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Inspections at your plant will be conducted by the Inspection Center in your vicinity. More information on Follow-up Service Inspections can be found at <https://www.ul.com/resources/follow-up-services-additional-resources>.

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Marks as needed may be obtained from UL Label Centers. To find a Label Center in your vicinity, visit <https://marks.ul.com/about/ul-listing-and-classification-marks/labels/label-centers>.

Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at <https://www.ul.com/about/locations>.

Please find attached the related material

For your convenience, the below describes the related updates:

For revised/new documentation, please reference 2022-08-08 in the page headings. New volume 1. For revised/new documentation, please reference 2022-08-09 in the page headings. New Section 2.

E528621-Vol1-AuthorizationPage
E528621-vol1-RecCompMarkData
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E528621-vol1-Appendix
E528621-vol1-AppendixStandardized
E528621-vol1-SectionGeneral
E528621-20220808-Description

Figure-6-Total
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Figure-4-Total
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Times change, Trust Remains™



FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

BATTERIES, HOUSEHOLD AND COMMERCIAL - COMPONENT
(BBFS2)

Manufacturer:	SEE ADDENDUM FOR MANUFACTURER LOCATIONS
Applicant:	2889896 (Party Site) JIAXING BANCHEN TECHNOLOGY CO.,LTD. 4th Floor,Building 2,No.8,Guangjin Road,Guangchen Town,Pinghu City Jiaxing ZHEJIANG 314303 CN
Recognized Company:	2889896 (Party Site) SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Recognized Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following web-site: <http://www.ul.com/fus>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at <http://www.ul.com/aboutul/locations/>, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Recognized Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s), and any Recognized Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: <http://services.ul.com/fus-service-terms>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding

that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body.

Bruce A. Mahrenholz
Director
Conformity Assessment Programs (CPO)
UL LLC

LOCATION

2889896 (Party Site)

JIAXING BANCHEN TECHNOLOGY CO.,LTD.

4th Floor,Building 2,No.8,Guangjin Road,Guangchen Town,Pinghu City

Jiaxing ZHEJIANG 314303 CN

Factory ID: None

UL Contracting Party for above site is: UL GmbH

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

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LI-ION Battery, Model: 12V7500mAh	2	USR

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS, BBFS7)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3, BBFS8, BBFS9)

TABLE A - SAMPLE SELECTION GUIDE

Sample Group	#/Group	Model	Report Date	Category	Composition/Type	Additional Info	Test Program Code
1	1	12V4500mAh	2022-08-08	Secondary	Lithium systems		B
2	1	12V7500mAh	2022-08-09	Secondary	Lithium systems		B

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS, BBFS7)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3, BBFS8,
BBFS9)

INDEX TO FOOTNOTES:

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS, BBFS7)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3, BBFS8, BBFS9)

TABLE C - TEST CRITERIA

Refer to Sp. App. B for Footnotes and Table A for Additional Information

Model	Capacity, mAh	Nominal Voltage, Vdc	Open Circuit Voltage, Vdc	Max Charge voltage, Vdc	Max Charge current, mA	Top Off Charge Voltage, Vdc	Top off Charge Current, mA	End Point Voltage, Vdc	End Point Current, mA	Duration, hr	Min Supply Voltage for Testing, Vdc	Cell Source
12V4500mAh	4500	11.1				12.6	1350	8.25	225		18	INR18650- 1500 (MH650 16)
12V7500mAh	7500	11.1				12.6	2250	8.25	375		18	INR18650- 1500 (MH650 16)

ISSUED: 2014-04-14

STANDARDIZED APPENDIX PAGES
Subject 2054

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BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

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STANDARDIZED APPENDIX PAGE (SAP)

Controlled Document: Direct Request for Revision to PDE for Category

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

APPENDIX A - FIELD REPRESENTATIVE'S RESPONSIBILITIES

GENERAL

The Field Representative's general responsibilities, as part of the Follow-Up Services Procedure, are as noted in the published document titled, "UL Mark Surveillance Requirements", and is available through UL's secure customer portal MyHome@UL.com and/or through UL's internet site www.UL.com. Manufacturers that do not have Internet access may obtain the current version of these requirements from their local UL Customer Service Representative or UL Field Representative.

PROCEDURE IN THE EVENT OF NONCONFORMANCE

When a product does not comply with the Follow-Up Service Procedure, require that the manufacturer implement appropriate action as outlined in the "UL Variation Notice and Corrective Action Requirements" document, which can be found at www.ul.com/fus.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

APPENDIX B - INSTRUCTIONS FOR FIELD REPRESENTATIVE'S SAMPLE SELECTION

GENERAL

Referring to Sp. App. B, Table A. Within each calendar year and for each sample group, select either the number of battery pack models indicated in the No. Per Group Per Year (#/Group/Year) column, or the number in that group which are available during inspection visits, whichever is lesser.

Unless specifically requested, a battery pack model shall only be selected once each year.

If it is not possible to select the required number of battery pack models for a given calendar year due to production schedules, continue with the sample selection per Sp. App. B, Table A when inspection visits resume the following year. Do not select multiple samples of the same model to fulfill the #/Group/Year requirement.

SAMPLES FOR THE TESTING OFFICE

The Field Representative is responsible for selecting the appropriate battery pack models for Follow-Up testing as indicated above. For each battery pack model selected, the sample requirements and FUS Test Program are indicated in code, in the Test Program Code column in Sp. App. B, Table A. Specific details regarding the Test Program Codes are contained in Table B below, including quantity and form of samples, and the required test program.

TABLE B - TEST PROGRAM CODES

Test Program Code	Tests Required	Samples Required
A	Open Circuit Voltage Measurement, Short Circuit Test	2 complete samples with unsealed enclosures
B	Abusive Over Charge Test, Short Circuit Test	2 complete samples with unsealed enclosures
C	Abnormal Charging Test, Short Circuit Test	2 complete samples with unsealed enclosures
D	Drop Impact Test	3 complete samples with sealed enclosures
E	Projectile Test	10 component cell samples
F	3/4-Inch Flame Test	6 enclosure samples

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

The required samples are to be identified and tagged with the applicable information using a Sample Tag (Form 3000-217). Information shall include: Model number and capacity, and date and lot of production. If the same model is allowed to have multiple constructions/ratings, the key parameter(s) that could be used to identify the specific constructions/ratings being selected shall be documented on the tag. Examples of key parameters are Capacity or Cell Source, which could normally be found in Sp. App. C, Table C. Unless otherwise stated, the Field Representative shall inform the manufacturer that the samples are to be forwarded to the Test Office(s) as designated on the specific service profile.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

APPENDIX C - INSTRUCTIONS FOR FOLLOW-UP TESTS AT UL

GENERAL

The samples forwarded to UL in accordance with Appendix B shall be subjected to the tests indicated through the Test Program Code in Table A of Special Appendix B. Tests are to be conducted in accordance with the current edition for Household and Commercial Batteries, UL 2054, unless specifically indicated otherwise.

OPEN CIRCUIT VOLTAGE MEASUREMENT: (FOR PRIMARY BATTERY PACKS ONLY)

METHOD

The open circuit voltage of each primary model pack was measured using a direct-current voltmeter and compared to its specified open circuit voltage as indicated in Table C of Sp. App. C.

BASIS FOR ACCEPTABILITY

The measured voltage was within the tolerances of the manufacturer's specified open circuit voltage.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

SHORT CIRCUIT TEST (At $55^{\circ}\text{C} \pm 5^{\circ}\text{C}$):

METHOD

For a primary battery pack, one as-received sample was used for this test. For a secondary battery pack, one fully charged sample was used. It was charged in accordance with the top-off parameters as indicated in Table C of Sp. App. C.

The sample was short-circuited by connecting the positive and negative terminals to a circuit having a maximum resistance of 0.1 ohm. The sample was discharged until a fire or explosion was obtained, or until it had reached a completely discharged state less than 0.2 volts and/or the internal cell case temperatures (T_{max}) had returned to $+10^{\circ}\text{C}$ of ambient temperature.

Tests were conducted at $55^{\circ}\text{C} \pm 5^{\circ}\text{C}$, and the sample reached equilibrium at $55^{\circ} \pm 5^{\circ}\text{C}$ before the terminals were connected.

The sample was not subjected to single faults across any electrical protective device during this test.

BASIS OF ACCEPTABILITY

There was no fire or explosion. The maximum temperature on the internal cell casings (T_{max}) did not exceed 150°C .

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

ABUSIVE OVER CHARGE TEST: (FOR SECONDARY BATTERY PACKS ONLY)

METHOD

One fully charged sample was used for this test. It was charged in accordance with the top-off parameters as indicated in Table C of Sp. App. C.

The sample was tested in an ambient temperature of $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$). The room ambient temperature, T_{amb} , was recorded.

The sample was then discharged at a constant current rate of $0.2\text{C}/1$ hour to the manufacturer specified discharge endpoint voltage, as indicated in Table C of Sp. App. C.

The sample was subjected to a constant charging current at 10 times the C_5 amp rate (2 times the Capacity in Ah) using a supply voltage sufficient to maintain the charging rate through the duration of the test. A thermocouple was attached to the outer enclosure of the sample. The test was continued until the battery exploded or vented, or the temperature of the outer battery casing reached a steady state condition or returned to ambient.

BASIS OF ACCEPTABILITY

The sample did not explode or catch fire.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

ABNORMAL CHARGING TEST: (FOR SECONDARY BATTERY PACKS NOT SUBJECTED TO THE ABUSIVE OVERCHARGE TEST)

METHOD

Secondary battery pack samples not subjected to the preceding Abusive Over Charge Test are to be subjected to the Abnormal Charging Test as outlined below.

One fully charged sample shall be used for this test. It was charged in accordance with the top-off parameters as indicated in Table C of Sp. App. C.

The sample was tested in an ambient temperature of $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$). The room ambient temperature, T_{amb} , was recorded. A thermocouple was attached to the casing of internal cells to monitor temperatures in order to determine ultimate results.

The sample was discharged at a constant current rate of 0.2C/1 hour to the manufacturer specified discharge endpoint voltage, as indicated in Table C of Sp. App. C.

The sample was subjected to the following overcharge condition:

It was charged with a constant maximum specified charger output voltage and a current limit of three times the maximum charging current I_c , specified by the manufacturer and as indicated in Table C of Sp. App. C. The charging duration was to be the time required to reach the manufacturer's specified end-of-charge conditions and ultimate results had occurred.

Ultimate results were assumed to have occurred with one of the following:

1. The sample had reached the manufacturer's specified end-of-charge conditions and the internal cell case temperatures to have stabilized or returned to within 10 degrees of ambient temperature; or
2. The sample caught on fire or exploded.

The sample was not to be subjected to single fault condition.

BASIS OF ACCEPTABILITY

As a result of the testing, there was no fire or explosion. There was no rupture, bursting or cracking of internal cell casing(s) resulting in chemical leakage.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

DROP IMPACT TEST: (FOR BATTERY PACKS WITH ENCLOSURES OR PREVIOUSLY TESTED):

METHOD

For a primary battery pack, three complete, as-received samples were subjected to this test. For a secondary battery pack, three complete, fully charged samples were subjected to this test. They were charged in accordance with the top-off parameters as indicated in Table C of Sp. App. C.

The test was performed in an ambient of $20^{\circ} \pm 5^{\circ}\text{C}$.

Each of three samples was dropped from height of $1\text{ m} \pm 0.005\text{ m}$ so it strikes a concrete surface in the position that was most likely to produce adverse results (i.e. on corners or any sides or parts that may appear less robust). Each sample was dropped three times hitting a different location each time.

The samples were then examined for signs of damage to the enclosure that would damage or expose cells or protective parts, and for signs of fire or explosion as a result of the drops, a minimum of 2 hours but no more than 6 hours after conducting the testing.

Note: If damage to internal cells and protective parts was suspected, the sample enclosure was opened after the minimum 2 hour time to review the condition of its contents. Examples of damage would be dented or punctured cells and broken connections, etc. as a result of the drops.

BASIS OF ACCEPTABILITY

As a result of the drops, the samples did not explode or catch fire. The enclosures did not crack or become otherwise damaged to the extent that the cells or any protective devices were exposed or damaged.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

PROJECTILE TEST: (FOR CELLS ONLY):

METHOD

Note: This test was not conducted on battery packs that employ Recognized cells subjected to this test as part of the cell Recognition and follow up service testing.

Five of the 10 fully charged samples of the component cells were subjected to this test. Secondary cells were charged in accordance with the top off parameters as indicated in Table C of Sp. App. C before being subjected to the projectile test.

As shown in Figure 1, each cell samples was placed on a screen that covered a 102 mm (4 inch) diameter hole in the center of a platform table. The screen was constructed of steel wire mesh having 20 openings per inch (25.4 mm) and a wire diameter of 0.017 in. (0.43 mm). The screen was mounted 38 mm (1-1/2 inch) above a burner. The fuel and airflow ratios were set to provide a bright blue flame that caused the supporting screen to glow a bright red.

An eight-sided covered wire cage, 610 mm (2 feet) across and 305 mm (1 foot) high, made from metal screening was placed over the test sample as shown in Figure 1. The metal screening was constructed from 0.25 mm (0.010 inch) diameter aluminum wire with 16-18 wires per inch (25.4 mm) in each direction. The aluminum screening was free from holes and secured tautly around the frame.

Each sample was heated and remained on the screen until it exploded or the cell had ignited and burned out. It was not required to secure the sample in place unless it was at risk of falling of the screen before the test was completed. When required, the sample was secured to the screen with a single wire tied around the sample.

Note: The securement wire was only utilized if the sample would not remain above the flame during the test to achieve ultimate results. In this case the single wire utilized was the minimal thickness necessary to hold the cell in place.

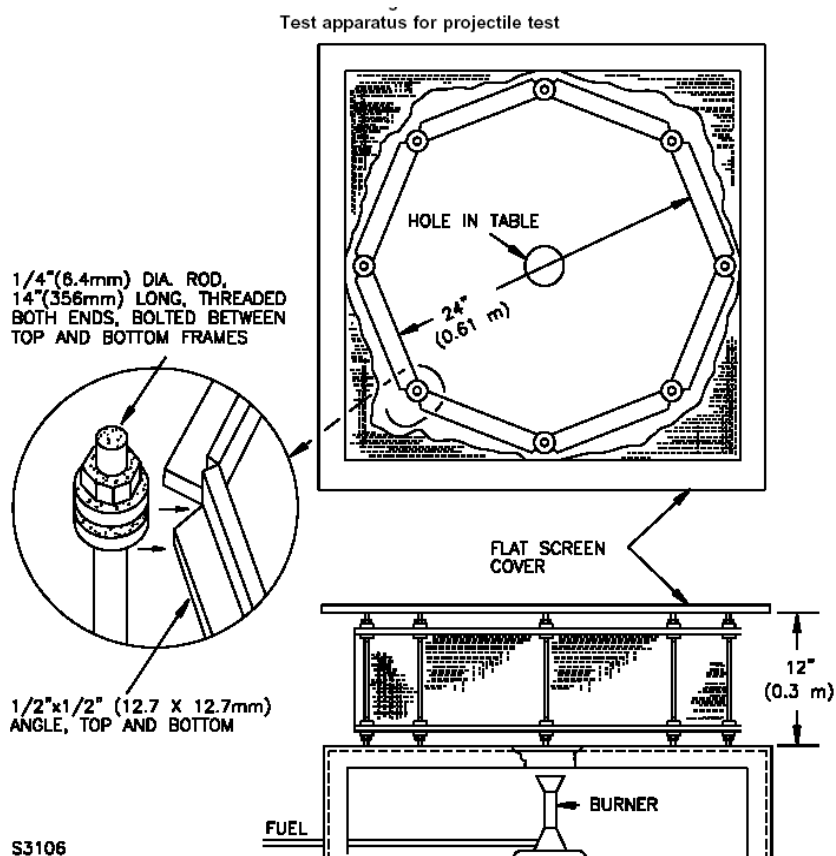
BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)

COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

PROJECTILE TEST (FOR CELLS ONLY):

METHOD (CONT'D)

Figure 1



BASIS FOR ACCEPTABILITY

No part of an exploding cells penetrated the aluminum wire screen such that some or the entire cell protruded through the screen.

Note: A hole in the screen created by a piece of the cell sitting on the screen and burning a hole through the screen was not considered a nonconforming result. Only those holes created by exploding parts puncturing the screen due to the force of the explosion were considered nonconforming results.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

3/4-INCH FLAME TEST:

METHOD

Refer to UL 746C, Flammability - 20 mm (3/4 Inch) Flame Test method.

BASIS FOR ACCEPTABILITY

Refer to UL 746C, Flammability - 20 mm (3/4-Inch) Flame Test acceptance criteria.

BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS)
COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL (BBFS2, BBFS3)

APPENDIX D - MANUFACTURER'S RESPONSIBILITIES

The Follow-Up Service Procedure covering the product is loaned to the manufacturer and constitutes the basis on which the product is judged for compliance with the applicable requirements.

GENERAL

The Manufacturer's general responsibilities, as part of the Follow-Up Services Procedure, are as noted in the published document titled, "UL Mark Surveillance Requirements", and is available through UL's secure customer portal MyHome@UL.com and/or through UL's internet site www.UL.com. Manufacturers that do not have Internet access may obtain the current version of these requirements from their local UL Customer Service Representative or UL Field Representative.

SECTION GENERAL

PRODUCT COVERED:

Component - Battery Packs.

FACTORY LOCATION AND IDENTIFICATION:

Location	Identification
REFER TO ADDENDUM TO AUTHORIZATION PAGE FOR FACTORY ID'S	

MARKING:

The manufacturer's name or trademark, catalog number, and electrical rating including voltage (V dc) and capacity (Ah) and the UL Recognition Mark.

Additional marking requirements are outlined in the individual sections describing the batteries/packs.

DATE OF MANUFACTURE MARKING

The batteries/packs shall be marked with the manufacturer's date of manufacture, which may be abbreviated; or may be in a nationally accepted conventional code; or in a code that does not repeat in less than 10 years.

File E528621
Project 4790432354

August 8, 2022

REPORT

on

COMPONENT - Batteries, Household and Commercial
(BBFS2)

JIAXING BANCHEN TECHNOLOGY CO., LTD.
ZHEJIANG, CHINA

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UL LLC authorizes the above named company to reproduce this Report only for purposes as described in the Conclusion. The Report should be reproduced in its entirety; However to protect confidential product information, the Construction Details Descriptive pages may be excluded.

DESCRIPTION

PRODUCT COVERED:

USR Component LI-ION Battery, Model(s): 12V4500mAh.

USR - Products designated USR have been investigated using US requirements as noted in the Test Record.

ELECTRICAL RATING:

Model	Voltage (Nominal), Vdc	Capacity (Nominal), Ah/Wh
12V4500mAh	11.1V	4500mAh
Note: The packs have been tested based upon their electrical ratings but no capacity performance testing has been conducted. In addition, no testing with a host product including a charger has been conducted.		

CELL CHEMISTRY AND CONFIGURATION:

Pack Model	Cell Model	Cell Chemistry and Type#	Number of Cells	Configuration*: X-S/Y-P
12V4500mAh	INR18650-1500	Lithium ion (Cylindrical)	9	3-S/3-P
* - X = No. of cells in series; Y = Number of parallel strings # - e.g. lithium ion cylindrical, lithium ion prismatic, lithium ion polymer (soft pouch), Ni-Cad prismatic, etc.				

MANUFACTURER'S RECOMMENDED CHARGING PARAMETERS:

Model	Standard Charging Current, A	Standard Charging Voltage, Vdc	Maximum Charging Current, A	Maximum Charging Voltage, Vdc
12V4500mAh	1.35A	12.6V	2.25A	12.6V

GENERAL CONSTRUCTION:

See Section General for general construction details employed on these products.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Products indicated as USR have been investigated using requirements contained in the Third Edition of UL 2054, Household and Commercial Batteries, Edition 3, Revision Date March 10, 2022.

Condition of Acceptability - When installed in the end product, consideration shall be given to the following:

1. These battery packs have been evaluated based upon manufacturers specifications for charging, discharging and temperature limits. They have not been evaluated in combination with charger(s) or host product(s). Additional evaluation to determine that the compatibility of the host with the battery pack and the charger with the battery pack will be needed to ensure that the battery pack is not used outside of its rated limits.
2. The battery pack was subjected to the Abnormal Charging test of UL 2054 which is a high rate charging test for 7 hours minimum based upon the parameters noted in the table below, with acceptable results. The end product evaluation shall determine that the maximum current and the maximum voltage limit noted below are not exceeded under any single fault conditions of the charging circuit.

Abnormal Charging Test Values		
Battery Pack Model	Maximum Abnormal Charging Current, A	Maximum Abnormal Charging Voltage Limit, V
12V4500mAh	6.75A (Max. Actual Measured)	12.6Vdc

The battery pack was also subjected to the Abusive Overcharge test of UL 2054 with acceptable results. The need to conduct additional abnormal/abusive charge testing in the end use application shall be determined.

3. The battery pack has been subjected to a short circuit test at both ambient ($20 \pm 5^{\circ}\text{C}$) and $55 \pm 5^{\circ}\text{C}$, with a resistance load in the range of $80 \pm 20 \text{ m}\Omega$. The need to conduct additional abnormal discharge testing shall be determined in the end use application.

4. The output of the battery pack has been determined to be a non-limited power source in accordance with UL 2054. For non-limited power sources, the need for additional protective circuitry and an appropriate fire enclosure for the end product, which is supplied by the battery pack, shall be determined in the end product evaluation.
5. The battery packs have been subjected to temperature testing under maximum load charging and discharging conditions and for use in a maximum ambient as noted below. If used in an ambient in excess of the maximum values noted, additional evaluation may be necessary.

Model	Temperature test charge conditions	Temperature test discharge conditions
12V4500mAh	2.25A, 12.6Vdc	9A

Model	Ambient Use Temperatures, °C
12V4500mAh	Charge: 0°C ~45°C Discharge: -10°C ~55°C

6. A temperature test with the battery pack in the end use installation shall be conducted under both maximum charging and discharging conditions. During the temperature test, the following temperature limits on temperature sensitive components shall not be exceeded:

Component	Model No.	Temperature Limits, °C
Cell (measured on Casing)	INR18650-1500	100

7. The battery pack enclosure has not been evaluated as a fire enclosure. The suitability of the battery pack enclosure's flammability shall be determined in end product evaluation.
8. The battery pack employs an enclosure that has not been evaluated as a mechanical enclosure in accordance with the enclosure requirements of UL 2054. A mechanical enclosure to protect cells and internal circuitry and prevent user access under all conditions of use shall be provided in the end use application. An evaluation of the mechanical enclosure's ability to prevent access to and provide protection for cells and internal circuitry shall be conducted in the end use application.

9. The end use application shall consider the need for the following markings and instructions or equivalent for the safe use of the battery pack:

Marking:

"Replace battery with (battery Recognized Company or end product manufacturer's name, part number) only. Use of another battery may present a risk of fire or explosion."

or "See Operating or maintenance Instructions for type of battery to be used" or equivalent with instructions for replacement of the correct battery pack provided.

or A symbol indicating the need to refer to the instruction manual may be used instead of the text noted above. An acceptable symbol is a combination of ISO 7010 - M002 (refer to instruction manual/booklet) and ISO 7010 - W001 (general warning sign), as depicted below:



Instructions:

- a. A warning notice with the following or equivalent:

"Caution - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not disassemble, heat above (manufacturer's maximum temperature limit), or incinerate. Replace battery with (battery manufacturer's name or end product manufacturer's name and part number) only. Use of another battery may present a risk of fire or explosion."

- b. Complete instructions as to how to replace the battery including the following or equivalent statement:

"Dispose of used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire."

MARKINGS/INSTRUCTIONS:

All markings shall be legible and permanent such as ink stamped, etched, adhesive labels, etc. Unless otherwise allowed, all adhesive labels shall be R/C (PGDQ2) component marking and labeling systems or printed on R/C (PGJI2) Component Printing Materials.

Nameplate Marking - The Recognized Company, trade name, trademark or other descriptive marking, catalog or model number, electrical rating, and Recognition Marking.

Date of Manufacturer Marking -.

The manufacturer's date code is as follows: YYYY MM DD

YYYY stands for year

MM stands for month

DD stands for day

For example: 2022 06 10 means manufactured on June 10, 2022

Factory Location Marking - See Section General for manufacturing location marking.

Cautionary Markings/Instructions - Each 1) battery pack; or 2) the smallest unit package, must be marked with; or 3) instructions provided with each battery, must include the following statements or equivalent:

- a. An attention word such as "CAUTION", "WARNING", or "DANGER", and a brief description of possible hazards associated with mishandling of the battery pack such as burn hazard, fire hazard, explosion hazard, and
- b. A list of actions to take to avoid possible hazards, such as do not crush, disassemble, dispose of in fire, or similar actions.
- c. Instructions regarding replacement batteries.

A lithium ion battery pack shall be marked with the following or equivalent: "CAUTION: Risk of Fire and Burns. Do Not Open, Crush, Heat Above (manufacturer's specified maximum temperature) or Incinerate. Follow Manufacturer's Instructions." This wording or equivalent shall also be included in the instructions packaged with the battery pack.

Charging Marking/Instructions - Recommended charging information is also provided on the product, its smallest packaging unit, or the instructions provided with each battery pack.

The charging limits as outlined in the Manufacturer's Recommended Charging Parameters Table above are provided as part of these instructions.

Battery Pack, Model 12V4500mAh, Fig. 1 to 5

See Ill(s). 1 to 7 for additional views of overall battery constructions.

1. Cell(s) - See tables and information below:

Battery Pack Model	Cell Manufacturer	Cell Model	R/C Cells, Y or N*	File Reference, (Unrecognized cells)	
				File No.	Report Date
12V4500mAh	Jiangxi Dongteng Lithium Co. Ltd	INR18650-1500	Y	MH65016	2021-04-19
Note: See Cell Chemistry and Configuration Table at beginning of report for information on type of cells, number of cells and their configuration in the battery pack circuit.					

Cells are located within the pack in a manner that would not result in blocking of vents in the event of cell venting. Cells are secured in their enclosure and prevented from movement that would cause damage to connections and short circuit of parts by:

Pack Model No.	Description	Cell Layout Ills. No.
12V4500mAh	Cells were fixed by plastic holder	Ill.6

Connections to cell terminals are constructed as noted below:

Pack Model No.	Description	Ills. No. or description
12V4500mAh	Connected by Nickel tabs	Fig.6

2. Battery Pack Enclosure/Case - See Table Below:

Battery Pack Model	Overall Dimensions, L x W x H, mm	Minimum thickness, mm	Enclosure Material Manufacturer	Enclosure Material Designation	Enclosure material flame rating at Minimum Thickness*
12V4500mAh	See ILL.7 for detail	--	--	--	--
* - V-0, V-1, or compliant with UL746C/UL 60950-1 20 mm Flame Test					

3. Protective Circuitry - Consists of the following Components:

Battery Pack Model No.	Type of Protective Component	Location of Component Within Pack	Component Manufacturer	Component Part No.	Component Ratings
12V4500mAh	Control IC (U1,U2)	PWB	Shenzhen Chuangxin Pico Electronics Co.,Ltd	CM1031-DT (TSSOP-16)	--
	MOSFFET (QD1 QD2 QC1 QC3)	PWB	DEVELOPER MICROELECTRONICS CO.,LTD	DP3080D	--
	MOSFFET (QD3 QD4 QC2 QC4)	PWB	ShenZhen Puolop Electronics co.,LTD	PTD3080	--
	Fuse (F1)	PWB	NANJING SART SCIENCE & TECHNOLOGY DEVELOPMENT CO LTD (E319512)	S1206-FA-20.0A	20A; 32Vdc; Interrupting Rating 300A
	RS1,RS2	PWB	--	--	1mΩ±5% ; 2W
	NTC (TH1, TH2)	Near to Cell positive and negative terminal	Guangdong Xinshiheng Technology Co. , Ltd. (E526963)	MF52 \$ 104 & 3950	R25: 100 KΩ±5%, Tmoa 105°C

See the following illustrations for details of protective circuitry:

Battery Pack Model Number	Illustration Number
12V4500mAh	TestRef1, I11.1

and Report

4. External Connector - Constructed as noted below:

Battery Pack Model Number	R/C Connector Manufacturer	R/C Connector Part Number	Illustration No.
12V4500mAh	ZHEJIANG HONGXING ELECTRICAL CO LTD(E344515)	HX420XX-T	N/A

- 4-1 External Connector and Receptacles alternate- (RTRT2, ECBT2, EMMT2), or nickel alloy or copper alloy pins housed in bodies of (QMFZ2) plastic at the thickness used rated V-2 minimum, minimum 80 degree C.

Inadvertent shorting of connector prevented by the following:

Battery Pack Model Number	Description of Mechanism to Prevent Inadvertent Short Circuiting of Connector Terminals
12V4500mAh	Recessed construction, refer to Fig.3

5. Insulation - Insulation to prevent shorting of connections, between cells, and other parts within the battery pack are provided by the following:
- 5-1. Tape - (OANZ2), marked "Flame Retardant" or rated V-2 or VTM-2 except for less or equal to 1750mm³ or 4g.
- 5-2. Glass fiber- Placed between plastic holder and enclosure(Fig.2).
6. Printed Wiring Board - R/C (ZPMV2), rated minimum 130 Degree C, V-1 or better.
7. Leading Wire - R/C (AVLV2), insulated with PVC, TFE, PTFE, FEP, neoprene or polyimide insulation or which is marked with "VW-1" or "FT-1", minimum 16 AWG, rated minimum 80 degree C.
8. Internal plastic holder - R/C (QMFZ2), used to hold cells in place, Rated minimum 80 degree C, V-2 or better.
9. Enclosure - Two sides of enclosure were made of plastic, the other four sides of enclosure were made of aluminum alloy. Plastic parts were fixed with aluminum alloy parts by screws.
- 9-1 Plastic enclosure parts: R/C(QMFZ2), Rated minimum 80 degree C, V-2 or better.
10. Glue - Used inside of enclosure, rated min V-2 except for less or equal to 1750mm³ or 4g as applicable.

Figure-1 Page-1

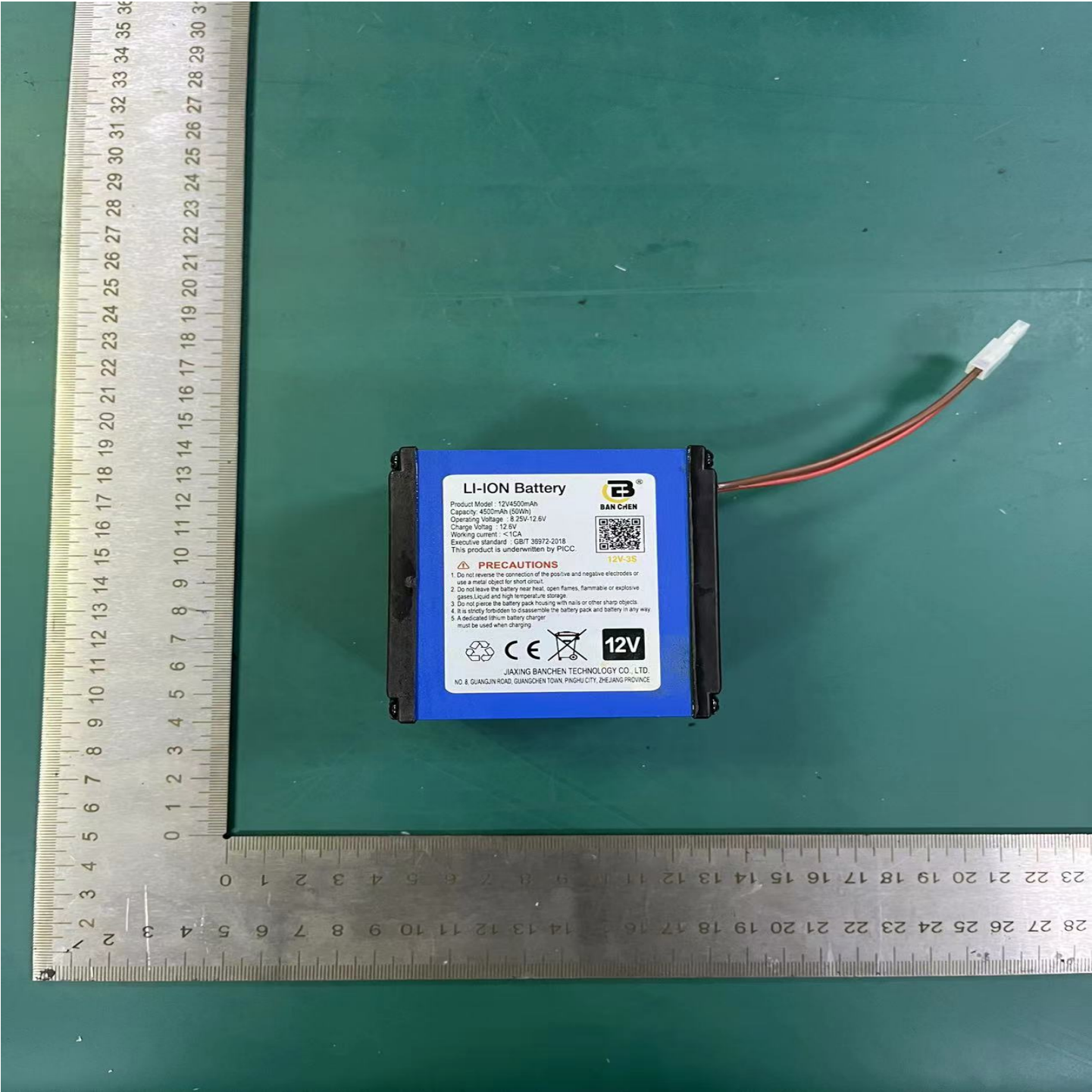


Figure-2 Page-1



Figure-3 Page-1

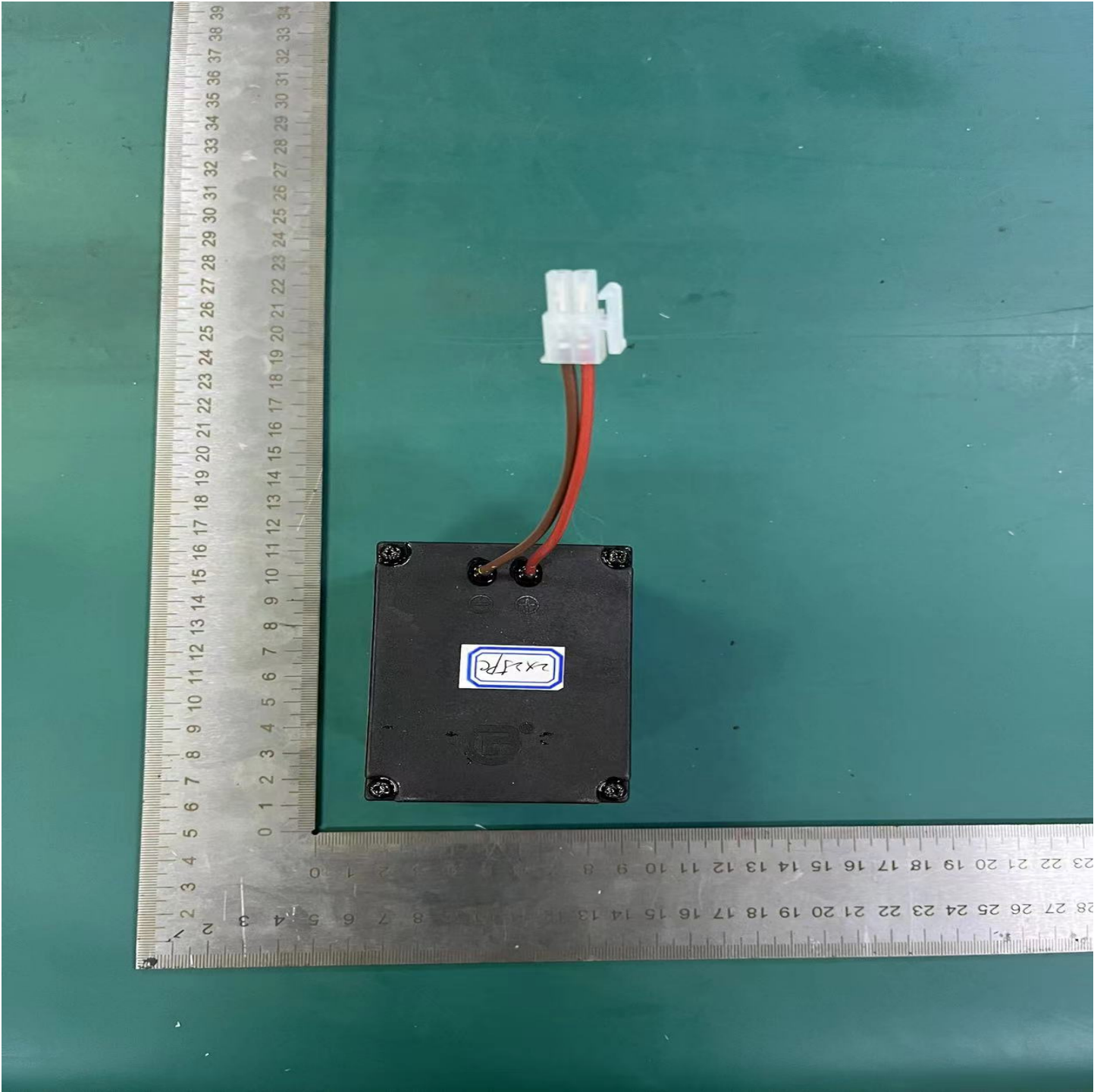
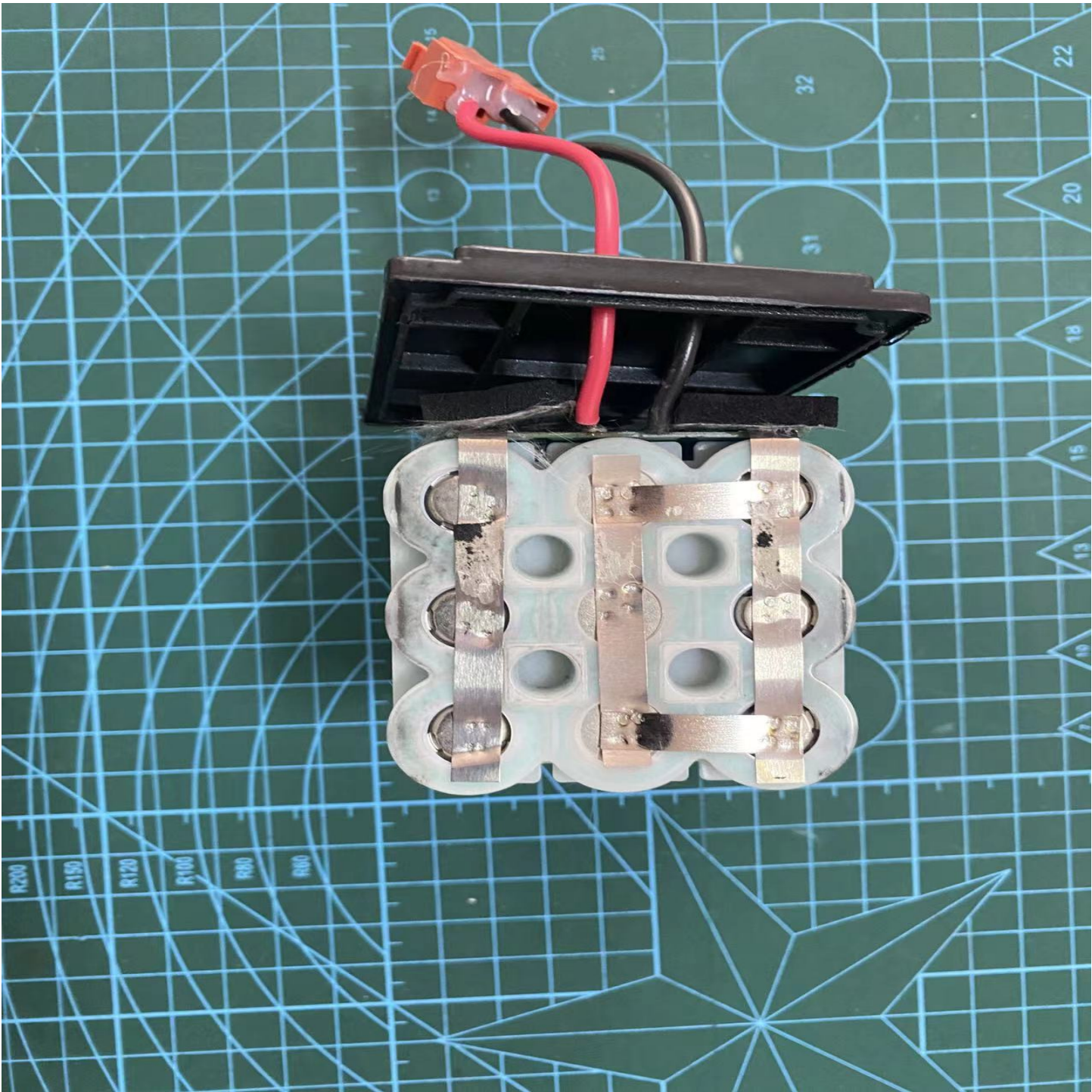


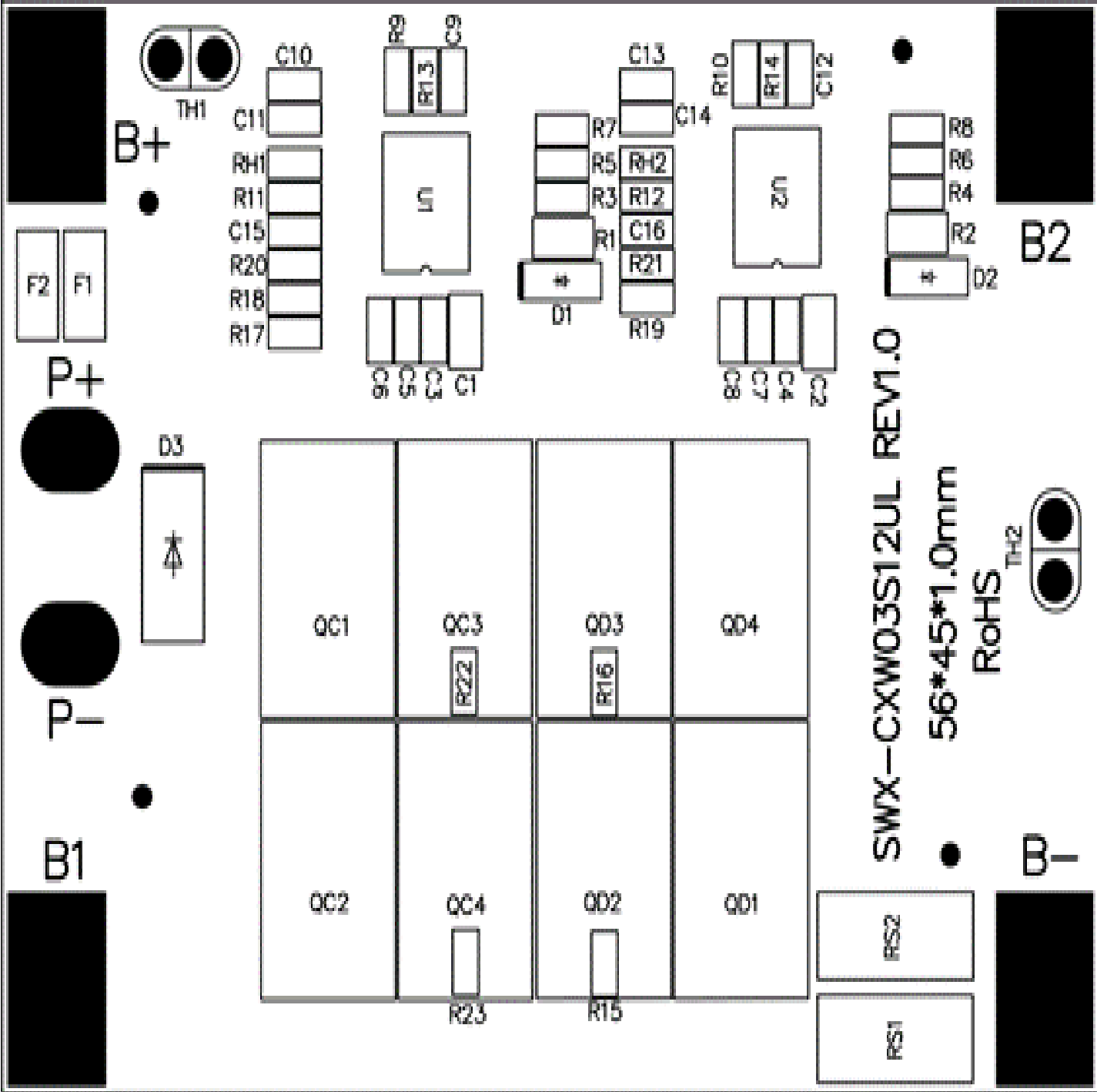
Figure-4 Page-1

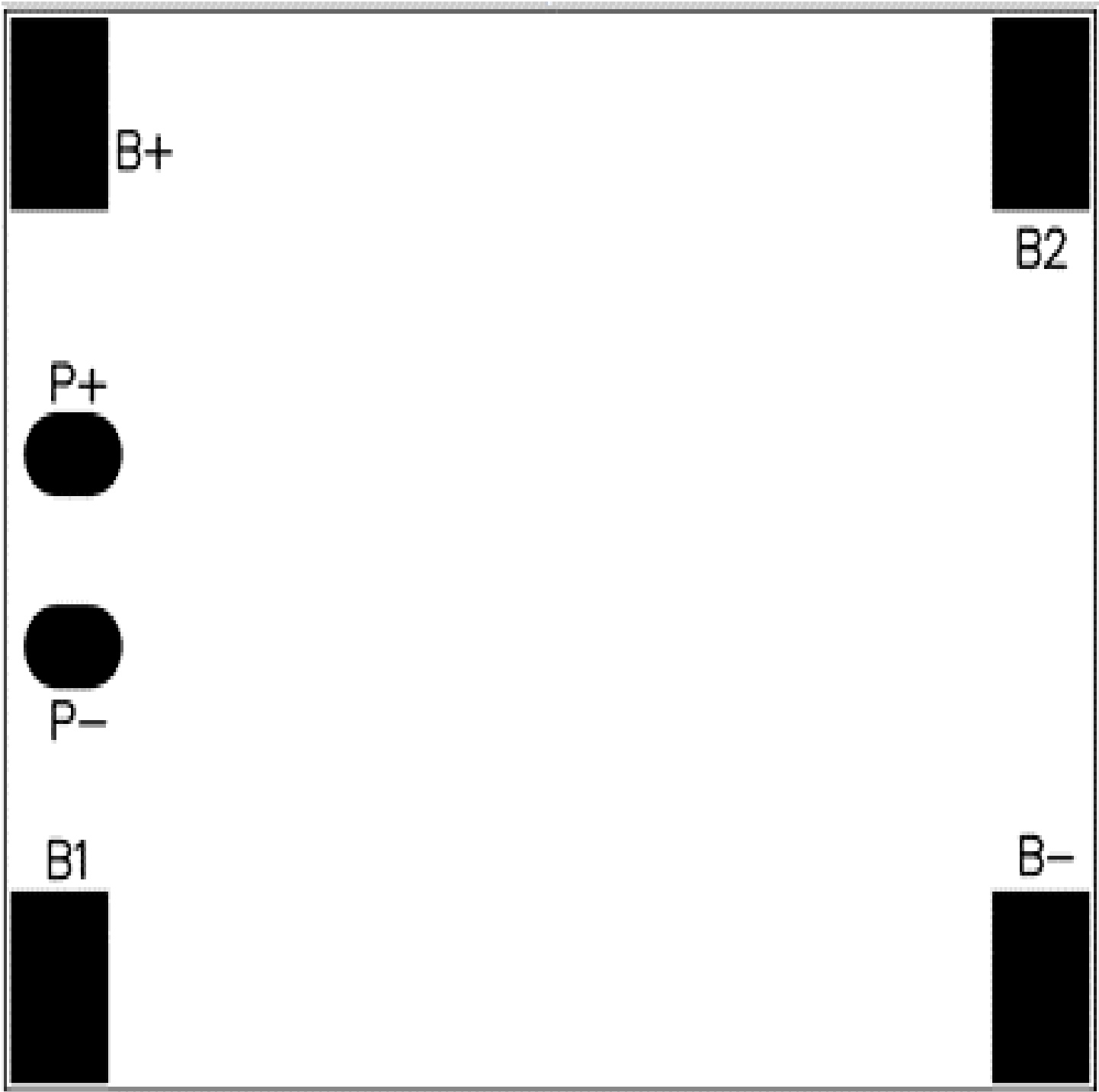


A photograph of a disassembled electronic device, likely a sensor or actuator, with its components laid out on a green surface next to a ruler. The components include a blue printed circuit board (PCB) with a black cover, a small white connector, several strips of yellow tape, a small clear plastic bag, and two white rectangular pads. The ruler shows measurements in centimeters and inches.

Figure-6 Page-1







The following Page(s) are related to Illustration-3. The next supplement, if applicable, will be identified with a new Supplement Page Heading

LI-ION Battery

Product Model : 12V4500mAh
Capacity: 4500mAh (50Wh)
Operating Voltage : 8.25V-12.6V
Rated Voltage : 11.1V
Charging limit voltage: 12.6V
Maximum charging current: 2.25A
Working current : <1CA
Executive standard : GB/T 36972-2018
This product is underwritten by PICC.



12V-3S

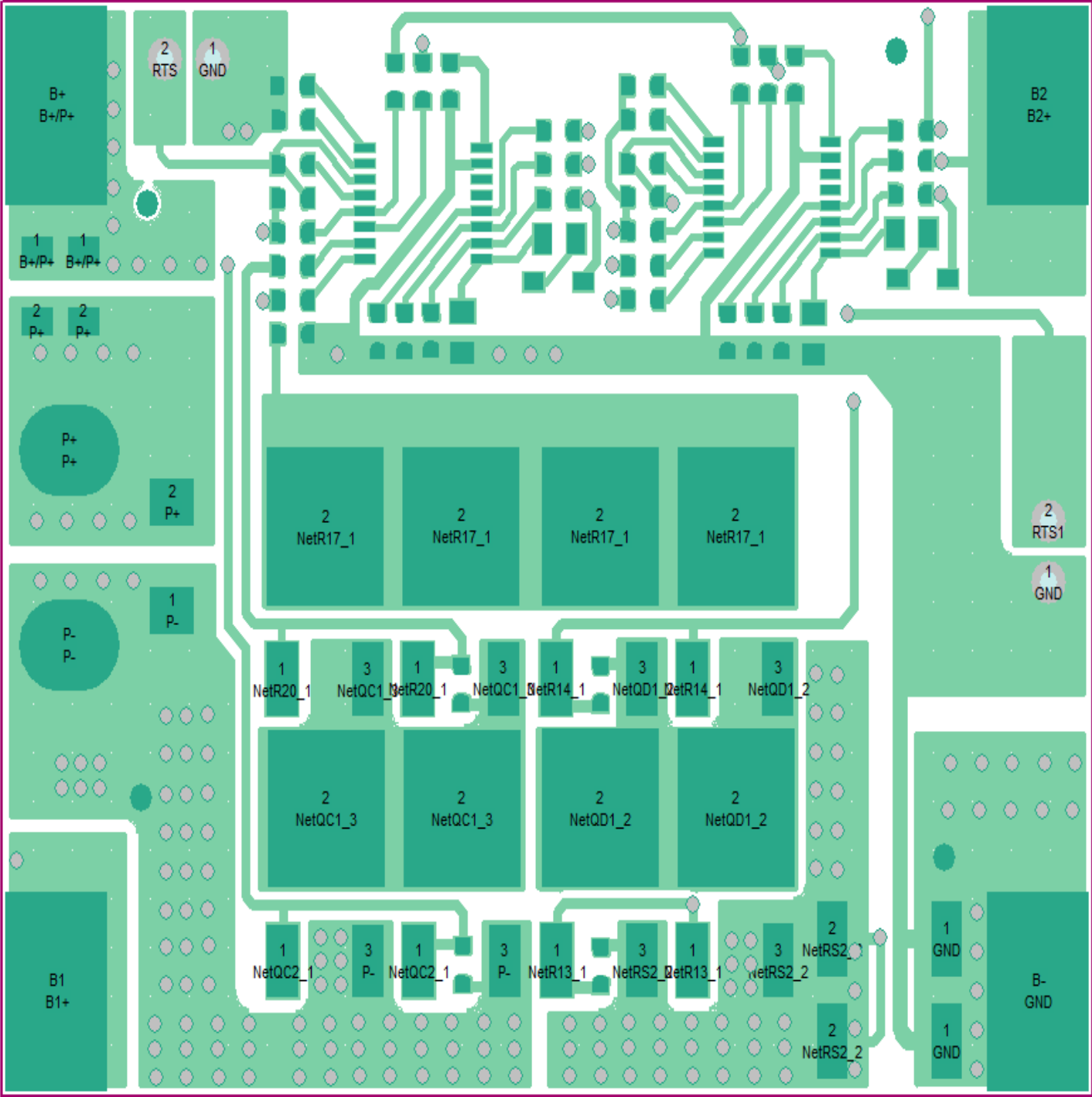
PRECAUTIONS

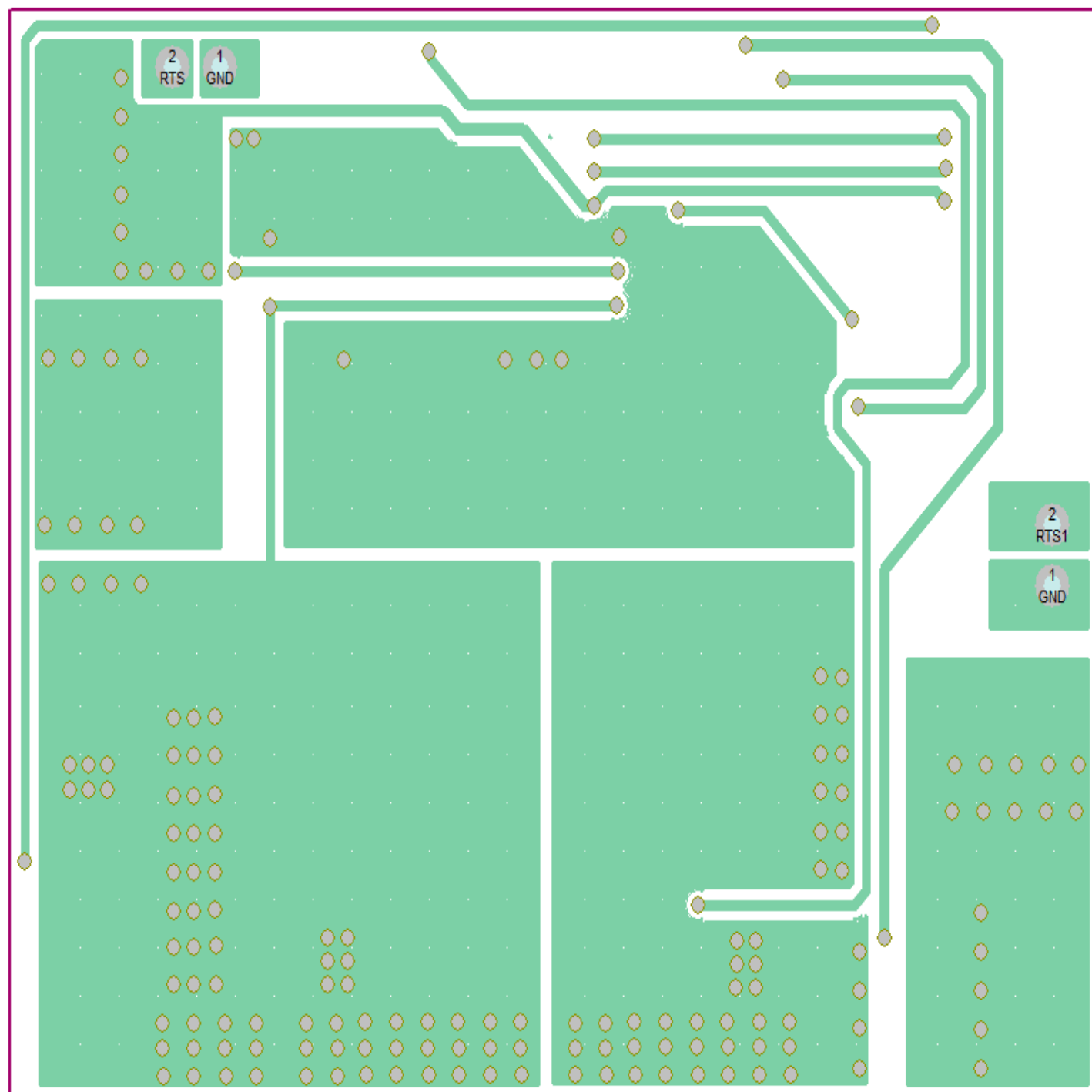
1. Do not reverse the connection of the positive and negative electrodes or use a metal object for short circuit.
2. Danger: Do not leave the battery near heat, open flames, flammable or explosive gases, liquid and high temperature storage.
3. Danger: Do not pierce the battery pack housing with nails or other sharp objects. It is strictly forbidden to disassemble the battery pack and battery in any way.
4. Caution - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not disassemble, heat above (manufacturer's maximum temperature limit), or incinerate. Replace battery with (battery manufacturer's name or end product manufacturer's name and part number) only. Use of another battery may present a risk of fire or explosion.
5. Dispose of used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
6. A dedicated lithium battery charger must be used when charging.



E528621
JIAXING BANCHEN TECHNOLOGY CO., LTD.
NO. 8, GUANGJIN ROAD, GUANGCHEN TOWN, PINGHU CITY, ZHEJIANG PROVINCE

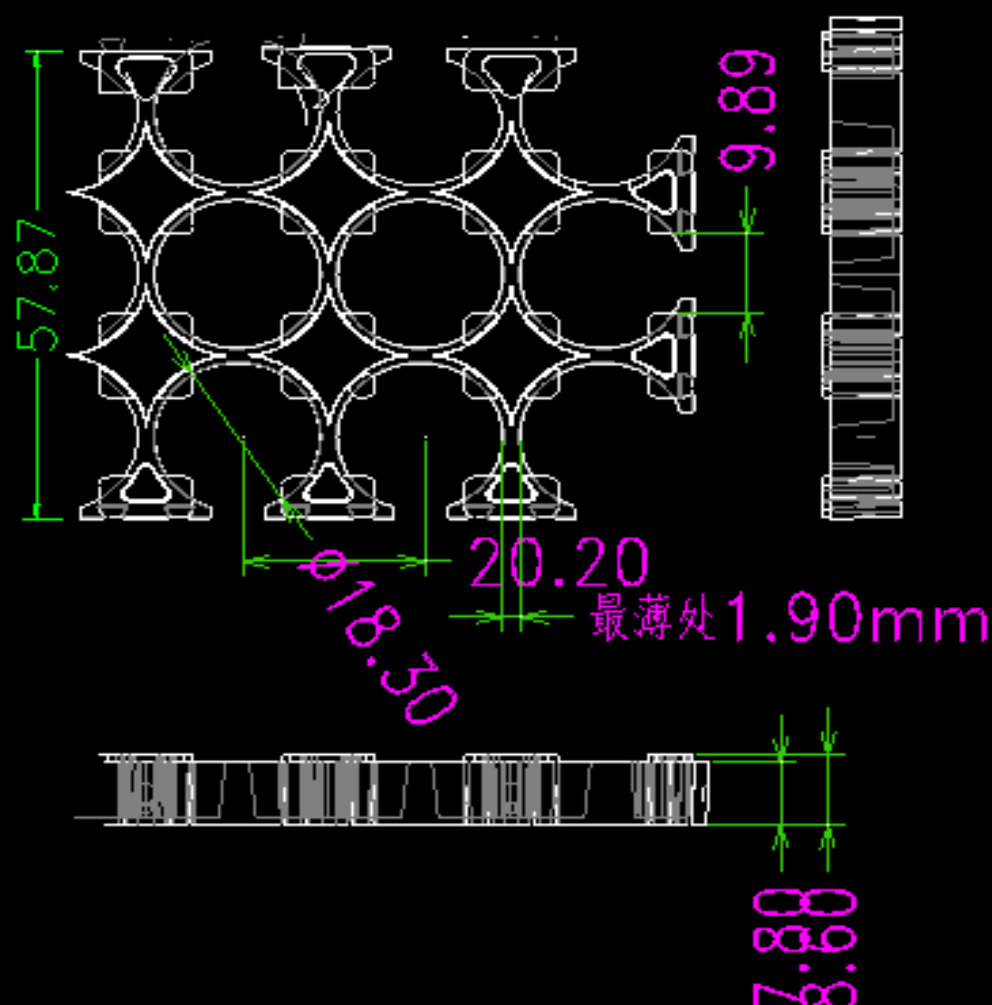
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嘉兴伴辰科技有限公司

18650电池拼接支架3X3





File E528621
Project 4790432354

August 9, 2022

REPORT

on

COMPONENT - Batteries, Household and Commercial
(BBFS2)

JIAXING BANCHEN TECHNOLOGY CO., LTD.
ZHEJIANG, CHINA

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DESCRIPTION

PRODUCT COVERED:

USR Component LI-ION Battery, Model(s): 12V7500mAh.

USR - Products designated USR have been investigated using US requirements as noted in the Test Record.

ELECTRICAL RATING:

Model	Voltage (Nominal), Vdc	Capacity (Nominal), Ah/Wh
12V7500mAh	11.1V	7500mAh
Note: The packs have been tested based upon their electrical ratings but no capacity performance testing has been conducted. In addition, no testing with a host product including a charger has been conducted.		

CELL CHEMISTRY AND CONFIGURATION:

Pack Model	Cell Model	Cell Chemistry and Type#	Number of Cells	Configuration*: X-S/Y-P
12V7500mAh	INR18650-1500	Lithium ion (Cylindrical)	15	3-S/5-P
* - X = No. of cells in series; Y = Number of parallel strings # - e.g. lithium ion cylindrical, lithium ion prismatic, lithium ion polymer (soft pouch), Ni-Cad prismatic, etc.				

MANUFACTURER'S RECOMMENDED CHARGING PARAMETERS:

Model	Standard Charging Current, A	Standard Charging Voltage, Vdc	Maximum Charging Current, A	Maximum Charging Voltage, Vdc
12V7500mAh	2.25A	12.6V	3.75A	12.6V

GENERAL CONSTRUCTION:

See Section General for general construction details employed on these products.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Products indicated as USR have been investigated using requirements contained in the Third Edition of UL 2054, Household and Commercial Batteries, Edition 3, Revision Date March 10, 2022.

Condition of Acceptability - When installed in the end product, consideration shall be given to the following:

1. These battery packs have been evaluated based upon manufacturers specifications for charging, discharging and temperature limits. They have not been evaluated in combination with charger(s) or host product(s). Additional evaluation to determine that the compatibility of the host with the battery pack and the charger with the battery pack will be needed to ensure that the battery pack is not used outside of its rated limits.
2. The battery pack was subjected to the Abnormal Charging test of UL 2054 which is a high rate charging test for 7 hours minimum based upon the parameters noted in the table below, with acceptable results. The end product evaluation shall determine that the maximum current and the maximum voltage limit noted below are not exceeded under any single fault conditions of the charging circuit.

Abnormal Charging Test Values		
Battery Pack Model	Maximum Abnormal Charging Current, A	Maximum Abnormal Charging Voltage Limit, V
12V7500mAh	11.25 (Max. Actual Measured)	12.6Vdc

The battery pack was also subjected to the Abusive Overcharge test of UL 2054 with acceptable results. The need to conduct additional abnormal/abusive charge testing in the end use application shall be determined.

3. The battery pack has been subjected to a short circuit test at both ambient ($20 \pm 5^{\circ}\text{C}$) and $55 \pm 5^{\circ}\text{C}$, with a resistance load in the range of $80 \pm 20 \text{ m}\Omega$. The need to conduct additional abnormal discharge testing shall be determined in the end use application.

4. The output of the battery pack has been determined to be a non-limited power source in accordance with UL 2054. For non-limited power sources, the need for additional protective circuitry and an appropriate fire enclosure for the end product, which is supplied by the battery pack, shall be determined in the end product evaluation.
5. The battery packs have been subjected to temperature testing under maximum load charging and discharging conditions and for use in a maximum ambient as noted below. If used in an ambient in excess of the maximum values noted, additional evaluation may be necessary.

Model	Temperature test charge conditions	Temperature test discharge conditions
12V7500mAh	3.75A, 12.6Vdc, cut off 375mA	15A

Model	Ambient Use Temperatures, C
12V7500mAh	Charge: 0°C ~45°C Discharge: -10°C ~55°C

6. A temperature test with the battery pack in the end use installation shall be conducted under both maximum charging and discharging conditions. During the temperature test, the following temperature limits on temperature sensitive components shall not be exceeded:

Component	Model No.	Temperature Limits, °C
Cell (measured on Casing)	INR18650-1500	100

7. The battery pack enclosure has not been evaluated as a fire enclosure. The suitability of the battery pack enclosure's flammability shall be determined in end product evaluation.
8. The battery pack employs an enclosure that has not been evaluated as a mechanical enclosure in accordance with the enclosure requirements of UL 2054. A mechanical enclosure to protect cells and internal circuitry and prevent user access under all conditions of use shall be provided in the end use application. An evaluation of the mechanical enclosure's ability to prevent access to and provide protection for cells and internal circuitry shall be conducted in the end use application.

9. The end use application shall consider the need for the following markings and instructions or equivalent for the safe use of the battery pack:

Marking:

"Replace battery with (battery Recognized Company or end product manufacturer's name, part number) only. Use of another battery may present a risk of fire or explosion."

or "See Operating or maintenance Instructions for type of battery to be used" or equivalent with instructions for replacement of the correct battery pack provided.

or A symbol indicating the need to refer to the instruction manual may be used instead of the text noted above. An acceptable symbol is a combination of ISO 7010 - M002 (refer to instruction manual/booklet) and ISO 7010 - W001 (general warning sign), as depicted below:



Instructions:

- a. A warning notice with the following or equivalent:

"Caution - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not disassemble, heat above (manufacturer's maximum temperature limit), or incinerate. Replace battery with (battery manufacturer's name or end product manufacturer's name and part number) only. Use of another battery may present a risk of fire or explosion."

- b. Complete instructions as to how to replace the battery including the following or equivalent statement:

"Dispose of used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire."

MARKINGS/INSTRUCTIONS:

All markings shall be legible and permanent such as ink stamped, etched, adhesive labels, etc. Unless otherwise allowed, all adhesive labels shall be R/C (PGDQ2) component marking and labeling systems or printed on R/C (PGJI2) Component Printing Materials.

Nameplate Marking - The Recognized Company, trade name, trademark or other descriptive marking, catalog or model number, electrical rating, and Recognition Marking.

Date of Manufacturer Marking -.

The manufacturer's date code is as follows: YYYY MM DD

YYYY stands for year

MM stands for month

DD stands for day

For example: 2022 06 10 means manufactured on June 10, 2022

Factory Location Marking - See Section General for manufacturing location marking.

Cautionary Markings/Instructions - Each 1) battery pack; or 2) the smallest unit package, must be marked with; or 3) instructions provided with each battery, must include the following statements or equivalent:

- a. An attention word such as "CAUTION", "WARNING", or "DANGER", and a brief description of possible hazards associated with mishandling of the battery pack such as burn hazard, fire hazard, explosion hazard, and
- b. A list of actions to take to avoid possible hazards, such as do not crush, disassemble, dispose of in fire, or similar actions.
- c. Instructions regarding replacement batteries.

A lithium ion battery pack shall be marked with the following or equivalent: "CAUTION: Risk of Fire and Burns. Do Not Open, Crush, Heat Above (manufacturer's specified maximum temperature) or Incinerate. Follow Manufacturer's Instructions." This wording or equivalent shall also be included in the instructions packaged with the battery pack.

Charging Marking/Instructions - Recommended charging information is also provided on the product, its smallest packaging unit, or the instructions provided with each battery pack.

The charging limits as outlined in the Manufacturer's Recommended Charging Parameters Table above are provided as part of these instructions.

Battery Pack, Model 12V7500mAh, Fig. 1 to 4

See Ill(s). 1 to 8 for additional views of overall battery constructions.

1. Cell(s) - See tables and information below:

Battery Pack Model	Cell Manufacturer	Cell Model	R/C Cells, Y or N*	File Reference, (Unrecognized cells)	
				File No.	Report Date
12V7500mAh	Jiangxi Dongteng Lithium Co. Ltd	INR18650-1500	Y	MH65016	2021-04-19
Note: See Cell Chemistry and Configuration Table at beginning of report for information on type of cells, number of cells and their configuration in the battery pack circuit.					

Cells are located within the pack in a manner that would not result in blocking of vents in the event of cell venting. Cells are secured in their enclosure and prevented from movement that would cause damage to connections and short circuit of parts by:

Pack Model No.	Description	Cell Layout Ills. No.
12V7500mAh	Cells were fixed by plastic holder	Ill.6

Connections to cell terminals are constructed as noted below:

Pack Model No.	Description	Ills. No. or description
12V7500mAh	Connected by Nickel tabs	Fig.1

2. Battery Pack Enclosure/Case - See Table Below:

Battery Pack Model	Overall Dimensions, L x W x H, mm	Minimum thickness, mm	Enclosure Material Manufacturer	Enclosure Material Designation	Enclosure material flame rating at Minimum Thickness*
12V7500mAh	See ILL.7 for detail	--	--	--	--
* - V-0, V-1, or compliant with UL746C/UL 60950-1 20 mm Flame Test					

3. Protective Circuitry - Consists of the following Components:

Battery Pack Model No.	Type of Protective Component	Location of Component Within Pack	Component Manufacturer	Component Part No.	Component Ratings
12V7500mAh	Control IC (U1,U2)	PWB	Shenzhen Chuangxin Pico Electronics Co.,Ltd	CM1031-DT (TSSOP-16)	--
	MOSFFET (QD1 QD2 QC1 QC3)	PWB	DEVELOPER MICROELECTRONICS CO.,LTD	DP3080D	--
	MOSFFET (QC2 QC4 QD3 QD4)	PWB	ShenZhen Puolop Electronics co.,LTD	PTD3080	--
	Fuse (F1)	PWB	NANJING SART SCIENCE & TECHNOLOGY DEVELOPMENT CO LTD (E319512)	S1206-FA-20.0A	20A; 32Vdc; Interrupting Rating 300A
	RS1,RS2	PWB	--	--	1mΩ±5% ; 2W
	NTC (TH1, TH2)	Near to Cell positive and negative terminal	Guangdong Xinshiheng Technology Co. , Ltd. (E526963)	MF52 \$ 104 & 3950	R25: 100 KΩ±5%, Tmoa 105°C

See the following illustrations for details of protective circuitry:

Battery Pack Model Number	Illustration Number
12V7500mAh	TestRef1, I11.1

4. External Connector - Constructed as noted below:

Battery Pack Model Number	R/C Connector Manufacturer	R/C Connector Part Number	Illustration No.
12V7500mAh	ZHEJIANG HONGXING ELECTRICAL CO LTD(E344515)	HX420XX-T	N/A

- 4-1 External Connector and Receptacles alternate - (RTRT2, ECBT2, EMMT2), or nickel alloy or copper alloy pins housed in bodies of (QMFZ2) plastic at the thickness used rated V-2 minimum, minimum 80 degree C. Inadvertent shorting of connector prevented by the following:

Battery Pack Model Number	Description of Mechanism to Prevent Inadvertent Short Circuiting of Connector Terminals
12V7500mAh	Recessed construction, refer to Fig.3

5. Insulation - Insulation to prevent shorting of connections, between cells, and other parts within the battery pack are provided by the following:
- 5-1. Tape - (OANZ2), marked "Flame Retardant" or rated V-2 or VTM-2 except for less or equal to 1750mm³ or 4g.
- 5-2. Glass fiber- Placed between plastic holder and enclosure(Fig.2).
6. Printed Wiring Board - R/C (ZPMV2), rated minimum 130 Degree C, V-1 or better.
7. Leading Wire - R/C (AVLV2), insulated with PVC, TFE, PTFE, FEP, neoprene or polyimide insulation or which is marked with "VW-1" or "FT-1", minimum 16 AWG, rated minimum 80 degree C.
8. Internal plastic holder - R/C (QMFZ2), used to hold cells in place, Rated minimum 80 degree C, V-2 or better.
9. Enclosure - Two sides of enclosure were made of plastic, the other four sides of enclosure were made of aluminum alloy. Plastic parts were fixed with aluminum alloy parts by screws.
- 9-1. Plastic enclosure parts: R/C(QMFZ2), Rated minimum 80 degree C, V-2 or better.
10. Glue - Used inside of enclosure, rated min V-2 except for less or equal to 1750mm³ or 4g as applicable.

Figure-1 Page-1

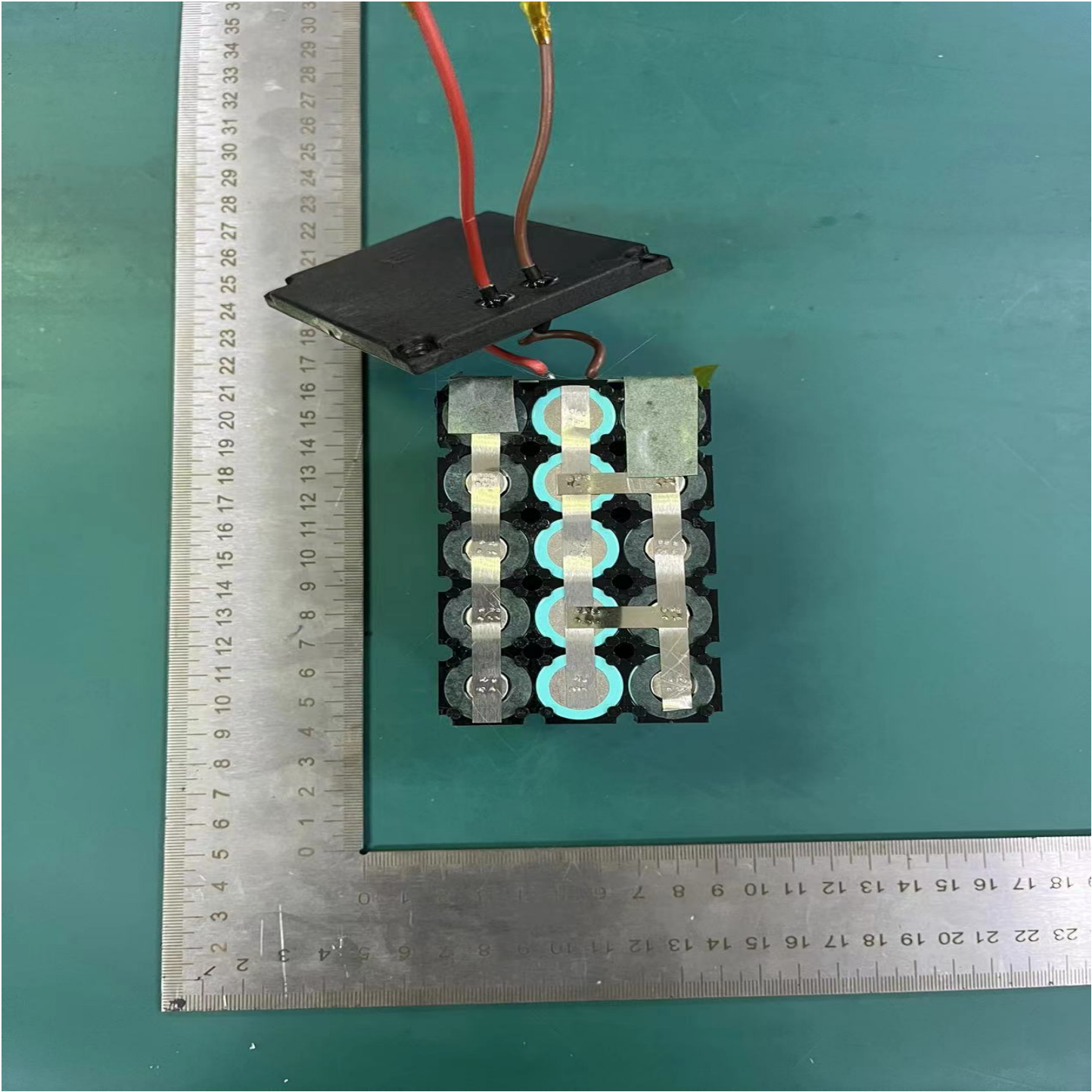


Figure-2 Page-1

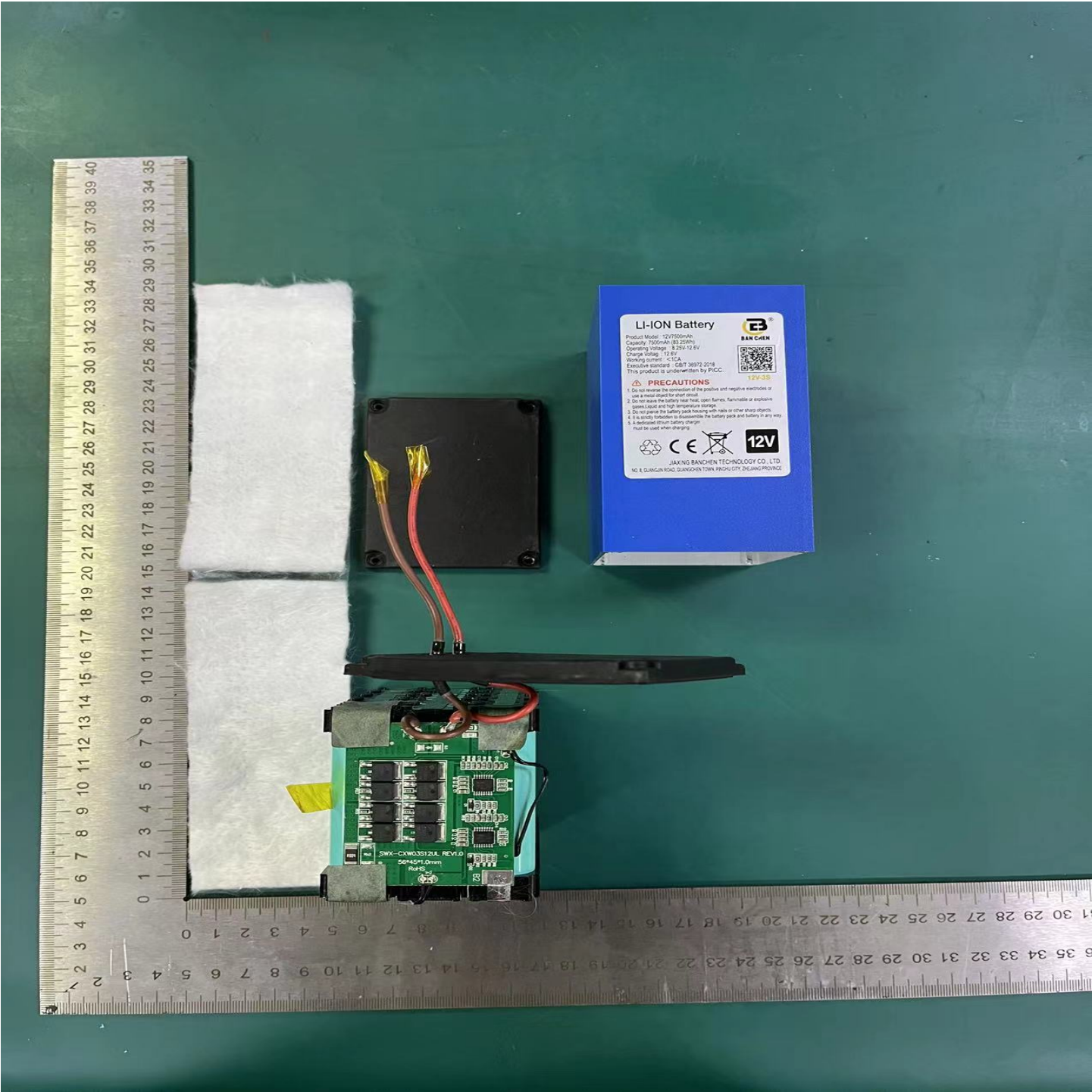


Figure-3 Page-1

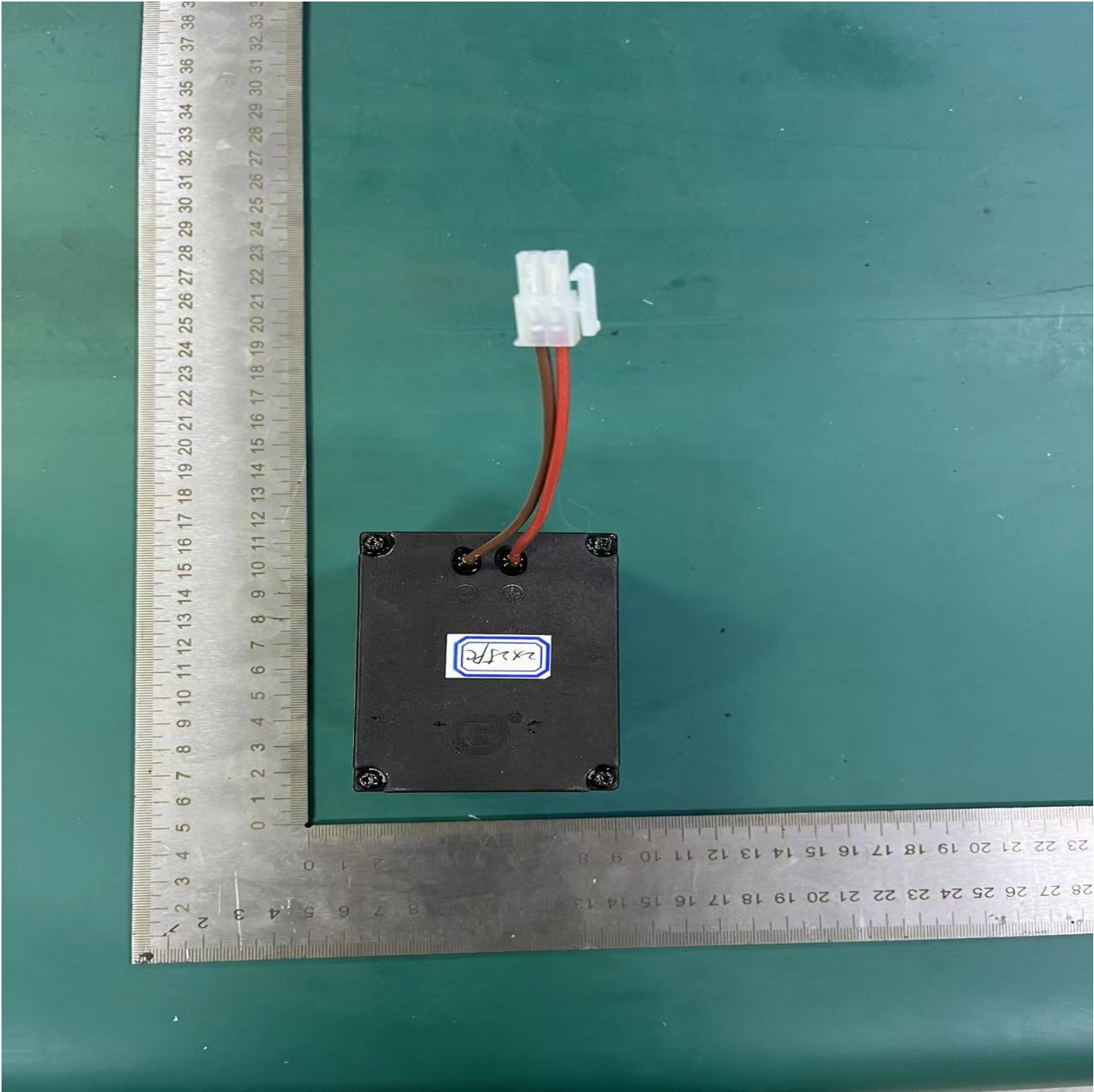
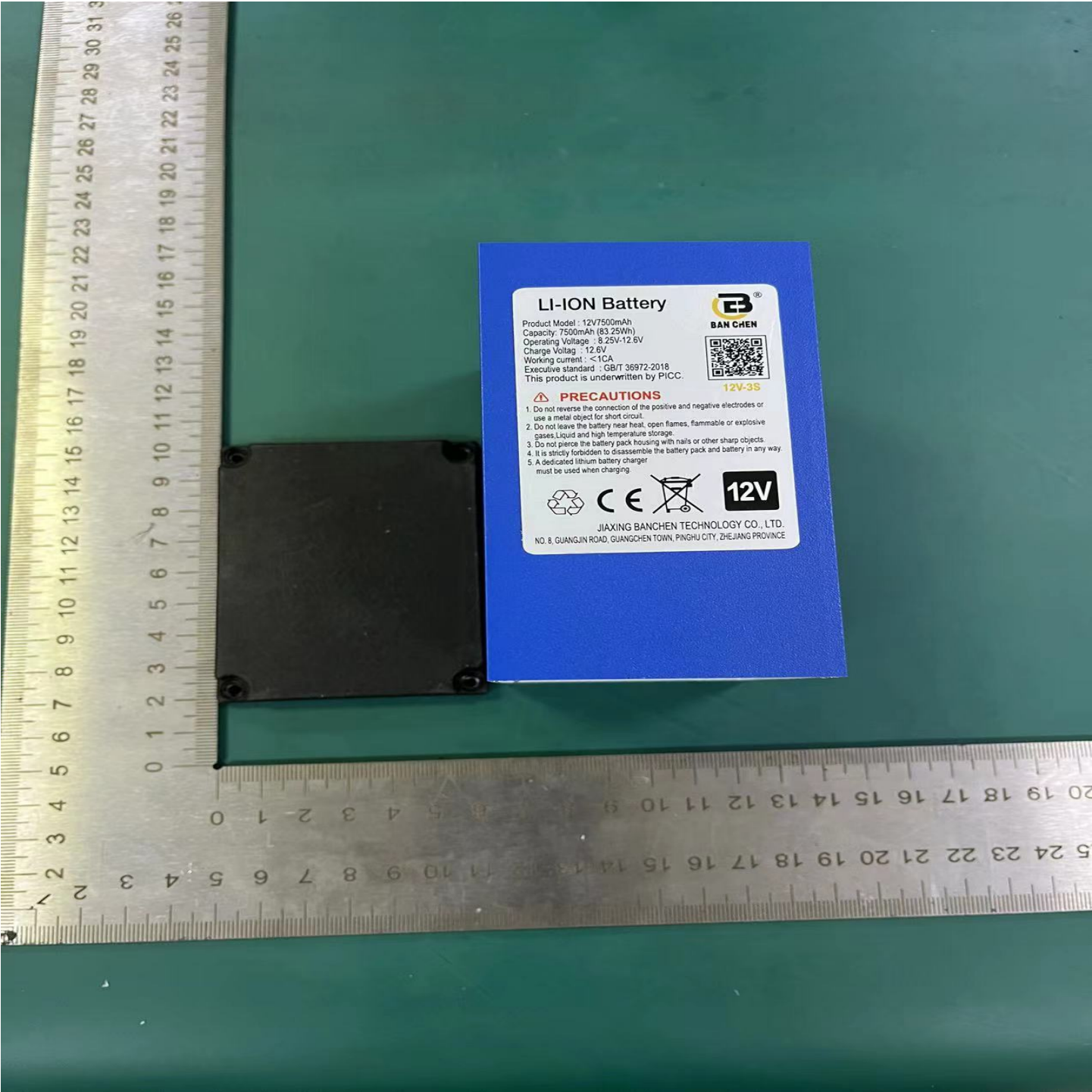
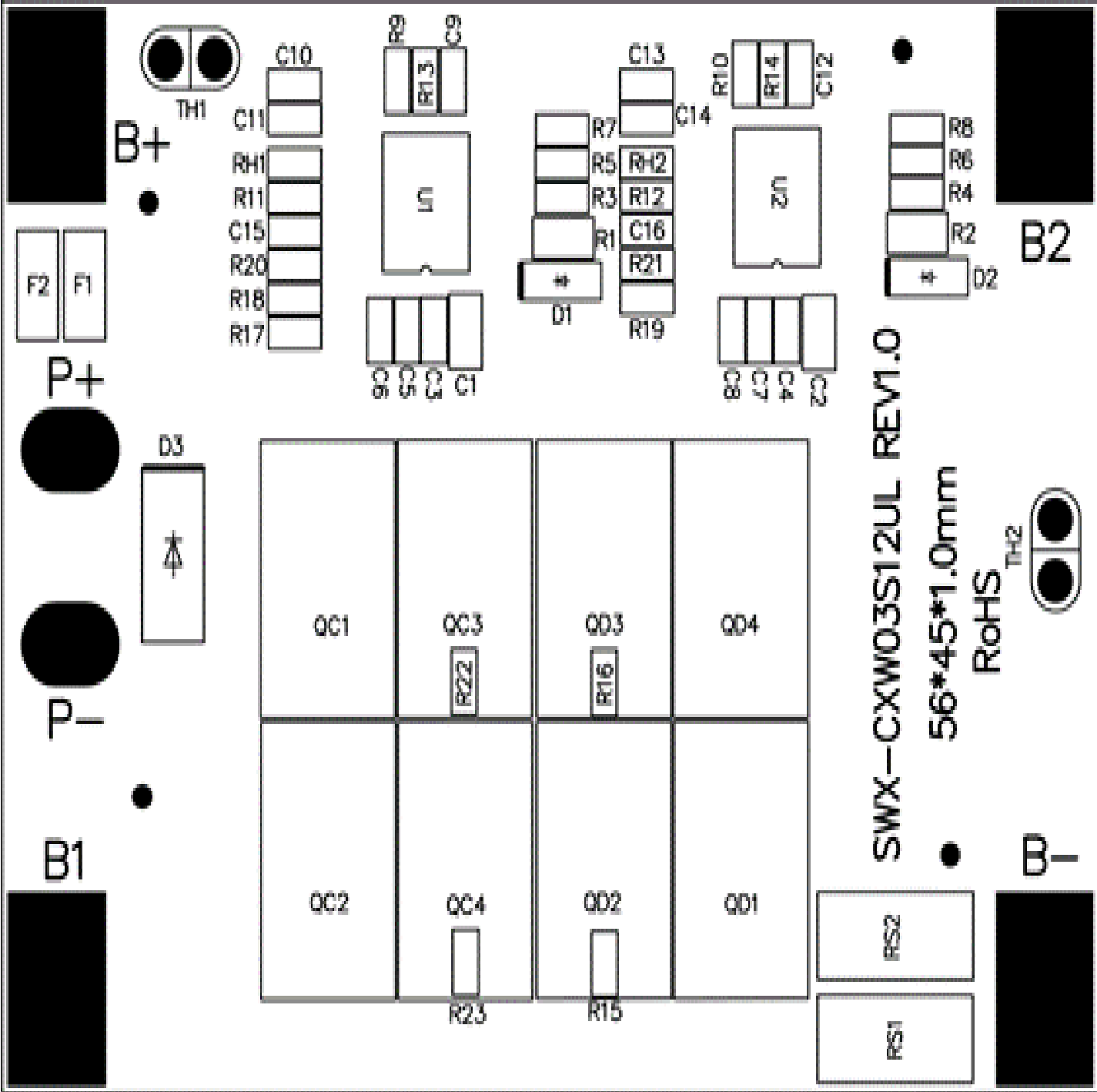
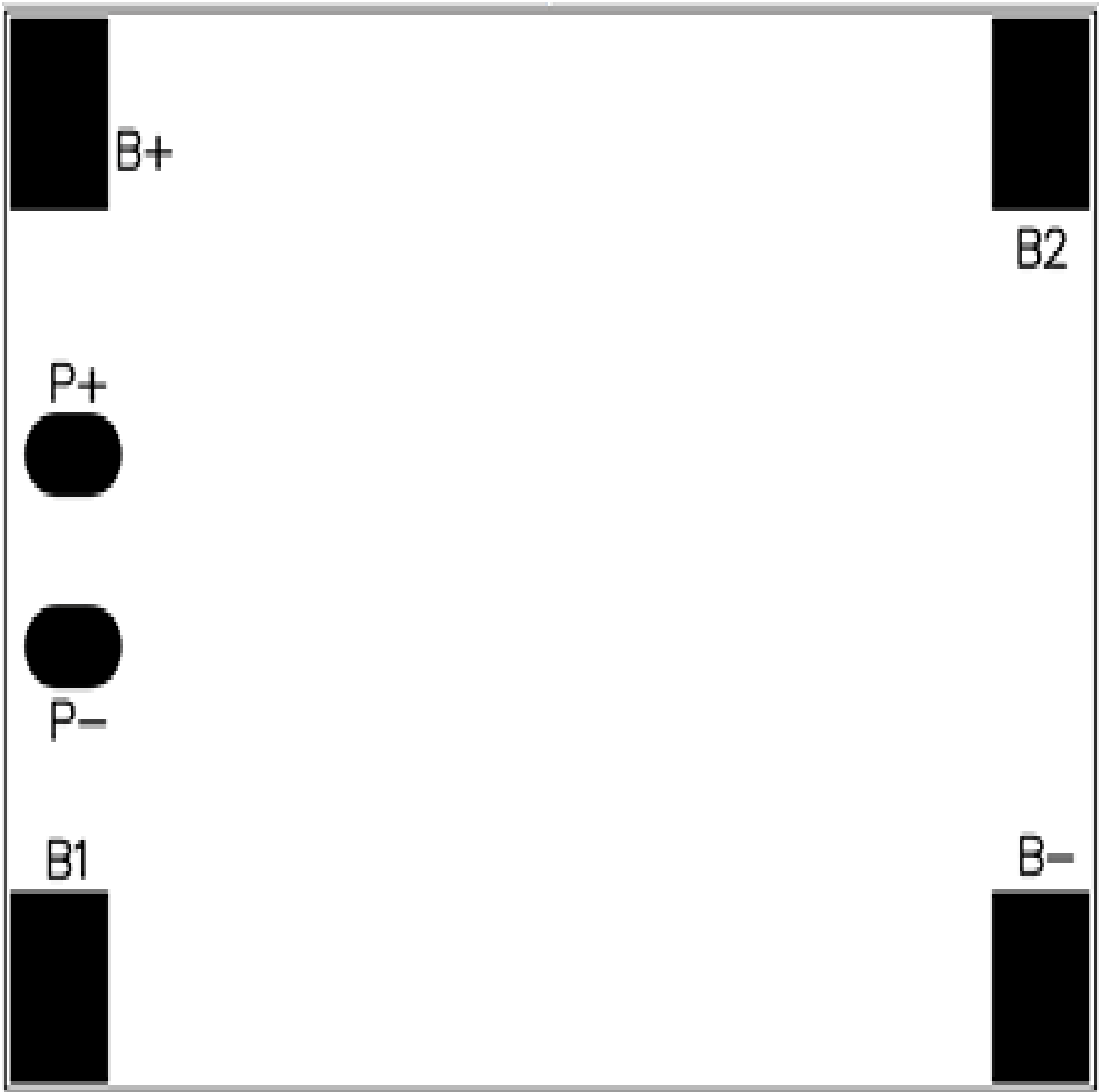
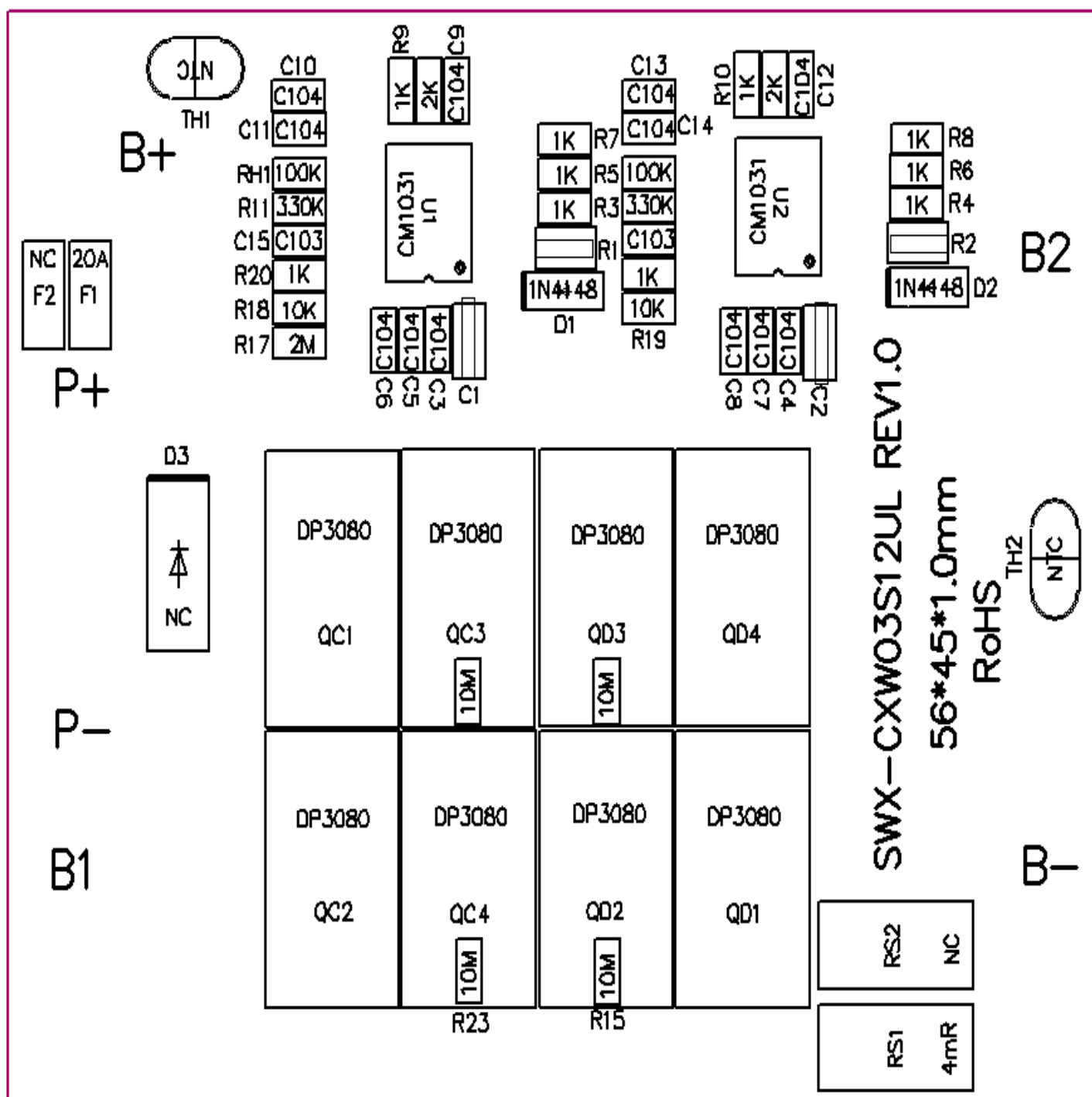


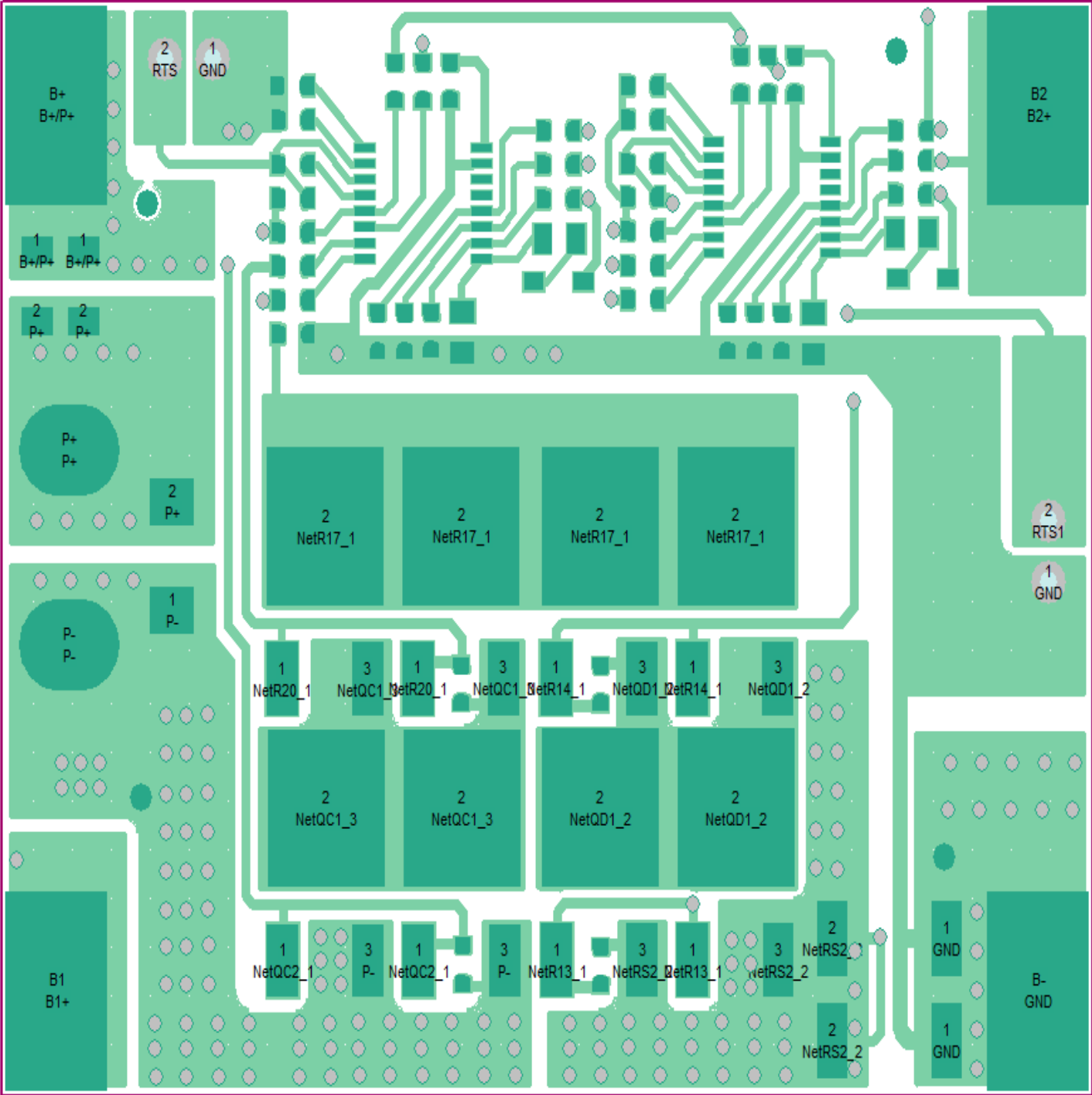
Figure-4 Page-1

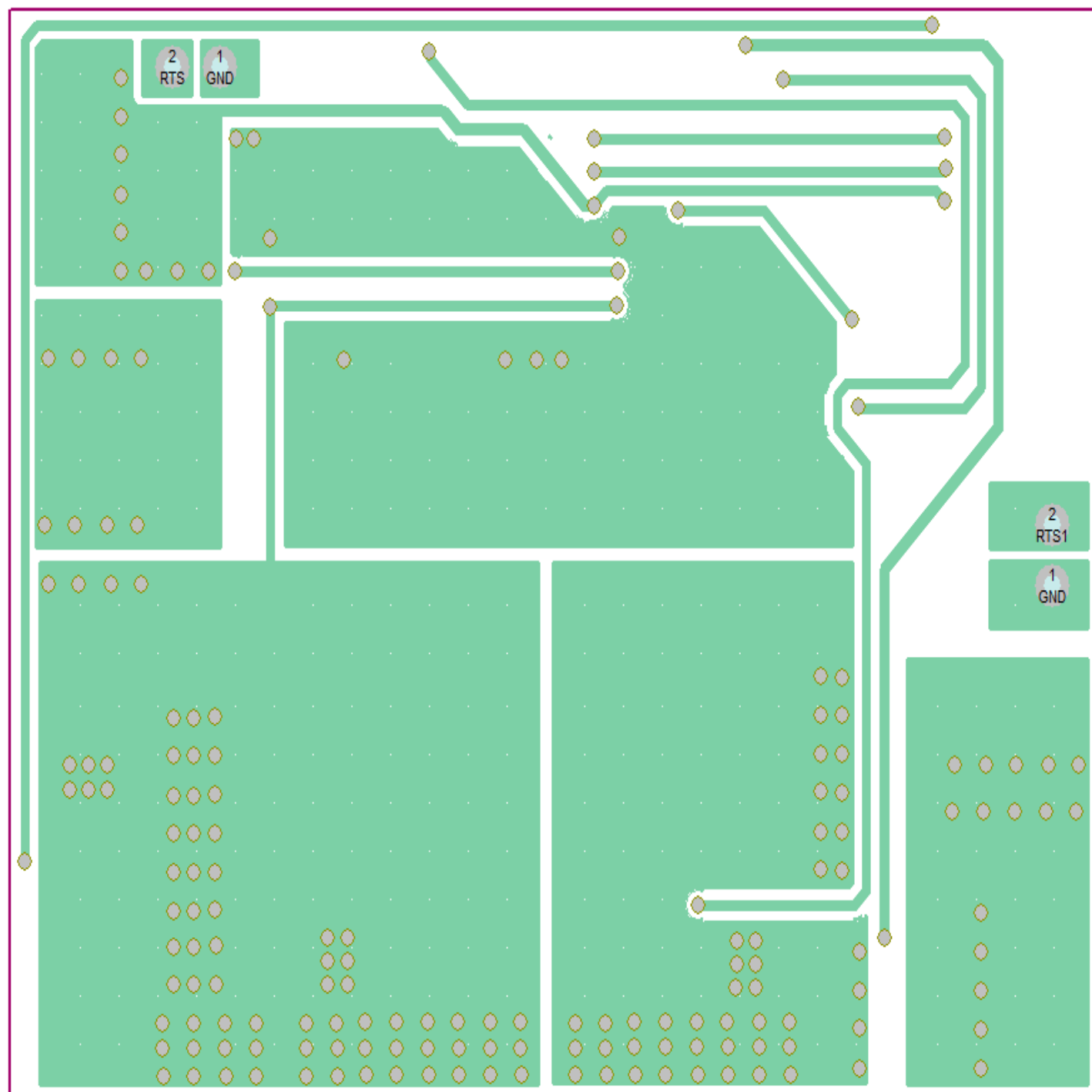






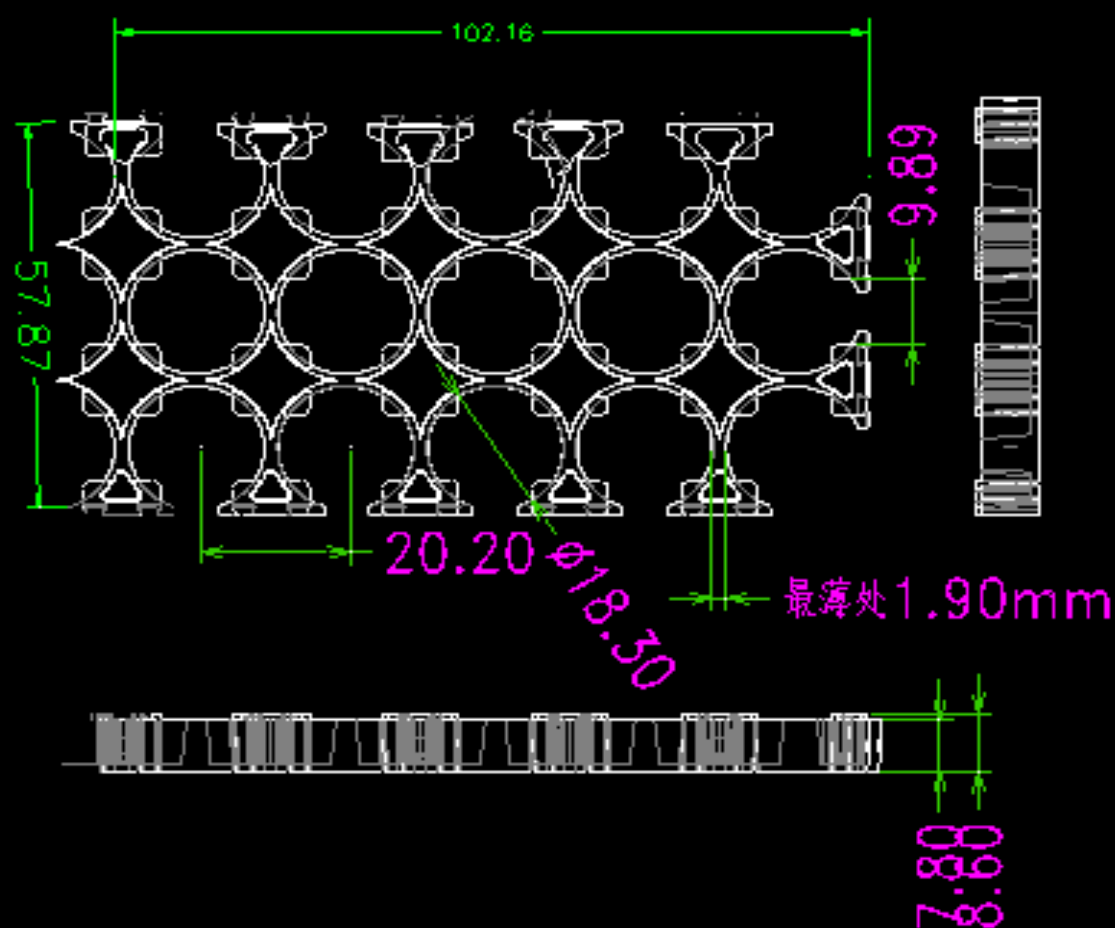


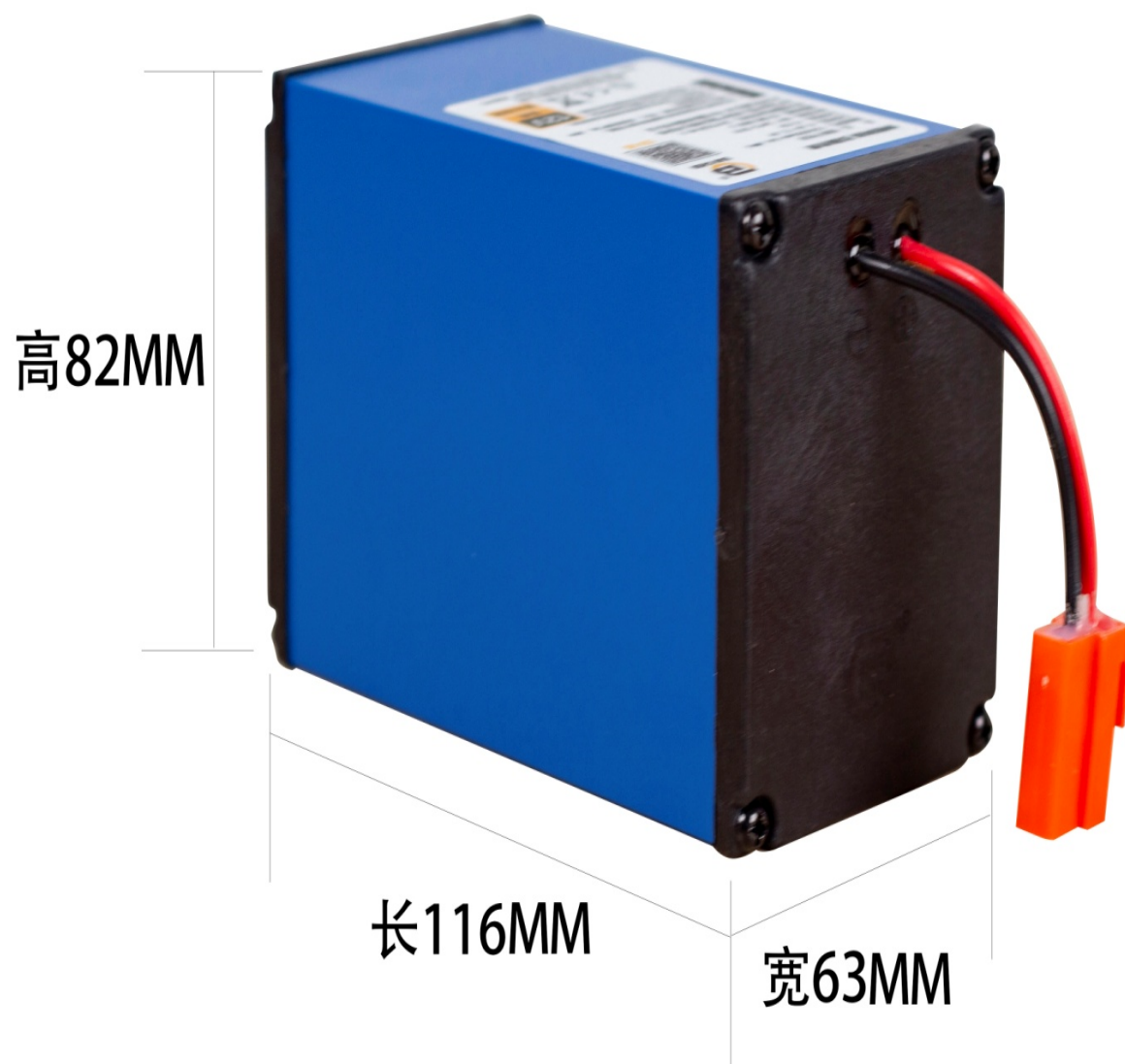




嘉兴伴辰科技有限公司

18650电池拼接支架3X5





The following Page(s) are related to Illustration-8. The next supplement, if applicable, will be identified with a new Supplement Page Heading

LI-ION Battery

Product Model : 12V7500mAh
Capacity : 7500mAh (83.25Wh)
Operating Voltage : 8.25V-12.6V
Rated Voltage : 11.1V
Charging limit voltage: 12.6V
Maximum charging current: 3.75A
Working current : <1CA
Executive standard : GB/T 36972-2018
This product is underwritten by PICC.



12V-3S

⚠ PRECAUTIONS

1. Do not reverse the connection of the positive and negative electrodes or use a metal object for short circuit.
2. Danger: Do not leave the battery near heat, open flames, flammable or explosive gases, liquid and high temperature storage.
3. Danger: Do not pierce the battery pack housing with nails or other sharp objects. It is strictly forbidden to disassemble the battery pack and battery in any way.
4. Caution - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not disassemble, heat above (manufacturer's maximum temperature limit), or incinerate. Replace battery with (battery manufacturer's name or end product manufacturer's name and part number) only. Use of another battery may present a risk of fire or explosion.
5. Dispose of used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
6. A dedicated lithium battery charger must be used when charging.



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