



Acknowledgment Letter

SPECIFICATION FOR APPROVAL

Customer Name	Beijing Vision		
Customer Project Name	SK510	Project Name	SK510
Customer P/N		SDC P/N	WF714B-1131L-80
Band	WIFI2. 4G/5. 8G/BT		
Version	A0		
Designer Information			
RF Engineer	Fu Xuerong	R&D Diretor	Xia Chenglei
ME Engineer	Huang Zongbao		

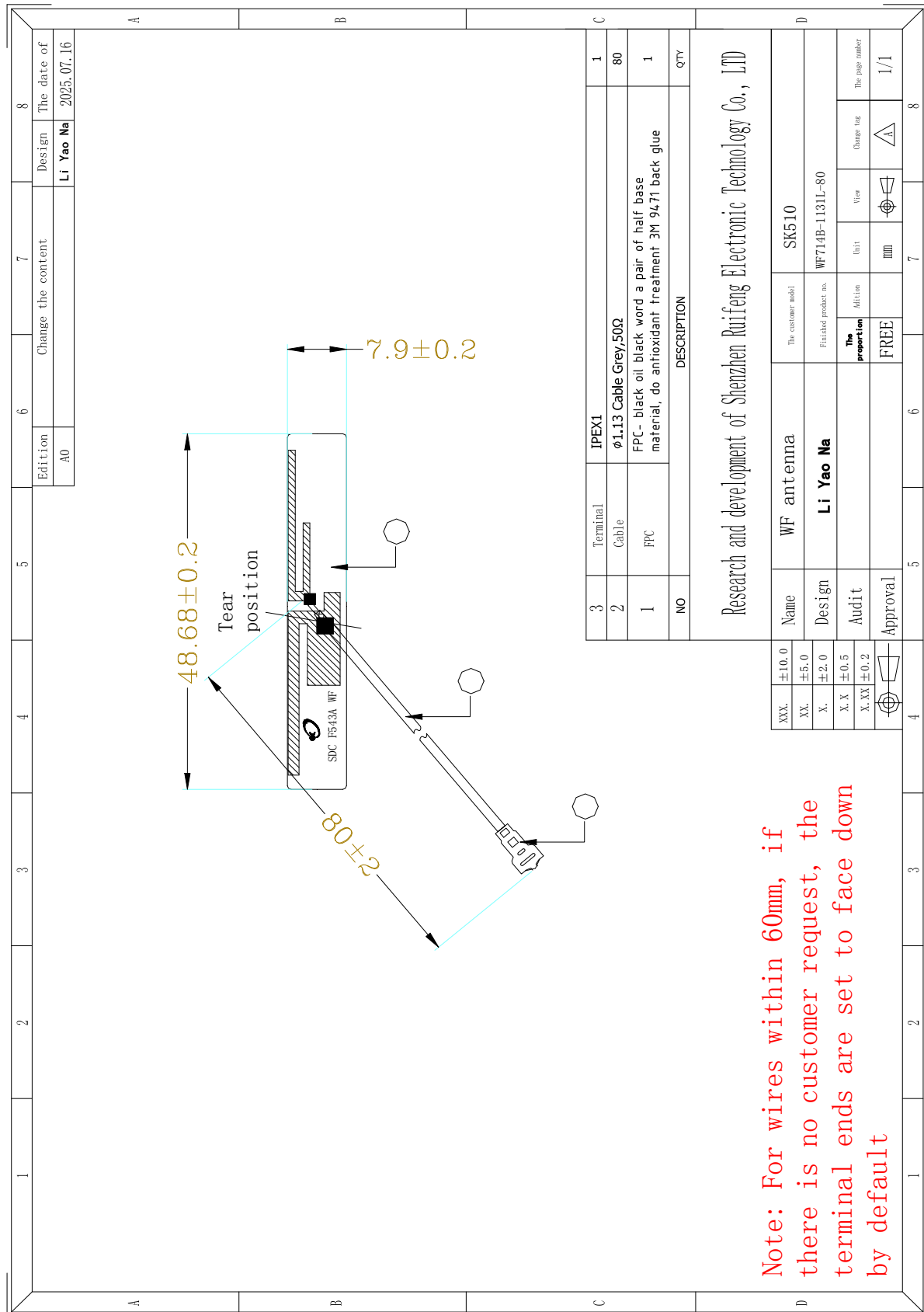
Approval				Customer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	Fu Xuerong	Xia Chenglei		
Date	2025. 7. 16	2025. 7. 16	2025. 7. 16		

Change Log				
Version	Change Description	Person in Charge	Approval By	Date

Catalogue

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Drawing or Product Image



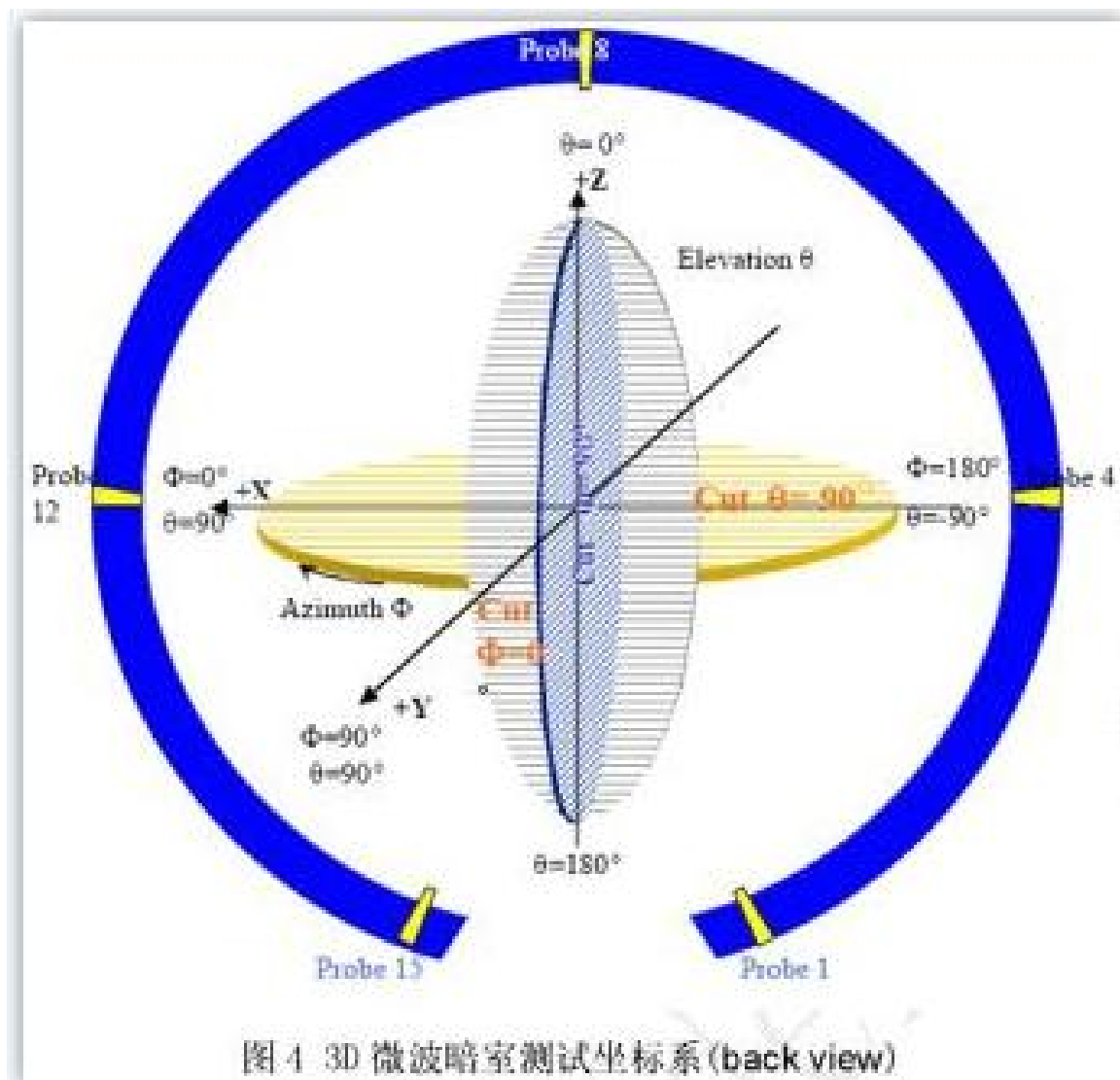
Sample Dimensions Test Report

Test Date	2025. 7. 16	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	48.68±0.2mm	48.7	48.8	48.7	Pass
②width	7.9±0.2mm	7.9	8.0	7.9	Pass
③thickness	0.1±0.03mm	0.1	0.1	0.1	Pass
④Line length	80±2mm	80	81	80	Pass
Conclusion					PASS
Inspector & Date	Xu Yanfang 2025. 7. 16		Approval & Date		

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:



1. Electrical Specification

1.1: Electrical Specification

Freq. Range (MHz)	2400-2500; 5150-5850
Impedance (Ω)	50
VSWR	≤ 2
Directional	Omni directional
Polarization	Linear
Gain (dBi)	2400-2500: 2.04
	5150-5850: 1.91

1.2: Mechanical Specification

Material	FPC
RF Cable Type	RF1.13
Connector Type	First generation terminal

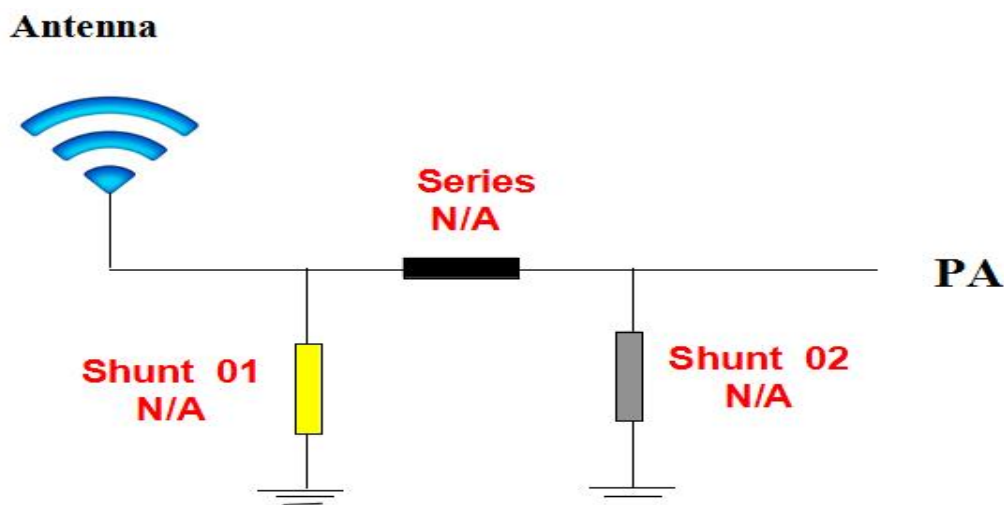
1.3: Environmental Specification

Operation temp	-40 °C ~ +85 °C
storage temperature	-40 °C ~ +85 °C

S11 Parameter-VSWR

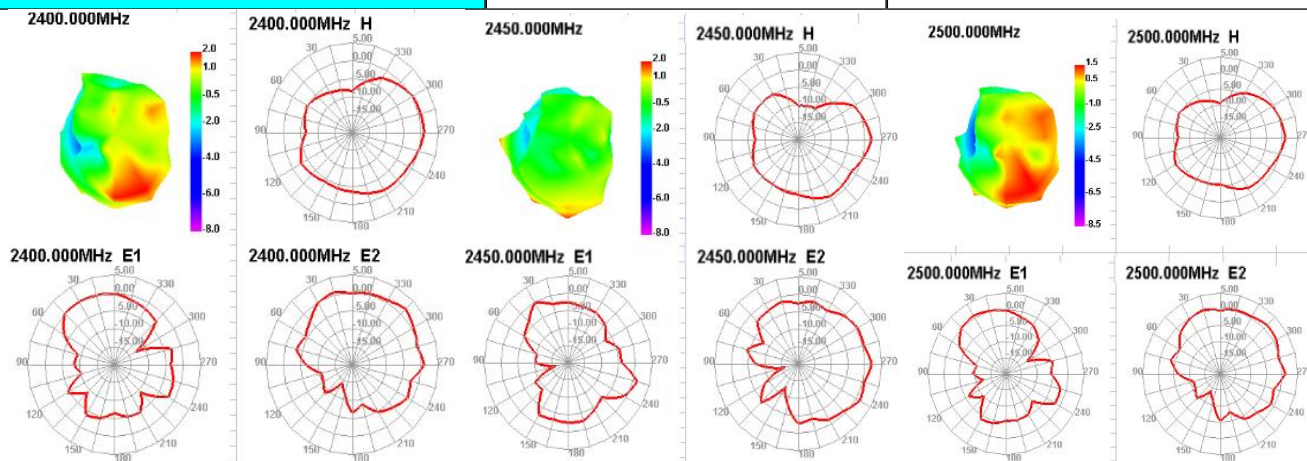


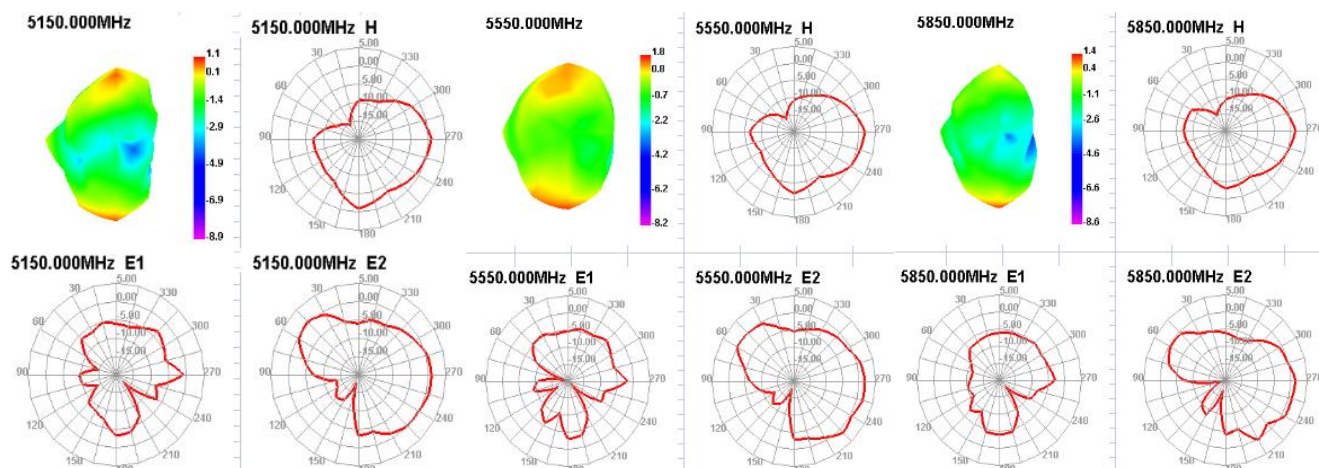
2. Antenna Matching Network



3. Gain & Efficiency

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
2400	52.27	2.04
2450	51.37	2.04
2500	52.58	1.52
5150	50.63	1.14
5350	50.25	1.91
5500	48.39	1.82
5750	47.33	1.79
5850	47.93	1.43





4. WIFI OTA Data

2.4G WIFI	TRP			TIS		
Channel	CH1	CH6	CH12	CH1	CH6	CH12
802.11 b , 11M	15.83	15.57	15.22	-66.9	-70.03	-66.61
802.11 g , 54M	13.57	13.34	13.49	-54.38	-68.51	-55.29
802.11 n , MCS7 (65M)	12.31	12.28	12.61	-53.18	-56.12	-54.53

5.8G WIFI	TRP			TIS		
Channel	CH36	CH60	CH165	CH36	CH161	CH165
802.11 A , 54M	12.28	12.48	11.73	-67.26	-68.45	-68.67

Reliability Test Report

Test Date	2025. 7. 16	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 °C 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 °C	Constant temperature and humidity box	OK	OK	OK	Pass
Low temperature operation	Powered on for 24 hours at -20 °C	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) °C <input type="checkbox"/> 24H <input checked="" type="checkbox"/> 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. 7. 16		Approval & Date			

Product ROHS Composition Declaration Form

product name	Uniform material	Harmful substance content(PPM)					HS test report number	Date of HS test report
		Pb	Cd	Hg	Cr	Br		
WIFI&BT antenna terminal	FPC	ND	ND	ND	ND	ND	UNIB21042707HR-01	2025. 7. 16
		ND	ND	ND	ND	ND		
		ND	ND	ND	ND	ND		
		ND	ND	ND	ND	ND		
		ND	ND	ND	ND	ND		
	wire rod	ND	ND	ND	ND	ND		
		ND	ND	ND	ND	ND		
		ND	ND	ND	ND	ND		
	terminal	ND	ND	ND	ND	ND		

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

WIFI antenna
installation location

