Shenzhen Guowen Reading Technology Co., LTD

Material acknowledgement

Material: Date: 2024-12-11 Recognition Number: 06-02-01-019-02 Version: V1.0

Part 1: Basic information			
Material name	S2 PRO 2.4G/5.8G WiFi Antenna	Supplier name	Shenzhen Qinxin Technology Co., LTD
ts	Specification: FPC Black, Description: 20.5 * 17 * 0.15. ROHS. Coaxial black / wire L80MM / wire diameter 0.81 / fourth generation terminal, antenna screen printing S 2 PRO-WIFI		
Admitted reason: the first sealed sample ☐ replacement material ☐ upgrade improvement☑			
Provide information:	☑1 Product drawings and specifications 2 safety regulations / EMI associated parts certificate 3 Material certificate / BOM list☐☐ ☐4 attached "RoHS controlled substance non-use guarantee" 5 reliability test standard & test report 6 factory inspection report☑☐ ☐7 Quality acceptance standard 8 Quality control plan ☐ 9 Other relevant information☐		

Part two: Application for examination and approval
Provisional admission: ☐ Limited use (quantity) Officily recognition: batch use ☐ limited use (quantity)☑ Limited reasons:
Applicant date: 2024-08-22

Part three: Design verification examination and approval		
Identify the item		Test content and results
Functional departments countersign	project manager	suggestion: sign:
	ID	suggestion: sign:
	structure	suggestion: sign:
	electron	suggestion: sign:
	engineering	suggestion: sign:
	character	suggestion: sign:
Approval opinion R&D director		

Part 4: Distribution Department	
Sample distribut	Company archive, supplier, processing plant each 1 copy- -a total of 3 copies
remarks	

Catalogue

1 Antenna profile

1.1 Antenna sample

1.2 Composition of the antenna

This project has a kind of antenna: composed of FPC coaxis. The whole antenna provided by our company is as shown in Table 1-1.

Table 1-1, Detailed table of the antenna

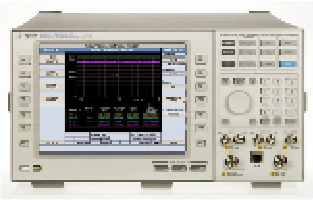
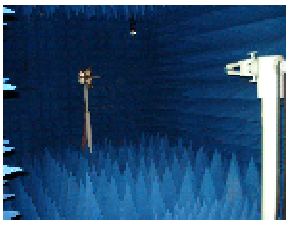
name	S2PRO 2.4/5.8G/WiFi	
material quality	The FPC + copper axis	
quantity (pcs)	1	

2 The antenna test environment

2. 1 External test environment

Our main test equipment is shown in the table below.

Table 2-2. Main test equipment

order number	device name	Device pictures	Measurement index	operational environment
1	**Agilent 8960 Integrated tester**		**Active performance**	Normal temperature and humidity
2	Microwave darkroom			
3	**ADVANTEST R3765BH Network analyzer**		**Passive performance**	There is no large metal around it
				Normal temperature and humidity

2. 1.1 A passive test

The connection of the test device is: network analyzer test line test equipment.

2. 1.2 Active testing

The main performance indicators of active testing: total radiation power (TRP), omnidirectional sensitivity (TIS).

Test site

Microwave dark chamber: the frequency range is 700 MHz-6 GHz, the static area range is 50cm circumference, and the reflectivity is less than-50 dB.

Test instrument

Network analyzer, CMW500, standard horn antenna, GTS1800 test system, printer, etc.

3 Main antenna

3.1 Matching circuit

Antenna match is not changed

3.2 Test results

The antenna operating frequency band is at 2400MHz~2500MHz,5725-5.850MHZ. It is the index of the electrical performance of our designed and mass-produced antenna.

The antenna performance values are shown in the following below:

P60Q	CHannel	TRP	TIS
2.4G 802.11B-11Mbps	1	14.71	-82.6
	7	14.15	-81.8
	11	14.16	-82.3

P60Q	CHannel	TRP	TIS
5G802.11A-54Mbps	36	12.57	-68.9
	149	13.25	-68.8
	165	10.93	-67.9

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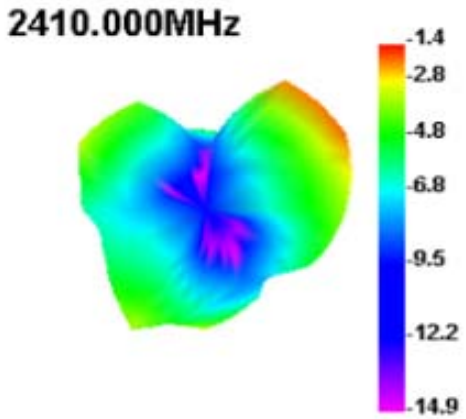
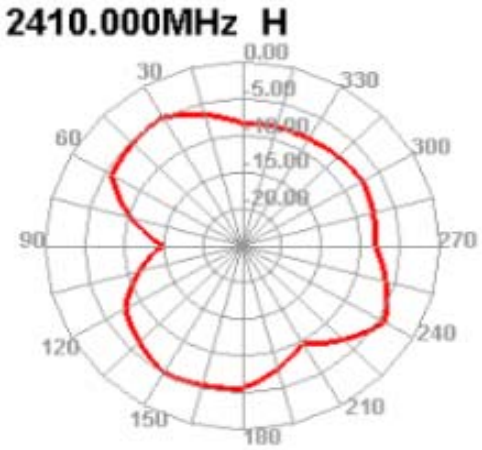
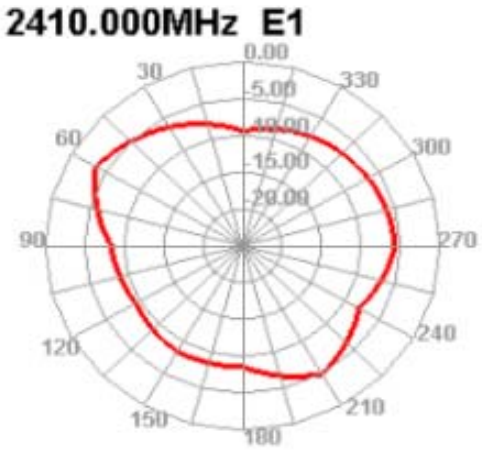
Antenna efficiency and gain data

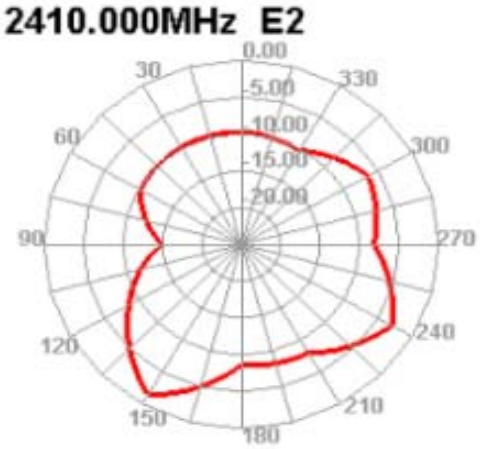
Freq (MHz)	Effi (%)	Gain (dBi)	5180	37.1	2.32	5390	55.03	3.38	5600	67.85	3.91
			5190	47.2	3.43	5400	64.5	4.35	5610	63.05	3.52
2400	37.15	1.56	5200	45.98	3.3	5410	65.23	4.37	5620	67.05	3.78
2410	38.14	1.63	5210	45.75	3.16	5420	66.41	4.17	5630	65.34	4.82
2420	39.14	1.66	5220	43.23	2.73	5430	65.31	4.49	5640	63.68	3.79
2430	40.13	1.68	5230	40.96	2.63	5440	63.86	4.05	5650	68.07	4.25
2440	41.72	1.83	5240	48.52	3.26	5450	65.65	4.67	5660	64.96	4.24
2450	43.2	2.02	5250	49.85	3.27	5460	65.58	4.18	5670	64.16	3.54
2460	43.03	1.91	5260	48.82	3.3	5470	67.54	4.24	5680	62.51	3.4
2470	42.99	1.94	5270	47.38	2.94	5480	65.7	4.49	5690	62.66	3.3
2480	44.78	1.97	5280	43.62	2.58	5490	65.7	3.9	5700	62.78	3.84
2490	44.84	1.87	5290	49.03	2.97	5500	68.52	4.73	5710	64.28	4.27
2500	42.97	1.6	5300	48.44	2.89	5510	64.28	4.53	5720	62.4	3.98
			5310	51.15	3.2	5520	65.18	3.65	5730	62.1	3.38
			5320	54.67	3.49	5530	64.15	3.47	5740	61.19	3.3
			5330	50.66	2.97	5540	67.85	4.35	5750	61.26	3.72
			5340	53.13	3.3	5550	68.44	3.66	5760	61.9	3.57
			5350	53.17	3.36	5560	66.66	3.65	5770	59.49	4.21
			5360	56.69	3.57	5570	68.8	4.2	5780	58.87	4.36
			5370	58.94	3.79	5580	64.45	3.37	5790	53.91	2.94
			5380	57.62	3.55	5590	63.68	3.41	5800	52.98	3.08
									5810	57.58	3.53

antenna pattern:









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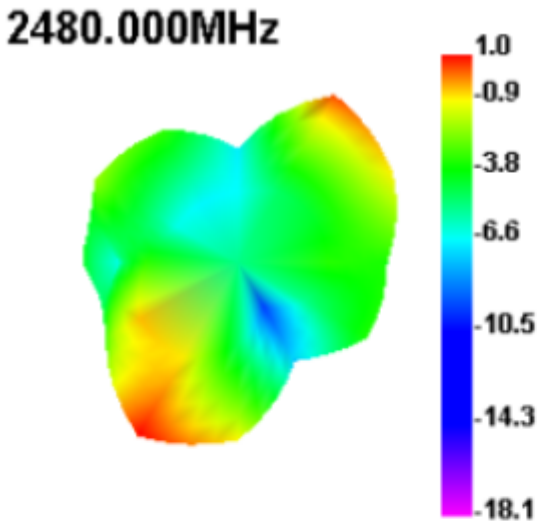

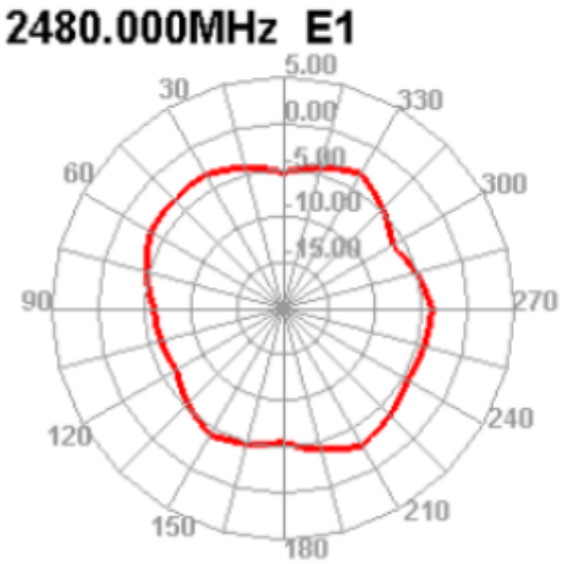

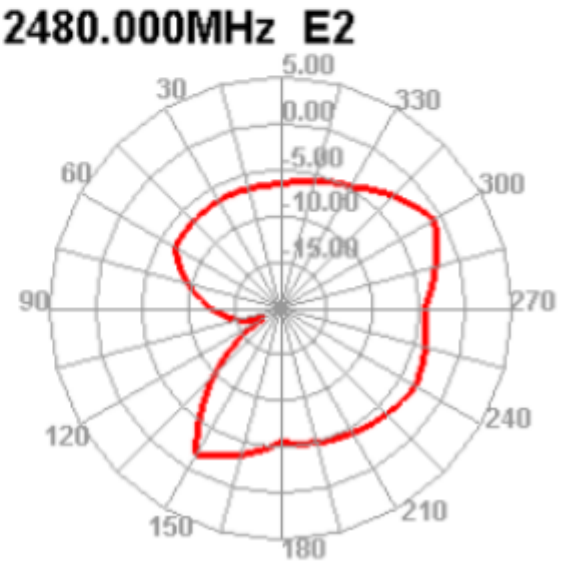

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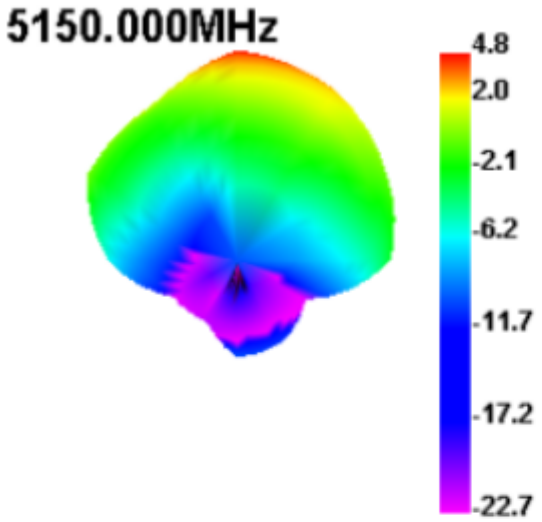

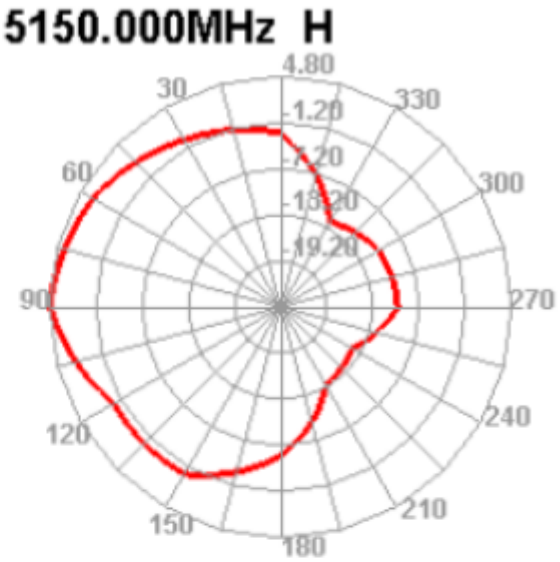

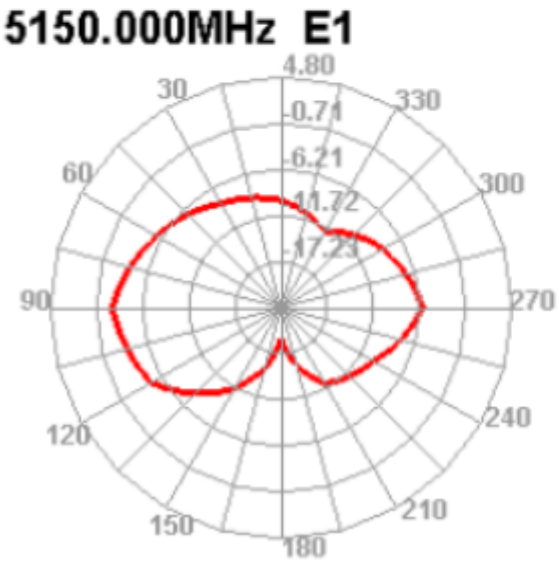

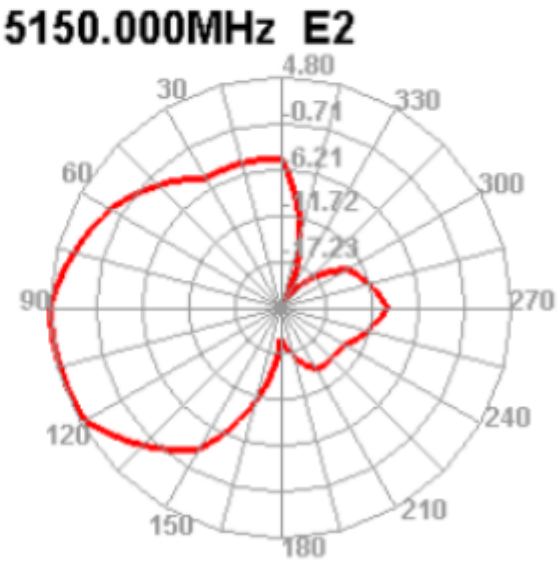

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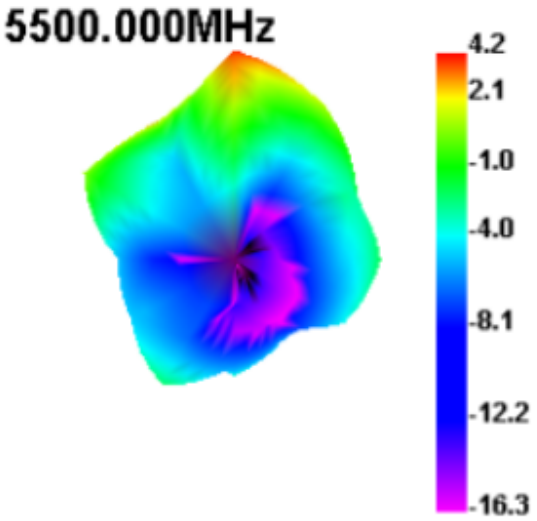

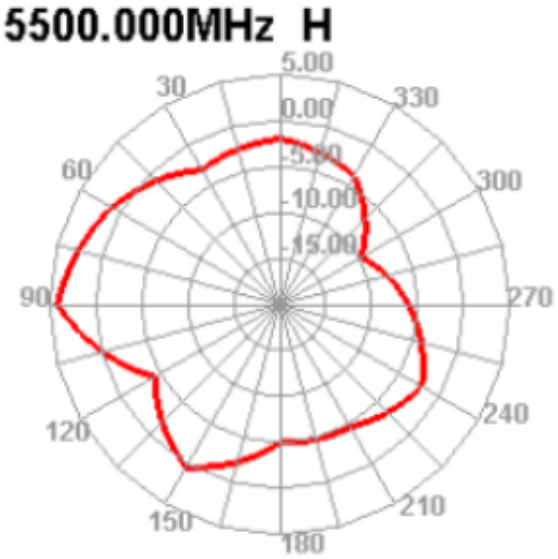

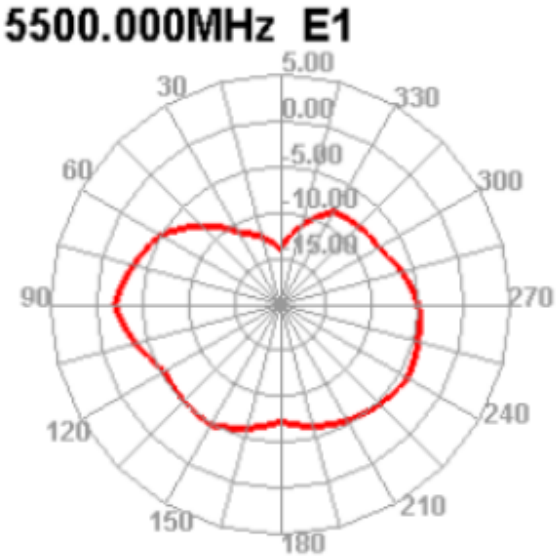

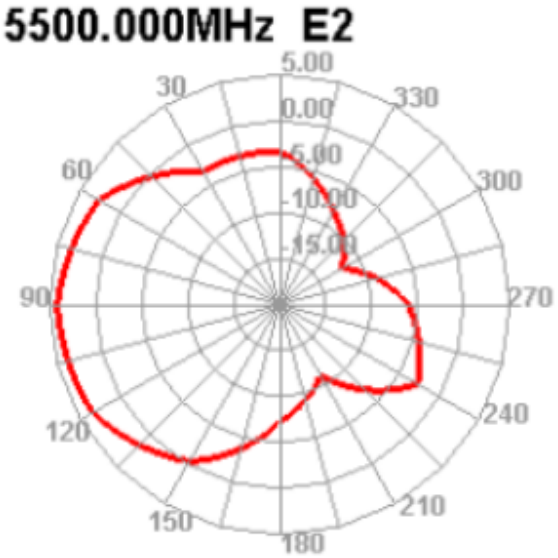

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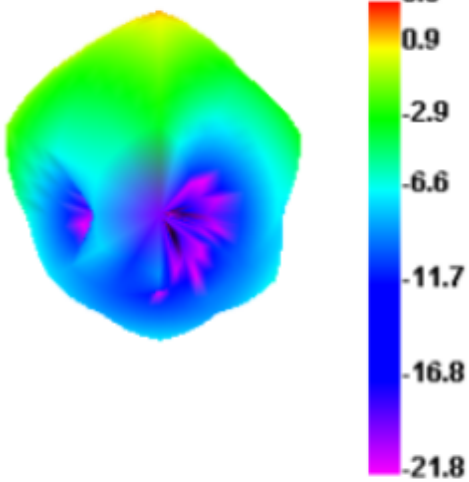
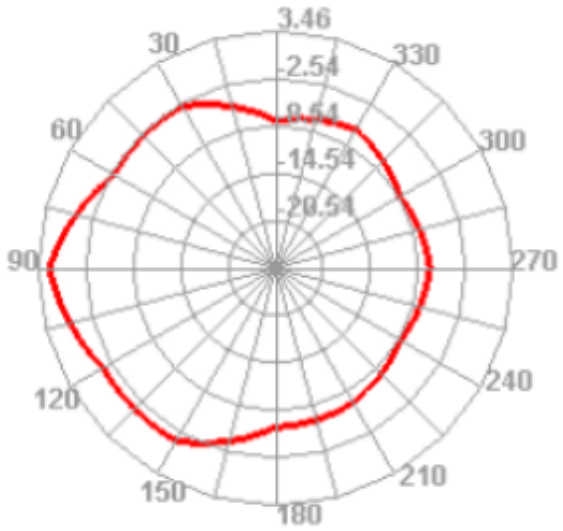
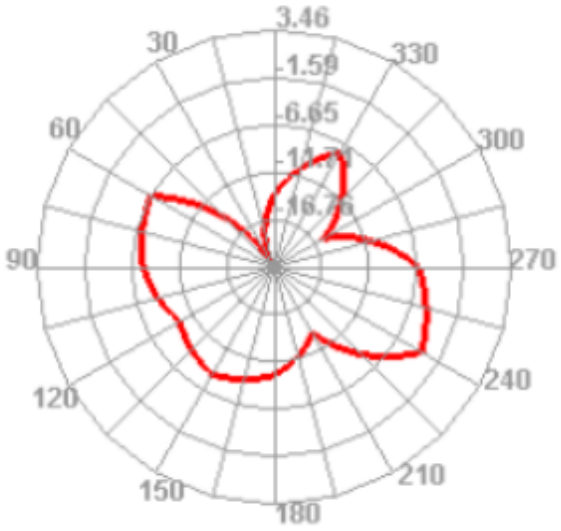
5750.000MHz



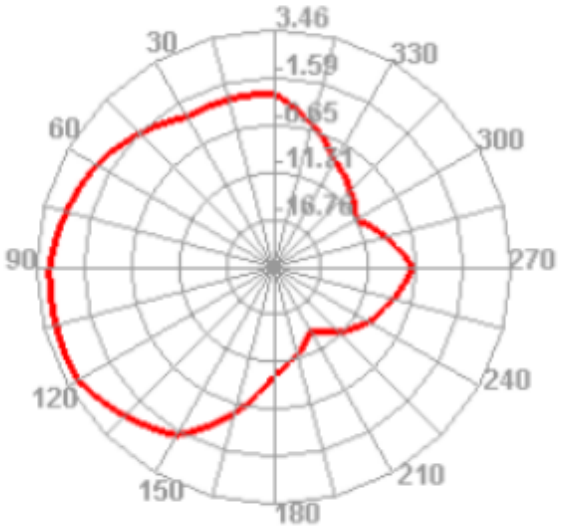
5750.000MHz H



5750.000MHz E1



5750.000MHz E2



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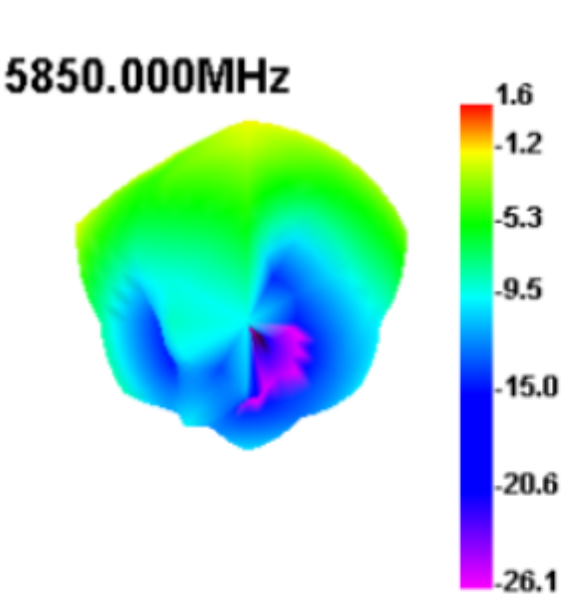

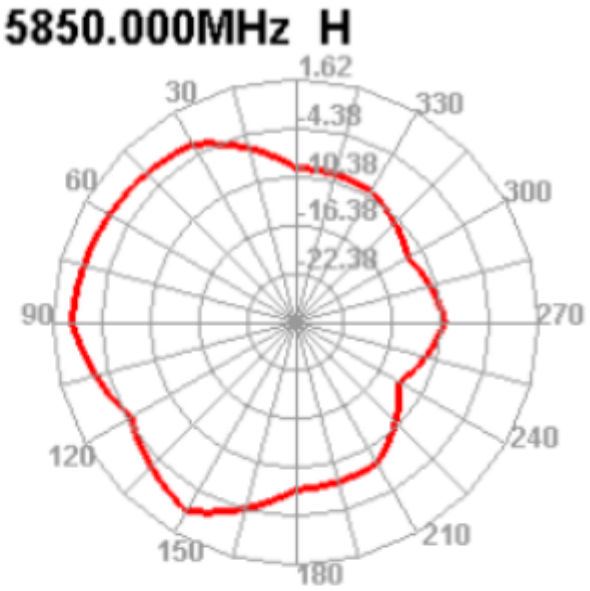

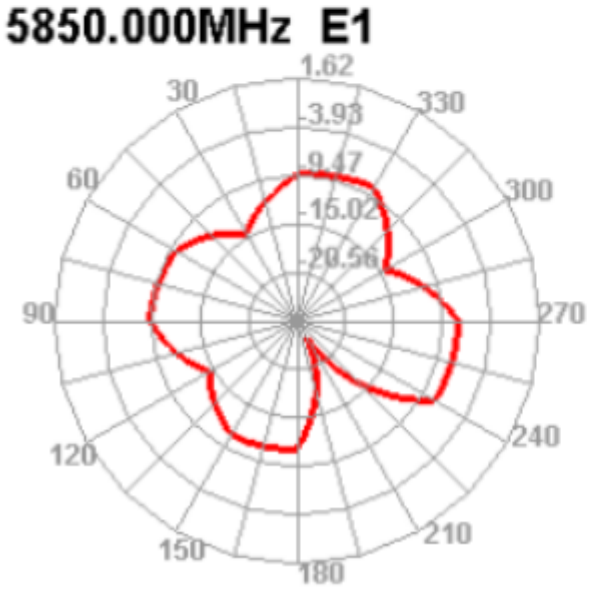

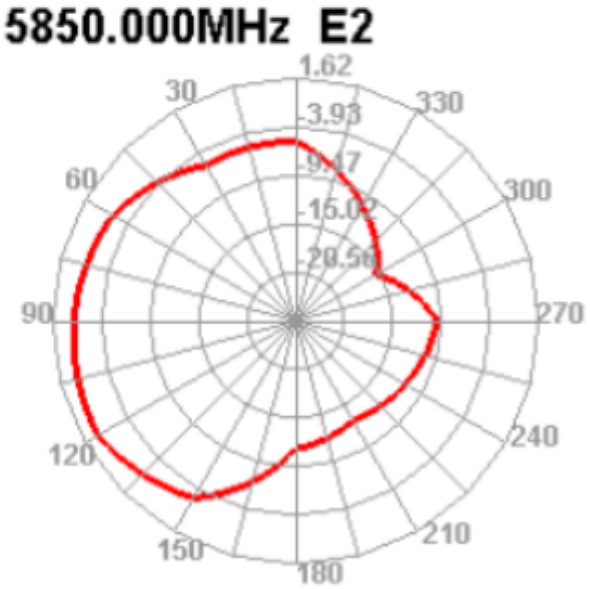

4、Complete Machine Status:

5. Conclusion

Antenna is designed based on customer-provided prototype, electrical parameters and structural requirements, please confirm!

6. Assembly diagram