



Inspection Report

Product name: Lithium ion power battery

Specification model: 18650-Fe-1800mAh

Inspection category: comprehensive performance testing

Inspection Department: Technical Department

Inspection department: test center

Inspection date: May 27, 2020

Report Number: CS 20200527

Number of samples	40PCS	Test basis	Product specification, national standard GB/T31485-2015
Sample information	Production battery sampling		
Test	Temperature $25\pm2^{\circ}\text{C}$ Humidity $60\pm5\%$		



Conditions	
Test Equipment	Digital multimeter, internal resistance meter, charging and discharging cabinet, stopwatch, constant current and constant voltage source, thermometer, acupuncture machine, extruder, weight impact machine, free fall stand, high and low temperature box.
Standard charging	The battery is charged with a constant current of 900mA under the condition of an ambient temperature of $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$. When the battery terminal voltage reaches 3.65V, it is changed to constant voltage charging until the charging current is 0.02C.
Standard discharge	The battery is discharged at a constant current of 1800mA at an ambient temperature of $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$. When the battery terminal voltage reaches 2.5V, the discharge stops.
Maximum current discharge	The battery is discharged at a constant current of 5400mA at an ambient temperature of $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$. When the battery terminal voltage reaches 2.5V, the discharge stops.
Test Results	qualified

Test: Yang Audit: Cao

Lan Fulan Approval:

Serial number	Test items	According to the standard	Number of samples	in conclusion	Remarks
1	Appearance, size, quality	Diameter: $18.3\text{mm} \pm 0.2\text{mm}$	5	qualified	
		height: $65.2 \pm 0.2\text{mm}$	5	qualified	
		Mass: $42 \pm 1\text{g}$	5	qualified	
2	Voltage, internal resistance	Voltage $\geq 3.2\text{V}$	40	qualified	
		Internal resistance $\leq 20\text{m}\Omega$	40	qualified	
3	capacity	Not less than 100% of rated value	40	qualified	
4	Temperature	$-20^{\circ}\text{C} \geq 40\%$, $-10^{\circ}\text{C} \geq 50\%$, $0^{\circ}\text{C} \geq$	2	qualified	



	performance	70%、25℃ \geq 100%、55℃ \geq 95%			
5	Rate discharge performance	1C \geq 100%、2C \geq 95%、3C \geq 90%	2	qualified	
6	Rate charging performance	2C \geq 80%	2	qualified	
7	Normal temperature charge maintenance and recovery	No less than 85% of the initial capacity, and capacity recovery no less than 90% of the initial capacity.	2	qualified	
8	High temperature charging maintenance and recovery	No less than 85% of the initial capacity, and capacity recovery no less than 90% of the initial capacity.	2	qualified	
9	Cycle life	Standard discharge 1000 times \geq 90% initial capacity 2000 times \geq 80% initial capacity	2	qualified	
10	Overdischarge	No explosion, no fire, no leakage	2	qualified	
11	Overcharge	No explosion, no fire	2	qualified	
12	Short circuit	No explosion, no fire	2	qualified	
13	fall	No explosion, no fire, no leakage	2	qualified	
14	Thermal shock	No explosion, no fire	2	qualified	
15	extrusion	No explosion, no fire	2	qualified	
16	Heavy impact	No explosion, no fire	2	qualified	
17	acupuncture	No explosion, no fire	2	qualified	
18	Vibration test	No fire, no explosion, no leakage	2	qualified	
19	Sea water immersion	No fire, no explosion	2	qualified	
20	Low pressure	No fire, no explosion, no leakage	2	qualified	
21	Temperature cycle	No fire, no explosion, no leakage	2	qualified	
22	storage	Capacity recovery rate \geq 90%	2	qualified	

Appearance, size, quality

1 test

procedure

- 1) Under good light conditions, use visual inspection to check the appearance of the battery
- 2) Use 0~150mm calipers to measure the diameter and height of the battery;
- 3) Measure the quality of the battery with an electronic scale with an accuracy of 0.001g.

2 According

to the

standard

Diameter: $18.3\text{mm} \pm 0.2$ Height: $65.2\text{mm} \pm 0.2\text{mm}$ Mass: $42 \pm 1\text{g}$

3 test

record

Numbering	1#	2#	3#	4#	5#
Exterior	No abnormality	No abnormality	No abnormality	No abnormality	No abnormality
Diameter (mm)	18.23	18.22	18.25	18.22	18.23
Height (mm)	65.17	65.19	65.22	65.19	65.21
Mass (g)	41.68	41.59	41.75	41.55	41.74

4 Conclusion	qualified
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Voltage, internal resistance

1 test procedure

Use frequency 1KHz AC internal resistance tester to measure;

2 According to the standard

Voltage $\geq 3.2V$, internal resistance $\leq 20m\Omega$

3 test data

Numbering	Internal resistance (m Ω)	Voltage (V)	Numbering	Internal resistance (m Ω)	Voltage (V)	Numbering	Internal resistance (m Ω)	Voltage (V)
1#	15.18	3.3036	15#	15.26	3.3037	29#	15.28	3.3037
2#	15.09	3.3032	16#	15.39	3.3025	30#	15.07	3.3037
3#	15.40	3.3036	17#	15.11	3.3030	31#	14.93	3.3038
4#	15.39	3.3038	18#	15.05	3.3027	32#	15.07	3.3029
5#	15.39	3.3034	19#	14.84	3.3024	33#	15.21	3.3032
6#	15.11	3.3039	20#	15.20	3.3034	34#	15.00	3.3031
7#	15.45	3.3034	21#	14.99	3.3036	35#	14.83	3.3028
8#	15.61	3.3034	22#	14.77	3.3030	36#	15.93	3.3036
9#	15.11	3.3029	23#	15.08	3.3033	37#	15.24	3.3034
10#	14.11	3.3031	24#	15.21	3.3038	38#	15.27	3.3035
11#	15.48	3.3035	25#	15.45	3.3039	39#	15.51	3.3030
12#	15.25	3.3031	26#	15.13	3.3037	40#	15.21	3.3033
13#	15.13	3.3036	27#	15.12	3.3032			
14#	15.16	3.3034	28#	14.91	3.3035			



4 Conclusi on	qualified
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Nominal capacity

1 test

procedure

1) After charging

according to the

standard,

2) Discharge according to standard.

3) stop

2 According

to the

standard

Discharge

capacity $\geq 1750\text{mAh}$

3 test

record

Numbering	Capacity (mAh)	Numbering	Capacity (mAh)	Numbering	Capacity (mAh)
1#	1792.2	15#	1802.6	29#	1798.0
2#	1798.2	16#	1790.6	30#	1792.9
3#	1791.1	17#	1795.9	31#	1814.7
4#	1792.9	18#	1792.1	32#	1790.4
5#	1795.7	19#	1796.2	33#	1812.9
6#	1802.3	20#	1798.1	34#	1790.9
7#	1801.1	21#	1811.5	35#	1815.4
8#	1795.8	22#	1800.0	36#	1816.7
9#	1798.1	23#	1797.6	37#	1803.2
10#	1810.0	24#	1796.1	38#	1806.0
11#	1789.4	25#	1796.9	39#	1799.1
12#	1799.6	26#	1797.9	40#	1796.3
13#	1797.3	27#	1799.6		
14#	1791.6	28#	1797.2		



4 Conclusion	qualified
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Temperature performance

1 test procedure

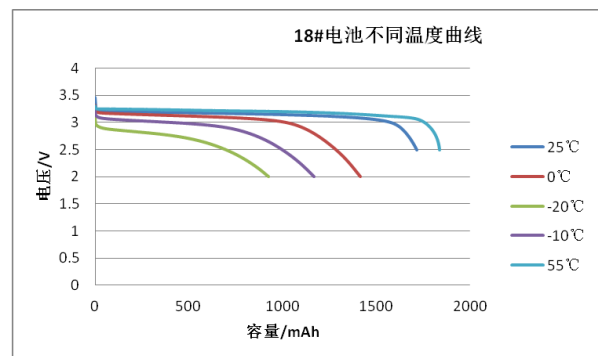
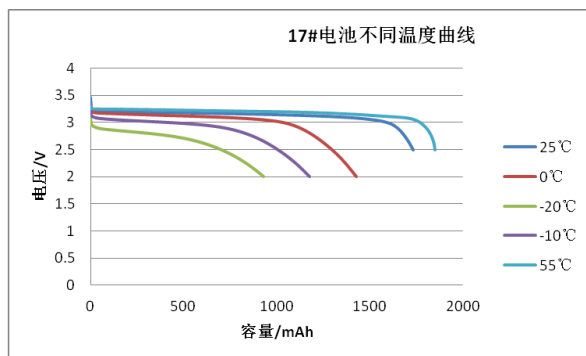
- 1) After charging according to the standard;
- 2) Discharge at -20°C , -10°C , 0°C , 0.5°C , and 1C at 25°C and 55°C .
- 3) Record the discharge capacity;
- 4) After standing for 2h at room temperature, check the appearance.

2 According to the standard

$-20^{\circ}\text{C} \geq 40\%$ 、 $-10^{\circ}\text{C} \geq 50\%$ 、 $0^{\circ}\text{C} \geq 70\%$ 、 $25^{\circ}\text{C} \geq 100\%$ 、 $55^{\circ}\text{C} \geq 95\%$

3 test record

Numbering	55℃ discharge capacity mAh	25℃ discharge capacity mAh	0℃ discharge capacity mAh	-10℃ discharge capacity mAh	-20℃ discharge capacity mAh	Discharge capacity ratio (%)				
						55℃	25℃	0℃	-10℃	-20℃
17#	1850.2	1734	1428.4	1175.3	929.7	106.7	100	82.3	67.7	53.6
18#	1838.2	1718.5	1417.1	1168.9	924	107	100	82.5	68	53.7



4	qualified
Conclusion	

Rate discharge performance

1 test procedure

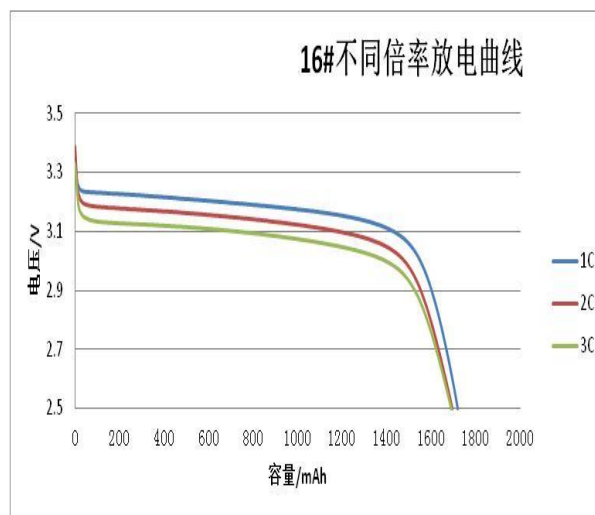
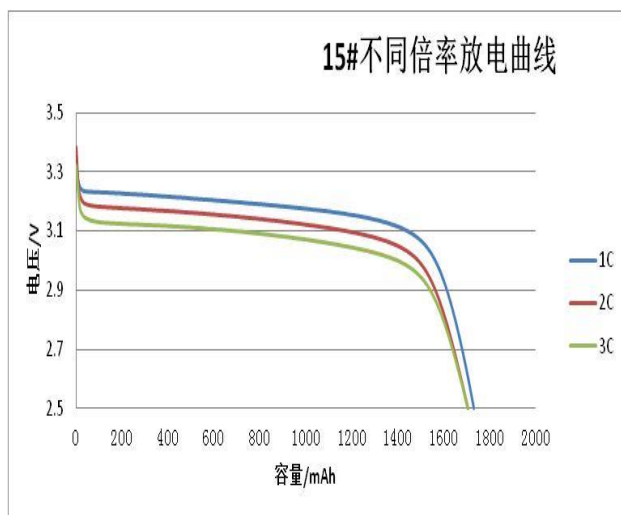
- 1) Recharge according to the standard, discharge at 1C to the termination voltage, and record the discharge capacity;
- 2) Recharge according to the standard, discharge at 2C to the termination voltage, and record the discharge capacity;
- 3) Recharge according to the standard, and record the discharge capacity at 3C to the termination voltage;

2 According to the standard

1C \geq 100%、2C \geq 95%、3C \geq 90%

3 test data

Numbering	1C discharge capacity mAh	2C discharge capacity mAh	3C discharge capacity mAh	2C/1C ratio	3C/1C ratio
15#	1733.7	1709.3	1708.5	98.6%	98.5%
16#	1721.2	1695.2	1692	98.5%	98.3%



4 Conclusion	qualified
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Room temperature rate charging

1 test procedure

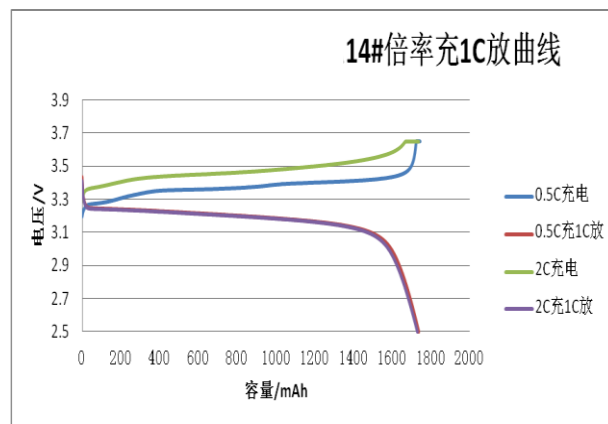
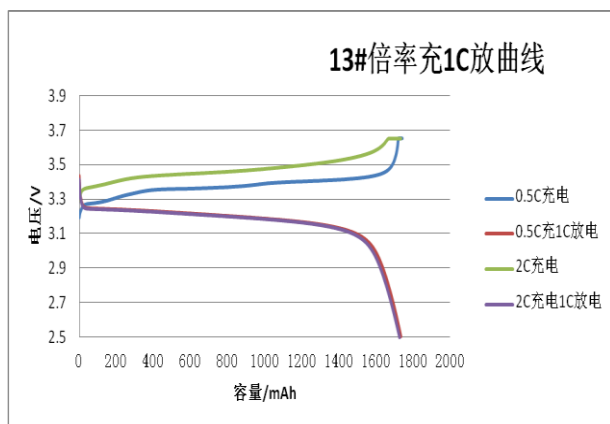
- 1) Recharge according to the standard, discharge at 1C to the termination voltage, and record the discharge capacity;
- 2) Press 2C to charge again, discharge at 1C to the termination voltage, and record the discharge capacity;

2 According to the standard

$2C \geq 80\%$

3 test data

Numbering	0.5/1C	2C/1C	Retention rate%
13#	1736.4	1728.8	99.6
14#	1738.5	1730	99.5



4 Conclusion	qualified
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Normal temperature charge maintenance and

recovery

1 test procedure

- 1) After charging according to the standard, record the charging capacity
- 2) Put the fully charged battery at room temperature and leave it for 28 days
- 3) Discharge the battery at 1C to the termination voltage, and record the discharge capacity and time;
- 4) After standard charging, discharge at 1C to the termination voltage, record the discharge capacity and time,

2 According to the standard

The charge at room temperature is maintained at no less than 85% of the initial capacity, and the capacity recovery is no less than 90% of the initial capacity.

3 test data

Numbering	Initial capacity mAh	Normal temperature charge retention capacity mAh	Discharge capacity ratio (%)	Normal temperature charge recovery capacity mAh	Discharge capacity ratio (%)
9#	1814	1756.1	96.8	1782.4	98.3
10#	1822	1762.8	96.8	1787.3	98.1

4 Conclusion	qualified
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High temperature charging maintenance and recovery

1 test procedure

- 1) After charging according to the standard, record the charging capacity
- 2) Put the fully charged battery often at 55°C for 7 days
- 3) After leaving the battery at room temperature for 5 hours, discharge it to the termination voltage at 1C, and record the discharge capacity and time;
- 4) After standard charging, discharge at 1C to the termination voltage, record the discharge capacity and time,

2 According to the standard

The high temperature charge remains at least 85% of the initial capacity, and the capacity recovery is not less than 90% of the initial capacity.

3 test data

Numbering	Initial capacity mAh	55°C high temperature charge retention capacity mAh	Discharge capacity ratio (%)	55°C high temperature charging recovery capacity mAh	Discharge capacity ratio (%)
7#	1799	1749.6	97.3	1776.3	98.7
8#	1813	1765	97.4	1789.1	98.7

4 Conclusion	qualified
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Cycle performance

1 test procedure

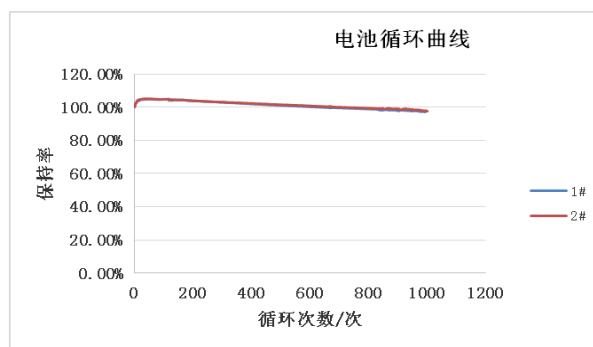
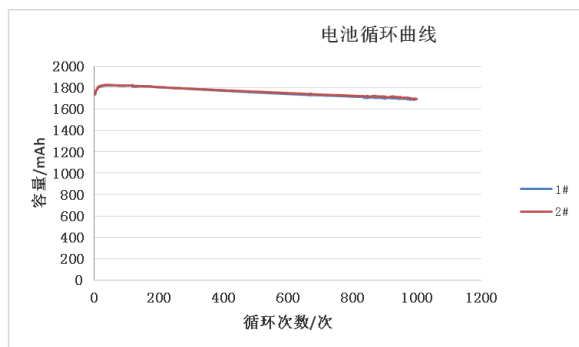
- 1) Let stand for 10 minutes
- 2) Discharge with 1C current to the final voltage (discharge the surplus)
- 3) Let stand for 10 minutes
- 4) Transfer to constant voltage charging with 0.5C or 1C current as required until the battery voltage reaches 3.65V, and stop charging when the charging current drops to 0.02C
- 5) Let stand for 10 minutes
- 6) Discharge to the final voltage with 1C current as required
- 7) Loop (3~6)
- 8) The battery capacity is less than 80% of the rated capacity, and the test is terminated.

2 According to the standard

The discharge capacity after 1000 cycles is no less than 90% of the initial capacity, and after 2000 cycles, the discharge capacity is no less than 80% of the initial capacity.

3 test data

Numbering	Initial capacity mAh	Capacity after cycle mAh	Discharge capacity ratio (%)	Cycles
1#	1739.3	1696.1	97.51	1000
2#	1738.7	1695.0	97.49	1000



4 Conclusion	qualified
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Overdischarge

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) The battery is discharged at 1C current for 90min and observed for 1h

2 According to the standard

No fire, no explosion, no leakage

3 test data

Numbering	Initial voltage (V)	Initial internal resistance (mΩ)	explosion	Catch fire	smoke	Leakage	judgement result
25#	3.419	14.3	no	no	no	no	qualified
26#	3.406	13.9	no	no	no	no	qualified





4 Conclusio n	qualified
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Overcharge

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Charge the battery cell with 1C current, and stop charging for 1 hour when it reaches 5.5V or the time reaches 1 hour

² According to the standard

No fire, no explosion

3 test data

Number in g	Initial voltage (V)	Initial internal resistance (mΩ)	explosion	Catch fire	judgement result
23#	3.419	15	no	no	qualified
24#	3.423	14.9	no	no	qualified





4 Conclusion	qualified
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Short circuit

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Short-circuit the positive and negative electrodes of the battery for 10 minutes (total resistance of the wire is $5\text{m}\Omega$), and observe for 1 hour
- 3) Monitor the battery temperature change during the experiment. When the battery temperature drops to about 20°C lower than the peak value, the experiment ends.

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($\text{m}\Omega$)	explosion	Catch fire	temperature	judgement result
29#	3.42	15.2	no	no	/	qualified
30#	3.42	15.0	no	no	/	qualified



4 Conclusion	qualified
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fall

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) The battery cell falls freely from a height of 1.5m to the concrete floor, and falls from the positive and negative terminals one time each, and randomly falls two times from the side.
- 3) After the free fall, check the battery voltage and appearance,

2 According to the standard

There should be no obvious damage, rupture, liquid leakage, smoke, fire, or explosion in appearance.

3 test data

Before falling		After falling	
Numbering	Voltage (V)	Voltage (V)	Exterior
31#	3.566	3.479	No obvious damage, rupture, leakage, smoke, fire, or explosion
32#	3.564	3.472	No obvious damage, rupture, leakage, smoke, fire, or explosion





4 Conclusion	qualified
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Thermal shock

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Put the cell in an electric heating blast drying box, and the temperature will rise from room temperature to $130^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at a rate of $5^{\circ}\text{C} \pm 2^{\circ}\text{C}/\text{min}$ and keep it for 30 minutes.

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($\text{m}\Omega$)	explosion	Catch fire	judgement result
33#	3.423	15	no	no	qualified
34#	3.422	14.9	no	no	qualified





4 Conclusion	qualified
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extrusion

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Test under the following conditions.
 - a) Place the battery cell on two extrusion planes, increase the pressure to $13 \pm 0.78 \text{ kN}$, and maintain the pressure for 1 min.

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($\text{m}\Omega$)	explosion	Catch fire	judgement result
35#	3.416	14.8	no	no	qualified
36#	3.426	15.1	no	no	qualified





4 Conclusion	qualified
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Heavy impact

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Place a $\Phi 15.8\text{mm}$ steel column in the center of the battery, and a 9.1kg weight hammer freely drops the impact cell from a height of 610mm.
- 3) After the free drop, detect the battery voltage and appearance.

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($\text{m}\Omega$)	explosion	Catch fire	judgement result
39#	3.419	15.1	no	no	qualified
40#	3.414	15.2	no	no	qualified





4 Conclusion	qualified
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acupuncture

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Use a high temperature resistant steel needle of $\Phi 3\text{mm} \sim \Phi 8\text{mm}$ at a speed of $10\text{mm/s} \sim 40\text{mm/s}$ to penetrate from the direction perpendicular to the battery plate (the steel needle stays in the battery).

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($\text{m}\Omega$)	explosion	Catch fire	judgement result
37#	3.418	15	no	no	qualified
38#	3.419	15.4	no	no	qualified



4 Conclusion	qualified
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Vibration test

1 test procedure

- 1) The battery is charged according to the standard method.
- 2) Apply a double amplitude of 1.6mm, a frequency change rate of 1Hz/min, a frequency range of 10Hz~55Hz, and a reciprocating vibration of 90~100min to test the vibration of the battery in three mutually perpendicular directions.

2 According to the standard

The battery core does not leak, fire or explode.

3 test data

Numbering	Initial voltage (V)	Initial internal resistance (mΩ)	explosion	Catch fire	judgement result
13#	3.421	15	no	no	qualified
14#	3.419	14.7	no	no	qualified



4 Conclusion	qualified
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Temperature cycle

1 test procedure

1) The battery is charged according to the standard method.

2) Put the battery in the temperature box, and adjust the temperature of the temperature box as required to cycle 5 times and observe for 1H

2 According to the standard

No fire, no explosion, no leakage

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($m\Omega$)	explosion	Catch fire	judgement result
21#	3.428	14.9	no	no	qualified
22#	3.420	14.8	no	no	qualified





4 Conclusion	
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1. 翻	翻. 1
2. 译	译. 2
3. 狗	狗. 3
/	/
4. 翻	翻. 4
5. 译	译. 5
6. 狗	狗. 6
/	/
7. 翻	翻. 7
8. 译	译. 8
9. 狗	狗. 9
/	/
10. 翻	翻. 10
11. 译	译. 11
12. 狗	狗. 12
/	/
13. 翻	翻. 13
14. 译	译. 14
15. 狗	狗. 15
/	/
16. 翻	翻. 16
17. 译	译. 17
18. 狗	狗. 18
/	/
19. 翻	翻. 19
20. 译	译. 20
21. 狗	狗. 21
/	/
22. 翻	翻. 22
23. 译	译. 23
24. 狗	狗. 24

Sea water immersion

1 test procedure

1) The battery is charged according to the standard method.

2) Immerse the battery in 3.5% NaCL solution (simulating the composition of sea water at room temperature) for 2H, and the water depth should be below the single battery.

2 According to the standard

No fire, no explosion

3 test data

Numbering	Initial voltage (V)	Initial internal resistance ($m\Omega$)	explosion	Catch fire	judgement result
19#	3.424	14.8	no	no	qualified
20#	3.422	15.1	no	no	qualified





4 Conclusion	qualified
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1. 翻	翻. 1
2. 译	译. 2
3. 狗	狗. 3
/	/
4. 翻	翻. 4
5. 译	译. 5
6. 狗	狗. 6
/	/
7. 翻	翻. 7
8. 译	译. 8
9. 狗	狗. 9
/	/
10. 翻	翻. 10
11. 译	译. 11
12. 狗	狗. 12
/	/
13. 翻	翻. 13
14. 译	译. 14
15. 狗	狗. 15
/	/
16. 翻	翻. 16
17. 译	译. 17
18. 狗	狗. 18
/	/
19. 翻	翻. 19
20. 译	译. 20
21. 狗	狗. 21
/	/
22. 翻	翻. 22
23. 译	译. 23
24. 狗	狗. 24
/	/
25. 翻	翻. 25
26. 译	译. 26
27. 狗	狗. 27
/	/
28. 翻	翻. 28
29. 译	译. 29
30. 狗	狗. 30
/	/
31. 翻	翻. 31
32. 译	译. 32
33. 狗	狗. 33
/	/
34. 翻	翻. 34
35. 译	译. 35
36. 狗	狗. 36

Low pressure

1 test procedure

1) The battery is charged according to the standard method.

2) Put the battery into the low-pressure box, adjust the air pressure in the test box to 11.6KPa and the temperature to room temperature, let it stand for 6h, and observe for 1h

2 According to the standard

No fire, no explosion, no leakage

3 test data

Numbering	Initial voltage (V)	Initial internal resistance (mΩ)	explosion	Catch fire	judgement result
23#	3.422	15.1	no	no	qualified
24#	3.419	14.8	no	no	qualified



4 Conclusion	qualified
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1. 翻	翻. 1
2. 译	译. 2
3. 狗	狗. 3
/	/
4. 翻	翻. 4
5. 译	译. 5
6. 狗	狗. 6
/	/
7. 翻	翻. 7
8. 译	译. 8
9. 狗	狗. 9
/	/
10. 翻	翻. 10
11. 译	译. 11
12. 狗	狗. 12
/	/
13. 翻	翻. 13
14. 译	译. 14
15. 狗	狗. 15
/	/
16. 翻	翻. 16
17. 译	译. 17
18. 狗	狗. 18
/	/
19. 翻	翻. 19
20. 译	译. 20
21. 狗	狗. 21
/	/
22. 翻	翻. 22
23. 译	译. 23
24. 狗	狗. 24
/	/
25. 翻	翻. 25
26. 译	译. 26
27. 狗	狗. 27
/	/
28. 翻	翻. 28
29. 译	译. 29
30. 狗	狗. 30
/	/
31. 翻	翻. 31
32. 译	译. 32
33. 狗	狗. 33
/	/
34. 翻	翻. 34
35. 译	译. 35
36. 狗	狗. 36
/	/
37. 翻	翻. 37
38. 译	译. 38
39. 狗	狗. 39
/	/
40. 翻	翻. 40
41. 译	译. 41
42. 狗	狗. 42
/	/
43. 翻	翻. 43
44. 译	译. 44
45. 狗	狗. 45
/	/
46. 翻	翻. 46
47. 译	译. 47
48. 狗	狗. 48
/	/
49. 翻	翻. 49
50. 译	译. 50
51. 狗	狗. 51
/	/
52. 翻	翻. 52
53. 译	译. 53
54. 狗	狗. 54
/	/
55. 翻	翻. 55
56. 译	译. 56
57. 狗	狗. 57
/	/
58. 翻	翻. 58
59. 译	译. 59
60. 狗	狗. 60
/	/
61. 翻	翻. 61
62. 译	译. 62
63. 狗	狗. 63
/	/
64. 翻	翻. 64
65. 译	译. 65
66. 狗	狗. 66
/	/
67. 翻	翻. 67
68. 译	译. 68
69. 狗	狗. 69
/	/
70. 翻	翻. 70
71. 译	译. 71
72. 狗	狗. 72
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73. 翻	翻. 73
74. 译	译. 74
75. 狗	狗. 75
/	/
76. 翻	翻. 76
77. 译	译. 77
78. 狗	狗. 78
/	/
79. 翻	翻. 79
80. 译	译. 80
81. 狗	狗. 81
/	/
82. 翻	翻. 82
83. 译	译. 83
84. 狗	狗. 84
/	/
85. 翻	翻. 85
86. 译	译. 86
87. 狗	狗. 87
/	/
88. 翻	翻. 88
89. 译	译. 89
90. 狗	狗. 90
/	/
91. 翻	翻. 91
92. 译	译. 92
93. 狗	狗. 93
/	/
94. 翻	翻. 94
95. 译	译. 95
96. 狗	狗. 96
/	/
97. 翻	翻. 97
98. 译	译. 98
99. 狗	狗. 99
/	/
100. 翻	翻. 100

storage

1 test procedure

1) The battery is charged according to the standard method.

2) Discharge at 1C for 30min

3) Store at $45^{\circ}\text{C} \pm 2$ for 28 days, after 5 hours at room temperature, do a 0.5C full charge and 1C discharge to 2.5V, record the recovery capacity

2 According to the standard

Capacity recovery rate $\geq 90\%$
initial capacity

3 test data

Numbering	Initial capacity	Discharge capacity	Capacity retention rate	judgement result
11#	1784.9	1704.6	95.5	qualified
12#	1787	1703	95.3	qualified

4 Conclusion	qualified
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