

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:	GEM600-VV-WXY-ZZ G and GEM750-VV-WXY-ZZ G (where W is an alpha character A or T, X is an alpha character A, B or T, Y is an Alpha Character D, -ZZ is any numeric character 00-99 and the G designation is optional).
Rating(s):	GEM600-VV-WXY-ZZ G Input: 100-240 Vac, 50/60 Hz, 9 A/4.5 A Output: V1: 24 Vdc, 25.0 A, 27.0 A-PK V2: 28 Vdc, 21.5 A, 23.5 A-PK V3: 36 Vdc, 16.7 A, 18.0 A-PK V4: 48 Vdc, 12.5 A, 13.5 A-PK GEM750-VV-WXY-ZZ G Input: 100-240 Vac, 50/60 Hz, 11 A/5.5 A Output: V1: 24 Vdc, 31.2 A, 34.0 A-PK V2: 28 Vdc, 26.8 A, 29.5 A-PK V3: 36 Vdc, 20.8 A, 22.8 A-PK V4: 48 Vdc, 15.6 A, 17.0 A-PK Airflow: 42 CFM with integral fan Ambient: 50°C *Peak current is for a maximum duration of 60 seconds with a 10% duty cycle.
Standards:	UL 60950-1, 1st Edition, 2006-07-07 (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 ST VENTURA CA 93003

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

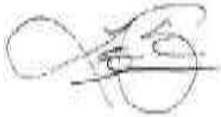
This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up 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:



Linus Park
Lead Engineering Associate
Underwriters Laboratories Inc.

Reviewed By:



Kevin Tang
Staff Engineer
Underwriters Laboratories Inc.

SPECIFIC TECHNICAL CRITERIA

<p>UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements</p>	
Report Reference No	E135803-A37-UL-1
Compiled by	Linus Park
Reviewed by	Kevin Tang
Date of issue	2007-05-23
Standards	UL 60950-1, 1st Edition, 2006-07-07 (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	None
Model and/or type reference	GEM600-VV-WXY-ZZ G and GEM750-VV-WXY-ZZ G (where W is an alpha character A or T, X is an alpha character A, B or T, Y is an Alpha Character D, -ZZ is any numeric character 00-99 and the G designation is optional).
Rating(s)	GEM600-VV-WXY-ZZ G Input: 100-240 Vac, 50/60 Hz, 9 A/4.5 A Output: V1: 24 Vdc, 25.0 A, 27.0 A-PK V2: 28 Vdc, 21.5 A, 23.5 A-PK V3: 36 Vdc, 16.7 A, 18.0 A-PK V4: 48 Vdc, 12.5 A, 13.5 A-PK GEM750-VV-WXY-ZZ G Input: 100-240 Vac, 50/60 Hz, 11 A/5.5 A Output: V1: 24 Vdc, 31.2 A, 34.0 A-PK V2: 28 Vdc, 26.8 A, 29.5 A-PK V3: 36 Vdc, 20.8 A, 22.8 A-PK V4: 48 Vdc, 15.6 A, 17.0 A-PK Airflow: 42 CFM with integral fan Ambient: 50°C *Peak current is for a maximum duration of 60 seconds with a 10% duty cycle.

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): 1.72
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	These products are component switch-mode power supplies intended to be built into an end product. Input/output connectors are provided for factory wiring in the end use equipment.
CC1.0	Model Differences
CC1.1	<p>All models within the Model Series GEM600 are similar with exception to the Main Power Transformers and minor component changes.</p> <p>All models within the Model Series GEM750 are similar with exception to the Main Power Transformers and minor component changes.</p> <p>Model Series GEM600 and GEM750 are nearly identical to each other with exception to the difference to the Power FETS, which are more robust in the GEM750 Series.</p> <p>Models GEM600-VV-WXY-ZZ G and GEM750-VV-WXY-ZZ G have following nomenclature differences:</p> <p>Where VV is the output Voltage 24-48VDC W is an alpha character A or T, which represents the Input Connector X is an alpha character A, B or T which represents the Output Connector Y is an alpha Character D, which represents the Optional OR-ing Diode -ZZ is any numeric character 00-99 which represents Value Added Configurations not related to safety "G" indicates the manufacturer's claim of compliance with the RoHS directive</p>
CD1.0	Additional Information
CD1.1	N/A
CE1.0	Technical Considerations
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (T _{ma}) permitted by the manufacturer's specification of: 40°C
CE1.4	The product is intended for use on the following power systems: TN
CF1.0	Engineering Conditions of Acceptability
CF1.1	<p>For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.</p> <p>When installed in an end-product, consideration must be given to the following:</p>

CF1.2	The following Production-Line tests are conducted for this product: Electric Strength, Earthing Continuity
CF1.3	The end-product Electric Strength Test is to be based upon a maximum working voltage of: Primary-SELV: 385 Vrms, 671 Vpk, Primary-Earthed Dead Metal: 312 Vrms.
CF1.5	The following secondary output circuits are SELV: All outputs
CF1.6	The following secondary output circuits are at hazardous energy levels: All Outputs
CF1.11	The power supply terminals and/or connectors are: Suitable for factory wiring only, 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. Power Supply Chassis is functional earthed. Additional bonding will be required in the end-product.
CF1.16	An investigation of the protective bonding terminals has: 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): T6 (Class F) and T7 (Class F)
CF1.19	The following end-product enclosures are required: Mechanical, Fire, Electrical
CF1.21	The maximum continuous power supply output (Watts) relied on forced air cooling from: Model GEM600 Series: 600 W fan at 42 cfm applied to the top of the power supply. Model GEM750 Series: 750 W fan at 42 cfm applied to the top of the power supply.
CF1.23	The equipment is suitable for direct connection to: AC mains supply

Demko Certificate

Product: Power Supply
Manufacturer: SL POWER ELECTRONICS CORP
6050 KING ST
VENTURA CA 93003, USA
Production site: INDUSTRIAS S L S A DE C V
COSTA RICA #60
COL CUAHUTEMOC, MEXICALI, BC MEXICO
Certified by request of: SL POWER ELECTRONICS CORP
6050 KING ST
VENTURA CA 93003, USA
Trademark: -NONE-
Model/Type ref.: See appendix
Rated current or power: See appendix
Rated voltage: See appendix
Insulation Class: I
Degree of protection: IP X0
Additional information: Airflow: 42 CFM with integral fan
Ambient: 50°C
*Peak current is for a maximum duration of 60 seconds with a 10% duty cycle

Variants covered by this certificate are specified in the attached appendix.
Detailed specification of the certified product(s) is listed in the appendix.

A sample of the product has been tested and found in conformity with EN 60950-1:2001, as shown in the Test Report from Underwriters Laboratories with ref. No. E135803-A37-IT-2 dated 2007-07-09.

Furthermore, the product complies with the national deviations in Denmark.

Date of expiry: 2010-12-01

Information on the date of expiry: See the covering letter to this certificate.

UL International Demko A/S is a body notified to the Member States and Commission of the European Communities according to the provisions of Article 8 of the Low Voltage Directive.

The Manufacturer complies with the Production Surveillance Requirements. Products included in this certificate are allowed to carry the registered approval marks of UL International Demko A/S, or for cables <DEMKO>. The name of UL International Demko A/S can be used in the marketing of the products.

This Statement is only valid for products, which are identical to the tested product, and manufactured at the above-mentioned production site(s). UL International Demko A/S has to be informed in writing about any changes, in accordance with the "UL International Demko A/S Standard Terms and Conditions" for UL International Demko A/S services. The validity of this certificate is shortened if the EU legislation requires re-testing and re-certification, due to new standards or amendments coming into force, before the expiry date.

Herlev, 2007-08-09

Jan-Erik Storgaard
Certification Manager



UL International Demko A/S

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Appendix to Demko Certificate No. 143522-01

The Certificate covers the following:

143522-01-0001; GEM600-VV-WXY-ZZ G; 100-240 Vac, 50/60Hz; 9A/4.5A;

Output:

V1: 24 Vdc, 25.0 A, 27.0 A-PK

V2: 28 Vdc, 21.5 A, 23.5 A-PK

V3: 36 Vdc, 16.7 A, 18.0 A-PK

V4: 48 Vdc, 12.5 A, 13.5 A-PK

143522-01-0002; GEM750-VV-WXY-ZZ G; 100-240 Vac, 50/60 Hz; 11 A/5.5 A;

Output:

V1: 24 Vdc, 31.2 A, 34.0 A-PK

V2: 28 Vdc, 26.8 A, 29.5 A-PK

V3: 36 Vdc, 20.8 A, 22.8 A-PK

V4: 48 Vdc, 15.6 A, 17.0 A-PK

Type key: Where VV is the output Voltage 24-48VDC, where W is an alpha character A or T, X is an alpha character A, B or T, Y is an Alpha Character D, -ZZ is any numeric character 00-99 and the G designation is optional.

Airflow: 42 CFM with integral fan

Ambient: 50°C

*Peak current is for a maximum duration of 60 seconds with a 10% duty cycle

Herlev, 2007-08-09

Jan-Erik Storgaard
Certification Manager



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