

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

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
RF频率 RF Frequency	0.01		50	GHz
LO频率 LO Frequency	0.01		50	GHz
LO驱动功率 LO-Input power		-5		dBm
IF频率 IF Frequency	DC		5	GHz
输入1dB压缩点 P-1 Input P1dB		9		dBm
基波变频损耗 Fundamental Conversion Loss		5		dB
三次谐波变频损耗 3th Harmonic Conversion Loss		14		dB
RF至IF隔离度 RF to IF Isolation		35		dB
RF至LO隔离度 RF to LO Isolation		35		dB
LO至IF隔离度 LO to IF Isolation		25		dB
VD 供电电压 VD power supply		-7		V

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
RF端口 RF Port	2.4mm Female	
LO端口 LO Port	2.4mm Female	
IF端口 IF Port	SMA Female	
直流偏置 DC Bias	SMA Female	
尺寸 Size	17.5*17.5*8	mm

绝对最大值 Absolute Maximum Ratings:

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

外形图 Outline Drawing:

VD

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			

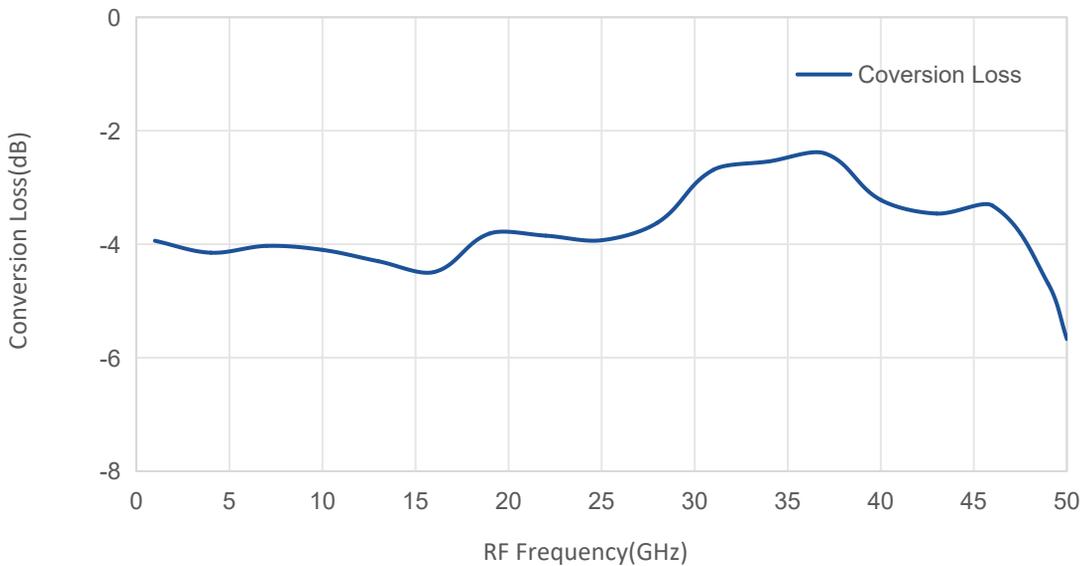
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLBM-0.01G50G-05-V	Active Coax Mixer, RF:0.01-50GHz,LO:0.01-50GHz,IF:0.01-5GHz,-7V VD Supply	Rev.1.0

典型曲线 Typical Performance Data:

Conversion Loss vs RF Frequency

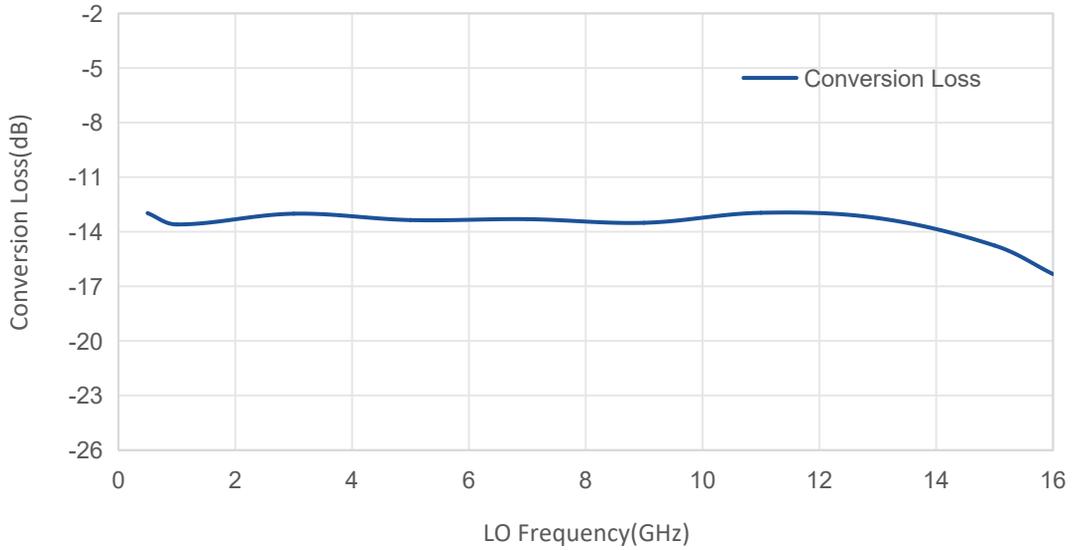
IF=100MHz, Fundament mode



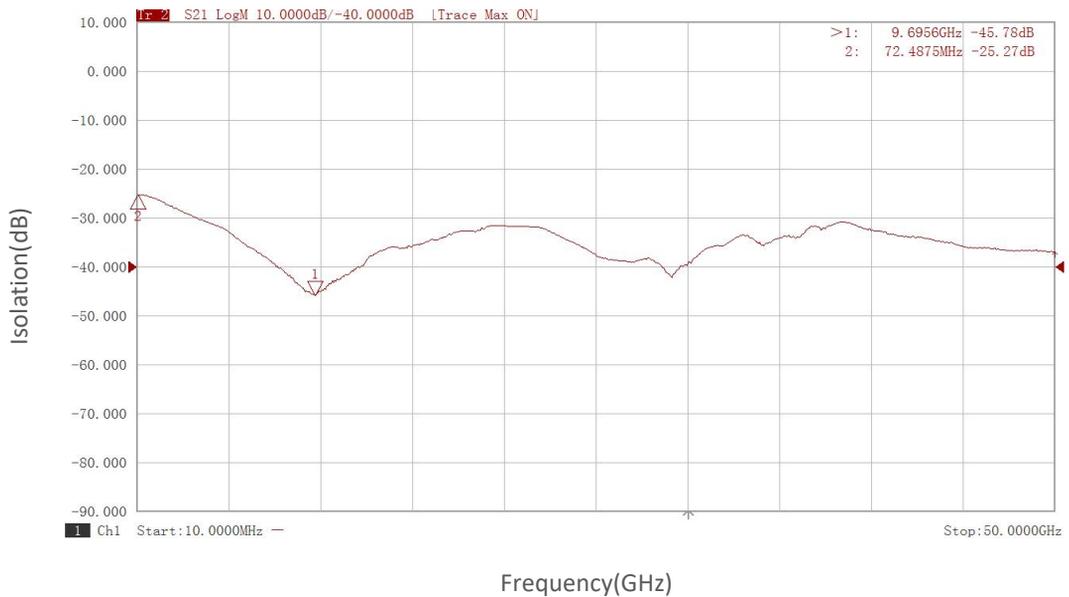
典型曲线 Typical Performance Data:

Conversion Loss vs LO Frequency

IF=100MHz,3th Harmonics mode



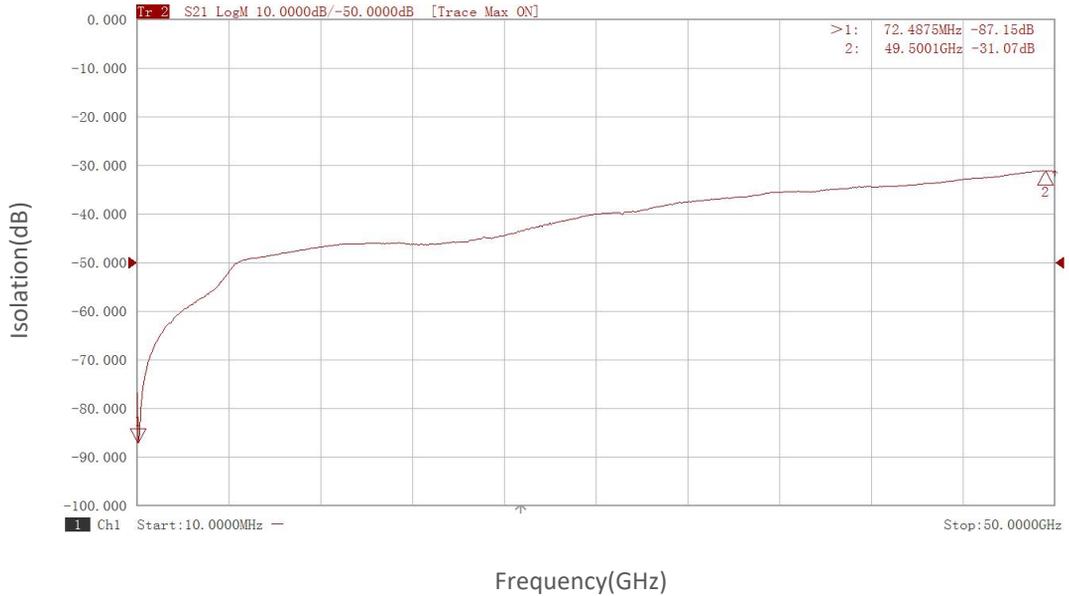
LO to IF Isolation vs Frequency



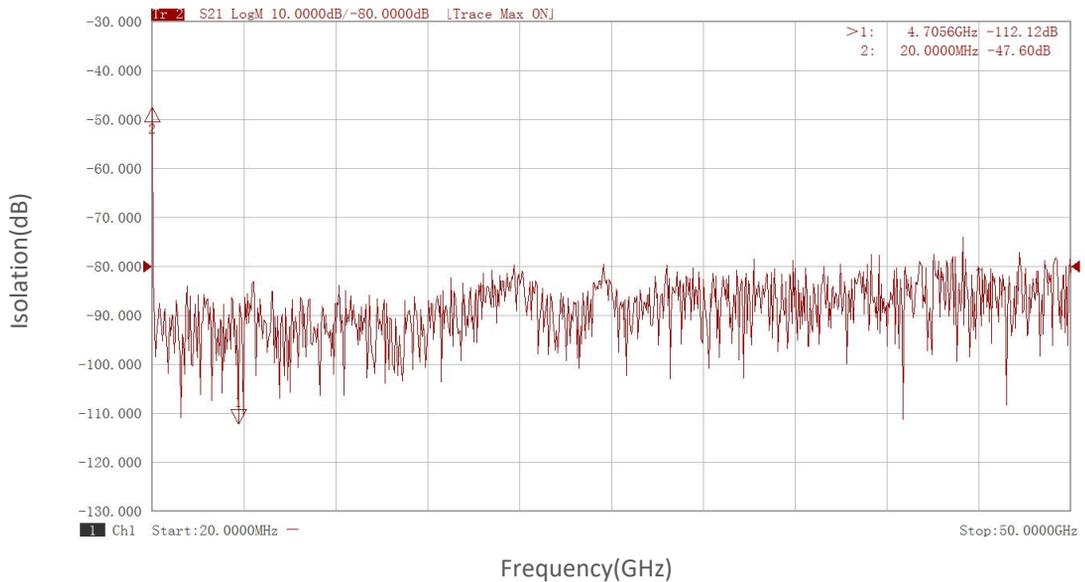
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

LO to RF Isolation vs Frequency



RF to IF Isolation vs Frequency



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