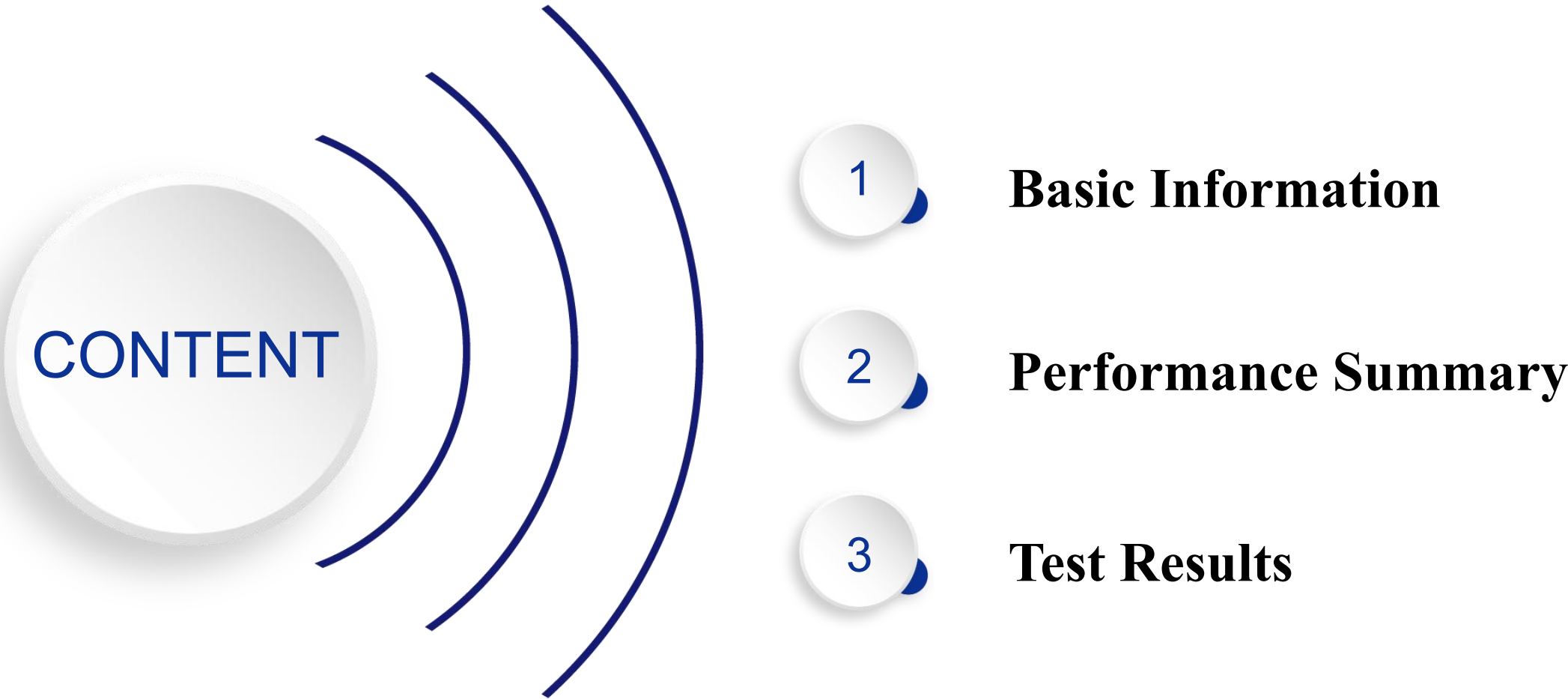


LFP 100 Test Report





CONTENT

1

Basic Information

2

Performance Summary

3

Test Results

Items		Parameters	Units
Chemical System		LFP/C	/
	Width (W)	160.2 ± 0.5	mm
	Overall Height(H)	118.3 ± 0.5	
	Shoulder Height(h)	115.5 ± 0.5	
	Thickness (T)	50 ± 0.5 (300kgf)	
Weight		2000 ± 150	g
AC Impedance of 1kHz @ 30%SOC		≤ 0.5 @ ~30%SOC	mΩ
Capacity @ 25°C_0.5C_2.5V~3.65V		100	Ah
Energy @ 25°C_0.5C_2.5V~3.65V		320	Wh
Nominal Voltage @ 25°C_0.5C		3.2	V
Working Temperature	Charge	0~60	°C
	Discharge	-30~60	°C
Storage	Temperature	-30~60	°C
	Humidity	≤ 80	RH

Items	Test Conditions	Requirements	Actual Measurement
Capacity	25°C_0.5C_2.5V~3.65V	≥100Ah	103.2Ah
Rate Discharge	0.33C	≥100Ah	106.0Ah
	0.5C	≥100Ah	104.8Ah
	1C	≥98Ah	104.2Ah
Temperature Discharge	-20°C	≥60Ah	85.8Ah
	0°C	≥80Ah	101.5Ah
	10°C	≥85Ah	96.7Ah
	25°C	≥100Ah	103.8Ah
	45°C	≥99Ah	106.0Ah
	55°C	≥99Ah	105.7Ah
DC-IR	25°C_1C_30s @ 50%SOC	≤1.5mΩ	1.27mΩ
Cycle Life	25°C_0.5C/0.5C	≥4000 cycles @ 80Ah	1700 cycles @ 92.2Ah
	45°C_0.5C/0.5C	≥2000 cycles @ 80Ah	1400 cycles @ 91.6Ah

S/N	Items	Requirements	Results	Refer Standards
1	Over charge	No fire, no explosion	Pass	GB/T 36276-2018
2	Over discharge	No fire, no explosion	Pass	
3	Short Circuit	No fire, no explosion	Pass	
4	Crush	No fire, no explosion	Pass	
5	Fall	No fire, no explosion	Pass	
6	Low air pressure	No fire, no explosion, or no leakage	Pass	
7	Heat	No fire, no explosion	Pass	
8	Thermal runaway	No fire, no explosion	Pass	

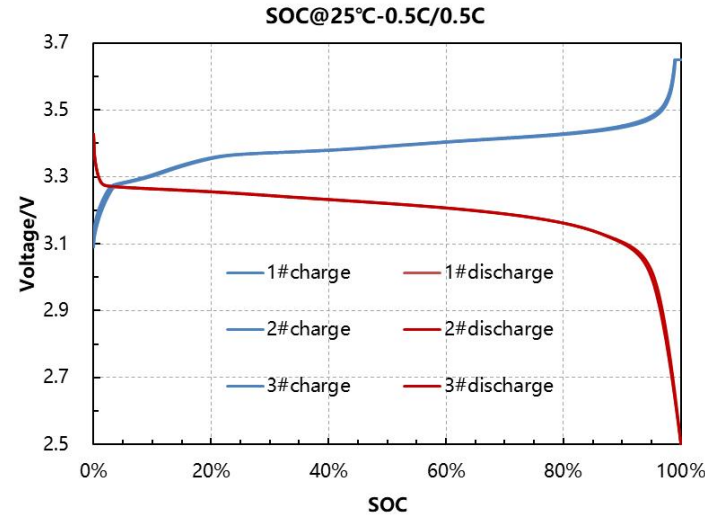
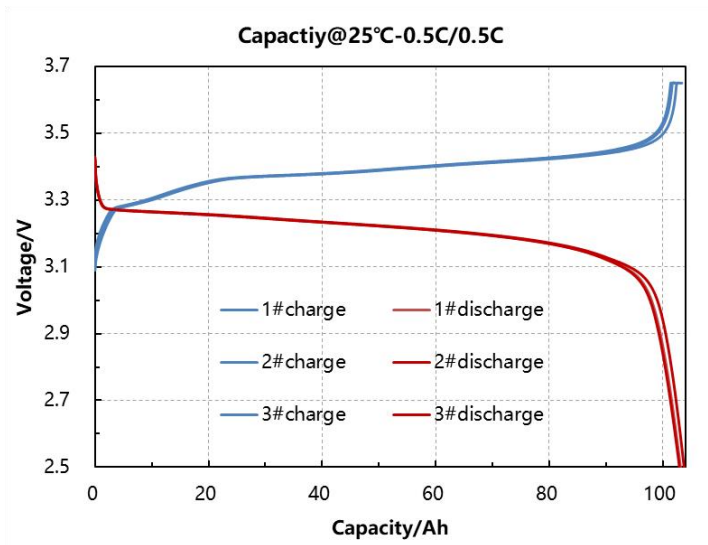
Summary: The cell meet with GB/T 36276-2018.

Capacity & Energy

Test Condition: Charge: 25°C_0.5C CC to 3.65V, 3.65V CV to 0.05C, rest 30min;

Discharge: 25°C_0.5C DC to 2.5V, rest 30min.

Requirement: Capacity @ 25°C_0.5C/0.5C ≥ 100Ah; Energy @ 25°C_0.5C/0.5C ≥ 320Wh.



S/N	Discharge Capacity /Ah	Discharge Energy /Wh
1#	103.1	328.9
2#	102.9	328.3
3#	103.7	331.1
Ave	103.2	329.4

Comment:

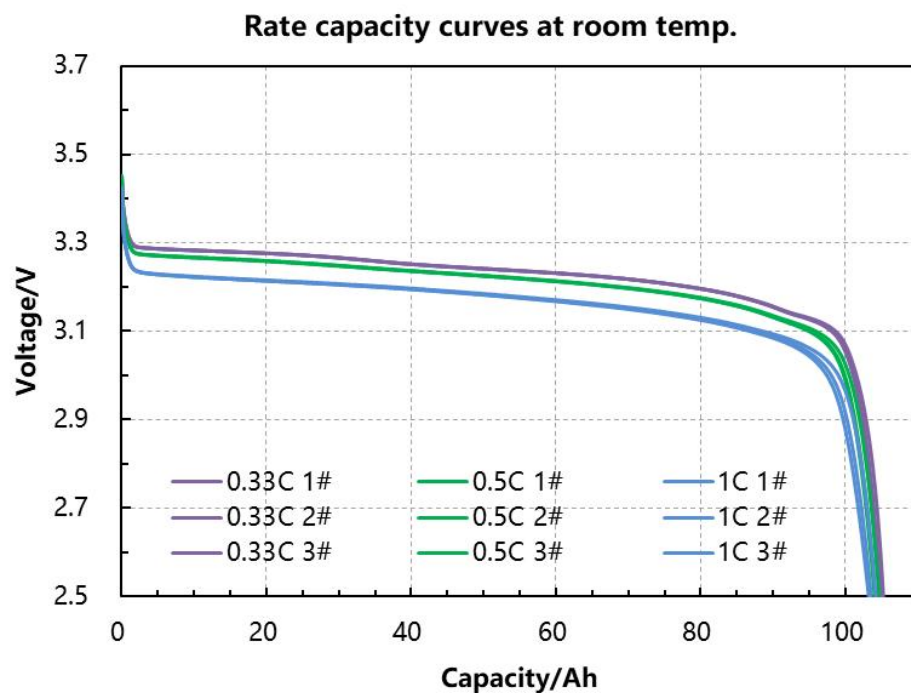
- The initial capacity of the cell is higher than 100Ah, and the energy is higher than 320Wh, meeting its design requirements;
- The SOC-Voltage charge-discharge curve has a high coincidence degree and a good consistency.

□ Rate Discharge

Test Condition: Charge: 25°C_0.5C CC to 3.65V, 3.65V CV to 0.05C, rest 30min;

Discharge: 25°C_0.33C/0.5C/1C DC to 2.5V, rest 30min.

Requirement: Capacity @ 25°C_0.5C $\geq$ 100Ah; 0.5C $\geq$ 100Ah; 1C $\geq$ 98Ah.



Rate	S/N	Discharge Capacity/Ah	Requirement
0.33C	1#	105.9	$\geq 100\text{Ah}$
	2#	106.1	
	3#	105.9	
	Ave.	106.0	
0.5C	1#	104.7	$\geq 100\text{Ah}$
	2#	104.9	
	3#	104.8	
	Ave.	104.8	
1C	1#	104.1	$\geq 98\text{Ah}$
	2#	104.3	
	3#	104.2	
	Ave.	104.2	

□ Comment:

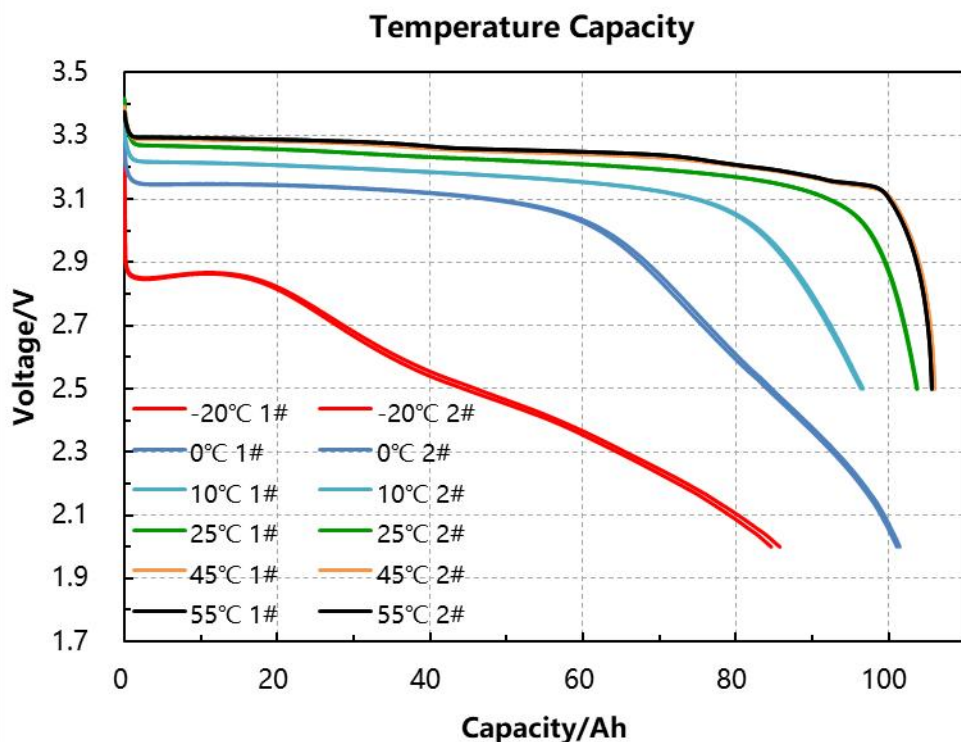
- Results meet with requirements.

□ Temperature Discharge

Test Condition: Charge: 25°C_0.5C CC to 3.65V, 3.65V CV to 0.05C;

Discharge: T°C_0.5C DC to 2.5V (T > 0°C) or 2.0V (T ≤ 0°C).

Requirement: Capacity @ -20°C ≥ 70Ah; 0°C ≥ 85Ah; 10°C ≥ 85Ah; 45°C ≥ 99Ah; 55°C ≥ 99Ah.



Temperature	S/N	DC Capacity/Ah	Requirement
-20°C	1#	85.8	≥70Ah
	2#	84.6	
0°C	1#	101.5	≥85Ah
	2#	101.1	
10°C	1#	96.7	≥85Ah
	2#	96.4	
25°C	1#	103.8	≥100Ah
	2#	103.7	
45°C	1#	106.0	≥99Ah
	2#	106.2	
55°C	1#	105.7	≥99Ah
	2#	105.7	

□ Comment:

- Results meet with requirements.

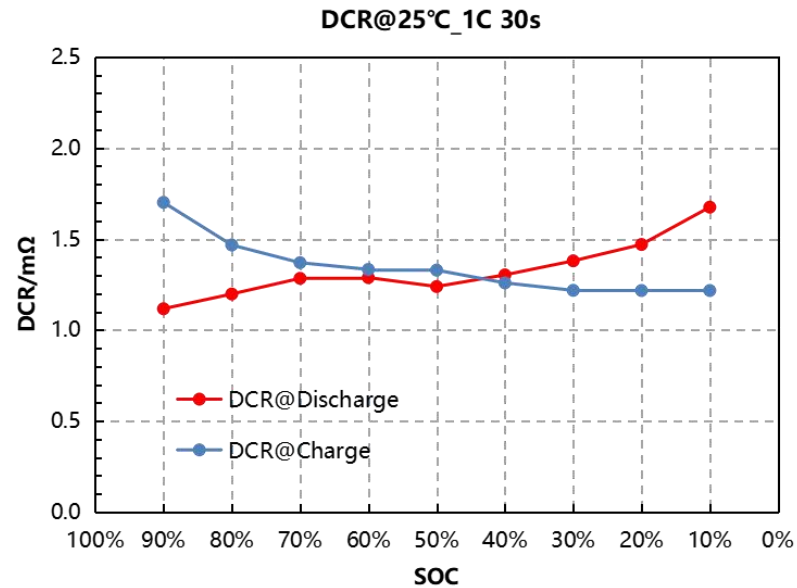
□ DCR

Test Condition:

Discharge: 25°C_0.1C CC to 3.65V, 3.65V CV to 0.05C, rest for 180min; 0.1C discharge to different SOC, rest for 30min; then discharge the cell in 1C for 30s at different SOC.

Charge: 25°C_0.1C DC to 2.5V, rest for 180min; 0.1C discharge to different SOC, rest for 30min; then discharge the cell in 1C for 30s at different SOC.

Requirement: DCR@ 25°C_50%SOC ≤ 1.5mΩ.



SOC	DCR@Discharge mΩ	DCR@Charge mΩ
90%	1.12	1.70
80%	1.20	1.47
70%	1.28	1.37
60%	1.29	1.33
50%	1.27	1.34
40%	1.30	1.26
30%	1.38	1.22
20%	1.47	1.22
10%	1.68	1.22

□ Comment:

- Results meet with requirements.

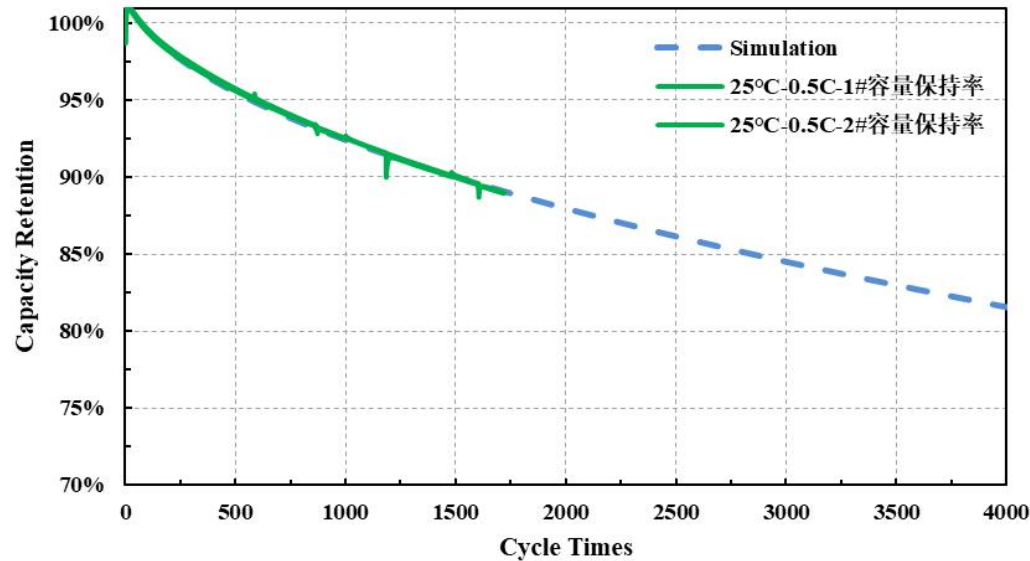
□ Cycle Life_25°C_0.5C/0.5C@80%EOL

Test Condition: Charge: 25°C_0.5C CC to 3.65V, 3.65V CV to 0.05C, rest 30min;

Discharge: 25°C_0.5C DC to 2.5V, rest 30min.

Requirement: 25°C_0.5C/0.5C $\geq$ 4000 cycles @ Typical capacity*80%.

25°C_0.5C/0.5C Cycle Test



S/N	Cycles	Capacity Retention rate	Capacity Retention	Requirement
1#	1700	89.1%	92.6Ah	≥4000 cycles @80Ah
2#	1700	89.0%	93.3Ah	
Simulation	4000	81.6%	83.5Ah	

□ Comment:

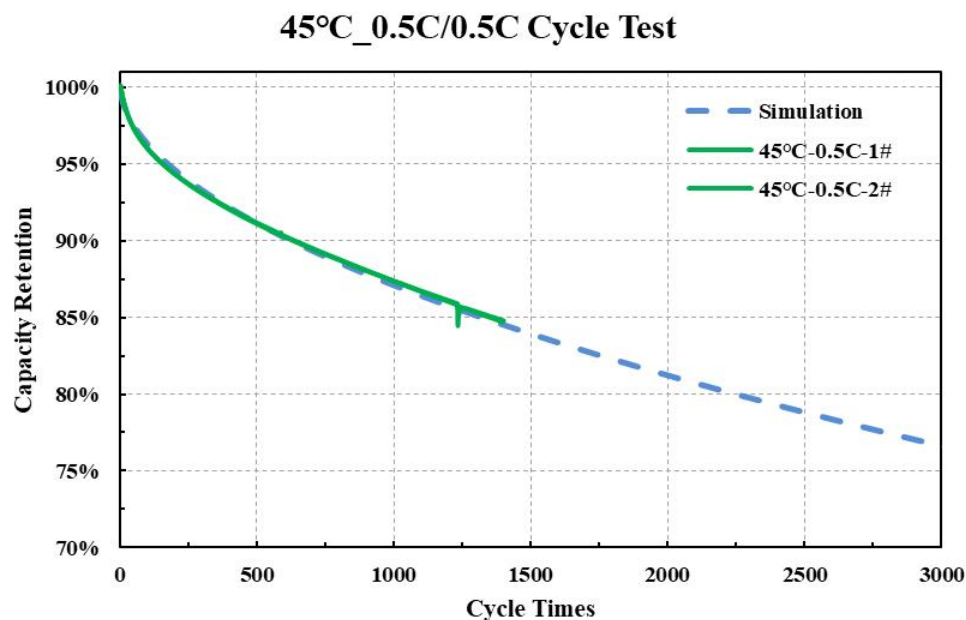
- The capacity retention 94.1Ah after 1400 cycles, and the cycle trend of meet with 4000cycles @80Ah

□ Cycle Life_45°C_0.5C/0.5C@80%EOL

Test Condition: Charge: 45°C_0.5C CC to 3.65V, 3.65V CV to 0.05C, rest 30min;

Discharge: 45°C_0.5C DC to 2.5V, rest 30min.

Requirement: 45°C_0.5C/0.5C $\geq$ 2000 cycles @ Typical capacity*80%.

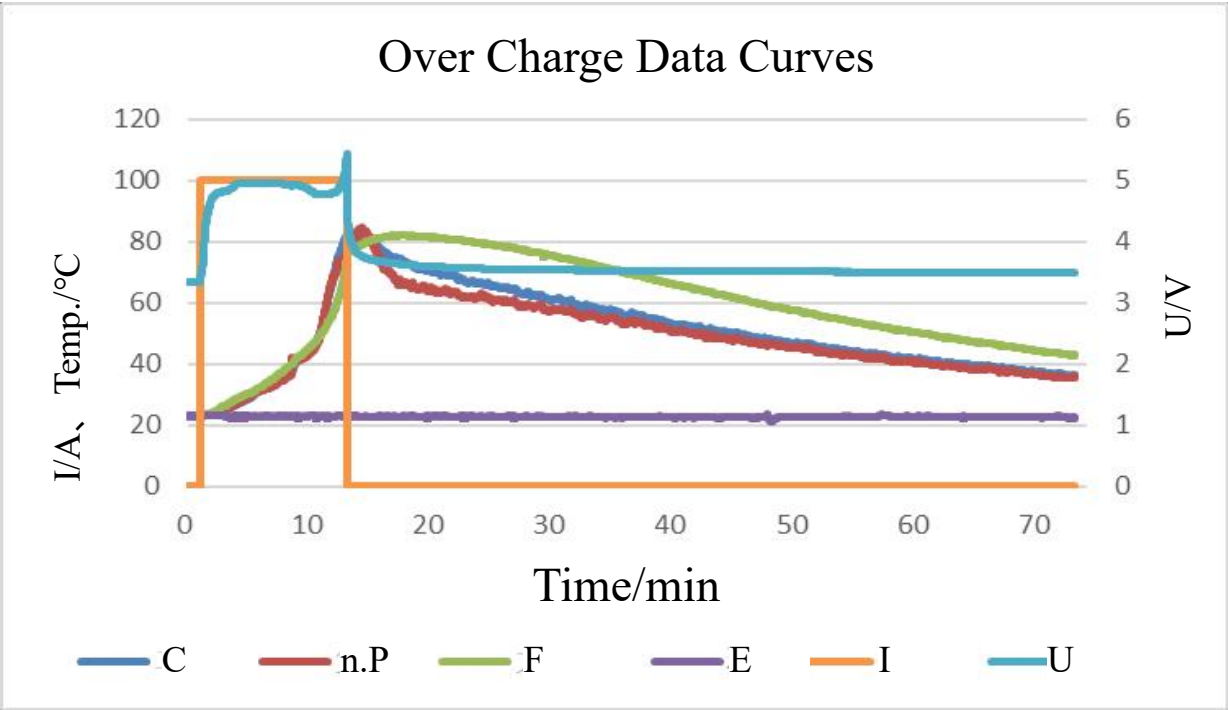


S/N	Cycles	Capacity Retention rate	Capacity Retention	Requirement
1#	1400	84.8%	91.6Ah	≥2000 cycles @80Ah
2#	1400	84.7%	91.7Ah	
Simulation	2000	81.8%	88.6Ah	

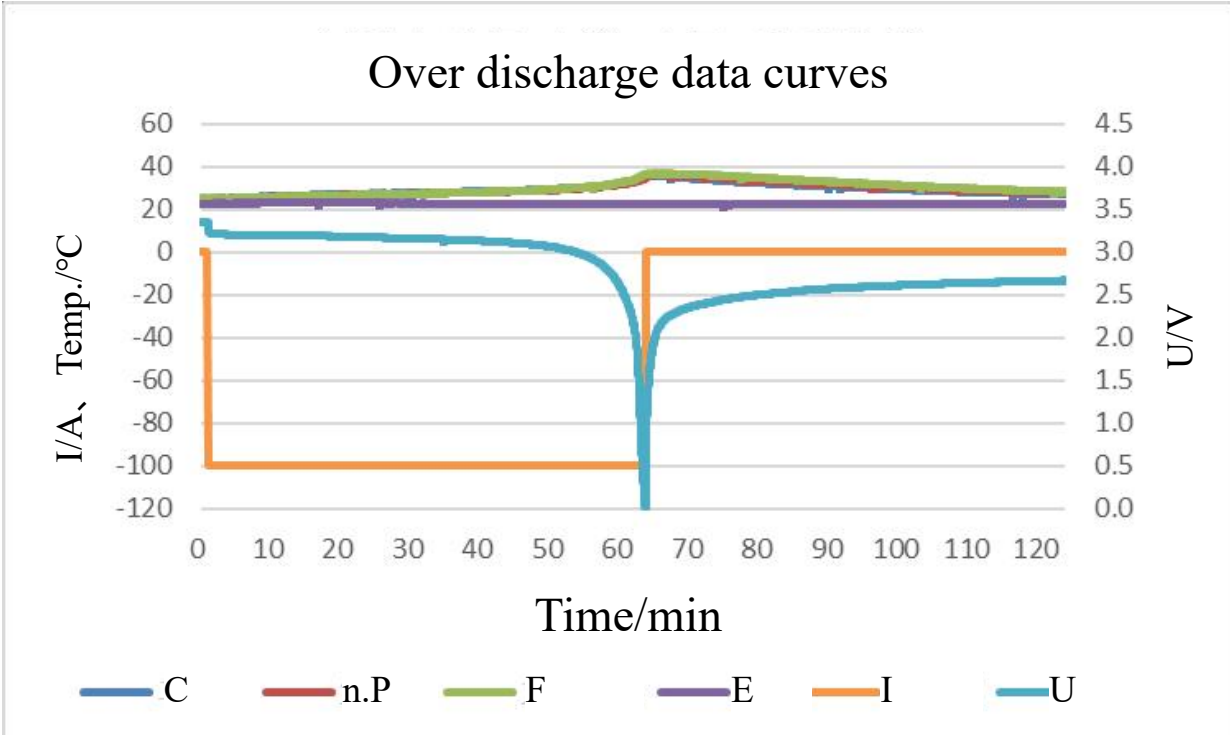
□ Comment:

- The capacity retention 91.6Ah after 1400 cycles, and the cycle trend of meet with 2000cycles @ 80Ah

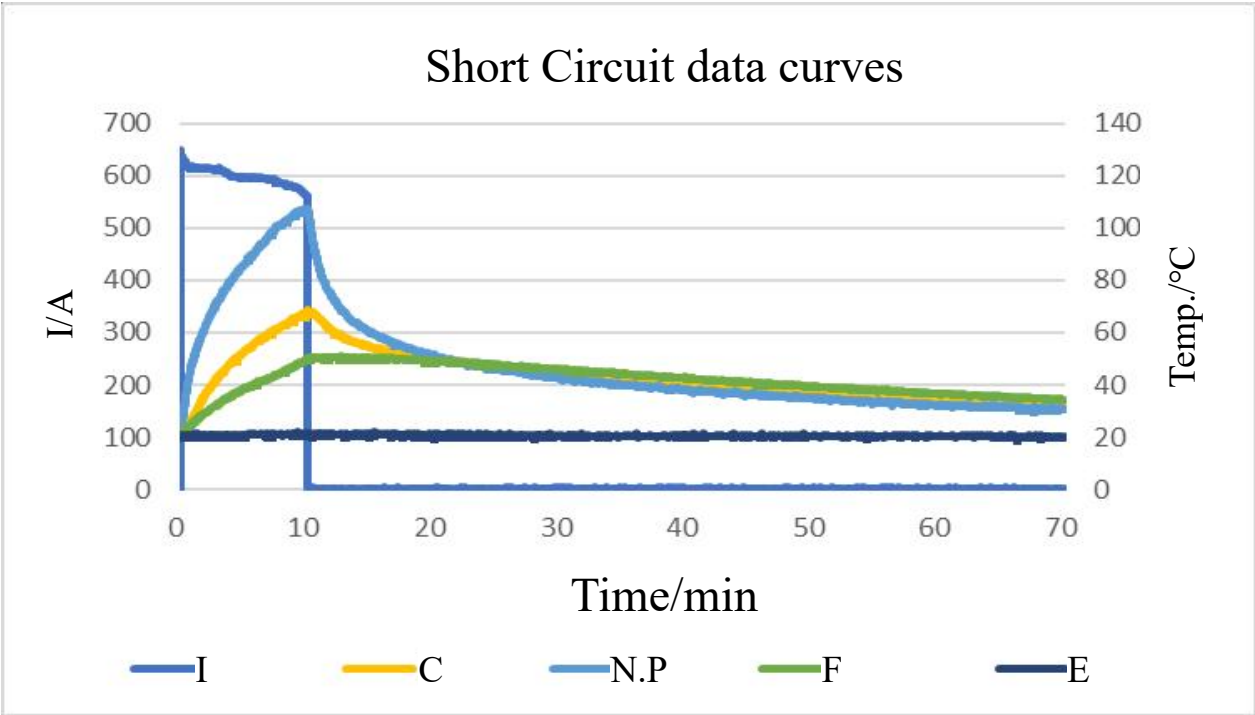
Over Charge

Item	Over charge	Requirements	No fire, no explosion	Result	Pass
Refer standard	GB/T 36276-2018				
Test Data				cell before test	
Note: C:code N.P: Negtive Pole F:Surface Center E:environment I: Current U: Voltage Over Charge Data Curves 				cell after test	

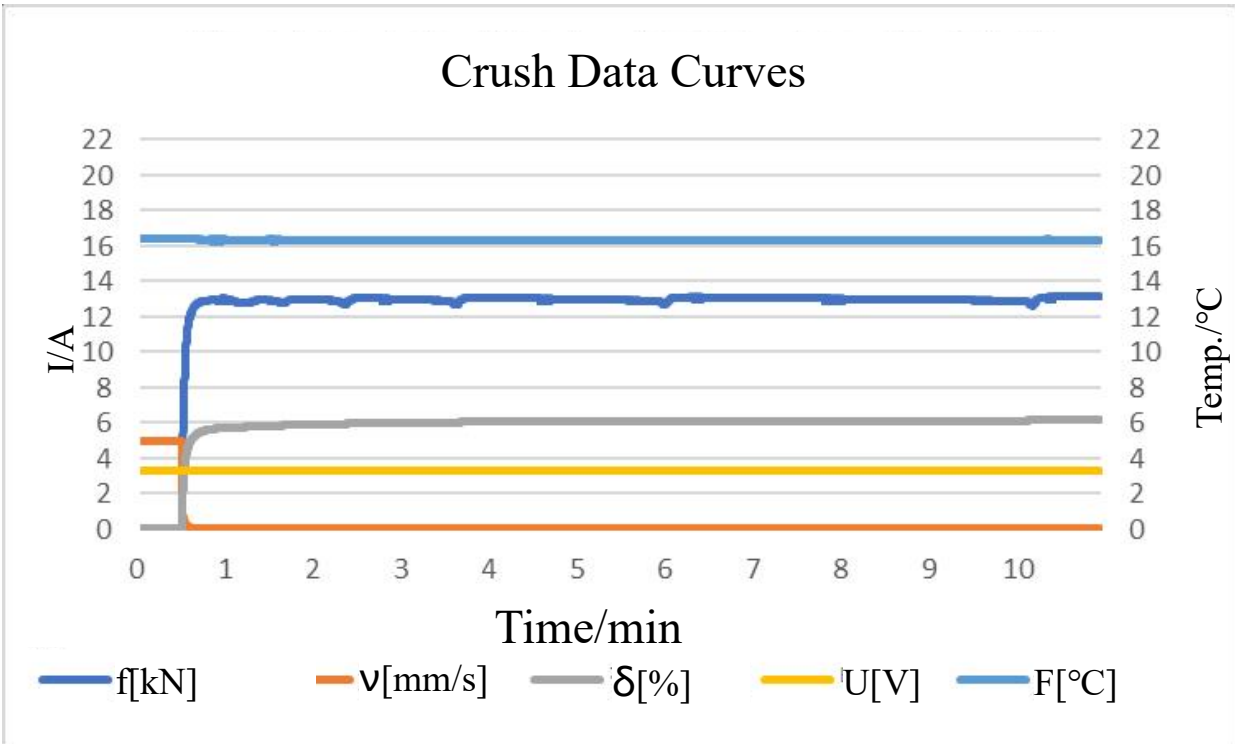
Over Discharge

Item	Over discharge	Requirements	No fire, no explosion	Result	Pass
test method	GB/T 36276-2018				
test curves				cell before test	
Note: C:code N.P: Negtive Pole F:Surface Center E:environment I: Current U: Voltage Over discharge data curves 				cell after test	
					

□ Short Circuit

Demend	Short Circuit	Requirements	No fire, no explosion	Result	Pass																																																						
test method	GB/T 36276-2018																																																										
test curves				cell before test																																																							
Note: C:code N.P: Negative Pole F:Surface Center E:environment I: Current U: Voltage Short Circuit data curves  The graph displays five data series over a 70-minute period. The left y-axis represents current (I/A) from 0 to 700, and the right y-axis represents temperature (Temp./°C) from 0 to 140. A vertical dashed line at 10 minutes indicates the end of the short circuit phase. Series I (blue) shows a sharp drop in current at 10 minutes. Series C (yellow), N.P (light blue), F (green), and E (dark blue) show varying temperature increases during the short circuit phase, with C reaching the highest peak temperature of approximately 100°C. <table border="1"><caption>Approximate data points from the Short Circuit data curves graph</caption><thead><tr><th>Time/min</th><th>I/A (I)</th><th>Temp./°C (C)</th><th>Temp./°C (N.P)</th><th>Temp./°C (F)</th><th>Temp./°C (E)</th></tr></thead><tbody><tr><td>0</td><td>650</td><td>20</td><td>20</td><td>20</td><td>20</td></tr><tr><td>10</td><td>550</td><td>100</td><td>80</td><td>40</td><td>20</td></tr><tr><td>20</td><td>250</td><td>80</td><td>60</td><td>30</td><td>20</td></tr><tr><td>30</td><td>200</td><td>70</td><td>50</td><td>25</td><td>20</td></tr><tr><td>40</td><td>180</td><td>65</td><td>45</td><td>22</td><td>20</td></tr><tr><td>50</td><td>170</td><td>60</td><td>42</td><td>20</td><td>20</td></tr><tr><td>60</td><td>160</td><td>55</td><td>40</td><td>18</td><td>20</td></tr><tr><td>70</td><td>150</td><td>50</td><td>38</td><td>15</td><td>20</td></tr></tbody></table>				Time/min	I/A (I)	Temp./°C (C)	Temp./°C (N.P)	Temp./°C (F)	Temp./°C (E)	0	650	20	20	20	20	10	550	100	80	40	20	20	250	80	60	30	20	30	200	70	50	25	20	40	180	65	45	22	20	50	170	60	42	20	20	60	160	55	40	18	20	70	150	50	38	15	20	cell after test	
Time/min	I/A (I)	Temp./°C (C)	Temp./°C (N.P)	Temp./°C (F)	Temp./°C (E)																																																						
0	650	20	20	20	20																																																						
10	550	100	80	40	20																																																						
20	250	80	60	30	20																																																						
30	200	70	50	25	20																																																						
40	180	65	45	22	20																																																						
50	170	60	42	20	20																																																						
60	160	55	40	18	20																																																						
70	150	50	38	15	20																																																						
																																																											

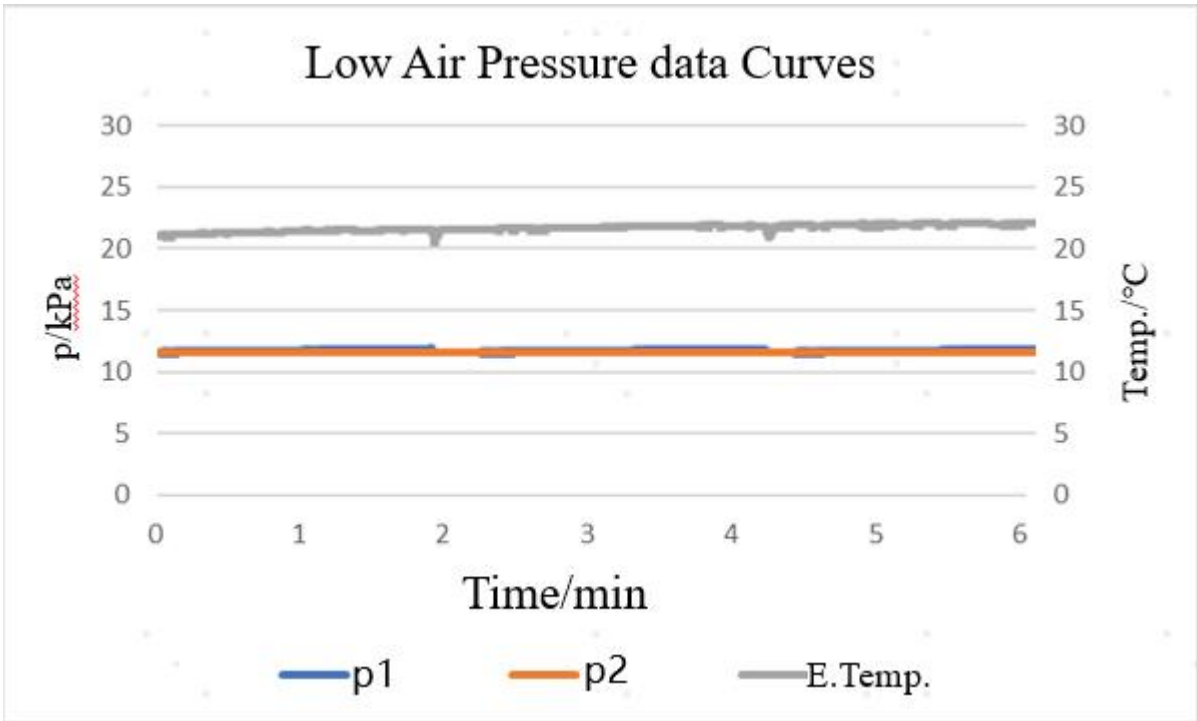
□ Crush

Demend	Crush	Requirements	No fire, no explosion	Result	Pass
test method	GB/T 36276-2018				
Test Curves				cell before test	
Note: f:force v:speed δ:Deformation rate U:Voltage F:Surface Center Crush Data Curves 				cell after test	

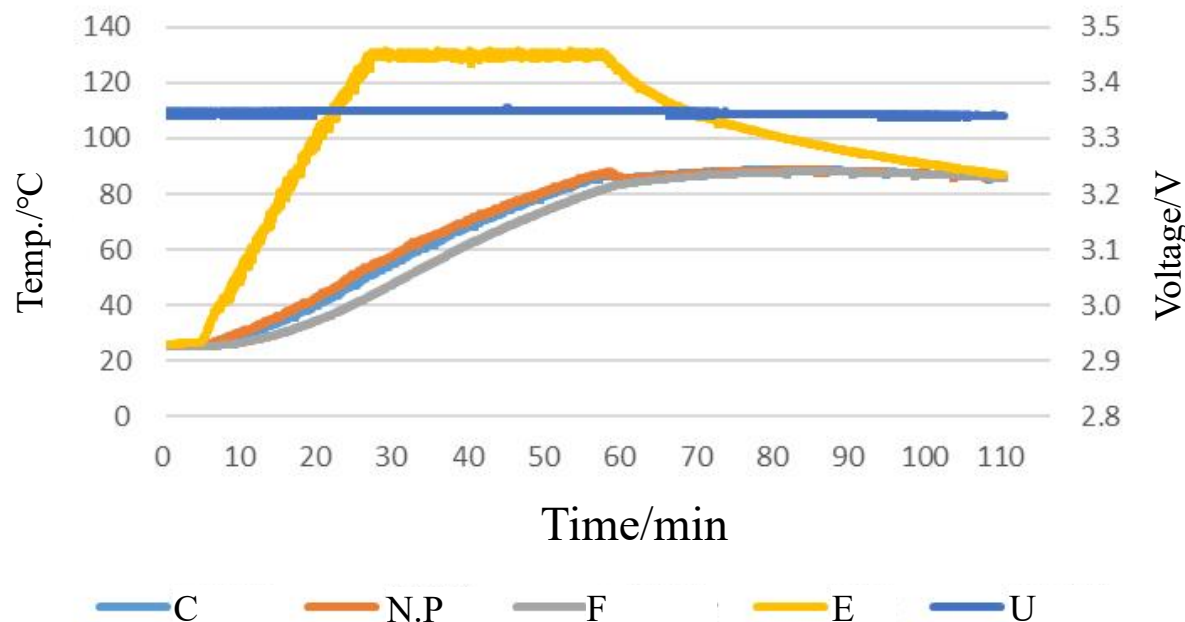
☐ Fall

Demend	Fall	Requirements	No fire, no explosion			Result	Pass																		
test method	GB/T 36276-2018																								
Test Data						cell before test																			
<table><tr><th colspan="3">Before the test</th><th colspan="3">After the test</th></tr><tr><th>Voltage</th><th>IMP</th><th>Mass</th><th>Voltage</th><th>IMP</th><th>Mass</th></tr><tr><td>3.367</td><td>0.28</td><td>2.00</td><td>3.361</td><td>0.28</td><td>2.00</td></tr></table>						Before the test			After the test			Voltage	IMP	Mass	Voltage	IMP	Mass	3.367	0.28	2.00	3.361	0.28	2.00		
						Before the test			After the test																
						Voltage	IMP	Mass	Voltage	IMP	Mass														
						3.367	0.28	2.00	3.361	0.28	2.00														
cell after test																									
																									

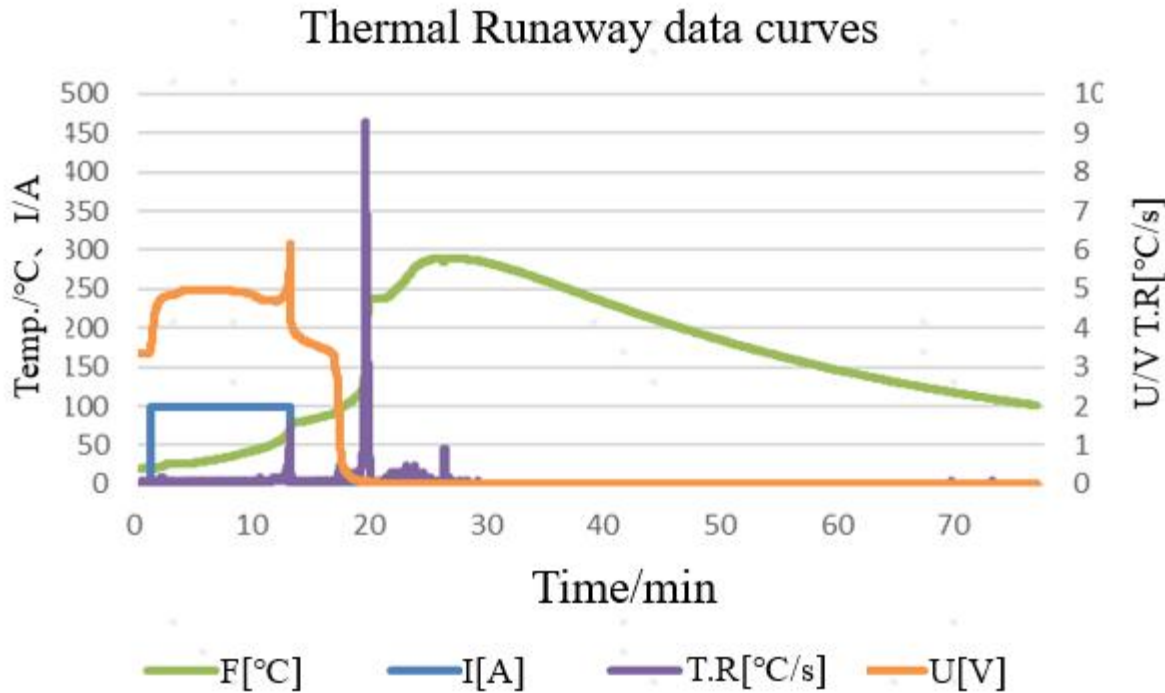
□ Low Air Pressure

Demend	Low air pressure	Requirements	No fire, no explosion, or no leakage	Result	Pass																																
test method	GB/T 36276-2018																																				
Test Curves				cell before test																																	
Note: p1:Testing Pressure p2:setted Pressure E.Temp: environmental temperature Low Air Pressure data Curves <table border="1"><caption>Approximate data points from the graph</caption><thead><tr><th>Time/min</th><th>p1/kPa</th><th>p2/kPa</th><th>E.Temp/°C</th></tr></thead><tbody><tr><td>0</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>1</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>2</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>3</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>4</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>5</td><td>12.0</td><td>12.0</td><td>22.0</td></tr><tr><td>6</td><td>12.0</td><td>12.0</td><td>22.0</td></tr></tbody></table>				Time/min	p1/kPa	p2/kPa	E.Temp/°C	0	12.0	12.0	22.0	1	12.0	12.0	22.0	2	12.0	12.0	22.0	3	12.0	12.0	22.0	4	12.0	12.0	22.0	5	12.0	12.0	22.0	6	12.0	12.0	22.0	cell after test 	
Time/min	p1/kPa	p2/kPa	E.Temp/°C																																		
0	12.0	12.0	22.0																																		
1	12.0	12.0	22.0																																		
2	12.0	12.0	22.0																																		
3	12.0	12.0	22.0																																		
4	12.0	12.0	22.0																																		
5	12.0	12.0	22.0																																		
6	12.0	12.0	22.0																																		

□ Heat

Demend	Heat	Requirements	No fire, no explosion	Result	Pass																																																																														
test method	GB/T 36276-2018																																																																																		
test curves				cell before test																																																																															
Note: C:code N.P: Negtive Pole F:Surface Center E:environment U: Voltage	Heat data curves  <table><caption>Approximate data points from the Heat data curves graph</caption><thead><tr><th>Time/min</th><th>C (°C)</th><th>N.P (°C)</th><th>F (°C)</th><th>E (°C)</th><th>U (V)</th></tr></thead><tbody><tr><td>0</td><td>25</td><td>25</td><td>25</td><td>25</td><td>3.3</td></tr><tr><td>10</td><td>30</td><td>35</td><td>30</td><td>35</td><td>3.3</td></tr><tr><td>20</td><td>40</td><td>50</td><td>40</td><td>50</td><td>3.3</td></tr><tr><td>30</td><td>55</td><td>65</td><td>55</td><td>65</td><td>3.3</td></tr><tr><td>40</td><td>70</td><td>75</td><td>70</td><td>75</td><td>3.3</td></tr><tr><td>50</td><td>80</td><td>85</td><td>80</td><td>85</td><td>3.3</td></tr><tr><td>60</td><td>85</td><td>90</td><td>85</td><td>90</td><td>3.3</td></tr><tr><td>70</td><td>85</td><td>85</td><td>85</td><td>85</td><td>3.2</td></tr><tr><td>80</td><td>85</td><td>85</td><td>85</td><td>85</td><td>3.2</td></tr><tr><td>90</td><td>85</td><td>85</td><td>85</td><td>85</td><td>3.2</td></tr><tr><td>100</td><td>85</td><td>85</td><td>85</td><td>85</td><td>3.2</td></tr><tr><td>110</td><td>85</td><td>85</td><td>85</td><td>85</td><td>3.2</td></tr></tbody></table>			Time/min	C (°C)	N.P (°C)	F (°C)	E (°C)	U (V)	0	25	25	25	25	3.3	10	30	35	30	35	3.3	20	40	50	40	50	3.3	30	55	65	55	65	3.3	40	70	75	70	75	3.3	50	80	85	80	85	3.3	60	85	90	85	90	3.3	70	85	85	85	85	3.2	80	85	85	85	85	3.2	90	85	85	85	85	3.2	100	85	85	85	85	3.2	110	85	85	85	85	3.2	cell after test	
				Time/min	C (°C)	N.P (°C)	F (°C)	E (°C)	U (V)																																																																										
0	25	25	25	25	3.3																																																																														
10	30	35	30	35	3.3																																																																														
20	40	50	40	50	3.3																																																																														
30	55	65	55	65	3.3																																																																														
40	70	75	70	75	3.3																																																																														
50	80	85	80	85	3.3																																																																														
60	85	90	85	90	3.3																																																																														
70	85	85	85	85	3.2																																																																														
80	85	85	85	85	3.2																																																																														
90	85	85	85	85	3.2																																																																														
100	85	85	85	85	3.2																																																																														
110	85	85	85	85	3.2																																																																														

□ Thermal Runaway

Demend	Thermal runaway	Requirements	No fire, no explosion	Result	Pass
test method	GB/T 36276-2018				
test curves				cell before test	
Note: F:Surface Center T.R: Temperature Rise speed. I: Current U: Voltage Thermal Runaway data curves  The graph displays four data series over a 75-minute period. The left y-axis represents Temperature (F) and Current (I) in Amperes (A), ranging from 0 to 500. The right y-axis represents Temperature Rise Rate (T.R) in degrees Celsius per second (°C/s) and Voltage (U) in Volts (V), ranging from 0 to 10. The x-axis represents Time in minutes (min), ranging from 0 to 75. The Temperature (F) curve (green) starts at approximately 25°C, rises to a peak of about 300°C at 25 minutes, and then gradually decreases to 100°C by 75 minutes. The Current (I) curve (blue) is a constant 10A until 15 minutes, then drops to 0A. The Temperature Rise Rate (T.R) curve (purple) shows a sharp peak of approximately 9.5°C/s at 20 minutes. The Voltage (U) curve (orange) starts at 1.5V, rises to 2.5V at 10 minutes, and then drops to 0V at 20 minutes.				cell after test	
					

» Stock Code: 001283



Power the Future