

# KEEPOWER TECHNOLOGY CO., LIMITED

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## Approve of sample

<b>Customer name</b>				<b>Product number</b>	<b>EM-2004-D-2S</b>
<b>Date of sample</b>				<b>Customer type</b>	<b>EM-2004-D-2S</b>
<b>Edition</b>	<b>01</b>	<b>Page</b>		<b>File number</b>	
<b>Checked by</b>			<b>Approved by</b>		<b>Made by</b>
					<b>HKY</b>
<b>Material number</b>					
<b>Customer confirm</b>					
<b>Advice confirm:</b>					
<b>Certification:</b>					
<b>Date:</b>					

## Contents

### 1 Outline

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

### 2 Application

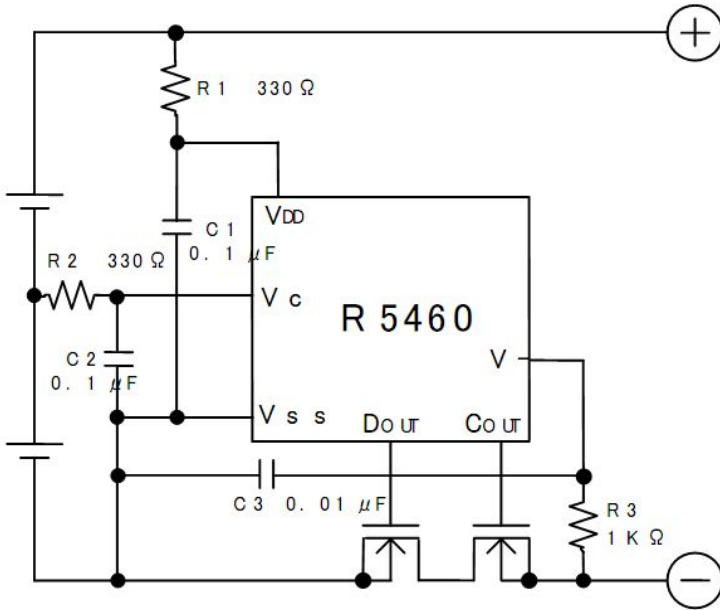
- (1) Lithium-ion rechargeable battery packs
- (2) Lithium-ion polymer battery packs

### 3 Electrical characteristics

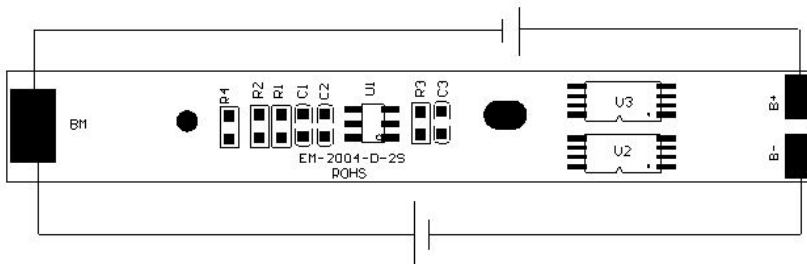
Topt=25°C

Item	Symbol	Content	Criterion
Over charge Protection	$V_{DET1}$	Over charge detection voltage	4. $25\pm 0.025V$
	$tV_{DET1}$	Over charge detection delay time	$1000\pm 300ms$
	$V_{REL1}$	Over charge release voltage	4. $05\pm 0.05V$
Over discharge protection	$V_{DET2}$	Over discharge detection voltage	$2.4\pm 0.06V$
	$tV_{DET2}$	Over discharge detection delay time	$128\pm 39ms$
	$V_{REL2}$	Over discharge release voltage	$3.0\pm 0.075V$
Over current protection	$V_{DET3}$	Over current detection voltage	$0.2\pm 0.015V$
	$I_{DP}$	Over current detection current	3.5-6.5A
	$tV_{DET3}$	Detection delay time	8-16ms
		Release condition	Cut load
Short 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	$V_C=3.8V$ ; $R_{DS}\leq 45m\Omega$
Current consumption	$I_{DD}$	Current consume in normal operation	3 $\mu A$ Type 12 $\mu A$ Max

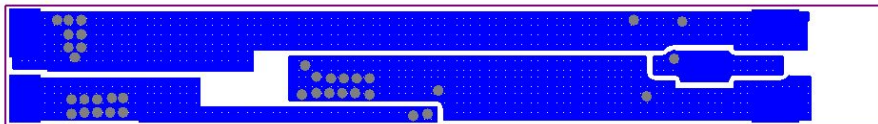
## 4、 Application Circuit



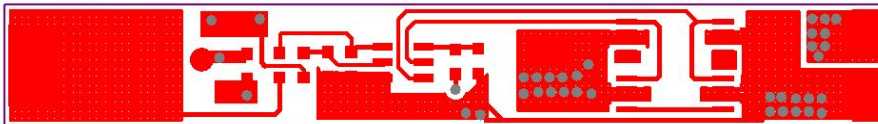
### 5、 the connect capture



### 6、 PCB layout



BOTTOMLAYER



TOPLAYER

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	54.9*7.5*0.6mm	PCB	1	EM-2004-D-2S	meiyadi

## SIZE:

