

Dual Balance Mixer

RF: 0.01-67GHz/LO: 0.01-67GHz/IF: 0.01-1GHz

Model: TLBM-0.01G67G-01-V

TLBM-0.01G67G-01-V is a dual balance mixer. The mixer covers the LO and RF frequency from 0.01 to 67 GHz with an extremely broad IF output from 0.01 to 1 GHz. The mixer offers a conversion loss of 7 dB typical and LO input power of 1 dBm typical.

Features:

- RF/LO coverage : 0.01-67GHz
- IF operation : 0.01-1GHz
- Conversion loss: 7dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	0.01		67	GHz
LO Frequency	0.01		67	GHz
LO-Input power	-2	1	3	dBm
IF Frequency	0.01		1	GHz
Input P1dB		0		dBm
Conversion Loss		7		dB
RF to IF Isolation		15		dB
RF to LO Isolation		35		dB
LO to IF Isolation		25		dB
VEE power supply	-3.5	-3.3	-3	V
DC Supply Current		90		mA

Mechanical Specifications:

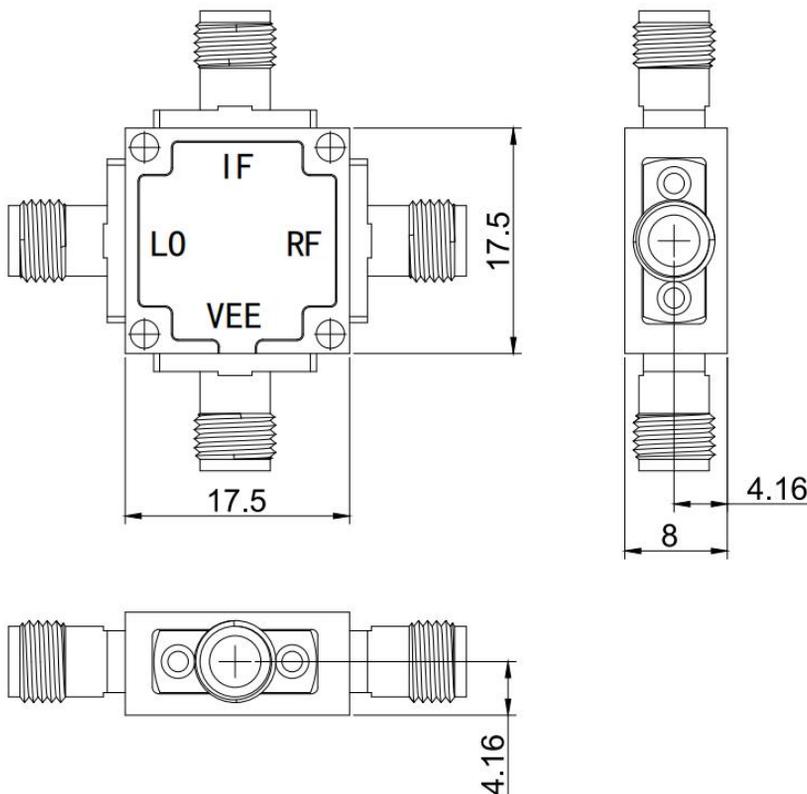
Parameter	Value	Units
RF Port	1.85mm Female	
LO Port	1.85mm Female	
IF Port	SMA Female	
DC Bias	SMA Female	
Size	17.5*17.5*8	mm

Absolute Maximum Ratings:

Parameter	Value
RF/LO Input Power	5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°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			

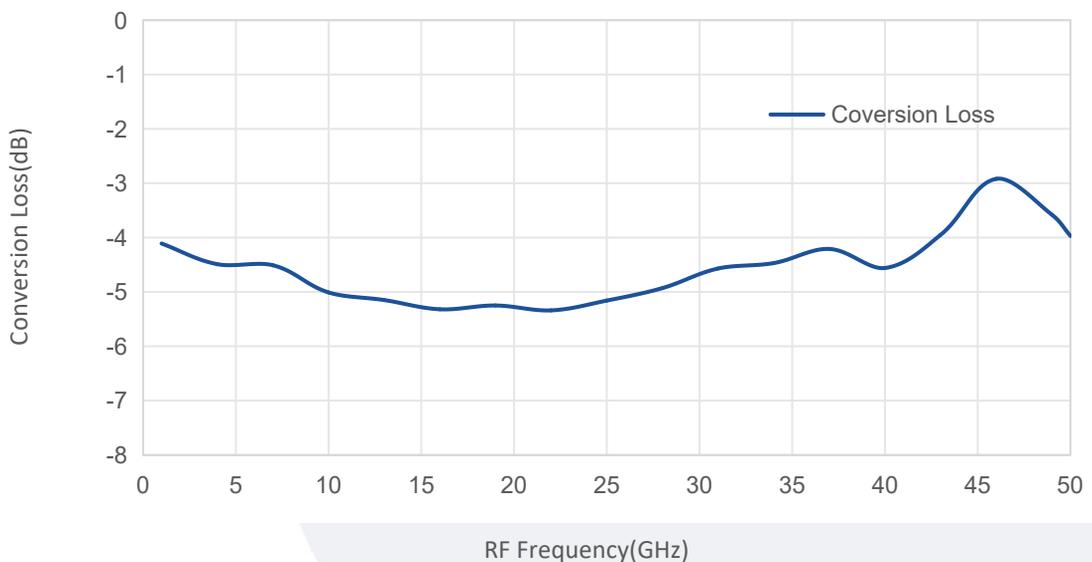
Ordering Information:

Base Number	Description	Revision
TLBM-0.01G67G-01-V	Dual Balanced Mixer RF:0.01-67GHz,LO:0.01-67GHz,IF:0.01-1GHz	Rev.1.1

Typical Performance Data:

Conversion Loss vs RF Frequency

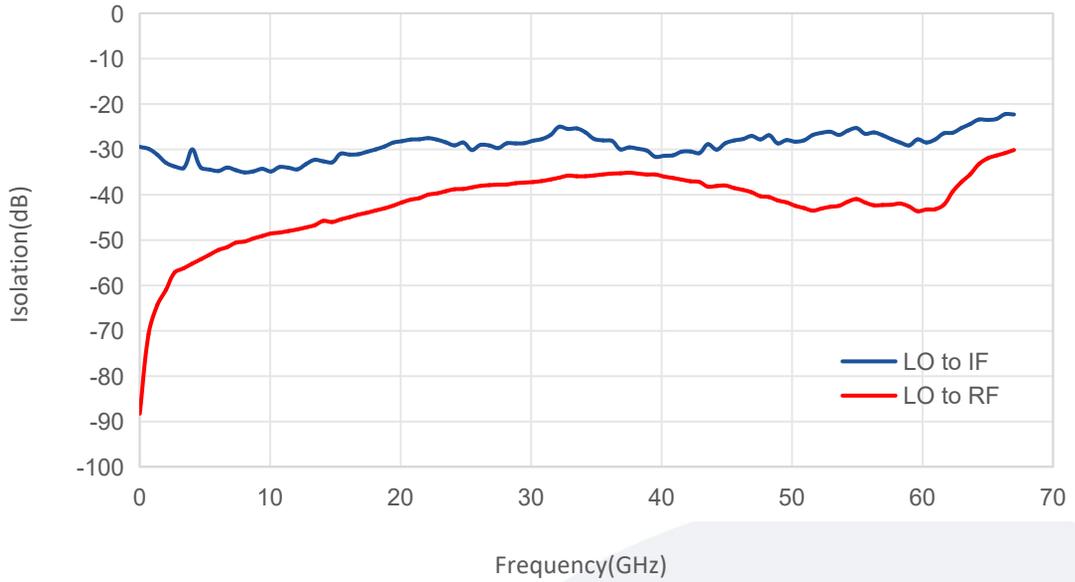
IF=100MHz, LO= 0dBm



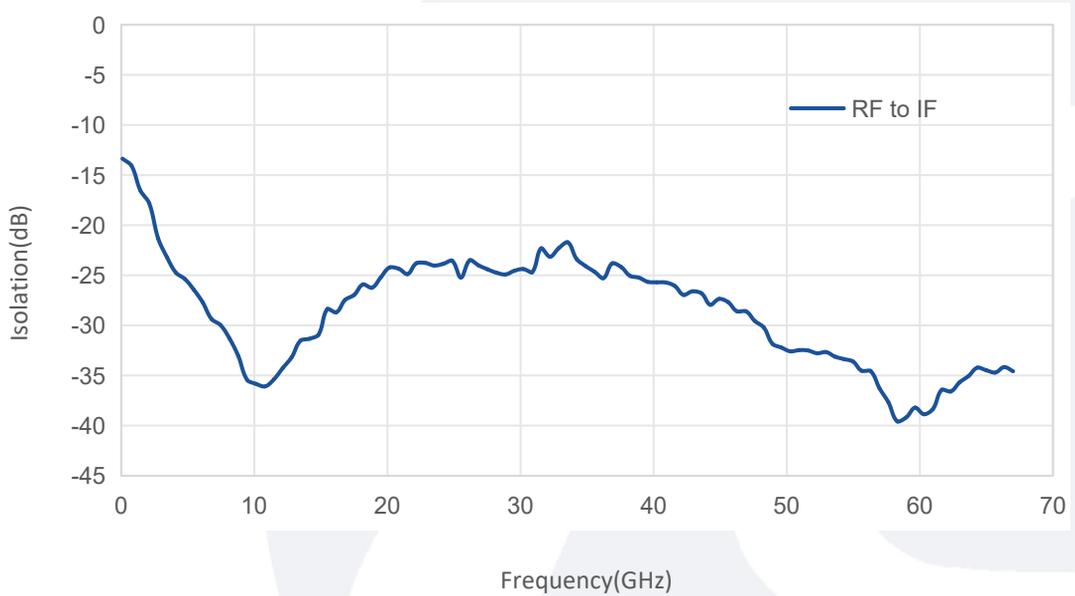
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IF/RF Isolation vs Frequency



RF to IF Isolation vs Frequency



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