

acknowledgement

SPECIFICATION FOR APPROVAL

Distribution department	appraisal report	Parts drawings	sample plate
purchase	☒	☐	☐
quality department	☒	☒	☒
product engineering	☒	☒	☐
Cultural management center	☒	☐	☐
research and development	☐	☐	☐
supplier	☒	☐	☐
else	☐	☐	☐

Document Number:

Version: A00

Applicable type: L-CW8513F 12 pages

Part material number:

Part description:

Supplier: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer model: 661007-IA

Sample admission date: 2024.9.4

part drawing number:

☐ Fully recognized and unqualified

☐ Conditional approval, purchase limit and quantity:
cause:

Part quality : not determined

The number samples is not enough

The documentation is incomplete

else:

Note: This quantity limit indicates that the applicant is only responsible for the samples within this quantity

handle	countersign			approval
	engineering /R&D	Business / Procurement	character	

Material Requirements Specification for the L-CW8513F project antenna

Customer name: Xiechuang

Customer product name: L-CW8513F

Product name: WIFI antenna

Product specification: See the BOM table for more details

Product code: _____

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	V0.6	editio princeps	2024-9-2	Li Jieyi	12	

The Supplier acknowledges the signature:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

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

The demanders 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 antenna technical requirements and material requirements specifications for the L-CW8513F products.

This requirement is applicable to the antenna selection, testing and acceptance of L-CW8513F products.

1.2 Project basic information

Antenna name:	L-CW8513F
Antenna band:	WIFI :2. 45GHz/5. 8GHz
Antenna material:	FPC antenna + coaxis

2. Technical index requirements

2.1 Active Reporting

2.2 Test instructions

Test tools: Agilent8960 instrument, R & SCMW500, 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: DUT is fixed in the center of the turntable with H plane, on the same horizontal line as the center of the horn antenna.

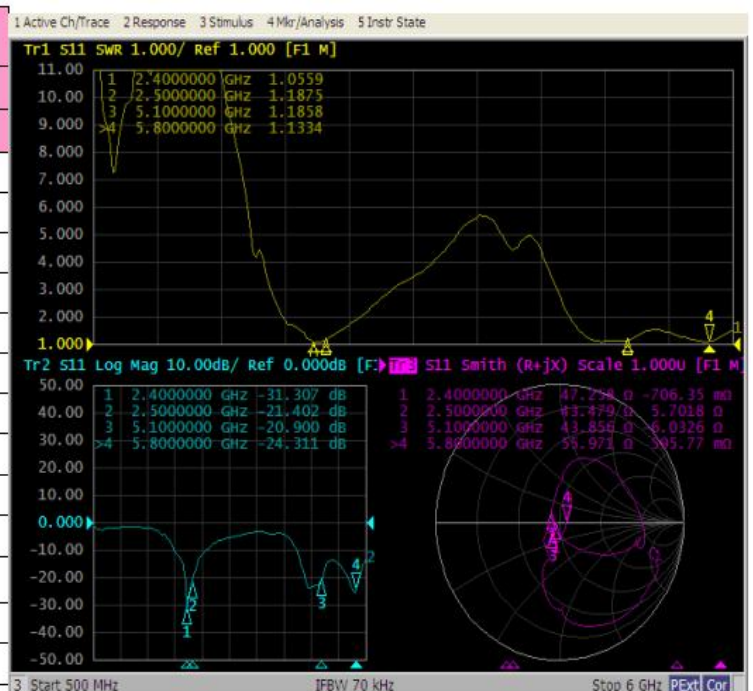
The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.1 Active parameters of the antenna

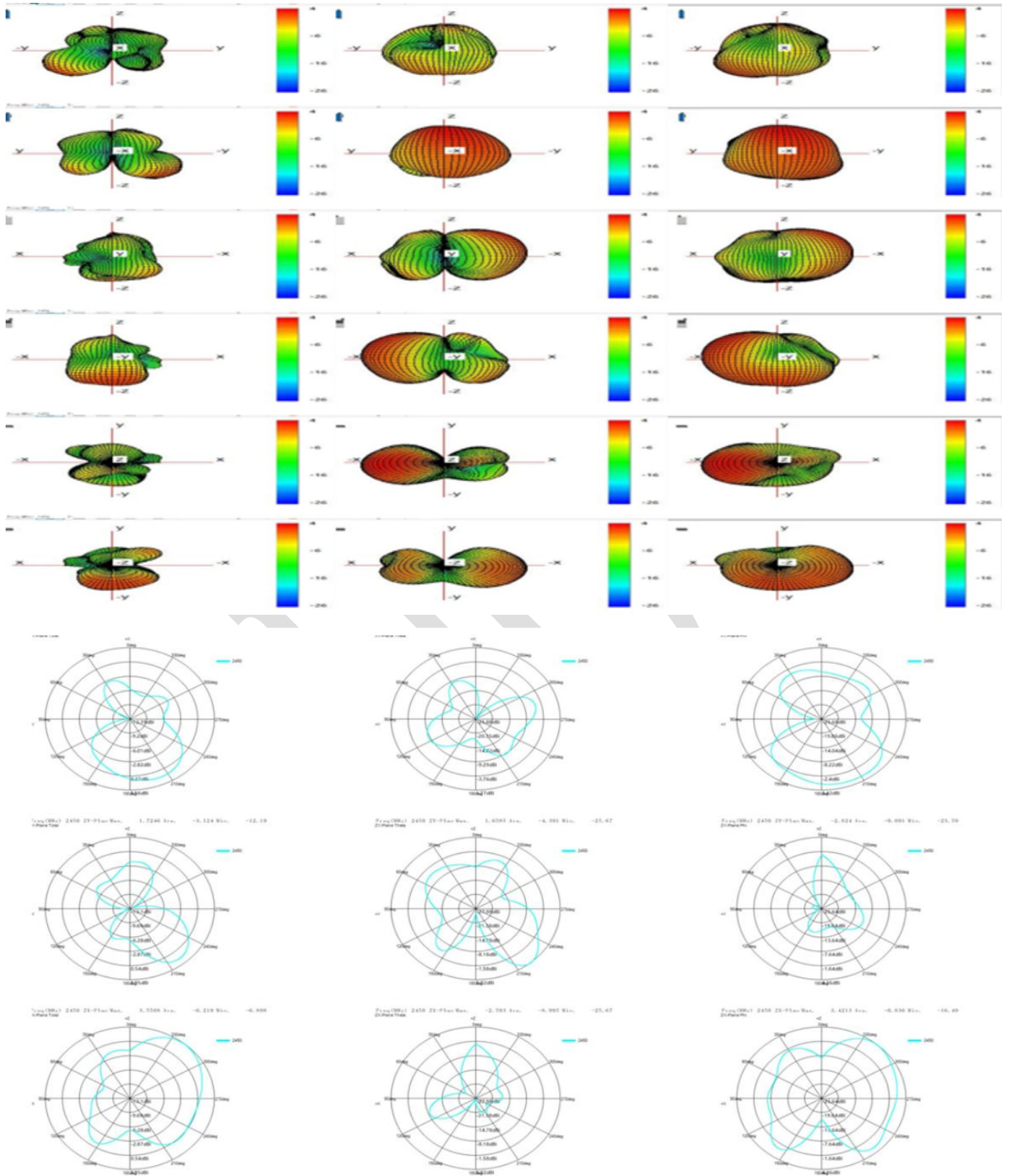
	802.11	channel number	TRP (db)	TIS (dbm)
WIFI	11B	CH1	15.09	
		CH7	15.42	
		CH13	16.10	-84.02
	11G	CH1	15.34	
		CH7	16.58	
		CH13	18.05	-70.53
	11N	CH1	17.02	
		CH7	16.08	
		CH13	18.03	-68.04
	11A	CH36	17.07	
		CH104	15.15	
		CH165	16.05	-74.19

2.2.2 4-in-1 antenna passive parameters

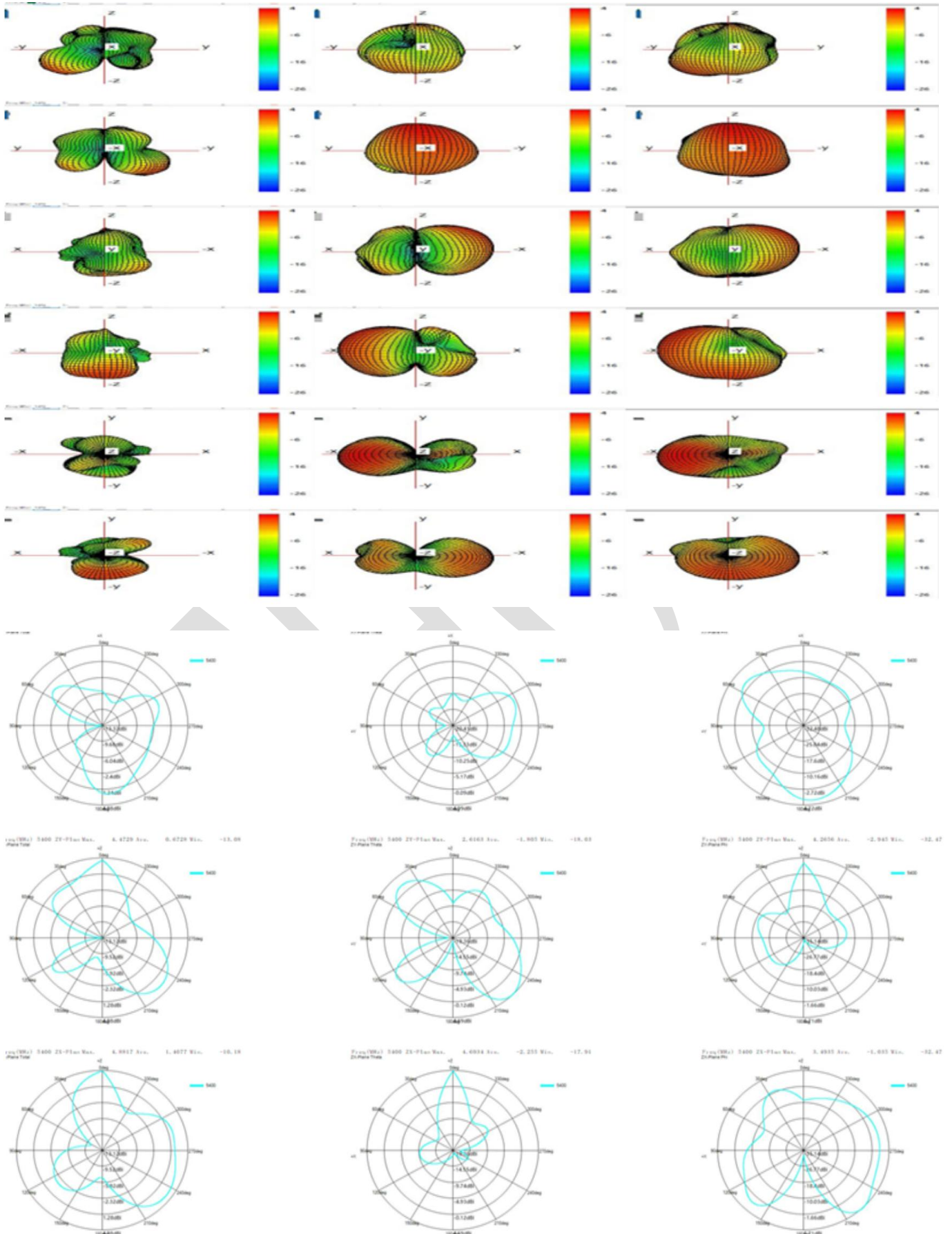
Passive Test					
Freq	Effi	Gain	Freq	Effi	Gain
(MHz)	(%)	(dBi)	(MHz)	(%)	(dBi)
2400.0	55.2%	4.12	5100.0	50.1%	4.02
2420.0	56.9%	4.01	5150.0	52.2%	4.15
2440.0	58.3%	3.84	5200.0	54.6%	4.26
2460.0	60.0%	4.05	5250.0	55.9%	3.94
2480.0	58.7%	3.82	5300.0	57.4%	3.76
2500.0	57.1%	3.71	5350.0	59.3%	3.53
			5400.0	60.2%	3.86
			5450.0	61.7%	3.98
			5500.0	60.1%	4.05
			5550.0	58.4%	4.19
			5600.0	56.3%	3.84
			5650.0	58.2%	3.68
			5700.0	57.5%	3.55
			5750.0	56.2%	3.34
			5800.0	55.6%	3.21



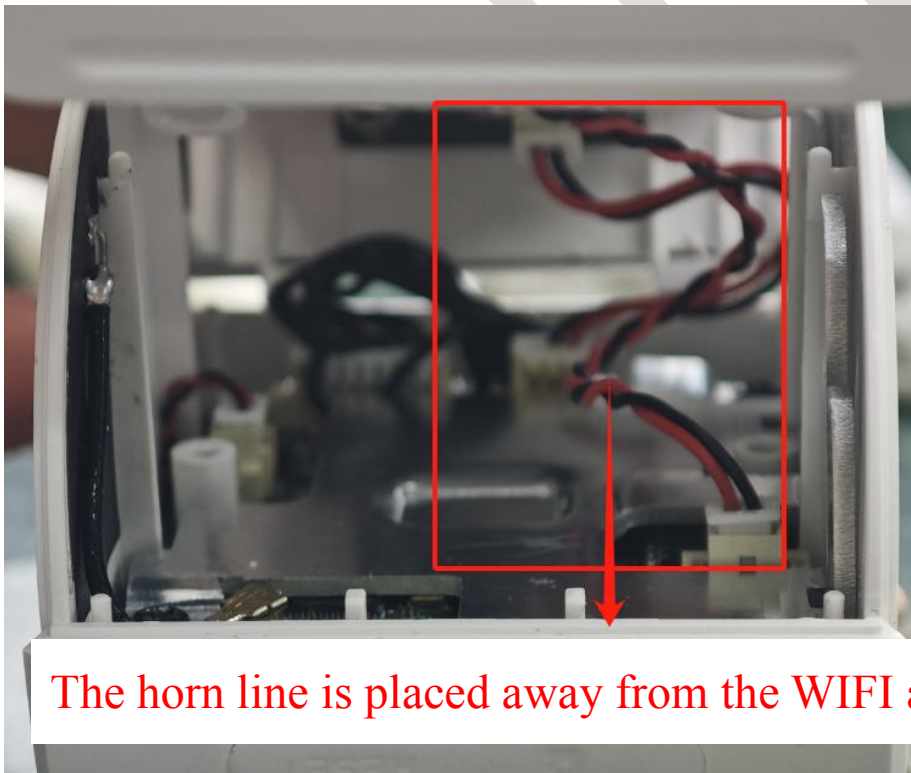
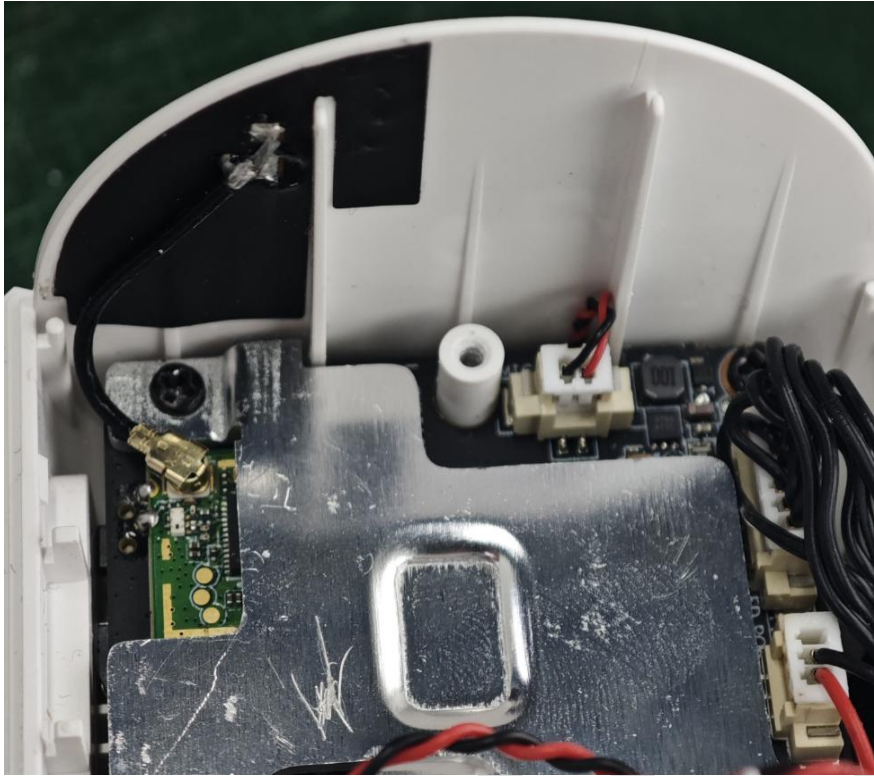
2.2.3 2.4G passive map



2.2.4 5.8G passive Fig

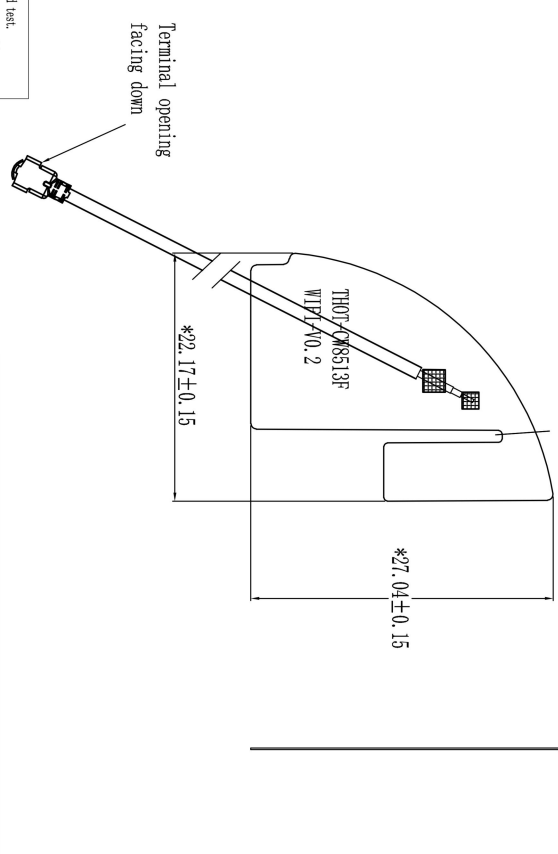


2.2.5 Position and cycloid of the antenna



The horn line is placed away from the WIFI antenna

3. Engineering drawings

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 First generation terminal				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>Modify the content</th> <th>Version</th> <th>Revise</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		DATE	Modify the content	Version	Revise																																																																																																										
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4. List of materials

661007 (L-CW8513F)-BOM

Edition : T:B

client : 661

Type of airTCft : 661007 Set a date : 2024/8/28

Item number	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	661007-IA-TB	WIFI1 antenna		L-CW8513F	WIFI-FPC welding coaxial line	black	PCS	1	
1.1	661007-IA-01-TB	WIFI-FPC		L-CW8513F	WIFI-FPC electrolytic copper 1 half white character 27.04*22.17* 0.12mm	black	PCS	1	
1.2	661007-IA-02-TB	WIFI-CABLE		L-CW8513F	Single-head first-generation terminal Φ 1.13*35.00 mm	black	PCS	1	
1.3	661007-IA-03-TB	Assemble		L-CW8513F	First generation terminal ϕ 1.13*197.00 mm	black	PCS	1	
verify :			examine :				manufacture : BYZ		

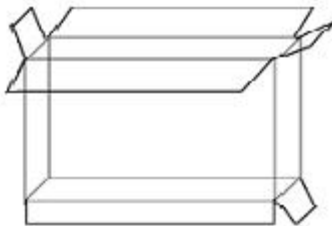
5. Reliability report

Hot and cold shock test report

client	Co-create		date	2024-8-24		Factory number	661007	
P / N	L-CW8513F		quantity	Each 5PCS		testing time	48H	
material specification	Single side half to half, electrolytic copper gold plating		supplier	Renesola		reference standard	MIL-SDT-202Method017IEC60749-25 JEDECJESD22-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 ℃		Temperature tolerance	2℃
time	constant temperature	high temperature	0.30H	High temperature heating	10min		remarks	1. High temperature heating temperature rises from room temperature to set high temperature 2, low temperature cooling refers to the drop from the set high temperature to the set low temperature
		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 has no warping and no glue overflow.					ACC	

Shenzhen Yusheng Communication Equipment Co., LTD		
Salt mist test report		
client:	Co-create	Model number: L-CW8513F
Sample condition	Number of samples: 5 PCS	
	Material: single-sided half-to-half electrolytic copper	Plating layer: gold-plated
Date of experimental site: 48 hours from June 26,09:25 to 09:25 on June 5,2024		
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	

6. Package schematic diagram

Packaging method diagram		
product name	Antenna components	
P / N	661007	
Project model	L-CW8513F	
File details	Carton Size 1:270 * 260 * 200MM Carton Size 2:260 * 200 * 200MM Carton Size 3: by order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Label size 1: General 100 * 100mm Label size 2: according to customer requirements	
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		