EMC TEST REPORT

Report No.: 16071212-FCC-E

Supersede Report No.:N/A

Applicant	NEG TECHNOLOGY CO., LIMITED
Product Name	Mobile Phone
Model No.	F1015
Serial No.	N/A
Test Standard	FCC Part 15 Subpart B Class B:2015, ANSI C63.4: 2014
Test Date	December 15 to December 31, 2015
Issue Date	October 19, 2016
Test Result	☑ Pass ☐ Fail
Equipment complied with the specification	☑
Equipment did not comply with the specification	☐

Winnie Zhang	David Huang	
Winnie Zhang Test Engineer	David Huang Checked By	

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Test result presented in this test report is applicable to the tested sample only

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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

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

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

Laboratories Introduction

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

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

Accreditations for Conformity Assessment

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

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CONTENTS

1. Report Revision History

Report No.	Report Version	Description	Issue Date
16071212-FCC-E	NONE	Original	October 19, 2016

2. Customer information

Applicant Name	NEG TECHNOLOGY CO., LIMITED
Applicant Add	Rm 1406, Block B, Jinsejiari, Jingtian south road, Futian district, Shenzhen, China
Manufacturer	NEG TECHNOLOGY CO., LIMITED
Manufacturer Add	Rm 1406, Block B, Jinsejiari, Jingtian south road, Futian district, Shenzhen, China

3. Test site information

Lab performing tests	SIEMIC (Shenzhen-China) LABORATORIES
Lab Address	Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao' an District, Shenzhen, Guangdong China 518108
FCC Test Site No.	718246
IC Test Site No.	4842E-1
Test Software	Radiated Emission Program-To Shenzhen v2.0

4. Equipment under Test (EUT) Information

Description of EUT:	Mobile Phone
Main Model:	F1015
Serial Model:	N/A
Date EUT received:	December 14,2015
Test Date(s):	December 15 to December 31, 2015
Antenna Gain:	GSM850: 0dBi PCS1900: 0dBi Bluetooth: 0dBi
Type of Modulation:	GSM / GPRS: GMSK Bluetooth: GFSK, π /4DQPSK, 8DPSK
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 Bluetooth: 2402-2480 MHz
Number of Channels:	GSM 850: 124CH PCS1900: 299CH Bluetooth: 79CH
Input Power:	Battery: Model：F1015 Sepc:DC3.7V, 650mAh,2.41Wh Voltage limited of charging:4.2V Adapter: Model:F1015 Input: AC100-240V,50/60Hz,150mA Output: DC 5.0V,500mA
Port:	Power Port, Earphone Port, USB Port

GPRS/EGPRS Multi-slot class 8/10/12

Trade Name : OWN

FCC ID: 2AAZ8-F1015

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

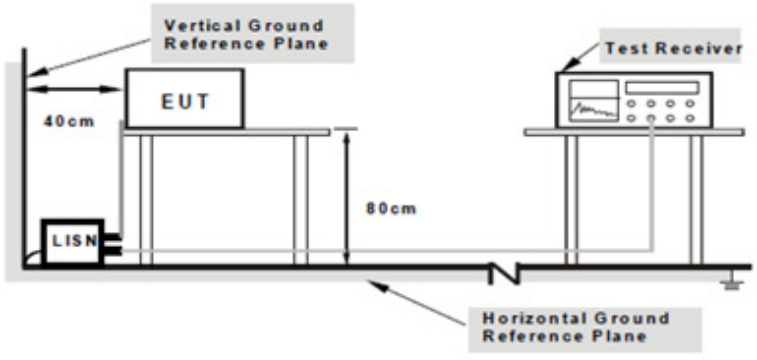
Emissions		
Test Item	**Description**	**Uncertainty**
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	25℃
Relative Humidity	52%
Atmospheric Pressure	1028mbar
Test date :	December 28, 2015
Tested By :	Winnie Zhang

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.107</td><td>a)</td><td>For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu] H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.
<table>
<tr><th rowspan="2">Frequency ranges (MHz)</th><th colspan="2">Limit (dBμV)</th></tr>
<tr><th>QP</th><th>Average</th></tr>
<tr><td>0.15 ~ 0.5</td><td>66 – 56</td><td>56 – 46</td></tr>
<tr><td>0.5 ~ 5</td><td>56</td><td>46</td></tr>
<tr><td>5 ~ 30</td><td>60</td><td>50</td></tr>
</table>
</td><td>☑</td></tr>
<tr><td>Test Setup</td><td colspan="3"> 

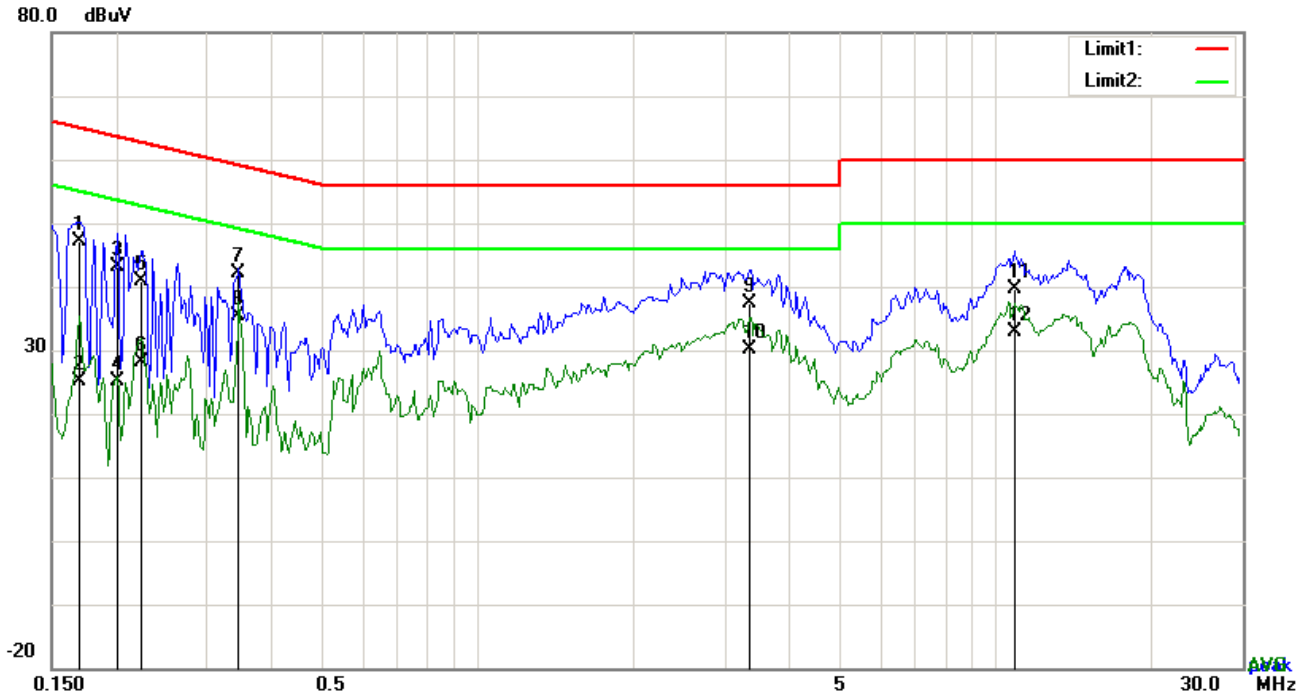
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table.
2. The power supply for the EUT was fed through a 50Ω /50mH EUT LISN, connected to filtered mains.</td></tr>
</table>

	3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. 4. All other supporting equipment were powered separately from another main supply. 5. The EUT was switched on and allowed to warm up to its normal operating condition. 6. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver. 7. High peaks, relative to the limit line, The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 kHz. 8. Step 7 was then repeated for the LIVE line (for AC mains) or DC line (for DC power).
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Mode 1 :	USB Mode

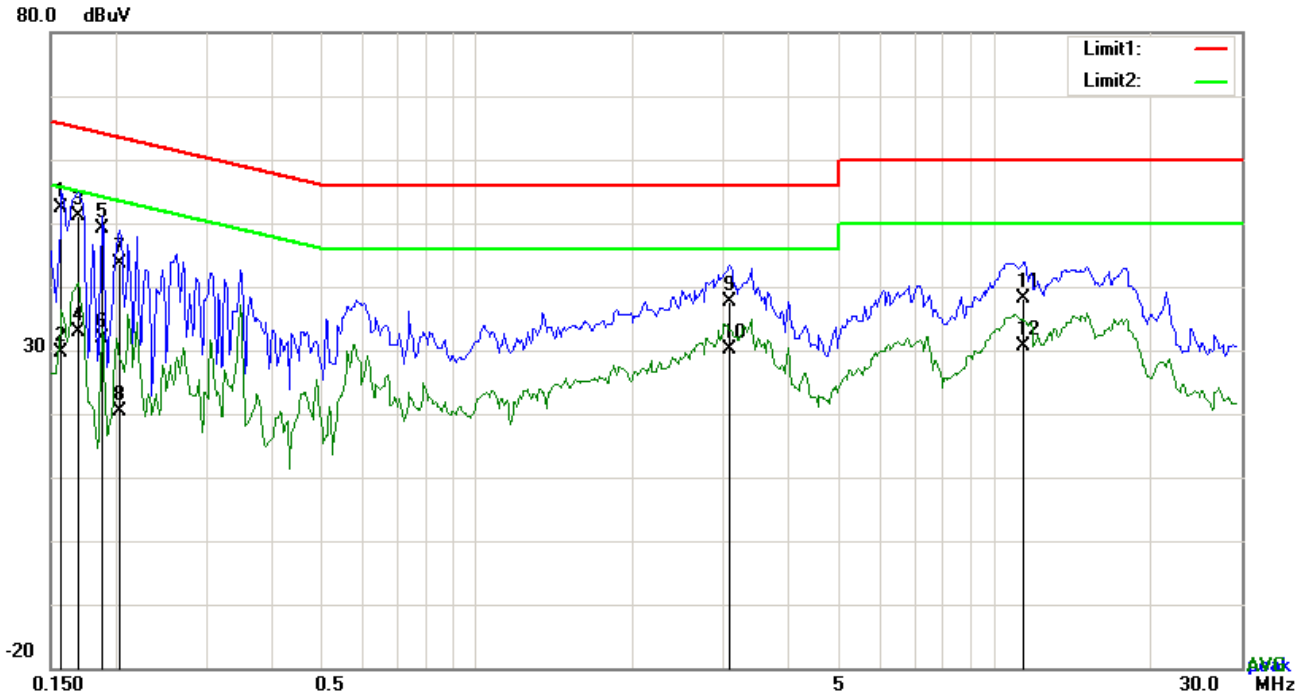


Test Data

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	37.04	QP	10.03	47.07	64.98	-17.91
2	L1	0.1695	15.13	AVG	10.03	25.16	54.98	-29.82
3	L1	0.2007	33.05	QP	10.03	43.08	63.58	-20.50
4	L1	0.2007	15.12	AVG	10.03	25.15	53.58	-28.43
5	L1	0.2241	30.94	QP	10.03	40.97	62.67	-21.70
6	L1	0.2241	18.22	AVG	10.03	28.25	52.67	-24.42
7	L1	0.3450	32.19	QP	10.03	42.22	59.08	-16.86
8	L1	0.3450	25.28	AVG	10.03	35.31	49.08	-13.77
9	L1	3.3627	27.43	QP	10.06	37.49	56.00	-18.51
10	L1	3.3627	20.13	AVG	10.06	30.19	46.00	-15.81
11	L1	10.8663	29.47	QP	10.16	39.63	60.00	-20.37
12	L1	10.8663	22.78	AVG	10.16	32.94	50.00	-17.06

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	0.1578	42.24	QP	10.02	52.26	65.58	-13.32
2	N	0.1578	19.50	AVG	10.02	29.52	55.58	-26.06
3	N	0.1695	41.10	QP	10.02	51.12	64.98	-13.86
4	N	0.1695	22.85	AVG	10.02	32.87	54.98	-22.11
5	N	0.1890	39.14	QP	10.02	49.16	64.08	-14.92
6	N	0.1890	21.96	AVG	10.02	31.98	54.08	-22.10
7	N	0.2046	33.52	QP	10.02	43.54	63.42	-19.88
8	N	0.2046	10.33	AVG	10.02	20.35	53.42	-33.07
9	N	3.0858	27.70	QP	10.05	37.75	56.00	-18.25
10	N	3.0858	20.01	AVG	10.05	30.06	46.00	-15.94
11	N	11.4318	28.01	QP	10.16	38.17	60.00	-21.83
12	N	11.4318	20.42	AVG	10.16	30.58	50.00	-19.42

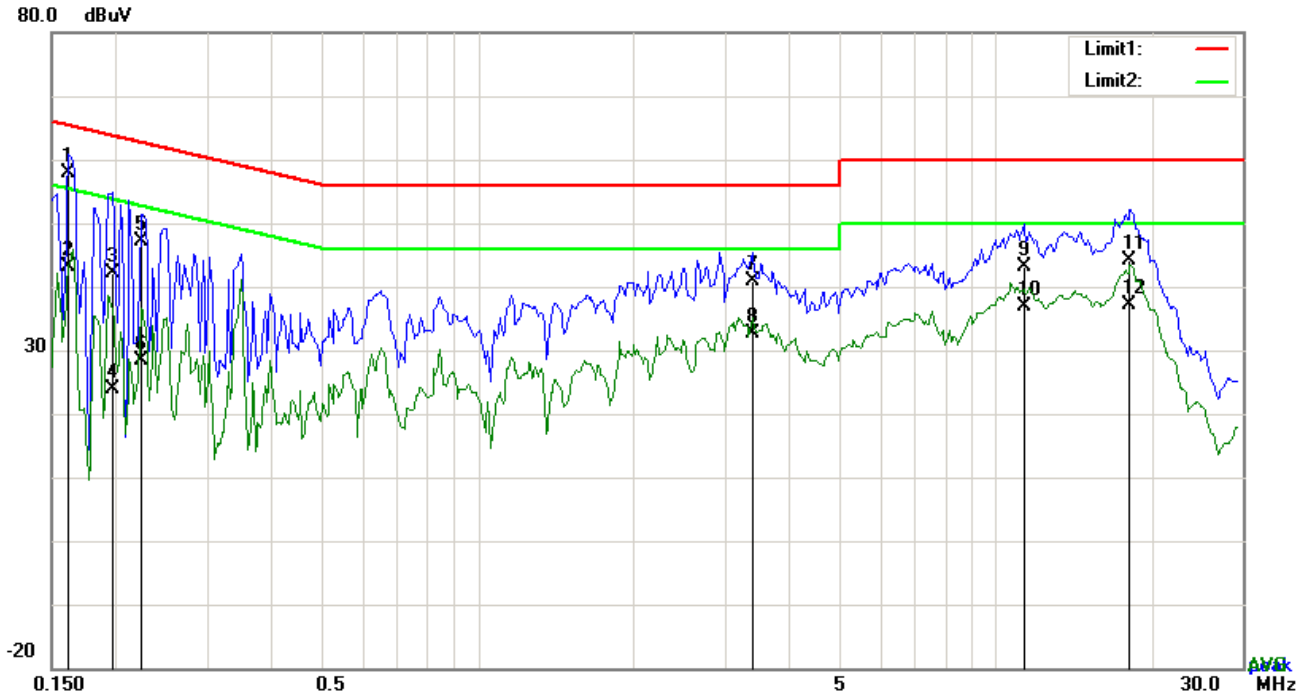
Test Mode :	USB Mode

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	0.1500	41.28	QP	10.03	51.31	66.00	-14.69
2	L1	0.1500	24.67	AVG	10.03	34.70	56.00	-21.30
3	L1	0.1695	37.24	QP	10.03	47.27	64.98	-17.71
4	L1	0.1695	19.49	AVG	10.03	29.52	54.98	-25.46
5	L1	0.3489	34.21	QP	10.03	44.24	58.99	-14.75
6	L1	0.3489	27.47	AVG	10.03	37.50	48.99	-11.49
7	L1	0.6531	26.50	QP	10.03	36.53	56.00	-19.47
8	L1	0.6531	17.37	AVG	10.03	27.40	46.00	-18.60
9	L1	3.2886	30.08	QP	10.06	40.14	56.00	-15.86
10	L1	3.2886	21.92	AVG	10.06	31.98	46.00	-14.02
11	L1	17.4183	33.55	QP	10.26	43.81	60.00	-16.19
12	L1	17.4183	26.84	AVG	10.26	37.10	50.00	-12.90

Test Mode :	USB Mode



Test Data

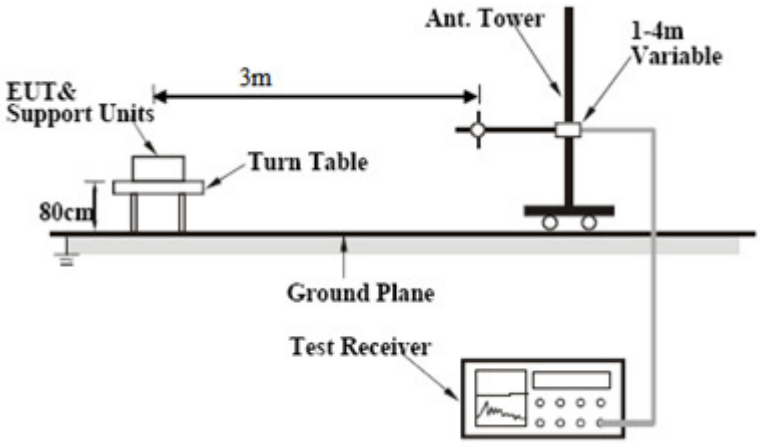
Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1617	47.94	QP	10.02	57.96	65.38	-7.42
2	N	0.1617	33.23	AVG	10.02	43.25	55.38	-12.13
3	N	0.1968	32.18	QP	10.02	42.20	63.74	-21.54
4	N	0.1968	13.82	AVG	10.02	23.84	53.74	-29.90
5	N	0.2241	37.02	QP	10.02	47.04	62.67	-15.63
6	N	0.2241	18.27	AVG	10.02	28.29	52.67	-24.38
7	N	3.3861	30.73	QP	10.05	40.78	56.00	-15.22
8	N	3.3861	22.68	AVG	10.05	32.73	46.00	-13.27
9	N	11.3343	33.01	QP	10.16	43.17	60.00	-16.83
10	N	11.3343	26.76	AVG	10.16	36.92	50.00	-13.08
11	N	18.1749	33.88	QP	10.24	44.12	60.00	-15.88
12	N	18.1749	26.97	AVG	10.24	37.21	50.00	-12.79

6.2 Radiated Emissions

Temperature	22℃
Relative Humidity	53%
Atmospheric Pressure	1029mbar
Test date :	December 29, 2015
Tested By :	Winnie Zhang

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>47CFR§15.109(d)</td><td>a)</td><td>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges
<table>
<tr><th>Frequency range (MHz)</th><th>Field Strength (μV/m)</th></tr>
<tr><td>30 – 88</td><td>100</td></tr>
<tr><td>88 – 216</td><td>150</td></tr>
<tr><td>216 960</td><td>200</td></tr>
<tr><td>Above 960</td><td>500</td></tr>
</table></td><td>☑</td></tr>
<tr><td>Test Setup</td><td colspan="3"> 
</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
a. Vertical or horizontal polarization (whichever gave the higher emission level</td></tr>
</table>

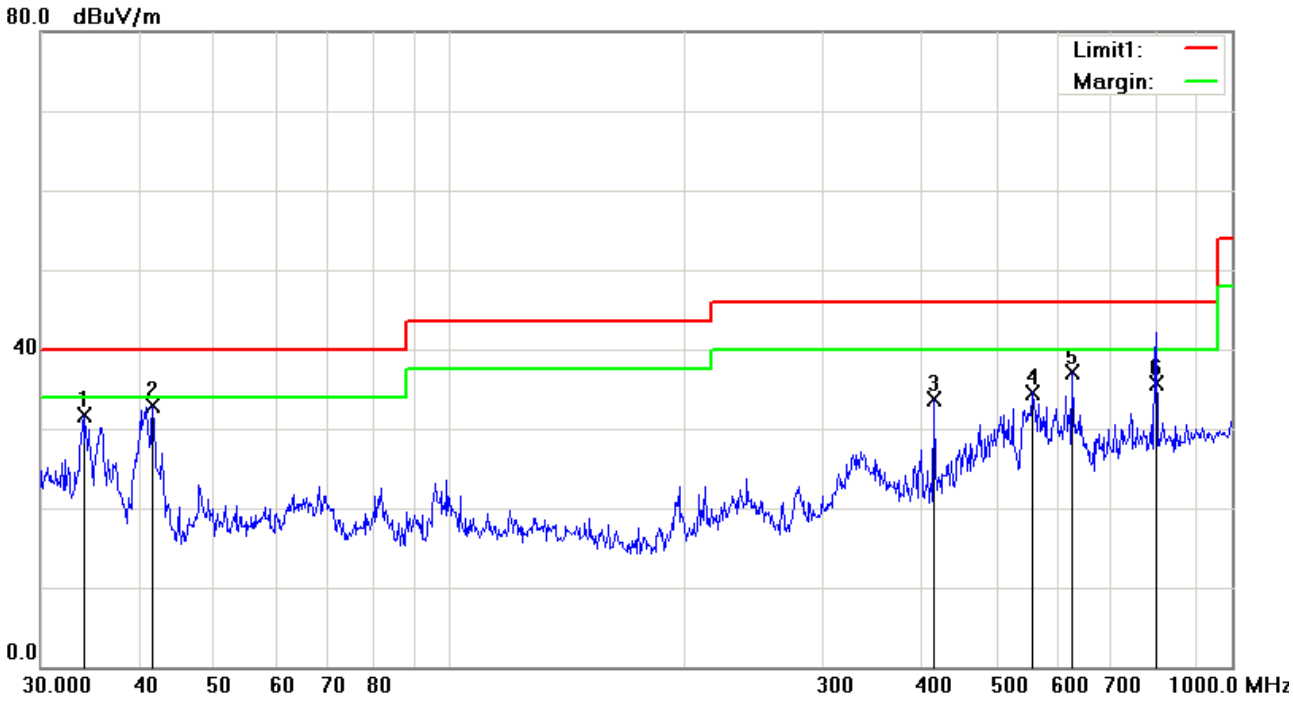
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz. 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak measurement at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth with Peak detection for Average Measurement as below at frequency above 1GHz. ■ 1 kHz (Duty cycle < 98%) □ 10 Hz (Duty cycle > 98%) 5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	
Result	☑ Pass ☐ Fail

Test Data ☑ Yes ☐ N/A

Test Plot ☑ Yes (See below) ☐ N/A

Test Mode 1:	USB Mode

Below 1GHz

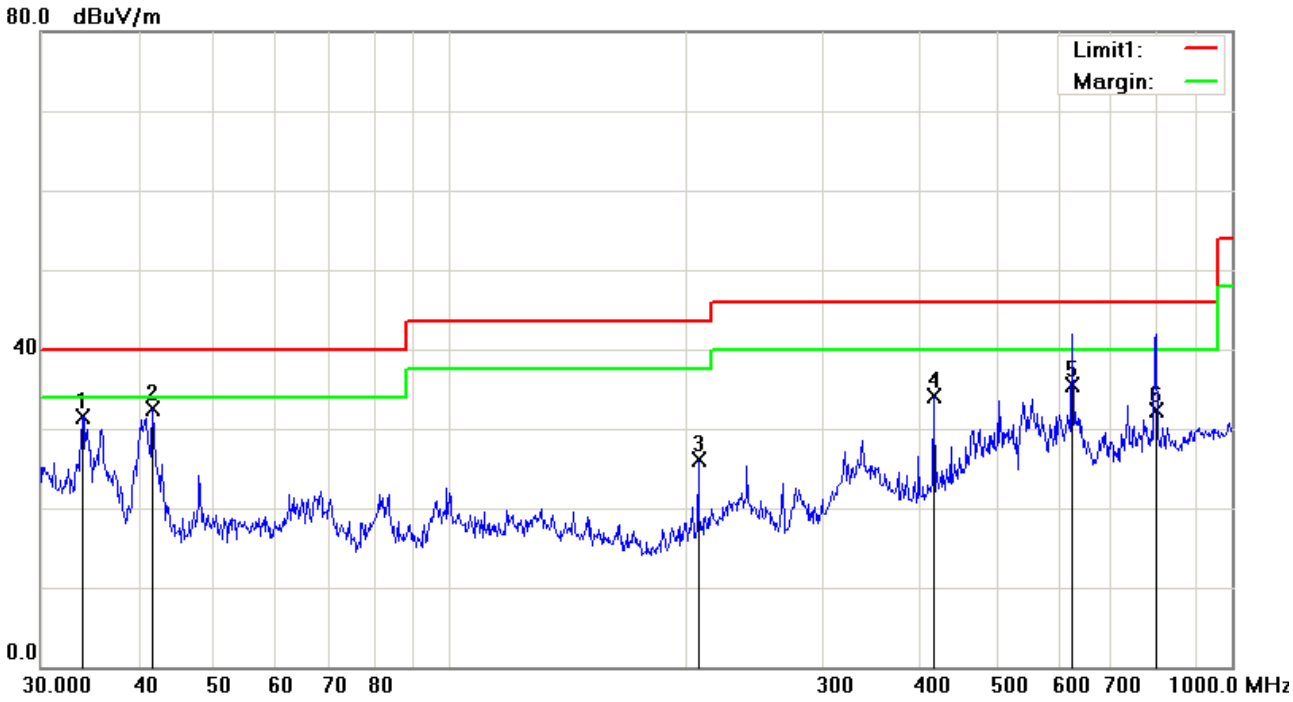


Test Data

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	34.0365	34.92	peak	-3.24	31.68	40.00	-8.32	100	206
2	H	41.7130	41.59	peak	-8.73	32.86	40.00	-7.14	100	0
3	H	416.1791	37.63	peak	-3.91	33.72	46.00	-12.28	100	202
4	H	556.7744	35.31	peak	-0.71	34.60	46.00	-11.40	100	209
5	H	625.0780	36.76	peak	0.42	37.18	46.00	-8.82	100	0
6	H	798.6867	32.46	QP	3.19	35.65	46.00	-10.35	100	6

Below 1GHz



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	33.9174	34.65	peak	-3.15	31.50	40.00	-8.50	100	192
2	V	41.7130	41.21	peak	-8.73	32.48	40.00	-7.52	100	162
3	V	207.8501	34.84	peak	-8.81	26.03	43.50	-17.47	100	162
4	V	416.1791	38.10	peak	-3.91	34.19	46.00	-11.81	100	23
5	V	624.0890	35.11	QP	0.39	35.50	46.00	-10.50	100	338
6	V	799.6670	29.11	QP	3.21	32.32	46.00	-13.68	100	348

Above 1GHz

Frequency (MHz)	Amplitude (dBμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Factors (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/AV)
1573.52	55.43	58	157	V	-22.26	74	-18.57	PK
2044.53	57.66	49	244	V	-21.13	74	-16.34	PK
1631.40	54.54	123	186	V	-23.32	74	-19.46	PK
2154.73	53.22	96	230	H	-21.15	74	-20.78	PK
2853.62	53.27	133	306	H	-21.23	74	-20.73	PK
1819.88	52.46	101	159	H	-20.77	74	-21.54	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	09/17/2015	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	03/25/2015	03/24/2016	☑
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

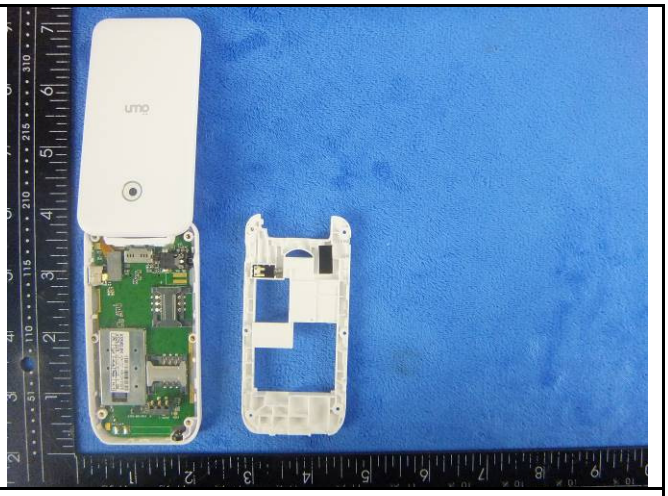
	
Whole Package - Top View	Adapter - Front View
	
EUT - Front View 1	EUT - Front View 2

EUT - Rear View

	
EUT - Top View	EUT - Bottom View
	
EUT - Left View	EUT - Right View

Annex B.ii. Photograph: EUT Internal Photo

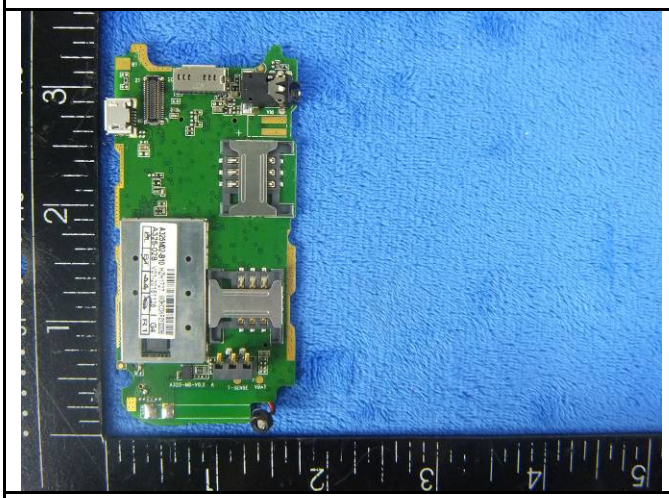
Cover Off - Top View 1



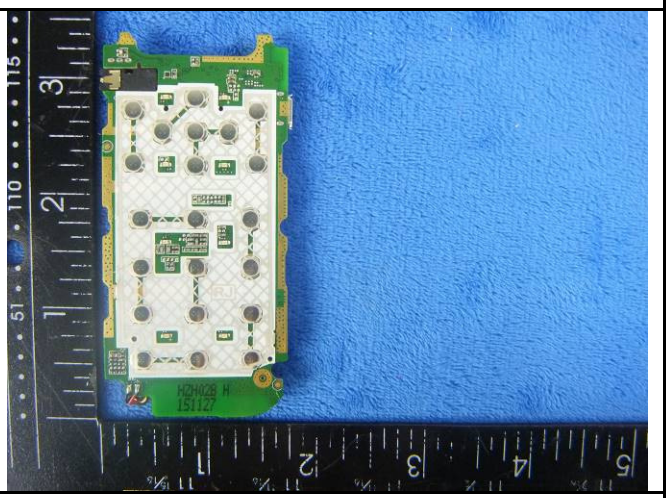
Cover Off - Top View 2

Battery - Front View

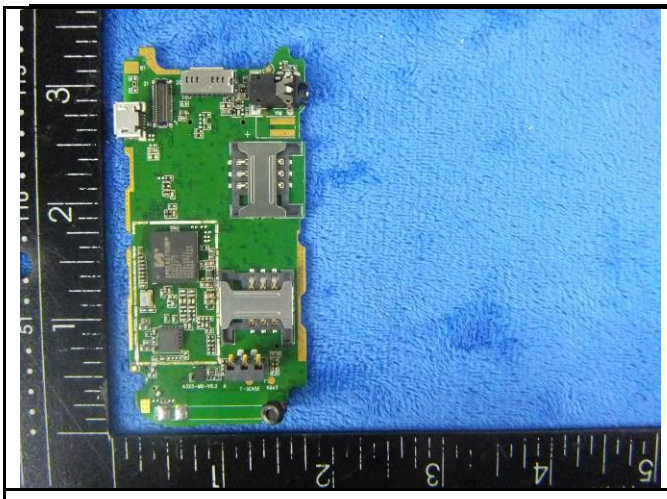
Battery - Rear View



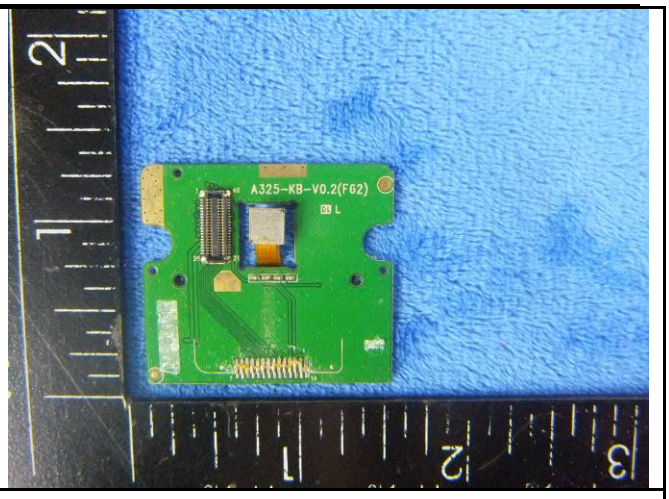
Mainbard with Shielding - Front View



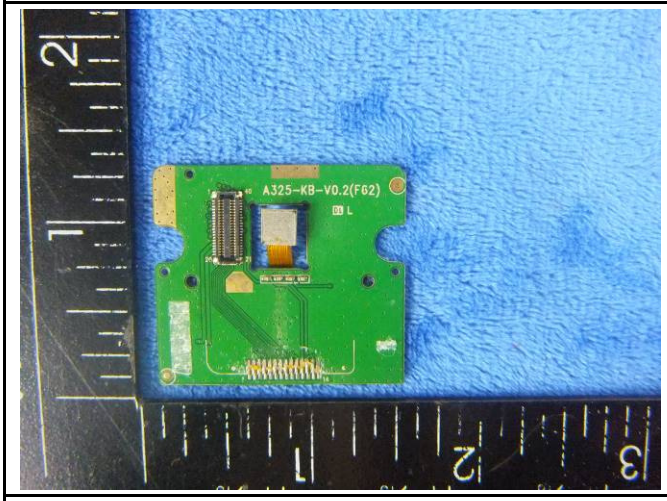
Mainbard with Shielding - Rear View



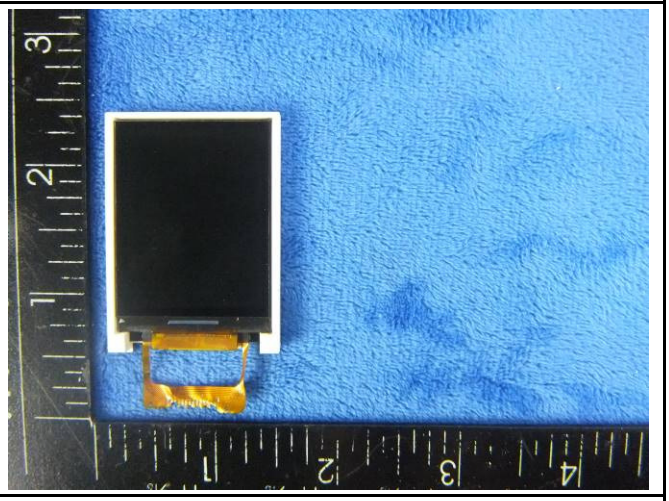
Mainboard without shielding - Front View



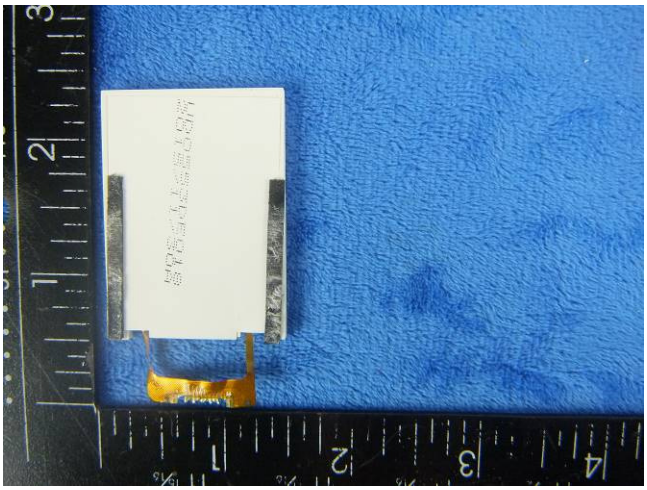
Small Mainbard - Front View



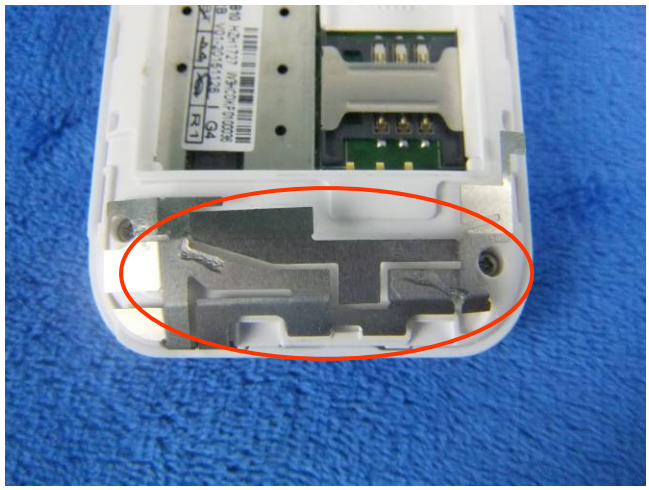
Small Mainbard - Rear View



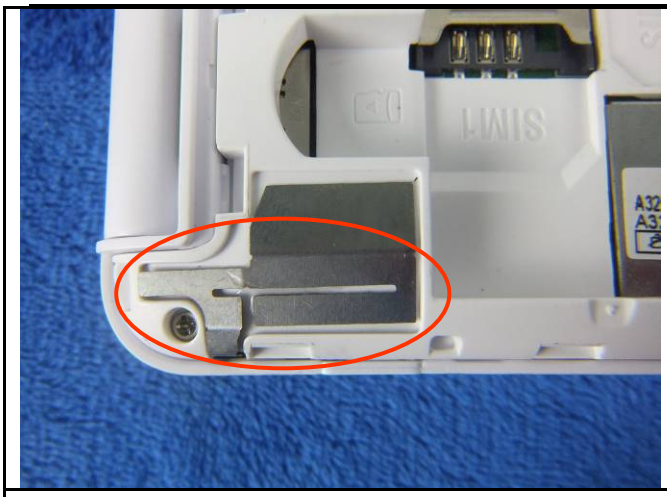
LCD – Front View



LCD – Rear View

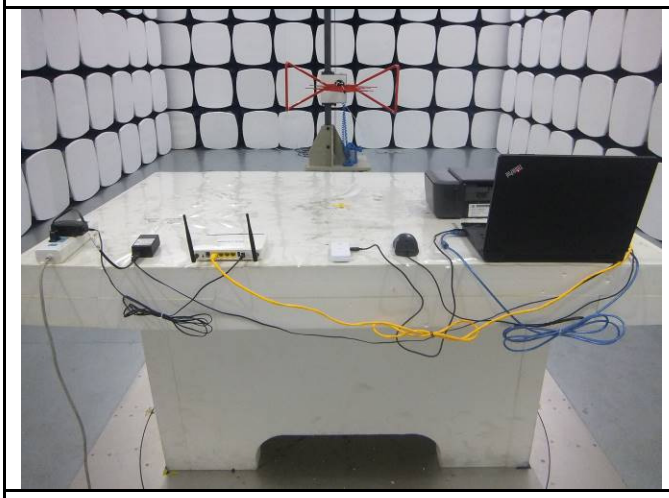
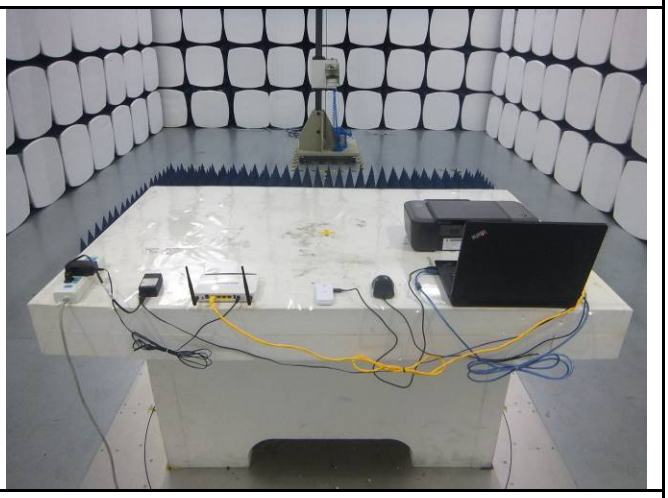


GSM/PCS - Antenna View



BT - Antenna View

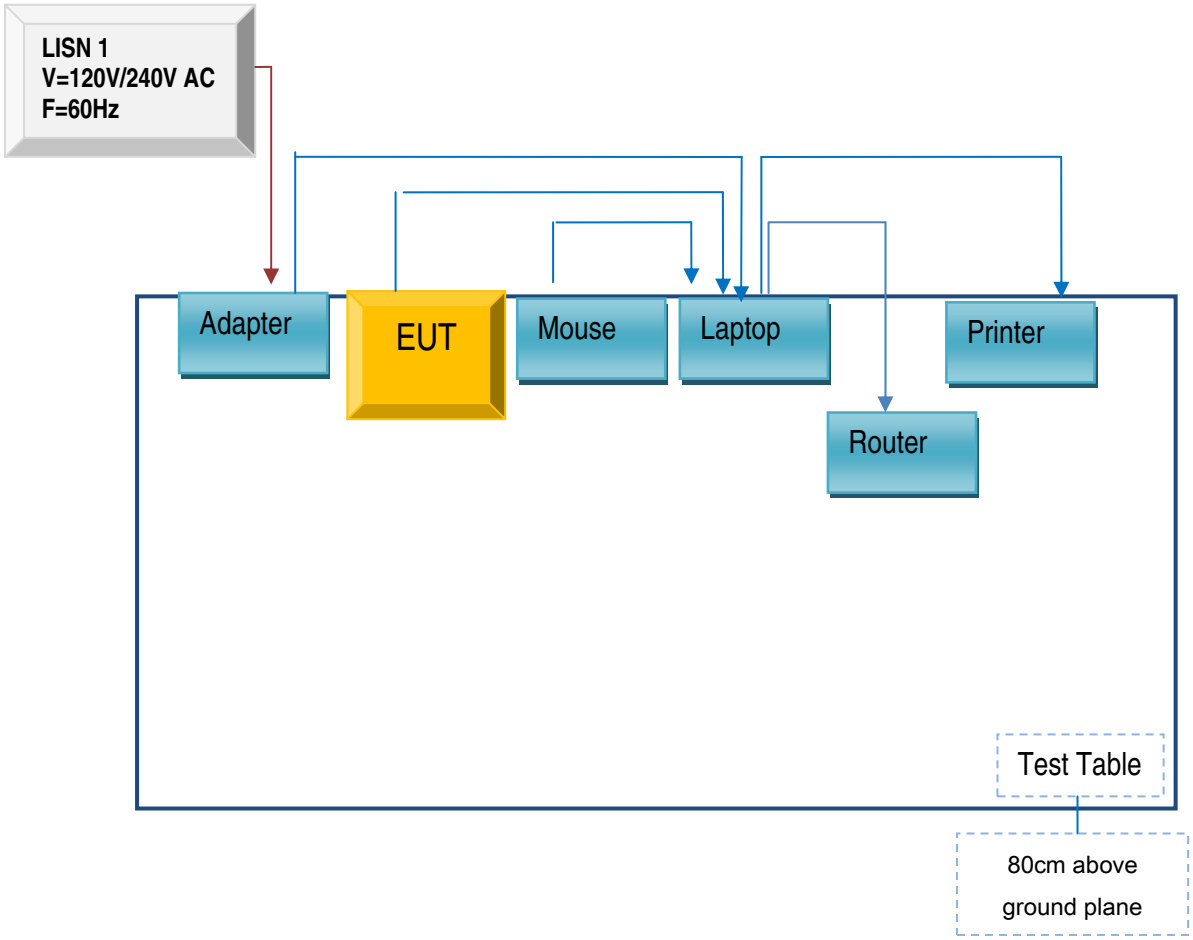
Annex B.iii. Photograph: Test Setup Photo

	
Conducted Emissions Test Setup – Front View	Conducted Emissions Test Setup – Side View
	
Radiated Spurious Emissions Test Setup Below 1GHz	Radiated Spurious Emissions Test Setup Above 1GHz

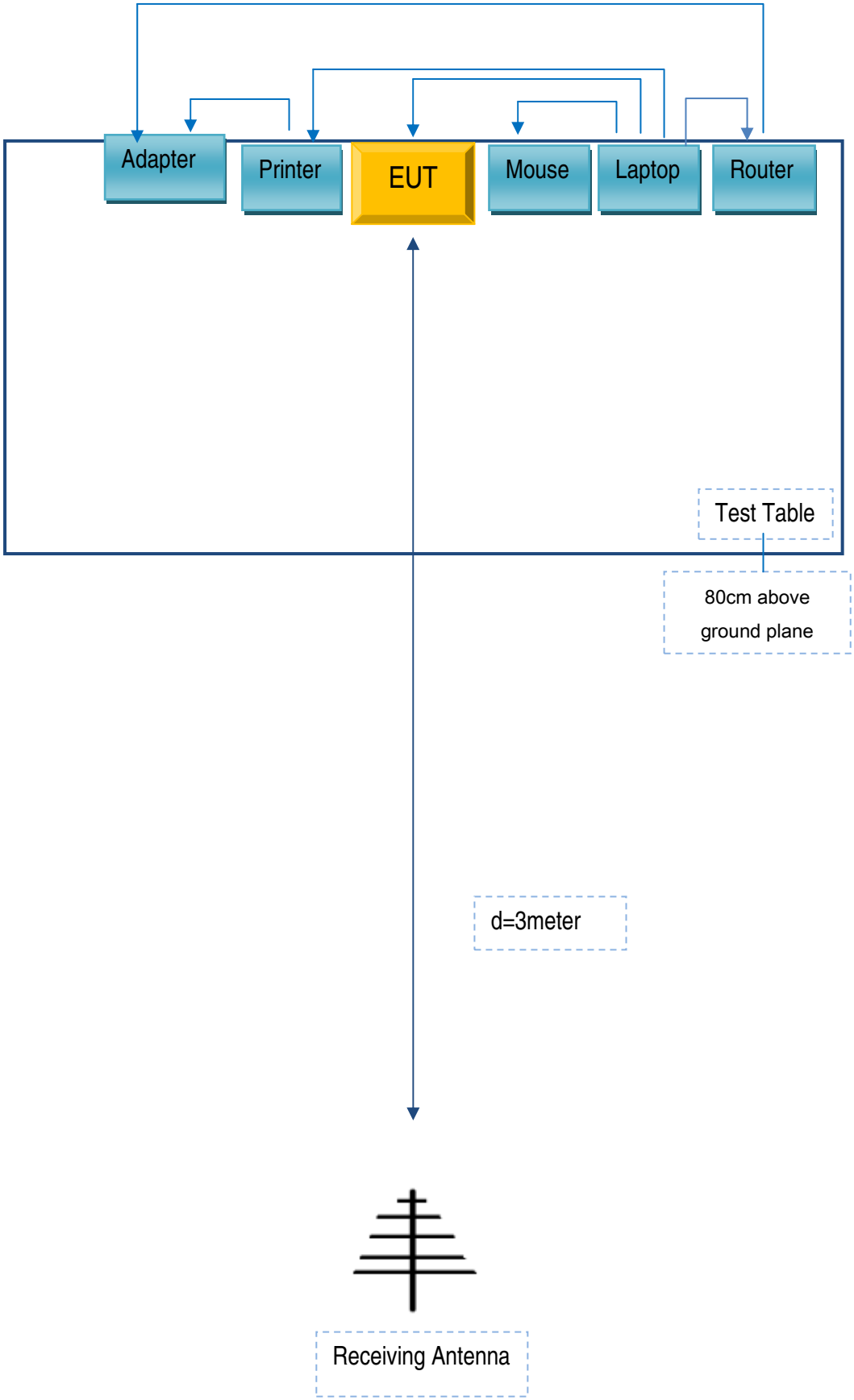
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



Block Configuration Diagram for Radiated Emissions



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	Lenovo Laptop	E40& 0579A52	LR-1EHRX
GOLDWEB	Router	R102	1202032094
Mouse	TENGE	DH-5033	JX10325
HP	Printer	VCVRA-1003	CN36M19JWX
DELL	Mouse	E100	912NMTUT41481
NEG TECHNOLOGY CO.,LIMITED	Adapter	F1015	C0705
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

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

Please see Attachment

Annex E. DECLARATION OF SIMILARITY

N/A