



FCC Report

Applicant: KBX GROUP

Address of Applicant: AVENIDA 1ERA. CALLE B Y C MANZANA 58, FRANCE
FIELD, PANAMA, Florida, 32412, United States

Equipment Under Test (EUT)

Product Name: Flat Computer

Model No.: QQ-900ii-WT, QQ-900ii-BK

Trade Mark: QUO

FCC ID: 2AAPW-QQ-900II

Applicable standards: FCC CFR Title 47 Part 15 Subpart B:2014

Date of sample receipt: October 20, 2015

Date of Test: October 21-26, 2015

Date of report issue: October 27, 2015

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Lo

Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	October 27, 2015	Original

Prepared By:

Sam. Gao

Date:

October 27, 2015

Project Engineer

Check By:

hank. gao

Date:

October 27, 2015

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part15.107	PASS
Radiated Emissions	Part15.109	PASS

PASS: The EUT complies with the essential requirements in the standard.

4.1 Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz ~ 30MHz	± 4.34dB	(1)
Radiated Emission	30MHz ~ 1000MHz	± 4.24dB	(1)
Radiated Emission	1GHz ~ 26.5GHz	± 4.68dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	± 3.45dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

Remark: Test according to ANSI C63.4:2014

5 General Information

5.1 Client Information

Applicant:	KBX GROUP
Address of Applicant:	AVENIDA 1ERA. CALLE B Y C MANZANA 58, FRANCE FIELD, PANAMA, Florida, 32412, United States
Manufacturer/ Factory:	KBX GROUP
Address of Manufacturer Factory:	AVENIDA 1ERA. CALLE B Y C MANZANA 58, FRANCE FIELD, PANAMA, Florida, 32412, United States

5.2 General Description of EUT

Product Name:	Flat Computer
Model No.:	QQ-900ii-WT, QQ-900ii-BK
Power Supply:	Adapter : Model No.: MX12X8-0502000UU Input: AC 100-240V, 50/60Hz, 0.35A Output: DC 5V, 2A Or DC 3.7V Li-ion Battery,5400mAh

5.3 Test mode

Test mode:	
PC working mode	Keep the EUT in Bruning mode
REC mode	Keep the EUT in REC mode
TF Card playing mode	Keep the EUT in playing mode

5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 600491**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, June 28, 2013.

- **Industry Canada (IC) —Registration No.: 9079A-2**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, June 26, 2013.

5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Room 301-309, 3th Floor, Block A, Huafeng Jinyuan Business Building, No. 300 Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, China

Tel: 0755-27798480

Fax: 0755-27798960

5.6 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC Approval
DELL	KEYBOARD	SK-8115	N/A	DOC
DELL	MOUSE	MOC5UO	N/A	DOC

5.7 Deviation from Standards

Biconical, log.per. antenna and horn antenna were used instead of dipole antenna.

Semi-anechoic Chamber was used as alternation of open air test sites, and all test suites were performed with radiated method in it.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.0(L)*6.0(W)* 6.0(H)	GTS250	July. 03 2015	July. 02 2020
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	ESU EMI Test Receiver	R&S	ESU26	GTS203	July. 03 2015	July. 02 2016
4	BiConiLog Antenna	SCHWARZBECK	VULB9163	GTS214	July. 06 2015	July. 05 2016
5	Double -ridged waveguide horn	SCHWARZBECK	9120D	GTS208	July. 06 2015	July. 05 2016
6	RF Amplifier	HP	8347A	GTS204	July. 03 2015	July. 02 2016
7	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	July. 03 2015	July. 02 2016
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial cable	GTS	N/A	GTS210	July. 05 2015	July. 04 2016
10	Coaxial Cable	GTS	N/A	GTS211	Jul. 05 2015	Jul. 04 2016
11	Thermo meter	N/A	N/A	GTS256	July. 07 2015	July. 07 2016

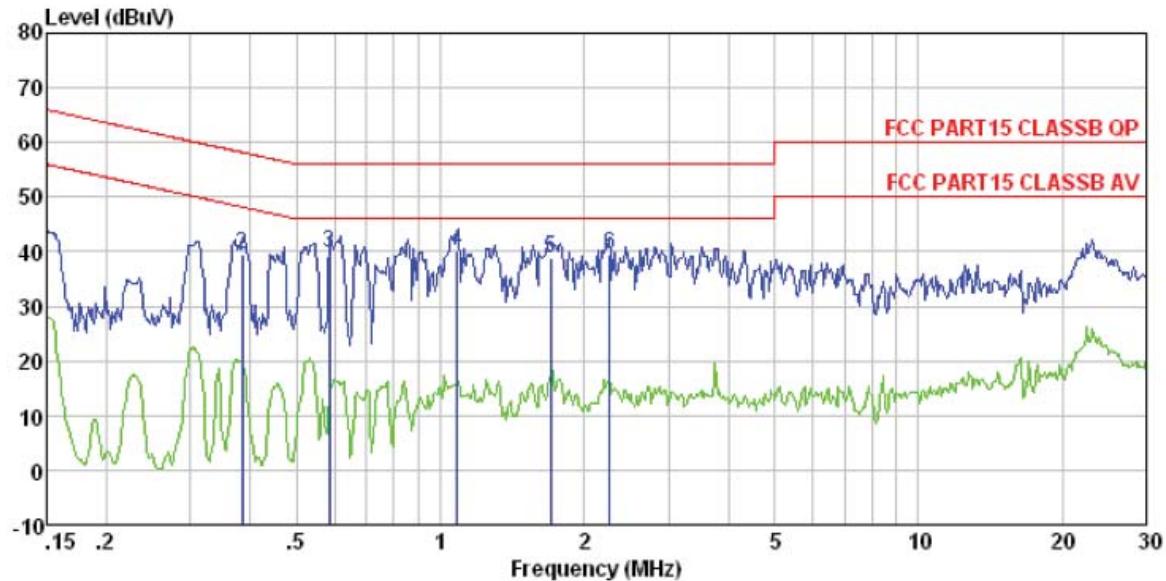
Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May. 16 2014	May. 15 2019
2	EMI Test Receiver	R&S	ESCI 7	GTS552	April. 29 2015	April. 29 2016
3	Pulse Limiter	R&S	ESH3-Z2	GTS224	July. 03 2015	July. 02 2016
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July. 03 2015	July. 02 2016
5	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	July. 03 2015	July. 02 2016
6	Coaxial Cable	GTS	N/A	GTS227	July. 05 2015	July. 04 2016
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Thermo meter	KTJ	TA328	GTS233	July. 07 2015	July. 06 2016

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	ChangChun	DYM3	GTS257	July 07 2015	July 06 2016

7 Test Results and Measurement Data

7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107																
Test Method:	ANSI C63.4:2014																
Test Frequency Range:	150KHz to 30MHz																
Class / Severity:	Class B																
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto																
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBuV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 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 range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)																
	Quasi-peak	Average															
0.15-0.5	66 to 56*	56 to 46*															
0.5-5	56	46															
5-30	60	50															
	* Decreases with the logarithm of the frequency.																
Test setup:	<p>Reference Plane</p> <p>LISN</p> <p>AUX Equipment</p> <p>E.U.T</p> <p>Test table/Insulation plane</p> <p>40cm</p> <p>80cm</p> <p>LISN</p> <p>Filter</p> <p>AC power</p> <p>EMI Receiver</p> <p>Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>																
Test procedure:	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 																
Test Instruments:	Refer to section 6 for details																
Test mode:	Refer to section 5.3 for details																
Test results:	Pass																

Measurement Data
Line:


Condition : FCC PART15 CLASSB QP LISN-2013 LINE

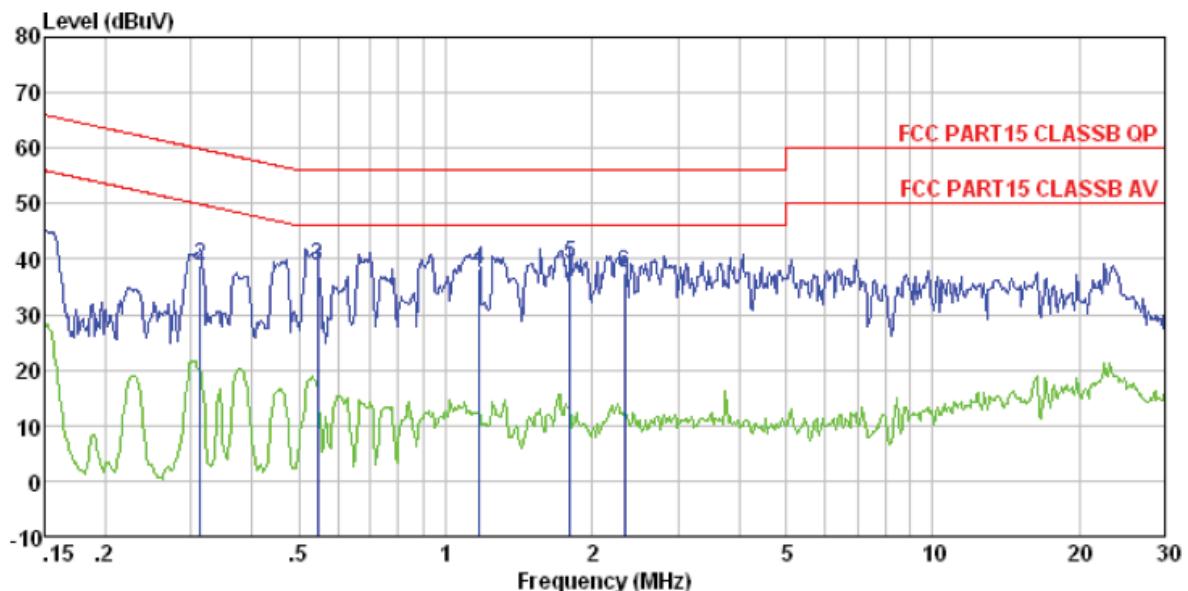
Job No. : 1927RF

Test mode : Burning mode

Test Engineer: Joe

Read Freq	LISN Level	Cable Loss	Limit Level	Over Line	Over Limit	Remark
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	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.150	40.59	0.15	0.12	40.86	66.00	-25.14	QP
2	0.385	39.29	0.11	0.10	39.50	58.17	-18.67	QP
3	0.585	39.59	0.13	0.12	39.84	56.00	-16.16	QP
4	1.082	39.81	0.13	0.13	40.07	56.00	-15.93	QP
5	1.698	38.51	0.12	0.14	38.77	56.00	-17.23	QP
6	2.261	39.32	0.13	0.15	39.60	56.00	-16.40	QP

Neutral:


Condition : FCC PART15 CLASSB QP LISN-2013 NEUTRAL

Job No. : 1927RF

Test mode : Burning mode

Test Engineer: Joe

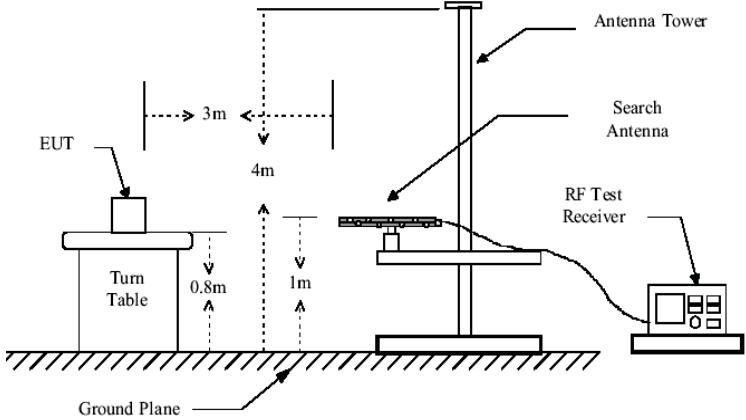
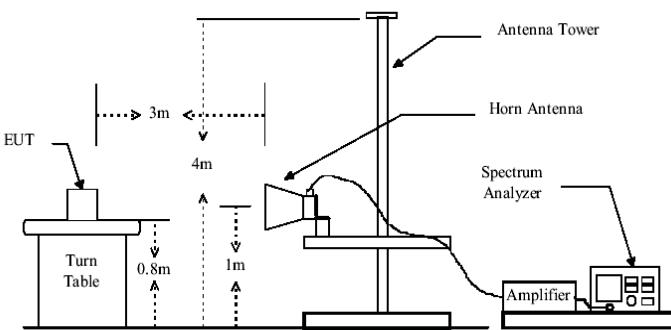
Freq	Read	LISN	Cable	Limit Level	Limit	Over	Remark
	MHz	dBuV	Factor		Line	Limit	
1	0.150	41.96	0.07	0.12	42.15	66.00	-23.85 QP
2	0.313	38.51	0.06	0.10	38.67	59.88	-21.21 QP
3	0.546	38.76	0.07	0.11	38.94	56.00	-17.06 QP
4	1.172	38.09	0.08	0.13	38.30	56.00	-17.70 QP
5	1.800	39.00	0.09	0.14	39.23	56.00	-16.77 QP
6	2.334	37.13	0.10	0.15	37.38	56.00	-18.62 QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + LISN Factor + Cable Loss
4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

7.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109																									
Test Method:	ANSI C63.4:2014																									
Test Frequency Range:	30MHz to 10GHz																									
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)																									
Receiver setup:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-1GHz</td> <td>Quasi-peak</td> <td>120kHz</td> <td>300kHz</td> <td>Quasi-peak Value</td> </tr> <tr> <td>Above 1GHz</td> <td>Peak</td> <td>1MHz</td> <td>3MHz</td> <td>Peak Value</td> </tr> <tr> <td></td> <td>Peak</td> <td>1MHz</td> <td>10Hz</td> <td>Average Value</td> </tr> </tbody> </table>					Frequency	Detector	RBW	VBW	Remark	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value		Peak	1MHz	10Hz	Average Value	
Frequency	Detector	RBW	VBW	Remark																						
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Above 1GHz	Peak	1MHz	3MHz	Peak Value																						
	Peak	1MHz	10Hz	Average Value																						
Limit:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dBuV/m @3m)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.00</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.50</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.00</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.00</td> <td>Quasi-peak Value</td> </tr> <tr> <td>Above 1GHz</td> <td>54.00</td> <td>Average Value</td> </tr> <tr> <td></td> <td>74.00</td> <td>Peak Value</td> </tr> </tbody> </table>					Frequency	Limit (dBuV/m @3m)	Remark	30MHz-88MHz	40.00	Quasi-peak Value	88MHz-216MHz	43.50	Quasi-peak Value	216MHz-960MHz	46.00	Quasi-peak Value	960MHz-1GHz	54.00	Quasi-peak Value	Above 1GHz	54.00	Average Value		74.00	Peak Value
Frequency	Limit (dBuV/m @3m)	Remark																								
30MHz-88MHz	40.00	Quasi-peak Value																								
88MHz-216MHz	43.50	Quasi-peak Value																								
216MHz-960MHz	46.00	Quasi-peak Value																								
960MHz-1GHz	54.00	Quasi-peak Value																								
Above 1GHz	54.00	Average Value																								
	74.00	Peak Value																								
Test Procedure:	<ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 																									
Test setup:	Below 1GHz																									

	 <p>Above 1GHz</p> 
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Measurement Record:	Uncertainty: $\pm 4.5\text{dB}$
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Note:

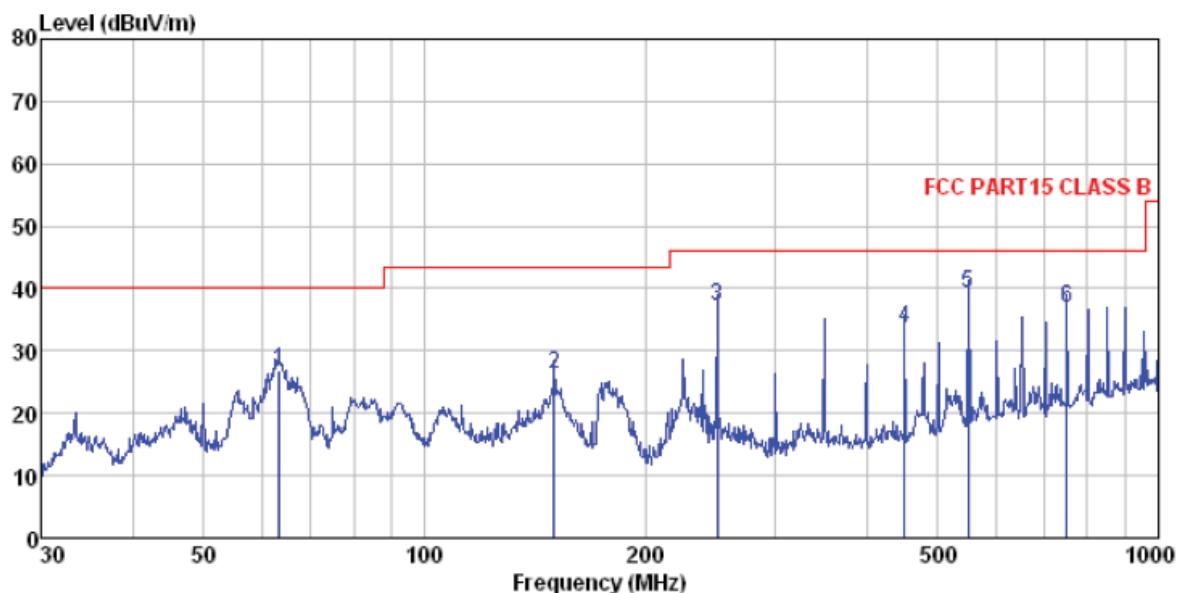
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

Measurement Data

Below 1GHz

Horizontal:



Condition : FCC PART15 CLASS B VULB9163-2013M HORIZONTAL

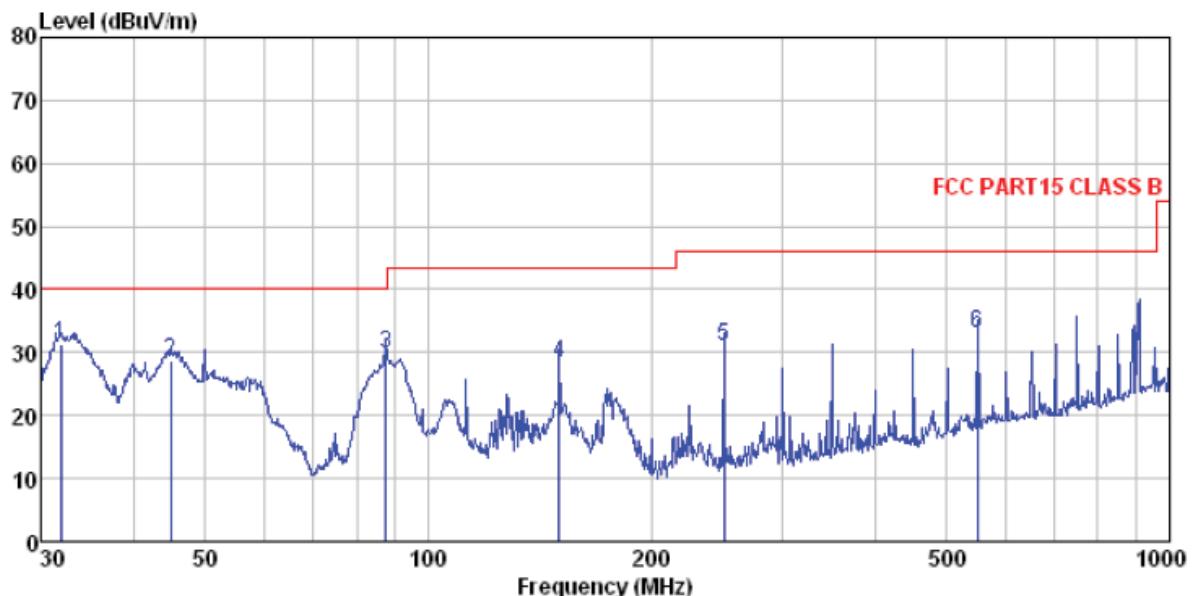
Job No : 1927RF

Test mode : Burning mode

Test Engineer: Chen

Freq MHz	Read	Antenna	Cable	Preamp	Limit Level dBuV/m	Over Line Limit dB	Remark
	Level	Factor	Loss	Factor			
1 63.313	42.56	13.37	0.89	29.90	26.92	40.00	-13.08 QP
2 150.011	43.95	10.26	1.57	29.41	26.37	43.50	-17.13 QP
3 250.301	50.56	14.07	2.12	29.65	37.10	46.00	-8.90 QP
4 451.135	42.41	17.58	3.09	29.39	33.69	46.00	-12.31 QP
5 550.948	45.39	19.57	3.53	29.30	39.19	46.00	-6.81 QP
6 750.108	40.41	21.43	4.28	29.20	36.92	46.00	-9.08 QP

Vertical:



Condition : FCC PART15 CLASS B VULB9163-2013M VERTICAL

Job No : 1927RF

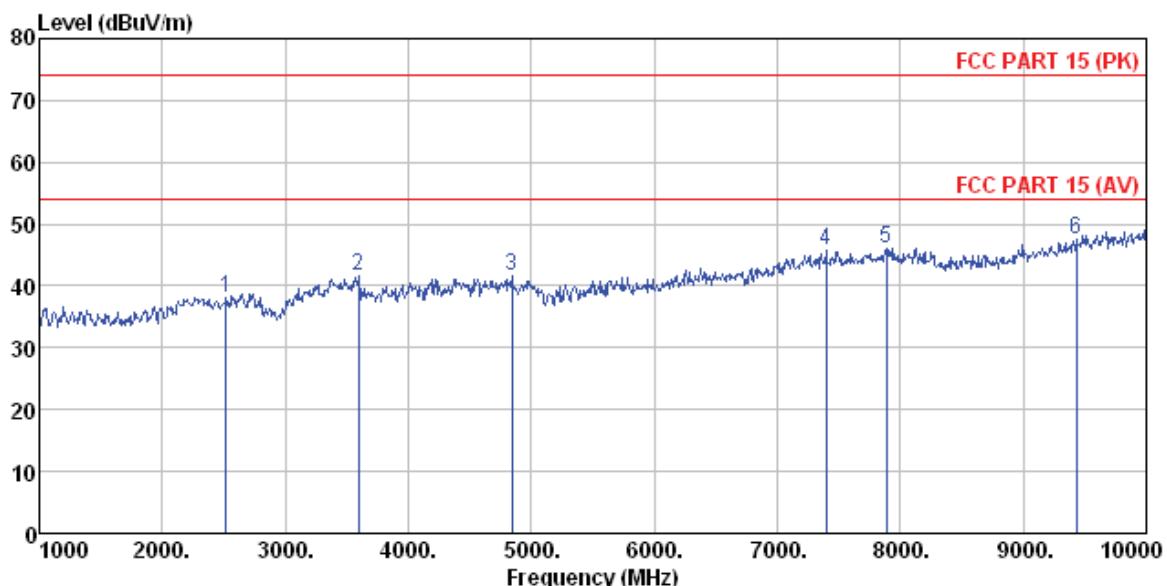
Test mode : Burning mode

Test Engineer: Chen

	ReadAntenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss	Level	Line	Limit	Remark	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	31.955	46.38	14.32	0.57	30.09	31.18	40.00	-8.82 QP
2	44.901	42.33	15.55	0.72	30.02	28.58	40.00	-11.42 QP
3	87.725	45.27	13.18	1.09	29.76	29.78	40.00	-10.22 QP
4	150.011	45.90	10.26	1.57	29.41	28.32	43.50	-15.18 QP
5	250.301	44.40	14.07	2.12	29.65	30.94	46.00	-15.06 QP
6	550.948	39.26	19.57	3.53	29.30	33.06	46.00	-12.94 QP

Above 1GHz

Horizontal:



Condition : FCC PART 15 (PK) BBHA9120D ANT (>1GHZ) HORIZONTAL

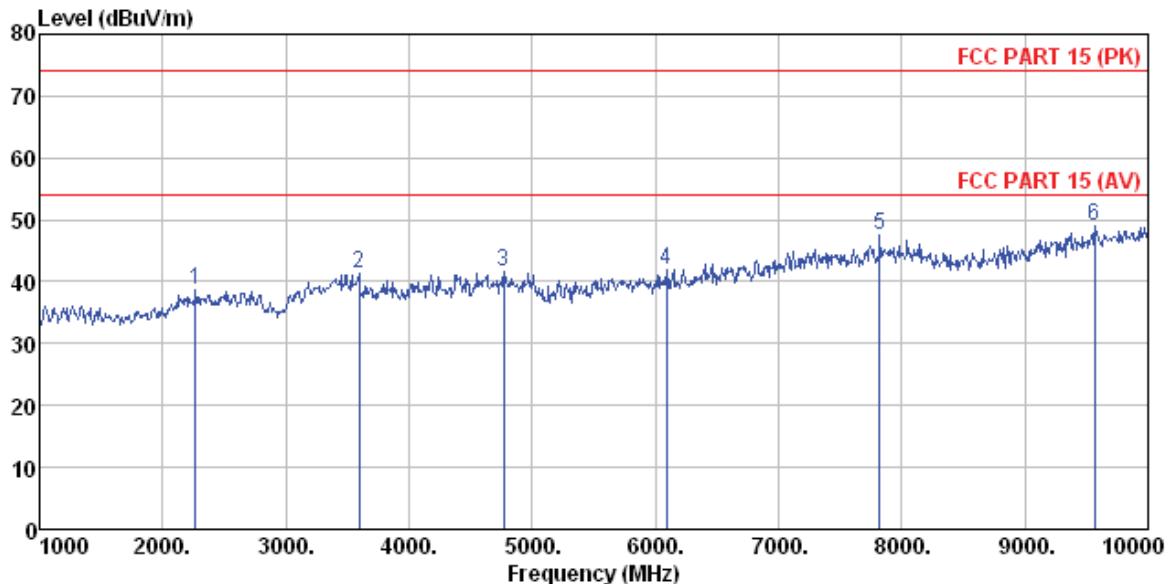
Job No. : 1927RF

Test Mode : Burning mode

Test Engineer: Rong

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Level	
1	2521.000	38.79	27.58	5.51	33.88	38.00	74.00 -36.00 Peak
2	3592.000	38.12	29.12	7.13	32.66	41.71	74.00 -32.29 Peak
3	4843.000	33.26	31.82	8.63	32.11	41.60	74.00 -32.40 Peak
4	7399.000	29.28	36.52	11.76	31.83	45.73	74.00 -28.27 Peak
5	7885.000	28.39	37.14	12.03	31.36	46.20	74.00 -27.80 Peak
6	9433.000	27.83	37.66	13.99	31.81	47.67	74.00 -26.33 Peak

Vertical:



Condition : FCC PART 15 (PK) BBHA9120D ANT(>1GHZ) VERTICAL

Job No. : 1927RF

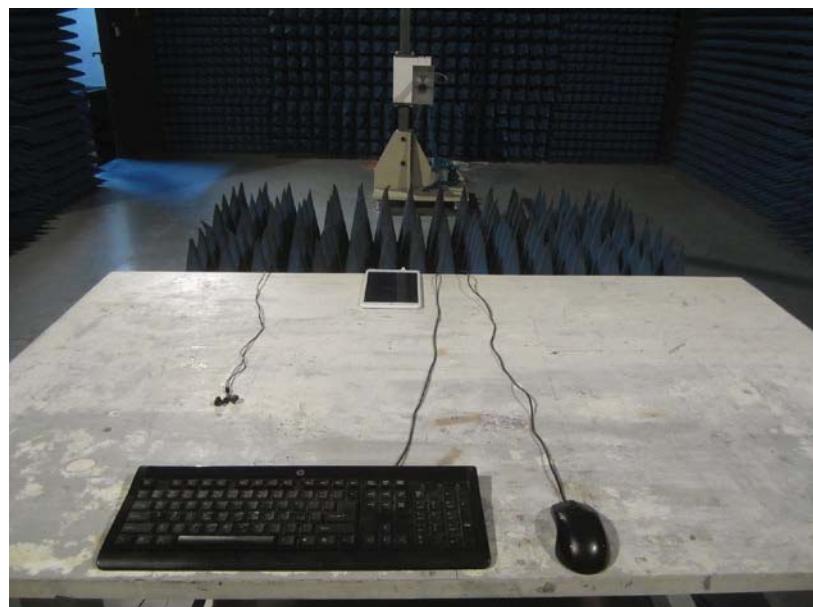
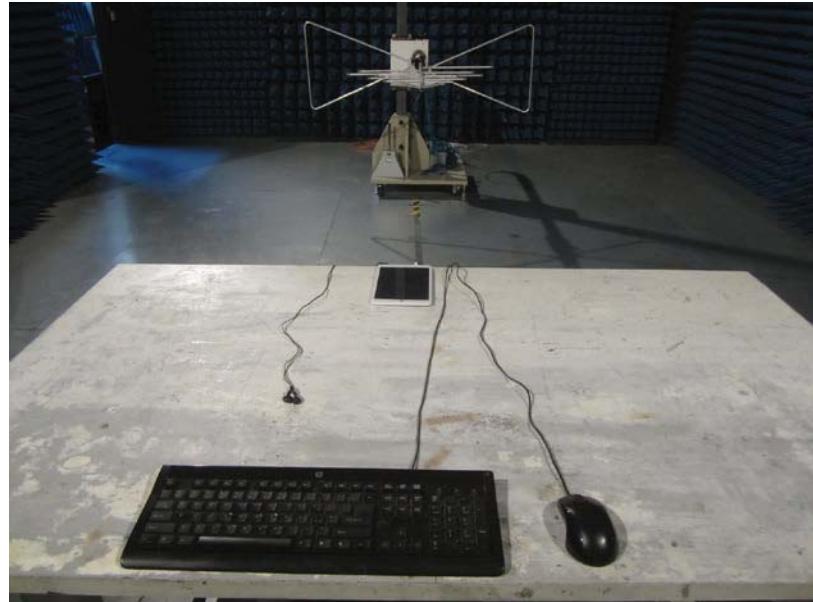
Test Mode : Burning mode

Test Engineer: Rong

Freq	Read	Antenna	Cable	Preamp	Limit	Over	Remark
	MHz	dBuV	Level	Factor	Loss	Factor	
1	2269.000	39.52	28.00	5.25	34.15	38.62	74.00 -35.38 Peak
2	3592.000	37.63	29.12	7.13	32.66	41.22	74.00 -32.78 Peak
3	4771.000	33.28	31.75	8.58	32.07	41.54	74.00 -32.46 Peak
4	6094.000	30.66	32.99	10.33	32.06	41.92	74.00 -32.08 Peak
5	7822.000	29.99	37.07	12.00	31.43	47.63	74.00 -26.37 Peak
6	9568.000	28.75	37.90	14.10	31.66	49.09	74.00 -24.91 Peak

8 Test Setup Photo

Radiated Emission



Conducted Emission



9 EUT Constructional Details

Reference to the test report No. GTSE15100192701

----- End -----