



Antenna Test report

Model Name: S4

Date: 2025.04.02

Shenzhen Xinlingke Technology Co., Ltd.

5th Floor, Office Building, Fifth Industrial Zone, North Area, High-tech Park, Nanshan District, Shenzhen

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01.Project Introduction and Photoes-Project Introduction



RF Engineer	Engineer Kong	Email	2532625702@qq.com
		Mobile	18477016343
Antenna Overview			
Status of Sample machine	Whole machine	Project Name	S4
Antenna Type	PIFA	Structure mode	LDS
Main Antenna	4G:B2/4/5/7/12/13/17/66		
Other Antenna	2.4GWIFI GPS		

01.Project Introducation and Photoes-Photos



The front



The back



02.Report Versions



Version	Report Time	Commissioning Overview
A0	2025.03.04	Antenna Test Report
A1		
A2		
A3		
A4		
A5		
A6		
A7		
A8		
A9		
A10		

03.Introduction of Company and Test Environment- Company



Company Experience

Shenzhen Xinlingke Technology Co., Ltd. owns 12 years of experience in R & D and production of various mobile communication terminals. Company has established a joint RF device laboratory with universities. Company is proficient in antennas of 5G NSA and SA, ultra thin mobile phones, NB IOT / EMTC, and base station.



Product Range

The products of company cover many fields, such as smart home, Internet of vehicles, smart wear, mobile phones, pad, base station etc.



Core Task

Company has been committed to improving our long-term competitiveness by providing whole RF solution, insisted on taking customer demand as the first place.

03.Introduction of Company and Test Environment-Test Environment



The company owns several OTA darkrooms whose frequency bands covers from 400mhz to 8.5ghz.

- Providing OTA test for whole machine which include but not be limited to 5G NSA, SA(trp/tis), WiFi active test (supporting 11b/11g/11n/11ax mode), bluetooth/GPS active test
- Providing antenna gain and efficiency
- Providing 2D pattern / Apple chart analysis
- Providing upper and lower hemisphere efficiency
- Providing mutual interference correlation coefficient test items.

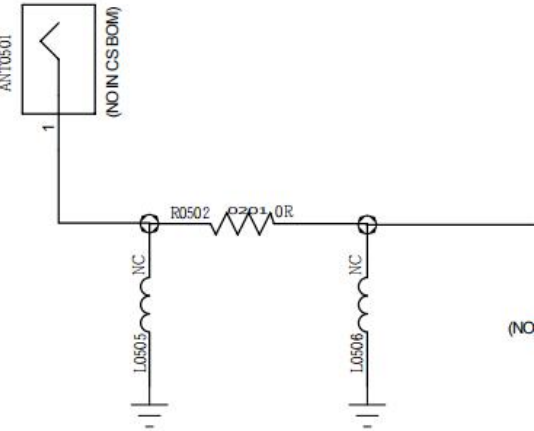
04.Main antenna matching circuit (European version))



Main road
matching

Not changed

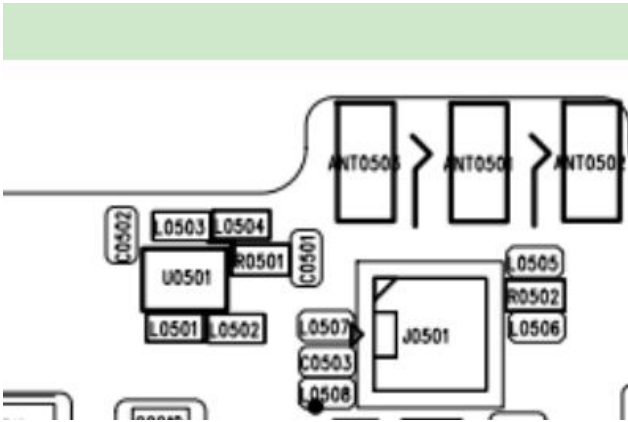
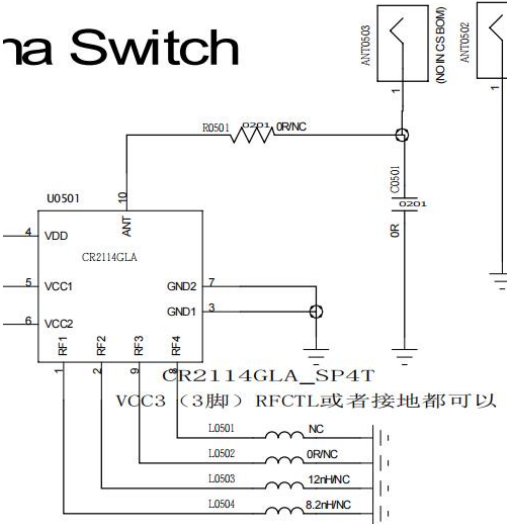
tuner	
RF1:	3G, B1/8 4G, B1/3/7/8/41
RF2	4G, B20
RF3:	4G, B28
RF4:	



tuner

RF1	0Ω
RF2	3.9NH
RF3	8.2NH
RF4	NC
C0501	NC
R0501	0Ω

na Switch

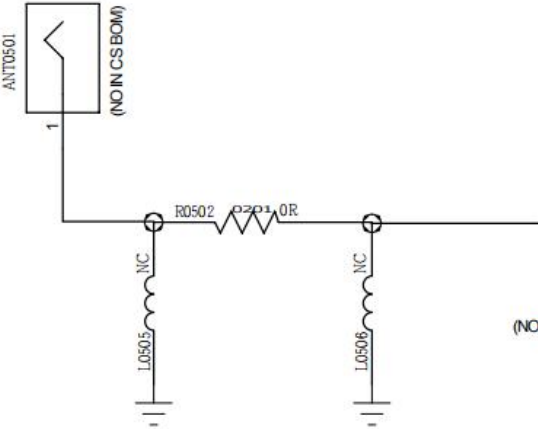


04.Main antenna matching circuit (US version)



Main road
matching

Not changed

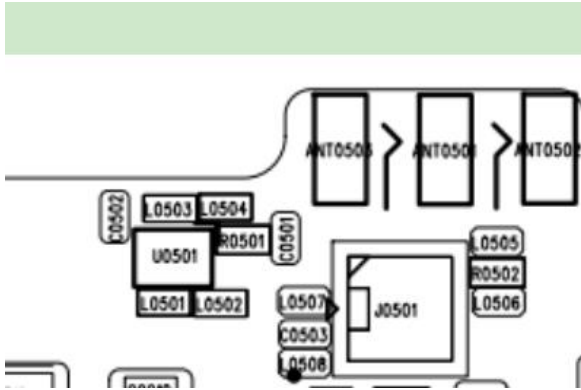
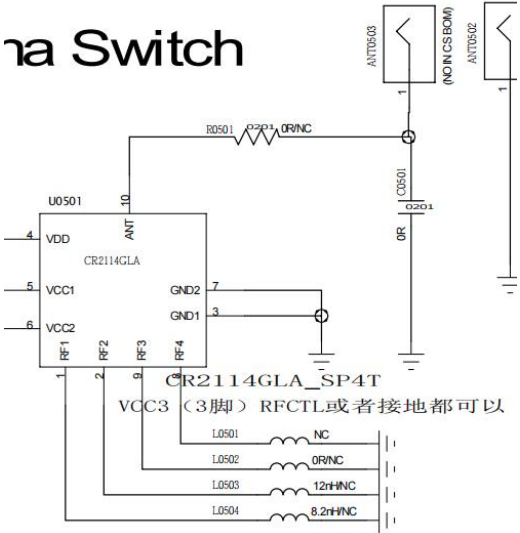


tuner	
RF1:	3G, B2/4/5 4G, B2/4/5/7/13/66
RF2	4G, B12/17
RF3:	
RF4:	

tuner

RF1	0Ω
RF2	4.7NH
RF3	6.8NH
RF4	NC
C0501	NC
R0501	0Ω

ra Switch



05.Main antenna related data (European version)



Band	Channel	TRP	TIS
B1(10m)	L	10.5	
	M	10.1	
	H	11.2	-82.8
B3(10m)	L	8.2	
	M	9.1	
	H	10.1	-81.2
B7(10m)	L	9.1	
	M	10.3	
	H	9.5	-82.7
B8(10m)	L	7.6	
	M	7.8	
	H	7.9	-77.6

Band	Channel	TRP	TIS
B20(10m)	L	5.3	
	M	5.7	
	H	6.1	-72.7
B28(10m)	L	3.1	
	M	3.1	
	H	3.3	-67.4
B41(20m)	L	9.5	
	M	11.1	
	H	12.1	-83.1

05.Main antenna related data (US version)



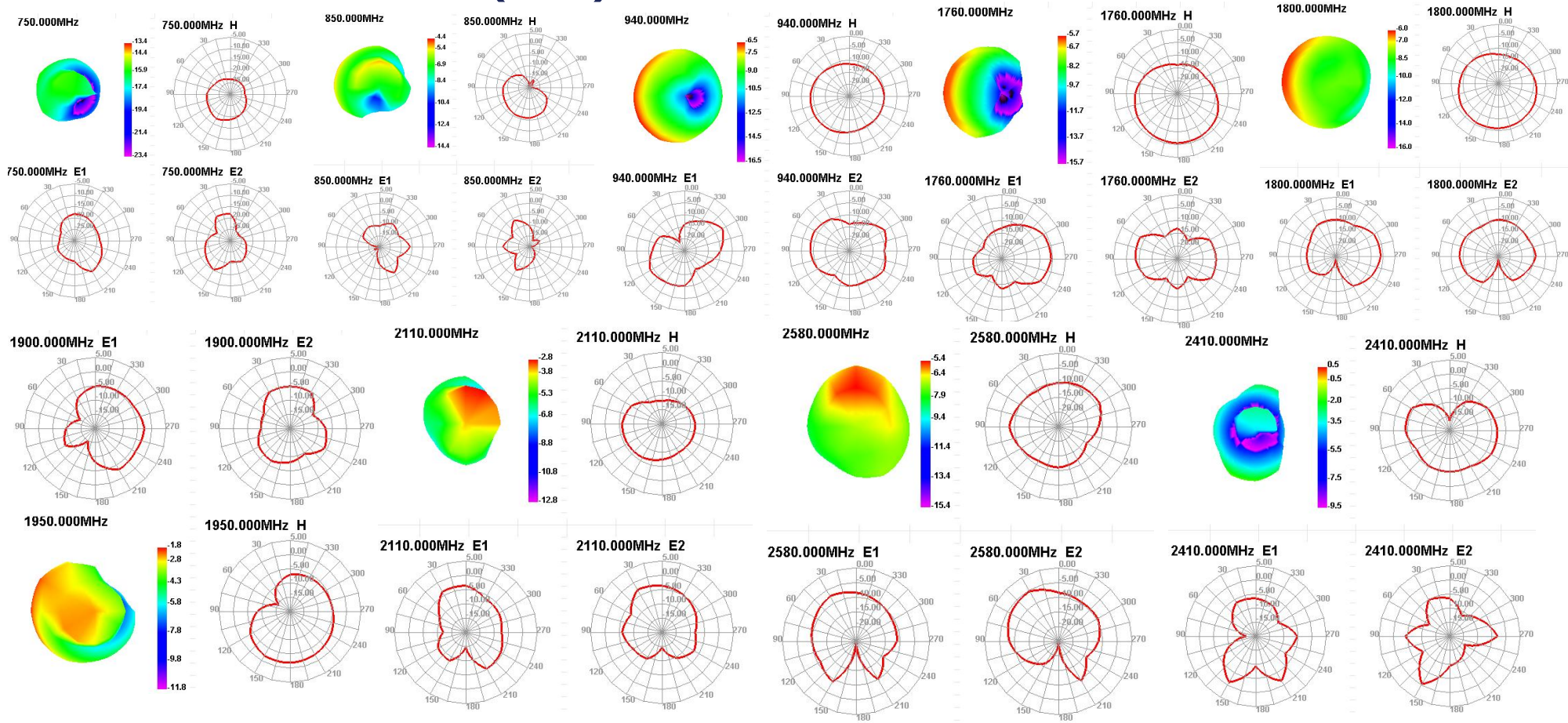
Band	Channel	TRP	TIS
B2 _(10m)	L	12.1	
	M	11.1	
	H	11.5	-84.7
B4 _(10m)	L	9.1	
	M	8.6	
	H	9.2	-85.1
B5 _(10m)	L	7.5	
	M	7.6	
	H	8.1	-76.6
B7 _(10m)	L	11	
	M	11.3	
	H	11.2	-81.5

Band	Channel	TRP	TIS
B12 _(10m)	L	3.9	
	M	4.5	
	H	5	-72.9
B13 _(10m)	L		
	M	4	-71.3
	H		
B17 _(10m)	L	3.9	
	M	4.2	
	H	4.9	
B66 _(10m)	L	8.6	
	M	9.1	
	H	9.2	-84.6

05.Main antenna related data (dbi)

European version

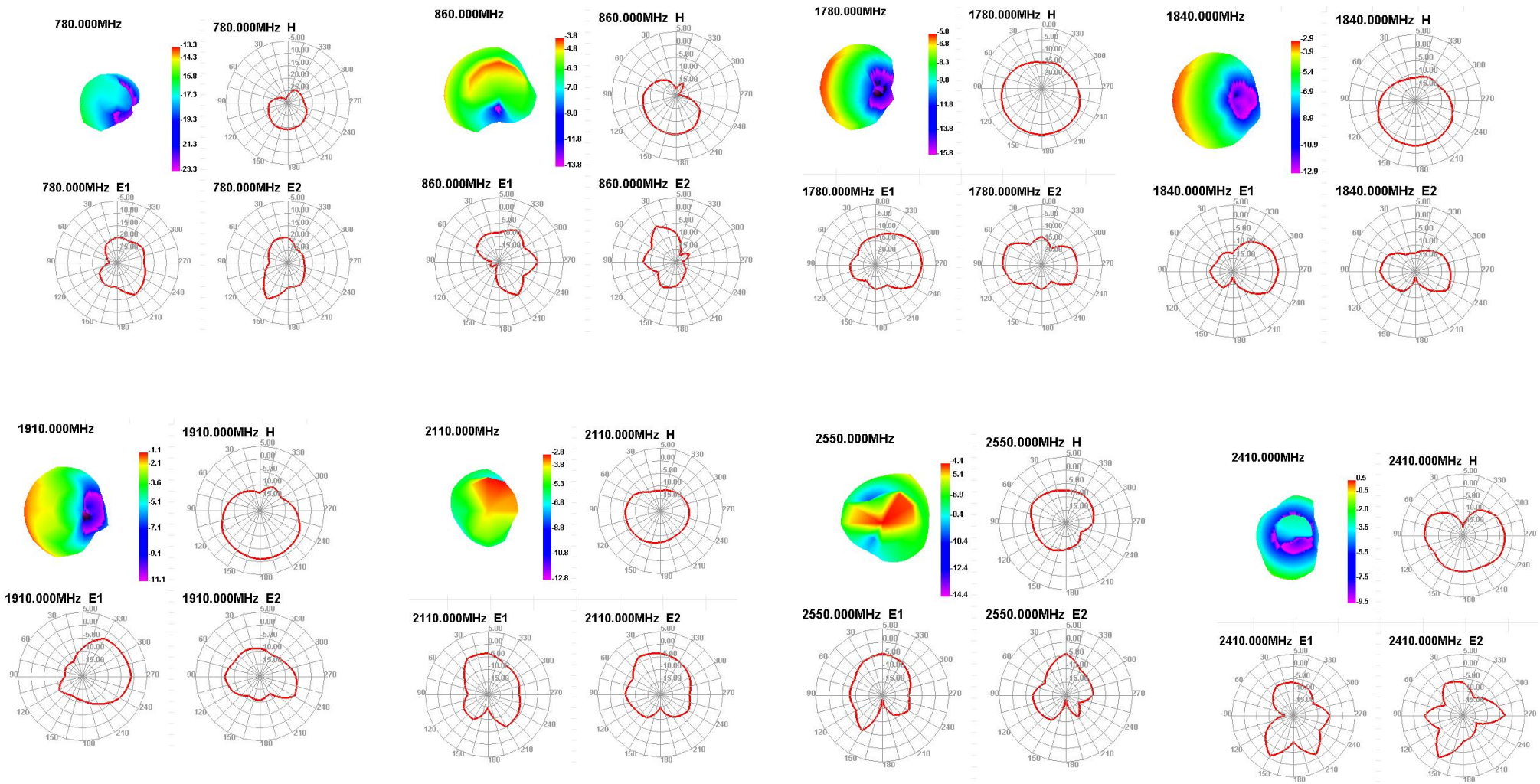
Band	Gain (dBi)
EGSM900	-6.5
DCS1800	-5.7
W1	-2.8
W8	-6.5
Band1	-1.8
Band3	-5.7
Band7	-5.4
Band8	-5.7
Band20	-4.4
Band28	-13.4
Band41	-5.4
WIFI2.4g	0.5
BT	0.5



05.Main antenna related data (dbi)

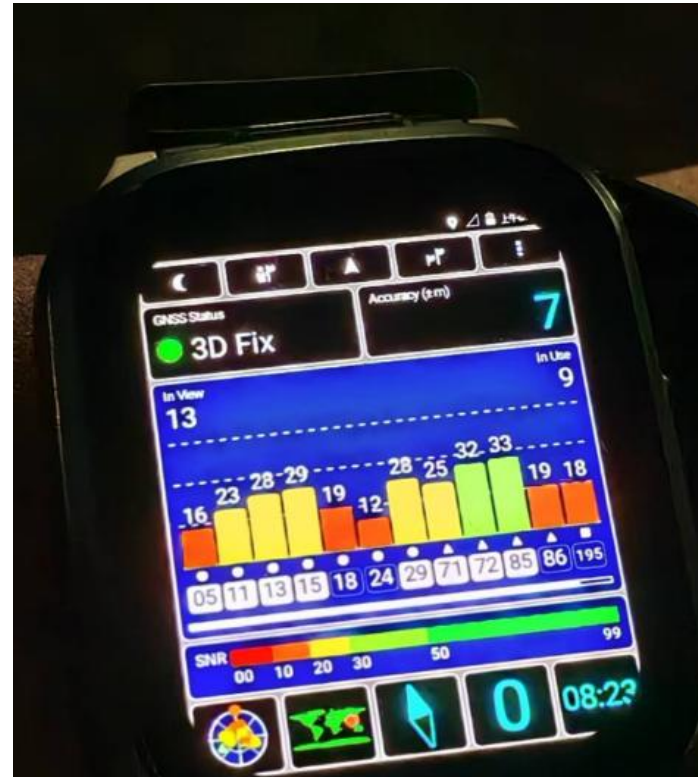
US version

Band	Gain (dBi)
W2	-2.9
W4	-5.8
W5	-3.8
Band2	-1.1
Band4	-5.8
Band5	-3.8
Band7	-4.4
Band12	-13.8
Band13	-13.3
Band17	-13.8
Band66	-5.8
WIFI2.4g	0.5
BT	0.5



06.GPS related dat

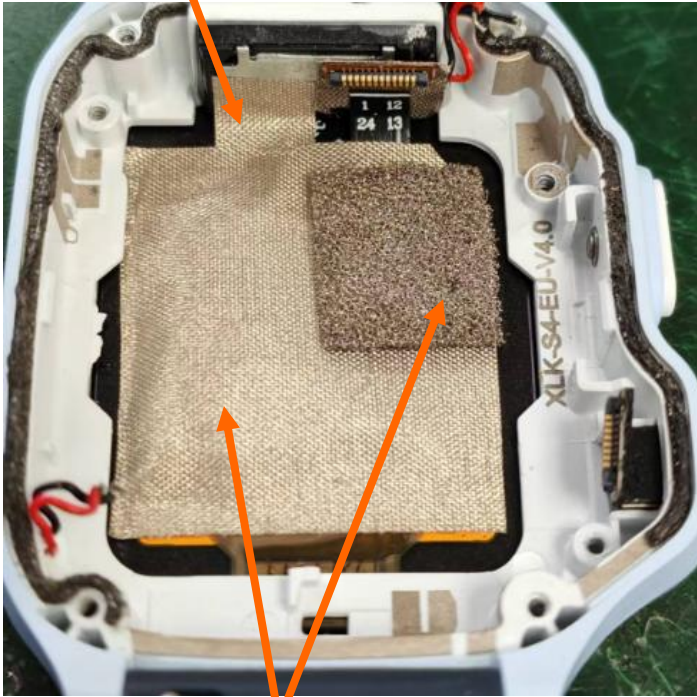
Measured data



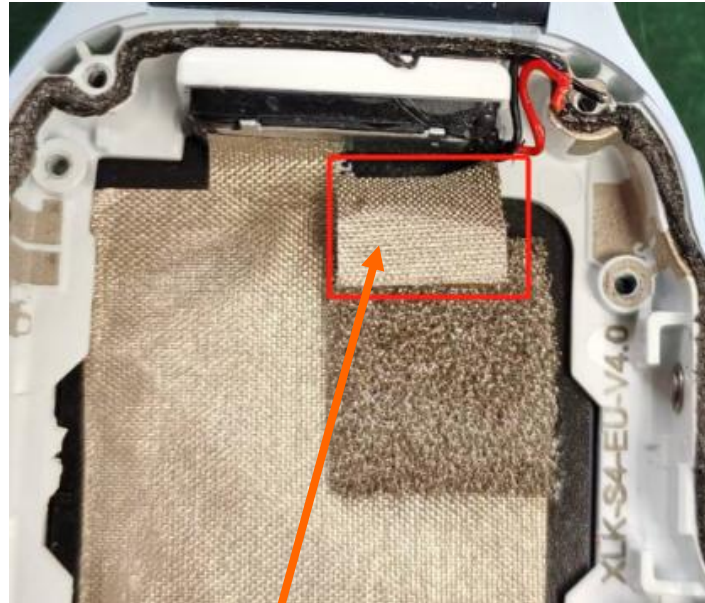
The test is performed by hand. The cold start positioning time is 60 seconds, and the maximum star value is about 34

07.Environmental treatment

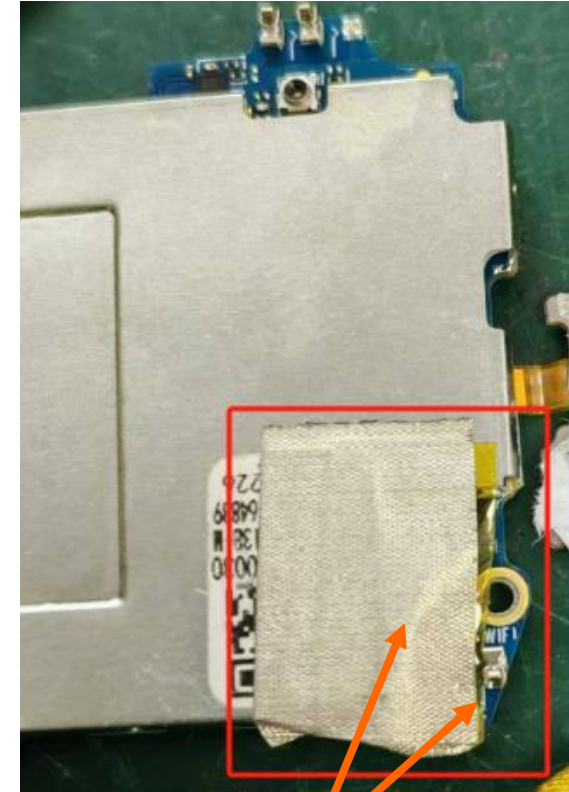
The horn tape conductive cloth and the screen conductive cloth are grounded



The screen is covered with conductive cloth to shield interference. The conductive cloth should be tightly attached to the screen without lifting, and then the conductive sponge should be attached to the motherboard for grounding

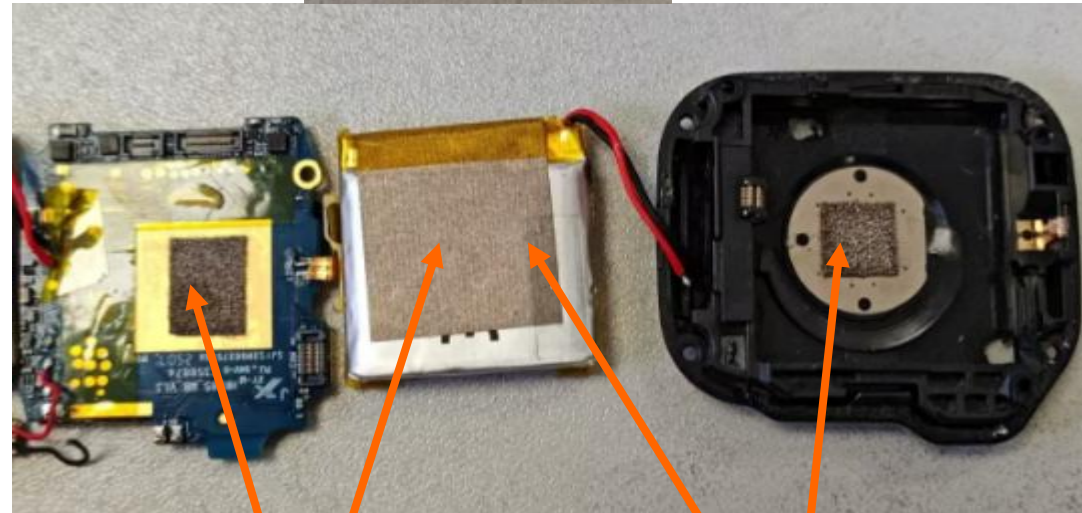
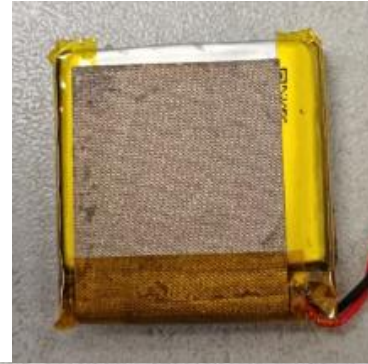


The screen line should be covered with conductive cloth to shield interference



The motherboard shielding cover should be covered with conductive cloth to shield interference. Pay attention to the conductive cloth should not touch the pin

07.Environmental treatment

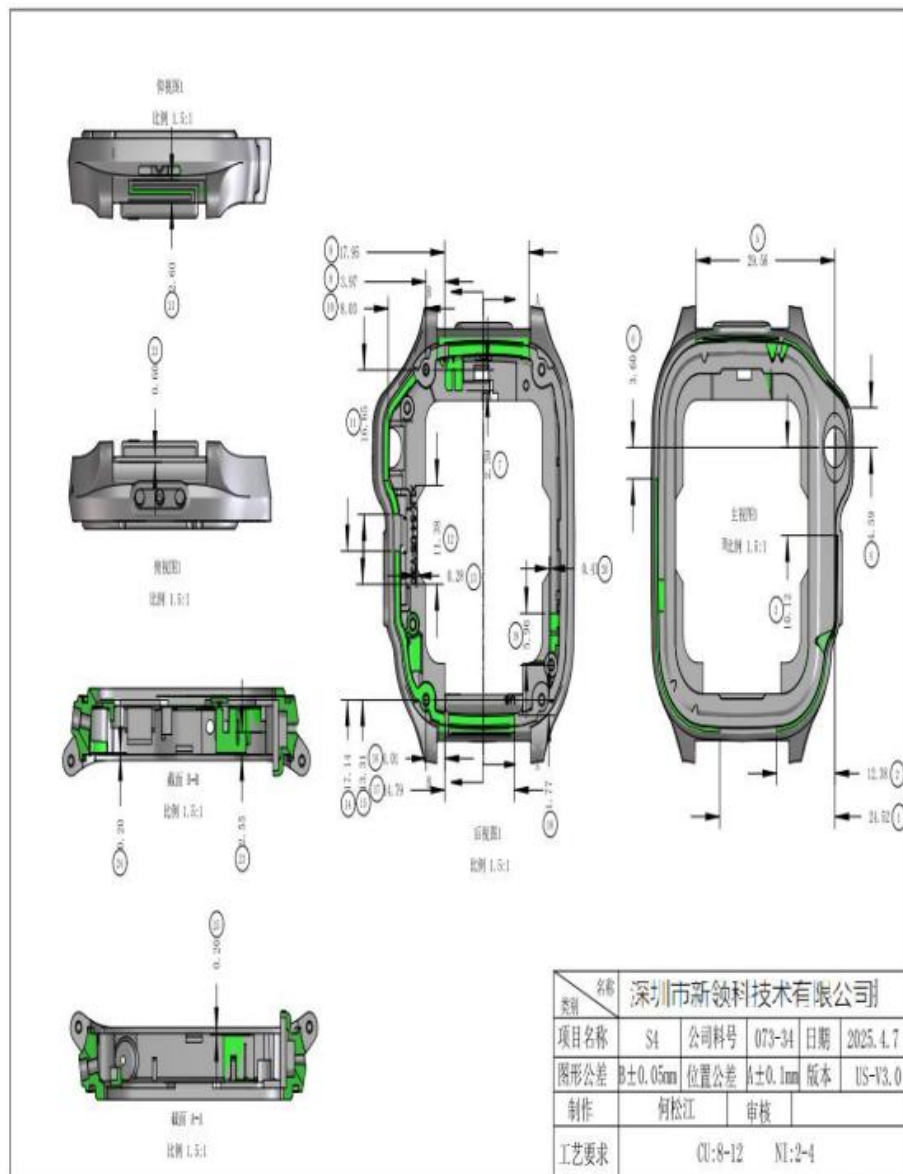


The motherboard is coated with conductive sponge and the battery is grounded. The positive and negative sides of the battery are coated with conductive cloth

The heart rate patch is attached to the conductive sponge and the battery conductive cloth is grounded

08. Structural diagram

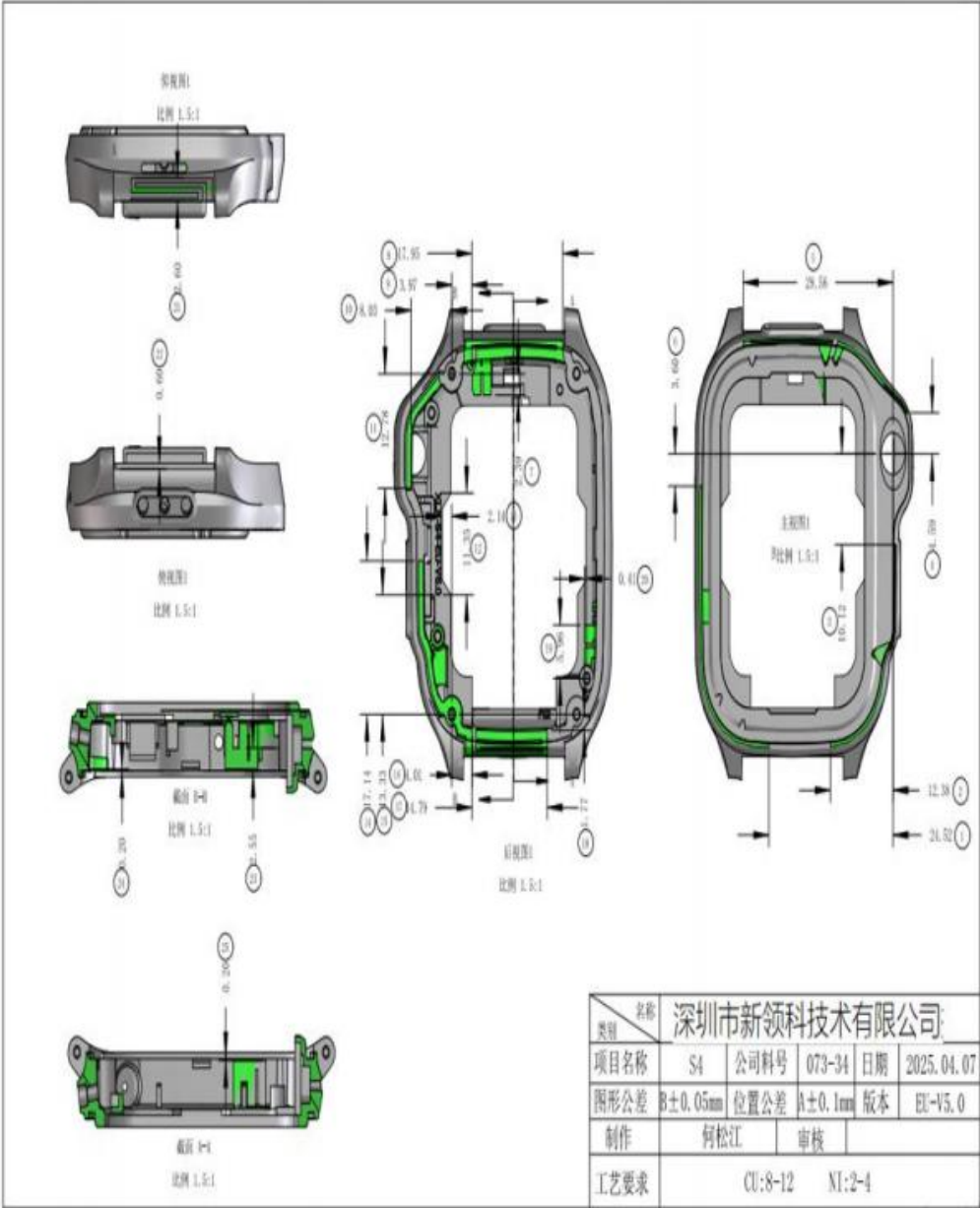
US version



类别	名称: 深圳市新领科技术有限公司				
项目名称	S4	公司料号	073-34	日期	2025.4.7
图形公差	B±0.05mm	位置公差	A±0.1mm	版本	US-V3.0
制作	何松江		审核		
工艺要求	CU:8-12		NI:2-4		

08.Structural diagram

European version



THANKS!

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