
FCC Test Report

Report No.: AGC00119150401FE01

FCC ID : BRCPC1018

APPLICATION PURPOSE : Original Equipment

PRODUCT DESIGNATION : tablet pc

BRAND NAME : Kinwei/Titan

MODEL NAME : PC1018 (Series model name please see page 4)

CLIENT : Kintech Co., Ltd.

DATE OF ISSUE : May.28, 2015

STANDARD(S) : FCC Part 15 Rules

REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co, Ltd

CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.



Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May.28, 2015	Valid	Original Report

TABLE OF CONTENTS

1. VERIFICATION OF CONFORMITY	4
2. GENERAL INFORMATION	5
2.1. PRODUCT DESCRIPTION	5
2.2. RELATED SUBMITTAL(S) / GRANT (S)	5
2.3. TEST METHODOLOGY	5
2.4. SPECIAL ACCESSORIES	5
2.5. EQUIPMENT MODIFICATIONS	5
3. MEASUREMENT UNCERTAINTY.....	6
4. DESCRIPTION OF TEST MODES.....	6
5. SYSTEM TEST CONFIGURATION	6
5.1. EQUIPMENT USED IN EUT SYSTEM.....	6
5.2. SUMMARY OF TEST RESULTS.....	6
6. TEST FACILITY.....	7
7. RADIATED EMISSION	8
7.1. MEASUREMENT PROCEDURE.....	8
7.2. TEST SETUP.....	10
7.3. TEST RESULT	11
8. FCC LINE CONDUCTED EMISSION TEST	13
8.1. LIMITS OF LINE CONDUCTED EMISSION TEST	13
8.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	13
8.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	14
8.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	14
8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	15
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	17
APPENDIX B: PHOTOGRAPHS OF EUT	18

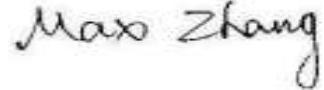
1. VERIFICATION OF CONFORMITY

Applicant	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Manufacturer	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang, Bao An District, Shenzhen, Guang Dong, China
Product Designation	tablet pc
Brand Name	Kinwei/Titan
Test Model:	PC1018
Series Model	PC1018ME, PC1018Y, PCXXXX(XXXX represents 0000~9999), PCXXXXME(XXXX represents 0000~9999), PCXXXXY(XXXX represents 0000~9999; Y represents A~Z), KW-PC1018U, KW-PC1018, KW-PCXXXXU(XXXX represents 0000~9999), KW-PCXXXX(XXXX represents 0000~9999)
Difference description	All the same except for the model name.
Date of test	May.20, 2015 to May.27, 2015
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-BR/RF (2013-03-01)

We hereby certify that:

The above equipment was tested by Compliance Certification Services(Shenzhen) Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part .

Prepared By


Max Zhang

May.28, 2015

Checked By


Kidd Yang

May.28, 2015

Authorized By


Solger Zhang

May.28, 2015

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

Hardware Version	N/A
Software Version	N/A
Antenna Designation	Integrated Antenna
EUT Supply	DC 5.0V by adapter
Adapter Supply	AC 120V/60Hz

Note: The micro USB port is only for charging, and the USB port is for data exchange.

2.2. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: BRCPC1018** filing to comply with Section 15.107&15.109 of the FCC Part 15, Subpart B Rules.

2.3. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4 (2009). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.4. SPECIAL ACCESSORIES

Refer to section 5.1.

2.5. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

Conducted measurement: $\pm 3.18\text{dB}$

Radiated measurement: $\pm 3.91\text{dB}$

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Data exchange

5. SYSTEM TEST CONFIGURATION

5.1. EQUIPMENT USED IN EUT SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	tablet pc	Kinwei/Titan	PC1018	EUT
2	Adapter	JKY36-SP0501500	DC5V/1.5A	Accessory
3	USB Cable	N/A	N/A	Accessory
4	USB storage device	Kingston	G2	A.E

5.2. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.109	Radiated Emission	Compliant
§15.107	Conducted Emission	Compliant

6. TEST FACILITY

Site	Compliance Certification Services (Shenzhen) Inc.
Location	No.10-1 Mingkeda Logistics park, No.18, Huanguan South Rd., Guan Lan Town, Baoan District, Shenzhen, China
FCC Registration No.	441872
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2009.

ALL TEST EQUIPMENT LIST

Radiated Emission Test Site 966(2)					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	03/01/2015	03/01/2016
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	03/09/2015	03/08/2016
Amplifier	MITEQ	AM-1604-3000	1123808	03/18/2015	03/17/2016
High Noise Amplifier	Agilent	8449B	3008A01838	03/18/2015	03/17/2016
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	07/10/2014	07/09/2015
Bilog Antenna	SCHAFFNER	CBL6143	5082	03/01/2015	03/01/2016
Horn Antenna	SCHWARZBECK	BBHA9120	D286	03/01/2015	03/01/2016
Loop Antenna	COM-POWER	AL-130	121044	09/27/2014	09/26/2015
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R
Controller	CT	N/A	N/A	N.C.R	N.C.R
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/28/2015	02/27/2016
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

Conducted Emission Test Site					
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	03/09/2015	03/08/2016
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543-WX	03/09/2015	03/08/2016
LISN	EMCO	3825/2	8901-1459	03/09/2015	03/08/2016
Temp. / Humidity Meter	VICTOR	HTC-1	N/A	03/04/2015	03/03/2016
Test S/W	FARAD	EZ-EMC/ CCS-3A1-CE			

7. RADIATED EMISSION

7.1. MEASUREMENT PROCEDURE

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions below 1GHz, use 120KHz RBW and $VBW >= 3RBW$ for QP reading.
7. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
8. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
9. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
10. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
11. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.
12. An unmodulated CW signal at the operating frequency of the EUT shall be supplied to the EUT for all measurements. Such a signal may be supplied by either a signal generator with an antenna in close proximity to the EUT. The signal level shall be sufficient to stabilize the local oscillator of the EUT.
13. Only the worst case is reported.

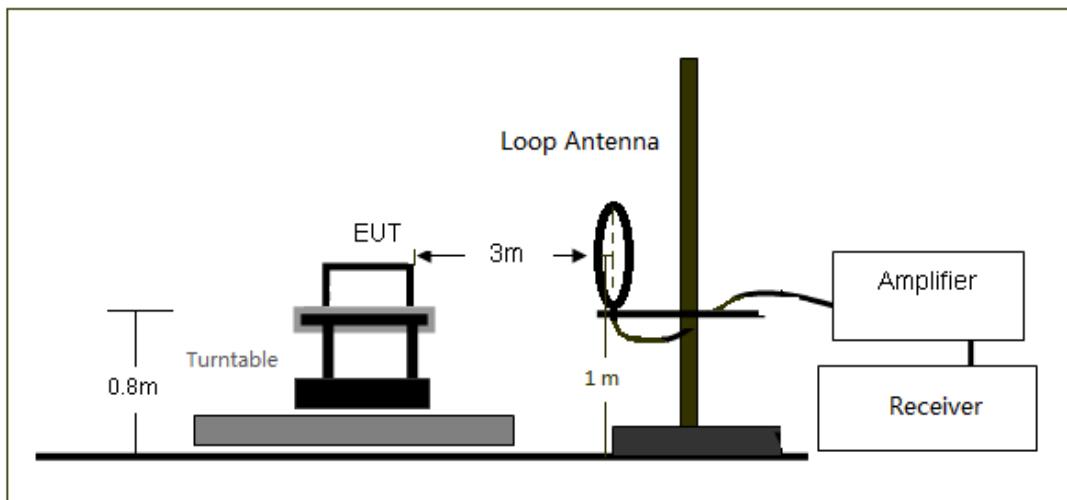
The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RBW 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RBW 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RBW 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/1MHz for Peak, 1MHz/10Hz for Average

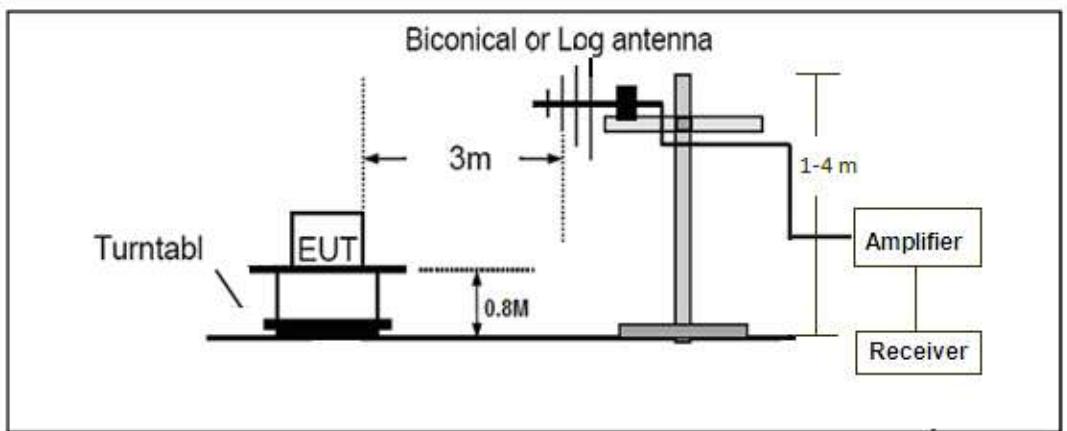
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RBW 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RBW 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RBW 120KHz for QP

7.2. TEST SETUP

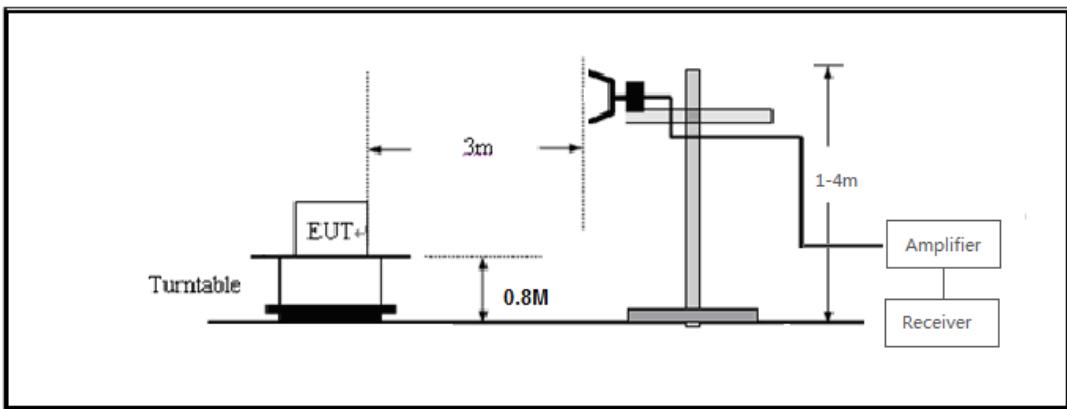
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz

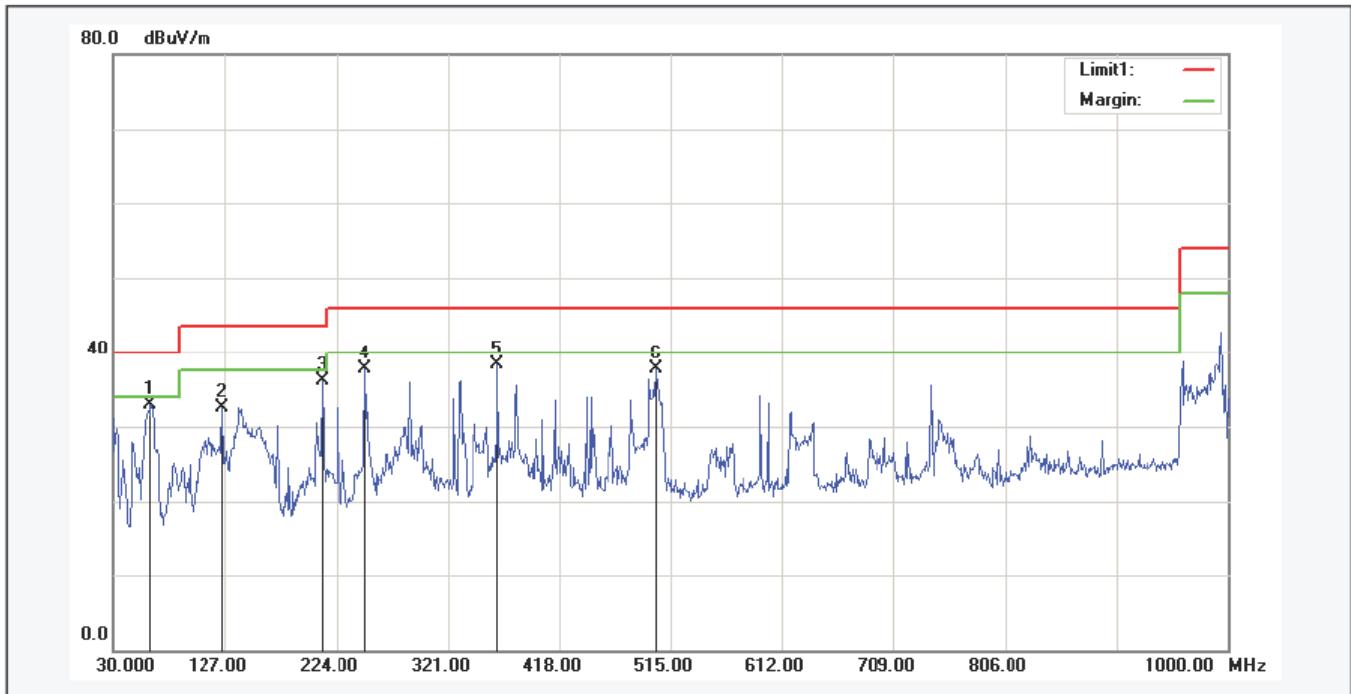


7.3. TEST RESULT

RADIATED EMISSION BELOW 30MHz

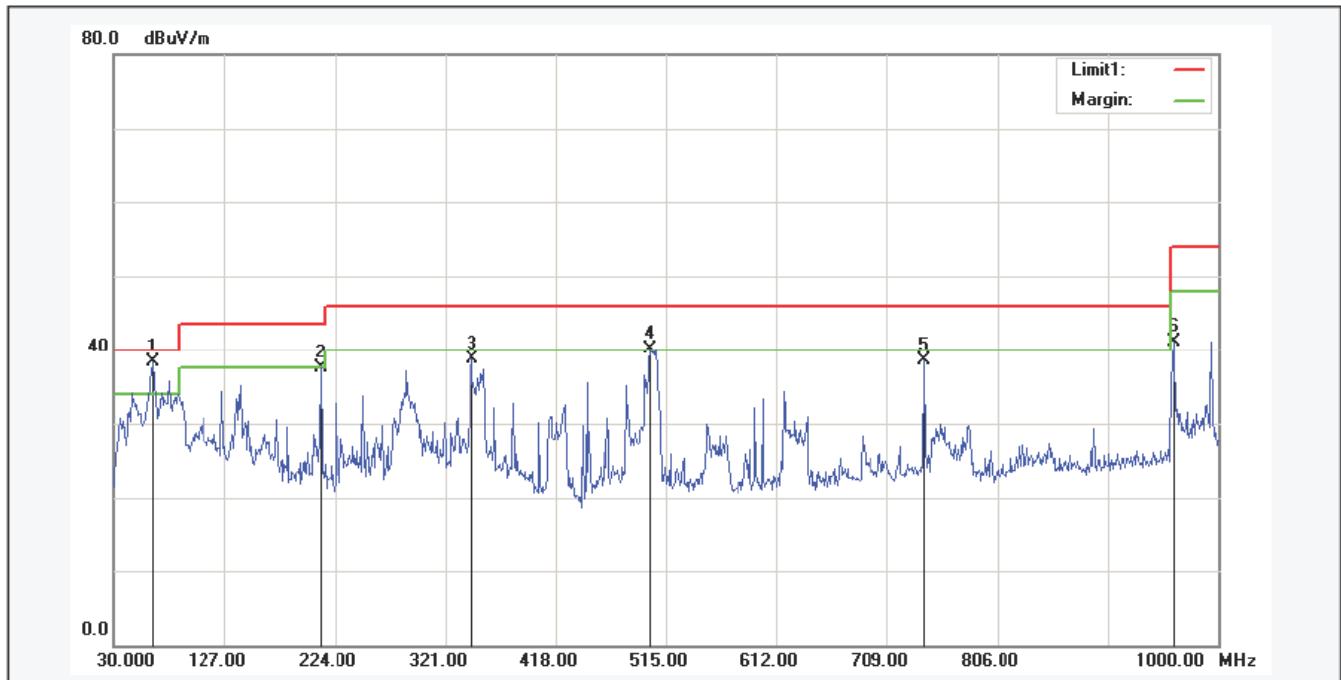
No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHz-Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	62.0100	46.52	-13.57	32.95	40.00	-7.05			peak
2	125.0600	45.32	-12.74	32.58	43.50	-10.92			peak
3	211.3900	47.57	-11.40	36.17	43.50	-7.33			peak
4	249.2200	48.45	-10.80	37.65	46.00	-8.35			peak
5	364.6500	47.30	-9.00	38.30	46.00	-7.70			peak
6	502.3900	44.49	-6.86	37.63	46.00	-8.37			peak

RADIATED EMISSION BELOW 1GHz-Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1*	63.9500	52.05	-13.84	38.21	40.00	-2.79			peak
2!	211.3900	48.94	-11.40	37.54	43.50	-5.96			peak
3	344.2800	48.10	-9.49	38.61	46.00	-7.39			peak
4!	501.4200	46.98	-6.87	40.11	46.00	-5.89			peak
5	741.9800	42.12	-3.57	38.55	46.00	-7.45			peak
6	961.2000	41.97	-0.79	41.18	54.00	-12.82			peak

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

2. The “Factor” value can be calculated automatically by software of measurement system.
3. Emissions above 1G have 20dB margin. No recording in the test report.

8. FCC LINE CONDUCTED EMISSION TEST

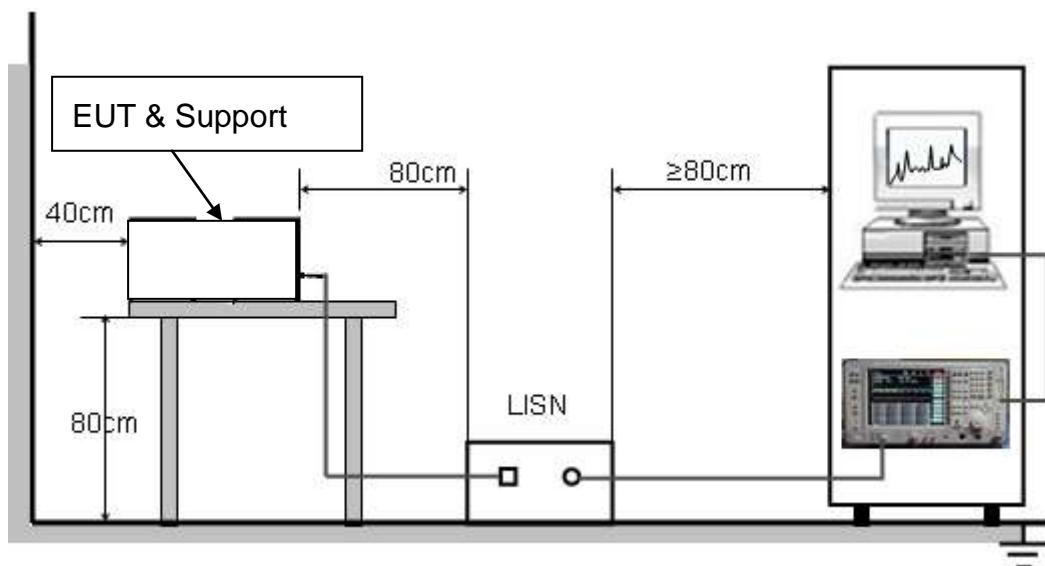
12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

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.

8.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



8.3. PRELIMINARY 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. All support equipments received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC5V charging voltage by adapter which received 120V/60Hz power by a LISN..
6. The 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.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

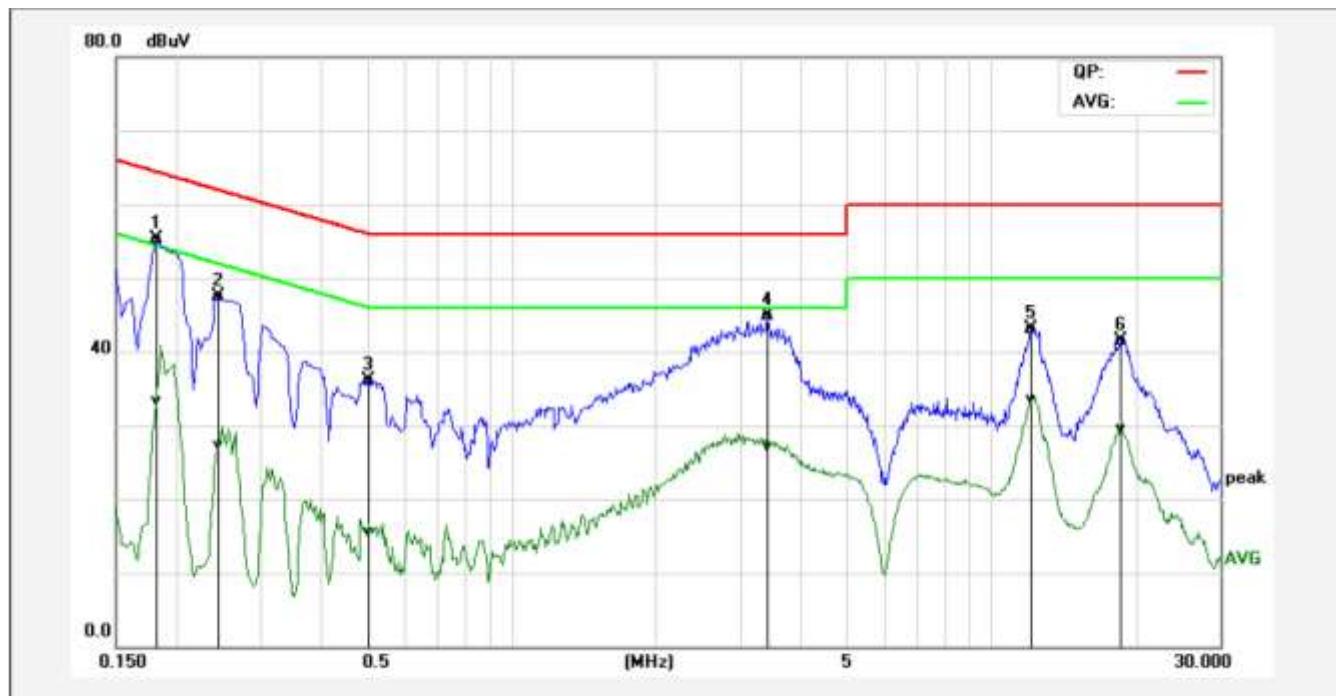
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

8.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. 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.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

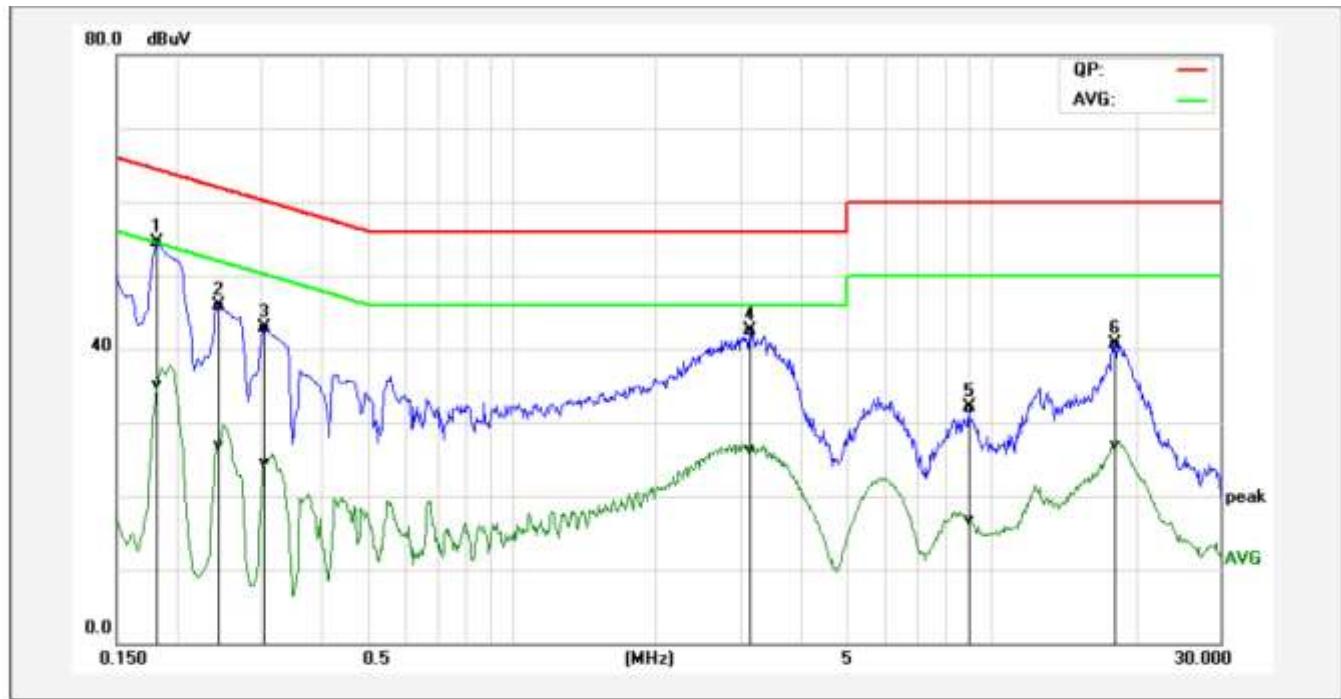
8.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Line Conducted Emission Test Line 1-L



No.	Frequency (MHz)	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
		(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1*	0.1819	45.61	23.60	9.65	55.26	33.25	64.39	54.40	-9.13	-21.15	Pass
2P	0.2460	37.80	17.66	9.69	47.49	27.35	61.89	51.89	-14.40	-24.54	Pass
3P	0.5020	26.51	5.81	9.68	36.19	15.49	56.00	46.00	-19.81	-30.51	Pass
4P	3.4260	35.21	17.45	9.70	44.91	27.15	56.00	46.00	-11.09	-18.85	Pass
5P	12.1459	33.27	23.57	9.89	43.16	33.46	60.00	50.00	-16.84	-16.54	Pass
6P	18.6940	31.75	19.64	9.85	41.60	29.49	60.00	50.00	-18.40	-20.51	Pass

Line Conducted Emission Test Line 2-N



No.	Frequency (MHz)	QuasiPeak	Average	Correction	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Remark
		reading (dBuV)	reading (dBuV)	factor (dB)	result (dBuV)	result (dBuV)	limit (dBuV)	limit (dBuV)	margin (dB)	margin (dB)	
1*	0.1819	44.77	25.41	9.79	54.56	35.20	64.39	54.40	-9.83	-19.20	Pass
2P	0.2460	36.12	17.12	9.77	45.89	26.89	61.89	51.89	-16.00	-25.00	Pass
3P	0.3060	33.13	14.75	9.75	42.88	24.50	60.08	50.08	-17.20	-25.58	Pass
4P	3.1500	32.73	16.61	9.75	42.48	26.36	56.00	46.00	-13.52	-19.64	Pass
5P	8.9860	22.16	6.91	9.84	32.00	16.75	60.00	50.00	-28.00	-33.25	Pass
6P	18.2020	30.96	17.24	9.72	40.68	26.96	60.00	50.00	-19.32	-23.04	Pass

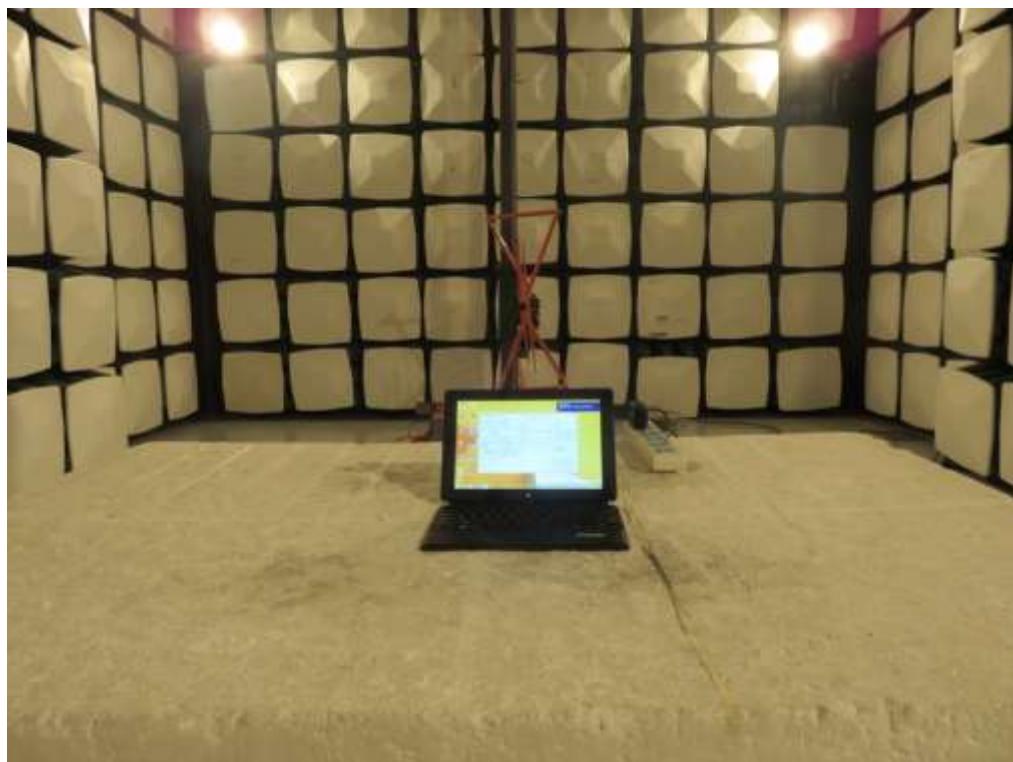
RESULT: PASS

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP

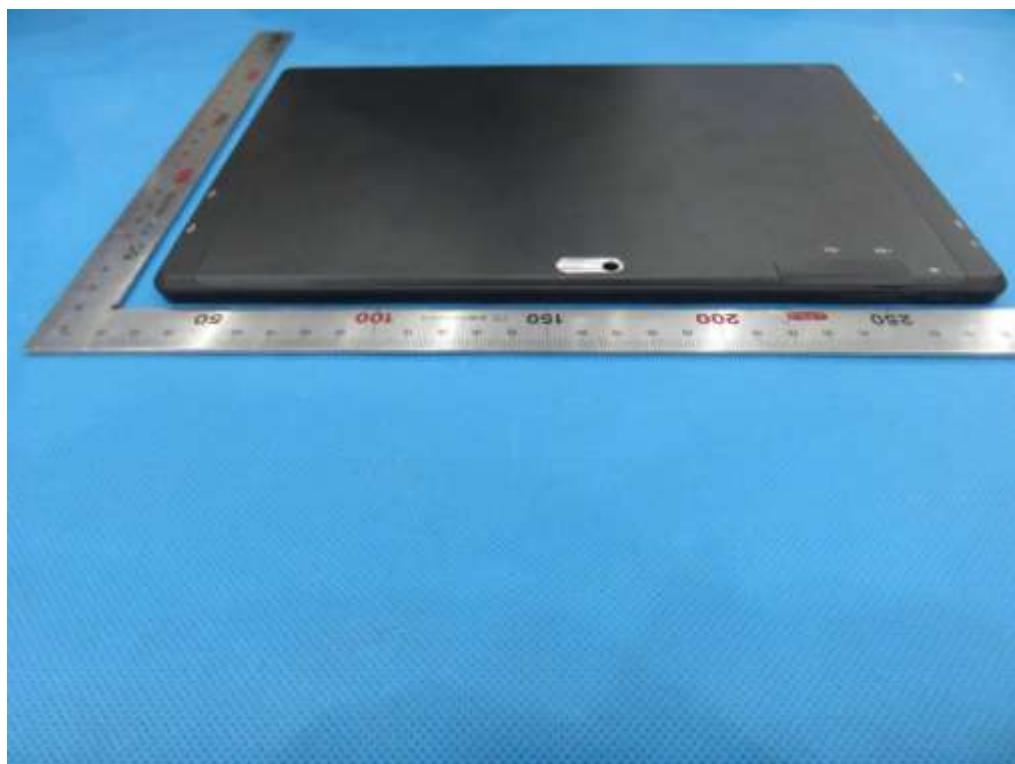


APPENDIX B: PHOTOGRAPHS OF EUT

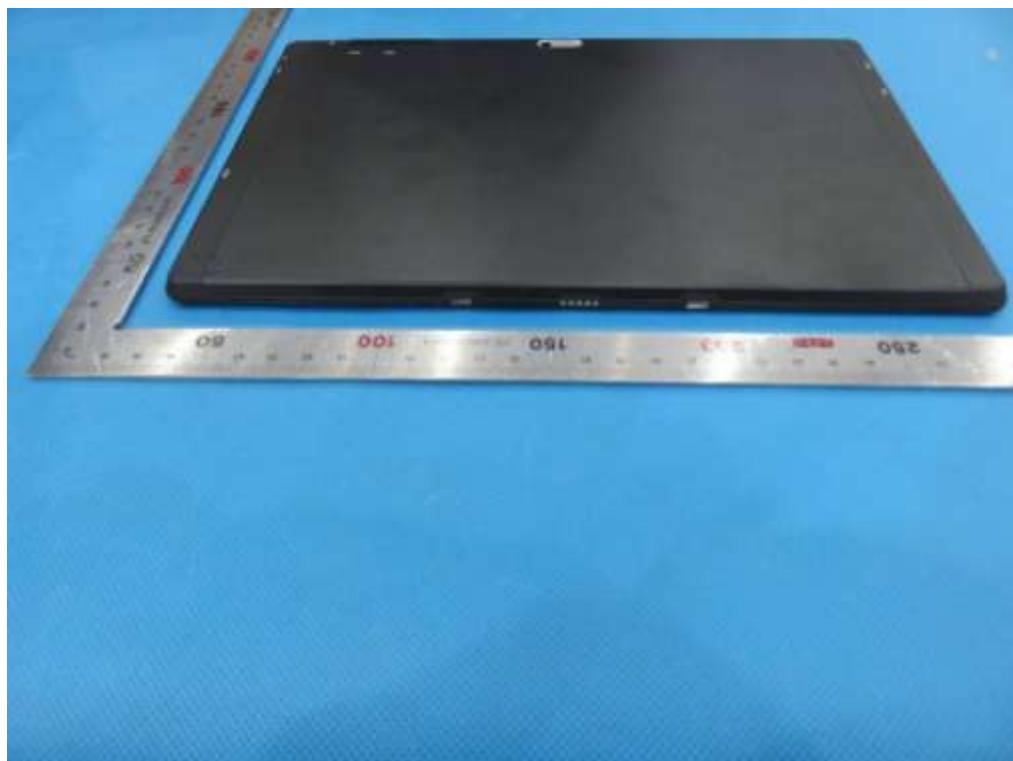
All VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



LEFT VIEW OF EUT



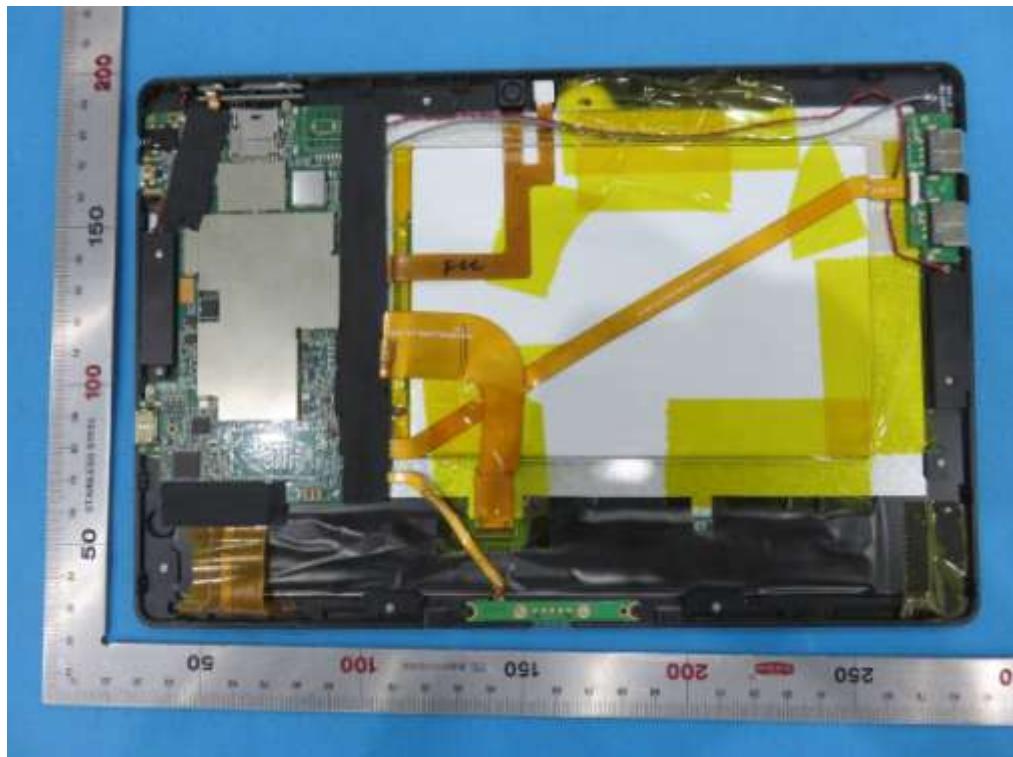
RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



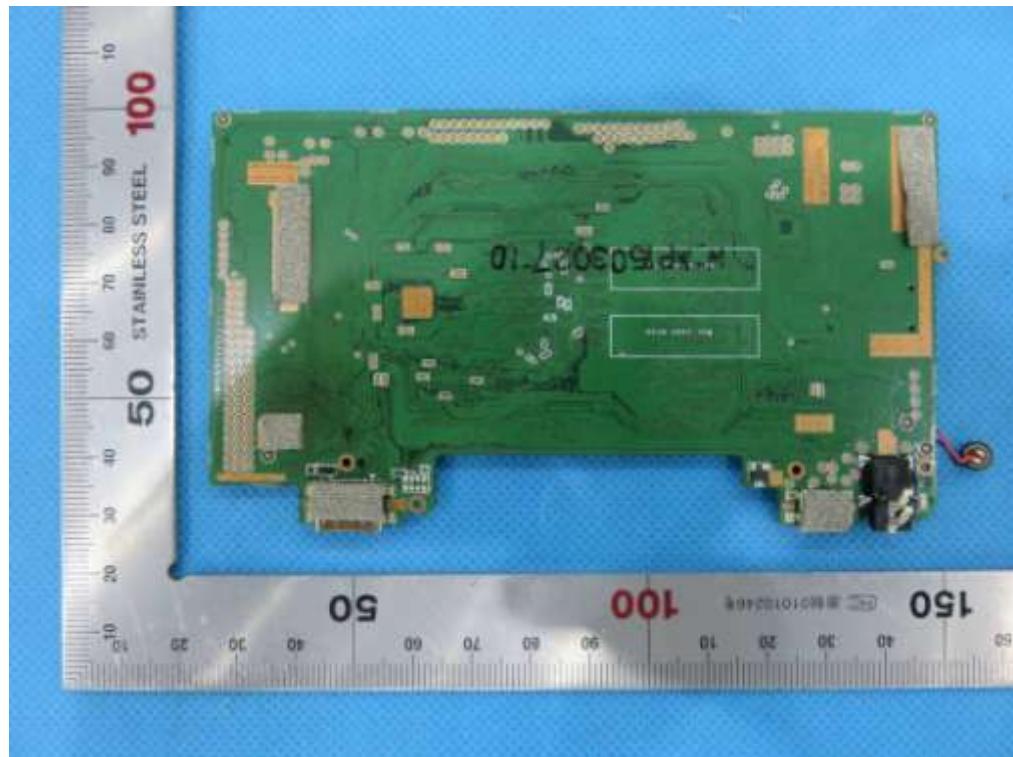
INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-4



INTERNAL VIEW OF EUT-5



----END OF REPORT----