

深圳市昱晟通讯设备有限公司
SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD

承认书 acknowledgement

客户名称 customer name	深圳市科奈信科技有限公司 Shenzhen CANNICE Technology Co., Ltd.
产品名称 product name	A1249, 右耳机, FPC 天线 A1249, right headphone, FPC antenna
客户料号 Customer material number	300012000300
项目名称 project name	右耳机天线 Right headset antenna
产品品牌 Product brand	深圳市昱晟通讯设备有限公司 SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD
产品型号 product model	615002-IB

附件 appendix	封面 Cover	图纸 drawing	FAI 报告 FAI report	CPK 报告 CPK report
	规格书 specification	可靠性测试报告 Reliability test report	环保 environmental protection	其他 3D 文件 Other 3D files

供应商签核 supplier sign	制作 make	审核 check	
	陈柯鸿	曾祥好	

客户 签核 client sign	制作 make	审核 check	批准 approve

承认条件 condition of recognition	☐ 承认 admit	☐ 拒绝承认 disallow
	☐ 条件承认 Conditional recognition 需满足条件 Need to meet the conditions:	
	☐ 临时承认 限量 _____ PCS	

供应商信息 Supplier information
名称: 深圳市昱晟通讯设备有限公司 联系人: 邓成雨 Name: Shenzhen Yusheng Communication Equipment Co., LTD. Contact person: Deng Chengyu
地址: 深圳市光明区光明大道与东长路交叉口东南侧南太云创谷园区 2 栋 4 层 4A Address: 4A, Floor 4, Building 2, Nantaiyun Chuangu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen City
电话: 0755-23984257 传真: 0755-86090455 Tel.: 0755-23984257 Fax: 0755-86090455
EMAIL: meng.yuan@szthot.com

A1249 项目天线物料需求规格书

A1249 Project antenna material requirements specification

客户名称：深圳市科奈信科技有限公司

customer name：Shenzhen CANNICE Technology Co., Ltd.

项目型号 Project model A1249

产品名称：A1249,右耳机,FPC 天线

product name：A1249, right headphone, FPC anten na

产品规格 Product specification: 30.93*4.8*0.12mm,2.4~2.5GHz,V0.6,无
卤,背胶 3M9471. 615002-IB-RA(昱晟通讯)

物料编码 Material code: 300012000300

变更内容履历 Change Content CV: :

序号 NO	版本 edition	状态 status	生效日期 availability date	责任人 person liable	页码 pagination	备注 remarks
1	初版 first edition	初版 first edition	2024-3-12	李洁仪 Lijieyi	14	

以下为认签页：

The following is the signature page:

供方承认签字

The supplier acknowledges the signature

责任人/日期 Responsible person / date		IQC/日期 IQC/ date	审核/日期 Review / Date	核准/日期 Approval / Date
MD	冯继武	苏观凤	曾祥好	
RF	陈柯鸿			

需方承认签字（认签后请寄回）：

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

需方判定结果： ☐ 合格 ☐ 不合格 The demander the result: ☐ qualified ☐ unqualified			
开发设计工程师/日期 Development & Design Engineer / Date	SQE 工程师/日期 SQE Engineer / Date	采购负责人/日期 Purchasing Leader / Date	开发部经理批准/日期 Development Manager approval / date

目录 catalogue

1.概述 OVERVIEW	5
1.1 适用范围 SCOPE OF APPLICATION	5
1.2 项目基础信息 BASIC INFORMATION OF THE PROJECT	5
2.技术指标要求 TECHNICAL INDEX REQUIREMENTS	6
2.1 测试项目及设备介绍 INTRODUCTION OF THE TEST ITEMS AND THE EQUIPMENT	6
2.2 有源报告 ACTIVE REPORTING	6
2.2.1 测试说明 TEST SPECIFICATION	6
2.2.2 传导数据 SENSORS DATA	7
2.2.3 匹配电路如下图 THE MATCHING CIRCUIT IS SHOWN BELOW	7
2.2.4 装机注意事项 INSTALLATION PRECAUTIONS	8
2.2.5 S11	8
2.2.6 天线 OTA ANTENNA OTA	9
2.2.7 拉距测试 STRETCH TEST	9
3.结构图纸 STRUCTURAL DRAWINGS	10
3.1 右耳机图纸 right HEADSET DRAWINGS	10
R-antenna	10
4.可靠性测试报告 RELIABILITY TEST REPORT	11
5.物料清单 BOM	13
6.包装示意图 SCHEMATIC DIAGRAM OF PACKAGING	14

1.概述 Overview

1.1 适用范围 scope of application

本要求规定了 A1249 产品的天线技术要求和物料需求规范。

This requirement specifies the antenna technical requirements and material requirements specifications for A1249 products.

本要求适用于 A1249 产品的天线选型、测试和验收。

This requirement is applicable to the antenna selection, testing and acceptance of A1249 products.

1.2 项目基础信息 Basic information of the project

天线名称： Antenna name:	<u>A1249</u>
天线频段： Antenna band:	BT
天线材质： Antenna material:	电解铜+镀金 Electrolyzed copper + gold-plated

2.技术指标要求 Technical index requirements

2.1 测试项目及设备介绍 Introduction of the test items and the equipment

清单 inventory	测试项目 test item	设备 equipment
有源测试 Active test	TRP,TIS	综合测试仪、微波暗室 Integrated tester, microwave darkroom

2.2 有源报告 Active Reporting

2.2.1 测试说明 test specification

测试工具：Agilent8960综测仪、R&SCMW500、全电波远场ETS暗室，高精度定位系统及其控制器和带自动测试程序的电脑

测试环境：温度 $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ，湿度 $50\% \pm 15\%$

测试方法：DUT以H面放于转台中心位置固定，与喇叭天线中心位置在同一个水平线上。

定位系统使 DUT 在整个球面进行旋转，满足高精度的三维定位。各射频仪器、转台控制器与带自动测试软件的 PC 通过 GPIB 接口进行通信

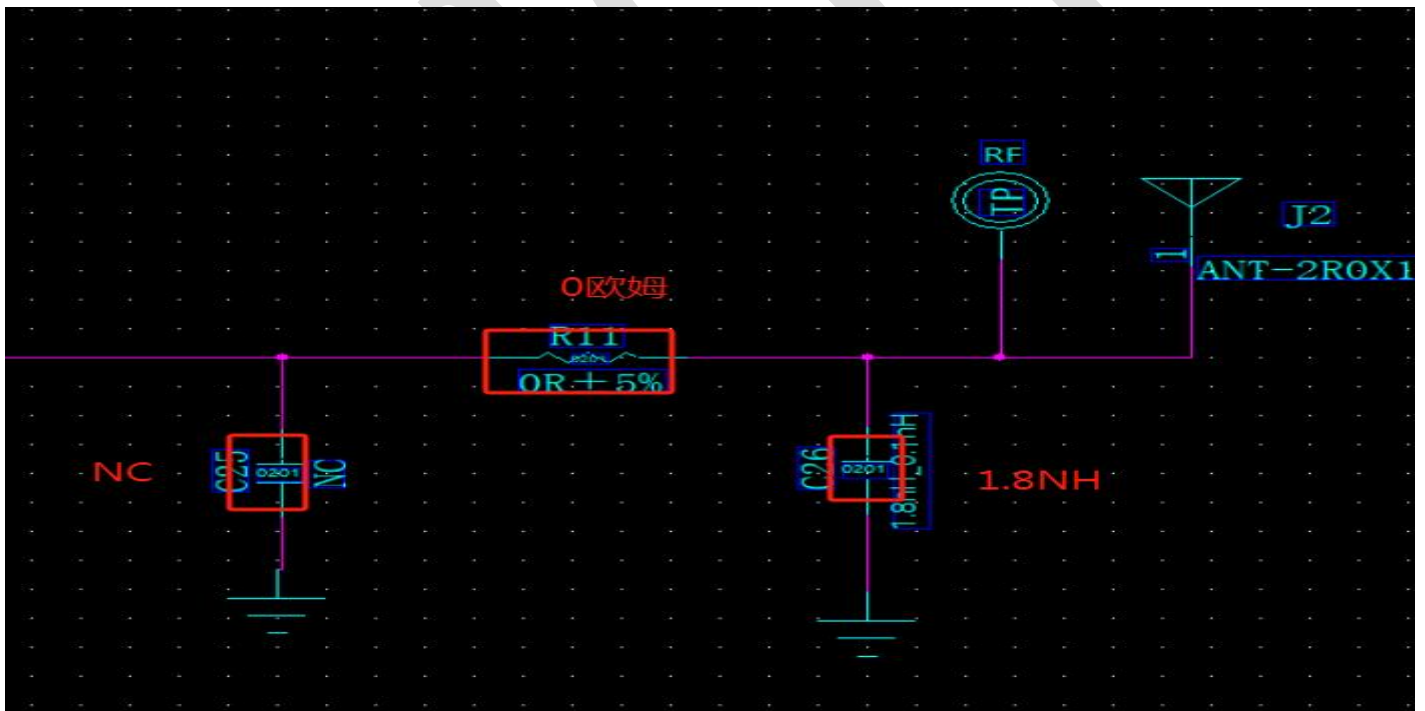
Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$ Test method: The DUT is fixed in the center of the turntable with the 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 interfa

2.2.2 传导数据 Sensors data

	Channel	TRP (dBm)	TIS (dBm)
R	0	9.9	-93
	39	9.9	-93
	78	9.9	-93

2.2.3 匹配电路如下图 The matching circuit is shown below

R



2.2.4 装机注意事项 Installation precautions



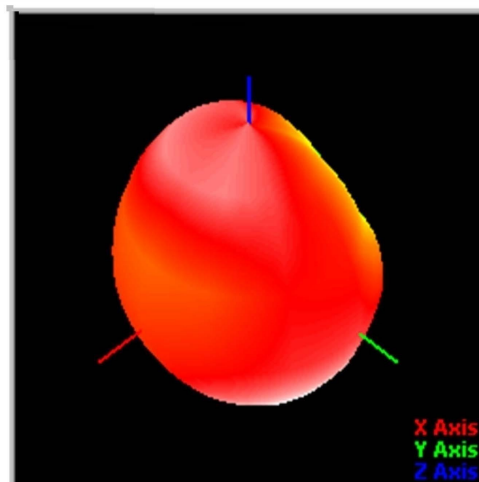
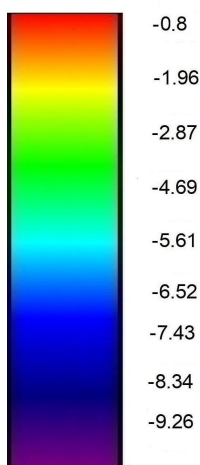
电池线双绞 3 圈处理

2.2.5 S11



Freq (MHz)	Effi (%)	Gain (dBi)
2410	23	-1.2
2420	24	-1.1
2430	26	-0.9
2440	28	-0.8
2450	32	-0.9
2460	33	-1.1
2470	27	-0.9
2480	26	-1.1
2490	25	-1.2
2500	24	-1.3

Frequency: 2440MHz



2.2.6 天线 OTA Antenna OTA

自由数据	R	Channel	TRP (dBm)	TIS (dBm)
		0	3.11	-87.65
		39	3.49	-88.55
		78	4.25	-89.77

头模数据		Channel	TRP (dBm)	TIS (dBm)
	R	0	-1.49	-83.11
		39	-1.37	-83.21
		78	-1.29	-83.25

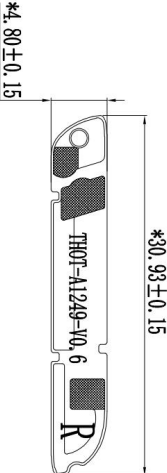
2.2.7 拉距测试 Stretch test

样机	测试员	BMI	测试设备	测试地点	距离
1#	kevin	32	iphone6	THOT 阳台	14m

3.结构图纸 structural drawings

3.1 右耳机图纸 right headset drawings

R-antenna

1	2	3	4	5	6
				DATE	Modify the content
				Version	Revise
skills requirements: 1. PC substrate specifications: PT substrate: 0.5mm Electrolytic copper: 0.5oz(18) Double-sided type: 3W-9471158 2. Electroplating specifications: Nickel plated: 3µm Gold: 0.05µm 3. Surface ink requirements: Surface ink color: Matt black Printing font color: White 4. Reliability requirements: 1. Reliability test: salt spray test/under friction test/thermal resistance test/1000 gnd test 2. The front ink, the surface of the ink is required to be folded in half without cracking, according, etc. 5. Tolerance requirements: 1. Shape tolerance ±0.15; 2. Copper foil circuit tolerance ±0.05; 3. The position of the copper foil to the shape is ±0.15; 4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15; 5. The size tolerance of gold finger is ±0.20. 6. For other unmarked dimensions, refer to 2D drawings. 6. Key control size: The dimensions marked with asterisks are regarded as important dimensions and the others refer to 2D drawings 7. Environmental requirements: Parts meet 80852.0/87/86wh/Q environmental protection requirements 8. Packaging requirements: Roll plate bottom film packaging					
Shenzhen Yu Sheng Communication Equipment Co., Ltd. Model A1294-01 Design BYZ Name R-PC Review MD Part NO 615002-1B-PA confirm RF Material quality Electrolytic copper (half to half) UNIT mm projection FIT series R.A					

4.可靠性测试报告 Reliability test report

冷热冲击测试报告 Hot and cold shock test report

consumer	科奈信 CANNICE	日期 date	2024-03-11	厂内编号 Factory number	/
P / N	615002	数量 quantity	各 5PCS	测试时间 testing time	48H
材料规格 material specification	单面半对半有胶电解铜 Single face half to half glue electrolytic copper	供应商 supplier	昱晟 THOT	参考标准 reference standard	MIL-SDT-202Method017IEC60749-25 JEDEC JESD22-A104-B IEC68-2-1MIL-STD-2168-85

测试目的：检测产品的可靠性及镀层的结合力、镀层抗氧化及抗腐蚀能力。

Test purpose: To test the reliability of products and coating binding force, coating and oxidation resistance and corrosion resistance.

设备名称：高低温试验箱

Equipment name: high and low temperature test box

实验室环境 laboratory environment

温度 temperature	22-26℃	相对湿度 relative humidity	65-75%	大气压 atmos	1MPA
-------------------	--------	------------------------------	--------	-----------	------

测试参数 test parameter

温度 temperature	高温 high temperature		80℃	低温 low temperature	负 40℃ minus forty ℃	温度公差 Temperature tolerance	2℃	
时间 time	恒温	高温 high temperature	0.30H	高温升温 High temperature heating	10min	备注 remarks	1、高温升温是从常温升至设定高温 2、低温降温是指从设定高温降至设定低温 1. High temperature heating up rises from room temperature to set high temperature 2.Low temperature cooling refers to falling from the set high temperature to the set low temperature	
		低温 low temperature	0.30H	低温降温 Low temperature cooling	10min			
循环次数 ycle index	32 次 32 Times		其它 else	相对湿度 relative humidity	95%			
外观检验 visual inspection	分层 lamination	ACC	氧化 oxidize	ACC	起泡 blister	ACC	油墨脱落 The ink fell off	ACC
测试 test	抗剥离 antistripping	≥0.8kgf/cm2	点焊 spot welding	ACC	百格测试 Wear-resistant experiment	ACC	耐磨实验 Wear-resistant experiment	ACC

测试记录 test record:

产品编号 NO	产品测试结果 identification of product	判定 judge
	实验结束后，产品无起翘，无溢胶。 After the experiment, the product has no warping and no glue overflow.	ACC

深圳市昱晟通讯设备有限公司

Shenzhen Yusheng Communication Equipment Co., LTD

盐雾测试报告 Salt mist test report

客户 consumer:	科奈信 CANNICE	型号 model : A1249
试样情况 Sample condition	试样数量 Number of samples : 5PCS	
	材料 : 单面半对半有胶电解铜 Material: single side half to half glue electrolytic copper	镀层 : 镀金 Plated layer: gold plated
实验起止时间: 2024 年 09 月 09 号 09 时 25 分至 2024 年 03 月 11 日 09 时 25 分 共 48 小时 Start time of the experiment: 09:25 on March 20,2022 to 09:25 on March 22,2023		
实验类型 Type of experiment	☒ NSS ☐ ASS ☐ CASS	
实验条件 experimental condition	盐溶液 Salt solution : 5%	PH:7.0
	箱内温度 Temperature in the box35-C	相对湿度 relative humidity : 85%℃
	喷雾方式 : ☒ 连续 ☐ 间歇 Spray method: ☒ Continuous ☐ interval	压缩空气压力 Compressed air pressure : : 1kg / m 2
	盐雾沉降率 precipitation rate of salt spray :	雾液收集 Fog collection : PH7.0anc
	实验周期 : 1--个循环 Experimental period: 1- -cycle	喷雾时间 Spray time : 48H
		放置时间 storage period : 2H
每 16 小时观察结果 The results were observed every 16 hours	试验温度 test temperature : 36℃	压力桶温度 storage period : 47.5℃
实验结果 experimental result	实验后的外观 : 外观完整无损 , 无明显变化 Appearance after the experiment: the appearance is intact and intact, no obvious change	
	镀层 : 无剥落 , 无锈蚀 Plating: no peeling, no corrosion	
	表面喷涂 , 丝印 : 无脱落 , 无气泡 Surface spraying, screen printing: no shedding, no bubbles	



5.物料清单 BOM



深圳市昱晟通讯设备有限公司

Shenzhen Yusheng Communication Equipment Co.,LTD

615002(A1249-01)BOM表

版次: R:A

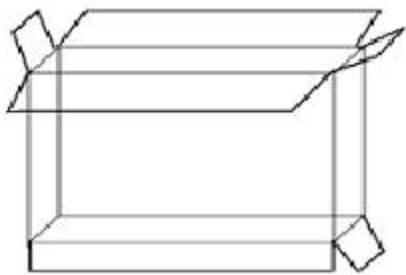
客户: 615

机种: 615002

制订日期: 2024/02/24

项次	*物料编码	*物料名称	物料类别.名称	*机型	规格型号	颜色	*计量单位.	用量	备注
1	615002-IA-RA	BT-L天线		A1249-01	黑色 BT-L-FPC 电解铜 半对半 镀金 30.93*4.80*0.12 mm	黑色	PCS	1	
1.1	615002-IA-01-RA	BT-L天线		A1249-01	黑色 BT-L-FPC 电解铜 半对半 镀金 30.93*4.80*0.12 mm	黑色	PCS	1	
2	615002-IB-RA	BT-R天线		A1249-01	黑色 BT-R-FPC 电解铜 半对半 镀金 30.93*4.80*0.12 mm	黑色	PCS	1	
2.1	615002-IB-01-RA	BT-R天线		A1249-01	黑色 BT-R-FPC 电解铜 半对半 镀金 30.93*4.80*0.12 mm	黑色	PCS	1	
确认:			审核:			制作:闭业智			

6.包装示意图 Schematic diagram of packaging

包装方式图 Packing pattern drawing																				
产品名称 Product name	天线组件 Antenna module																			
料号 Material number	615002																			
项目型号 Project model	A1249																			
装箱明细 Packing details	纸箱尺寸 1Carton Size 1: 270*260*200MM 纸箱尺寸 2Carton Size 2: 260*200*200MM 纸箱尺寸 3Carton Size 3: 根据订单数量/体积而定 Subject to order quantity/volume																			
	装箱方式 Packing method	按订单数量包装 Packing as per order quantity																		
	装箱总数 Total number of cases	按订单数量包装 Packing as per order quantity																		
标签要求 Label requirement	标签尺寸 Label Size 1: 通用 100*100mm Universal 100*100mm 标签尺寸 2Label Size 2: 根据客户要求 According to customer requirements	<table border="1"> <thead> <tr> <th colspan="2">深圳市昱晟通讯设备有限公司</th> </tr> <tr> <th colspan="2">SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD</th> </tr> </thead> <tbody> <tr> <td>Customer name 客户名称</td> <td>*****</td> </tr> <tr> <td>Order reference 订单编号</td> <td>*****</td> </tr> <tr> <td>Project name 项目名称</td> <td>*****</td> </tr> <tr> <td>Material code 物料编码</td> <td>*****</td> </tr> <tr> <td>Quantity 出货数量</td> <td>****PCS</td> </tr> <tr> <td>Date 出货日期</td> <td>*****</td> </tr> <tr> <td colspan="2">Address: 407-411, Floor 4, Building 2, Yuntai Chuanggu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen</td> </tr> </tbody> </table>	深圳市昱晟通讯设备有限公司		SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD		Customer name 客户名称	*****	Order reference 订单编号	*****	Project name 项目名称	*****	Material code 物料编码	*****	Quantity 出货数量	****PCS	Date 出货日期	*****	Address: 407-411, Floor 4, Building 2, Yuntai Chuanggu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen	
深圳市昱晟通讯设备有限公司																				
SHENZHEN YUSHENG COMMUNICATION EQUIPMENT CO., LTD																				
Customer name 客户名称	*****																			
Order reference 订单编号	*****																			
Project name 项目名称	*****																			
Material code 物料编码	*****																			
Quantity 出货数量	****PCS																			
Date 出货日期	*****																			
Address: 407-411, Floor 4, Building 2, Yuntai Chuanggu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen																				
注意事项 Matters needing attention 1.因订单数量限制，每款物料的装箱方式根据订单总数量或者实物体积选择箱子大小 Due to the quantity limitation of the order, the packing method of each item shall be based on the total quantity of the order or the physical volume 2.保存温度：常温 Storage temperature: normal temperature 3. 保存条件：贮藏在阴凉干燥处 Storage condition: Store in a cool and dry place																				