






Acknowledgment Letter

SPECIFICATION FOR APPROVAL

Customer Name	different		
Customer Project Name	AP16	Project Name	AP16
Antenna type		SDC P/N	NFC2999B-0813L-120
Band	NFC		
Version	A0		
Designer Information			
RF Engineer		R&D Director	
ME Engineer			

Approval				ustomer Approval	
	Prepared By	Checked By	Approval By	Checked By	Approval By
Signature	Huang Zongbao	Fu Xuerong	Xia Chenglei		
Date	2023. 10. 11	2023. 10. 11	2023. 10. 11		

hange Log				
Version	Change Description	Person in Charge	Approval By	Date

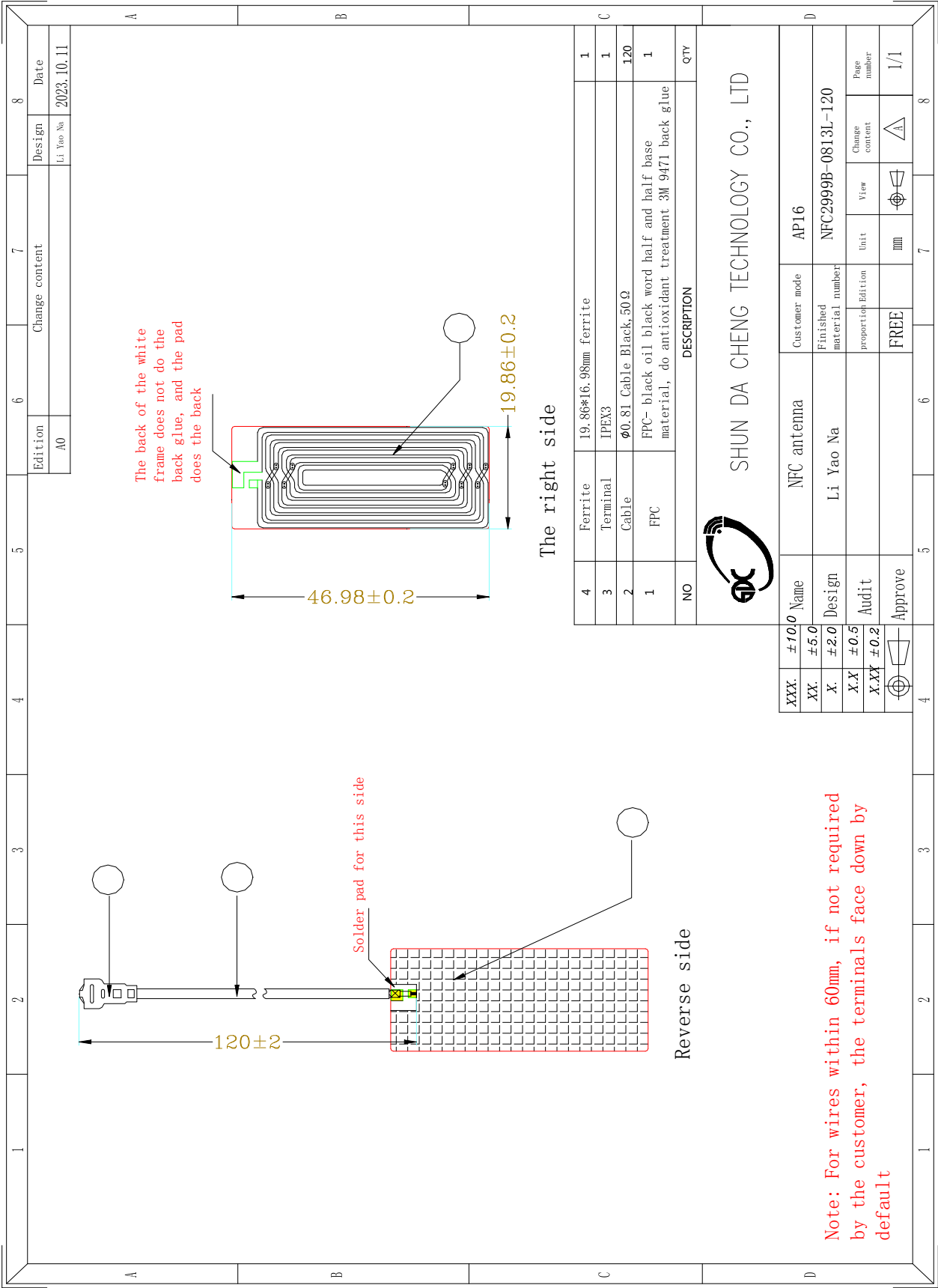


Catalogue

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Drawing or Product Image





Sample Dimensions Test Report

Test Date	2023. 10. 11	Sample Qty.	3	Inspector	Xu Yanfang
Dimension No.	Standard	Sample 1	Sample 2	Sample 3	Pass/NG
①length	46.98±0.2mm	46.98	47	46.98	Pass
②width	19.86±0.2mm	19.86	19.96	19.86	Pass
③thickness	0.1±0.03mm	0.1	0.1	0.1	Pass
④Line length	120±2mm	120	121	120	Pass
⑤					
⑥					
⑦					
Conclusion					PASS
Inspector & Date	Xu Yanfang 2023. 10. 11		Approval & Date		



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:

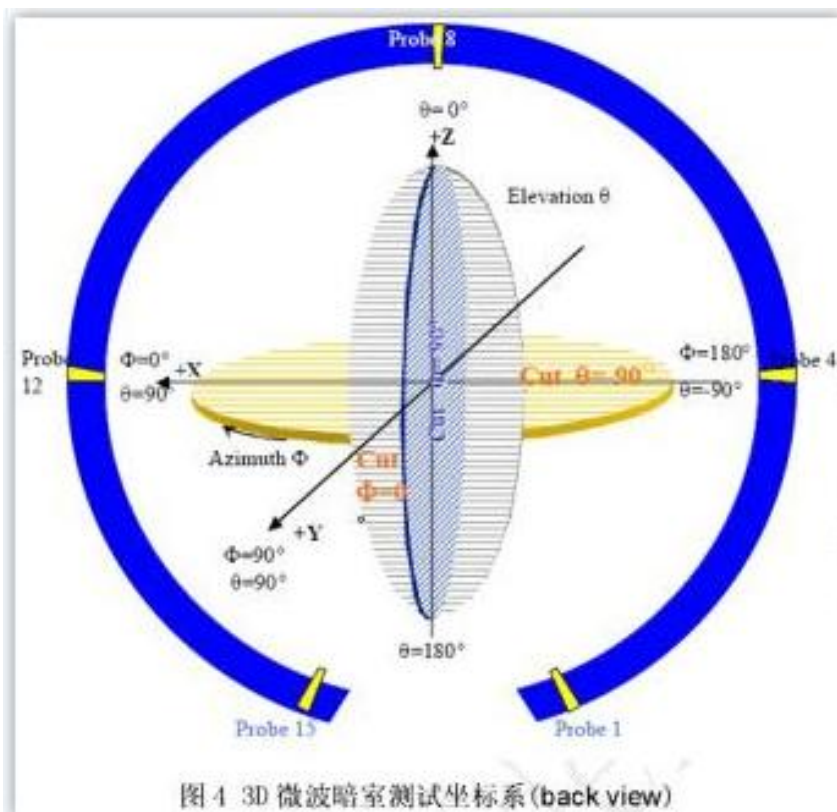


图4 3D微波暗室测试坐标系(back view)

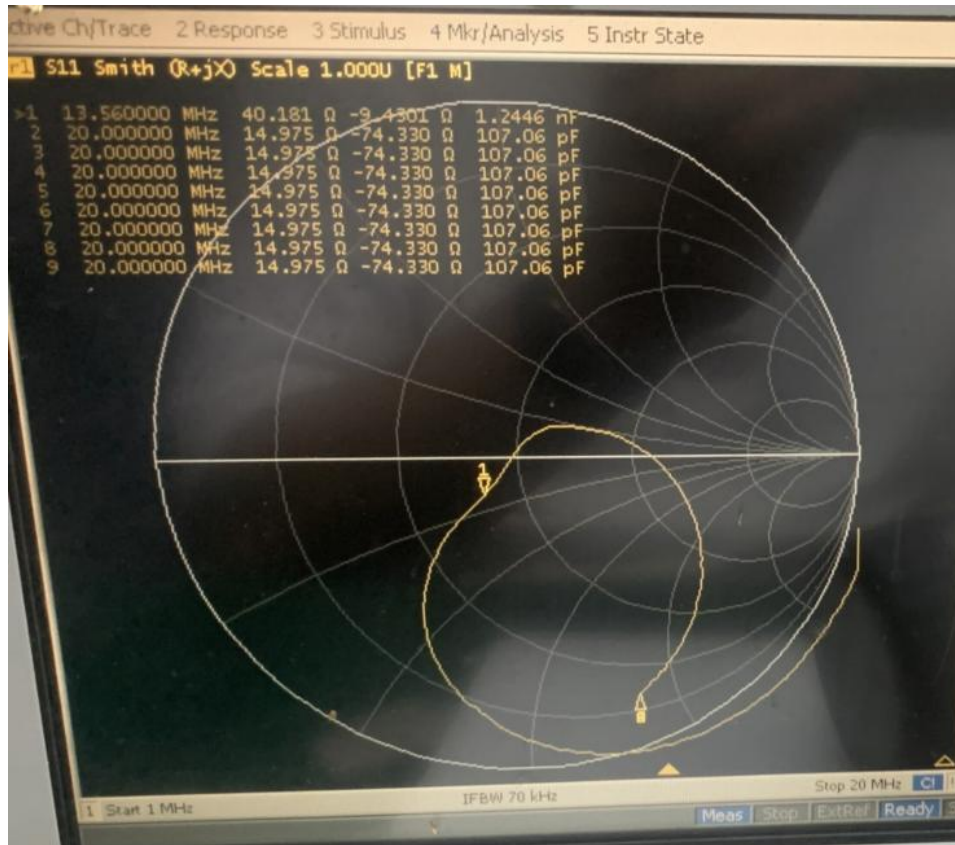
1. **S11 Parameter-VSWR**

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.



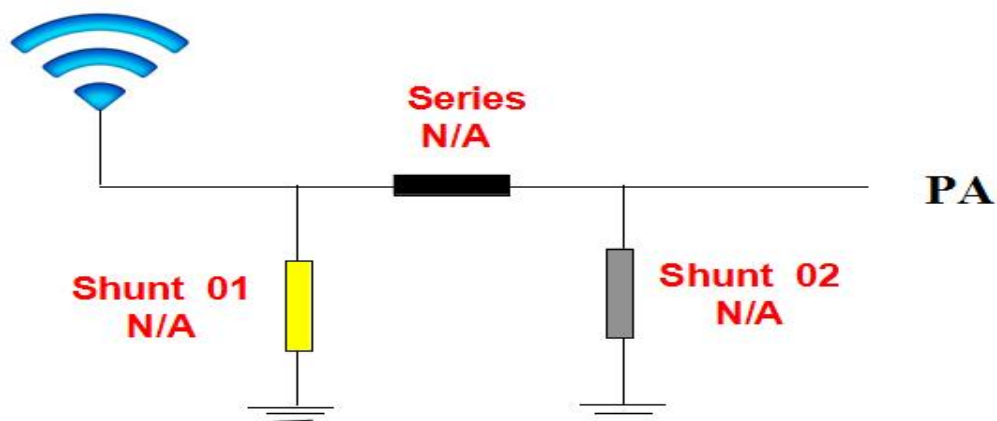
S11 Parameter-VSWR

Frequency(MHz)	13.56
VSWR	40.18 Ω



2. Antenna Matching Network

Antenna





3. Electrical parameter:

Antenna Information	
Manufacturer	Shenzhen Shundacheng Technology Co., Ltd
Antenna Type	Coil antenna
Antenna Model	FPC
Antenna Part Number	NFC2999B-0813L-120
Antenna Frequency Range	13.56MHz
Antenna Input Power limitation	/
Antenna Peak Gain	/
Antenna Dimension (LxHxW)	Length 48.98mm \pm 0.2, width 21.86mm \pm 0.2



Reliability Test Report

Test Date	2023. 10. 11	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 2023. 10. 11		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		
NFC	FPC	ND	ND	ND	ND	ND	UNIB21042707HR-01	2023. 10. 11
		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



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



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Certificate of Compliance