EMC TEST REPORT

Report No.: 15070332-FCC-E

Applicant	Dfine Technology Co.,Ltd.
Product Name	Wireless HDMI AV Transmission System
Model No.	DF-W5001
Serial No.	N/A
Test Standard	FCC Part 15 Subpart B Class B:2014, ANSI C63.4: 2014
Test Date	May 22 to June 29,2015
Issue Date	June 29, 2015
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Lucifer He	David Huang	
Lucifer He 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

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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CONTENTS

1. Report Revision History

Report No.	Report Version	Description	Issue Date
15070332-FCC-E	NONE	Original	June 29, 2015

2. Customer information

Applicant Name	Dfine Technology Co.,Ltd.
Applicant Add	Building E6, Tianfu Software Park, No.1366, Tianfu Avenue, High-Tech District, Chengdu, Sichuan, China
Manufacturer	Dfine Technology Co.,Ltd.
Manufacturer Add	Building E6, Tianfu Software Park, No.1366, Tianfu Avenue, High-Tech District, Chengdu, Sichuan, 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:	Wireless HDMI AV Transmission System
Main Model:	DF-W5001
Serial Model:	N/A
Antenna Gain:	WIFI: 5 dBi
Input Power:	Adapter: Model:ST-012AAC-050200U Input: AC 100-240V 50/60Hz 0.3A Output: DC5V 2.0A
Trade Name :	
Date EUT received:	June 10, 2015

Equipment Category：	N/A
Type of Modulation:	802.11b/g/n: DSSS, OFDM
RF Operating Frequency (ies):	WIFI(802.11a): 5190-5230 MHz; 5755-5795MHz
Number of Channels:	WIFI 5.19-5.23G(a):2CH WIFI 5.755-5.795G(a): 2CH
Port:	Power Port, Earphone Port, USB Port
GPRS/EGPRS Multi-slot class	8/10/12

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

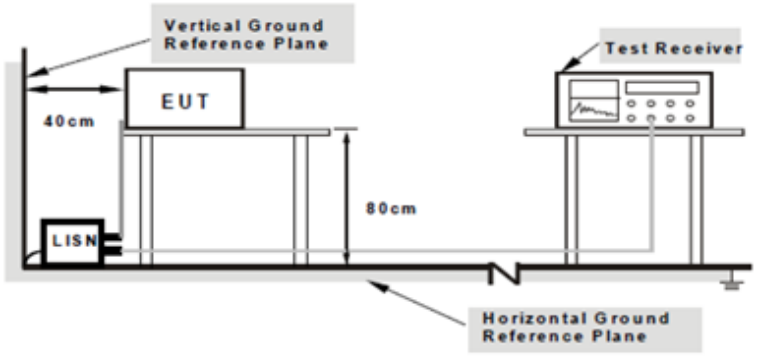
Emissions		
Test Item	**Description**	**Uncertainty**
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	20°C
Relative Humidity	59%
Atmospheric Pressure	1017mbar
Test date :	June 17, 2015
Tested By :	Lucifer 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"> 

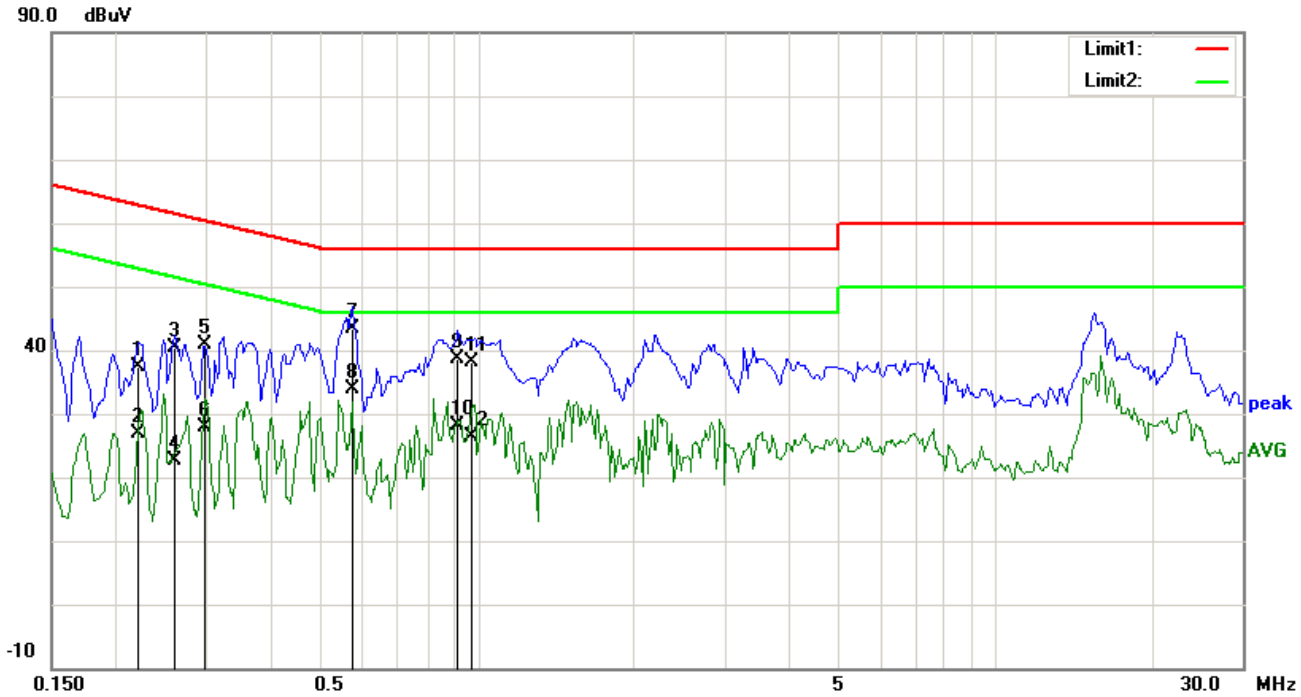
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT and supporting equipment were set up in accordance with the requirements of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

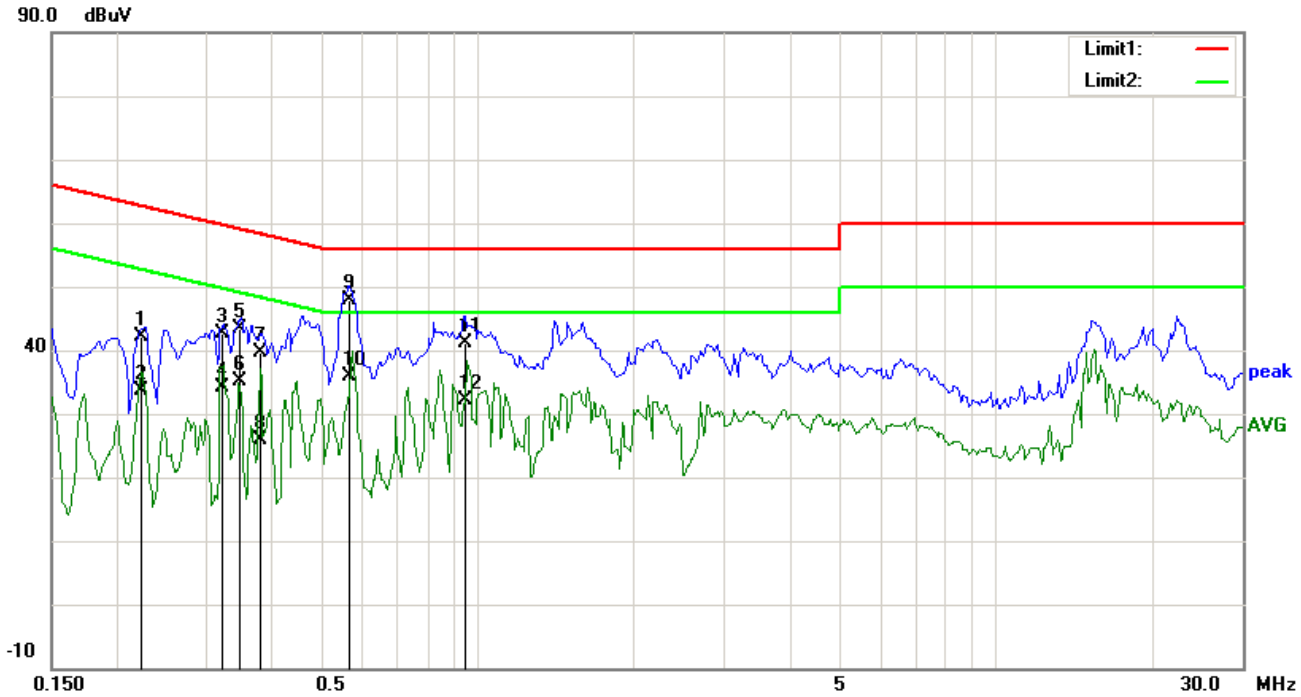


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Comment
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)	
1	L1	0.2208	24.40	QP	12.94	37.34	62.79	-25.45	
2	L1	0.2208	13.97	AVG	12.94	26.91	52.79	-25.88	
3	L1	0.2594	27.47	QP	12.79	40.26	61.45	-21.19	
4	L1	0.2594	9.74	AVG	12.79	22.53	51.45	-28.92	
5	L1	0.2984	28.34	QP	12.65	40.99	60.29	-19.30	
6	L1	0.2984	15.20	AVG	12.65	27.85	50.29	-22.44	
7	L1	0.5680	31.53	QP	11.83	43.36	56.00	-12.64	
8	L1	0.5680	22.13	AVG	11.83	33.96	46.00	-12.04	
9	L1	0.9156	27.03	QP	11.48	38.51	56.00	-17.49	
10	L1	0.9156	16.59	AVG	11.48	28.07	46.00	-17.93	
11	L1	0.9820	26.65	QP	11.42	38.07	56.00	-17.93	
12	L1	0.9820	14.94	AVG	11.42	26.36	46.00	-19.64	

Test Mode 1:	Running

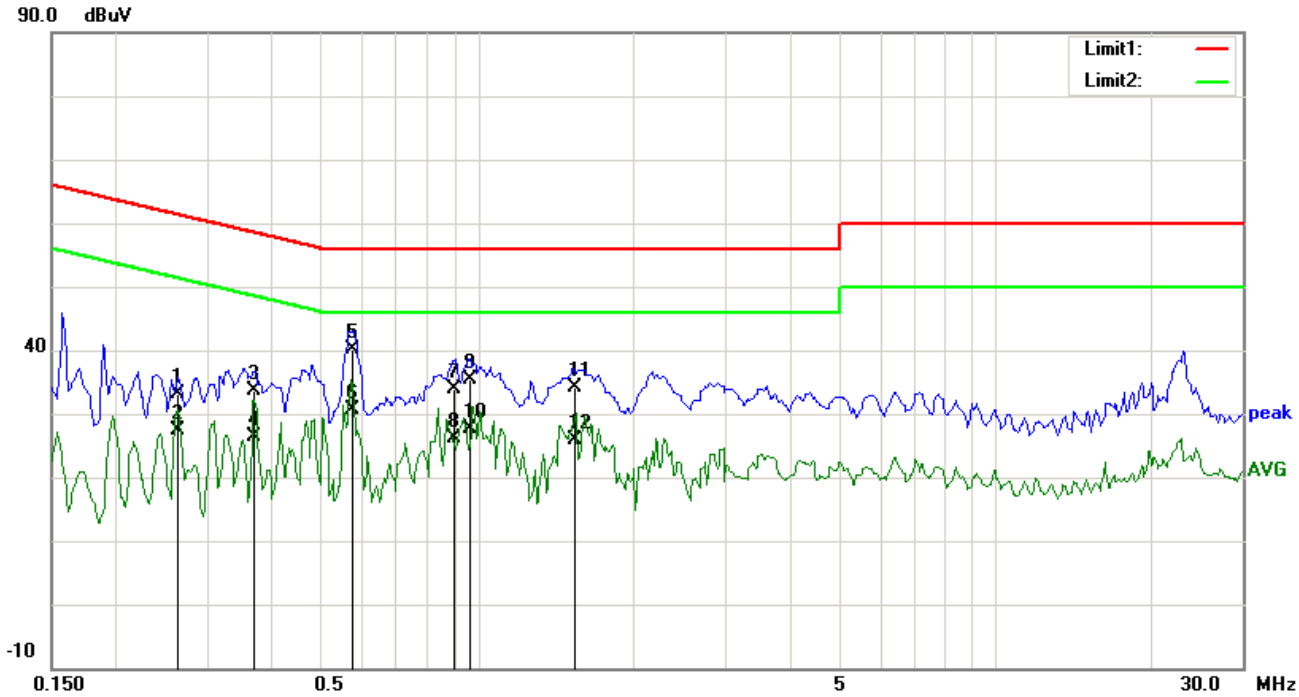


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Comment
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)	
1	N	0.2242	29.16	QP	12.92	42.08	62.66	-20.58	
2	N	0.2242	20.67	AVG	12.92	33.59	52.66	-19.07	
3	N	0.3200	30.02	QP	12.57	42.59	59.71	-17.12	
4	N	0.3200	21.59	AVG	12.57	34.16	49.71	-15.55	
5	N	0.3465	30.92	QP	12.47	43.39	59.05	-15.66	
6	N	0.3465	22.71	AVG	12.47	35.18	49.05	-13.87	
7	N	0.3805	27.41	QP	12.34	39.75	58.27	-18.52	
8	N	0.3805	13.62	AVG	12.34	25.96	48.27	-22.31	
9	N	0.5641	35.96	QP	11.84	47.80	56.00	-8.20	
10	N	0.5641	24.16	AVG	11.84	36.00	46.00	-10.00	
11	N	0.9431	29.71	QP	11.46	41.17	56.00	-14.83	
12	N	0.9431	20.72	AVG	11.46	32.18	46.00	-13.82	

Test Mode 2:	Running

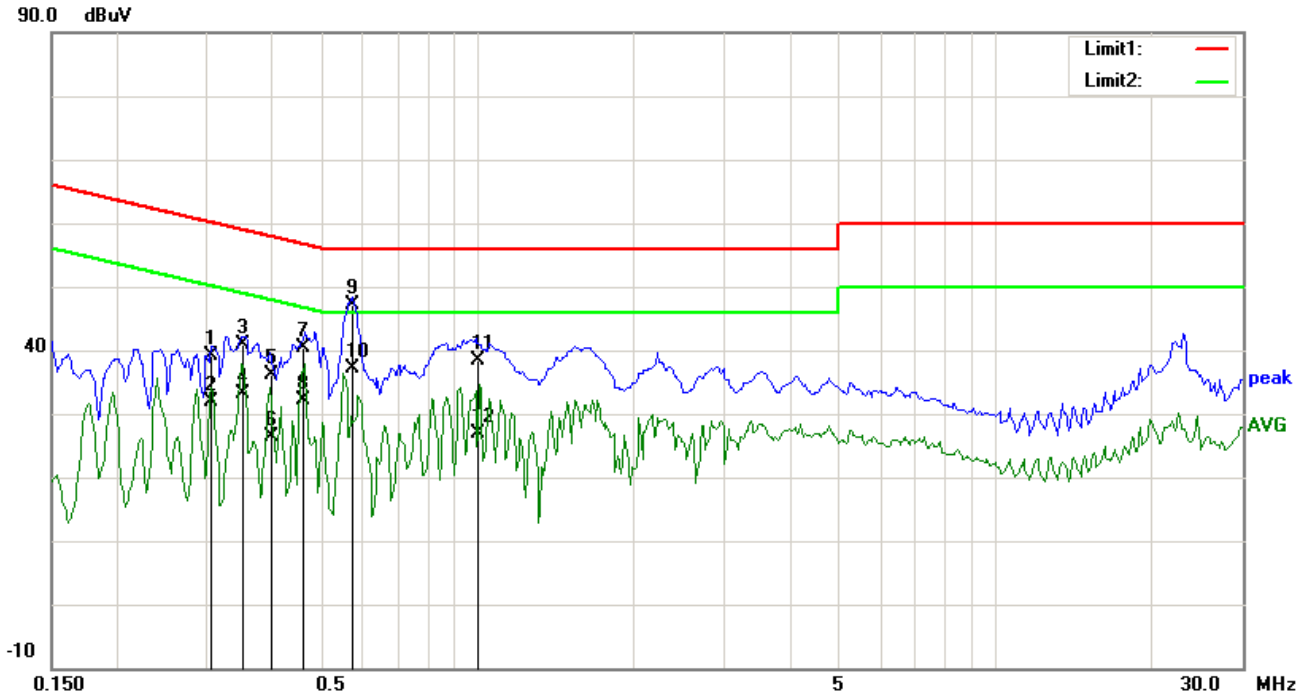


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Comment
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)	
1	L1	0.2633	20.29	QP	12.78	33.07	61.33	-28.26	
2	L1	0.2633	14.57	AVG	12.78	27.35	51.33	-23.98	
3	L1	0.3692	21.36	QP	12.39	33.75	58.52	-24.77	
4	L1	0.3692	14.01	AVG	12.39	26.40	48.52	-22.12	
5	L1	0.5758	28.40	QP	11.82	40.22	56.00	-15.78	
6	L1	0.5758	18.92	AVG	11.82	30.74	46.00	-15.26	
7	L1	0.8992	22.38	QP	11.50	33.88	56.00	-22.12	
8	L1	0.8992	14.69	AVG	11.50	26.19	46.00	-19.81	
9	L1	0.9633	23.90	QP	11.44	35.34	56.00	-20.66	
10	L1	0.9633	16.12	AVG	11.44	27.56	46.00	-18.44	
11	L1	1.5355	22.72	QP	11.40	34.12	56.00	-21.88	
12	L1	1.5355	14.43	AVG	11.40	25.83	46.00	-20.17	

Test Mode 1:	Running



Test Data

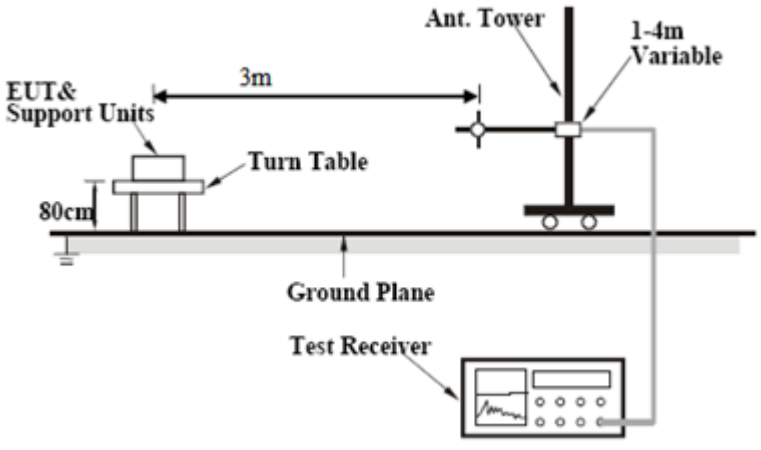
Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Comment
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)	
1	N	0.3063	26.43	QP	12.62	39.05	60.07	-21.02	
2	N	0.3063	19.33	AVG	12.62	31.95	50.07	-18.12	
3	N	0.3531	28.48	QP	12.45	40.93	58.89	-17.96	
4	N	0.3531	20.71	AVG	12.45	33.16	48.89	-15.73	
5	N	0.4000	23.88	QP	12.27	36.15	57.85	-21.70	
6	N	0.4000	13.99	AVG	12.27	26.26	47.85	-21.59	
7	N	0.4588	28.25	QP	12.05	40.30	56.71	-16.41	
8	N	0.4588	20.12	AVG	12.05	32.17	46.71	-14.54	
9	N	0.5680	35.24	QP	11.83	47.07	56.00	-8.93	
10	N	0.5680	25.37	AVG	11.83	37.20	46.00	-8.80	
11	N	0.9997	27.03	QP	11.40	38.43	56.00	-17.57	
12	N	0.9997	15.41	AVG	11.40	26.81	46.00	-19.19	

6.2 Radiated Emissions

Temperature	20°C
Relative Humidity	59%
Atmospheric Pressure	1017mbar
Test date :	June 17, 2015
Tested By :	Lucifer He

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.
107(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>

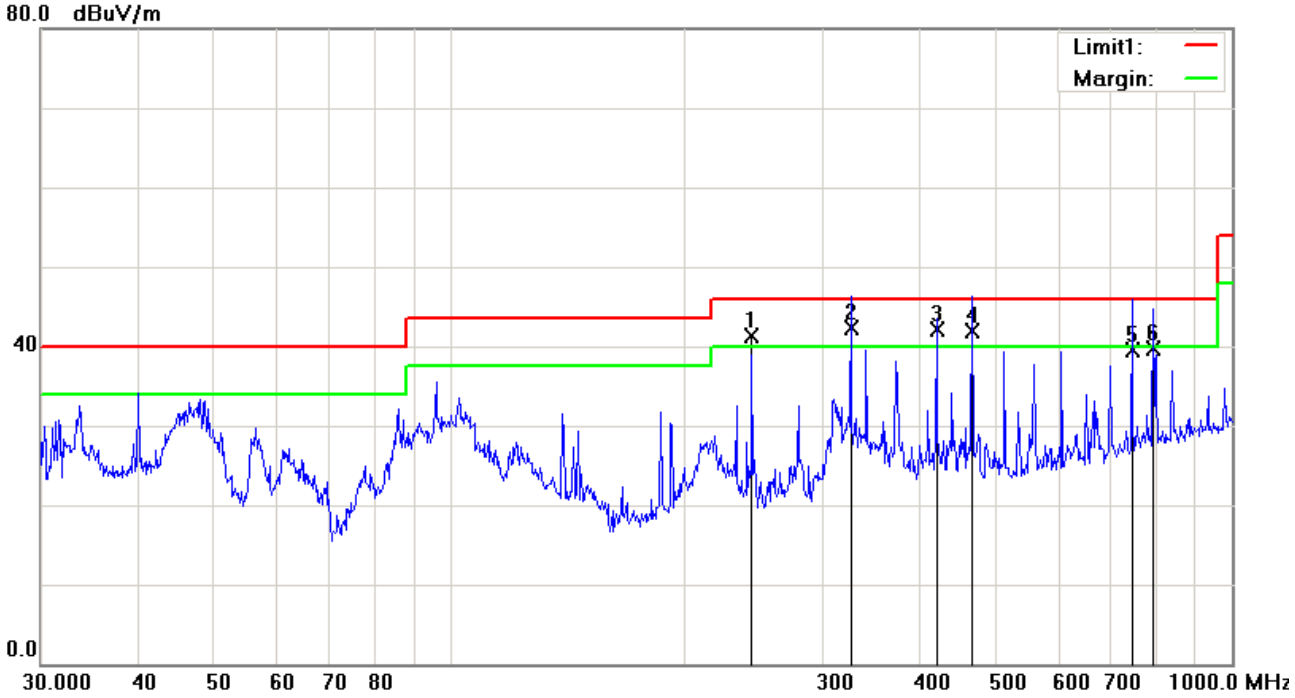
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120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

Below 1GHz



Test Data

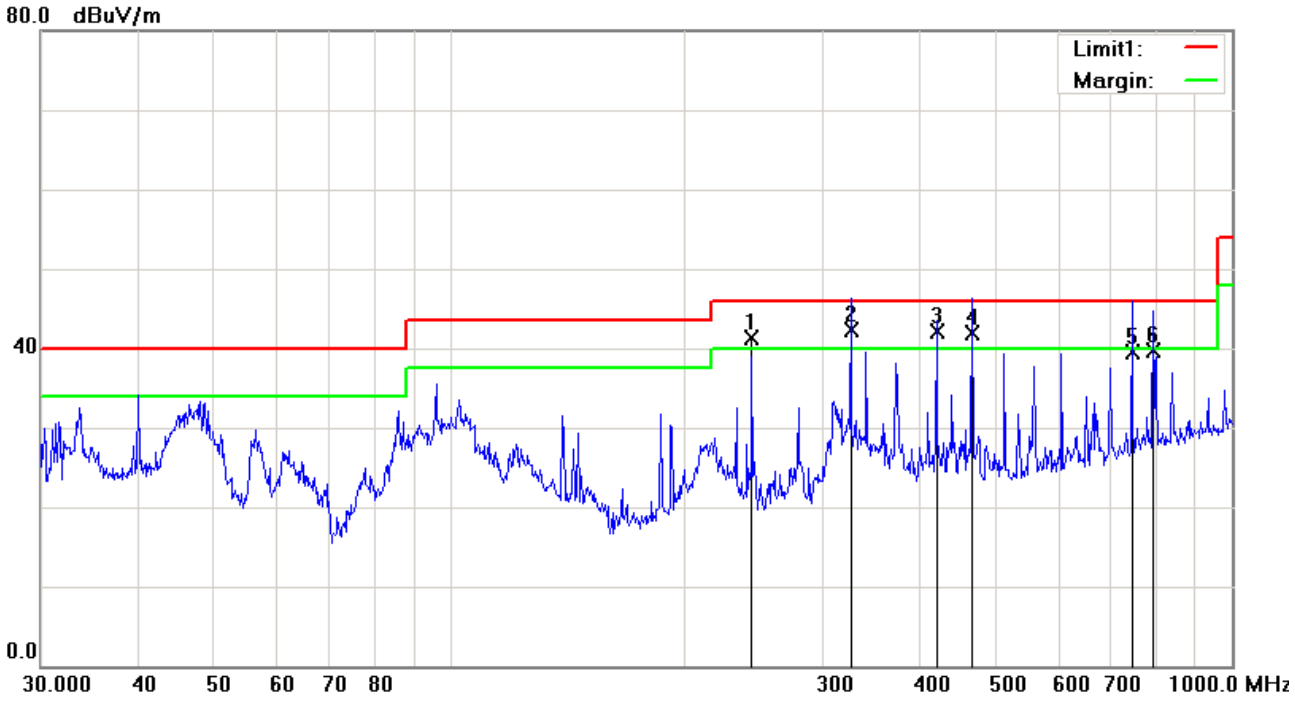
Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Height	Degree	Comment
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )	
1	H	186.4409	48.05	QP	-9.46	38.59	43.50	-4.91	100	154	
2	H	243.3772	50.46	QP	-9.13	41.33	46.00	-4.67	100	4	
3	H	325.5958	46.31	QP	-6.16	40.15	46.00	-5.85	100	128	
4	H	340.7817	44.24	QP	-5.73	38.51	46.00	-7.49	100	139	
5	H	744.8661	36.77	QP	2.31	39.08	46.00	-6.92	100	359	
6	H	793.3960	35.15	QP	3.11	38.26	46.00	-7.74	100	359	

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	Comment
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	( )	
1	V	243.3772	50.37	QP	-9.13	41.24	46.00	-4.76	100	250	
2	V	325.5958	48.55	QP	-6.16	42.39	46.00	-3.61	100	14	
3	V	419.1081	45.84	QP	-3.83	42.01	46.00	-3.99	100	220	
4	V	465.5994	44.51	QP	-2.65	41.86	46.00	-4.14	100	325	
5	V	744.8661	37.29	QP	2.31	39.60	46.00	-6.40	100	360	
6	V	793.3960	36.57	QP	3.11	39.68	46.00	-6.32	100	360	

Above 1GHz

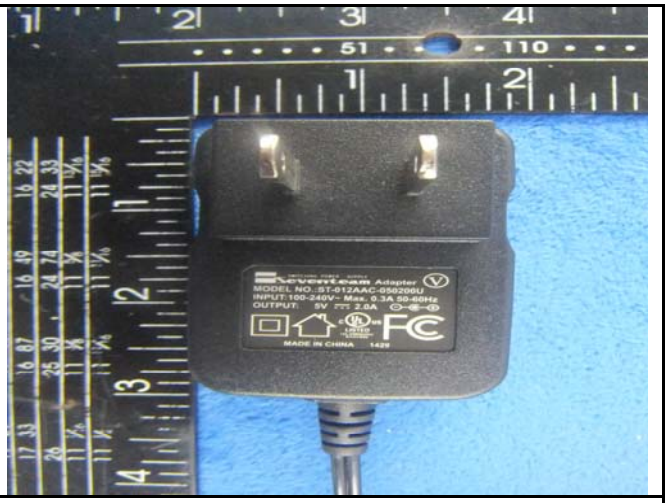
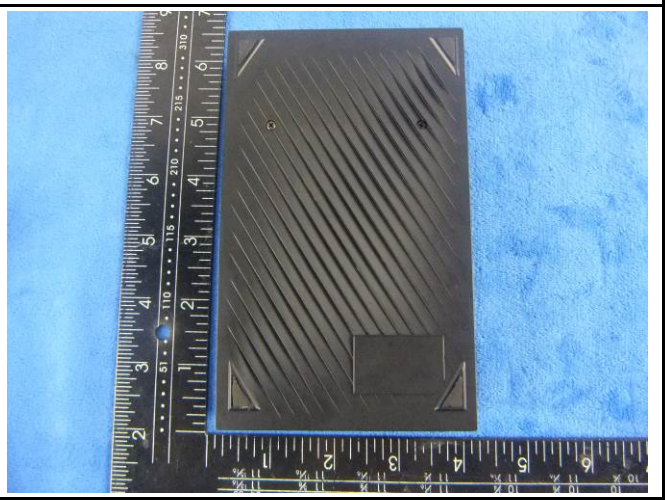
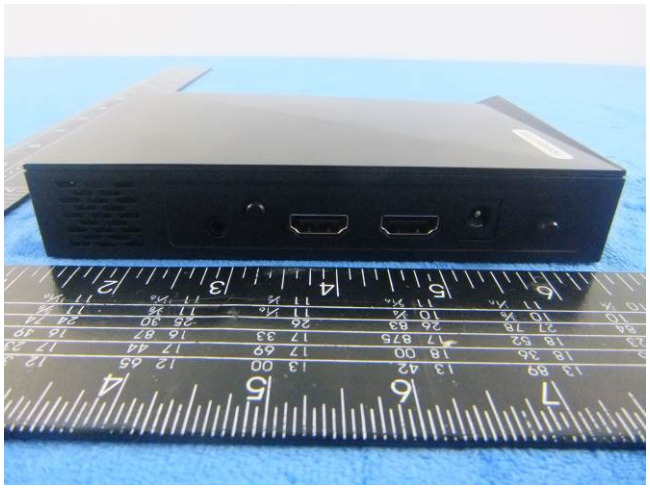
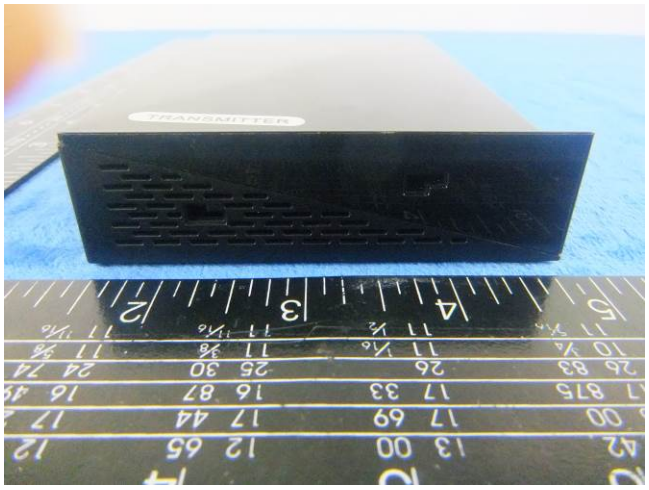
Note: The frequency that above 1GHz is mainly from the environment noise.

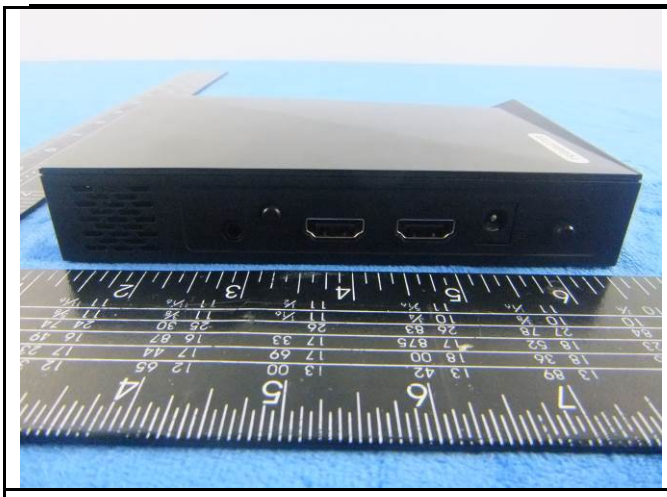
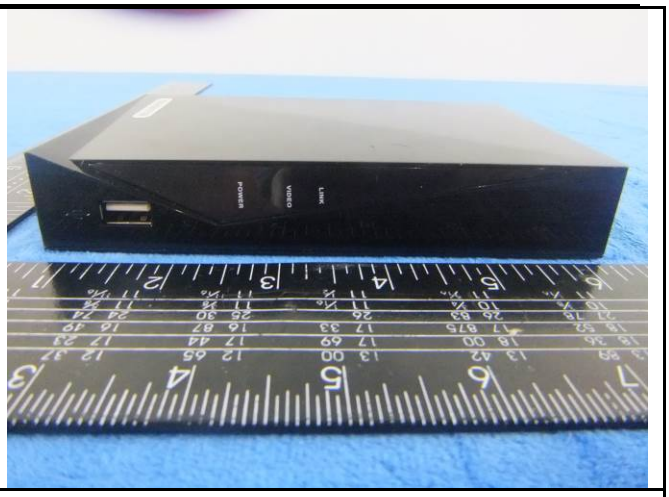
Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
EMI test receiver	ESCS30	8471241027	09/18/2014	09/17/2015	☑
Line Impedance Stabilization Network	LI-125A	191106	09/26/2014	09/25/2015	☑
Line Impedance Stabilization Network	LI-125A	191107	09/26/2014	09/25/2015	☑
LISN	ISN T800	34373	09/26/2014	09/25/2015	☑
Transient Limiter	LIT-153	531118	09/02/2014	09/01/2015	☑
Radiated Emissions					
EMI test receiver	ESL6	100262	09/18/2014	09/17/2015	☑
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/02/2014	09/01/2015	☑
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/25/2015	03/24/2016	☑
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/22/2014	09/21/2015	☑
Double Ridge Horn Antenna	AH-118	71259	09/25/2014	09/24/2015	☑

Annex B. EUT And Test Setup Photographs

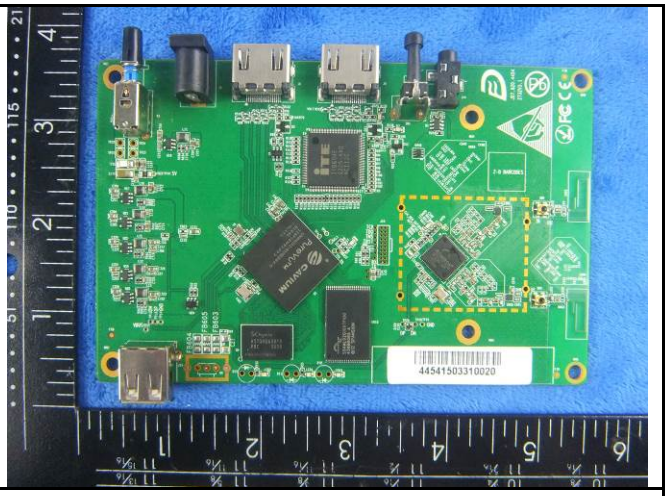
Annex B.i. Photograph: EUT External Photo

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Whole package- DF-W5001TX Front View</td><td>Adapter -DF-W5001TX Front View</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>EUT - DF-W5001TX Front View</td><td>EUT - DF-W5001TX Rear View</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>EUT - DF-W5001TX Top View</td><td>EUT - DF-W5001TX Bottom View</td></tr>
</table>

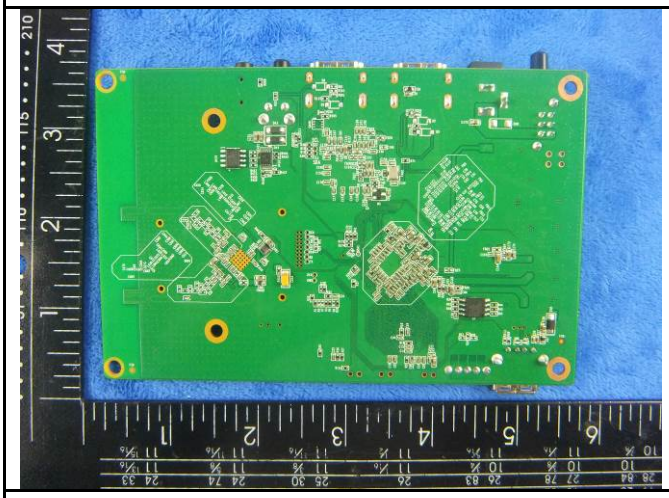
	
EUT - DF-W5001TX Left View	EUT - DF-W5001TX Right View

Annex B.ii. Photograph: EUT Internal Photo

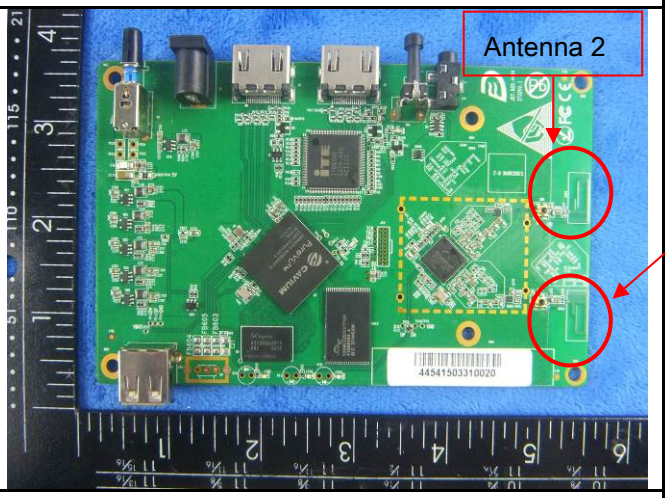
EUT – DF-W5001TX Uncover Front View



EUT – DF-W5001TX Uncover Front View



Mainboard - DF-W5001TX Front View



WIFI - DF-W5001TX Antenna View

Annex B.iii. Photograph: Test Setup Photo

Conducted Emissions Test Setup – Front View

Conducted Emissions Test Setup – Side View

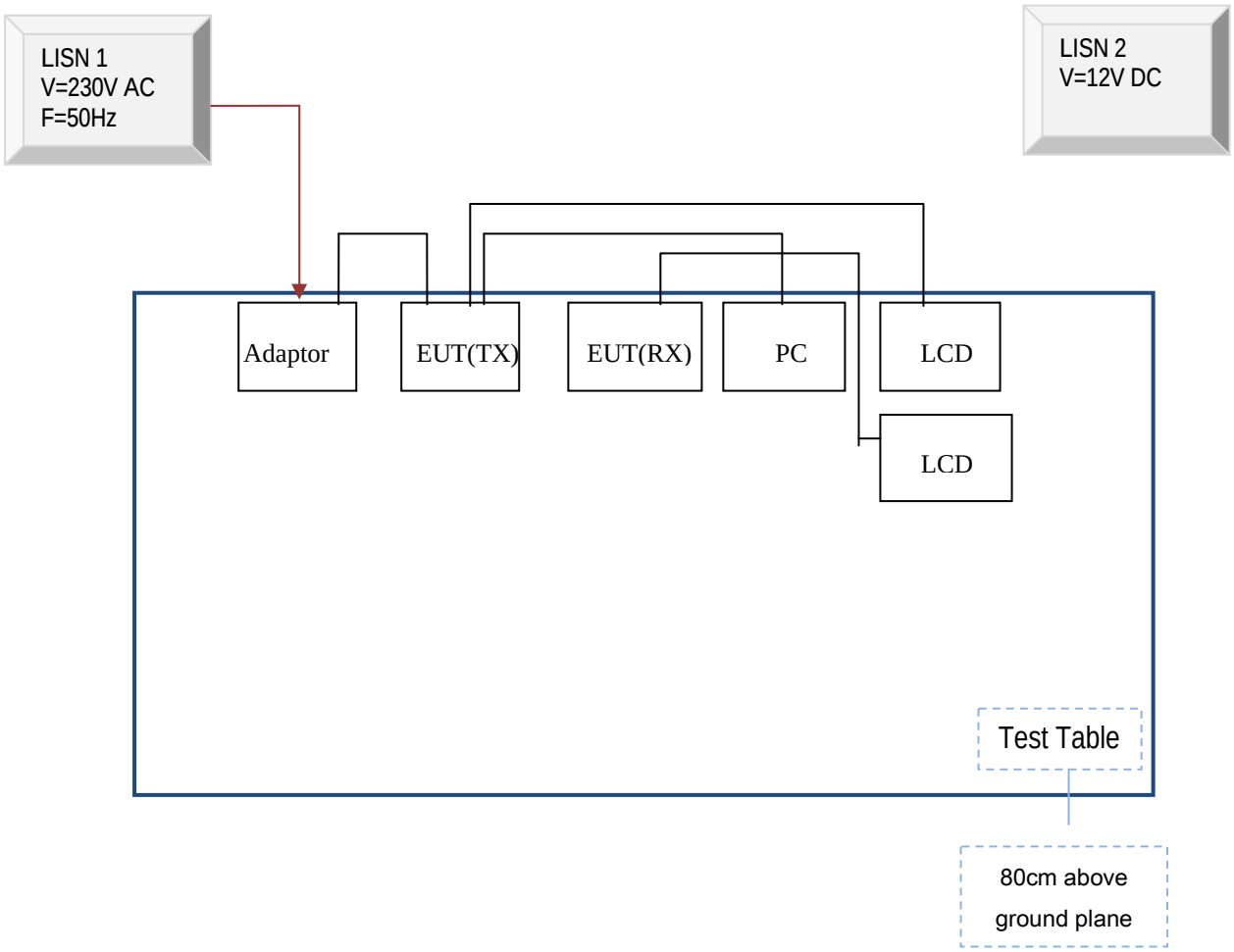
Radiated Spurious Emissions Test Setup Below 1GHz

Radiated Spurious Emissions Test Setup Above 1GHz

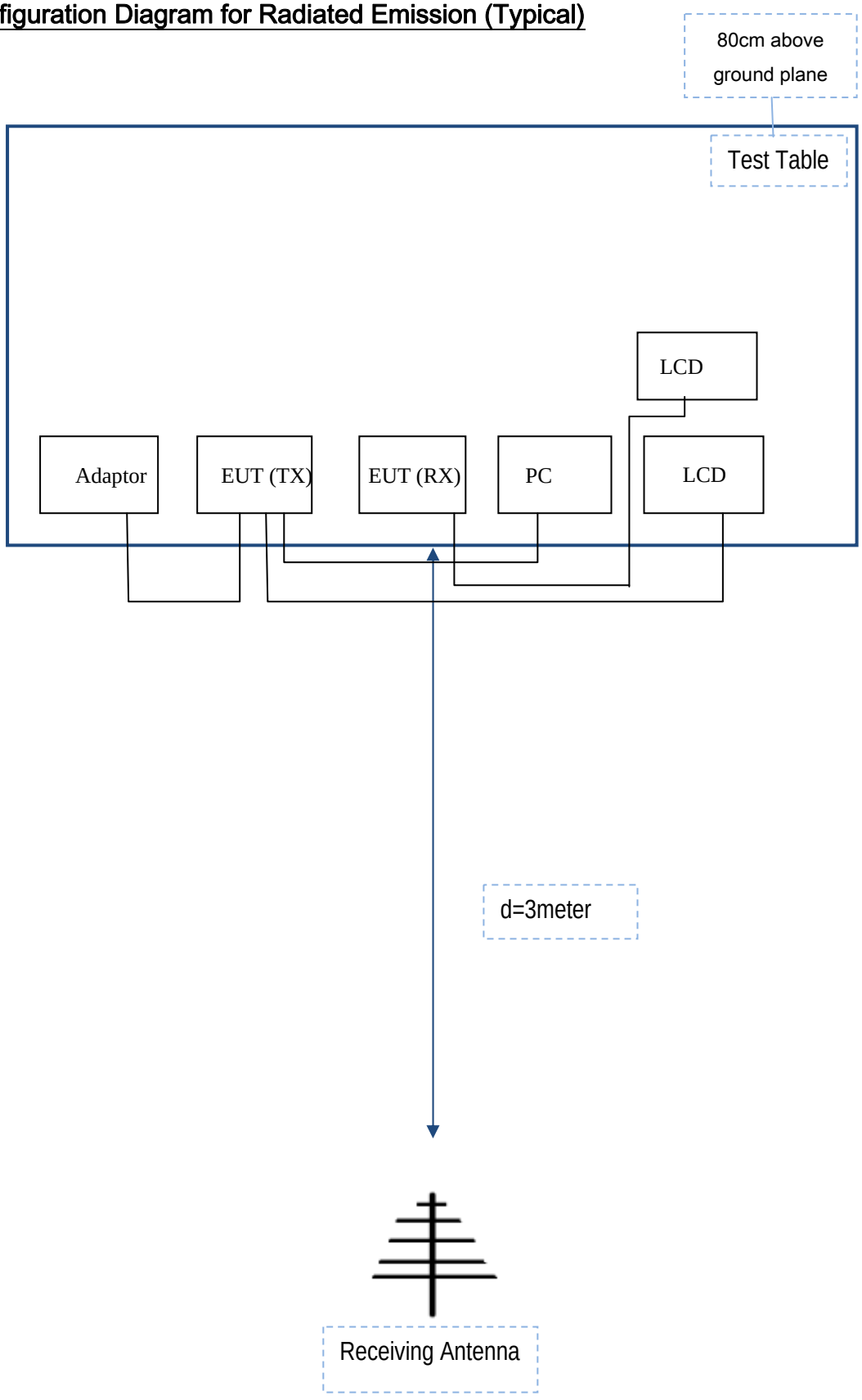
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

A Annex C.i. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions (Typical)



Block Configuration Diagram for Radiated Emission (Typical)



Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

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

Manufacturer	Equipment Description	Model	Calibration Date	Calibration Due Date
Dell	LCD	E1914HC	N/A	N/A
ThinkPad	Laptop	E40	N/A	N/A

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

Please see Attachment

Annex E. DECLARATION OF SIMILARITY

N/A