

Dual Balance Mixer

RF:18-40 GHz/LO:18-40 GHz/IF:DC-18 GHz

Model: TLBM-1840-LS-E

TLBM-1840-LS-E is a dual balance mixer. The mixer covers the LO and RF frequency from 18 to 40 GHz with an extremely broad IF output from DC to 18 GHz. The mixer offers a conversion loss of 13 dB typical and LO input power of 15 dBm typical.

Features:

- RF/LO coverage : 18-40GHz
- IF operation : DC-18GHz
- Conversion loss: 13dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	18		40	GHz
LO Frequency	18		40	GHz
LO-Input power	13	15	23	dBm
IF Frequency	0		18	GHz
Input P1dB		8		dBm
Conversion Loss		13		dB
RF to IF Isolation		25		dB
RF to LO Isolation		25		dB
LO to IF Isolation		25		dB

Mechanical Specifications:

Parameter	Value	Units
Connector 1	2.92mm Female	
Connector 3	2.92mm Female	
Connector 2	SMA Female	
Size	23.6*14.4*8	mm

Connector Functions:

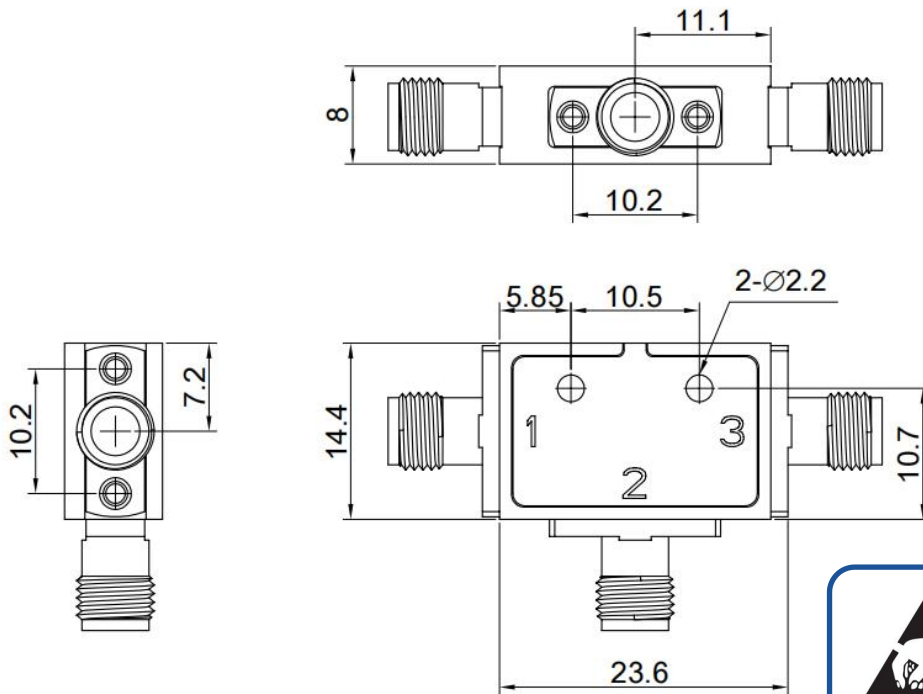
Port	Function
Connector 1	RF
Connector 2	IF
Connector 3	LO

Absolute Maximum Ratings:

Parameter	Value
LO Input Power	23 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			

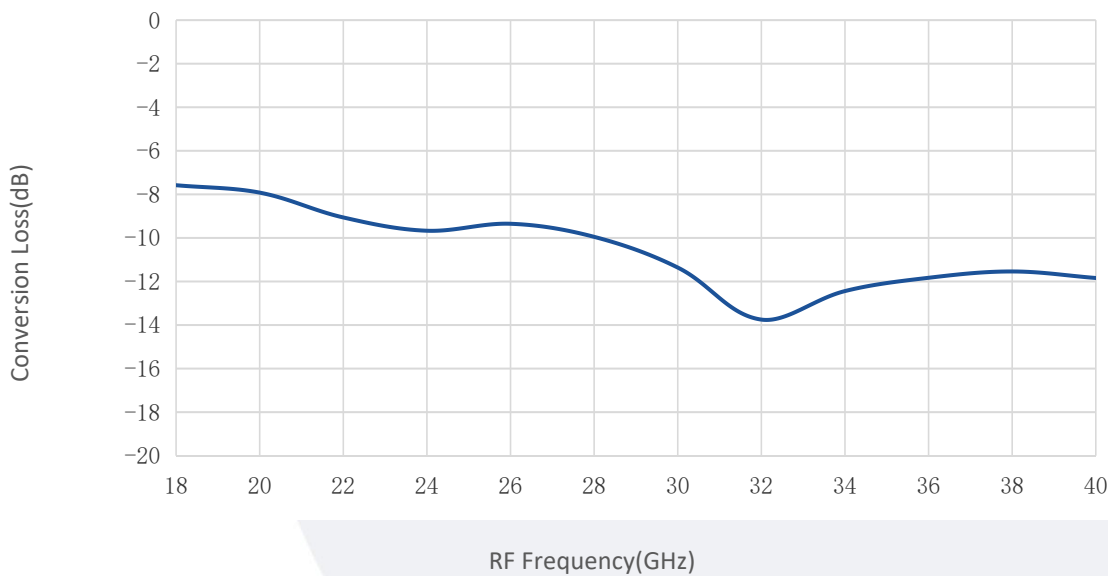
Ordering Information:

Base Number	Description	Revision
TLBM-1840-LS-E	Dual Balanced Mixer RF:18-40GHz,LO:18-40GHz,IF:DC-18GHz	Rev.1.1

Typical Performance Data:

Coverision Loss vs RF Frequency

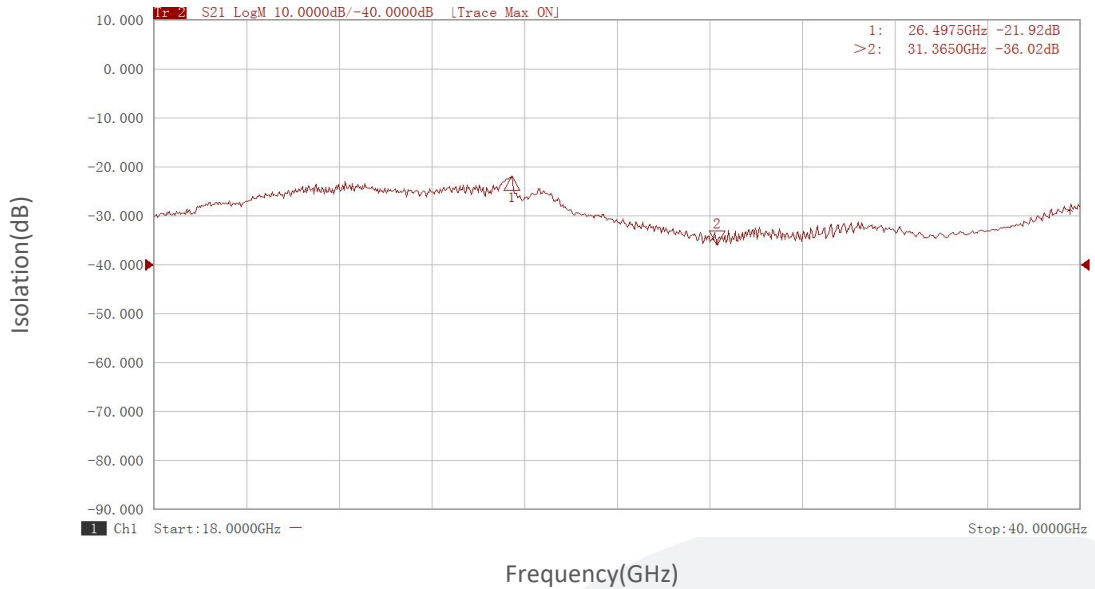
IF=0.1GHz,-10dBm; LO=15dBm



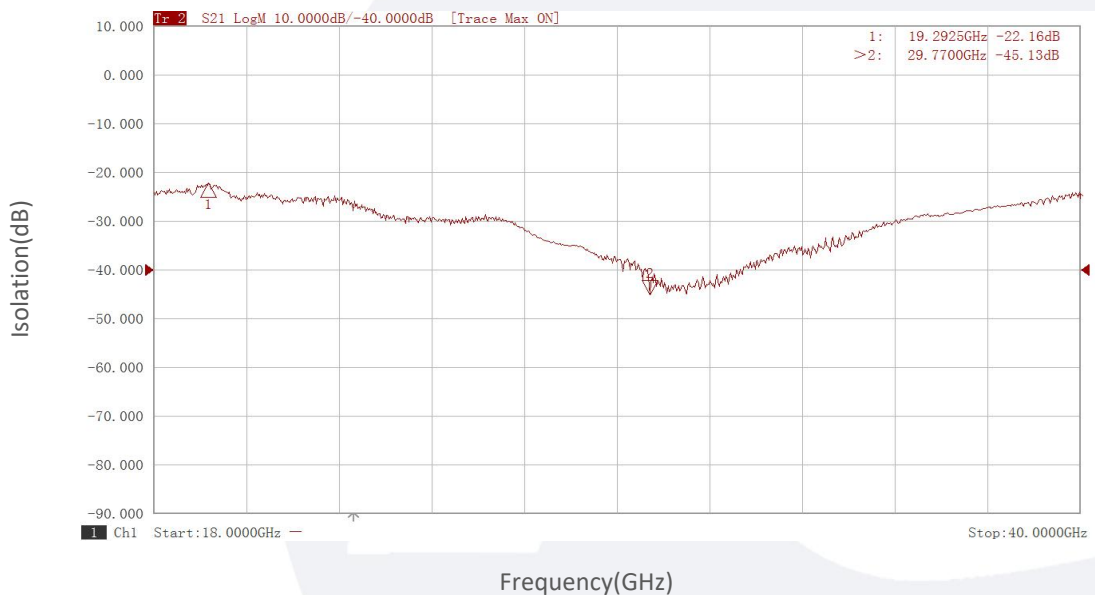
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IF Isolation vs Frequency



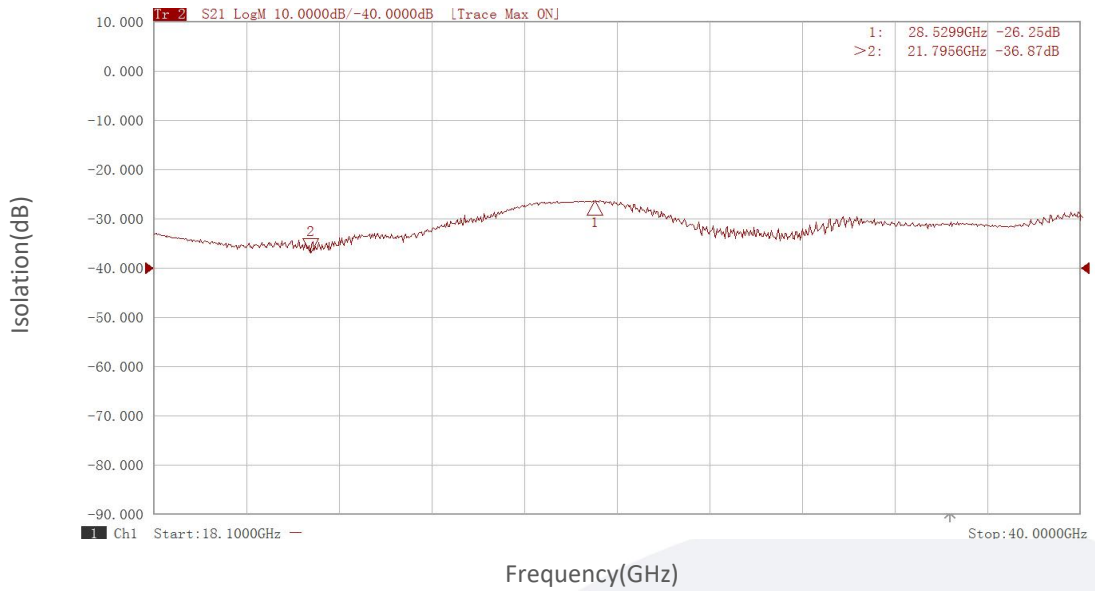
LO to RF Isolation vs Frequency



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Typical Performance Data:

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.