

SINGLE VOLTAGE EXTERNAL POWER SUPPLY TEST REPORT

Report No.: 241118107GZU-001

Date: 27 Nov., 2024

Applicant: CHANGZHOU BAOJIN ELECTRICAL CO LTD

Applicant Address: HESHU LIJIA WUJIN, CHANGZHOU, JIANGSU 213165 CHINA

Product name: CUL ADAPTORR

Model: JXA-12V800-IP44

Brand Name: N/A

Rating: Input: 120Vac, 60Hz 0.28A
Output: 12Vac, 0.8A

Requirement: CSA-C381.1-17 November 2017-Test method for calculating the energy efficiency of single-voltage external ac-dc and ac-ac power supplies.
Amendment 14 to the Energy Efficiency Regulations for External Power Supplies (EPS) in the Canada Gazette, Part II.

Sample Received: 18 Nov., 2024

Test performed: 19 Nov., 2024

Certification Body: Intertek Testing Services NA INC.
545 East Algonquin Road, Suite F Arlington Heights, IL 60005 USA

Testing laboratory: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
1~8th floor, Block E2, 11 Cai Pin Road, Science City, Guangzhou Economic Development Zone Guangzhou, China

Testing location: Dongguan Lepont Testing Service Co., Ltd. /Room 102, Building 11, No.7, Houjie Science And Technology Avenue, Houjie, Dongguan, Guangdong, China

Conclusion: From the results of our testing on the submitted sample(s), we are of the opinion that the submitted sample(s) COMPLY WITH Canada's Energy Efficiency Regulations for External Power Supplies requirement and level VI requirements of International Efficiency Marking Protocol.

Note:

1. This report shall not be reproduced, except in full, without written approval of the laboratory. This test results relate only to the items tested.
2. The results contained in the report are for technical evaluation only and are applicable only to the specific test specimen referenced within the report. Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

Prepared by:

Ellie Xie

Ellie Xie
Engineer

Approved by:

Spark He

Spark He
Reviewer

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TECHNICAL INFORMATION

- | | | |
|----|--|----------------------|
| 1. | Built-in switch on the UUT: | None |
| 2. | Product powered by UUT: | -- |
| 3. | Replacement EPS: | NO |
| 4. | Security EPS: | NO |
| 5. | The end-use equipment and the brand and model number of that equipment if a replacement EPS or a security EPS: | N/A (Not Applicable) |

Test Equipment

Equipment Name	Type	control number	Calibration Date	Due Date
Power Meter	WT310E	LEP014-012	27-Nov-23	26-Nov-24
Digital Multimeter	Fluke17B	LEP001-003	27-Nov-23	26-Nov-24
DC Electric load	IT8512B+	LEP015-020	27-Nov-23	26-Nov-24
DigitSteel tapeal	5M	LEP110-003	30-Nov-23	29-Nov-24
Temperature-Humidity Recorder	TH20BL	LEP019-002	6-Dec-23	5-Dec-24

General Remark

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty. This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

General product information

Manufacturer: CHANGZHOU BAOJIN ELECTRICAL CO LTD

Manufacturer Address: HESHU LIJIA WUJIN, CHANGZHOU, JIANGSU 213165 CHINA

Energy efficiency verification mark: N/A (Not Applicable)

The UUT is non user selectable ac-ac single output CUL ADAPTOR. The product's output is 12VAC, 0.8A.

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TEST PROCESS:

The tests are carried out in a room that has an air speed close to test sample of $< 0.5\text{m/s}$, and the ambient temperature is maintained at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$. The test voltage was 115V at 60Hz .

The test sample was operated at 100% of nameplate current output for at least 30 minutes immediately prior to conducting efficiency measurements. After this warm-up period, if the power level does not drift by more than 5% from the maximum value observed, the UUT can be considered stable and then the measurements were recorded at the end of the 5 minutes period. Subsequent load conditions can then be measured under the same 5 minutes stability guidelines. For active mode power measuring, to measure efficiency using NRCan method if the difference between the "efficiency standard" and the measured efficiency is less than 0.8%. Canadian method requires 30 minutes warm up period at each stage, and the Canadian method allows measuring energy using only the 'accumulative energy approach'.

Measurements of power of 0,50 W or greater are made with an uncertainty of less than or equal to 2 % at the 95 % confidence level. Measurements of power of less than 0,50 W are made with an uncertainty of less than or equal to 0,01 W at the 95 % confidence level.

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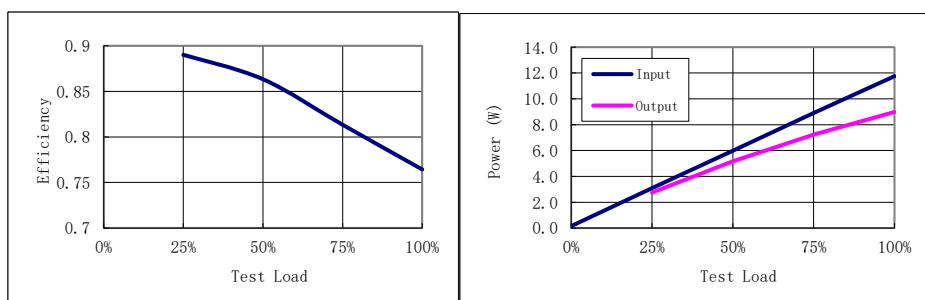
Date: 27 Nov., 2024

TEST RESULTS

Sample 1: Test voltage is 115Vac @ 60Hz

Percent of nameplate current	0%	25%	50%	75%	100%
Rms Output Current (mA)		200	400	600	800
Rms Output Voltage (V)	14.59	13.76	12.93	12.07	11.23
Active Output Power (W)		2.752	5.172	7.242	8.984
Rms Input Voltage (V)	115	115	115	115	115
Active Input Power (W)	0.154	3.092	5.991	8.904	11.754
Total Harmonic Distortion(THD) V%	0.115	0.115	0.116	0.117	0.118
Total Harmonic Distortion(THD) A%	21.23	1.67	0.76	0.41	0.29
True Power Factor (W/VA)	0.526	0.994	0.996	0.995	0.994
Power Consumed by EUT(W)	0.154	0.340	0.819	1.662	2.770
Efficiency		89.00%	86.33%	81.33%	76.43%
Average Efficiency		83.28%			

Figure



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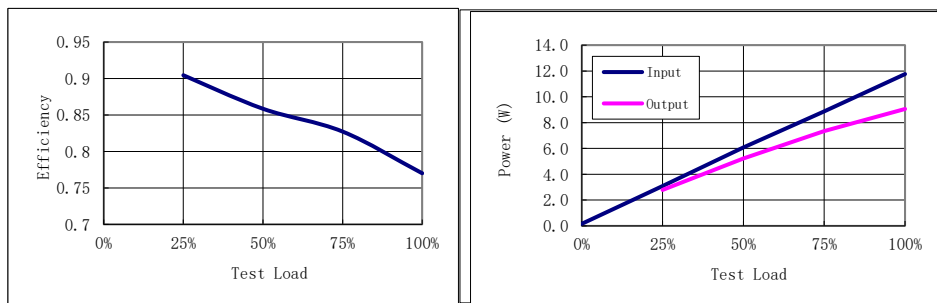
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TEST RESULTS

Sample 2: Test voltage is 115Vac @ 60Hz

Percent of nameplate current	0%	25%	50%	75%	100%
Rms Output Current (mA)		200	400	600	800
Rms Output Voltage (V)	14.72	13.93	13.05	12.23	11.32
Active Output Power (W)		2.786	5.220	7.338	9.056
Rms Input Voltage (V)	115	115	115	115	115
Active Input Power (W)	0.160	3.080	6.080	8.870	11.760
Total Harmonic Distortion(THD) V%	0.113	0.113	0.115	0.117	0.119
Total Harmonic Distortion(THD) A%	22.65	1.80	0.83	0.45	0.31
True Power Factor (W/VA)	0.529	0.993	0.996	0.995	0.994
Power Consumed by EUT(W)	0.160	0.294	0.860	1.532	2.704
Efficiency		90.45%	85.86%	82.73%	77.01%
Average Efficiency		84.01%			

Figure



Test Result Summary (test at 115V 60Hz):

Sample Number	Active Efficiency	No-Load Power
Sample 1	83.28%	0.154
Sample 2	84.01%	0.160
Mean of sample:	83.64%	0.157
Sample standard deviation	0.52%	0.004
UCL/1.05		0.168
LCL/0.95	83.12%	
level VI	81.71%	0.21

The samples tested comply with level VI.

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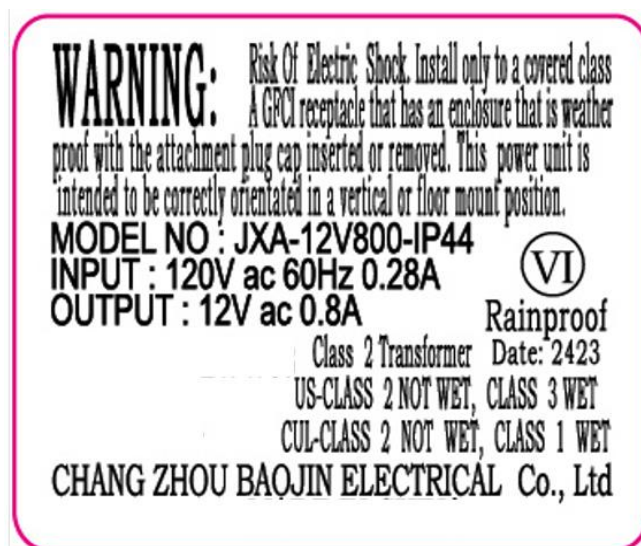
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Critical components list:

Component	Manufacture/Trademark	Type/model	Value / rating
Transformer	CHANGZHOU BAOJIN ELECTRICAL CO LTD	JXA-12V800-IP44	CLASS B

Labels :

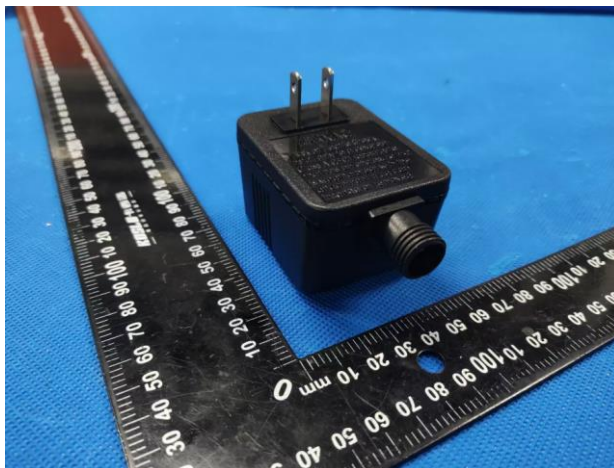


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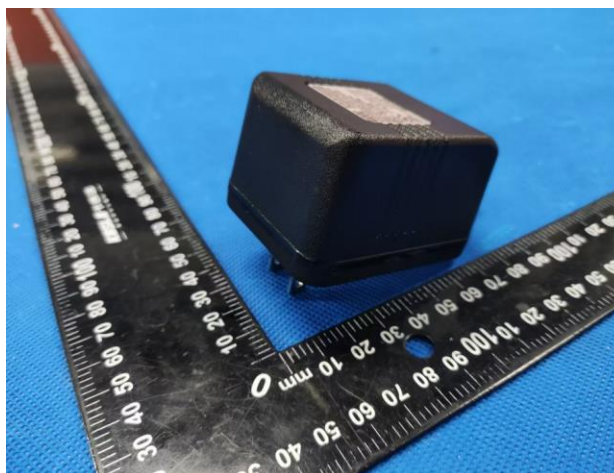
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Photo:



External view



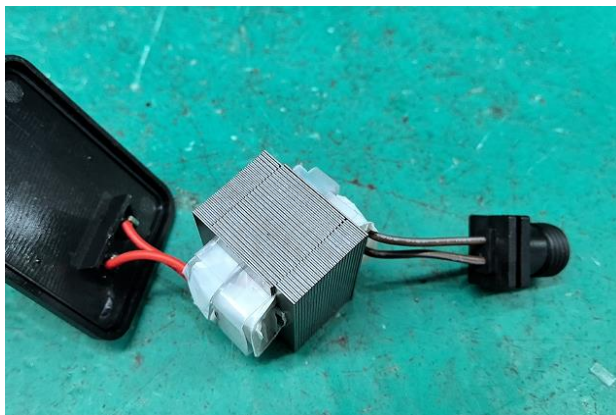
External view

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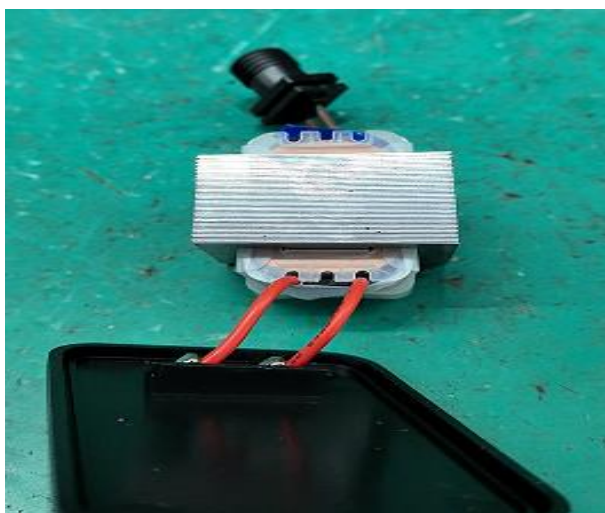
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Internal view



Internal view

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