

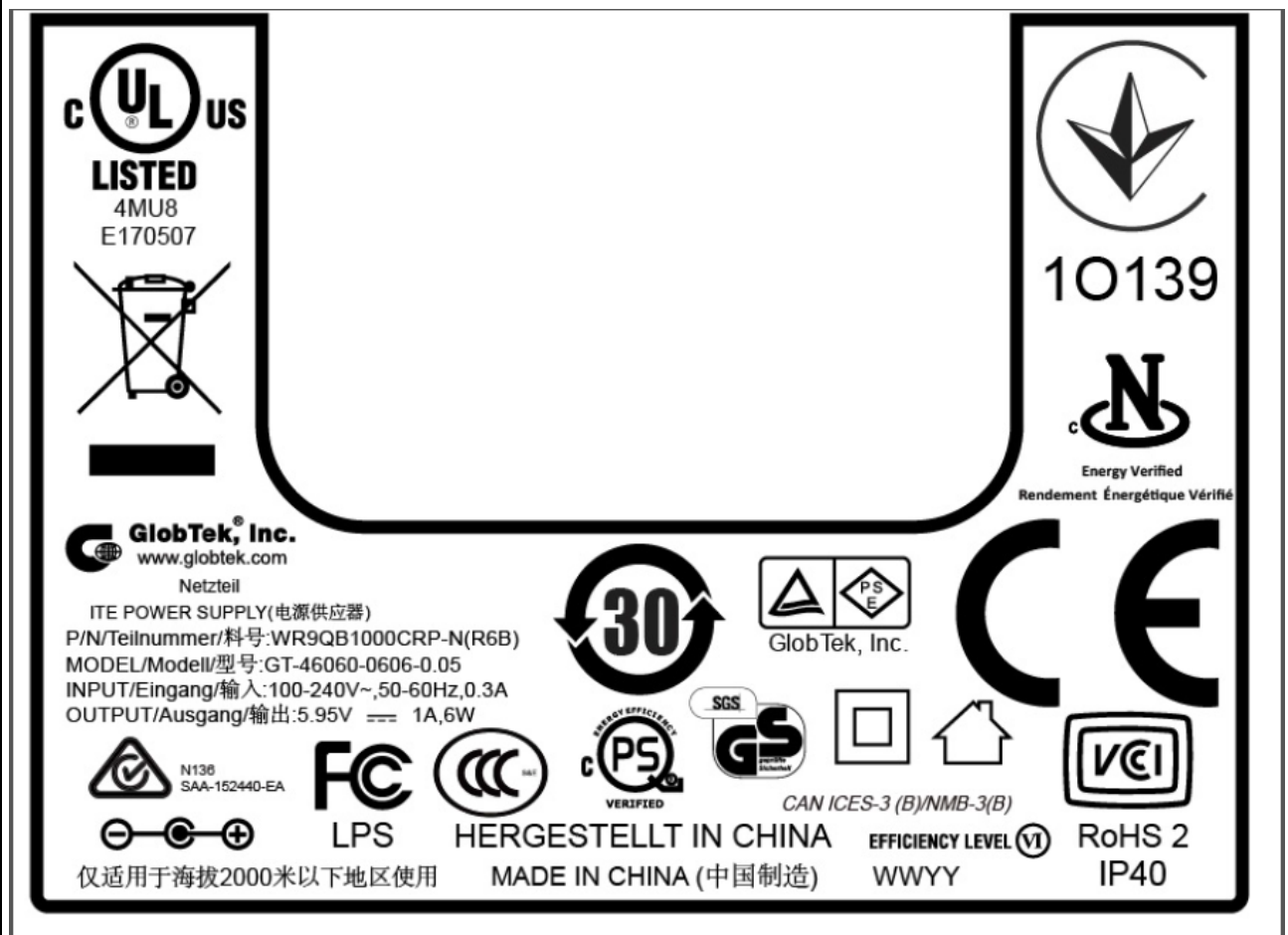


TEST REPORT C381.1-17

Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies

Report Reference No.	385214/En	
Tested by (printed name and signature)	Lisa Lee	
Approved by (printed name and signature)	Kenny Ho	
Date of issue	2019-10-18	
Total number of pages	9	
Testing Laboratory	Nemko Shanghai Ltd., Shenzhen Branch	
Address	Unit C &D, Floor 2 & Floor 10, Financial Base Tower 2, Kefa Road 8#, Hi-Technology Park, Nanshan District, Shenzhen 518057, China	
Testing location	As above	
Applicant's name	GlobTek, Inc.	
Address	186 Veterans Dr. Northvale, NJ 07647 USA	
Test specification:		
Standard	International Efficiency Marking Protocol ver.3.0 C381.1-17: Energy performance of external ac-dc and ac-ac power supplies	
Test procedure	Appendix Z to Subpart B, Part 430 of Title 10 to the United States Code of Federal Regulations, entitled Uniform Test Method for Measuring the Energy Consumption of External Power Supplies	
Test Report Form No.	C381.1-17_A	
Test Report Form(s) Originator	Nemko Shenzhen	
Master TRF	2019-10	
This test report is based on the content of the internal test program. The test program considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by Nemko Shenzhen. Nemko Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.		
Test item description	ITE Power Supply	
Trademark	GlobTek	
Manufacturer	Same as applicant	
Factory	See page 3	
Model and/or type reference	GT-46060-0606-0.05	
Rating(s) (V; Hz)	AC input: 100-240 V ac 50-60 Hz 0.3 A DC output: 5.95Vdc 1A 6W Cl. II	

Copy of marking plate



Summary of testing:

This EUT comply with efficiency requirement of C381.1-17: Energy performance of external ac-dc and ac-ac power supplies.

Possible test case verdicts:

- test case does not apply to the test object : N/A (Not applicant)
- test object does meet the requirement : P (Pass)
- test object does not meet the requirement : F (Fail)

Testing:

Date of receipt of test item : 2019-10-18

Date (s) of performance of tests : 2019-10-18

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Annex #)" refers to additional information appended to the report.
Throughout this report a point is used as the decimal separator.
Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods

General product information:

The rated output power (Po) of the EUT=5.95 W

	Result	Limit for NrCan directive
	Vin=115V 60Hz	Mark VI
No load condition power consumption (W)	0.09	0.1
Average active efficiency	77.91%	74.94%
Supplementary Information: No-Load condition power consumption of ROUND(MAX(UUT1,UUT2,UUT3),2)=0.09		
Supplementary Information: average value efficiency of (Min(77.98%,77.91%,78.03%))=77.91%		
Remark: International Efficiency Marking Protocol ver.3.0		

Factory Information

1、 Name: GlobTek, Inc.

Address: 186 Veterans Dr. Northvale, NJ 07647 USA

2、 Name: GlobTek (Suzhou) Co., Ltd

Address: Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China

C381.1-17			
Clause	Requirement + Test	Result - Remark	Verdict

Ref. No	Test equipment	Manufacturer	Model	Serial number	Calibration due date
NSZ2018	Digital AC Power Source	All power	APW-150N	888130	06 Jan 2020
NSZ2013	EUP Power Meter	Xitron	2801	28010907016	06 Jan 2020
NSZ2046	DC Electric Load	ARRAY	3711A	A06BH02082	06 Jan 2020
NSZ2050	Thermo-hygrometer	Corintech	EL-WiFi-TH+	4703	12 Mar 2020

	Test conditions		—
	Ambient temperature in °C	See the test result table.	—
	Information describing the test set-up used at each load condition	Low power measurement circuit.	—

	Test configuration		—
	Nominal test supply voltage (V)	115V ac	—
	Nominal total harmonic distortion of supply voltage waveform	<2%	—
	Test frequency (Hz)	60Hz	—
	Any notes regarding the operation of the product :	--	—
	Did the EPS have a built-in ON/OFF switch on the input?	No	—
	Was the output voltage selectable?	No	—
	Setting used when performing tests	Low power measurement circuit.	—
	Output cable length (to the nearest cm)	183cm±3cm	—

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Test results						P
Vin=115V 60Hz UUT 1						
	No load	Power Modes				
Percent of nameplate current	0%	25%	50%	75%	100%	Average
DC output current (A r.m.s)	0	0.25	0.5	0.75	1	
DC output voltage (V r.m.s)	6.05	6.08	6.09	6.11	6.12	
DC output power (W r.m.s)	0.00	1.52	3.05	4.58	6.12	

Maximum AC input voltage (V r.m.s)	115.07	115.06	115.04	115.03	115.02	
Minimum AC input voltage (V r.m.s)	115.02	115.01	114.99	114.98	114.97	
Maximum ambient temperature (°C)	24.15	24.08	24.08	24.08	24.07	
Minimum ambient temperature (°C)	24.15	24.08	24.08	24.09	24.07	
AC input power (W)	0.09	1.97	3.9	5.85	7.81	
Current total harmonic distortion (THD)(%)	327.77	195.82	170.71	151.9	137.13	
True power factor	0.29	0.45	0.49	0.53	0.55	
Crest Factor	1.42	1.42	1.42	1.42	1.42	
Power consumed (W)	0.09	0.45	0.86	1.27	1.69	
Active mode efficiency		77.16%	78.08%	78.33%	78.36%	
Average efficiency of active modes						77.98%
Calculated measurement uncertainty	0.0001	0.0025	0.005	0.0075	0.0100	
Uncertainty requirement	0.0200	0.0394	0.078	0.117	0.1562	

Supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Test results						P
Vin=115V 60Hz UUT 2						
	No load	Power Modes				
Percent of nameplate current	0%	25%	50%	75%	100%	Average
DC output current (A r.m.s)	0	0.25	0.5	0.75	1	
DC output voltage (V r.m.s)	6.06	6.07	6.09	6.1	6.11	
DC output power (W r.m.s)	0.00	1.52	3.05	4.58	6.11	

Maximum AC input voltage (V r.m.s)	115.08	115.06	115.05	115.0	115.1	
Minimum AC input voltage (V r.m.s)	115.02	115.01	114.99	114.98	115.04	
Maximum ambient temperature (°C)	24.07	24.07	24.07	24.07	24.07	
Minimum ambient temperature (°C)	24.07	24.07	24.07	24.07	24.07	
AC input power (W)	0.09	1.96	3.86	5.89	7.87	
Current total harmonic distortion (THD)(%)	329.28	198.33	173.05	152.93	138.36	
True power factor	0.29	0.44	0.49	0.52	0.55	
Crest Factor	1.42	1.42	1.42	1.42	1.42	
Power consumed (W)	0.09	0.44	0.82	1.32	1.76	
Active mode efficiency		77.42%	78.89%	77.67%	77.64%	
Average efficiency of active modes						77.91%
Calculated measurement uncertainty	0.0001	0.0025	0.0051	0.0067	0.0105	
Uncertainty requirement	0.0200	0.0392	0.0772	0.1178	0.1574	
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Test results						P
Vin=115V 60Hz UUT 3						
	No load	Power Modes				
Percent of nameplate current	0%	25%	50%	75%	100%	Average
DC output current (A r.m.s)	0	0.25	0.5	0.75	1	
DC output voltage (V r.m.s)	6.04	6.1	6.13	6.13	6.15	
DC output power (W r.m.s)	0.00	1.53	3.07	4.6	6.15	

Maximum AC input voltage (V r.m.s)	115.15	115.11	115.1	115.09	115.08	
Minimum AC input voltage (V r.m.s)	115.1	115.06	115.04	115.03	115.03	
Maximum ambient temperature (°C)	24.07	24.07	24.07	24.07	24.07	
Minimum ambient temperature (°C)	24.07	24.07	24.07	24.07	24.07	
AC input power (W)	0.08	1.98	3.92	5.83	7.88	
Current total harmonic distortion (THD)(%)	328.21	200.61	174.02	153.64	138.83	
True power factor	0.29	0.44	0.48	0.52	0.55	
Crest Factor	1.42	1.42	1.42	1.42	1.42	
Power consumed (W)	0.08	0.46	0.86	1.23	1.73	
Active mode efficiency		77.02%	78.19%	78.86%	78.05%	
Average efficiency of active modes						78.03%
Calculated measurement uncertainty	0.0001	0.0025	0.0052	0.0078	0.0101	
Uncertainty requirement	0.0200	0.0396	0.0784	0.1166	0.1576	
Supplementary information:						

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Clause	Requirement + Test	Result - Remark	Verdict

	Conclusion		—
	No-Load condition power consumption (W).....:	0.09	—
	No-Load limit applied (W)	0.1	—
	Regulatory conference	No load power consumption of C381.1-17	—
	No-Load verdict (PASS/FAIL)	PASS	—
	Calculated average efficiency of active modes (%):	77.91	—
	Average efficiency of active modes limit applied (%)	74.94	—
	Regulatory reference.....:	No load power consumption of C381.1-17	—
	Average efficiency of active modes verdict (PASS/FAIL)	PASS	—

Annex 1 - Photo

