泰莱微波
Talent Microwave

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Absorptive,Broadband MMIC Switch

20-40GHz/SP16T/SMP Male

Model: TLSP16T20G40GA

The TLSP16T20G40GA is an absorptive MMIC diode based switch with a TTL driver that operates between 20 and 40 GHz. The SP16T switch offers 55 dB port-to-port isolation with a typical switching speed of 50 ns. The input and output connectors of the switch are SMP male.

Features:

- Frequency range: 20-40GHz
- Insertion Loss: 14dB
- 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	20		40	GHz
插损 Insertion Loss		14		dB
隔离 Isolation		50		dB
切换速度 Switch Speed		50	100	ns
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		: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/+3.3~+5		V DC
直流电流 DC Supply Current		30		mA
开关类型 Switch type	Absorptive			
阻抗 Impedance	50			Ohms

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绝对最大值 Absolute Maximum Ratings :

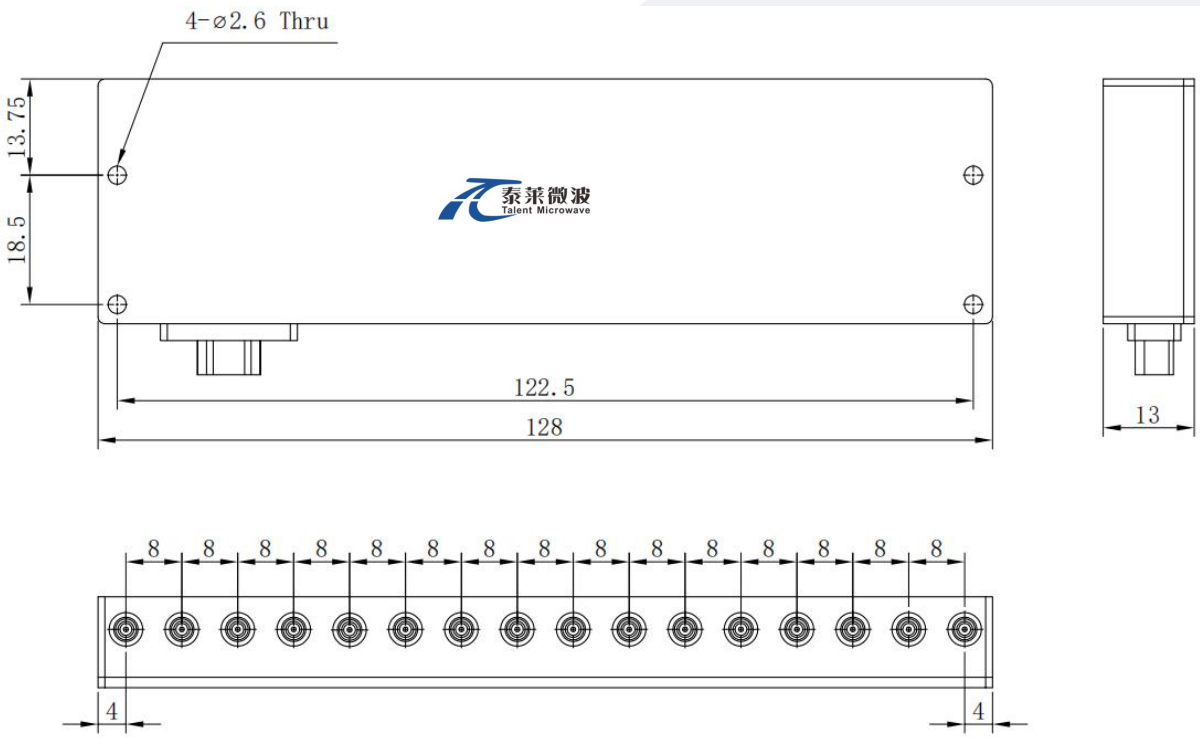
描述 Description	参数 Parameter	单位 Units
供电偏置电压 Supply Bias Voltage	±5%	V
射频输入功率 RF Input Power	25	dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V	

机械特性 Mechanical Specifications:

描述 Description	参数 Parameter	单位 Units
输入/输出接口 Input /Output Connector	SMP Male/SMP Male	
直流控制接口 Control Bias Connector	J30J-9ZKP	
尺寸 Size	128*35*13	mm

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

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加电接口及真值表 DC Power Supply Connector&Truth Table:

J30J-9ZKP	
引脚Pin#	功能Function
1	+5V
2	C1
3	C2
4	C3
5	C4
6	+5V
7	GND
8	GND
9	GND

真值表 Truth Table				
TTL Control Input				Signal Path State
Bit1	Bit2	Bit3	Bit4	
0	0	0	0	J0-J1
0	0	0	1	J0-J2
0	0	1	0	J0-J3
0	0	1	1	J0-J4
0	1	0	0	J0-J5
0	1	0	1	J0-J6
0	1	1	0	J0-J7
0	1	1	1	J0-J8
1	0	0	0	J0-J9
1	0	0	1	J0-J10
1	0	1	0	J0-J11
1	0	1	1	J0-J12
1	1	0	0	J0-J13
1	1	0	1	J0-J14
1	1	1	0	J0-J15
1	1	1	1	J0-J16

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	℃
存储温度 Non-operating Temperature	-55		+125	℃
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:

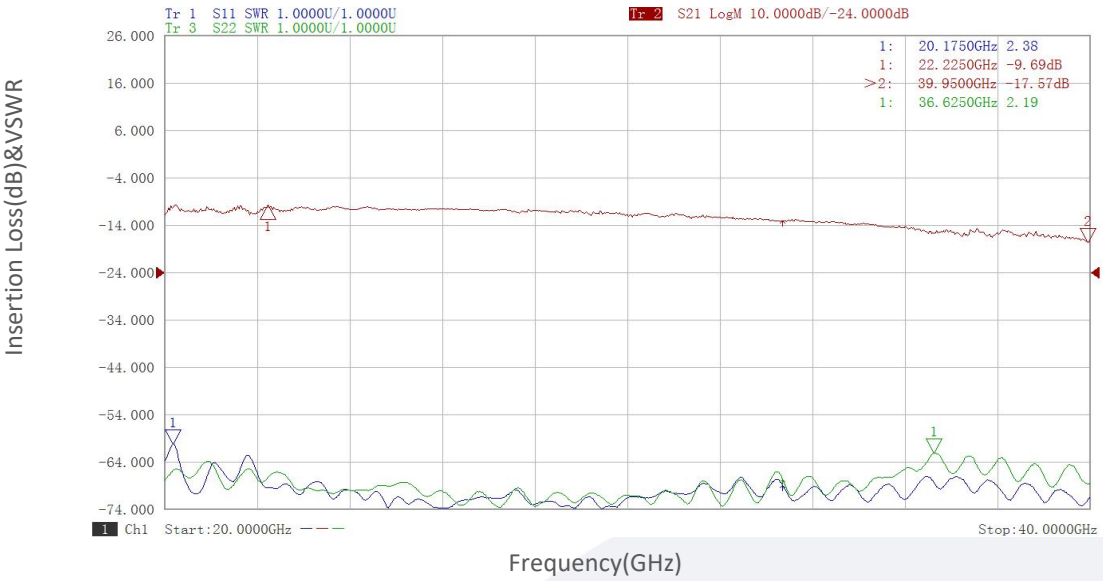
标准型号 Base Number	描述 Description	版本号 Revision
TLSP16T20G40GA	Absorptive,Broadband MMIC Switch 20-40 GHz, SP16T, SMP Male	Rev.1.0

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典型曲线 Typical Performance Data:

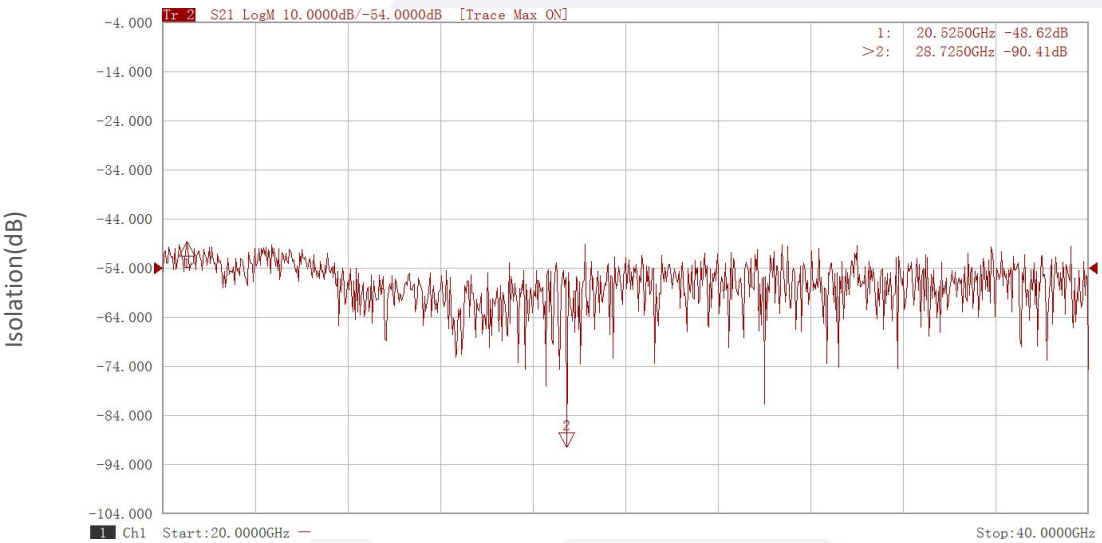
Insertion Loss&VSWR vs Frequency

J0-J1:



Isolation vs Frequency

J0-J1:



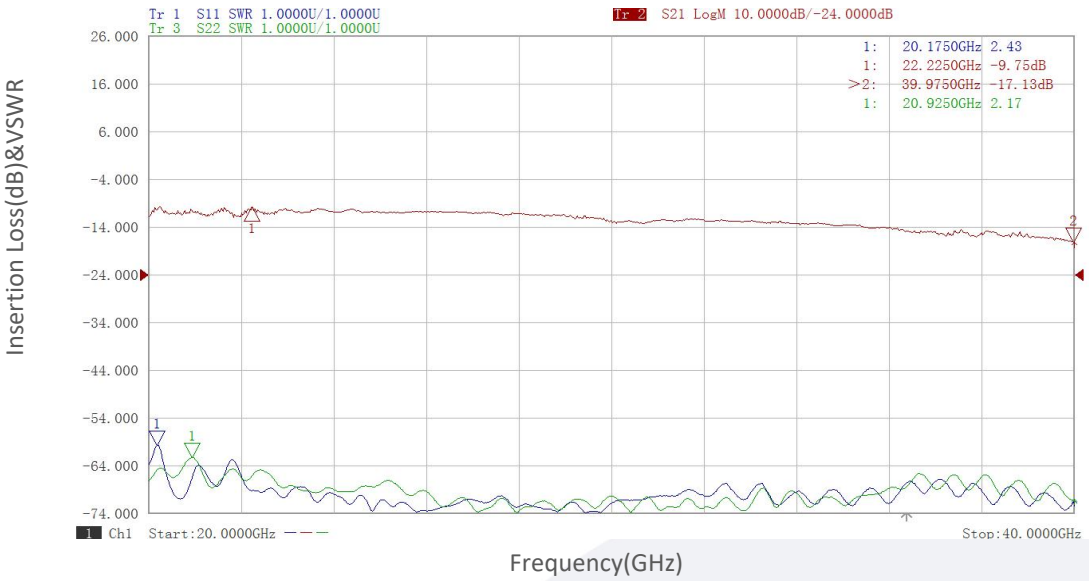
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典型曲线 Typical Performance Data:

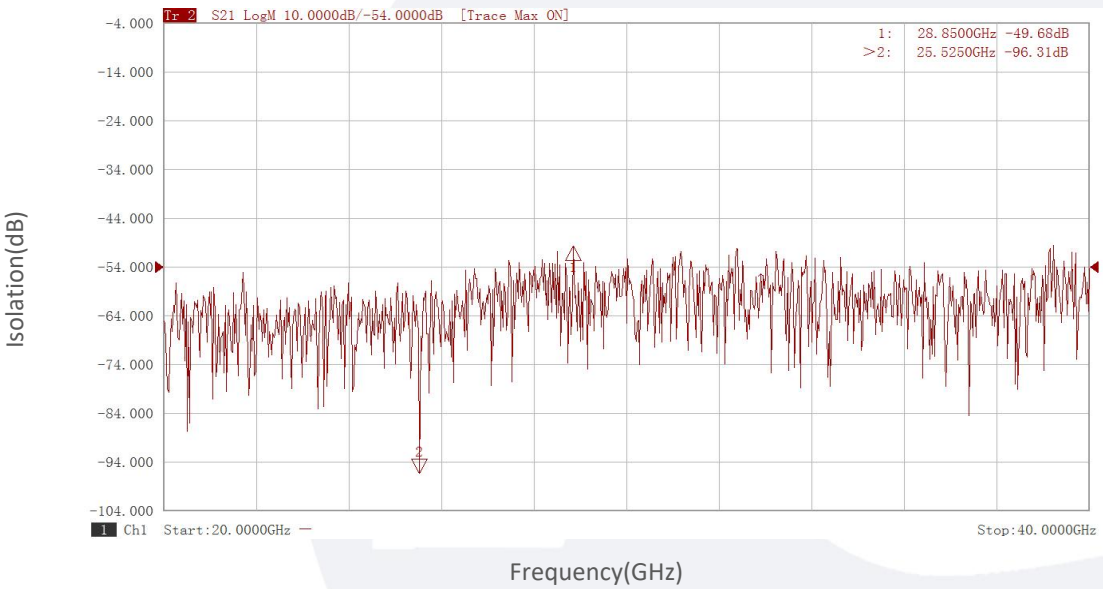
Insertion Loss&VSWR vs Frequency

J0-J2:



Isolation vs Frequency

J0-J2:



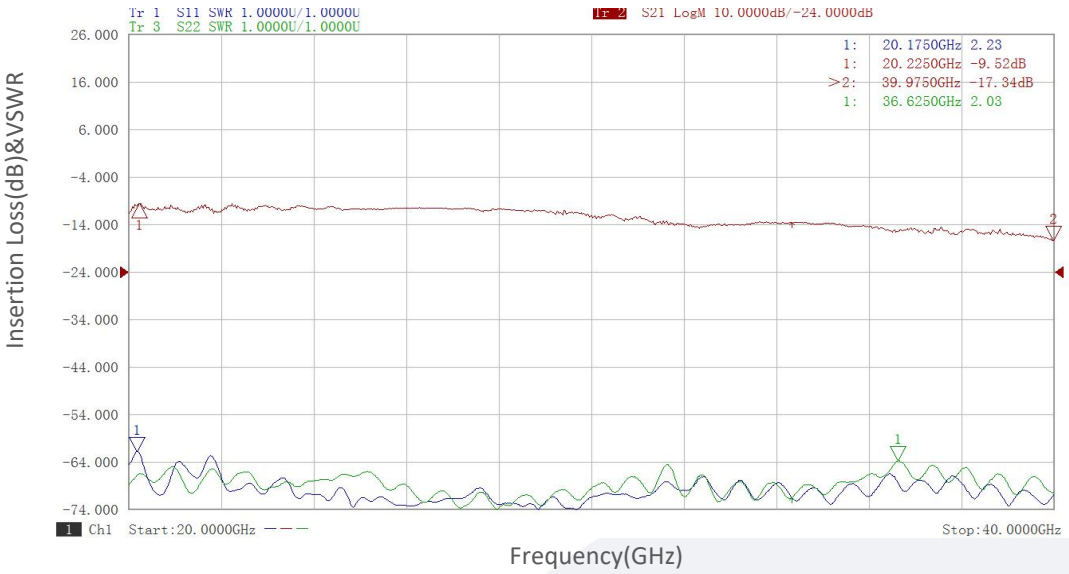
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典型曲线 Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J3:

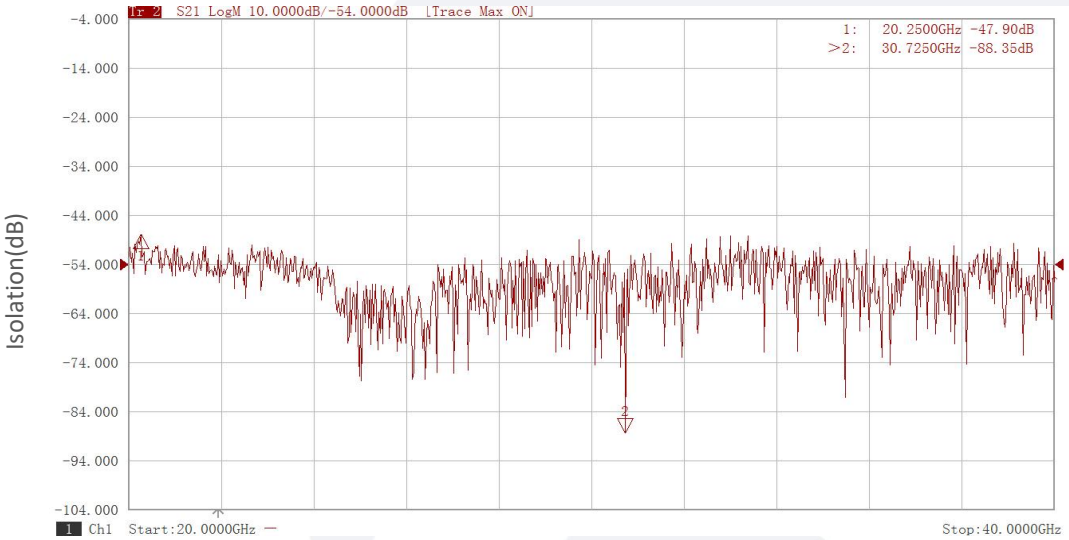


Insertion Loss(dB)&VSWR

Frequency(GHz)

Isolation vs Frequency

J0-J3:



Isolation(dB)

Frequency(GHz)

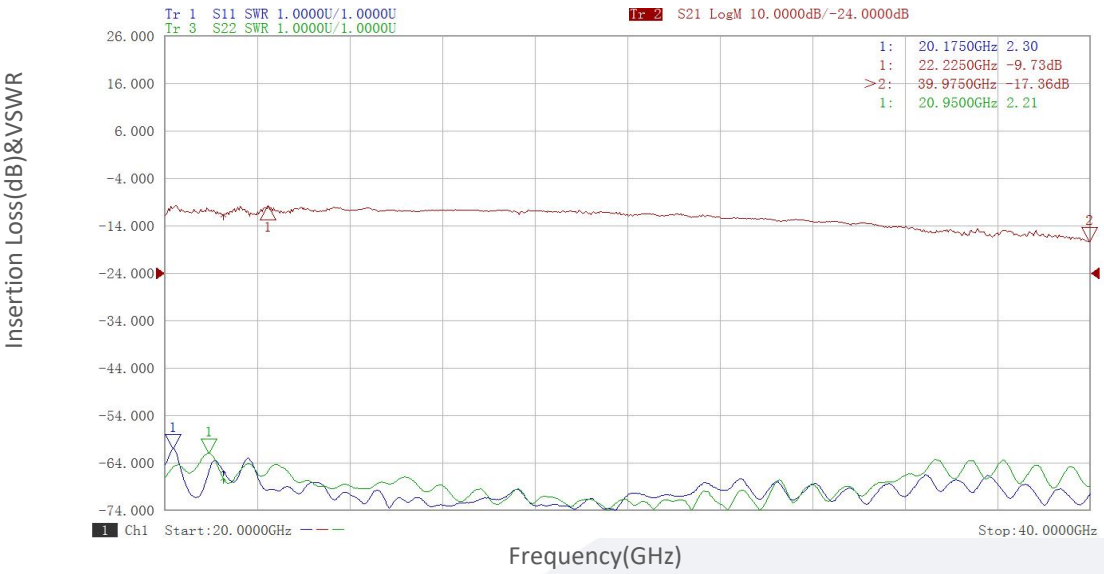
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典型曲线 Typical Performance Data:

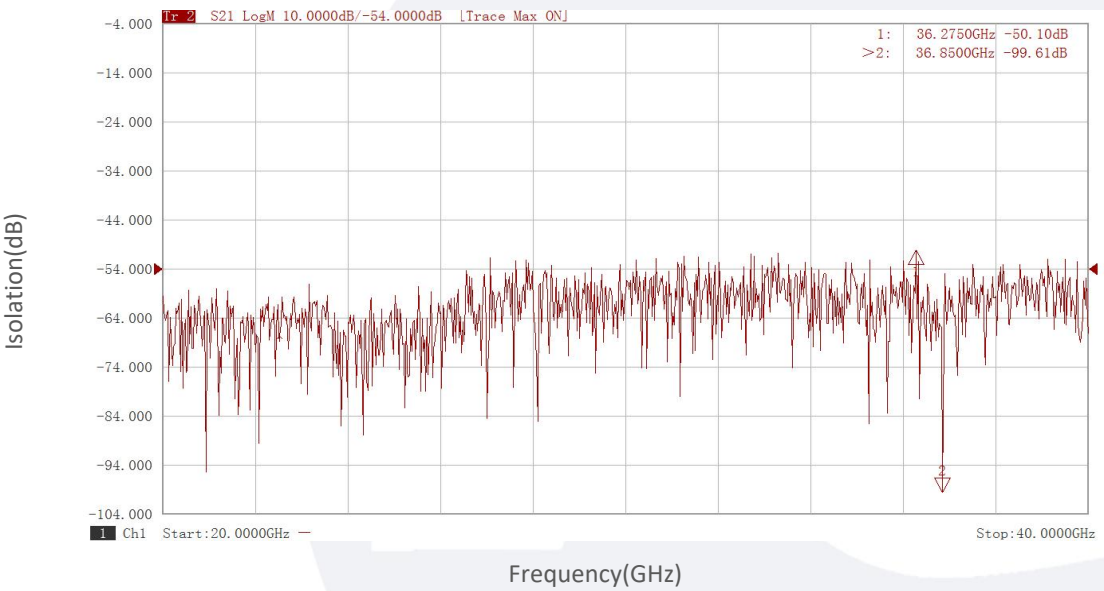
Insertion Loss&VSWR vs Frequency

J0-J4:



Isolation vs Frequency

J0-J4:



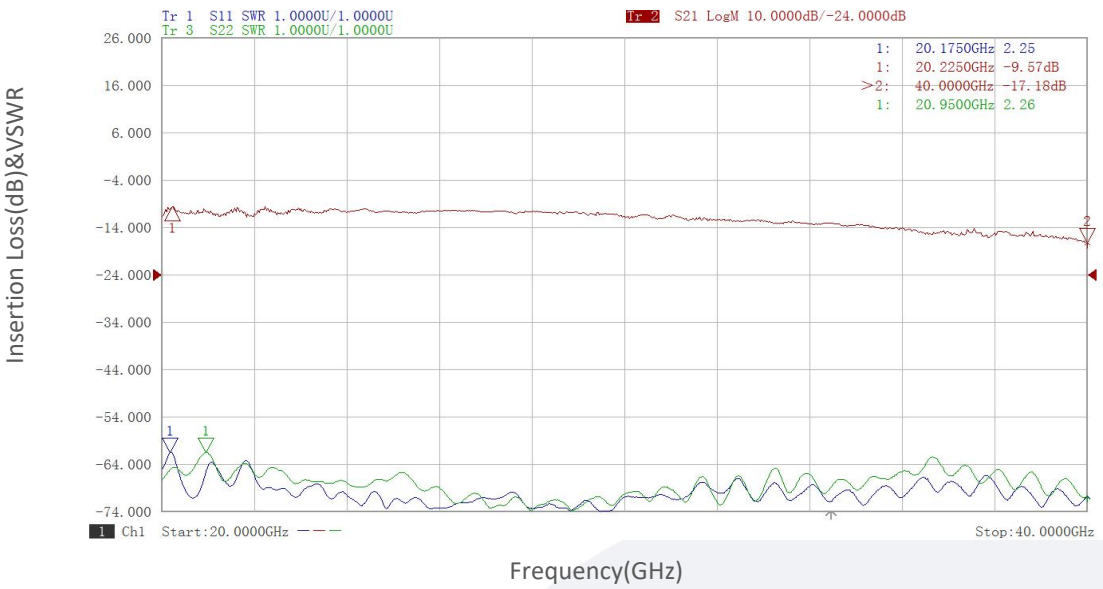
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典型曲线 Typical Performance Data:

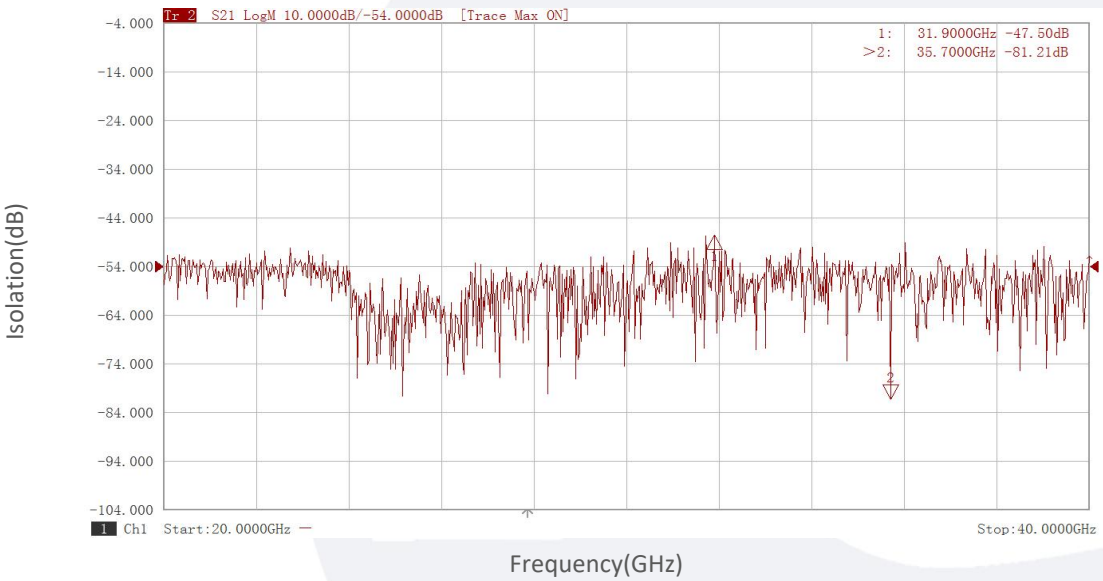
Insertion Loss&VSWR vs Frequency

J0-J5:



Isolation vs Frequency

J0-J5:



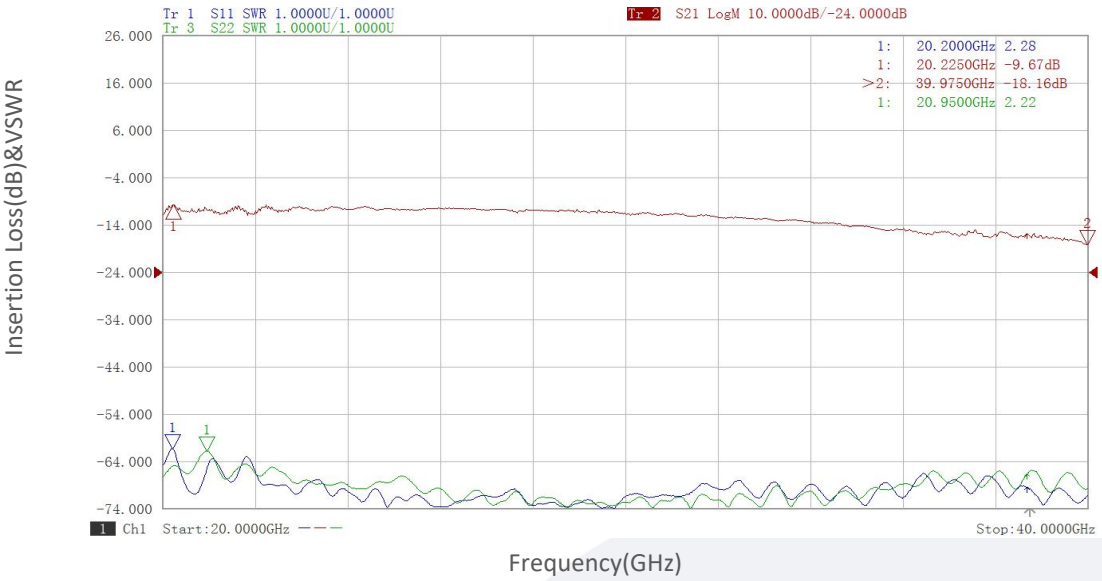
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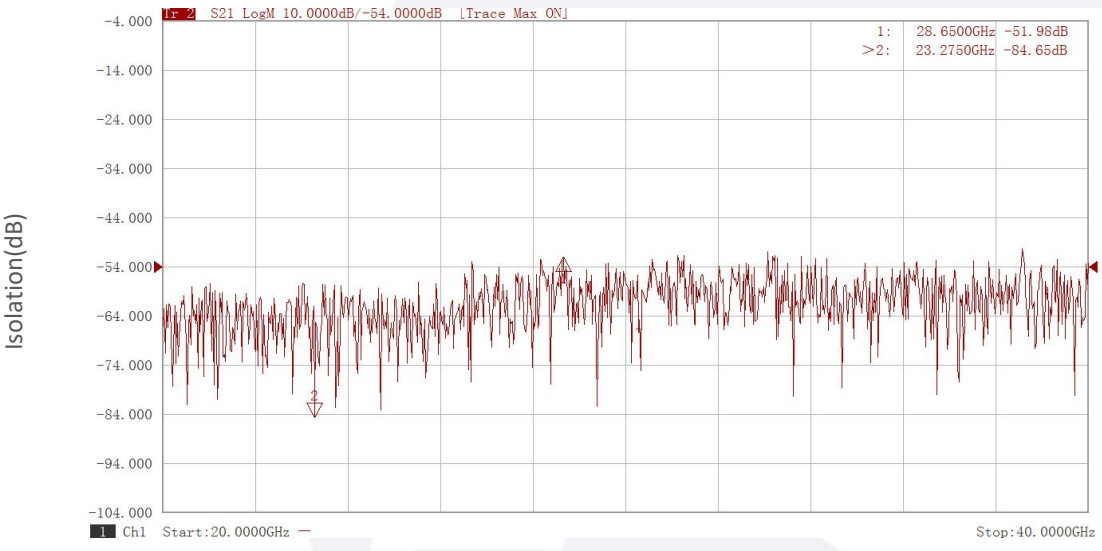
Insertion Loss&VSWR vs Frequency

J0-J6:



Isolation vs Frequency

J0-J6:



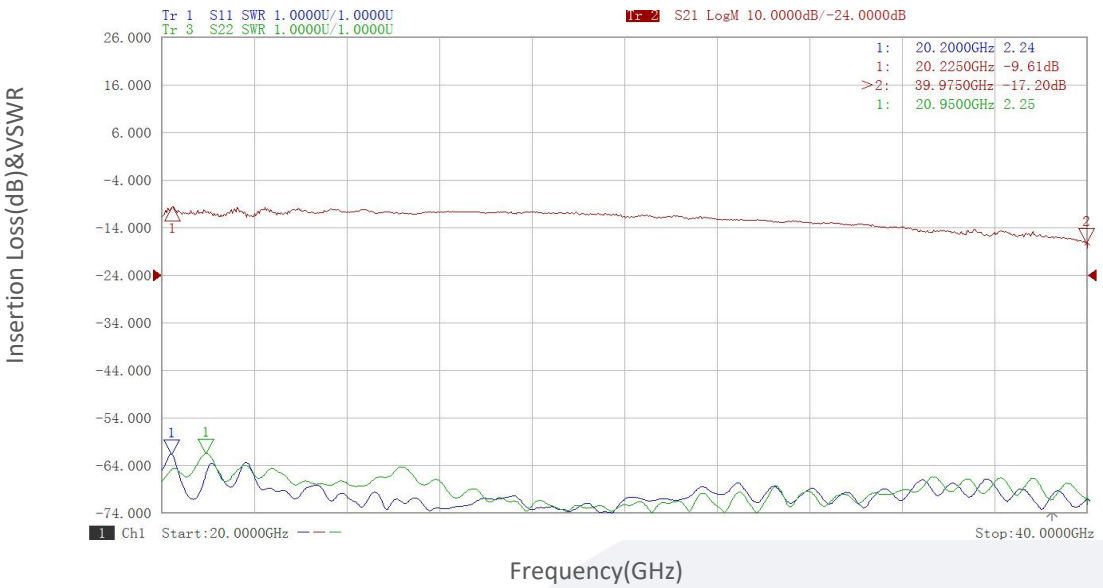
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典型曲线 Typical Performance Data:

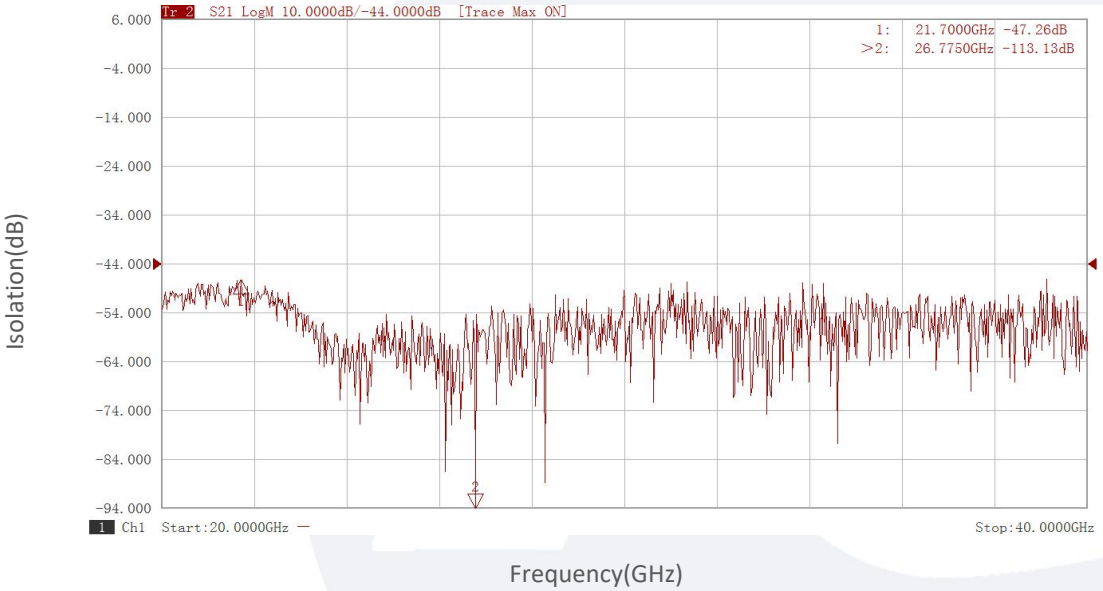
Insertion Loss&VSWR vs Frequency

J0-J7:



Isolation vs Frequency

J0-J7:



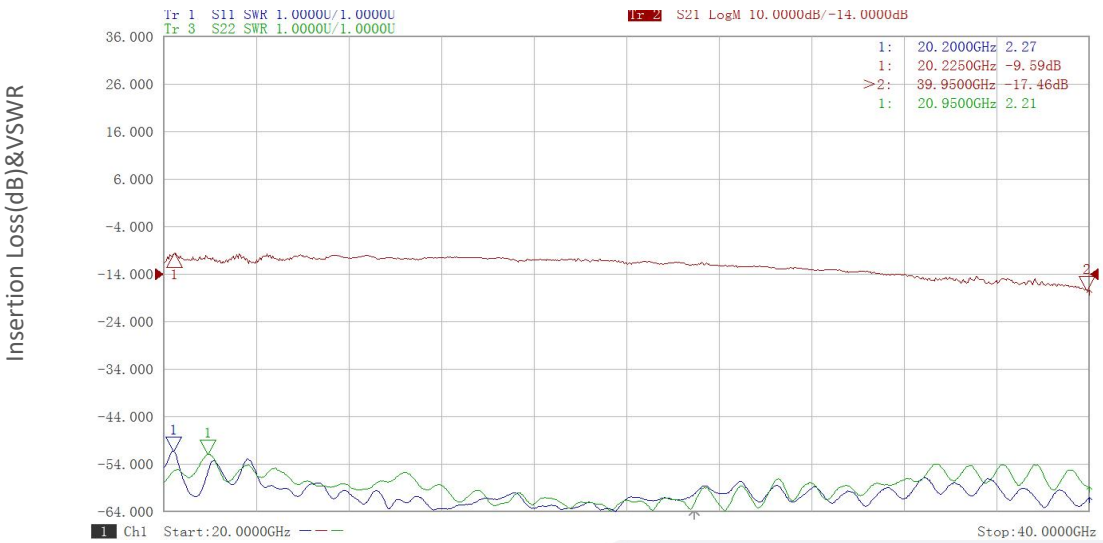
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典型曲线 Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J8:

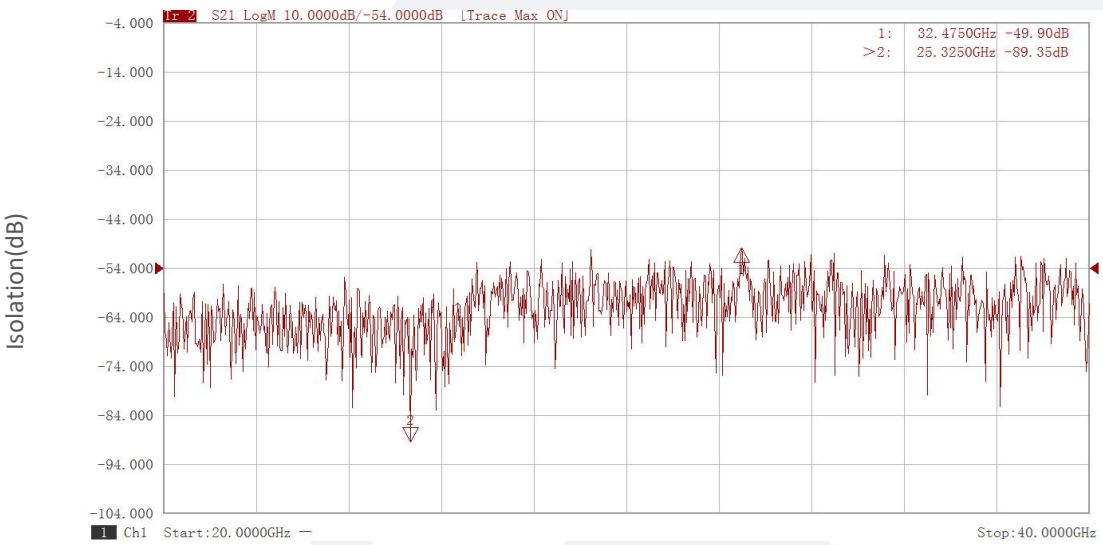


Insertion Loss(dB)&VSWR

Frequency(GHz)

Isolation vs Frequency

J0-J8:



Isolation(dB)

Frequency(GHz)

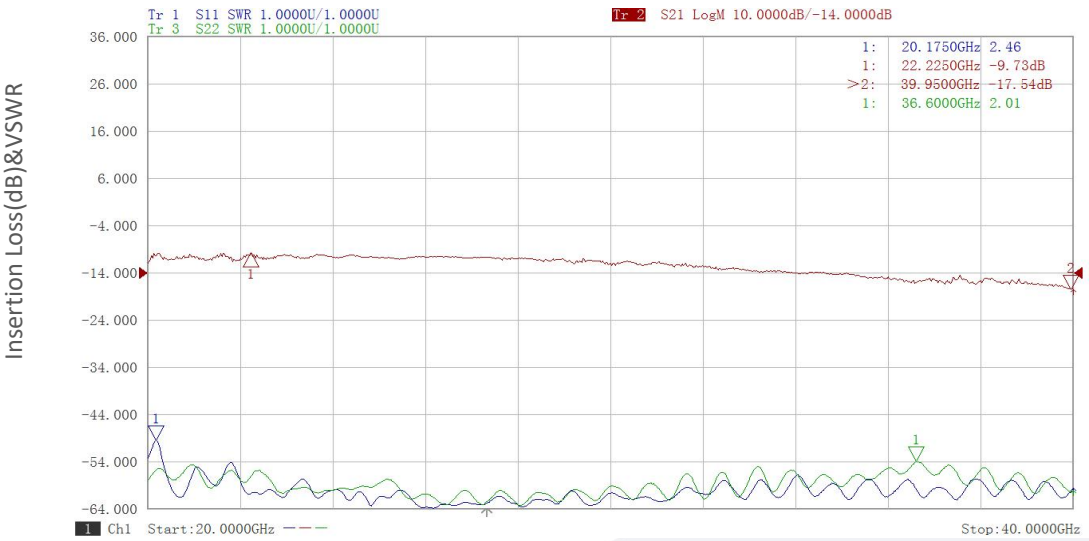
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典型曲线 Typical Performance Data:

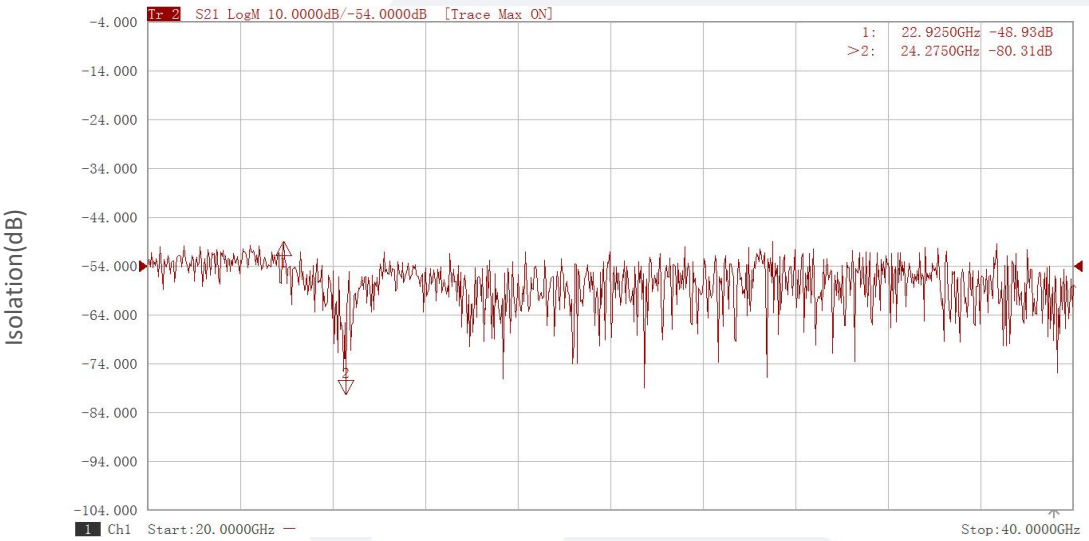
Insertion Loss&VSWR vs Frequency

J0-J9:



Isolation vs Frequency

J0-J9:



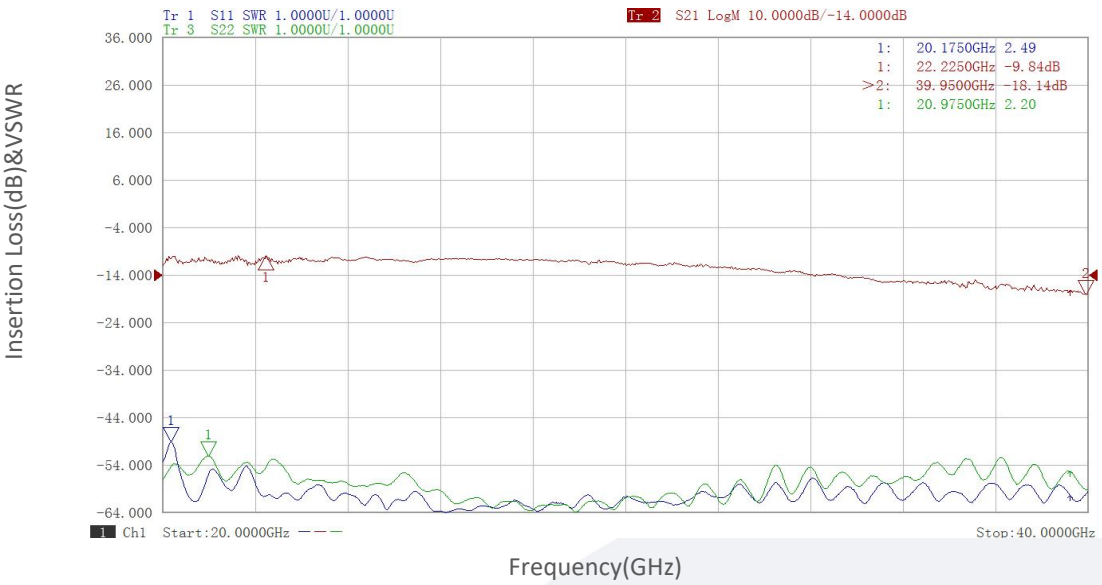
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典型曲线 Typical Performance Data:

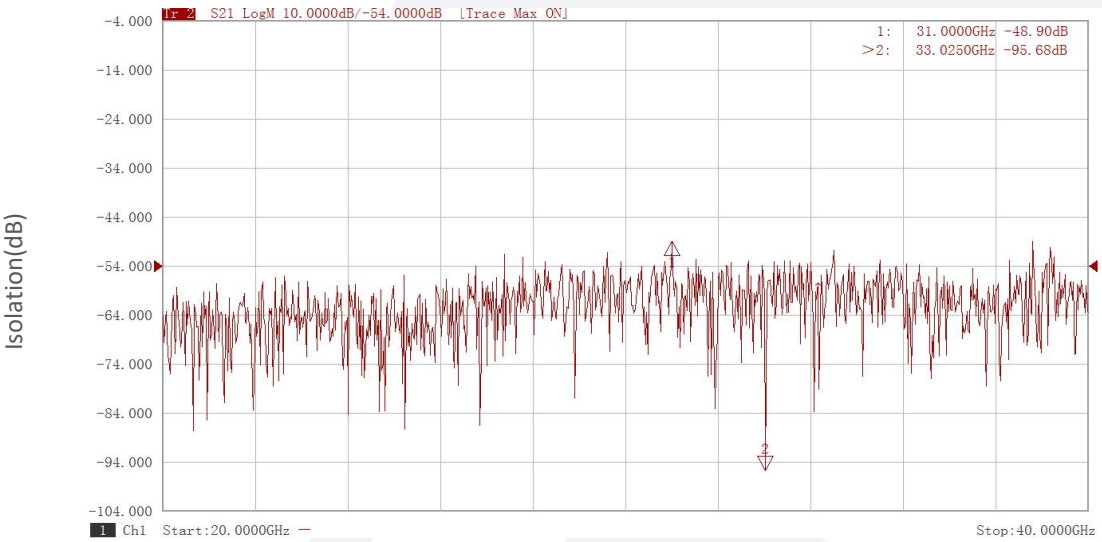
Insertion Loss&VSWR vs Frequency

J0-J10:



Isolation vs Frequency

J0-J10:



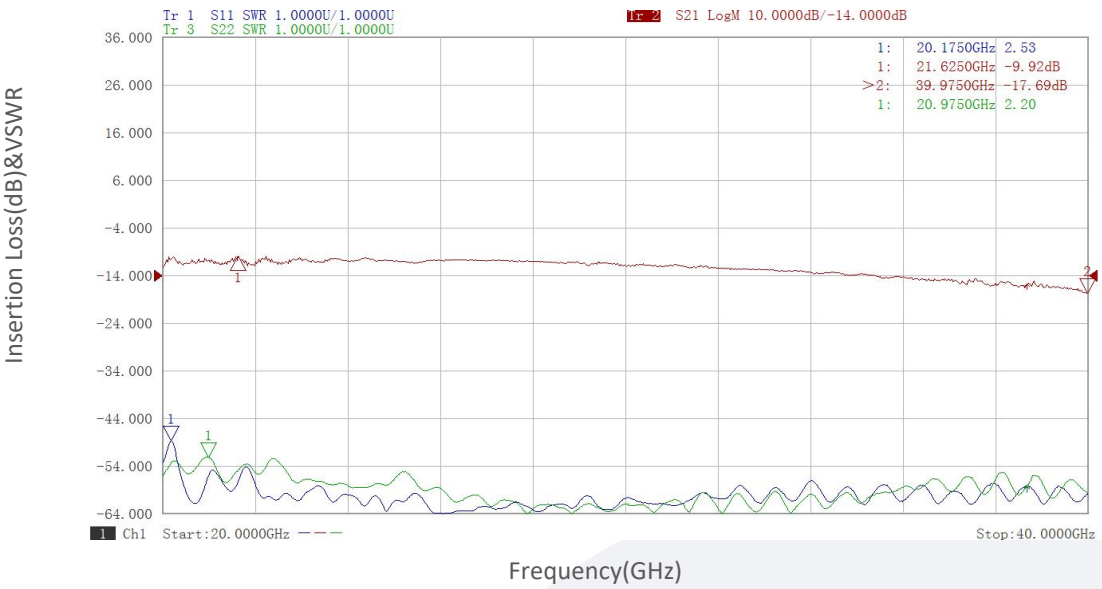
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典型曲线 Typical Performance Data:

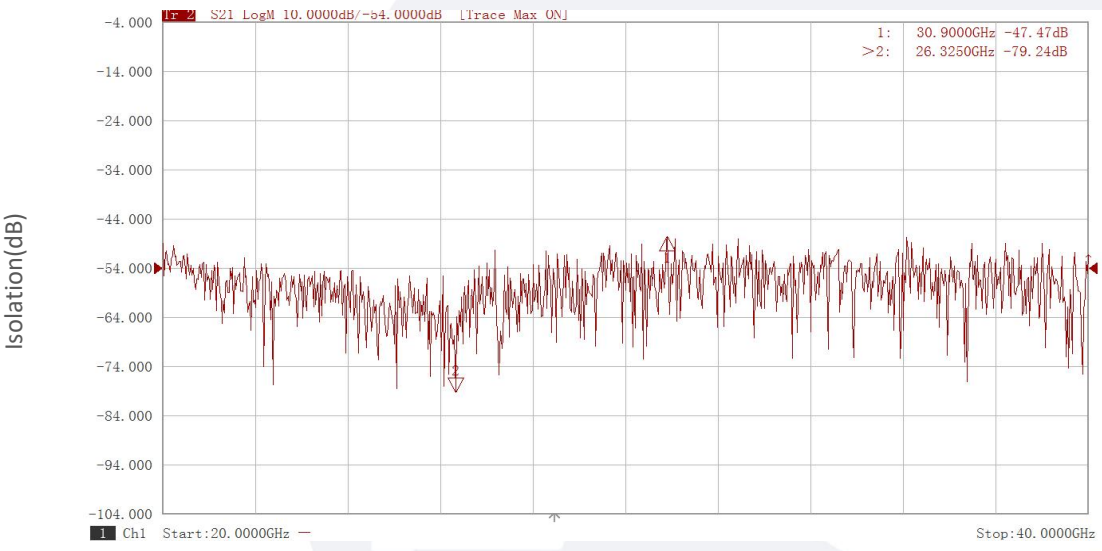
Insertion Loss&VSWR vs Frequency

J0-J11:



Isolation vs Frequency

J0-J11:



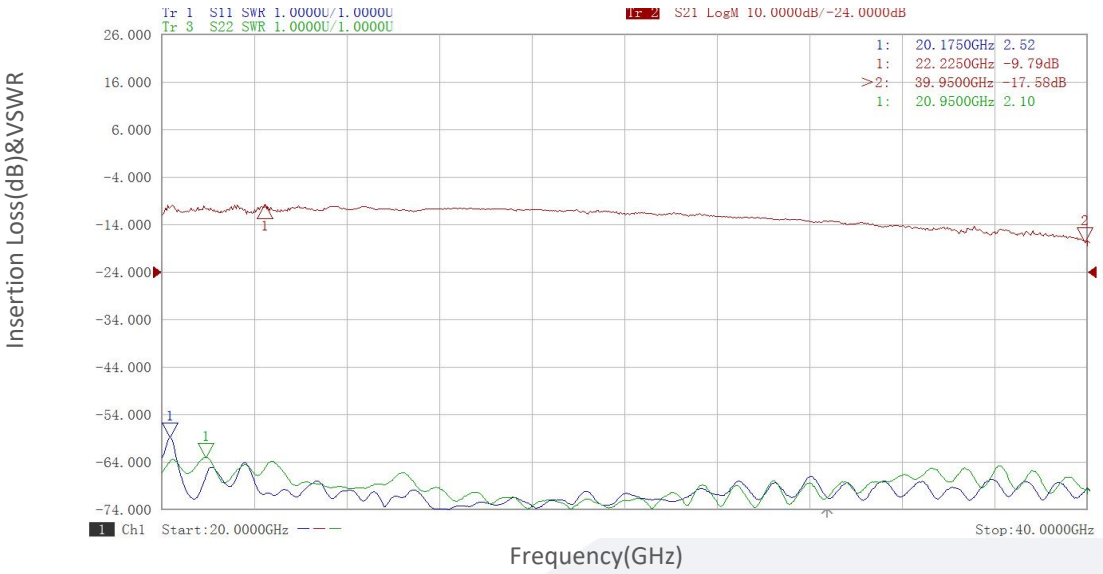
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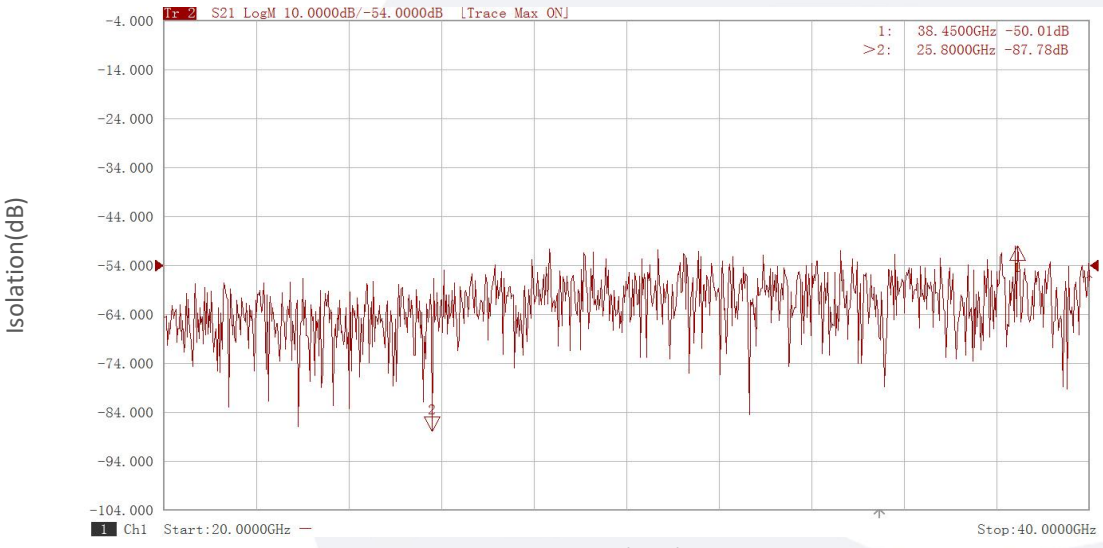
Insertion Loss&VSWR vs Frequency

J0-J12:



Isolation vs Frequency

J0-J12:



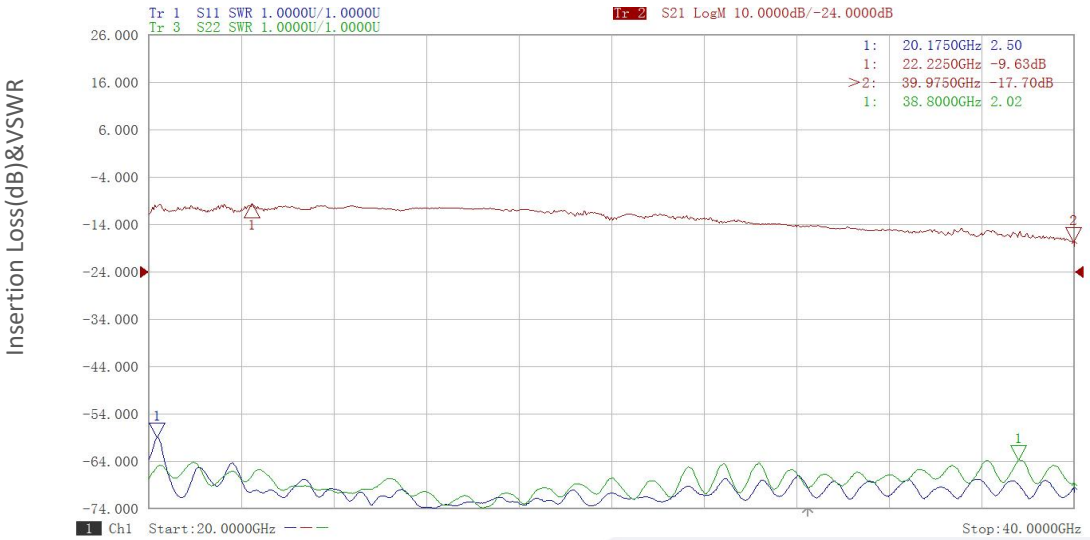
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典型曲线 Typical Performance Data:

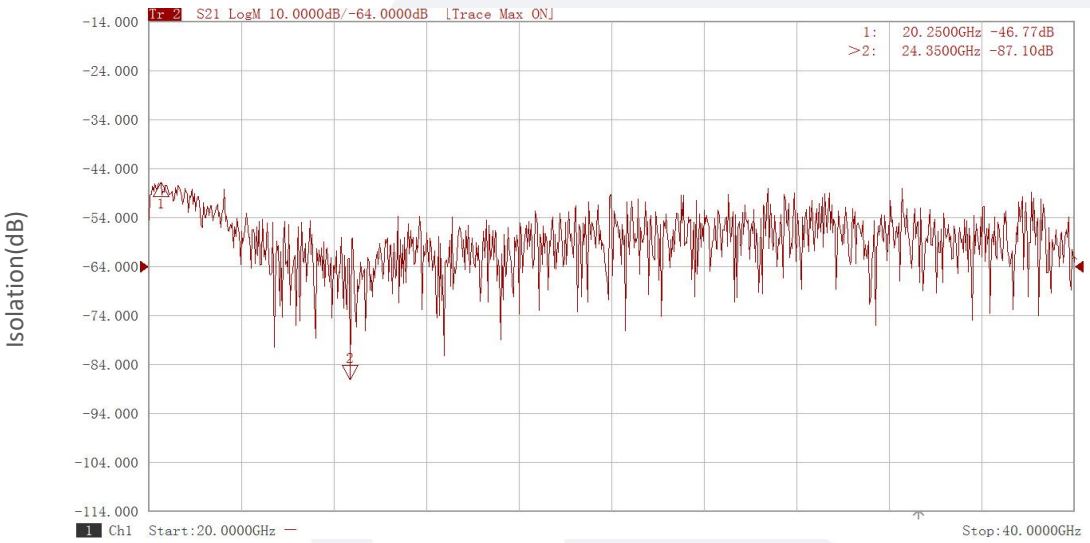
Insertion Loss&VSWR vs Frequency

J0-J13:



Isolation vs Frequency

J0-J13:



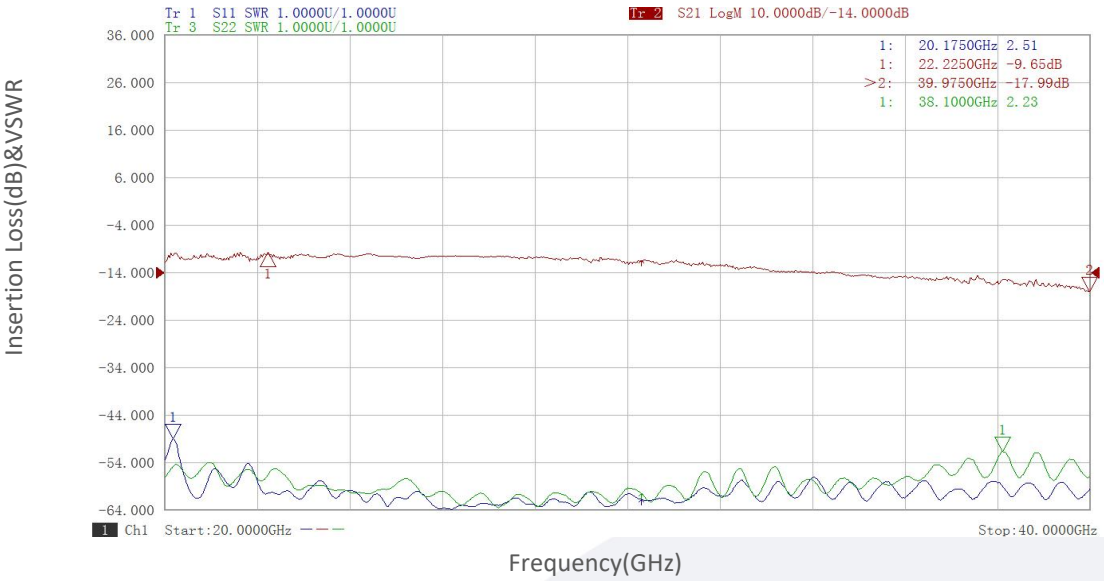
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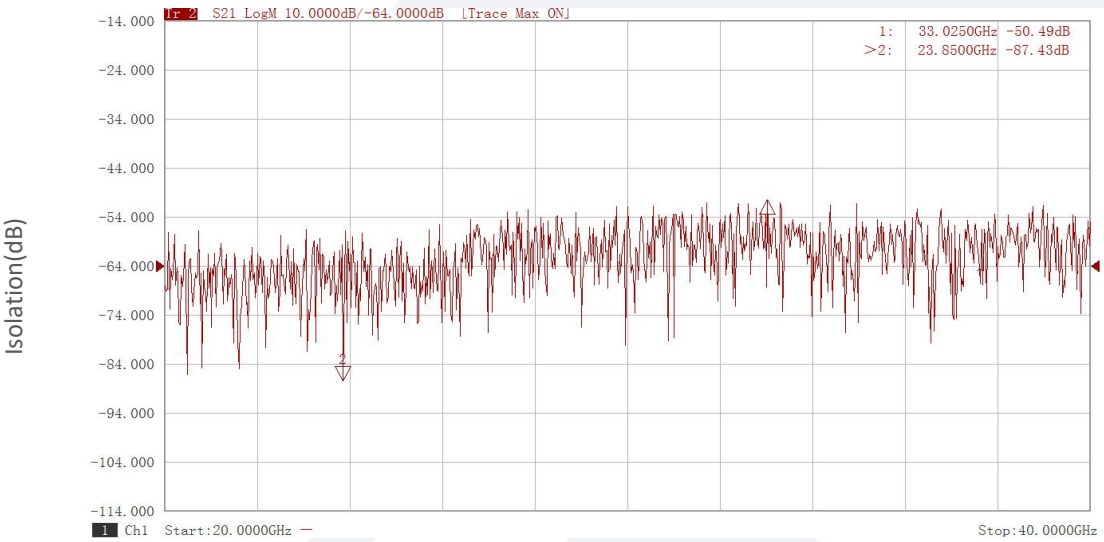
Insertion Loss&VSWR vs Frequency

J0-J14:



Isolation vs Frequency

J0-J14:



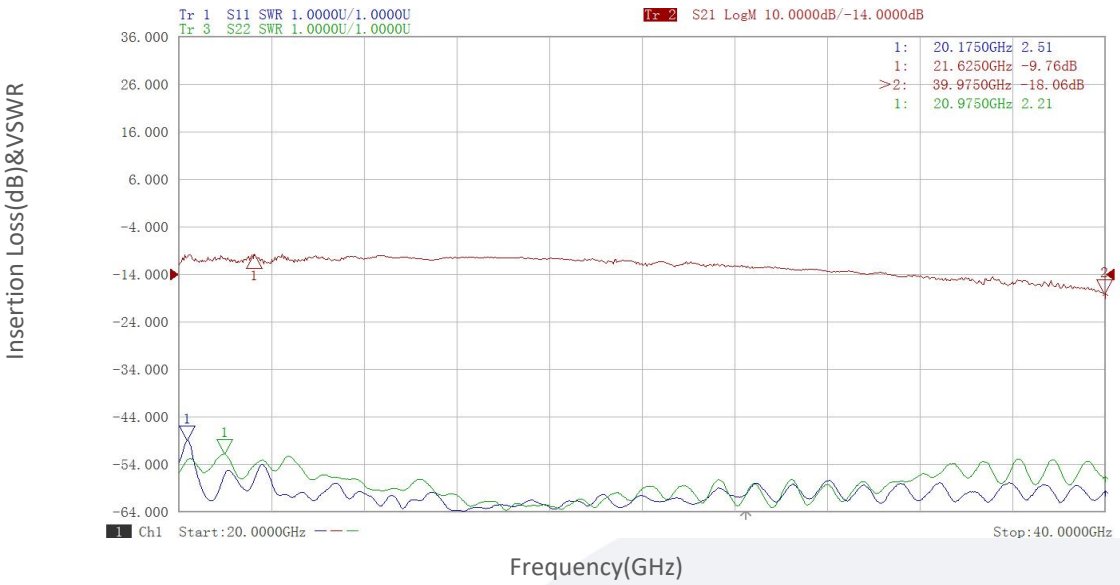
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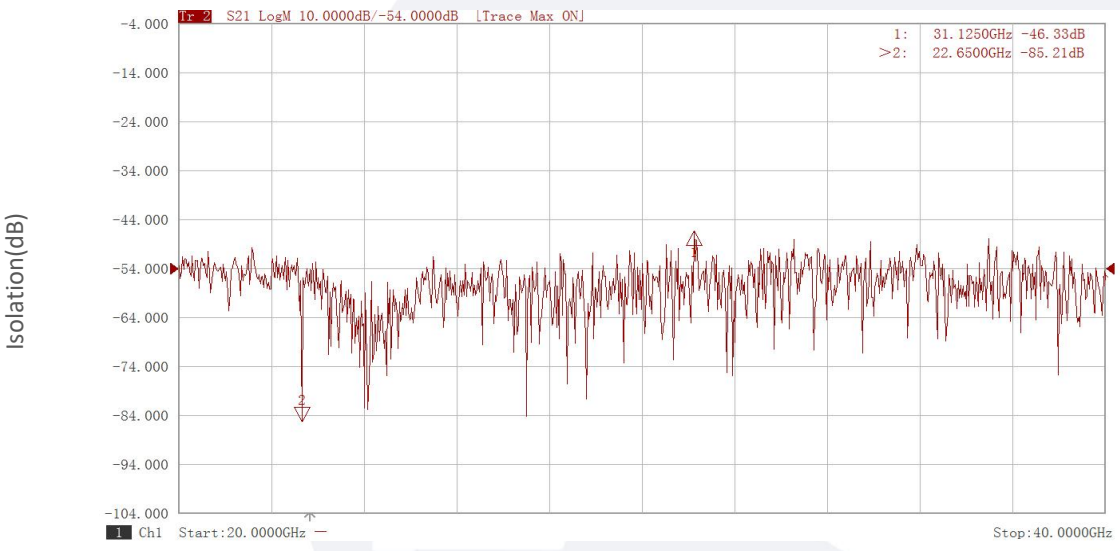
Insertion Loss&VSWR vs Frequency

J0-J15:



Isolation vs Frequency

J0-J15:



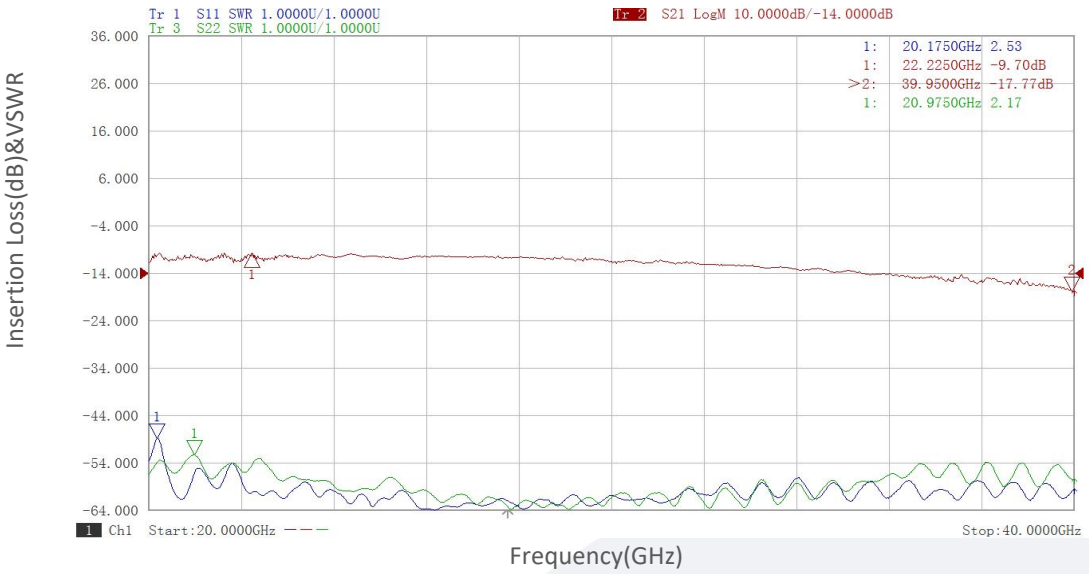
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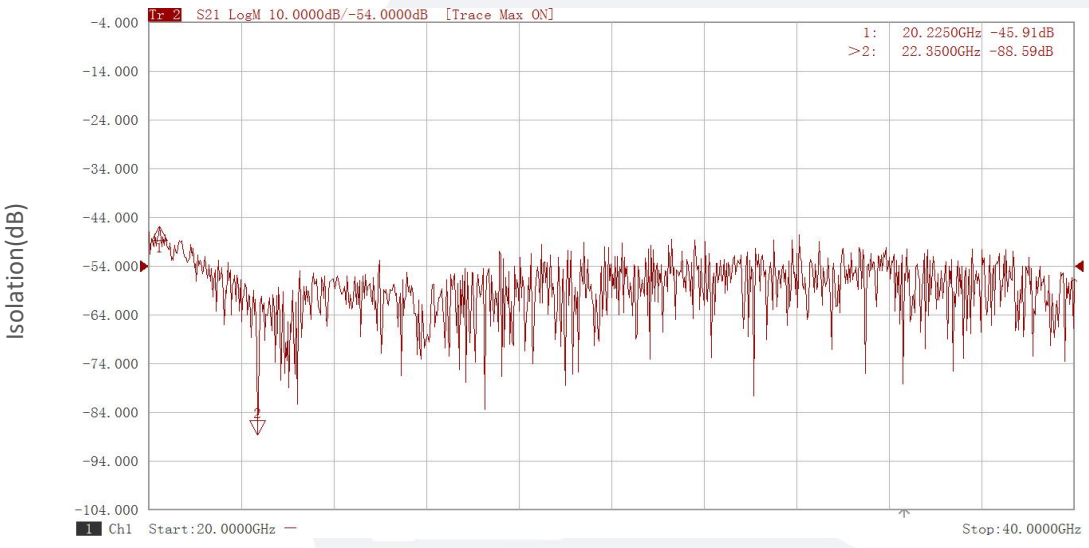
Insertion Loss&VSWR vs Frequency

J0-J16:



Isolation vs Frequency

J0-J16:



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