# EMC TEST REPORT



Report No.: 17070190-FCC-E V1

Supersede Report No: N/A

Applicant	AOC			
Product Name	Tablet PC			
Model No.	A831L			
Serial No.	N/A	N/A		
Test Standard	FCC Part 1	FCC Part 15 Subpart B Class B:2016, ANSI C63.4: 2014		
Test Date	March 10 to April 04, 2017			
Issue Date	April 17, 2017			
Test Result	Pass Fail			
Equipment complied with the specification				
Equipment did not comply with the specification				
mas. He		David Huang		
Evans 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

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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
17070190-FCC-E	NONE	Original	April 05, 2017
17070190-FCC-E V1	V1	Added the test setup photos	April 17, 2017

## 2. Customer information

Applicant Name	AOC	
Applicant Add	14F-5, NO.258, Liancheng Rd., Zhonghe Dist., New Taipei City, Taiwan	
Manufacturer	China Great Wall Computer Shenzhen Co., Ltd	
Manufacturer Add	No.Great wall Computer Industrial Park,Bao Shi East Road,Bao' an	
	Bistrict,Shenzhen,P.R.China	

## 3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES	
	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park	
Lab Address	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 of	Radiated Emission Program-To Shenzhen v2.0	
Radiated Emission		
Test Software of	EZ-EMC(ver.lcp-03A1)	
Conducted Emission		



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## 4. Equipment under Test (EUT) Information

Description of EUT:	l ablet PC

Main Model: A831L

Serial Model: N/A

GSM850: -0.7dBi PCS1900: -0.8dBi

UMTS-FDD Band V: -0.7dBi UMTS-FDD Band II: -0.8dBi

LTE Band II: -0.8dBi

Antenna Gain: LTE Band IV: -0.7dBi

LTE Band VII: -1dBi LTE Band XVII: -0.7dBi

WIFI: 1.18dBi

Bluetooth/BLE: 1.18dBi

GPS: 0.22dBi

Antenna Type: PIFA antenna

Adapter:

Model: SC/10WA050200US

Input: AC100-240V~50/60Hz,0.5A

Input Power:
Output: DC 5.0V,2A

Battery:

Spec: 3.8V,19Wh,5000mAh

Equipment Category: JBC

GSM / GPRS: GMSK EGPRS: GMSK,8PSK UMTS-FDD: QPSK

Type of Modulation: LTE Band: QPSK, 16QAM

802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK,  $\pi$  /4DQPSK, 8DPSK

BLE: GFSK GPS:BPSK



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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  $\sim$  1907.6 MHz;

RX: 1932.4 ~ 1987.6 MHz

LTE Band II TX: 1850.7~ 1909.3 MHz; RX : 1930.7 ~ 1989.3 MHz

RF Operating Frequency (ies): LTE Band IV TX: 1710.7 ~ 1754.3 MHz; RX: 2110.7 ~ 2154.3 MHz

LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz

LTE Band XVII TX:  $706.5 \sim 713.5 \text{ MHz}$ ; RX :  $736.5 \sim 743.5 \text{ MHz}$ 

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

GSM 850: 124CH

PCS1900: 299CH

UMTS-FDD Band V: 102CH

UMTS-FDD Band II: 277CH

Number of Channels: 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: AOC

FCC ID: 2AEB5-A831L

Date EUT received: March 10, 2017

Test Date(s): March 10 to April 04, 2017



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

#### **Measurement Uncertainty**

Parameter	Uncertainty	
AC Power Line Conducted Emissions	±3.71dB	
(150kHz~30MHz)		
Radiated Emission(30MHz~1GHz)	±5.12dB	
Radiated Emission(1GHz~6GHz)	±5.34dB	



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## 6. Measurements, Examination And Derived Results

## 6.1 AC Power Line Conducted Emissions

Temperature	23°C
Relative Humidity	57%
Atmospheric Pressure	1020mbar
Test date :	March 23, 2017
Tested By :	Evans He

#### Requirement(s):

Spec	Item	Requirement Applicable				
47CFR§15. 107	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.				<b>&gt;</b>	
107		Frequency ranges	Limit (			
		(MHz)	QP	Average		
		0.15 ~ 0.5	66 – 56	56 – 46		
		0.5 ~ 5	56	46		
		5 ~ 30				
Test Setup	Setup  Vertical Ground Reference Plane  Test Receiver  40cm  Horizontal Ground					
	Reference Plane  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	the	EEUT and supporting eq	m x 1m x 0.8m high, n	on-metallic table.		
	2. The	onnected to				



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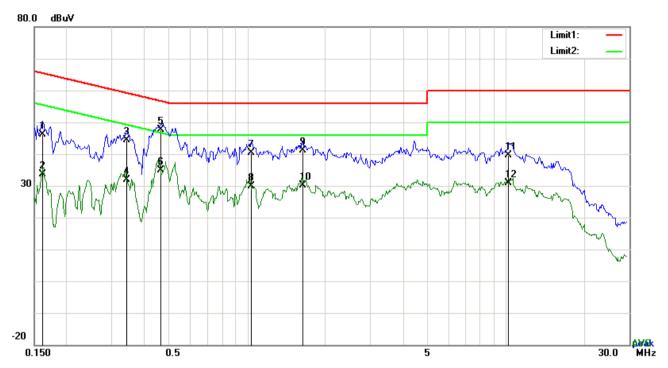
_	
	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.
	All other supporting equipment were powered separately from another main supply.
	5. The EUT was switched on and allowed to warm up to its normal operating condition.
	6. A scan was made on the NEUTRAL 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	
Remark	
Result	Pass Fail
-	
Test Data	Yes N/A
Test Plot	Yes (See below) N/A
Test Mode 1	: USB Mode
Test Wode T	. OOD Wode
Tool Mode O	MD4 Mada
l est Mode 2	: MP4 Mode
<b>T</b> (1)	
l est Mode 3	: Camera Mode
Test Mode 4	:  FM Mode

All modes were investigated. The results below show only the worst case.(USB mode, MP4 Mode)



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## Test Mode 1 : USB Mode



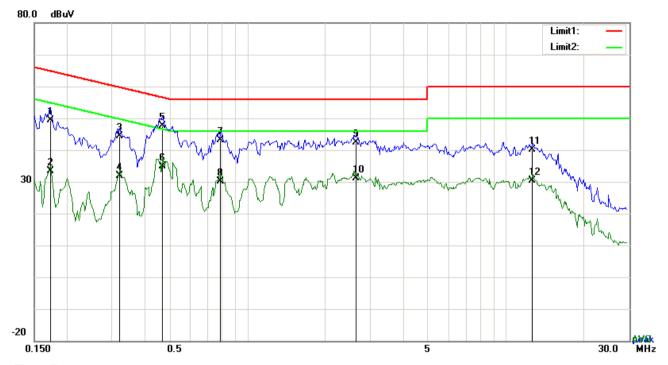
Test Data

## Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1617	36.11	QP	10.03	46.14	65.38	-19.24
2	L1	0.1617	23.57	AVG	10.03	33.60	55.38	-21.78
3	L1	0.3411	34.27	QP	10.03	44.30	59.18	-14.88
4	L1	0.3411	21.76	AVG	10.03	31.79	49.18	-17.39
5	L1	0.4659	37.67	QP	10.03	47.70	56.59	-8.89
6	L1	0.4659	24.88	AVG	10.03	34.91	46.59	-11.68
7	L1	1.0392	30.23	QP	10.03	40.26	56.00	-15.74
8	L1	1.0392	19.91	AVG	10.03	29.94	46.00	-16.06
9	L1	1.6437	31.09	QP	10.04	41.13	56.00	-14.87
10	L1	1.6437	20.02	AVG	10.04	30.06	46.00	-15.94
11	L1	10.2813	29.58	QP	10.15	39.73	60.00	-20.27
12	L1	10.2813	20.72	AVG	10.15	30.87	50.00	-19.13



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Test Data

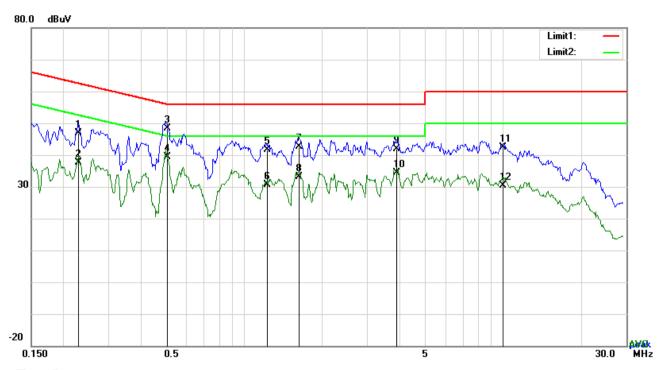
## Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1734	39.27	QP	10.02	49.29	64.80	-15.51
2	Ν	0.1734	23.24	AVG	10.02	33.26	54.80	-21.54
3	Ν	0.3216	34.47	QP	10.02	44.49	59.67	-15.18
4	N	0.3216	21.74	AVG	10.02	31.76	49.67	-17.91
5	N	0.4698	37.67	QP	10.02	47.69	56.52	-8.83
6	Ν	0.4698	24.83	AVG	10.02	34.85	46.52	-11.67
7	Ν	0.7896	32.99	QP	10.03	43.02	56.00	-12.98
8	Ν	0.7896	20.03	AVG	10.03	30.06	46.00	-15.94
9	N	2.6304	32.28	QP	10.05	42.33	56.00	-13.67
10	N	2.6304	20.96	AVG	10.05	31.01	46.00	-14.99
11	N	12.6837	30.04	QP	10.17	40.21	60.00	-19.79
12	N	12.6837	20.12	AVG	10.17	30.29	50.00	-19.71



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Test Mode 1: USB Mode



Test Data

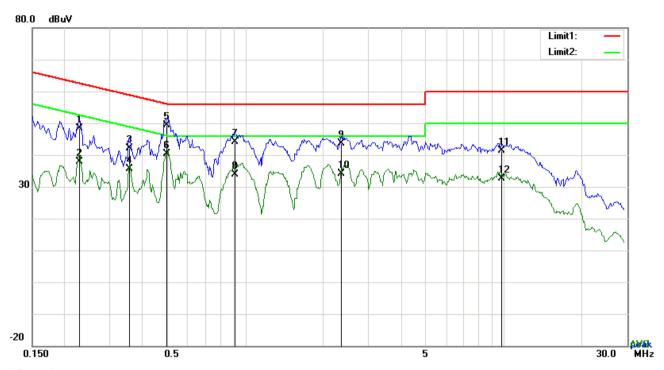
## Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.2280	36.76	QP	10.03	46.79	62.52	-15.73
2	L1	0.2280	27.70	AVG	10.03	37.73	52.52	-14.79
3	L1	0.5049	38.36	QP	10.03	48.39	56.00	-7.61
4	L1	0.5049	29.43	AVG	10.03	39.46	46.00	-6.54
5	L1	1.2342	31.51	QP	10.03	41.54	56.00	-14.46
6	L1	1.2342	20.67	AVG	10.03	30.70	46.00	-15.30
7	L1	1.6320	32.51	QP	10.04	42.55	56.00	-13.45
8	L1	1.6320	23.21	AVG	10.04	33.25	46.00	-12.75
9	L1	3.8931	31.92	QP	10.07	41.99	56.00	-14.01
10	L1	3.8931	24.24	AVG	10.07	34.31	46.00	-11.69
11	L1	10.0707	32.25	QP	10.15	42.40	60.00	-17.60
12	L1	10.0707	20.26	AVG	10.15	30.41	50.00	-19.59



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Test Mode1: USB Mode



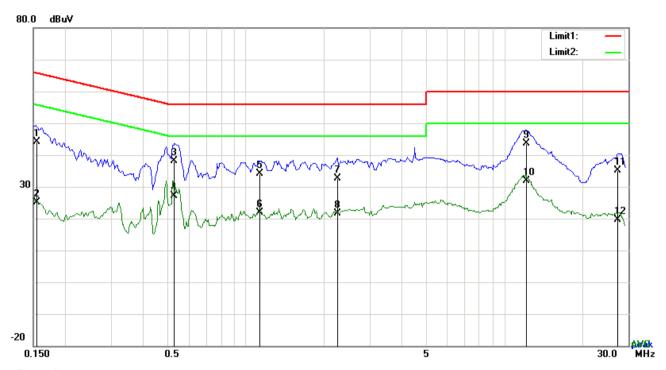
Test Data

### Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	N	0.2280	38.43	QP	10.02	48.45	62.52	-14.07
2	N	0.2280	27.77	AVG	10.02	37.79	52.52	-14.73
3	N	0.3567	32.06	QP	10.02	42.08	58.80	-16.72
4	N	0.3567	25.63	AVG	10.02	35.65	48.80	-13.15
5	N	0.4971	39.37	QP	10.02	49.39	56.05	-6.66
6	N	0.4971	30.27	AVG	10.02	40.29	46.05	-5.76
7	N	0.9144	34.22	QP	10.03	44.25	56.00	-11.75
8	N	0.9144	23.75	AVG	10.03	33.78	46.00	-12.22
9	N	2.3574	33.49	QP	10.04	43.53	56.00	-12.47
10	N	2.3574	24.10	AVG	10.04	34.14	46.00	-11.86
11	N	9.8289	31.33	QP	10.14	41.47	60.00	-18.53
12	N	9.8289	22.40	AVG	10.14	32.54	50.00	-17.46



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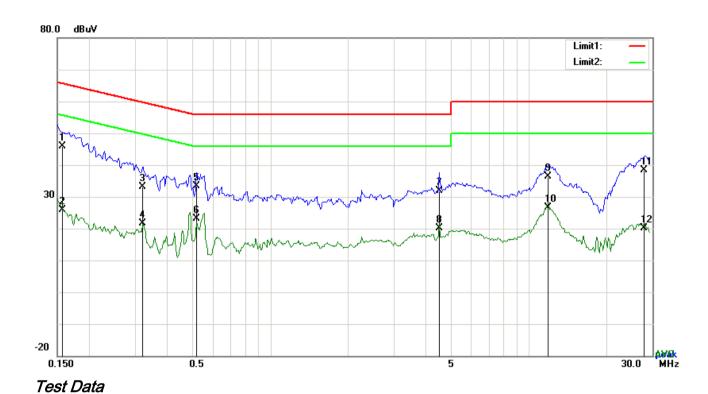
Test Data

## Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1548	34.00	QP	10.03	44.03	65.74	-21.71
2	L1	0.1548	14.98	AVG	10.03	25.01	55.74	-30.73
3	L1	0.5283	28.00	QP	10.03	38.03	56.00	-17.97
4	L1	0.5283	17.00	AVG	10.03	27.03	46.00	-18.97
5	L1	1.1328	24.05	QP	10.03	34.08	56.00	-21.92
6	L1	1.1328	11.85	AVG	10.03	21.88	46.00	-24.12
7	L1	2.2521	22.60	QP	10.05	32.65	56.00	-23.35
8	L1	2.2521	11.59	AVG	10.05	21.64	46.00	-24.36
9	L1	12.0948	33.41	QP	10.18	43.59	60.00	-16.41
10	L1	12.0948	21.58	AVG	10.18	31.76	50.00	-18.24
11	L1	27.3555	24.79	QP	10.44	35.23	60.00	-24.77
12	L1	27.3555	9.23	AVG	10.44	19.67	50.00	-30.33



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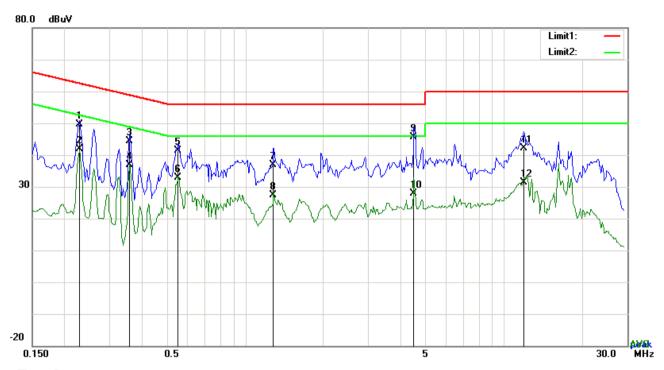


## Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1578	35.78	QP	10.02	45.80	65.58	-19.78
2	N	0.1578	15.92	AVG	10.02	25.94	55.58	-29.64
3	N	0.3216	23.02	QP	10.02	33.04	59.67	-26.63
4	N	0.3216	11.73	AVG	10.02	21.75	49.67	-27.92
5	N	0.5205	23.41	QP	10.02	33.43	56.00	-22.57
6	N	0.5205	13.03	AVG	10.02	23.05	46.00	-22.95
7	N	4.5054	21.85	QP	10.07	31.92	56.00	-24.08
8	N	4.5054	9.95	AVG	10.07	20.02	46.00	-25.98
9	N	11.9271	26.13	QP	10.16	36.29	60.00	-23.71
10	N	11.9271	16.59	AVG	10.16	26.75	50.00	-23.25
11	N	27.8552	28.03	QP	10.39	38.42	60.00	-21.58
12	N	27.8552	9.66	AVG	10.39	20.05	50.00	-29.95



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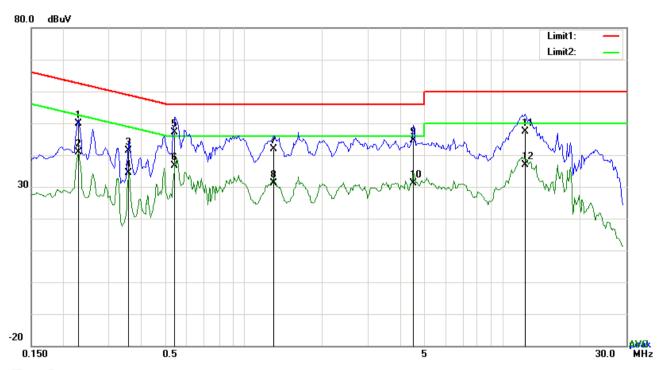
Test Data

## Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.2280	39.71	QP	10.03	49.74	62.52	-12.78
2	L1	0.2280	31.73	AVG	10.03	41.76	52.52	-10.76
3	L1	0.3567	34.35	QP	10.03	44.38	58.80	-14.42
4	L1	0.3567	26.81	AVG	10.03	36.84	48.80	-11.96
5	L1	0.5517	31.34	QP	10.03	41.37	56.00	-14.63
6	L1	0.5517	22.88	AVG	10.03	32.91	46.00	-13.09
7	L1	1.2888	26.88	QP	10.03	36.91	56.00	-19.09
8	L1	1.2888	17.43	AVG	10.03	27.46	46.00	-18.54
9	L1	4.4937	35.44	QP	10.07	45.51	56.00	-10.49
10	L1	4.4937	17.91	AVG	10.07	27.98	46.00	-18.02
11	L1	11.9544	32.04	QP	10.18	42.22	60.00	-17.78
12	L1	11.9544	21.12	AVG	10.18	31.30	50.00	-18.70



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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	0.2280	39.85	QP	10.02	49.87	62.52	-12.65	
2	N	0.2280	30.94	AVG	10.02	40.96	52.52	-11.56	
3	N	0.3567	31.25	QP	10.02	41.27	58.80	-17.53	
4	N	0.3567	24.46	AVG	10.02	34.48	48.80	-14.32	
5	N	0.5400	37.06	QP	10.02	47.08	56.00	-8.92	
6	N	0.5400	26.60	AVG	10.02	36.62	46.00	-9.38	
7	N	1.3005	31.97	QP	10.03	42.00	56.00	-14.00	
8	N	1.3005	21.22	AVG	10.03	31.25	46.00	-14.75	
9	Ν	4.5171	34.46	QP	10.07	44.53	56.00	-11.47	
10	Ν	4.5171	21.09	AVG	10.07	31.16	46.00	-14.84	
11	N	12.2001	37.26	QP	10.17	47.43	60.00	-12.57	
12	N	12.2001	26.74	AVG	10.17	36.91	50.00	-13.09	



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## 6.2 Radiated Emissions

Temperature	23°C
Relative Humidity	57%
Atmospheric Pressure	1020mbar
Test date :	March 23, 2017
Tested By :	Evans He

#### Requirement(s):

Spec	Item	Requirement		Applicable			
47CFR§15.	a)	Except higher limit as specified else emissions from the low-power radio exceed the field strength levels spe the level of any unwanted emission the fundamental emission. The tigh edges	▼				
109(d)	(a)	Frequency range (MHz)	Field Strength (μV/m)				
		30 - 88	100				
		88 – 216	150				
		216 - 960	200				
		Above 960	500				
Test Setup	Ant. Tower  Support Units  Turn Table  Ground Plane  Test Receiver						
Procedure	<ol> <li>The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>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:         <ul> <li>Vertical or horizontal polarization (whichever gave the higher emission level</li> </ul> </li> </ol>						



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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.
	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)
restrict	163 (Gee Below)
Test Mode 1	: USB Mode
Test Mode 2	: MP4 Mode
Test Mode 3	: Camera Mode
Test Mode 4	: FM Mode

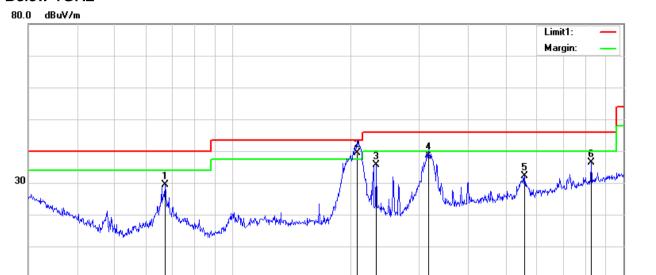
All modes were investigated. The results below show only the worst case(USB mode)



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Test Mode 1: USB Mode

#### Below 1GHz



### Test Data

30.000

40

50

60 70 80

-20

## Horizontal Polarity Plot @3m

300

400

500

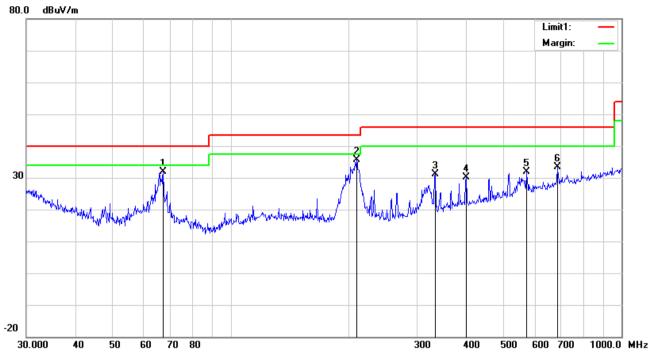
600 700 1000.0 MHz

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	Н	67.2022	43.31	peak	7.66	22.39	0.92	29.50	40.00	-10.50	100	88
2	I	207.8501	48.11	QP	11.99	22.37	1.57	39.30	43.50	-4.20	100	308
3	Н	233.3487	44.59	peak	11.63	22.32	1.65	35.55	46.00	-10.45	100	166
4	Н	316.5890	45.02	QP	13.95	22.24	1.87	38.60	46.00	-7.40	200	271
5	Н	558.7302	32.68	peak	18.52	21.67	2.48	32.01	46.00	-13.99	100	312
6	Н	827.4934	32.85	peak	21.70	21.08	2.91	36.38	46.00	-9.62	100	153



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#### 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	>	67.2022	45.73	peak	7.66	22.39	0.92	31.92	40.00	-8.08	100	250
2	٧	210.0482	44.56	peak	11.96	22.36	1.57	35.73	43.50	-7.77	100	22
3	V	333.6867	37.03	peak	14.31	22.20	1.96	31.10	46.00	-14.90	100	256
4	V	400.4319	34.35	peak	15.71	22.01	2.01	30.06	46.00	-15.94	100	171
5	V	570.6100	32.40	peak	18.69	21.65	2.48	31.92	46.00	-14.08	100	311
6	V	684.7454	32.20	peak	20.03	21.39	2.57	33.41	46.00	-12.59	100	221



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#### Above 1GHz

Frequency	Read_level	Azimuth	Height	Polarity	Level	Factors	Limit	Margin	Detector
(MHz)	(dBµV/m)		(cm)	(H/V)	(dBµV/m)	(dB)	(dBµV/m)	(dB)	(PK/AV)
1306.45	68.51	66	200	V	49.13	-19.38	74	-24.87	PK
1899.86	69.24	273	100	V	53.28	-15.96	74	-20.72	PK
2318.71	68.61	195	100	V	54.43	-14.18	74	-19.57	PK
1511.37	69.34	167	200	Н	50.82	-18.52	74	-23.18	PK
2500.64	68.37	98	100	Н	54.69	-13.68	74	-19.31	PK
1798.32	69.81	311	100	Н	53.06	-16.75	74	-20.94	PK

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

Note 2: 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.



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## Annex A. TEST INSTRUMENT

Instrument	Model	Serial#	Cal Date	Cal Due	In use	
AC Line Conducted Emis	AC Line Conducted Emissions					
EMI test receiver	ESCS30	8471241027	09/16/2016	09/15/2017	>	
Line Impedance Stabilization Network	LI-125A	191106	09/24/2016	09/23/2017	<u>&lt;</u>	
Line Impedance Stabilization Network	LI-125A	191107	09/24/2016	09/23/2017	V	
LISN	ISN T800	34373	09/24/2016	09/23/2017	<	
Transient Limiter	LIT-153	531118	08/31/2016	08/30/2017	<	
Radiated Emissions						
EMI test receiver	ESL6	100262	09/16/2016	09/15/2017	<b>~</b>	
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/31/2016	08/30/2017	<b>(</b>	
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/23/2017	03/22/2018	<u> </u>	
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/20/2016	09/19/2017	V	
Double Ridge Horn Antenna	AH-118	71259	09/23/2016	09/22/2017	K	



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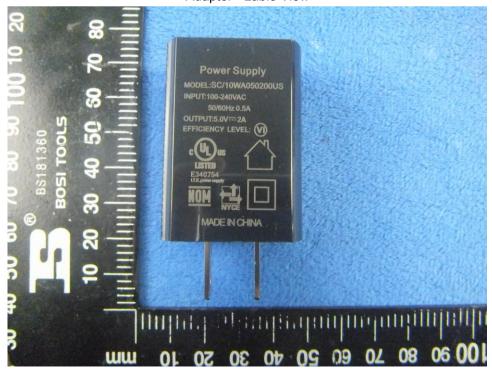
## Annex B. EUT And Test Setup Photographs

### Annex B.i. Photograph: EUT External Photo

Whole Package View



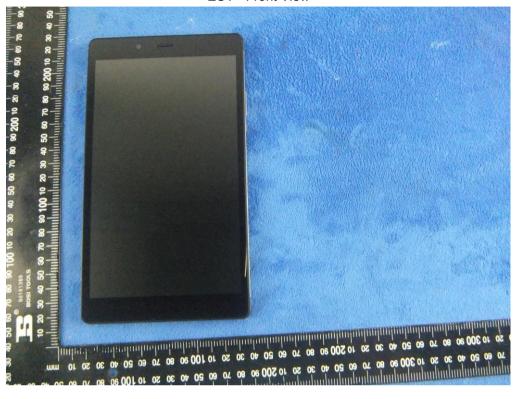
Adapter - Lable View





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**EUT - Front View** 



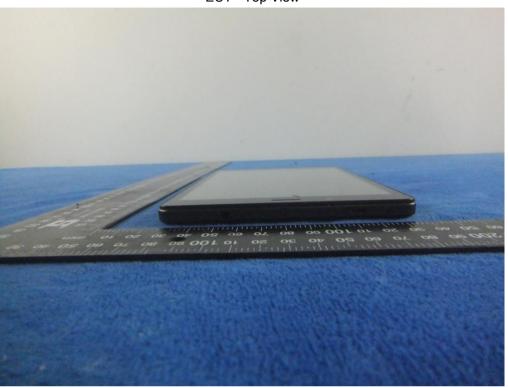
**EUT - Rear View** 



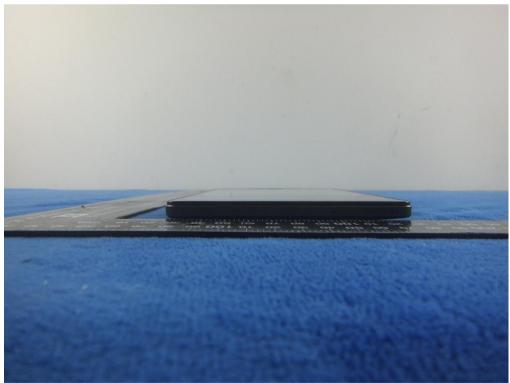


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EUT - Top View



**EUT - Bottom View** 





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EUT - Left View



EUT - Right View





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## Annex B.ii. Photograph: EUT Internal Photo





Cover Off - Top View 2



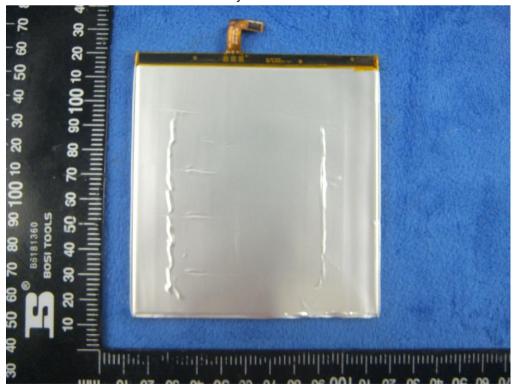


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Battery - Front View



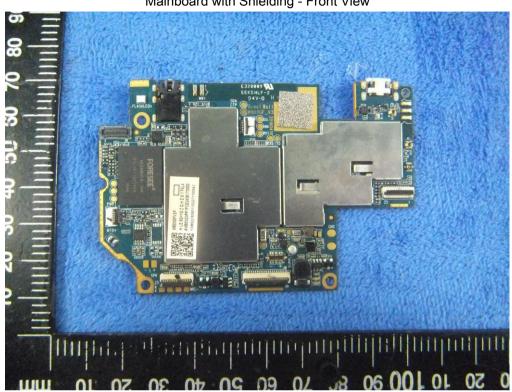
Battery - Rear View



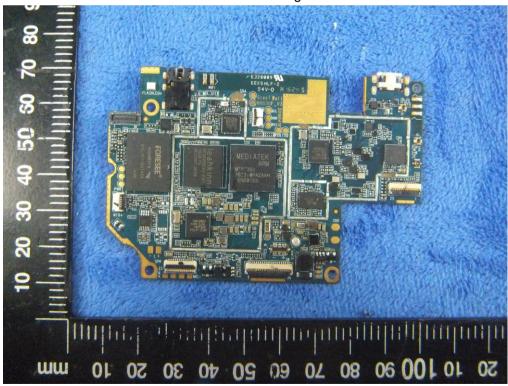


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Mainboard with Shielding - Front View



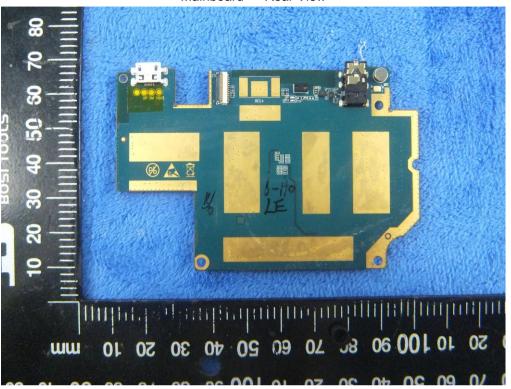
Mainboard without Shielding - Front View





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Mainboard - Rear View



LCD - Front View



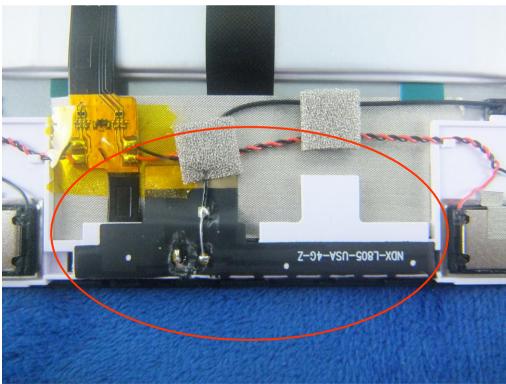


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#### LCD - Rear View



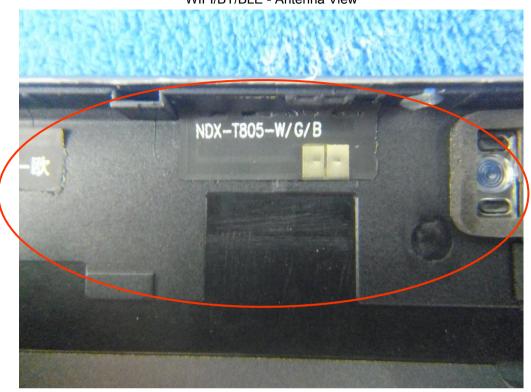
GSM/PCS/UMTS-FDD Antenna View



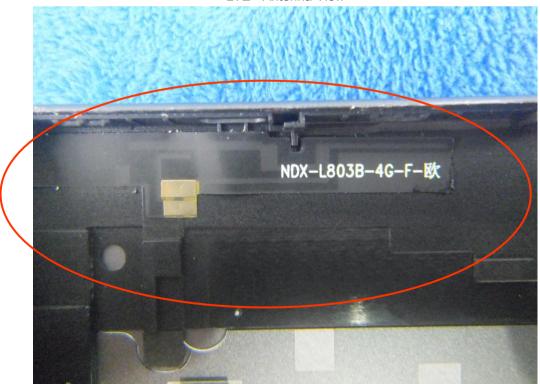


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WIFI/BT/BLE - Antenna View



LTE - Antenna View



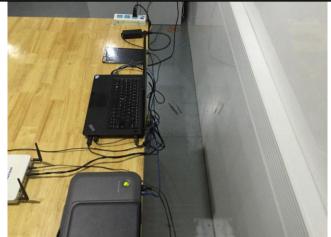


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## Annex B.iii. Photograph: Test Setup Photo



Conducted Emissions Test Setup – Front View ( USB mode )



Conducted Emissions Test Setup – Side View ( USB mode )



Conducted Emissions Test Setup – Front View ( MP4 mode )



Conducted Emissions Test Setup – Side View ( MP4 mode )



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Radiated Emissions Test Setup Below 1GHz ( USB mode )



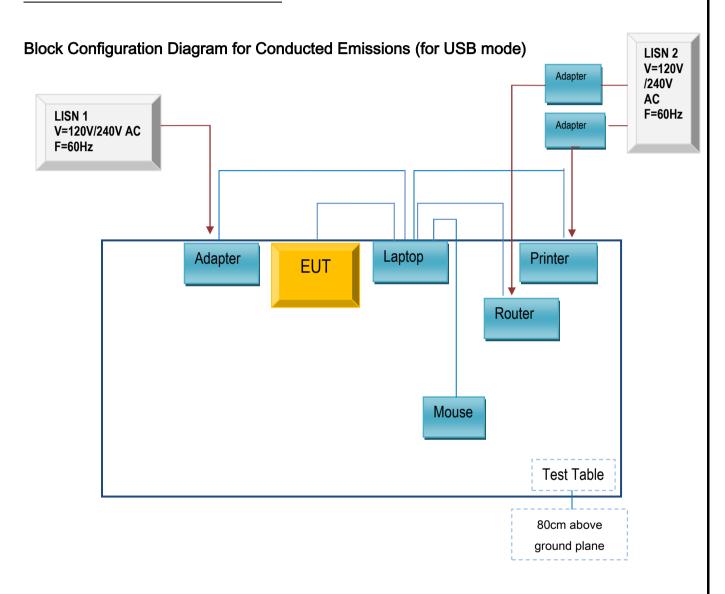
Radiated Emissions Test Setup Above 1GHz ( USB mode )



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## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

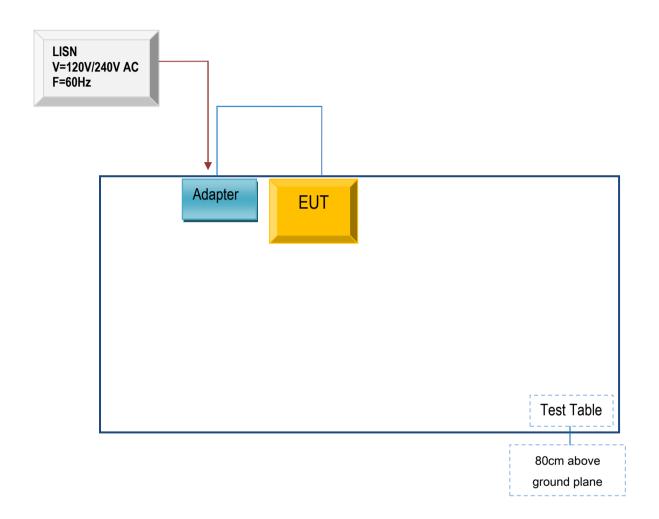
#### Annex C.ii. TEST SET UP BLOCK





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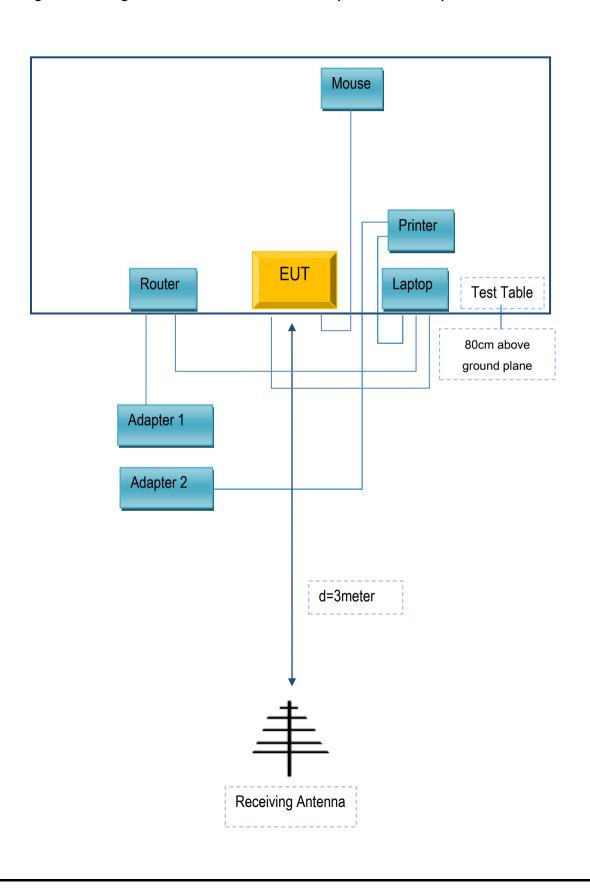
## Block Configuration Diagram for Conducted Emissions (for MP4 mode)





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## Block Configuration Diagram for Radiated Emissions (for USB mode)





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## 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
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

### Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	JX120051274
USB Cable	Un-shielding	No	2m	CBA3000AH0C1
RJ45 Cable	Un-shielding	No	2m	KX156327541
Router Power cable	Un-shielding	No	2m	13274630Z
Printer Power cable	Un-shielding	No	2m	127581031
Power Cable	Un-shielding	No	0.8m	GT211032



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

Please see the attachment



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## Annex E. DECLARATION OF SIMILARITY

N/A