TEST REPORT
UL 2743
STANDARD FOR SAFETY Portable Power Packs

Report Number	22ITC0106025S
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Applicant's name	Shenzhen youquanmei Technology Co., Ltd
Address	202, building 1, Xingyuan, No. 43, Yingbin Avenue, Tangxia Town, Dongguan

Test specification:

Standard	UL 2743 2nd Edition, July 3, 2018 Complete Document UL Standard for Safety Portable Power Packs
Test procedure	UL test report
Non-standard test method	N/A

Test Report Form No.	/
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2014-02

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.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Possible test case verdicts

- test case does not apply to the test object	N/A (or N)
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
- Testing Instructions of standards only	Info (Information Only)

Testing	
Date of receipt of test item.....:	Jan. 06, 2022
Date(s) of performance of tests.....:	Jan. 06, 2022 to Jan. 11, 2022

Product information

Product name……:	Portable Power Station
Brand name……:	Aobteeny
Model/Type reference……:	YQM_FWdy_700, YQM_FWdy
Ratings……:	See marking plate

General product information:

The product covered by this report is Portable Power Station intended for use as Jump Starter for IT equipment. The product is equipped with Lighting/Type-C/ input, Type-C /Type-A USB/ AC output connectors which.

Relevant Technical consideration:

-Equipment mobility: Protable

-Operating condition: Continuous

-Connection to the mains: not directly connected to the mains

-Access location: operator accessible

-Over voltage category(OVC): other, not directly connected to the mains

-Mains supply tolerance (%): N/A

-Considered current rating of protective device as part of the building installation(A): N/A

-Pollution degree (PD): PD2

-IP protection class: IP20

-Altitude of operation (m): up to 2000 meters

-Mass of equipment (kg): approx.4.86Kg

-One appearance is required for this application, only the color is different; The internal structure is identical

Copy of marking plate (Representative):

Aobteeny

Portable power station
Model: YQM_FWDY_700
Total:45000mAh
Total Power : 100W
Power Input : 20V⎓
Output : AC110V
Battery : 14.8V/45000mAh
Current : 6A

Manufacturer: Shenzhen youquanmei Technology Co., Ltd
Address: 202, building 1, Xingyuan, No. 43, Yingbin Avenue, Tangxia Town, Dongguan

MADE IN CHINA

UL 2743 Complete Document UL Standard for Safety Portable Power Packs (Issue Number: 2, Dated July 3, 2018)		
Clause	**Description Requirement**	**Verdict**
42	Power Input Test	P
43	Normal Charging Operation Test	P
44	Lithium Charging System Test	P
45	Capacitor Discharge Test	N/A
46	Leakage Current Test	P
47	Normal Temperature Test	P
48	Dielectric Voltage Withstand Test	P
49	Leakage Current Following Humidity Conditioning	P
50	Abnormal Operation Tests	P
51	Vibration Test	P
52	Ground Continuity	N/A
53	Overload Tests	P
54	Strain Relief Test	N/A
55	Strength of Enclosure Tests	P
56	Mold Stress Test	P
57	Strength of Handles Test	P
58	Stability Test	N/A
59	Hydrostatic Strength Test	P
60	Rain Test	N/A
61	Tests on Insulating Materials	P
62	Accelerated Aging of Gaskets, Sealing Compounds, and Adhesives Test	N/A
63	Metallic Coating Thickness Test	N/A
64	Permanency of Wrapped Hang Tag Marking	N/A
65	Power Pack Ampacity Test	N/A
66	Back Feed Test	N/A
67	Cold Bend Test	N/A
68	Clamp Tests	N/A

Possible test case verdicts:

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

Appendix 1: Critical components information					
Component Name	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity**
Cell	SHENZHEN BAK POWER BATTERY CO.,LTD	N18650CL 29	3.6V, 2900 mAh	UL 1642	UL
PCB Alt.	Interchangeable	Interchangea ble	V-1 or better,130°C, ,min 0.8mm,	UL769 UL94	UL approved
IC (U7)	XySemi Inc	XB7608A	Overcharge Detection Voltage: 4.3±0.05 V, Over-discharge Detection Voltage: 2.4 ±0.1 V,	--	Tested with appliance
Internal Wire (red, black)	DONGGUAN HUAJUNDA CO LTD	3239	MIN 22AWG MAX 200°C min3000VAC	UL 758	UL E363052
Internal Wire Alt.	DONG GUAN SHENG PAI ELECTRIC WIRE & CABLE CO LTD	3135	22AWG, 200°C, 600Vac	UL 758	ULE347603
Internal Wire Alt.	DONGGUAN HUAJUNDA CO LTD	3135	MIN 22AWG, 200°C, min600VAC	UL 758	UL E363052
-Triple insulation wire of transformer	FURUKAWA ELECTRIC CO LTD	TEX-E	130°C	EN 60950-1	VDE 006735
-Bobbin of transformer	HITACHI CHEMICAL CO LTD	CP-J-8800	Phenolic, V-0, 150°C, min. 0.46mm thick.	UL 94 UL 746C	UL E42956
-Magnet Wire of transformer	PACIFIC ELECTRIC WIRE & CABLE CO LTD	DD-NYU	130°C	UL 1446	UL E84081
Plastic Enclosure	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	V-0, 120°C, min. thickness 1.5mm	UL94, UL746C	UL E121562
Remark:					

INTRODUCTION			
1	**Scope**		P
1.1	These requirements cover power banks, sometimes also known as portable USB chargers or portable back-up battery power, which are standalone devices that incorporate batteries for mobile powering of low voltage electronic devices.		P
1.2	These requirements do not cover products with dedicated inputs from external photovoltaic panels or vehicle 12 Vdc adapters, or other power pack products under the scope of the Outline of Investigation for Portable Power Packs, UL 2743.		P
1.3	These requirements cover products with integral photovoltaic cells as power source.		P
2	**Components**		P
2.1	A component of a product covered by this outline of investigation shall comply with the requirements for that component. See Appendix A for a list of standards covering components generally used in the products covered by this outline of investigation.		P
2.2	Lithium ion cells shall comply with either the Standard for Lithium Batteries, UL 1642 or the Standard for Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes – Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made From Them, for Use in Portable Applications, UL 62133.	Cell complied with UL 1642.	P
2.3	Nickel cells shall comply with either the Standard for Household and Commercial Batteries, UL 2054 or the Standard for Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes – Safety Requirements for Portable Sealed Secondary Cells, and for Batteries Made From Them, for Use in Portable Applications, UL 62133.	Test complied.	P

CONSTRUCTION			
6	**General**		P
6.1	If the operation and maintenance of a power pack by the user involves a risk of injury to persons, a risk of electric shock, or a risk of fire, means shall be provided to reduce the risk. When evaluating a power pack, consideration shall be given to reasonably foreseeable misuse of the product.	Test complied.	P

6.2	Power packs intended for use within a repair facility, and marked as such as indicated in 69.4, shall be provided with instructions containing the statement in 74.3 and shall be marked as shown in 70.17. Power packs that are not intended for use in a repair facility shall be marked in accordance with 70.18.		P
6.3	Outdoor use power packs shall be evaluated for all environmental considerations addressed by this Standard and are intended to be used and stored either outdoors or indoors. Temporary outdoor use power packs shall be evaluated for exposure to rain, shall be marked in accordance with 70.19 and 70.20,and shall be provided with instructions in accordance with 74.5. Indoor use only power packs shall be marked in accordance with 70.21 and shall be provided with instructions in accordance with 74.6. Indoor use only packs need not comply with the environmental considerations in 7.5.		P
6.4	For power packs not marked in accordance with 70.22, the device shall be subjected to the Vibration Test, Section 51.	Test complied.	P

PERFORMANCE			
42	**Power Input Test**		**P**
42.1	The current input to a power pack shall not exceed 110 percent of the marked current rating of the power pack, when the power pack is operated under the conditions of maximum normal load.	.	P
42.2	Maximum normal load shall consist of the maximum current draw while the power pack is operating in all possible modes.		P
43	**Normal Charging Operation Test**		P
43.1	Charging a lithium-ion battery under normal conditions shall not exceed the specified operating region for charging of the cell.		P
43.2	Compliance with 43.1 is checked by the following tests in 43.3 – 43.7.		P
44	**Lithium Charging System Test**		P
44.1	A sample of the power pack subjected to this test shall be considered to comply with this test provided none of the following has occurred: a) There has been no explosion during this test; b) No charring or burning of the medical gauze, cheesecloth or tissue paper has resulted; and		P

	c) The cells shall not have exceeded the upper limit charging voltage by more than 150 mV or, if they have, then the charging system shall be permanently disabled from recharging the battery.		
45	**Capacitor Discharge Test**		N/A
45.1	A power pack provided with filtering capacitors, or other primary capacitors, rated in excess of 0.10μF and connected between one side of the line and ground, shall be subjected to the Capacitor DischargeTest.	No X- capacitors	N/A
46	**Leakage Current Test**		P
	A power pack shall be tested in accordance with 46.2 – 46.7. Leakage current shall not be more than 0.5 mA.		P
47	**Normal Temperature Test**		P
47.1	A power pack, when tested under the conditions of maximum normal load as described in 47.2 shall not reach a temperature high enough to cause a risk of fire, to damage any materials used, or exceed the temperature rises specified in Table 47.1. See Section 39, Surface Temperatures.		P
48	**Dielectric Voltage Withstand Test**		P
48.1	While in a well-heated condition, a power pack shall withstand for 1 minute without breakdown the application of a 60 Hz essentially sinusoidal potential of: a) 1000 volts plus twice the maximum rated voltage between: 1) The primary circuit and dead metal parts; 2) The primary and secondary circuits; 3) Secondary circuits operating above 50 V and dead metal parts; and 4) Secondary circuits operating above 50 V and secondary circuits operating below 50 V. b) 500 volts between: 1) Secondary circuits operating below 50 volts and dead metal parts, and 2) Secondary circuits operating below 50 volts and other secondary circuits operating below 50 V.		P
49	**Leakage Current Following Humidity Conditioning**		P
49.1	A power pack shall comply with the requirements for leakage current in Section 46, Leakage Current Test, following exposure for 48 hours to air having a relative humidity of 88 ±2 percent at a temperature of 32 ±2°C (90 ±4°F).		P
49.2	To determine whether a product complies with the requirement in 49.1, a sample of the power pack is to be heated to a		P

	temperature just above 34° C (93° F) to reduce the likelihood of condensation of moisture during conditioning.		
50	**Abnormal Operation Tests**		P
50.1	A power pack shall not emit flame or molten metal or become a risk of fire, electric shock, or injury to persons when subjected to the tests specified in 50.2 – 50.10. Separate samples are to be used for conducting each test, unless using a sample for more than one test is agreeable to all concerned.		P
50.2	Output short test		P
50.3	Reverse polarity of booster cables		N/A
50.4	Component faults		P
50.5	Relay and solenoid burnout	No relay	N/A
50.6	Printed-wiring board abnormal test		P
50.7	Disconnected fan test		P
50.8	Blocked ventilation test		N/A
50.9	Overcharging test		P
50.10	Internal battery reverse polarity test		P
51	**Vibration Test**		P
51.1	Cells shall not catch fire nor explode during or immediately following the Vibration Test.	Cells shall not catch fire	P
51.2	The Vibration Test shall consist of vibration for 4 hours at a frequency of 22 cycles per second with a displacement of 6.4 mm (1/4 inch) in a vertical plane. The unit is to be mounted as intended during the test.		P
53	**Overload Tests**		P
54	**Strain Relief Test**		P
55	**Strength of Enclosure Tests**		P
55.1	A power pack shall be tested as described in 55.2 and 55.3. Following these tests, the power pack shall: a) Not permit a probe, as illustrated in Figure 7.1, to contact an uninsulated live part that may involve a risk of electric shock; b) Comply with the Dielectric Voltage Withstand Test, Section 48, with the potential applied between live parts and accessible dead metal parts; and c) Not have a permanent distortion of a metallic enclosure that reduces spacings below the minimum values, as specified in Spacings, Section 29.		P
55.2	Impact test		P
55.3	Drop test		P
56	**Mold Stress Test**		P
	The sample is to be placed in an air		P

	circulating oven at a temperature equal to 10 degrees higher than the maximum temperature observed on the enclosure during the temperature test, but not less than 80°C (176°F) or 70°C (158°F) if marked in accordance with 70.22. The sample is to be conditioned in the oven for 7 hours.		
57	**Strength of Handles Test**		P
	A handle used to lift or carry a power pack shall withstand a force of four times the weight of the power pack without breakage of the handle, its securing means, or that portion of the enclosure to which the handle is attached.		P
58	**Stability Test**		N/A
	A power pack shall not tip over but shall return to its normal at rest position when: a) Tipped through an angle of 10 degrees from an at rest position on a horizontal surface; or b) Placed on an inclined plane inclined at an angle of 10 degrees from the horizontal.		N/A
59	**Hydrostatic Strength Test**		P
	A hydrostatic strength test is to be conducted by filling the pressure confining portion of the sample with water so as to exclude all air, connecting the sample to a hydraulic pump, gradually increasing the pressure to the specified test value, and holding it for a period of 1 minute. As a result of the test, the pressure confining portion of the sample shall withstand without rupture a test pressure of five times the maximum pressure developed by the system, or five times the rated pressure of the power pack' s air compressor, whichever is greater	As a result of the test, the pressure confining portion of the sample shall withstand without rupture a test pressure of five times the maximum pressure developed by the system	P
60	**Rain Test**		N/A
	The rain test apparatus is to consist of three spray heads mounted in a water supply pipe rack as illustrated in Figure 60.1. The spray heads are to be constructed in accordance with the details illustrated in Figure 60.2. The water pressure for all tests is to be maintained at 34.5 Pa (5 psig) at each of the spray heads. The distance between the center nozzle and the product is to be 1.5 m (5 feet). The product is to be brought into the focal area of the three spray heads in the position intended during use. The spray is to be directed at a 45 degree angle from the vertical toward the product. The total exposure is to be for 1 hour.	Non-outdoor use	N/A
61	**Tests on Insulating Materials**		P

	The insulating material is to be placed between two opposing electrodes. The electrodes are to be cylindrical brass or stainless steel rods 1/4 inch (6.4 mm) in diameter with edges rounded to a 0.8 mm (1/32 inch) radius. The upper moveable electrode is to weigh 50 ±2 grams (1.76 ± 0.07 ounces) to exert sufficient pressure on the specimen to provide good electrical contact. The test potential shall be as indicated in the Dielectric Voltage Withstand Test, Section 48, and is to be maintained for 1 second.	1000V,1S	P
62	**Accelerated Aging of Gaskets, Sealing Compounds, and Adhesives Test**		N/A
	The requirements in 62.2 – 62.6 apply to gaskets and sealing compounds employed to make an enclosure raintight or rainproof as determined by the Rain Test, Section 60. The requirements in 62.7 apply to an adhesive used to secure a gasket.		N/A
63	**Metallic Coating Thickness Test**		N/A
	The solution used for the test is to be made from distilled water and is to contain 200 grams per liter (26.7 ounces per gallon) of American Chemical Society (ACS) reagent grade chromic acid (CrO3) and 50 grams per liter (6.7 ounces per gallon) of ACS reagent grade concentrated sulfuric acid (H2SO4). The latter is equivalent to 27 milliliters per liter of ACS reagent grade concentrated sulfuric acid, specific gravity 1.84,containing 96 percent of H2SO4.	NO Metallic Coating	N/A
64	**Permanency of Wrapped Hang Tag Marking**		N/A
	a) Tearing at any point for more than 1.6 mm (1/16 inch); b) Movement of the tag more than 12.7 mm (1/2 inch) along the length of the cable; c) Shrinkage, wrinkling, cracking, or other deformation that renders the marking illegible; or d) Visible curling or loosening around the edges of a tag with an adhesive back.	NO Hang Tag	N/A
65	**Power Pack Ampacity Test**		N/A
	A lead-acid power pack with a booster function shall be subjected to the Power Pack Ampacity Test for 10 seconds. Lead acid batteries are to be loaded such that the constant output voltage is 7.2 volts. For Lithium-Ion powered units with protection circuitry, the Power Pack Ampacity Test is to be conducted for 5 seconds and the battery packs may be loaded to the lowest constant output voltage that the battery pack will allow, and this constant voltage will also be included with the battery pack's rating, along with the time duration of the ampacity output. The ampacity is to be recorded for the duration of the test. At the end of the test, the ampacity is to be	No lead-acid power pack	N/A

	recorded and this shall be the power pack's ampacity rating. The Power Pack Ampacity Temperature Test, see 47.3, is to be conducted at the same time as the Power Pack Ampacity Test, but note it is continued longer than to obtain the ampacity rating.		
66	**Back Feed Test**		N/A
	Under both normal operation and single fault conditions, the voltage present at the input connections when the power pack is not connected to the power source shall not exceed 60 V dc, and the available current shall not exceed 3.5mA		N/A
67	**Cold Bend Test**		N/A
	There shall be no evidence of cracks on the inside or outside surfaces after the test has been completed.		N/A
68	**Clamp Tests**		N/A
68.2	Cold drop test		N/A
68.3	Dielectric voltage-withstand test		N/A
68.4	Secureness test		N/A
MARKINGS			
Appendix A	**General**		P
	Risk of Electric Shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.		P
	For continued protection against risk of fire, replace only with same type and rating of fuse.		P
	Refer replacement to qualified service personnel.		P
WARNING			P
	Do not overcharge the internal battery. See Instruction Manual.		P
	Do not smoke, strike a match, or cause a spark in the vicinity of the power pack.		P
	Only charge the internal battery in a well ventilated area.		P
	Risk of Electric Shock. Connect only to properly grounded outlets.		P
	Risk of Injury To Persons. Do not use this product if the power cord or the battery cables are damaged in any way.		P
	Risk of Electric Shock. This cover is provided with an interlock. Do not defeat its purpose or attempt to service without removing cover completely.		P
	Risk of Explosion. This equipment has arcing or sparking parts which should not be exposed to flammable vapors. This equipment should be located at least 457 mm (18 inches) above the floor when used in a repair facility.		P
	This device is not intended for use in a commercial repair facility.		P
	This device is intended to be stored indoors		P

	when not in use. This device shall not be stored or left outdoors when not in use.		
	This device is intended for temporary use outdoors and reasonable care should be exercised when using this device in wet conditions.		P
	This device is intended to be used indoors only. Do not use outdoors.		P
	Risk of Electric Shock and Risk of Fire. This device is not to be stored in a vehicle.		P

42	**TABLE: Electrical data (in normal conditions)**			P
U (V)	I (A)	Irated (A)	P (W)	Condition/status
DC20V	2.0	2.25A	40.0	Normal load
Type-C 5V	1.6	3A	8.0	Normal load
Supplementary information:				

43 normal Charging Test	**Pass** ~~/ Fail / N/A~~
Requirement	The battery is charged in accordance with the charging system instructions starting with a fully discharged battery. Testing is carried out at an ambient temperature of 20 ±5°C (68 ±9°F) and: a) If the power pack is recommended to be operated at a minimum temperature lower than 4° C(39.2°F), the test is also conducted at that minimum temperature plus 0/minus 5 °C (plus 0/minus 9 °F); or b) If the appliance is recommended to be operated at a maximum temperature greater than 40°C (104°F), the test is also conducted at that maximum temperature plus 5/minus 0 °C (plus 9/minus 0 °F).43.4 All individual cell voltages, temperatures and the charging current (or multiple current measurements as in the case of parallel configurations unless analysis makes this unnecessary) are monitored. Cells shall not experience conditions outside their specified operating region for charging (e.g.limits of voltage and current). Below is an example result of such analyses.
Ambient temperature (°C):	**23.6**
Equipment:	**Sample No.:** YQM_FWDY_700
Acceptance criteria	No explosion or catch fire, or chemical leak

Measurement Record

Model	**Charge voltage (V)**	**Charge current (mA)**	**Charge time (h)**	**/**	**Maximum Cell Temperature (°C)**	**Results**
YQM_FWDY_700	14.8	9625	7.0	/	32.9	P
YQM_FWDY_700	14.8	9625	7.0	/	33.3	P
YQM_FWDY_700	14.8	9625	7.0	/	32.1	P
YQM_FWDY_700	14.8	9625	7.0	/	33.3	P
YQM_FWDY_700	14.8	9625	7.0	/	32.9	P
Remark:						

44.6 Lithium Charging System Test						**Pass ~~/ Fail / N/A~~**
Requirement	Components in the charging circuit are faulted as described in 44.6, one at a time, if the outcome of such a fault is uncertain based upon analysis. For each fault condition introduced, the state of the battery before charging is as follows: 1) A series configured battery is to have a deliberate imbalance. The imbalance is to be introduced into a fully discharged battery by charging one cell to approximately 50 percent of full charge; 2) If the test of Section 43, Normal Charging Operation Test, is conducted with an imbalance of less than 50 percent, a series configured battery is to have a deliberate imbalance as established in 44.6; or 3) A single cell or parallel only configuration battery is to be fully discharged.					
Ambient temperature (°C):	**23.6**					
Equipment:				**Sample No.: YQM_FWDY_700**		
Acceptance criteria	No explosion or catch fire, or chemical leak					
Measurement Record						
Model	**Charge voltage (V)**	**Charge current (mA)**	**Charge time (h)**	**Single fault component**	**Maximum Cell Temperature (°C)**	**Results**
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	35.9	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	35.3	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	34.1	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	33.3	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	32.9	P
Remark:						

44.6 Lithium Charging System Test						**Pass ~~/ Fail / N/A~~**
Requirement	Components in the charging circuit are faulted as described in 44.6, one at a time, if the outcome of such a fault is uncertain based upon analysis. For each fault condition introduced, the state of the battery before charging is as follows: 1) A series configured battery is to have a deliberate imbalance. The imbalance is to be introduced into a fully discharged battery by charging one cell to approximately 50 percent of full charge; 2) If the test of Section 43, Normal Charging Operation Test, is conducted with an imbalance of less than 50 percent, a series configured battery is to have a deliberate imbalance as established in 44.6; or 3) A single cell or parallel only configuration battery is to be fully discharged.					
Ambient temperature (°C):	**23.6**					
Equipment:				**Sample No.: YQM_FWDY_700**		
Acceptance criteria	No explosion or catch fire, or chemical leak					

Measurement Record						
Model	**Charge voltage (V)**	**Charge current (mA)**	**Charge time (h)**	**Single fault component**	**Maximum Cell Temperature (°C)**	**Results**
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	35.9	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	35.3	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	34.1	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	33.3	P
YQM_FWDY_700	14.8	9625	7.0	U7 PIN 1-PIN 20	32.9	P
Remark:						
46	**TABLE: touch current measurement**					P

Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
output terminal To enclosure	0.04/0.04 (Normal/Reverse)	0.5	System on, switch “S1” closed
supplementary information:			
Tested voltage:			

47	**TABLE: Thermal requirements**						P
	Supply voltage (V) .....:	DC20V Input	Max. Output	--	--	--	—
	Ambient T_{min} (°C) .....:	--	--	--	--	--	—
	Ambient T_{max} (°C) .....:	--	--	--	--	--	—
Maximum measured temperature T of part/at.....:		T (°C)					Allowed T_{max} (°C)
Big Capacitor		81.1	87.4	--	--	--	105
Y- Capacitor		84.4	89.9	--	--	--	125
Photo coupler		92.1	10.2	--	--	--	125
PCB near U1		91.1	96.8	--	--	--	130
PCB near Q6		83.1	101.5	--	--	--	130
PCB near transformer		95.7	103.4				130
Plastic enclosure inside near transformer		53.4	55.2	--	--	--	Ref.
Plastic enclosure outside near transformer		46.1	49.1	--	--	--	Ref.
Ambient		25.0	25.0	--	--	--	--
Supplementary information:							

Temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information:
(*) worst condition for heating test

48	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
output port to plastic enclosure with metal foil		DC	500	No
Supplementary information:				

49	TABLE: Leakage Current Following Humidity Conditioning		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
output terminal to enclosure	0.01/0.01 (Normal/Reverse)	0.5	System on, switch “S1” closed
supplementary information:			
Tested voltage:			

50	**TABLE: Fault condition tests**		P
	Ambient temperature (°C) ..... :	See below	—
	Power source for EUT: Manufacturer, model/type, output rating ..... :	--	—

Component No.	Fault	Supply voltage (V)	Test time	current (A)	Observation
C1	shorted	DC20V	1sec	0	Unit normal operation, no hazards.
D2	shorted	DC20V	10min	0.02	Unit normal operation, no damage, no hazards.
Q4 pin 1-2	shorted	DC20V	1sec	0	Unit normal operation, no damage, no hazards
Q6 pin 2-3	shorted	DC20V	1sec	0	Unit shut down, no hazards.
Photo coupler pin 1	Opened	DC20V	10min	0.02	Unit normal operation, no damage, no hazards.
Photo coupler pin1-2	shorted	DC20V	10mins	0.02	Unit shut down, recoverable, no damage, no hazards.
Photo coupler pin3-4	shorted	DC20V	10mins	0.02	Unit shut down, recoverable, no damage, no hazards.
USB C port	shorted	DC20V	10min	0.02	Unit shut down, recoverable, no damage, no hazards.

Supplementary information:

1 After fault condition, output voltage complied with SELV requirement.

2. The unit passed 1000V hi-pot test between primary and accessible output connector after single fault test above.

3. After fuse opened condition, same result came out for each source of fuse used and the fuse does not Cracked.

Attachment I Photos of Product

Photo 1

Photo 2

Photo 3

Photo 4

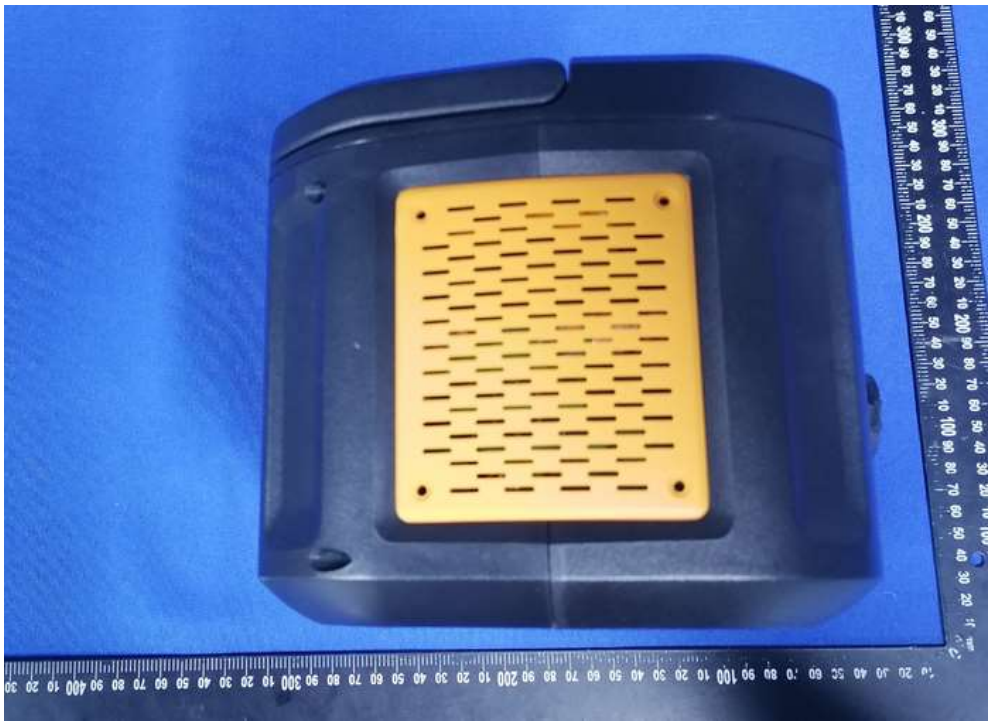

Photo 5

Photo 6

Photo 7

Photo 8

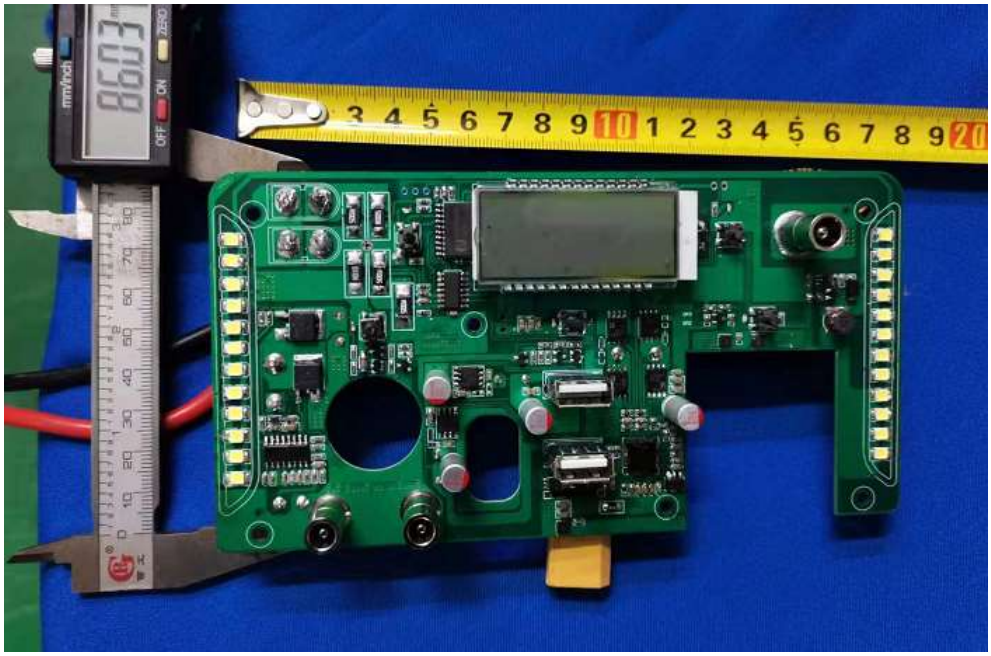

Photo 9

----End of Report----

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