

Shenzhen SKYLink Technology Co.,Ltd

Antenna Specification for Approval

Customer Name: _____

Product Name: _____ S200 WIFI Antenna

Part Number: _____ S200. WIFI. L. C081. 120B. 4

Part Number: _____ S200. WIFI. R. C081. 100B. 4

Issued Date: _____ 2024-08-09

Customer

R&D Dept	Business Dept	Approved By

SKYLink

R&D Dept	Engineer Dept	Approval

● Specification Summary

A. Electrical Characteristics	
Frequency	2400~2500MHz、 5150~5850MHz
VSWR	<3.0
Efficiency	>30%
Peak Gain	2dbi
Impedance	50 Ohm
Polarization	linear polarization
B. Material & Mechanical Characteristics	
Material of Radiator	FPC
Cable Type	0.81mm Black 线损(dB/m):4.70 (2GHz) 7.80 (5GHz)
Connector Type	IPEX 4
Dimension	At Attachment
Heat-durability	280±5°C, 10sec.
C. Environmental Characteristics	
Operation Temperature	- 20 °C ~ + 80 °C
Storage Temperature	- 30 °C ~ + 85 °C

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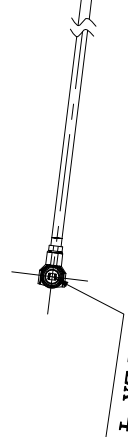
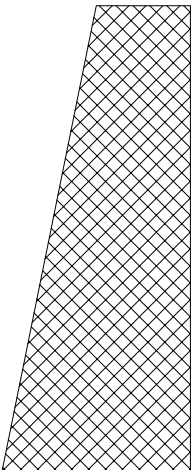
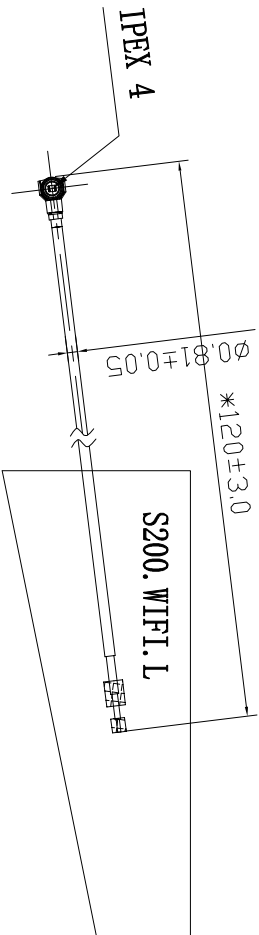
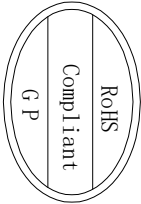
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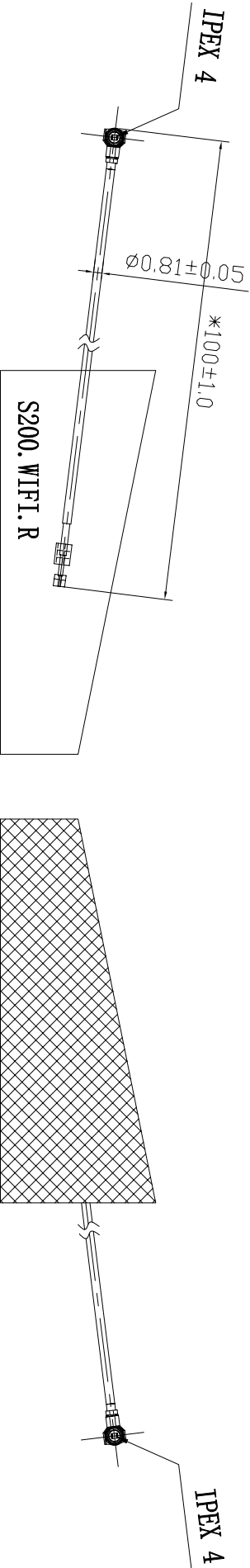
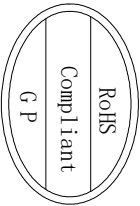
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1		2		3		4		5		6		7		8	
RoHS Compliant G P															
A															
B															
C															
D															

IPEX 4



1		2	3	4	5	6	7	8
A								A
B								B
C								C
D								D
Rev		Description		Date	Remark			
		1		2	3	4	5	6
		A		New drawing				
		Third Angle		Project	Part Name	Date	2024-08-09	
		0~10		±0.05	○	0.02		
		10~18		±0.10	◎	0.03		
		18~30		±0.12	⊥	0.02		
		30~40		±0.15	∠	0.04		
		40~		±0.20	Angle	±0.5°		
		Location		DWG No.		Approved by		
						Unit		mm
						Scale		1:1
						Rev		A

● Test Equipment & Conditions

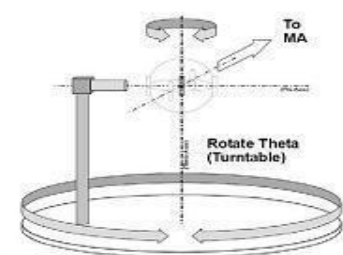
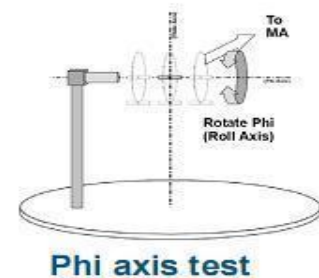
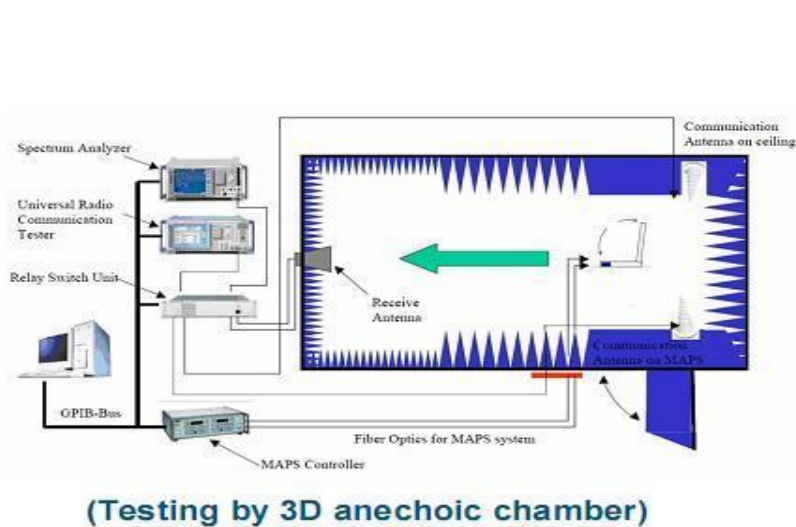
1. Network Analyzers :

Agilent 8753D 5071B

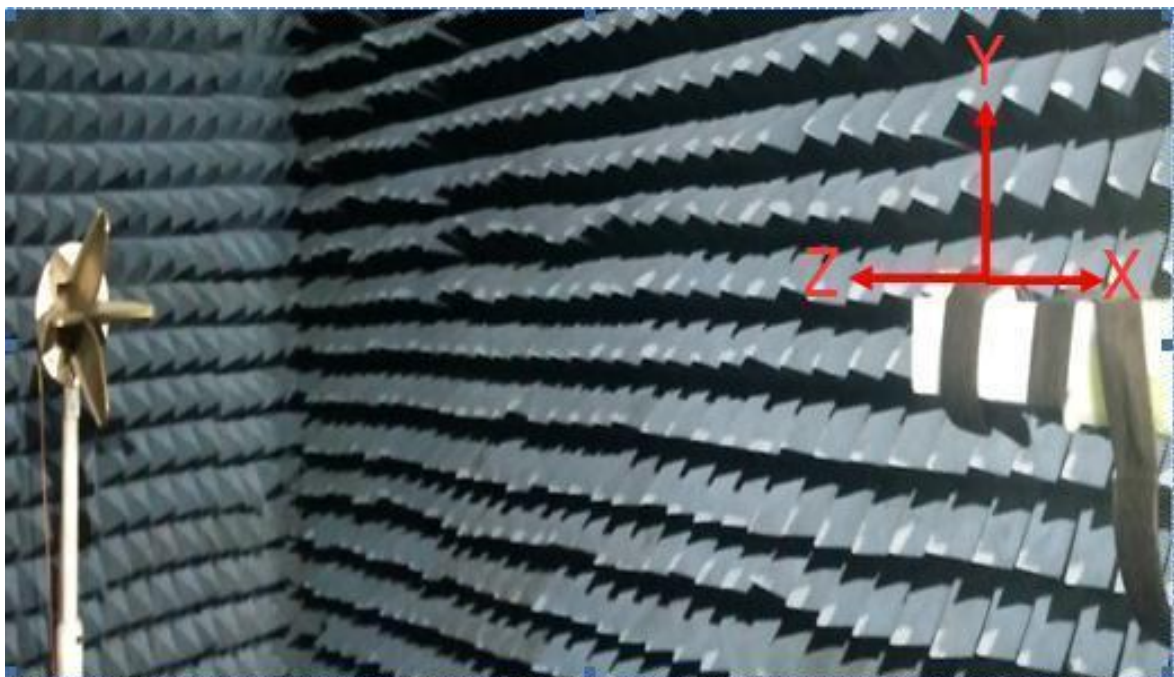
Communications Test Set:

Agilent E5515C CMW500

2. 3D Chamber Test System



Theta axis test



◆ Gain & Efficiency

■ Left antenna

Freq	Effi	Gain
(MHz)	(%)	(dBi)
2400	36.31	0.98
2410	35.8	1.27
2420	39.63	1.74
2430	44.2	2.27
2440	43.17	2.23
2450	40.49	2.06
2460	40.45	2.1
2470	41.58	2.18
2480	42.11	1.95
2490	41.87	1.79
2500	40.24	1.39

Freq	Effi	Gain
(MHz)	(%)	(dBi)
5150	51.05	3.41
5200	48.17	2.88
5250	48.29	2.96
5300	47.29	2.86
5350	51.12	3.17
5400	51.16	2.97
5450	47.03	2.45
5500	47.82	2.47
5550	49.91	2.93
5600	53.33	3.28
5650	55.01	3.6
5700	54.58	3.59
5750	55.55	3.96
5800	52.53	3.88
5850	55	3.67

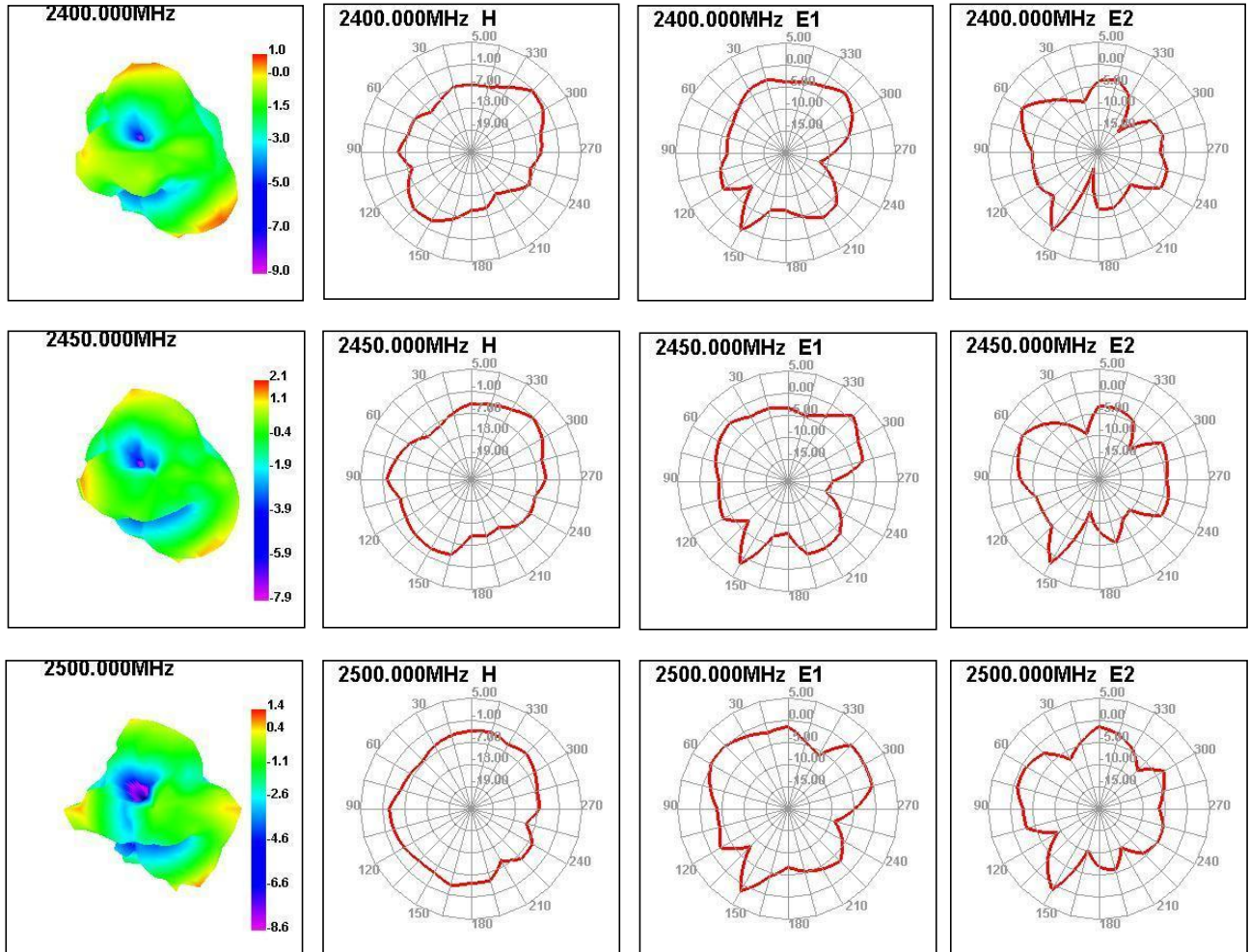
■ Right antenna

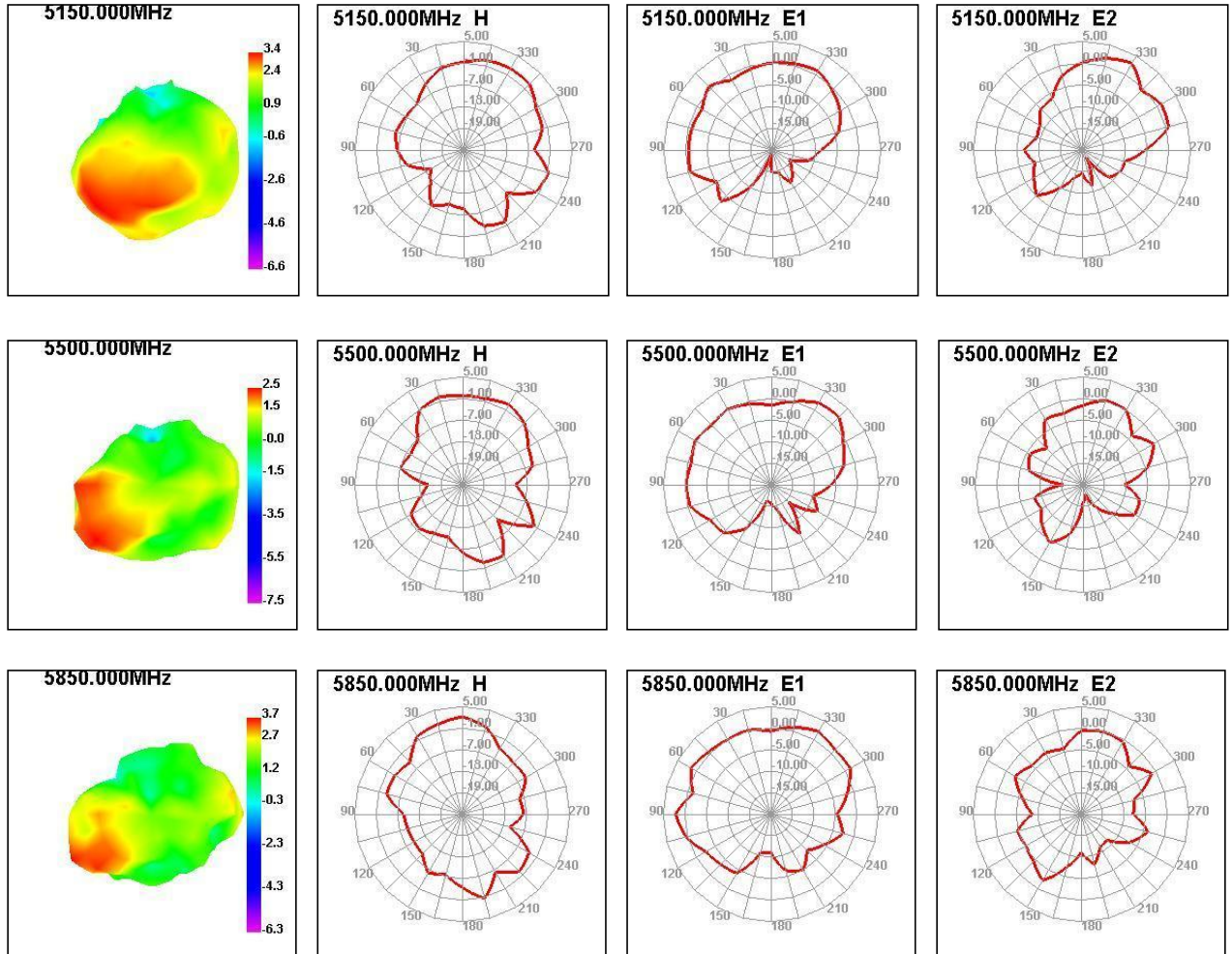
Freq	Effi	Gain
(MHz)	(%)	(dBi)
2400	30.11	1.03
2410	31.63	1.42
2420	34.45	1.88
2430	38.21	2.32
2440	37.14	2.07
2450	34.59	1.51
2460	34.12	1.1
2470	35.58	1.11
2480	35.73	0.86
2490	35.09	0.56
2500	32.76	0.07

Freq	Effi	Gain
(MHz)	(%)	(dBi)
5150	50.73	4.06
5200	47.69	3.66
5250	48.37	3.61
5300	47.57	3.71
5350	51.12	3.71
5400	52.17	3.35
5450	47.96	3.38
5500	48.86	3.43
5550	50.81	3.59
5600	54.66	3.99
5650	55.24	3.75
5700	53.7	3.6
5750	55.35	3.14
5800	52.02	2.89
5850	57.3	3.54

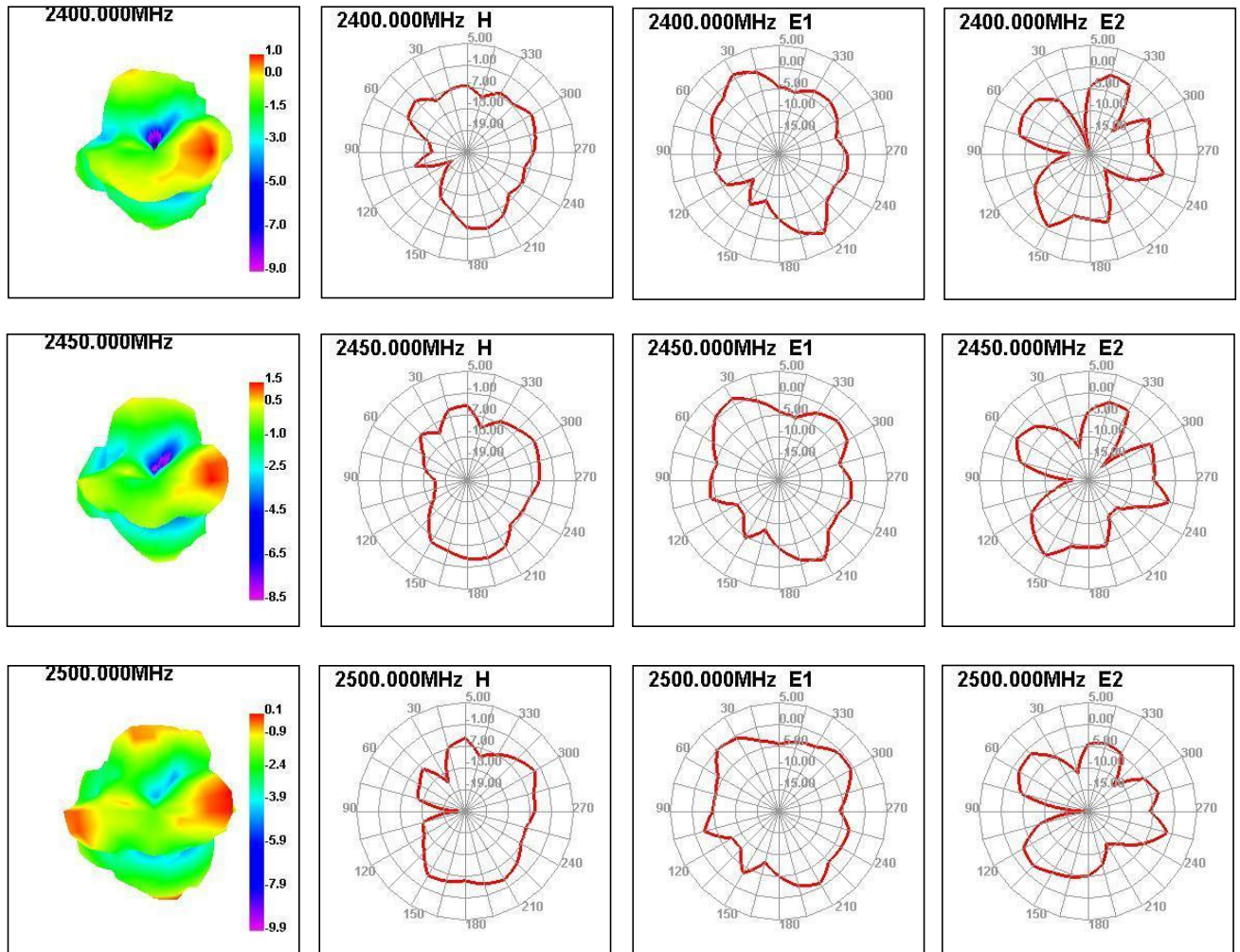
◆ Radiation Pattern

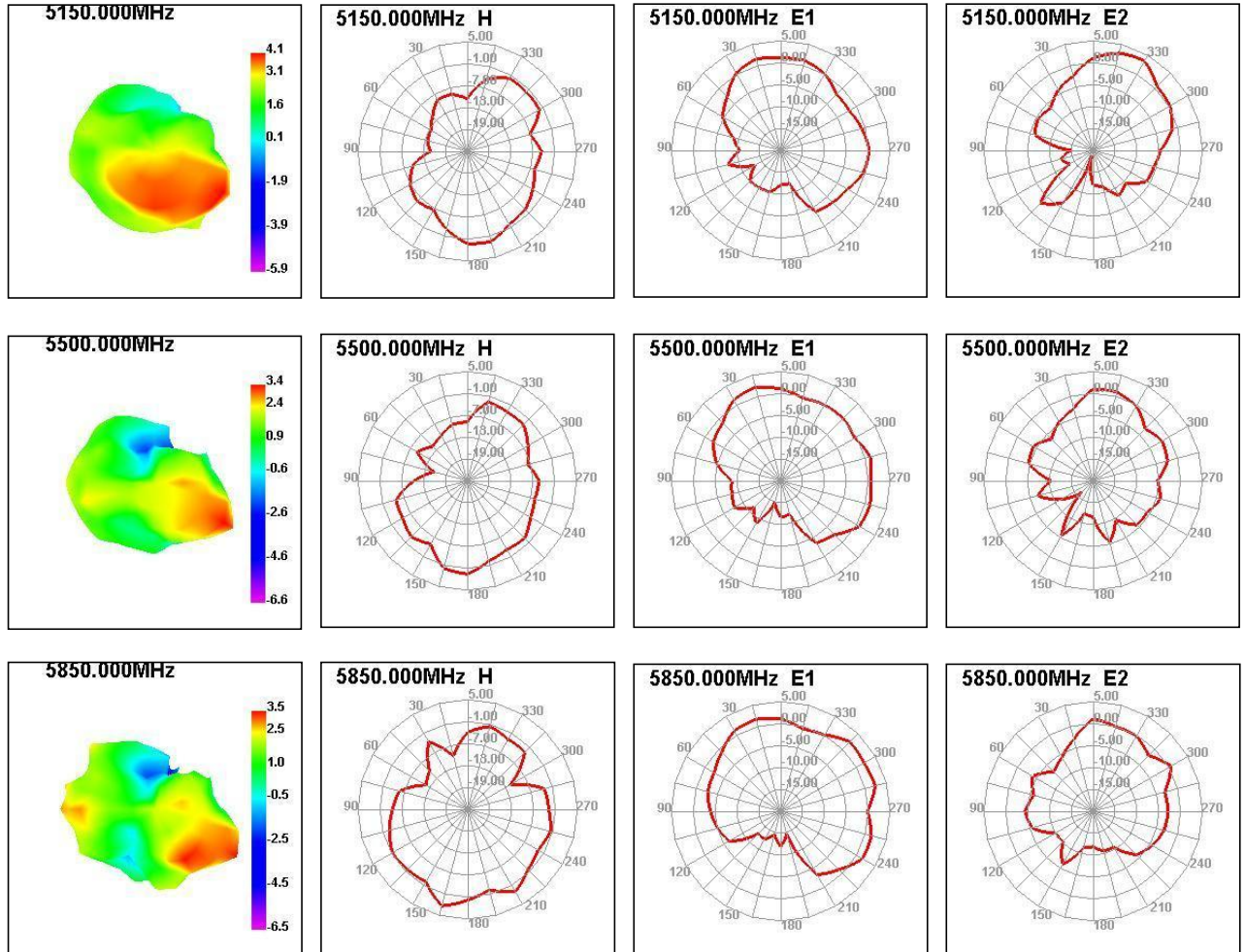
■ Left antenna





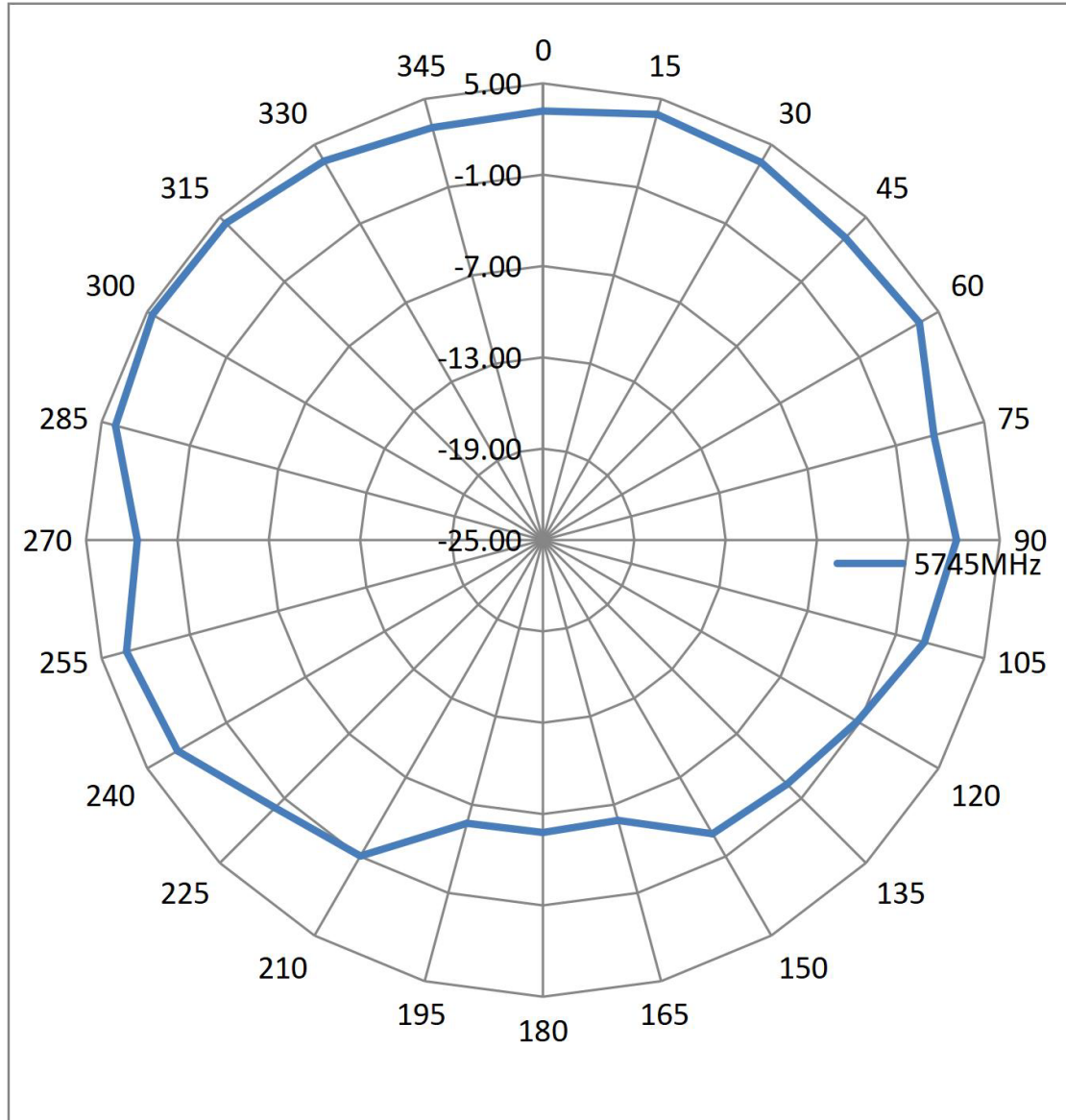
■ Right antenna





◆ Antenna pattern

The horizontal synthesis direction diagram of the antenna



◆ Reliability Test

Test Item		Test condition	Equipment	Specification	Result
1	Low Temp. Storage Test	Temperature: -30℃, Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2	High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃,test antenna after 2 hours.	Temp.&Humi. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3	Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: $35\pm 2^{\circ}\text{C}$ Humidity: 85% NaCl salt spray :$5\pm 1\%$.PH value :6.5~7.2 Test time:24hours	Salt-Spray Tester	No color change No appear rusting	PASS