

Absorptive, Broadband MMIC Switch

0.01-40 GHz/SP4T/2.92mm Female

Model: TLSP4T0.01G40GA

The TLSP4T0.01G40GA is an absorptive MMIC switch with a TTL driver that operates between 0.01 and 40 GHz. The SP4T switch offers 65 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are 2.92mm female. The input and output are integrated with direct isolation capacitors.

Features:

- Frequency range: 0.01-40GHz
- Insertion Loss: 7 dB
- Power Handling : 25 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.01		40	GHz
Insertion Loss		7		dB
Isolation	55	65		dB
Switch Speed		100		ns
Input VSWR		2	2.5	:1
Output VSWR		2	2.5	:1
Power Handling			25	dBm
DC Voltage		5		V DC
DC Supply Current		30		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

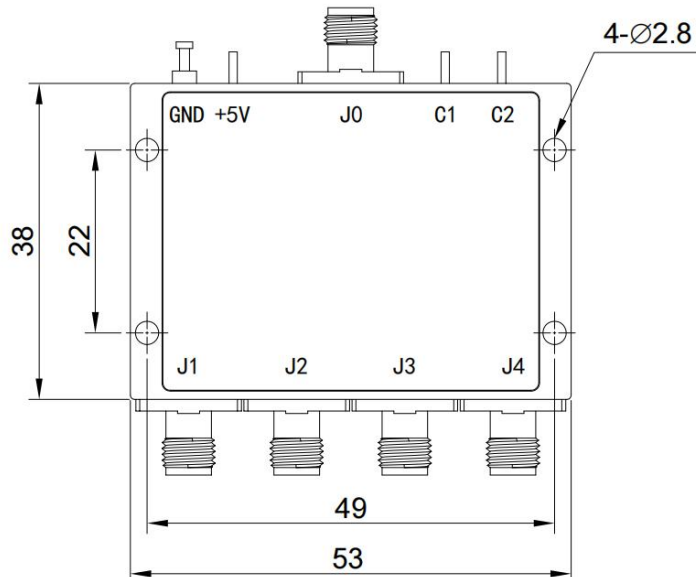
Parameter	Value	Units
Supply Bias Voltage	±5%	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
Control Bias	Solder Pin	
Size	53*38*12	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

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

- 1.Dimensions are in mm [inches]
 - 2.Tolerances: Outline drawing ±0.2 [0.008] Hole ±0.2 [0.008]
- NOTE: ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°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			

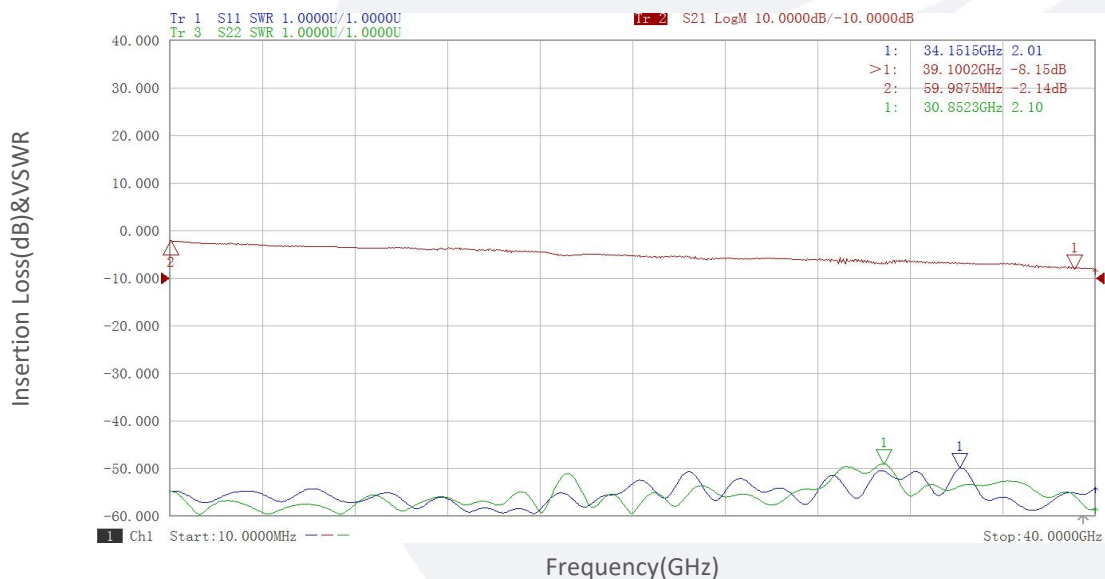
Ordering Information:

Base Number	Description	Revision
TLSP4T0.01G40GA	Absorptive,Broadband MMIC Switch 0.01-40 GHz,SP4T,2.92mm Female	Rev.1.1

Typical Performance Data:

Insertion Loss&VSWR vs Frequency

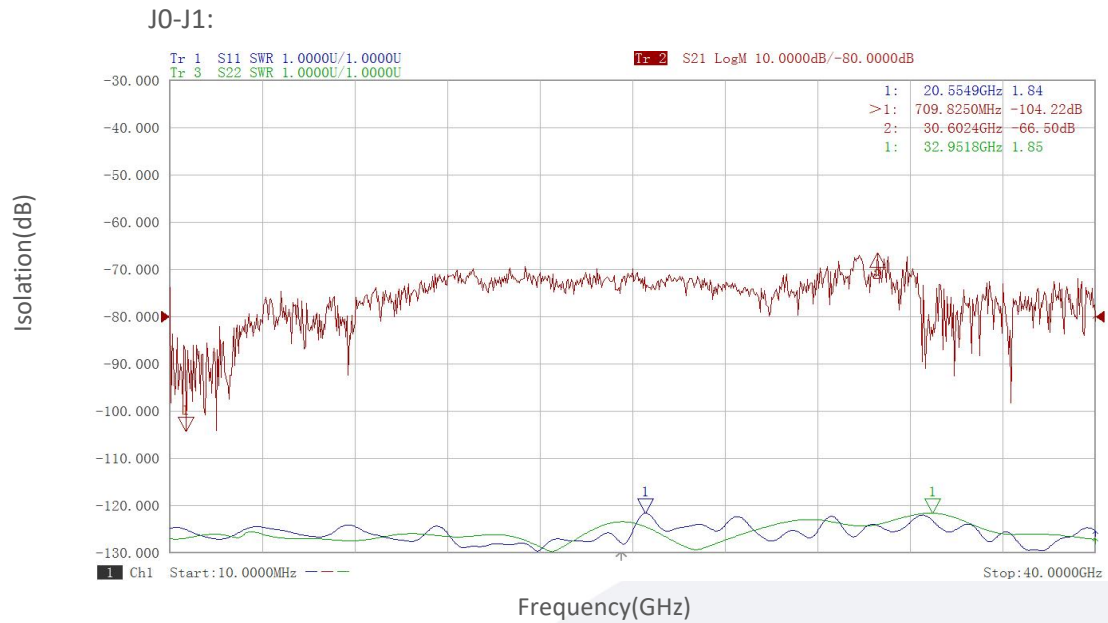
J0-J1:



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:

Isolation vs Frequency



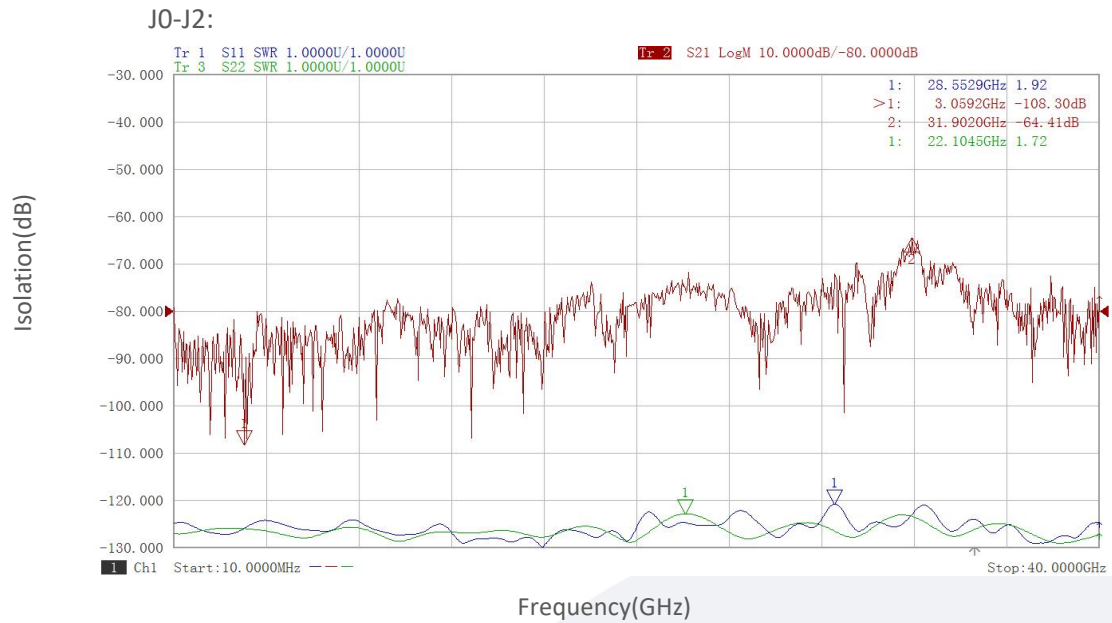
Insertion Loss & VSWR vs Frequency



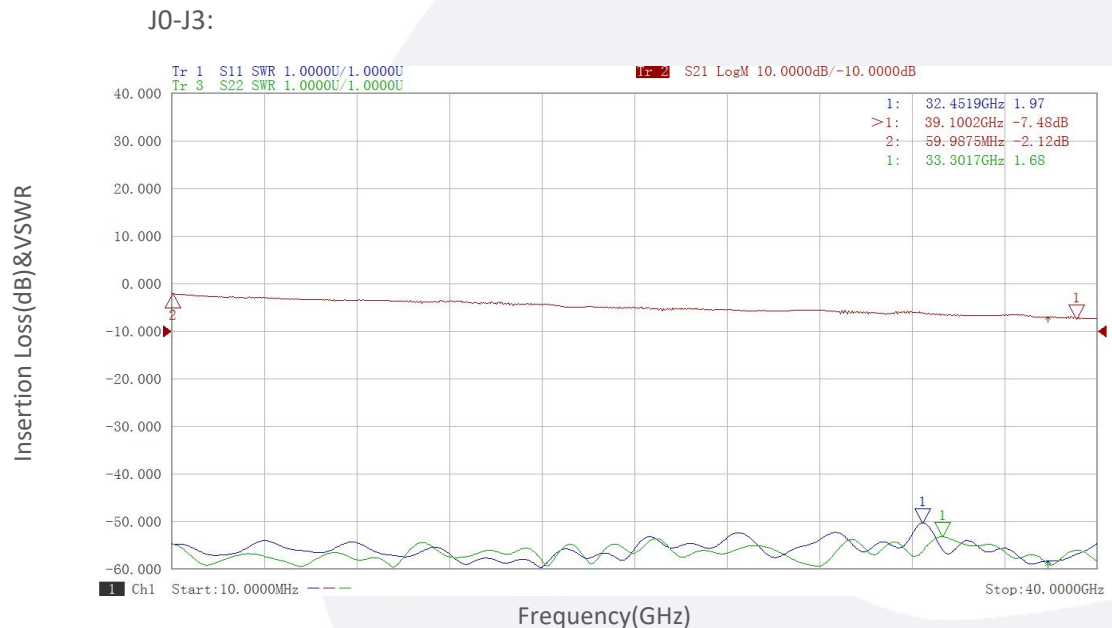
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



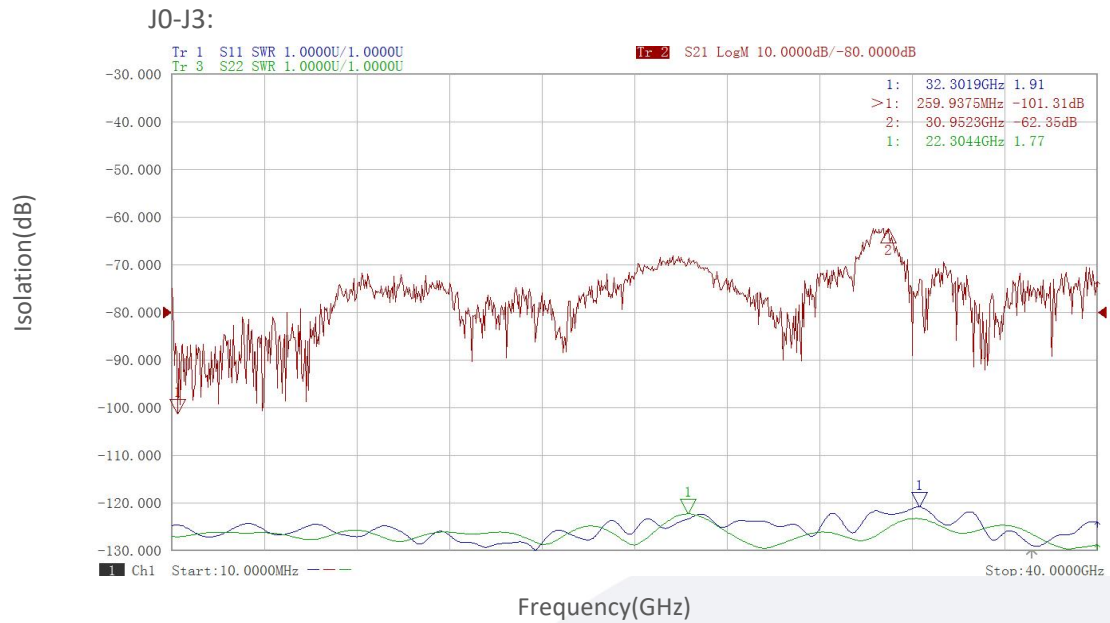
Insertion Loss&VSWR vs Frequency



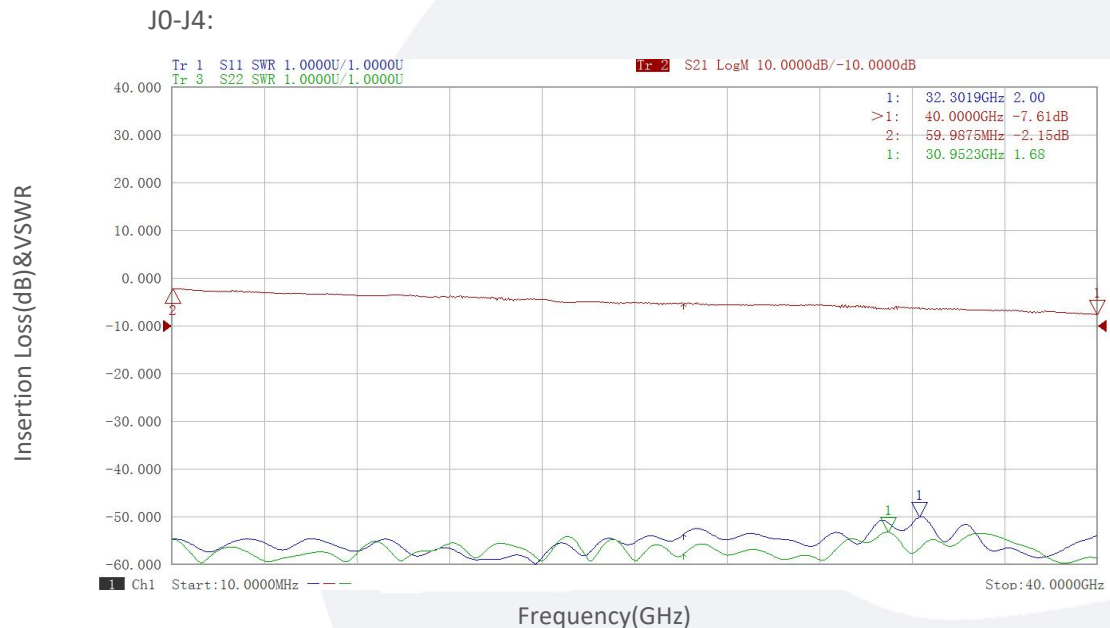
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



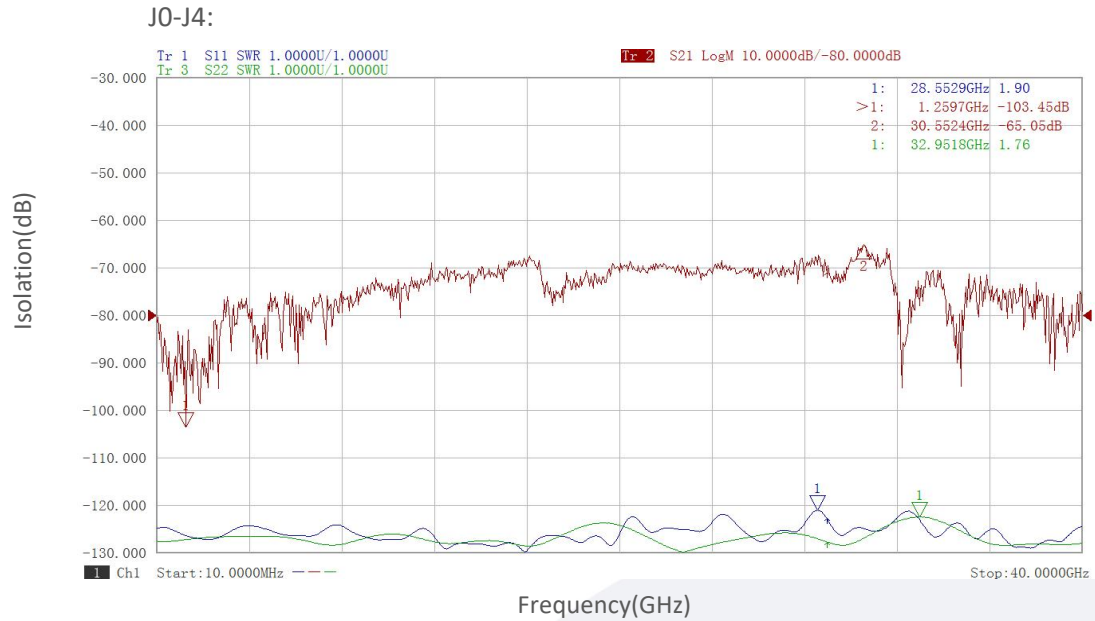
Insertion Loss&VSWR vs Frequency



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Isolation vs Frequency



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