Shenzhen Kaipushen Communication Technology Co.,

APPROVAL SHEET

CUSTOMER	Shenzhen Horn Acoustics Co., Ltd
DESCRIPTION	A855-L/BT天线/A855-L/BT antenna
REV.NO	V1.0
CUSTOMER PART.NO	H11010002120 IN098_RF_L,V1.0
CUSTOMER PART.NO	080.A855L.10161
Delivery date	2025-02-12
Supplier's address:	The second floor of the Yulong Office Building, Longcheng IndustrialZone, No. 440 Longguan Avenue, Longhua District, Shenzhen
Supplier's phone number:	

Customer acknowledges

CUSTOMER APPROVAL

SQE	research and development	CMF	environment protection	purchase

Samples are provided

SAMPLE PR VIDE				
make	engineering	quality	environment protection	approve

FORM-H1332(1.0)

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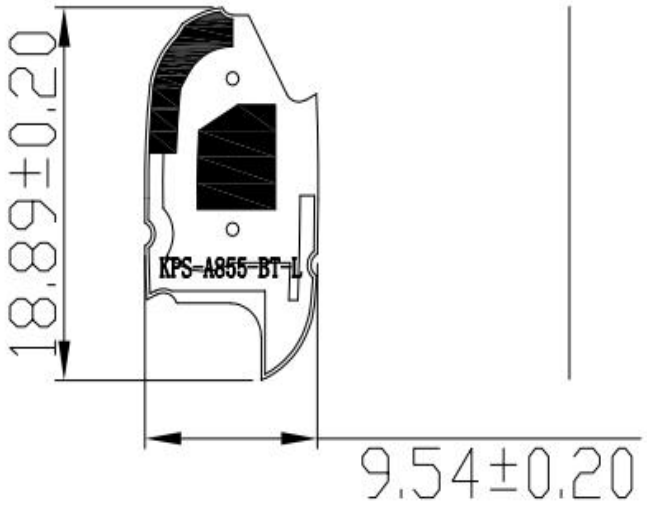
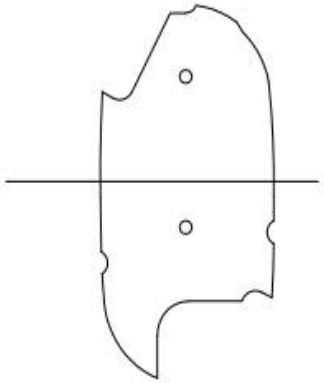
3、Structural diagram





铜箔区
Copper foil area

镀金区
Gilded area

背胶区
Adhesive area

背断线
Dorsal disconnection

技术要求：
(technical requirement)
1.材质：电解铜PI,单面板，镀金；
(Material: Electrolytic copper PI, single panel, gold plated)
2.打"*"为重要尺寸；
(Mark * as an important size)
3.未标注尺寸详见图纸；
(Please refer to the drawing for dimensions not indicated)
4.符合RoHS要求；
(Meets RoHS requirements)
5.表面无油污，杂质，毛刺等。
(No oil stains, impurities, burrs, etc. on the surface)

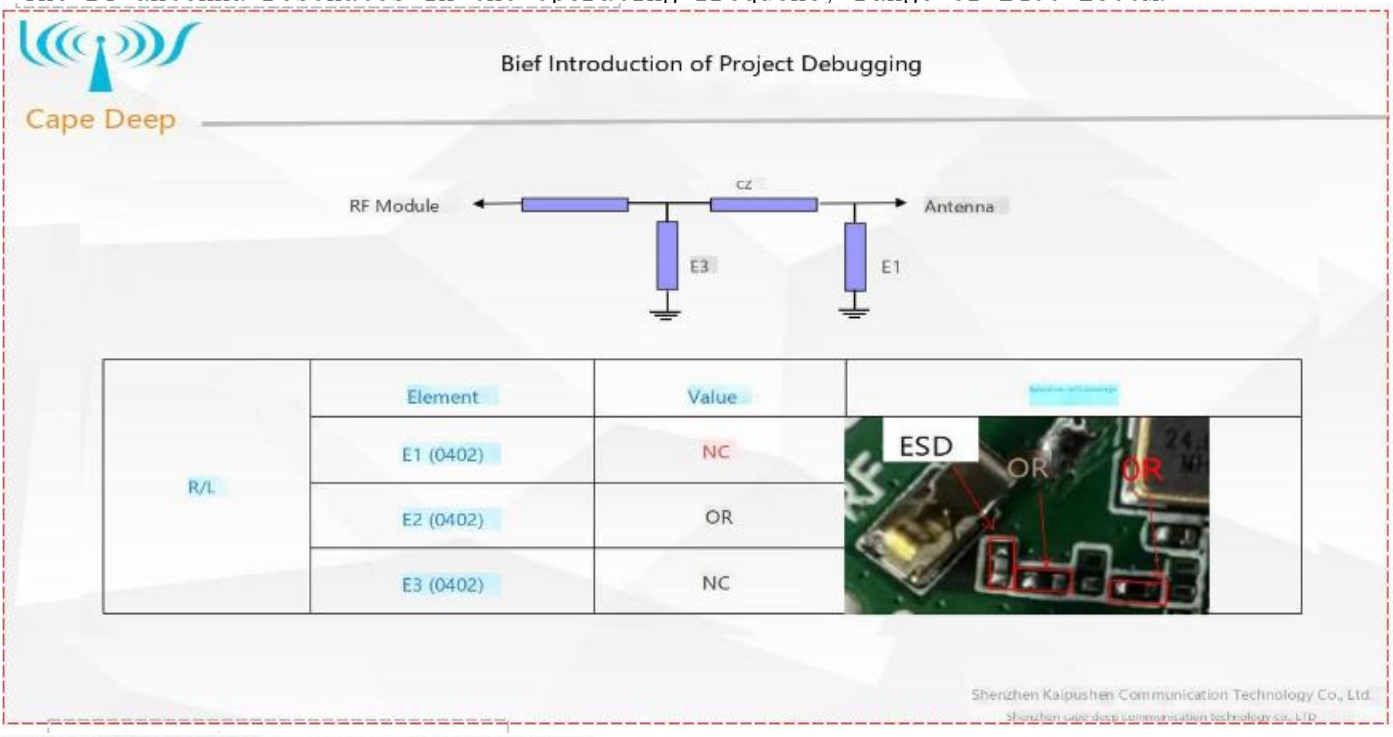
深圳市凯普深通讯科技有限公司
Shenzhen Kaipushen Communication Technology Co., Ltd

⌀0.03	产品名称(product name)：	A855	结构(MD)：	CHEN JIAN
0.02	产品种类 (Product category)：	BT antenna	射频(RF)：	JIANG CHANG XING
0.04	产品料号(Product part number)：			
UNIT：mm	colour:black	proportion:1:1	version:A	

5.1 Electrical performance

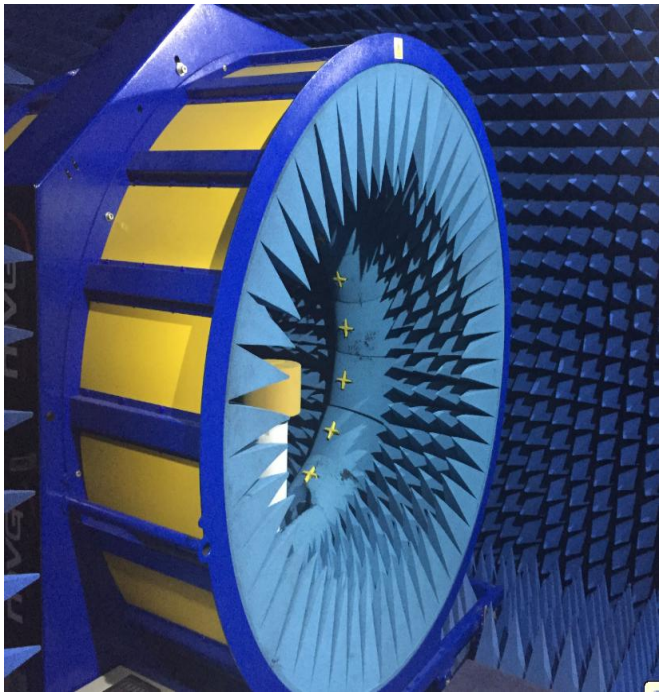
5.1-1 Specification standards

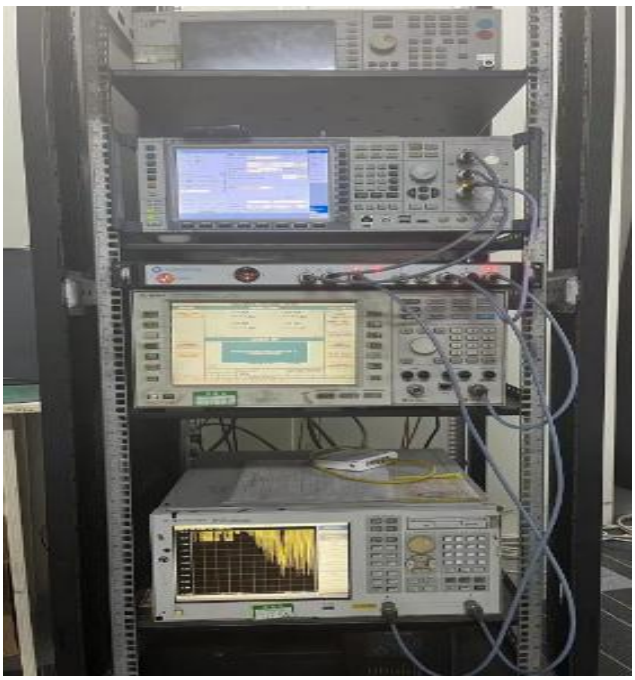
The BT antenna resonates in the operating frequency range of 2400-2500M.



5.1-2 Matching Circuits for Antennas .

5.1-2 darkroom equipment





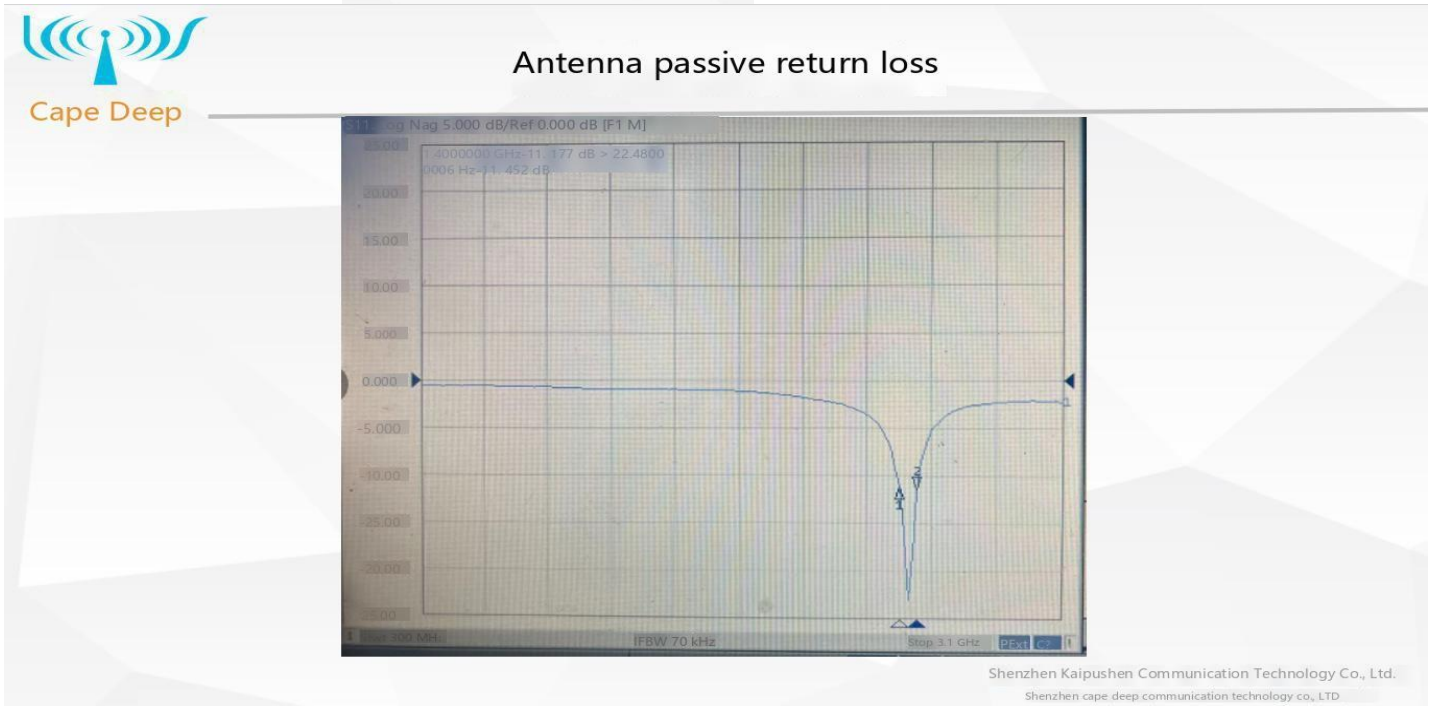
6.2 Standing Wave Ratio (SWR) Test

6.2-1 Test Setup

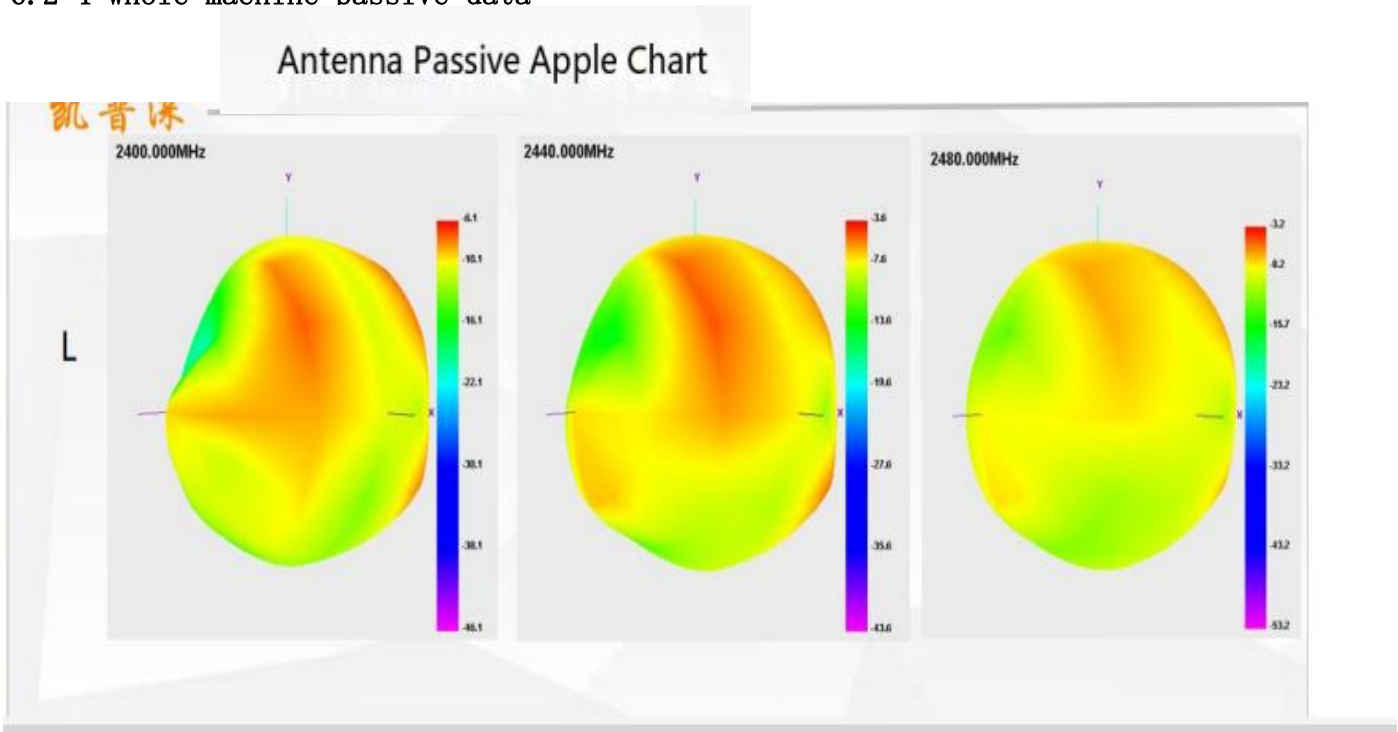
The Standing Wave Ratio (SWR) test setup is sequentially connected as follows: E5071B Network Analyzer → 50 ohm coaxial cable → 150mm long copper tube → test fixture.

Test fixture processing: from the cell phone PCB antenna 50 ohm test point with a rigid cable leads to the SMA-J connector and a set of copper tube with a choke connection, and then connected to other devices in turn.

6.2-3 passive test results

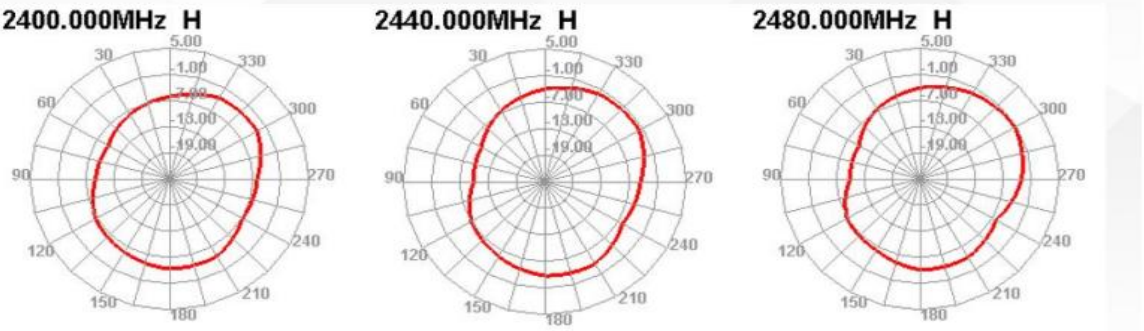


6.2-4 whole machine passive data



2D directional map

L



Free space efficiency of antenna darkroom

L

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	25.04	-6.01	-0.4
2410	23.36	-6.32	-0.27
2420	24.2	-6.16	0.23
2430	25.17	-5.99	0.04
2440	22.99	-6.38	-0.81
2450	21.33	-6.71	-1.71
2460	22.44	-6.49	-1.7
2470	22.43	-6.49	-1.52
2480	25.59	-5.92	-0.75

Free space active data

1#L

Test	Bluetooth TRP		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
Txp Ave(dBm)	0.37	4.6	4.06
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
Sens Ave(dBm)	-85.3	-86.5	-85.8

2#L

Test	Bluetooth TRP		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
Txp Ave(dBm)	0.11	3.9	3.8
Test	Bluetooth TIS		
Result	0	39	78
Frequency (MHz)	2402	2441	2480
Sens Ave(dBm)	-84.9	-86.4	-86.1

深圳市凯普深通讯科技有限公司
Shenzhen cape deep communication technology co., LTD

environmental treatment

assembled in accordance with the environment of the pilot production prototype

Full dimensional measurement report

	Customer	Horn		Item name		A855		Specifications			Material	Electrolytic copper
	Supplier	Kemp Deep		Measure tools		Quadratic		Measure unit		mm	Measure date	2025/2/12
NO.	(DIMENSION)	upper limit	+ TOL.	- TOL.	lower limit	Actual testing 1	Actual testing 2	Actual testing 3	Actual testing 4	Actual testing 5	Actual testing6	UPPER≦100%	LOWER≦100%
1	18.89	19.09	0.20	0.20	18.69	18.92	18.88	18.85	18.92	18.88	18.80	15%	45%
2	9.54	9.74	0.20	0.20	9.34	9.48	9.55	9.58	9.60	9.52	9.53	30%	30%
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

tabulation: Jian Chen

To examine: XingTuoWU

KPS 天线专家 Shenzhen cape deep communication technology co., LTD					QC schedule drawing			file number		KPS--QPA-QA004	Enactment Date	
								file version		A/01	Page	page 1
technological process			Control focus		management responsibility	method		Inspection method			corrective action	
Order Number	Main Proce	project name	aControl Project	Regulatory standards	person liable	Normal sampling number	person in charge	Inspection method	Examines the tool	Record type	Solution	
	▽	begin										
1	○	Receiving	quantity/product name/specifications	《Engineering BOM》 《Material receiving	Material clerk					《Electronic account》	Contact the supplier and issue 《returning note》	
2	◇	Incoming	specifications/model/ pack	《Engineering BOM》 《Sampling inspection plan	IQC	MA=0.25 MI=0.65	IQC	1.visual 2.Machine	Two dimensional	《IQC incoming inspection record	Inspection: OK, stamped with pass seal, The inspection ng shall be labeled as nonconforming product and issued at the same time《8D Report	
3	○	material	quantity/product name/specifications	《 production instruction》 《Material receiving	Material clerk					《Material requisition and		
4	○	pack	pack quantity/indicate	《Finished product packaging operation	packager							
5	○	Delivery	product appearance bad record Dimensional test	《Engineering BOM》 《Sampling inspection plan	OQC	MA=0.25 MI=0.65	OQC	1.visual 2.Machine	Two dimensiona	《OQC finished product inspection	If the number of times of the same type of the same type missing in the daily inspection is greate, OQC issues the 8D	
6	○	delivery	product namespecification quantity	《Finished product shipping operation instruction 》	Material clerk					《Electronic account》		
	▽	finish										

character	Revision date	Revised content	Revised ;	Acknowledged	Fiction		auditing		approval	
①										
②					date		date		date	
③										

Shenzhen Kaipushen Communication Technology Co., Ltd		file NO	
		Enactment Date	
	FPC antenna inspection specification	Page	
		edition	A0

1. Purpose and purpose: rigorous testing , Control the use of defective products and ensure product quality requirements。

2. applicable scope: FPC aerial。

3. content

item	content	tool	Inspection standards and technical requirements	Defect Description	stratum
packing	characteristic	visual	The outer package is clearlylabeled, Indicate, product name、specifications、quantity、date。	The identification is not clear and cannot be identified。	MIN
	Matter	visual	Uniform packaging, Clean and tidy, unabroken , No impact on handling 、Storage, No wrong installation 、mixed 、Less clothes。	Inconsistent packaging, Dirty、damp、damaged., Affect handling 、Storage。	MIN
appearance	surface	visual	FPC is not damaged、Copper Exposured、dehiscence、chromatic aberration、Yijiao,Gold finger is free of oxidation and brittle crack。	FPC is damaged、Copper Exposured、dehiscence、chromatism、 rubber overflowing ,Oxidation of golden finger、Brittle crack 。	MAJ
structure	measurement	vernier caliper	Board size (dimensions) Same as template	The size is different from the sample 。	MAJ
	Material	sample plate	Same as template 。	Material is different from template	MAJ
performance	Electroplate	electro plating Machine	Golden finger degree golden brightness, coverage rate 100%	The gold plating is not bright,or the gold plating coverage is low。	MAJ
	forced jointing	chassis	FPC is pasted on its enclosure consistent with the preset pasting position,None.	FPC is pasted on its enclosure,Inconsistent with the preset pasting position ,More or less .	MAJ

Formulate :	auditing :	Approve:

RoHS restricted substance composition questionnaire

(Information of supplied products)

(Customer name)	Description of Material/model	entry name	manufacturer	Green material identification
Horn	BTantenna	A855	Shenzhen Kaipushen Communication Technology Co., Ltd	/

(Product composition information)

(Order Number)	(Component Name)	(Component part number)	(Component supplier)	Third party test report		Content of restricted substances PPM						remarks
				date	number	(Pb)	(Cd)	(Hg)	(Cr^{6+})	(PBB)	(PBDE)	
1	3M adhesive backing	/	3M, USA	2023/12/27	SHAEC23021627701	O	O	O	O	O	O	
2	Kwai Lengti	/	Kwai Lengti	2024/1/12	SHAEC24000428806	O	O	O	O	O	O	
3	Solder resist ink	/	ouli Industr	2024/6/14	ETR24600712	O	O	O	O	O	O	
4	Electroplating/Gold Nickel	/	Xinda Sheng	2024/3/26	A2240158803101001E	O	O	O	O	O	O	
5	Character ink	/	Chuan Yu	2023/10/13	ETR23A00862M01	O	O	O	O	O	O	

Note:

1. Please indicate whether the content of the six restricted substances is compliant or non-compliant by ○ and ×; compliance is indicated by

2, PPM limit value: cadmium <100PPM; lead/mercury/hexavalent chromium/PBB/PBDE <1000PPM.

3. The total amount of lead, hexavalent chromium, mercury and cadmium in packaging materials shall not exceed 100 ppm.

4. This form should be completed in full and stamped by the supplier; here the supplier refers to the direct trading party. (Provide stamped paper or scanned PDF file)

Salt spray test report

Date: 2025 年 02月 12日			
product name	A855	Customer	Horn
Supplier	Shenzhen Kaipushen Communication Technology Co., Ltd	National Test standard	GB/T 2423.2-2008
Sample situation	Sample qty: 5PCS		
	Coating: Gold plated ≥0.5U″		
Test start and end time	From 9:00 am on February 10, 2025 to 9:00 am on February 12, 2025, a total of 48 hours		
Test type	■ NSS	□ ASS	□ CASS
Test condition	Salt solution: 5%		PH:7.0
	Chamber temp: 35° C		Relative humidity: 85%
	Spray way: ■Continuous □ 间歇 intermittent		Compressed air pressure: 1kg/cm²
	Salt spray sedimentation rate: 1-2ml/80cm2/h		Fog fluid collection: 1.4ml/80cm2/h
	Test cycle: __1_cycle		Spray time: 48h
Test results	Appearance after test:appearance intact, without obvious change		
	Coating: no spalling, no rust		
	Surface spraying, silk screen: no falling off, no bubbles.		

Explanation:
1、 Salt spray test operating standards in accordance with the People's Republic of China national standard GB/T2423.17-2008 implementation。
2、The test piece results are determined according to the national standard GB/T6451-02 of the People's Republic of China。

Operator by/date: Jian Chen Approved by/date: XingtuoWU

High-low temperature test record

Product name	A855	Customer name	Horn
Test qtu	6 pcs	Test date	2025年2月12日
Cycle number	1	Time	48H

TestCondition:

High temp: + 65degrees Humidity: 90 % RH

Low temp: - 25 度degree

Test time: high temp: 48 H low temp: 48 H

Test item	Uncycled test		Cycled test	
No	After high temp	After low temp	After high temp	After low temp
1	OK	/		
2	OK	/		
3	OK	/		
4	OK	/		
5	OK	/		
6	OK	/		

After test deficiency:

Reason analysis:

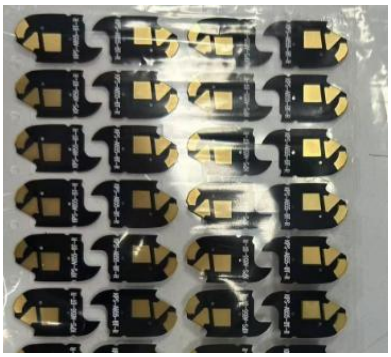
Improvement measures:

Test results: √ Pass Fail

To examine: XingTuoWU tabulation: Jiar

（Packing）

Customer：	Horn	Material name	FPC aerial
packing qty	one carton	Packing material	Carton
Qty/carton		Packing way	Ziplock bag （Single packaging of blister discs for adhesive assembly ）



Picture 1:Single package

Picture 2: Packing way

Picture 3: Packing view (front, side, top)

Picture 4:packing label

notes: If the antenna needs to be attached for processing, it should be packaged and shipped according