EMC TEST REPORT

Report No.: 15070621-FCC-E2

Supersede Report No.: N/A

Applicant	Shenzhen Creative Industry Co., Ltd.
Product Name	Video Baby Monitor
Model No.	IPC100
Serial No.	N/A
Test Standard	FCC Part 15 Subpart B Class B:2014, ANSI C63.4: 2014
Test Date	September 03 to October 14, 2015
Issue Date	December 24, 2015
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Winnie Zhang	David Huang	
Winnie Zhang Test Engineer	David Huang Checked By	

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
15070621-FCC-E2	NONE	Original	October 14, 2015
15070621-FCC-E2	V1	Adding 433MHz Receiver Board photos	December 24, 2015

2. Customer information

Applicant Name	Shenzhen Creative Industry Co., Ltd.
Applicant Add	2/F, Block 3, Nanyou Tian'an Industry Town, Guangd, Shenzhen, China,518054
Manufacturer	MC Devices Co., Ltd.
Manufacturer Add	Suite 516 BLD 4, National Software Base, Ke ji zhong 2 Road, Shenzhen Hi-Tech Park, Shenzhen, 518.57, China

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT:	Video Baby Monitor
Main Model:	IPC100
Serial Model:	N/A
Date EUT received:	September 02, 2015
Test Date(s):	September 03 to October 14, 2015
Equipment Category：	CYY
Antenna Gain:	WIFI: 3dBi 433MHz Receiver: 0dBi
Type of Modulation:	802.11b/g/n: DSSS, OFDM
RF Operating Frequency (ies):	WIFI:802.11b/g/n(20M): 2412-2462 MHz WIFI:802.11n(40M): 2422-2452 MHz Receiver: 433MHz
Number of Channels:	WIFI :802.11b/g/n(20M): 11CH WIFI :802.11n(40M): 7CH Receiver: 1CH
Port:	USB Port
Input Power:	Adapter: Model :PS10E050K2000UU Input :100-240Vac, 50/60Hz, 0.35A Output :5.0Vdc, 2000mA
Trade Name :	N/A
FCC ID:	A49IPC100

5. Test Summary

The product was tested in accordance with the following specifications.

All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.107; ANSI C63.4: 2014	AC Power Line Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

Emissions		
Test Item	**Description**	**Uncertainty**
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

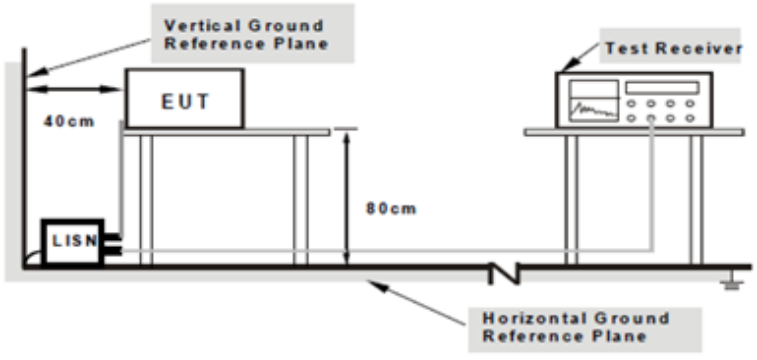
Temperature	23°C
Relative Humidity	59%
Atmospheric Pressure	1026mbar
Test date :	September 26, 2015
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.107	a)	For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu] H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.	☑

Frequency ranges (MHz)	Limit (dBμV)	
	QP	Average
0.15 ~ 0.5	66 – 56	56 – 46
0.5 ~ 5	56	46
5 ~ 30	60	50

Test Setup



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

Procedure

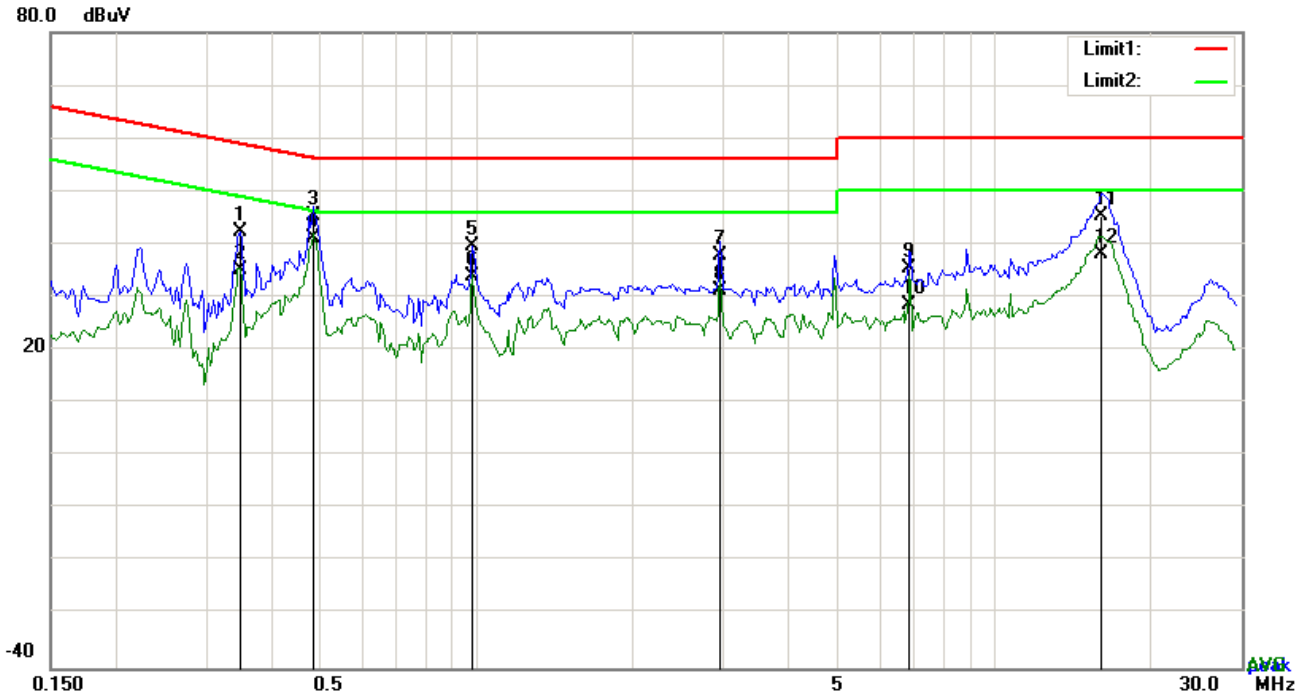
1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.
2. The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.

	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. 4. All other supporting equipment were powered separately from another main supply. 5. The EUT was switched on and allowed to warm up to its normal operating condition. 6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver. 7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz. 8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Mode 1:	Receiver 433MHz Mode

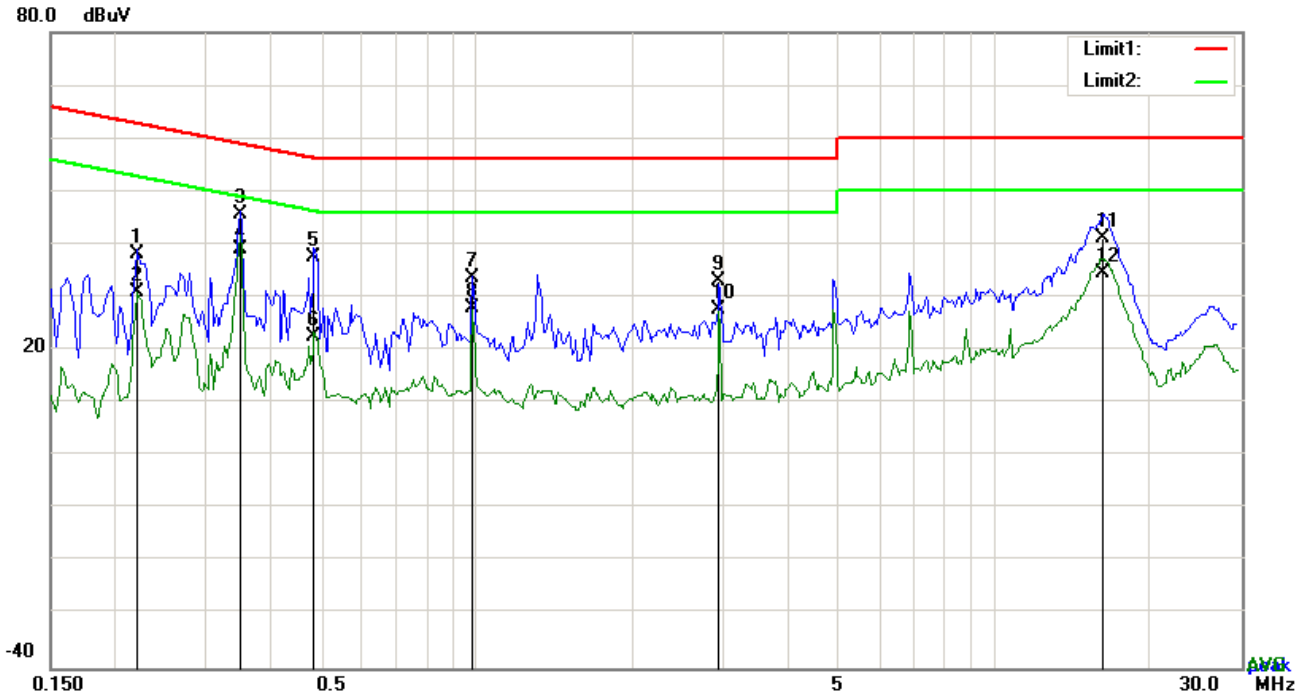


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.3489	32.23	QP	10.03	42.26	58.99	-16.73
2	L1	0.3489	25.22	AVG	10.03	35.25	48.99	-13.74
3	L1	0.4815	35.27	QP	10.03	45.30	56.31	-11.01
4	L1	0.4815	31.08	AVG	10.03	41.11	46.31	-5.20
5	L1	0.9807	29.49	QP	10.03	39.52	56.00	-16.48
6	L1	0.9807	24.03	AVG	10.03	34.06	46.00	-11.94
7	L1	2.9463	27.69	QP	10.05	37.74	56.00	-18.26
8	L1	2.9463	21.34	AVG	10.05	31.39	46.00	-14.61
9	L1	6.8727	25.22	QP	10.11	35.33	60.00	-24.67
10	L1	6.8727	18.32	AVG	10.11	28.43	50.00	-21.57
11	L1	16.1391	35.04	QP	10.24	45.28	60.00	-14.72
12	L1	16.1391	27.90	AVG	10.24	38.14	50.00	-11.86

Test Mode 1:	Receiver 433MHz Mode

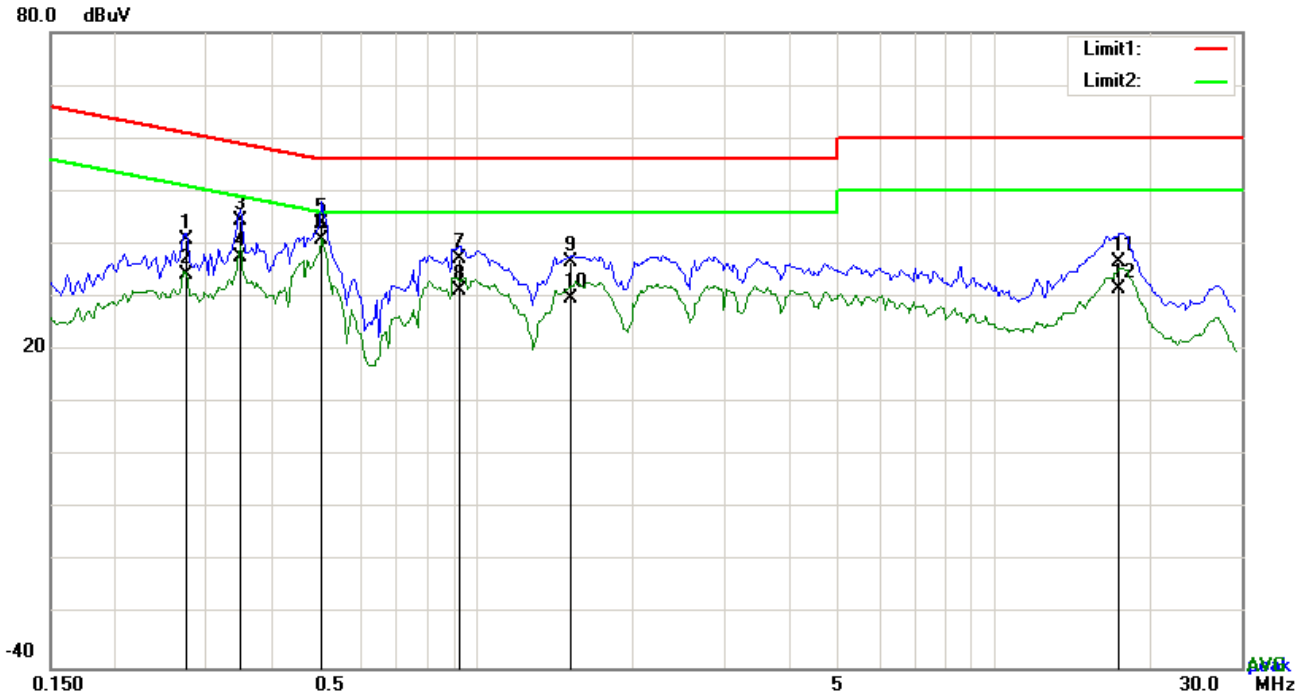


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.2202	28.17	QP	10.03	38.20	62.81	-24.61
2	N	0.2202	20.87	AVG	10.03	30.90	52.81	-21.91
3	N	0.3489	35.61	QP	10.03	45.64	58.99	-13.35
4	N	0.3489	28.88	AVG	10.03	38.91	48.99	-10.08
5	N	0.4854	27.48	QP	10.03	37.51	56.25	-18.74
6	N	0.4854	12.42	AVG	10.03	22.45	46.25	-23.80
7	N	0.9807	23.48	QP	10.03	33.51	56.00	-22.49
8	N	0.9807	18.00	AVG	10.03	28.03	46.00	-17.97
9	N	2.9424	22.93	QP	10.05	32.98	56.00	-23.02
10	N	2.9424	17.65	AVG	10.05	27.70	46.00	-18.30
11	N	16.2132	30.88	QP	10.24	41.12	60.00	-18.88
12	N	16.2132	24.20	AVG	10.24	34.44	50.00	-15.56

Test Mode 1:	Receiver 433MHz Mode

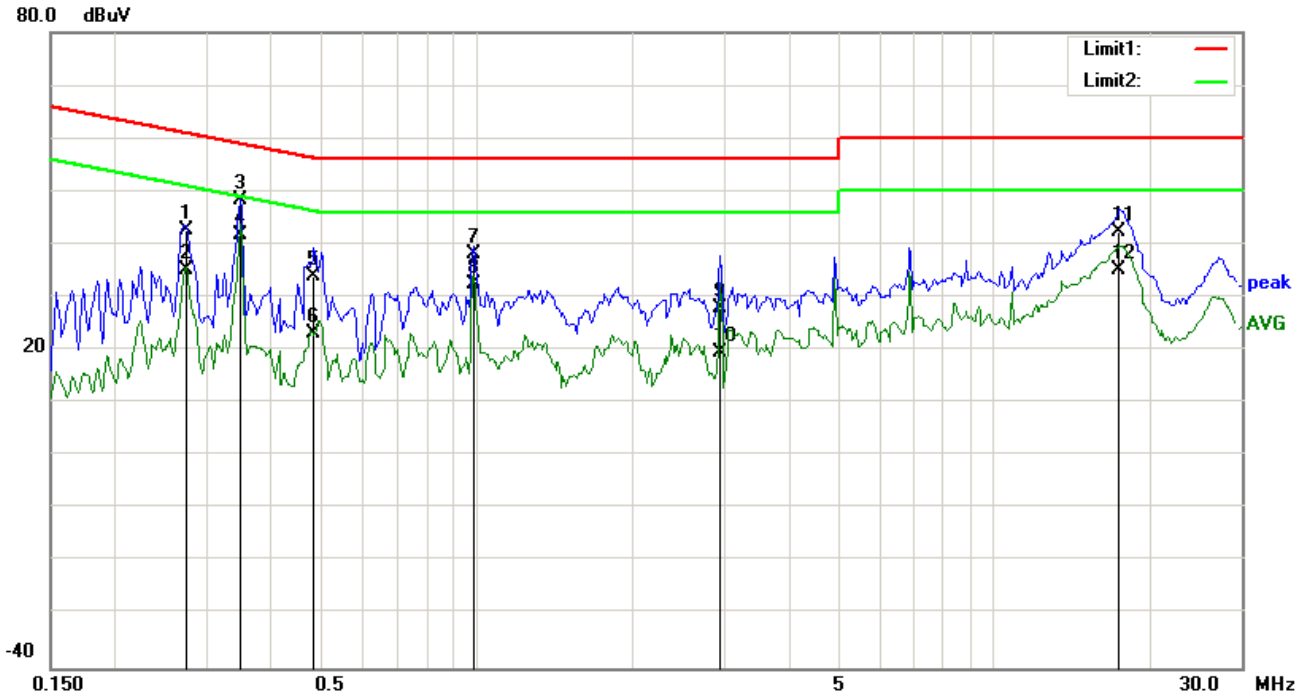


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.2748	30.83	QP	10.03	40.86	60.97	-20.11
2	L1	0.2748	24.25	AVG	10.03	34.28	50.97	-16.69
3	L1	0.3489	34.41	QP	10.03	44.44	58.99	-14.55
4	L1	0.3489	27.52	AVG	10.03	37.55	48.99	-11.44
5	L1	0.5010	33.78	QP	10.03	43.81	56.00	-12.19
6	L1	0.5010	30.72	AVG	10.03	40.75	46.00	-5.25
7	L1	0.9261	27.20	QP	10.03	37.23	56.00	-18.77
8	L1	0.9261	21.27	AVG	10.03	31.30	46.00	-14.70
9	L1	1.5228	26.51	QP	10.04	36.55	56.00	-19.45
10	L1	1.5228	19.56	AVG	10.04	29.60	46.00	-16.40
11	L1	17.4573	26.35	QP	10.26	36.61	60.00	-23.39
12	L1	17.4573	21.28	AVG	10.26	31.54	50.00	-18.46

Test Mode 1:	Receiver 433MHz Mode



Test Data

Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.2748	32.59	QP	10.02	42.61	60.97	-18.36
2	N	0.2748	25.20	AVG	10.02	35.22	50.97	-15.75
3	N	0.3489	38.26	QP	10.02	48.28	58.99	-10.71
4	N	0.3489	31.61	AVG	10.02	41.63	48.99	-7.36
5	N	0.4854	23.92	QP	10.02	33.94	56.25	-22.31
6	N	0.4854	13.11	AVG	10.02	23.13	46.25	-23.12
7	N	0.9846	28.12	QP	10.03	38.15	56.00	-17.85
8	N	0.9846	22.43	AVG	10.03	32.46	46.00	-13.54
9	N	2.9541	17.91	QP	10.05	27.96	56.00	-28.04
10	N	2.9541	9.36	AVG	10.05	19.41	46.00	-26.59
11	N	17.4612	32.25	QP	10.23	42.48	60.00	-17.52
12	N	17.4612	24.80	AVG	10.23	35.03	50.00	-14.97

6.2 Radiated Emissions

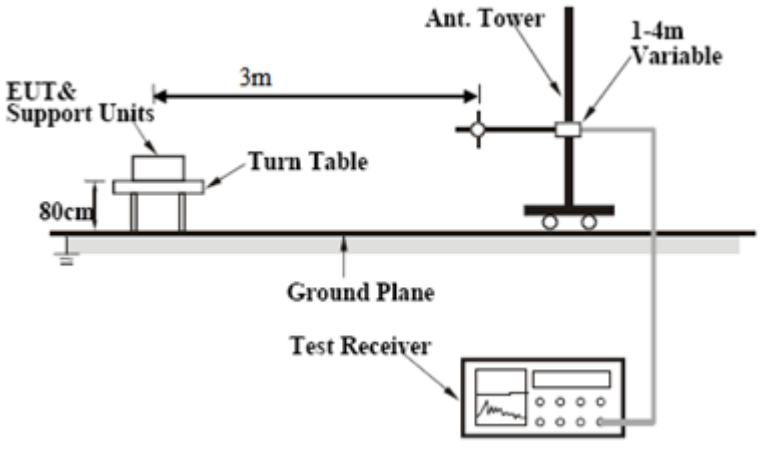
Temperature	23°C
Relative Humidity	59%
Atmospheric Pressure	1026mbar
Test date :	September 26, 2015
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable
47CFR§15.107(d)	a)	Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges	☑

Frequency range (MHz)	Field Strength (μV/m)
30 – 88	100
88 – 216	150
216 960	200
Above 960	500

Test Setup



Procedure

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
   a. Vertical or horizontal polarization (whichever gave the higher emission level

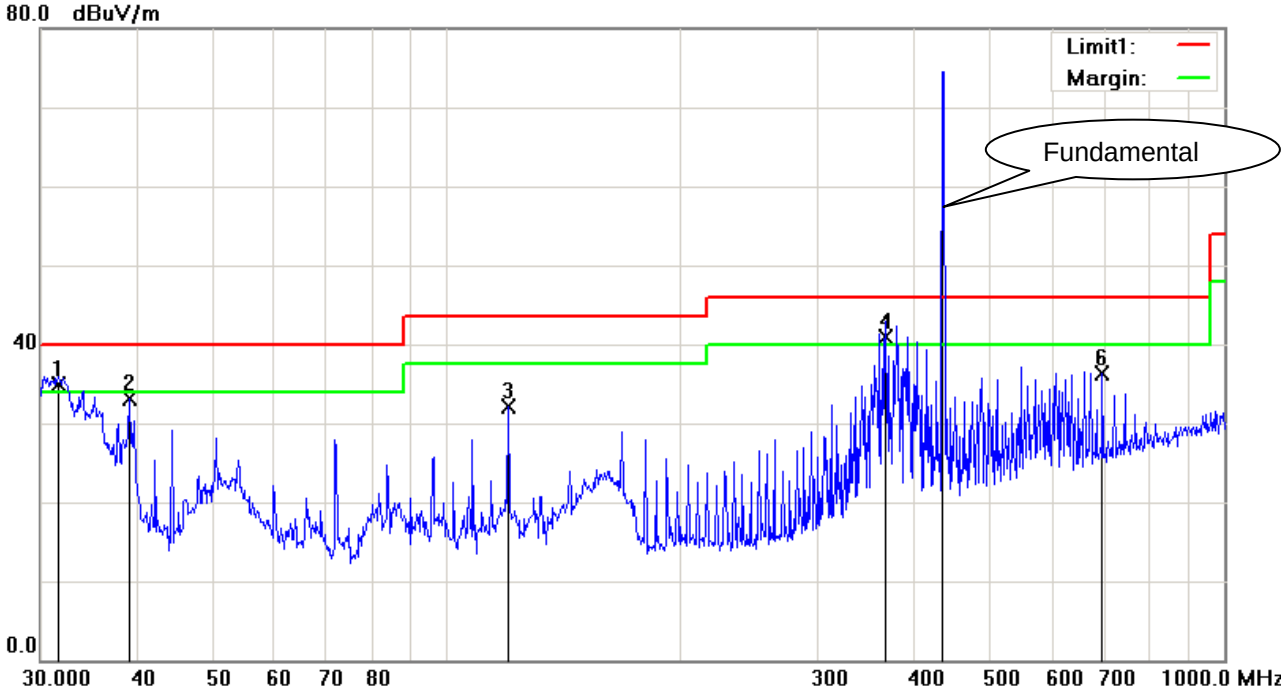
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz. 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth with Peak detection for Average Measurement as below at frequency above 1GHz. ■ 1 kHz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%) 5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Mode 1:	Receiver 433MHz Mode

Below 1GHz



Test Data

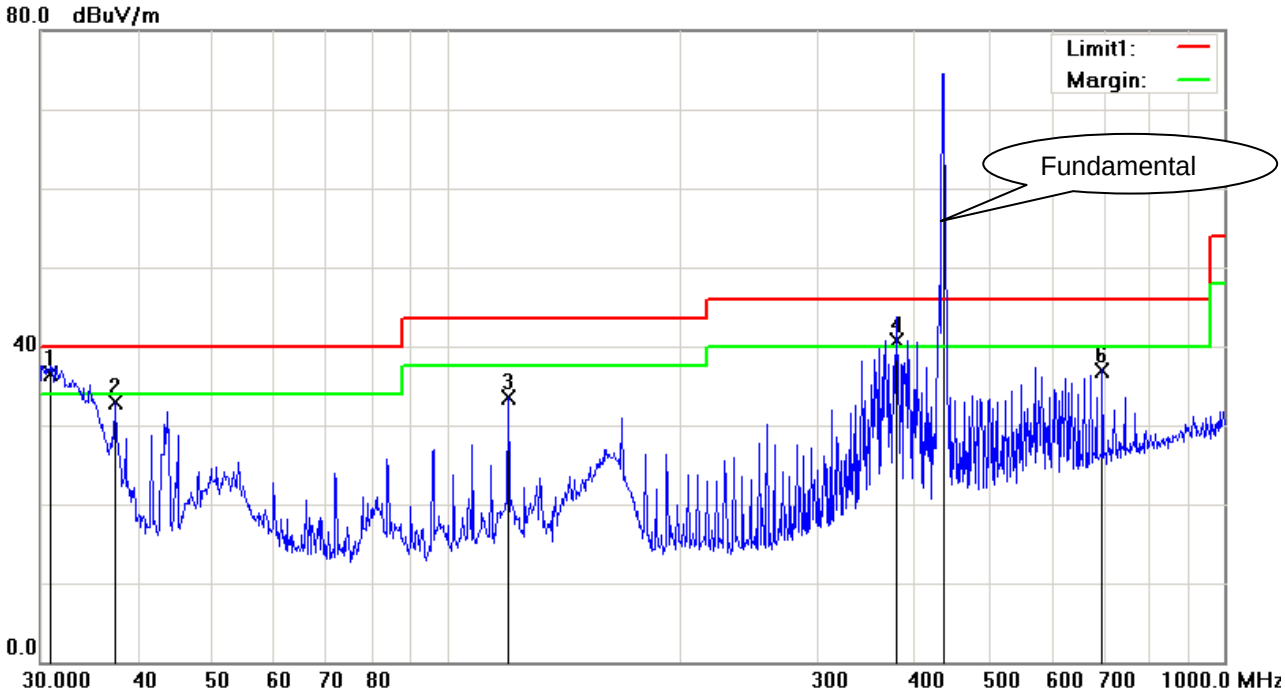
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )
1	H	31.6202	36.26	QP	-1.45	34.81	40.00	-5.19	100	209
2	H	39.0245	39.92	peak	-6.88	33.04	40.00	-6.96	100	201
3	H	119.8556	39.47	peak	-7.33	32.14	43.50	-11.36	100	2
4	H	366.8231	46.01	QP	-5.07	40.94	46.00	-5.06	100	276
6	H	696.8567	34.90	peak	1.35	36.25	46.00	-9.75	100	182

Above 1GHz

Note: The frequency that above 1GHz is mainly from the environment noise.

Below 1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )
1	V	30.9619	37.52	QP	-0.96	36.56	40.00	-3.44	100	209
2	V	37.4165	38.57	peak	-5.70	32.87	40.00	-7.13	100	201
3	V	119.8556	40.89	peak	-7.33	33.56	43.50	-9.94	100	10
4	V	378.5843	45.59	QP	-4.80	40.79	46.00	-5.21	100	180
6	V	696.8567	35.65	peak	1.35	37.00	46.00	-9.00	100	160

Above 1GHz

Note: The frequency that above 1GHz is mainly from the environment noise.

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
EMI test receiver	ESCS30	8471241027	09/17/2015	09/16/2016	☑
Line Impedance Stabilization Network	LI-125A	191106	09/25/2015	09/24/2016	☑
Line Impedance Stabilization Network	LI-125A	191107	09/25/2015	09/24/2016	☑
LISN	ISN T800	34373	09/25/2015	09/24/2016	☑
Transient Limiter	LIT-153	531118	09/01/2015	08/31/2016	☑
Radiated Emissions					
EMI test receiver	ESL6	100262	09/17/2015	09/16/2016	☑
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/01/2015	08/31/2016	☑
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/25/2015	03/24/2016	☑
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/21/2015	09/20/2016	☑
Double Ridge Horn Antenna	AH-118	71259	09/24/2015	09/23/2016	☑

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo

Whole Package - Top View

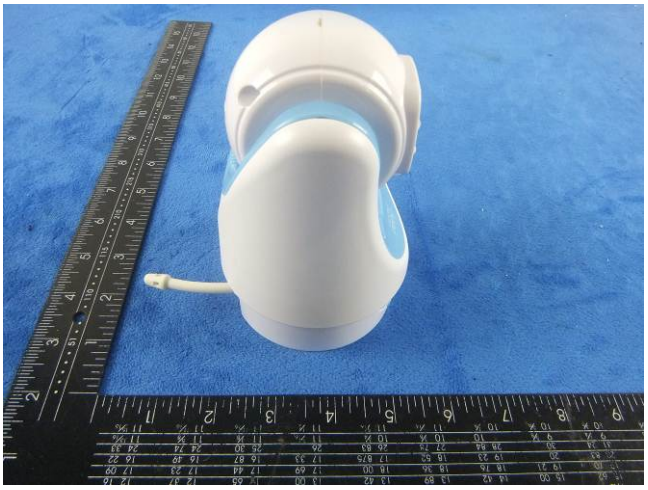
Adapter - Front View

EUT – Front View

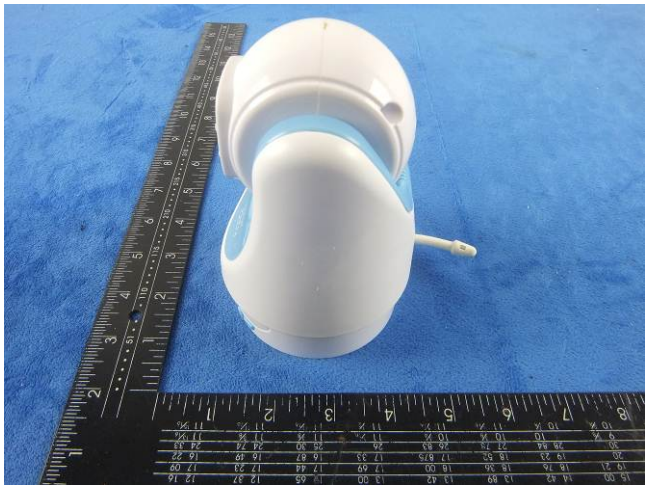
EUT – Rear View

EUT - Top View

EUT – Bottom View



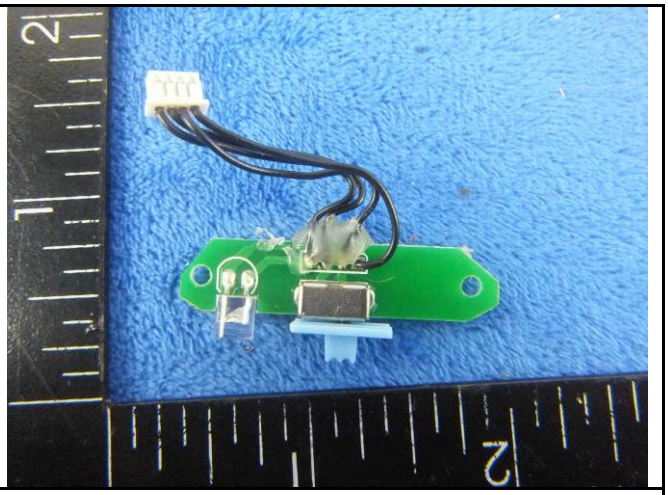
EUT - Left View



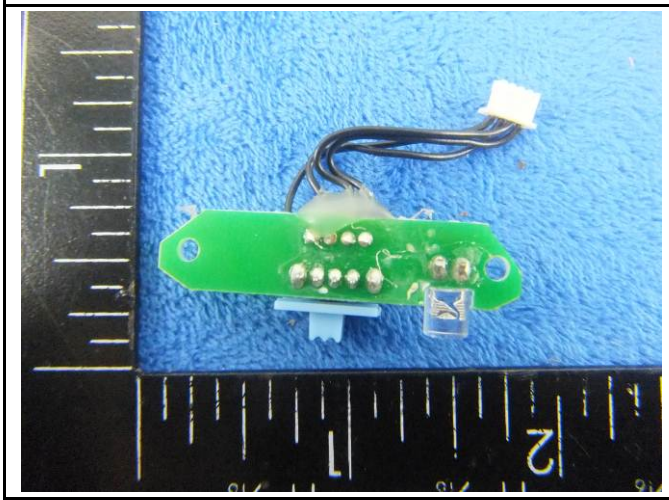
EUT - Right View

Annex B.ii. Photograph: EUT Internal Photo

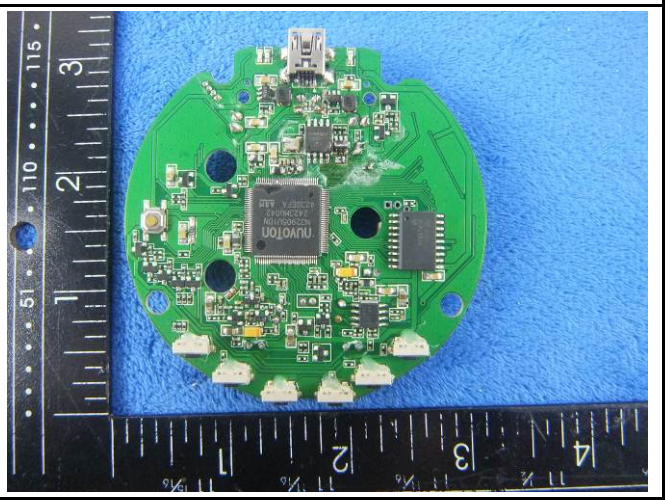
EUT - Uncover Front View



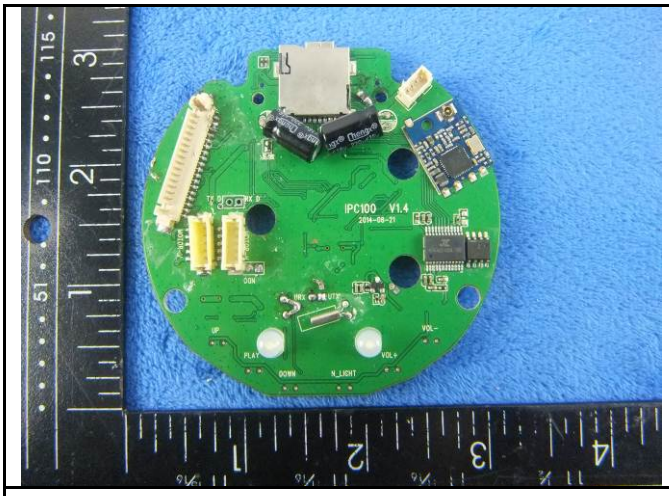
Small Mainborad - Front View



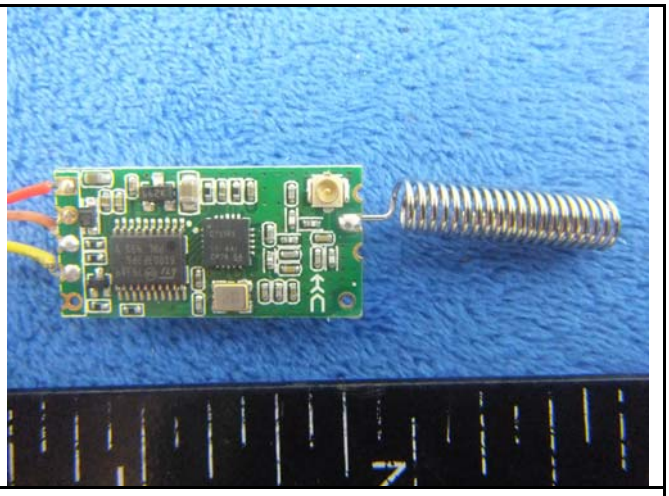
Small Mainborad - Rear View



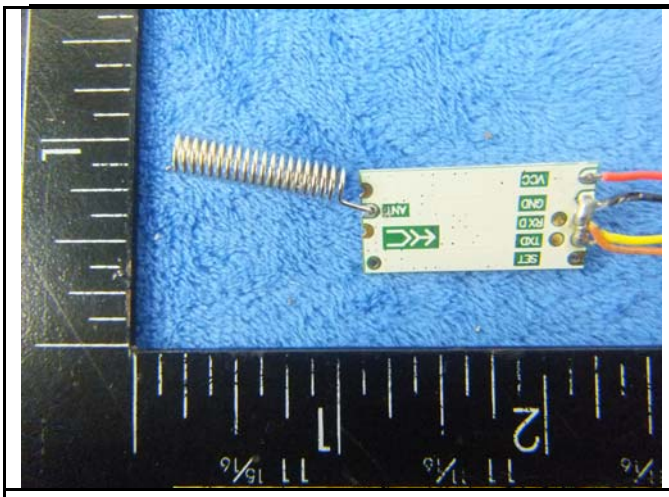
Mainborad - Front View



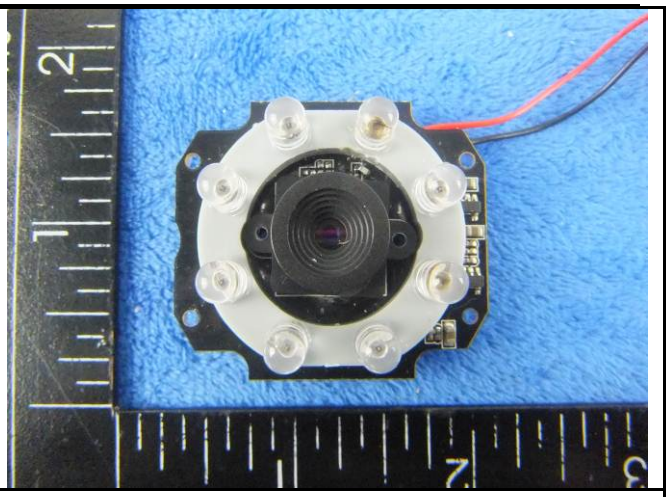
Mainborad - Rear View



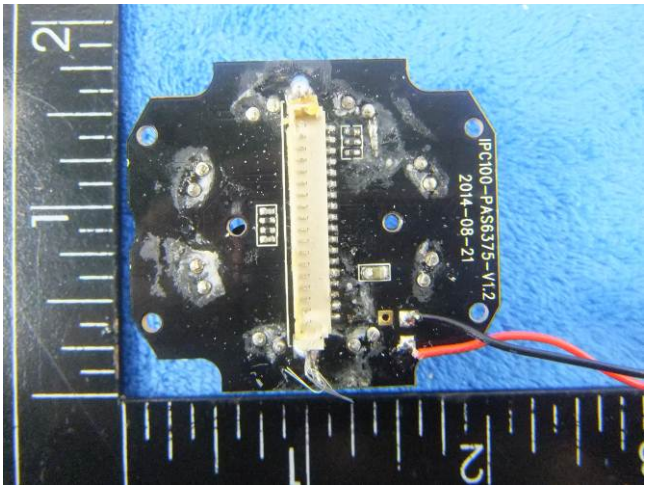
433MHz Receiver Borad - Front View



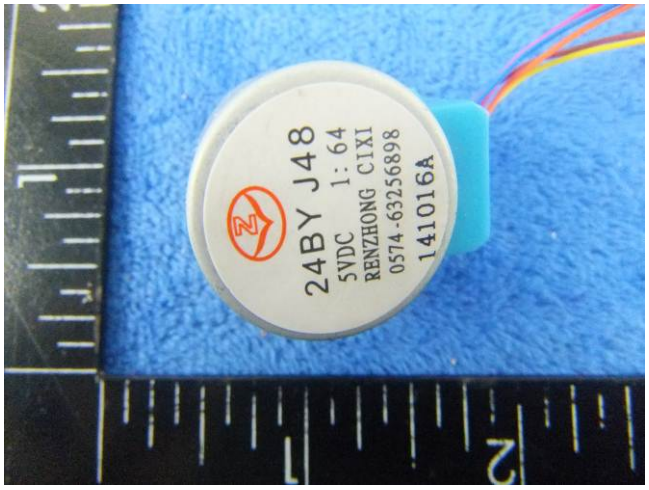
433MHz Receiver Borad - Rear View



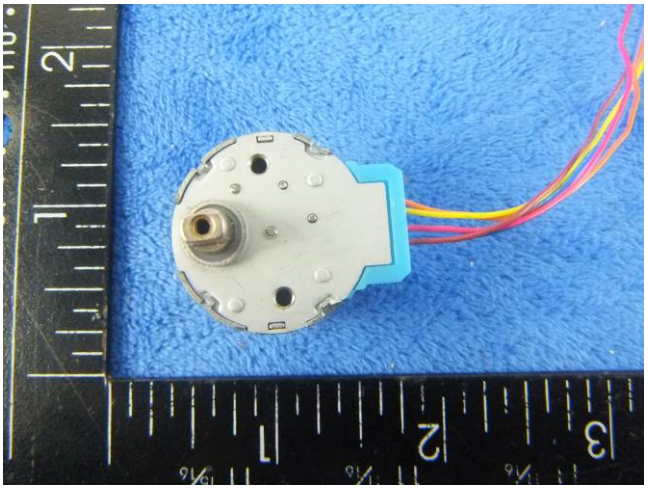
Camera – Front View



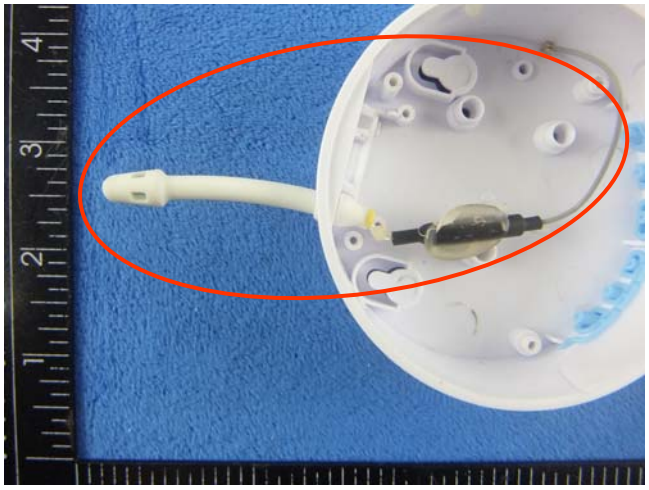
Camera - Rear View



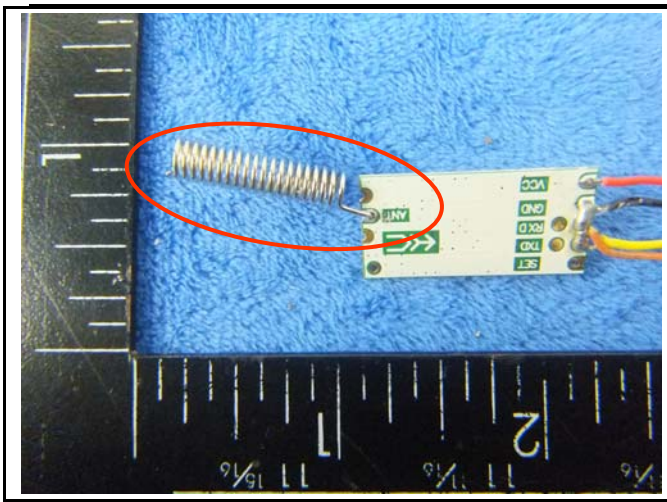
Motor – Front View



Motor – Rear View

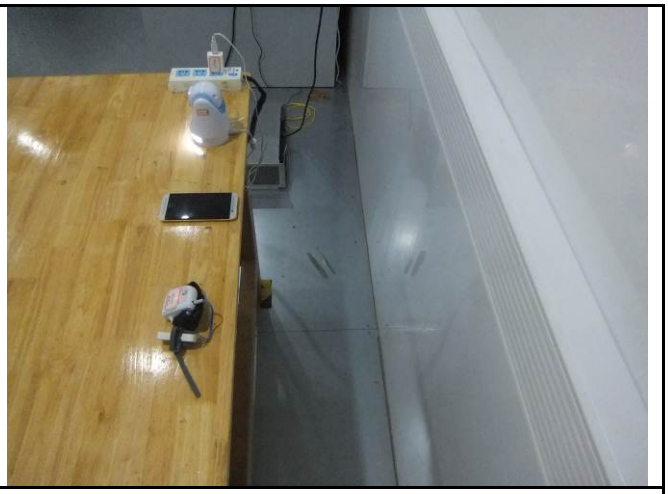
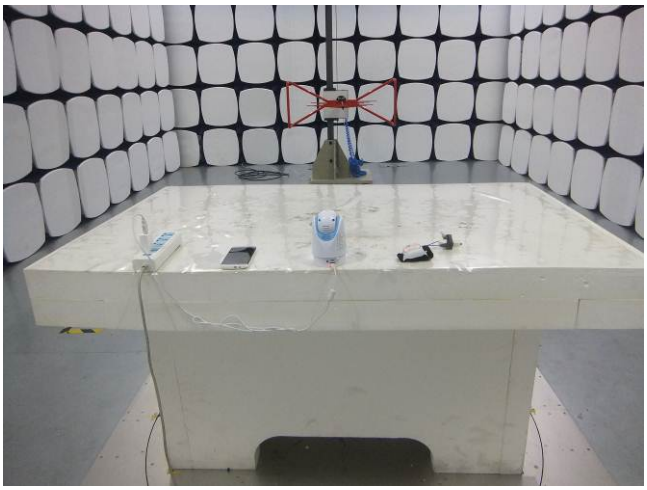
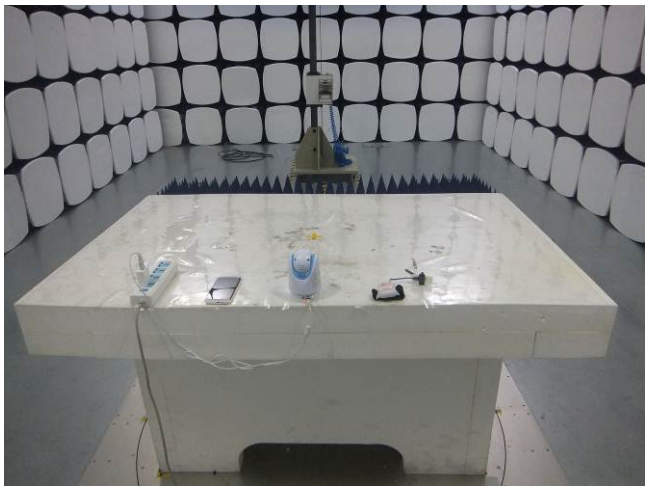


WIFI - Antenna View



433MHz Receiver- Antenna View

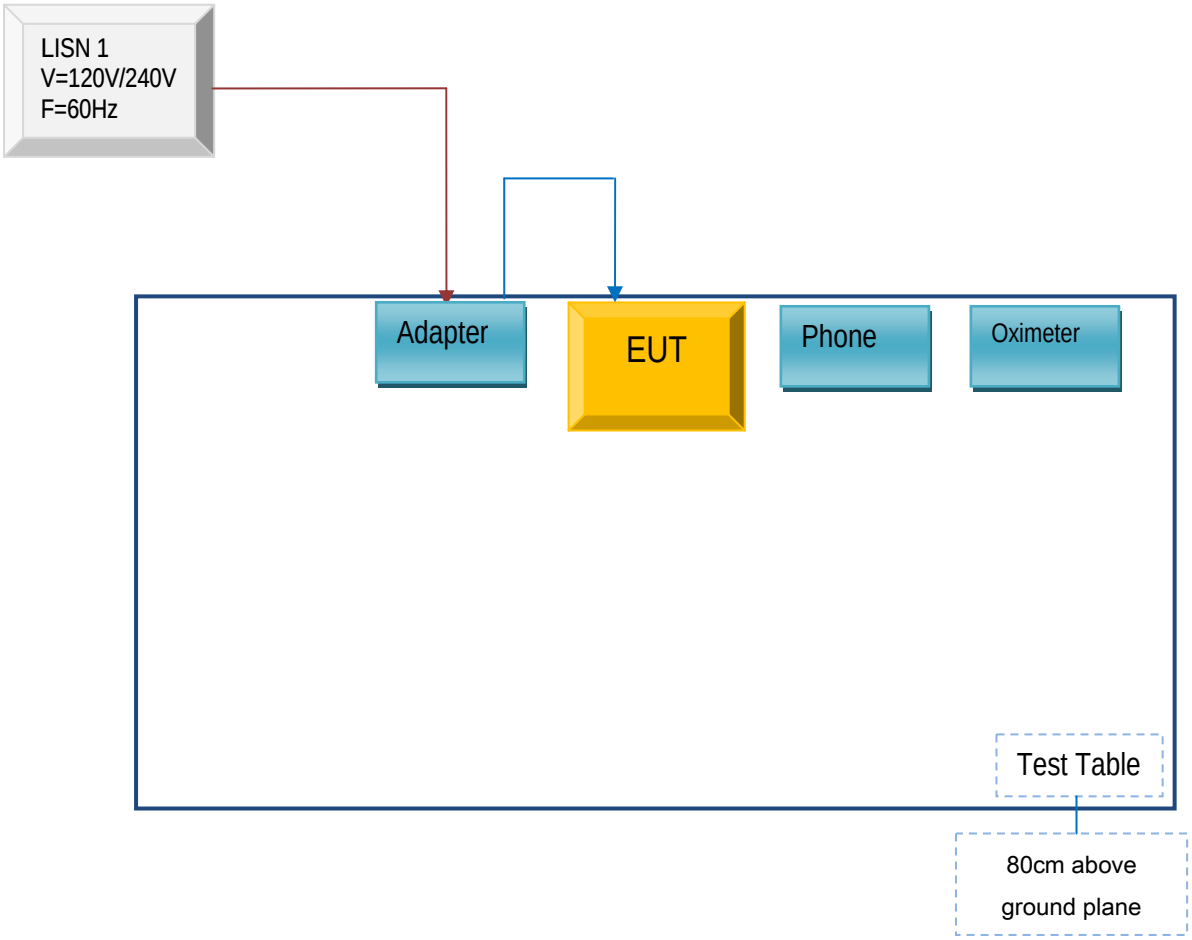
Annex B.iii. Photograph: Test Setup Photo

	
Conducted Emissions Test Setup – 433MHz Front View	Conducted Emissions Test Setup – 433MHz Side View
	
Radiated Emissions Test Setup Below 1GHz– 433MHz Front View	Radiated Emissions Test Setup Above 1GHz – 433MHz Side View

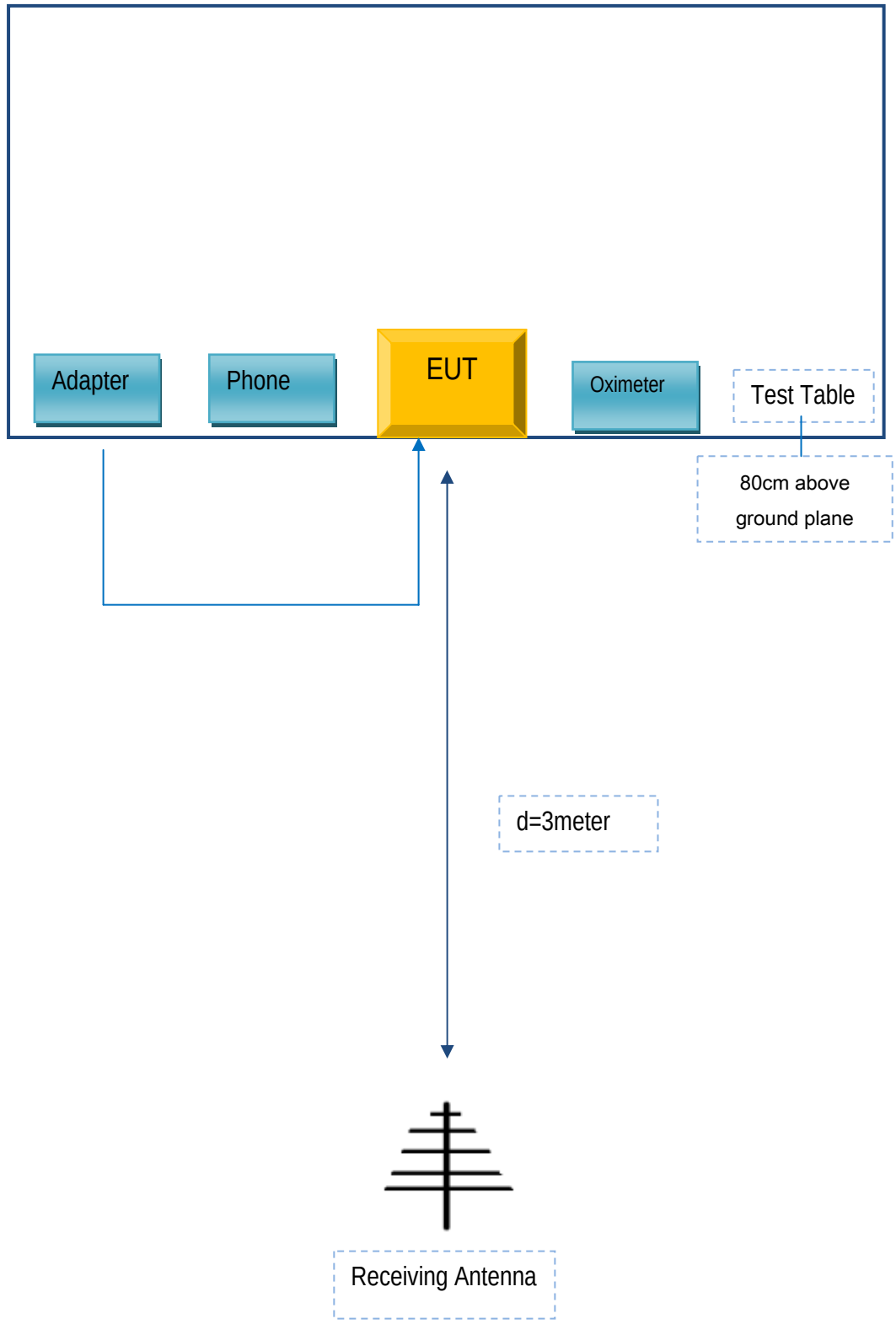
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Annex C. il. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
HTC	Phone	One E8	SH199TR05110
Shenzhen Creative Industry Co., Ltd.	Adapter	PS10E050K2000UU	CN1211011710
Shenzhen Creative Industry Co., Ltd.	Oximeter	PC-68A	CN1221541003Z

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	CN1211011710

Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see Attachment

Annex E. DECLARATION OF SIMILARITY

N/A