

Shenzhen Aihui Technology Co., LTD

Antenna specification

Antenna Sample Confirmation From

Supplier name: Vendor Name	Shenzhen Aihui Technology Co., LTD ShenZhen Aihui Technology Co., Ltd				
Customer name: Customer Name	Jie hong				
Sample name: Sample Name	ZDT 310-YLDP 34				
Product model number, Part Number					
Sample specification: Specification	Main antenna; ZDT 310-YLDP 34-4G-AH line length 125mm 4 generation / P 30LTE panel Three in one; ZDT 310-YLDP 34-WGB-AH line length is 65 mm for 4 generations Collection; the DIV-AH line length is 135 mm for 4 generations				
Inspection item Inspection Item	Performance test: Performance	Visual inspection of the Total Appearance	Structure of the structure	Others	result Inspection Result
remarks Remark					
quality audit QA Audit		Engineering Review Engineer Audit	Chen Yichu	Business confirmation Sales Confirmation	
The following is completed by the customer The following are filled by Customer					
Customer opinion Customer Evaluation					

Customer's signature / seal Signation / Chapter by Customer	Date / date: 2024.01.02
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Antenna Test Report

Test unit: Shenzhen Aihui Technology Co., LTD Test by : ShenZhen Aihui Technology Co., Ltd			
material Ma t erial	F PC		
Antenna type Antenna Type	M o nopoleType	Polarization mode Polarization mode	L inear
application scenarios A p plication			
Work frequency band Band	GSM /WCDMA /LTE WiFi /BT /GPS	VSWR	≤2
power Power	Max : 2W	impedance Impedance	50Ω
gain dB i	≥ 1dB i		
testing facility Test Equipment	HPE 5071C 、 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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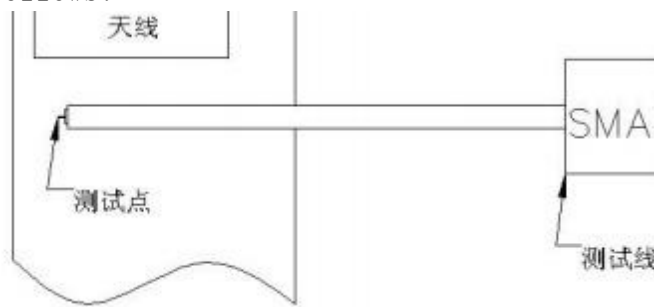
1. Project pictures not

have

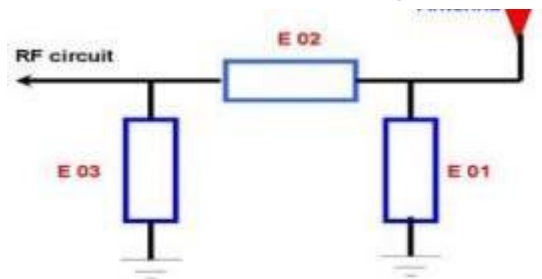
2. Test the manufacturing equipment

Objective: To test the passive parameters of the antenna as accurately as possible.

Preparation method: The hand mechanism uses a 50 ohm coaxial cable, one end is connected to the test point of the back end of the mobile phone motherboard (the front end of the RF test hole), and the other end is connected to the SMA connector. The schematic diagram is as follows:



3. The antenna matching circuit



Modify the point / Modify

E 01	E 02	E 03
N o	N o	N o

Note: Match without modification.

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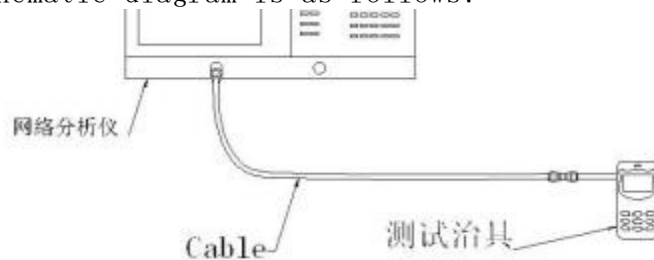
4. S 11 test

4.0 S 11 Description of the test method

Test Equipment: Network Analyzer (E 5071C)

Test method: Export a 50 ohm CABLE cable from the instrument test port, use the SMA connector of the calibration, and record the echo loss and standing wave ratio corresponding to the relevant frequency point.

The test schematic diagram is as follows:



Schematic diagram of the test

5. Dark room test equipment and data

5.0, to test the equipment

Test system: shield the dark room

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test equipment: Use the network analyzer AgilentE 5071C when testing the passive data

When testing active data, use the comprehensive meter CMW 500



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5.1 Antenna active test data

channel	L	M	H	L	M	H
TRP	23.26	23.18	23.05	22.35	22.19	22.98
TIS			-102.03			-102.1

Frequency Band	W2			W5		
channel	L	M	H	L	M	H
TRP	15.54	15.55	15.25	14.54	14.24	14.31
TIS			-102.35			-101.14

Frequency Band	B2			B4		
channel	L	M	H	L	M	H
TRP	16.31	16.05	16.14	15.35	15.26	15.41
TIS			-89.13			-87.63

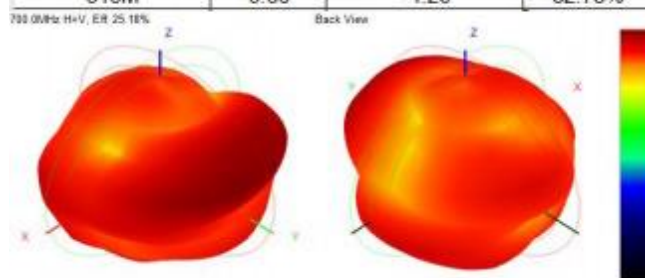
Frequency Band	B5			B7		
channel	L	M	H	L	M	H
TRP	14.25	14.13	14.22	16.75	16.42	16.24
TIS			-86.22			-86.75

Frequency Band	B28-A			B28-B		
channel	L	M	H	L	M	H
TRP	13.16	13.58	13.47	13.01	13.52	13.14
TIS			-85.69			-85.99

5.1 antenna antenna test data

main antenna

Frequency	Gain	Efficiency	Return Loss
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%



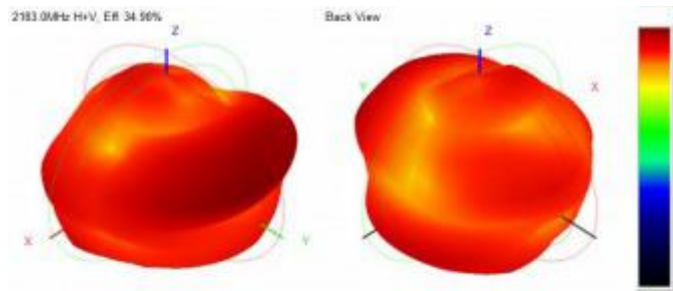
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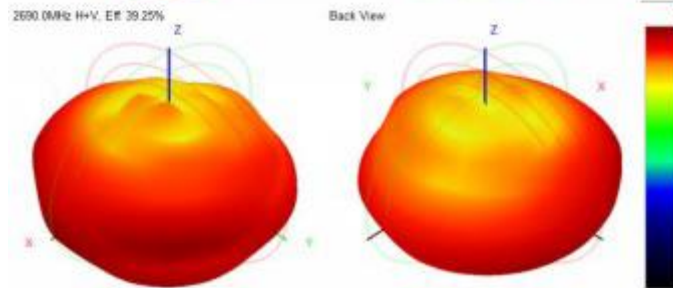
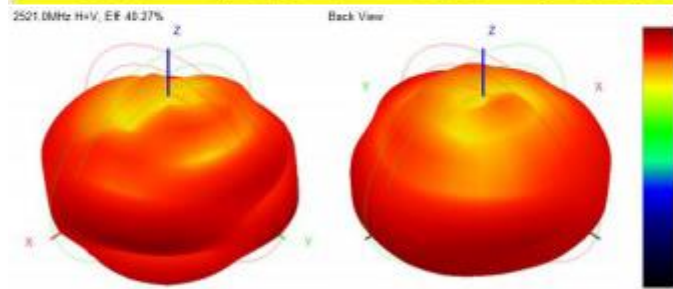
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2521M	0.83	-3.95	40.24%
2554M	0.86	-3.9	40.72%
2588M	1.39	-4.13	38.65%
2622M	1.25	-4.23	37.73%
2656M	0.62	-4.31	37.1%
2690M	0.83	-39.99	39.25%

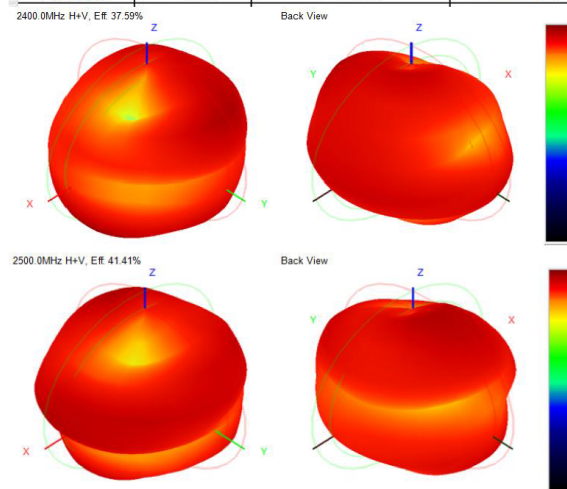


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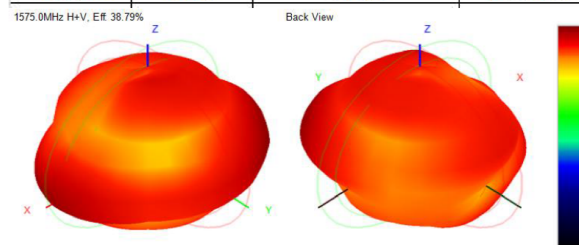
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Three-in-one antenna

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%



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%

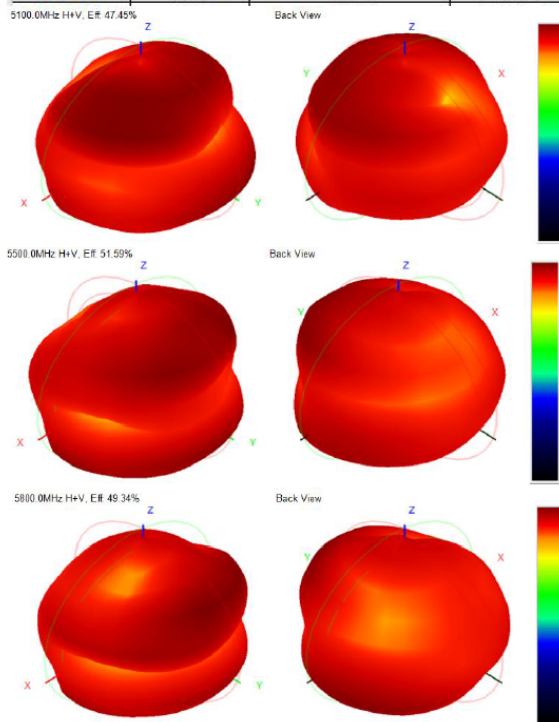


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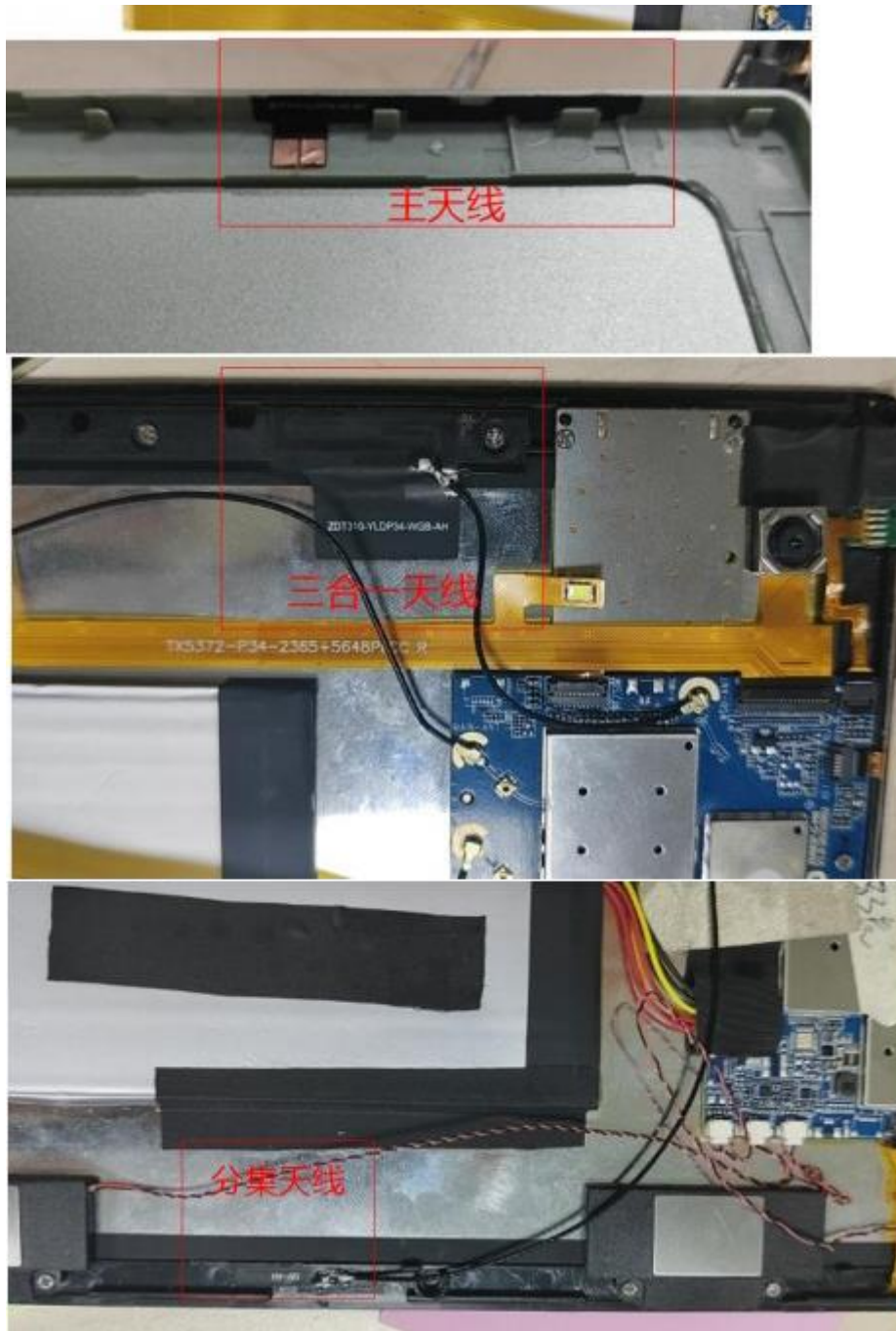
Gain&Efficiency			
frequency 频率(Hz)	gain 增益(dB)	efficiency 效率(dB)	efficiency 效率
5050M	1.56	-3.47	48.34%
5100M	1.62	-3.43	47.45%
5150M	1.44	-3.86	49.29%
5200M	1.36	-3.17	50.43%
5250M	1.51	-2.97	52.42%
5300M	1.61	-3.13	51.47%
5350M	1.63	-3.55	50.33%
5400M	1.35	-3.02	52.14%
5450M	1.47	-3.34	50.17%
5500M	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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.16 Antenna position

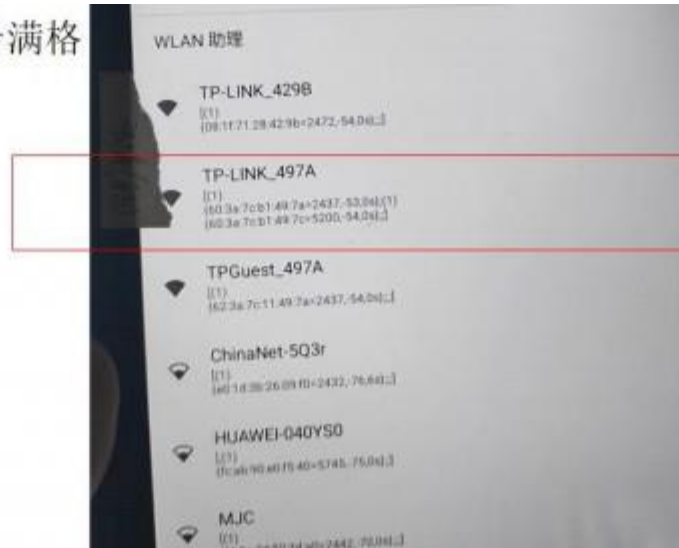


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6.2 WIFI / GPS

距离热点10M 信号满格
上网正常



测试地点为窗台,38
以上星值1颗



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7. Environmental treatment



8. Antenna mass production index

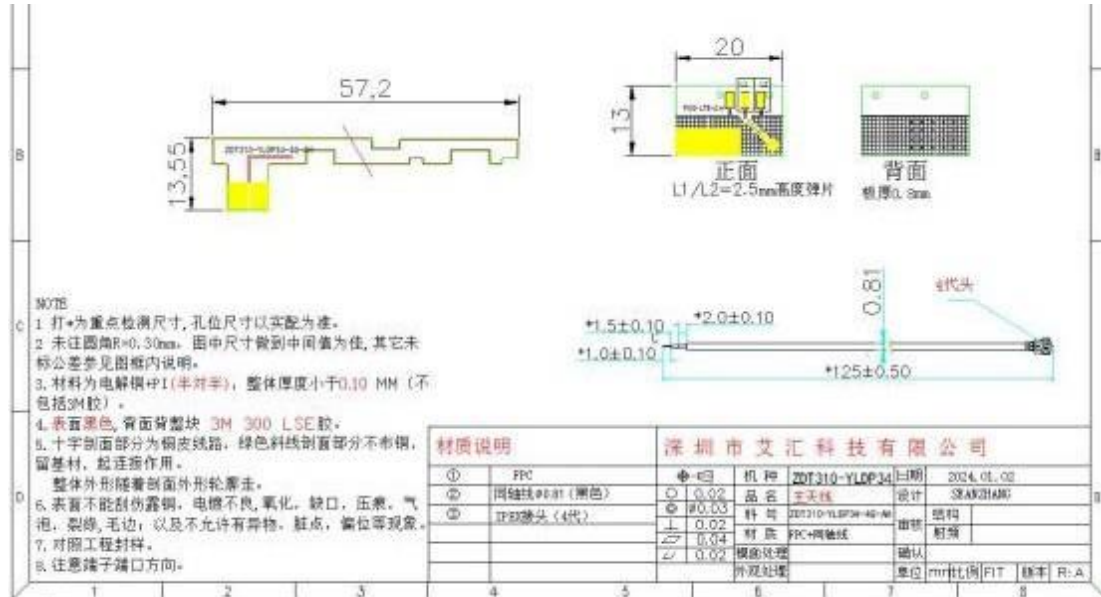
When the antenna is in mass production, the standing wave ratio is used as the test standard for mass production.

Based on the differences of the project itself, the following criteria are given:

frequency	Mass production standards
824MHZ -2170MHZ	VSWR (mass production performance) <VSWR (recognized performance) + 0.5
1575MHZ	VSWR (mass production performance) <VSWR (recognized performance) + 0.5
2400MHZ -2500MHZ	VSWR (mass production performance) <VSWR (recognized performance) + 0.5

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9. Structural drawings



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