EMC TEST REPORT

Report No.: 15050050-FCC-E

Supersede Report No.:N/A

Applicant	b Mobile HK Limited
Product Name	Mobile Phone
Model No.	C240
Serial No.	N/A
Test Standard	FCC Part 15 Subpart B Class B:2014, ANSI C63.4: 2014
Test Date	October 30 to November 24, 2015
Issue Date	November 25, 2015
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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1. Report Revision History

Report No.	Report Version	Description	Issue Date
15050050-FCC-E	NONE	Original	November 25, 2015
15050050-FCC-E	V1	Changing Test Setup Photos and adding data	December 07,2015

2. Customer information

Applicant Name	b Mobile HK Limited
Applicant Add	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung;New Territories; Hong Kong
Manufacturer	b Mobile HK Limited
Manufacturer Add	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung;New Territories; Hong Kong

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:	C240
Serial Model:	N/A
Antenna Gain:	GSM850: 0.7dBi PCS1900: 1.2dBi UMTS-FDD Band V: 0.7dBi UMTS-FDD Band IV: 1.1dBi UMTS-FDD Band II: 1.2dBi Bluetooth: 1.1dBi
Input Power:	Adapter: Model:TX-141006-05 Input: AC 100-240V; 50/60Hz;0.2A Output: DC5.0V;500mA Battery: Model:C240 Spec:DC3.7V,1000mAh,3.7Wh
Equipment Category：	JBP
Type of Modulation:	GSM / GPRS: GMSK EGPRS: GMSK 8PSK UMTS-FDD: QPSK, 16QAM 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 UMTS-FDD Band V TX: 826.4 ~ 846.6 MHz; RX: 871.4 ~ 891.6 MHz UMTS-FDD Band IV TX:1712.4 ~ 1752.6 MHz; RX : 2112.4 ~ 2152.6 MHz UMTS-FDD Band II TX:1852.4 ~ 1907.6 MHz; RX: 1932.4 ~ 1987.6 MHz Bluetooth: 2402-2480 MHz

Number of Channels:	GSM 850: 124CH PCS1900: 299CH UMTS-FDD Band V : 102CH UMTS-FDD Band IV: 202CH UMTS-FDD Band II : 277CH Bluetooth: 79CH
Port:	Power Port, Earphone Port, USB Port
GPRS/EGPRS Multi-slot class	8/10/12
Trade Name :	Bmobile
FCC ID:	ZSW-10-004
Date EUT received:	October 29,2015

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

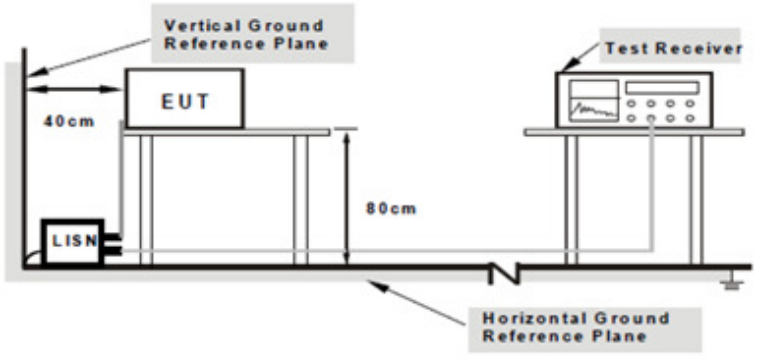
Emissions		
Test Item	**Description**	**Uncertainty**
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	24℃
Relative Humidity	56%
Atmospheric Pressure	1004mbar
Test date :	November 04, 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"> 

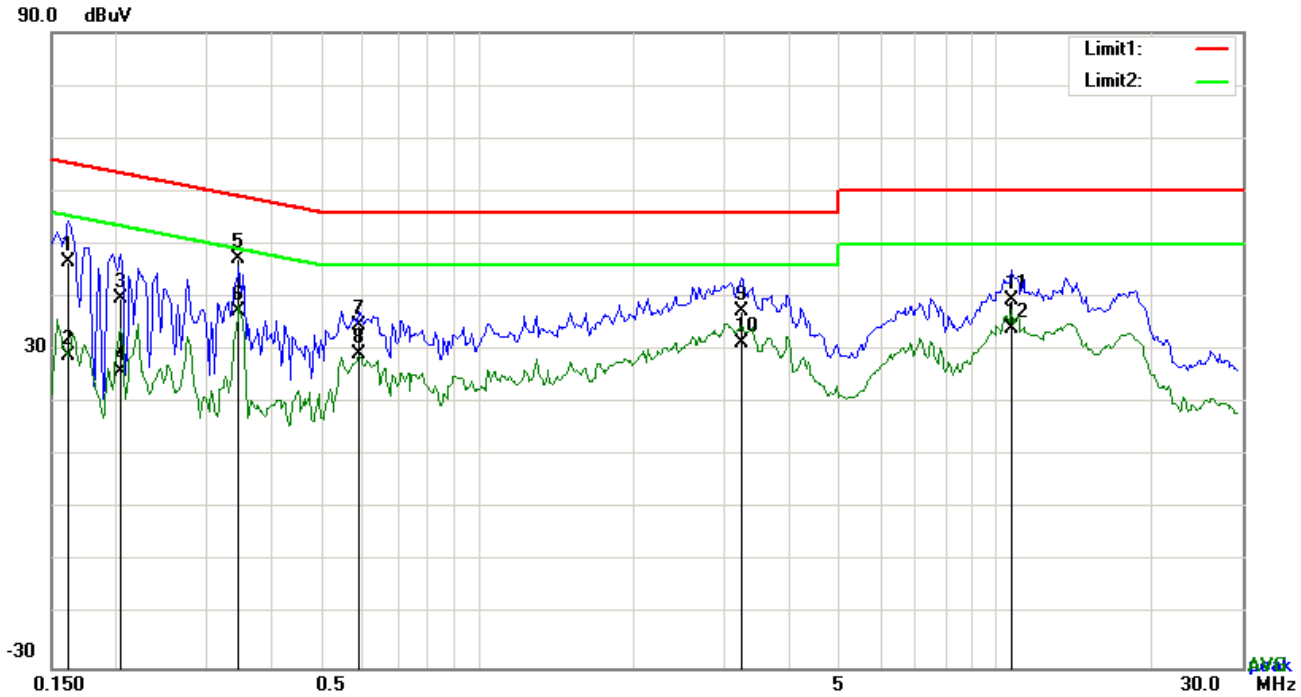
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</td></tr>
<tr><td>Procedure</td><td colspan="3">1. The EUT and supporting equipment were set up in accordance with the requirements of 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

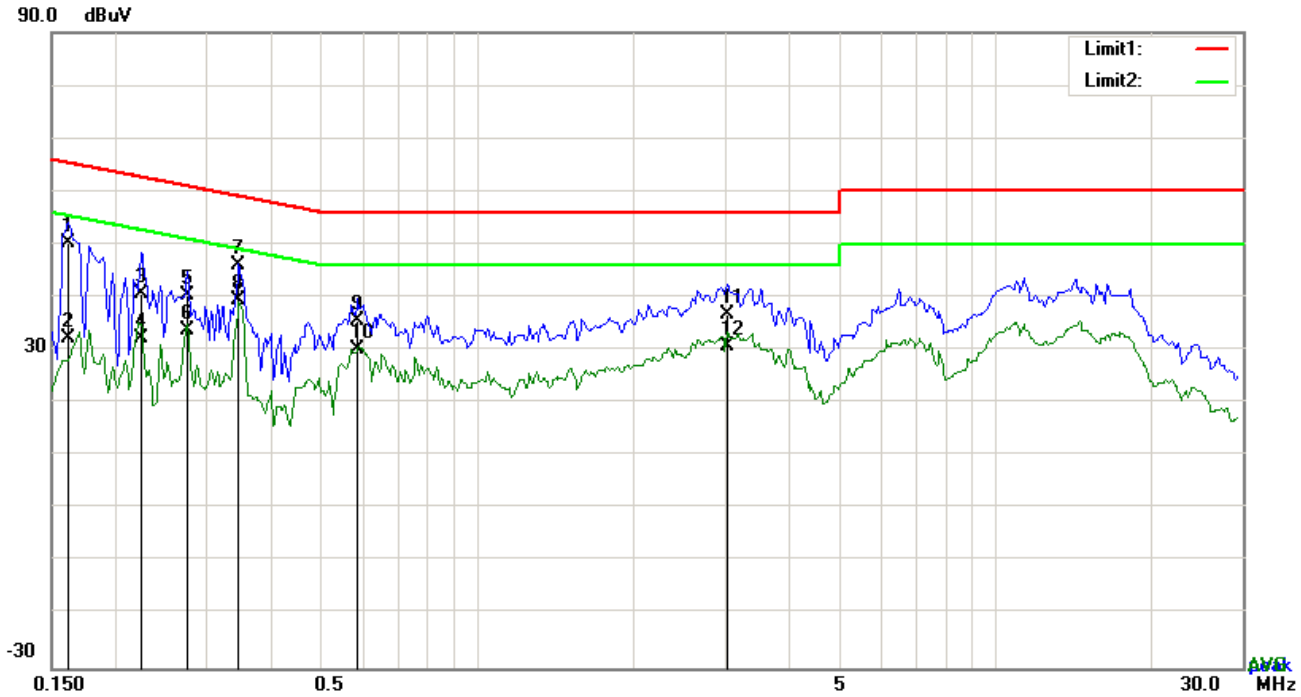


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1617	36.76	QP	10.03	46.79	65.38	-18.59
2	L1	0.1617	19.01	AVG	10.03	29.04	55.38	-26.34
3	L1	0.2046	29.81	QP	10.03	39.84	63.42	-23.58
4	L1	0.2046	15.93	AVG	10.03	25.96	53.42	-27.46
5	L1	0.3450	37.13	QP	10.03	47.16	59.08	-11.92
6	L1	0.3450	27.47	AVG	10.03	37.50	49.08	-11.58
7	L1	0.5907	24.50	QP	10.03	34.53	56.00	-21.47
8	L1	0.5907	19.14	AVG	10.03	29.17	46.00	-16.83
9	L1	3.2340	27.27	QP	10.06	37.33	56.00	-18.67
10	L1	3.2340	21.41	AVG	10.06	31.47	46.00	-14.53
11	L1	10.7727	29.43	QP	10.16	39.59	60.00	-20.41
12	L1	10.7727	23.75	AVG	10.16	33.91	50.00	-16.09

Test Mode :	USB Mode

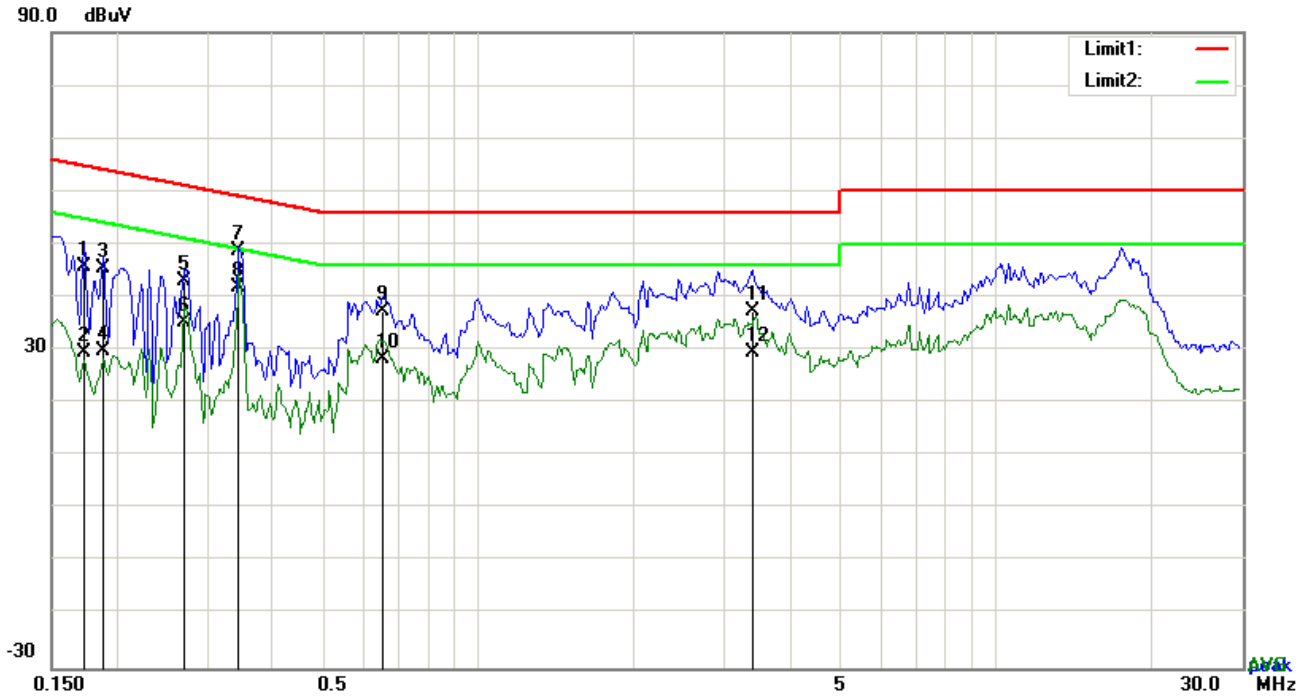


Test Data

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	40.27	QP	10.02	50.29	65.38	-15.09
2	N	0.1617	22.38	AVG	10.02	32.40	55.38	-22.98
3	N	0.2241	30.73	QP	10.02	40.75	62.67	-21.92
4	N	0.2241	22.18	AVG	10.02	32.20	52.67	-20.47
5	N	0.2748	30.37	QP	10.02	40.39	60.97	-20.58
6	N	0.2748	23.59	AVG	10.02	33.61	50.97	-17.36
7	N	0.3450	35.96	QP	10.02	45.98	59.08	-13.10
8	N	0.3450	29.30	AVG	10.02	39.32	49.08	-9.76
9	N	0.5868	25.62	QP	10.02	35.64	56.00	-20.36
10	N	0.5868	20.08	AVG	10.02	30.10	46.00	-15.90
11	N	3.0273	26.80	QP	10.05	36.85	56.00	-19.15
12	N	3.0273	20.80	AVG	10.05	30.85	46.00	-15.15

Test Mode :	USB Mode

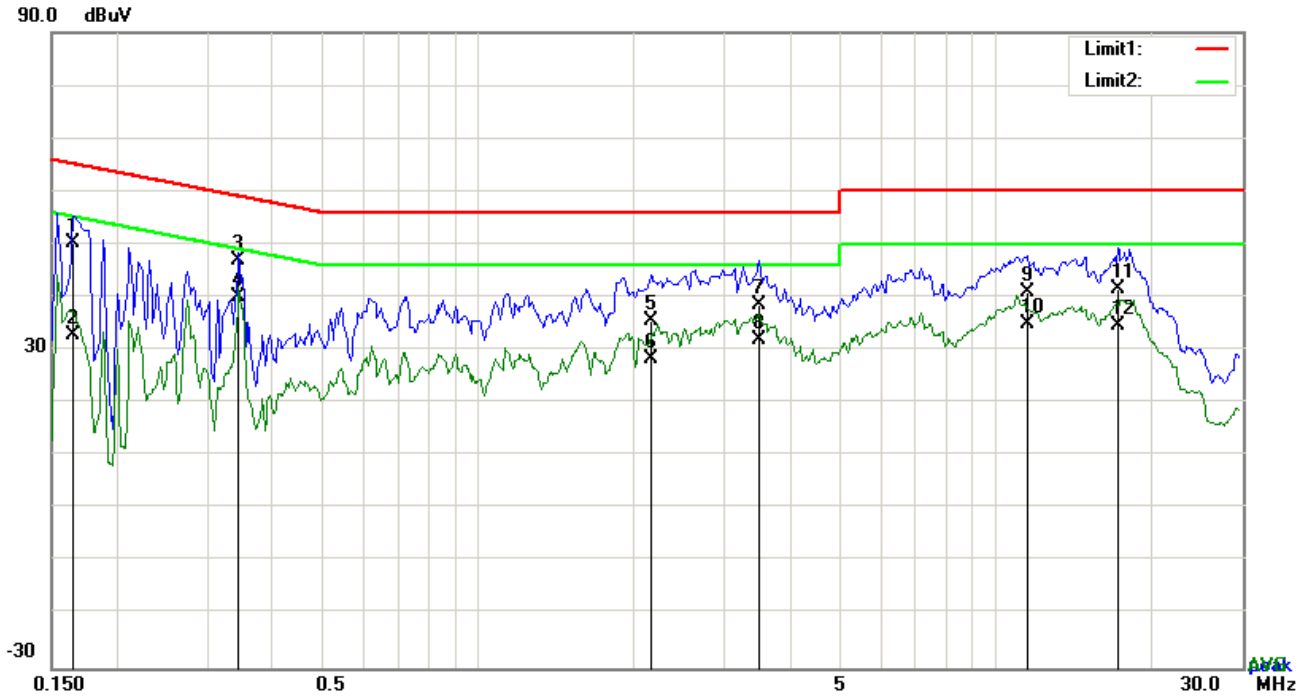


Test Data

Phase Line Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	L1	0.1734	35.68	QP	10.03	45.71	64.80	-19.09
2	L1	0.1734	19.49	AVG	10.03	29.52	54.80	-25.28
3	L1	0.1890	35.53	QP	10.03	45.56	64.08	-18.52
4	L1	0.1890	19.94	AVG	10.03	29.97	54.08	-24.11
5	L1	0.2709	32.98	QP	10.03	43.01	61.09	-18.08
6	L1	0.2709	25.19	AVG	10.03	35.22	51.09	-15.87
7	L1	0.3450	38.59	QP	10.03	48.62	59.08	-10.46
8	L1	0.3450	31.78	AVG	10.03	41.81	49.08	-7.27
9	L1	0.6570	27.45	QP	10.03	37.48	56.00	-18.52
10	L1	0.6570	18.46	AVG	10.03	28.49	46.00	-17.51
11	L1	3.3822	27.44	QP	10.06	37.50	56.00	-18.50
12	L1	3.3822	19.37	AVG	10.06	29.43	46.00	-16.57

Test Mode :	USB Mode



Test Data

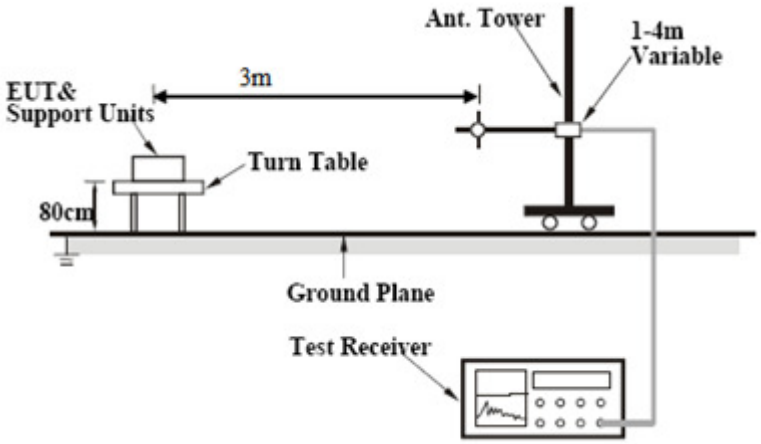
Phase Neutral Plot at 240Vac, 60Hz

No.	P/L	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
		(MHz)	(dBuV)		(dB}	(dBuV)	(dBuV)	(dB)
1	N	0.1656	40.17	QP	10.02	50.19	65.18	-14.99
2	N	0.1656	22.90	AVG	10.02	32.92	55.18	-22.26
3	N	0.3450	36.82	QP	10.02	46.84	59.08	-12.24
4	N	0.3450	30.07	AVG	10.02	40.09	49.08	-8.99
5	N	2.1624	25.54	QP	10.04	35.58	56.00	-20.42
6	N	2.1624	18.22	AVG	10.04	28.26	46.00	-17.74
7	N	3.4914	28.42	QP	10.05	38.47	56.00	-17.53
8	N	3.4914	22.00	AVG	10.05	32.05	46.00	-13.95
9	N	11.5371	30.67	QP	10.16	40.83	60.00	-19.17
10	N	11.5371	24.87	AVG	10.16	35.03	50.00	-14.97
11	N	17.2740	31.20	QP	10.23	41.43	60.00	-18.57
12	N	17.2740	24.56	AVG	10.23	34.79	50.00	-15.21

6.2 Radiated Emissions

Temperature	24℃
Relative Humidity	56%
Atmospheric Pressure	1004mbar
Test date :	November 04, 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>

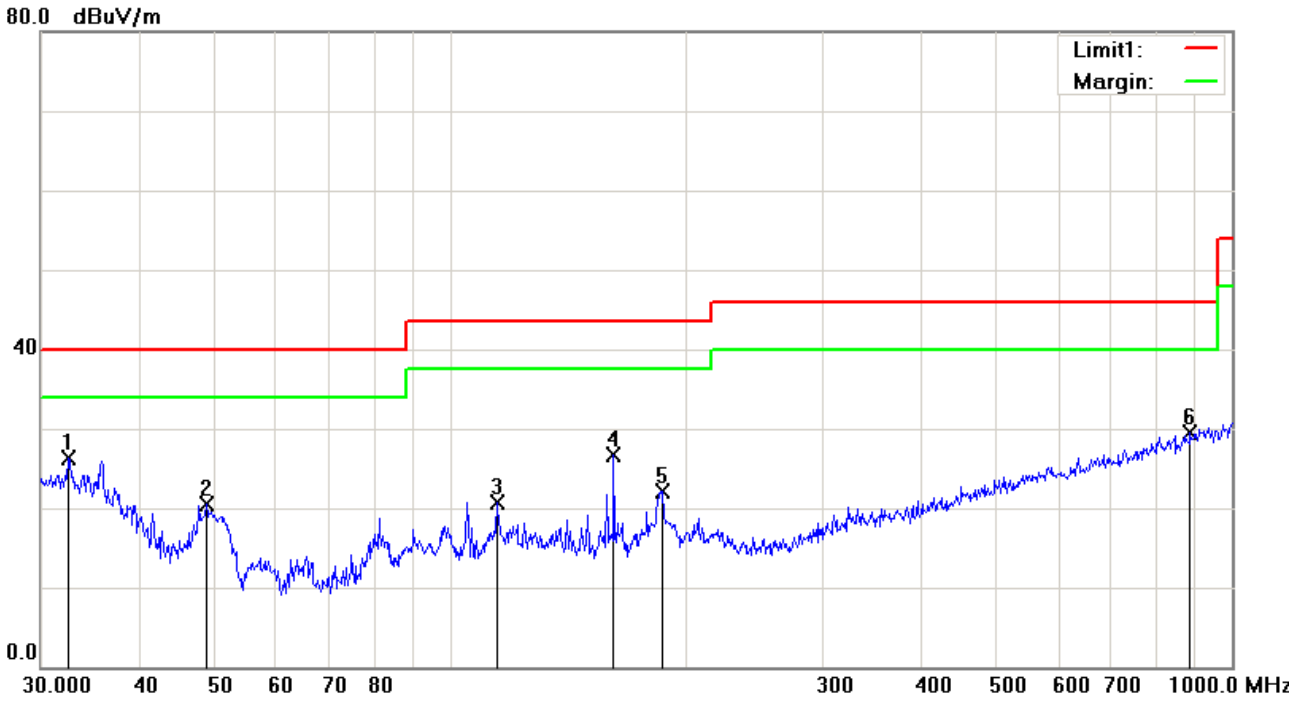
	over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120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

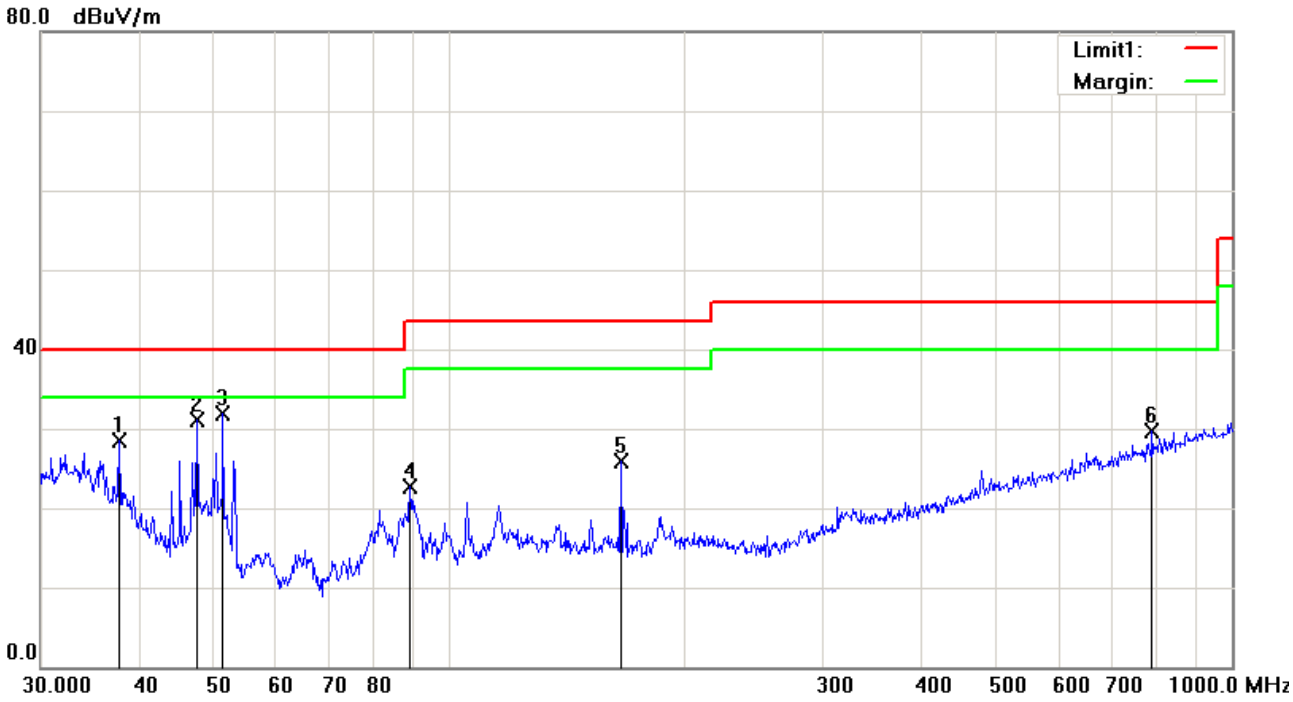


Test Data

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	32.5198	28.34	peak	-2.11	26.23	40.00	-13.77	100	359
2	H	48.8429	33.09	peak	-12.66	20.43	40.00	-19.57	100	359
3	H	114.9169	28.84	peak	-8.17	20.67	43.50	-22.83	100	358
4	H	162.0414	35.13	peak	-8.45	26.68	43.50	-16.82	100	233
5	H	187.0958	31.58	peak	-9.42	22.16	43.50	-21.34	100	165
6	H	884.5029	25.06	peak	4.42	29.48	46.00	-16.52	100	359

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	37.8121	34.44	peak	-5.99	28.45	40.00	-11.55	100	180
2	V	47.4918	43.13	peak	-12.06	31.07	40.00	-8.93	100	180
3	V	51.3005	45.27	peak	-13.33	31.94	40.00	-8.06	100	180
4	V	88.9639	36.07	peak	-13.40	22.67	43.50	-20.83	100	134
5	V	165.4867	34.63	peak	-8.73	25.90	43.50	-17.60	100	180
6	V	790.6188	26.58	peak	3.06	29.64	46.00	-16.36	100	0

Above 1GHz

Frequency (MHz)	Amplitude (dBμV/m)	Azimuth	Height (cm)	Polarity (H/V)	Factors (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/AV)
1565.77	53.55	48	167	V	-24.88	74	-20.45	PK
2045.19	58.12	134	164	V	-22.07	74	-15.88	PK
1611.4	54.23	64	145	V	-26.1	74	-20.77	PK
2155.42	52.14	38	249	H	-23.35	74	-22.86	PK
2850.11	51.99	123	200	H	-20.88	74	-23.01	PK
1809.51	52.24	45	165	H	-23.9	74	-22.76	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.

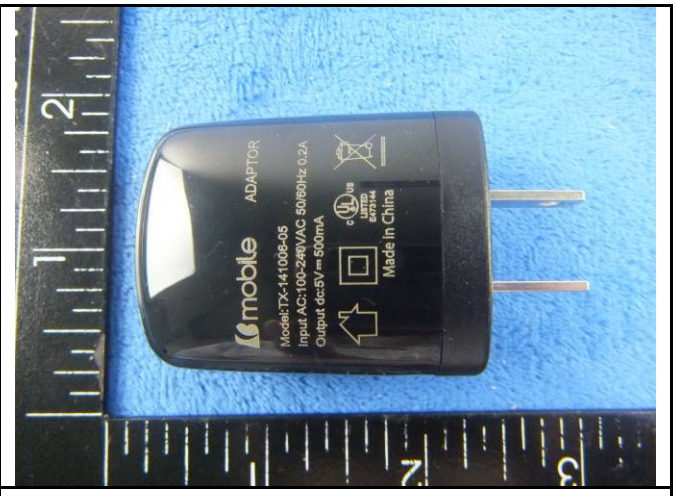
Annex A. TEST INSTRUMENT

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



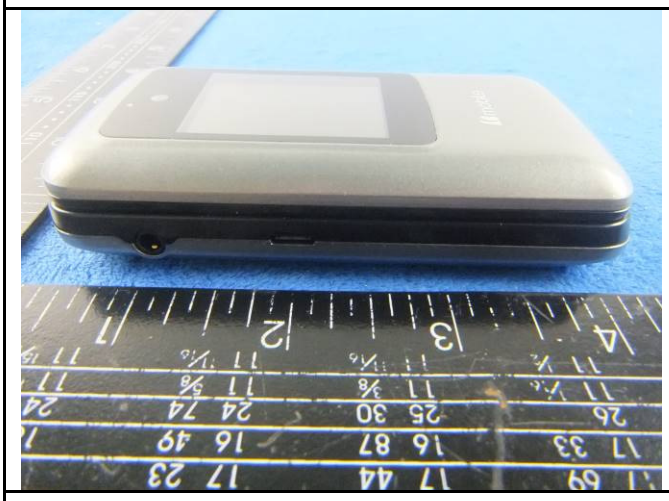
Adapter - Front View

EUT - Front View

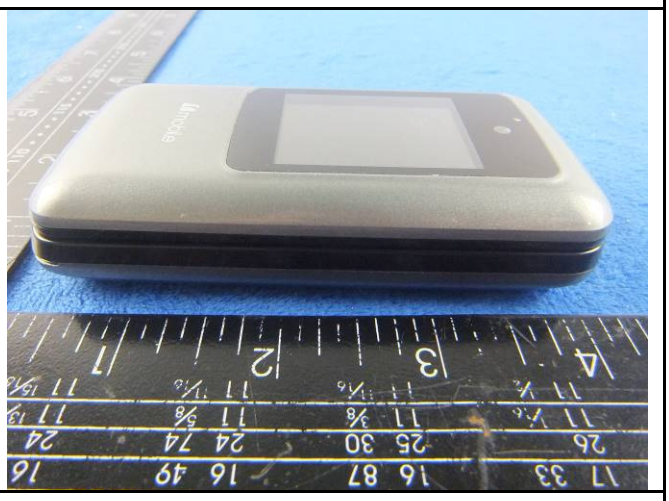
EUT - Rear View

EUT - Top View

EUT - Bottom View



EUT - Left View

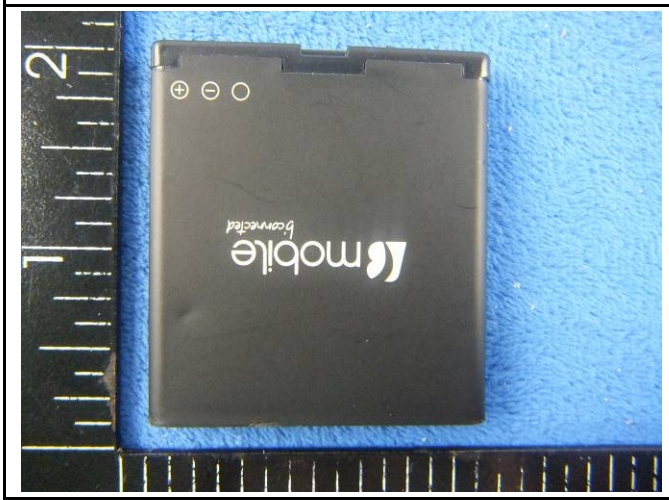


EUT - Right View

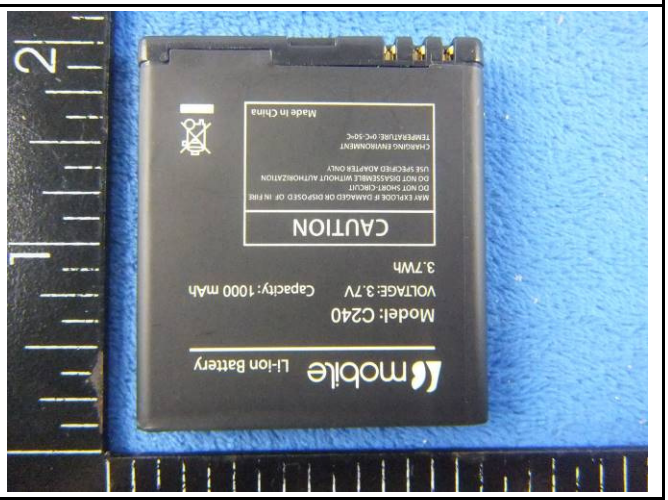
Annex B.ii. Photograph: EUT Internal Photo

Cover Off - Top View 1

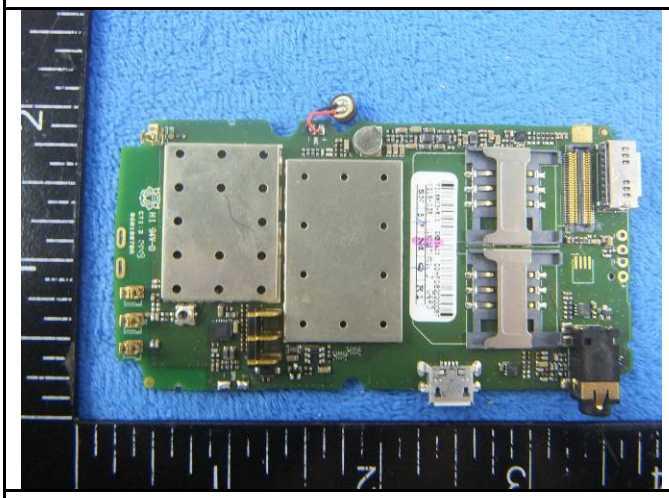
Cover Off - Top View 2



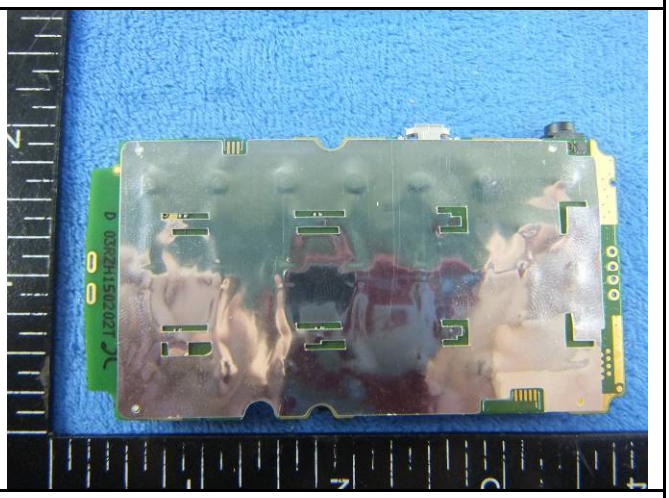
Battery - Front View



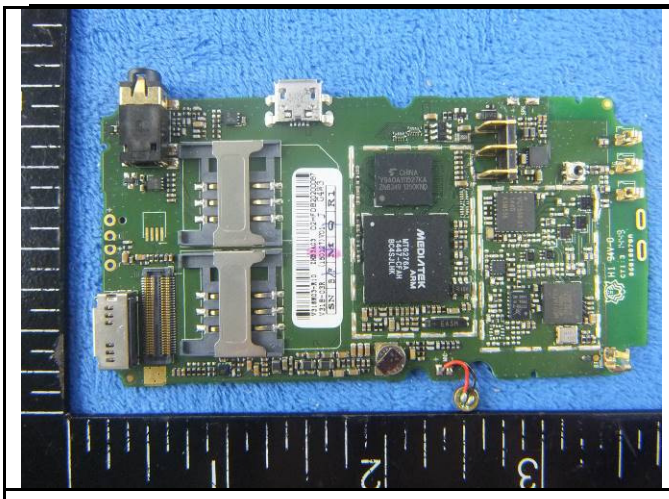
Battery - Rear View



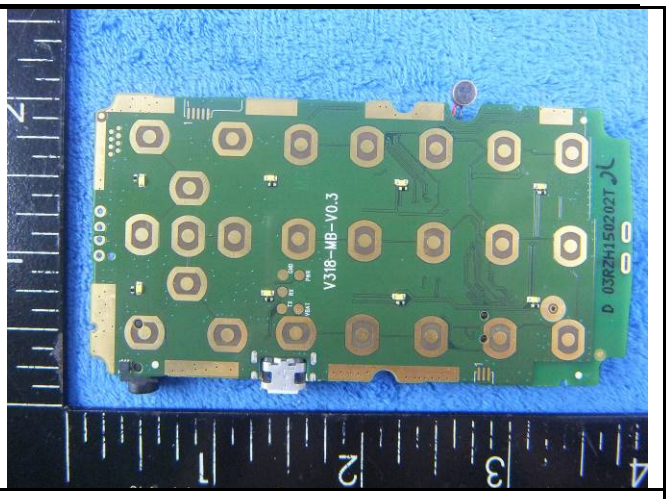
Mainborad With Shielding - Front View



Mainborad With Shielding - Rear View

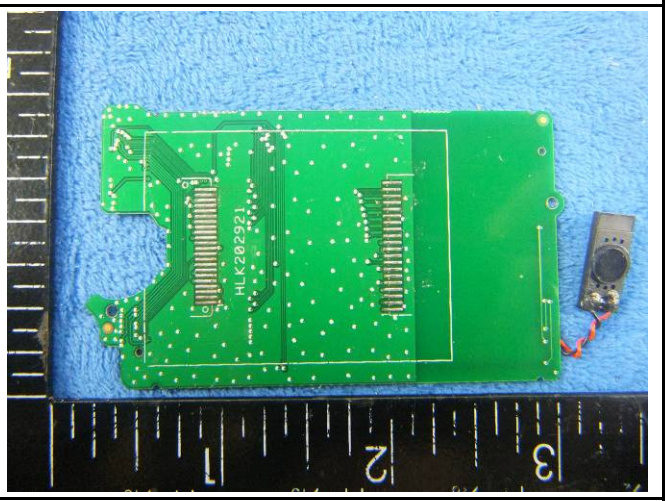


Mainborad Without Shielding - Front View

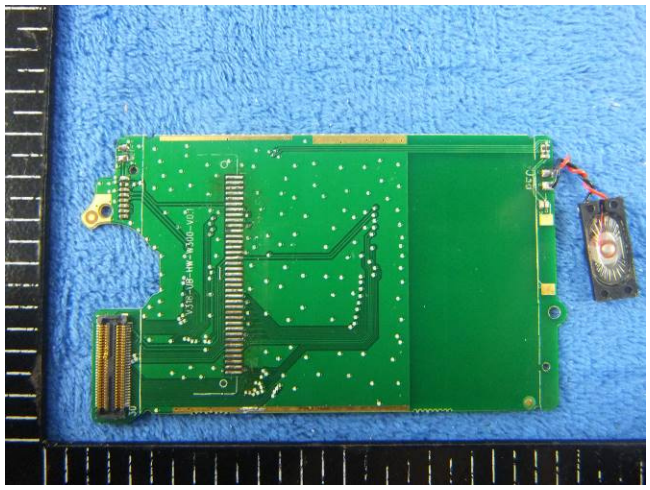


Mainborad Without Shielding - Rear View

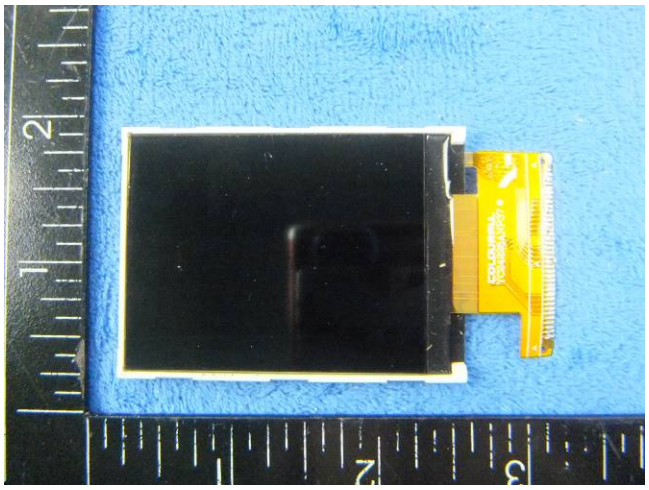
Cover Off - Top View 3



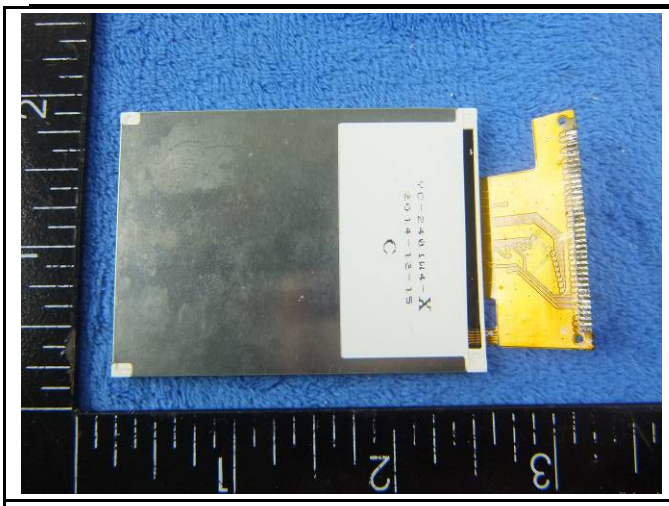
Connecting plate - Front View



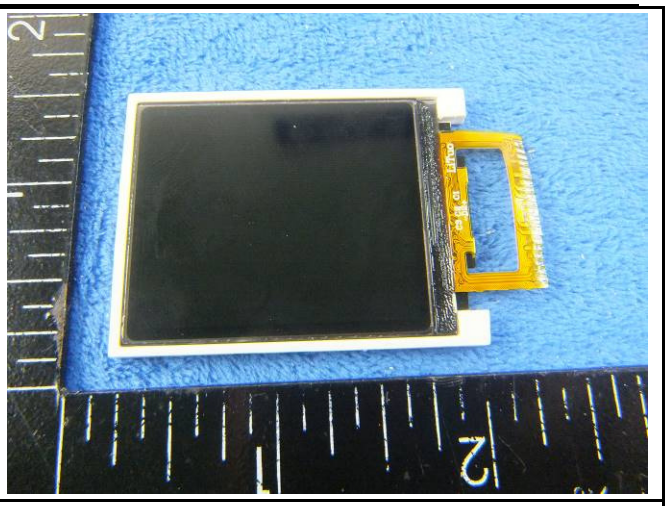
Connecting plate - Rear View



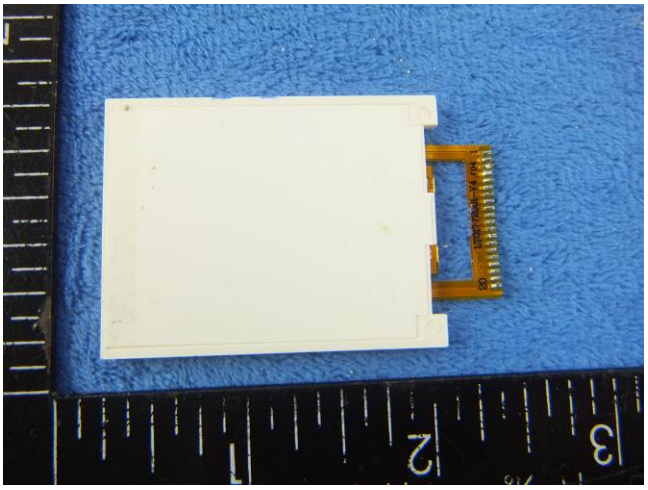
LCD 1 – Front View



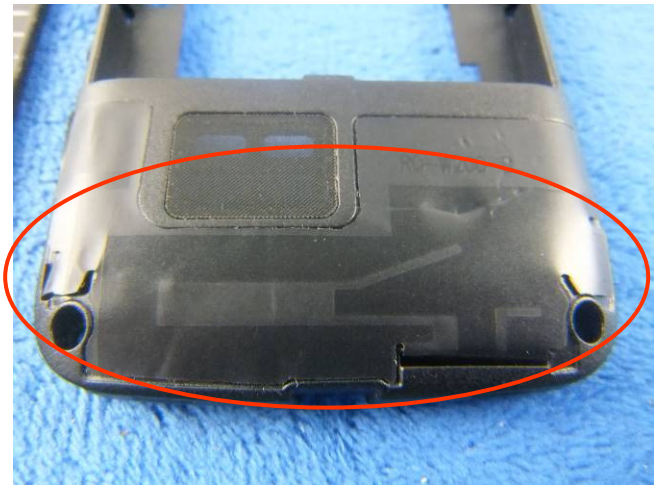
LCD 1 – Rear View



LCD 2– Front View



LCD 2 – Rear View



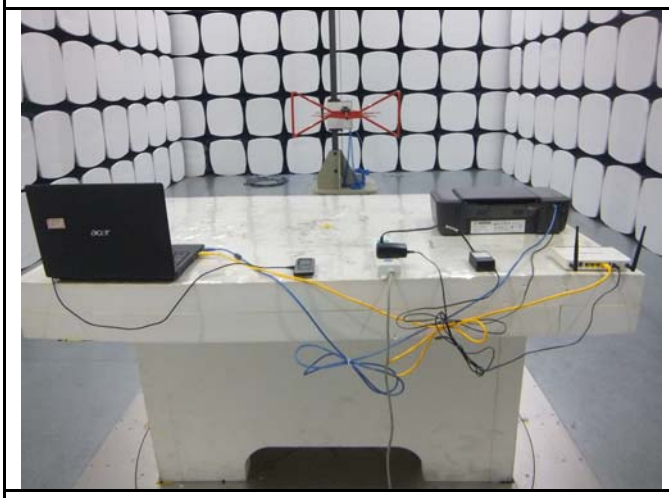
GSM/PCS/UMTS-FDD Antenna View

BT - Antenna View

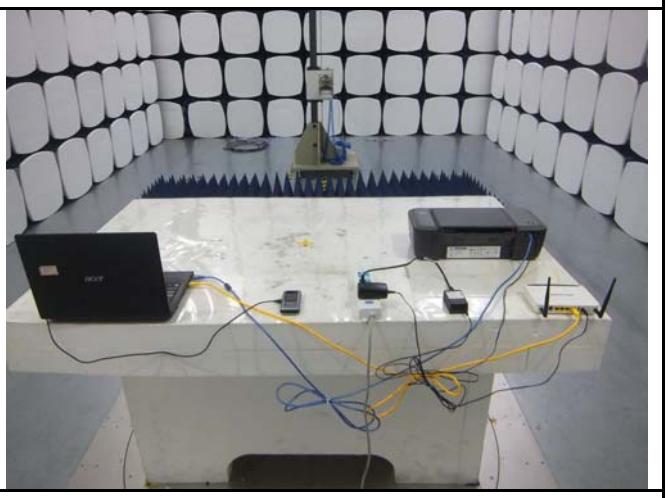
Annex B.iii. Photograph: Test Setup Photo

Conducted Emissions Test Setup – Front View

Conducted Emissions Test Setup – Side View



Radiated Spurious Emissions Test Setup Below 1GHz



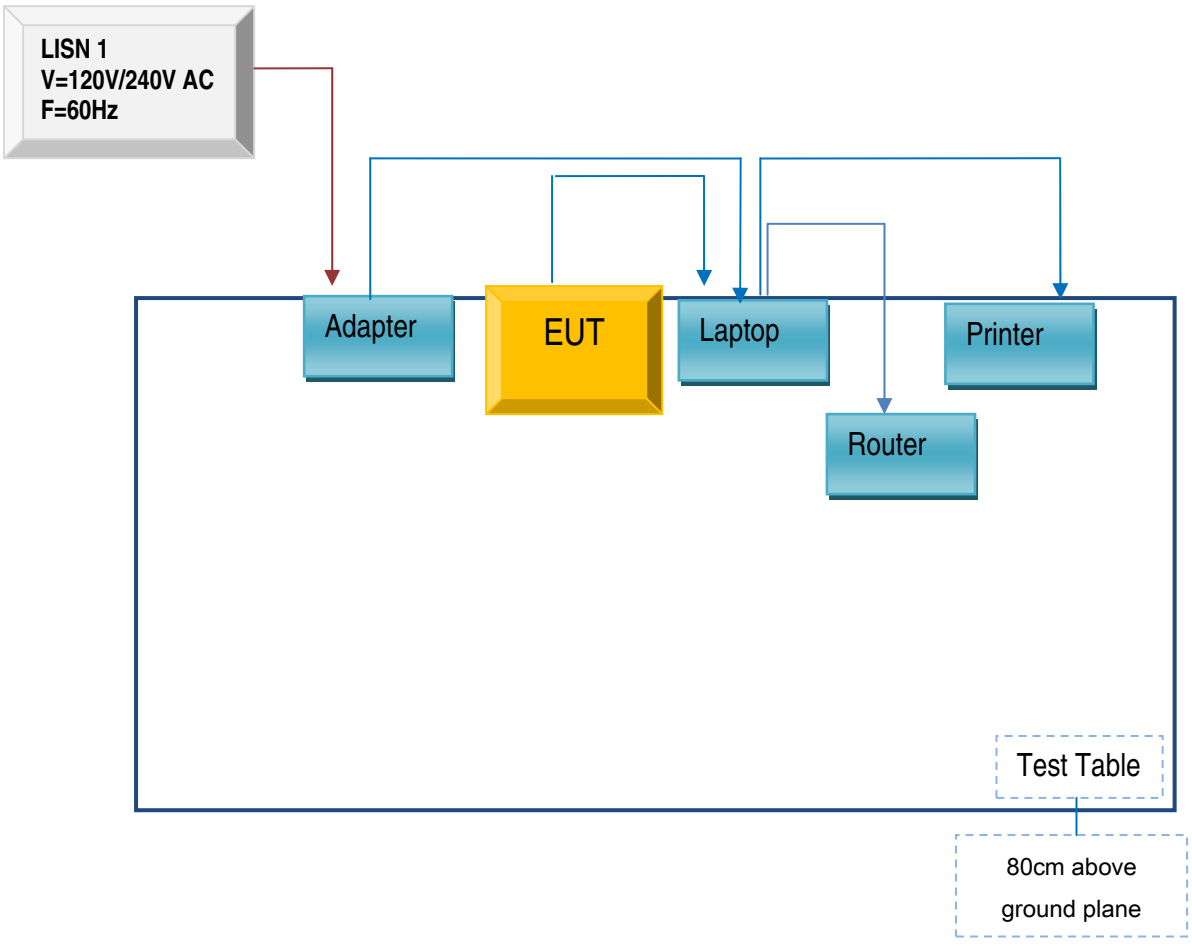
Radiated Spurious Emissions Test Setup Above 1GHz

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

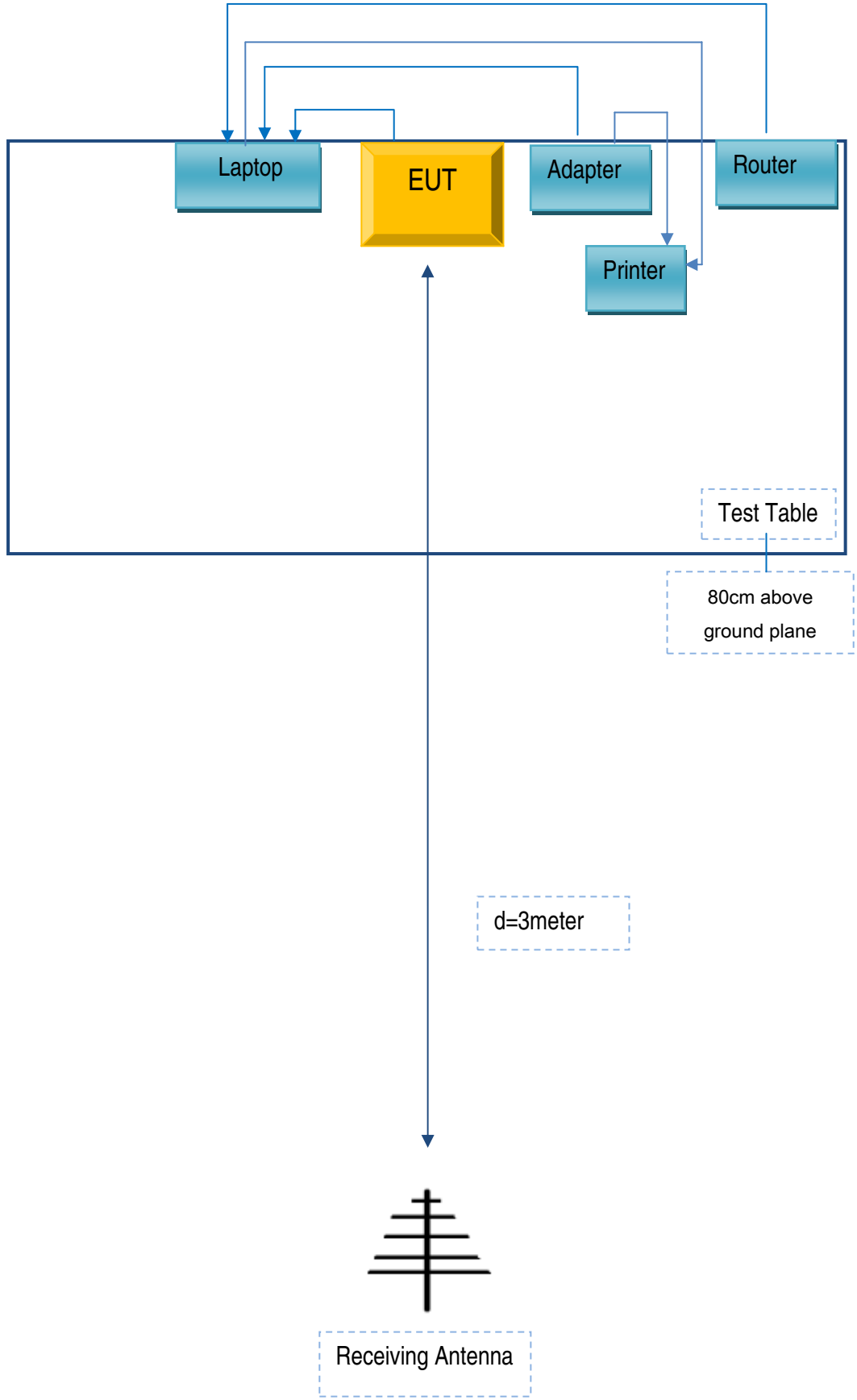
Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions

Block Configuration Diagram for 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 Euquipment:

Manufacturer	Equipment Description	Model	Calibration Date	Calibration Due Date
Lenovo	Lenovo Laptop	E40& 0579A52	N/A	N/A

Supporting Cable:

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

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

Please see Attachment

Annex E. DECLARATION OF SIMILARITY

N/A