ETSI EN 300 440 V2.1.1 (2017-03)

TEST REPORT

For

Vonino Electronics Limited

Miramar Tower 10F - no1010, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong

Model: Xavy G7

Report Type:	**Product Type:**
Amended Report	Tablet PC

Report Number: RSZ170523002-22DA1

Report Date: 2017-06-08

Reviewed By: RF Engineer

Prepared By: Bay Area Compliance Laboratories Corp. (Shenzhen)
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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Issue
0	RSZ170417008-22D	Original Report	2017-05-02
1	RSZ170523002-22DA1	Amended Report	2017-06-08

Note:

This is an amended report application based on original report, the details as below:

1. Change the applicant to “Vonino Electronics Limited”.

2. Change the applicant address to “Miramar Tower 10F - no1010, 132 Nathan Road, Tsim Sha Tsui, Kowloon, Hong Kong”

3. Change the model to “Xavy G7”.

4. Change the trade name to “Vonino”.

Based on the above difference, it will affect nothing, so all the data and photos please refer to the original report.

BELOW IS THE REFERENCED REPORT

ETSI EN 300 440 V2.1.1 (2017-03)

TEST REPORT

For

Shenzhen Adreamer Technology Co., Ltd

Building A2, Silicon Valley Dynamic Qinghu Garden, Dahe Rd., Longhua, Shenzhen, China

Tested Model: MK6952
Multiple Model: Xavy G7

Report Type:	**Product Type:**
Original Report	Tablet PC

Report Number:	RSZ170417008-22D
Report Date:	2017-05-02
Reviewed By:	Simon Wang RF Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Shenzhen Adreamer Technology Co., Ltd's* product, model number: *MK6952 in* this report is a *Tablet PC*, which was measured approximately: 186 mm (L) * 101mm (W) * 9.6mm (H), rated with input voltage: DC 3.7V from rechargeable li-ion battery or DC 5.0V from adapter.

Adapter information
Model: C2000
Input: AC 100-240V 50/60Hz 0.3A
Output: DC 5.0V, 2.0A

Notes: This series products model: Xavy G7 and MK6952 are identical; they have the same or similar appearance, structure, PCB, Material and function to the testing products, and only are different for model name. Model MK6952 was selected for fully testing, the detailed information can be referred to the attached declaration which was stated and guaranteed by the applicant.

** All measurement and test data in this report was gathered from production sample serial number: 1700688 (Assigned by BACL, Shenzhen).The EUT supplied by the applicant was received on 2017-04-17.*

Objective

This report is prepared on behalf of the *Shenzhen Adreamer Technology Co., Ltd* in accordance with ETSI EN 300 440 V2.1.1 (2017-03),Short Range Devices (SRD); Radio equipment to be used in the 1 GHz to 40 GHz frequency range; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

The object is to determine compliance with ETSI EN 300 440 V2.1.1 (2017-03).

Related Submittal(s)/Grant(s)

No Related Submittals.

Test Methodology

All measurements contained in this report were conducted with ETSI EN 300 440.

Measurement uncertainty with radiated emission is 5.81 dB for 30MHz-1GHz.and 4.88 dB for above 1GHz, 1.95dB for conducted measurement.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on October 31, 2013. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

No modifications were made to the EUT.

EUT Exercise Software

No exercise software.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT.

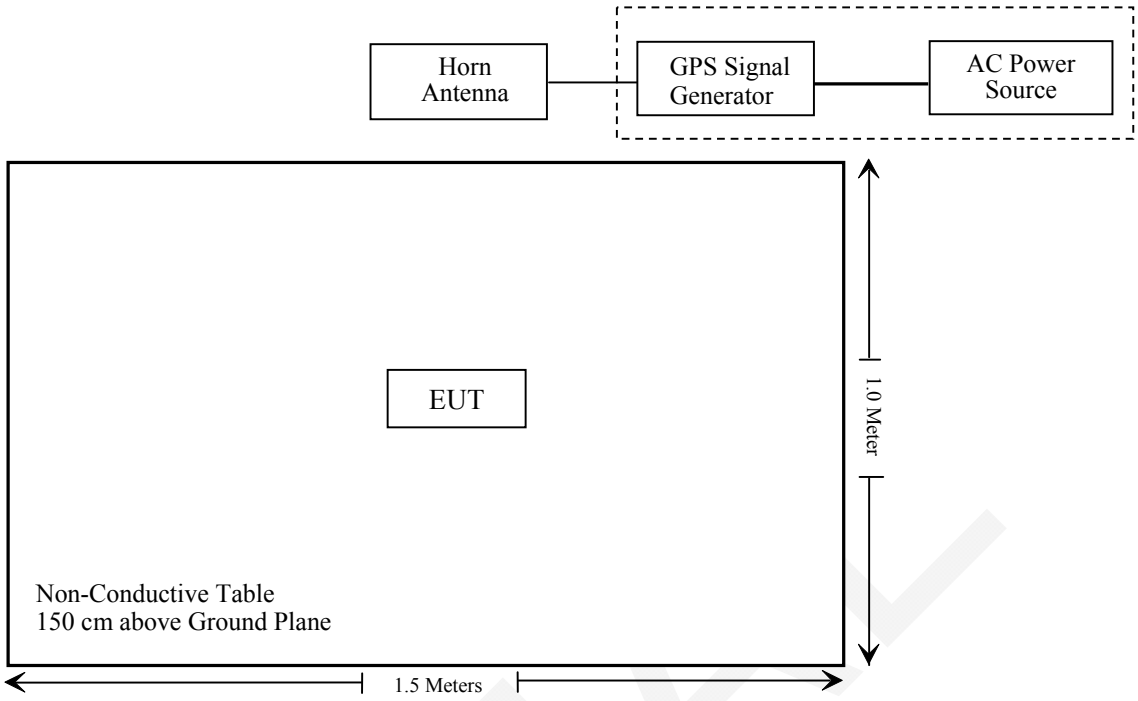
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
MEGURO	GPS Signal Generator	MSG-2050	N/A

External I/O Cable

Cable Description	Length (m)	From Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

ETSI EN 300 440 V2.1.1 (2017-03)

ETSI EN 300 440 V2.1.1 (2017-03)	Description of test	Result
§ 4.2.2	Equivalent isotropically radiated power	Not Applicable
§ 4.2.3	Permitted range of operating frequencies	Not Applicable
§ 4.2.4	Unwanted emission in the Spurious Emissions domain	Not Applicable
§ 4.2.5	Duty Cycle	Not Applicable
§ 4.3.5	Receiver Spurious Radiations	Compliance

Not Applicable: Testing is not required for the receiving sample.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Receiver Spurious Radiations					
Sunol Sciences	Horn Antenna	DRH-118	A052604	2014-12-29	2017-12-28
BIZI	Signal Analyzer	FSEM	845987/005	2017-04-14	2018-04-14
Sunol Sciences	Bi-log Antenna	JB1	A040904-2	2014-12-17	2017-12-16
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2017-02-14	2018-02-14
HP	Amplifier	HP8447E	1937A01046	2016-11-12	2017-05-13
Anritsu	Signal Generator	68369B	004114	2016-12-05	2017-12-05
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2016-12-07	2017-12-07
COM POWER	Dipole Antenna	AD-100	41000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2015-08-18	2018-08-17

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

ETSI EN 300 440 V2.1.1 (2017-03) § 4.3.5 – RECEIVER SPURIOUS RADIATIONS

Applicable Standard

For measurements above 1 000 MHz the peak value shall be measured using a spectrum analyser. The "max hold" function of a spectrum analyser shall be used. For measurements up to 1 000 MHz the quasi-peak detector set in accordance with the specification of CISPR 16 [1], [2] and [3] shall be used.

The power of any spurious emission shall not exceed 2 nW in the range 25 MHz to 1 GHz and shall not exceed 20 nW on frequencies above 1 GHz.

EUT Setup

The radiated emission tests were performed in the 3-meter Chamber, using the setup accordance with ETSI EN 300 440. The specifications used were the ETSI EN 300 440 limits.

Spectrum Analyzer Setup

According to ETSI EN 300 440, the EUT was tested from 25 MHz to 16 GHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Range	RBW	Video B/W	Detector
Below 30 MHz	10 kHz	30 kHz	Peak
30 MHz – 1000 MHz	100 kHz	300 kHz	Peak
Above 1 GHz	1 MHz	3 MHz	Peak

Test Procedure

1) Method of measurement conducted spurious components

This method of measurement applies to receivers having a permanent antenna connector.

A test load, 50Ω power attenuator, may be used to protect the measuring receiver (see clause 6.5) against damage when testing a receiver combined in one unit with a transmitter.

The measuring receiver used shall have sufficient dynamic range and sensitivity to achieve the required measurement accuracy at the specified limit. The bandwidth of the measuring receiver shall be adjusted until the sensitivity of the measuring receiver is at least 6 dB below the spurious emission limit given in clause 4.3.5.4. This bandwidth shall be recorded in the test report:

a) The receiver input terminals shall be connected to a measuring receiver having an input impedance of 50 Ω and the receiver is switched on.

b) For carrier frequencies in the range 1 GHz to 20 GHz the frequency of the measuring receiver shall be adjusted over the frequency range 25 MHz to 10 times the carrier frequency, not exceeding 40 GHz. For carrier frequencies above 20 GHz the measuring receiver shall be tuned over the range 25 MHz up to twice the carrier frequency not exceeding 66 GHz. The frequency and the absolute power level of each of the spurious components found shall be noted.

c) If the detecting device is not calibrated in terms of power input, the level of any detected components shall be determined by replacing the receiver by the signal generator and adjusting it to reproduce the frequency and level of every spurious component noted in step b). The absolute power level of each spurious component shall be noted.

d) The frequency and level of each spurious emission measured and the bandwidth of the measuring receiver shall be recorded in the test report.

2) Method of measurement cabinet radiation

This method of measurement applies to receivers having a permanent antenna connector.

a) A test site selected from annex B which fulfils the requirements of the specified frequency range of this measurement shall be used. The test antenna shall be oriented initially for vertical polarization and connected to a measuring receiver. The bandwidth of the measuring receiver shall be adjusted until the sensitivity of the measuring receiver is at least 6 dB below the spurious emission limit given in clause 4.3.5.4. This bandwidth shall be recorded in the test report.

The receiver under test shall be placed on the support in its standard position and connected to an artificial antenna, see clause 5.8.2.

b) For carrier frequencies in the range 1 GHz to 20 GHz the frequency of the measuring receiver shall be adjusted over the frequency range 25 MHz to 10 times the carrier frequency, not exceeding 40 GHz. For carrier frequencies above 20 GHz the measuring receiver shall be tuned over the range 25 MHz up to twice the carrier frequency not exceeding 66 GHz. The frequency of each spurious component shall be noted. If the test site is disturbed by radiation coming from outside the site, this qualitative search may be performed in a screened room with reduced distance between the transmitter and the test antenna.

c) At each frequency at which a component has been detected, the measuring receiver shall be tuned and the test antenna shall be raised or lowered through the specified height range until the maximum signal level is detected on the measuring receiver.

d) The receiver shall be rotated up to 360° about a vertical axis, to maximize the received signal.

e) The test antenna shall be raised or lowered again through the specified height range until a maximum is obtained. This level shall be noted.

f) The substitution antenna (see clause B.3.2) shall replace the receiver antenna in the same position and in vertical polarization. It shall be connected to the signal generator.

g) At each frequency at which a component has been detected, the signal generator, substitution antenna and measuring receiver shall be tuned. The test antenna shall be raised or lowered through the specified height range until the maximum signal level is detected on the measuring receiver. The level of the signal generator giving the same signal level on the measuring receiver as in step e) shall be noted. This level, after correction due to the gain of the substitution antenna and the cable loss, is the radiated spurious component at this frequency.

h) The frequency and level of each spurious emission measured and the bandwidth of the measuring receiver shall be recorded in the test report.

i) Measurements b) to h) shall be repeated with the test antenna oriented in horizontal polarization.

3) Method of measurement radiated spurious components

This method of measurement applies to receivers having an integral antenna.

a) A test site selected from annex B which fulfils the requirements of the specified frequency range of this measurement shall be used. The test antenna shall be oriented initially for vertical polarization and connected to a measuring receiver. The bandwidth of the measuring receiver shall be adjusted until the sensitivity of the measuring receiver is at least 6 dB below the spurious emission limit given in clause 4.3.5.4. This bandwidth shall be recorded in the test report.

The receiver under test shall be placed on the support in its standard position.

b) The same method of measurement as items b) to i) of clause 4.3.5.3.2 shall apply.

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	53 %
ATM Pressure:	101.0 kPa

The testing was performed by Dylan Li on 2017-05-01.

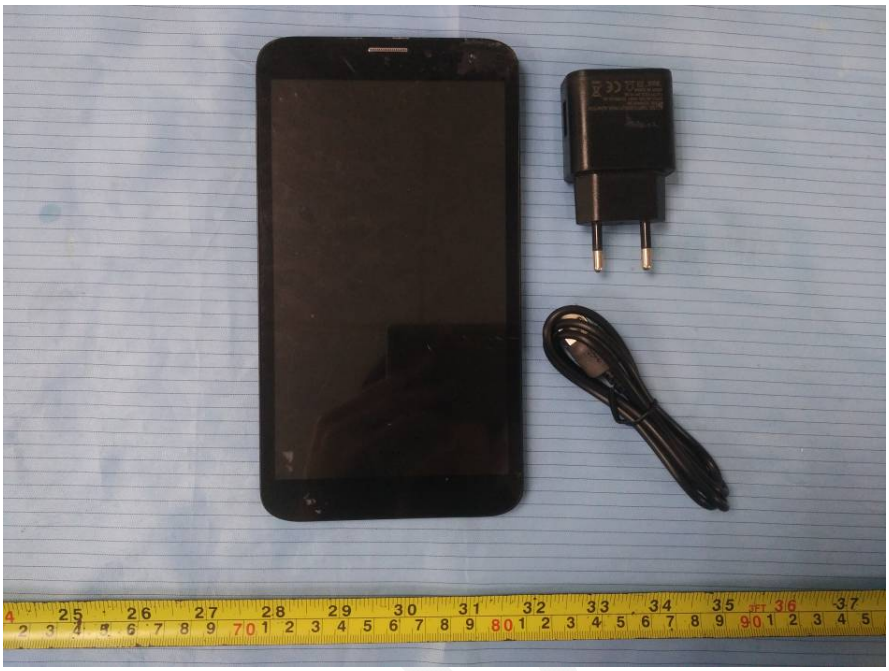
Test Mode: Receiving

Frequency (MHz)	Receiver Reading (dBμV)	Turn Table Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	EN 300 440	
			Height (m)	Polar (H/V)	SG Level (dBm)	Cable (dB)	Antenna Gain (dB)		Limit (dBm)	Margin (dB)
145.65	31.56	119	1.2	H	-63.4	0.3	0.0	-63.7	-57	6.70
145.65	30.48	151	2.4	V	-64.5	0.3	0.0	-64.8	-57	7.80
1565.42	31.87	101	1.6	H	-66.8	1.40	8.90	-59.30	-47	12.30
1565.42	30.56	297	1.4	V	-68.7	1.40	8.90	-61.20	-47	14.20

Note:
1) Absolute Level = SG Level - Cable Loss + Antenna Gain
2) Margin = Limit - Absolute Level

EXHIBIT A - EUT PHOTOGRAPHS

EUT – All View



EUT – Front View

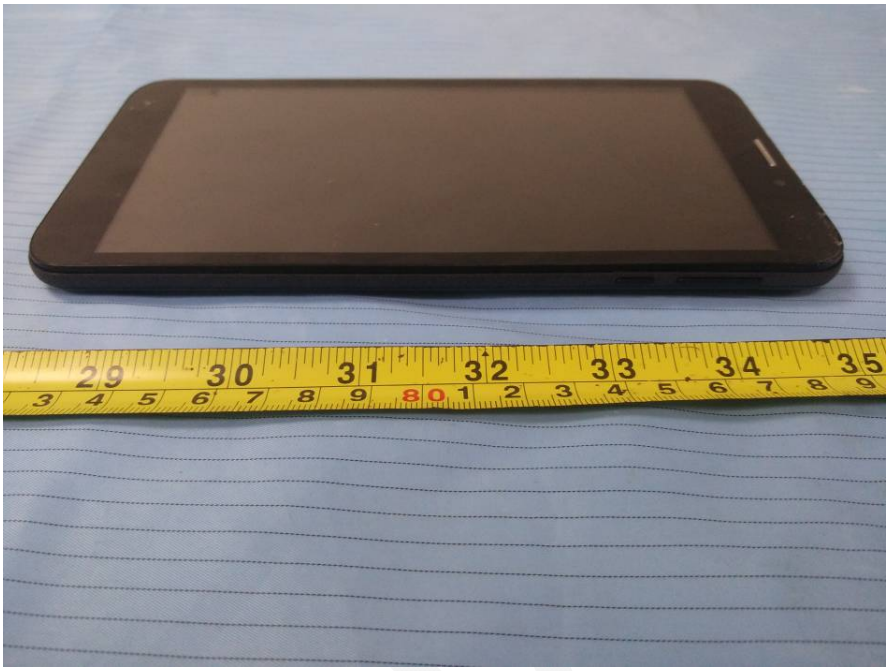
EUT – Rear View

EUT – Top View

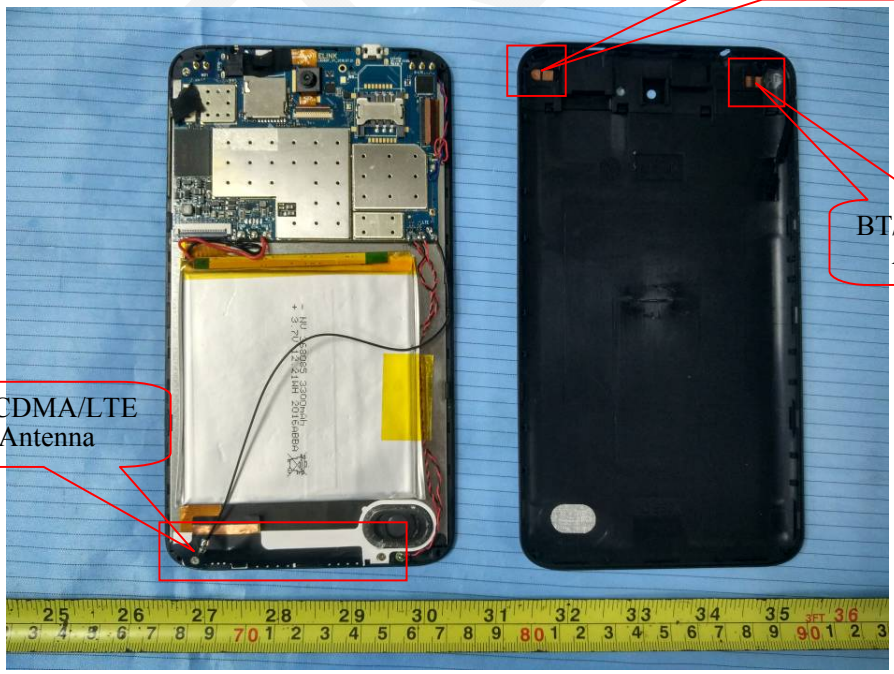
EUT – Bottom View

EUT – Left View

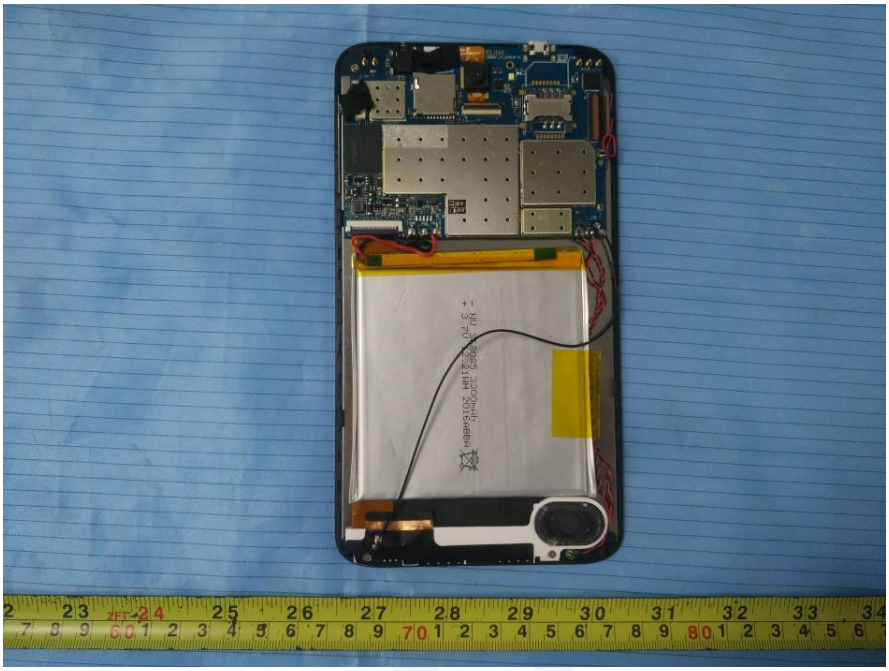
EUT – Right View



EUT – Cover off View 1



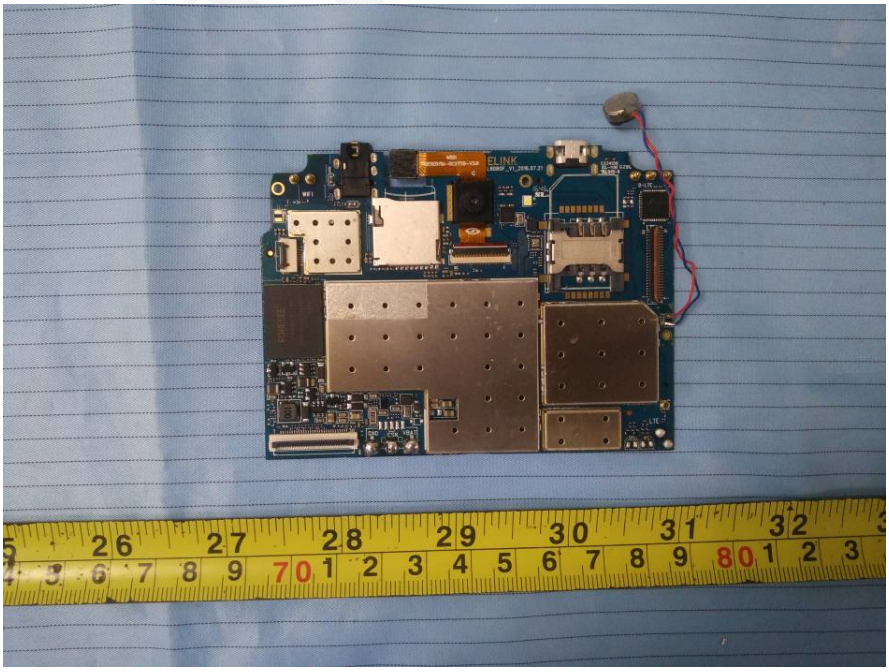
EUT – Cover off View 2



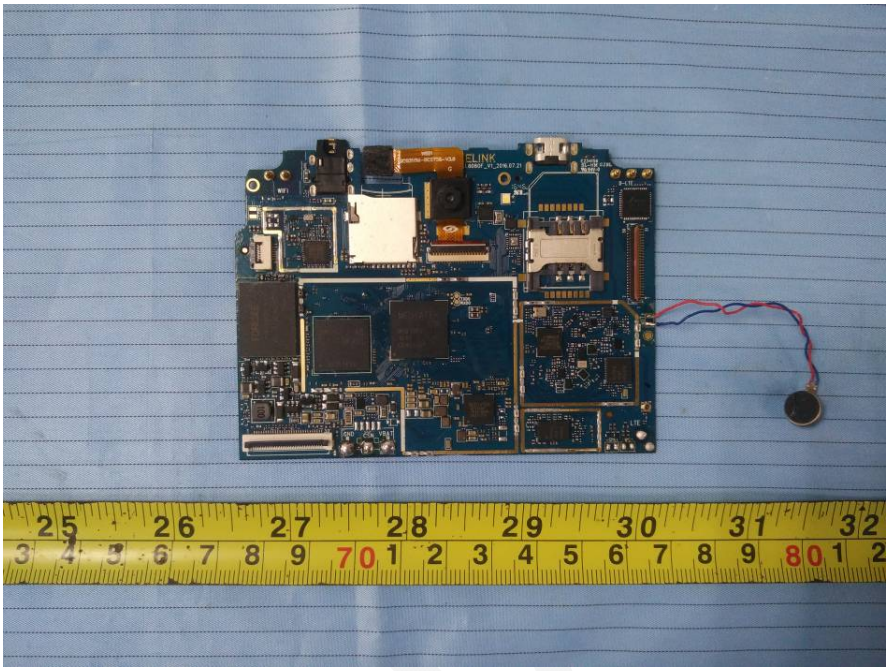
EUT – Cover off View 3

EUT – Cover off View 4

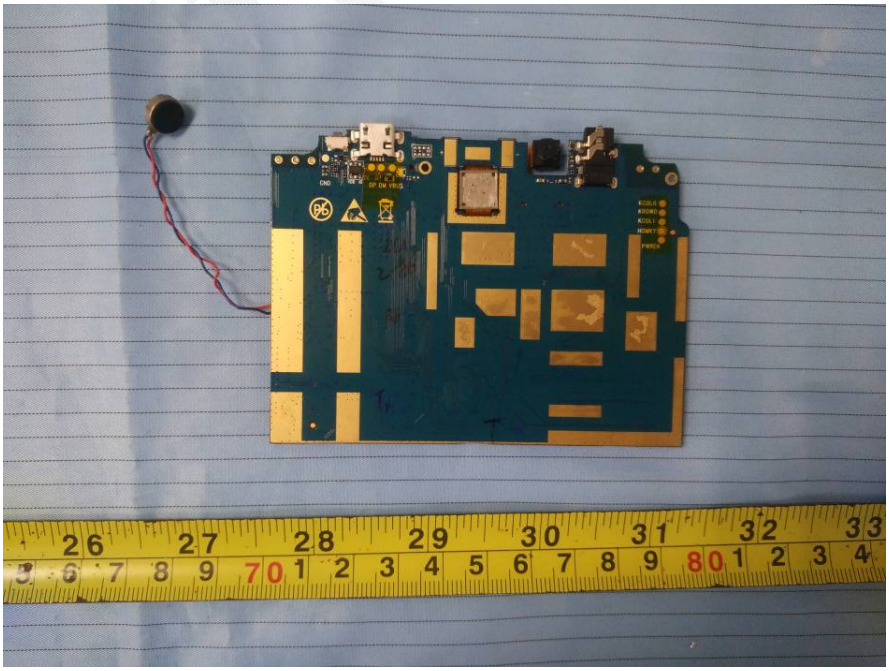
EUT – Main Board Top View



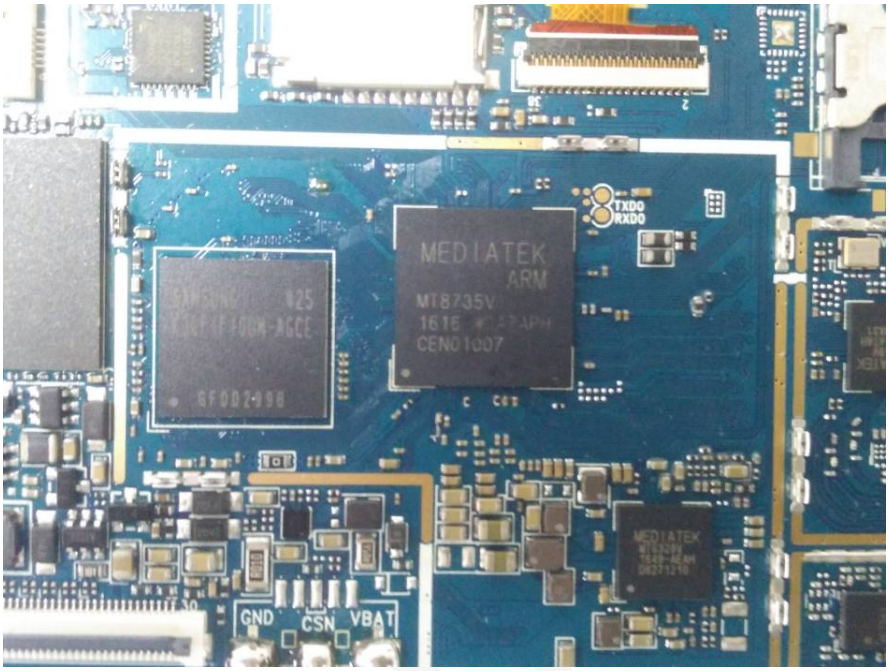
EUT – Main Board Top Shielding off View



EUT –Main Board Bottom View



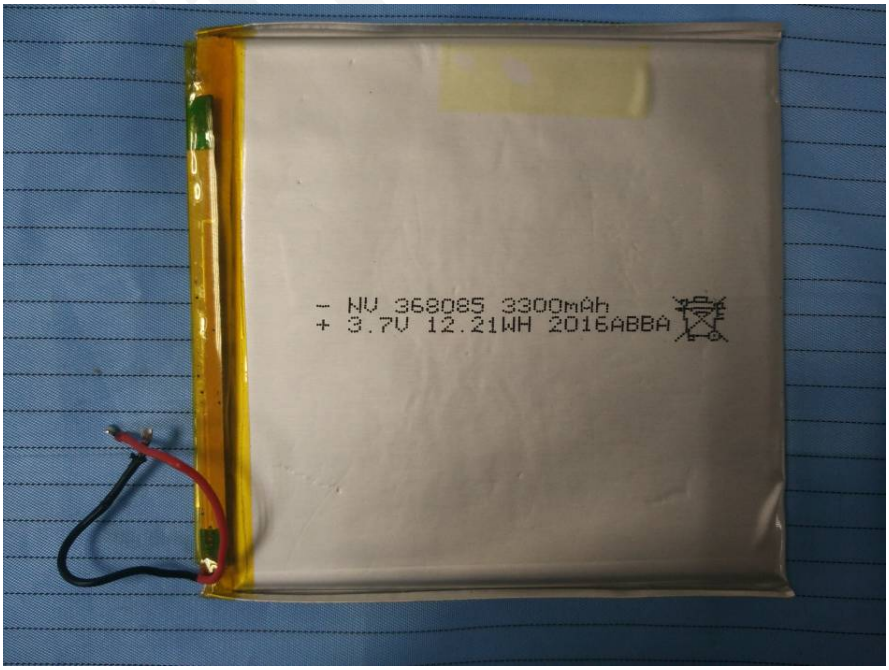
EUT – IC Chip View



EUT – Adapter View

EUT – Adapter Label View

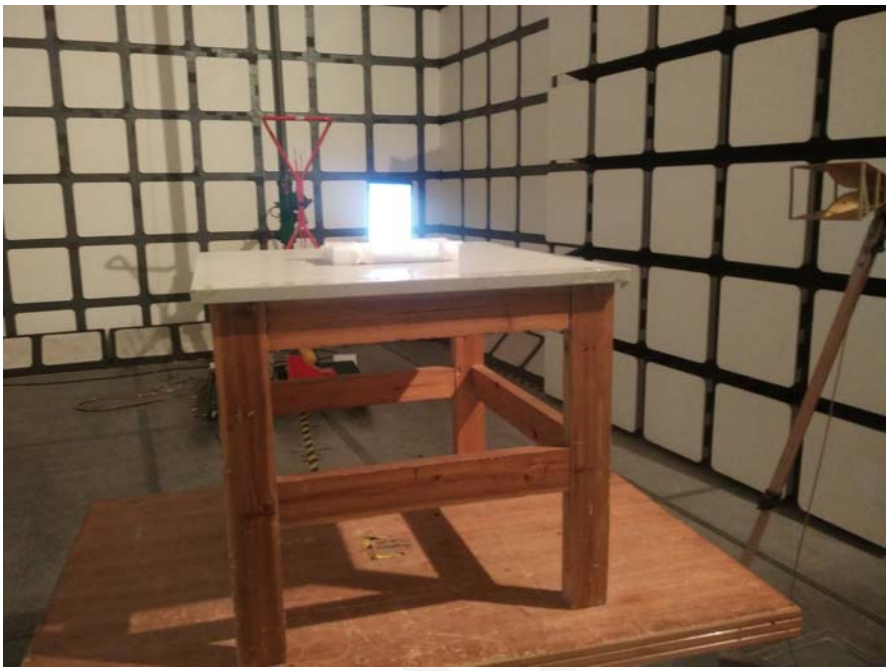
EUT – Battery Front View



EUT – Battery Rear View

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Radiated Spurious Emissions Test View (Below 1GHz)



Radiated Spurious Emissions Test View (Above 1GHz)

******* END OF REPORT *******