

 Prüfbericht-Nr.:
 Auftrags-Nr.:
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Kunden-Referenz-Nr.: N/A Auftragsdatum: July 20, 2021

Client Reference No.: Order date:

Auftraggeber: DONGGUAN OPAQI ELECTRONIC TECHNOLOGY CO., LTD

Client: No.2 Of Xifu Road, HongYeBeiLu, LinCun, TangXia Town, DongGuan, GuangDong.

S

Prüfgegenstand: Power Bank

Test item:

**Bezeichnung / Typ-Nr.:** *Identification / Type No.:* YJ-523B

Auftrags-Inhalt: Test Report

**Prüfgrundlage:**Test specification:
Subject: 2056 No. 2 (11-03-2015)

Wareneingangsdatum: July 21, 2021

Date of receipt:

**Prüfmuster-Nr.:** MTi210621012#01 to *Test sample No.*: MTi210621012#41

**Prüfzeitraum:** July 22, 2021 – September 27,

Testing period: 2021

Ort der Prüfung: Shenzhen Microtest Co., Ltd.

Place of testing:

**Prüflaboratorium:** TÜV Rheinland (Guangdong)

Testing laboratory: Ltd.

Prüfergebnis\*: Pass

geprüft von / tested by:

Test result\*:

Byron Tang

kontrolliert von / reviewed by:

Simon Yuan

September 30, 2021 Simon Yuan/Project Enginer September 30, 2021 Byron Tang/Reviewer

 Datum
 Name / Stellung
 Unterschrift
 Datum
 Name / Stellung
 Unterschrift

 Date
 Name / Position
 Signature
 Date
 Name / Position
 Signature

Sonstiges / Other.

The report contains below parts:

- Main report 19 pages including this cover page;

- Attachment 1: Equipment list: 1 pages; - Attachment 2: Photo document: 5 pages.

**Zustand des Prüfgegenstandes bei Anlieferung:** Prüfmuster vollständig und unbeschädigt Condition of the test item at delivery: Test item complete and undamaged

Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet 3 = satisfactory 4 = sufficient Leaend: 2 = good5 = poor1 = verv goodF(ail) = failed a.m. test specification(s)P(ass) = passed a.m. test specification(s)N/A = not applicableN/T = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.



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# TEST REPORT UL 2056 Outline of Investigation for Safety of Power Banks

 Report Number.
 CN219E7G 001

 Date of issue.
 See cover page

 Total number of pages.
 See cover page

Testing location.....: Shenzhen Microtest Co., Ltd.

101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe

Community, Fuhai Street, Bao 'an District, Shenzhen,

Guangdong, China.

Testing Laboratory...... TUV Rheinland (Guangdong) Ltd.

No.199 Kezhu Road, Guangzhou Science City, Guangzhou

510663, Guangdong Province P.R. China

Test specification:

 Standard
 See cover page

 Test procedure
 See cover page

Non-standard test method.....: N/A

Test Report Form No...... Rev. 01-Jun-2018

**Test Report Form(s) Originator ....:** TÜV Rheinland (Shenzhen) Co., Ltd.

Master TRF.....: Dated 2018-06



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Test item particulars:	
Information about the product needed to establish a correct test program, such as product mobility, type of power connections and similar.	` '
Designation	YJ-523B
Trade mark	N/A
Nominal voltage	5.0Vdc
Rated capacity	9600mAh
Output capacity:	5600mAh
Maximum charge voltage	5.25Vdc
Maximum charge current	2000mA
Final voltage	3.0Vdc
Max Ambient Temperature	45°C max(charge), 50°C max(discharge)
Manufacturer's charge method:	Charging the battery with 2000mA constant current and 5.0V constant voltage until the current less than 200mA
Possible test case verdicts:	
Test case does not apply to the test object	N(/A)
Test object does meet the requirement	P(ass)
Test object does not meet the requirement	F(ail)
Testing:	
Date of receipt of test item	See cover page
Date(s) of performance of tests	See cover page

### General remarks:

This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

The test results presented in this report relate only to the object tested.

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.



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## Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Name:Power Bank Model No:YJ-523B

Type-C Input:5V =2A Max Micro Input:5V=2A Max

USB Output: 5V-2.1A Max (5600mAh)

Battery Capacity:9600mAh

Made in China

Date code :MMDDYY

**Date code: MMDDYY** 

MM indicated product year; DD indicated product month; YY indicated product day;

Caution label will be placed on the immediate package.

### Summary of testing:

Clause(s)	Test(s)
8	General
8.4	TABLE: Abnormal Charging Test for model (battery)
8.5	TABLE: Abusive Overcharge Test for model (battery)
8.7/8.8	TABLE: Battery Pack Component Temperature Test and Battery Pack Surface Temperature Test
8.9	TABLE: Limited power sources
9	Power Input Test
10	Overload of Output Ports Test
12	Capacity Verification Test

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#### **General information:**

#### **Description of the prodcut:**

The product covered in this report is a power bank, intended to use for mobile powering of low voltage electronic devices.

- 1). The component cell (Model: INR21700M50T) has been approved according to UL1642 by UL (Certificate No.: MH61510), see component list table for details.
- 2). The power bank has been evaluated according to UL 2054, except the test items in Clause 8 (details see Page 4).
- 3). The Power bank mainly composed of:
- -Circuit Module
- -Li-ion cell (2pcs, 1S2P)
- -Plastic Enclosure
- -Two Input port (micro Input, Type-C Input), one output port (1 USB output).
- 3). The Input load and output loads can not be operated at the same time.

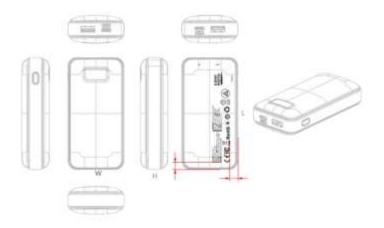
#### Power bank electrical parameter:

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Cut-off Voltage
			2A(Micro)	0.4 \( \( \) \( \) \( \) \( \)	2A(Micro)	0.44/1100/		
YJ-523B	5600mAh	5.0V	2A(Type- C)	2.1A(USB/ Output )	2A(Type- C)	2.1A(USB/ Output )	5.25V	3.0V

#### Built-in cell electrical parameter:

Model	Nominal capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Cut-off Voltage
INR21700M50T	9600mAh	3.63V	1455mA	970mA	3395mA	7275mA	4.2V	2.5V

#### **Construction:**



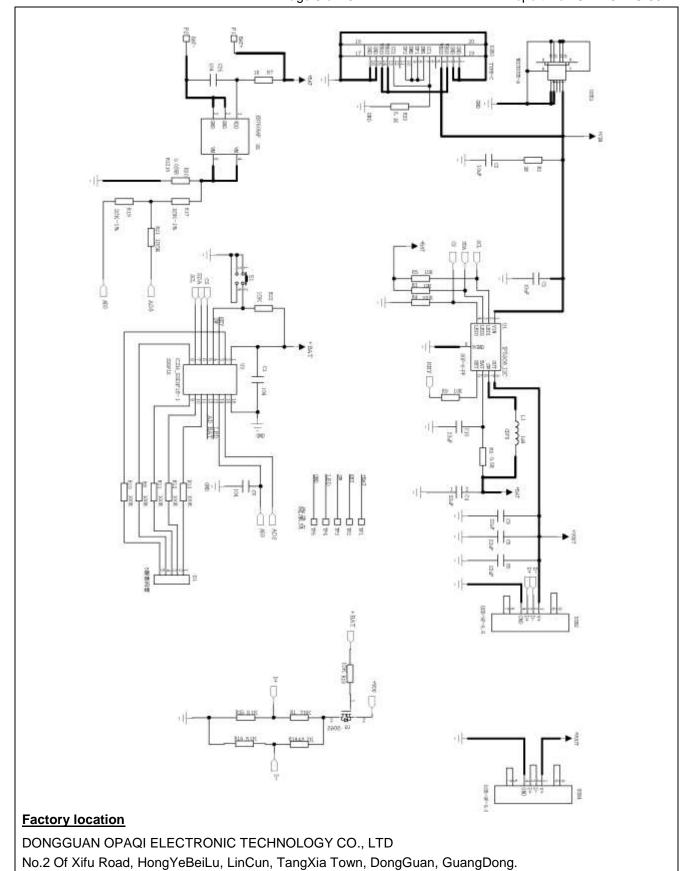
Battery (Unit:L:103.4 mm\*W:52.3mm\*H:26.5mm)

### Circuit diagram:



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		UL 2056		
Clause	Requirement + Test		Result - Remark	Verdict

	CONSTRUCTION		Р
7	General		Р
7.1	Power banks shall comply with the requirements in the Standard for Household and Commercial Batteries, UL 2054.	Tested and complied.	Р
7.2	The input port from external power supply is in general dc jack or USB port, and shall not be of the types described in 1.3.	USB port used	Р
7.3	If the built-in dc/dc converter circuitry generates voltage exceeding 42.4 Vac or 60 Vdc, this circuitry shall comply with the applicable requirements of either the Standard for Information Technology Equipment – Safety – Part 1: General Requirements, UL 60950-1 or the Standard for Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements, UL 62368-1.	No such converter circuitry which can generates such high voltage	N/A
7.4	For power banks with direct plug-in construction, the following shall be met.	Not direct plug-in construction.	N/A
	a) The power bank and its built-in ac/dc power supply shall comply with the applicable requirements of either the Standard for Information Technology Equipment-Safety-Part 1: General Requirements, UL60950-1 or the Standard for Audio/Video, Information and Communication Technology Equipment-Part 1: Safety Requirements, UL 62368-1.		N/A
	b) A barrier shall be provided between the built-in ac/dc power supply and built-in battery pack. The barrier shall comply with the requirements of electrical insulation and fire enclosure of either the Standard for Information Technology Equipment-Safety-Part 1: General Requirements, UL60950-1 or the Standard for Audio/Video, Information and Communication Technology Equipment-Part 1: Safety Requirements, UL 62368-1.		N/A

	PERFORMANCE		Р
8	General		Р
8.1	Unless otherwise superseded by a requirement in this Outline, power banks shall comply with the requirements of battery packs in the Standard for Household and Commercial Batteries, UL 2054.	Tested and complied.	Р
8.2	For the Abnormal Charging Test and Abusive Overcharge Test in the Standard for Household and Commercial Batteries, UL 2054, 8.3 – 8.5 shall be followed.		Р



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	UL 2056		
Clause	Requirement + Test	Result - Remark	Verdict
T		T	
8.3	The tests shall be conducted at the input point of battery protecting circuit. Note – This means dc/dc converter circuitry will be bypassed to result in battery overcharging, which is required for the evaluation of protecting circuit.		P
8.4	For the Abnormal Charging Test in the Standard for Household and Commercial Batteries, UL 2054, the following shall be taken as maximum current Ic: Rated maximum charging current of the built-in battery (rather than the power bank).	See appended table 8.4	Р
8.5	For the Abusive Overcharge Test in the Standard for Household and Commercial Batteries, UL 2054, the C5 amp rate of the built-in battery (rather than the power bank) shall be taken for the purpose of this test.	See appended table 8.5	Ф
8.6	For the Battery Pack Component Temperature Test and Battery Pack Surface Temperature Test in the Standard for Household and Commercial Batteries, UL 2054, 8.7 and 8.8 shall be followed.		Р
8.7	For output loading temperature test, a fully charged power bank shall be discharged. Any load of the output ports that can be operated at the same time shall be considered to result in maximum temperature rise.	See appended table 8.7/8.8	Р
8.8	For input loading temperature test, a fully discharged power bank shall be charged in accordance with manufacturer's specifications. Any load of the output ports that can be operated at the same time shall be considered to result in maximum temperature rise.	See appended table 8.7/8.8	Р
8.9	Each output port shall be a limited power source in accordance with the Standard for Household and Commercial Batteries, UL 2054, the Standard for Information Technology Equipment – Safety – Part 1:General Requirements, UL 60950-1, or the Standard for Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements, UL 62368-1, or a Class 2 power source in accordance with the Standard for Class 2 Power Units, UL 1310.	See appended table 8.9	Р
8.10	Each output port shall be a SELV circuit in accordance with the Standard for Information Technology Equipment – Safety – Part 1: General Requirements, UL 60950-1 or be an ES1 in accordance with the Standard for Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements, UL 62368-1.	SELV circuit, dc output rated less than 60Vdc.	Р



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		UL 2056	·	
Clause	Requirement + Test		Result - Remark	Verdict

9	Power Input Test		Р
9.1	The current input to a power bank shall not exceed 110% of the marked input current rating of the power bank, when the power bank is operated under the conditions of maximum normal load.	See appended table 9	Р
9.2	Maximum normal load shall consist of the maximum current draw while the power bank is operating in all possible modes. This may include charging the built-in battery, and output ports unloaded or loaded at the rated maximum normal load. Any load that can be operated at the same time shall be considered in order to obtain the maximum normal load.	The Input load and output loads can not be operated at the same time.	N/A

10	Overload of Output Ports Test		Р
10.1	Each power output pin of output port shall be overloaded in accordance with 10.2 – 10.5.		Р
10.2	In accordance with manufacturer's specifications, fully charge the built-in battery of power bank.		Р
10.3	The power bank is covered with one layer of cheesecloth and placed on a softwood board covered with one layer of tissue paper.		Р
10.4	Each power output pin of output port shall then be loaded to draw the maximum current, for at least 1 h.		Р
10.5	After this test, the cheesecloth and tissue paper shall remain intact.	See table 10	Р

11	Flammability of Photovoltaic Cells Test		N/A
11.1	This test shall be conducted if the power bank is provided with integral photovoltaic cells as a power source.	No photovoltaic cells used.	N/A
11.2	In accordance with manufacturer's specifications, fully charge the built-in battery of the power bank.		N/A
11.3	The power bank is covered with one layer of cheesecloth and placed on a softwood board covered with one layer of tissue paper.		N/A
11.4	The power bank is subjected to single component fault that is likely to occur and which would result in flammability issue of the photovoltaic cells, such as back-feed of battery power, and is kept in this state for 1 h.		N/A
11.5	After this test, the cheesecloth and tissue paper shall remain intact.		N/A

12	Capacity Verification Test	Р
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	UL 2056					
Clause	Requirement + Test	Result - Remark	Verdict			
1		T				
12.1	The marked electrical capacity of power bank, measured at the power output pin of output port, shall comply with the Standard for Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes – Secondary Lithium Cells and Batteries for Portable Applications, IEC 61960, Clause 7.3.1, Discharge Performance at 20 °C (Rated Capacity), and the modified test method in 12.2.	See table 12	P			
12.2	The power bank is discharged at a constant current equals to rated current of the output port, until its voltage is equal to the end-of-discharge voltage of the output port, specified by the manufacturer.		Р			

	MARKINGS		
13	General		Р
13.1	Unless otherwise superseded by a requirement in this Outline, power banks shall comply with the requirements in the Standard for Household and Commercial Batteries, UL 2054.	See marking plate on page 5	Р
13.2	For electrical ratings, the following information shall be provided	See marking plate on page 4	Р
	<ul> <li>a) Input rating in Vdc and A. If there are more than one input ports, the rating of each port shall be provided;</li> </ul>	Input rating of each port provided.	Р
	b) Output rating in Vdc and A. If there are more than one output ports, it shall include rating of each port and the combined rating (if it is not equal to the summation of all ports); and	Output rating of each port and combined rating marked.	Р
	c) Electrical capacity in Ah or mAh. If there are more than one output ports/output ratings, either the capacity of each port/rating shall be provided, or the minimum capacity of these ports/ratings shall be provided.	Capacity of each output marked.	Р

	INSTRUCTIONS		
14	General		Р
14.1	Power banks shall be provided with legible instructions pertaining to the proper selection and replacement of its power supply or charger.	User manual provided.	Р
14.2	Power banks shall be provided with legible instructions pertaining to a risk of fire or injury to persons associated with the use of the product.	User manual provided.	Р
14.3	An illustration is allowed with a required instruction to clarify the intent but shall not replace the written instruction.	No related illustration in the user manual	N/A
15	Instructions Pertaining to Risk of Fire or Injury to	Persons	Р



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	UL 2056						
Clause	Requirement + Test	Result - Remark	Verdict				
15.1	Instructions pertaining to a risk of fire or injury to persons shall warn the user of reasonably foreseeable risks and state the precautions to be taken to reduce such risks. Such instructions shall be preceded by the heading "INSTRUCTIONS PERTAINING TO RISK OF FIRE OR INJURY TO PERSONS" or the equivalent.	User manual provided.	P				
15.2	Unless otherwise indicated, the text of the instructions in 15.4 shall be in the words specified or words that are equivalent, clear, and understandable. Substitution of the signal word "DANGER" for "WARNING" is allowed when the risk associated with the product is such that a situation exists which, if not avoided, will result in death or serious injury.	User manual provided.	P				
15.3	Numbering of the items in the list in 15.4 and including other instructions pertaining to a risk of fire or injury to persons that the manufacturer determines to be necessary and that do not conflict with the intent of the instructions are acceptable.	User manual provided.	Р				



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	UL 2056		
Clause	Requirement + Test	Result - Remark	Verdict
15.4	The instructions pertaining to a risk of fire or injury to persons shall include those items in the following list that are applicable to the product. The statement "IMPORTANT SAFETY INSTRUCTIONS" or the equivalent shall precede the list, and the statement "SAVE THESE INSTRUCTIONS" or the equivalent shall either precede or follow the list. The word "WARNING" shall be entirely in upper case letters or	User manual provided.	P
	shall be emphasized to distinguish it from the rest of the text.  IMPORTANT SAFETY INSTRUCTIONS  WARNING – When using this product, basic		
	precautions should always be followed, including the following:  a) Read all the instructions before using the product.		
	b) To reduce the risk of injury, close supervision is necessary when the product is used near children.		
	c) Do not put fingers or hands into the product.		
	d) Do not expose power bank to rain or snow.		
	e) Use of a power supply or charger not recommended or sold by power pack manufacturer may result in a risk of fire or injury to persons.		
	f) 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.		
	g) 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.		
	h) Do not disassemble the power bank. Take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or injury to persons.		
	i) Do not expose a power pack to fire or excessive temperature. Exposure to fire or temperature above 100°C may cause explosion. The temperature of 100°C can be replaced by the temperature of 212°F.		
	j) Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.		
1	1.,		1

k) Switch off the power bank when not in use.

SAVE THESE INSTRUCTIONS



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		UL 2056		
Clause	Requirement + Test		Result - Remark	Verdict

APPENDIX A	
Standards for Components	Ī
Standards under which components of the products covered by this outline of investigation are evaluated include the following:	
Title of Standard - UL Standard Designation	
Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements – UL 60730-1	
Low-Voltage Fuses – Part 1: General Requirements – UL 248-1	
Low-Voltage Fuses – Part 14: Supplemental Fuses – UL 248-14	
Marking and Labeling Systems – UL 969	
Polymeric Materials – Use in Electrical Equipment Evaluations – UL 746C	
Printed-Wiring Boards – UL 796	
Tests for Flammability of Plastic Materials for Parts in Devices and Appliances – UL 94	
Thermal-Links – Requirements and Application Guide – UL 60691	
Thermistor-Type Devices – UL 1434	



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2.1 – 2.5	TABLE: List of Crit	ical Componen	ts		Р
Object/part No.	Manufacturer/ trademark	Type/Model	Technical Data	Standard	Marks of Conformity
Cell	Jiangxi Canhui New Energy Science And Technology Co., Ltd	INR21700M50 T	3.7V, 4850mAh	UL 1642	UL MH19896
PCB	SHENZHEN HEHEXIN ELECTRONIC TECHNOLOGY CO LTD	YJ-523B	V-0, 130°C	UL 796	UL E363709
IC (U1)	INJOINIC TECHNOLOGY	IP5407	VIN: 0.3-6V; Tj: -40 ~ 150; Tstg: -60-150°C		Tested with appliance
IC (U5)	XySemi Inc	XB7608A	VIN: -0.3~6V; Tj: -40~85; Tstg: -55~150°C		Tested with appliance
MCU (U3)	CHIP SEA	SOP20	VIN-0.3-6V; TJ: -40-+85°C; Ts: -55-+150°C		Tested with appliance
Plastic Enclosure	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	PC, V-0, 120°C, min. thickness: 1.5mm	UL746C	UL E121562
Lead wire	DONGGUAN YIAO ELECTRONICS CO LTD	3239	200°C, 22AWG, 3KVdc, VW-1	UL 758	UL E348933
Supplementa	ary information:			•	•



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8.4	TABLE: Abnormal Charging Test					Р
Ambient tem	nperature: 23.4°C					<u> </u>
ld 1.455 A						
	Ue	3	.0		V	
	Ic	6.79		A		
	Uc	5.25		V		
Sa	mple No.	MTi21062101 2#1	MTi21062101 2#2	MTi21062101 2#3	MTi21062101 2#4	MTi21062101 2#5
Cell Ca	se temp. (°C)	43.8	44.3	44.1	44.7	44.5
Power bar	nk surface temp. (°C)	40.4	39.9	40.3	41.6	41.0
Faulted P	rotective Device	IC(U5) pin1-pin3 SC				

## Supplementary information:

- 1) The DC/DC converter circuit is by passed (U1 pin1 to pin6 were short-circuited).
- 2) Charging current is 3x Ic=20.37A
- 3) Charge until the power bank fully charged plus additional 7hrs.
- -No explosion or fire, or chemical leak.
- SC: Short circuit.

8.5	TABLE: Abus	ive Overcharge	Overcharge Test				
Ambient tem	Ambient temperature: 21.5°C						
Samp						21062101 2#10	
lc(	mA)	19200	19200	19200	19200		9600
Cell Case	temp. (°C)	37.0	37.3	37.9	37.8		36.2
	surface temp. °C)	33.9	34.2	33.5	33.8		33.5
Faulted Protective Device IC(U5) pin1-pin3 SC							

## Supplementary information:

- 1) The DC/DC converter circuit is bypassed (U1 pin1 to pin6 were short-circuited).
- 2) Test current is 10 times C5 for 4pcs and 5 times C5 for 1pc.
- -No explosion or fire.

SC: Short circuit.



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8.7/8.8	TABLE: Battery Pack Component Temperature Test and Battery Pack Surface Temperature Test	Р
Power ban	k Component Temperature Test	

Sample No.	MTi210621012#11		MTi21062	21012#12	Limited T		
Testing Process	Charging	Discharging	Charging	Discharging	Charging	Discharging	
PCB near U1	81.2	118.8	82.2	118.8	130	130	
PCB near U3	73.1	105.7	76.0	106.7	130	130	
PCB near U5	64.6	85.1	64.9	86.2	130	130	
Lead Wire	63.7	89.0	64.7	88.7	200	200	
Cell surface	53.8	65.8	56.5	67.4			
Ambient	Shift to 45.0	Shift to 45.0	Shift to 45.0	Shift to 45.0			

## Power bank Surface Temperature Test

Sample No.	MTi21062	1012#11	MTi21062	21012#12	Limited T		
Testing Process	Charging	Discharging	Charging	Discharging	Charging	Discharging	
Power bank surface (near USB port)	51.0	60.5	53.5	61.9	75	75	
Power bank surface (near cell)	60.1	66.3	65.2	68.7	75	75	
Ambient	Shift to 45.0	Shift to 45.0	Shift to 45.0	Shift to 45.0			

# Supplementary information:

- 1) Input temperature test: charging with 5Vdc and batteries full discharged.
- 2) Output temperature test: Full charged battery and USB output load 3.08A.
- -Component & surface temperature not exceed the limits.



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8.9 TABLE: Limited power sources

**USB:** Circuit output tested:

Note: Measured Uoc (V) with all load circuits disconnected:

Components	Sample No.	Uoc (V)	I <sub>sc</sub> (A)		١	/A
			Meas.	Limit	Meas.	Limit
Normal condition	MTi21062101 2#13	5.09	3.19	8	13.61	100
U5 pin2-pin 4 SC	MTi21062101 2#15	5.12	3.10	8	12.72	100
U1 pin6-pin 8 SC	MTi21062101 2#16	4.44	6.5	8	14.4	100
R20 SC	MTi21062101 2#17	5.10	3.12	8	12.11	100

supplementary information:

- Output meet the limited power source requirements.

SC: Short circuit

8.10	TABLE: Evaluation of voltage limiting components in SELV circuits					
Component (measured between)			Itage (V) operation)	Voltage Limiting Component		
		V peak	V d.c.			
Fault test per	V		asured (V) in SELV circu / peak or V d.c.)	uits		
supplementar	ry information:					

9	TABLE: P	ABLE: Power Input Test							
U (V)	I (A)	Irated (A)	P (W)	Condition/status					
Type-C input 5Vdc	1.84	2.0		Charging with internal cells discharged to end-of	voltage				
Micro input 5Vdc	1.83	2.0		Charging with internal cells discharged to end-of	voltage				

Supplementary information:

- The input to power bank not exceed 110% of the marked input current rating.



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				0			-1	
10	TAI	BLE: Overload	of Output	Ports Tes	t			Р
	Ambient temperature (°C):					23.5	_	
			EUT: Manufacturer, model/type,			-	USB output: 5V/2.1A	_
Compone No.	ent	Fault	Supply voltage (V)	Test time	Curr drav (A	vn	Observation	
USB outpu	t	Overload	5.12	1h	3.0	8	NC, NT	
Test results	s:							Verdict
- Chemical	leak	s				No		Р
- Explosion of the battery				No		Р		
- Emission of flame or expulsion of molten metal						No		Р
- Emission of flame or expulsion of molten metal No - Electric strength tests of equipment after completion of tests								N/A

NC, NT

Supplementary information:

NC = Cheesecloth remain intact

YC = Cheesecloth charred or flamed

NT = Tissue paper remained intact

NT = Tissue paper remained intact YT = Tissue paper charred or flamed

YT = Tissue paper charred or flamed

- The cheesecloth and tissue paper remain intact.

- cheesecloth and tissue paper shall remain intact

11	TABLE: Flammal	bility of Ph	otovoltai	c Cells Tes	t		N/A
	Ambient temperatu	re (°C)		:			_
	Power source for E output rating						_
Componer No.	nt Fault	Supply voltage (V)	Test time	Current drawn (A)	·	Observation	
İ							
Test result	s:						Verdict
- Chemica	l leaks						
- Explosion	n of the battery						
- Emission	of flame or expulsion	on of molter	n metal				
- Electric s	trength tests of equ	ipment afte	r complet	ion of tests			
- cheesecl	oth and tissue pape	r shall rema	ain intact				
Suppleme	ntary information:				1		l .
	esecloth remain inta	ıct					
YC = Chee	esecloth charred or	flamed					



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12	TABLE: Cap		Р						
Ambient temperature: 23.1°C									
Output 1									
Samp	ole No.	MTi210621012 #18					i210621012 #22		
Discharge current (mA)		2100	2100	2100	2100	2100 21			
Capacity (mAh)		5612.6	5625.2	5625.2 5623.8		5613.7			
Rated cap	Rated capacity (mAh) 5600								
Supplementary information:  - Marked capacity verified and complied.									

--End of Report--

# **Photo Documentation**



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Picture 1. Front view of battery



Picture 2. Back view of battery

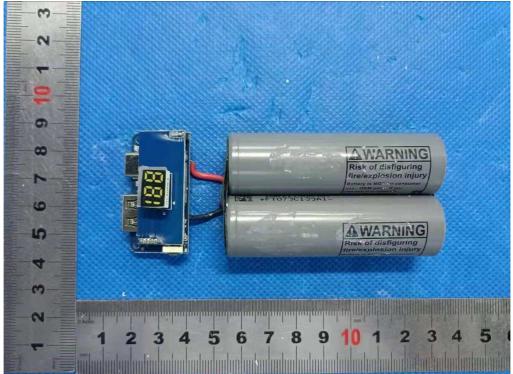
# **Photo Documentation**



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Figure 3. Input port and output port view of Power Bank

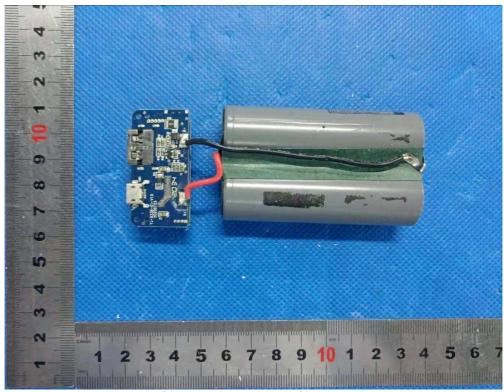


Picture 4. Inner view-1 of battery

# **Photo Documentation**



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Picture 5. Inner view-2 of battery



Picture 6. Front view of cell

# **Photo Documentation**



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Picture 7. Back view of cell



Picture 8. Component view-1 of protection board

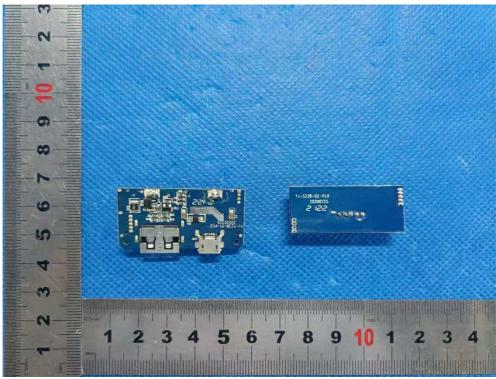
# **Photo Documentation**



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<u>Product:</u> Power Bank

Type Designation: YJ-523B



Picture 9. Component view-2 of protection board