FCC Test Report

Report No.: AGC00119141101FE08

FCC ID	:	BRCPC7094
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	tablet pc
BRAND NAME	:	Kinwei, Titan
TEST MODEL	:	Refer to page 4.
CLIENT	:	Kintech Co., Ltd.
DATE OF ISSUE	:	Dec.23, 2014
STANDARD(S)	:	FCC Part 15 Rules
REPORT VERSION	:	V1.0

Attestation of ***G***lobal ***C***ompliance (Shenzhen) Co., Ltd

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec.23, 2014	Valid	Original Report

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1. VERIFICATION OF COMPLIANCE

Applicant	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industral Zone, Xi Xiang Bao An District, Shenzhen, Guang Dong, China
Manufacturer	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industral Zone, Xi Xiang Bao An District, Shenzhen, Guang Dong, China
Product Designation	tablet pc
Brand name:	Kinwei, Titan
Test Model	PC7094
Series Model	PC7094ME, PC7094B, PC70XX(XX represents00~99), PC70XXME(XX represents00~99), PC70XXB(XX represents00~99), KW-PC7094U, KW-PC7094, KW-PC70XXU(XX represents00~99), KW-PC70XX(XX represents00~99).
Difference description	All the same except for the model name.
Date of test:	Dec.16, 2014 to Dec.22, 2014
Deviation:	None
Condition of Test Sample	Normal

The above equipment was tested by Attestation Of Global Compliance Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2003. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.
The test results of this report relate only to the tested sample identified in this report.

Prepared By	Max Zhang	
	Max Zhang	Dec.23, 2014
Checked By	Kidd Yang	
	Kidd Yang	Dec.23, 2014
Authorized By	Solger Zhang	
	Solger Zhang	Dec.23, 2014

2. PRODUCT INFORMATION

Housing Type: Plastic

EUT Rating Voltage: DC 3.7V by battery or USB Operated

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port of EUT			
I/O Port Type	**Q'TY**	**Cable**	**Tested with**
USB	1	0.8m Unshielded	1
Headset Port	1	0.8m Unshielded	1

3. TEST FACILITY

Facility	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location:	B112-B113, Building 12, Baoan Building Materials Center, No.1 of Xixiang Inner Ring Road, Baoan District, Shenzhen, Guangdong, P.R.China
Description:	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.
Site Filing:	The FCC Registration Number is 259865
Instrument Tolerance:	All measuring equipment is in accord with ANSI C63.4 requirements that meet industry regulatory agency and accreditation agency requirement.

4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
PC	Apple Inc	Macbook Pro	N/A	N/A	1.5m unshielded

**Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

5. SYSTEM DESCRIPTION

EUT test procedure:

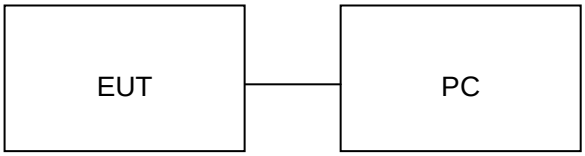
1. Connect EUT and peripheral devices.
2. Power on the EUT, the EUT begins to work.
3. Running data transmission and make sure the EUT normal working.

Test Mode

1. USB (Data transmitting)

NOTE: Other modes have reflected in VOC program.

Configure:



6. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.107	Conduction Emission	Compliant
§15.109	Radiated Emission	Compliant

7. FCC LINE CONDUCTED EMISSION TEST

7.1. TEST EQUIPMENT OF LINE CONDUCTED EMISSION TEST

Description	Manufacturer	Model	Cal. Date	Cal. Due
EMI Test Receiver	Rohde & Schwarz	ESHS 30	2014.07.30	2015.07.30
LISN	Rohde & Schwarz	ESH2-Z5	2014.09.05	2015.09.04

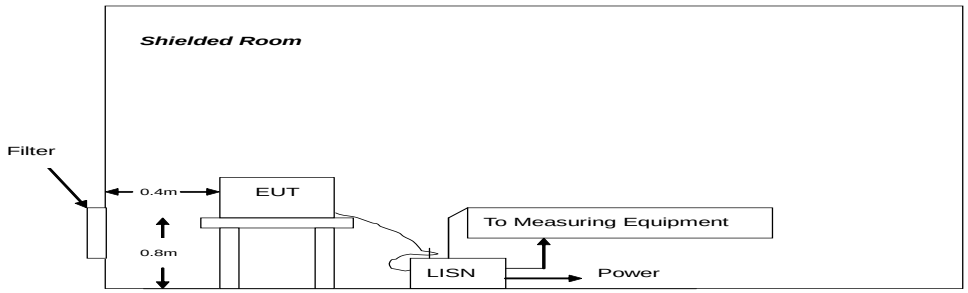
7.2 .LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

**Note: 1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

7.3. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



A: Powered through filter

7.4. PROCEDURE OF LINE CONDUCTED EMISSION TEST

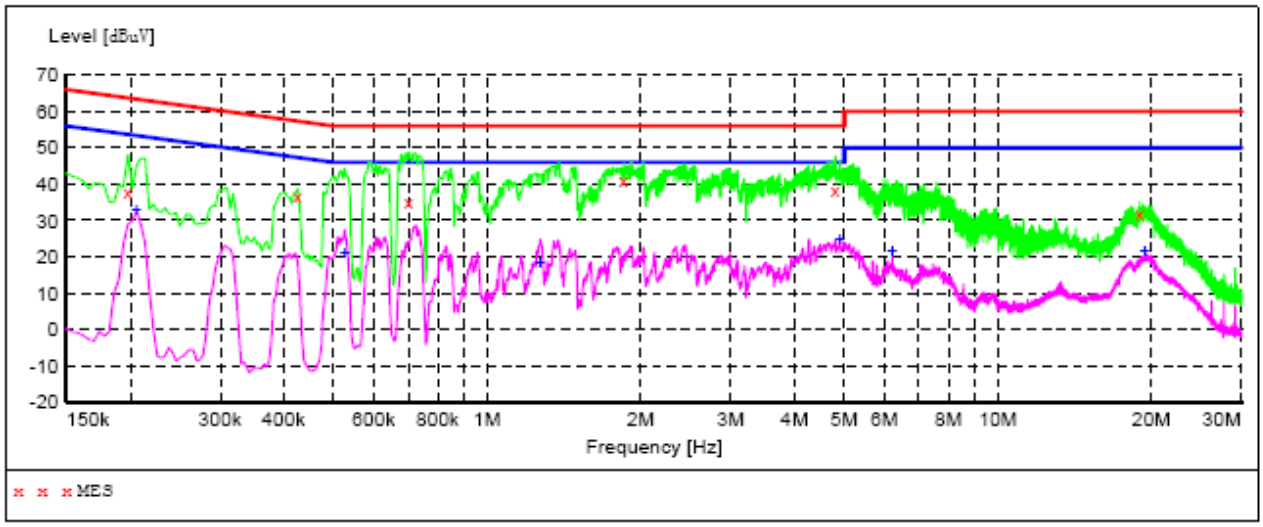
1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per ANSI C63.4.
3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4) The EUT received DC 5V power by PC. All support equipments received AC 120V/60Hz power from socket under the turntable, if any.
5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
7) During the above scans, the emissions were maximized by cable manipulation.
8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.

The test data of the worst case condition(mode 1) was reported on the following Data page.

7.5 TEST RESULT OF LINE CONDUCTED EMISSION TEST

LINE CONDUCTED EMISSION - L

SCAN TABLE: "Voltage(150K-30M)PR1"
Short Description: 9k-30M Voltage



MEASUREMENT RESULT:

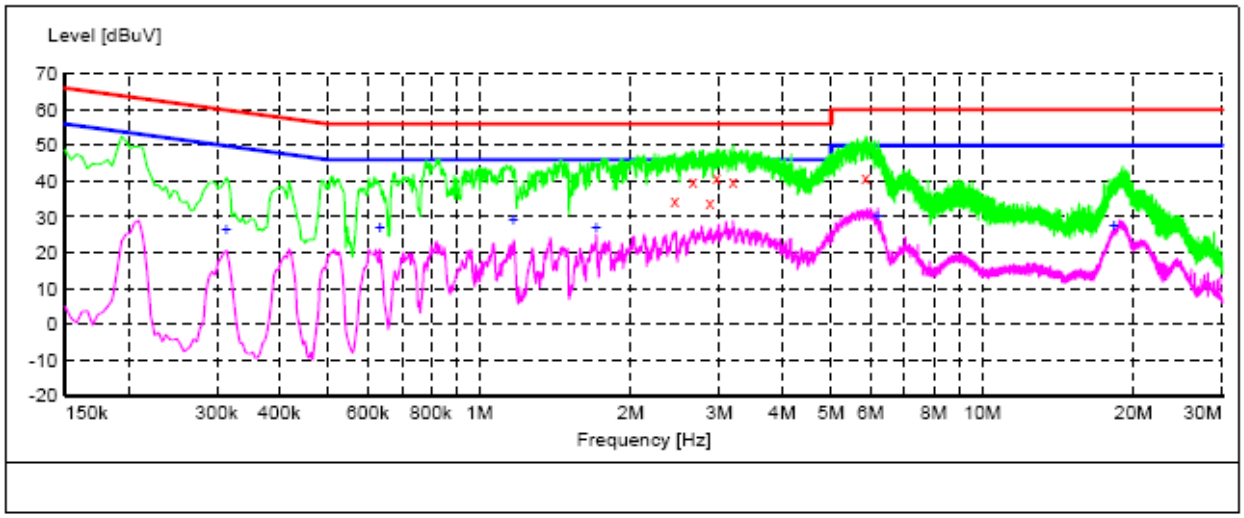
Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.198000	37.70	0.2	64	26.0	PK	L1	GND
0.426000	36.50	0.2	57	20.8	PK	L1	GND
0.702000	35.20	0.2	56	20.8	PK	L1	GND
1.850000	40.80	0.3	56	15.2	PK	L1	GND
4.806000	38.40	0.3	56	17.6	PK	L1	GND
18.954000	32.00	0.8	60	28.0	PK	L1	GND

MEASUREMENT RESULT:

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.206000	33.00	0.2	53	20.4	AV	L1	GND
0.526000	21.10	0.2	46	24.9	AV	L1	GND
1.270000	18.60	0.2	46	27.4	AV	L1	GND
4.906000	25.10	0.3	46	20.9	AV	L1	GND
6.210000	21.60	0.4	50	28.4	AV	L1	GND
19.394000	21.70	0.8	50	28.3	AV	L1	GND

LINE CONDUCTED EMISSION – N

SCAN TABLE: "Voltage(150K-30M)PR1"
Short Description: 9k-30M Voltage



MEASUREMENT RESULT

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
2.450000	34.40	0.3	56	21.6	PK	N	GND
2.658000	39.90	0.3	56	16.1	PK	N	GND
2.874000	34.10	0.3	56	21.9	PK	N	GND
2.966000	40.90	0.3	56	15.1	PK	N	GND
3.194000	40.20	0.3	56	15.8	PK	N	GND
5.862000	41.20	0.4	60	18.8	PK	N	GND

MEASUREMENT RESULT

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.314000	26.60	0.2	50	23.3	AV	N	GND
0.634000	27.20	0.2	46	18.8	AV	N	GND
1.170000	29.20	0.2	46	16.8	AV	N	GND
1.706000	26.80	0.3	46	19.2	AV	N	GND
6.194000	30.10	0.4	50	19.9	AV	N	GND
18.298000	27.30	0.7	50	22.7	AV	N	GND

8. FCC RADIATED EMISSION TEST

8.1. TEST EQUIPMENT OF RADIATED EMISSION

Description	Manufacturer	Model	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	2014.02.17	2015.02.16
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	2014.08.17	2015.08.16
WIDEBAND REQUENCY ANTENNA	SCHWARZBECK	VULB9168	07/21/2014	07/20/2015
Broadband Preamplifier	SCHWARZBECK	BBV 9718	07/26/2014	07/26/2015
Multi-Device Controller	EMCO	2090	07/30/2014	07/30/2015
RF CABLE	SUIRONG	30MHZ-18GHZ	07/18/2014	07/18/2015
RF CABLE	SAT	9KHZ-30MHZ	06/04/2014	06/03/2015

8.2. LIMITS OF RADIATED EMISSION TEST

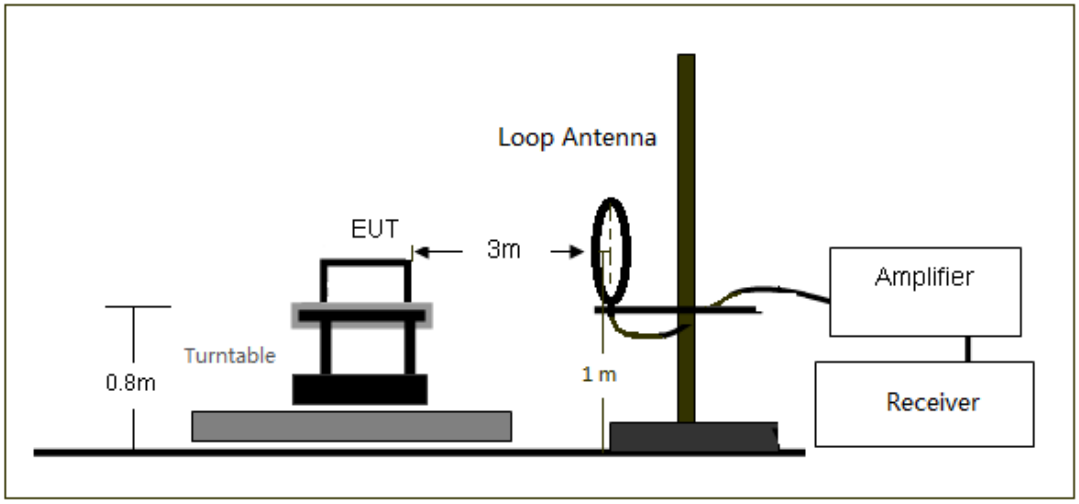
Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ Q.P.)
30~88	3	40.0
88~216	3	43.5
216~960	3	46.0
Above 960	3	54.0

**Note: The lower limit shall apply at the transition frequency.

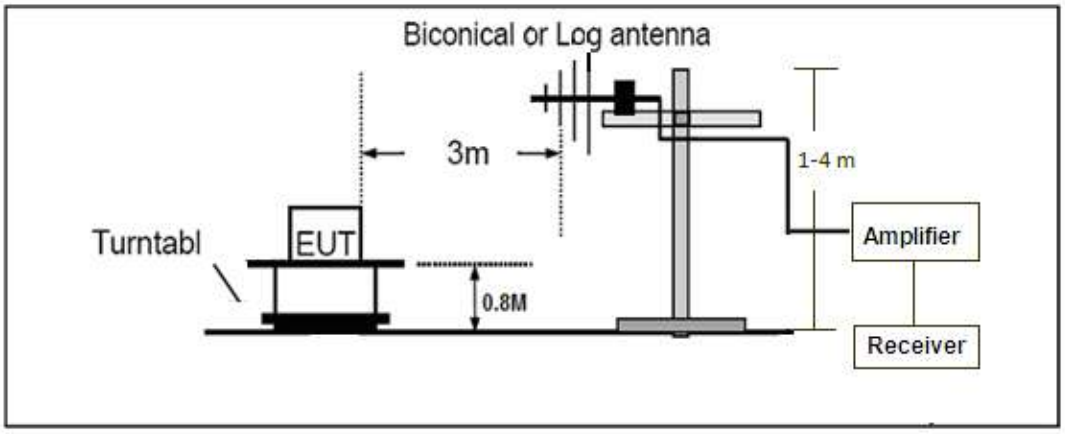
8.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST

System Diagram of Connections between EUT and Simulators

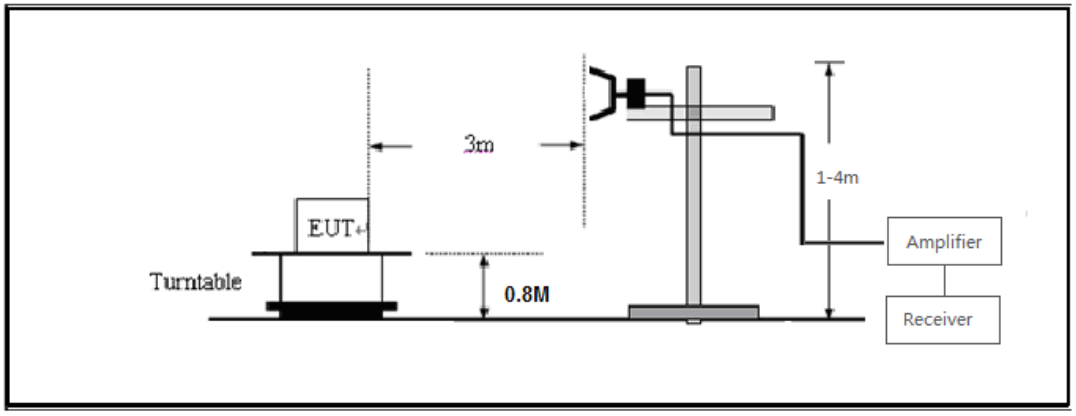
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



8.4 PROCEDURE OF RADIATED EMISSION TEST

1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2) Support equipment, if needed, was placed as per ANSI C63.4.
3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4) The EUT received DC 5V by PC. All support equipments received AC 120V/60Hz power from socket under the turntable, if any.
5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
7) The test mode(s) were scanned during the test:
8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented.

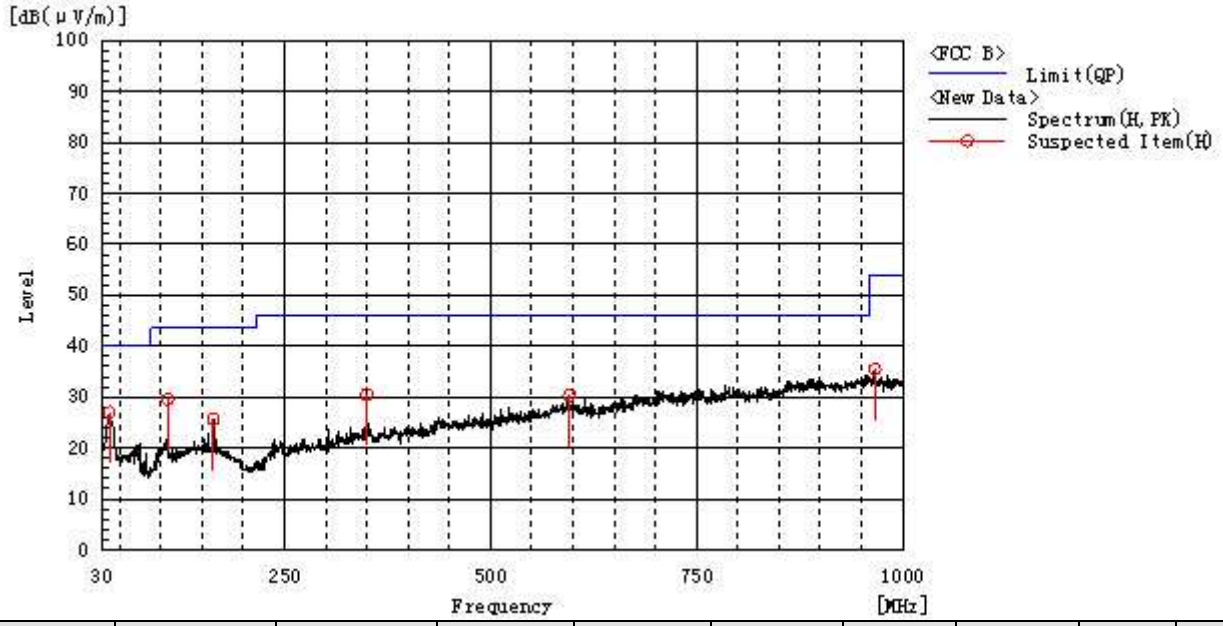
The test data of the worst case condition(mode 1) was reported on the following Data page

8.5 TEST RESULT OF RADIATED EMISSION TEST

RADIATED EMISSION BELOW 30MHZ

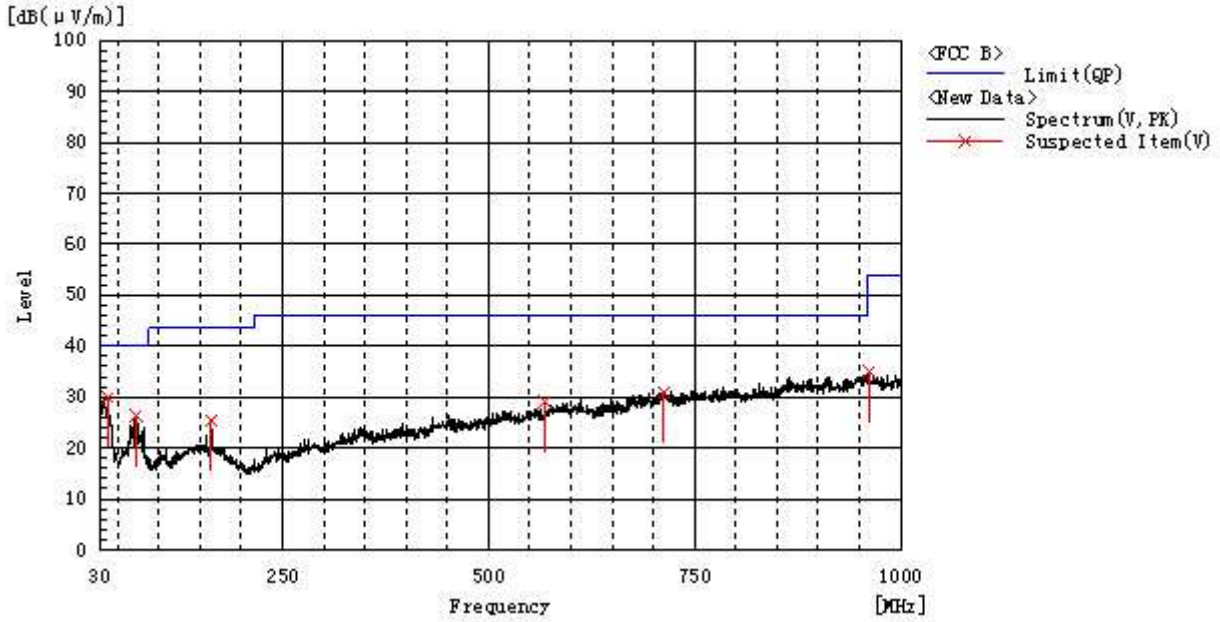
No emission found between lowest internal used/generated frequencies to 30MHz

Radiated Emission Test –Horizontal -3m



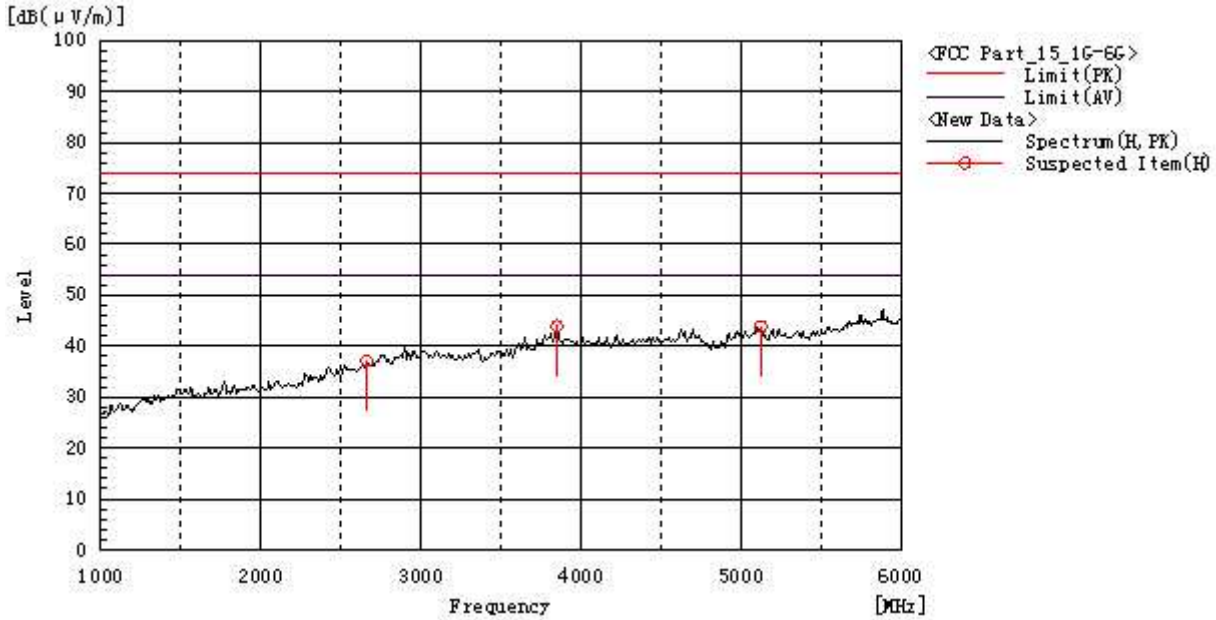
Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
37.760	H	5.8	21.2	27.0	40.0	13.0	Pass	100.0	188.7
108.570	H	18.3	11.3	29.6	43.5	13.9	Pass	100.0	11.0
163.860	H	10.6	15.0	25.6	43.5	17.9	Pass	200.0	80.5
350.100	H	12.1	18.4	30.5	46.0	15.5	Pass	100.0	70.3
966.050	H	6.7	28.7	35.4	54.0	18.6	Pass	100.0	109.5
595.995	H	7.3	23.0	30.3	46.0	15.7	Pass	200.0	246.3

Radiated Emission Test –Vertical -3m



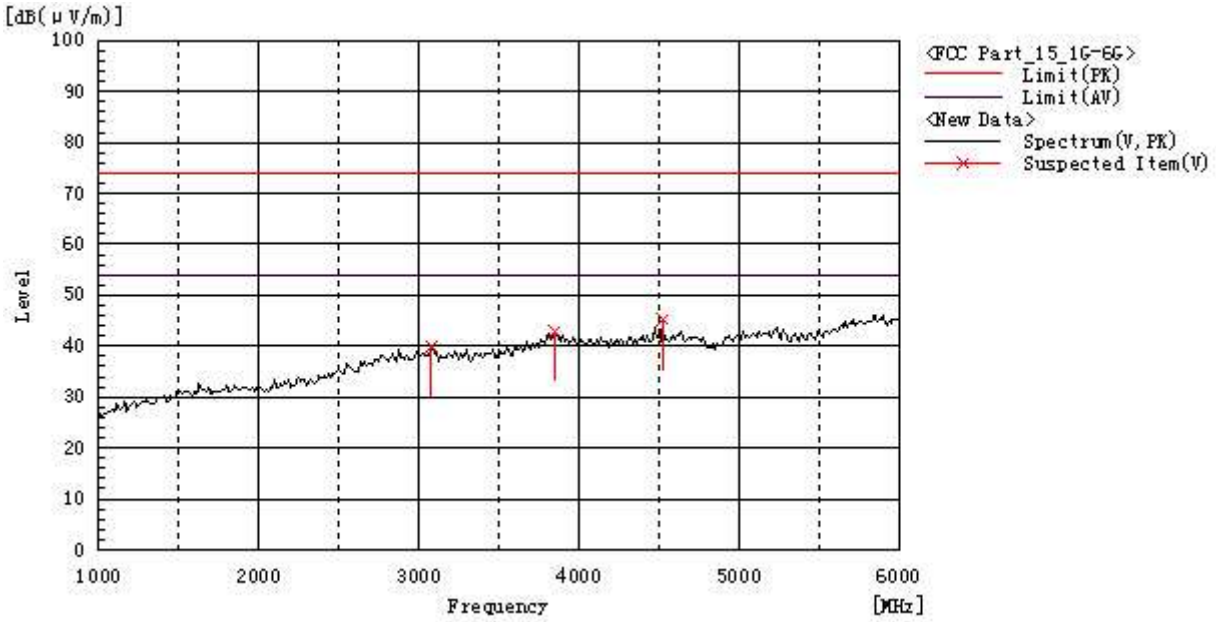
Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) QP	Margin dB	Pass/Fail	Height cm	Angle deg
38.245	V	8.8	21.2	30.0	40.0	10.0	Pass	100.0	124.2
73.650	V	16.1	10.2	26.3	40.0	13.7	Pass	100.0	188.2
163.375	V	10.4	15.0	25.4	43.5	18.1	Pass	100.0	214.9
961.685	V	6.2	28.7	34.9	54.0	19.1	Pass	200.0	131.4
568.835	V	7.0	22.0	29.0	46.0	17.0	Pass	100.0	300.5
712.395	V	5.4	25.6	31.0	46.0	15.0	Pass	200.0	153.9

RADIATED EMISSION ABOVE 1GHZ – HORIZONTAL



Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) PK	Margin dB PK	Pass/Fail	Height cm	Angle deg
3850.000	H	37.8	6.1	43.9	74.0	30.1	Pass	200.0	72.1
2662.500	H	35.5	1.5	37.0	74.0	37.0	Pass	100.0	196.0
5125.000	H	34.6	9.3	43.9	74.0	30.1	Pass	200.0	286.4

RADIATED EMISSION ABOVE 1GHZ - VERTICAL



Frequency MHz	Polarization	Reading dB(uV)	Factor dB (1/m)	Level dB(uV/m) PK	Limit dB(uV/m) PK	Margin dB PK	Pass/Fail	Height cm	Angle deg
4525.000	V	37.7	7.4	45.1	74.0	28.9	Pass	100.0	165.7
3075.000	V	36.2	3.7	39.9	74.0	34.1	Pass	100.0	165.7
3850.000	V	36.8	6.1	42.9	74.0	31.1	Pass	200.0	144.8

RESULT: PASS

Note: 6~12.38GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

The “Factor” value can be calculated automatically by software of measurement system.

APPENDIX 1
PHOTOGRAPHS OF TEST SETUP

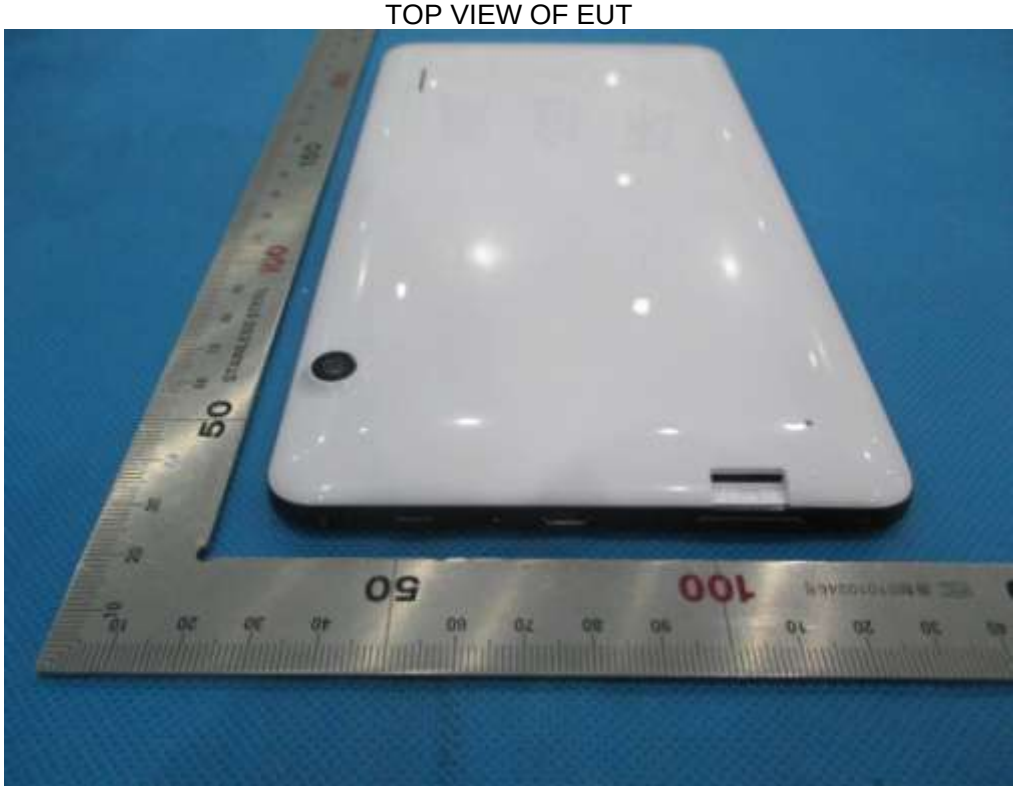
FCC LINE CONDUCTED EMISSION TEST SETUP

FCC RADIATED EMISSION TEST SETUP

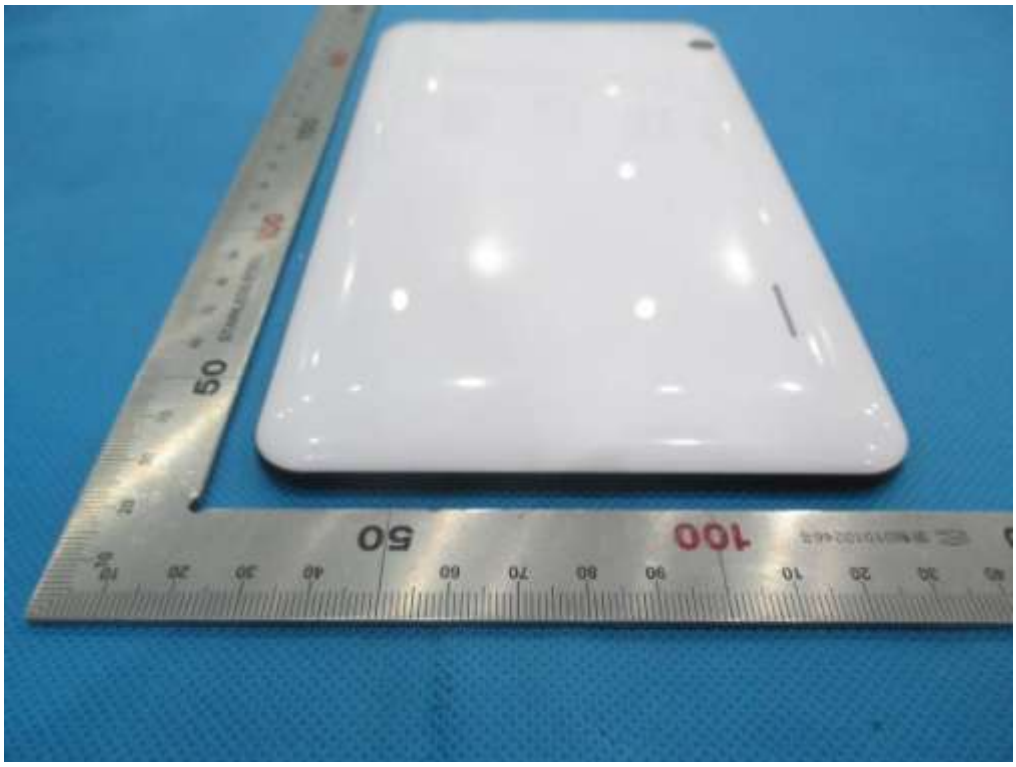
APPENDIX 2
PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT

TOP VIEW OF EUT



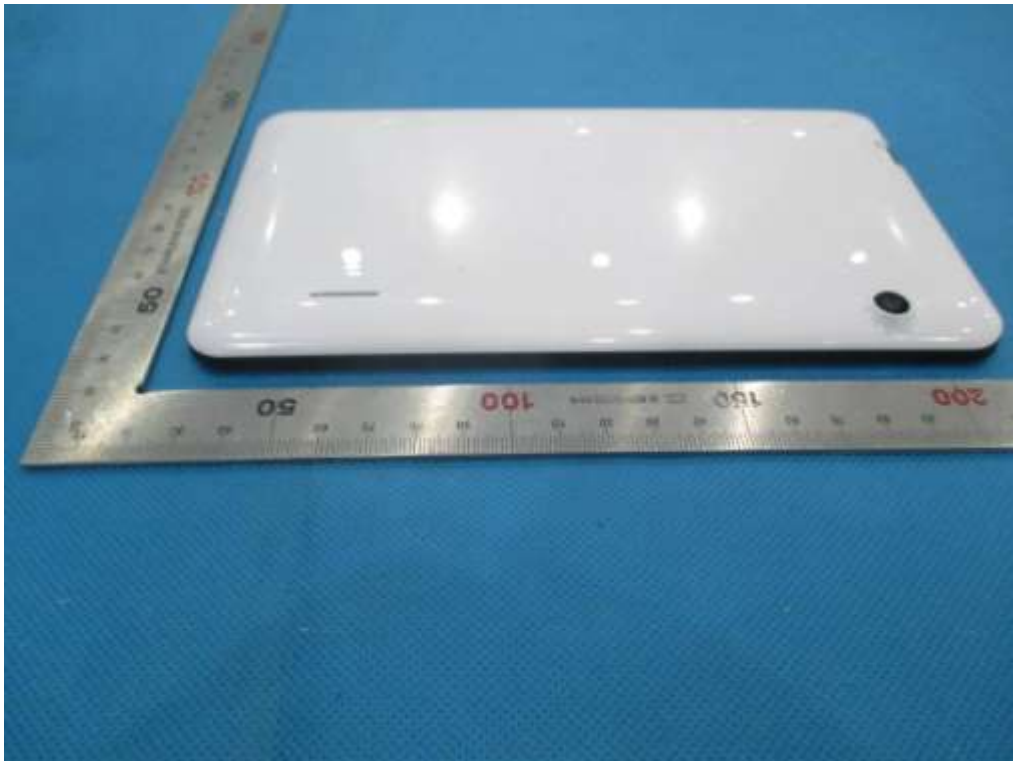
BOTTOM VIEW OF EUT



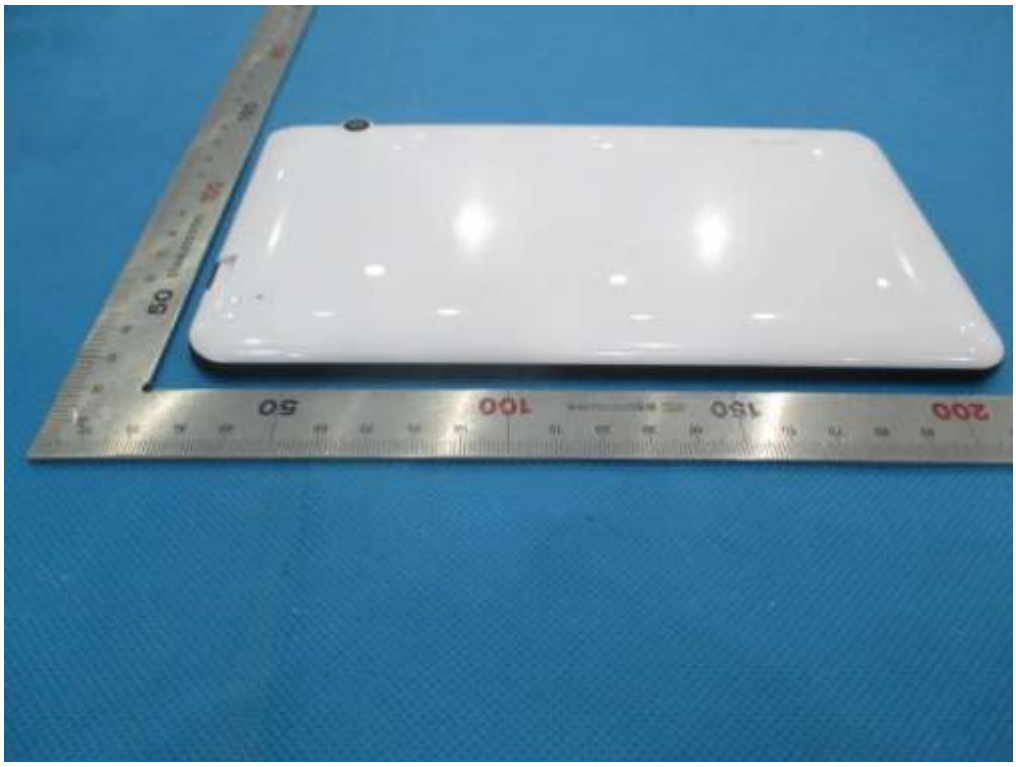
FRONT VIEW OF EUT

BACK VIEW OF EUT

LEFT VIEW OF EUT



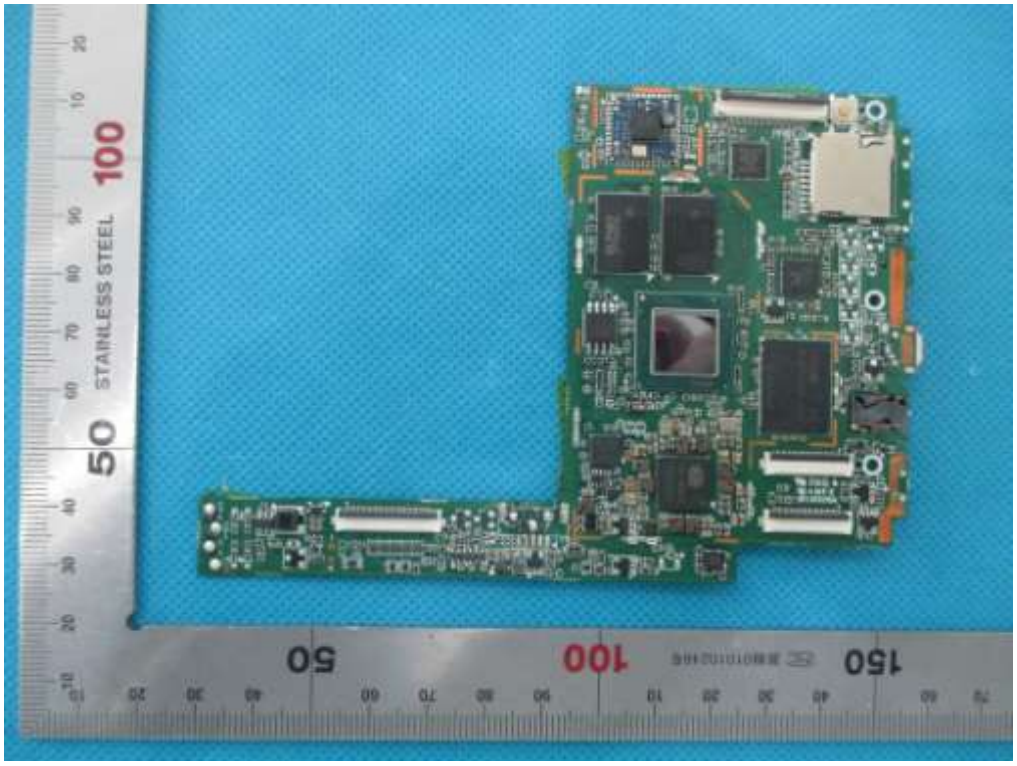
RIGHT VIEW OF EUT



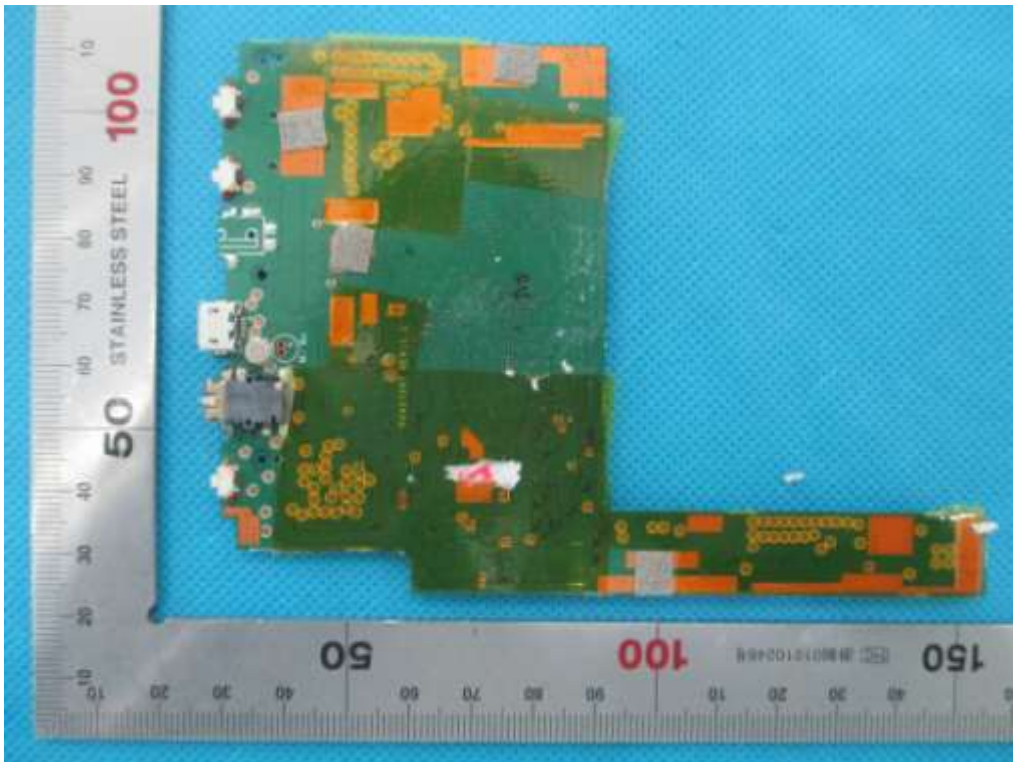
OPEN VIEW OF EUT-1

INTERNAL VIEW OF EUT-1

INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4

----END OF REPORT----