Shenzhen Aihui Technology Co. , Ltd.

Antenna specification

Antenna Sample Confirmation From

Name of supplier	ShenZhen Aihui Technology Co., Ltd				
Customer name	Ju ren				
Sample name	M1095-V2.0				
model					
Sample size	Main antenna:80MM 3rd generation line screen printing：JR-M1095-4G-AH-V2.0 conductive fabric： 10*15 Three in one antenna:35MM 3rd generation line screen printing：JR-M1095-WGB-AH-V2.0 Diversity antenna:35MM 3rd generation line screen printing：JR-M1095-DIV-AH-V2.0				
Inspection item	Performance test	Visual inspection	Structure	In the news	Test results
Notes					
Quality Audit		Project Audit		Business confirm	

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				ation	
The following is to be completed by the client					
Customer feedback					
Customer signature/seal	date:				

Antenna Test Report

Test Unit: Shenzhen Aihui Technology Co. , Ltd.	
Materials	FPC

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Antenna form	PIFA	Polarization mode	Linear
Application scenario	W/G/B		
Working band	2400Mhz-2500Mhz 5100Mhz-5850Mhz 824MHZ-2690MHZ	VSWR	≤2
Power	Max : 2W	Impedance	50Ω
dBi	≥ 1dB ±0.5DB		
Test Equipment	HPE5071C、Shielding Room、3D automatic turntable		

Antenna Description: :

1. Grounding processing and picture description: no

2. Need to change the motherboard to match: no

- Test voltage: 3.6V, check the antenna contact is good before testing.
- The RF cable of the integrated tester is kept in a natural state and can not be curled.

Specification:test the specified power level, all indicators must conform to the specifications.

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Shenzhen Aihui Technology Co. , Ltd.

1.Project Image

2.Test Fixture

3.Antenna matching circuit

4.S11 test

5.Antenna passive efficiency and gain

6.Darkroom test equipment and data

7.Schematic diagram of antenna assembly

8.Antenna environment handling

9.Antenna mass production index

10.Structural drawing

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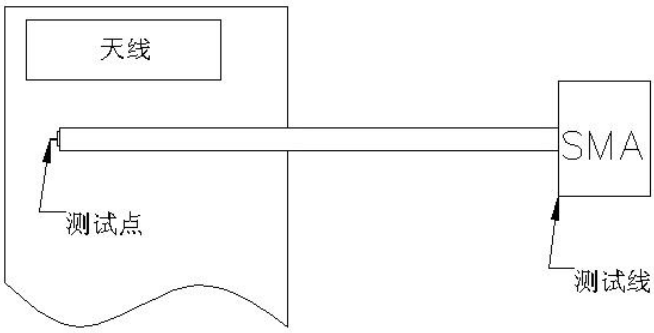
1.Project Image

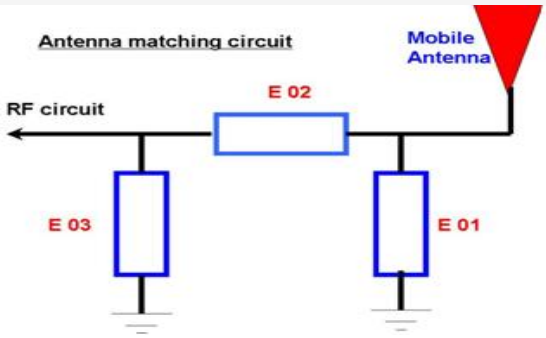
The final verification antenna performance prototype in our company for at least one year, easy to analyze and solve the problem of antenna mass production, to ensure the quality of antenna shipment

2.Test Fixture

Objective: to test the passive parameters of antenna as accurately as possible. Making Method: the handset is made of a 50 ohm coaxial cable, one end of which is connected to the test point of the back end of the matching circuit of the handset motherboard (front end of the RF test hole) , and the other end is connected to the SMA joint. The diagram is as follows:



3、Antenna matching circuit



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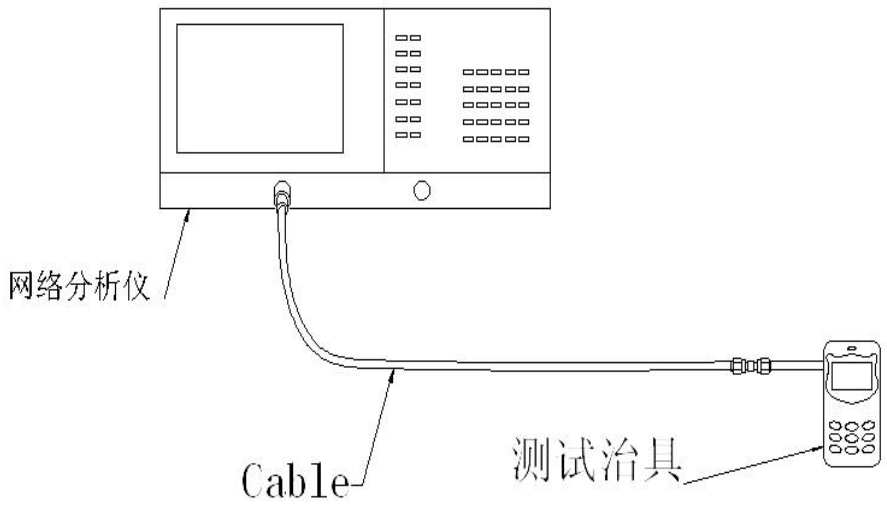
Modify

E01	E02	E03
No	No	No

Note: The match is unmodified.

4.S11 test

4.0 4.0s11 test method description of test equipment: Network Analyzer (E5071C) test method: a 50 ohm CABLE is used to export from the instrument test port. The SMA connector for connecting the handset is calibrated using a calibration piece, record the echo loss and standing wave ratio corresponding to the relevant frequency points. The test schematic is as follows:



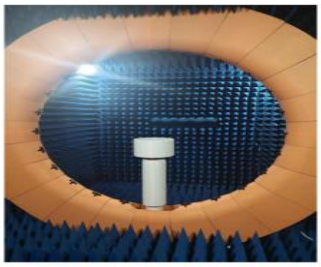
5.Darkroom test equipment and data

6.Test Equipment

Test system: shielded darkroom

The temperature was 22 ° C ± 3 ° C and the humidity was 50% ± 15%

Test equipment: when testing passive data, use the Network analyzer AGILENTE5071C to test active data, use the omnibus CMW500



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7.Active antenna test data

Frequency Band	GMS:850			1900		
channel	L	M	H	L	M	H
TRP	26.66	26.74	26.41	25.65	25.44	24.19
TIS			-100.52			-103.63
Frequency Band	900			1800		
channel	L	M	H	L	M	H
TRP	24.24	24.44	24.16	23.22	23.44	23.16
TIS			-98.65			-101.90

Frequency Band	WCDMA:W1			W2		
channel	L	M	H	L	M	H
TRP	17.54	17.44	17.63	18.65	18.44	17.41
TIS			-102.91			-103.09
Frequency Band	W5					
channel	L	M	H			
TRP	16.36	16.44	16.30			
TIS			-100.19			

Frequency Band	LTE B2			LTE B4		
channel	L	M	H	L	M	H
TRP	17.65	16.77	17.41	16.21	16.11	16.19
TIS			-90.52			-88.10
Frequency Band	LTE B5			LTE B7		
channel	L	M	H	L	M	H
TRP	15.85	16.44	16.30	18.65	18.44	18.25
TIS			-89.61			-90.16
Frequency Band	LTE B13			LTE B28A		
channel	L	M	H	L	M	H
TRP		15.63		15.71	15.77	16.30
TIS		-88.52				-89.16

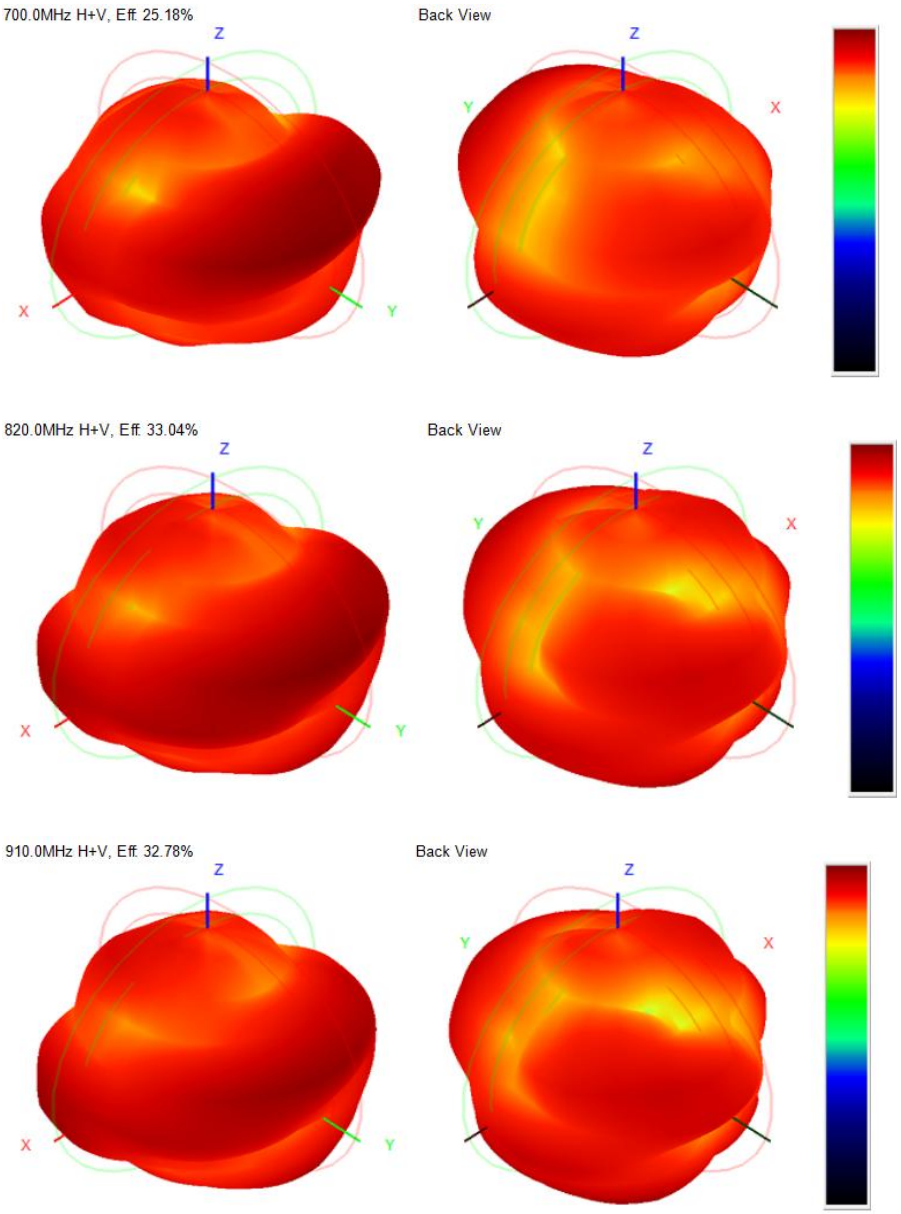
Frequency Band	LTE B28B			LTE B66		
channel	L	M	H	L	M	H
TRP	15.81	16.32	16.05	16.33	16.25	16.14
TIS			-88.15			-88.10

Frequency Band	WIFI-2.4G-B模			WIFI-2.4G-G模		
channel	L	M	H	L	M	H
TRP	13.52	14.44	13.63	12.32	12.82	12.41
TIS			-82.52			-70.66
Frequency Band	WIFI-2.4G-N模			WIFI-5.8G-A模		
channel	L	M	H	L	M	H
TRP	11.65	12.04	12.52	10.32	10.44	9.52
TIS			-68.65			-72.60

8.Antenna passive test data

Main antenna

Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
700M	0.39	-4.54	25.18%
730M	0.63	-4.18	27.15%
760M	1.03	-3.38	30.88%
790M	0.96	-3.55	32.17%
820M	0.83	-3.73	33.04%
850M	1.25	-3.29	32.4%
880M	1.17	-3.34	34.88%
910M	0.66	-4.26	32.78%



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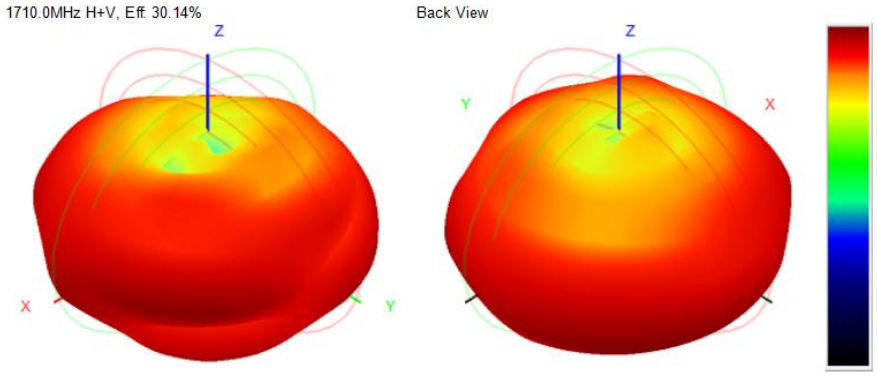
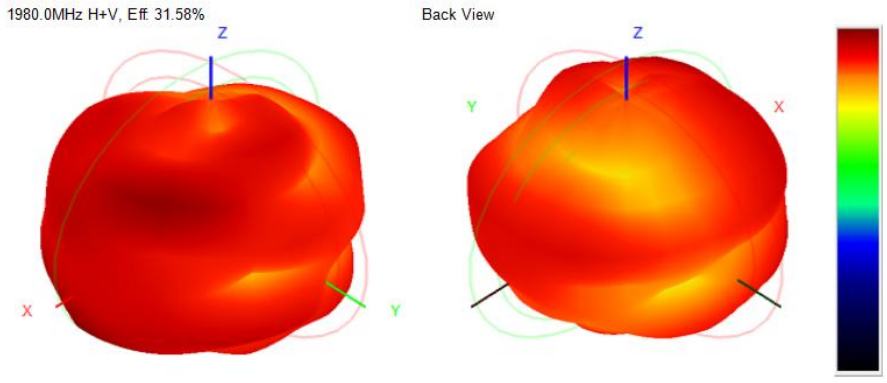
Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
1710M	0.96	-4.21	30.14%
1743M	0.76	-3.96	32.22%
1777M	1.01	-3.77	33.24%
1811M	1.3	-3.98	32.58%
1845M	0.99	-3.57	34.19%
1878M	0.82	-4.08	31.69%
1912M	1.21	-3.42	33.75%
1946M	1.33	-3.34	35.44%
1980M	1.03	-4.05	31.58%
2014M	0.68	-4.16	30.62%
2047M	0.85	-3.85	32.61%
2081M	0.91	-3.62	34.62%
2115M	1.13	-3.85	33.98%
2149M	1.45	-3.89	32.12%
2183M	0.89	-3.56	34.98%





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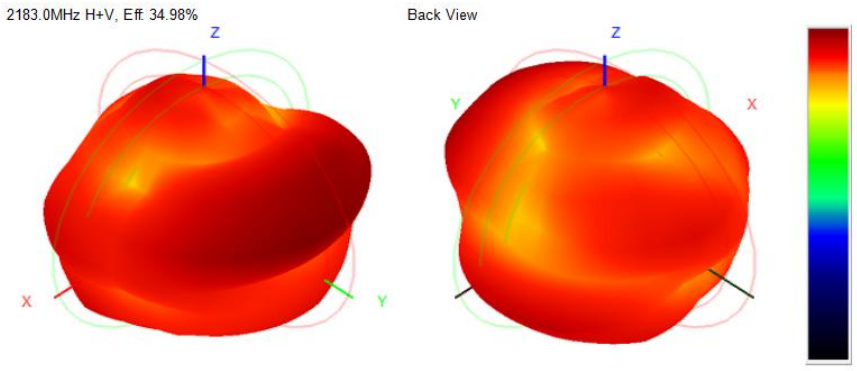
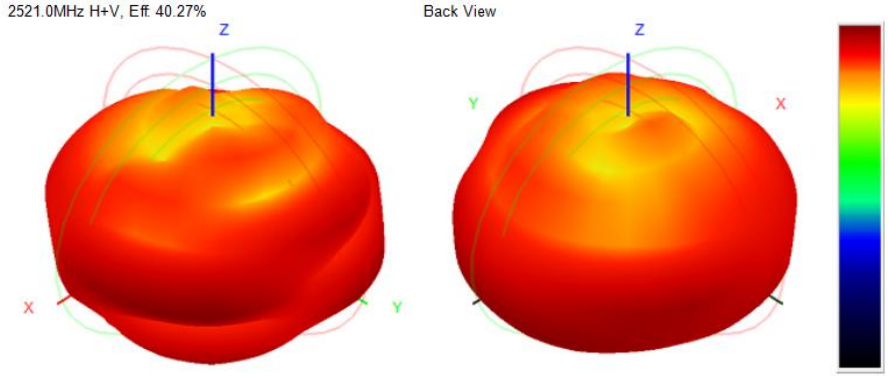
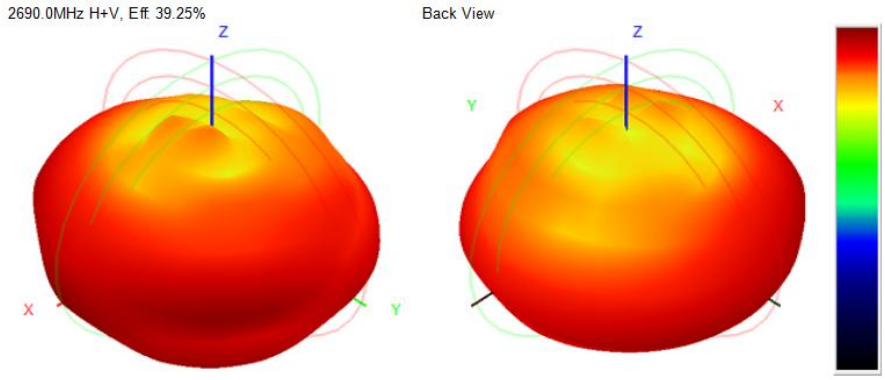


2521M	0.83	-3.95	40.24%
2554M	0.86	-3.9	40.72%
2588M	1.39	-4.13	38.65%
2622M	1.25	-4.23	37.73%
2656M	0.62	-4.31	37.1%
2690M	0.83	-39.99	39.25%





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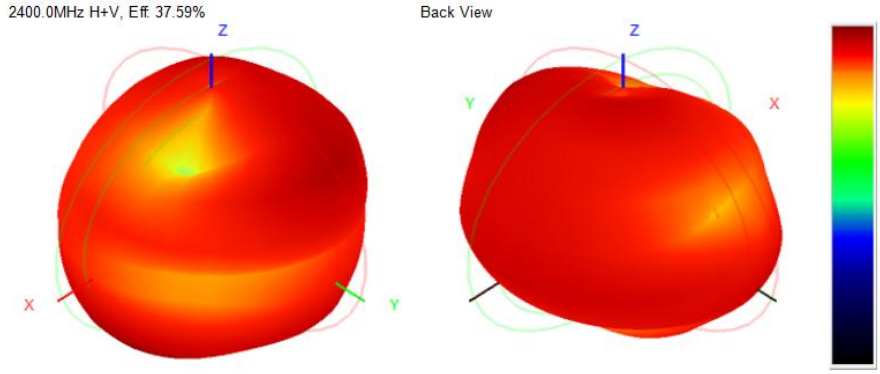
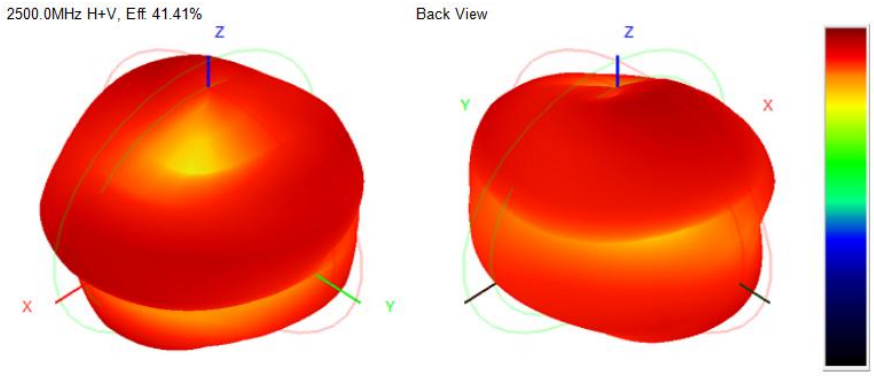
Three-way antenna

Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
2400M	0.86	-3.73	37.59%
2420M	1.16	-3.38	38.59%
2440M	1.27	-3.13	38.49%
2460M	0.96	-3.63	40.18%
2480M	1.24	-3.15	40.03%
2500M	1.53	-3.04	41.41%





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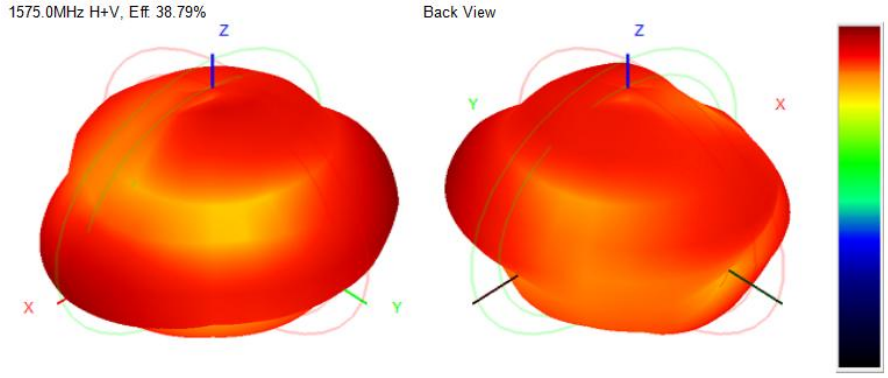
Gain&Efficiency 增益和效率			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
1565M	0.98	-4.23	36.68%
1575M	0.86	-4.33	38.79%
1585M	0.93	-4.16	36.39%
1595M	0.83	-4.38	35.42%



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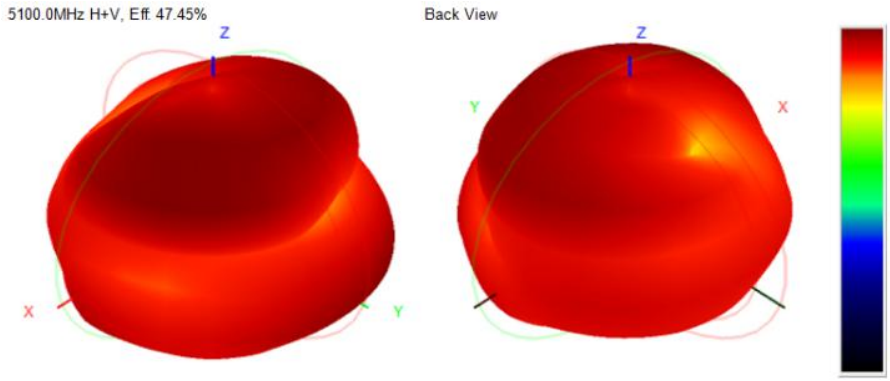
Gain&Efficiency			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
5050M	1.56	-3.47	48.34%
5100M	1.62	-3.43	47.45%
5150M	1.44	-3.86	49.29%
5200M	1.36	-3.17	50.43%
5250M	1.51	-2.97	52.42%
5300M	1.61	-3.13	51.47%
5350M	1.63	-3.55	50.33%
5400M	1.35	-3.02	52.14%
5450M	1.47	-3.34	50.17%
5500M	1.43	-3.43	51.19%
5550M	1.58	-3.24	48.69%
5600M	1.57	-3.61	49.51%
5650M	1.37	-3.88	48.13%
5700M	1.8	-3.79	50.87%
5750M	1.74	-4.1	52.09%
5800M	1.64	-4.22	49.34%
5850M	1.49	-4.31	50.19%



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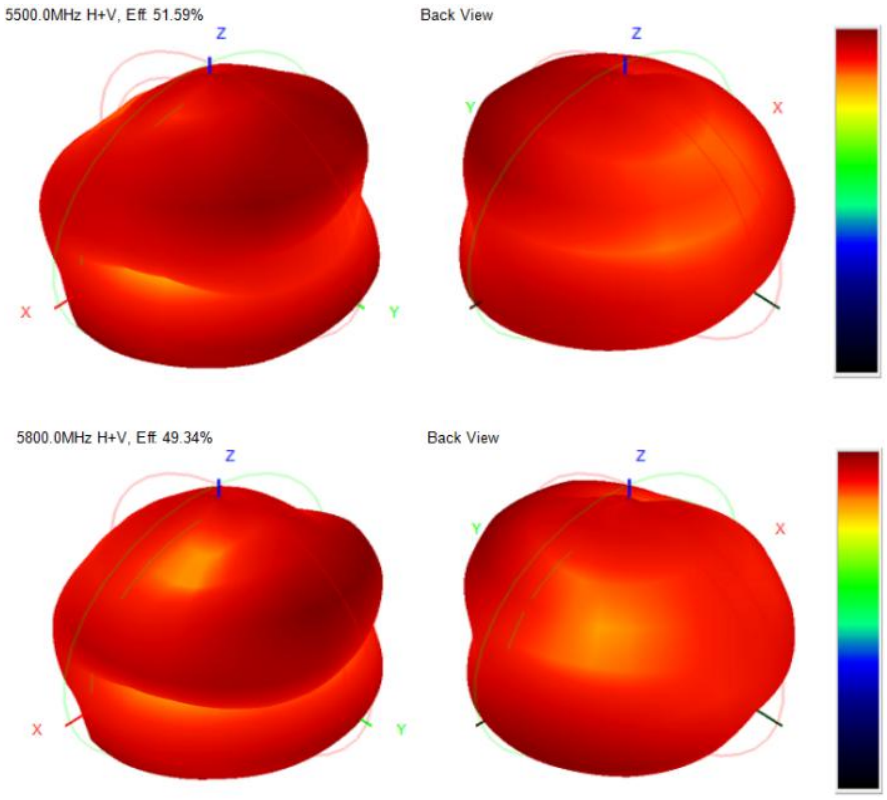
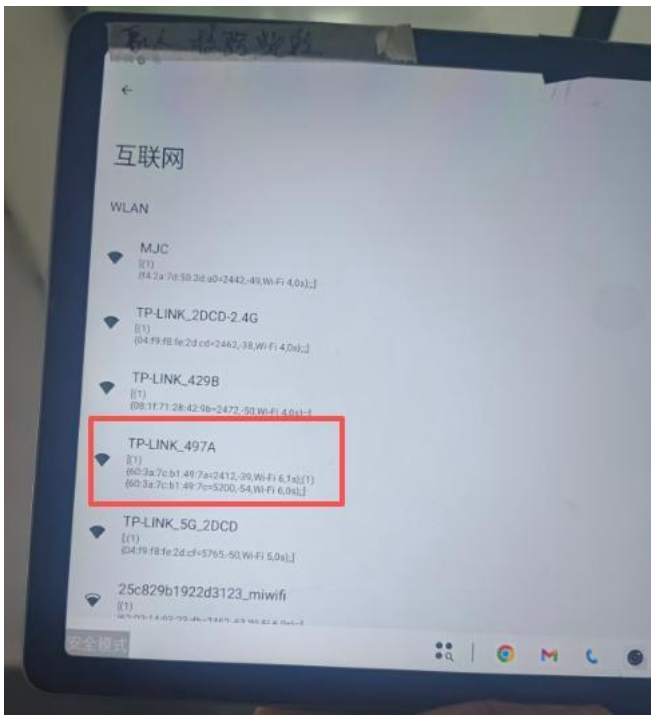


9.WIFI antenna actual measurement

The signal is full strength 10 meters away from the hotspot, and internet access is normal



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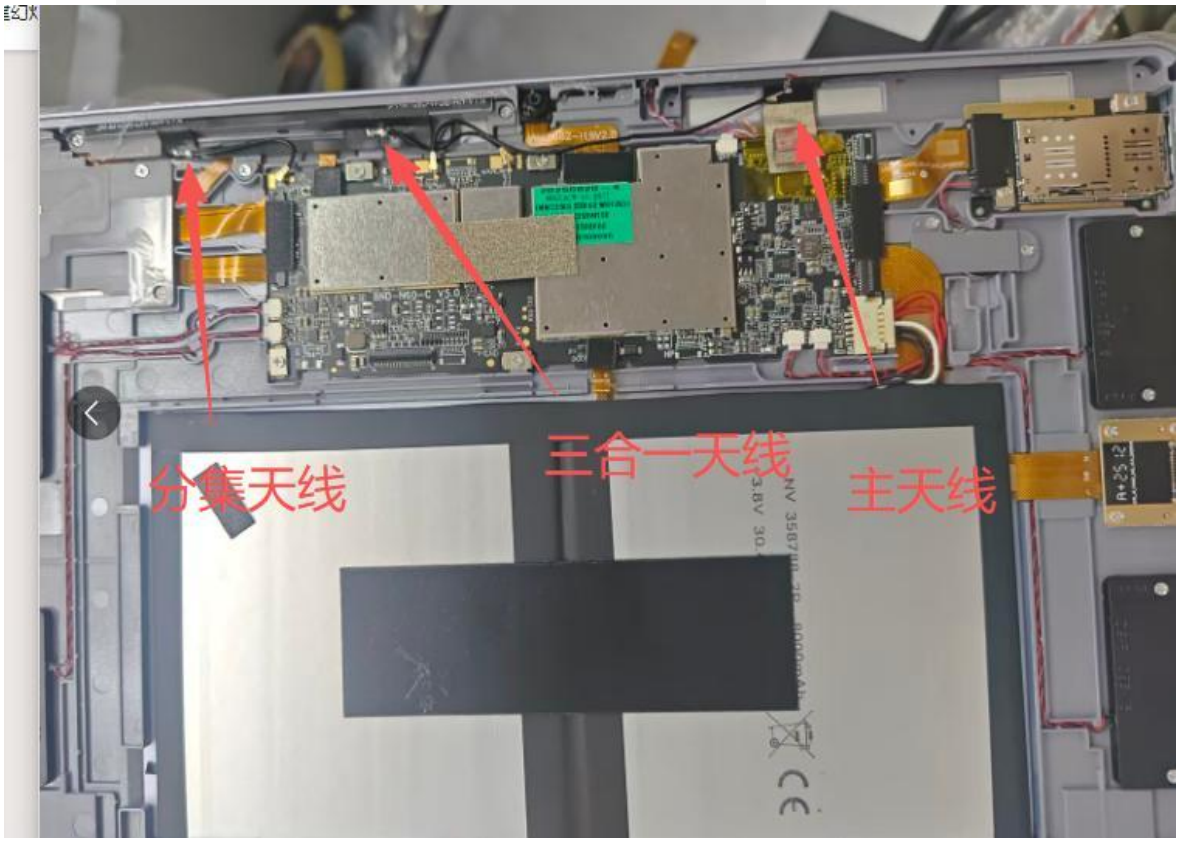
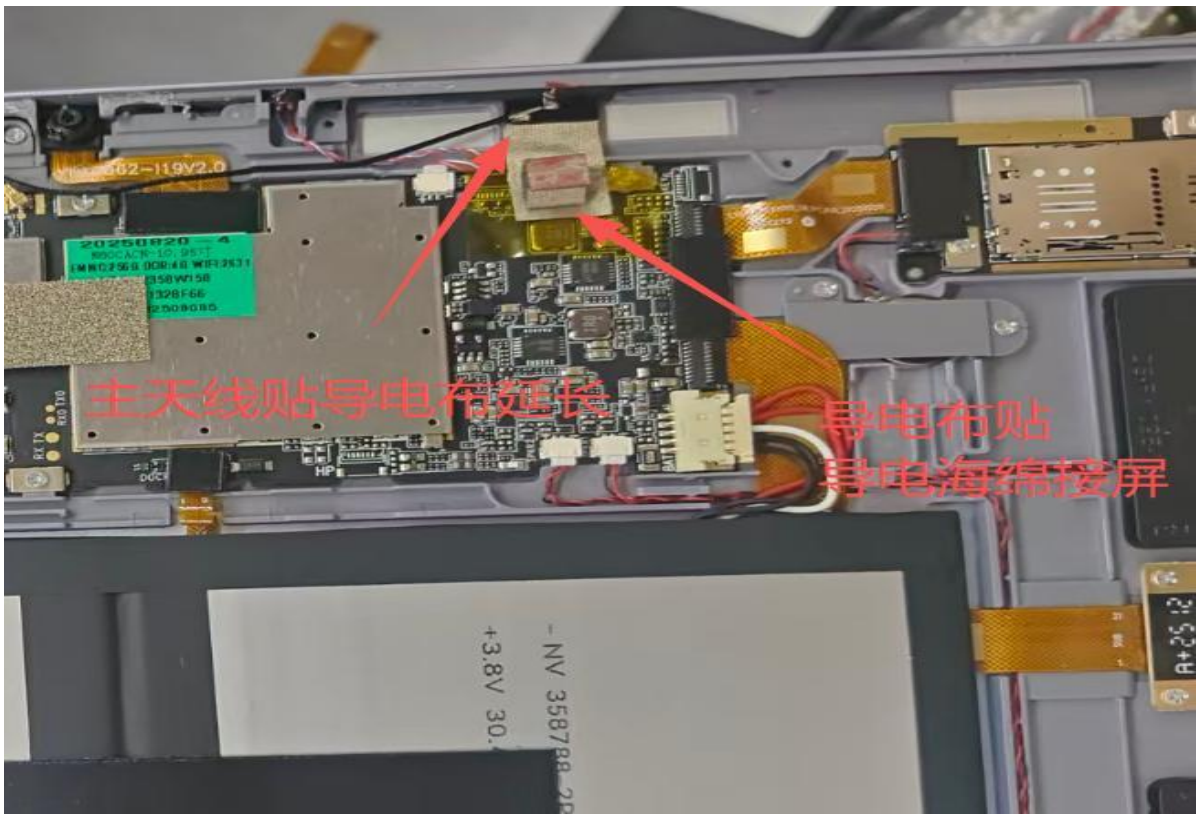
10. GPS antenna actual measurement

The testing location is our company's window sill positioning time of 40 seconds or more, 2-3 pieces, 35 pieces or more, 4-6 pieces

11. Antenna assembly diagram





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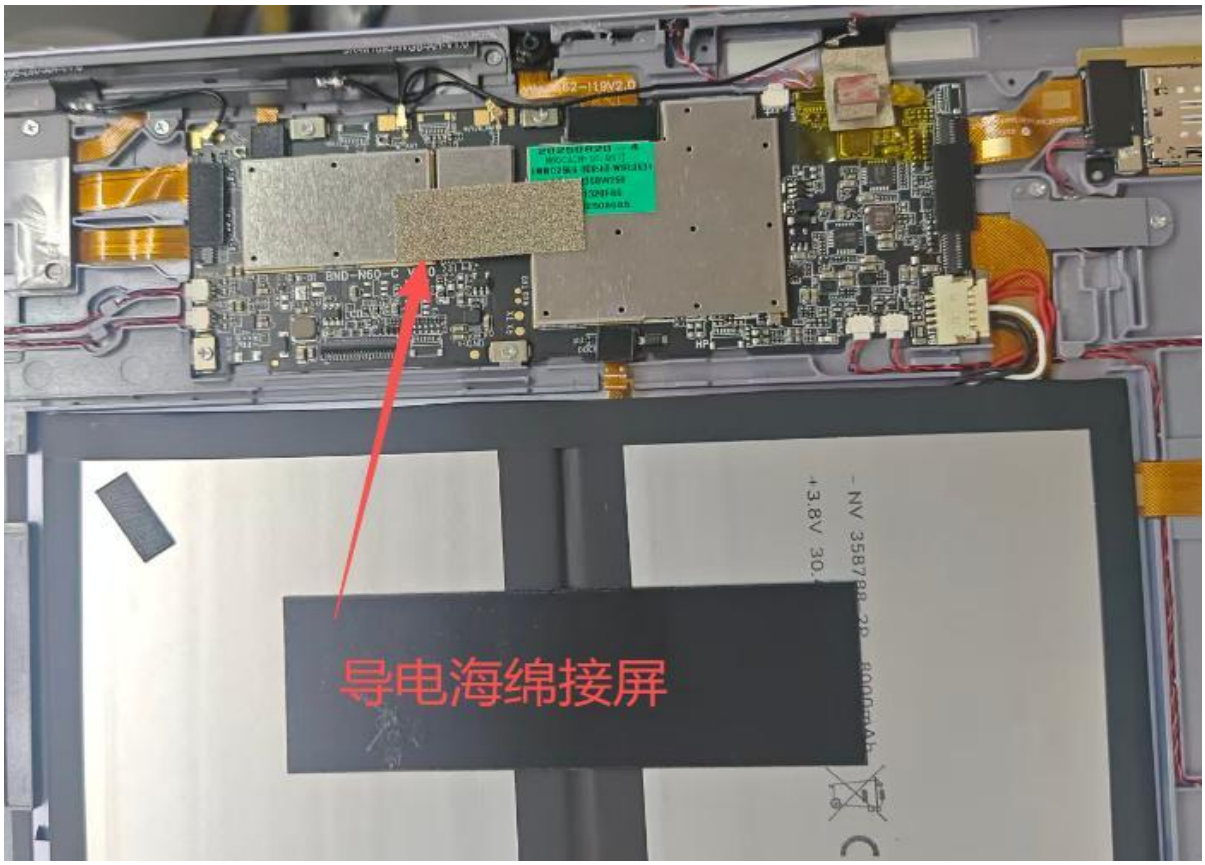

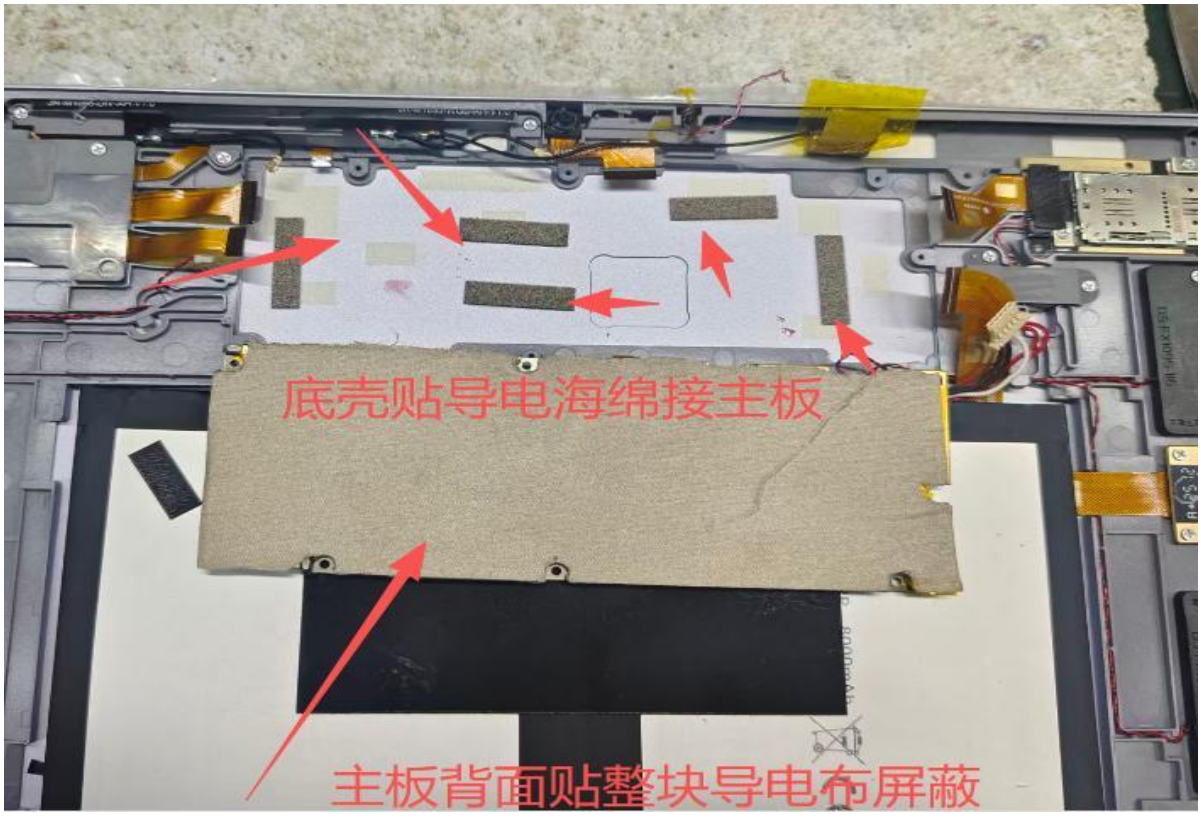

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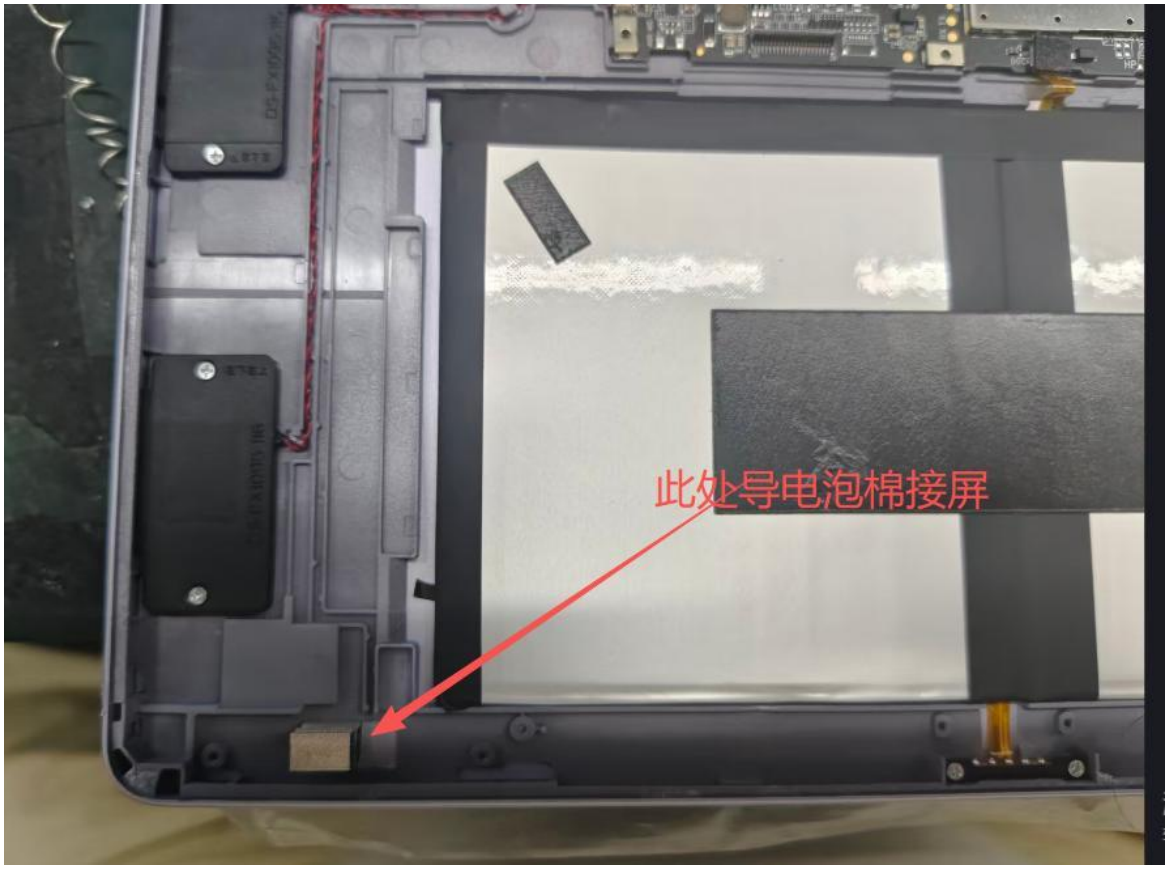

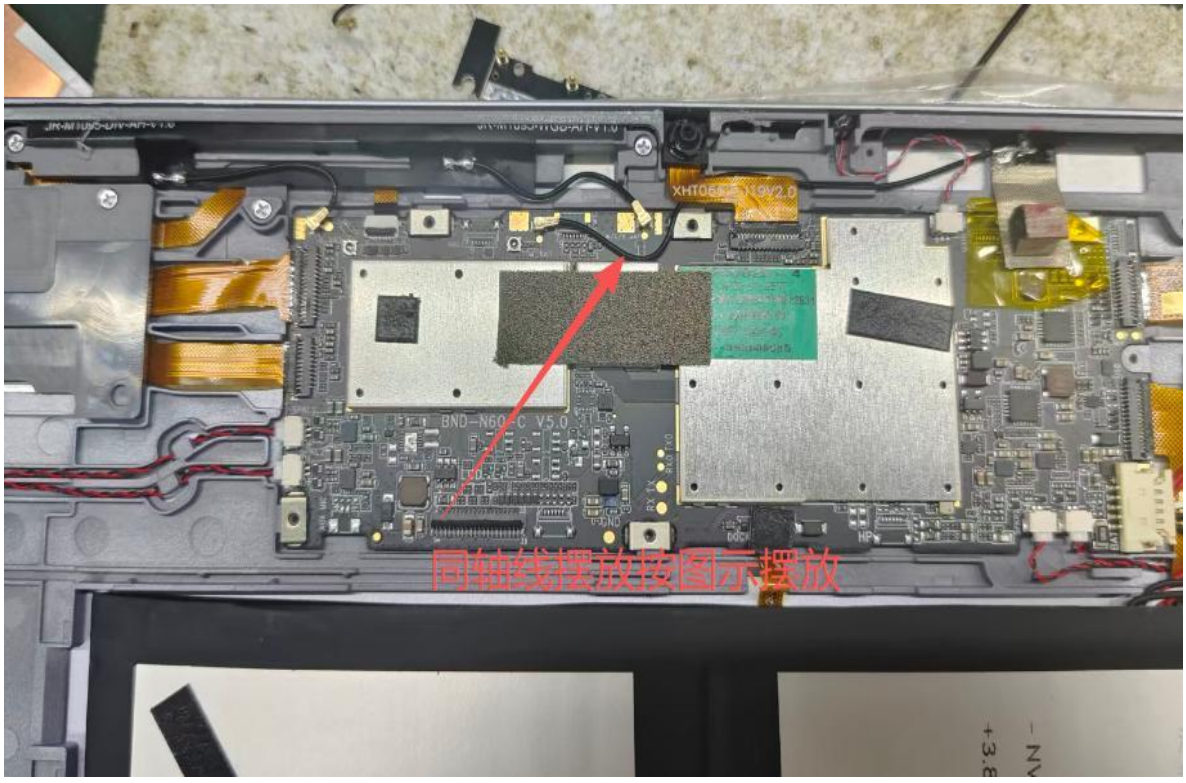

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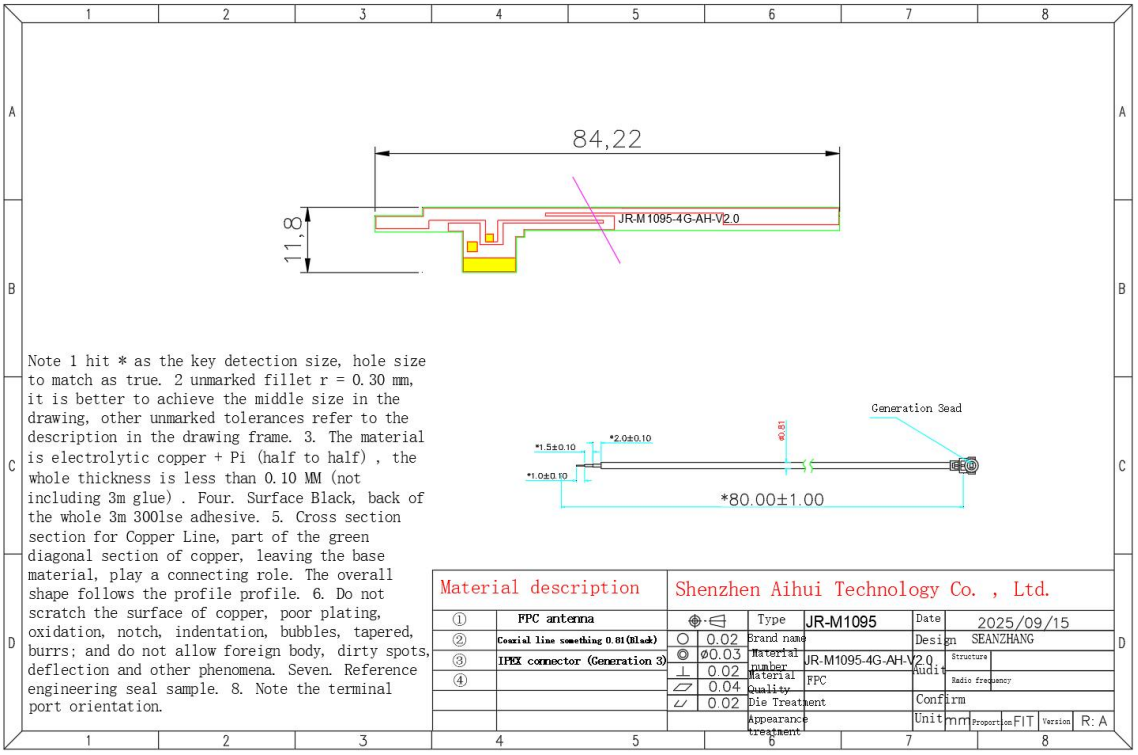
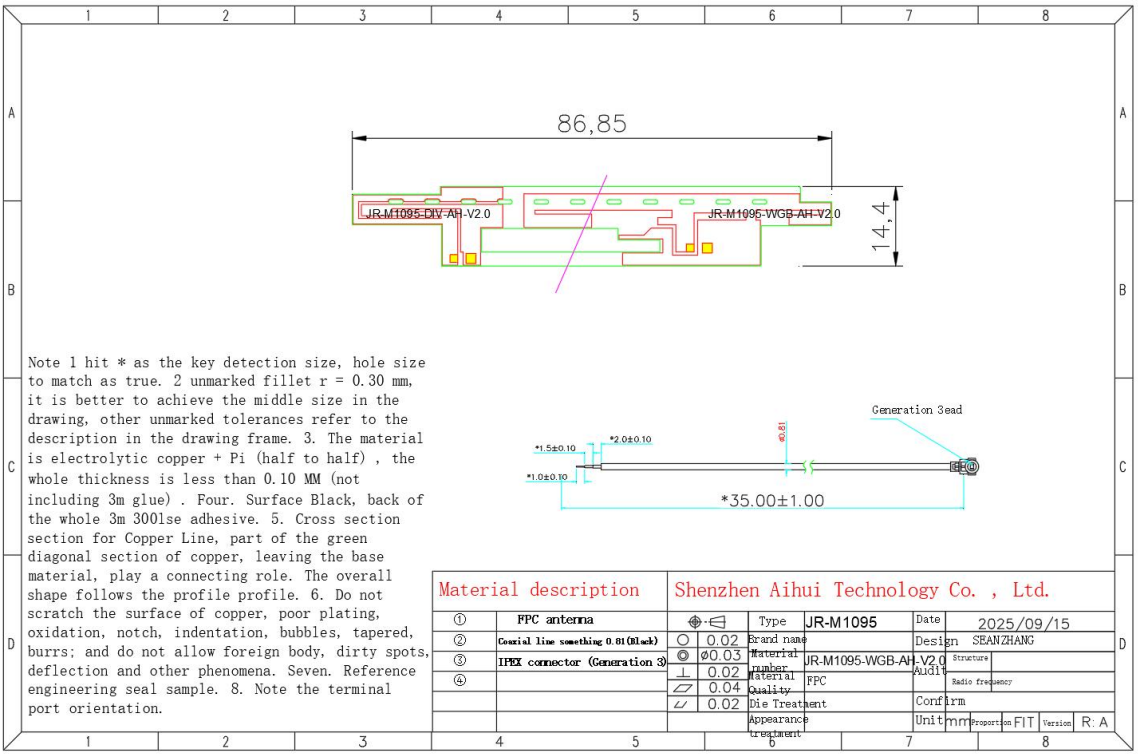
12.Antenna mass production index

When the antenna is mass-produced, the standing wave ratio is taken as the mass-produced test standard.
Based on the differences of the project itself, the following criteria are given:

Frequency	Standard for volume production
2400 MHZ -2500MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5
5100 MHZ -5800MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5
824MHZ-2690MHZ	VSWR (Mass Production performance) & LT; VSWR(recognition performance) 0.5

13.Structural drawings





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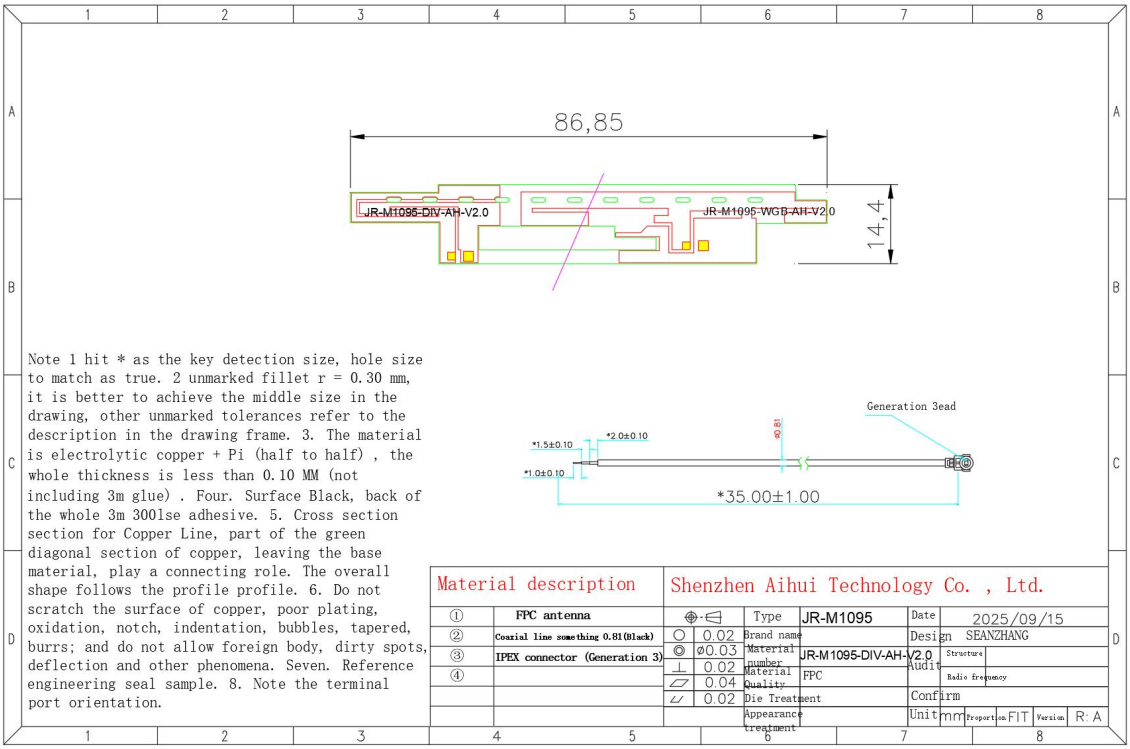

Note 1 hit * as the key detection size, hole size to match as true. 2 unmarked fillet r = 0.30 mm, it is better to achieve the middle size in the drawing, other unmarked tolerances refer to the description in the drawing frame. 3. The material is electrolytic copper + Pi (half to half) , the whole thickness is less than 0.10 MM (not including 3m glue) . Four. Surface Black, back of the whole 3m 300lse adhesive. 5. Cross section section for Copper Line, part of the green diagonal section of copper, leaving the base material, play a connecting role. The overall shape follows the profile profile. 6. Do not scratch the surface of copper, poor plating, oxidation, notch, indentation, bubbles, tapered, burrs; and do not allow foreign body, dirty spots, deflection and other phenomena. Seven. Reference engineering seal sample. 8. Note the terminal port orientation.

Material description		Shenzhen Aihui Technology Co. , Ltd.			
①	FPC antenna	0.02	Type	JR-M1095	Date 2025/09/15
②	Coaxial line something 0.81(Black)	0.02	Brand name		Design SEANZHANG
③	IPEX connector (Generation 3)	ø0.03	Material number	JR-M1095-DIV-AH-V2.0	Audit Structure
④		0.02	Material	FPC	Radio frequency
		0.04	Quality		Confirm
		0.02	Die Treatment		Unit mm Proportion FIT Version R: A
			Appearance treatment		

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