Shenzhen Kepshen Communication Technology Co

Shenzhen Kaipushen Communication Technology Co.,

Letter of Recognition

APPROVAL SHEET

Customer name CUSTOMER	Shenzhen Horn Acoustics Co., Ltd
Material Name DESCRIPTION	A855-R/BT antenna/A855-R/BT antenna
VERSION REV	V1.0
Customer number CUSTOMER PART.NO	H11010002116 IN098_RF_R,V1.0
Internal material number CUSTOMER PART.NO	080.A855R.10161
Date of delivery of recognition A. D	2025-02-12
Supplier's address.	Supplier's address: The second floor of the Yulong Office Building, Longcheng Industrial Zone, No. 440, Longguan Avenue, Longhua District, Shenzhen IndustrialZone, No. 440 Longguan Avenue, Longhua District, Shenzhen
Supplier's phone number.	

Customer acknowledges

CUSTOMER APPROVAL

SQE	R&D	CMF	environmental protection	Procurement

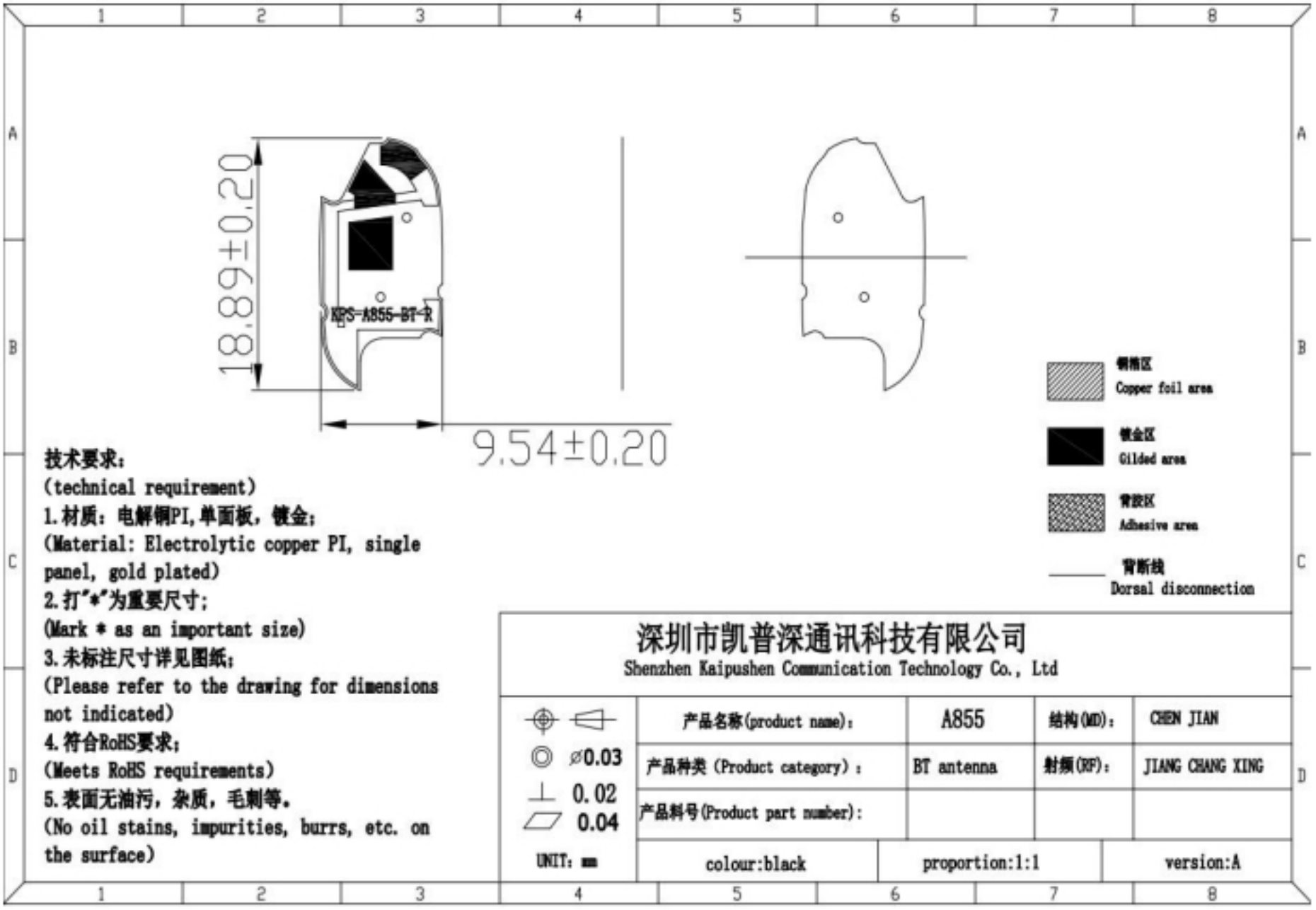
Samples are provided

SAMPLE PR VIDE				
Production	Engineering	Quality	environmental protection	Approval

FORM-H1332(1.0)

order record
Table of contents

3、结构图/Structural diagram



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)

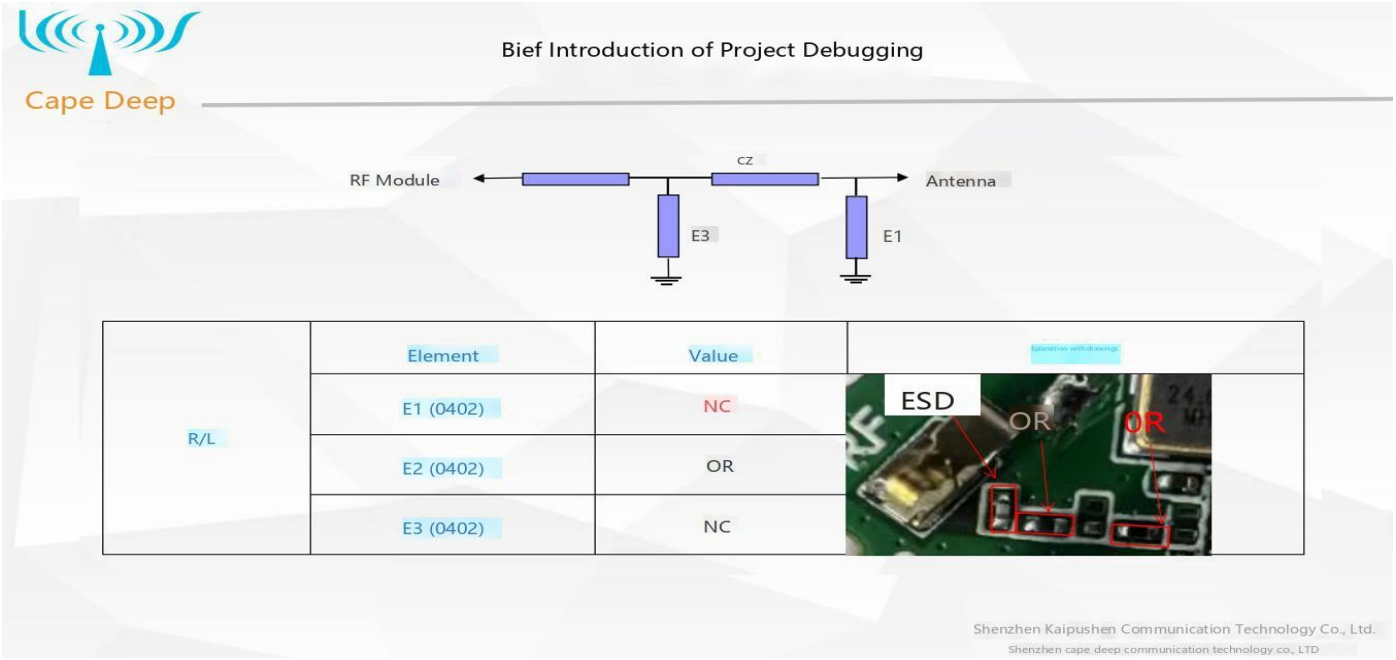
深圳市凯普深通讯科技有限公司
Shenzhen Kaipushen Communication Technology Co., Ltd

⌀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

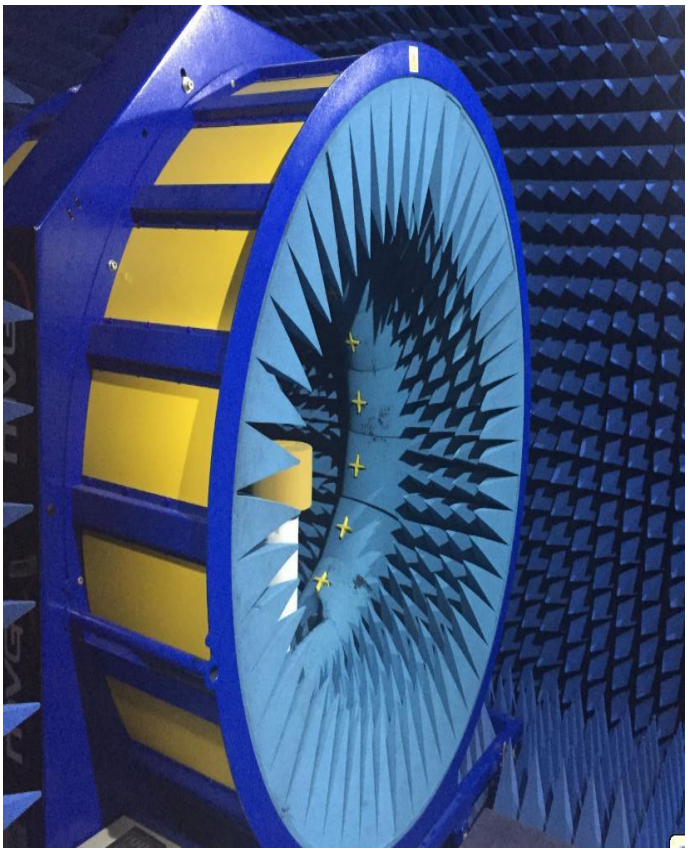
5.1-1 specification standards

BT Antenna The operating band generates resonance at 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

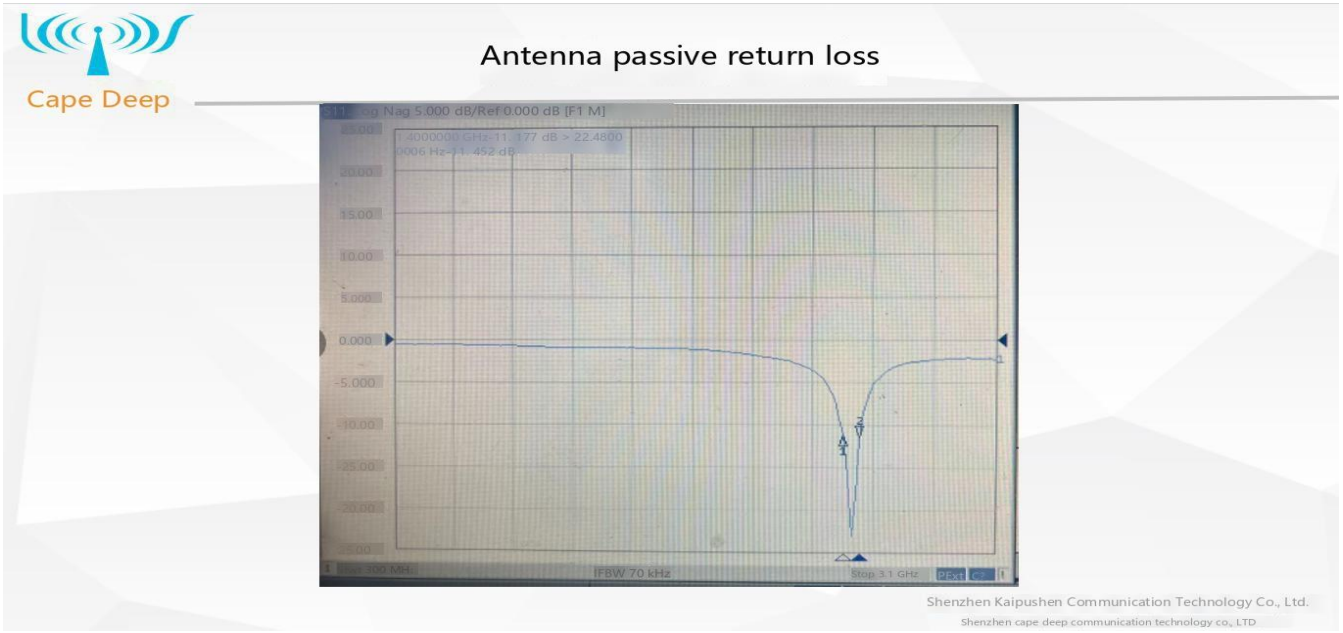
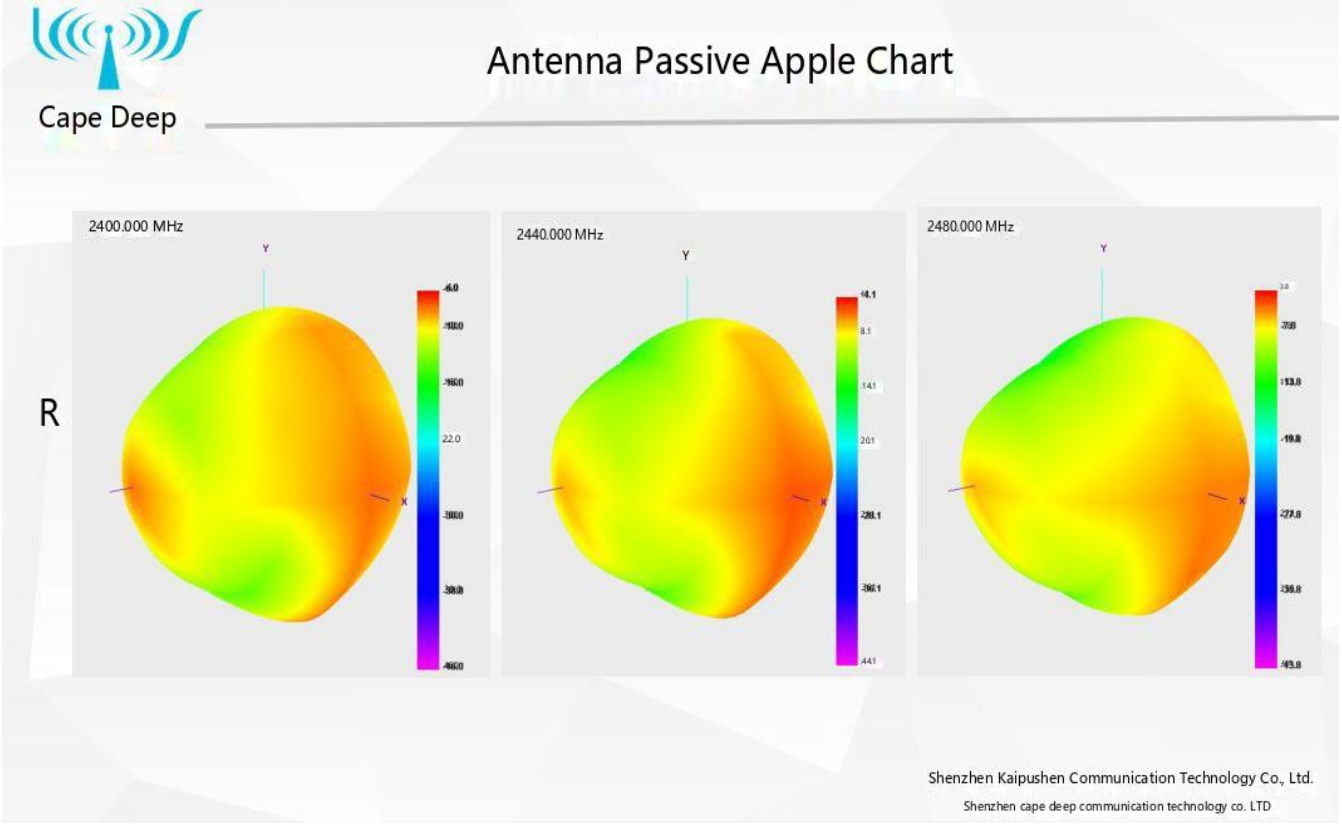


Diagram of main antenna S11

6.2-4 whole machine passive data



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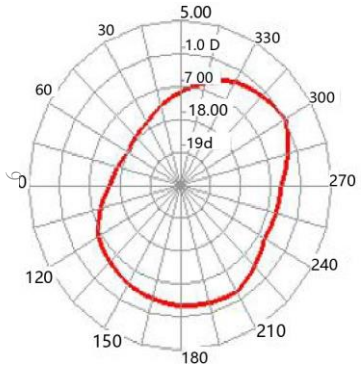
2D directional map

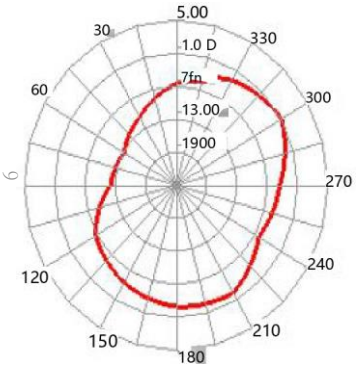
Kerushen

R

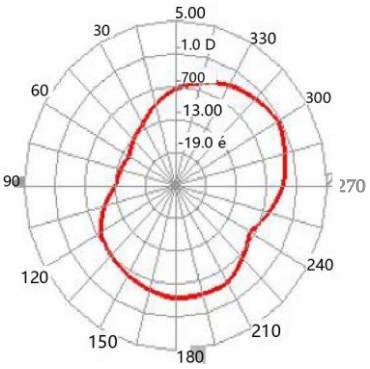
2400.000MHz H



2440.000MHz H



2480.000MHz H



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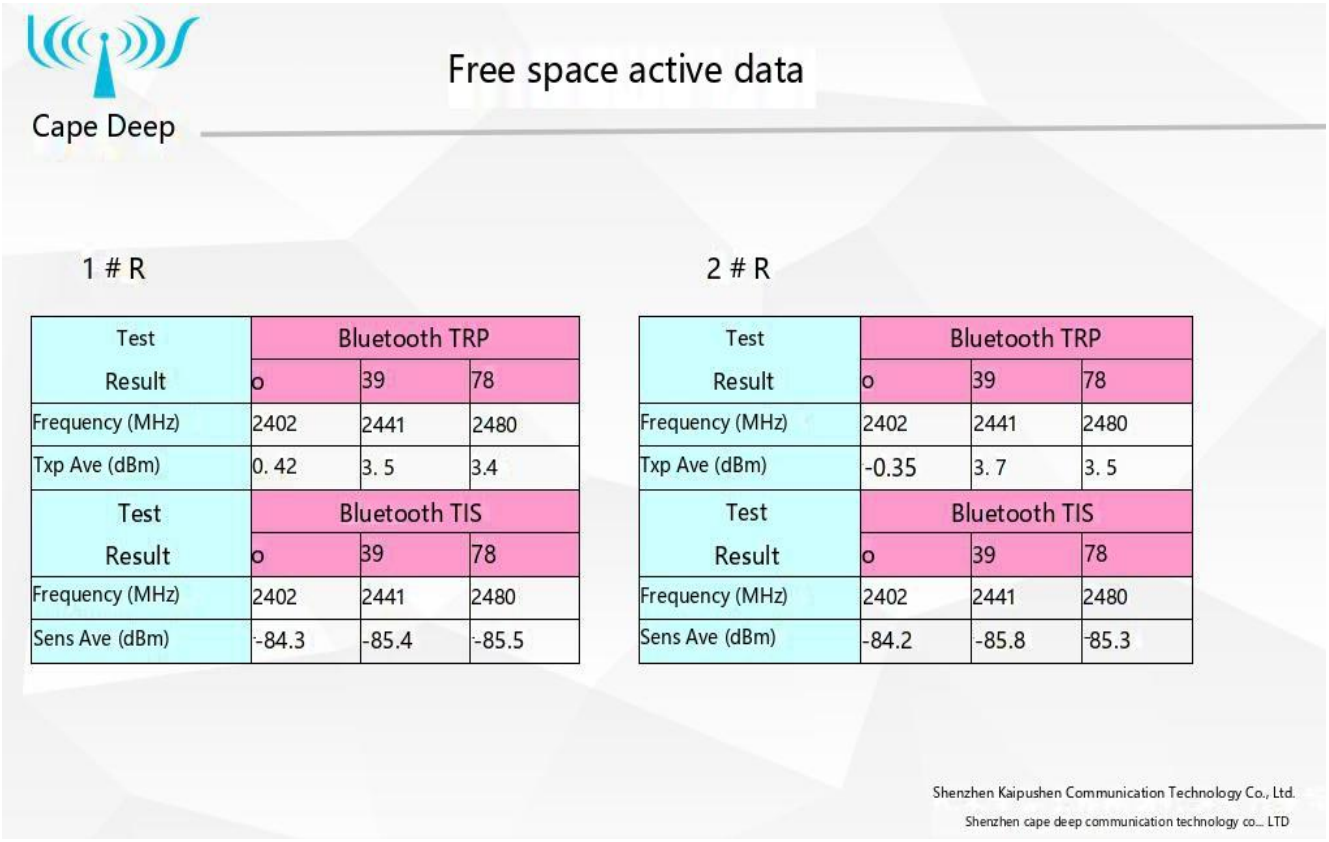
Kaiser

antenna darkroom free space efficiency

R

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	25. 53	-5. 93	-0.6
2410	25. 88	-5. 87	-0.67
2420	23. 87	-6. 22	-1.05
2430	24. 83	-6. 05	-1. 04
2440	23. 66	-6.26	-1. 14
2450	22. 74	-6. 43	-1. 2
2460	22. 52	-6. 47	-1. 01
2470	21. 68	-6. 64	-1. 24
2480	19.53	-7. 09	-1.72

Active data for the entire machine



Cape Deep

Free space active data

1 # R

Test	Bluetooth TRP		
Result	o	39	78
Frequency (MHz)	2402	2441	2480
Txp Ave (dBm)	0. 42	3. 5	3.4
Test	Bluetooth TIS		
Result	o	39	78
Frequency (MHz)	2402	2441	2480
Sens Ave (dBm)	-84.3	-85.4	-85.5

2 # R

Test	Bluetooth TRP		
Result	o	39	78
Frequency (MHz)	2402	2441	2480
Txp Ave (dBm)	-0.35	3. 7	3. 5
Test	Bluetooth TIS		
Result	o	39	78
Frequency (MHz)	2402	2441	2480
Sens Ave (dBm)	-84.2	-85.8	-85.3

Shenzhen Kaipushen Communication Technology Co., Ltd.

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		gauge grid Specifications				Material	Electrolytic copper
	Supplier Supplier	Kemp Deep		Measure tools		Quadratic		Measure unit		mm		Measure date	2025/2/12
NO.	Size (DIMENSION)	Upper limit	+ TOL.	- TOL.	Lower limit	Measurement 1	Measurement 2	Measurement 3	Actual measurement 4	Measurement 5	Measurement 6	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													
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14													
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16													
17													
18													
19													
20													

tabulation:Jian Chen, Jian Chen

To examine the review:XingTuoWU Witch Star Drag

Shenzhen Kepshen Communication Technology Co Shenzhen cape deep communication technology co., LTD					QCschedule 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 Process	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 operation instruction》	Material clerk					《Electronic account》	Contact the supplier and issue 《 returning note》	
2		Incoming inspection	specifications/model/pack	《Engineering BOM》 《 Sampling inspection plan 》 《IQC incoming material inspection instruction》	IQC	MA=0.25 MI=0.65	IQC	1.visual 2.Machine test 3.sample	Two dimensional vernier caliper	《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 Problem Solving Report 》, Notify the supplier of return and improve 。	
3		material	quantity/product name/specifications	《 production instruction》 《Material receiving operation instruction》	Material clerk					《Material requisition and distribution		
4		pack	pack quantity/indicate	《Finished product packaging operation instruction 》	packager							
5		Delivery inspection	product appearance bad record Dimensional test Bad sign Good product packaging ROHS compliance	《Engineering BOM》 《 Sampling inspection plan 》 《OQCFinal inspection operation instruction 》	OQC	MA=0.25 MI=0.65	OQC	1.visual 2.Machine test 3.sample	Two dimensional vernier caliper	《OQC finished product inspection record 》	If the number of times of the same type of the same type missing in the daily inspection is greate, OQC issues the 8D report problem solving report to the production manager for analysis and improve	
6		deliver y	product namespecification quantity delivery note	《Finished product shipping operation instruction 》	Material clerk					《Electronic account》		
		finish										

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

③					date		date		date		

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 Substances Composition Questionnaire
RoHS restricted substance composition questionnaire

Information of supplied products

Customer name	Description of Material/model	project name entry name	manufacturer	Green material identification
Horn	BT antenna/BTantenna	A855	Shenzhen Kepshen Communication Technology Co Shenzhen Kaipushen Communication Technology Co., Ltd	/

Product composition information

Order Number	Componen t Name	Component part number	Component supplier	Third party test report		Restricted substance content PPM restricted substances PPM Content of						Remarks
				Date	No	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	hexavalent chromium (Cr^{6+})	polybrominated biphenyls (PBB)	polybrominated diphenyl ethers (PBDE)	
1	3M adhesive backing	/	3M, USA	2023/12/27	SHAEC23021627701	O	O	O	O	O	O	
2	Base material (copper foil)	/	Kwai Lengti	2024/1/12	SHAEC24000428806	O	O	O	O	O	O	
3	Solder Resist Ink	/	YULI INDUSTRY	2024/6/14	ETR24600712	O	O	O	O	O	O	
4	electroplating/gold-nickel	/	Xindasheng	2024/3/26	A2240158803101001E	O	O	O	O	O	O	
5	Character ink	/	Kawahiro	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 ○; non-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

Salt spray test report

Date:February 12, 2025			
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″ Coating: Gold plated ≥0.5U″		
Test start and end time	February 10, 2025 0900 hours to February 12, 2025 0900 hours Total 48 H (Total 48H)		
Test type	■ NSS	□ ASS	□ CASS
Test condition	Salt solution:5%		PH:7.0
	Chamber temp: 35° C		Relative humidity: 85%.
	Spray way: ■ Continuous □ 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 the test: The appearance is intact and there is no obvious change. Appearance after test:appearance intact, without obvious change		
	Coating: no spalling, no rust		
	Surface spraying, silk-screen printing: no shedding, no bubbles. Surface spraying, silk screen: no falling off, no bubbles.		

DescriptionExplanation.

1, salt spray test operating standards in accordance with the national standards of the People's Republic of China GB/T2423.17-2008 implementation

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 in accordance with the national standards of the People's Republic of China GB/T6461-02 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 Reviewed by/dateApproved by/date: Wu XingtuoXingtuoWU

high/low temperature test records

High-low temperature test record

Product name	A855	Customer name	Horn
Test qtu	6 pcs	Test date	February 12, 2025
Cycle number	1	Time	48H

Test

High temp:+ 65 degrees Humidity: 90% RH Low temp:- 25 degree

Test time: high temp: 48 H Low temp:48 H

Test item	Uncycle test		Cycle test	
Serial number No	After high temperature	After low temperature temp	After high temperature	After low temperature temp
1	OK	/		
2	OK	/		
3	OK	/		
4	OK	/		
5	OK	/		
6	OK	/		

After test defect:

Reason analysis Reason analysis:

改善措

Improvement measures:

Experimental results Test results: √ qualified Pass

Unqualified Fail

Audit: Wu Xingtuo Record: Chen Jian

Packing mode (packing)

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

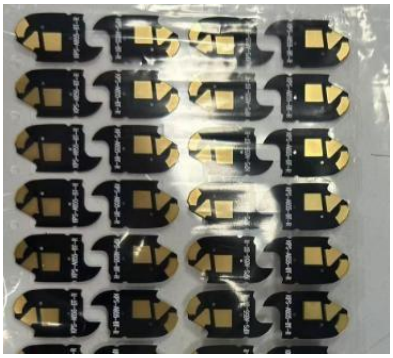

Figure 1: Individual packages
Picture 1:Single package

Picture 2:Packing method
Picture 2: Packing way

Figure III

Fig. 3: View of the box (front, side, top (Ministry of Foreign Affairs)

Picture 3: Packing view (front,

Figure IV

Figure 4: Outer box labeling
Picture 4:packing label

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