

## UN Test Report

|                   |   |
|-------------------|---|
| Name of Sample    | Lithium Ion Battery 3UF653864S-B005A  |
| Consignor         | SANYO Energy(Suzhou) CO.,LTD  |
| Manufacturer      | SANYO Energy(Suzhou) CO.,LTD  |
| Test Method       | United Nations "Recomenndations on the TRANSPORT OF DANGEROUS GOODS"  |
| Criterion         | United Nations "Recomenndations on the TRANSPORT OF DANGEROUS GOODS"  |
| Appearance        | Black rectangular parallelepiped  |
| Test Date         | T1-T5 2012/9/26-2012/10/09<br>T6 2013/04/03<br>T7 2012/10/10<br>T8 2012/08/28-2012/09/04  |
| Test Items        | Altitude simulation, Thermal test, Vibration test, Shock test, External short circuit, Overcharged  |
| Conclusion        | The sample has passed the items of UN38.3.  |
| Remark            | Certification by Original Cell Model<br>Certification by Similar Battery Model:3UF653864S-B001A<br>Ratio of (3UF653864S-B005A)/(3UF653864S-B001A)<br>[Wh rating ratio]: 100%, [Voltage ratio]: 100% |
| Consignor Address | No.86 Sunwu Road, Xukou, Wuzhong District, Suzhou City, Jiangsu Province<br>215164, China   |

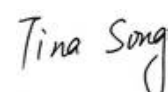
Sanyo Energy(Suzou) Co.,Ltd.



Approval



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**CONFIDENTIAL**

Date: April 30, 2015

**B: Checklist for Judging New Type Battery or not**

Confirmation of presence of change in "The element which is given influence"

(Change ⇒ ○、No change ⇒ -)

When there is no change in all items, it is NOT considered to be a New Type Battery.

|  |                  |
|--|------------------|
| Model which UN regulation test has completed | 3UF653864S-B001A |
| Target model which is not a new type         | 3UF653864S-B005A |

| Test Item (Function)   | The element which is given influence   | Presence of change |
|--|--|--------------------|
| T1: Altitude Simulation<br>(Decompression load)                  | <ul style="list-style-type: none"> <li>▪ Crimped part, Gasket (Cell)</li> <li>▪ Gas Release Vent, Cell Case (Cell)</li> <li>▪ Pack (Plastic) Case</li> <li>▪ Holding Member (Insulator, Insulation Tape, Both Sides Tape)</li> <li>▪ Coating materials</li> </ul>  | -                  |
| T2: Thermal Shock<br>(Repetition of high temp.<br>and low temp.) | <ul style="list-style-type: none"> <li>▪ Crimped part, Gasket (Cell)</li> <li>▪ Gas Release Vent, Cell Case (Cell)</li> <li>▪ Finished state of Wound Electrodes (Cell)</li> <li>▪ Pack (Plastic) Case</li> <li>▪ Holding Member (Insulator, Insulation Tape, Both Sides Tape)</li> <li>▪ Coating materials</li> </ul> | -                  |
| T3: Vibration<br>(Vibration load)                                | <ul style="list-style-type: none"> <li>▪ Finished state of Wound Electrodes (Cell)</li> <li>▪ Electric wiring member</li> <li>▪ Electronic Parts on a circuit board</li> <li>▪ Cell Holding Member (Adhesive, Both Sides Tape, Lib of Plastic Case)</li> </ul>   | -                  |
| T4: Shock (Shock load)   | <ul style="list-style-type: none"> <li>▪ Wiring Member</li> <li>▪ Electronic Parts on a circuit board</li> <li>▪ Cell Holding Member (Adhesive, Both Sides Tape, Lib of Plastic Case)</li> <li>▪ Finished state of Wound Electrodes (Cell)</li> </ul>  | -                  |
| T5: External Short<br>Circuit (Short current)                    | <ul style="list-style-type: none"> <li>▪ Over-voltage Protection</li> <li>▪ Current Control Device</li> <li>▪ Safety Device of cell (Cell)</li> <li>▪ Lead Tab</li> </ul>  | -                  |
| T6 (Cell): Impact/Crush  | <ul style="list-style-type: none"> <li>▪ Separator (Cell)</li> <li>▪ Insulation State in a cell (Cell)</li> </ul>  | -                  |
| T7 (Pack): Overcharge<br>(Charge load)                           | <ul style="list-style-type: none"> <li>▪ Overcharge Protection</li> <li>▪ Thermal Device</li> <li>▪ Safety Device of cell (Cell)</li> </ul>  | -                  |
| T8 (Cell): Forced Discharge                                      | <ul style="list-style-type: none"> <li>▪ Finished state of Wound Electrodes</li> </ul>   | -/NA *1            |
| Wh of cell   | Is Wh difference of cell less than 20%?  | -                  |
| Voltage of cell  | Is increase of cell voltage less than 20%?   | -                  |
| Judgment result  | New Type or not  | New (Not new)      |

\*1 Judgement has not applied if first checking was run under the UN test manual ver. 5 or former.

Sanyo Energy (Suzou) Co., Ltd.



approval



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## Certificate of UN test for Lithium ion battery

Customer Model : ASM PN SB10F46462 FRU PN 00HWO24  
 Global Code : BJ-F630011AA  
 Product Name : 3UF653864S-B005A

Sanyo Energy (Suzhou) Co., Ltd.

UN評価合格  
 三洋電機株式会社  
 小型二次電池事業部

*T. Kura*  
 T. Kura Manager

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              |              |      |   |
| T 1   | Altitude simulation    | Pass         |      | First cycle 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 |

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

## Lithium ion battery Specification

| Item                       | Nominal value | Note |
|----------------------------|---------------|------|
| Watt-hour rating           | 24 Wh         |      |
| Nominal voltage            | 11.1 V        |      |
| Lithium equivalent content | 1.93 g        |      |

Above test procedures are compliant to the following manual.

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