

Test summary of UN test for Lithium ion battery

Customer Model : KNB-45L
 Global Code : BJ-C120011AB
 Product Name : 2UF103450P-B003B
 Manufacturer : 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
 https://industrial.panasonic.com/ww/products/batteries/
 Test Laboratory : Same as the manufacturer


 H. Kuroda Senior Manager
 Battery Pack Engineering Department
 Energy Solutions Business Division
 SANYO Electric Co., Ltd.

We declare that this battery passed UN test.

| Manual of Tests and Criteria (38.3 Lithium batteries) | | Test results | Note | Number of test batteries/cells | |
|---|------------------------|--------------|------|---|---|
| No. | Test item | | | First cycle | After 50 cycles |
| T 1 | Altitude simulation | Pass | | First cycle fully charged 4 batteries | After 50 cycles fully charged 4 batteries |
| T 2 | Thermal test | Pass | | | |
| T 3 | Vibration | Pass | | | |
| T 4 | Shock | Pass | | | |
| T 5 | External short circuit | Pass | | | |
| T 6 | Crush | Pass | | First cycle 50% charged 5 cells | |
| T 7 | Overcharge | Pass | | First cycle, fully charged 4 batteries | After 50 cycles, fully charged 4 batteries |
| T 8 | Forced discharge | Pass | | First cycle, fully discharged 10 cells | After 50 cycles, fully discharged 10 cells |

*1 The test data may contain additional test result other than above table.

Lithium ion battery Specification

| Item | Value/Description | Note |
|----------------------------|-------------------------|------|
| Watt-hour rating | 14 Wh | |
| Weight | max.120 g | |
| Physical description | Battery with outer case | |
| Lithium equivalent content | 1.13 g | |


Above test procedures are compliant to the following manual.

(Manual of Tests and Criteria ST/SG/AC.10/11, PartIII, sub-section 38.3, Rev.5A1 for cell, Rev.5A1 for battery)

Judgment for necessity of test items is carried out based on the latest rules, and it is not linked with the version actually tested.

Certificate of Package Drop Test for Lithium ion battery

Customer Model : KNB-45L
 Global Code : BJ-C120011AB
 Product Name : 2UF103450P-B003B


 H.Kuroda Senior Manager
 Battery Pack Engineering Department
 Energy Solutions Business Division
 SANYO Electric Co., Ltd.

We declare that this battery passed UN test.

| Test item | Test results | Note |
|-------------------|--------------|--|
| Package Drop Test | Pass | The package shall be dropped from 1.2m high on to a concrete surface (flat and horizontal) with five orientations (drop once a sample) ; (1)flat on the bottom, (2)flat on the long side, (3)flat on the short side, (4)on the edge, (5)on the corner |

Lithium ion battery Specification

| Item | Nominal value | Note |
|----------------------------|---------------|------|
| Watt-hour rating | 14 Wh | |
| Lithium equivalent content | 1.13 g | |

Above test procedures are compliant to the following regulation.
 (Model Regulations ST/SG/AC.10/1/Rev.20, Special Provision188)