



FCC TEST REPORT

FCC ID: 2AE25Q100

Product Name:	Wireless Charging Pad
Trademark:	ELOGE
Model Number:	Q100 Q200, Q300, Q400, Q500, Q600, Q700, Q800, Q900.
Prepared For :	Shen Zhen Eloge Technology Co.,LTD
Address :	3rd floor,Building 2,YuCheng Industrial Park, Quter RingRoad,ShiLongZai,ShiYan Town, ShenZhen City,GuangDong,China
Prepared By :	Shenzhen BCTC Technology Co., Ltd.
Address :	A. Floor 3, 44 Building, Tanglang Industrial Park B, Taoyuan Street, Nanshan District, Shenzhen, China
Test Date:	May. 30 - Jun. 06, 2015
Date of Report :	Jun. 06, 2015
Report No.:	BCTC-15050070



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TEST REPORT DECLARATION

Applicant : Shen Zhen Elog Technology Co.,LTD
Address : 3rd floor,Building 2,YuCheng Industrial Park, Quter
RingRoad,ShiLongZai,ShiYan Town, ShenZhen City,GuangDong,China
EUT Description : **Wireless Charging Pad**
Model Number : **Q100**

Test Standards:

FCC Part 15 C: 2014

The EUT described above is tested by US to determine the maximum emission levels emanating from the EUT, the maximum emission levels are compared to the FCC Part 15 B Subpart Class B limits.

The measurement results are contained in this test report and Shenzhen BCTC Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements.

Also, this report shows that the EUT is to be technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen BCTC Technology Co., Ltd.

Date of Test:

May. 30 - Jun. 06, 2015

Prepared by(Engineer):

Eric Yang

Reviewer(Quality Manager):

Sophie Lee

Approved & Authorized Signer(Manager):

Casey Wang





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 Technology Co., Ltd.
Site Location	: A. Floor 3, 44 Building, Tanglang Industrial Park B, Taoyuan Street, Nanshan District, Shenzhen, China

1.4. Test Uncertainty

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



2. PRODUCT DESCRIPTION

2.1.EUT Description

Description : **Wireless Charging Pad**

Applicant : **Shen Zhen Eloge Technology Co.,LTD**
3rd floor,Building 2,YuCheng Industrial Park, Quter
RingRoad,ShiLongZai,ShiYan Town, ShenZhen City,GuangDong,China

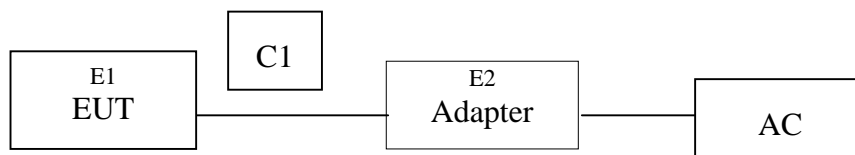
Manufacturer : **Shen Zhen Eloge Technology Co.,LTD**
3rd floor,Building 2,YuCheng Industrial Park, Quter
RingRoad,ShiLongZai,ShiYan Town, ShenZhen City,GuangDong,China

Model Number : Q100

Serial Model : Q200, Q300, Q400, Q500, Q600, Q700, Q800, Q900.

Model Difference : All the same,Only model name is different.

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 Charging Pad	N/A	Q100	N/A	EUT
E-2	Adapter	N/A	K05050-2	N/A	
	Mobile phone	N/A	iPhone 5	N/A	
	Battery model	N/A	AE4026	N/A	electric quantity:50%



Item	Shielded Type	Ferrite Core	Length	Note
C1	NO	NO	0.5M	

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	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Aug. 25, 14	1 Year
2	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Aug. 25, 14	1 Year
3	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Aug. 25, 14	1 Year
4	Conical	Emtek	N/A	N/A	N/A	N/A
5	Voltage Probe	Schwarzbeck	TK9416	N/A	Aug. 25, 14	1 Year
6	Coaxial Switch	Anritsu	MP59B	6100214550	Aug. 25, 14	1 Year

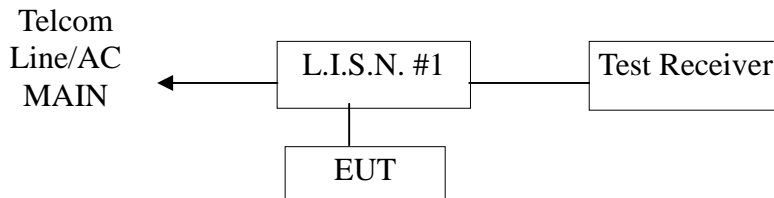
4.2. For Radiated Emission Measurement

Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Aug. 25, 14	1 Year
2	Test Receiver	Rohde&Schwarz	ESHS30	828985/018	Aug. 25, 14	1 Year
3	Bilog Antenna	Schwarzbeck	VULB9163	142	Aug. 25, 14	1 Year
4	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Aug. 25, 14	1 Year
5	Cable	Schwarzbeck	AK9513	ACRX1	Aug. 25, 14	1 Year
6	Cable	Rosenberger	N/A	FR2RX2	Aug. 25, 14	1 Year
7	Cable	Schwarzbeck	AK9513	CRRX2	Aug. 25, 14	1 Year
8	Cable	Schwarzbeck	AK9513	CRRX2	Aug. 25, 14	1 Year
9	Single Phase Power Line Filter	MPE	23332C	N/A	Aug. 25, 14	1 Year
10	Single Phase Power Line Filter	MPE	23333C	N/A	Aug. 25, 14	1 Year
11	Signal Generator	HP	864A	3625U00573	Aug. 25, 14	1 Year
12	Loop Antenna	ARA	PLA-1030/B	1029	Jun. 08, 14	1 Year

5. CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



(EUT: **Wireless Charging Pad**)

5.2. Test Standard

FCC Part 15 C: 2014

5.3. Conducted Emission Limit (Class B)

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 Part 15 B requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.4.1. Wireless Charging Pad

Model Number: **Q100**

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.

5.7. Test Result

PASS

Please refer to the following pages.

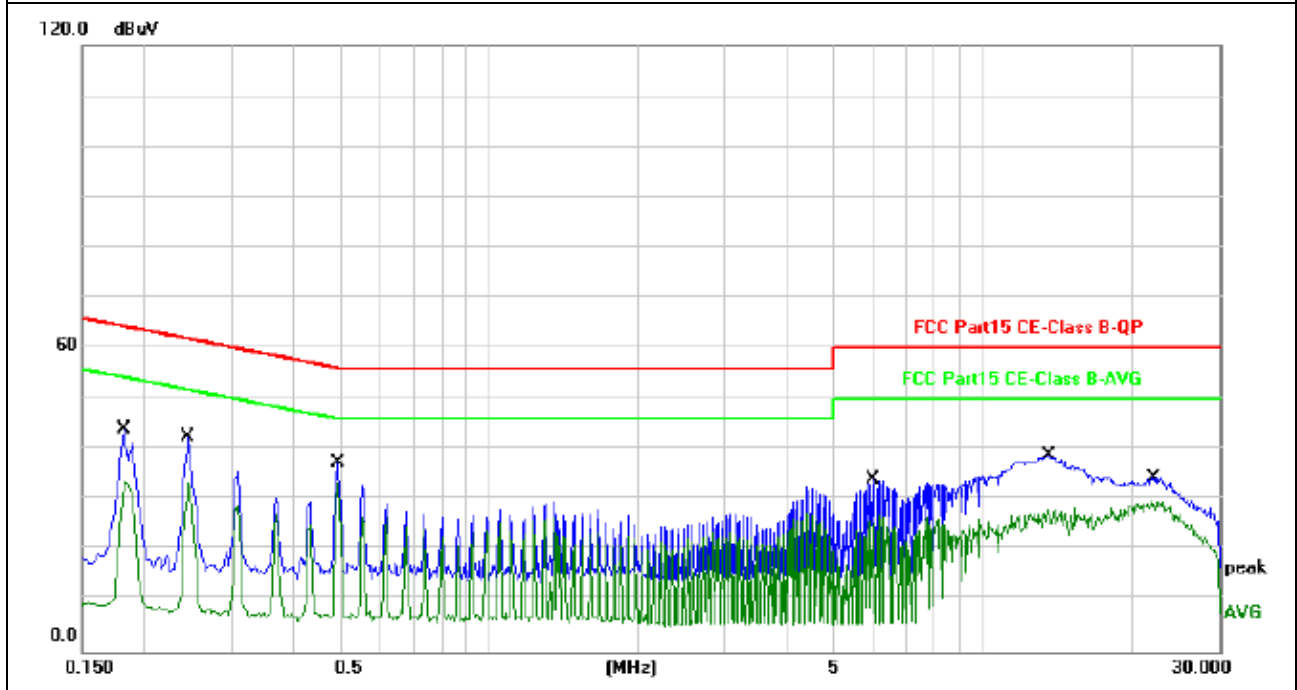


EUT:	Wireless Charging Pad	Model Name :	Q100
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Normal Link

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.1819	34.00	10.06	44.06	64.39	-20.33	QP
0.1819	23.62	10.06	33.68	54.39	-20.71	AVG
0.2460	32.33	10.08	42.41	61.89	-19.48	QP
0.2460	23.48	10.08	33.56	51.89	-18.33	AVG
0.4940	27.21	10.11	37.32	56.10	-18.78	QP
0.4940	23.20	10.11	33.31	46.10	-12.79	AVG
5.9860	23.89	10.09	33.98	60.00	-26.02	QP
5.9860	16.84	10.09	26.93	50.00	-23.07	AVG
13.5740	28.67	10.14	38.81	60.00	-21.19	QP
13.5740	18.00	10.14	28.14	50.00	-21.86	AVG
21.8420	24.05	10.18	34.23	60.00	-25.77	QP
21.8420	19.74	10.18	29.92	50.00	-20.08	AVG

Remark:

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





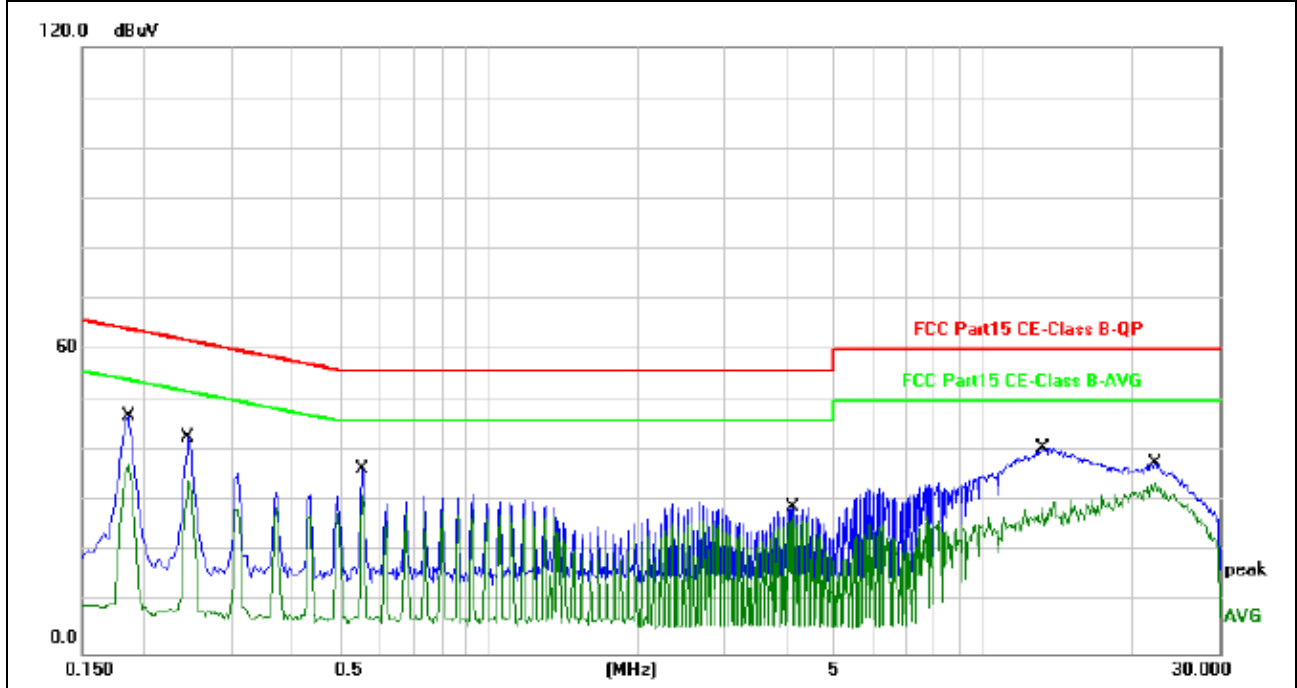
EUT:	Wireless Charging Pad	Model Name. :	Q100
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Normal Link

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector Type
0.1860	36.92	10.06	46.98	64.21	-17.23	QP
0.1860	27.22	10.06	37.28	54.21	-16.93	AVG
0.2460	32.53	10.08	42.61	61.89	-19.28	QP
0.2460	24.01	10.08	34.09	51.89	-17.80	AVG
0.5540	26.35	10.12	36.47	56.00	-19.53	QP
0.5540	21.30	10.12	31.42	46.00	-14.58	AVG
4.1340	18.70	10.16	28.86	56.00	-27.14	QP
4.1340	16.87	10.16	27.03	46.00	-18.97	AVG
13.2060	30.41	10.14	40.55	60.00	-19.45	QP
13.2060	20.14	10.14	30.28	50.00	-19.72	AVG
22.2099	27.55	10.18	37.73	60.00	-22.27	QP
22.2099	23.58	10.18	33.76	50.00	-16.24	AVG

Remark:

1. All readings are Quasi-Peak and Average values.

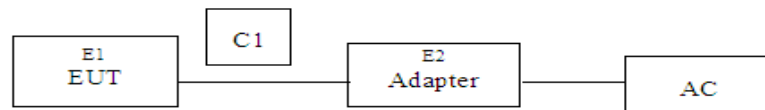
2. Factor = Insertion Loss + Cable Loss.



6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup

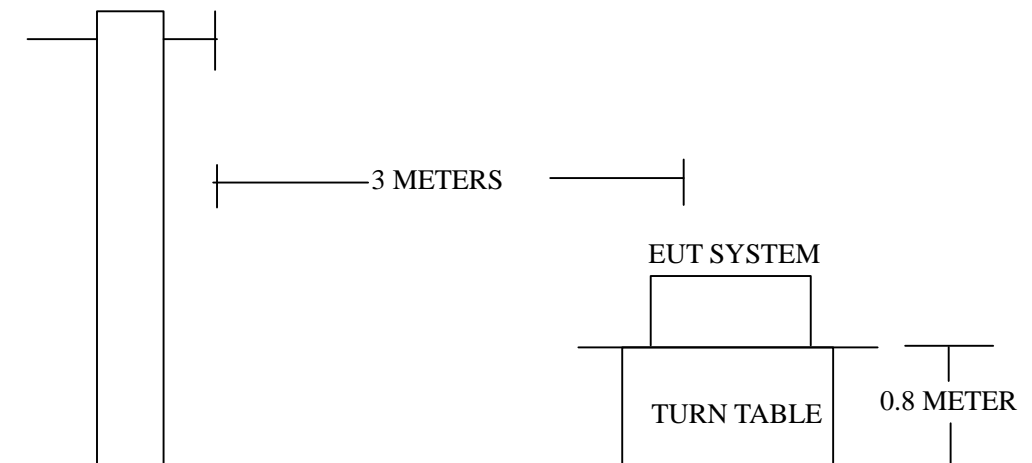
6.1.1. Block Diagram of connection between the EUT and the simulators



(EUT: Wireless Charging Pad)

6.1.2. Anechoic Chamber Test Setup Diagram

ANTENNA TOWER



GROUND PLANE

6.2. Test Standard

FCC Part 15 C: 2014

6.3. Radiated Emission Limit(Class B)

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Note:(1) The smaller limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT or system.



6.4.EUT Configuration on Test

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.

Operating Condition of EUT

6.4.1.Setup the EUT as shown on Section 6.1

6.4.2.Turn on the power of all equipments.

6.4.3.Let the EUT work in test mode(EUT working) and measure it.

6.5.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.

The bandwidth setting on the test receiver is 120 KHz.

The EUT is tested in Anechoic Chamber. The frequency range from 30MHz to 1000MHz is checked. All the test results are listed in Section 6.6.

6.6.Test Result

PASS

Please refer to the following pages.

**9KHz-30MHz**

EUT:	Wireless Charging Pad	Model Name :	Q100
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC5V For Adapter		
Test Mode :	Normal Link		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



30MHz-1GHz

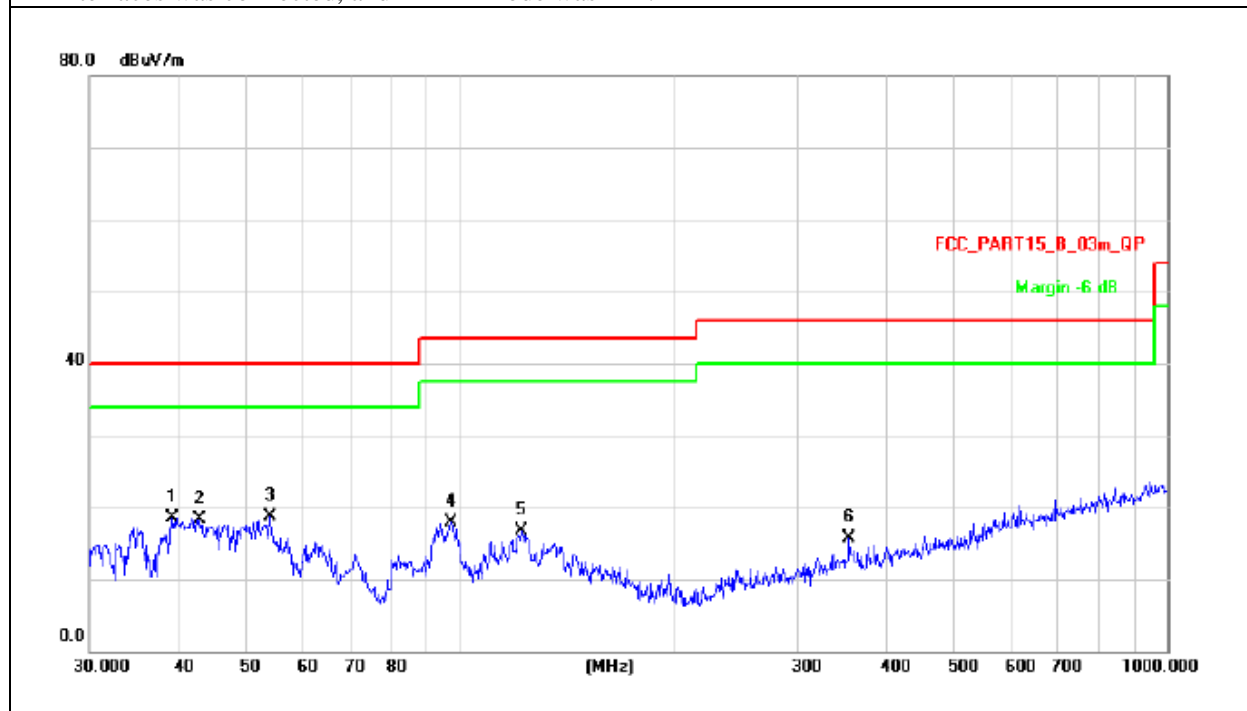
EUT:	Wireless Charging Pad	Model Name :	Q100
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC5V For Adapter		
Test Mode :	Normal Link		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
39.2991	27.37	-8.82	18.55	40.00	-21.45	QP
42.8998	27.48	-9.21	18.27	40.00	-21.73	QP
53.8818	29.62	-10.93	18.69	40.00	-21.31	QP
97.1148	34.69	-16.79	17.90	43.50	-25.60	QP
122.4040	31.18	-14.57	16.61	43.50	-26.89	QP
355.4273	27.02	-11.29	15.73	46.00	-30.27	QP

Remark:

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

All interfaces was connected, and BT TX mode was link.





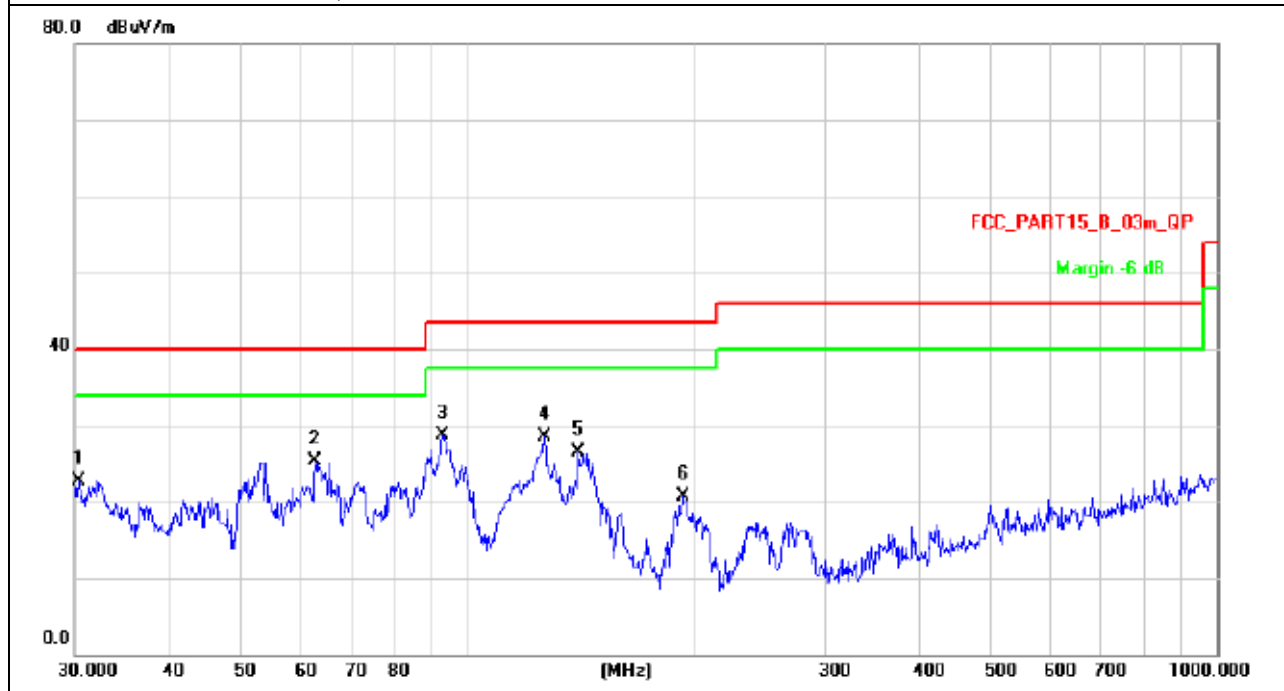
EUT:	Wireless Charging Pad	Model Name :	Q100
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization :	Vertical
Test Voltage :	DC5V For Adapter		
Test Mode :	Normal Link		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
30.3173	30.79	-8.06	22.73	40.00	-17.27	
62.6507	37.38	-12.05	25.33	40.00	-14.67	QP
92.7871	45.87	-17.23	28.64	43.50	-14.86	QP
126.7723	42.73	-14.31	28.42	43.50	-15.08	QP
140.8351	39.76	-13.34	26.42	43.50	-17.08	QP
193.7728	36.45	-15.81	20.64	43.50	-22.86	QP

Remark:

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

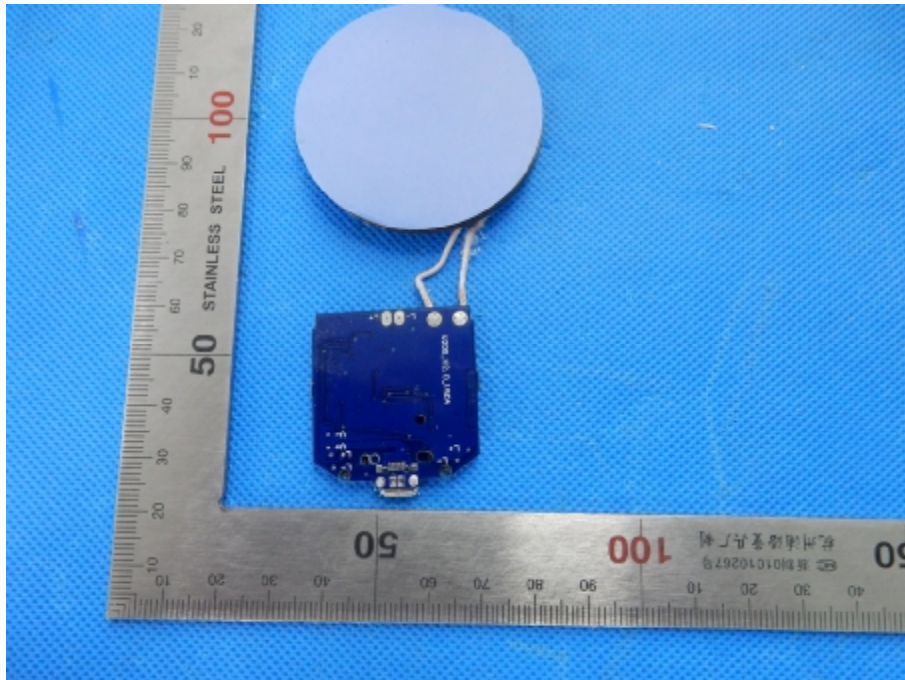
All interfaces was connected, and BT TX mode was link.





APPENDIX I (PHOTOS OF THE EUT)

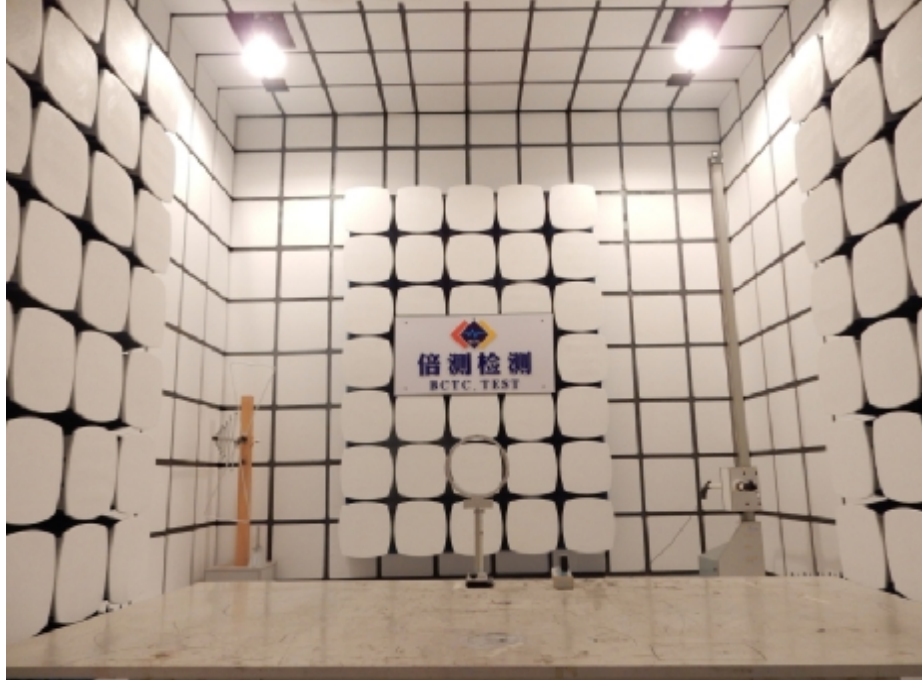
EUT Photo 1**EUT Photo 2**

EUT Photo 3**EUT Photo 4**

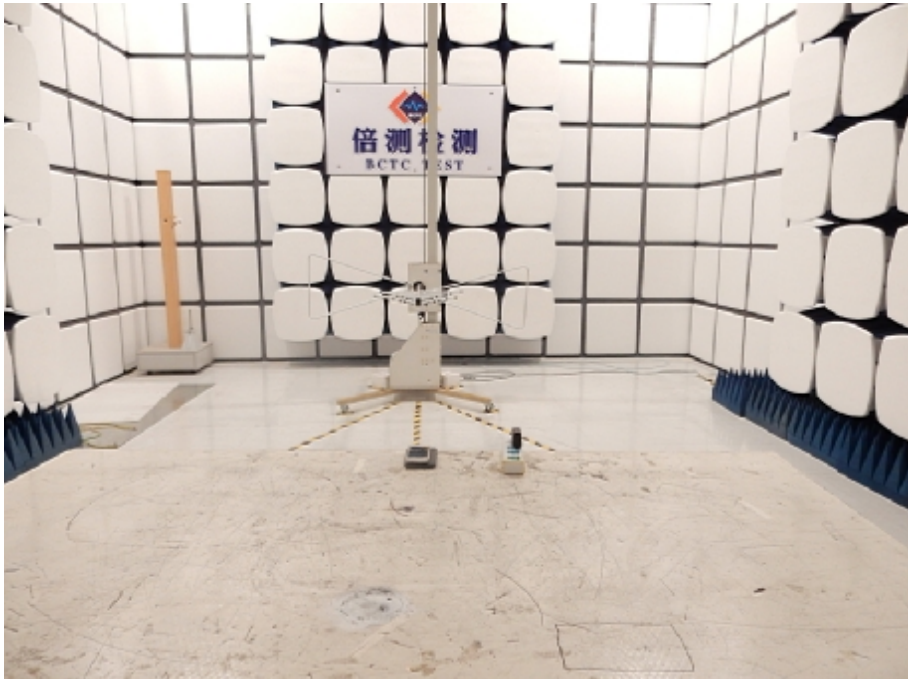


APPENDIX II (TEST PHOTOS OF THE EUT)

9KMz-30MHz



30MHz-1GMz





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