

DESCRIPTION

PRODUCT COVERED:

USL, CNL - Power Bank(s), Model(s): SP8129, EL133, SP8127, SP8126, 32163, **SP8186, T1036, CPP-4690.**

MODEL DIFFERENCE: Models SP8129, EL133 are identical to each other except for model designation.

Model SP8127, **SP8186** is identical to Model SP8129 except for layout of PWB and enclosure shape.

Model SP8126 is identical to Model SP8129 except for layout of PWB and enclosure shape.

Models SP8126, 32163 are identical to each other except for model designation.

Model SP8186 is identical to Model SP8129 except for layout of PWB, rated capacity and enclosure shape.

Models SP8186, T1036, CPP-4690 are identical to each other except for model designation.

ELECTRICAL RATING:

Input Rated Voltage, Vdc	5.0
Input Rated Current, A	1.5
Output Port # 1 Rated Voltage, Vdc	5.0
Output Port # 1 End-of-Discharge Voltage, Vdc	4.5
Output Port # 1 Rated Current, A	1.0
Output Port # 1 Rated Capacity, mAh	2700, 2600 for model SP8186, T1036, CPP-4690
Output Port # 2 Rated Voltage, Vdc	5.0
Output Port # 2 End-of-Discharge Voltage, Vdc	4.5
Output Port # 2 Rated Current, A	2.1
Output Port # 2 Rated Capacity, mAh	2700, 2600 for model SP8186, T1036, CPP-4690
Manufacturer's Maximum Recommended Ambient, °C	0~45°C for Charging; 0~50°C for Discharging

Note: The products have been tested based upon their electrical ratings. No testing with a host product including a charger has been conducted.

CELL CHEMISTRY AND CONFIGURATION:

Cell Model	Cell Chemistry and Type#	Number of Cells	Configuration*: X-S/Y-P
FST18650NB-2200mAh	lithium ion cylindrical	2	1-S/2-P
* - X = No. of cells in series; Y = Number of parallel strings. # - e.g. lithium ion cylindrical, lithium ion prismatic, lithium ion polymer (soft pouch), Ni-Cad prismatic, etc.			

Power Bank, Model(s): SP8129. See Fig.1~Fig.7. Model **SP8127**. See Fig.8~Fig.14
Model(s): SP8126, 32163. See Fig.15~Fig.22. **Model SP8186, T1036, CPP-4690, See Fig.23~Fig.28.**

See Ill.2~Ill.3 for additional views of overall constructions of Model SP8129.
See Ill.4~Ill.5 for additional views of overall constructions of Model SP8127.
See Ill.6~Ill.8 for additional views of overall constructions of Model(s):
SP8126, 32163.

**See Ill.9~Ill.11 for additional views of overall constructions of model(s):
SP8186, T1036, CPP-4690.**

1. Cell - See table below:

Cell Manufacturer	Cell Model No.	Recognized Cells, Y or N*	Recognized Cells	
			File Number	Issue Date
FAR EAST FIRST NEW ENERGY CO LTD	FST18650NB- 2200mAh	Y	MH48852	2012-06-07
Note: See Cell Chemistry and Configuration Table at beginning of report for information on type of cells, number of cells and their configuration in the battery pack circuit.				

Cells are located within the product in a manner that would not result
in blocking of vents in the event of cell venting. Cells are secured in their
enclosure and prevented from movement that would cause damage to connections
and short circuit of parts as described in Fig.3, Fig.11, Fig.20, **Fig.25.**

Connections to cell terminals are constructed as described in Fig.5,
Fig.12, Fig.21, **Fig.26.**

2. Power Bank Enclosure/Case - See Table Below:

Overall Dimensions, L x W x H, mm	Minimum Thickness, mm	Enclosure Material Manufacturer/ Grade	Enclosure Material Type	Enclosure Material Flame Rating at Minimum Thickness*
Approximately 22.3 x 48.3 x 94.5 (SP8129)	0.75 (Plastic Frame)	SABIC (E45329, E121562 or E207780)	CX7240 (GG)	V-0, 90°C
	0.7 (Aluminum Tube)	--	Aluminum Material	--
Approximately 21.6 x 60.3 x 73.2 (SP8127)	0.75 (Plastic Frame)	SABIC (E45329, E121562 or E207780)	CX7240 (GG)	V-0, 90°C
	0.7 (Aluminum Tube)	--	Aluminum Material	--
Approximately 22.4 x 47.9 x 101.1 (SP8126)	TOP: 1.73 (Plastic frame)	SABIC (E45329, E121562 or E207780)	CX7240 (GG)	V-0, 90°C, min. 0.75mm
	BOTTOM: 1.65 (Plastic frame)	SABIC (E45329, E121562 or E207780)	CX7240 (GG)	V-0, 90°C, min. 0.75mm
	0.7 (Aluminum Tube)	--	Aluminum Material	--
Approximately 43.0 x 23.0 x 86.0 (SP8186)	0.99 (Plastic frame)	SABIC (E45329, E121562 or E207780)	CX7240 (GG)	V-0, 90°C, min. 0.75mm
* - V-0, V-1, or compliant with UL 746C 20 mm Flame Test				

Plastic Frame and Aluminum Tube are fitted by Snap-in construction and further secured by Special Screw, see Fig.4 for details.

For model SP8126, Plastic Frame and Metal Part are fitted by snap-in construction and Adhesive.

For model SP8186, Plastics enclosure is secured by snap-in construction and Adhesive.

No openings designed in the enclosure except for the recessed Input/Output connector.

3. Power Bank DC/DC Circuitry and Protective Circuitry - Consists of the following:

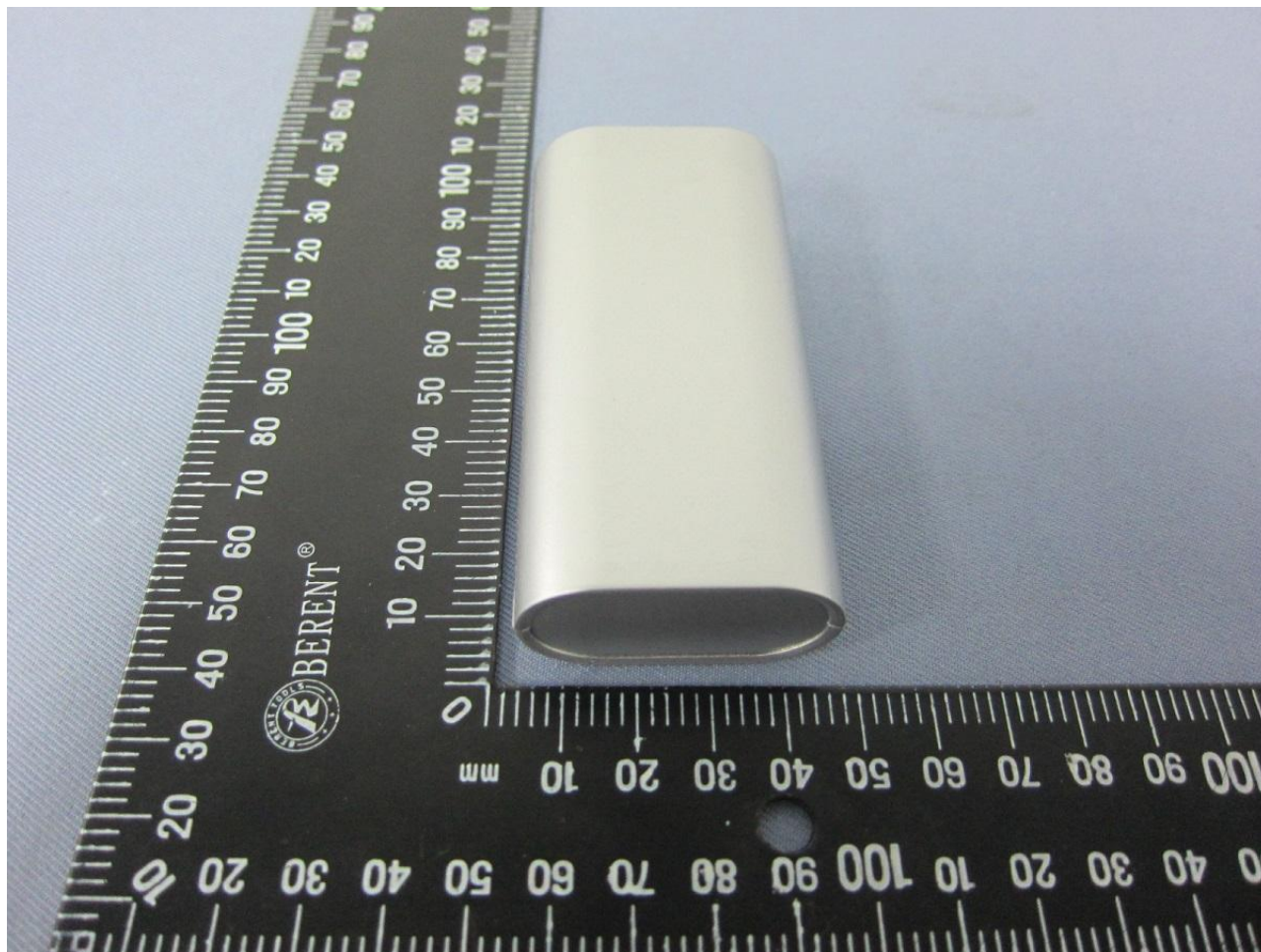
Component Type	Component Location	Component Manufacturer	Component Part No.	Component Ratings
IC (U1) And IC (U2) for model SP8126	On PWB	INJOINIC	AP5613YX	--
IC (U4) And IC (U3) for model SP8126 IC (U2) for model SP8186	On PWB	FUJITSU	DW01	--
MOSFET (Q1, Q2) And MOSFET (Q3, Q4) for model SP8126 MOSFET (Q2, Q3) for model SP8186	On PWB	DP	DP8205	--
Inductor (L1)	On PWB	Various	Various	1uH, 2.5 A

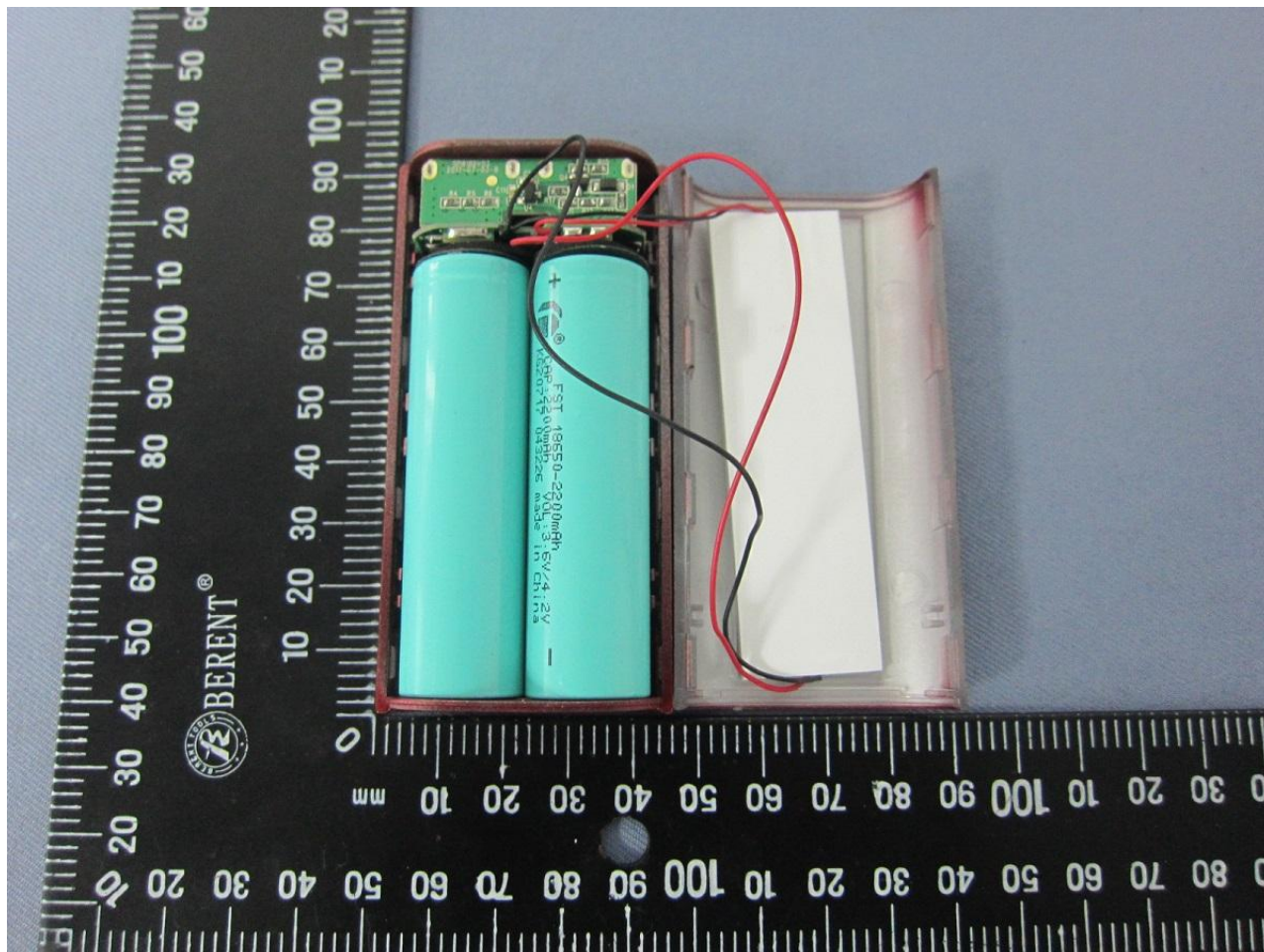
See Ill.3 & Ill.5 & Ill.8 for details of the circuitry.

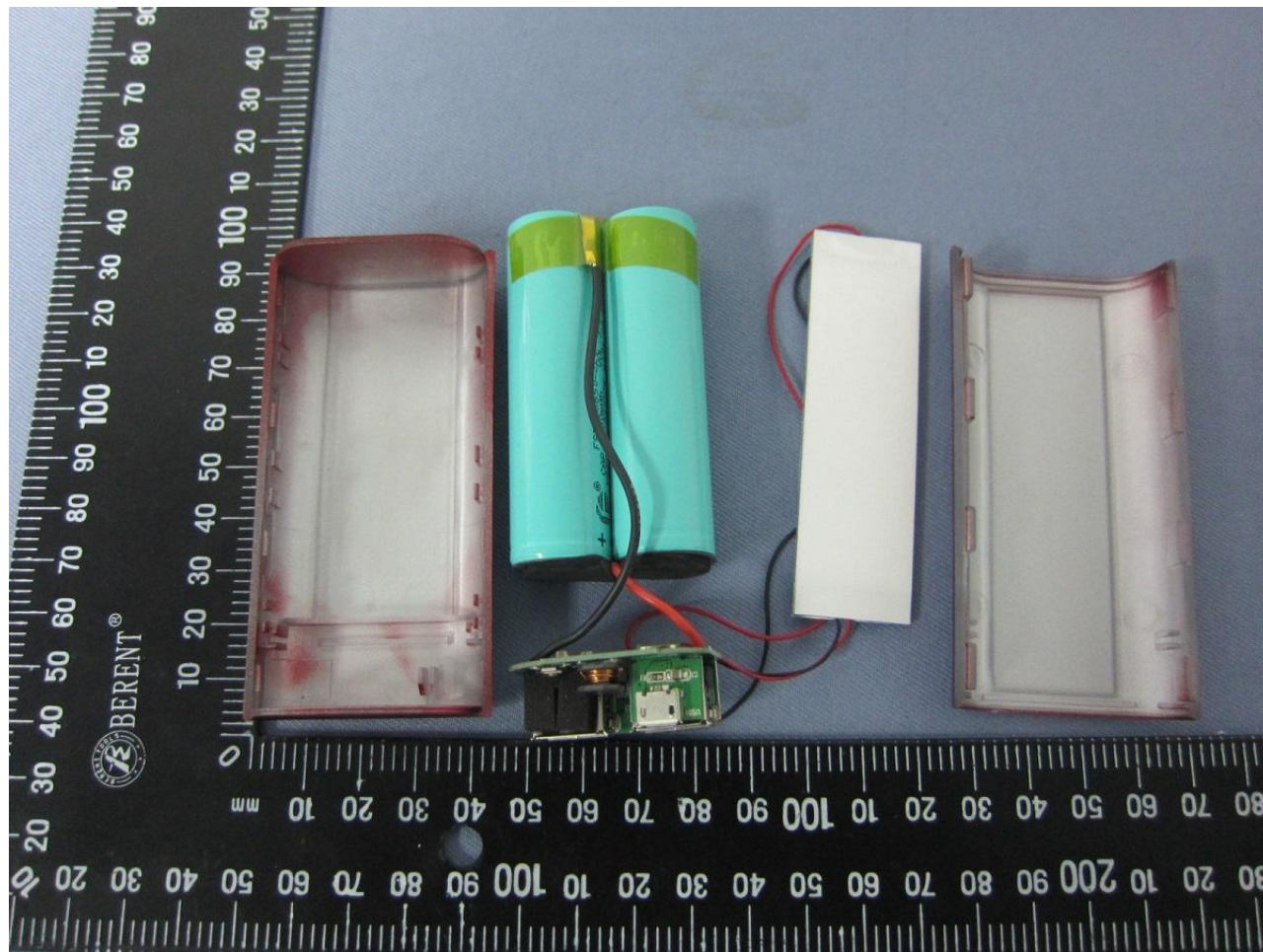
4. External Connector - Recessed in the Plastic Enclosure. See Fig.3, Fig.11.
5. Insulation - R/C (OANZ2), located between cell and other parts, minimum 105 degree C or designated "Flame Retardant". Except for less than or equal to 2 cm³.
- Alternate Insulation - (QMFZ2 or QMTS2), located between cell and other parts, Min. V-2. Except for less than or equal to 2 cm³.
6. Printed Wiring Board - R/C (ZPMV2), Min. V-1, Min. 130°C.
7. Internal Wiring - R/C (AVLV2), Routed away from sharp edges, moving parts. Rated minimum 105 degree C, 30 V, minimum 24 AWG, FEP, PTFE, PVC, TFE, neoprene, or surface marked VW-1 or FT-1.
8. Adhesive - R/C (QOQW2), Seal enclosure for model SP8126, Refers To Fig.18~Fig.19 **and seal enclosure for model SP8186**, Type UB-511, by XIAMEN AIBEISEN ELECTRONIC CO LTD (E470972), Min. 0~105°C.
9. Internal plastic frame - R/C (QMFZ2), for model SP8126's cell holder, refers to Fig.17, rated minimum V-2 or VTM-2 or HF-2, minimum 90°C or volume is less than 2cm³.

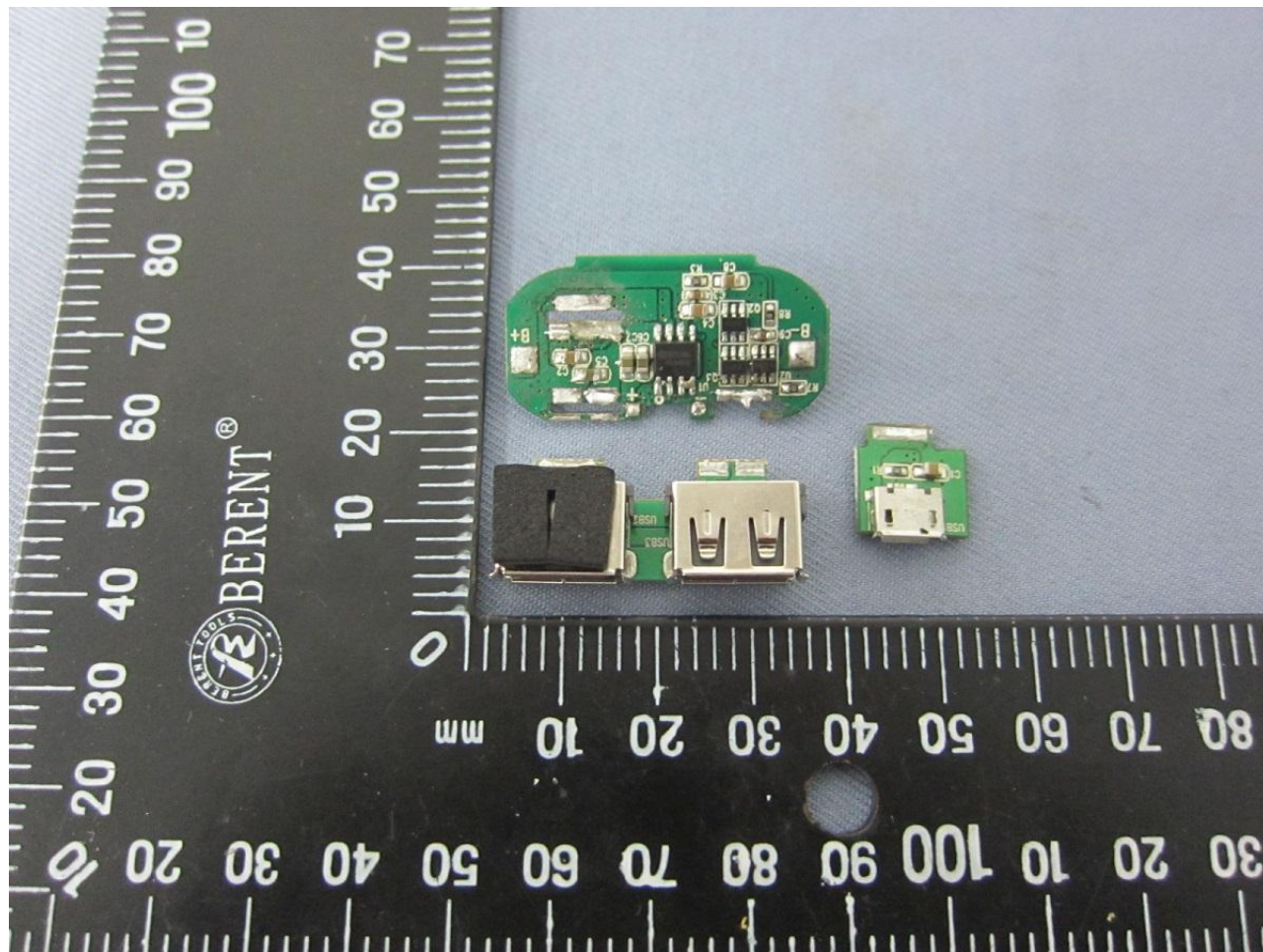
10. Internal Wiring (Connect PWB and LED screen for Model SP8186) - R/C (AVLV2), Routed away from sharp edges, moving parts. Rated minimum 80 degree C, 30 V, minimum 30 AWG, FEP, PTFE, PVC, TFE, neoprene, or surface marked VW-1 or FT-1.

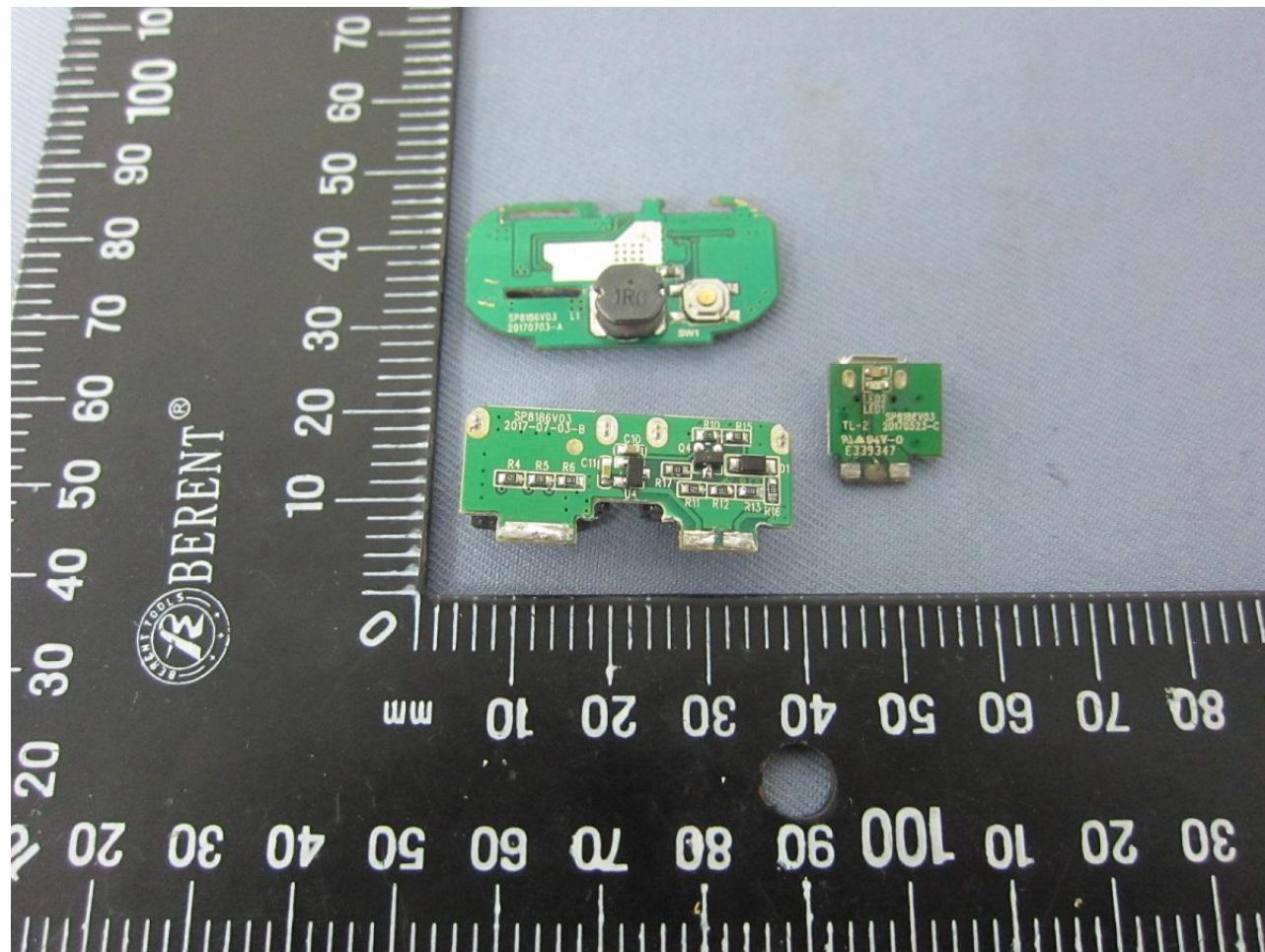


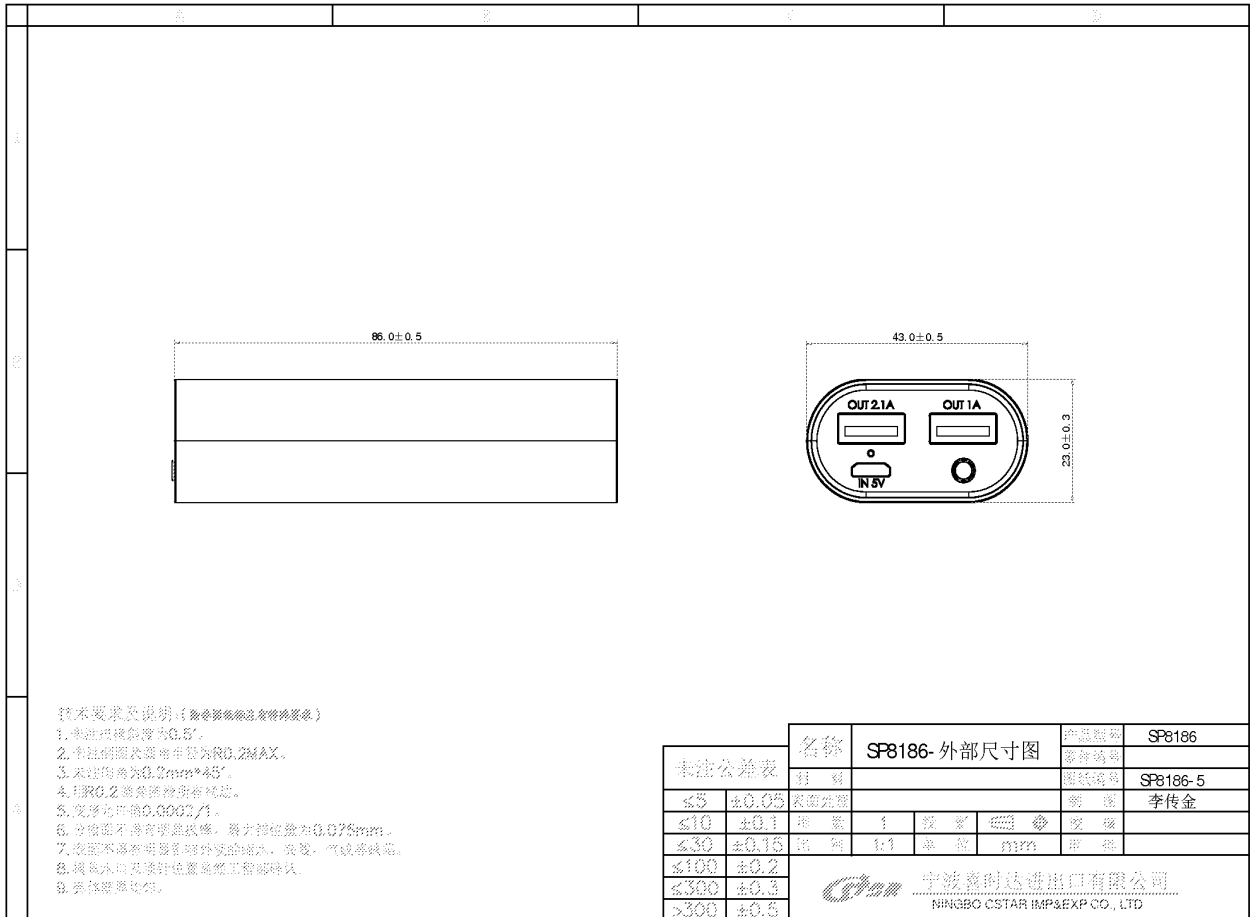




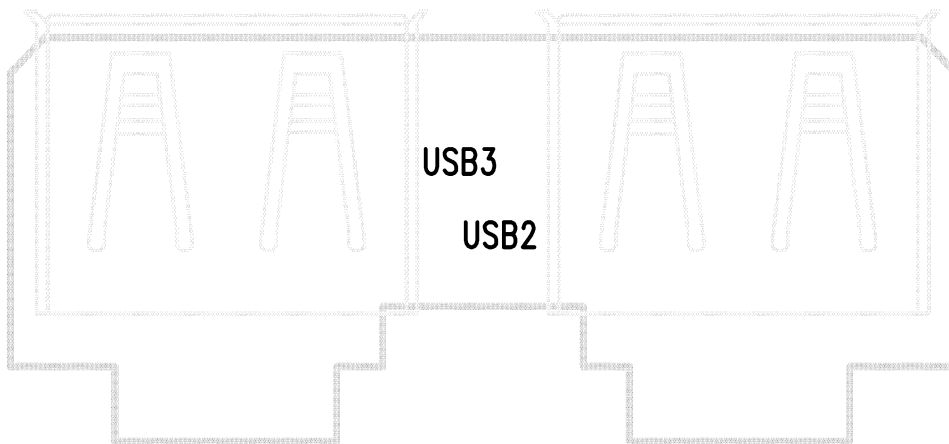




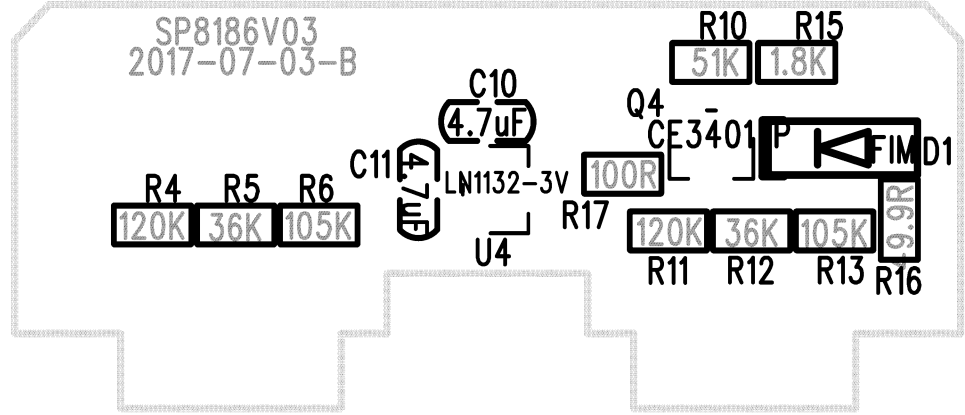




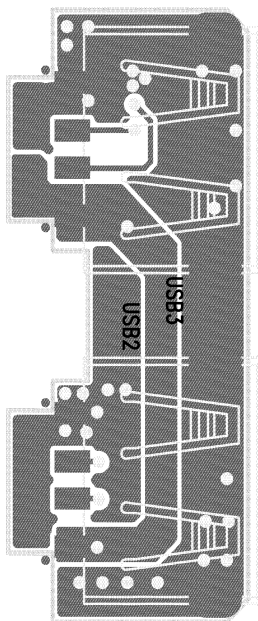
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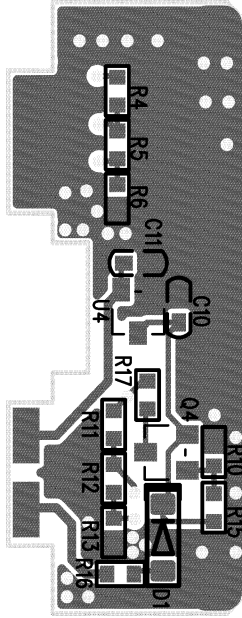
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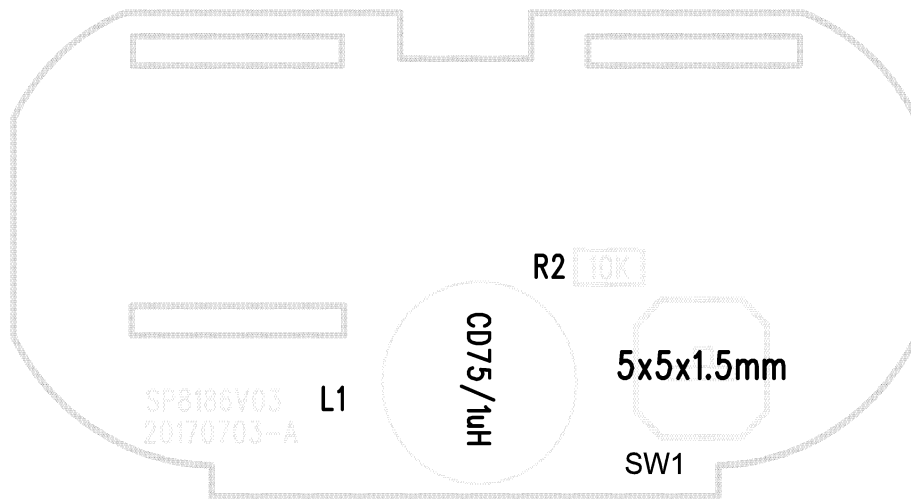
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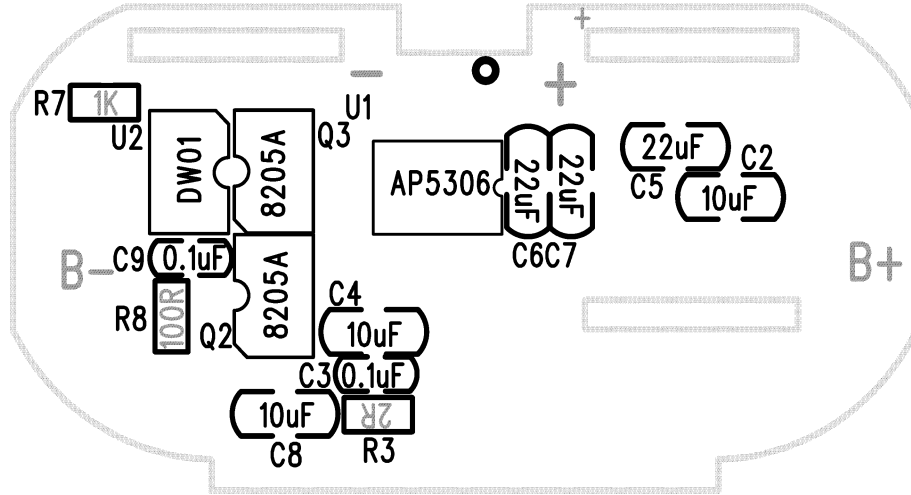
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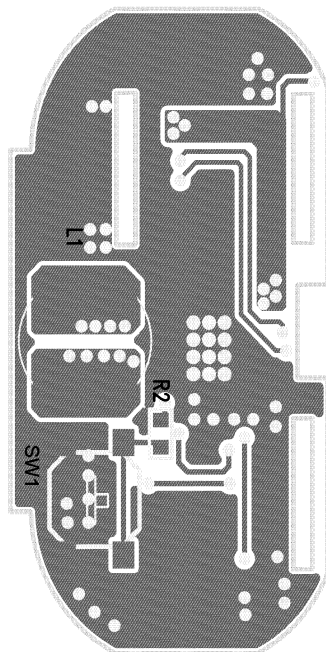
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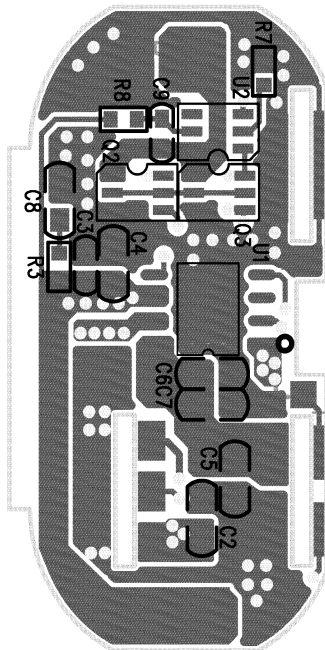
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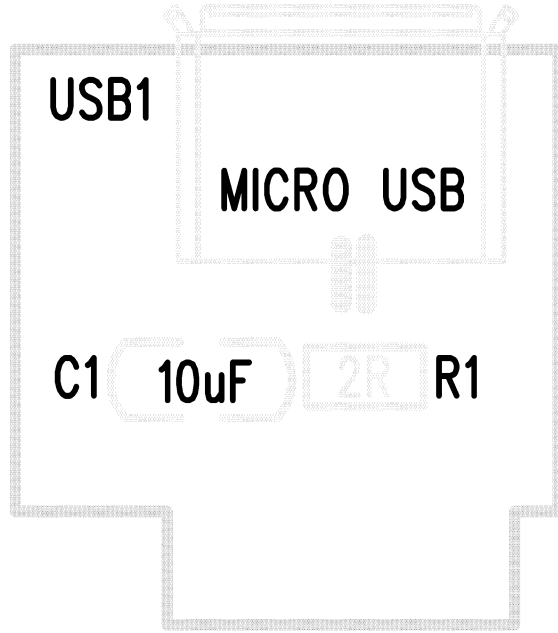
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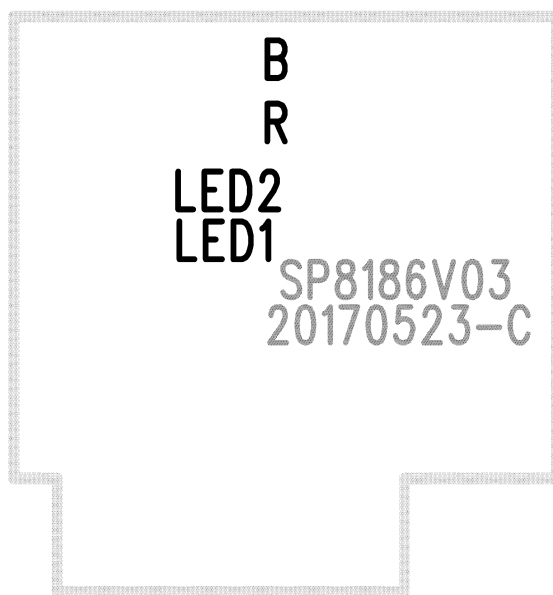
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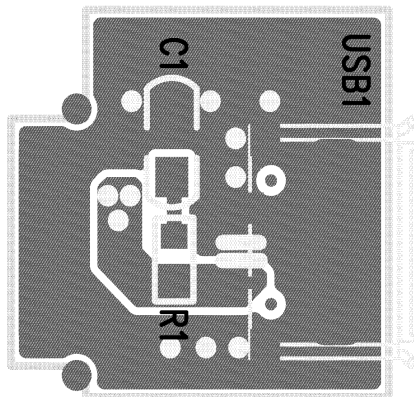
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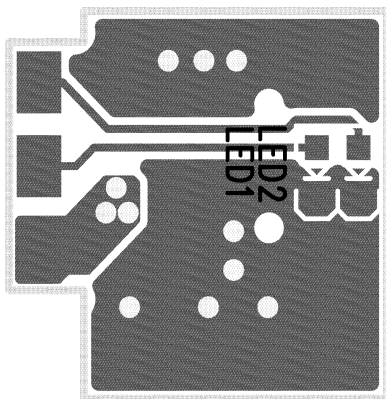
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USER MANUAL for power bank



ITE Accessories Lithium ion battery UL 2056 certified

Model: SP180
Item No.: xxxxx
Input: DC 5V/1500mA
Maximum input: DC 5.3V/2000mA
Output: DC 5V/1000mA, 2.100mA
Battery Cell capacity: 15.64Wh, 3.6V / 4400mAh
Product capacity: 13Wh, 3V / 2000mAh
Operating temperature: 0-45°C for Charging
0-50°C for Discharging
Product Name: Power Bank

EN
CAUTION: Risk of Fire and Burns, don't open, crush, disassemble and dispose of in fire. Accessible surfaces held or touched for short periods only. Don't heat above 50 °C or incinerate. Follow Manufacturer's instructions

FR
DANGER: risque d'incendie et de brûlures, ne pas ouvrir, démanteler, écraser ni jeter au feu. Ne pas toucher ou tenir les surfaces accessibles sur une longue durée. Ne pas chauffer au-dessus de 50 °C. Instructions de fabricant Suivre

MADE IN CHINA


PRODUCT IDENTIFICATION

1. 5V Input Port (Micro USB)
2. 5V Output Port 1 (USB A type)
3. 5V Output Port 2 (USB A type)
4. ON/OFF Button
5. LED indicator
6. LED light

(It will light up during charging and discharging)

Button and indicator	
Stand	LED Indicator
Charging	Flash (Red)
Fully charged	lit (Red)
Working	lit (Blue)
Power On	Press once
Power Off	Click 5 times

ACCESSORY: USB Cable



USB CABLE

HOW TO USE

Instructions:

1. Charging the portable Power bank
 - a. Using your mobile phone's USB adapter. Connect a USB cable to your phone's USB adapter. Using the micro USB connector, connect the other end of the USB cable to the IN port on the portable Power Bank. Plug the USB adapter into the outlet to begin charging.
 - b. Using your computer. Connect a USB cable to a USB outlet on your computer. Using the micro USB connector, connect the other end of the USB cable to an IN port on the portable Power Bank. Make sure the computer is on to begin charging the portable Power bank.
2. Charging mobile phones and other electronic devices.
 - a. The portable power device has a USB output port which has the maximum output current of 2100 mA.
 - b. Connect to USB cable to your mobile phone/device using the appropriate connector. Connect the other end of the USB cable to the OUT port of the portable Power bank. Your mobile phone/device should display the status of charging.
 - c. Remove the USB cable from your mobile device when it is fully charged.

WARNING - In order to charge device use only accessory cable (provided with power bank) or the cable included with your own device by the manufacturer.

WARNING - BATTERY PRECAUTION

When using this product, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Power bank main unit contains an internal lithium ion battery. Upon initial use or after a prolonged storage period, fully charge it once. The unit's full performance is achieved only after 2 or 3 completed charge and discharge cycles.
3. Power banks are not allowed in checked luggage on commercial airline flights. Handle with care and dispose of in accordance to local regulations. Carry on only.
4. To reduce the risk of injury, close supervision is necessary when the product is used near children.
5. Do not put fingers or hands into the product.
6. Do not expose power bank to rain or snow.
7. Use of a power supply or charger not recommended or sold by power bank manufacturer may result in a risk of fire or injury to persons.
8. Do not use the power bank in excess of its output rating. Overload outputs above rating may result in a risk of fire or injury to persons.
9. Do not use the power bank that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
10. Do not disassemble the power bank. Take it to a qualified service person when service or repair is required. Incorrect assembly may result in a risk of fire or injury to persons.
11. Do not expose a power pack to fire or excessive temperature. Never store or use this product in temperatures below 32°F (0°C) or above 118°F (48°C).
12. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
13. Do not charge the power bank while using the power bank to charge a device. Do not charge the power bank for more than 4-6 hours and do not leave unattended.
14. Disconnect the power bank when not in use.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning:
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SAVE THESE INSTRUCTIONS

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TEST RECORD NO. 4

SAMPLES:

A sample Power bank(s), Model(s): SP8186(T1036, CPP-4690) as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

POWER BANK ELECTRICAL RATING:

Input Rated Voltage, Vdc	5.0
Input Rated Current, A	1.5
Output Port # 1 Rated Voltage, Vdc	5.0
Output Port # 1 End-of-Discharge Voltage, Vdc	4.5
Output Port # 1 Rated Current, A	1.0
Output Port # 1 Rated Capacity, mAh	2600
Output Port # 2 Rated Voltage, Vdc	5.0
Output Port # 2 End-of-Discharge Voltage, Vdc	4.5
Output Port # 2 Rated Current, A	2.1
Output Port # 2 Rated Capacity, mAh	2600
Manufacturer's Maximum Recommended Ambient, °C	0~45°C for Charging; 0~50°C for Discharging

INTERNAL BATTERY CHARGING PARAMETERS RECOMMENDED BY MANUFACTURER:

Standard Charging Current, A	Standard Charging Voltage, Vdc	Maximum Charging Current, A	Maximum Charging Voltage, Vdc
2.2	4.2	4.4	4.25

GENERAL:

Model SP8186 is identical to Model SP8129 except for layout of PWB, rated capacity and enclosure shape.

Models SP8186, T1036, CPP-4690 are identical to each other except for model designation. Tests were only conducted on model SP8186.

Test results relate only to the items tested.

All tests are conducted at Dongguan UTL Electronic Technology Co Ltd, located in 1F, HENGZHENG BLDG, NORTH RD OF STATION, NANCHENG DISTRICT, DONGGUAN, GUANGDONG, CHINA under the UL WTDP program.

The following tests were conducted on Model SP8126 which represents aforementioned models.

Battery Pack Component Temperature Test, Battery Pack Surface Temperature Test (UL 2056)	8.1, 8.6-8.8
Lithium Ion System (UL 2056)	8.1
Heating Test (UL 60950-1/CSA C22.2 No. 60950-1-07)	4.5
Energy Hazard Measurements (UL 60950-1/CSA C22.2 No. 60950-1-07)	2.1.1.5
250 N Steady Force Test: (UL 2056)	8.1
Steady Force Tests 250 N (UL 60950-1/CSA C22.2 No. 60950-1-07)	4.2.4
Mold Stress Relief Test: (UL 2056)	8.1
Stress Relief (UL 60950-1/CSA C22.2 No. 60950-1-07)	4.2.7
Drop Impact Test: (UL 2056)	8.1
Drop (UL 60950-1/CSA C22.2 No. 60950-1-07)	4.2.6
Power Input Test (UL 2056):	9
Overload Of Output Ports Test (UL 2056):	10
Capacity Verification Test (UL 2056):	12, 13.2

The test methods and results of the above tests have been reviewed and found in accordance with the requirements (unless noted otherwise in the table above) in the Issue 2 of UL 2056, Outline of Investigation for Safety of Power Banks, issue dated November 3, 2015.

The test methods and results of the above tests also have been reviewed and found in accordance with the requirements (unless noted otherwise in the table above) in the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment-Safety-Part1: General Requirements, CAN/CSA-C22.2 No. 60950-1-07, Second Edition, issue dated October 14, 2014, and UL 60950-1, Second Edition, including revisions through revision date October 14, 2014.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the Issue 2 of UL 2056, Outline of Investigation for Safety of Power Banks, issue dated November 3, 2015, and the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment-Safety-Part1: General Requirements, CAN/CSA-C22.2 No. 60950-1-07, Second Edition, issue dated October 14, 2014, and UL 60950-1, Second Edition, including revisions through revision date October 14, 2014, and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

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Senior Project engineer