



深圳市昱晟通讯设备有限公司

K6MAX 项目天线物料需求规格书

K6MAX Project antenna material requirements specification

客户名称： Botslab Inc.

customer name : Botslab Inc.

项目型号 Project model K6MAX

产品名称： 天线组件

product name : antenna module

产品规格： 详情请见 BOM 表

Product specification: See BOM for details

物料编码 Material code: 231100293, 231100298 (凯木金)

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	2023-09-05	张小芬 Xiao-Fen Zhang	6	
1	尺寸公差变更 Variation of dimensional tolerance	尺寸 5+/- 0.05 改成 5+0.05/-0.03 Size 5+/-0.05 Change it to 5+0.05/-0.03	2023-12-06	钟秋鸿 Zhong QiuHong	22	

以下为认签页：

The following is the signature page:

供方承认签字

The supplier acknowledges the signature

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1.概述 Overview

1.1 适用范围 scope of application

本要求规定了 K6MAX 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 K6MAX products.

本要求适用于 K6MAX 产品的天线选型、测试和验收。

This requirement is applicable to the antenna selection, testing and acceptance of K6MAX products.

1.2 项目基础信息 Basic information of the project

天线名称： Antenna name:	<u>K6MX</u>
天线频段： Antenna band:	WIFI:2402-2484MHZ
天线材质： Antenna material:	壳料/PCB/同轴线焊接组装 Shell /PCB/ coaxial line welding assembly

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 interf

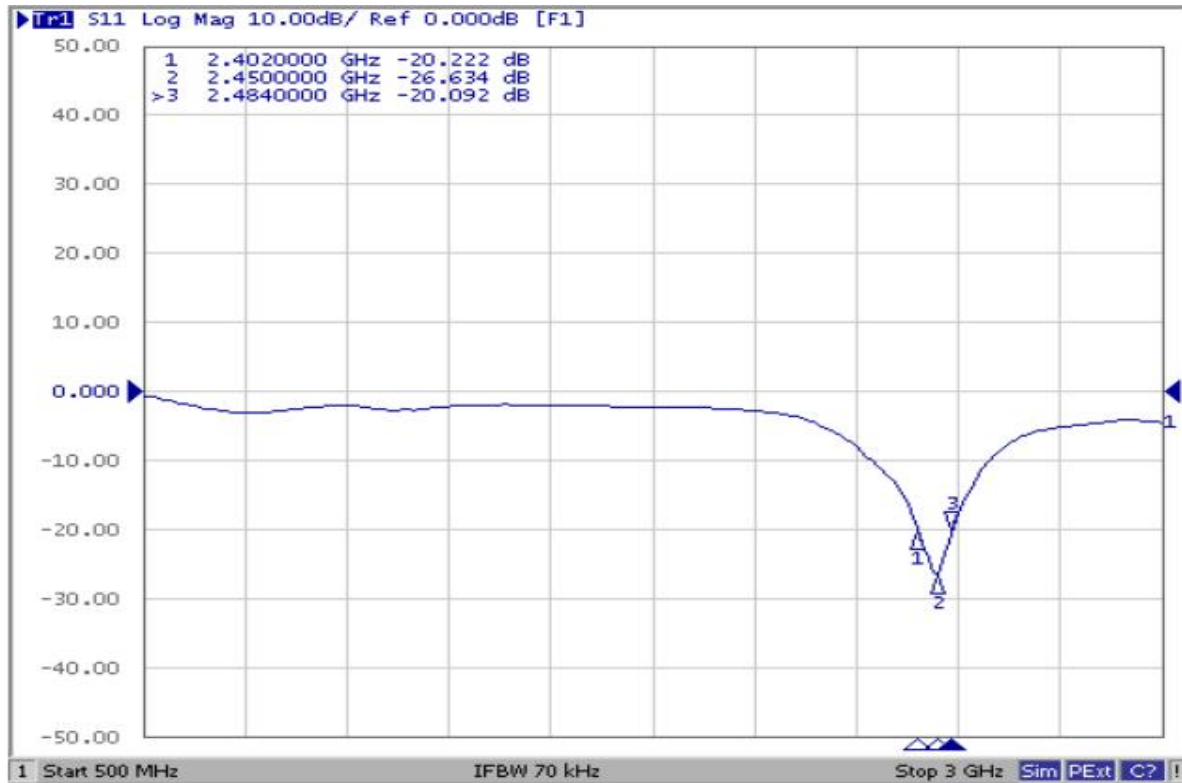
2.2.2 天线无源数据 Antenna passive data

Freq (Mhz)	Effi (%)	Effi (db)	Gain (dbi)
2400MHZ	62.2%	-2.06	2.75
2410MHZ	63.2%	-1.99	3.10
2420MHZ	64.1%	-1.93	3.02
2430MHZ	63.5%	-1.97	3.15
2440MHZ	65.5%	-1.84	3.44
2450MHZ	66.4%	-1.78	3.27
2460MHZ	65.9%	-1.81	3.50
2470MHZ	64.3%	-1.92	3.36
2480MHZ	63.1%	-2.00	3.29
2490MHZ	62.6%	-2.03	2.98
2500MHZ	61.1%	-2.14	2.87

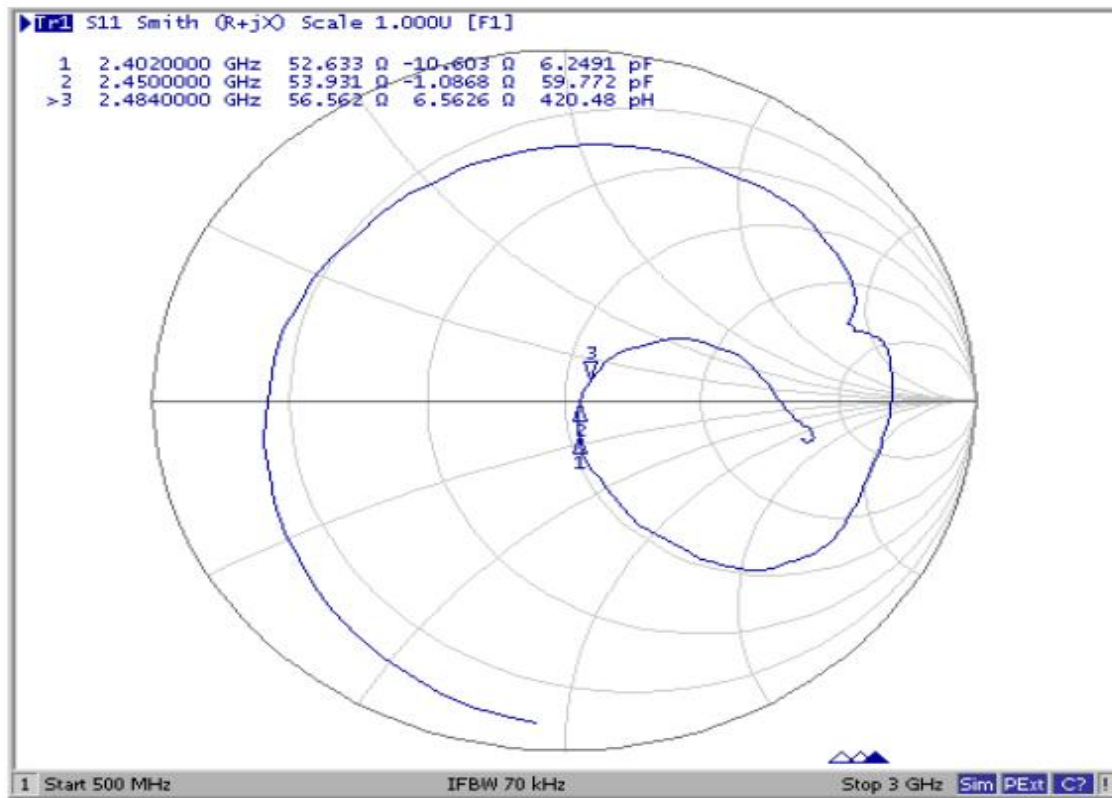
2.2.3 天线无源数据-vswr Antenna passive data -vswr



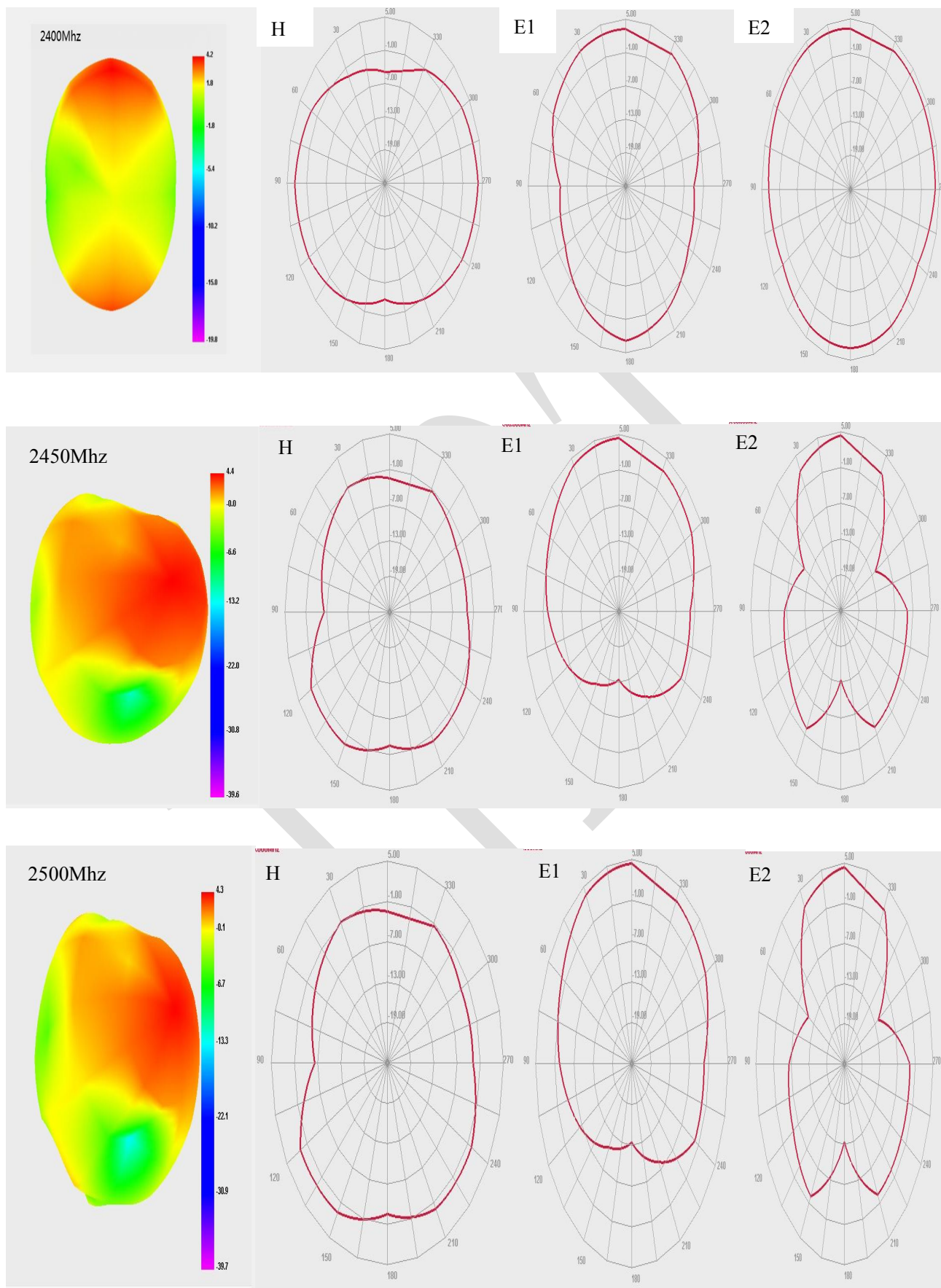
2.2.4 天线无源数据 Log Mag Antenna passive data Log Mag



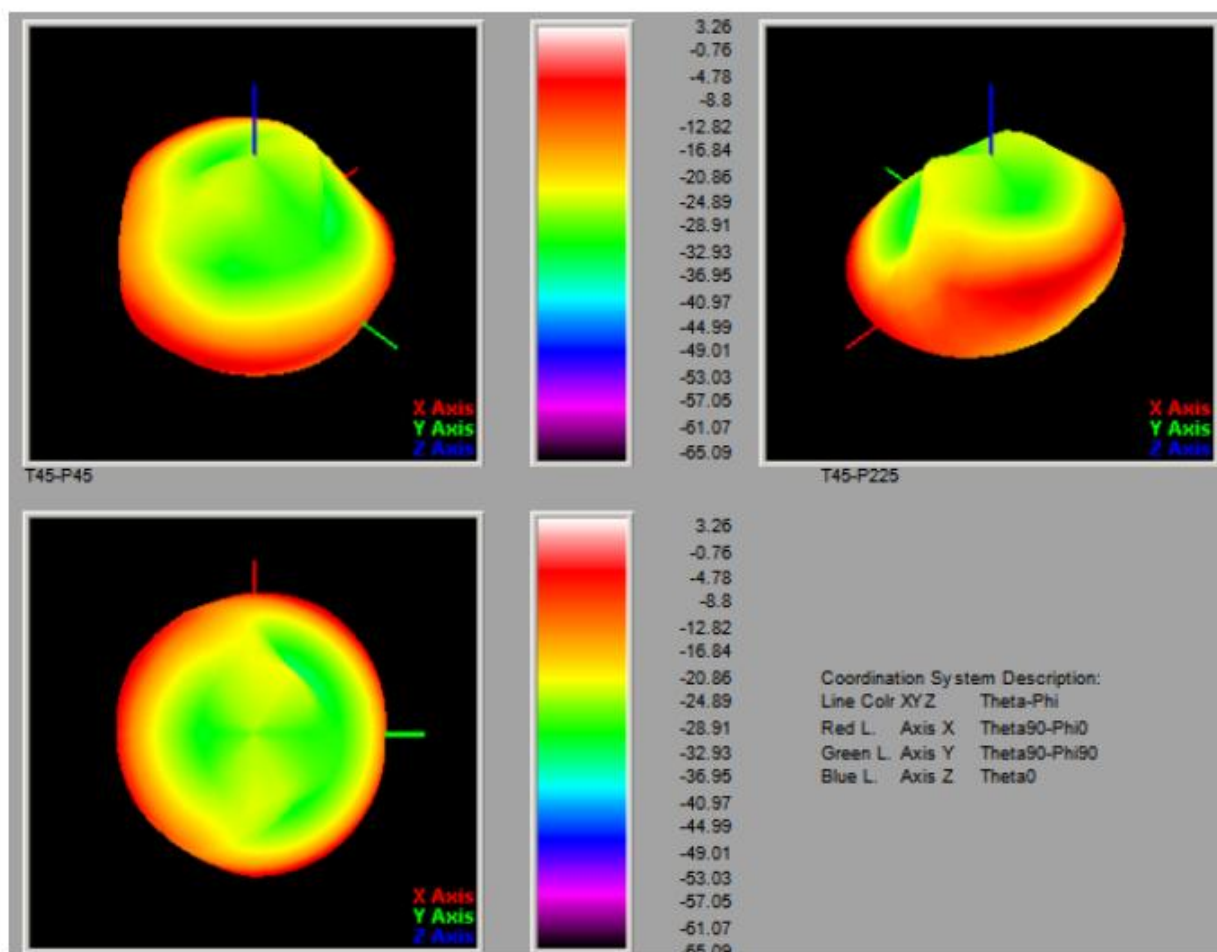
2.2.5 天线无源数据 Smith Antenna passive data Smith



2.2.6 天线无源数据-2D Pattern Antenna passive data -2D Pattern



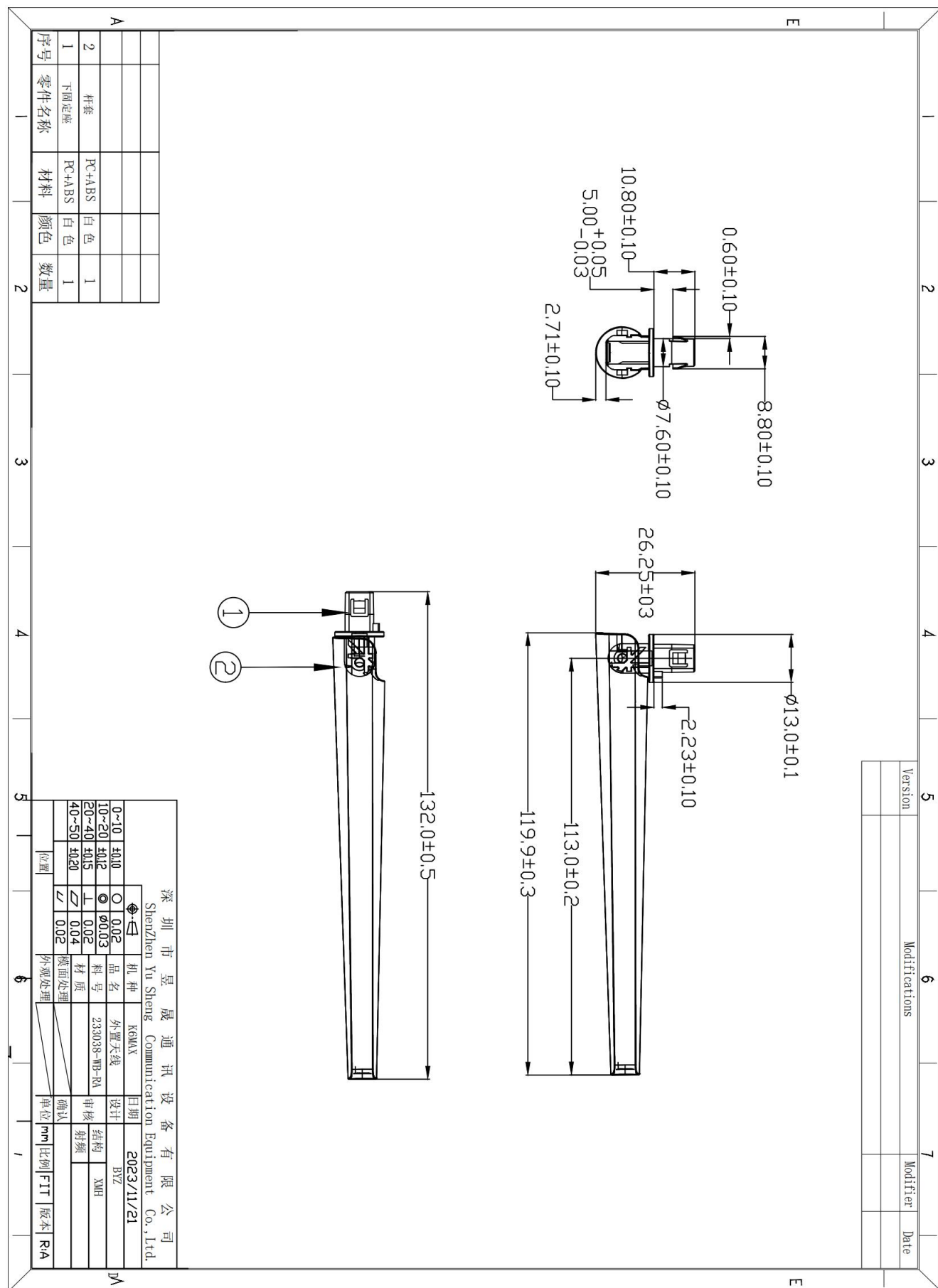
2.2.7 天线无源数据-3D Pattern Antenna passive data -3D Pattern



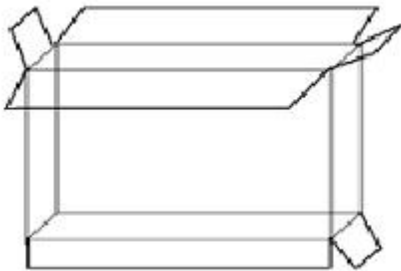
真天线 Dummy antenna



假天线 Phantom antenna



包装图 Package drawing

包装方式图 Packing pattern drawing																				
产品名称 Product name	天线组件 Antenna module																			
料号 Material number	233038																			
项目型号 Project model	K6MAX																			
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, Yantai 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, Yantai Chuanggu Park, southeast of the intersection of Guangming Avenue and Dongchang Road, Guangming District, Shenzhen	
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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																				