

# KEEPOWER TECHNOLOGY CO., LIMITED

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## Approve of sample

<b>Customer name</b>				<b>Product number</b>	4S-EBD02-AB
<b>Date of sample</b>				<b>Customer type</b>	
<b>Edition</b>	01	<b>page</b>		<b>File number</b>	
<b>Checked by</b>			<b>Approved by</b>		<b>Made by</b>
					HKY
<b>Material number</b>					

### Customer confirm

**Advice confirm:**

**Certification:**

**Date:**

# Contents

## 1. Outline

This specification is suitable for **4-cell** Lithium-ion Battery Protection Circuit manufactured by KEEPOWER TECHNOLOGY CO., LIMITED.

## 2. Application

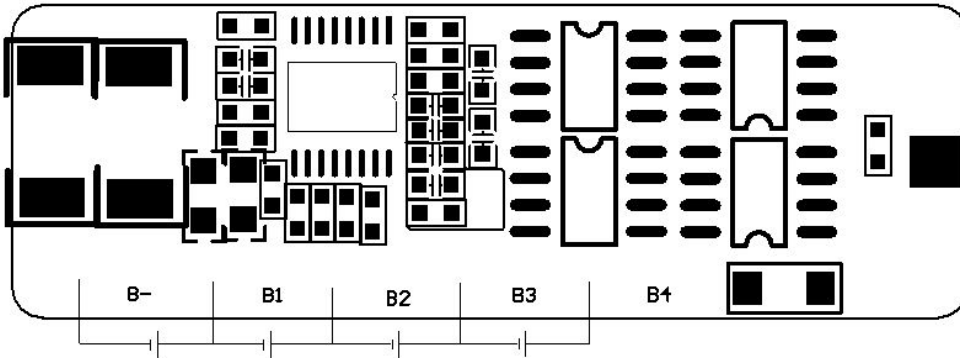
- (1) Lithium-ion rechargeable battery packs
- (2) Lithium-ion polymer battery packs

## 3. Electrical characteristics

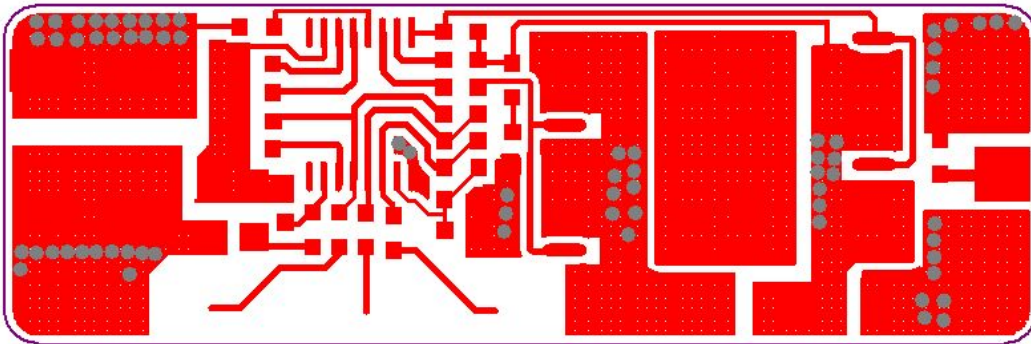
 $T_{opt}=25^{\circ}\text{C}$ 

Item	Symbol	Content	Criterion
Over charge Protection	$V_{DET1}$	Over charge detection voltage	4. $275\pm 0.025\text{V/CELL}$
	$tV_{DET1}$	Over charge detection delay time	$1\pm 0.5\text{s}$
	$V_{REL1}$	Over charge release voltage	4. $075\pm 0.05\text{V/CELL}$
Over discharge protection	$V_{DET2}$	Over discharge detection voltage	$2.3\pm 0.08\text{V/CELL}$
	$tV_{DET2}$	Over discharge detection delay time	$100\pm 50\text{ms}$
	$V_{REL2}$	Over discharge release voltage	$2.7\pm 0.1\text{V/CELL}$
Over current protection	$V_{DET3}$	Over current detection voltage	$0.13\pm 0.025\text{V}$
	$I_{DP}$	Over current detection current	$26\pm 2\text{A}$
	$tV_{DET3}$	Detection delay time	$10\pm 5\text{ms}$
		Release condition	Cut load
Short protection		Detection condition	Exterior short circuit
		Short Detection delay time	$300\pm 250\mu\text{s}$
		Release condition	Cut short circuit
Interior resistance	$R_{DS}$	Main loop electrify resistance	$V_C=4\text{V}; R_{DS}\leq 45\text{m}\Omega$
Current consumption	$I_{DD}$	Current consume in normal operation	$60\mu\text{A}$ Type $100\mu\text{A}$ Max

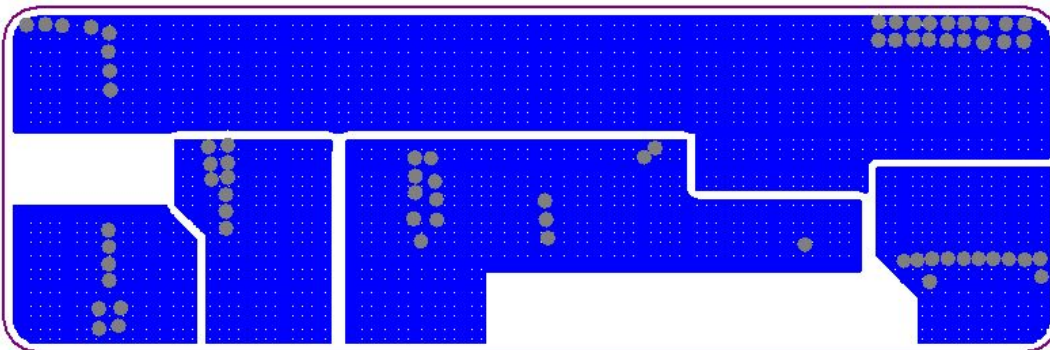
## 4. The connect capture



## 5. PCB layout



TOP LAYER



BOTTOM LAYER

## 6. BOM

SPEC	NAME	QTY	REMARK
I-S8254AAG-TSSOP16	CONTROL IC	1	U1
M-AO4407-SO-8	MOSFET	4	U2,U3,U4,U5
RP-1K-0603-5%	RESISTANCE	5	R4,R5,R6,R7,R9
RP-5.1K-0603-5%	RESISTANCE	3	R1,R3,R8
CP-104-0603-20%50V	CAPACITOR	9	C1C2C3C4C5C6C8 C9 C10
CP-105-0603-20%25V	CAPACITOR	1	C7
RP-51R-0805-5%	RESISTANCE	1	R13
RP-1M-0603-5%	RESISTANCE	1	R2
RP-0.01R-2512-1%	金属膜电阻 (大毅)	2	R14,R15
RW-10KNTC-0603-1%	NTC(B=3435) JOINSET	1	RT
4*2*0.3mm	镍片	1	F1
46*15 *1.0mm 绿油	PCB(喷锡)	1	4S-EBD02-AB
备注:			

## 7. Size

