

Dual Balance Mixer

RF:18-50 GHz/LO:18-50 GHz/IF:DC-20 GHz

Model: TLBM-1850-LS

TLBM-1850-LS is a dual balance mixer. The mixer covers the RF frequency from 18 to 50 GHz ,LO frequency from 18 to 50 GHz with an extremely broad IF output from DC to 20 GHz. The mixer offers a conversion loss of 11 dB typical and LO input power of 15 dBm typical.

Features:

- RF coverage: 18-50GHz
- LO coverage: 18-50GHz
- IF operation: DC-20GHz
- Conversion loss: 11dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	18		50	GHz
LO Frequency	18		50	GHz
LO-Input power	13	15	17	dBm
IF Frequency	DC		20	GHz
Input P1dB		9		dBm
Conversion Loss		13		dB
RF to IF Isolation		25		dB
RF to LO Isolation		30		dB
LO to IF Isolation		30		dB

Mechanical Specifications:

Parameter	Value	Units
Connector1	2.4mm Female	
Connector 2	2.4mm Female	
Connector 3	SMA Female	
Size	23.6*14.4*8	mm

Absolute Maximum Ratings:

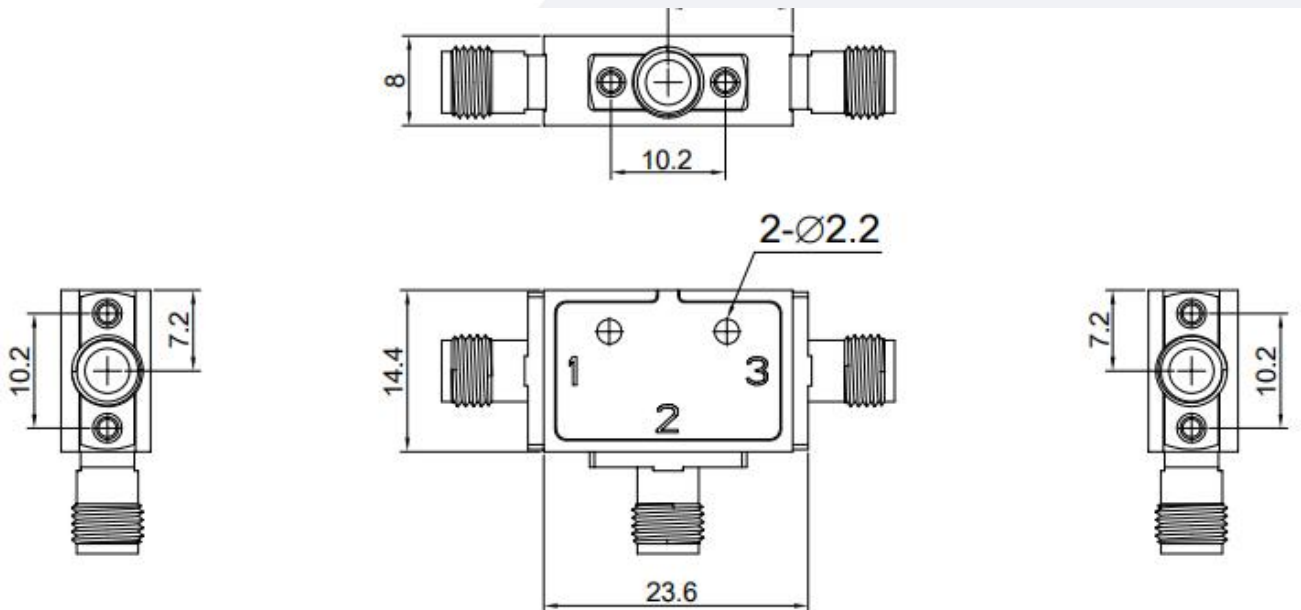
Parameter	Value
RF/LO Input Power	23 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Port Functions

Port	Function
Port1	RF/LO
Port2	LO/RF
Port3	IF

Outline Drawing:

Unit:mm



Environmental Conditions:

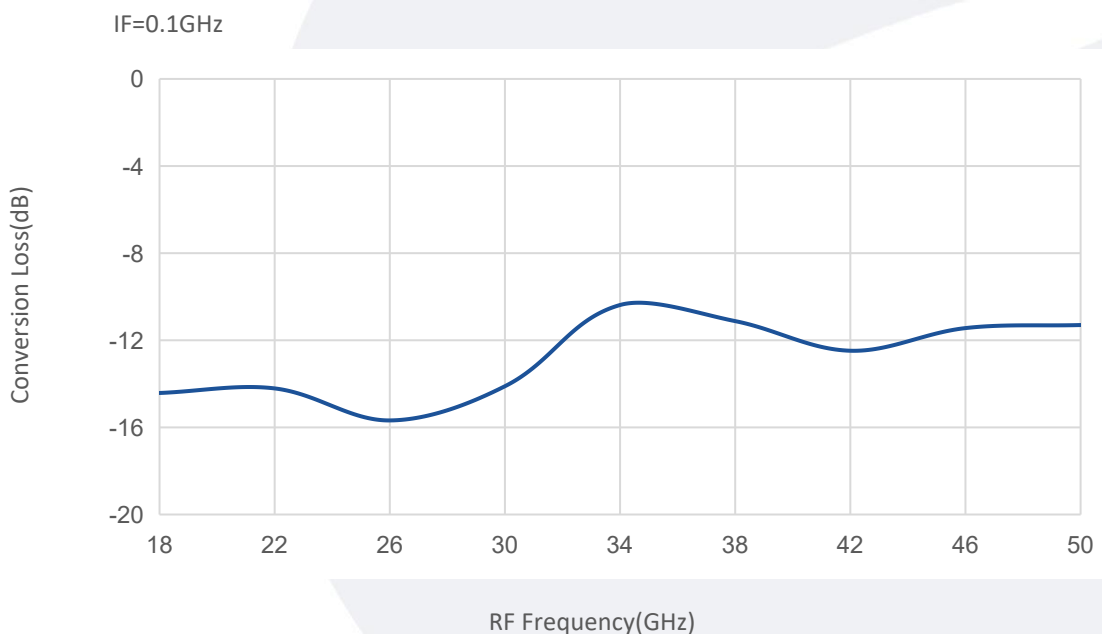
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-1850-LS	Dual Balanced Mixer RF:18-50GHz,LO:18-50GHz,IF:DC-20GHz	Rev.1.0

Typical Performance Data:

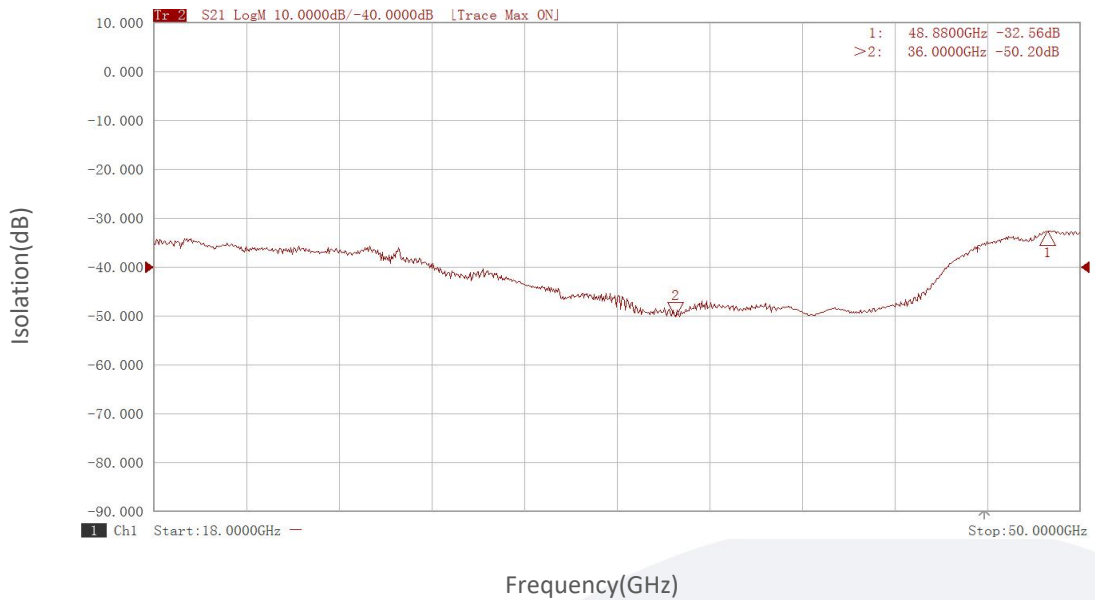
Conversion Loss vs RF Frequency



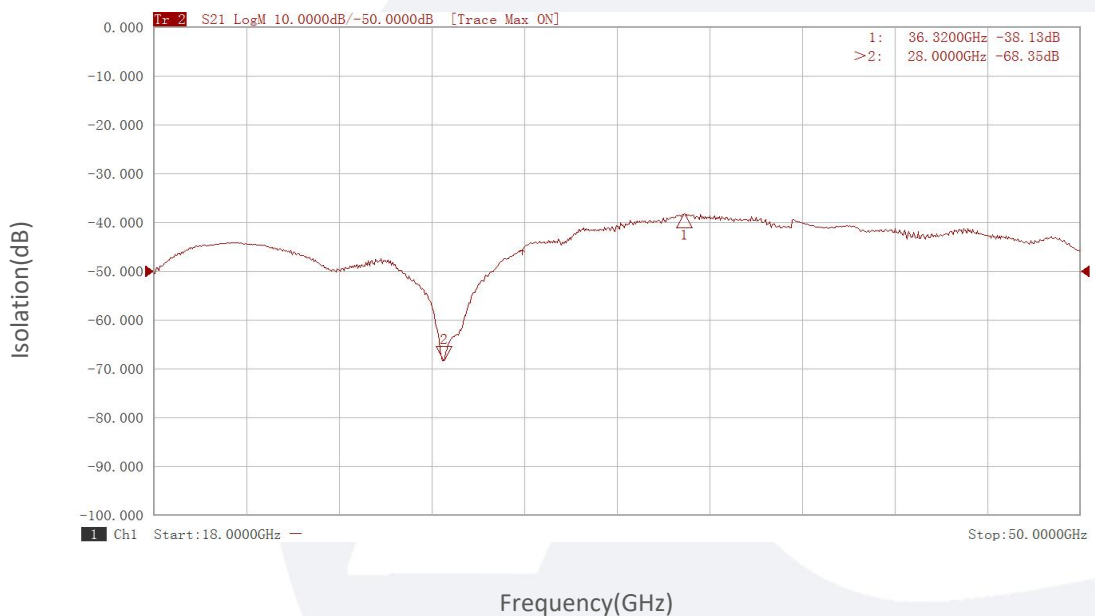
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IF Isolation vs Frequency



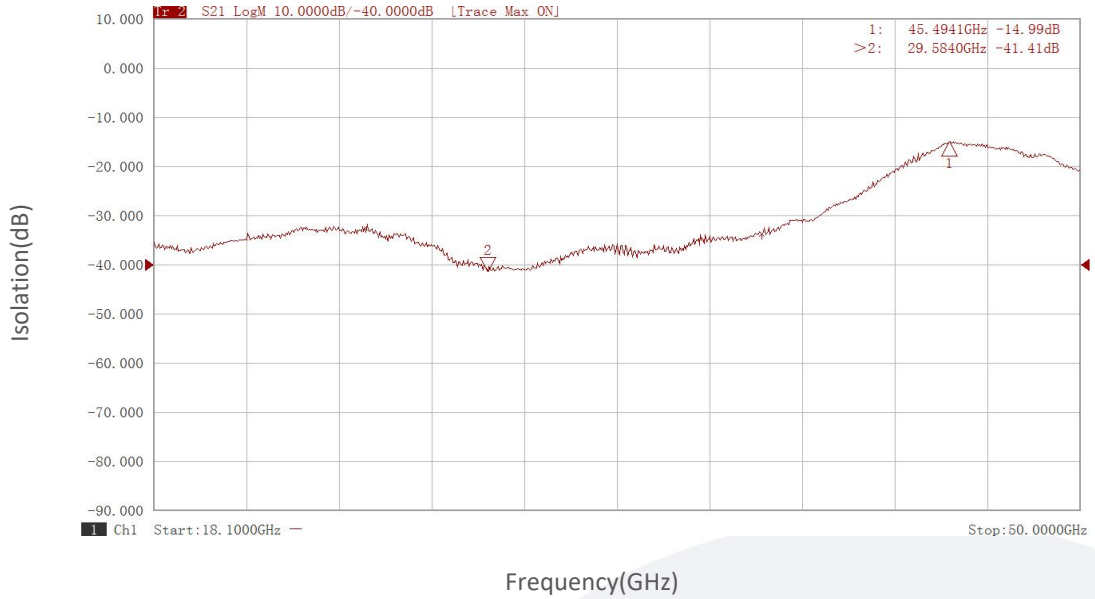
LO to RF Isolation vs Frequency



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:

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.