

Shenzhen Kaipushen Communication Technology Co., Ltd

Sample approve sheet

Customer: Ruiboxin

Item name: A316

Sample name: BT aerial

Description/color: black

Release Date: 2022-09-06

Supplier confirmed	Make	R&D	Structure	Quality
	Liu Xiao meng 2022.09.06			

Customer confirmed	Item	Appearance	Structure	Quality

Conclusion	☐ MP use ☐ Limited use () K
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☐ ROHS

Supplier name: Shenzhen Kaipushen Communication Technology Co., Ltd

Supplier address: 2nd Floor, Building 1, Yulong Building, Longcheng Industrial Zone, No.440, Longguan Avenue, Longhua District, Shenzhen

Tel: 0755-29351613

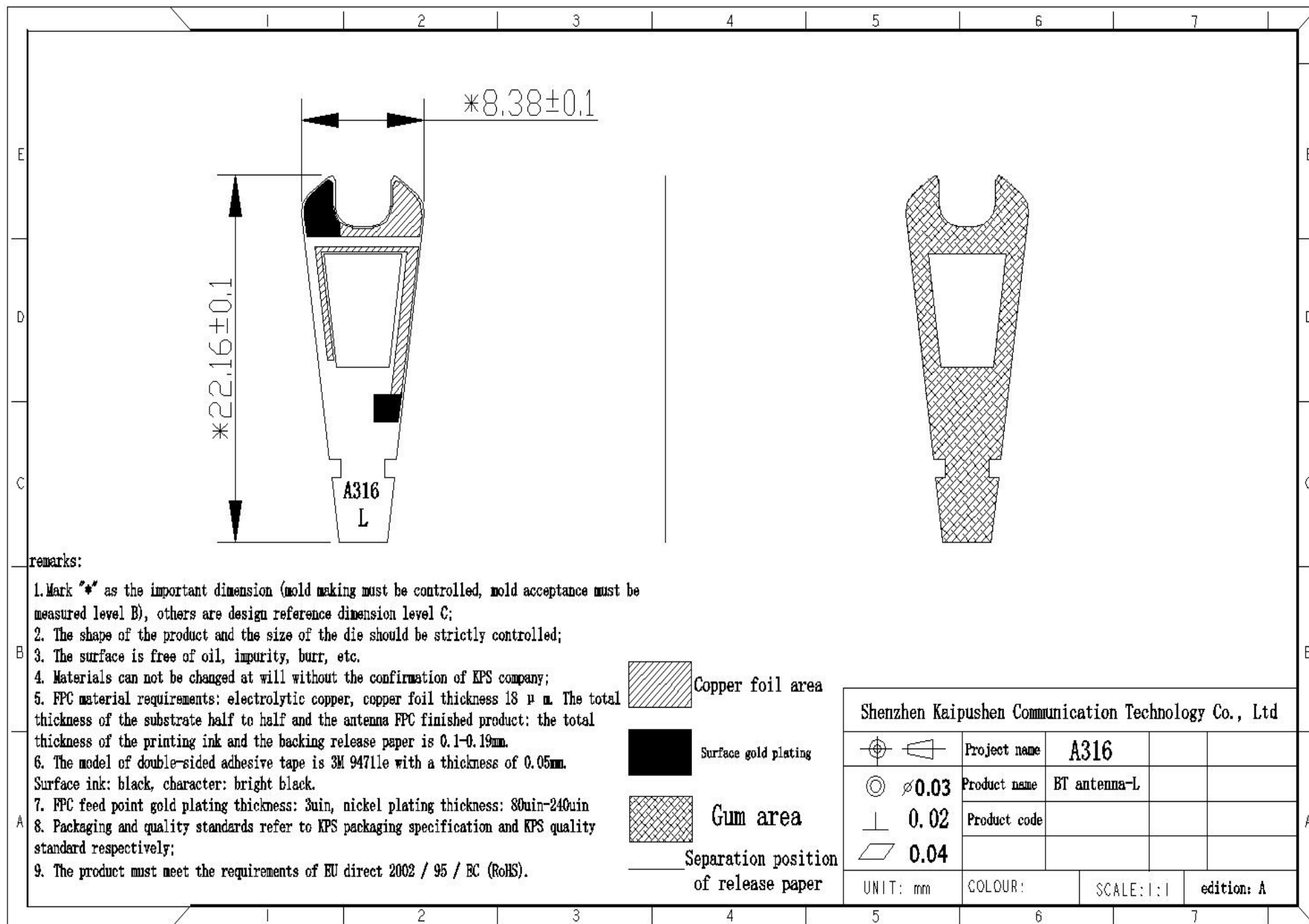
Fax: 0755-29351510

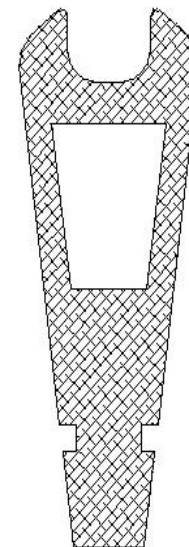
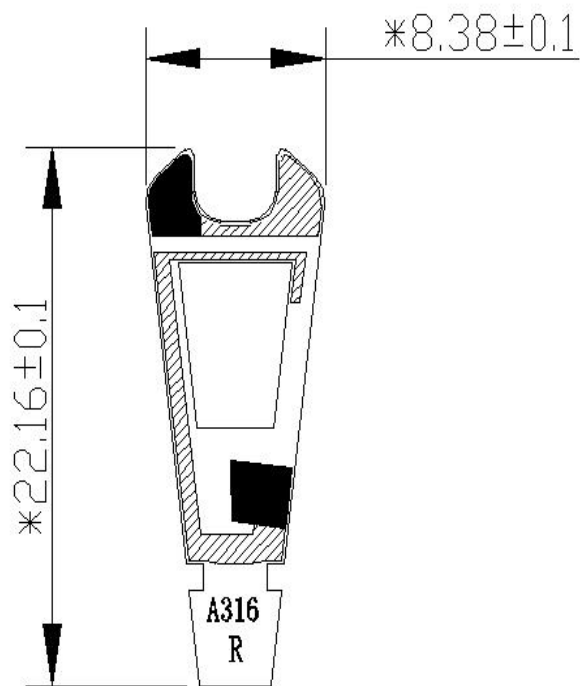
E-mail: szkpstx@szkpstx.com

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3. ICD图纸





remarks:

1. Mark "*" as the important dimension (mold making must be controlled, mold acceptance must be measured level B), others are design reference dimension level C;
2. The shape of the product and the size of the die should be strictly controlled;
3. The surface is free of oil, impurity, burr, etc.
4. Materials can not be changed at will without the confirmation of KPS company;
5. FPC material requirements: electrolytic copper, copper foil thickness 18 μ m. The total thickness of the substrate half to half and the antenna FPC finished product: the total thickness of the printing ink and the backing release paper is 0.1-0.19mm.
6. The model of double-sided adhesive tape is 3M 9471le with a thickness of 0.05mm. Surface ink: black, character: bright black.
7. FPC feed point gold plating thickness: 3 μ m, nickel plating thickness: 30 μ m-240 μ m
8. Packaging and quality standards refer to KPS packaging specification and KPS quality standard respectively;
9. The product must meet the requirements of EU direct 2002 / 95 / EC (RoHS).



Copper foil area



Surface gold plating



Gum area

Separation position
of release paper

Shenzhen Kaipushen Communication Technology Co., Ltd

 	Project name	A316		
	Product name	BT antenna-R		
	Product code			
	UNIT: mm	COLOUR:	SCALE: 1:1	edition: A

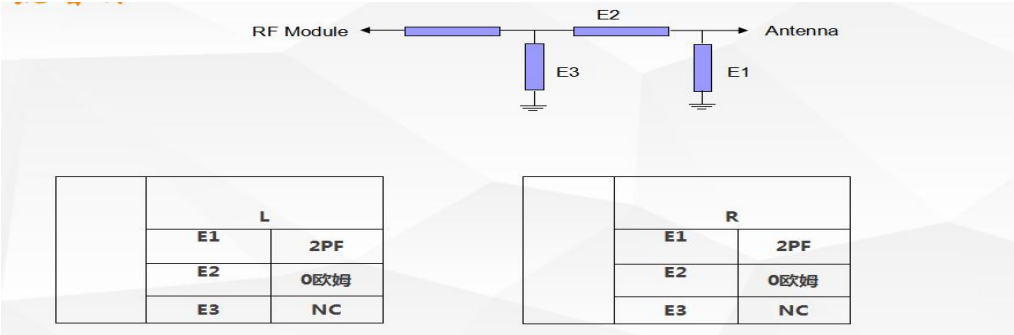
5.1 electrical properties

5.1-1 specification

BT antenna resonates at 2400m-2500m 。

5.1-2 Matching circuit of antenna 。

BT: Matching circuits of left and right main boards of headphones are as follows:



5.2 Standing wave ratio (SWR) test

5.2-1 Test settings

Connect the standing wave ratio (SWR) test device in sequence: E5071Bnetwork analyzer→50 ohm coaxial cable→150mm long copper pipe→test fixture 。

Treatment of test fixture: 从耳机PCB上天线50欧姆测试点处用一根硬质电缆引出SMA-J接头与套有扼流圈的铜管连接，再依次连接其他装置。

6.2-2 VSWR Test:

Thefollowing Standing wave ratio of the edge frequency point of the antenna operating band : g

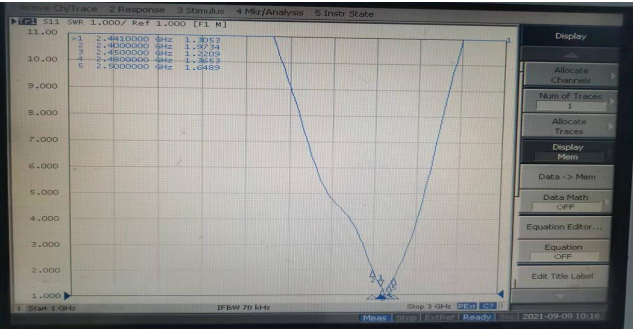
L	Fre(MHZ)	2402	2440	2480
	SRW	1.9	1.3	1.36

Thefollowing tableshows: TCS4973A GPS/WIFI/BTStanding wave ratio of the edge frequency point of the antenna operating band :

R	Fre(MHZ)	2402	2440	2480
	SRW	1.5	1.1	1.6

6.2-3 Passive test results

left



right



1.The figure above is the standing wave ratio curve

6.2-4 Active test data of the whole machine:

Main antenna test data:

BT	L			R		
CHANNEL	0	39	78	0	39	78
TRP	4.7	5.5	5	4.5	5.1	5
TIS	-88.5	-89	-89	-88.7	-89	-89

Main antenna head model test data:

BT	L			R		
CHANNEL	0	39	78	0	39	78
TRP	-2.6	-2	-2.1	-2.3	-1.8	-1.8
TIS	-81.6	-81.7	-81.4	-81.75	-82.6	-82.1

6.2-6 BTantenna passive test data:



Full dimensional measurement report

	Customer	Ruiboxin		part name		BT aerial		Qty					Material	Electrolytic copper
	Supplier	Kaipushen		Measure tools		Quadratic		Measure unit		mm			Measure date	2021/12/13
NO.	Size (DIMENSION)	Upper	+ TOL.	- TOL.	Lower	Act mea 1	Act mea 2	Act mea 3	Act mea 4	Act mea 5	Act mea 6	Act mea 7	UPPER $\leq$ 100%	LOWER $\leq$ 100%
1	22.16	22.26	0.10	0.10	22.16	22.17	22.15	22.17	22.17	22.15	22.18	22.17	20%	10%
2	8.38	8.48	0.10	0.10	8.28	8.37	8.38	8.38	8.37	8.39	8.39	8.37	10%	10%
3	22.16	22.26	0.10	0.10	22.06	22.15	22.15	22.16	22.18	22.17	22.17	22.17	20%	10%
4	8.38	8.48	0.10	0.10	8.28	8.38	8.38	8.37	8.37	8.40	8.39	8.39	20%	10%
5														
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20														

Tabulation: Jian Chen

auditing : Wu Xingtuo

Date: 2021-12-16

KPS 天线专家		深圳市凯普深通讯科技有限公司			QCschedule drawing			file number		KPS--QPA-QA004		Enactment Date				
		Shenzhen cape deep communication technology co.,						file version		A/01		Page		page 1		
technological process			Control focus			management responsibility	method		Inspection method				corrective action			
Order Numbe	Main Process	proje ct	aControl Project	Regulatory standards		person liable	Normal sampling	person in	Inspecti on	Examines the tool	Record type		Solution			
		begin														
1		Recei ving	quantity/product name/specificati	《Engineering BOM》 《Material receiving operation instruction》		Material clerk					《Electronic account 》		Contact the supplier and issue 《 returning note》			
2		Incom ing inspe ction	specifications/m odel/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 dimension al 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 .			
4		mater ial	quantity/product name/specificati	《 production instruction》 《Material receiving operation instruction》		Material clerk					《Material requisition and distribution					
22		pack	pack quantity/indicat	《Finished product packaging operation instruction 》		packager										
21		Deliv ery inspe ction	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. Machin e test 3. sample	Two dimension al 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			
25	deliv ery	product namespecification quantity	《Finished product shipping operation instruction 》		Material clerk					《Electronic account 》						
	finis															
chara cter	Revision date		Revised content				Revised; Revised	Acknowle dged by	Fiction			auditi ng			approval	
①																
②																
③										date			date			date

Shenzhen cape deep 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 Exposed 、 dehiscence 、 chromatic aberration 、 Yijiao,Gold finger is free of oxidation and brittle crack.	FPC is damaged、 Copper Exposed 、 dehiscence 、 chromatism、 rubber overflowing ,Oxidation of golden finger 、 Brittle crack.	MAJ
	structure	measurement	vernier	Board size (dimensions) Same as template	The size is different from the	MAJ
		Material	sample plate	Same as template.	Material is different from	MAJ
	performance	Electroplate	electroplating	Golden finger degree golden brightness.	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				
Ruiboxin		BT aerial		A316		Shenzhen Kaipushen Communication Technology Co., Ltd		/				
Product composition information												
Order Number	part name	Specification	component supplier	Third party test report		Content of restricted substances PPM						remarks
				date for	number	(Pb)	(Cd)	(Hg)	(Cr ⁶⁺)	(PBB)	(PBDE)	
1	adhesive	3M9471LSE	3M	2021/1/13	SHAEC2100467601	O	O	O	O	O	O	
2	base material	A pair of half electrolytic	Kwai lungeti	2021. 3. 3	SHAEC2103249004	O	O	O	O	O	O	
3	cElectroplate	FPCElectronicelling	Rongfeng	2021. 4. 25	A2210137408101E	O	O	O	O	O	O	
4	Solder mask black oil	PSM-800	Youli	2021. 9. 6	ETR21805816	O	O	O	O	O	O	
5	Text white oil	KTM-150FWM	Kaiyao	2021. 5. 18	ETR21502304	O	O	O	O	O	O	

written by: Wuxintuo

Filled by: Department: Quality

Salt spray test report

Date: 2021 年 12月 16日

Item	A316-BT aerial	Customer	Ruiboxin
Supplier	Shenzhen Kaipushen Communication Technology Co., Ltd	National Test standard	GB/T 2423.2-2008
Sample situation	Sample qty: 5PCS Base material: Half to one-third electrolytic copper with glue Coating: Gold plated $\geq 3U''$		
Test time	2021年12月13日 9时 00 分至 2021 年12月15日 9时 00 分 共计 48 H		
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/cm ²
	Salt spray sedimentation rate: 1-2ml/80cm ² /h		Fog fluid collection: 1.4ml/80cm ² /h
	Test cycle: __1__cycle		Spray time: 48 h
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: : Wu Xingtuo 2021.12.16			

High-low temperature test record

Product name	A316	Customer name	Ruiboxin
Test qtu	6 pcs	Test date	2021年12月13日
Cycle number	1	Time	48H

TestCondition:

High temp: + 65 degree Humidity: 90 % RH

Low temp: - / 度 degree

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

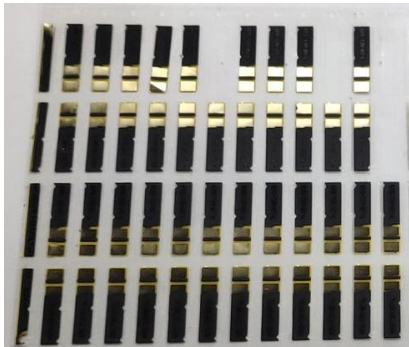
Test results: ✓ Pass ☐ Fail

Operator by/date: Jian Chen

Approved by: Wu Xingtuo

Packing

Customer:	Ruiboxin	Material name:	A316-BT aerial
packing qty:	one carton	Packing material:	Carton
Qty/carton:		Packing way :	Ziplock bag



Picture 1:Single package



Picture 2: Packing way



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



Picture 4:packing label

Fiction : Wu Xingtuo

auditing: LiMinghui