

## Dual Balance Mixer

RF:18-40 GHz/LO:18-40 GHz/IF:DC-18 GHz

Model: TLBM-1840-LS-E

TLBM-1840-LS-E is a dual balance mixer. The mixer covers the LO and RF frequency from 18 to 40 GHz with an extremely broad IF output from DC to 18 GHz. The mixer offers a conversion loss of 13 dB typical and LO input power of 15 dBm typical.

### Features:

- RF/LO coverage : 18-40GHz
- IF operation : DC-18GHz
- Conversion loss: 13dB Typ
- High LO to RF isolation
- Dual Balanced Mixer

### 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	18		40	GHz
LO频率 LO Frequency	18		40	GHz
LO驱动功率 LO-Input power	13	15	23	dBm
IF频率 IF Frequency	0		18	GHz
输入1dB压缩点 Input P1dB		8		dBm
变频损耗 Conversion Loss		13		dB
RF至IF隔离度 RF to IF Isolation		25		dB
RF至LO隔离度 RF to LO Isolation		25		dB
LO至IF隔离度 LO to IF Isolation		25		dB

## 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
端口1 Connector 1	2.92mm Female	
端口3 Connector 3	2.92mm Female	
端口2 Connector 2	SMA Female	
尺寸 Size	23.6*14.4*8	mm

## 接口定义 Connector Functions:

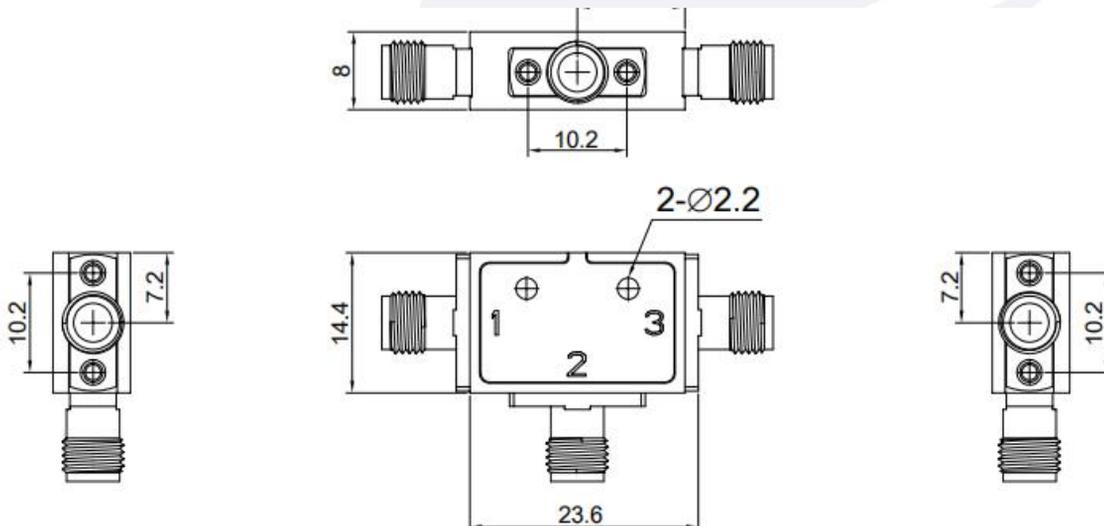
端口 Port	功能 Function
Connector 1	RF
Connector 2	IF
Connector 3	LO

## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
LO功率 LO Input Power	23 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

## 外形图 Outline Drawing:

Unit:mm



## 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°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			

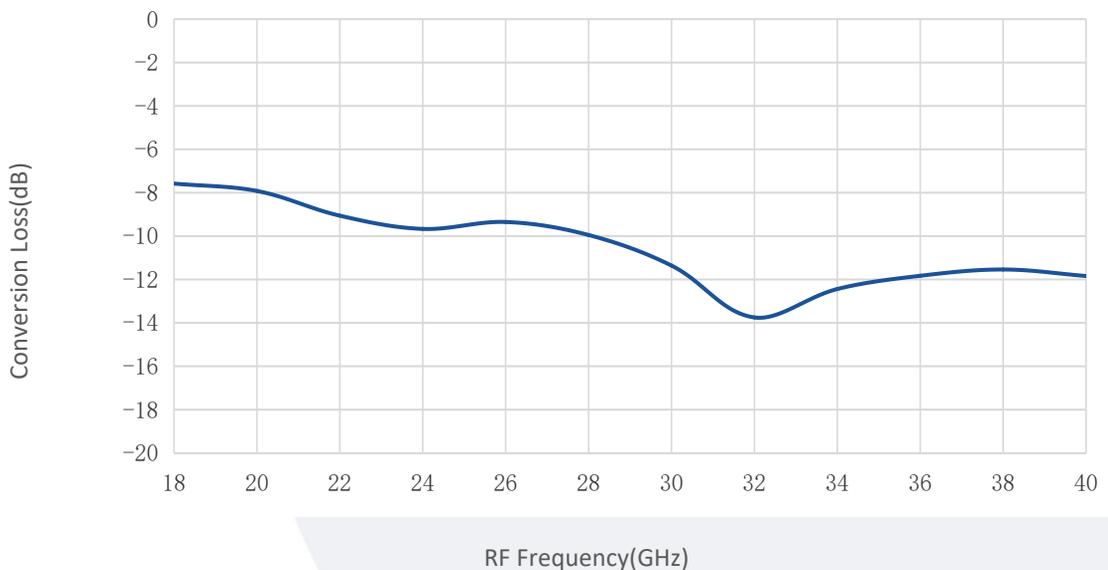
## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLBM-1840-LS-E	Dual Balanced Mixer RF:18-40GHz,LO:18-40GHz,IF:DC-18GHz	Rev.1.0

## 典型曲线 Typical Performance Data:

### Conversion Loss vs RF Frequency

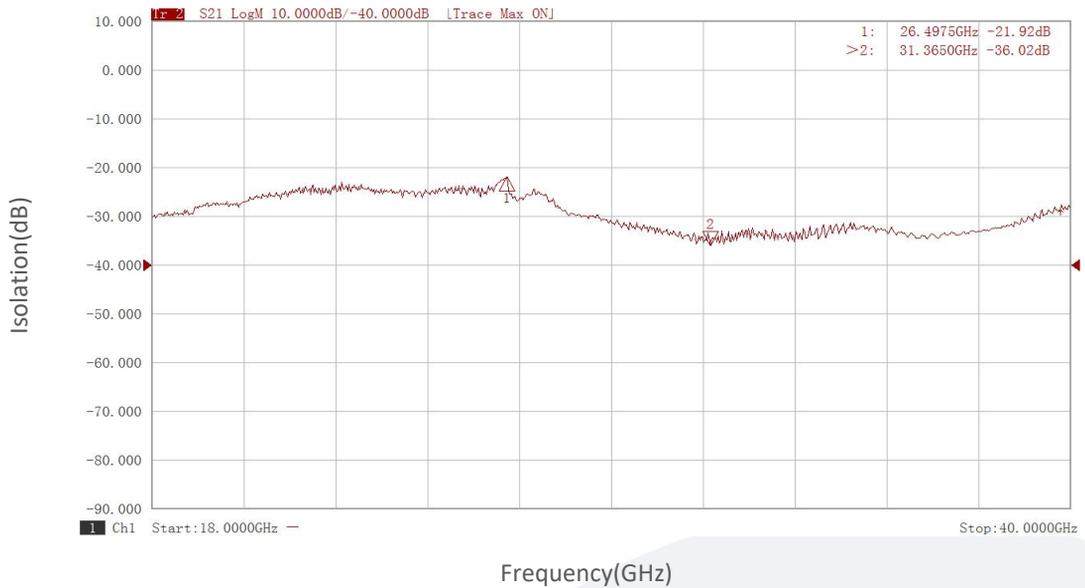
IF=0.1GHz,-10dBm; LO=15dBm



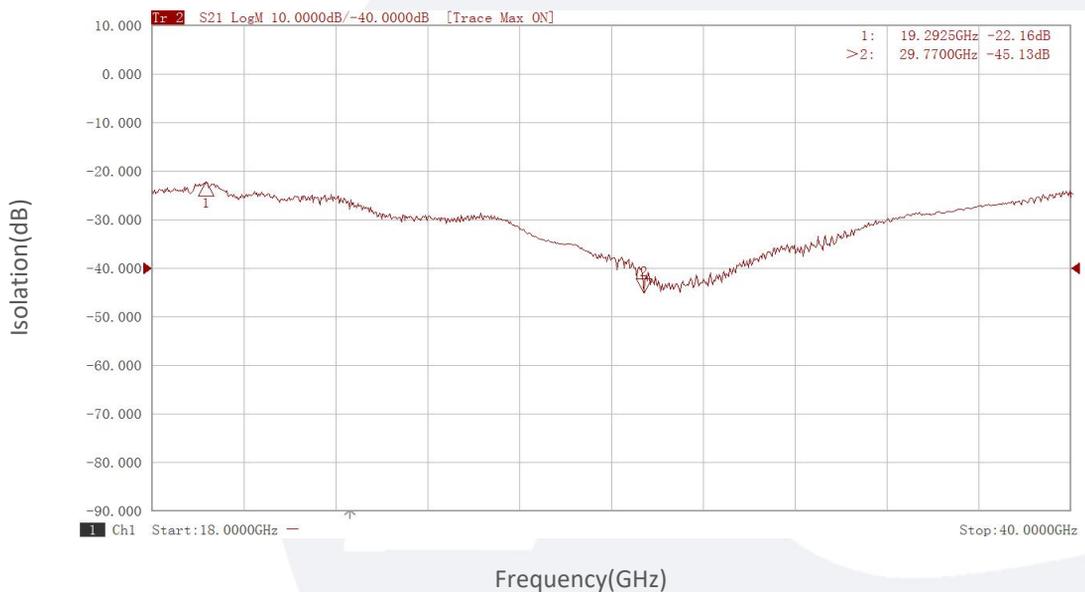
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## 典型曲线 Typical Performance Data:

### LO to IF Isolation vs Frequency



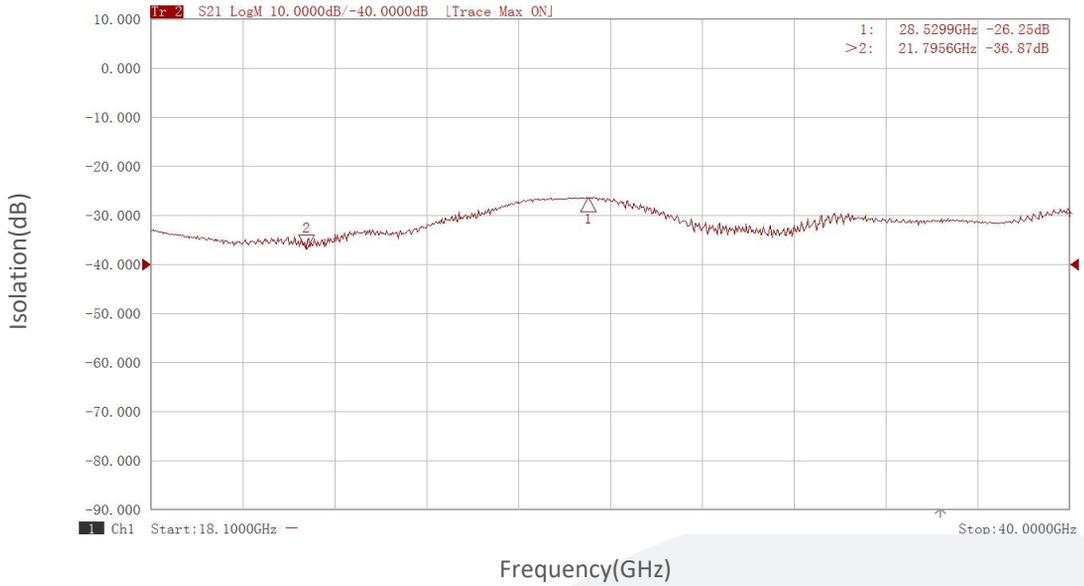
### LO to RF Isolation vs Frequency



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.

## 典型曲线 Typical Performance Data:

### RF to IF Isolation vs Frequency



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