

Specification

Type	Protection Circuit Module
Part No.	2S-2004-D
Prepared by	Jia Funpeng
Approved by	Li Guoqiang
Signature	
Version	2.0

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Contents

1. Outline

This specification is suitable for 2-cell Lithium-ion battery protection circuit designed by Keppower Technology Co., Limited.

2. Application

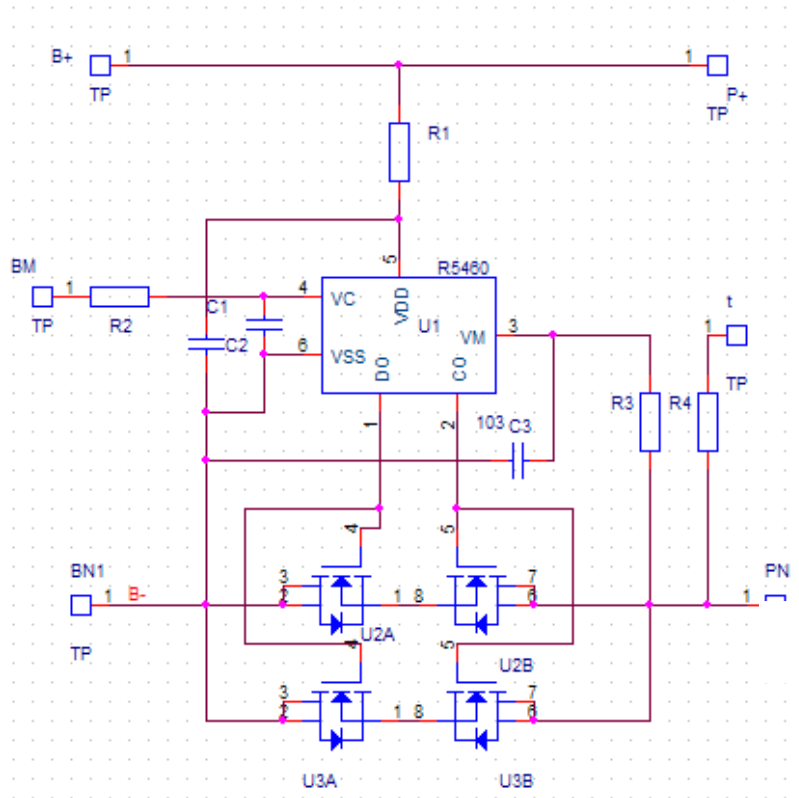
- (1) Lithium-ion rechargeable battery packs
- (2) Lithium-ion polymer battery packs

3. Electrical Characteristics

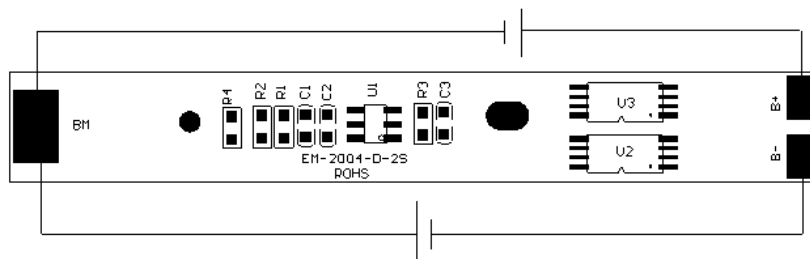
T_{opt}=25°C

Item	Symbol	Description	Criterion
Over Charge Protection	V _{DET1}	Over Charge Detection Voltage	4.29±0.025V
	tV _{DET1}	Over Charge Detection Delay Time	1000±300ms
	V _{REL1}	Over Charge Release Voltage	4.05±0.05V
Over Discharge Protection	V _{DET2}	Over Discharge Detection Voltage	3.0±0.06V
	tV _{DET2}	Over Discharge Detection Delay Time	128±39ms
	V _{REL2}	Over Discharge Release Voltage	3.2±0.075V
Over Current Protection	V _{DET3}	Over Current Detection Voltage	0.2±0.015V
	I _{DP}	Over Current Detection Current	9.0-14.0A
	tV _{DET3}	Detection Delay Time	8-16ms
		Release Condition	Cut load
Short Circuit Protection		Detection Condition	Exterior Short Circuit
		Short Detection Delay Time	150-500us
		Release Condition	Cut Short Circuit
Interior Resistance	R _{DS}	Main Loop Electrify Resistance	V _C =3.8V, R _{DS} ≤65mΩ
Current Consumption	I _{DD}	Current Consume in Normal Operation	3μA Typ., 8μA Max.

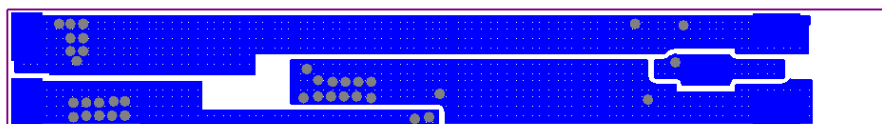
4. Circuit



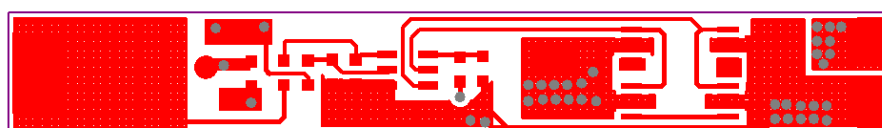
5. Connection Capture



6. PCB Layout



BOTTOM LAYER



TOP LAYER

7. BOM List

Item	Part No.	Part Name	Q'ty	Specification	Remark
1	U1	Control IC	1	R5460N212AF	RICOH
2	U2, U3	MosFET	2	AO8814	AOS
3	R1, R2	Resistance	2	330R	GUOJU
4	R3	Resistance	1	1K	GUOJU
5	C1, C2	Capacitor	2	104 50V 20%	GUOJU
6	C3	Capacitor	1	103 50V 20%	GUOJU
7	R4	NTC	1	10K-1%(B=3435)	JOINSET
8	54.9*7.5*0.6mm	PCB	1	2004-D	MEIYADI

8. PCB Size

