泰莱微波 Talent Microwave

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Reflective,E-band Waveguide Switch

71-86Hz/SP4T/WR-12 Model: TMSP4T-071086-R

The TMSP4T-071086-R is a E-Band, SP4T reflective switch. The switch exhibits 5 dB typical insertion loss and 25 dB nominal isolation across the frequency range of 71 to 86 GHz. The control voltage of the standard model is TTL. The RF input and output ports are WR-12 waveguides with UG-387/UM anti-cocking flanges.

Features:

- Frequency range: 71-86 GHz
- Low Insertion Loss: 5dB
- High Isolation
- Switch Type: Reflective

Applications:

- THz Systems
- Test Equipment

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	71		86	GHz
插损 Insertion Loss		5		dB
隔离 Isolation		25		dB
切换速度 Switch Speed		100		ns
输入回损 Input Return Loss		-12		dB
输出回损 Output Return Loss		-12		dB
直流电压 DC Voltage		5		V DC
控制电压 Control Voltage		5		V
直流电流 DC Current		40		mA
开关类型 Switch type	Reflective			

绝对最大值 Absolute Maximum Ratings :

描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	+5.5	V
射频输入功率 RF Input Power	+20	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

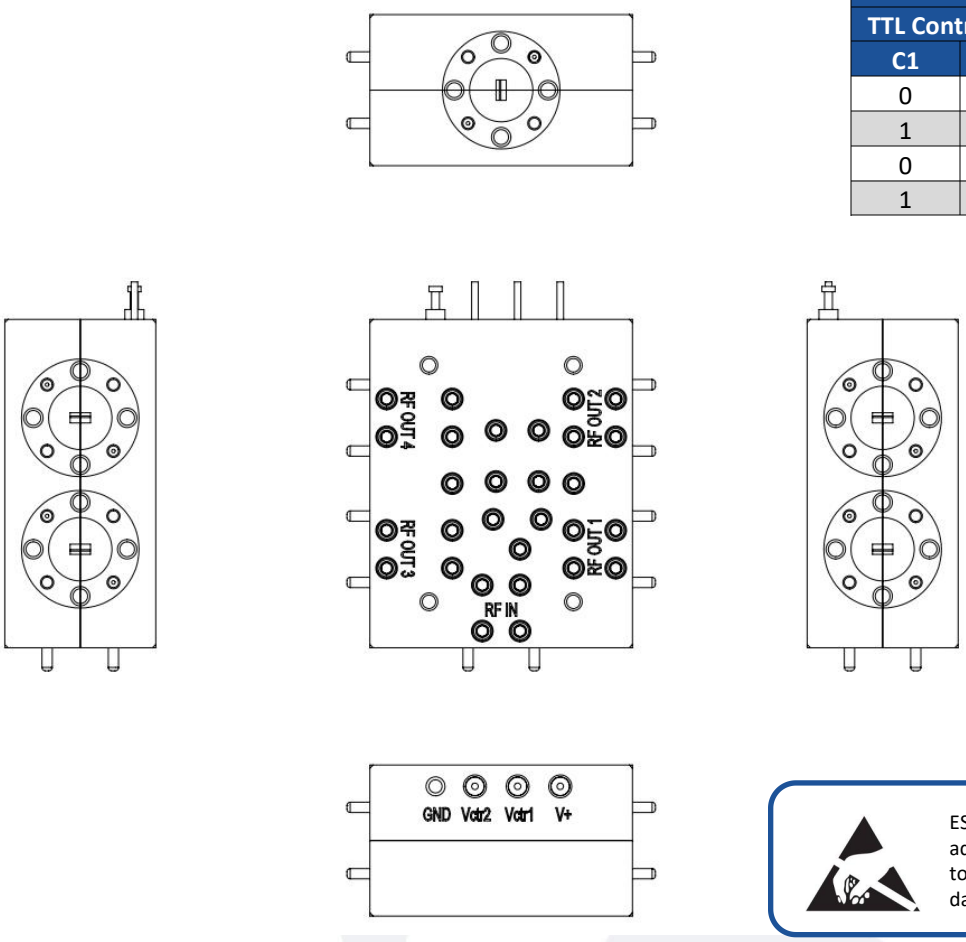
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机械特性 Mechanical Specifications:

描述 Description	参数 Parameter	单位 Units
输入接口 Input Connector	WR-12/UG-387/U	
输出接口 Output Connector	WR-12/UG-387/U	
直流控制接口 Control Bias	Solder Pin	
尺寸 Size	50*40*23	mm

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



真值表 Truth Table		
TTL Control Input		Signal Path State
C1	C2	
0	0	RF1 On
1	0	RF2 On
0	1	RF3 On
1	1	RF4 On

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

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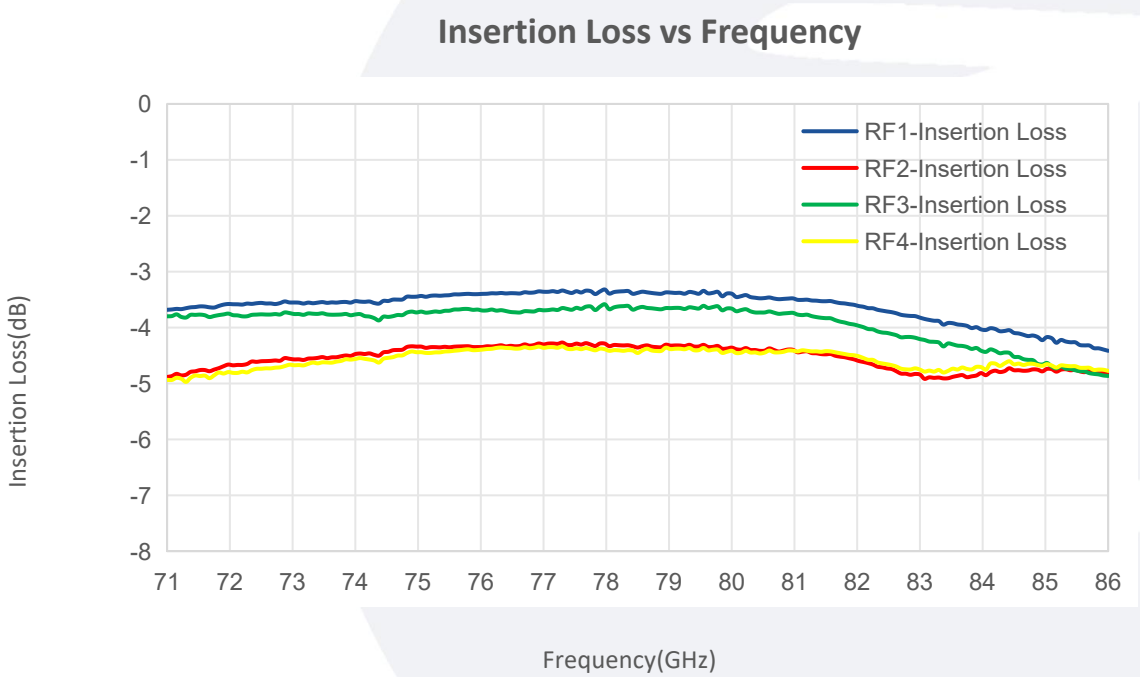
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	℃
存储温度 Non-operating Temperature	-45		+85	℃
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
TMSP4T-071086-R	Reflective,E-band Waveguide Switch 71-86 GHz,SP4T,WR-12/UG-387/U	Rev.1.2

典型曲线 Typical Performance Data:

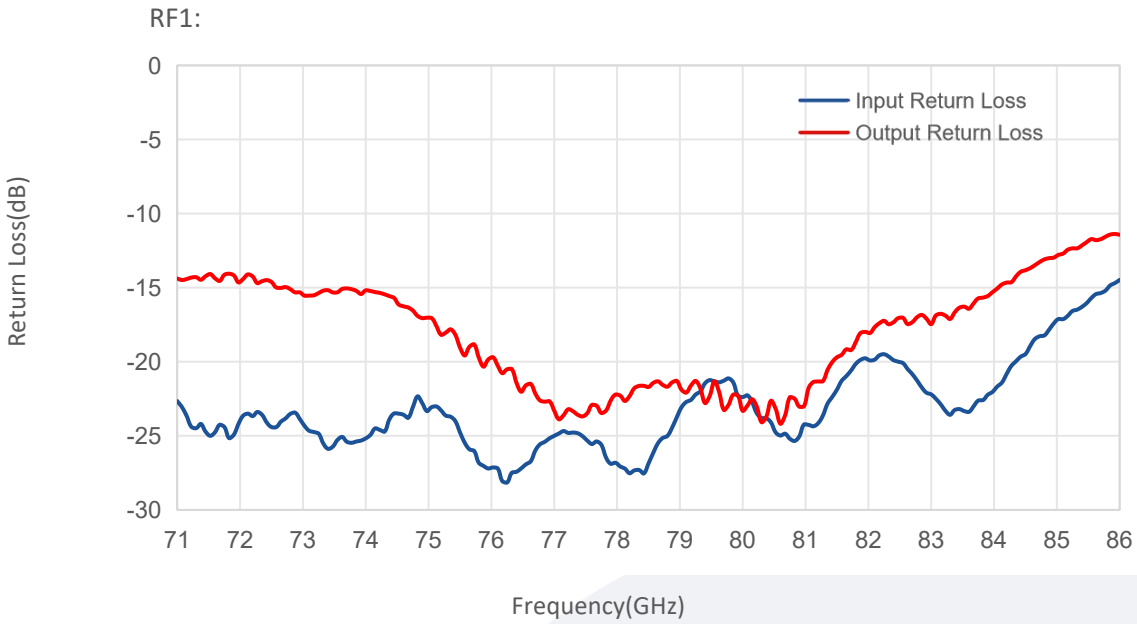


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

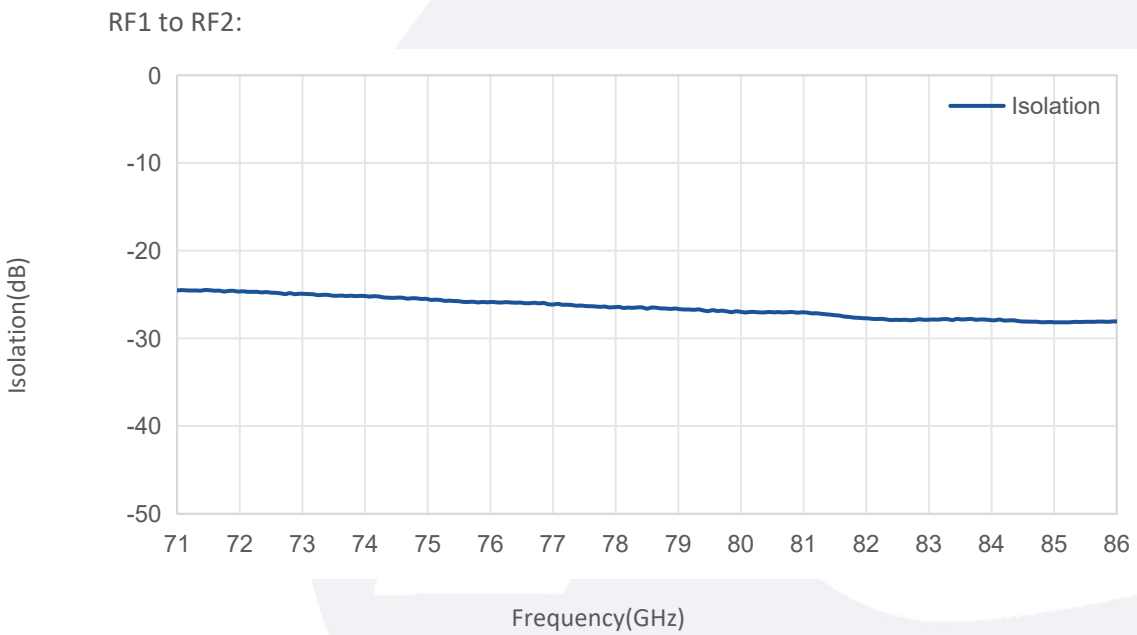
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典型曲线 Typical Performance Data:

Return Loss vs Frequency



Isolation vs Frequency



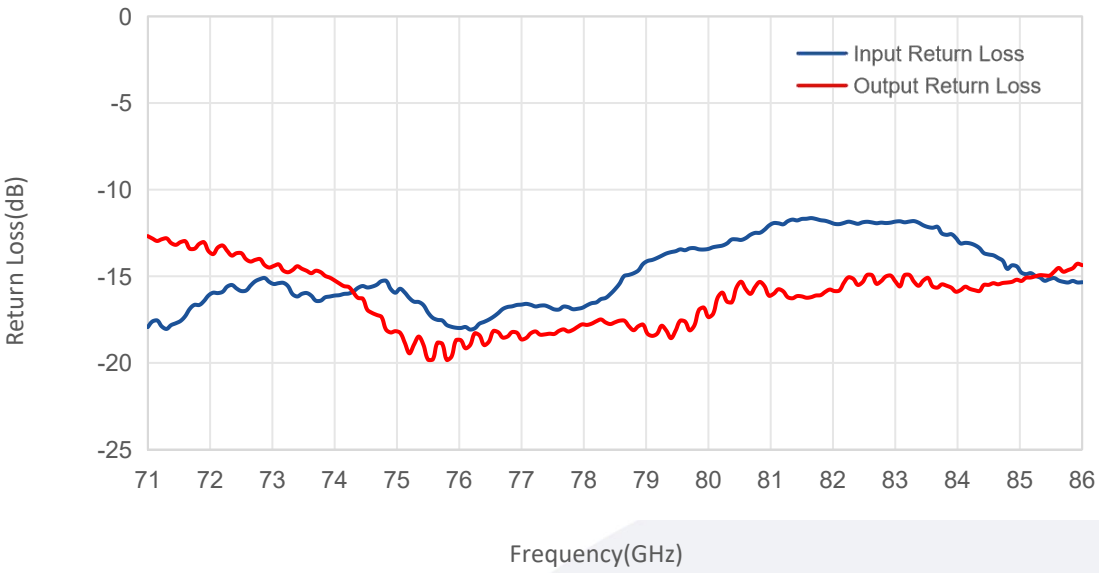
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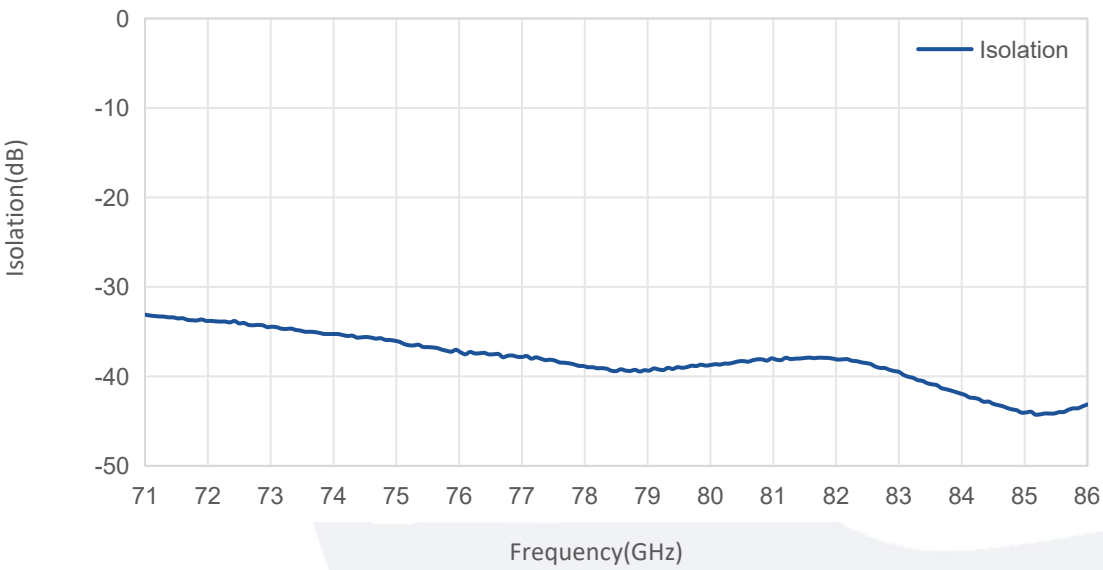
Return Loss vs Frequency

RF2:



Isolation vs Frequency

RF2 to RF1:



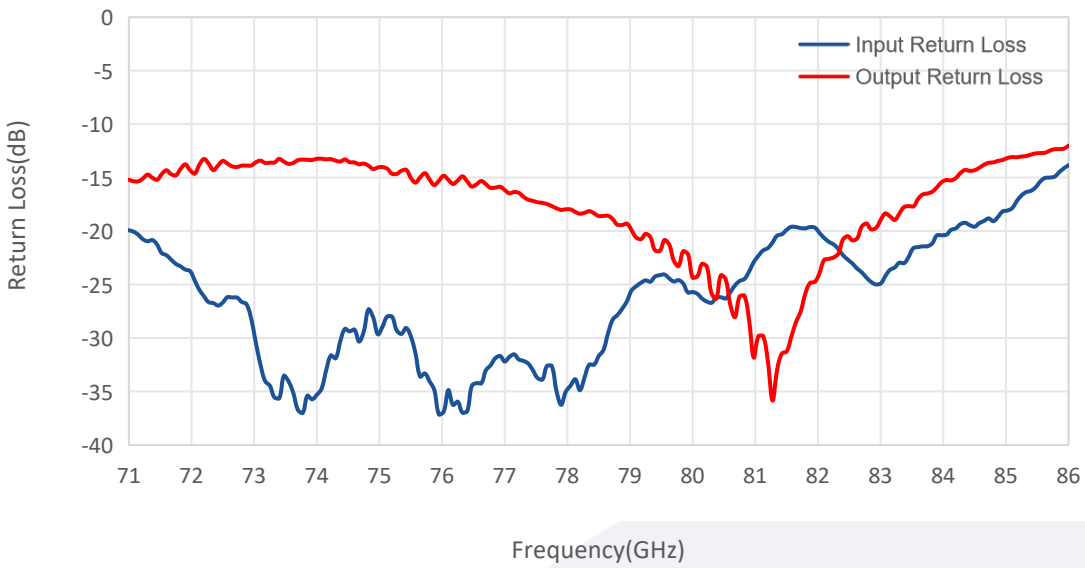
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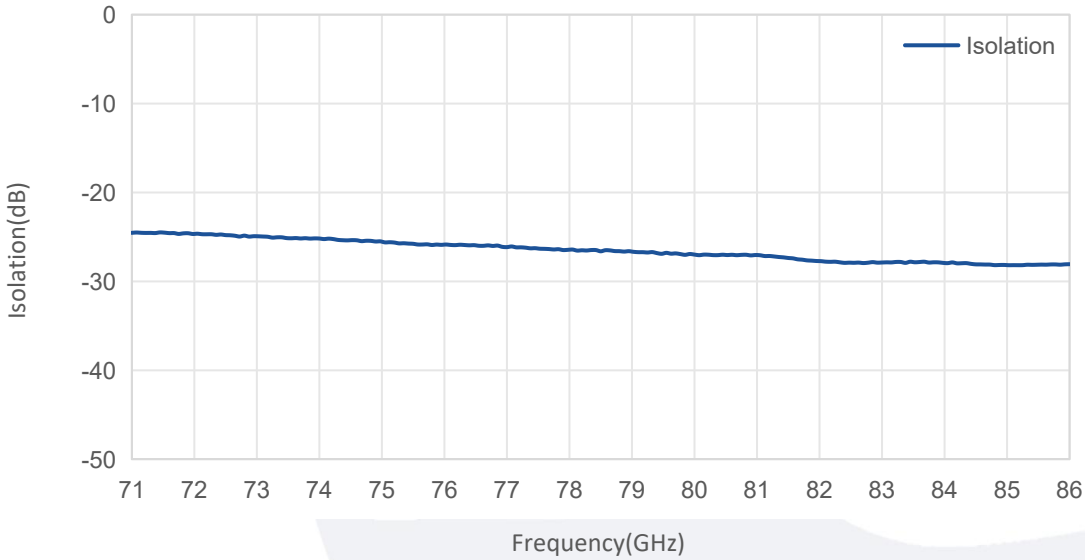
Return Loss vs Frequency

RF3:



Isolation vs Frequency

RF3 to RF4:



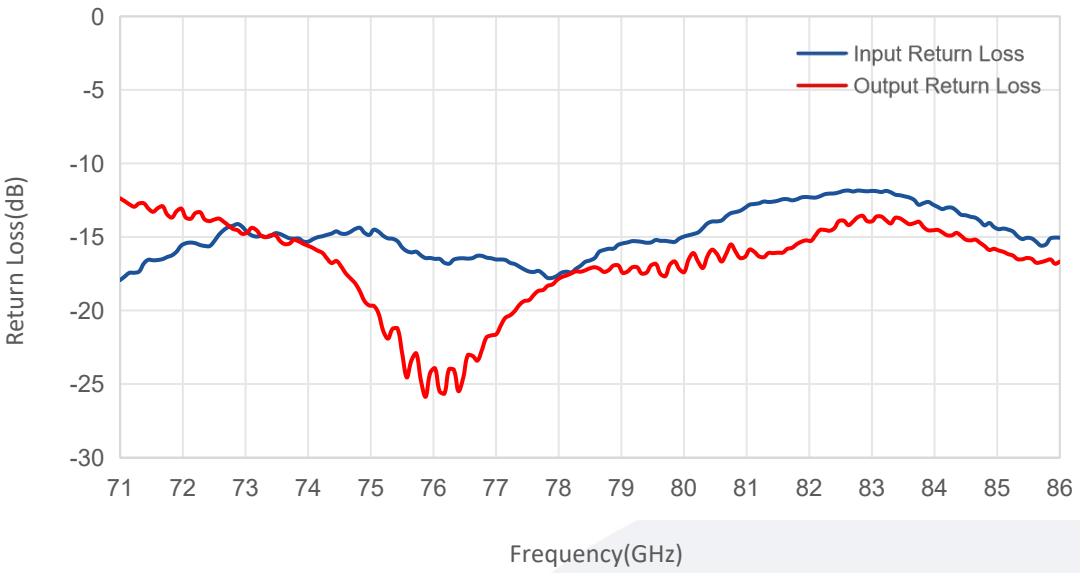
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典型曲线 Typical Performance Data:

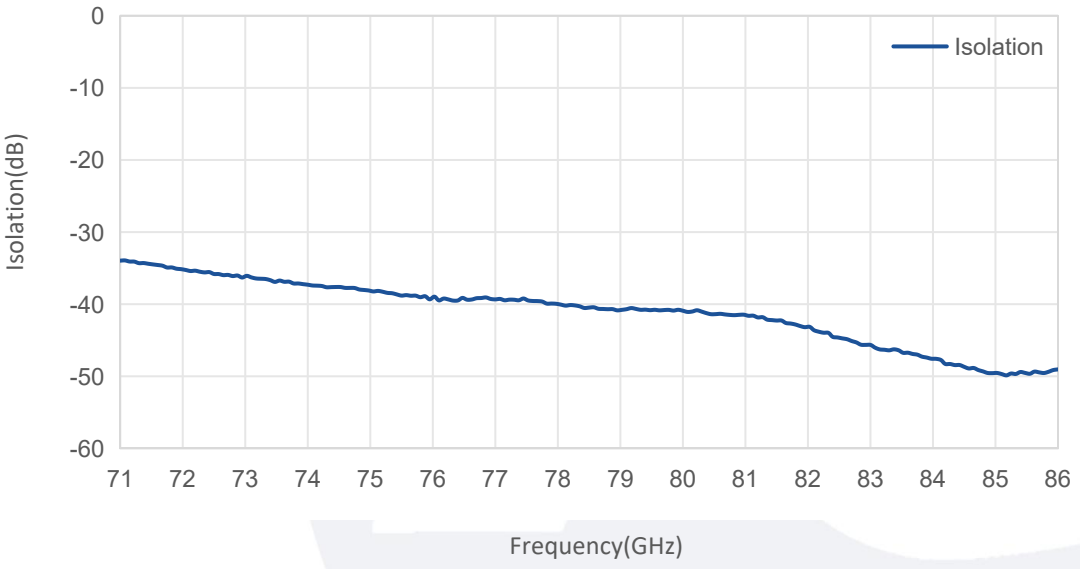
Return Loss vs Frequency

RF4:



Isolation vs Frequency

RF4 to RF3:



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