

Dual Balance Mixer

RF:2-22 GHz/LO:2-22 GHz/IF:DC-3.5 GHz

Model: TLBM-0222-S

TLBM-0222-S is a dual balance mixer. The mixer covers the RF frequency from 2 to 22 GHz ,LO frequency from 2 to 22 GHz with an extremely broad IF output from DC to 3.5 GHz. The mixer offers a conversion loss of 10 dB typical and LO input power of 9 dBm typical.

Features:

- RF coverage : 2-22GHz
- LO coverage : 2-22GHz
- IF operation : DC-3.5GHz
- Conversion loss: 10dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	2		22	GHz
LO Frequency	2		22	GHz
LO-Input power	6	9	27	dBm
IF Frequency	DC		3.5	GHz
IF Input 1dB Gain Compression Point		3		dBm
Conversion Loss		10	15	dB
RF to IF Isolation		25		dB
RF to LO Isolation		45		dB
LO to IF Isolation		20		dB

Mechanical Specifications:

Parameter	Value	Units
Connector1	SMA Female	
Connector 2	SMA Female	
Connector 3	SMA Female	
Size	29*19*11	mm

Absolute Maximum Ratings:

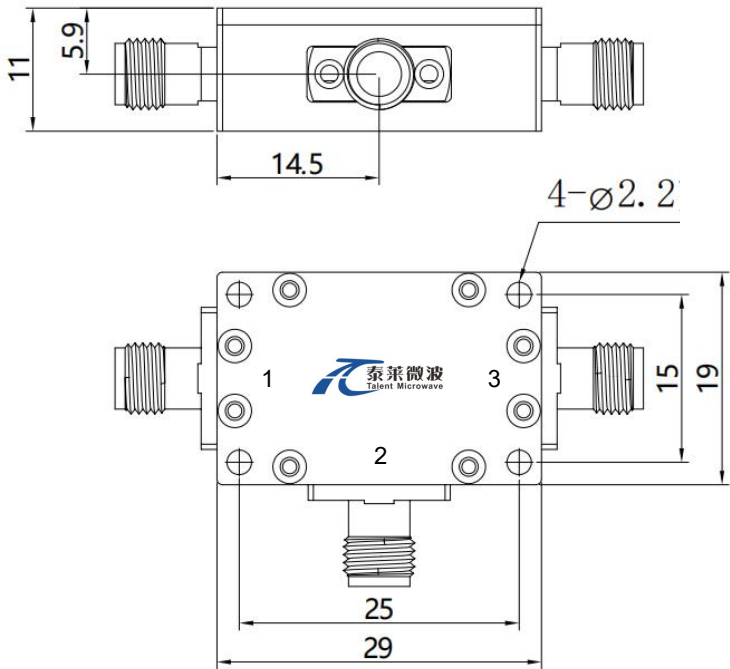
Parameter	Value
LO Input Power	27 dBm
ESD sensitivity (HBM)	Class 0, passed 150V

Port Functions

Port	Function
Port1	RF
Port2	IF
Port3	LO

Outline Drawing:

Unit:mm



Regulatory Compliance:



Environmental Conditions:

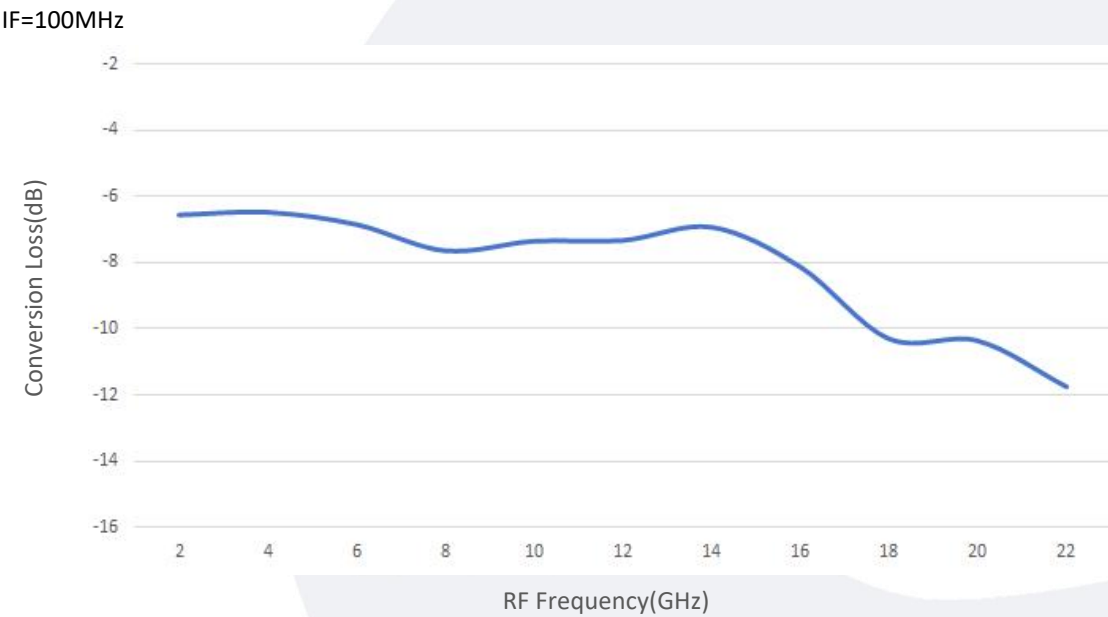
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLBM-0222-S	Dual Balanced Mixer RF:2-22GHz,LO:2-22GHz,IF:DC-3.5GHz	Rev.1.1

Typical Performance Data:

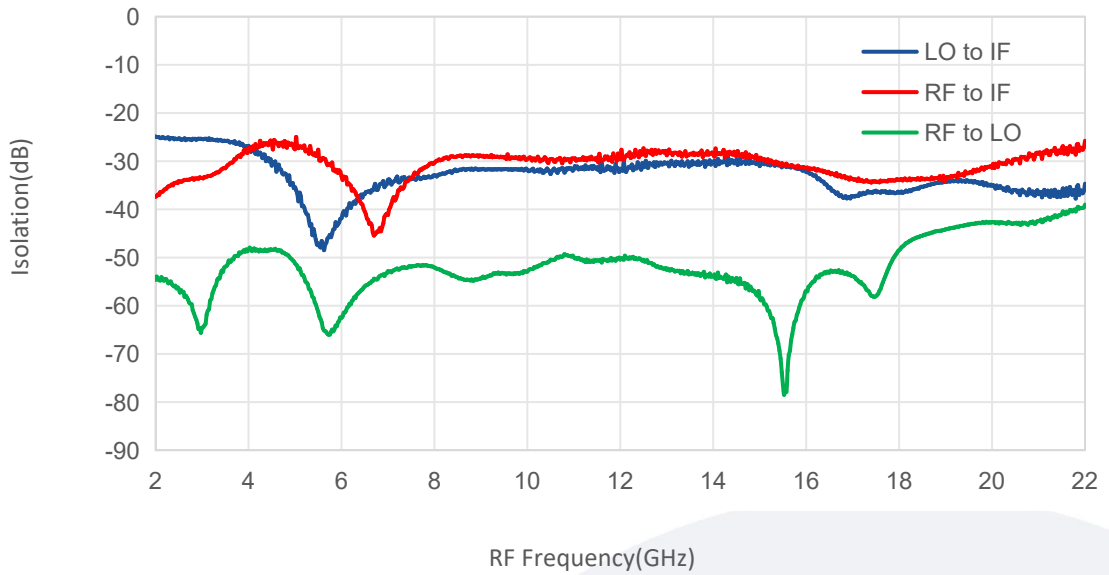
Conversion Loss vs RF Frequency



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:

Isolation 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.