



深圳市金芯微电子有限公司

SHENZHEN GOLDICWELL ELECTRONIC CO.,LTD.

产品规格书

Product specification

产品名称 Model Name	JDB 控制板
型号规格 Specification	XHWL-JDB-DC
产品编码 Product Code	
文件版本 File Version	V1.2
生效日期 Effective Date	2023-02-14

客户 Customer:

审核 Checked _____ 日期 Date _____

批准 Approved _____ 盖章 Stamp _____

制造商 Manufacturers: 深圳市金芯微电子有限公司

审核 Checked 林伟京 日期 Date 2023-02-14

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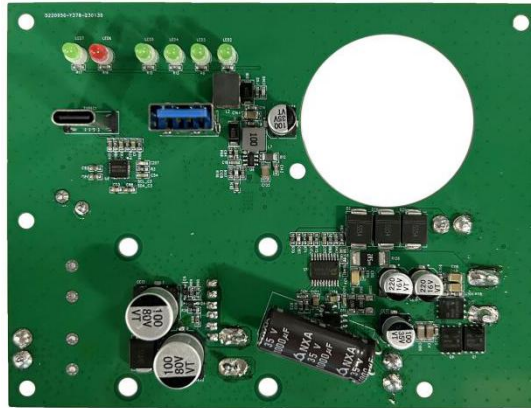
更新履历 Update history

序号 No.	版本 Version	日期 Date	更新说明 Updated instructions
1	V1.0	2022-08-03	制定 Initial release
2	V1.1	2022-12-10	客户认证要求更改降低点烟器输出电压 Customer certification requires change to reduce cigarette lighter output voltage
3	V1.2	2023-02-14	改善铜柱短路和移动电感位置 Improve short circuit and move inductance position of copper column



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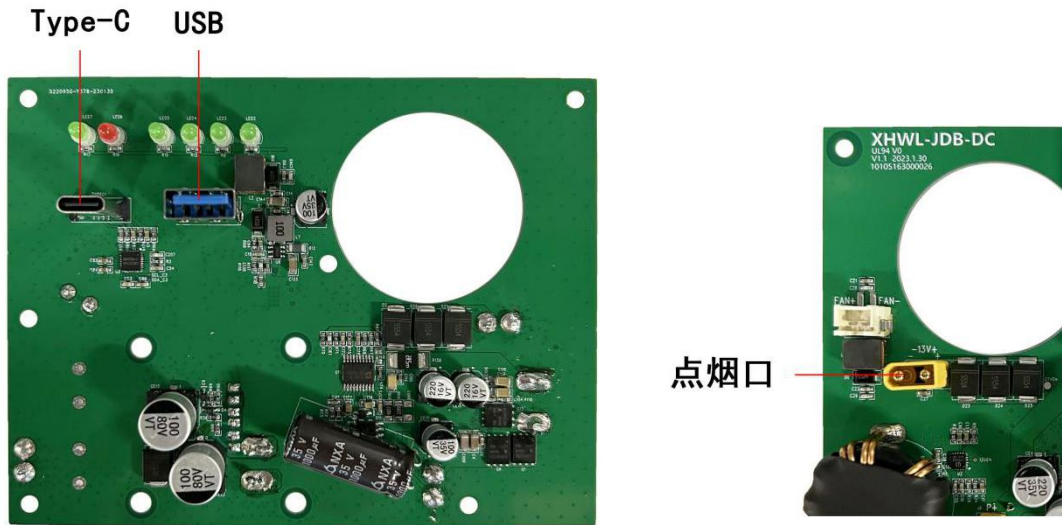
1. 产品描述 The product description

类别 Category	项目 Project	规格要求 Specifications	备注 Note
电池组 The battery pack	电芯组合方式 Combination mode of cell	16S	
	电池规格 The battery specification	标称电压: 51.8V, 充满电压: 58.8V Nominal voltage: 51.8V, full voltage: 58.8V	
输出功能 Output function	USB	支持 QC2.0/3.0 Support QC2.0/3.0 5V@3A, 9V@2.5A, 12V@2A	
	TYPE-C	支持 PD 快充协议 (PD2.0/3.0) Support PD Fast Charging protocol (PD2.0/3.0) 5V@3A, 9V@3A, 12V@3A, 15V@3A, 20V@3A/20V@5A	单向, 100W One-way, 100W
	点烟口放电 Smoke outlet discharges	12V10A 120W	

1.1 基本性能 Basic performance

项目 Project	备注 Note
电量指示功能 Electric quantity indicator function	充满电后电量显示 100% The power display is 100% after being fully charged
板端转换效率 Board end conversion efficiency	TYPE C 及 USB 最大效率 95% The maximum efficiency of TYPE C and USB is 95%
温度、湿度范围 Temperature and humidity range	存储: 0~25℃ 1 年; -10~45℃ 3 个月, -20~60℃ 1 个月; 湿度范围: 小于 75%RH Storage: 0 ~ 25℃ for 1 year; -10 ~ 45℃ 3 months, -20 ~ 60℃ 1 month; Humidity range: less than 75%RH
尺寸 size	122*93*33mm

1.2 各端口输出参数 Port output parameters



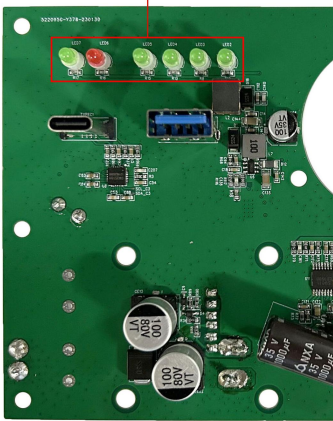
序号 No.	测试项目 Test project	测试内容 The test content	判定标准 Decision criteria	
1	点烟口输出端口 (板端) 12V Smoke port output port(The plate end)	输出电压 Output voltage	11.60V-13.30V	
		标准功率 Standard power	120W(12V10A)	超功率时显示报警 Display alarm when overpower
		过流点 Point of flow	10.3 -11.3A	超功率显示报警并关闭输出 Overpower display alarm and turn off output
2	USB 5V@3A (板端) (The plate end)	输出电压 Output voltage	4.75V-5.25V	Apple2.4A USB-DCP-5V-1.5A QC2-9V-12V QC3.0 Samsung-AFC-9V-12V Huawei-FCP-9V-2A Huawei-SCP-4.5V-5A
		输出过流 Output flow	3.1—3.6A	
	USB 9V@2.5A (板端) (The plate end)	输出电压 Output voltage	8.55V-9.45V	
		输出过流 Output flow	2.7—3.2A	
	USB 12V@2A (板端) (The plate end)	输出电压 Output voltage	11.40V-12.60V	
		输出过流 Output flow	2.1—2.6A	
3	TYPE C 5V@3A (板端) (The plate end)	输出电压 Output voltage	4.75V-5.25V	PD2.0 PD3.0 PPS
		输出过流 Output flow	3.1—4.2A	Apple2.4A Samsung-5V-2A
	TYPE C 9V@3A (板端) (The plate end)	输出电压 Output voltage	8.55V-9.45V	USB-DCP-5V-1.5A QC2-9V-12V-20V QC3.0
		输出过流 Output flow	3.1—4.2A	Samsung-AFC-9V-12V Huawei-FCP-9V-2A



TYPE C 12V@3A (板端) (The plate end)	输出电压 Output voltage	11.40V-12.60V	Huawei-SCP-4.5V-5A
	输出过流 Output flow	3.1—4.2A	
TYPE C 15V@3A (板端) (The plate end)	输出电压 Output voltage	14.25V-15.75V	
	输出过流 Output flow	3.1—4.2A	
TYPE C 20V@5A (板端) (The plate end)	输出电压 Output voltage	19.00-21.00V	
	输出过流 Output flow	5.1—6.1A(E-mark 线) (E - mark line)	
TYPE C (板端) (The plate end)	PPS 电压 PPS voltage	3.3-21.0V	
	输出电流 Output current	3A	

1.3 端口定义 Port definitions

电量指示灯



指示灯端口 风扇

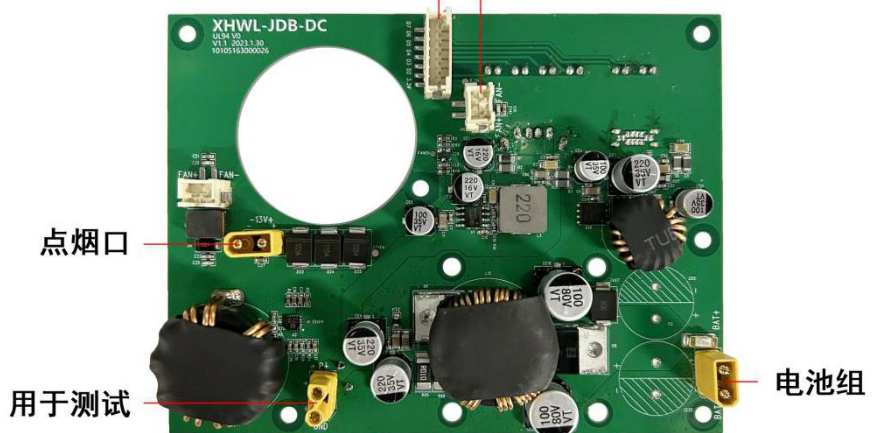


图 Figure	位号 A no.	端口说明 The port that
	LED2 LED3 LED4 LED5 LED6 LED7	指示灯 (如图, 从右往左) Indicator LED (as shown, from right to left) p1-LED2 : 25%电量显示 Power display p2-LED3 : 50%电量显示 p3-LED4 : 75%电量显示 p4-LED5 : 100%电量显示 p5-LED6 : 故障告警灯 Trouble warning lights p6-LED7 : 运行指示灯 Running indicator light
	J1	指示灯端口 (如图, 从右往左) Indicator LED port (as shown, from right to left) p1-3.3V : LED 正极供电 LED positive terminal power supply



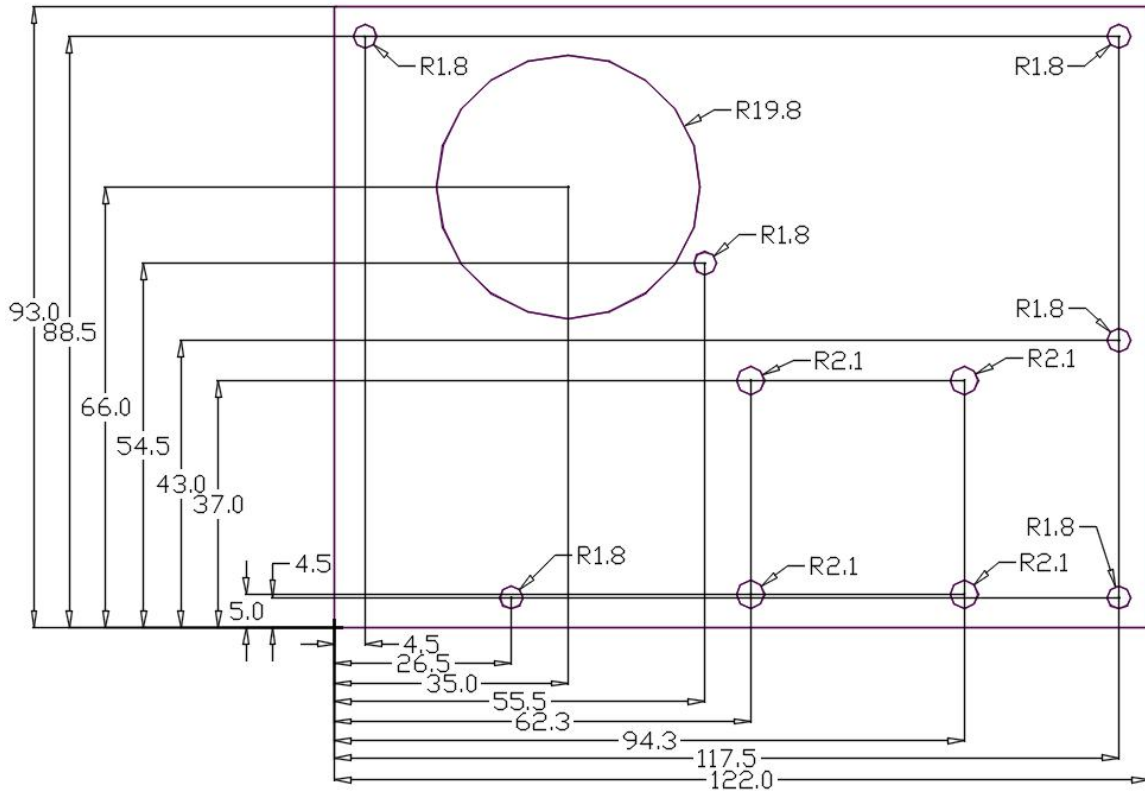
		<p>p2-D2 : 25%电量显示 Power display p3-D3 : 50%电量显示 p4-D4 : 75%电量显示 p5-D5 : 100%电量显示 p6-D6 : 运行指示灯 Running indicator light p6-D7 : 故障告警灯 Trouble warning lights</p>
<p>负极  正极</p>	J10 J3	<p>风扇端口 (如图, 从左往右依次) Fan ports (as shown, from left to right) p1-FAN- p2-FAN+</p>
<p>正极  负极</p>	J11	<p>点烟器端口 (如图, 从左往右依次) Cigarette lighter port (as shown, from left to right) p1-12V+ p2-12V-</p>
<p>正极  负极</p>	/	<p>电池组端口 (如图, 从左往右依次) The battery pack port (as shown, from left to right) p1-BAT+ p2-BAT-</p>

2. 工作环境参数 Working environment parameters

项目 Project	最小值 Min	标准 Standard	最大值 Max	备注 Note
工作温度 Working temperature	-10℃	---	40℃	产品正常工作的环境温度 Ambient temperature at which the product works normally
存储温度 Storage temperature	-20℃	---	70℃	产品不工作在存储温度范围内, 适用于存储 The product does not work in the storage temperature range, suitable for storage
工作湿度 Working humidity	0%	---	65%	产品正常工作的环境湿度 Ambient humidity for normal operation of the product
存储湿度 Store humidity	0%	---	70%	产品不工作在存储湿度范围内, 适用于存储 The product does not work in the storage humidity range, suitable for storage

3. 图 Figure

3.1 安装孔及 PCB 尺寸 Mounting hole and PCB size



尺寸:长(122mm)*宽(93mm)
Size: L (122mm)* W (93mm)

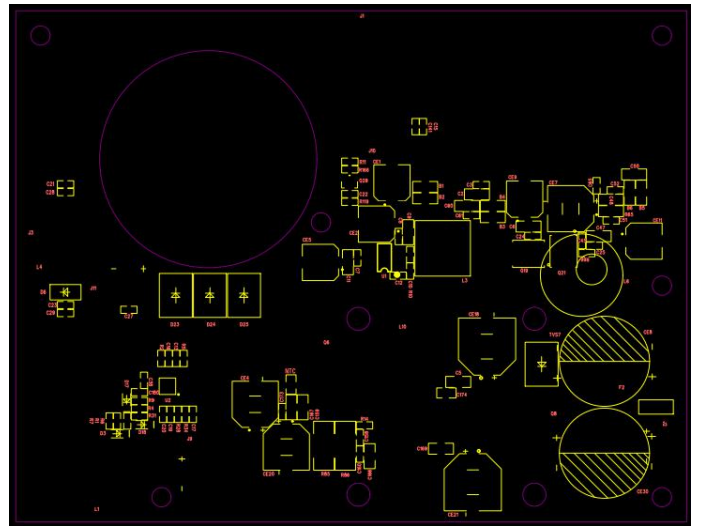
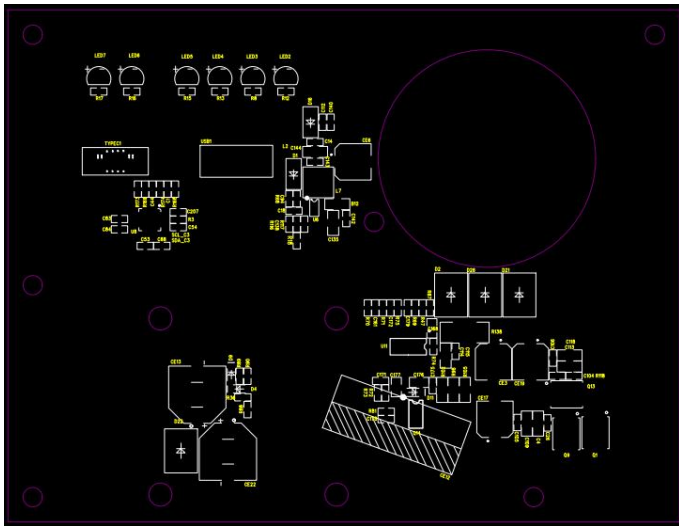
3.2 元器件丝印图 Silkscreen of components

顶层丝印图

Top screen printing

底层丝印图

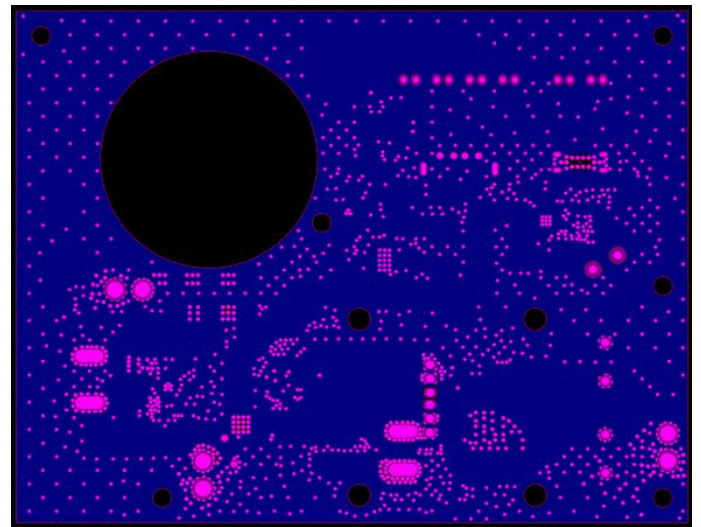
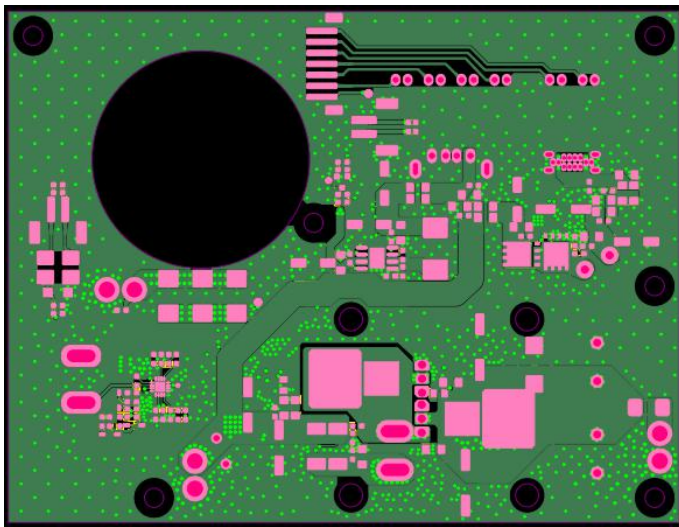
Bottom screen printing



3.3 布线图 Wiring diagram

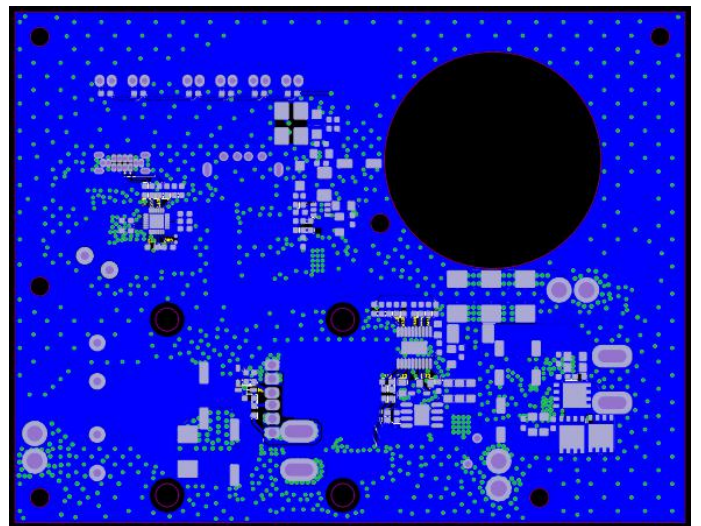
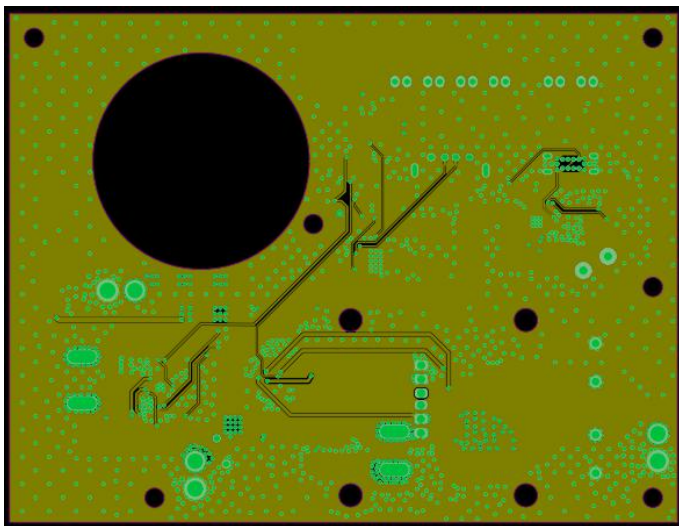
1 层
1 layer

2 层
2 layer



3 层
3 layer

4 层
4 layer



4. 包装规格 Packing specification

外箱尺寸: 521mm*360mm*236mm

Outer box size: 521mm*360mm*236mm

箱内刀卡尺寸: 长刀卡 511mm*220mm /短刀卡 350mm*220mm

Knife card size: long card 511mm*220mm/short card 350mm*220mm

材质: K636K

Material: K636K

包装方式: 一箱装 24 个, 每个板子气泡袋包裹, 刀卡隔开

The packing way: box of 24, each board wrapped in bubble bags, separated by knife cards