

Dual Balance Mixer

RF:2-18GHz/LO:2-18GHz/IF:DC-3GHz

Model: TLBM-0218-S

TLBM-0218-S is a dual balance mixer. The mixer covers the LO and RF frequency from 2 to 18 GHz with an extremely broad IF output from DC to 3 GHz. The mixer offers a conversion loss of 13 dB typical and LO input power of 15 dBm typical.

Features:

- RF/LO coverage: 2-18GHz
- IF operation: DC-3GHz
- 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	2		18	GHz
LO Frequency	2		18	GHz
LO-Input power		15		dBm
IF Frequency	DC		3	GHz
Conversion Loss		13		dB
Input 1 dB Gain Compression Point		TBD		dBm
LO to IF Isolation		25		dB
LO to RF Isolation		25		dB
RF to IF Isolation		20		dB
Impedance		50		Ohms

Mechanical Specifications:

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

Connector Functions:

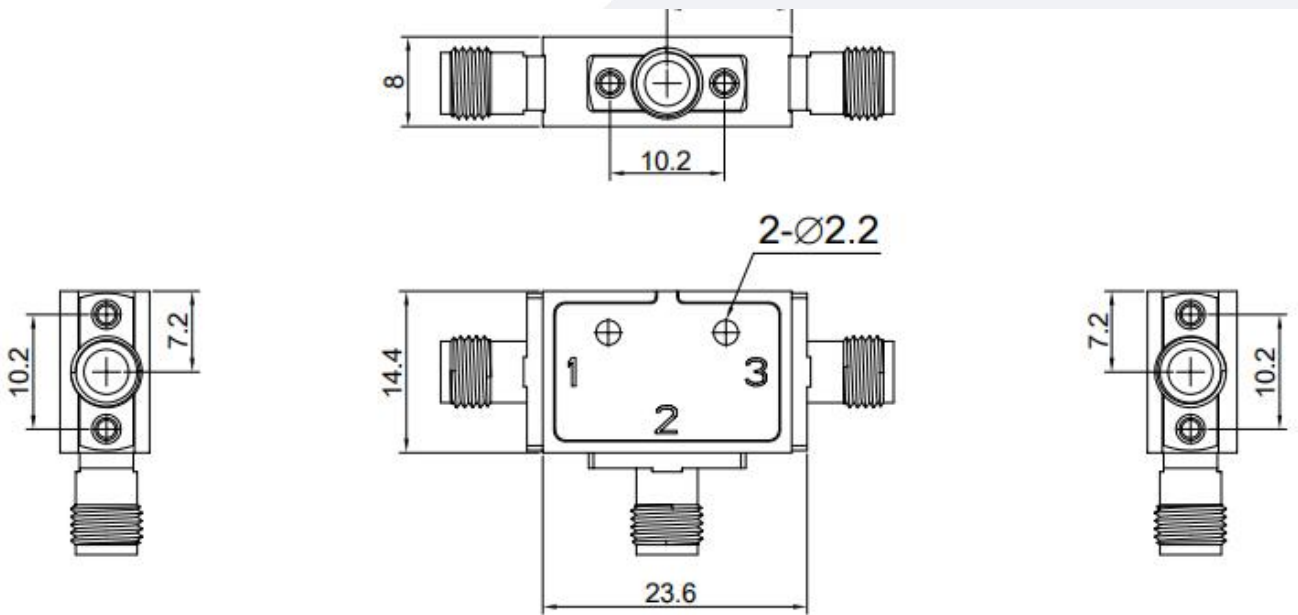
Port	Function
Connector 1	LO
Connector 2	IF
Connector 3	RF

Absolute Maximum Ratings:

Parameter	Value
RF/LO Input Power	TBD
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:

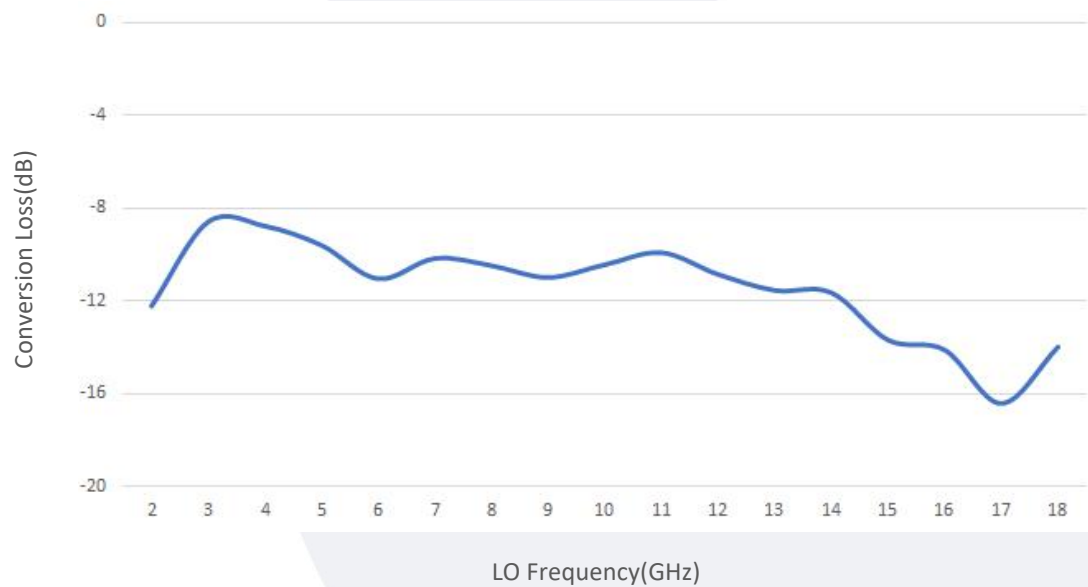
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-0218-S	Dual Balanced Mixer RF:2-18GHz,LO:2-18GHz,IF:DC-3GHz	Rev.1.0

Typical Performance Data:

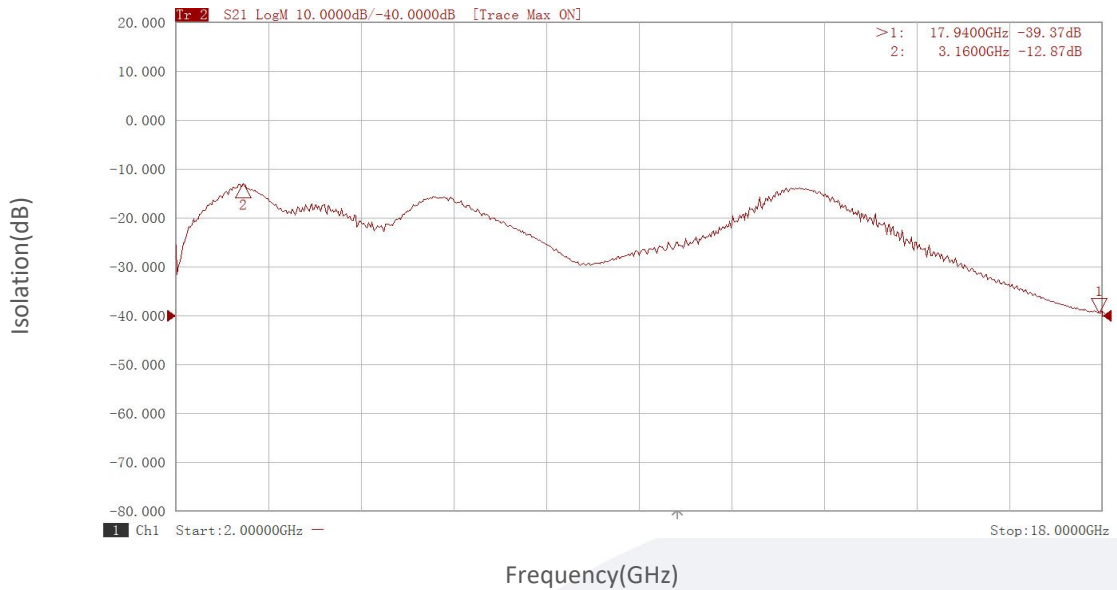
Conversion Loss vs LO Frequency



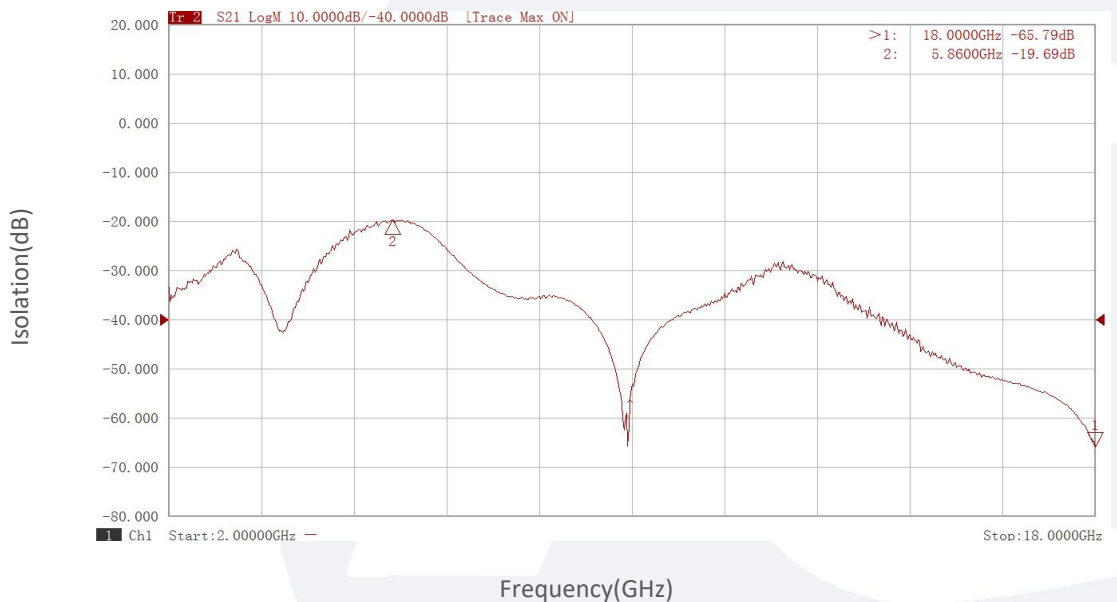
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IF Isolation vs Frequency



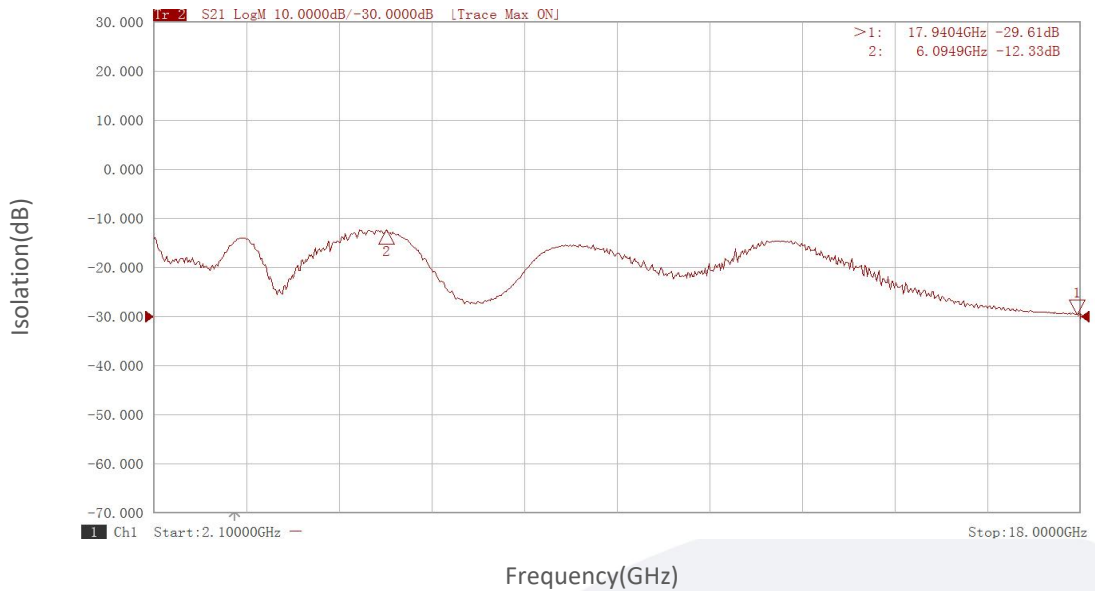
LO to RF Isolation vs Frequency



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.