

Protection Circuit Datasheet

1. Outline 综述

The specification is suitable 1S lithium ion battery protection circuit manufactured by LiPol Battery Co. LTD.

2. Application 应用范围

Lithium-ion rechargeable battery packs & Lithium-ion polymer battery packs

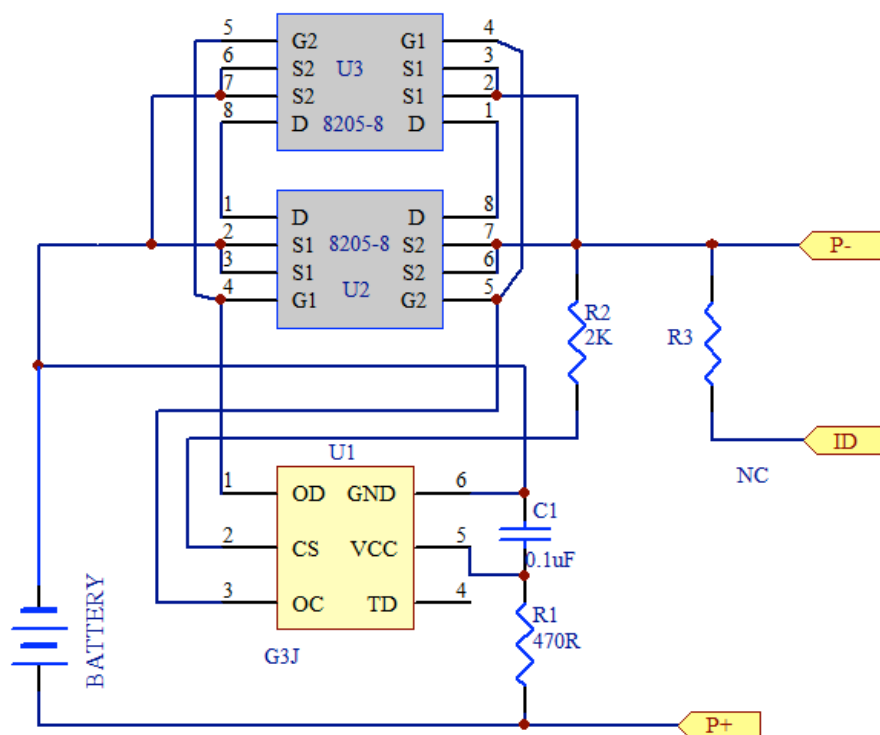
3. Electrical Characteristics 电气特征

Item 项目	Symbol 符号	Content 详细内容	Criterion 标准
Over charge Protection 过充保护	V_{DET1}	Over charge detection voltage 过充电检测电压	4.28±0.05V
	tV_{DET1}	Over charge detection delay time 过充电检测延迟时间	1000–1300ms
	V_{REL1}	Over charge release voltage 过充电解除电压	4.08±0.10V
Over discharge protection 过放保护	V_{DET2}	Over discharge detection voltage 过放电检测电压	2.8V±0.1V
	tV_{DET2}	Over discharge detection delay time 过放电检测延迟时间	80–130ms
	V_{DEL1}	Release condition 保护解除条件	充电激活
Over current protection 过流保护	V_{DET3}	Over current detection voltage 过电流检测电压	100±20mV
	I_{DP}	Transient overcurrent protection 瞬间过电流保护	1.8–4A
	tV_{DET3}	Continuous working current 持续工作电流	≤2.0A
		Release condition 保护解除条件	移除负载
Short protection 短路保护		Detection condition 保护条件	Exterior short circuit 外部电路短路
	T_{SHORT}	Detection delay time 检测延迟时间	100–400us
		Release condition 保护解除条件	Cut short circuit 断开短路电路
Interior resistance 内阻	R_{DS}	Main loop electrify resistance 主回路通态电阻	$R_{DS} \leq 60m\Omega$
Current consumption 消耗电流	I_{DD}	Current consume in normal operation 工作时电路内部消耗	7.0μA Max
0V Battery Charge Function 0V充电功能	V_{0CH}	Available 允许	

4. Material List 元件清单

NO.	Location 元件编号	Part name 元件名称	Specification 元件规格	Pack type 封装式	Qty 数量	Supplier
1	U1	Battery protection IC	S-8261ABMMD-G3MT2x	SOT-23-6	1	ABLIC
2	U2	Silicon MOSFET	8205	TSSOP8	2	
3	R1	Resistance	SMD 470Ω±5%	0603	1	华新科
4	R2	Resistance	SMD 2KΩ±5%	0603	1	华新科
5	R3	Resistance	NC			
6	C1	Capacitance	SMD 0.1μF	0603	1	国巨
7	B+	Nickel sheet	7*3*0.3	Square	1	德源
	B-	Nickel sheet	7*3*0.3	Square	1	德源
8	PCB	Print circuit board	25*3.95 *0.6无铅绿油,	LTD	1	路通达
			板宽-0.10mm, 板长±0.12mm, 板厚+0.1			

5. Protection Circuit Schematic Diagram



4. PCB Layout 线路板元件位置图

