



Certificate of Compliance

Certificate: 2655281 (LR 54761)

Master Contract: 163595

Project: 70155231

Date Issued: 2017-09-11

Issued to: GE Power Electronics, Inc
601 Shiloh Rd
Plano, Texas 75074
USA

Attention: Mr. Paul Ng

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:


Tracy Geng, Certifier

PRODUCTS

CLASS 5311 11 – POWER SUPPLIES – Component Type (CSA 60950-1-07, 2nd Edition)

CLASS 5311 91 – POWER SUPPLIES – Component Type (CSA 60950-1-07, 2nd Edition/UL 60950-1, 2nd Edition) Certified To U.S. Standards

Component Power Supply, Class I with detachable power cord, for use with Information Technology Equipment and Electrical Business Machines, where the suitability of the combination is to be determined.

Model SP805 and MPR0854, rated 100-240V, 50/60Hz (or 47-63Hz), 10-5A; Output Rating 54Vdc, 14.82A, 800W or 50Vdc, 16A, 800W.

Note: The model designation may be followed by alphanumeric suffixes denoting non-safety-critical marketing options.



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APPLICABLE REQUIREMENTS

- | | |
|---|---|
| CAN/CSA-C22.2 No. 60950-1-07 (Second Edition)
Amendment 2:2014 (MOD) | – Information Technology Equipment – Safety – Part 1:
General Requirements |
| ANSI/UL Std. No. 60950-1-2014 (Second Edition) | – Information Technology Equipment – Safety – Part 1:
General Requirements |

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Supplement to Certificate of Compliance

Certificate: 2655281 (LR 54761)

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70155231	2017-09-11	Update report 2655281 to add alternative output rating of model MPR0854 & SP805, the addition supplier for X-cap C7 and the alternative type for L10.
70029876	2015-05-28	Update to Am 2:2014 and addition of model MPR0854.
2655281	2013-09-09	Original Certification.



Descriptive Report and Test Results

MASTER CONTRACT: 163595
REPORT: 2655281
PROJECT: 70155231

Edition 1: September 9, 2013; Project 2655281 – Toronto
Issued by Sam Tam

Edition 2: May 28, 2015; Project 70029876 – Toronto
Issued by Mohamed Negm, EIT; Reviewed by Syed Rizvi.

Upgrade to Amd 2:2014 and addition of model MPR0854
Referral to updated CB report in Appendix A.

Edition 3: **September 11, 2017; Project 70155231 - Shanghai**
Issued by James Zhang / Tracy Geng

Report pages reissued
Updated Att1 Schematics & PWB Layouts to 29
Updated Photographs to 15

Contents: Certificate of Compliance – 1 page
Supplement to Certificate of Compliance – 1 page
Description and Tests – Pages 1 to **10**
Photographs – pages 1 to **15**
Att. 1 – Schematics & PWB Layouts – **29** pages
Att. 2 – T1 & T2 specification – 4 pages
Appendix A – TUV CB Report 31382070.003
Following files is kept at CSA Main file only
Att. 3 – Illustrations – 30 pages
Att. 4 – Test datasheet for additional tests – 26 pages

PRODUCTS

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Model SP805 and MPR0854, rated 100-240V, 50/60Hz (or 47-63Hz), 10-5A; Output Rating 54Vdc, 14.82A, 800W or **50Vdc, 16A, 800W**.

Note: The model designation may be followed by alphanumeric suffixes denoting non-safety-critical marketing options.

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APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 60950-1-07 (Second Edition) – Information Technology Equipment – Safety – Part 1:
Amendment 2:2014 (MOD) General Requirements
- ANSI/UL Std. No. 60950-1-2014 (Second Edition) – Information Technology Equipment – Safety – Part 1:
General Requirements

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Nameplate adhesive label material approval information:

PART 1: Minimum Markings:

Marking Method: (For Minimum Markings)

- Approved type adhesive nameplate (suitable for surface to which it is applied).

Required Information: (For Minimum Markings)

- The submitter's name and/or CSA File No. "LR 54761" or Master Contract No. "163595"
Note: Cherokee and CSA File No. "LR 54761" or Master Contract No. "163595 may be marked
- Model or identifying designation
- Complete electrical rating
- Date of manufacture, serial number or date code traceable to month and year of manufacture
- The CSA Monogram, "NRTL/C" or "c US" indicator
- The optional indicators "CSA 60950-1" and/or "ANSI/UL 60950-1".

Note:

Bilingual Markings for products with CSA Mark or CSA Mark and the NRTL/C or c US indicator:

Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the Customer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the Customer to determine this requirement and have bilingual wording added to the "Markings".

ADDITIONAL MARKINGS

The following markings are marked on the unit.

- (a) A statement of output ratings and maximum output power.
- (b) The fuse type(s) (e.g. time delay) and rating(s) (in volts and amperes), adjacent to each fuseholder, and "CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE".

ALTERATIONS

Markings, as described above.

CONDITIONS OF ACCEPTABILITY

1. Suitable electrical and fire enclosure is to be provided by the end product.
2. Maximum operating ambient shall not exceed 50°C in a pollution degree 2 environment.
3. The subject product is not intended to be field serviced or repaired.
4. The output delivers > 240VA, thus it is energy hazard. The end product shall provide the proper means to limit the energy or its accessibility.
5. The power supply has been evaluated for use at an altitude of up to 4,000 meters above sea level, and the Clearance requirement has been adjusted by a multiplying factor of 1.29 in accordance with IEC60664-1.
6. The subject power supply can be hot swappable type connection at DC output, connector current interruption test was performed to the output connector with 200 cycles with acceptable result. Any other output connector not listed in this report has to be evaluated.
7. Maximum measured leakage current for TN and TT power system: 1.4mA at 264V, 60Hz.
8. Reinforced insulation based on minimum 250 V ac MAINS voltage. The highest working voltages measured were 570 V peak between Transformer T2 and 540 V peak between Transformer T1 (primary and SELV secondary); 520 V peak between Q23 to Chassis (primary to earth).

SPECIAL INSTRUCTIONS FOR FIELD SERVICES

1. Component descriptions marked with either the "(INT)" or "(INT*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

COMPONENT SPECIAL PICK UP (Not applicable.)

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

FACTORY TESTS

1. Production-Line Dielectric Voltage-Withstand Test: Clause 5.2
 - (a) Only ac values are specified. As an alternative, the equivalent dc voltage (1.414 times the ac voltage) may be used.
 - (b) The factory test may be done at existing room temperature.

For Grounded Units (Class I or Class 2) Rated Above 130V and Up To 250V: The equipment at the conclusion of manufacture, before shipment, shall withstand for one second, without breakdown, the application of 1500V ac between live parts and exposed non-current-carrying metal parts.

Transformers:

- (a) Transformer manufacturer's written agreement to conduct Dielectric Strength Test on 100 percent production will be acceptable.
- (b) No additional factory tests are required for Certified* transformers or transformers in Certified* power supplies.

For Safety Isolating Transformers in Grounded or Double Insulated Units: Each transformer before assembly into the equipment shall be subjected to the following dielectric strength tests for a period of one min, without breakdown:

For units rated more than 130V and up to 250 V:
3000V ac from primary to SELV secondaries.
1500V ac from primary to core (if core is floating or grounded).
1500V ac from core to SELV secondaries (if core is floating).

Warning: The factory test(s) specified may present a hazard of injury to personnel and/or property, and should only be performed by persons knowledgeable of such hazards and under conditions designed to minimize the possibility of injury.

DESCRIPTION

Notes:

1. Component Substitution
 - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT*" are not eligible for substitution without evaluation and report updating
 - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
 - c) The Term "INT*" means a "Recognized" and/or "Accepted" component may be replaced by one "Recognized" and/or "Accepted" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application, providing the applicable country identifiers are included, the component is **also** CSA Certified, the requirements in item "d" below are complied with and any "conditions of suitability" for the component (as recorded in this descriptive report) are complied with.

- d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
- e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.

General: The subject models are switching-type power supplies provided with metallic electrical enclosure, as shown in the Attachments.

- (a) This unit is considered to operate under the conditions of:
 - (i) Pollution Degree 2: Not sealed, not subject to dust, dirt, condensation.
 - (ii) Equipment mobility: Component.
 - (iii) Class of equipment: Class I (grounded).
 - (iv) Connection to the supply: Building-in.
 - (v) Rated ambient of 50°C.
 - (vi) TN-S Power System.
- (b) Approval codes for Attachment 1 - critical components: (all components are suitable for the application)
 - Certified = CSA International (Certified or Certified Component)
 - UL = Underwriters Laboratories Inc. (Listed or Recognized)

TEST HISTORY

Project 2655281: (Edition 1)

Evaluation was based on review and acceptance of TUV CB report 31382070.001

Input Current Rating:..... Clause 1.6.2
Capacitance Discharge: Clause 2.1.1.7 (time constant measured 0.074s)
SELV Test: Clauses 2.2.2, 2.2.3, 2.2.4
Earth Test: Clause 2.6.3.4 (0.003 ohm)
Humidity Test:..... Clause 2.9.2
Working Voltage Measurement: Clauses 2.10
Heating: Clause 4.5.1
Ball Pressure Test:..... Clause 4.5.5
Touch current: Clause 5.1
Electric Strength: Clause 5.2
Abnormal Operating and Fault Conditions: Clause 5.3

Project 70029876: (Edition 2)

This report update covers the addition of model MPR0854, and the update to Amendment 2 of CSA/UL 60150-1 (Second Edition). Model MPR0854 is similar in construction and electric circuitry to model SP805. The difference is in the models designation for marketing purposes. Evaluation was based on the review and acceptance of TUV CB report 31382070.003 (Appendix A). A copy of the evaluation document is retained at CSA archiving database, Documentum, under project number 70029876.

Project 70155231: (Edition 3)

This report update covers the addition output ratings of model MPR0854 & SP805, the addition supplier for X-cap C7 and the alternative type for L10. The following additional tests were evaluated and test results were satisfactory.

Test Location:

**GE Power Electronics (Shanghai) Co., Ltd.
1F, #58 Building,461 Hong Cao Road, Shanghai, 200233, P.R. China
The following applicable tests were conducted with satisfied test results.**

**Input Current Rating:..... Clause 1.6.2
Output Characteristics Test: Clause 2.1.1.5
Capacitance Discharge Test: Clause 2.1.1.7
Heating: Clause 4.5.1
Electric Strength:..... Clause 5.2
Abnormal Operating and Fault Conditions:.. Clause 5.3**

---End of Report---