

Absorptive, Broadband PIN Switch

0.5-40 GHz/SP16T/2.92mm Female

Model: TLSP16T0.5G40GA

The TLSP16T0.5G40GA is an absorptive PIN diode based switch with a TTL driver that operates between 0.5 and 40 GHz. The SP16T switch offers 55 dB port-to-port isolation with a typical switching speed of 50 ns. The input and output connectors of the switch are 2.92 mm female.

Features:

- Ultra Wide Band: 0.5-40GHz
- Low Insertion Loss: 10.0 dB
- Power Handling : 23 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5-40			GHz
Insertion Loss		10	14	dB
Isolation	45	55		dB
Switch Speed		50	100	ns
Input VSWR		2.2	2.5	:1
Output VSWR		2.2	2.5	:1
Power Handling			23	dBm
DC Voltage		+/-5		V DC
Control Logic TTL		0/+5		V DC
DC Supply Current		600/-50		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

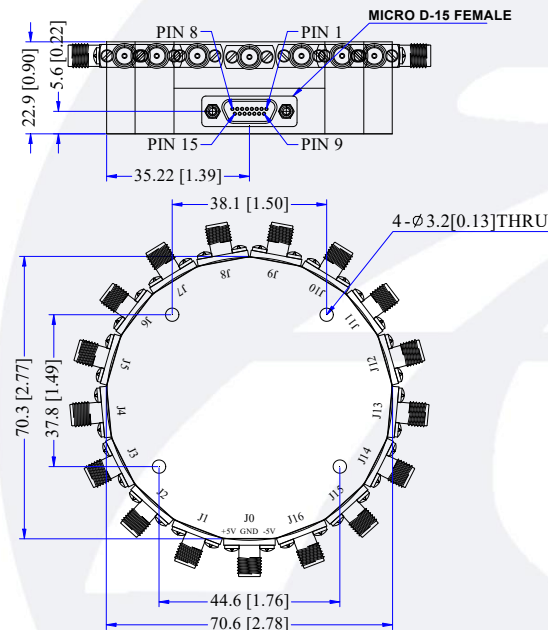
Description	Parameter	Units
Supply Bias Voltage	±5%	V
RF Input Power	23	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
Control Bias	Midro D-15 Female	
Material	Aluminium	
Finish	Gold Painting	
Size	70.6*70.3*22.9	mm
Weight	210	g

Outline Drawing:

Unit:mm



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

Truth Table :

Truth Table				
TTL Control Input				Signal Path State
C4	C3	C2	C1	
0	0	0	0	J0-J1
0	0	0	1	J0-J2
0	0	1	0	J0-J3
0	0	1	1	J0-J4
0	1	0	0	J0-J5
0	1	0	1	J0-J6
0	1	1	0	J0-J7
0	1	1	1	J0-J8
1	0	0	0	J0-J9
1	0	0	1	J0-J10
1	0	1	0	J0-J11
1	0	1	1	J0-J12
1	1	0	0	J0-J13
1	1	0	1	J0-J14
1	1	1	0	J0-J15
1	1	1	1	J0-J16

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

Power supply& Control Connector:

MICRO D-15 FEMALE Define	
1	C1
2	C2
3	C3
4	C4
5	NC
6	NC
7	NC
8	NC
9	GND
10	+5V
11	-5V
12	GND
13	+5V
14	-5V
15	NC

Environmental Conditions:

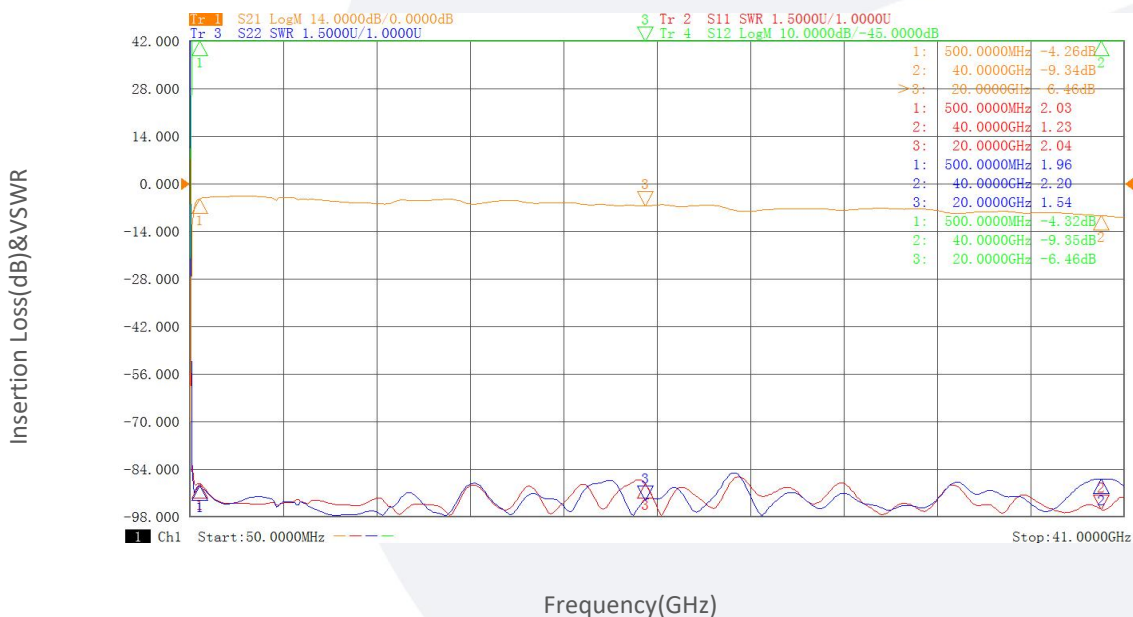
Parameter	Min	Typ	Max	Units
Operating Temperature	-25		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Description	Revision
TLSP16T0.5G40GA	Absorptive,Broadband PIN Switch 0.5-40 GHz,SP16T,2.92mm	Rev.1.1

Typical Performance Data:

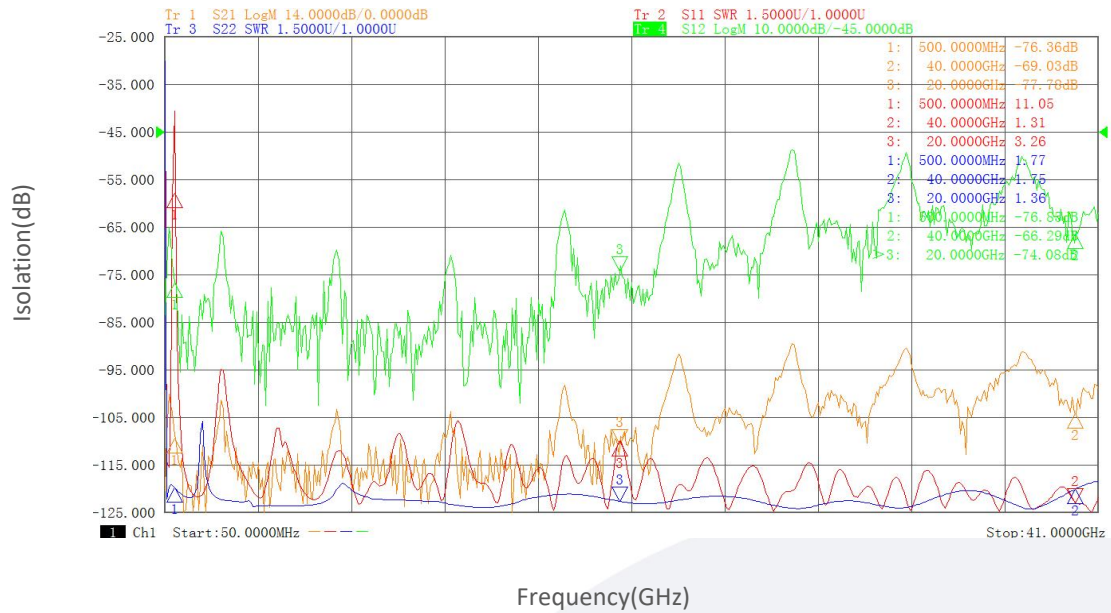
Insertion Loss&VSWR vs Frequency



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



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.