Specification

Type	Protection Circuit Module
Part No.	1S-YH10A-V2
Prepared by	Jia Funpeng
Approved by	Li Guoqiang
Signature	
Version	1.0

www.keeppower.com.cn

Contents

1. Outline

This specification is suitable for 1-cell Lithium-ion battery protection circuit designed by Keeppower Technology Co., Limited.

2. Application

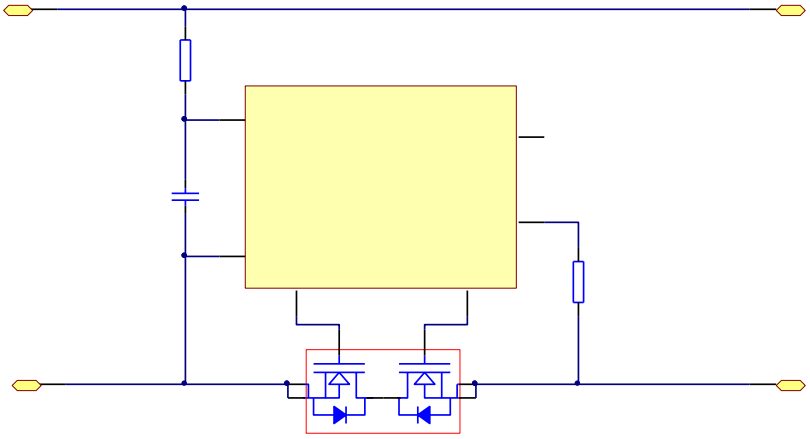
(1) Lithium-ion rechargeable battery packs
(2) Lithium-ion polymer battery packs

3. Electrical Characteristics

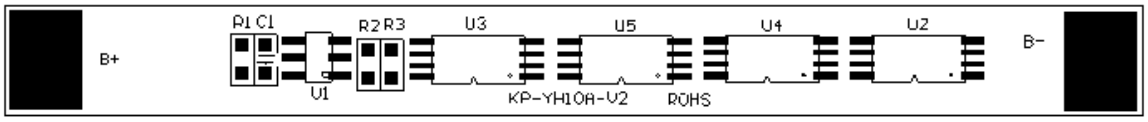
Topt=25℃

Item	Symbol	Description	Criterion
Over Charge Protection	V_{DET1}	Over Charge Detection Voltage	4.25±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	2.5±0.063V
	tV_{DET2}	Over Discharge Detection Delay Time	20±6ms
	V_{REL2}	Over Discharge Release Voltage	3.0±0.075V
Over Current Protection	V_{DET3}	Over Current Detection Voltage	0.2±0.015V
	I_{DP}	Over Current Detection Current	13.0-17.0A
	tV_{DET3}	Detection Delay Time	0.5-1.7ms
		Release Condition	Cut load
Short Circuit Protection		Detection Condition	Exterior Short Circuit
		Short Detection Delay Time	230-500us
		Release Condition	Cut Short Circuit
Interior Resistance	R_{DS}	Main Loop Electrify Resistance	V_C=3.8V; R_{DS}≤25mΩ
Current Consumption	I_{DD}	Current Consume in Normal Operation	3μA Typ, 8μA Max

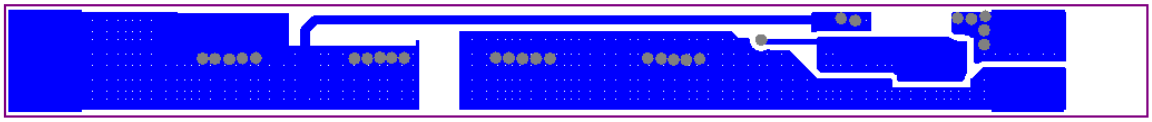
4. Circuit



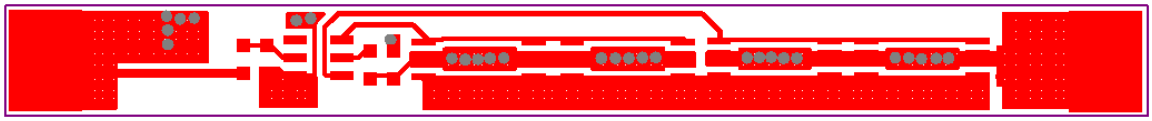
5. Connection Capture



6. PCB Layout



BOTTOM LAYER



TOP LAYER

7. BOM List

Item	Part No.	Part Name	Q'ty	Specification	Remark
1	U1	Control IC	1	R5478N101CD	RICOH
2	U2, U3, U4, U5	MosFET	4	AO8814	AOS
3	R1	Resistance	1	330R	GUOJU
4	R2	Resistance	1	1K	GUOJU
5	C1	Capacitor	1	103 50V 20%	GUOJU

Item	Part No.	Part Name	Q'ty	Specification	Remark
6	R3	NTC	1	10K 1%(B=3435)	JOINSET
7	62.0*6.0*1.2mm	PCB	1	YH10A	MEIYADI

8. PCB Size

