Ref. Certif. No.

US/13847/UL

IEC SYSTEM FOR CONFORMITY TESTING AND CERTIFICATION OF ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ESSAIS DE CONFORMITE ET DE CERTIFICATION DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product
Produit

Power Supply

Name and address of the applicant
Nom et adresse du demandeur

SL Power Electronics Corp
6050 King Drive, Bldg. A
Ventura, CA 93003, USA

Name and address of the manufacturer
Nom et adresse du fabricant

SL Power Electronics Corp
6050 King Drive, Bldg. A
Ventura, CA 93003, USA

Name and address of the factory
Nom et adresse de l'usine

Powerld Enterprises Co Ltd
Guang Ming Ranch, Xinmei Industrial Park Guangming St
Baoan, Shenzhen, Guangdong 518107, China

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

GECA20-XG: Input: 100-240 V ac, 0.5 A, 50/60 Hz
Output: 4 A or 20 W maximum or see below for standard output models.
Rated power is at 45°C Ambient Convection Cooled.
GECA20-5G: 5 V dc/4.0 A, GECA20-12G: 12 V dc/1.67 A
GECA20-15G: 15 V dc/1.34 A, GECA20-24G: 24 V dc/0.84 A

Trademark (if any)
Marque de fabrique (si elle existe)

CONDOR

Model / Type Ref.
Ref. de type

GECA20-XG, where X is any number from 5 through 24.

Additional information (if necessary)
Information complémentaire (si nécessaire)

The CB Test Report comprises 7 enclosures.

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

PUBLICATION	EDITION
IEC 60950-1 (2001)	**First Edition,**

Additional evaluation to CENELEC Common Modifications also included.
See Test Report for National Differences.

as shown in the Test Report Ref. No.
which forms part of this Certificate
comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

E135803-A53-CB-1

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

Underwriters Laboratories

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Date:
Issued: 2009 May 8

Signature: Ronald Vaickauski

Ronald Vaickauski

COVER PAGE FOR TEST REPORT

Product Category:	Power Supplies for Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	QQGQ2, QQGQ8
Test Procedure:	Component Recognition
Product:	Power Supply
Model/Type Reference:	GECA20-XG, where X is any number from 5 through 24.
Rating(s):	GECA20-XG Input: 100-240 V ac, 0.5 A, 50/60 Hz Output: 4 A or 20 W maximum or see below for standard output models. Rated power is at 45°C Ambient Convection Cooled. GECA20-5G 5 V dc/4.0 A GECA20-12G 12 V dc/1.67 A GECA20-15G 15 V dc/1.34 A GECA20-24G 24 V dc/0.84 A
Standards:	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Applicant Name and Address:	SL POWER ELECTRONICS CORP 6050 KING DRIVE, BLDG. A VENTURA CA 93003 UNITED STATES

This Report includes the following parts, in addition to this cover page:

1. Specific Inspection Criteria
2. Specific Technical Criteria
3. Clause Verdicts
4. Critical Components
5. Test Results
6. National Differences
7. Enclosures

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 Underwriters Laboratories Inc. ('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 Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Report By:

Tom Scheuffele
Senior Project Engineer
Underwriters Laboratories Inc.

Reviewed By:

David Feusier
Staff Engineer
Underwriters Laboratories Inc.

SPECIFIC TECHNICAL CRITERIA

UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No	E135803-A53-UL-1
Compiled by	Tom Scheuffele
Reviewed by	David Feusier
Date of issue	2009-05-08
Standards	UL 60950-1, 1st Edition, 2007-10-31 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Test procedure	Component Recognition
Non-standard test method	N/A
Test item description	Power Supply
Trademark	CONDOR
Model and/or type reference	GECA20-XG, where X is any number from 5 through 24.
Rating(s)	GECA20-XG Input: 100-240 V ac, 0.5 A, 50/60 Hz Output: 4 A or 20 W maximum or see below for standard output models. Rated power is at 45°C Ambient Convection Cooled. GECA20-5G 5 V dc/4.0 A GECA20-12G 12 V dc/1.67 A GECA20-15G 15 V dc/1.34 A GECA20-24G 24 V dc/0.84 A

Particulars: test item vs. test requirements	
Equipment mobility	for building-in
Operating condition	continuous
Mains supply tolerance (%)	+6%, -10%
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class I (earthed)
Mass of equipment (kg)	0.1
Protection against ingress of water	IP X0

Possible test case verdicts:	
- test case does not apply to the test object ..... :	N / A
- test object does meet the requirement ..... :	Pass
- test object does not meet the requirement ..... :	Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator

GENERAL PRODUCT INFORMATION:	
CA1.0	**Report Summary**
CA1.1	N/A
CB1.0	**Product Description**
CB1.1	Switching Power Supplies.
CC1.0	**Model Differences**
CC1.1	The GECA20-XG models are similar to each other and differ only in secondary circuitry. Component CY6 value differ between the some of the individual models. Refer to the critical components list for the actual values used. Also, the transformer for Models GECA20-5/GECA20-5G excludes the Flux Band. Suffix "X" is any number from 5 through 24, which represents the output voltage rating. The suffix G indicates compliance to RoHS.
CD1.0	**Additional Information**
CD1.1	Samples of Models GECA20-5G, GECA20-12G, GECA20-15G, and GECA20-24G were tested to represent the GECA20-XG Series. The GECA20-XG Series have been investigated previously and currently Recognized to UL60950-1 and Certified to CSA60950-1. A new report was compiled for the CB Report with ALL National Differences and include UL, C-UL. The original report is to be replaced with this new report. The schematics for these models are kept in file at the CB Testing Laboratory mentioned in the first page of this test report, and can be provided by the applicant upon request by NCB's.
CE1.0	**Technical Considerations**
CE1.2	The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 45°C
CE1.4	The product is intended for use on the following power systems: TN, ,
CE1.7	The product was investigated to the following additional standards: EN 60950-1:2001 (which includes all European national differences, including those specified in this test report).
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): The output of all models complies as limited power source (LPS).
CE1.14	The following are available from the Applicant upon request: Specific data sheets for LEDs that are used for indicating purposes and assumed to be inherently Class 1 operating in the 400 - 700 nm wavelength range.

CF1.0	**Engineering Conditions of Acceptability**
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc. When installed in an end-product, consideration must be given to the following:
CF1.2	The following Production-Line tests are conducted for this product: Electric Strength,
CF1.3	The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 250 Vrms, 354 Vpk
CF1.5	The following secondary output circuits are SELV: All.
CF1.7	The following secondary output circuits are at non-hazardous energy levels: All.
CF1.11	The power supply terminals and/or connectors are: Not investigated for field wiring
CF1.12	The maximum investigated branch circuit rating is: 20 A
CF1.13	The investigated Pollution Degree is: 2
CF1.15	Proper bonding to the end-product main protective earthing termination is: Required.
CF1.16	An investigation of the protective bonding terminals has: Not been conducted
CF1.18	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): T1 (Class B) (130°C)
CF1.19	The following end-product enclosures are required: Mechanical, Fire, Electrical
CF2.0	This component has been judged on the basis of the required spacings in the Standard for Safety of Information Technology Equipment, UL60950-1, First Edition, dated April 1, 2003.
CF2.1	The product input and output are isolated from each other by Reinforced insulation.
CF2.2	All tests were conducted with an internal UL R/C fuse, rated T2.0 AL, 250 V.