

Reflective, Broadband MMIC Switch

0.8G-20G/SPDT/SMA Female

Model: TLSPDT0.8G20GA

The TLSPDT0.8G20GA is an reflective MMIC switch with a TTL driver that operates between 0.8G and 20 GHz. The SPDT switch offers 60 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are SMA female.

Features:

- Ultra Wide Band: 0.8G-20GHz
- Low Insertion Loss: 4 dB
- Power Handling : 27 dBm
- High Isolation
- Switch Type: reflective

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	0.8		20	GHz
插损 Insertion Loss		4		dB
隔离 Isolation	60			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
开关类型 Switch type	Absorptive			
阻抗 Impedance		50		Ohms

绝对最大值 Absolute Maximum Ratings :

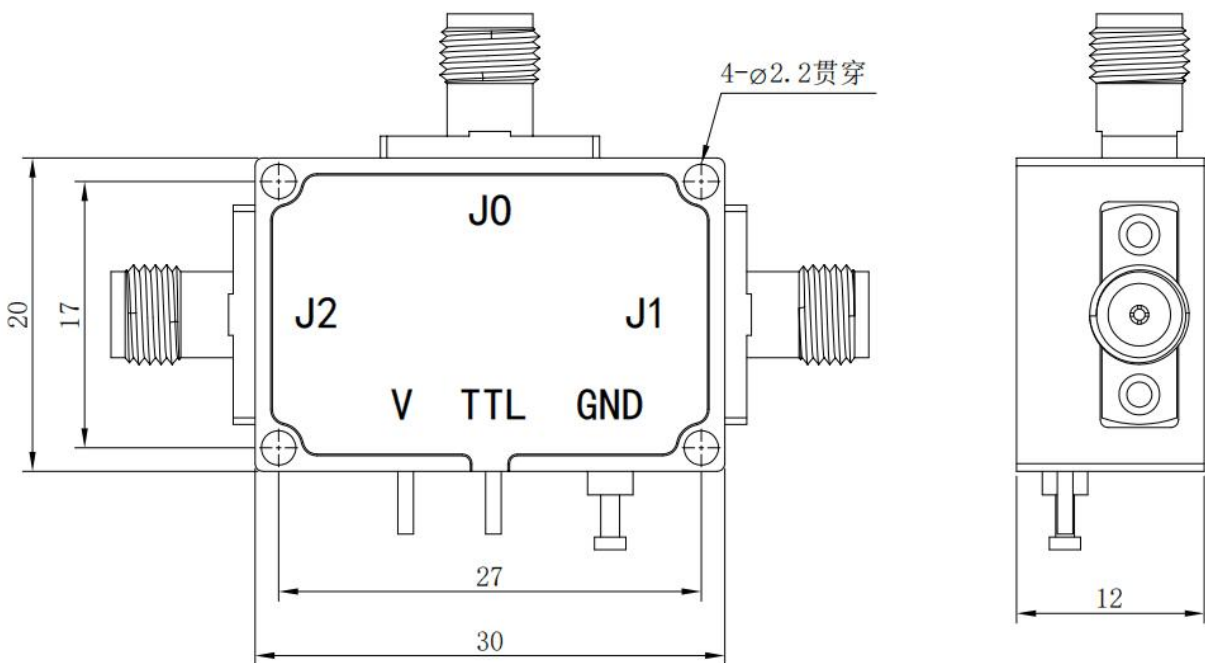
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	±5%	V
射频输入功率 RF Input Power	27	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	SMA 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



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.

真值表 Truth Table

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

TTL Control Voltages &VDD

Stage	Bias Condition
VDD	+5V ($\pm 5\%$)
Low (0)	0 to 0.8Vdc
High (1)	+2 to +3.3Vdc

温度环境 Environmental Conditions:

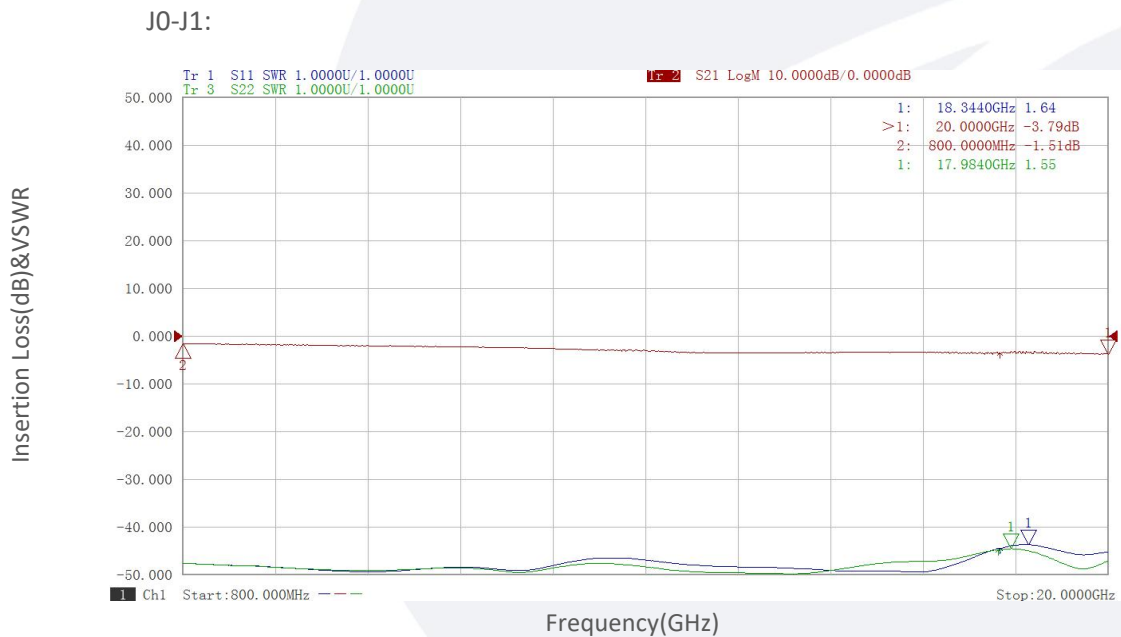
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLSPDT0.8G20GA	Reflective,Broadband MMIC Switch 0.8-20GHz, SPDT, SMA Female	Rev.1.0

典型曲线 Typical Performance Data:

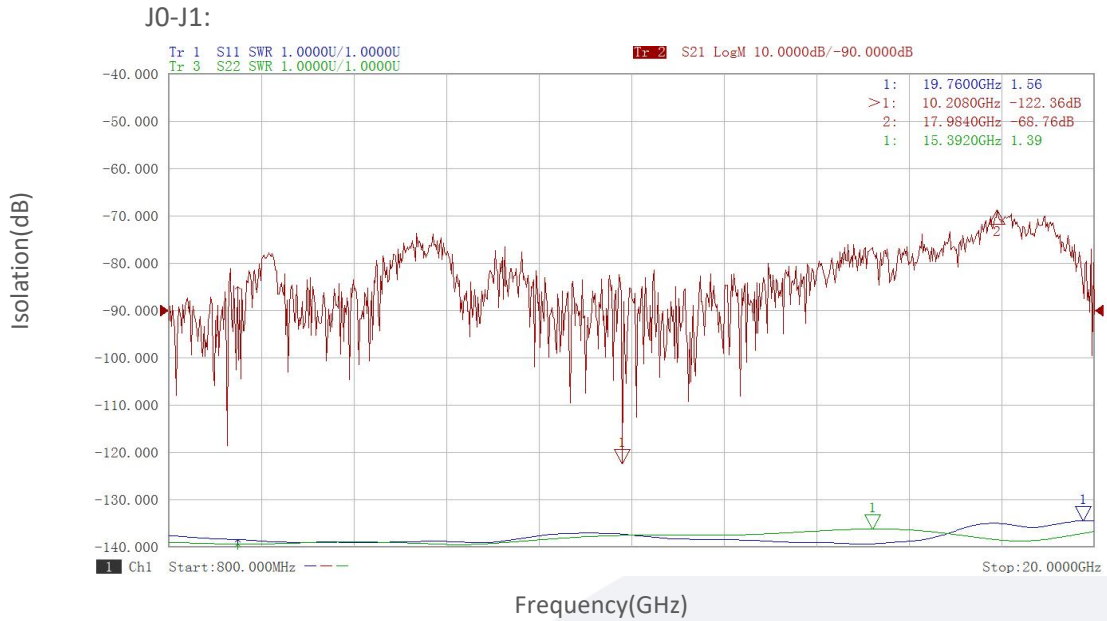
Insertion Loss&VSWR vs Frequency



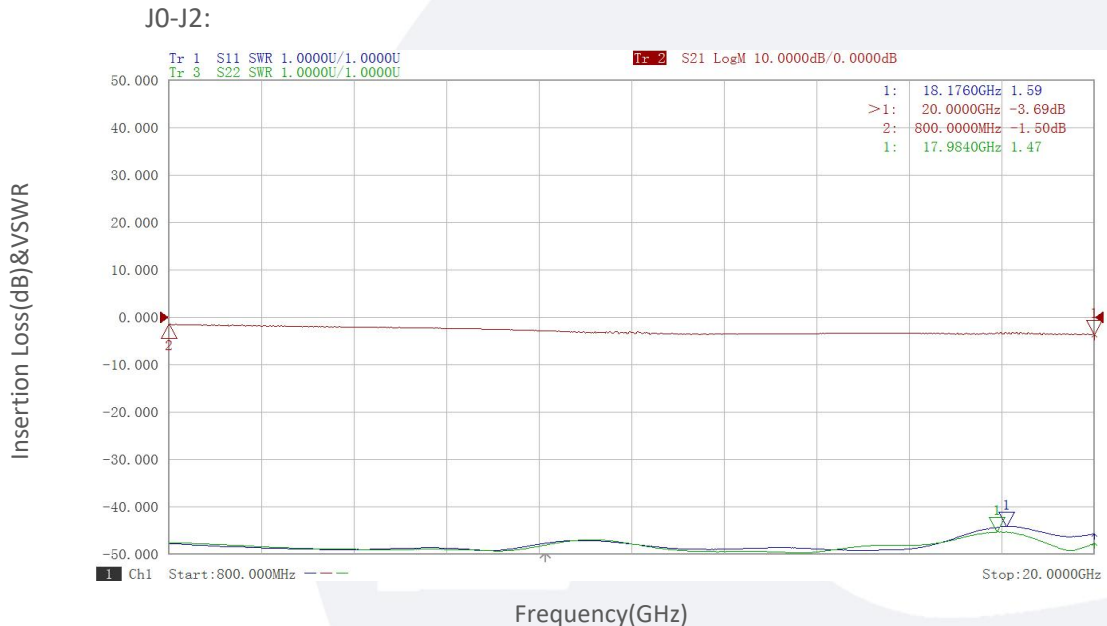
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Isolation vs Frequency



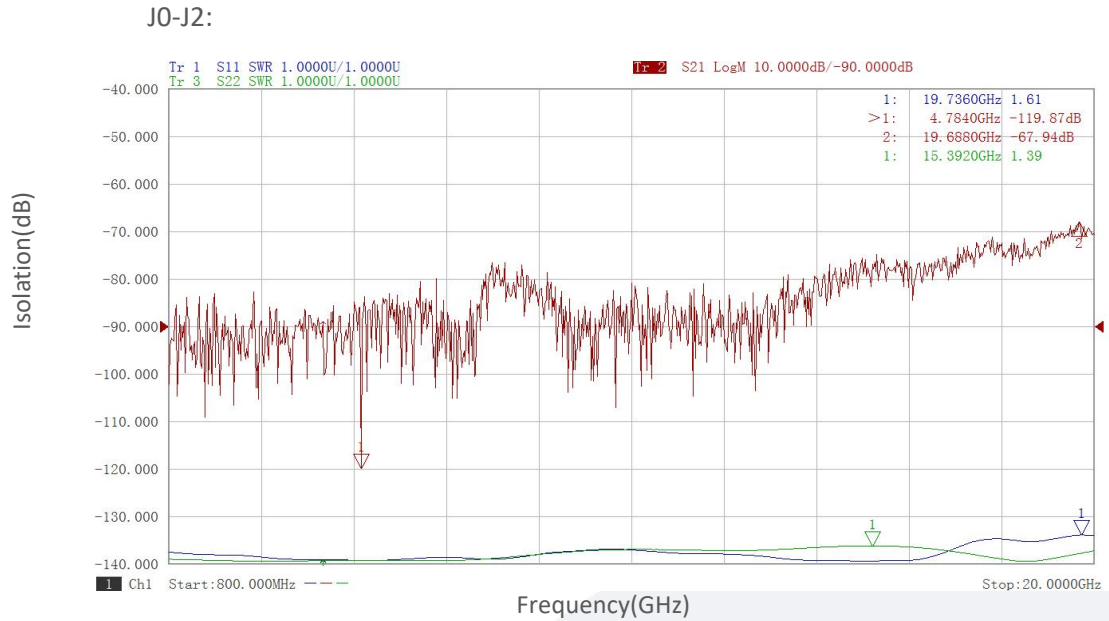
Insertion Loss&VSWR vs Frequency



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



Switch Time



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.