

KS 563 project antenna specification

Customer name: Dongguan Zhifeng Electronics Co., LTD

Customer product name: KS 563

Product name: Antenna


Product specification: LFPC antenna / RFPC antenna

material code: _____

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
1	R:a	R:a	2023-07-27	Zhong Qihong	13	

The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC / Date-	Review / Date	Approval / Date
MD	<i>Feng Jiwu</i>	<i>Su Guanfeng</i>	<i>Chen Kehong</i>	
RF	He poetry Yin			

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

The demander's judgment 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 **KS563** Antenna technical requirements and material requirements specifications.

This requirement applies to **KS563** Antenna type selection, test, and acceptance.

1.2 Project basic information

Antenna name:	KS563
Antenna frequency:	BT: 2402MHz-2480MHz
Antenna material:	FPC
Antenna version:	V5

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 $50\% \pm 15\%$

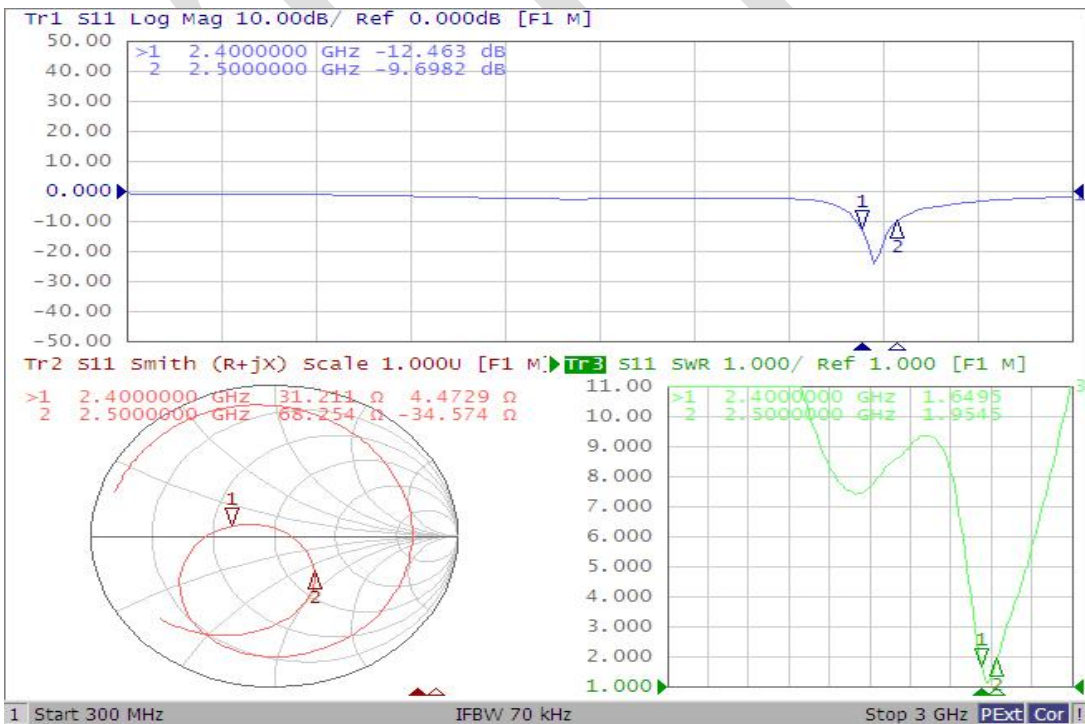
Test method: DUT is fixed in the center of the turntable on the same horizontal line as the center of the horn antenna.

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



2.2.3 Active and passive data of the right ear antenna



2.2.4 Main board conduction data

A. S		
0	8. 18	-92
39	8. 61	-92
78	8. 65	-92

a.d		
0	8. 51	-92
39	8. 38	-92
78	8. 25	-92

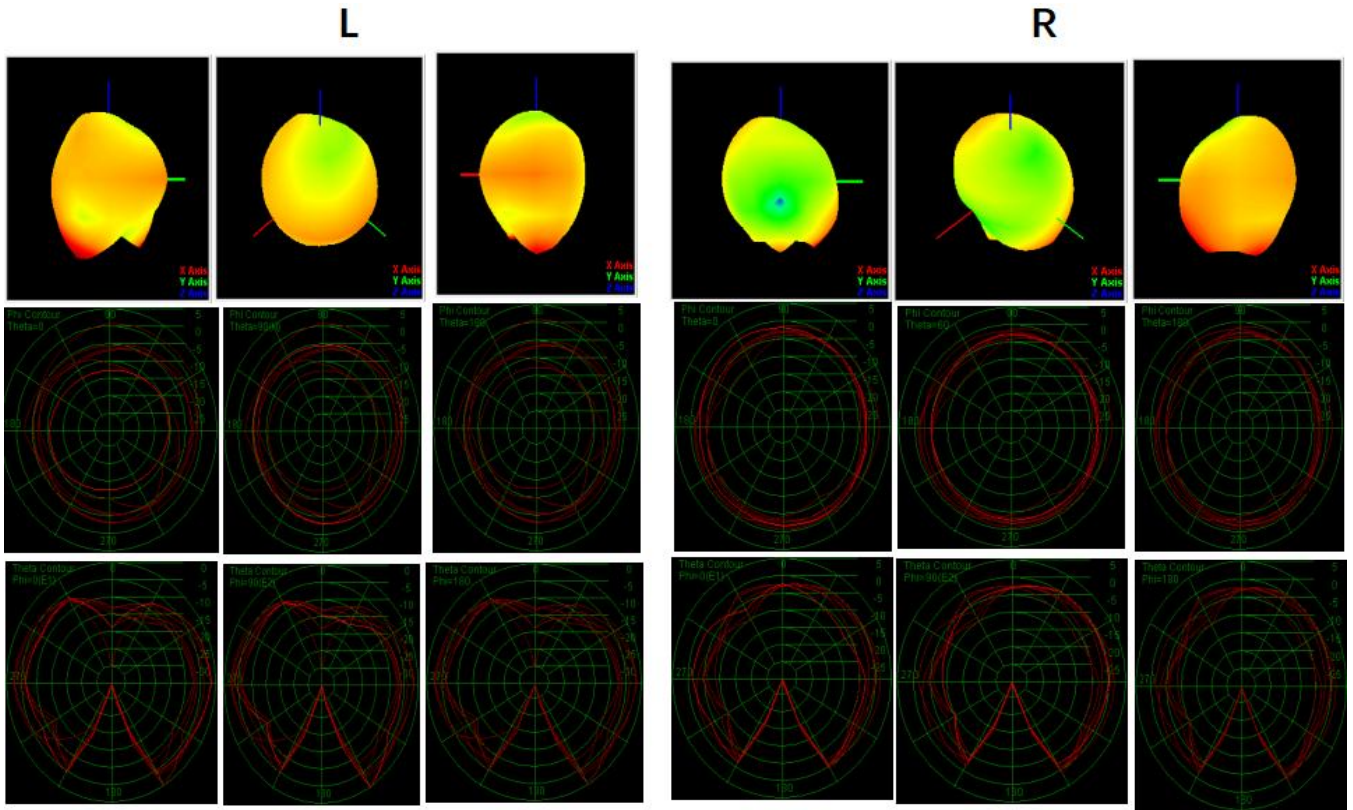
2.2.5 Antenna efficiency-L

frequency point	productiveness%	gain
2400	22.40%	-1.68
2410	22.90%	-1.56
2420	23.20%	-0.97
2430	24.10%	-0.65
2440	25.50%	0.43
2450	25.70%	0.40
2460	24.60%	-0.89
2470	23.80%	-0.57
2480	22.30%	-1.24
2490	22.60%	-1.38
2500	21.50%	-1.47

2.2.6 Antenna efficiency- -R

frequency point	productiveness%	gain
2400	21.80%	-1.88
2410	22.30%	-1.72
2420	23.60%	-1.16
2430	24.50%	-0.12
2440	25.70%	0.56
2450	26.40%	0.69
2460	25.60%	0.51
2470	24.40%	-0.26
2480	23.80%	-1.18
2490	22.70%	-1.34
2500	22.20%	-1.56

2.2.7 Direction entation of antenna passive plane



2.2.8 Antenna active parameters

Channel No.	Free space test data/L	
	TRP (dBm)	TIS (dBm)
0	3.24	-87.51
39	3.48	-87.63
78	4.16	-88.38

Channel No.	Free space test data/R	
	TRP (dBm)	TIS (dBm)
0	3.59	-88.49
39	3.72	-88.57
78	4.29	-88.66

2.2.9 Antenna active parameters / head ear

Channel No.	Head and ear test data/L	
	TRP (dBm)	TIS (dBm)
0	-1.78	-80.87
39	-1.10	-80.63
78	-0.58	-80.39

Channel No.	Head and ear test data/R	
	TRP (dBm)	TIS (dBm)
0	-1.89	-80.19
39	-1.53	-80.7
78	-1.42	-80.57

2.3.0 Sample test

1 # / Cyan					
Channel No.	Free space test data/L		Channel No.	Free space test data/R	
	TRP (dBm)	TIS (dBm)		TRP (dBm)	TIS (dBm)
0	3.45	-87.72	0	3.61	-88.4
39	3.67	-87.59	39	3.73	-88.36
78	4.23	-88.41	78	4.35	-88.51

1 # / Cal / head ear					
Channel No.	Head and ear test data/L		Channel No.	Head and ear test data/R	
	TRP (dBm)	TIS (dBm)		TRP (dBm)	TIS (dBm)
0	-1.68	-80.43	0	-1.76	-80.37
39	-1.36	-80.51	39	-1.69	-80.28
78	-0.82	-80.39	78	-1.53	-80.16

2 # / Grey					
Channel No.	Free space test data/L		Channel No.	Free space test data/R	
	TRP (dBm)	TIS (dBm)		TRP (dBm)	TIS (dBm)
0	3.38	-87.52	0	3.52	-88.44
39	3.49	-87.43	39	3.77	-88.63
78	4.21	-88.25	78	4.28	-88.72

2 # / grey / head ear					
Channel No.	Head and ear test data/L		Channel No.	Head and ear test data/R	
	TRP (dBm)	TIS (dBm)		TRP (dBm)	TIS (dBm)
0	-1.74	-80.64	0	-1.8	-80.36
39	-1.53	-80.51	39	-1.64	-80.45
78	-1.06	-80.28	78	-1.37	-80.38

2.3.1 Antenna field measurement data

test method:	1. Distance test: Connect the Bluetooth headset with the mobile phone, and place the mobile phone on the 60cm high non-metal bracket. The tester wears the headset to walk to the distance, and the tester rotates 360 degrees. Measure the limit distance between the call sound and music sound in the headset, measure the distance.	
	2. Close body test: the tester carries the mobile phone (preferably the back pocket of the pants opposite the main ear of the Bluetooth headset) for the human rotation test whether there is no card.	
	3. Cover the hands test: testers wear headphones and connect with the mobile phone to play music, test two states: 1) fingertip up test, test whether the music is broken; 2) fingertip back test, test whether the music is broken.	
Test location:	In the outdoor open space of our downstairs (see the test environment)	
testing facility:	Iphone 6	
test result:	listen to music	1. When the left and right ears are the main ears, test 360 degrees within 13m,
		2, close body test without card break phenomenon.
		3, hands cover test: not yet tested

3.structural drawings

L edge

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<p>技术要求:</p> <p>1. PCB基材规格: FR4</p> <p>2. 电镀规格: 镀镍: 3~8um 表面油墨颜色: 黑色 印刷字体颜色: 灰白色 印刷字体高度: 按图纸要求</p> <p>3. 表面油墨要求: 1. 可溶性墨水, 墨水颗粒直径在微米级, 印刷后油墨层厚度在微米级, 印刷后油墨层厚度在微米级, 印刷后油墨层厚度在微米级 2. 正面油墨, 油墨表面要求对折不开裂, 不可划伤</p> <p>4. 可靠性要求: 1. 外形公差±0.10; 2. 铜箔线路公差±0.05; 3. 铜箔到外形的位置±0.15; 4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15; 5. 金手指尺寸公差±0.20; 6. 其它未标注尺寸参照图纸</p> <p>5. 公差要求: 1. 外形公差±0.10; 2. 铜箔线路公差±0.05; 3. 铜箔到外形的位置±0.15; 4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15; 5. 金手指尺寸公差±0.20; 6. 其它未标注尺寸参照图纸</p> <p>6. 重点控制尺寸: 标注尺寸的尺寸为重要尺寸, 其它参照图纸</p> <p>7. RoHS要求: 涉及物料必须符合环保要求</p> <p>8. 包装要求: 用PE袋包装, 每袋数量100PCS, 包装袋外有标识</p>	<p>技术要求:</p> <p>1. PCB基材规格: FR4</p> <p>2. 电镀规格: 镀镍: 3~8um 表面油墨颜色: 黑色 印刷字体颜色: 灰白色 印刷字体高度: 按图纸要求</p> <p>3. 表面油墨要求: 1. 可溶性墨水, 墨水颗粒直径在微米级, 印刷后油墨层厚度在微米级, 印刷后油墨层厚度在微米级, 印刷后油墨层厚度在微米级 2. 正面油墨, 油墨表面要求对折不开裂, 不可划伤</p> <p>4. 可靠性要求: 1. 外形公差±0.10; 2. 铜箔线路公差±0.05; 3. 铜箔到外形的位置±0.15; 4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15; 5. 金手指尺寸公差±0.20; 6. 其它未标注尺寸参照图纸</p> <p>5. 公差要求: 1. 外形公差±0.10; 2. 铜箔线路公差±0.05; 3. 铜箔到外形的位置±0.15; 4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15; 5. 金手指尺寸公差±0.20; 6. 其它未标注尺寸参照图纸</p> <p>6. 重点控制尺寸: 标注尺寸的尺寸为重要尺寸, 其它参照图纸</p> <p>7. RoHS要求: 涉及物料必须符合环保要求</p> <p>8. 包装要求: 用PE袋包装, 每袋数量100PCS, 包装袋外有标识</p>				
<p>由 Autodesk 教育版产品制作</p>					

第三视角	
0~3	±0.08
3~30	±0.10
30~50	±0.12
50~80	±0.15
知速	±1°

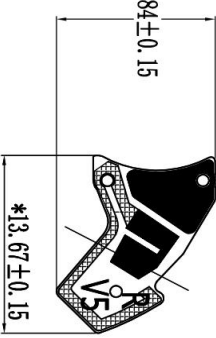
项目名称	K5563
产品名称	L-BT-PCB
产品料号	447010-1A
材料	电铸铜(半对半)

深圳市昱晟通讯设备有限公司

日期	20230619
设计	FJW
审核	FJW
批准	RF

标记	签名	修改内容	日期

R edge

1	由 Autodesk 教育版产品制作	2	3	4	5	6																																																
<p>技术要求:</p> <p>1. PC基材规格:</p> <p>2. 电镀厚度:</p> <p>3. 表面油墨要求:</p> <p>4. 可靠性要求:</p> <p>5. 公差要求:</p> <p>6. 重点管控尺寸:</p> <p>7. RoHS要求:</p> <p>8. 包装要求:</p>	<p>PI基材:</p> <p>电镀铜 (半对半):</p> <p>电铸铜 (单面铜):</p> <p>双面胶:</p> <p>镀镍: 3.8um;</p> <p>镀金: 0.0251UM</p> <p>表面油墨颜色:</p> <p>印刷字体颜色:</p> <p>印刷字体高度:</p> <p>按图纸要求</p>	<p>1. 可靠性要求: 盐雾试验要求按照IPC-A-610标准执行</p> <p>2. 正面油墨: 油墨表面要求对折不开裂,不可划伤等</p> <p>1. 外形公差±0.10;</p> <p>2. 铜箔线路公差±0.05;</p> <p>3. 铜箔到外形的位置±0.15;</p> <p>4. 孔对孔位置公差±0.10; 孔到外形位置公差±0.15;</p> <p>5. 金手指尺寸公差±0.20;</p> <p>6. 其它未标注尺寸参照2D图纸</p>	<p>涉及物料必须符合环保要求</p> <p>用PE袋包装, 每袋数量100PCS, 包装袋外有标识</p>	<p style="text-align: center;">*11.84±0.15</p>  <p style="text-align: center;">*13.67±0.15</p> <p style="text-align: center;">*0.12±0.02</p> <p style="text-align: center;">■ 镀金区域</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>标记</td> <td>签名</td> <td>修改内容</td> <td>日期</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	标记	签名	修改内容	日期					<p style="text-align: center;">深圳市昱晟通讯设备有限公司</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>第二视角</td> <td>项目名称</td> <td>日期</td> <td>设计</td> <td>20230619</td> </tr> <tr> <td>0~3 ±0.08</td> <td>K5963</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>3~30 ±0.10</td> <td>产品名称</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>30~50 ±0.12</td> <td>R-PT-PPC</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>50~80 ±0.15</td> <td>产品料号</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>角度 ±1°</td> <td>447010-1A</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td>材料</td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td>电镀铜 (半对半)</td> <td> </td> <td> </td> <td> </td> </tr> </table>	第二视角	项目名称	日期	设计	20230619	0~3 ±0.08	K5963				3~30 ±0.10	产品名称				30~50 ±0.12	R-PT-PPC				50~80 ±0.15	产品料号				角度 ±1°	447010-1A					材料					电镀铜 (半对半)			
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4. Bill Of Material

深圳市昱晟通讯有限公司

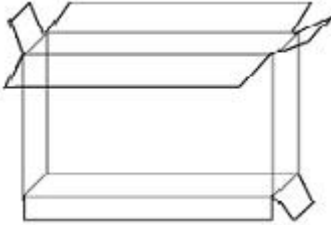



YUSHENG COMMUNICATION TECHNOLOGY CO.,LTD.

447010 (KS563) -BOM表

文件编号

版次: T:A		客户: 447			机种: 447010		制订日期: 20230626				
项次	料号	品名	类型	版本	规格	材质	表面处理	颜色	单位	数量	工艺
1	447010-IA	BT-L-FPC	Z	T:A	11.97*13.59*0.12mm				PCS	1	
1.1	447010-IA-01	BT-L-FPC	W	T:A	11.97*13.59*0.12mm	电解铜 半对半 9471	镀金	黑色	PCS	1	半切工艺
2	447010-IB	BT-T-FPC	Z	T:A	11.84*13.67*0.12mm				PCS	1	
2.1	447010-IB-01	BT-T-FPC	W	T:A	11.84*13.67*0.12mm	电解铜 半对半 9471	镀金	黑色	PCS	1	半切工艺
类型: W.外购 B.半成品 Z.成品 C.客供											
确认:				审核:				制作: 冯继武			

5.Schematic diagram of packaging

Packaging method diagram																														
product name	antenna																													
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	<table border="1" style="width: 100%; text-align: center;"> <tr> <td colspan="4">  東莞志豐電子有限公司 KINGSTATE ELECTRONICS (DONGGUAN) CO., LTD 物料標示卡 </td> </tr> <tr> <td>供應商</td> <td>昱晟通讯</td> <td>訂單號碼</td> <td>DGE41-210930110</td> </tr> <tr> <td>物料料號</td> <td></td> <td>生產批號</td> <td></td> </tr> <tr> <td>品名規格</td> <td></td> <td>產品顏色</td> <td></td> </tr> <tr> <td>訂單數量</td> <td></td> <td>包裝數量</td> <td></td> </tr> <tr> <td>生產日期</td> <td></td> <td>交貨日期</td> <td></td> </tr> <tr> <td>月份標籤</td> <td></td> <td></td> <td> <input type="checkbox"/> HSF <input type="checkbox"/> HF <input type="checkbox"/> 其他 </td> </tr> </table>	 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			<input type="checkbox"/> HSF <input type="checkbox"/> HF <input type="checkbox"/> 其他
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生產日期		交貨日期																												
月份標籤			<input type="checkbox"/> HSF <input type="checkbox"/> HF <input type="checkbox"/> 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. 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

THOT