泰莱微波
Talent Microwave

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W-Band Reflective FET Switch

75-110 GHz/SP4T/ WR-10

Model: TMSP4T-075110-10

TheTMSP4T-075110-10 is a W-Band switch with a TTL driver that operates between 75 and 110 GHz. The SP4T switch offers 45 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are WR-10.

Features:

- Frequency range: 75-110GHz
- Insertion Loss: 7dB
- Power Handling : 36 dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	75		110	GHz
Insertion Loss		7		dB
Isolation		45		dB
Switch Speed		100		ns
Input VSWR		1.4		:1
Output VSWR		1.6		:1
Output P1dB		20		dBm
DC Voltage		+5		V DC
Control Voltage TTL	“0”=Low;“1”=High			V
DC Supply Current		100		mA
Switch type	Reflective			

Absolute Maximum Ratings :

Parameter	Description	Units
Supply Bias Voltage	+5（+5%）	V
RF Input Power	36	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

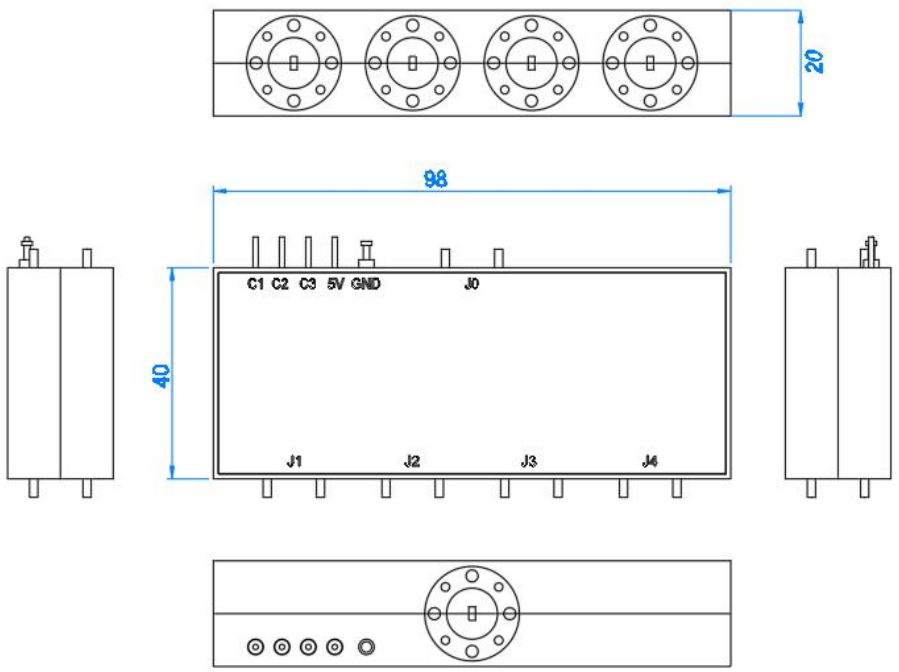
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Mechanical Specifications:

Parameter	Description	Units
Input /Output Connector	WR-10/UG-387/U	
Control Bias	Solder Pin	
Size	98*40*20	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Truth Table			
TTL Control Input			Signal Path State
C1	C2	C3	
1	0	1	J0-J1
1	0	0	J0-J2
0	1	0	J0-J3
0	1	1	J0-J4

TTL Control Voltages &VDD	
Stage	**Bias Condition**
VDD	+5V (±5%)
Low（0）	0 to 0.8Vdc
High（1）	+5.0Vdc (±5%)

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

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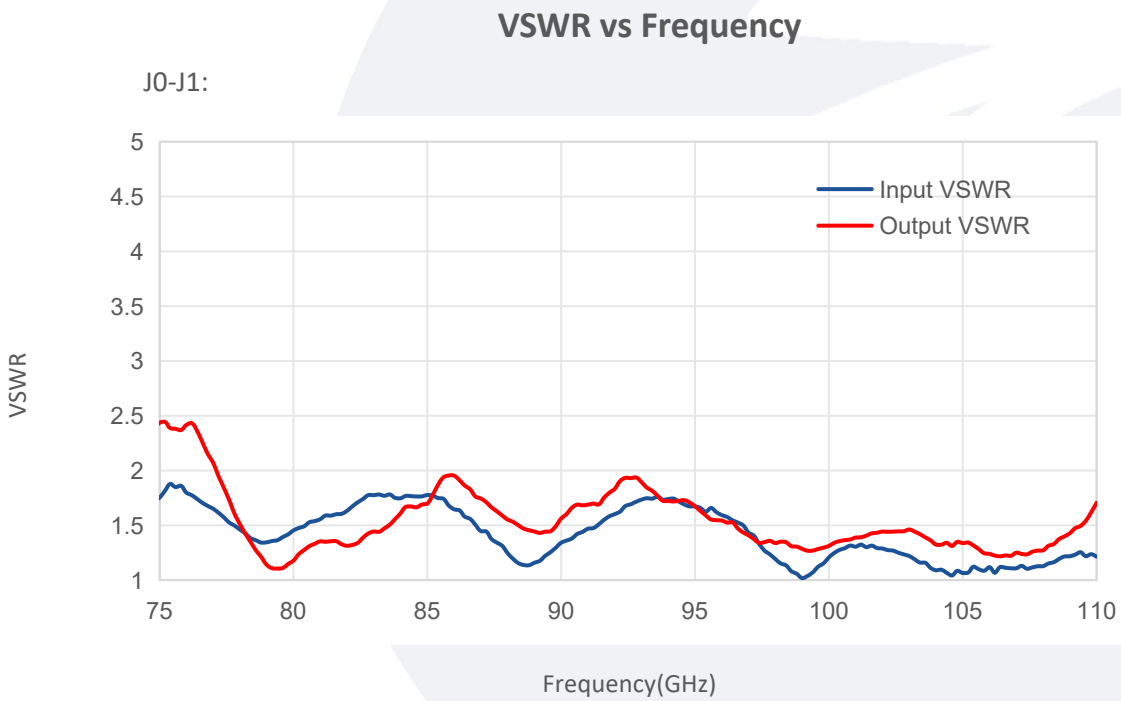
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+125	℃
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-075110-10	W-Band Reflective FET Switch 75-110 GHz,SP4T,WR-10	Rev.1.0

Typical Performance Data:

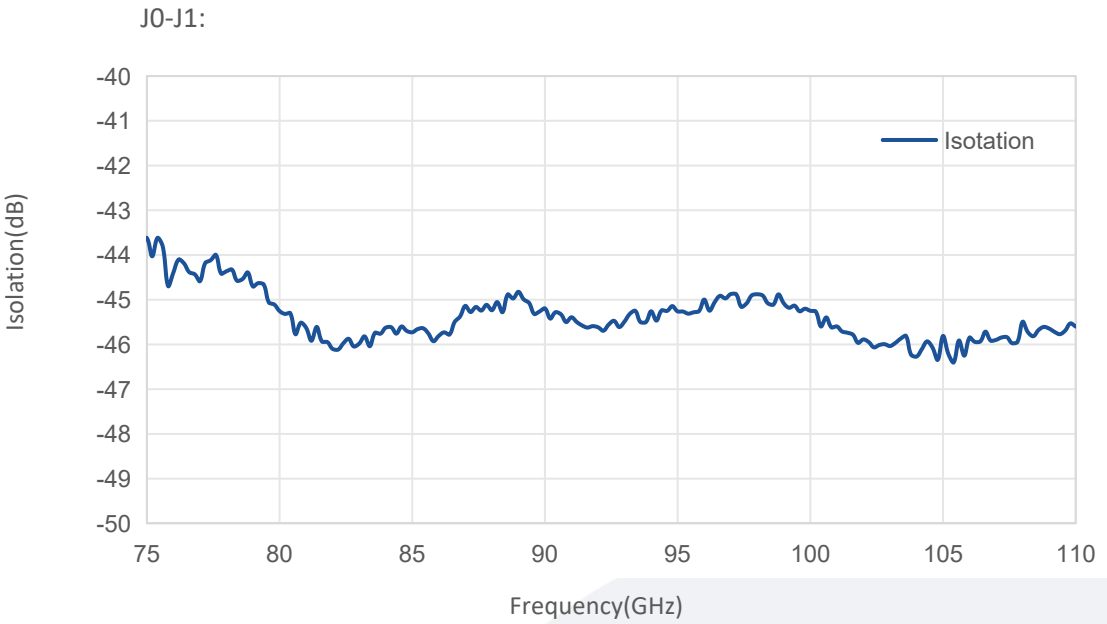


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

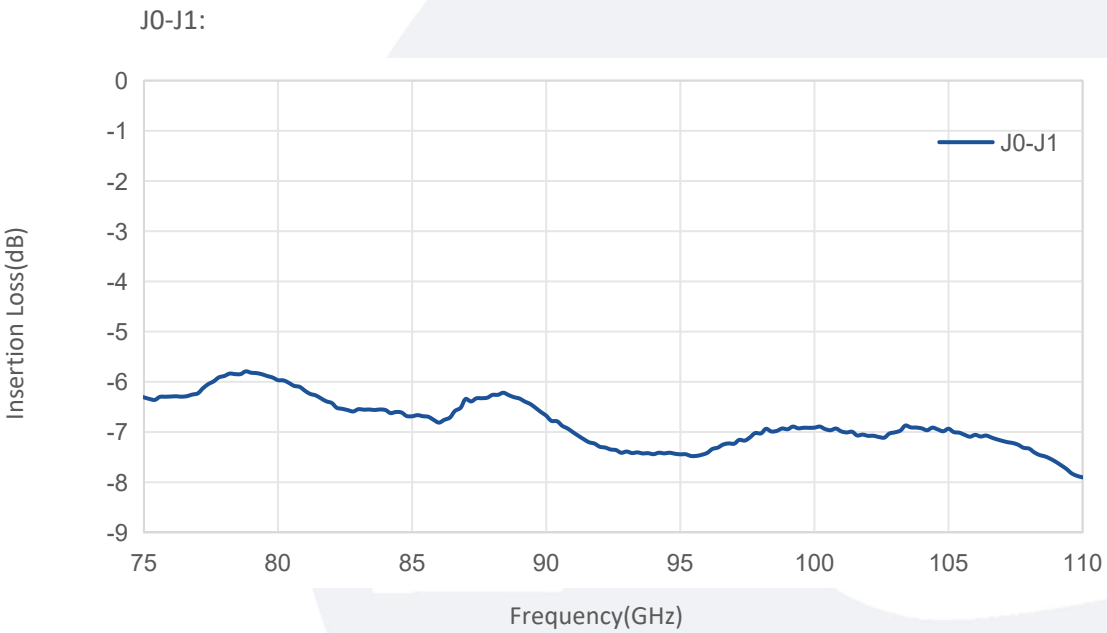
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Typical Performance Data:

Isolation vs Frequency



Insertion Loss vs Frequency



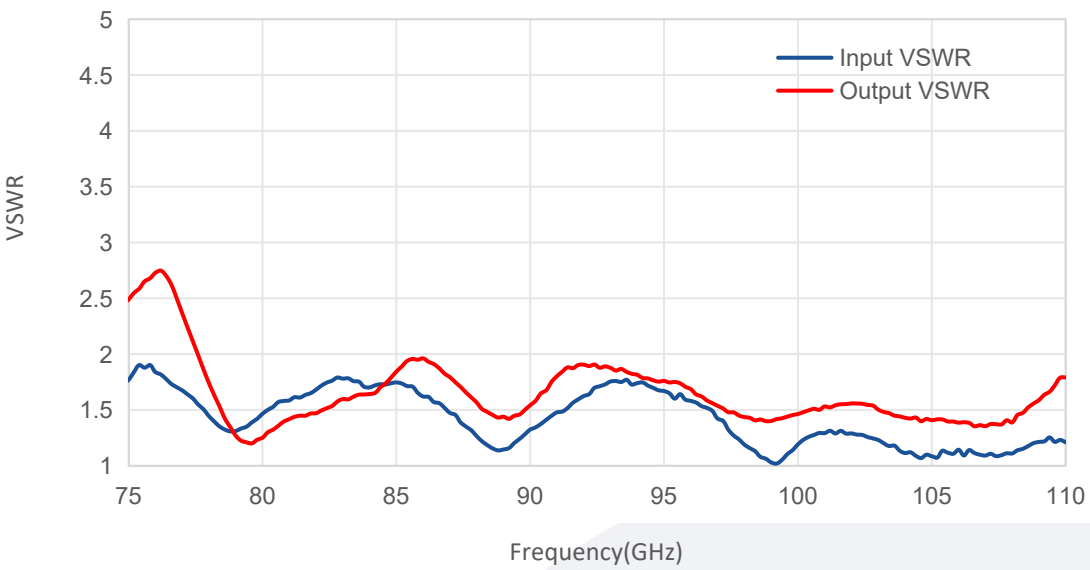
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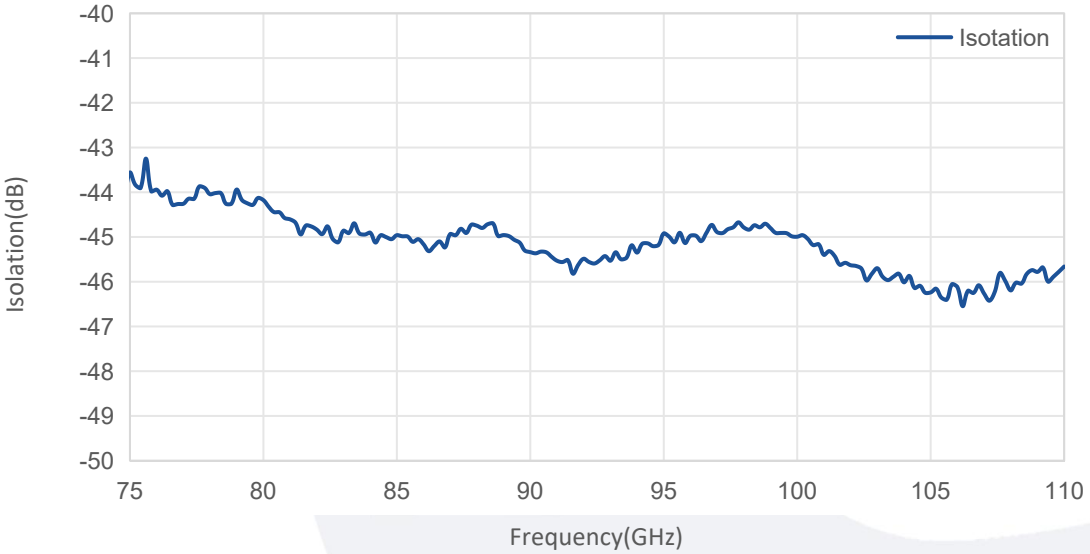
VSWR vs Frequency

J0-J2:



Isolation vs Frequency

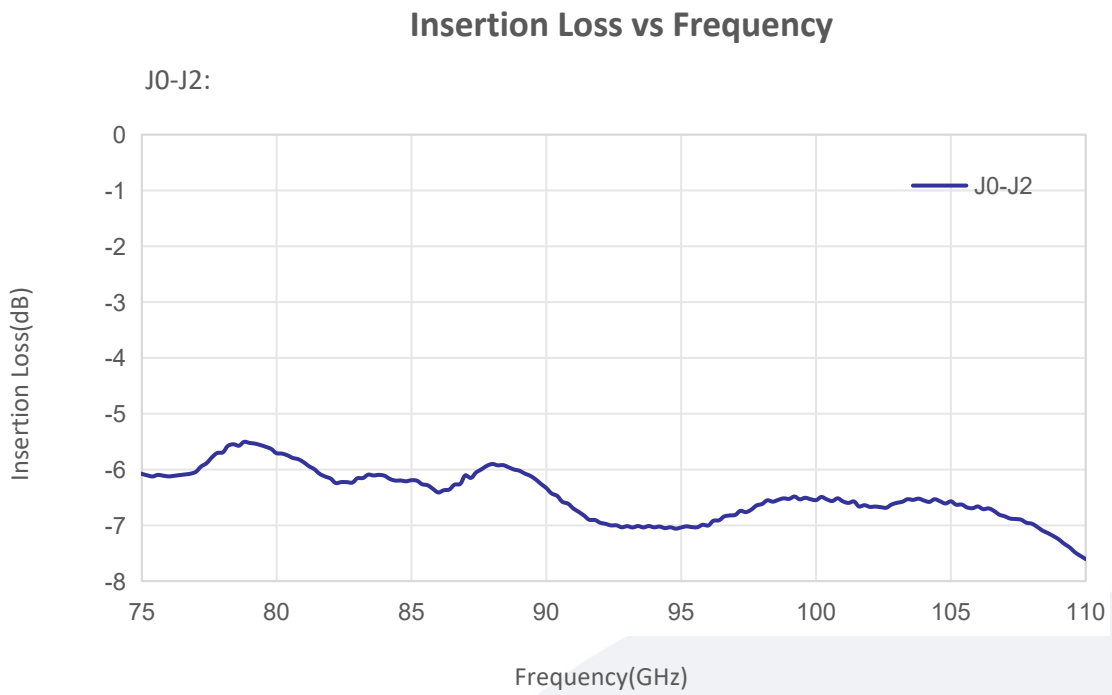
J0-J2:

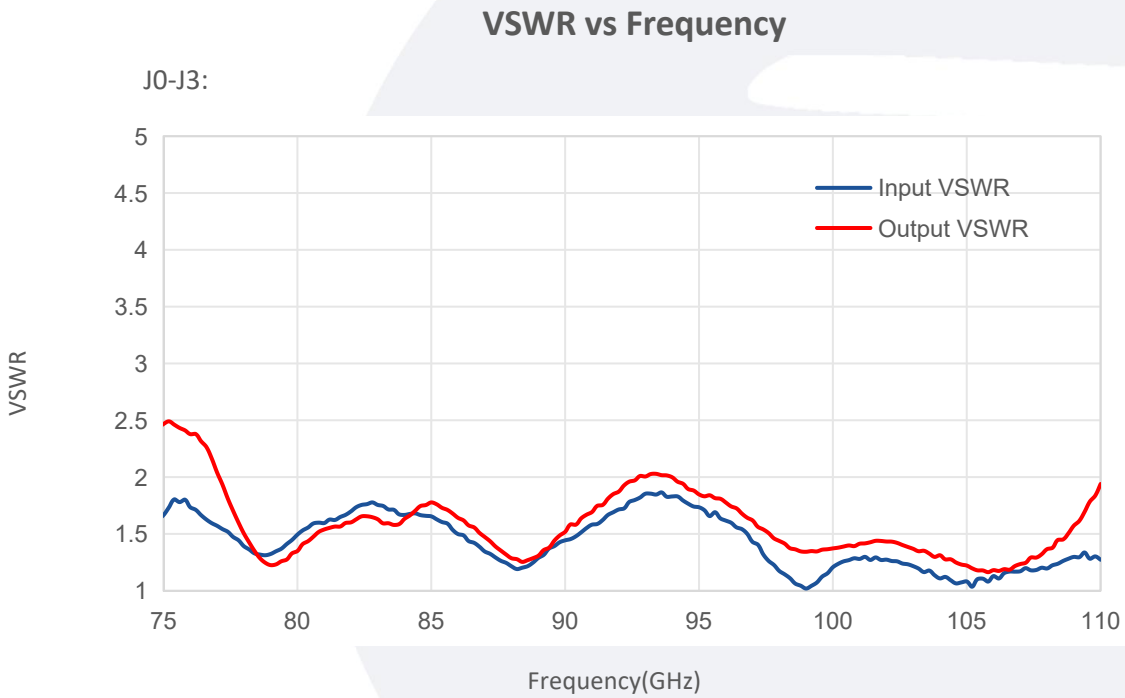


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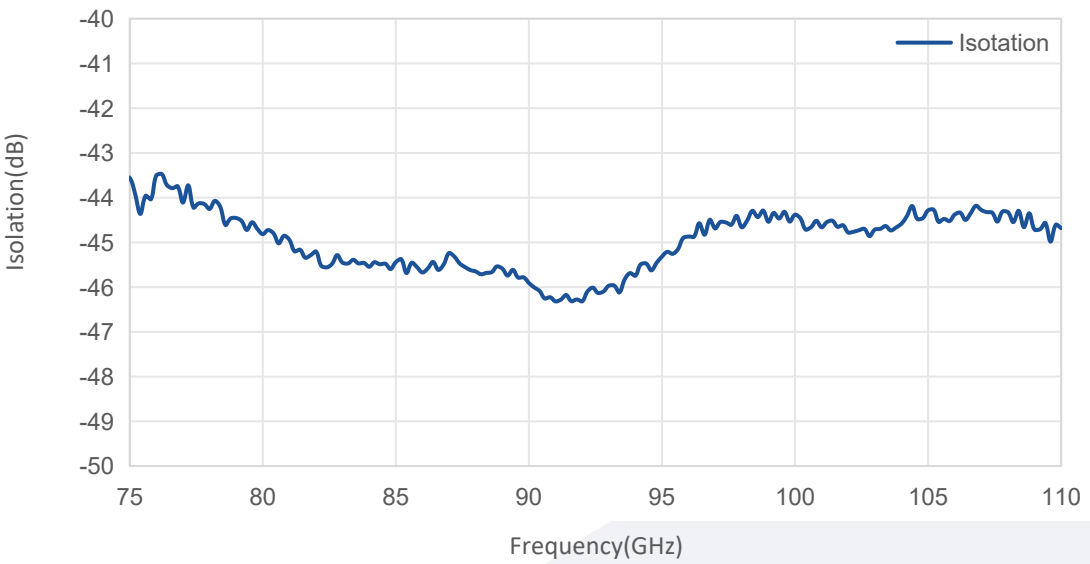
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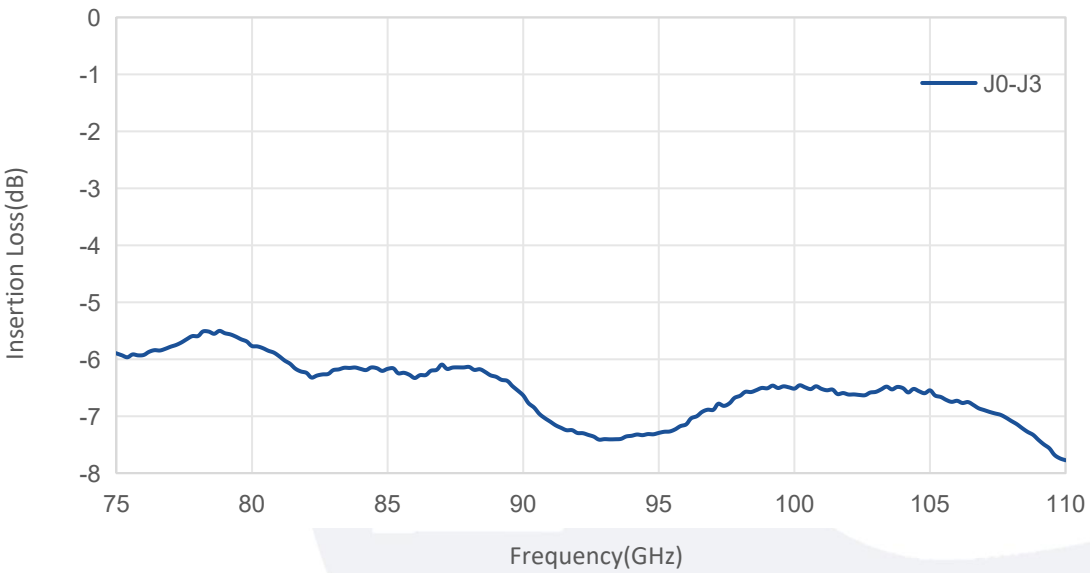
Isolation vs Frequency

J0-J3:



Insertion Loss vs Frequency

J0-J3:

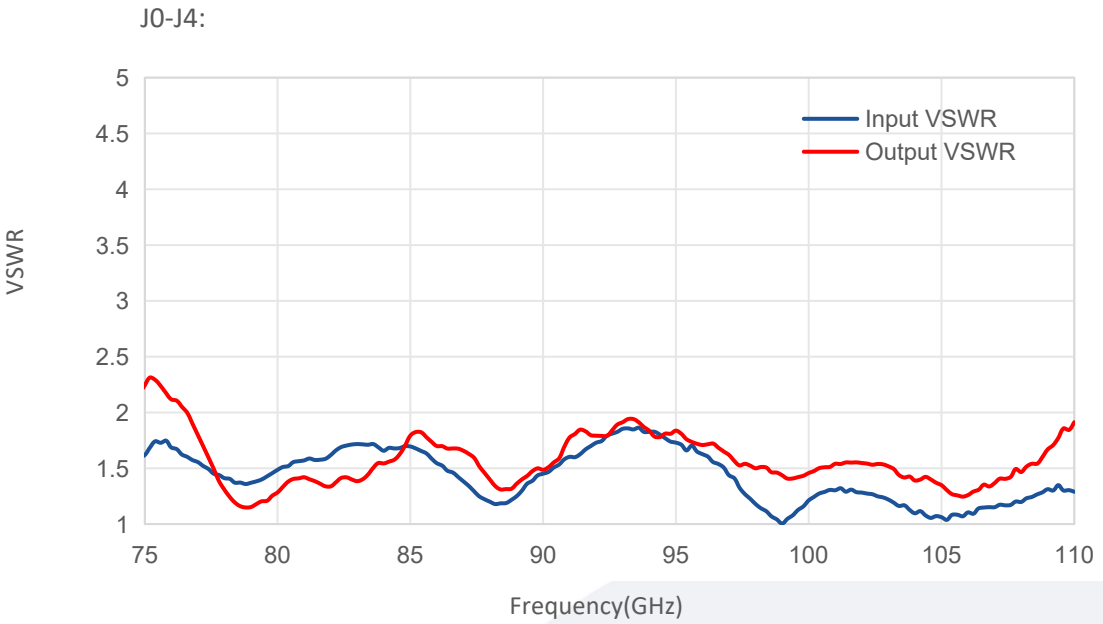


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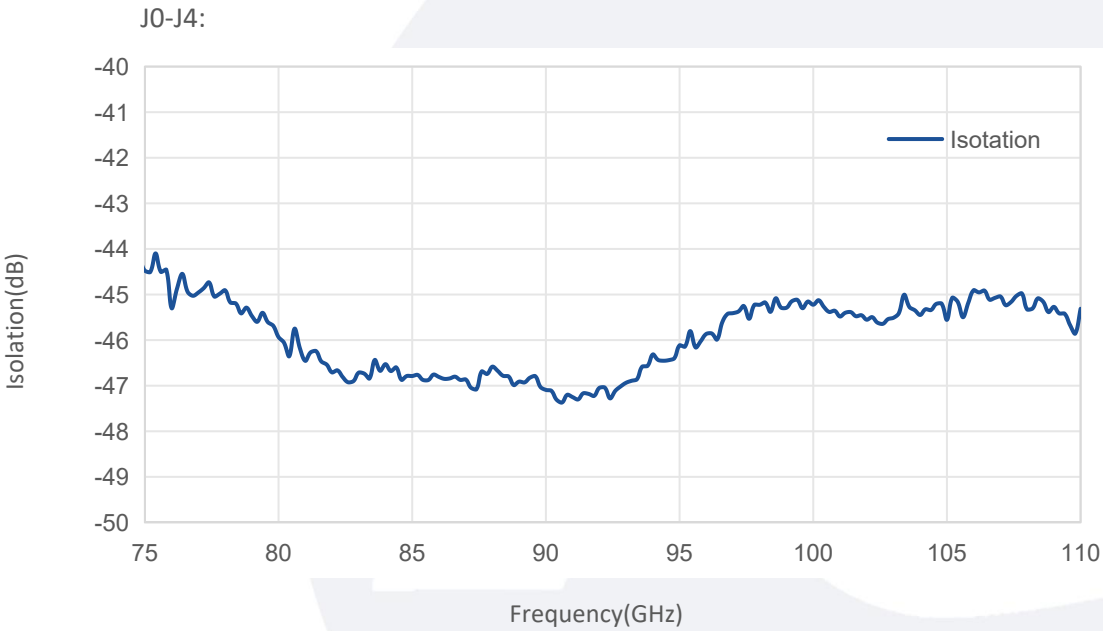
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Typical Performance Data:

VSWR vs Frequency



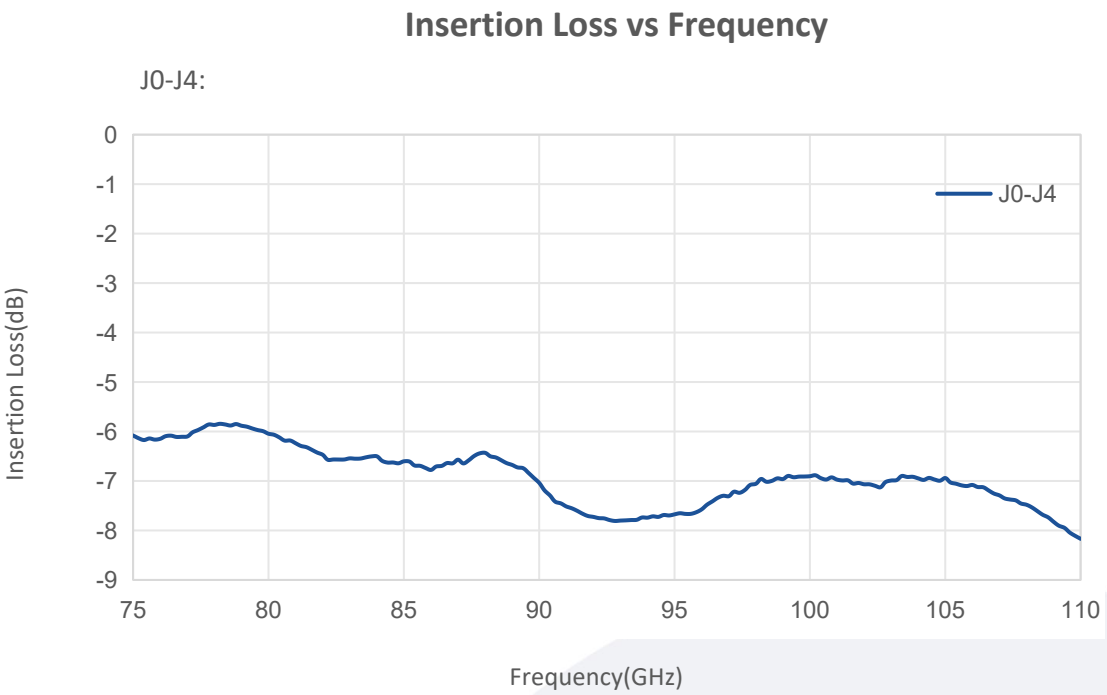
Isolation vs Frequency



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