泰莱微波
Talent Microwave

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V-Band Reflective FET Switch

50-75GHz/SPDT/ WR-15

Model: TMSPDT-050075-15

TheTMSPDT-050075-15 is a V-Band switch with a TTL driver that operates between 50 and 75 GHz. The SPDT switch offers 30 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The switch is equipped with WR-15 waveguide and UG-385/U-M flange as its input port and output port.

Features:

- Frequency range: 50-75GHz
- Insertion Loss: 3.5dB
- Power Handling : 20dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	50		75	GHz
Insertion Loss		3.5		dB
Isolation		38		dB
Switch Speed		100		ns
Input VSWR		1.8		:1
Output VSWR		1.8		:1
Output P1dB		20		dBm
DC Voltage		-5		V DC
Control Voltage TTL		“0”=Low;“1”=High		V
DC Supply Current		5		mA
Switch type		Reflective		

Absolute Maximum Ratings :

Parameter	Description	Units
Supply Bias Voltage	-5（+5%）	V
RF Input Power	27	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

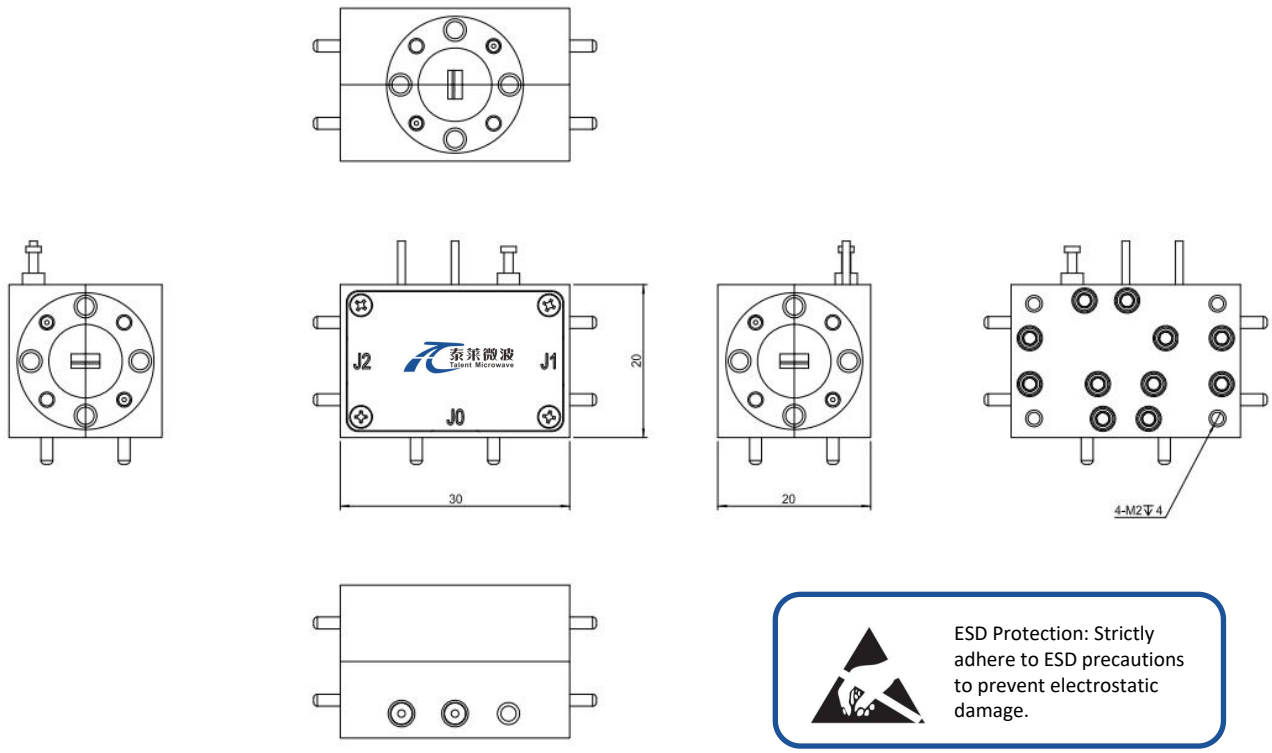
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Mechanical Specifications:

Parameter	Description	Units
Input /Output Connector	WR-15/UG-385/U	
Control Bias	Solder Pin	
Size	30*20*20	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

Truth Table	
TTL Control Input	**Signal Path State**
0	J0-J1
1	J0-J2

TTL Control Voltages &VDD	
Stage	**Bias Condition**
VDD	-5V (±5%)
Low（0）	0 to 0.8Vdc
High（1）	3.3 to +5.0Vdc

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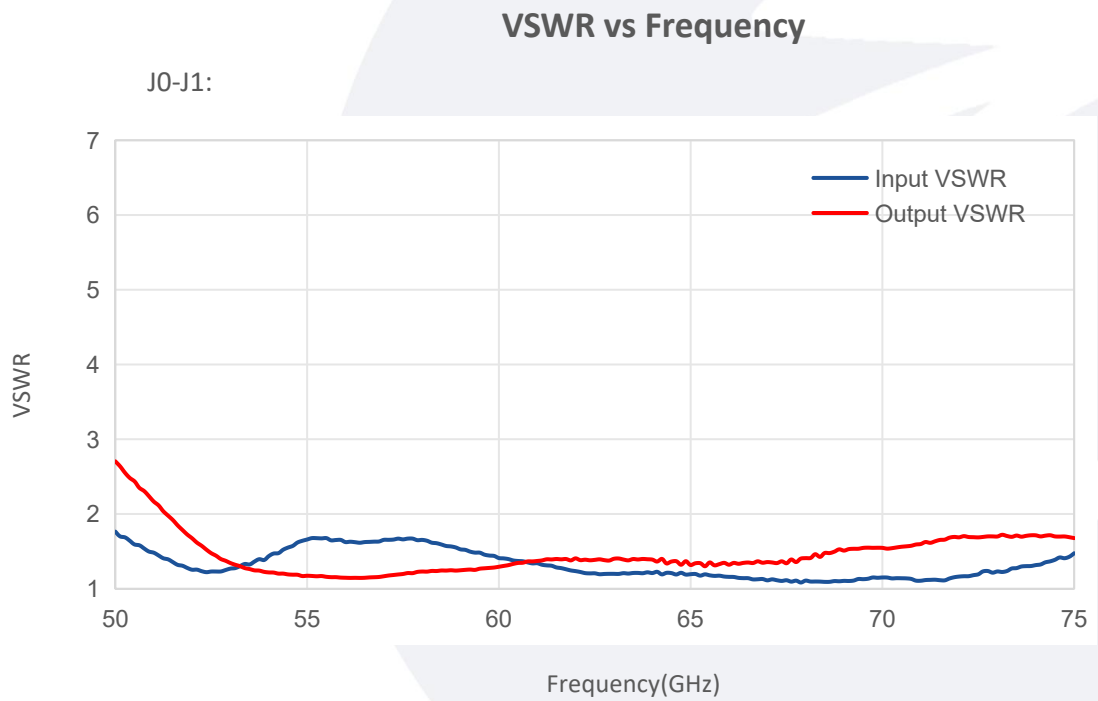
Environmental Conditions:

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
TMSPDT-050075-15	V-Band Reflective FET Switch 50-75GHz,SPDT,WR-15	Rev.1.0

Typical Performance Data:

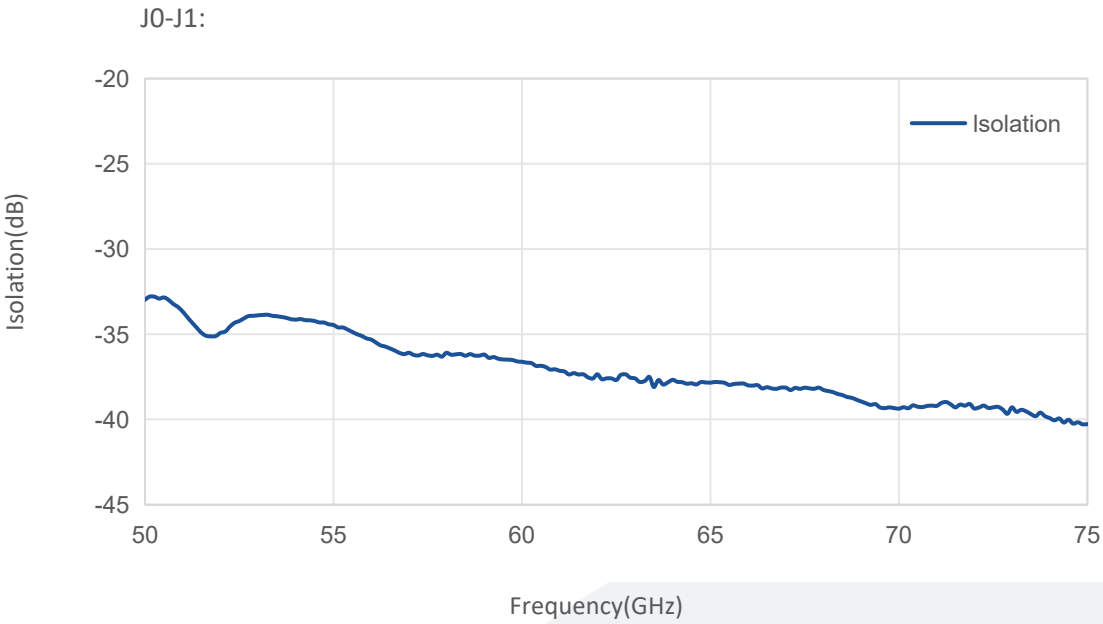


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

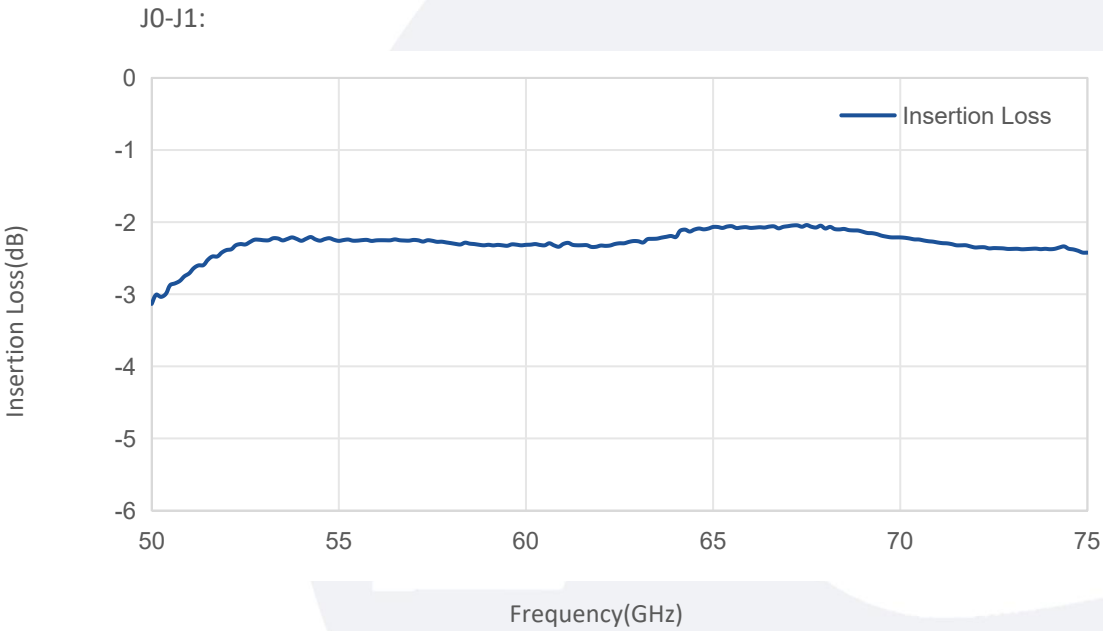
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Typical Performance Data:

Isolation vs Frequency



Insertion Loss vs Frequency

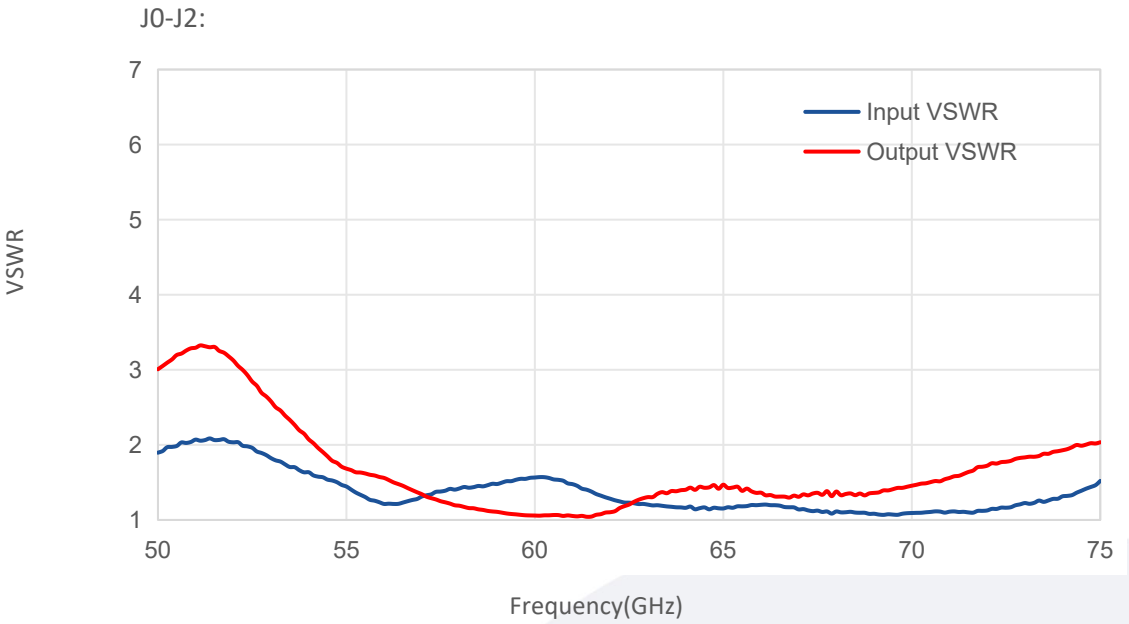


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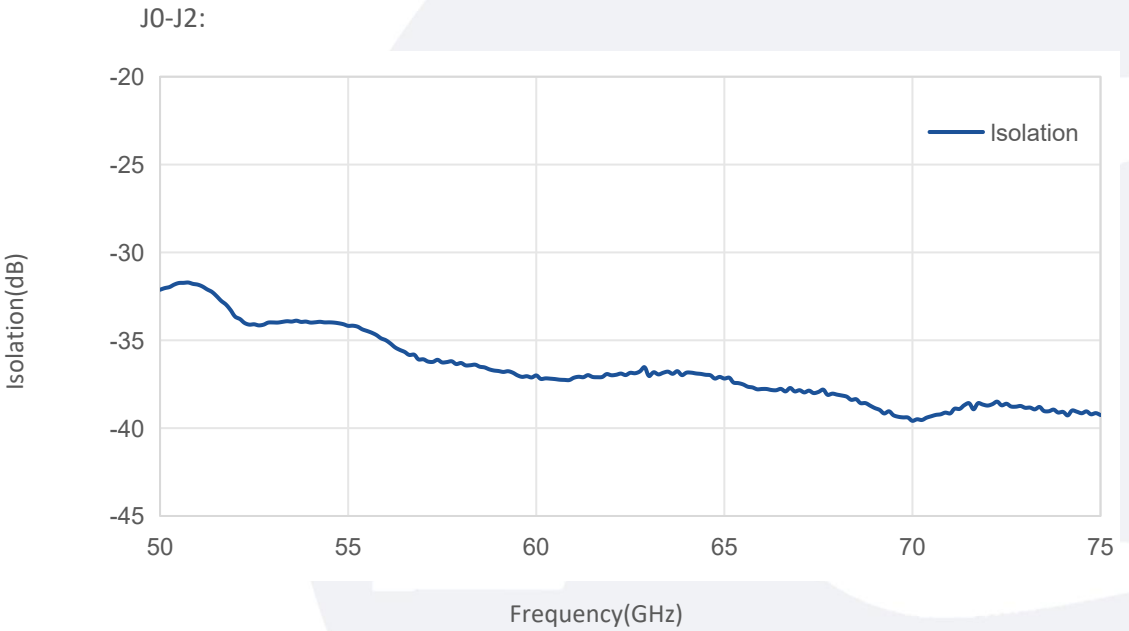
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Typical Performance Data:

VSWR vs Frequency



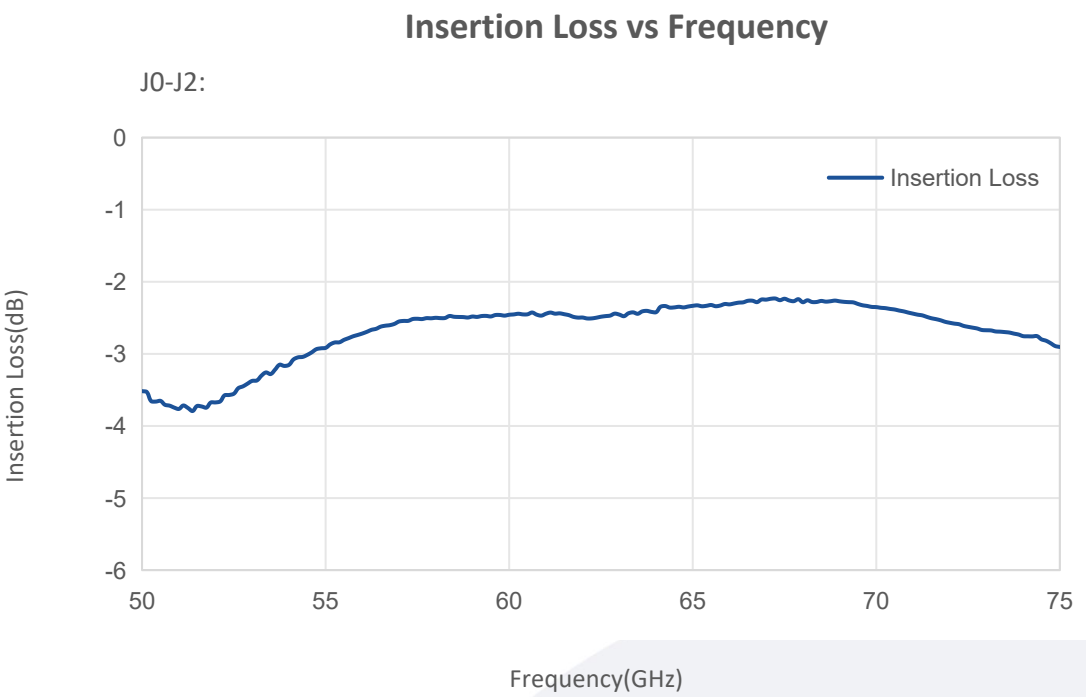
Isolation vs Frequency



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