Shenzhen EBO Technology Co., Ltd.

1-4F, Huafeng Science Park, Xin'an Sixth Road, 82th District, Bao'an,
Shenzhen, China.
Telephone: +86-755-29451282,
Fax: +86-755-22639141

TEST REPORT

Applicant:	Archos SA
Address of Applicant:	12 Rue Ampere 91430 Igny, France
Equipment Under Test (EUT)	
Product Name:	LUDO
Model No.:	1001
Trade Mark:	Archos
FCC ID:	SOV1001
Applicable standards:	FCC CFR Title 47 Part 15 Subpart B:2011
Date of sample receipt:	Jun. 19, 2012
Date of Test:	Jun. 20-28, 2012
Date of report issued:	Jun. 29, 2012
Test Result :	Pass *

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

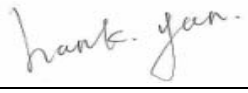
The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 1999/5/EC are considered.

Authorized Signature:

Kavin Yu
Laboratory Manager

2 Version

Version No.	Date	Description
00	*November 29, 2012*	*Original*

Prepared By:  ***Date:*** *November 29, 2012*

Project Engineer

Check By:  ***Date:*** *November 29, 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 comply 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 EUT

Product Name:	LUDO
Model No.:	1001
Power supply:	Model No.: ADS-36RJ-12 12030G Input: AC 100-240V~50/60Hz 0.8A MAX Output: 12V 2.5A

5.3 Test mode and Test voltage

Test mode:	
SD Card Playing mode	Keep the EUT in Playing mode
Video Record mode	Keep the EUT in Video Recording mode
USB Playing mode	Keep the EUT in USB playing mode
PC mode	Keep the EUT in exchanging data mode.
Test voltage:	
AC 120V/60Hz	

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number
HP	Printer	CB495A	05257893
DELL	PC	OPTIPLEX745	GTS312
DELL	MONITOR	E178FPC	N/A
DELL	KEYBOARD	SK-8115	N/A
DELL	MOUSE	MOC5UO	N/A

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Test Facility

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

● **CNAS —Registration No.: CNAS L5775**

CNAS has accredited Global United Technology Services Co., Ltd. to ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

● **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) —Registration No.: 9079A-1**

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.

5.8 Test Location

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

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	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	ESU EMI Test Receiver	R&S	ESU26	GTS203	Jul. 07 2012	Jul. 06 2013
4	BiConiLog Antenna	SCHWARZBECK	VULB9163	GTS214	Mar. 10 2012	Mar. 09 2013
5	Double -ridged waveguide horn	SCHWARZBECK	9120D	GTS208	Mar. 10 2012	Mar. 09 2013
6	RF Amplifier	HP	8347A	GTS204	Jul. 07 2012	Jul. 06 2013
7	Preamplifier	HP	8349B	GTS206	Jul. 07 2012	Jul. 06 2013
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
9	Coaxial cable	GTS	N/A	GTS210	Jul. 07 2012	Jul. 06 2013
10	Coaxial Cable	GTS	N/A	GTS211	Jul. 07 2012	Jul. 06 2013
11	Thermo meter	N/A	N/A	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. 05 2012	Jul. 06 2013

7 Test results and Measurement Data

7.1 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109
Test Method:	ANSI C63.4:2009
Test Frequency Range:	30MHz to 8000MHz
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Receiver setup:	

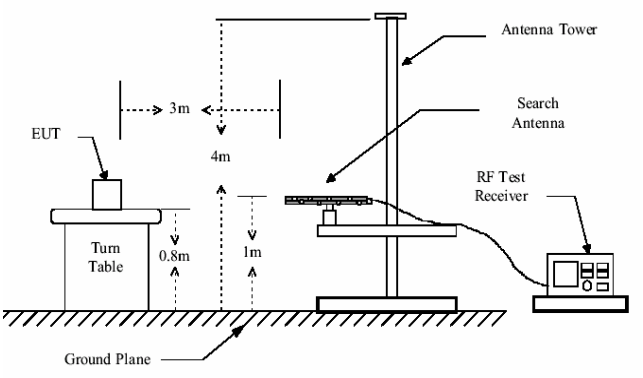
Frequency	Detector	RBW	VBW	Value
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Average	1MHz	3MHz	Average

Limit:

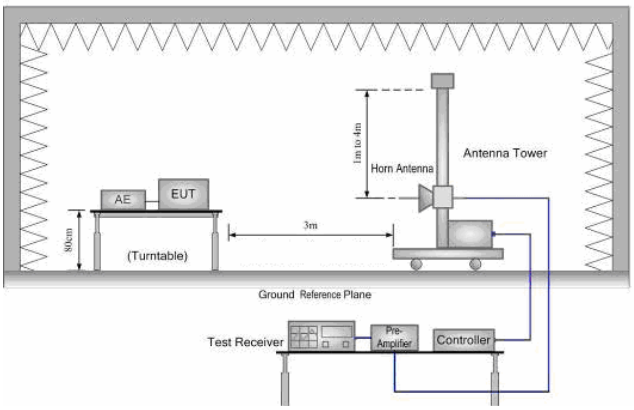
Frequency	Limit (dBμV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

Test setup:

Below 1GHz



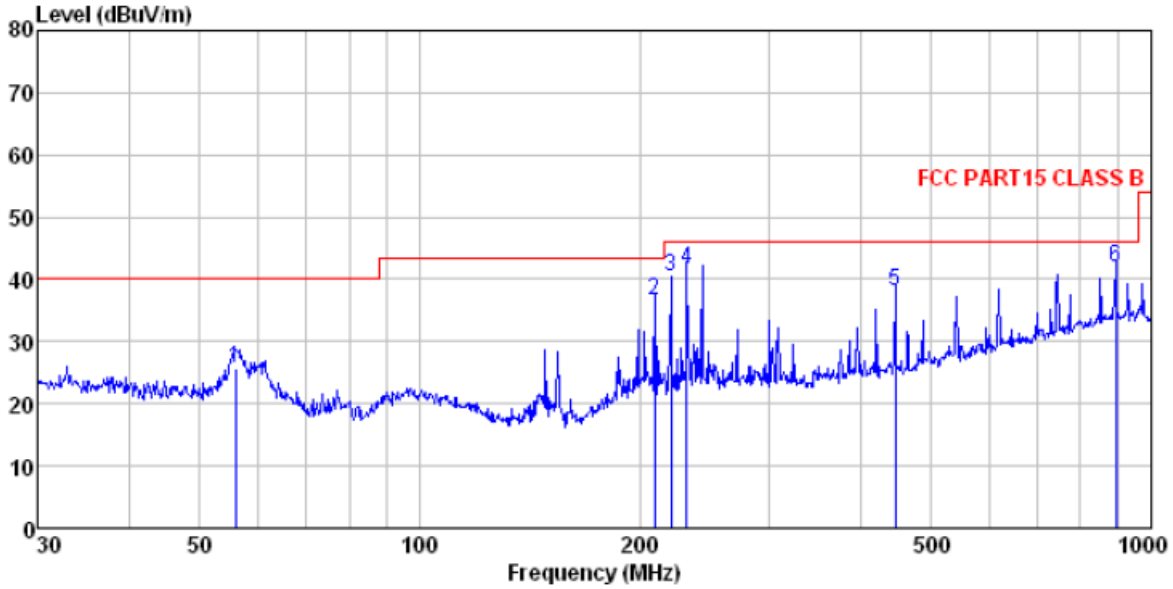
Above 1GHz

	
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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 rotatable 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 environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.3 for details, so only show the test data of the worst case mode.
Test results:	Pass

Measurement Data

Below 1GHz

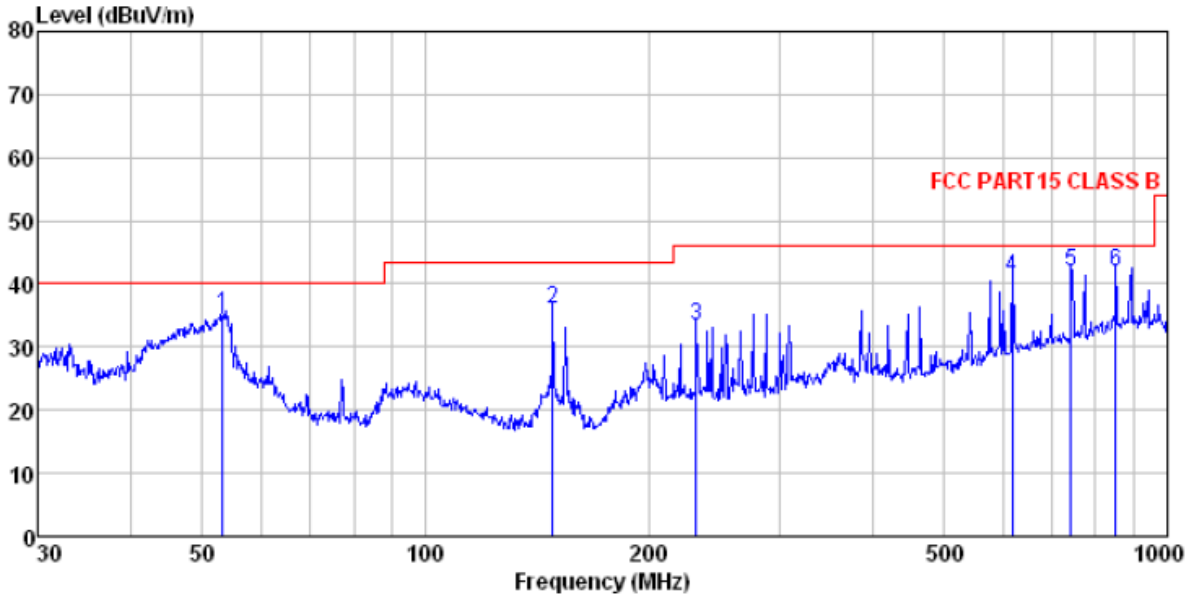
Horizontal:



Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 HORIZONTAL
Job No. : 1350RF
Test Mode : PC mode
Test Engineer: Blue

	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	56.001	40.72	16.04	0.83	31.95	25.64	40.00	-14.36	QP
2	209.313	52.93	13.90	1.89	32.14	36.58	43.50	-6.92	QP
3	220.617	56.31	14.26	1.96	32.15	40.38	46.00	-5.62	QP
4	231.718	57.11	14.78	2.02	32.15	41.76	46.00	-4.24	QP
5	446.414	49.17	17.57	3.07	31.73	38.08	46.00	-7.92	QP
6	893.857	44.30	24.05	4.83	31.19	41.99	46.00	-4.01	QP

Vertical:

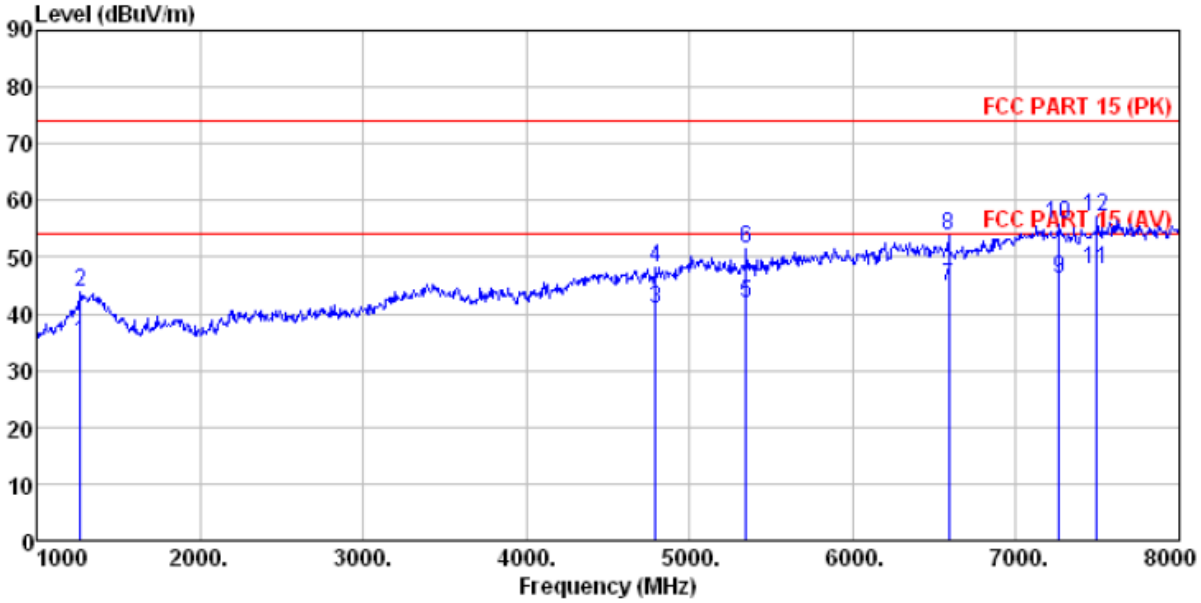


Site : 3m chamber
Condition : FCC PART15 CLASS B 3m VULB9163 -2012-05 VERTICAL
Job No. : 1350RF
Test Mode : PC mode
Test Engineer: Blue

	Freq	Read 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	53.318	50.02	16.19	0.80	31.95	35.06	40.00	-4.94	QP
2	148.441	55.10	11.29	1.56	31.98	35.97	43.50	-7.53	QP
3	231.718	48.85	14.78	2.02	32.15	33.50	46.00	-12.50	QP
4	618.537	47.72	20.71	3.80	31.07	41.16	46.00	-4.84	QP
5	742.259	46.55	22.34	4.24	31.25	41.88	46.00	-4.12	QP
6	851.035	44.95	23.60	4.66	31.25	41.96	46.00	-4.04	QP

Above 1GHz

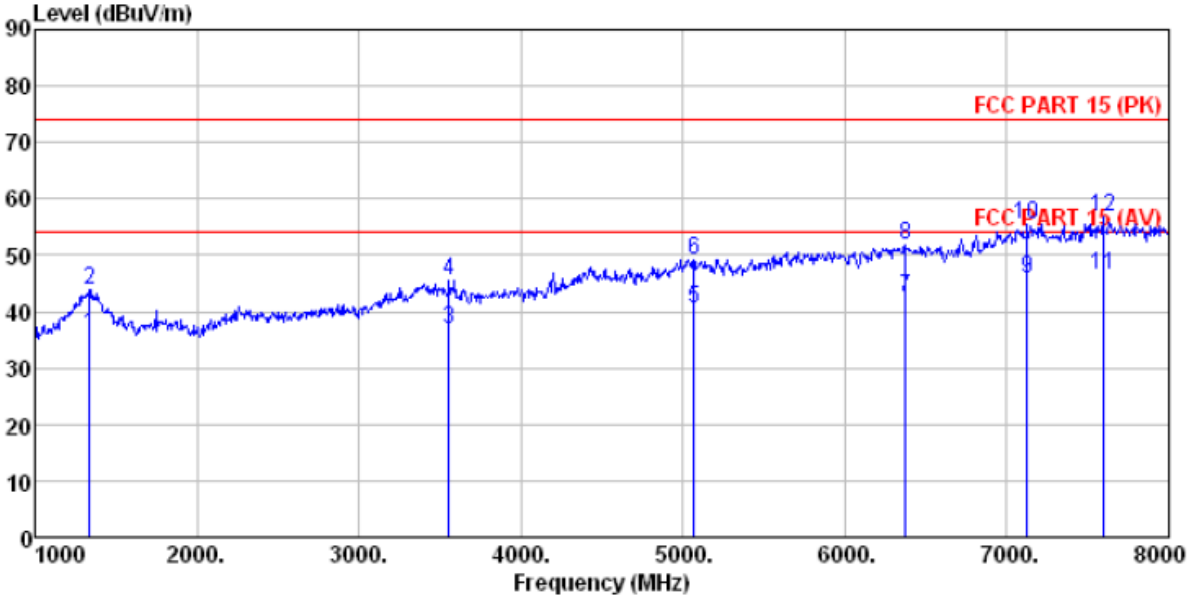
Horizontal:



Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120D ANT(>1GHZ) HORIZONTAL
Job No. : 1350RF
Test mode : PC mode
Test Engineer: Blue

	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	1266.000	24.60	25.56	4.52	19.94	34.74	54.00	-19.26	Average
2	1266.000	33.86	25.56	4.52	19.94	44.00	74.00	-30.00	Peak
3	4794.000	24.53	31.76	8.59	24.20	40.68	54.00	-13.32	Average
4	4794.000	32.14	31.76	8.59	24.20	48.29	74.00	-25.71	Peak
5	5347.000	24.69	31.75	9.29	23.84	41.89	54.00	-12.11	Average
6	5347.000	34.34	31.75	9.29	23.84	51.54	74.00	-22.46	Peak
7	6586.000	25.34	33.86	11.00	25.31	44.89	54.00	-9.11	Average
8	6586.000	34.09	33.86	11.00	25.31	53.64	74.00	-20.36	Peak
9	7265.000	24.61	36.28	11.69	26.58	46.00	54.00	-8.00	Average
10	7265.000	34.27	36.28	11.69	26.58	55.66	74.00	-18.34	Peak
11	7496.000	26.48	36.66	11.82	27.22	47.74	54.00	-6.26	Average
12	7496.000	35.71	36.66	11.82	27.22	56.97	74.00	-17.03	Peak

Vertical:

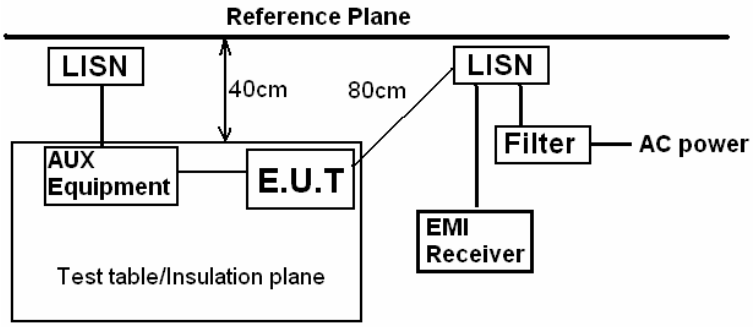


Site : 3m chamber
Condition : FCC PART 15 (PK) 3m BBHA9120D ANT(>1GHZ) VERTICAL
Job No. : 1350RF
Test mode : PC mode
Test Engineer: Blue

	Freq	Read 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	1336.000	26.40	25.69	4.57	20.79	35.87	54.00	-18.13	Average
2	1336.000	34.29	25.69	4.57	20.79	43.76	74.00	-30.24	Peak
3	3555.000	28.50	29.09	7.07	27.95	36.71	54.00	-17.29	Average
4	3555.000	37.29	29.09	7.07	27.95	45.50	74.00	-28.50	Peak
5	5067.000	23.74	32.01	8.85	23.93	40.67	54.00	-13.33	Average
6	5067.000	32.38	32.01	8.85	23.93	49.31	74.00	-24.69	Peak
7	6376.000	23.14	33.43	10.73	24.69	42.61	54.00	-11.39	Average
8	6376.000	32.32	33.43	10.73	24.69	51.79	74.00	-22.21	Peak
9	7125.000	24.50	35.93	11.60	26.26	45.77	54.00	-8.23	Average
10	7125.000	34.25	35.93	11.60	26.26	55.52	74.00	-18.48	Peak
11	7594.000	25.27	36.81	11.87	27.44	46.51	54.00	-7.49	Average
12	7594.000	35.48	36.81	11.87	27.44	56.72	74.00	-17.28	Peak

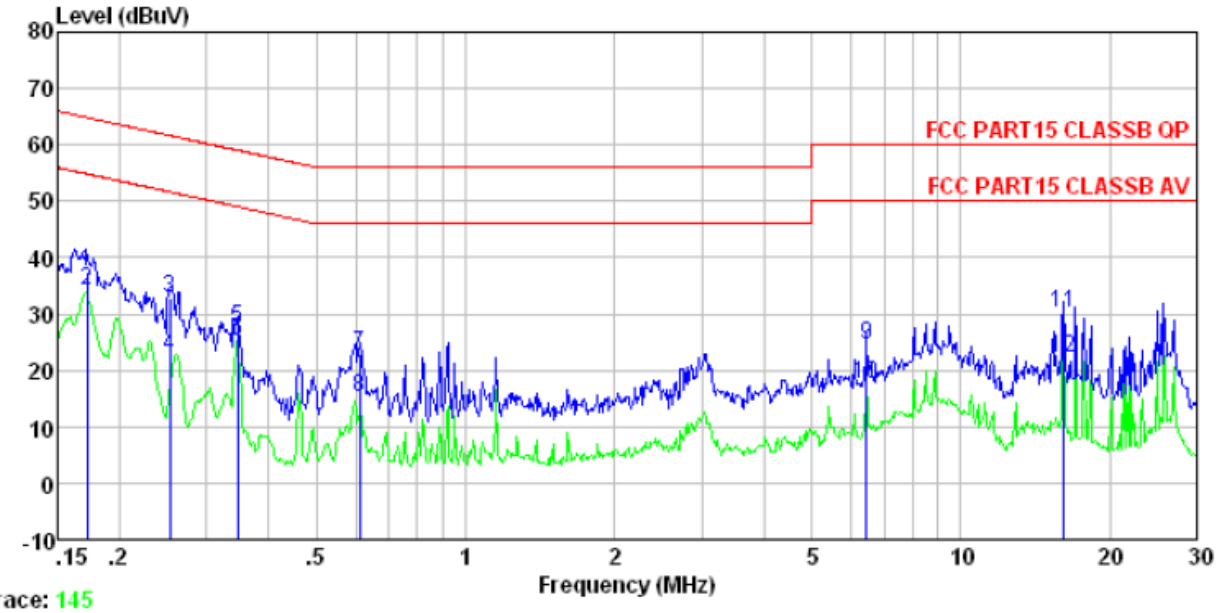
Note:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

7.2 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107
Test Method:	ANSI C63.4:2009
Test Frequency Range:	150kHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9kHz, VBW=30kHz
Limit:	<table><tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBμV)</td></tr><tr><td>Quasi-peak</td><td>Average</td></tr><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>0.5-30</td><td>60</td><td>50</td></tr></table>
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test procedure	1. 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. 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 refers 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: 2009 on conducted measurement.
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.3 for details, so only show the test data of the worst case mode.
Test results:	Pass

Measurement Data

Line:

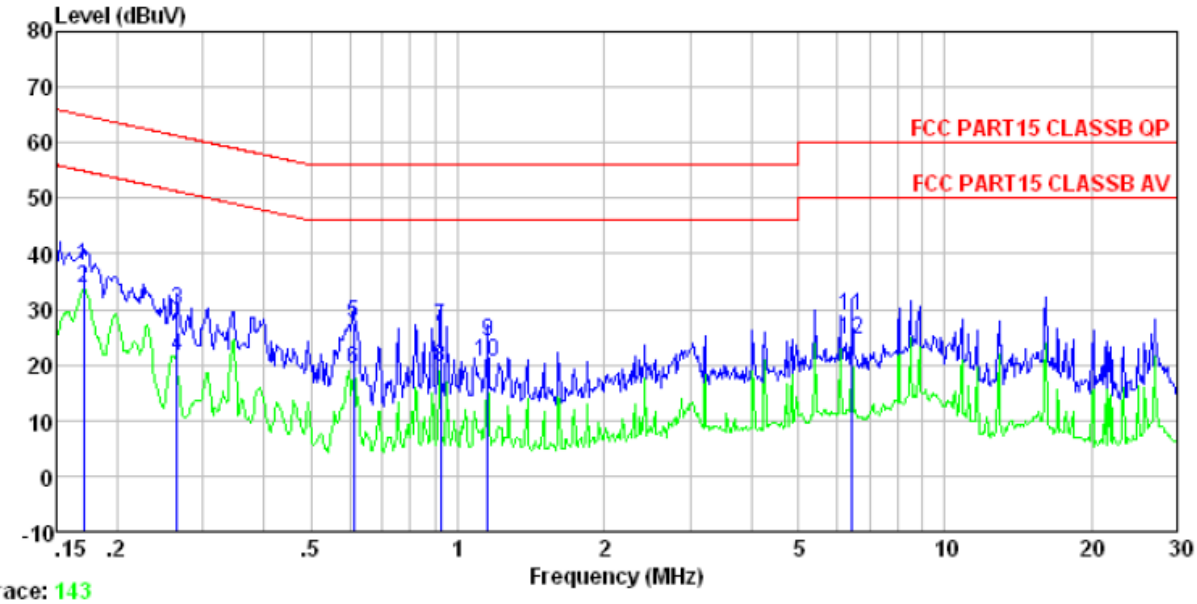


Trace: 145

Condition : FCC PART15 CLASSB QP LISN-2012 LINE
Job No. : 1350RF
Test Mode : PC mode
Test Engineer: Edward

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.172	37.68	-0.26	0.10	37.52	64.86	-27.34	QP
2	0.172	34.20	-0.26	0.10	34.04	54.86	-20.82	Average
3	0.253	32.85	-0.23	0.10	32.72	61.64	-28.92	QP
4	0.253	22.60	-0.23	0.10	22.47	51.64	-29.17	Average
5	0.346	27.79	-0.22	0.10	27.67	59.05	-31.38	QP
6	0.346	25.36	-0.22	0.10	25.24	49.05	-23.81	Average
7	0.611	23.13	-0.20	0.10	23.03	56.00	-32.97	QP
8	0.611	15.44	-0.20	0.10	15.34	46.00	-30.66	Average
9	6.454	24.75	-0.33	0.13	24.55	60.00	-35.45	QP
10	6.454	17.63	-0.33	0.13	17.43	50.00	-32.57	Average
11	16.140	30.54	-0.53	0.20	30.21	60.00	-29.79	QP
12	16.140	22.71	-0.53	0.20	22.38	50.00	-27.62	Average

Neutral:



Trace: 143

Condition : FCC PART15 CLASSB QP LISN-2012 NEUTRAL
Job No. : 1350RF
Test Mode : PC mode
Test Engineer: Edward

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.170	37.93	-0.13	0.10	37.90	64.94	-27.04	QP
2	0.170	33.84	-0.13	0.10	33.81	54.94	-21.13	Average
3	0.266	29.89	-0.09	0.10	29.90	61.25	-31.35	QP
4	0.266	21.63	-0.09	0.10	21.64	51.25	-29.61	Average
5	0.611	27.60	-0.08	0.10	27.62	56.00	-28.38	QP
6	0.611	19.28	-0.08	0.10	19.30	46.00	-26.70	Average
7	0.923	26.93	-0.09	0.10	26.94	56.00	-29.06	QP
8	0.923	19.53	-0.09	0.10	19.54	46.00	-26.46	Average
9	1.153	24.07	-0.09	0.10	24.08	56.00	-31.92	QP
10	1.153	20.41	-0.09	0.10	20.42	46.00	-25.58	Average
11	6.454	28.97	-0.19	0.13	28.91	60.00	-31.09	QP
12	6.454	24.68	-0.19	0.13	24.62	50.00	-25.38	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.