

Dual Balance Mixer

RF:0.5-2.5 GHz/LO:0.5-2.5 GHz/IF:DC-1 GHz

Model: TLBM-0.5G2.5G-S

TLBM-0.5G2.5G-S is a dual balance mixer. The mixer covers the RF frequency from 0.5 to 2.5 GHz ,LO frequency from 0.5 to 2.5 GHz with an extremely broad IF output from DC to 1 GHz. The mixer offers a conversion loss of 13 dB typical and LO input power of 17 dBm typical.

Features:

- RF coverage : 0.5-2.5GHz
- LO coverage : 0.5-2.5GHz
- IF operation : DC-1GHz
- 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	0.5		2.5	GHz
LO Frequency	0.5		2.5	GHz
LO-Input power		17		dBm
IF Frequency	DC		1	GHz
Input P1dB		12		dBm
Conversion Loss		11		dB
RF to IF Isolation		10		dB
RF to LO Isolation		35		dB
LO to IF Isolation		35		dB

Mechanical Specifications:

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

Absolute Maximum Ratings:

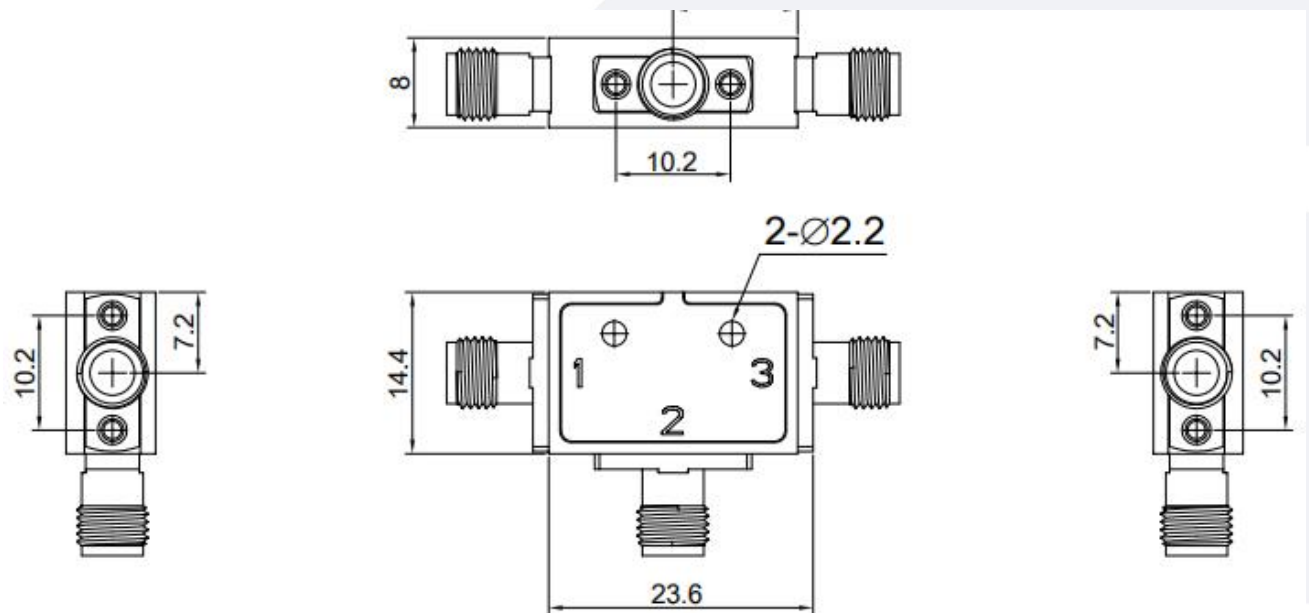
Parameter	Value
RF/LO Input Power	TBD
ESD sensitivity (HBm)	Class 0, passed 150V

Port Functions

Port	Function
Port1	RF
Port2	IF
Port3	LO

Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

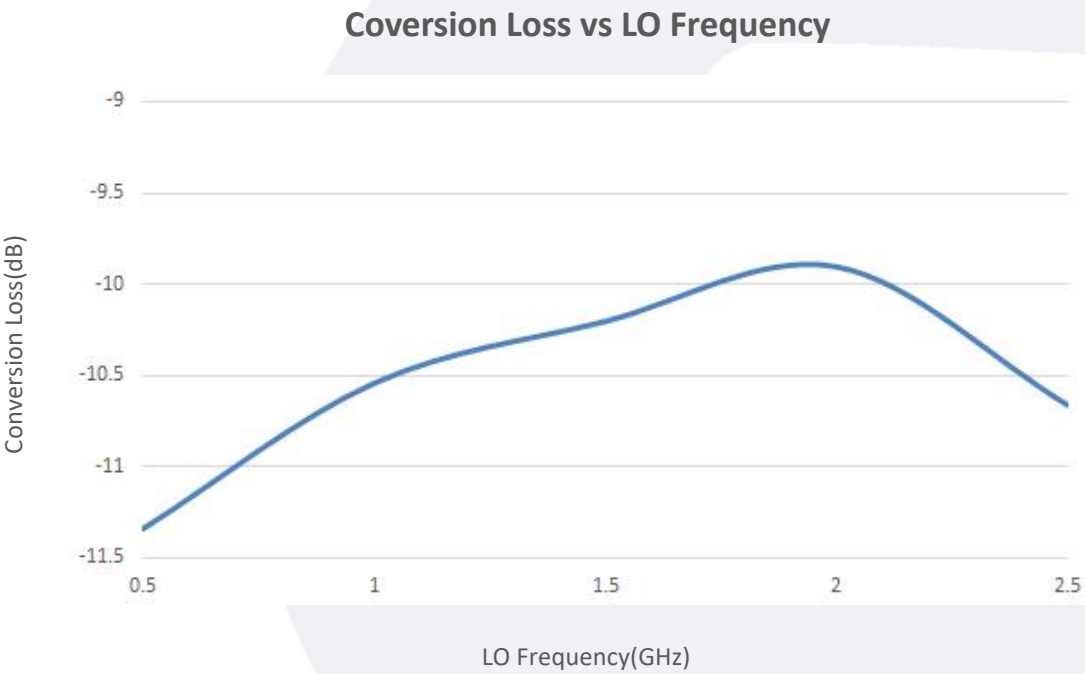
Environmental Conditions:

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-0.5G2.5G-S	Dual Balanced Mixer RF:0.5-2.5GHz,LO:0.5-2.5GHz,IF:DC-1GHz	Rev.1.0

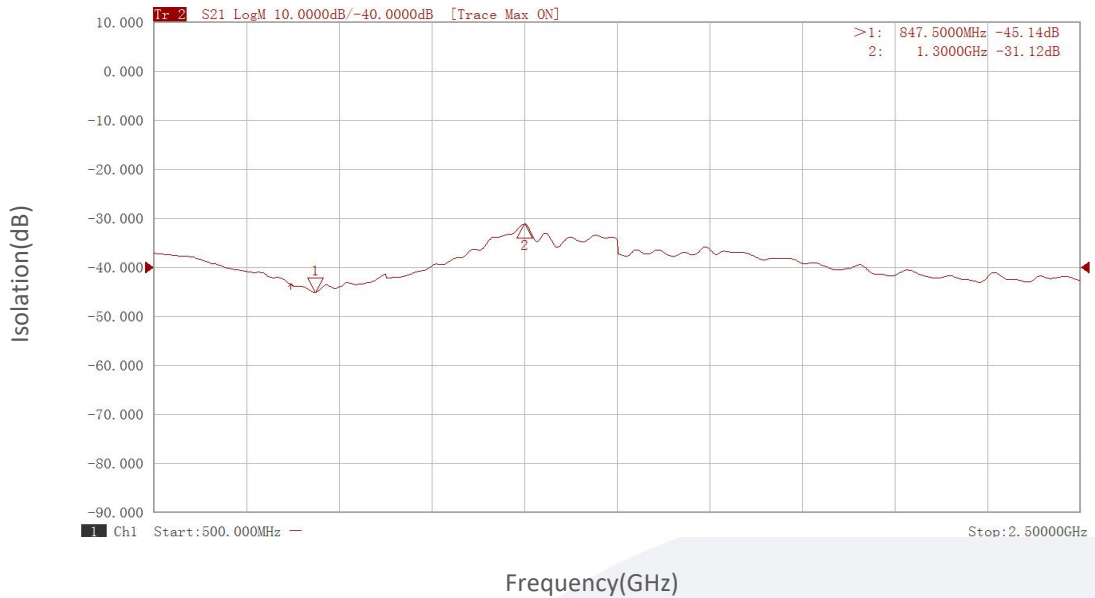
Typical Performance Data:



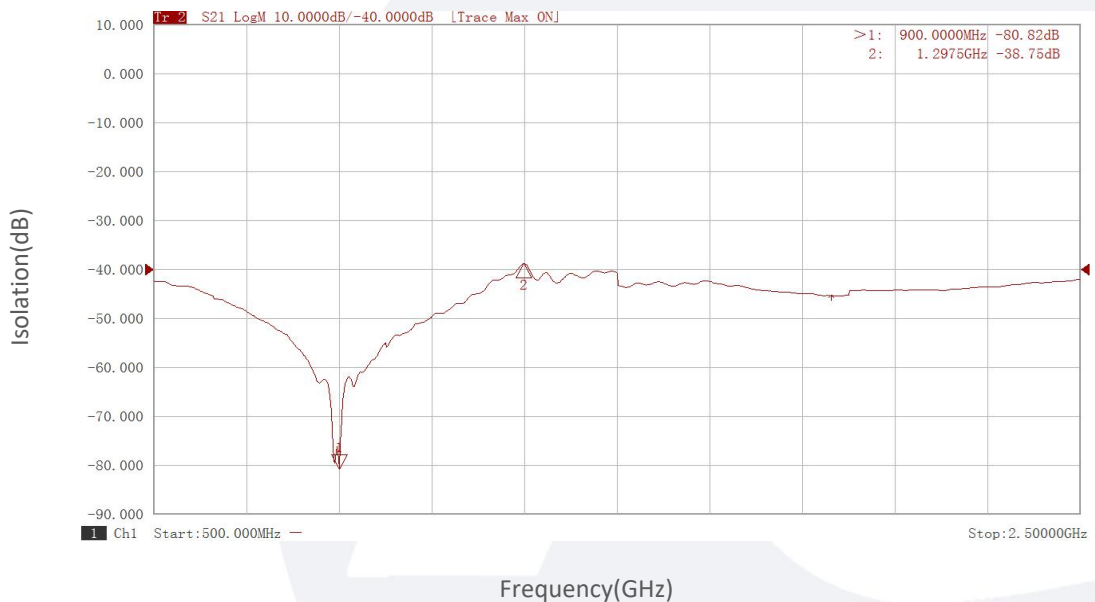
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IF Isolation vs Frequency



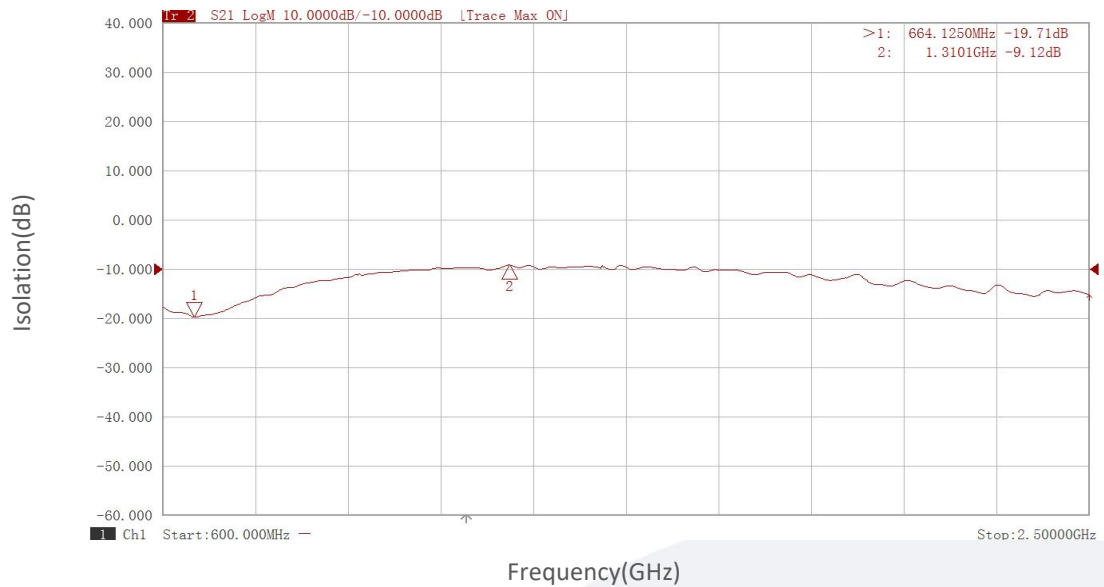
LO to RF Isolation vs Frequency



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Typical Performance Data:

RF to IF Isolation vs Frequency



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