

深圳市锐斯达电子有限公司

# 物料样品承认书

## SPECIFICATION FOR APPROVAL

客户名称 ( customer name ) :

客户型号 (customer model) :

# 聚合物保护板

锐斯达物料型号 (Restar material model): RSD-4045

物料配置 (Material configuration) :

DWO1\*8205A (双8脚MOS)

送样日期 (Deliver date) :

2018-12-15

锐斯达内部确认 Restarte internal confirmation			
工程确认 Project confirmation	品质确认 Quality confirmation	市场确认 market to confirm	审批 examination approval
高飞	洪庆龙	李敬	
客户确认 Our client's confirmation			
工程确认 Project confirmation	品质确认 Quality confirmation	采购确认 Purchase confirmation	审批 Purchase confirmation
确认结果 Verify the results: 合格 qualified (       )    不合格 unqualified (       ) 其它 other (       )			

公司名称:

## 1 概述 overview

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本承认书描述了由深圳市锐斯达电子有限公司生产的手机锂电池保护线路的应用范围，工艺标准，电性能参数，主要材料，尺寸规格，检测标准等项目的相关内容。本承认书所描述的所有项目标准可作为品质检验标准及依据。

This letter of admission describes the application scope, process standard, electrical performance parameters, main materials, size specifications, testing standards and other related items of lithium battery protection circuit for mobile phones produced by ruisda electronics co., LTD. Shenzhen.All project standards described in this form may be used as quality inspection standards and basis.

## 2 产品应用范围 Product application scope

2.1 液态锂离子可充电电池；Liquid lithium ion rechargeable battery;

2.2 聚合物锂离子可充电电池。Polymer lithium ion rechargeable battery.

## 3 产品外观及工艺指标 Product appearance and process index

序号	项目 project		检验方法 Inspection methods	检验标准 Inspection standard
3.1	产 品 外 观 Product appearance		目视 visual	保护板外观应达到以下要求：布线合理，元件排列整齐，各焊盘及焊接点无氧化、色泽异常，元件及 PCB 板表面干净，无污渍，不影响其商业价值。The appearance of the protection board shall meet the following requirements: reasonable wiring, orderly arrangement of components, no oxidation of each welding plate and welding point, abnormal color and luster, clean surface of components and PCB board, no stains, and shall not affect its commercial value.
3.2	产 品 工 艺	焊接工艺 Welding process	目视，借助放大镜 Look, with a magnifying glass	焊点圆滑，焊接牢固可靠，无假焊、虚焊、毛刺等焊接缺陷。The welding spot is round and smooth, the welding is firm and reliable, no false welding, false welding, burr and other welding defects.
		板材材质 Plate material		●玻纤双面 Glass fiber double □玻纤单面 Fiberglass single □普通单面 Ordinary single □其它 other
		PCB 镀层工艺 PCB coating process		□厚金 Thick gold □钴金 Cobalt gold●喷锡 Tin spray □ 沉金 turmeric □喷无铅锡 Lead-free tin spray□其它 other
		成品板焊接工艺 Welding technology of finished product plate		●普通锡 Ordinary tin □环保无铅锡 Environmentally friendly lead-free tin □环 保 无 卤 锡 Environmentally friendly halogen-free tin □其它 other

## 4 产品电气性能指标

序号	项目 project	符号 symbol	检验方法及设备 Inspection methods	检验标准 acceptance standard			单位
				最小值	典型值	最大值	

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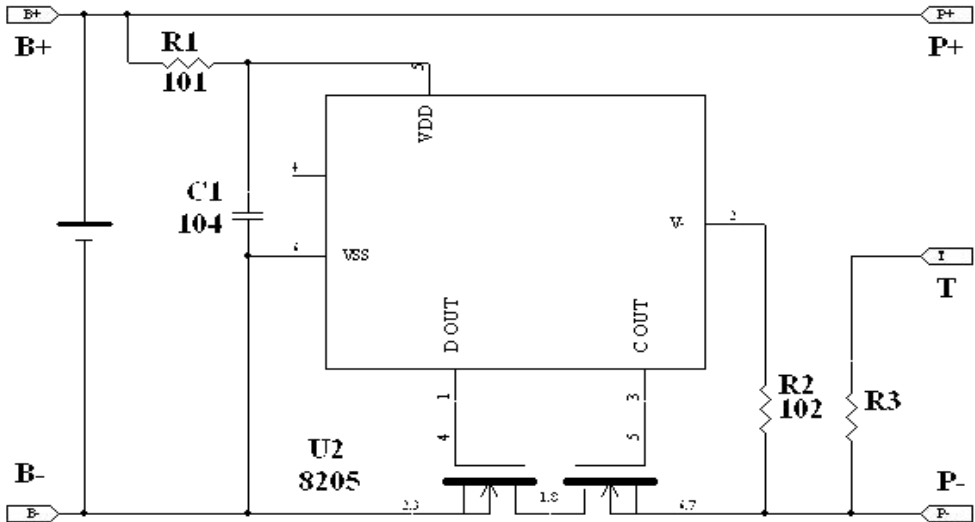
4.1	过充保护 Overcharge protection	过充电检测电压 Overcharge detection voltage	$V_{CU}$	锂电保护板测试仪 Lithium protective plate tester	4.25	4.30	4.35	V
		过充电检测延迟时间 Overcharge detection delay time	$V_{CU}$	锂电保护板测试仪 Lithium protective plate tester		110		ms
		过充电解除电压 Overcharge release voltage	$V_{CL}$	锂电保护板测试仪 Lithium protective plate tester	4.05	4.10	4.15	V
4.2	过放保护 Overplay protection	过放电检测电压 Overdischarge detection voltage	$V_{DL}$	锂电保护板测试仪 Lithium protective plate tester	2.425	2.5	2.575	V
		过放电检测延迟时间 Overdischarge detection delay time	$T_{DL}$	锂电保护板测试仪 Lithium protective plate tester		55		ms
		过放解除电压 Overdischarge release voltage	$V_{DR}$	锂电保护板测试仪 Lithium protective plate tester	2.825	2.9	2.975	V
4.3	过流保护 Overcurrent protection	过电流检测电压 Overcurrent detection voltage	$V_{CHA}$	锂电保护板测试仪 Lithium protective plate tester		0.15		V
		过电流保护电流 Overcurrent protection current	$I_{IOV1}$	锂电保护板测试仪 Lithium protective plate tester	2.0	3.0	6.0	A
		检测延迟时间 Detection delay time	$T_{IOV1}$	锂电保护板测试仪 Lithium protective plate tester		7.0		ms
4.4	短路保护 Short circuit protection	检测延迟时间 Detection delay time	$T_{SHORT}$	锂电保护板测试仪 Lithium protective plate tester	200	400	600	$\mu S$
		保护解除条件 Protection release condition		万用表 multimeter	断开外部短路负载或充电恢复 Disconnect external short circuit load or recharge recovery			
4.5	内阻 Internal resistance	主回路通态电阻 Main circuit on-state resistance	$R_{DS}$	锂电保护板测试仪 Lithium protective plate tester		45		m $\Omega$
4.6	消耗电流 Current consumption	通常工作时消耗电流 Current is normally consumed during operation	$I_{OPE}$	锂电保护板测试仪 Lithium protective plate tester		2.0	6.0	$\mu A$

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4.7	静态电流 static current	休眠时消耗电流 Current is consumed while dormant	$I_{PDN}$	锂电保护板测试仪 Lithium protective plate tester	0.7	1.0	$\mu A$
4.8	电阻 resistance	T1 端电阻值 resistance value	T1	万用表 multimeter	10K		$\Omega$

注：以上测试环境均为 25℃所测出的值,非常温下可能有所不同,该电路的工作温度范围为-40--85℃,具体测试条件及测试电路请参照保护 IC 之规格书。Note: the above test environment are measured values by 25 ℃, under very warm may be different, the circuit of the working temperature range for - 40-85 ℃, the specific test conditions and test circuit, please refer to protect IC specification.

## 5 典型应用原理图 Typical application schematic diagram



## 6 电路元件清单 Circuit component list

序号	物料名称 name of the material	物料代号 material code	物料规格 Material specifications	用量 dosage	厂商/备注 Manufacturer/remark
1	保护 ICprotect the IC	U1	DW01V /SOT-23-6	1	富满
2	MOSFET	U2/U3	8205A /TSSOP-8	2	蓝箭
3	贴片电阻 Patch resistance	R1	100 $\Omega$ $\pm$ 5%/0603	1	
4	贴片电阻 Patch resistance	R2	1K $\Omega$ $\pm$ 5%/0603	1	
5	贴片电阻 Patch resistance	R3	10K NTC $\pm$ 5%/0603	1	
5	贴片电容	C1	0.1 $\mu F$ /-20%/+80%/16V/0402	1	

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	patch capacitance				
6	钢片 Sheet steel	B+ /B-	7*3*0.3	2	
7	印制电路板 printed-circuit board	PCB	RSD-4045	1	禎麟

## 7 顶层线路板元件位置图 Top layer circuit board component location diagram



顶层线路图 Top floor circuit diagram



底层焊盘图 Drawing of bottom welding plate



底层线路图 Underlying circuit diagram



## 8 PCB 尺寸图 Size chart : Length \* width \* height 长度\*宽度\*高度=45 (+/-0.1) \*4.0 (+/-0.075) \*0.6 (+/-0.1) mm

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