

Absorptive, Broadband PIN Switch

0.1-18 GHz/SPDT/SMA Female

Model: TLSPDT1G18GA

The TLSPDT1G18GA is an absorptive PIN diode based switch with a TTL driver that operates between 1 and 18 GHz. The SPDT switch offers 70 dB port-to-port isolation with a typical switching speed of 50 ns. The input and output connectors of the switch are SMA female.

Features:

- Frequency range: 1-18 GHz
- Low Insertion Loss: 2.5 dB Typ
- Power Handling : 27 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	1-18			GHz
插损 Insertion Loss		2.5	4.5	dB
隔离 Isolation		70		dB
切换速度 Switch Speed		50	100	ns
输入驻波 Input VSWR		1.5		:1
输出驻波 Output VSWR		1.5		:1
耐功率 Power Handling			27	dBm
直流电压 DC Voltage		+5		V DC
直流电流 DC Supply Current		20		mA
控制电平 Control Logic TTL		0/+5		V DC
开关类型 Switch type	Absorptive			
阻抗 Impedance	50			Ohms

绝对最大值 Absolute Maximum Ratings :

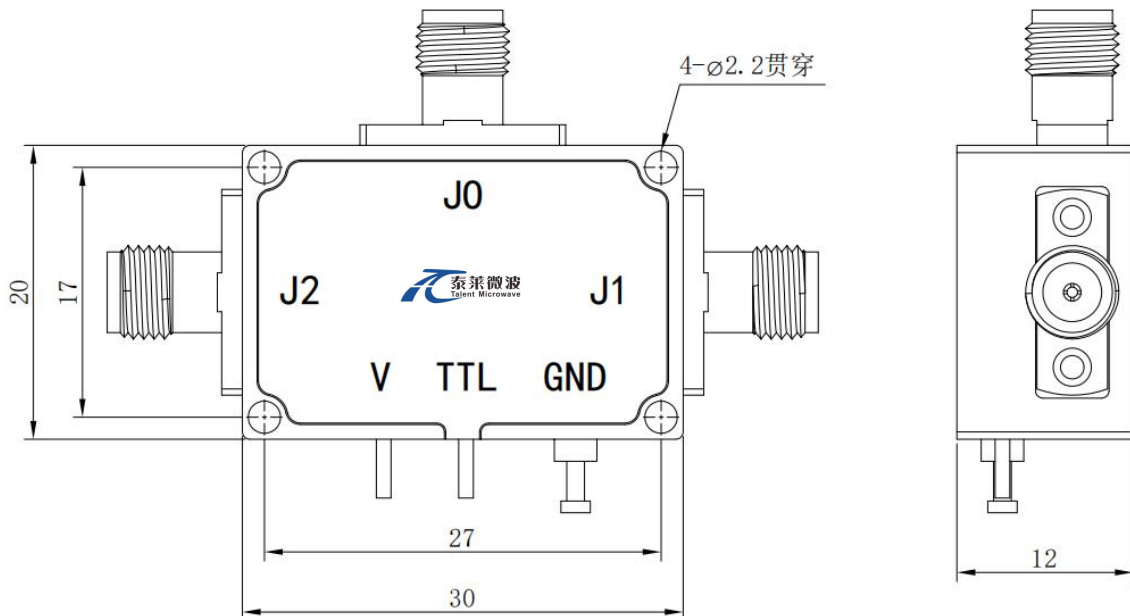
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	±5%	V
射频输入功率 RF Input Power	27	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	SMAMm Female/SMA Female	
直流控制接口 Control Bias	Solder Pin	
尺寸 Size	30*20*12	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



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

温度环境 Environmental Conditions:

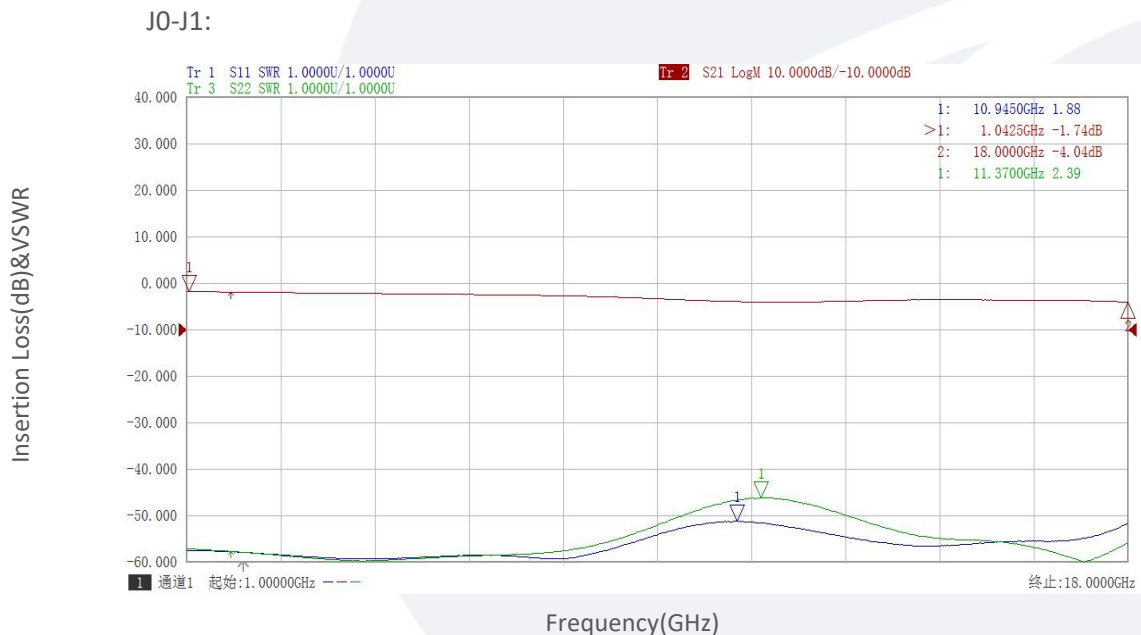
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLSPDT1G18GA	Absorptive,Broadband PIN Switch 1-18 GHz,SPDT,SMA	Rev.1.1

典型曲线 Typical Performance Data:

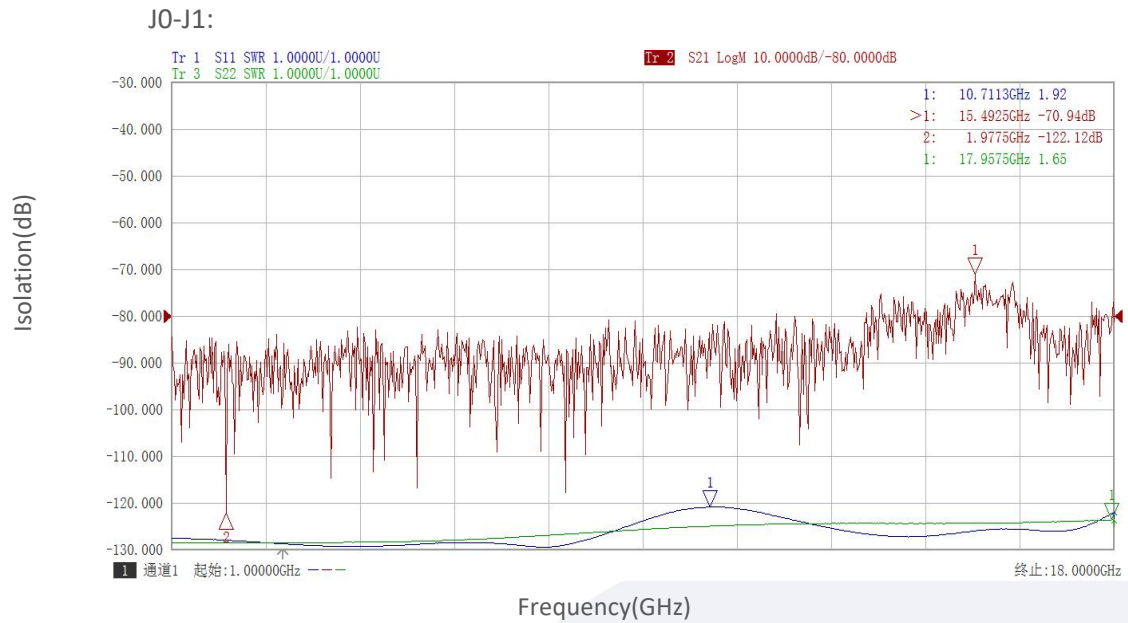
Insertion Loss&VSWR vs Frequency



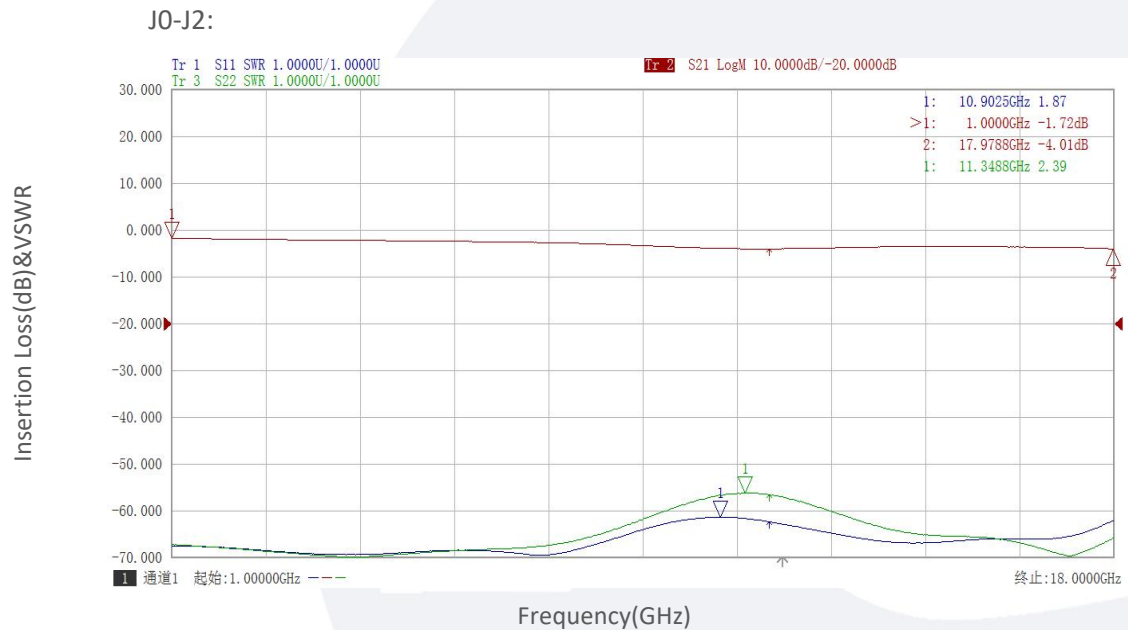
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Isolation vs Frequency



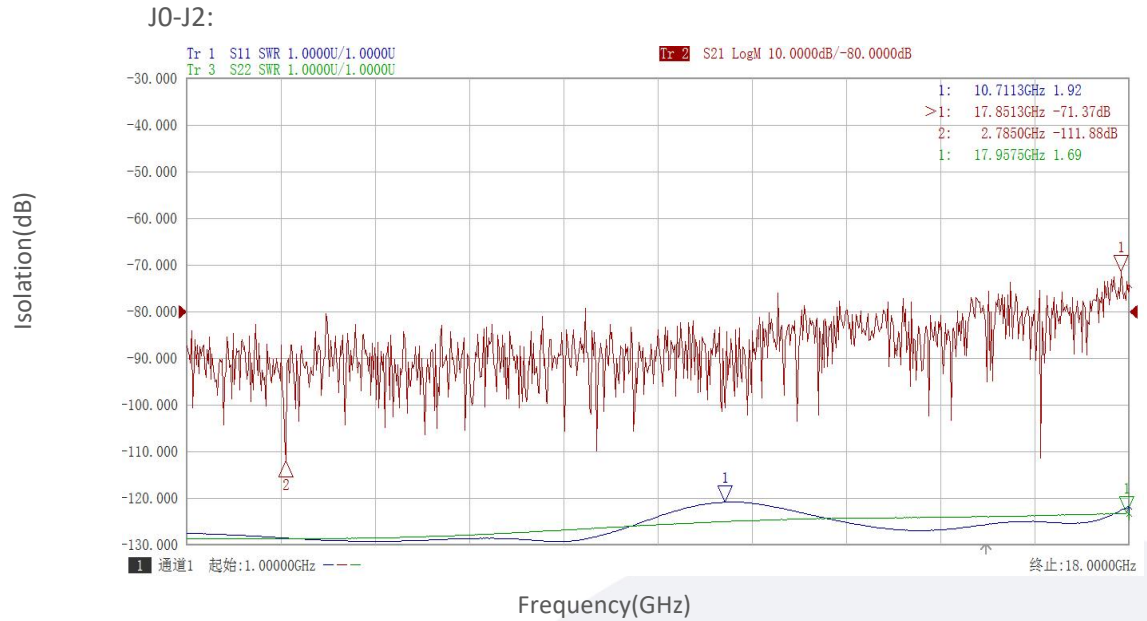
Insertion Loss&VSWR vs Frequency



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