

## Absorptive, Broadband MMIC Switch

### 10MHz-8GHz/SP16T/SMA Female

**Model: TLSP16T10M8GA-2**

The TLSP16T10M8GA-2 is an absorptive MMIC switch that operates between 10MHz and 8GHz. The SP16T switch offers 55 dB port-to-port isolation with a typical switching speed of 100 ns. The input and output connectors of the switch are SMA female.

#### Features:

- Frequency range: 10MHz-8GHz
- Insertion Loss: 6.0 dB
- Power Handling : 25dBm
- 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	10MHz		8GHz	
插损 Insertion Loss		6		dB
隔离 Isolation		55		dB
切换速度 Switch Speed		100		ns
输入驻波 Input VSWR		1.8		:1
输出驻波 Output VSWR		1.8		:1
耐功率 Power Handling			25	dBm
直流电压 DC Voltage	"0" = 0V; "1" = +3.3~+5V			V DC
控制电平 Control Logic TTL		+5		V DC
直流电流 DC Supply Current		50		mA
开关类型 Switch type	Absorptive			
阻抗 Impedance	50			Ohms

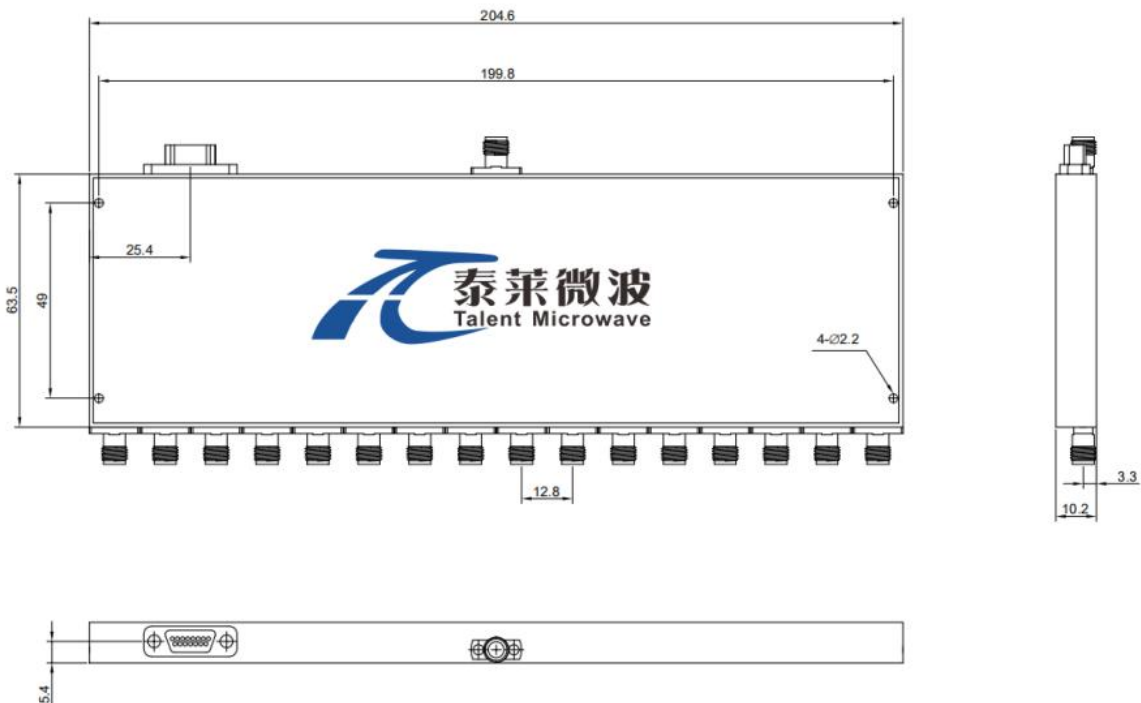
## 绝对最大值 Absolute Maximum Ratings :

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	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	SMA Female/SMA Female	
直流控制接口 Control Bias Connector	J30J-15ZKP	
尺寸 Size	204.6*63.5*10.2	mm

## 外形图 Outline Drawing: Unit:mm; Tolerance:±0.1mm



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

## 引脚定义 Pin Definitions :

真值表 Truth Table										
TTL Control Input										Signal Path State
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	
0	0	0	0	0	0	0	0	0	0	J0-J1
0	0	0	1	0	0	0	0	0	0	J0-J2
0	0	1	0	0	0	0	0	0	0	J0-J3
0	0	1	1	0	0	0	0	0	0	J0-J4
0	1	0	0	0	0	0	0	0	0	J0-J5
0	1	0	0	0	1	0	0	0	0	J0-J6
0	1	0	0	1	0	0	0	0	0	J0-J7
0	1	0	0	1	1	0	0	0	0	J0-J8
1	0	0	0	0	0	0	0	0	0	J0-J9
1	0	0	0	0	0	0	1	0	0	J0-J10
1	0	0	0	0	0	1	0	0	0	J0-J11
1	0	0	0	0	0	1	1	0	0	J0-J12
1	1	0	0	0	0	0	0	0	0	J0-J13
1	1	0	0	0	0	0	0	0	1	J0-J14
1	1	0	0	0	0	0	0	1	0	J0-J15
1	1	0	0	0	0	0	0	1	1	J0-J16

J30J-9ZKP	
针 Pin	单位 Units
1	C1
2	C2
3	C3
4	C4
5	C5
6	C6
7	C7
8	C8
9	C9
10	C10
11	+5V
12	NC
13	GND
14	GND
15	NC

## 温度环境 Environmental Conditions:

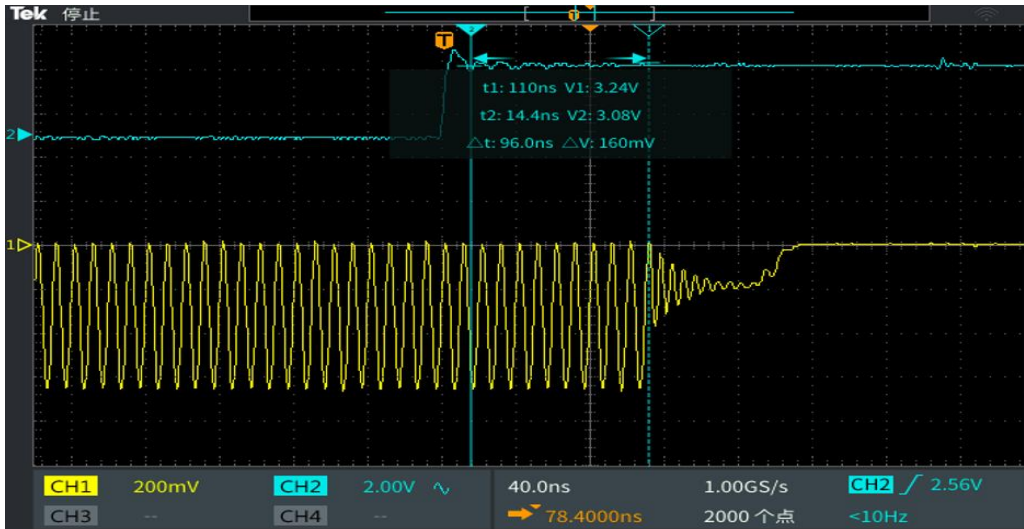
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

## 订货信息 Ordering Information:

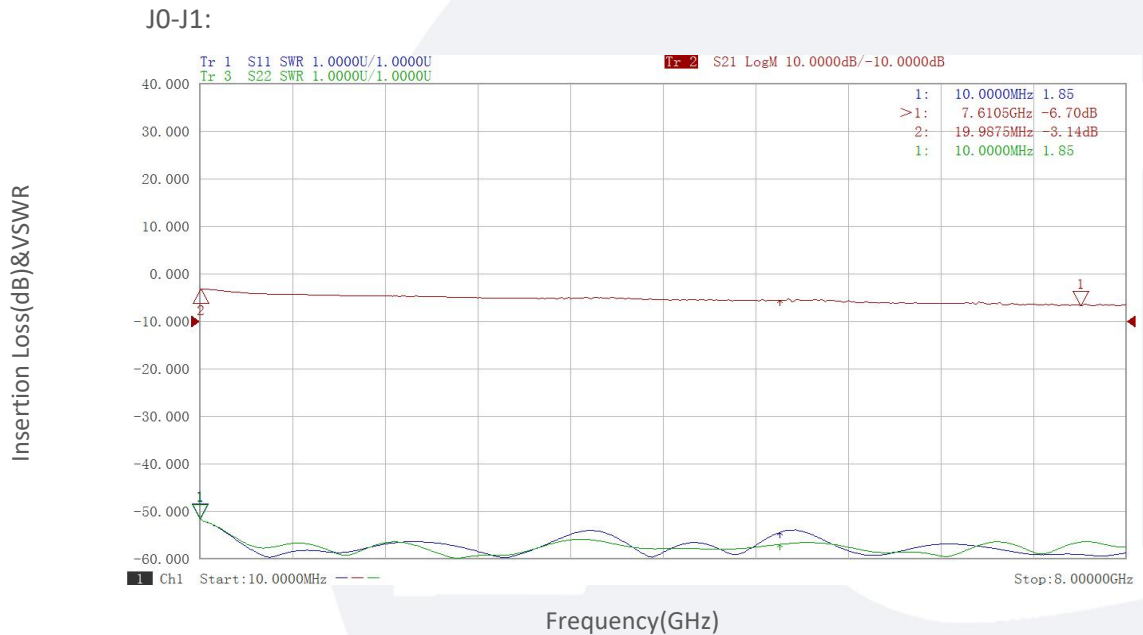
标准型号 Base Number	描述 Description	版本号 Revision
TLSP16T10M8GA-2	Absorptive, Broadband MMIC Switch 10MHz-8GHz, SP16T, SMA	Rev.1.0

典型曲线 Typical Performance Data:

Switch Speed



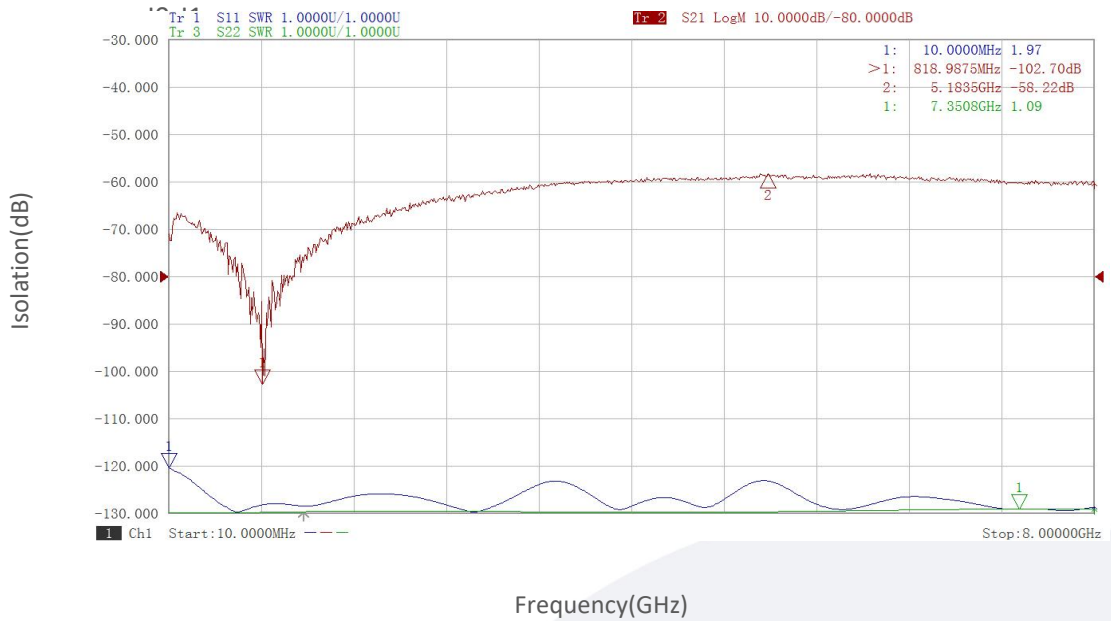
Insertion Loss&VSWR vs Frequency



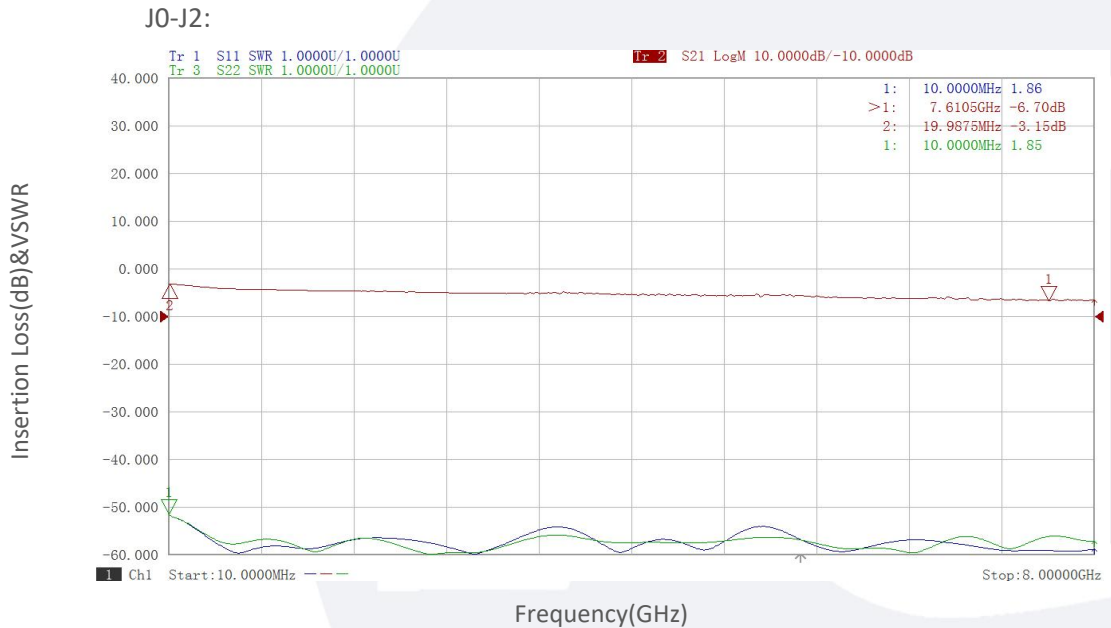
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Isolation vs Frequency



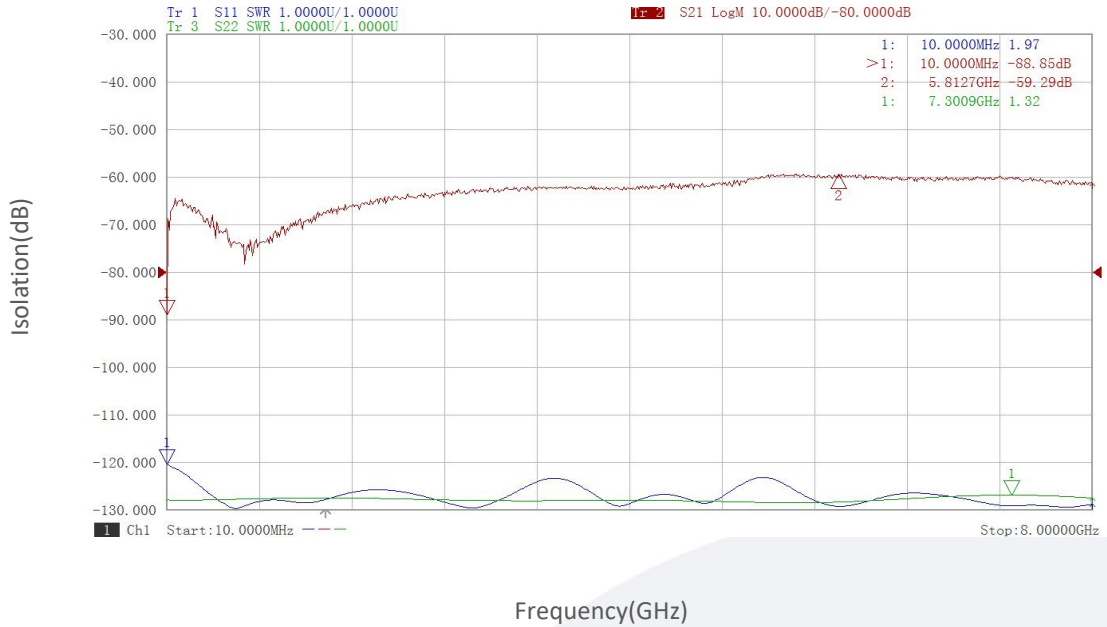
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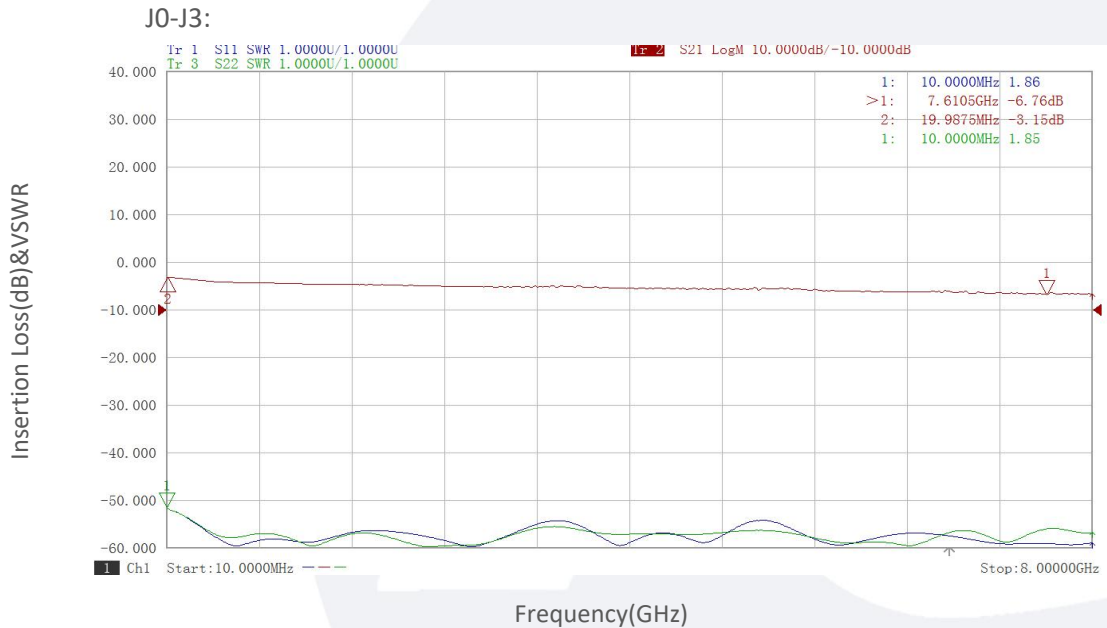
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典型曲线 Typical Performance Data:

Isolation vs Frequency



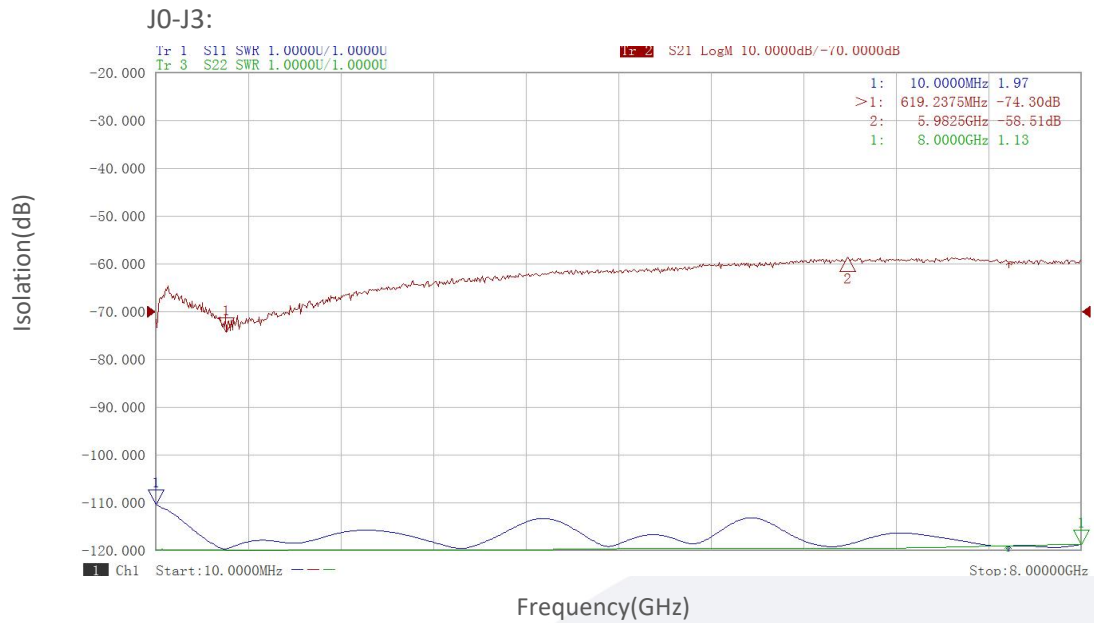
Insertion Loss & VSWR vs Frequency



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## 典型曲线 Typical Performance Data:

### Isolation vs Frequency



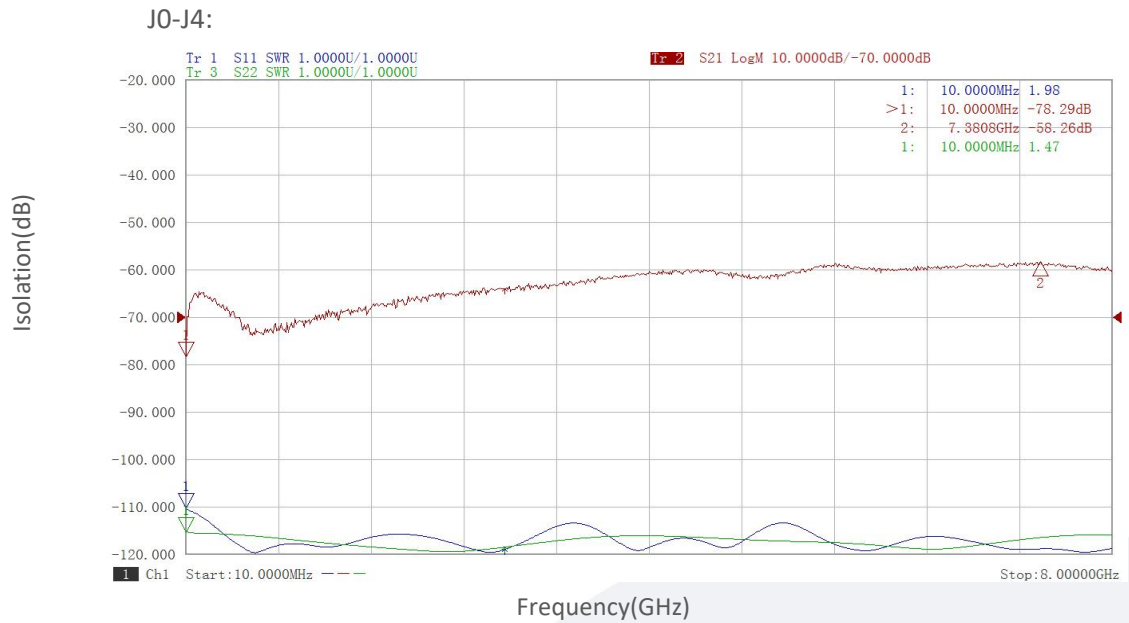
### Insertion Loss&VSWR vs Frequency



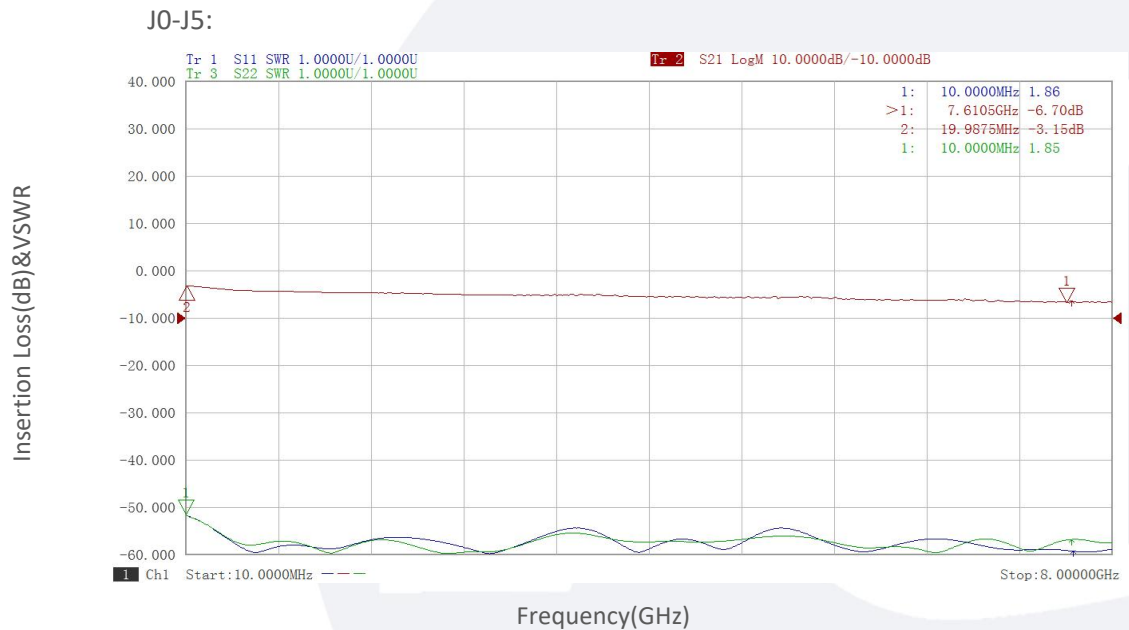
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典型曲线 Typical Performance Data:

Isolation vs Frequency



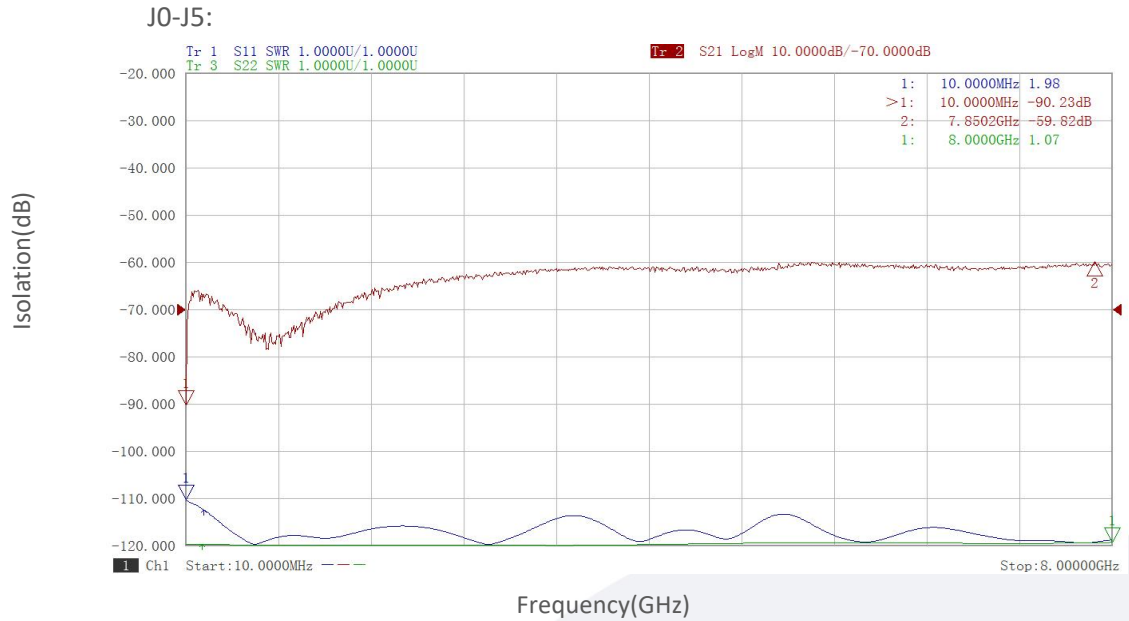
Insertion Loss&VSWR vs Frequency



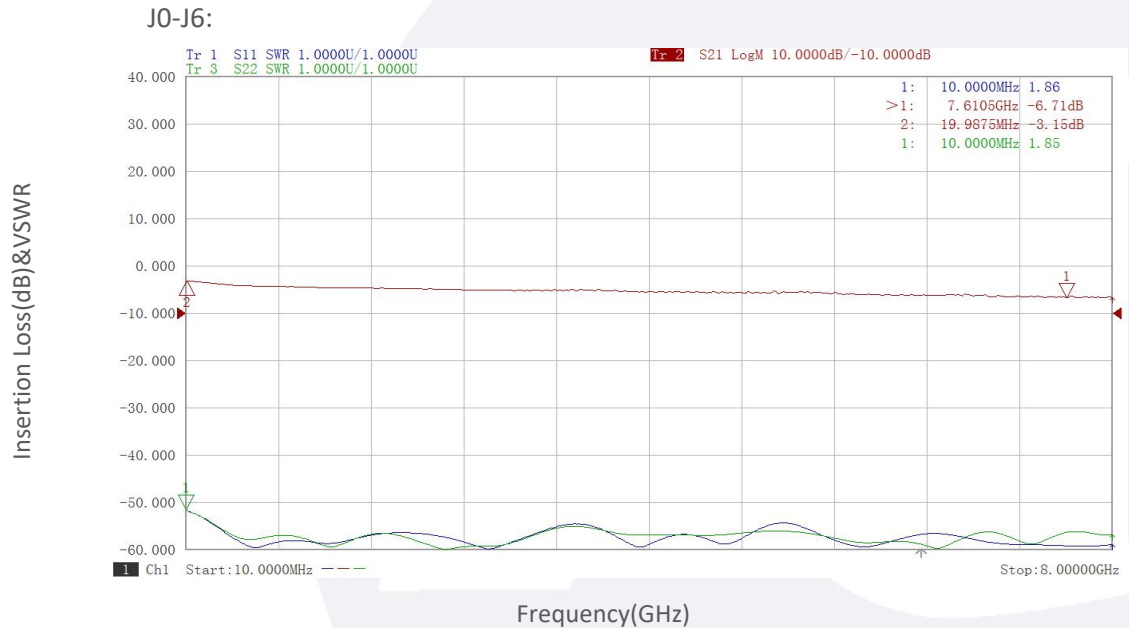
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## 典型曲线 Typical Performance Data:

### Isolation vs Frequency



### Insertion Loss & VSWR vs Frequency

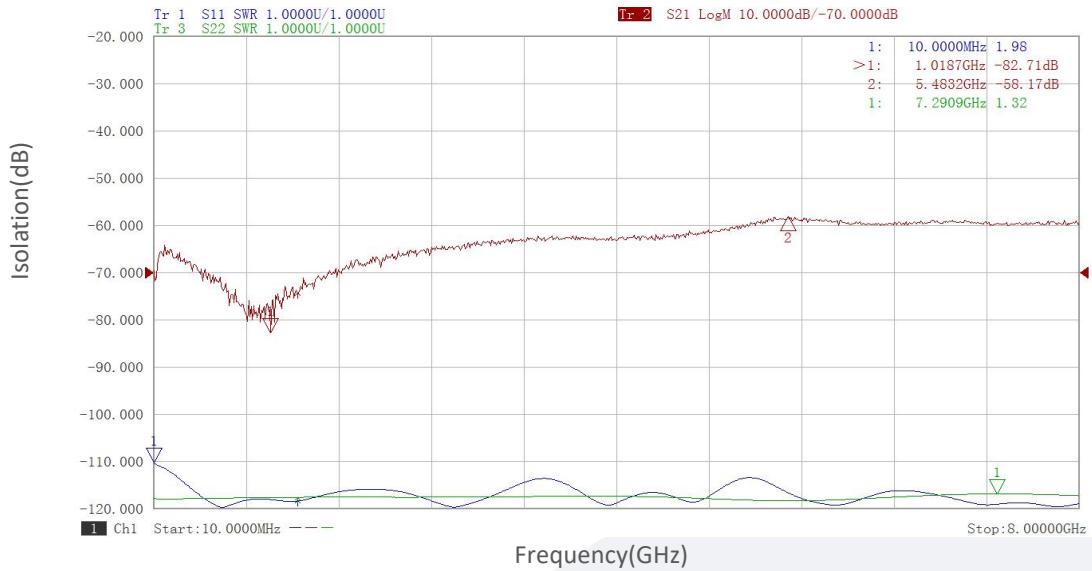


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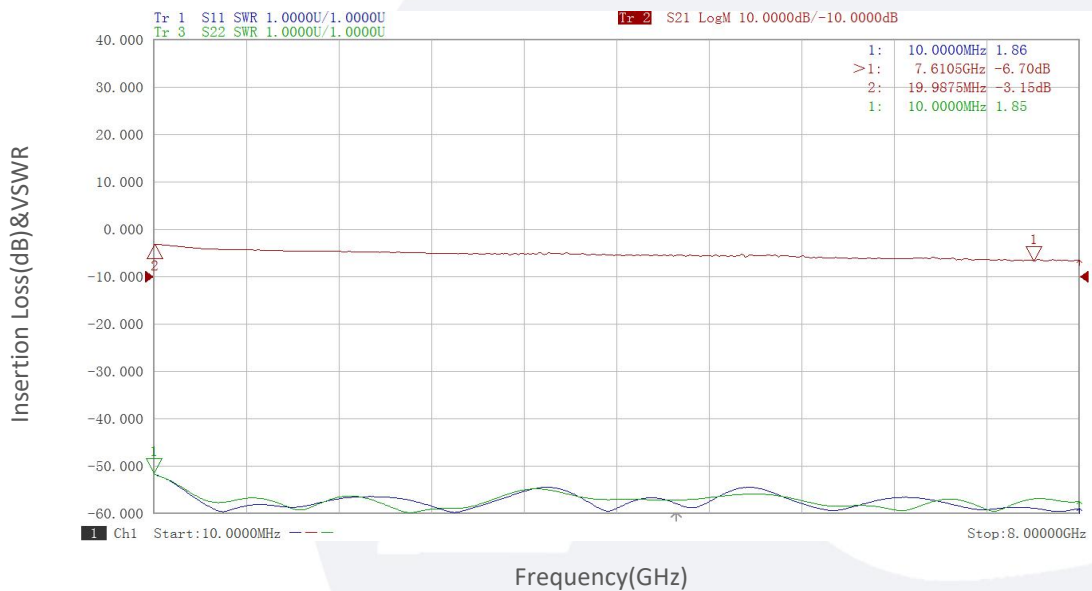
### Isolation vs Frequency

J0-J6:



### Insertion Loss & VSWR vs Frequency

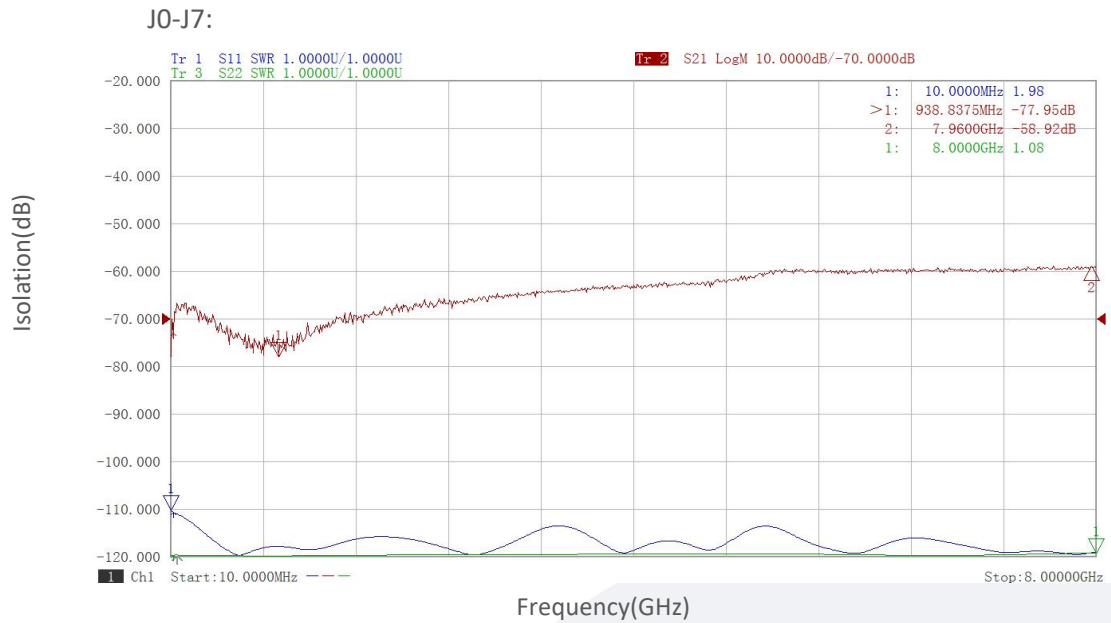
J0-J7:



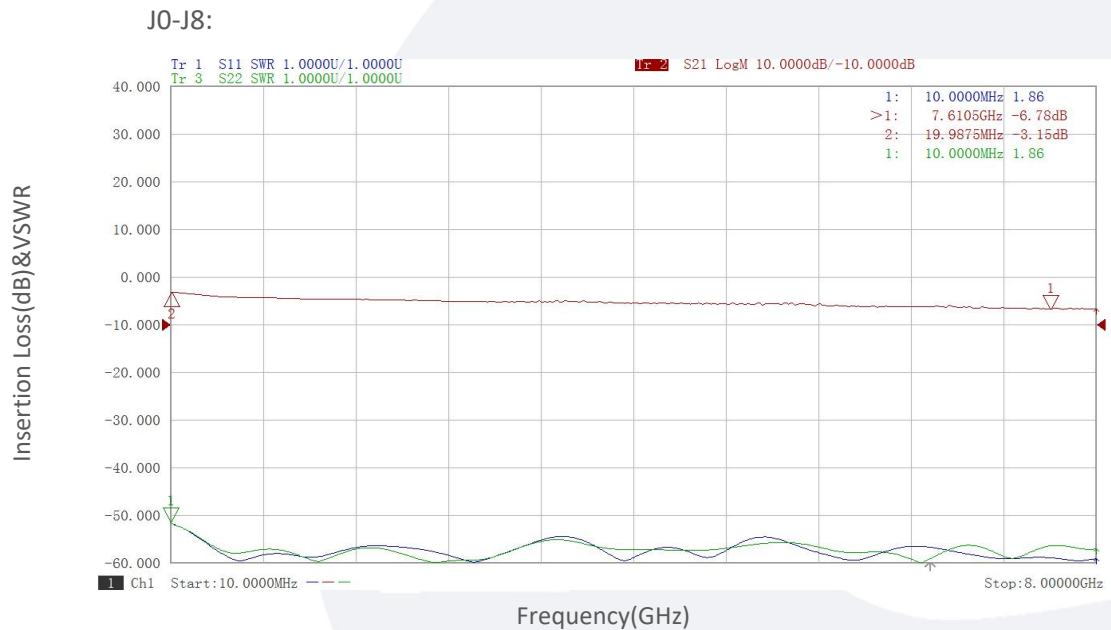
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## 典型曲线 Typical Performance Data:

### Isolation vs Frequency



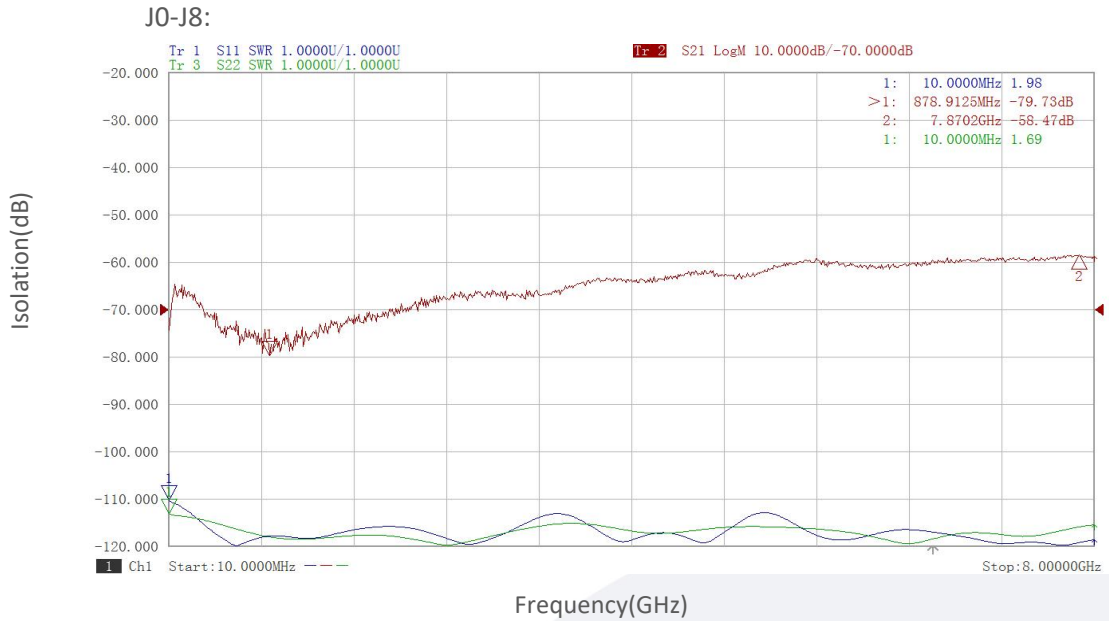
### Insertion Loss&VSWR vs Frequency



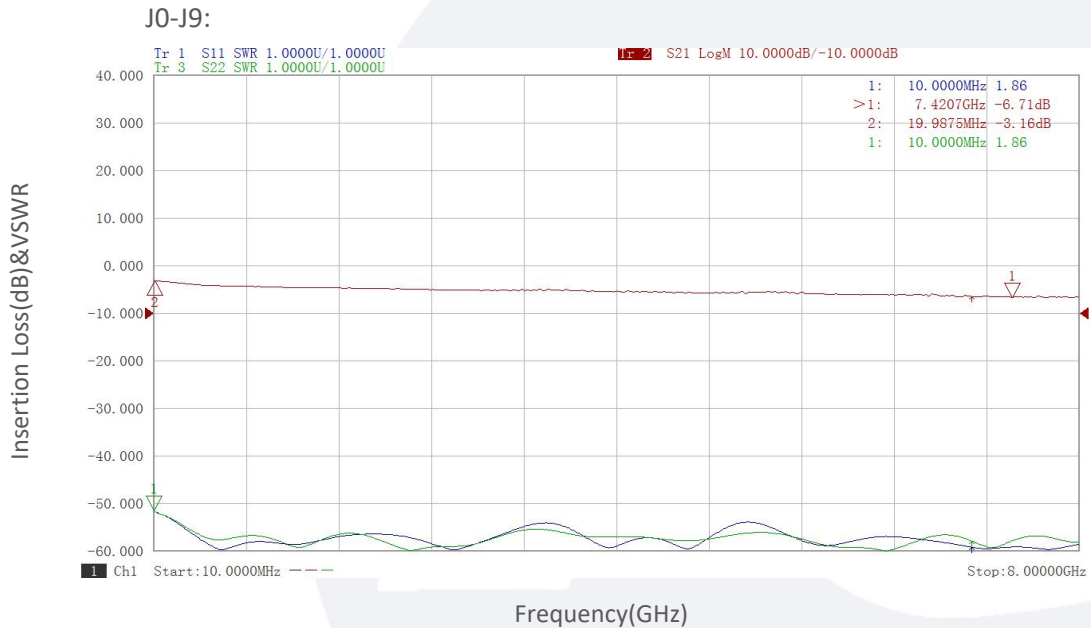
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典型曲线 Typical Performance Data:

Isolation vs Frequency



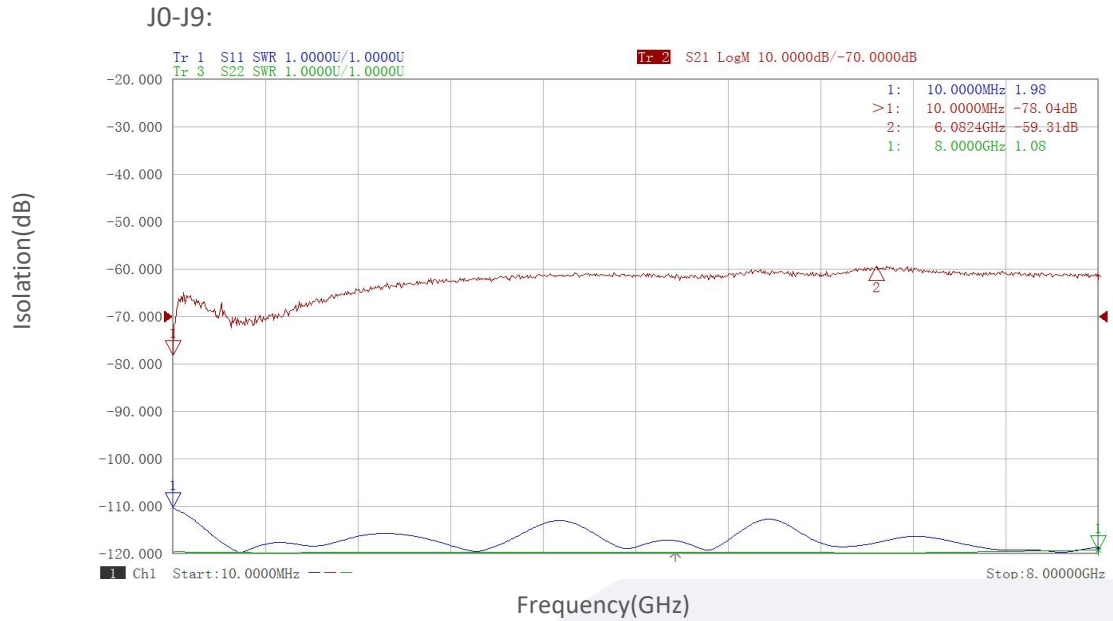
Insertion Loss&VSWR vs Frequency



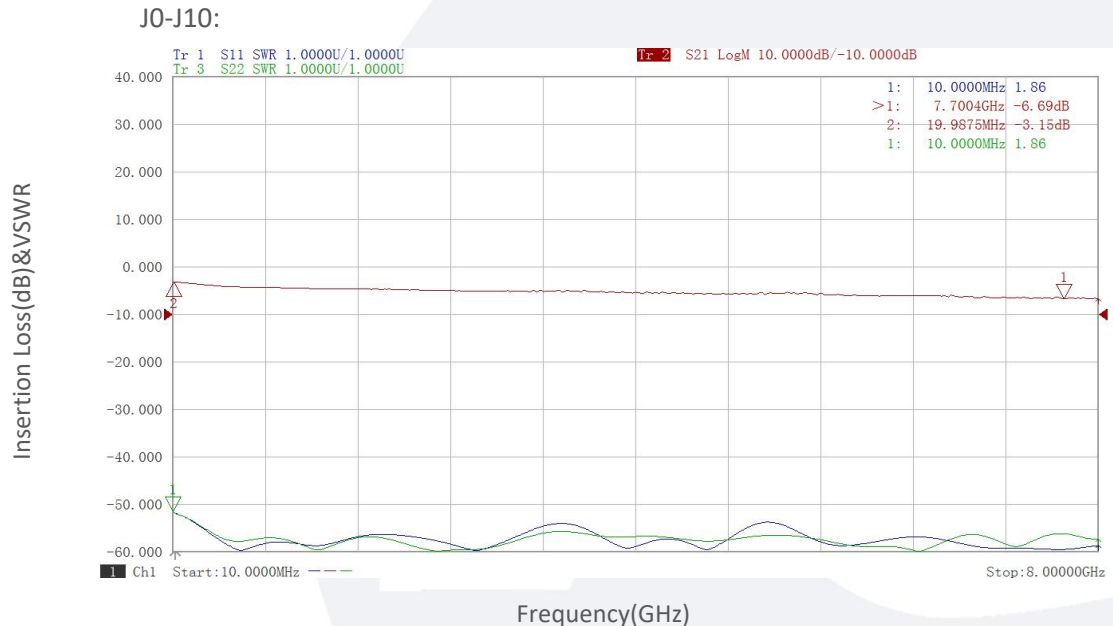
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典型曲线 Typical Performance Data:

Isolation vs Frequency



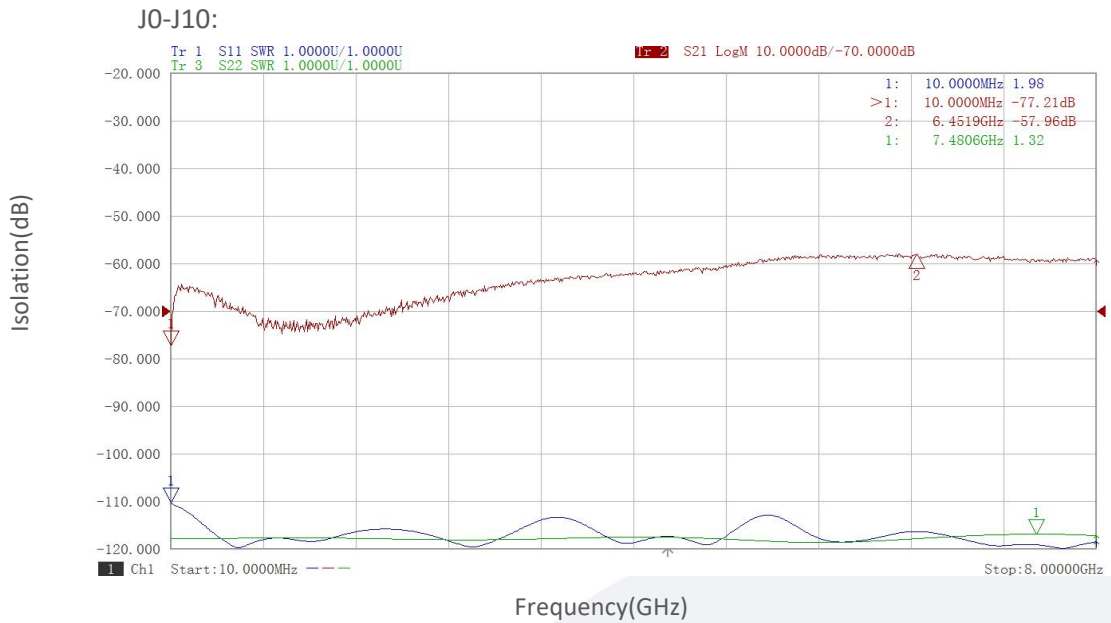
Insertion Loss & VSWR vs Frequency



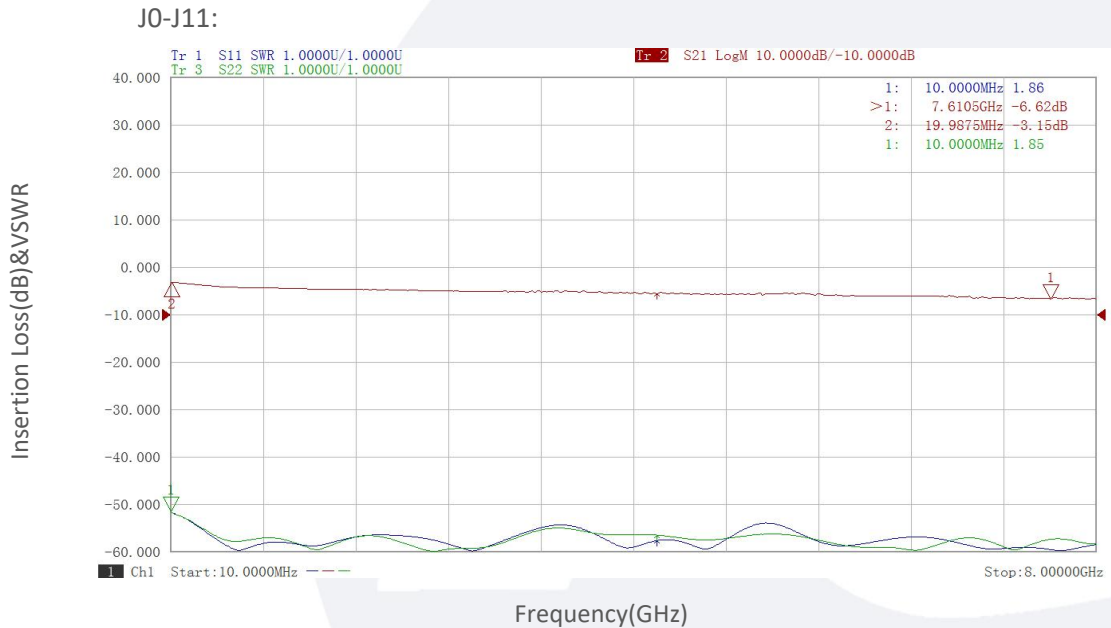
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Isolation vs Frequency



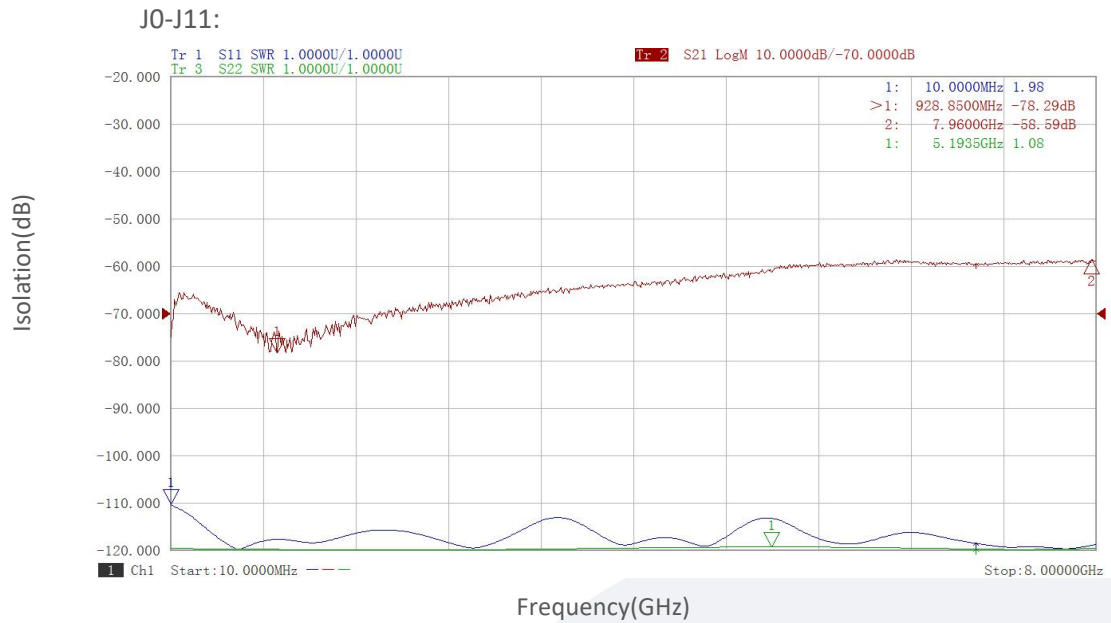
Insertion Loss&VSWR vs Frequency



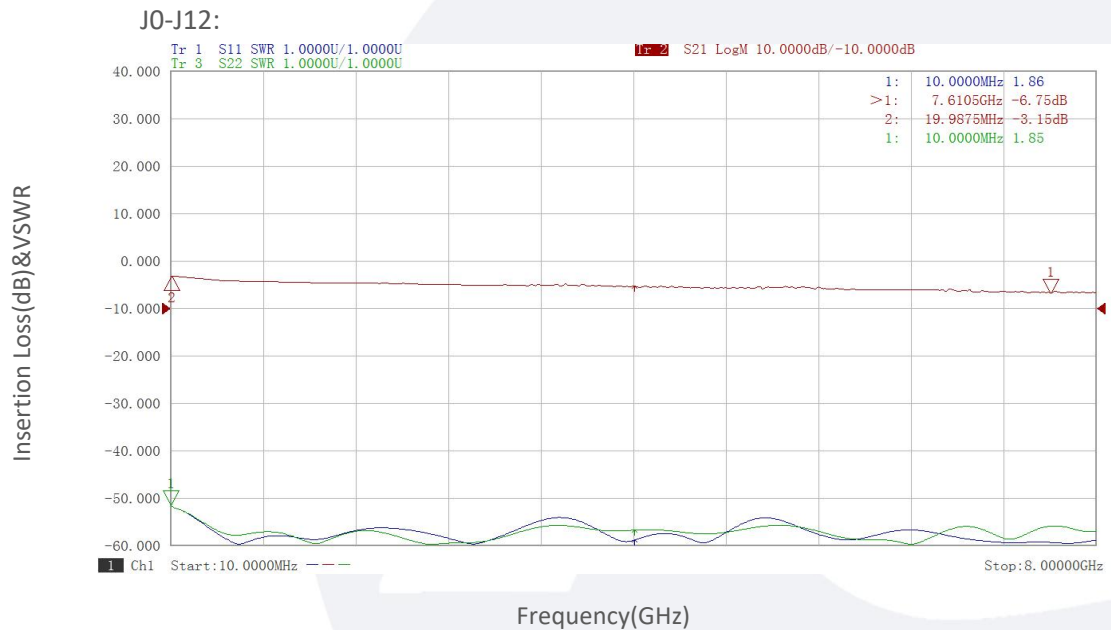
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### Isolation vs Frequency



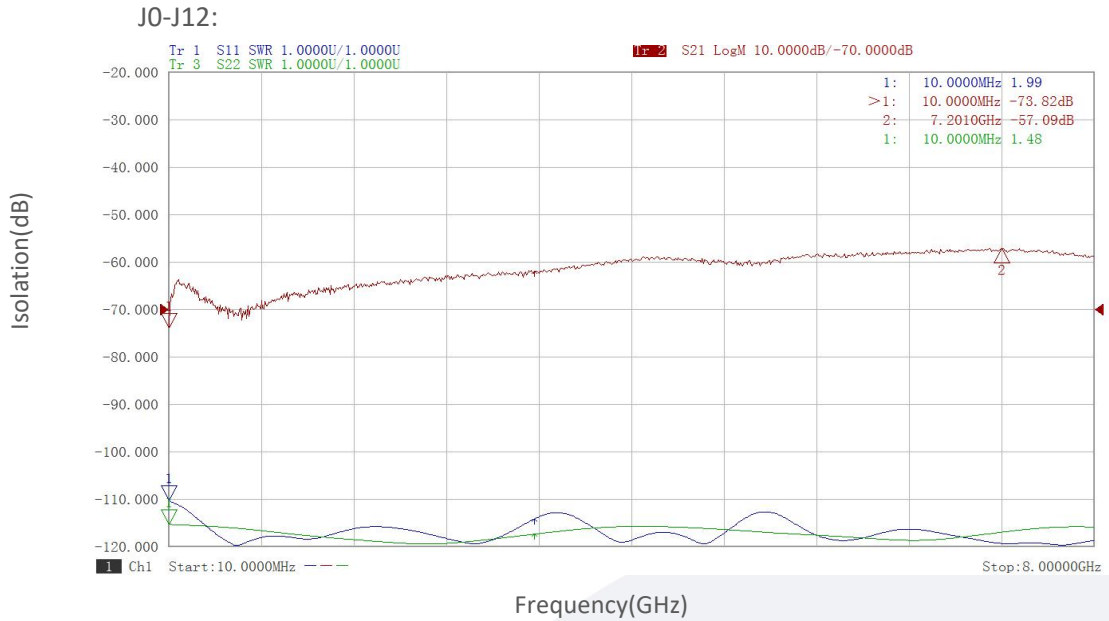
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Isolation vs Frequency



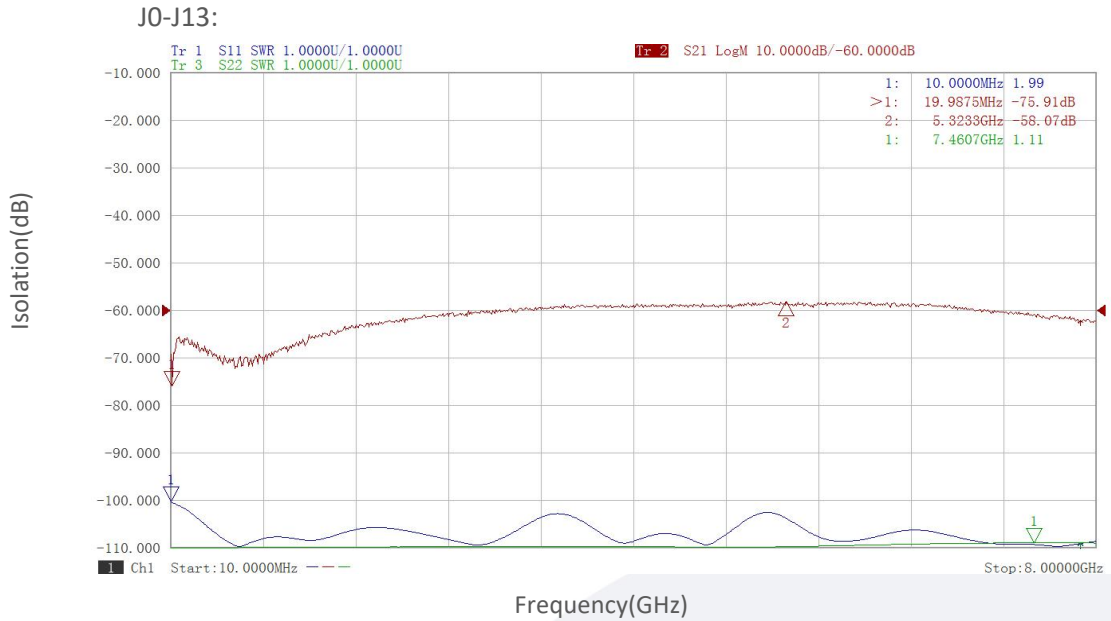
Insertion Loss&VSWR vs Frequency



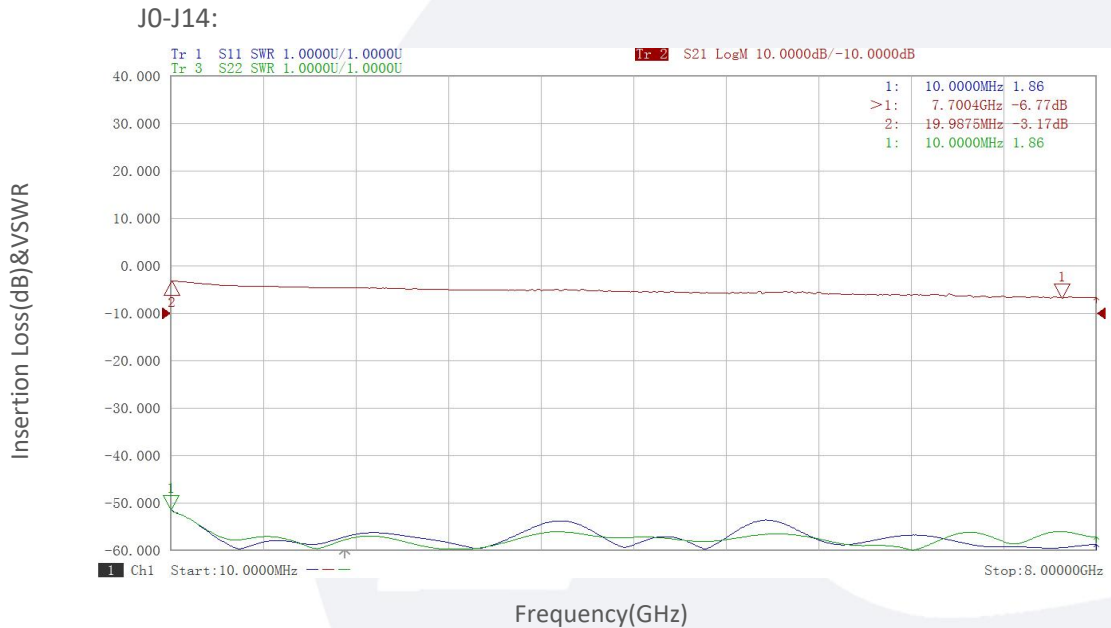
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Isolation vs Frequency



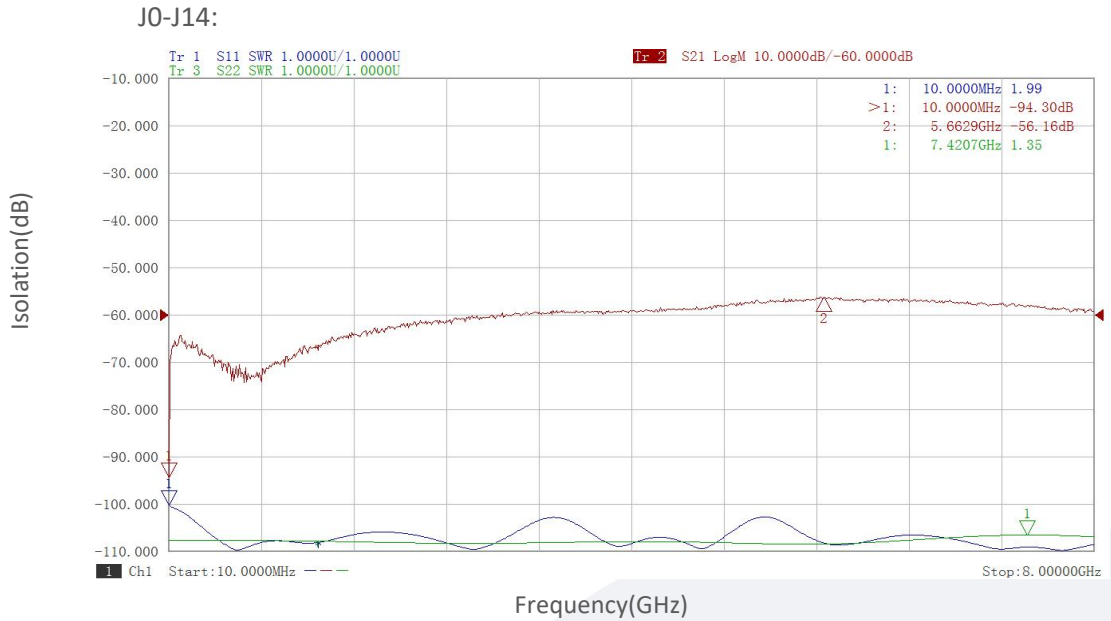
Insertion Loss&VSWR vs Frequency



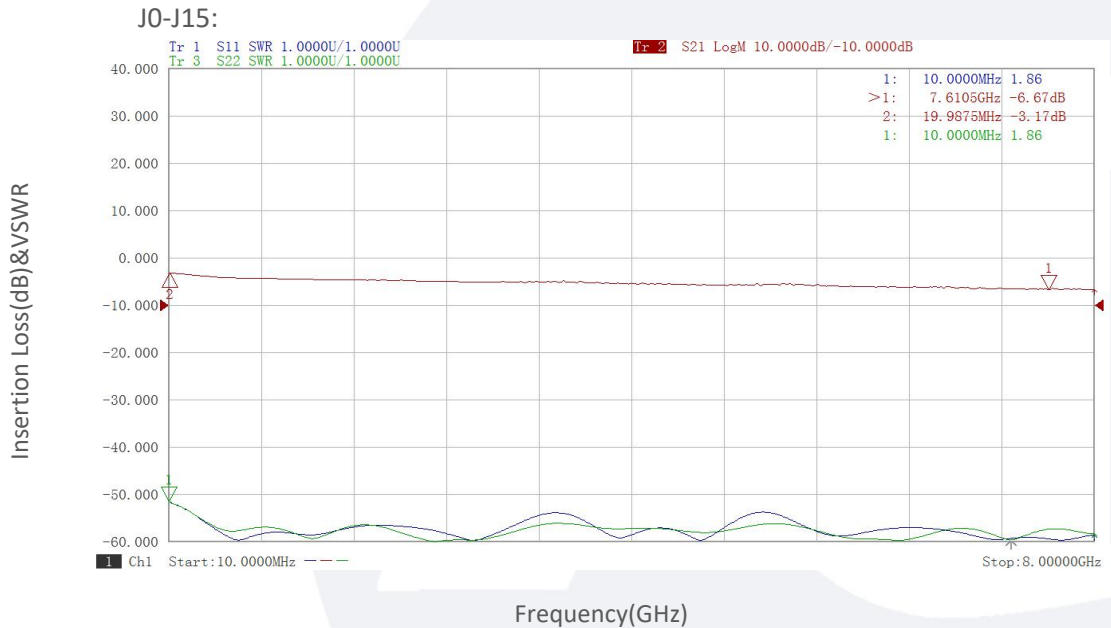
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典型曲线 Typical Performance Data:

Isolation vs Frequency



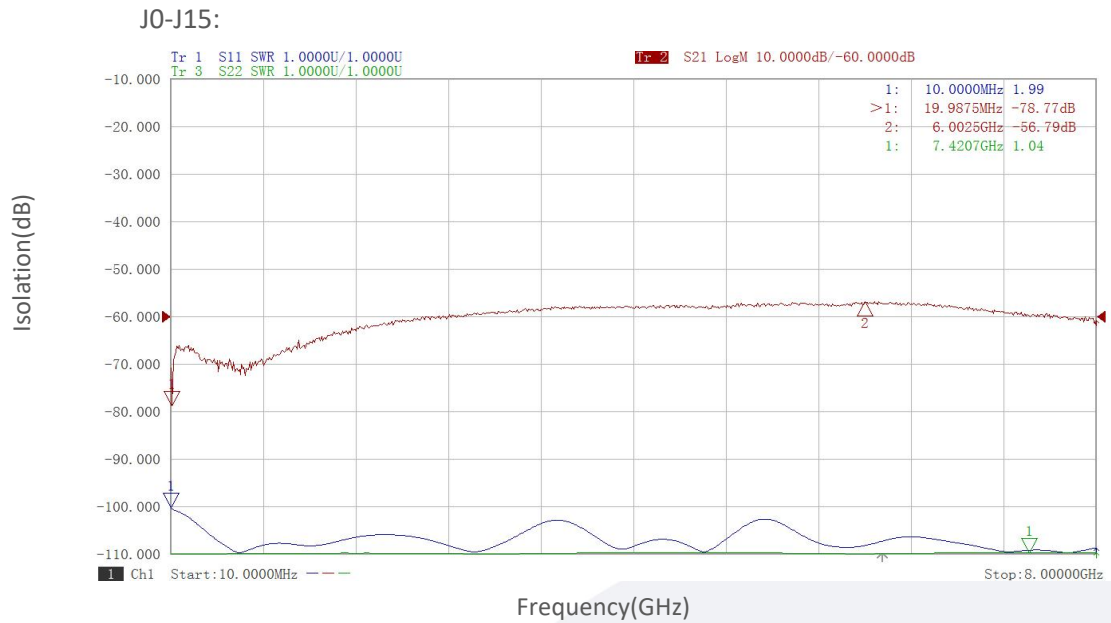
Insertion Loss&VSWR vs Frequency



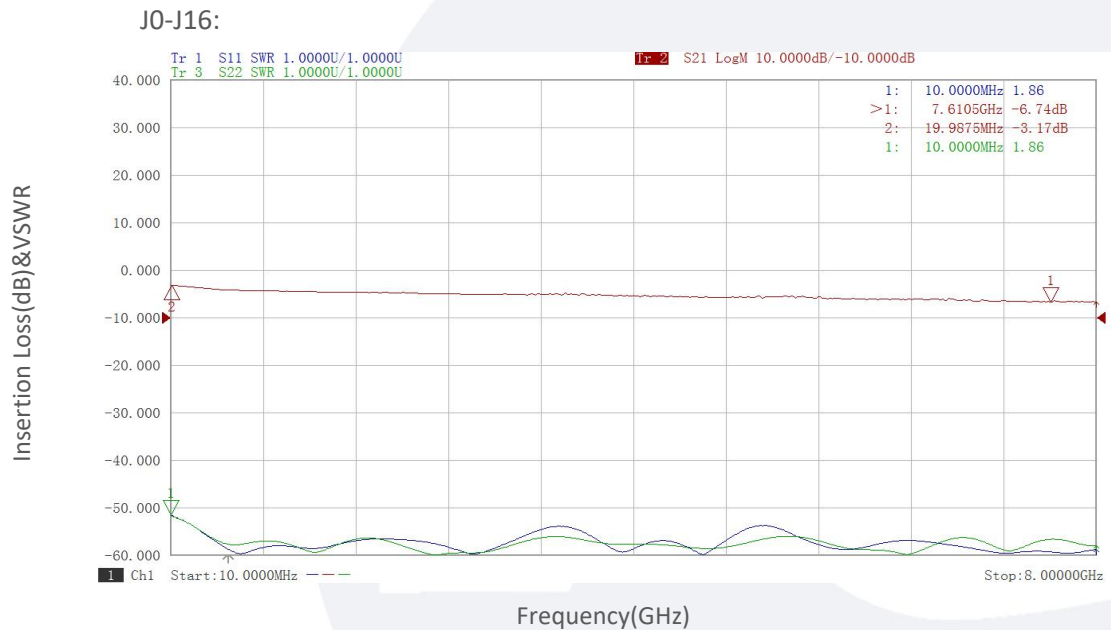
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### Isolation vs Frequency



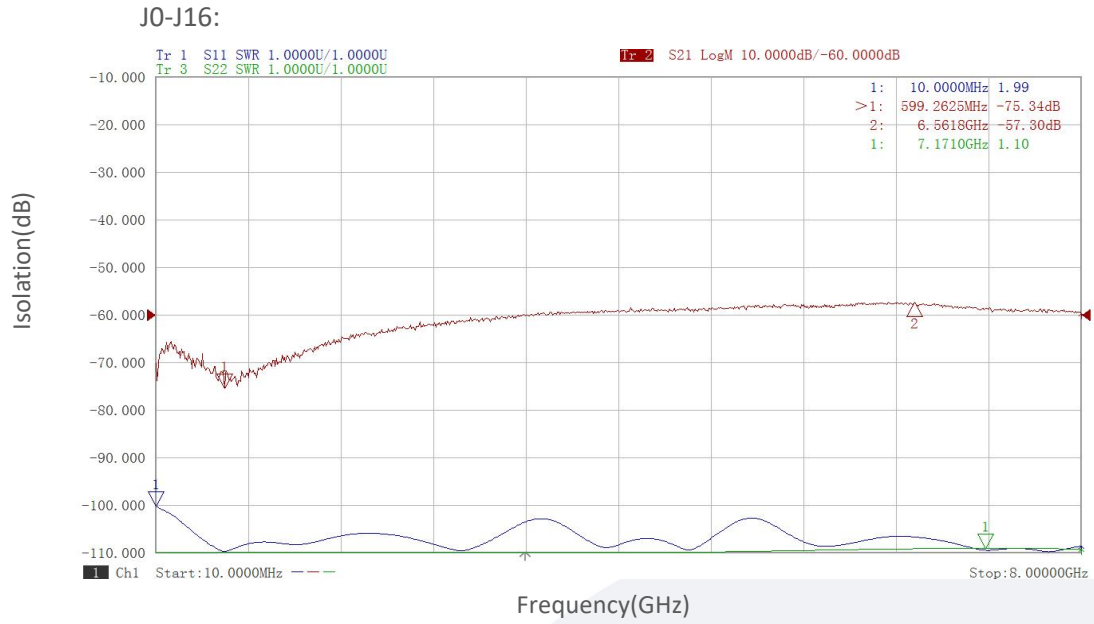
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