

Reflective, Broadband MMIC Switch

0.1-110GHz/SPDT/1.0mm Female

Model: TLSPDT0.1G110GR

The TLSPDT0.1G110GR is a reflective type switch with a TTL driver that operates between 0.1 and 110 GHz. The SPDT switch offers 30 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are 1.0 mm female.

Features:

- Frequency range: 0.1-110GHz
- Insertion Loss: 9dB Typ
- Power Handling: 25dBm
- High Isolation
- Switch Type: Reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		110	GHz
Insertion Loss		9		dB
Isolation		30		dB
Switch Speed		100		ns
Input VSWR		2.5		:1
Output VSWR		2.5		:1
Power Handling		25		dBm
DC Supply Voltage		5		V DC
Control Logic TTL		0/+5		V DC
DC Supply Current		5		mA
Switch type	Reflective			
Impedance		50		Ohms

Absolute Maximum Ratings:

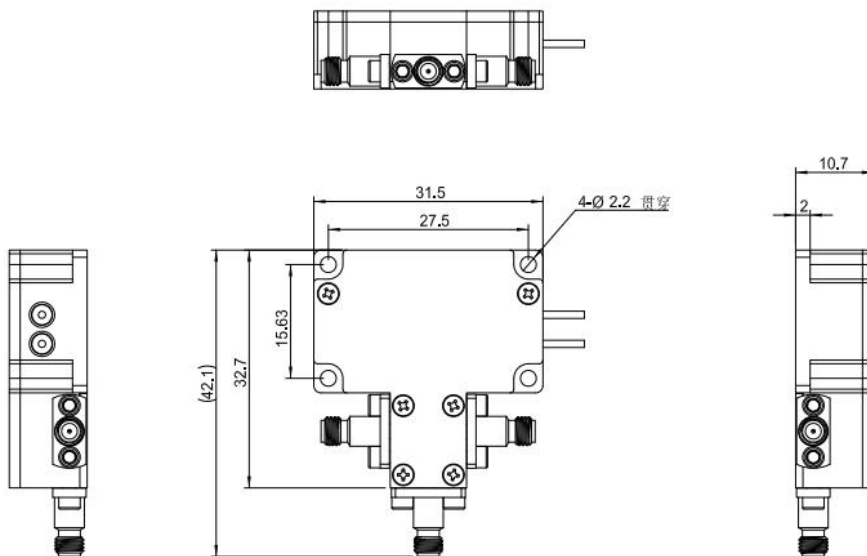
Description	Parameter	Units
Supply Bias Voltage	5	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	1.0mm Female/1.0mm Female	
Control Bias Connector	Solder Pin	
Size	31.5*32.7*10.7	mm

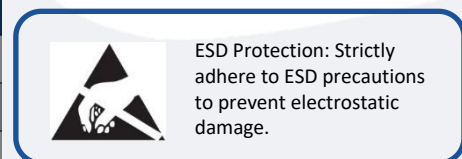
Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Truth Table	
TTL Control Input	Signal Path State
Bit1	
0	J0-J1
1	J0-J2

TTL Control Voltages &VDD	
Stage	Bias Condition
VDD	+5V (±5%)
Low (0)	0 to 2.2Vdc
High (1)	+3.3 to +5.0Vdc



Environmental Conditions:

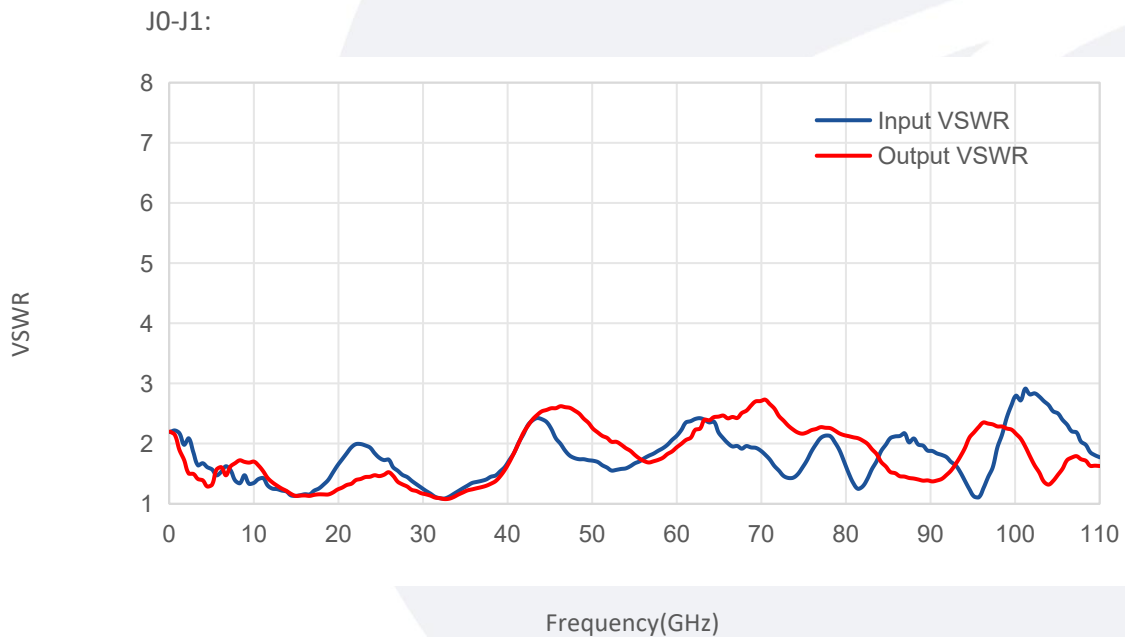
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLSPDT0.1G110GR	Reflective,Broadband MMIC Switch 0.1-110 GHz,SPDT,1.0mm Female	Rev.1.0

Typical Performance Data:

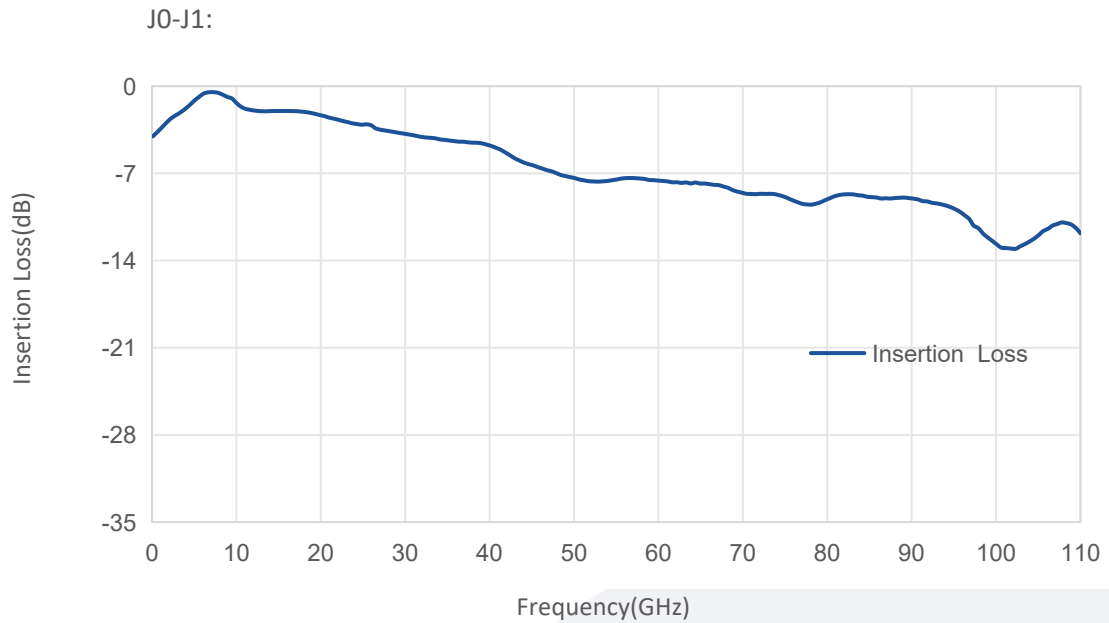
VSWR vs Frequency



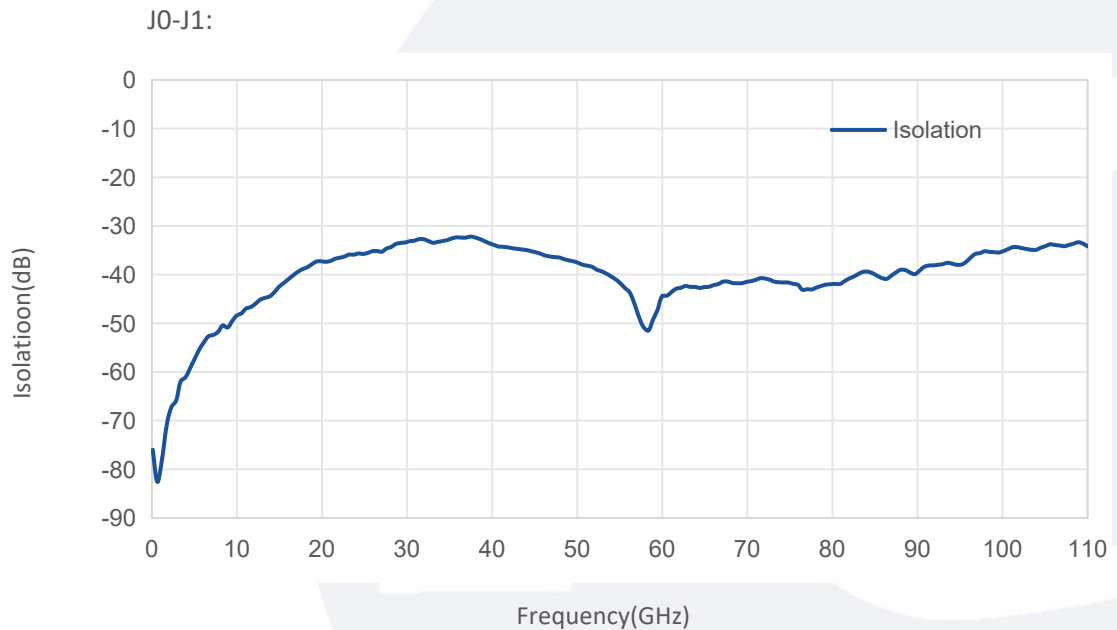
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss vs Frequency



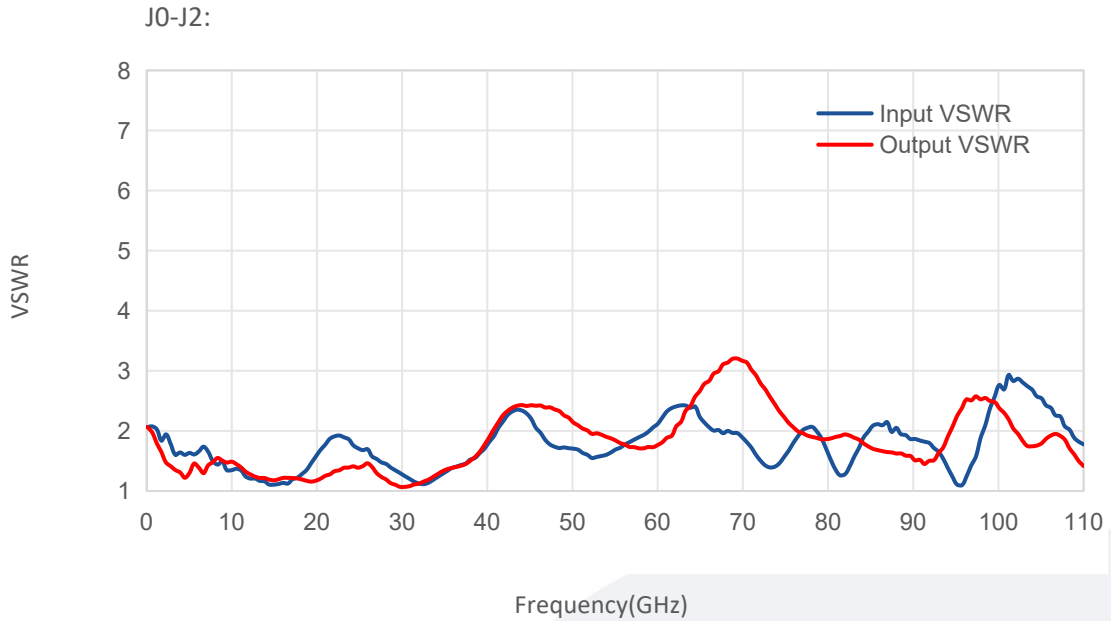
Isolation vs Frequency



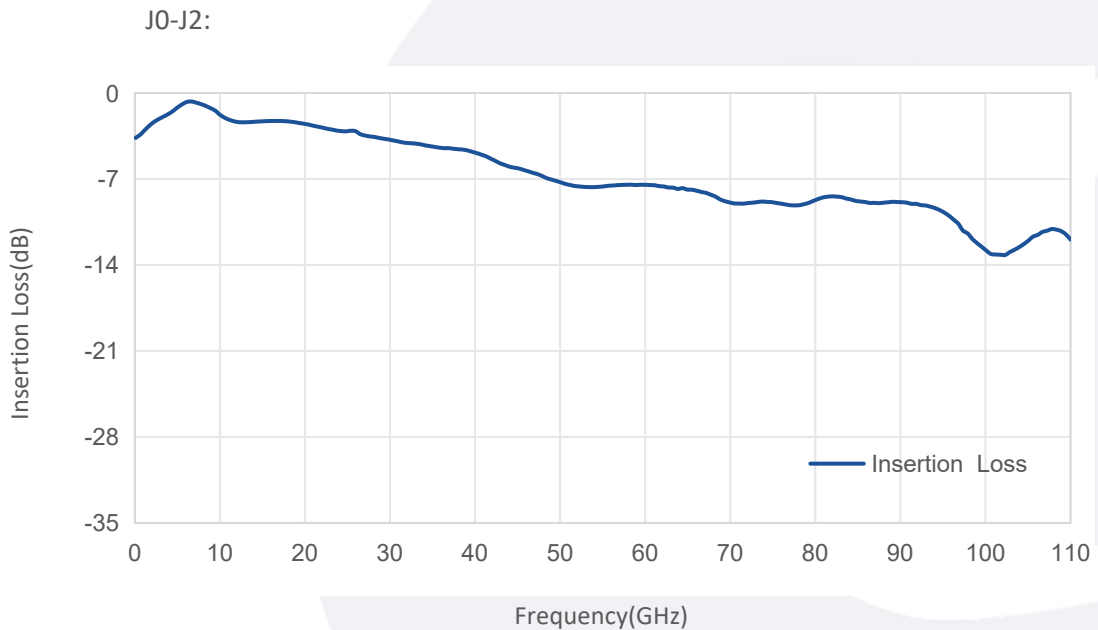
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



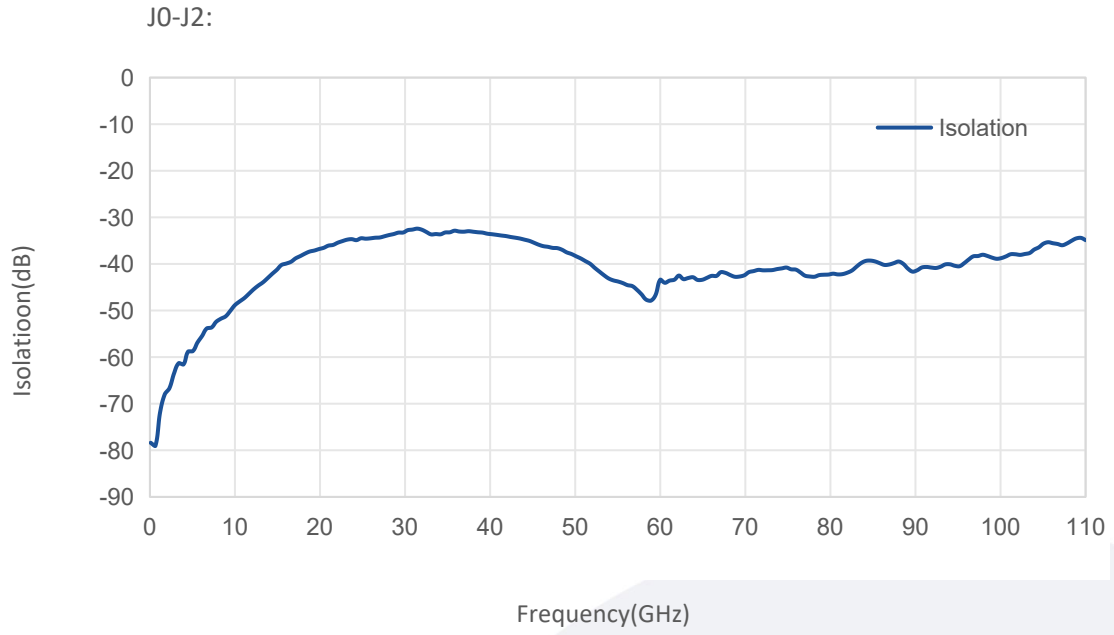
Insertion Loss vs Frequency



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Typical Performance Data:

Isolation vs Frequency



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