TEST REPORT

Reference No.	:	WTS15S0424822-1E
FCC ID	:	2AEMZT-205
Applicant	:	Huizhou SPEED Wireless Technology Co.,Ltd.
Address	:	SX-01-02 Shangxia Section, Hi-tech District of East-river, Huizhou, Guangdong, China
Manufacturer	:	Huizhou SPEED Wireless Technology Co.,Ltd.
Address	:	SX-01-02 Shangxia Section, Hi-tech District of East-river, Huizhou, Guangdong, China
Product Name	:	Wireless charging power bank
Model No.	:	T-205
Standards	:	FCC PART18: 2014
Date of Receipt sample	:	Apr. 08, 2015
Date of Test	:	Apr. 08 - 17, 2015
Date of Issue	:	May 12, 2015
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Zero Zhou / Project Engineer

Approved by:

Philo Zhong / Manager

2 Test Summary

Test Items	Test Requirement	Test Method	Result
Conducted Emissions (150kHz to 30MHz)	18.307(c)	FCC Measurement Procedure MP-5	Pass
Radiated Emissions (9kHz to 30MHz)	18.305(c)	FCC Measurement Procedure MP-5	Pass

3 Contents

4 General Information

4.1 General Description of E.U.T.

Product Name	:Wireless charging power bank
Model No.	:T-205
Model Description	: N/A
Transmitting Frequency	: 110-205KHz

4.2 Details of E.U.T.

Technical Data ..... : Battery DC 3.7V 4500mAh *2
USB Input: DC 5V/2A
USB1 Output: DC 5V/2.1A
USB2 Output: DC 5V/2.1A
Wireless Output: DC 5V/1A

4.3 Test Facility

The test facility has a test site registered with the following organizations:

- **IC – Registration No.: 7760A-1**

Waltek Services(Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration 7760A-1, July 12, 2012.

- **FCC – Registration No.: 880581**

Waltek Services (Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581, April 29, 2014.

- **FCC – Registration No.: 328995**

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 328995, December 3, 2014.

5 Equipment Used during Test

5.1 Equipments List

Conducted Emissions						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	100947	Sep.15, 2014	Sep.14, 2015
2.	LISN	R&S	ENV216	100115	Apr.10, 2015	Apr.09, 2016
3.	Cable	Top	TYPE16(3.5M)	-	Sep.15, 2014	Sep.14, 2015
3m Semi-anechoic Chamber for Radiation Emissions						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	Test Receiver	R&S	ESCI	101296	Sep.15,2015	Sep.14,2016
2.	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.15,2015	Sep.14,2016
3.	Amplifier	Compliance pirection systems inc	PAP-0203	22024	Sep.15,2015	Sep.14,2016
4.	Cable	HUBER+SUHNER	CBL2	525178	Sep.15,2015	Sep.14,2016

5.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
MacBook Air	Apple	A1465	C17KTQDNF5N7
Mobile Phone	Apple	iPhone 6	/

5.3 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±3.64dB	(1)
Radiation Emission	9KHz~30MHz	±5.03dB	(1)

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.4 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

6 Conducted Emission Test

Test Requirement ..... : FCC CFR 47 Part 18 Section 18.307(c)

Test Method ..... : ANSI C63.4:2003 and FCC MP-5

Test Result ..... : Pass

Frequency Range ..... : 150kHz to 30MHz

Class ..... : Class B

Limit ..... :

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50

6.1 E.U.T. Test Condition

Operating Environment:

Temperature ..... : 23°C

Humidity ..... : 53.6%RH

Atmospheric Pressure ..... : 101kPa

EUT Operation:

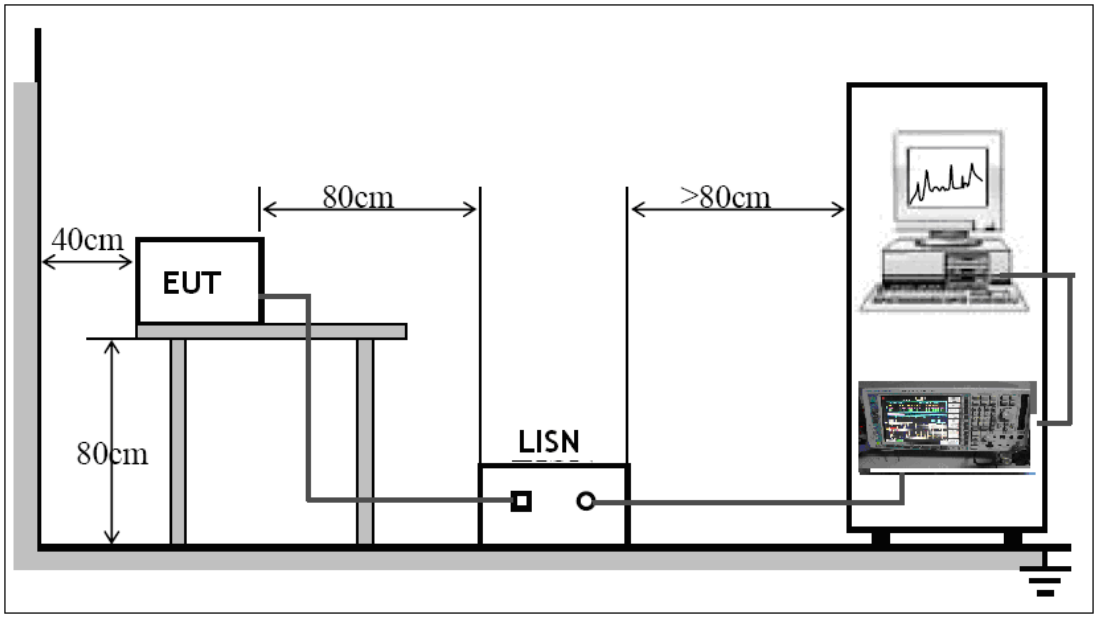
Input Voltage ..... : DC 5V

Operating Mode ..... : Charging with R-6S mode, Charging with R-6p mode

Remark ..... : The worst mode is Charging with R-6p mode and the data is shown as follow.

6.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.4:2003.

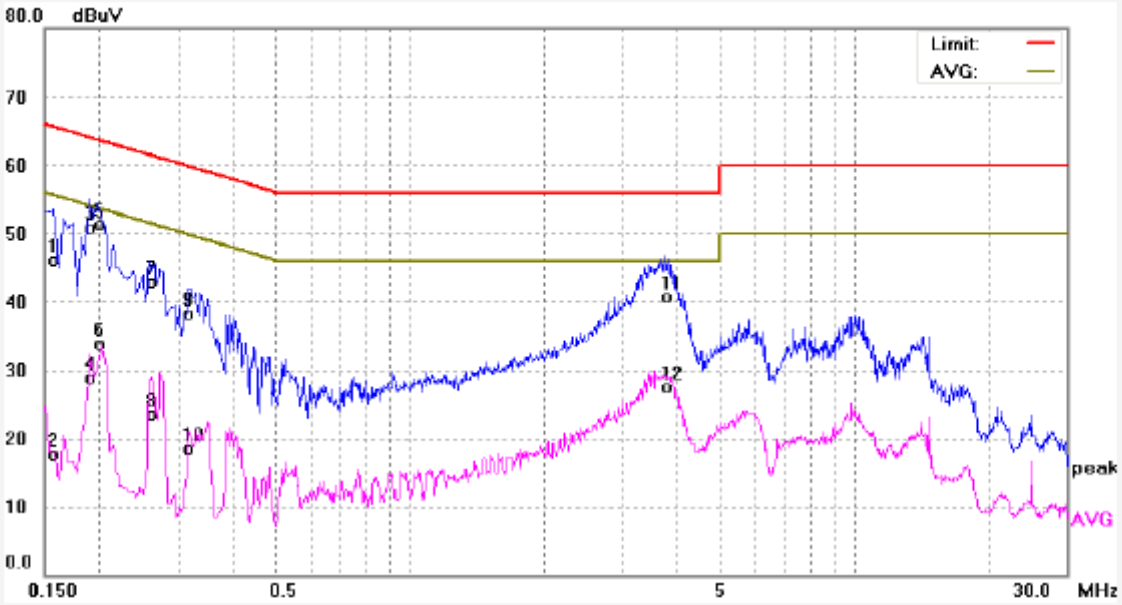


The EUT was placed on the test table in shielding room

6.3 Conducted Emission Test Result

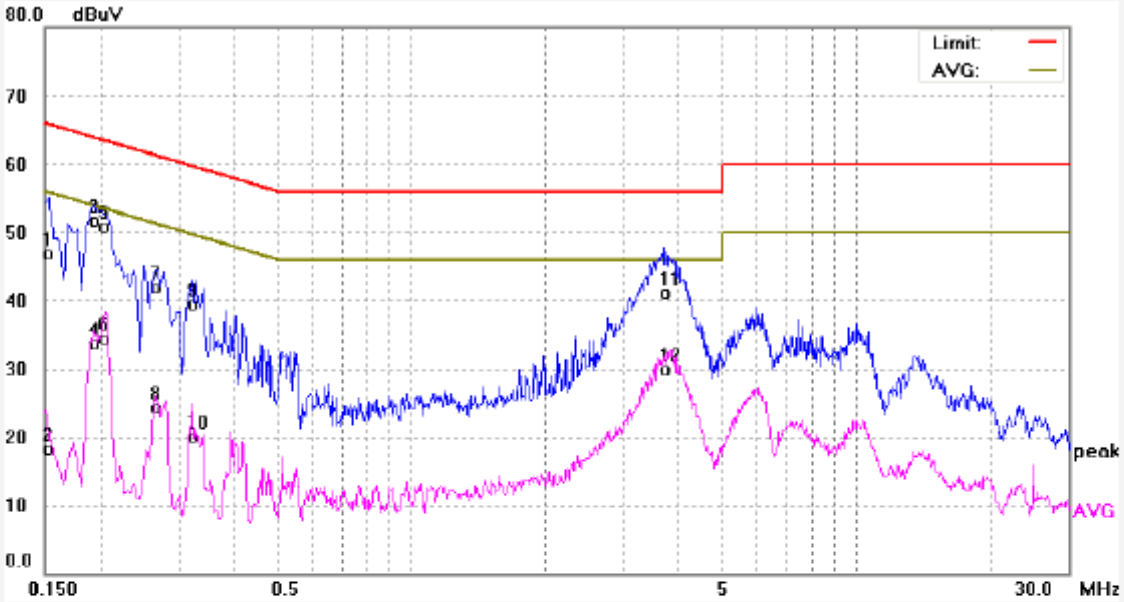
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1580	35.93	10.13	46.06	65.56	-19.50	QP	
2	0.1580	7.53	10.13	17.66	55.56	-37.90	AVG	
3	0.1900	40.72	10.15	50.87	64.03	-13.16	QP	
4	0.1900	18.72	10.15	28.87	54.03	-25.16	AVG	
5	0.1980	41.11	10.15	51.26	63.69	-12.43	QP	
6	0.1980	23.74	10.15	33.89	53.69	-19.80	AVG	
7	0.2580	32.70	10.16	42.86	61.49	-18.63	QP	
8	0.2580	13.43	10.16	23.59	51.49	-27.90	AVG	
9	0.3180	28.07	10.17	38.24	59.76	-21.52	QP	
10	0.3180	8.42	10.17	18.59	49.76	-31.17	AVG	
11	3.7300	30.31	10.30	40.61	56.00	-15.39	QP	
12	3.7300	17.18	10.30	27.48	46.00	-18.52	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1539	36.87	10.13	47.00	65.78	-18.78	QP	
2	0.1539	8.24	10.13	18.37	55.78	-37.41	AVG	
3	0.1940	41.61	10.15	51.76	63.86	-12.10	QP	
4	0.1940	23.57	10.15	33.72	53.86	-20.14	AVG	
5	0.2020	40.72	10.15	50.87	63.52	-12.65	QP	
6	0.2020	24.26	10.15	34.41	53.52	-19.11	AVG	
7	0.2660	31.67	10.16	41.83	61.24	-19.41	QP	
8	0.2660	14.20	10.16	24.36	51.24	-26.88	AVG	
9	0.3220	29.40	10.17	39.57	59.65	-20.08	QP	
10	0.3220	9.88	10.17	20.05	49.65	-29.60	AVG	
11	3.6940	30.90	10.30	41.20	56.00	-14.80	QP	
12	3.6940	19.51	10.30	29.81	46.00	-16.19	AVG	

7 Radiation Emission Test

Test Requirement.....	:	FCC CFR 47 Part 18 Section 18.305(c)
Test Method	:	ANSI C63.4:2003 and FCC MP-5
Test Result	:	Pass
Frequency Range.....	:	9KHz to 30MHz
Class.	:	Class B
Limit		Any non-ISM frequency 15uV/m @300m For 3m, distance correction factor=40*log(300/3)=80dB; For 3m Limit, 20log(15uV/m)+80=103.52dBuV/m

7.1 EUT Operation:

Operating Environment:

Temperature	:	23°C
Humidity	:	54.1%RH
Atmospheric Pressure.....	:	101kPa

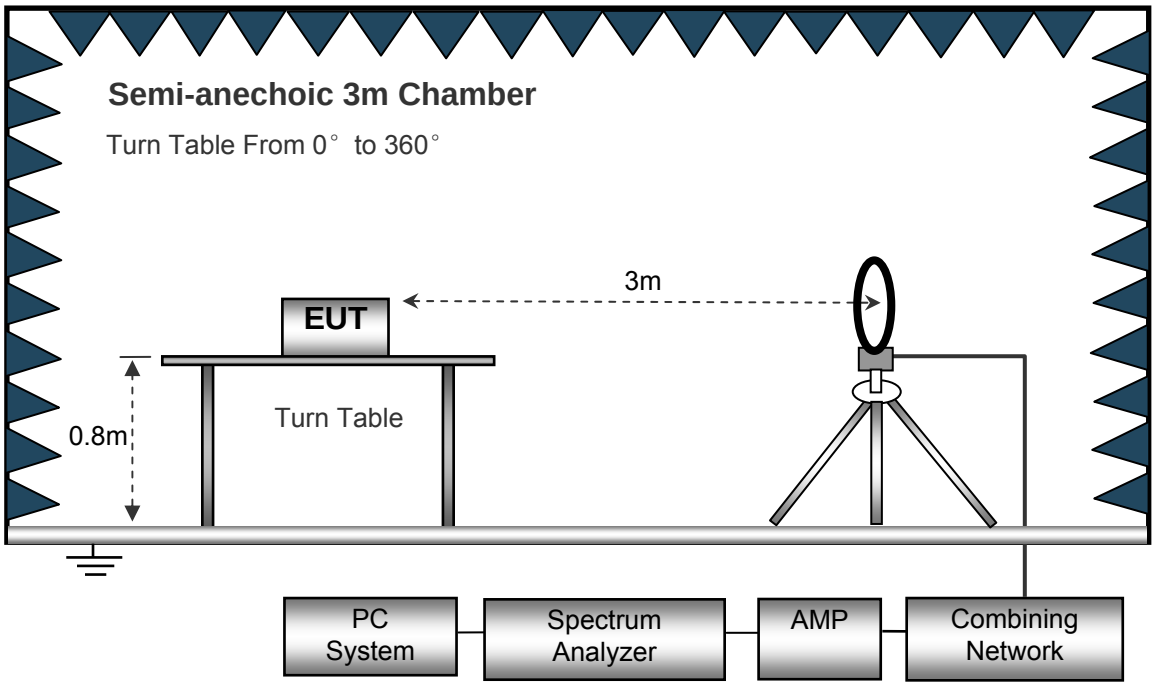
EUT Operation:

Input Voltage.....	:	DC 5V
Operating Mode	:	Charging with R-6S mode, Charging with R-6p mode
Remark.....	:	The worst mode is Charging with R-6p mode and the data is shown as follow.

7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4: 2003.

The test setup for emission measurement below 30MHz.



7.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed ..... Auto
IF Bandwidth.....10kHz
Video Bandwidth.....10kHz

Resolution Bandwidth.....10kHz

7.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are tested under X-axis position(X denotes lying on the table).

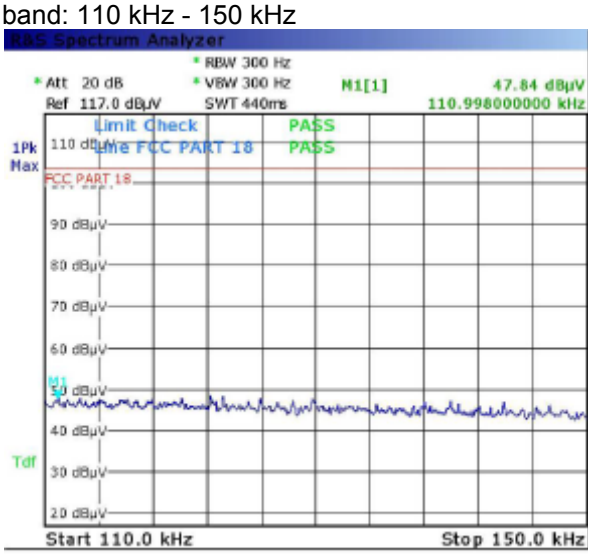
7.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:
Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain the "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

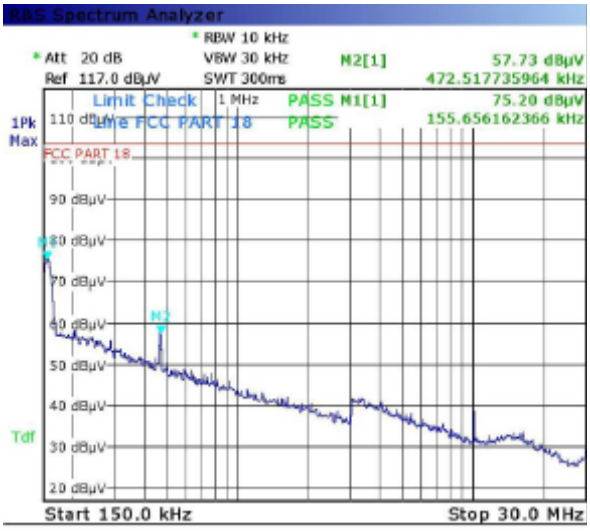
Margin = Corr. Ampl. – Limit

7.6 Summary of Test Results

Detector: PK Frequency band: 110 kHz - 150 kHz



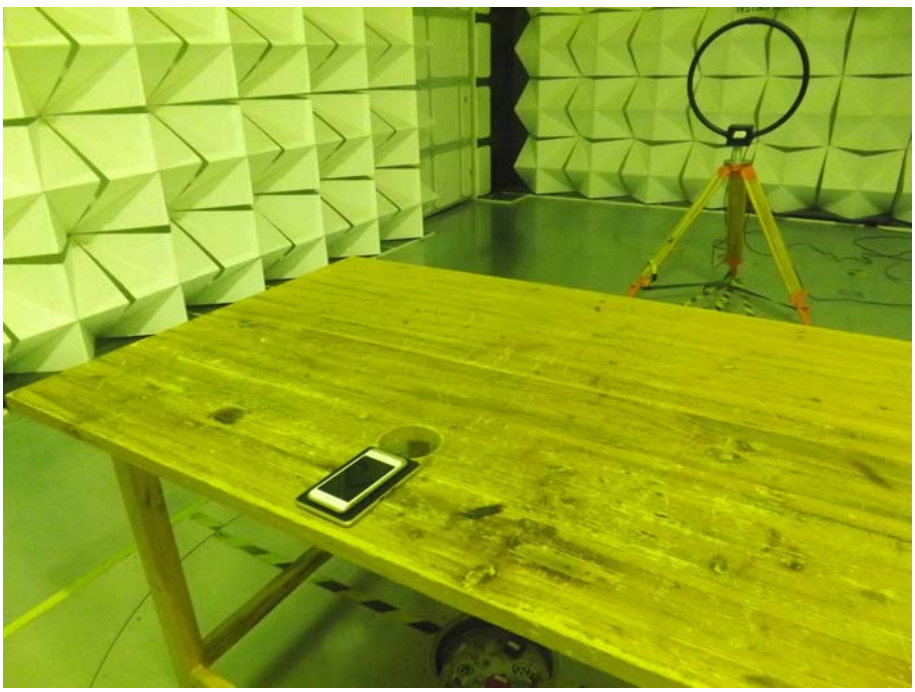
Detector: PK Frequency band: 150 kHz – 30 MHz



8 Photographs of Testing

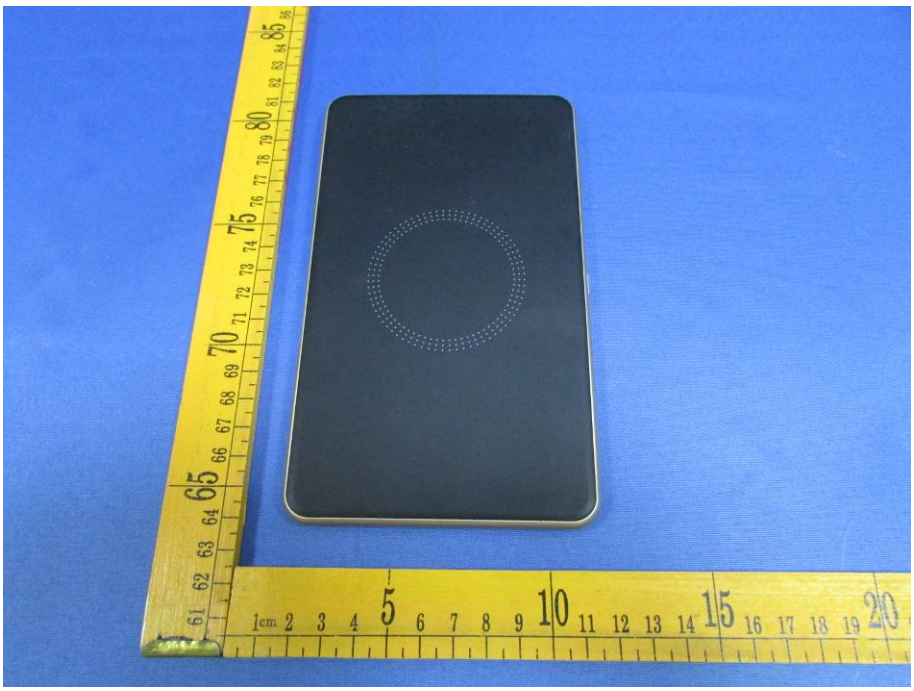
8.1 Conducted Emissions Test View

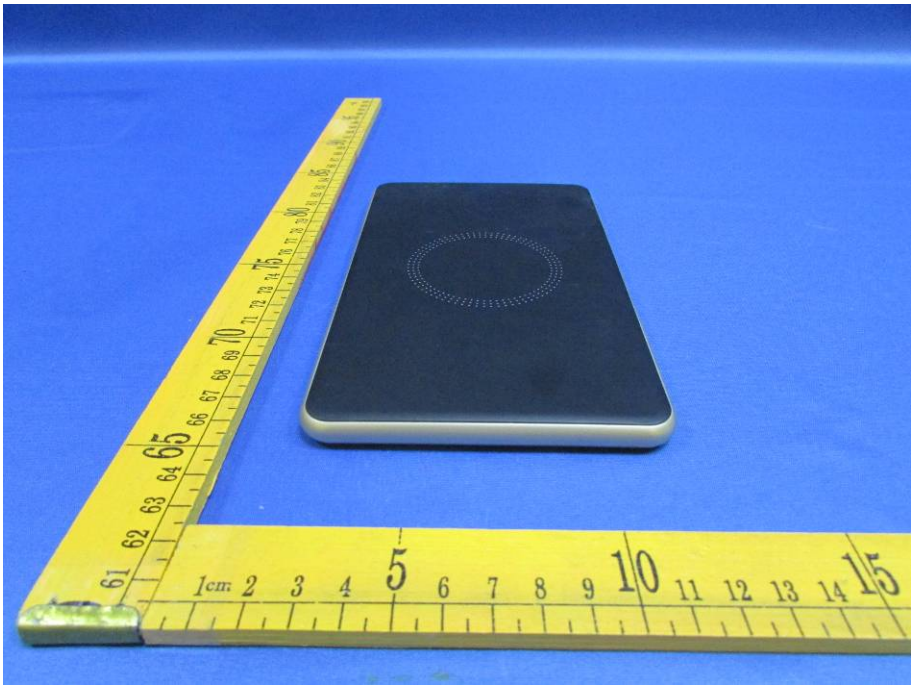
8.2 Radiated Emission Test View

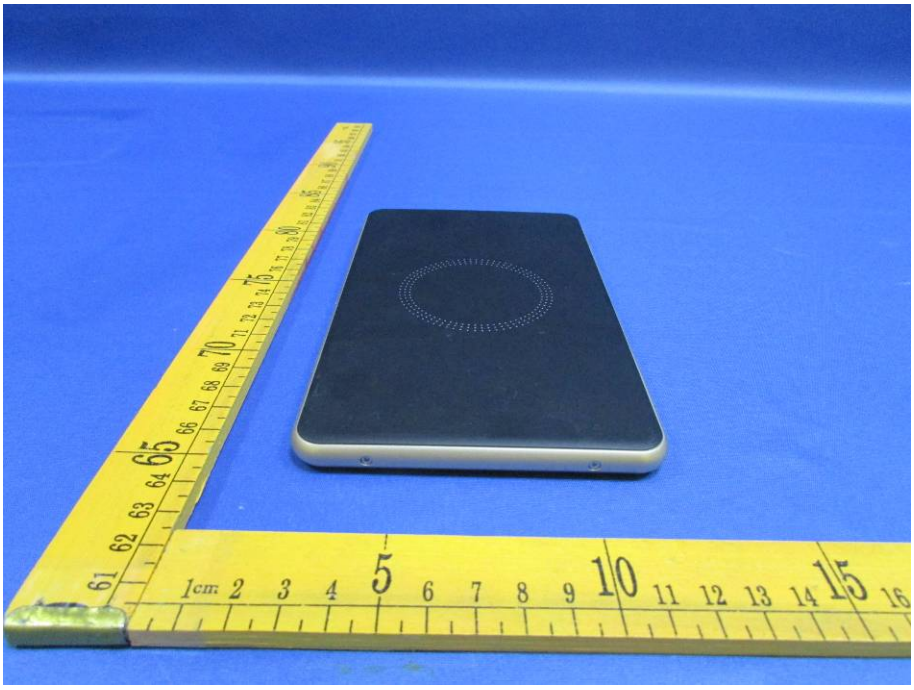


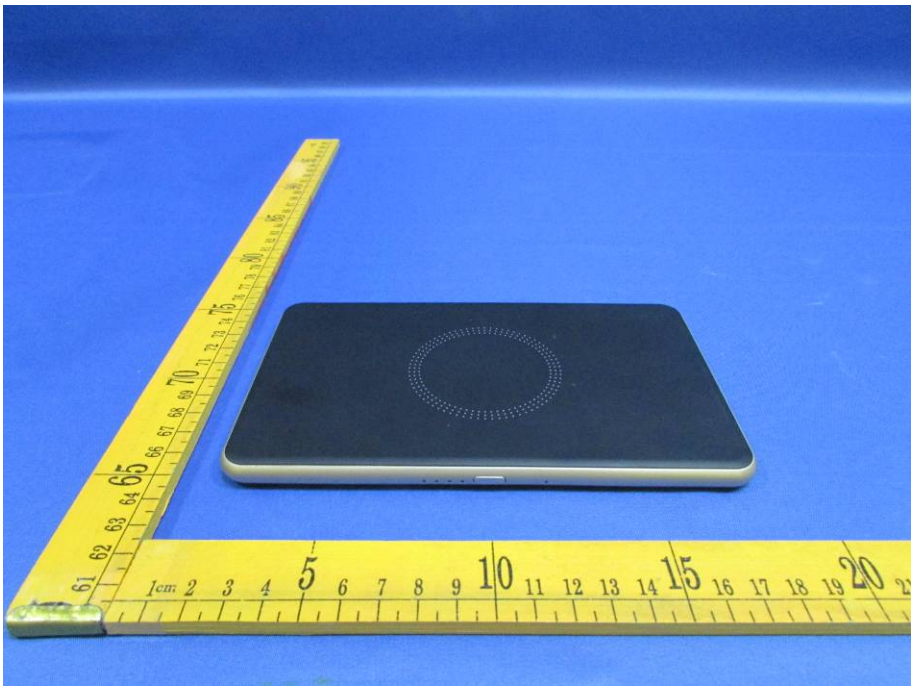
9 Photographs - Constructional Details

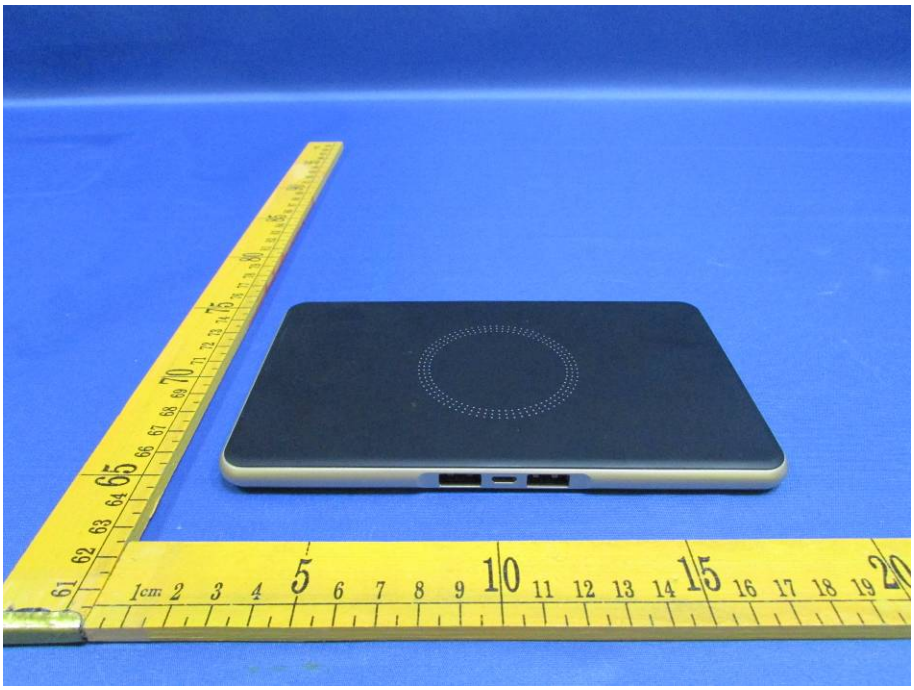
9.1 EUT - Appearance View





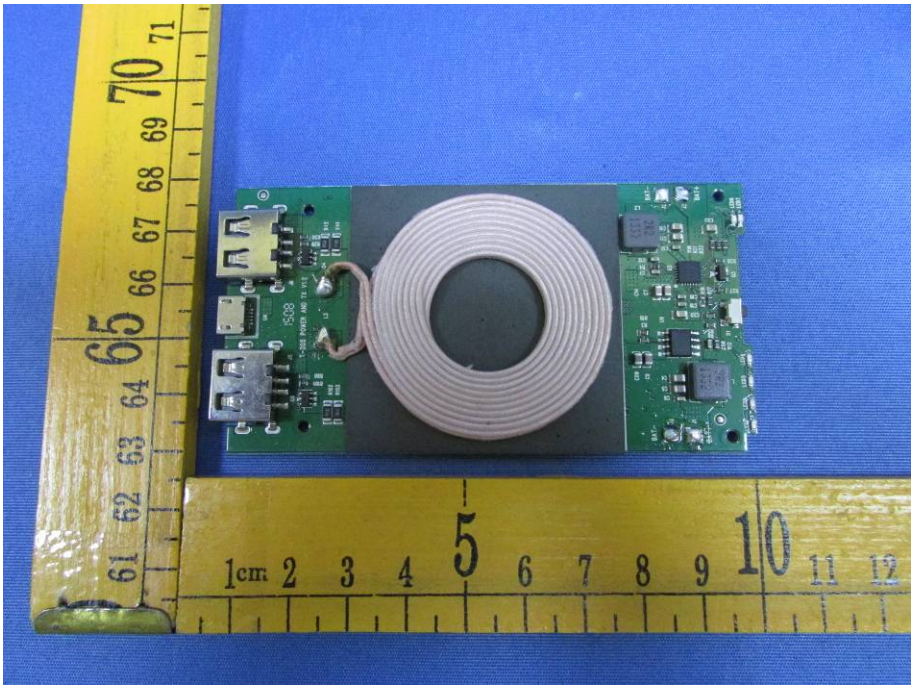


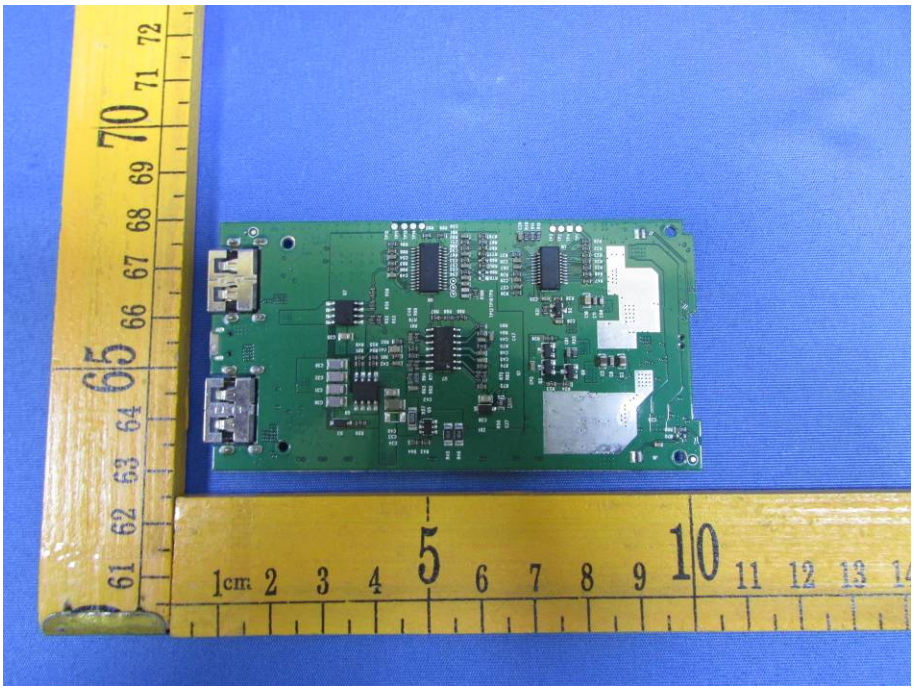


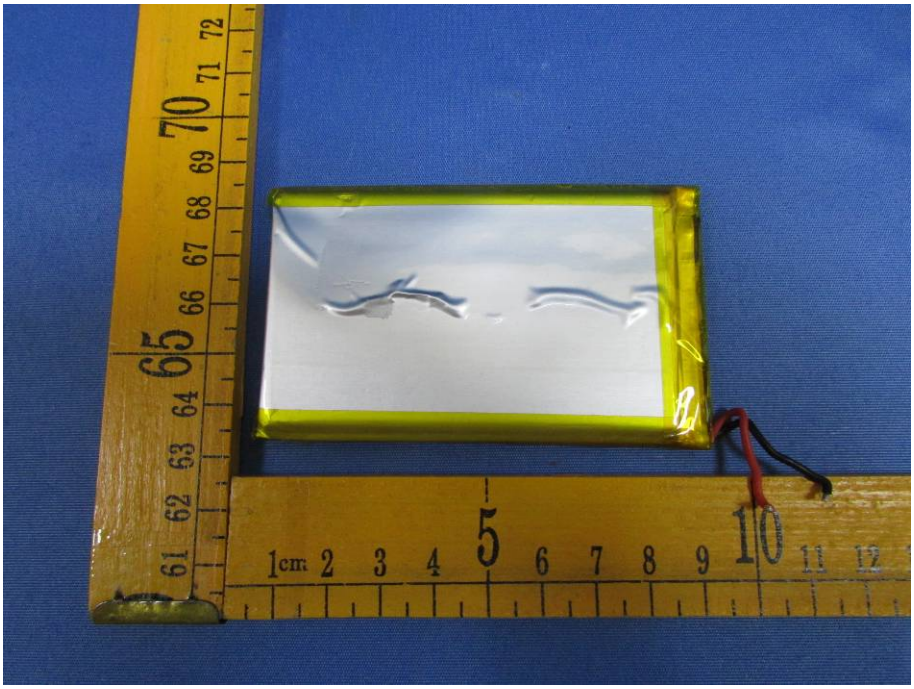


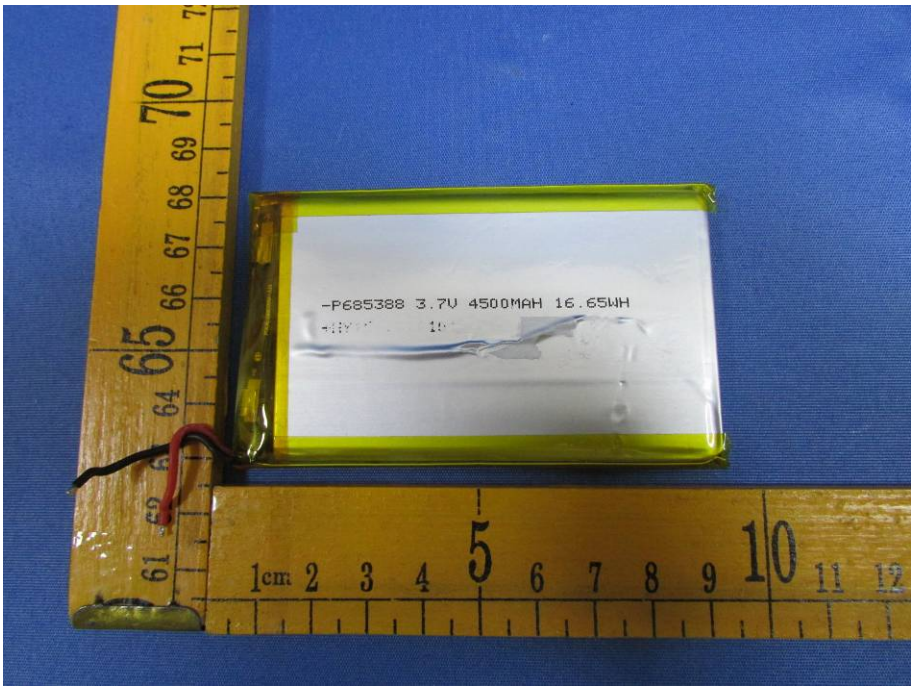

Wireless Charging Power Bank
Model :T-205 Input:5V⎓2A
Output: 2-DC 5.1V/2.1A MAX3.6A
Wireless Output:5W
Capacity:9000mAh

9.2 PCB- View









======End of Report======