

Reflective, Broadband MMIC Switch

0.1-110GHz/SPDT/1.0mm Female

Model: TLSPDT0.1G110GR

The TLSPDT0.1G110GR is a reflective type switch with a TTL driver that operates between 0.1 and 110 GHz. The SPDT switch offers 30 dB port-to-port isolation with a typical switching speed of 100 nanoseconds. The input and output connectors of the switch are 1.0 mm female.

Features:

- Frequency range: 0.1-110GHz
- Insertion Loss: 9dB Typ
- Power Handling: 25dBm
- 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	0.1		110	GHz
插损 Insertion Loss		9		dB
隔离 Isolation		30		dB
切换速度 Switch Speed		100		ns
输入驻波 Input VSWR		2.5		:1
输出驻波 Output VSWR		2.5		:1
耐功率 Power Handling		25		dBm
直流电压 DC Supply Voltage		5		V DC
控制电平 Control Logic TTL		0/+5		V DC
直流电流 DC Supply Current		5		mA
开关类型 Switch type	Reflective			
阻抗 Impedance	50			Ohms

绝对最大值 Absolute Maximum Ratings:

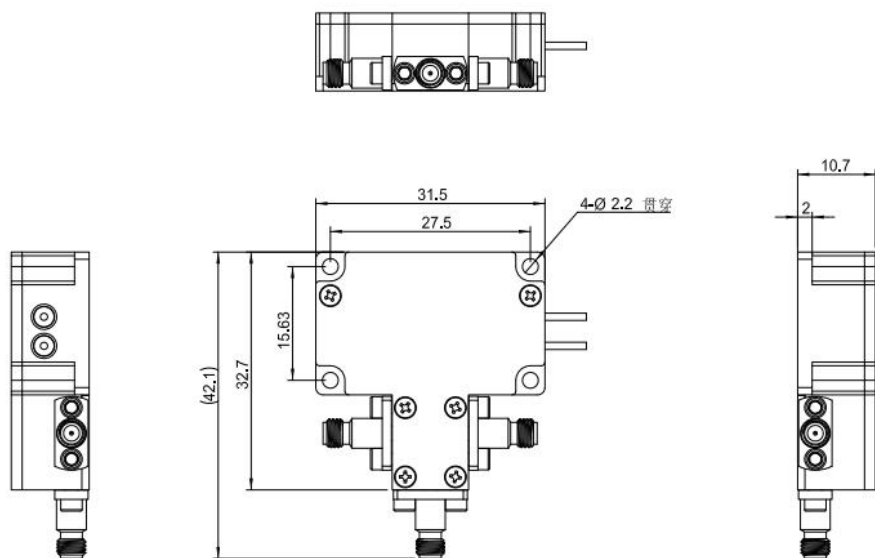
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	5	V
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

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 Connector	Solder Pin	
尺寸 Size	31.5*32.7*10.7	mm

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



真值表 Truth Table

TTL Control Input	Signal Path
Bit1	State
0	J0-J1
1	J0-J2

TTL Control Voltages &VDD

Stage	Bias Condition
VDD	+5V (±5%)
Low (0)	0 to 2.2Vdc
High (1)	+3.3 to +5.0Vdc



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

温度环境 Environmental Conditions:

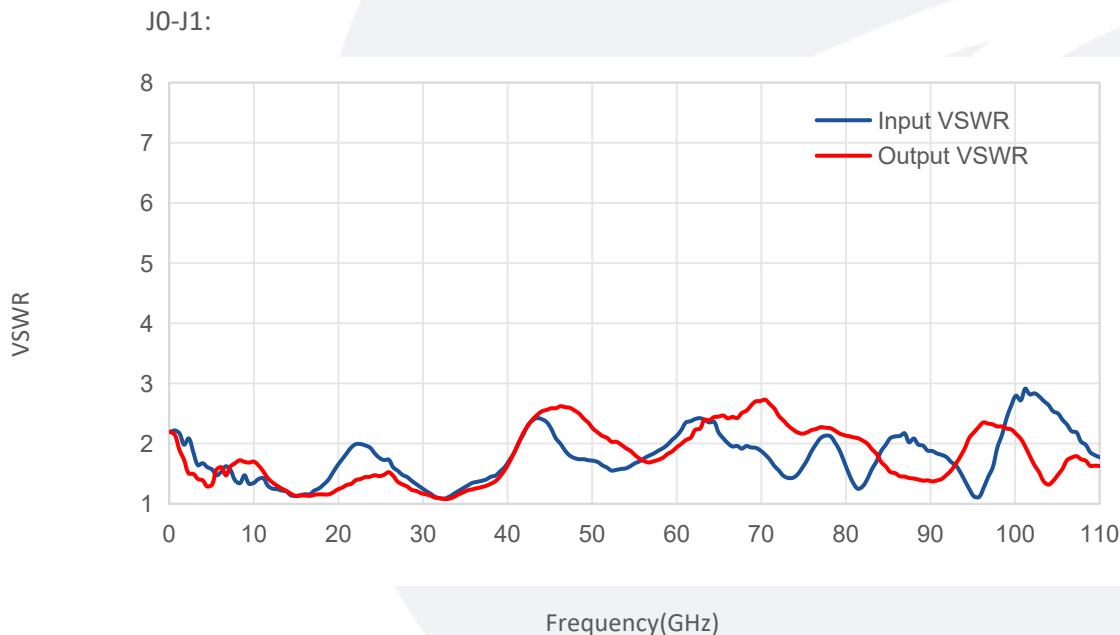
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc 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
TLSPDT0.1G110GR	Reflective,Broadband MMIC Switch 0.1-110 GHz,SPDT,1.0mm Female	Rev.1.0

典型曲线 Typical Performance Data:

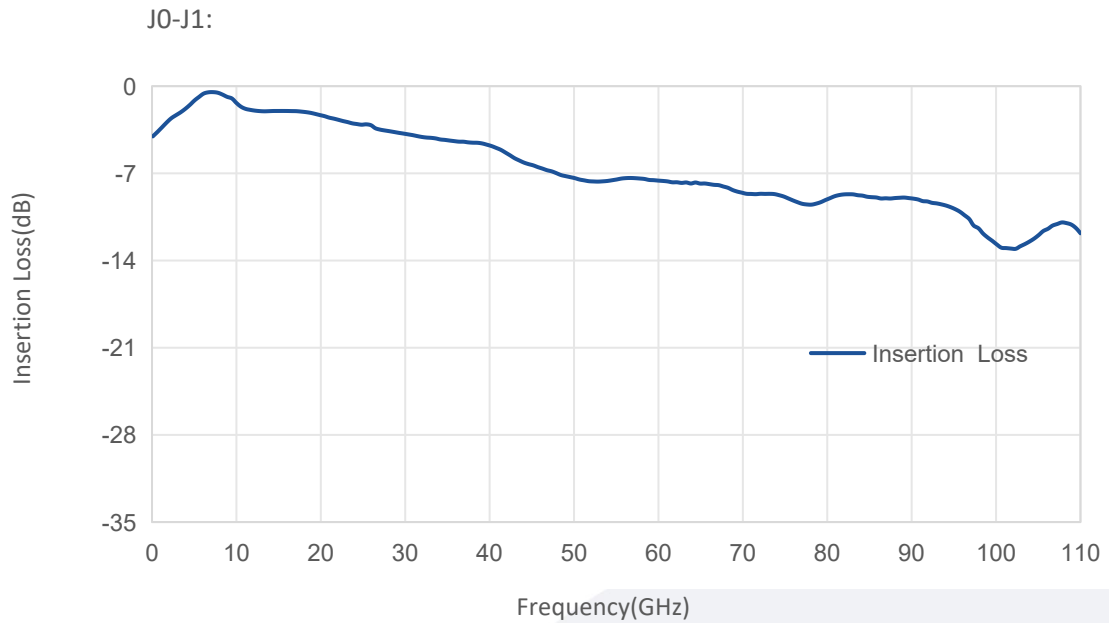
VSWR vs Frequency



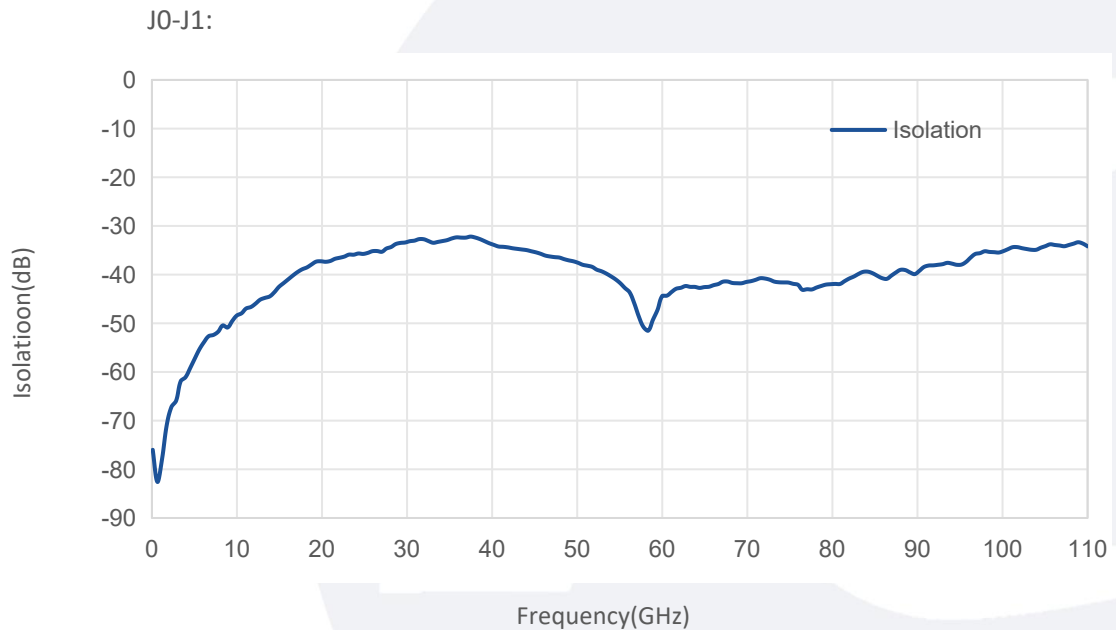
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Insertion Loss vs Frequency



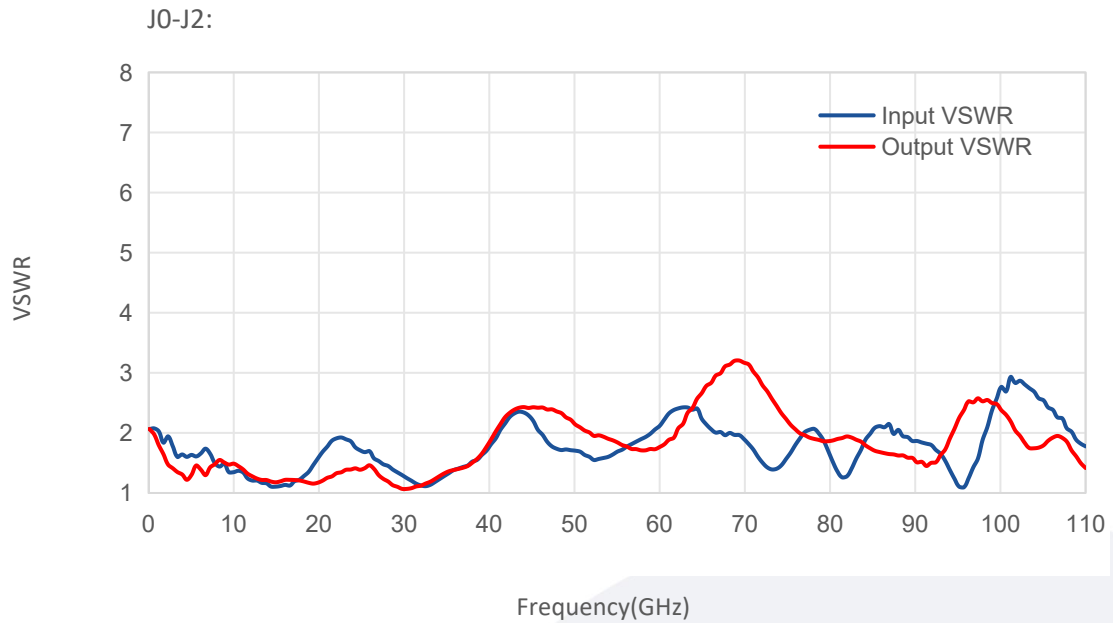
Isolation vs Frequency



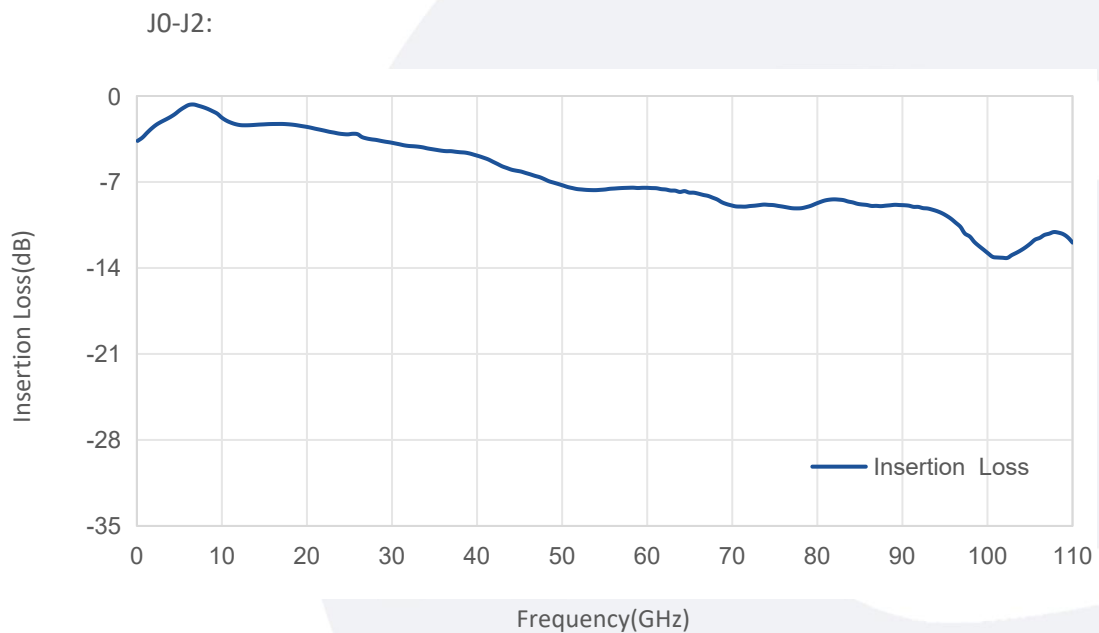
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

VSWR vs Frequency



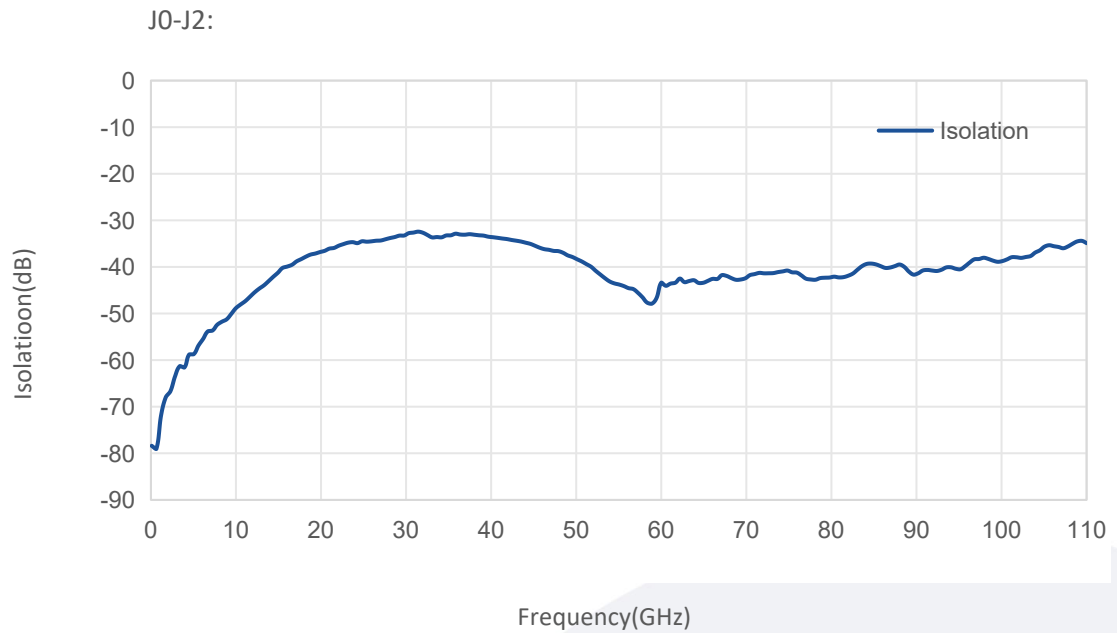
Insertion Loss vs Frequency



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



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.