

SPECIFICATION FOR APPROVAL

(Product acceptance letter)

product name: D300

Product model (original factory model): DashCAM D300 FPC 196024-IA

The Customer's Item Name: WIFI antenna

The Customer's "Specification and Model": FPC THOT D300 2.4G 5G V1 2.4G 5.8G Built-in FPC antenna with hand tear position ROHS.

Customer's Material Code: 18600000011014

Change Content CV:

order number	Content before change	The changed content	Change date	edition	page number	person liable
1	editio princeps	editio princeps	2024-2-22	R:A	13	Li Jieyi

Name of the supplier: Shenzhen Yusheng Communication Equipment Co., LTD

Supplier address: 407-411, Floor 4, Building 2, South Taiyun Chuanggu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen City

Contact number: 0755-23984257

Fax: 0755-86090455

Email address: Shan@163.com

(Signature of the Supplier)

Responsible person / date

Review / Date

Approval Date

Chen Kehong

He lei

Feng Jiwu

This admission includes the following: (indispensable)

1. the title page of a thread-bound book
2. Parameter specifications
3. Structural size diagram
4. Packaging diagram
5. BOM outside
- Vi. Production process flow table
7. Environmental Protection / certification status
- VIII. Samples, test report

Customer name (company name): Shenzhen Oni Electronics Co., LTD

The buyer (customer) determines the result: ☐ qualified ☐ unqualified

Demand (customer) recognition (please return the entire recognition bookmark after confirmation)

Development & Design Engineer / Date	SQE Engineer / Date	Head of the Purchasing Department / Date	Development Manager approval / date

D300 project antenna material requirements specification

Customer name: Onie

Customer product name: D300

Product name: WIFI antenna

Product specification: See the BOM table list for more details

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order number	edition	state	Start and end date	person liable	page number	remarks
1	editio princeps	MP	2024-2-22	Li Jieyi	13	

The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD	Close industry wisdom	Su Guanfeng	He lei	
RF	Chen Kehong			

The Demander acknowledges the signature (please send it back after the confirmation):

The demander's judgment result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

catalogue

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1. Overview

1.1 Scope of application

This requirement, specifies the product Specification for antenna technical requirements and material requirements for D300.

This requirement applies to D300 antenna selection, test and acceptance, the main body consists of dielectric ceramics, LNA circuit, shielding cover, etc. It has the characteristics of many types, small volume, high gain, low noise and convenient equipment. We can design the specific requirements of our customers to meet different needs. This product is a GPS band dual-frequency receiving antenna, used for the production of navigation instrument, locator, tester and other products with GPS function.

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2 Active Reporting

2.2.1 Test instructions

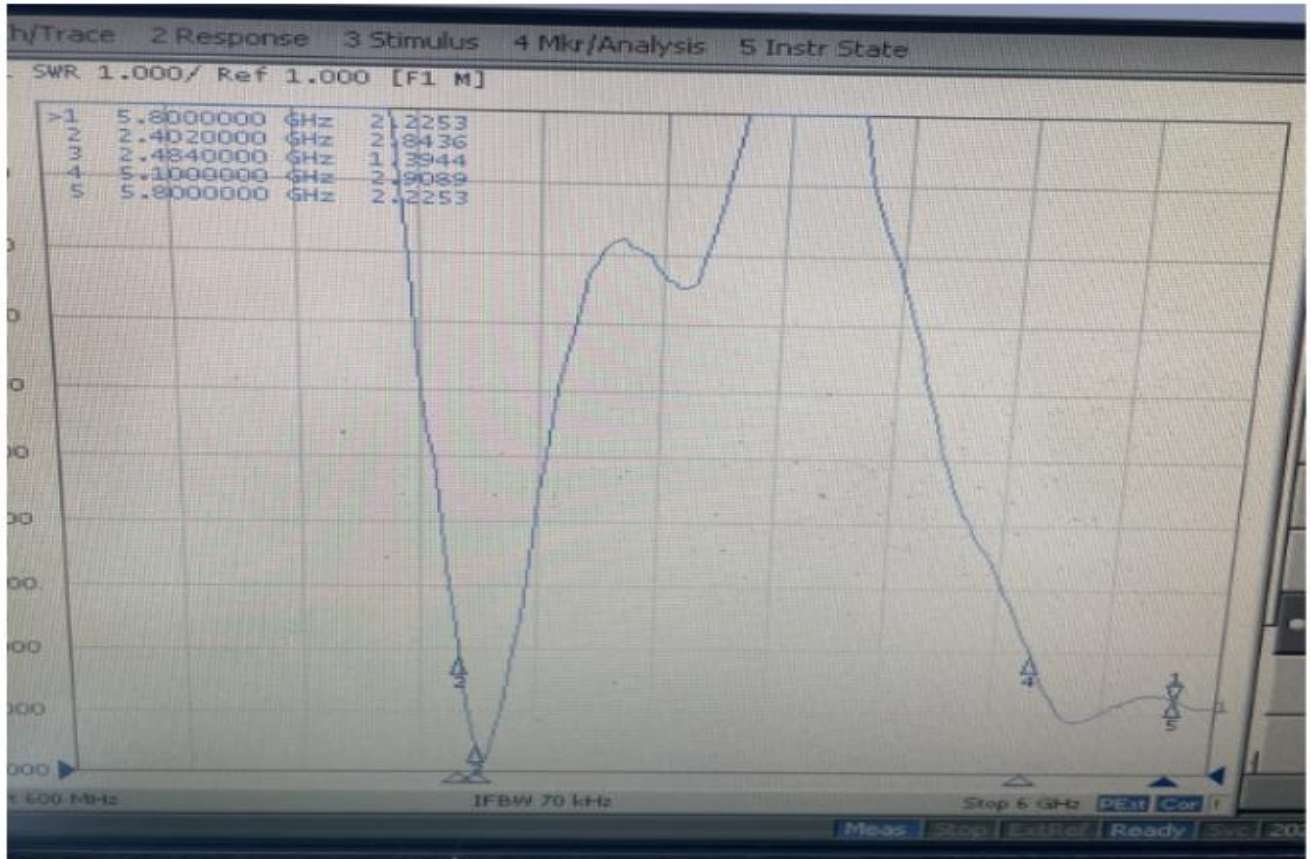
Test tools: Agilent8960 instrument, R & S CMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

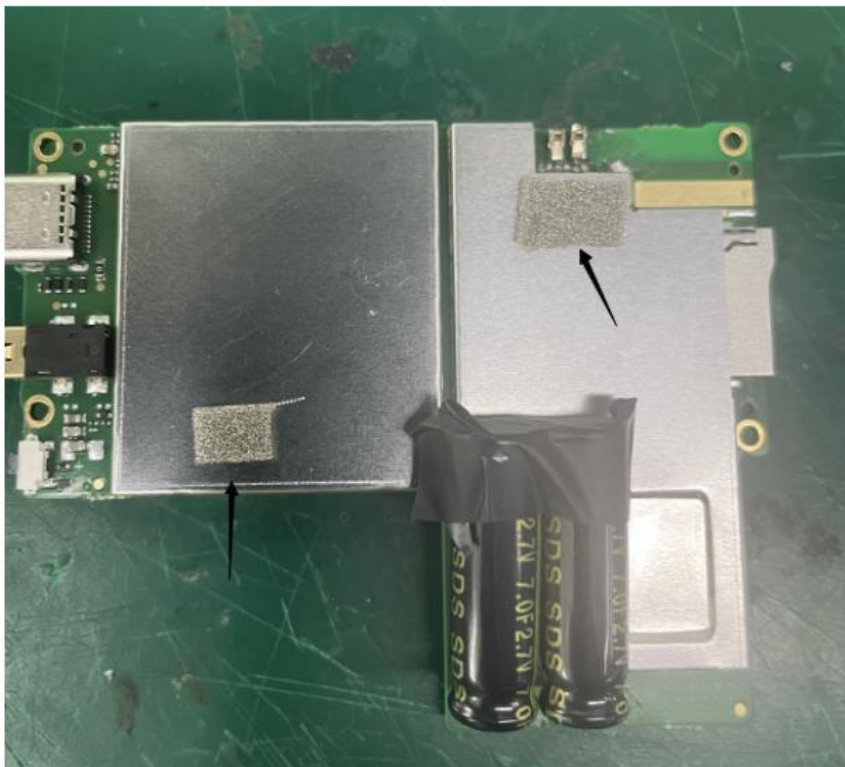
Test method: The DUT is fixed in the center of the turntable with the H plane, on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.2 Antenna passive parameters



2.2.3 Antenna environment treatment



As shown in Figure 2, add conductive sponge and metal block to ground.



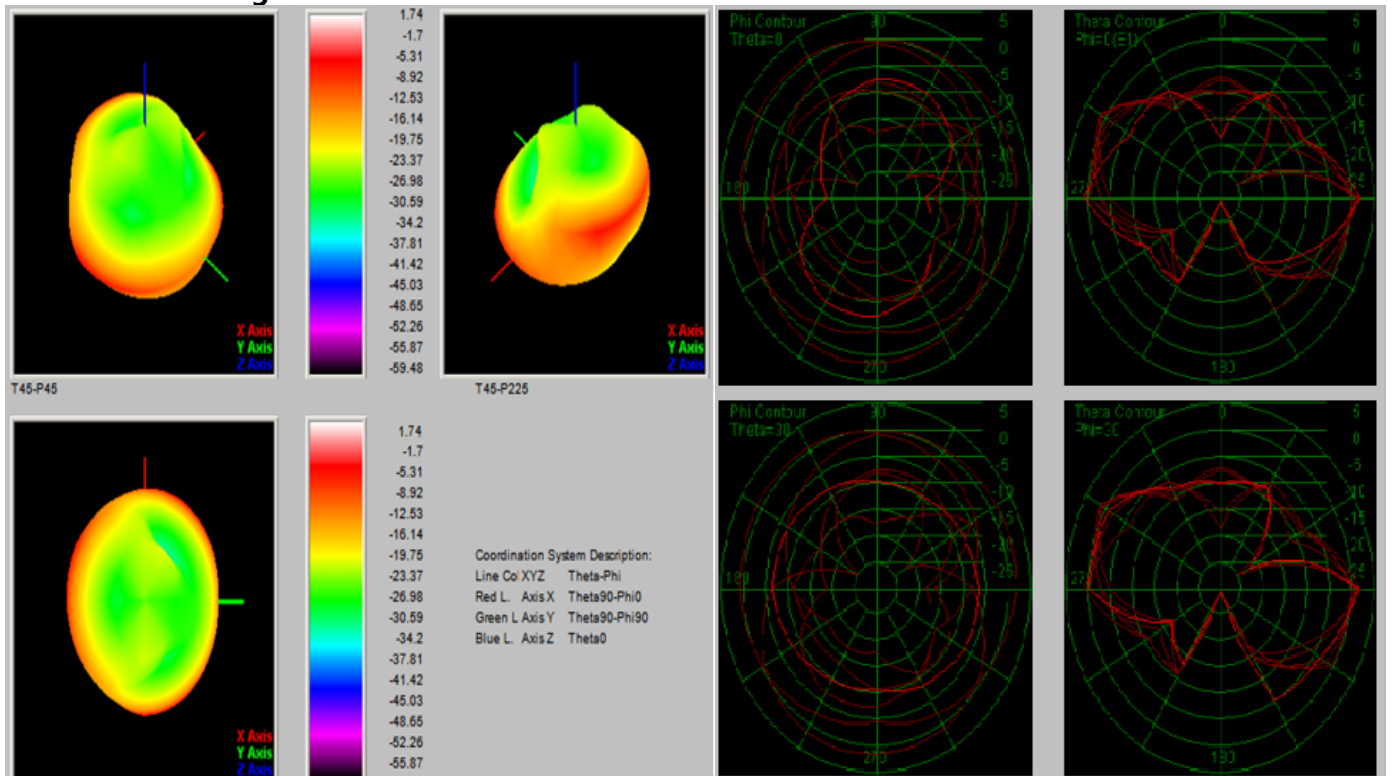
Add conductive
cloth grounding
as shown

2.2.4 Antenna passive parameters

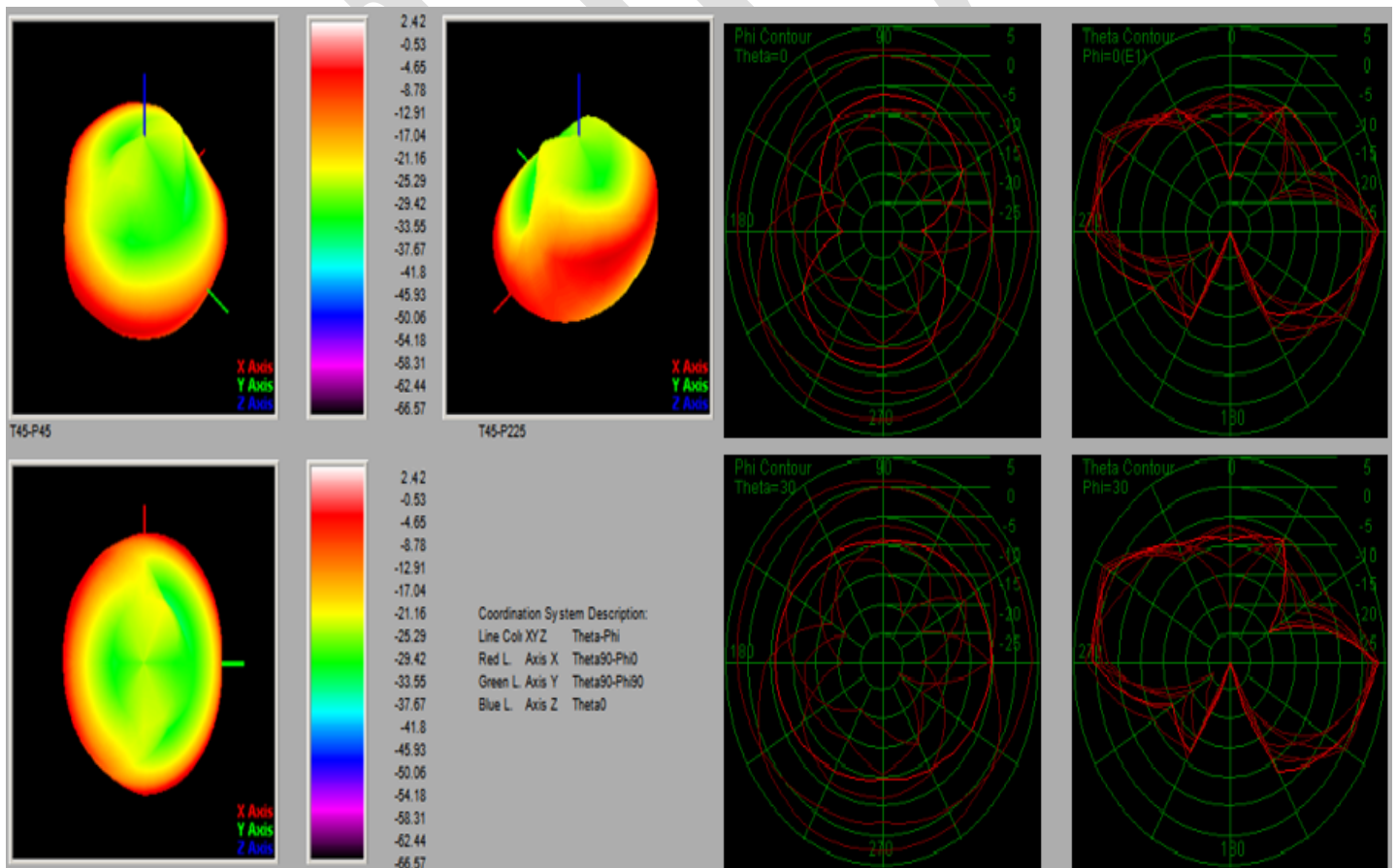
Freq(天线效率)	Effi (%)	Gain (dbi)
2400MHZ	32	1.65
2420MHZ	35	1.46
2440MHZ	38	1.58
2460MHZ	36	1.68
2480MHZ	34	1.74
2500MHZ	32	1.60

Freq(主天线效率)	Effi (%)	Gain (dbi)
5100MHZ	29	2.14
5210MHZ	32	2.23
5310MHZ	30	2.42
5410MHZ	29	1.85
5510MHZ	31	1.65
5610MHZ	30	1.78
5710MHZ	29	1.60
5800MHZ	31	1.67
5900MHZ	30	1.58

2.2.5 Direction Figure 2480MHz unit:dBi



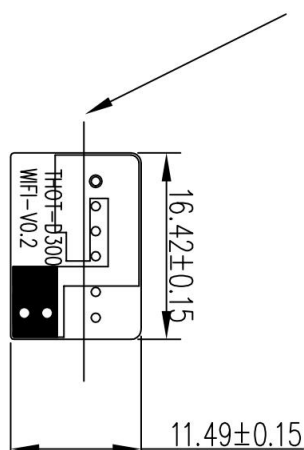
2.2.6 Direction Figure 5310MHz unit:dBi



2.2.7 WIFI Active parameters

Test	B model			A model		
Channel	1	6	11	36	157	165
TRP (dBm)	13.35	12.85	12.65	11.35	12.35	12.65
TIS (dBm)	-77.25	-78.25	-78.40	-67.24	-68.12	-68.65

3. engineering drawing

1		2		3		4		5		6		7		8																																					
Centrifugal paper separation line 																																																			
由 Autodesk 教育版产品制作																																																			
skills requirements: <table border="1"> <tr> <td>1. IPC substrate specifications:</td> <td>PI substrate:</td> <td>Electrolytic copper (half to half)</td> </tr> <tr> <td>2. Electroplating specifications:</td> <td>Double-sided tape:</td> <td>3M-9471LSE</td> </tr> <tr> <td>3. Surface ink requirements:</td> <td>Nickel plated:</td> <td>3 8um</td> </tr> <tr> <td></td> <td>Surface ink color:</td> <td>Gilded: 0.025um</td> </tr> <tr> <td></td> <td>Printing font color:</td> <td>Mat black</td> </tr> <tr> <td></td> <td>Printing font height:</td> <td>Bright black</td> </tr> </table>																1. IPC substrate specifications:	PI substrate:	Electrolytic copper (half to half)	2. Electroplating specifications:	Double-sided tape:	3M-9471LSE	3. Surface ink requirements:	Nickel plated:	3 8um		Surface ink color:	Gilded: 0.025um		Printing font color:	Mat black		Printing font height:	Bright black																		
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4. Reliability requirements: 1. Reliability test: salt spray test\rubber friction test\alcohol resistance test\100 grid test. 2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.																																																			
5. Tolerance requirements: 1. Shape tolerance ± 0.10; 2. Copper foil circuit tolerance ± 0.05; 3. The position of the copper foil to the shape is ± 0.15; 4. Hole-to-hole position tolerance ± 0.10; hole-to-shape position tolerance ± 0.15; 5. The size tolerance of gold finger is ± 0.20. 6. For other unmarked dimensions, refer to 2D drawings.																																																			
6. Key control size: The dimensions marked with numbers are regarded as important dimensions, and the others refer to 2D drawings																																																			
7. Environmental requirements: Parts meet ROHS2.0/HF/Reach/CP environmental protection requirements																																																			
8. Packaging requirements: Packed in PE bags, the quantity of each bag is 100PCS, there is a mark on the outside of the bag																																																			
DATE <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> <tr> <td>Modify the content</td> <td>Version</td> <td>Revise</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>																1	2	3	4	5	6	7	8	Modify the content	Version	Revise																									
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4. Bill Of Material

YUSHENG COMMUNICATION TECHNOLOGY CO.,LTD.

196024(D300)-BOM

Edition: R:A

client:196

Model: 196024

date: 20240222

Item	Part No	Name	Types of	version	specification	Material quality	colour	unit	Quantity	Craft
1	196024-IA-RA	WIFI antenna	Z	R:A	16.42*11.49*0.12 MM	Electrolytic copper (half to half)	black	Gold plated	PCS	1
1	196024-IA-RA	WIFI antenna	Z	R:A	16.42*11.49*0.12 MM	Electrolytic copper (half to half)	black	Gold plated	PCS	1

The above parts meet the environmental requirements of ROHS2.0 HF Reach GP

Type: W. Outsourcing B. Semi-finished products Z. Finished products C. Customer supply

Confirmation:

Review:

Production: FJW

5. strain relief test

Shenzhen Yusheng Communication Equipment Co., LTD

Coaxial terminal tension test

Test method: clamp the coaxial terminal on the tension test table and place it vertically, and stretch the wire position at 50 + / -10mm / min until the tensile value reaches the test requirements (800g / terminal without falling off); assemble twice, and the sample function is qualified. Judgment result: after the test, the same axis is not damaged, and the sample function is

normal 客户: Onie 型号 : D300 测试日期: 2024-2-20

NO	1	2			decide
result	No shedding, normal performance	No shedding, normal performance			☒ ACC ☐ REJ

测试人: suguanfeng

审核: lindan

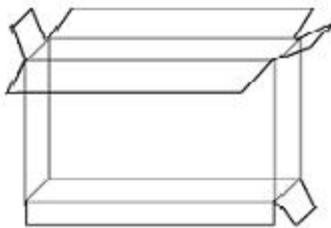
6. Reliability test report

Hot and cold shock test report

client	O'ni technology		date	2024-1-4		Factory number	/	
P / N	D300		quantity	Each 5PCS		testing time	48H	
material specification	FPC antenna		supplier	Renesola		reference standard	MIL-SDT-202Method017IEC60749-25 JEDEC JESD22-A104-B IEC68-2-1MIL-STD-2168-85	
Test purpose: To test the reliability of products and coating binding force, coating and oxidation resistance and corrosion resistance.								
Equipment name: high and low temperature test box								
laboratory environment								
temperature	22-26℃		relative humidity	65-75%		atmos	1MPA	
test parameter								
temperature	high temperature		80℃	low temperature	minus forty °C		Temperature tolerance	2℃
time	constant temperature	high temperature	0.30H	High temperature heating	10min		remarks	1. High temperature warming rises from normal temperature to set high temperature. 2
		low temperature	0.30H	Low temperature cooling	10min			
cycle index	32 Times		else	relative humidity	95%			
visual inspection	lamination	ACC	oxidize	ACC	blister	ACC	The ink fell off	ACC
test	antistripping	≥0.8kgf/cm2	spot welding	ACC	Bige test	ACC	Wear-resistant experiment	ACC
test record:								
identification of product		Product test results					judge	
		After the experiment, the product was oxidized and rusted.					ACC	

Shenzhen Yusheng Communication Equipment Co., LTD		
Salt mist test report		
client:	O'ni technology	Model number: D300
Sample condition	Number of samples: 5 PCS	
	Material: FPC antenna	cladding material:
Starting date of the experiment: 10:025 on January 2,20:25,2024 to January 4,2024		
Type of experiment	☒ NSS ☐ ASS ☐ CASS	
experiment condition	Salt solution: 5%	PH:7.0
	Box temperature: 35 · C	Relative humidity: 85% °C
	Spray method: ☒ Continuous ☐ interval	Compressed air pressure: 1kg / m 2
	precipitation rate of salt spray:	Fog liquid collection: PH7.0anc
	Experimental period: 1- -cycle	Spray time: 48H
		Hold time: 2H
The results were observed every 16 hours	The test temperature is: 36°C	Pressure barrel temperature: 47.5°C
experimental result	Appearance after the experiment: the appearance is intact and intact, no obvious change	
	Plating: no peeling, no corrosion	
	Surface spraying, screen printing: no falling off, no bubbles	

7.Schematic diagram of packaging

Packaging method diagram														
product name	WiFi antenna													
P / N	196024													
Project model	D300													
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume													
	Boating method	Packaging by order quantity												
	Total number of binning	Packaging by order quantity												
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements requirements	深圳市昱晟通讯设备有限公司 <table><tr><td>客户名称</td><td>*****</td></tr><tr><td>订单编号</td><td>*****</td></tr><tr><td>项目名称</td><td>*****</td></tr><tr><td>物料编码</td><td>*****</td></tr><tr><td>数 量</td><td>****pcs</td></tr><tr><td>出货日期</td><td>****年**月**日</td></tr></table> 地址：深圳市光明新区光明大道南太云创客园区2栋4楼4A	客户名称	*****	订单编号	*****	项目名称	*****	物料编码	*****	数 量	****pcs	出货日期	****年**月**日
客户名称	*****													
订单编号	*****													
项目名称	*****													
物料编码	*****													
数 量	****pcs													
出货日期	****年**月**日													
matters need attention														
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume														
2. Storage temperature: room temperature														
3. Preservation conditions: store them in a cool and dry place														