



深圳市顺达成科技有限公司
SHUN DA CHENG TECHNOLOGY CO., LTD

承 认 书

SPECIFICATION FOR APPROVAL

客户名称 Customer Name	昱科		
客户项目名 Customer Project Name	AL1001WB	顺达成项目名 SDC Project Name	AL1001WB
客户编码 Customer P/N		顺达成料号 SDC P/N	WF6109B-0814R-25 主（黑） WF6109B-0814R-35 副（灰）
频段 Band	WIFI2.4G/5.8G/BT		
版本号 Version	A0		
设计人信息/Designer Information			
射频工程师 RF Engineer	伍文载	研发主管 R&D Director	夏承磊
结构工程师 ME Engineer	黄宗宝		

审批/ Approval				客户批准/Customer Approval	
	制作 Prepared By	审核 Checked By	批准 Approval By	审核 Checked By	批准 Approval By
签章 Signature	黄宗宝	夏承磊	陈华明		
日期 Date	2025. 02. 28	2025. 02. 28	2025. 02. 28		

修订履历/Change Log				
版本 Version	修订内容 Change Description	责任人 Person in Charge	核准 Approval By	日期 Date



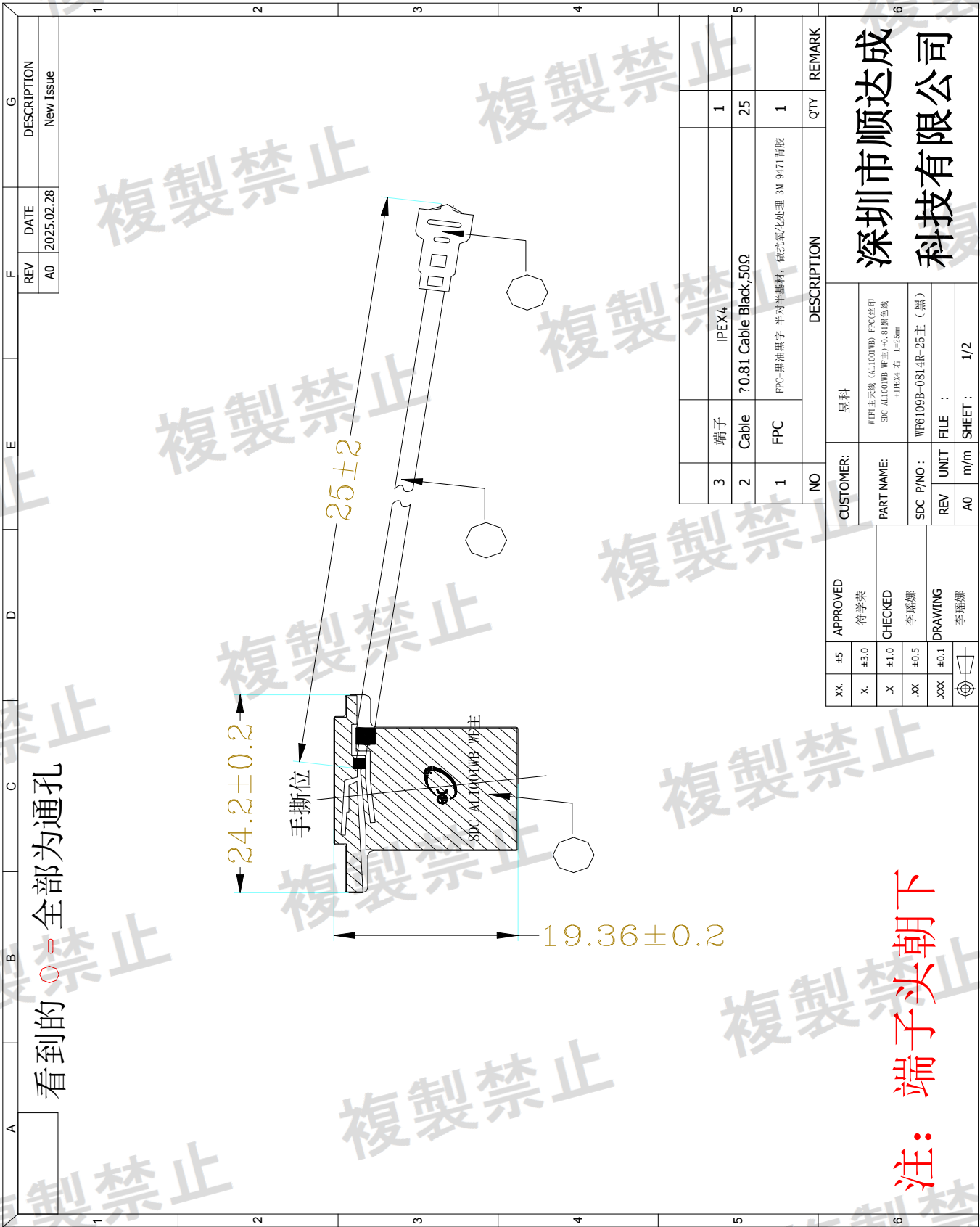
目录/Catalogue

序号 No.	项目 Item	页码 Page No.
1	图纸或实物图片 Drawing or Product Image	3
2	尺寸测量报告 Dimensions Test Report	4
3	射频性能测试报告 RF Performance Test Report	5-8
4	可靠性测试报告 Reliability Test Report1	9
5	包装文件 Package Document	10
6	环境有害物质管控一览表 RoHS Control list for Sample	11
7	安装事宜或其它 Install Wizard or Other	11



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产品图纸或实物图片
Drawing or Product Image





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样品尺寸测量报告

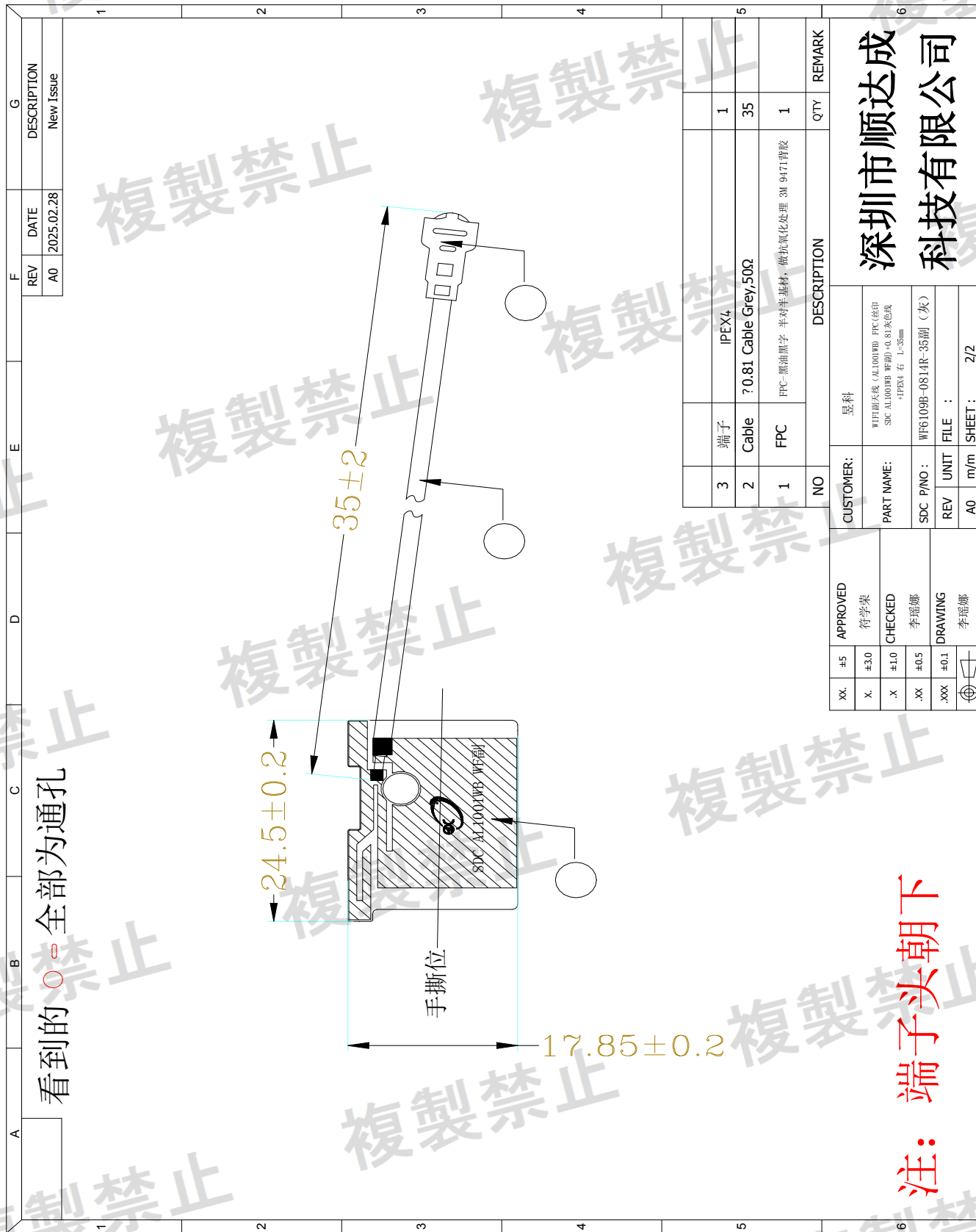
Sample Dimensions Test Report

测试日期 Test Date	2025. 02. 28	样品数量 Sample Qty.	3	测试人 Inspector	许燕芳
尺寸编号 Dimension No.	标准 Standard	样品 1 Sample 1	样品 2 Sample 2	样品 3 Sample 3	Pass/NG
①长度	24. 2±0. 2mm	24. 2	24. 3	24. 2	Pass
②宽度	19. 36±0. 2mm	19. 4	19. 4	19. 36	Pass
③厚度	0. 1±0. 03mm	0. 1	0. 1	0. 1	Pass
④线长	25±2mm	25	25	26	Pass
最终结论 Conclusion					PASS
测试人&日期 Inspector & Date	许燕芳 2025. 02. 28		批准&日期 Approval & Date		



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产品图纸或实物图片
Drawing or Product Image





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样品尺寸测量报告

Sample Dimensions Test Report

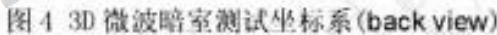
测试日期 Test Date	2025. 02. 28	样品数量 Sample Qty.	3	测试人 Inspector	许燕芳
尺寸编号 Dimension No.	标准 Standard	样品 1 Sample 1	样品 2 Sample 2	样品 3 Sample 3	Pass/NG
①长度	24.5±0.2mm	24.5	24.6	24.5	Pass
②宽度	17.85±0.2mm	17.85	17.9	17.9	Pass
③厚度	0.1±0.03mm	0.1	0.1	0.1	Pass
④线长	35±2mm	35	36	35	Pass
最终结论 Conclusion					PASS
测试人&日期 Inspector & Date	许燕芳 2025. 02. 28		批准&日期 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:



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.

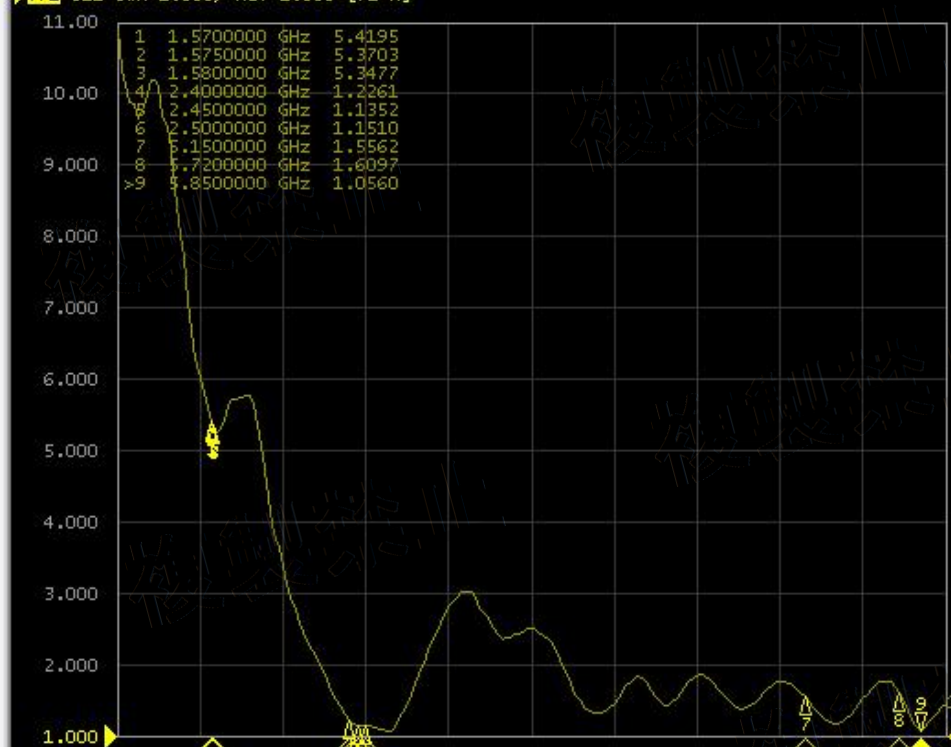


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S11 Parameter-VSWR

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

▶ Tr1 S11 SWR 1.000/ Ref 1.000 [F1 M]



1 Start 1 GHz IFBW 70 kHz Stop 6 GHz Cor !

Display

Allocate Channels

Num of Traces
1

Allocate Traces

Display Mem

Data -> Mem

Data Math
OFF

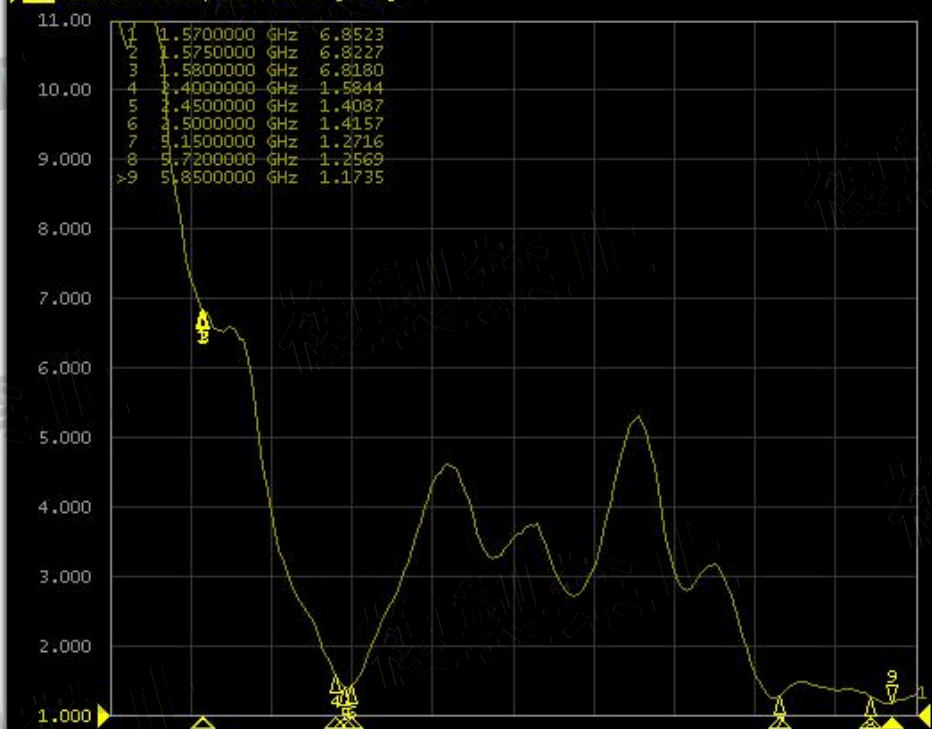
Equation Editor...

Equation
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Edit Title Label

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

▶ Tr1 S11 SWR 1.000/ Ref 1.000 [F1 M]



1 Start 1 GHz IFBW 70 kHz Stop 6 GHz Cor !

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Allocate Channels

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Data -> Mem

Data Math
OFF

Equation Editor...

Equation
OFF

Edit Title Label



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2. 天线匹配网络/Antenna Matching Network

Antenna



Series
N/A

PA

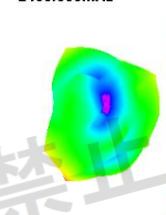
Shunt 01
N/A

Shunt 02
N/A

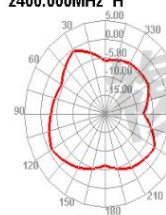
3. Gain & Efficiency

Passive Test For 2.4G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Directivity (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
2400	43.54	-3.61	1.03	-1.12	20.581	22.962	1.03	-15.9	4.64	15	48.93	49.09
2425	45.48	-2.97	1.96	-0.19	23.926	26.555	1.96	-16.48	4.93	15	49.09	49.22
2450	36.53	-4.37	0.87	-1.28	17.136	19.397	0.87	-19.74	5.24	15	49.25	49.27
2475	35.97	-4.44	0.52	-1.63	17.205	18.763	0.52	-23.22	4.96	75	49.98	49.91
2500	36.94	-4.32	0.32	-1.83	17.676	19.267	0.32	-18.36	4.64	75	49.71	49.62

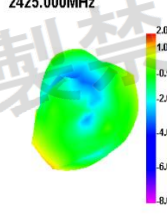
2400.000MHz



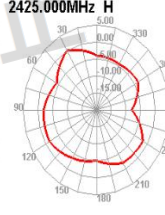
2400.000MHz H



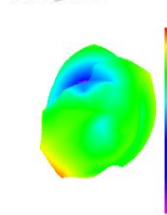
2425.000MHz



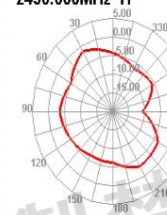
2425.000MHz H



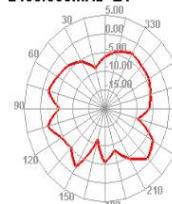
2450.000MHz



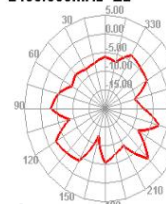
2450.000MHz H



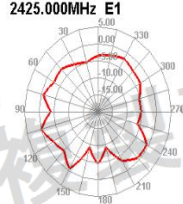
2400.000MHz E1



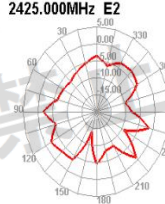
2400.000MHz E2



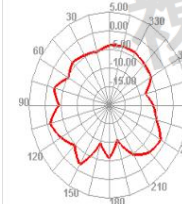
2425.000MHz E1



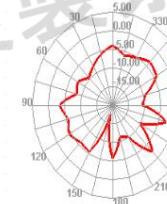
2425.000MHz E2



2450.000MHz E1



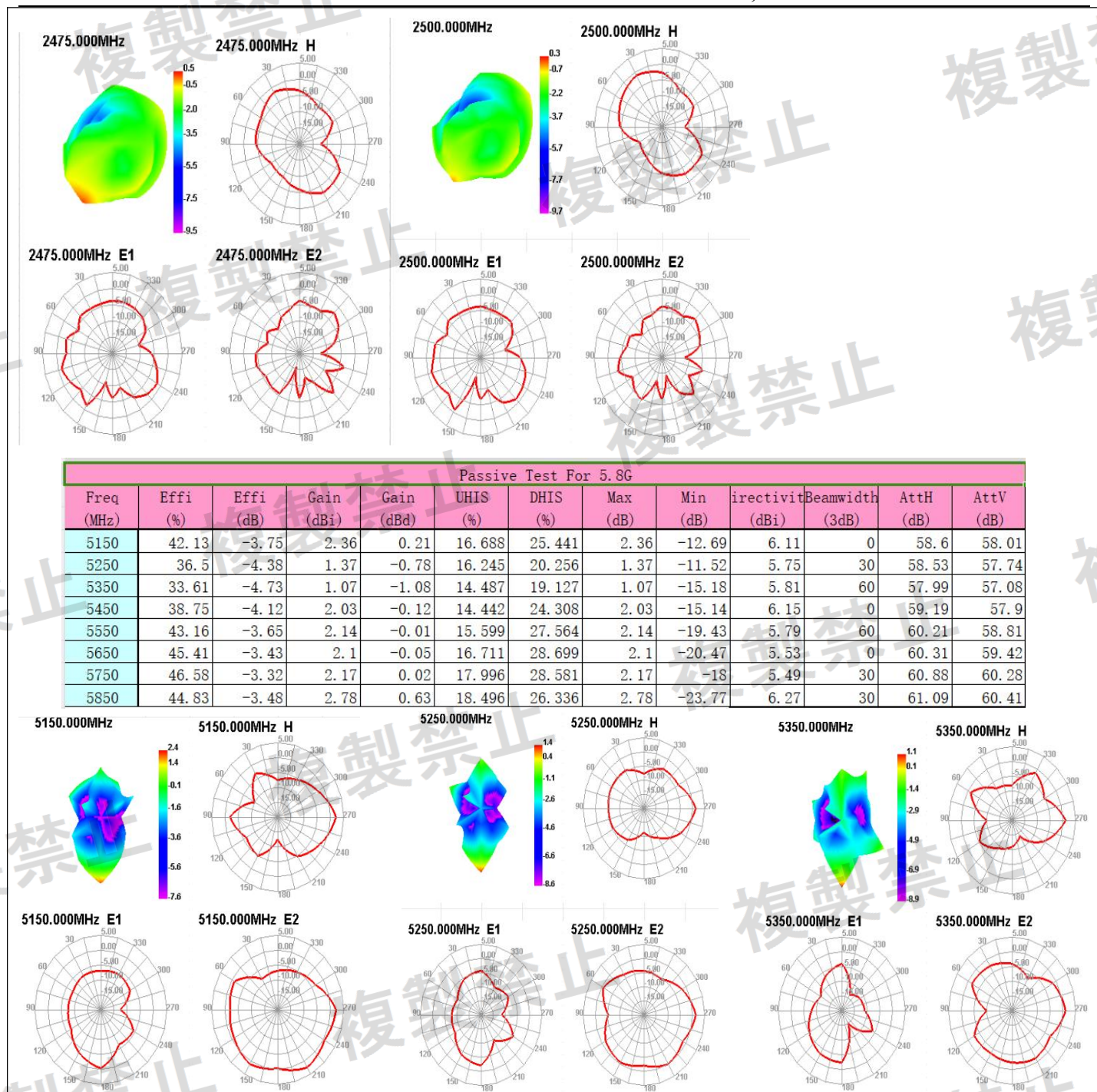
2450.000MHz E2





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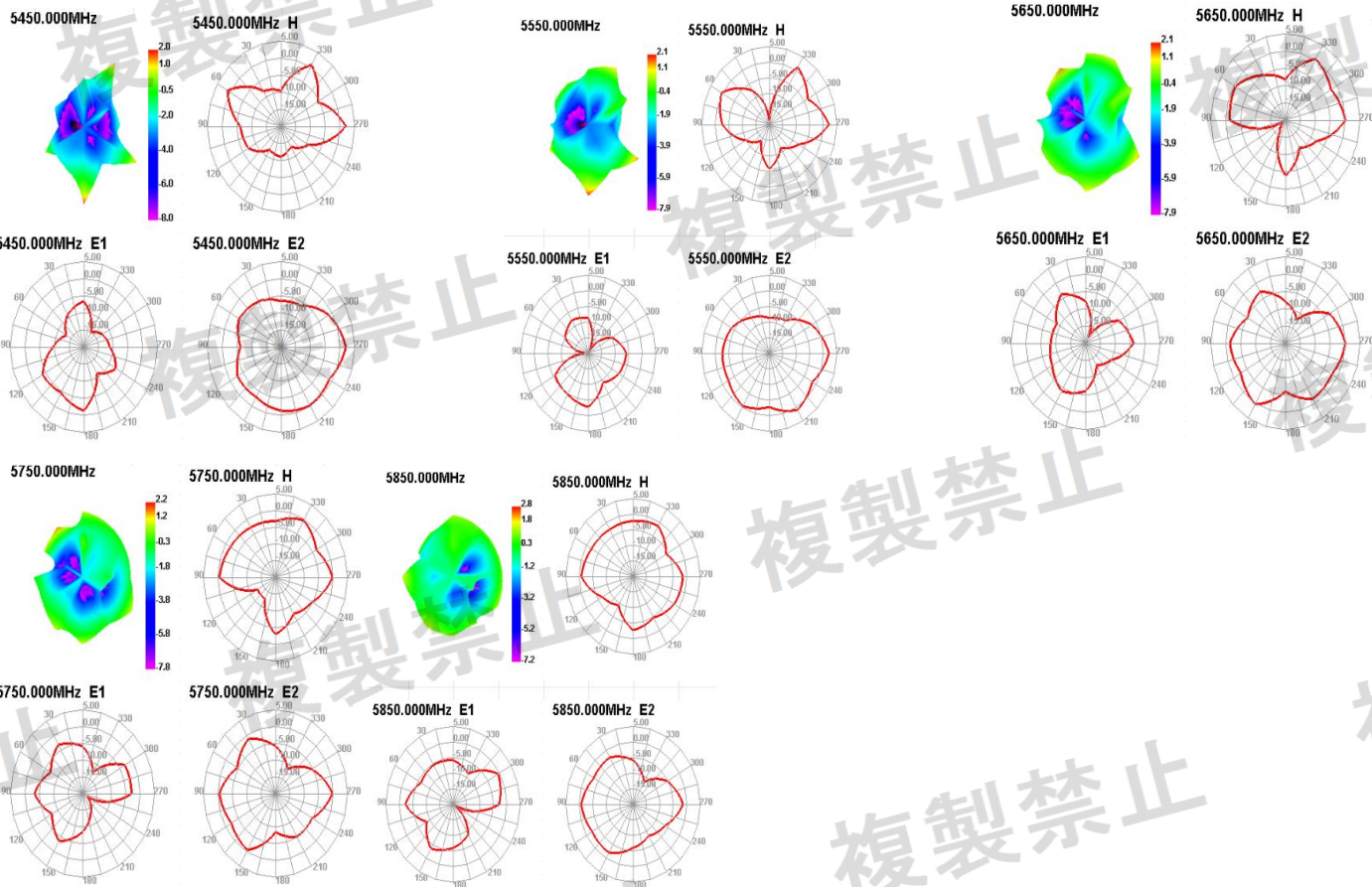
SHUN DA CHENG TECHNOLOGY CO., LTD





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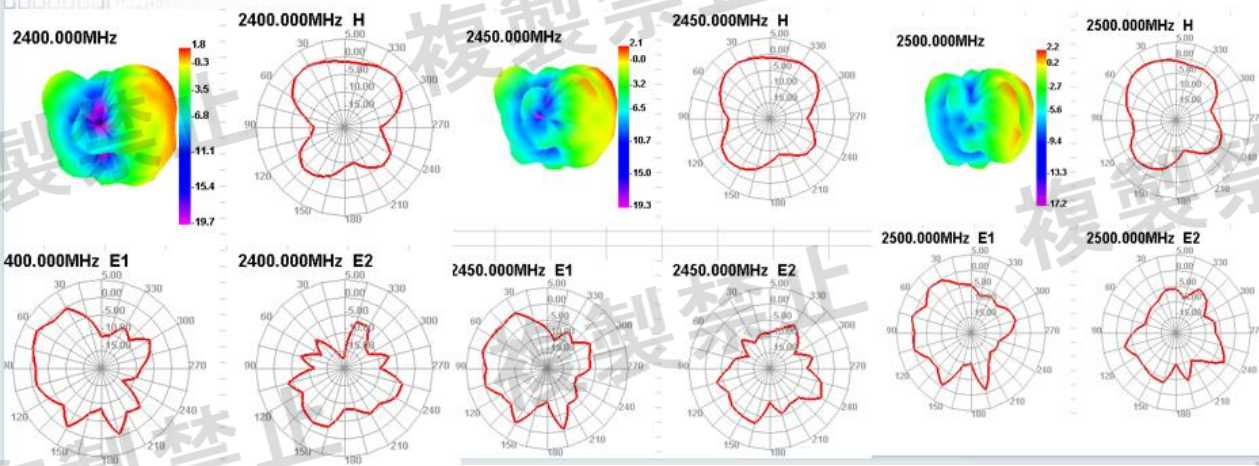


WIFI AUX

Passive Test For 2.4G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenu Hor	Attenu Ver
2400	43.91	-3.57	1.84	-0.31	22.401	21.511	1.84	-19.67	49.25	48.85
2450	44.86	-3.48	2.13	-0.02	22.886	21.973	2.13	-19.33	49.5	49.28
2500	45.49	-3.42	2.16	0.01	23.63	21.862	2.16	-17.15	49.61	49.52

2400.00MHz - 2500.00MHz Gain

5.00



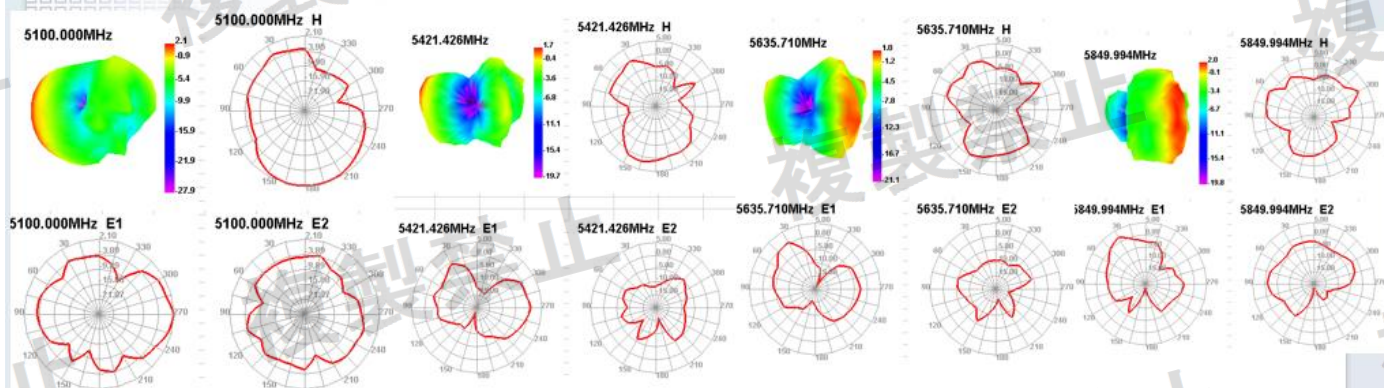


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Passive Test For 5.8G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
5100	39.74	-4.01	2.1	-0.05	19.309	20.435	2.1	-27.87	64.41	63.8
5207.14	32.4	-4.9	0.91	-1.24	15.743	16.652	0.91	-24.89	61.01	60.71
5314.28	35.76	-4.47	1.73	-0.42	17.926	17.834	1.73	-18.84	60.15	59.59
5421.43	37.05	-4.31	1.73	-0.42	19.307	17.743	1.73	-19.66	60.88	60.38
5528.57	44.37	-3.53	2.03	-0.12	24.066	20.305	2.03	-27.5	63.75	63.1
5635.71	34.14	-4.67	1.05	-1.1	19.484	14.656	1.05	-21.15	63	62.42
5742.85	42.37	-3.73	2.27	0.12	26.477	15.897	2.27	-21.05	63.75	63.17
5849.99	41.95	-3.77	2.04	-0.11	27.682	14.265	2.04	-19.81	64.46	64.2

5100.00MHz - 5850.00MHz Gain



4. WIFI OTA Data

2.4G	802.11b, (2.4G) 11M		
	Channel	CH1	CH6 CH11
	TRP	12.09	12.4 12.31
	TIS	-78.52	-78.69 -78.44
5.8G	802.11a, (5.8G) 54M		
	Channel	CH36	CH60 CH161
	TRP	10.07	10.3 9.72
	TIS	-67.21	-68.24 -69.17



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可靠性测试报告

Reliability Test Report

测试日期 Test Date	2025. 02. 28	样品数量 Sample Qty.	3	测试人 Inspector	许燕芳	
测试项目 Test Item	要求 Requirement	试验设备 testing equipment	样品 1 Sample 1	样品 2 Sample 2	样品 3 Sample 3	判定 PASS/NG
高温存储	在+85℃条件下暴露 24H, 恢复 2H 后进行测试	恒温恒湿箱	OK	OK	OK	Pass
低温存储	在-40℃条件下暴露 24H, 恢复 2H 后进行测试	恒温恒湿箱	OK	OK	OK	Pass
高温工作	在+60℃条件下通电工作 24H	恒温恒湿箱	OK	OK	OK	Pass
低温工作	在-20℃条件下通电工作 24H	恒温恒湿箱	OK	OK	OK	Pass
盐雾试验	(5 ± 0. 5)%氯化钠、 pH 值为 6. 5~7. 2, 实验箱温度 (35±2)℃ ☐ 24H ☒ 48H	盐雾试验机	OK	OK	OK	Pass
连接器铆压拉拔力	1. 13 线径 ≥10N 0. 81 线径 ≥8N RG174 ≥60N RG178 ≥50N	推拉力计	≥10N	≥10N	≥10N	Pass
最终结论 Conclusion						Pass
测试人&日期 Inspector & Date	许燕芳 2025. 02. 28		批准&日期 Approval & Date			



包 装 规 范

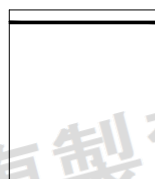
项目名：AL1001WB

成品名称：FPC天线

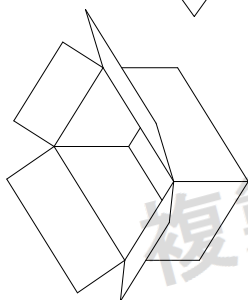
FPC成品天线 (一)



(二) 每PE袋装100pcs产品 (以实际包装为准)



(三) 再将装好的天线小包装袋整齐放入
(图三) 装10小袋 (以实际包装为准)



(四) 包装好的天线放入纸箱, 可装5大袋,
每箱可装5000PCS (图四)。(以实际
包装为准)



供应商	
采购单号	
物料编码	
规格型号	
数量	
日期	

(五) 包装完成后需贴上出货标签 (图五)。



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安装事宜或其它

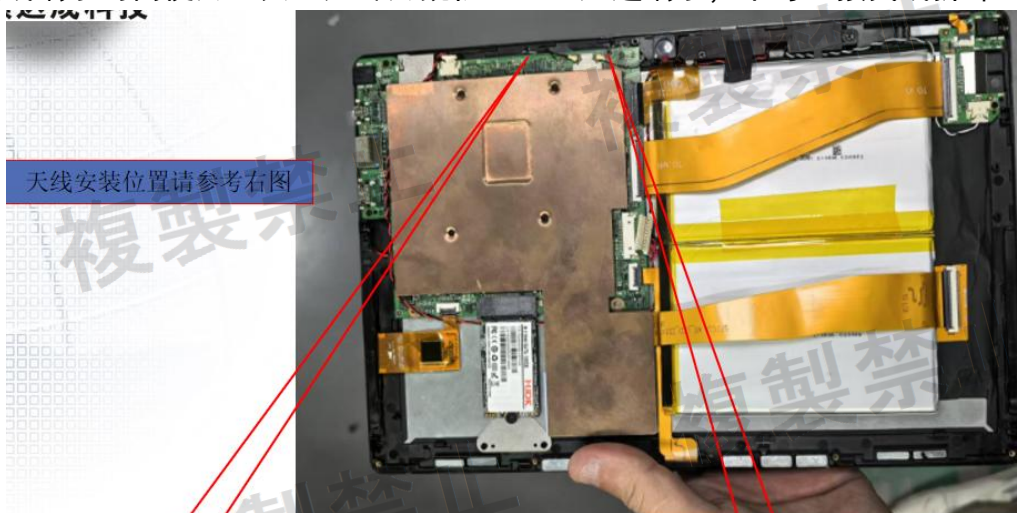
Install Wizard or Other

安装过程:

取 1PCS 产品, 用手撕下 FPC 背面的离型纸, 然后将 FPC 定位孔位置与外壳定位孔位置 (定位筋位或定位线) 对齐, 平整的贴附与外壳上, 具体位置如下图所示:

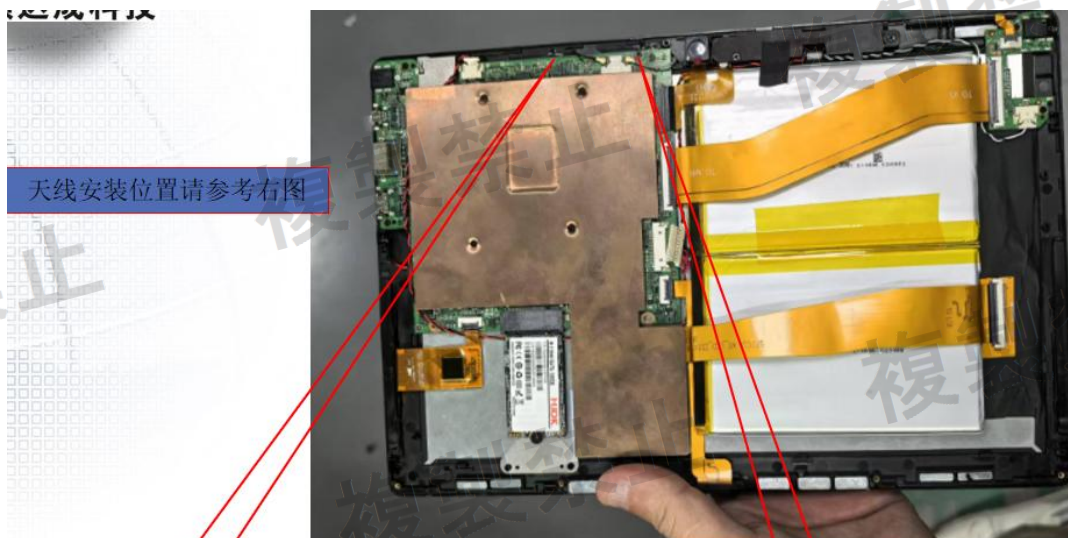
安装过程注意事项:

- ☐ 粘贴天线后保证 FPC 完整贴附于外壳;
- ☐ 定位孔与外壳定位柱位置对齐;
- ☐ FPC 边缘与外壳边缘对齐;
- ☐ 带端子天线在将端子扣合到主板 PCBA 端时请首先对齐端子, 然后垂直扣合;
- ☐ 拆卸天线端子时需使用工具 (如专用撬棍) 垂直翘起端子, 不可直接拽线拆卸



WIFI主天线

WIFI副天线



WIFI主天线

WIFI副天线



深圳市顺达成科技有限公司
SHUN DA CHENG TECHNOLOGY CO., LTD

产品 ROHS 证书

Certificate

Certificate Number: UNIB23083106HC-01



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



Shenzhen United Testing Technology Co., Ltd.

Shenzhen: D101&D401, No. 107, Kaicheng High-Tech Park, Taoyuan Community, Dalang, Sub-District
Longhua District, Shenzhen, Guangdong, China/518109
Guangzhou: No.47-3, Industrial Road, Zhushan, Dalong Street, Panyu District, Guangzhou, Guangdong,
China/511450;
101/F, Building 2, Tongxin Industrial Park, Xinqiao Village, Dalong Street, Panyu District, Guangzhou,
Guangdong, China/511450
Tel: +86-755-86180996/+86-020-39277769 Fax: +86-0755-86180156
Web Site: www.uni-lab.hk/ E-mail: hofferlau@uni-lab.hk



Certificate of Compliance