EMC TEST REPORT

Report No.: 17071476-FCC-E

Supersede Report No: N/A

Applicant	Horizon Hobby, LLC
Product Name	Inductrix
Model No.	BLH8701
Serial No.	N/A
Test Standard	FCC Part 15 Subpart B Class B:2017, ANSI C63.4: 2014
Test Date	December 28, 2017 to January 18, 2018
Issue Date	January 19, 2018
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Evans He	David Huang	
Test Engineer	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

Phone: +86 0755 2601 4629801 Email: China@siemic.com.cn

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
17071476-FCC-E	NONE	Original	January 19, 2018

2. Customer information

Applicant Name	Horizon Hobby, LLC
Applicant Add	4105 Fieldstone Road, Champaign, IL 61822, USA
Manufacturer	Yuneec International(China) Co., Ltd
Manufacturer Add	No.388 East Zhengwei Road, Jinxi Town, Kunshan, Jiangsu, 215324, 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.	535293
IC Test Site No.	4842E-1
Test Software of Radiated Emission	Radiated Emission Program-To Shenzhen v2.0
Test Software of Conducted Emission	EZ-EMC(ver.Icp-03A1)

4. Equipment under Test (EUT) Information

Description of EUT:	Inductrix
Main Model:	BLH8701
Serial Model:	N/A
Antenna Gain:	1dBi
Antenna Type:	monopole antenna
Input Power:	Battery Spec: 3.7V, 150mAh
Equipment Category：	JBP
Type of Modulation:	GFSK
RF Operating Frequency (ies):	2404-2476MHz
Number of Channels:	23CH
Trade Name：	N/A
FCC ID:	BRWBLH8701
Date EUT received:	December 27, 2017
Test Date(s):	December 28, 2017 to January 18, 2018

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

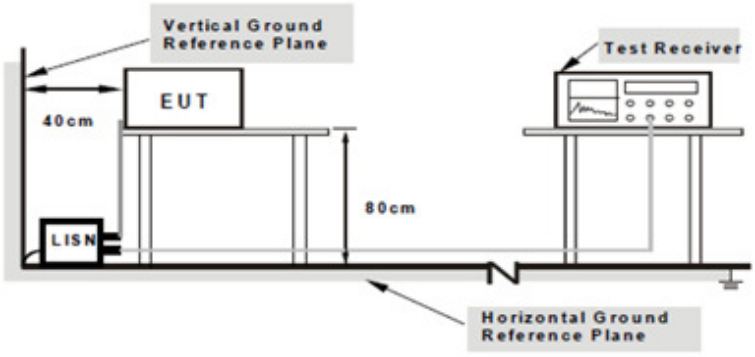
Parameter	Uncertainty
AC Power Line Conducted Emissions (150kHz~30MHz)	±3.11dB
Radiated Emission(30MHz~1GHz)	±5.12dB
Radiated Emission(1GHz~6GHz)	±5.34dB

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	22℃
Relative Humidity	53%
Atmospheric Pressure	1008mbar
Test date :	January 02, 2018
Tested By :	Evans He

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.107</td><td>a)</td><td>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.
<table>
<tr><th rowspan="2">Frequency ranges (MHz)</th><th colspan="2">Limit (dBμV)</th></tr>
<tr><th>QP</th><th>Average</th></tr>
<tr><td>0.15 ~ 0.5</td><td>66 – 56</td><td>56 – 46</td></tr>
<tr><td>0.5 ~ 5</td><td>56</td><td>46</td></tr>
<tr><td>5 ~ 30</td><td>60</td><td>50</td></tr>
</table></td><td>☑</td></tr>
<tr><td>Test Setup</td><td colspan="3"> 

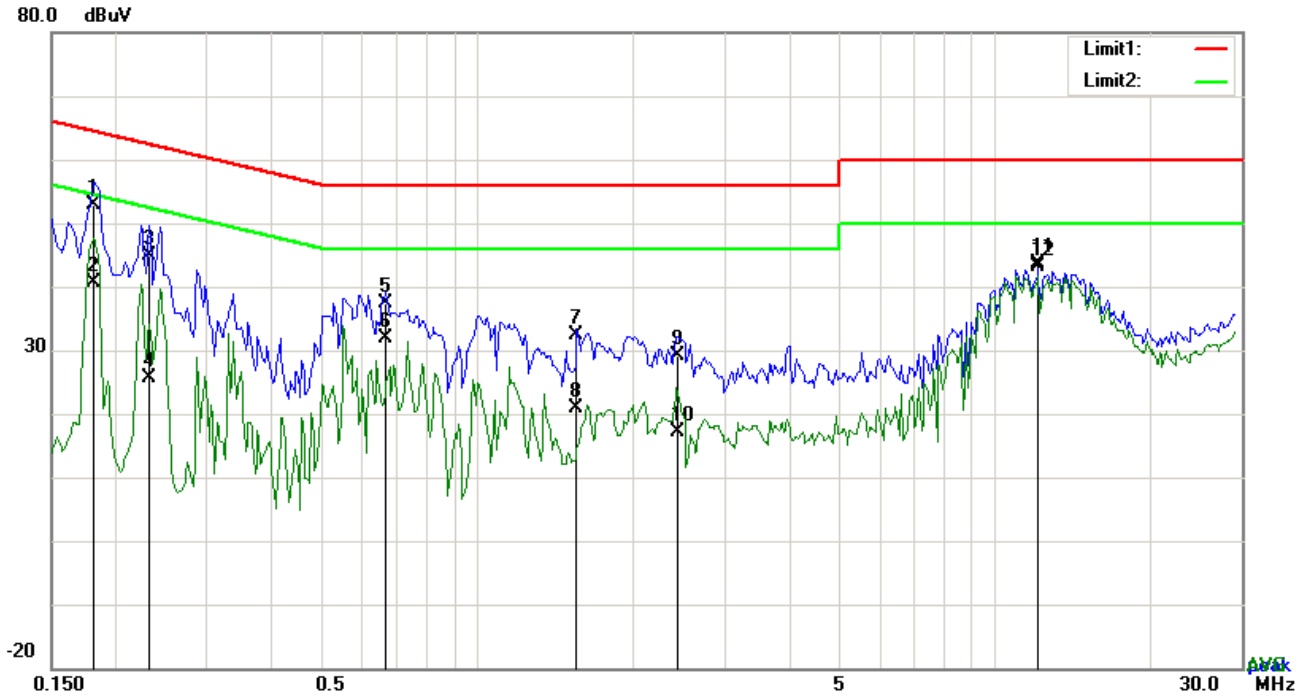
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT and supporting equipment were set up in accordance with the requirements of 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 50Ω /50mH EUT LISN, connected to filtered mains.</td></tr>
</table>

	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 :	Charging Mode

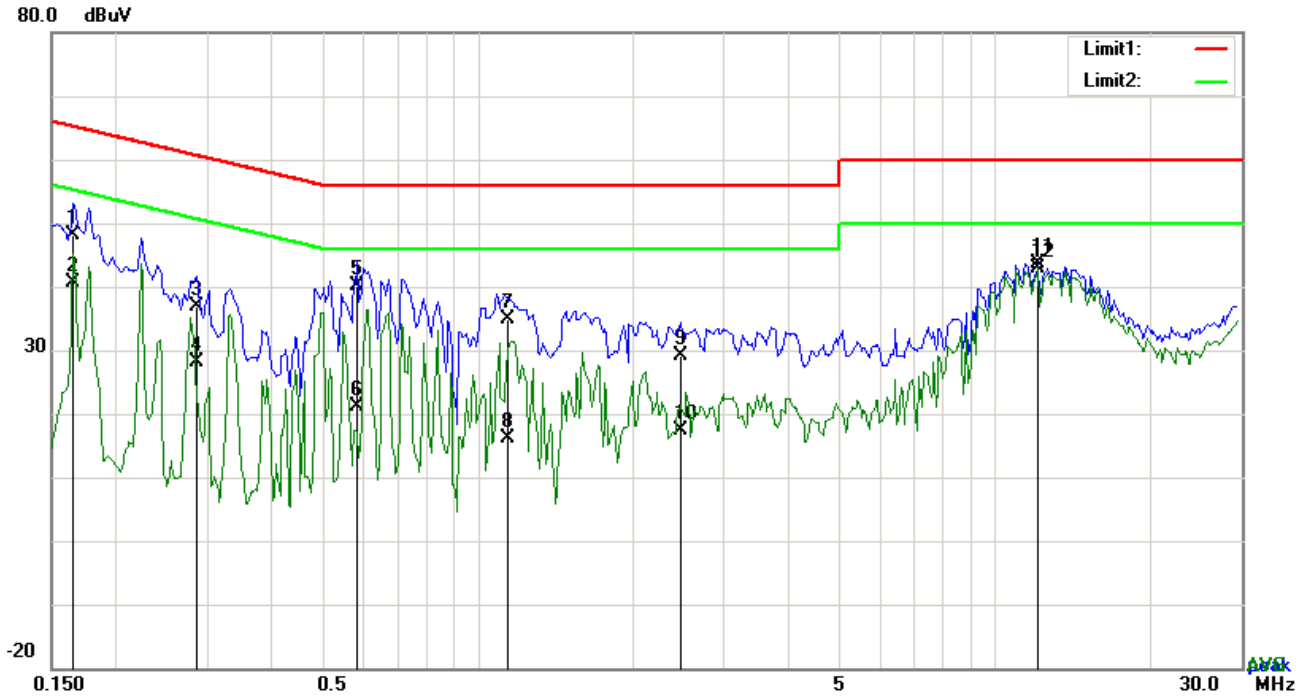


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1812	42.88	QP	10.03	52.91	64.43	-11.52
2	L1	0.1812	30.68	AVG	10.03	40.71	54.43	-13.72
3	L1	0.2319	34.92	QP	10.03	44.95	62.38	-17.43
4	L1	0.2319	15.54	AVG	10.03	25.57	52.38	-26.81
5	L1	0.6648	27.40	QP	10.03	37.43	56.00	-18.57
6	L1	0.6648	21.92	AVG	10.03	31.95	46.00	-14.05
7	L1	1.5540	22.27	QP	10.04	32.31	56.00	-23.69
8	L1	1.5540	10.86	AVG	10.04	20.90	46.00	-25.10
9	L1	2.4346	18.99	QP	10.05	29.04	56.00	-26.96
10	L1	2.4346	7.01	AVG	10.05	17.06	46.00	-28.94
11	L1	12.1572	33.47	QP	10.18	43.65	60.00	-16.35
12	L1	12.1572	32.90	AVG	10.18	43.08	50.00	-6.92

Test Mode :	Charging Mode

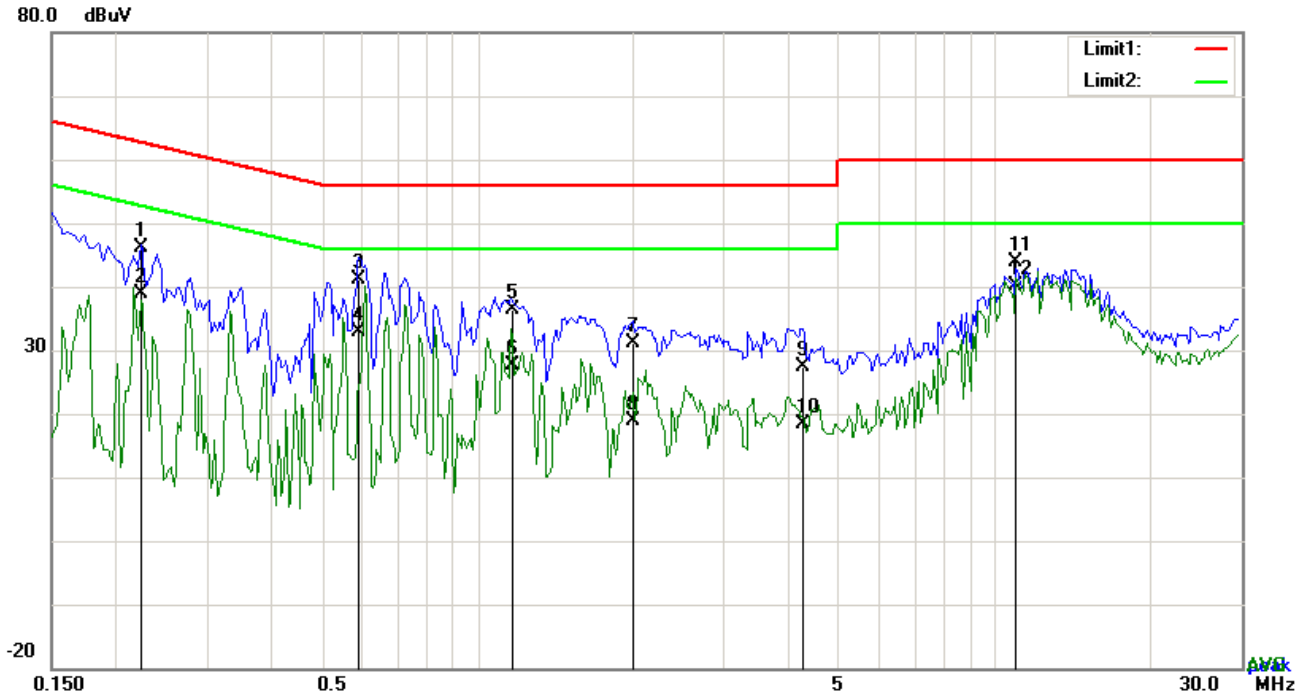


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1656	38.23	QP	10.02	48.25	65.18	-16.93
2	N	0.1656	30.57	AVG	10.02	40.59	55.18	-14.59
3	N	0.2865	26.77	QP	10.02	36.79	60.63	-23.84
4	N	0.2865	18.02	AVG	10.02	28.04	50.63	-22.59
5	N	0.5868	30.05	QP	10.02	40.07	56.00	-15.93
6	N	0.5868	11.11	AVG	10.02	21.13	46.00	-24.87
7	N	1.1445	24.79	QP	10.03	34.82	56.00	-21.18
8	N	1.1445	6.21	AVG	10.03	16.24	46.00	-29.76
9	N	2.4666	18.97	QP	10.04	29.01	56.00	-26.99
10	N	2.4666	7.41	AVG	10.04	17.45	46.00	-28.55
11	N	12.1572	33.40	QP	10.17	43.57	60.00	-16.43
12	N	12.1572	32.79	AVG	10.17	42.96	50.00	-7.04

Test Mode :	Charging Mode

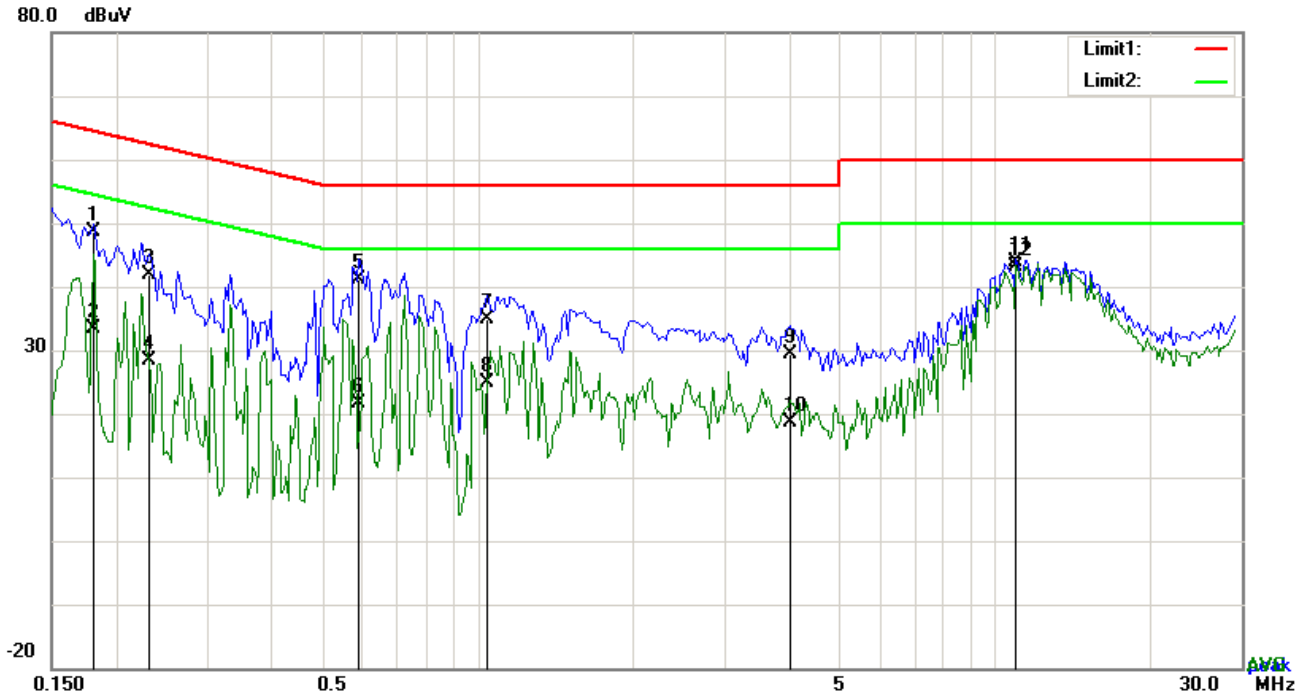


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.2241	36.02	QP	10.03	46.05	62.67	-16.62
2	L1	0.2241	28.76	AVG	10.03	38.79	52.67	-13.88
3	L1	0.5907	31.18	QP	10.03	41.21	56.00	-14.79
4	L1	0.5907	22.76	AVG	10.03	32.79	46.00	-13.21
5	L1	1.1657	26.38	QP	10.03	36.41	56.00	-19.59
6	L1	1.1657	17.49	AVG	10.03	27.52	46.00	-18.48
7	L1	1.9947	21.08	QP	10.04	31.12	56.00	-24.88
8	L1	1.9947	8.85	AVG	10.04	18.89	46.00	-27.11
9	L1	4.2558	17.25	QP	10.07	27.32	56.00	-28.68
10	L1	4.2558	8.37	AVG	10.07	18.44	46.00	-27.56
11	L1	10.9716	33.79	QP	10.16	43.95	60.00	-16.05
12	L1	10.9716	30.03	AVG	10.16	40.19	50.00	-9.81

Test Mode :	Charging Mode



Test Data

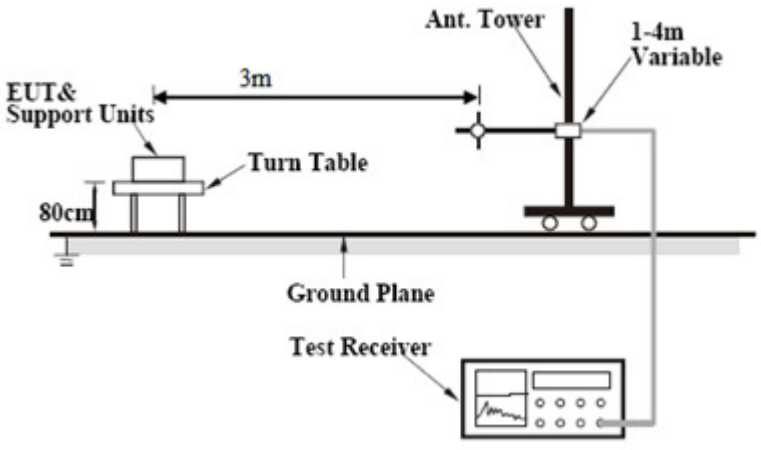
Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1812	38.50	QP	10.03	48.53	64.43	-15.90
2	N	0.1812	23.41	AVG	10.03	33.44	54.43	-20.99
3	N	0.2319	31.74	QP	10.03	41.77	62.38	-20.61
4	N	0.2319	18.27	AVG	10.03	28.30	52.38	-24.08
5	N	0.5907	31.04	QP	10.03	41.07	56.00	-14.93
6	N	0.5907	11.59	AVG	10.03	21.62	46.00	-24.38
7	N	1.0470	24.85	QP	10.03	34.88	56.00	-21.12
8	N	1.0470	14.91	AVG	10.03	24.94	46.00	-21.06
9	N	4.0257	19.27	QP	10.07	29.34	56.00	-26.66
10	N	4.0257	8.54	AVG	10.07	18.61	46.00	-27.39
11	N	10.9716	33.74	QP	10.16	43.90	60.00	-16.10
12	N	10.9716	33.02	AVG	10.16	43.18	50.00	-6.82

6.2 Radiated Emissions

Temperature	22℃
Relative Humidity	53%
Atmospheric Pressure	1008mbar
Test date :	January 02, 2018
Tested By :	Evans He

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.109(d)</td><td>a)</td><td>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
<table>
<tr><th>Frequency range (MHz)</th><th>Field Strength (μV/m)</th></tr>
<tr><td>30 – 88</td><td>100</td></tr>
<tr><td>88 – 216</td><td>150</td></tr>
<tr><td>216 - 960</td><td>200</td></tr>
<tr><td>Above 960</td><td>500</td></tr>
</table></td><td>☑</td></tr>
<tr><td>Test Setup</td><td colspan="3"> 
</td></tr>
<tr><td>Procedure</td><td colspan="3">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</td></tr>
</table>

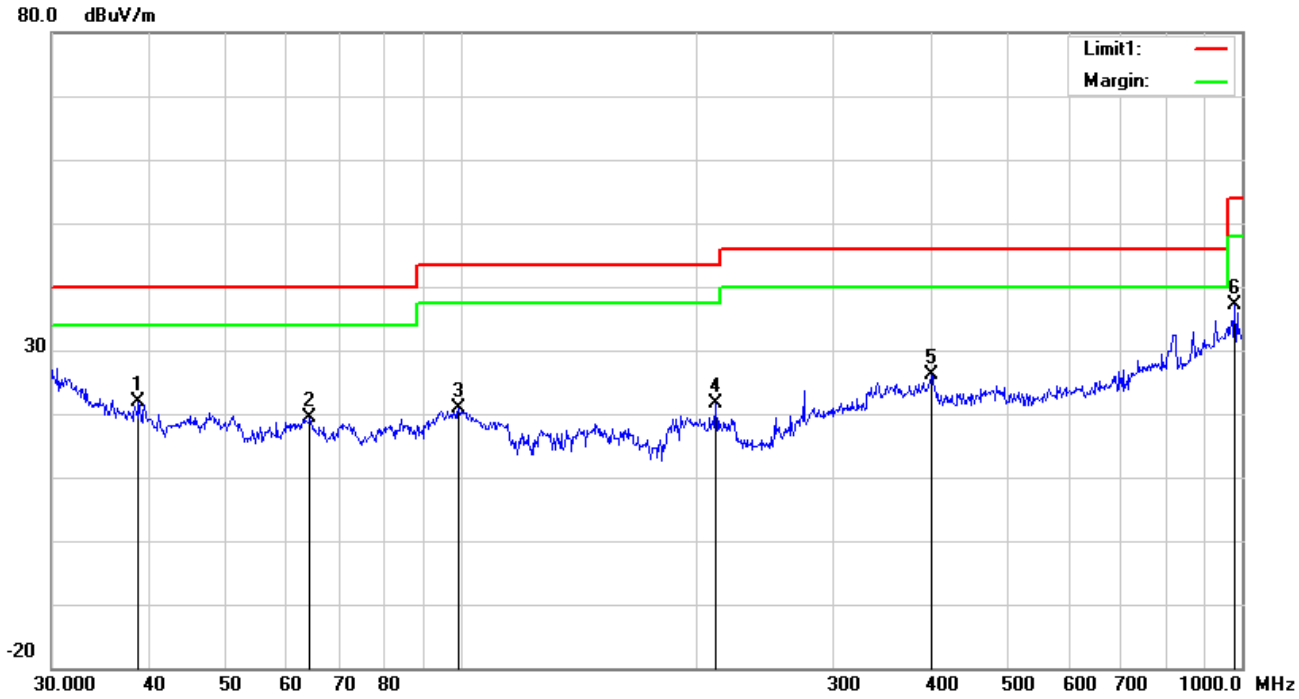
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 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 :	Charging Mode

Below 1GHz



Test Data

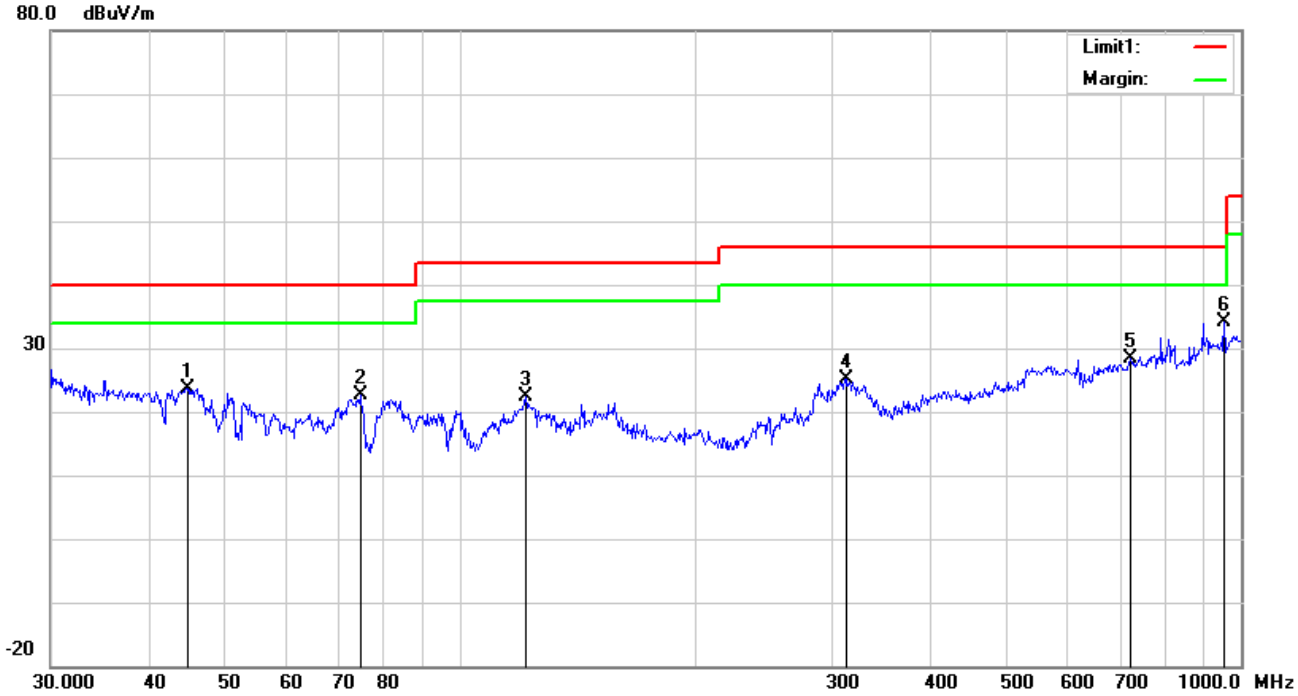
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	H	38.7518	28.58	peak	14.81	22.27	0.78	21.90	40.00	-18.10	100	155
2	H	64.2075	33.31	peak	7.51	22.40	0.86	19.28	40.00	-20.72	100	58
3	H	99.5281	31.78	peak	10.29	22.32	1.11	20.86	43.50	-22.64	100	253
4	H	212.2695	30.57	peak	11.93	22.36	1.58	21.72	43.50	-21.78	100	235
5	H	400.4319	30.33	peak	15.71	22.01	2.01	26.04	46.00	-19.96	100	332
6	H	979.1804	31.61	peak	22.90	20.73	3.35	37.13	54.00	-16.87	100	305

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	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	38.7518	28.58	peak	14.81	22.27	0.78	21.90	40.00	-18.10	100	62
2	V	64.2075	33.31	peak	7.51	22.40	0.86	19.28	40.00	-20.72	100	231
3	V	99.5281	31.78	peak	10.29	22.32	1.11	20.86	43.50	-22.64	100	53
4	V	212.2695	30.57	peak	11.93	22.36	1.58	21.72	43.50	-21.78	100	304
5	V	400.4319	30.33	peak	15.71	22.01	2.01	26.04	46.00	-19.96	100	326
6	V	979.1804	31.61	peak	22.90	20.73	3.35	37.13	54.00	-16.87	100	182

Above 1GHz

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

Annex A. TEST INSTRUMENT

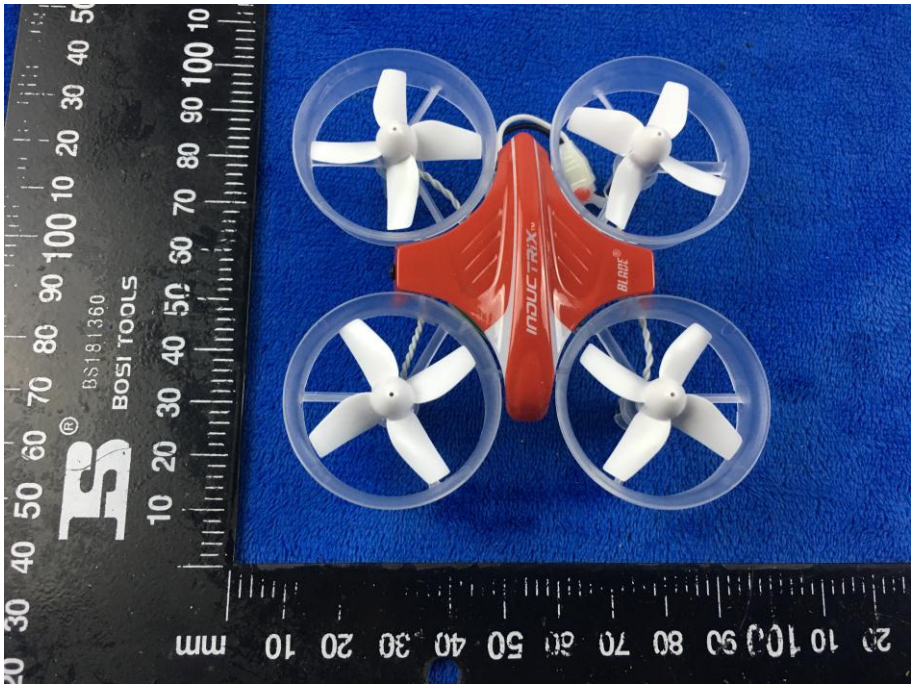
Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
EMI test receiver	ESCS30	8471241027	09/15/2017	09/14/2018	☑
Line Impedance Stabilization Network	LI-125A	191106	09/23/2017	09/22/2018	☑
Line Impedance Stabilization Network	LI-125A	191107	09/23/2017	09/22/2018	☑
LISN	ISN T800	34373	09/23/2017	09/22/2018	☑
Transient Limiter	LIT-153	531118	08/30/2017	08/29/2018	☑
Radiated Emissions					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	☑
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	☑
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	☑
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	☑
Double Ridge Horn Antenna	AH-118	71259	09/22/2017	09/21/2018	☑

Annex B. EUT And Test Setup Photographs

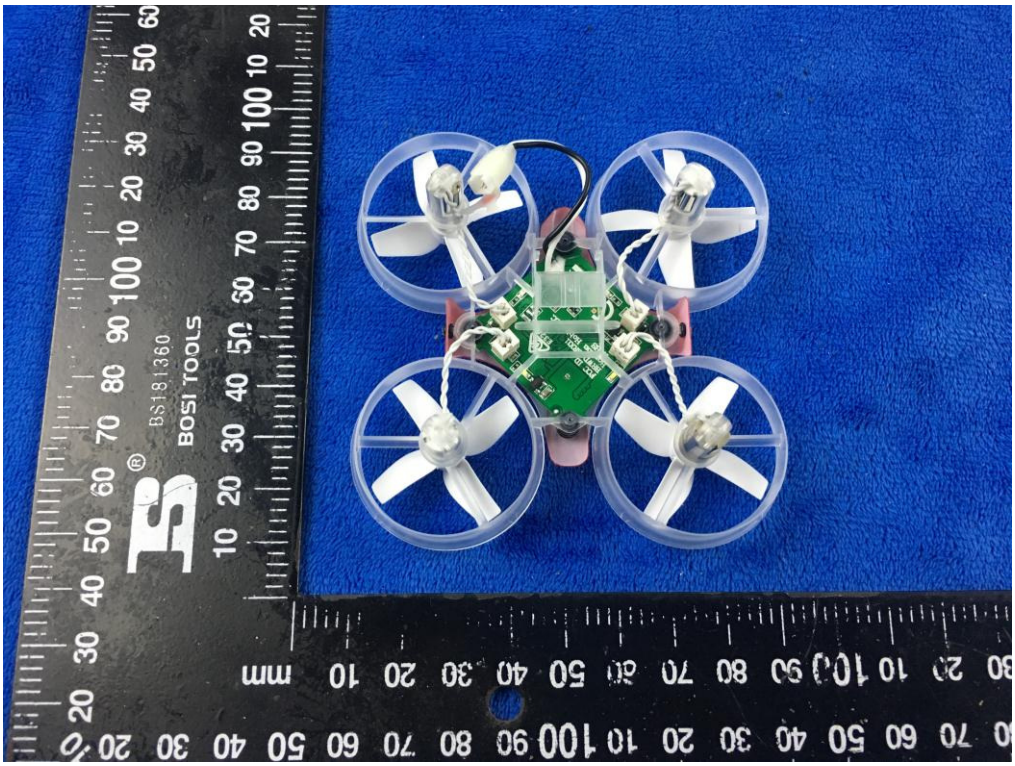
Annex B.i. Photograph: EUT External Photo

Whole Package View

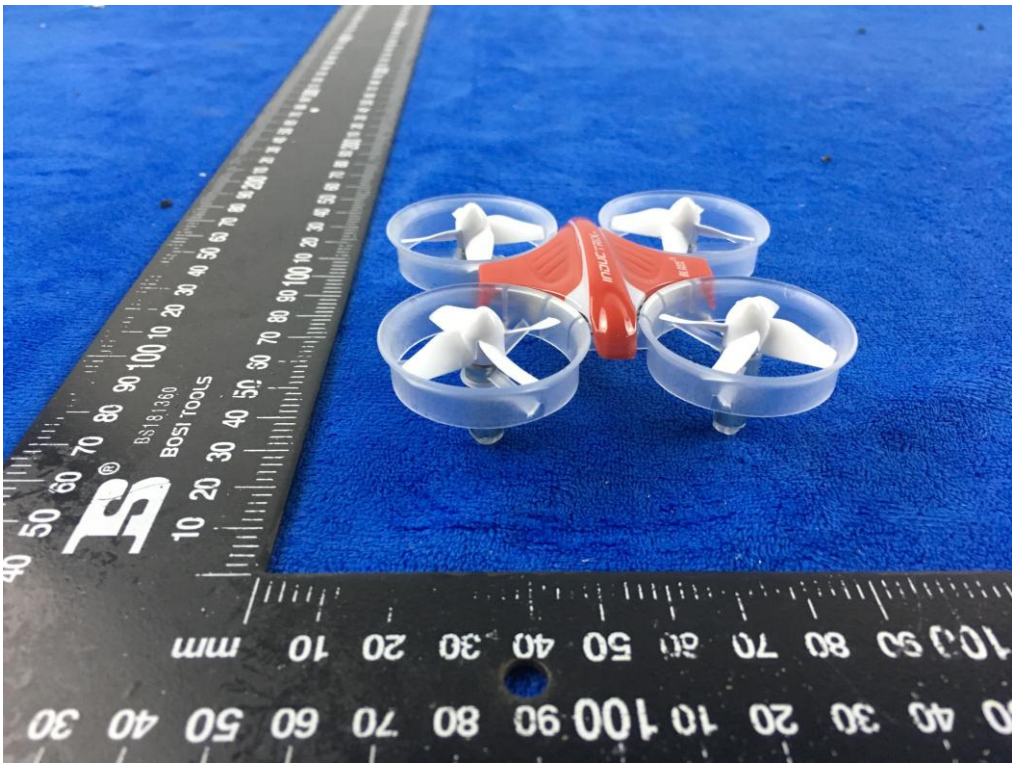
EUT - Front View



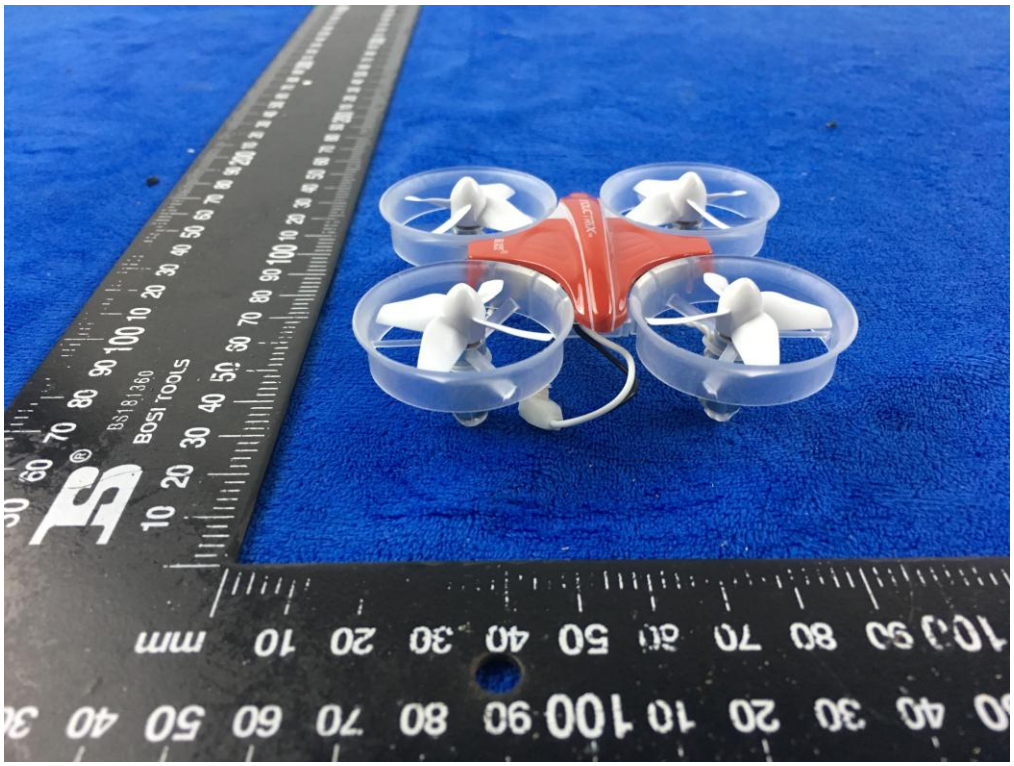
EUT - Rear View



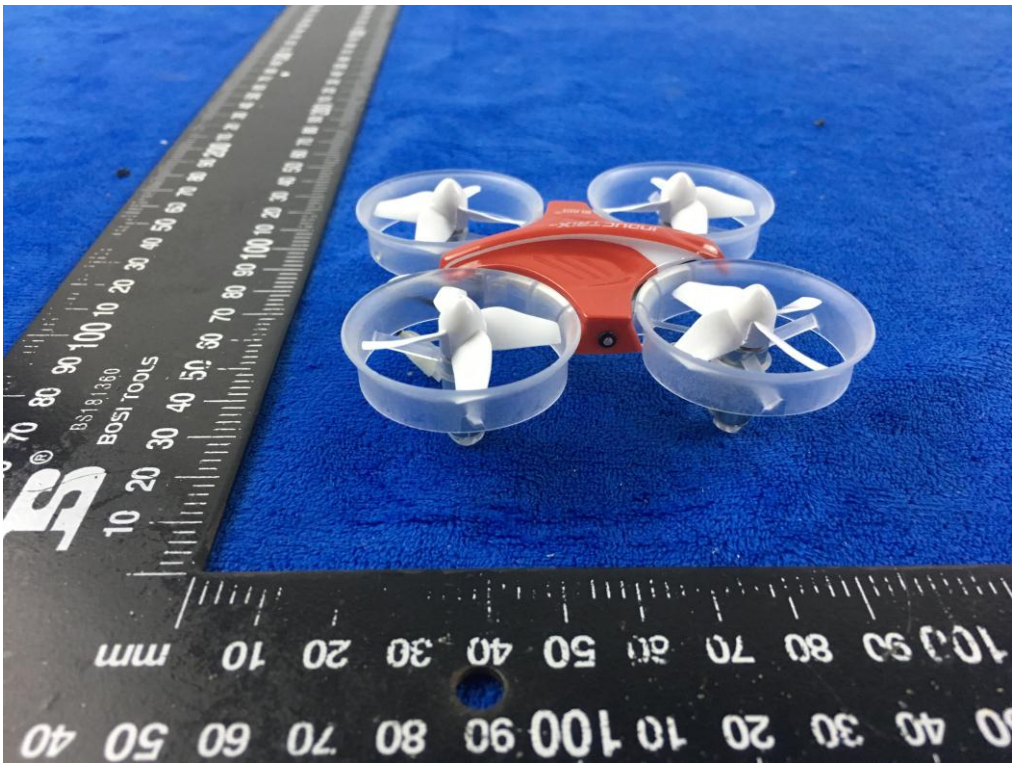
EUT - Top View



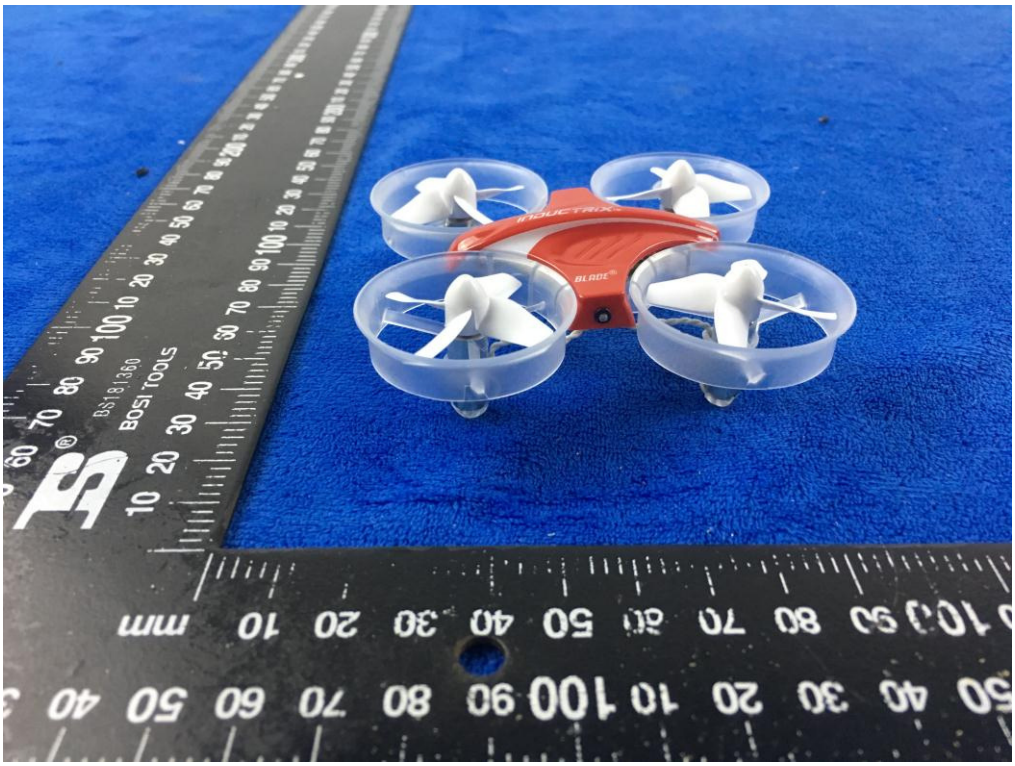
EUT - Bottom View



EUT - Left View



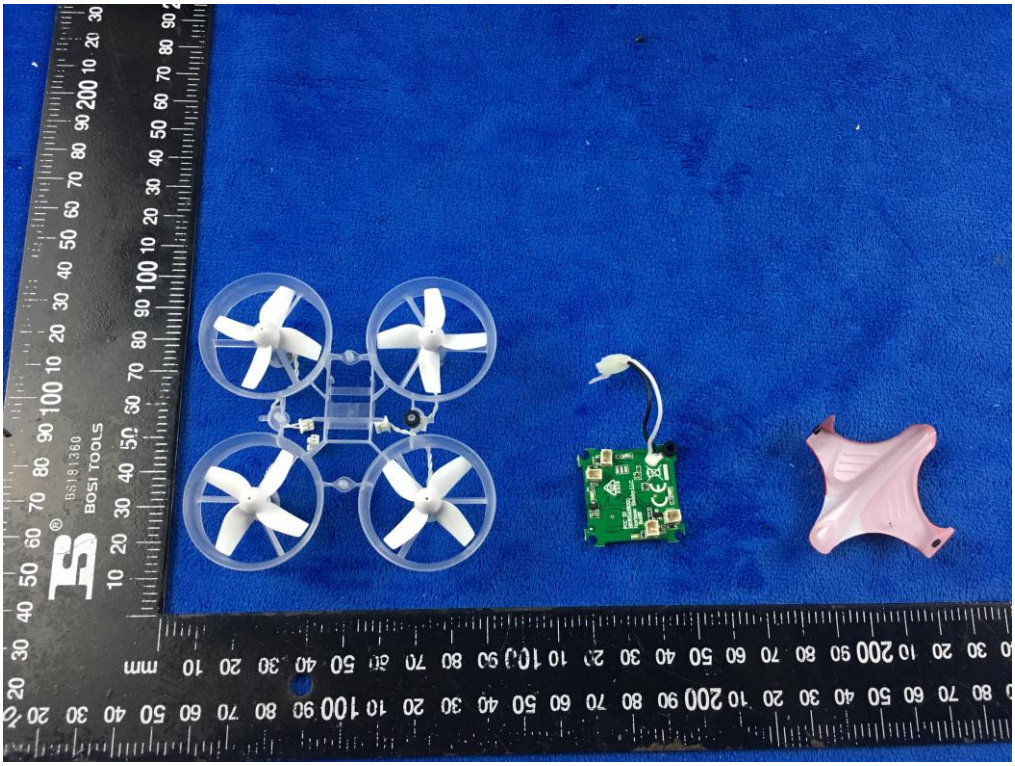
EUT - Right View



Label View

Annex B.ii. Photograph: EUT Internal Photo

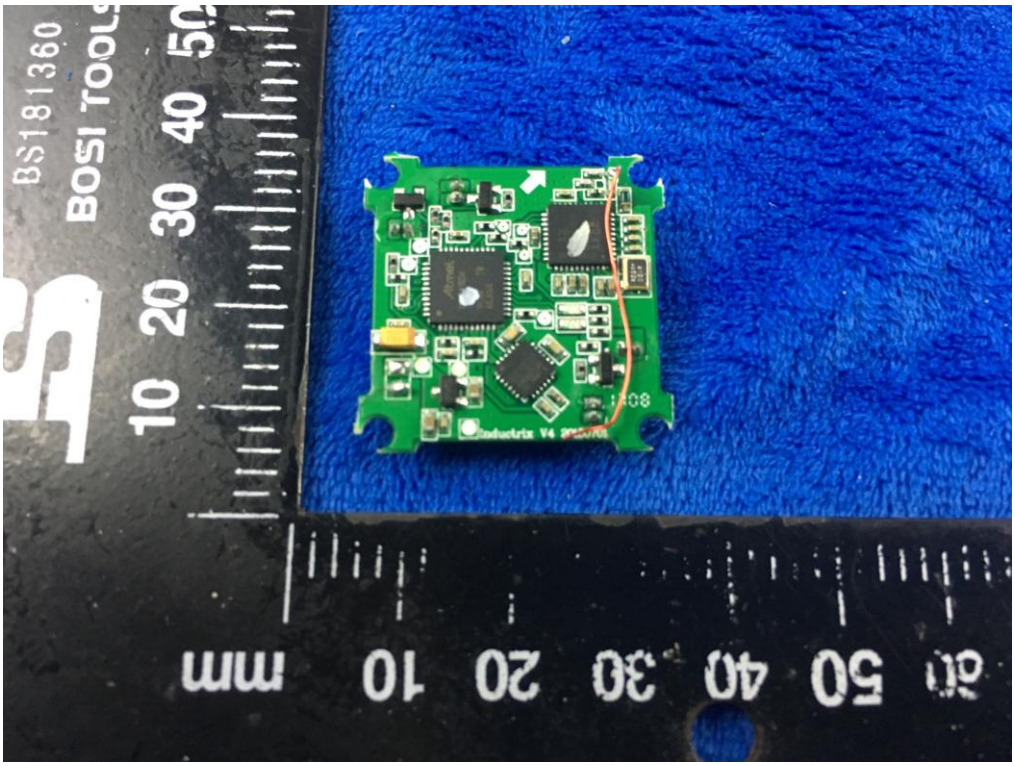
Cover Off - Top View



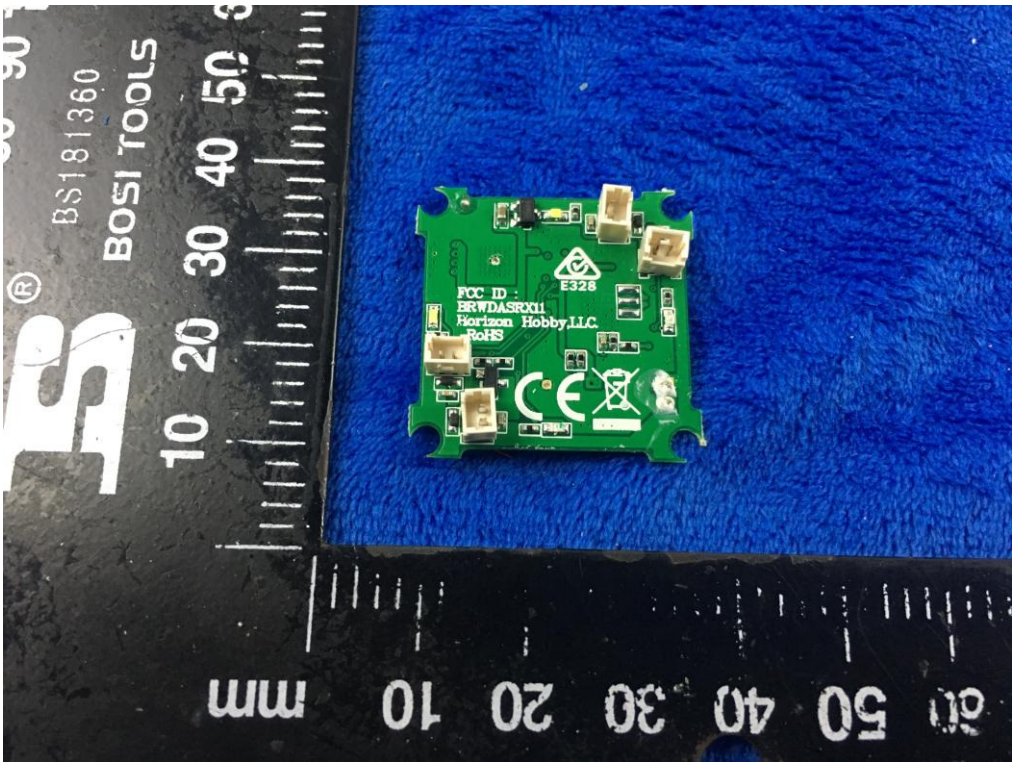
Battery - Front View

Battery - Rear View

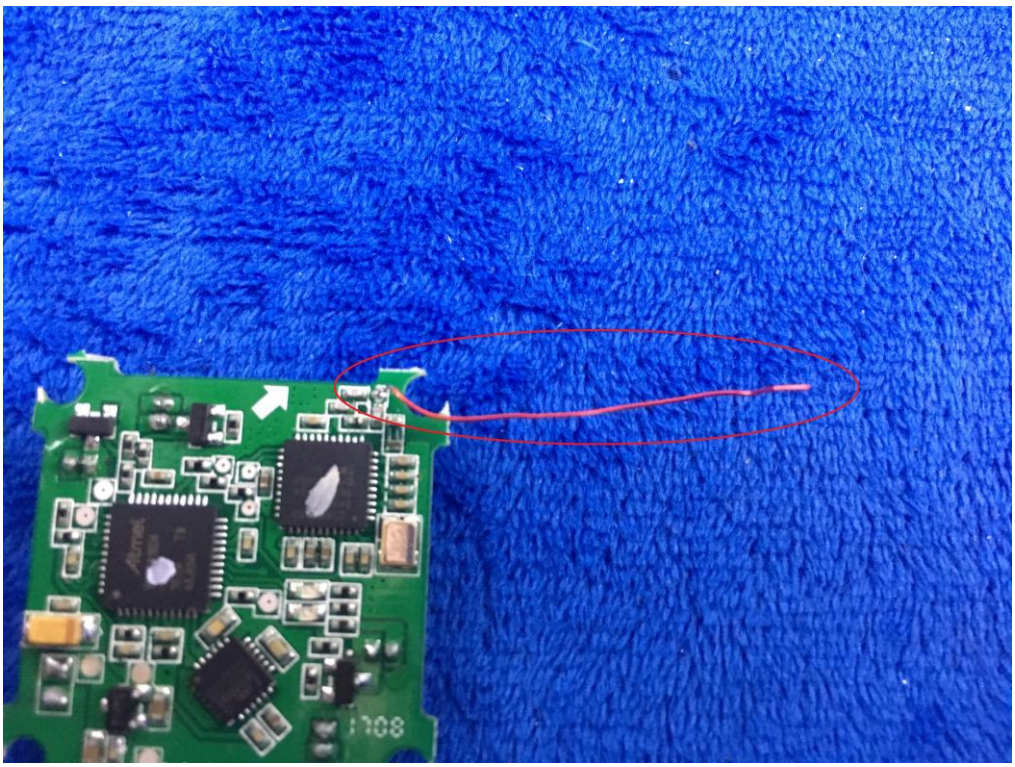
Mainboard - Front View



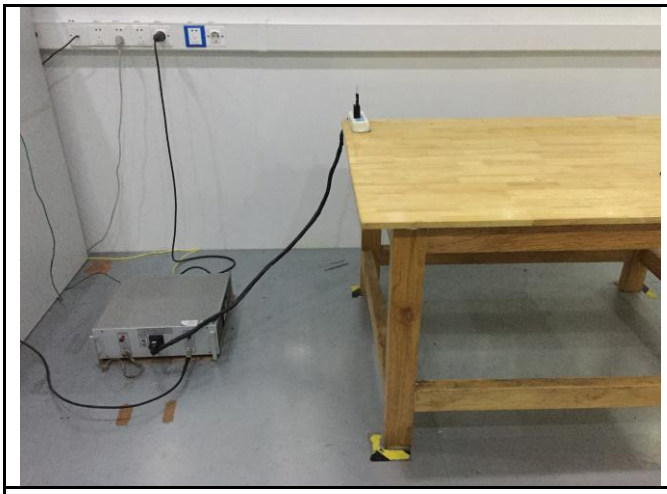
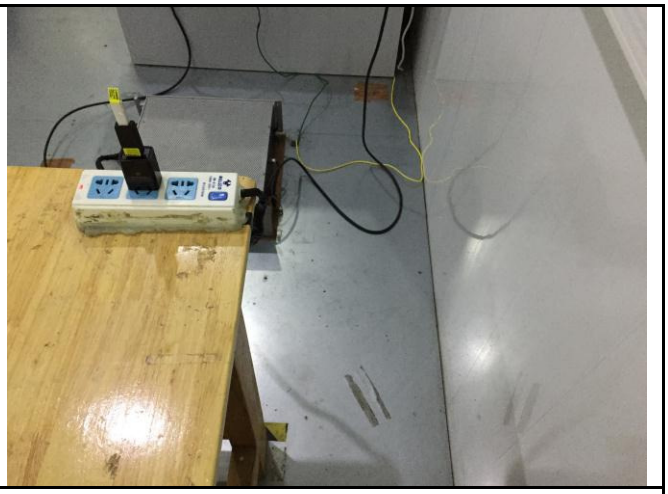
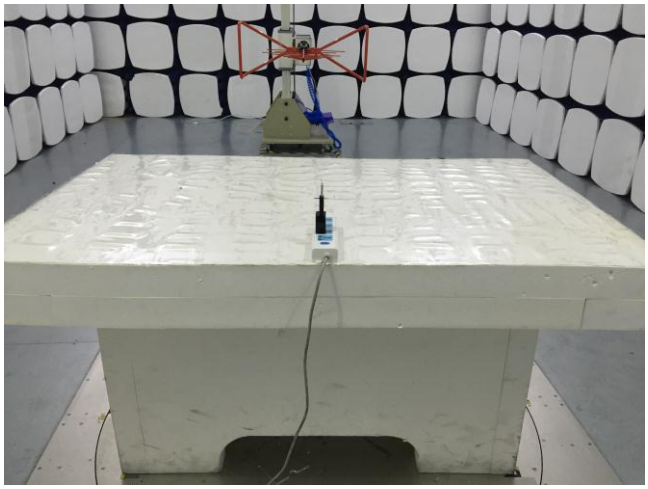
Mainboard – Rear View



Antenna View



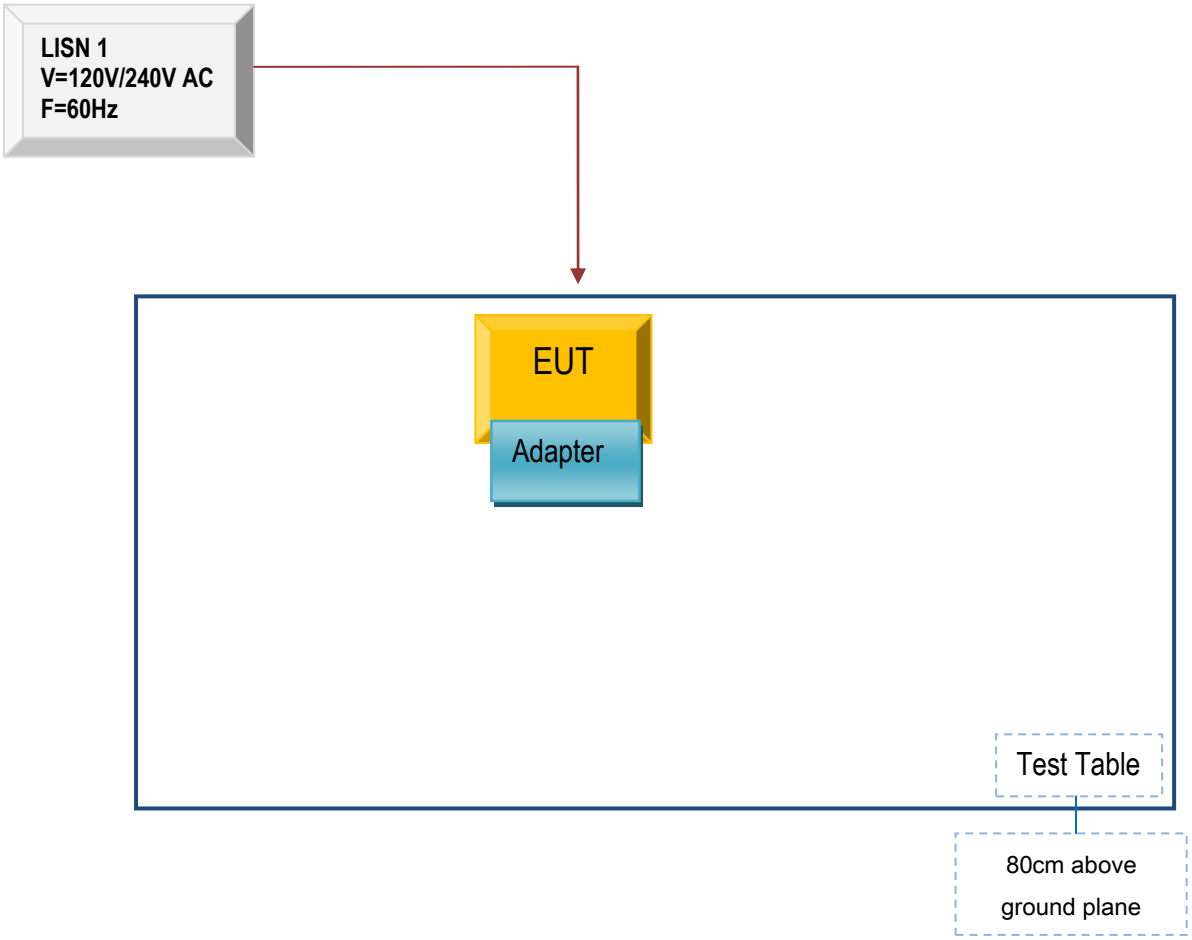
Annex B.iii. Photograph: Test Setup Photo

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

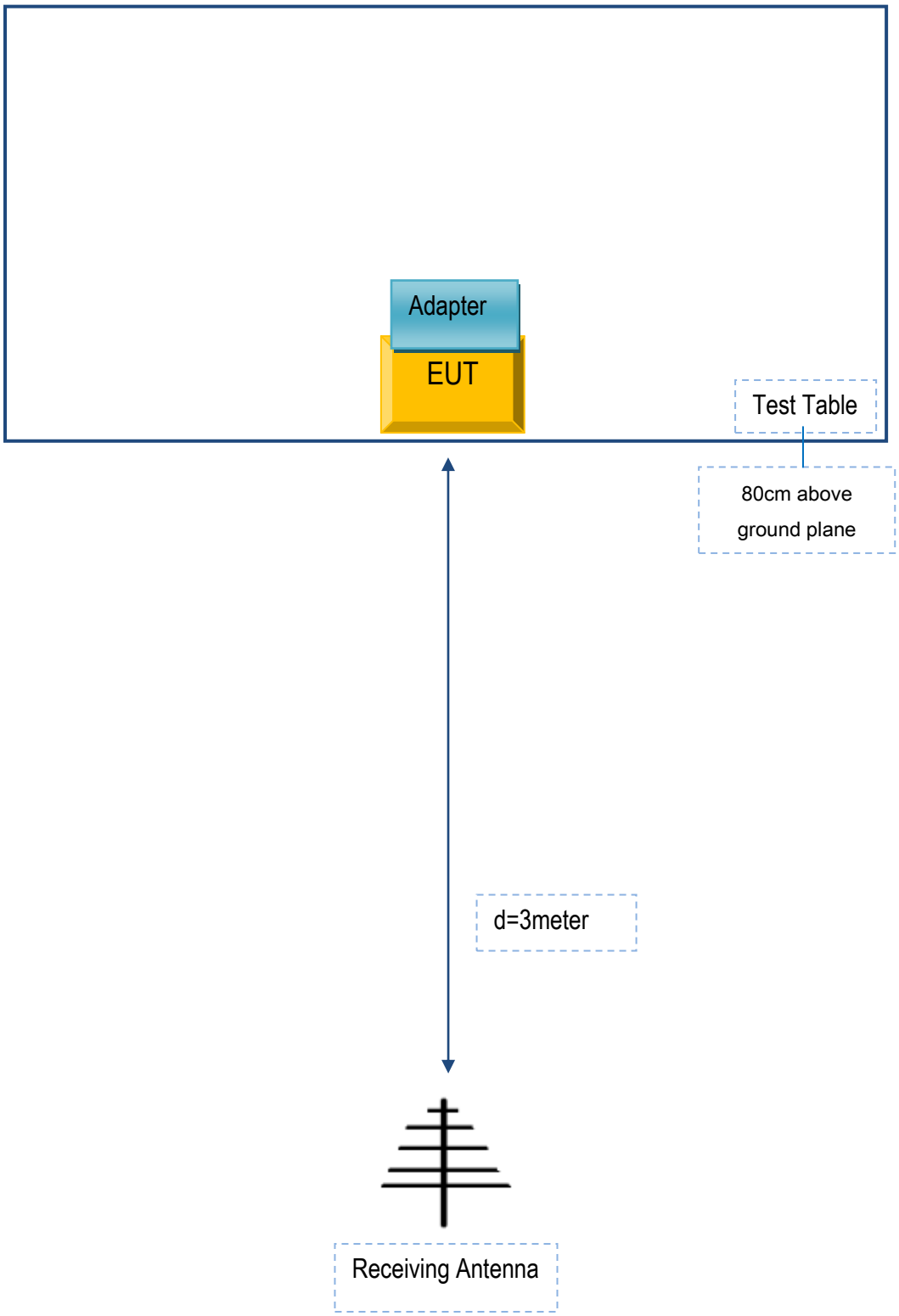
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

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
N/A	N/A	N/A	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
N/A	N/A	N/A	N/A	N/A

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

Please see the attachment

Annex E. DECLARATION OF SIMILARITY

N/A