

Li-ion Battery Pack

BL2600C186502S1P**(* can be 0-9 or A-Z or any special character or blank. represent customization of the wire length or connector type or designation and wiring of the connector, or firmware variations)**

Tested under

UL 2054, Third Edition, November 17, 2021, Household and Commercial Batteries

File: E115461

MET Report: 136736

Approved: May ,28, 2025

Applicant:

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- ☐ MET Classification

- ☐ MET-C Listing
- ☐ MET Listing for Canada
- ☒ MET-C Recognition
- ☐ MET-C Classification

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Change Record

Change Number	Description	Approval Date	Project Number	Amendment Engineer	Engineer Initials
N/A	N/A	N/A	N/A	N/A	N/A

Description

Product(s) Covered:

Lithium-ion Battery, Model BL2600C186502S1P****(* can be 0-9 or A-Z or any special character or blank. represent customization of the wire length or connector type or designation and wiring of the connector, or firmware variations)

Product Description:

- The battery pack covered by this report is used in end product and comprises 2 Li-ion cells (2S1P) and protection circuit board.

Electrical Rating:

- 7.3V, 2600mAh, 18.98Wh

Engineering Considerations (Not For Field Representative's Use):

Lithium-ion Battery, Model BL2600C186502S1P****(* can be 0-9 or A-Z or any special character or blank. represent customization of the wire length or connector type or designation and wiring of the connector, or firmware variations), has been investigated in accordance with UL 2054, Third Edition, November 17, 2021, Household and Commercial Batteries This product must be in accordance with its instructions for use.

- BL2600C186502S1PFQU, BL2600C186502S1PFCU and BL2600C186502S1PFPCU are identical except for different printed circuit board. After review, BL2600C186502S1PFQU was subjected to all applicable tests and the most unfavourable data was recorded. BL2600C186502S1PFCU and BL2600C186502S1PFPCU was subjected to the test of Cl.11, Cl.12, Cl.13.

Description (Continued)

Note to Field Representative:

- A sample of each component listed below and a purchase order for the work described below at the current hourly rate shall be submitted to:*

Eurofins E&E NA, Inc.
914 West Patapsco Avenue
Baltimore, Maryland 21230-3432

for reassessment processed under job NRTL 128159 for verification of construction against the associated drawings also listed below. The component(s) shall be subjected to an annual audit for continued compliance. The annual re-verification is a client incurred expense to be assessed at the current hourly rate at the time of the test. The estimated time for re-verification is also listed below.

Figure/ Item #	Component	Controlled Document Number	Re-Verification Type	Re-verification Maximum Estimated time (hours)
--	Weak part	01	Short-Circuit	7

*Alternatively: If the evaluation is performed by the Eurofins E&E NA representative's lab other than the location above or by the MET representative during the Follow-up inspection, all data shall be returned to the Baltimore office listed above for surveillance tracking under the assigned job number mentioned above.

- The above inspections are a client incurred cost and will be billed at the hourly rate in place at the time of the inspection.

General Requirements

Scope of Requirements: The requirements contained within this section apply to all products contained within this Follow-Up Service Report File where applicable.

Definitions: *(as defined or used in the context of the standard)*

Term	Definitions
SELV:	Safety Extra Low Voltage
PCB:	Printed Circuit Board
TNV:	Telecommunications Network Voltage
Listed/Recognized Component:	A component evaluated to the applicable U.S. standards by a Nationally Recognized Testing Laboratory (NRTL).
Certified Component:	A component evaluated to the applicable Canadian standards by a Certification Organization (CO).
Listee:	Applicant

Measurements: All dimensions indicated in the body of this report are approximations unless otherwise indicated.

Corrosion Protection: All corrosive metals shall be provided with a means to protect from corrosion. Acceptable methods include painting, plating and galvanizing. Dissimilar metals shall not be employed where reliable continuity is required.

Soldered Connections: All soldered connections shall be made mechanically secure before soldering. Tack soldering is not acceptable. Acceptable forms of mechanical securement include:

- A) Lead is inserted through an eyelet or opening of a terminal block prior to soldering.
- B) Lead is inserted into a U or V shaped slot in the terminal prior to soldering.
- C) Lead is wrapped around a terminal post prior to soldering.
- D) Lead is tied to adjacent lead with wire tie-wrap near termination point.

Electrical Connections: All electrical connections other than soldering shall be provided with positive detent, crimp type insulated Recognized Component connectors suitable for the voltage and temperatures involved. They shall be sized for the wire and mounting terminations. Where hazardous voltage or energy is involved, all wire connections to connectors shall employ a recognized method of double securement. Where fork-type lugs are used, they shall be snap-on or up-turned lug type.

Mechanical Assembly: All parts shall be secured by welding, bolts/nuts with lock or star washers, or thread forming screws.

Creepage and Clearances: Shall be in accordance with the evaluated product standards.

General Requirements (Continued)

Where present, the following items are required.

Internal Plastics: Shall be a Recognized/Certified Component, Plastic, rated minimum 94V-0.

PCB: Shall be a Recognized Component, rated minimum 94V-0 and 130°C.

Tubing and Sleeving: Shall be a Listed/Recognized/Certified Component, rated minimum VW-1.

Internal Wiring: All internal wiring and connections are properly jacketed or enclosed within the equipment. Wiring is routed and secured to reduce the possibility of stress being transmitted to electrical connections, as necessary. All internal conductors in the secondary circuits are routed away from primary circuit conductors and from uninsulated live parts. There is no internal wiring subject to contact by the user when the product is employed as intended. The internal wiring is acceptable for conditions of service to which it will be subjected. Internal conductors consist of Recognized Component AWM insulated individual conductors; sized in accordance with UL 758, as may be applicable for the current expected in the conductor, rated 22AWG, 300V, 80°C.

Instruction: For products sold in Canada, instruction manuals and safety instructions shall be written in both English and French. For products sold in the United States of America, instruction manuals and safety instructions shall be written in English.

Markings

Etching, molding, die-stamping, silk-screening, stamped-, or etched-metal labels secured by rivets or screws are considered permanent. Recognized/Certified Component, Marking and Labeling Systems, and/or labels tested and deemed suitable for the surface to which it is applied is also considered permanent. Each product is to be permanently marked with the following information:

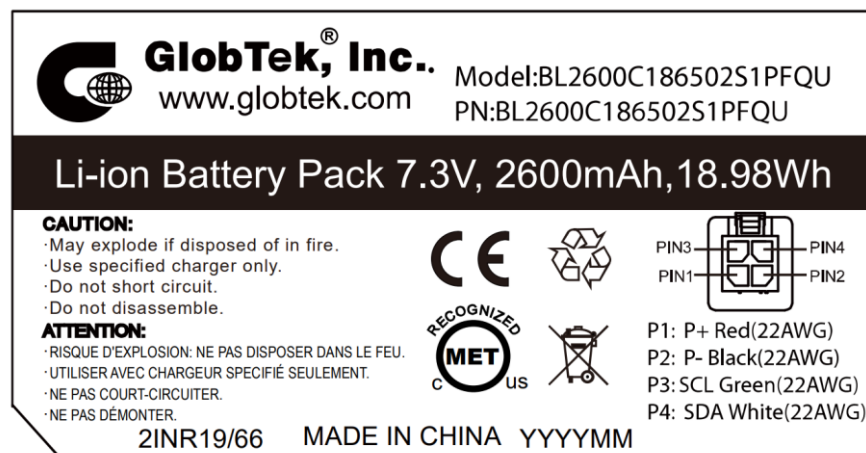
- a. The MET Mark, with the applicant/listee name or alternate listee name as identified within this report, trade name or trademark, product model number, and a date of manufacture or serial number. If the date of manufacture is in a code, it shall not repeat in less than 10 years and it shall not require reference to the manufacturer's records to determine when the product was manufactured.
- b. Method of applying the MET Mark:
☒ Direct Imprinting
☐ Purchasing Labels from Eurofins E&E NA

Approved MET Mark:



- c. For DC Equipment, fuse ratings, and fuse rupturing speed is required.
- d. Signal words such as "CAUTION" or "WARNING" shall be legible or size as required in the standard(s) and applied in accordance with the standard.

Size: 18*35mm



Manual/Service Instructions

- Operations and Service instructions are provided with the equipment.
- See illustration 1 to illustration 2.

Alternate Listee Information

Alternate listees and product names or model numbers: None

	Company Name	Product Name	Listing Number
Applicant	None		
Alt. Listee 1			

Applicant's Responsibilities

Product Modifications:

Minor product modifications by the manufacturer may be allowed using the following guidelines:

1. Components identified in this report as "Listed, Recognized, or Certified" and **NOT** identified with a manufacturer name or part number may be exchanged with an alternate "Listed, Recognized, or Certified" component of equivalent value.

Example: Appliance Inlet Connector - Listed/Certified Component, IEC 320 style male connector, rated 250 volts and 20 amperes. Mechanically secured to the front panel with screws and locking washers.

- This inlet connector may be replaced with any Listed/Certified inlet connector with the same ratings as stated and where mechanical securement is maintained.

2. Components identified by a manufacturer name, part number, or with specific comments, (such as AC only, indoor use only, approved for use in this product only), may **NOT** be replaced or modified without prior approval from MET Laboratories.

Example: Circuit Breaker - Recognized/Certified Component, ABCD Co. P/N XYZ123, rated 250 volts maximum, 50/60 Hz, 25 full-load amperes, 31.3 trip amperes. Toggle handle marked with IEC on/off symbols. Mechanically secured to the front panel with screws and locking washers.

- This circuit breaker can **NOT** be modified or changed without prior approval by Eurofins E&E NA, Inc.

Applicant's Responsibilities (Continued)

Project Amendments:

For any changes related to product construction, manufacturing locations, if the product is intended to be marketed/sold under an alternate name or model number than that originally listed, or any issues which would require notification or change in the status of this file, please complete the form and return to Eurofins E&E NA following the instructions provided on the form.

For your convenience a Project Amendment Request (PAR) form is available for download at <http://corp.metlabs.com/safetyreq/> Alternatively, please provide it to your local Eurofins office or Eurofins Partner Representative.

If you are terminating or suspending production of this product for an extended period, please send a letter on company letterhead to:

Eurofins E&E NA, Inc.
Attn: Follow Up Services Department
914 West Patapsco Avenue
Baltimore, Maryland 21230
USA
Fax: (410) 354-3313

Applicant's Responsibilities (Continued)

Manufacturing and Production-Line Tests and Documentation

This product is exempt from production line testing.

Conditions of Acceptability

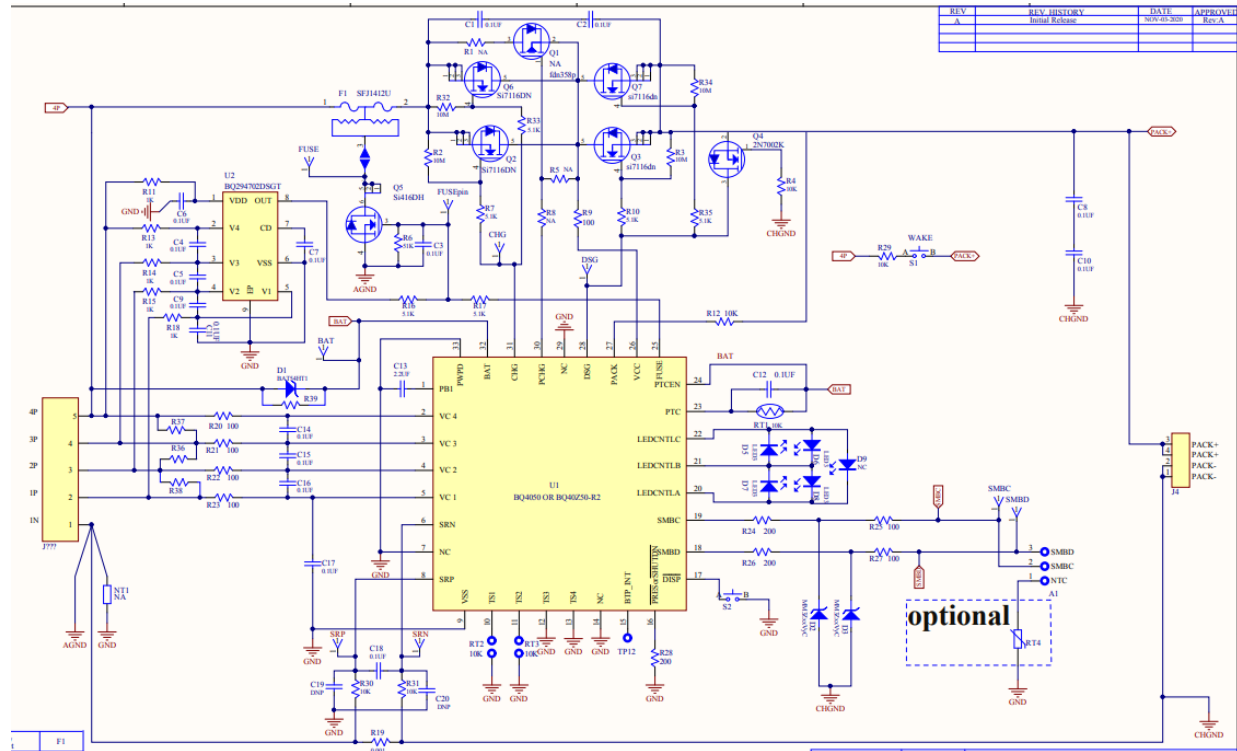
When installed in the end product, consideration shall be given to the following:

1. This component has been judged on basis of the requirement of UL 2054, Third Edition, November 17, 2021, Household and Commercial Batteries.
2. The rating of this battery is 7.3V, 2600mAh, 18.98Wh.

Critical Components

Figure/ item No.	Object/ Parts No.	Manufacturer/ Trademark	Type/ Model	Technical Data	Standard (Edition / year)	Mark(s) of Conformity	Secured Method
5/1	Cell	LISHEN	LR1865SK	3.65V, 2600mAh	UL1642	MH27663	--
3/2	PCB	Guangde Boya Xinxing Electronic Technology Co Ltd	BY-1	V-0, 130 °C	UL 796	UL E475783	Soldered With PCB
	Alternative	Interchangeable	Interchang eable	Min. V-0, 130°C	UL 796	UL approved	Soldered With PCB
3/3	IC (U1)	TEXAS INSTRUMENTS	BQ40Z50- R2	VCC:-0.3V-30V TSTG:-65°C~150°C	UL2054	Tested with battery	Soldered With PCB
3/4	IC (U2)	TEXAS INSTRUMENTS	BQ2947	OVP:3.85V~4.6V TSTG:- 40°C~110°C	UL2054	Tested with battery	Soldered With PCB
3/5	PTC (F1)	Dexerials	SFJ- 0812U	12A/4.0V-9.0V	UL2054	Tested with battery	Soldered With PCB
3/6	MOSFET (Q2, Q3)	NCEPOWER	NCEP306 5QU	65A 30V	UL2054	Tested with battery	Soldered With PCB
	Alternative	Interchangeable	Interchang eable	65A 30V	UL2054	Tested with battery	Soldered With PCB
1/7	Wire	Interchangeable	Interchang eable	Min. 24AWG, min.300V, min.80°C	UL 758	UL approved	Soldered With PCB
1/8	Connector	Molex	39013045	Min.V-2	UL 94	UL E29179	Soldered With PCB
	Alternative	Interchangeable	Interchang eable	Min.V-2	UL 94	UL approved	Soldered With PCB

Critical Drawings



Figures

Figure 1

Overview of battery (BL2600C186502S1PFQU)



Figure 2

Overview of battery (BL2600C186502S1PFQU)

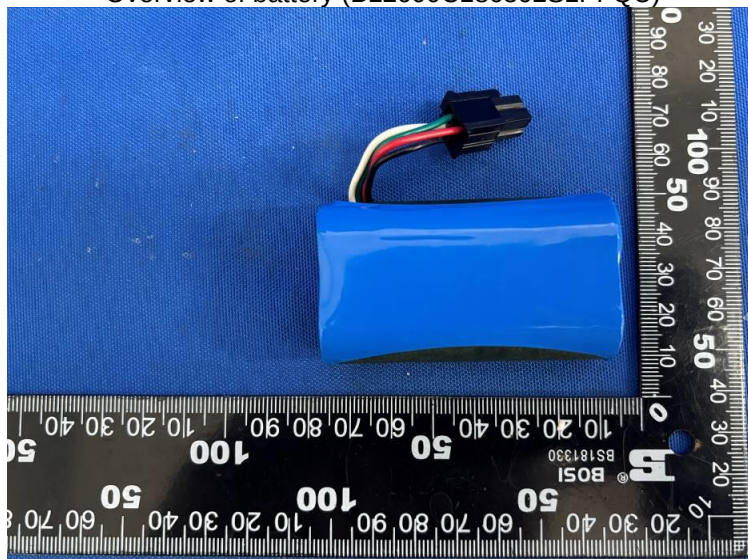


Figure 3

Main board view (BL2600C186502S1PFQU)

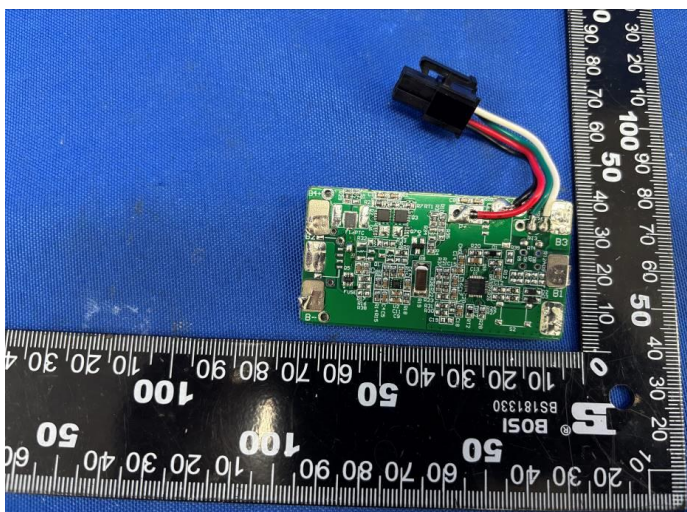


Figure 4

Main board view (BL2600C186502S1PFQU)

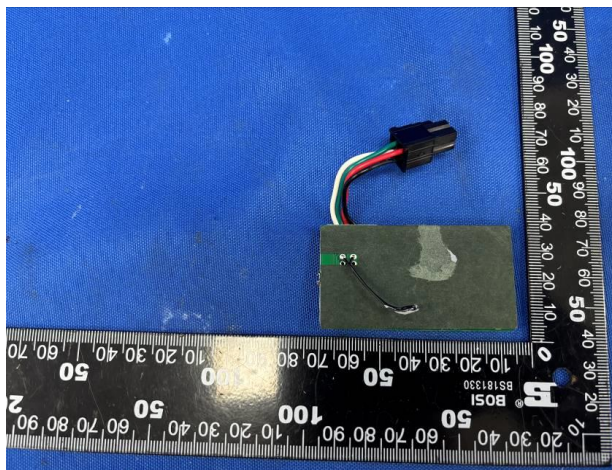


Figure 5

Cell view (BL2600C186502S1PFQU)



Figure 6

Overview of battery (BL2600C186502S1PFCU)



Figure 7

Overview of battery (BL2600C186502S1PFCU)

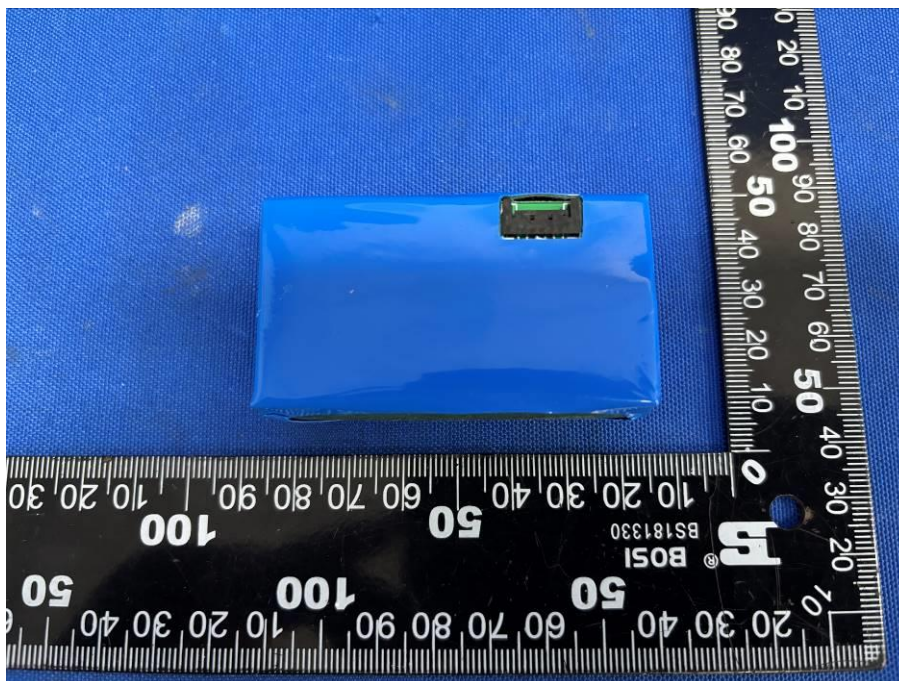


Figure 8

Main board view (BL2600C186502S1PFCU)

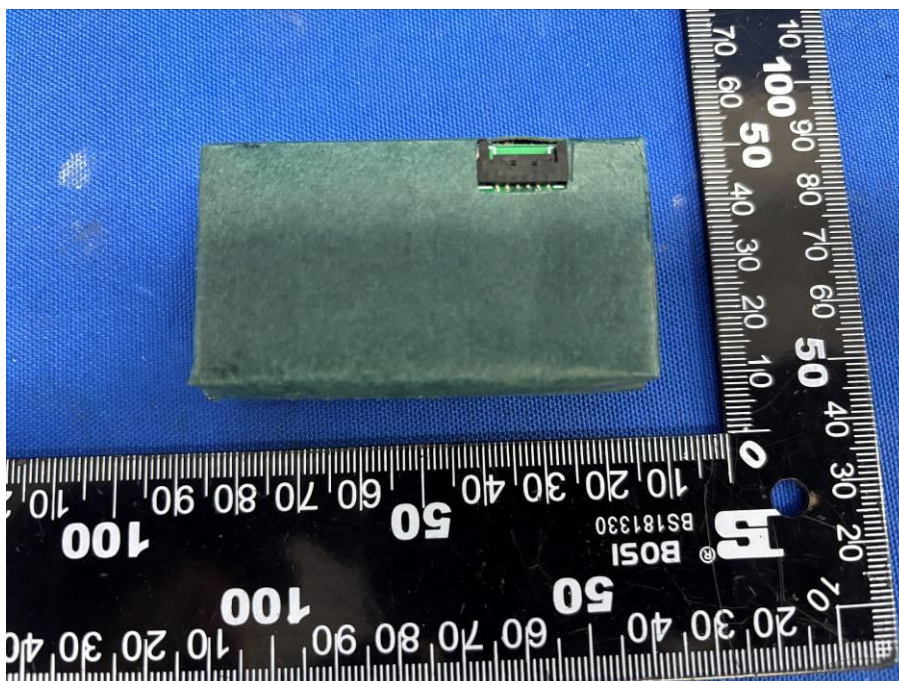


Figure 9

Main board view (BL2600C186502S1PFCU)

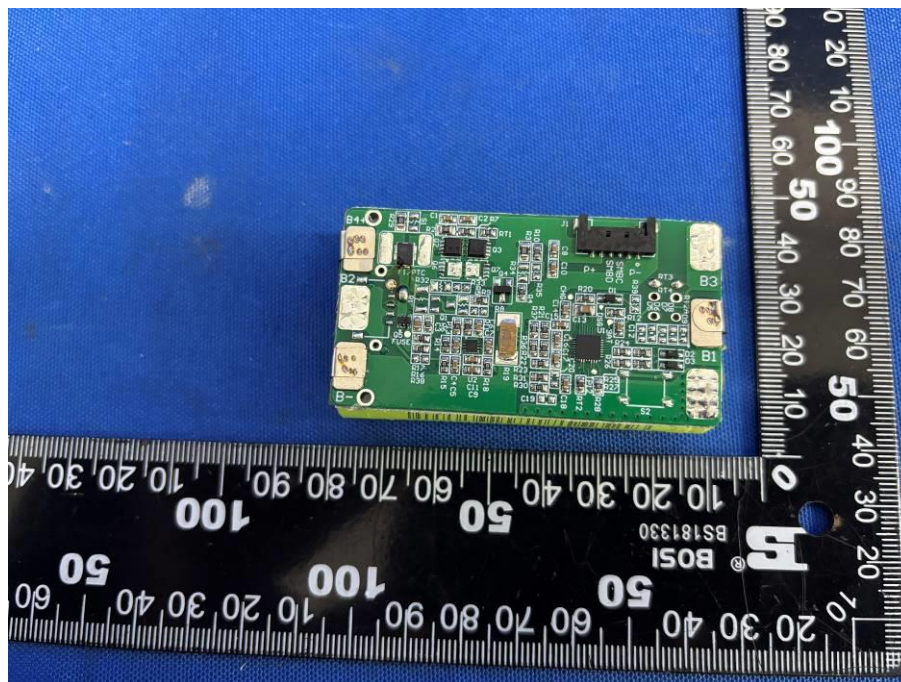


Figure 10

Cell view (BL2600C186502S1PFCU)



Figure 11 Overview of battery (BL2600C186502S1PFPCU)



Figure 12 Overview of battery (BL2600C186502S1PFPCU)

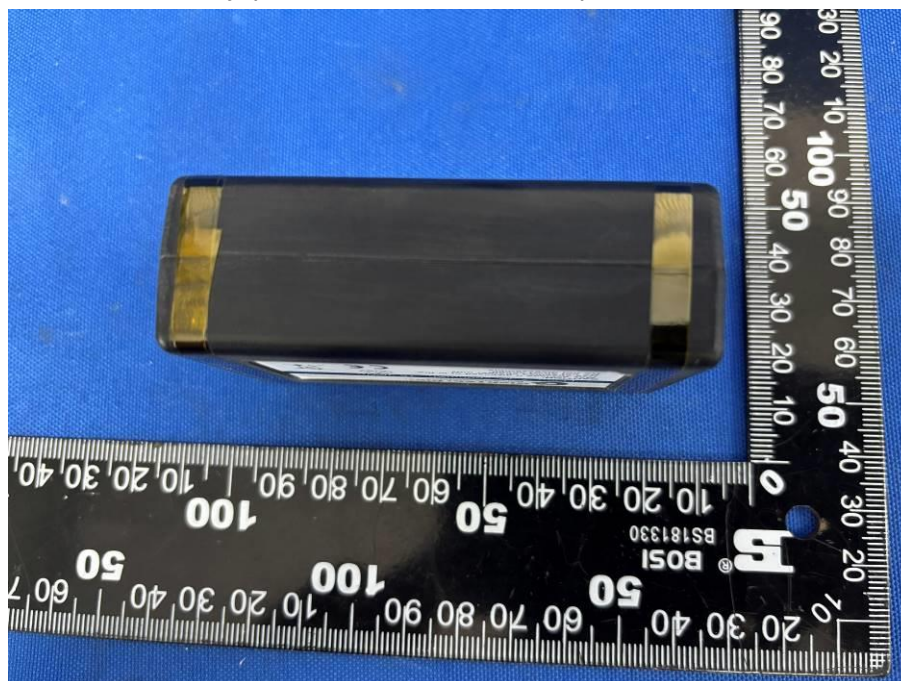


Figure 13 Main board view (BL2600C186502S1PFPCU)

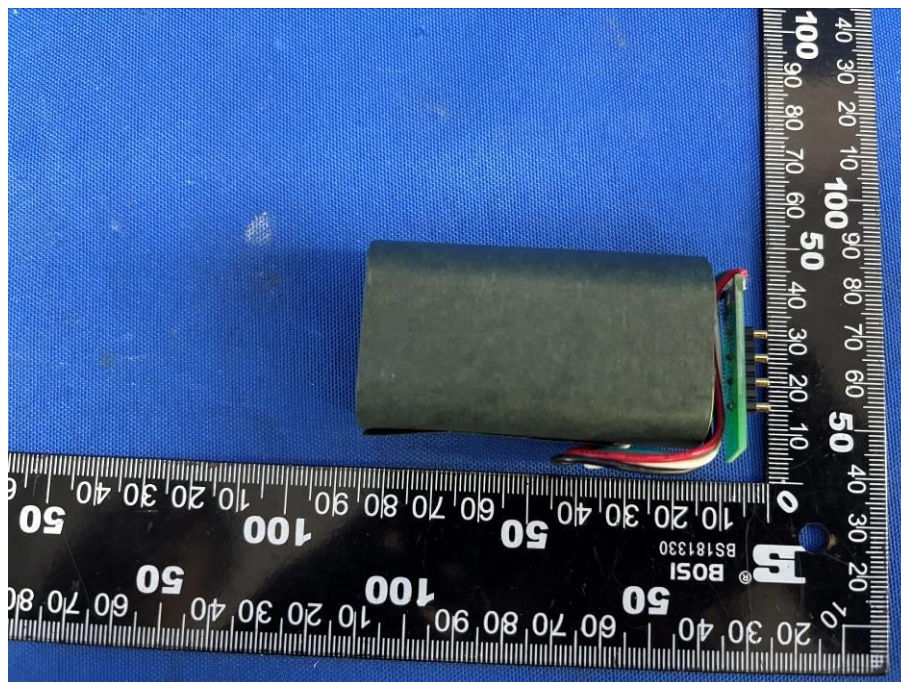


Figure 14 Main board view (BL2600C186502S1PFPCU)

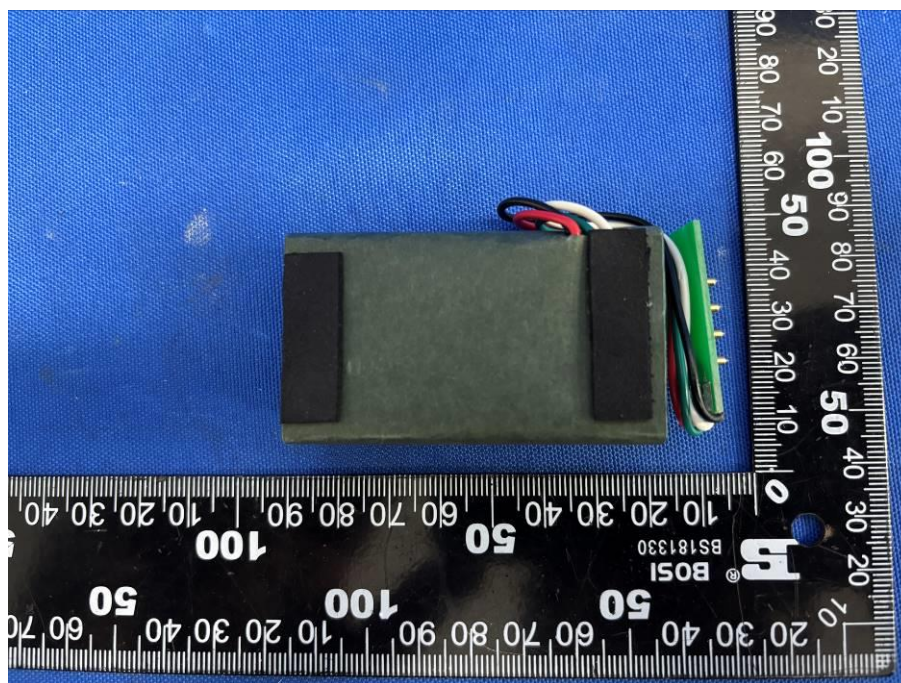


Figure 15 Main board view (BL2600C186502S1PFPCU)

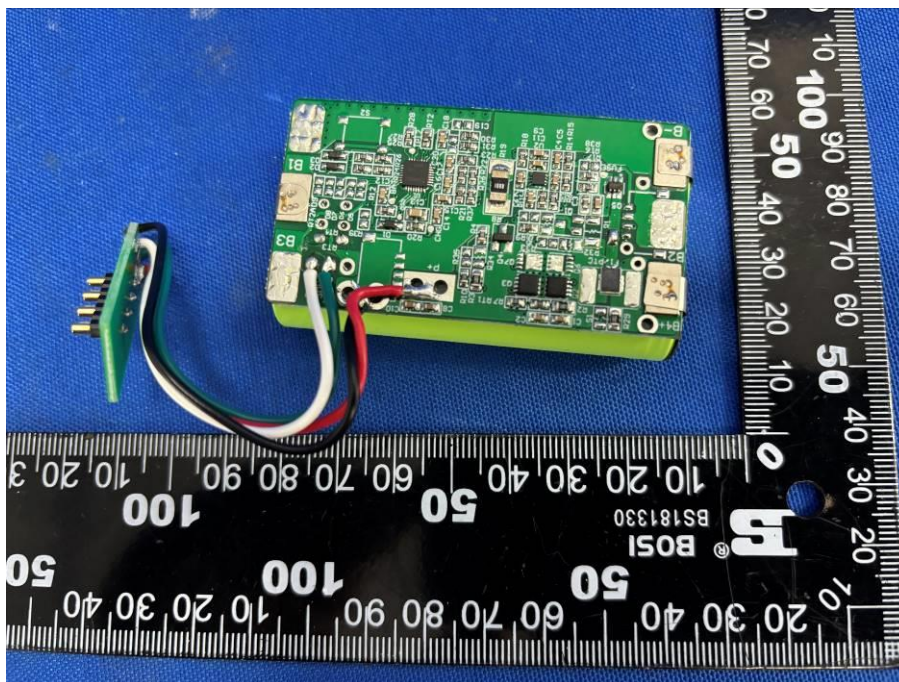
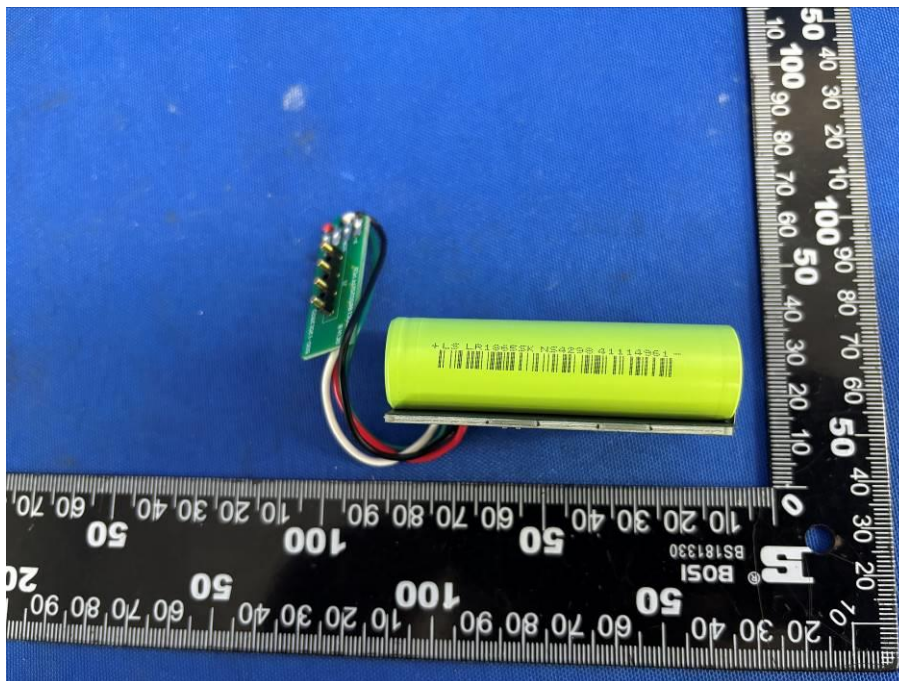


Figure 16 Cell view (BL2600C186502S1PFPCU)



Testing Considerations

The samples of the BL2600C186502S1P*****(* can be 0-9 or A-Z or any special character or blank. represent customization of the wire length or connector type or designation and wiring of the connector, or firmware variations) were subjected to the following test program with satisfactory results. These models were tested and considered the most representative of all covered products. All tests were conducted in accordance with UL 2054, Third Edition, November 17, 2021, Household and Commercial Batteries.

Only these tests were considered necessary due to engineering considerations. Detailed test results are on file at MET Laboratories under project number 136736.

TESTS CONDUCTED:

UL2054 Tests Conducted:

11. Short-Circuit
12. Abnormal Charging
13. Abusive Overcharge
14. Forced-Discharge
16. Battery Pack Component Temperature
17. Battery Pack Surface Temperature
23. Steady Force
24. Mold Stress Relief
25. Drop Impact

Conclusion

The product covered by this report have been tested, examined, and found to comply with the applicable requirements of UL 2054, Third Edition, November 17, 2021.

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