

Shenzhen Jiabaida Electronic Technology Co., Ltd.

SHENZHEN JIABaida ELECTRONICS TECHNOLOGY.CO.,LTD

product specifications

Product specification

Customer name:

Customer

product name:

Sample Name

5ABattery pack balancing module

Product number:

Model Name

JBD-B04S003-L4S-5A V1.0

Submission date:

Date

2023-08-28

Version:

Version

A01

Customer signature and seal:

SIGNATURES

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Reviewer: Feng Jianjun

approve:

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change log

version number	Page/Chapter	Revised by	Revision date	modify the content	Remark
A01	full text	Wu Yifan	2023.08.28	Brand new fiction	

1.Product introduction

JBD-B04S003 is specifically targeted at 3~4The string battery pack is balanced when used; it can be used for lithium batteries with different chemical properties.

Such as lithium ion, lithium polymer, lithium iron phosphate, etc. Balanced current maximum 5A.

2.Technical Parameters

2.1.Basic parameters

Operating Voltage	12V-16.8V
Balanced voltage	3.1V-4.2V
Balanced turn-on voltage	12.5±0.7V
equalization off	12.3±0.7V
Balanced current	0-5A (battery pack voltage difference 0-1V)
Operating power consumption	≤20mA
Shutdown power consumption	≤300uA
Operating temperature	- 30°C~70°C
Protection board size	70±0.5mm * 56±0.5mm * 21±2mm(length Width Height)

Note: The test needs to be at temperature 25±2°C, relative humidity 65±20% environment of

3.Function Description

3.1When the battery pack is working, use the battery pack to power the balancing board to prevent a large voltage difference between the battery packs causing abnormal power supply.

Damage to battery pack powered instruments;

3.2The equalization can be turned on after sending the command; after the equalization is turned on, stop sending the command, the control pin will turn off and on again, and then continue

Turn it on and turn it off after powering on again; after the balance board goes to sleep, the protection board needs to send a command to wake up, and the balance on flag will be read only after waking up.

Chi.

3.3When the battery pack is working, when the active balancing board detects that the total voltage of the battery pack is higher than 13V Active balancing will be enabled.

4.Main materials

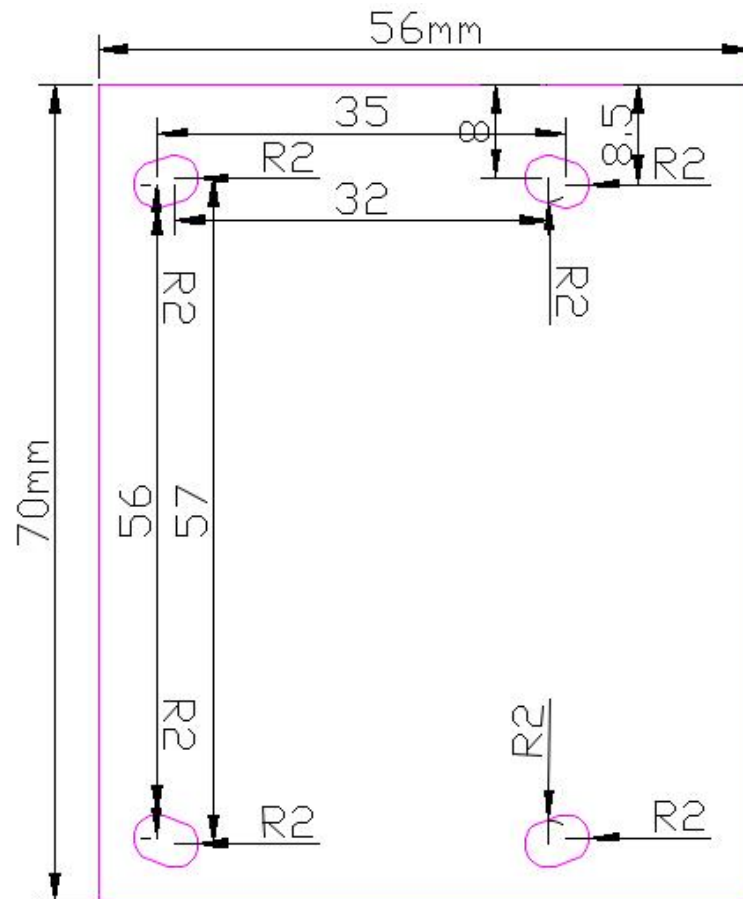
serial number	Material name	Manufacturer	Dosage
1	MOSTube\SMD\HYG030N03LQ1C2\DFN5*6\	Hua Yiwei	16pcs
2	IC\EG2104S\SOP8	Yijing Microelectronics	4PCS

Note: The above materials may be replaced by materials with the same specifications or better specifications. If there is a need for certification, replacement of materials is not allowed.

You need to notify our company to re-submit samples and controlled specifications. The final right of interpretation belongs to Jiabaida.

5.Schematic diagram and dimensions

5.1.Mark the dimensions and installation points on the diagram



6.Signal port definition

6.1.The schematic diagram indicates the interface number (refer to the figure below)



mark Number	bit number	Connector function	Connector diagram	Pin definition	PINFunction definition	explain bright
1	J1 (HY3.96-5P) (with buckle)	Battery balancing detection socket(18AWG)		1 B4	Follow up4Connect the positive terminal of the battery cell	pre Keep
				2 B3	Follow up3Connect the positive terminal of the battery cell	
				3B2	Follow up2Connect the positive terminal of the battery cell	
				4B1	Follow up1Connect the positive terminal of the battery cell	
				5B0	Connect to the negative pole of the lowest battery-saving core	
2	J2 (HY2.0-2P) (with buckle)	Balanced switch		1	VCC	pre Keep
				2	RUN	
3	J3 (HY2.0-2P)	BMScontrol switch		1	GND	pre Keep
				2	VEN 3.3Vcontrol	

7.Environmental suitability

7.1.Working conditions:

BMSThe protective board allows normal operation under the following conditions:

Ambient temperature: -30°C ~+75°C;

Relative humidity:5% ~ 90%;

Atmospheric pressure:86kPa~106kPa;

7.2.Storage environment

BMSThe protective board should be stored at an ambient temperature of -5°C~+40°C, relative humidity is not greater than70%, Clean and well-ventilated warehouse
Inside, the air must not contain corrosive gases and media that affect electrical insulation, and must not be subject to any mechanical impact or heavy pressure. not exposed to direct sunlight
radiation, the distance from the heat source (heating equipment, etc.) shall not be less than2m. Under the above storage conditions,BMSThe protective board can be stored for one year.

8.Packing and shipping

8.1.Logo:

BMSThe protective board should have the following clear and durable markings:

- 1) Product name and model
- 2) Battery cell model
- 3) Factory date and serial number

8.2.Package

- 1) The packaging should meet the requirements of moisture-proof and vibration-proof. The packaging box should be strong and reliable. The box should be lined with moisture-proof material. The product should not be exposed inside to
Should move.

- 2) External carton packaging, single board anti-static bag and bubble bag packaging;

8.3.transportation

- 1) During transportation, the product must not be subject to severe mechanical impact, exposure to the sun, rain, chemical corrosive substances and harmful gases; 5.3.2 In

During the loading and unloading process, the product should be handled with care, and throwing or heavy pressure is strictly prohibited.

2) The stacking height of packaging boxes is less than 5 layers.

9. Precautions

1) This management system cannot be used in series.

2) When multiple battery packs using this management system are connected in parallel, it should be ensured that the maximum voltage difference of each battery pack before parallel connection is less than 3V.

3) When multiple battery packs using this management system are used in parallel, the total charging surge current of the adapter may be applied to a single battery pack.

It should be ensured that the total charging inrush current of the adapter does not exceed the maximum charging inrush current of a single management system.

4) The short-circuit protection function of this management system is suitable for a variety of application scenarios, but it does not guarantee that it can be short-circuited under any conditions. When electricity

The sum of the internal resistance values of the battery pack and short-circuit loop is less than $40\text{m}\Omega$, the battery pack capacity exceeds the rated value by 20%, and the short-circuit current exceeds 1800A.

When the inductance of the short-circuit loop is very large or the total length of the short-circuited wire is very long, please test by yourself to determine whether this tube can be used.

management system.

5) When welding the battery leads, there must be no wrong connection or reverse connection. If it is indeed connected incorrectly, the circuit board may be damaged and needs to be re-wired.

The new product can only be used after passing the test.

6) During assembly, the management system should not directly contact the surface of the battery core to avoid damaging the circuit board. The assembly must be firm and reliable.

7) During use, be careful not to touch the lead tips, soldering iron, solder, etc. on the components on the circuit board, otherwise the circuit board may be damaged.

8) Pay attention to anti-static, moisture-proof, waterproof, etc. during use.

9) Please follow the design parameters and usage conditions during use, and the values in this specification must not be exceeded, otherwise the management system may be damaged.

10) After assembling the battery pack and management system, if you find no voltage output or failure to charge when you power on for the first time, please check whether the wiring is correct.

Indeed.