SHARETRONIC

WY acknowledgement

SPECIFICATION FOR APPROVAL

Document Number:	Version: A00
Applicable type: L-CW7513G 11 pages	
Material number: 400104320	

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

The Part Description:ANT 2.4/5G dual-band WiFi 2.8dBi cable length 70mm built-in FPC antenna L_CW7513G 661012-IA Yu Sheng

Supplier: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD

Manufacturer model: 661012-IA

Sample admission date: August 28,2024

part drawing number:

F☐ recognized and unqualified

C☐ tional approval, ☐ purchase limit and quantity:

cause:

Part quali☐ s not determined

Insufficie☐ mber of samples

Incomplete ☐ cription document

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	

T-SQWPE030-01G

Material Requirements Specification for the L-CW7513G project antenna

Customer name: Xiechuang

Customer product name: L-CW7513G

Product name: WIFI antenna

Product specification: See the BOM table for more details

Product code: 400104320

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	V0.6	editio princeps	2024-10-24	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 demander's judgment result: □ qualified □ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

catalogue

1. Overview

1.1 Scope of application

This requirement is applicable to the antenna selection, testing and acceptance of L-CW7513G products.

1.2 Project basic information

Antenna name:	**L-CW7513G**
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 & S CMW500, full wave far field ETS dark room, high precisio n positioning system and its controller and computer with automatic test program

Test environment: temperature 22℃± 3℃, humidity 50% ± 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.

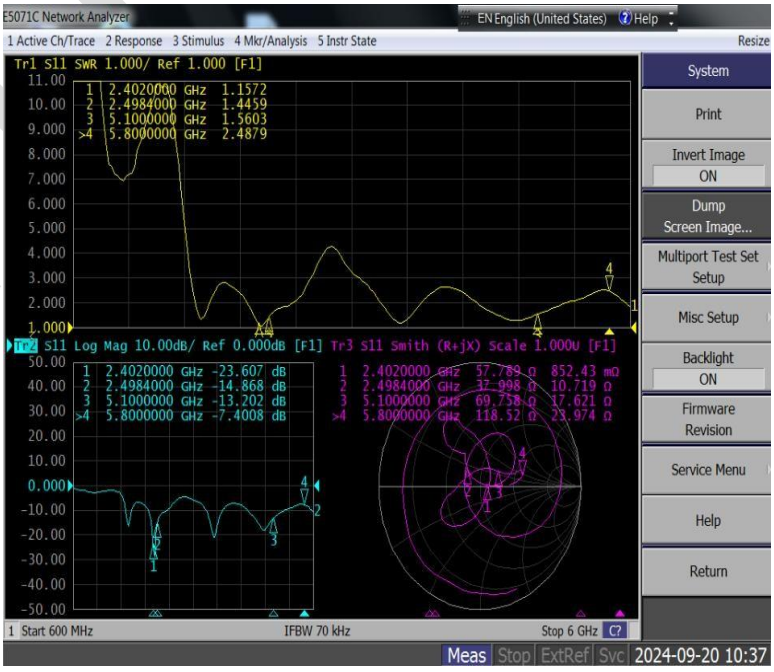
The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.1 WIFI antenna active parameters

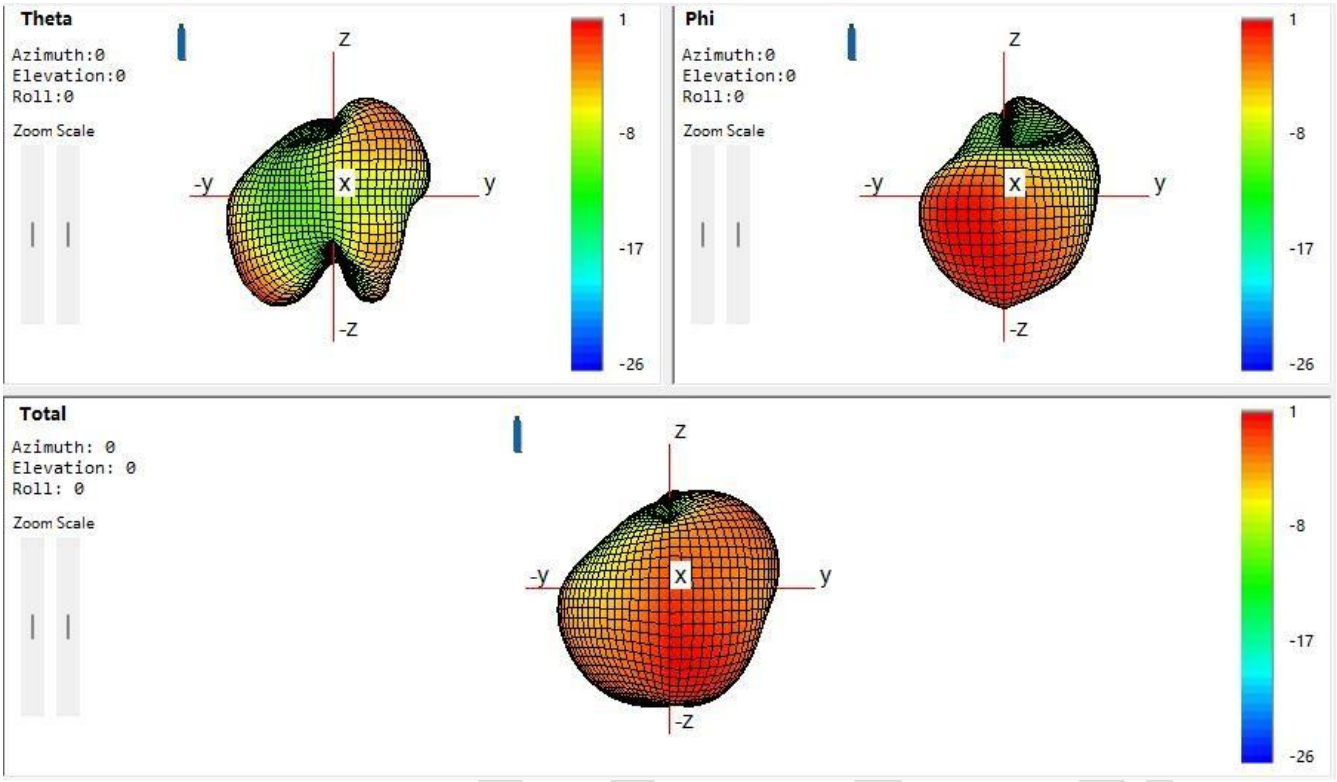
	802.11	信道号	TRP(db)	TIS(dbm)
WIFI	11B	CH1	18.02	-83.74
		CH7	17.21	-84.17
		CH13	16.18	-79.41
	11G	CH1	18.74	-69.27
		CH7	18.78	-67.95
		CH13	18.63	-65.78
	11N	CH1	18.28	-66.78
		CH7	18.54	-64.88
		CH13	18.45	-62.19
	11A	CH36	18.29	75.87
		CH149	17.13	-73.62
		CH165	17.63	-75.57

2.2.2 antenna passive data

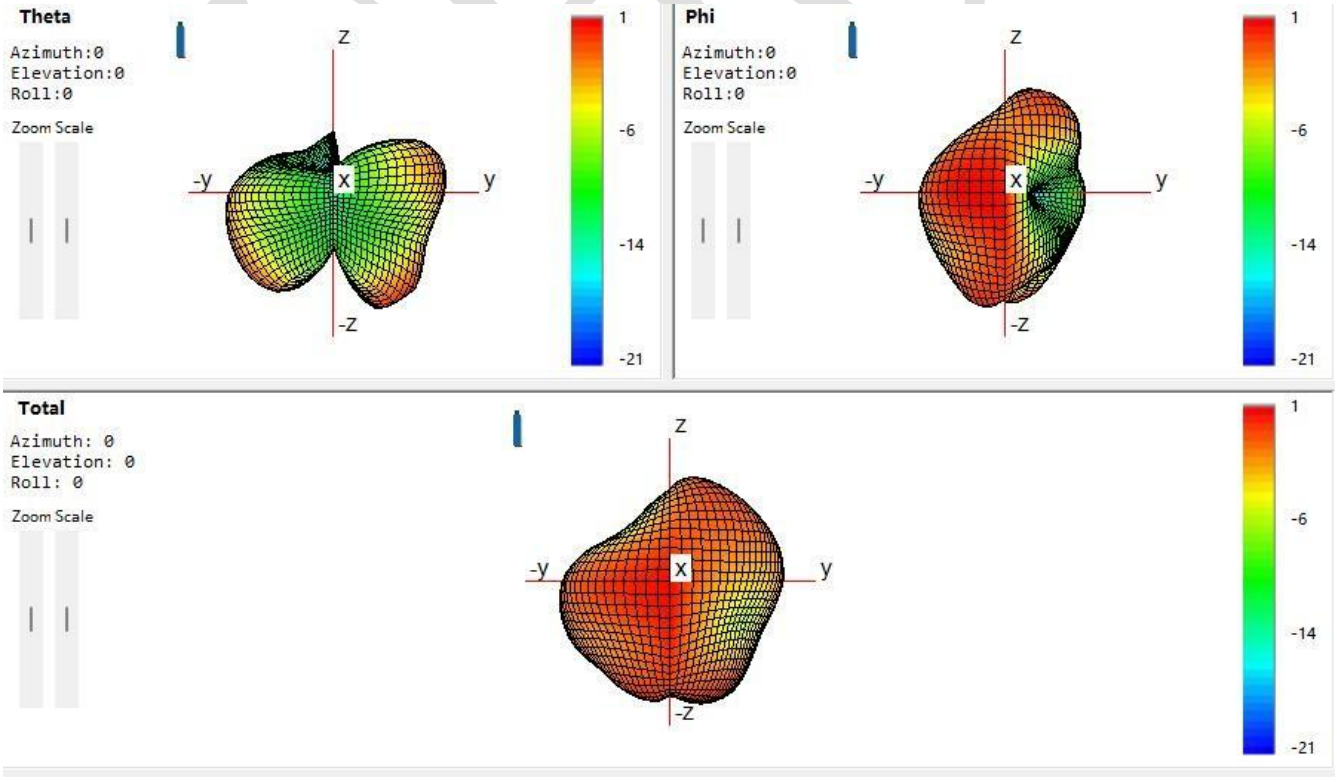
Passive Test					
Freq (MHz)	Effi (%%)	Gain (dBi)	Freq (MHz)	Effi (%%)	Gain (dBi)
2400.0	55.24%	1.99	5100.0	50.95%	2.8
2420.0	53.52%	1.71	5150.0	49.51%	2.76
2440.0	51.51%	1.37	5200.0	51.94%	2.36
2460.0	50.28%	0.98	5250.0	50.57%	2.16
2480.0	49.68%	1.00	5300.0	47.88%	1.73
2500.0	48.85%	0.87	5350.0	54.43%	1.67
			5400.0	58.74%	1.55
			5450.0	57.99%	1.57
			5500.0	53.29%	1.59
			5550.0	57.16%	1.75
			5600.0	62.31%	1.66
			5650.0	64.48%	1.61
			5700.0	59.32%	1.63
			5750.0	55.86%	1.47
			5800.0	57.63%	1.35



2.2.3 2.4G far-field direction diagram

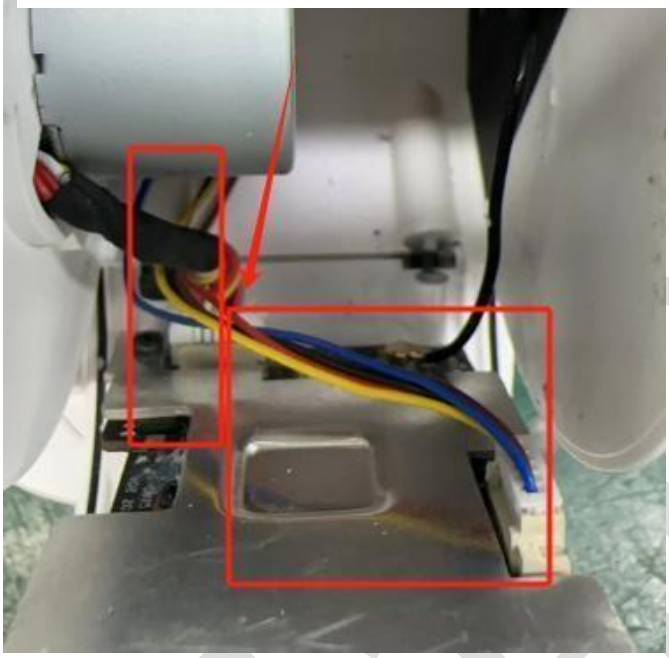


2.2.3 5.8G far-field direction diagram

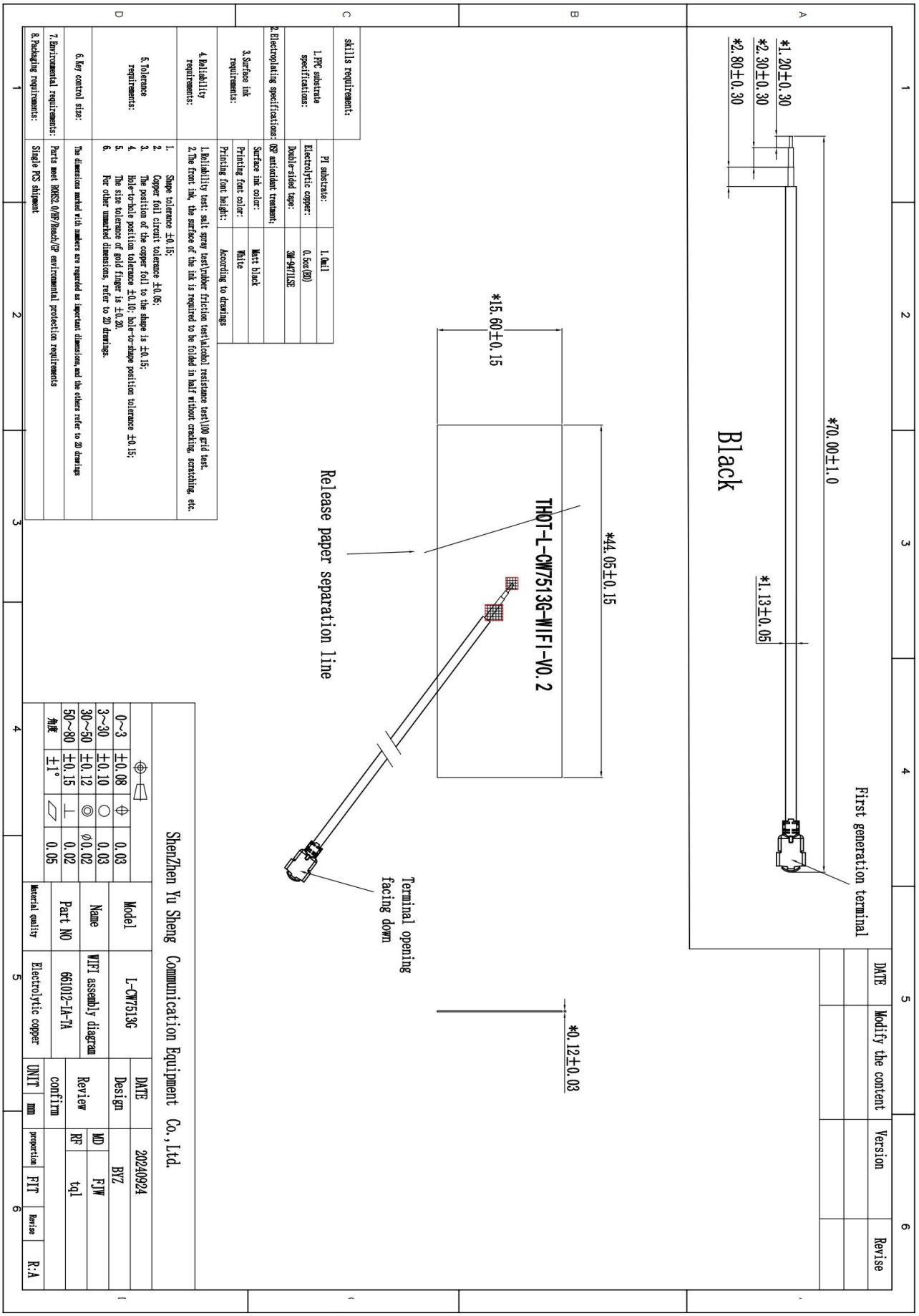


2.2.4 Antenna environmental treatment

The wire avoidance antenna ensures antenna clearance



3.engineering drawing



4. List of materials

Shenzhen Yusheng Communication Equipment Co.,LTD

661012 (L-CW7513G)-BOM

edition: T:B client: 661 Type of aircraft: 661012 Set a date: 2024/09/27

Item numb	* Material code	* Material name	Material class	*Machine type	Specification and model	colour	*unit.	dosage	remark
1	661012-IA-TA	WIFI antenna assembly		L-CW7513G	WIFI-FPC welding coaxial line	BLACK	PCS	1	
1.1	661012-IA-01-TA	WIFI-FPC		L-CW7513G	WIFI-FPC electrolytic copper 1 half 15.6*44.05* 0.12mm	BLACK	PCS	1	
1.2	661012-IA-02-TB	WIFI-Cable		L-CW7513G	Single-head first-generation terminal φ1.13 x 70.00 mm	BLACK	PCS	1	
1.3	661012-IA-03-TA	Assemble		L-CW7513G	Coaxial line welding FPC	BLACK	PCS	1	
verify:			examine:				manufacture: BYZ		

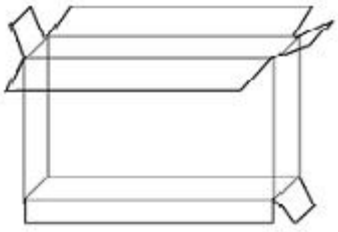
5. Reliability report

Hot and cold shock test report

<table>
<tr><td>client</td><td colspan="2">Co-create</td><td>date</td><td>2024-8-24</td><td>Factory number</td><td colspan="2">661012</td></tr>
<tr><td>P / N</td><td colspan="2">L-CW7513G</td><td>quantity</td><td>Each 5PCS</td><td>testing time</td><td colspan="2">48H</td></tr>
<tr><td>material specification</td><td colspan="2">Single side half to half, electrolytic copper gold plating</td><td>supplier</td><td>Renesola</td><td>reference standard</td><td colspan="2">MIL-SDT-202Method017IEC60749-25
JEDECJESD22-A104-B
IEC68-2-1MIL-STD-2168-85</td></tr>
<tr><td colspan="8">Test purpose: To test the reliability of products and coating binding force, coating and oxidation resistance and corrosion resistance.</td></tr>
<tr><td colspan="8">Equipment name: high and low temperature test box</td></tr>
<tr><td colspan="8">laboratory environment</td></tr>
<tr><td>temperature</td><td colspan="2">22-26℃</td><td>relative humidity</td><td>65-75%</td><td colspan="2">atmos</td><td>1MPA</td></tr>
<tr><td colspan="8">test parameter</td></tr>
<tr><td>temperature</td><td colspan="2">high temperature</td><td>80℃</td><td>low temperature</td><td colspan="2">minus forty ℃</td><td>Temperature tolerance</td><td>2℃</td></tr>
<tr><td rowspan="2">time</td><td rowspan="2">constant temperature</td><td>high temperature</td><td>0.30H</td><td>High temperature heating</td><td colspan="2">10min</td><td rowspan="2">remarks</td><td rowspan="2">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</td></tr>
<tr><td>low temperature</td><td>0.30H</td><td>Low temperature cooling</td><td colspan="2">10min</td></tr>
<tr><td>cycle index</td><td colspan="2">32 Times</td><td>else</td><td>relative humidity</td><td colspan="2">95%</td><td></td><td></td></tr>
<tr><td>visual inspection</td><td>lamination</td><td>ACC</td><td>oxidize</td><td>ACC</td><td>blister</td><td>ACC</td><td>The ink fell off</td><td>ACC</td></tr>
<tr><td>test</td><td>antistripping</td><td>⩾ 0.8kgf/cm2</td><td>spot welding</td><td>ACC</td><td>Bige test</td><td>ACC</td><td>Wear-resistant experiment</td><td>ACC</td></tr>
<tr><td colspan="8">test record:</td></tr>
<tr><td colspan="2">identification of product</td><td colspan="4">Product test results</td><td colspan="2">judge</td></tr>
<tr><td colspan="2"></td><td colspan="4">After the experiment, the product has no warping and no glue overflow.</td><td colspan="2">ACC</td></tr>
</table>

<table>
<tr><td colspan="3">Shenzhen Yusheng Communication Equipment Co., LTD</td></tr>
<tr><td colspan="3">Salt mist test report</td></tr>
<tr><td>client:</td><td>Co-create</td><td>Model number: L-CW7513G</td></tr>
<tr><td rowspan="2">Sample condition</td><td colspan="2">Number of samples: 5 PCS</td></tr>
<tr><td>Material: single-sided half-to-half electrolytic copper</td><td>Plating layer: gold-plated</td></tr>
<tr><td colspan="3">Date of experimental site: 48 hours from June 26,09:25 to 09:25 on June 5,2024</td></tr>
<tr><td>Type of experiment</td><td colspan="2">■ NSS □ASS □CASS</td></tr>
<tr><td rowspan="6">experiment condition</td><td>Salt solution: 5%</td><td>PH:7.0</td></tr>
<tr><td>Box temperature: 35 · C</td><td>Relative humidity: 85% ℃</td></tr>
<tr><td>Spray method: ■ Continuous □ interval</td><td>Compressed air pressure: 1kg / m 2</td></tr>
<tr><td>precipitation rate of salt spray:</td><td>Fog liquid collection: PH7.0anc</td></tr>
<tr><td rowspan="2">Experimental period: 1- -cycle</td><td>Spray time: 48H</td></tr>
<tr><td>Hold time: 2H</td></tr>
<tr><td>The results were observed every 16 hours</td><td>The test temperature is: 36℃</td><td>Pressure barrel temperature: 47.5℃</td></tr>
<tr><td rowspan="3">experimental result</td><td colspan="2">Appearance after the experiment: the appearance is intact and intact, no obvious change</td></tr>
<tr><td colspan="2">Plating: no peeling, no corrosion</td></tr>
<tr><td colspan="2">Surface spraying, screen printing: no falling off, no bubbles</td></tr>
</table>

6. Package schematic diagram

<table>
<tr><td colspan="3">Packaging method diagram</td></tr>
<tr><td>product name</td><td colspan="2">Antenna components</td></tr>
<tr><td>P / N</td><td colspan="2">661012</td></tr>
<tr><td>Project model</td><td colspan="2">L-CW7513G</td></tr>
<tr><td rowspan="3">File details</td><td>Carton Size 1:
270*260*200MM
Carton Size 2:
260*200*200MM
Carton Size 3:
Depending on the order quantity / volume</td><td>  </td></tr>
<tr><td>Boating method</td><td>Packaging by order quantity</td></tr>
<tr><td>Total number of binning</td><td>Packaging by order quantity</td></tr>
<tr><td>labeling requirement</td><td>Tag Size 1:
Universal use 100 * 100mm
Tag Size 2:
According to customer requirements</td><td></td></tr>
<tr><td colspan="3">matters need attention</td></tr>
<tr><td colspan="3">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</td></tr>
<tr><td colspan="3">2. Storage temperature: room temperature</td></tr>
<tr><td colspan="3">3. Preservation conditions: store them in a cool and dry place</td></tr>
</table>