AT-6DPS-0820R-360NCP

0.8-2.0GHz Digital Phase Shifter

Digital Phase Shifter, 360 Degree range 0.8-2.0GHz, 6bit, 5.625 degree step

2024-10-10

Description:

AT-6DPS-0820R-360NCP is 6bit digital phase shifter covering 0.8-2.0GHz frequency range, with 5.625degee step and 360degree range.

The phase shifter is suitable for broadband test, and 5G millimeter wave application. There are dc blocks in RF1 and RF2 port inside. NO dc block required during operation.

More information, visit www.atmicrowave.com

Feature

- ✓ Frequency: 0.8-2.0GHz
- ✓ 6bit, 5.625degree LSB
- ✓ Range: 360degree
- ✓ Very fast speed

Application

- ✓ Test Equipment
- ✓ ROF (RF Over Fiber)
- ✓ Radar System
- ✓ Telecom Communication

Electronical Specifications:

Parameter	Min	Typical	Max
Frequency		0.8-2.0GHz	
Control Bits		6bits	
Control Step		5.625 degree	
Phase shift Range		360 degree	
Insertion Loss		-10dB	-13dB
Return Loss	-7dB	-10dB	
VEE		-5V/10mA	
TTL Control Voltage		Low=0V, 0 to 0.4V High=+3.3V, +3 to +5V	
Spec Temp		25C	

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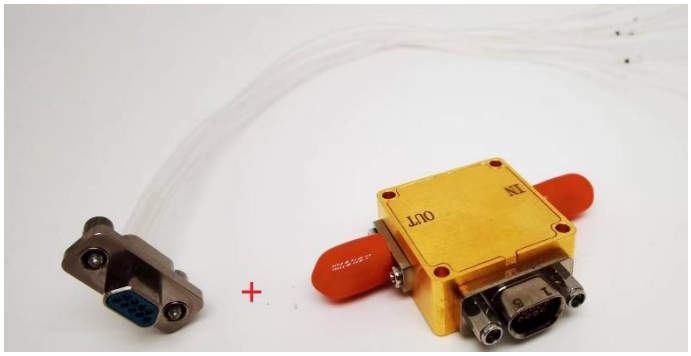
Mechanical Information

Item	Description
Input Port	SMA Female
Output Port	SMA Female
Control Port	J30J-9ZKSP
Case Material	Copper
Finish	Gold Plated
Weight	50g
Size:	See outline



Absolute Maximum Ratings Table

Parameter	Value
VEE	-6V
Control Low	0 to 0.4V
Control High	+3 to +6V
RF Power	+27dBm
Operating Temperature	-40 to +85C
Storage Temperature	-55 to +125C

Notes:

1. Datasheet may be changed according to update of MMIC, Raw materials , process, and so on.
2. This data is only for reference, not for guaranteed specifications.
3. Please contact AT Microwave team to make sure you have the most current data.

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True Table

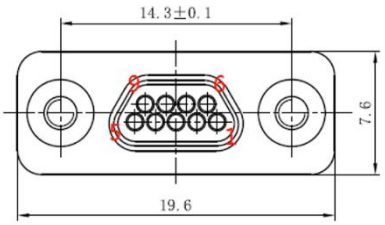
State	V1	V2	V3	V4	V5	V6
Reference	0	0	0	0	0	0
5.625	1	0	0	0	0	0
11.25	0	1	0	0	0	0
22.5	0	0	1	0	0	0
45	0	0	0	1	0	0
90	0	0	0	0	1	0
180	0	0	0	0	0	1
270	0	0	0	0	1	1
354.375	1	1	1	1	1	1

TTL Low=0 to 0.4V

TTL High=+3.3V, +3 to +5V

Pin Description:

Pin Number	Function	Description
1	P1	TTL
2	P2	TTL
3	P3	TTL
4	P4	TTL
5	P5	TTL
6	P6	TTL
7	VEE	Power supply, -5V
8	GND	
9	NC	



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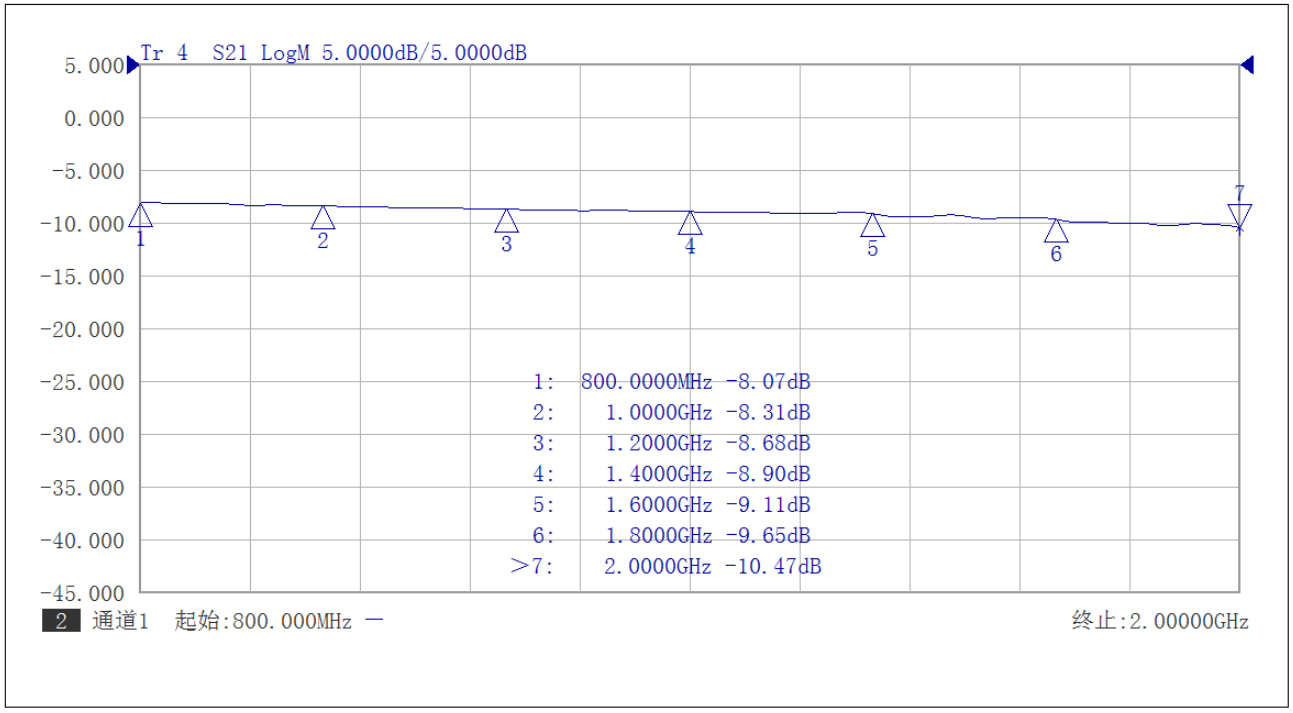
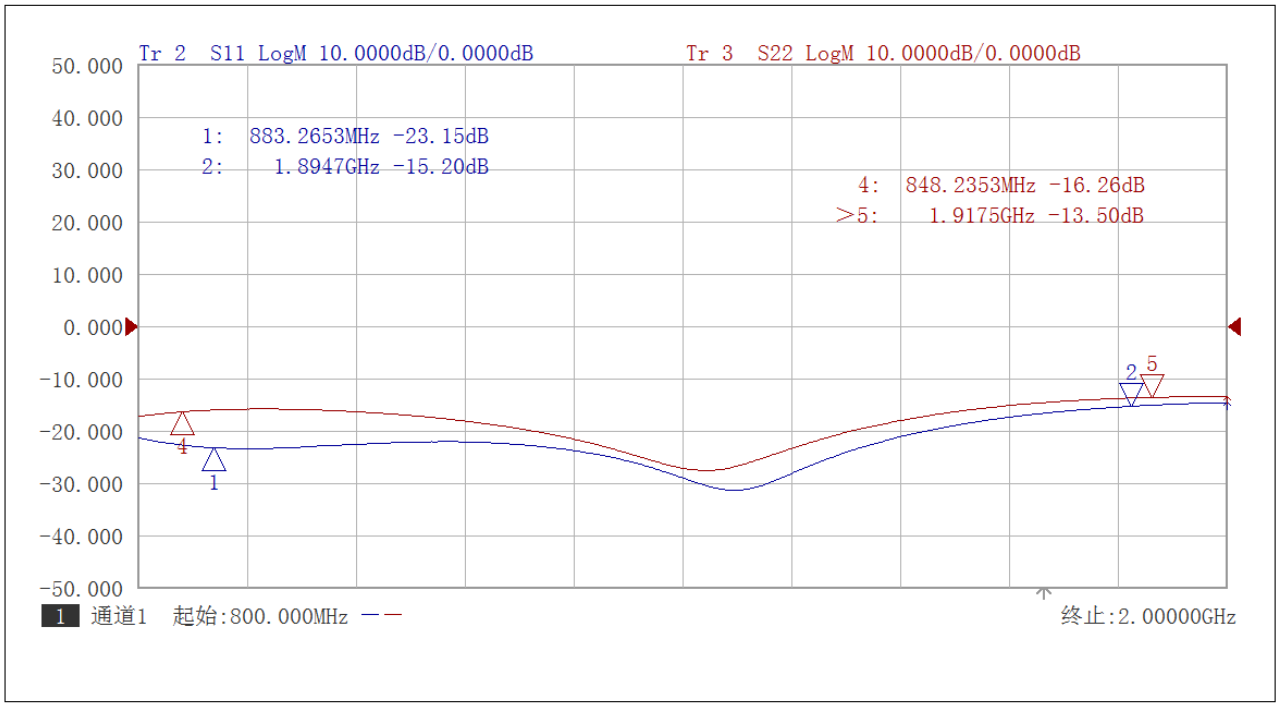
TEST DATA



Insertion Loss vs Frequency at 0 degree



Return Loss vs Frequency at 0 degree

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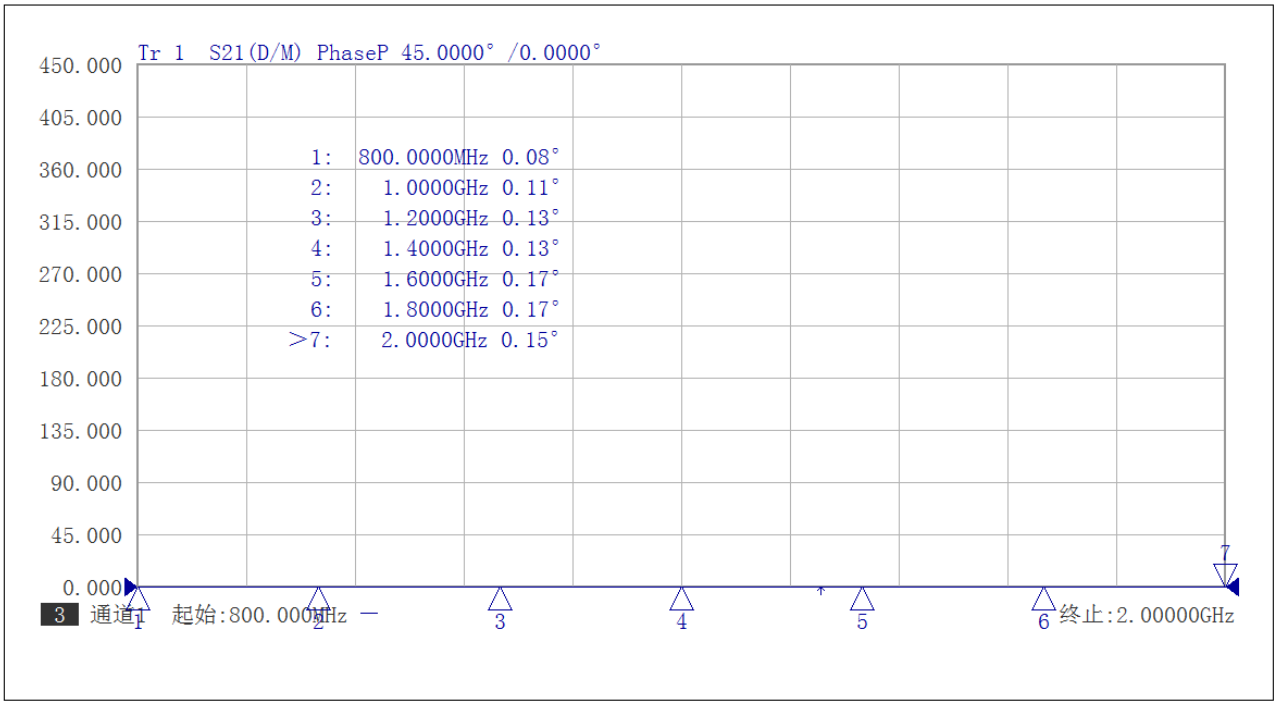
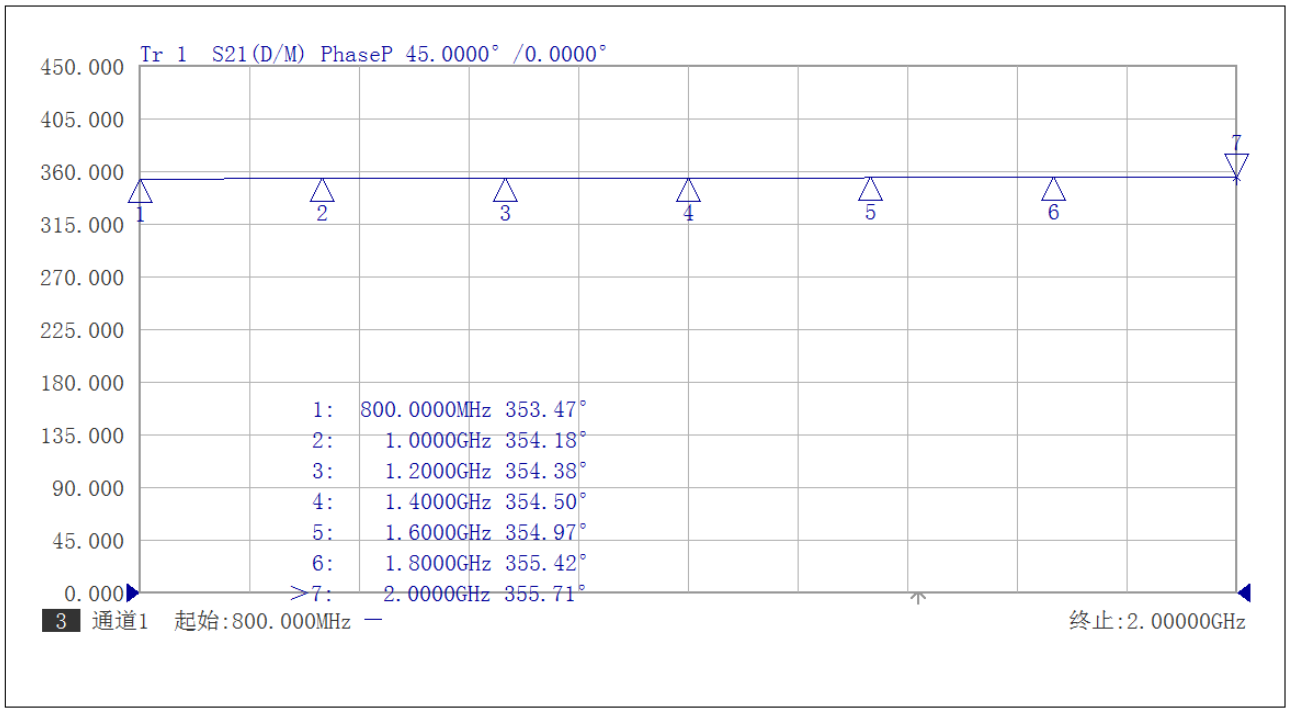


Phase shit vs Frequency at 0 Degree



Phase shit vs Frequency at 5.625 Degree

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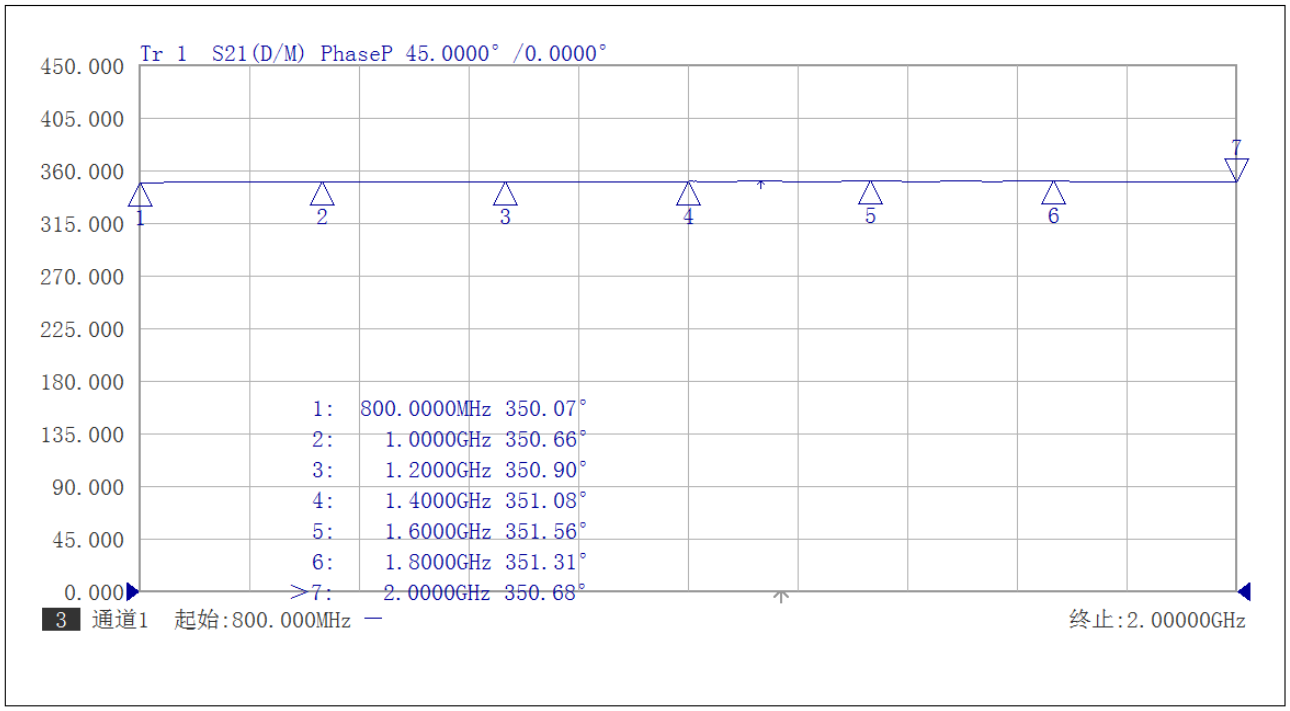
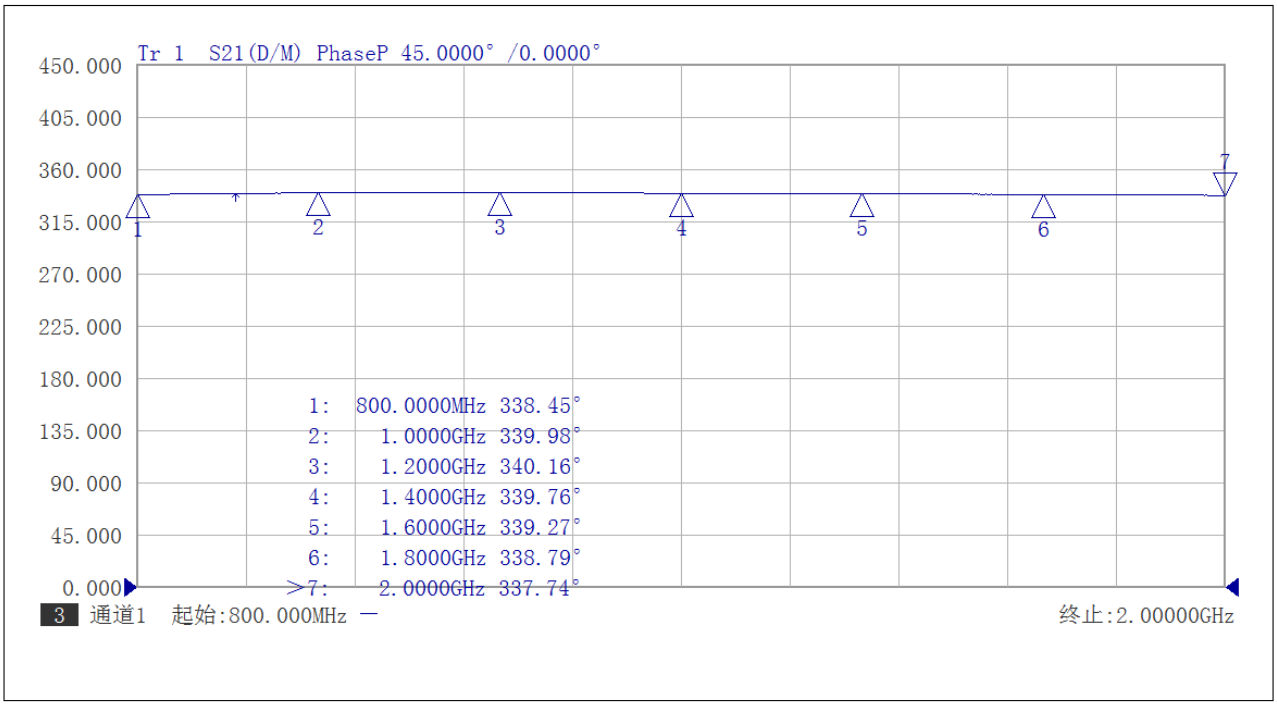


Phase shit vs Frequency at 11.25 Degree



Phase shit vs Frequency at 22.5 Degree

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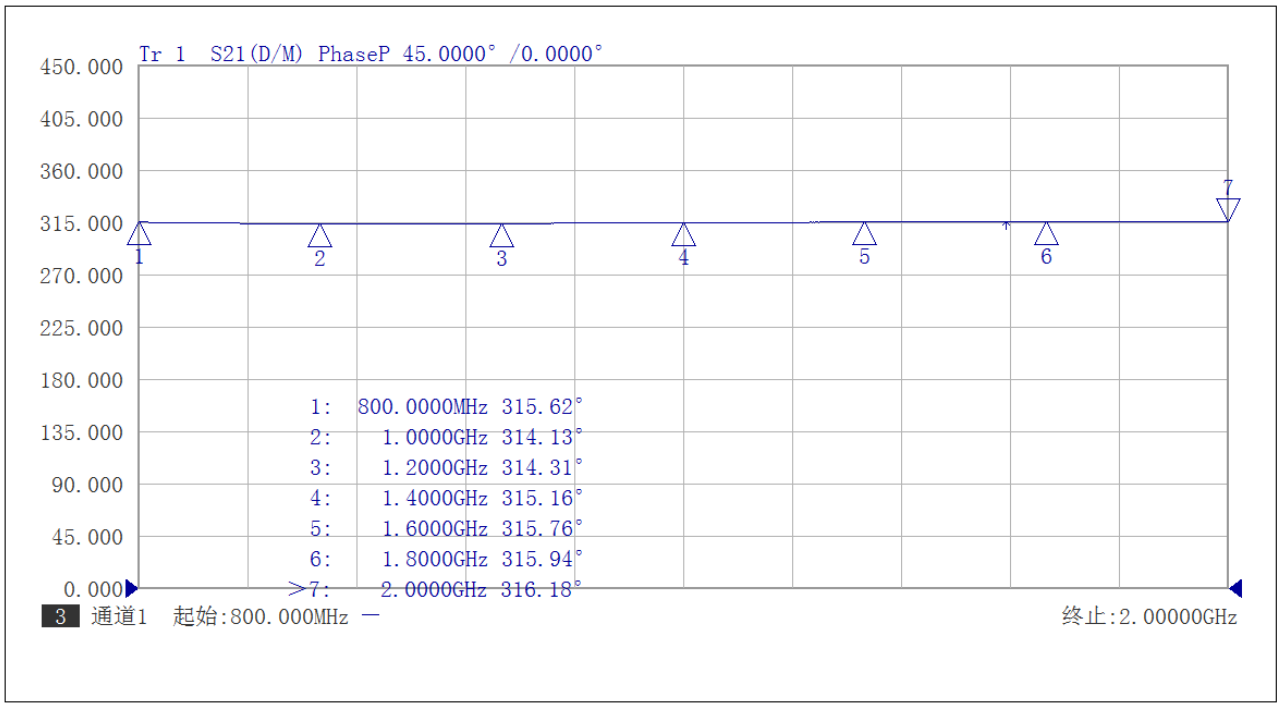
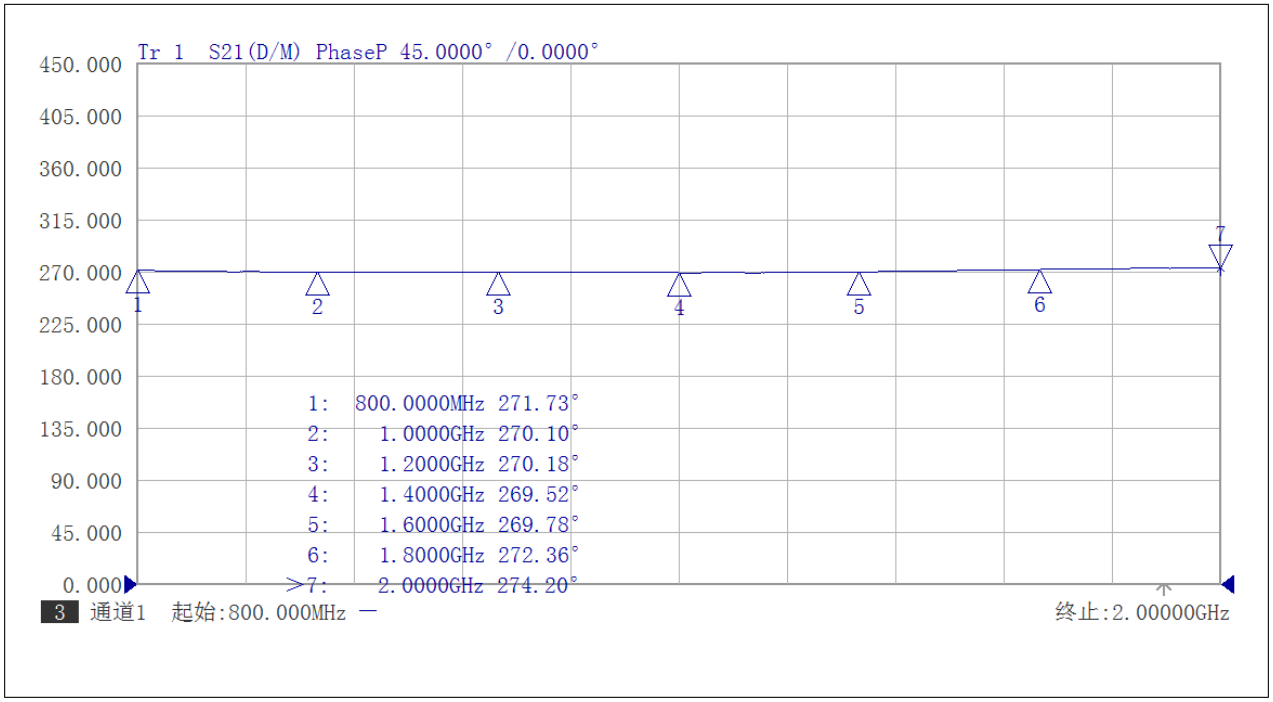


Phase shit vs Frequency at 45 Degree



Phase shit vs Frequency at 90 Degree

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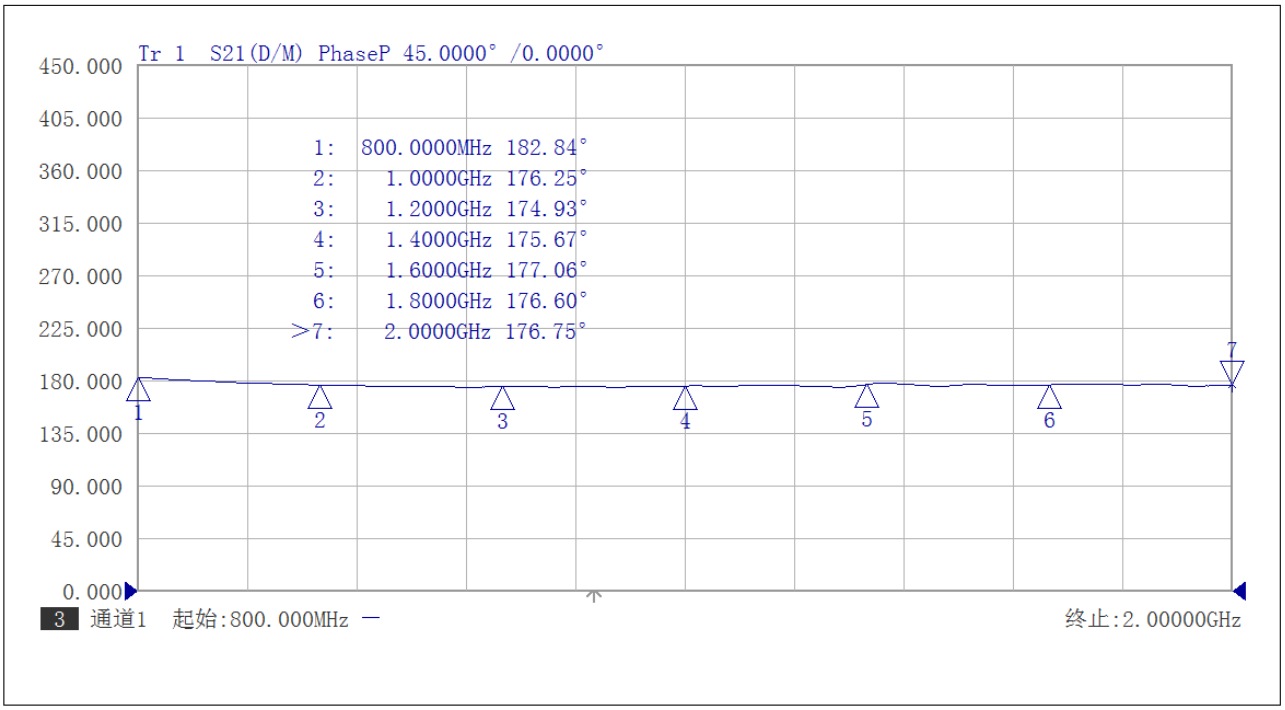

Phase shit vs Frequency at 180 Degree

Dimension (mm)