Shenzhen EBO Technology Co., Ltd.

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TEST REPORT

Applicant: Archos SA

Address of Applicant: 12, Rue Ampere 91430 Igny France

Equipment Under Test (EUT)

Product Name: ChildPad

Model No.: AN7DG3B

Trade mark: ARNOVA

FCC ID: SOVAN7DG3B

Applicable standards: FCC CFR Title 47 Part 15 Subpart B:2010

Date of sample receipt: June 18, 2012

Date of Test: July 24, 2012

Date of report issued: July 24, 2012

Test Result : PASS *

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

Authorized Signature:

Kavin Yu
Laboratory Manager

2 Version

Version No.	Date	Description
00	*July 24, 2012*	*Original*

Prepared by: Collin. He ***Date:*** *July 24, 2012*

Project Engineer

Reviewed by: Hans. Hu ***Date:*** *July 24, 2012*

Reviewer

3 Contents

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.

5 General Information

5.1 Client Information

Applicant:	Archos SA
Address of Applicant:	12, Rue Ampere 91430 Igny France
Manufacturer:	Archos SA
Address of Manufacturer/	12, Rue Ampere 91430 Igny France

5.2 General Description of E.U.T.

Product Name:	ChildPad
Model No.:	AN7DG3B
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40))
Power supply:	MODEL: ASSA1a-050150 Input: AC 100-240V, 50-60Hz, 0.45A Output: DC 5.0V, 1500mA DC 3.7V Li-ion Battery

5.3 Test mode and voltage

Test mode:	
Data Transfer mode	Data Transfer with PC
Test voltage:	AC 120V/60Hz

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 fuly described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 600491, July 20, 2010.

● **Industry Canada (IC)**

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-1.

5.5 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: 2nd Floor, Block No.2, 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 ID/DoC
HP	Printer	CB495A	05257893	DoC
Lenovo	PC	OPTIPLEX745	GTS312	DoC
Lenovo	MONITOR	E178FPC	N/A	DoC
Lenovo	KEYBOARD	SK-8115	N/A	DoC
Lenovo	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

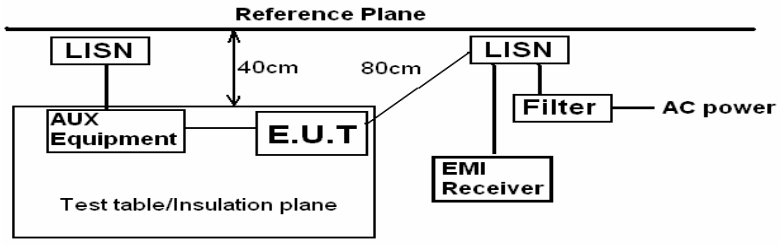
Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (mm-dd-yy)**	**Cal.Due date (mm-dd-yy)**
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 30 2011	Mar. 29 2013
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Jul. 03 2012	Jul. 02 2013
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	Feb. 26 2012	Feb. 25 2013
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	9120D-829	GTS208	Mar. 10 2012	Mar. 09 2013
6	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	Jul. 03 2012	Jul. 02 2013
7	Amplifier(2GHz-20GHz)	HP	8349B	GTS206	Jul. 03 2012	Jul. 02 2013
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial cable	GTS	N/A	GTS210	Jul. 03 2012	Jul. 02 2013
10	Coaxial Cable	GTS	N/A	GTS211	Jul. 03 2012	Jul. 02 2013
11	Thermo meter	KTJ	TA328	GTS256	Jul. 06 2012	Jul. 05 2013

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	7.0(L)x3.0(W)x3.0(H)	GTS252	Sep. 08 2011	Sep. 07 2013
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	Jul. 03 2012	Jul. 02 2013
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	Jul. 03 2012	Jul. 02 2013
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	Jul. 03 2012	Jul. 02 2013
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	Jul. 03 2012	Jul. 02 2013
6	Coaxial Cable	GTS	N/A	GTS227	Jul. 03 2012	Jul. 02 2013
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Thermo meter	KTJ	TA328	GTS233	Jul. 04 2012	Jul. 03 2013

General used equipment:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (dd-mm-yy)**	**Cal.Due date (dd-mm-yy)**
1	Barometer	ChangChun	DYM3	GTS257	July 10 2012	July 09 2013

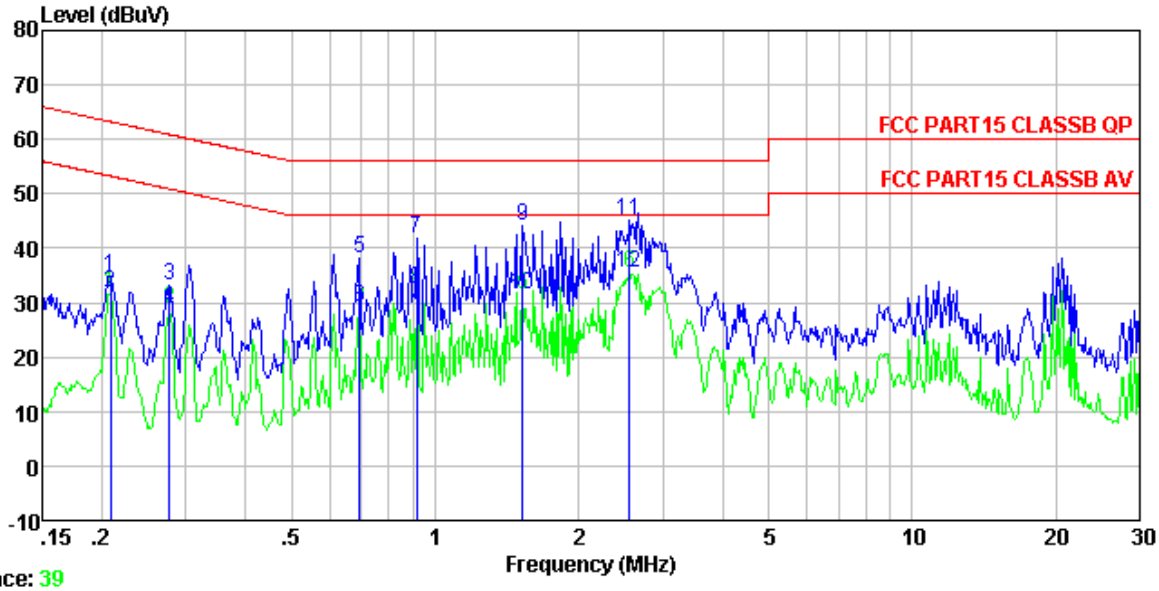
7 Test results and Measurement Data

7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107
Test Method:	ANSI C63.4:2003
Test Frequency Range:	150kHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9kHz, VBW=30kHz
Limit:	Frequency range (MHz) / Limit (dBμV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 0.5-30: 60 / 50
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 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: 2003 on conducted measurement.
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test environment:	Temp.: 25 °C ⋮ Humid.: 52% ⋮ Press.: 1 012mbar
Measurement Record:	Uncertainty: ± 3.45dB
Test Instruments:	Refer to section 6 for details
Test mode:	Data Transfer with PC
Test results:	Pass

Measurement Data

Line:

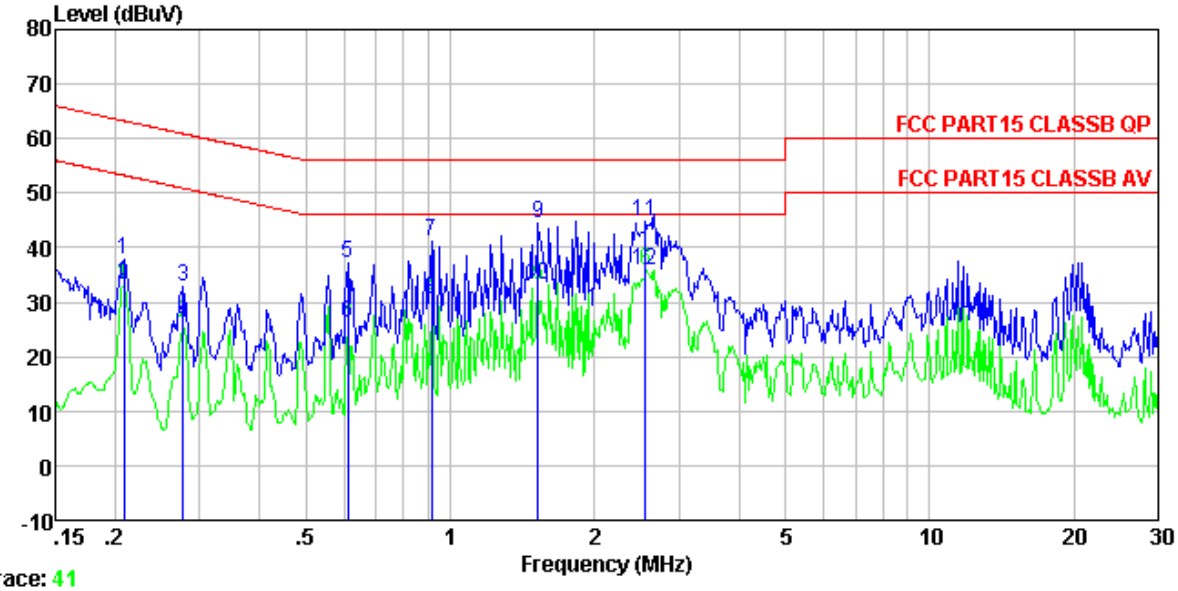


Trace: 39

Condition : FCC PART15 CLASSB QP LISN(2011) LINE
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: HuXiaohe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.208	34.06	0.65	0.10	34.81	63.27	-28.46	QP
2	0.208	31.07	0.65	0.10	31.82	53.27	-21.45	Average
3	0.277	32.47	0.62	0.10	33.19	60.90	-27.71	QP
4	0.277	28.01	0.62	0.10	28.73	50.90	-22.17	Average
5	0.694	37.40	0.52	0.10	38.02	56.00	-17.98	QP
6	0.694	28.63	0.52	0.10	29.25	46.00	-16.75	Average
7	0.914	41.36	0.49	0.10	41.95	56.00	-14.05	QP
8	0.914	31.88	0.49	0.10	32.47	46.00	-13.53	Average
9	1.527	43.52	0.43	0.10	44.05	56.00	-11.95	QP
10	1.527	30.89	0.43	0.10	31.42	46.00	-14.58	Average
11	2.554	44.81	0.37	0.10	45.28	56.00	-10.72	QP
12	2.554	35.01	0.37	0.10	35.48	46.00	-10.52	Average

Neutral:



Trace: 41

Condition : FCC PART15 CLASSB QP LISN(2011) NEUTRAL
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: HuXiaohe

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.208	37.08	0.65	0.10	37.83	63.27	-25.44	QP
2	0.208	32.53	0.65	0.10	33.28	53.27	-19.99	Average
3	0.277	32.01	0.62	0.10	32.73	60.90	-28.17	QP
4	0.277	25.33	0.62	0.10	26.05	50.90	-24.85	Average
5	0.611	36.45	0.53	0.10	37.08	56.00	-18.92	QP
6	0.611	25.46	0.53	0.10	26.09	46.00	-19.91	Average
7	0.914	40.66	0.49	0.10	41.25	56.00	-14.75	QP
8	0.914	29.93	0.49	0.10	30.52	46.00	-15.48	Average
9	1.527	43.86	0.43	0.10	44.39	56.00	-11.61	QP
10	1.527	32.79	0.43	0.10	33.32	46.00	-12.68	Average
11	2.554	44.45	0.37	0.10	44.92	56.00	-11.08	QP
12	2.554	35.37	0.37	0.10	35.84	46.00	-10.16	Average

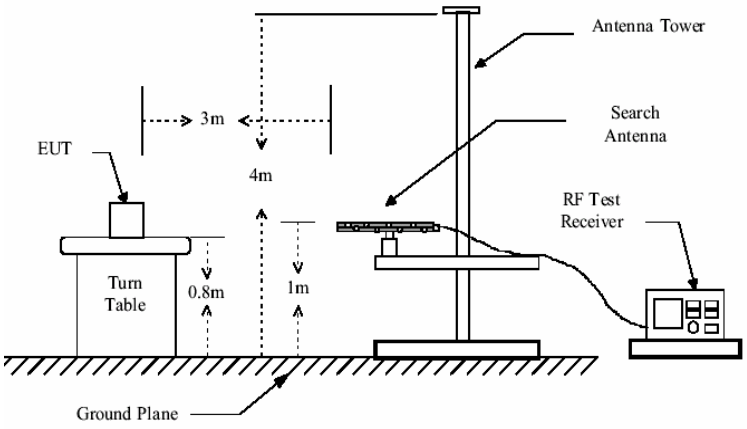
Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

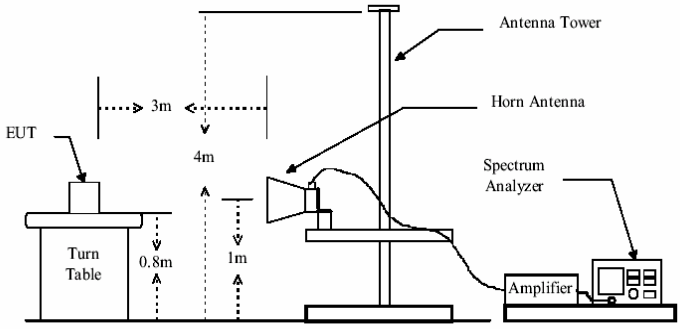
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

7.2 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 B Section 15.109</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4:2003</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 5GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</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>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>74.0</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>
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.
</td></tr>
<tr><td>Test setup:</td><td>Below 1GHz</td></tr>
</table>



Above 1GHz



Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
Measurement Record:					Uncertainty: ± 4.5dB	
Test Instruments:	Refer to section 6 for details					
Test mode:	Data Transfer with PC					
Test results:	Passed					

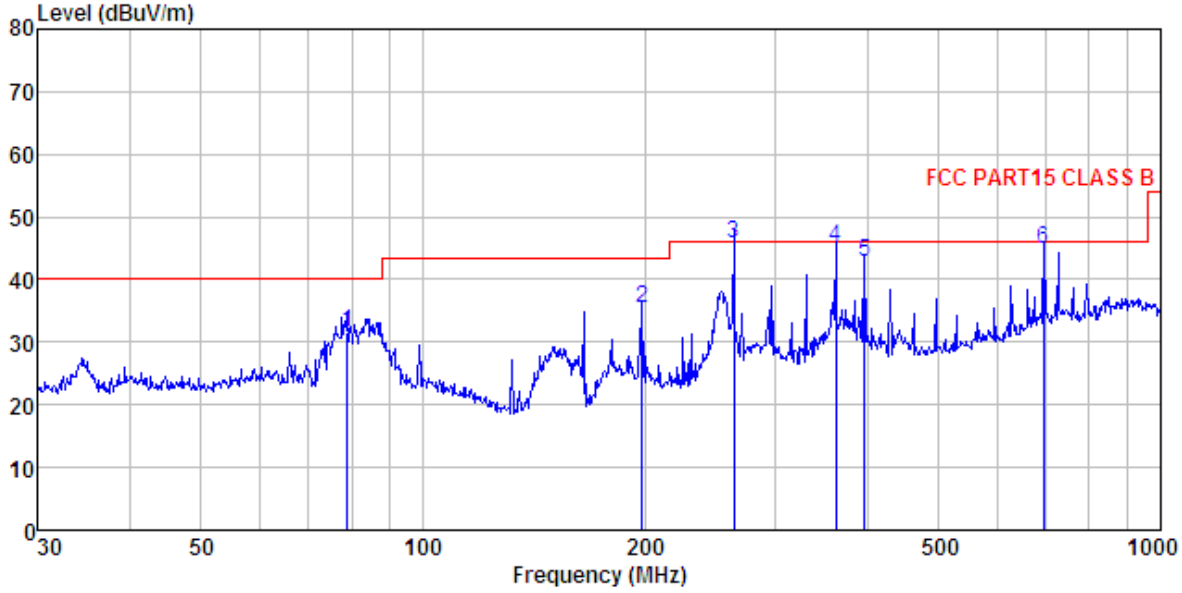
Note:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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

Measurement Data

Below 1GHz

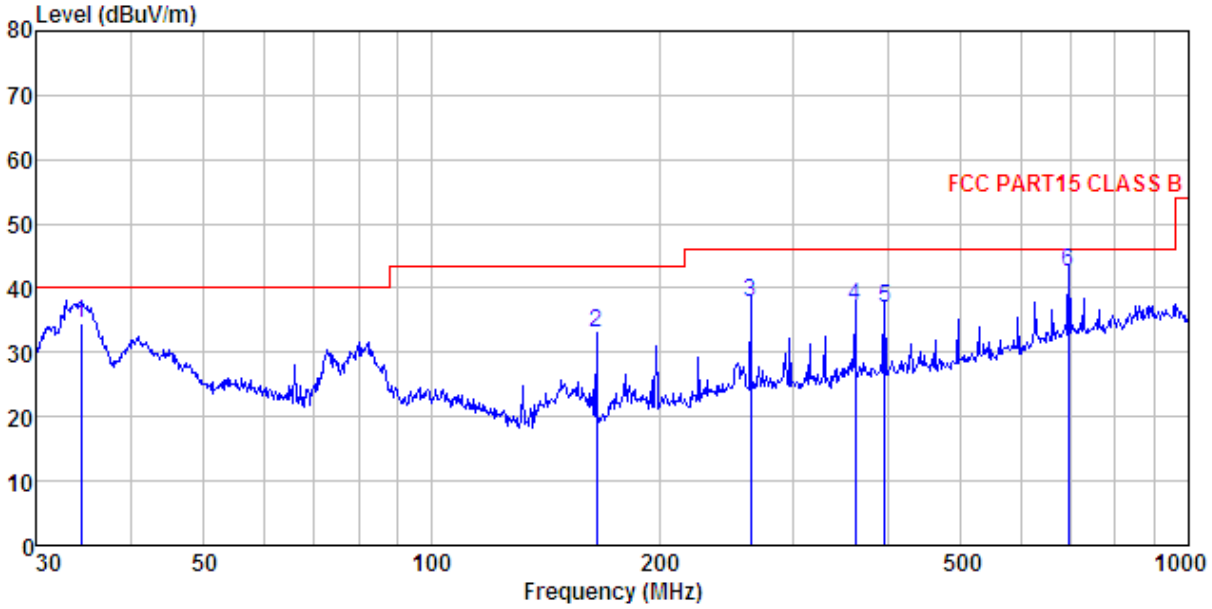
Horizontal:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 HORIZONTAL
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: Sam

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	78.965	50.52	11.74	1.02	31.77	31.51	40.00	-8.49	QP
2	197.893	52.12	13.57	1.83	32.13	35.39	43.50	-8.11	QP
3	263.819	60.60	15.22	2.19	32.17	45.84	46.00	-0.16	QP
4	362.985	58.04	16.45	2.68	31.99	45.18	46.00	-0.82	QP
5	396.242	55.00	17.01	2.83	31.90	42.94	46.00	-3.06	QP
6	694.417	50.10	21.74	4.07	31.18	44.73	46.00	-1.27	QP

Vertical:

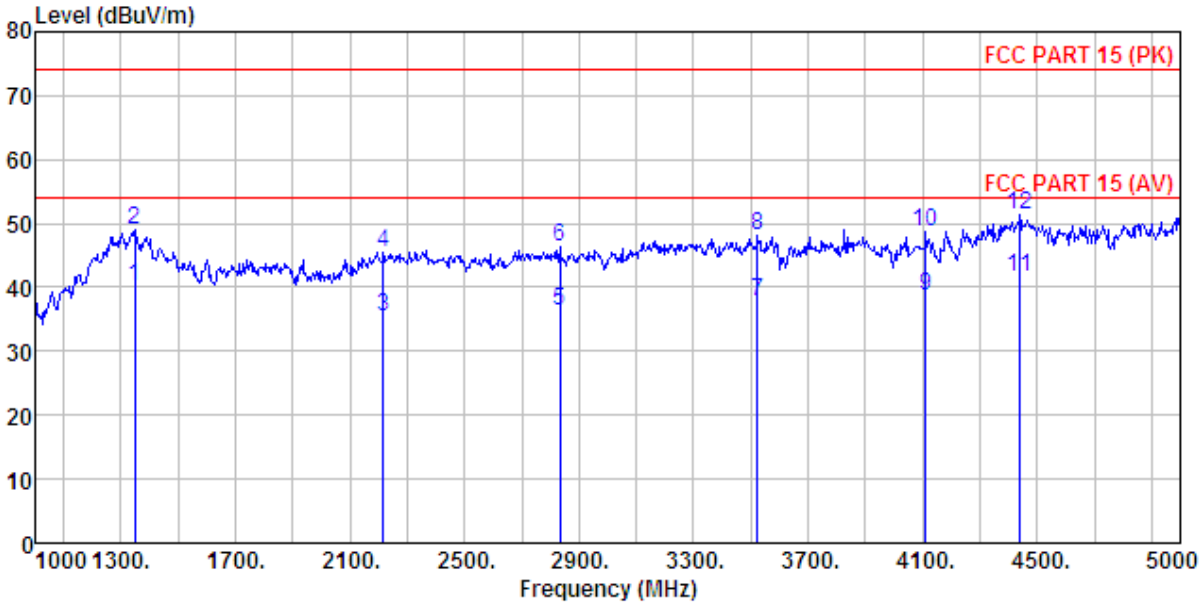


Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 VERTICAL
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: Sam

	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	34.396	50.30	15.80	0.60	32.06	34.64	40.00	-5.36	QP
2	164.908	51.57	11.86	1.66	32.03	33.06	43.50	-10.44	QP
3	263.819	52.56	15.22	2.19	32.17	37.80	46.00	-8.20	QP
4	362.985	50.08	16.45	2.68	31.99	37.22	46.00	-8.78	QP
5	396.242	49.09	17.01	2.83	31.90	37.03	46.00	-8.97	QP
6	694.417	47.91	21.74	4.07	31.18	42.54	46.00	-3.46	QP

Above 1GHz

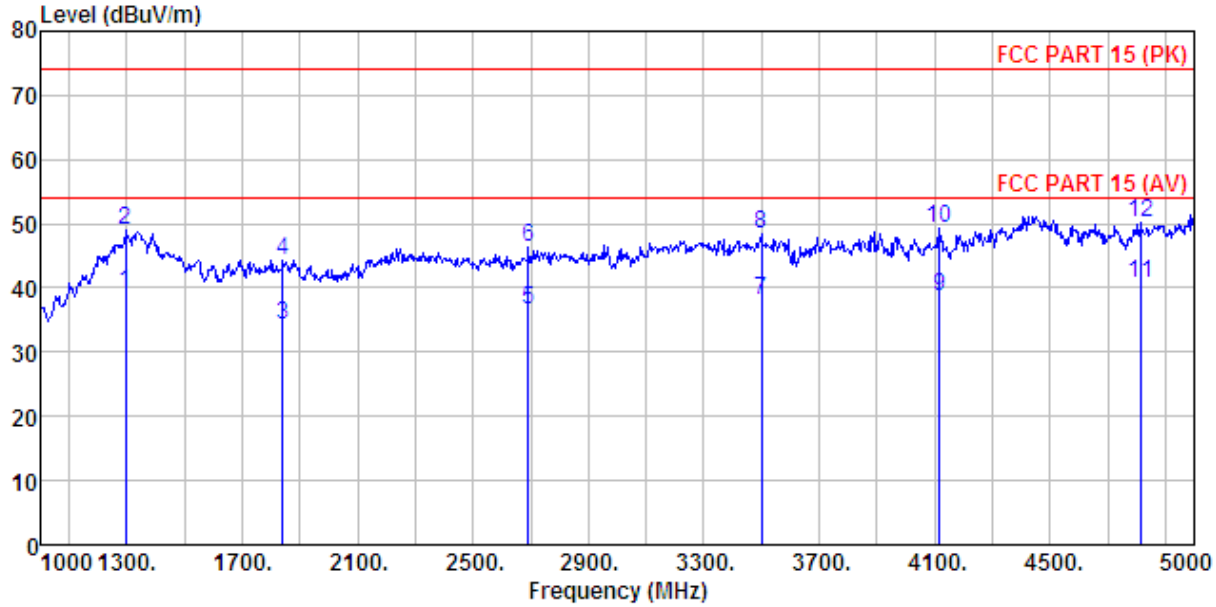
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120D ANT(>1GHZ) HORIZONTAL
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: Sam

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1348.000	30.55	25.70	4.58	20.79	40.04	54.00	-13.96	Average
2	1348.000	39.60	25.70	4.58	20.79	49.09	74.00	-24.91	Peak
3	2216.000	32.76	27.98	5.20	30.61	35.33	54.00	-18.67	Average
4	2216.000	42.88	27.98	5.20	30.61	45.45	74.00	-28.55	Peak
5	2832.000	32.38	28.39	5.78	30.19	36.36	54.00	-17.64	Average
6	2832.000	42.23	28.39	5.78	30.19	46.21	74.00	-27.79	Peak
7	3524.000	29.87	29.04	7.01	28.02	37.90	54.00	-16.10	Average
8	3524.000	40.03	29.04	7.01	28.02	48.06	74.00	-25.94	Peak
9	4112.000	26.74	29.95	7.97	26.14	38.52	54.00	-15.48	Average
10	4112.000	37.02	29.95	7.97	26.14	48.80	74.00	-25.20	Peak
11	4440.000	26.86	31.20	8.29	24.73	41.62	54.00	-12.38	Average
12	4440.000	36.47	31.20	8.29	24.73	51.23	74.00	-22.77	Peak

Vertical:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120D ANT(>1GHZ) VERTICAL
Job No. : 647RF
Test Mode : Data Transfer
Test Engineer: Sam

	Freq	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1296.000	29.32	25.62	4.54	20.22	39.26	54.00	-14.74	Average
2	1296.000	39.07	25.62	4.54	20.22	49.01	74.00	-24.99	Peak
3	1840.000	32.86	25.48	4.88	29.05	34.17	54.00	-19.83	Average
4	1840.000	43.03	25.48	4.88	29.05	44.34	74.00	-29.66	Peak
5	2692.000	33.14	28.12	5.67	30.42	36.51	54.00	-17.49	Average
6	2692.000	42.92	28.12	5.67	30.42	46.29	74.00	-27.71	Peak
7	3500.000	30.31	28.96	6.95	28.09	38.13	54.00	-15.87	Average
8	3500.000	40.64	28.96	6.95	28.09	48.46	74.00	-25.54	Peak
9	4116.000	26.84	29.95	7.99	26.14	38.64	54.00	-15.36	Average
10	4116.000	37.40	29.95	7.99	26.14	49.20	74.00	-24.80	Peak
11	4812.000	24.65	31.78	8.61	24.17	40.87	54.00	-13.13	Average
12	4812.000	34.04	31.78	8.61	24.17	50.26	74.00	-23.74	Peak

------end------