

# RF TEST REPORT



Report No.: 15070273-FCC-R4

Supersede Report No.: N/A

Applicant	Social Mobile Telecommunications	
Product Name	PHONE	
Model No.	X301	
Serial No.	Vapor	
Test Standard	FCC Part 15.247: 2014, ANSI C63.10: 2013	
Test Date	April 17 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"/>
Wiky.Jam	Chris You	
Wiky.Jam Test Engineer	Chris You Checked By	
<p>This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only</p>		

Issued by:

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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-R4	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 17 to April 27, 2015

Equipment Category : DTS

GSM850: 0.8 dBi

PCS1900: -1 dBi

Antenna Gain:	UMTS-FDD Band V: -0.7dBi
	UMTS-FDD Band II: -0.9dBi
	Bluetooth/BLE: -0.5dBi
	WIFI: -0.5 dBi

## GSM / GPRS: GMSK

## EGPRS: GMSK, 8PSK

Type of Modulation:	UMTS-FDD: QPSK, 16QAM 802.11b/g/n: DSSS, OFDM Bluetooth: GFSK, π /4DQPSK BLE: GFSK
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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 ~ 1907.6 MHz

RF Operating Frequency (ies): RX: 1932.4 ~ 1987.6 MHz  
UMTS-FDD Band IV TX :1712.4 ~ 1752.6 MHz;  
RX : 2112.4 ~ 2152.6 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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Max. Output Power: -9.435 dBm

GSM 850: 124CH

PCS1900: 299CH

UMTS-FDD Band V : 102CH

UMTS-FDD Band II : 277CH

Number of Channels: UMTS-FDD Band IV: 202CH

WIFI :802.11b/g/n(20M): 11CH

WIFI :802.11n(40M): 7CH

Bluetooth: 79CH

BLE: 40CH

Port: Power Port, Earphone Port, USB Port

Battery:

Model: BP X301

Spec: 3.7V 1200mAh 4.44Wh

Charging Limit Voltage:4.2V

Input Power: 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
§15.203	Antenna Requirement	Compliance
§15.247 (a)(2)	DTS (6 dB) CHANNEL BANDWIDTH	Compliance
§15.247(b)(3)	Conducted Maximum Output Power	Compliance
§15.247(e)	Power Spectral Density	Compliance
§15.247(d)	Band-Edge & Unwanted Emissions into Non-Restricted Frequency Bands	Compliance
§15.207 (a),	AC Power Line Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions & Unwanted Emissions into Restricted Frequency Bands	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 Antenna Requirement**

#### **Applicable Standard**

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **Antenna Connector Construction**

The EUT has 2 antennas:

A permanently attached PIFA antenna for Bluetooth/BLE/WIFI, the gain is -0.5dBi for Bluetooth/BLE/WIFI.

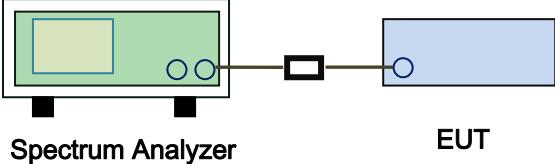
A permanently attached PIFA antenna for GSM and UMTS, the gain is 0.8dBi for GSM850, -0.7dBi for UMTS-FDD Band V, -1dBi for PCS1900, the gain is -0.9dBi for UMTS-FDD Band II

**The antenna meets up with the ANTENNA REQUIREMENT.**

**Result:** Compliance.

## 6.2 DTS (6 dB) Channel Bandwidth

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

Spec	Item	Requirement	Applicable
§ 15.247(a)(2)	a)	6dB BW $\geq$ 500kHz;	<input checked="" type="checkbox"/>
	b)	99% BW: For FCC reference only; required by IC.	<input checked="" type="checkbox"/>
Test Setup	 <b>Spectrum Analyzer</b> <b>EUT</b>		
Test Procedure	<p>558074 D01 DTS MEAS Guidance v03r02, 8.1 DTS bandwidth</p> <p><u>6dB Emission bandwidth measurement procedure</u></p> <ul style="list-style-type: none"> <li>- Set RBW = 100 kHz.</li> <li>- Set the video bandwidth (VBW) <math>\geq</math> 3 ' RBW.</li> <li>- Detector = Peak.</li> <li>- Trace mode = max hold.</li> <li>- Sweep = auto couple.</li> <li>- Allow the trace to stabilize.</li> </ul> <p>Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.</p>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

**Test Data**     Yes       N/A

**Test Plot**     Yes (See below)       N/A

## 6dB Bandwidth measurement result

### Test Data

CH	Freq (MHz)	6dB Bandwidth (kHz)	99% Occupied Bandwidth (MHz)
Low	2402	668.8	1.0252
Mid	2440	682.8	1.0257
High	2480	692.4	1.0289

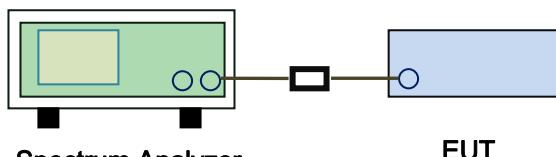
### Test Plots



### 6.3 Maximum Output Power

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

#### Requirement(s):

Spec	Item	Requirement	Applicable
§15.247(b) (2),	a)	FHSS in 2400-2483.5MHz with $\geq$ 75 channels: $\leq$ 1 Watt	<input type="checkbox"/>
	b)	FHSS in 5725-5850MHz: $\leq$ 1 Watt	<input type="checkbox"/>
	c)	For all other FHSS in the 2400-2483.5MHz band: $\leq$ 0.125 Watt.	<input type="checkbox"/>
	d)	FHSS in 902-928MHz with $\geq$ 50 channels: $\leq$ 1 Watt	<input type="checkbox"/>
	e)	FHSS in 902-928MHz with $\geq$ 25 & $<$ 50 channels: $\leq$ 0.25 Watt	<input type="checkbox"/>
	f)	DSSS in 902-928MHz, 2400-2483.5MHz, 5725-5850MHz: $\leq$ 1 Watt	<input checked="" type="checkbox"/>
Test Setup		 <b>Spectrum Analyzer</b> <b>EUT</b>	
Test Procedure		<p>558074 D01 DTS MEAS Guidance v03r02, 9.1.2 Integrated band power method</p> <p>Maximum output power measurement procedure</p> <ol style="list-style-type: none"> <li>Set the RBW <math>\geq</math> DTS bandwidth.</li> <li>Set VBW <math>\geq</math> <math>3 \times</math> RBW.</li> <li>Set span <math>\geq</math> <math>3 \times</math> RBW</li> <li>Sweep time = auto couple.</li> <li>Detector = peak.</li> <li>Trace mode = max hold.</li> <li>Allow trace to fully stabilize.</li> <li>Use peak marker function to determine the peak amplitude level.</li> </ol>	
Remark			

Result	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
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 Test Data  Yes  N/A

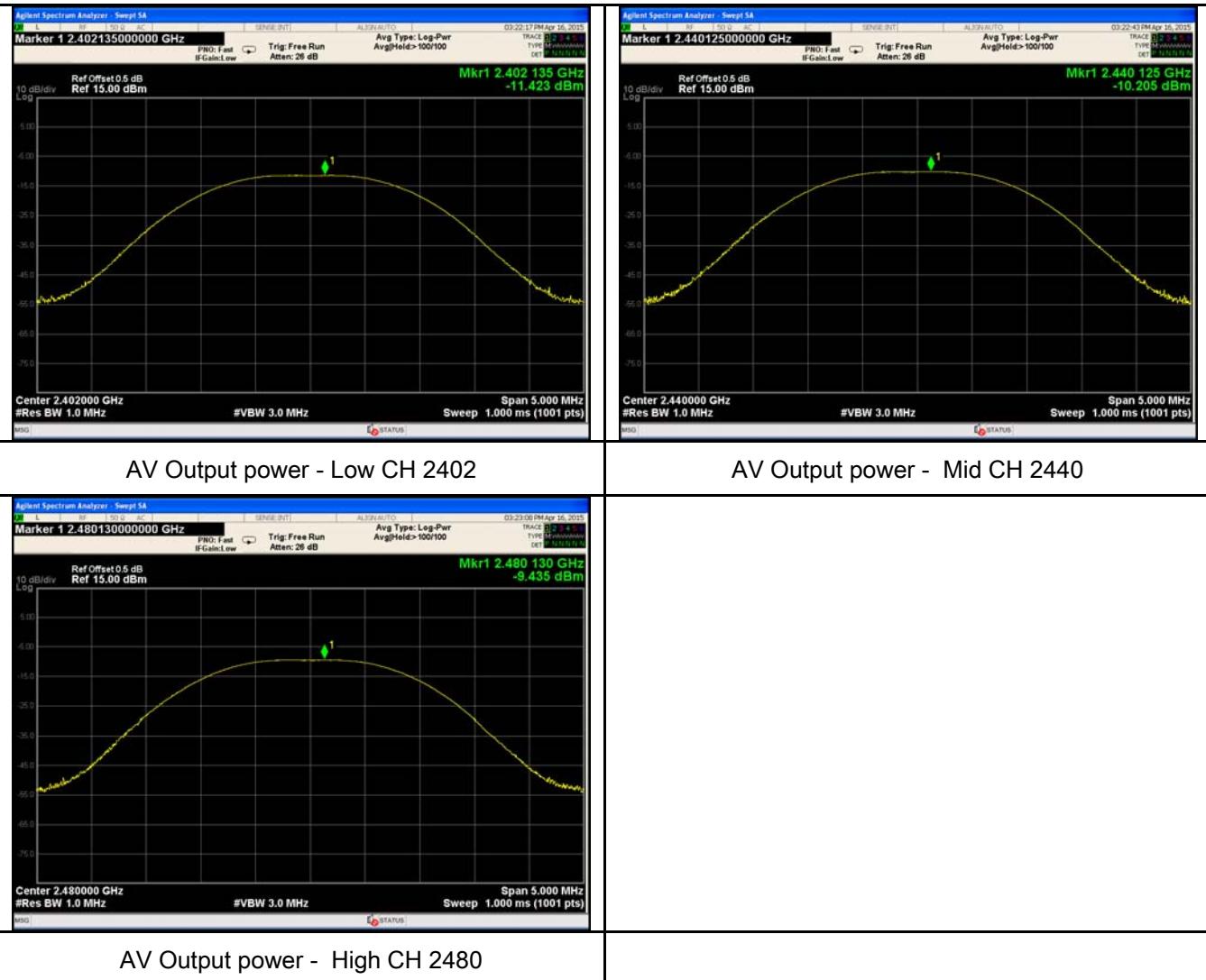
 Test Plot  Yes (See below)  N/A

### Output Power measurement result

#### Test Data

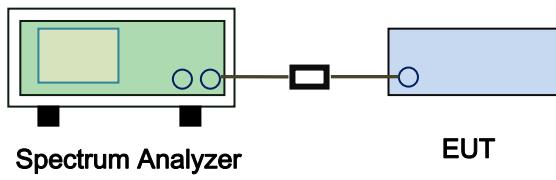
Type	CH	Freq (MHz)	Conducted Power (dBm)	Limit (dBm)	Result
Output power	Low	2402	-11.423	30	Pass
	Mid	2440	-10.205	30	Pass
	High	2480	-9.435	30	Pass

#### Test Plots



## 6.4 Power Spectral Density

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

Spec	Item	Requirement	Applicable
§15.247(e)	a)	The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.	<input checked="" type="checkbox"/>
Test Setup			
Test Procedure	<p>558074 D01 DTS MEAS Guidance v03r02, 10.2 power spectral density method power spectral density measurement procedure</p> <ul style="list-style-type: none"> <li>- a) Set analyzer center frequency to DTS channel center frequency.</li> <li>- b) Set the span to 1.5 times the DTS bandwidth.</li> <li>- c) Set the RBW to: <math>3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}</math>.</li> <li>- d) Set the VBW <math>\geq 3 \times \text{RBW}</math>.</li> <li>- e) Detector = peak.</li> <li>- f) Sweep time = auto couple.</li> <li>- g) Trace mode = max hold.</li> <li>- h) Allow trace to fully stabilize.</li> <li>- i) Use the peak marker function to determine the maximum amplitude level within the RBW.</li> <li>- j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.</li> </ul>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

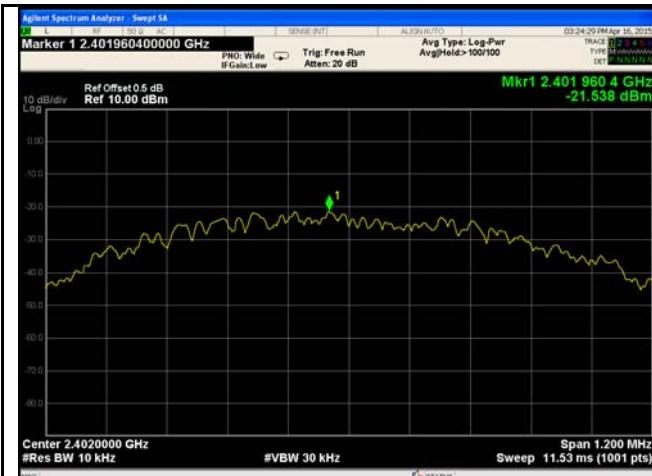
Test Data     Yes       N/A  
 Test Plot     Yes (See below)       N/A

## Power Spectral Density measurement result

## Test Data

Type	CH	Freq (MHz)	PSD (dBm)	Limit (dBm)	Result
PSD	Low	2402	-21.54	8	Pass
	Mid	2440	-20.29	8	Pass
	High	2480	-19.68	8	Pass

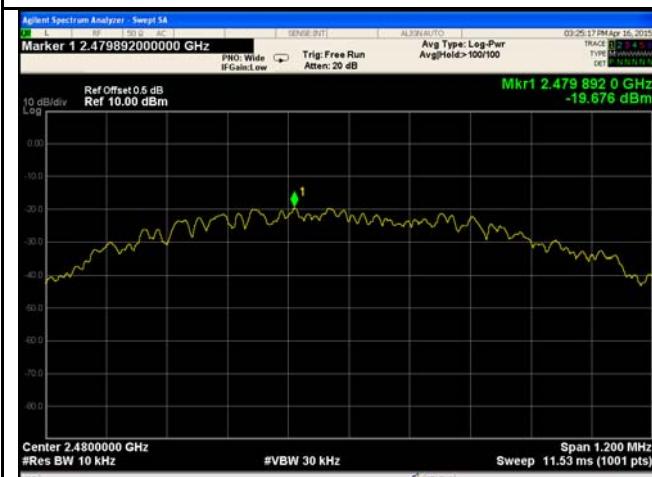
## Test Plots



PSD - Low CH 2402



PSD - Mid CH 2440

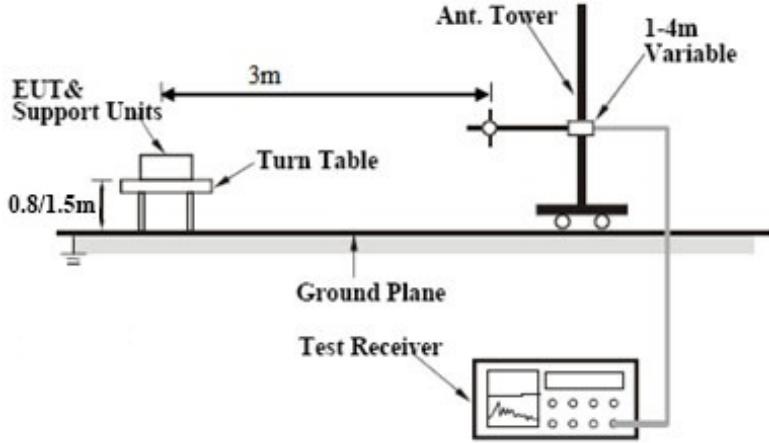


PSD - High CH 2480

## 6.5 Band-Edge & Unwanted Emissions into Non-Restricted Frequency Bands

Temperature	24°C
Relative Humidity	52%
Atmospheric Pressure	1013mbar
Test date :	March 12, 2015
Tested By :	Wiky.Jam

### Requirement(s):

Spec	Item	Requirement	Applicable
§15.247(d)	a)	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.	<input checked="" type="checkbox"/>
Test Setup	 <p>The diagram illustrates the test setup. An 'EUT &amp; Support Units' is positioned on a 'Turn Table' at a height of '0.8/1.5m' above a 'Ground Plane'. A 'Test Receiver' is connected to the turn table. A '1-4m Variable' length 'Ant. Tower' is mounted on the turn table, extending vertically upwards. A horizontal line labeled '3m' connects the center of the EUT to the base of the Ant. Tower.</p>		
Test Procedure	<p>Radiated Method Only</p> <ul style="list-style-type: none"> <li>- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.</li> <li>- 2. Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.</li> </ul>		

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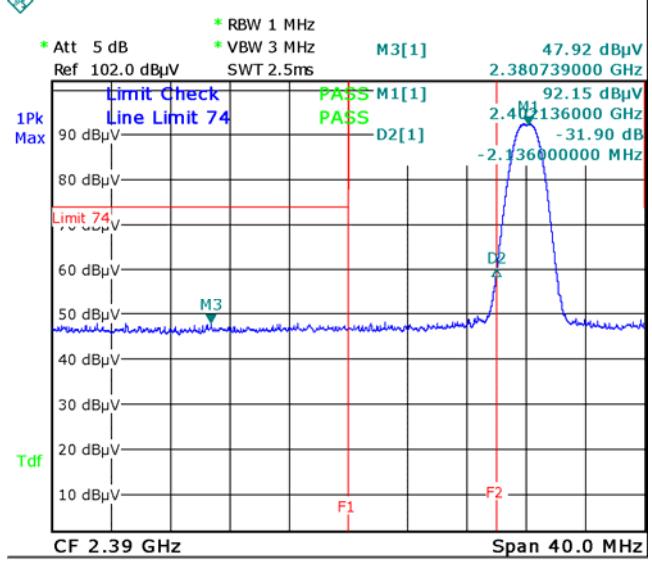
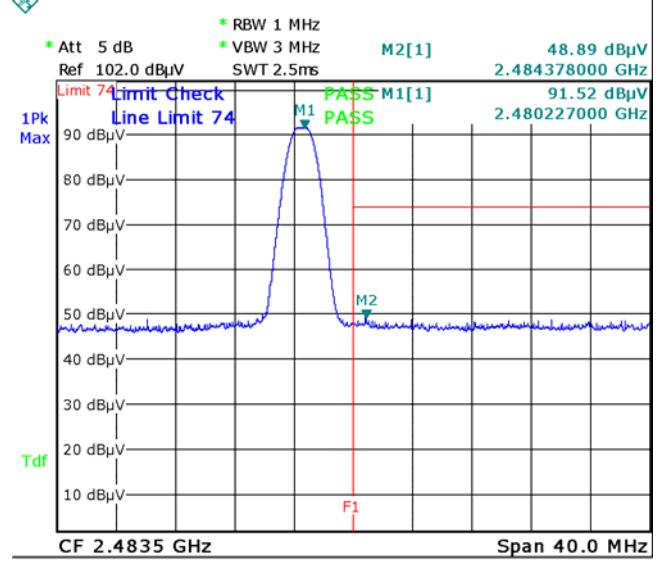
	<ul style="list-style-type: none"> <li>- 3. First, set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, check the emission of EUT, if pass then set Spectrum Analyzer as below:           <ul style="list-style-type: none"> <li>a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.</li> <li>b. 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.</li> <li>c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz with Peak detection for Average Measurement as below at frequency above 1GHz.</li> </ul> </li> <li>- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.</li> <li>- 5. Repeat above procedures until all measured frequencies were complete.</li> </ul>
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data     Yes       N/A

Test Plot     Yes (See below)       N/A

## Test Plots

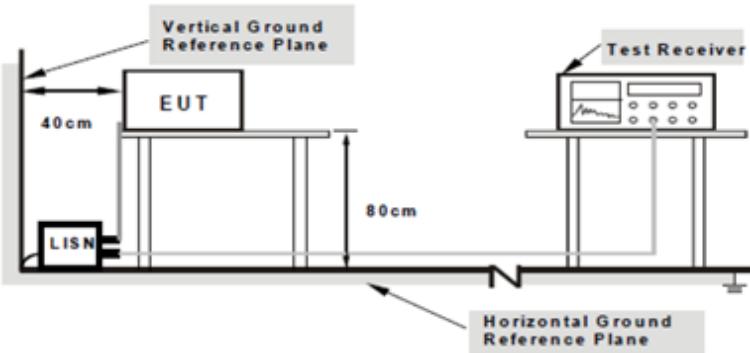
### Band Edge measurement result

	
<p>Band Edge, Left Side (Peak)</p> <p><b>Note: F1 is frequency 2390MHz; F2 is frequency 2400MHz</b></p>	<p>Band Edge, Right Side (Peak)</p> <p><b>Note: F1 is frequency 2483.5MHz</b></p>
<p>Note: (no need if PK value less than the AV limit)</p>	<p>Note: (no need if PK value less than the AV limit)</p>

## 6.6 AC Power Line Conducted Emissions

Temperature	21°C
Relative Humidity	56%
Atmospheric Pressure	1017mbar
Test date :	March 16, 2015
Tested By :	Wiky.Jam

### Requirement(s):

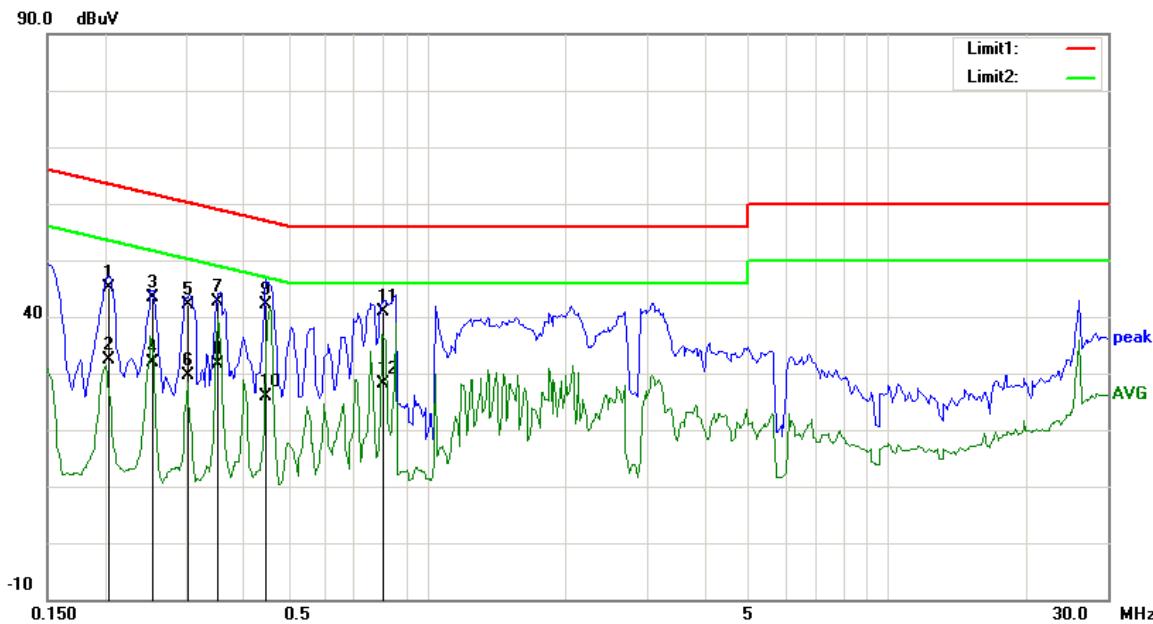
Spec	Item	Requirement	Applicable														
47CFR§15.207,	a)	<p>For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 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 (dB<math>\mu</math>V)</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 $\mu$ 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 $\mu$ V)																
	QP	Average															
0.15 ~ 0.5	66 – 56	56 – 46															
0.5 ~ 5	56	46															
5 ~ 30	60	50															
Test Setup			 <p><b>Note:</b> 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"> <li>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.</li> <li>The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.</li> <li>The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss</li> </ol>																

	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:	Transmitting Mode
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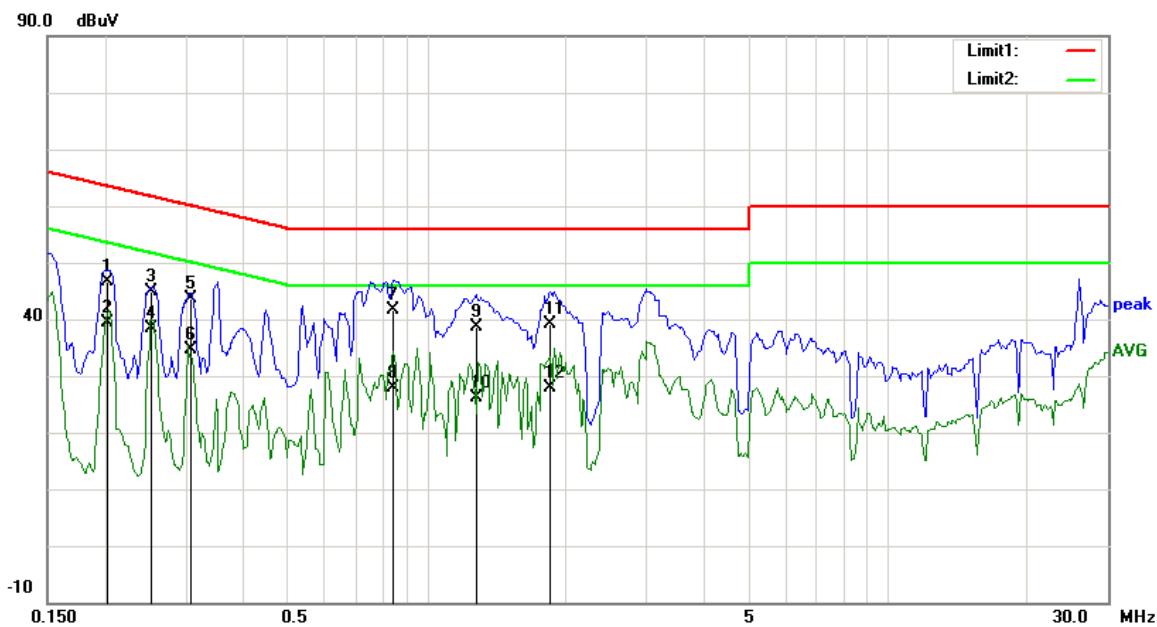


### Test Data

#### Phase Line Plot at 120Vac, 60Hz

No.	P/L	Frequency (MHz)	Reading (dB $\mu$ V)	Detector	Corrected (dB)	Result (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Comment)
1	L1	0.2047	32.18	QP	13.00	45.18	63.42	-18.24	
2	L1	0.2047	19.38	AVG	13.00	32.38	53.42	-21.04	
3	L1	0.2535	30.59	QP	12.82	43.41	61.64	-18.23	
4	L1	0.2535	19.04	AVG	12.82	31.86	51.64	-19.78	
5	L1	0.3035	29.51	QP	12.63	42.14	60.15	-18.01	
6	L1	0.3035	17.00	AVG	12.63	29.63	50.15	-20.52	
7	L1	0.3531	30.19	QP	12.45	42.64	58.89	-16.25	
8	L1	0.3531	19.21	AVG	12.45	31.66	48.89	-17.23	
9	L1	0.4469	30.15	QP	12.10	42.25	56.93	-14.68	
10	L1	0.4469	13.73	AVG	12.10	25.83	46.93	-21.10	
11	L1	0.8045	29.32	QP	11.60	40.92	56.00	-15.08	
12	L1	0.8045	16.56	AVG	11.60	28.16	46.00	-17.84	

Test Mode:	Transmitting Mode
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### Test Data

#### Phase Neutral Plot at 120Vac, 60Hz

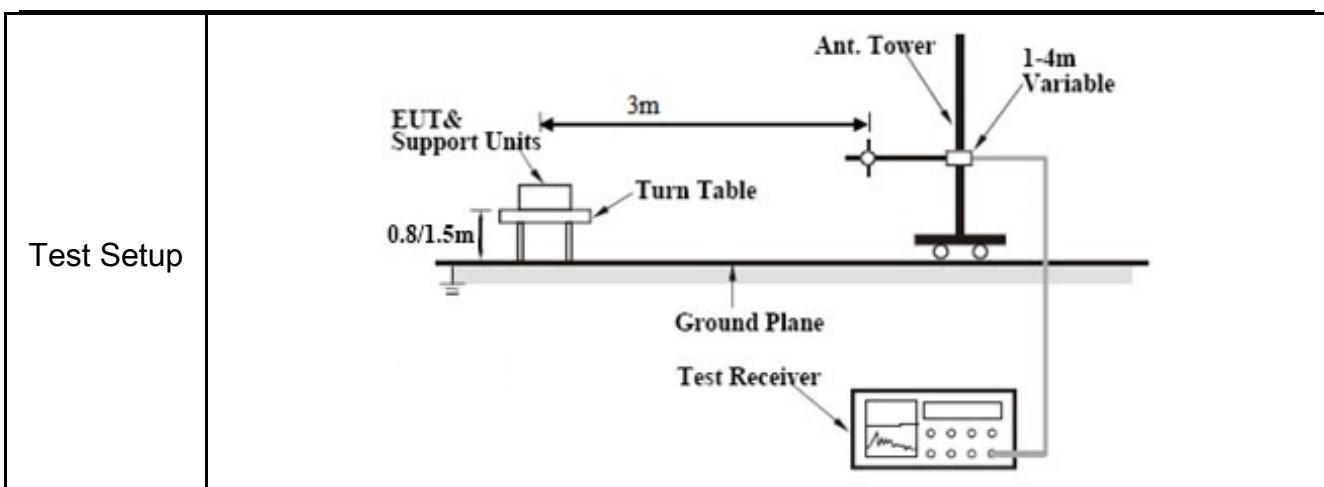
No.	P/L	Frequency (MHz)	Reading (dB $\mu$ V)	Detector	Corrected (dB)	Result (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Comment
1	N	0.2029	33.55	QP	13.00	46.55	63.49	-16.94	
2	N	0.2029	26.33	AVG	13.00	39.33	53.49	-14.16	
3	N	0.2521	32.14	QP	12.82	44.96	61.69	-16.73	
4	N	0.2521	25.65	AVG	12.82	38.47	51.69	-13.22	
5	N	0.3063	31.00	QP	12.62	43.62	60.07	-16.45	
6	N	0.3063	21.99	AVG	12.62	34.61	50.07	-15.46	
7	N	0.8453	30.09	QP	11.55	41.64	56.00	-14.36	
8	N	0.8453	16.33	AVG	11.55	27.88	46.00	-18.12	
9	N	1.2945	27.07	QP	11.44	38.51	56.00	-17.49	
10	N	1.2945	14.70	AVG	11.44	26.14	46.00	-19.86	
11	N	1.8492	27.61	QP	11.51	39.12	56.00	-16.88	
12	N	1.8492	16.42	AVG	11.51	27.93	46.00	-18.07	

## 6.7 Radiated Spurious Emissions

Temperature	22°C
Relative Humidity	57%
Atmospheric Pressure	1018mbar
Test date :	March 17, 2015
Tested By :	Wiky.Jam

### Requirement(s):

Spec	Item	Requirement	Applicable										
47CFR§15. 247(d), RSS210 (A8.5)	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 (<math>\mu</math>V/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 ( $\mu$ V/m)	30 – 88	100	88 – 216	150	216 – 960	200	Above 960	500	<input checked="" type="checkbox"/>
Frequency range (MHz)	Field Strength ( $\mu$ V/m)												
30 – 88	100												
88 – 216	150												
216 – 960	200												
Above 960	500												
b)	<p>For non-restricted band, In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB or 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, determined by the measurement method on output power to be used. Attenuation below the general limits specified in § 15.209(a) is not required</p> <p><input checked="" type="checkbox"/> 20 dB down <input type="checkbox"/> 30 dB down</p>	<input checked="" type="checkbox"/>											
c)	or restricted band, emission must also comply with the radiated emission limits specified in 15.209	<input checked="" type="checkbox"/>											



Procedure	<ol style="list-style-type: none"> <li>1. The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>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:           <ol style="list-style-type: none"> <li>a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</li> <li>b. The EUT was then rotated to the direction that gave the maximum emission.</li> <li>c. Finally, the antenna height was adjusted to the height that gave the maximum emission.</li> </ol> </li> <li>3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasiy Peak detection at frequency below 1GHz.</li> <li>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 is 10Hz with Peak detection for Average Measurement as below at frequency above 1GHz.</li> <li>5. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</li> </ol>
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Remark	Different RF configuration has been evaluated but not much difference was found. The data presented here is the worst case data with EUT under 802.11n – HT20-2437MHz mode.
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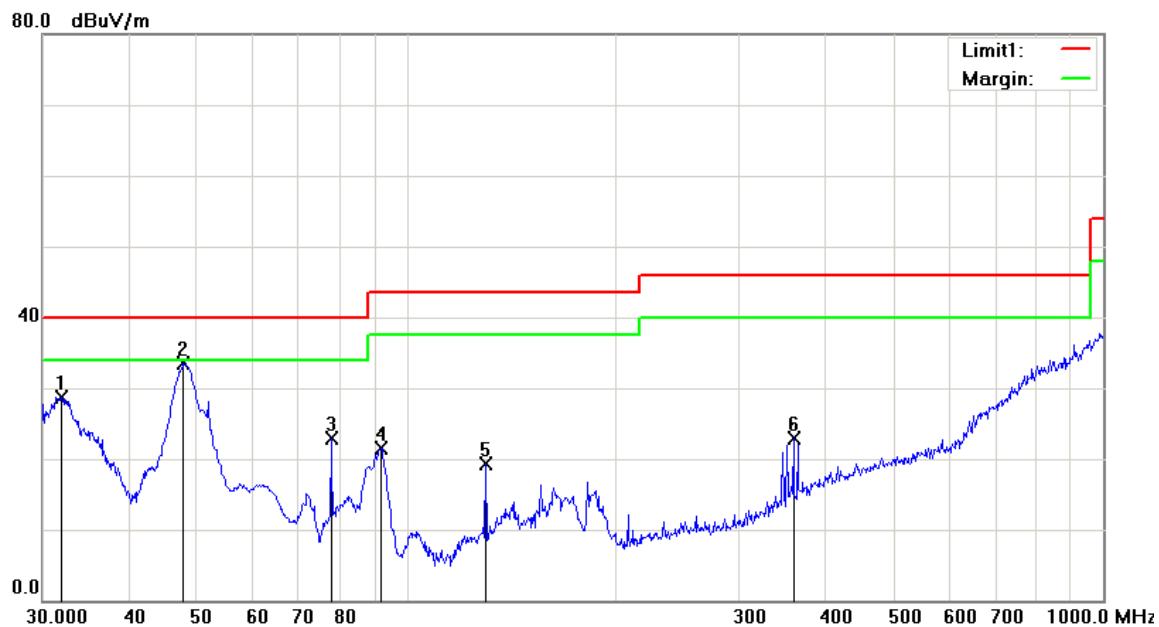
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
--------	--

Test Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A
-----------	--

Test Plot	<input checked="" type="checkbox"/> Yes (See below) <input type="checkbox"/> N/A
-----------	--

Test Mode:	Transmitting Mode
------------	-------------------

Below 1GHz

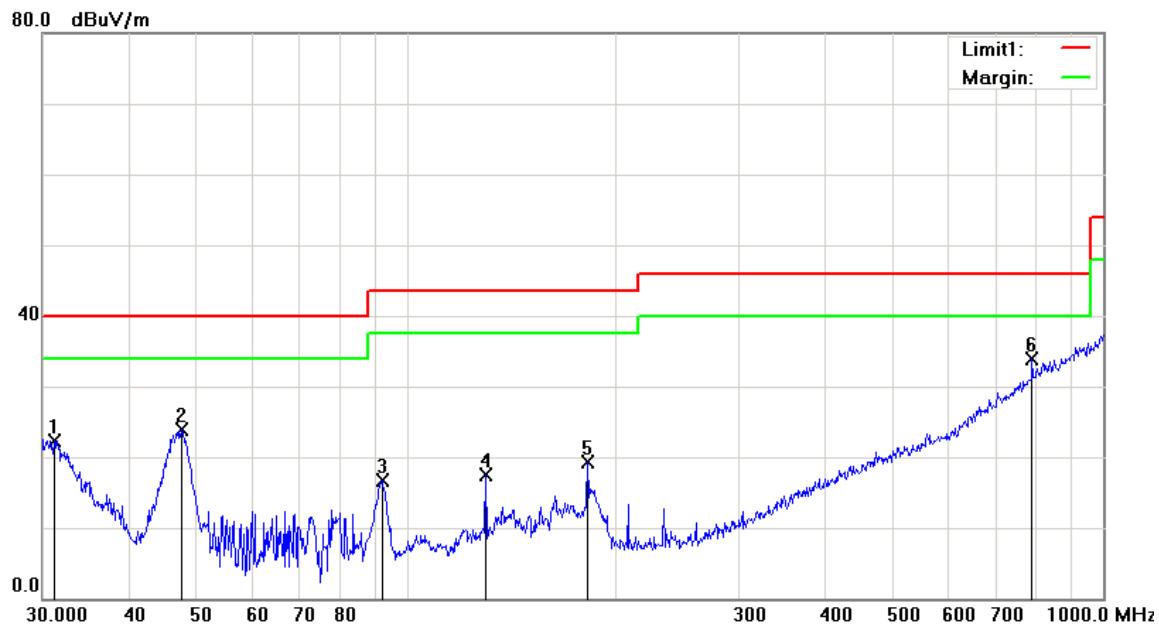


### Test Data

Vertical Polarity Plot @3m

No	P/L	Frequency (MHz)	Reading (dB $\mu$ V)	Detector	Corrected (dB)	Result (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Height	Degree	Comment
1	V	31.9546	31.32	peak	-2.58	28.74	40.00	-11.26	100	120	
2	V	47.8260	46.52	peak	-12.97	33.55	40.00	-6.45	100	327	
3	V	77.8654	36.62	peak	-13.76	22.86	40.00	-17.14	100	150	
4	V	91.8163	35.07	peak	-13.50	21.57	43.50	-21.93	100	221	
5	V	129.9226	26.91	peak	-7.53	19.38	43.50	-24.12	100	120	
6	V	359.1860	27.81	peak	-4.87	22.94	46.00	-23.06	100	263	

## Below 1GHz



## Test Data

Horizontal Polarity Plot @3m

No	P/L	Frequency (MHz)	Reading (dB $\mu$ V)	Detector	Corrected (dB)	Result (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Height	Degree	Comment
1	H	31.1798	23.41	peak	-1.13	22.28	40.00	-17.72	100	150	
2	H	47.4918	30.65	peak	-6.74	23.91	40.00	-16.09	200	222	
3	H	92.1388	29.62	peak	-12.84	16.78	43.50	-26.72	200	184	
4	H	129.9226	25.51	peak	-7.92	17.59	43.50	-25.91	200	214	
5	H	181.9202	29.15	peak	-9.76	19.39	43.50	-24.11	200	263	
6	H	790.6188	30.75	peak	3.06	33.81	46.00	-12.19	200	113	

**Test Mode:** Transmitting Mode

**Low Channel (2402 MHz)**

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4804	36.78	AV	V	33.83	6.86	31.72	45.75	54	-8.25
4804	37.51	AV	H	33.83	6.86	31.72	46.48	54	-7.52
4804	47.85	PK	V	33.83	6.86	31.72	56.82	74	-17.18
4804	48.64	PK	H	33.83	6.86	31.72	57.61	74	-16.39

**Middle Channel (2440 MHz)**

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4880	38.23	AV	V	33.86	6.82	31.82	47.09	54	-6.91
4880	39.2	AV	H	33.86	6.82	31.82	48.06	54	-5.94
4880	47.93	PK	V	33.86	6.82	31.82	56.79	74	-17.21
4880	48.25	PK	H	33.86	6.82	31.82	57.11	74	-16.89

**High Channel (2480 MHz)**

Frequency (MHz)	S.A. Reading (dB $\mu$ V)	Detector (PK/AV)	Polarity (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
4960	36.94	AV	V	33.9	6.76	31.92	45.68	54	-8.32
4960	35.88	AV	H	33.9	6.76	31.92	44.62	54	-9.38
4960	48.65	PK	V	33.9	6.76	31.92	57.39	74	-16.61
4960	49.55	PK	H	33.9	6.76	31.92	58.29	74	-15.71

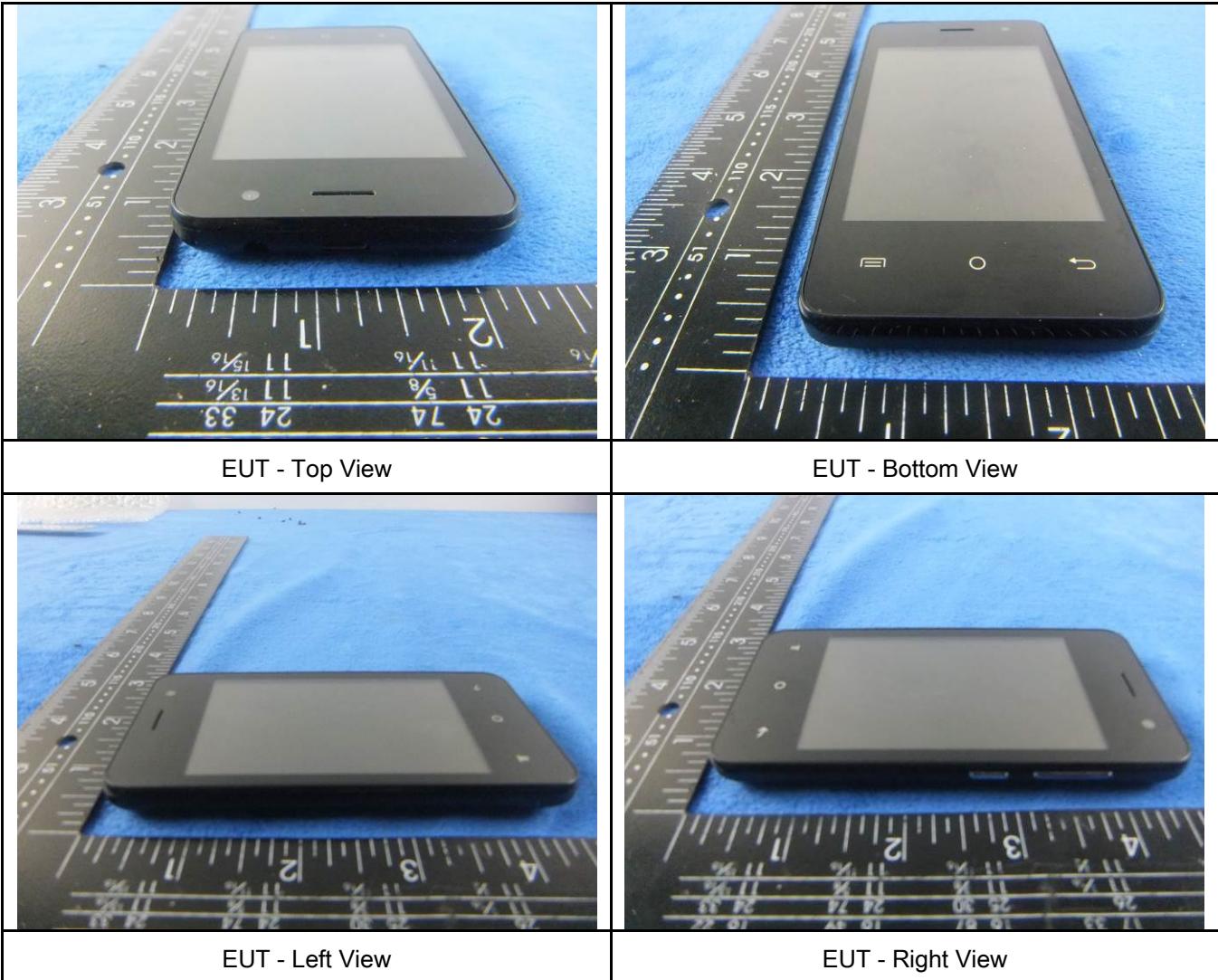
## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>AC Line Conducted</b>					
EMI test receiver	ESCS30	8471241027	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
Line Impedance	LI-125A	191106	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>
Line Impedance	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"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/25/2014	09/24/2015	<input checked="" type="checkbox"/>
Transient Limiter	LIT-153	531118	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
<b>RF conducted test</b>					
Agilent ESA-E SERIES	E4407B	MY45108319	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	09/02/2014	09/01/2015	<input checked="" type="checkbox"/>
DC Power Supply	E3640A	MY40004013	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
<b>Radiated Emissions</b>					
EMI test receiver	ESL6	100262	09/18/2014	09/17/2015	<input checked="" type="checkbox"/>
Positioning Controller	UC3000	MF780208282	11/20/2014	11/19/2015	<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 (1 ~18GHz)	AH-118	71283	09/25/2014	09/24/2015	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/26/2014	09/25/2015	<input checked="" type="checkbox"/>

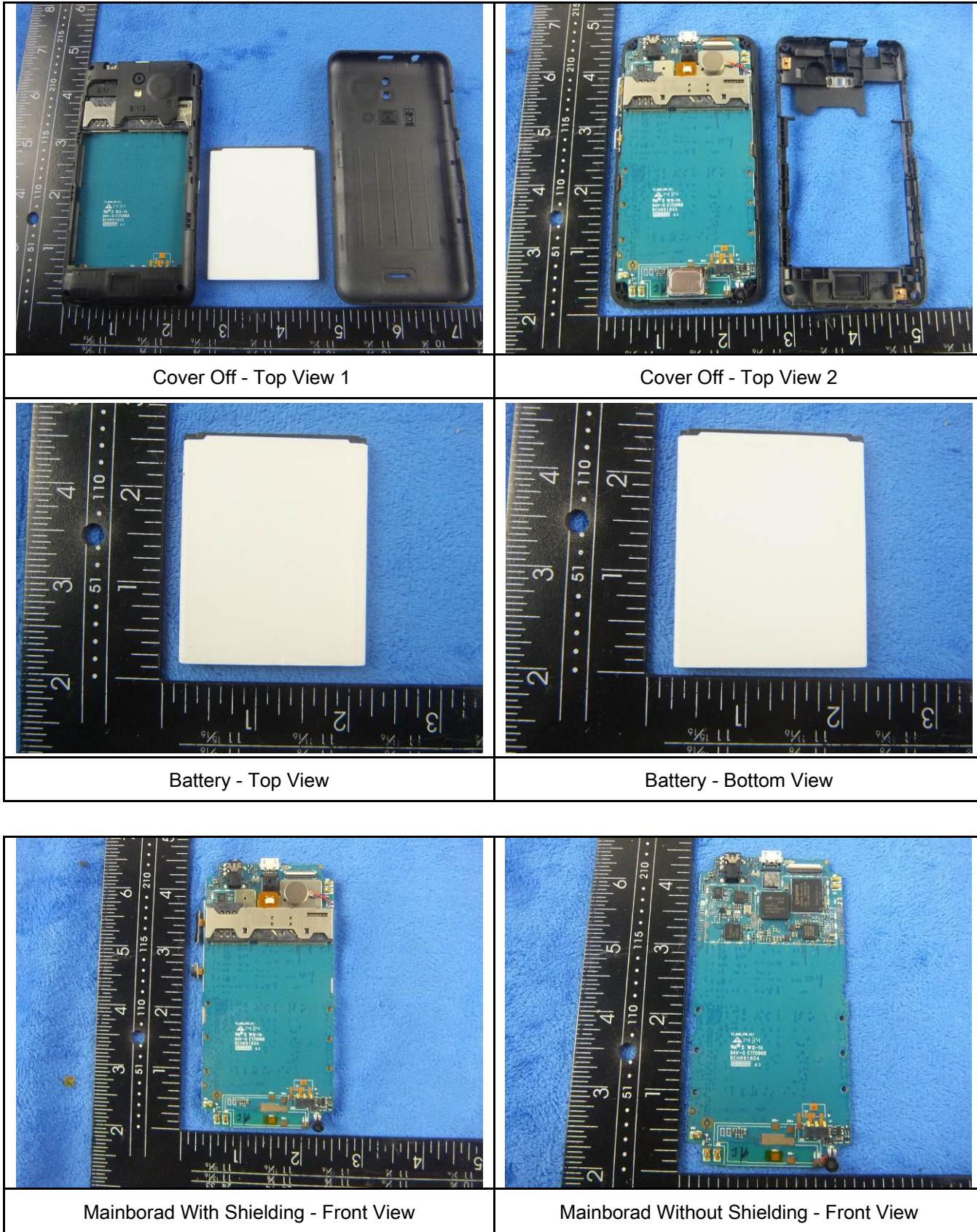
## Annex B. EUT And Test Setup Photographs

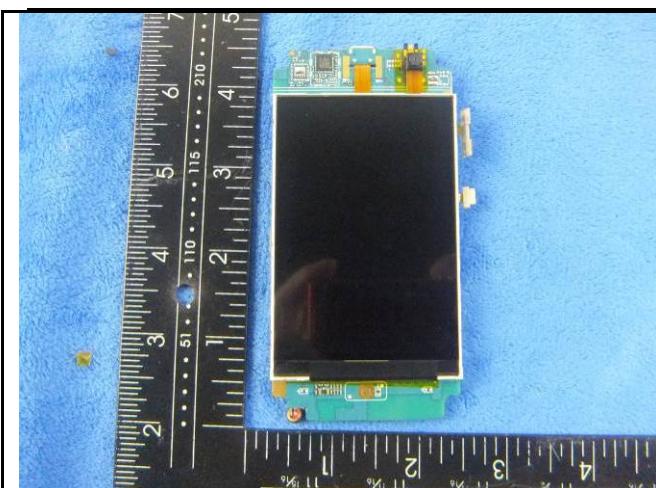
### Annex B.i. Photograph: EUT External Photo



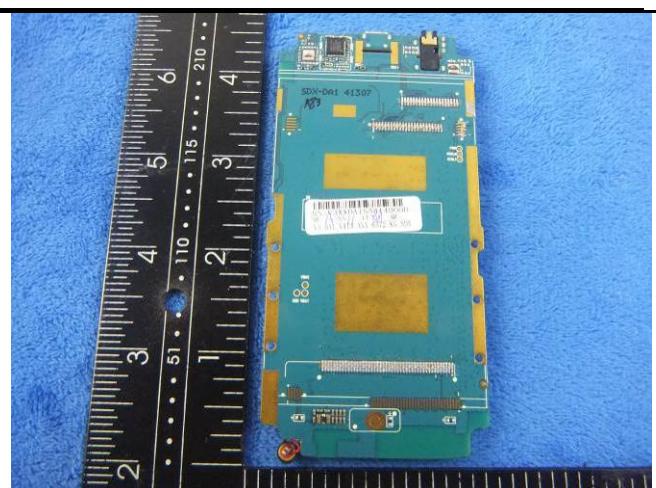


Annex B.ii. Photograph: EUT Internal Photo

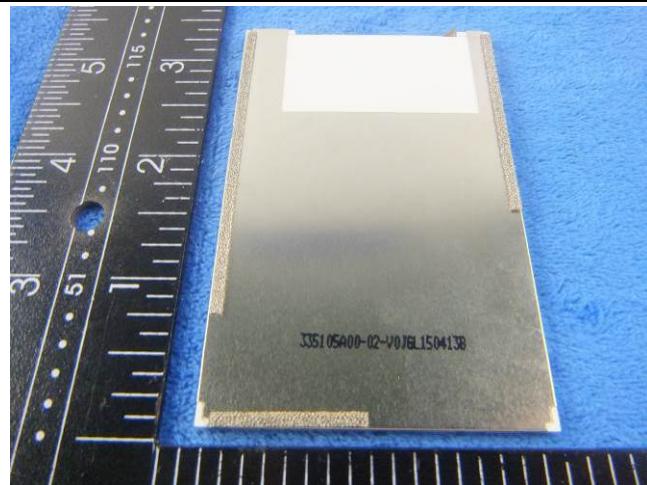




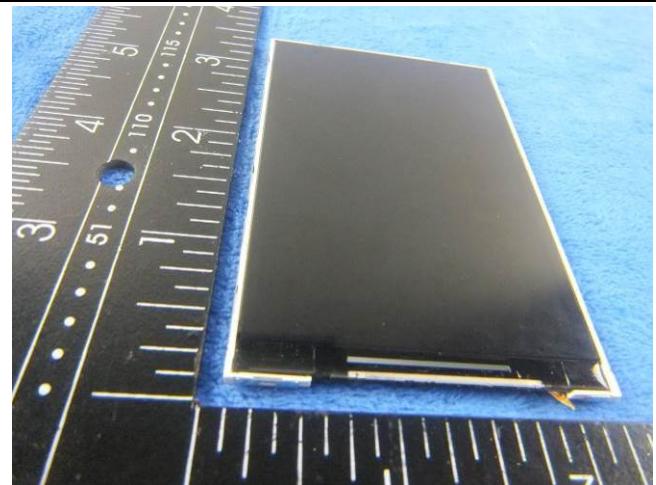
Mainborad With Shielding - rear View



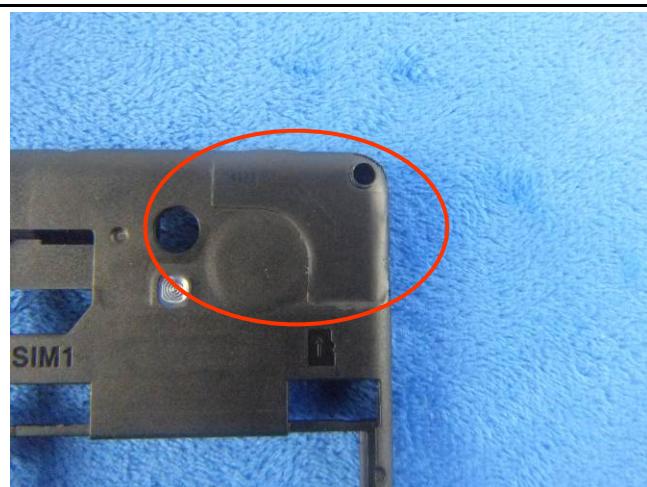
Mainborad Without Shielding - rear View



LCD - Rear View



LCD - Front View

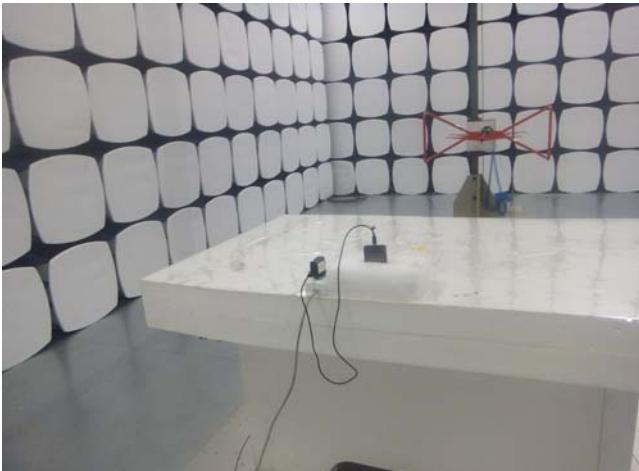


WIFI/BT/BLE - Antenna View



GSM/PCS/UMTS-FDD Antenna View

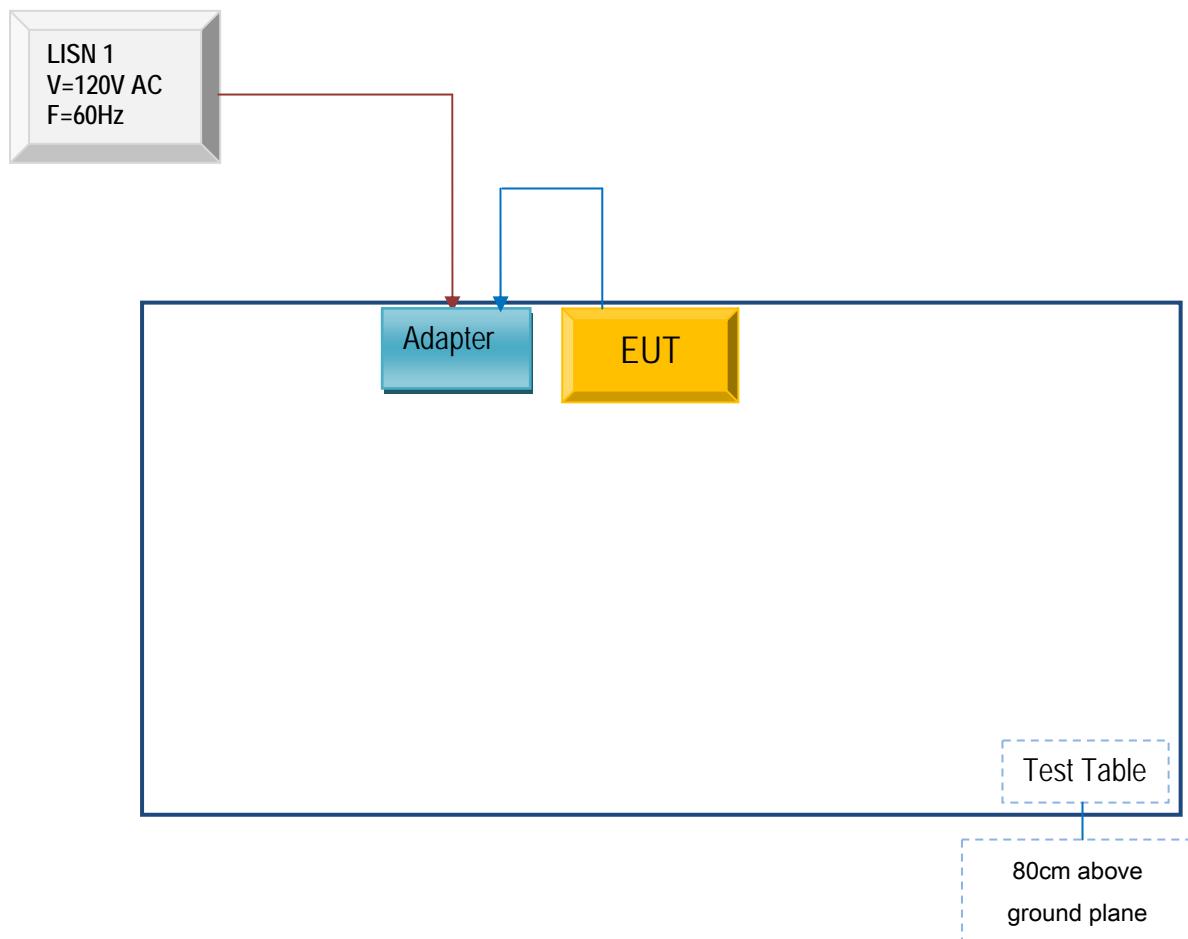
**Annex B.iii. Photograph: Test Setup Photo**

 A photograph showing a blue electronic device on the left connected by a cable to a white rectangular test object on a wooden table. The table is positioned in front of a grey wall with a blue electrical outlet box. The floor is grey.	 A photograph showing the same setup from a side angle, highlighting the white rectangular test object on the wooden table and the blue device on the floor.
Conducted Emissions Test Setup Front View	Conducted Emissions Test Setup Side View
 A photograph of a white rectangular test object on a white reflective table. The table is positioned in front of a large, white, hexagonal patterned absorber wall. A black power cord is visible on the table.	 A photograph of the same test object and setup as above, but from a higher angle, showing the white rectangular test object on the white reflective table with the hexagonal absorber wall in the background.
Radiated Spurious Emissions Test Setup Below 1GHz	Radiated Spurious Emissions Test Setup Above 1GHz

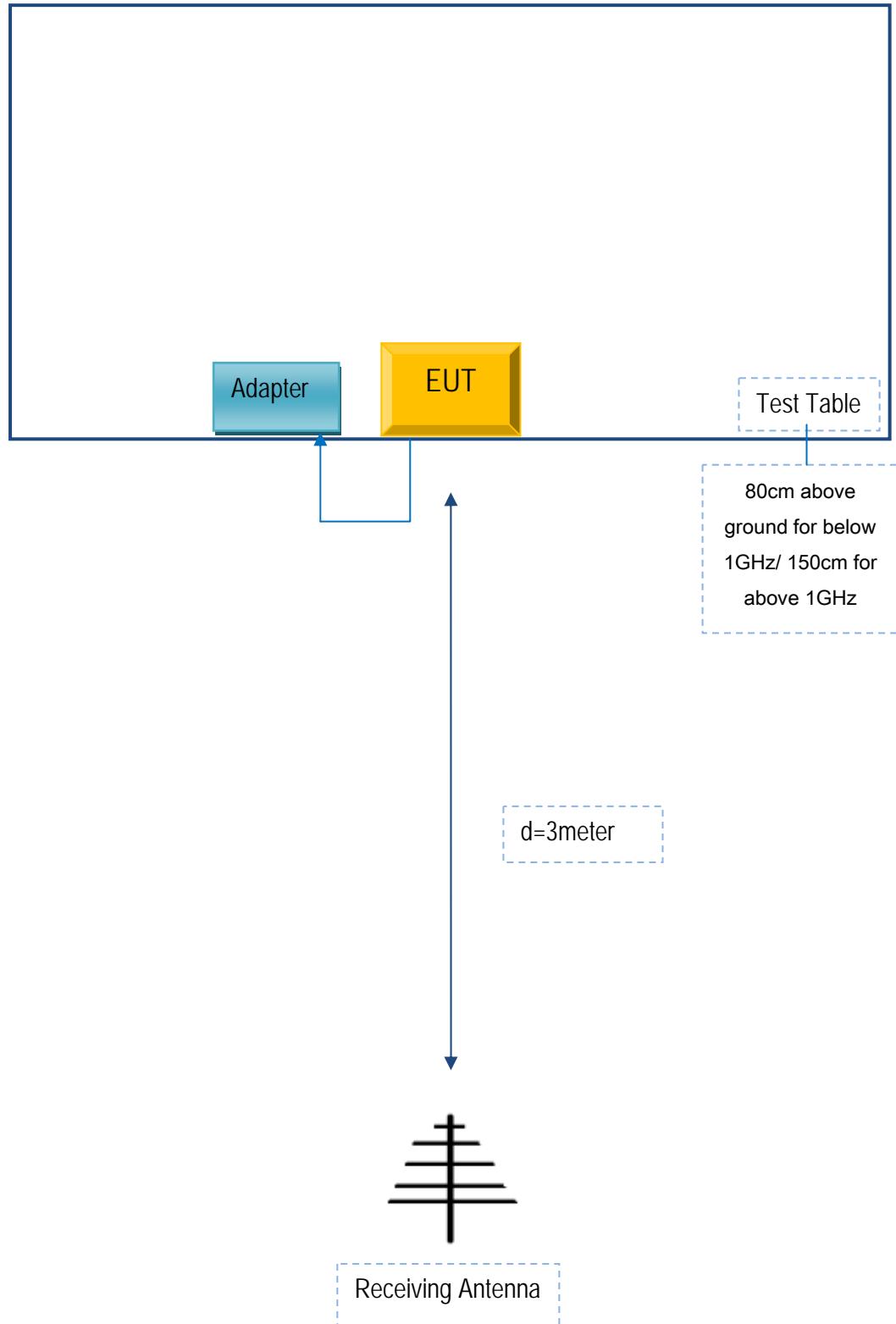
## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

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

Block Configuration Diagram for AC Line 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
N/A	N/A	N/A	N/A	N/A

Test Report No.	15070273-FCC-R4
Page	37 of 38

## 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