

Reflective, Broadband MMIC Switch

100K-50G/SPDT/2.4mm Female

Model: TLSPDT100K50GR

The TLSPDT100K50GR is an reflective MMIC switch with a TTL driver that operates between 100K and 50 GHz. The SPDT switch offers 25 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are 2.4mm female.

Features:

- Frequency range: 100K-50GHz
- Low Insertion Loss: 3 dB
- Power Handling : 25 dBm
- High Isolation
- Switch Type: reflective

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	100KHz-50GHz			
Insertion Loss		3		dB
Isolation		35		dB
Switch Speed		50	100	ns
Input VSWR		2		:1
Output VSWR		2		:1
Power Handling			25	dBm
DC Voltage		5		V DC
DC Supply Current		20		mA
Switch type	Reflective			
Impedance	50			Ohms

Absolute Maximum Ratings :

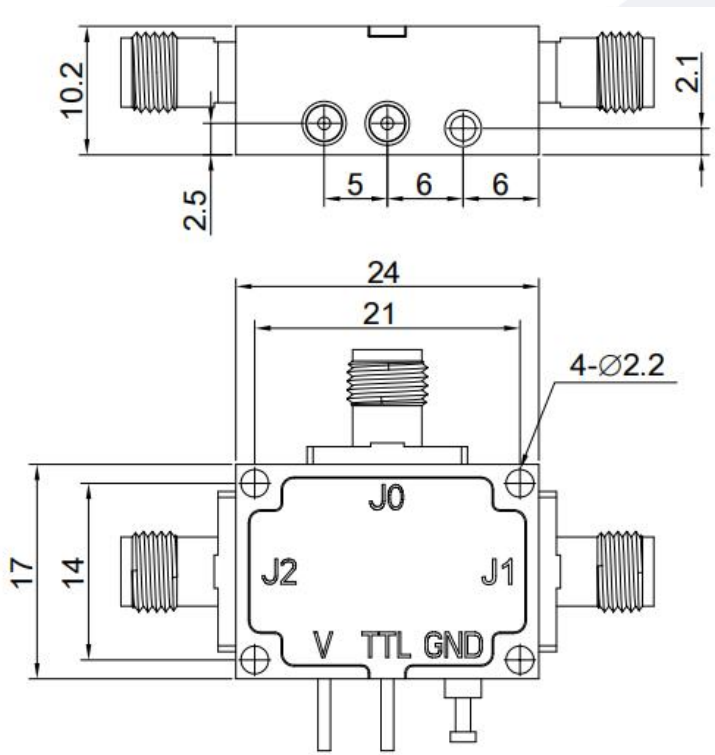
Description	Parameter	Units
Supply Bias Voltage	$\pm 5\%$	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
Control Bias	Solder Pin	
Size	24*17*10.2	mm

Outline Drawing:

Unit:mm



Regulatory Compliance:



Truth Table

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

TTL Control Voltages &VDD

Stage	Bias Condition
VDD	+5V ($\pm 5\%$)
Low (0)	0 to 0.8Vdc
High (1)	+2 to +3.3Vdc

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

Environmental Conditions:

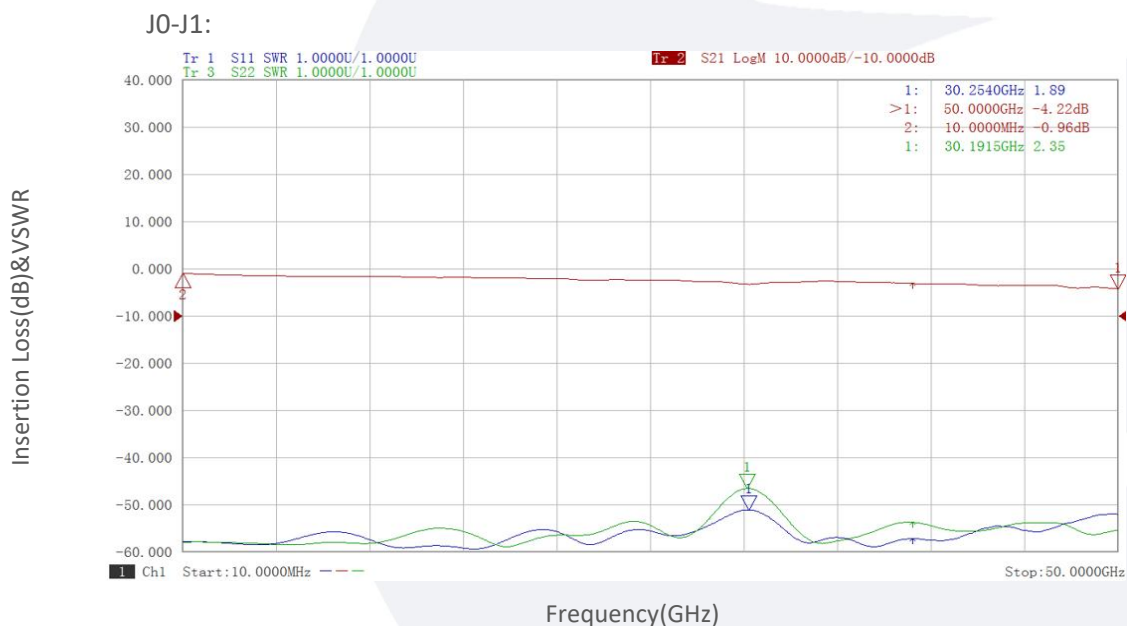
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLSPDT100K50GR	Reflective,Broadband MMIC Switch 100K-50GHz,SPDT,2.4mm Female	Rev.1.1

Typical Performance Data:

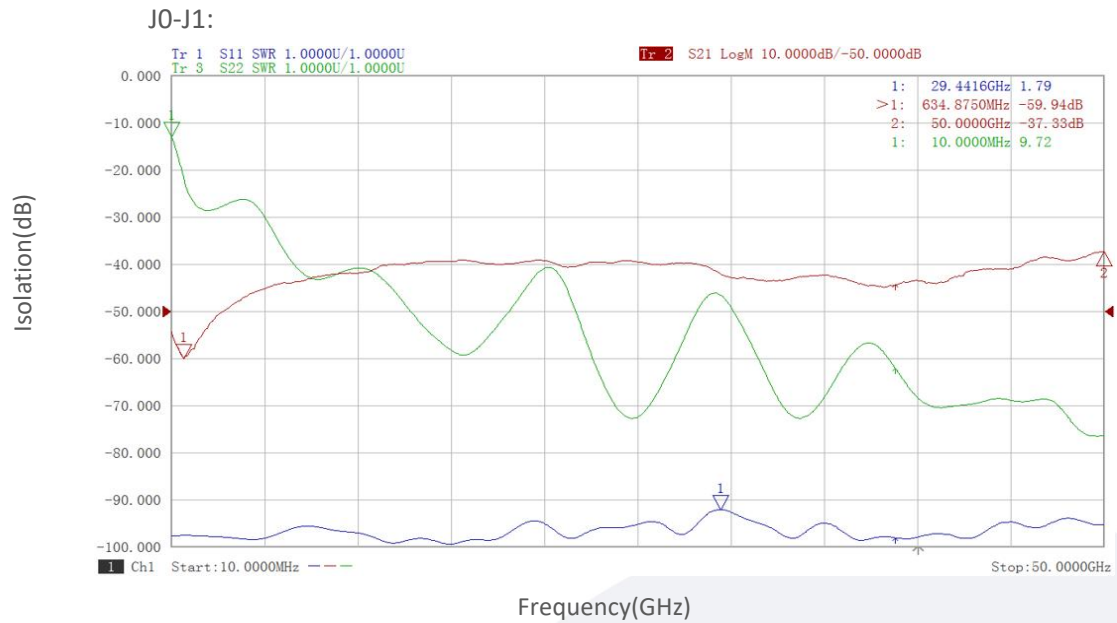
Insertion Loss&VSWR vs Frequency



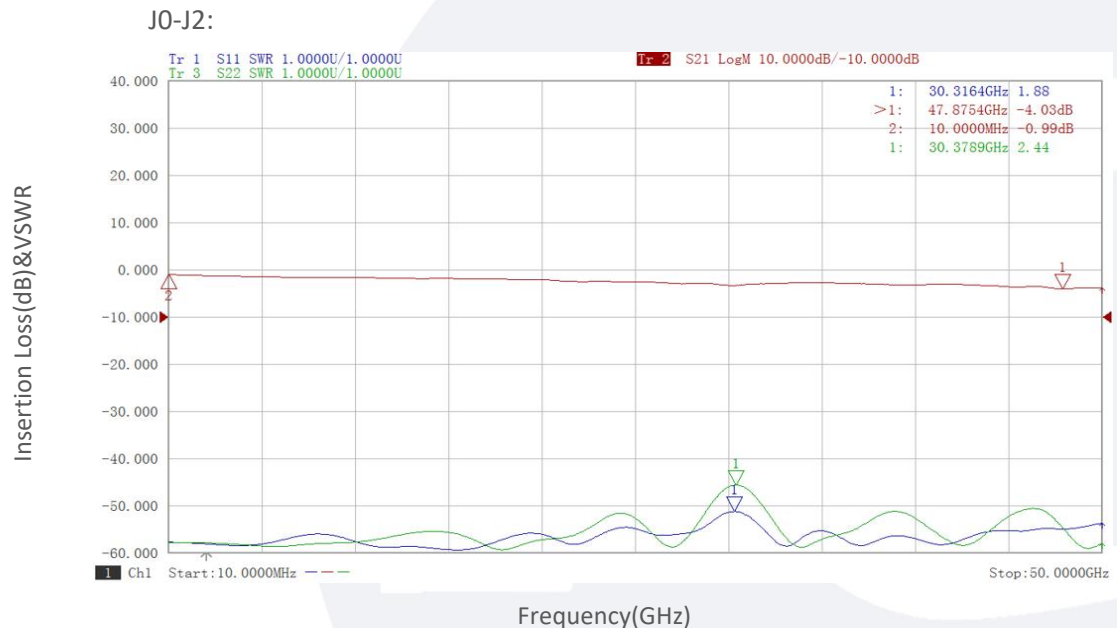
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



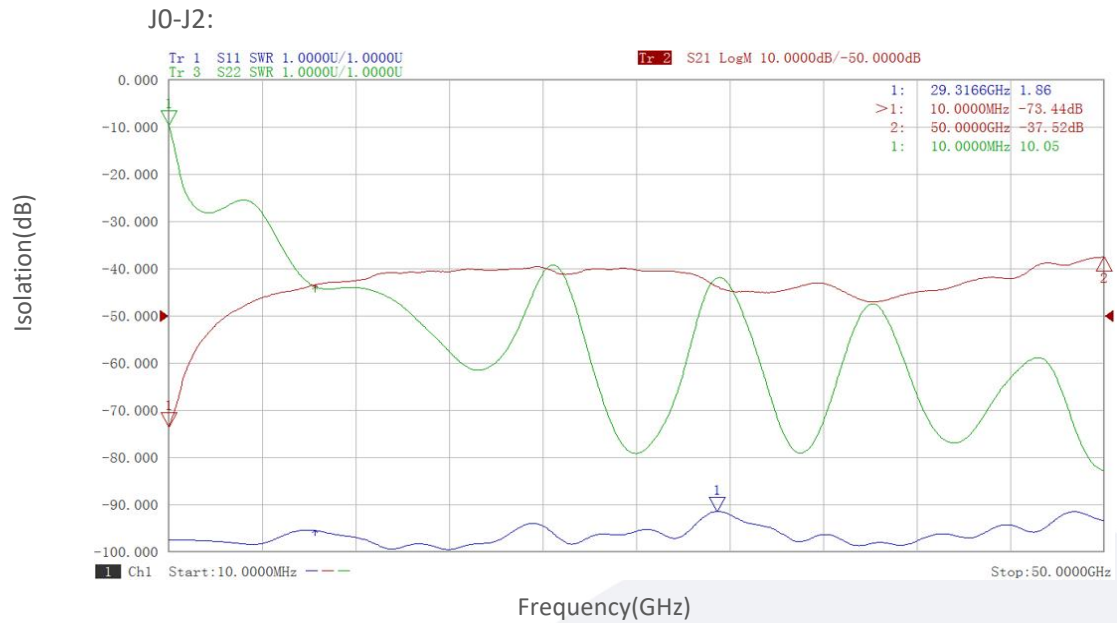
Insertion Loss&VSWR vs Frequency



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Typical Performance Data:

Isolation vs Frequency



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