

Absorptive, Broadband PIN Switch

1-18 GHz/SP3T/ SMA Female

Model: TLSP3T1G18GA

The TLSP3T1G18GA is an absorptive PIN diode based switch with a TTL driver that operates between 1 and 18 GHz. The SP3T switch offers 70 dB port-to-port isolation with a typical switching speed of 100 ns. The input and output connectors of the switch are SMA female.

Features:

- Ultra Wide Band: 1-18GHz
- Low Insertion Loss: 2.5 dB
- Power Handling : 30 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1-18			GHz
Insertion Loss		2.5	4	dB
Isolation	60	70		dB
Switch Speed			100	ns
Input VSWR		1.5	2	:1
Output VSWR		1.5	2	:1
Power Handling			30	dBm
DC Voltage		+5/-5		V DC
DC Supply Current		120/50		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

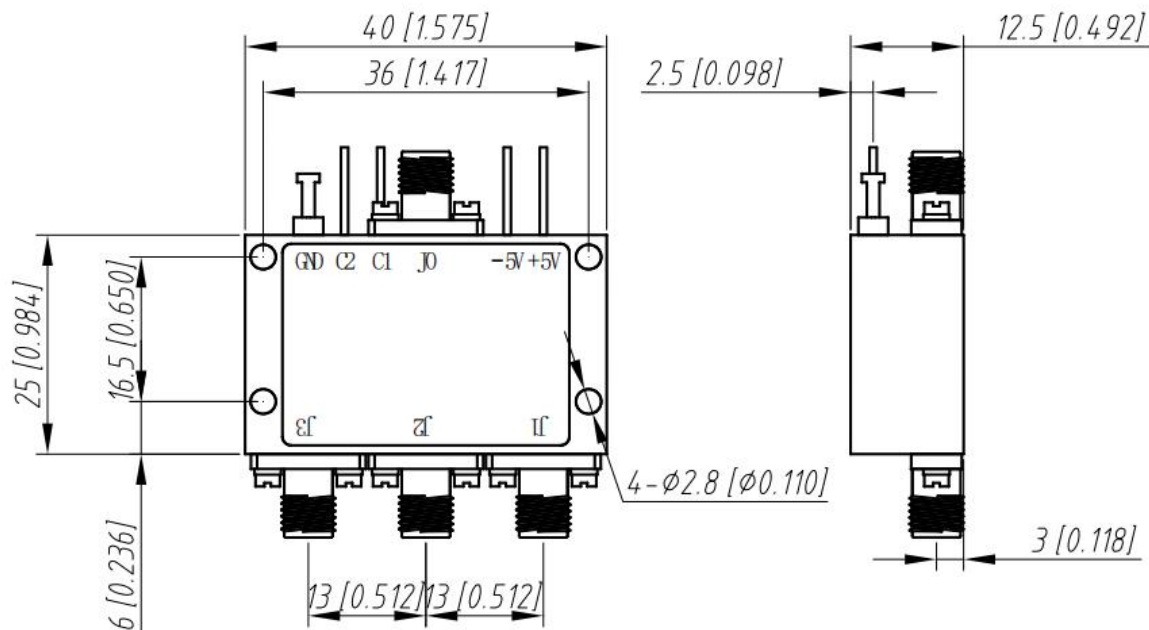
Description	Parameter	Units
Supply Bias Voltage	$\pm 5\%$	V
RF Input Power	30	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	SMA Female/SMA Female	
Control Bias	Solder Pin	
Size	40*25*12.5	mm

Outline Drawing:

Unit:mm



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

TTL Control Voltages &VDD	
Stage	Bias Condition
VDD	+5V ($\pm 5\%$)
VEE	-5V ($\pm 5\%$)
Low (0)	0 to 0.8Vdc
High (1)	2.0 to +5.0Vdc

Environmental Conditions:

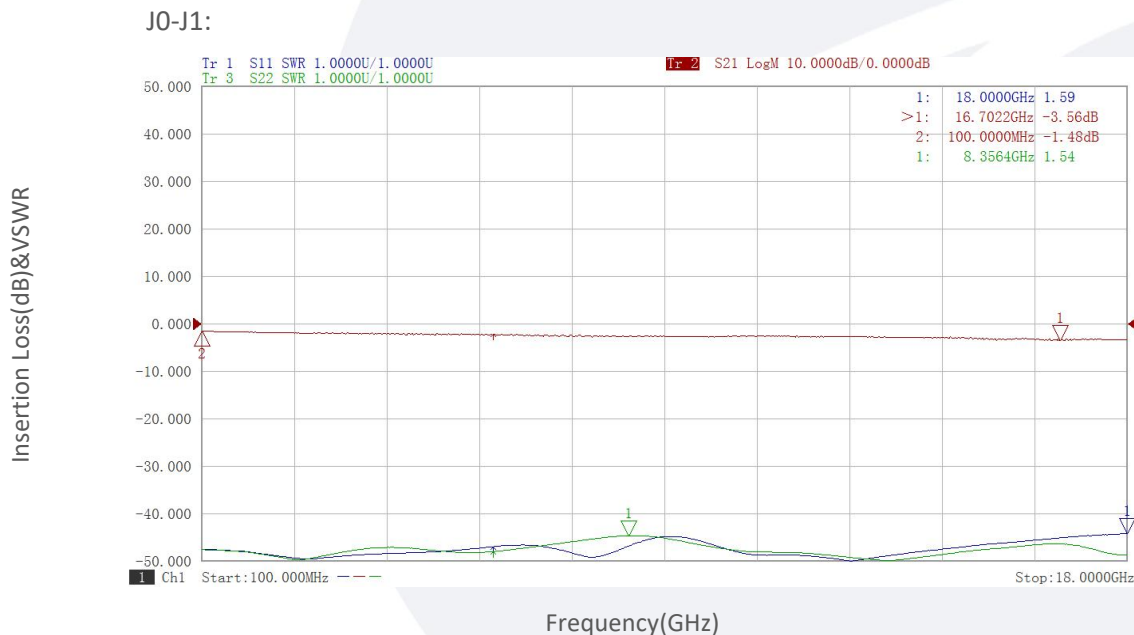
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLSP3T1G18GA	Absorptive,Broadband PIN Switch 1-18 GHz,SP3T,SMA	Rev.1.1

Typical Performance Data:

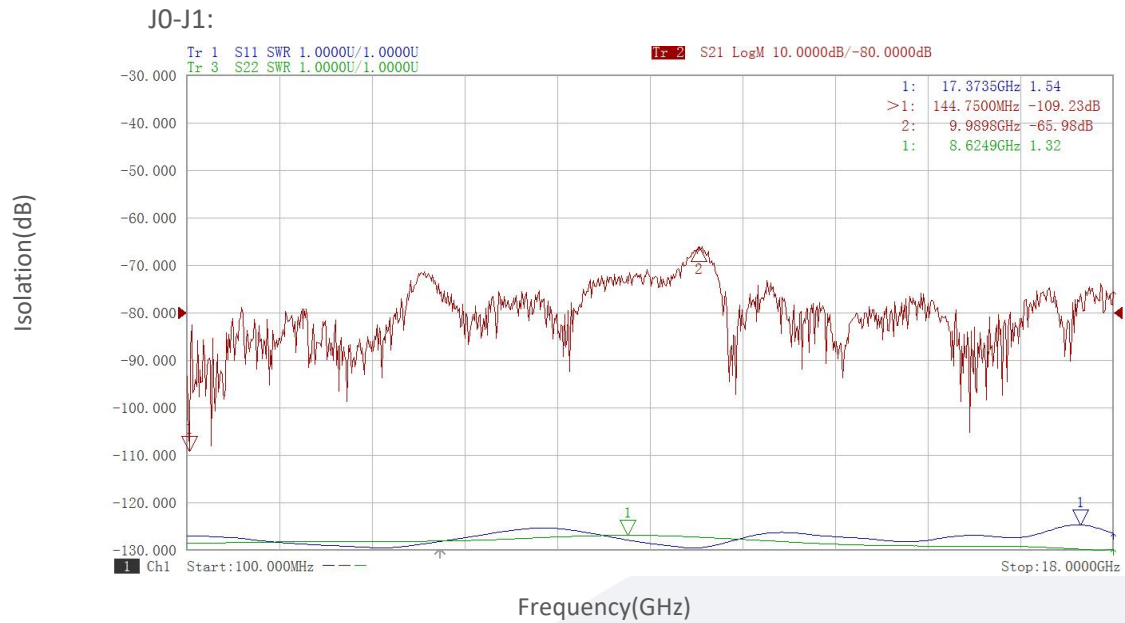
Insertion Loss&VSWR vs Frequency



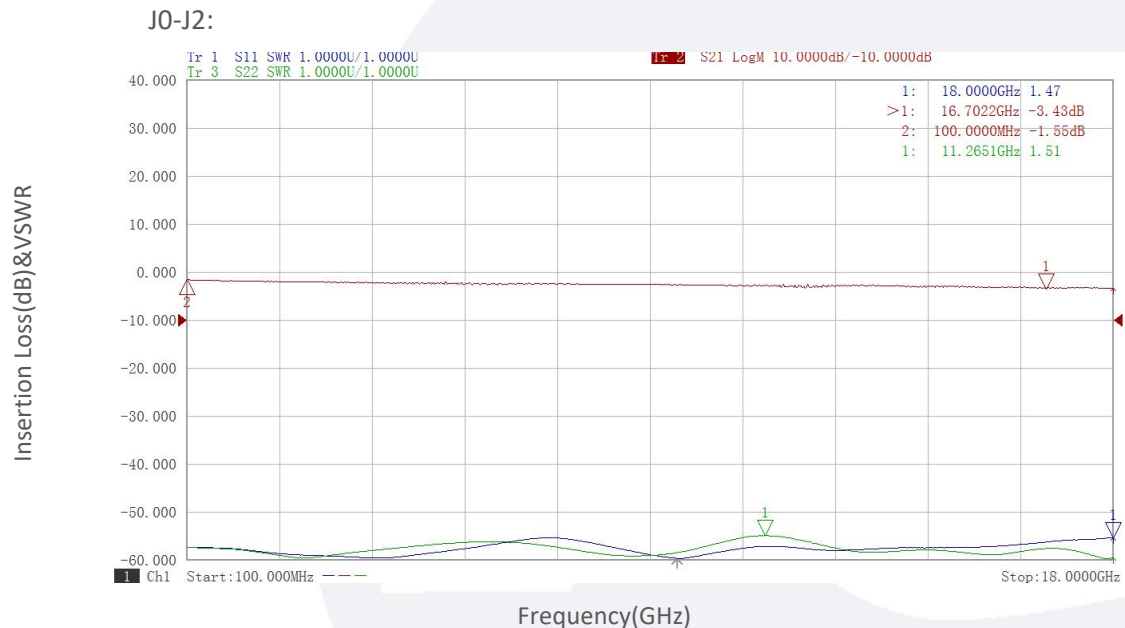
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



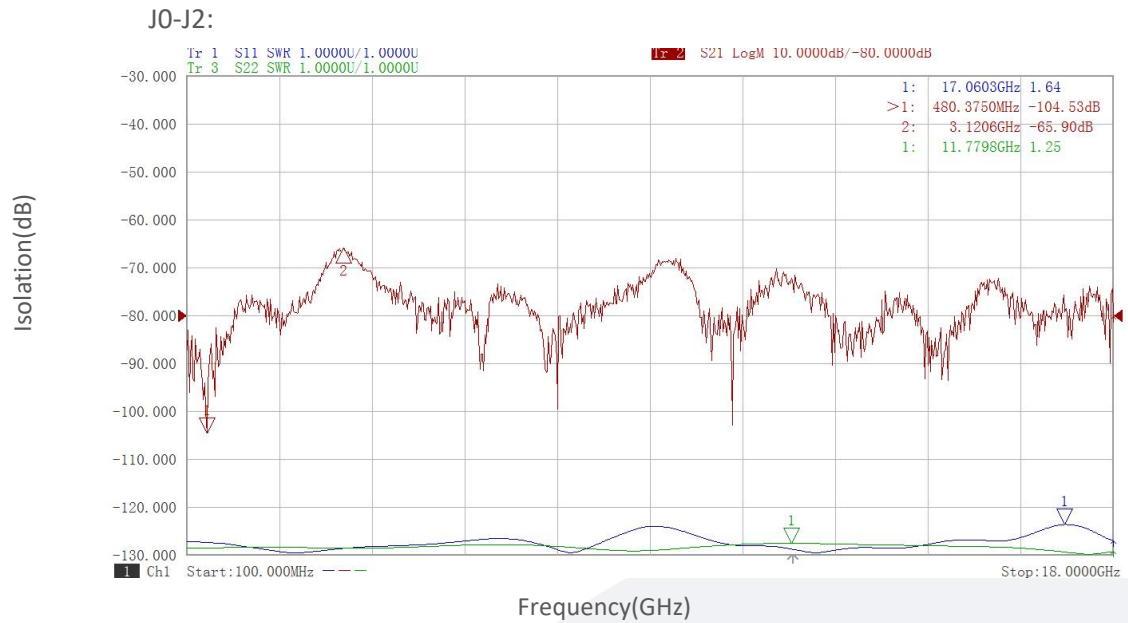
Insertion Loss&VSWR vs Frequency



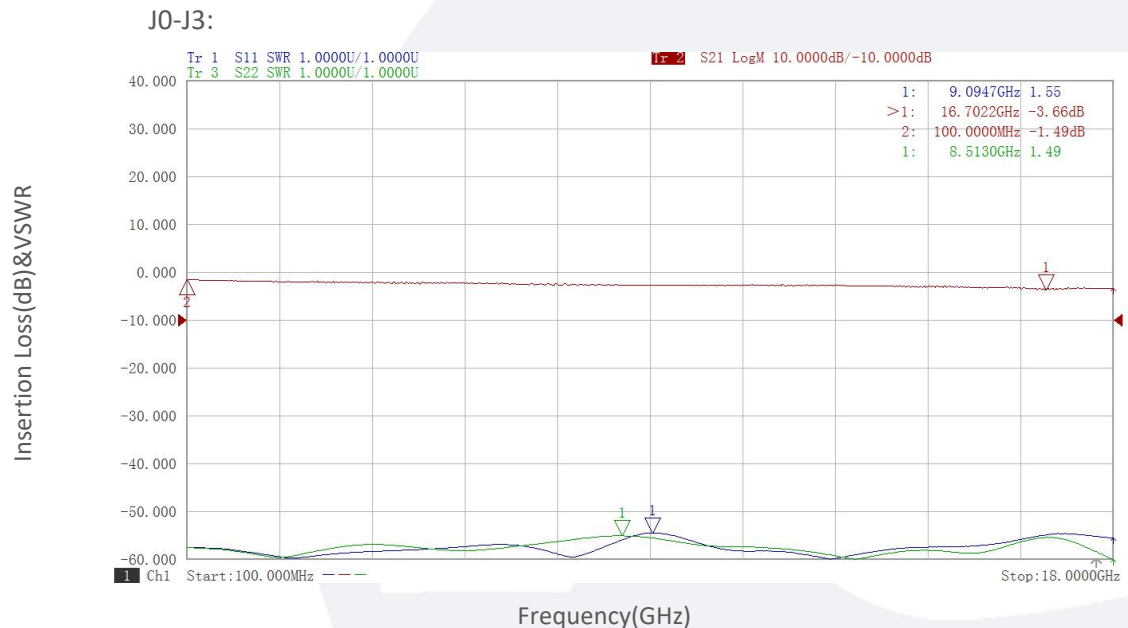
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



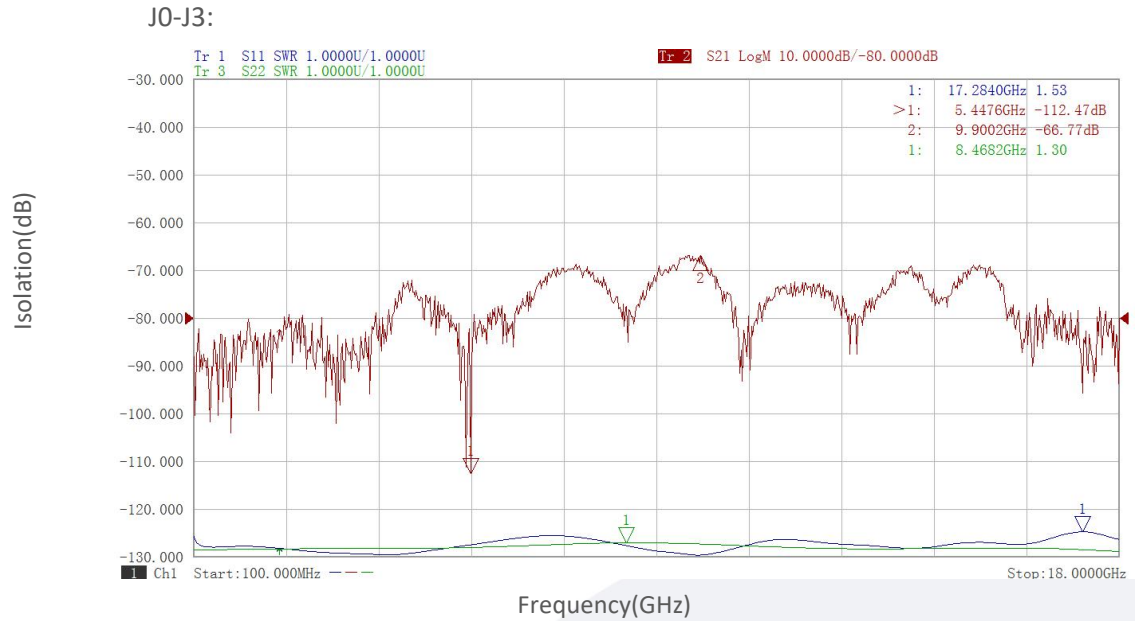
Insertion Loss & VSWR vs Frequency



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