

FCC PART 15B, CLASS B
TEST REPORT

For

Nexpro International Limitada

San Jose-Goicoechea, Guadalupe, Barrio Tournon, frente Al Hotel Villas Tournon,

Oficinas Del Bufete Facio Y Canas, Costa Rica

FCC ID: ZYPE510I

Report Type: Original Report	Product Type: GSM Mobile Phone
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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 *Nexpro International Limitada*'s product, model number: *E510i (FCC ID: ZYPE510I)* (the "EUT") in this report is a *GSM Mobile Phone*, which was measured approximately: 11.1 cm (L) x 5.9 cm (W) x 1.2 cm (H), rated input voltage: DC 3.7V battery or DC 5.2V from adapter for charging.

ADAPTADOR ca/cc :

ENTRADA: 100-240Vca 50/60 Hz 120mA

SALIDA: 5.2Vcc 500mA

** All measurement and test data in this report was gathered from production sample serial number: 1108075 (Assigned by BACL, Shenzhen). The EUT was received on 2011-09-16.*

Objective

This report is prepared on behalf of *Nexpro International Limitada* 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 15 Class B.

Related Submittal(s)/Grant(s)

FCC Part 15.247 DSS and Part 22H&24E PCE submissions with FCC ID: ZYPE510I.

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 manufacturer.

EUT Exercise Software

No exercise software

Equipment Modifications

No modification was made to the unit tested.

Local Support Equipment List and Details

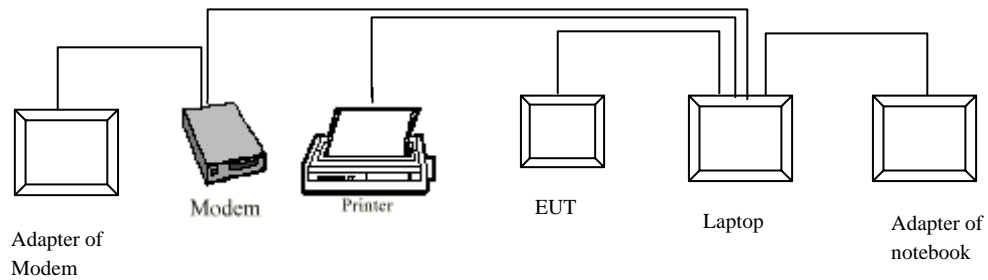
Manufacturer	Description	Model	Serial Number
DELL	PC	D600	85RF831
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293

External I/O Cable

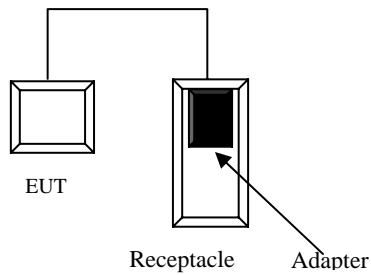
Cable Description	Length (m)	From/Port	To
Shielded Detachable Printer Cable	1.8	Parallel Port/Host	Printer
Shielded Detachable Serial Cable	1.8	Serial Port/Host	Modem
Shielded Detachable USB Cable	0.85	EUT	PC

Configuration of Test Setup

For downloading mode

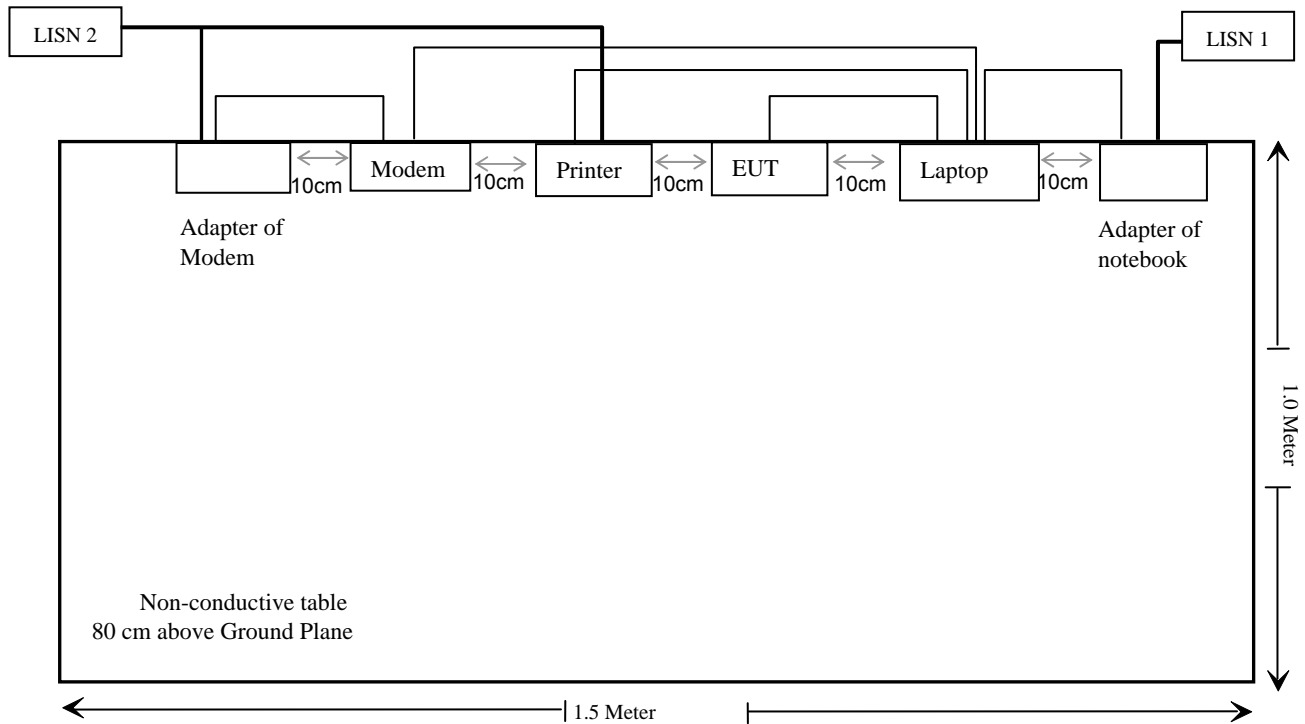


For Charging & media playing mode

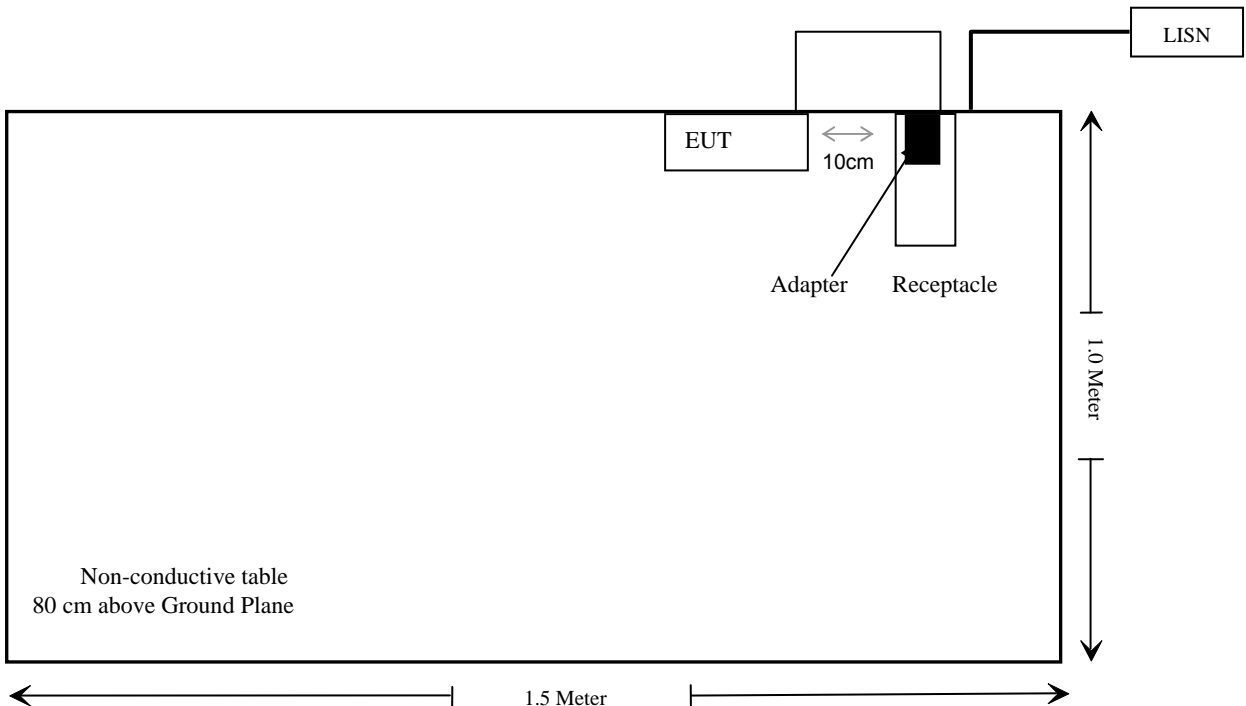


Block Diagram of Test Setup

For downloading mode



For Charging & media playing mode



SUMMARY OF TEST RESULTS

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

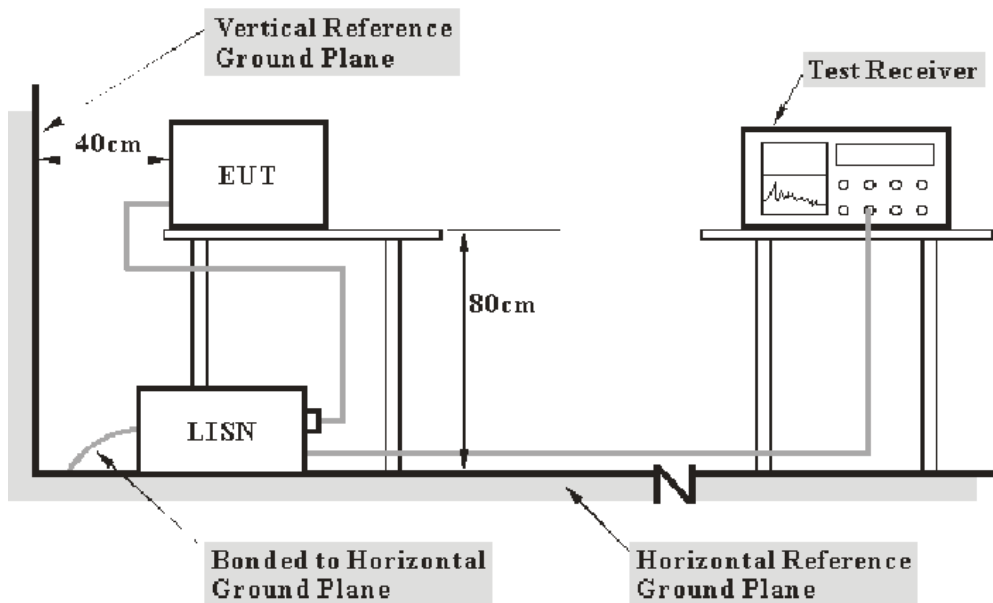
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

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 ± 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 laptop 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 charging & media 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:

<u>Frequency Range</u>	<u>IF B/W</u>
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 laptop 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 charging & media 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:

8.75 dB at 0.480 MHz in the **Line** conducted mode for downloading mode

Test Data

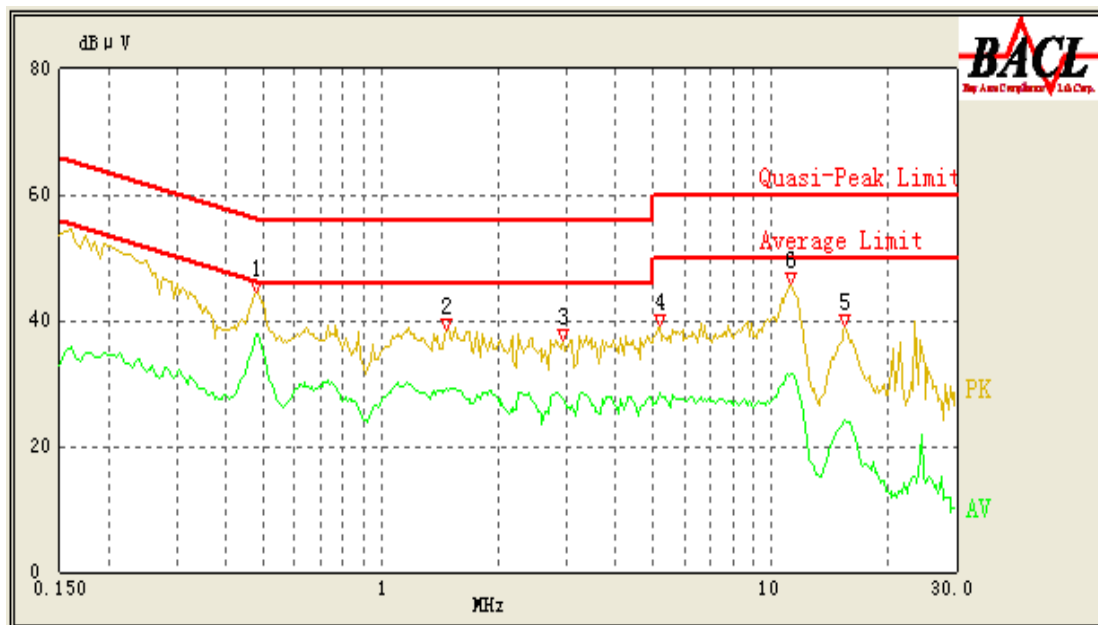
Environmental Conditions

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

The testing was performed by Eros Du on 2011-10-09.

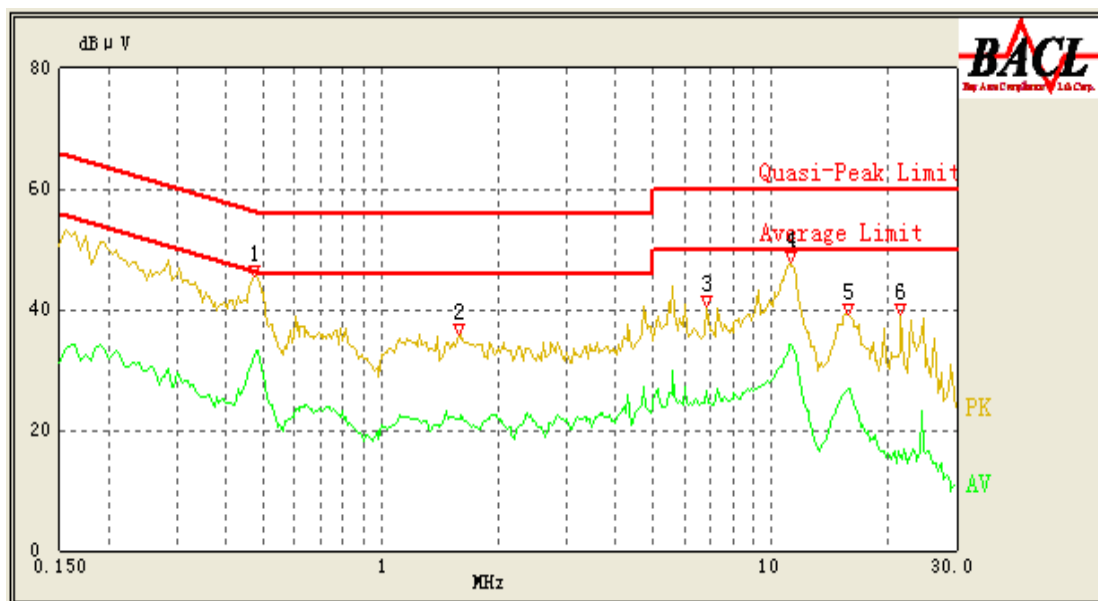
Test Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.480	37.82	10.10	46.57	8.75	Ave.
0.480	42.22	10.10	56.57	14.35	QP
1.465	29.31	10.10	46.00	16.69	Ave.
2.935	27.41	10.10	46.00	18.59	Ave.
11.185	31.25	10.10	50.00	18.75	Ave.
5.175	28.58	10.10	50.00	21.42	Ave.
11.250	37.24	10.10	60.00	22.76	QP
1.465	33.13	10.10	56.00	22.87	QP
2.920	31.80	10.10	56.00	24.20	QP
15.635	23.67	10.10	50.00	26.33	Ave.
5.175	32.56	10.10	60.00	27.44	QP
15.485	29.59	10.10	60.00	30.41	QP

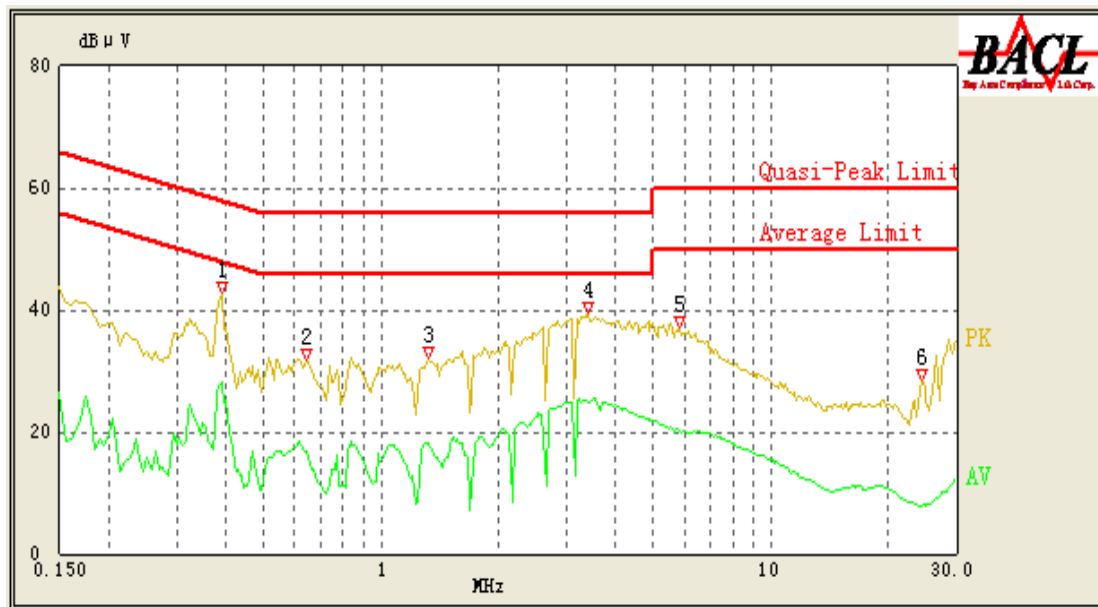
AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.480	33.18	10.10	46.57	13.39	Ave.
11.160	34.20	10.10	50.00	15.80	Ave.
0.475	39.87	10.10	56.71	16.84	QP
11.250	40.65	10.10	60.00	19.35	QP
15.700	26.46	10.10	50.00	23.54	Ave.
6.860	26.39	10.10	50.00	23.61	Ave.
1.570	21.73	10.10	46.00	24.27	Ave.
6.860	35.55	10.10	60.00	24.45	QP
15.745	33.30	10.10	60.00	26.70	QP
1.585	28.87	10.10	56.00	27.13	QP
21.750	15.14	10.10	50.00	34.86	Ave.
21.570	22.25	10.10	60.00	37.75	QP

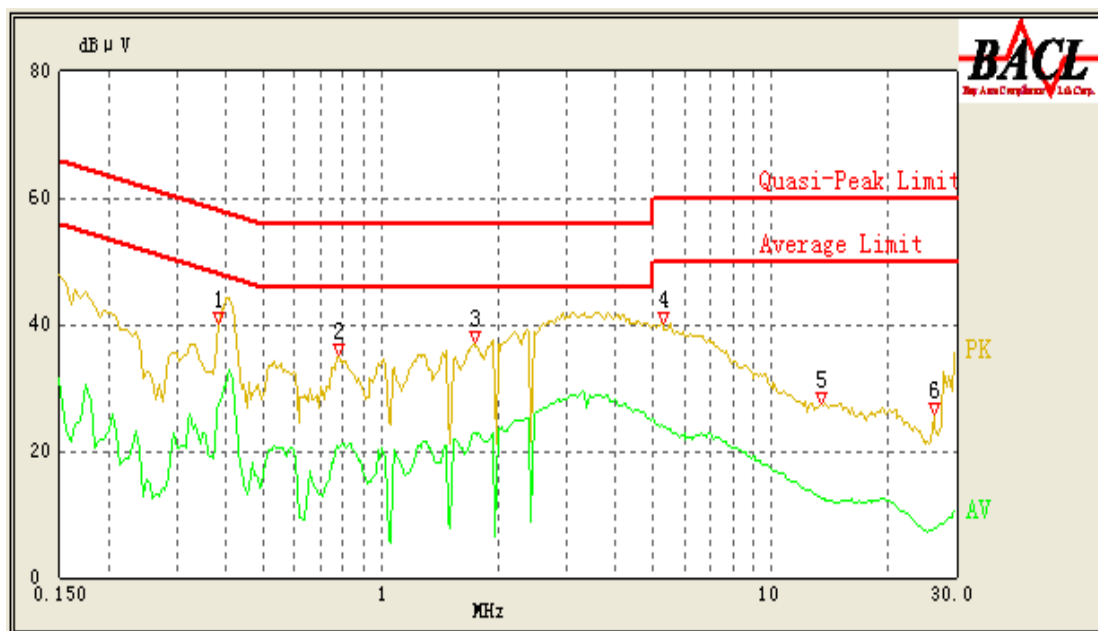
Test Mode: Charging & media playing

AC 120V/60 Hz, Line



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.390	28.27	10.10	49.14	20.87	Ave.
3.395	24.86	10.10	46.00	21.14	Ave.
3.390	33.13	10.10	56.00	22.87	QP
0.390	35.82	10.10	59.14	23.32	QP
1.325	18.01	10.10	46.00	27.99	Ave.
1.330	26.90	10.10	56.00	29.10	QP
0.645	16.87	10.10	46.00	29.13	Ave.
0.645	26.77	10.10	56.00	29.23	QP
5.830	20.32	10.10	50.00	29.68	Ave.
5.830	27.75	10.10	60.00	32.25	QP
24.505	7.87	10.10	50.00	42.13	Ave.
24.505	12.96	10.10	60.00	47.04	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Corrected Amplitude (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/QP/Ave.)
0.385	38.02	10.10	59.29	21.27	QP
0.385	27.66	10.10	49.29	21.63	Ave.
1.730	22.67	10.10	46.00	23.33	Ave.
1.735	31.59	10.10	56.00	24.41	QP
0.780	20.65	10.10	46.00	25.35	Ave.
0.780	30.50	10.10	56.00	25.50	QP
5.225	24.29	10.10	50.00	25.71	Ave.
5.280	33.99	10.10	60.00	26.01	QP
13.400	12.67	10.10	50.00	37.33	Ave.
13.520	20.29	10.10	60.00	39.71	QP
26.115	7.61	10.10	50.00	42.39	Ave.
26.275	12.00	10.10	60.00	48.00	QP

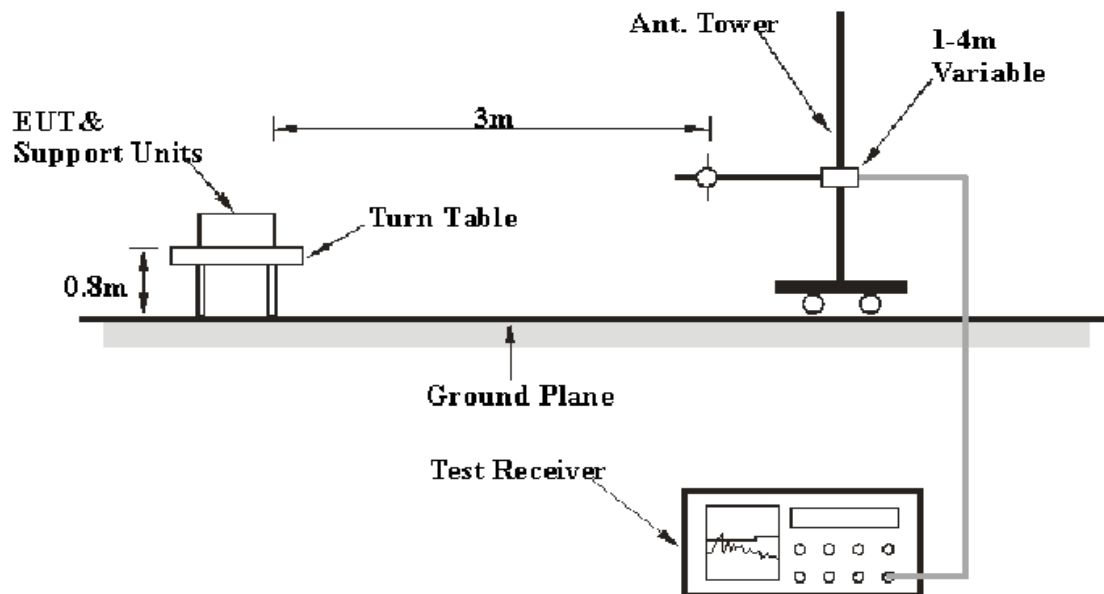
FCC §15.109 - RADIATED EMISSIONS

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

EUT Setup



The radiated emission tests were performed in the 3 meters 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 laptop 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 charging&media 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 emissions test, for downloading mode, the laptop and all the other relevant equipments were connected to AC floor outlet. For charging & media 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	2012-08-01
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:

2.6 dB at 40.121000 MHz in the **Vertical** polarization for charging&media playing mode

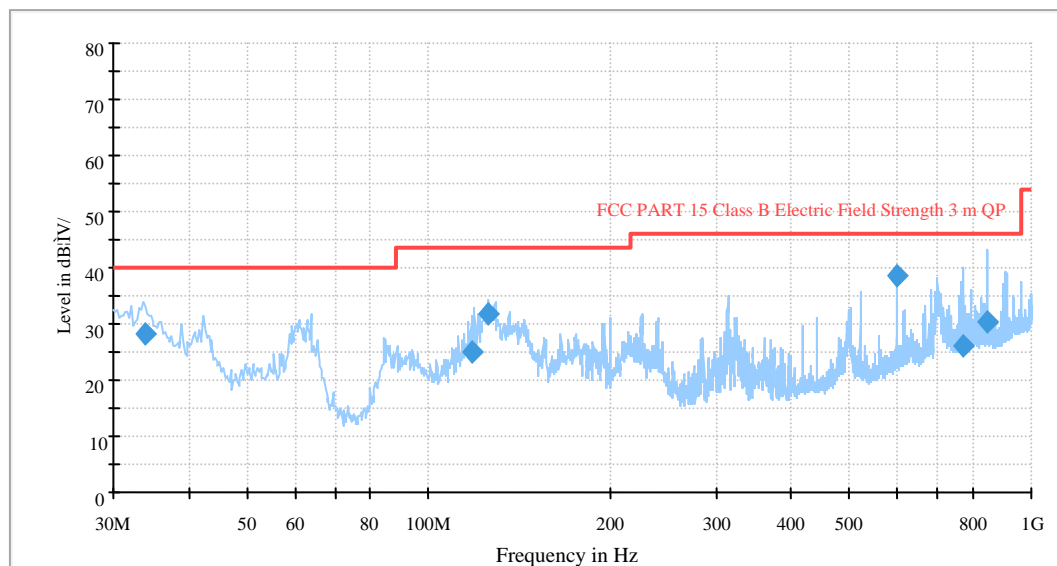
Test Data

Environmental Conditions

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

The testing was performed by Eros Du on 2011-10-08.

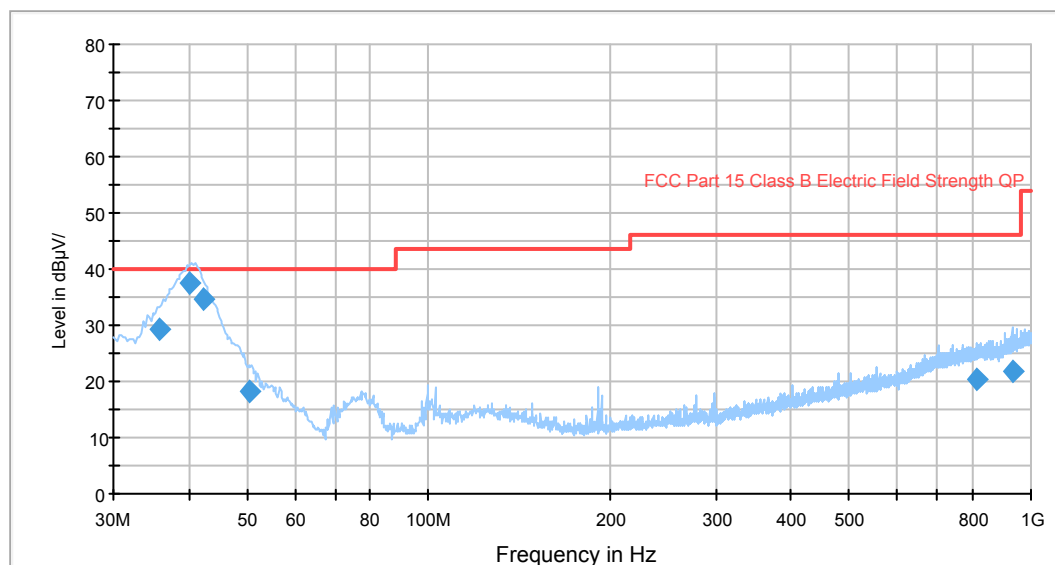
Test Mode: Downloading



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
600.042750	38.5	101.0	V	72.0	-6.6	46.0	7.5
125.766000	31.8	101.0	V	256.0	-12.4	43.5	11.7
33.993500	28.2	102.0	V	0.0	-8.1	40.0	11.8
842.058250	30.4	176.0	H	237.0	-1.2	46.0	15.6
118.545250	24.8	131.0	V	159.0	-12.5	43.5	18.7
770.006000	26.2	102.0	V	204.0	-2.2	46.0	19.8

Test Mode: Charging & media playing

Auto Test(FCC 15 Class B)



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
40.121000	37.4	102.0	V	178.0	-12.2	40.0	2.6*
42.248250	34.5	101.0	V	211.0	-13.5	40.0	5.5
35.897250	29.1	102.0	V	211.0	-9.4	40.0	10.9
50.641500	18.2	102.0	V	149.0	-17.4	40.0	21.8
929.941250	21.8	323.0	H	207.0	0.2	46.0	24.2
814.479250	20.5	401.0	H	93.0	-1.6	46.0	25.5

* Within measurement uncertainty.

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