Lab Code: 200707-0

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: ZYPBADGER

Report Type:	Product Type:
Original Report	Mobile Phone

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Report Number:	R1DG120704001-00A
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TABLE OF CONTENTS

GENERAL INFORMATION **3**
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 3
OBJECTIVE 3
RELATED SUBMITTAL(S)/GRANT(S) 3
TEST FACILITY 3
SYSTEM TEST CONFIGURATION **5**
DESCRIPTION OF TEST CONFIGURATION 5
EUT EXERCISE SOFTWARE 5
EQUIPMENT MODIFICATIONS 5
LOCAL SUPPORT EQUIPMENT LIST AND DETAILS 5
EXTERNAL I/O CABLE 5
BLOCK DIAGRAM OF TEST SETUP 6
SUMMARY OF TEST RESULTS **7**
FCC §15.107 – AC LINE CONDUCTED EMISSIONS **8**
MEASUREMENT UNCERTAINTY 8
EUT SETUP 8
EMI TEST RECEIVER SETUP 9
TEST EQUIPMENT LIST AND DETAILS 9
TEST PROCEDURE 9
TEST RESULTS SUMMARY 9
TEST DATA 9
FCC §15.109 - RADIATED EMISSIONS **12**
MEASUREMENT UNCERTAINTY 12
EUT SETUP 12
EMI TEST RECEIVER SETUP 13
TEST PROCEDURE 13
TEST EQUIPMENT LIST AND DETAILS 13
CORRECTED AMPLITUDE & MARGIN CALCULATION 13
TEST RESULTS SUMMARY 13
TEST DATA 14

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Nexpro International Limitada*'s product, model number: *Badger (FCC ID: ZYPBADGER)* (the "EUT") in this report was a *Badger* which was measured approximately: 11.0 cm (L) x 6.0cm (W) x 1.3cm (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.: YW50;
Input: AC 100-240V, 50/60 Hz, 120mA
Output: 5.0V, 500mA

** All measurement and test data in this report was gathered from production sample serial number: 120704001 (Assigned by BACL, Dongguan). The EUT was received on 2012-07-04*

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

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.

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

Winthraw.exe software was provided by BACL

Equipment Modifications

No modification was made to the EUT tested.

Local Support Equipment List and Details

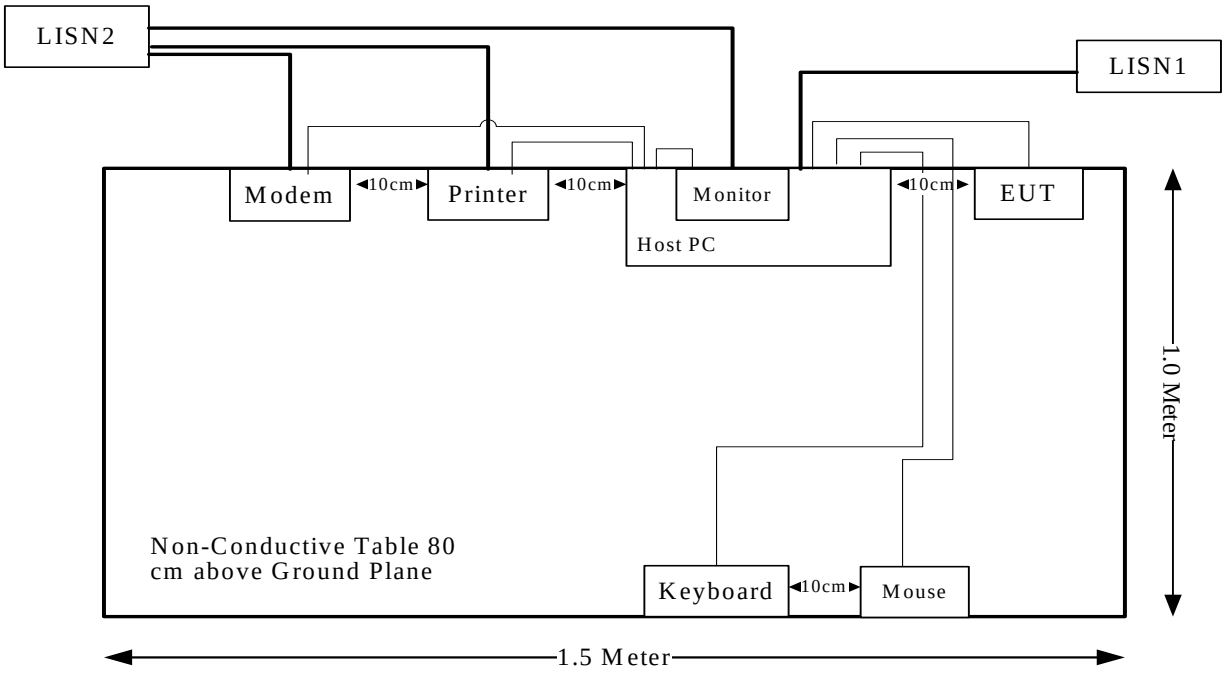
Manufacturer	Description	Model	Serial Number
DELL	PC	VOSTRO	HNXJWZX
DELL	Monitor	E2010HC	CN-O3D6N6-64180-042-0Q1M
DELL	Mouse	M05600A	FOY02PTY
DELL	Keyboard	SK-8115	CN-ODJ313-716716-05A-0DS0
SAST	Modem	AEM-2100	090200213
HP	Printer	C3941A	JPTVOB13237

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable Keyboard Cable	1.5	USB Port/Host PC	Keyboard
Shielded Detachable Mouse Cable	1.5	USB Port/Host PC	Mouse
Shielded Detachable VGA Cable	1.5	VGA Port/Host PC	Monitor
Shielded Detachable USB Cable	1.0	Host PC	EUT
Shielded Detachable Serial Cable	1.2	Serial Port/Host	Modem
Shielded Detachable Printer Cable	1.8	Parallel Port/Host	Printer

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

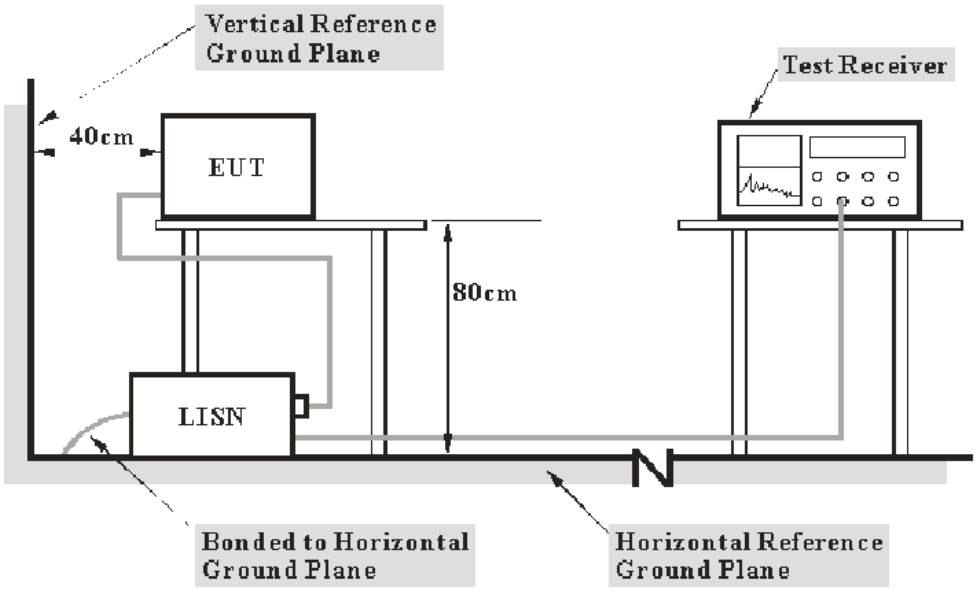
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Measurement Uncertainty

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 CISPR 16-4-2, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Dongguan) is 1.5 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:

Frequency Range	***IF BW***
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 Reciever	ESCS 30	830245/006	2011-10-08	2012-10-07
Rohde & Schwarz	LISN	ESH3-Z5	843331/015	2011-10-08	2012-10-07
Rohde & Schwarz	LISN	ESH3-Z5	100113	2011-10-08	2012-10-07

*** 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, 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:

5.26 dB at **1.865 MHz** in the **Line**

Test Data

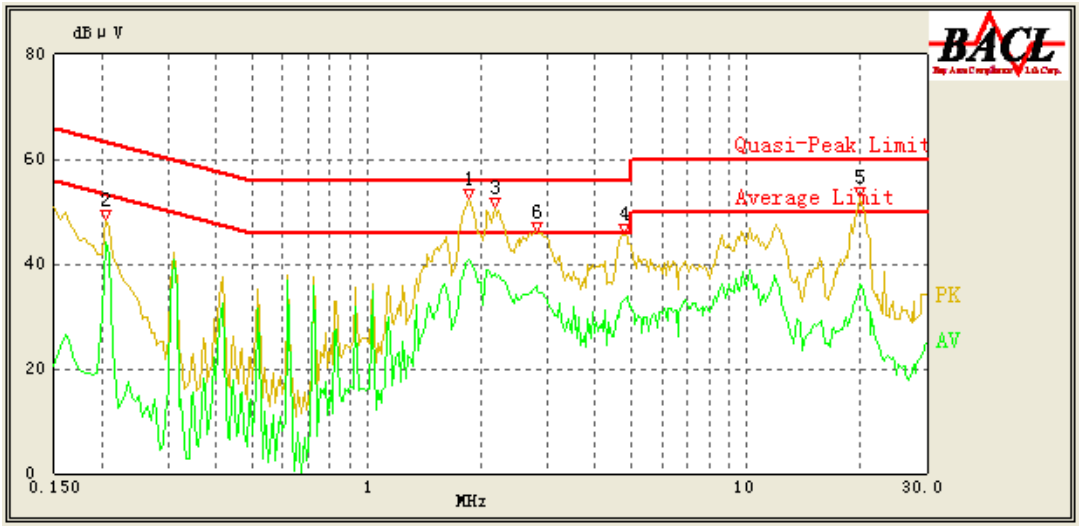
Environmental Conditions

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

The testing was performed by Dean Liu on 2012-07-09.

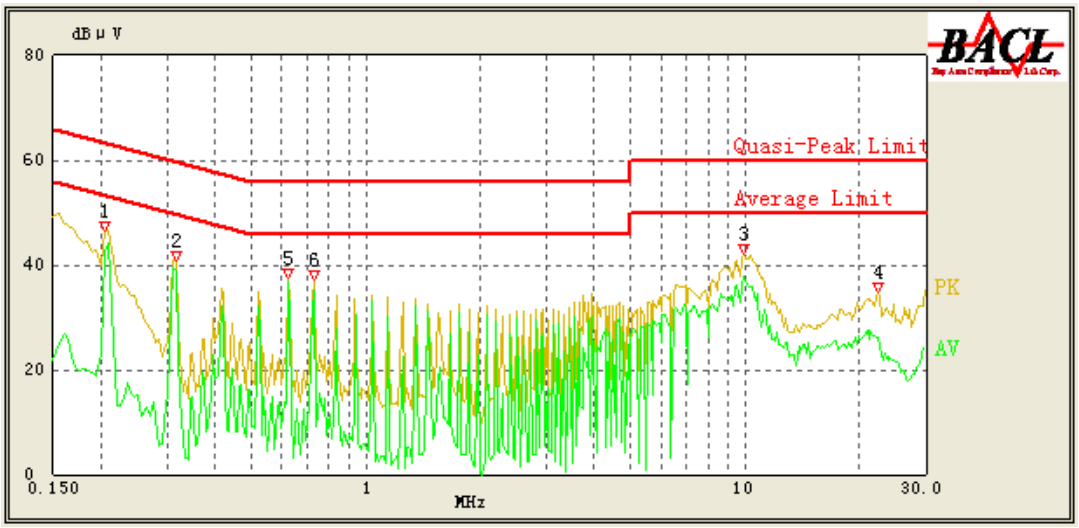
EUT Operation Mode: Downloading

AC 120V/60 Hz, Line



Frequency (MHz)	Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/ QP/Ave.)
1.865	40.74	1.10	46.00	5.26	Ave
2.175	38.17	1.10	46.00	7.83	Ave
2.795	35.84	1.10	46.00	10.16	Ave
0.205	44.08	1.10	54.43	10.35	Ave
4.765	33.02	1.10	46.00	12.98	Ave
19.980	36.08	1.10	50.00	13.92	Ave
0.205	44.42	1.10	64.43	20.01	QP
1.865	18.36	1.10	56.00	37.64	QP
19.925	18.54	1.10	60.00	41.46	QP
2.175	13.16	1.10	56.00	42.84	QP
4.760	12.82	1.10	56.00	43.18	QP
2.795	9.83	1.10	56.00	46.17	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/ QP/Ave.)
0.625	36.96	1.10	46.00	9.04	Ave
0.730	35.24	1.10	46.00	10.76	Ave
0.205	42.35	1.10	54.43	12.08	Ave
9.900	37.84	1.10	50.00	12.16	Ave
0.315	38.99	1.10	51.29	12.30	Ave
0.625	36.87	1.10	56.00	19.13	QP
0.730	36.15	1.10	56.00	19.85	QP
0.205	43.36	1.10	64.43	21.07	QP
0.315	39.36	1.10	61.29	21.93	QP
22.315	26.02	1.10	50.00	23.98	Ave
9.900	35.11	1.10	60.00	24.89	QP
22.315	25.25	1.10	60.00	34.75	QP

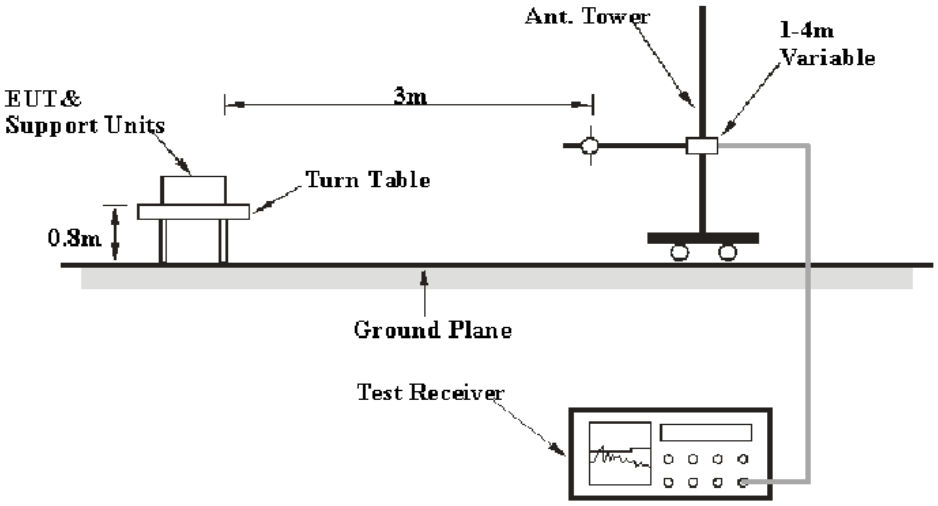
FCC §15.109 - RADIATED EMISSIONS

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 CISPR 16-4-2, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement from 30 MHz to 1 GHz at Bay Area Compliance Laboratories Corp. (Dongguan) is 4.9 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 C**lass 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
Rohde & Schwarz	EMI Test Reciever	ESCI	100224	2012-05-13	2013-05-12
Sunol Sciences	Hybrid Antennas	JB3	A060611-1	2011-09-06	2012-09-05
HP	Pre-amplifier	8447E	2434A02181	2011-10-08	2012-10-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp (Dongguan) 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:

Corrected Amplitude = Meter Reading + Correction Factor

Correction Factor = 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 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:

7.40 dB at **314.2100 MHz** in the **Horizontal** polarization

Test Data

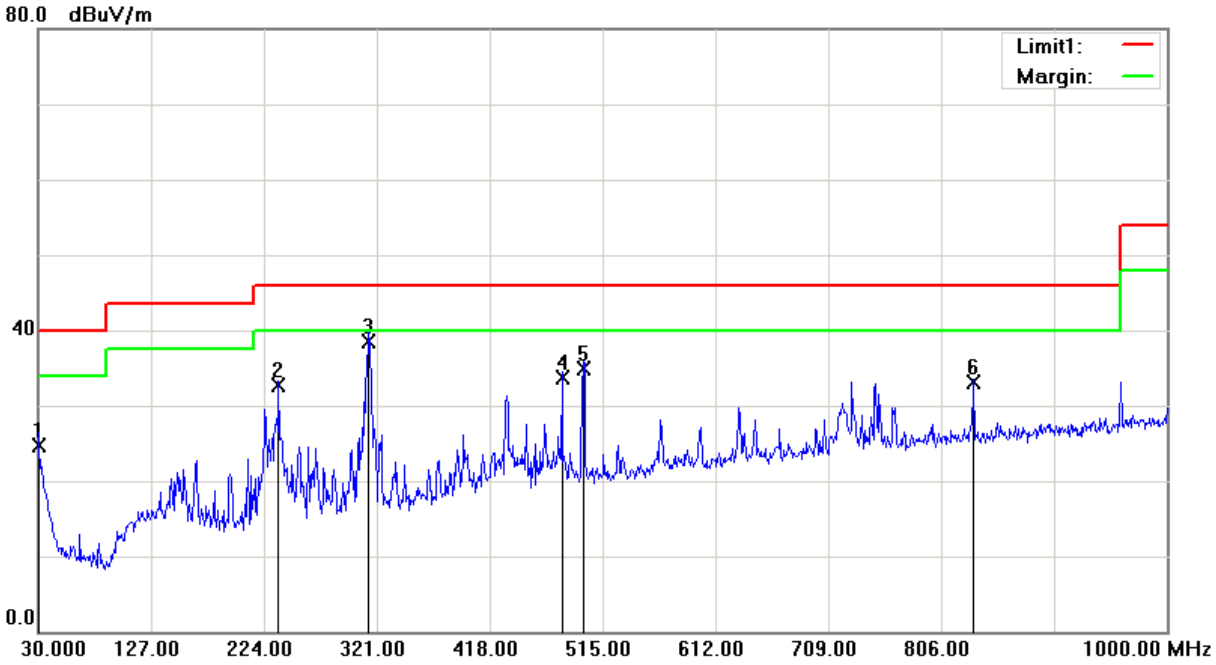
Environmental Conditions

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

The testing was performed by Dean Liu on 2012-07-05.

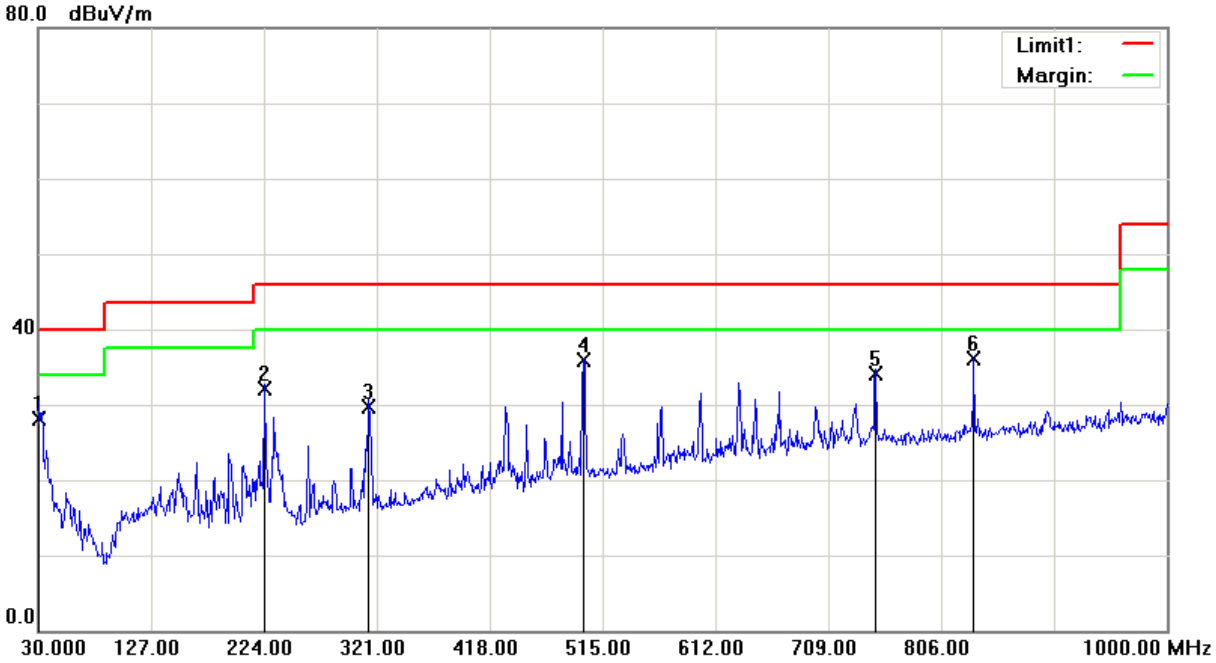
EUT Operation Mode: Downloading

Horizontal



Frequency (MHz)	Reading (dBµV)	Detector	Correction Factor (dB)	Corrected Amplitude (dBµV/m)	Limit (dBuV/m)	Margin (dB)
314.2100	43.56	QP	-4.96	38.60	46.00	7.40
498.5100	36.12	QP	-1.22	34.90	46.00	11.10
480.0800	34.96	QP	-1.26	33.70	46.00	12.30
834.1300	29.69	QP	3.41	33.10	46.00	12.90
236.6100	40.30	QP	-7.50	32.80	46.00	13.20
30.0000	23.10	QP	1.70	24.80	40.00	15.20

Vertical



Frequency (MHz)	Reading (dBµV)	Detector	Correction Factor (dB)	Corrected Amplitude (dBµV/m)	Limit (dBuV/m)	Margin (dB)
834.1300	32.69	QP	3.41	36.10	46.00	9.90
498.5100	37.12	QP	-1.22	35.90	46.00	10.10
30.0000	26.50	QP	1.70	28.20	40.00	11.80
749.7400	31.70	QP	2.40	34.10	46.00	11.90
224.9700	40.07	QP	-7.97	32.10	46.00	13.90
314.2100	34.76	QP	-4.96	29.80	46.00	16.20

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