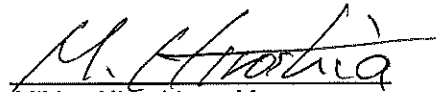


Test summary of UN test for Lithium ion battery

TOCAD ENERGY CO.,LTD.
Quality Assurance Department


Mikiya Hiroshima Manager

We declare that this battery passed UN test.

Manual of Tests and Criteria (38.3 Lithium batteries)		Test results	Note
No.	Test item		
T1	Altitude simulation	Pass	
T2	Thermal test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External short circuit	Pass	
T6	Impact / Crush	Pass	component cell
T7	Overcharge	Pass	
T8	Forced discharge	Pass	component cell

We declare that the above-mentioned test is the result of being checked according to UN test
(Manual of Tests and Criteria ST/SG/AC. 10/11, Part III, sub-section 38.3)

We declare that this battery passed UN test.

Test item	Test results	Note
Package Drop Test	Pass	The package shall be dropped from 1.2meter high onto a concrete surface. (flat and horizontal) with five orientations (1)flat on the bottom, (2)flat on the top, (3)flat on the long side, (4)flat on the short side, (5)on a corner

We declare the above : The test result mentioned above was checked according to UN test
(Model Regulations ST/SG/AC. 10/1/Rev. 20, Special Provision188)

Manufacturer
(battery)

TOCAD ENERGY, Co.Ltd. 989-0225 4-1-14 Higashicho, Shiroishi City, Miyagi Japan
Tel: +81-224-25-0131, mail: info_green@tocad.co.jp,
website: <https://www.tocad.co.jp/>

(component cell)

SANYO Electric Co., Ltd. 222-1 Kaminaizen, Sumoto City, Hyogo 656-8555, Japan
Tel: +81-799-23-3931, email: prb-bp-ta@ml.jp.panasonic.com
website: <https://industrial.panasonic.com/ww/products/batteries/>

Test Laboratory
(battery)

Same as the manufacturer

(component cell)

Same as the manufacturer

Test summary of UN test for Lithium ion battery

TU19-BR-001

2019/12/9

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Test Report List

Customer Model Name	Product Part Code	Test report No.	UN38.3 Rev.		Packing Drawing No.
			Battery	Cell	
BA-E001	H2UR18650A-0891／H2UR18650A-1024	UN-13-004c	5A2	5A2	P310382/P311718
PA-BT-001	H2UR18650E-0927／H2UR18650E-1029	UN-13-045c	5A1	5A1	P310759/P311723
PA-BT-4000LI	H4UR18650E-0829／H4UR18650E-1027	UN-11-020d	5A2	5A1	P309866/P311721
PA-BT-002	H3UR18650RX-0966／H3UR18650RX-1025	UN-15-010b	5A2	5A1	P311066/P311719
PA-BT-003	H2UR18650RX-0980	UN-16-016a	5A2	5A1	P311399
PA-BT-004	H4UR18650RX-0998／H4UR18650RX-1028	UN-16-069b	5A2	5A1	P311375/P311722
BT-300	H2UR18650F-2-0786	UN-10-031b	5A2	5A1	P309640

Lithium ion battery Specification

Customer Model Name	Product Part Code	Weight(g)	Physical description	Nominal Voltage(V)	Rated Capacity(Ah)	Watt-hour rating(Wh)	Aggregate Lithium Equivalent Content(g)
BA-E001	H2UR18650A-0891／H2UR18650A-1024	Max. 108.5	Prismatic battery	7.2	1.85	14	1.110
PA-BT-001	H2UR18650E-0927／H2UR18650E-1029	Max. 130	Prismatic battery	7.2	1.77	13	1.062
PA-BT-4000LI	H4UR18650E-0829／H4UR18650E-1027	Max. 250	Prismatic battery	14.4	1.80	26	2.160
PA-BT-002	H3UR18650RX-0966／H3UR18650RX-1025	Max. 185	Prismatic battery	10.8	1.75	19	1.575
PA-BT-003	H2UR18650RX-0980	Max. 120	Prismatic battery	7.2	1.75	13	1.050
PA-BT-004	H4UR18650RX-0998／H4UR18650RX-1028	Max. 250	Prismatic battery	14.4	1.75	26	2.100
BT-300	H2UR18650F-2-0786	Max. 260	Prismatic battery	7.2	4.10	30	2.460