

Dual Balance Mixer

RF:10MHz-1 GHz/LO:10MHz-1 GHz/IF:DC-200 MHz

Model: TLBM-10M1G-S

TLBM-10M1G-S is a dual balance mixer with Vcc supply. The mixer covers the RF frequency from 0.01 to 1 GHz ,LO frequency from 0.01 to 1 GHz with IF output from DC to 200 MHz. The mixer offers a conversion gain of 4 dB typical and LO input power of 0 dBm typical.

Features:

- RF coverage : 0.01-1GHz
- LO coverage : 0.01-1GHz
- IF operation : DC-200MHz
- Conversion gain: 4dB Typ
- Dual Balanced Mixer
- Vcc Supply
- UP/Down conversion

Applications:

- Defense & federal communications
- Instrumentations

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
RF Frequency	0.01		1	GHz
LO Frequency	0.01		1	GHz
LO-Input power		0		dBm
IF Frequency	DC		200	MHz
Input P1dB		4		dBm
Conversion Gain		5		dB
IN to LO Isolation		40		dB
LO to IN Isolation		40		dB
LO to OUT Isolation		25		dB
Vcc power supply		+5		V
Supply current		40		mA

Mechanical Specifications:

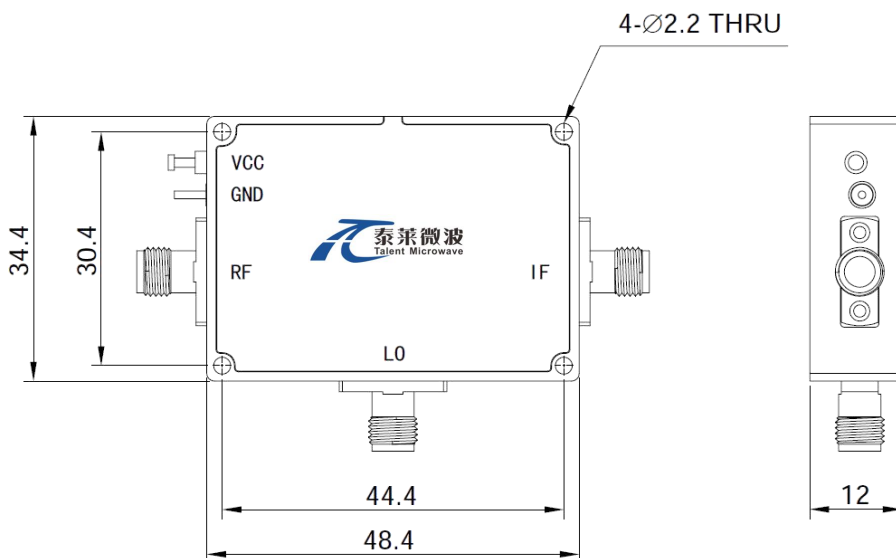
Parameter	Value	Units
RF Port	SMA Female	
LO Port	SMA Female	
IF Port	SMA Female	
DC Bias	Solder Pin	
Size	34.4*48.4*12	mm
Weight	TBD	

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	15 dBm
LO Input Power	10 dBm
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	-40		+70	°C
Non-operating Temperature	-65		+100	°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			

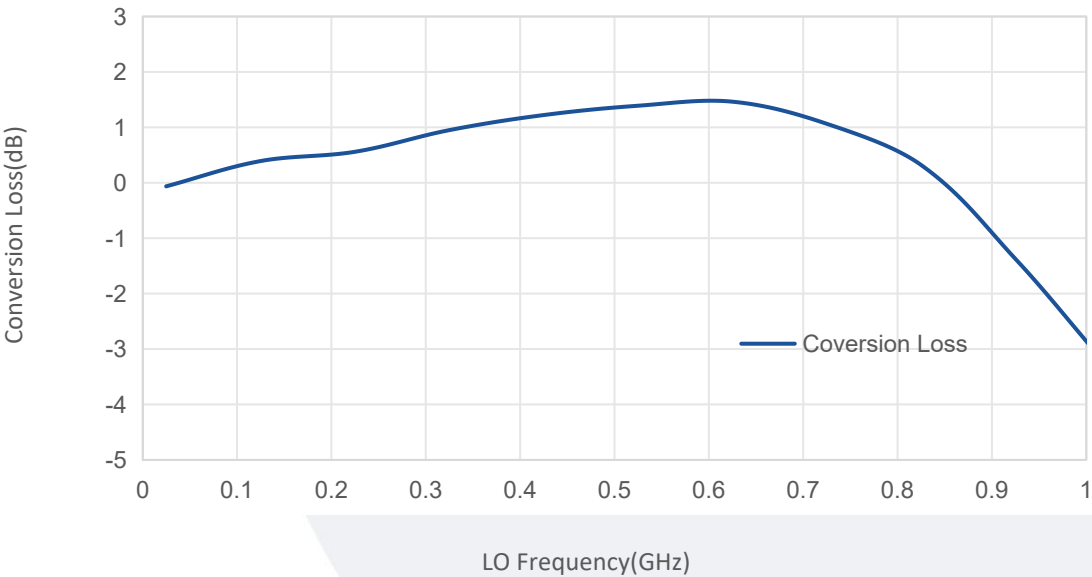
Ordering Information:

Base Number	Description	Revision
TLBM-10M1G-S	Dual Balanced Mixer RF:10MHz-1GHz,LO:10MHz-1GHz,IF:DC-200MHz +5V Vcc Supply	Rev.1.0

Typical Performance Data:

Up Coversion Loss vs RF Frequency

IF=10MHz,LO=15MHz-1GHz

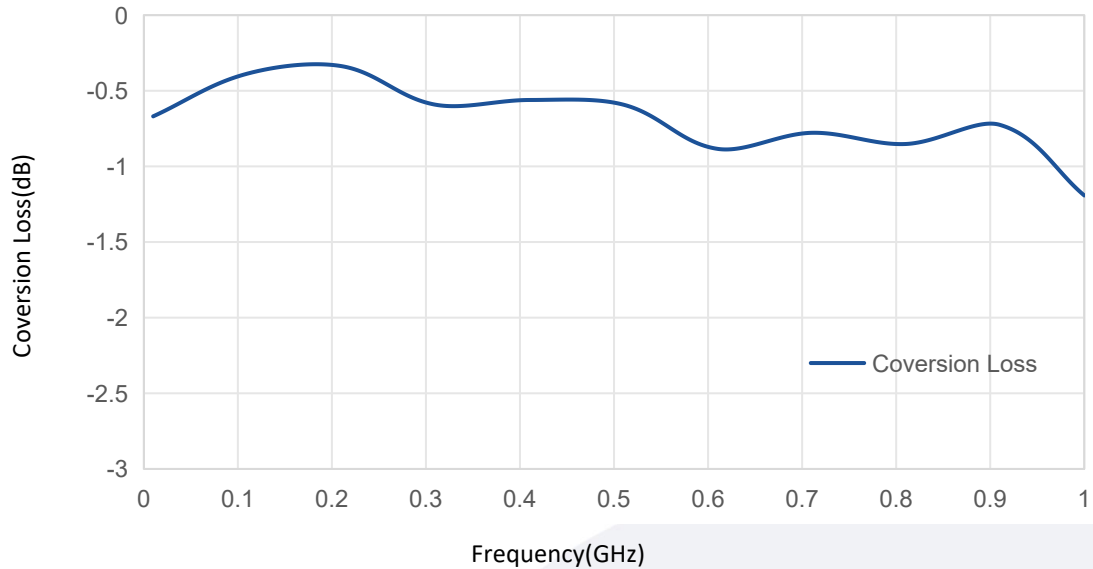


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

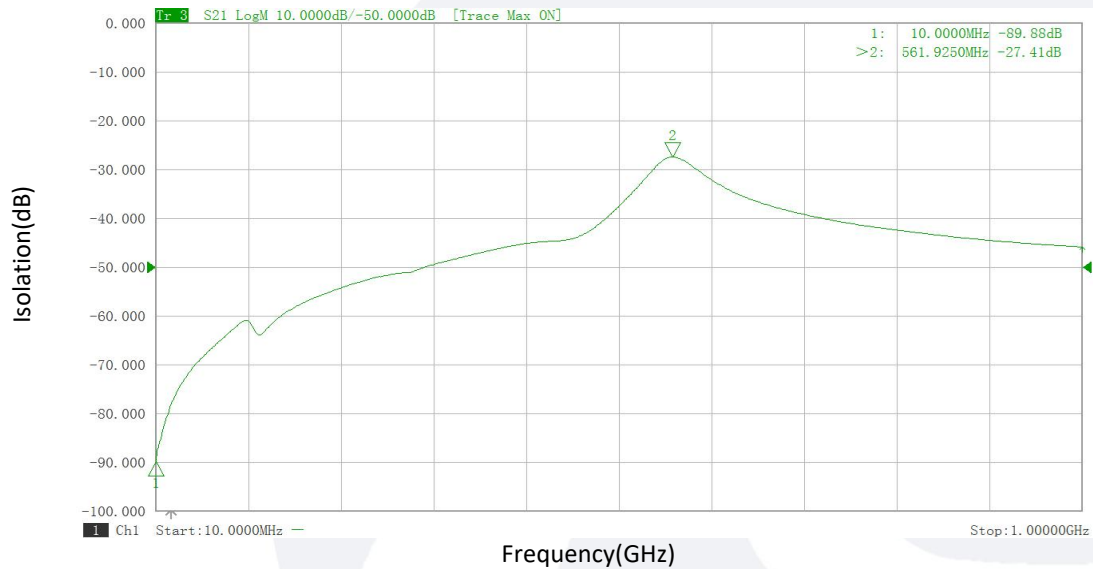
Typical Performance Data:

Down Conversion Loss vs Frequency

IF=10MHz, LO=15MHz-1GHz



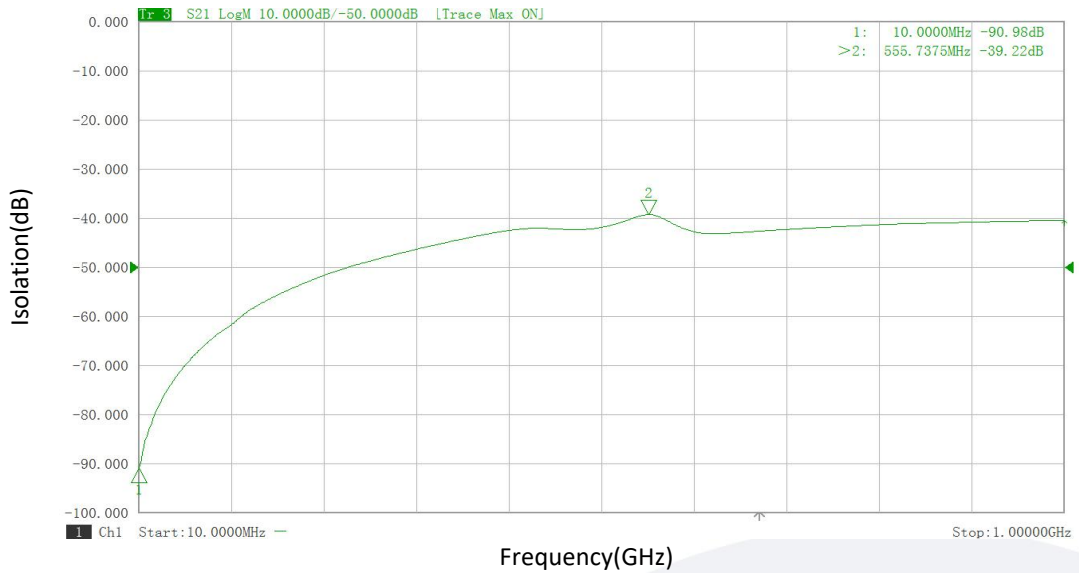
IN to LO Isolation vs Frequency



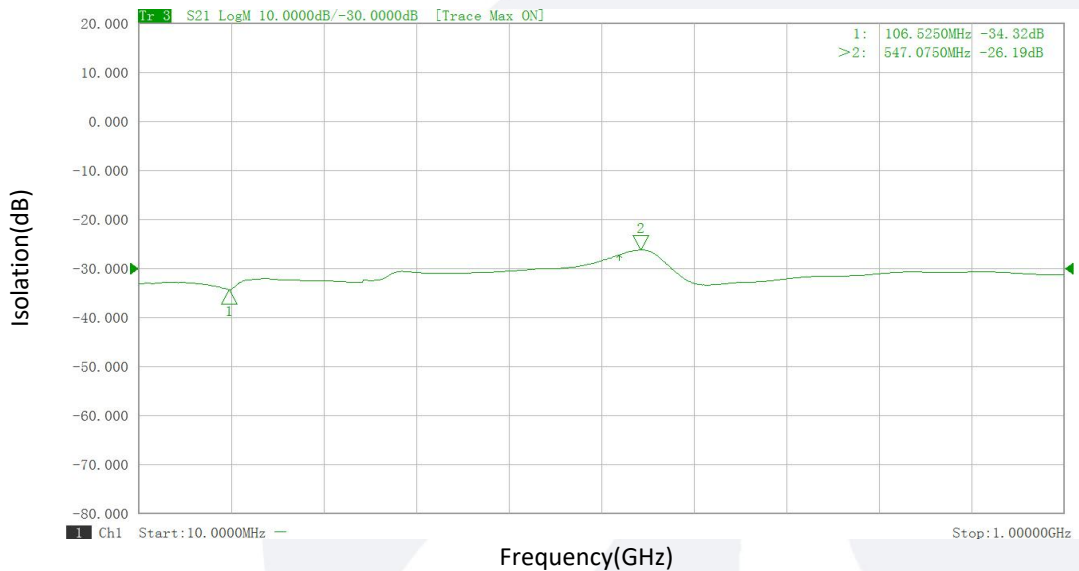
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

LO to IN Isolation vs Frequency



LO to OUT Isolation vs Frequency



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