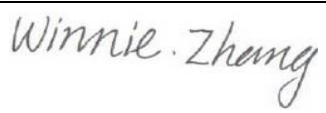
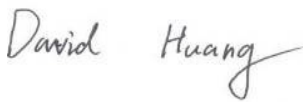


EMC TEST REPORT



Report No.: 16070480-FCC-E

Supersede Report No.: N/A

Applicant	MOBIWIRE MOBILES (NINGBO) CO.,LTD	
Product Name	Mobile phone	
Model No.	 SMART VALUE	
Serial No.	N/A	
Test Standard	FCC Part 15 Subpart B Class B:2015, ANSI C63.4: 2014	
Test Date	April 28 to May 10, 2016	
Issue Date	May 20, 2016	
Test Result	☒ Pass ☐ Fail	
Equipment complied with the specification ☒		
Equipment did not comply with the specification ☐		
		
Winnie Zhang 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

Zone A, Floor 1, Building 2 Wan Ye Long Technology Park

South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108

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

Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
16070480-FCC-E	NONE	Original	May 11, 2016
16070480-FCC-E	V1	Update trademark	May 20, 2016

2. Customer information

Applicant Name	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Applicant Add	No.999,Dacheng East Road,Fenghua City,Zhejiang
Manufacturer	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Manufacturer Add	No.999,Dacheng East Road,Fenghua City,Zhejiang

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: Mobile phone

Main Model:

öwn SMART VALUE

Serial Model:

N/A

Date EUT received:

April 27, 2016

Test Date(s):

April 28 to May 10, 2016

Equipment Category :

Class B

Antenna Gain:

GSM850: -3dBi
PCS1900: -1dBi
UMTS-FDD Band V: -3dBi
UMTS-FDD Band II: -1dBi
Bluetooth/BLE/WIFI: -2dBi
LTE Band IV: -3dBi
LTE Band VII: -2dBi
GPS:-2dBi

Type of Modulation:

GSM / GPRS: GMSK
EGPRS: GMSK,8PSK
UMTS-FDD: QPSK, 16QAM
802.11b/g/n: DSSS, OFDM
Bluetooth: GFSK, π /4DQPSK, 8DPSK
BLE: GFSK
LTE Band: QPSK, 16QAM
GPS:BPSK

	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
RF Operating Frequency (ies):	WIFI:802.11b/g/n(20M): 2412-2462 MHz WIFI:802.11n(40M): 2422-2452 MHz Bluetooth& BLE: 2402-2480 MHz LTE Band IV TX: 1712.5 ~ 1752.5 MHz; RX : 2112.5 ~ 2152.5 MHz LTE Band VII TX: 2502.5 ~ 2567.5 MHz; RX : 2622.5 ~ 2687.5 MHz GPS RX: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:	Power Port, Earphone Port, USB Port
Input Power:	Adapter: Model: OWN SMART VALUE Input: AC 100-240V; 50/60Hz;0.2A Output: DC 5.0V,1A Battery: Model: OWN SMART VALUE Spec:3.8V,2100mAh,7.98Wh Limited charger voltage :4.35V
Trade Name :	
GPRS/EGPRS Multi-slot class	8/10/12
FCC ID:	2ADA4VALUE

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
-	-	-

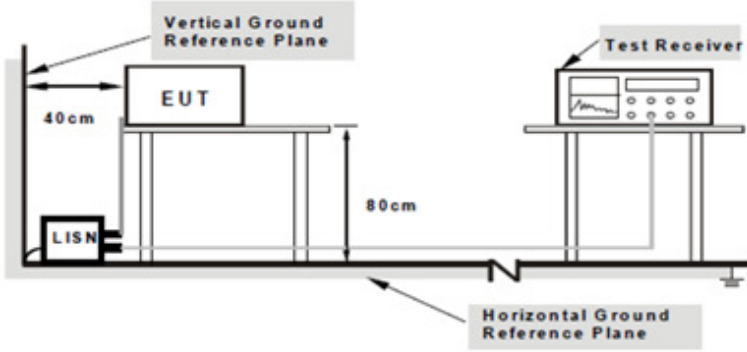
6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	22°C
Relative Humidity	53%
Atmospheric Pressure	1029mbar
Test date :	April 29, 2016
Tested By :	Winnie Zhang

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.
------------	---

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 50W/50mH EUT LISN, connected to filtered mains.
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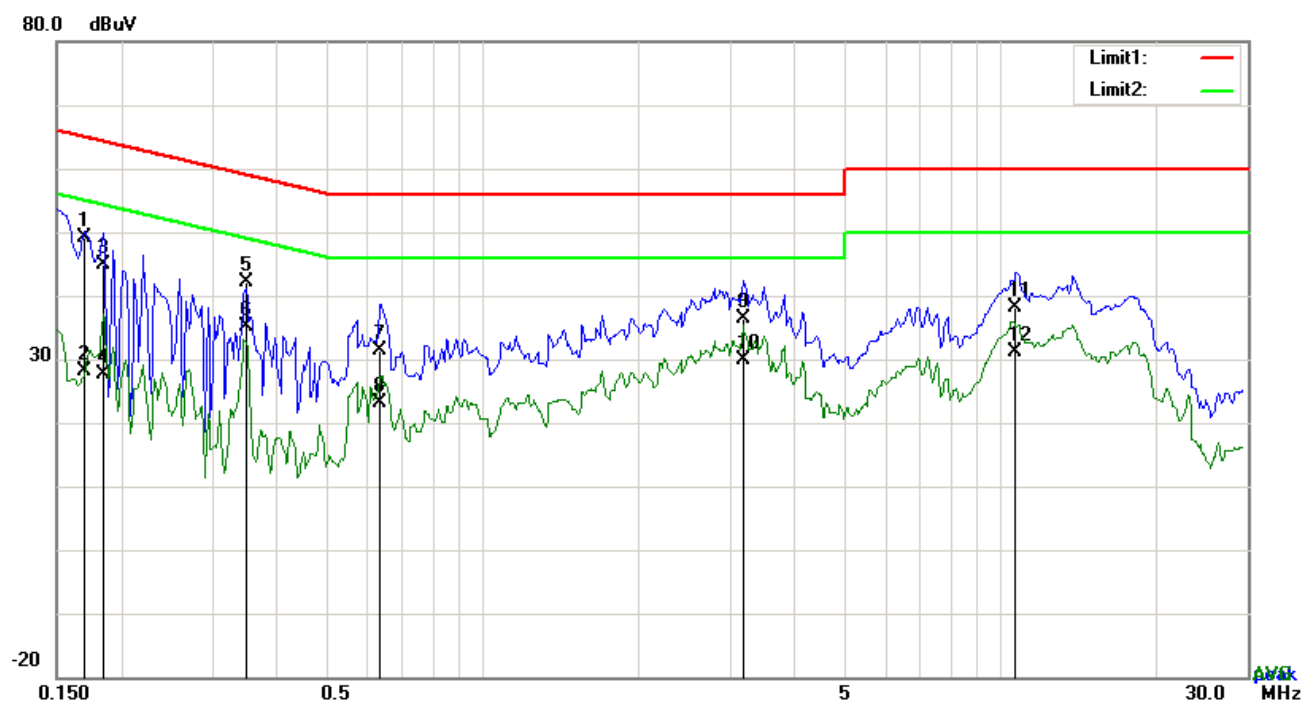
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	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. 4. All other supporting equipment were powered separately from another main supply. 5. The EUT was switched on and allowed to warm up to its normal 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: USB Mode

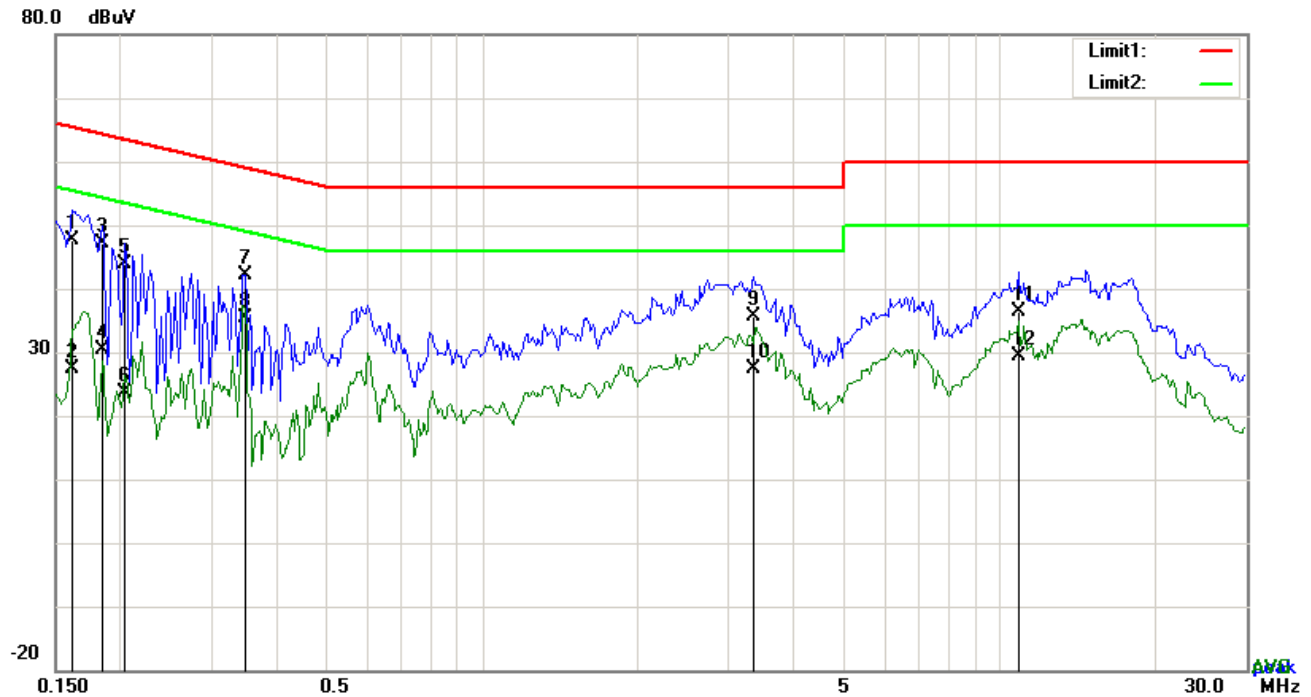


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1695	39.02	QP	10.03	49.05	64.98	-15.93
2	L1	0.1695	17.98	AVG	10.03	28.01	54.98	-26.97
3	L1	0.1851	34.73	QP	10.03	44.76	64.25	-19.49
4	L1	0.1851	17.64	AVG	10.03	27.67	54.25	-26.58
5	L1	0.3489	32.07	QP	10.03	42.10	58.99	-16.89
6	L1	0.3489	25.22	AVG	10.03	35.25	48.99	-13.74
7	L1	0.6336	21.27	QP	10.03	31.30	56.00	-24.70
8	L1	0.6336	13.09	AVG	10.03	23.12	46.00	-22.88
9	L1	3.1794	26.41	QP	10.06	36.47	56.00	-19.53
10	L1	3.1794	19.82	AVG	10.06	29.88	46.00	-16.12
11	L1	10.6830	28.03	QP	10.16	38.19	60.00	-21.81
12	L1	10.6830	20.87	AVG	10.16	31.03	50.00	-18.97

Test Mode: USB Mode

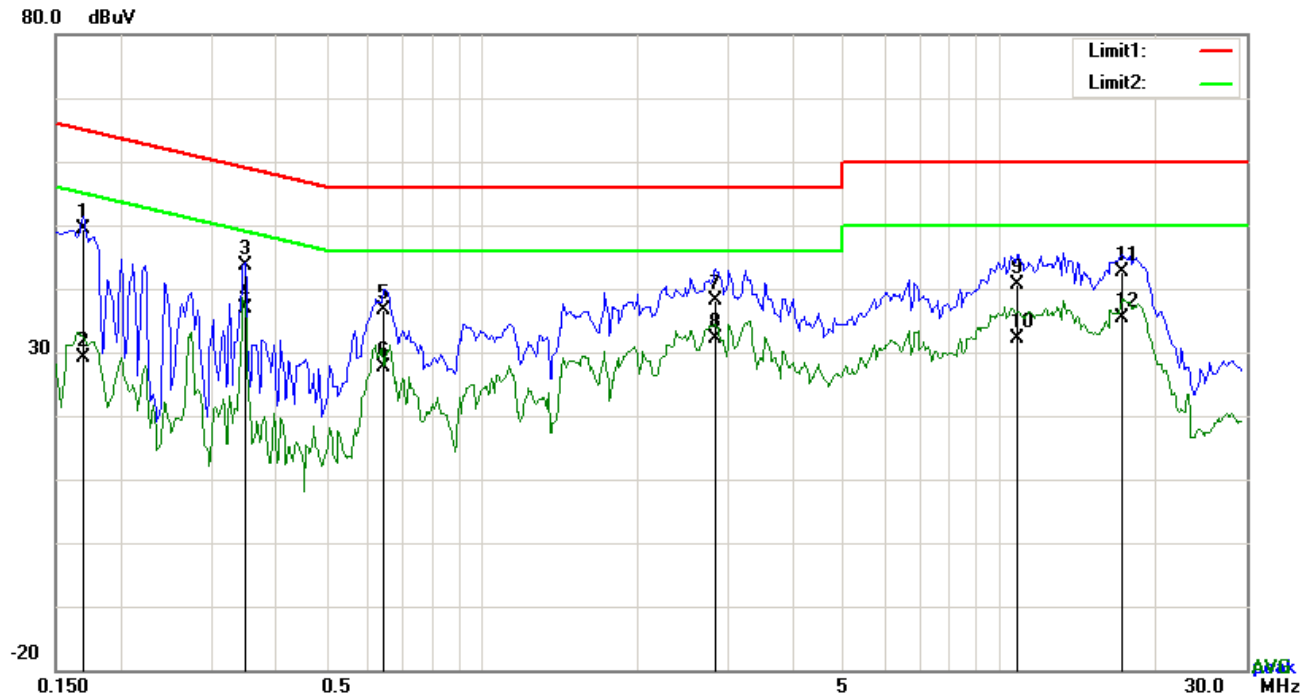


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1617	37.67	QP	10.02	47.69	65.38	-17.69
2	N	0.1617	17.41	AVG	10.02	27.43	55.38	-27.95
3	N	0.1851	37.06	QP	10.02	47.08	64.25	-17.17
4	N	0.1851	20.30	AVG	10.02	30.32	54.25	-23.93
5	N	0.2046	33.80	QP	10.02	43.82	63.42	-19.60
6	N	0.2046	13.59	AVG	10.02	23.61	53.42	-29.81
7	N	0.3489	32.22	QP	10.02	42.24	58.99	-16.75
8	N	0.3489	25.35	AVG	10.02	35.37	48.99	-13.62
9	N	3.3627	25.53	QP	10.05	35.58	56.00	-20.42
10	N	3.3627	17.26	AVG	10.05	27.31	46.00	-18.69
11	N	10.8780	26.20	QP	10.15	36.35	60.00	-23.65
12	N	10.8780	19.15	AVG	10.15	29.30	50.00	-20.70

Test Mode: USB Mode

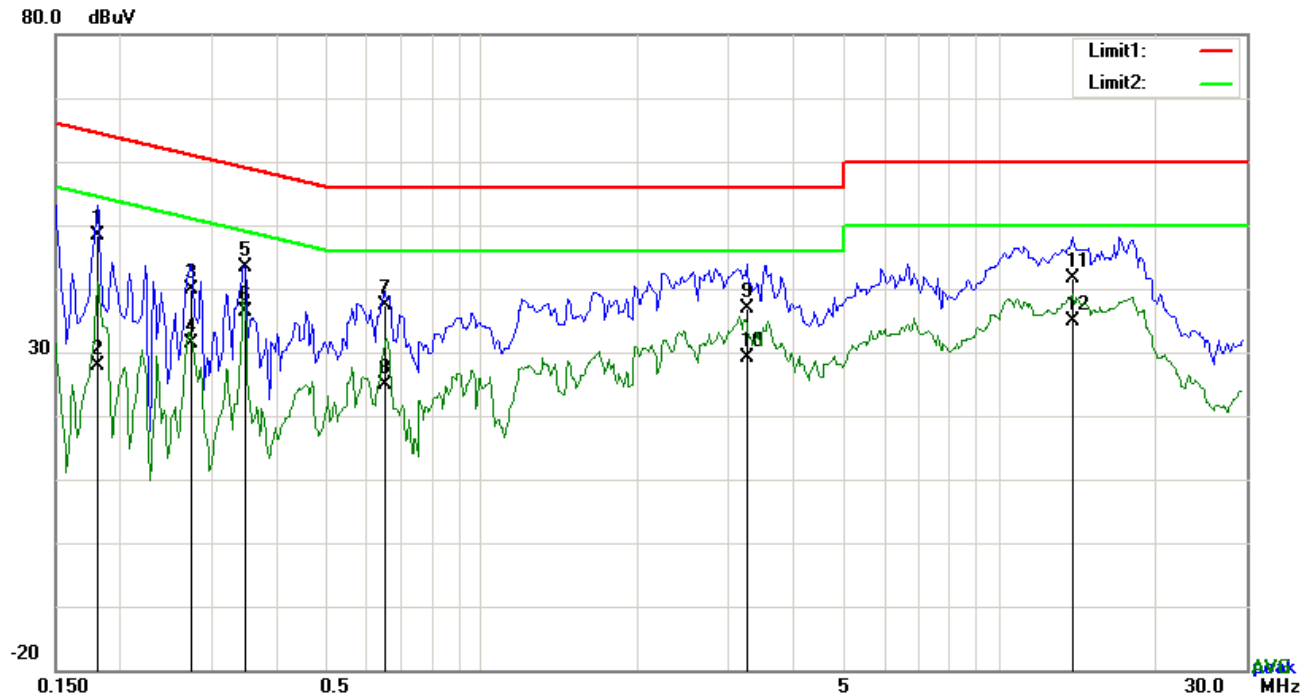


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB)	(dBuV)	(dBuV)	(dB)
1	L1	0.1695	39.34	QP	10.03	49.37	64.98	-15.61
2	L1	0.1695	19.01	AVG	10.03	29.04	54.98	-25.94
3	L1	0.3489	33.55	QP	10.03	43.58	58.99	-15.41
4	L1	0.3489	26.74	AVG	10.03	36.77	48.99	-12.22
5	L1	0.6453	26.68	QP	10.03	36.71	56.00	-19.29
6	L1	0.6453	17.57	AVG	10.03	27.60	46.00	-18.40
7	L1	2.8254	28.10	QP	10.05	38.15	56.00	-17.85
8	L1	2.8254	22.05	AVG	10.05	32.10	46.00	-13.90
9	L1	10.8468	30.55	QP	10.16	40.71	60.00	-19.29
10	L1	10.8468	21.95	AVG	10.16	32.11	50.00	-17.89
11	L1	17.2467	32.29	QP	10.26	42.55	60.00	-17.45
12	L1	17.2467	25.16	AVG	10.26	35.42	50.00	-14.58

Test Mode: 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	0.1812	38.32	QP	10.02	48.34	64.43	-16.09
2	N	0.1812	17.79	AVG	10.02	27.81	54.43	-26.62
3	N	0.2748	29.95	QP	10.02	39.97	60.97	-21.00
4	N	0.2748	21.42	AVG	10.02	31.44	50.97	-19.53
5	N	0.3489	33.34	QP	10.02	43.36	58.99	-15.63
6	N	0.3489	26.43	AVG	10.02	36.45	48.99	-12.54
7	N	0.6492	27.25	QP	10.02	37.27	56.00	-18.73
8	N	0.6492	14.86	AVG	10.02	24.88	46.00	-21.12
9	N	3.2418	26.81	QP	10.05	36.86	56.00	-19.14
10	N	3.2418	18.99	AVG	10.05	29.04	46.00	-16.96
11	N	13.8615	31.47	QP	10.19	41.66	60.00	-18.34
12	N	13.8615	24.69	AVG	10.19	34.88	50.00	-15.12

6.2 Radiated Emissions

Temperature	22°C
Relative Humidity	53%
Atmospheric Pressure	1029mbar
Test date :	April 29, 2016
Tested By :	Winnie Zhang

Requirement(s):

Spec	Item	Requirement	Applicable	
47CFR§15.107(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	
------------	--

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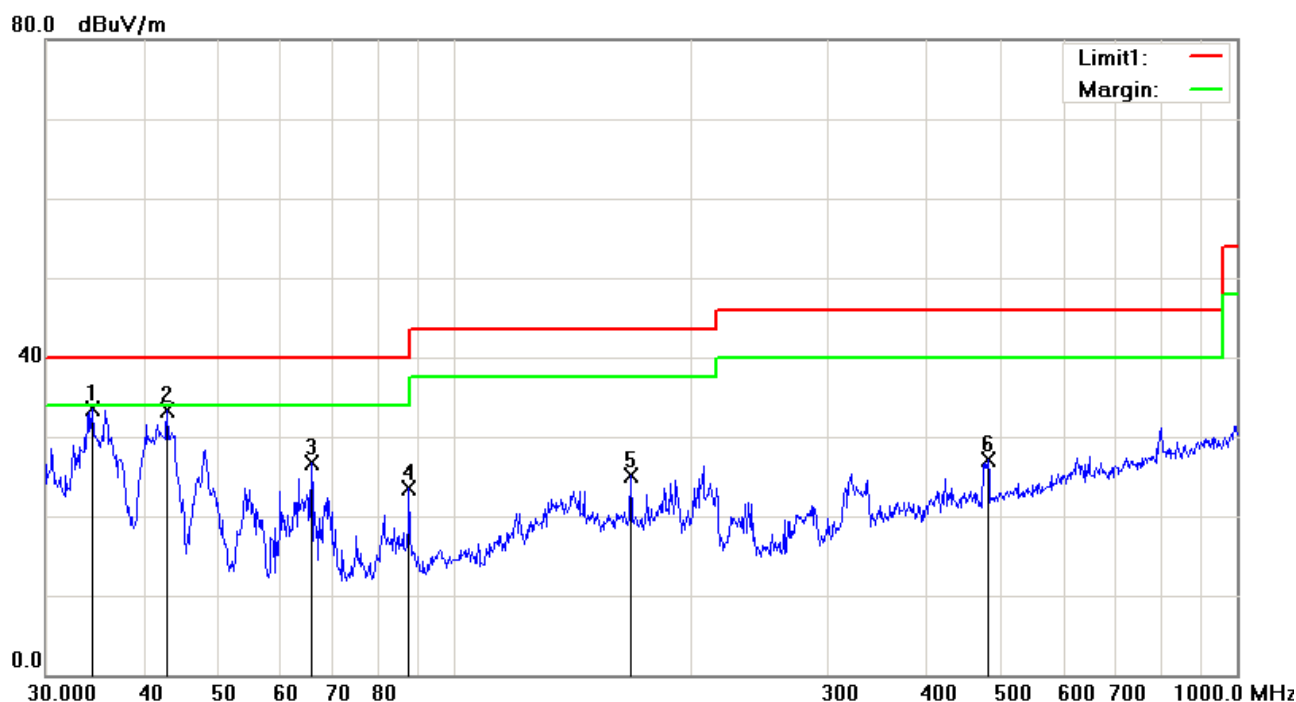
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120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

Below 1GHz



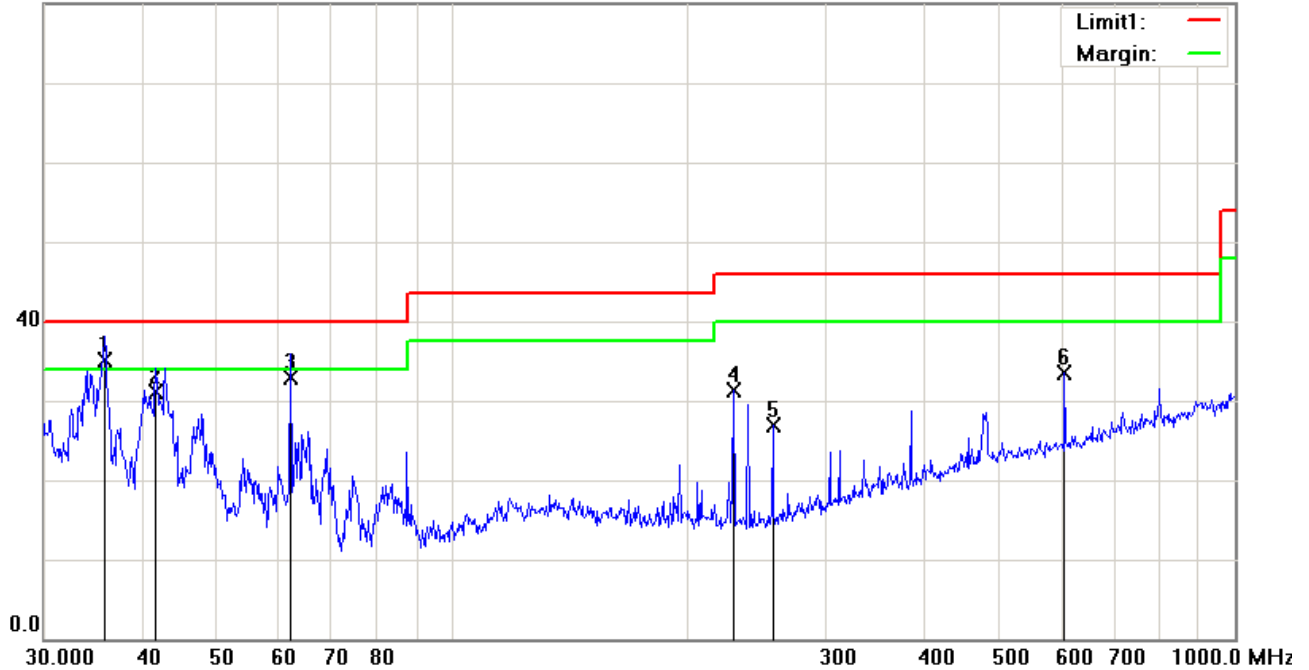
Test Data

Horizontal Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	H	34.3964	36.98	peak	-3.50	33.48	40.00	-6.52	100	160
2	H	42.8998	42.90	peak	-9.53	33.37	40.00	-6.63	100	306
3	H	65.5727	40.61	peak	-13.92	26.69	40.00	-13.31	100	235
4	H	87.4177	37.03	peak	-13.44	23.59	40.00	-16.41	100	269
5	H	167.8243	33.93	peak	-8.92	25.01	43.50	-18.49	100	344
6	H	480.5276	29.32	peak	-2.23	27.09	46.00	-18.91	100	134

Below 1GHz

80.0 dBuV/m



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin	Height	Degree
		(MHz)	(dBuV/m)		(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(°)
1	V	35.8747	39.64	QP	-4.58	35.06	40.00	-4.94	100	180
2	V	41.7130	39.86	QP	-8.73	31.13	40.00	-8.87	100	300
3	V	61.9951	47.12	QP	-14.20	32.92	40.00	-7.08	100	128
4	V	228.4904	40.36	peak	-9.00	31.36	46.00	-14.64	100	120
5	V	256.5211	35.78	peak	-8.89	26.89	46.00	-19.11	100	42
6	V	605.6592	33.42	peak	0.10	33.52	46.00	-12.48	100	349

Above 1GHz

Frequency (MHz)	Amplitude (dBμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Factors (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/AV)
1564.82	49.84	66	100	V	-21.22	74	-24.16	PK
2055.63	50.22	122	128	V	-21.58	74	-23.78	PK
1778.12	50.65	85	156	V	-22.37	74	-23.35	PK
2121.30	50.75	57	180	H	-21.45	74	-23.25	PK
2877.28	48.14	130	130	H	-22.66	74	-25.86	PK
1885.66	49.74	58	163	H	-22.72	74	-24.26	PK

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

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

Note3, X-Axis, Y-Axis and -Axis were investigated. The results above show only the worst case.

Note4: 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	09/17/2015	09/16/2016	☒
Line Impedance Stabilization Network	LI-125A	191106	09/25/2015	09/24/2016	☒
Line Impedance Stabilization Network	LI-125A	191107	09/25/2015	09/24/2016	☒
LISN	ISN T800	34373	09/25/2015	09/24/2016	☒
Transient Limiter	LIT-153	531118	09/01/2015	08/31/2016	☒
Radiated Emissions					
EMI test receiver	ESL6	100262	09/17/2015	09/16/2016	☒
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/01/2015	08/31/2016	☒
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/24/2016	03/23/2017	☒
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/21/2015	09/20/2016	☒
Double Ridge Horn Antenna	AH-118	71259	09/24/2015	09/23/2016	☒

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo





EUT - Top View



EUT - Bottom View



EUT - Left View



EUT - Right View

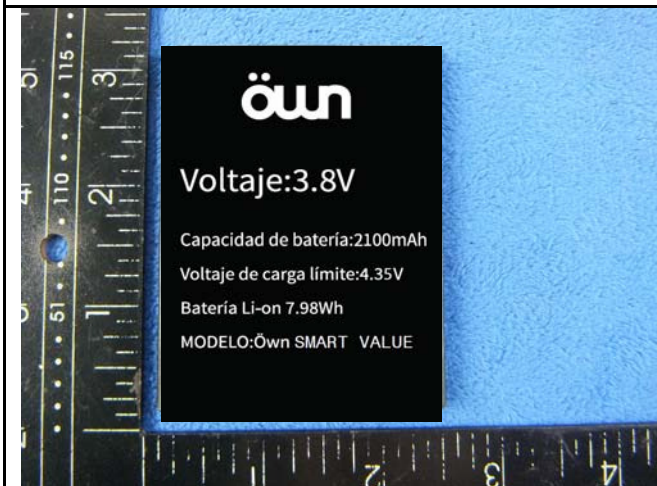
Annex B.ii. Photograph: EUT Internal Photo



Cover Off - Top View 1



Cover Off - Top View 2



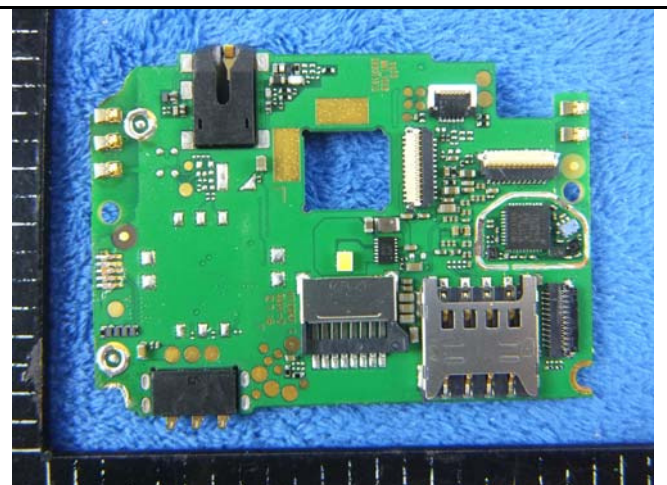
Battery - Front View



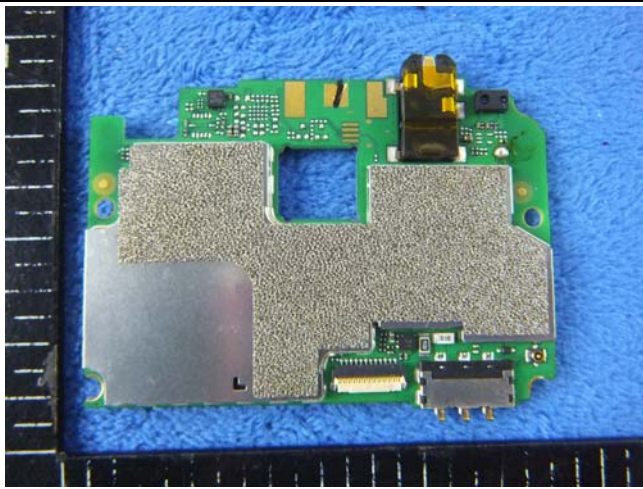
Battery - Rear View



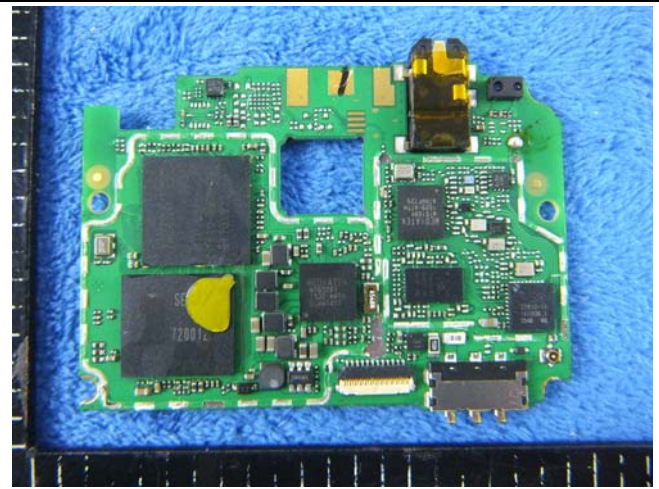
Mainboard with Shielding - Front View



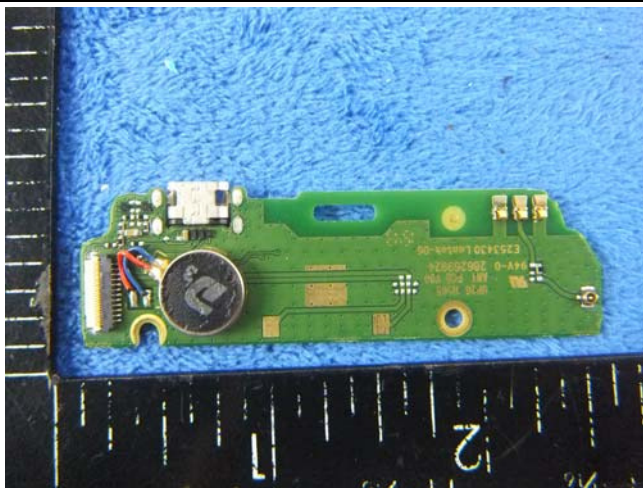
Mainboard without Shielding - Front View



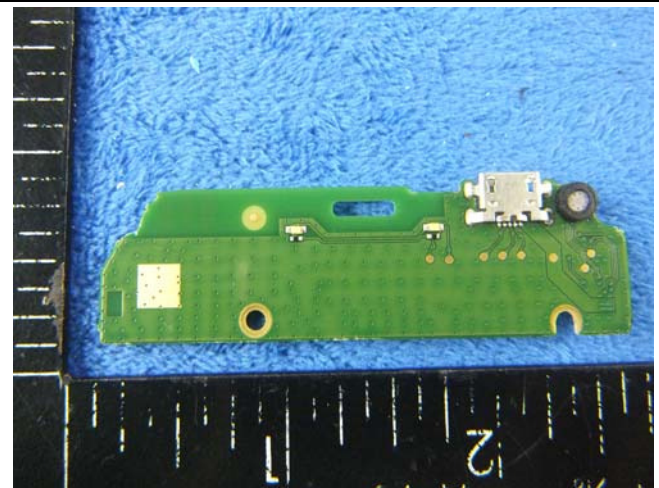
Mainboard with Shielding - Rear View



Mainboard without Shielding – Rear View



Small Mainboard - Front View



Small Mainboard - Rear View



LCD – Front View



LCD – Rear View

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GSM/PCS/UMTS-FDD Antenna View



WIFI/BT/BLE/GPS - Antenna View



LTE - Antenna View

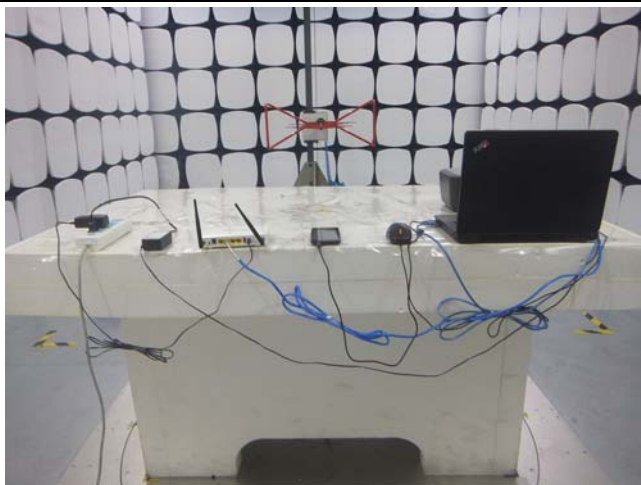
Annex B.iii. Photograph: Test Setup Photo



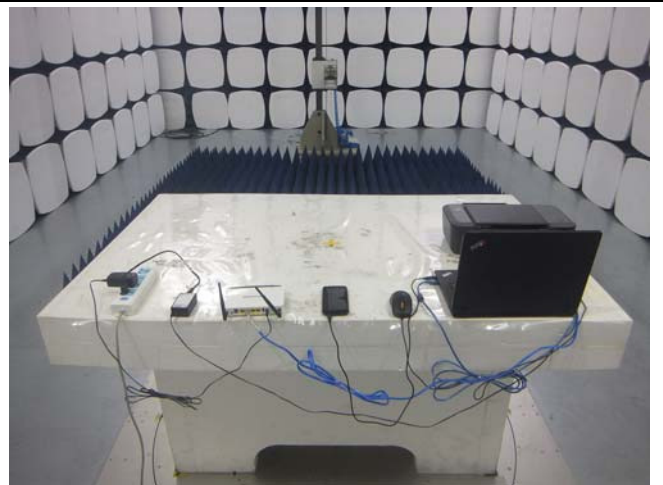
Conducted Emissions Test Setup – TF Card Front View



Conducted Emissions Test Setup – TF Card Side View



Radiated Emissions Test Setup Below 1GHz - TF Card Front View

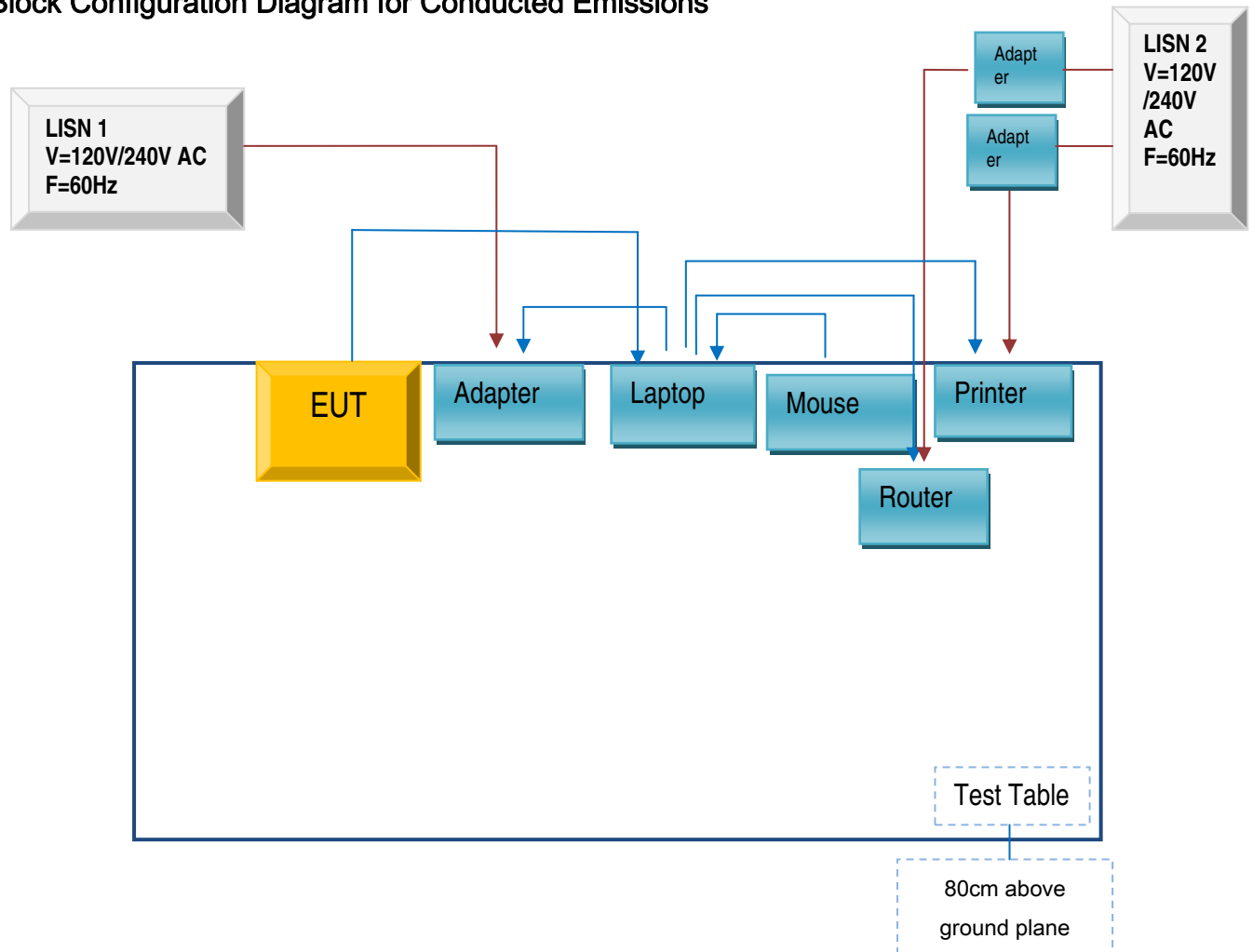


Radiated Emissions Test Setup Above 1GHz - TF Card Side View

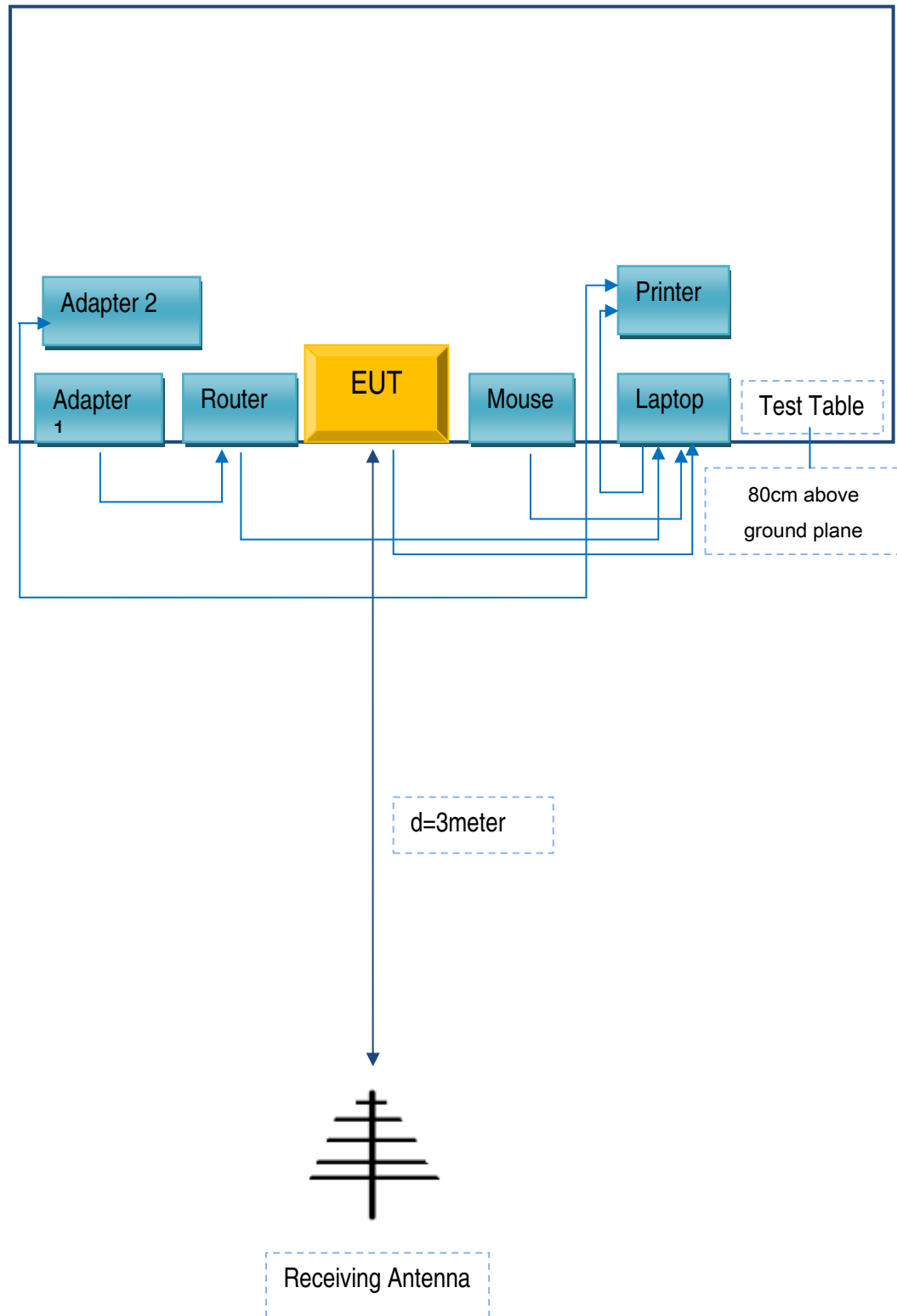
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Annex C. 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	Lenovo Laptop	E40& 0579A52	LR-1EHRX
GOLDWEB	Router	R102	1202032094
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	2m	JX120051274
RJ45 Cable	Un-shielding	No	2m	KX156327541
Router Power cable	Un-shielding	No	2m	13274630Z
Printer Power cable	Un-shielding	No	2m	127581031
USB Cable	Un-shielding	No	0.8m	ST1274111

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

N/A

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Annex E. DECLARATION OF SIMILARITY

N/A