

Product Technical Specifications

Product Model:	KOP13-D245870Q-C
Product Type:	Omni Antenna Array
Versions:	V1.1
Frank:	
Eason:	
Ratify:	

Catalogue

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Document Revisions Record

Date	Versions	Explain	Ratify
2024.7.31	V1.0	First Edition	
2024.8.2	V1.1	Update	

1 Electrical Performance Index

Name Of Index	Index Value			
Frequency Band(MHz)	2400-2500	5150-5850	5925-6425	6525-7125
Typical Gain (dBi)	7.53	8.12	9.86	8.81
Typical Horizontal Plane 3-dB BW(°)	360	360	360	360
Typical Vertical Plane 3-dB BW(°)	35	20	18	18
Typical Non-circularity (dBi)	±6	±6	±7	±3
Typical Electrical Downtilt(°)	5	7	0	0
Typical VSWR	≤2.0		≤2.0	≤2.0
Typical Isolation(dB)-(The same Freq)	≤ -15	≤ -20	≤ -20	≤ -20
Typical Isolation (dB)-(Different Freq)	2.4GHz&5GHz: ≤ -15 2.4GHz&6.2GHz: ≤ -20 2.4GHz&6.7GHz: ≤ -25		5GHz&6.2GHz: ≤ -20 5GHz&6.7GHz: ≤ -20 6.2GHz&6.7GHz: ≤ -30	
Channels	P1 P2 P3 P4 (White cable)		P5 P6 P7 P8 (Blue cable)	P9 P10 P11 P12 (Red cable)
Maximum power(W)	20			
Impedance (Ω)	50			
Lighting protection	Non-DC ground			
Remarks	2.4GHz: Expression Frequency 2400-2500MHz 5GHz: Expression Frequency 5150-5850MHz 6.2GHz: Expression Frequency 5925-6425MHz 6.7GHz: Expression Frequency 6525-7125MHz			

2 Mechanical Index

Name Of Index	Performance / Index
Dimensions(mm)	Φ250×293 (±5)
Antenna Weight(g)	520 (±50)
Wind strength resistance (m/s)	36.9
Max Wind resistance	55
Operating Temperature (°C)	-40 /+70
Application	Wifi6 /Wifi7

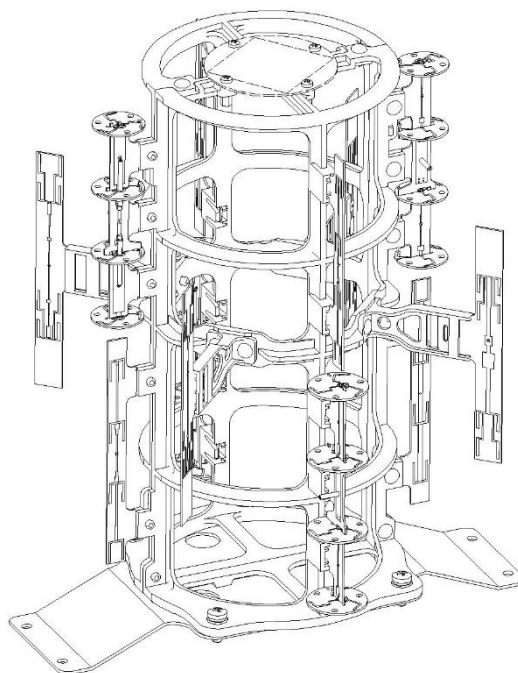
3 Environmental Performance Test

NO	Item	Test Condition	Requirement	Conclusion
1	Appearance	Visual	1. Plastic part: smooth and flat surface without discolor, broken, crack distortion defects is acceptable 2. PCB (or FPCB) : The surface is free of dirt, damage, oxidation, no obvious mechanical damage and other defects, screen printing clear.	
2	High temperature test	Refer to GB-T2423.2, the temperature is 70 °C and the time is 16 hours.	After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	
3	Low temperature test	Refer to GB-T2423.1, the temperature is -40 °C for 16 hours.	After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	

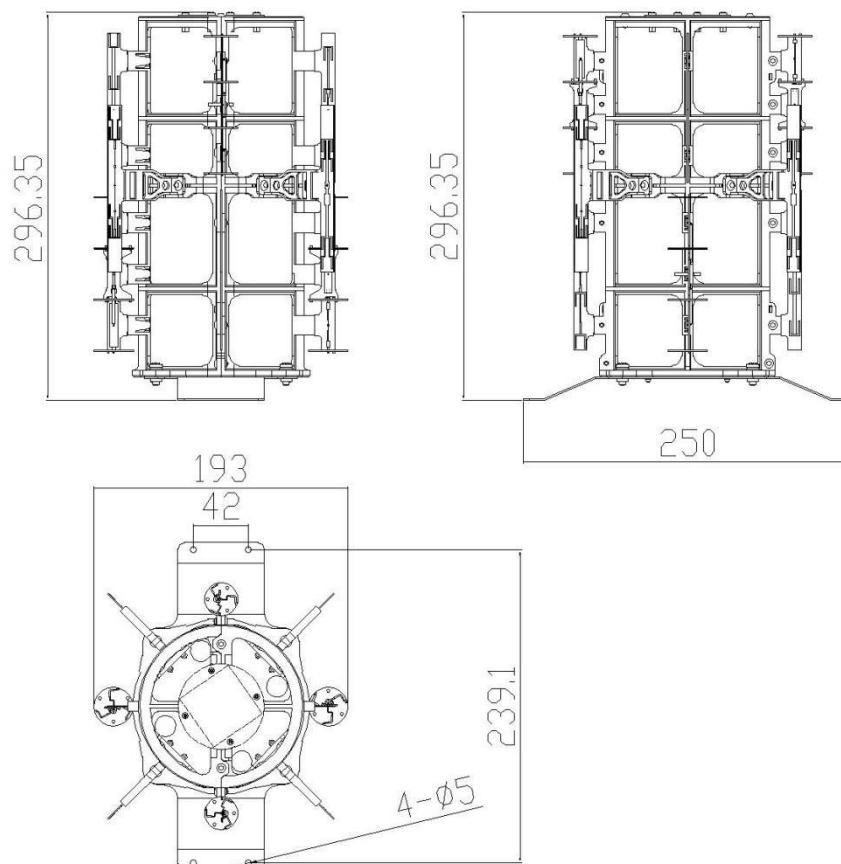
4 Antenna Outline and Internal Diagram



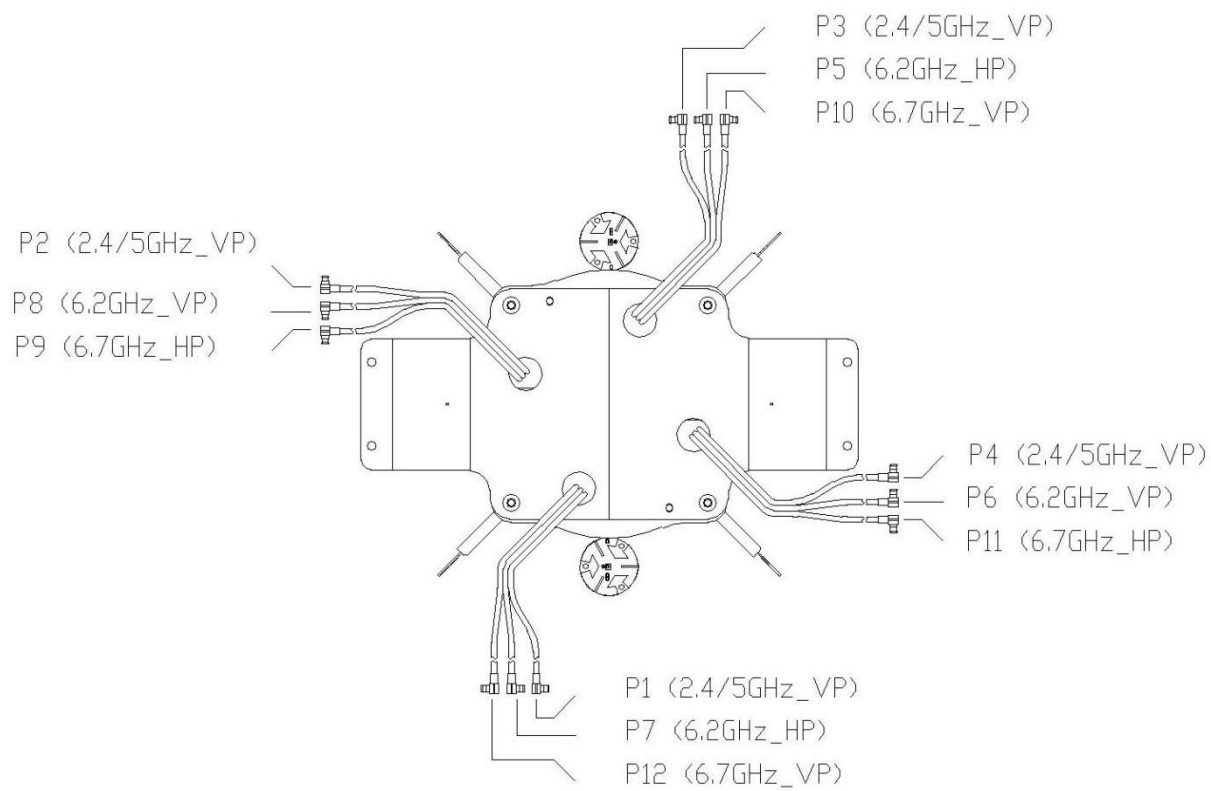
Outside view



Antenna internal diagram

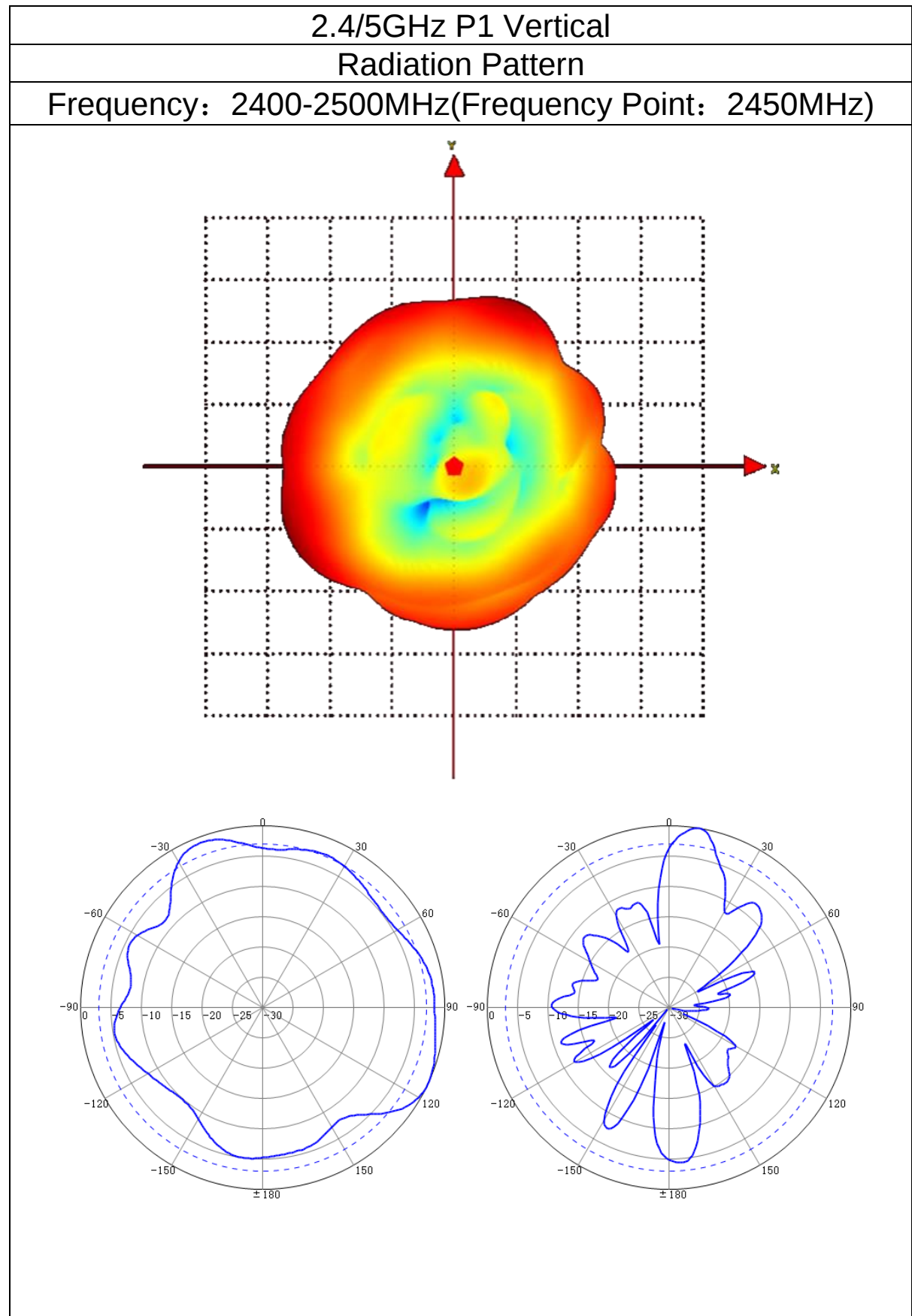


Size diagram



Ports diagram

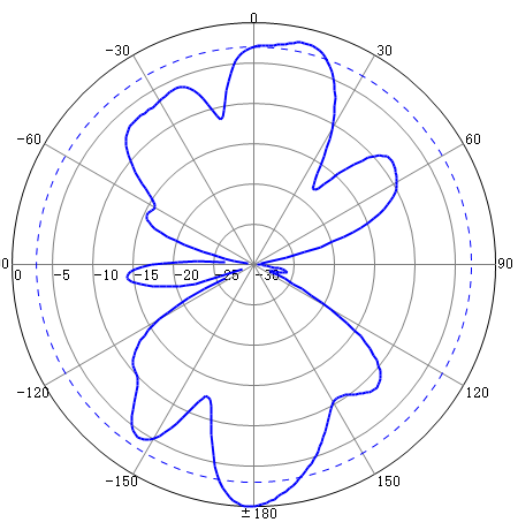
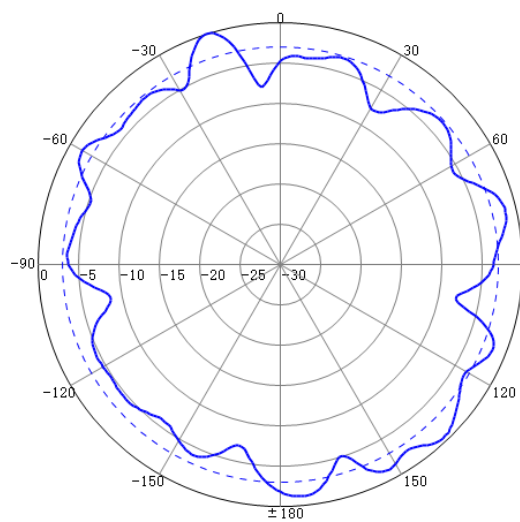
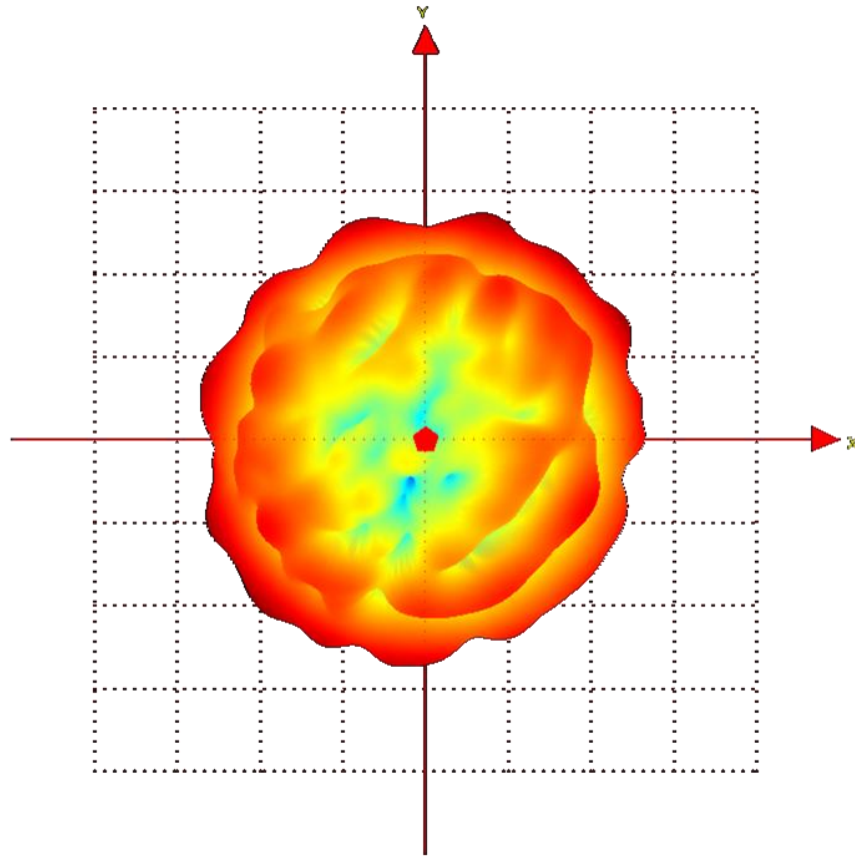
5 Typical Radiations Pattern



2.4/5GHz P1 Vertical

Radiation Pattern

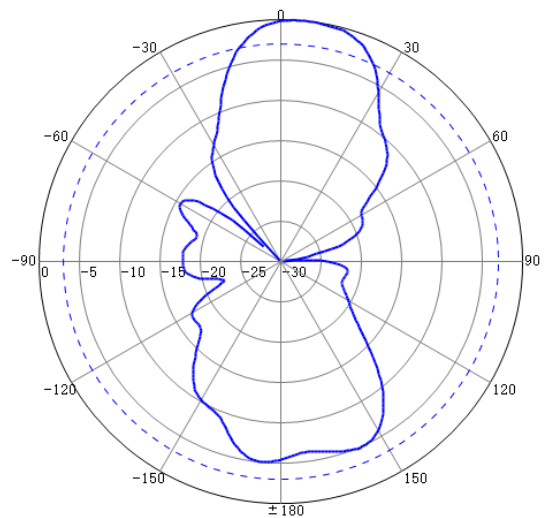
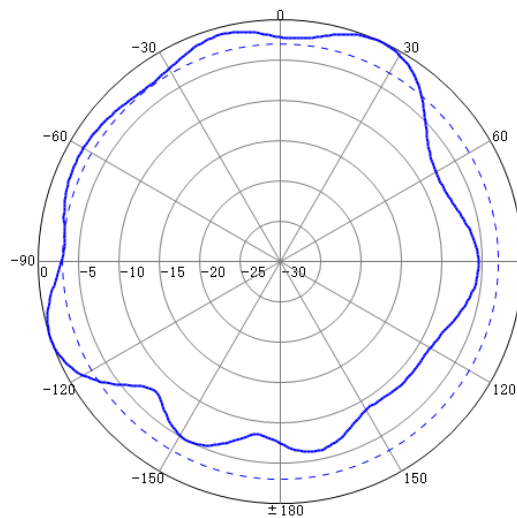
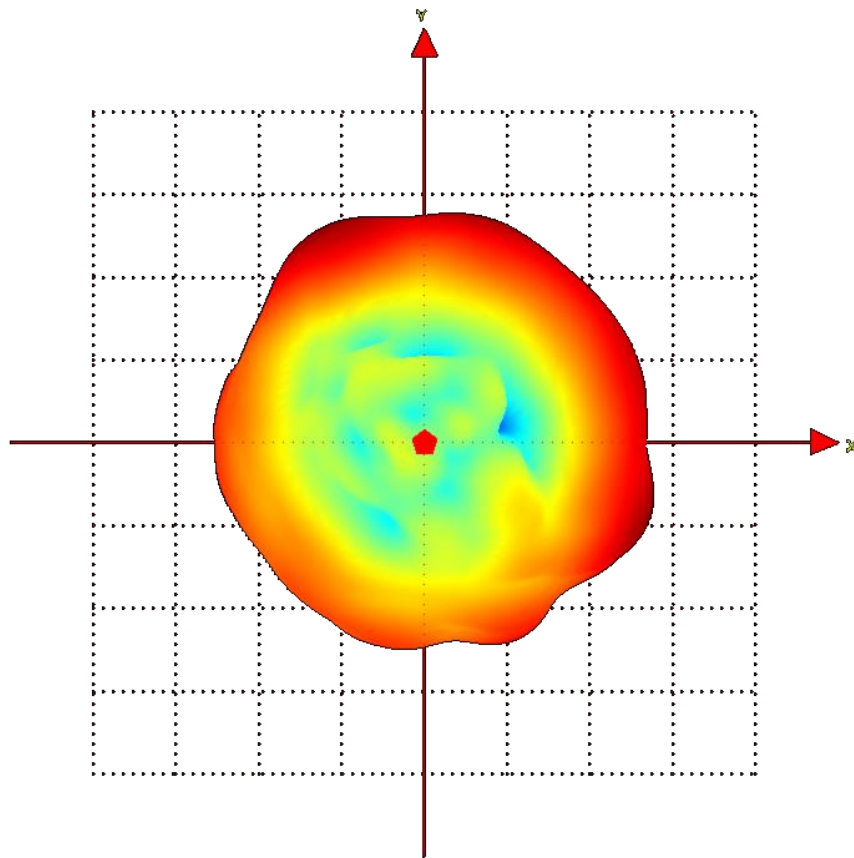
Frequency : 5150-5850MHz (Frequency Point:
5500MHz)



2.4/5GHz P2 Vertical

Radiation Pattern

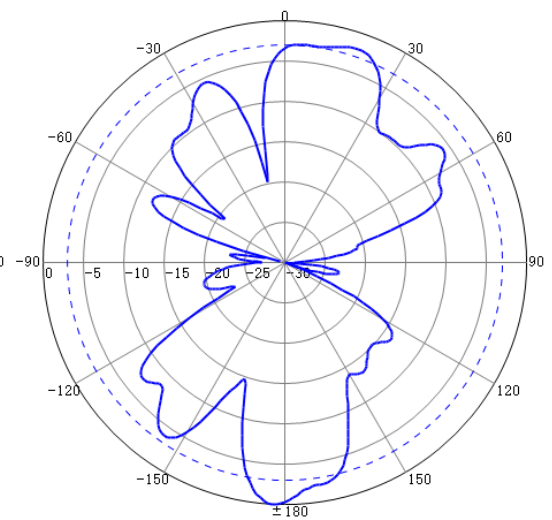
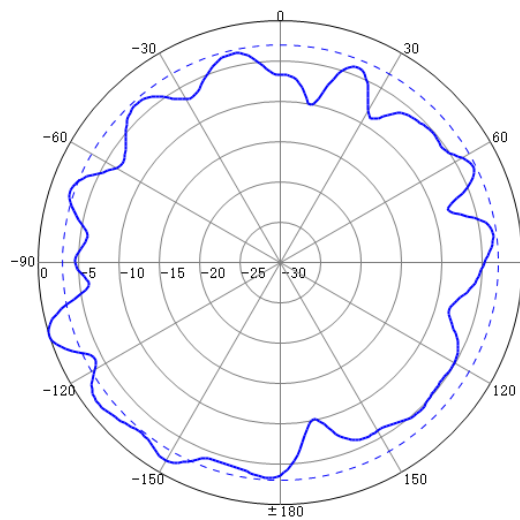
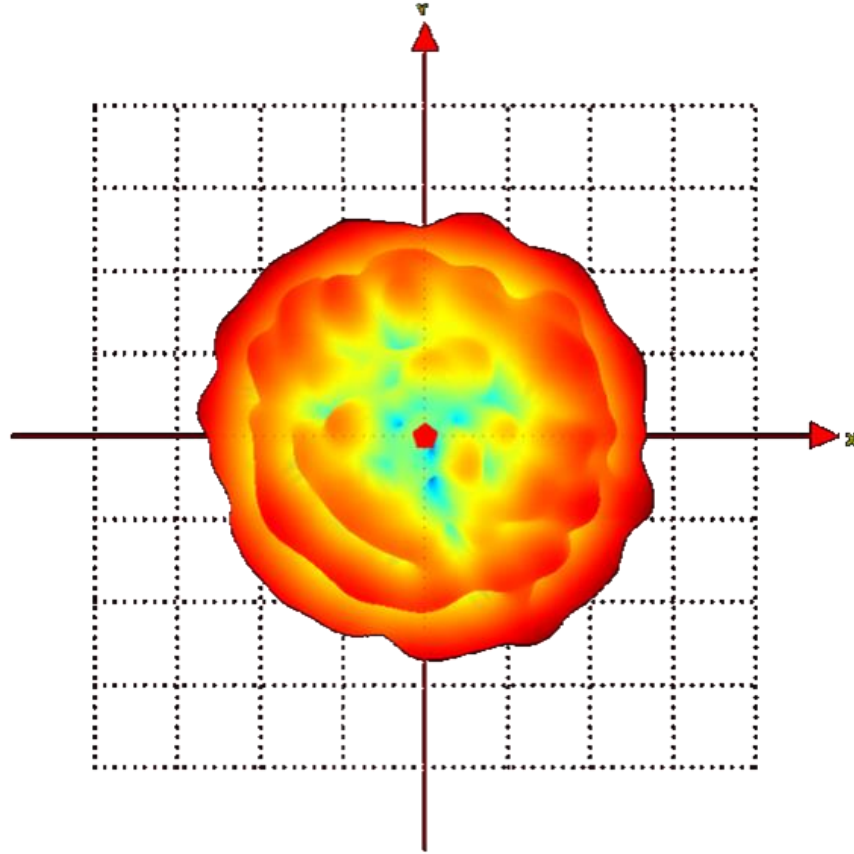
Frequency : 2400-2500MHz(Frequency Point : 2450MHz)



2.4/5GHz P2 Vertical

Radiation Pattern

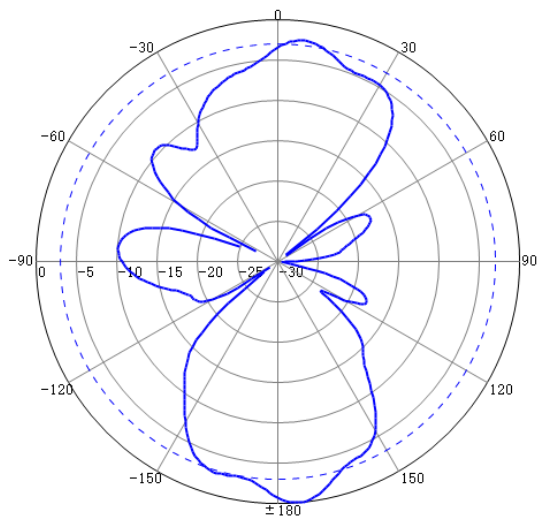
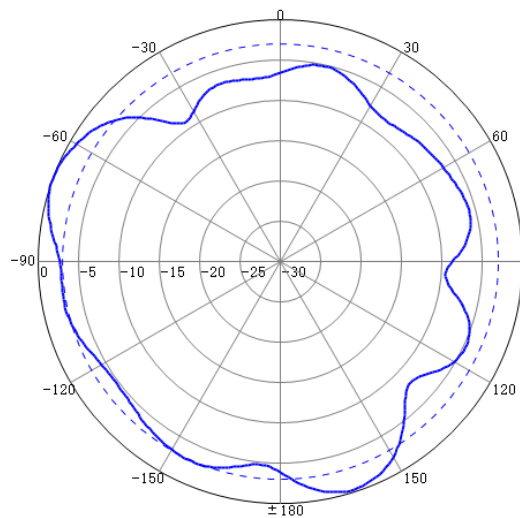
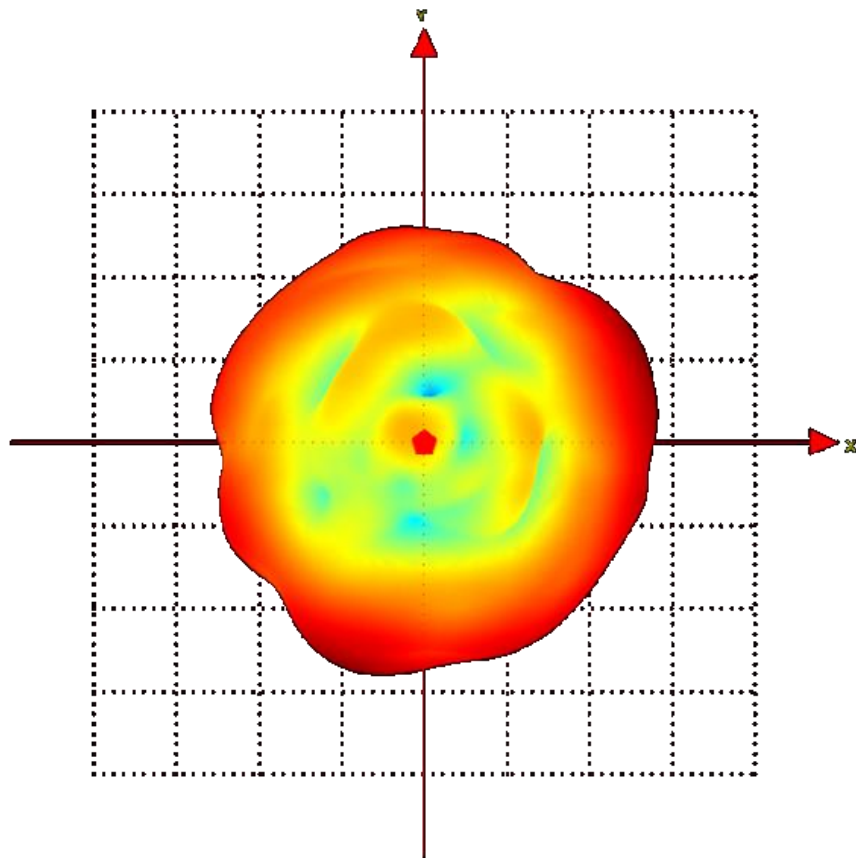
Frequency : 5150-5850MHz (Frequency Point:
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2.4/5GHz P3 Vertical

Radiation Pattern

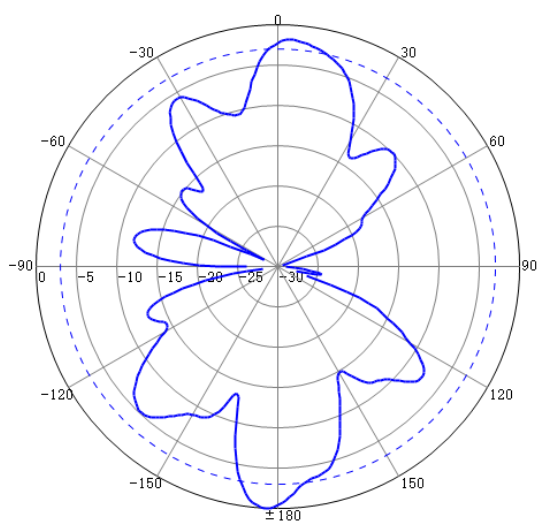
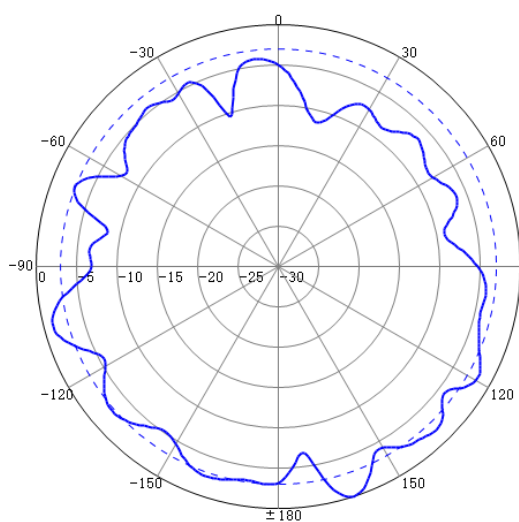
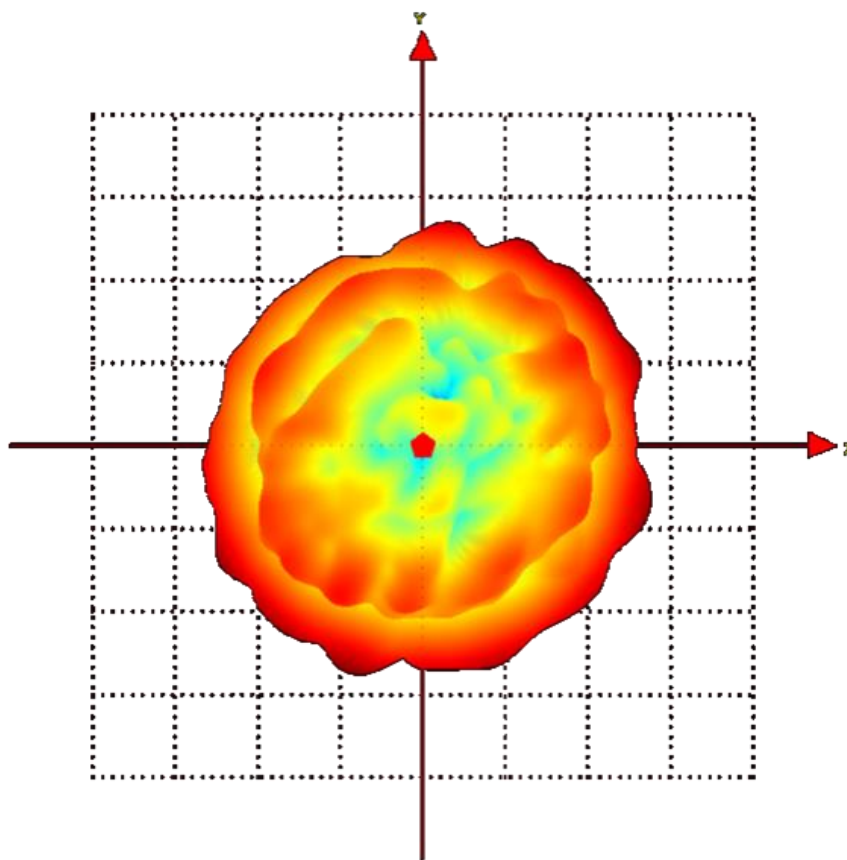
Frequency : 2400-2500MHz(Frequency Point : 2450MHz)



2.4/5GHz P3 Vertical

Radiation Pattern

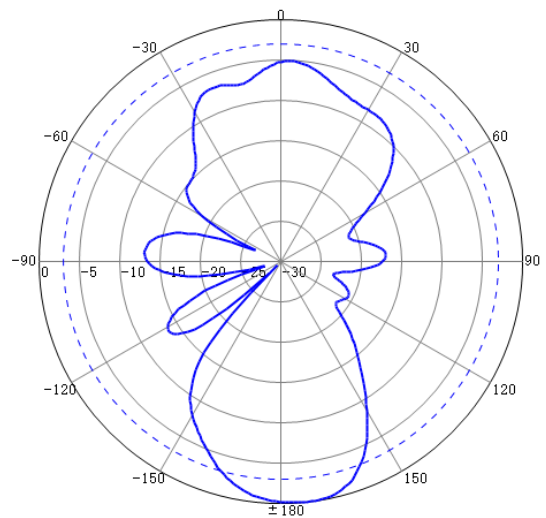
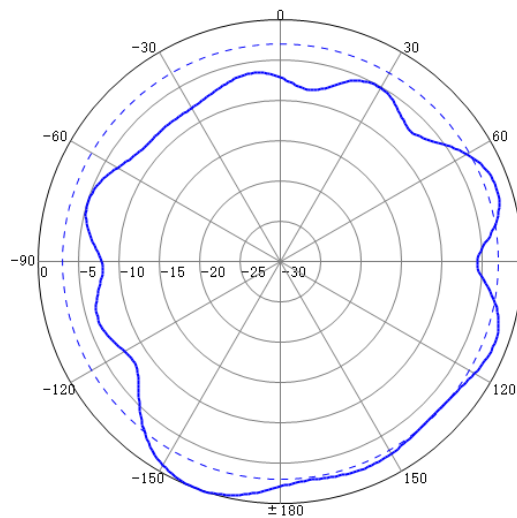
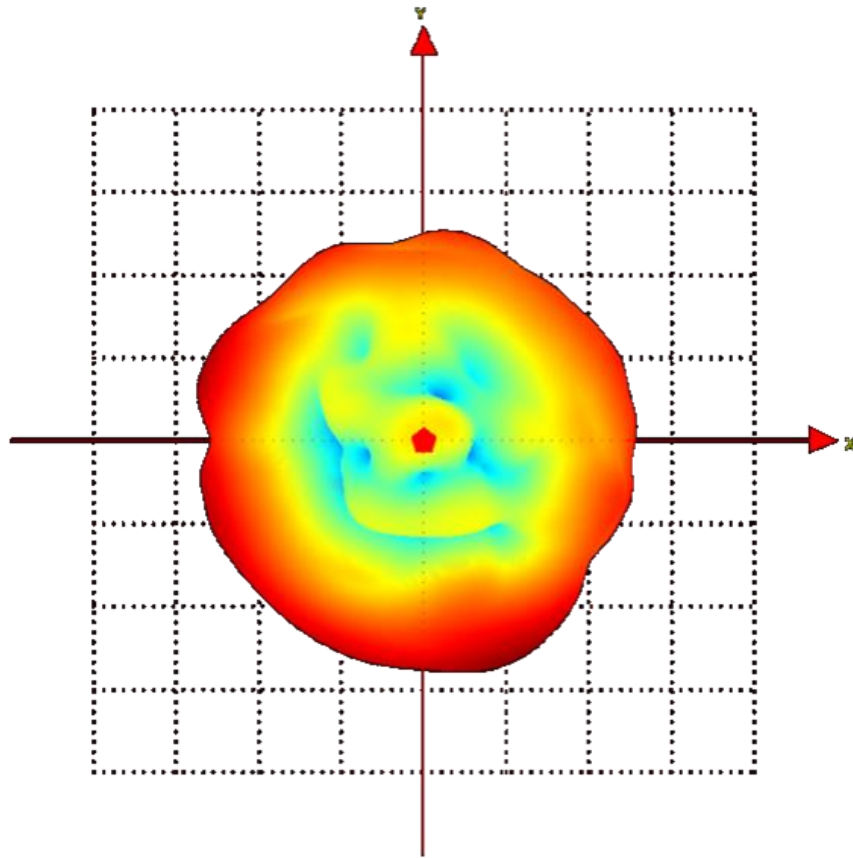
Frequency : 5150-5850MHz (Frequency Point:
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2.4/5GHz P4 Vertical

Radiation Pattern

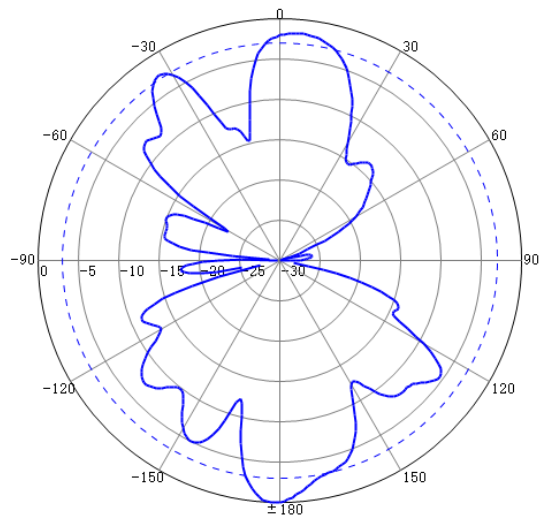
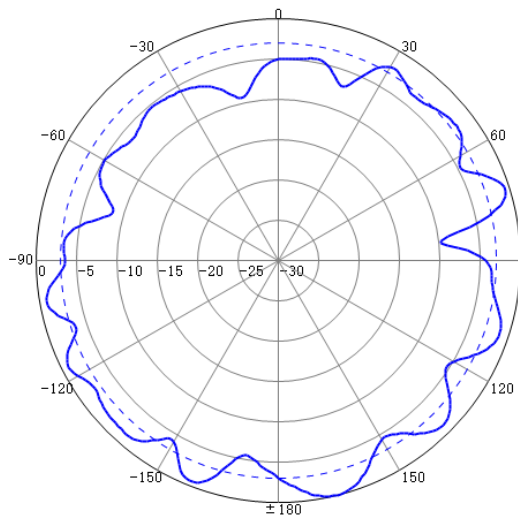
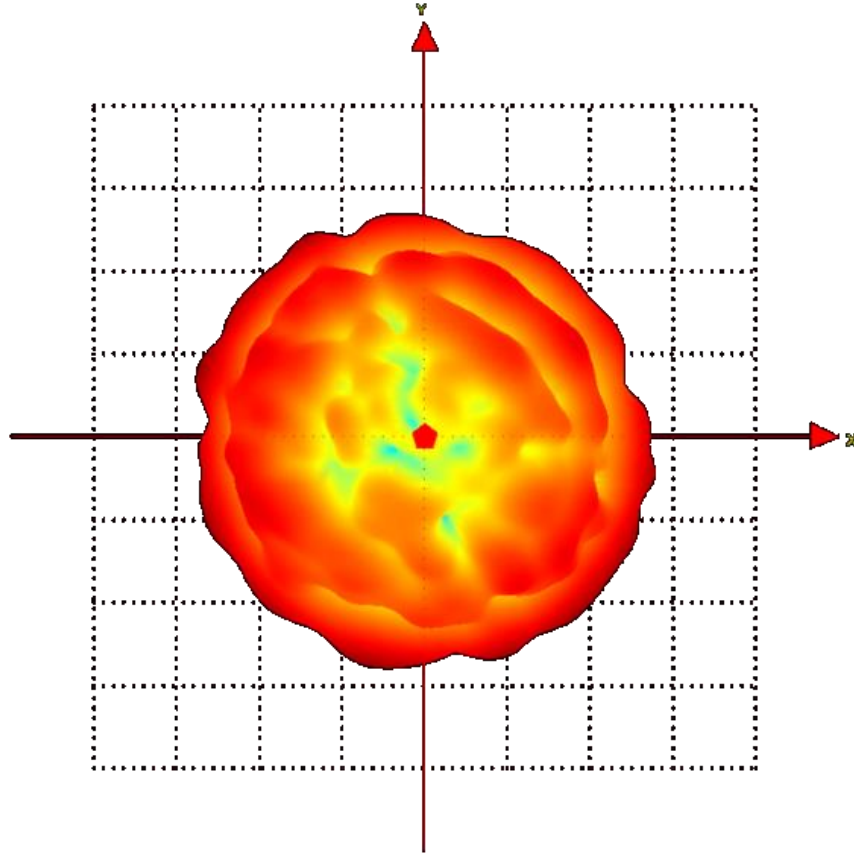
Frequency : 2400-2500MHz(Frequency Point : 2450MHz)

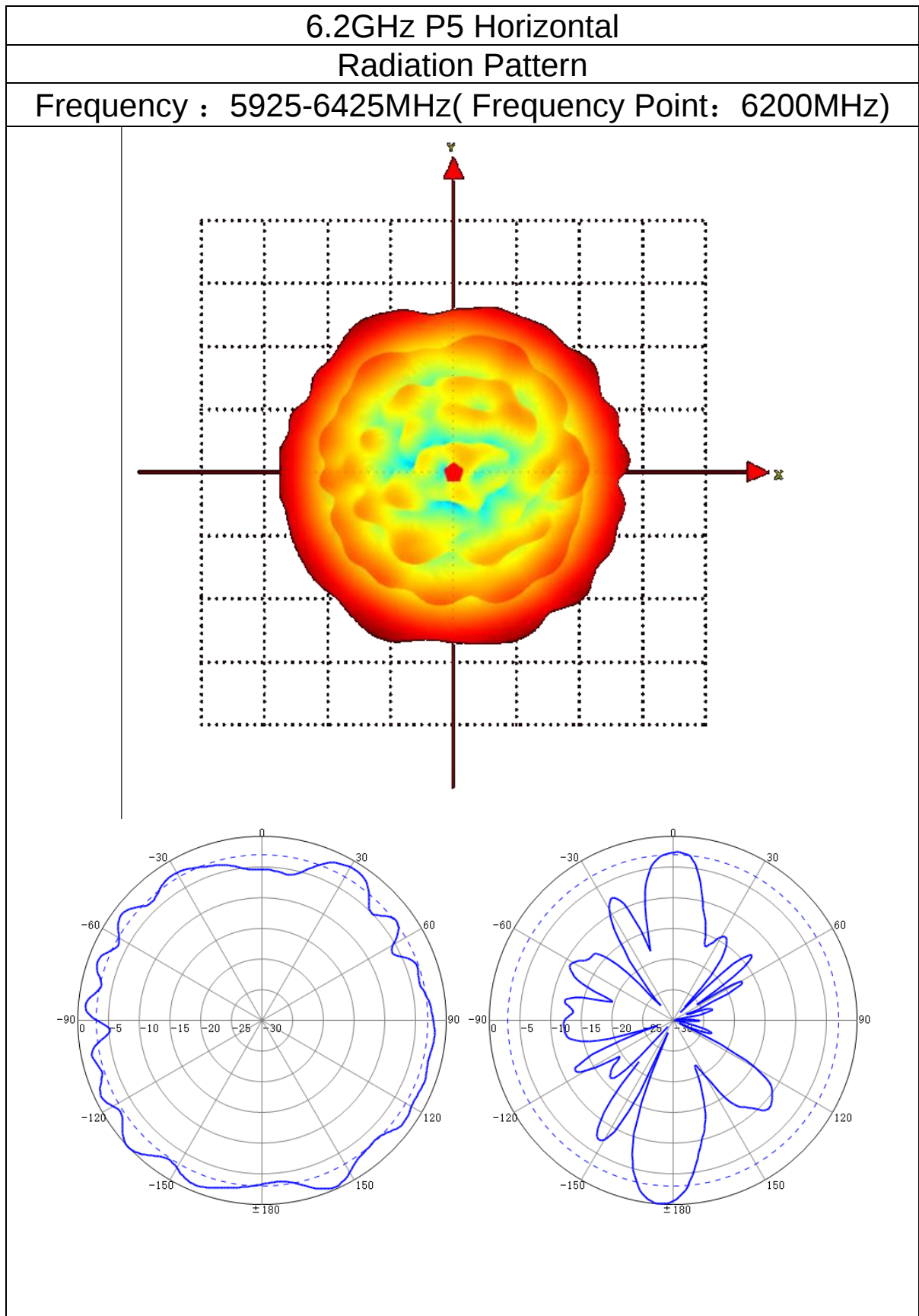


2.4/5GHz P4 Vertical

Radiation Pattern

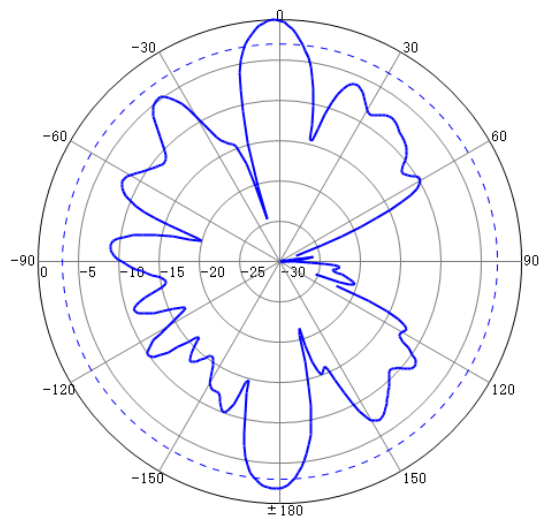
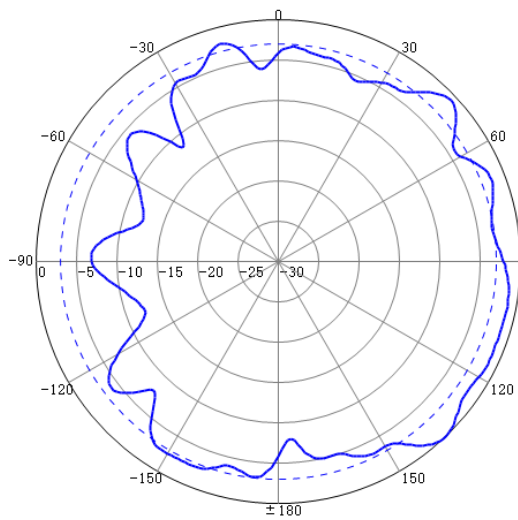
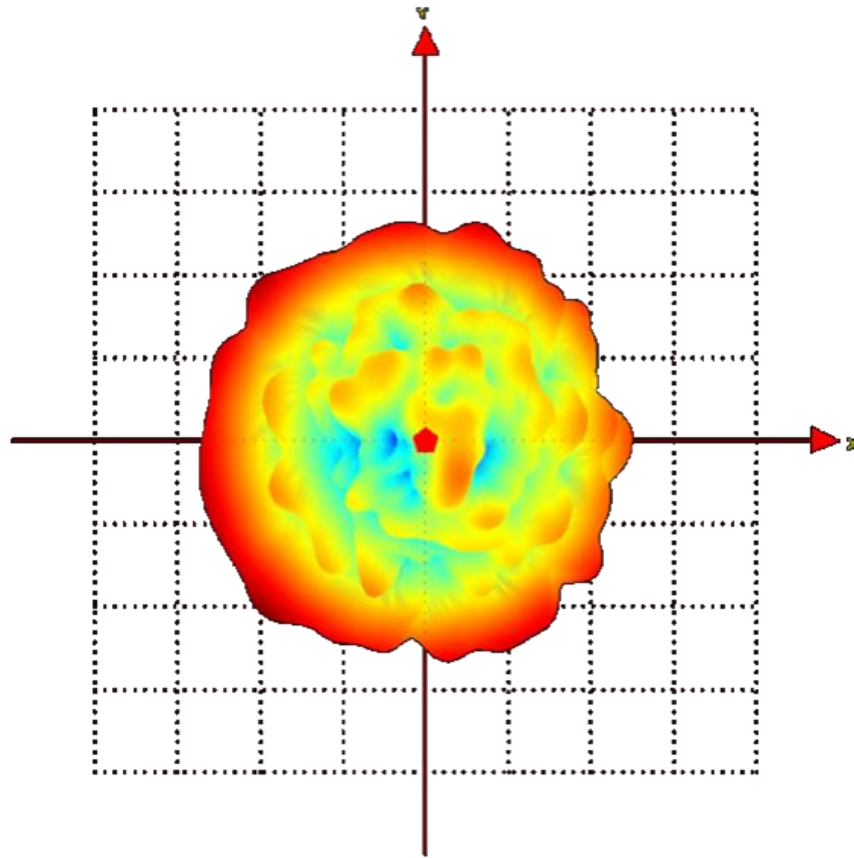
Frequency : 5150-5850MHz (Frequency Point:
5500MHz)





6.2GHz P6 Vertical
Radiation Pattern

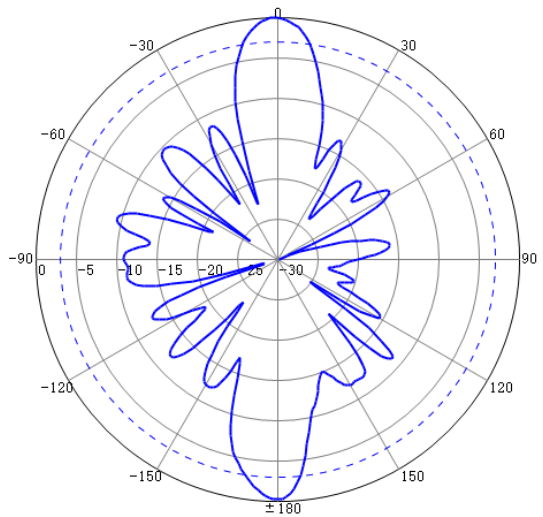
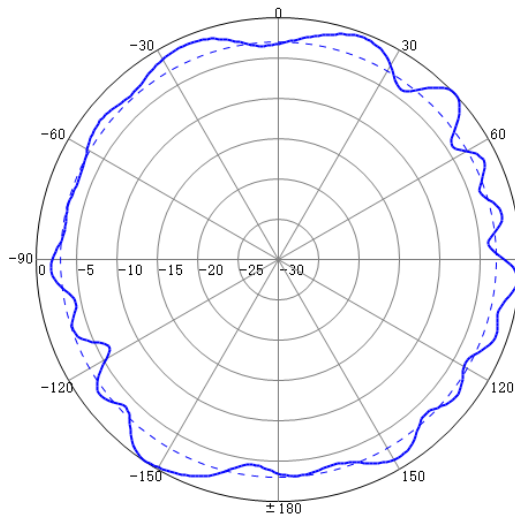
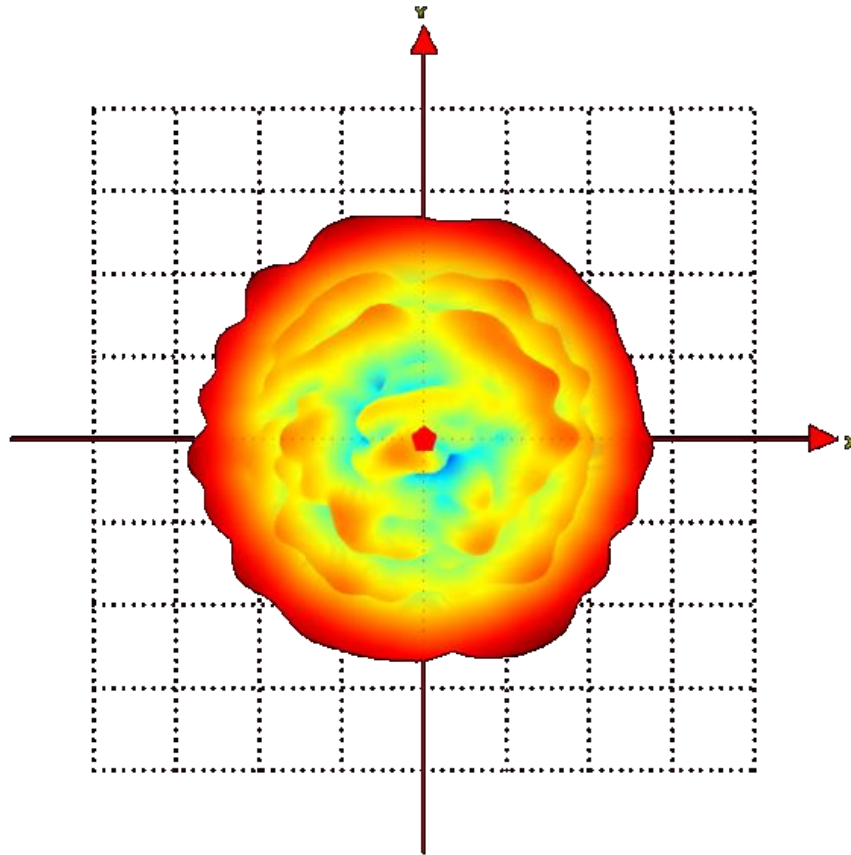
Frequency : 5925-6425MHz(Frequency Point: 6200MHz)



6.2GHz P7 Horizontal

Radiation Pattern

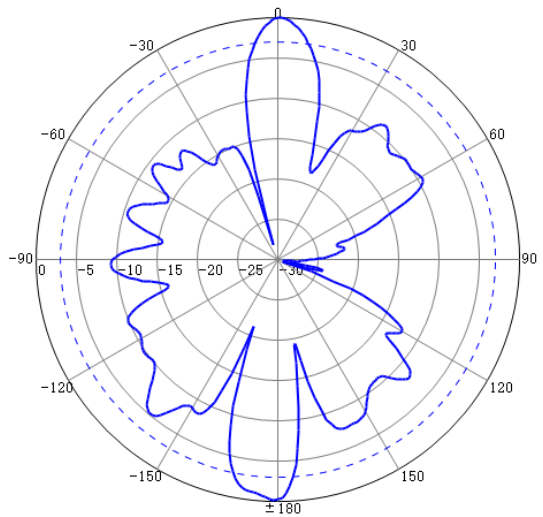
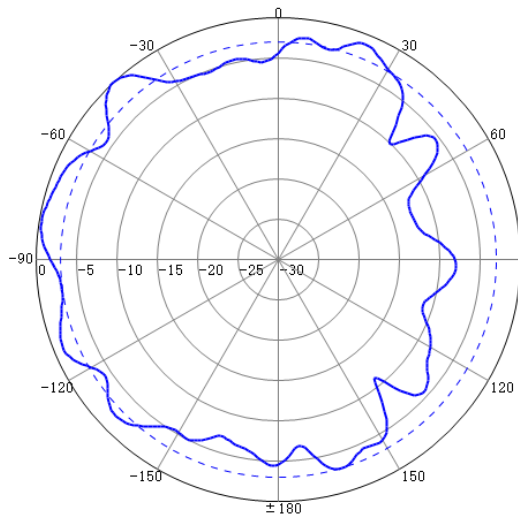
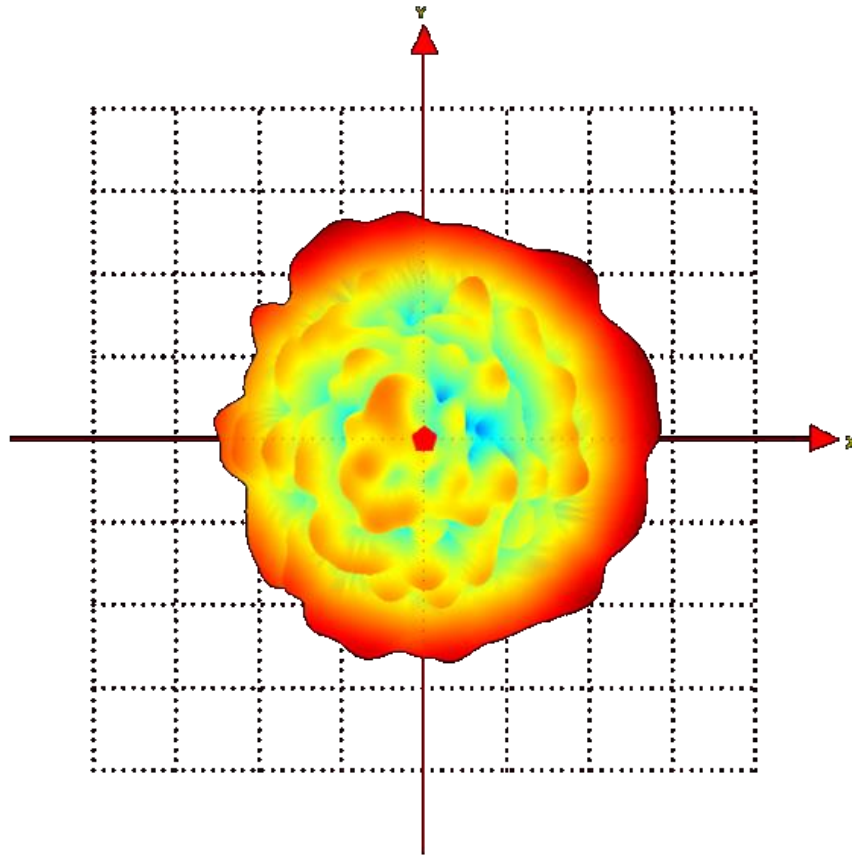
Frequency : 5925-6425MHz(Frequency Point: 6200MHz)



6.2GHz P8 Vertical

Radiation Pattern

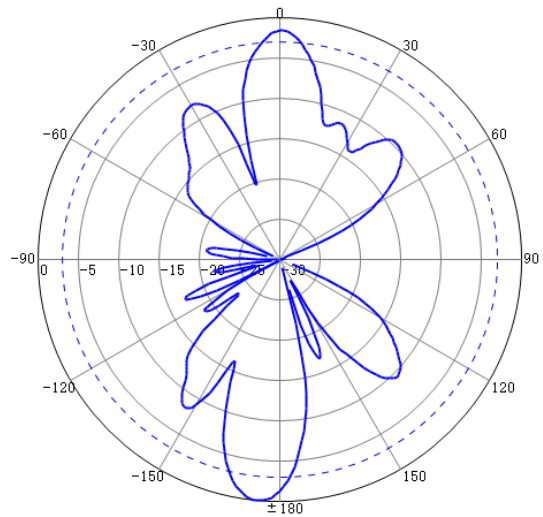
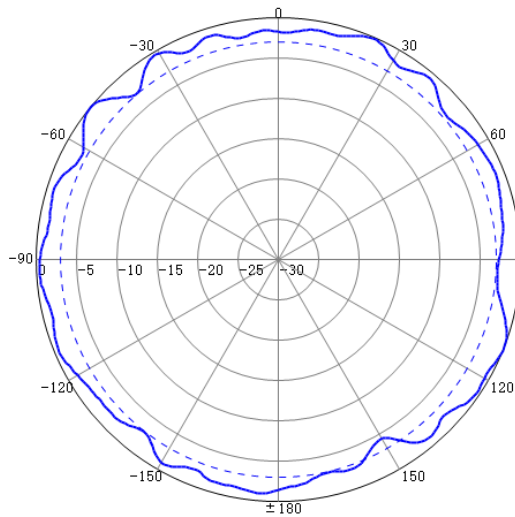
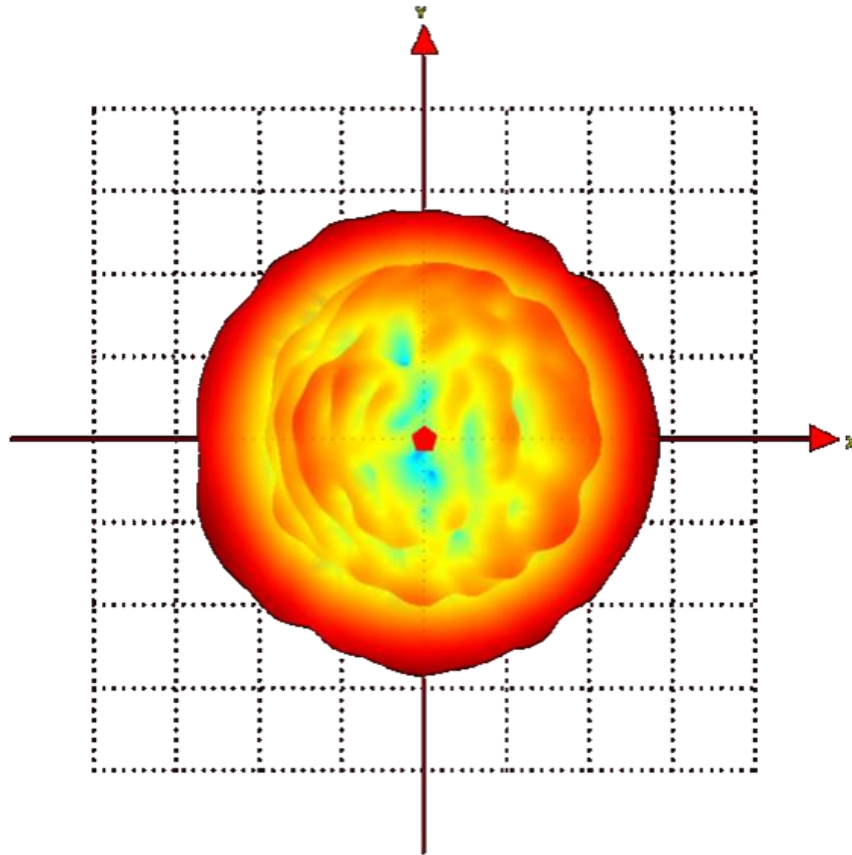
Frequency : 5925-6425MHz(Frequency Point : 6200MHz)

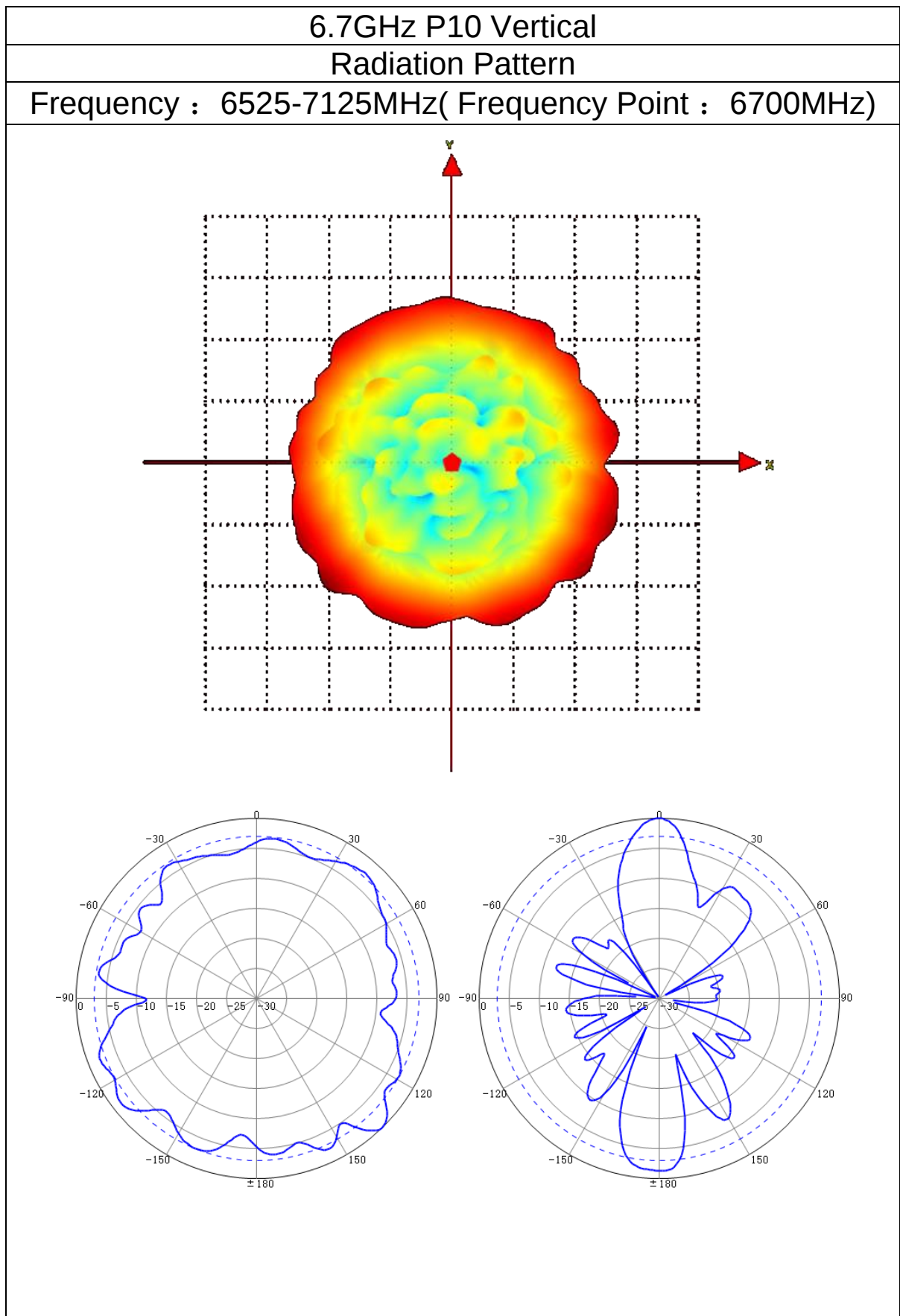


6.7GHz P9 Horizontal

Radiation Pattern

Frequency : 6525-7125MHz(Frequency Point : 6700MHz)

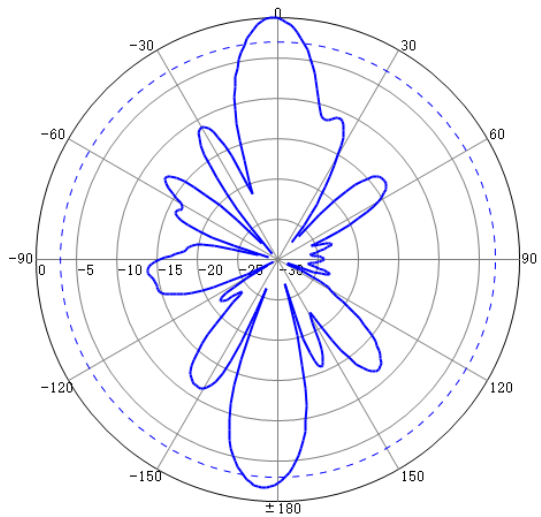
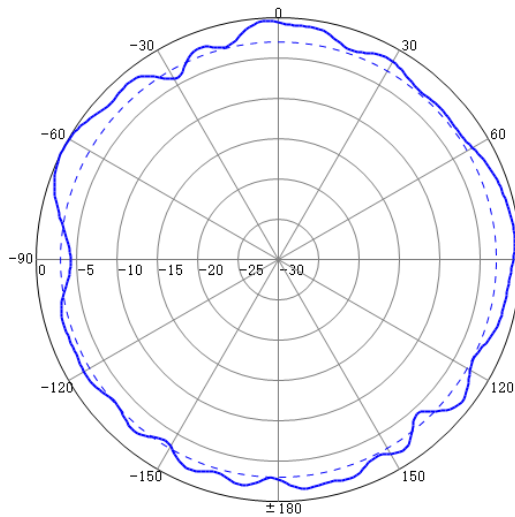
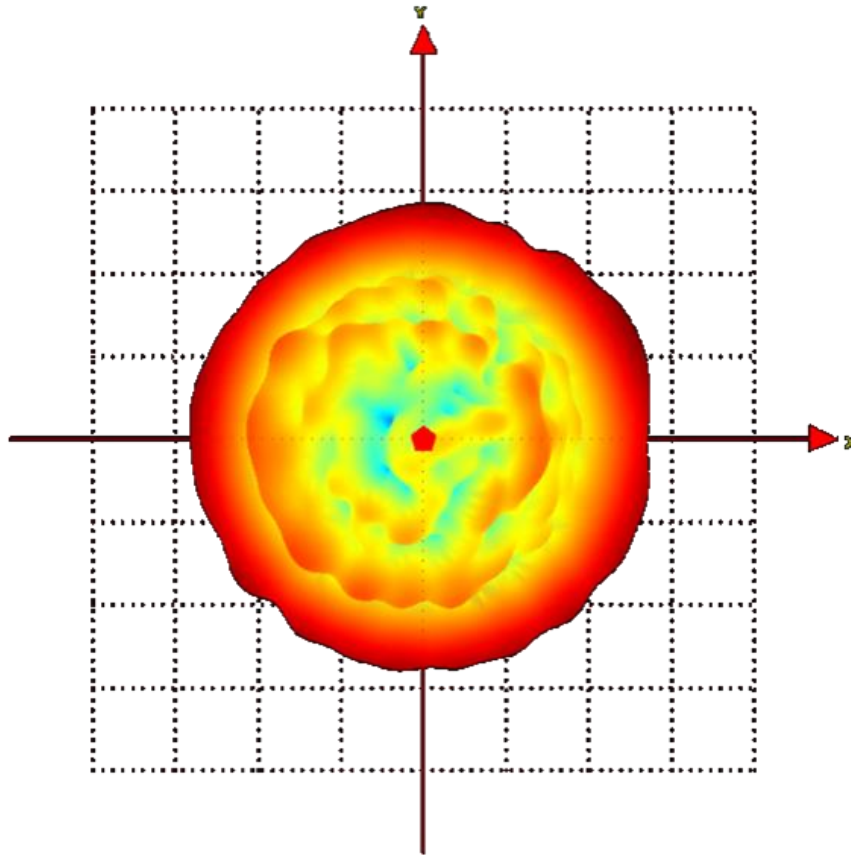


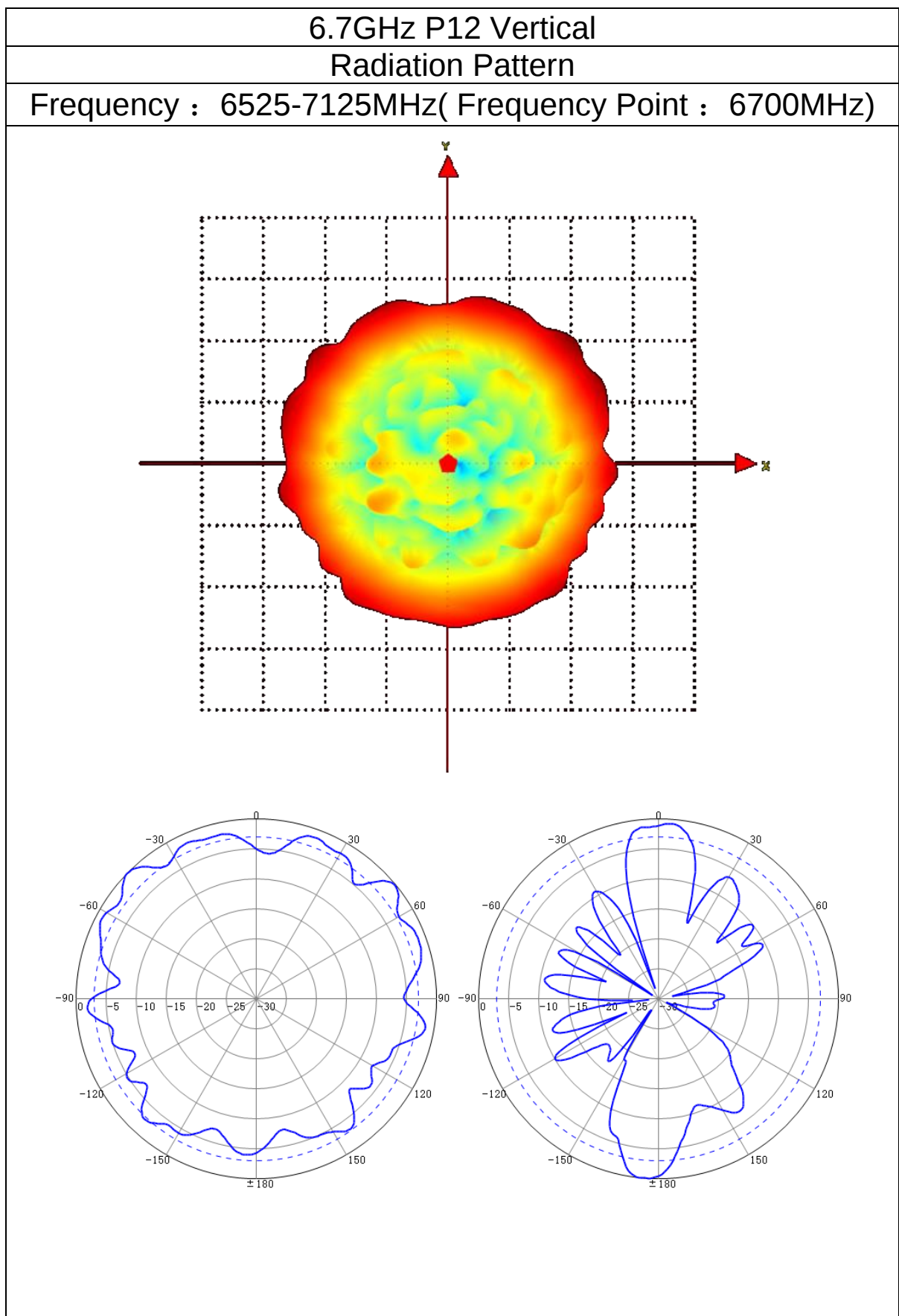


6.7GHz P11 Horizontal

Radiation Pattern

Frequency : 6525-7125MHz(Frequency Point : 6700MHz)



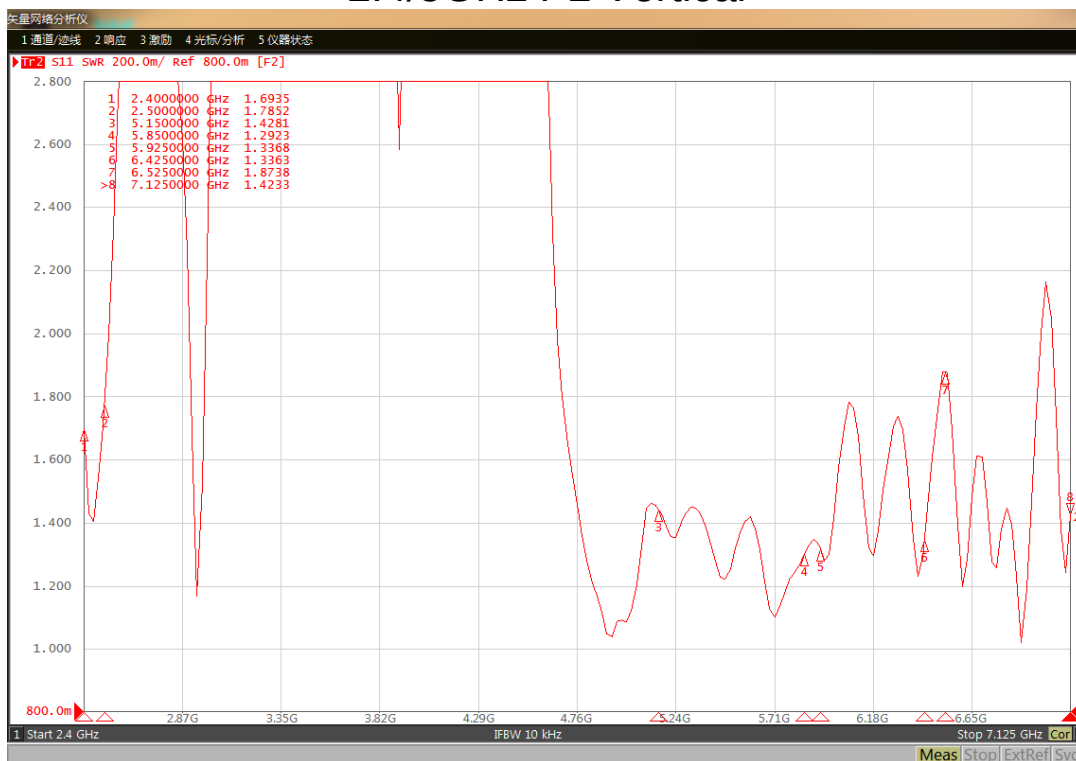


6 Antenna VSWR

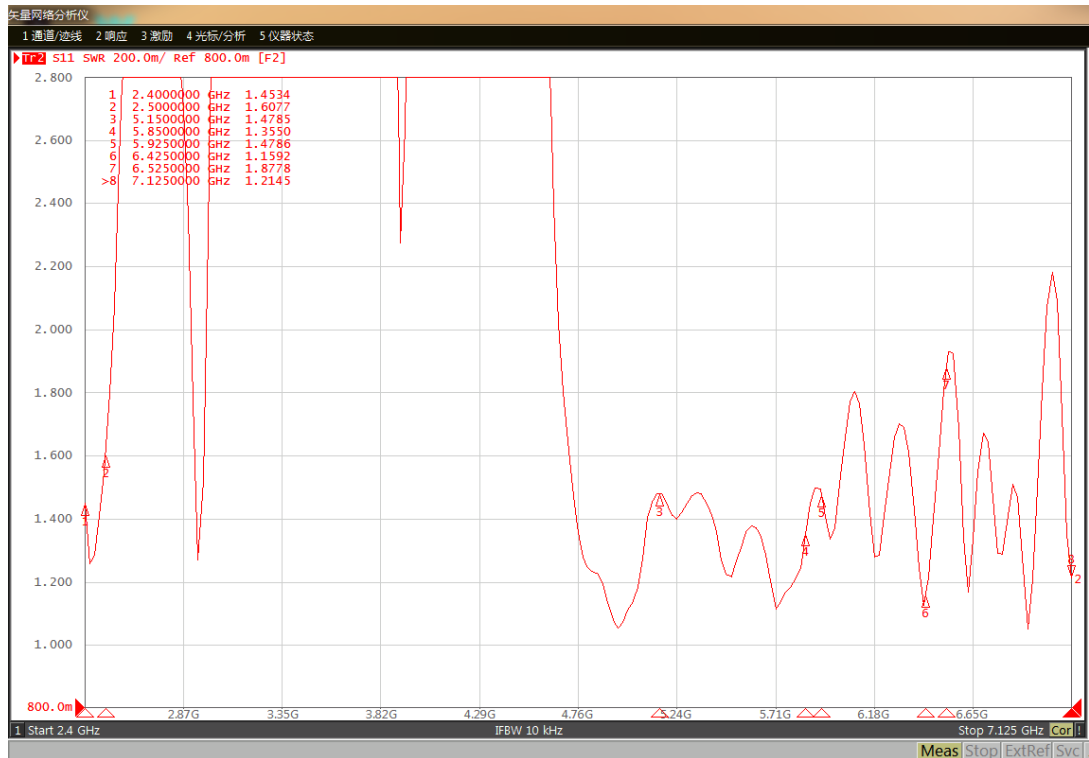
2.4/5GHz P1 Vertical



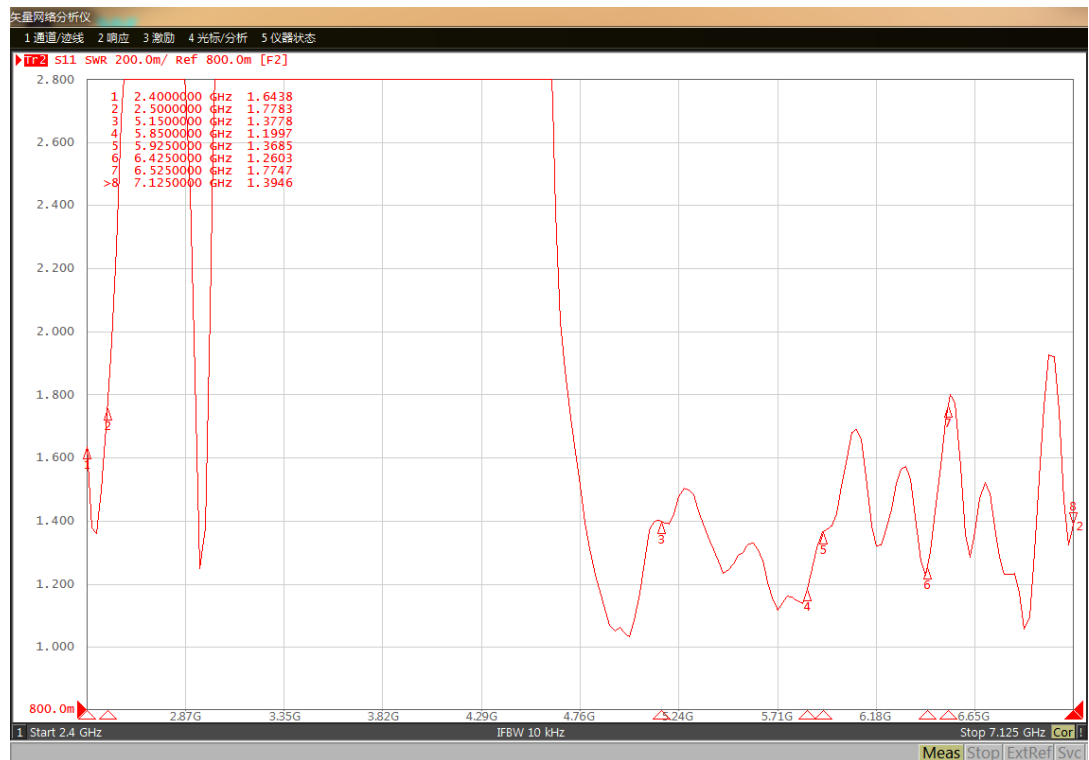
2.4/5GHz P2 Vertical



2.4/5GHz P3 Vertical



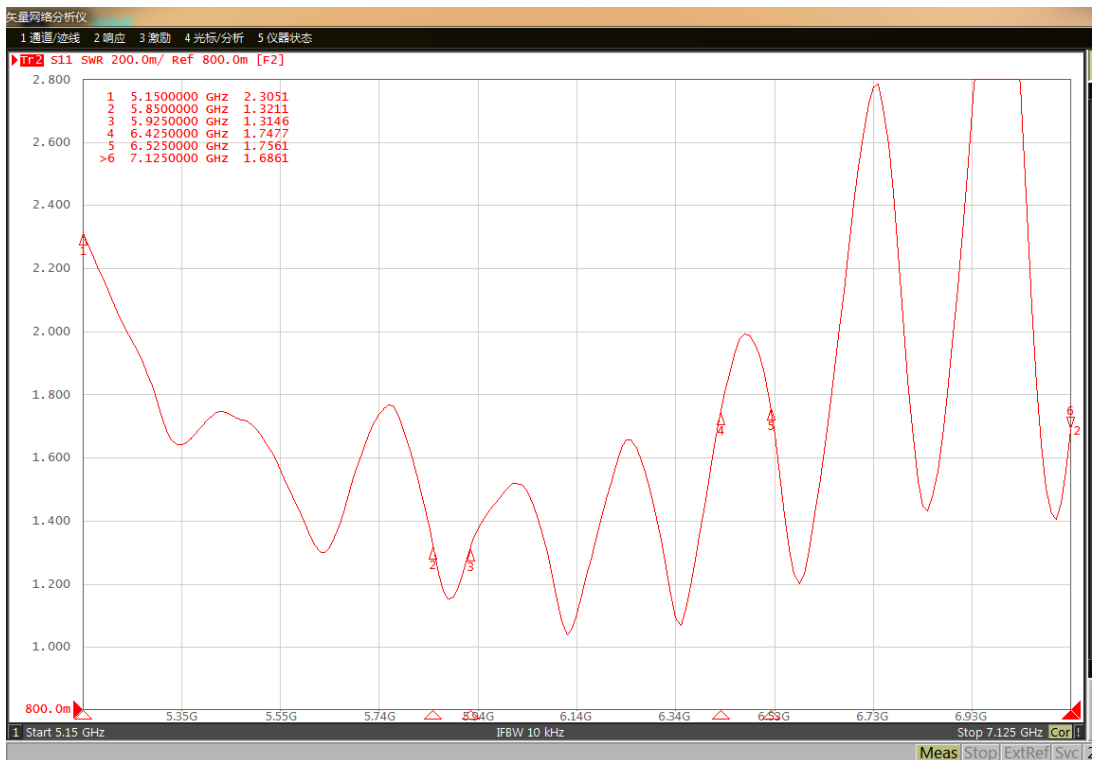
2.4/5GHz P4 Vertical



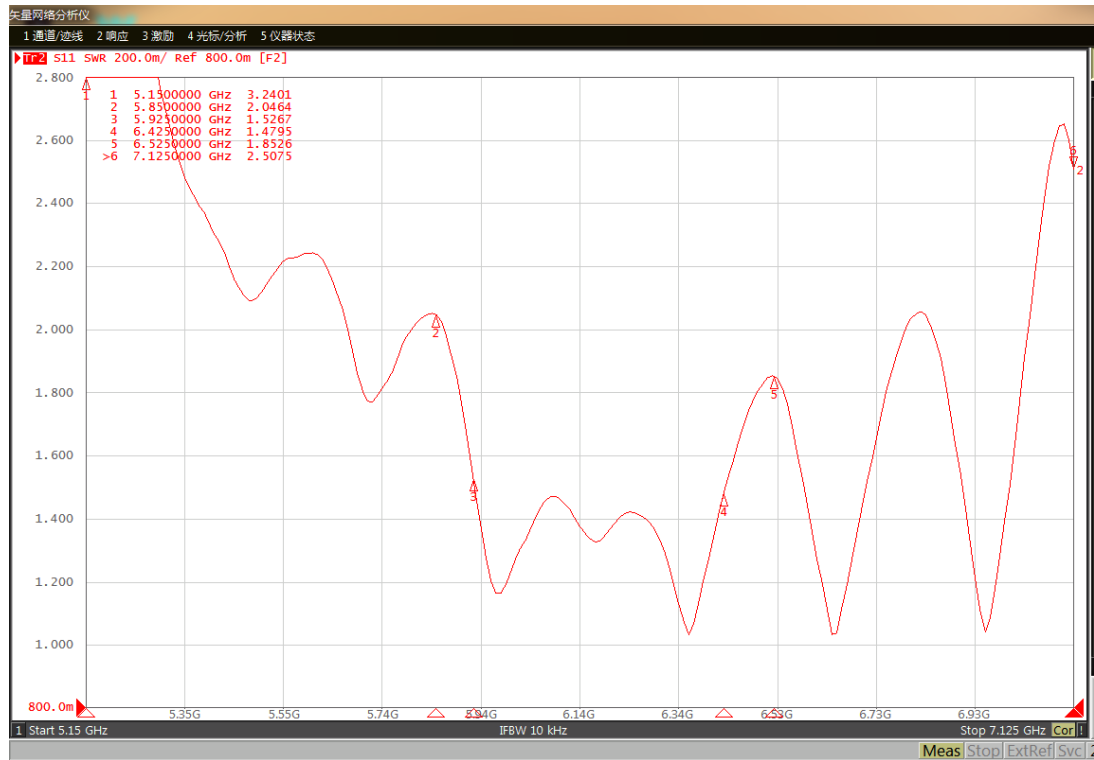
6.2GHz P5 Horizontal



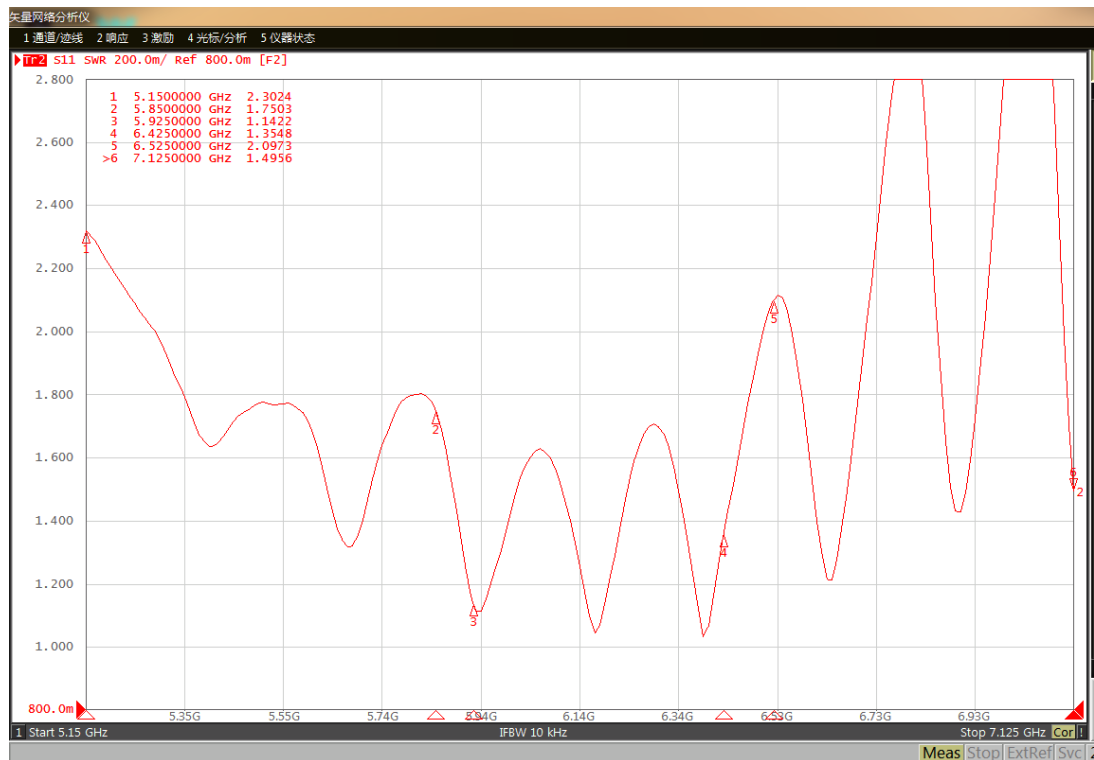
6.2GHz P6 Vertical



6.2GHz P7 Horizontal



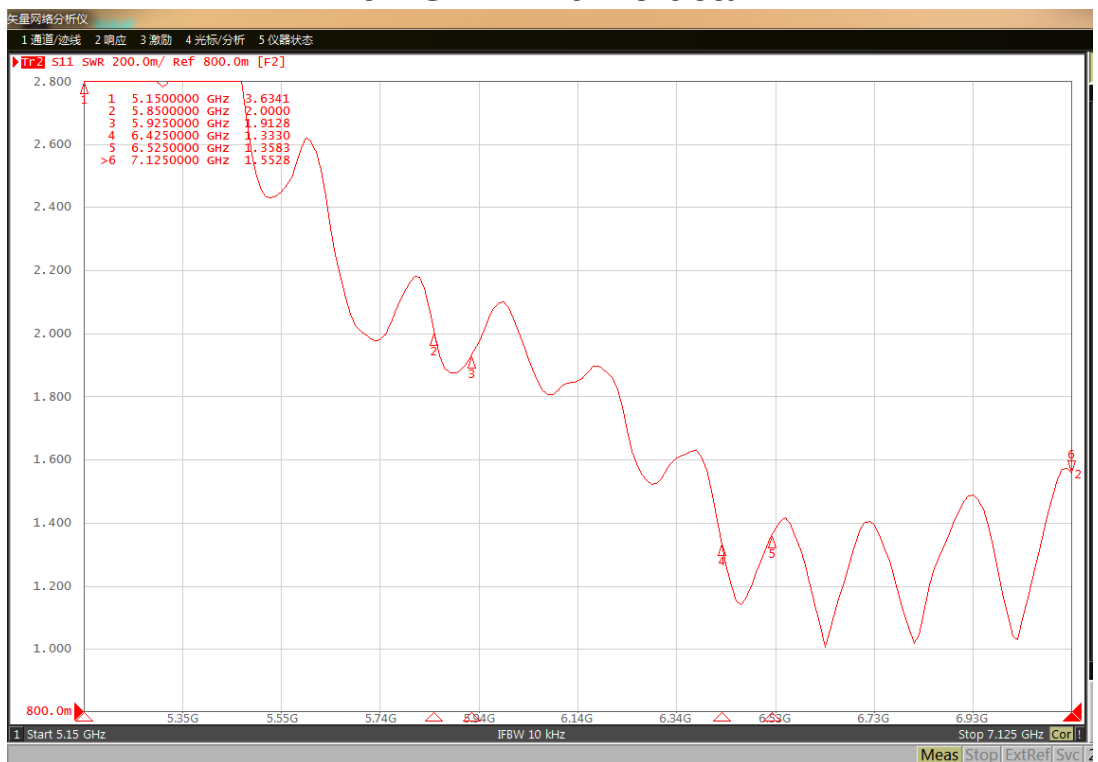
6.2GHz P8 Vertical



6.7GHz P9 Horizontal



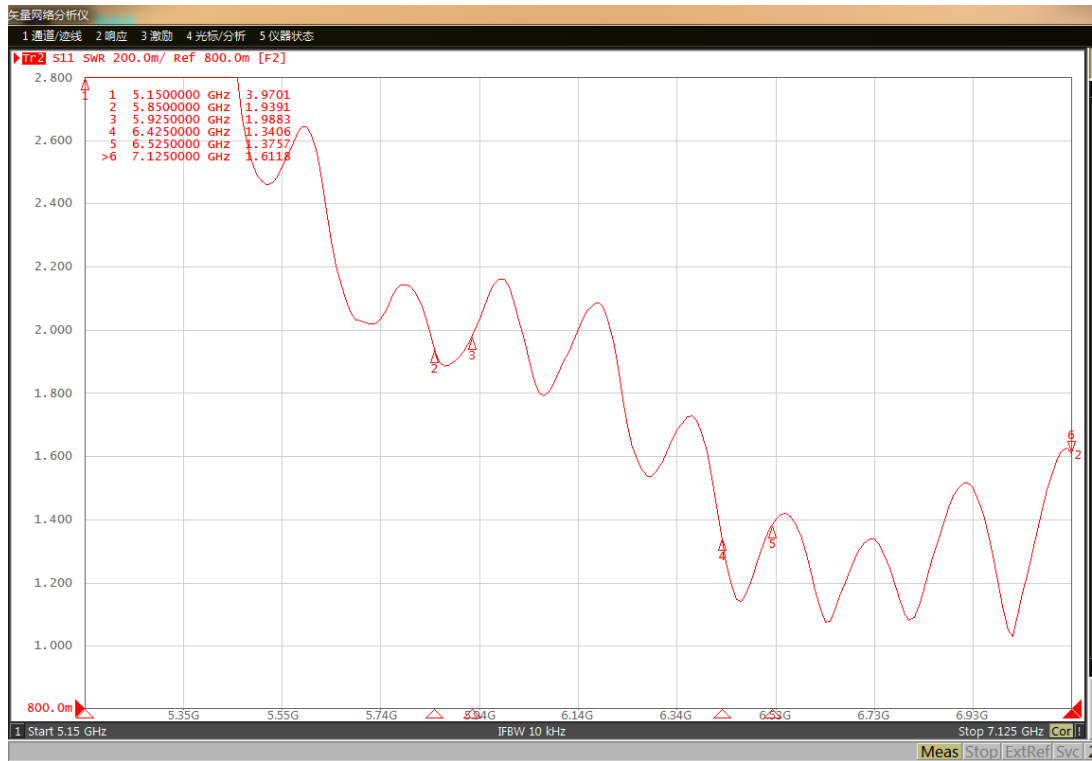
6.7GHz P10 Vertical



6.7GHz P11 Horizontal

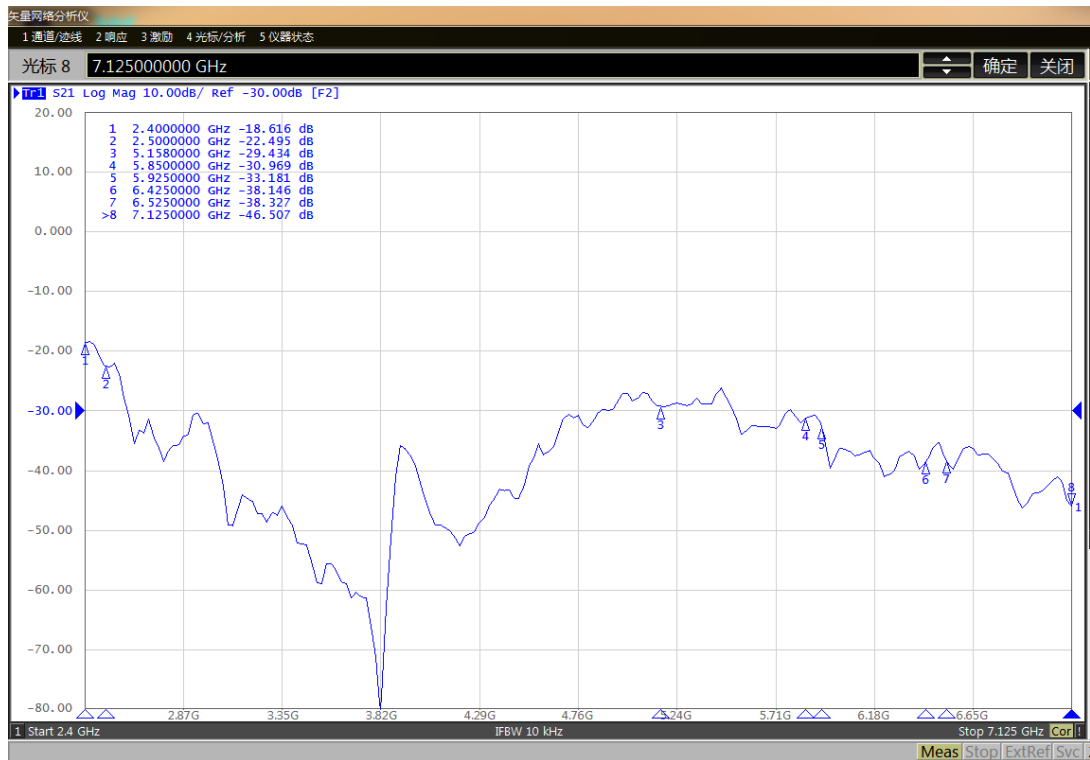


6.7GHz P12 Vertical

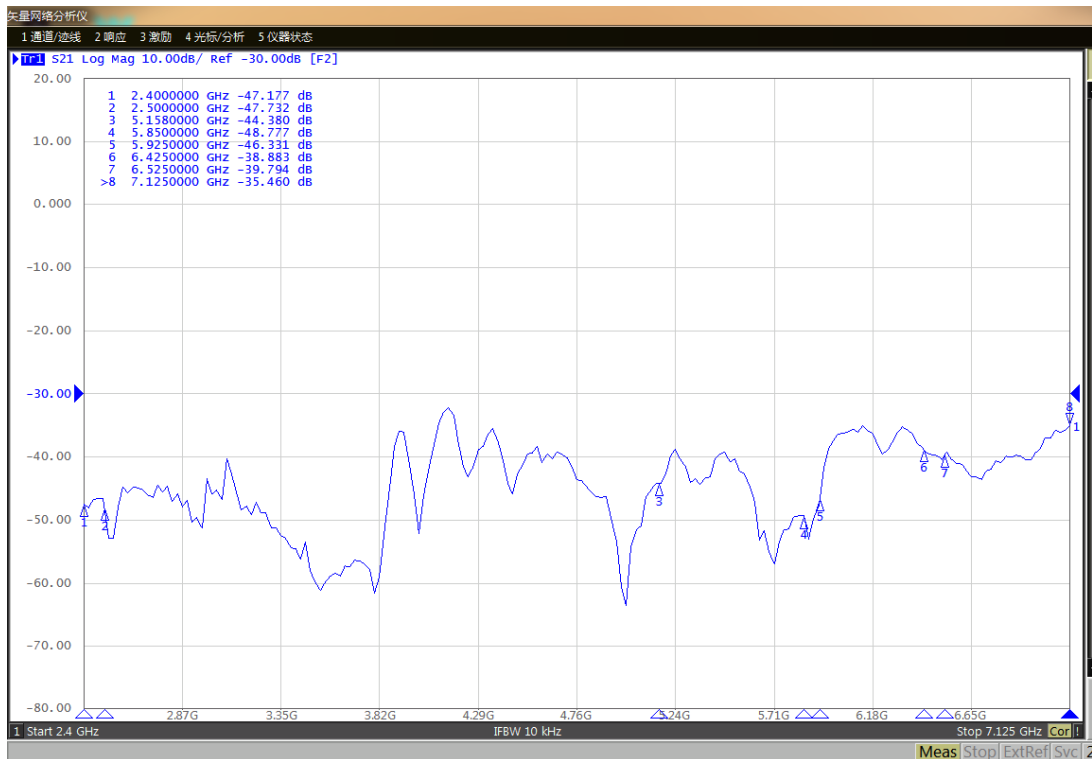


7 Antenna Isolation (Typical Port)

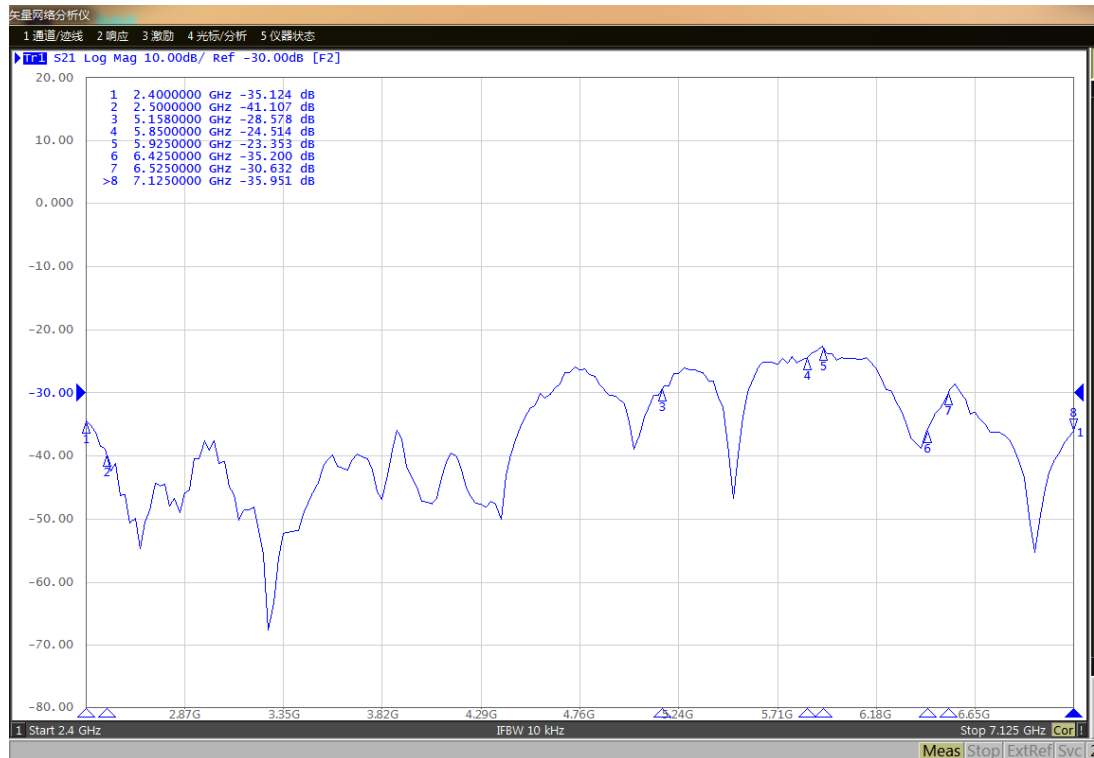
2.4/5GHz Vertical P1 与 P2



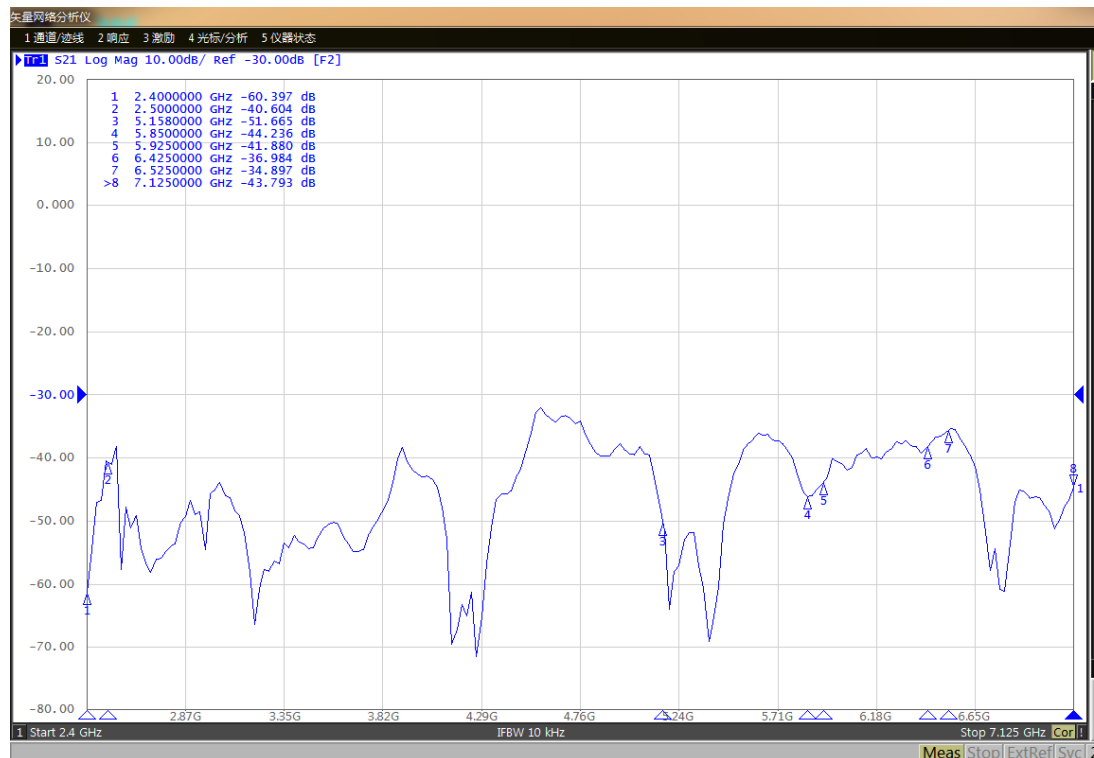
2.4/5GHz P1 Vertical And 6.2 GHz P5 Horizontal



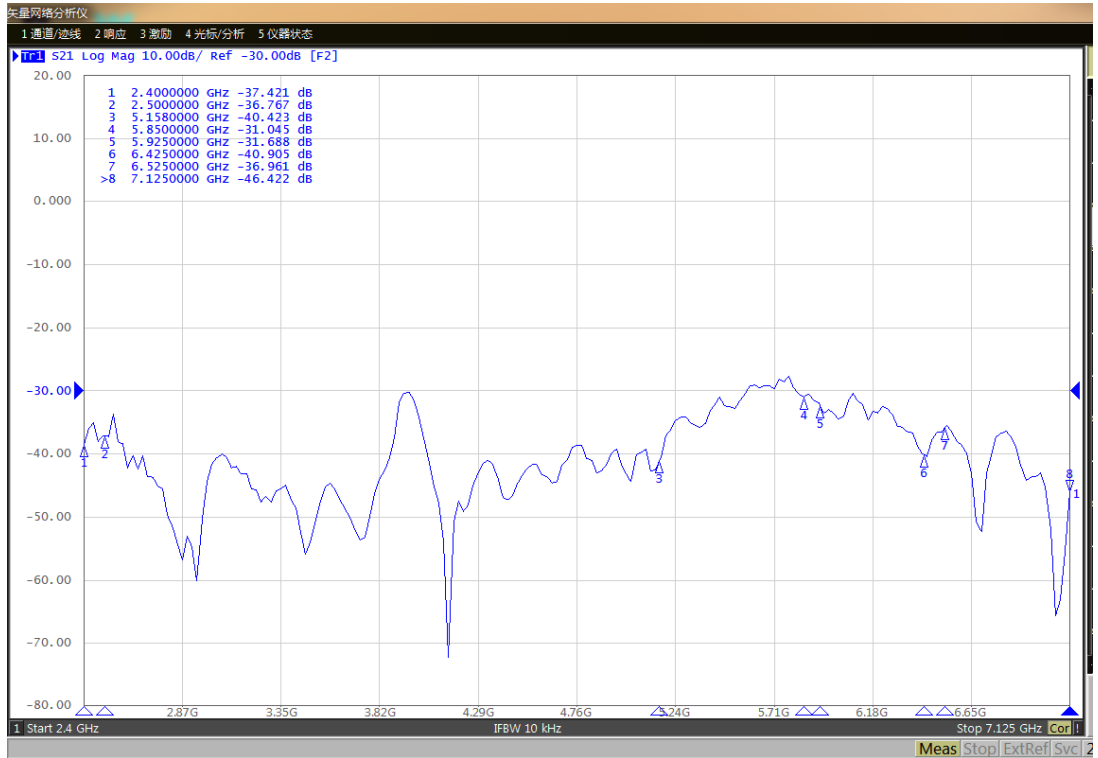
2.4/5GHz P1 Vertical And 6.2GHz P6 Vertical



2.4/5GHz P1 Vertical And 6.7GHz P11 Horizontal



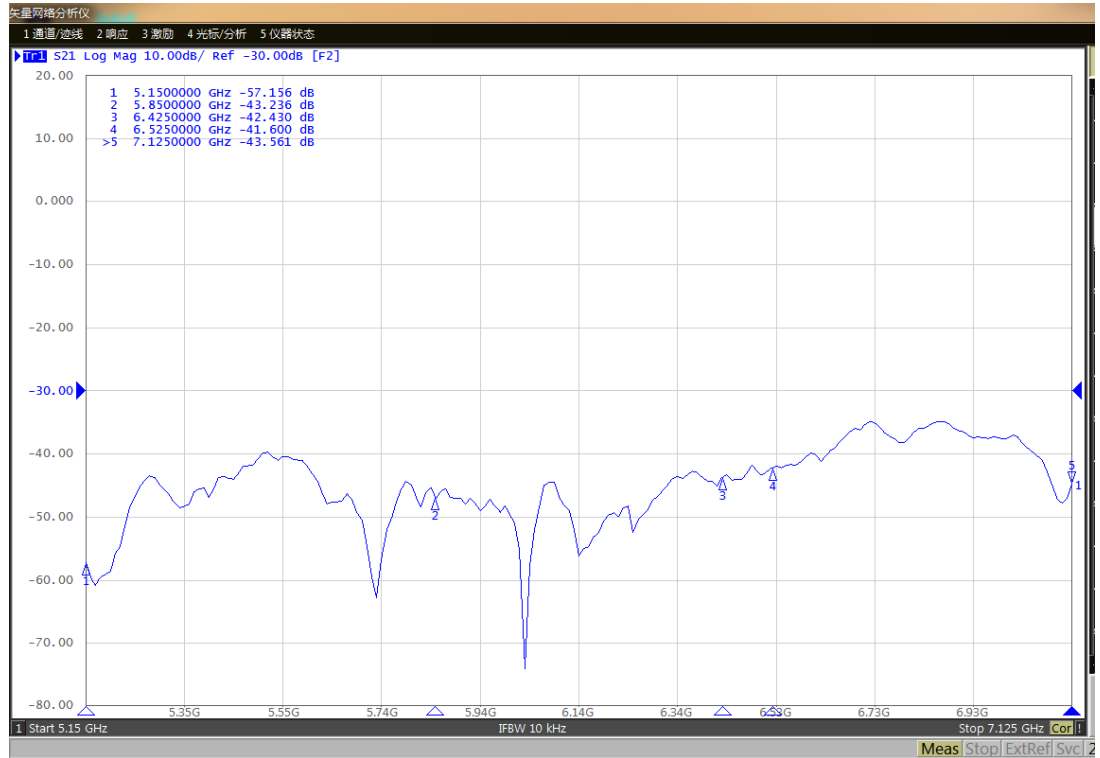
2.4/5GHz P1 Vertical And 6.7GHz P12 Vertical



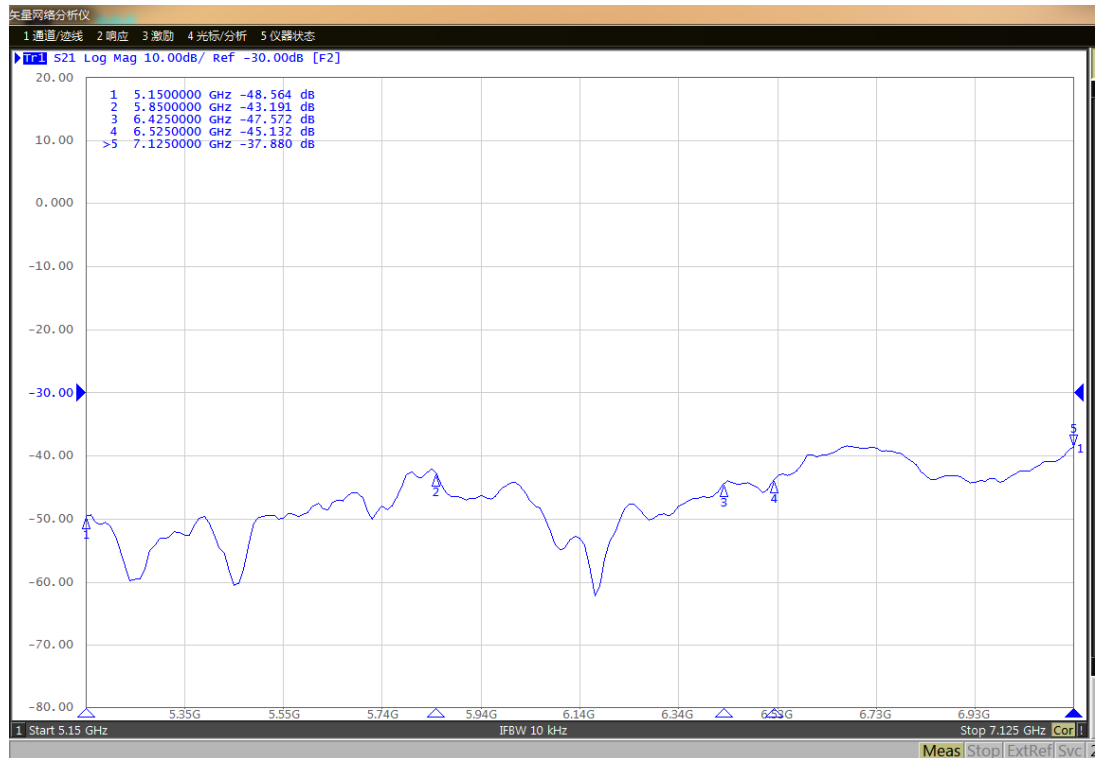
6.2 GHz P5 Horizontal And 6.2 GHz P6 Vertical



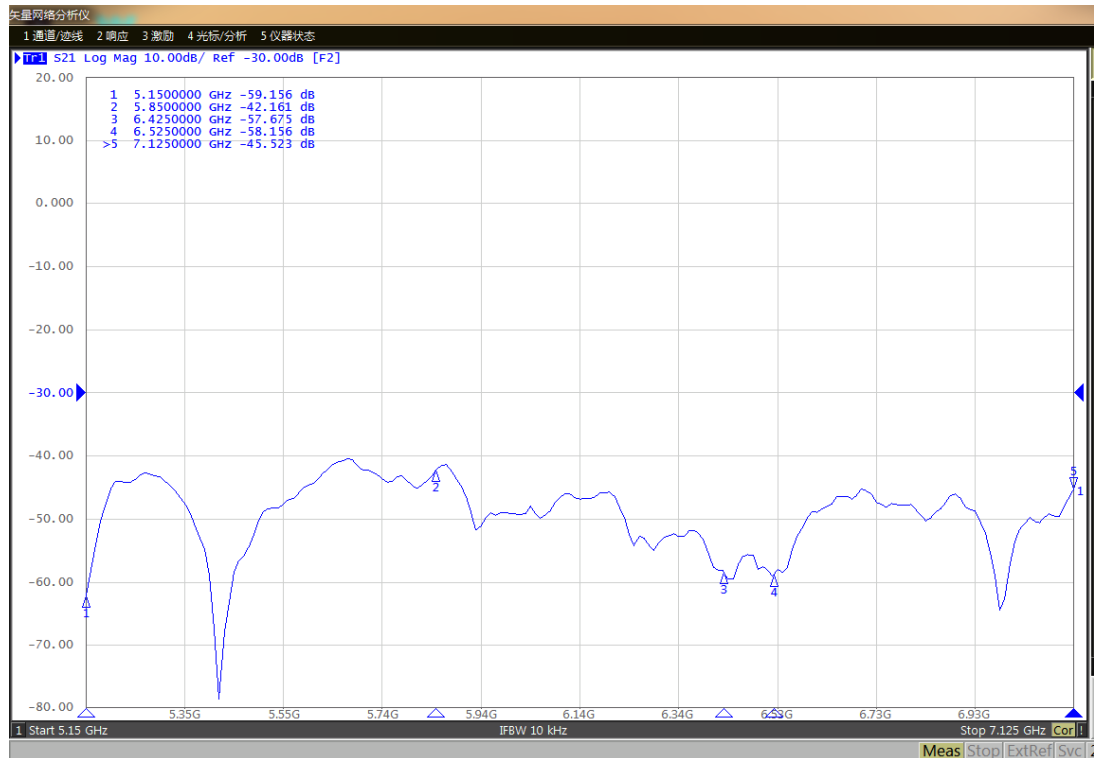
6.2 GHz P5 Horizontal And 6.7GHz P11 Horizontal



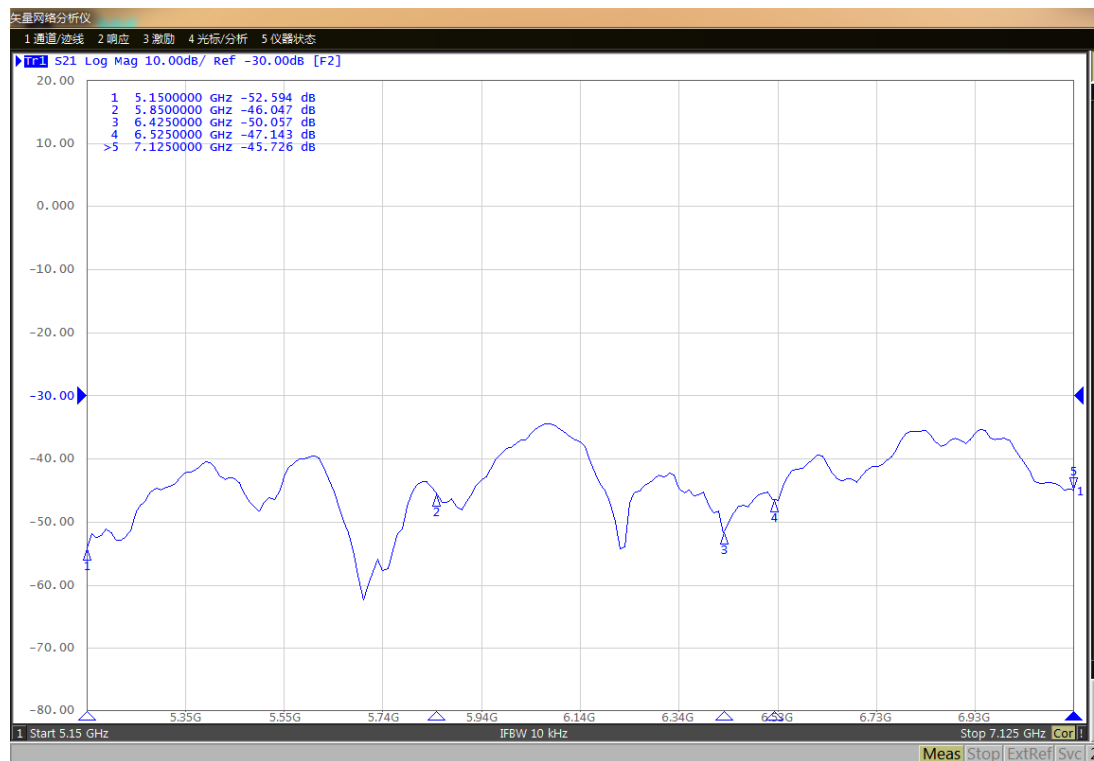
6.2 GHz P5 Horizontal And 6.7GHz P12 Vertical



6.2 GHz P6 Vertical And 6.7GHz P11 Horizontal



6.2GHz P6 Vertical And 6.7GHz P12 Vertical



6.7GHz P11 Horizontal And 6.7GHz P12 Vertical



8 The maximum antenna gain between -30° to 30°.

AS for the omni-directional antenna, the maximum antenna gain within elevation range between -30° to 30° for 5GHz and 6GHz is shown as below.

Freq./Band	5GHz(NI-1)	6GHz(NI1-5)	6GHz(NI-7)
Maximum antenna gain at 30°elevation 7	7.65dBi	9.62dBi	8.70dBi