
FCC Test Report

Report No.: AGC00119150104FE07

FCC ID : BRCPC1021
APPLICATION PURPOSE : Original Equipment
PRODUCT DESIGNATION : tablet pc
BRAND NAME : Kinwei, Titan
MODEL NAME : PC1021ME
CLIENT : Kintech Co., Ltd.
DATE OF ISSUE : 24 Mar. 2015
STANDARD(S) : FCC Part 15 Rules
REPORT VERSION : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	24 Mar. 2015	Valid	Original Report

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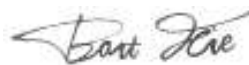
1. VERIFICATION OF CONFORMITY

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	PC1021ME
Series Model	PC1021Y,PCXXXX(XXXX represents0000~9999), PCXXXXME(XXXX represents0000~9999),PCXXXXY(XXXX represents0000~9999;Yrepresents A~Z),KW-PC1021I,KW-PC1021,KW-PC1021J, KW-PCXXXXI(XXXX represents0000~9999),KW-PCXXXX(XXXX represents0000~9999),KW-PCXXXXJ(XXXX represents0000~9999)
Difference description	All the same except for the model name.
Measurement Procedure	ANSI C63.4: 2003
Date of test	17 Mar. 2015 ~23 Mar. 2015
Report Template	AGCRT-US-IT/AC

The above equipment was tested by Shenzhen STS Test Services 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



Bart Xie 24 Mar. 2015

Checked By



Kidd Yang 24 Mar. 2015

Authorized By



Solger Zhang 24 Mar. 2015

2. SYSTEM DESCRIPTION

EUT test procedure:

1. Connect EUT and peripheral devices (PC) through USB port.
2. Power on the EUT, use the software to transfer data between EUT and PC.
3. Make sure the EUT operates normally during the test.

Test Mode

TEST MODE DESCRIPTION		
NO.	TEST MODE DESCRIPTION	WORST
1	USB (connection for data transferring)	V
Note: 1.V means EMI worst mode 2 .Other modes have been verified through VOC mode.		

3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in Measurement” (GUM) published by ISO.

Conducted measurement: +/- 2.75dB

Radiated measurement: +/- 3.2Db

Summary Of Test Results

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

4. PRODUCT INFORMATION

Housing Type	Plastic
EUT Input Rating	DC 3.7V by battery
Adapter Input	AC 100~240V,50-60Hz, 0.3A
Adapter Output	DC 5.0V, 2A

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

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
USB Port	1	1.0 m, unshielded	1
Earphone Port	1		

5. SUPPORT EQUIPMENT

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
Notebook	Lenovo	B460	WB03928113	1	1.5m unshielded

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

6. TEST FACILITY

Site	Shenzhen STS Test Services Co., Ltd.
Location	1/F, Building 2, Zhuoke Science Park, Chongqing Road, Fuyong, Baoan District, Shenzhen, China.
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003.
Site Filing	FCC Registration No.: 842334; IC Registration No.: 12108A-1
Instrument Tolerance	All measuring equipment is in accord with ANSI C63.4 requirements that meet industry regulatory agency and accreditation agency requirement.

ALL TEST EQUIPMENT LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Universal Radio Communication Tester	R&S	CMU200	112012	2014.10.25	2015.10.24
Bilog Antenna	TESEQ	CBL6111D	34678	2014.10.25	2015.10.24
Low frequency cable	MURATA	R-03	130627	2014.10.25	2015.10.24
High frequency cable	HARBOUR	R-02	FL0000175	2014.10.25	2015.10.24
EMI Test Receiver	R&S	ESCI	101427	2014.10.25	2015.10.24
Antenna Mast	EM	SC100_1	N/A	N/A	N/A
Turn Table	EM	SC100	060531	N/A	N/A
50Ω Switch	Anritsu Corp	MP59B	6200983705	2014.07.06	2015.07.05
Spectrum Analyzer	Aglient	E4407B	MY50140340	2014.10.25	2015.10.24
Horn Antenna	Schwarbeck	BBHA 9120D	9120D-963	2014.10.25	2015.10.24
Pre-Amplifier	DASY 5	NO. WL-42W	9638	2014.10.25	2015.10.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESPI	102086	2014.10.25	2015.10.24
LISN	R&S	ENV216	101242	2014.10.25	2015.10.24
LISN	EMCO	3810/2NM	000-23625	2014.10.25	2015.10.24
Absorbing clamp	R&S	MDS-21	100668	2014.10.27	2015.10.26
Temperature & Humidity Chamber	Mieo	HH660	N/A	2014.10.27	2015.10.26
Conduction Cable	EM	C01	N/A	2014.10.25	2015.10.24
Clamp Cable	EM	C02	N/A	2014.10.25	2015.10.24

7. FCCLINE CONDUCTED EMISSION TEST

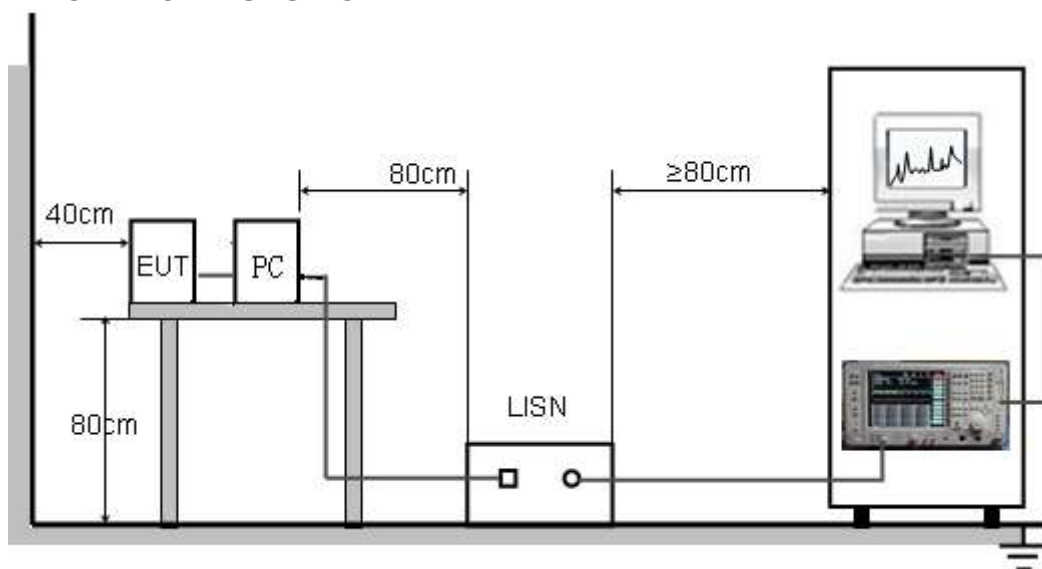
7.1. LIMITS OF LINE CONDUCTED EMISSION TEST

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 0.50MHz.

7.2. BLOCK DIAGRAM OF TEST SETUP



7.3. 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 DC5V power from PC with receive AC120V/60Hz power from a LISN.
- (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 Summary Data page.

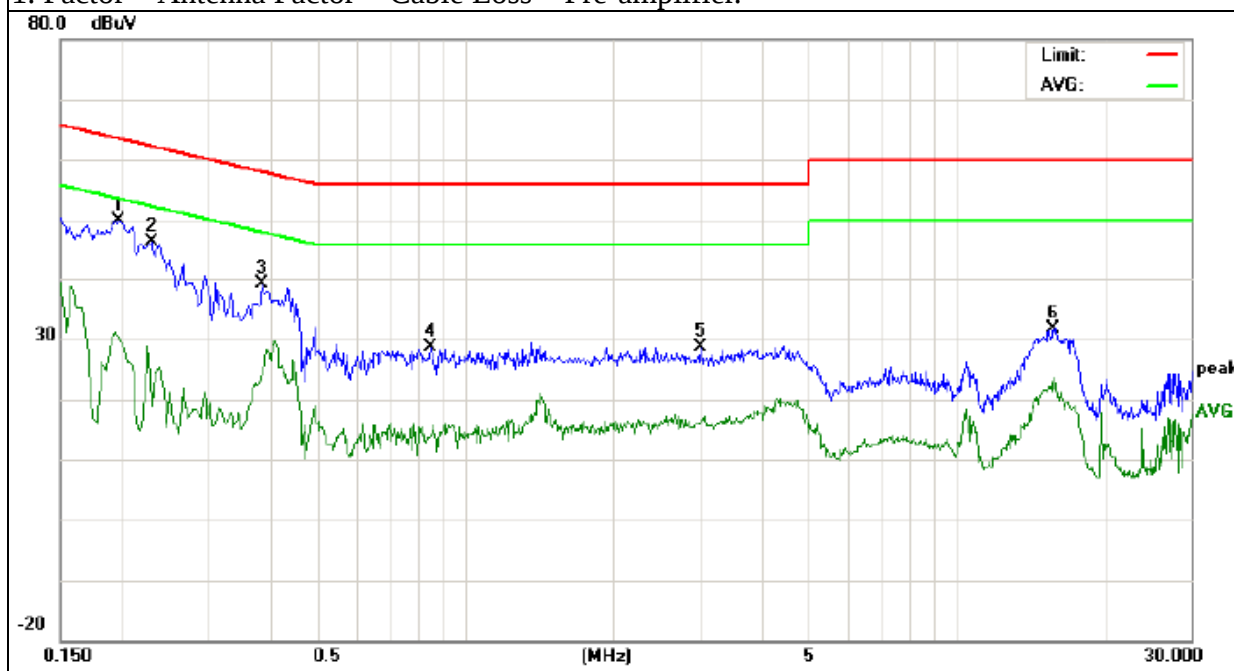
7.4. TEST RESULT OF LINE CONDUCTED EMISSION TEST

EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from PC with AC 120V/60Hz	Test Mode :	1

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor (dB)	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1965	39.67		20.17	10.21	49.88		30.38	63.75	53.75	-13.87	-23.37	P	
2	0.2300	36.23		8.53	10.25	46.48		18.78	62.45	52.45	-15.97	-33.67	P	
3	0.3860	28.82		14.06	10.32	39.14		24.38	58.15	48.15	-19.01	-23.77	P	
4	0.8500	18.32		3.46	10.34	28.66		13.80	56.00	46.00	-27.34	-32.20	P	
5	3.0220	18.13		5.62	10.55	28.68		16.17	56.00	46.00	-27.32	-29.83	P	
6	15.7980	21.52		11.87	10.11	31.63		21.98	60.00	50.00	-28.37	-28.02	P	

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



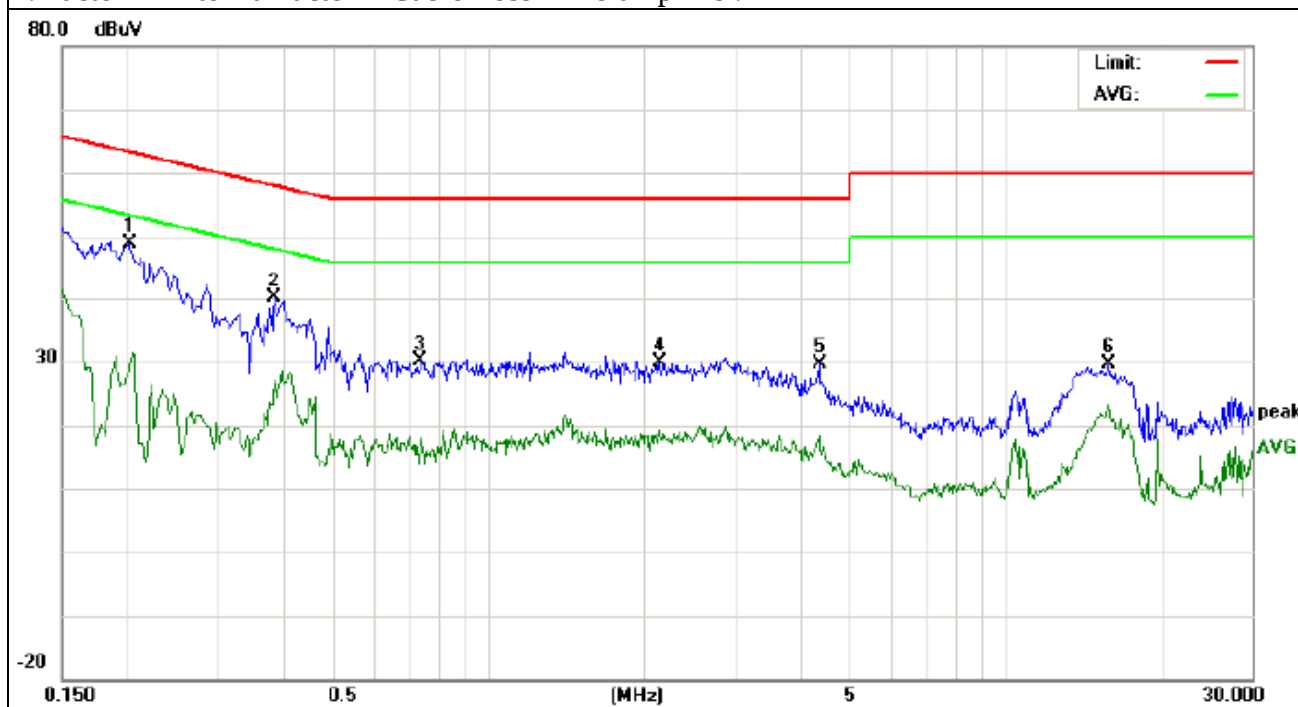
RESULT: PASS

EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from PC with AC 120V/60Hz	Test Mode :	1

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor (dB)	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2020	38.63		18.52	10.22	48.85		28.74	63.52	53.52	-14.67	-24.78	P	
2	0.3860	29.76		16.86	10.32	40.08		27.18	58.15	48.15	-18.07	-20.97	P	
3	0.7420	19.92		7.86	10.32	30.24		18.18	56.00	46.00	-25.76	-27.82	P	
4	2.1540	19.54		8.87	10.28	29.82		19.15	56.00	46.00	-26.18	-26.85	P	
5	4.3659	19.27		8.08	10.27	29.54		18.35	56.00	46.00	-26.46	-27.65	P	
6	15.8300	19.45		13.34	10.11	29.56		23.45	60.00	50.00	-30.44	-26.55	P	

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



RESULT: PASS

8. FCC RADIATED EMISSION TEST

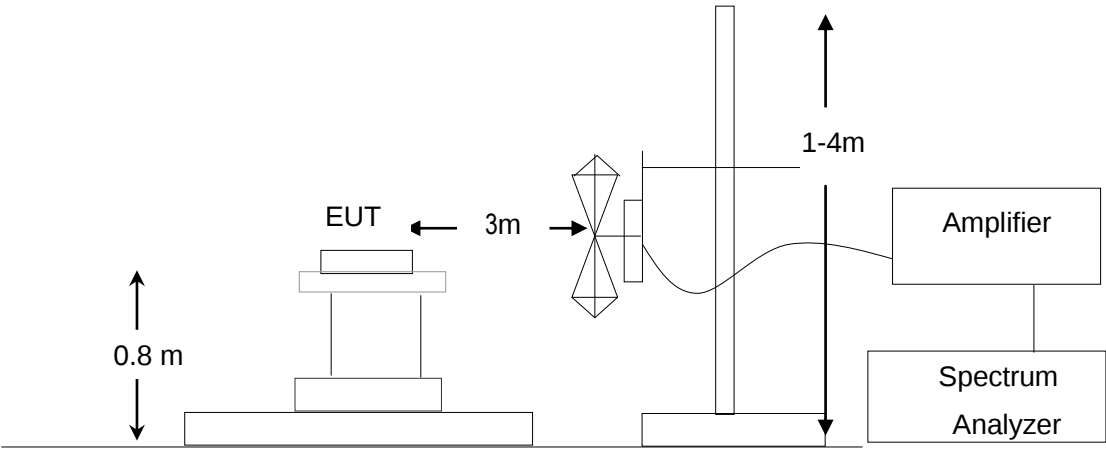
8.1. LIMITS OF RADIATED EMISSION TEST

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.

8.2. BLOCK DIAGRAM OF TEST SETUP

System Diagram of Connections between EUT and Simulators



8.3. 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 power from PC with receive AC120V/60Hz power from socket under the turntable through a LISN.
- (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 Summary Data page.

8.4. TEST RESULT OF RADIATED EMISSION TEST

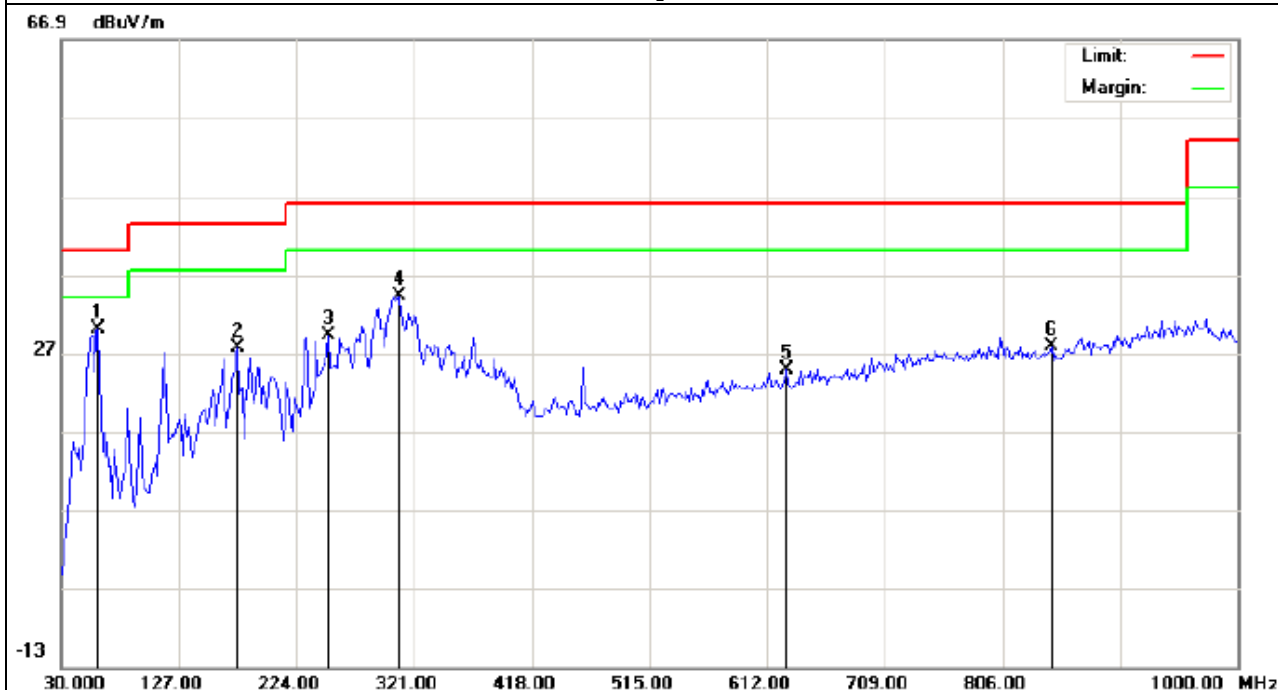
Radiated Emission Test at 3m Distance-Horizontal

EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 5V from PC		
Test Mode :	Mode 1		

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	60.7167	18.98	11.09	30.07	40.00	-9.93	peak			
2		175.5000	15.60	12.03	27.63	43.50	-15.87	peak			
3		249.8667	15.36	13.89	29.25	46.00	-16.75	peak			
4		308.0667	18.27	15.95	34.22	46.00	-11.78	peak			
5		628.1667	1.10	23.80	24.90	46.00	-21.10	peak			
6		846.4167	0.47	27.31	27.78	46.00	-18.22	peak			

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



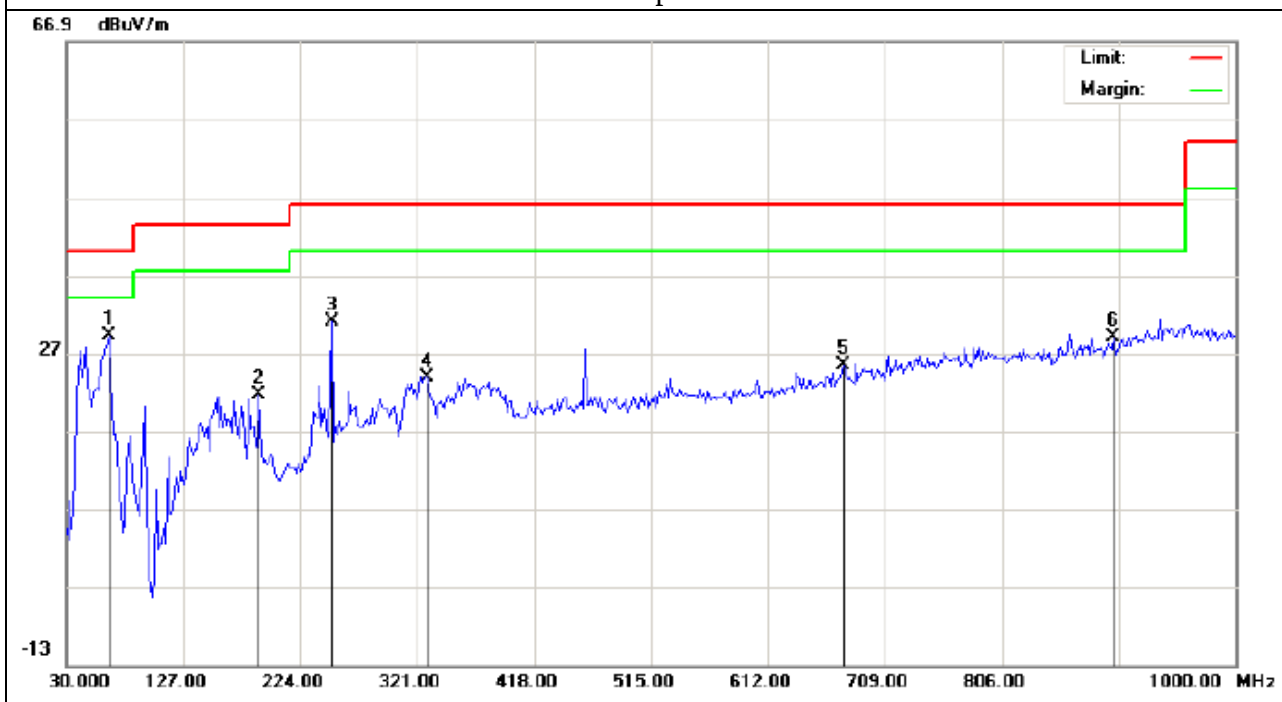
Radiated Emission Test at 3m Distance-Vertical

EUT :	tablet pc	Model Name. :	PC1021ME
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Polarization :	Vertical
Test Voltage :	DC 5V from PC		
Test Mode :	Mode 1		

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	65.5667	23.27	5.98	29.25	40.00	-10.75	peak			
2		190.0500	10.14	11.52	21.66	43.50	-21.84	peak			
3		249.8667	17.06	13.89	30.95	46.00	-15.05	peak			
4		329.0833	6.38	17.35	23.73	46.00	-22.27	peak			
5		675.0500	0.79	24.52	25.31	46.00	-20.69	peak			
6		898.1500	0.48	28.56	29.04	46.00	-16.96	peak			

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Note: All Other modes above 1GHz have more than 20db margin, no recording in the report
Measurement = Reading + Factor, Over = Measurement – Limit.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP



APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT



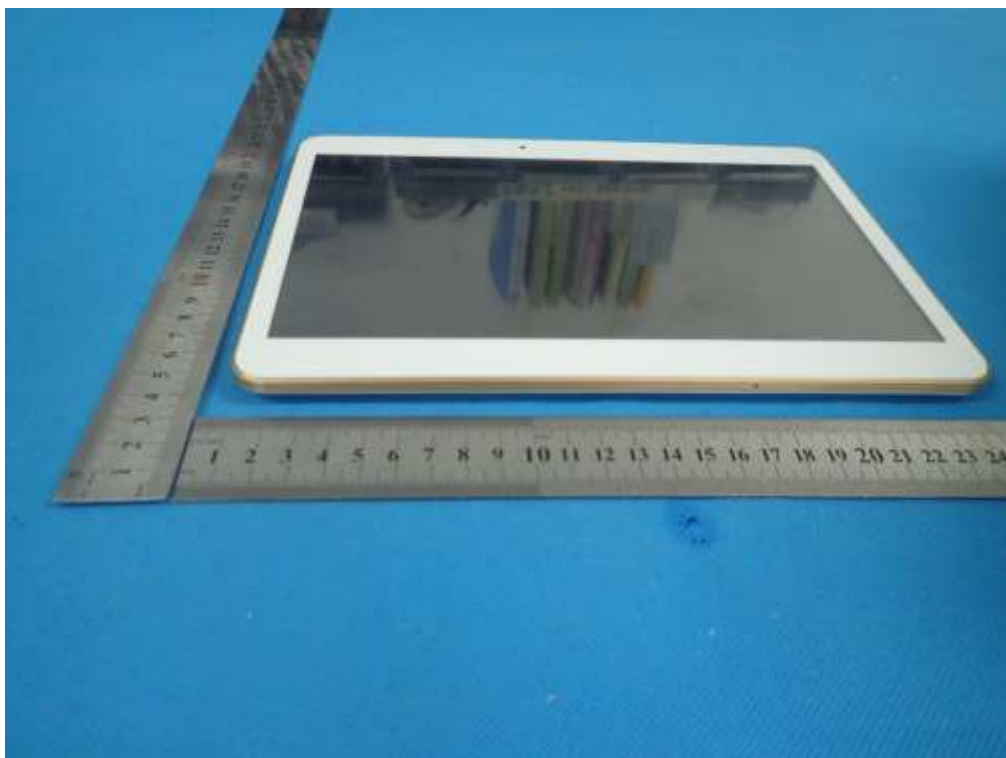
TOP VIEW OF EUT



BOTTOM VIEW OF EUT



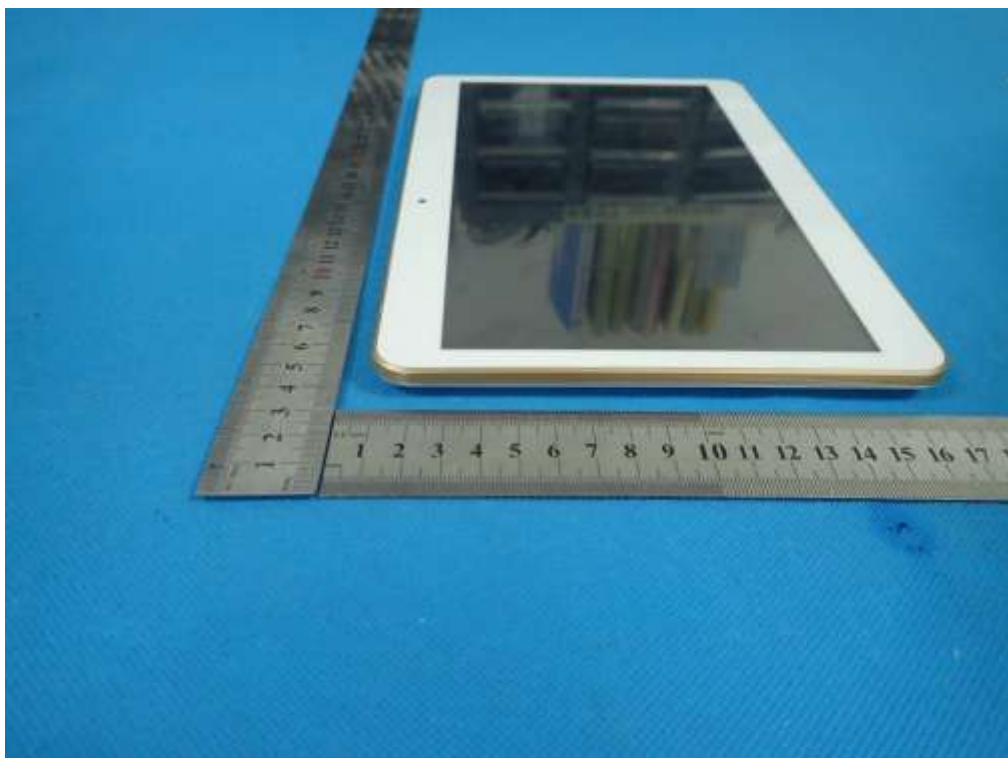
FRONT VIEW OF EUT



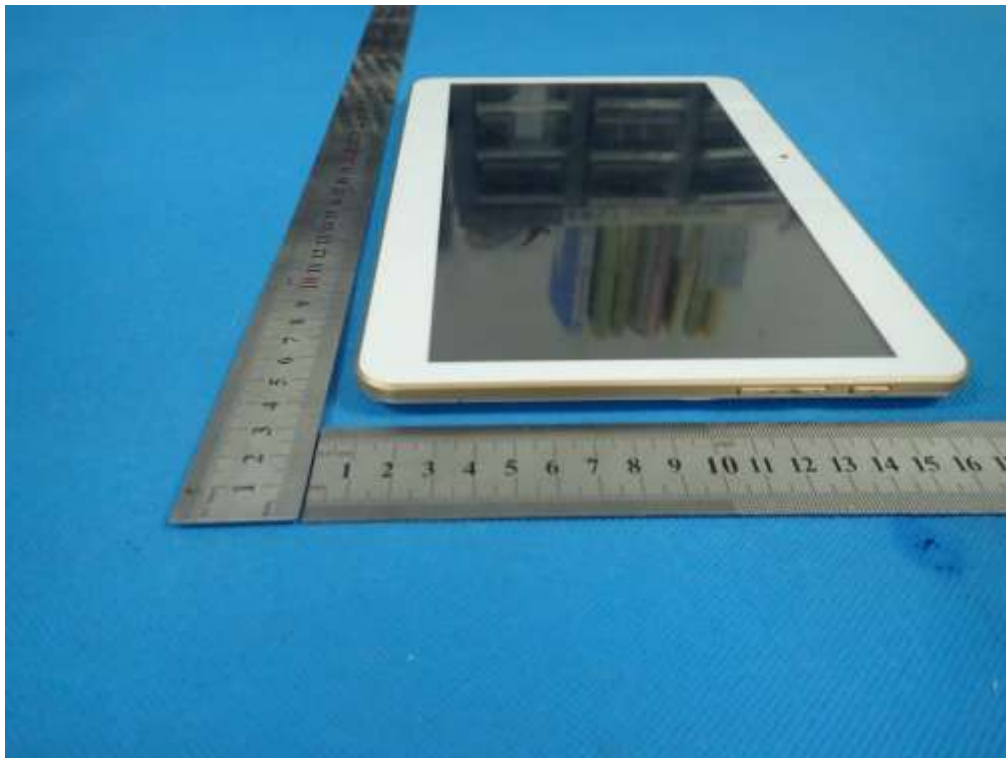
BACK VIEW OF EUT



LEFT VIEW OF EUT



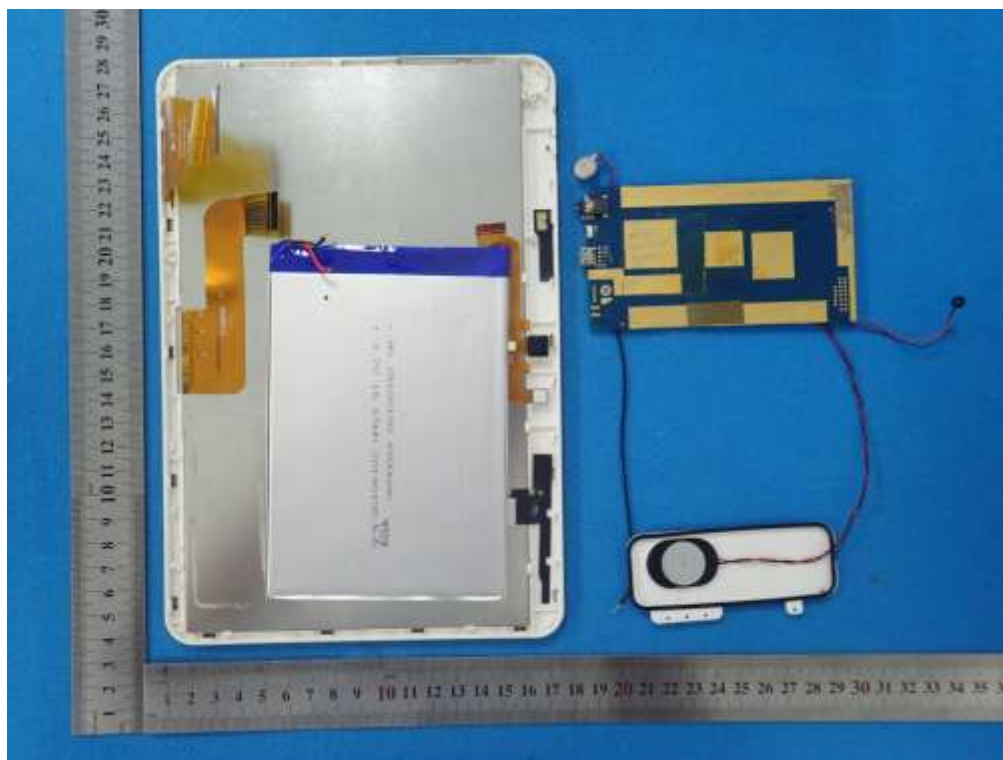
RIGHT VIEW OF EUT



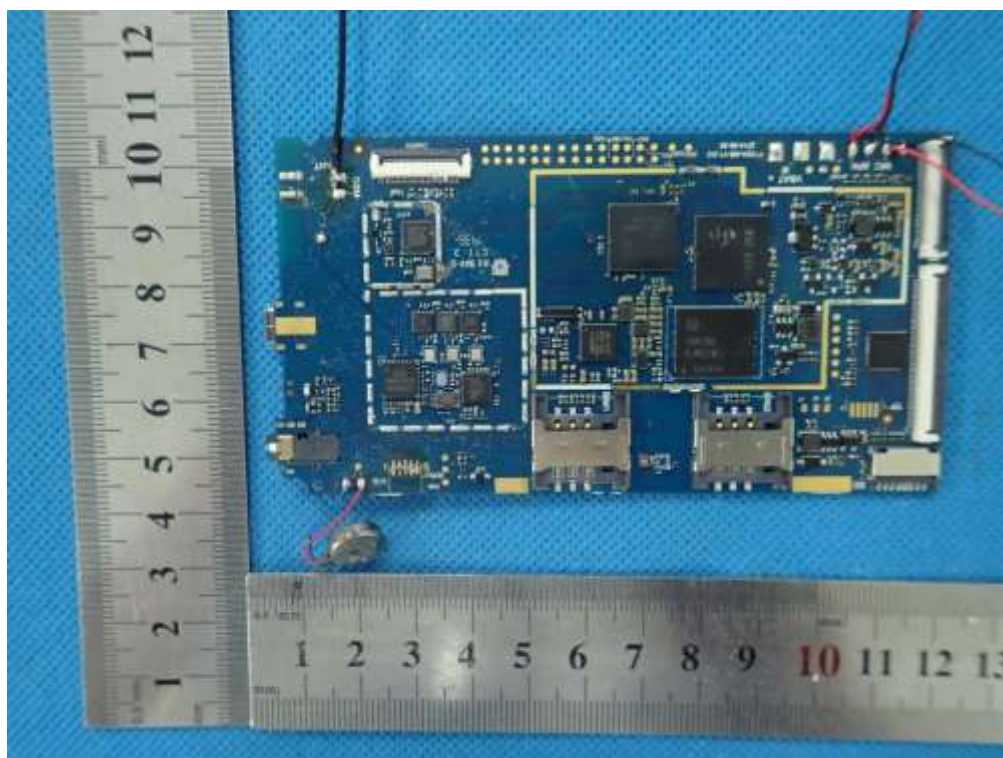
OPEN VIEW OF EUT-1



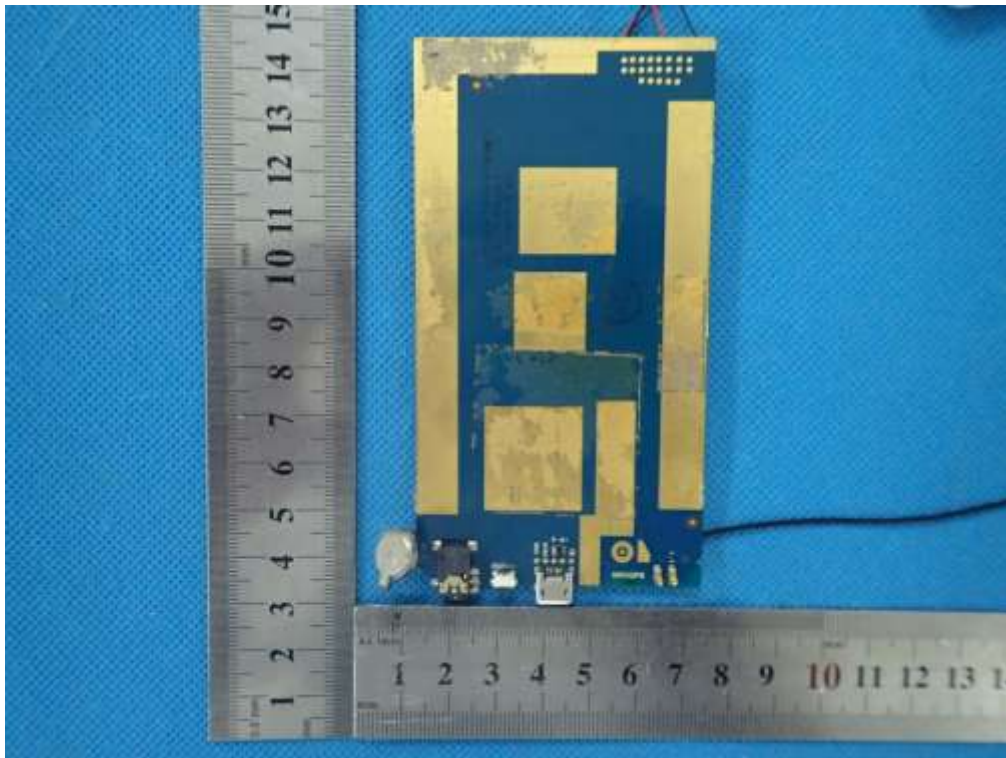
OPEN VIEW OF EUT-2



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



----END OF REPORT----