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Report Reference #

E132067-A97-UL

UL TEST REPORT AND PROCEDURE

Standard:	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)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Complementary CCN:	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Product:	Switching Power Supply
Model:	FETA2500B-xy (x=36, 48) (y=-R, -Y1, -F2 or blank), FETA2500BA-xy (x=36, 48) (y=-R, -F2 or blank) and FETA3000BA-48y (y=-R, -F2 or blank)
Rating:	y is optional suffix, any combination of above letters may be provided. Models FETA2500B-xy and FETA2500BA-xy AC 200-240V, 50-60Hz, 11.3 Atyp (x=36) AC 200-240V, 50-60Hz, 13.8 Atyp (x=48) Model FETA3000BA-48y AC 200-240V, 50-60Hz, 16.6 Atyp Refer to Model Differences for output ratings.
Applicant Name and Address:	COSEL CO LTD 1-6-43 KAMIAKAE-MACHI TOYAMA-SHI TOYAMA 930-0816 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: Toshiyuki Suzuki

Reviewed by: Tetsuo Iwasaki

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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

The products are building-in type switching power supplies.

Model Differences

All models are identical except for output rating, secondary winding of transformer and secondary components. See Miscellaneous ID 7-01 to 7-04 for the Derating Curves.

Output Ratings:

Model FETA2500B-36: 36 Vdc (32.4-39.6), 55 A (55-50), 1980 W max.
 Model FETA2500B-36-Y1 and FETA2500BA-36: 36 Vdc (28.8-39.6), 55 A (55-50), 1980 W max.
 Model FETA2500B-48: 48 Vdc (43.2-52.8), 52 A (52-47.2), 2496 W max.
 Model FETA2500B-48-Y1 and FETA2500BA-48: 48 Vdc (38.4-52.8), 52 A (52-47.2), 2496 W max.
 Model FETA3000BA-48: 48 Vdc (38.4-52.8), 62 A(62-56.3), 2976 W max.
 AUX output (CN1, CN2 pin1, 2): 12 Vdc, 0.15 A

Maybe provided with suffix y.

y is optional suffix, any combination of following letters may be provided.

y = -R, -Y1, -F2 or blank

Suffix -R denote reverses the logic of the remote ON/OFF control function to the power supply.

Suffix -Y1 denotes having wider output voltage adjustable range.

Suffix -F2 denote the wind of the cooling fan is reversed.

Model FETA2500BA-xy is identical to model FETA2500B-x-Y1 except for the followings software specification and output voltage adjustable range.

- The output recovery is as below when the input power is applied within approximately 2 seconds after power off.

Model FETA2500B-xy: It doesn't return to the normal condition with alarm.

Model FETA2500BA-xy: It returns to the normal condition automatically after alarm.

Model FETA3000BA-48y is identical to model FETA2500BA-xy except for the Heatsink A, Transformer (T301), Internal Fan, Insulation Sheet G, minor components and electrical rating.

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 : +10%, -10%
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : intended for use with Class I equipment (earthed)
- Considered current rating of protective device as part of the building installation (A) : 50A
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : Up to 3000 m
- Altitude of test laboratory (m) : Less than 3000 m
- Mass of equipment (kg) : Approximately 2 kg

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- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 25-50°C at 100% load (depending on condition), 60-70°C at 50% load (depending on condition). See Enclosure Id. 7-01 for details.
- The product is intended for use on the following power systems: TN

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 end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-Ground: 392 Vrms, 708 Vpk, Primary-SELV: 392 Vrms, 856 Vpk
- The following secondary output circuits are SELV: Output of all models
- The following secondary output circuits are at hazardous energy levels: Output of all models (except for AUX output)
- The following secondary output circuits are supplied by a Limited Power Source: AUX output
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The maximum investigated branch circuit rating is: 50 A
- The investigated Pollution Degree is: 2
- Proper bonding to the end-product main protective earthing termination is: Required (Chassis or Cover or FG terminal (TB101))
- An investigation of the protective bonding terminals has: Not been conducted
- The following input terminals/connectors must be connected to the end-product supply neutral: TB101 Pin 2 (N) (Indicate near the TB101)
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C): T701 (Class B), T301 (Class F)
- The following end-product enclosures are required: Electrical, Fire
- The following secondary output circuits are ES1: Outputs of all models.
- The following secondary output circuits are PS2: AUX output.
- The following secondary output circuits are PS3: Outputs of all models except for AUX output.
- This component has been evaluated in 'control of fire spread' method assuming appropriate fire enclosure is provided in end product. Unless the fire enclosure is made of non-combustible or V-0 material, the separation from the PIS (all electrical components) shall be considered.
- Classification of PIS has not been conducted. Therefore, all electrical components and conductors including printed wirings were assumed to be arcing/resistive PIS.

Additional Information

Variable Resistor (VR501) used for output voltage setting of rated output.

Additional Standards

The product fulfills the requirements of: The product fulfills the requirements of: The product fulfills the requirements of: UL 62368-1, 2nd Edition, 2014-12-01, CAN/CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12.

Markings and instructions

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)

CERTIFICATE OF COMPLIANCE

Certificate Number 20190731-E132067
Report Reference E132067-A97-UL
Issue Date 2019-JULY-31

Issued to: COSEL CO LTD
 1-6-43 KAMIAKAE-MACHI
 TOYAMA-SHI
 TOYAMA 930-0816 JAPAN

This certificate confirms that representative samples of

COMPONENT - POWER SUPPLIES, INFORMATION TECHNOLOGY EQUIPMENT INCLUDING ELECTRICAL BUSINESS EQUIPMENT; POWER SUPPLIES FOR USE WITH AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT

Se Addendum page

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 60950-1, - (Information Technology Equipment - Safety - Part 1: General Requirements)
 CAN/CSA C22.2 No. 60950-1-07, - (Information Technology Equipment - Safety - Part 1: General Requirements)

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
 UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number	20190731-E132067
Report Reference	E132067-A97-UL
Issue Date	2019-JULY-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Switching Power Supply
 FETA2500B-xy (x=36, 48) (y=-R, -Y1, -F2 or blank),
 FETA2500BA-xy (x=36, 48) (y=-R, -F2 or blank)
 and
 FETA3000BA-48y (y=-R, -F2 or blank)

y is optional suffix, any combination of above letters may be provided.



Bruce Mahrenholz, Director North American Certification Program
 UL LLC

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