



TEST REPORT

For
ITALCOM GROUP

1728 Coral Way, Coral Gables, Miami, Florida 518048, USA

FCC PART 15B, CLASS B

FCC ID: YPVITALCOMKOLX1

Report Type: Original Report	Product Type: Mobile Phone
Test Engineer: <u>Polo Xue</u> <i>polo xue</i>	
Report Number: <u>RSZ110701001-00</u>	
Report Date: <u>2011-08-09</u>	
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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 *ITALCOM GROUP*'s product, model number: *KOLX1, FCC ID: YPVITALCOMKOLX1*, the "EUT" in this report is a *Mobile phone*, which was measured approximately: 11.0cm (L) x 5.2cm (W) x 1.02cm (H), rated input voltage: DC 3.7 V battery.

Adapter information:

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

Output: DC 5.0V 0.5A

** All measurement and test data in this report was gathered from production sample serial number: 1107001 (Assigned by BACL, Shenzhen). The EUT was received on 2011-07-01.*

Objective

This Type approval report is prepared on behalf of *ITALCOM GROUP* 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 the EUT with FCC Part 15B, Class B.

Related Submittal(s)/Grant(s)

FCC Part 22H & 24E PCE submission with FCC ID: YPVITALCOMKOLX1.

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 manufacturer testing fashion.

EUT Exercise Software

N/A

Equipment Modifications

No modification was made to the unit tested.

Host System Configuration List and Details

Manufacturer	Device Name	Model	Serial Number
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E8NBM
Seagate	Hard Disk	ST340014A	5JXK3NAD
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02OZ
Lite-ON	CD-Rom	LTN-489S	N/A
Intel	CPU	Celeron D-2533	N/A
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700
Intel	Ethernet	PRO 10/100 VE	N/A

Local Support Equipment List and Details

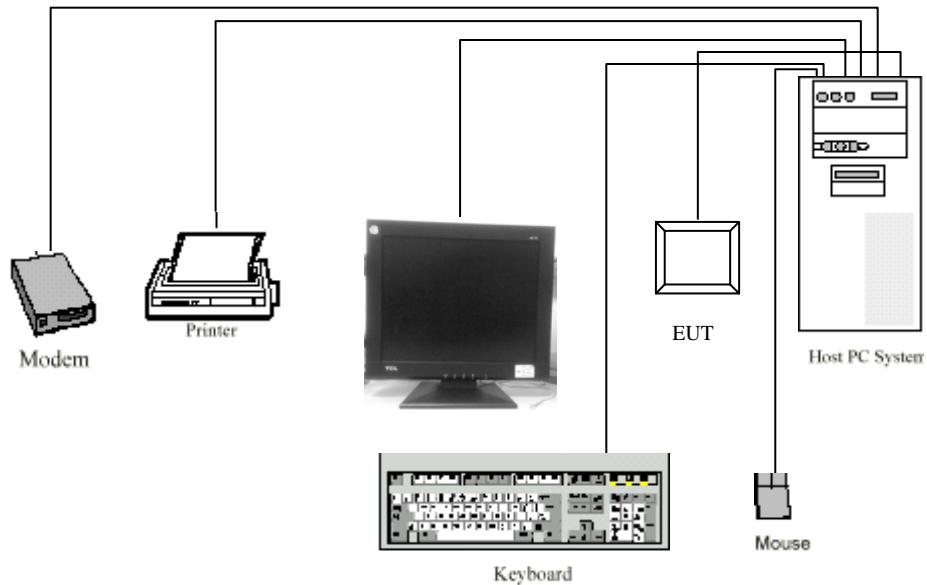
Manufacturer	Description	Model	Serial Number
DELL	PC	1#	N/A
DELL	Keyboard 1#	L100	CNORH656658907BL04TY
DELL	Mouse 1#	MOC5UO	G1B0096D
DELL	LCD 1#	E178WFPC	CN-OWY564-64180-7C4-2SQH
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293

External I/O Cable

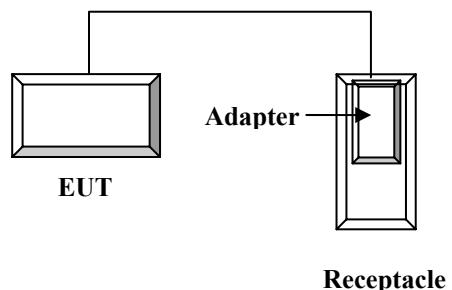
Cable Description	Length (m)	From/Port	To
Shielded Detachable K/B Cable	1.5	K/B Port/Host	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port/Host	Mouse
Shielded Detachable Printer Cable	1.2	Parallel Port/Host	Printer
Shielded Detachable Serial Cable	1.2	Serial Port/Host	Modem
Shielded Detachable VGA Cable	1.5	VGA Port/Host	Monitor
Shielded Undetachable AC/DC Cable	1.01	Adapter	EUT
Shielded Undetachable Data Cable	0.98	EUT	Host PC

Configuration of Test Setup

Downloading Mode:

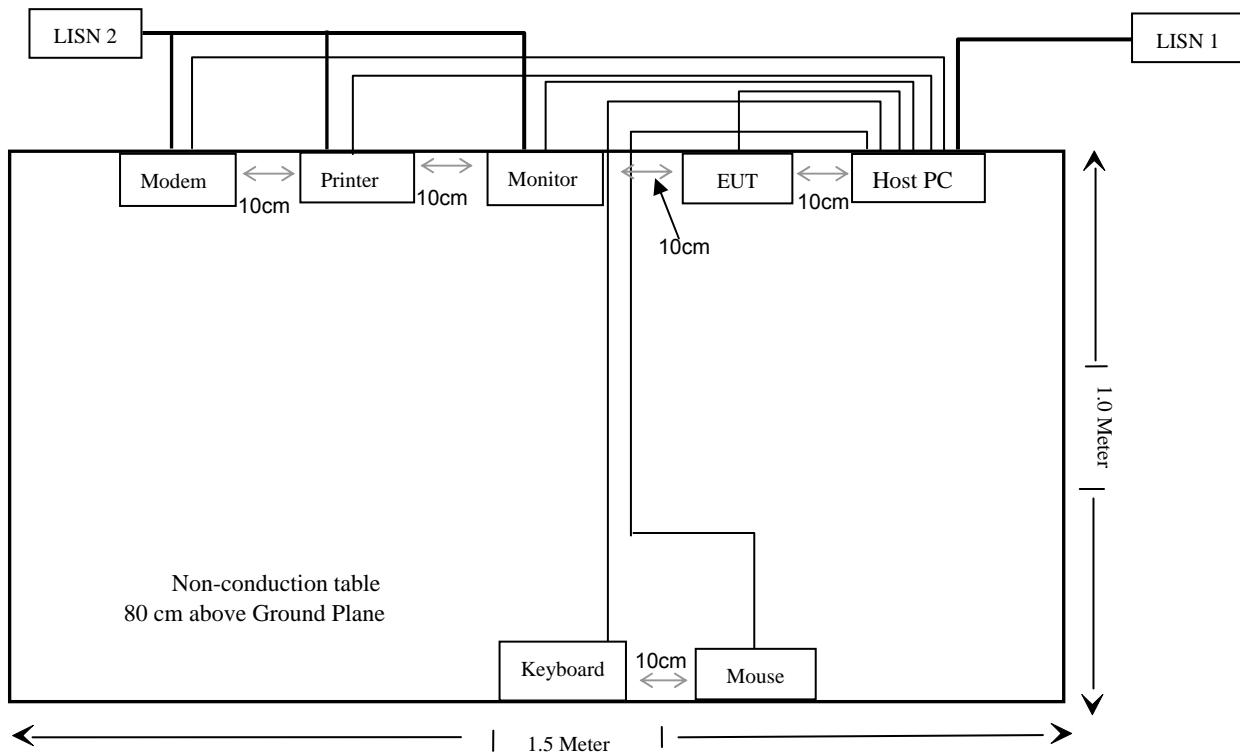


Multimedia Playing & Charging Mode:

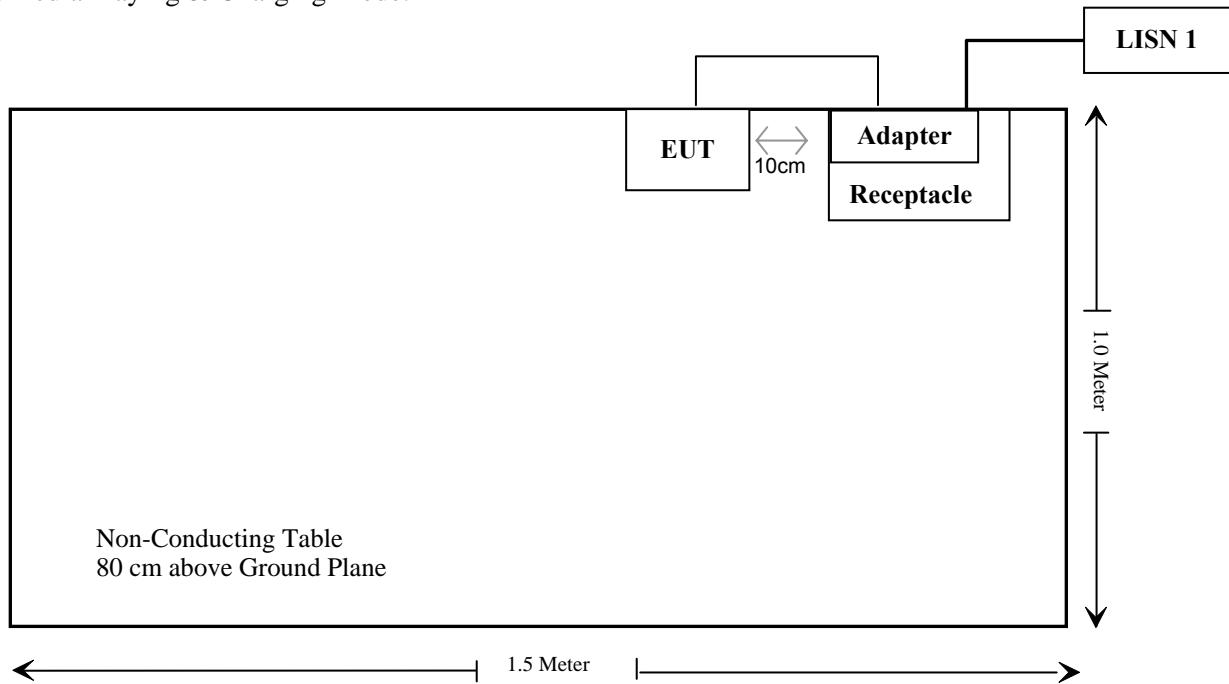


Block Diagram of Test Setup

Downloading Mode:



Multimedia Playing & Charging Mode:



SUMMARY OF TEST RESULTS

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

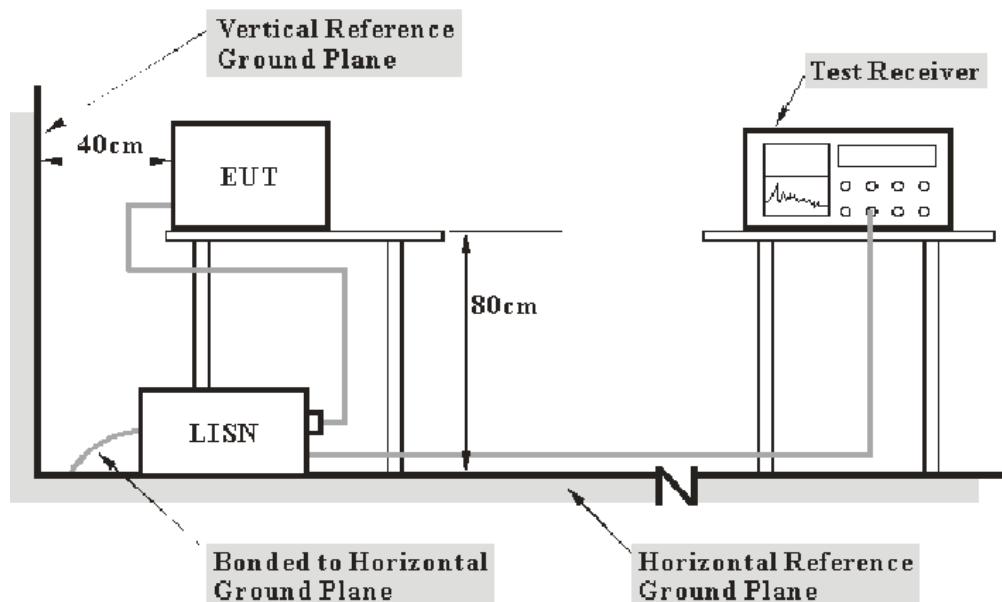
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

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 (AMIN) 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 host PC 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 & charging 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 Procedure

During the conducted emission test, the host PC 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 PC power supply. And the adapter was connected to the outlet of the LISN for adapter power supply.

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:

Downloading: 6.51 dB at 1.580 MHz in the Line conducted mode
Multimedia Playing & Charging: 18.61 dB at 1.585 MHz in the Neutral conducted mode

Test Data

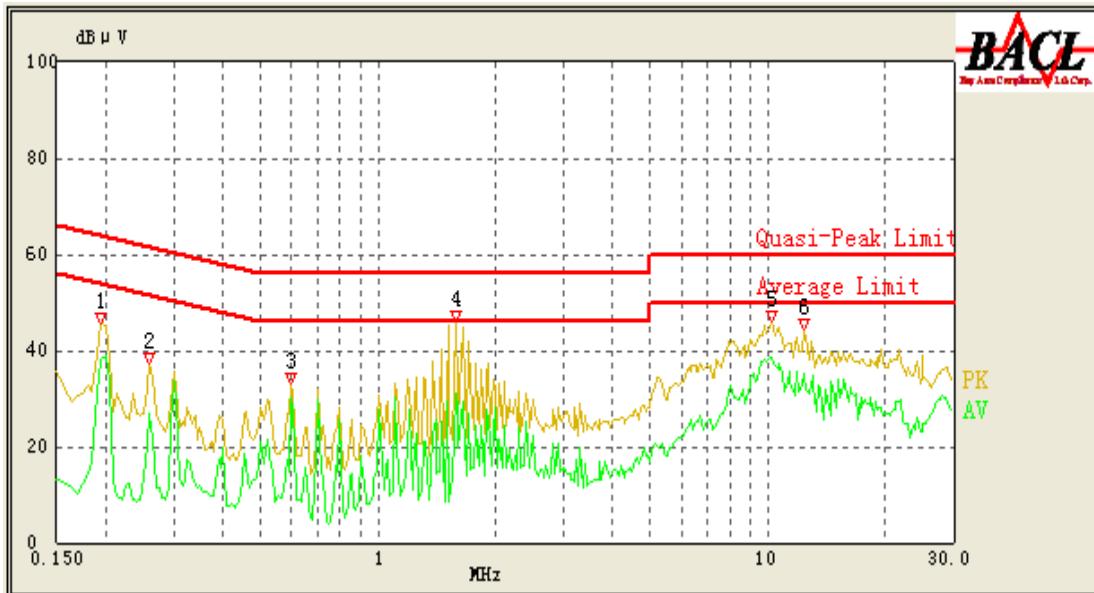
Environmental Conditions

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

The testing was performed by Polo Xue on 2011-08-01.

Test Mode: Downloading

AC 120V/60 Hz, Line:



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Result (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Remark (PK/ QP/Ave.)
1.580	49.49	10.10	56.00	6.51	QP
10.280	37.98	10.10	50.00	12.02	Ave.
12.425	35.17	10.10	50.00	14.83	Ave.
1.580	30.94	10.10	46.00	15.06	Ave.
0.600	30.32	10.10	46.00	15.68	Ave.
0.195	38.08	10.10	54.71	16.63	Ave.
0.195	41.45	10.10	64.71	23.26	QP
0.600	32.27	10.10	56.00	23.73	QP
12.425	34.21	10.10	60.00	25.79	QP
0.260	26.99	10.10	52.86	25.87	Ave.
0.260	33.40	10.10	62.86	29.46	QP
10.280	27.42	10.10	60.00	32.58	QP

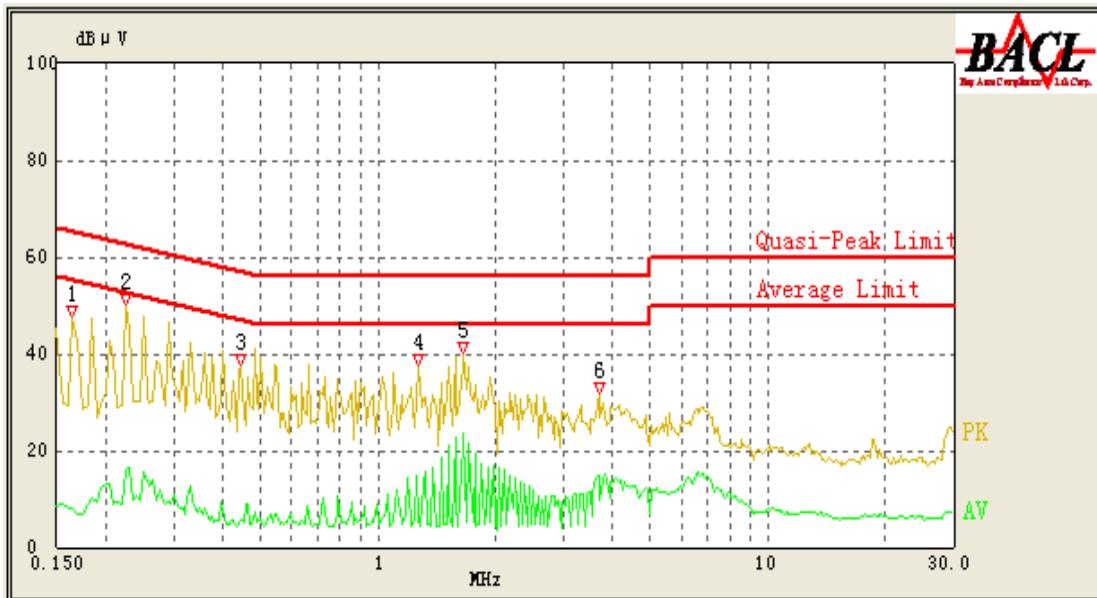
AC 120V/60 Hz, Neutral



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Result (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Remark (PK/ QP/Ave.)
1.580	48.97	10.10	56.00	7.03	QP
1.580	35.10	10.10	46.00	10.90	Ave.
1.000	33.26	10.10	46.00	12.74	Ave.
7.915	33.05	10.10	50.00	16.95	Ave.
0.195	36.90	10.10	54.71	17.81	Ave.
25.015	40.94	10.10	60.00	19.06	QP
25.020	30.09	10.10	50.00	19.91	Ave.
7.910	39.56	10.10	60.00	20.44	QP
1.000	35.04	10.10	56.00	20.96	QP
0.195	37.90	10.10	64.71	26.81	QP
0.265	24.48	10.10	52.71	28.23	Ave.
0.265	33.36	10.10	62.71	29.35	QP

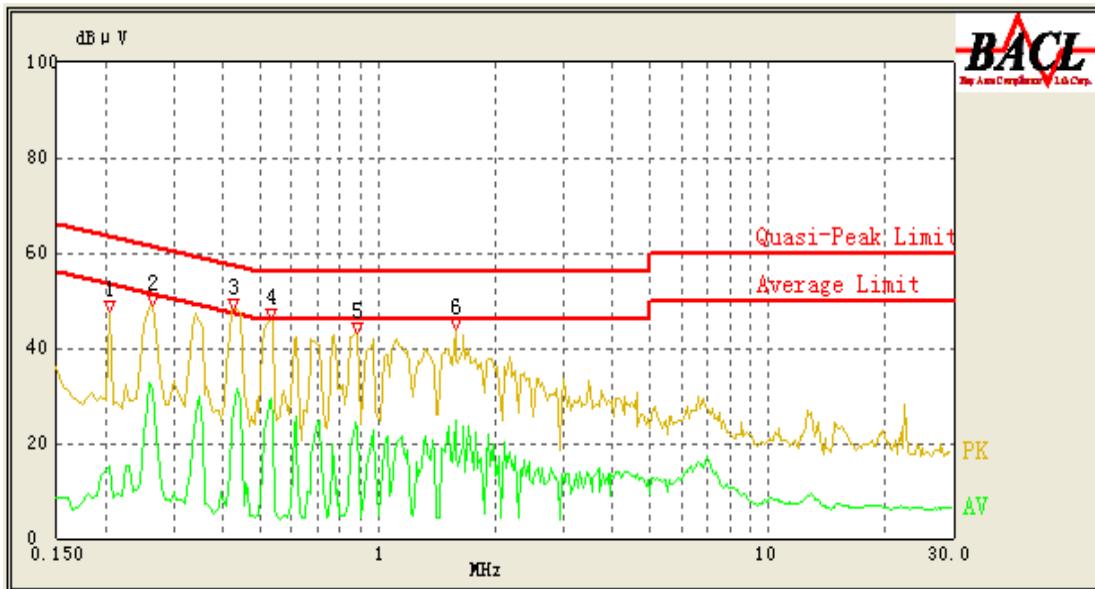
Test Mode: Multimedia Playing and charging

AC 120V/60 Hz, Line



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Result (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Remark (PK/ QP/Ave.)
1.650	36.54	10.10	56.00	19.46	QP
1.650	23.47	10.10	46.00	22.53	Ave.
0.225	39.66	10.10	63.86	24.20	QP
1.270	28.37	10.10	56.00	27.63	QP
0.165	37.46	10.10	65.57	28.11	QP
0.445	28.42	10.10	57.57	29.15	QP
3.695	14.90	10.10	46.00	31.10	Ave.
3.695	18.44	10.10	56.00	37.56	QP
0.225	15.85	10.10	53.86	38.01	Ave.
1.270	6.16	10.10	46.00	39.84	Ave.
0.445	5.72	10.10	47.57	41.85	Ave.
0.165	8.10	10.10	55.57	47.47	Ave.

AC 120V/60 Hz, Neutral



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	Corrected Result (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Remark (PK/ QP/Ave.)
1.585	37.40	10.10	56.00	18.60	QP
0.265	31.60	10.10	52.71	21.11	Ave.
1.585	24.74	10.10	46.00	21.26	Ave.
0.425	22.90	10.10	48.14	25.24	Ave.
0.530	19.35	10.10	46.00	26.65	Ave.
0.885	18.33	10.10	46.00	27.67	Ave.
0.265	35.01	10.10	62.71	27.7	QP
0.530	28.04	10.10	56.00	27.96	QP
0.425	26.87	10.10	58.14	31.27	QP
0.885	23.15	10.10	56.00	32.85	QP
0.205	15.33	10.10	54.43	39.10	Ave.
0.205	22.42	10.10	64.43	42.01	QP

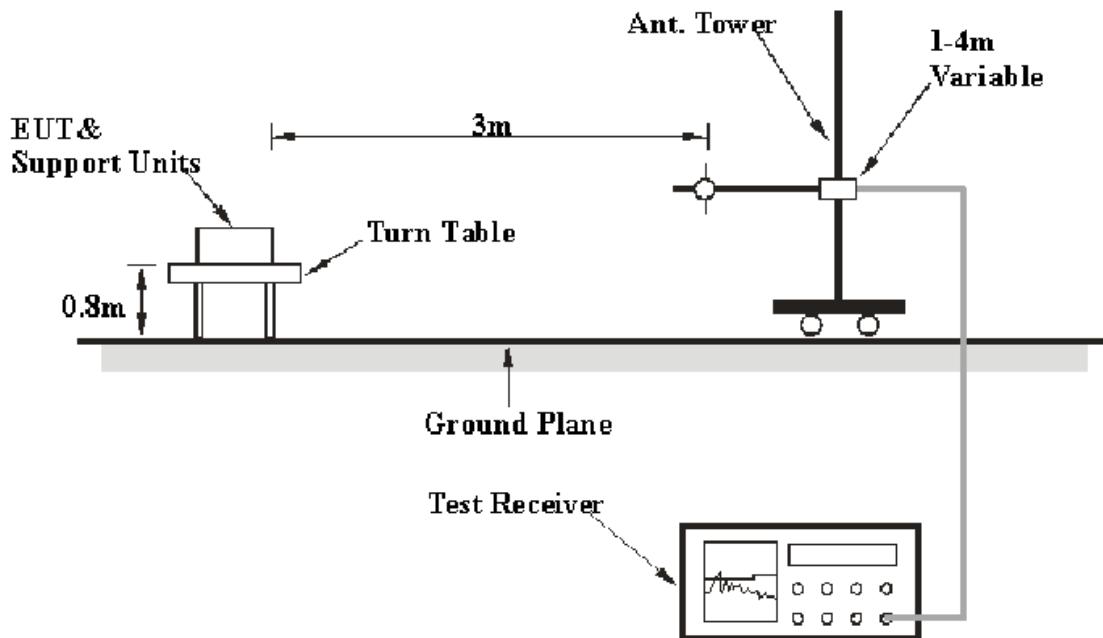
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

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 Host PC was connected to 120 VAC/60 Hz power source for downloading mode

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

Test Procedure

For the radiated emissions test, the Host PC or adapter was connected to the outlet of the LISN.

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

All data was recorded with the Quasi-peak detector for frequencies from 30 MHz to 1 GHz and with the Average detector for the frequencies above 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 7 dB means the emission is 7 dB 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	Pre-amplifier	HP8447E	1937A01046	2010-08-02	2011-08-02
Sunol Sciences	Horn Antenna	DRH-118	A052604	2011-05-05	2012-05-04
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2011-07-08	2012-07-07
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
HP	Pre-amplifier	HP8447D	2944A09795	2010-08-02	2011-08-02
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:

5.9 dB at 756.035500 MHz in the **Horizontal** polarization for downloading mode

23.3 dB at 30.165125 MHz in the **Vertical** polarization for Multimedia playing & charging mode

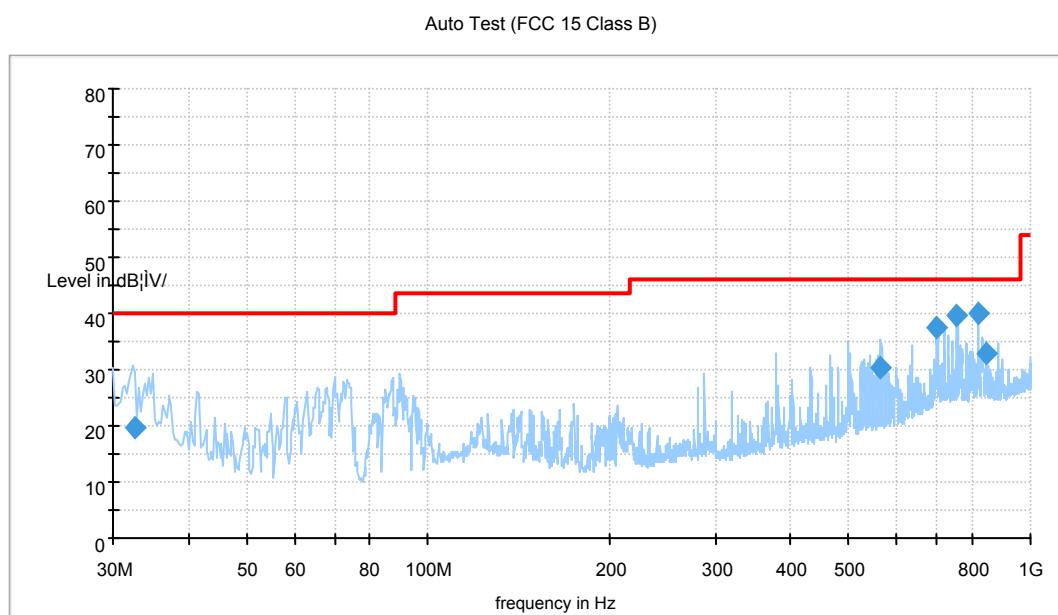
Test Data

Environmental Conditions

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

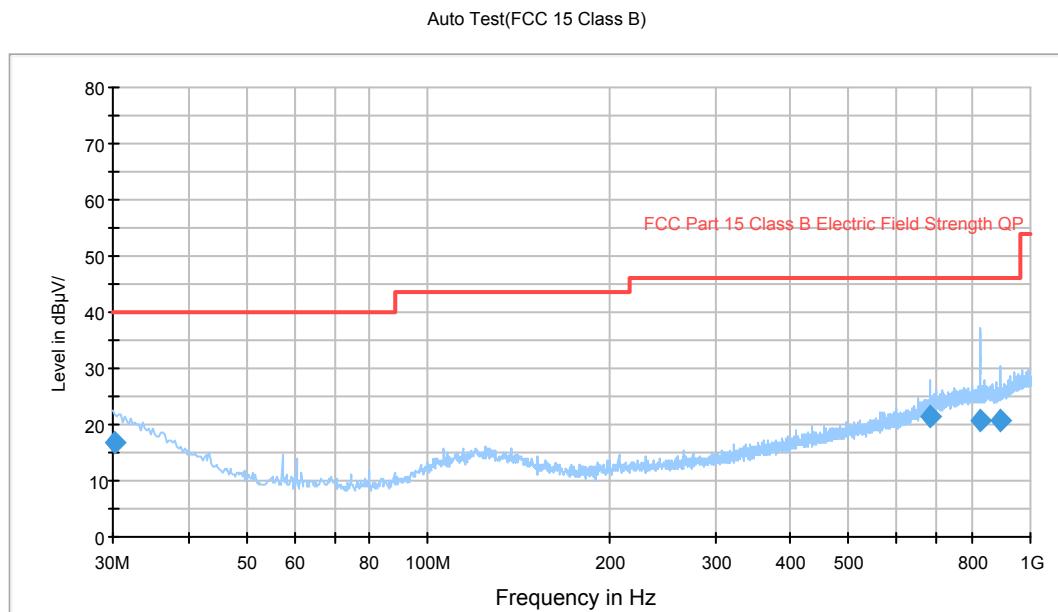
The testing was performed by Polo Xue on 2011-07-27.

1) Test Mode: Downloading



Frequency (MHz)	Corrected Amplitude (dB μ V/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dB μ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
756.035500	40.1	100.0	H	78.0	-2.5	46.0	5.9
819.032000	39.8	298.0	V	153.0	-1.5	46.0	6.2
698.094500	37.4	100.0	V	164.0	-3.2	46.0	8.6
844.1297750	32.3	400.0	V	7.0	-1.2	46.0	13.7
565.238500	30.7	134.0	V	94.0	-7.4	46.0	15.3
32.538750	19.6	100.0	V	191.0	-7.2	40.0	20.4

Note: For above 1 GHz frequencies, the emissions below 20 dB of limit were not recorded.

Test Mode: Multimedia Playing & Charging

Frequency (MHz)	Corrected Amplitude (dB μ V/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dB μ V/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
30.165125	16.7	400.0	V	111.0	-5.5	40.0	23.3
679.439750	21.4	100.0	V	150.0	-3.8	46.0	24.6
826.696500	20.8	384.0	V	111.0	-1.4	46.0	25.2
890.685250	20.7	347.0	H	326.0	-1.2	46.0	25.3

Note: For above 1 GHz frequencies, the emissions below 20 dB of limit were not recorded.

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