

SAMSUNG SDI 	Test Report UN 38.3 Transport Certificate	Created by: Minyeol Han
	Document no.: VT003274055	Version: V1.1
		Date: 2020-01-20

UN 38.3 Transport Certificate

Proof of Validation

SAMSUNG SDI Co., Ltd. hereby certifies that the product is validated in accordance with the test manual of the UN Transport; Dangerous goods 38.3.

Product Information

Manufacturer : Samsung SDI **SDI Model Name :** PA0110NS001A

Address : 150-20, Gongse-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea

Phone number : +82-31-8006-3100 **E-mail:** sdimaster@samsung.com

Web-site : [http:// www.samsungsdi.co.kr](http://www.samsungsdi.co.kr)

Classification : Lithium-ion Secondary Battery Small

Nominal capacity : 11 Ah Nominal voltage : 13.5 V

Watt hour : 148.5 Wh mass : 4.0 kg

Physical description Vehicle Battery Assembled Battery N/A

Test Result

Source of Test Condition & Criteria

UN Transport of Dangerous Goods; Manual of Tests and Criteria - 6th rev Amend #1; Section 38.3

Test Laboratory

Internal test laboratory at Samsung SDI Co., Ltd.

Address: 163, Bangudae-ro, Samnam-myeon, Ulju-gun, Ulsan, Republic of Korea

Phone number : +82-70-7142-7411 **E-mail :** heedong.park@samsung.com

Web-site: [http:// www.samsungsdi.co.kr](http://www.samsungsdi.co.kr)

Test Result

Lithium-ion batteries tested proven to meet the requirement of each applicable test in the UN manual.

Test Item	Test Result	Test Date	Remark
T.1 Altitude simulation	Pass	2019-09-27 ~ 2019-10-07	-
T.2 Thermal shock	Pass	2019-09-12 ~ 2019-09-23	-
T.3 Vibration	Pass	2019-09-23 ~ 2019-10-05	-
T.4 Mechanical shock	Pass	2019-09-27 ~ 2019-10-07	-
T.5 External short circuit	Pass	2019-11-26 ~ 2019-11-29	-
T.6 Impact / Crush	Not Applicable	Not Applicable	Cell Only
T.7 Overcharge	Pass	2019-09-10 ~ 2019-10-30	-
T.8 Forced discharge	Not Applicable	Not Applicable	Cell Only

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Product Information

Customer	Project Name	Part Number
FCA	[11Ah] 12V Pack	521117570
Customer Stage	Document Name	
D sample	11Ah_Pack_12V_4S1P_UN_38.3_Transport_Certificate_PA0110NS001A	

DUT (Device under Test) Information

Sample/Module	Cell	Stack	HW	SW
D sample	Series	N/A	H20	X136
DUT S/N				
1cycle	: PA1020419A111052KFWM, PA1020419A111057KFWM PA1020419A111042KFWM, PA1020419A111041KFWM			
25cycles	: PA1020419A110990KFWM, PA1020419A111019KFWM PA1020419A110995KFWM, PA1020419A110996KFWM			
1cycle	: PA10204196040676HLNM, PA10204196040681HLNM PA10204196040684HLNM, PA10204196040671HLNM			
25cycles	: PA10204196040674HLNM, PA10204196040683HLNM PA10204196040673HLNM, PA10204196040668HLNM			
Sample Amount		Production Place		
16		SDI (Ulsan)		

Test Information

Test Engineer (T1 – T4)	Test Engineer (T5)	Test Engineer (T7)	Test Place
Heedong Pack	Kyuyoung Kim	Kyuyoung Kim	SDI (Ulsan)
Test Result	Summary of Result		
Passed	• 4 DUTs at first cycle and 4 DUTs at 25cycles were under tests T.1 Altitude Simulation, T.2 Thermal test, T.3 Vibration, T.4 Shock, T.5 External short circuit. 4 DUTs at first cycle and 4 DUTs at 25cycles were under tests T.7 Overcharge test. • All of 16 DUTs passed the criteria.		

Approval Record

Created by	Approved by
	
2020-01-20/ Engineer (Created by) Minyeol Han	2020-01-20/ Principal Engineer (Approved by) Kyoungsoo Seo

Released for Development Phase

A sample	<input type="checkbox"/>	B sample	<input type="checkbox"/>	C sample	<input type="checkbox"/>	D sample	<input checked="" type="checkbox"/>	Series	<input type="checkbox"/>
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