

TEST REPORT

Report No.: BCTC2312439735S

Applicant: Shenzhen Patpet Technology Co., Ltd

Product Name: Ultrasonic dog training device

Product Type: U12

Tested Date: 2023-12-27 to 2024-01-03

Issued Date: 2024-01-24

Shenzhen BCTC Testing Co., Ltd.



TEST REPORT CEC-400-2017-002-CMF	
Report Number BCTC2312439735S	
Date of issue..... 2024-01-24	
Total number of pages 14 pages	
Testing Laboratory Shenzhen BCTC Testing Co., Ltd.	
Address 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China	
Applicant's name Shenzhen Patpet Technology Co., Ltd	
Address Floor 1-3, No.61 the 2nd Industrial Zone, Houting Community, Shajing Street, Baoan District, Shenzhen, China	
Test specification:	
Standard	California Code of Regulations Title 20, Division 2, Chapter 4, Article 4, Sections 1601-1605, 1607: Appliance Efficiency Regulations - Battery Chargers and Battery Charger Systems
Test procedure.....	Appendix Y to Subpart B of Part 430-Uniform Test Method for Measuring the Energy Consumption of Battery Chargers
Non-standard test method.....	N/A
Test Item description	Ultrasonic dog training device
Trade Mark	PATPET
Manufacturer	Shenzhen Patpet Technology Co., Ltd Floor 1-3, No.61 the 2nd Industrial Zone, Houting Community, Shajing Street, Baoan District, Shenzhen, China
Model/Type reference.....	U12, U11, U13, U14, U15, U16, U17, U18, U19
Ratings	Input: 5.0V==1.0A Battery: 3.7V, 1600mAh, 5.92Wh

Testing procedure and testing location:**Testing Laboratory** **Shenzhen BCTC Testing Co., Ltd.****Address** 1-2/F., Building B, Pengzhou Industrial Park, No.158,
Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an
District, Shenzhen, Guangdong, China**Tested by (name, function, signature)....:** Iris He
(Project Handler) *Iris He***Approved by (name, function, signature):** Sam Wang
(Reviewer) *Sam Wang*

Copy of marking plate:

Ultrasonic dog training device

Model: U12

Input: 5.0V $\overline{=}$ 1.0A



Manufacturer: Shenzhen Patpet Technology Co., Ltd

Address: Floor 1-3, No.61 the 2nd Industrial Zone, Houting
Community, Shajing Street, Baoan District, Shenzhen, China

Made in China YYMM

Symbols were marked on the product:

“BC” marking can be displayed on the case, color box or manual.

Product Information

Battery chemistry:	☐ Valve-Regulated Lead Acid (VRLA) ☐ Flooded Lead Acid ☐ Nickel Cadmium (NiCd) ☐ Nickel Metal Hydride (NiMH) ☒ Lithium Ion (Li-Ion) ☐ Lithium Polymer ☐ Rechargeable Alkaline ☐ Nanophosphate Lithium Ion ☐ Silver Zinc ☐ Others, please specify:
Number of charger ports:	1
Number of test sample:	2
Marking location:	☐ Both – the unit is marked both on the charger and the retail package as described below. ☐ Charger – the unit is marked with a “BC” inside a circle on the product nameplate that houses the battery charging terminals. ☐ Package – the unit is marked with a “BC” inside a circle on the retail packaging and, if included, the cover page of the instructions. ☒ Label – the unit is marked with a “BC” inside a circle on the product nameplate.

Manufacturer of battery:	ZHONGSHAN PNAS ENERGY TECHNOLOGY CO.,LTD
Model of battery:	PNAS18500
Rated of battery:	DC3.7V, 1600mAh, 5.92Wh
Number of batteries incorporated in the product:	1
Note: --	

General test condition:

Ambient temperature (°C): (20±5)	23.9
Maximum air speed (m/s): ≤0.5m/s	0.3
For AC input: The product powered by one AC/DC external power supply	
Test frequency tolerance: (±1.0%)	N/A
Test voltage tolerance: (±1.0%)	N/A
Maximum THD of voltage: (≤2%)	N/A
Crest factor: (1.34-1.49)	N/A
For DC input, the AC ripple voltage (RMS) shall be	
≤ 0.2 V for DC voltages up to 10 V, or	0.06
≤ 2 percent of the DC voltage for DC voltages over 10 V	N/A

Testing Setup

Charge the battery with the UUT for the period specified by the UUT manufacturer as the time needed to fully charge the battery under test.

- 1) All limited time functions used to deliver the primary charge to the battery, including cell equalization, are to be excluded from the measurement of battery maintenance mode.
- 2) If these events are known to occur for a time period beyond the manufacturer specified charge time, the battery is to be left in place until all such functions are complete.
- 3) In cases where no charge time is specified, the batteries to be charged for a period of at least 24 hours.

Test Result:

Measured Value			
Determination of represented values	Sample 1	Sample 2	Units
Battery capacity of tested battery (if more than 1 charger port report the total of all battery capacities connected during test)(E _{batt} = Measured battery energy):	6.4409	6.5219	Watt-hours
24 Hour Charge and Maintenance Energy (E ₂₄):	9.1806	9.1921	Watt-hours
Battery maintenance mode power (P _m):	0	0	Watts
No battery mode power (P _{sb}):	0	0	Watts
No battery mode power (P _{off}):	--	--	Watts
t _{cd} = Charge test duration	24	24	Hours
t _{a&m} , n, t _{sb} and t _{off}	See table 5.3 for Product Class 2: Low-Energy Low-Voltage		

Test requirement-Unit Energy Consumption requirement

Unit energy consumption (UEC) less than or equal to the prescribed “Maximum UEC” standard when using the equations for the appropriate product class and corresponding rated battery energy as shown in the following table:

TABLE 5.3—BATTERY CHARGER USAGE PROFILES

Product class				Hours per day***			Charges (n)	Threshold charge time*
No.	Description	Rated battery energy (E _{batt})**	Special characteristic or battery voltage	Active + maintenance (t _{a&m})	Standby (t _{sb})	Off (t _{off})	Number per day	Hours
1	Low-Energy	≤5 Wh	Inductive Connection****	20.66	0.10	0.00	0.15	137.73
2	Low-Energy, Low-Voltage	<100 Wh	<4 V	7.82	5.29	0.00	0.54	14.48
3	Low-Energy, Medium-Voltage	<100 Wh	4-10 V	6.42	0.30	0.00	0.10	64.20
4	Low-Energy, High-Voltage	<100 Wh	>10 V	16.84	0.91	0.00	0.50	33.68
5	Medium-Energy, Low-Voltage	100-3000 Wh	<20 V	6.52	1.16	0.00	0.11	59.27
6	Medium-Energy, High-Voltage	100-3000 Wh	≥20 V	17.15	6.85	0.00	0.34	50.44
7	High-Energy	>3000 Wh		8.14	7.30	0.00	0.32	25.44

*If the duration of the charge test (minus 5 hours) as determined in section 3.3.2 of appendix Y to

subpart B of this part exceeds the threshold charge time, use equation (ii) to calculate UEC otherwise use equation (i).

**E_{batt} = Rated battery energy as determined in 10 CFR part 429.39(a).

***If the total time does not sum to 24 hours per day, the remaining time is allocated to unplugged time, which means there is 0 power consumption and no changes to the UEC calculation needed.

****Inductive connection and designed for use in a wet environment (e.g. electric toothbrushes).

Reference Limit:

Product class	Product class description	Battery energy	Special characteristic or battery voltage	Adopted standard as a function of battery energy (kWh/yr)
1	Low-Energy	≤5 Wh	Inductive Connection in Wet Environments.	3.04
2	Low-Energy, Low-Voltage	<100 Wh	<4 V	0.1440 * E _{batt} + 2.95
3	Low-Energy, Medium-Voltage		4–10 V	For E _{batt} <10Wh, UEC = 1.42 kWh/y E _{batt} ≥10 Wh, UEC = 0.0255 * E _{batt} + 1.16
4	Low-Energy, High-Voltage		>10 V	0.11 * E _{batt} + 3.18
5	Medium-Energy, Low-Voltage	100–3000 Wh	<20 V	0.0257 * E _{batt} + .815
6	Medium-Energy, High-Voltage		≥20 V	0.0778 * E _{batt} + 2.4
7	High-Energy	>3000 Wh		0.0502 * E _{batt} + 4.53

<i>n</i>	$\sqrt{n}$	<i>t</i> for 97.5% confidence
2	1.41	12.706
3	1.73	4.303
4	2.00	3.182
5	2.24	2.776
6	2.45	2.571
7	2.65	2.447
8	2.83	2.365
9	3.00	2.306
10	3.16	2.262

$$UCL = \bar{x} + t_{0.975} \left(\frac{s}{\sqrt{n}} \right)$$

Remark: ($\bar{x}$ is the sample mean; *n* is the number of samples; and *x_i* is the UEC of the *i*th sample. *s* is the sample standard deviation; *n* is the number of samples; and *t_{0.975}* is the t-statistic for a 97.5-percent one-tailed confidence interval with *n*-1 degrees of freedom)

Unit Energy Consumption Result:

Calculate unit energy consumption (UEC) for a battery charger using one of the two equations (equation (i) or equation (ii)) listed below. If a battery charger is tested and its charge duration as determined in section 5.2 of this appendix minus 5 hours is greater than the threshold charge time listed in table 5.3 below (i.e. (t_{cd}-5) * *n* > ta&m), use equation (ii) to calculate UEC; otherwise calculate the battery charger's UEC using

$$(i) UEC = 365(n(E_{24} - 5P_m - E_{batt}) \frac{24}{t_{cd}} + (P_m(t_{a\&m} - (t_{cd} - 5)n) + (P_{sb}t_{sb}) +$$

$$(P_{off}t_{off})) \text{ or,}$$

$$(ii) UEC = 365(n(E_{24} - 5P_m - E_{batt}) \frac{24}{(t_{cd}-5)} + (P_{sb}t_{sb}) + (P_{off}t_{off}))$$

	Product class and description	Rated battery energy and battery voltage or Special characteristic	UEC (kWh/yr)	Maximum UEC (kWh/yr)
Sample 1	Class 2: Low-Energy	5.92Wh, 3.7V	0.657	3.877
Sample 2	Low-Voltage	5.92Wh, 3.7V	0.640	3.889

Department of Energy (CEC) sampling plan for Battery chargers

Determination of represented value. Manufacturers must determine represented values, which include certified ratings, for each basic model of battery charger in accordance with the following sampling provisions.

Represented values include: The unit energy consumption (UEC) in kilowatt-hours per year (kWh/yr), battery discharge energy (E_{batt}) in watt hours (Wh), 24-hour energy consumption (E₂₄) in watt hours (Wh), maintenance mode power (P_m) in watts (W), standby mode power (P_{sb}) in watts (W), off mode power (P_{off}) in watts (W), and duration of the charge and maintenance mode test (t_{cd}) in hours (hrs) for all battery chargers other than uninterruptible power supplies (UPSs); and average load adjusted efficiency (Eff_{avg}) for UPSs.

Sample No.	Active model energy consumption UEC (kWh/yr)
1#	0.657
2#	0.640
Number of units tested (n)	2
Mean of sample (X)	0.649
Sample standard deviation (s)	0.012235
LCL/0.95	N/A
UCL/1.05	0.723

Note: The appliance complies with the requirements of CEC Appliance Efficiency for Federally Regulated Battery Chargers

Test Equipment List

T-ID	name	type	valid until
BCTC-SA-273	Digital Power Meter	WT310E	2024-11-15
BCTC-SA-263	Stop Watch	XL-008	2024-03-26
BCTC-SA-301	Temperature & Humidity Datalogger	HT20R	2024-07-30
BCTC-SA-122	Electronic Loading	M9710	2024-03-26
BCTC-SA-016	DC Source	LW-12050KD	2024-03-26

Product photos

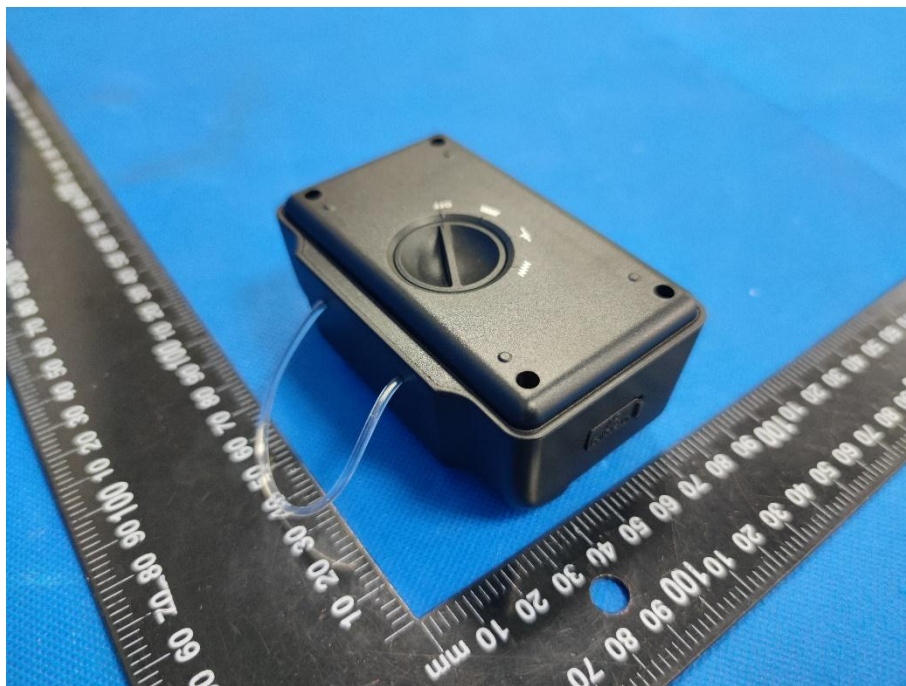
EUT Photo 1



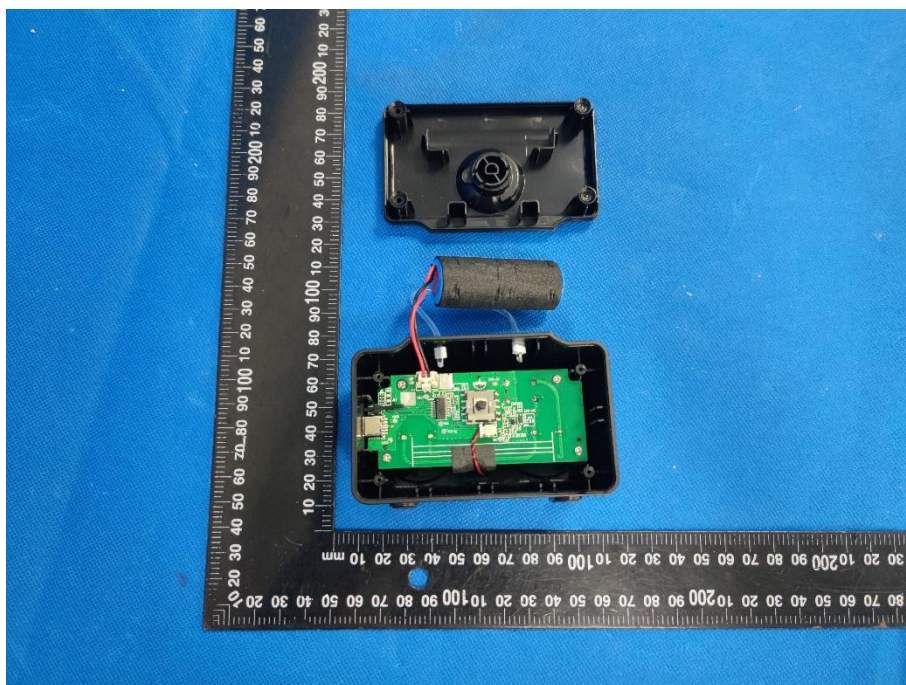
EUT Photo 2



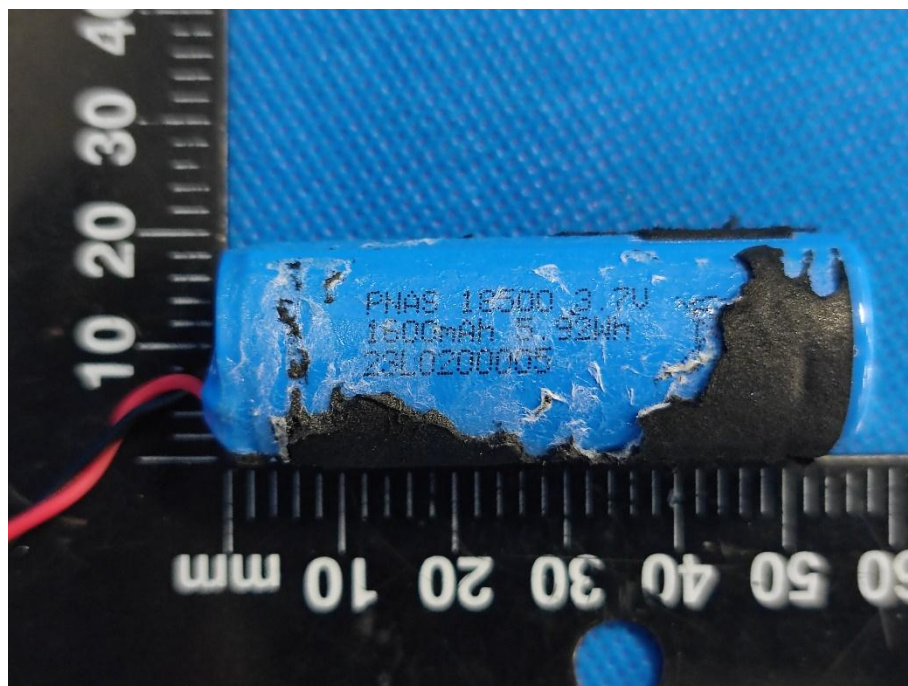
EUT Photo 3



EUT Photo 4



EUT Photo 5



STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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***** END *****