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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	71		86	GHz
Insertion Loss		5		dB
Isolation		25		dB
Switch Speed		100		ns
Input Return Loss		-12		dB
Output Return Loss		-12		dB
DC Voltage		5		V DC
Control Voltage		5		V
DC Current		40		mA
Switch type	Reflective			

Absolute Maximum Ratings :

Description	Parameter	Units
Supply Bias Voltage	+5.5	V
RF Input Power	+20	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

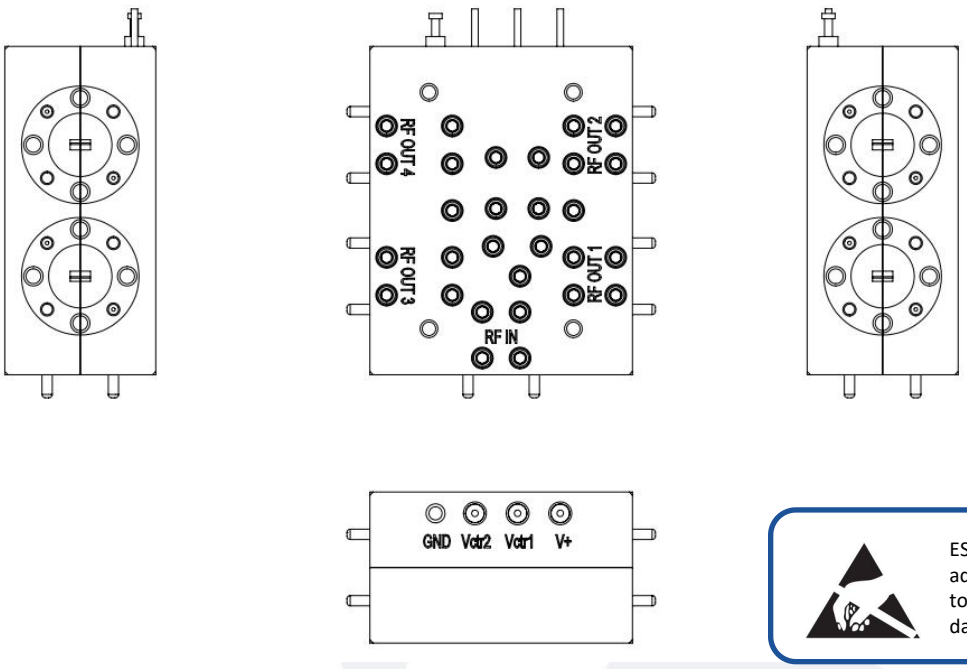
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Mechanical Specifications:

Description	Parameter	Units
Input Connector	WR-12/UG-387/U	
Output Connector	WR-12/UG-387/U	
Control Bias	Solder Pin	
Size	50*40*23	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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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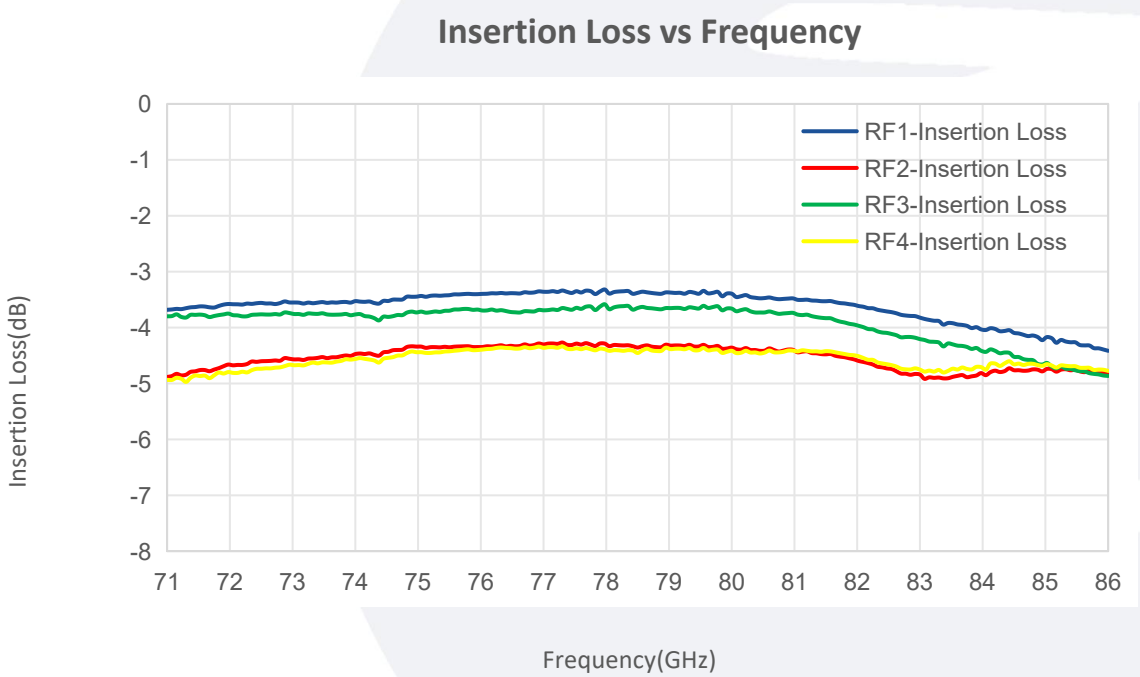
Environmental Conditions:

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

Typical Performance Data:

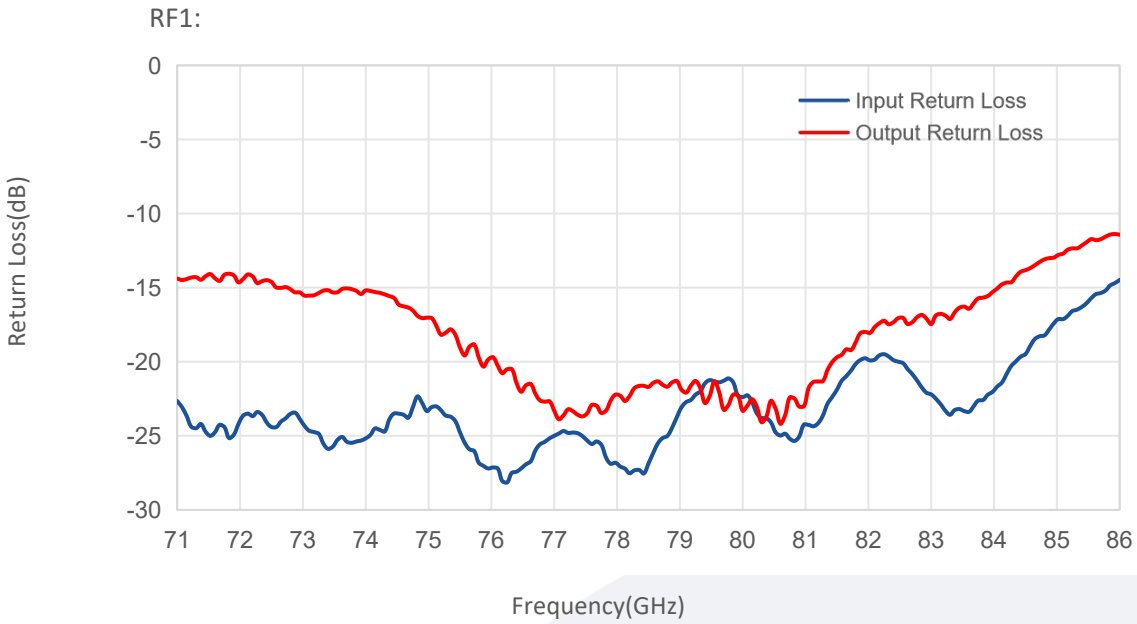


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

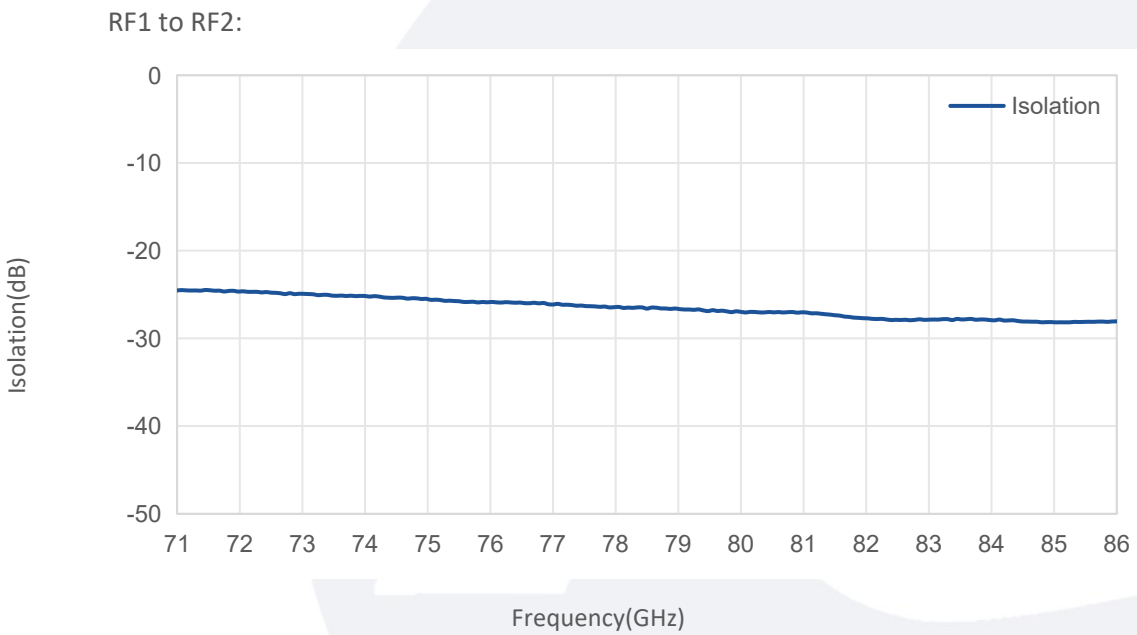
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Typical Performance Data:

Return Loss vs Frequency



Isolation vs Frequency



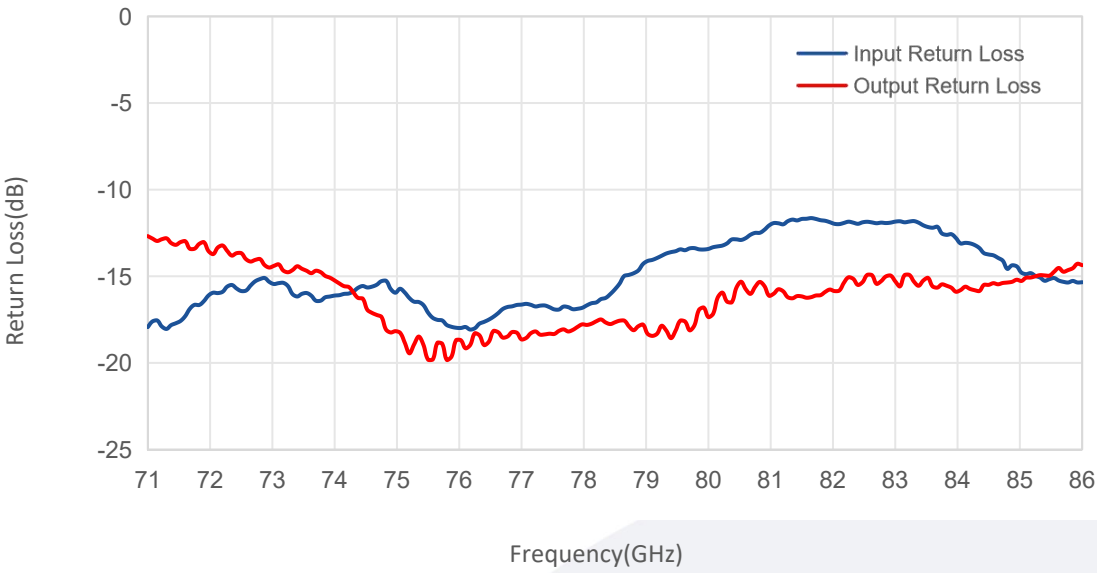
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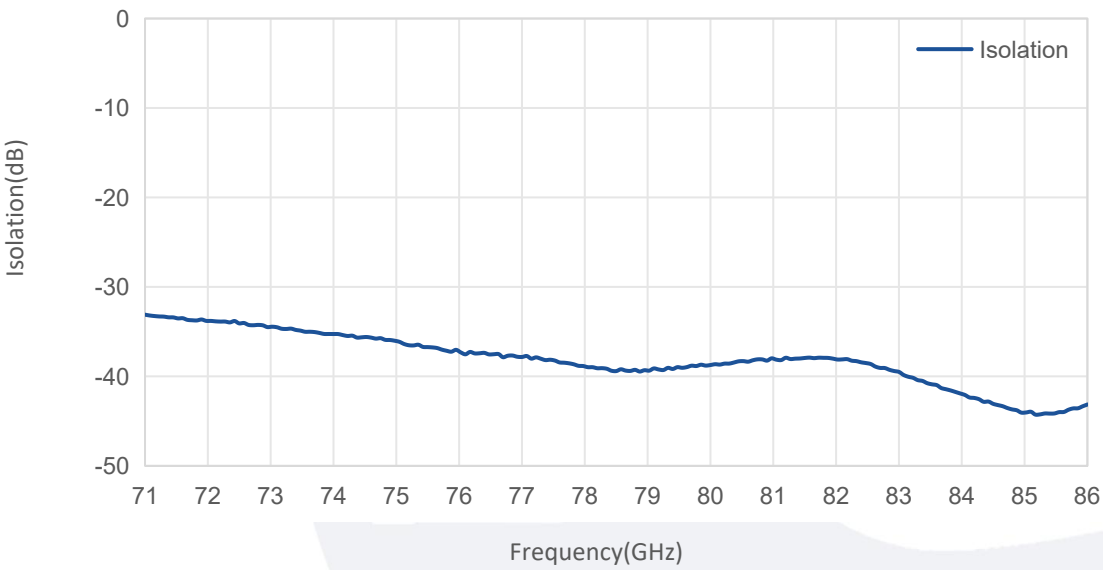
Return Loss vs Frequency

RF2:



Isolation vs Frequency

RF2 to RF1:



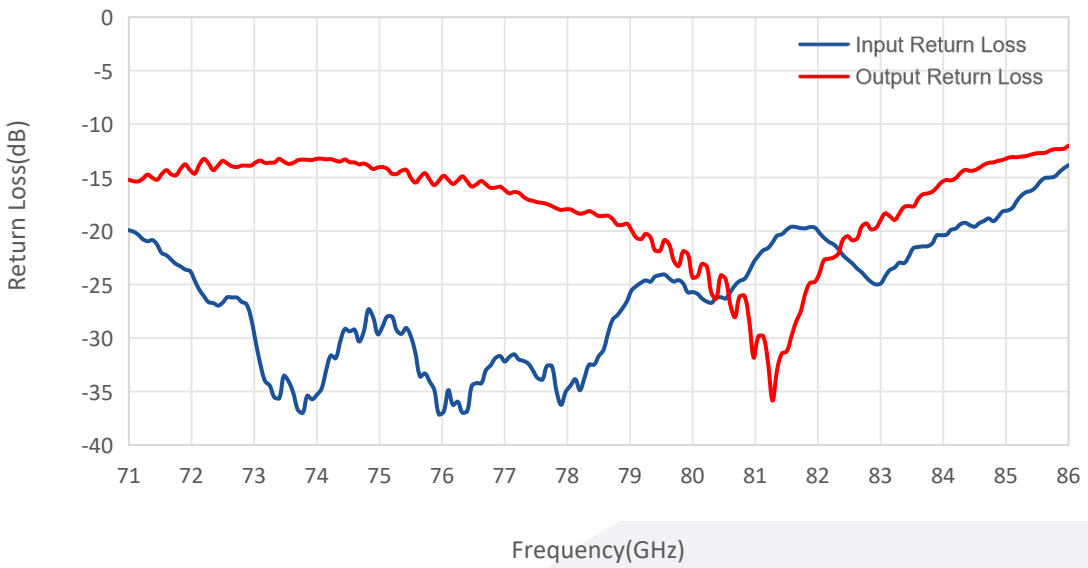
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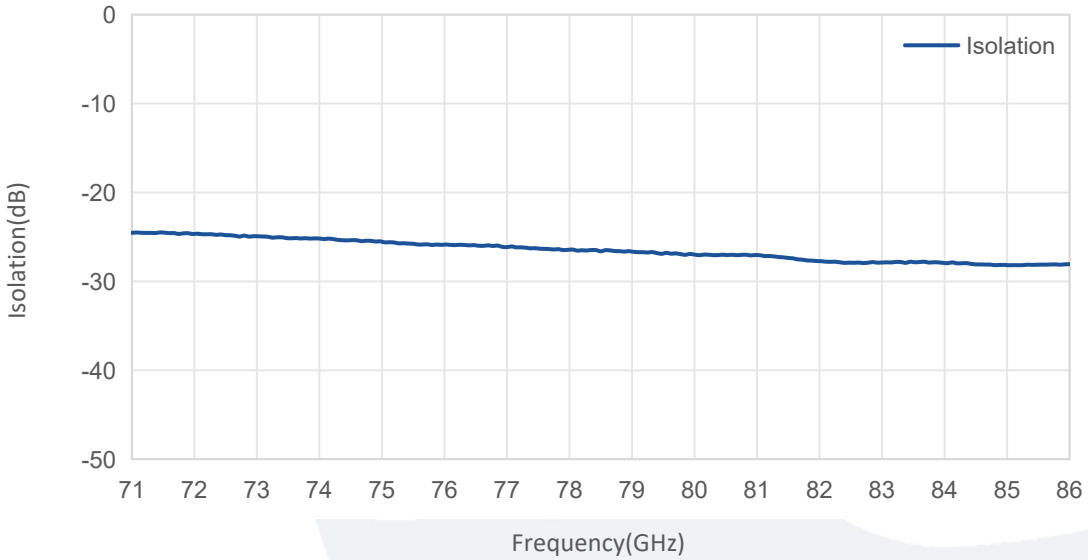
Return Loss vs Frequency

RF3:



Isolation vs Frequency

RF3 to RF4:



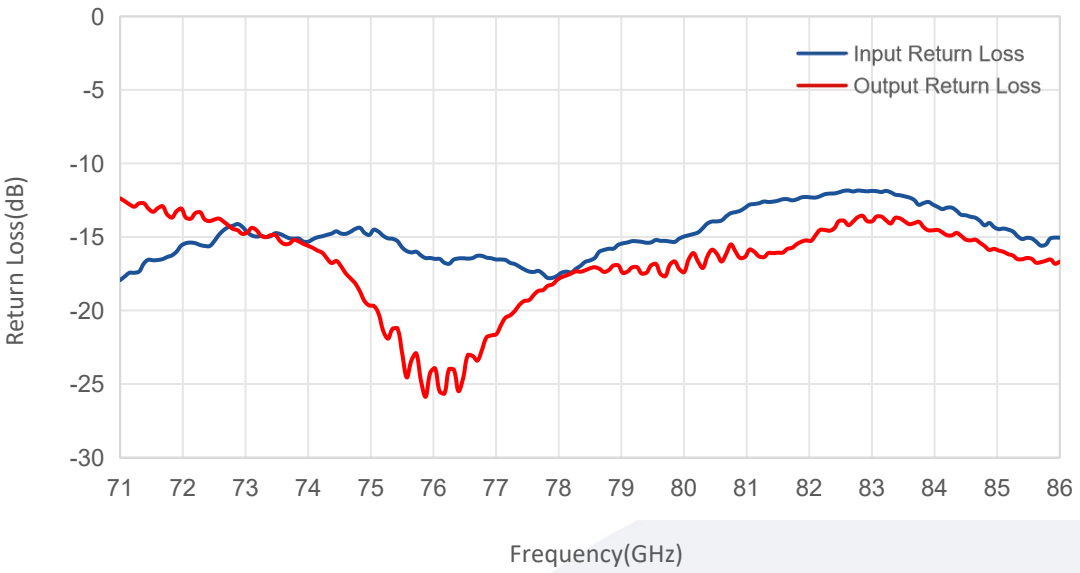
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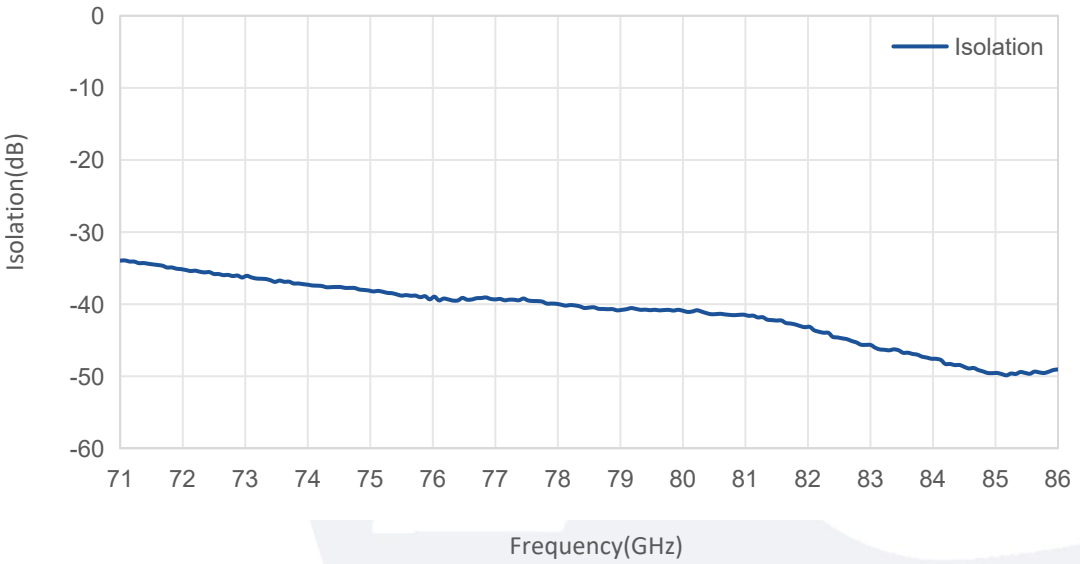
Return Loss vs Frequency

RF4:



Isolation vs Frequency

RF4 to RF3:



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