泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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www.talentmw.com

Absorptive,Broadband MMIC Switch

0.01-40 GHz/SP4T/2.92mm Female

Model: TLSP4T0.01G40GA

The TLSP4T0.01G40GA is an absorptive MMIC switch with a TTL driver that operates between 0.01 and 40 GHz. The SP4T switch offers 65 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are 2.92mm female.The input and output are integrated with direct isolation capacitors.

Features:

- Frequency range: 0.01-40GHz
- Insertion Loss: 7 dB
- Power Handling : 25 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	0.01		40	GHz
插损 Insertion Loss		7		dB
隔离 Isolation	55	65		dB
切换速度 Switch Speed		100		ns
输入驻波 Input VSWR		2	2.5	:1
输出驻波 Output VSWR		2	2.5	:1
耐功率 Power Handling			25	dBm
直流电压 DC Voltage		5		V DC
直流电流 DC Supply Current		30		mA
开关类型 Switch type	Absorptive			
阻抗 Impedance	50			Ohms

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绝对最大值 Absolute Maximum Ratings :

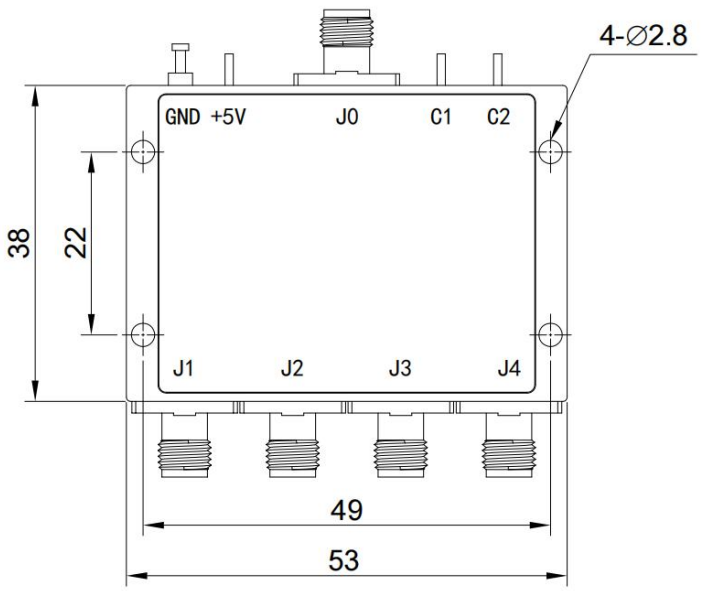
参数 Parameter	指标 Value	单位 Units
供电偏置电压 Supply Bias Voltage	±5%	V
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

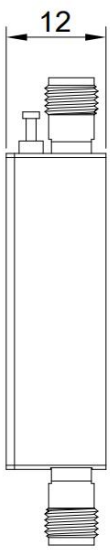
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/2.92mm Female	
直流控制接口 Control Bias	Solder Pin	
尺寸 Size	53*38*12	mm

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm





真值表 Truth Table		
TTL Control Input		Signal Path State
C1	C2	
0	0	J0-J1
1	0	J0-J2
0	1	J0-J3
1	1	J0-J4

TTL Control Voltages&VDD	
Stage	Bias Condition
VDD	+5V (±5%)
Low（0）	0 to 0.8Vdc
High（1）	+3.3 to +5.0Vdc

1.Dimensions are in mm [inches]
2.Tolerances: Outline drawing ±0.2 [0.008] Hole ±0.2 [0.008]
NOTE: ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME

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

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温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-40		+85	℃
存储温度 Non-operating Temperature	-50		+95	℃
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			

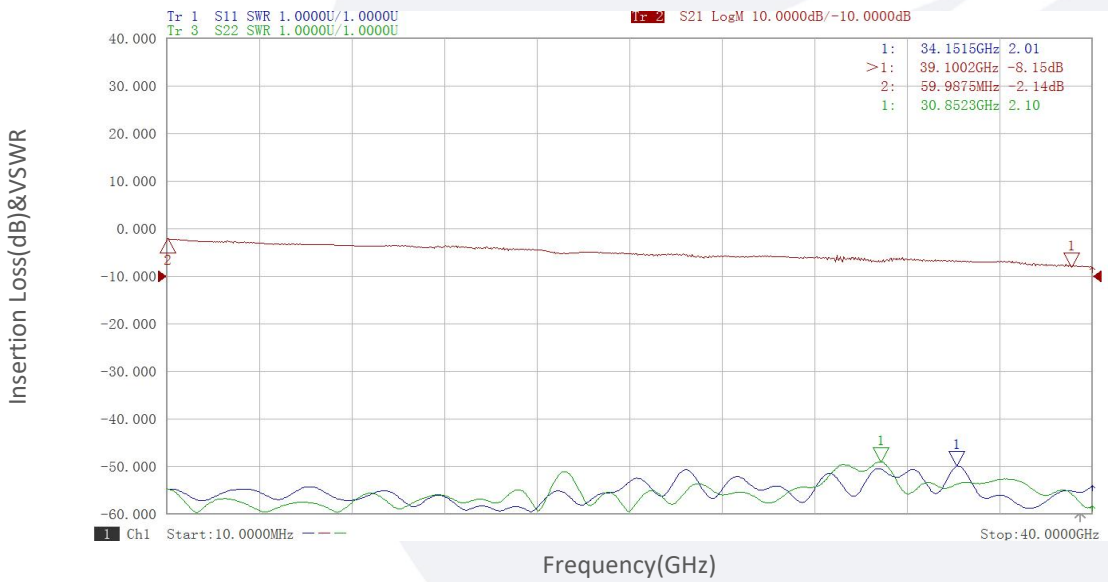
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLSP4T0.01G40GA	Absorptive,Broadband MMIC Switch 0.01-40 GHz,SP4T,2.92mm Female	Rev.1.1

典型曲线 Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J1:



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.

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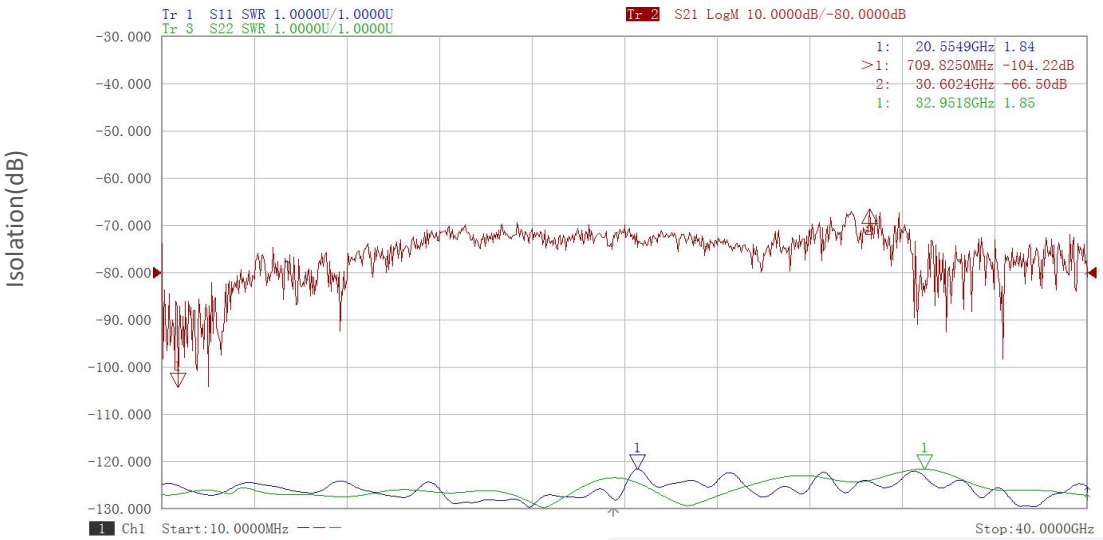
典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J1:

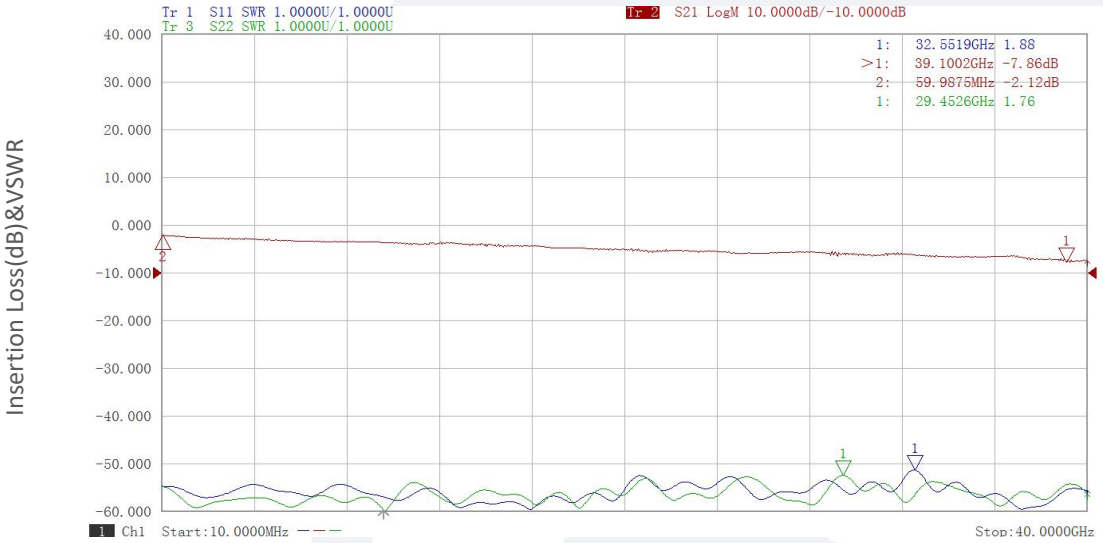


Isolation(dB)

Frequency(GHz)

Insertion Loss&VSWR vs Frequency

J0-J2:



Insertion Loss(dB)&VSWR

Frequency(GHz)

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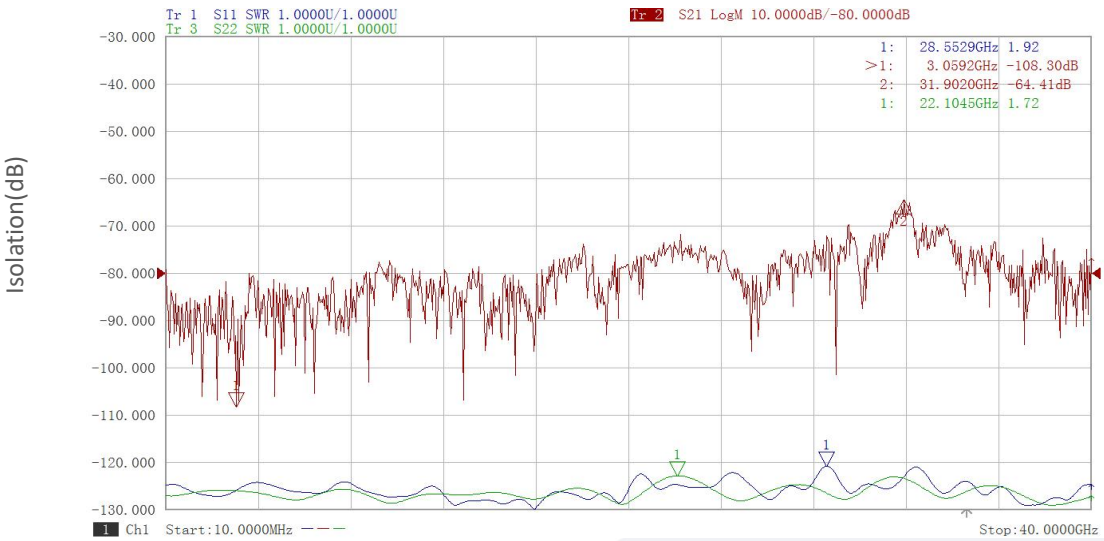
典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J2:

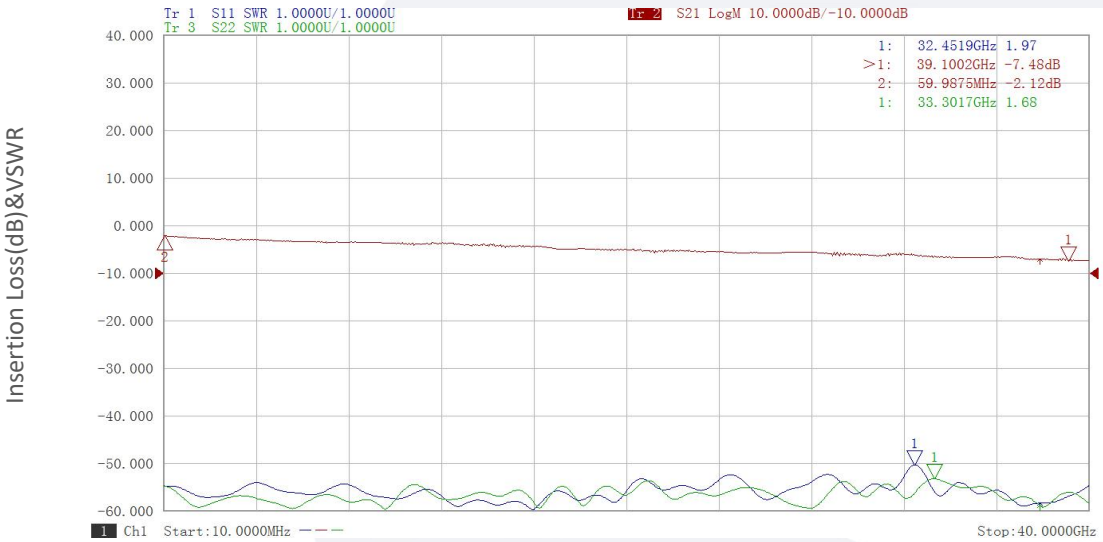


Isolation(dB)

Frequency(GHz)

Insertion Loss&VSWR vs Frequency

J0-J3:



Insertion Loss(dB)&VSWR

Frequency(GHz)

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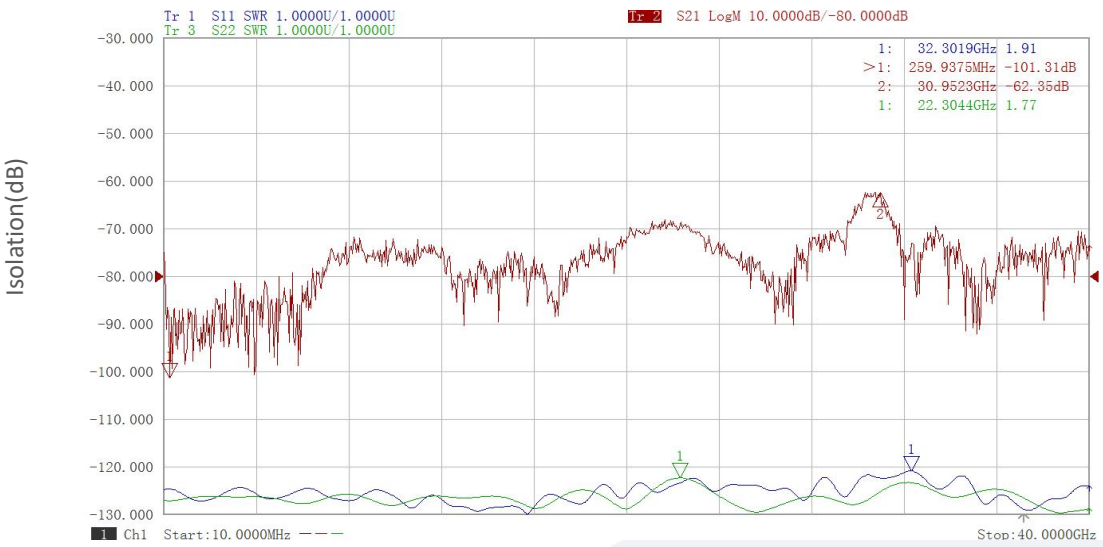
典型曲线 Typical Performance Data:

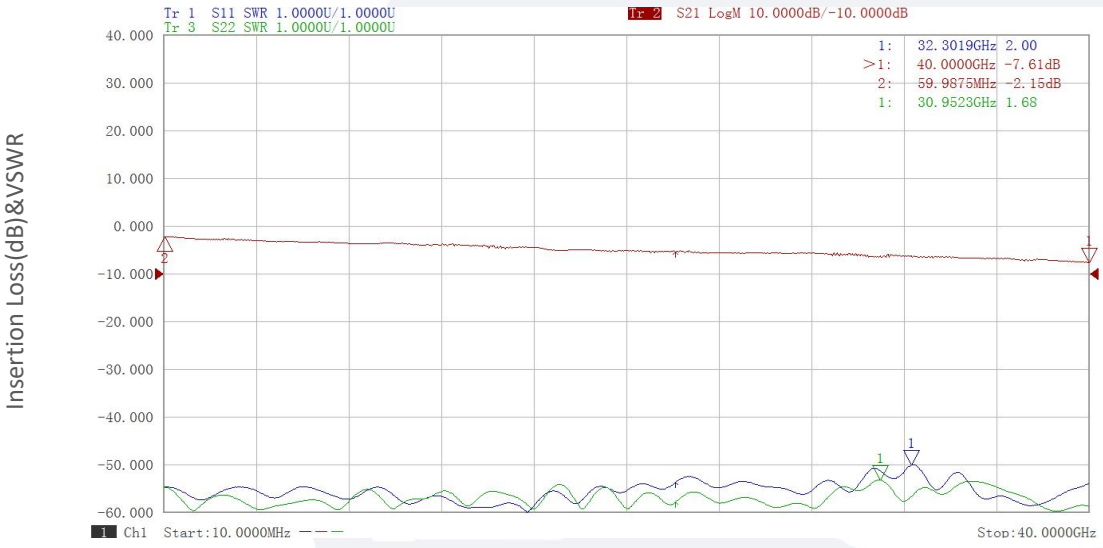
Isolation vs Frequency

J0-J3:



Insertion Loss&VSWR vs Frequency

J0-J4:



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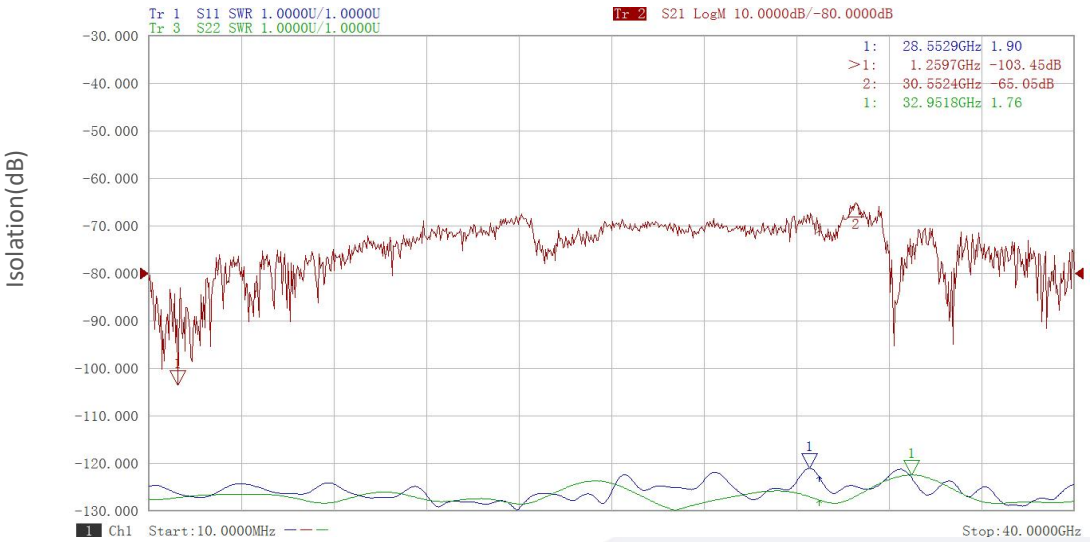
典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J4:



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