泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Absorptive,Broadband GaAs MMIC Switch

9KHz-8GHz/SP4T/ SMA/Phase Matched Model: TLSP4T9K8GA-PM

The TLSP4T9K8GA-PM is an absorptive MMIC switch with a TTL driver that operates between 9KHz and 8 GHz. The SP8T switch offers 50 dB port-to-port isolation with a typical switching speed of 50 nanoseconds. The input and output connectors of the switch are SMA female.The input and output are integrated with direct isolation capacitors.

Features:

- Frequency range: 9KHz-8GHz
- Low Insertion Loss: 2.0 dB
- Power Handling : 30 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	9KHz		8GHz	
插损 Insertion Loss		3	3.5	dB
隔离 Isolation		50		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			30	dBm
幅度一致性 Amplitude Consistency			±0.5	dB
幅度稳定性 Amplitude Stability			±1	dB
直流电压 DC Voltage		5		V DC
直流电流 DC Supply Current			100	mA
开关类型 Switch type	Absorptive			
控制电平 Control Logic TTL	“0”=Low(0V) ; “1”=High(+3.3V)			V
阻抗 Impedance	50			Ohm

泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

绝对最大值 Absolute Maximum Ratings :

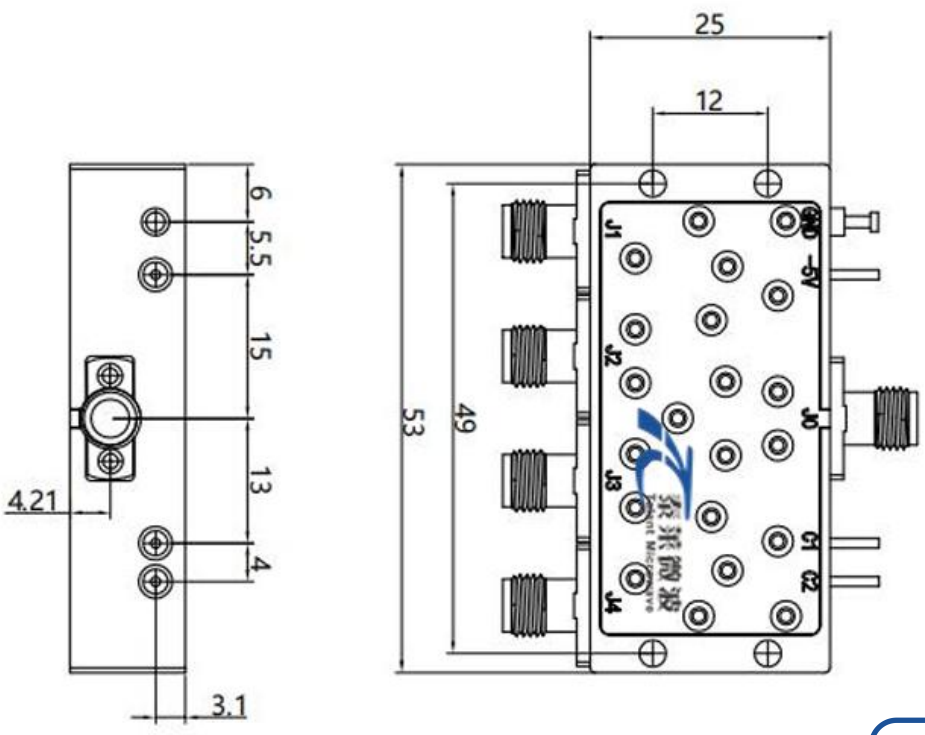
参数 Parameter	指标 Value	单位 Units
供电偏置电压 Supply Bias Voltage	±5%	V
射频输入功率 RF Input Power	30	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流控制接口 Control Bias	Solder Pin	
重量 Weight	200	g

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
0	1	J0-J2
1	0	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

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

泰莱微波 Talent Microwave
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

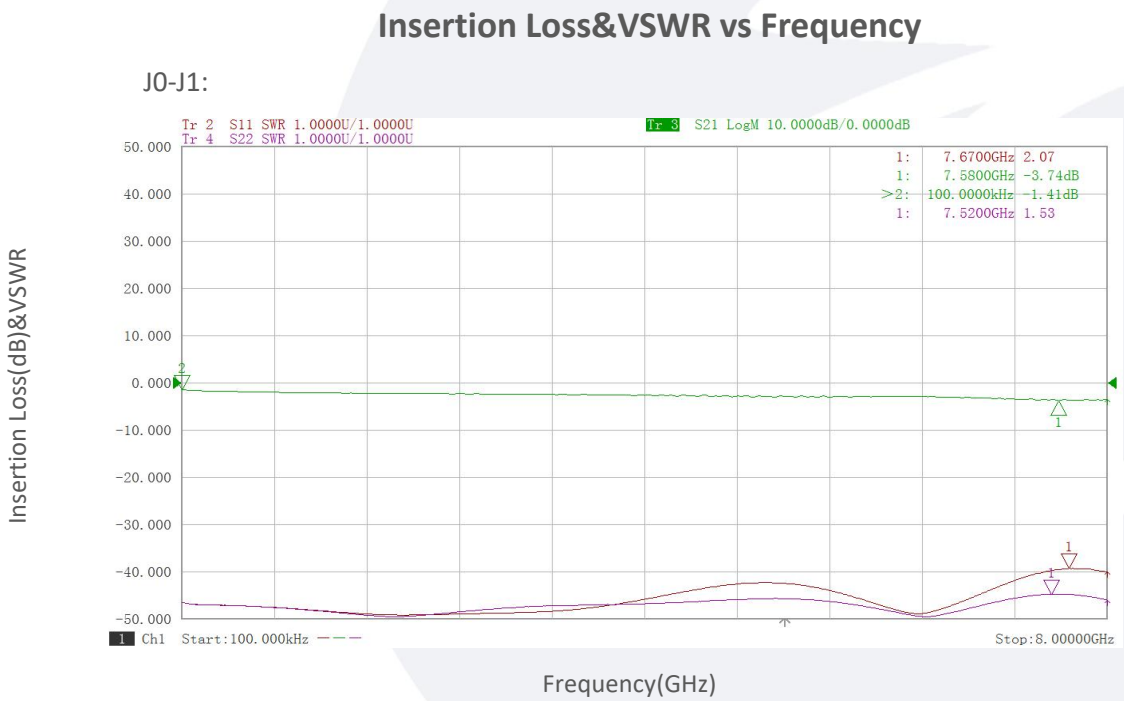
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	℃
存储温度 Non-operating Temperature	-45		+85	℃
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
TLSP4T9K8GA-PM	Absorptive,Broadband GaAs MMIC Switch 9 KHz-8 GHz,SP4T,SMA, Phase Matched	Rev.1.0

典型曲线 Typical Performance Data:



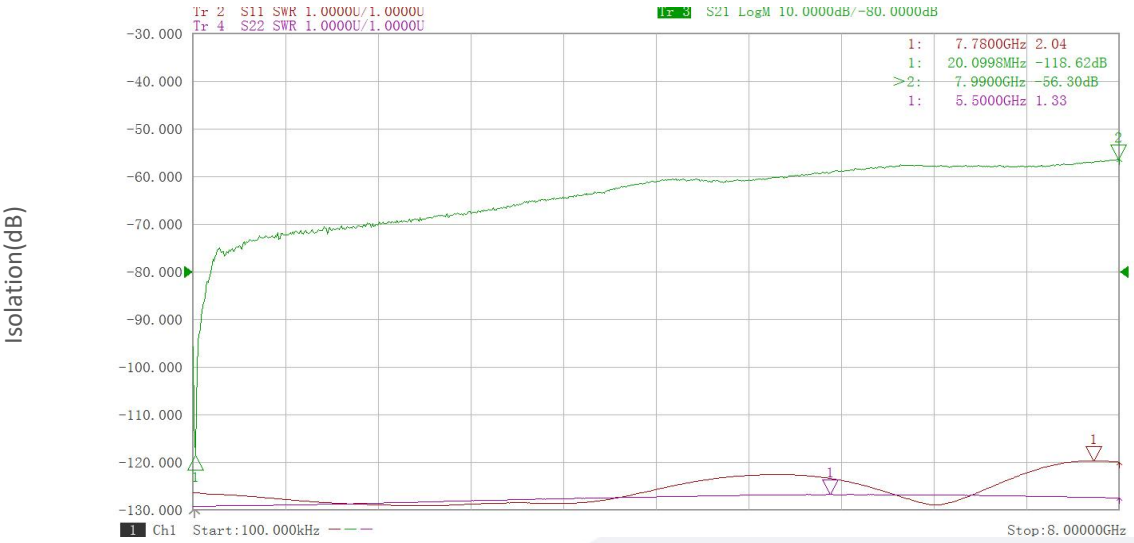
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J1:

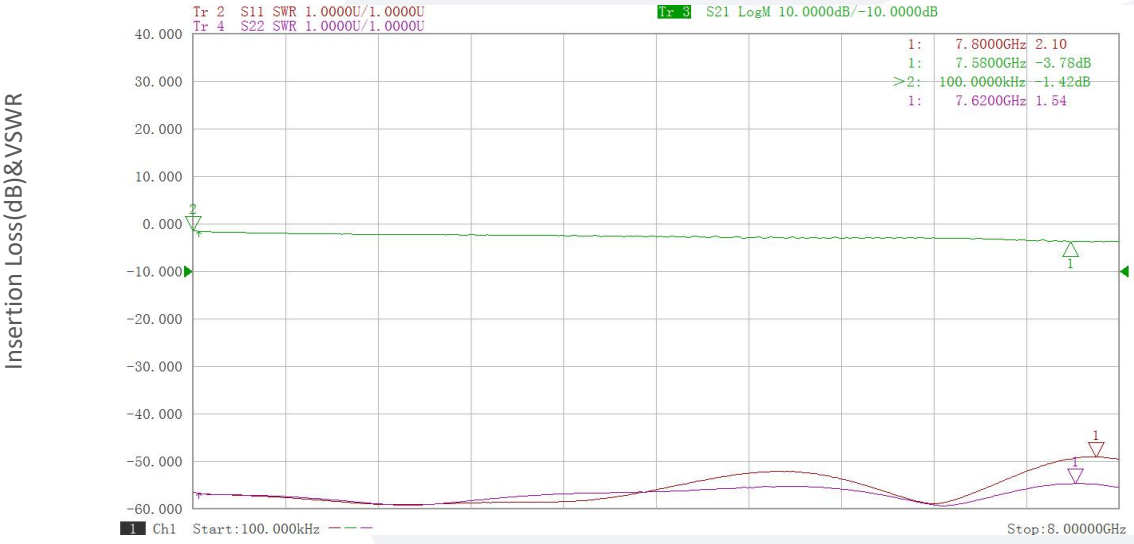


Isolation(dB)

Frequency(GHz)

Insertion Loss&VSWR vs Frequency

J0-J2:



Insertion Loss(dB)&VSWR

Frequency(GHz)

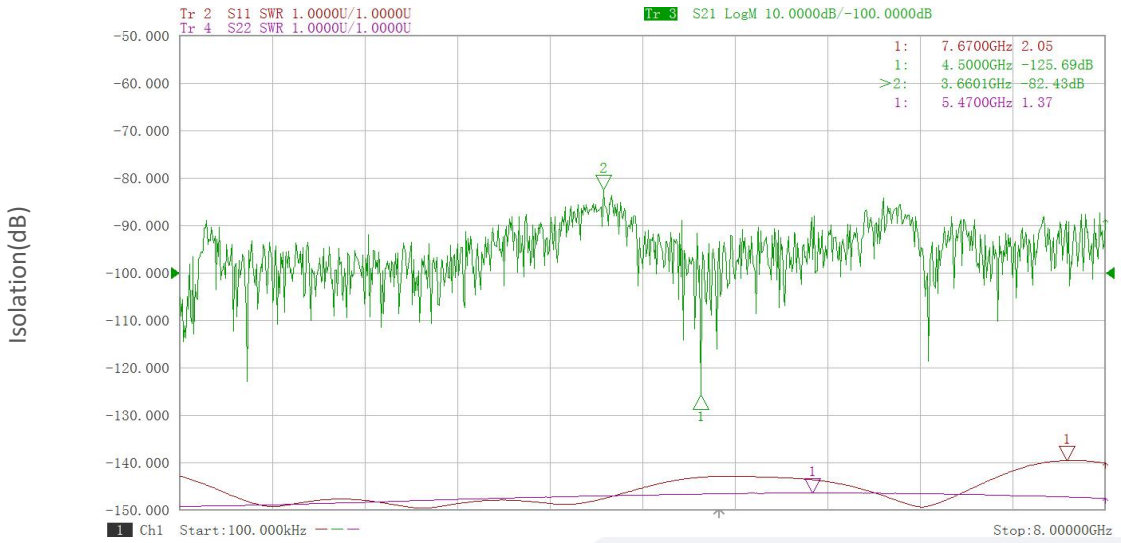
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

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)

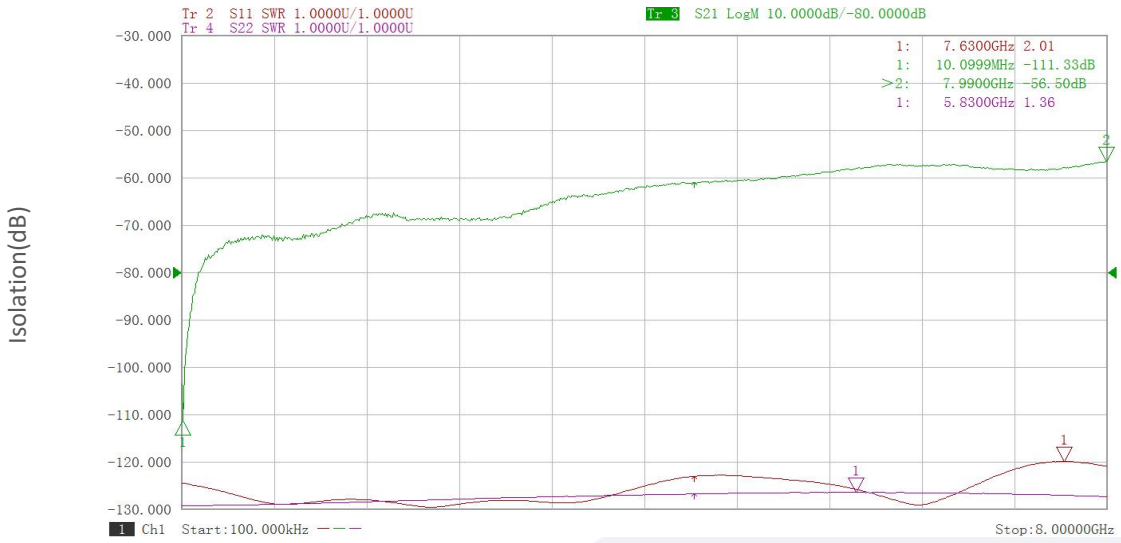
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J3:



Isolation(dB)

Frequency(GHz)

Insertion Loss&VSWR vs Frequency

J0-J4:



Insertion Loss(dB)&VSWR

Frequency(GHz)

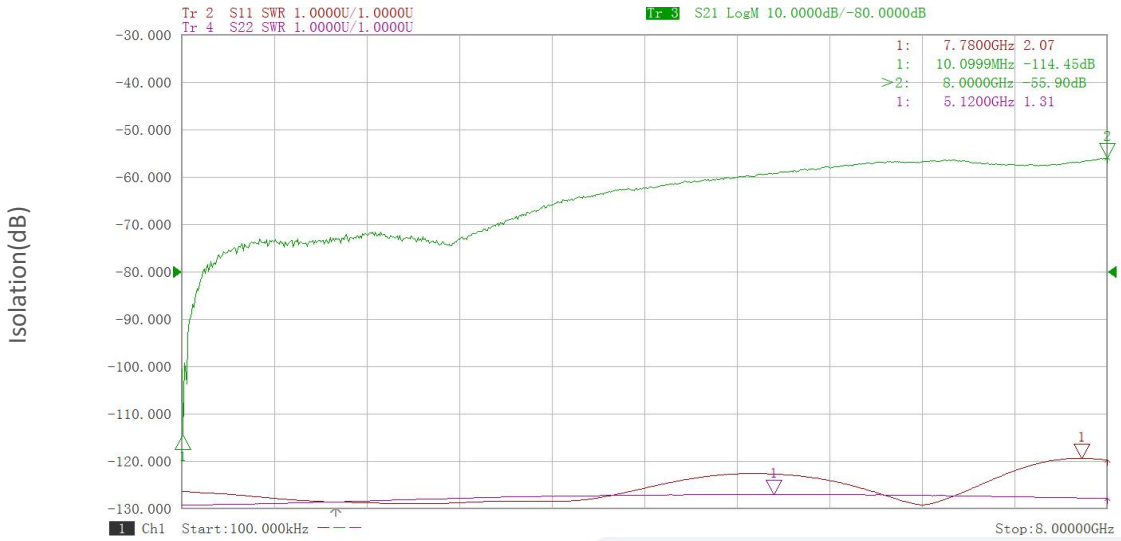
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

Isolation vs Frequency

J0-J4:



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.