

Product Technical Specifications

Product Model:	KDP13-VH5170NZ
Product Type:	Direction Antenna Array
Versions:	V1.0
Frank:	
Eason:	
Ratify:	

Catalogue

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Document Revisions Record

Date	Versions	Explain	Ratify
2024.8.1	V1.0	First Edition	

1 Electrical Performance Index

Name Of Index	Index Value			
Frequency Band(MHz)	5150-5850	5150-5850	5925-6425	6525-7125
Typical Gain (dBi)	10.32	10.32	12.53	12.72
Typical Horizontal Plane 3-dB BW(°)	60	60	50	50
Typical Vertical Plane 3-dB BW(°)	30	30	30	30
Typical Electrical Downtilt(°)	0	7	0	0
VSWR	≤2.0	≤2.0	≤2.0	≤2.0
Isolation (dB) -(The same Freq)	≤ -18	≤ -18	≤ -18	≤ -18
Isolation (dB) -(Different Freq)	5GHz&6.2GHz: ≤ -25 5GHz&6.7GHz: ≤ -25 6.2GHz&6.7GHz: ≤ -30			
Channels	P1 P2 (White cable)	P3 P4 (White cable)	P5 P6 P7 P8 (Red cable)	P9 P10 P11 P12 (Blue cable)
Maximum power(W)	20			
Impedance (Ω)	50			
Lighting protection	Non-DC ground			
Remarks	5GHz: Expression Frequency 5150-5850MHz 6.2GHz: Expression Frequency 5925-6425MHz 6.7GHz: Expression Frequency 6525-7125MHz			

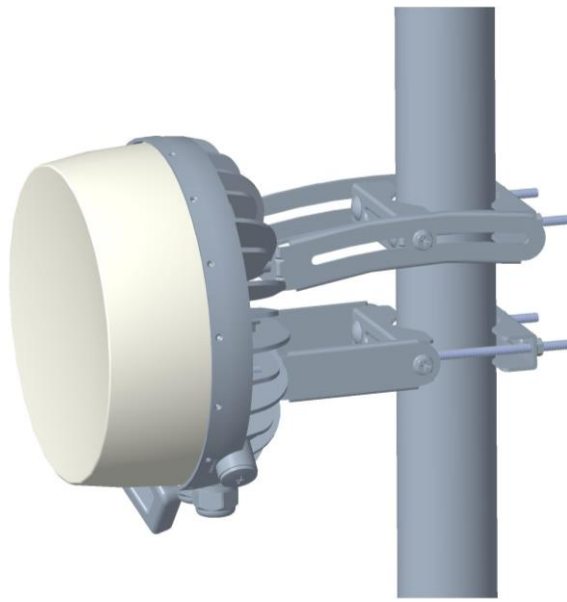
2 Mechanical Index

Mechanical Index	Mechanical Index
Dimensions(mm)	250*220*66(±5)
Antenna Weight(g)	260(±20)
Wind strength resistance (m/s)	36.9
Max Wind resistance	55
Operating Temperature (°C)	-40 +70
Application	Wifi6 /Wifi7

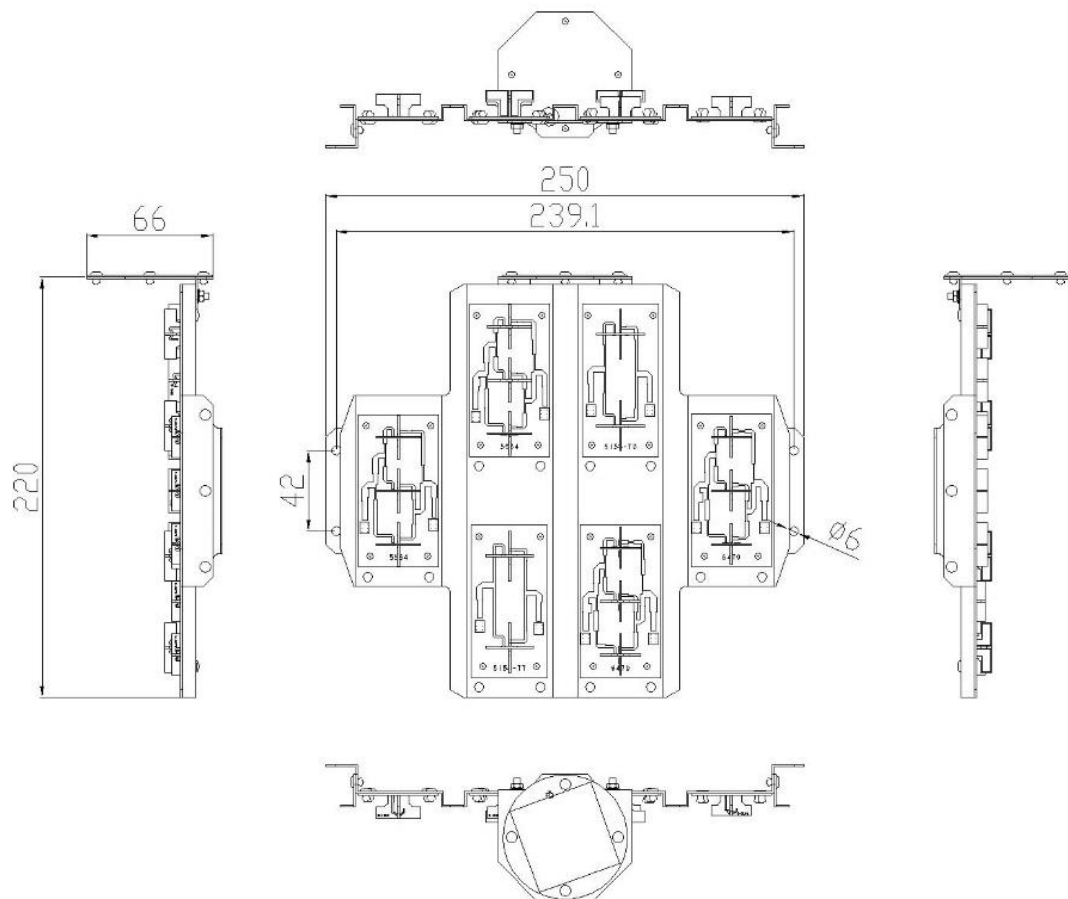
3 Environmental Performance Test

NO	Item	Test Condition	Requirement	Conlauseion
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.	

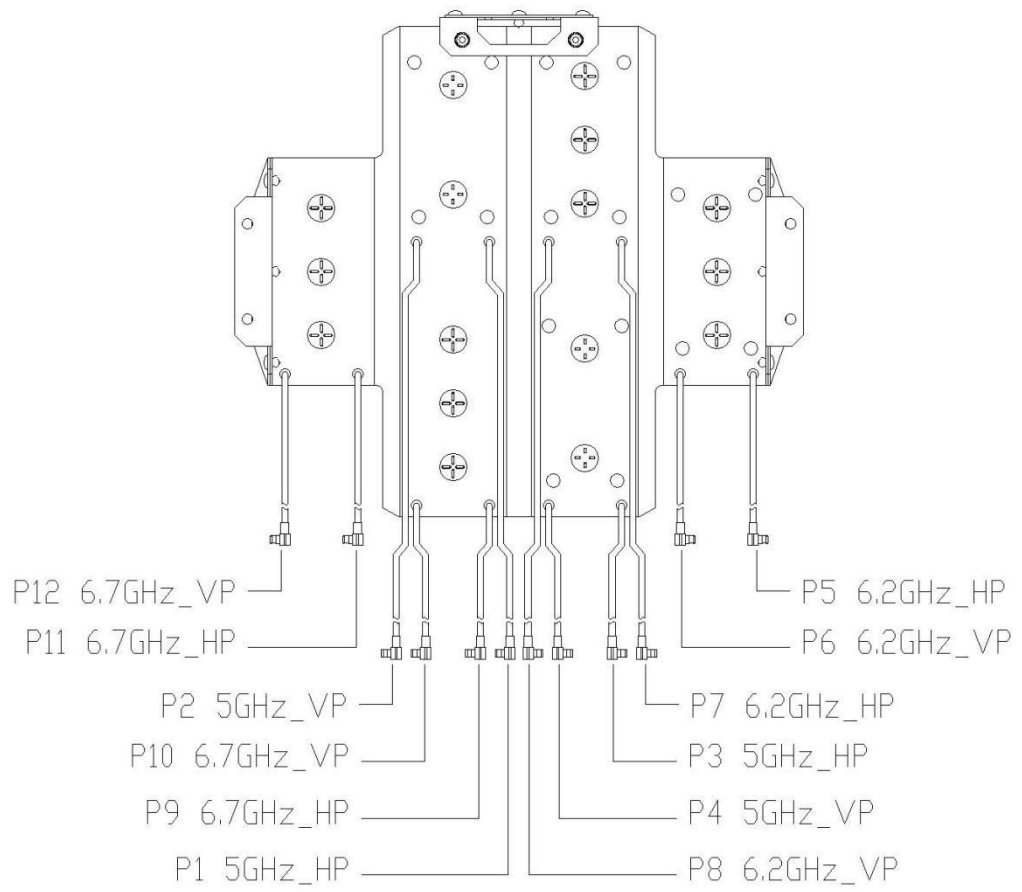
4 Antenna Outline and Internal Diagram



Outside view

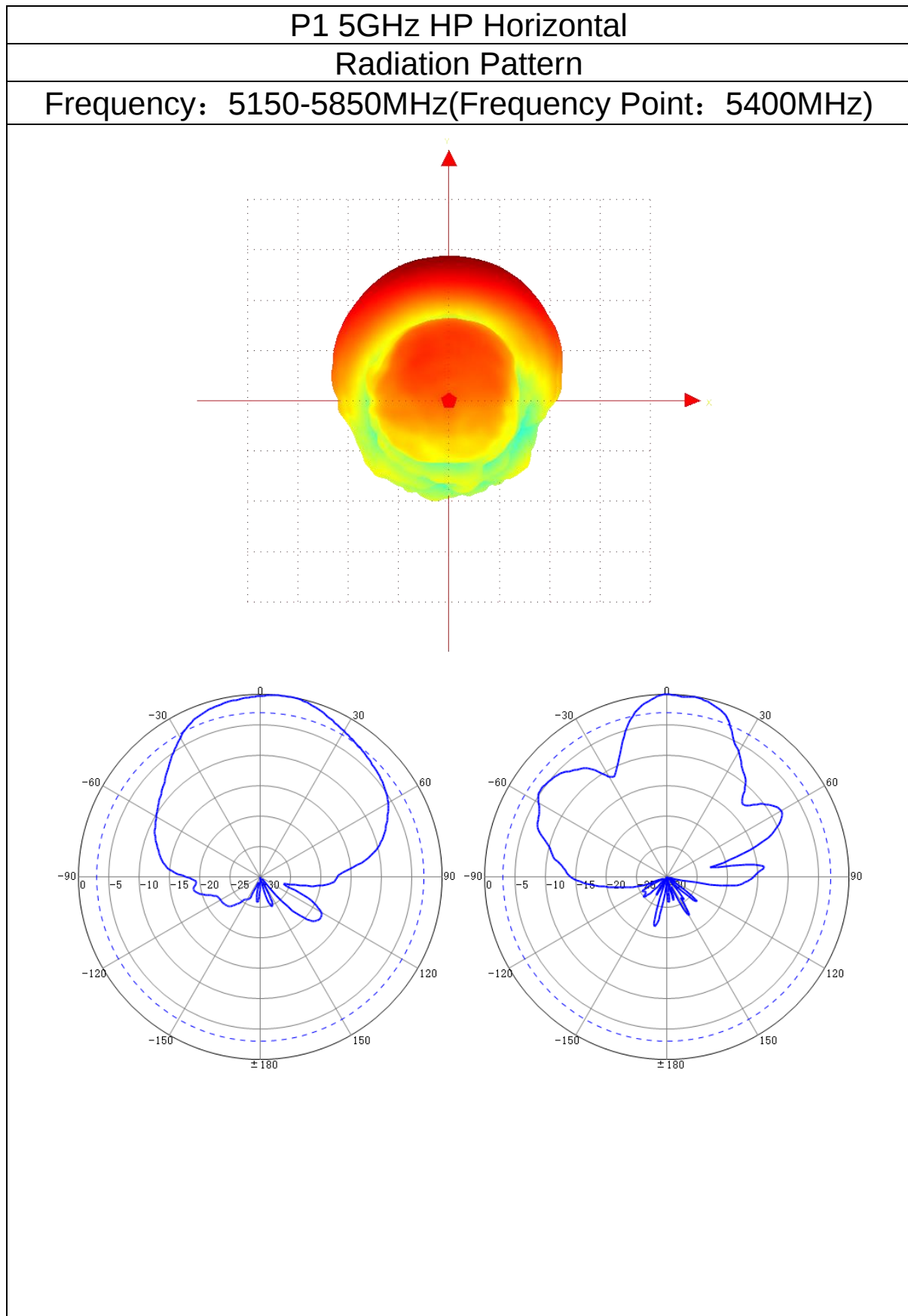


Size diagram



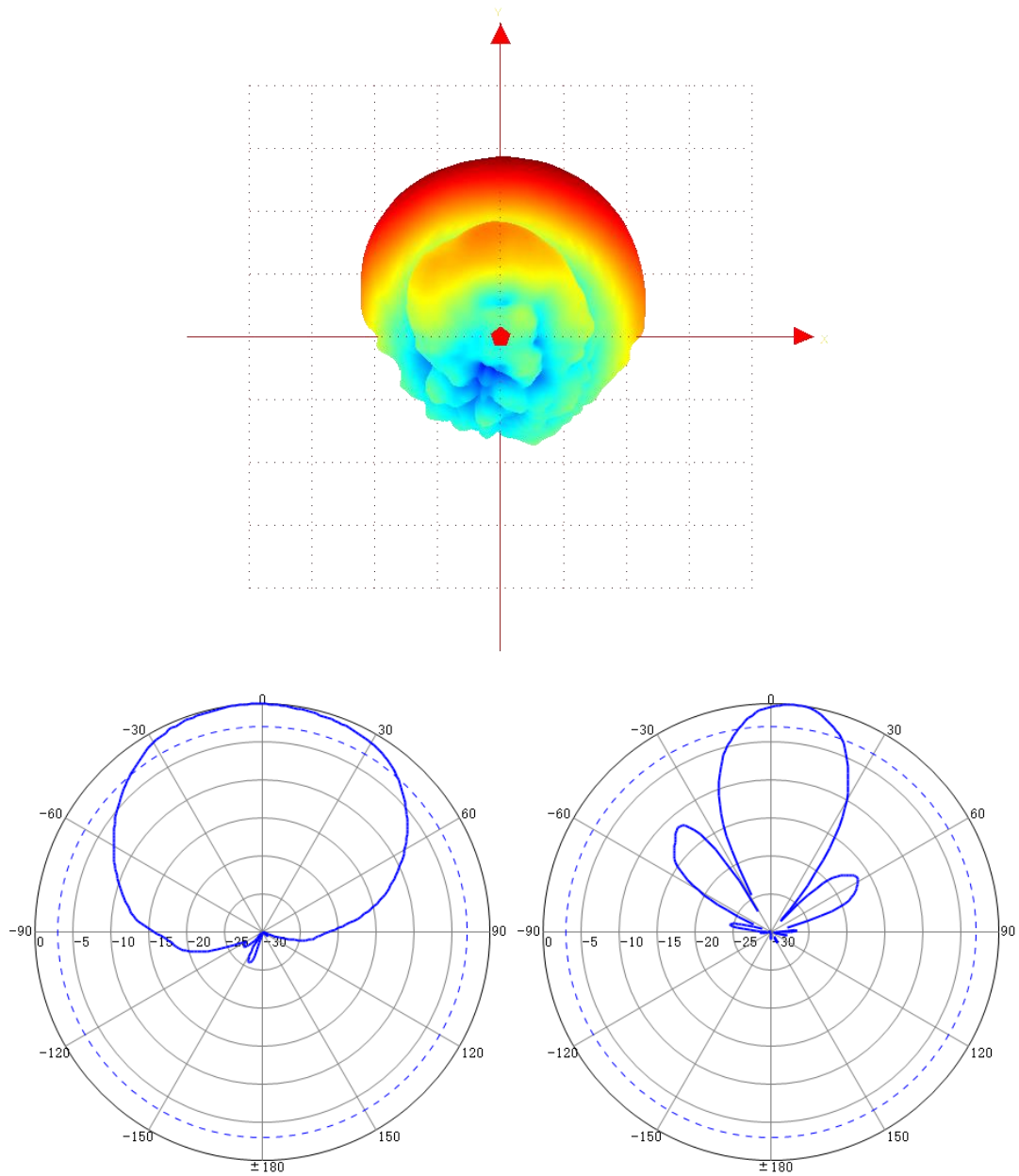
Ports diagram

5 Antenna Pattern



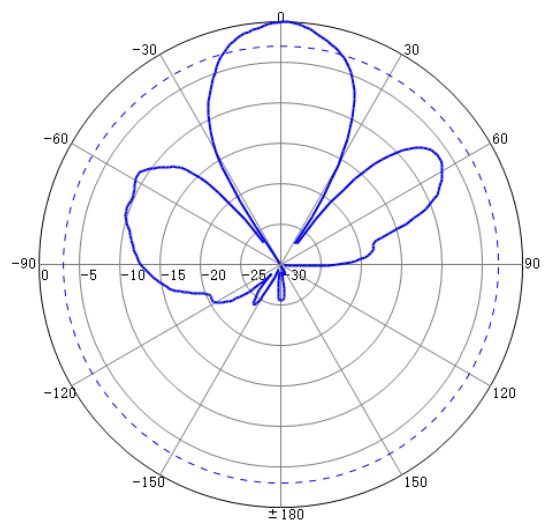
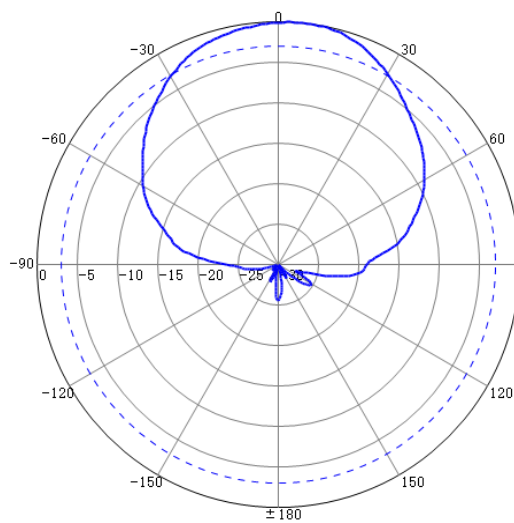
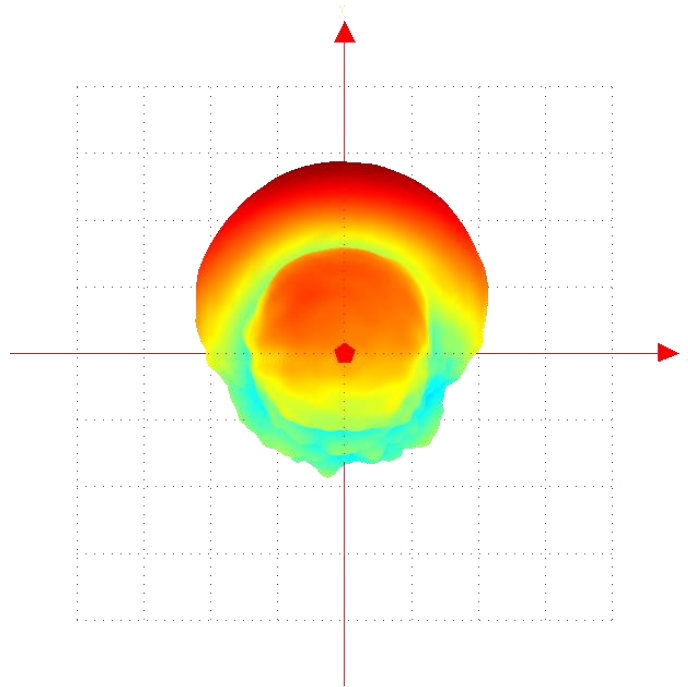
P2 5GHz VP Vertical
Radiation Pattern

Frequency: 5150-5850MHz(Frequency Point: 5400MHz)



P3 5GHz HP Horizontal Radiation Pattern

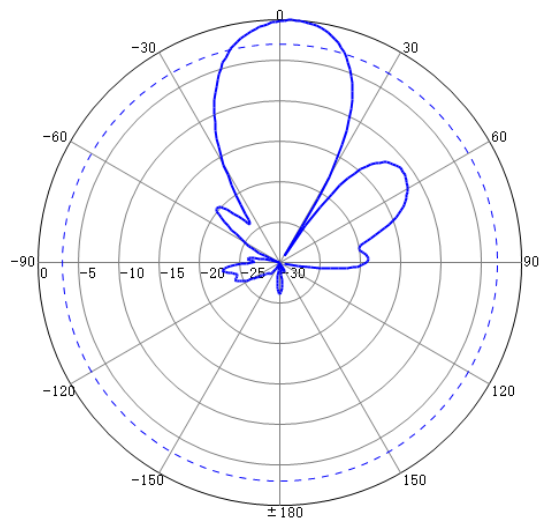
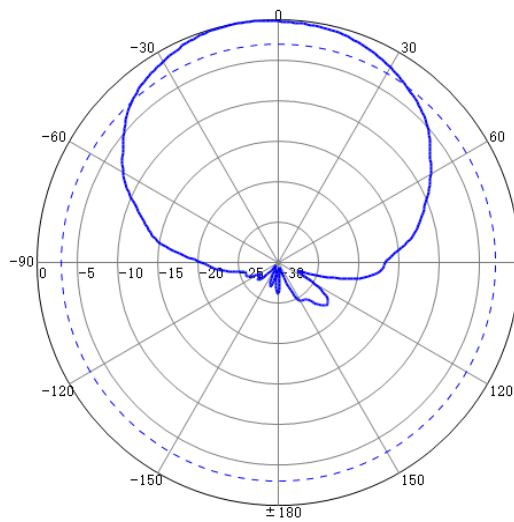
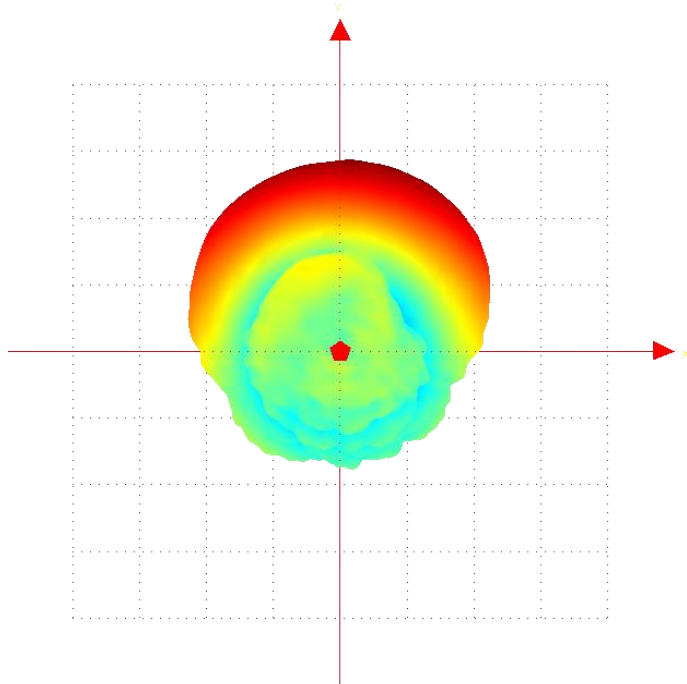
Frequency: 5150-5850MHz(Frequency Point: 5400MHz)



P4 5GHz VP Vertical

Radiation Pattern

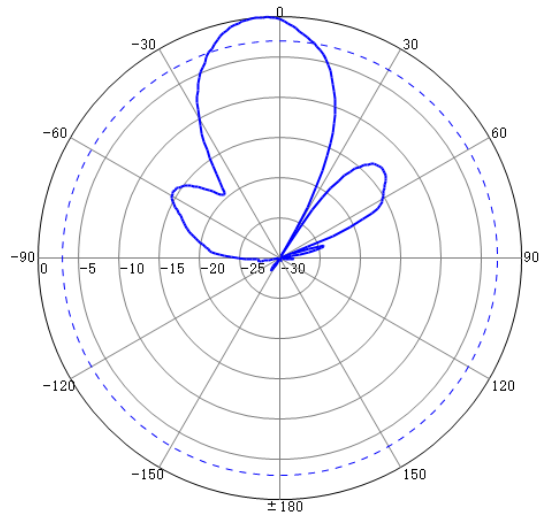
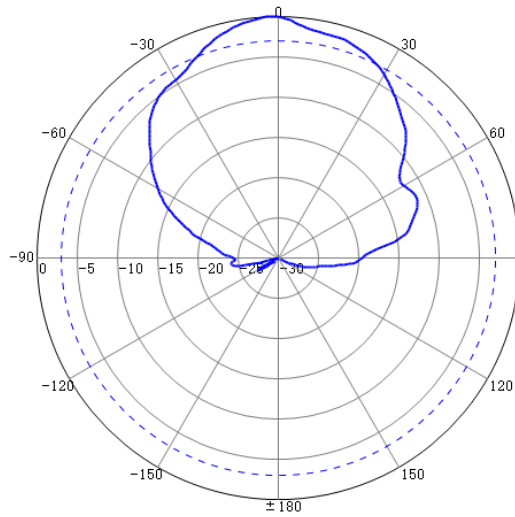
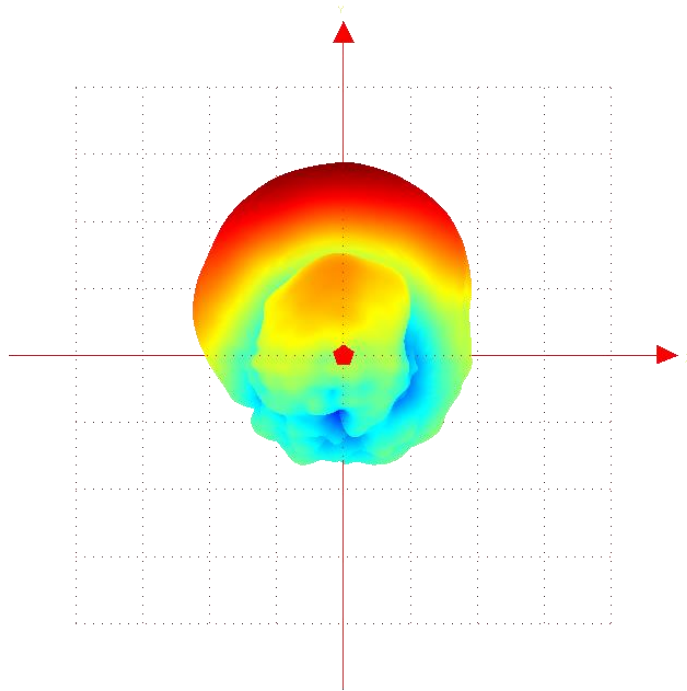
Frequency: 5150-5850MHz(Frequency Point: 5400MHz)



P5 6.2GHz HP Horizontal

Radiation Pattern

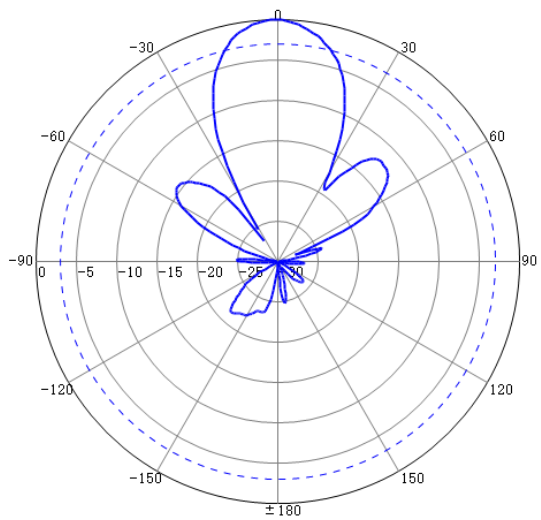
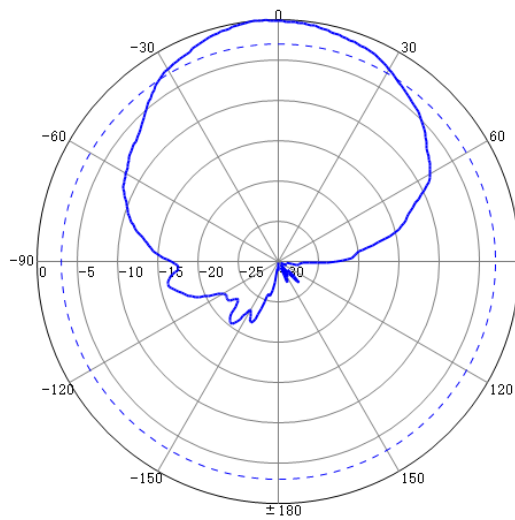
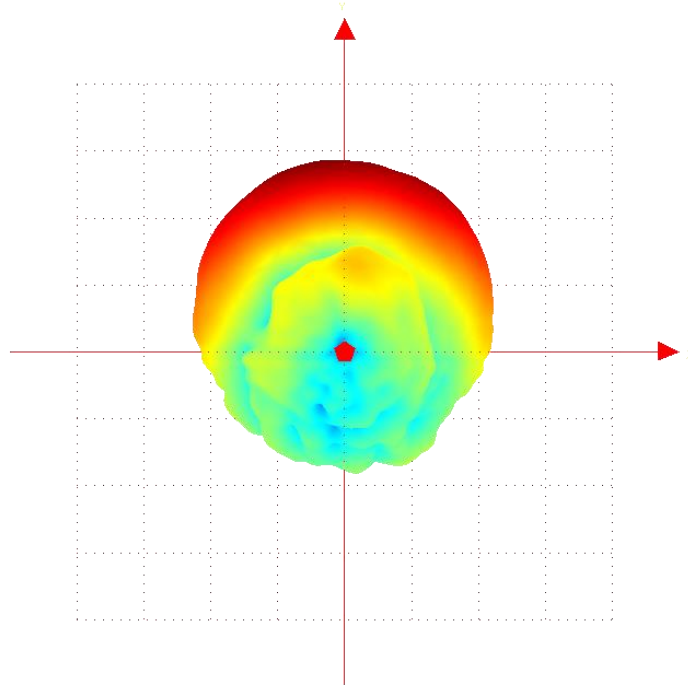
Frequency: 5925-6425MHz(Frequency Point: 6200MHz)



P6 6.2GHz VP Vertical

Radiation Pattern

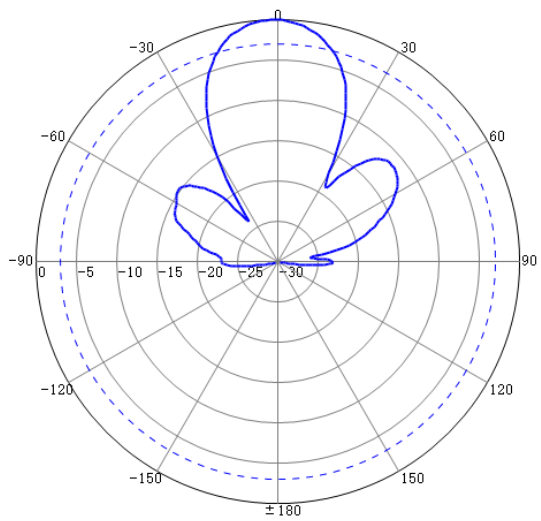
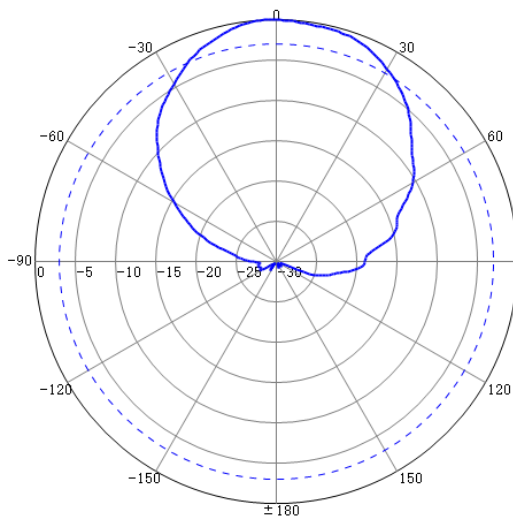
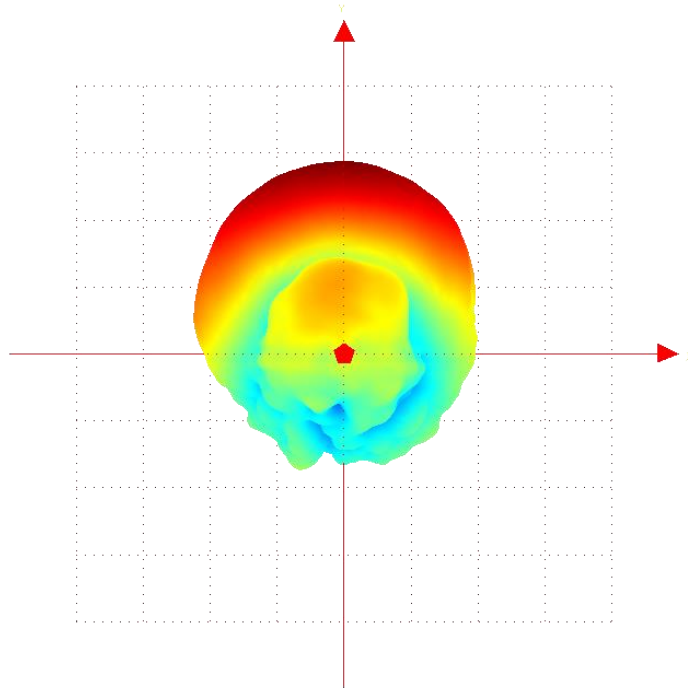
Frequency: 5925-6425MHz(Frequency Point: 6200MHz)



P7 6.2GHz HP Horizontal

Radiation Pattern

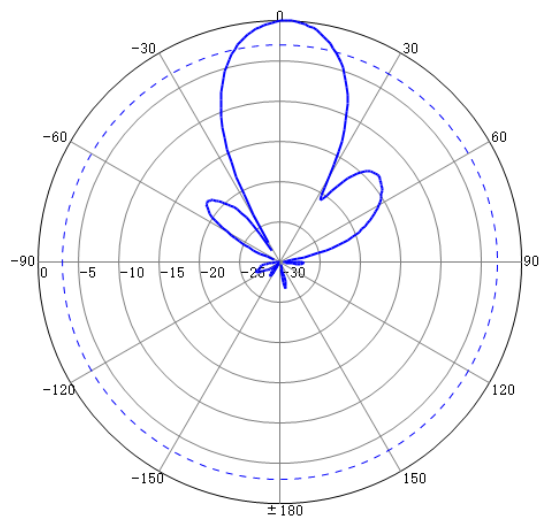
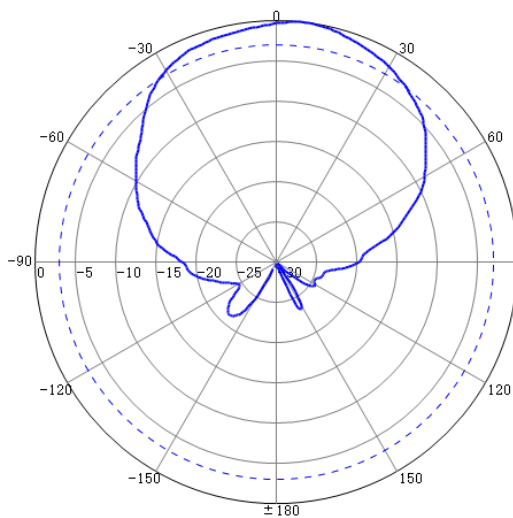
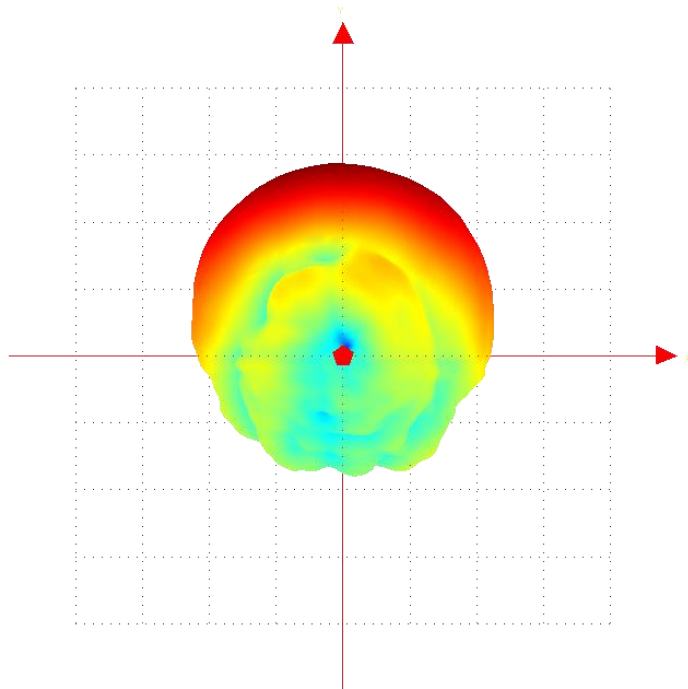
Frequency: 5925-6425MHz(Frequency Point: 6200MHz)



P8 6.2GHz VP Vertical

Radiation Pattern

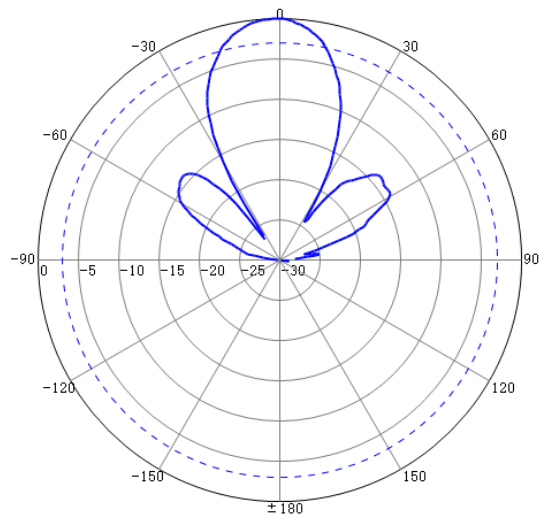
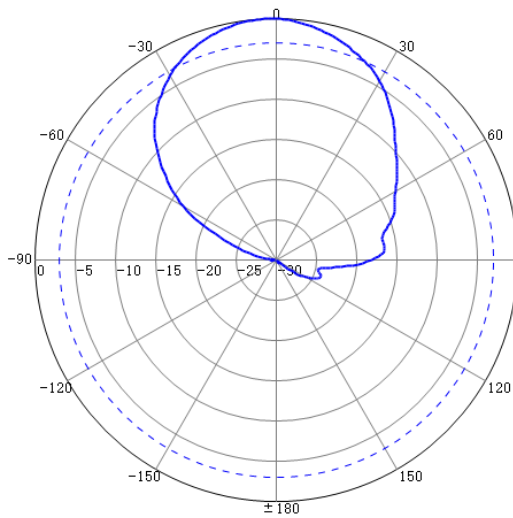
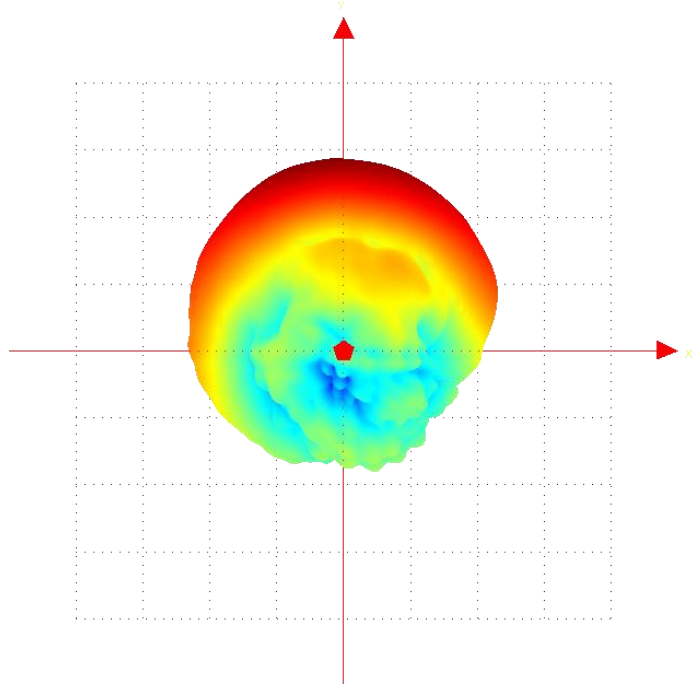
Frequency: 5925-6425MHz(Frequency Point: 6200MHz)



P9 6.7GHz HP Horizontal

Radiation Pattern

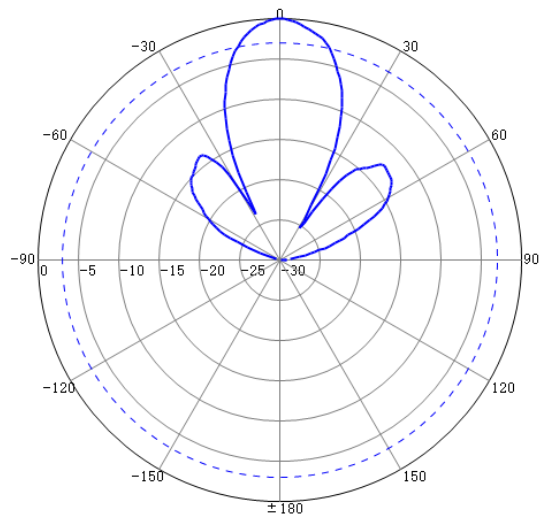
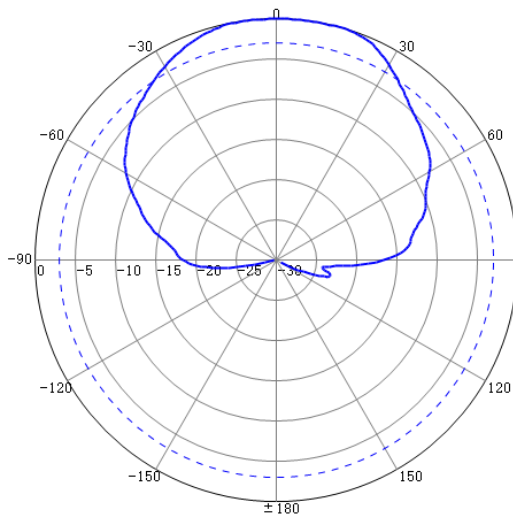
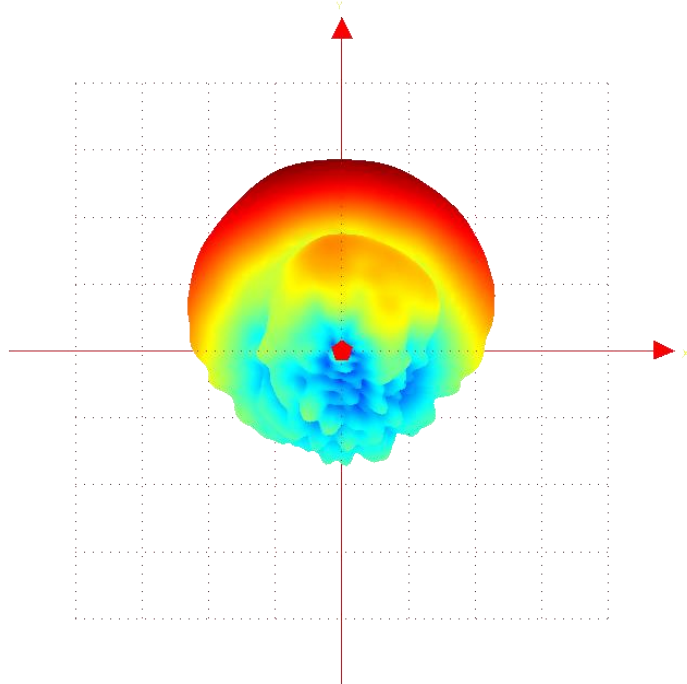
Frequency: 6525-7125MHz(Frequency Point: 6700MHz)



P10 6.7GHz VP Vertical

Radiation Pattern

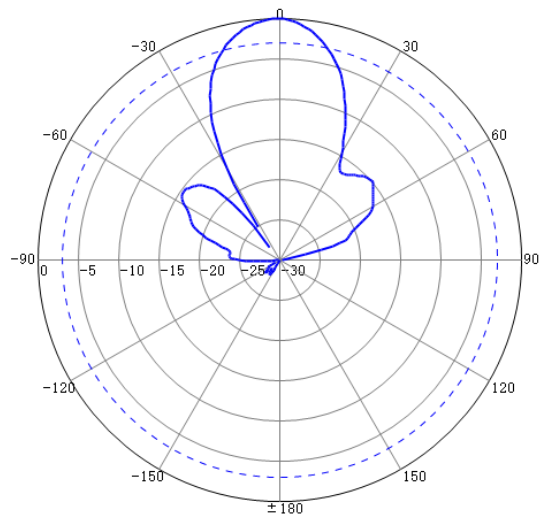
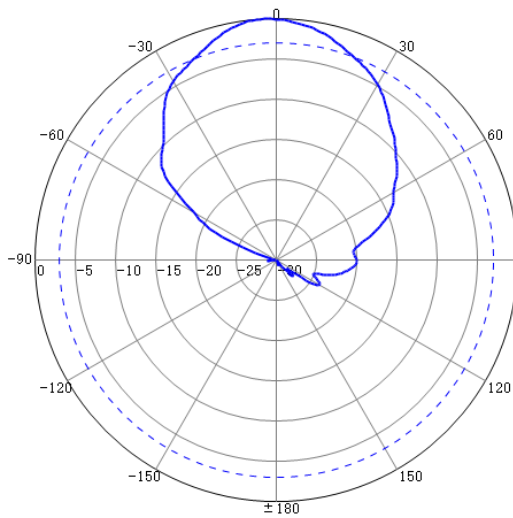
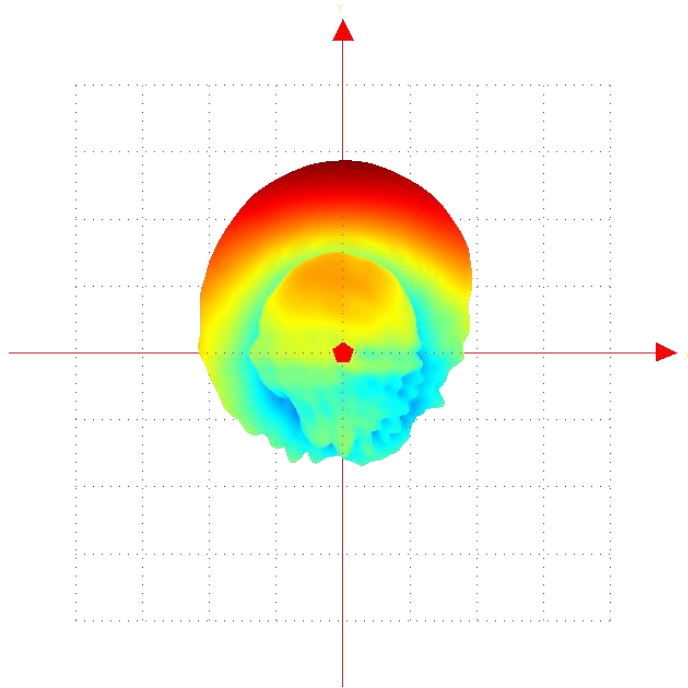
Frequency: 6525-7125MHz(Frequency Point: 6700MHz)



P11 6.7GHz HP Horizontal

Radiation Pattern

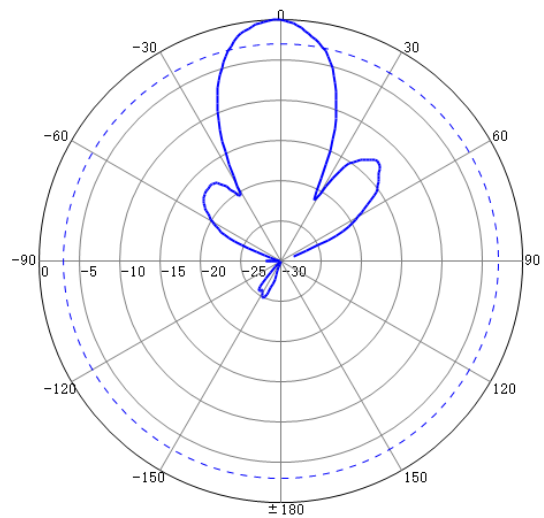
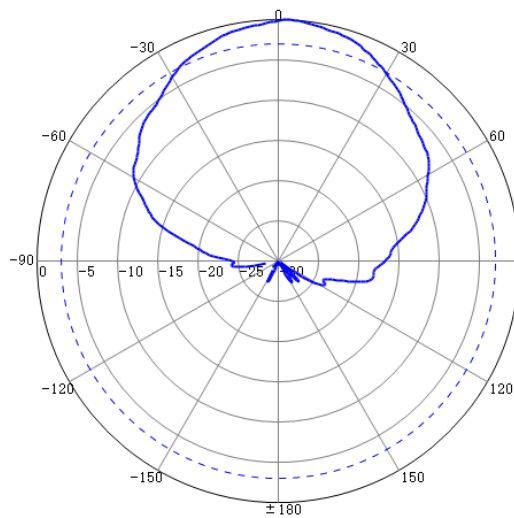
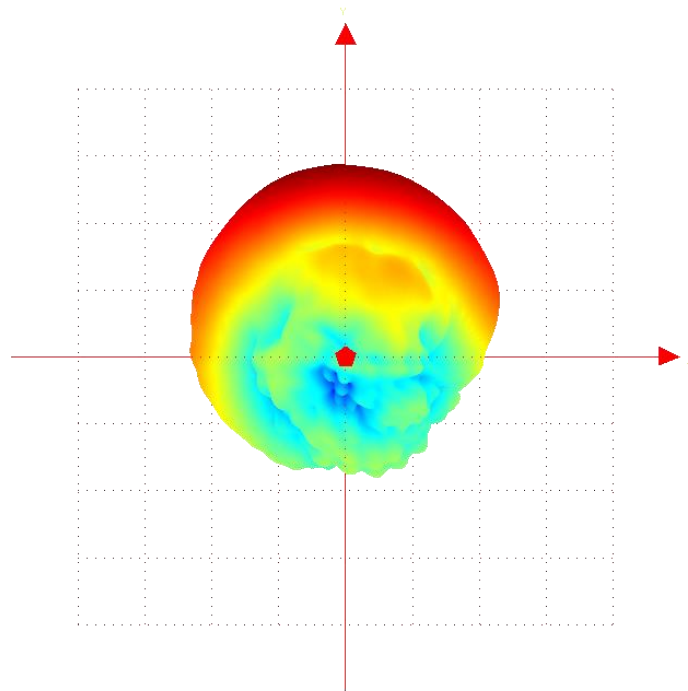
Frequency: 6525-7125MHz(Frequency Point: 6700MHz)



P12 6.7GHz VP Vertical

Radiation Pattern

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

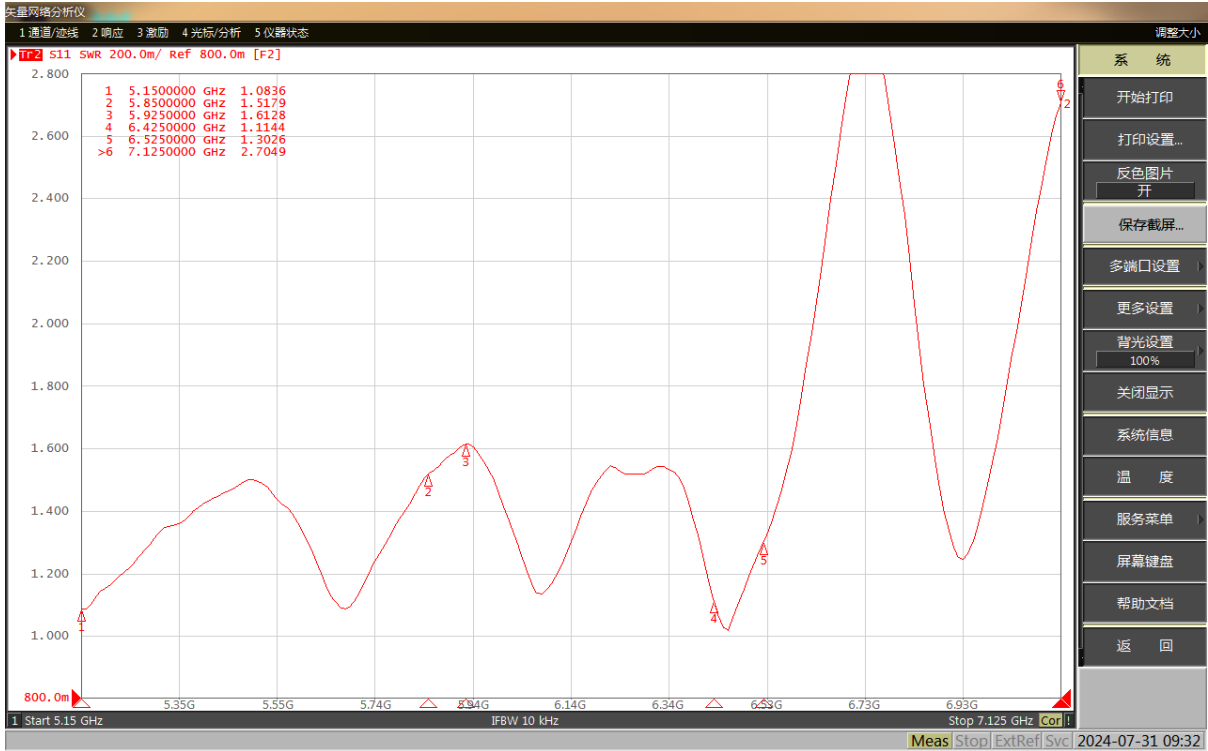


6 Antenna VSWR

P1 5GHz HP Horizontal



P2 5GHz VP Vertical



P3 5GHz HP Horizontal



P4 5GHz VP Vertical



P5 6.2GHz HP Horizontal



P6 6.2GHz VP Vertical



P7 6.2GHz HP Horizontal



P8 6.2GHz VP Vertical



P9 6.7GHz HP Horizontal



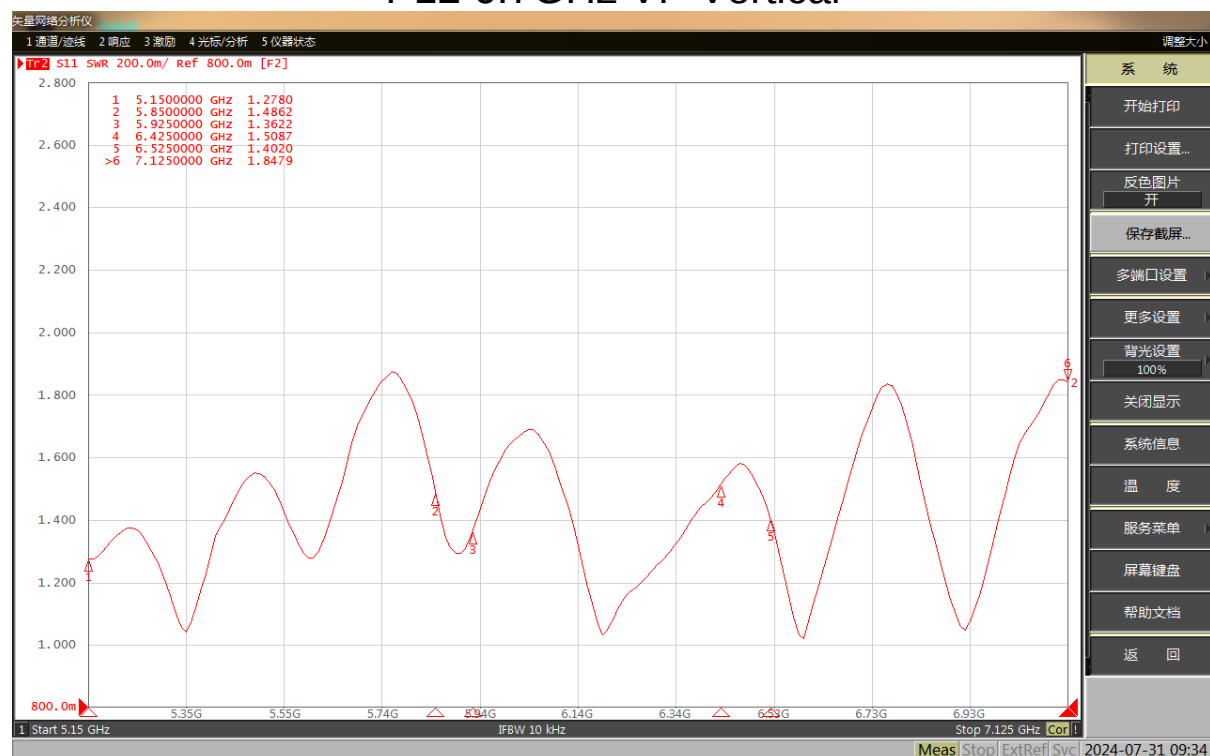
P10 6.7GHz VP Vertical



P11 6.7GH HP Horizontal



P12 6.7GHz VP Vertical



7 Antenna Isolation (Typical Port)

P1 5GHz HP Horizontal and P2 VP Vertical



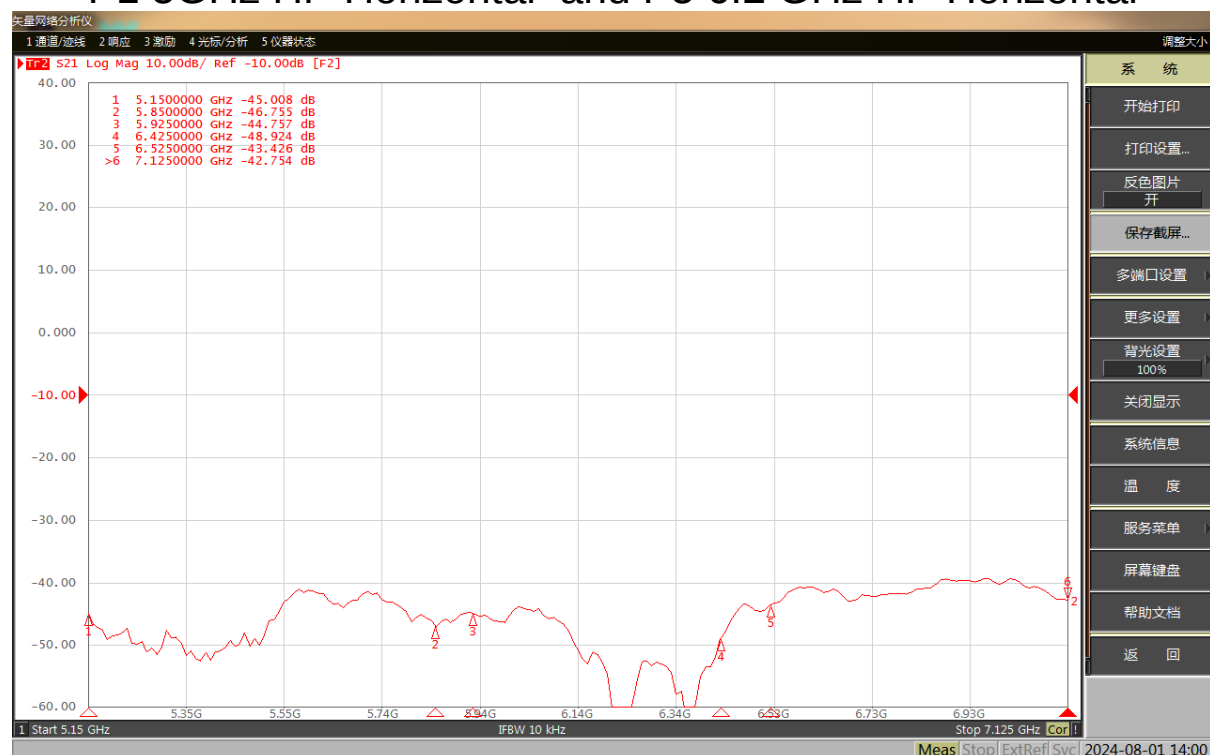
P5 6.2GHz HP Horizontal and P6 VP Vertical



P9 6.7GHz HP Horizontal and P10 VP Vertical



P1 5GHz HP Horizontal and P5 6.2 GHz HP Horizontal



P2 5GHz VP Vertical and P6 6.2 GHz VP Vertical



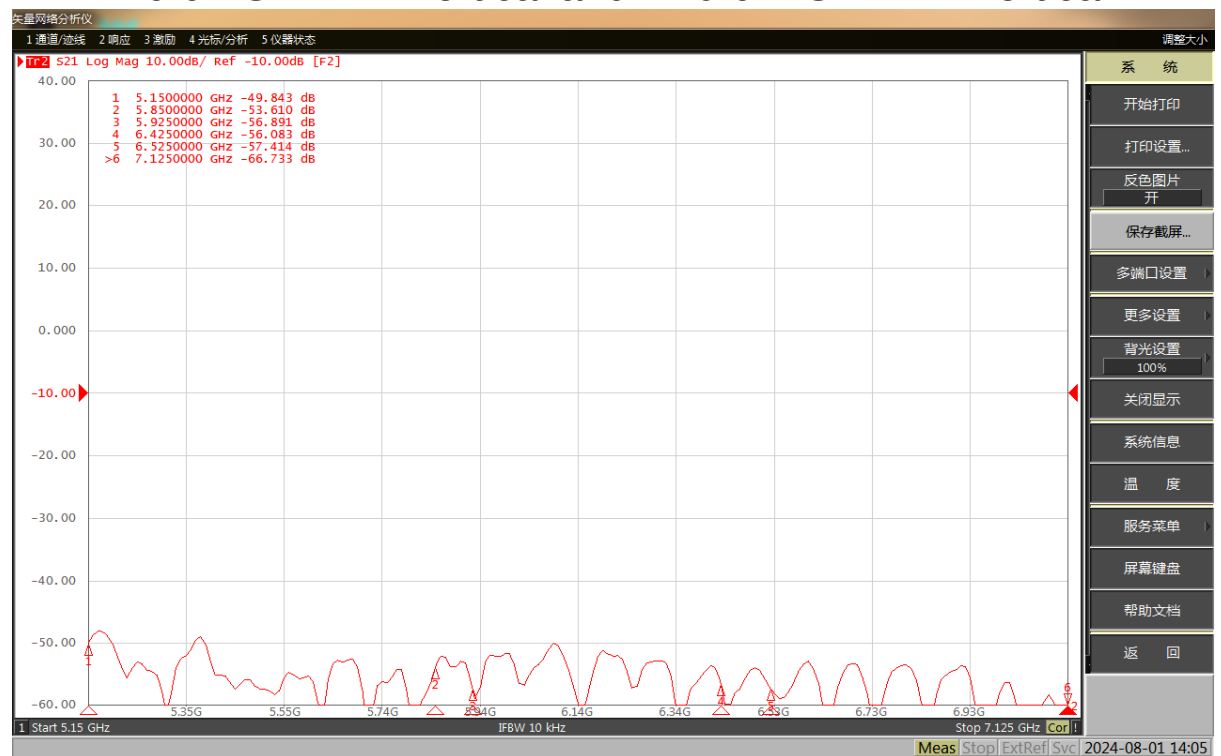
P1 5GHz HP Horizontal and P9 6.7 GHz HP Horizontal



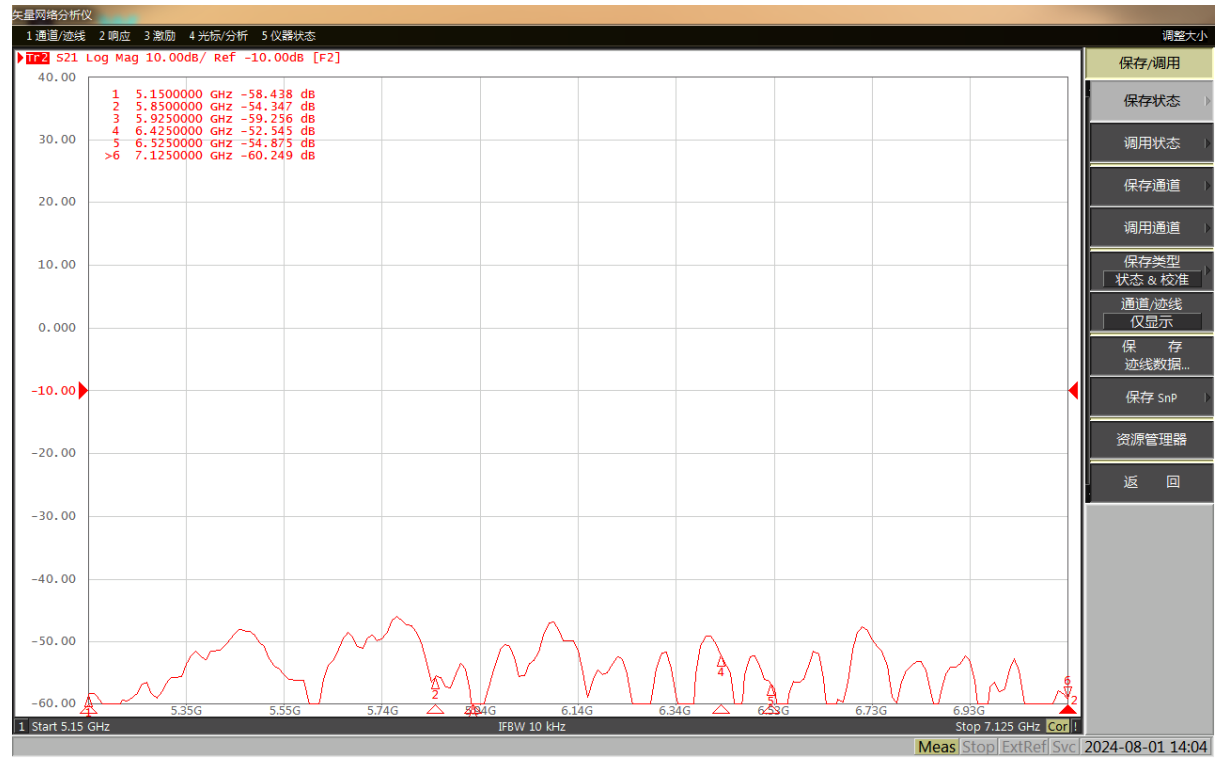
P2 5GHz VP Vertical and P10 6.7 GHz VP Vertical



P6 6.2GHz VP Vertical and P10 6.7 GHz VP Vertical



P5 6.2GHz HP Horizontal and P9 6.7 GHz HP Horizontal



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	3.92dBi	1.23dBi	-0.63dBi