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**TEST REPORT
IEC 62619**

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications

Report Number.....: S03A22080317L00101
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Tested by (name + signature).....: Andre Gao *Andre Gao*
Reviewed by (name + signature).....: Jason Xu *Jason Xu*
Approved by (name + signature).....: Rod Liu *Rod Liu*



Testing Laboratory Name.....: Guangdong ESTL Technology Co., Ltd.
Address.....: Room 101, 201-208, Unit 1, Building 1, No. 9 Headquarters 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China.
Applicant's name.....: Shenzhen EverExceed Industrial Co., Ltd.
Address.....: Kechuang Building, Hengchangrong High Tech. Park, Dezheng Road, Shiyan, Bao'an District, Shenzhen, China

Test specification:
Standard.....: IEC 62619:2022

Test item description.....: LiFePO4 Battery
Trade Mark.....: EverExceed
Manufacturer.....: Shenzhen EverExceed Industrial Co., Ltd.
Address.....: Kechuang Building, Hengchangrong High Tech. Park, Dezheng Road, Shiyan, Bao'an District, Shenzhen, China
Factory.....: Shenzhen EverExceed Industrial Co., Ltd.
Address.....: Kechuang Building, Hengchangrong High Tech. Park, Dezheng Road, Shiyan, Bao'an District, Shenzhen, China
Model/Type reference.....: EP-48100
Ratings.....: 51.2V 100Ah 5120Wh

List of Attachments (including a total number of pages in each attachment): N/A	
Summary of testing:	
<p>Tests performed (name of test and test clause):</p> <p>Product safety test:</p> <p>cl.7.2.1 External short circuit test (cell);</p> <p>cl.7.2.2 Impact test (cell);</p> <p>cl.7.2.3.2 Whole drop test (cell);</p> <p>cl.7.2.3.3 Edge and corner drop test (battery system)</p> <p>cl.7.2.4 Thermal abuse (cell);</p> <p>cl.7.2.5 Overcharging (cell);</p> <p>cl.7.2.6 Forced discharge (cell);</p> <p>cl.7.3.2 Internal short-circuit test (cell);</p> <p>cl. 8.2.2 Overcharge control of voltage (battery system)</p> <p>cl.8.2.4 Overheating control (battery system)</p> <p>The samples comply with the requirement of IEC 62619: 2022.</p>	<p>Testing location:</p> <p>Guangdong ESTL Technology Co., Ltd.</p> <p><input checked="" type="checkbox"/> Room 101, 201-208, Unit 1, Building 1, No. 9 Headquarters 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China.</p> <p><input checked="" type="checkbox"/> Room 101, Unit 2, Building 1, No. 11 Headquarters 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China.</p>
Summary of compliance with National Differences (List of countries addressed): N/A	
<p><input checked="" type="checkbox"/> The product fulfils the requirements of EN 62619:2022.</p>	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

+	-
Model: EP-48100	
IFpP28/176/208[1P16S]M/0+60/95	
LiFePO4 Battery	
51.2V 100Ah 5120Wh	
YYMMDD	
Shenzhen EverExceed Industrial Co., Ltd.	
Not short-circuit, Keep away from heat sources	

Remark:

“YY” means to years; “MM” means to months; “DD” means to days.

Test item particulars :
Classification of installation and use : N/A
Supply Connection : N/A
..... :
Possible test case verdicts:
- test case does not apply to the test object..... : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement..... : F (Fail)
Testing :
Date of receipt of test item : 2023-02-18
Date (s) of performance of tests : 2023-02-18 to 2023-03-15
General remarks:
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>

General product information and other remarks:

The main features of the battery are shown as below :

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Cut-off Voltage
EP-48100	100Ah	51.2V	50A	50A	100A	100A	57.6V	43.2V

The main features of the battery are shown as below :

Model	Upper limit charge voltage	Taper-off current	Lower charge temperature	Upper charge temperature
EP-48100	57.6V	5A	0°C	45°C

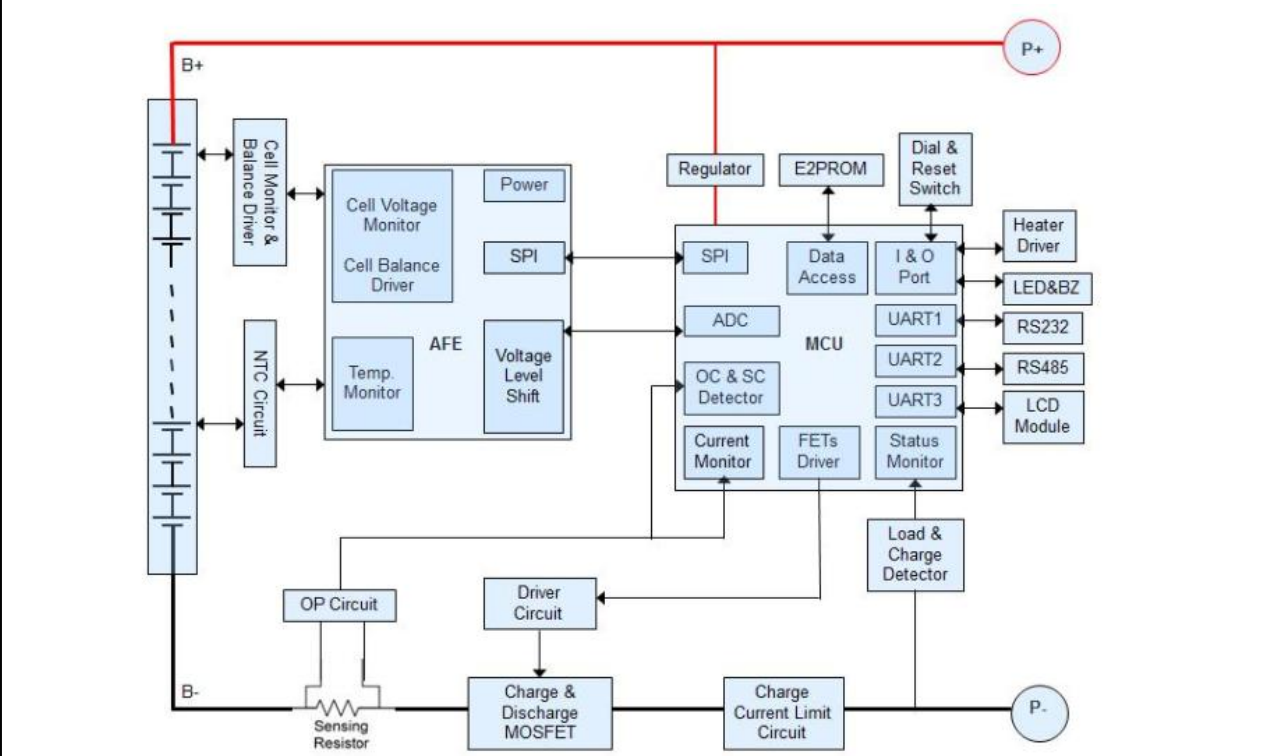
The main features of the cell are shown as below :

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Cut-off Voltage
CB2717320 4EA-100Ah	100Ah	3.2V	20A	20A	100A	100A	3.65V	2.5V

The main features of the cell in the battery are shown as below :

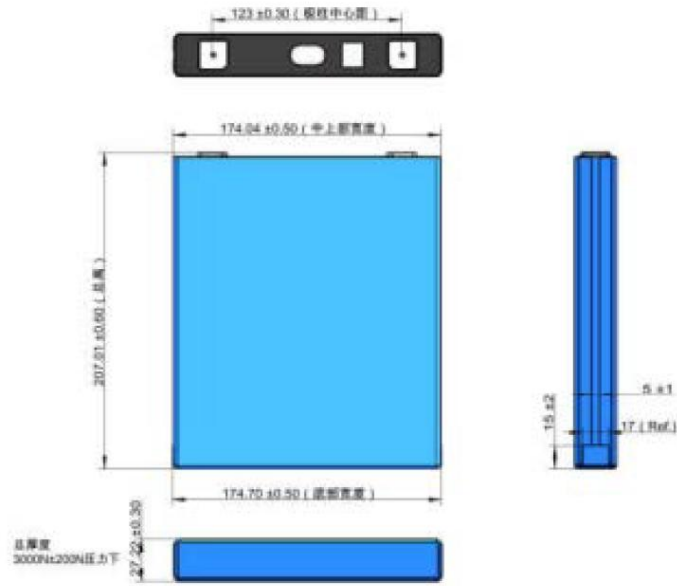
Model	Upper limit charge voltage	Taper-off current	Lower charge temperature	Upper charge temperature
CB2717320 4EA-100Ah	3.65V	5A	0°C	45°C

Circuit diagram:



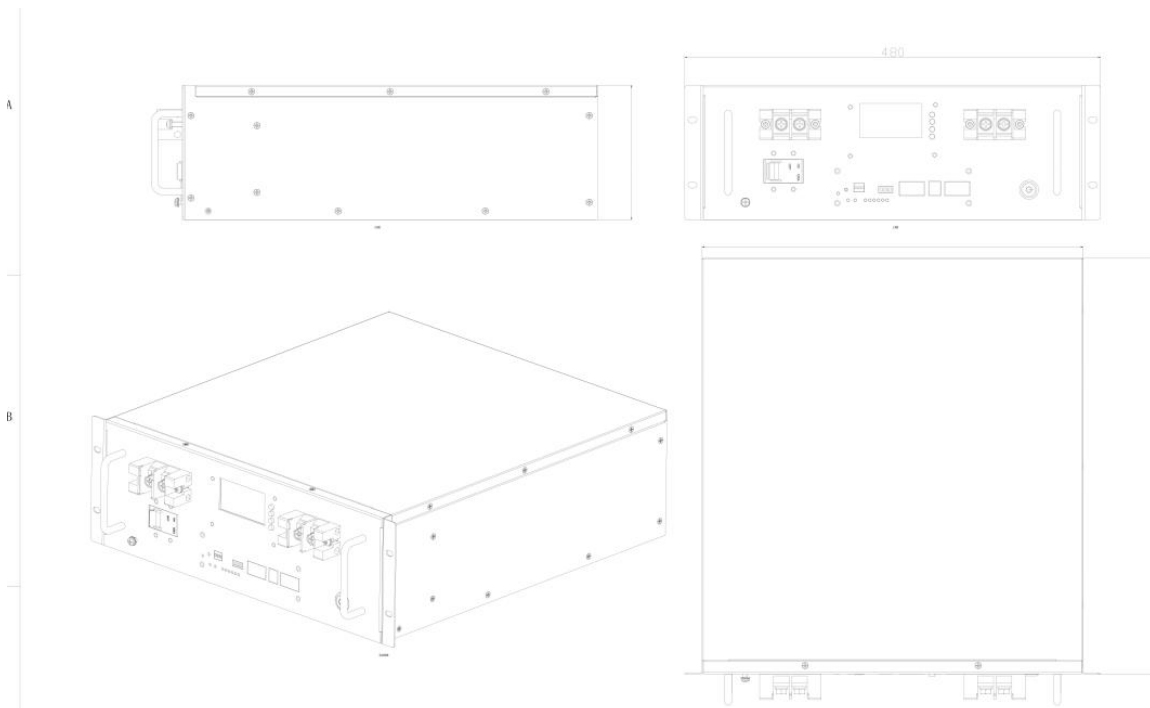
Construction:

Cell



Unit: mm

Battery



L(Max.): W(max.): H(max.) = 483mm: 480mm: 177mm
L(Max.): W(max.): H(max.) = 483mm: 480mm: 155mm

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict
4	PARAMETER MEASUREMENT TOLERANCES		
	Parameter measurement tolerances		
5	GENERAL SAFETY CONSIDERATIONS		P
5.1	General		P
	Cells and batteries are safe under conditions of both intended use and reasonably foreseeable misuse.....:	Clause 6, Clause 7, 8.1, and 8.2. See also table 5.1 for Critical components information	P
	Reduce the risk of injuries from moving parts		P
5.2	Insulation and wiring		P
	Voltage, current, altitude, and humidity requirements	See instructions;	P
	Adequate clearances and creepage distances between connectors and live parts at different voltages or between live parts and non-current-carrying accessible parts		P
	Protect from hazardous live parts, including during installation		P
	The mechanical integrity of internal connections		P
5.3	Venting		P
	Pressure relief function		P
	Encapsulation used to support cells within an outer casing		P
5.4	Temperature/voltage/current management		P
	The design prevents abnormal temperature-rise	Cell evaluated only.	P
	Voltage, current, and temperature limits of the cells		P
	Specifications and charging instructions for equipment manufacturers		P
5.5	Terminal contacts of the battery pack and/or battery system		P
	Polarity marking(s)		P
	Polarity marking not provided for keyed external connector		P
	Capability to carry the maximum anticipated current		P
	External terminal contact surfaces		P
	Terminal contacts are arranged to minimize the risk of short circuits		P
5.6	Assembly of cells, modules, or battery packs into battery systems		P
5.6.1	General		P
	Independent control and protection method(s)		P
	Recommendations of cell operating limits, mounting advice, storage conditions and other design recommendations by the cell manufacturer	Provided in specification.	P
	Batteries designed for the selective discharge of a portion of their series connected cells		P

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict
	Protective circuit component(s) and consideration to the end-device application		P
5.6.2	Battery system design		P
	The voltage control function		P
	Maximum charging/discharging current of the cell are not exceeded		P
5.7	Operating region of lithium cells and battery systems for safe use		P
	The cell operating region..... :		P
	Designation of battery system to comply with the cell operating region		P
5.8	System lock (or system lock function)		P
	Non-resettable function to stop battery operation		P
	Manual with procedure for resetting of battery operation		P
	Emergency battery final discharge		P
5.9	Quality plan		P
	Manufacturing quality plan (for example: ISO9001, etc.) prepared and implemented..... :	Reference: ISO 9001: 2015	P
	The process capabilities and the process controls		P

6	TYPE TEST CONDITIONS		P
6.1	General		P
6.2	Test items		P
	Cells or batteries that are not more than six months old (See Table 1 of IEC 62619)		P
	Capacity confirmation of the cells or batteries		P
	Default ambient temperature of test, 25 °C ± 5 °C	Tests were carried out in an ambient temperature of 25 ± 5°C.	P

7	SPECIFIC REQUIREMENTS AND TESTS		P
7.1	Charging procedure for test purposes		P
	The battery discharged to a specified final voltage prior to charging		P
	The cells or batteries charged using the method specified by the manufacturer..... :		P
7.2	Reasonably foreseeable misuse		P
7.2.1	External short-circuit test (cell or cell block)	Complied.	P
	Short circuit with total resistance of 30 m ± 10 m at 25 °C ± 5 °C		P
	Results: no fire, no explosion		P
7.2.2	Impact test (cell or cell block)	Complied.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Cylindrical cell, longitudinal axis impact		N/A
	Prismatic cell, longitudinal axis and lateral axis impact	Prismatic cell	P
	Results: no fire, no explosion.		P
7.2.3	Drop test (cell or cell block, and battery system)		P
7.2.3.1	General		P
7.2.3.2	Whole drop test (cell or cell block, and battery system)	Prismatic cell.	P
	Description of the Test Unit..... :	Cell	—
	Mass of the test unit (kg)..... :	2.2kg	—
	Height of drop (m)..... :	1.0m	—
	Results: no fire, no explosion	See Table 7.2.3.1	P
7.2.3.3	Edge and corner drop test (cell or cell block, and battery system)	More than 20 kg	P
	Description of the Test Unit..... :	battery system)	—
	Mass of the test unit (kg)..... :	45.52Kg	—
	Height of drop (m)..... :	0.05m	—
	Results: no fire, no explosion	No fire, no explosion	P
7.2.4	Thermal abuse test (cell or cell block)		P
	Results: no fire, no explosion		P
7.2.5	Overcharge test (cell or cell block)		P
	For those battery systems that are provided with only a single protection for the charging voltage control		—
	Results: no fire, no explosion..... :	See Table 7.2.5.	P
7.2.6	Forced discharge test (cell or cell block)	Cell	P
	Cells connected in series in the battery system..... :	16S	N/A
	Redundant or single protection for discharge voltage control provided in battery system..... :	Two protection provided	N/A
	Target Voltage..... :		P
	Maximum discharge current of the cell, Im..... :		P
	Discharge current for forced discharge, 1.0 It..... :		P
	Discharging time, t = (1 It / Im) x 90 (min.)..... :		P
	Results: no fire, no explosion..... :	See Table 7.2.6.	P
7.3	Considerations for internal short-circuit – Design evaluation		P
7.3.1	General		P
7.3.2	Internal short-circuit test (cell)		P
	Samples preparation procedure: In accordance with Clause A.5 and A.6 of IEC 62133-2:2017		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Tested per 7.3.2 b) in an ambient temperature of 25 °C ± 5 °C.		P
	The appearance of the short-circuit location recorded by photograph or other means..... :		—
	The pressing was stopped - When a voltage drop of 50 mV was detected; or		N/A
	- The pressing force of 800 N (cylindrical cells) or 400 N (prismatic cells) was reached	400	P
	Results: no fire..... :	See Table 7.3.2.	P
7.3.3	Propagation test (battery system)		N/A
	Method to create a thermal runaway in one cell :	Alternate test item 7.3.2 performed.	N/A
	Results: No external fire from the battery system, no battery case rupture..... :		N/A

8	BATTERY SYSTEM SAFETY (CONSIDERING FUNCTIONAL SAFETY)		P
8.1	General requirements	Cell evaluated only.	P
	Functional safety analysis for critical controls		P
	Conduct of a process hazard analysis for both the cell manufacturing process and the battery system manufacturing process		P
	Conduct of risk assessment and mitigation of the battery system		P
8.2	Battery management system (or battery management unit)		P
8.2.1	Requirements for the BMS		P
	The safety integrity level (SIL) target of the BMS		P
	The charge control evaluated by tests in clauses 8.2.2 to 8.2.4		P
8.2.2	Overcharge control of voltage (battery system)		P
	The exceeded charging voltage applied to the whole battery system		P
	The exceeded charging voltage applied to only a part of the battery system, such as the cell(s)..... :		P
	Results: no fire, no explosion..... :	See Table 8.2.2.	P
	The BMS terminated the charging before exceeding the upper limit charging voltage		P
8.2.3	Overcharge control of current (battery system)		P
	Results: no fire, no explosion..... :	See Table 8.2.3	P
	The BMS detected the overcharging current and controlled the charging to a level below the maximum charging current		P
8.2.4	Overheating control (battery system)		P
	The cooling system, if provided, was disconnected		P

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict
	Elevated temperature for charging, 5 °C above maximum operating temperature..... :		P
	Results: no fire, no explosion..... :	See Table 9.2.5	P
	The BMS detected the overheat temperature and terminated charging		P
	The battery system operated as designed during test		P

9	EMC		N/A
	Battery system fulfil EMC requirements of the end-device application..... :		N/A

10	INFORMATION FOR SAFETY		P
	The cell manufacturer provides information about current, voltage and temperature limits of their products	Provided in Specification.	P
	The battery system manufacturer provides information regarding how to mitigate hazards to equipment manufacturers or end-users.		P

11	MARKING AND DESIGNATION (REFER TO CLAUSE 5 OF IEC 62620)		P
	The marking items shown in Table 1 in IEC 62620 indicated on the cell, battery system or instruction manual.		P
	Cell or battery system has clear and durable markings		P
	Cell designation		P
	Battery designation		P
	Battery structure formulation		P

12	PACKAGING AND TRANSPORT		P
	Refer to Annex D		P

ANNEX A	OPERATING REGION OF CELLS FOR SAFE USE		P
A.1	General		P
A.2	Charging conditions for safe use		P
A.3	Consideration on charging voltage		P
A.4	Consideration on temperature		P
A.5	High temperature range		P
A.6	Low temperature range		P
A.7	Discharging conditions for safe use		P

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict
A.8	Example of operating region		P

ANNEX B	PROCEDURE OF 7.3.3 PROPAGATION TEST BY LASER IRRADIATION		P
B.1	General		P
B.2	Test conditions		P
B.2.1	Cell test (preliminary test)		P
	The cell fully charged according to the manufacturer recommended conditions..... :	CC and CV	—
	Laser irradiation point on the cell..... :		—
	Output power of laser irradiation..... :		—
	Tested in an ambient temperature of 25 °C ± 5 °C		N/A
	Repeat of cell test for 3 times		N/A
B.2.2	Battery system test (main test)		N/A
	The battery system fully charged according to the manufacturer recommended conditions..... :		—
	Target cell to be laser irradiated..... :		—
	The irradiation point on the target cell same or similar as that on the cell test		N/A
	Output power of laser irradiation..... :		—
	Tested in an ambient temperature of 25 °C ± 5 °C		N/A

ANNEX C	PROCEDURE OF 7.3.3 PROPAGATION TEST BY METHODS OTHER THAN LASER		N/A
C.1	General		N/A
C.2	Test conditions:		N/A
	– The battery fully charged according to the manufacturer recommended conditions..... :		—
	– Target cell forced into thermal runaway..... :		—
	– A specially prepared sample (e.g. a heater or a hole for nail penetration provided) used for ease of testing..... :		—
C.3	Method used for initiating the thermal runaway. 1) Heater (Heater, Burner, Laser, Inductive heating 2) Overcharge 3) Nail penetration of the cell 4) Combination of above methods 5) Other methods..... :		—

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX D	PACKAGING AND TRANSPORT		P
	The materials and pack design chosen in a way as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of environmental contaminants		P
	Regulations concerning international transport of secondary lithium batteries		P

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

5.1	TABLE: Critical components information					P
Object/part no.	Manufacturer/ trademark	Type/model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Cell	Ruipu Energy Co., Ltd.	CB27173204EA-100Ah	3.2V, 100Ah	IEC 62619: 2022	Tested with appliance	
-Electrolyte	--	--	LiPF ₆	--	--	
-Separator	Hebei Gellec New Energy Science & Technology Co.,Ltd	--	Polyolefin, total two cores	--	--	
-Positive	Ruipu Energy Co., Ltd	--	LiFePO ₄	--	--	
-Negative	Ruipu Energy Co., Ltd	--	Graphite	--	--	
PCB	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160A	130°C, V-0 °C	UL 796	UL approved	
IC (UM1)	HUADA	HC32F460PETB	Supply voltage:1.8~3.6V, TA=-40~105°C	--	Tested with appliance	
IC (UA1)	SINO WEALTH ELECTRONIC LTD.	SH367309	VBAT=-0.3~70V, TJ=-40~85°C	--	--	
Discharge MOSFET (QP2, QP4, QP6, QP10, QP12, QP14, QP24)	China Resources Microelectronics (Chongqing) Limited	CRSS028N10N	VDS=100V, VGS=±20V, ID=180A, TJ=-55~150°C	--	--	
Charge MOSFET (QP1, QP3, QP5, QP9, QP11, QP13, QP15, QP21, QP23,)	China Resources Microelectronics (Chongqing) Limited	CRSS028N10N	VDS=100V, VGS=±20V, ID=180A, TJ=-55~150°C	--	--	
Resister (R4, R5, R6, R7, R13, R14, R15, R16, R17, R18)	TA-I TECHNOLOGY CO., LTD	RLP25FEGMR0 02	2mΩ, min. 3W	--	--	
Capacitance (CAP2, CAP4, CAP5)	SAMXON	ESK227M2AI20 RR	220 uF, 100V, 105 °C	--	--	

IEC 62619					
Clause	Requirement + Test			Result - Remark	Verdict
Capacitance (CAP2, CAP4, CAP5)	SAMXON	ESK227M2AI20 RR	220 uF, 100V, 105 °C	--	--
Inductance (L2)	GLORY	T106060-7.5uH-H-GLR	7.5uH, 130 °C	--	--
PTC(F1)	ShenZhen JinRui Electronic Material Co.,Ltd	JK60-500	Operation Current: 0.05A~5A, Maximum Voltage: 60Vdc, Operating Temperature: -40 °C ~ 85 °C	--	--
NTC	SHENZHEN SUNLORD ELECTRONICS CO LTD	SNGA1103F243 5FB	10kohm at 25°C, Tmoa=125°C	--	--
Internal wire	Interchangeable	Interchangeable	Min. 12AWG, Min. 200°C, 600V	UL 758	UL approved
Connector	FUTTRONICS	FSPC80160N-25R	125A, 1500V dc	UL 94	UL approved
Plastic Enclosure	Interchangeable	Interchangeable	Min. V-1, Min. 85°C	UL 94	UL approved
Supplementary information:					
¹⁾ Provided evidence ensures the agreed level of compliance. See OD-2039.					

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

7.2.1	TABLE: External short-circuit test (cell or cell block)					P
Sample No.	Ambient (at 25°C ± 5°C)	OCV at start of test (V dc)	Resistance of Circuit (mΩ)	Maximum Case Temperature Rise ΔT (°C)	Results	
C1	25.6	3.487	32	78.5	A, E	
Supplementary information: A – No fire or Explosion B – Fire C – Explosion D – The test was completed after 6 h E – The test was completed after the cell casing cooled to 20% of the maximum temperature rise F – Other (Please explain): ____						

7.2.5	TABLE: Overcharge test (cell or cell block)					P
Sample No.	OCV at start of test (V dc)	OCV at end of test (V dc)	Measured Maximum Charging Current (A)	Measured Maximum Charging Voltage (V dc)	Max. Cell Case Temperature, (°C)	Results
C6	2.833	3.65	100	3.635	43.8	A, D
Supplementary information: Results: A – No fire or Explosion B – Fire C – Explosion D – Test concluded when temperature reached a steady state condition E – Test concluded when temperature returned to ambient F – Other (Please explain): ____						

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

7.2.6	TABLE: Forced discharge test (cell or cell block)				P
Sample No.	OCV before applying reverse charge, (V dc)	Target Voltage (V dc)	Measured Reverse Charge Current It, (A)	Total Time for Reversed Charge Application (min)	Results
C7	2.835	3.65	100	90	A
Supplementary information: Results: A – No fire or Explosion B – Fire C – Explosion D – Other (Please explain): ____					

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

7.3.2	TABLE: Internal short-circuit test (cell)				P
Sample No.	OCV at start of test, (V dc)	Particle location ¹⁾	Maximum applied pressure, (N)	Results	
C8	3.411	1	400	A, E	
C9	3.418	1	400	A, E	
C10	3.420	1	400	A, E	
C11	3.416	1	400	A, E	
C12	3.417	1	400	A, E	
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--	--	--	--	--	
--	--	--	--	--	
--	--	--	--	--	
--	--	--	--	--	

Supplementary information:

¹⁾ Identify one of the following:

1: Nickel particle inserted between positive and negative (active material) coated area.

2: Nickel particle inserted between positive aluminium foil and negative active material coated area.

Results:

A – No fire or explosion

B – Fire

C – Explosion

D – Test concluded when 50 mV voltage drop occurred prior to reaching force limit

E – Test concluded when 400 N pressure was reached and 50 mV voltage drop was not achieved

F – Test was concluded when fire or explosion occurred

G – Other (Please explain): __

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

7.3.3	TABLE: Propagation test (battery system)					N/A
Sample No.	OCV of Battery System Before Test, (V dc)	OCV of Target Cell Before Test, (V dc)	Maximum Cell Case Temperature, (°C)	Maximum DUT Enclosure Temperature, (°C)	Results	
Method of cell failure ¹⁾		Location of target cell		Area for fire protection (m ²)		

Supplementary information:

- 1) Cell can be failed through laser exposure, applied heat, overcharge, nail penetration or combinations of these failures or other acceptable methods. See supporting documentation for details on cell failure method
- 2) If the battery system has no outer covering, the manufacturer is required to specify the area for fire protection.

Results:
A – No fire external to DUT enclosure or area for fire protection or no battery case rupture
B – Fire external to DUT enclosure or area for fire protection
C – Explosion
D – Battery case rupture
E – Other (Please explain): __

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

8.2.2	TABLE: Overcharge control of voltage (battery system)				P
Sample No.	OCV at start of test for Cell/Cell Blocks, (V dc)	Maximum Charging Current, (A)	Max. Charging Voltage, (V dc)	Max. Voltage of Cell/Cell Blocks, (V dc)	Results
B2	2.833	100	64.24	3.633	A, D
	2.826			3.632	
	2.853			3.628	
	2.836			3.631	
	2.830			3.629	
	2.838			3.628	
	2.829			3.630	
	2.830			3.633	
	2.843			3.632	
	2.822			3.635	
	2.831			3.628	
	2.836			3.633	
	2.831			3.630	
	2.835			3.627	
	2.833			3.629	
2.829	3.633				
			Charge Voltage Applied Battery System: 1)		
			Whole	Part	
			--	--	

Supplementary information:

1) The exceeded voltage can be applied to only a part of the system such as the cell(s) in the battery system per Figure 6 of IEC 62619, if it is difficult to do it in using the whole battery system.

Results:

A – No Fire or Explosion

B – Fire

C – Explosion

D – The voltage of the measured cells or cell blocks did not exceed the upper limit charging voltage

E – The voltage of the measured cells or cell blocks did exceed the upper limit charging voltage

F – All function of battery system did operate as intended during the test.

G – All function of battery system did not operate as intended during the test.

H – Other (Please explain): ____

IEC 62619			
Clause	Requirement + Test	Result - Remark	Verdict

8.2.3	TABLE: Overcharge control of current (battery system)			N/A
Sample No.	OCV at start of test, (V dc)	Max. Charging Current, (A)	Max. Charging Voltage, (V dc)	Results

Supplementary information:
Results:
A – No fire or Explosion
B – Fire
C – Explosion
D – Overcurrent sensing function of BMU did operate and then charging stopped
E – Overcurrent sensing function of BMU did not operate and then charging stopped
F – All function of battery system did operate as intended during the test.
G – All function of battery system did not operate as intended during the test.
H – Other (Please explain): _____

8.2.4	TABLE: Overheating control (battery system)			P
Model No.	OCV at start(SOC 50%) of test, V dc	Maximum Charging Current, A	Measured Maximum Charging Voltage, V dc	
B3	52.23	100	57.6	
--	--	--	--	
--	--	--	--	
Maximum Specified Temperature of Battery System, °C		Maximum Measured Cell Case Temperature, °C	Results	
45		50	A, D, F	
--		--	--	
--		--	--	

Supplementary information:
Results:
A – No fire or Explosion
B – Fire
C – Explosion
D – Temperature sensing function of BMU did operate and then charging stopped
E – Temperature sensing function of BMU did not operate and then charging stopped
F – All function of battery system did operate as intended during the test.
G – All function of battery system did not operate as intended during the test.
H – Other (Please explain): _____

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Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information: Results: A – No fire or Explosion B – Fire C – Explosion D - Overcurrent sensing function of BMU did operate and then charging stopped E - Overcurrent sensing function of BMU did not operate and then charging stopped F - All function of battery system did operate as intended during the test. G - All function of battery system did not operate as intended during the test. H - Other (Please explain): _____			

Photos



Fig. 1



Fig. 2

Photos

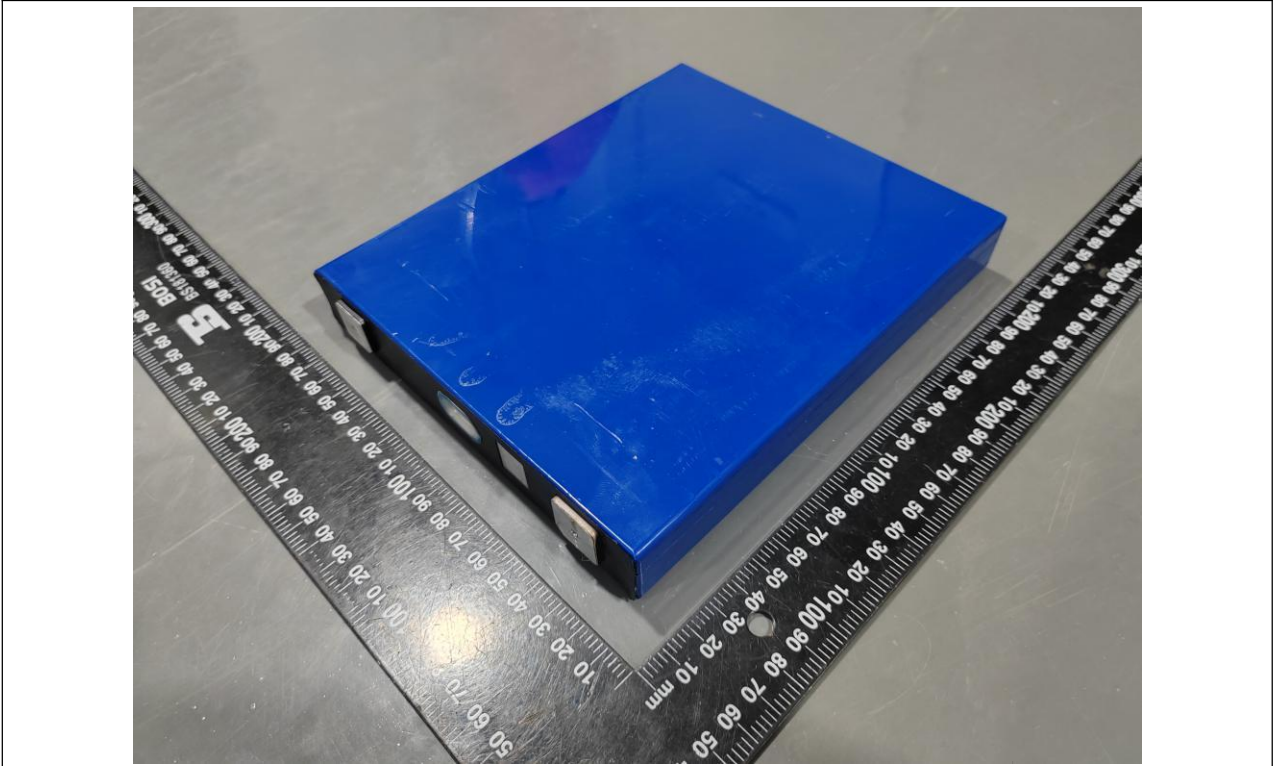


Fig. 3

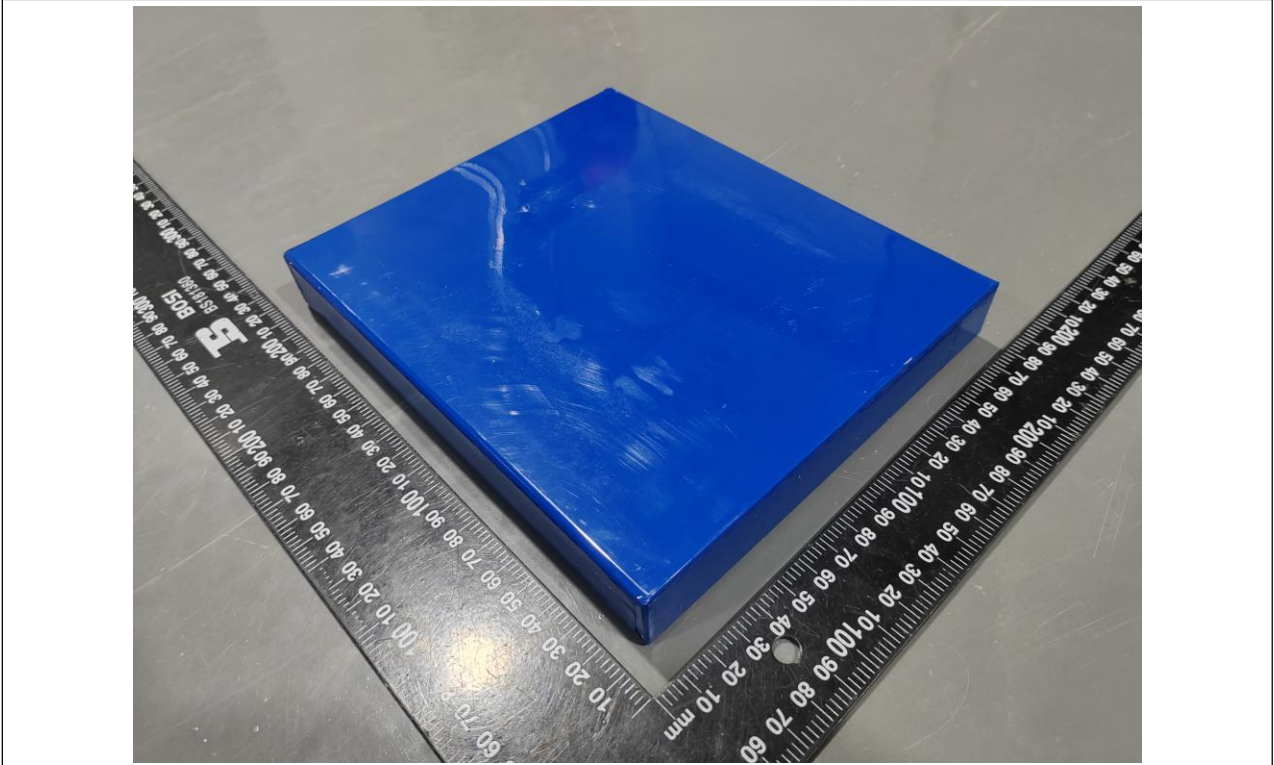


Fig. 4

--- End of Report ---