泰莱微波
Talent Microwave

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Voltage Controlled Phase Shifter

0-360° /8-12GHz

Model: TLVP8G12G-360

TLVP8G12G-360 is a coaxial voltage-variable shifter providing precise 360° phase. This model achieves a low insertion loss 6.0dB and a good input return loss -10dB. It features a control bandwidth from 8 to 12GHz and a control voltage range of 0 to +13V. The unit is housed in a compact aluminum alloy case with SMA connectors and a built-in base mounting bracket.

Features:

- Frequency range: 8-12GHz
- High Phase Shift Accuracy
- High Phase Shift Range
- Single Positive Control Voltage

Applications:

- Communications antennas
- Phased array radars

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	8		12	GHz
移相范围 Phase Range		360		°
插损 Insertion Loss		6		dB
插损温度系数 Insertion Loss Temperature Coefficient		0.003		dB/℃
输入回损 Input Return Loss		-10		dB
输出回损 Output Return Loss		-10		dB
控制电压 Control Voltage Range	0	13		V
控制电流 Control Current		5		mA
相位平坦度 Phase Flatness		±15		°
输入功率0.1dB压缩点 Input Power for 0.1dB Compression		25		dBm
阻抗 Impedance		50		Ohms

绝对最大值 Absolute Maximum Ratings :

参数 Parameter	指标 Value	单位 Units
控制电压 Control Voltage Range	+15V	V
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

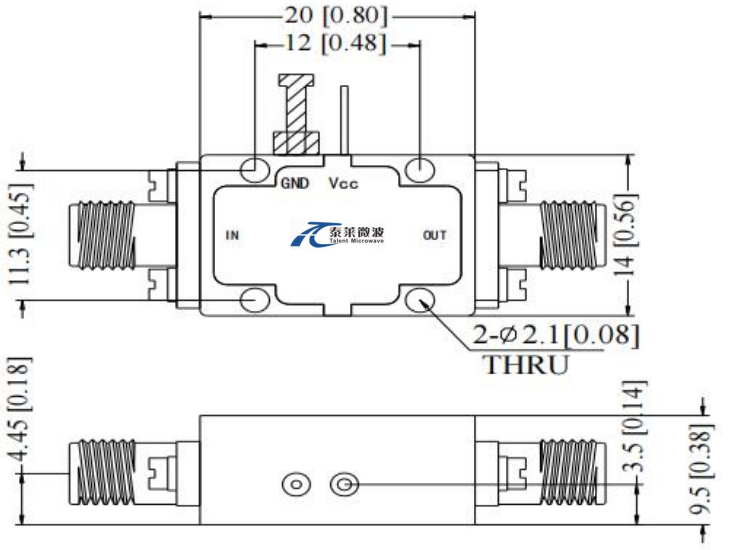
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环境和机械特性 Envrionmental And Physical Characteristics:

参数 Parameter	指标 Value	单位 Units
操作温度 Operating Temerature	-40 to +70	℃
存储温度 Storage Temerature	-55 to +85	℃
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
尺寸 Size	20*14*9.5	mm

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

订货信息 Ordering Information:

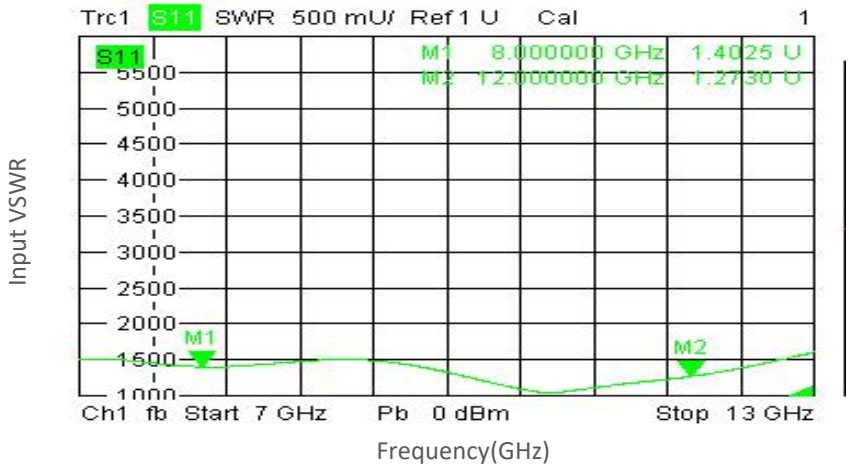
标准型号 Base Number	描述 Description	版本号 Revision
TLVP8G12G-360	Voltage Controlled Phase Shifter ,8-12GHz,SMA Female	Rev.1.1

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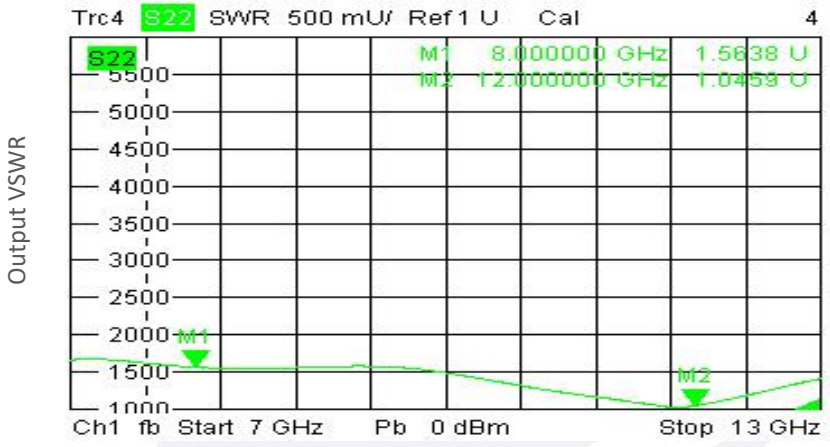
典型曲线 Typical Performance Data:

0V-0°:

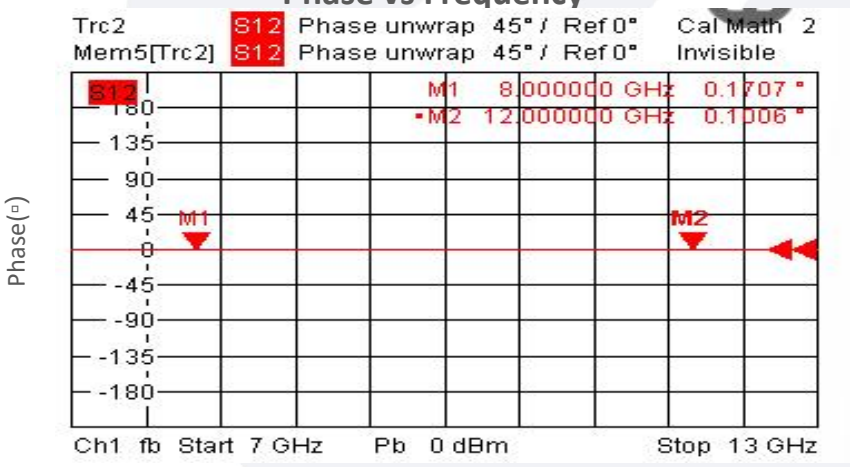
Input VSWR vs Frequency



Output VSWR vs Frequency



Phase vs Frequency



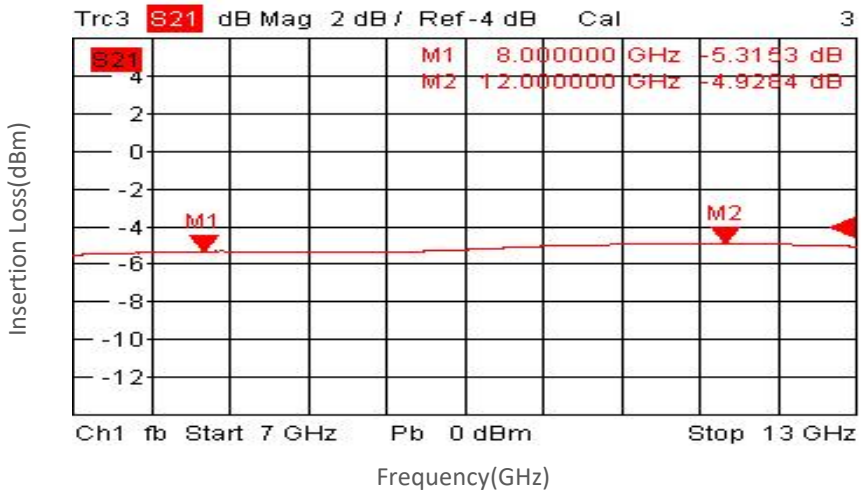
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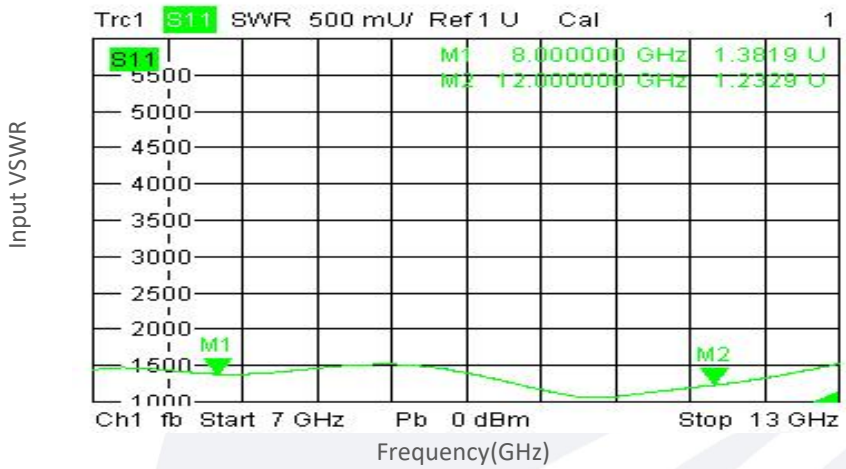
0V-0°:

Insertion Loss vs Frequency

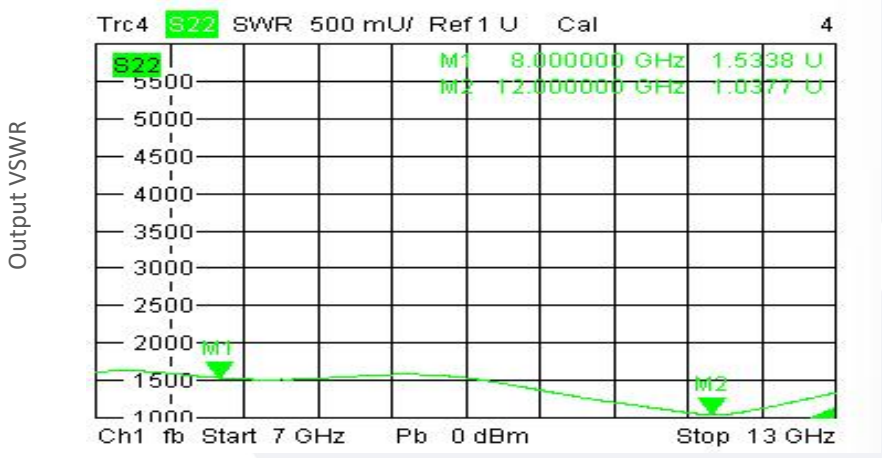


0.12V-12°:

Input VSWR vs Frequency



Output VSWR vs Frequency



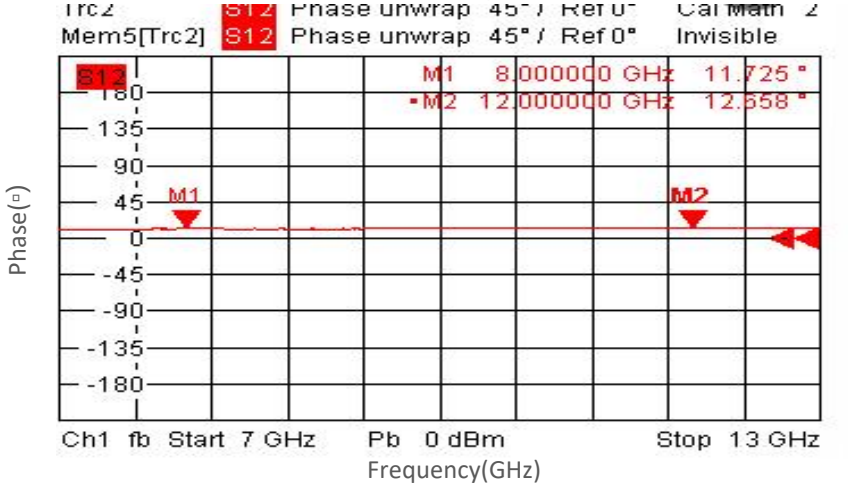
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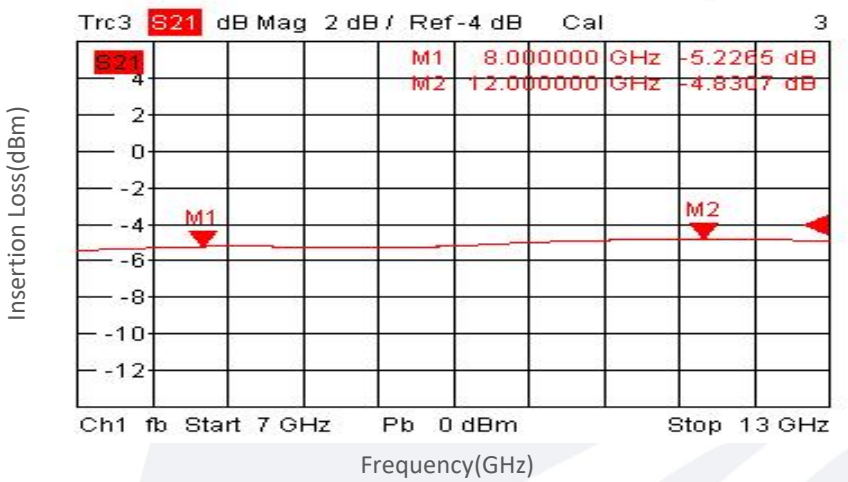
典型曲线 Typical Performance Data:

0.12V-12°:

Phase vs Frequency

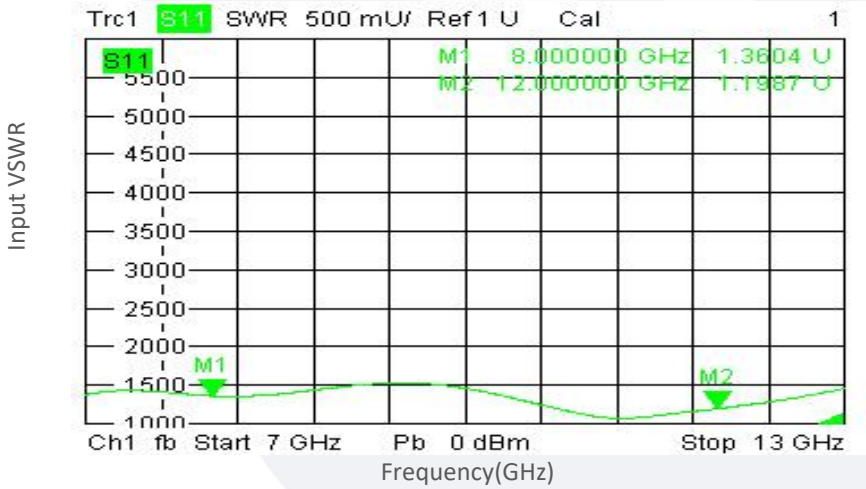


Insertion Loss vs Frequency



0.25V-24°:

Input VSWR vs Frequency



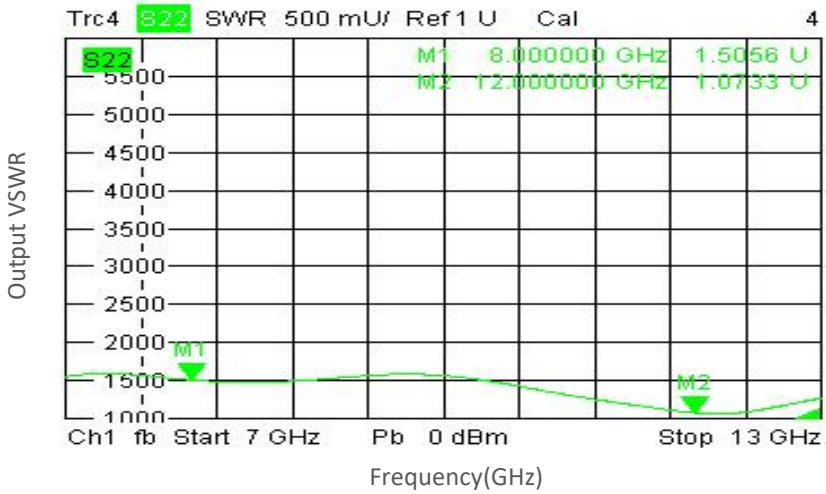
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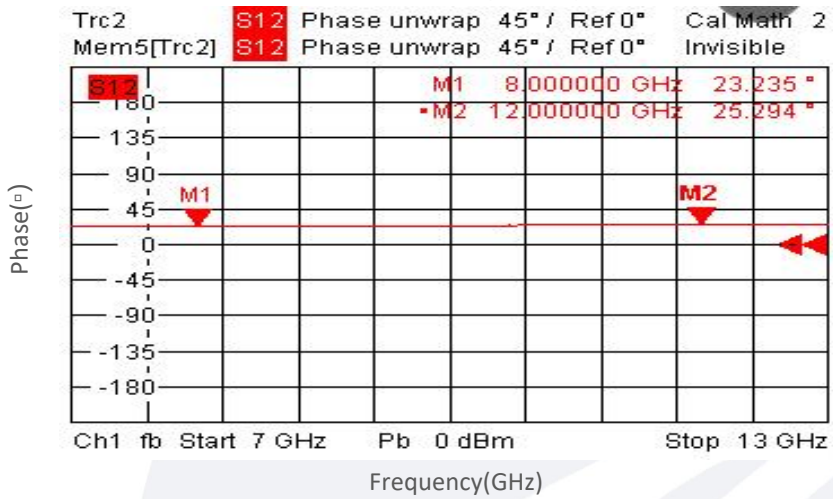
典型曲线 Typical Performance Data:

0.25V-24°:

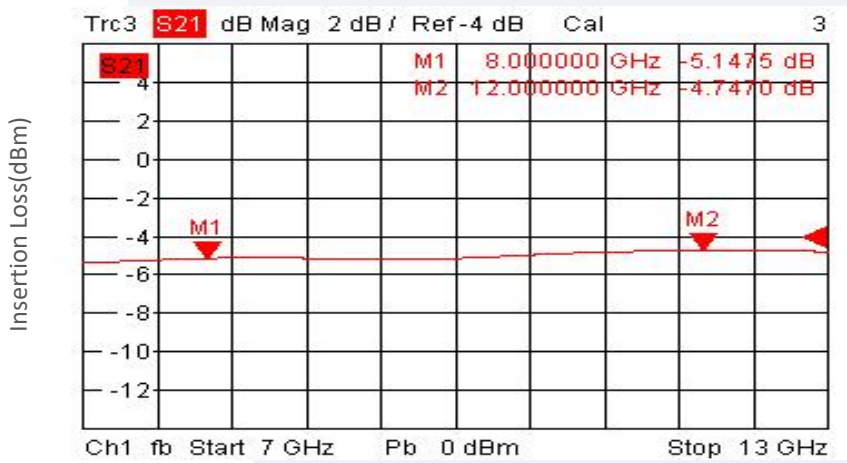
Output VSWR vs Frequency



Phase vs Frequency



Insertion Loss vs Frequency



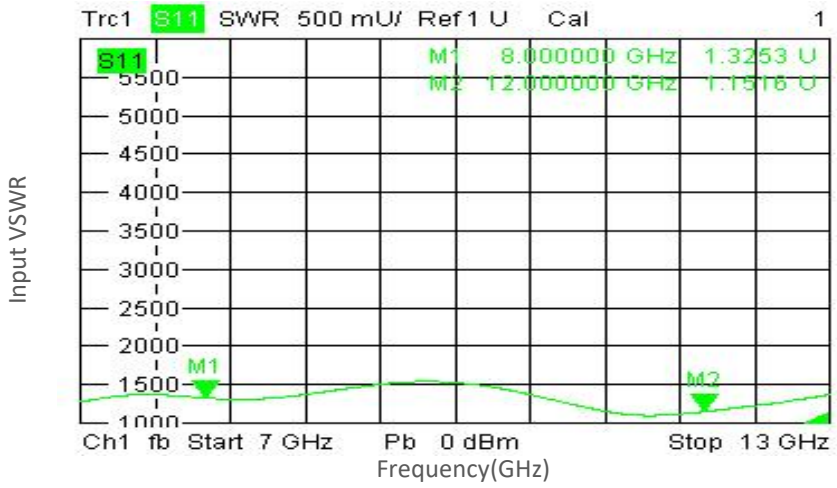
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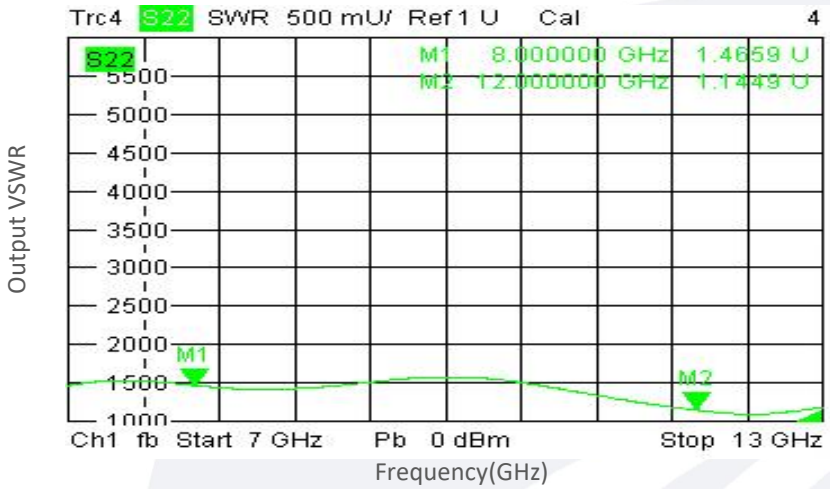
典型曲线 Typical Performance Data:

0.51V-45°:

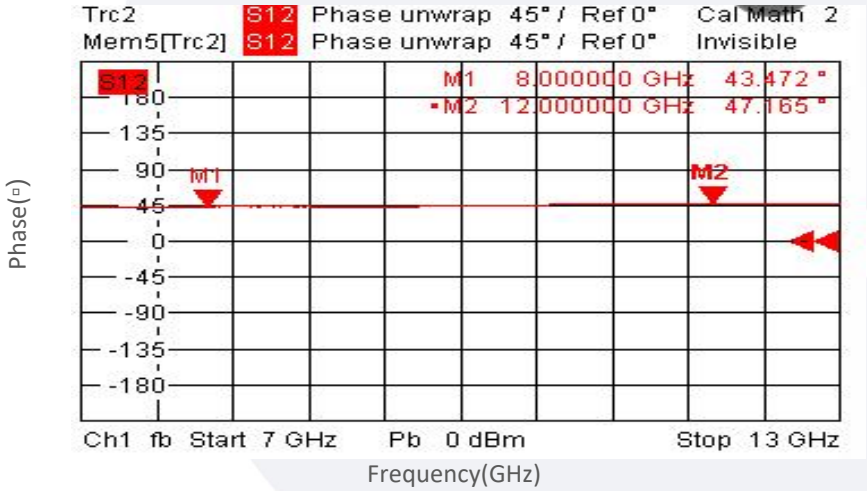
Input VSWR vs Frequency



Output VSWR vs Frequency



Phase vs Frequency

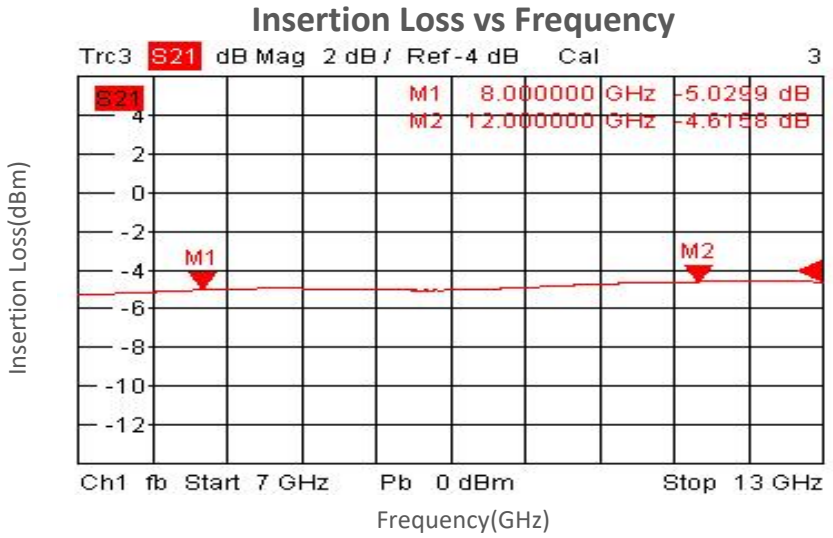


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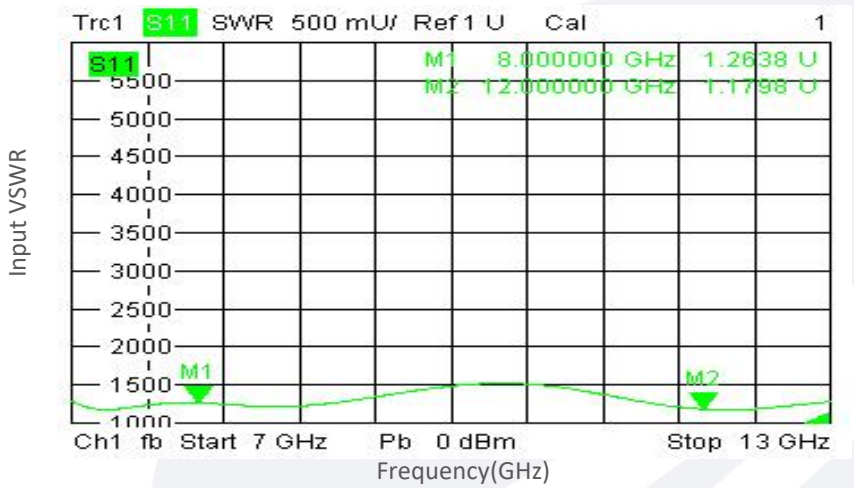
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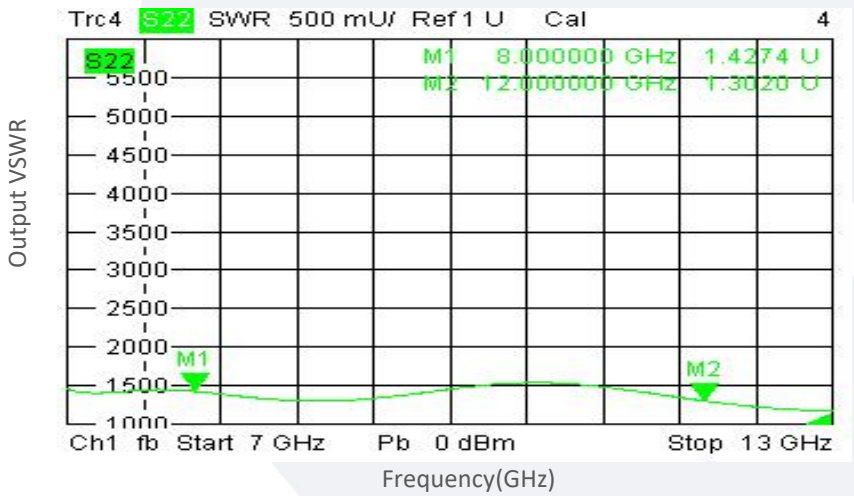
典型曲线 Typical Performance Data:

0.52V-45°:



1.22V-90°:



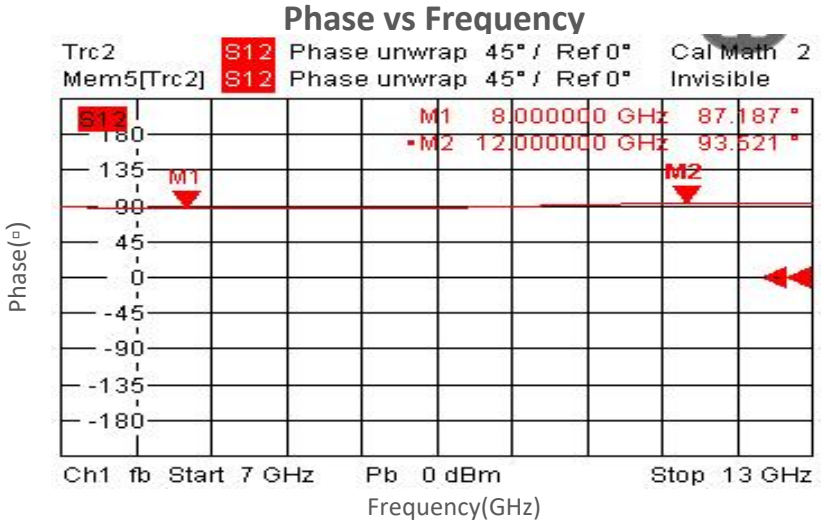


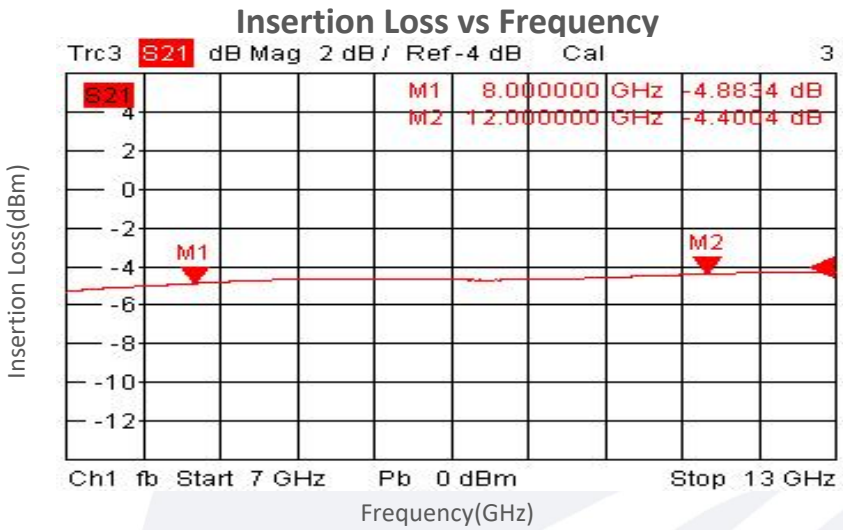
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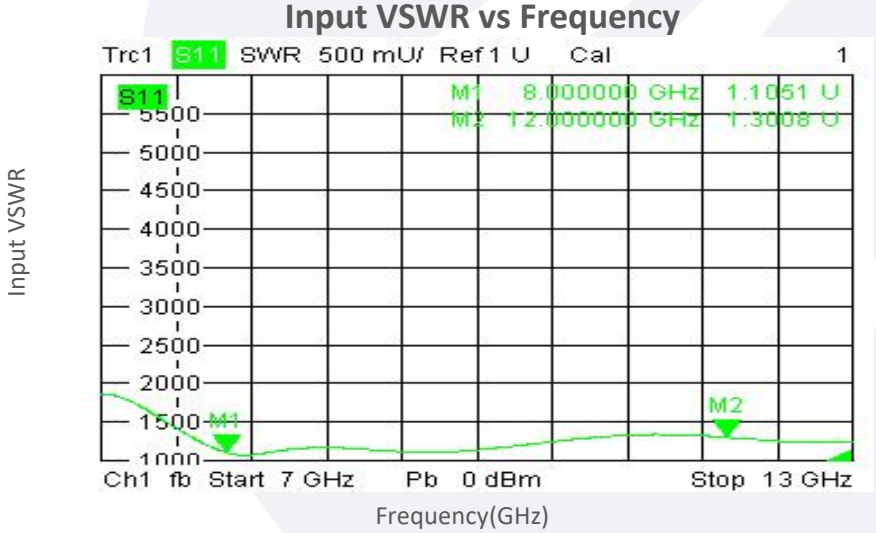
典型曲线 Typical Performance Data:

1.26V-90°:





3.15V-180°:



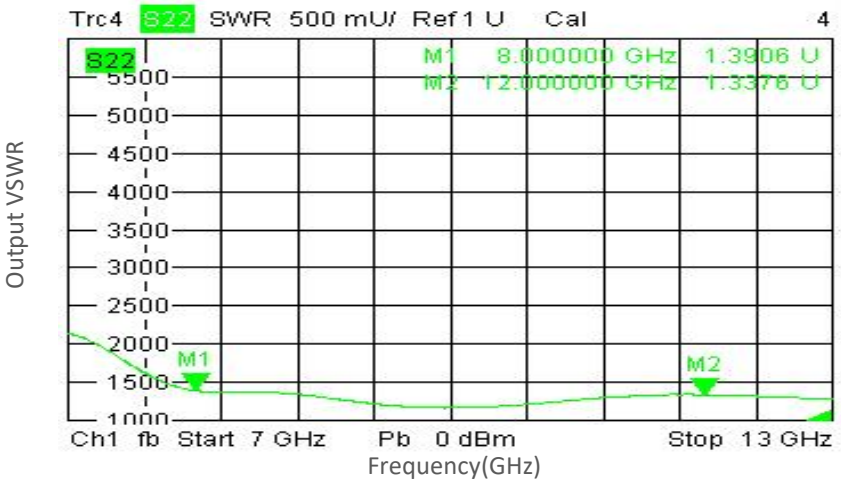
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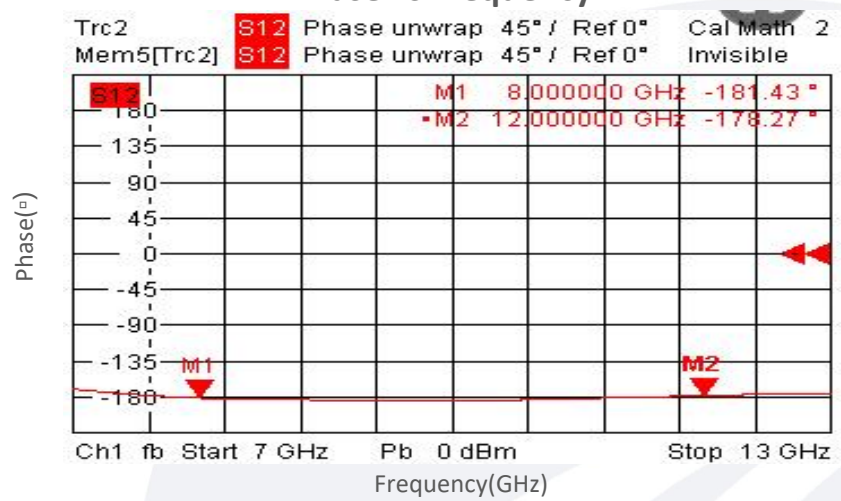
典型曲线 Typical Performance Data:

3.15V-180°:

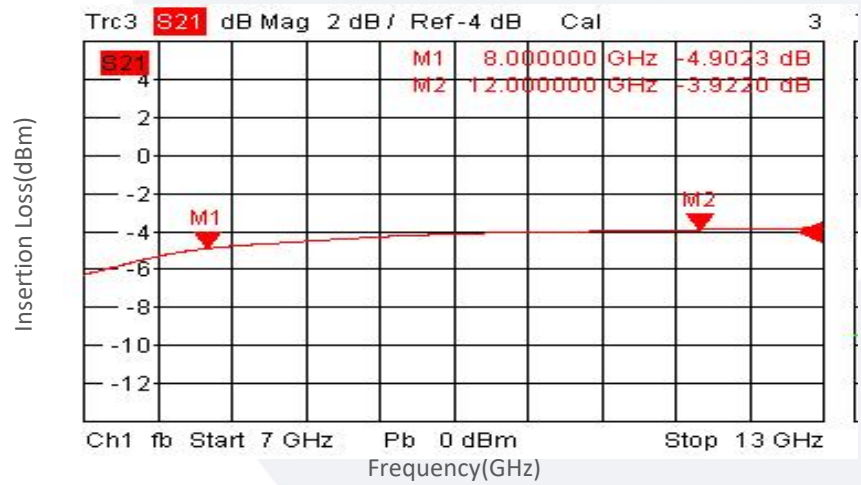
Output VSWR vs Frequency



Phase vs Frequency



Insertion Loss vs Frequency



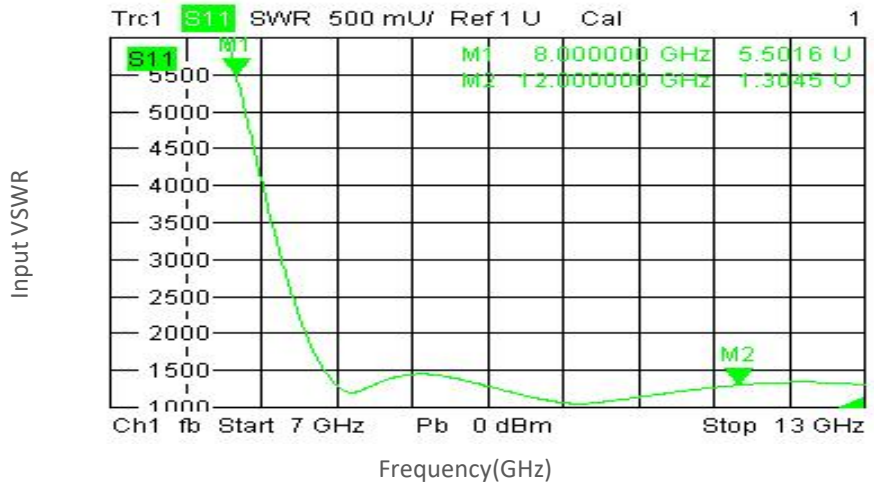
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典型曲线 Typical Performance Data:

8.65V-360°:

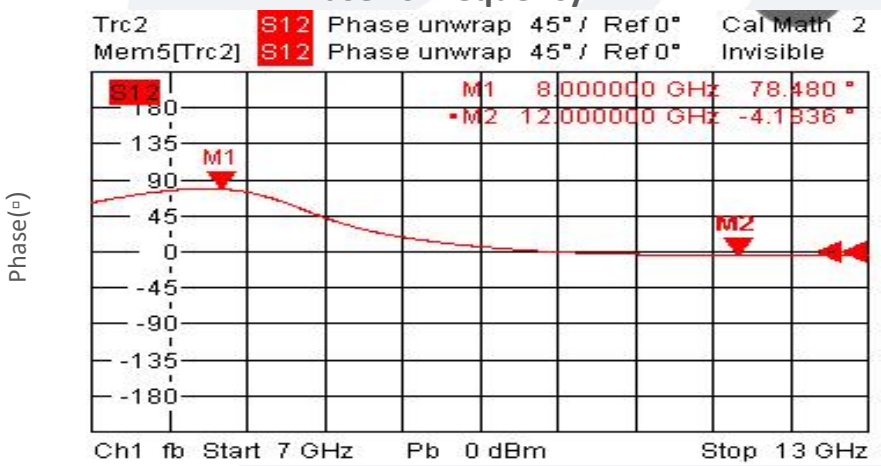
Input VSWR vs Frequency



Output VSWR vs Frequency



Phase vs Frequency



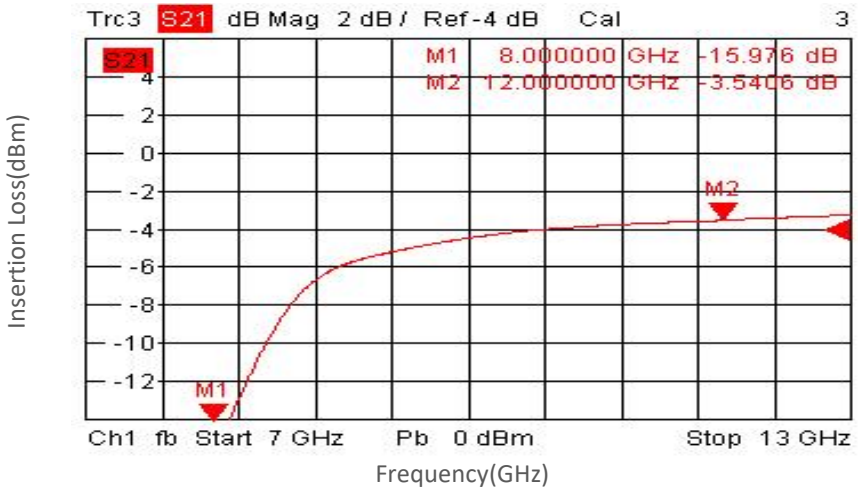
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典型曲线 Typical Performance Data:

8.65V-360°:

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.