

KS588 project antenna specification

Customer name: Dongguan Zhifeng Electronics Co., LTD

Customer product name: KS588

Product name: Antenna


Product specification: LFPC antenna / RFPC antenna

Material code: BT-L-FPC; BT-R-FPC

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	R:a	R:a	2024-06-04	Li Jieyi	13	

The Supplier acknowledges the signature of the following part:

Responsible person / date		IQC / Date-	Review / Date	Approval / Date
MD	Feng Jiwu	Su Guanfeng	Have detailed	
RF	Chen Kehong			

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

The demander the result: <input type="checkbox"/> qualified <input type="checkbox"/> 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, provided **KS588** Antenna technical requirements and material requirements specifications.

This requirement applies to **KS588** Antenna type selection, test, and acceptance.

1.2 Project basic information

Antenna name:	KS588
Antenna frequency:	BT: 2402-2484MHz
Antenna material:	FPC

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2 Active Reporting

2.2.1 Test instructions

Test tools: Agilent8960 instrument, R & S CMW500, 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.

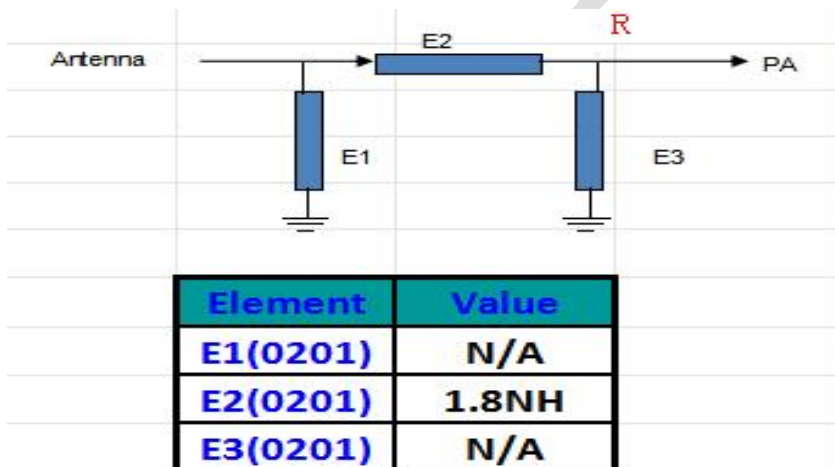
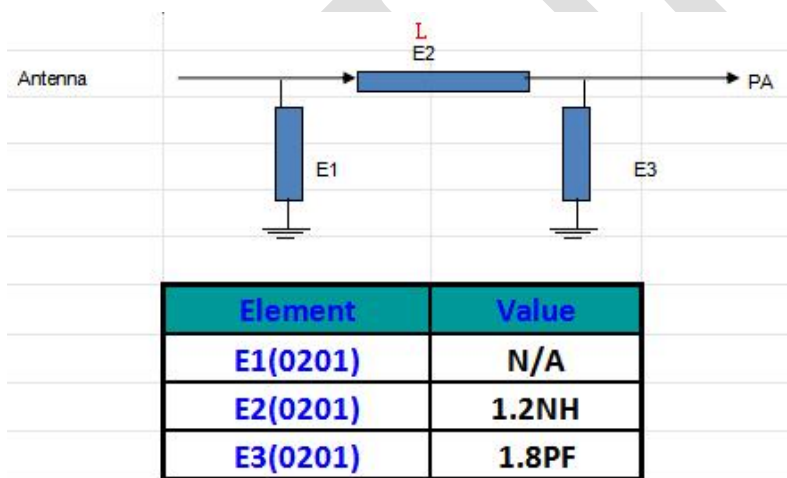
The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.2 Creative Guide data

	Channel	power	sensitivity
L	0	9.1	-93.0
	39	9.2	-93.0
	78	9.1	-93.0

	Channel	power	sensitivity
R	0	8.9	-93.0
	39	9.0	-93.0
	78	9.0	-93.0

2.2.3 The matching circuit is shown below



2.2.4 The antenna ota

L	Channel	TRP (dBm)	TIS (dBm)	free space
	0	1.25	-85.85	
	39	1.68	-86.02	
	78	1.85	-86.32	

	Channel	TRP (dBm)	TIS (dBm)	Head model data
L	0	-2.35	-82.01	
	39	-2.14	-82.35	
	78	-1.69	-82.45	

R	Channel	TRP (dBm)	TIS (dBm)	free space
	0	1.35	-86.21	
	39	2.02	-86.68	
	78	2.24	-87.14	

R	Channel	TRP (dBm)	TIS (dBm)	free space
	0	-2.05	-82.4	
	39	-1.68	-82.5	
	78	-1.49	-82.65	

2.2.5 Efficiency of the antenna

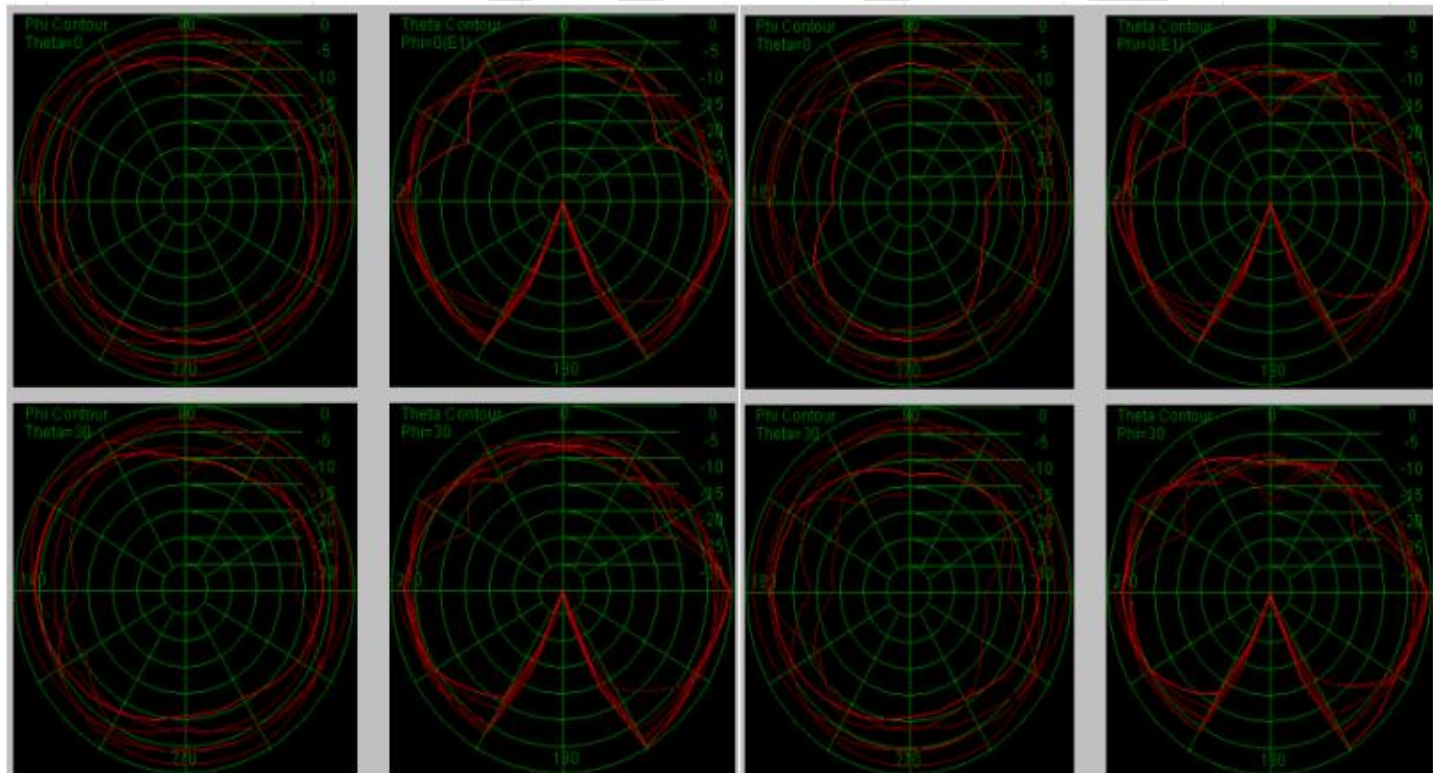
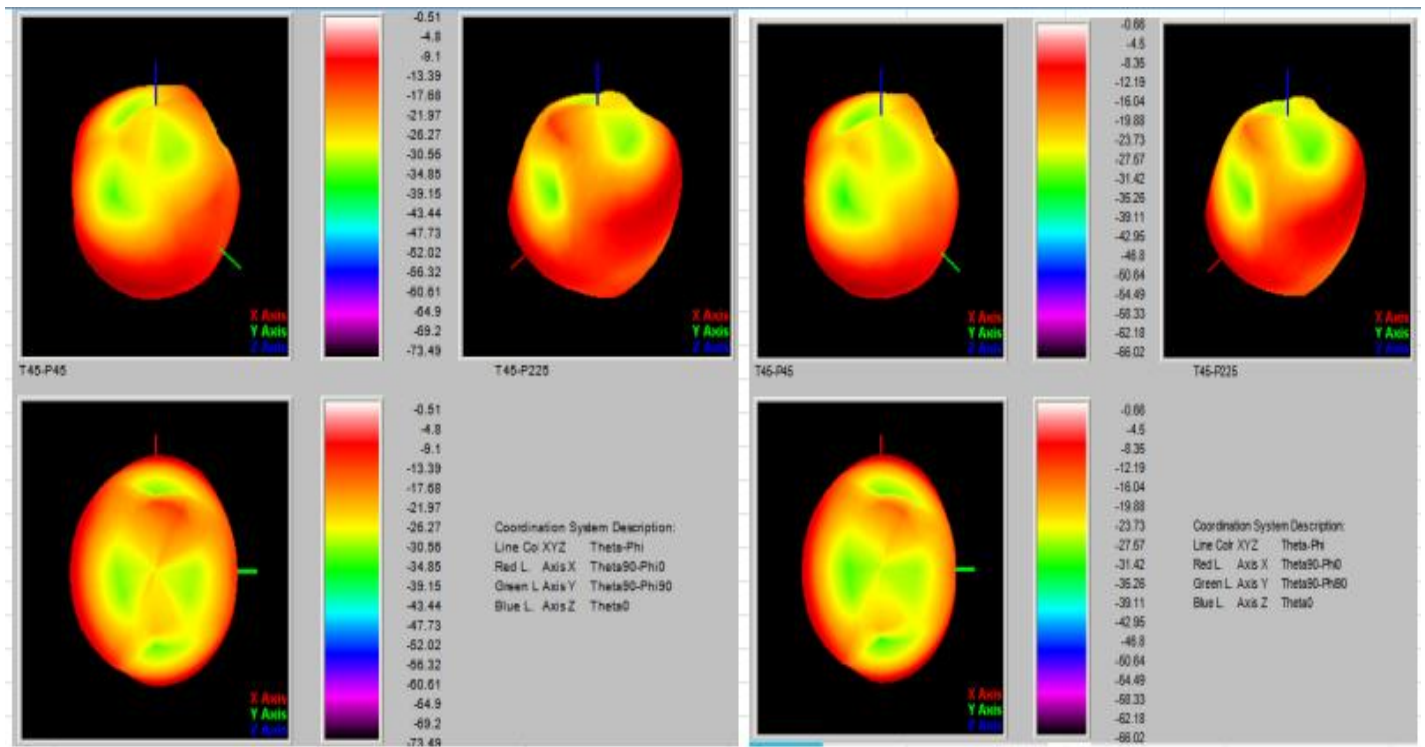
Freq (MHz)	Effi (%)	Gain (dBi)
2410	17	-1
2420	18	-0.6
2430	20	-0.5
2440	23	0.1
2450	26	0.2
2460	28	-0.3
2470	26	-0.4
2480	22	-0.5
2490	19	-0.3
2500	16	-0.4

L

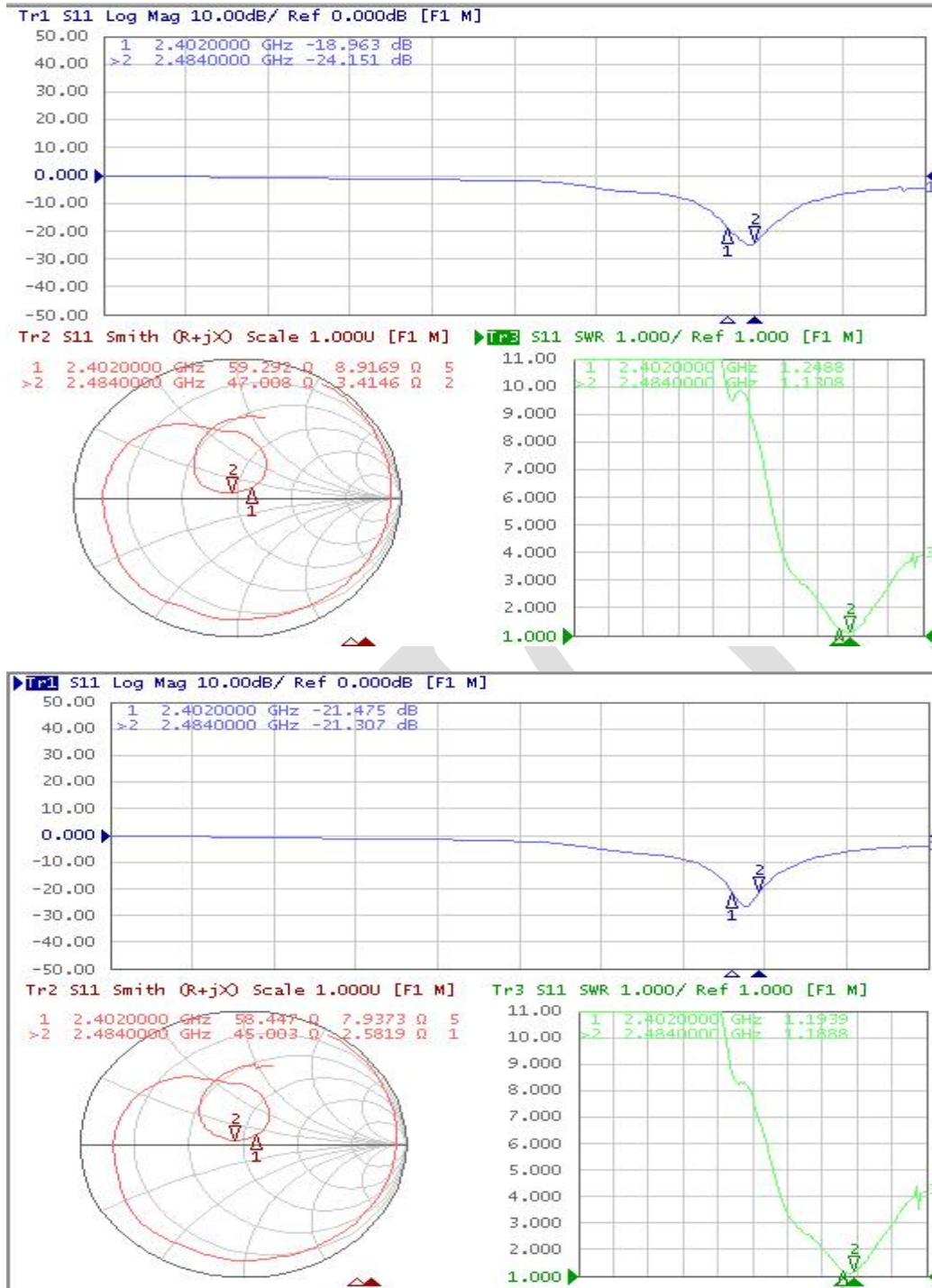
Freq (MHz)	Effi (%)	Gain (dBi)
2410	17	-1
2420	16	-0.9
2430	18	-0.8
2440	22	-0.7
2450	24	-0.6
2460	27	-0.6
2470	26	-0.5
2480	22	-0.4
2490	19	-0.5
2500	17	-0.4

R

2.2.6 Direction diagram



2.2.7 The passive parameters

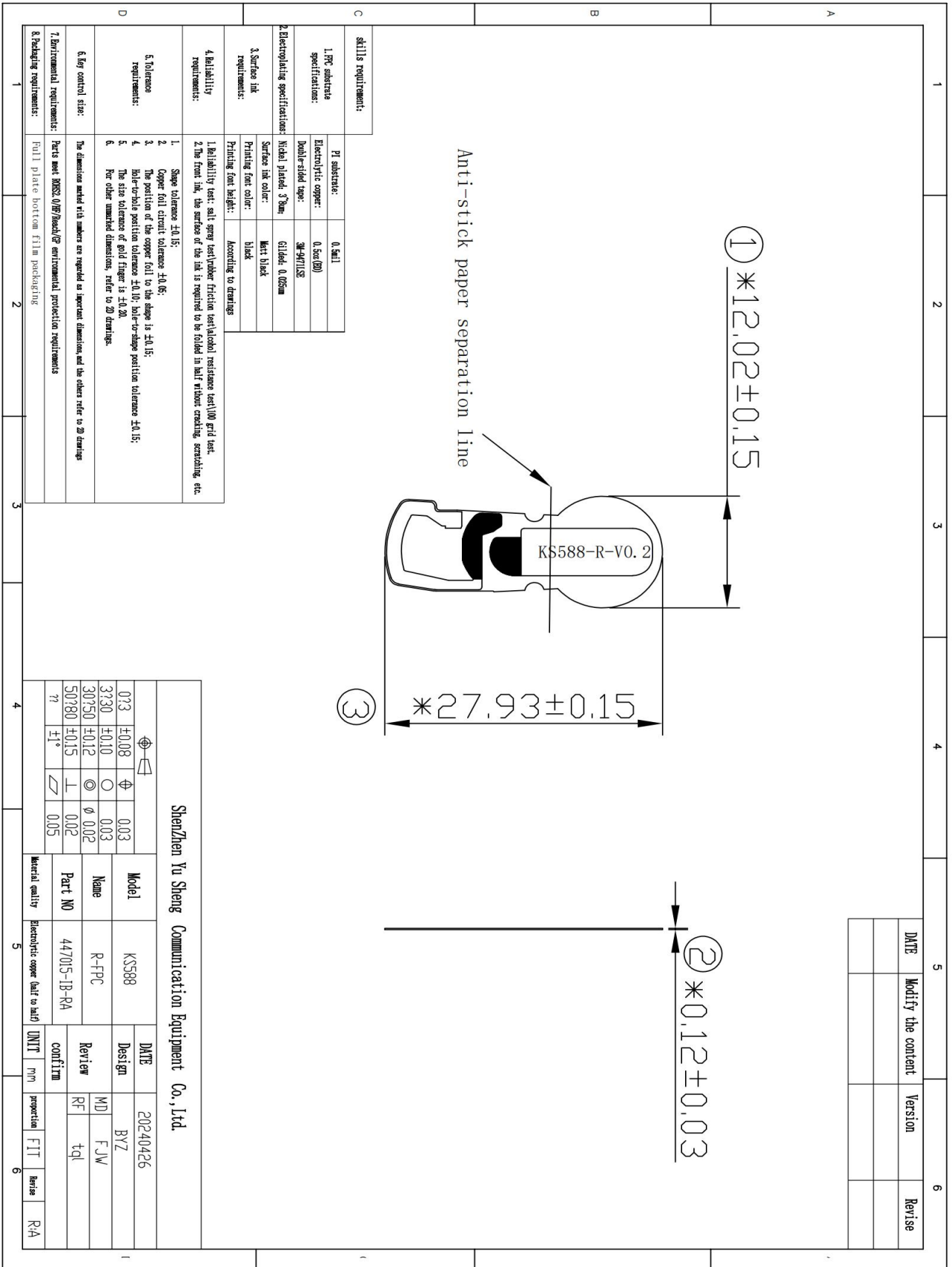


2.2.8 Pull distance test

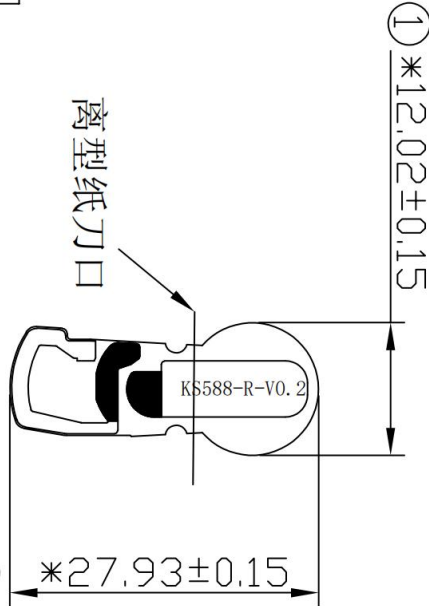
model machine	test controler	BMI	time	testing facility	Test location	distance
ks588	Chen Kehong	29	14:00-17:00	Apple 6	Company balcony	13M

3. Structural drawings

L edge



R edge

A		1	2	3	4	5	6	7	8																																																
B																																																									
C																																																									
D																																																									
技术要求:																																																									
1. PCB基材规格:																																																									
2. 电镀规格:																																																									
3. 表面油墨要求:																																																									
4. 可靠性要求:																																																									
5. 公差要求:																																																									
6. 重点管控尺寸:																																																									
7. 环保要求:																																																									
8. 包装要求:																																																									
日期		1	2	3	4	5	6	7	8																																																
修改内容																																																									
版本																																																									
修订																																																									
位置		<p>深圳市昱晟通讯设备有限公司</p> <p>Shenzhen Yu Sheng Communication Equipment Co., Ltd.</p> <table border="1"> <tr> <td>机种</td> <td>K5588</td> <td>日期</td> <td>20240426</td> </tr> <tr> <td>品名</td> <td>BT-R</td> <td>设计</td> <td>BYZ</td> </tr> <tr> <td>料号</td> <td>447015-1B-RA</td> <td>审核</td> <td>BYZ</td> </tr> <tr> <td>材质</td> <td>电解铜(半对半)</td> <td>结构</td> <td>射频</td> </tr> <tr> <td>表面处理</td> <td></td> <td>射频</td> <td>CKH</td> </tr> <tr> <td>外观处理</td> <td></td> <td>确认</td> <td></td> </tr> </table>								机种	K5588	日期	20240426	品名	BT-R	设计	BYZ	料号	447015-1B-RA	审核	BYZ	材质	电解铜(半对半)	结构	射频	表面处理		射频	CKH	外观处理		确认																									
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4. List of materials

447015 (KS588) BOM

edition: R:A

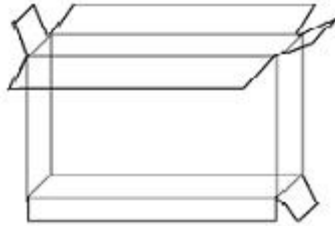
client: 447

Type of aircraft: 447015

Set a date: 2024/05/04

Item	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	447015-IA-RA	BT-L Antenna		KS588	BLACK BT-L-FPC Electrolytic copper 12.02*27.93*0.12mm	black	PCS	1	
1.1	447015-IA-01-RA	BT-L Antenna		KS588	BLACK BT-L-FPC Electrolytic copper 12.02*27.93*0.12mm	black	PCS	1	
2	447015-IB-RA	BT-R Antenna		KS588	BLACK BT-R-FPC Electrolytic copper 12.02*27.93*0.12mm	black	PCS	1	
2.1	447015-IB-01-RA	BT-R Antenna		KS588	BLACK BT-R-FPC Electrolytic copper 12.02*27.93*0.12mm	black	PCS	1	
verify:			examine:			manufacture: BYZ			

5. Package schematic diagram

Packaging method diagram	
product name	antenna
P / N	447015
Project model	KS588
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume
	
	Boating method Packaging by order quantity
	Total number of binning Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag 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	

6. Manufacturers

Manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD

Address: 407-411, Building 2, South Taiyun Chuanggu Park, intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen City

THOT