

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 good	
RF	Chen Kehong			

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

The demander the result: ☐ qualified ☐ 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.

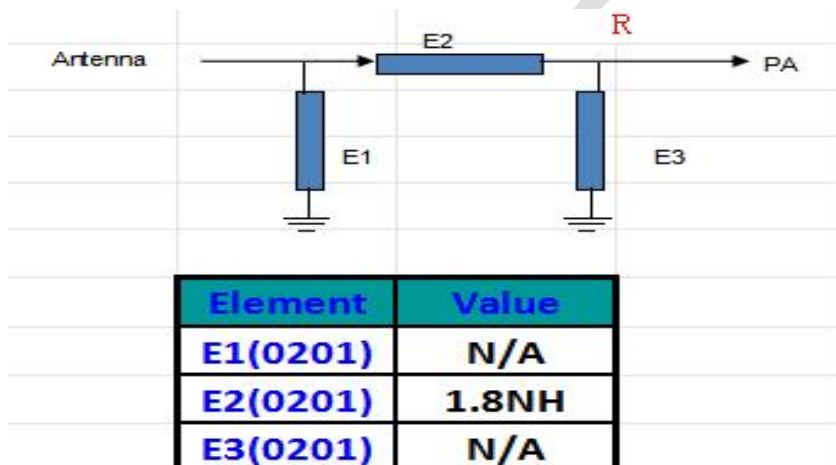
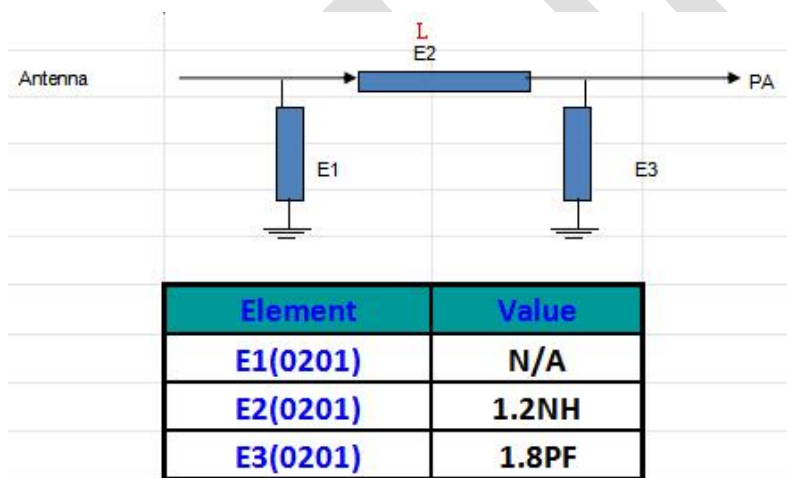
The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

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

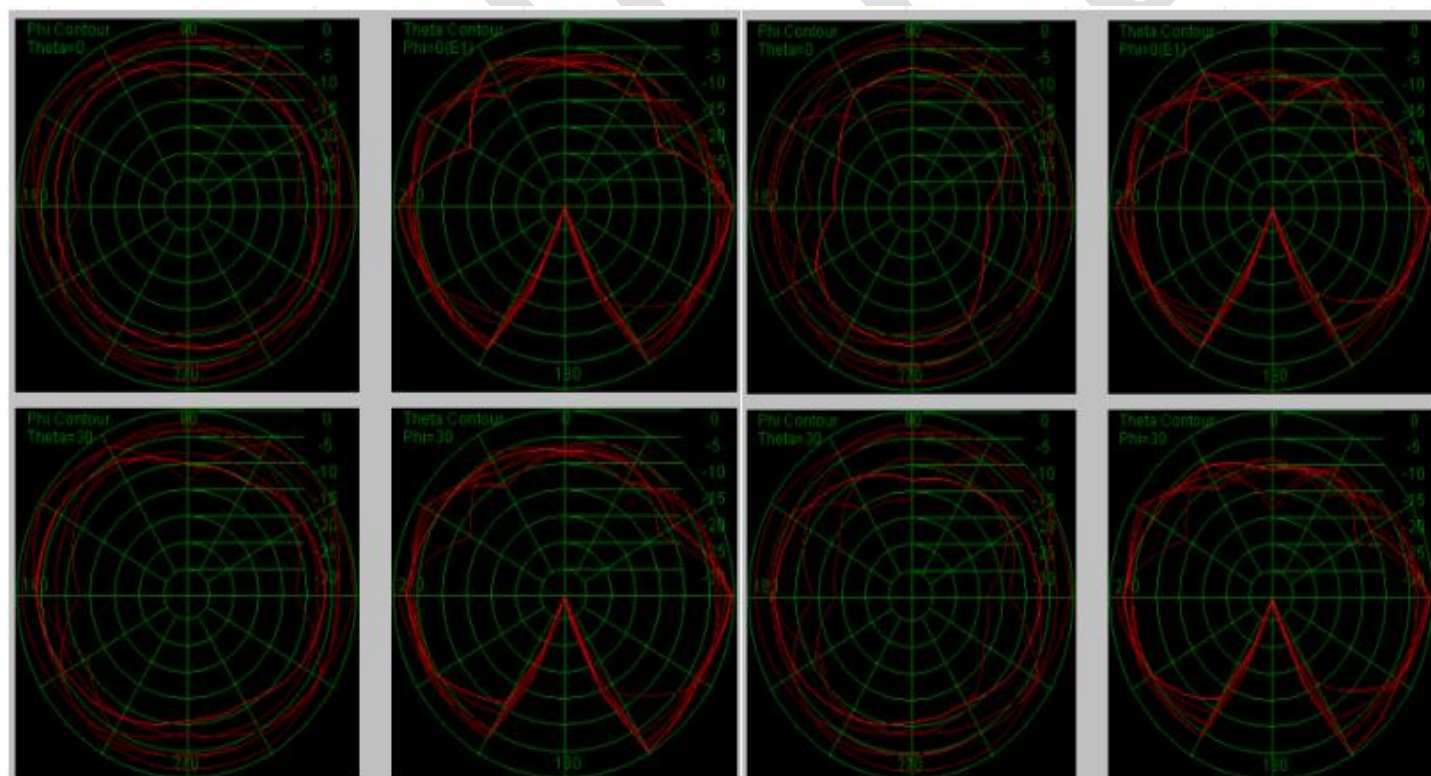
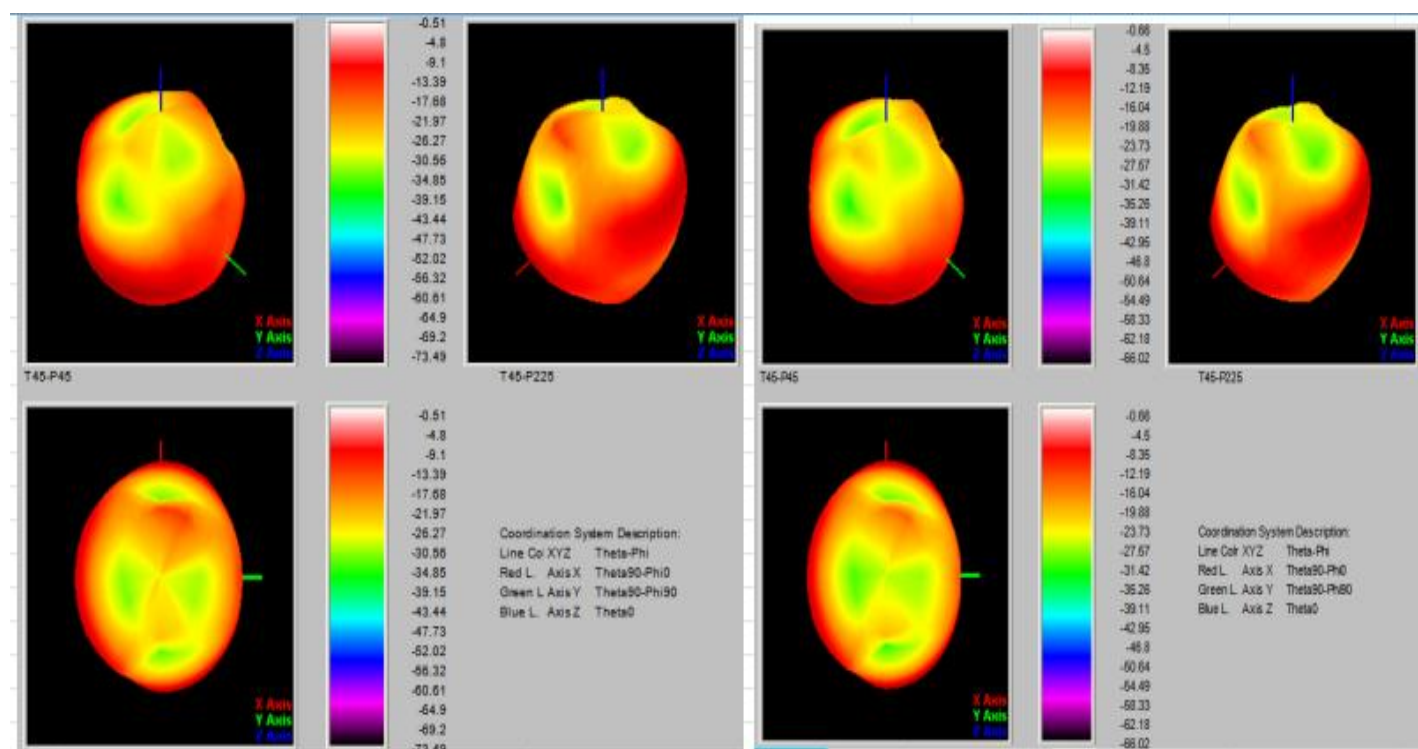
Freq (MHz)	Effi (%)	Gain (dBi)
2410	17	-1
2420	18	-0.6
2430	20	-0.5
2440	23	0.1
2450	26	0.2
2460	28	-0.3
2470	26	-0.4
2480	22	-0.5
2490	19	-0.3
2500	16	-0.4

L

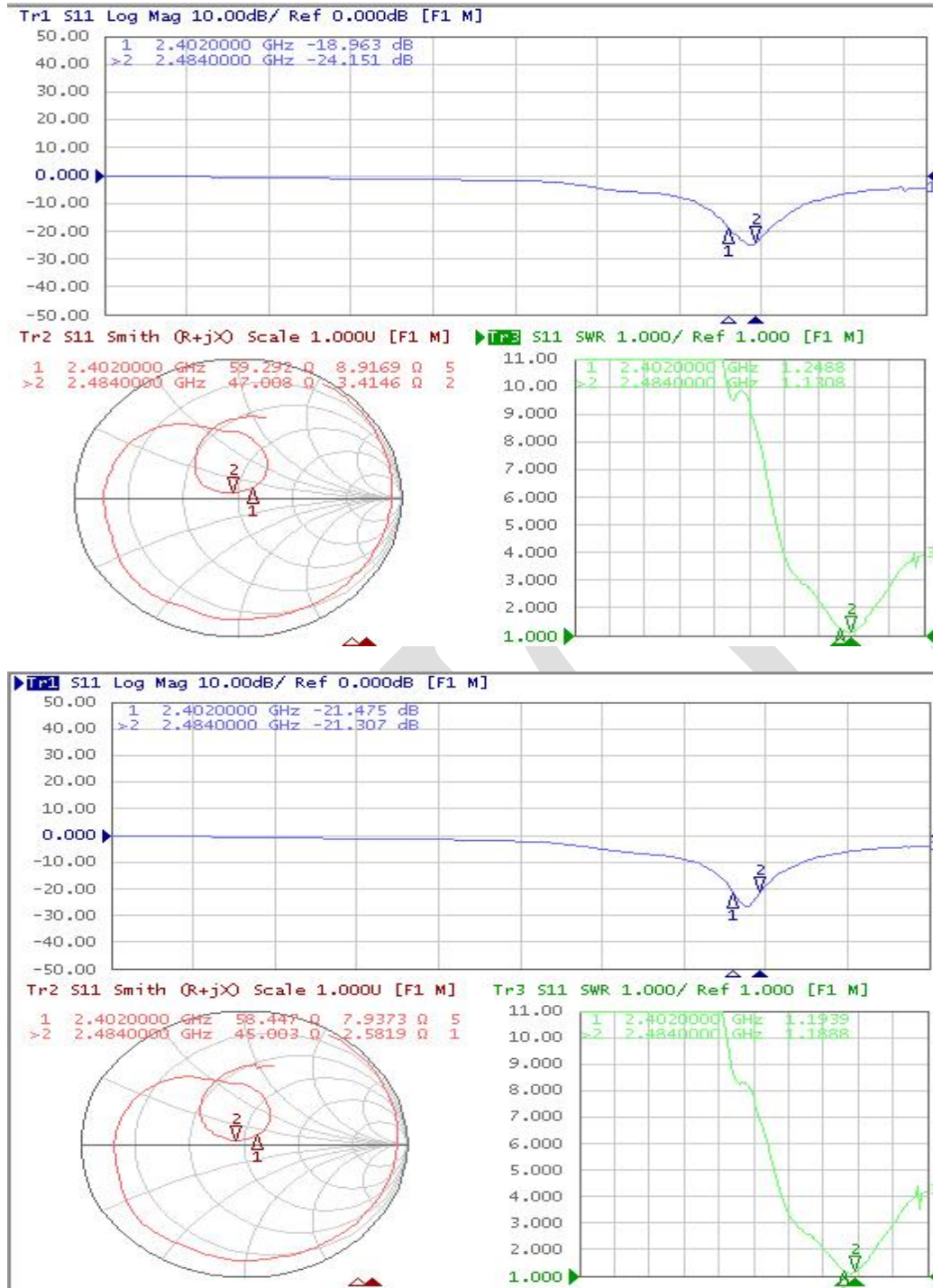
Freq (MHz)	Effi (%)	Gain (dBi)
2410	17	-1
2420	16	-0.9
2430	18	-0.8
2440	22	-0.7
2450	24	-0.6
2460	27	-0.6
2470	26	-0.5
2480	22	-0.4
2490	19	-0.5
2500	17	-0.4

R

2.2.6 Direction diagram



2.2.7 The passive parameters

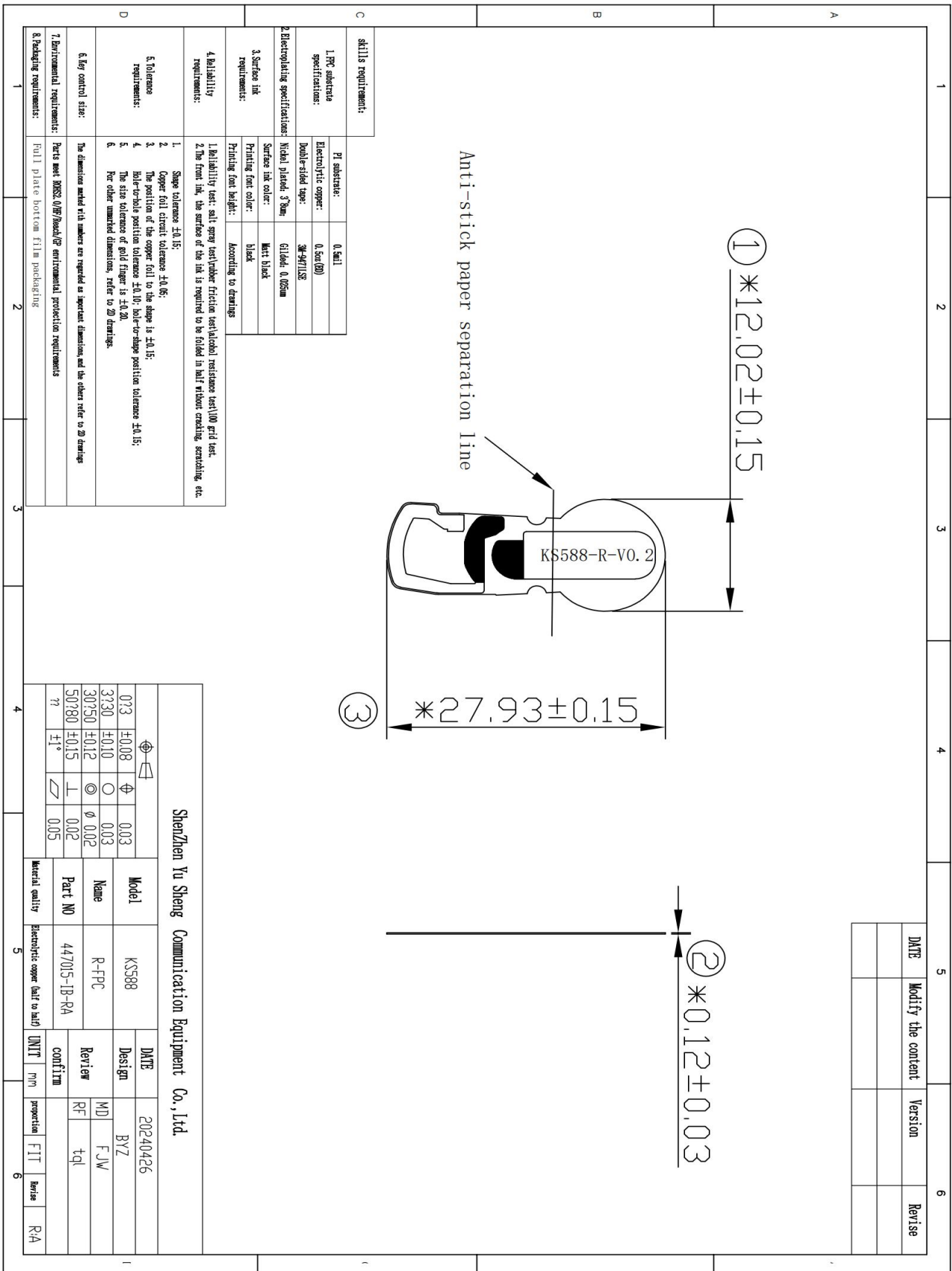


2.2.8 Pull distance test

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

	1	2	3	4	5	6	7	8
A								
B								
C								
D								

技术要求:	Pt基材: 电解铜 半对半 0.5oz (BD) 双面胶: 3M-9471LSF	电镀规格: 镀镍: 3~8um 镀金 0.025UM	表面油墨颜色: 亚光黑色 印刷字体颜色: 亮黑	印刷字体高度: 按照纸要求	其它要求
1. PFC基材规格:					
2. 电镀规格:					
3. 表面油墨要求:					
4. 可靠性要求:	1. 可靠性测试: 盐雾腐蚀试验(中性盐雾)按GB/T 2424.2-2008执行; 2. 正面油漆: 油漆表面要求对折不开裂、不可划伤等。				
5. 公差要求:	1. 外形公差±0.15; 2. 铜箔线路公差±0.05; 3. 铜箔到外形的公差±0.15; 4. 孔到孔位置公差±0.15; 孔到外形位置公差±0.15; 5. 金手指尺寸公差±0.30; 6. 其它未标注尺寸参照2D图纸。				
6. 重点管控尺寸:	标红数字的尺寸为重要尺寸, 其它参照2D图纸				
7. 环保要求:	零部件符合RoHS2.0/HF/Reach/Cp环保要求				
8. 包装要求:	半切工艺				

日期	修改内容	版本	修订
1	2	3	4

1	2	3	4	5	6	7	8
① *12.02±0.15 离型纸刀口 K5588-R-V0.2 ③ *27.93±0.15 ② *0.12±0.03							

深 圳 市 昱 晟 通 讯 设 备 有 限 公 司											
Shenzhen Yu Sheng Communication Equipment Co., Ltd.											
0~10		±0.10	○	0.02	机种	K5588	日期	20240426			
10~20		±0.12	◎	0.03	品名	BT-R	设计	BYZ			
20~40		±0.15	⊥	0.02	料号	447015-1B-RA	审核	结构 BYZ			
40~50		±0.20	∇	0.04	材质	电解铜(半对半)	射核	CKH			
			∇	0.02	模面处理		确认				
位置					外观处理		单位	mm	比例	FIT	版本 R:A
5					6		7				8

4. List of materials

447015 (KS588) BOM

edition: R:A

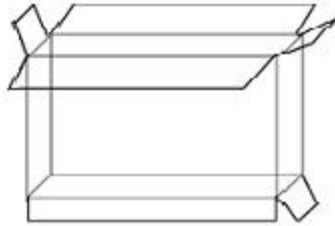
client: 447

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