

## UL TEST REPORT AND PROCEDURE

<b>Standard:</b>	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
<b>Certification Type:</b>	Component Recognition
<b>CCN:</b>	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
<b>Product:</b>	Capacitor Board
<b>Model:</b>	CB03* (* maybe maximum 20 characters, any alphanumeric character, "-" or "/" or blank, which denotes control number)
<b>Rating:</b>	N/A
<b>Applicant Name and Address:</b>	NIPRON CO LTD 2-57 OHAMA-CHO AMAGASAKI-SHI HYOGO-KEN 660-0095 JAPAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Yoshifusa Koyanagi, Project Handler    Reviewed by: Takaya Ishisue, Reviewer

### Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
  - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
  - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
  - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

This equipment is the Capacitor Board used with Switching Power Supply to increase capacitance after Bridge diode. This capacitor Board is connected maximum 3 pcs in series.

### Model Differences

\* is control number not related to safety.

### Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : not directly connected to the mains
- Operating condition : continuous
- Access location : for building-in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : N/A
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed)
- Considered current rating of protective device as part of the building installation (A) : N/A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : up to 5000 m (for PWB (3411P2)), up to 4000 m (for PWB (3411P1))
- Altitude of test laboratory (m) : approximately 10 to 20 m
- Mass of equipment (kg) : approximately 0.10
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 70 °C
- The product was investigated to the following additional standards: EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 (which includes all European national differences, including those specified in this test report).

### Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The following Production-Line tests are conducted for this product: Electric Strength
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required
- An investigation of the protective bonding terminals has: Not been conducted
- The following end-product enclosures are required: Electrical and Fire
- This Capacitor Board is used with Power Supply, models UZP-220, UZP-150, mUZP-150, UZP-120, mUZP-120, mUZPT-120, OZP-200, mOZP-200, and PS-10WP-5VSB

#### Additional Information

This Capacitor Board is used with Switching Power Supply models below.

- UZP-220 (E161936-A88-UL, E161936-A88-CB)
- UZP-150 & mUZP-150 (E161936-A89-UL, E161936-A89-CB)
- UZP-120 & mUZP-120 & mUZPT-120 (E161936-A98-UL, E161936-A98-CB)
- OZP-200, mOZP-200, and PS-10WP-5VSB (E161936-A46-UL, E161936-A52-CB)

UZP-150 and mUZP-150 are identical except for number of Fuse, primary winding of Transformer (T1), and the difference does not affect Input Test Result. So, only UZP-150 was evaluated as representative model in this report.

UZP-120 and mUZP-120 are identical except for model designation, so only UZP-120 was evaluated as representative model in this report.

OZP-200 and mOZP-200 are identical except for model designation, so only OZP-200 was evaluated as representative model in this report.

(for CB Application)

National Differences of Australia/New Zealand were evaluated. See Enclosure Id. 7-03 (National Differences of Australia/New Zealand to IEC 60950-1, ED. 2.0 (2005) + Am1 (2009) + Am2 (2013)) for details.

National Differences of Japan according to IEC60950-1 2nd. Edition +A1 was evaluated. See Enclosure Id. 7-04 (National Differences of Japan based on J60950-1 (H27) and J3000 (H25)) for details.

#### Markings and instructions

Clause Title	Marking or Instruction Details
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number

#### Special Instructions to UL Representative

N/A

**Production-Line Testing Requirements**

**Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.**

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A	--	--	--	--	--	--

**Earthing Continuity Test Exemptions - This test is not required for the following models:**

All models

**Electric Strength Test Exemptions - This test is not required for the following models:**

N/A

**Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:**

N/A

**Sample and Test Specifics for Follow-Up Tests at UL**

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A	--	--	--	--	--