Suzhou Talent Microwave,Inc
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Active Coax Mixer

RF:0.01-50 GHz/LO:0.01-50 GHz/IF:0.01-5 GHz Model: TLBM-0.01G50G-05-V

TLBM-0.01G50G-05-V is a active coax mixer with VEE supply. The mixer covers the RF frequency from 0.01 to 50 GHz ,LO frequency from 0.01 to50 GHz with an extremely broad IF output from DC to 5 GHz. The mixer offers a conversion loss of 5 dB typical and LO input power of -5 dBm typical.

Features:

- RF coverage : 0.01-50GHz
- LO coverage : 0.01-50GHz
- IF operation : DC-5GHz
- Conversion loss: 5dB Typ
- High LO to RF isolation
- VD Supply
- Down conversion only

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	0.01		50	GHz
LO Frequency	0.01		50	GHz
LO-Input power		-5		dBm
IF Frequency	DC		5	GHz
P-1 Input P1dB		9		dBm
Fundamental Conversion Loss		5		dB
3th Harmonic Conversion Loss		14		dB
RF to IF Isolation		35		dB
RF to LO Isolation		35		dB
LO to IF Isolation		25		dB
VD power supply		+5		V
DC Supply Current		85		mA

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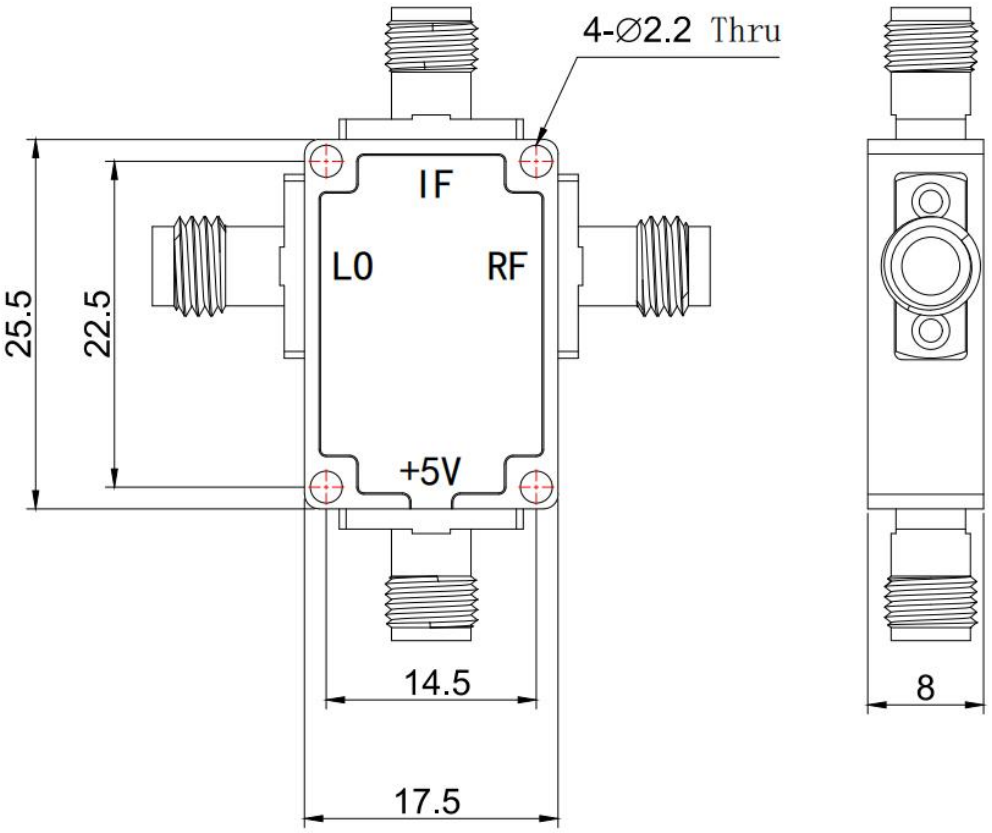
Mechanical Specifications:

Parameter	Value	Units
RF Port	2.4mm Female	
LO Port	2.4mm Female	
IF Port	SMA Female	
DC Bias	SMA Female	
Size	25.5*17.5*8	mm

Absolute Maximum Ratings:

Parameter	Value
RF/LO Input Power	15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:



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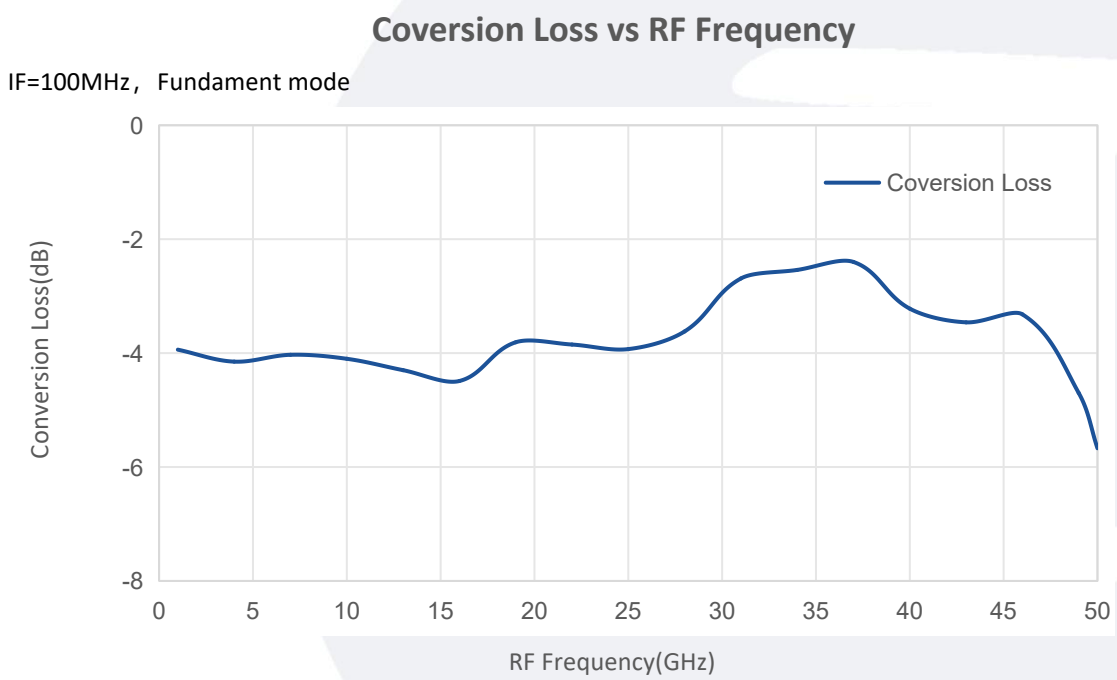
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
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-0.01G50G-05-V	Active Coax Mixer, RF:0.01-50GHz,LO:0.01-50GHz,IF:0.01-5GHz,+5V VD Supply	Rev.1.1

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.

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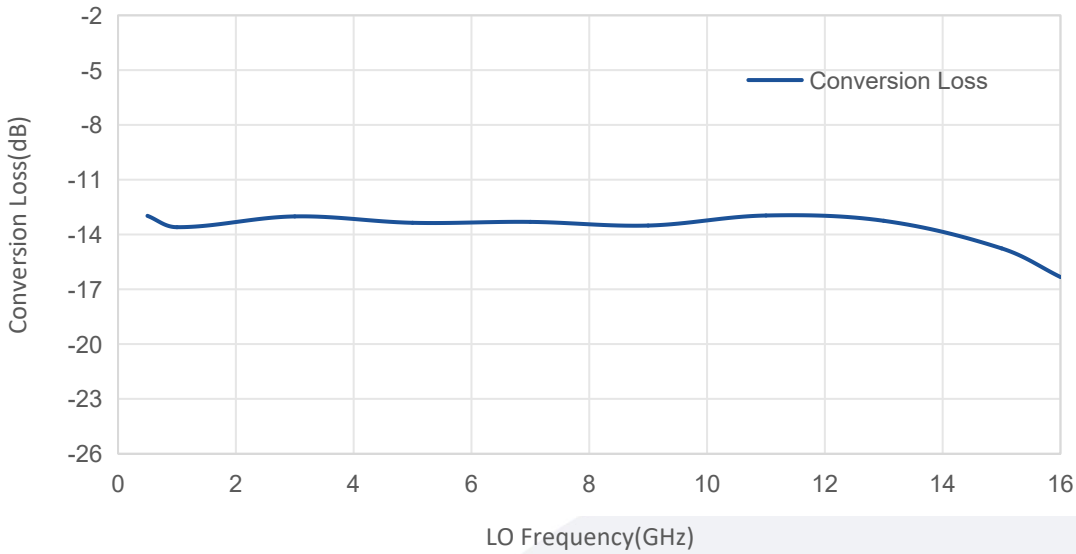
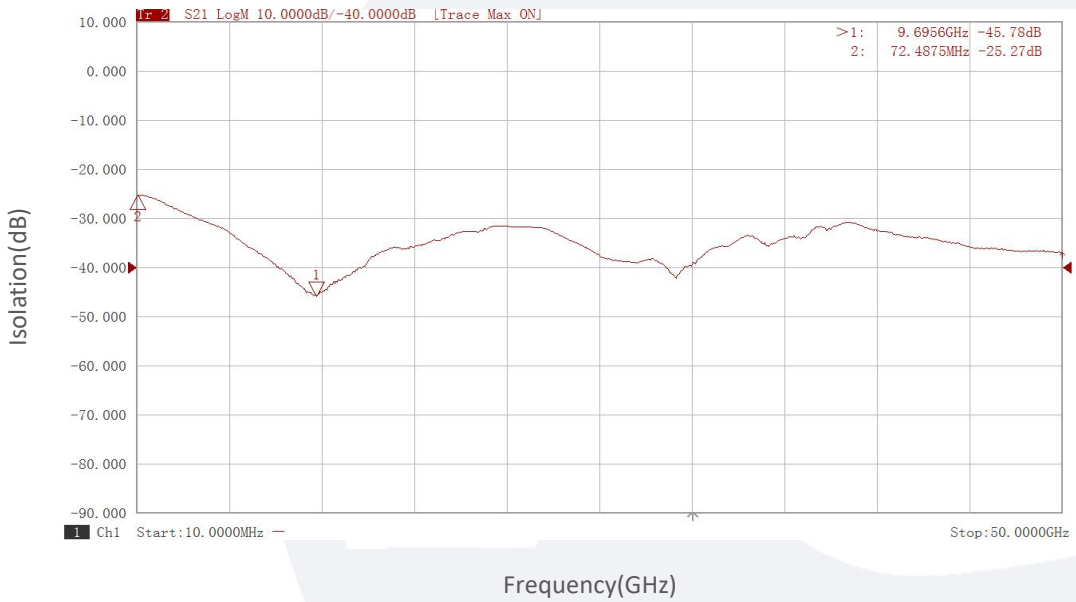
Typical Performance Data:

Coversion Loss vs LO Frequency

IF=100MHz,3th Harmonics mode



LO to IF Isolation vs Frequency



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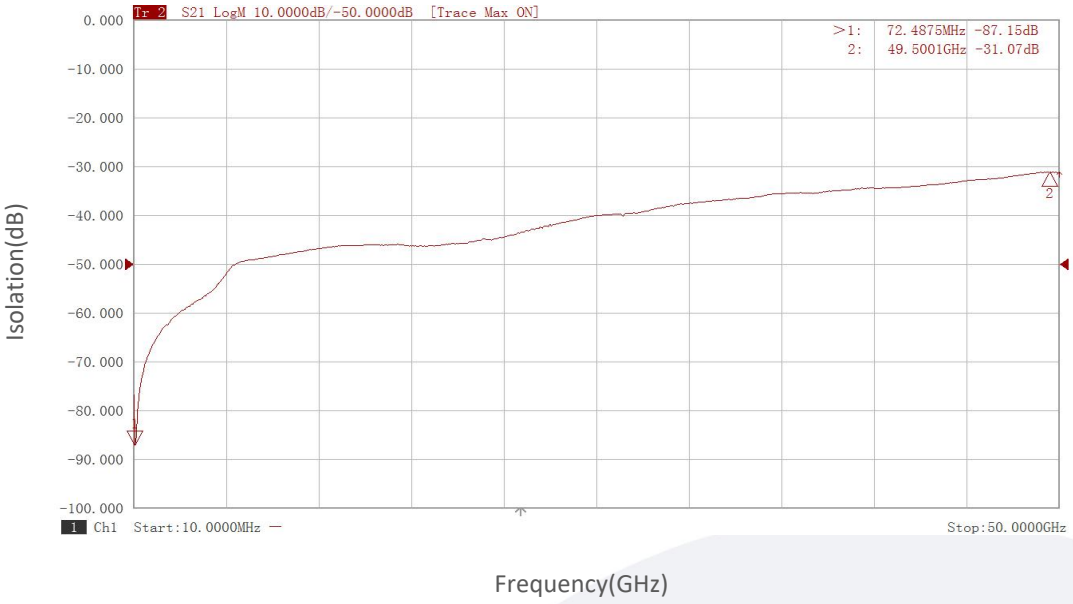
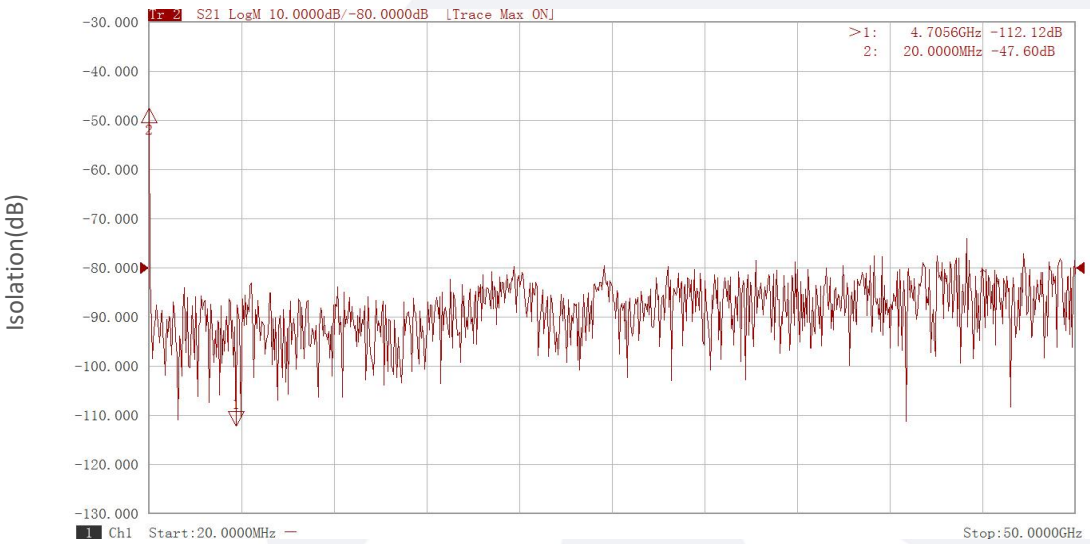
Typical Performance Data:

LO to RF Isolation vs Frequency



RF to IF Isolation vs Frequency



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