

EMC TEST REPORT



Report No.: 18020209-FCC-E

Supersede Report No.: N/A

Applicant	YMAX Communications Corp.	
Product Name	magicJack	
Main Model	K1103R3	
Test Standard	FCC Part 15 Subpart B Class B:2017, ANSI C63.4: 2014	
Test Date	February 11 to February 23, 2018	
Issue Date	February 23, 2018	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification	<input checked="" type="checkbox"/>	
Equipment did not comply with the specification	<input type="checkbox"/>	
<i>Louise Tu</i>	<i>Deon Dai</i>	
Louise Tu Test Engineer	Deon Dai Engineer Reviewer	
<p>This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only</p>		

Issued by:

SIEMIC (Nanjing-China) Laboratories

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Technology Development Park, Nanjing, China

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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
18020209-FCC-E	NONE	Original	February 23, 2018

2. Customer information

Applicant Name	YMAX Communications Corp.
Applicant Add	5700 Georgia Avenue, West Palm Beach, Florida, USA
Manufacturer	YMAX Communications Corp.
Manufacturer Add	5700 Georgia Avenue, West Palm Beach, Florida, USA

3. Test site information

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Address	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	694825
IC Test Site No.	4842B-1
Test Software	EZ_EMG

4. Equipment under Test (EUT) Information

Description of EUT: magicJack

Main Model: K1103R3

Serial Model: N/A

Date EUT received: February 8, 2018

Test Date(s): February 11 to February 23, 2018

Power: Input:100-240VAC 50/60Hz 0.2A
Output:5V 1A

Freq: 24MHz

Port: USB Port, RJ45 Port, RJ11 Port

Trade Name: N/A

FCC ID: Y79K1103

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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	Conducted Emissions	Compliance
§15.109; ANSI C63.4: 2014	Radiated Emissions	Compliance

Measurement Uncertainty

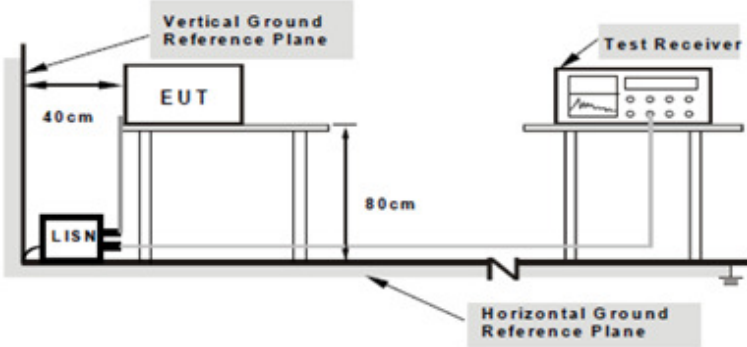
Test Item	Description	Uncertainty
Radiated Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	3.952dB

6. Measurements, Examination And Derived Results

6.1 Conducted Emissions

Temperature	23°C
Relative Humidity	51%
Atmospheric Pressure	1022mbar
Test date :	February 11 to February 14, 2018
Tested By :	Louise Tu

Requirement(s):

Spec	Requirement	Applicable																									
47CFR §15.107	<p>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 [μ]H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.</p> <p style="text-align: center;">Class A Limit</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Frequency ranges (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>QP</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15 ~ 0.5</td> <td>79</td> <td>66</td> </tr> <tr> <td>0.5 ~ 30</td> <td>73</td> <td>60</td> </tr> </tbody> </table> <p style="text-align: center;">Class B Limit</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Frequency ranges (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>QP</th> <th>Average</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency ranges (MHz)	Limit (dBμV)		QP	Average	0.15 ~ 0.5	79	66	0.5 ~ 30	73	60	Frequency ranges (MHz)	Limit (dBμV)		QP	Average	0.15 ~ 0.5	66 – 56	56 – 46	0.5 ~ 5	56	46	5 ~ 30	60	50	☒
Frequency ranges (MHz)	Limit (dBμV)																										
	QP	Average																									
0.15 ~ 0.5	79	66																									
0.5 ~ 30	73	60																									
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	 <p style="text-align: center;"> 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. </p>																										
Procedure	<ol style="list-style-type: none"> 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. The power supply for the EUT was fed through a 50 [μ]H/50 EUT LISN, connected to filtered mains. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. All other supporting equipment were powered separately from another main supply. The EUT was switched on and allowed to warm up to its normal operating condition. 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. High peaks, relative to the limit line, were then selected, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10kHz. Steps 6-7 were repeated for the LIVE line (for AC mains) or DC line (for DC power). 																										
Remark																											

Result	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Fail
Test Data	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> N/A
Test Plot	<input checked="" type="checkbox"/> Yes(See below)	<input type="checkbox"/> N/A

Data sample

No.	Frequency (MHz)	Reading (dB μ V)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dB μ V)	Limit (dB μ V)	Margin (dB)
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Frequency (MHz) = Emission frequency in MHz

Reading (dB μ V) = Receiver Reading Value

Detector=Quasi Peak Detector or Average Detector

Lisn/ISN= Insertion loss of LISN

Ps_Lmt= Insertion loss of transient limiter (The transient limiter included 10dB attenuation)

Cab_L= cable loss

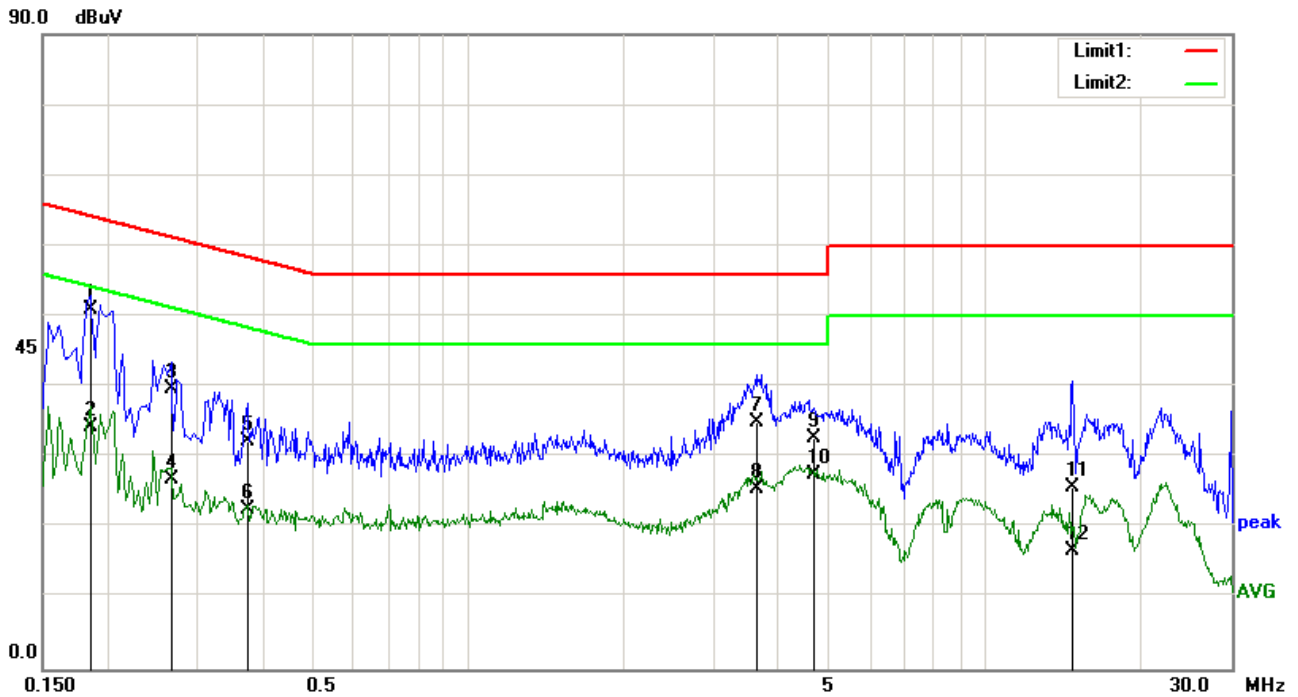
Result (dB μ V) = Reading Value + Corrected Value

Limit (dB μ V) = Limit stated in standard

Calculation Formula:

Margin (dB) = Result (dB μ V) – limit (dB μ V)

Test Mode:	Normal Working (Notebook)
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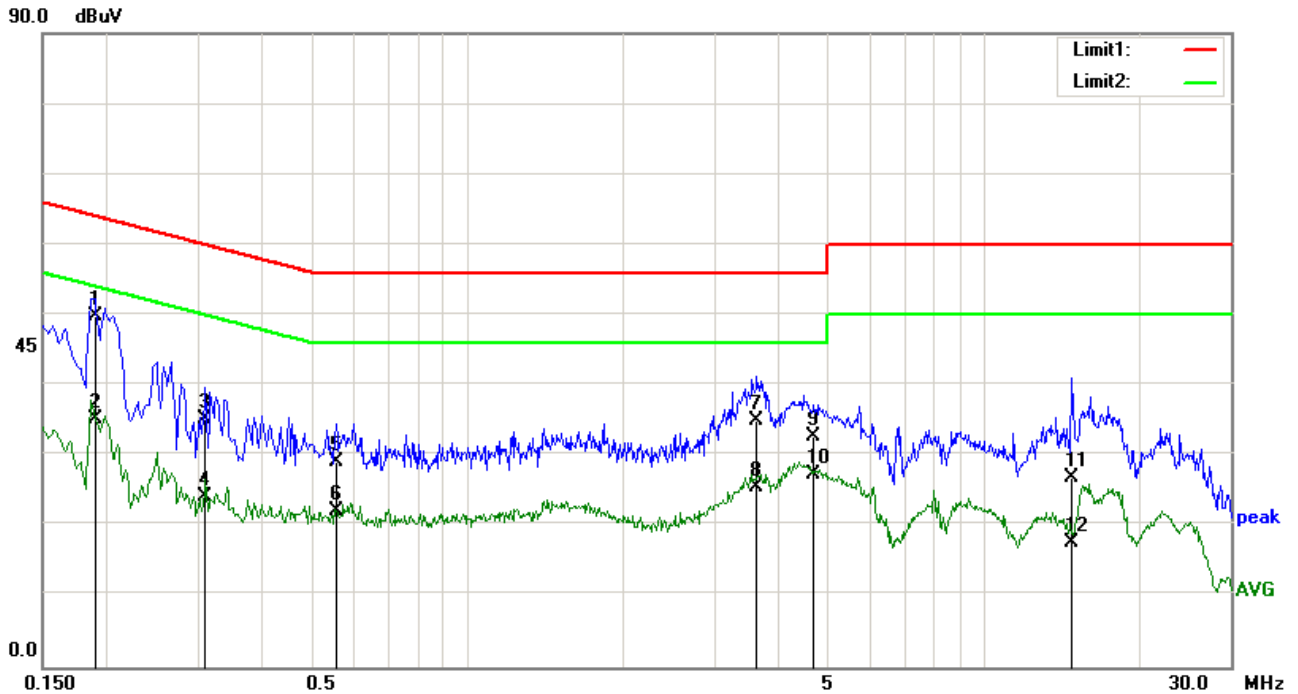


Phase Line Plot at 120V AC, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps Lmt (dB)	Cab L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.1860	40.50	QP	0.10	-10.00	0.30	50.90	64.21	-13.31
2	0.1860	23.81	AVG	0.10	-10.00	0.30	34.21	54.21	-20.00
3	0.2660	29.37	QP	0.10	-10.00	0.20	39.67	61.24	-21.57
4	0.2660	16.55	AVG	0.10	-10.00	0.20	26.85	51.24	-24.39
5	0.3740	21.96	QP	0.11	-10.00	0.20	32.27	58.41	-26.14
6	0.3740	12.27	AVG	0.11	-10.00	0.20	22.58	48.41	-25.83
7	3.6100	24.53	QP	0.22	-10.00	0.25	35.00	56.00	-21.00
8	3.6100	15.07	AVG	0.22	-10.00	0.25	25.54	46.00	-20.46
9	4.6740	22.16	QP	0.26	-10.00	0.28	32.70	56.00	-23.30
10	4.6740	16.94	AVG	0.26	-10.00	0.28	27.48	46.00	-18.52
11	14.8180	14.46	QP	0.85	-10.00	0.47	25.78	60.00	-34.22
12	14.8180	5.41	AVG	0.85	-10.00	0.47	16.73	50.00	-33.27

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Notebook)
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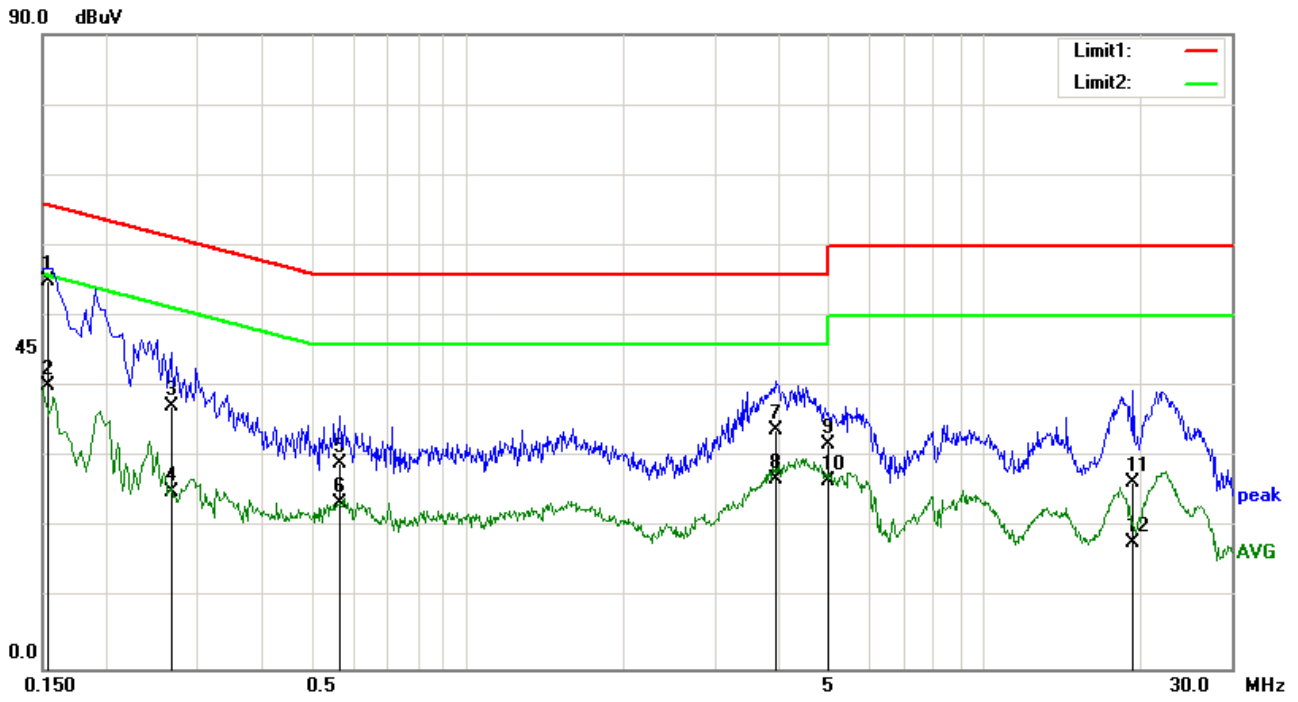


Phase Neutral Plot at 120V AC, 60Hz

No.	Frequency (MHz)	Reading (dBµV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	0.1900	39.36	QP	0.10	-10.00	0.30	49.76	64.04	-14.28
2	0.1900	24.77	AVG	0.10	-10.00	0.30	35.17	54.04	-18.87
3	0.3100	24.90	QP	0.10	-10.00	0.20	35.20	59.97	-24.77
4	0.3100	13.91	AVG	0.10	-10.00	0.20	24.21	49.97	-25.76
5	0.5580	18.84	QP	0.11	-10.00	0.21	29.16	56.00	-26.84
6	0.5580	11.93	AVG	0.11	-10.00	0.21	22.25	46.00	-23.75
7	3.6380	24.46	QP	0.23	-10.00	0.25	34.94	56.00	-21.06
8	3.6380	15.05	AVG	0.23	-10.00	0.25	25.53	46.00	-20.47
9	4.6780	22.26	QP	0.27	-10.00	0.28	32.81	56.00	-23.19
10	4.6780	16.88	AVG	0.27	-10.00	0.28	27.43	46.00	-18.57
11	14.7500	15.60	QP	0.93	-10.00	0.47	27.00	60.00	-33.00
12	14.7500	6.23	AVG	0.93	-10.00	0.47	17.63	50.00	-32.37

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Notebook)
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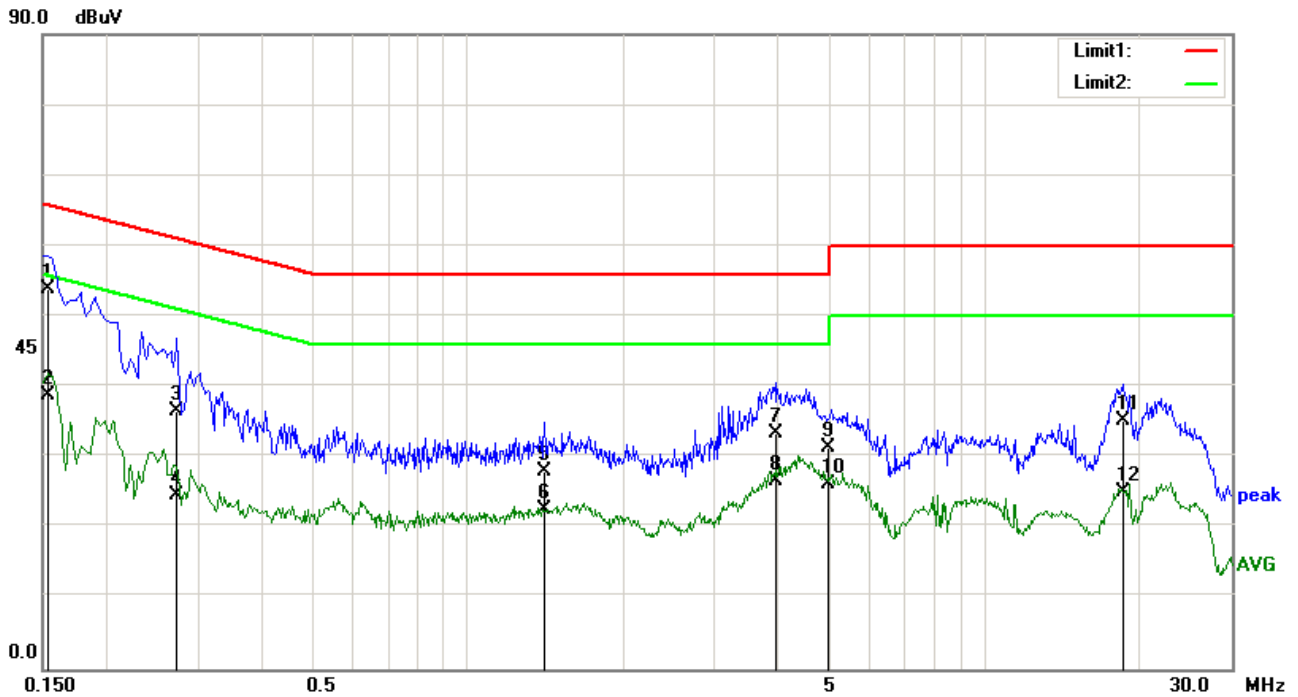


Phase Line Plot at 240V AC, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps Lmt (dB)	Cab L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.1540	44.48	QP	0.10	-10.00	0.35	54.93	65.78	-10.85
2	0.1540	29.74	AVG	0.10	-10.00	0.35	40.19	55.78	-15.59
3	0.2660	26.87	QP	0.10	-10.00	0.20	37.17	61.24	-24.07
4	0.2660	14.87	AVG	0.10	-10.00	0.20	25.17	51.24	-26.07
5	0.5660	18.71	QP	0.12	-10.00	0.21	29.04	56.00	-26.96
6	0.5660	13.14	AVG	0.12	-10.00	0.21	23.47	46.00	-22.53
7	3.9300	23.43	QP	0.23	-10.00	0.26	33.92	56.00	-22.08
8	3.9300	16.51	AVG	0.23	-10.00	0.26	27.00	46.00	-19.00
9	4.9940	21.36	QP	0.27	-10.00	0.30	31.93	56.00	-24.07
10	4.9940	16.15	AVG	0.27	-10.00	0.30	26.72	46.00	-19.28
11	19.4260	14.92	QP	1.05	-10.00	0.57	26.54	60.00	-33.46
12	19.4260	6.17	AVG	1.05	-10.00	0.57	17.79	50.00	-32.21

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working(Notebook)
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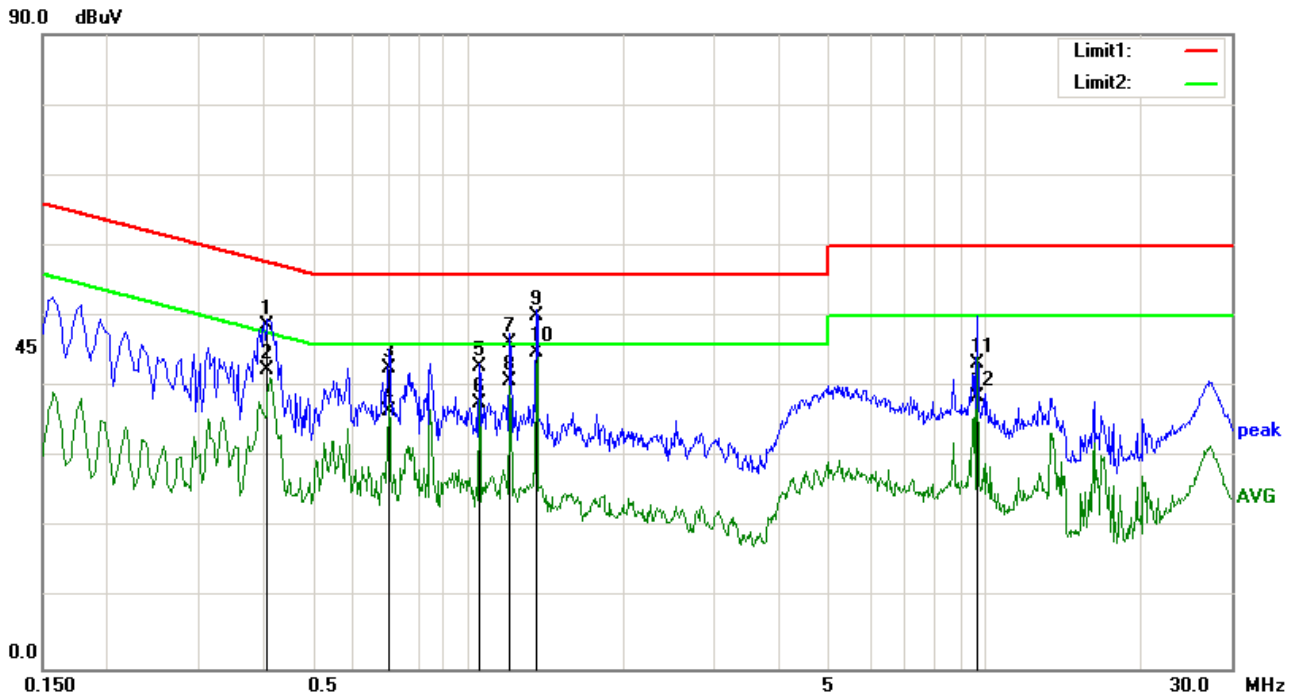


Phase Neutral Plot at 240V AC, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.1540	43.44	QP	0.11	-10.00	0.35	53.90	65.78	-11.88
2	0.1540	28.38	AVG	0.11	-10.00	0.35	38.84	55.78	-16.94
3	0.2740	26.20	QP	0.10	-10.00	0.20	36.50	61.00	-24.50
4	0.2740	14.29	AVG	0.10	-10.00	0.20	24.59	51.00	-26.41
5	1.4060	17.58	QP	0.15	-10.00	0.20	27.93	56.00	-28.07
6	1.4060	12.31	AVG	0.15	-10.00	0.20	22.66	46.00	-23.34
7	3.9260	22.90	QP	0.24	-10.00	0.26	33.40	56.00	-22.60
8	3.9260	16.11	AVG	0.24	-10.00	0.26	26.61	46.00	-19.39
9	4.9740	20.92	QP	0.28	-10.00	0.30	31.50	56.00	-24.50
10	4.9740	15.65	AVG	0.28	-10.00	0.30	26.23	46.00	-19.77
11	18.4700	23.57	QP	1.12	-10.00	0.52	35.21	60.00	-24.79
12	18.4700	13.36	AVG	1.12	-10.00	0.52	25.00	50.00	-25.00

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Adapter)
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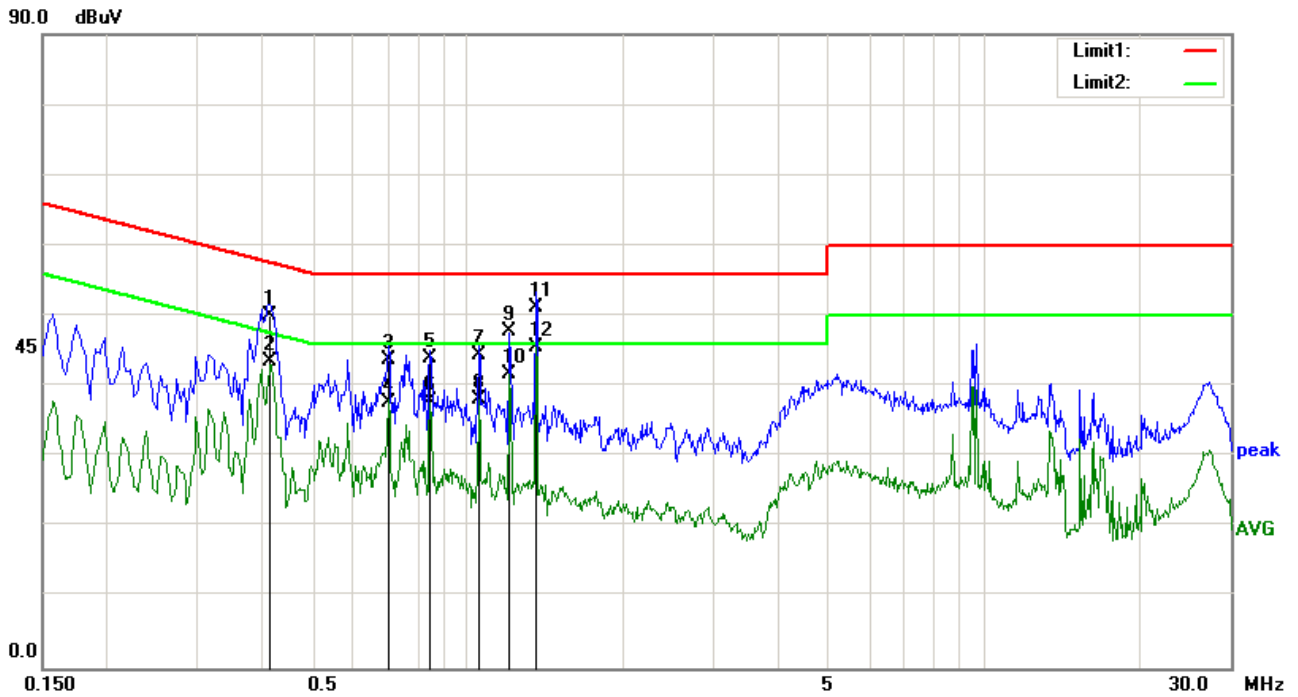


Phase Line Plot at 120V AC, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps Lmt (dB)	Cab L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.4100	38.37	QP	0.11	-10.00	0.21	48.69	57.65	-8.96
2	0.4100	32.10	AVG	0.11	-10.00	0.21	42.42	47.65	-5.23
3	0.7020	32.30	QP	0.13	-10.00	0.20	42.63	56.00	-13.37
4	0.7020	26.24	AVG	0.13	-10.00	0.20	36.57	46.00	-9.43
5	1.0540	32.53	QP	0.14	-10.00	0.19	42.86	56.00	-13.14
6	1.0540	27.26	AVG	0.14	-10.00	0.19	37.59	46.00	-8.41
7	1.2060	35.90	QP	0.14	-10.00	0.21	46.25	56.00	-9.75
8	1.2060	30.46	AVG	0.14	-10.00	0.21	40.81	46.00	-5.19
9	1.3580	39.64	QP	0.15	-10.00	0.21	50.00	56.00	-6.00
10	1.3580	34.64	AVG	0.15	-10.00	0.21	45.00	46.00	-1.00
11	9.6860	32.44	QP	0.48	-10.00	0.39	43.31	60.00	-16.69
12	9.6860	27.79	AVG	0.48	-10.00	0.39	38.66	50.00	-11.34

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Adapter)
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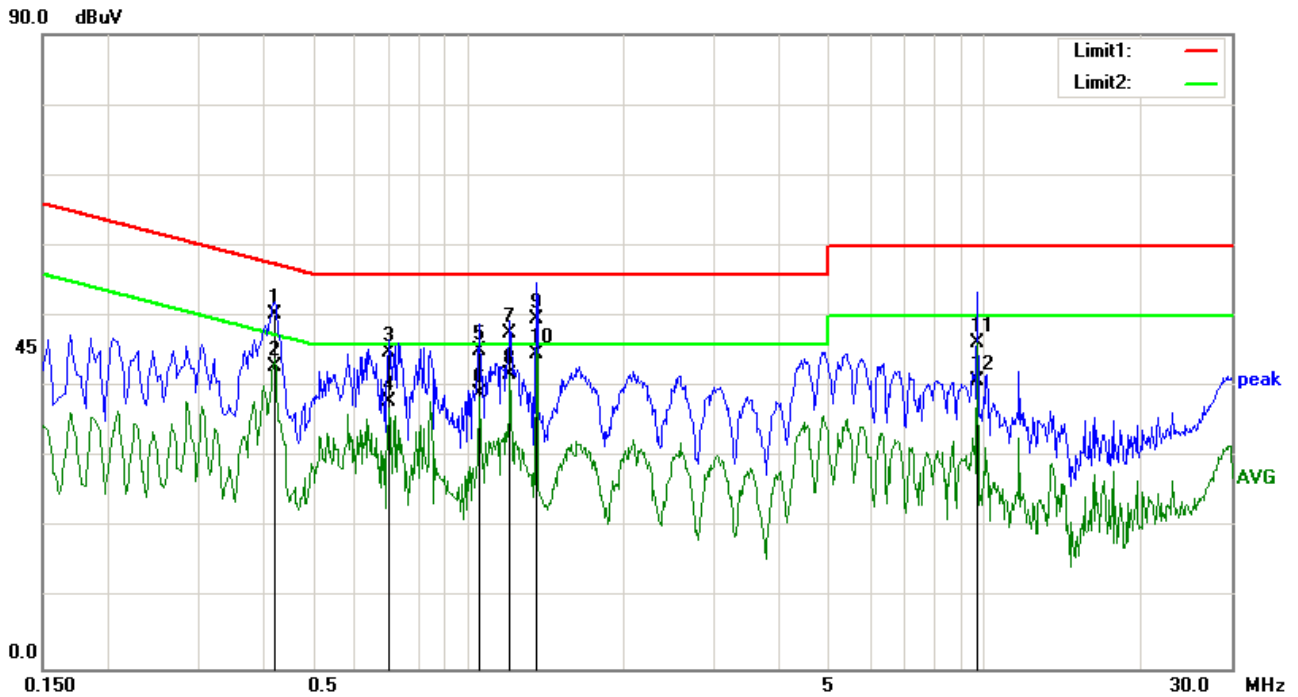


Phase Neutral Plot at 120V AC, 60Hz

No.	Frequency (MHz)	Reading (dB μ V)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dB μ V)	Limit (dB μ V)	Margin (dB)
1	0.4140	39.83	QP	0.11	-10.00	0.21	50.15	57.57	-7.42
2	0.4140	33.16	AVG	0.11	-10.00	0.21	43.48	47.57	-4.09
3	0.7020	33.37	QP	0.12	-10.00	0.20	43.69	56.00	-12.31
4	0.7020	27.47	AVG	0.12	-10.00	0.20	37.79	46.00	-8.21
5	0.8460	33.77	QP	0.12	-10.00	0.20	44.09	56.00	-11.91
6	0.8460	27.63	AVG	0.12	-10.00	0.20	37.95	46.00	-8.05
7	1.0540	34.02	QP	0.13	-10.00	0.19	44.34	56.00	-11.66
8	1.0540	27.86	AVG	0.13	-10.00	0.19	38.18	46.00	-7.82
9	1.2060	37.56	QP	0.14	-10.00	0.21	47.91	56.00	-8.09
10	1.2060	31.38	AVG	0.14	-10.00	0.21	41.73	46.00	-4.27
11	1.3580	40.74	QP	0.14	-10.00	0.21	51.09	56.00	-4.91
12	1.3580	35.23	AVG	0.14	-10.00	0.21	45.58	46.00	-0.42

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Adapter)
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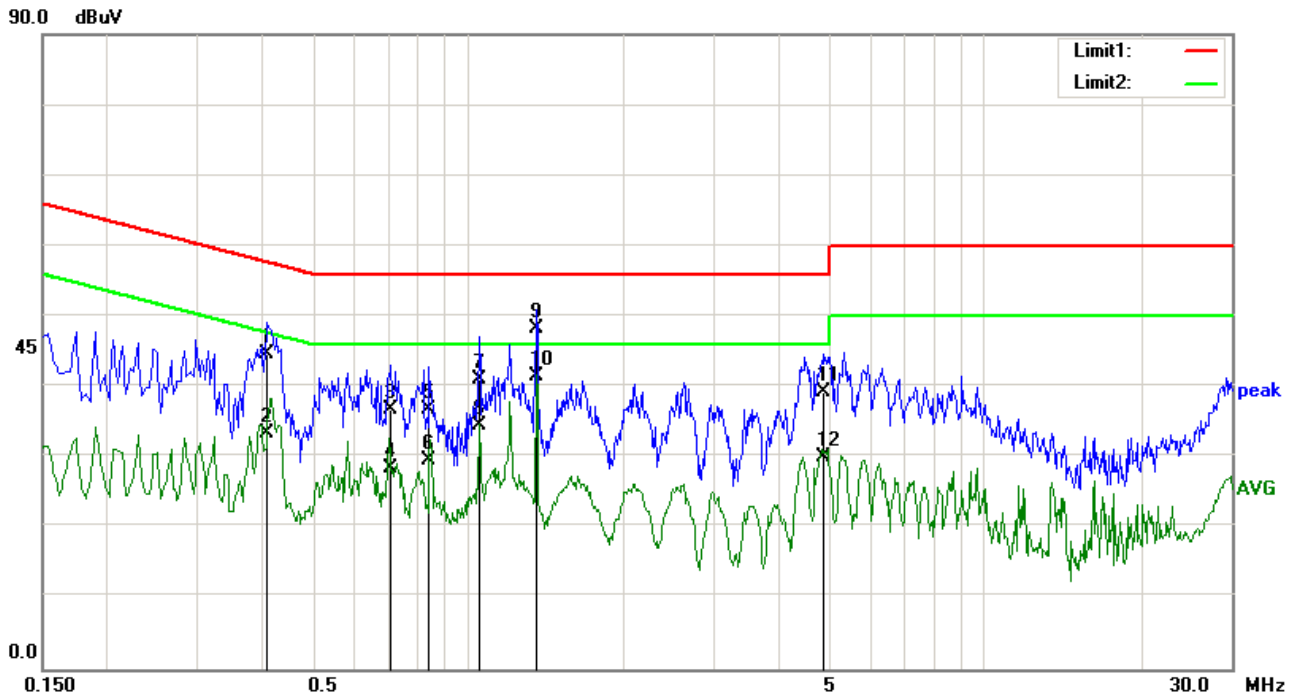


Phase Line Plot at 240V AC, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps Lmt (dB)	Cab L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.4220	39.86	QP	0.11	-10.00	0.21	50.18	57.41	-7.23
2	0.4220	32.46	AVG	0.11	-10.00	0.21	42.78	47.41	-4.63
3	0.7020	34.45	QP	0.13	-10.00	0.20	44.78	56.00	-11.22
4	0.7020	27.60	AVG	0.13	-10.00	0.20	37.93	46.00	-8.07
5	1.0540	34.79	QP	0.14	-10.00	0.19	45.12	56.00	-10.88
6	1.0540	28.72	AVG	0.14	-10.00	0.19	39.05	46.00	-6.95
7	1.2060	37.29	QP	0.14	-10.00	0.21	47.64	56.00	-8.36
8	1.2060	31.32	AVG	0.14	-10.00	0.21	41.67	46.00	-4.33
9	1.3580	39.30	QP	0.15	-10.00	0.21	49.66	56.00	-6.34
10	1.3580	34.26	AVG	0.15	-10.00	0.21	44.62	46.00	-1.38
11	9.6860	35.26	QP	0.48	-10.00	0.39	46.13	60.00	-13.87
12	9.6860	29.90	AVG	0.48	-10.00	0.39	40.77	50.00	-9.23

Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

Test Mode:	Normal Working (Adapter)
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Phase Neutral Plot at 240V AC, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.4100	34.37	QP	0.11	-10.00	0.21	44.69	57.65	-12.96
2	0.4100	23.05	AVG	0.11	-10.00	0.21	33.37	47.65	-14.28
3	0.7100	26.53	QP	0.12	-10.00	0.20	36.85	56.00	-19.15
4	0.7100	18.06	AVG	0.12	-10.00	0.20	28.38	46.00	-17.62
5	0.8420	26.48	QP	0.12	-10.00	0.20	36.80	56.00	-19.20
6	0.8420	19.35	AVG	0.12	-10.00	0.20	29.67	46.00	-16.33
7	1.0540	30.63	QP	0.13	-10.00	0.19	40.95	56.00	-15.05
8	1.0540	24.23	AVG	0.13	-10.00	0.19	34.55	46.00	-11.45
9	1.3580	37.84	QP	0.14	-10.00	0.21	48.19	56.00	-7.81
10	1.3580	31.21	AVG	0.14	-10.00	0.21	41.56	46.00	-4.44
11	4.8940	28.69	QP	0.28	-10.00	0.29	39.26	56.00	-16.74
12	4.8940	19.54	AVG	0.28	-10.00	0.29	30.11	46.00	-15.89

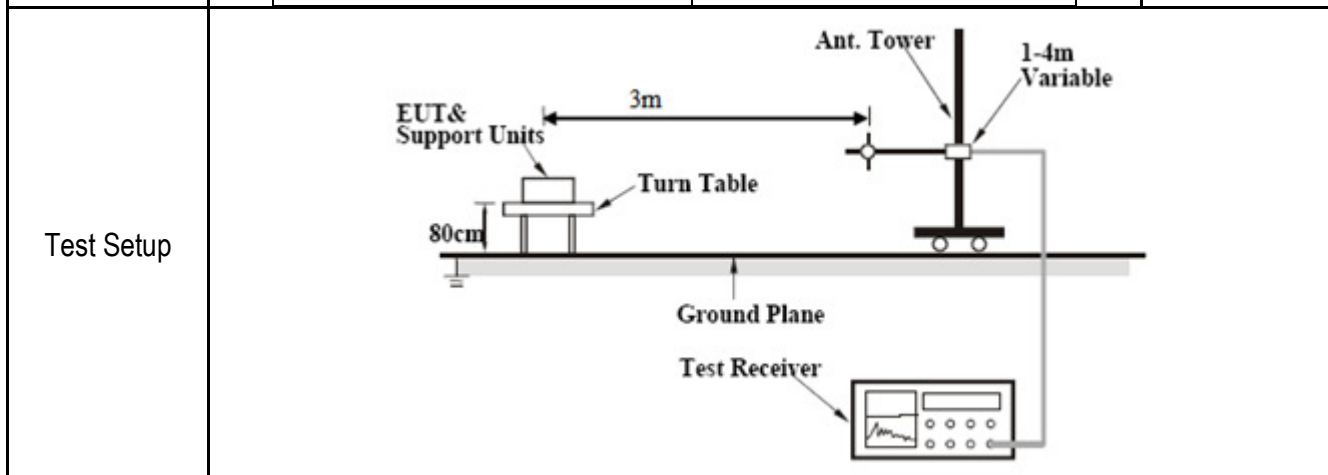
Note: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement shall only be made up to 1GHz.

6.2 Radiated Emissions

Temperature	23°C
Relative Humidity	51%
Atmospheric Pressure	1022mbar
Test date :	February 14 to February 23, 2018
Tested By :	Louise Tu

Requirement(s):

Spec	Requirement	Applicable																				
47CFR §15.109	<p>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</p> <p style="text-align: center;">Class A Limit</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength ($\mu\text{V/m}$)</th> </tr> </thead> <tbody> <tr> <td>30 – 88</td> <td>90</td> </tr> <tr> <td>88 – 216</td> <td>150</td> </tr> <tr> <td>216 – 960</td> <td>210</td> </tr> <tr> <td>Above 960</td> <td>300</td> </tr> </tbody> </table> <p style="text-align: center;">Class B Limit</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength ($\mu\text{V/m}$)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency range (MHz)	Field Strength ($\mu\text{V/m}$)	30 – 88	90	88 – 216	150	216 – 960	210	Above 960	300	Frequency range (MHz)	Field Strength ($\mu\text{V/m}$)	30 – 88	100	88 – 216	150	216 – 960	200	Above 960	500	<input checked="" type="checkbox"/>
Frequency range (MHz)	Field Strength ($\mu\text{V/m}$)																					
30 – 88	90																					
88 – 216	150																					
216 – 960	210																					
Above 960	300																					
Frequency range (MHz)	Field Strength ($\mu\text{V/m}$)																					
30 – 88	100																					
88 – 216	150																					
216 – 960	200																					
Above 960	500																					



Procedure	<ol style="list-style-type: none"> 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 characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: <ol style="list-style-type: none"> a. Vertical or horizontal polarisation (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. For emission frequencies measured below and above 1GHz, set the spectrum analyzer on a 100kHz and 1MHz resolution bandwidth respectively for each frequency measured. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
-----------	--

Remark	
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Result	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
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Test Data Yes N/A

Test Plot Yes (See below) N/A

Data sample

No.	Frequency (MHz)	Reading (dB μ V/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Degree ($^{\circ}$)
-----	--------------------	---------------------------	----------	-----------------	--------------	---------------	--------------------------	-------------------------	----------------	----------------	--------------------------

Frequency (MHz) = Emission frequency in MHz

Reading (dB μ V/m) = Receiver Reading Value

Detector= Peak Detector or Quasi Peak Detector

Ant_F=Antenna Factor

PA_G=Pre-Amplifier Gain

Cab_L=Cable Loss

Result (dB μ V/m) = Reading Value + Corrected Value

Limit (dB μ V/m) = Limit stated in standard

Height (cm) = Height of Receiver antenna

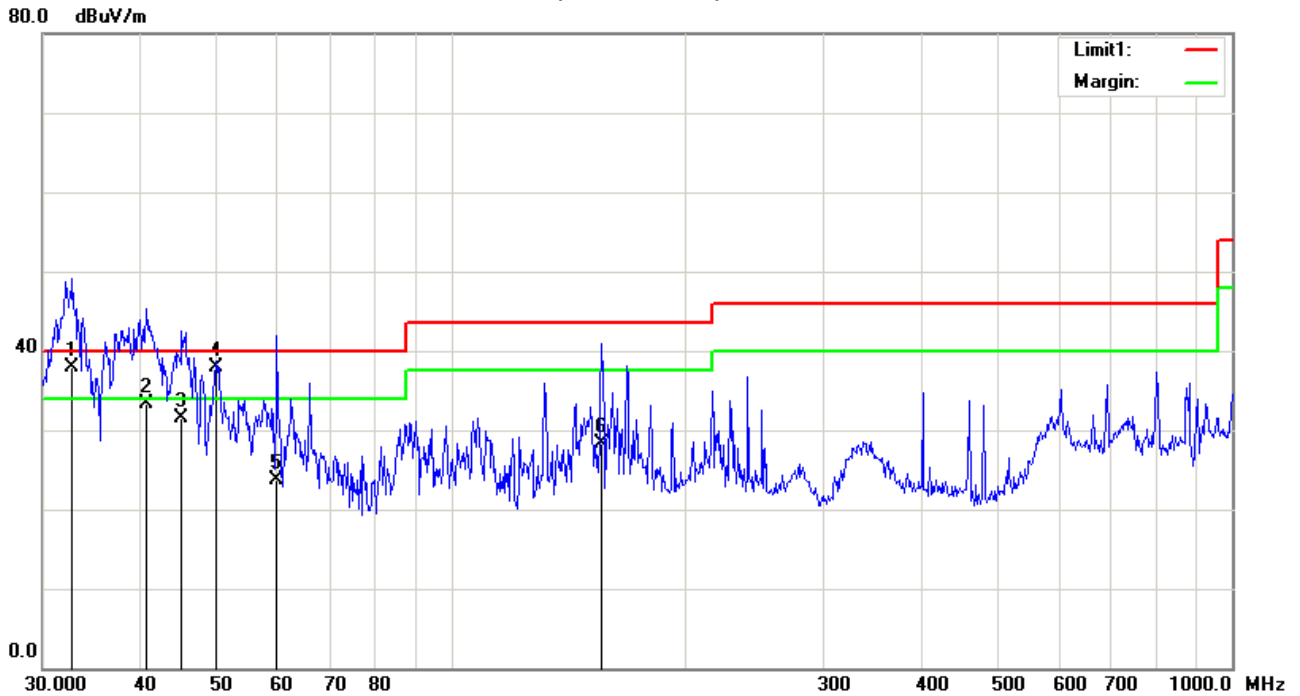
Degree = Turn table degree

Calculation Formula:

Margin (dB) = Result (dB μ V/m) – limit (dB μ V/m)

Test Mode:	Normal Working (Notebook)
-------------------	----------------------------------

(Below 1GHz)



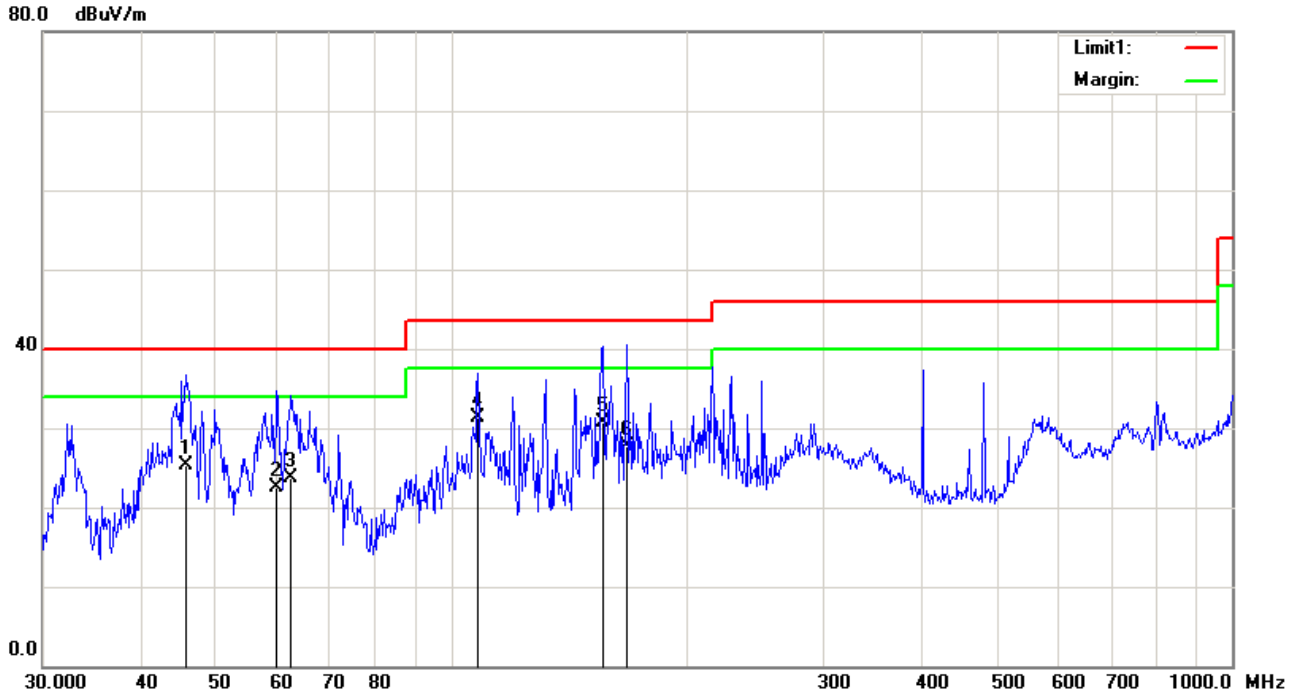
Test Data

Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	32.7486	62.64	QP	20.00	45.66	0.92	37.90	40.00	-2.10	100	126
2	40.7016	62.77	QP	15.31	45.74	1.06	33.40	40.00	-6.60	100	294
3	45.2166	64.11	QP	12.27	46.03	1.15	31.50	40.00	-8.50	100	46
4	50.0566	74.16	QP	9.04	46.45	1.25	38.00	40.00	-2.00	100	248
5	59.8588	61.80	QP	7.86	47.26	1.30	23.70	40.00	-16.30	200	342
6	155.9101	60.29	QP	13.60	47.57	2.08	28.40	43.50	-15.10	100	359

Test Mode:	Normal Working (Notebook)
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(Below 1GHz)



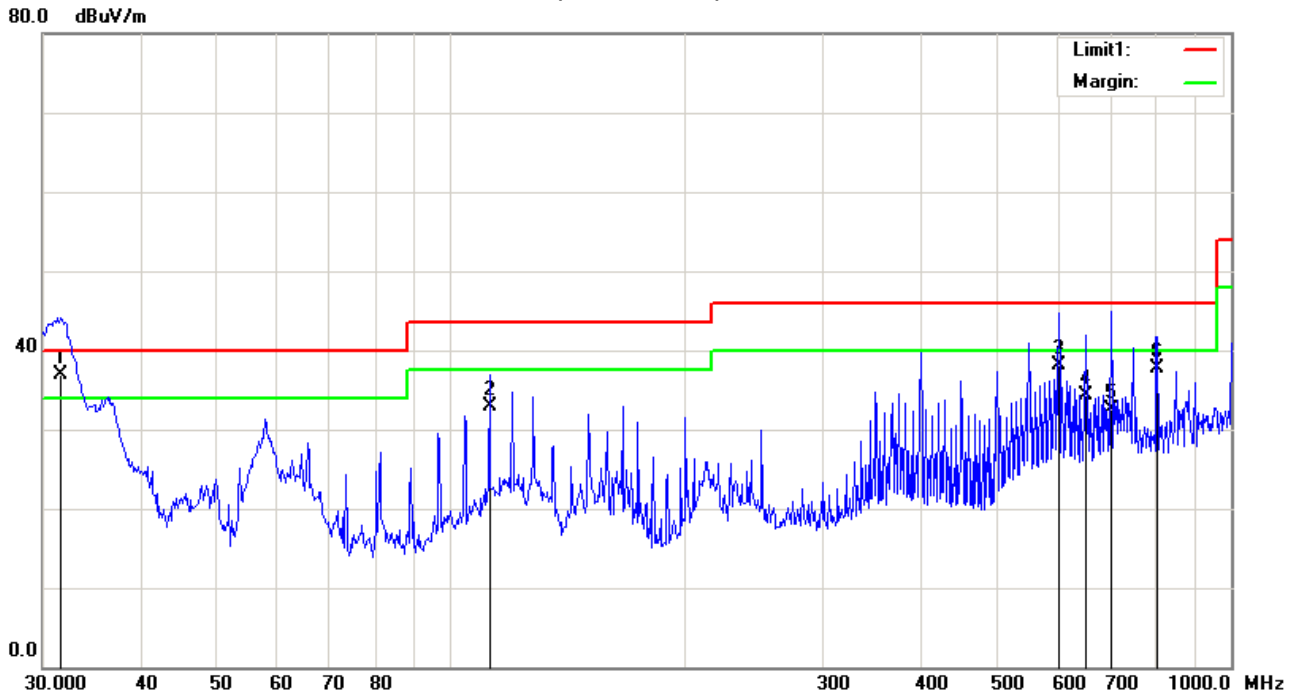
Test Data

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	45.8553	59.90	QP	10.33	46.09	1.17	25.31	40.00	-14.69	300	175
2	59.8588	58.91	QP	9.49	47.26	1.30	22.44	40.00	-17.56	200	173
3	62.4314	60.11	QP	9.78	47.46	1.33	23.76	40.00	-16.24	300	188
4	108.2667	61.41	QP	14.50	46.29	1.68	31.30	43.50	-12.20	200	182
5	156.4578	63.50	QP	12.68	47.53	2.08	30.73	43.50	-12.77	200	200
6	167.8243	59.98	QP	12.27	46.66	2.09	27.68	43.50	-15.82	200	207

Test Mode:	Normal Working (Adapter)
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(Below 1GHz)



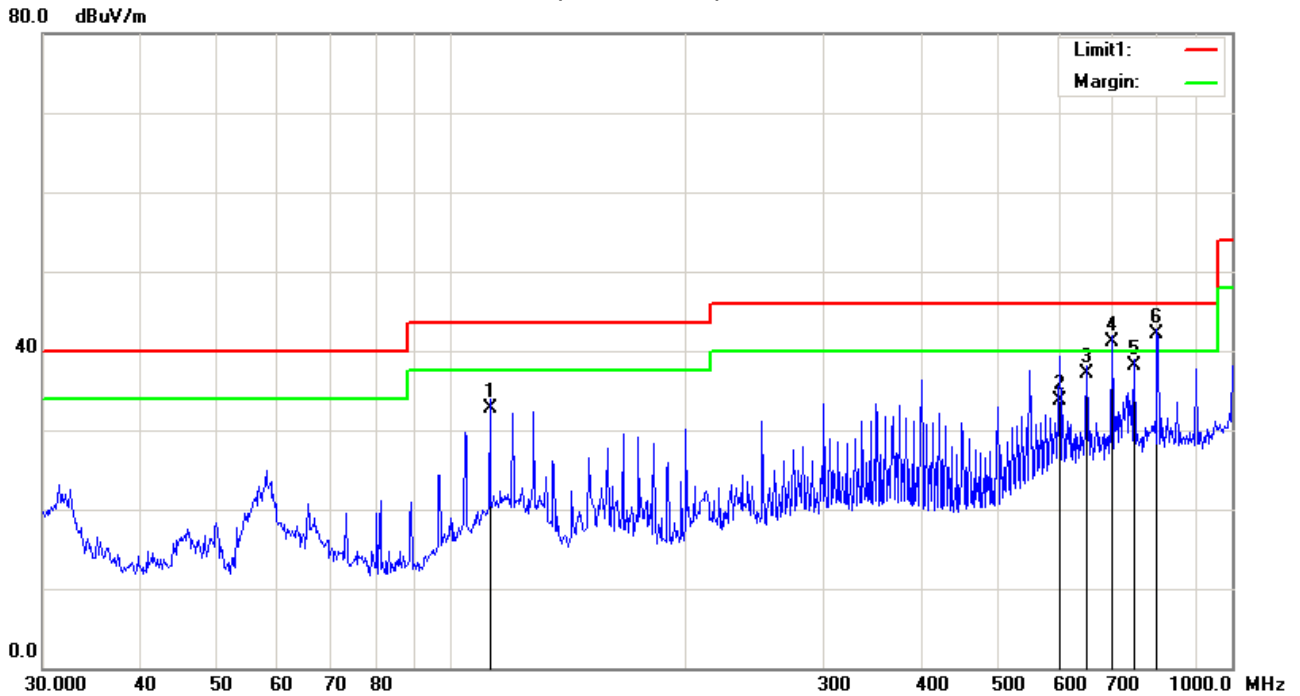
Test Data

Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	31.6202	61.11	QP	20.66	45.67	0.90	37.00	40.00	-3.00	200	198
2	112.1305	63.20	QP	14.30	46.31	1.71	32.90	43.50	-10.60	100	4
3	601.4265	62.55	QP	20.29	48.58	3.94	38.20	46.00	-7.80	200	6
4	651.9417	56.98	QP	21.47	48.15	4.10	34.40	46.00	-11.60	200	6
5	701.7610	51.06	QP	22.57	45.39	4.26	32.50	46.00	-13.50	200	199
6	804.6028	57.80	QP	21.65	46.21	4.56	37.80	46.00	-8.20	100	6

Test Mode:	Normal Working (Adapter)
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(Below 1GHz)



Test Data

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	112.1305	62.08	QP	15.22	46.31	1.71	32.70	43.50	-10.80	300	150
2	601.4265	57.16	QP	21.28	48.58	3.94	33.80	46.00	-12.20	200	322
3	651.9417	59.40	QP	21.85	48.15	4.10	37.20	46.00	-8.80	300	92
4	701.7610	59.82	QP	22.41	45.39	4.26	41.10	46.00	-4.90	200	173
5	750.1083	56.02	QP	22.70	45.02	4.40	38.10	46.00	-7.90	200	356
6	801.7863	60.97	QP	22.99	46.31	4.55	42.20	46.00	-3.80	300	65

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
R&S EMI Test Receiver	ESPI3	101216	05/03/2017	05/02/2018	<input checked="" type="checkbox"/>
V-LISN	ESH3-Z5	838979/005	05/15/2017	05/14/2018	<input checked="" type="checkbox"/>
SIEMIC EZ_EMC Conducted Emissions software	Ver.ICP-03A1	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Radiated Emissions					
Spectrum Analyzer	N9010A	MY47191130	05/03/2017	05/02/2018	<input type="checkbox"/>
R&S EMI Receiver	ESPI3	101216	05/03/2017	05/02/2018	<input checked="" type="checkbox"/>
Antenna (30MHz~6GHz)	JB6	A121411	04/15/2017	04/14/2018	<input checked="" type="checkbox"/>
Agilent Pre-Amplifier	8449B	N/A	10/31/2017	10/30/2018	<input type="checkbox"/>
Hp Agilent Pre-Amplifier	8447F	1937A01160	10/26/2017	10/25/2018	<input checked="" type="checkbox"/>
EMCO Horn Antenna (1~18GHz)	3115	N/A	10/08/2017	10/07/2018	<input type="checkbox"/>
SIEMIC EZ_EMC Radiated Emissions software	Ver.ICP-03A1	N/A	N/A	N/A	<input checked="" type="checkbox"/>

Annex B. EUT And Test Setup Photographs

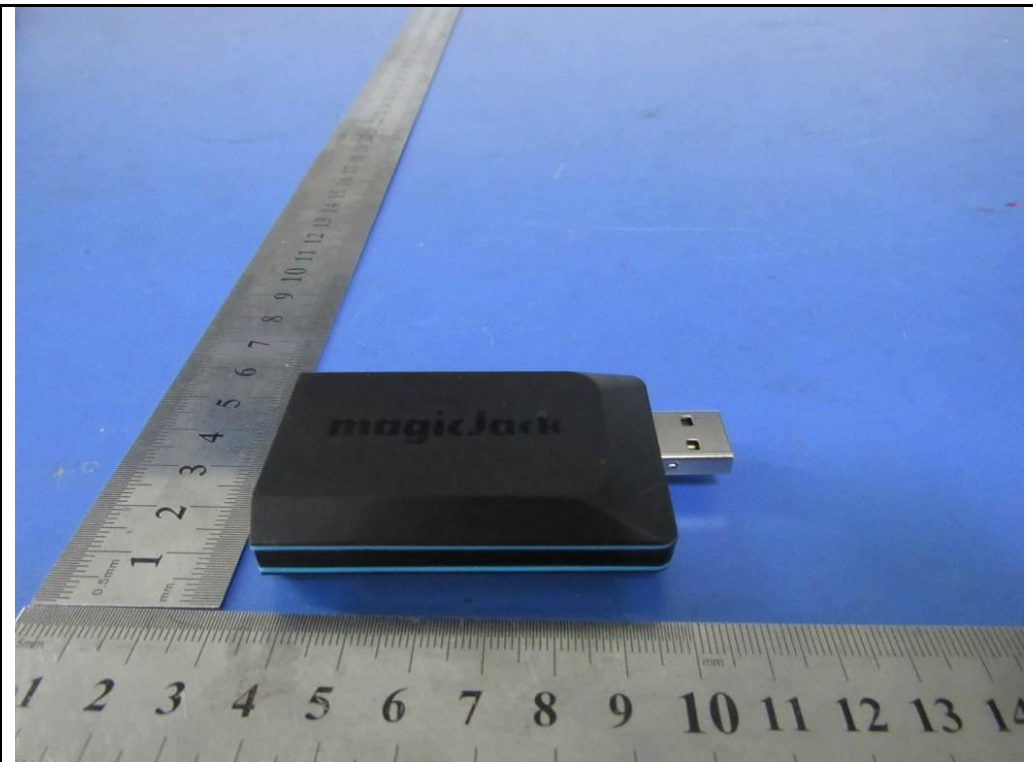
Annex B.i. Photograph EUT External Photo



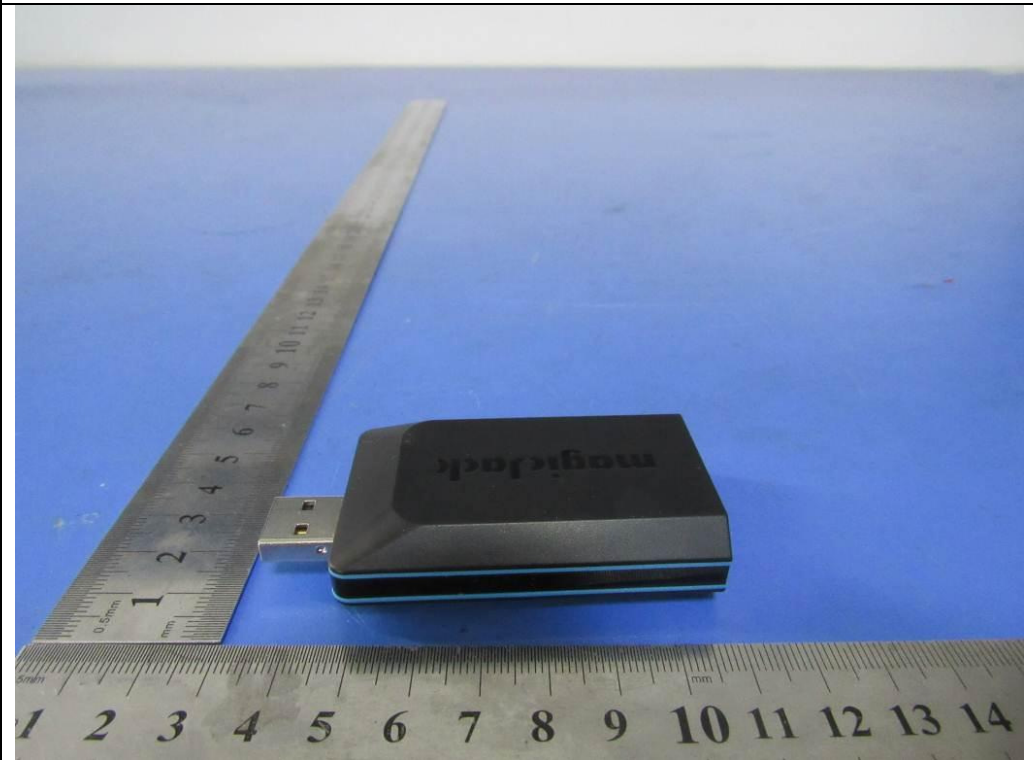
The Whole Package – Front View



Adapter – Front View



Front View of EUT



Rear View of EUT



Top View of EUT



Bottom View of EUT

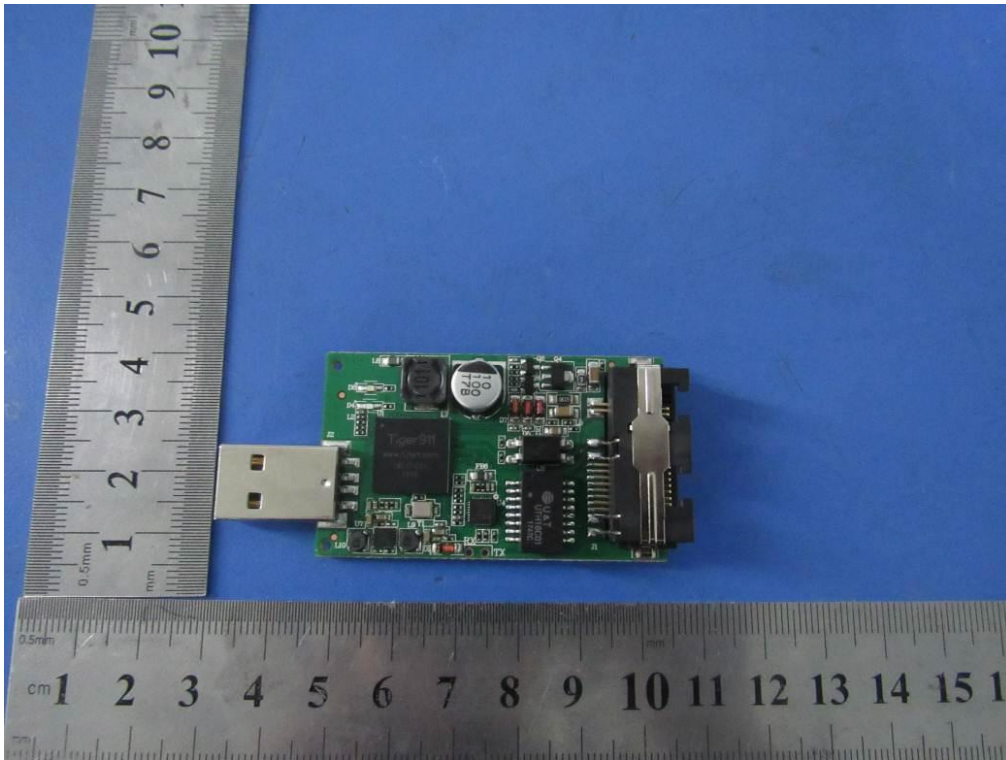


Left View of EUT

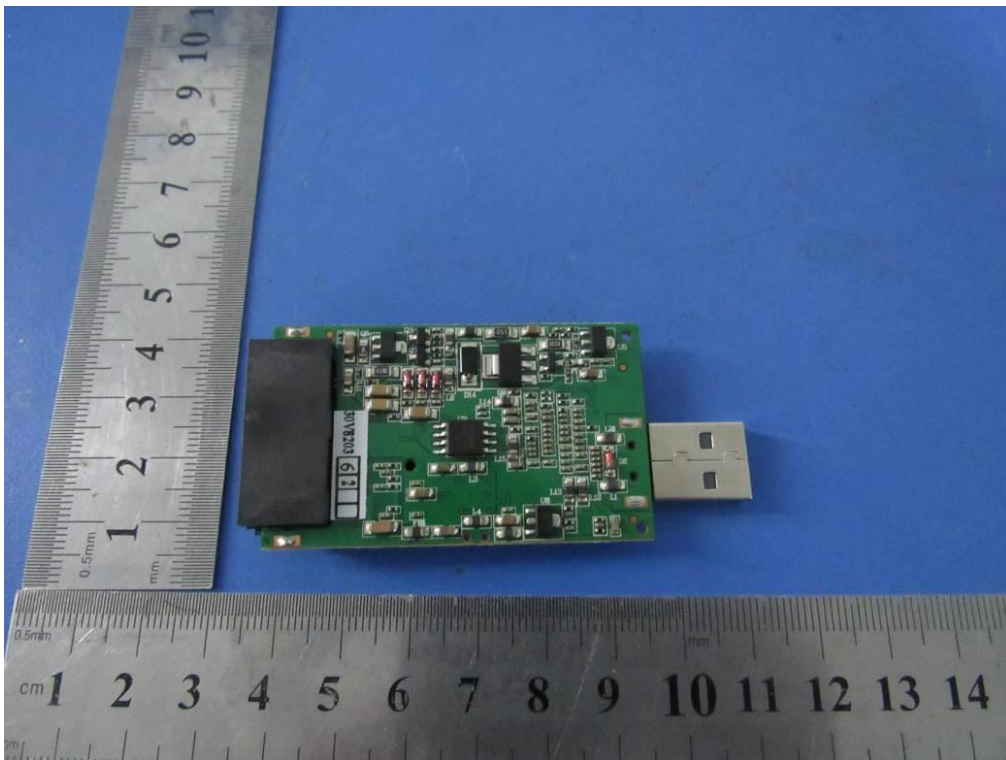


Right View of EUT

Annex B.ii. Photograph EUT Internal Photo



PCBA - Front View



PCBA - Rear View

Annex B.iii. Photograph: Test Setup Photo



Conducted Emissions Test Setup Front View (Adapter)



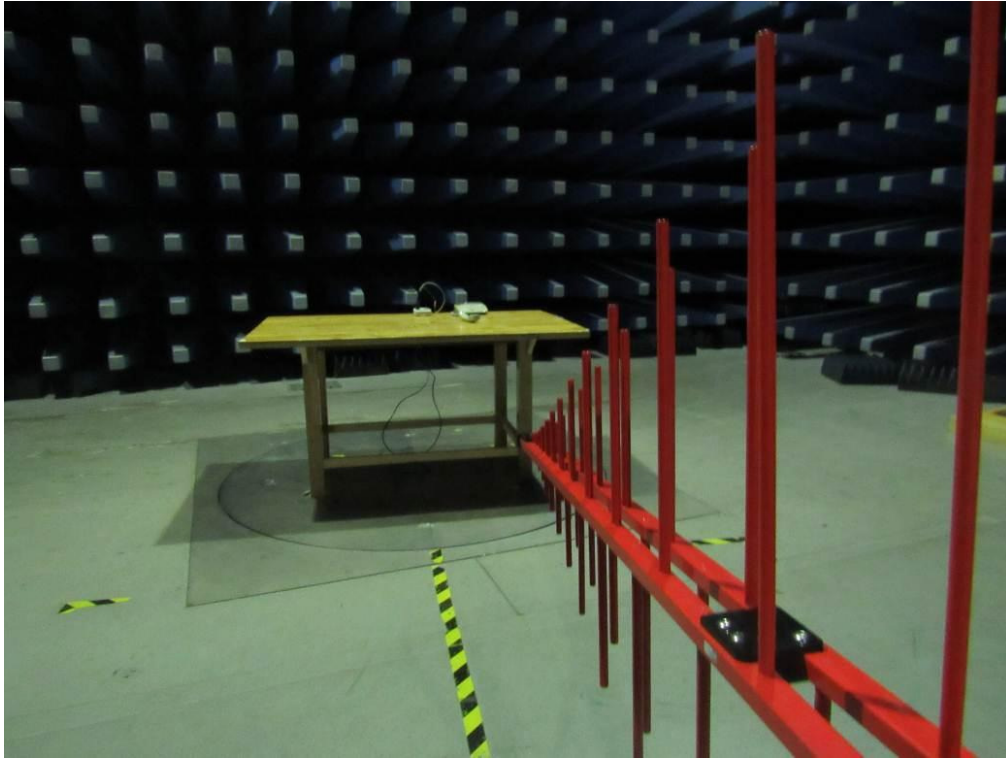
Conducted Emissions Test Setup Side View (Adapter)



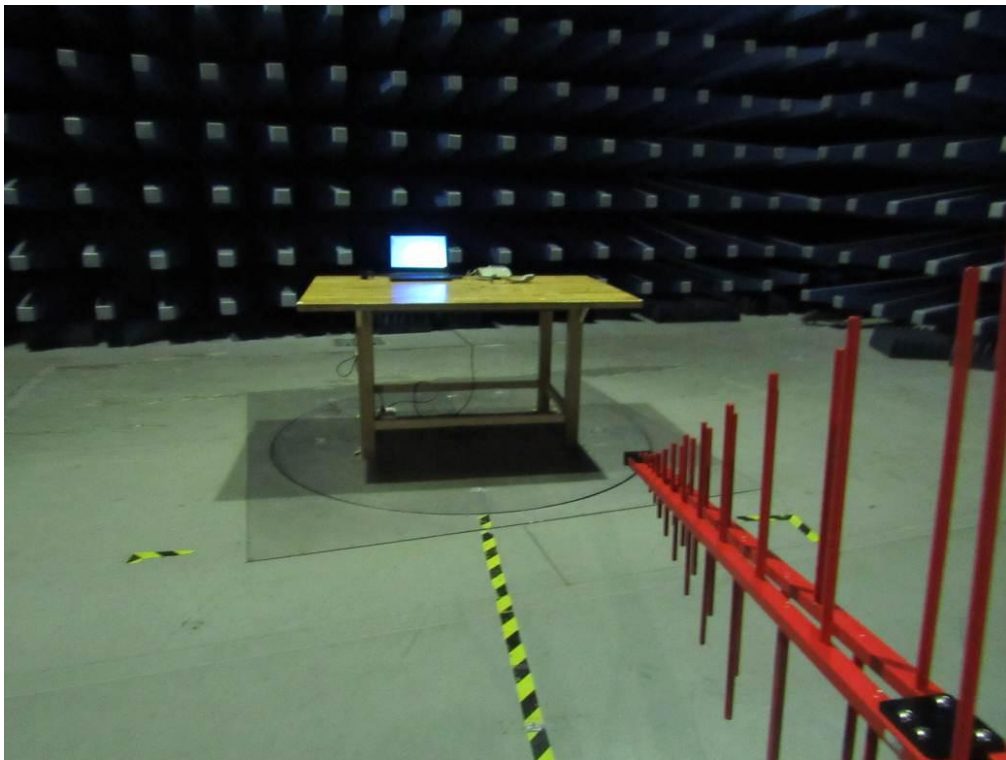
Conducted Emissions Test Setup Front View (Notebook)



Conducted Emissions Test Setup Side View (Notebook)



Radiated Emissions Setup Below 1GHz Front View (Adapter)



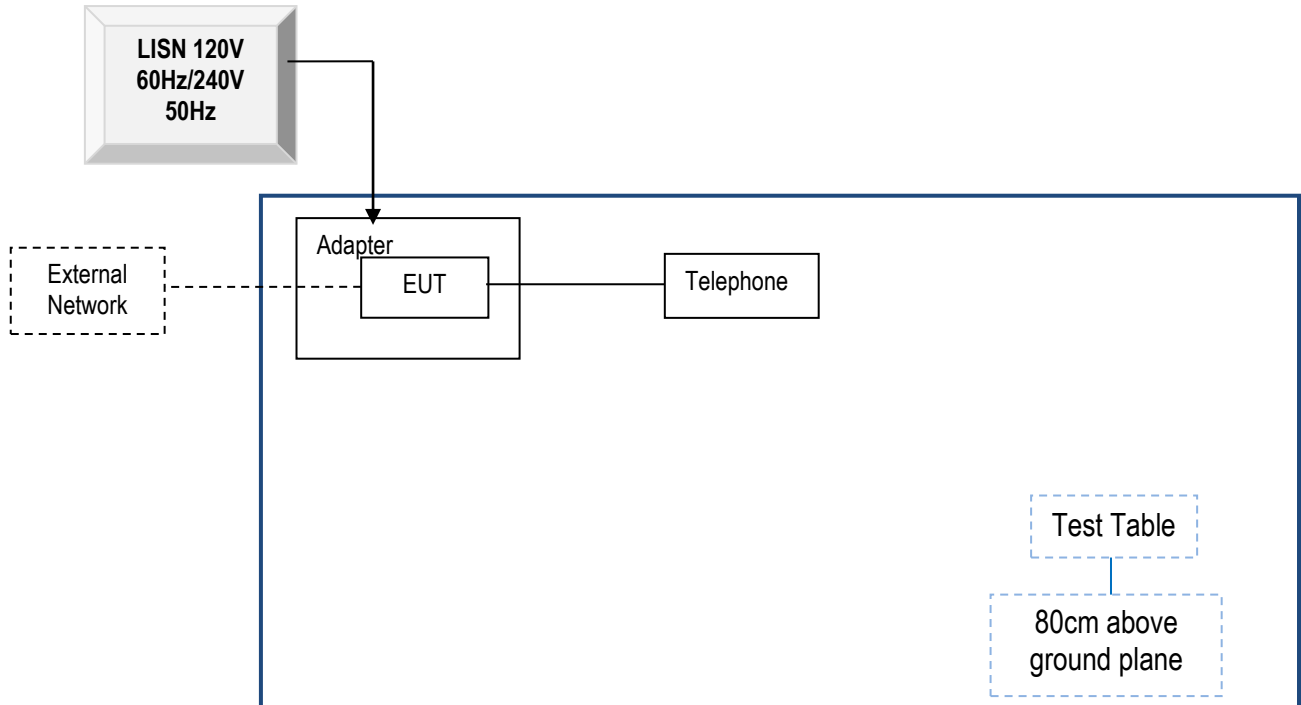
Radiated Emissions Setup Below 1GHz Front View (Notebook)

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

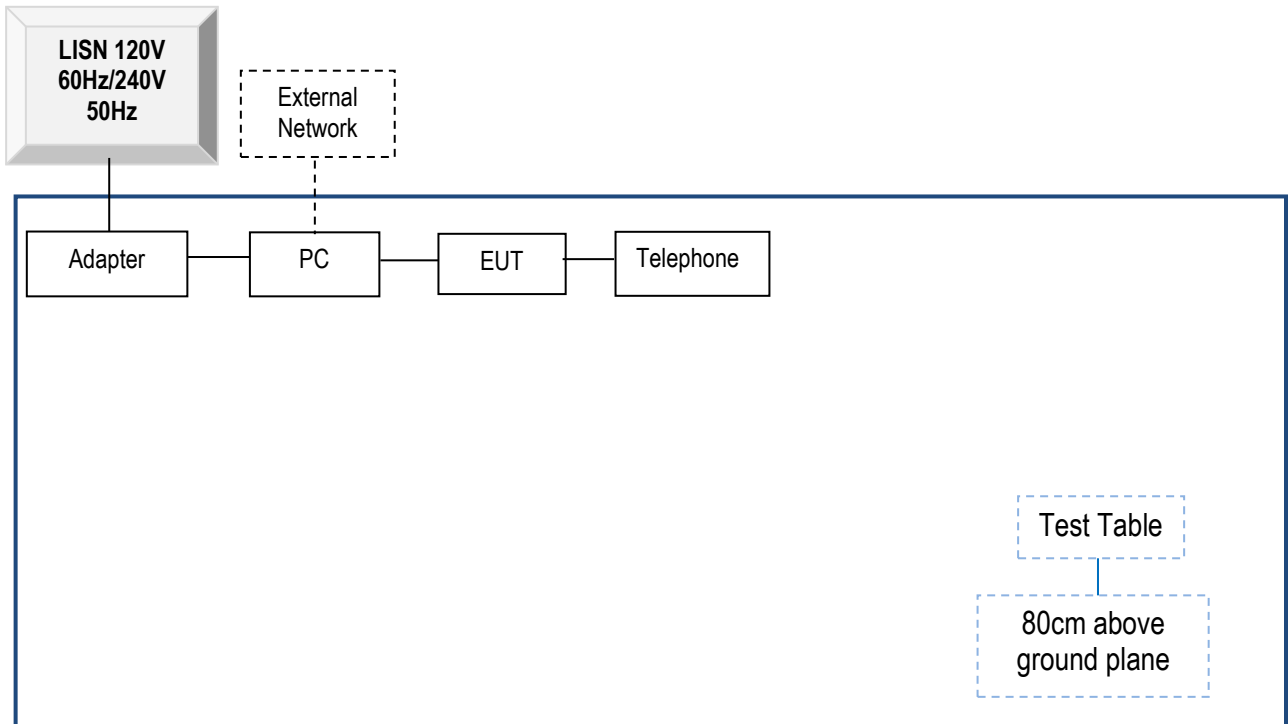
Annex C.i. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions

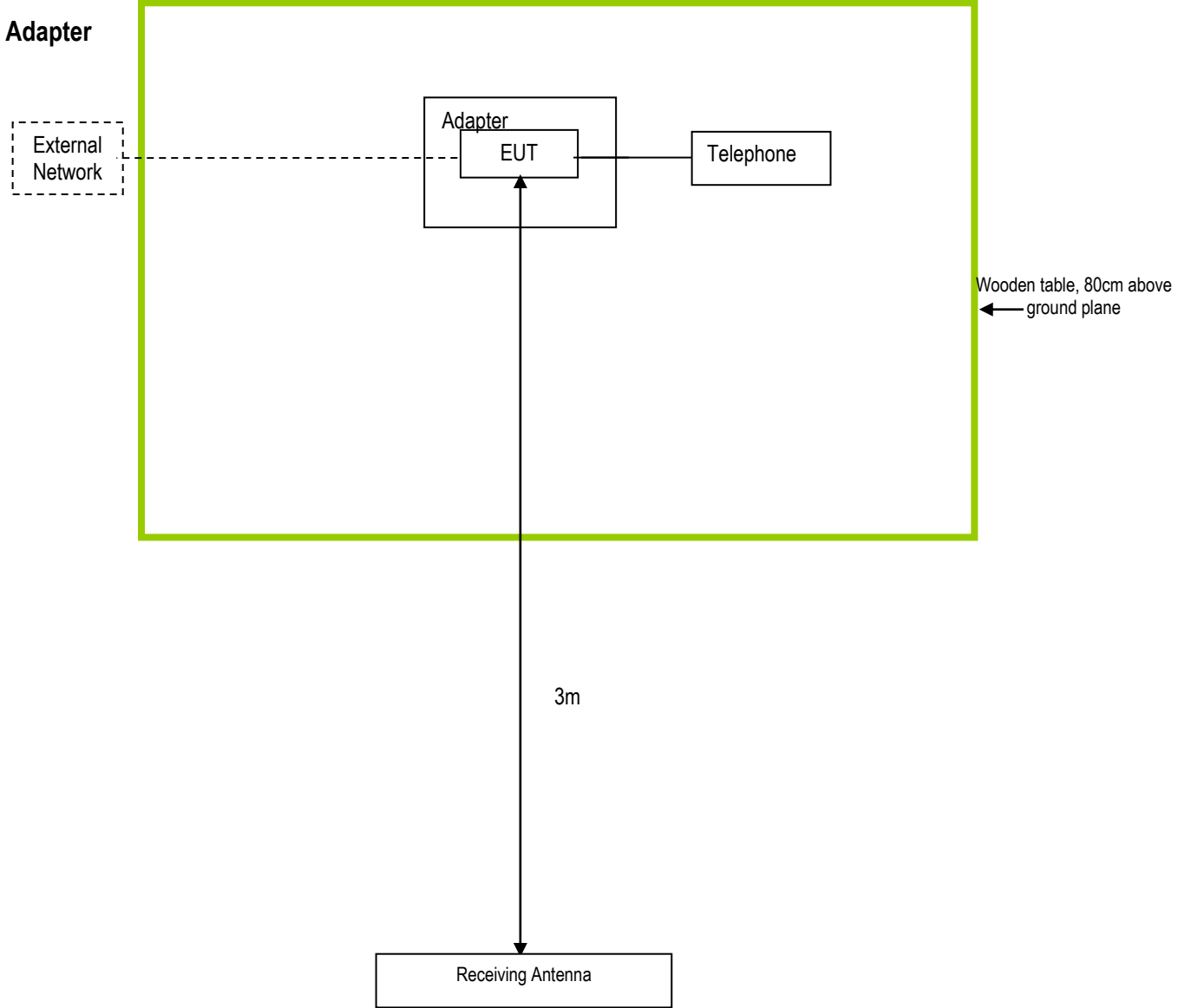
Adapter



Notebook

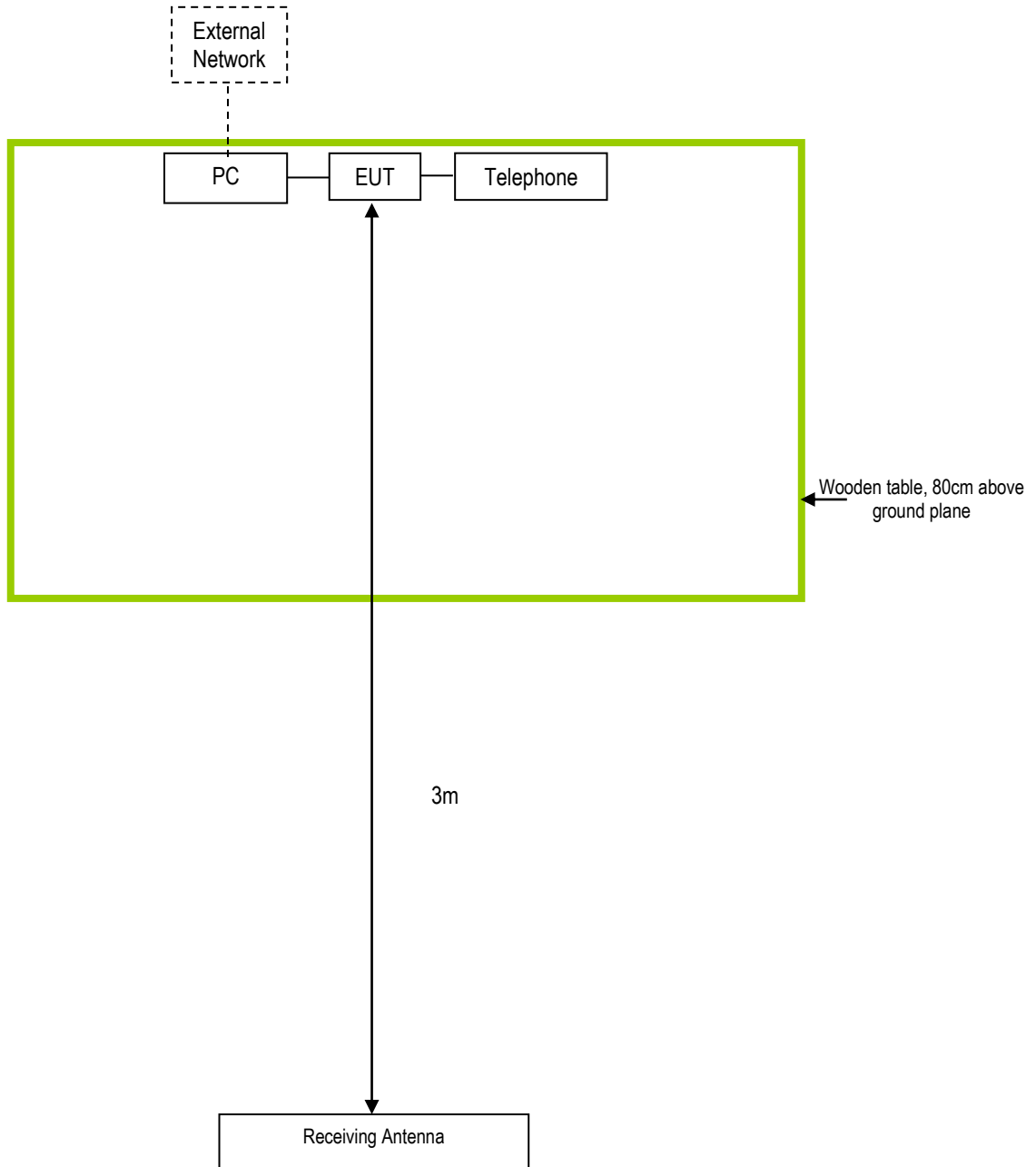


Block Configuration Diagram for Radiated Emissions



Block Configuration Diagram for Radiated Emissions

Notebook



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
Dell	Notebook	inspiron14-3443	N/A
TCL	Telephone	TCL HCD868 (17B) TSD	N/A

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

Please see Attachment

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Annex E. DECLARATION OF SIMILARITY

N/A