



FCC PART 15 CLASS B

MEASUREMENT AND 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: ZYPB4010

Report Type: Original Report	Product Type: MOBILE PHONE(JOY)
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Report Number: <u>R1DG120612001-00C</u>	
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Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan).

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Nexpro International Limitada*'s product, model number: *B4010 (FCC ID: ZYPB4010)* (the "EUT") in this report was a *JOY*, which was measured approximately: 11.0 cm (L) x 5.8cm (W) x 1.2cm (H), rated input voltage: DC 3.7V Lithium battery or DC 5.0V from adapter for charging. The highest EUT operating frequency is 26 MHz.

Adapter Information:

MODEL NO:C325A50070

ADAPTER AC/DC

INPUT: 100-240V, 50/60 Hz, 120mA

OUTPUT: 5.0V, 700mA

** All measurement and test data in this report was gathered from production sample serial number: 120612001 (Assigned by BACL, Dongguan). The EUT was received on 2012-06-14.*

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 22H&24E PCE submissions with FCC ID: ZYPB4010.

FCC Part 15C DSS submissions with FCC ID: ZYPB4010.

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

Description of Test Configuration

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

EUT Exercise Software

Winthraw.exe software was provided by BACL

Equipment Modifications

No modification was made to the EUT tested.

Local Support Equipment List and Details

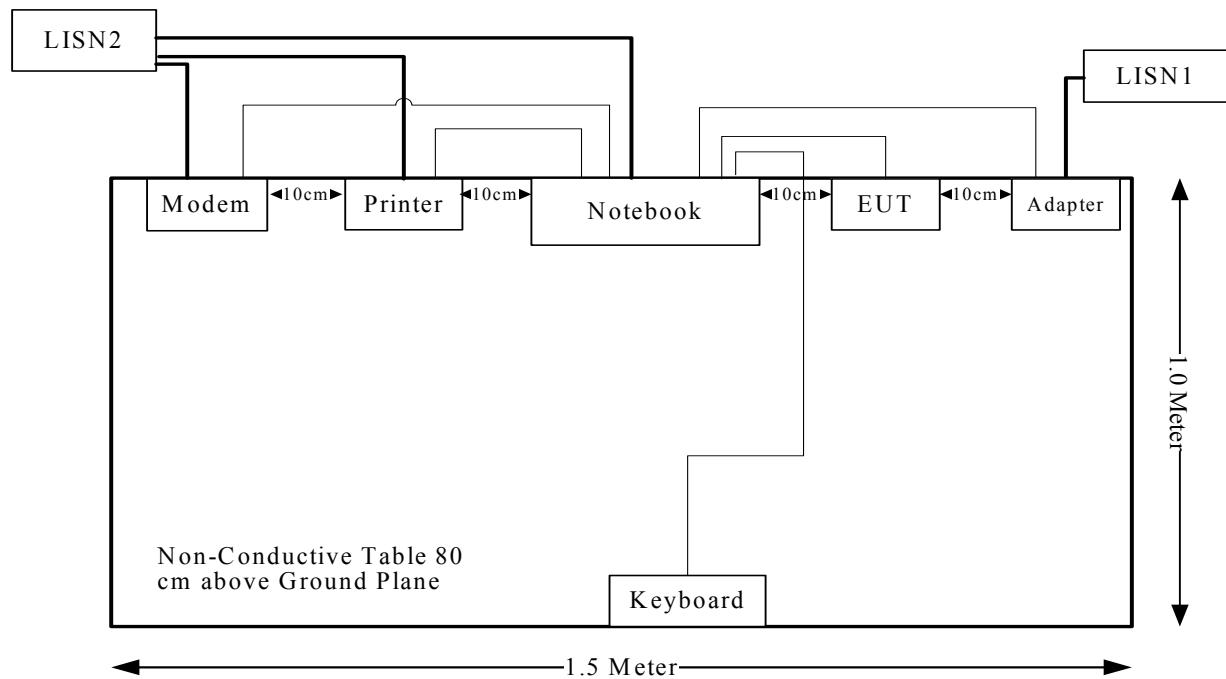
Manufacturer	Description	Model	Serial Number
HP	Laser Jet5L	C3941A	JPTVOB2337
SAST	Modem	AEM-2100	0293
DELL	Keyboard	L100	CNORH656658907BL05DC
DELL	Notebook	PP11L	N/A

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable Printer Cable	1.2	Parallel Port of Notebook	Printer
Shielded Detachable Serial Cable	1.2	Serial Port of Notebook	Modem
Shielded Detachable Keyboard Cable	1.5	Keyboard Port of Notebook	Keyboard
USB Cable	1.0	Notebook	EUT

Block Diagram of Test Setup

Downloading 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

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:

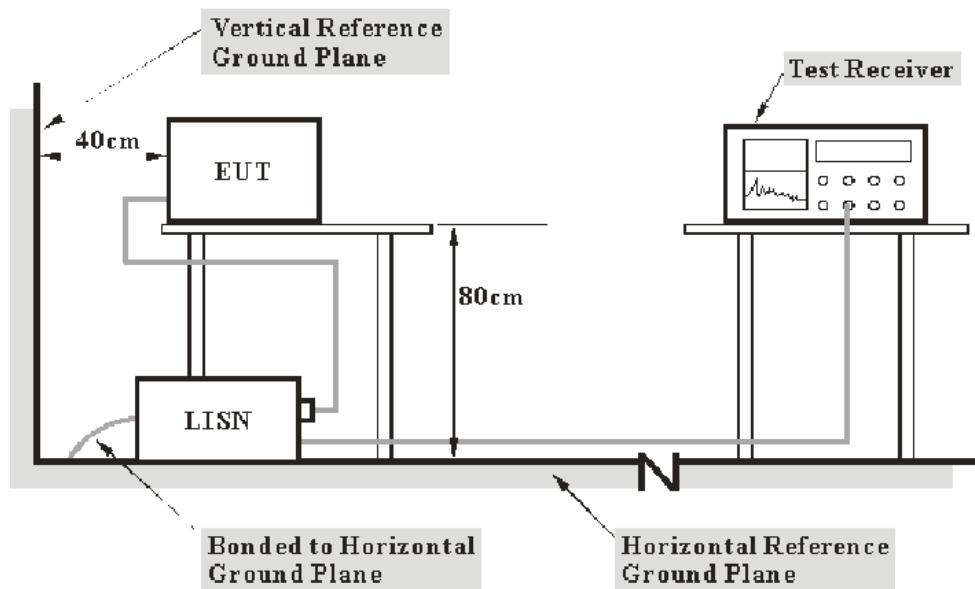
- compliance is deemed to occur if no measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit.

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 3.5 dB (150 kHz to 30 MHz), and conducted disturbance at telecommunication port using AAN is 5.0 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Conducted disturbance at mains port using AMN (9 kHz to 150 kHz) (150 kHz to 30 MHz)	3.8 dB 3.4 dB
Conducted disturbance at mains port using voltage probe (9 kHz to 30 MHz)	2.9 dB
Conducted disturbance at telecommunication port using AAN (150 kHz to 30 MHz)	5.0 dB
Conducted disturbance at telecommunication port using CVP (150 kHz to 30 MHz)	3.9 dB
Conducted disturbance at telecommunication port using CP (150 kHz to 30 MHz)	2.9 dB

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 host PC 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:

<u>Frequency Range</u>	<u>IF BW</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	100176	2011-11-24	2012-11-23
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2011-11-17	2012-11-16
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12208	N/A	N/A

Test Procedure

During the conducted emission test, the host PC was connected to the outlet of the first LISN, the printer, monitor and modem 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 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:

9.92 dB at 0.295 MHz in the **Neutral** mode.

Test Data

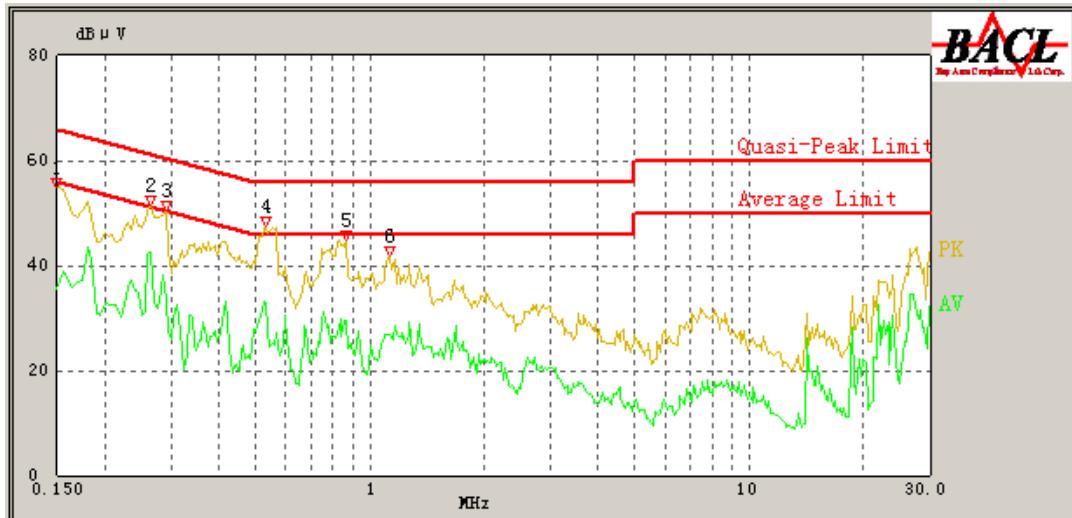
Environmental Conditions

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

The testing was performed by Allen Qiao on 2012-06-14.

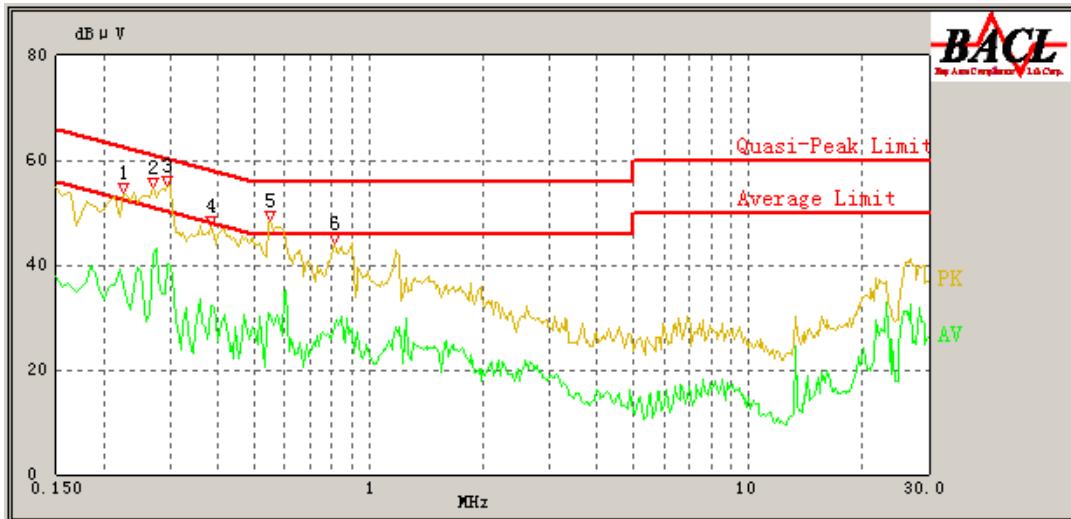
EUT Operation Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	Reading (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Detector (PK/ QP/Ave.)
0.150	48.30	0.40	66.00	17.70	QP
0.150	35.50	0.40	56.00	20.50	Ave.
0.265	46.76	0.42	62.71	15.95	QP
0.265	42.43	0.42	52.71	10.28	Ave.
0.290	47.13	0.42	62.00	14.87	QP
0.290	33.64	0.42	52.00	18.36	Ave.
0.530	38.32	0.42	56.00	17.68	QP
0.530	32.81	0.42	46.00	13.19	Ave.
0.865	37.17	0.45	56.00	18.83	QP
0.865	29.42	0.45	46.00	16.58	Ave.
1.125	31.68	0.45	56.00	24.32	QP
1.130	26.98	0.45	46.00	19.02	Ave.

AC 120V/60 Hz, Neutral



Frequency (MHz)	Reading (dB μ V)	Correction Factor (dB)	Limit (dB μ V)	Margin (dB)	Detector (PK/ QP/Ave.)
0.225	47.60	0.42	63.86	16.26	QP
0.225	36.26	0.42	53.86	17.60	Ave.
0.270	49.98	0.42	62.57	12.59	QP
0.270	42.04	0.42	52.57	10.53	Ave.
0.295	51.94	0.42	61.86	9.92	QP
0.295	40.16	0.42	51.86	11.70	Ave.
0.385	40.24	0.42	59.29	19.05	QP
0.385	32.06	0.42	49.29	17.23	Ave.
0.550	44.69	0.42	56.00	11.31	QP
0.550	30.45	0.42	46.00	15.55	Ave.
0.810	33.97	0.44	56.00	22.03	QP
0.815	28.09	0.44	46.00	17.91	Ave.

FCC §15.109 - RADIATED EMISSIONS

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If U_{lab} is less than or equal to U_{cisp} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cisp} of Table 1, then:

- compliance is deemed to occur if no measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cisp}})$, exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cisp}})$, exceeds the disturbance limit.

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

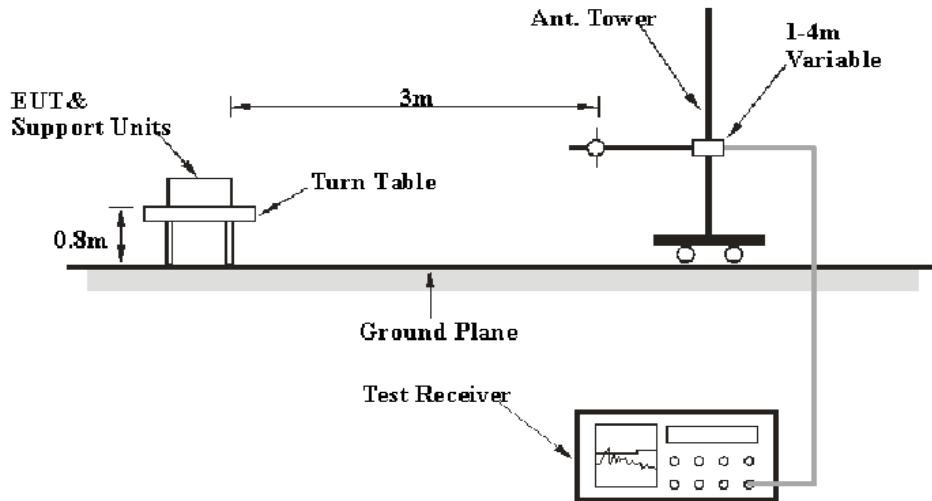
1G~6GHz: 4.45 dB

6G~18GHz: 5.23 dB

Table 1 – Values of U_{cisp}

Measurement	U_{cisp}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

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 host PC was connected to a 120 VAC/60 Hz power source.

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:

Frequency	RBW	VBW	IF BW	Detection
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz	Quasi-peak

Test Procedure

During the radiated emissions test, the host PC, monitor, modem and the printer were connected to AC floor outlet

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all Install 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	2011-11-24	2012-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2012-11-27

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:

3.50 dB at 65.8900 MHz in the Horizontal polarization

Test Data

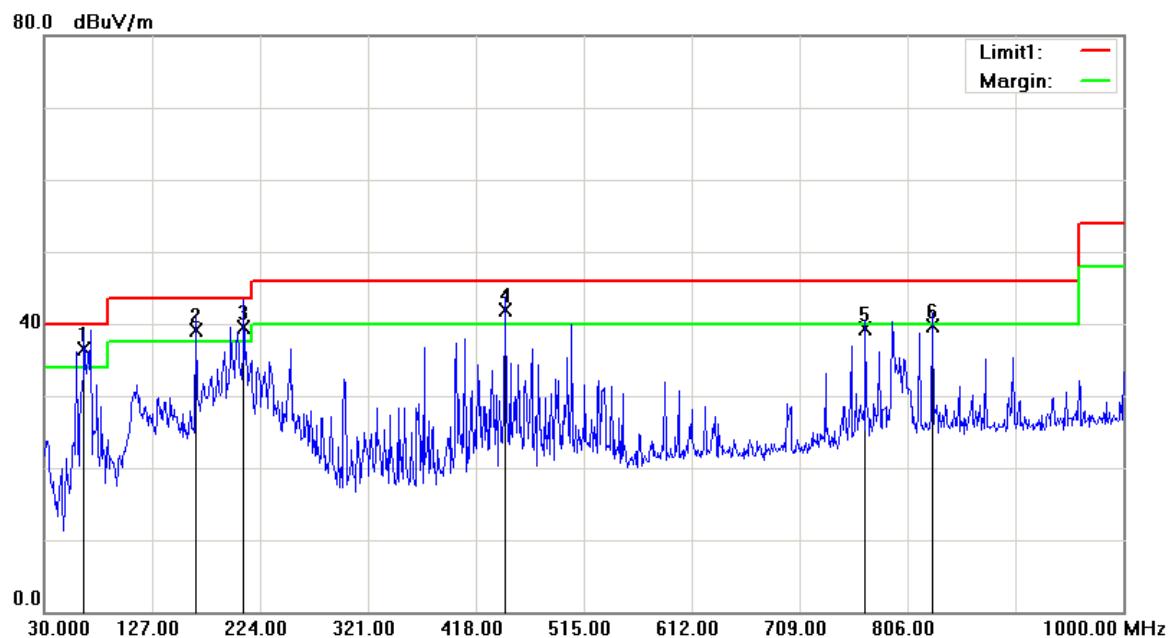
Environmental Conditions

Temperature:	26 °C
Relative Humidity:	60 %
ATM Pressure:	100.0 kPa

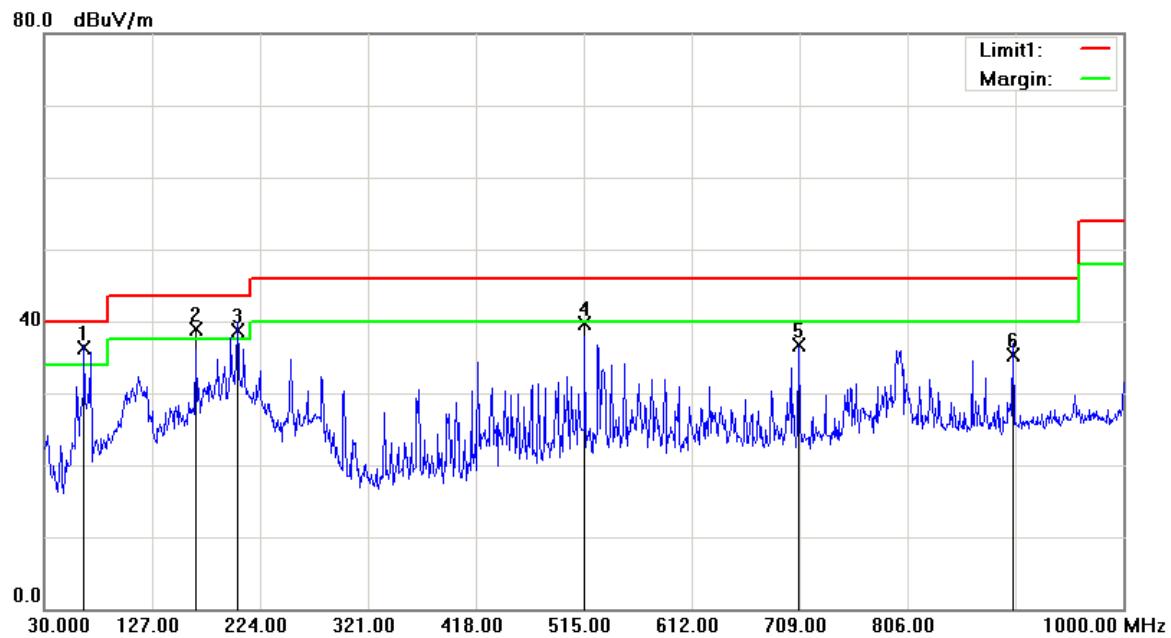
The testing was performed by Allen Qiao on 2012-06-14.

EUT Operation Mode: Downloading

Horizontal



Frequency (MHz)	Reading (dB μ V)	Detector	Correction Factor (dB)	Corrected Amplitude (dB μ V/m)	Limit (dBuV/m)	Margin (dB)
65.8900	48.88	QP	-12.38	36.50	40.00	3.50*
165.8000	47.11	QP	-7.91	39.20	43.50	4.30
209.4500	48.52	QP	-8.92	39.60	43.50	3.90
444.1900	45.10	QP	-3.20	41.90	46.00	4.10
768.1700	38.28	QP	1.02	39.30	46.00	6.70
828.3100	37.91	QP	1.89	39.80	46.00	6.20

Vertical

Frequency (MHz)	Reading (dB μ V)	Detector	Correction Factor (dB)	Corrected Amplitude (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
65.8900	48.78	QP	-12.38	36.40	40.00	3.60*
165.8000	46.81	QP	-7.91	38.90	43.50	4.60
203.6300	46.86	QP	-8.16	38.70	43.50	4.80
515.9700	41.82	QP	-2.12	39.70	46.00	6.30
708.0300	36.55	QP	0.25	36.80	46.00	9.20
901.0600	32.24	QP	3.16	35.40	46.00	10.60

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