

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	Feng Jiwu	Su Guanfeng	Chen Kehong	
RF	He poetry Yin			

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

The demander's judgment result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

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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

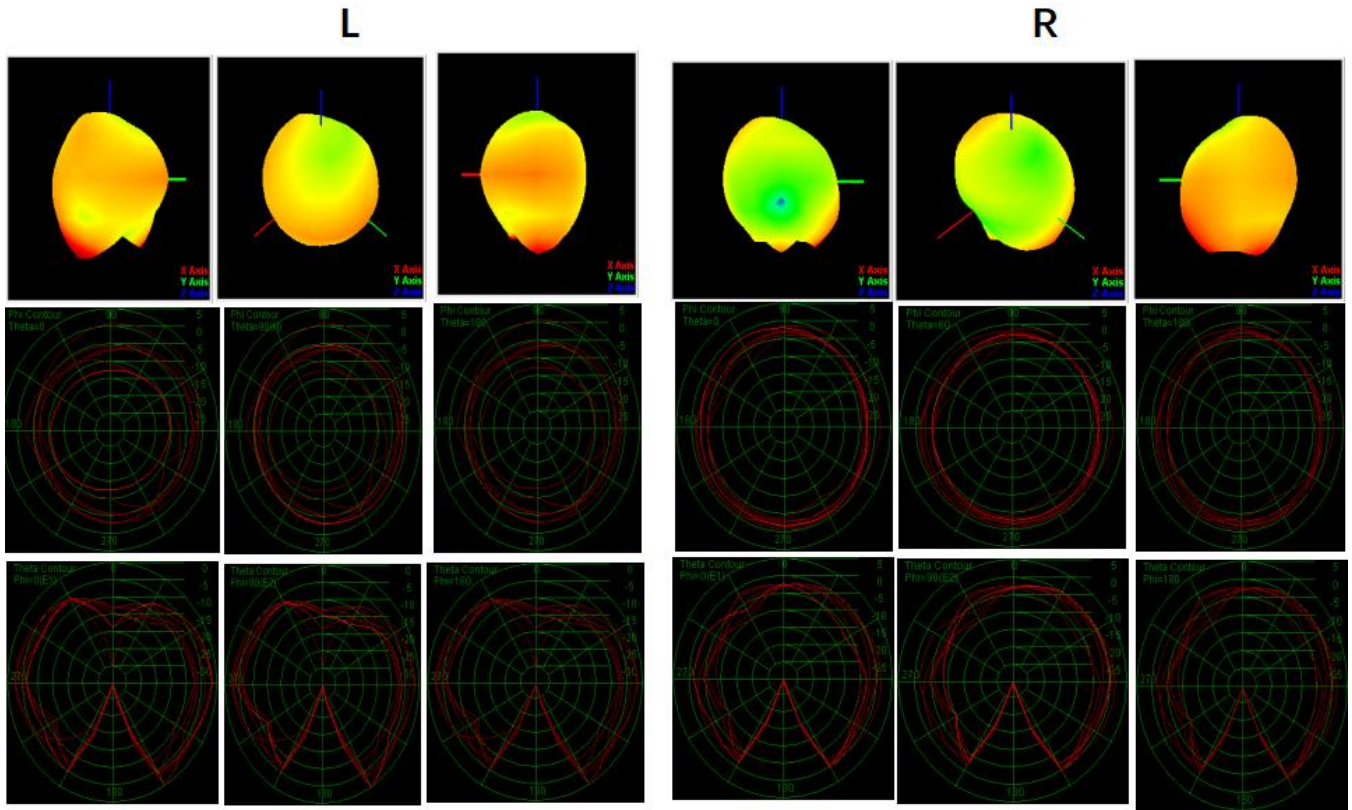
2.2.5 Antenna efficiency-L

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

1		2		3		4		5		6		
								标记		签名	修改内容	日期

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1											
技术要求:											
1. PCB材料规格:											
PI基材:											
电铸铜(单面板): 0.5oz(ED)											
双面胶: 3M 9471											
2. 电镀规格:											
电镀: 3~8um											
镀金: 0.025UM											
表面油膜颜色: 黑色											
印刷字体颜色: 灰白色											
印刷字体高度: 按图纸要求											
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6. 其它未标注尺寸参照2D图纸.											
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7. RoHS要求:											
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3. 铜箔到											

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鍍金區域

4. Bill Of Material

深圳市昱晟通讯有限公司

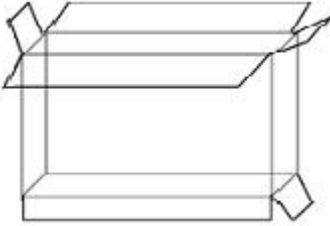
YUSHENG COMMUNICATION TECHNOLOGY CO.,LTD.

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-r-FPC	Z	T:A	11.84*13.67*0.12mm				PCS	1	
2.1	447010-IB-01	BT-r-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	 KINGSTATE 東莞志豐電子有限公司 KINGSTATE ELECTRONICS (DONGGUAN) CO., LTD 物料標示卡 <table border="1"> <tr> <td>供應商</td><td>昱晟通訊</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>☒ HSE ☐ HF ☐ 其他</td></tr> </table>		供應商	昱晟通訊	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			☒ HSE ☐ HF ☐ 其他
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月份標籤			☒ HSE ☐ HF ☐ 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