

Absorptive, Broadband PIN Switch

0.1-110 GHz/SPDT/1.0mm Female

Model: TLSPDT0.1G110G

The TLSPDT0.1G110G is an absorptive PIN diode based switch with a TTL driver that operates between 0.1 and 110 GHz. The SPDT switch offers 20 dB port-to-port isolation with a typical switching speed of 100 ns. The input and output connectors of the switch are 1.0mm Female.

Features:

- Ultra Wide Band: 0.1-110 GHz
- Low Insertion Loss: 6.5 dB Typ
- Power Handling : 20 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	0.1-110			GHz
插损 Insertion Loss		6.5		dB
隔离 Isolation	20			dB
切换速度 Switch Speed			100	ns
输入驻波 Input VSWR			3.0	:1
输出驻波 Output VSWR			3.0	:1
耐功率 Power Handling			20	dBm
直流电压 DC Voltage		+5		V DC
控制电压 Control Voltage	High (1) →0V Low (0) →-15V			V
直流电流 DC Supply Current		100		mA
开关类型 Switch type	Reflective			
阻抗 Impedance	50			Ohms

绝对最大值 Absolute Maximum Ratings :

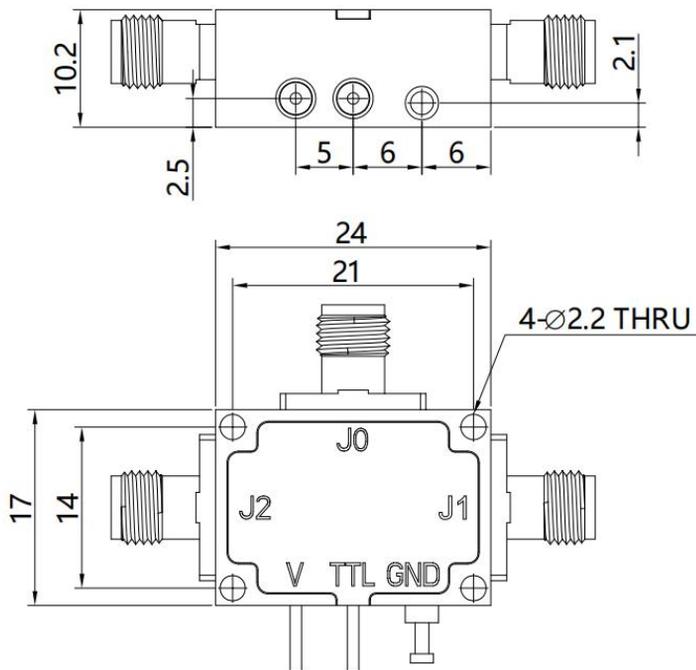
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	+5V±10%	V
射频输入功率 RF Input Power	23	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	1.0mm Female/1.0mm Female	
直流控制接口 Control Bias	Solder Pin	
尺寸 Size	24*17*10.2	mm

外形图 Outline Drawing:

Unit:mm



真值表 Truth Table

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

TTL Control Voltages &VDD

Stage	Bias Condition
VDD	+5V (±5%)
Low (0)	-15.5 to -14.5Vdc
High (1)	0 to 0.5Vdc



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

温度环境 Environmental Conditions:

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

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLSPDT0.1G110G	Reflective, Broadband PIN Switch 0.1-110 GHz,SPDT,1.0mm Female	Rev.1.0