



## FCC PART 15B

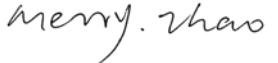
### TEST REPORT

For

**Archos SA**

12 Rue Ampere, Igny 91430, France

**FCC ID: SOV9030**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Smart Home Phone
<b>Test Engineer:</b> <u>Alvin Huang</u> 	
<b>Report Number:</b> <u>RSZ110824002-00b</u>	
<b>Report Date:</b> <u>2011-12-05</u>	
<b>Reviewed By:</b> <u>EMC Engineer</u> <b>Test Laboratory:</b> <u>Merry Zhao</u>  Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 <a href="http://www.baclcorp.com.cn">www.baclcorp.com.cn</a>	

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\* This report contains data that are not covered by the NVLAP accreditation and are marked with an asterisk “★” (Rev.2)

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## GENERAL INFORMATION

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### Product Description for Equipment under Test (EUT)

The Archos SA's product, model number: 9030 (FCC ID: SOV9030) (the "EUT") in this report is a handset of *Internet Tablet with DECT*, which was measured approximately: 12.6 cm (L) x 6.1 cm (W) x 1.2 cm (H), rated input voltage: 3.7 V battery or DC 5.0V charging from adapter.

Adapter information:

Model: KSAS0060500075VUU

Input: AC 100-240V, 50/60 Hz, 0.18A

Output: DC 5.0V, 0.75A

*\* All measurement and test data in this report was gathered from production sample serial number: 1108062 (Assigned by BACL, Shenzhen). The EUT was received on 2011-08-24.*

### Objective

This report is prepared on behalf of Archos SA in accordance with Part 2, Subpart J, Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to determine compliance with FCC Part 15 Class B.

### Related Submittal(s)/Grant(s)

FCC Part 15.247WiFi DTS, 15D PUE submissions and FCC Part 15D PUB submission of base part portion with FCC ID: SOV9030

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at <http://ts.nist.gov/Standards/scopes/2007070.htm>.

## SYSTEM TEST CONFIGURATION

### Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

### EUT Exercise Software

N/A

### Equipment Modifications

No modification was made to the unit tested.

### Local Support Equipment List and Details

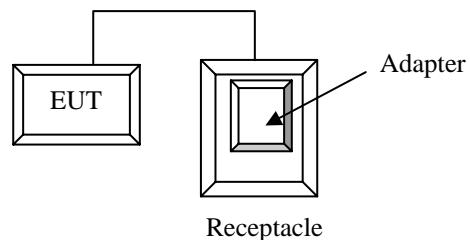
Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP05L	DLTGE456
SAST	Modem	AEM-2100	6588D51200013
DELL	Mouse	MOC5UO	G1B0096D
HP	Printer	C3941A	JPTVOB2337

### External I/O Cable

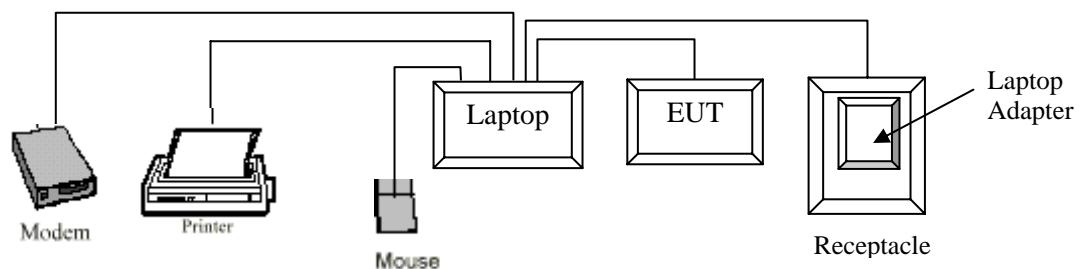
Cable Description	Length (m)	From Port	To
Shielded Detachable Printer Cable	1.2	Laptop	Printer
Shielded Detachable Serial Cable	1.2	Laptop	Modem
Shielded Detachable Mouse Cable	1.5	USB Port	Mouse
Unshielded Detachable USB Cable	2.0	EUT	Adapter

## Configuration of Test Setup

Charging & Media playing mode:

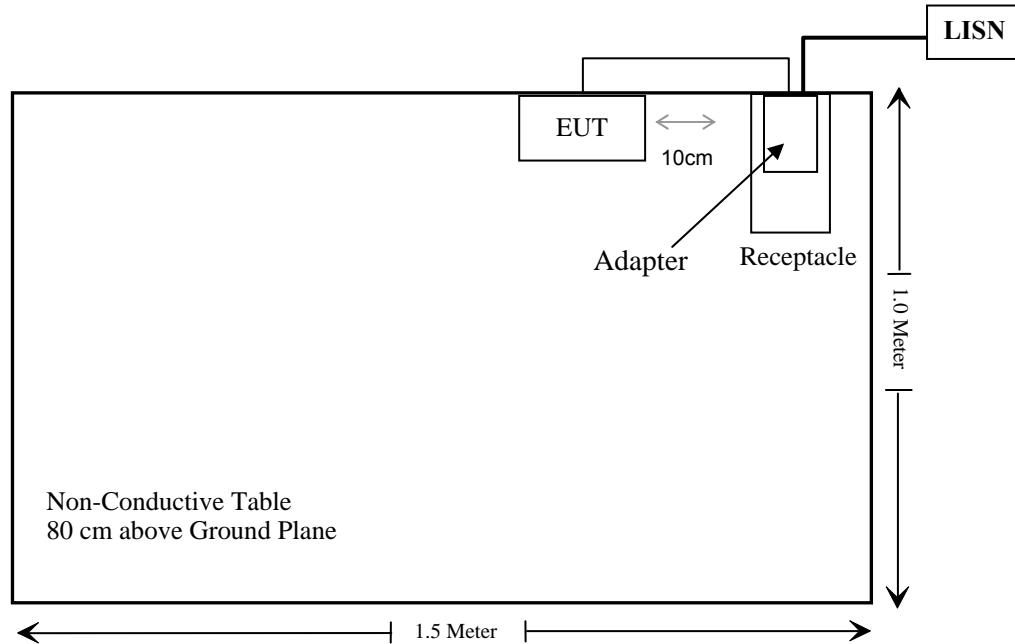


Downloading mode:

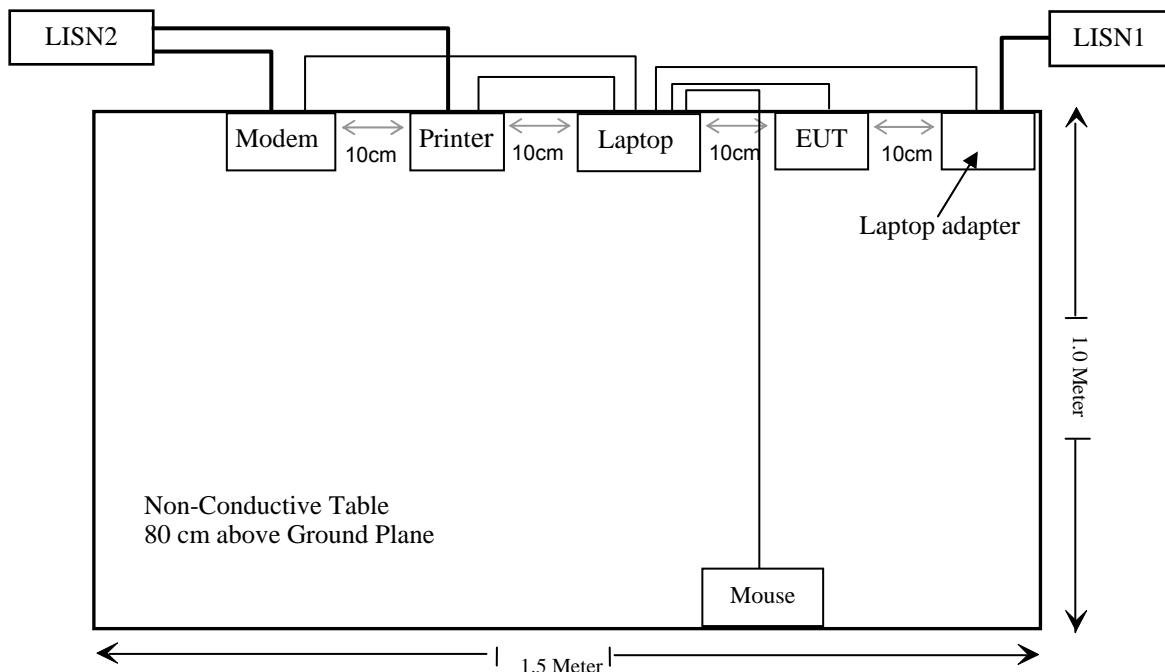


## Block Diagram of Test Setup

Charging & Media playing mode:



Downloading mode:



**SUMMARY OF TEST RESULTS**

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FCC Rules	Description of Test	Results
§15.107	AC Line Conducted Emissions	Compliance
§15.109	Radiated Emissions	Compliance

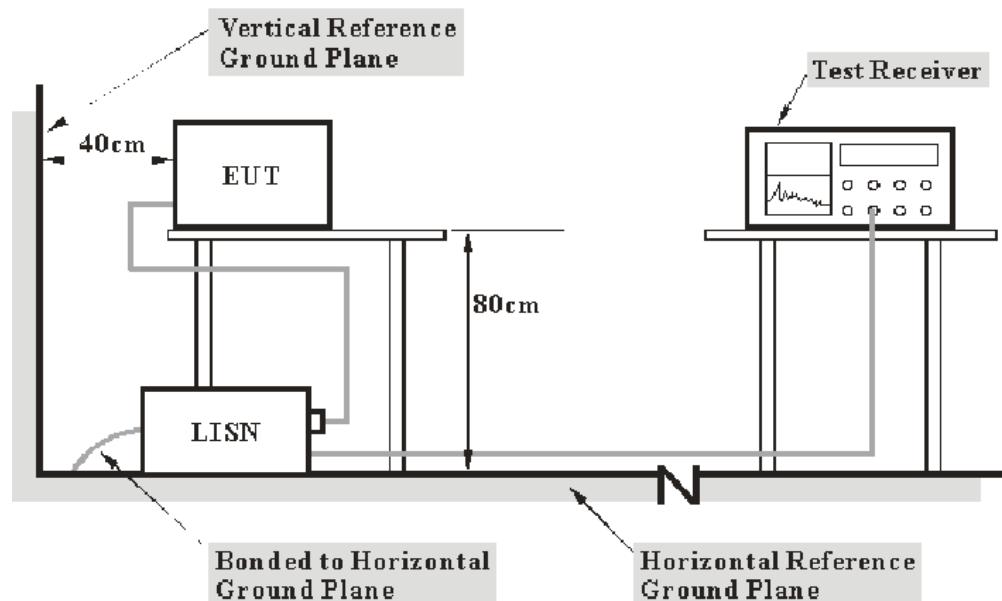
## FCC §15.107 – AC LINE CONDUCTED EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 2.4$  dB.(k=2, 95% level of confidence)

### EUT Setup



**Note:**

1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.107 Class B limits.

The adapter was connected to a 120 VAC/60 Hz power source.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

<b>Frequency Range</b>	<b>IF B/W</b>
150 kHz – 30 MHz	9 kHz

## Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2011-03-03	2012-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-03-09	2012-03-08

\* **Statement of Traceability:** Bay Area Compliance Laboratory Corp. attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.107, with the worst margin reading of:

**7.11 dB at 0.600 MHz** in the **Neutral** conducted mode for downloading mode

## Test Data

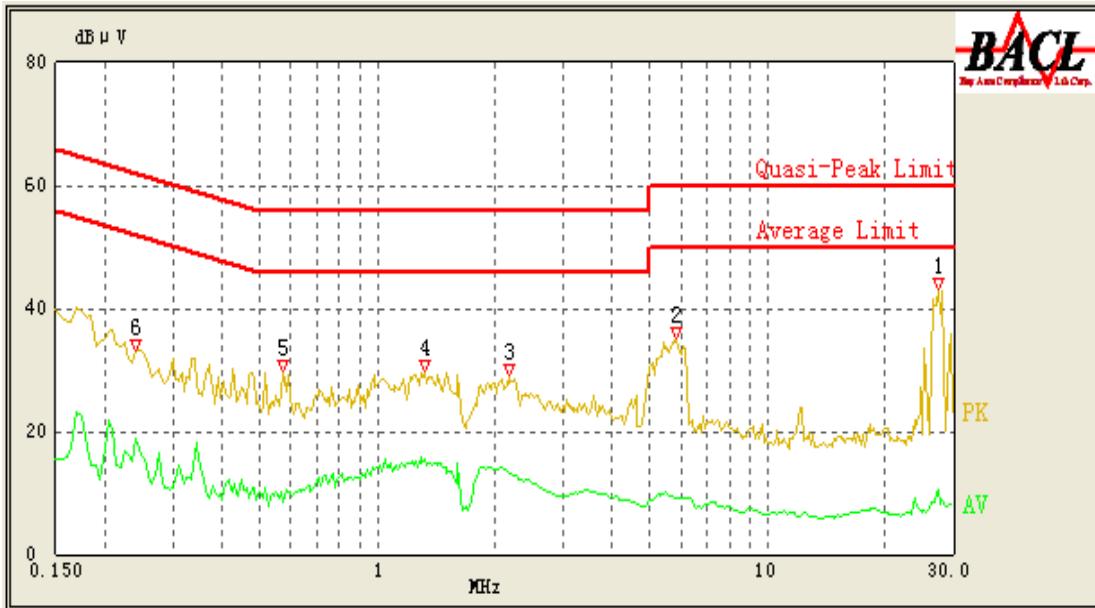
### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	48 %
<b>ATM Pressure:</b>	100.0 kPa

*The testing was performed by Alvin Huang on 2011-09-16*

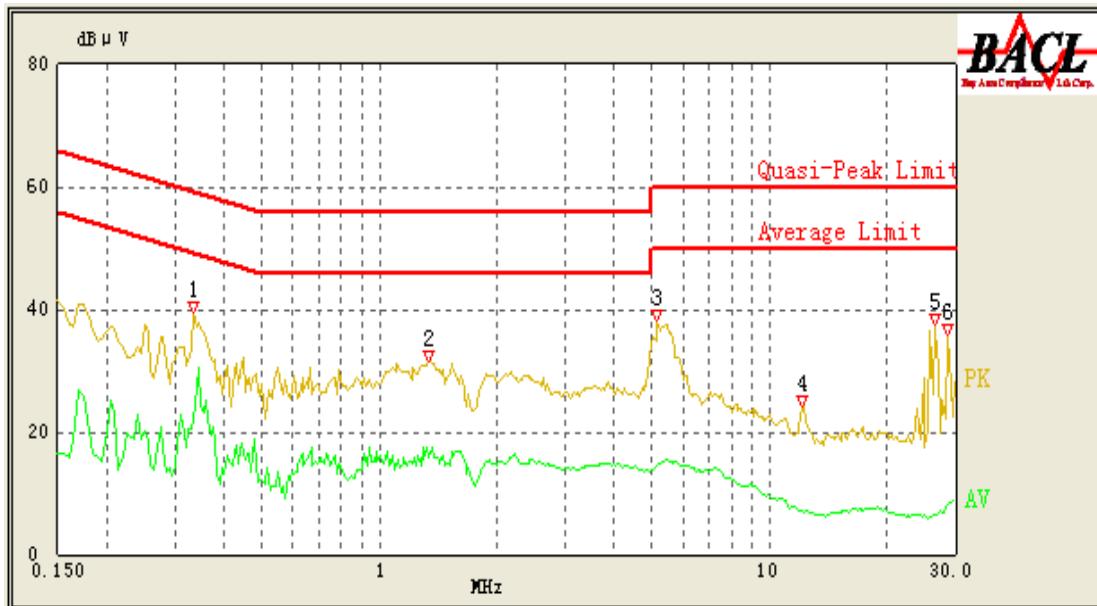
*Test mode: Charging & Media Playing*

**120 V, 60 Hz, Line:**



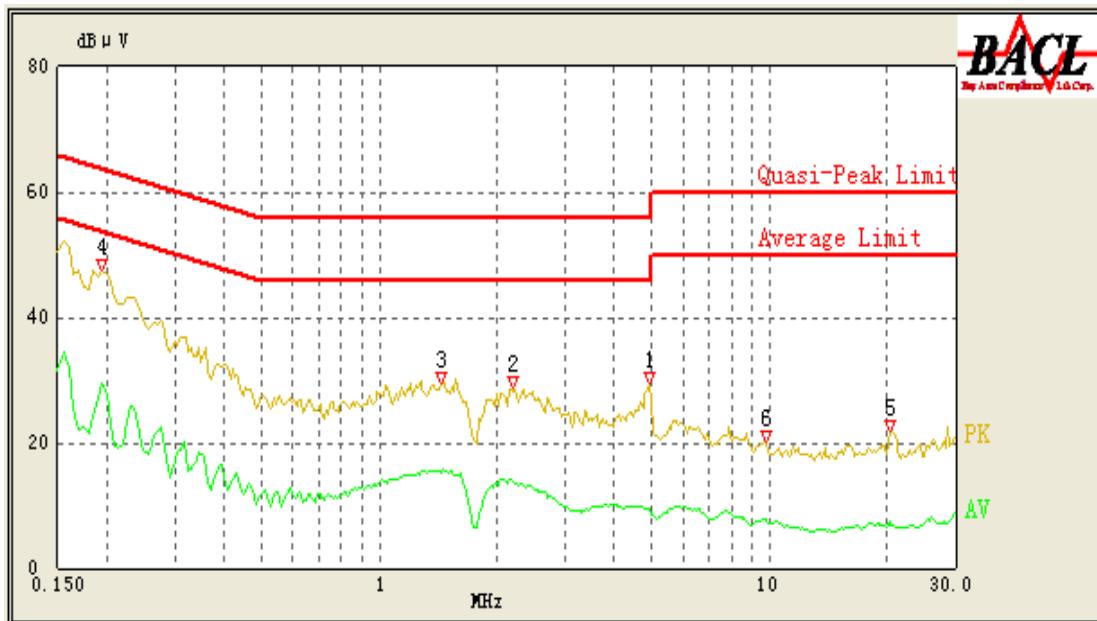
Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
1.320	15.34	10.10	46.00	30.66	Ave.
0.240	31.14	10.10	63.43	32.29	QP
2.160	13.63	10.10	46.00	32.37	Ave.
1.320	22.43	10.10	56.00	33.57	QP
0.240	18.87	10.10	53.43	34.56	Ave.
2.175	19.75	10.10	56.00	36.25	QP
5.835	22.69	10.10	60.00	37.31	QP
0.575	8.53	10.10	46.00	37.47	Ave.
27.355	10.37	10.10	50.00	39.63	Ave.
0.575	15.69	10.10	56.00	40.31	QP
5.830	9.27	10.10	50.00	40.73	Ave.
27.355	10.86	10.10	60.00	49.14	QP

**120 V, 60 Hz, Neutral:**



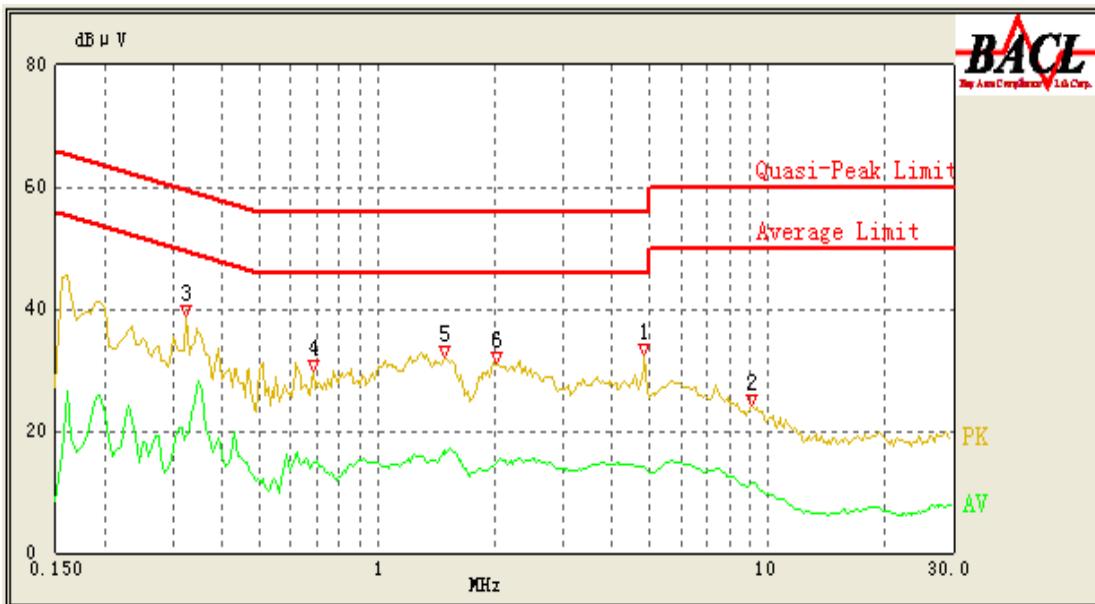
Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
0.335	22.07	10.10	50.71	28.64	Ave.
1.340	15.82	10.10	46.00	30.18	Ave.
0.335	29.59	10.10	60.71	31.12	QP
1.340	24.85	10.10	56.00	31.15	QP
5.215	14.68	10.10	50.00	35.32	Ave.
5.165	21.45	10.10	60.00	38.55	QP
28.635	8.05	10.10	50.00	41.95	Ave.
12.170	7.08	10.10	50.00	42.92	Ave.
26.515	6.49	10.10	50.00	43.51	Ave.
12.180	11.62	10.10	60.00	48.38	QP
28.565	11.60	10.10	60.00	48.40	QP
26.515	9.93	10.10	60.00	50.07	QP

## 120 V, 60 Hz, Line: (with charging base)



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
0.195	29.66	10.10	54.71	25.05	Ave.
0.195	37.83	10.10	64.71	26.88	QP
1.440	15.12	10.10	46.00	30.88	Ave.
2.235	13.56	10.10	46.00	32.44	Ave.
1.440	21.89	10.10	56.00	34.11	QP
2.210	20.44	10.10	56.00	35.56	QP
4.900	9.57	10.10	46.00	36.43	Ave.
4.930	14.38	10.10	56.00	41.62	QP
9.775	7.67	10.10	50.00	42.33	Ave.
20.360	7.38	10.10	50.00	42.62	Ave.
9.780	11.24	10.10	60.00	48.76	QP
20.355	10.06	10.10	60.00	49.94	QP

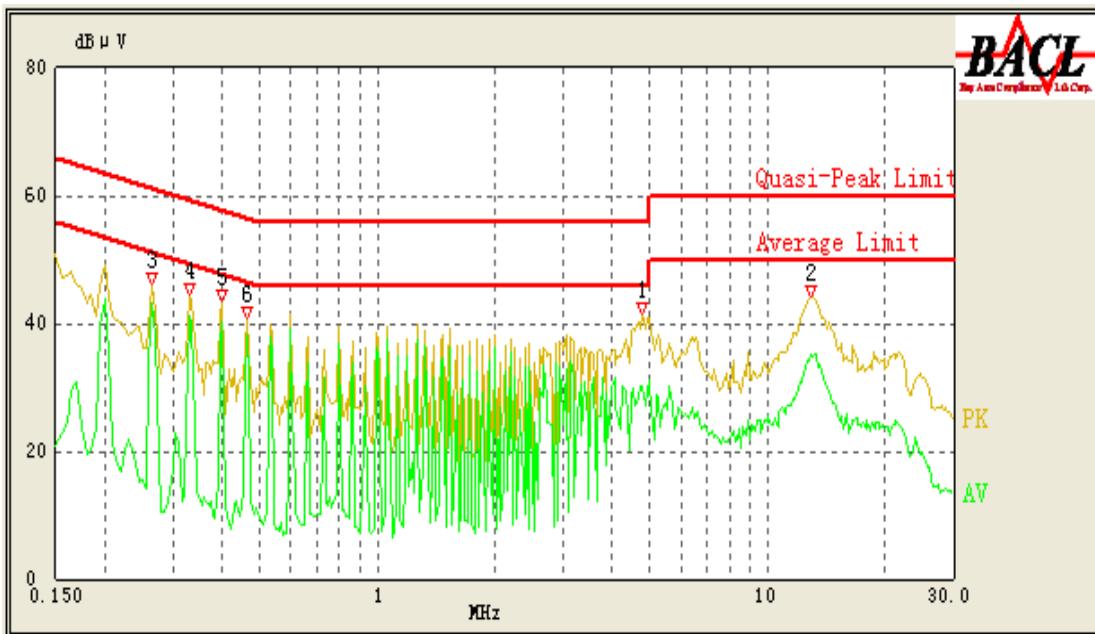
## 120 V, 60 Hz, Neutral: (with charging base)



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
1.490	16.08	10.10	46.00	29.92	Ave.
2.065	15.48	10.10	46.00	30.52	Ave.
1.495	25.30	10.10	56.00	30.70	QP
2.025	24.97	10.10	56.00	31.03	QP
0.685	14.77	10.10	46.00	31.23	Ave.
4.845	14.14	10.10	46.00	31.86	Ave.
0.325	19.13	10.10	51.00	31.87	Ave.
0.325	27.03	10.10	61.00	33.97	QP
0.685	20.50	10.10	56.00	35.50	QP
4.845	19.11	10.10	56.00	36.89	QP
9.050	11.14	10.10	50.00	38.86	Ave.
9.070	16.36	10.10	60.00	43.64	QP

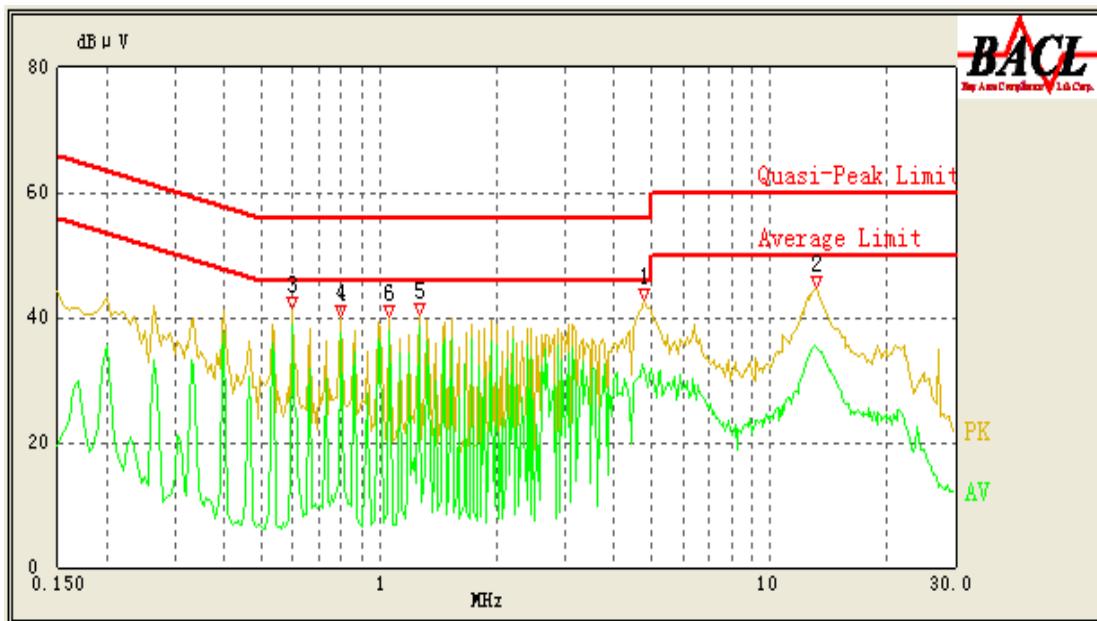
*Test mode: Downloading*

**120 V, 60 Hz, Line:**



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
0.465	38.22	10.10	47.00	8.78	Ave.
0.400	40.04	10.10	48.86	8.82	Ave.
0.265	43.22	10.10	52.71	9.49	Ave.
0.330	41.27	10.10	50.86	9.59	Ave.
12.900	35.31	10.20	50.00	14.69	Ave.
4.785	30.01	10.20	46.00	15.99	Ave.
0.400	42.12	10.10	58.86	16.74	QP
0.465	38.99	10.10	57.00	18.01	QP
4.785	37.43	10.20	56.00	18.57	QP
0.265	44.06	10.10	62.71	18.65	QP
12.900	41.22	10.20	60.00	18.78	QP
0.330	41.66	10.10	60.86	19.20	QP

**120 V, 60 Hz, Neutral:**



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V)	Correction Factor (dB)	Limit (dB $\mu$ V)	Margin (dB)	Detector (PK/Ave./QP)
0.600	38.89	10.10	46.00	7.11	Ave.
1.265	38.38	10.12	46.00	7.62	Ave.
1.065	38.00	10.11	46.00	8.00	Ave.
0.800	37.58	10.11	46.00	8.42	Ave.
4.790	31.96	10.20	46.00	14.04	Ave.
13.035	35.48	10.20	50.00	14.52	Ave.
4.790	40.15	10.20	56.00	15.85	QP
0.600	39.41	10.10	56.00	16.59	QP
1.265	39.10	10.12	56.00	16.90	QP
0.800	38.69	10.11	56.00	17.31	QP
1.065	38.67	10.11	56.00	17.33	QP
13.170	41.91	10.20	60.00	18.09	QP

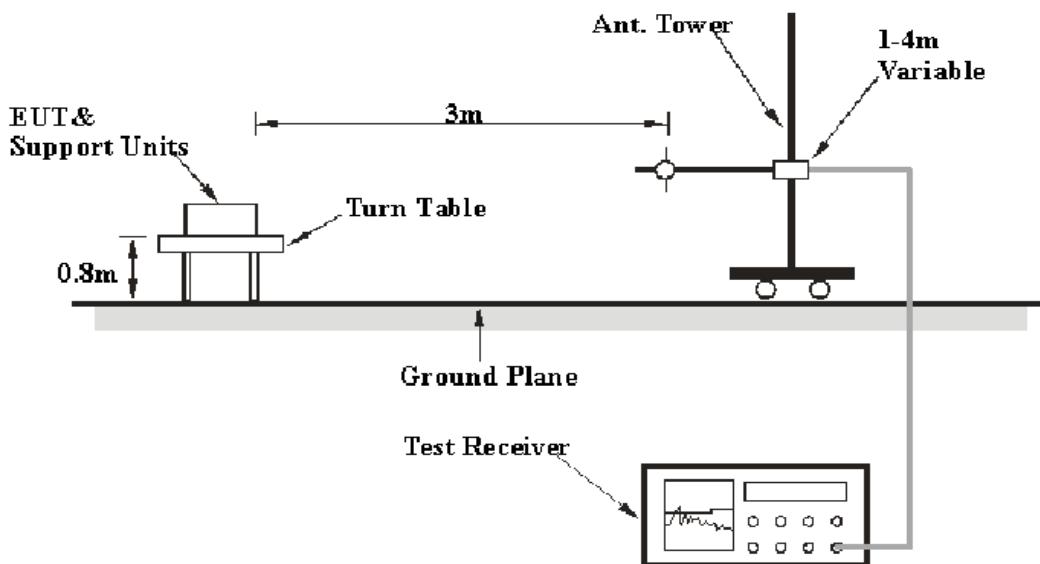
## FCC §15.109 - RADIATED EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 4.0$  dB. (k=2, 95% level of confidence)

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part 15.109, Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter connected to a 120 VAC/60 Hz power source.

### EMI Test Receiver Setup

The system was investigated from 30 MHz to 1 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

<b>Frequency Range</b>	<b>RBW</b>	<b>Video B/W</b>	<b>Detector</b>
30MHz – 1000 MHz	100 kHz	300 kHz	QP

## Test Procedure

For the radiated emissions test, the adapter was connected to AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode from 30 MHz to 1 GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Loss} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447E	1937A01046	2011-08-02	2012-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2011-07-05	2012-07-04

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp (Shenzhen). attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC §15.109 Class B, with the worst margin reading of:

**6.2 dB at 698.978250 MHz** in the **Vertical** polarization for downloading mode

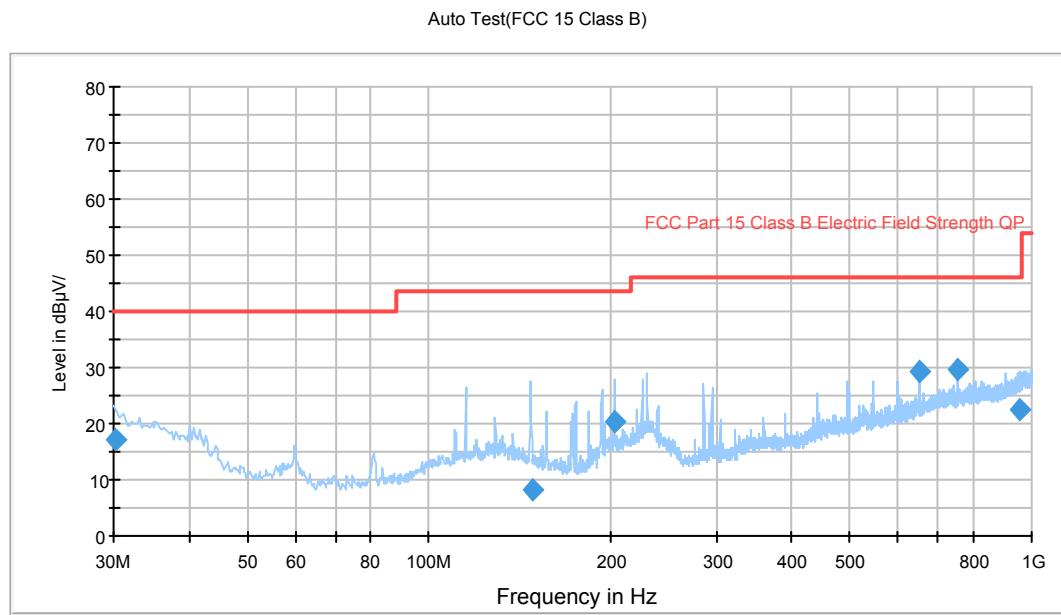
## Test Data

### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	48 %
<b>ATM Pressure:</b>	100.0 kPa

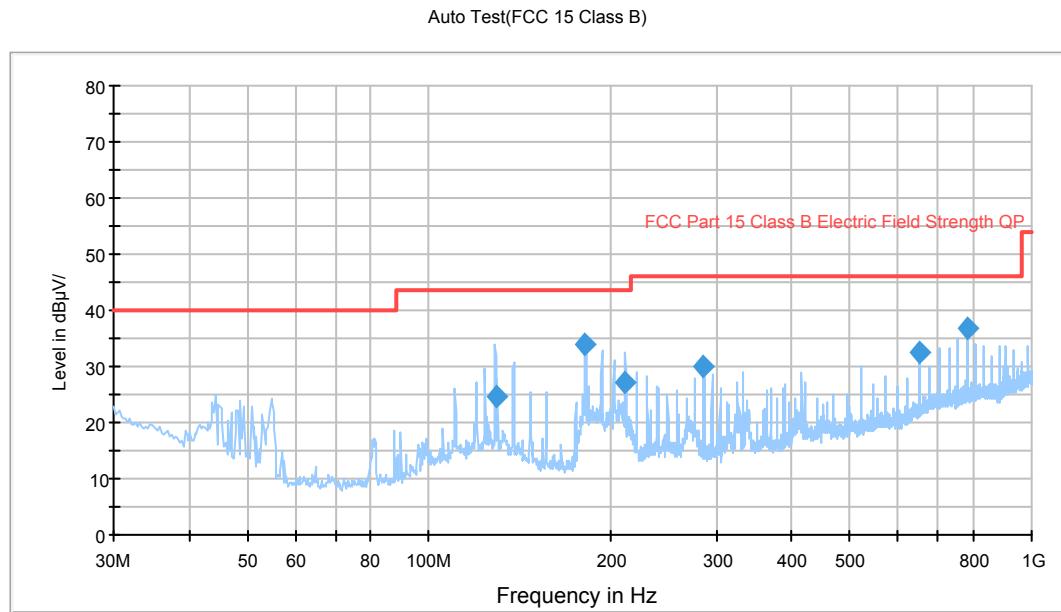
*The testing was performed by Alvin Huang on 2011-09-16.*

*Test Mode: charging & Media palying*



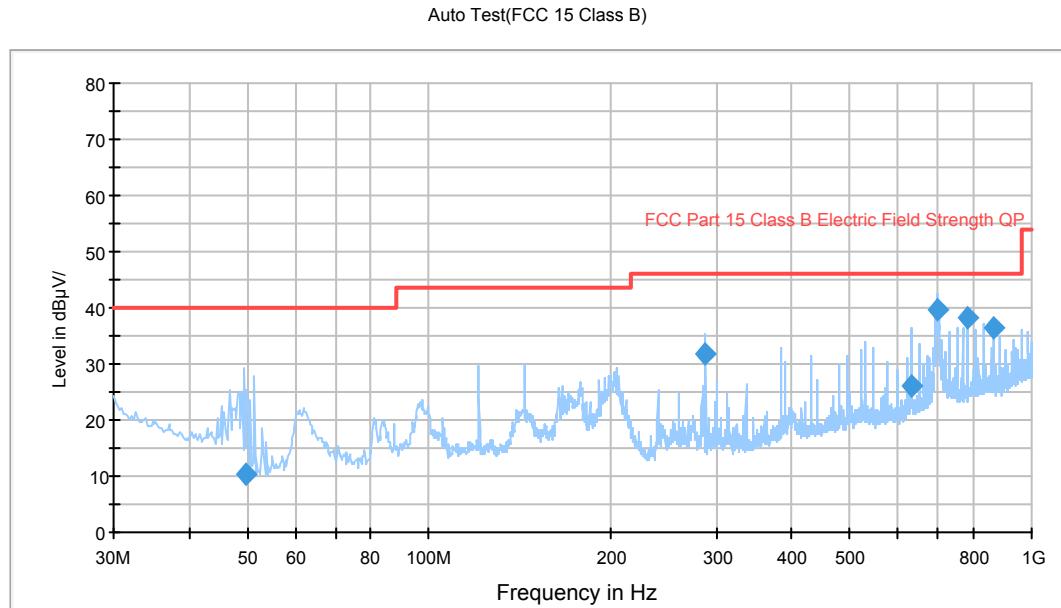
Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
753.981500	29.7	100.0	V	350.0	46.0	16.3
650.012250	29.1	100.0	V	198.0	46.0	16.9
30.128375	17.0	184.0	V	273.0	40.0	23.0
202.763000	20.3	104.0	H	64.0	43.5	23.2
955.509000	22.6	258.0	H	150.0	46.0	23.4
148.059750	8.2	375.0	H	25.0	43.5	35.3

Test Mode: charging & Media playing (with charging base)



Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
779.978250	36.8	104.0	H	223.0	46.0	9.2
181.998250	33.8	206.0	H	260.0	43.5	9.7
650.072500	32.3	104.0	H	172.0	46.0	13.7
285.837500	29.9	104.0	H	57.0	46.0	16.1
212.057500	27.1	105.0	H	227.0	43.5	16.4
129.206250	24.7	258.0	H	336.0	43.5	18.8

*Test Mode: downloading*



Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Test Antenna		Turntable Position (degree)	Limit (dB $\mu$ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)			
698.978250	39.8	100.0	V	258.0	46.0	6.2
780.004000	38.1	104.0	H	191.0	46.0	7.9
863.930000	36.3	104.0	H	170.0	46.0	9.7
287.951250	31.8	104.0	H	60.0	46.0	14.2
630.501000	26.0	106.0	V	306.0	46.0	20.0
49.599500	10.5	306.0	H	346.0	40.0	29.5

\*\*\*\*\* END OF REPORT \*\*\*\*\*