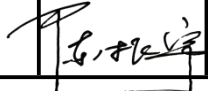







Antenna Sample Confirmation From
shenzhen Kenhaitong Antenna Technology Co.,Ltd.

Antenna acknowledgment

Antenna Sample Confirmation From

Vendor Name	Shenzhen kenhaitong antenna technology co, ltd				
Customer Name	松富				
Sample Name	WIFI ANTENNA				
Part Number	KIT-WZ-WF-V02				
Customer ID					
Specification	WIFI Antenna FPC 33.65*10.5mm IPEX1 210mm Cable Black				
Inspection Item	Performance	Total Appearance	structure	Audit	Inspection Result
	OK	OK		OK	OK
Remark					
QA Audit		Engineer Audit		Sales Confirm	
The following are filled by Customer					
Customer Evaluation					
Signation/ Chapter by Customer	date:				

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Hangcheng Street, Bao'an District, Shenzhen
TEL: 0755-85274764 FAX: 0755-85274764



Antenna Test Report

Test by: Shenzhen kenhaitong antenna technology co,ltd			
Material	FPC+Cable+IPEX		
Antenna Type	MonopoleType	Polarization mode	Linear
Application			
Band	2.4G WIFI	VSWR	≤1.53
Power	Max: 2W	Impedance	50Ω
dBi	≥2.67dBi		
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 <ul style="list-style-type: none">● 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.			



1、 Project pictures

2、 Test equipment

3、 Antenna matching circuit

4、 S11 test

4.0 S11 Description of test method

4.1 S11 Parameter pictures

5、 Dark room test equipment and data

5.0 instrumentation

5.1 test data

6、 Antenna assembly position

7、 Structural drawings

8、 Dimensional check report

9、 Reliability test report

10、 Packing

1、Project pictures



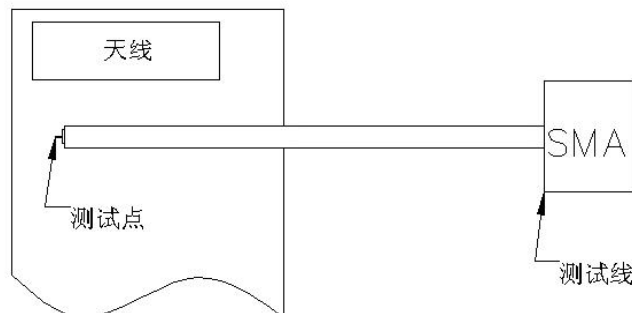
Note: The customer finally verified that the antenna performance prototype is retained in our company for at least one year to analyze and solve the abnormal situation in the antenna mass production and ensure the antenna shipment quality.

2、Test equipment

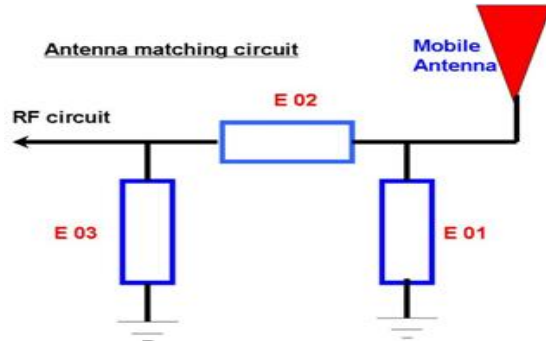
Objective: To test the passive parameters of the antenna as accurately as possible.

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、Antenna matching circuit



Modify

E01	E02	E03
No	No	No

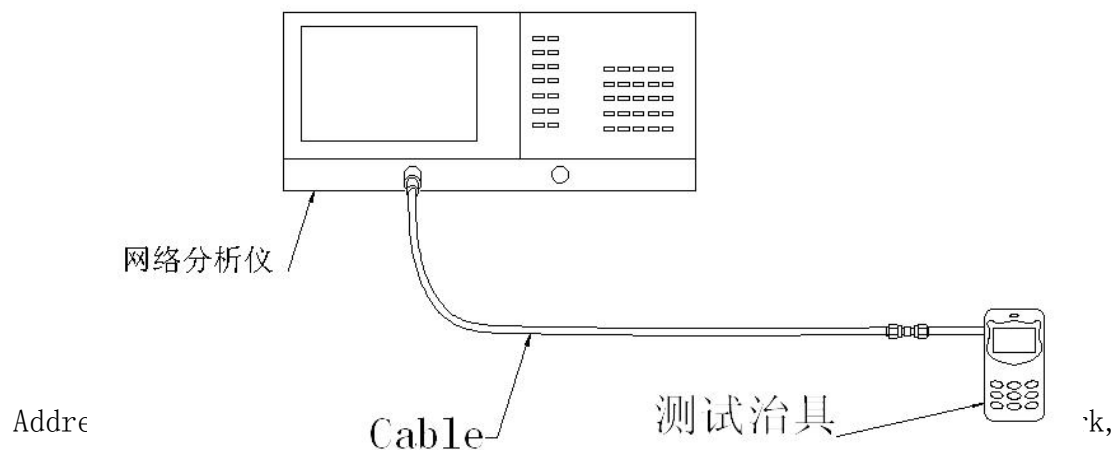
Remarks: Match No Modification

4. S11 test

Method (S11 Description of test method) Test Equipment: Network Analyzer (E5071C) Test method: Use a 50 Ohm CABLE cable to export from the instrument test port, use the SMA connector of the hand mechanism after the calibration calibration, and record the echo loss and standing wave ratio corresponding to the relevant frequency point.

The test schematic diagram is as

测试示意图



4.1 S11 Parameter pictures

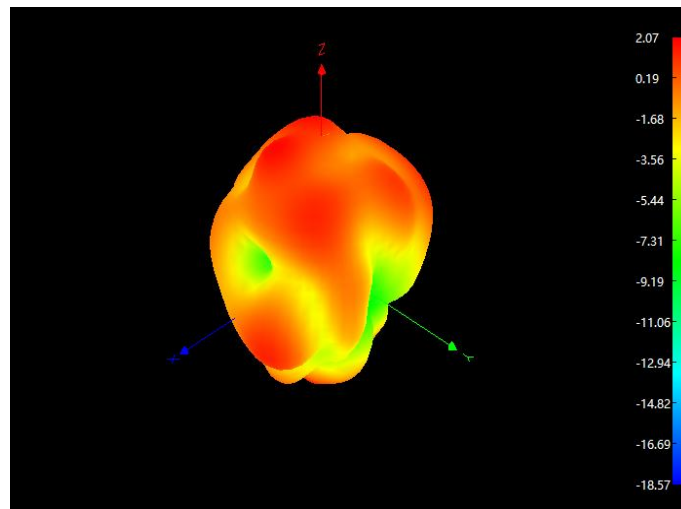
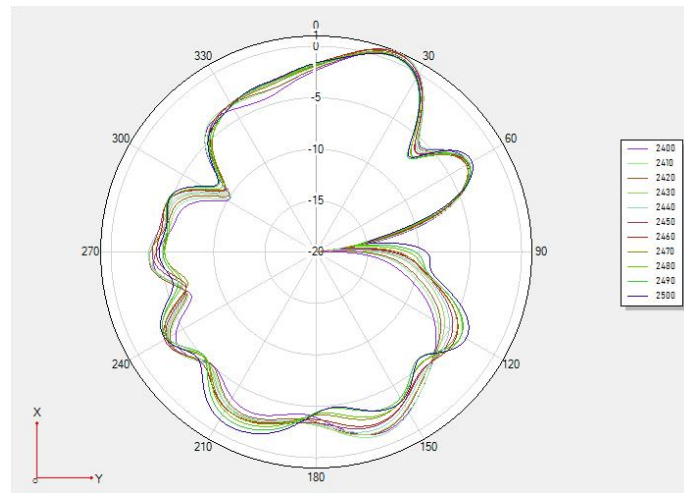


frequency (MHz)	2400		2500			
SWR	1.53		1.35			



2.4G Antenna passive parameter

Frequency / MHz	Efficiency / %	Gain/ dB
2400	56.36	2.1
2410	54.83	2.03
2420	56.1	2.19
2430	53.46	2.07
2440	54.58	2.33
2450	52.97	2.25
2460	52.24	2.4
2470	48.19	2.2
2480	48.19	2.39
2490	48.08	2.5
2500	48.75	2.67



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5、Dark room test equipment and data

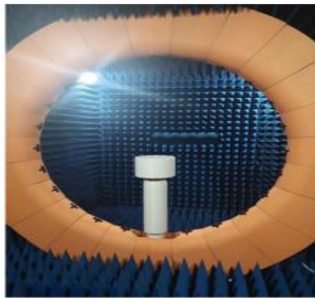
5.0 instrumentation

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 AgilentE5071C when testing the passive data

When testing active data, use the comprehensive meter CMW500



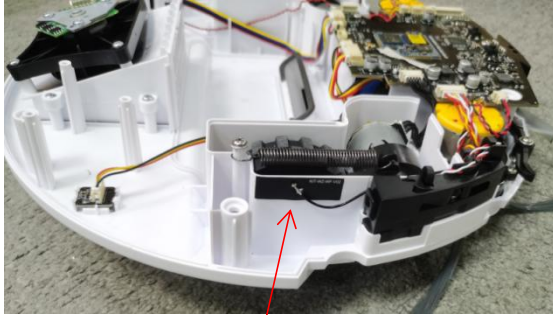
5.1 Active test for OTA

Band	Channel	TRP	TIS
802.11b (11Mbps)	L	16.46	85.84
	M		
	H		
802.11g (54Mbps)	L	14.43	70.37
	M		
	H		
802.11n (MCS7-65Mbps)	L	14.67	67.57
	M		
	H		

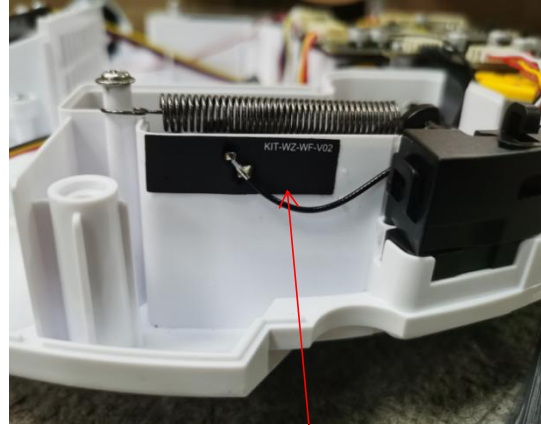
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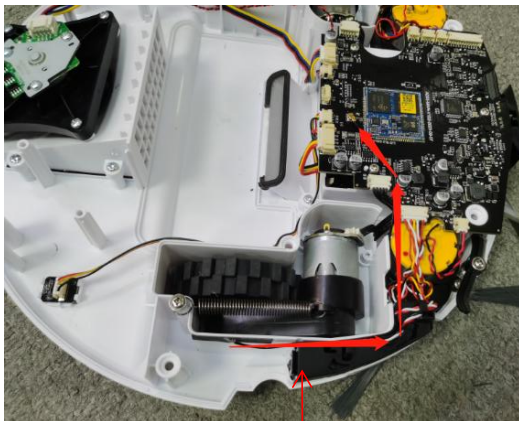
6、Antenna assembly position



wifi 2.4G



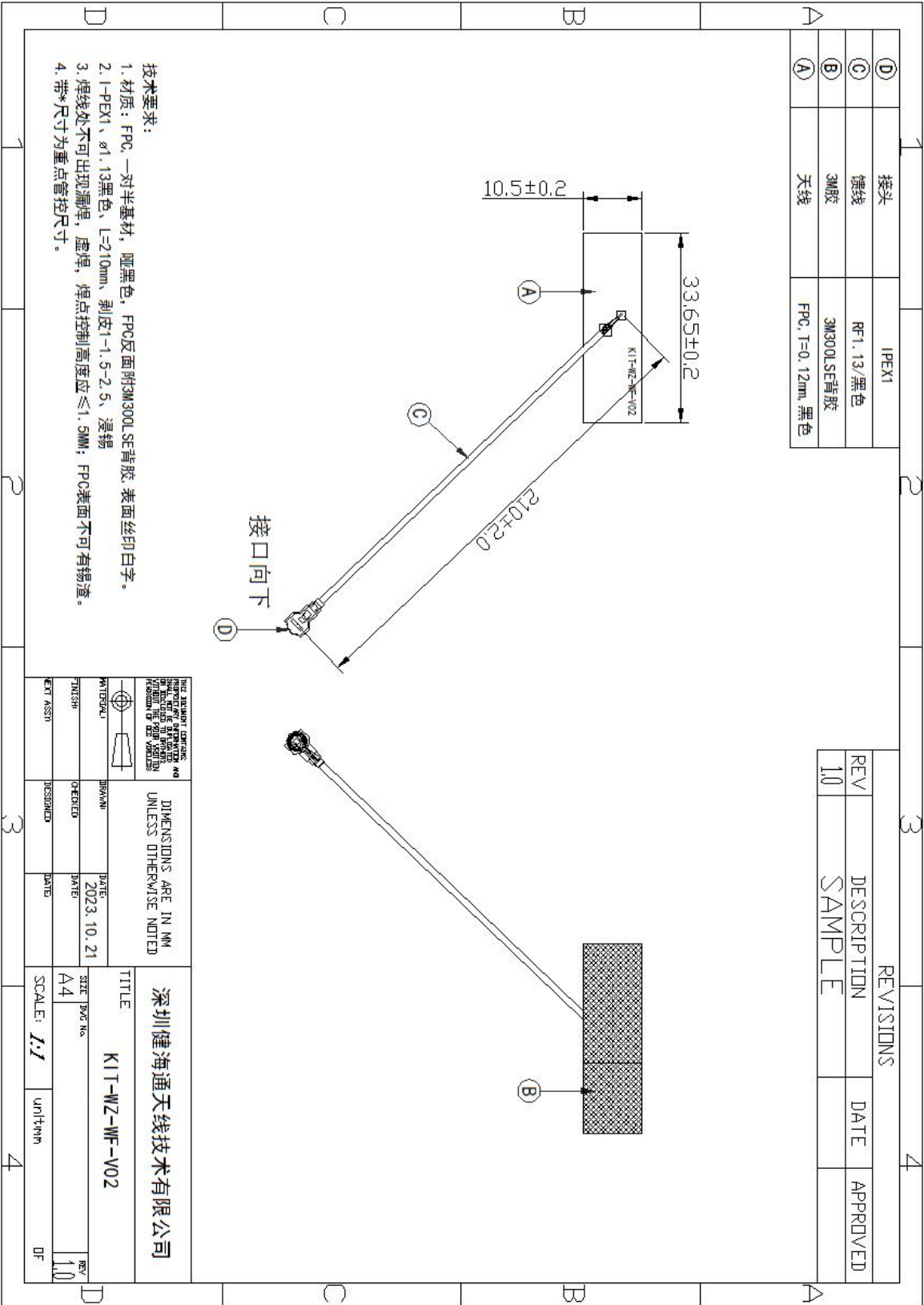
Welding line mode



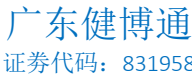
circuit



7、Structural drawings



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shenzhen Kenhaitong Antenna Technology Co.,Ltd.

8、 Dimensional check report

Dimensional check report

日期: 2023/11/29

Test Items		Standard	Sample inspection status (value)					Determine	Remarks
			1	2	3	4	5		
Antenna structure size	A1	33.65±0.2mm	33.63	33.67	33.65	33.63	33.65	OK	
	A2	10.5±0.2mm	10.52	10.50	10.54	10.50	10.48	OK	
	A3	210±2.0mm	210.12	210.20	210.08	210.11	210.15	OK	
	A4								
	A5								
	A6								
	A7								
	A8								
	A9								
	A10								
	A11								

核准: CZY

审核: CXM

测试: JXB

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10、Reliability test report

Salt spray test report

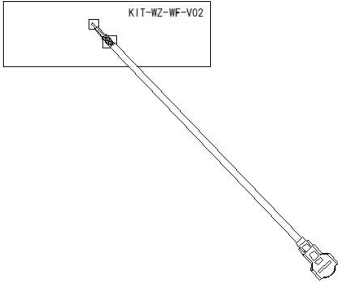
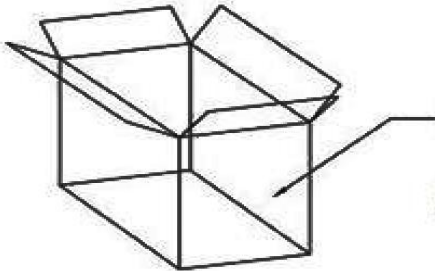
Number: 20231021001

Product name		KIT-WZ-WF-V02		Number of tests		5set	
Product item No				Test standard		GB2423.17	
Inspection date		2023.10.21		Material of goods		FPC+IPEX CABLE	
测试时间：2023.10.20-2023.10.21							
Test items	Required standards	Actual value	determine	Test items	Required standards	Actual value	determine
Test instrument	KD-60	KD-60	OK	Test time	48H	48H	OK
Salt spray test type	NSS neutral	NSS neutral	OK	Salt spray tank temperature	35℃	35℃	OK
PH value of brine	6.5-7.2	6.5-7.2	OK	Salt	1-2ml	1.8ml	OK
Spray mode	successive	successive	OK	Material of goods	FPC	FPC	OK
Brine composition	5%NaCl	5%NaCl	OK	Compressed air pressure	1±0.1KG/CM²	1	OK
Saturation temperature	47℃	47℃	OK	Specimen placement angle	45°	45°	OK
Test observation time	Observation phenomenon						
4H	No abnormality						
8H	No abnormality						
12H	No abnormality						
16H	No abnormality						
20H	No abnormality						
24H	No abnormality						
Judgment criteria: According to the national standard 5944-86 rating method, grade 9 or above is qualified							
Judgment result	Qualified						
Tester	CGL		Examine	CXM		Approval	JXB

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10、Packing

Packaging					
Customer Name: 松富		Name: KIT-WZ-WF-V02		Code:	包装版本: TEST: A
Package details	Code	name	size	quantities	
	PE	PE bag	230*330*0.12	1/100	
	SYC-BZ-01	Paper box	270*250*130	1/10000	
job step	1. Prepare the required packaging materials and place them in favorable operation positions. 2. Carcarton / PE bags, packaging, 100PCS / bag, 100 bags, 10,000 P C S per box. 3. Put 100 bags in each box, totaling 10,000 P C S. After filling the box, seal the box with transparent tape. Graphic picture of packaging products				
					
remark					
	compile	approval	MADE	DATE	
	JSB	DS	LSY	2023/11/29	