

FCC PART 15B, CLASS B
MEASUREMENT AND TEST REPORT

For

CT Asia

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FCC ID: YHLBLULINDY

Report Type: Original Report	Product Type: Mobile Phone
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Report Number: RSZ110913007-00A	
Report Date: 2011-09-30	
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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

Product Description for Equipment under Test (EUT)

The *CT Asia*'s product, model number: *Lindy*, FCC ID: *YHLBLULINDY*, the "EUT" in this report is a *Mobile Phone*, which was measured approximately: 101 mm (L) x 56.2 mm (W) x 13.7 mm (H), rated input voltage: DC 3.7 V battery or DC 5V from adapter for charging.

Adapter information

Model: US200507

Input: AC 100-240V 50/60 Hz 0.15A

Output: DC 5.0 500mA

** All measurement and test data in this report was gathered from production sample serial number: 1109029 (Assigned by BACL, Shenzhen). The EUT was received on 2011-09-13.*

Objective

This report is prepared on behalf of *CT Asia* 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 the compliance of EUT with FCC Part 15B, Class B.

Related Submittal(s)/Grant(s)

FCC Part 22H&24E PCE submission with FCC ID: YHLBLULINDY

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

Description of Test Configuration

The system was configured for testing in a typical mode which is provided by manufacture.

EUT Exercise Software

N/A

Equipment Modifications

No modification was made to the EUT tested.

Local Support Equipment List and Details

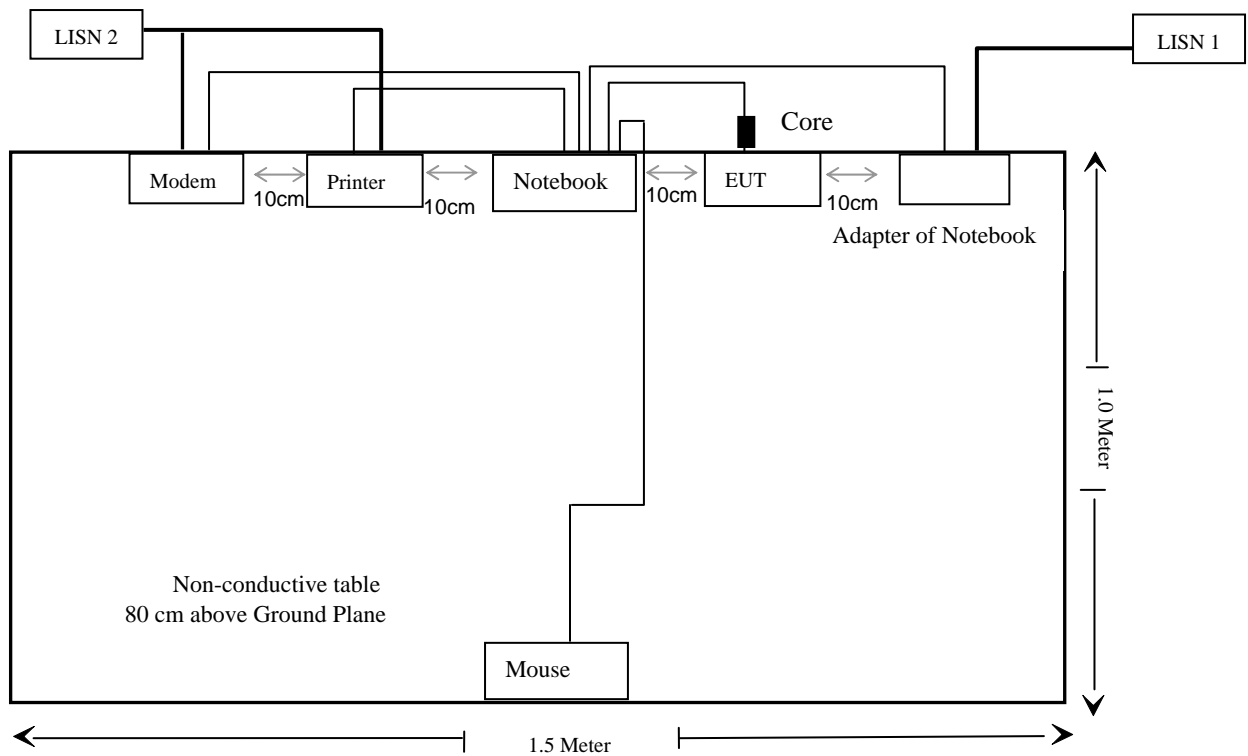
Manufacturer	Description	Model	Serial Number
DELL	Notebook	D600	85RF831
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293

External I/O Cable

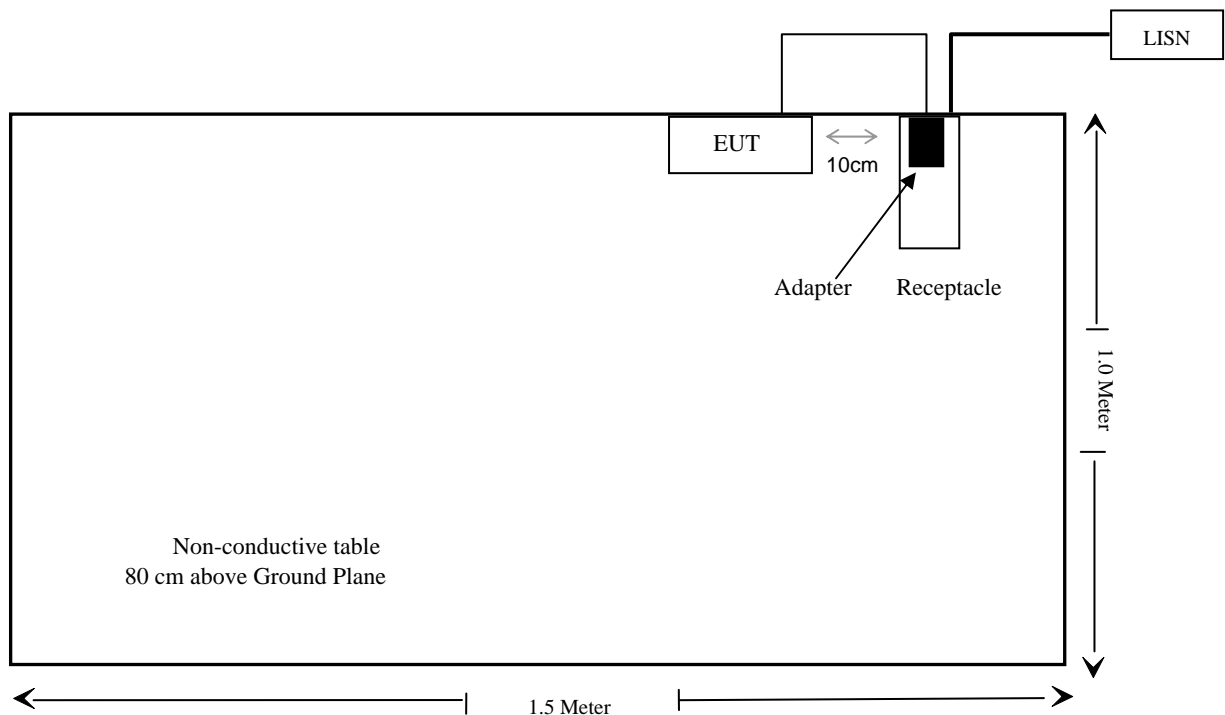
Cable Description	Length (m)	From/Port	To
Shielded Detachable Printer Cable	1.8	Parallel Port/Host	Printer
Shielded Detachable Serial Cable	1.5	Serial Port/Host	Modem
Shielded Detachable USB Cable	0.85	EUT	Notebook
Shielded Detachable Power Cable	1.0	EUT	Adapter

Block Diagram of Test Setup

For downloading mode



For Charging&multimedia playing mode



SUMMARY OF TEST RESULTS

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

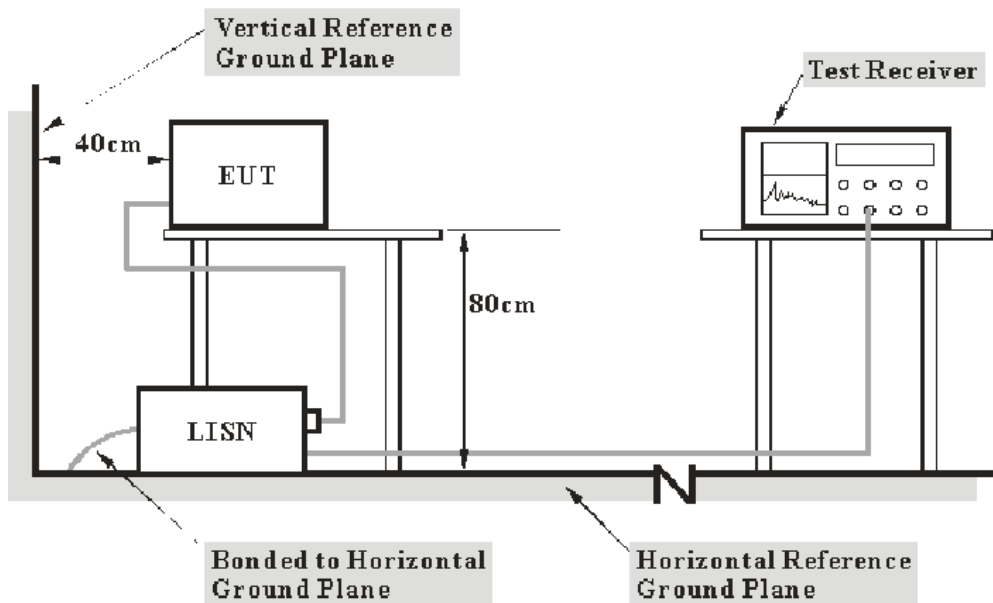
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

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 ± 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 spacing between the peripherals was 10 cm.

The adapter of notebook was connected to a 120 VAC/60 Hz power source for downloading mode.

The adapter was connected to a 120 VAC/60 Hz power source for multimedia playing mode.

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:

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

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 Procedure

During the conducted emission test, for downloading mode, the adapter of notebook was connected to the outlet of the first LISN and the other relevant support equipments were connected to the outlet of the second LISN. For multimedia playing mode, 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 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:

3.91 dB at 0.310 MHz in the Line conducted mode for downloading mode

Test Data

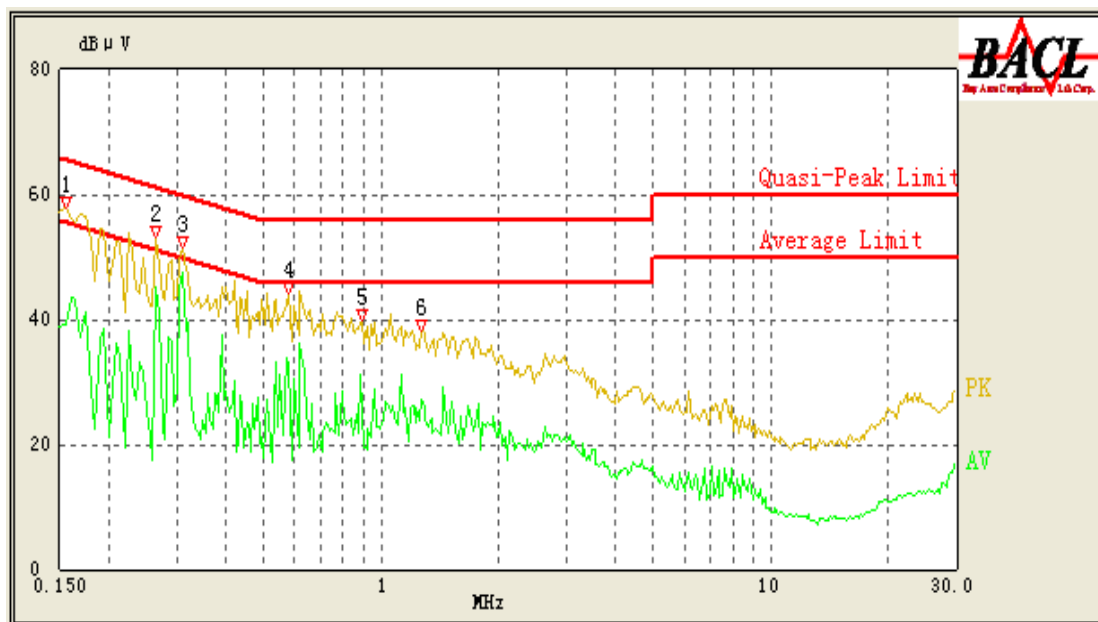
Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Jimmy Xiao on 2011-09-16.

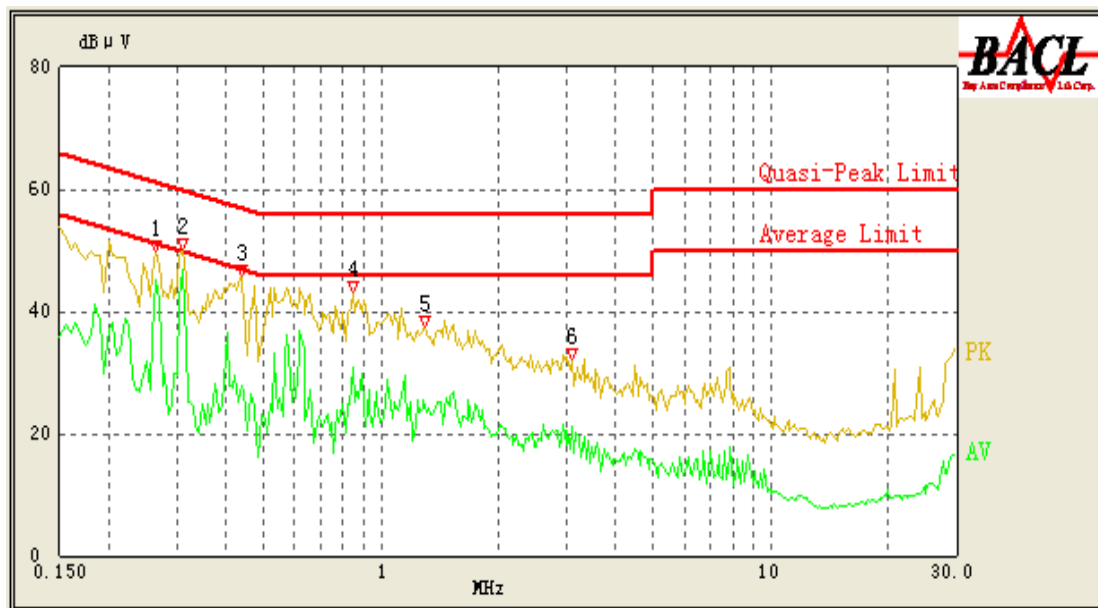
EUT Operation Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.310	47.52	10.10	51.43	3.91	Ave.
0.265	45.08	10.10	52.71	7.63	Ave.
0.310	48.60	10.10	61.43	12.83	QP
0.580	32.95	10.10	46.00	13.05	Ave.
0.155	52.05	10.10	65.86	13.81	QP
0.885	31.15	10.10	46.00	14.85	Ave.
0.155	39.18	10.10	55.86	16.68	Ave.
0.265	45.21	10.10	62.71	17.50	QP
0.580	37.92	10.10	56.00	18.08	QP
1.270	27.21	10.10	46.00	18.79	Ave.
0.895	32.64	10.10	56.00	23.36	QP
1.275	29.33	10.10	56.00	26.67	QP

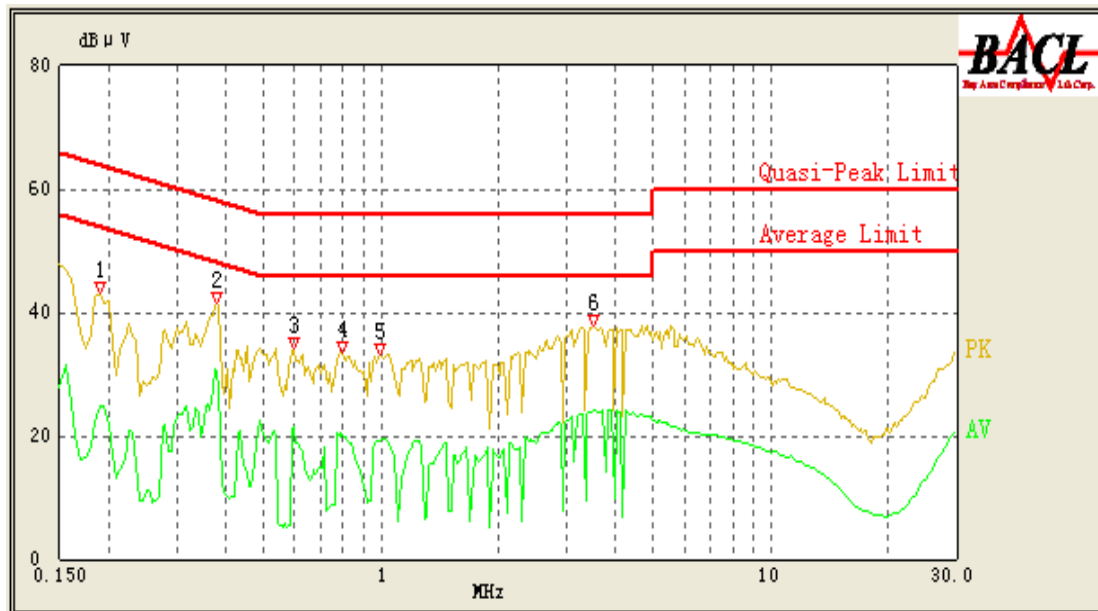
AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.310	46.92	10.10	51.43	4.51	Ave.
0.265	45.07	10.10	52.71	7.64	Ave.
0.310	49.35	10.10	61.43	12.08	QP
0.265	48.55	10.10	62.71	14.16	QP
0.845	30.78	10.10	46.00	15.22	Ave.
0.440	27.72	10.10	47.71	19.99	Ave.
1.285	25.45	10.10	46.00	20.55	Ave.
0.440	34.36	10.10	57.71	23.35	QP
3.090	21.08	10.10	46.00	24.92	Ave.
0.845	30.87	10.10	56.00	25.13	QP
1.290	25.68	10.10	56.00	30.32	QP
3.090	24.81	10.10	56.00	31.19	QP

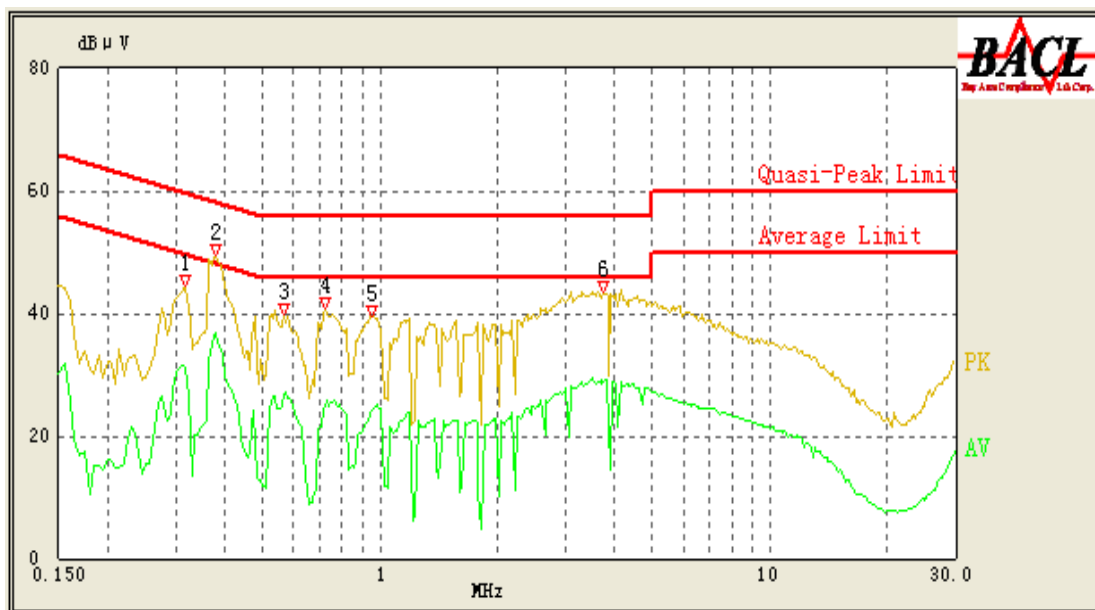
EUT Operation Mode: Charging&Multimedia playing

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.380	30.36	10.10	49.43	19.07	Ave.
0.380	39.08	10.10	59.43	20.35	QP
3.520	24.18	10.10	46.00	21.82	Ave.
3.510	31.79	10.10	56.00	24.21	QP
0.595	21.43	10.10	46.00	24.57	Ave.
0.790	20.55	10.10	46.00	25.45	Ave.
0.595	29.70	10.10	56.00	26.30	QP
0.995	19.32	10.10	46.00	26.68	Ave.
0.795	29.17	10.10	56.00	26.83	QP
0.995	27.88	10.10	56.00	28.12	QP
0.190	24.72	10.10	54.86	30.14	Ave.
0.190	34.41	10.10	64.86	30.45	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.380	36.69	10.10	49.43	12.74	Ave.
3.755	28.97	10.10	46.00	17.03	Ave.
0.570	26.88	10.10	46.00	19.12	Ave.
0.315	31.15	10.10	51.29	20.14	Ave.
3.750	35.35	10.10	56.00	20.65	QP
0.725	24.94	10.10	46.00	21.06	Ave.
0.955	24.09	10.10	46.00	21.91	Ave.
0.380	37.06	10.10	59.43	22.37	QP
0.570	32.47	10.10	56.00	23.53	QP
0.315	35.92	10.10	61.29	25.37	QP
0.725	29.85	10.10	56.00	26.15	QP
0.950	29.45	10.10	56.00	26.55	QP

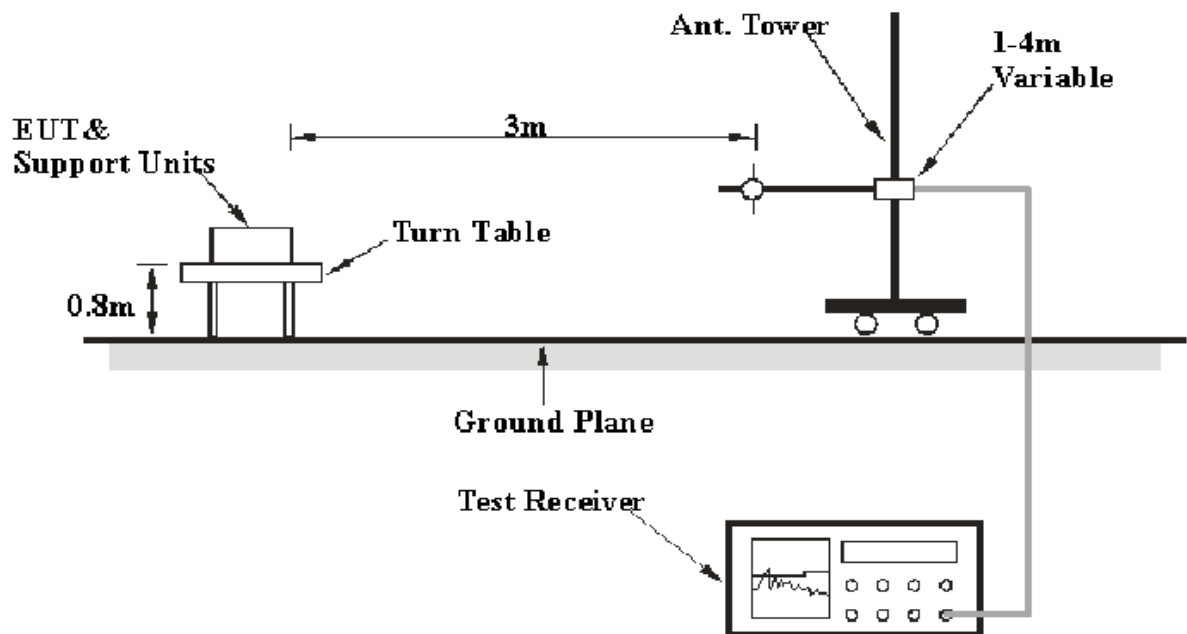
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

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 ± 4.0 dB. ($k=2$, 95% level of confidence)

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B 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 spacing between the peripherals was 10 cm.

The adapter of notebook was connected to a 120 VAC/60 Hz power source for downloading mode.

The adapter was connected to a 120 VAC/60 Hz power source for multimedia playing mode.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 1000 MHz.

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

<i>Frequency</i>	<i>RB/W</i>	<i>VB/W</i>	<i>IF B/W</i>	<i>Detection</i>
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz	Quasi-peak

Test Procedure

During the radiated emission test, for downloading mode, the adapter of notebook and all the other relevant equipments were connected to AC floor outlet. For multimedia playing mode, the adapter was connected to the 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.

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.

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 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:

4.5 dB at 35.999000 MHz in the Vertical polarization for downloading mode

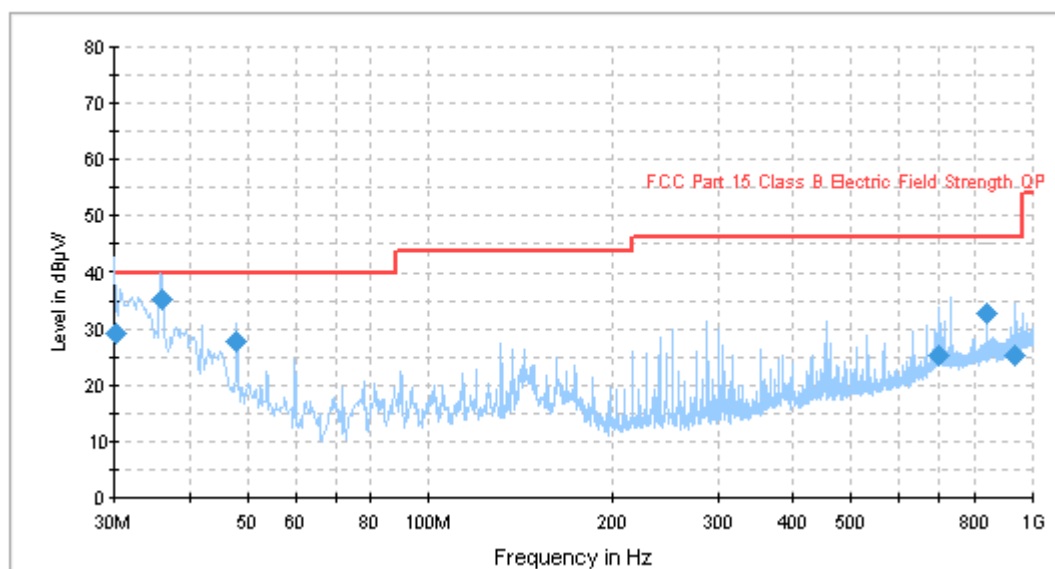
Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

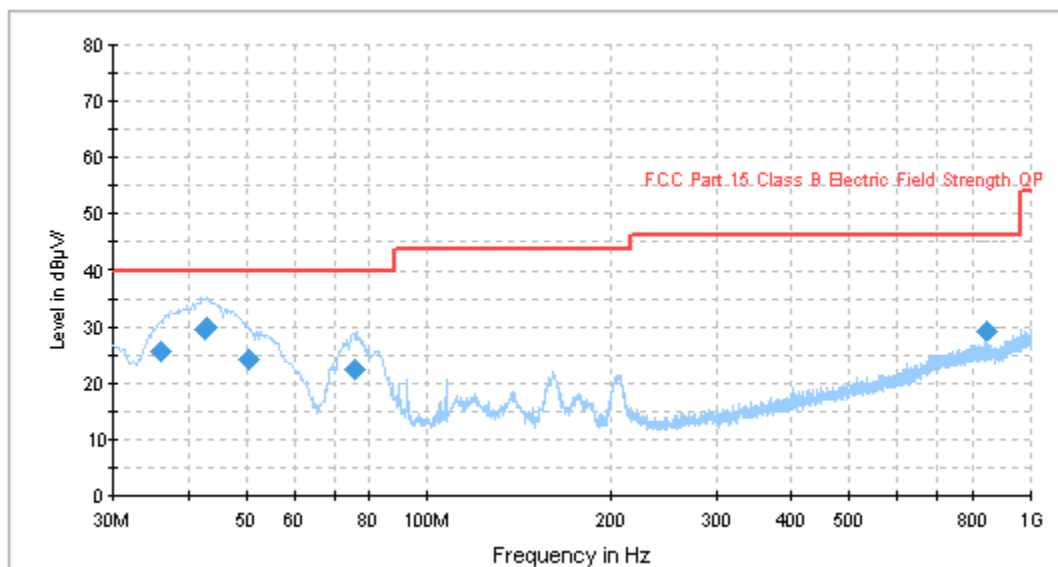
The testing was performed by Jimmy Xiao on 2011-09-16.

EUT Operation Mode: Downloading



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
35.999000	35.5	107.0	V	128.0	-9.5	40.0	4.5
30.194000	29.3	100.0	V	168.0	-5.5	40.0	10.7
48.016250	28.0	100.0	V	327.0	-16.4	40.0	12.0
836.547750	32.5	100.0	V	309.0	-1.3	46.0	13.5
932.419750	25.4	143.0	H	0.0	0.2	46.0	20.6
700.175750	25.2	205.0	H	0.0	-3.1	46.0	20.8

EUT Operation Mode: Charging&Multimedia playing



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
42.863500	30.0	104.0	V	43.0	-13.9	40.0	10.0
42.582500	29.6	104.0	V	74.0	-13.7	40.0	10.4
35.932250	25.6	104.0	V	98.0	-9.4	40.0	14.4
50.451000	24.3	104.0	V	95.0	-17.3	40.0	15.7
836.614250	28.8	104.0	V	305.0	-1.3	46.0	17.2
75.872500	22.4	146.0	V	130.0	-18.2	40.0	17.6

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