

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	0.01		1	GHz
LO频率 LO Frequency	0.01		1	GHz
LO驱动功率 LO-Input power		0		dBm
IF频率 IF Frequency	DC		200	MHz
输入1dB压缩点 Input P1dB		4		dBm
变频损耗 Conversion Loss		1		dB
IN至LO隔离度 IN to LO Isolation		40		dB
LO至IN隔离度 LO to IN Isolation		40		dB
LO至OUT隔离度 LO to OUT Isolation		25		dB
供电电压 Vcc power supply		+5		V
供电电流 Suppy current		40		mA

机械特性 Mechanical Specifications:

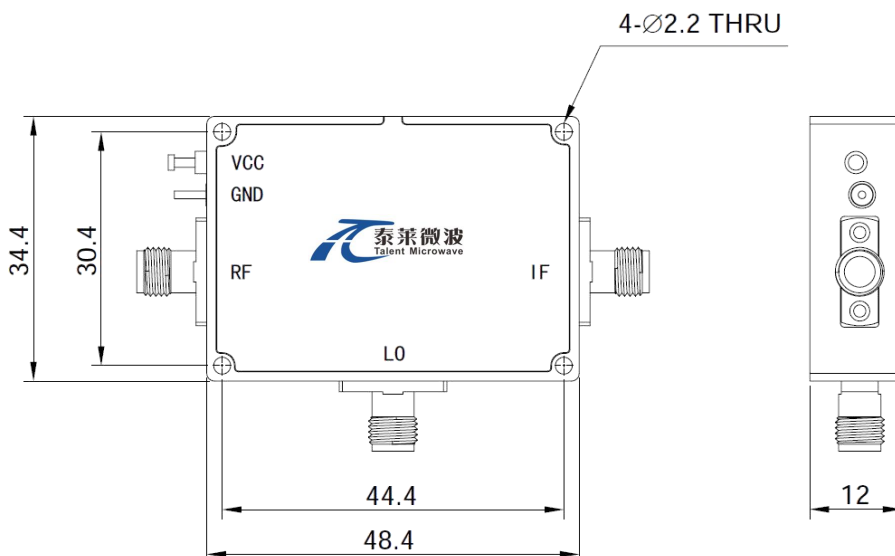
参数 Parameter	指标 Value	单位 Units
RF接口 RF Port	SMA Female	
LO接口 LO Port	SMA Female	
IF接口 IF Port	SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	34.4*48.4*12	mm
重量 Weight	TBD	

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
RF功率 RF Input Power	15 dBm
LO功率 LO Input Power	10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-40		+70	°C
存储温度 Non-operating Temperature	-65		+100	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

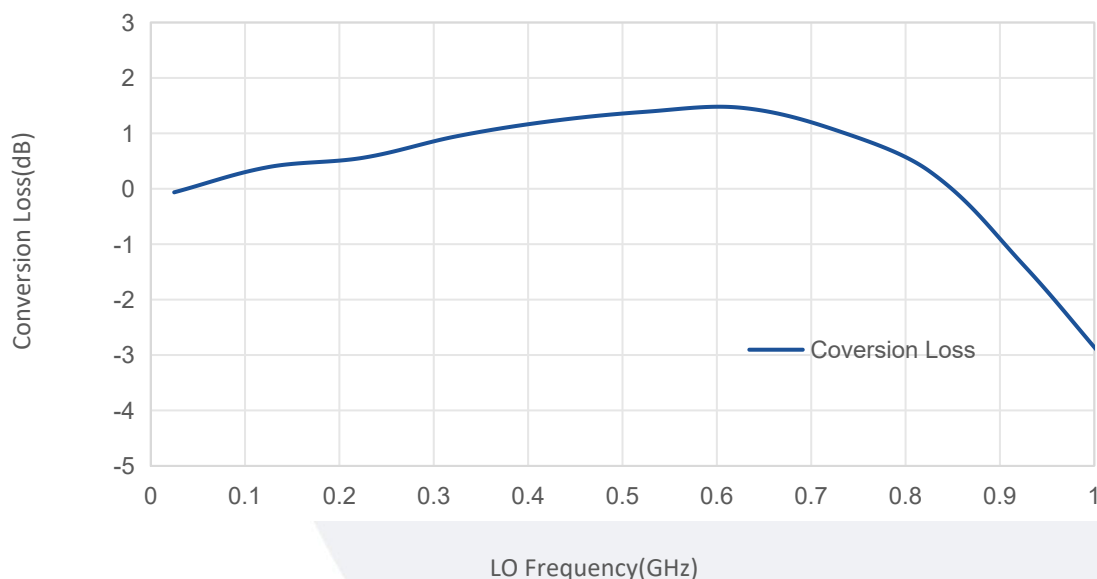
订货信息 Ordering Information:

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

典型曲线 Typical Performance Data:

Up Conversion Loss vs RF Frequency

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

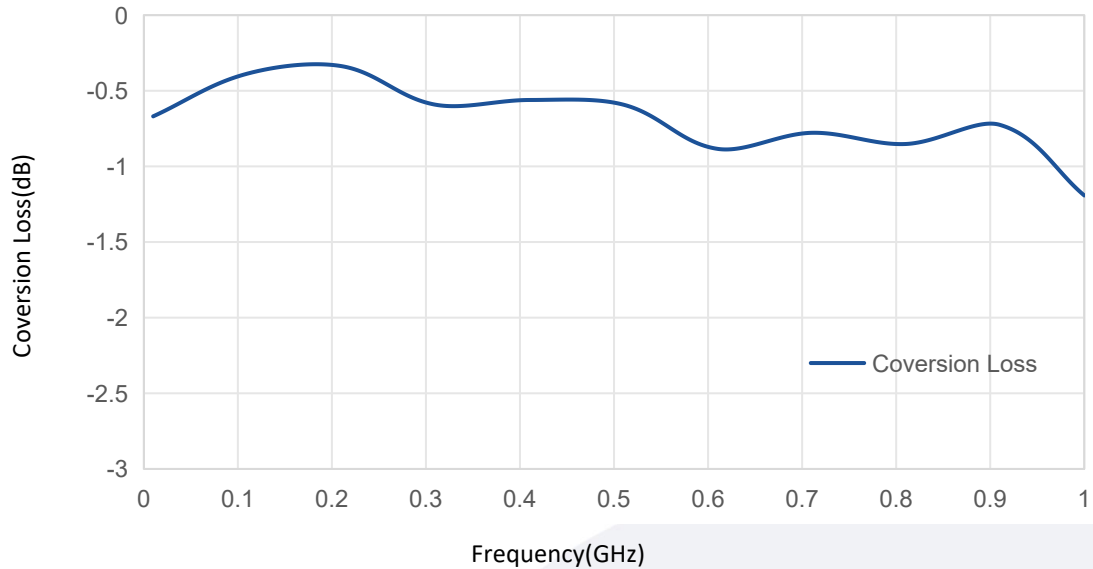


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

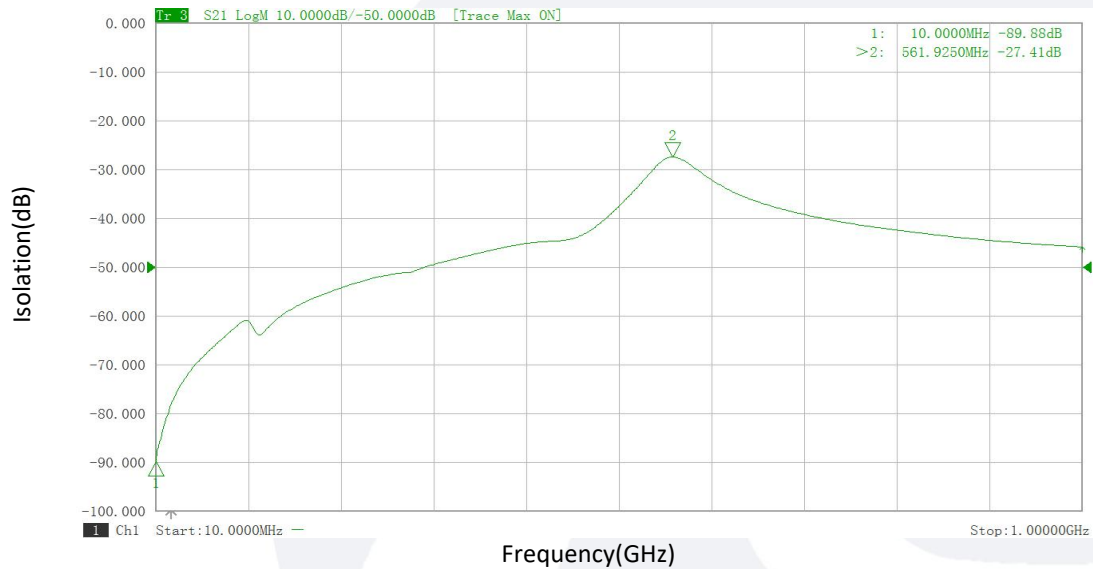
典型曲线 Typical Performance Data:

Down Conversion Loss vs Frequency

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



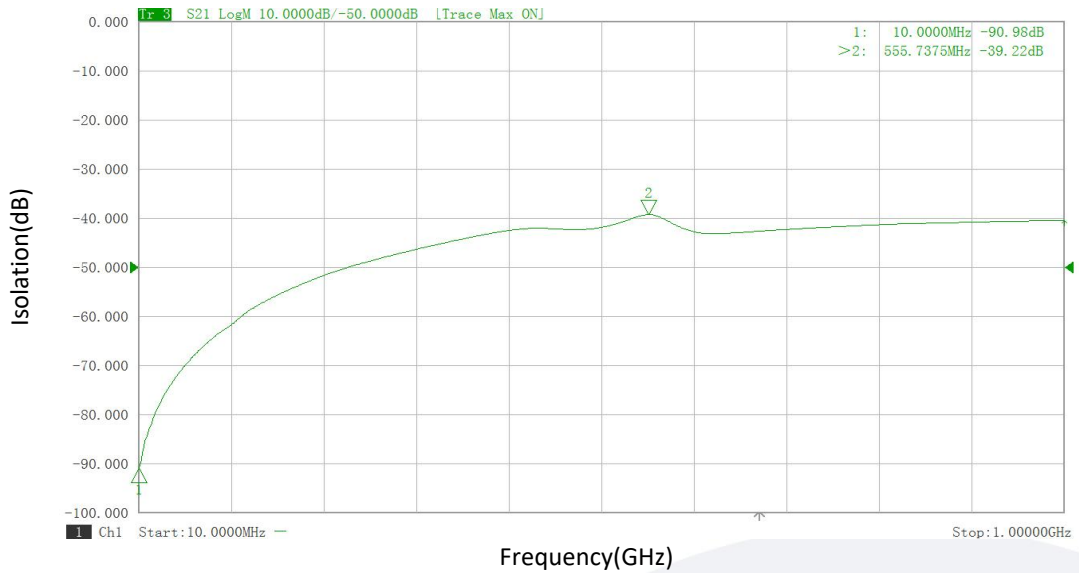
IN to LO Isolation vs Frequency



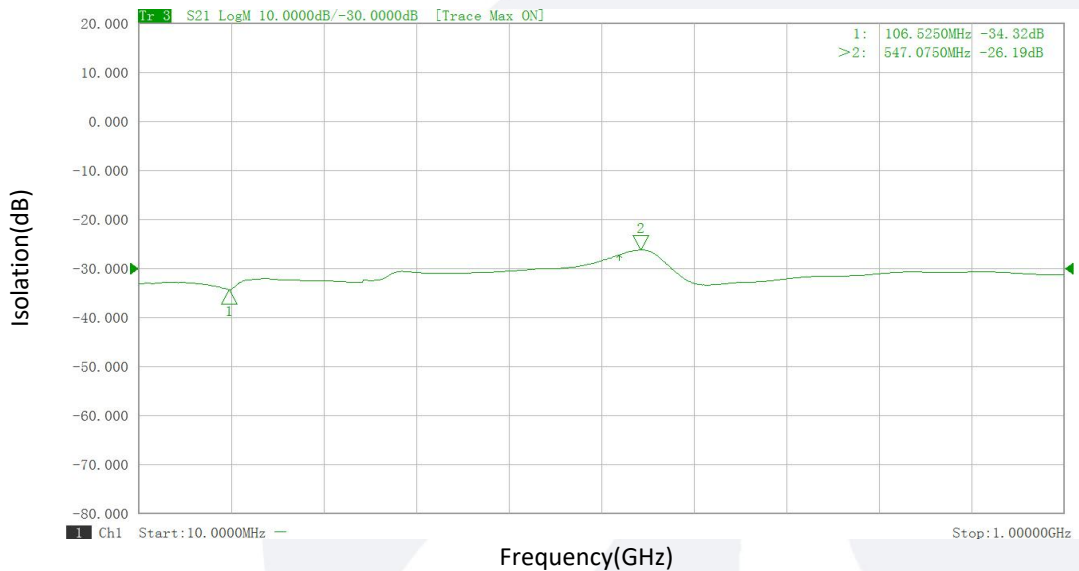
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

LO to IN Isolation vs Frequency



LO to OUT 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.