

EMC TEST REPORT



Report No.: 18070342-FCC-E

Supersede Report No: N/A

Applicant	G-TOUCH LLC.	
Product Name	Mobile phone	
Model No.	Stella X	
Serial No.	N/A	
Test Standard	FCC Part 15 Subpart B Class B, ANSI C63.4: 2014	
Test Date	April 12 to May 11, 2018	
Issue Date	May 11, 2018	
Test Result	☒ Pass ☐ Fail	
Equipment complied with the specification ☒		
Equipment did not comply with the specification ☐		
<i>Evans He</i>	<i>David Huang</i>	
Evans He Test Engineer	David Huang Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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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
18070342-FCC-E	NONE	Original	May 11, 2018

2. Customer information

Applicant Name	G-TOUCH LLC.
Applicant Add	1750 NW 107TH Avenue, STE P-411, Miami,Florida, United States
Manufacturer	G-TOUCH LLC.
Manufacturer Add	1750 NW 107TH Avenue, STE P-411, Miami,Florida, United States

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.lcp-03A1)

4. Equipment under Test (EUT) Information

Description of EUT:	Mobile phone
Main Model:	Stella X
Serial Model:	N/A
Antenna Gain:	GSM850: -3.64dBi PCS1900: -2.18dBi UMTS-FDD Band V: -3.64dBi UMTS-FDD Band II: -2.18dBi WIFI: 2.9dBi Bluetooth/BLE: 3dBi GPS: 1.6dBi
Antenna Type:	PIFA antenna
Input Power:	Adapter(Trade name: GTOUCH): Model: Stella X Input: AC100-220V~50/60Hz,0.15A Output: DC 5.0V, 1000mA Adapter(Trade name: TuCEL): Model: TC504B-CHR Input: AC100-240V~50/60Hz,0.15A Output: DC 5.0V, 1A Battery(Trade name: GTOUCH): Model: Stella X Spec: 3.7V, 2200mAh Charging Limited Voltage: 4.2V Battery(Trade name: TuCEL): Model: TC504B-BAT Spec: 3.8V, 2200mAh Charging Limited Voltage: 4.35V
Equipment Category :	JBP

Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK UMTS-FDD: QPSK 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK, 8DPSK BLE: GFSK GPS:BPSK
RF Operating Frequency (ies):	GSM850 TX: 824.2 ~ 848.8 MHz; RX: 869.2 ~ 893.8 MHz PCS1900 TX: 1850.2 ~ 1909.8 MHz; RX: 1930.2 ~ 1989.8 MHz UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz WIFI: 802.11b/g/n(20M): 2412-2462 MHz WIFI: 802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz GPS: 1575.42 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH UMTS-FDD Band V: 102CH UMTS-FDD Band II: 277CH WIFI :802.11b/g/n(20M): 11CH WIFI :802.11n(40M): 7CH Bluetooth: 79CH BLE: 40CH GPS:1CH
Port:	USB Port, Earphone Port
Trade Name :	N/A
FCC ID:	2AJDZSTELLAX
Date EUT received:	April 11, 2018
Test Date(s):	April 12 to May 11, 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

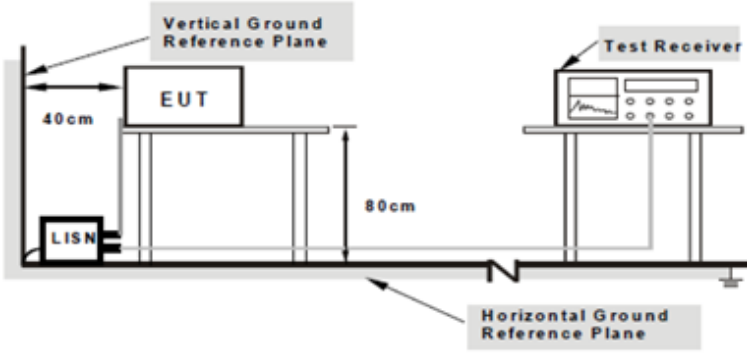
6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1022mbar
Test date :	April 28, 2018
Tested By :	Evans He

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.															
		<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>	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	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.
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Procedure	- 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 50Ω /50mH EUT LISN, connected to filtered mains.
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	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:	USB Mode
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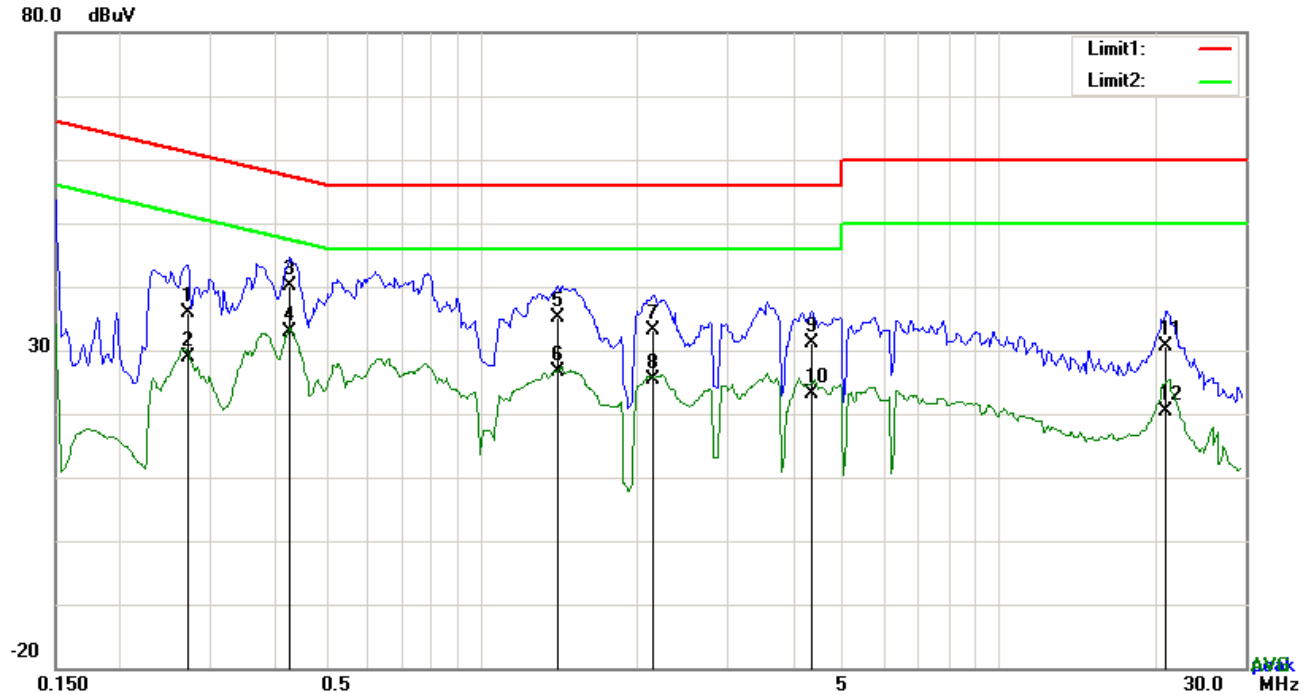
Test Mode 2:	MP4 Mode
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Test Mode 3:	Camera Mode
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Test Mode 4:	FM Mode
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Note: All modes were investigated, the results below show only the worst case(USB mode).

Test Mode 1:	USB Mode
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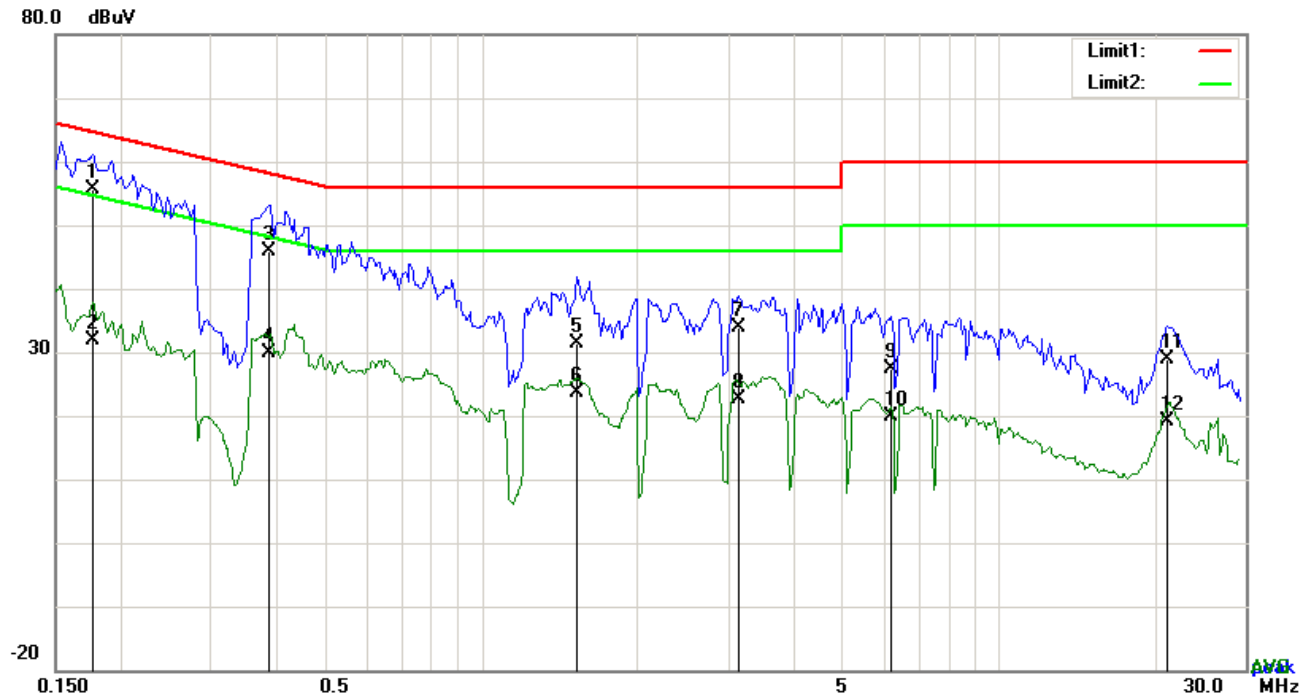


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.2709	25.93	QP	10.03	35.96	61.09	-25.13
2	L1	0.2709	18.77	AVG	10.03	28.80	51.09	-22.29
3	L1	0.4269	30.15	QP	10.03	40.18	57.31	-17.13
4	L1	0.4269	22.77	AVG	10.03	32.80	47.31	-14.51
5	L1	1.4058	24.99	QP	10.04	35.03	56.00	-20.97
6	L1	1.4058	16.59	AVG	10.04	26.63	46.00	-19.37
7	L1	2.1546	23.18	QP	10.04	33.22	56.00	-22.78
8	L1	2.1546	15.24	AVG	10.04	25.28	46.00	-20.72
9	L1	4.3416	21.14	QP	10.07	31.21	56.00	-24.79
10	L1	4.3416	13.12	AVG	10.07	23.19	46.00	-22.81
11	L1	21.1038	20.24	QP	10.32	30.56	60.00	-29.44
12	L1	21.1038	10.13	AVG	10.32	20.45	50.00	-29.55

Test Mode 1:	USB Mode
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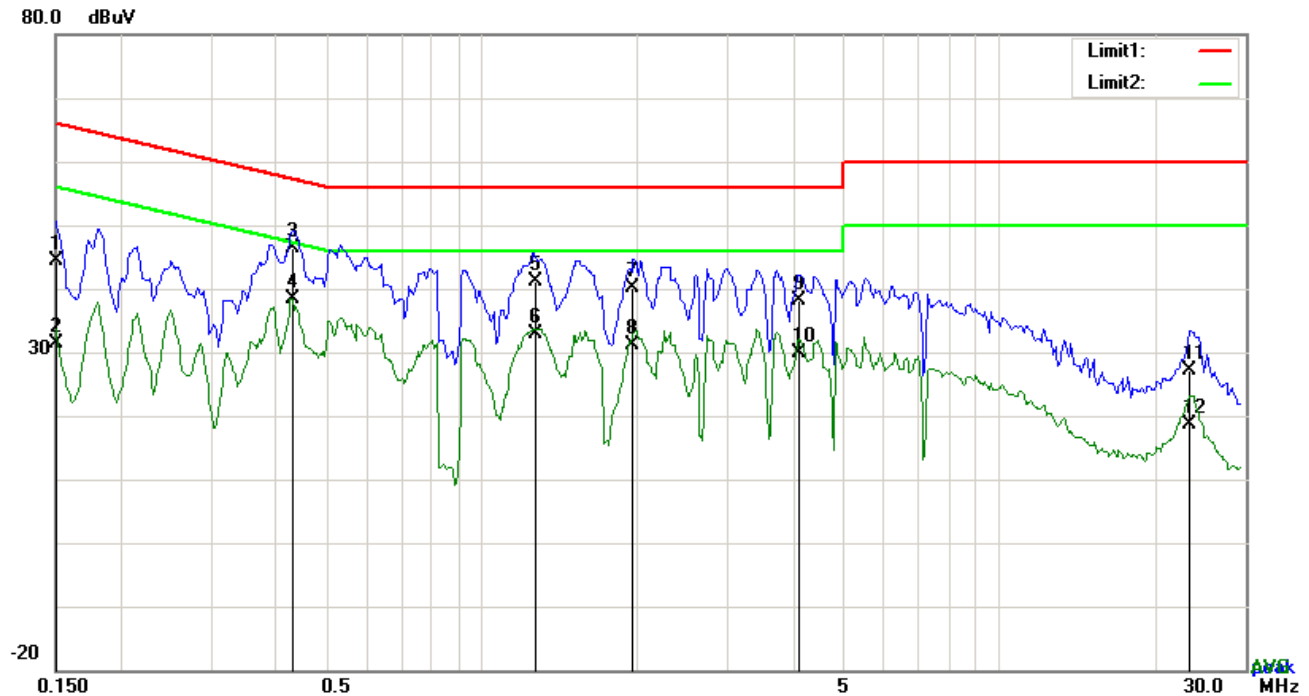


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	N	0.1773	45.63	QP	10.02	55.65	64.61	-8.96
2	N	0.1773	21.90	AVG	10.02	31.92	54.61	-22.69
3	N	0.3879	35.78	QP	10.02	45.80	58.11	-12.31
4	N	0.3879	19.85	AVG	10.02	29.87	48.11	-18.24
5	N	1.5306	21.45	QP	10.04	31.49	56.00	-24.51
6	N	1.5306	13.71	AVG	10.04	23.75	46.00	-22.25
7	N	3.1404	23.82	QP	10.05	33.87	56.00	-22.13
8	N	3.1404	12.63	AVG	10.05	22.68	46.00	-23.32
9	N	6.1941	17.37	QP	10.09	27.46	60.00	-32.54
10	N	6.1941	9.67	AVG	10.09	19.76	50.00	-30.24
11	N	21.2208	18.68	QP	10.28	28.96	60.00	-31.04
12	N	21.2208	8.95	AVG	10.28	19.23	50.00	-30.77

Test Mode 1:	USB Mode
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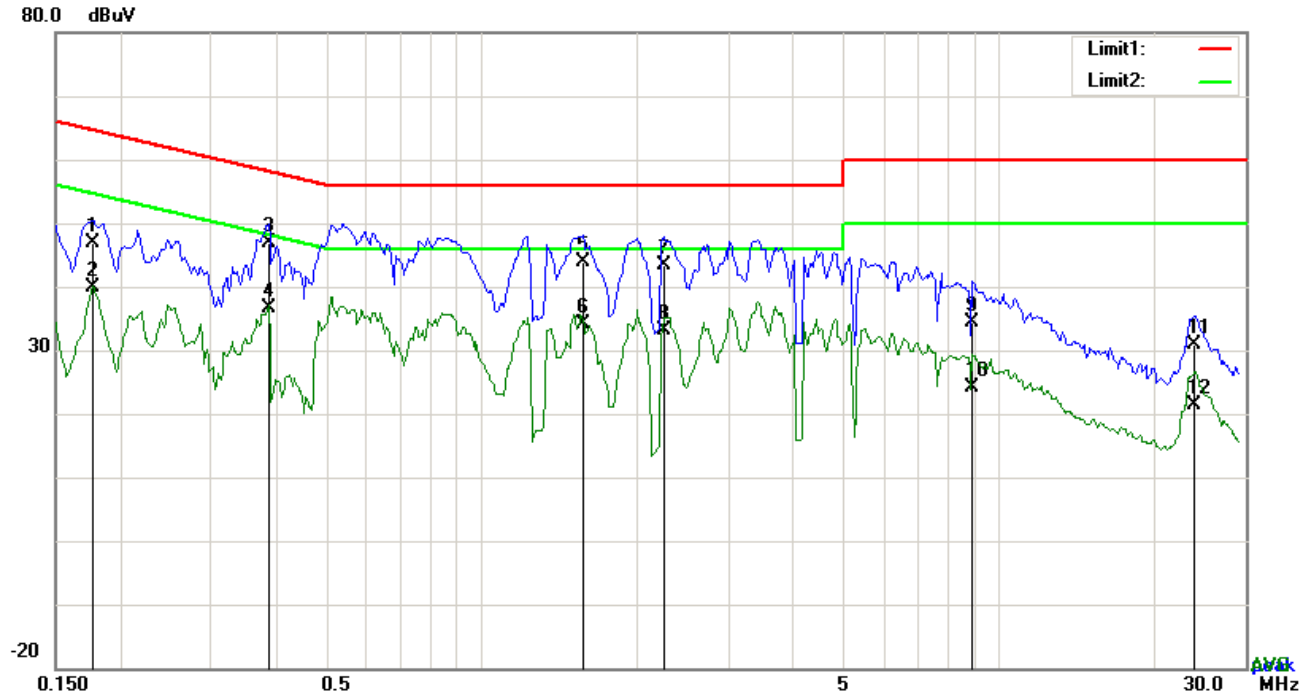


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1500	34.27	QP	10.03	44.30	66.00	-21.70
2	L1	0.1500	21.36	AVG	10.03	31.39	56.00	-24.61
3	L1	0.4308	36.37	QP	10.03	46.40	57.24	-10.84
4	L1	0.4308	28.38	AVG	10.03	38.41	47.24	-8.83
5	L1	1.2688	31.03	QP	10.03	41.06	56.00	-14.94
6	L1	1.2688	22.87	AVG	10.03	32.90	46.00	-13.10
7	L1	1.9635	30.11	QP	10.04	40.15	56.00	-15.85
8	L1	1.9635	21.03	AVG	10.04	31.07	46.00	-14.93
9	L1	4.1193	27.97	QP	10.07	38.04	56.00	-17.96
10	L1	4.1193	19.73	AVG	10.07	29.80	46.00	-16.20
11	L1	23.3502	16.75	QP	10.36	27.11	60.00	-32.89
12	L1	23.3502	8.18	AVG	10.36	18.54	50.00	-31.46

Test Mode 1:	USB Mode
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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	0.1773	36.90	QP	10.02	46.92	64.61	-17.69
2	N	0.1773	29.87	AVG	10.02	39.89	54.61	-14.72
3	N	0.3879	36.91	QP	10.02	46.93	58.11	-11.18
4	N	0.3879	26.54	AVG	10.02	36.56	48.11	-11.55
5	N	1.5696	33.72	QP	10.04	43.76	56.00	-12.24
6	N	1.5696	24.12	AVG	10.04	34.16	46.00	-11.84
7	N	2.2521	33.41	QP	10.04	43.45	56.00	-12.55
8	N	2.2521	23.10	AVG	10.04	33.14	46.00	-12.86
9	N	8.9007	24.24	QP	10.12	34.36	60.00	-25.64
10	N	8.9007	14.02	AVG	10.12	24.14	50.00	-25.86
11	N	23.9976	20.50	QP	10.32	30.82	60.00	-29.18
12	N	23.9976	10.98	AVG	10.32	21.30	50.00	-28.70

6.2 Radiated Emissions

Temperature	25°C
Relative Humidity	57%
Atmospheric Pressure	1022mbar
Test date :	April 28, 2018
Tested By :	Evans He

Requirement(s):

Spec	Item	Requirement	Applicable	
47CFR§15.109(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	
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Procedure	- The EUT was switched on and allowed to warm up to its normal operating condition. - 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: - Vertical or horizontal polarization (whichever gave the higher emission level
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	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 Quasi 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:	USB Mode
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Test Mode 2:	MP4 Mode
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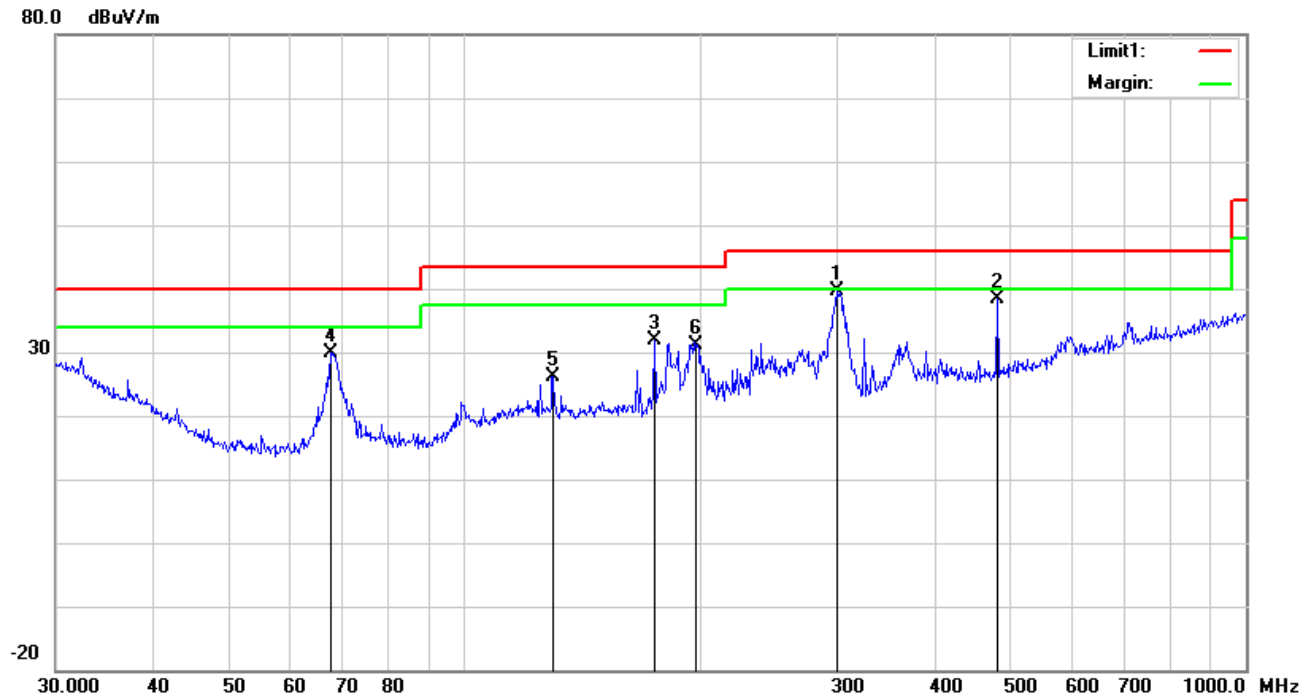
Test Mode 3:	Camera Mode
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Test Mode 4:	FM Mode
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Note: All modes were investigated, the results below show only the worst case(USB mode).

Test Mode 1: USB Mode

Below 1GHz

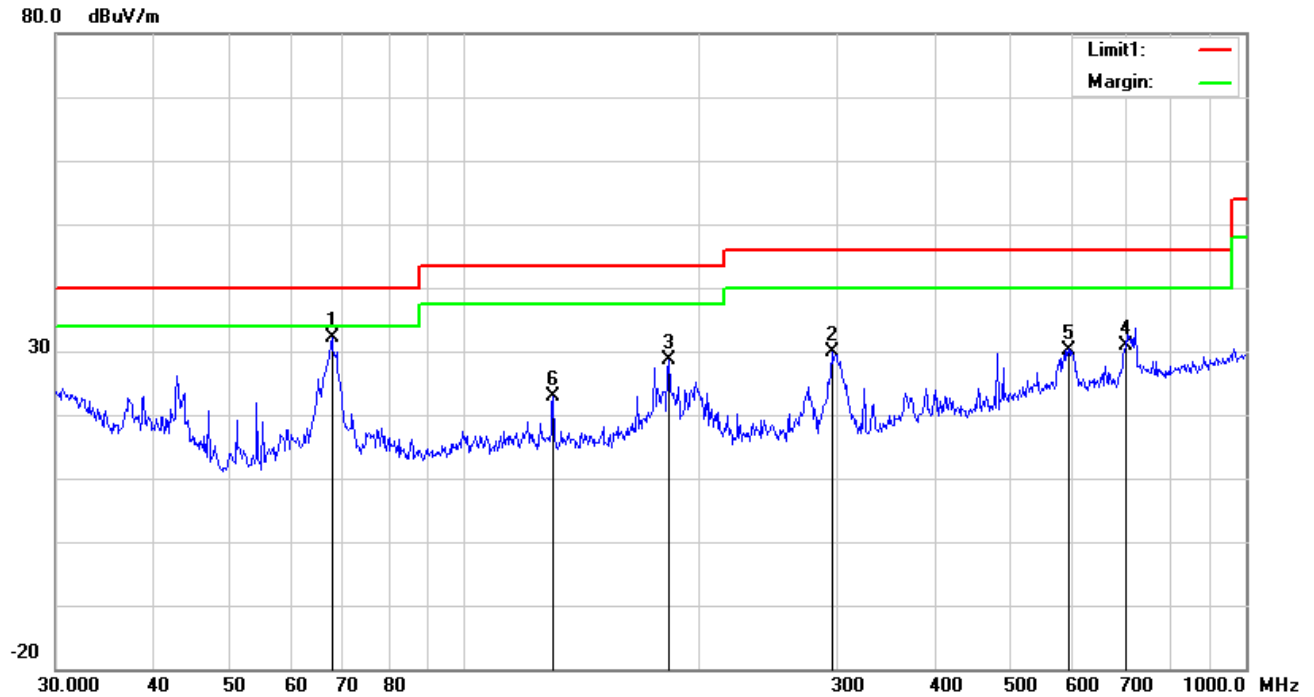


Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)
1	H	299.3158	46.67	peak	13.57	22.29	1.79	39.74	46.00	-6.26	100	2
2	H	480.5276	40.49	peak	17.31	21.85	2.31	38.26	46.00	-7.74	100	143
3	H	175.0368	41.45	peak	11.40	22.25	1.36	31.96	43.50	-11.54	100	22
4	H	67.4382	43.70	peak	7.67	22.39	0.93	29.91	40.00	-10.09	100	312
5	H	129.9226	34.13	peak	13.26	22.38	1.20	26.21	43.50	-17.29	100	53
6	H	197.8928	39.97	peak	11.98	22.37	1.54	31.12	43.50	-12.38	100	121

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	67.6751	45.79	peak	7.68	22.39	0.93	32.01	40.00	-7.99	100	283
2	V	295.1469	36.93	peak	13.39	22.29	1.78	29.81	46.00	-16.19	100	110
3	V	182.5592	38.46	peak	11.14	22.27	1.41	28.74	43.50	-14.76	100	155
4	V	701.7610	29.43	peak	20.22	21.36	2.55	30.84	46.00	-15.16	100	231
5	V	593.0497	30.36	peak	19.00	21.60	2.49	30.25	46.00	-15.75	100	54
6	V	129.9226	30.87	peak	13.26	22.38	1.20	22.95	43.50	-20.55	100	264

Above 1GHz

Frequency (MHz)	Read_level (dBμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Level (dBμV/m)	Factors (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/AV)
1316.31	67.54	169	100	V	-19.96	47.58	74	-26.42	PK
2689.55	58.9	43	100	V	-13	45.9	74	-28.1	PK
3609.33	61.02	107	100	V	-12.23	48.79	74	-25.21	PK
1167.81	62.26	359	100	H	-19.22	43.04	74	-30.96	PK
3705.21	58.01	196	100	H	-11.46	46.55	74	-27.45	PK
1040.61	67.96	237	100	H	-20.26	47.7	74	-26.3	PK

*Note1: The highest frequency of the EUT is 2480 MHz, so the testing has been conformed to 5*2480MHz
=12,400MHz.*

Note2: The frequency that above 3GHz is mainly from the environment noise.

Note3: The AV measurement performed, more than 20dB below limit so AV test data was not presented.

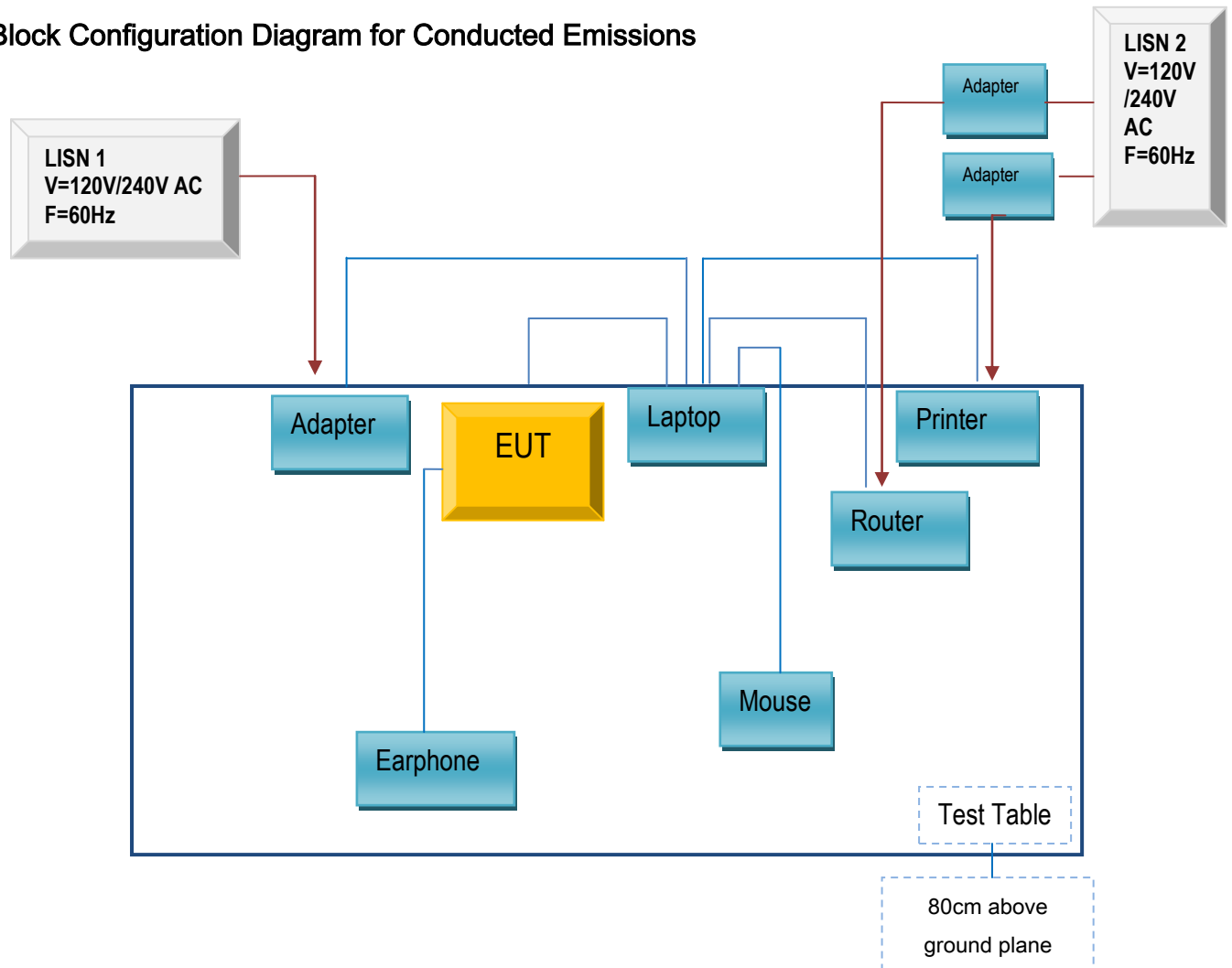
Annex A. TEST INSTRUMENT

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	03/22/2018	03/21/2019	☒
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	☒

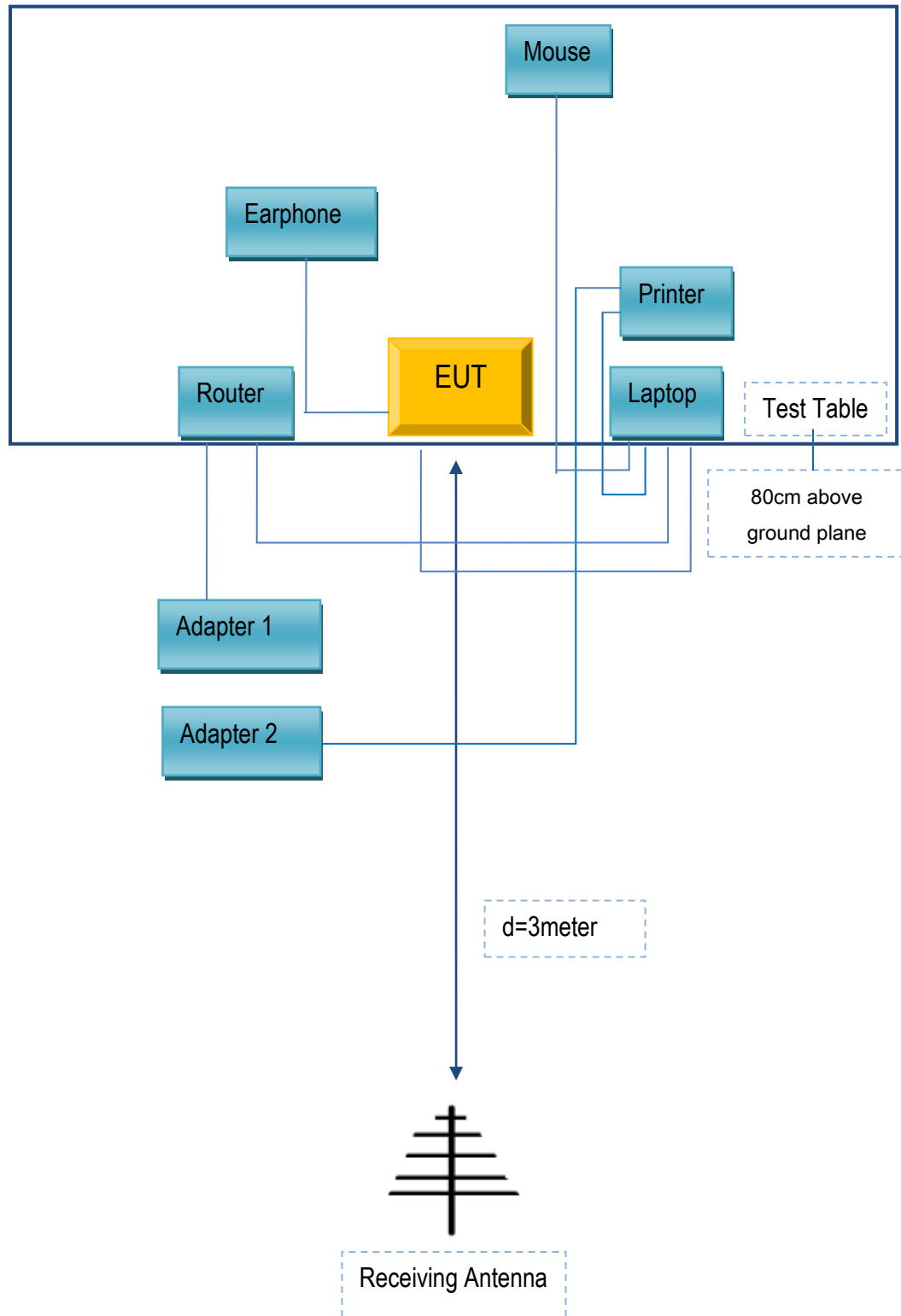
Annex B. TEST SETUP AND SUPPORTING EQUIPMENT

Annex B.i. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Annex B. ii. 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
Lenovo	Laptop	E40	LR-1EHRX
GOLDWEB	Router	R102	1202032094
Lenovo	AC Adapter	42T4416	21D9JU
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481
BULL	Socket	GN-403	GN201203
N/A	Earphone	N/A	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	N/A
USB Cable	Un-shielding	No	2m	N/A
RJ45 Cable	Un-shielding	No	2m	N/A
Router Power cable	Un-shielding	No	2m	N/A
Printer Power cable	Un-shielding	No	2m	N/A
Power Cable	Un-shielding	No	0.8m	N/A

**Annex C. User Manual / Block Diagram / Schematics / Partlist/
DECLARATION OF SIMILARITY**

Please see the attachment