

UN 38.3 Test Report

Lithium cell or battery test summary in accordance with
sub-section 38.3 of Manual of Tests and Criteria.

Test Report Number	UN-C41N2303-BBWJ
Customer Name	ASUS
Product Name	LI-ION BATTERY PACK
Model Name	C41N2303
Test specification	ST/SG/AC.10/11/Rev.8
UN38.3 Test Item	T.1, T.2, T.3, T.4, T.5, T.6, T.7, T.8 (Note that T.6 and T.8 are for Cell)
Test sample No	1~38
Test Date	2025/10/9 ~ 2025/11/5
Date of Test Report	2025/11/5
Product Manufacturer & Test Laboratory	Dynapack Electronic Technology (Suzhou) Co., Ltd
Manufacturer & Test Laboratory information	Address: No. 8 Hua-Gang Road, Wujiang Economical and Technological Development Zone, Suzhou city, JiangSu. PRC. Tel: 0086-051263408688 E-mail: Cathy.Xu@dynapack.com.cn ZIP: 215200 Website: http://www.dynapack.com.tw

Description of Battery	
Model Name	C41N2303
Battery Type	Small LI-ION BATTERY PACK
Pack Configuration	4 Series / 1 Parallel
Nominal Voltage	15.52 V
Capacity/Energy	Typical:5808mAh 90Wh Rated:5636mAh 88Wh
Mass	0.322 kg
Pack Dimension(mm)	302.30*78.40*6.70
Cell Brand	BYD
Cell model	MSL3076D9

Performed Tests		Results
UN38.3 T1	Altitude simulation	☒ PASS ☐ FAIL
UN38.3 T2	Thermal test	☒ PASS ☐ FAIL
UN38.3 T3	Vibration	☒ PASS ☐ FAIL
UN38.3 T4	Shock	☒ PASS ☐ FAIL
UN38.3 T5	External short circuit	☒ PASS ☐ FAIL
UN38.3 T6	Crush	☒ PASS ☐ FAIL
UN38.3 T7	Overcharge	☒ PASS ☐ FAIL
UN38.3 T8	Forced discharge	☒ PASS ☐ FAIL
Reference to assembled battery testing requirements:		
☒ Not Applicable ☐ UN38.3.3(f) ☐ UN38.3.3(g)		

Prepared By :

Checked By :

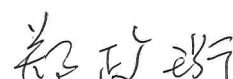
Approved By :



Engineer
Cathy.Xu



Senior Engineer
Sky.Jiang



Associate Vice President
Michael.Cheng

本報告未經本公司書面許可，不可部份複製

This document cannot be reproduced, except in full, without prior written permission of the Company
Any unauthorized alteration, forgery or falsification of the content or appearance of this document
is unlawful and offenders may be prosecuted to the fullest extent of the law

順達科技股份有限公司：桃園市龜山區樂善里文永路 188 號 13 樓 (Tel : 03-396-3399 ; Fax : 03-396-1166)

13F., No. 188, Wenhe Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)

順達電子科技(蘇州)有限公司：江蘇省蘇州市吳江經濟開發區花港路 8 號 (Tel : 86-512-6340-8688)

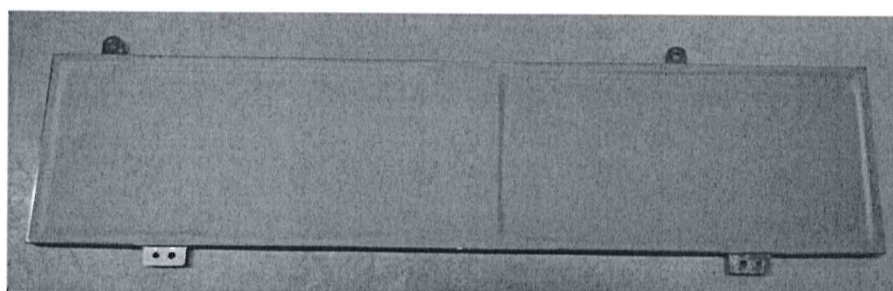
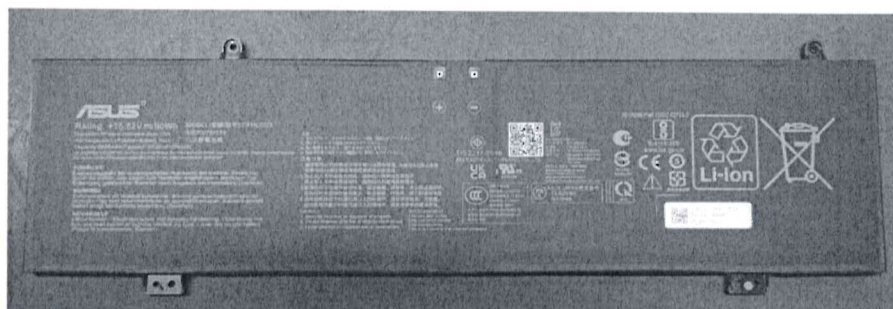
No. 8 Hua-Gang Road, Wujiang Economical and Technological Development
Zone, Suzhou city, JiangSu. PRC

1. Test Equipment

Inst. No.	Description	Series No	Function/Range
WJ6014	Learning Machine	D14106-2	20 V / 10 A
WJ6015	Chamber	6609K	-40~150°C
WJ9004	Learning Machine	D20131-7	20V / 15A
WJ9005	Chamber	MEA1504-010	0~100°C, 10%~98%RH
WJ6103	Electronic Scales	0929016	0.2~600g, Accuracy 0.01g
WJ6108	3560 AC mΩMeter	051139050	0~5/50 V / 30mΩ-3kΩ
WJ6105	Vacuum Machine	GS55-221	-76~0cmHg
WJ6189	Thermal shock2	9811K	200°C ~-80°C
WJ6073	Vibration Machine	D1202031	5~2000Hz Level/5~1500Hz Vertical; Max. acceleration: 100gVertical;
WJ2401	Shock	D2312665	MAX 1600G
WJ6115	Chamber	6514K	0-150°C / 20%RH~98%RH
WJ6104	34970 data recorder	MY44039623	-100~+400°C
WJ4035	Digital Caliper	05565311	0~200mm
WJ2501	Crush	LG4620	0~20KN
WJ8037	34970 data recorder	MY44039446	-100~+400°C
WJ6106	POWER SUPPLY	006103176669002004	0~30V; 0~18A
WJ6107	POWER SUPPLY	006103176670001002	0~30V; 0~18A
WJ7006	34970 data recorder	MY44042480	-100~+400°C
WJ7008	POWER SUPPLY	006103156267001009	0~30V; 0~18A
WJ7009	POWER SUPPLY	006103156273001007	0~30V; 0~18A
WJ6197	DC E-LOAD	002022506570001023	3~120 V / 0~60 A
WJ8001	Digital T-H-Meter	2045240566	0 to +50°C / 10 to 95%HR
WJ8002	Digital T-H-Meter	2045240692	0 to +50°C / 10 to 95%HR

2. Detail records as below :

2.1 Photograph



Rating: +15.52V 90Wh MODEL(型號/型号): C41N2303
Questions? Please visit www.asus.com 4ICP3/76/139
Rechargeable Li-Polymer Battery Pack 二次鋰電池組
Capacity: 5808mAh (Typical) / 5636mAh (Rated)

锂离子電池組
額定容量: 5636mAh
充電限制電壓: 17.8V
標稱電壓: 15.52V
額定能量: 88Wh
生產廠: 順達電子科技(蘇州)有限公司
製造商: 順達電子科技(蘇州)有限公司
製造地: 中國

2.2 Test Data:

2.2.1 T.1 Altitude

Sample No.	Sample	OCV(V)		Voltage Residual (%)	Mass(g)		Mass Loss (%)	Result
	Status	Before	After		Before	After		
1	1CYC , Fully charge	17.638	17.626	99.93%	321.26	321.28	0.00%	PASS
2	1CYC , Fully charge	17.608	17.596	99.93%	321.36	321.33	0.01%	PASS
3	1CYC , Fully charge	17.609	17.595	99.92%	320.38	320.35	0.01%	PASS
4	1CYC , Fully charge	17.630	17.616	99.92%	319.81	319.78	0.01%	PASS
5	25CYC , Fully charge	17.616	17.602	99.92%	321.23	321.28	0.00%	PASS
6	25CYC , Fully charge	17.628	17.614	99.92%	319.29	319.24	0.02%	PASS
7	25CYC , Fully charge	17.638	17.626	99.93%	319.05	319.07	0.00%	PASS
8	25CYC , Fully charge	17.614	17.602	99.93%	320.37	320.35	0.01%	PASS
Temperature, °C		22.6			Humidity, %RH		48.3	

Criteria:

*Batteries meet requirement regard mass loss was less than (0.5% , $M < 1g$; 0.2%, $1g \leq M \leq 75g$; 0.1%, $M > 75g$) and voltage after testing is not less than 90% of its voltage immediately prior to this procedure.

*No leakage, No venting, No disassembly, No rupture and no fire.

2.2.2 T.2 Thermal shock

Sample No.	Sample	OCV(V)		Voltage Residual (%)	Mass(g)		Mass Loss (%)	Result
	Status	Before	After		Before	After		
1	1CYC , Fully charge	17.626	17.273	98.00%	321.28	321.27	0.00%	PASS
2	1CYC , Fully charge	17.596	17.246	98.01%	321.33	321.36	0.00%	PASS
3	1CYC , Fully charge	17.595	17.243	98.00%	320.35	320.40	0.00%	PASS
4	1CYC , Fully charge	17.616	17.267	98.02%	319.78	319.81	0.00%	PASS
5	25CYC , Fully charge	17.602	17.241	97.95%	321.28	321.28	0.00%	PASS
6	25CYC , Fully charge	17.614	17.255	97.96%	319.24	319.21	0.01%	PASS
7	25CYC , Fully charge	17.626	17.272	97.99%	319.07	319.08	0.00%	PASS
8	25CYC , Fully charge	17.602	17.241	97.95%	320.35	320.36	0.00%	PASS
Temperature, °C		22.5			Humidity, %RH		48.2	

Criteria:

*Batteries meet requirement regard mass loss was less than (0.5% , $M < 1g$; 0.2%, $1g \leq M \leq 75g$; 0.1%, $M > 75g$) and voltage after testing is not less than 90% of its voltage immediately prior to this procedure.

*No leakage, No venting, No disassembly, No rupture and no fire.

2.2.3 T.3 Vibration

Sample No.	Sample	OCV(V)	OCV(V)	Voltage Residual (%)	Mass(g)	Mass(g)	Mass Loss (%)	Result
	Status	Before	After		Before	After		
1	1CYC , Fully charge	17.273	17.230	99.75%	321.27	321.28	0.00%	PASS
2	1CYC , Fully charge	17.246	17.212	99.80%	321.36	321.38	0.00%	PASS
3	1CYC , Fully charge	17.243	17.215	99.84%	320.40	320.41	0.00%	PASS
4	1CYC , Fully charge	17.267	17.234	99.81%	319.81	319.79	0.01%	PASS
5	25CYC , Fully charge	17.241	17.205	99.79%	321.28	321.30	0.00%	PASS
6	25CYC , Fully charge	17.255	17.222	99.81%	319.21	319.17	0.01%	PASS
7	25CYC , Fully charge	17.272	17.229	99.75%	319.08	319.04	0.01%	PASS
8	25CYC , Fully charge	17.241	17.208	99.81%	320.36	320.38	0.00%	PASS
Temperature, °C		22.3			Humidity, %RH		48.2	

Criteria:

*Batteries meet requirement regard mass loss was less than (0.5% , $M < 1g$; 0.2%, $1g \leq M \leq 75g$; 0.1%, $M > 75g$) and voltage after testing is not less than 90% of its voltage immediately prior to this procedure.

*No leakage, No venting, No disassembly, No rupture and no fire.

2.2.4 T.4 shock

Sample No.	Sample	OCV(V)	OCV(V)	Voltage Residual (%)	Mass(g)	Mass(g)	Mass Loss (%)	Result
	Status	Before	After		Before	After		
1	1CYC , Fully charge	17.230	17.202	99.84%	321.28	321.25	0.01%	PASS
2	1CYC , Fully charge	17.212	17.171	99.76%	321.38	321.34	0.01%	PASS
3	1CYC , Fully charge	17.215	17.181	99.80%	320.41	320.42	0.00%	PASS
4	1CYC , Fully charge	17.234	17.205	99.83%	319.79	319.79	0.00%	PASS
5	25CYC , Fully charge	17.205	17.177	99.84%	321.30	321.26	0.01%	PASS
6	25CYC , Fully charge	17.222	17.186	99.79%	319.17	319.18	0.00%	PASS
7	25CYC , Fully charge	17.229	17.188	99.76%	319.04	319.03	0.00%	PASS
8	25CYC , Fully charge	17.208	17.175	99.81%	320.38	320.42	0.00%	PASS
Temperature, °C		22.7			Humidity, %RH		48.9	

Criteria:

*Batteries meet requirement regard mass loss was less than (0.5% , $M < 1g$; 0.2%, $1g \leq M \leq 75g$; 0.1%, $M > 75g$) and voltage after testing is not less than 90% of its voltage immediately prior to this procedure.

*No leakage, No venting, No disassembly, No rupture and no fire.

2.2.5 T.5 External Short circuit

Sample NO.	Sample Status	Max Battery Temperature(°C)	Result
1	1CYC , Fully charge	57.40	PASS
2	1CYC , Fully charge	56.95	PASS
3	1CYC , Fully charge	56.77	PASS
4	1CYC , Fully charge	56.87	PASS
5	25CYC , Fully charge	57.45	PASS
6	25CYC , Fully charge	57.18	PASS
7	25CYC , Fully charge	57.45	PASS
8	25CYC , Fully charge	56.91	PASS
Temperature, °C		22.1	Humidity, %RH
			47.0

Criteria:

- *All Batteries can meet requirement subjected external temperature does not exceed 170 °C .
- *All Batteries no disassembly, no rupture and no fire during the test and within six hours of this test.

2.2.6 T.6 Crush

Sample NO.	Sample Status	Max Cell Temperature (°C)	Result
9	1CYC,50% Capacity	22.49	PASS
10	1CYC,50% Capacity	22.31	PASS
11	1CYC,50% Capacity	22.38	PASS
12	1CYC,50% Capacity	22.50	PASS
13	1CYC,50% Capacity	22.37	PASS
14	25CYC,50% Capacity	22.47	PASS
15	25CYC,50% Capacity	22.30	PASS
16	25CYC,50% Capacity	22.44	PASS
17	25CYC,50% Capacity	22.32	PASS
18	25CYC,50% Capacity	22.41	PASS
Temperature, °C		22.3	Humidity, %RH
			47.3

Criteria:

- *All cells can meet requirement subjected external temperature does not exceed 170°C .
- *All cells no disassembly and no fire during the test and within six hours of this test.

2.2.7 T.7 Over Charge

Sample NO.	Sample Status	Result
1	1CYC, Fully charge	PASS
2	1CYC, Fully charge	PASS
3	1CYC, Fully charge	PASS
4	1CYC, Fully charge	PASS
5	25CYC, Fully charge	PASS
6	25CYC, Fully charge	PASS
7	25CYC, Fully charge	PASS
8	25CYC, Fully charge	PASS
Temperature, °C		22.5
Humidity, %RH		47.2

Criteria:

*All batteries can meet no disassembly and no fire during the test and within seven days after the test.

2.2.8 T.8 Forced Discharge

Sample NO.	Sample Status	Result	Sample NO.	Sample Status	Result
19	1CYC, Fully discharge	PASS	29	25CYC, Fully discharge	PASS
20	1CYC, Fully discharge	PASS	30	25CYC, Fully discharge	PASS
21	1CYC, Fully discharge	PASS	31	25CYC, Fully discharge	PASS
22	1CYC, Fully discharge	PASS	32	25CYC, Fully discharge	PASS
23	1CYC, Fully discharge	PASS	33	25CYC, Fully discharge	PASS
24	1CYC, Fully discharge	PASS	34	25CYC, Fully discharge	PASS
25	1CYC, Fully discharge	PASS	35	25CYC, Fully discharge	PASS
26	1CYC, Fully discharge	PASS	36	25CYC, Fully discharge	PASS
27	1CYC, Fully discharge	PASS	37	25CYC, Fully discharge	PASS
28	1CYC, Fully discharge	PASS	38	25CYC, Fully discharge	PASS
Temperature, °C		22.6	Humidity, %RH		47.1

Criteria:

*All cells no disassembly and no fire during the test and within seven days after the test.

--- End of Test report ---