



FCC TEST REPORT

FCC ID: 2APKKKW-008

Product Name:	Wireless Charger
Trademark:	N/A
Model Number:	KW-008 KW-009, KW-010, KW-011, KW-012
Prepared For :	Shenzhen Jingzhi Precision Technology Co.,Ltd.
Address :	3F/5th Floor JinXing Industrial Park, Tangwei Jian'an Road, Fuyong Town, Bao'an District, Shenzhen, Guangdong, China
Prepared By :	Shenzhen BCTC Testing Co., Ltd.
Address :	BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road, Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China
Test Date:	Mar. 19 - Mar. 26, 2018
Date of Report :	Mar. 26, 2018
Report No.:	BCTC-FY180301083E



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TEST REPORT DECLARATION

Applicant : Shenzhen Jingzhi Precision Technology Co.,Ltd.
Address : 3F/5th Floor JinXing Industrial Park, Tangwei Jian'an Road,
Fuyong Town, Bao'an District, Shenzhen, Guangdong, China
EUT Description : Wireless Charger
Model Number KW-008
KW-009, KW-010, KW-011, KW-012

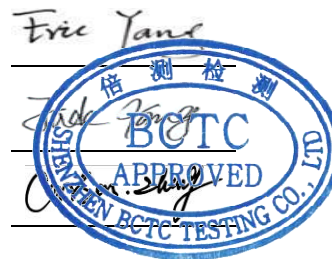
Test Standards:

FCC Part 15 C: 2015

This device described above has been tested by BCTC, and the test results show that the equipment under And it is applicable only to the tested sample identified in the report.

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Prepared by(Engineer): Eric Yang
Reviewer(Supervisor): Jade Yang
Approved(Manager): Carson Zhang





1. GENERAL INFORMATION

1.1. Report information

- 1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BCTC approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BCTC in any way guarantees the later performance of the product/equipment.
- 1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BCTC therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BCTC, unless the applicant has authorized BCTC in writing to do so.

1.2. Measurement Uncertainty

Available upon request.

1.3. Test Facility

Site Description
Name of Firm : Shenzhen BCTC Testing Co., Ltd.

Site Location : BCTC Building & 1-2F, East of B Building,
Pengzhou Industrial, Fuyuan 1st Road, Qiaotou
Community, Fuyong Street, Bao'an District,
Shenzhen, China

1.4. Test Uncertainty

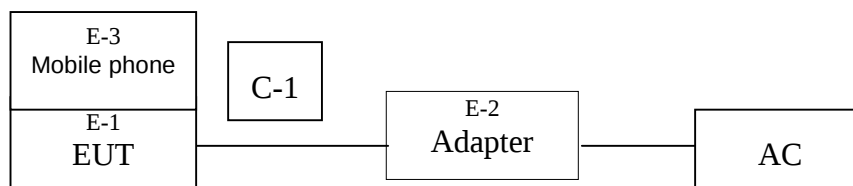
Conducted Emission = $\pm 2.66\text{dB}$
Uncertainty
Radiated Emission Uncertainty = $\pm 4.15\text{dB}$

2. PRODUCT DESCRIPTION

2.1.EUT Description

Description	: Wireless Charger
Applicant	: Shenzhen Jingzhi Precision Technology Co.,Ltd. 3F/5th Floor JinXing Industrial Park, Tangwei Jianan Road, Fuyong Town, Baoan District, Shenzhen, Guangdong, China
Manufacturer	: Shenzhen Jingzhi Precision Technology Co.,Ltd. 3F/5th Floor JinXing Industrial Park, Tangwei Jianan Road, Fuyong Town, Baoan District, Shenzhen, Guangdong, China
Trademark	N/A
Model Number	: KW-008
Serial Model	: KW-009, KW-010, KW-011, KW-012
Model Difference	: All the model are the same circuit and RF module, except model names.
Power Supply	Input: 5V/2A 9V/1.67A Output: 5W/10W(Max)
Work Frequency	: 110-205KHz

2.2.Block Diagram of EUT Configuration



2.3.Test Conditions

Temperature: 23~25℃

Relative Humidity: 55~63 %



2.4. Description Of Support Units (Conducted Mode)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless Charger	N/A	KW-008	N/A	EUT
E-2	Adapter	N/A	BCTC-002	N/A	AC100-240V 50/60Hz 500mA Output: 5V $\overline{\text{---}}$ 3A 9V $\overline{\text{---}}$ 2A, 12V $\overline{\text{---}}$ 1.5A
E-3	Mobile phone	616-0804	Apple 7Plus	N/A	Lab. Provide

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0.8M	USB cable unshielded

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

3. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	Pass
Radiated disturbance	Pass

Remark: “N/A” means “Not applicable.”



4. TEST EQUIPMENT USED

4.1. For Conducted Emission Test

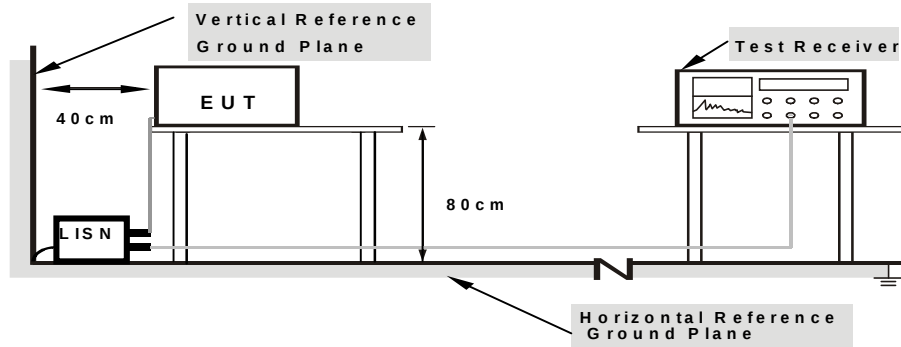
Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Test Receiver	R&S	ESCI	1166.5950K03-1 01165-ha	2017.08.27	2018.08.26
2	LISN	SCHWARZBECK	NSLK8127	8127739	2017.08.27	2018.08.26
3	LISN	R&S	NSLK8126	8126487	2017.08.27	2018.08.26
4	RF cables	R&S	R204	R20X	2017.08.27	2018.08.26
5	Attenuator	R&S	ESH3-Z2	143206	2017.08.27	2018.08.26

4.2. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
5	Horn Antenna (14GHz-40GHz)	SCHWARZBECK	BBHA 9170	9170-181	2017.09.03	2018.09.02
6	Amplifier (9KHz-6GHz)	SCHWARZBECK	BBV9744	9744-0037	2017.08.27	2018.08.26
7	Amplifier (1GHz-18GHz)	SCHWARZBECK	BBV9718	9718-309	2017.08.27	2018.08.26
8	Amplifier (18GHz-40GHz)	SCHWARZBECK	BBV 9721	9721-205	2017.08.27	2018.08.26
9	Loop Antenna (9KHz-30MHz)	SCHWARZBECK	FMZB1519B	00014	2017.09.03	2018.09.02
10	RF cables1 (9kHz-1GHz)	R&S	R203	R20X	2017.08.27	2018.08.26
11	RF cables2 (1GHz-40GHz)	R&S	R204	R21X	2017.08.27	2018.08.26
12	Antenna connector	Florida RF Labs	N/A	RF 01#	2017.08.27	2018.08.26
13	Power Metter	ANRITSU	ML2487A	6K00001568	2017.08.27	2018.08.26
14	Power Sensor (AV)	ANRITSU	ML2491A	030989	2017.08.27	2018.08.26
15	Signal Analyzer 9kHz-26.5GHz	Agilent	N9010A	MY48030494	2017.08.27	2018.08.26
16	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	2017.08.27	2018.08.26
17	D.C. Power Supply	LongWei	PS-305D	010964729	2017.08.27	2018.08.26

5. CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

(EUT: **Wireless Charger**)

5.2. Test Standard

FCC§15.207

5.3. Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC Part 15.207 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.4.1. milestone dual

Model Number: **KW-008**



5.5.Operating Condition of EUT

5.5.1.Setup the EUT and simulators as shown in Section 5.1.

5.5.2.Turn on the power of all equipments.

5.5.3.Let the EUT work in test modes (EUT Working) and test it.

5.6.Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESHS30) is used to test the emissions form both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

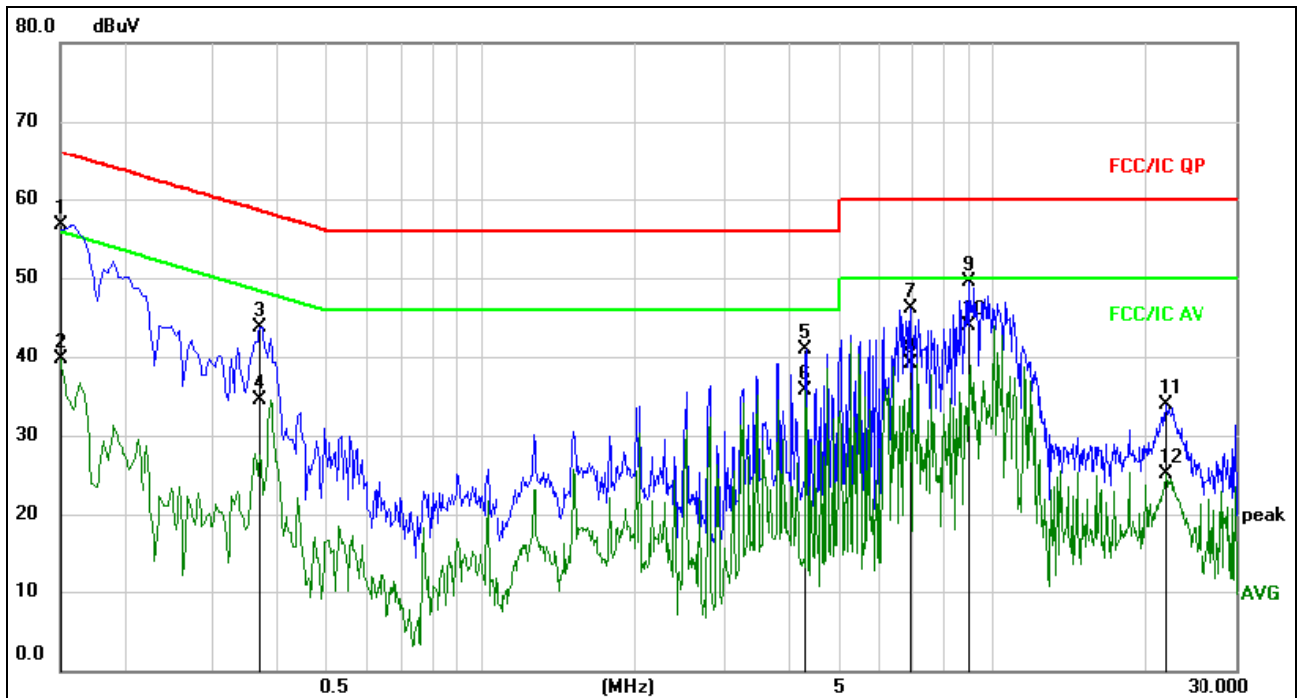
5.7.Test Result

PASS

Please refer to the following pages.



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	DC 5V For Adapter (adapter input:AC120V/60Hz)	Test Mode:	Normal Link



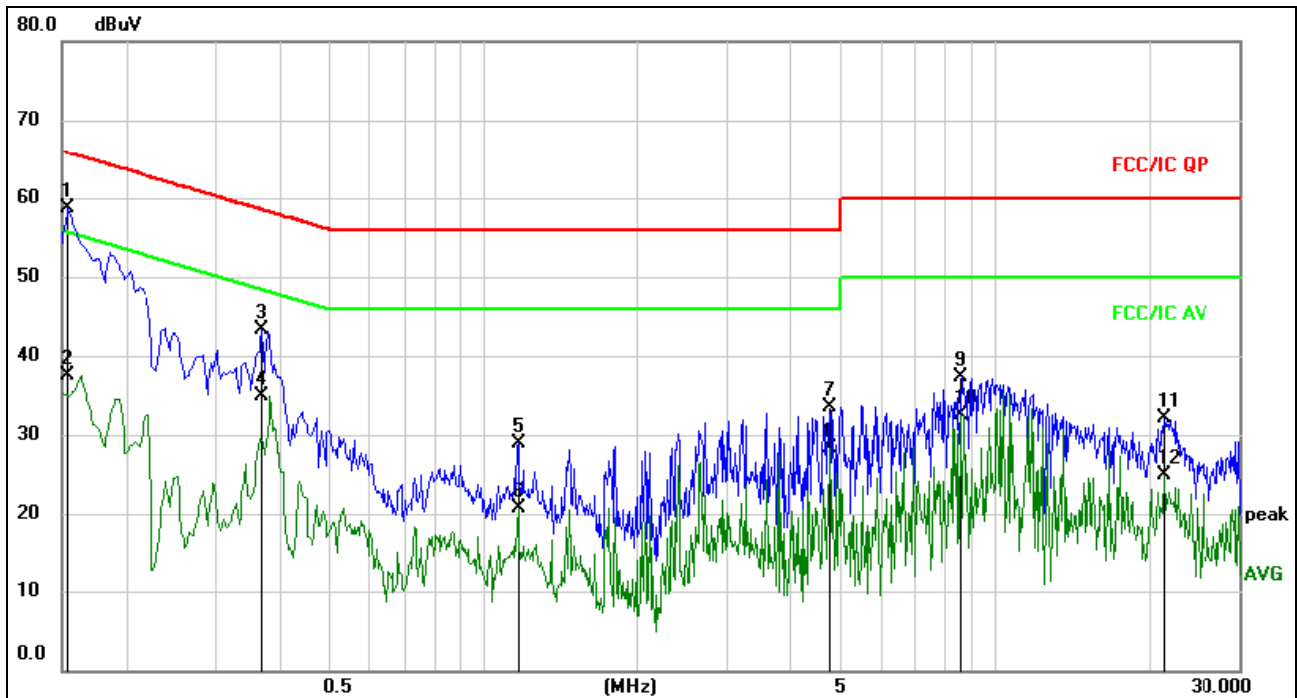
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	47.11	9.67	56.78	66.00	-9.22	QP	
2		0.1500	30.03	9.67	39.70	56.00	-16.30	AVG	
3		0.3704	34.13	9.67	43.80	58.49	-14.69	QP	
4		0.3704	24.87	9.67	34.54	48.49	-13.95	AVG	
5		4.2990	31.27	9.73	41.00	56.00	-15.00	QP	
6		4.2990	26.00	9.73	35.73	46.00	-10.27	AVG	
7		6.9405	36.38	9.80	46.18	60.00	-13.82	QP	
8		6.9405	29.32	9.80	39.12	50.00	-10.88	AVG	
9		9.0014	39.63	9.82	49.45	60.00	-10.55	QP	
10	*	9.0014	34.00	9.82	43.82	50.00	-6.18	AVG	
11		21.7815	23.97	9.85	33.82	60.00	-26.18	QP	
12		21.7815	15.20	9.85	25.05	50.00	-24.95	AVG	



EUT:	Wireless Charger	Model Name. :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	DC 5V For Adapter (adapter input:AC120V/60Hz)	Test Mode:	Normal Link



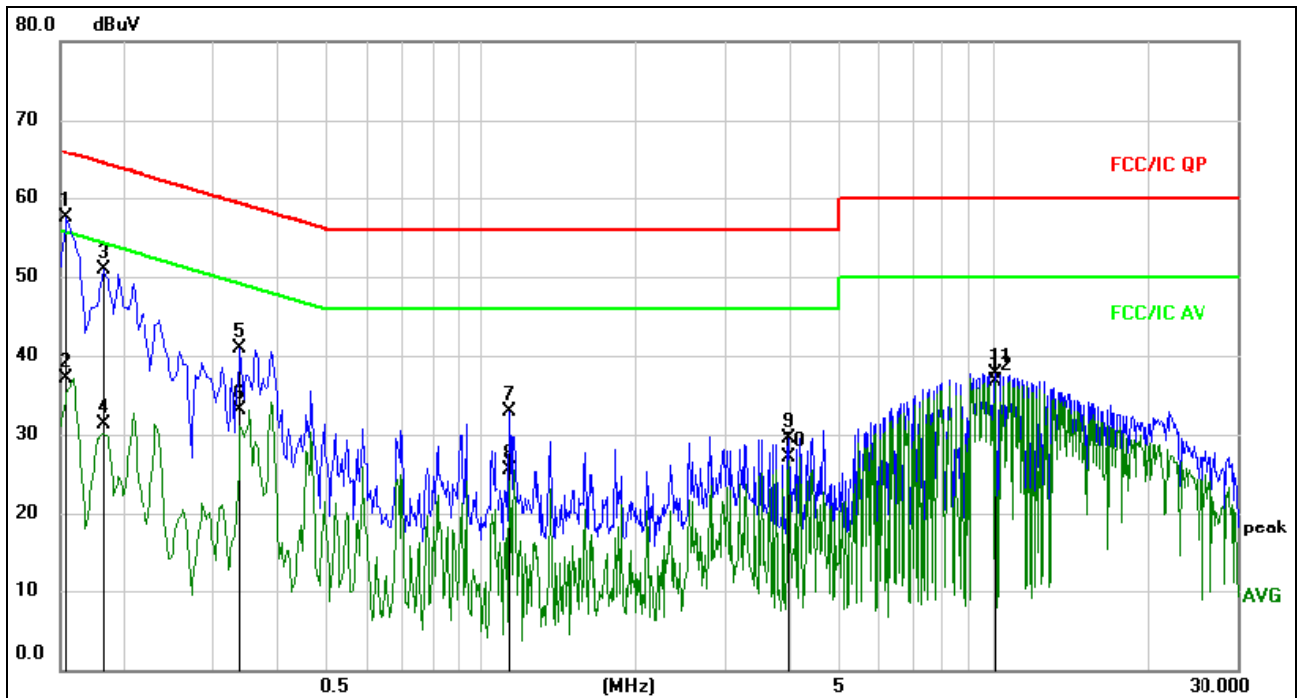
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1545	49.12	9.67	58.79	65.75	-6.96	QP	
2		0.1545	27.75	9.67	37.42	55.75	-18.33	AVG	
3		0.3704	33.55	9.67	43.22	58.49	-15.27	QP	
4		0.3704	25.28	9.67	34.95	48.49	-13.54	AVG	
5		1.1760	19.15	9.69	28.84	56.00	-27.16	QP	
6		1.1760	10.98	9.69	20.67	46.00	-25.33	AVG	
7		4.7445	23.78	9.74	33.52	56.00	-22.48	QP	
8		4.7445	18.65	9.74	28.39	46.00	-17.61	AVG	
9		8.5695	27.49	9.81	37.30	60.00	-22.70	QP	
10		8.5695	22.63	9.81	32.44	50.00	-17.56	AVG	
11		21.3045	22.30	9.84	32.14	60.00	-27.86	QP	
12		21.3045	14.97	9.84	24.81	50.00	-25.19	AVG	



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	DC 9V For Adapter (adapter input:AC120V/60Hz)	Test Mode:	Charging



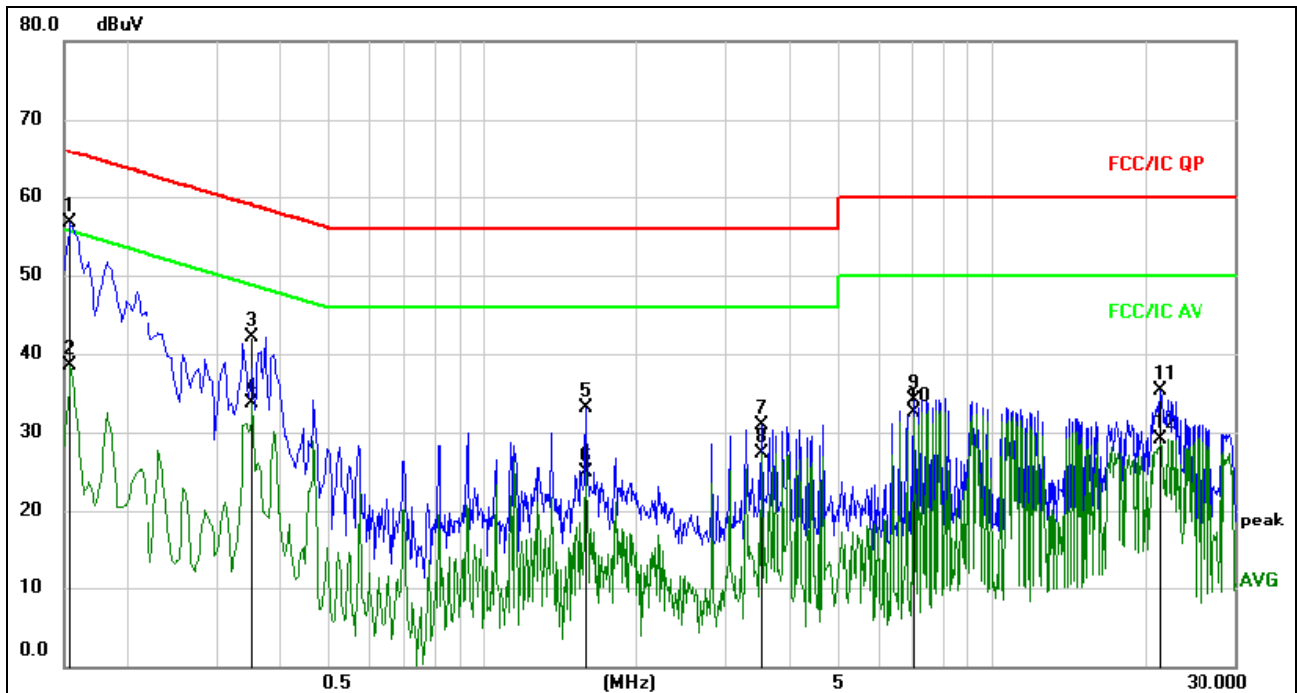
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1545	47.75	9.67	57.42	65.75	-8.33	QP	
2		0.1545	27.44	9.67	37.11	55.75	-18.64	AVG	
3		0.1815	41.20	9.66	50.86	64.42	-13.56	QP	
4		0.1815	21.71	9.66	31.37	54.42	-23.05	AVG	
5		0.3390	31.19	9.66	40.85	59.23	-18.38	QP	
6		0.3390	23.35	9.66	33.01	49.23	-16.22	AVG	
7		1.1400	23.15	9.69	32.84	56.00	-23.16	QP	
8		1.1400	15.78	9.69	25.47	46.00	-20.53	AVG	
9		3.9840	19.70	9.73	29.43	56.00	-26.57	QP	
10		3.9840	17.29	9.73	27.02	46.00	-18.98	AVG	
11		10.0770	27.93	9.83	37.76	60.00	-22.24	QP	
12		10.0770	26.85	9.83	36.68	50.00	-13.32	AVG	



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	DC 9V For Adapter (adapter input:AC120V/60Hz)	Test Mode:	Charging



Remark:

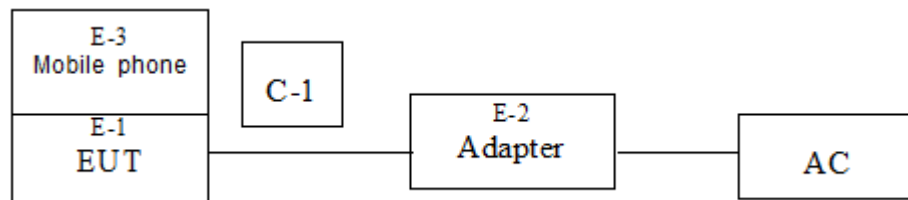
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1545	47.00	9.67	56.67	65.75	-9.08	QP	
2		0.1545	28.74	9.67	38.41	55.75	-17.34	AVG	
3		0.3525	32.51	9.67	42.18	58.90	-16.72	QP	
4		0.3525	23.95	9.67	33.62	48.90	-15.28	AVG	
5		1.5945	23.39	9.70	33.09	56.00	-22.91	QP	
6		1.5945	15.30	9.70	25.00	46.00	-21.00	AVG	
7		3.5160	21.11	9.73	30.84	56.00	-25.16	QP	
8		3.5160	17.66	9.73	27.39	46.00	-18.61	AVG	
9		7.0575	24.32	9.80	34.12	60.00	-25.88	QP	
10		7.0575	22.65	9.80	32.45	50.00	-17.55	AVG	
11		21.2910	25.37	9.84	35.21	60.00	-24.79	QP	
12		21.2910	19.31	9.84	29.15	50.00	-20.85	AVG	

6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup

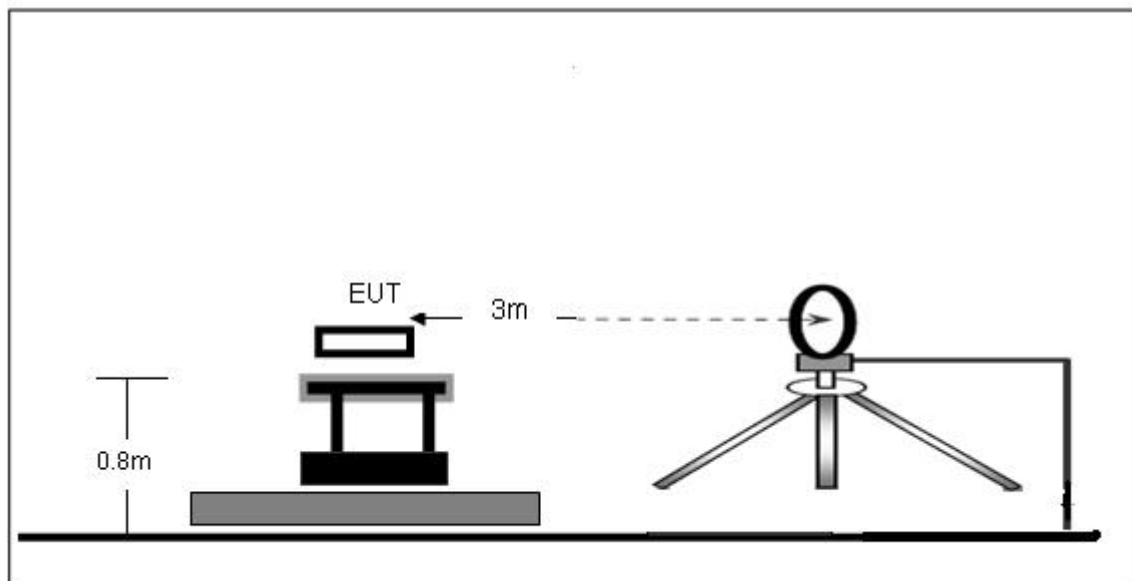
6.1.1. Block Diagram of connection between the EUT and the simulators



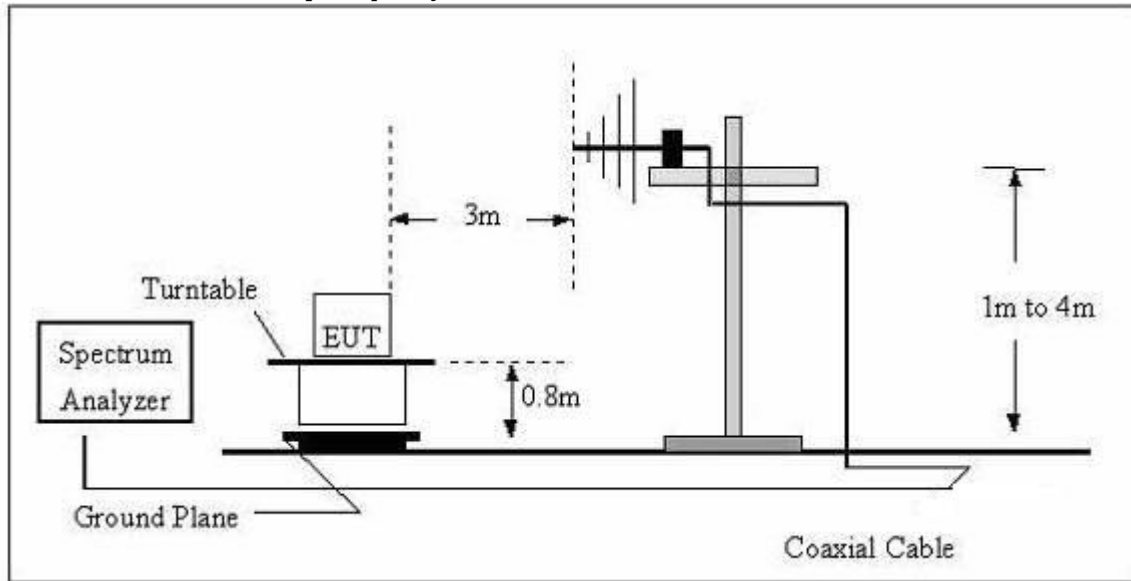
(EUT: **Wireless Charger**)

6.1.2. Anechoic Chamber Test Setup Diagram

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

6.2.Test Standard

FCC §15.209; §15.205;

6.3.EMI Test Receiver Setup

The system was investigated from 9kHz to1GHz.

During the radiated emission test, the EMI test receiver setup was set with the following configurations:

Frequency Range	RBW	Video B/W	Detector
9 kHz – 150 kHz	200 kHz	1 kHz	QP
150 kHz – 30MHz	9kHz	30kHz	QP
30 MHz – 1000 MHz	120 kHz	300 kHz	QP

Note: For the frequency bands 9-90 kHz and 110-490 kHz, the test was based on average detector.

6.4.Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.



6.5.Test Result

PASS

Please refer to the following pages.



9kHz-30MHz

EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 9V For Adapter(adapter intpu:AC120V/60Hz)		
Test Mode :	Normal Link		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(kHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
16.34000	39.75	20.15	59.90	143.34	-83.44	PK
16.34000	35.26	20.15	55.41	123.34	-67.93	AV
37.62000	59.67	20.33	80.00	136.1	-56.10	PK
37.62000	56.58	20.33	76.91	116.1	-39.19	AV
72.6500	70.31	20.55	90.86	130.38	-39.52	PK
72.6500	66.54	20.55	87.09	110.38	-23.29	AV
102.8000	54.69	20.64	75.33	107.36	-32.03	QP
368.1400	38.96	21.26	60.22	116.28	-56.06	PK
368.1400	34.26	21.26	55.52	96.28	-40.76	AV
865.3300	14.11	22.32	36.43	68.86	-32.43	QP

Note:

Pre-scan in the all of mode, the worst case in of was recorded.

Factor = antenna factor + cable loss – pre-amplifier.

Margin = Emission Level- Limit.



30MHz-1GHz

EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 5V For Adapter(adapter input:AC120V/60Hz)		
Test Mode :	Normal Link		



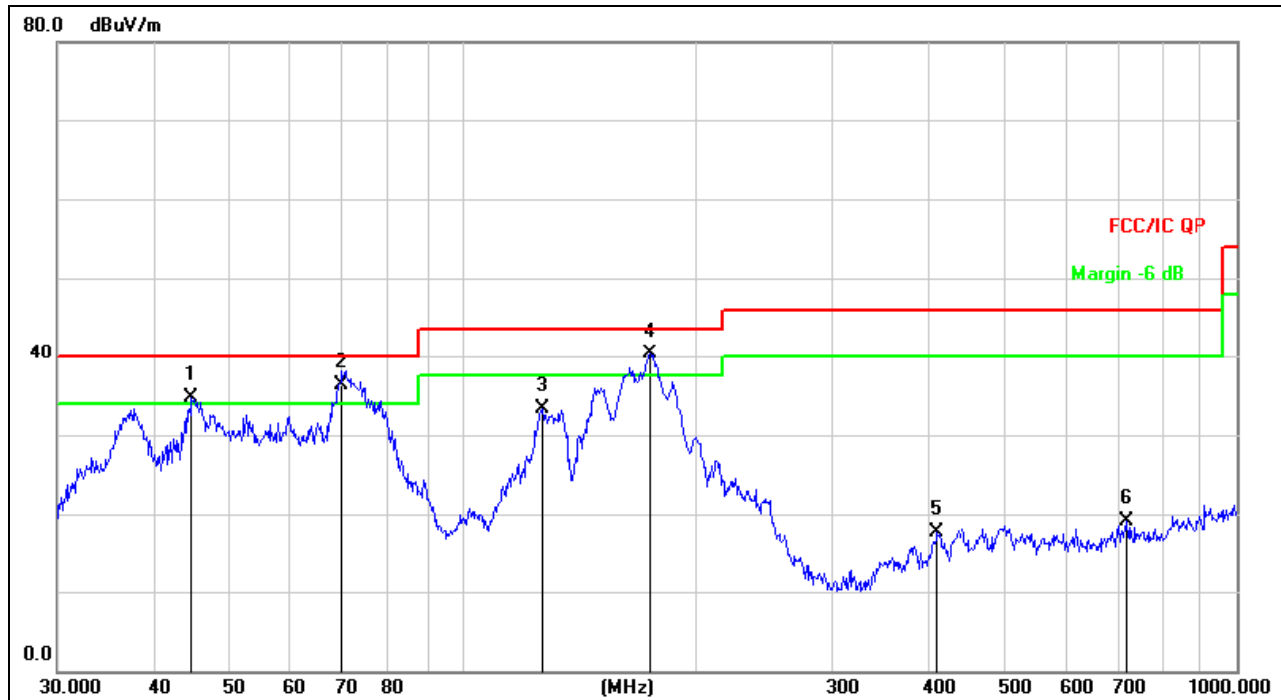
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
		MHz	Level	Factor	ment			Detector
			dBuV	dB	dBuV/m	dB/m	dB	
1		45.2166	32.65	-14.03	18.62	40.00	-21.38	QP
2		72.0843	40.87	-18.01	22.86	40.00	-17.14	QP
3	*	161.9953	58.54	-18.97	39.57	43.50	-3.93	QP
4		213.7634	51.66	-16.20	35.46	43.50	-8.04	QP
5		410.3825	32.53	-11.57	20.96	46.00	-25.04	QP
6		952.0937	23.20	-1.97	21.23	46.00	-24.77	QP



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
Test Voltage :	DC 5V For Adapter(adapter input:AC120V/60Hz)		
Test Mode :	Normal Link		



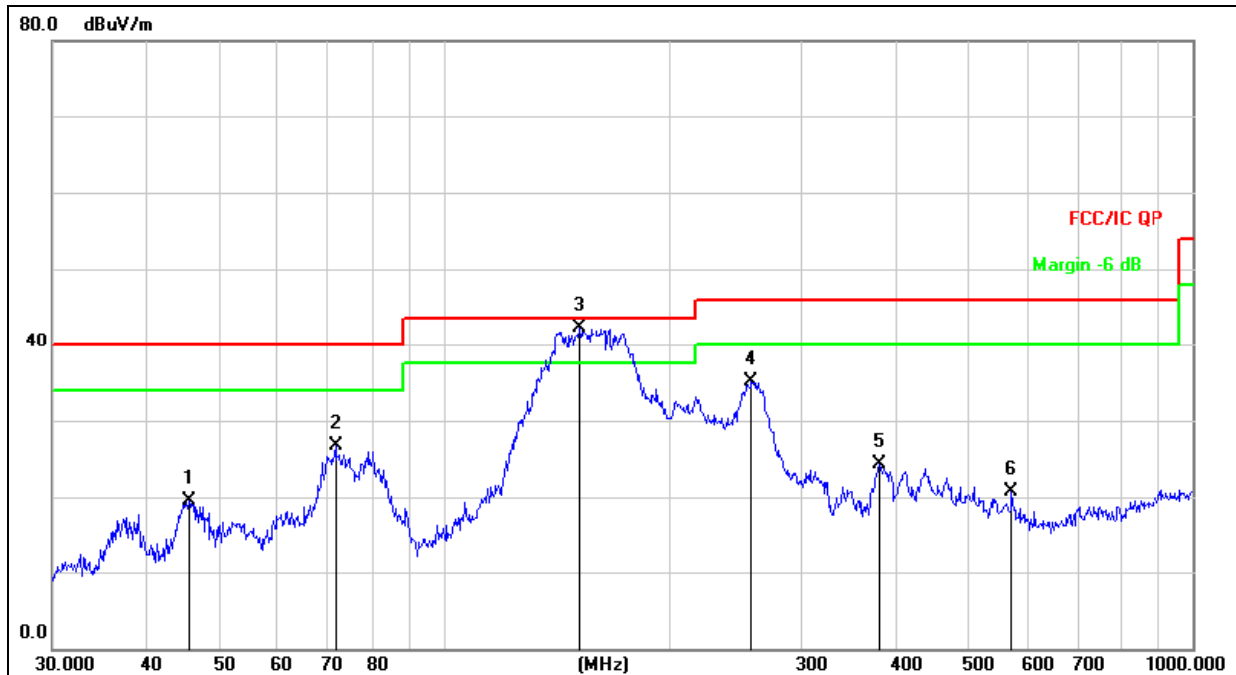
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	44.5867	48.77	-14.10	34.67	40.00	-5.33	QP
2	!	70.0650	53.89	-17.60	36.29	40.00	-3.71	QP
3		126.7723	51.86	-18.54	33.32	43.50	-10.18	QP
4	*	174.4241	58.68	-18.36	40.32	43.50	-3.18	QP
5		408.9460	29.27	-11.62	17.65	46.00	-28.35	QP
6		719.1995	24.28	-5.13	19.15	46.00	-26.85	QP



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 9V For Adapter(adapter input:AC120V/60Hz)		
Test Mode :	Normal Link		



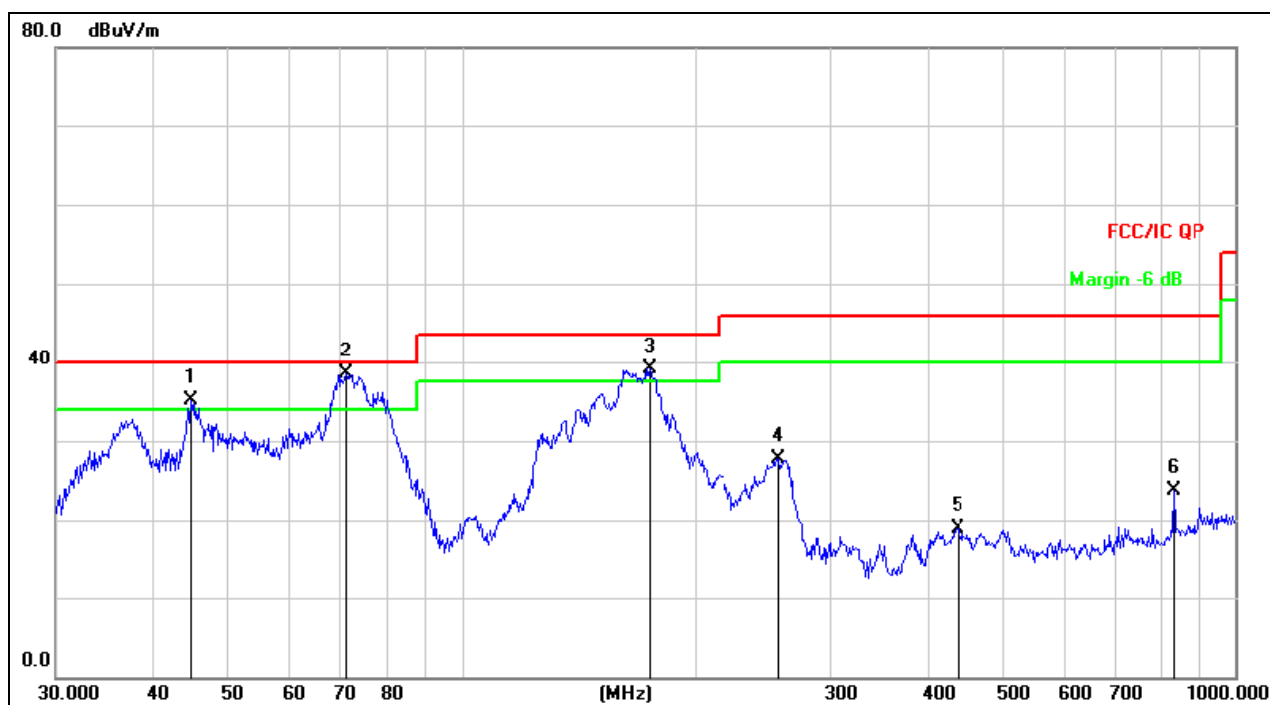
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		45.5347	33.62	-14.03	19.59	40.00	-20.41	QP
2		71.5806	44.52	-17.91	26.61	40.00	-13.39	QP
3	*	151.5972	61.20	-18.98	42.22	43.50	-1.28	QP
4		257.4221	50.23	-15.04	35.19	46.00	-10.81	QP
5		381.2485	36.43	-12.14	24.29	46.00	-21.71	QP
6		572.6144	27.87	-7.20	20.67	46.00	-25.33	QP



EUT:	Wireless Charger	Model Name :	KW-008
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
Test Voltage :	DC 9V For Adapter(adapter input:AC120V/60Hz)		
Test Mode :	Normal Link		



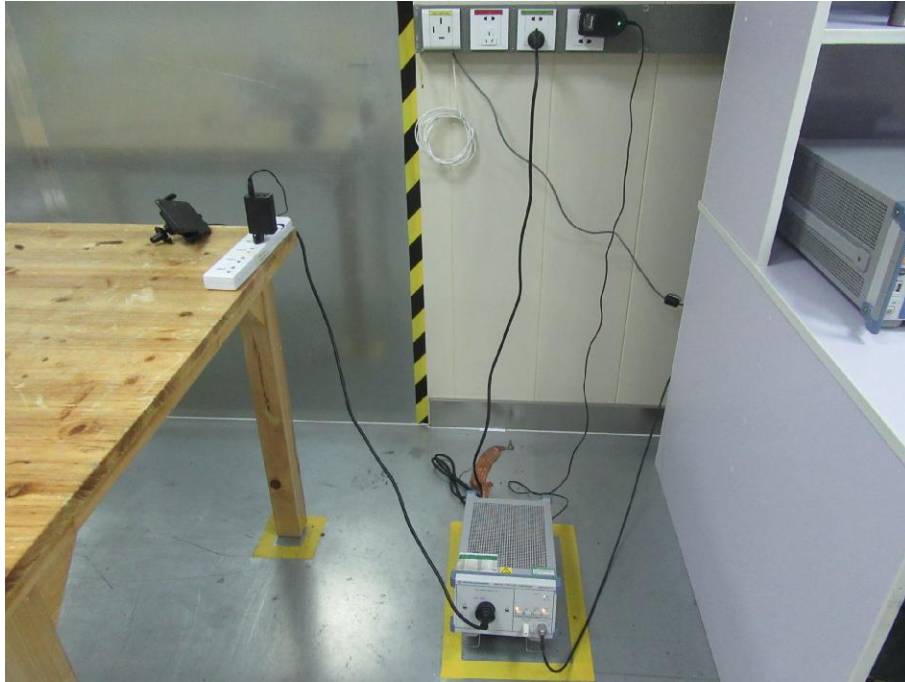
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

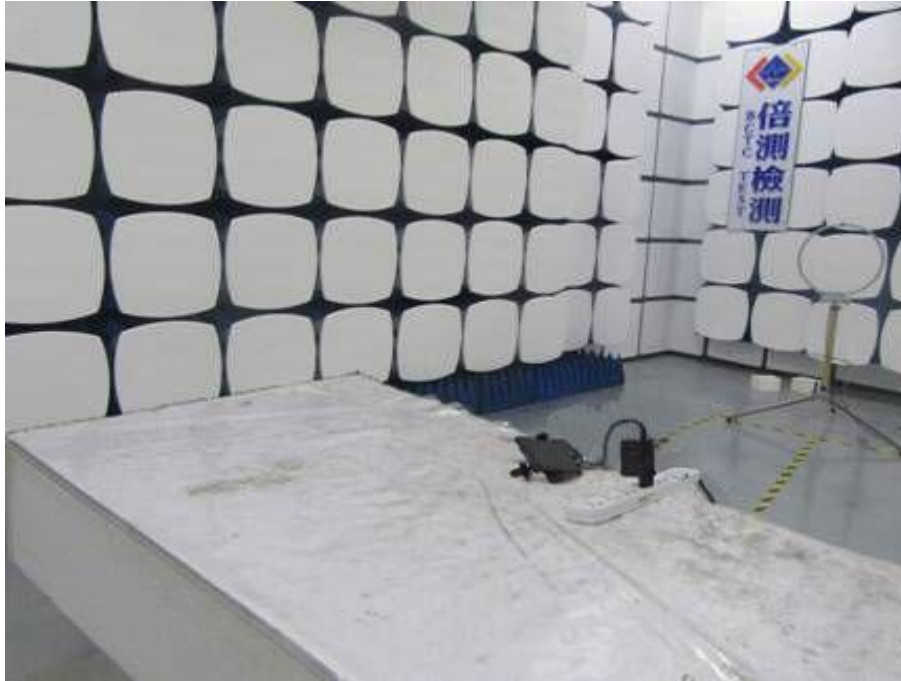
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	44.7433	49.27	-14.08	35.19	40.00	-4.81	QP
2	*	71.0802	56.30	-17.81	38.49	40.00	-1.51	QP
3	!	175.0367	57.43	-18.32	39.11	43.50	-4.39	QP
4		256.5210	42.73	-15.05	27.68	46.00	-18.32	QP
5		437.1198	29.73	-10.78	18.95	46.00	-27.05	QP
6		830.4002	27.23	-3.57	23.66	46.00	-22.34	QP

7. EUT TEST PHOTOS

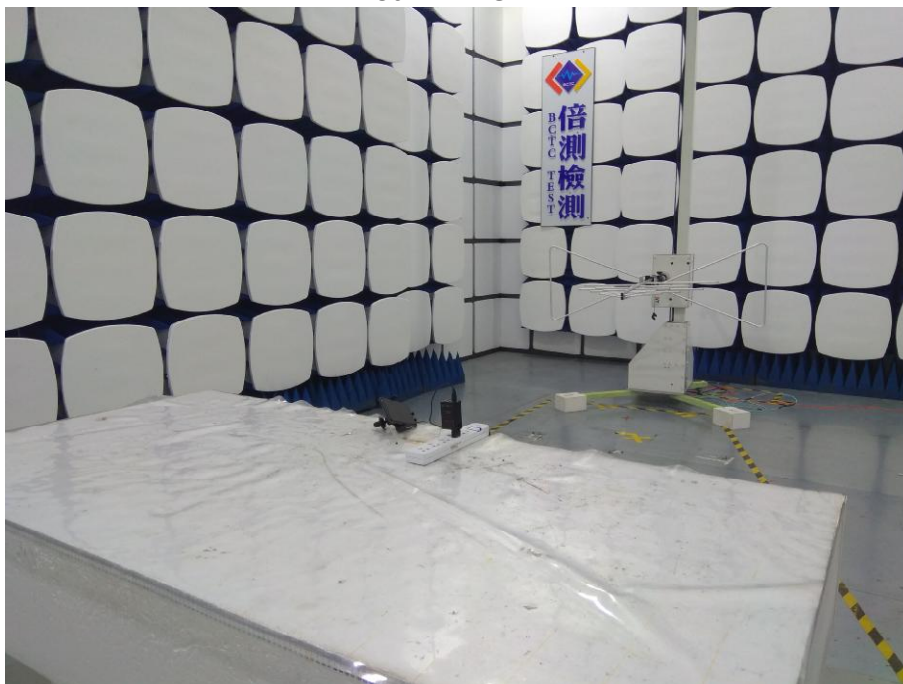
Conducted Measurement Photos



Radiated Measurement Photos 9KHz-30MHz



30MHz-1GHz



8. EUT PHOTOS



***** END OF REPORT *****