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Approve of Sample

Customer				Part No.	2S-2004-D
Date of Sample		2013-11-19			
Edition	01	Page	4	File number	
Checked by			Approved by		Made by
					HKN
Material number					
Customer confirm					
Advice confirm:					
Certificate:					
Date:					

Contents

1. Outline

This specification is suitable for **2-cell** Lithium ion Battery Protection Circuit manufactured by KEEPOWER TECHNOLOGY CO., LIMITED.

2. Application

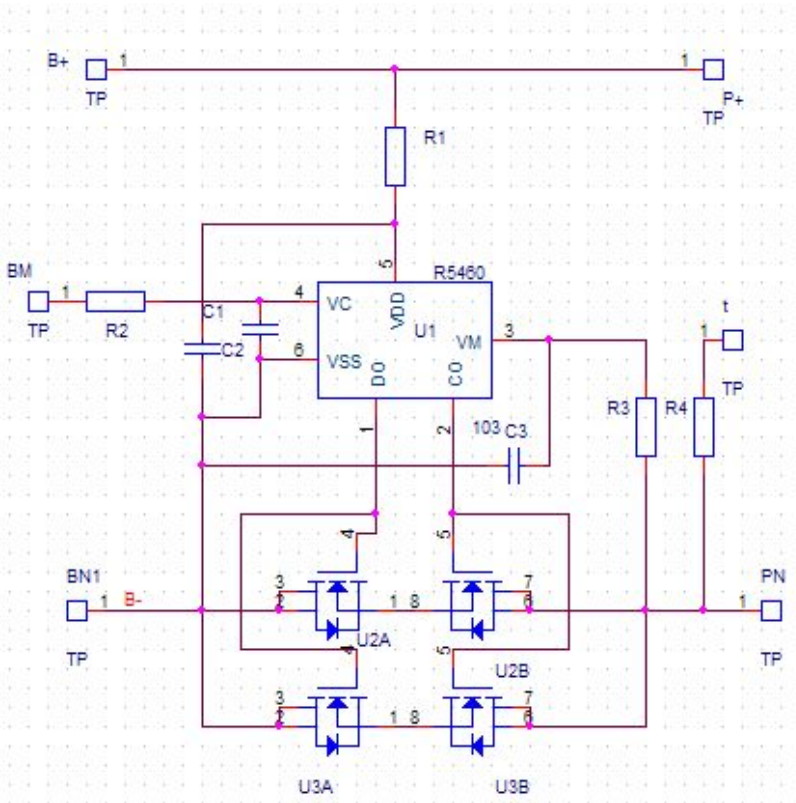
- (1) Lithium-ion rechargeable battery packs
- (2) Lithium-ion polymer battery packs

3. Electrical characteristics

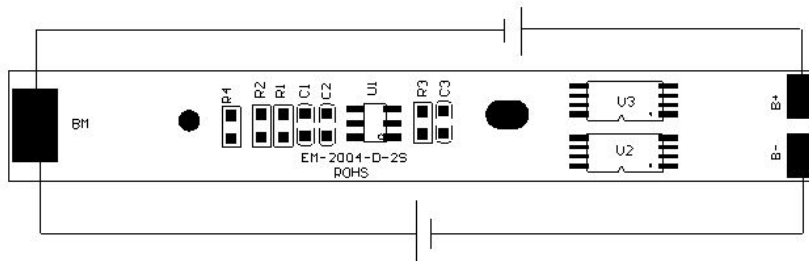
$T_{opt}=25^{\circ}C$

Item	Symbol	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. 25±0.025V
	tV_{DET1}	Over charge detection delay time 过充电检测延迟时间	1000±300ms
	V_{REL1}	Over charge release voltage 过充电解除电压	4. 05±0.05V
Over discharge protection 过放保护	V_{DET2}	Over discharge detection voltage 过放电检测电压	2.4±0.06V
	tV_{DET2}	Over discharge detection delay time 过放电检测延迟时间	128±39ms
	V_{REL2}	Over discharge release voltage 过放解除电压	3.0±0.075V
Over current protection 过流保护	V_{DET3}	Over current detection voltage 过电流检测电压	0.2±0.015V
	I_{DP}	Over current detection current 过电流保护电流	3.5-6.5A
	tV_{DET3}	Detection delay time 检测延迟时间	8-16ms
		Release condition 保护解除条件	Cut load 断开负载
Short protection 短路保护		Detection condition 保护条件	Exterior short circuit 外部电路短路
		Short Detection delay time 短路检测延迟时间	150-500us
		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	$V_C=3.8V$; $R_{DS} \leq 45m\Omega$
Current consumption 消耗电流	I_{DD}	Current consume in normal operation 工作时电路内部消耗	3μA Type 12μA Max
NTC(25°C)1% B=3435	ID		9.9-10.1K

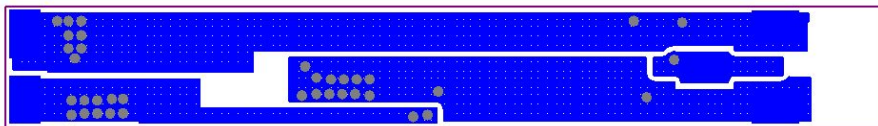
4. Application circuit



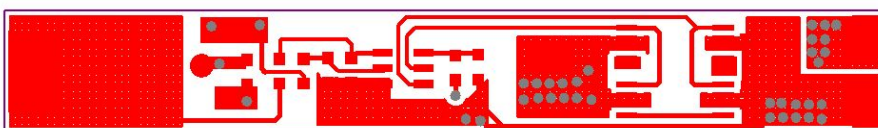
5. The connect capture



6. PCB Layout



BOTTOM LAYER



TOP LAYER

BOM:

Item	Part No.	Part Name	Q'ty	Specification	Remark
1	U1	Control IC	1	R5460N208AF	RICOH
2	U2	MosFET	1	AO8814	AOS
3	R1, R2	RESISTANCE	2	330R	GUOJU
4	R3	RESISTANCE	1	1K	GUOJU
5	C1, C2	CAPACITOR	1	104 50V 20%	GUOJU
6	C3	CAPACITOR	1	103 50V 20%	GUOJU
7	R4	NTC	1	RW-10KNTC-0603-1% B=3435	JOINSET
8	54.9*7.5*0.6mm	PCB	1	EM-2004-D-2S	MEIYADI

SIZE:

