FCC PART 15B, CLASS B

TEST REPORT

For

XIAMEN SCALETECH Co., LTD

Zone A, 4th Floor, #10 of Ai-de Air Industry Park, Gaoqi South 12th Road, Xiamen, Fujian, China

FCC ID: ORBSDCP2PRN

Report Type:	Product Type:
Original Report	Stamps.com Model P2 Printer

Test Engineer:	Star Xie
Report Number:	R1XM121203050-00
Report Date:	2012-12-27
Reviewed By:	Harry Wu EMC Leader
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *XIAMEN SCALETECH Co., LTD.*'s product, model number: *Stamps.com P2 Printer (FCC ID: ORBSDCP2PRN)* (the "EUT") in this report is a *Stamps.com Model P2 Printer*, which was measured approximately: 18.0 cm (L) x10.8 cm (W) x 12.3 cm (H), rated input voltage: DC 7.5V from adapter, the highest operating frequency is 20MHz.

Adapter Information: Stamps
Model: PS30IAHFK3000U
Input: 100-240Vac, 50-60Hz, 0.8A
Output: 7.5Vdc, 3000mA

All measurement and test data in this report was gathered from production sample serial number: 121203050 (Assigned by BACL, Dongguan). The EUT was received on 2012-12-03.

Objective

This report is prepared on behalf of *XIAMEN SCALETECH Co., LTD.* 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 15B, Class B.

Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s)

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) 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 February 02, 2012. 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.: 273710. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Justification

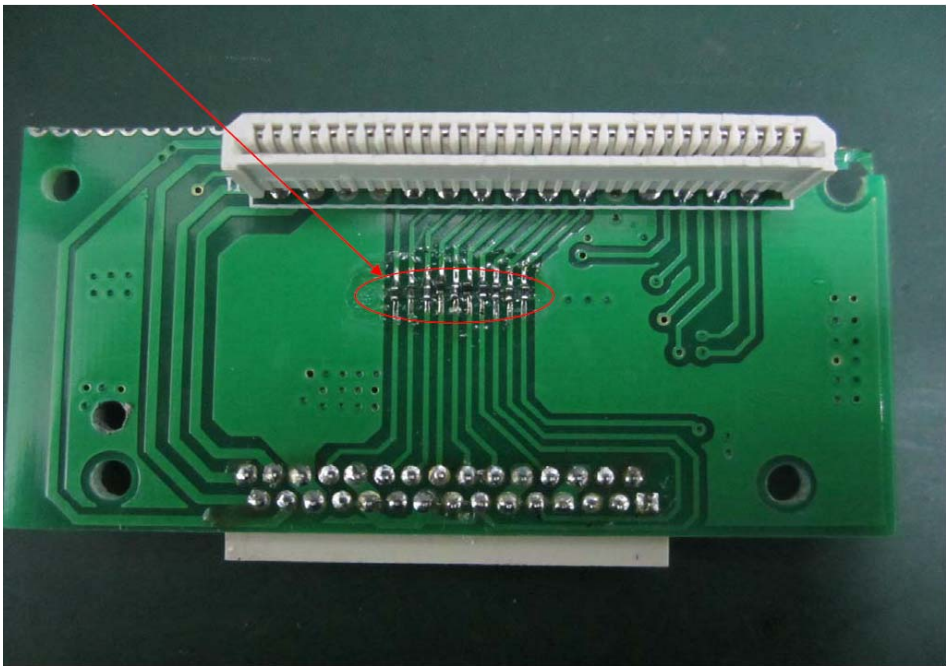
The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

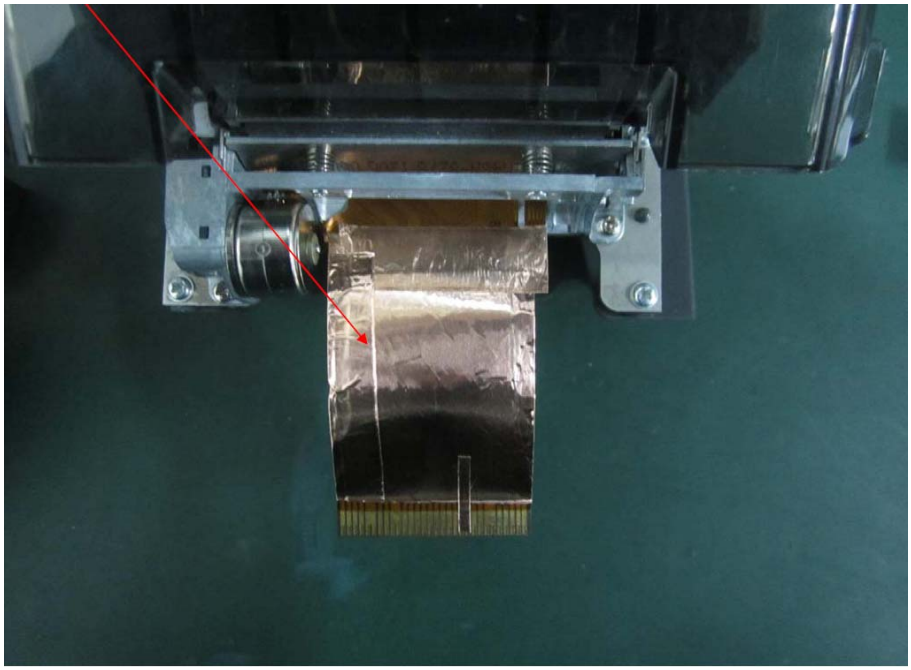
"Stamps.com Printer LAN Setting"(Used for the numerical display) was used

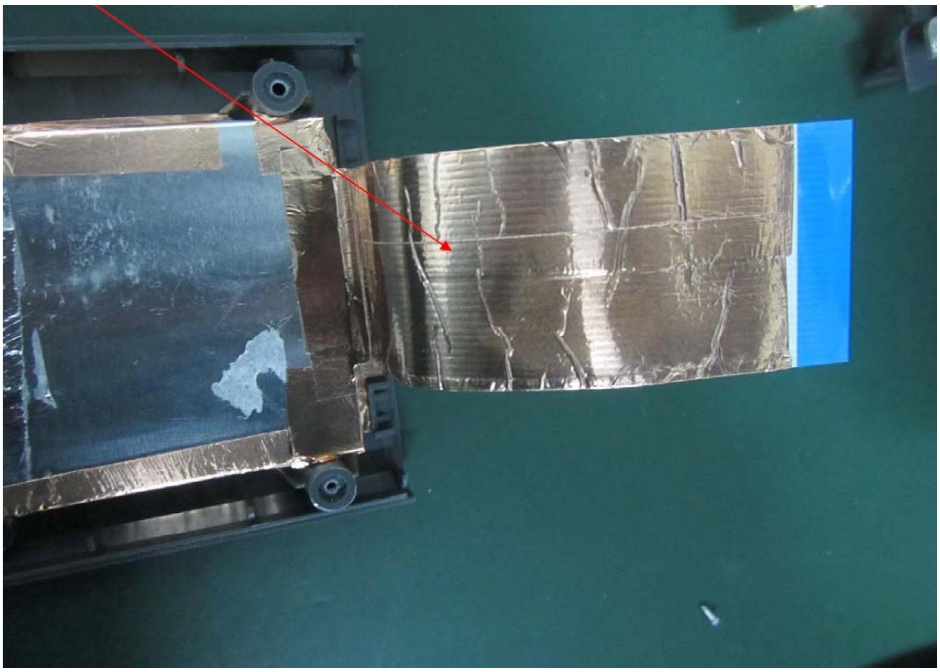
Equipment Modifications

1) Add 60 Ω magnetic beads on data lines as below,



2) Put the data transmission line shielding earthing.





3) Add magnetic ring on power output end, winding a circle. (Magnetic ring size: RC 10*20*5-M)

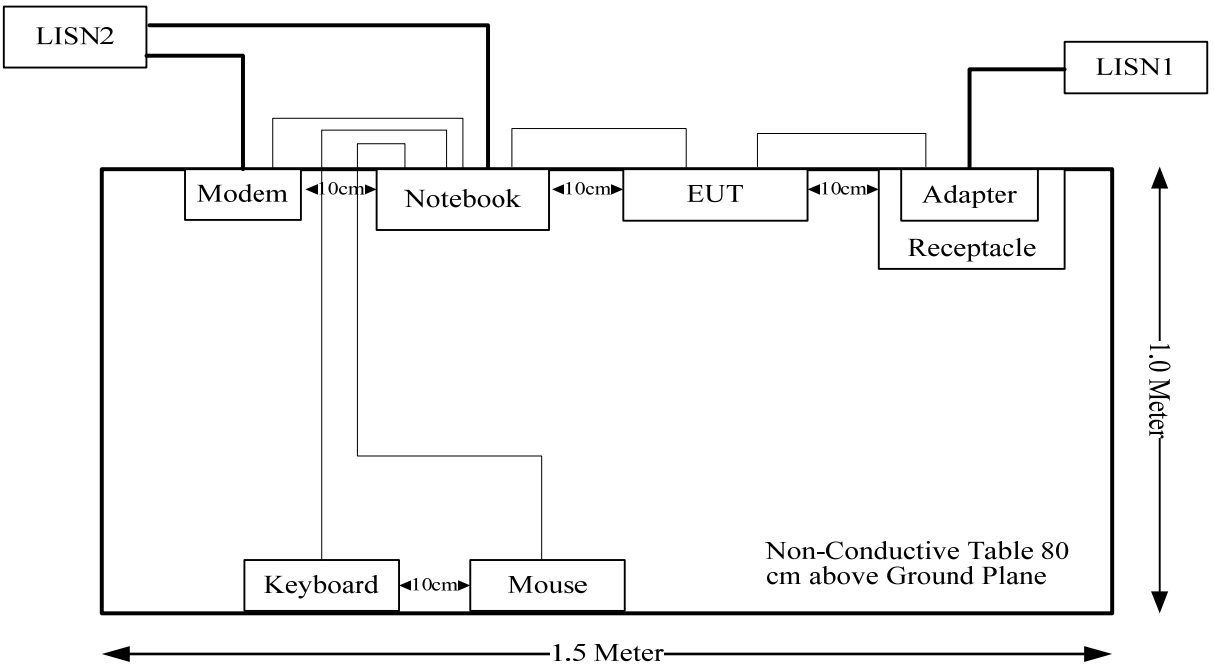
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Notebook	PP11L	QDS-BRCM1017
DELL	Mouse	MO56UOA	F0Y02P7Y
DELL	Keyboard	SK-8115	CN-0DJ313-716716-05A-0DSO
SAST	Modem	AEM-2100	090200213

External I/O Cable

Cable Description	Length (m)	From	To
Shielded Detachable Mouse Cable	1.5	Mouse Port of PC	Mouse
Shielded Detachable Serial Cable	1.5	Serial Port of PC	Modem
Shielded Detachable Keyboard Cable	1.5	Keyboard Port of PC	Keyboard
Shielded Detachable RJ45 Cable	1.8	RJ45 Port of PC	EUT
Unshielded Detachable Usb Cable	1.5	Usb Port of PC	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

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

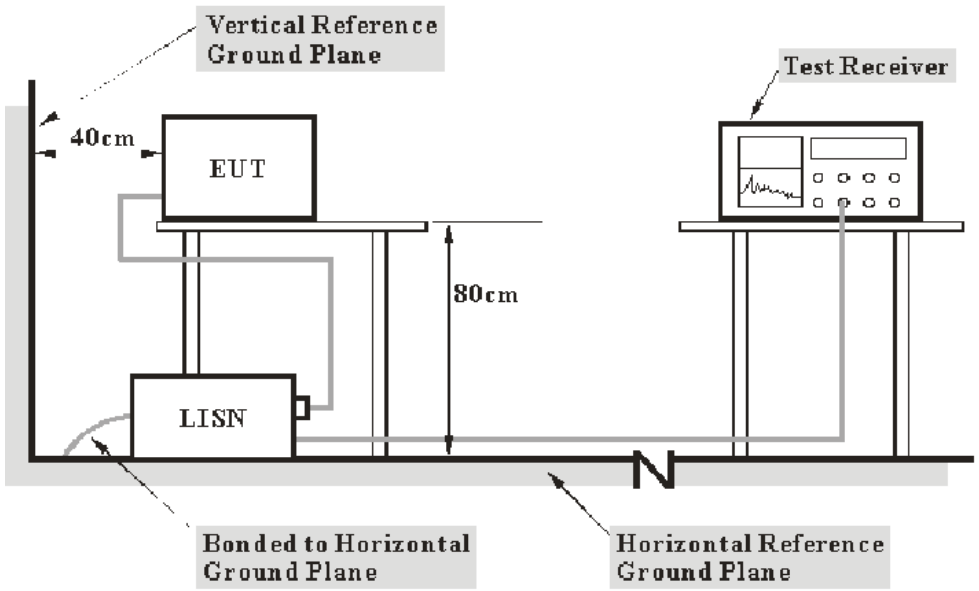
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Measurement Uncertainty

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

Based on CISPR 16-4-2-2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz), and the uncertainty will not be taken into consideration for all the test data recorded in the report.

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:

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second 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
R&S	EMI Test Receiver	ESCS 30	830245/006	2012-11-29	2013-11-28
R&S	LISN1	ESH3-Z5	843331/015	2012-09-17	2013-09-16
R&S	LISN2	ESH3-Z5	100113	2012-11-29	2013-11-28

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:

10.95 dB at **0.150MHz** in the **Neutral** conducted of mode printing via USB

13.58 dB at **0.420MHz** in the **Neutral** conducted of mode printing via LAN

Test Data

Environmental Conditions

Temperature:	22.6 °C
Relative Humidity:	62 %
ATM Pressure:	101.2kPa

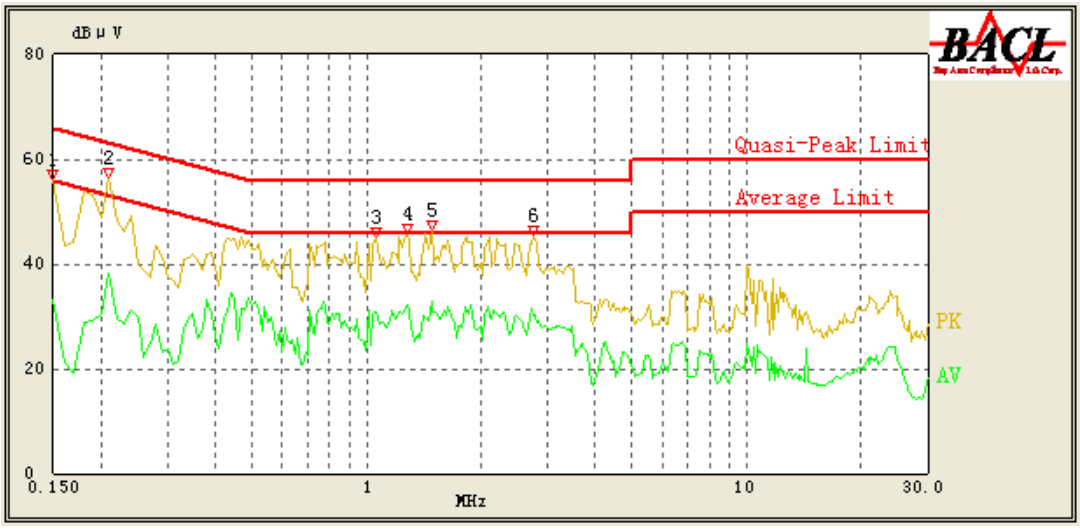
The testing was performed by Star Xie on 2012-12-04.

Test mode: Printing via USB

120 V, 60 Hz, Line:

No.	Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
1	0.160	44.20	0.45	65.71	21.51	QP
2	0.160	26.77	0.45	55.71	28.94	AV
3	0.200	49.44	0.40	64.57	15.13	QP
4	0.200	27.02	0.40	54.57	27.55	AV
5	0.220	37.55	0.39	64.00	26.45	QP
6	0.220	19.36	0.39	54.00	34.64	AV
7	0.570	31.56	0.32	56.00	24.44	QP
8	0.570	26.48	0.32	46.00	19.52	AV
9	1.410	32.15	0.34	56.00	23.85	QP
10	1.410	27.81	0.34	46.00	18.19	AV
11	3.500	29.81	0.38	56.00	26.19	QP
12	3.470	26.74	0.38	46.00	19.26	AV

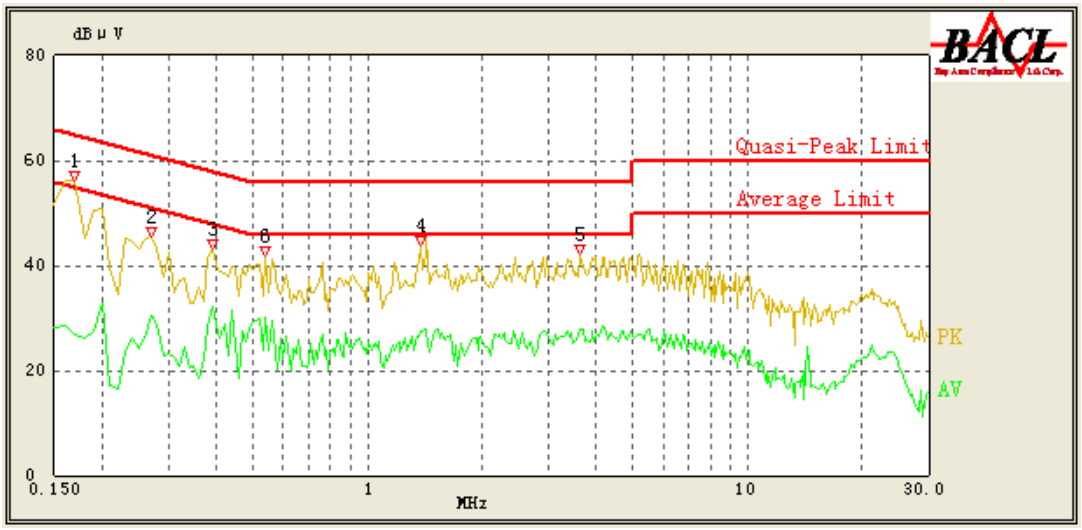
120 V, 60 Hz, Neutral:



No.	Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
1	0.150	55.05	0.26	66.00	10.95	QP
2	0.150	33.21	0.26	56.00	22.79	AV
3	0.210	38.44	0.25	64.29	25.85	QP
4	0.210	38.30	0.25	54.29	15.99	AV
5	1.060	36.42	0.23	56.00	19.58	QP
6	1.060	30.99	0.23	46.00	15.01	AV
7	1.280	37.53	0.24	56.00	18.47	QP
8	1.280	32.29	0.24	46.00	13.71	AV
9	1.480	38.13	0.25	56.00	17.87	QP
10	1.480	32.85	0.25	46.00	13.15	AV
11	2.740	35.75	0.28	56.00	20.25	QP
12	2.760	30.05	0.28	46.00	15.95	AV

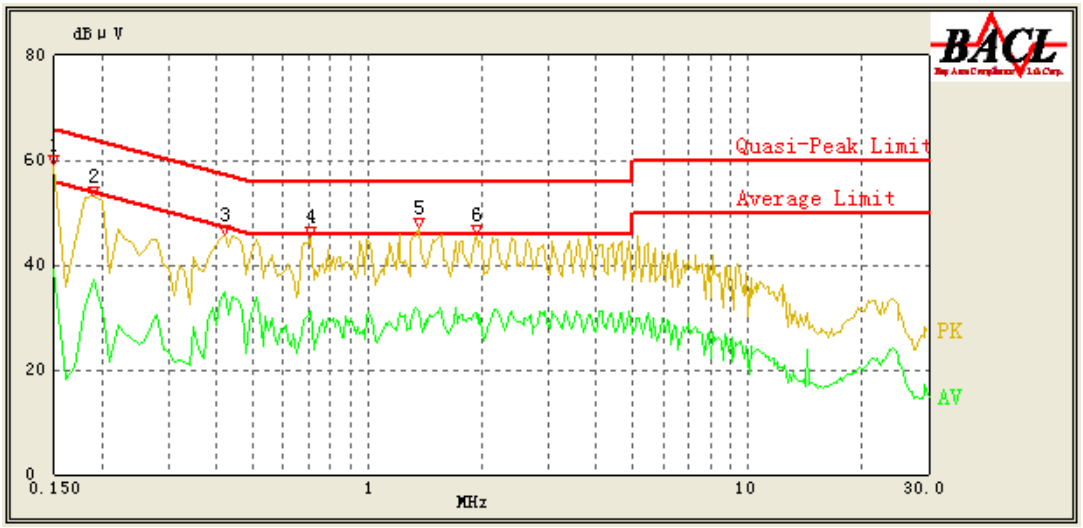
Test mode: Printing via LAN

120 V, 60 Hz, Line:



No.	Frequency (MHz)	Cord. Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/AV/QP)
1	0.170	38.97	0.43	65.43	26.46	QP
2	0.170	26.94	0.43	55.43	28.49	AV
3	0.270	31.99	0.36	62.57	30.58	QP
4	0.270	30.38	0.36	52.57	22.19	AV
5	0.390	38.33	0.32	59.14	20.81	QP
6	0.390	32.29	0.32	49.14	16.85	AV
7	1.380	31.71	0.34	56.00	24.29	QP
8	1.380	27.39	0.34	46.00	18.61	AV
9	3.610	31.65	0.39	56.00	24.35	QP
10	3.610	27.73	0.39	46.00	18.27	AV
11	0.540	33.69	0.31	56.00	22.31	QP
12	0.540	30.28	0.31	46.00	15.72	AV

120 V, 60 Hz, Neutral:



No.	Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
1	0.150	50.71	0.26	66.00	15.29	QP
2	0.150	39.18	0.26	56.00	16.82	AV
3	0.190	45.68	0.25	64.86	19.18	QP
4	0.190	37.24	0.25	54.86	17.62	AV
5	0.420	40.28	0.22	58.29	18.01	QP
6	0.420	34.71	0.22	48.29	13.58	AV
7	0.710	33.34	0.21	56.00	22.66	QP
8	0.710	31.31	0.21	46.00	14.69	AV
9	1.360	33.56	0.25	56.00	22.44	QP
10	1.360	31.30	0.25	46.00	14.70	AV
11	1.930	32.88	0.26	56.00	23.12	QP
12	1.930	30.79	0.26	46.00	15.21	AV

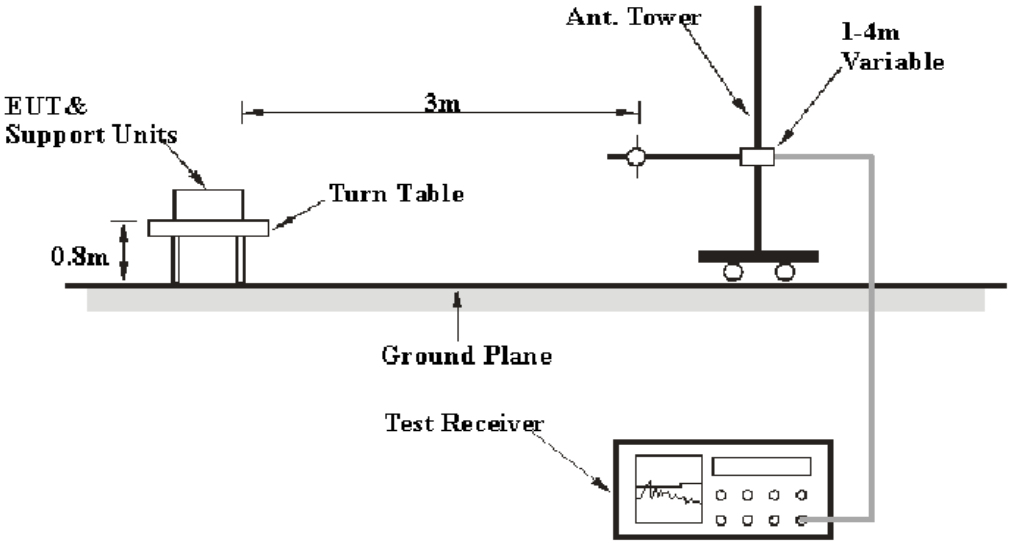
FCC §15.109 - RADIATED EMISSIONS

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 CISPR 16-4-2-2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB
and the uncertainty will not be taken into consideration for all the test data recorded in the report.

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

According to FCC 15.33 requirements, the system was measured from 30 MHz to 1 GHz.

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

Frequency Range	***RBW***	***Video B/W***	***Detector***
30MHz – 1000 MHz	120 kHz	300 kHz	QP

Test Procedure

For the radiated emissions test, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

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

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-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:

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss - 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:

Margin = Limit – Corrected Amplitude

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2012-05-14	2013-05-13
Sunol Sciences	Hybrid Antennas	JB3	A060611-1	2011-09-06	2013-09-05
HP	Pre-amplifier	8447E	2434A02181	2012-10-08	2013-10-07
R&S	Spectrum Analyzer	FSEM 30	DE31388	2012-03-15	2013-03-14
ETS-LINDGREN	Horn Antenna	3115	000 527 35	2012-09-06	2014-09-05
PICOSECOND	Amplifier	5828	2708	N/A	N/A

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:

4.40 dB at **625.5800 MHz** in the **Horizontal** polarization of mode printing via USB

4.30 dB at **624.6100 MHz** in the **Horizontal** polarization of mode printing via LAN

Test Data

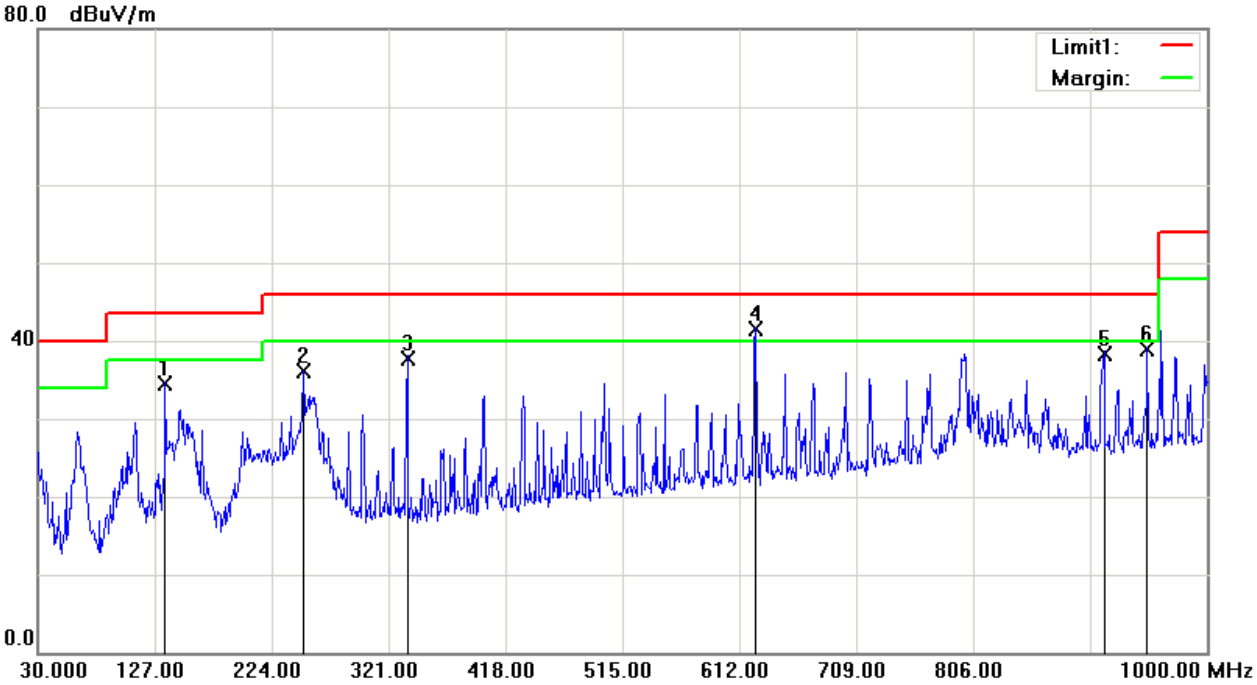
Environmental Conditions

Temperature:	20.9°C
Relative Humidity:	59 %
ATM Pressure:	101.6kPa

The testing was performed by Star Xie on 2012-12-25.

Test mode: Printing via USB

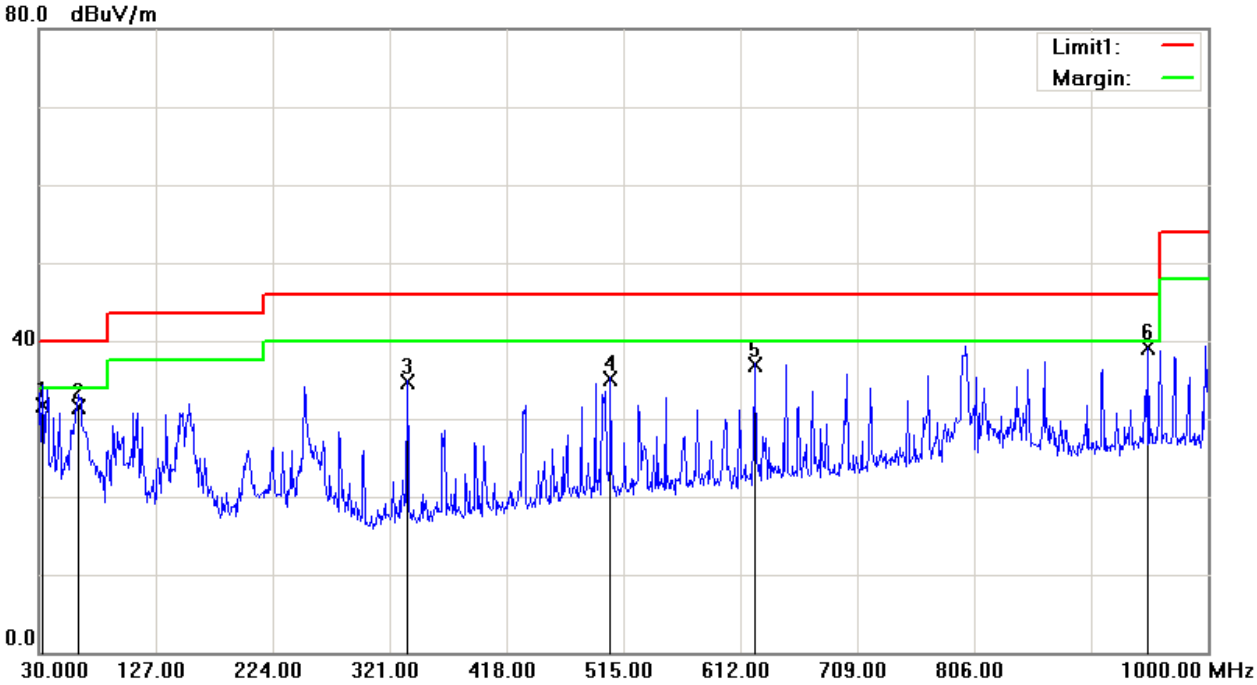
Horizontal:



Frequency (MHz)	Receiver Reading (dBuV/m)	Detector (PK/QP/Ave)	Correction Factor (dB)	Cord. Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
625.5800	42.10	QP	-0.50	41.60	46.00	4.40*
950.5300	35.47	QP	3.53	39.00	46.00	7.00
914.6400	35.24	QP	3.16	38.40	46.00	7.60
336.5200	43.32	QP	-5.52	37.80	46.00	8.20
135.7300	41.36	QP	-6.86	34.50	43.50	9.00
250.1900	44.28	QP	-8.18	36.10	46.00	9.90

*Within measurement uncertainty!

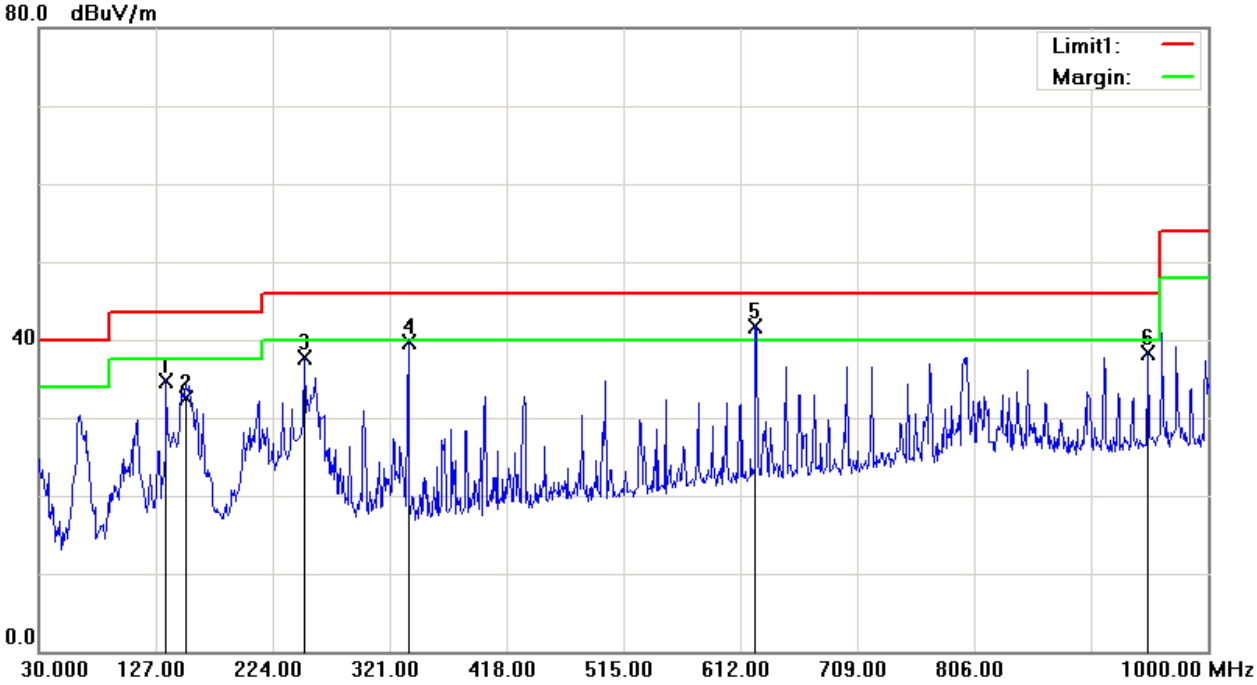
Vertical:



Frequency (MHz)	Receiver Reading (dBuV/m)	Detector (PK/QP/Ave)	Correction Factor (dB)	Cord. Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
950.5300	35.57	QP	3.53	39.10	46.00	6.90
32.9100	32.61	QP	-0.91	31.70	40.00	8.30
62.9800	44.52	QP	-12.92	31.60	40.00	8.40
624.6100	37.44	QP	-0.54	36.90	46.00	9.10
504.3300	37.43	QP	-2.23	35.20	46.00	10.80
335.5500	40.24	QP	-5.54	34.70	46.00	11.30

Test mode: Printing via LAN

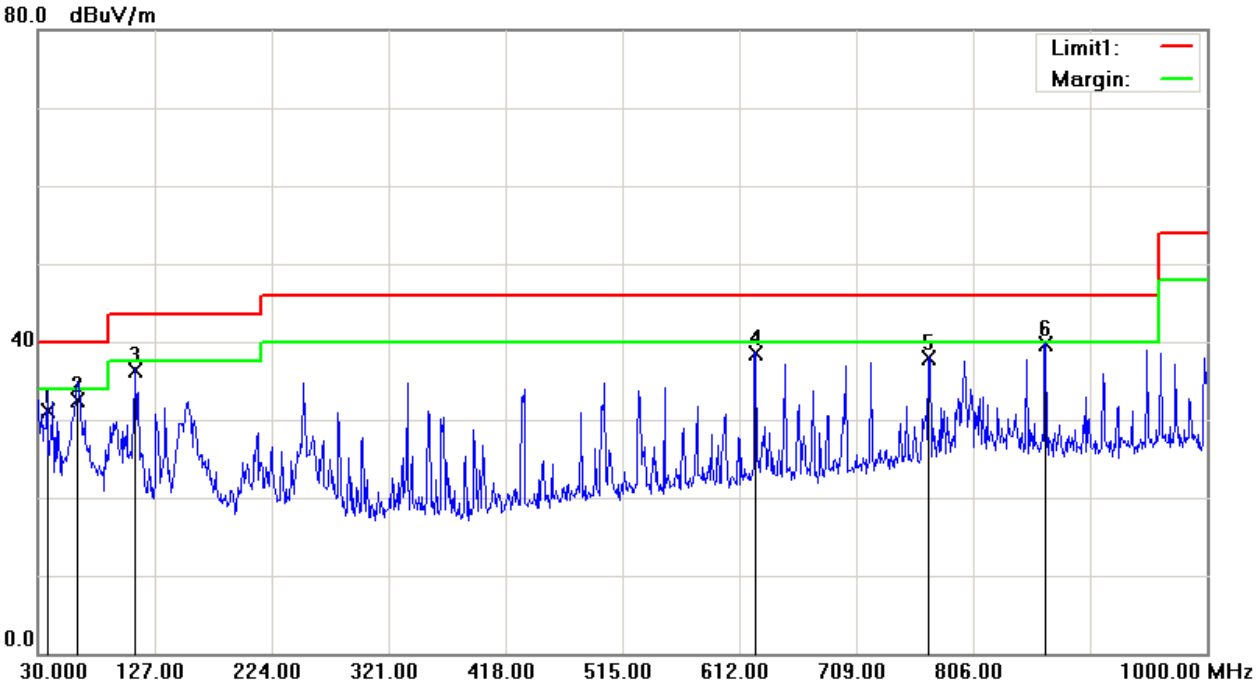
Horizontal:



Frequency (MHz)	Receiver Reading (dBuV/m)	Detector (PK/QP/Ave)	Correction Factor (dB)	Cord. Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
624.6100	42.24	QP	-0.54	41.70	46.00	4.30*
336.5200	45.32	QP	-5.52	39.80	46.00	6.20
950.5300	34.87	QP	3.53	38.40	46.00	7.60
250.1900	45.88	QP	-8.18	37.70	46.00	8.30
135.7300	41.56	QP	-6.86	34.70	43.50	8.80
152.2200	40.22	QP	-7.72	32.50	43.50	11.00

*Within measurement uncertainty!

Vertical:



Frequency (MHz)	Receiver Reading (dBuV/m)	Detector (PK/QP/Ave)	Correction Factor (dB)	Cord. Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
866.1400	37.26	QP	2.54	39.80	46.00	6.20
110.5100	44.02	QP	-7.62	36.40	43.50	7.10
625.5800	39.10	QP	-0.50	38.60	46.00	7.40
62.9800	45.42	QP	-12.92	32.50	40.00	7.50
769.1400	36.50	QP	1.40	37.90	46.00	8.10
37.7600	35.96	QP	-4.76	31.20	40.00	8.80

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