

Absorptive, Broadband MMIC Switch

18-67GHz/SP4T/1.85mm Female

Model: TLSP4T18G67GA

The TLSP4T18G67GA is an absorptive MMIC diode based switch with 2 TTL driver that operates between 18 and 67 GHz. The SP4T switch offers 45 dB port-to-port isolation with a typical switching speed of 50 nanoseconds. The input and output connectors of the switch are 1.85mm female.

Features:

- Frequency range: 18-67GHz
- Insertion Loss: 7.5dB Typ
- Power Handling: 25dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	18		67	GHz
Insertion Loss		7.5		dB
Isolation	45			dB
Switch Speed		50	100	ns
Input VSWR		2		:1
Output VSWR		2		:1
Power Handling			25	dBm
Input P1dB		20		dBm
DC Supply Voltage		5		V DC
DC Supply Current		120		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

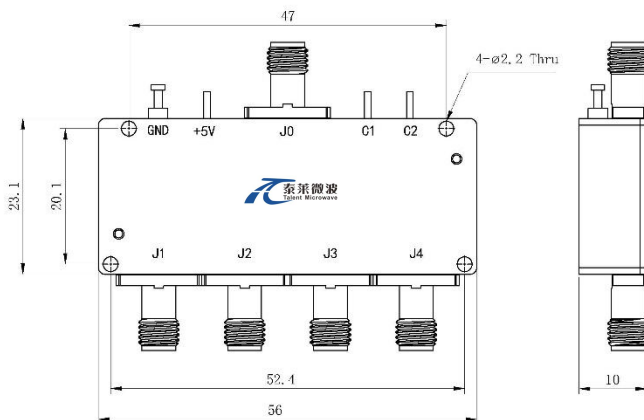
Description	Parameter	Units
Supply Bias Voltage	$\pm 5\%$	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	1.85mm Female/1.85mm Female	
Control Bias Connector	Solder Pin	
Size	56*23.1*10	mm

Outline Drawing:

Unit:mm



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

TTL Control Voltages & VDD	
Stage	Bias Condition
VDD	+5V ($\pm 5\%$)
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:

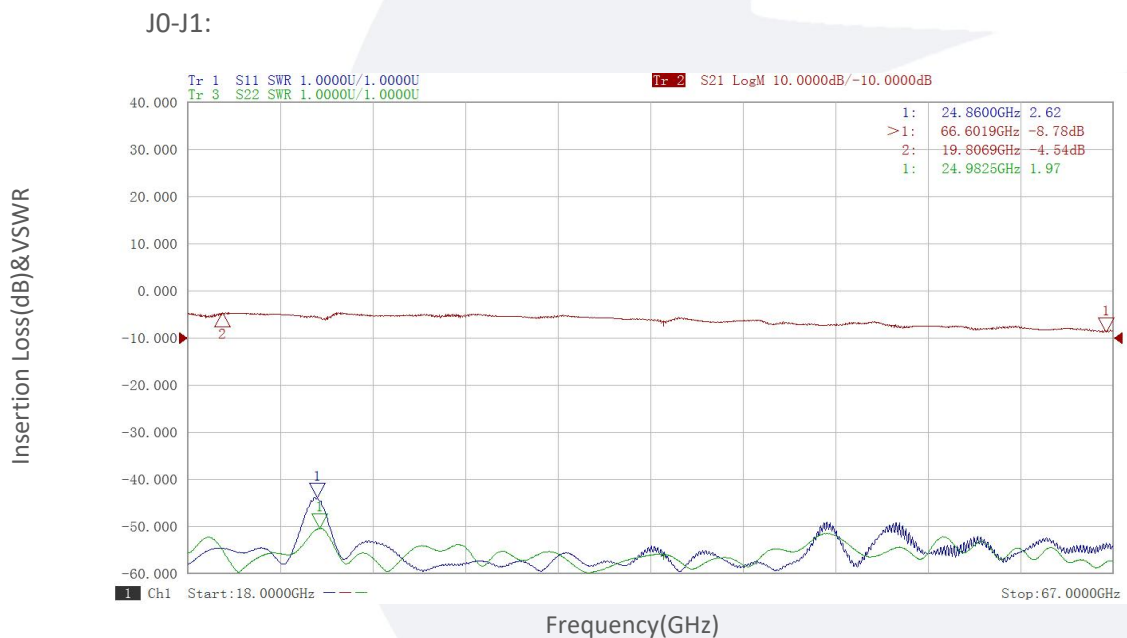
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLSP4T18G67GA	Absorptive,Broadband MMIC Switch 18-67GHz, SP4T, 1.85mm Female	Rev.1.0

Typical Performance Data:

Insertion Loss&VSWR vs Frequency

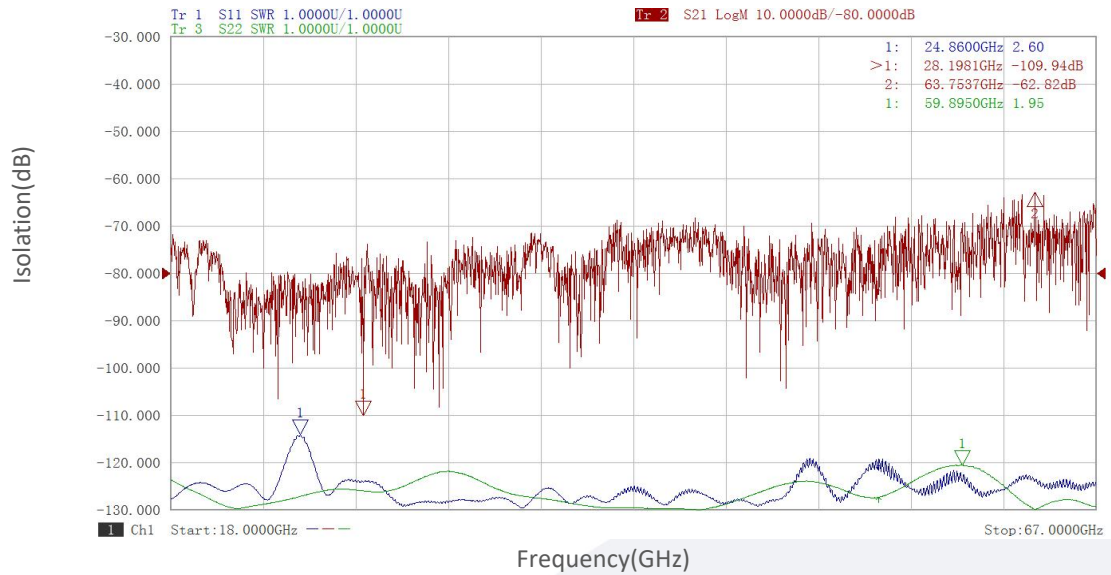


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

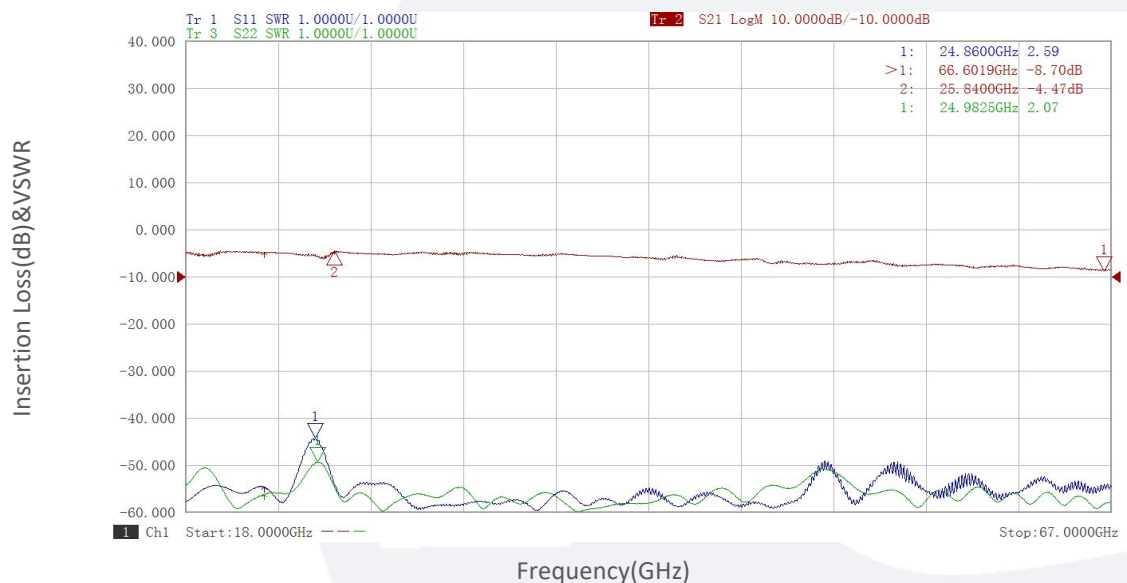
Isolation vs Frequency

J0-J1:



Insertion Loss&VSWR vs Frequency

J0-J2:

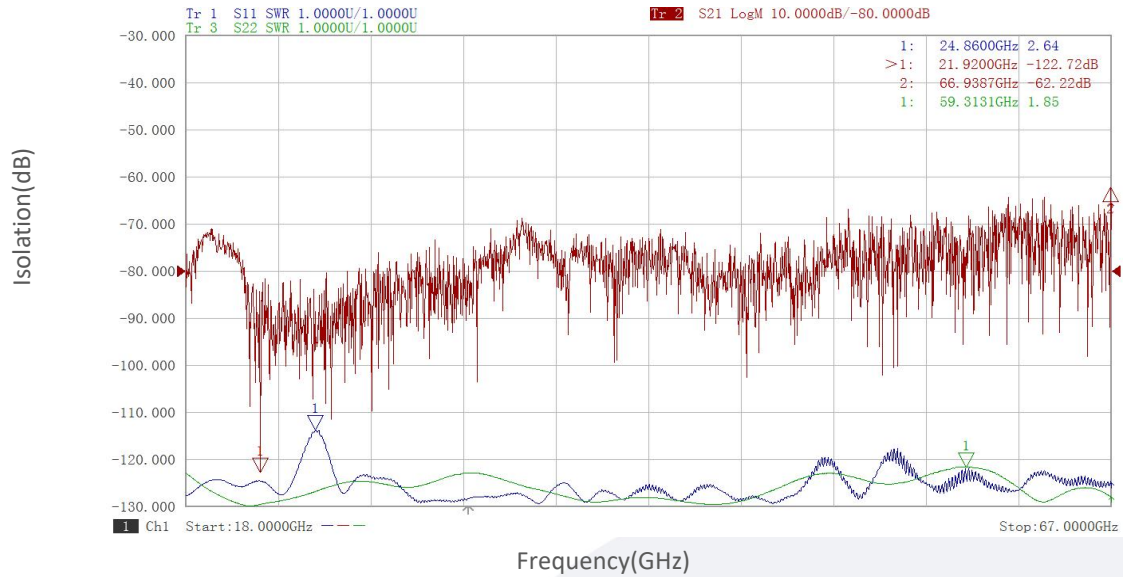


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

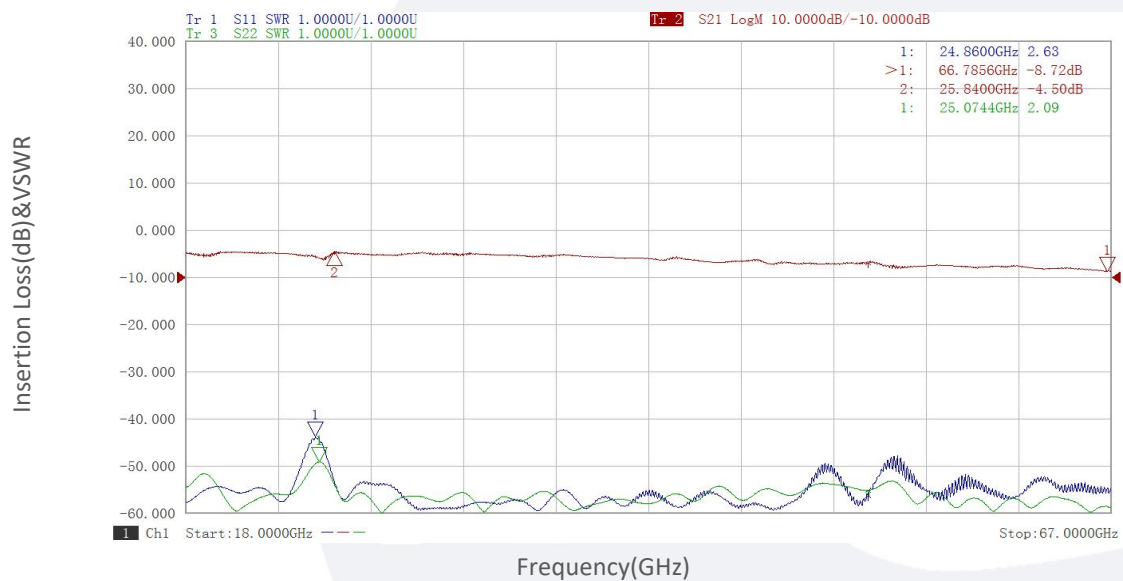
Isolation vs Frequency

J0-J2:



Insertion Loss&VSWR vs Frequency

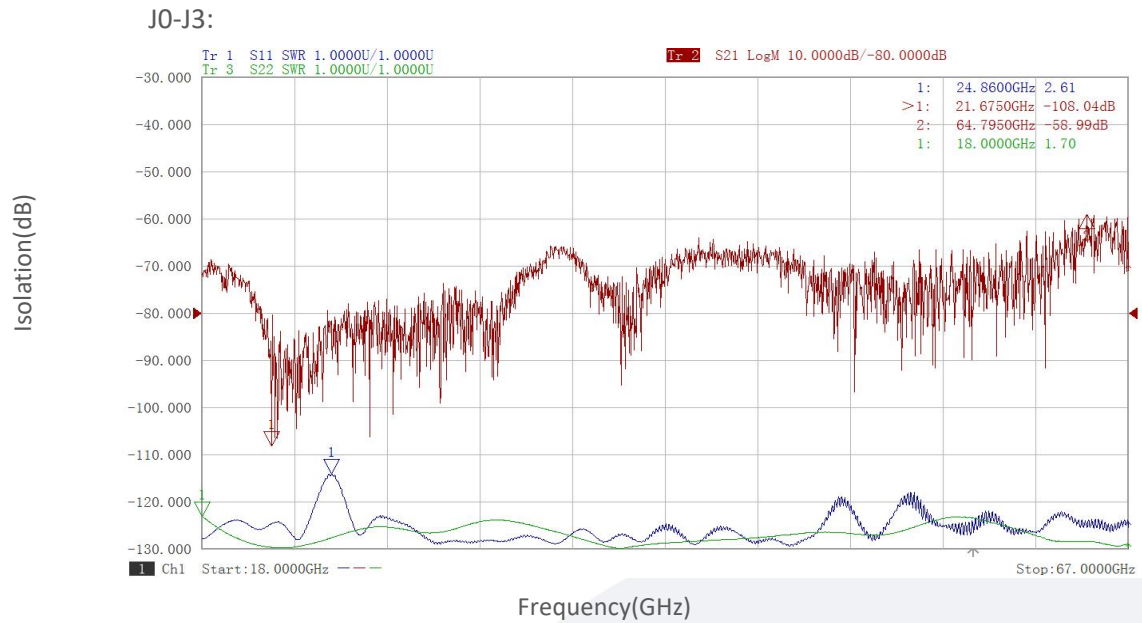
J0-J3:



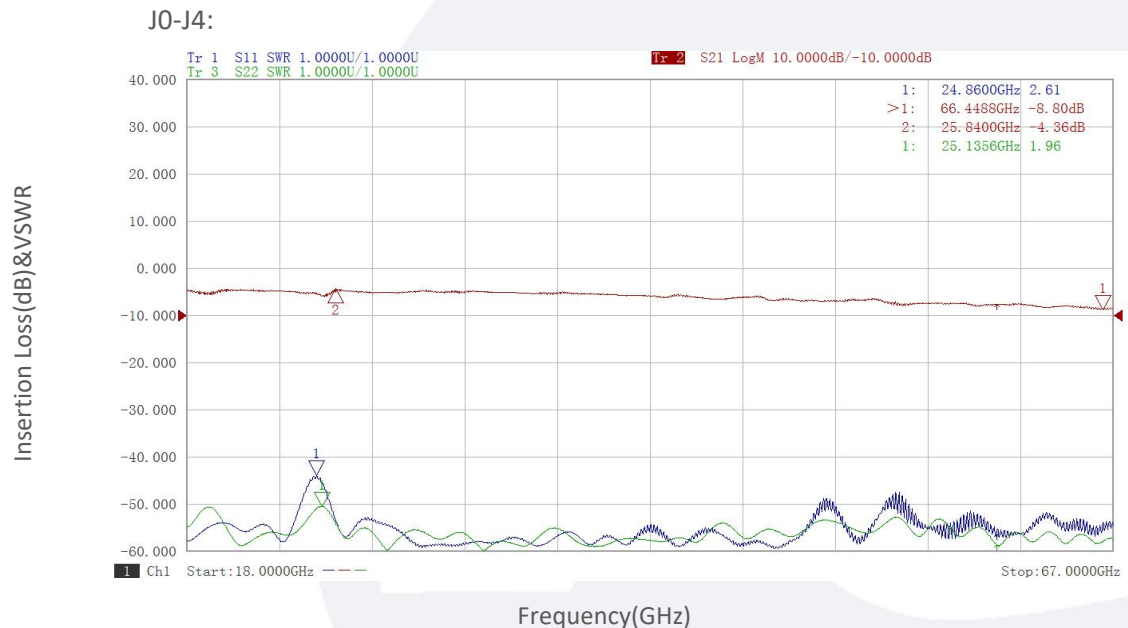
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



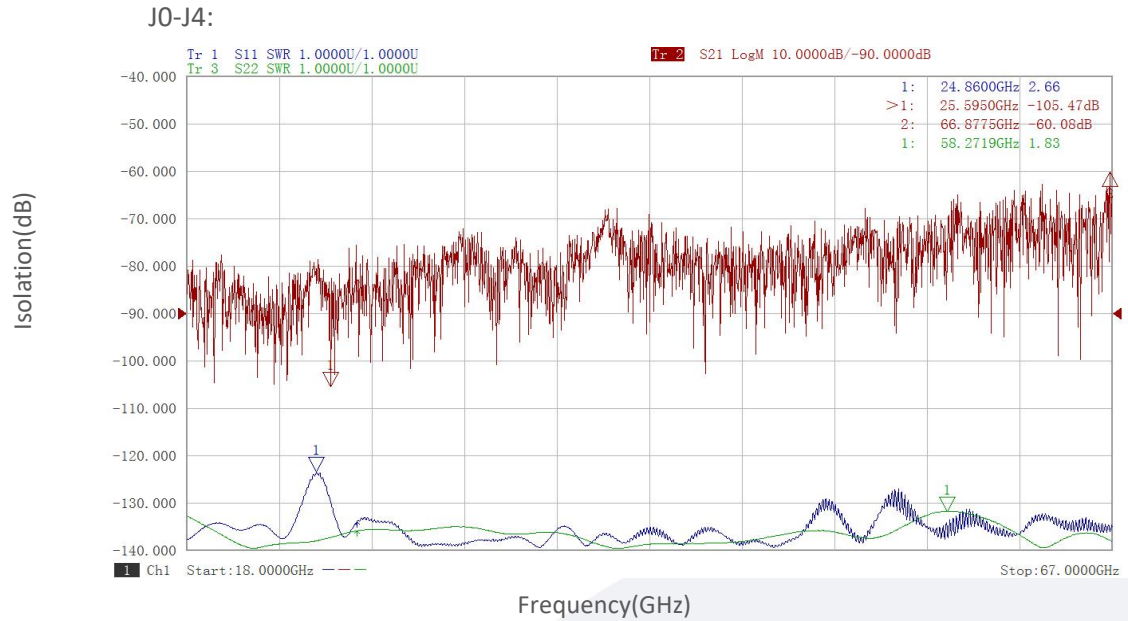
Insertion Loss & VSWR vs Frequency



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Typical Performance Data:

Isolation vs Frequency



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