Suzhou Talent Microwave,Inc
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Absorptive,Broadband GaAs MMIC Switch

9KHz-8GHz/SP4T/ SMA/Phase Matched

Model: TLSP4T9K8GA-PM

The TLSP4T9K8GA-PM is an absorptive MMIC switch with a TTL driver that operates between 9KHz and 8 GHz. The SP8T switch offers 50 dB port-to-port isolation with a typical switching speed of 50 nanoseconds. The input and output connectors of the switch are SMA female.

Features:

- Ultra Wide Band: 9KHz-8GHz
- Low Insertion Loss: 2.0 dB
- Power Handling : 30 dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		9KHz-8GHz		
Insertion Loss		2	3.5	dB
Isolation		50		dB
Switch Speed		50	100	ns
Input VSWR		1.5		:1
Output VSWR		1.5		:1
Power Handling			30	dBm
Amplitude Consistency			±0.5	dB
Amplitude Stability			±1	dB
DC Voltage		5		V DC
DC Supply Current			100	mA
Switch type		Absorptive		
Control Logic TTL		“0”=Low(0V) ; “1”=High(+3.3V)		V
Impedance		50		Ohm

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Absolute Maximum Ratings :

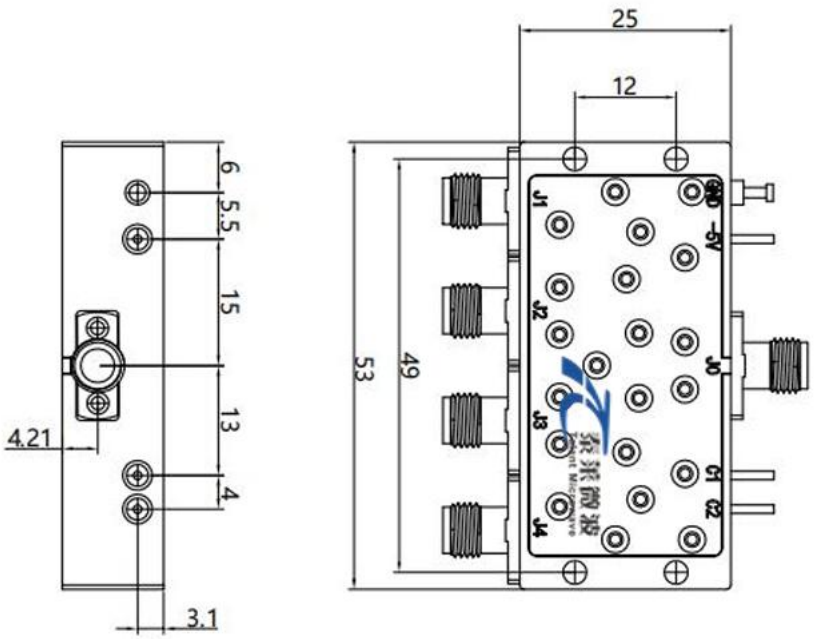
Description	Parameter	Units
Supply Bias Voltage	±5%	V
RF Input Power	30	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	SMA Female/SMA Female	
Control Bias	Solder Pin	
Weight	200	g

Outline Drawing:

Unit:mm



Truth Table		
TTL Control Input		Signal Path State
C1	C2	
0	0	J0-J1
0	1	J0-J2
1	0	J0-J3
1	1	J0-J4

TTL Control Voltages &VDD	
Stage	Bias Condition
VDD	+5V (±5%)
Low（0）	0 to 0.8Vdc
High（1）	3.3 to +5.0Vdc

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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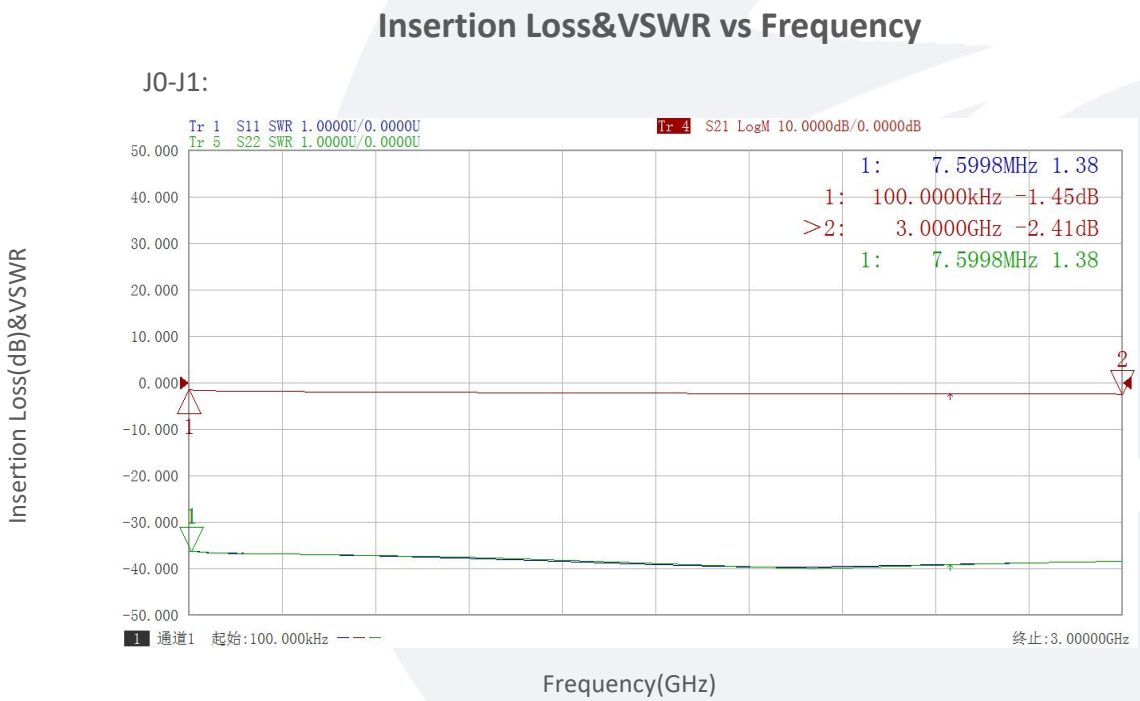
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

Base Number	Desciption	Revision
TLSP4T9K8GA-PM	Absorptive,Broadband GaAs MMIC Switch 9 KHz-8 GHz,SP4T,SMA, Phase Matched	Rev.1.1

Typical Performance Data:



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.

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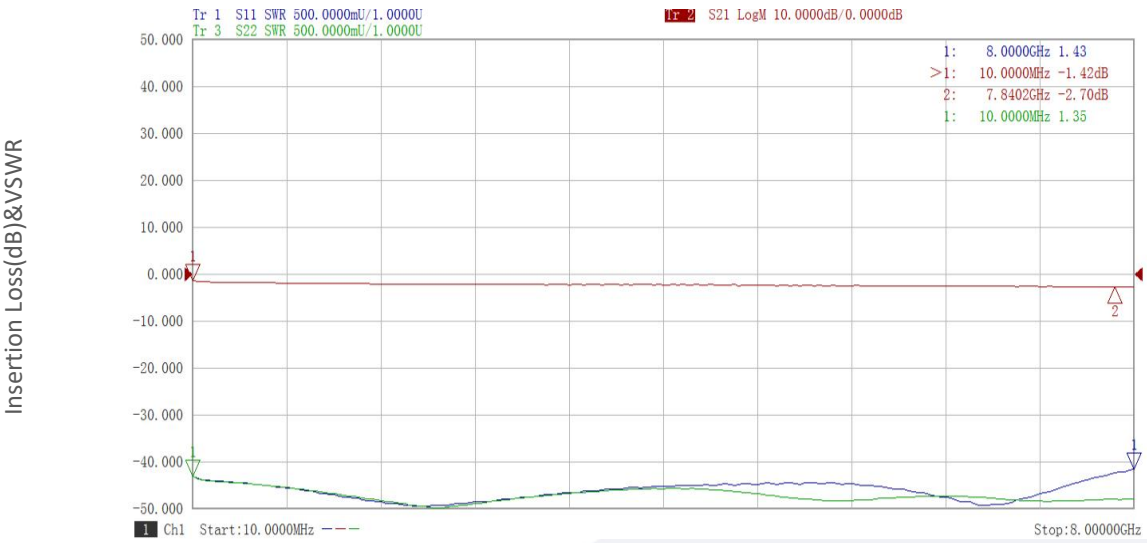
Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J1:



Isolation vs Frequency

J0-J1:

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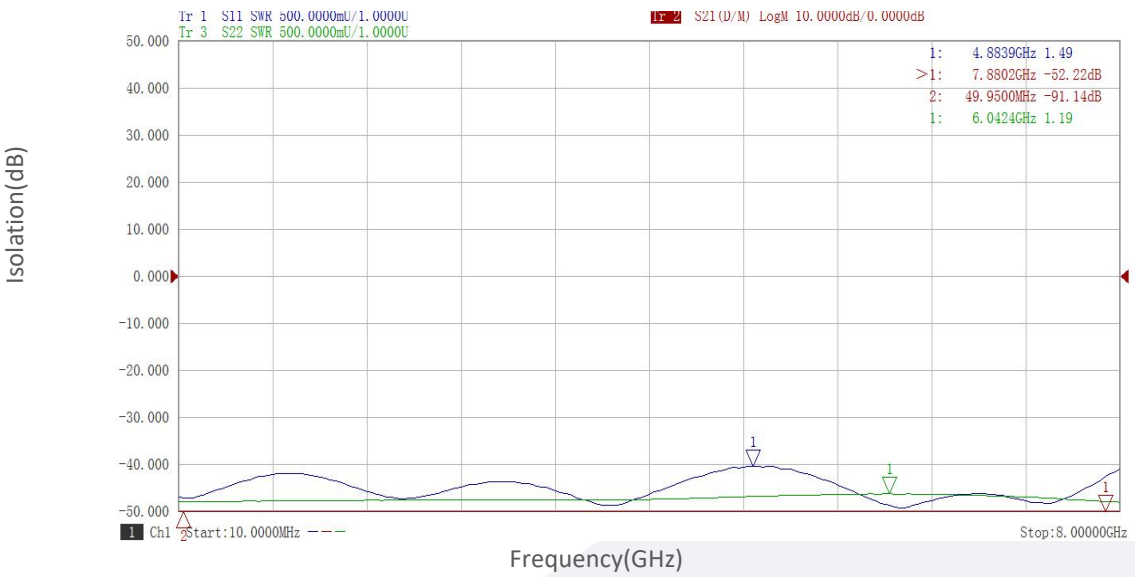
Typical Performance Data:

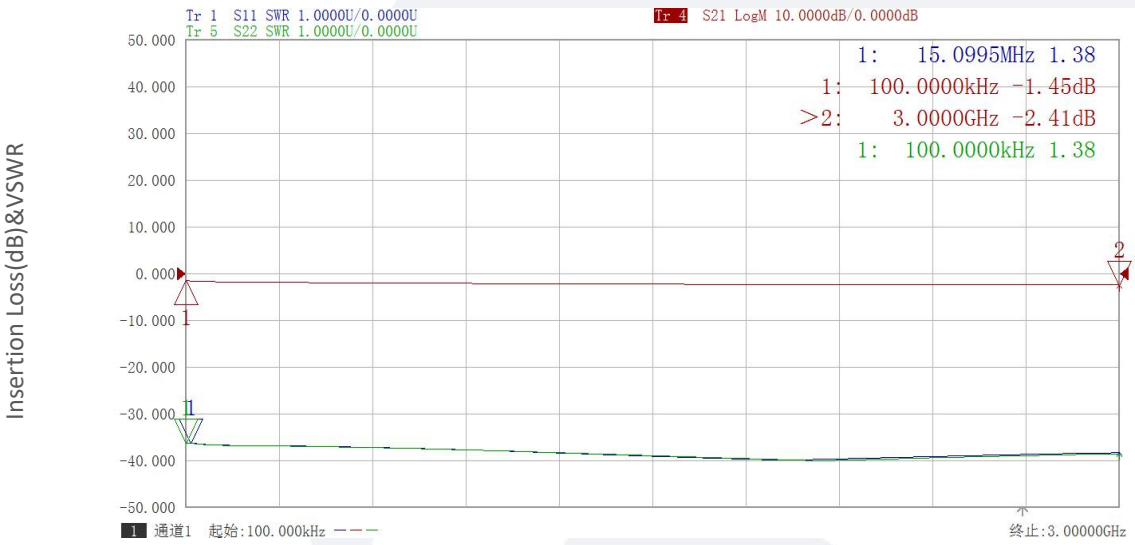
Isolation vs Frequency

J0-J1:



Insertion Loss&VSWR vs Frequency

J0-J2:



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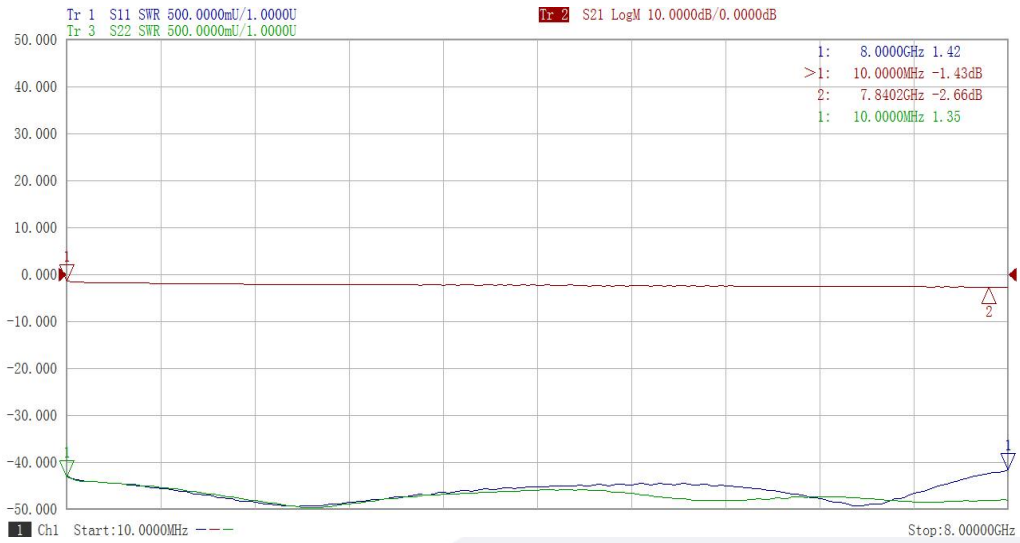
Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J2:



Insertion Loss(dB)&VSWR

Frequency(GHz)

Isolation vs Frequency

J0-J2:

Isolation(dB)

Frequency(GHz)

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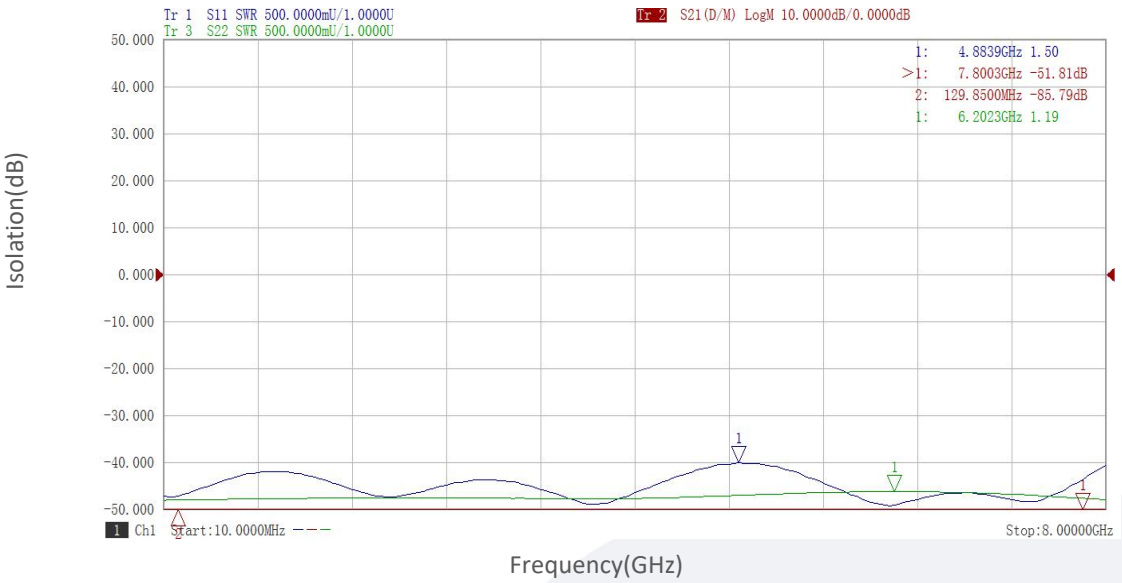
Typical Performance Data:

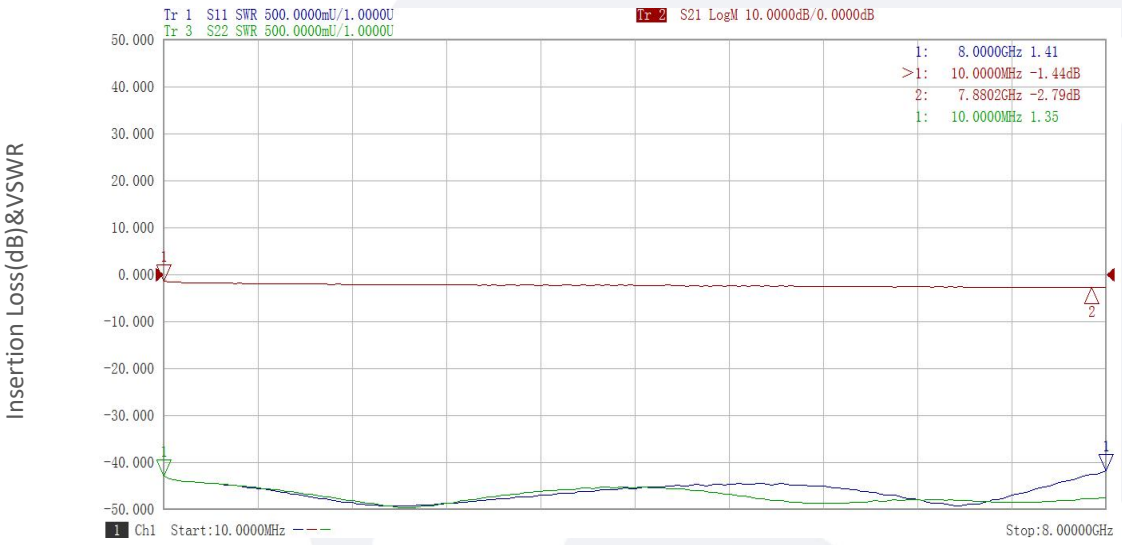
Isolation vs Frequency

J0-J2:



Insertion Loss&VSWR vs Frequency

J0-J3:



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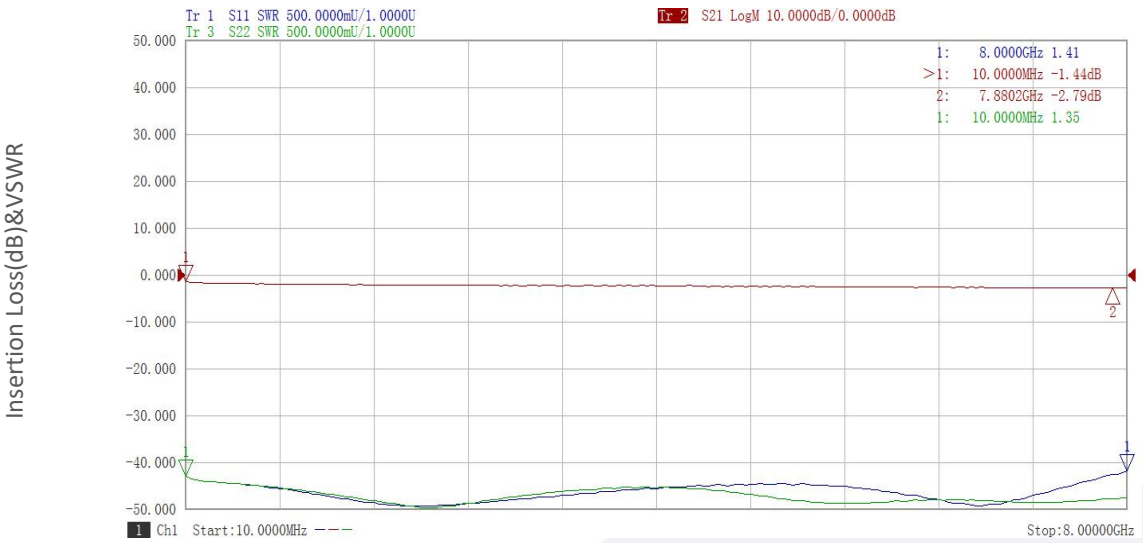
Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J3:



Isolation vs Frequency

J0-J3:

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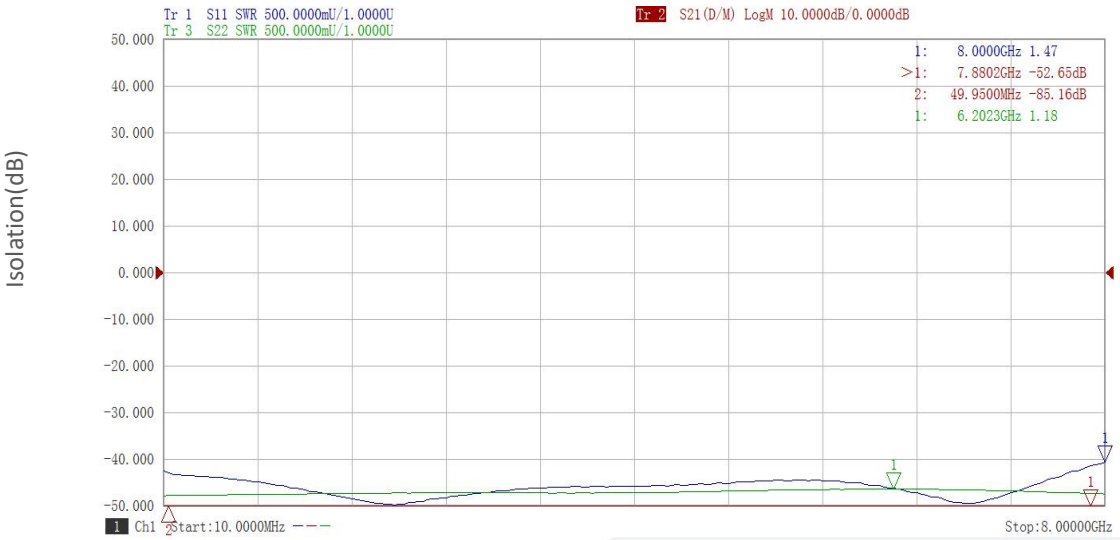
Typical Performance Data:

Isolation vs Frequency

J0-J3:



Insertion Loss&VSWR vs Frequency

J0-J4:

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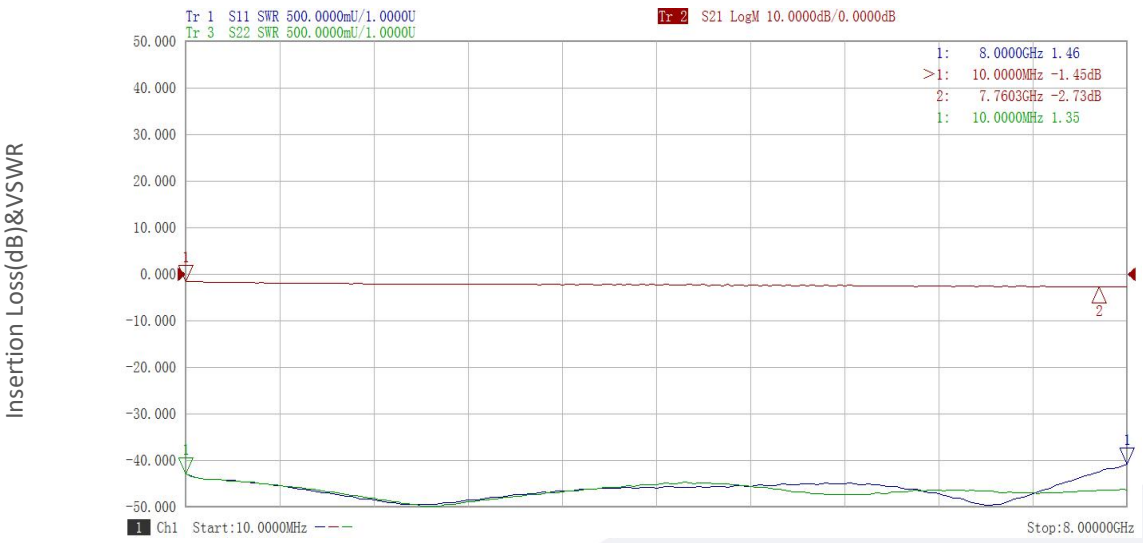
Typical Performance Data:

Insertion Loss&VSWR vs Frequency

J0-J4:



Insertion Loss(dB)&VSWR

Frequency(GHz)

Isolation vs Frequency

J0-J4:

Isolation(dB)

Frequency(GHz)

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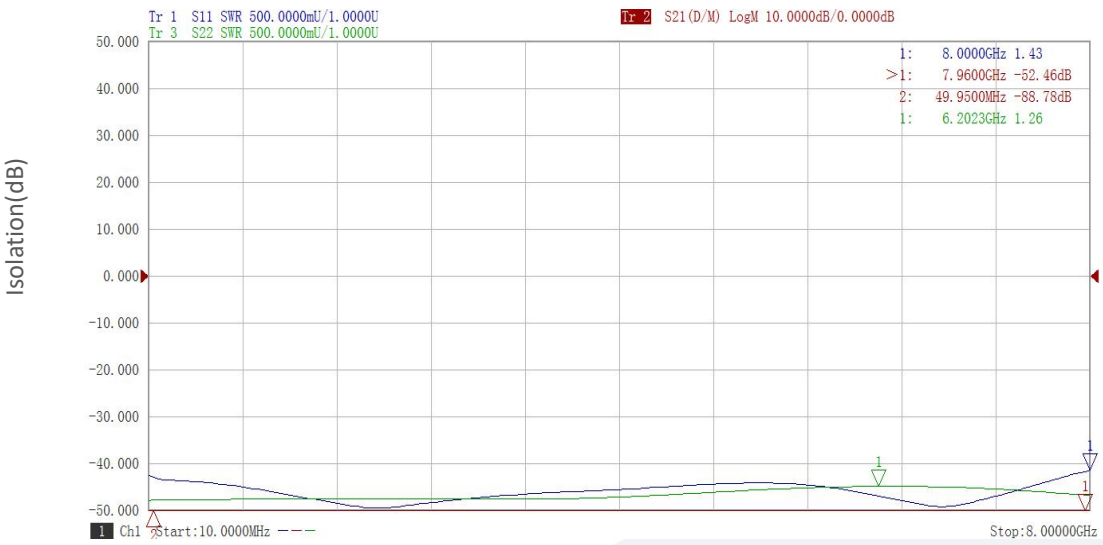
Typical Performance Data:

Isolation vs Frequency

J0-J4:



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