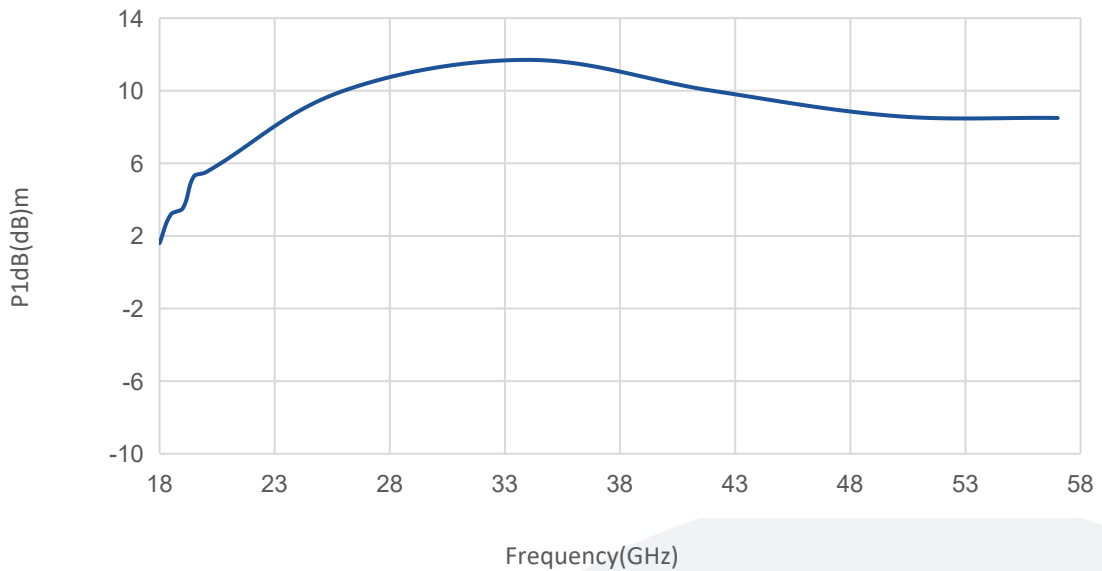


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

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Input P1dB vs Frequency



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LO to IF Isolation vs Frequency

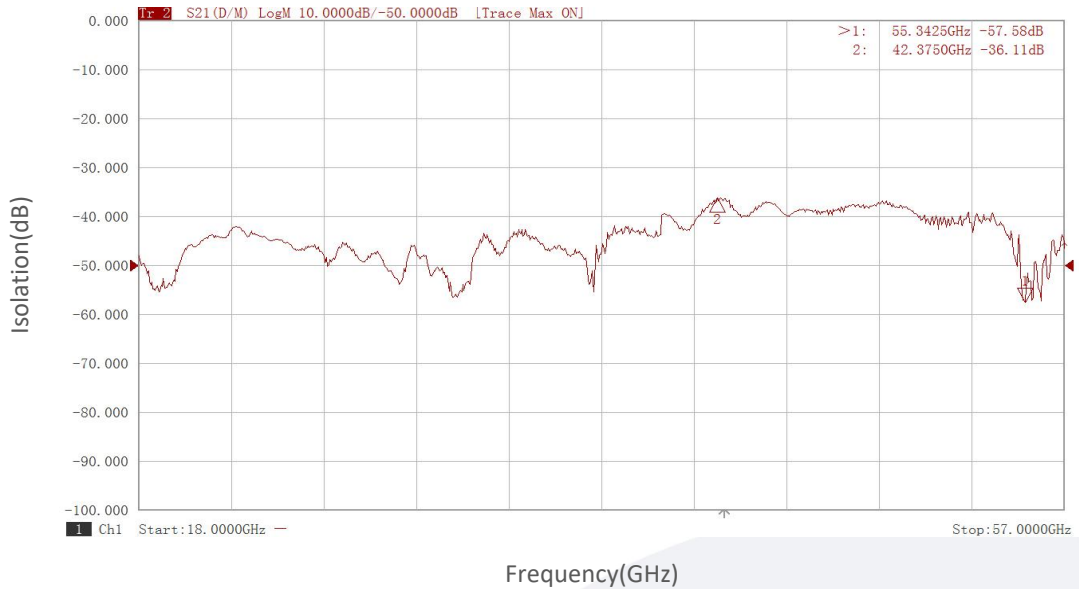


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

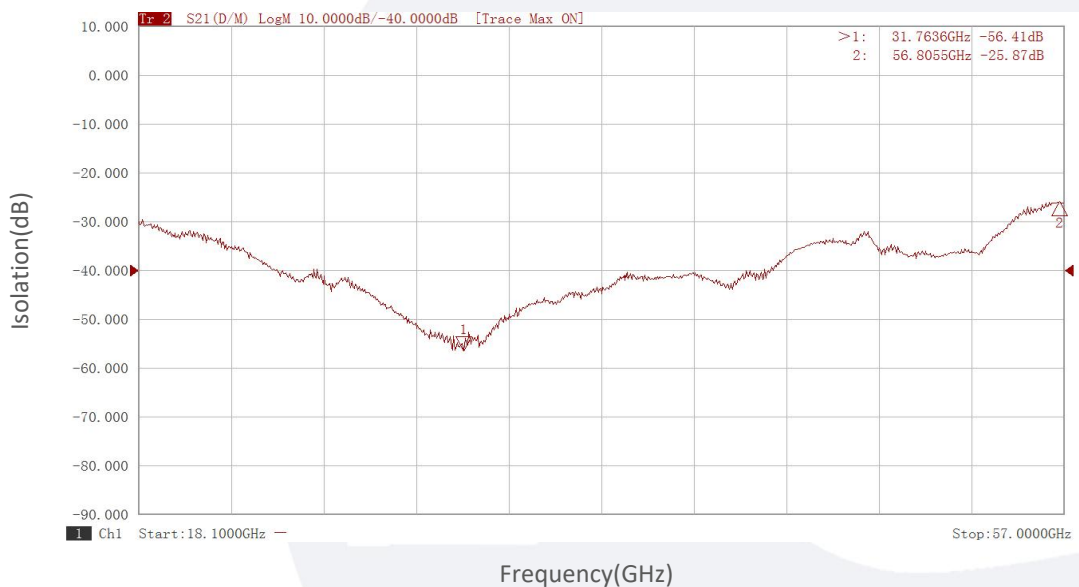
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LO to RF Isolation vs Frequency



By apply B

RF to IF Isolation vs 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.