



GP Batteries International Limited

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(Co. Reg. No. 199002111N)

Test Report

Report No. : TL2101I002-01
Client : GP Batteries International Limited
Address : 7/F Building 16W,
16 Science Park West Avenue,
Hong Kong Science Park, New Territories,
Hong Kong
Date : 24 August, 2021

Test Sample Description

Description : Lithium CR2477 Coin Cell
Type Designation / Size : CR2477
Nominal voltage : 3V
Date Code : -
Manufacturer :
Date of Receipt : 20 January, 2021



Test Condition

Test Location : STC Test Laboratory
Ambient Temperature : Service Output : (20±2)°C, Safety Test : (20±5)°C
Relative Humidity : (55+20/-40)%RH

Test Method

Batteries are tested in accordance with IEC 60086-4 (Edition 5.0)

Test Results

The results of this test are shown on the attached test data.

The test results are based on the battery samples supplied by the client.

Test Performed By

Name: CS Soh
Title: Assistant Engineer

Approved By

Name: Sally Chew
Title: Assistant Manager

Report No. : TL2101I002-01

Dimensions , Open Circuit Voltage and Weight Measurements

S/N	Open Circuit Voltage (V)	Height (mm)	Weight (g)	Remarks
Specs	3 - 3.4	7.3 - 7.7	Aprox. 10.5g	
1	3.297	7.54	9.675	
2	3.331	7.58	9.769	
3	3.310	7.58	9.685	
4	3.292	7.66	9.715	
5	3.326	7.59	9.687	
6	3.324	7.62	9.785	
7	3.300	7.55	9.717	
8	3.293	7.64	9.746	
Average	3.309	7.60	9.722	
Minimum	3.292	7.54	9.675	
Maximum	3.331	7.66	9.785	
Standard Deviation	0.01568	0.04209	0.04058	

Sampling Method

ANSI/ASQ Z1.4-2003 (R2018) General Inspection Level 1, Single Sampling Plan, Normal Inspection AQL1.0

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Service Output

Discharge Conditions			Minimum Average Duration	Application	Sample No.	Test Results	
R Ω	Daily period	End Voltage V				OCV (V)	Service Output (h)
4.7 K	24 h / day	2V	1500 h	Service Output Test	1	3.297	1694
					2	3.331	1726
					3	3.310	1735
					4	3.292	1692
					5	3.326	1722
					6	3.324	1686
					7	3.300	1659
					8	3.293	1727
					Average	3.309	1705
					Min	3.292	1659
					Max	3.331	1735

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Test Results

Intended use tests	Sample size: n =	Clause 6.4	Requirements	Observations	Result (Pass, Fail, N/A)	
					Undischarged	Fully discharged
Test A : Altitude	10	6.4.1	a. No leakage b. No venting c. No short-circuit d. No rupture e. No explosion f. No fire	No abnormality observed	Pass	Pass
Test B : Thermal Cycling	10	6.4.2	a. No leakage b. No venting c. No short-circuit d. No rupture e. No explosion f. No fire	No abnormality observed	Pass	Pass
Test C : Vibration	10	6.4.3	a. No leakage b. No venting c. No short-circuit d. No rupture e. No explosion f. No fire	No abnormality observed	Pass	Pass
Test D : Shock	10	6.4.4	a. No leakage b. No venting c. No short-circuit d. No rupture e. No explosion f. No fire	No abnormality observed	Pass	Pass
Test E : External short-circuit	10	6.5.1	a. No excessive temperature rise b. No rupture c. No explosion d. No fire	No abnormality observed	Pass	Pass
Test F : Impact	10	6.5.2	a. No excessive temperature rise b. No explosion c. No fire	No abnormality observed	Pass	Pass
Test H : Forced discharge	10	6.5.4	a. No fire b. No explosion (within 7 days after test)	No abnormality observed	N/A	Pass
Test I : Abnormal charging	5	6.5.5	a. No fire b. No explosion	No abnormality observed	Pass	N/A
Test J : Free fall	5	6.5.6	a. No venting b. No explosion c. No fire	No abnormality observed	Pass	N/A
Test K : Thermal abuse	5	6.5.7	a. No explosion b. No fire	No abnormality observed	Pass	N/A

Comments :

Test results showed tested samples pass the requirements of IEC 60086-4 (Edition 5.0).