



STC Test Report

Date: 2016-05-23

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No.: DM123353

Applicant: Dongguan Arun Industrial Co., Ltd.
No. 18, Xinfeng Street, Changlong Village, Huangjiang
Town, Dongguan City, Guangdong Province, P.R. China

Description of Sample(s): Submitted sample(s) said to be
Product: Wireless Charger
Brand Name: N/A
Model Number: WX0002
FCC ID: 2AHCLWX0002

Date Sample(s) Received: 2016-04-26

Date Tested: 2016-05-06 to 2016-05-19

Investigation Requested: FCC Part 18

Conclusion(s): The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 18. The tests were performed in accordance with the standards described above and on Section 2.2 in this Test Report.

Remark(s): ---


LONG Yun Jian, Along
Authorized Signatory
ElectroMagnetic Compatibility Department
For and on behalf of
STC (Dongguan) Company Limited

STC (Dongguan) Company Limited

68 Fumin Nan Road, Dalang, Dongguan, China. (Zip Code : 523 770)
Tel : (86 769) 8111 9888 Fax : (86 769) 8111 6222 E-mail : dgstc@dgstc.org Homepage : www.dgstc.org

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1.0 General Details

1.1 Equipment Under Test [EUT] Description of Sample(s)

Product: Wireless Charger
Manufacturer: Dongguan Arun Industrial Co., Ltd.
No. 18, Xinfeng Street, Changlong Village, Huangjiang Town,
Dongguan City, Guangdong Province, P.R. China
Brand Name: N/A
Model Number: WX0002
Rating: Input: 5V 2A
Output: 5V 1A

1.1.1 Description of EUT Operation

The Equipment Under Test (EUT) is a Wireless Charger. The test of EUT was conducted under on mode.

1.2 Date of Order

2016-04-26

1.3 Submitted Sample(s):

1 sample

1.4 Test Duration

2016-05-06 to 2016-05-19

1.5 Country of Origin

USA

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2.0 Technical Details

2.1 Investigations Requested

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 18: 2014 and MP-5: 1986 for FCC Certification.

2.2 Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result	
				Pass	Failed
Radiated Emissions 0.009MHz to 30MHz	FCC Part 18	MP-5: 1986		☒	☐
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC Part 18	MP-5: 1986	Class B	☒	☐

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3.0 Test Results

3.1 Emission

3.1.1 Radiated Emissions (0.009MHz to 30MHz)

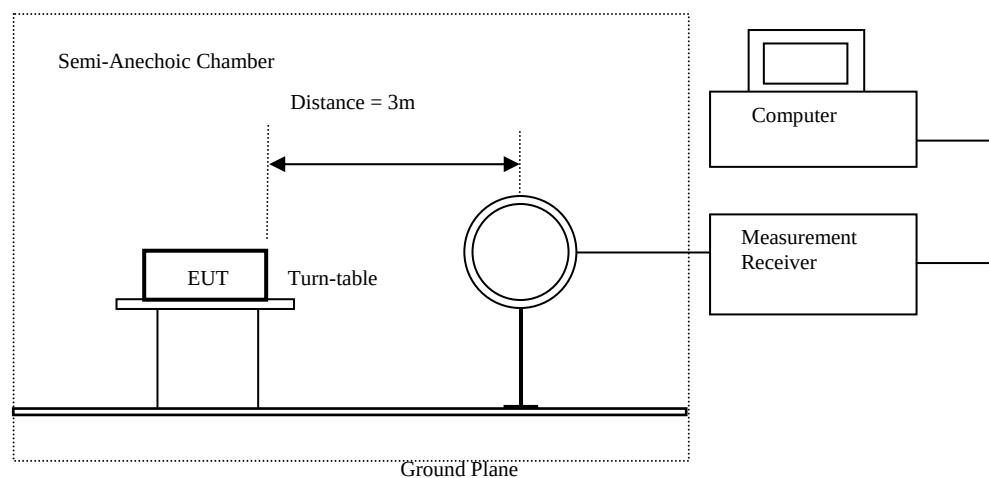
Test Requirement:	FCC Part 18
Test Method:	MP-5: 1986
Test Date:	2016-05-12
Mode of Operation:	Wireless Charging Mode

Test Method:

The sample was placed 0.8m above the ground plane of Semi-Anechoic chamber*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, The antenna height is 4m. The emissions worst-case are shown in Test Results of the following pages.

* Semi-anechoic chamber located on the STC (Dongguan) Company Ltd. 68 Fumin Nan Road, Dalang, Dongguan, Guangdong, PRC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules, with Registration Number: 629686.

Test Setup:



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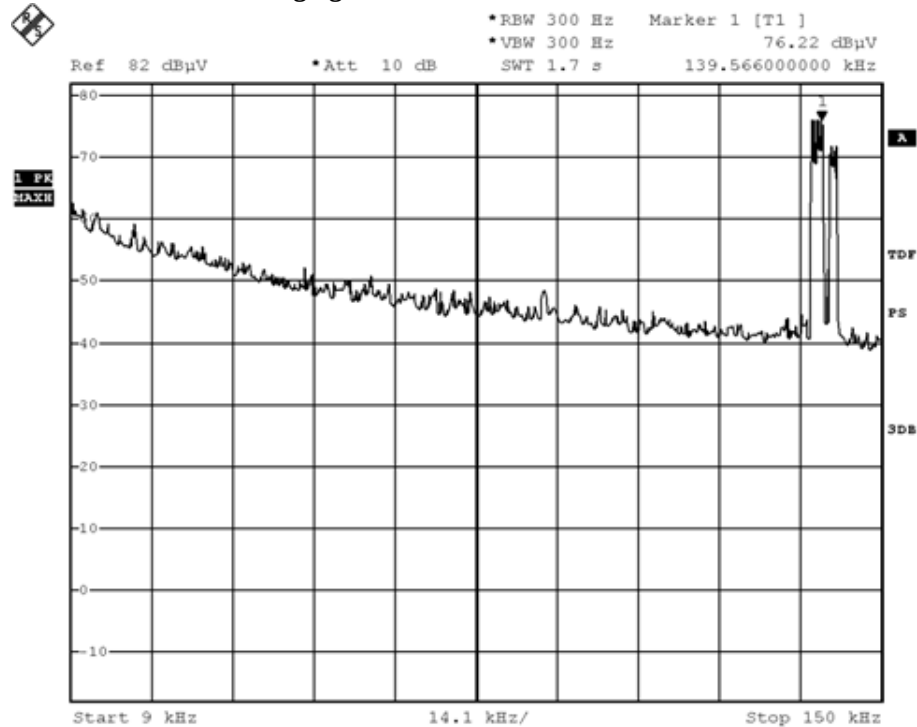
No.: DM123353

Limits for Radiated Emissions (FCC 47 CFR Part 18):

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V/m]
0.009-30	103.5

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector.

Results of Wireless Charging Mode: PASS



BMP

Date: 12.MAY.2016 17:55:10

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
139.6	Horizontal	76.2	103.5	6471.4	149968

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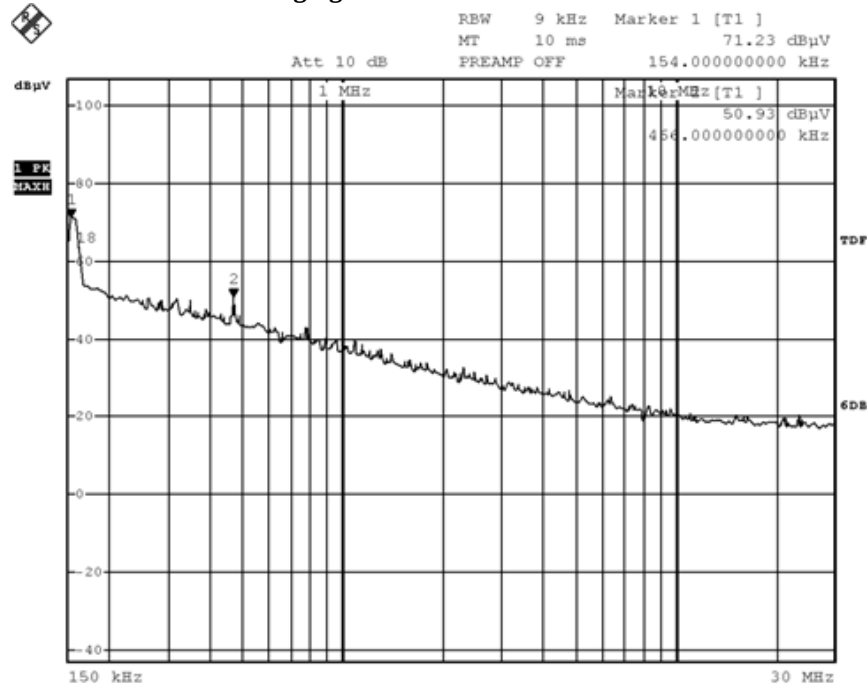
No.: DM123353

Limits for Radiated Emissions (FCC 47 CFR Part 18):

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V/m]
0.009-30	103.5

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector.

Results of Wireless Charging Mode: PASS



BMP

Date: 12.MAY.2016 17:50:25

Radiated Emissions Quasi-Peak					
Emission Frequency MHz	E-Field Polarity	Level @3m dB μ V/m	Limit @3m dB μ V/m	Level @3m μ V/m	Limit @3m μ V/m
154.0	Horizontal	71.2	103.5	3643.3	149968

Remarks:

Calculated measurement uncertainty (30MHz – 1GHz): 4.6dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

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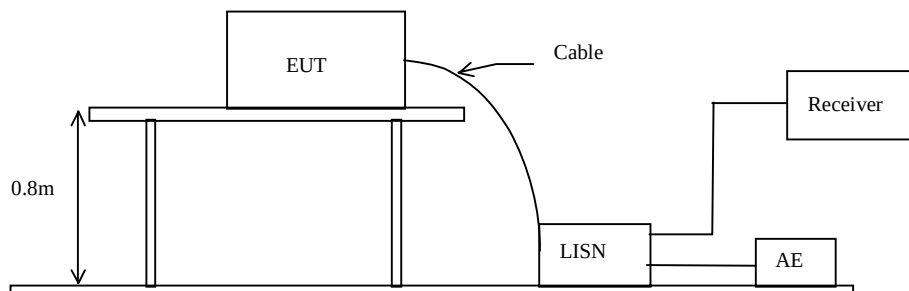
3.1.2 Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC Part 18
Test Method:	MP-5: 1986
Test Date:	2016-05-06
Mode of Operation:	Wireless Charging Mode

Test Method:

The test was performed in accordance with MP-5: 1986, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

Test Setup:



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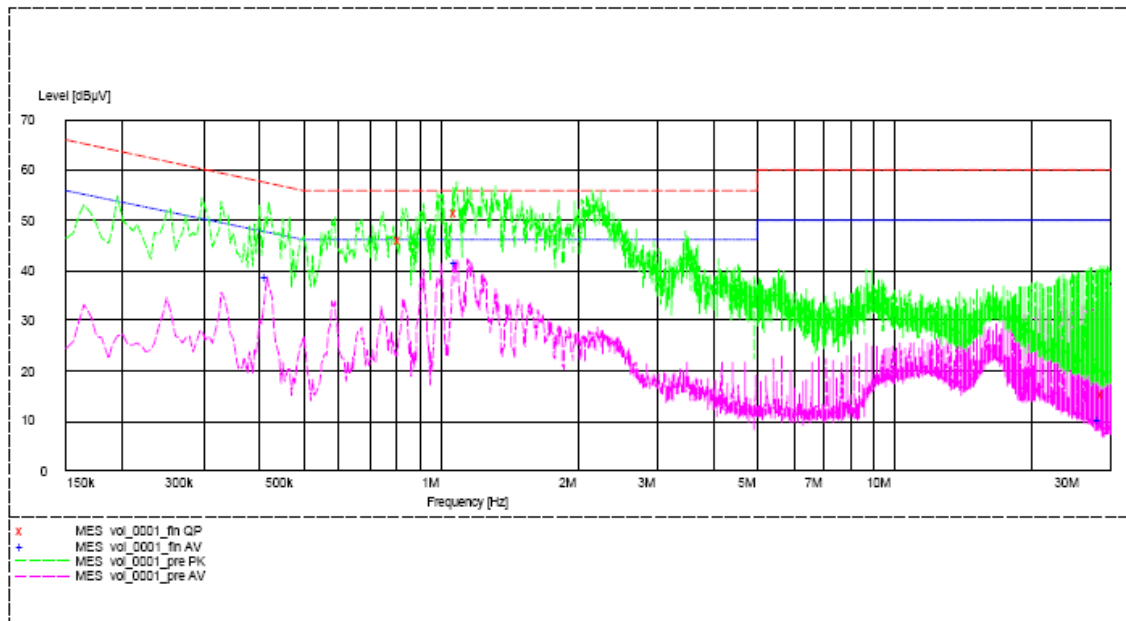
Limit for Conducted Emissions (FCC 47 CFR Part 18):

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average Limits [dB μ V]
0.15-0.5	66-56*	56-46*
0.5-5.0	56	46
5.0-30	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of Wireless Charging mode (L): PASS



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MEASUREMENT RESULT: "vol_0001_fin QP"

5/6/2016 11:30AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.820000	46.20	9.6	56	9.8	L1	GND
1.085000	51.50	9.6	56	4.5	L1	GND
28.960000	15.20	10.1	60	44.8	L1	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

5/6/2016 11:30AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.415000	38.90	9.6	48	8.6	L1	GND
1.085000	41.50	9.6	46	4.5	L1	GND
28.440000	10.10	10.1	50	39.9	L1	GND

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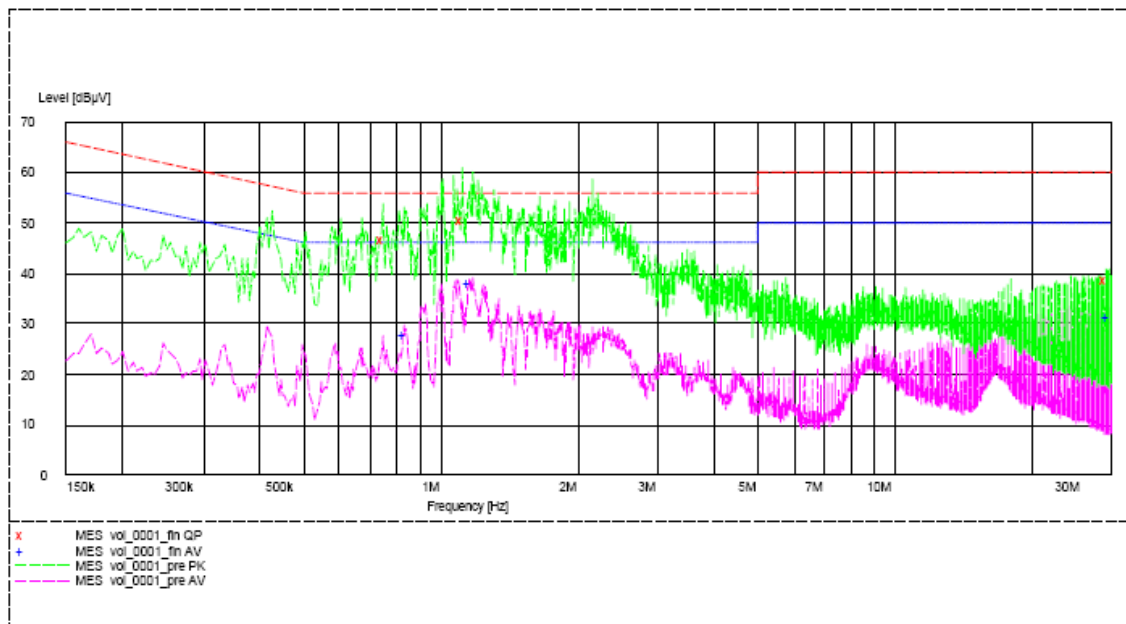
Limit for Conducted Emissions (FCC 47 CFR Part 18):

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average Limits [dB μ V]
0.15-0.5	66-56*	56-46*
0.5-5.0	56	46
5.0-30	60	50

* Decreases with the logarithm of the frequency.

Limits for Conducted Emissions Test, please refer to limit lines (Quasi-Peak and Average) in the following diagram.

Results of Wireless Charging mode (N): PASS



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MEASUREMENT RESULT: "vol_0001_fin QP"

5/6/2016 11:18AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.745000	46.70	9.6	56	9.3	N	GND
1.120000	50.50	9.6	56	5.5	N	GND
29.165000	38.90	10.1	60	21.1	N	GND

MEASUREMENT RESULT: "vol_0001_fin AV"

5/6/2016 11:18AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.830000	28.00	9.6	46	18.0	N	GND
1.160000	38.20	9.6	46	7.8	N	GND
29.425000	31.50	10.1	50	18.5	N	GND

Remarks:

Calculated measurement uncertainty (0.15MHz – 30MHz): 3.2dB

-*- Emission(s) that is far below the corresponding limit line.

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Appendix A

List of Measurement Equipment

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EMD004	LISN	ROHDE & SCHWARZ	ESH3-Z5	100102	2016.3.29	2017.3.29
EMD022	EMI Test Receiver	ROHDE & SCHWARZ	ESCS30	100314	2016.3.29	2017.3.29
EMD035	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100441	2016.3.29	2017.3.29
EMD036	EMI Test Receiver	ROHDE & SCHWARZ	ESIB 26	100388	2016.3.29	2017.3.29
EMD041	TWO-LINE V-NETWORK	ROHDE & SCHWARZ	ENV216	100261	2016.3.29	2017.3.29
EMD061	Biconilog Antenna	ETS.LINDGREN	3142C	00060439	2014.11.29	2016.11.29
EMD062	Double-Ridged Waveguide (1GHz – 18GHz)	ETS.LINDGREN	3117	00075933	2014.11.15	2016.11.15
EMD084	MULTI-DVICE CONTROLLER	ETS.LINDGREN	2090	00060107	N/A	N/A
EMD088	Video Contol Unit	ETS.LINDGREN	Y21953A	2601073	N/A	N/A
EMD093	Monitor	ViewSonic	VA9036	Q8X064201876	N/A	N/A
EMD102	Intelligent Frequency	Ainuo Instrument Co., Ltd	AN97005SS	79707454	N/A	N/A
EMD103	Intelligent Frequency	Ainuo Instrument Co., Ltd	AN97005SS	79707455	N/A	N/A
EMD105	FACT-3 EMC Chamber	ETS.LINDGREN	FACT-3	3803	N/A	N/A
EMD106	Shielding Room #1	ETS.LINDGREN	RFD-100	3802	N/A	N/A
EMD111	Power meter	ROHDE & SCHWARZ	NRVD	102051	2016.3.29	2017.3.29
	100V Insertion Unit	ROHDE & SCHWARZ	URV5-Z4	100464	2016.3.29	2017.3.29
EMD113	Pre-Amplifier	ROHDE & SCHWARZ	N/A	1129588	2016.3.29	2017.3.29
EMD124	Loop Antenna	ETS-Lindgren	6502	00104905	2016.04.28	2018.04.28
EMD131	Standard Gain Horn Antenna (18GHz – 26.5GHz)	Chengdu AINFO Inc.	JXTXLB-42-15-C-KF	J2021100721001	2015.04.09	2017.04.09
RE01	RF cable	N/A	N/A	N/A	2014-9-28	2016-9-27
RE02	RF cable	N/A	N/A	N/A	2014-9-28	2016-9-27

Remark:-

N/A Not Applicable or Not Available

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Appendix B

Photographs of EUT

Front View of the product



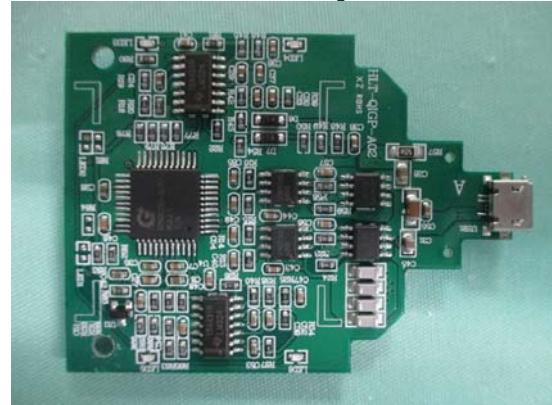
Rear View of the product



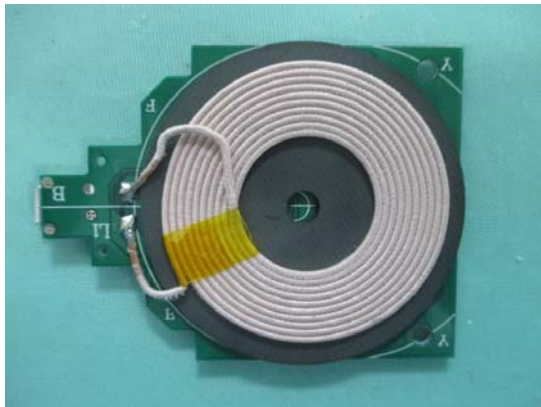
Inside View of the Product



Inner Circuit Top View



Inner Circuit Bottom View



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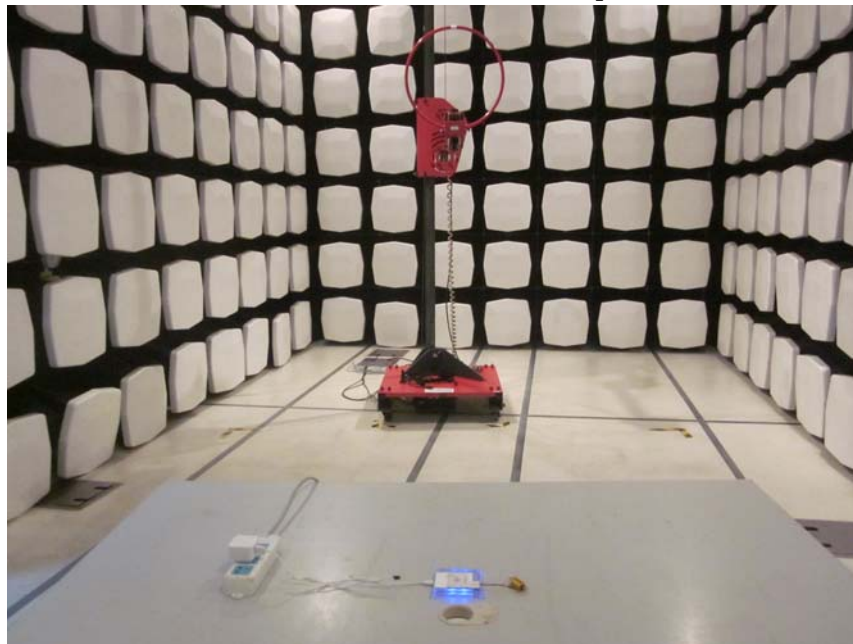
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Appendix B

Photographs of EUT

Radiated Emission Test Set Up



Conducted Emission Test Set Up



******* End of Test Report *******

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