Acknowledgment Letter

SPECIFICATION FOR APPROVAL

Customer Name	Multi Digital		
Customer Project Name	DY1095	SDC Project Name	DY1095
Customer P/N		SDC RF P/N	WG6231B-0813L-55
Band	GPS/WIFI2.4G/5.8G/BT		
Version	A0		
Designer Information			
RF Engineer	Fu Xuerong	R&D Diretor	Xia Chenglei
ME Engineer	Huang Zongbao		

Approval				ustomer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	Fu Xuerong	Xia Chenglei		
Date	2025.4.10	2025.4.10	2025.4.10		

hange Log				
Version	Change Description	Person in Charge	Approval By	Date

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Catalogue

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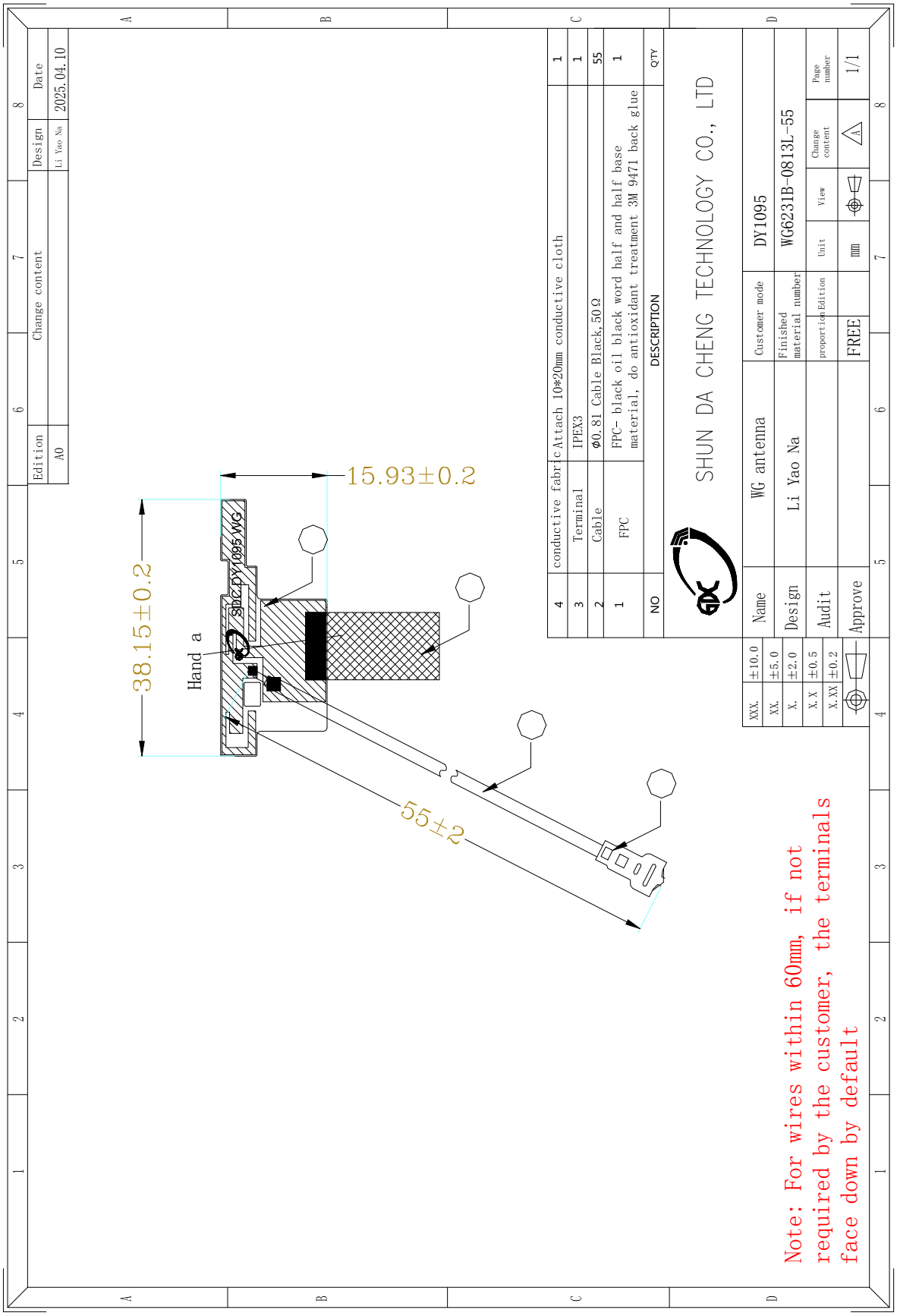
Drawing or Product Image



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Sample Dimensions Test Report

Test Date	2025.4.10	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	**Standard**	**Sample 1**	**Sample 2**	**Sample 3**	**Pass/NG**
①length	38.15±0.2mm	38.15	38.2	38.2	**Pass**
②width	15.93±0.2mm	15.95	15.95	16	**Pass**
③thickness	0.1±0.03mm	0.1	0.1	0.1	**Pass**
④Line length	55±2mm	55	56	55	**Pass**
Conclusion					PASS
Inspector & Date	Xu Yanfang 2025.4.10		Approval &D ate		

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RF Performance Test Report

Antenna Test Equipment Introduction

Test of antenna input characteristics using **Agilent E5071C and Agilent 5062A** vector network analyzer; The radiation pattern of the antenna are tested using the guangping 3D near field Anechoic Chamber, and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

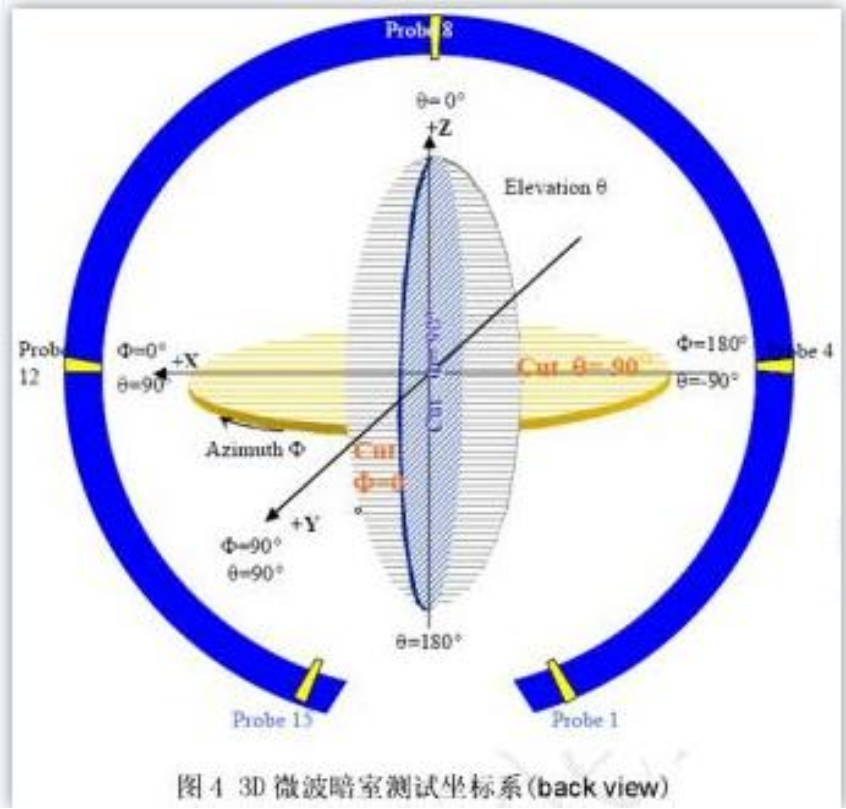


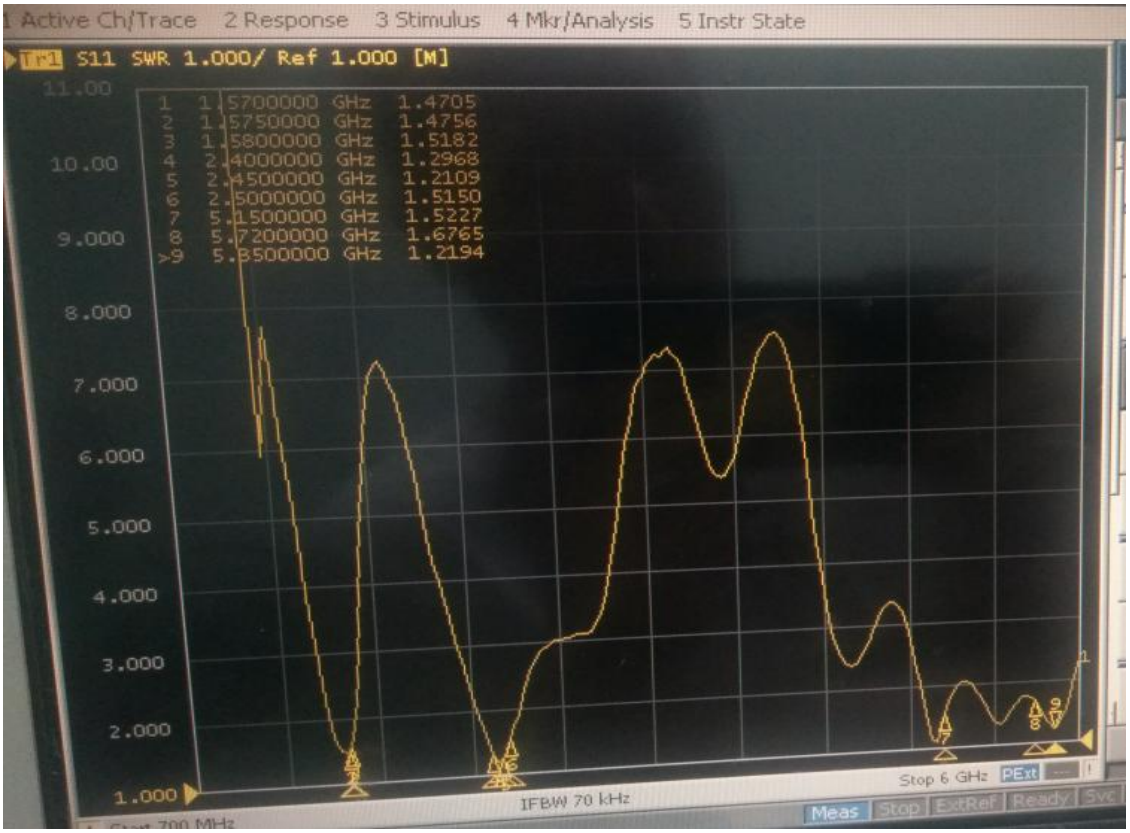
图 4 3D 微波暗室测试坐标系(back view)

1. *S11 Parameter-VSWR*

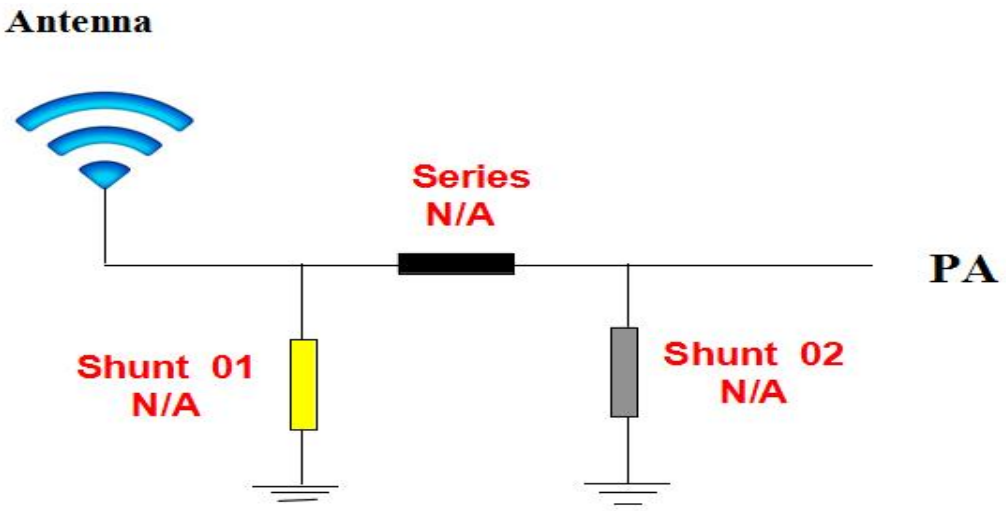
Measuring Method is a 50Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.

S11 Parameter-VSWR

frequency (MHZ)	1570	1575	1580	2400	2450	2500	5150	5720	5850
standing-wave ratio	1.47	1.29	1.21	1.51	1.52	1.67	1.21	1.47	1.29

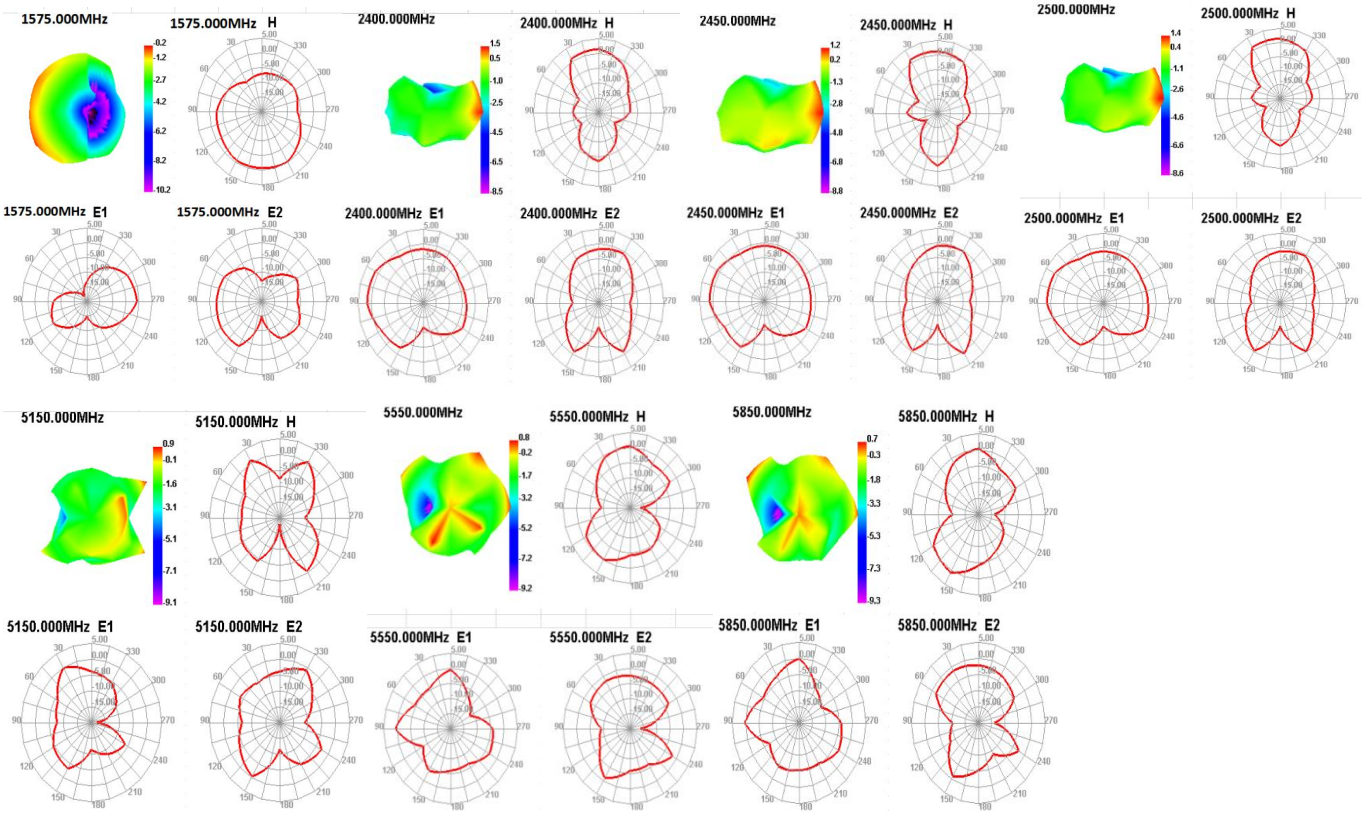


2. Antenna Matching Network



3. Gain & Efficiency

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
1575	32.76	-0.18
2400	38.45	1.51
2450	40.73	1.18
2500	40.22	1.35
5150	38.78	0.92
5350	39.22	0.96
5550	40.52	0.77
5850	41.43	1.27



4.WIFI OTA Data

2.4G WIFI	TRP			TIS		
Channel	CH1	CH6	CH12	CH1	CH6	CH12
802.11b, 11M	12.97	12.51	12.15	-79.46	-79.13	-78.75
802.11g, 54M	11.25	11.36	11.17	-67.14	-67.29	-67.31
802.11n, MCS7(65M)	11.56	11.18	11.35	-66.22	-66.27	-66.09

5.8G WIFI	TRP			TIS		
Channel	CH36	CH60	CH165	CH36	CH161	CH165
802.11A, 54M	10.55	10.36	10.18	-68.09	-68.32	-69.84

5.GPS measurement map

Tested on the rooftop of the fifth floor, the positioning time is about 70 seconds, with a maximum star value of 2 stars and 40 stars

Tested on the rooftop of the fifth floor, the positioning time is about 70 seconds, with a maximum star value of three stars and 40 stars

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Reliability Test Report

Test Date	2025.4.10	Sample Qty.	3	Inspector	Xu Yanfang	
Test Item	**Requirement**	**testing equipment**	**Sample 1**	**Sample 2**	**Sample 3**	**PASS/NG**
high temperature storage	Expose to+85 ℃ for 24 hours, recover for 2 hours, and conduct testing	Constant temperature and humidity box	OK	OK	OK	Pass
low temperature storage	Expose to -40 ° C for 24 hours, recover for 2 hours, and perform testing	Constant temperature and humidity box	OK	OK	OK	Pass
High temperature operation	Powered on for 24 hours at+60 ℃	Constant temperature and humidity box	OK	OK	OK	Pass
Low temperature operation	Powered on for 24 hours at -20 ℃	Constant temperature and humidity box	OK	OK	OK	Pass
Salt spray test	(5±0.5)%sodium chloride、pHValue is6.5～7.2, Temperature of experimental chamber(35±2)℃ ☐24H ☑48H	Salt spray testing machine	OK	OK	OK	Pass
Connector riveting and pulling force	1.13Wire diameter≥ 10N 0.81Wire diameter ≥ 8N RG174 ≥60N RG178 ≥50N	Push-pull force gauge	≥10N	≥10N	≥10N	Pass
Conclusion						Pass
Inspector & Date	Xu Yanfang 2025.4.10		Approval &Date			

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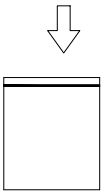
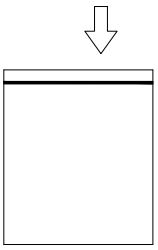
Packing rules

Project name: DY1095	Product name: FPC antenna

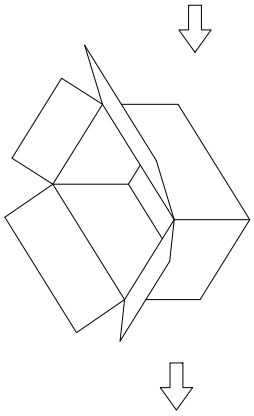
FPC antenna (one)



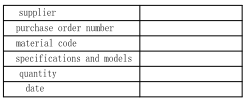
(two) Each PE bag contains 100pcs of products (subject to actual packaging)



(three) Then put the small antenna bag neatly into (Figure 3) and fill 10 small bags (the actual packaging shall prevail).



(four) The packaged antenna can be put into a carton, which can hold 5 large bags, each box can hold 5000PCS (Figure 4). (Subject to actual packaging)



supplier	
purchase order number	
material code	
specifications and models	
quantity	
date	

(five) After the packaging is completed, the shipping label should be affixed (Figure 5).

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Install Wizard or Other

setup script:

Take 1 PCS of product, tear off the release paper on the back of the FPC by hand, and then align the FPC positioning hole position with the shell positioning hole position (positioning rib position or positioning line), and attach it flat to the shell, as shown in the following figure:

Installation process precautions:

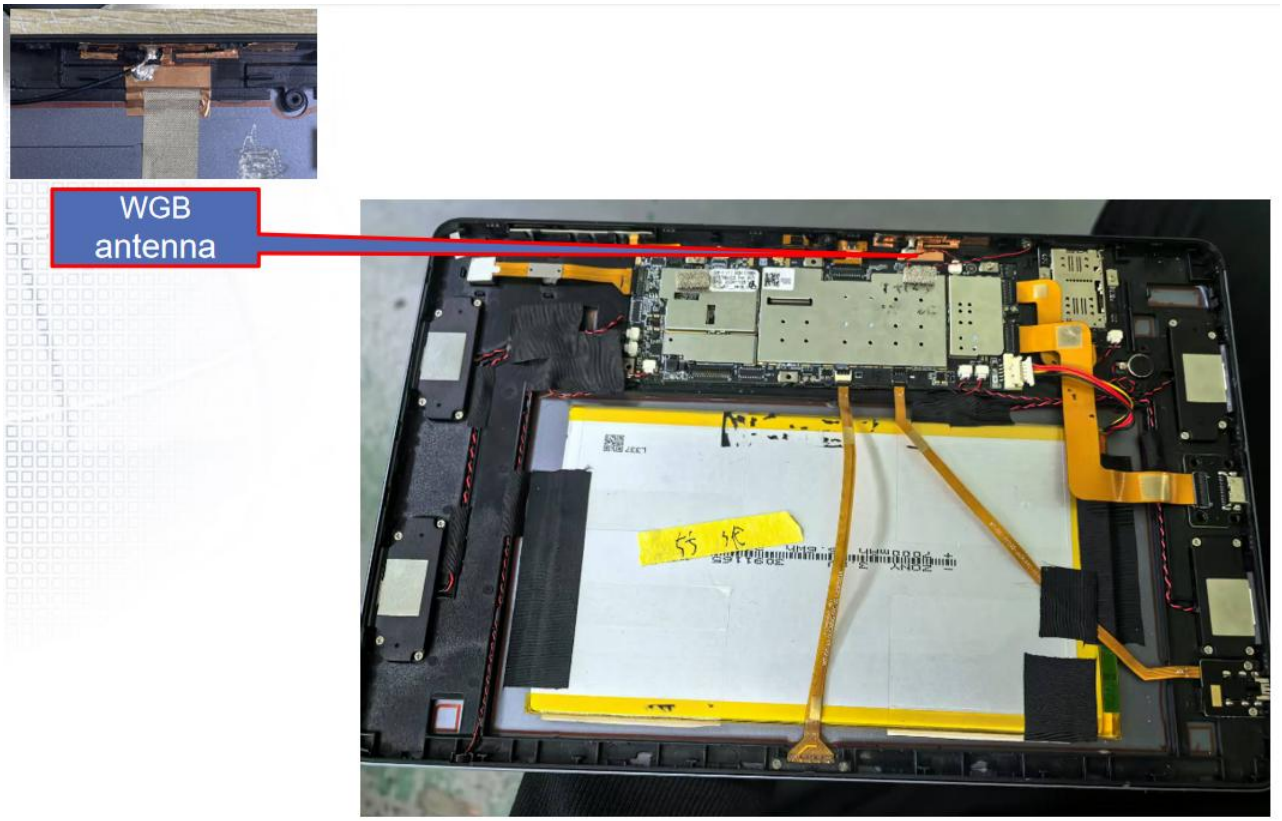
☐Ensure that the FPC is fully attached to the housing after pasting the antenna;

☐Align the positioning hole with the position of the casing positioning column;

☐Align FPC edge with shell edge;

☐When attaching the terminal to the PCBA end of the motherboard, please first align the terminals and then snap them vertically;

☐When disassembling antenna terminals, it is necessary to use a tool (such as a special pry bar) to vertically lift the terminals and not directly pull the wires for disassembly



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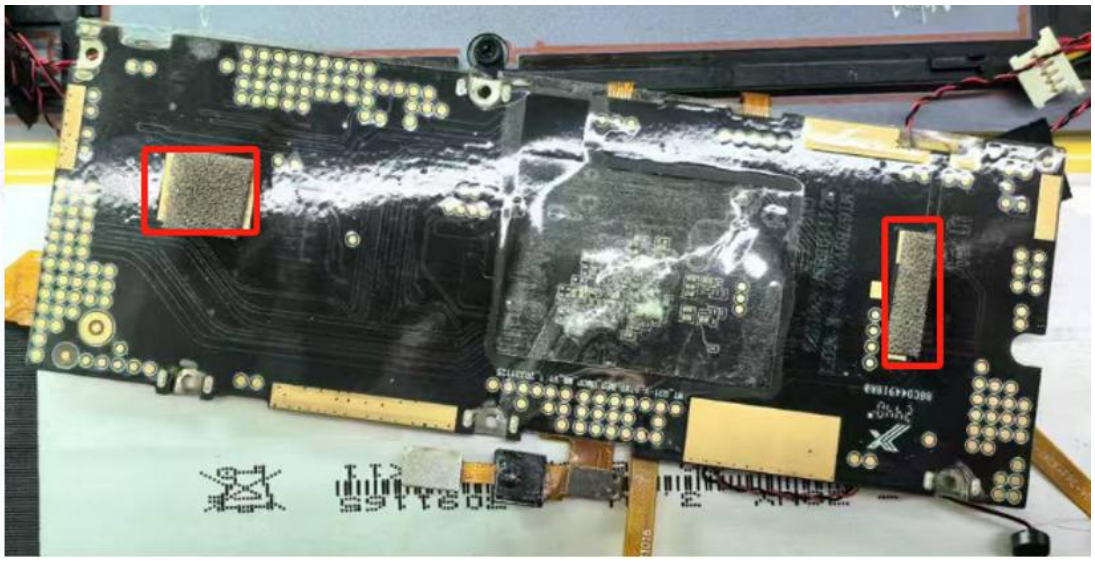
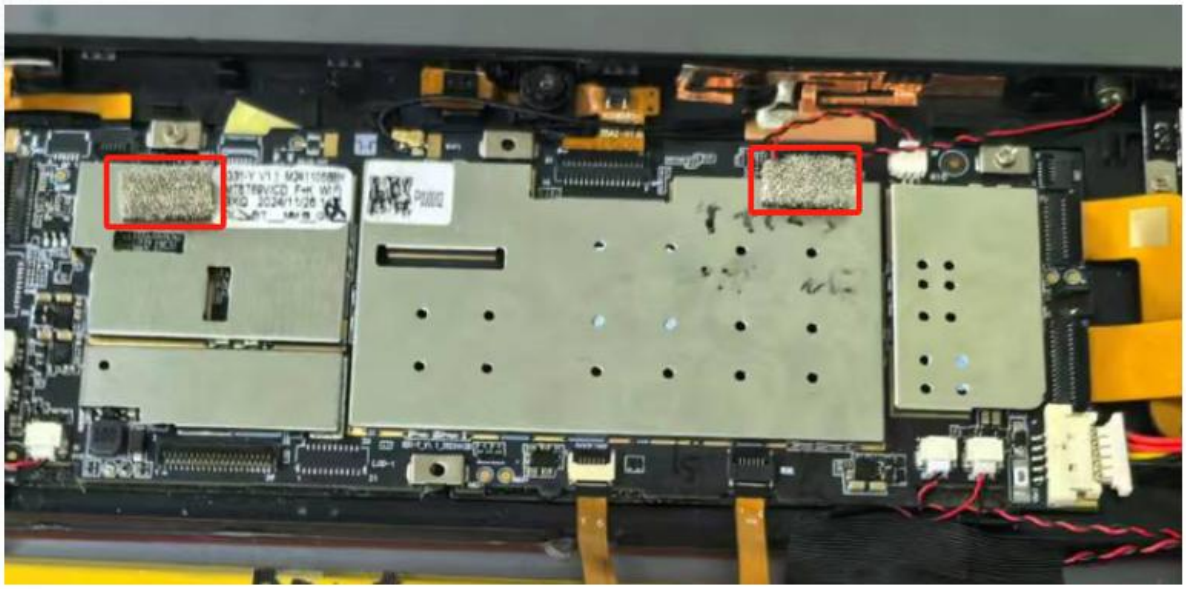


area at the bottom of the motherboard, and ground it to the metal bottom shell. The bottom shell should be synchronously laser engraved at the corresponding



Attach conductive sponge to the marked area above the shielding cover and ground it to the screen

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ROHS certificate of the product

Certificate

Certificate Number: UNIB23083106HC-01

Certificate of Compliance

Product:	5G/4G/WIFI/GPS/BT antenna
Applicant:	ShenZhen ShunDaCheng Technology Co., Ltd.
	4th Floor, Building B5, Xinfu Industrial Zone, Fuyong Chongqing Road, Baoan District, Shenzhen
Manufacturer:	N/A
Model No.:	N/A
Trade Name:	N/A
Test Methods:	IEC 62321-2:2021, IEC 62321-3-1:2013, IEC 62321-4:2013 +A1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015 IEC 62321-7-2:2017, IEC 62321-8:2017

The laboratory tested the product provided by the applicant according to the above test methods. According to the test results, the product conforms to RoHS Directive [(2011/65/EU and Amendment (EU) 2015/863)] issued by the European Commission. It is possible to use CE marking to demonstrate the compliance with RoHS Directive.

The certificate applies to the tested sample above mentioned only and shall not imply an assessment of the whole production. It is only valid in connection with the test report number: UNIB23083106HR-01.

Note: According to the requirements of the applicant for testing, details are shown in the test report.

RoHS

Sep. 06, 2023
Issue Date

Hoffer Lau

CE

Shenzhen United Testing Technology Co., Ltd.

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101/F, Building 2, Tongxin Industrial Park, Xinqiao Village, Dalong Street, Panyu District, Guangzhou, Guangdong, China/511450

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