

EMC TEST REPORT



Report No.: 15070273-FCC-E1

Supersede Report No.: N/A

Applicant	Social Mobile Telecommunications	
Product Name	PHONE	
Model No.	X301	
Serial No.	Vapor	
Test Standard	FCC Part 15 Subpart B Class B:2014, ANSI C63.4: 2014	
Test Date	April 16 to April 27, 2015	
Issue Date	May 08, 2015	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification <input checked="" type="checkbox"/>		
Equipment did not comply with the specification <input type="checkbox"/>		
Kahn Yang	Chris You	
Kahn Yang Test Engineer	Chris You Checked By	
This test report may be reproduced in full only		
Test result presented in this test report is applicable to the tested sample only		

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

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



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

Accreditations for Conformity Assessment

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

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
15070273-FCC-E1	NONE	Original	May 08, 2015

2. Customer information

Applicant Name	Social Mobile Telecommunications
Applicant Add	16400 NW 2nd Ave. #201 Miami, Florida 33169
Manufacturer	SMT TELECOMM HK LIMITED
Manufacturer Add	Unit C 8/F, CHARMHILL CTR 50 HILLWOOD RD TST KL

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: PHONE

Main Model: X301

Serial Model: Vapor

Date EUT received: April 15, 2015

Test Date(s): April 16 to April 27, 2015

Equipment Category : JBP

GSM850: 0.8 dBi

PCS1900: -1 dBi

UMTS-FDD Band V: -0.7dBi

Antenna Gain: UMTS-FDD Band II: -0.9dBi

Bluetooth/BLE: -0.5dBi

WIFI: -0.5 dBi

GSM / GPRS: GMSK

EGPRS: GMSK, 8PSK

UMTS-FDD: QPSK, 16QAM

Type of Modulation: 802.11b/g/n: DSSS, OFDM

Bluetooth: GFSK, π /4DQPSK, 8DPSK

BLE: GFSK

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

RF Operating Frequency (ies): UMTS-FDD Band II TX: 1852.4 ~ 1907.6 MHz;
RX: 1932.4 ~ 1987.6 MHz

WIFI: 802.11b/g/n(20M): 2412-2462 MHz

WIFI: 802.11n(40M): 2422-2452 MHz

Bluetooth& BLE: 2402-2480 MHz

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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

Number of Channels:
Port: Power Port, Earphone Port, USB Port

Battery:
Model: BP X301
Spec: 3.7V 1200mAh 4.44Wh

Input Power:
Charging Limit Voltage:4.2V
Adapter:
Model: PC X301
Input: AC 100-240V; 50/60Hz 0.15A Max
Output: DC 5.0V; 0.5A

Trade Name : Vapor
GPRS/EGPRS Multi-slot class 8/10/12
FCC ID: 2ACLMX301V

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

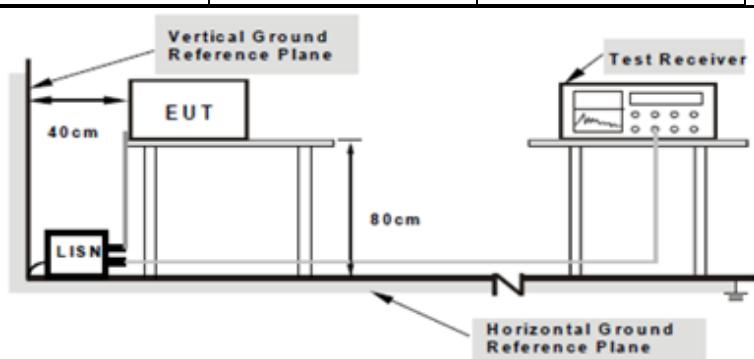
Emissions		
Test Item	Description	Uncertainty
Band Edge and Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	+5.6dB/-4.5dB
-	-	-

6. Measurements, Examination And Derived Results

6.1 AC Power Line Conducted Emissions

Temperature	21°C
Relative Humidity	56%
Atmospheric Pressure	1016mbar
Test date :	April 16, 2015
Tested By :	Kahn Yang

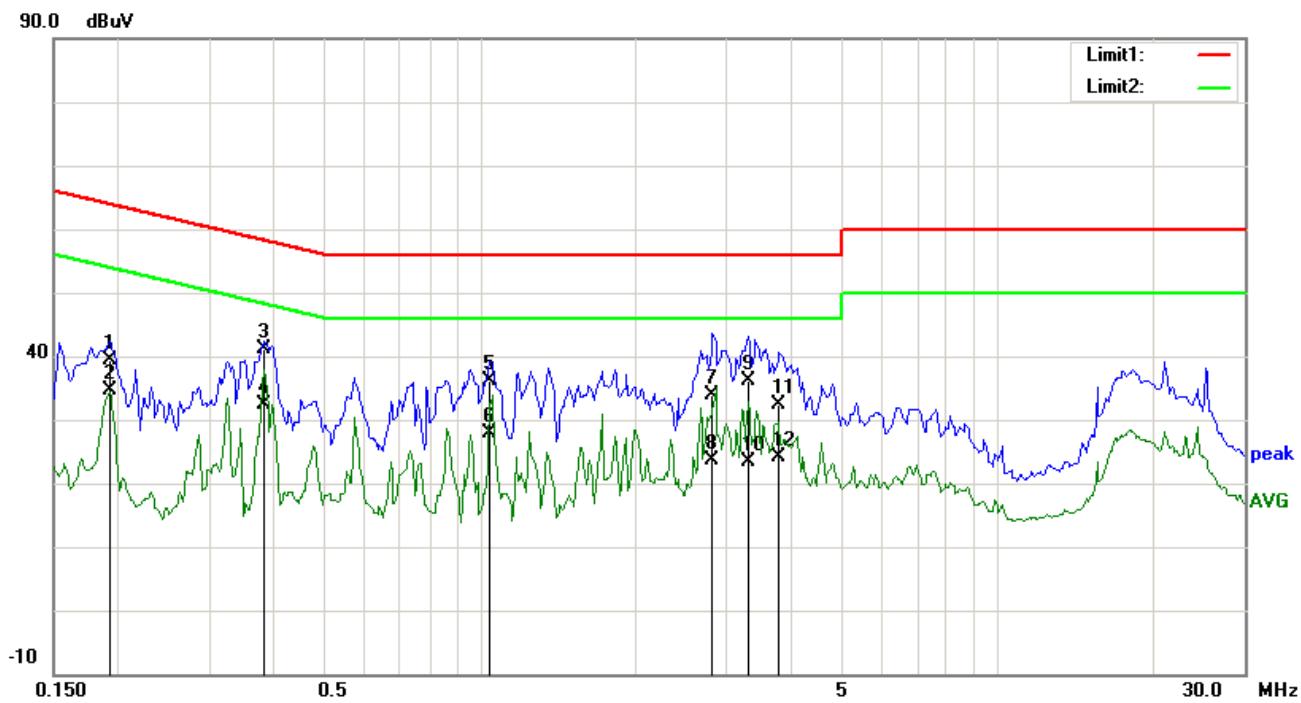
Requirement(s):

Spec	Item	Requirement	Applicable														
47CFR§15. 107	a)	<p>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.</p> <table border="1"> <thead> <tr> <th rowspan="2">Frequency ranges (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>QP</th> <th>Average</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency ranges (MHz)	Limit (dB μ V)		QP	Average	0.15 ~ 0.5	66 – 56	56 – 46	0.5 ~ 5	56	46	5 ~ 30	60	50	<input checked="" type="checkbox"/>
Frequency ranges (MHz)	Limit (dB μ V)																
	QP	Average															
0.15 ~ 0.5	66 – 56	56 – 46															
0.5 ~ 5	56	46															
5 ~ 30	60	50															
Test Setup	 <p>The diagram illustrates the test setup. A 'Vertical Ground Reference Plane' is shown as a horizontal line. A 'Horizontal Ground Reference Plane' is shown as a thick horizontal line at the bottom. An 'EUT' (Equipment Under Test) is a rectangular box connected to a 'LISN' (Line Impedance Stabilization Network) at the bottom. The LISN is connected to a 'Test Receiver' which is also connected to the ground plane. A '40 cm' dimension is shown between the LISN and the EUT. A '80 cm' dimension is shown between the LISN and the Test Receiver. Arrows point from the text labels to their respective components in the diagram.</p> <p>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.</p>																
Procedure	<ol style="list-style-type: none"> 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. 																

	<ol style="list-style-type: none"> 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	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

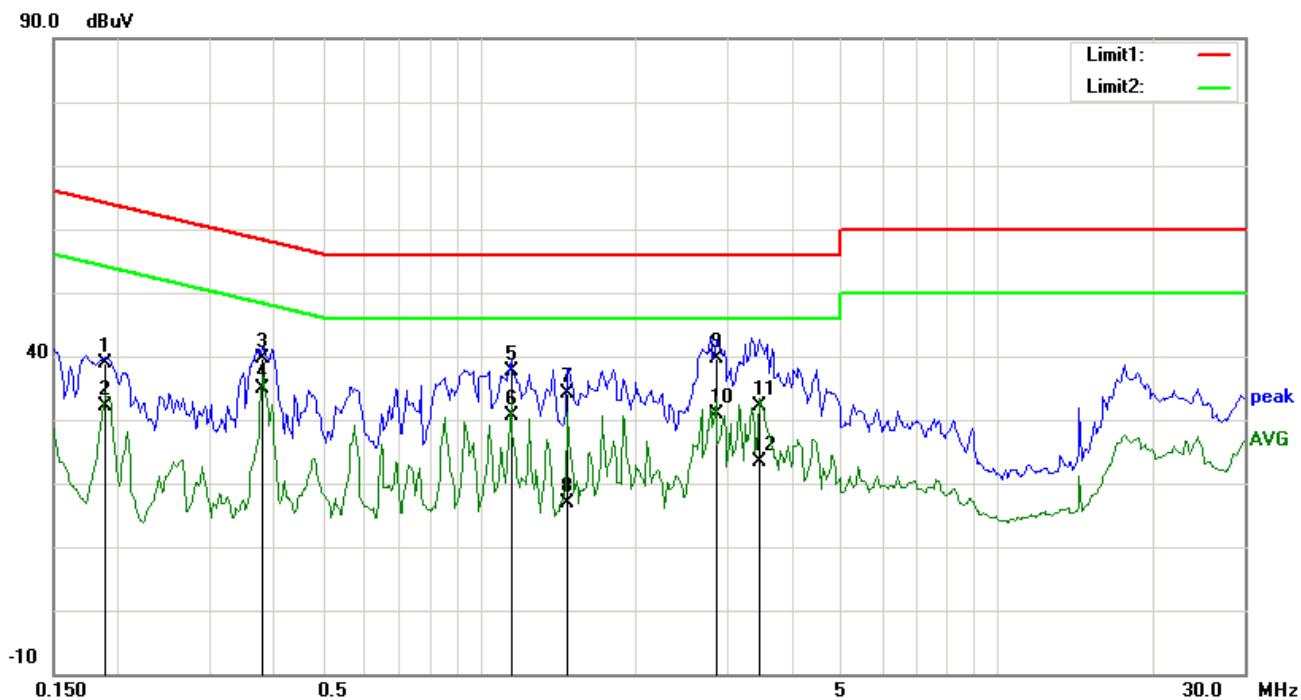
Test Data Yes N/A

Test Plot Yes (See below) N/A

Test Mode 1: USB Mode

Test Data

Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	L1	0.1930	26.29	QP	13.04	39.33	63.91	-24.58	
2	L1	0.1930	21.53	AVG	13.04	34.57	53.91	-19.34	
3	L1	0.3844	28.70	QP	12.33	41.03	58.18	-17.15	
4	L1	0.3844	19.99	AVG	12.33	32.32	48.18	-15.86	
5	L1	1.0484	24.85	QP	11.40	36.25	56.00	-19.75	
6	L1	1.0484	16.37	AVG	11.40	27.77	46.00	-18.23	
7	L1	2.8141	22.44	QP	11.40	33.84	56.00	-22.16	
8	L1	2.8141	12.29	AVG	11.40	23.69	46.00	-22.31	
9	L1	3.2969	24.65	QP	11.40	36.05	56.00	-19.95	
10	L1	3.2969	12.03	AVG	11.40	23.43	46.00	-22.57	
11	L1	3.7930	20.87	QP	11.40	32.27	56.00	-23.73	
12	L1	3.7930	12.64	AVG	11.40	24.04	46.00	-21.96	

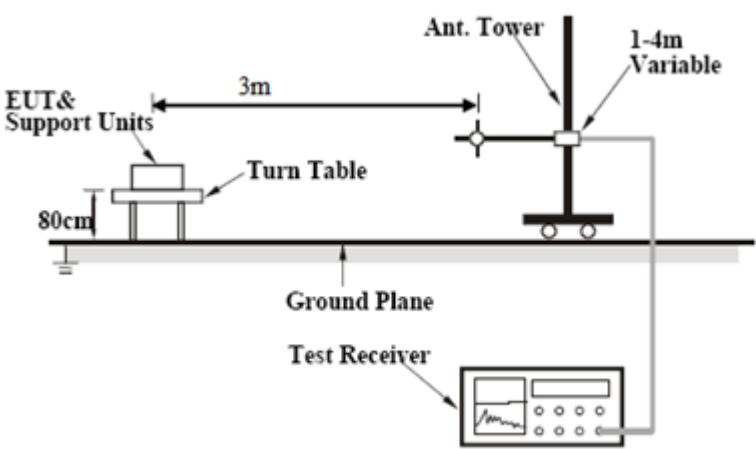
Test Mode 1: USB Mode

Test Data
Phase Neutral Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	N	0.1891	25.71	QP	13.05	38.76	64.08	-25.32	
2	N	0.1891	19.14	AVG	13.05	32.19	54.08	-21.89	
3	N	0.3805	27.39	QP	12.34	39.73	58.27	-18.54	
4	N	0.3805	22.51	AVG	12.34	34.85	48.27	-13.42	
5	N	1.1500	26.27	QP	11.42	37.69	56.00	-18.31	
6	N	1.1500	19.10	AVG	11.42	30.52	46.00	-15.48	
7	N	1.4781	22.67	QP	11.46	34.13	56.00	-21.87	
8	N	1.4781	5.52	AVG	11.46	16.98	46.00	-29.02	
9	N	2.8687	28.06	QP	11.63	39.69	56.00	-16.31	
10	N	2.8687	19.19	AVG	11.63	30.82	46.00	-15.18	
11	N	3.4688	20.31	QP	11.71	32.02	56.00	-23.98	
12	N	3.4688	11.77	AVG	11.71	23.48	46.00	-22.52	

6.2 Radiated Emissions

Temperature	22°C
Relative Humidity	57%
Atmospheric Pressure	1017mbar
Test date :	April 17, 2015
Tested By :	Kahn Yang

Requirement(s):

Spec	Item	Requirement	Applicable										
47CFR§15. 107(d)	a)	<p>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</p> <table border="1"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength (μV/m)</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency range (MHz)	Field Strength (μ V/m)	30 – 88	100	88 – 216	150	216 – 960	200	Above 960	500	<input checked="" type="checkbox"/>
Frequency range (MHz)	Field Strength (μ V/m)												
30 – 88	100												
88 – 216	150												
216 – 960	200												
Above 960	500												
Test Setup		 <p>The diagram illustrates the test setup for radiated emissions. A 'Turn Table' is positioned on a 'Ground Plane'. An 'EUT & Support Units' is mounted on the turn table at a height of 80cm. A vertical 'Ant. Tower' is positioned 3m away from the EUT. The antenna height is adjustable, indicated as '1-4m Variable'. A 'Test Receiver' is connected to the antenna to measure the signal levels.</p>											
Procedure		<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> Vertical or horizontal polarization (whichever gave the higher emission level) 											

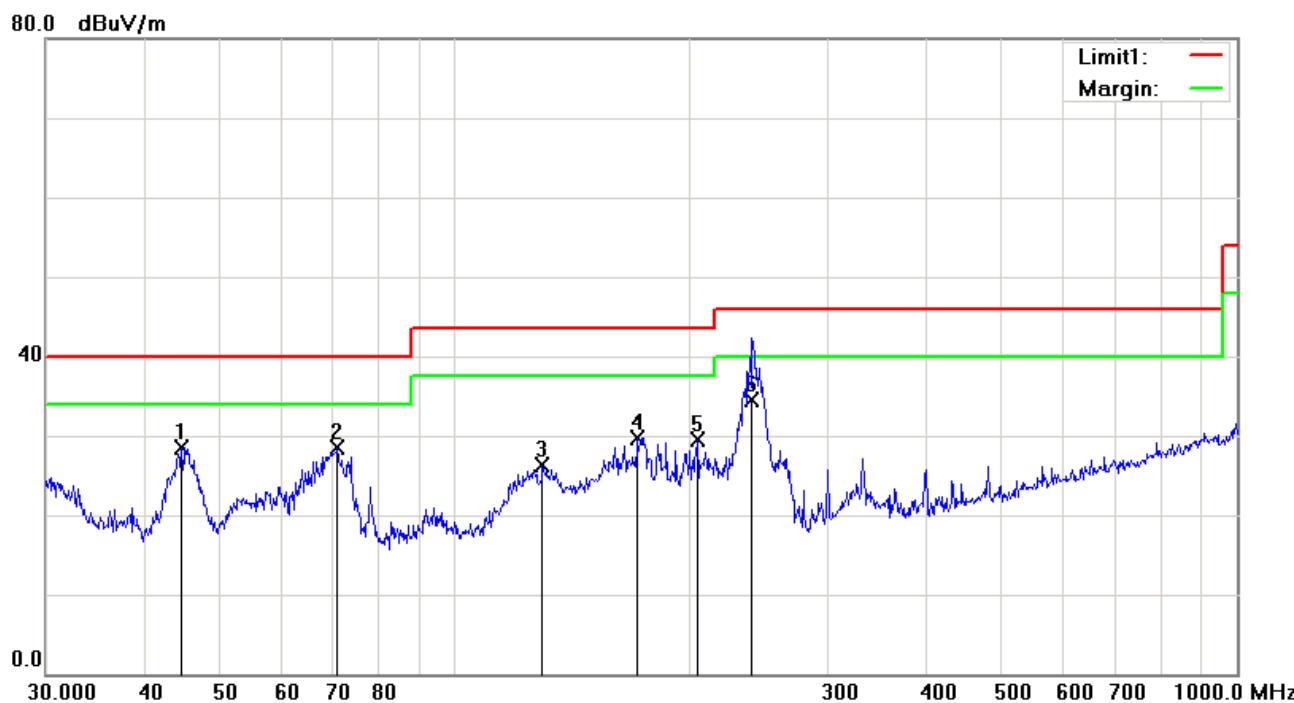
	<p>over a full rotation of the EUT) was chosen.</p> <p>b. The EUT was then rotated to the direction that gave the maximum emission.</p> <p>c. Finally, the antenna height was adjusted to the height that gave the maximum emission.</p> <p>3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.</p> <p>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.</p> <p>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.</p> <ul style="list-style-type: none"> ■ 1 kHz (Duty cycle < 98%) <input type="checkbox"/> 10 Hz (Duty cycle > 98%) <p>5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</p>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data Yes N/A

Test Plot Yes (See below) N/A

Test Mode: USB Mode

Below 1GHz



Test Data

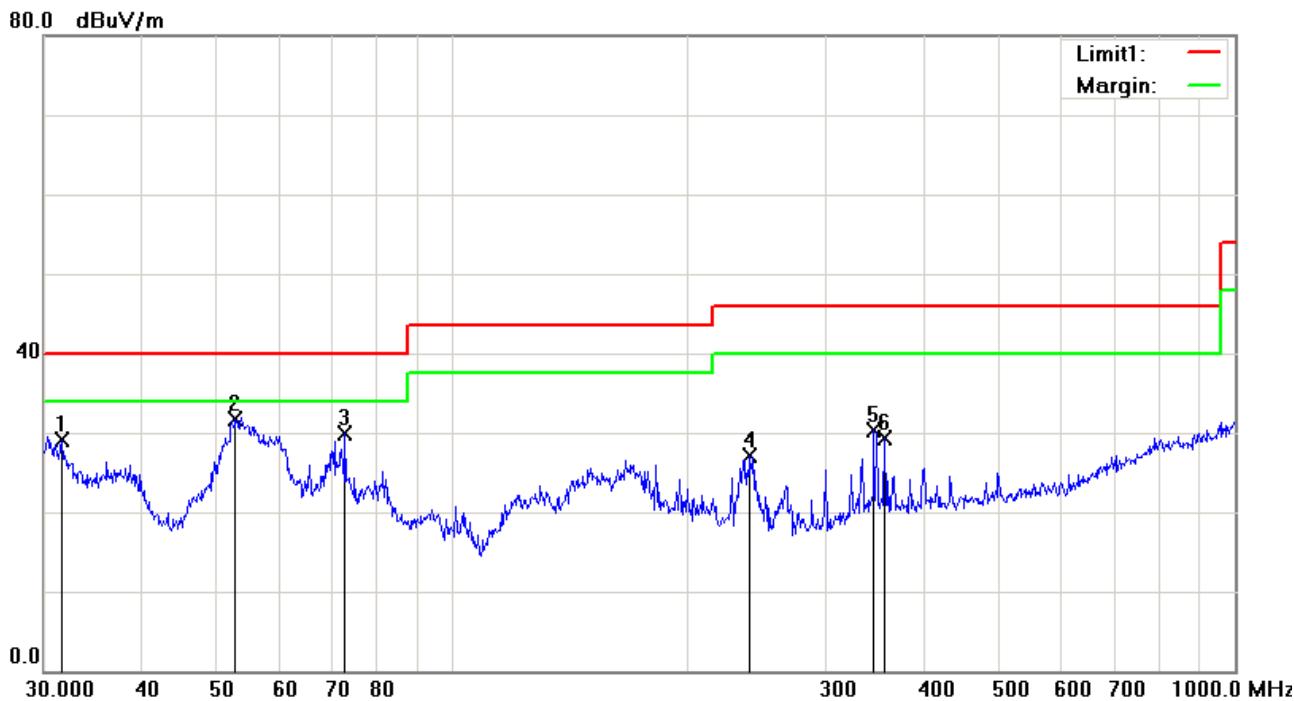
Horizontal Polarity Plot @3m

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree ()	Comment
1	H	44.7434	29.22	peak	-0.71	28.51	40.00	-11.49	200	147	
2	H	70.8315	42.14	peak	-13.62	28.52	40.00	-11.48	200	158	
3	H	129.4678	34.24	peak	-7.90	26.34	43.50	-17.16	200	128	
4	H	171.3926	38.96	peak	-9.21	29.75	43.50	-13.75	100	137	
5	H	204.2377	38.23	peak	-8.78	29.45	43.50	-14.05	100	130	
6	H	239.4963	43.51	QP	-9.09	34.42	46.00	-11.58	100	167	

Above 1GHz

Note: The frequency that above 1GHz is mainly from the environment noise.

Below 1GHz



Test Data

Vertical Polarity Plot @3m

No.	P/L	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree ()	Comment
1	V	31.6202	31.46	peak	-2.41	29.05	40.00	-10.95	100	300	
2	V	52.7600	45.86	peak	-14.10	31.76	40.00	-8.24	100	304	
3	V	72.8466	43.58	peak	-13.68	29.90	40.00	-10.10	100	120	
4	V	239.9873	34.40	peak	-7.30	27.10	46.00	-18.90	100	296	
5	V	345.5952	35.52	peak	-5.25	30.27	46.00	-15.73	100	71	
6	V	356.6758	34.32	peak	-4.93	29.39	46.00	-16.61	100	53	

Above 1GHz

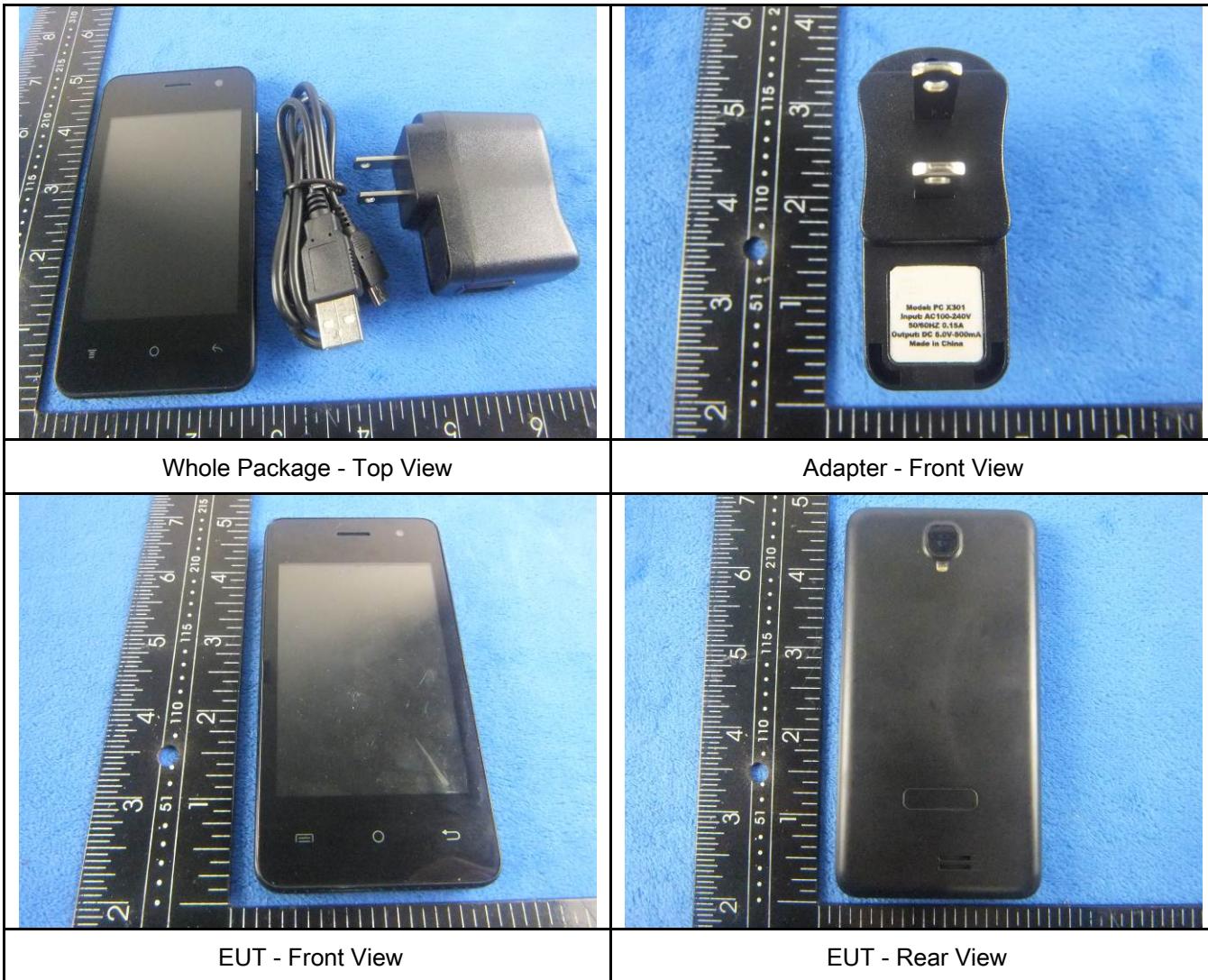
Note: The frequency that above 1GHz is mainly from the environment noise.

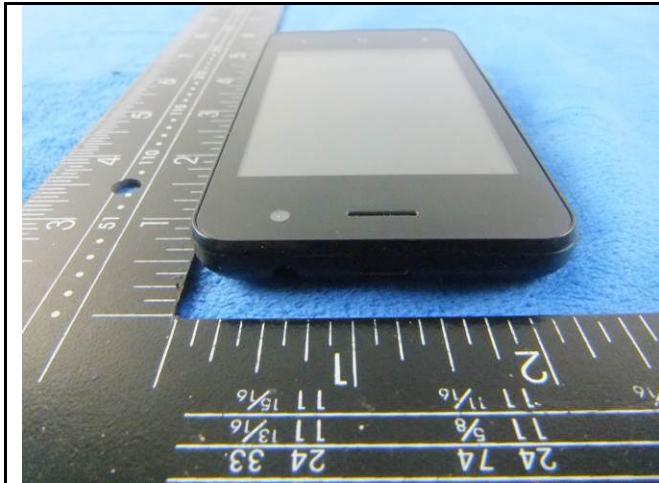
Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
EMI test receiver	ESCS30	8471241027	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
Line Impedance Stabilization Network	LI-125A	191106	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
Line Impedance Stabilization Network	LI-125A	191107	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
LISN	ISN T800	34373	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
Transient Limiter	LIT-153	531118	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
Radiated Emissions					
EMI test receiver	ESL6	100262	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/25/2015	03/24/2016	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/22/2014	09/21/2015	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna	AH-118	71259	09/25/2014	09/24/2015	<input checked="" type="checkbox"/>

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photo





EUT - Top View



EUT - Bottom View

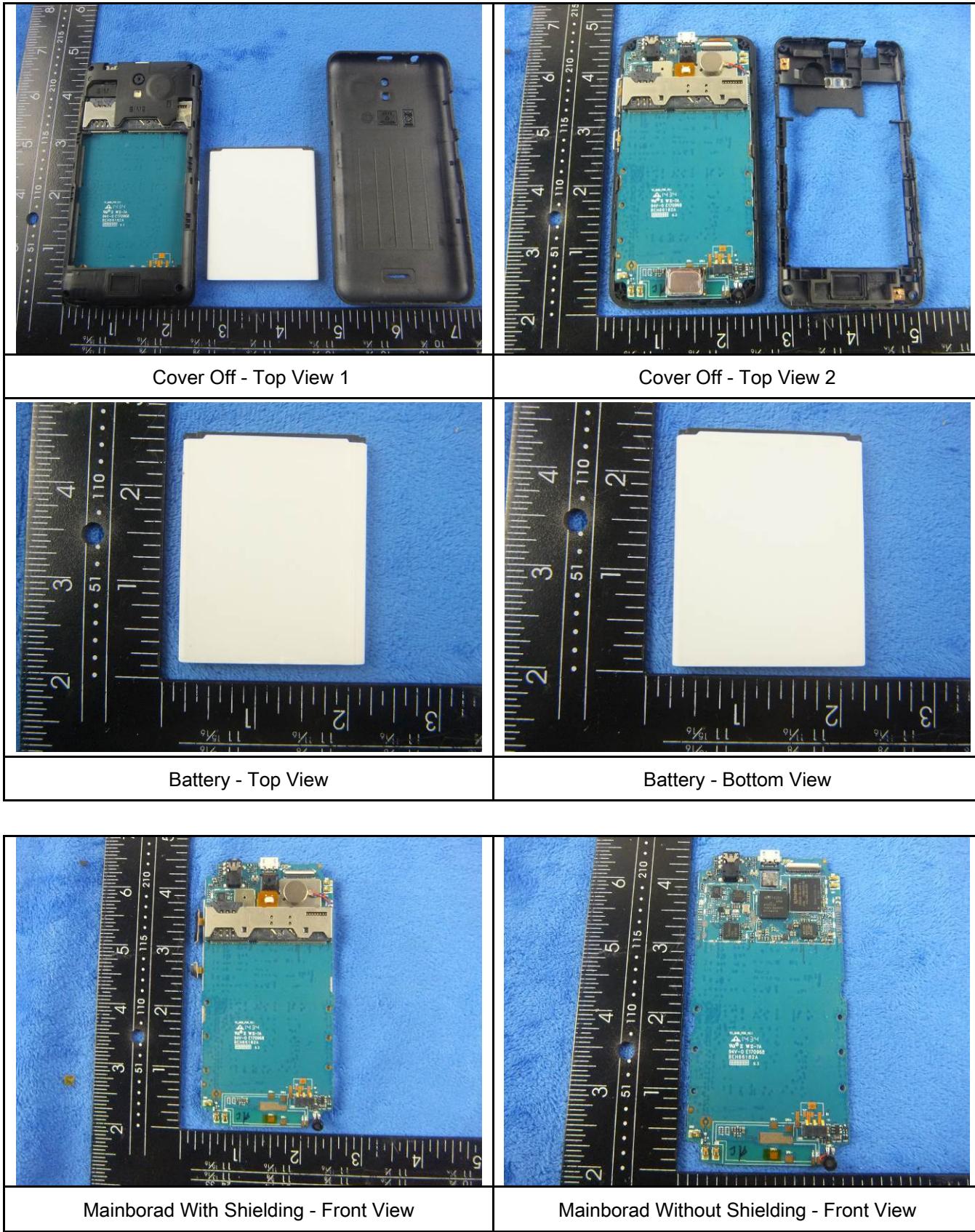


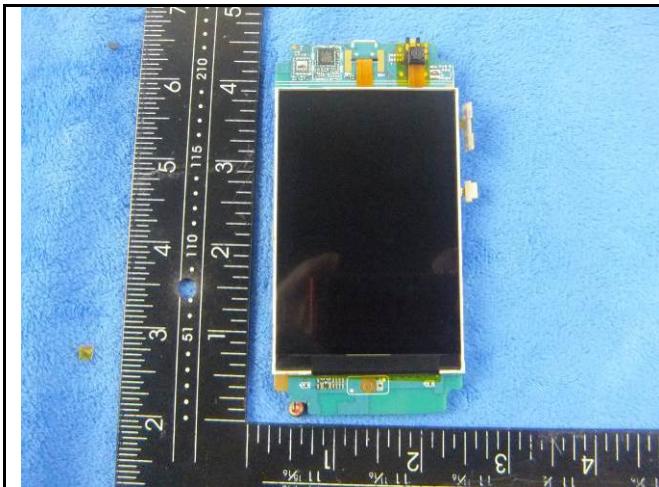
EUT - Left View



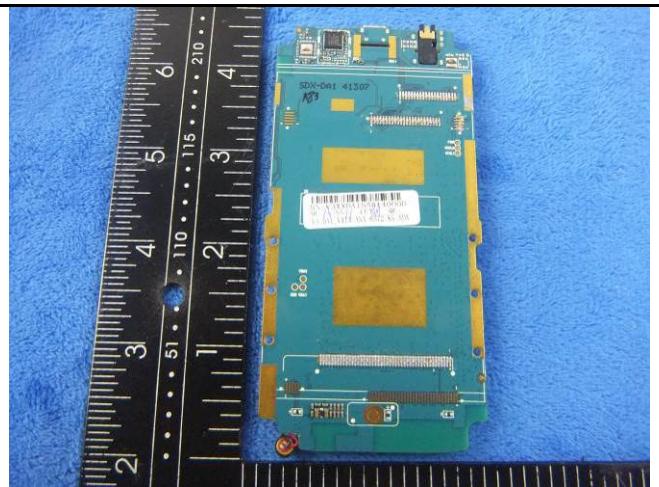
EUT - Right View

Annex B.ii. Photograph: EUT Internal Photo

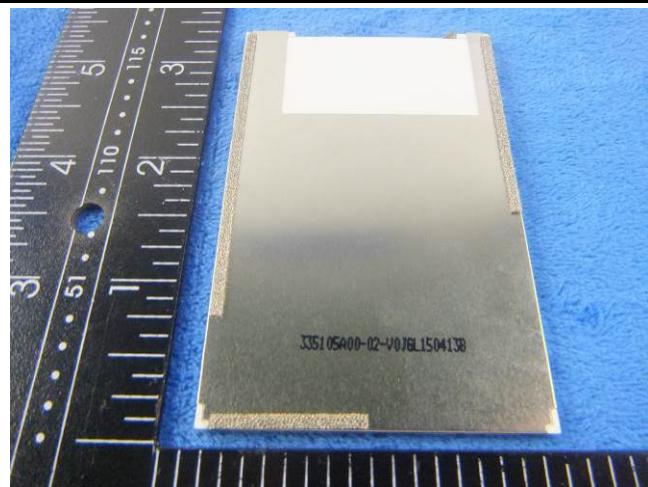




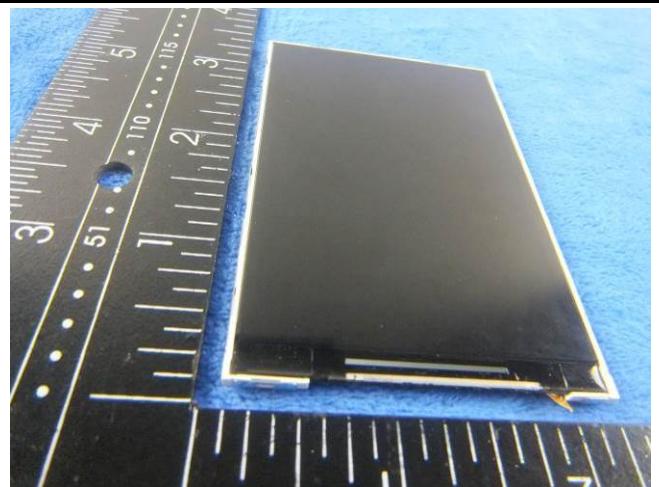
Mainborad With Shielding - rear View



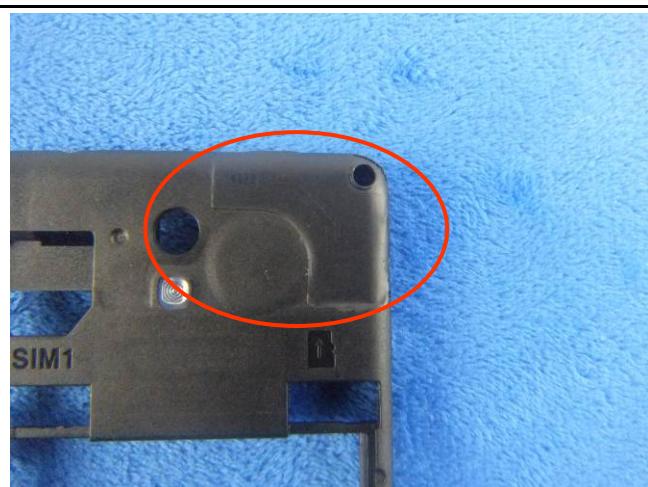
Mainborad Without Shielding - rear View



LCD – Rear View



LCD - Front View



WIFI/BT/BLE - Antenna View



GSM/PCS/UMTS-FDD Antenna View

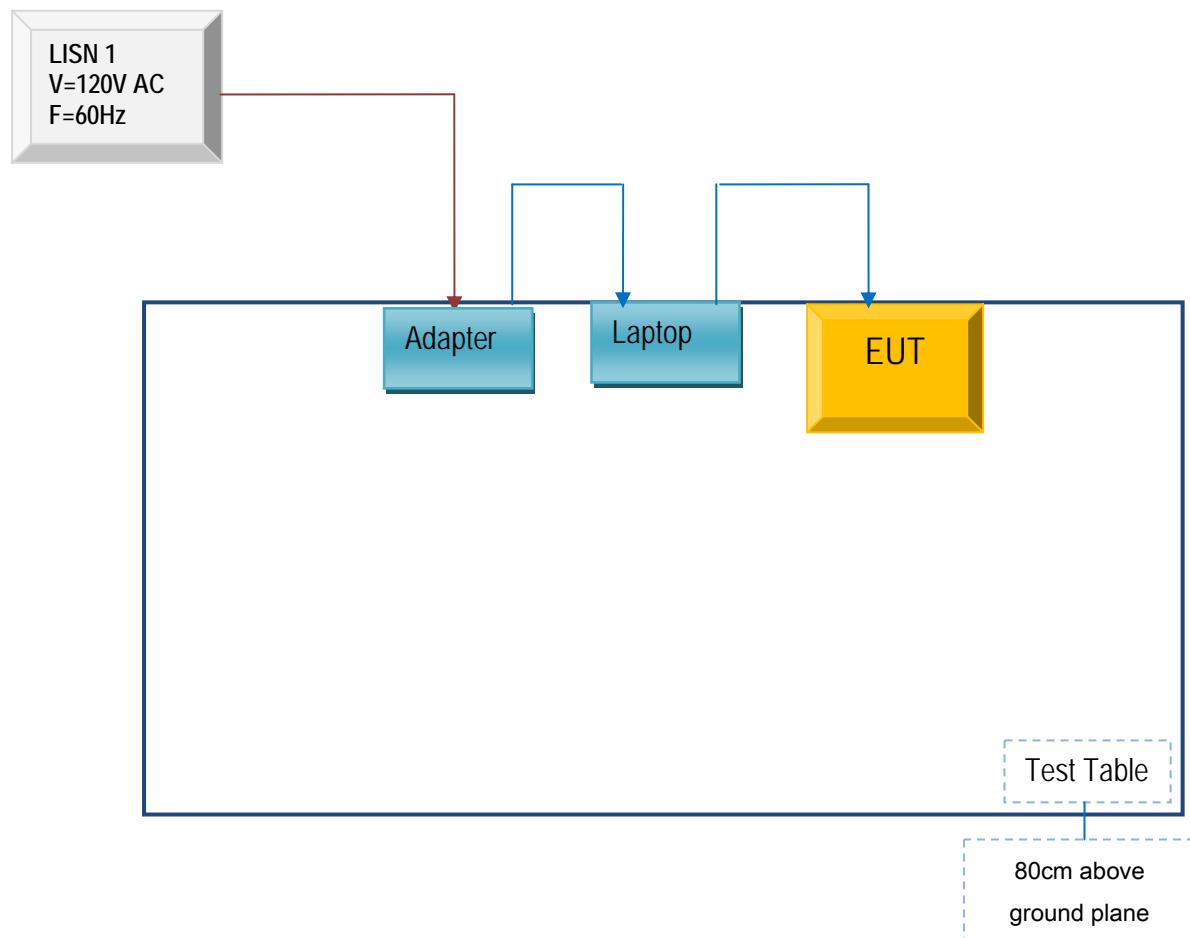
Annex B.iii. Photograph: Test Setup Photo

 A photograph showing a laptop on a wooden table. To the left, a blue power source unit with various cables is connected to the laptop and a power strip. The background shows a wall with electrical outlets.	 A photograph showing a laptop on a wooden table from a side angle. A black keyboard is connected to the laptop. The background shows a wall and a door.
Conducted Emissions Test Setup – Front View	Conducted Emissions Test Setup – Side View
 A photograph showing a laptop on a white reflective table inside a test chamber. The chamber has a black and white patterned wall. A red tripod-mounted antenna is positioned above the laptop. The table is supported by a white pillar.	 A photograph showing a laptop on a white reflective table inside a test chamber. The chamber has a black and white patterned wall. A blue tripod-mounted antenna is positioned above the laptop. The table is supported by a white pillar.
Radiated Spurious Emissions Test Setup Below 1GHz	Radiated Spurious Emissions Test Setup Above 1GHz

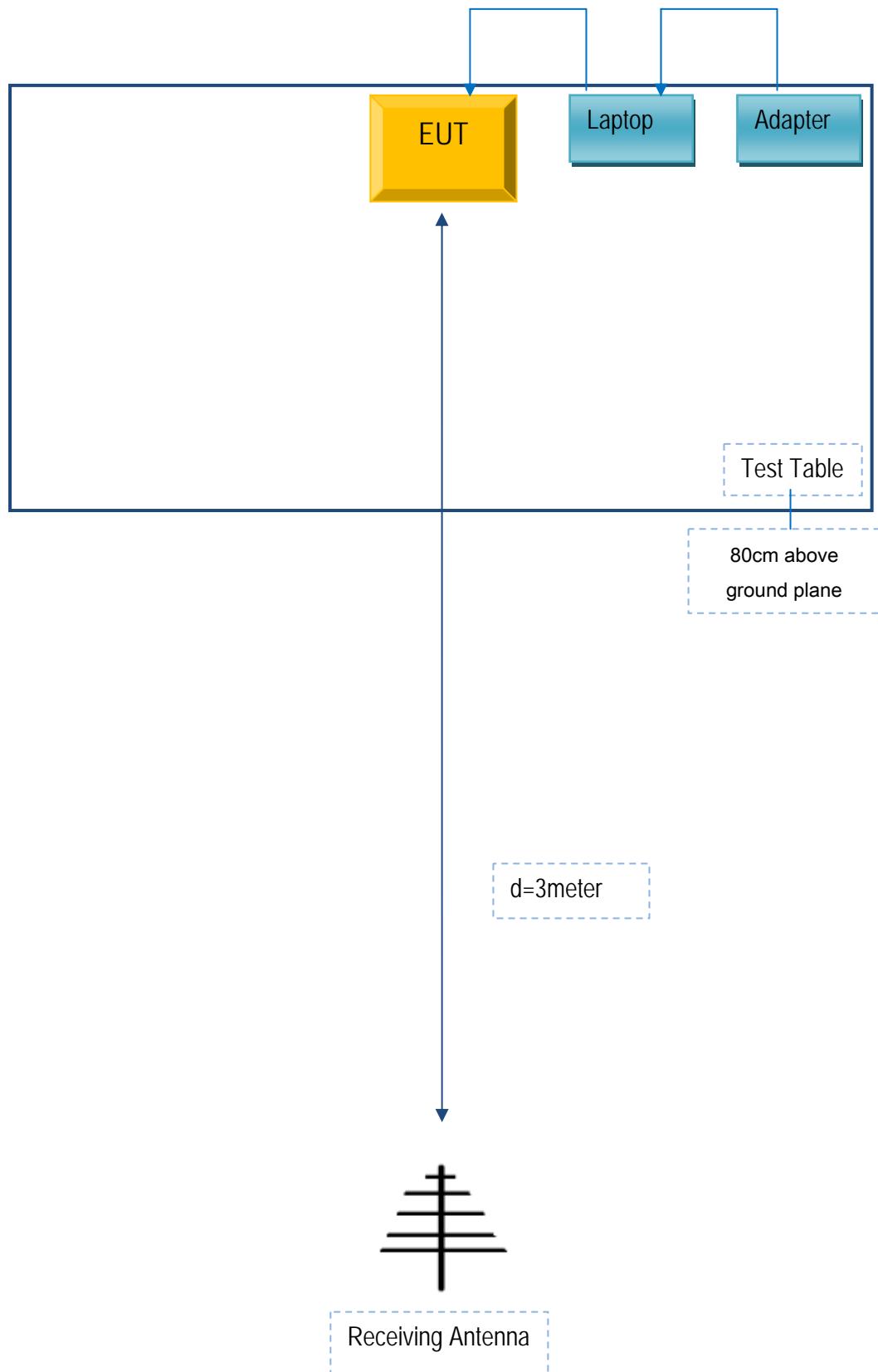
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

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

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

Please see Attachment

Annex E. DECLARATION OF SIMILARITY

Social Mobile Telecommunications

To: SIEMIC ,775 Montague Expressway, Milpitas, CA 95035,USA

Declaration Letter

Dear Sir,

For our business issue and marketing requirement, we would like to list 2 model numbers on the FCC certificates and reports, as following:

Model No.: X301, Vapor

We declare that, all the model PCB ,Antenna and Appearance shape , accessories are the same . The difference of these is listed as below:

Main Model No	Serial Model No	Difference
X301	Vapor	Different model name

Thank you!

Signature:

Printed name/title: Freddy Morcos / Manager
Address: 16400 NW 2nd Ave. #201 Miami, Florida 33169