

无锡威达智能电子股份有限公司

Wuxi Weida Intelligent Electronics Co., Ltd.

遥控器规格书

Remote control specification

客户名称: Client's name:	Wuxi Weida Intelligent Electronics Co., Ltd.
客户料号: Customer Part Number:	7601-3B7082-00440001
威达料号: WeiDa Part Number:	WH-7087_BLE
类型: Types of:	蓝牙+语音+红外 Bluetooth + voice + infrared
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审核: Review:	厉林玉 LiLinyu
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规格书变更履历表

Change of specification book resume

日期 Date	版本 Version	修改章节 Modify Chapter	描述 Describe	拟制 Quasi- system	备注 Note
2022-02-10	V1.0		创建	Nick	
2022-02-10	V1.1	第四章	修改单载波 组合按键	Nick	
2022-02-10	V1.2	第五章	增加遥控器 按键菲林图	Nick	
2022-04-01	V1.3	第四章	增加支持安 卓 11 系统	Nick	
2022-04-26	V1.4	第七章	增加 PCB 板 图；增加客 户料号以及 固件版本号	Nick	
2022-04-28	V1.5	第四章	修改设备名 称	Nick	
2022-06-08	V1.6	第四章	修改设备名 称	Nick	

遥控器版本信息表

	型号 Model	版本 Version	日期 Date	拟制 Proposed
软件 SW	WH-7087_BLE_v0.08_0505_OTA.bin	V008	22.5.5	Nick
硬件 HW	WH-7087_BLE	V1.0	22.2.11	Nick

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一、遥控器测试条件及参数

Remote Control test conditions and parameters

1、 硬件要求

Hardware requirements

序号 NO.	说明项目 Description Project	技术规格 Technical Specifications	备注 Note
1	按键数 Number of keys	22 键 22 Keys	
2	遥控器尺寸 Remote control size	150*45*18.5mm	
3	按键自由高度 Button Free Height	$\leq 2\text{mm}$	
4	按键作用后高度 The height after the key action	$\geq 0.5\text{mm}$	
5	按键作用力 Key force	160g \pm 30gf	锅仔片
6	外壳塑胶材质 Shell Plastic Material	ABS 原料（无味、不掺回料），厚度 $\geq 2.0\text{mm}$ ABS raw material (tasteless, no blending), thickness $\geq 2.0\text{mm}$	
7	外壳颜色 Shell Color	实色注塑黑色， Solid color injection black,	
8	丝印 Screen printing	耐酸耐醇耐磨 Acid-resistant and alcohol- resistant	
9	PCB 电路板材质 PCB Circuit board Material	双面板，按键碳油 Double sided board, key, carbon oil	

10	PCB 布线线宽及 间距 PCB Cabling line width and spacing	$\geq 0.3\text{mm}$	
11	表面涂敷处理 Surface Coating Treatment	详细见遥控器《外观及工艺要求》 See the remote control "appearance and process requirements" in detail	
		表面应平整牢固，不允许有划痕， 斑疵、流挂、脱落和破损 Surface should be flat and firm, not allowed to have scratches, spot defects, flow hanging, peeling and breakage	
12	电路板制作要求 Board Production requirements	所有印刷电路板均应防腐蚀 All printed circuit boards shall be corrosion resistant	
		不允许有飞线 No flying lines are allowed	
		焊点饱满，无虚焊、脱焊、连锡 Solder joints full, no virtual welding, off welding, Lianxi	
13	按键要求 Key requirements	按键胶边缘结构需增加“防水 墙”，以达到按键装配后，用手指 扣时不能脱出胶壳按键孔；按键面 定位过孔采用硅胶包塑胶设计，使 整个硅胶按键面没有破孔，以保证 长时间使用板面整洁，硅胶按键需 偏硬 Key adhesive edge structure should be added "waterproof wall", in order to achieve the key assembly, the finger buckle can not be out of	

		the plastic shell button hole, key surface positioning through the hole using silicone rubber bag plastic design, so that the entire silicone button surface has no holes to ensure that the use of a long plate surface neat, silicone key need to be hard	
14	导电胶材质 Conductive adhesive Material	必须使用硅胶原料（不加粉），并且没有刺激性气味 Must use silicone material (no powder) and no pungent odor	
15	Metal dome（锅仔片） Metal Dome (pot slices)	遥控器所有按键采用 metal dome 按键，并且寿命必须 ≥ 100 万次，连续按压测试次数 ≥ 50 万次，可恢复到原荷重 Remote control all keys to use the metal Dome button, and the life must be \geq million times, continuous press test number \geq million times, can restore to the original load	

2、 产品规格（红外部分）

Product Specifications (IR Part)

序号 NO.	项目 Project	规格参数 Specification parameter	备注 Note
1	工作温度 Operating temperature	0~50℃	
2	相对湿度 Relative humidity	$\leq 95\%$	
3	大气压力 Atmospheric pressure	86~106Kpa	
4	环境照度 Ambient illumination	自然光或荧光灯 200 \pm 50LX Natural light or fluorescent	

		lights 200± 50LX	
5	主控 MCU	TLSR8275	
6	外壳材料 Shell material	ABS	
7	样品颜色 Sample Color	参考客户需求规格 Reference Customer Requirements Specifications	
8	电池规格 Battery specification	AAA 1.5*2	
9	红外波长 Infrared wavelength	940±50nm	
10	红外载波频率 IR Carrier Frequency	38.0±0.5KHz	
11	瞬间工作电流	≤30mA	
12	平均工作电流 Average working current	≤20mA	
13	平均静态电流 Average static current	≤3uA	
14	工作电压范围 Operating voltage Range	2.0~3.6V	
15	遥控距离 Remote distance	L≥12M L ≥12M	
16	自由跌落试验 Free Drop test	从 80cm 高度，六面依次自由跌落在不小于 3cm 厚大理石地板， 三个循环。 From 80cm height, six-sided free fall in no less than 3cm thick marble floor, three cycles.	

17	静电环境试验 Electrostatic environment test	$\pm 8KV$	
18	高温储存试验 High Temperature Storage test	$70^{\circ}C$	
19	低温储存试验 Low Temperature storage test	$-20^{\circ}C$	
20	恒定湿热试验 Constant damp heat test	$40^{\circ}C$ 相对湿度 $90 \pm 2\%$ $40^{\circ}C$ Relative Humidity $90 \pm 2\%$	
21	温度循环变化试验 Temperature Cycle Change Test	<p>The graph shows a temperature cycle with the following parameters: - Temperature range: $60^{\circ}C$ to $-20^{\circ}C$ - Ramp up time: 1h - High temperature dwell time: 3h - Ramp down time: 1h - Low temperature dwell time: 3h</p>	
22	验收标准 Acceptance criteria MIL-STD-105E- LEVEL(II) AQL	重缺陷 (A类) AQL=0.65 Heavy defects (A Class) aql=0.65 轻缺陷 (C类) AQL=1.5 Light defect (C Class) aql=1.5	
23	遥控器运输及储存条件 Remote control transport and storage conditions	运输途中应避免雨雪直接侵袭或者强烈冲击。 遥控器应储存在环境温度 $-20^{\circ}C \sim +60^{\circ}C$ ，相对湿度不大于80%，周围没有强磁场、腐蚀物质和其它有害气体的库房中，储存期为一年。超过一年的产品经	

		<p>重新评估合格后，方可流入市场。</p> <p>In transit should avoid direct attack of rain or snow or strong impact.</p> <p>The remote control should be stored at ambient temperature-20°C~+60°C, the relative humidity is not greater than the 80%, with no strong magnetic field, corrosive substances and other harmful gases in the storehouse, the storage period is one year. After the product has been reassessed for more than one year, it can be brought into the market.</p>	
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3、产品规格（蓝牙部分）

Product Specifications (BLE Part)

序号 No.	项目 Project	描述 Describe	备注 Note
1	使用电池 Use battery	碱性环保电池 Alkaline Environmental Protection Battery	
2	供电电压 Supply voltage	2.2-3.6V	
3	电流描述 Current description	$\leq 70\mu\text{A}$ 待机功耗 $\leq 70\mu\text{A}$ standby power $\leq 10\text{mA}$ 发射功耗（常规按键） $\leq 10\text{mA}$ emission power consumption (general key) $\leq 25\text{mA}$ 录音功能（语音功能） $\leq 25\text{mA}$ recording feature (voice function)	

4	音频输出 Audio output	单声道、16K 采样率、16bit 精度音频输出 Mono, 16K sampling rate, 16bit Precision Audio output	
5	传输距离 (蓝牙) Transmission Distance (Bluetooth)	$\geq 12\text{m}$ (周围无遮挡物) $\geq 12\text{m}$ (no shelter around)	
6	蓝牙协议 (蓝牙) Bluetooth protocol (Bluetooth)	蓝牙 5.0 协议 Bluetooth 5.0 Protocol	
7	信号要求 (蓝牙) Signal requirements (Bluetooth)	满足通信传输距离要求, 同时符合蓝牙 BQB 认证要求 Meet the communication transmission distance requirements, while complying with the Bluetooth BQBCertification Requirements	
8	语音要求 (蓝牙) Voice requirements (Bluetooth)	语音软件识别率 $\geq 90\%$ (句), 有干扰情况下: 语音识别率 $\geq 85\%$ (句) (需要确认和机顶盒和软件正常状态) The speech software recognition rate $\geq 90\%$ (sentence), has the interference case: the speech recognition rate $\geq 85\%$ (needs to confirm and the set-top box and the software normal state)	
9	连接响应 (蓝牙) Connection response (Bluetooth)	$\leq 200\text{ms}$, 这里是指恢复连接速度, 通过遥控器端测试开始广播到被连接上的时间间隔 $\leq 200\text{ms}$, this refers to the speed at which the connection is restored, the	

		time interval at which the test begins broadcasting to the connected	
10	其他通用蓝牙设备影响 Other common Bluetooth device impact	HOST 端适配的驱动，要不影响原有的蓝牙通用设备支持，如蓝牙耳机/音响（HSP/HFP, A2DP 等），蓝牙键盘，蓝牙鼠标，游戏手柄等。 HOST End Adapter driver, or affect the original Bluetooth universal device support, such as Bluetooth headset /Audio (HSP/HFP, A2DP , etc.), Bluetooth keyboard, Bluetooth mouse, game handles and so on.	
11	音频传输要求 Audio Transmission Requirements	音频传输无异常，无明显干扰、丢数据、截幅等现象 No abnormal audio transmission, no obvious interference, loss of data, cutting amplitude and other phenomena	
12	麦克风灵敏度 Microphone Sensitivity	灵敏度 $-42 \pm 3\text{dB}$ Sensitivity $-42 \pm 3\text{dB}$	
13	麦克风信噪比 Microphone Signal-to-noise ratio	不能低于 58dB cannot be less than 58dB	

二、遥控器产品效果图

Effect picture of remote controller product

序号	变更内容	标识	日期	制定	审核
1	增加按键的尺寸		22.4.7	Nick	
2	修改热键、语音键丝印尺寸		22.4.8	Nick	
3	修改NETFLIX丝印尺寸		22.4.8	Nick	

1.遥控器外壳颜色

- PT Black C (实色注塑)

2.透镜颜色

- 深紫色 (实色注塑)

3.导电胶颜色

- PT Black C
- PT White C
- PT 1925 C

4.导电胶按键印刷颜色

- PT White C
- PT 1795 C (电源键)
- PT Black 7 C(YouTube&home)
- PT 485 C(YouTube)
- PT 432 C(prime video)
- PT 2173 C
- PT 179 C (四个点语音助手)
- PT 2257 C
- PT 7549 C


5.导电胶按键尺寸

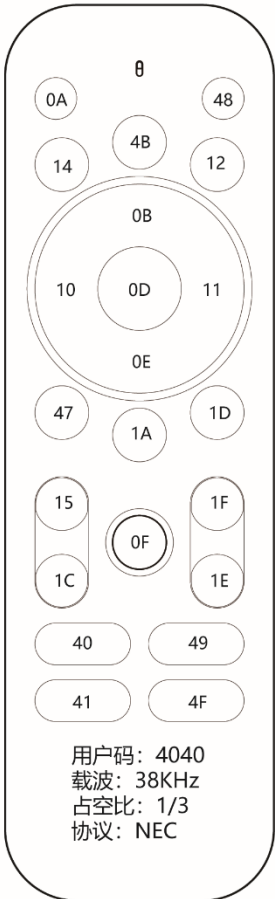
尺寸范围	公差	无锡威达智能电子股份有限公司					
0-10mm	±0.1	客户	*	图名	WH-7087_BLE效果图	图幅	A4
10-50mm	±0.2	品名	*	模号	-	单位	MM
50-100mm	±0.25	版本	A03	设计	Nick	日期	2022-02-10
100-150mm	±0.3	材质	-	审核		比例	1:1
150-200mm	±0.35	缩水	-	批准		张次	1/1
>200mm	±0.4	尺寸	-	路径			
角度	±2°						

三、遥控器键值

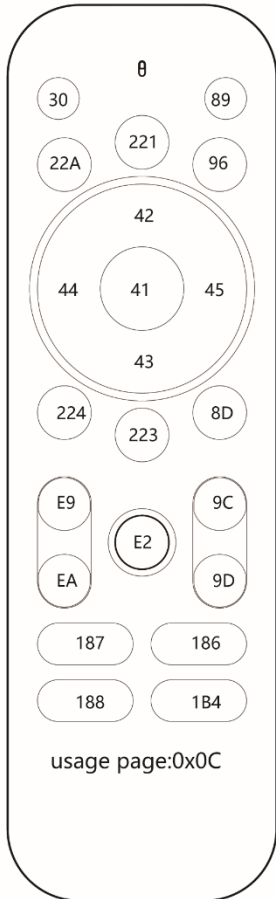
Remote control key value

序号	变更内容	标识	日期	制定	审核





用户码: 4040
载波: 38KHz
占空比: 1/3
协议: NEC



usage page:0x0C

尺寸范围	公差	无锡威达智能电子股份有限公司					
0-10mm	±0.03	客户	*	图名	WH-7087_BLE键值表	图幅	A4
10-50mm	±0.05	品名	*	模号	-	单位	MM
50-100mm	±0.08	版本	A00	设计	Nick	日期	2022-02-10
100-150mm	±0.1	材质	-	审核		比例	1:1
150-200mm	±0.15	缩水	-	批准		张次	1/1
>200mm	±0.2	尺寸	-	路径			
角度	±1°						

四、遥控器按键操作说明

Remote Control key action Description

- 1、 当连上机顶盒蓝牙，遥控器发蓝牙键值；未连上蓝牙模块，则发红外键值。

When you connect the set-top box Bluetooth, the remote control blue tooth key value, the Bluetooth module is not attached, the infrared key value;

- 2、 红外状态下：按住按键持续发射码值，指示灯不闪烁，直到弹起或一分钟后停止；

Under infrared status: press and hold the key to continuously transmit the code value, and the indicator does not flash until it pops up or stops after one minute.

- 3、 电池电量不足提醒：当电量低于 2.4V 时，指示灯闪烁 3 秒，频率 1HZ，指示灯颜色为红色；

Low Battery Reminder: When the power is less than 2.4V, The indicator flashes for 3 seconds, the frequency is 1Hz and the color of the indicator is red;

- 4、 配对功能：当同时按住“Back “和” Vol- “键并持续三秒，同时指示灯闪烁，闪烁频率 2Hz，配对距离为 20cm 到 1.5m，如果配对成功，遥控器红灯常亮 3 秒；如果 30 秒后配对失败，指示灯熄灭；

Pairing function: When the "Back" and " Vol- " keys are kept down for three seconds, while the LEDs are blinking, Flashing frequency 2Hz; The pairing distance is 20cm to 1.5m. If the pairing is successful, the red light of the remote control will be on for 3 seconds; If pairing fails after 30 seconds, the indicator light goes out.

Connection interval < 12ms;

遥控器距离 > 10m;

Remote control distance > 10m;

- 5、 在电视机开机启动时，检测遥控器升级文件，若存在升级文件，遥控器进行升级，灯呈呼吸灯闪烁。此时遥控器不可使用，任何按键无响应，升级成功后，灯停止闪烁，此时遥控器可正常使用，若升级失败

下次开机时再次检测并升级。失败后，灯停止闪烁，遥控器退回老版本正常运行；

When the TV is turned on and started, check the upgrade file of the remote control. If there is an upgrade file, the remote control will be upgraded, and the light will flash as a breathing light. At this time, the remote control cannot be used, and any key has no response. After the upgrade is successful, the light stops flashing. At this time, the remote control can be used normally. If the upgrade fails, it will be detected and upgraded again at the next boot. After failure, the light stops flashing and the remote control returns to the old version for normal operation;

6、 蓝牙设备名：RC-32。

Bluetooth device Name: RC-32.

7、 遥控器锁键功能：

Remote control key lock function

长按遥控器按键 60s，遥控器停止发码；抬起按键即恢复正常状态；

Long press the button on the remote control for 60s, the remote control stops sending codes; raise the button and it will return to normal status;

8、 回连功能：

Connect back function

在 4 米处遥控器与电视机保持连接至少 1 小时，不出现断连；在有配对信息并且蓝牙连接断开的情况下，按下任意键发送对应的红外码，并且发送回连广播 5 秒，回连成功指示灯闪 3 次。在有配对信息的情况下，遥控器上电发送回连广播 5 秒，回连成功，指示灯闪 3 次。

Keep the remote control connected with the TV for at least 1 hour at 4 meters without disconnection; When there is pairing information and the Bluetooth connection is disconnected, press any key to send the corresponding infrared code, send the back connection broadcast for 5 seconds, and the back connection success indicator flashes for 3 times. In the case of pairing information, the remote control will power on and send the back connection broadcast for 5 seconds. The back connection is successful, and the indicator light flashes for 3 time.

9、 Bug Report

红外模式下：按住“OK+Back”两个按键，同时发送 0x62；

蓝牙模式下：按住“OK+Back”两个按键，同时发送 0xEC (0x0C)

In IR mode: press and hold “OK + back” and send 0x62 at the same time;
 In BT mode: press and hold “OK + back” and send 0xec (0x0c) at the same time

10、 休眠及唤醒

Sleep and wake up

未进行任何数据交互时，遥控器保持连接 1 小时后主动进入休眠断连状态， 按任意键可唤醒遥控器；

如还在连接状态，则发送对应按键的蓝牙码值；如已进入蓝牙连接断开状态，则进入回连状态。

When there is no data interaction, the remote control remains connected for 1 hour and then actively enters the sleep disconnection state. Press any key to wake up the remote control,

If it is still connected, send the Bluetooth code value of the corresponding key; If the Bluetooth connection is disconnected, it will enter the back connection state.

11、 遥控器其他要求：

other remote control requirements:

- 1、 配对功能要求：不得存在扫描不到蓝牙设备或配对不上（包括短时间内连续按配对键）的问题，请验证 50 次确保无问题；

The pairing feature requires that no Bluetooth devices be scanned or not paired up (including a continuous press pairing key for a short period of time), verify that ensure no problem;

- 2、 BT 长连接：遥控器不主动断开蓝牙连接，断开连接后若回连超时则进入深度休眠模式，待下次按键唤醒回连；不得存在回连不上的问题，包括盒子断电回连，遥控器断电回连，静置 2 小时回连等，请验证 50 次确保无问题；

BT Long connection: The remote does not actively disconnect the Bluetooth connection, disconnect if the return timeout to enter the deep sleep mode, the Next button to wake up the connection, no return to the problem, including the box power back, remote control power back, static 2 hour back, please verify that times to ensure no problems;

- 3、 抗干扰功能要求：不得存在非常影响主机 WIFI 吞吐量的问题，请确保连接遥控器时主机端 WIFI 吞吐量正常；

anti-jamming features require: there must be no problem with a very strong host WiFi throughput, make sure that the host side WiFi throughput is normal when the remote is connected;

- 4、性能要求：要求支持 $\leq 10m$ ，不得存在语音通话卡顿，丢失以及遥控器按键卡顿、丢码或连键等问题；

Performance requirements: Require support $\leq 10m$, there must be no voice calls Cotton, lost and the remote control button cotton, missing code or even key problems;

- 5、功耗要求：遥控器可持续使用至少 6 个月以上。

Power Requirements: Remote control can be used consistently for at least 6 months or more.

- 6、语音控制：

Speech Control:

- 1、按语音键开始录音，遥控器收到语音引擎下发的停止录音指令后停止录音；

Press the Voice key to start recording, the remote control receives the voice engine issued stop recording instructions after stop recording;

- 2、进入语音模式后，超过 30S 之后遥控器主动退出语音模式（此操作主要为了省电）。

After entering speech mode, the remote control actively quits speech mode after 30S (this is mainly to save power).

- 3、语音协议：google 标准；

Voice protocol:Google.

- 7、单载波

Single carrier

同时按住(Google play)+(上)两个按键后上电，进入单载波，中心频点：2440GHz；

Press and hold the (Google play) + (up) buttons at the same time, then power on, enter single carrier, center frequency: 2440GHz

- 8、遥控器需要支持 android 11 系统

- 12、FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation

is subject

to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received,

including

interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by

the party

responsible for compliance could void the user's authority to

operate the

equipment.

NOTE: This equipment has been tested and found to comply with

the

limits for a Class B digital device, pursuant to Part 15 of

the FCC Rules.

These limits are designed to provide reasonable protection

against

harmful interference in a residential installation. This

equipment

generates uses and can radiate radio frequency energy and, if

not

installed and used in accordance with the instructions, may

cause harmful

interference to radio communications. However, there is no guarantee

that interference will not occur in a particular installation. If this equipment

does cause harmful interference to radio or television reception, which

can be determined by turning the equipment off and on, the user is

encouraged to try to correct the interference by one or more of the

following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to

which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This product complies with the radio interference requirements of the European Community.

Product name: BT Remote

Product model: WH-7087_BLE

Manufacturer: Wuxi Weida Intelligent Electronics Co.,Ltd.

Frequency Range: 2.4GHZ-2.48GHZ,

Max. Transmit Power: BT5.0 : 1.35 dBm Max

SIMPLIFIED EU DECLARATION OF CONFORMITY

The simplified EU declaration of conformity referred to in Article 10(9) shall be provided as follows:

Hereby, Wuxi Weida Intelligent Electronics Co.,Ltd. declares that radio equipment type WH-7087_BLE is in compliance with Directive 2014/53/EU, and this product is allowed to be used in all EU member states.

The full text of the EU declaration of conformity is available at following

company website:<http://www.cnwddz.com>

This product can be used across EU member states.

EUT Operating temperature: -10~40°C

五、遥控器菲林图

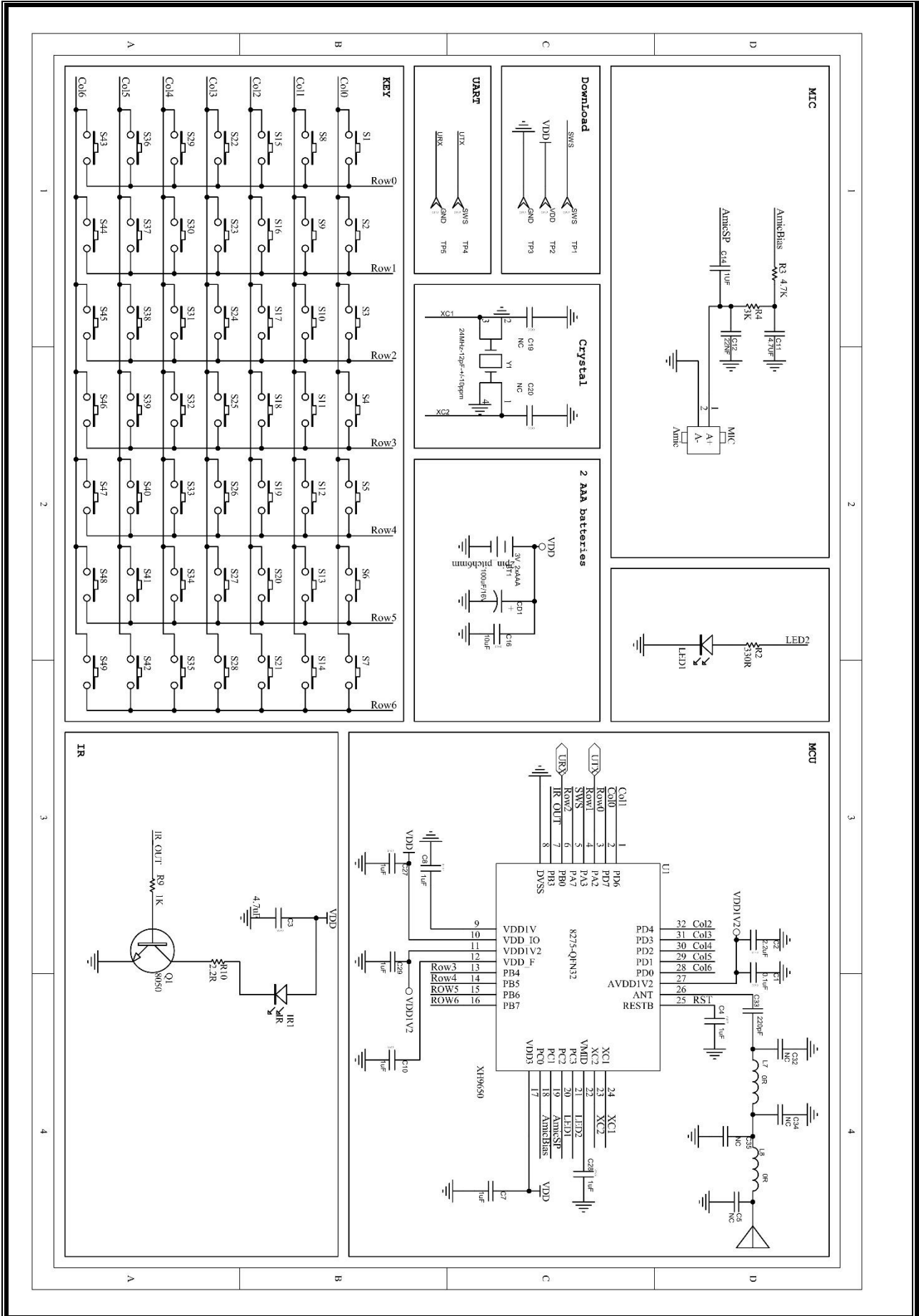
Schematic diagram of remote controller design

序号	变更内容	标识	日期	制定	审核
1	修改热键&语音键印刷大小		22.4.29	Nick	

尺寸范围	公差	无锡威达智能电子股份有限公司					
0-10mm	±0.03	客户	*	图名	WH-7087_BLE菲林图	图幅	A4
10-50mm	±0.05	品名	*	模号	-	单位	MM
50-100mm	±0.08	版本	A01	设计	Nick	日期	2022-02-10
100-150mm	±0.1	材质	-	审核		比例	1:1
150-200mm	±0.15	缩水	-	批准		张次	1/1
>200mm	±0.2	尺寸	-	路径			
角度	±1°						

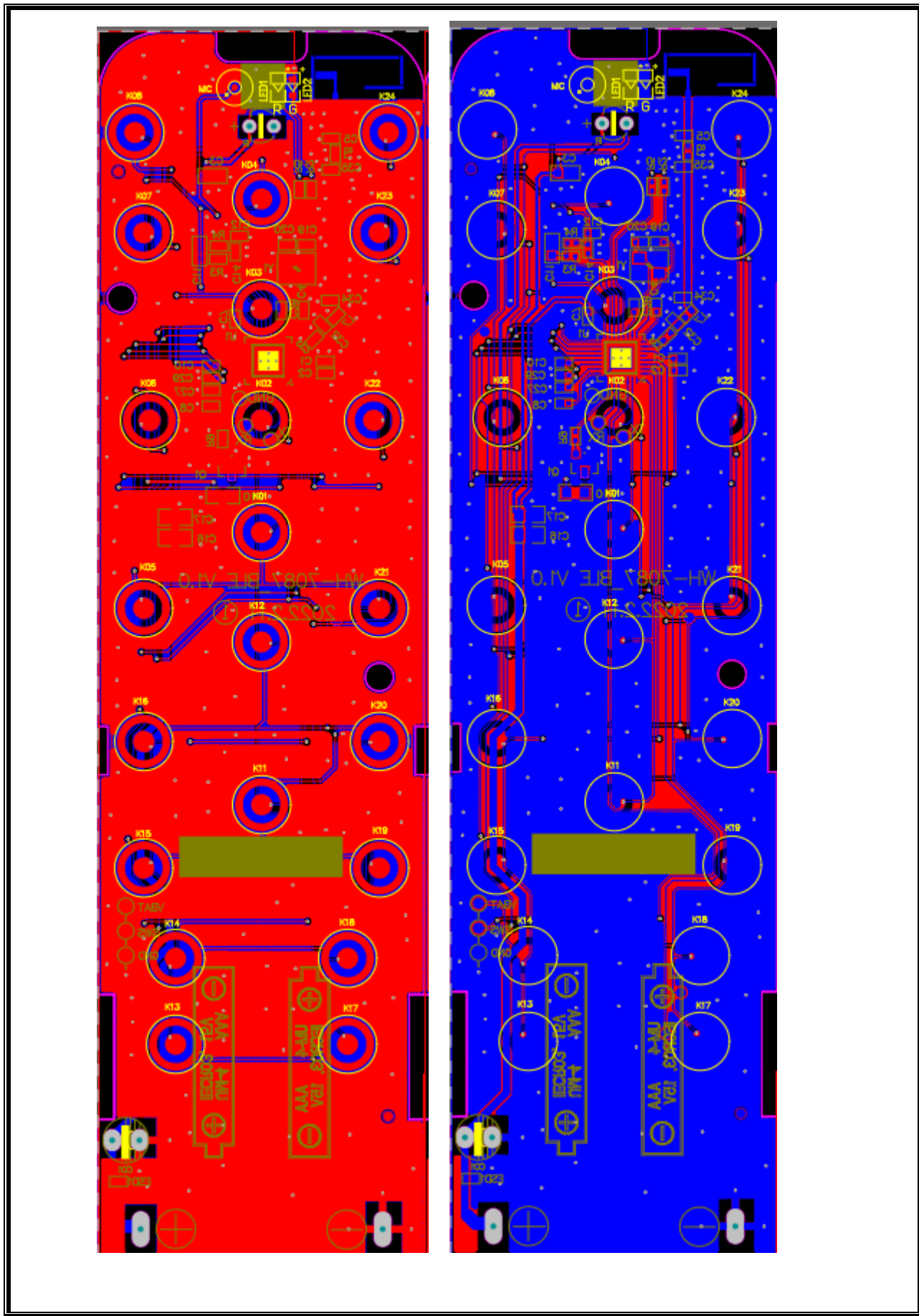
六、遥控器设计原理图

Schematic diagram of remote controller design



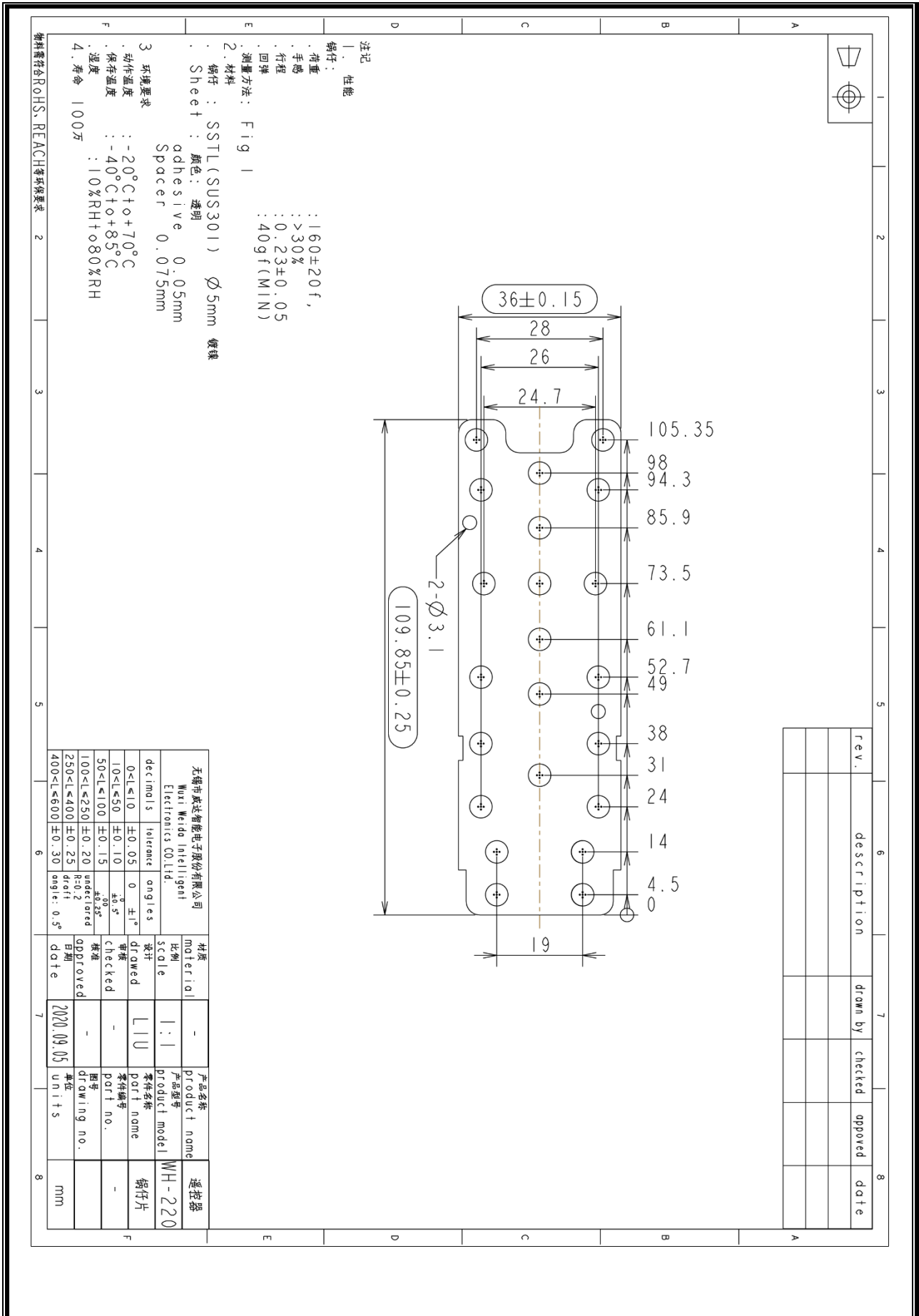
七、遥控器 PCB 图档

Remote control PCB picture file



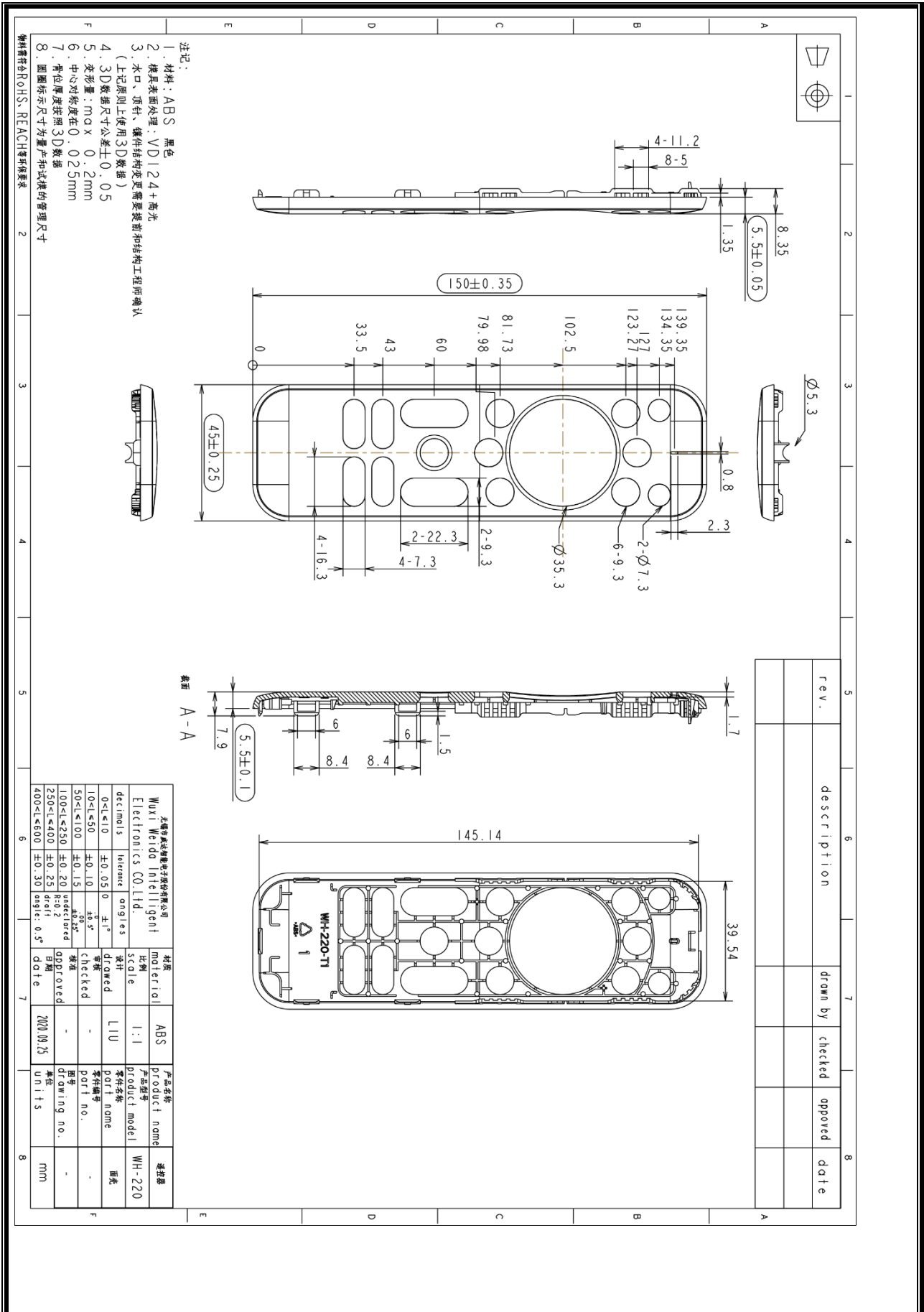
八、遥控器锅仔片图档

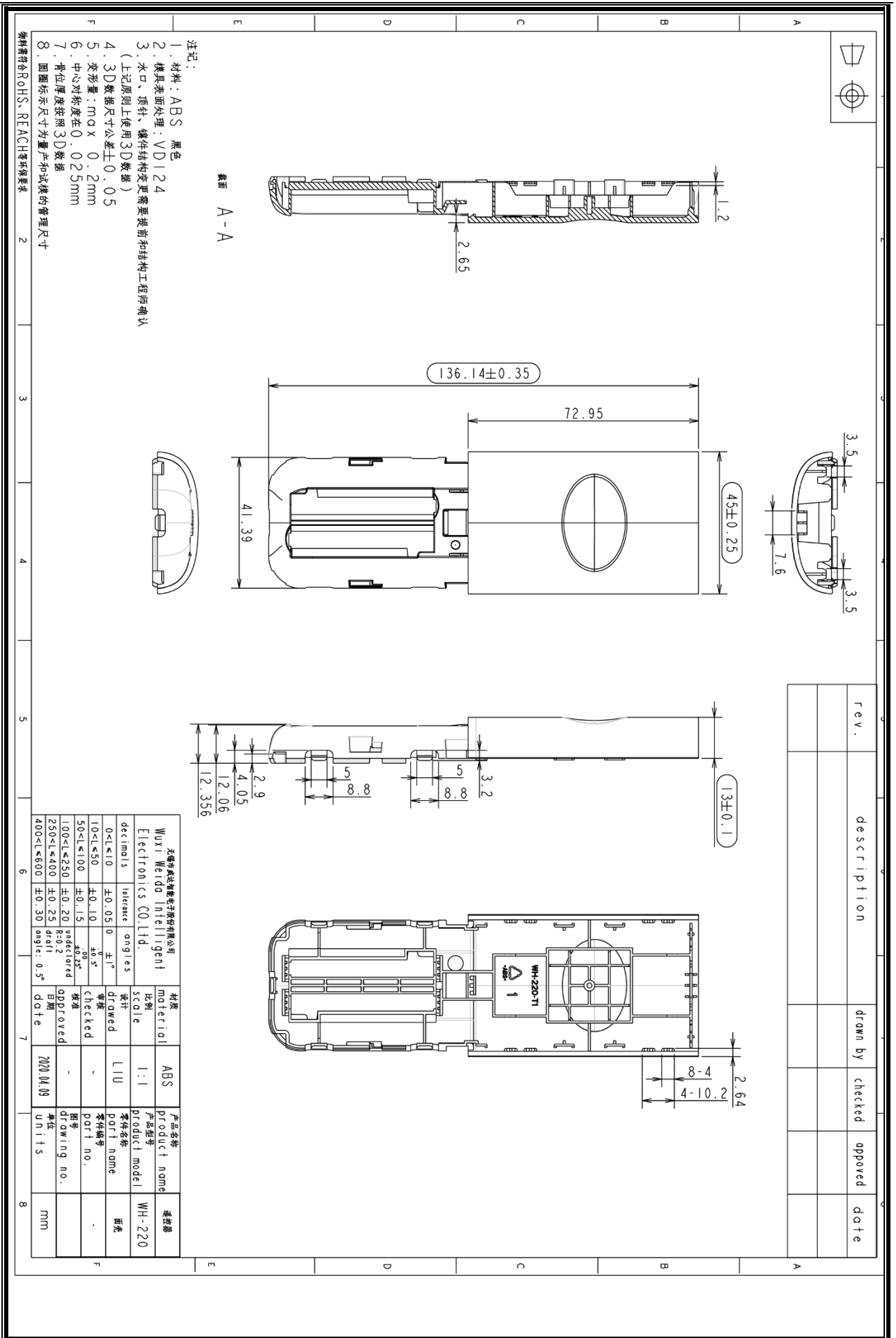
Remote control pot picture file

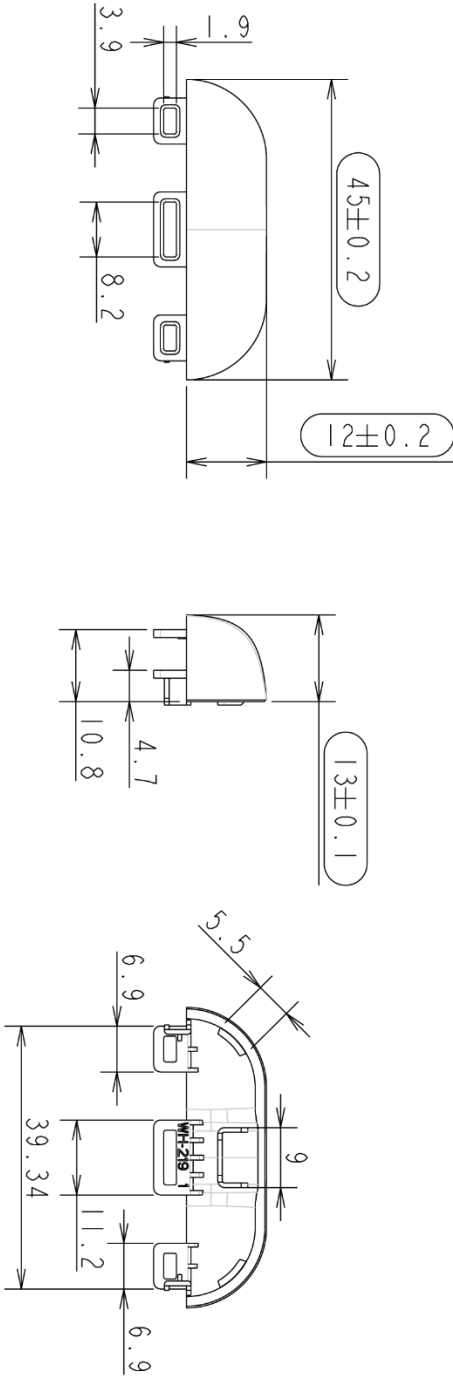


九、各部件尺寸图

Component size chart





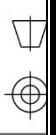


- 注记:
1. 材料: ABS 半透明
 2. 模具表面处理: 高光
 3. 水口、顶针、镶件结构变更需要提前和结构工程师确认
(上記原则上使用3D数据)
 4. 3D数据尺寸公差±0.05
 5. 变形量: max 0.2mm
 6. 中心对称度在0.025mm
 7. 骨位厚度按照3D数据
 8. 圆圈标示尺寸为量产和试模的管理尺寸

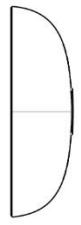
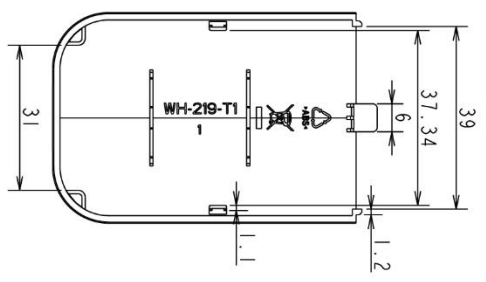
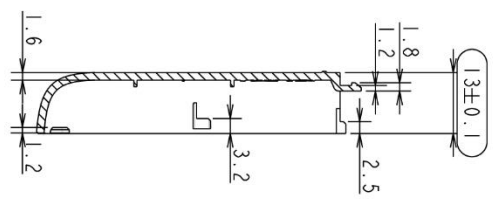
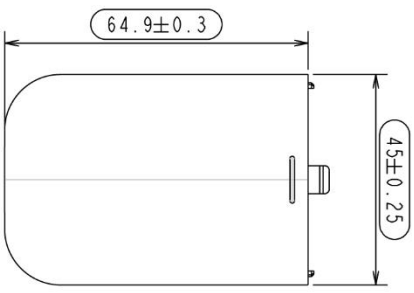
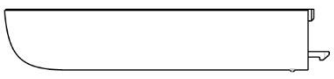
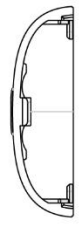
物料符合RoHS、REACH等环保要求

rev.	description	drawn by	checked	approved	date

无锡市威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics CO.,Ltd.		材料 material	ABS	产品名称 product name	遥控器 WH-219
decimals	tolerance	比例 scale	1:1	产品型号 product model	WH-219
0<L≤10	±0.05	设计 drawed	L11	零件名称 part name	镜片
10<L≤50	±0.10	审核 checked	-	零件编号 part no.	-
50<L≤100	±0.15	批准 approved	-	图号 drawing no.	-
100<L≤250	±0.20	日期 date	2020.09.25	单位 units	mm
250<L≤400	±0.25				
400<L≤600	±0.30				



REV.	DESCRIPTION	DRAWN BY	CHECKED	APPROVED	DATE

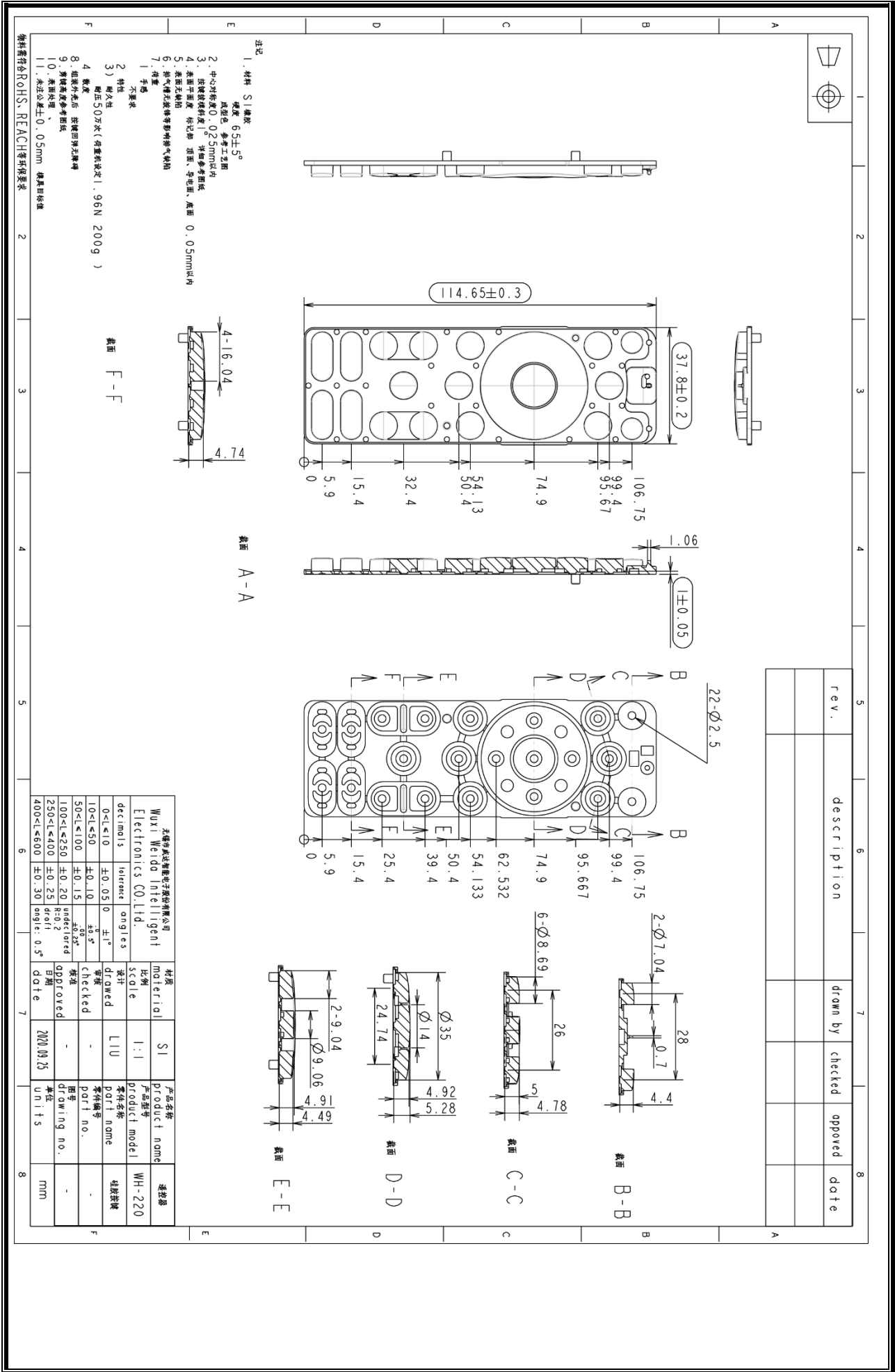


截面 A-A

- 注记:
1. 材料: ABS 黑色
 2. 模具表面处理: VD124
 3. 水口、顶针、镶件结构变更需要提前和结构工程师确认 (上記原則上使用3D数据)
 4. 3D数据尺寸公差±0.05
 5. 变形量: max 0.2mm
 6. 中心对称度在0.025mm
 7. 骨位厚度按照3D数据
 8. 圆面标示尺寸为量产和试模的管理尺寸

物料需符合ROHS、REACH等环保要求

无锡威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics Co., Ltd.		材料 material	ABS	产品名称 product name	连接器
decimals	tolerance	比例 scale	1:1	产品型号 product model	WH-219
0<L≤10	±0.05	设计 drawed	LIU	零件名称 part name	-
10<L≤50	±0.10	审核 checked	-	零件编号 part no.	-
50<L≤100	±0.15	标准 approved	-	图号 drawing no.	-
100<L≤250	±0.20	日期 date	2020.09.25	基型 units	mm
250<L≤400	±0.25				
400<L≤600	±0.30				
	angle: 0.5°				



		<p style="text-align: center;">线圈方向按图 并内凹0.3mm</p>							
<p>rev. description drawn by checked approved date</p>									
<p>无锡威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics CO.Ltd.</p>				材料 比例 scale	碳线钢 1:1	产品名称 product name	遥控器		
decimal	tolerance	angles	design	drawn	checked	part name			
0<L≤10	±0.05	0 ±1°							
10<L≤50	±0.10	±0.5°	审核						
50<L≤100	±0.15	±0.25°	标准						
100<L≤250	±0.20	undefinied	approved						
250<L≤400	±0.25	R=0.2	日期			图号 drawing no.			
400<L≤600	±0.30	angle: 0.5°	日期	2020.08.11		单位 units			
			date						

物料需符合ROHS、REACH等环保要求

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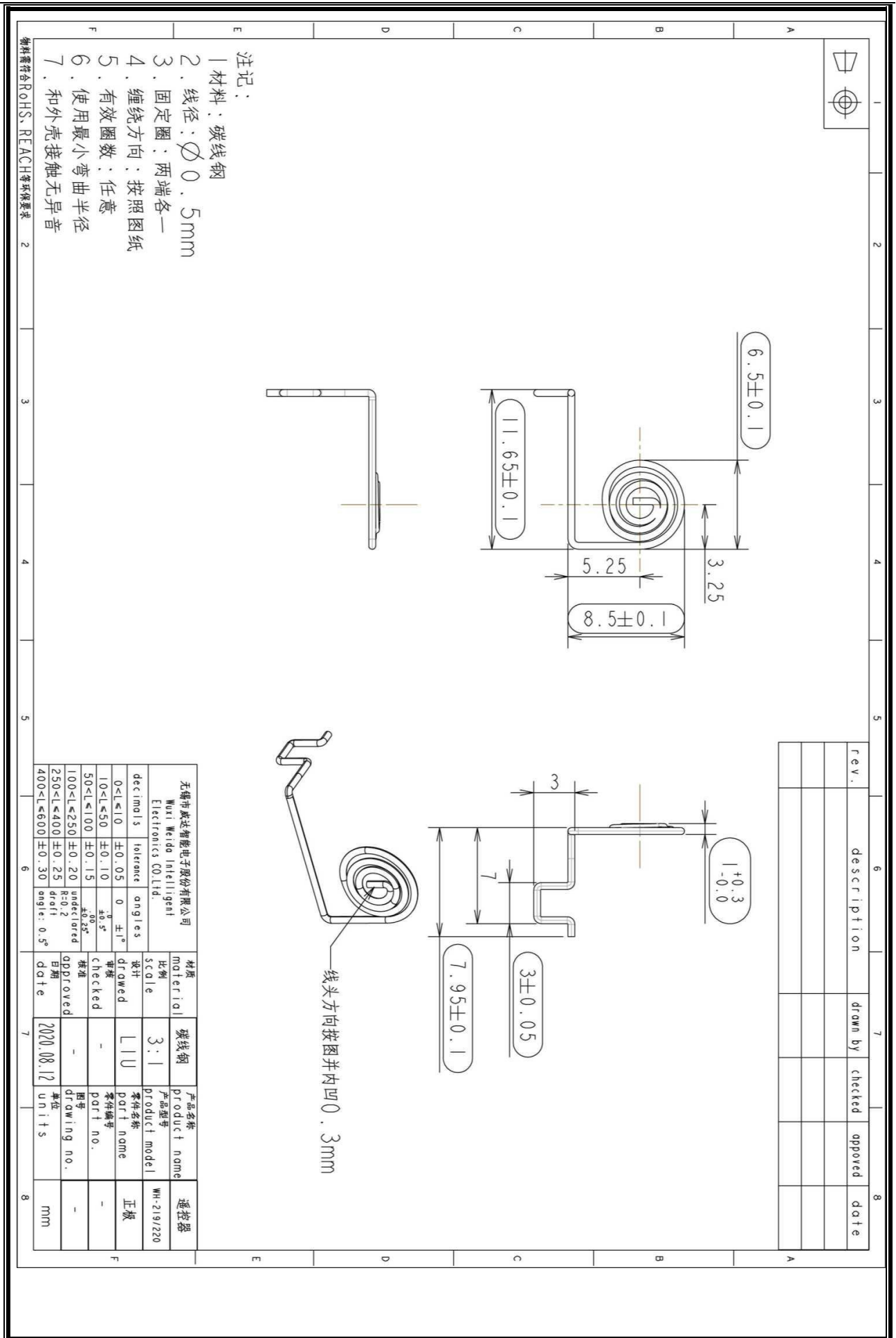
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<p>注记：</p> <ol style="list-style-type: none"> 1. 材料：碳线钢 2. 线径：$\varnothing 0.5\text{mm}$ 3. 固定圈：两端各一 4. 缠绕方向：按照图纸 5. 有效圈数：任意 6. 使用最小弯曲半径 7. 和外壳接触无异音 					<p>线头方向按图 并内凹 0.3mm</p>																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">无锡市威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics Co.,Ltd.</td> <td style="text-align: center;">材料 material</td> <td style="text-align: center;">碳线钢</td> <td style="text-align: center;">产品名称 product name</td> <td style="text-align: center;">遥控器</td> </tr> <tr> <td style="text-align: center;">decimal</td> <td style="text-align: center;">tolerance</td> <td style="text-align: center;">scale</td> <td style="text-align: center;">产品型号 product model</td> <td style="text-align: center;">WH-219/220</td> </tr> <tr> <td style="text-align: center;">0<L≤10</td> <td style="text-align: center;">±0.05</td> <td style="text-align: center;">3:1</td> <td style="text-align: center;">设计 drawn</td> <td style="text-align: center;">L11U</td> </tr> <tr> <td style="text-align: center;">10<L≤50</td> <td style="text-align: center;">±0.10</td> <td style="text-align: center;">0 ±1°</td> <td style="text-align: center;">审核 checked</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">50<L≤100</td> <td style="text-align: center;">±0.15</td> <td style="text-align: center;">±0.5°</td> <td style="text-align: center;">批准 approved</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">100<L≤250</td> <td style="text-align: center;">±0.20</td> <td style="text-align: center;">±0.005°</td> <td style="text-align: center;">日期 date</td> <td style="text-align: center;">2020.08.12</td> </tr> <tr> <td style="text-align: center;">250<L≤400</td> <td style="text-align: center;">±0.25</td> <td style="text-align: center;">undecleared</td> <td style="text-align: center;">图号 drawing no.</td> <td style="text-align: center;">-</td> </tr> <tr> <td style="text-align: center;">400<L≤600</td> <td style="text-align: center;">±0.30</td> <td style="text-align: center;">angle: 0.5°</td> <td style="text-align: center;">单位 units</td> <td style="text-align: center;">mm</td> </tr> </table>					无锡市威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics Co.,Ltd.	材料 material	碳线钢	产品名称 product name	遥控器	decimal	tolerance	scale	产品型号 product model	WH-219/220	0<L≤10	±0.05	3:1	设计 drawn	L11U	10<L≤50	±0.10	0 ±1°	审核 checked	-	50<L≤100	±0.15	±0.5°	批准 approved	-	100<L≤250	±0.20	±0.005°	日期 date	2020.08.12	250<L≤400	±0.25	undecleared	图号 drawing no.	-	400<L≤600	±0.30	angle: 0.5°	单位 units	mm					
无锡市威达智能电子股份有限公司 Wuxi Weida Intelligent Electronics Co.,Ltd.	材料 material	碳线钢	产品名称 product name	遥控器																																													
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400<L≤600	±0.30	angle: 0.5°	单位 units	mm																																													
<p>物料符合 RoHS, REACH 等环保要求</p>																																																	




十、遥控器包装示意图

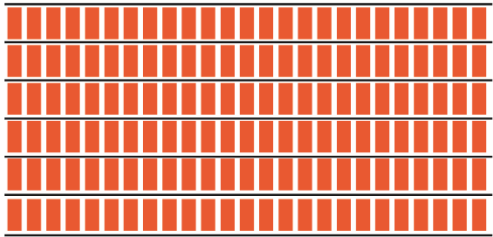
Schematic diagram of remote control package

H	G	F	E	D	C	B	A
			序号	变更内容	标识	日期	制定
							审核
1							1

1.将测试好的完整遥控器放入透明PE包装袋中。

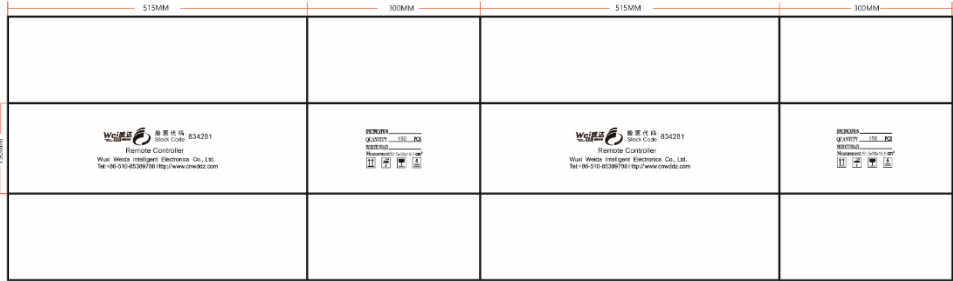


2.将包装好的遥控器放入包装箱中，每排25只，共6排，总计150PCS/箱。



黄色区域为摆放区域。

3.待整箱装完150只遥控器后，盖上衬板（格挡上下各1个），并用胶带封箱，贴上用户出货贴纸。



尺寸范围	公差	无锡威达智能电子股份有限公司					
0-10mm	±0.03	客户	*	图名	WH-7087装箱图	图幅	A4
10-50mm	±0.05	品名	*	模号	-	单位	MM
50-100mm	±0.08	版本	A00	设计	Nick	日期	2022-02-10
100-150mm	±0.1	材质	-	审核		比例	1:1
150-200mm	±0.15	缩水	-	批准		张次	1/1
>200mm	±0.2	尺寸	-	路径			
角度	±1°						

H	G	F	E	D	C	B	A
8							8