

China Science Microelectronics Technology (Shenzhen) Co., Ltd.

Product Approval Specification

SPECIFICATION FOR APPROVAL

Supplier Name	Shenzhen Shundacheng Technology Co., Ltd.	Day	Period	2024. 01. 15
Phone	13691865216	China Science Microelectronics Technology Project Model No.	ZQC-P1-MB	
Supplier Model Number	ZQC-P1-MB	China Microelectronics Technology Product Name	WIIFI/BT Antenna	
Supplier Contact Person	Chen Huaming	China Microelectronics Technology Product Number		
Supplier Address	4th Floor, Building B5, Xinfeng Industrial Park, Chongqing Road, Fuyong Town, Bao'an District, Shenzhen			
Prepared (PRE.): Huang Zongbao Reviewed (CHKD BY): Yang Yaping Approval by: Chen Huaming				

Customer Approval Result (APPROVAL RESULT): ● Qualified (OK) ● Not Qualified (NG) □ Other (OTHER): Remarks (REMARK): Date: 2024 Year Month Day	Organized by Zhongke Microelectronics Technology (APPD):
	Reviewed by Zhongke Microelectronics Technology (CHKD BY):
	Approved by Zhongke Microelectronics Technology (APPROVAL BY):

China Science Microelectronics Technology (Shenzhen) Co., Ltd.

Company Address: 5th Floor, Building A4, Abao Guangyao International Optical Communication Industrial Park, Zhu Longtian Road, Shiyan Street, Bao'an District, Shenzhen

Electric speech:

Transmit True:



承 认 书

SPECIFICATION FOR APPROVAL

Customer Name	China Science Microelectronics		
Customer Project Name	ZQC-P1-MB	SDC Project Name	ZQC-P1-MB
Customer P/N		SDC P/N	WG5530B-A
Band	WIFI2. 4G/5. 8G/BT		
Version	A0		
Designer Information			
RF Engineer	Yang Yonghui	Research and Development Director R&D Director	Fu Xuerong
Structural Engineer ME Engineer	Li Yaona		

审批/ Approval				客户批准/Customer Approval	
	制作 Prepared By	审核 Checked By	Approval Approval By	审核 Checked By	Approval Approval By
Signature Signature	Li Yaona	Fu Xuerong	Chen Huaming		
Date	2024. 01. 15	2024. 01. 15	2024. 01. 15		

Change Log				
Version	Revision Content Change Description	Person in Charge Person in Charge	Approval Approval By	Date



Catalogue

No.	Item	Page No.
1	Drawing or Product Image	3
2	Dimensions Test Report	4
3	RF Performance Test Report	5-8
4	Reliability Test Report1	9
5	Package Document	10
6	RoHS Control list for Sample	11
7	Installation matters or others Install Wizard or Other	11



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Product Drawing or Physical Image
Drawing or Product Image

1		2		3		4		5		6		7		8	
A		B		C		D		E		F		G		H	
版次		变更内容		设计		日期									
A0				李瑶娜		2024.01.15									
1		FPC		FPC-黑油黑字 半对半基材, 做电镀处理 3M 9471背胶		1									
NO		DESCRIPTION		QTY											
1		FPC		FPC-黑油黑字 半对半基材, 做电镀处理 3M 9471背胶		1									
名称		WB天线		客户型号		ZQC-P1-MB									
设计		L Yaona		成品料号		WG5530B-A									
审核				比例		版次		单位		视图		变更标记		页码	
批准				FREE				mm		Φ		△		1/1	
XXX. ±10.0		XX. ±5.0		X. ±2.0		X.X ±0.5		X.XX ±0.2		Φ		△		1/1	
1		2		3		4		5		6		7		8	
A		B		C		D		E		F		G		H	

24.7±0.2

8.1±0.2

Hand-Torn Position

1



Sample Dimensions Test Report

Sample Dimensions Test Report

Test Date	2024. 01. 15	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
① Length	24. 7±0. 2mm	24. 7	24. 8	24. 7	Pass
② Width	8. 1±0. 2mm	8. 1	8. 2	8. 1	Pass
Thickness	0. 1±0. 03mm	0. 1	0. 1	0. 1	Pass
Conclusion					PASS
Tester & Date Inspector & Date	Xu Yanfang 2024.01.15		Approval & Date Approval & Date		



RF Performance Test Report

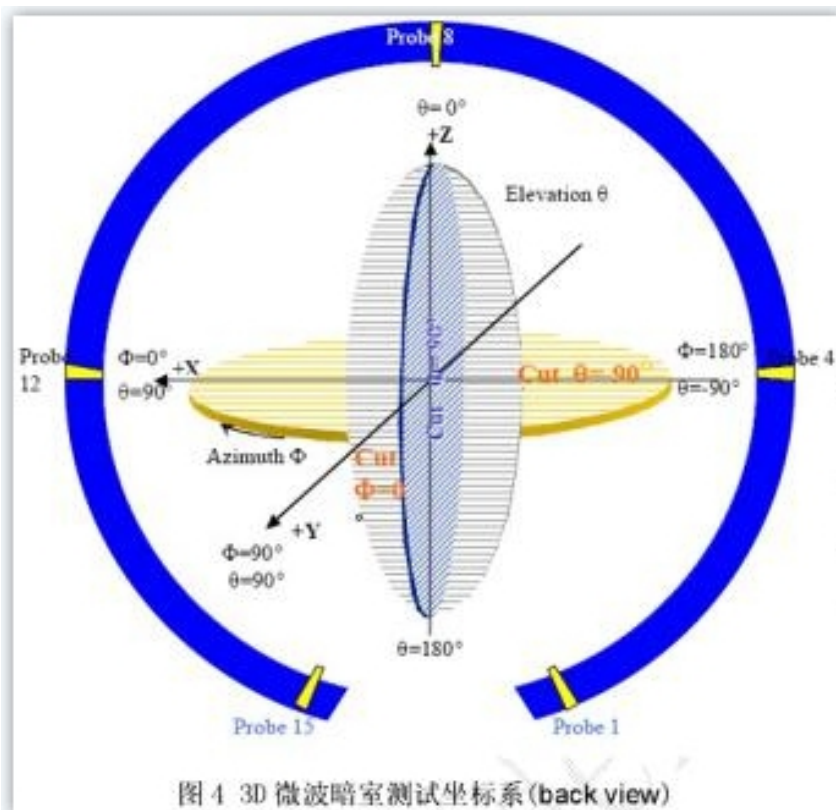
RF Performance Test Report

Antenna Test Equipment Introduction

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:

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:



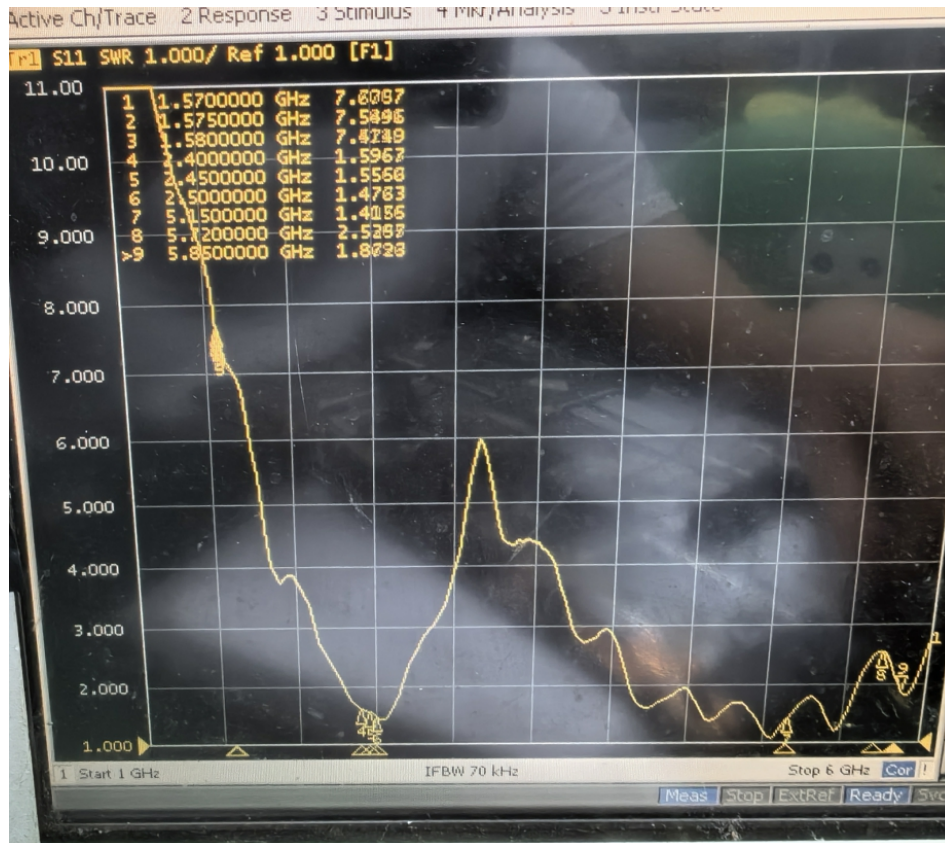
1. S11 Parameter-VSWR

Using a 50Ω coaxial cable connected to the antenna, then the cable is connected to the network analyzer to measure the S11 parameter, with the tested product at least 20 centimeters away from any metal.

Measuring Method: 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.

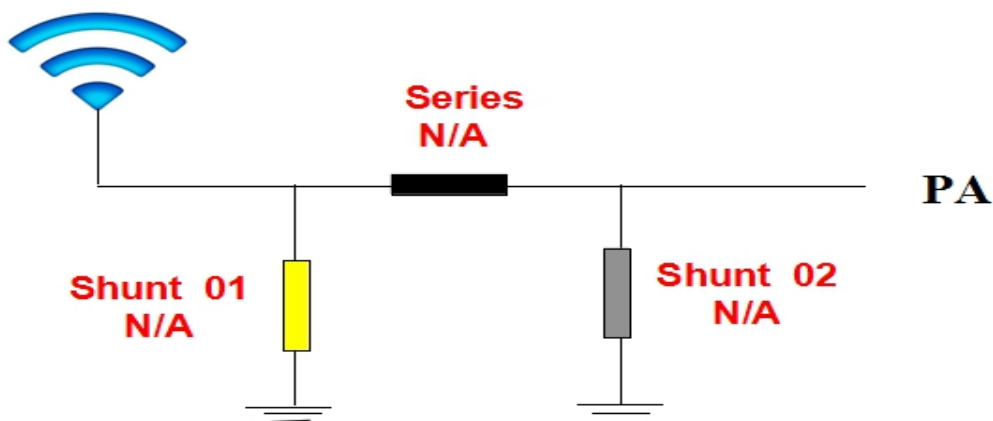


Frequency (MHz)	2400	2450	2500	5150	5720	5850
Standing Wave	1.59	1.55	1.47	1.4	2.52	1.87



2. Antenna Matching Network

Antenna

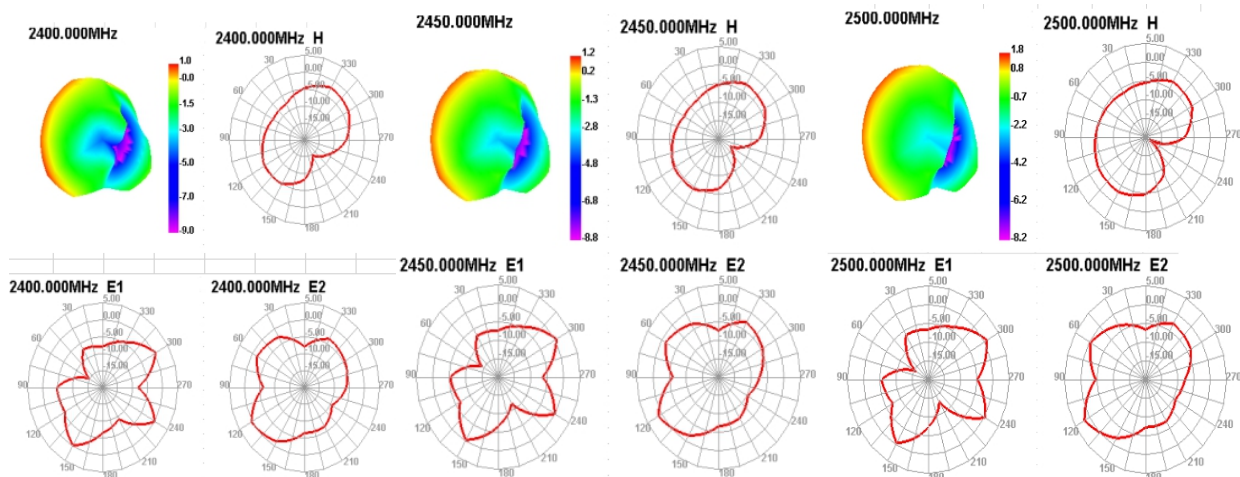




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3. Gain & Efficiency

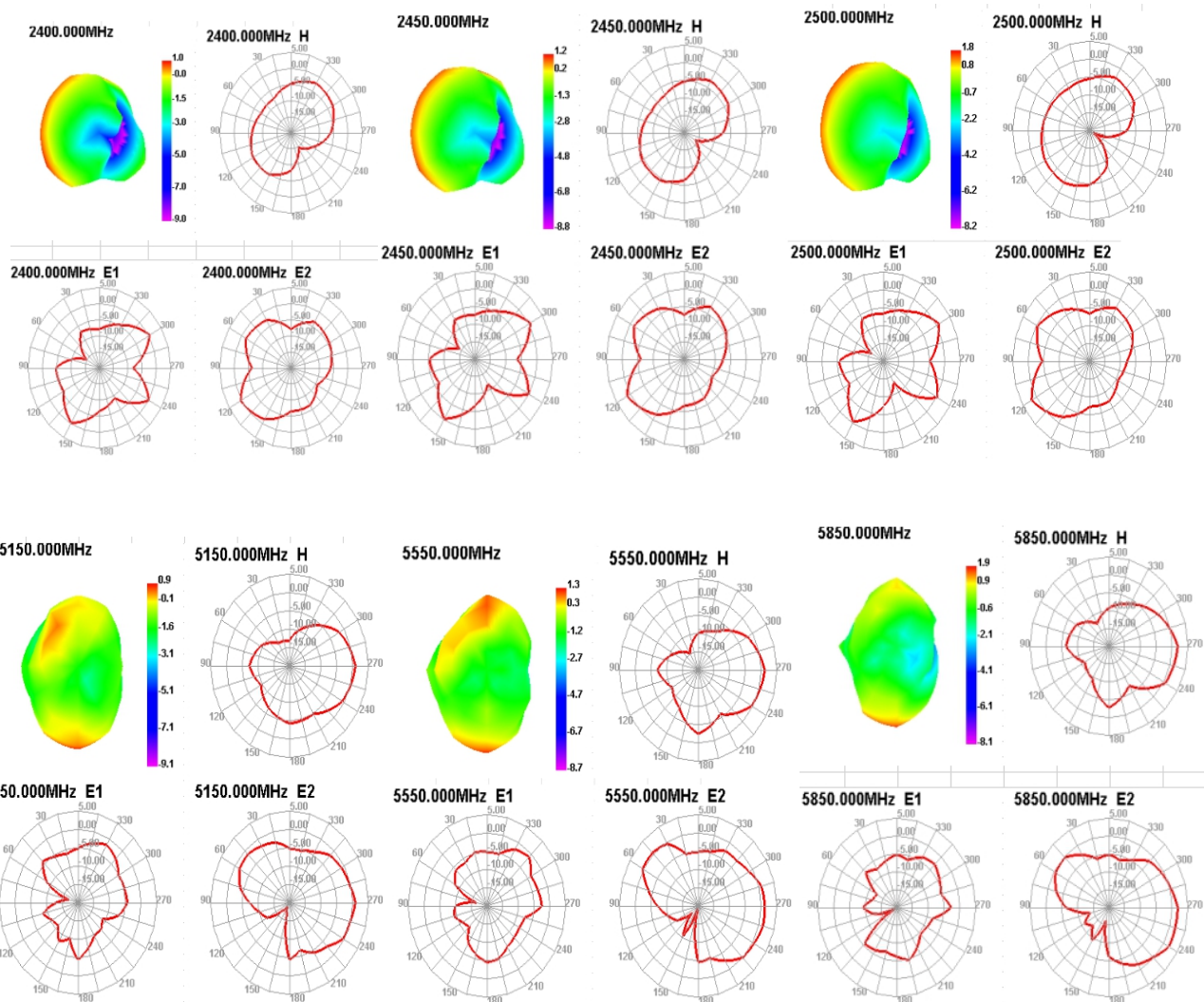
Frequency (MHz)	BT	Efficiency (%)	Peak GAIN (dBi)
2400		41.64	1.03
2450		41.27	1.18
2500		42.56	1.76



Frequency (MHz)	WiFi	Efficiency (%)	Peak GAIN (dBi)
2400		41.64	1.03
2450		41.27	1.18
2500		42.56	1.76
5150		38.27	0.93
5350		40.35	1.09
5550		42.63	1.26
5750		41.19	1.67
5850		40.76	1.85



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4. WIFI OTA Data

2.4G	802.11b (2.4G) 11 MBps		
Channel	CH1	CH7	CH11
TRP	12.13	12.16	12.07
TIS	-79.59	-79.32	-79.19

5G	802.11a (5.8G) 54 MBps		
Channel	CH36	CH60	CH161
TRP	9.13	9.27	9.67



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TIS	-69.6	-69.75	-69.34	
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Reliability Test Report

Reliability Test Report

Test Date	2024.01.15	Sample Qty.	3	Inspector	Xu Yanfang	
Test Item	Requirements Requirement	testing equipment	Sample 1	Sample 2	Sample 3	Judgment PASS/NG
High-temperature storage	Exposed at +85°C 24H, testing will be conducted after recovery for 2H	Constant temperature and humidity chamber	OK	OK	OK	Pass
Low-temperature storage	Exposed at -40°C 24H, testing will be conducted after recovery for 2H	Constant temperature and humidity chamber	OK	OK	OK	Pass
High-temperature operation	Power on and operate for 24 hours at +60°C	Constant temperature and humidity chamber	OK	OK	OK	Pass
Low-temperature operation	Power on for 24H under -20°C conditions	Constant temperature and humidity chamber	OK	OK	OK	Pass
Salt spray test	(5±0.5)% sodium chloride, pH value of 6.5~7.2, experimental box temperature (35±2)°C ☐ 24H ☒ 48H	Salt spray test machine	OK	OK	OK	Pass
Connector crimp pull force	1.13 wire diameter ≥10N 0.81 wire diameter ≥8N RG174 ≥60N RG178 ≥50N	Push-pull gauge	≥10N	≥10N	≥10N	Pass
Conclusion						Pass
Tester & Date Inspector & Date	Xu Yanfang 2024.01.15		Approval & Date Approval & Date			

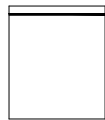


包 装 规 范

项目名：ZQC-P1-MB

成品名称：FPC天线

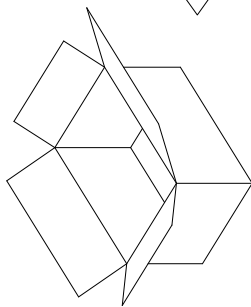
FPC成品天线 （一）



（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）.



Installation matters or others

Install Wizard or Other

Installation Process:

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

Installation Process Precautions:

- ☐ Ensure the FPC is completely attached to the shell after sticking the antenna;
- ☐ Align the positioning hole with the positioning column of the shell;
- ☐ **Align the edge of the FPC with the edge of the shell;**
- ☐ For terminal antennas, please align the terminal first when snapping it onto the mainboard PCBA end, then snap it vertically;
- ☐ When removing the antenna terminal, use a tool (such as a dedicated pry bar) to vertically lift the terminal, do not pull the wire directly to remove it.





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Product RoHS Certificate

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.

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