

Absorptive, Broadband PIN Switch

0.5-54GHz/SPDT/ 1.85mm Female

Model: TLSPDT0.5G54GA

The TLSPDT0.5G54GA is an absorptive PIN diode based switch with a TTL driver that operates between 0.5 and 54 GHz. The SPDT 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 1.85 mm female.

Features:

- Frequency range: 0.5-54GHz
- Low Insertion Loss: 8.0 dB
- Power Handling : 20 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5-54			GHz
Insertion Loss		8	8.5	dB
Isolation	70			dB
Switch Speed			100	ns
Input VSWR		2	2.5	:1
Output VSWR		2	2.5	:1
Power Handling			20	dBm
DC Supply Voltage		+/-5		V DC
Control Logic TTL		0/+5		V DC
DC Supply Current		150/-80		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

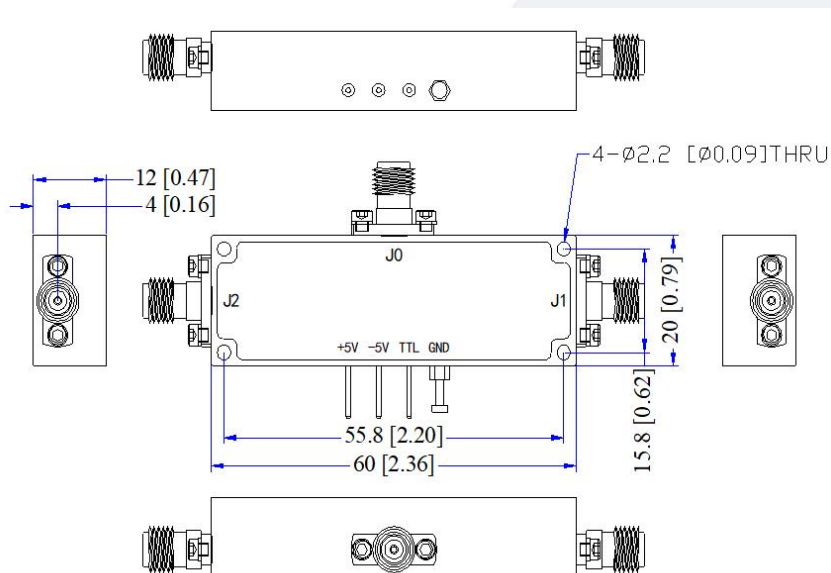
Description	Parameter	Units
Supply Bias Voltage	$\pm 5\%$	V
RF Input Power	20	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	1.85mm Female/1.85mm Female	
Control Bias	Solder Pin	
Size	60*20*12	mm

Outline Drawing:

Unit:mm



Regulatory Compliance:



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

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



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

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
TLSPDT0.5G54GA	Absorptive,Broadband PIN Switch 0.5-54 GHz,SPDT,1.85mm	Rev.1.1