

KS 557 project antenna specification

Customer name: Dongguan Zhifeng Electronics Co., LTD

Customer product name: KS 557

Product name: Antenna assembly

Product specification: bracket + FPC antenna + fitting

material code: _____

Antenna L semi-finished product (grey)	KJ562ETPA13-A2
Antenna R product (grey)	KJ562ETPA14-A2
Antenna L semi-finished product (pink)	KJ562ETPA15-A2
Antenna R finished (pink)	KJ562ETPA16-A2
Antenna L (green)	KJ562ETPA17-A2
Antenna R products (green)	KJ562ETPA18-A2
Antenna L semi-finished product (black)	KJ562ETPA11-A2
Antenna R semi-finished product (black)	KJ562ETPA12-A2

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	R:a	R:a	2023-07-28	Yuan Shujun	12	

The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC / Date-	Review / Date	Approval / Date
MD	Feng Jiwu	Zhong Qihong	Chen Kehong	
RF	He poetry Yin			

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

The demander's judgment 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 **KS557** Antenna technical requirements and material requirements specifications.

This requirement applies to **KS557** Antenna type selection, test, and acceptance.

1.2 Project basic information

Antenna name:	KS557
Antenna frequency:	BT: 2402MHz-2480MHz
Antenna material:	FPC
Antenna version:	V3

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

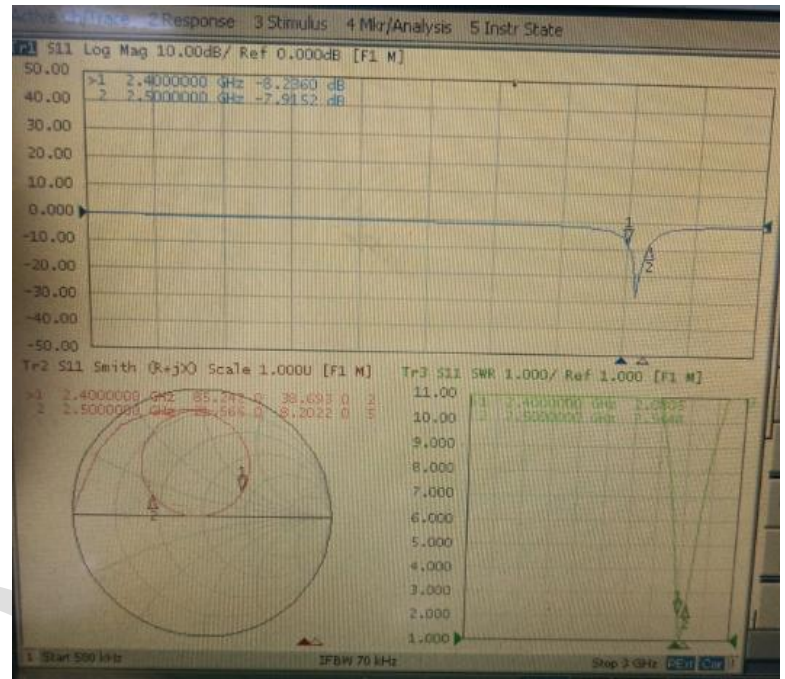
Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test method: DUT is fixed in the center of the turntable 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.

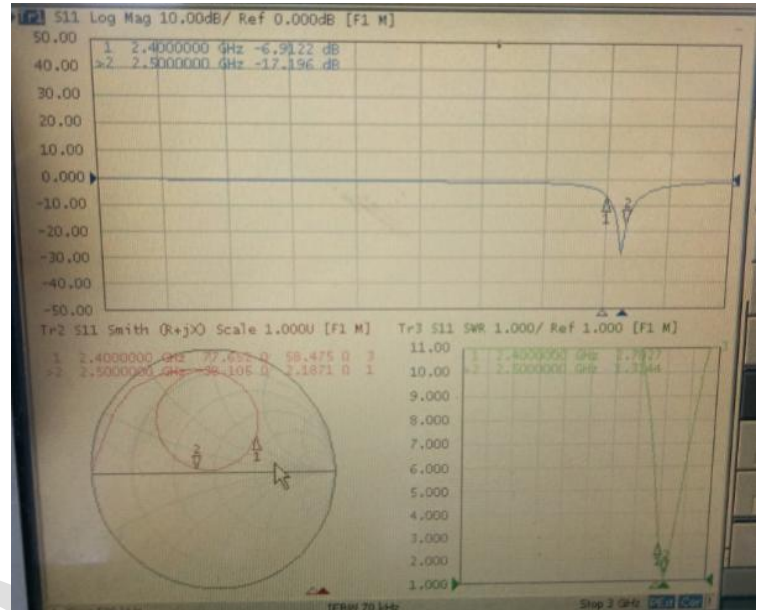
2.2.2 passive data of left ear antenna

Freq	Effi (%)	Gain (dBi)
2400.0	24.3%	-1.51
2410.0	25.6%	-1.49
2420.0	26.3%	-1.38
2430.0	27.4%	0.66
2440.0	28.6%	0.34
2450.0	27.8%	0.11
2460.0	27.7%	0.27
2470.0	26.6%	0.38
2480.0	25.5%	-0.19
2490.0	24.4%	-1.65
2500.0	23.3%	-1.53

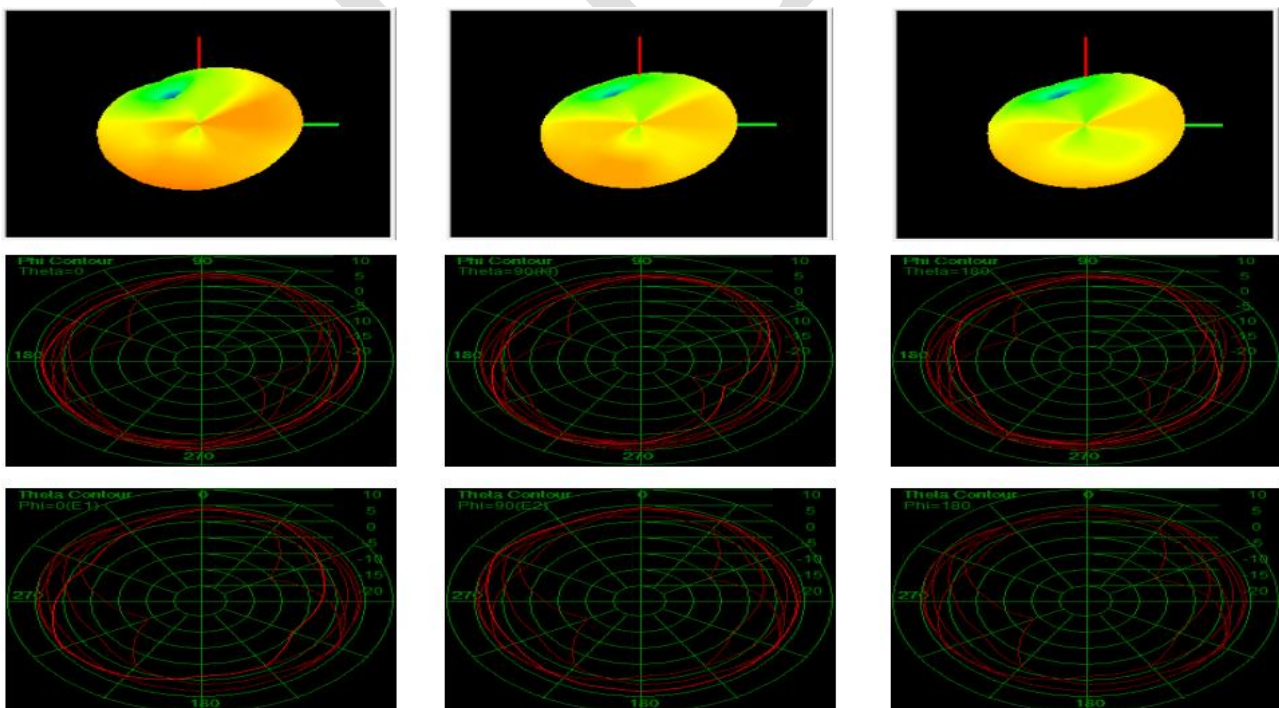


2.2.3 Active and passive data of the right ear antenna

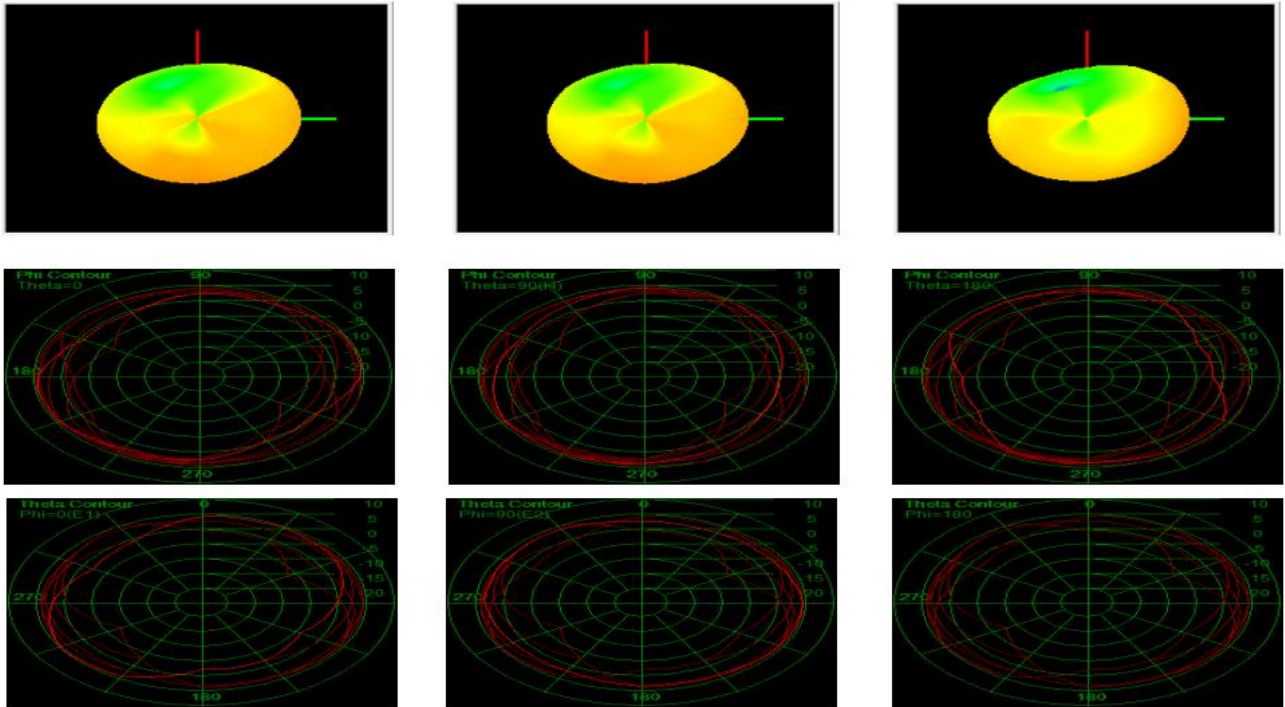
Freq	Effi (%)	Gain (dBi)
2400.0	24.4%	-1.57
2410.0	25.6%	-1.44
2420.0	26.8%	0.19
2430.0	27.9%	0.62
2440.0	28.6%	1.20
2450.0	27.7%	0.64
2460.0	26.2%	0.13
2470.0	25.8%	-1.25
2480.0	24.4%	-1.36
2490.0	23.6%	-1.79
2500.0	22.5%	-1.88



2.2.4 Left ear celestial source parameters-plane/direction



2.2.5 Right ear celestial source parameters-plane/direction

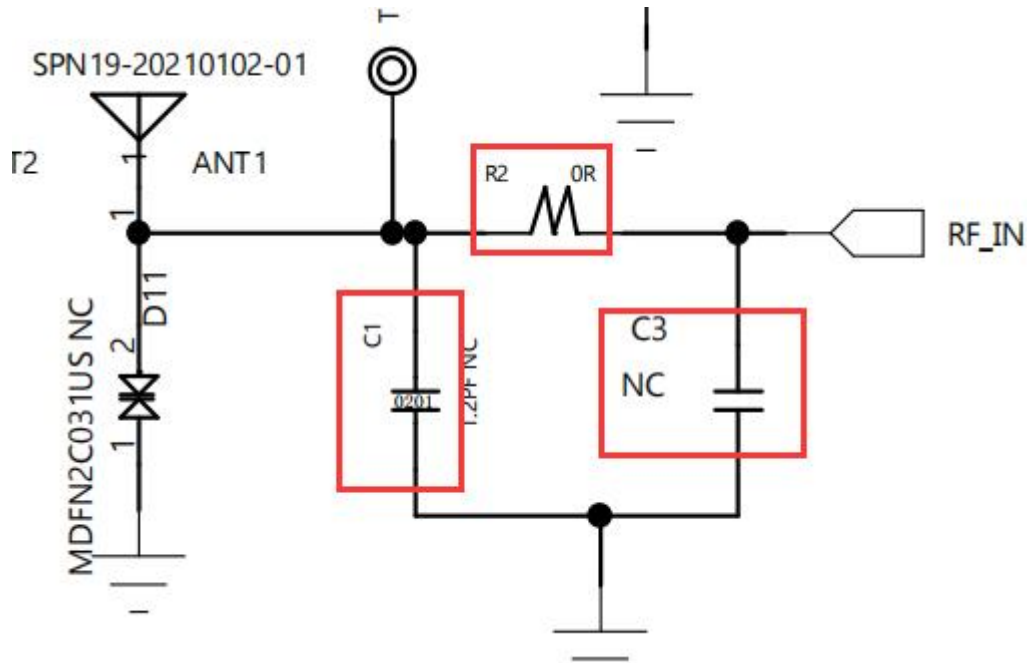


2.2.6 Antenna OTA

Channel No.	Free space test data/L	
	TRP (dBm)	TIS (dBm)
0	3.58	-88.67
39	4.19	-88.77
78	4.36	-89.47

Channel No.	Free space test data/R	
	TRP (dBm)	TIS (dBm)
0	4.65	-88.37
39	4.36	-88.60
78	3.65	-88.77

2.2.7 Matching circuit



C1:NC

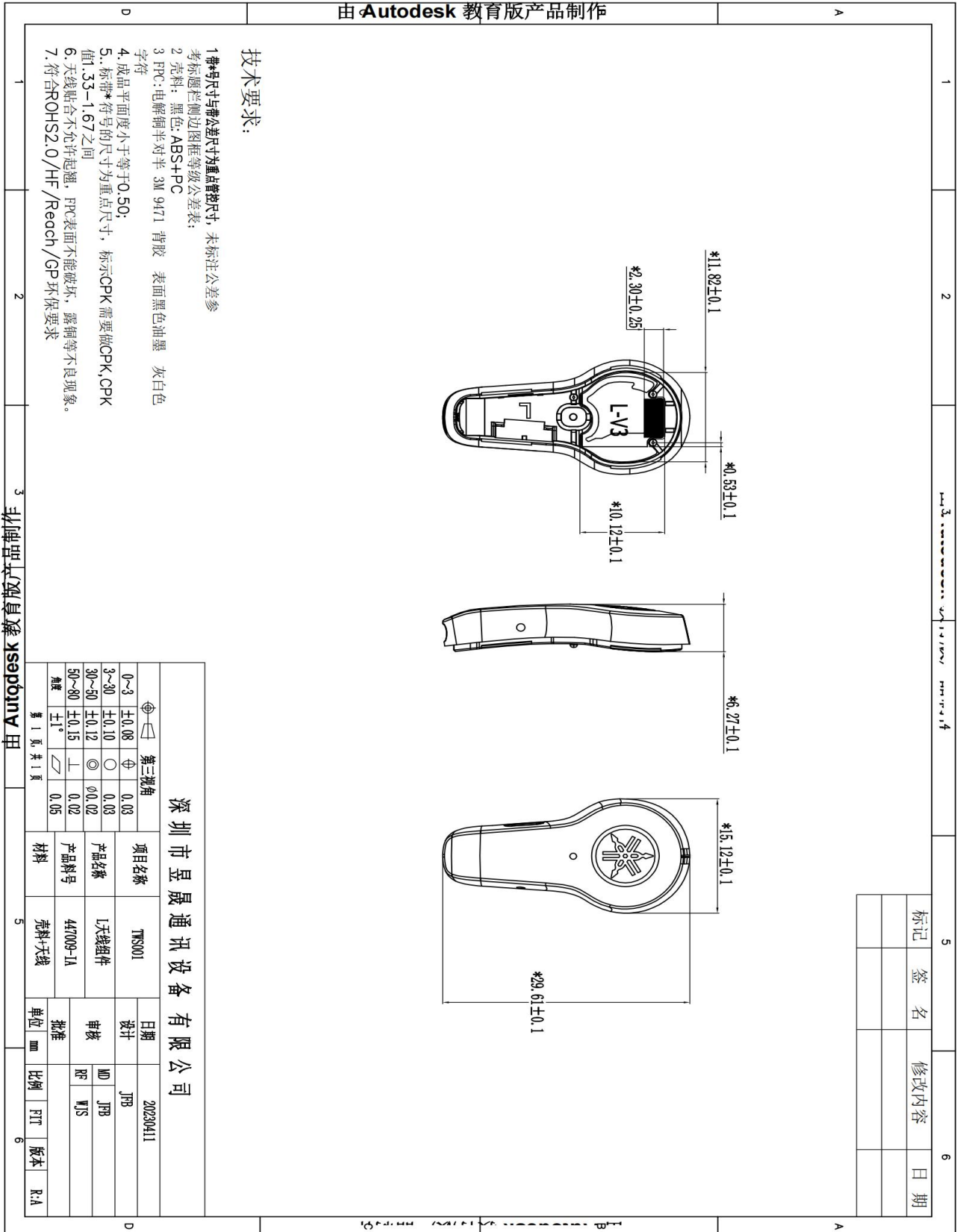
R2:0 Ohm

C3:NC

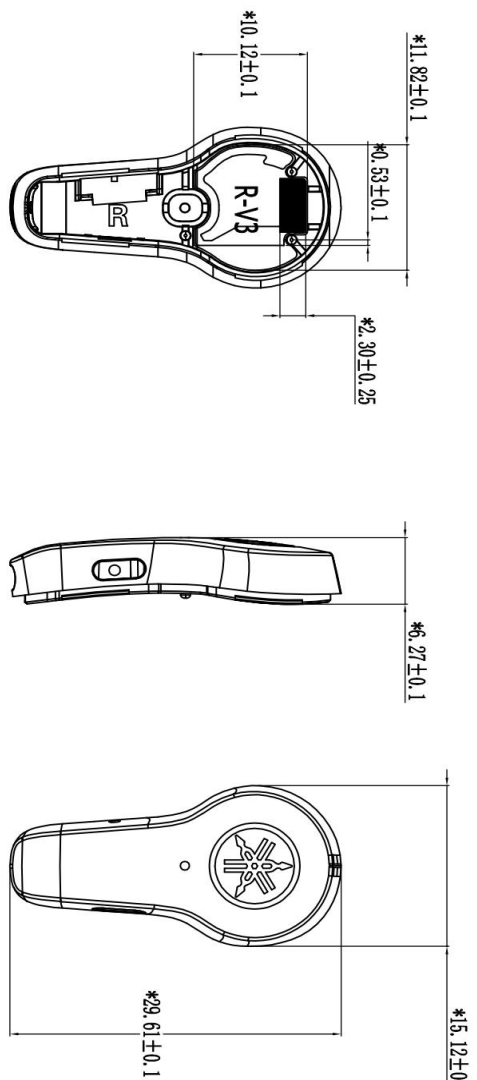
The left and right ears match the same

3.structural drawings

L antenna



R antenna

1		2		3		4		5		6																																																																									
技术要求: 1. 带*号尺寸为重点控制尺寸, 未标注公差参考标题栏侧边图框等级公差表; 2. 壳料: 黑色: ABS+PC 3. FPC: 电镀铜半对半 3M 9471 背胶 表面黑色油墨 灰白色字符 4. 成品平面度小于等于0.50; 5. 标带*符号的尺寸为重点尺寸, 标示CPK 需要做CPK, CPK值1.33-1.67之间 6. 天线贴合不允许起翘, FPC表面不能破坏, 露铜等不良现象。 7. 符合ROHS2.0/HF/Reach/GP 环保要求								<table border="1"> <tr> <th>标记</th> <th>签名</th> <th>修改内容</th> <th>日期</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				标记	签名	修改内容	日期																																																																				
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深圳市昱晟通讯设备有限公司 <table border="1"> <tr> <th colspan="2">第三视角</th> <th colspan="2">项目名称</th> <th colspan="2">日期</th> <th colspan="2">设计</th> <th colspan="2">审核</th> <th colspan="2">批准</th> </tr> <tr> <td>0~3</td> <td>±0.08</td> <td>0.03</td> <td>TMS001</td> <td>20230411</td> <td>JTB</td> <td>MD</td> <td>JTB</td> <td>RF</td> <td>WJS</td> <td> </td> <td> </td> </tr> <tr> <td>3~30</td> <td>±0.10</td> <td>0.03</td> <td>产品名称</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>30~50</td> <td>±0.12</td> <td>0.02</td> <td>R天线组件</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>50~80</td> <td>±0.15</td> <td>0.02</td> <td>产品料号</td> <td>447009-1B</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>角度</td> <td>±1°</td> <td>0.05</td> <td>材料</td> <td>壳料+天线</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> 第 1 页, 共 1 页												第三视角		项目名称		日期		设计		审核		批准		0~3	±0.08	0.03	TMS001	20230411	JTB	MD	JTB	RF	WJS			3~30	±0.10	0.03	产品名称									30~50	±0.12	0.02	R天线组件									50~80	±0.15	0.02	产品料号	447009-1B								角度	±1°	0.05	材料	壳料+天线							
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4.Bill Of Material

447009 (TWS001) -BOM table

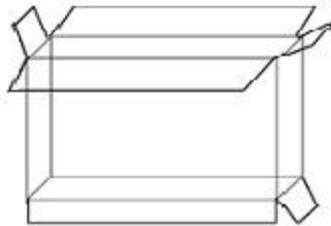
Version: T: A Customer: 447 Type: 447009 Date: 20230411

Item times	P / N	name of a part	type	edition	specifications	material quality	surface preparation	pigment	unit	quantity	technology
1	447009-IA	BT-L-assembly	Z	T:A	15.12*29.61*6.27mm				PCS	1	fit
1.1	447009-IA-01	BT-L-FPC	W	T:A	11.82*10.12*0.12mm	Electrolytic copper, half to half 9471	gold-plating	black	PCS	1	Half cutting process
1.1	447009-IA-02	L shell material	W	T:A	15.12*29.61*6.27mm	ABS+PC	microgroove	black	PCS	1	provided by customer
2	447009-IB	BT-R-assembly	Z	T:A	15.12*29.61*6.27mm				PCS	1	fit
2.1	447009-IB-01	BT-R-FPC	W	T:A	11.82*10.12*0.12mm	Electrolytic copper, half to half 9471	gold-plating	black	PCS	1	Half cutting process
2.2	447009-IB-02	R shell material	W	T:A	15.12*29.61*6.27mm	ABS+PC	microgroove	black	PCS	1	provided by customer

type:W.outsourcing B.semi-manufactures Z.end product C.provided by customer

Confirmation: Review: Production: Feng Jiwu

5.Schematic diagram of packaging

Packaging method diagram					
product name	Antenna components				
P / N					
Project model	KS557				
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	KINGSTATE 東莞志豐電子有限公司 KINGSTATE ELECTRONICS (DONGGUAN) CO. , LTD 物料標示卡			
		供應商	昱晟通讯	訂單號碼	DGE41-210930110
		物料料號		生產批號	
		品名規格		產品顏色	
		訂單數量		包裝數量	
		生產日期		交貨日期	
		月份標籤			☒ BSE ☐ BE ☐ 其他
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.manufacturer

Test site and manufacturer: Shenzhen Yusheng Communication Equipment Co., LTD

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

THOT