FCC 47 CFR PART 15 SUBPART B

TEST REPORT

Shenzhen Uniwins Technology Co., Ltd

POWER BANK

Model No.: UP-9065

Prepared for	:	
Address	:	

Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
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Date of receipt of test sample	:	October 12, 2017
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	October 12, 2017 ~ October 23, 2017
Date of Report	:	October 23, 2017

FCC TEST REPORT

FCC 47 CFR PART 15 SUBPART B

Report Reference No.	:	**LCS171012042AE**
Date Of Issue.....	:	October 23, 2017
Testing Laboratory Name	:	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address.....	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant'S Name.....	:	
Address.....	:	
Test Specification		
Standard	:	FCC 47 CFR Part 15 Subpart B, ANSI C63.4 -2014
Test Report Form No.	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	:	Dated 2011-03

Test Item Description.....	:	**POWER BANK**
Trade Mark.....	:	N/A
Model/ Type Reference.....	:	UP-9065
Ratings	:	Input:5V⎓3A Output:USB1:5V⎓2A; USB2:5V⎓3A; 9V⎓2A; 12V⎓1.5A
Result	:	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Hana Zeng	Davey Xu	Gavin Liang
Hana Zeng/ File administrators	Davey Xu/ Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS171012042AE	October 23, 2017 Date of issue

Type / Model.....	: UP-9065
EUT.....	: POWER BANK
Applicant.....	**:**
Address.....	:
Telephone.....	: /
Fax.....	: /
Manufacturer.....	**:**
Address.....	:
Telephone.....	: /
Fax.....	: /
Factory.....	:
Address.....	:
Telephone.....	: /
Fax.....	: /

Test Result according to the standards on page 6: **Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Revision	Issue Date	Revisions	Revised By
000	October 23, 2017	Initial Issue	Gavin Liang

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1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	**Standard**	**Limits**	**Results**
Conducted disturbance at mains terminals	FCC 47 CFR Part 15 Subpart B	Class B	N/A
Radiated disturbance	FCC 47 CFR Part 15 Subpart B	Class B	PASS
N/A is an abbreviation for Not Applicable.			

Test mode:		
Mode 1	Charge	Pre-scan
Mode 2	Discharge	Record
Mode 3	Charging And Discharging(Full Load)	Pre-scan

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

EUT	:	POWER BANK
Trade Mark	:	N/A
Model Number	:	UP-9065
Power Supply	:	Input:5V⎓3A Output:USB1:5V⎓2A; USB2:5V⎓3A; 9V⎓2A; 12V⎓1.5A
EUT Clock Frequency	:	≤108MHz

2.2.Description of Test Facility

Site Description
EMC Lab. : CNAS Registration Number. is L4595.

FCC Registration Number. is CN5024.

Industry Canada Registration Number. is 9642A-1.

ESMD Registration Number. is ARCB0108.

UL Registration Number. is 100571-492.

TUV SUD Registration Number. is SCN1081.

TUV RH Registration Number. is UA 50296516-001

NVLAP Registration Code is 600167-0.

2.3.Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.4.Measurement Uncertainty

Test	Parameters	Expanded uncertainty (U_{lab})	Expanded uncertainty (U_{cispr})
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.2 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	N/A

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

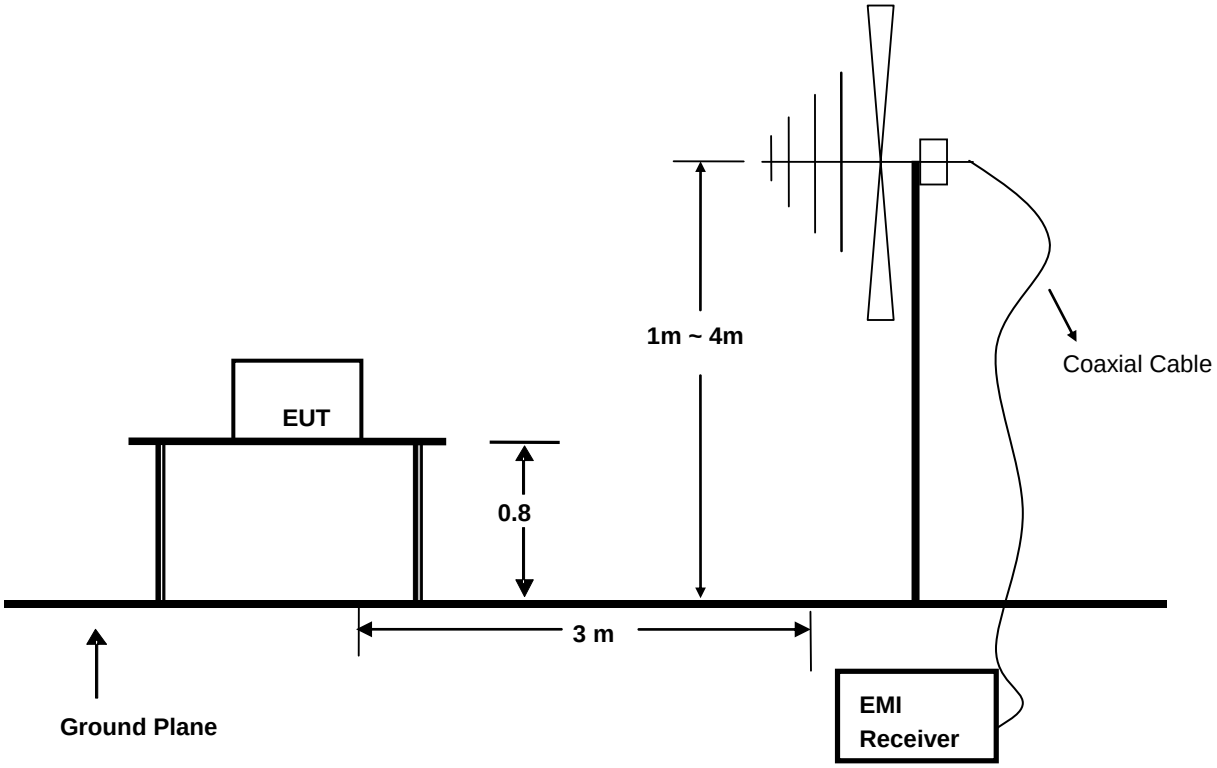
3. RADIATED EMISSION MEASUREMENT

3.1.Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2017-06-17
2	EMI Test Receiver	ROHDE & SCHWARZ	ESR 7	101181	2017-06-17
3	Log per Antenna	SCHWARZBECK	VULB9163	9163-470	2017-04-17
4	EMI Test Software	AUDIX	E3	N/A	2017-06-17
5	Positioning Controller	MF	MF-7082	/	2017-06-17

3.2.Block Diagram of Test Setup



3.3.Radiated Emission Limit (Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

Remark：(1) Emission level (dB)μV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.4.EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

3.5.Operating Condition of EUT

3.5.1.Setup the EUT as shown in Section 3.2.
3.5.2.Let the EUT work in test mode (Mode 2) and measure it.

3.6.Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

The bandwidth of the EMI test receiver is set at 120kHz.

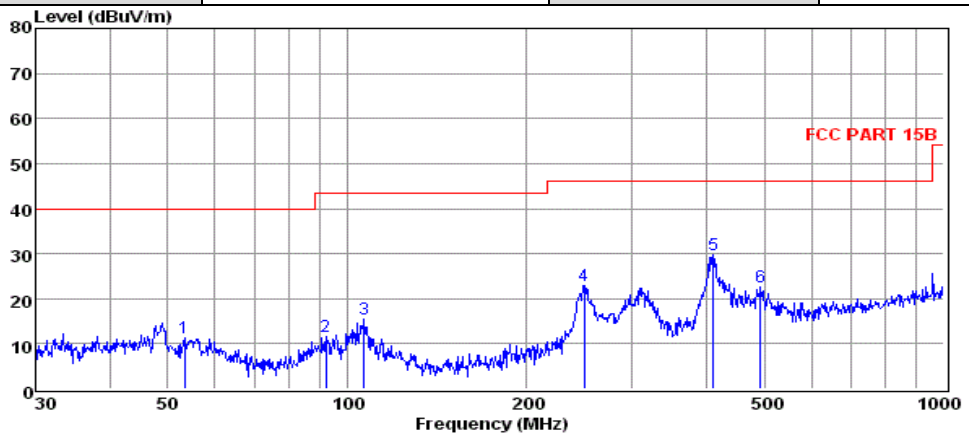
The frequency range from 30MHz to 1000MHz is checked.

3.7.Radiated Emission Noise Measurement Result

PASS.

The scanning waveforms please refer to the next page.

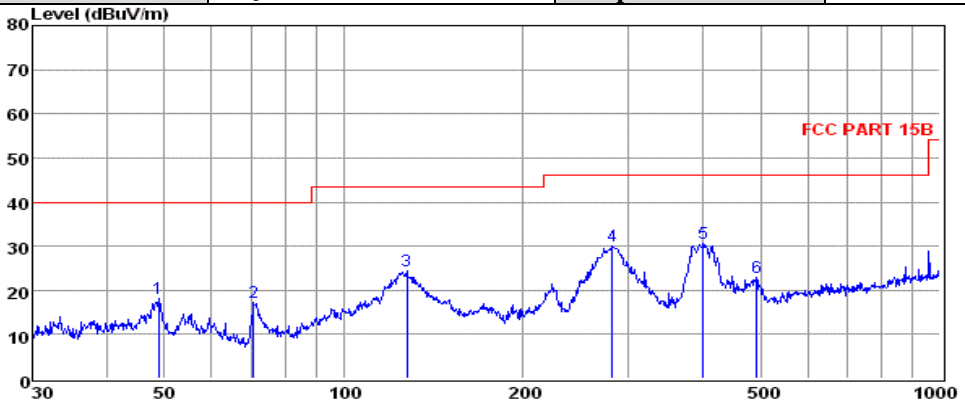
Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Vertical	**Distance**	3m
Test Engineer	LQP luo	**Output**	5V



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	53.32	-2.21	0.46	13.10	11.35	40.00	-28.65	QP
2	92.14	-1.17	0.56	12.30	11.69	43.50	-31.81	QP
3	106.76	2.38	0.68	12.54	15.60	43.50	-27.90	QP
4	249.43	9.87	1.02	12.07	22.96	46.00	-23.04	QP
5	410.38	13.16	1.28	15.27	29.71	46.00	-16.29	QP
6	492.47	4.79	1.50	16.39	22.68	46.00	-23.32	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Horizontal	**Distance**	3m
Test Engineer	LQP luo	**Output**	5V

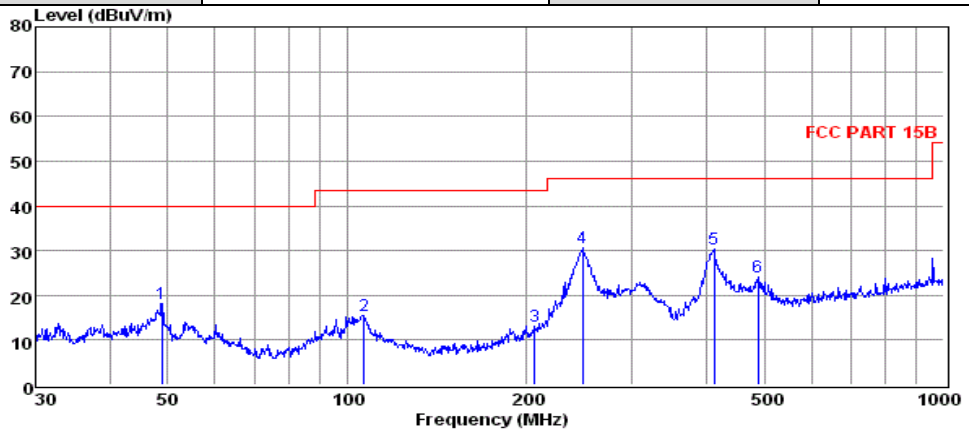


	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	48.84	4.58	0.35	13.32	18.25	40.00	-21.75	QP
2	70.58	8.05	0.55	8.55	17.15	40.00	-22.85	QP
3	127.66	14.34	0.67	9.29	24.30	43.50	-19.20	QP
4	281.99	16.33	1.06	12.71	30.10	46.00	-15.90	QP
5	400.43	14.43	1.20	15.07	30.70	46.00	-15.30	QP
6	492.47	5.00	1.50	16.39	22.89	46.00	-23.11	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note: Pre-Scan all mode, Thus record worse case mode result in this report.

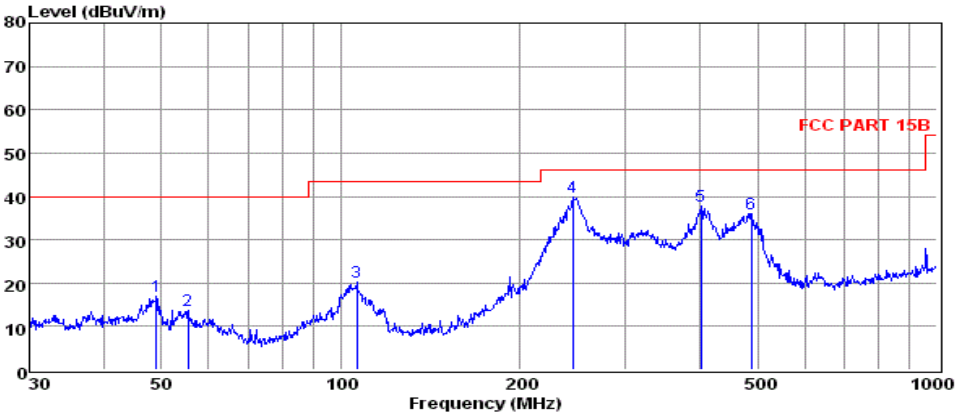
Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Vertical	**Distance**	3m
Test Engineer	LQP luo	**Output**	9V



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	48.84	4.47	0.35	13.32	18.14	40.00	-21.86	QP
2	106.76	2.38	0.68	12.54	15.60	43.50	-27.90	QP
3	206.40	1.19	0.99	10.77	12.95	43.50	-30.55	QP
4	247.68	17.48	0.97	12.07	30.52	46.00	-15.48	QP
5	411.82	13.82	1.35	15.30	30.47	46.00	-15.53	QP
6	489.03	6.60	1.32	16.30	24.22	46.00	-21.78	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Horizontal	**Distance**	3m
Test Engineer	LQP luo	**Output**	9V

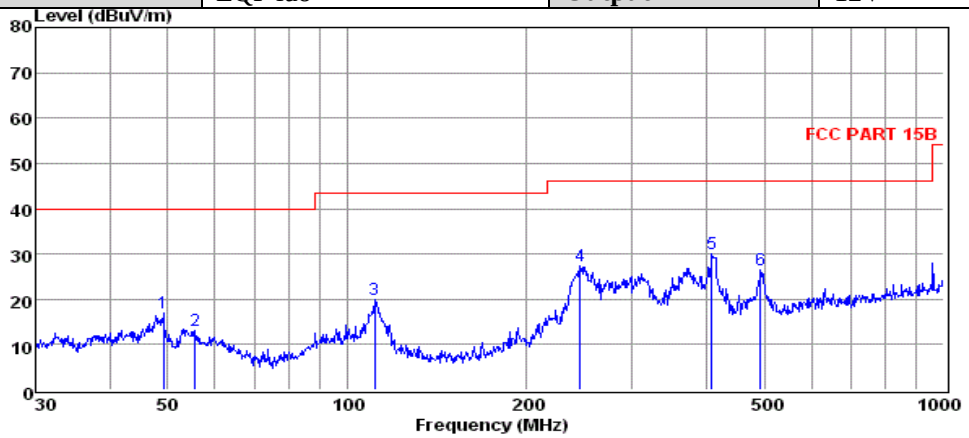


	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.01	3.35	0.35	13.31	17.01	40.00	-22.99	QP
2	55.41	0.10	0.47	12.99	13.56	40.00	-26.44	QP
3	106.39	7.05	0.68	12.58	20.31	43.50	-23.19	QP
4	245.09	26.81	0.90	12.08	39.79	46.00	-6.21	QP
5	401.84	21.48	1.20	15.10	37.78	46.00	-8.22	QP
6	489.03	18.47	1.32	16.30	36.09	46.00	-9.91	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note: Pre-Scan all mode, Thus record worse case mode result in this report.

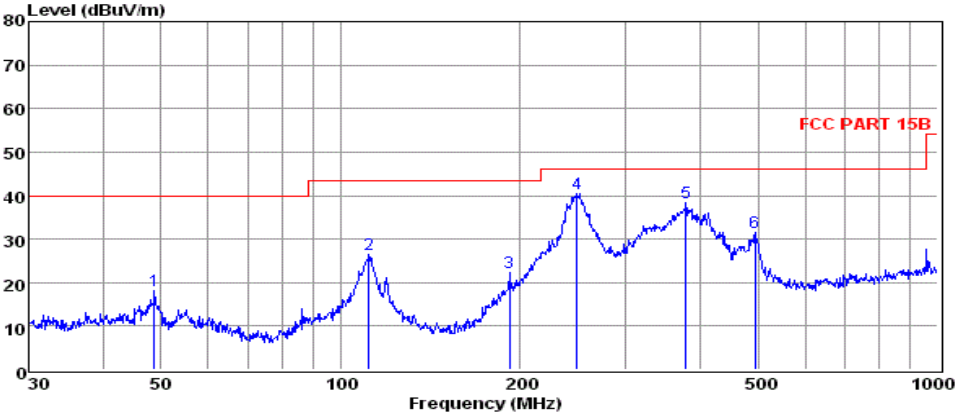
Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Vertical	**Distance**	3m
Test Engineer	LQP luo	**Output**	12V



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.19	3.30	0.35	13.30	16.95	40.00	-23.05	QP
2	55.61	-0.36	0.47	12.98	13.09	40.00	-26.91	QP
3	110.96	7.23	0.61	12.08	19.92	43.50	-23.58	QP
4	245.95	14.33	0.97	12.08	27.38	46.00	-18.62	QP
5	408.95	13.55	1.28	15.24	30.07	46.00	-15.93	QP
6	492.47	8.67	1.50	16.39	26.56	46.00	-19.44	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Model No.	UP-9065	**Test Mode**	Mode 2
Environmental Conditions	24.4℃, 55.6% RH	**Detector Function**	Quasi-peak
Pol	Horizontal	**Distance**	3m
Test Engineer	LQP luo	**Output**	12V



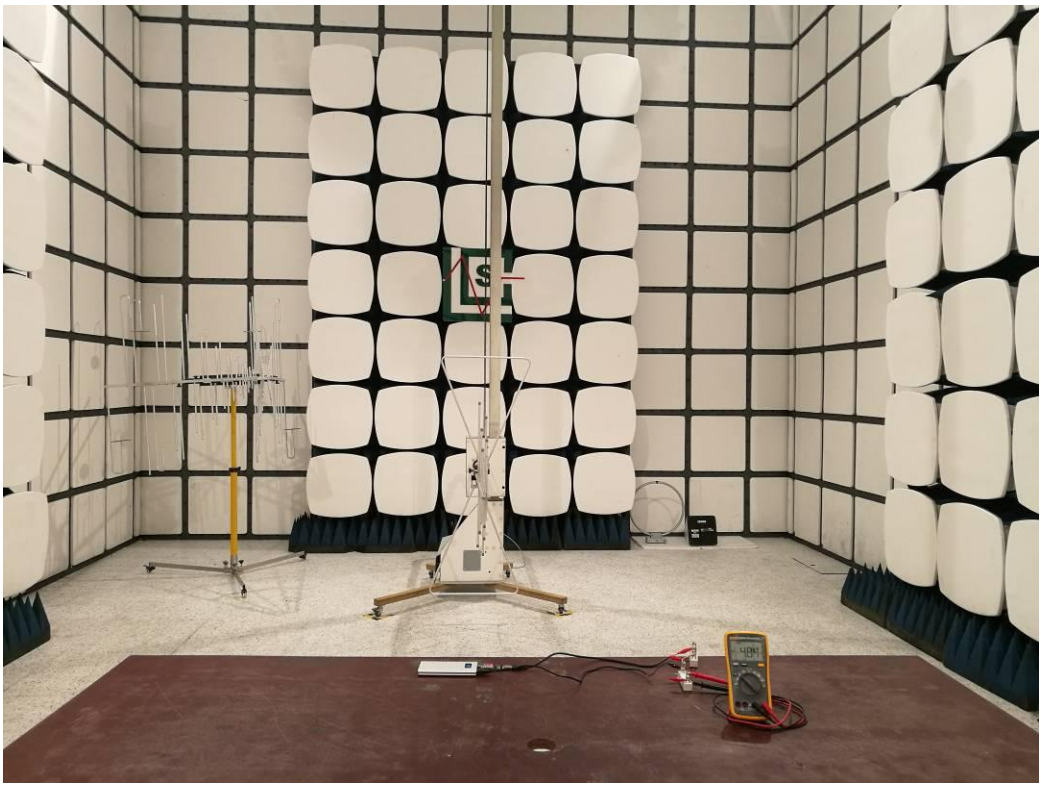
	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	48.67	4.38	0.35	13.33	18.06	40.00	-21.94	QP
2	111.35	13.75	0.61	12.01	26.37	43.50	-17.13	QP
3	191.75	10.84	0.86	10.56	22.26	43.50	-21.24	QP
4	248.55	27.44	1.02	12.07	40.53	46.00	-5.47	QP
5	378.58	22.45	1.30	14.58	38.33	46.00	-7.67	QP
6	494.20	13.58	1.50	16.43	31.51	46.00	-14.49	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note: Pre-Scan all mode, Thus record worse case mode result in this report.

4. PHOTOGRAPH

4.1.Photo of Radiated Measurement



5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

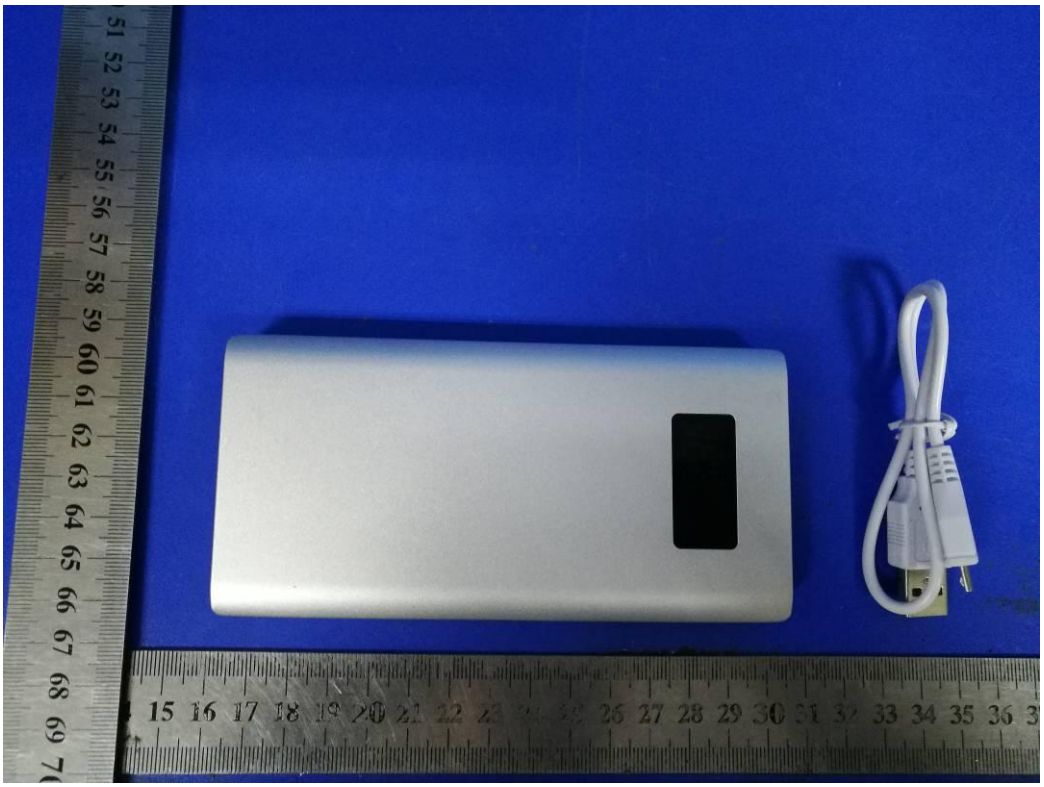


Fig 1

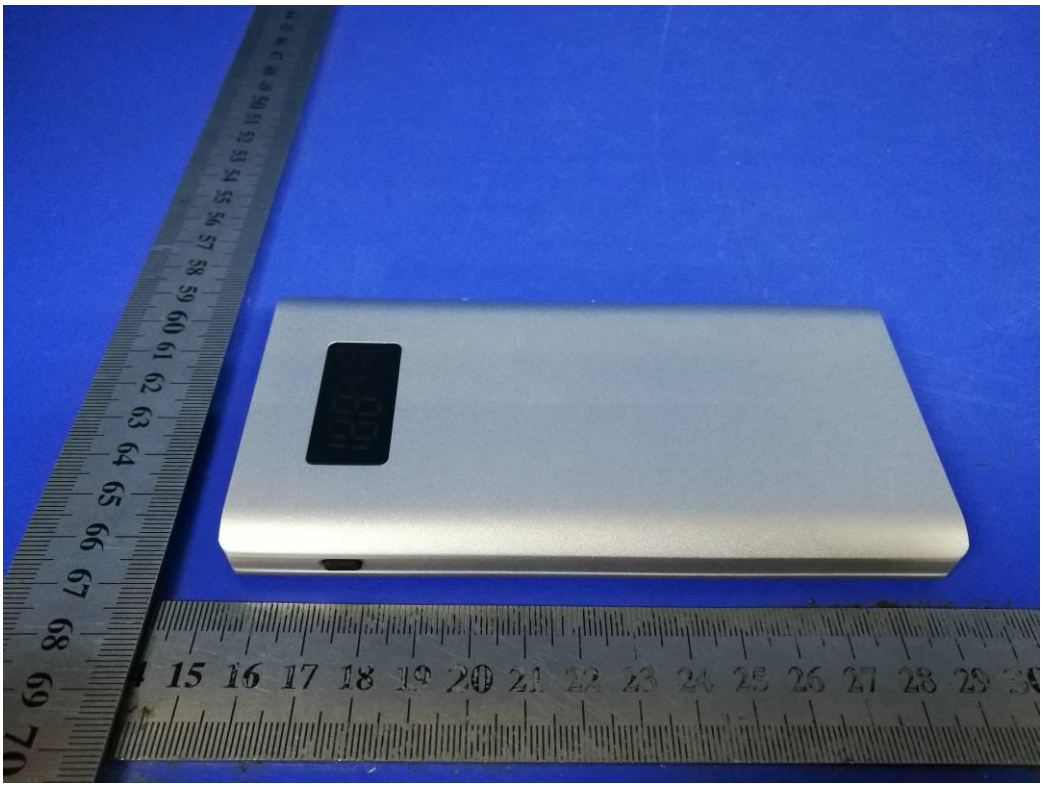


Fig 2

Fig 3

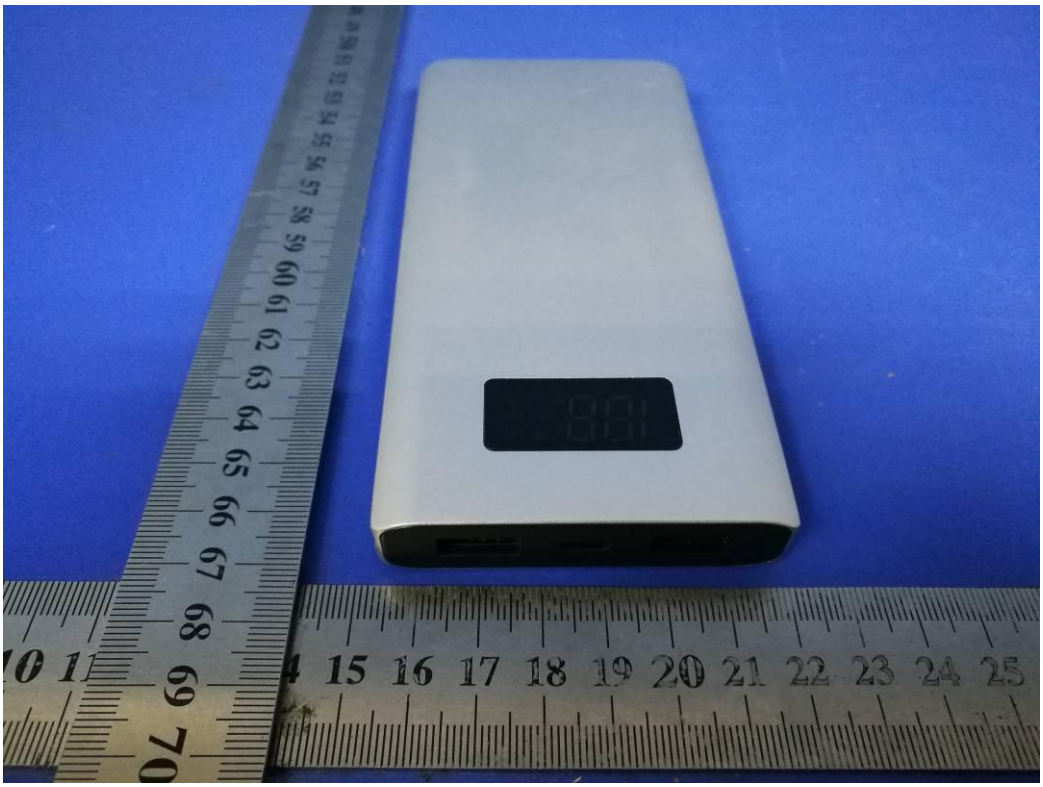


Fig 4

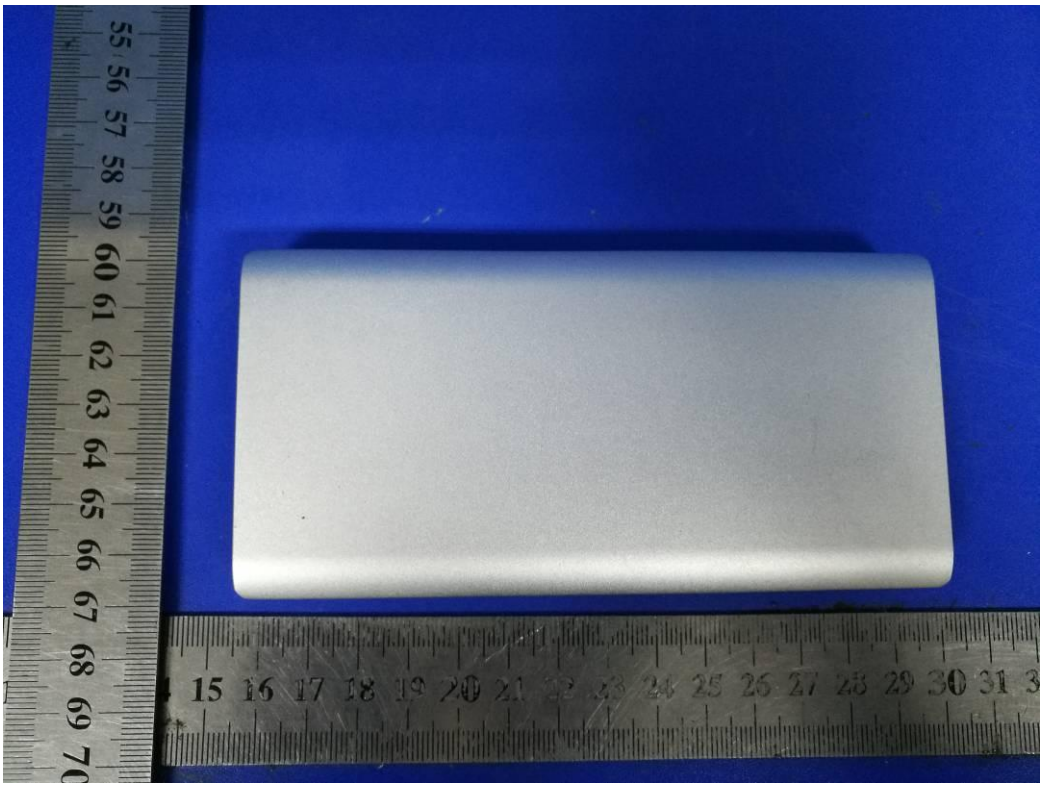


Fig 5

Fig 6

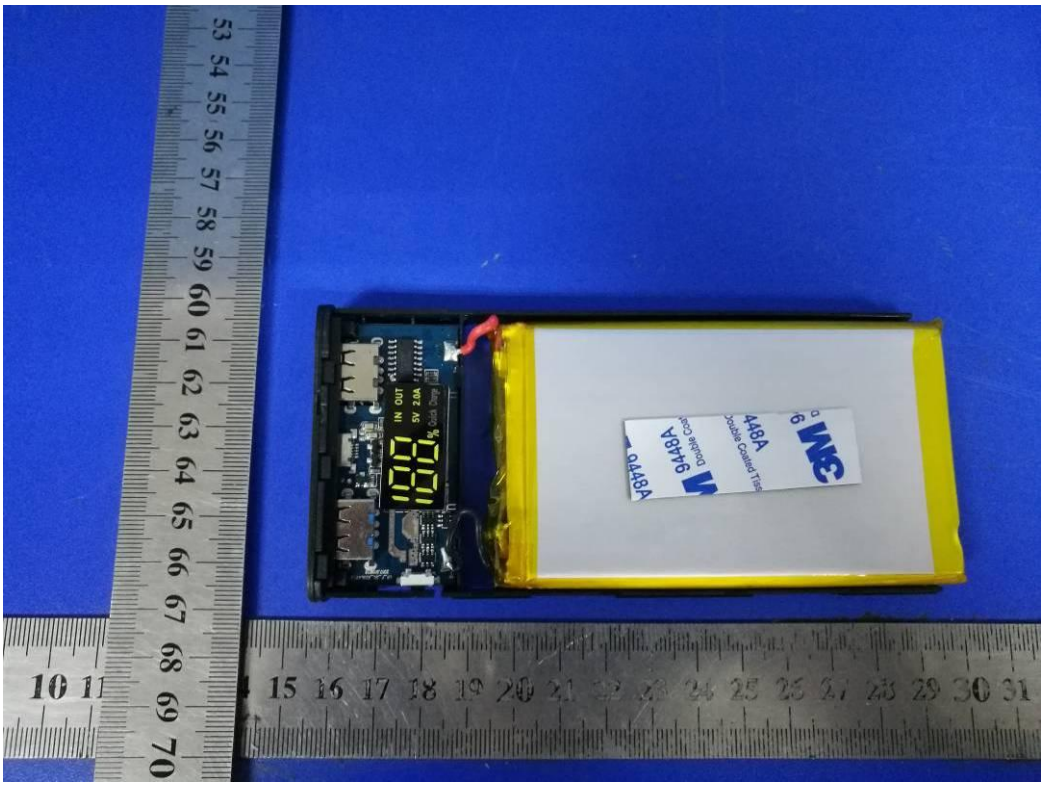


Fig 7

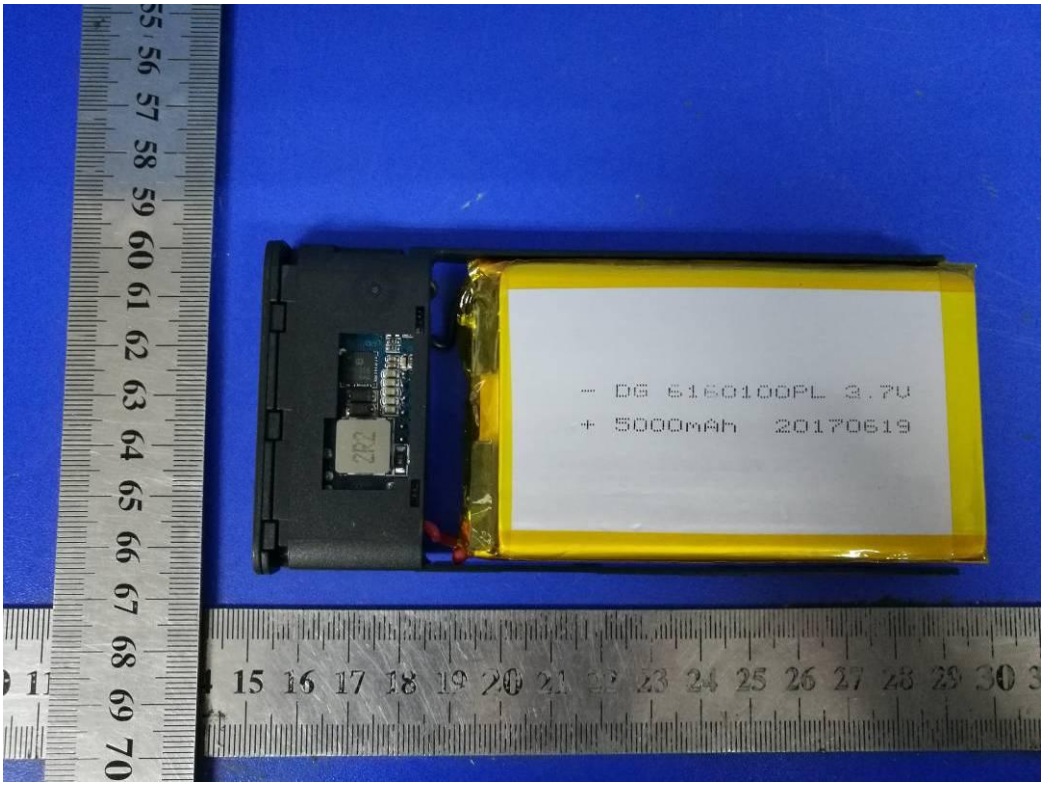


Fig 8

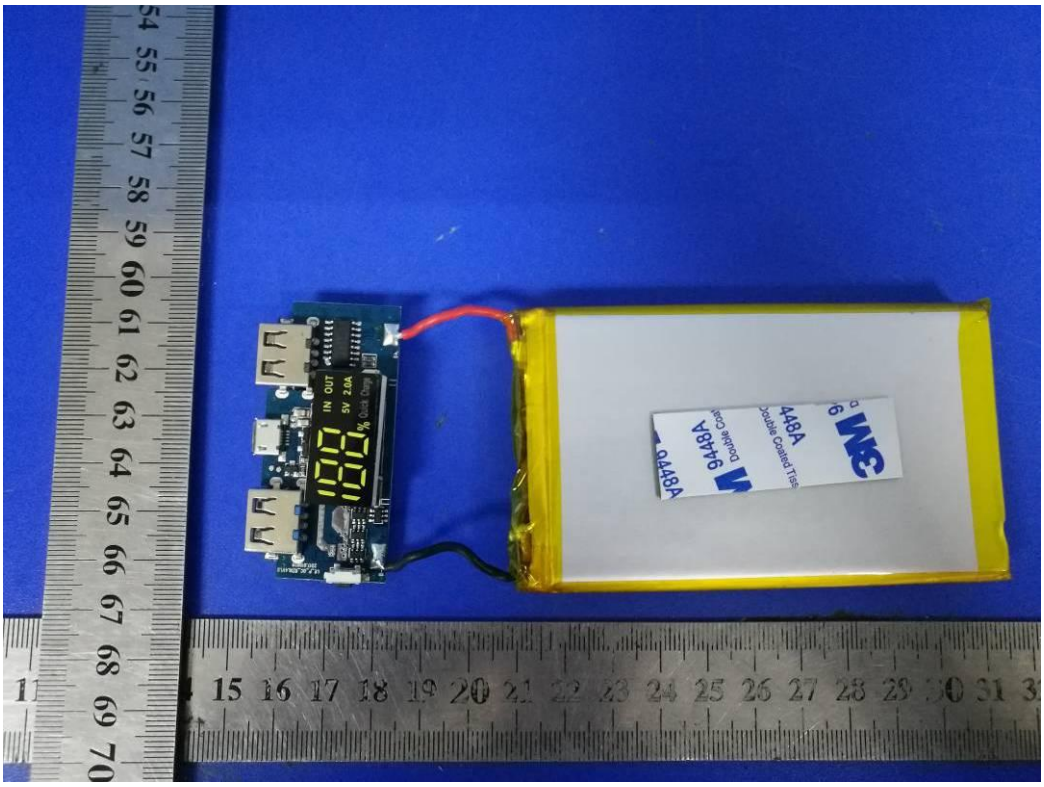


Fig 9

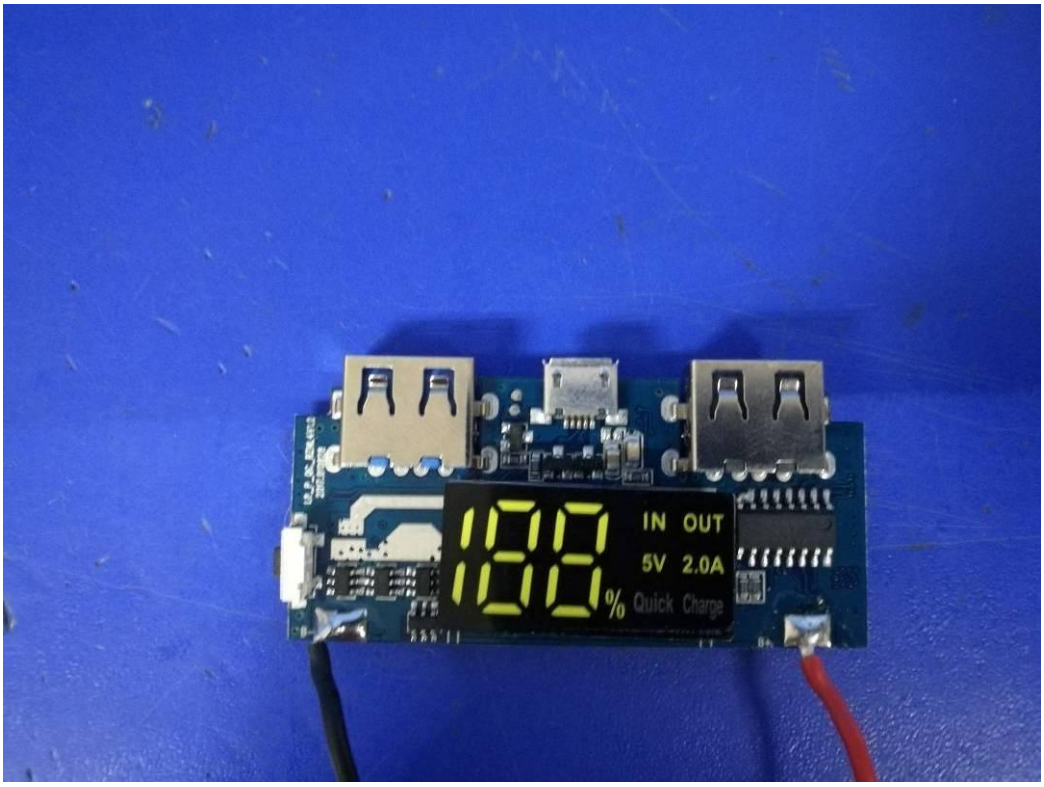


Fig 10

Fig 11

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