

## Trip Balance Mixer

RF:5-30 GHz/LO:5-30 GHz/IF:2-20 GHz

Model: TLBM-0530-LS

TLBM-0530-LS is a trip balance mixer. The mixer covers the RF frequency from 5 to 30 GHz ,LO frequency from 5 to 30 GHz with an extremely broad IF output from 2 to 20 GHz. The mixer offers a conversion loss of 12 dB typical and LO input power of 15 dBm typical.

### Features:

- RF coverage : 5-30GHz
- LO coverage : 5-30GHz
- IF operation : 2-20GHz
- Conversion loss: 12dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

### Applications:

- Defense & federal communications
- Instrumentations

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	5		30	GHz
LO Frequency	5		30	GHz
LO-Input power	10	15	17	dBm
IF Frequency	2		20	GHz
Input P1dB		8		dBm
Conversion Loss		12		dB
RF to IF Isolation		30		dB
RF to LO Isolation		30		dB
LO to IF Isolation		30		dB

### Mechanical Specifications:

Parameter	Value	Units
Connector1	2.92mm Female	
Connector 2	SMA Female	
Connector 3	2.92mm Female	
Size	23.6*14.4*8	mm

### Absolute Maximum Ratings:

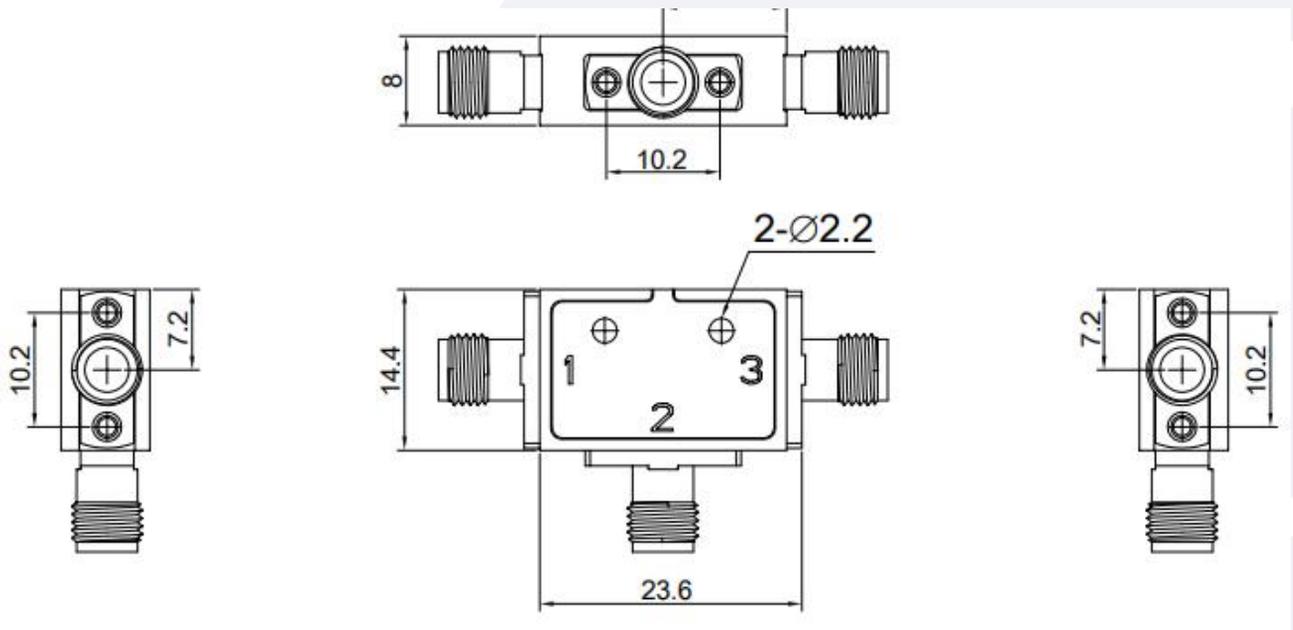
Parameter	Value
RF/LO Input Power	20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

### Port Functions

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

### 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			

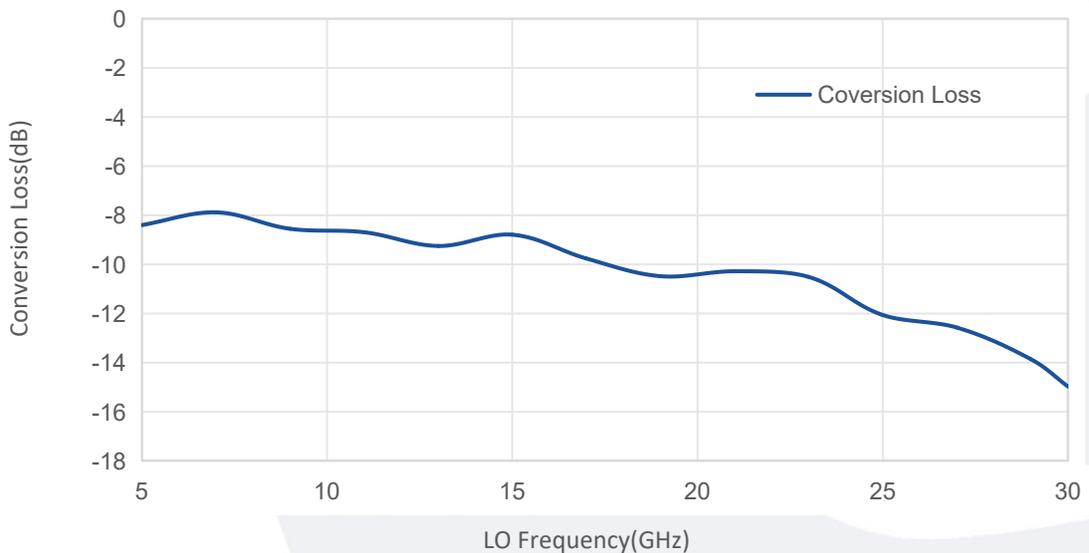
### Ordering Information:

Base Number	Description	Revision
TLBM-0530-LS	Trip Balanced Mixer RF:5-30GHz,LO:5-30GHz,IF:2-20GHz	Rev.1.0

### Typical Performance Data:

#### Conversion Loss vs LO Frequency

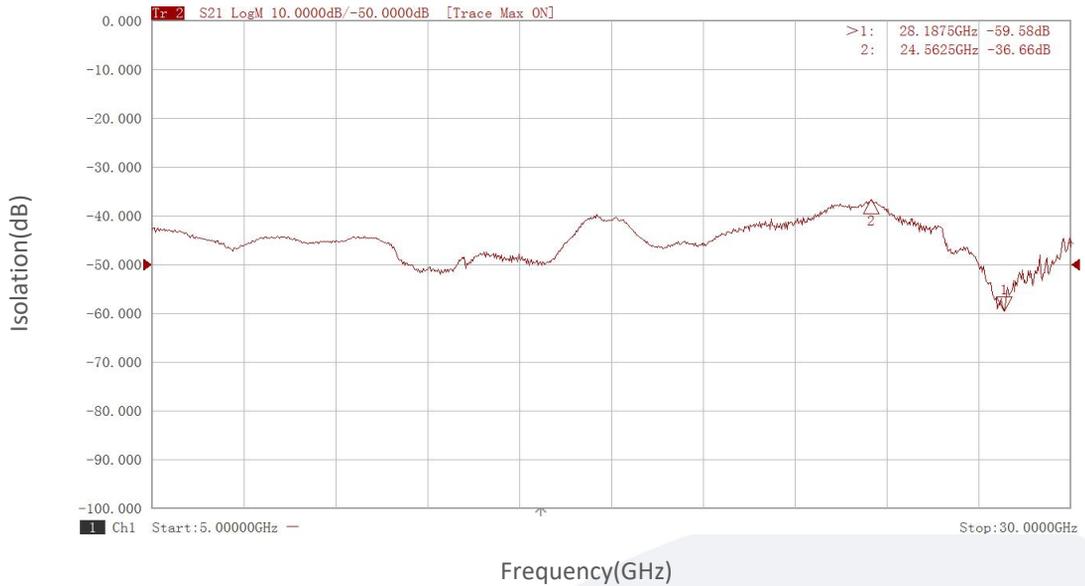
IF=3GHz



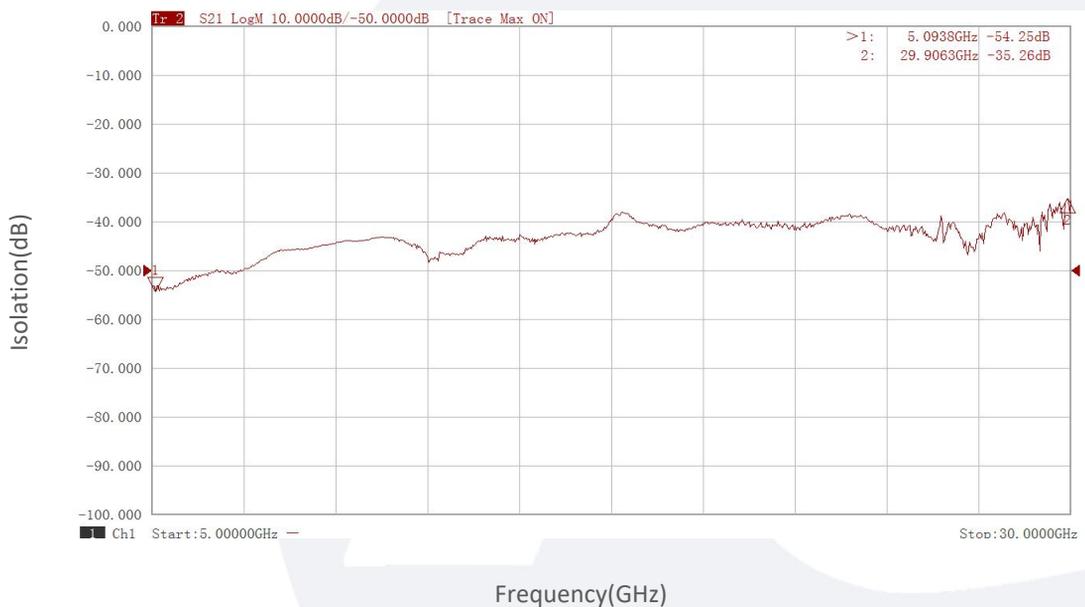
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### LO to IF Isolation vs Frequency



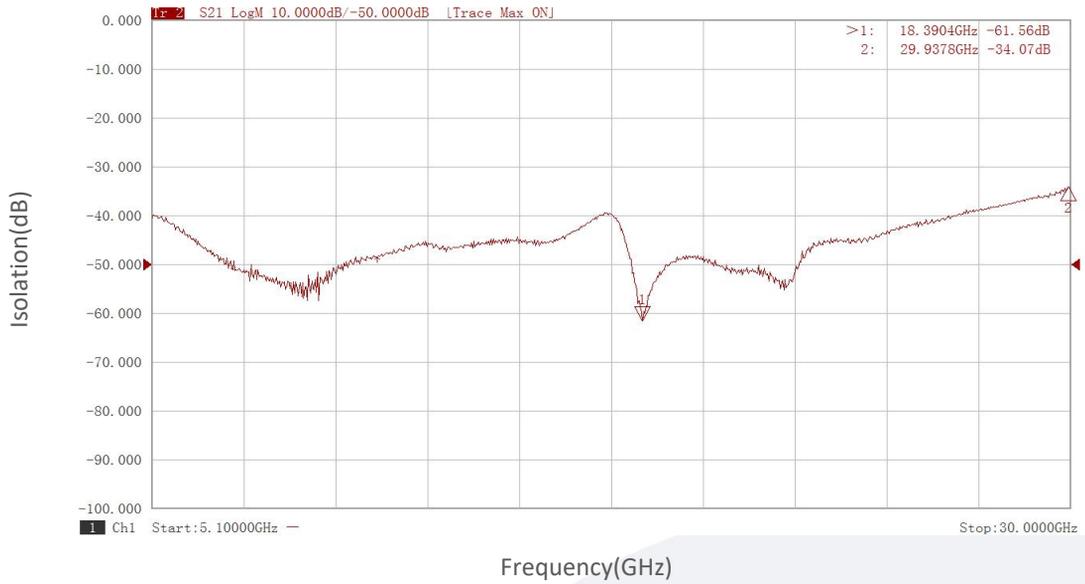
### LO to RF Isolation vs Frequency



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.