



TEST REPORT

METI Ordinance of Technical Requirements (H25.07.01) Appendix Information 9 : Lithium ion secondary batteries (Cell part—test only as client's request)

Report Number.....: 24CST040096P

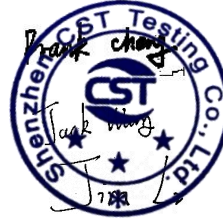
Tested by (name): Frank Cheng

Compiled by (name): Jack Wang

Approved by (name): Jim Li

Date of issue.....: May. 27, 2024

Total number of pages.....: 29 pages



Applicant's name.....: Shenwei Ruowo (Suzhou) Technology Co., LTD

Address.....: No. 116 Chengyang Road, Chengyang Street, Xiangcheng District,
Suzhou City, Jiangsu Province

Testing Laboratory.....: Shenzhen CST Testing Co., Ltd

Address.....: Room 308, 335, Block A, Huafeng Internet Creative Park, No. 107
Gonghe Industrial Road, Xixiang Street, Baoan District, Shenzhen,
China. 518101

Test specification:

Standard.....: METI Ordinance of Technical Requirements (H25.07.01) Appendix
9: Lithium ion secondary batteries (Cell part—test only as client's
request)

Test procedure.....: test Report

Non-standard test method.....: N/A

Test Report Form No.....:

Test Report Form(s) originator.....: Jim Li

Master TRF.....: Dated 2019-09

Test item description.....: Rechargeable Lithium-ion Polymer battery

Brand Name.....: N/A

Manufacturer.....: YANCHENG YANJU DIANZITechnology Co., Ltd.
398 Fudongnan Road, Binhai County, Yancheng City, JiangsuProvince
(East Gate)

Model/Type reference.....: 602525

Ratings.....: Battery: 3.7V, 300mAh, 1.11Wh

List of Attachments (including a total number of pages in each attachment):

Attachment No. 1: 1 pages of photos.

Summary of testing:**Tests performed (name of test and test clause):**

The submitted samples were tested and found to comply with the requirements of:

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9: Lithium ion secondary batteries (Cell part—test only as client's request)

Testing location:

Shenzhen CST Testing Co., Ltd
Room 308, 335, Block A, Huafeng Internet Creative Park, No. 107 Gonghe Industrial Road, Xixiang Street, Baoan District, Shenzhen, China. 518101

General disclaimer:

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 DL Testing Laboratory.

The authenticity of this Test Report and its contents can be verified by contacting the DL, responsible for this Test Report.

Copy of marking plate:

Rechargeable Lithium-ion Polymer battery

Model: 602525

Battery: 3.7V, 300mAh



YANCHENG YANJU DIANZI Technology Co., Ltd.

398 Fudongnan Road, Binhai County, Yancheng City, Jiangsu Province (East Gate)

Made in China

- The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.



Test item particulars..... :	
Classification of installation and use..... :	Use in portable appliance
Supply Connection..... :	Direct current supply
Recommend charging method declared by the manufacturer	CC/CV
Discharge current (0,2 It A)..... :	150mA for cell
Specified final voltage..... :	3.0V for cell
Upper limit charging voltage per cell..... :	4.2V
Maximum charging current..... :	300mA for cell
Charging temperature upper limit..... :	45°C
Charging temperature lower limit..... :	0°C
Polymer cell electrolyte type..... :	<input type="checkbox"/> gel polymer <input type="checkbox"/> solid polymer <input checked="" type="checkbox"/> 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..... :	
General remarks:	
<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>	
Name and address of factory (ies)..... :	YANCHENG YANJU DIANZITechnology Co., Ltd. 398 Fudongnan Road, Binhai County, Yancheng City, JiangsuProvince (East Gate)

**General product information:**

The battery has overcharge, over-discharge, over current and short-circuits proof circuit. The main features of the battery are shown as below (clause 7.1.1):

Model	Nominal capacity	Input	Lowest test temperature	Highest test temperature
602525	300mAh	/	0°C	45°C

The main features of the cell in the battery are shown as below (clause 7.1.1):

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Final Voltage
602525	300mAh	3.7V	150mA	150mA	300mA	300mA	4.2V	3.0V

The main features of the cell in the battery are shown as below (clause 7.1.2):

Model	Upper limit charge voltage	Taper-off current	Lower charge temperature	Upper charge temperature
602525	4.2V	10mA	0°C	45°C

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
1	General safety considerations		—
	The safety of secondary cells and batteries requires the consideration of two sets of applied conditions:		P
	a) intended use;		P
	b) reasonably foreseeable misuse		P
	It is expected that cells or batteries subjected to misuse may fail to function following such experience.		P
	They shall not however present significant hazards. It may also be expected that cells and batteries subjected to intended use shall not only be safe but shall continue to be functional in all respects.		P
1-1	Insulation and wiring		P
	The insulation resistance shall be not less than 5 MΩ at 500 V d.c.		P
	Internal wiring and its insulation shall be sufficient to withstand the maximum anticipated current, voltage and temperature requirements. And adequate clearances and creepage distances.		P
1-2	Inner pressure reduction mechanism		P
	Battery cases and cells shall be designed with a gas release mechanism, or shall be designed to reduce excessive internal pressure when the equipment reaches a value or rate set so as to protect against explosion or fire.		P
	If support material is used to fix cells within the battery case, the type of support material and method of fixing cells shall not inhibit pressure relief, and the battery shall not induce overheating during normal use of the battery.		N/A
1-3	Temperature current management		P
	The design of batteries shall be such that abnormal temperature-rise conditions are prevented.		P
	Means is provided to limit current to safe levels during charge and discharge.		P
1-4	Terminal contacts		P
	Terminals shall have clear polarity marking on the external surface of the battery.	Consider in end system	P
	The terminal contacts shall ensure that they can carry the maximum anticipated current.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	External terminal contact surfaces shall be formed from conductive materials with good mechanical strength and corrosion resistance.		P
	Terminal contacts shall be arranged so as to minimize the risk of short circuits.		P
1-5	Assembly of cells into batteries	See below	P
	Cells shall have closely matched capacities		P
	Be of the same chemistry and be from the same manufacturer.		P
	Connected cells shall incorporate separate circuitry to prevent the cell reversal caused by uneven discharges.		P
2	Intended Use		—
	In the tests mentioned below, the number and test ambient temperature of cells or batteries to be tested shall be as per Annex Table 1-1. Provided that these tests can be handled by using an equivalent or severer test method. Moreover, if the battery structure has been partially modified and the test results before the change can be used instead, no further tests are required on that particular part.		P
2-1	Continuous low-rate charging		P
	a) Requirement		P
	A continuous low-rate charge shall not cause fire or explosion.		P
	b) Test		P
	Fully charged cells are subjected for 28 days to a charge as specified by the manufacturer.		P
	c) Acceptance criteria		P
	Nickel systems: no fire, no explosion.		N/A
	Lithium systems: no fire, no explosion, no leakage.		P
2-2	Vibration		P
	a) Requirements		P
	Vibration encountered during transportation shall not cause leakage, fire or explosion.		P
	b) Test		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	Fully charged cells or batteries are vibration-tested under the following test conditions and the sequence in Table 2. A simple harmonic motion is applied to the cells or batteries with an amplitude of 0,76 mm, and a total maximum excursion of 1,52 mm. The frequency is varied at the rate of 1 Hz/min between the limits of 10 Hz and 55 Hz. The entire range of frequencies (10 Hz to 55 Hz) and return (55 Hz to 10 Hz), is traversed in 90 min ± 5 min for each mounting position (direction of vibration). The vibration is applied in each of three mutually perpendicular directions, in the sequence specified below.		P
	Step 1: Verify that the measured voltage is typical of the charged product being tested.		P
	Steps 2-4: Apply the vibration as specified in Table 2.		P
	Step 5: Rest cell for 1 h, then make a visual inspection.		P
	c) Acceptance criteria		P
	No fire, no explosion, no leakage.		P
2-3	Moulded case stress at high ambient temperature		P
	a) Requirement		P
	Internal components of batteries shall not be exposed during use at high temperature.		P
	b) Test		P
	Fully charged batteries are exposed to a moderately high temperature to evaluate case integrity. The battery is placed in an air circulating oven at a temperature of 70 °C ± 2 °C. The batteries remain in the oven for 7 h, after which they are removed and allowed to return to room temperature.		P
	c) Acceptance criteria		P
	No physical distortion of the battery case resulting in exposure of internal components.		P
2-4	Temperature cycling		P
	a) Requirement		P
	Repeated exposure to high and low temperatures shall not cause fire or explosion.		P
	b) Test according to the following procedure and the profile shown in figure 1.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	Fully charged cells or batteries are subjected to temperature cycling (–20 °C, +75 °C), in forced draught chambers, according to the following procedure.		P
	Step 1: Place the cells or batteries in an ambient temperature of 75 °C ± 2 °C for 4 h.		P
	Step 2: Change the ambient temperature to 20 °C ± 5 °C within 30 min and maintain at this temperature for a minimum of 2 h.		P
	Step 3: Change the ambient temperature to – 20 °C ± 2 °C within 30 min and maintain at this temperature for 4 h.		P
	Step 4: Change the ambient temperature to 20 °C ± 5 °C within 30 min and maintain at this temperature for a minimum of 2 h.		P
	Step 5: Repeat steps 1 to 4 for a further four cycles.		P
	Step 6: After the fifth cycle, store the cells or batteries for seven days prior to examination.		P
	c) Acceptance criteria		P
	No fire, no explosion, no leakage.		P
3	Reasonably foreseeable misuse		—
	In tests specified below, the number and test ambient temperature of cells or batteries to be tested shall be as per Annex Table 1-1. Provided that these tests can be conducted by using an equivalent or severer test method. Moreover, if the battery structure has been partially modified and the test results before the change can be used instead, no further tests are required on that particular part		P
3-1	External short circuit		P
	Shall conform to a) and b) below. a) The charged cell shall be left at an ambient Temperature of 55 ± 5 °C. With the positive and negative terminals short-circuited via connection to a total external resistance of 80 ± 20 mΩ, the battery shall be left for 24 hours or until the difference between the surface temperature of the charged cell and ambient temperature becomes not more than 20% of the maximum difference (whichever is the sooner), and the battery shall not fire or explode		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	b)The charged battery shall be left at an ambient temperature of 20±5°C.With the positive and negative terminals short-circuited via connection to a total external resistance of 80 ± 20mΩ,the battery shall be left for 24 hours or until the difference between temperature of the battery container and the ambient temperature becomes not more the 20% of the maximum difference(whichever is the sooner : if the battery incorporates a protective device or protective circuit and the current stopped),and the battery shall not fire or explode.		P
3-2	Free fall		P
	a) Requirements		P
	Dropping a cell or battery (for example, from a bench top) shall not cause fire or explosion.		P
	b) Test		P
	Each fully charged cell or battery is dropped three times from a height of 1.0 m onto a concrete floor.		P
	c) Acceptance criteria		P
	No fire, no explosion.		P
3-3	Mechanical shock (crash hazard)		P
	a) Requirements		P
	Shocks encountered during handling or transportation shall not cause fire, explosion or leakage.		P
	b) Test		P
	The fully charged cell or battery is secured to the testing machine by means of a rigid mount which will support all mounting surfaces of the cell or battery. The cell or battery is subjected to a total of three shocks of equal magnitude. The shocks are applied in each of three mutually perpendicular directions. At least one of them shall be perpendicular to a flat face.		P
	For each shock the cell or battery is accelerated in such a manner that during the initial 3 milliseconds the minimum average acceleration is 75 gn. The peak acceleration shall be between 125 gn and 175 gn. Cells or batteries are tested in an ambient temperature of 20°C± 5°C.		P
	c) Acceptance criteria		P
	No fire, no explosion, no leakage.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
3-4	Thermal abuse		P
	The charged cell at $20 \pm 5^{\circ}\text{C}$ shall be placed in a gravity or circulating air-convection oven. The oven temperature shall then be increased to $130 \pm 2^{\circ}\text{C}$ at a rate of $5 \pm 2^{\circ}\text{C} / \text{min.}$, left for 10 minutes, and then the battery shall not fire or explode.		P
3-5	Crushing of cells		P
	The charged cells shall not fire or explode when tested under the following test conditions:		P
	a) A charged cells shall be placed between two flat surfaces and a force of $13 \pm 1 \text{ kN}$ shall be applied by a crushing apparatus.		P
	b) The force shall be released when any of the following occurs: (1) the maximum force is applied, (2) an abrupt voltage drop of one-third of the original voltage has been obtained, or (3) there is 10% deformation of the battery height.		P
	Force shall be applied to charged cells so that the longitudinal axis of the cells becomes parallel with the flat surface of the crushing apparatus. For charged cells that are prismatic (hereafter called "the prismatic cells"), a similar test shall be performed by rotating a cell 90° around its longitudinal axis and it shall be ensured that force is applied to both the wide and narrow sides of the prismatic cells. At that time, one sample shall receive force in a single direction.		P
3-6	Low pressure		P
	a) Requirements		P
	Low pressure (for example, during transportation in an aircraft cargo hold) shall not cause fire or explosion.		P
	b) Test		P
	Each fully charged cell is placed in a vacuum chamber, in an ambient temperature of $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$. Once the chamber has been sealed, its internal pressure is gradually reduced to a pressure equal to or less than 11,6 kPa (this simulates an altitude of 15 240 m) held at that value for 6 h.		P
3-7	Overcharge		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	The cell discharged under the conditions specified in Annex Table 1-2 (including cells equipped with a protective device for use in equipment or batteries; hereafter called "the discharged cells") shall be provided. Then by using a power supply of not less than 10V, the battery shall be energized until it reaches 250% of the rated capacity or the test voltage with the designed charging current, and the battery shall not fire or explode.		P
3-8	Forced discharge		P
	a) Requirements		P
	A cell in a multicell application shall withstand polarity reversal without causing fire or explosion.		P
	b) Test		P
	A discharged cell is subjected to a reverse charge at 1 It A for 90 min.		P
	c) Acceptance criteria		P
	No fire, no explosion.		P
3-9	Cell protection against a high charging rate (lithium systems only)		P
	a) Requirements		P
	A cell shall not cause fire or explosion if a charger malfunctions or if excess current flows in a parallel battery pack.		P
	b) Test		P
	The cell is discharged as described in IEC 61960, then charged at three times the charging current recommended by the manufacturer, until the cell is fully charged or an internal safety device cuts off the charge current before the cell is fully charged.		P
	c) Acceptance criteria		P
	No fire, no explosion.		P
3-10	Forced internal short circuit of cells		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	<p>Step 1: At an ambient temperature of $20 \pm 5^{\circ}\text{C}$ and the dew point of -25°C or below, the sample charged cell shall be dismantled and the winding core shall be removed from the charged cell enclosure. Then a small L-shaped piece of metallic nickel (0.2-mm high by 0.1-mm wide, with each side 1-mm long) shall be inserted between the positive active material and negative active material as laid out in Table 2. If uncoated current collector of positive electrode is faced an active material coated negative electrode, said position shall be tested as well. Provided that, if inserting a small piece of metallic nickel as laid out in Table 2 makes the test difficult, then it is permissible to use a pressing jig as shown in Table 2, laid out so that pressure can be applied with the winding core in contact with the center of the inserted part of the small piece of metallic nickel.</p>		P
	<p>Step 2: After inserting the small piece, the winding core shall be reassembled to its original form, and sealed into a bag without permeability of electrolyte vapors. The time period between dismantling of the charged cell and closing of the bag shall be within 30 minutes.</p>		P
	<p>Step 3: The closed bag containing the winding core shall be stored for 45 ± 15 minutes at each the highest test temperature and the lowest test temperature specified in Annex Table 1-2. Then the winding core shall be taken out from the bag.</p>		P
	<p>Step 4: Immediately after taking out the winding core from the bag, a pressing jig as shown in Table 2 shall touch on the winding core, where said small piece of metallic nickel is inserted, and the pressing jig shall be lowered at a rate of 0.1mm/second at the highest and the lowest test temperatures specified in Annex Table 1-2.</p>		P
	<p>Step 5: The lowering of the pressing jig shall be stopped when a voltage drop of over 50 mV is obtained or the pressure reaches 800 N (whichever occurs earlier). Provided that, for prismatic cells, the lowering of the pressing jig shall be stopped when the pressure reaches 400N.</p>		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	Step 6: The test shall be conducted from steps 1 to 5 until five samples prove to have undergone a voltage drop. When internal short circuit is not detected in said five pieces at the specified maximum pressure, the number of the test cells shall be increased up to pieces.		P
	Results: no fire		P
3-11	Function of overcharge protection of batteries		P
	When tested at an ambient temperature of 20 ± 5°C by using any method specified below,the cell block in the battery shall not exceed the upper limited charging voltage specified in Annex Table 1-2.		P
	a)For batteries made of a one cell block,the voltage applied to the cell block during charging shall be measured.		P
	b)For batteries consisting of series of two pieces or more of cell blocks,it shall be charged while measuring the voltage of each cell block and at the same time,one cell block shall forcibly be discharged and the voltages of the other cell blocks shall gradually be measured.		N/A
	c)For batteries consisting of series of connection of two pieces or more of cell blocks,a voltage exceeding the upper limited charging voltage specified in Annex Tab 1-2 shall be applied to the cell block while measuring the voltage of each cell block.When the charging stops,the voltage shall be measured.		N/A
3-12	Free fall of appliance		P
	The charged batteries shall not undergo short-circuiting when tested under the conditions specified below.At an ambient temperature of 20± 5°C, according to the appliance specified in the left field of table 3,the charged battery shall be dropped once onto a concrete floor or iron plate in a direction Considered to most likely affect the battery in a negative manner Otherwise,an equivalent load shall be applied to said battery.However,this does not apply to portable appliance including battery weighing more than 7 kg or desktop appliance(excluding for appliance that may be carried around)weighing more than 5 kg including battery.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
4	Labeling		—
	Labeling shall be provided as specified in Annex Table 2.	See marking	P
	<p>Remarks</p> <p>ItA shall be expressed in the following formula [see IEC 61434 (1996)]: $ItA = MPC-RTL3000Ah/1 h$.</p> <p>Supporting documents complying with the procedure specified in JIS C 8714 (2007), Supplement B shall be stored.</p> <p>If an upper limited charging voltage having a value other than listed in Table 2 is newly used, one shall store supporting documents regarding voltage changes complying with the procedure specified in JIS C 8714 (2007), Supplement B, and use said value as the upper limited charging voltage.</p> <p>When a highest or a lowest test temperature having a value other than listed in Table 2 is newly used, supporting documents regarding temperature changes shall be stored complying with said procedure and said value can be stored as the highest or lowest test temperature according to JIS C 8714 (2007), Supplement B, "Procedure of the decision of new charging condition and the adoption of new model."</p>		
	Supplementary rules		P
	[Date of enforcement]		P
	Article 1 This ministerial ordinance will come into effect on the date of enforcement (November 20, 2008) of the Law for Revising Part of the Electrical Appliance and Material Safety Law (Law No. 116 of 2007).		P
	[Transitory measures]		P
	Article 2 Regulations (11) and (12) of Attached Table 9-3 of the Ministerial Ordinance for Determining Technical Standards for Electrical Appliances revised according to said ministerial ordinance will not be applied for three years after the date this ministerial ordinance came into effect.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
	For three years after the date of enforcement of this ministerial ordinance, Annex Tables 1-1 and 1-2 of Attached Table 9 of the Ministerial Ordinance for Determining Technical Standards for Electrical Appliances revised according to said ministerial ordinance may be applied under the test conditions specified in Attached Tables 1 and 2 in the Supplementary Rules. Provided that, this shall not apply to (1), (4), or (5) of Attached Table 9-3 regarding Lithium Ion Secondary Cells and Batteries for Portable Electronic Applications and Others.		P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

2-1 to 2-5	TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity¹⁾	
Cell	NV	602525	3.7V, 300mAh	Interpretation for METI Ordinance of Technical Requirements	Test with appliance	
PCB	SHENZHEN YINGHAIXINGYE ELECTRONIC CO LTD	YH-2	V-0, 130°C	UL 94 UL 796	UL E487319	

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

2-1	TABLE: Continuous Low Rate Charge Test				P
Sample no.	Recommended charging voltage Vc (Vdc)	Recommended charging current Irec (A)	OCV before test (Vdc)	Results	
Cell #1	4.2	0.15	4.19	P	
Cell #2	4.2	0.15	4.18	P	
Cell #3	4.2	0.15	4.18	P	
Cell #4	4.2	0.15	4.19	P	
Cell #5	4.2	0.15	4.18	P	
Supplementary information: No fire or explosion No leakage Note(s): Test time is 28 days.					

2-2	TABLE: Conditions for vibration test				P
Sample no.	OCV before test (Vdc)	OCV after test (Vdc)	Vibration time (minute)	Visual examination result	
For cells:					
Cell #6	4.18	4.18	90*3	No fire, no explosion, no leakage	
Cell #7	4.18	4.17	90*3		
Cell #8	4.19	4.18	90*3		
Cell #9	4.19	4.18	90*3		
Cell #10	4.19	4.18	90*3		
For batteries:					
Battery #1	4.19	4.18	90*3	No fire, no explosion, no leakage	
Battery #2	4.18	4.17	90*3		
Battery #3	4.19	4.18	90*3		
Battery #4	4.18	4.17	90*3		
Battery #5	4.16	4.16	90*3		
Note(s): The vibration is applied in each of three mutually perpendicular directions. Rest cell or batteries for 1 h, then make a visual inspection.					

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

2-3	TABLE: Moulded case stress at high ambient temperature			P
Sample No.	OCV at Start of Test, Vdc	Temperature(°C)	Result	
Battery- 30	4.18	70 ± 2°C	No physical distortion of the battery case resulting in exposure of internal components.	
Battery- 31	4.18	70 ± 2°C		
Battery- 32	4.19	70 ± 2°C		
Note(s): Test time is 7 hours.				

2-4	TABLE: Temperature cycling			P
Sample No.	OCV at Start of Test, Vdc	Temperature(°C)	Result	
Cells:				
Cell- 11	4.19	(-20°C, +75°C)	No fire, no explosion, no leakage.	
Cell- 12	4.18	(-20°C, +75°C)		
Cell- 13	4.18	(-20°C, +75°C)		
Cell- 14	4.19	(-20°C, +75°C)		
Cell- 15	4.19	(-20°C, +75°C)		
Batteries				
Battery- 06	4.18	(-20°C, +75°C)	No fire, no explosion, no leakage.	
Battery- 07	4.18	(-20°C, +75°C)		
Battery- 08	4.19	(-20°C, +75°C)		
Battery- 09	4.18	(-20°C, +75°C)		
Battery- 10	4.19	(-20°C, +75°C)		
Note(s):				

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-1	TABLE: External short-circuit (cell)					P
Sample no.	Ambient T (°C)	OCV before test (Vdc)	Resistance of circuit (mΩ)	Maximum case temperature (°C)	Results	
Samples charged at charging temperature upper limit (45°C)						
Cell #16	55.0	4.19	82.8	102.2	P	
Cell #17	55.0	4.18	83.5	101.9	P	
Cell #18	55.0	4.19	88.6	103.4	P	
Cell #19	55.0	4.18	87.7	106.5	P	
Cell #20	55.0	4.19	85.4	104.1	P	
Samples charged at charging temperature lower limit (-5°C)						
Cell #21	55.2	4.16	83.4	103.5	P	
Cell #22	55.2	4.16	86.2	104.2	P	
Cell #23	55.2	4.16	89.2	102.5	P	
Cell #24	55.2	4.15	92.7	108.3	P	
Cell #25	55.2	4.16	94.2	106.3	P	
Supplementary information: - No fire or explosion						

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-2	TABLE: External short-circuit (battery)						P
Sample no.	Ambient T (°C)	OCV before test (Vdc)	Resistance of circuit (mΩ)	Maximum case temperature (°C)	Component single fault condition	Results	
Samples charged at charging temperature upper limit (45°C)							
Battery #11	23.7	4.19	87.4	25.5	--	P	
Battery #12	23.7	4.19	88.2	25.4	--	P	
Battery #13	23.7	4.18	87.4	25.8	--	P	
Battery #14	23.7	4.19	88.7	25.3	--	P	
Battery #15	23.7	4.18	85.1	25.6	--	P	
Samples charged at charging temperature lower limit (-5°C)							
Battery #16	23.6	4.16	87.1	25.3	--	P	
Battery #17	23.6	4.15	88.1	25.5	--	P	
Battery #18	23.6	4.16	91.5	25.3	--	P	
Battery #19	23.6	4.16	90.2	25.4	--	P	
Battery #20	23.6	4.16	87.6	25.5	--	P	
Supplementary information: - No fire or explosion							

3-2	TABLE: Free fall			P
Sample No.	OCV at start of test, Vdc	Drop height (m)	Result	
Cells				
Cell#26	4.18	1.0	No fire, no explosion.	
Cell#27	4.18	1.0	No fire, no explosion.	
Cell#28	4.19	1.0	No fire, no explosion.	
Batteries				
Battery#21	4.18	1.0	No fire, no explosion.	
Battery#22	4.18	1.0	No fire, no explosion.	
Battery#23	4.18	1.0	No fire, no explosion.	
Note (s): Each sample dropped for 3 times.				

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-3	TABLE: Mechanical shock (crash hazard)		P
Sample No.	OCV at start of test, Vdc	Result	
Cells			
Cell#29	4.18	No fire, no explosion, no leakage.	
Cell#30	4.18		
Cell#31	4.18		
Cell#32	4.18		
Cell#33	4.18		
Batteries			
Battery#24	4.18	No fire, no explosion, no leakage.	
Battery#25	4.19		
Battery#26	4.18		
Battery#27	4.19		
Battery#28	4.18		
Note (s):			

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-4	TABLE: Thermal abuse			P
Sample No.	OCV at start of test, Vdc	Ambient temperature, (°C)	Temperature raised at a rate(°C /min)	Result
Samples charged at charging temperature of -5°C				
Cell#34	4.16	130±2	5±2	No fire, no explosion
Cell#35	4.16	130±2	5±2	No fire, no explosion
Cell#36	4.15	130±2	5±2	No fire, no explosion
Cell#37	4.16	130±2	5±2	No fire, no explosion
Cell#38	4.15	130±2	5±2	No fire, no explosion
Samples charged at charging temperature of 45°C				
Cell#39	4.18	130±2	5±2	No fire, no explosion
Cell#40	4.19	130±2	5±2	No fire, no explosion
Cell#41	4.19	130±2	5±2	No fire, no explosion
Cell#42	4.18	130±2	5±2	No fire, no explosion
Cell#43	4.19	130±2	5±2	No fire, no explosion

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict	
3-5	TABLE: Crush (cells)		P	
Sample no.	OCV before test (Vdc)	Width of cell before crush, (mm)	Width of cell after crush, (mm)	Results
Samples charged at charging temperature upper limit (45°C)				
A prismatic cell was crushed with its longitudinal axis parallel to the flat surfaces of the crushing apparatus				
Cell #44	4.19	18.25	--	P
Cell #45	4.19	18.22	--	P
Cell #46	4.18	18.21	--	P
Cell #47	4.18	18.22	--	P
Cell #48	4.18	18.20	--	P
A second set of prismatic cells was tested, rotated 90 degrees around their longitudinal axis compared to the first set.				
Cell #49	4.18	65.32	--	P
Cell #50	4.19	65.33	--	P
Cell #51	4.18	65.32	--	P
Cell #52	4.18	65.30	--	P
Cell #53	4.19	65.30	--	P
Samples charged at charging temperature lower limit (-5°C)				
A prismatic cell was crushed with its longitudinal axis parallel to the flat surfaces of the crushing apparatus				
Cell #54	4.16	18.29	--	P
Cell #55	4.16	18.22	--	P
Cell #56	4.16	18.24	--	P
Cell #57	4.15	18.27	--	P
Cell #58	4.15	18.29	--	P
A second set of prismatic cells was tested, rotated 90 degrees around their longitudinal axis compared to the first set.				
Cell #59	4.15	65.31	--	P
Cell #60	4.16	65.32	--	P
Cell #61	4.16	65.31	--	P
Cell #62	4.16	65.32	--	P
Cell #63	4.16	65.34	--	P

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

Supplementary information: - No fire or explosion

3-6	TABLE: Low pressure			P
Sample No.	OCV at start of test, Vdc	Pressure	Result	
Cell #64	4.18	≤11.6KPa	No fire, no explosion, no leakage.	
Cell #65	4.19	≤11.6KPa	No fire, no explosion, no leakage.	
Cell #66	4.19	≤11.6KPa	No fire, no explosion, no leakage.	
Note (s): Test time is 6 hours.				

3-7	TABLE:OVERCHARGE					P
Sample No.	OCV at start of test, Vdc	Maximum Charging Voltage, Vdc	Maximum charging current (A)	Total time of charging (h)	Result	
Test ambient temperature: -5°C						
Cell #67	4.16	4.2	0.3	2.5	No fire, no explosion.	
Cell #68	4.16	4.2	0.3	2.5		
Cell #69	4.15	4.2	0.3	2.5		
Cell #70	4.15	4.2	0.3	2.5		
Cell #71	4.16	4.2	0.3	2.5		
Test ambient temperature: 45°C						
Cell #72	4.18	4.2	0.3	2.5	No fire, no explosion.	
Cell #73	4.18	4.2	0.3	2.5		
Cell #74	4.19	4.2	0.3	2.5		
Cell #75	4.18	4.2	0.3	2.5		
Cell #76	4.19	4.2	0.3	2.5		
Note (s):						

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-8	TABLE: Forced discharge				P
Sample No.	Before reverse charge, Vdc	OCV after Test, Vdc	Reverse Charge current 1 It A	Total time of charging (h)	Result
Test ambient temperature: -5°C					
Cell #77	4.16	4.2	0.3	1.5	No fire, no explosion.
Cell #78	4.16	4.2	0.3	1.5	
Cell #79	4.16	4.2	0.3	1.5	
Cell #80	4.15	4.2	0.3	1.5	
Cell #81	4.16	4.2	0.3	1.5	
Test ambient temperature: 45°C					
Cell #82	4.18	4.2	0.3	1.5	No fire, no explosion.
Cell #83	4.18	4.2	0.3	1.5	
Cell #84	4.18	4.2	0.3	1.5	
Cell #85	4.19	4.2	0.3	1.5	
Cell #86	4.18	4.2	0.3	1.5	
Note (s):					

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-9	TABLE: Cell protection against a high charging rate (lithium systems only)			P
Sample No.	OCV at start of Test, Vdc	Charged current (A)	Maximum charging voltage, Vdc	Result
Test ambient temperature: -5°C				
Cell #87	3.33	0.3	4.19	No fire, no explosion.
Cell #88	3.33	0.3	4.18	No fire, no explosion.
Cell #89	3.33	0.3	4.18	No fire, no explosion.
Cell #90	3.32	0.3	4.19	No fire, no explosion.
Cell #91	3.32	0.3	4.18	No fire, no explosion.
Test ambient temperature: 45°C				
Cell #92	3.33	0.3	4.18	No fire, no explosion.
Cell #93	3.32	0.3	1.19	No fire, no explosion.
Cell #94	3.32	0.3	4.18	No fire, no explosion.
Cell #95	3.33	0.3	4.19	No fire, no explosion.
Cell #96	3.32	0.3	4.19	No fire, no explosion.
Note (s):				

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-10	TABLE: Forced internal short circuit of cells				P
Sample No.	Chamber ambient, (°C)	OCV at start of Test, Vdc	Particle location	Maximum applied pressure, (N)	Result
Test ambient temperature: -5°C					
Cell #97	-5	4.15	1	800	No fire, no explosion.
Cell #98	-5	4.16	1	800	
Cell #99	-5	4.16	1	800	
Cell #100	-5	4.16	1	800	
Cell #101	-5	4.15	1	800	
Test ambient temperature: 45°C					
Cell #102	45	4.18	1	800	No fire, no explosion.
Cell #103	45	4.19	1	800	
Cell #104	45	4.17	1	800	
Cell #105	45	4.19	1	800	
Cell #106	45	4.17	1	800	
Note (s):					

METI Ordinance of Technical Requirements (H25.07.01) Appendix 9

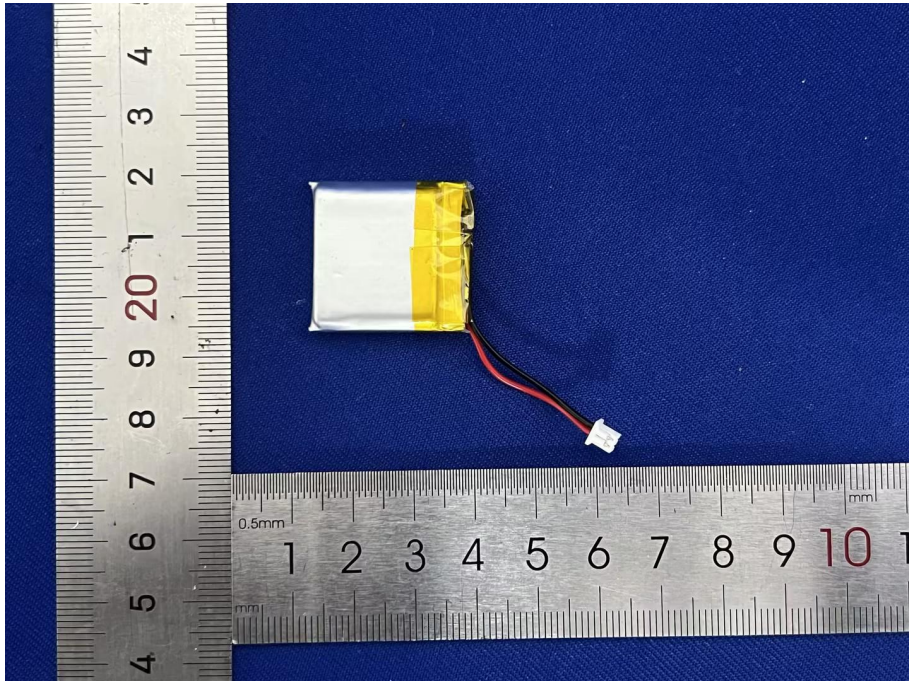
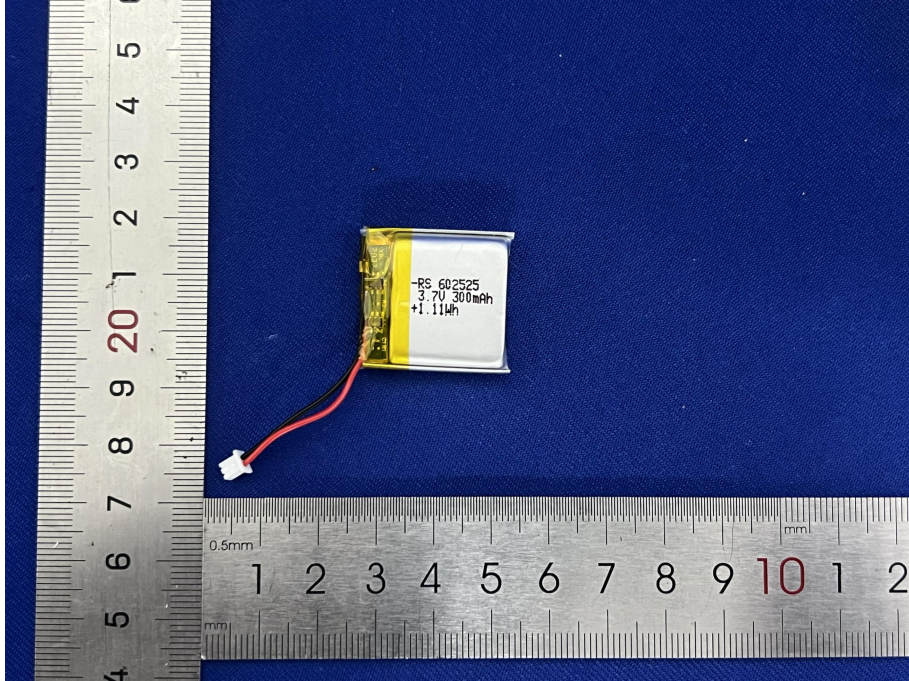
Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

3-11	TABLE: Function of overcharge protection of batteries				P
Sample No.	OCV at start of test, Vdc	Maximum Cell Voltage, Vdc	Charging Current, (A)	Result	
Battery#29	3.33	4.2	0.3	Maximum Cell Voltage below 4.2V	
Note (s): The overcharge protection function was OK.					

3-12	TABLE: Free fall of appliances				P
Sample No.	OCV at start of test, Vdc	OCV at after of test, Vdc	Drop height (m)	Result	
Battery#21	4.19	4.19	1.0	No external short circuit inside of the battery, no internal short circuit in cells.	
Battery#22	4.19	4.18	1.0		
Battery#23	4.18	4.18	1.0		
Note (s): 1. Each sample dropped for 3 times					

Attachment No. 1:

EUT PHOTOGRAPHS



***** END OF REPORT *****