

**FCC PART 15 CLASS B
MEASUREMENT AND TEST REPORT**

For

VeryKool USA Inc

4350 Executive Dr.100 San Diego, CA 92121

FCC ID: WA6I123

Report Type: Original Report	Product Type: Mobile phone
Test Engineer: <u>Bin Jiang</u> <i>Bin Jiang</i>	
Report Number: <u>RSZ120426001-00B</u>	
Report Date: <u>2012-05-16</u>	
Reviewed By: <u>Ivan Cao</u> <i>Ivan Cao</i> EMC Engineer	
Test Laboratory: Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn	

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. This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP*, or any agency of the Federal Government.

* This report contains data that are not covered by the NVLAP accreditation and are marked with an asterisk "★" (Rev.2)

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
PRINTER.....	5
KEYBOARD	5
EUT	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 *VeryKool USA Inc's* product, model number: *i123(FCC ID: WA6I123)* (the "EUT") in this report was a *Mobile phone*, which was measured approximately: 10.5cm (L) x 4.5cm (W) x 1.0cm (H), rated input voltage: DC 3.7V Lithium battery or DC 5.0V from adapter for charging.

Adapter Information: verykool
Model: NBT-050B-B050UA
Input: 100V-240VAC, 50/60Hz, 0.2A
Output: DC 5.0V, 500mA

** All measurement and test data in this report was gathered from production sample serial number: i12308C000001(Assigned by Applicant). The EUT was received on 2012-04-23.*

Objective

This report is prepared on behalf of *VeryKool USA Inc* 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: WA6I123.
FCC Part 15C DSS submissions with FCC ID: WA6I123

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. The highest working frequency is 26MHz in the test mode.

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

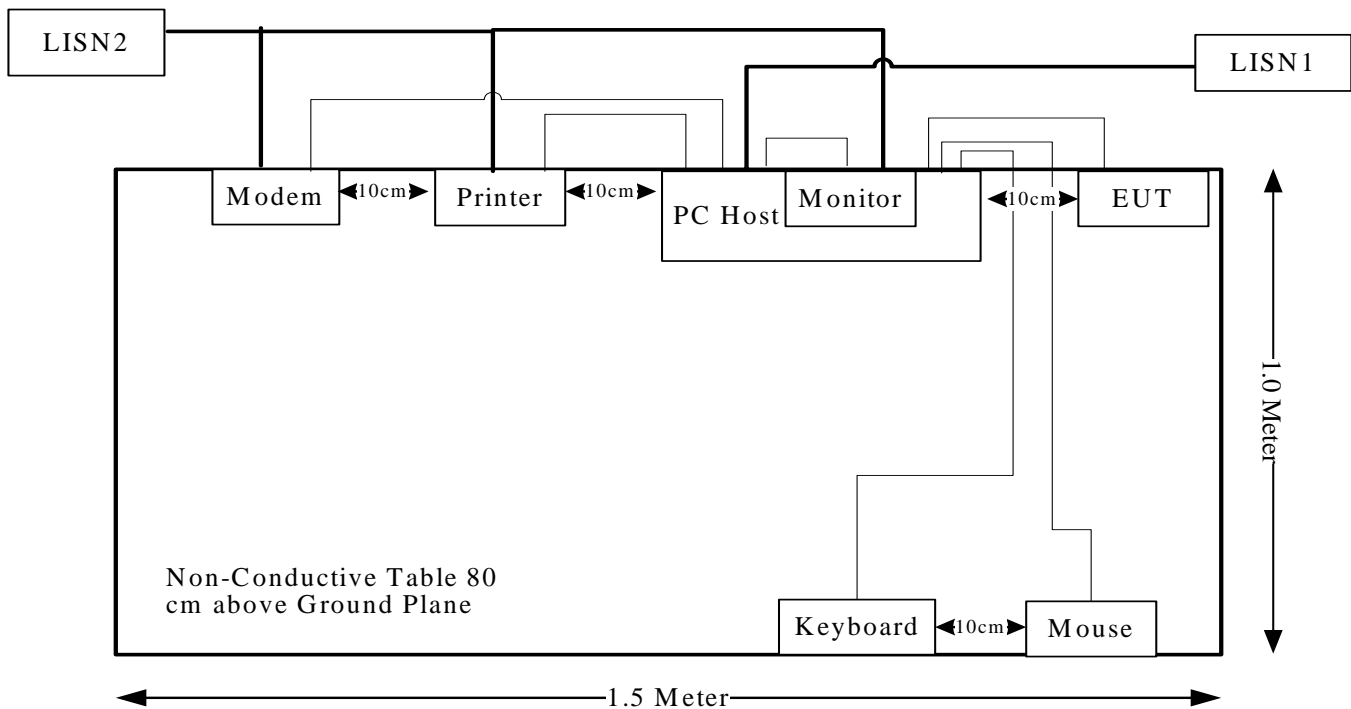
Manufacturer	Description	Model	Serial Number
DELL	Keyboard	SK-8115	CN-0DJ313-716716-05A-0DSO
DELL	Mouse	MO56UOA	F0Y02P7Y
DELL	Monitor	1706FPVt	CN-0T9401-71618-588-AJ9X
DELL	PC	Vostro/230	HNXJW2X
SAST	Modem	AEM-2100	090200213
HP	Printer	C3941A	JPTV013237

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielded Detachable Mouse Cable	1.5	Mouse Port of PC	Mouse
Shielded Detachable Printer Cable	1.2	Parallel Port of PC	Printer
Shielded Detachable Serial Cable	1.2	Serial Port of PC	Modem
Shielded Detachable VGA Cable	1.5	VGA Port of PC	Monitor
Shielded Detachable Keyboard Cable	1.5	Keyboard Port of PC	Keyboard
Shielded USB CABLE	0.4	PC	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

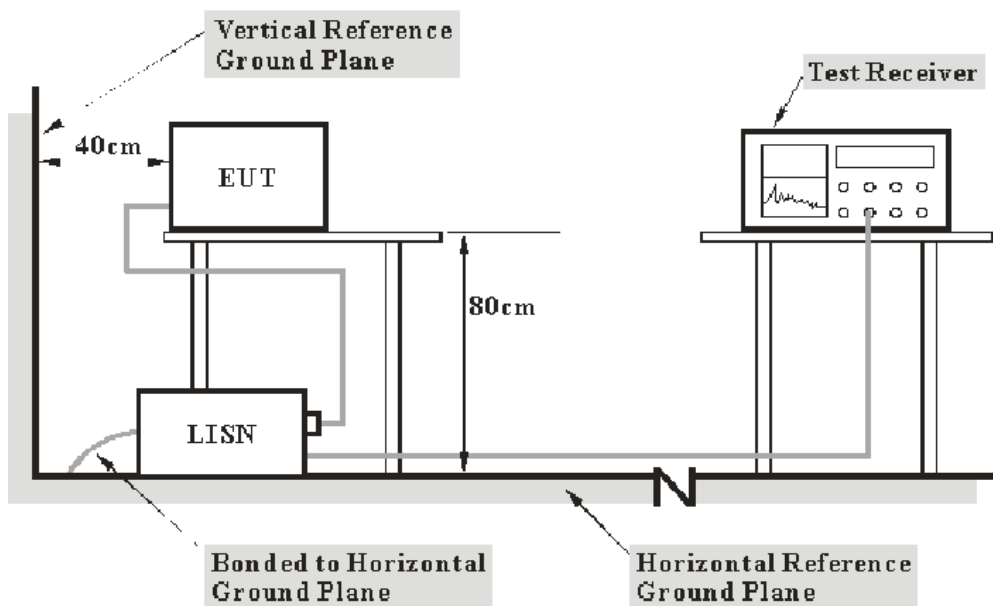
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

Measurement Uncertainty

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. (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 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

*** 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:

7.68 dB at 4.795 MHz in the **Neutral** conducted mode for USB downloading mode.

Test Data

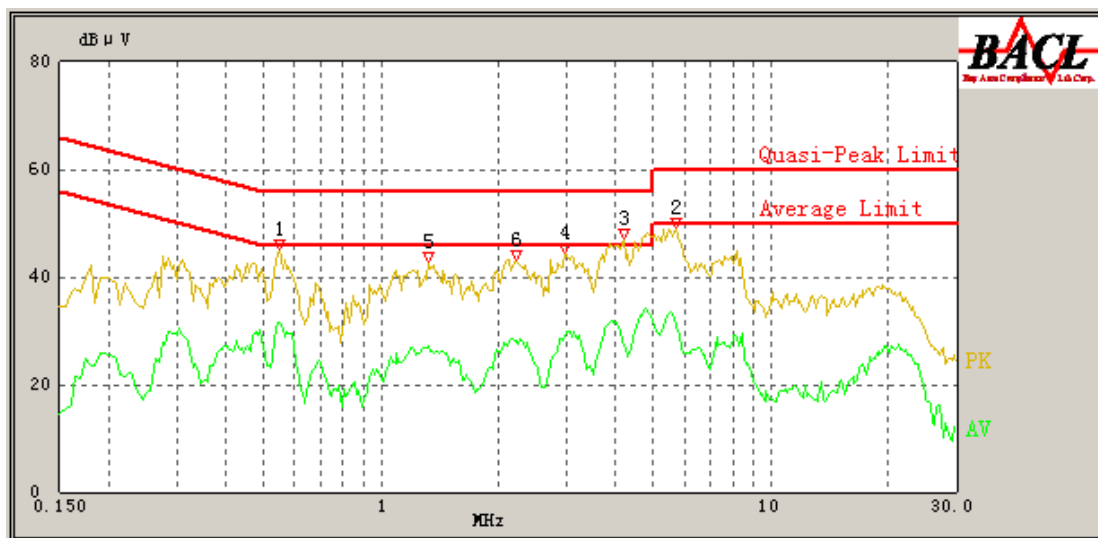
Environmental Conditions

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

The testing was performed by Bin Jiang on 2012-04-27.

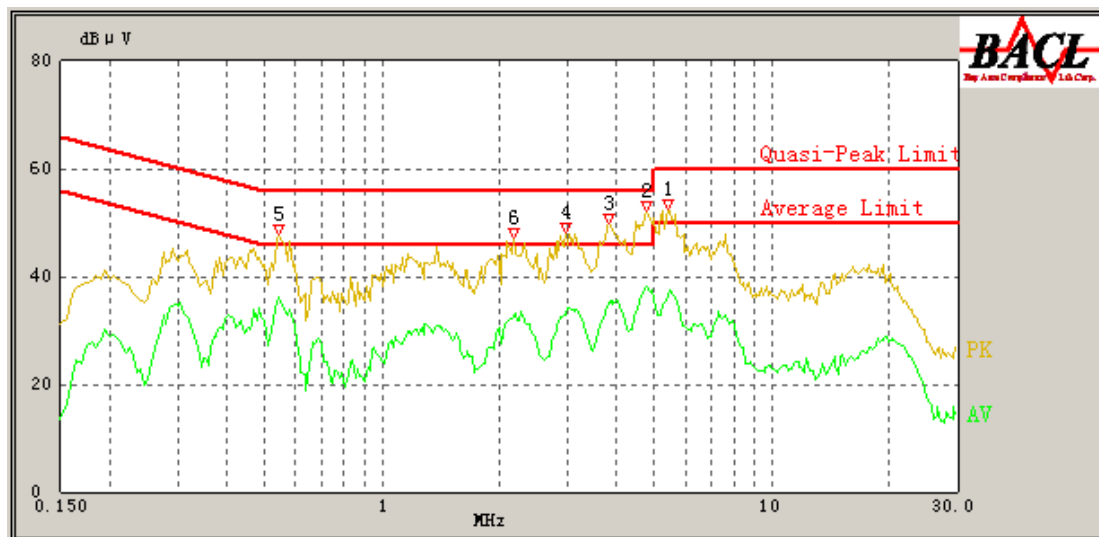
Mode: USB Downloading:

AC 120V/60 Hz, Line



Frequency (MHz)	Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/ QP/Ave.)
0.550	31.65	0.42	46.00	14.35	Ave.
0.550	39.78	0.42	56.00	16.22	QP
2.980	29.74	0.49	46.00	16.26	Ave.
5.660	32.43	0.52	50.00	17.57	Ave.
4.170	28.26	0.50	46.00	17.74	Ave.
2.215	28.24	0.48	46.00	17.76	Ave.
2.970	38.16	0.49	56.00	17.84	QP
4.190	37.32	0.50	56.00	18.68	QP
1.325	27.24	0.46	46.00	18.76	Ave.
2.235	37.07	0.48	56.00	18.93	QP
5.685	40.41	0.52	60.00	19.59	QP
1.325	35.46	0.46	56.00	20.54	QP

AC 120V/60 Hz, Neutral



Frequency (MHz)	Reading (dBμV)	Correction Factor (dB)	Limit (dBμV)	Margin (dB)	Detector (PK/ QP/Ave.)
4.795	38.32	0.51	46.00	7.68	Ave.
0.545	36.08	0.42	46.00	9.92	Ave.
4.765	45.77	0.51	56.00	10.23	QP
3.850	35.63	0.50	46.00	10.37	Ave.
0.545	43.26	0.42	56.00	12.74	QP
2.960	32.96	0.49	46.00	13.04	Ave.
3.815	42.68	0.50	56.00	13.32	QP
2.170	32.56	0.48	46.00	13.44	Ave.
5.405	36.52	0.52	50.00	13.48	Ave.
5.430	45.10	0.52	60.00	14.90	QP
2.960	41.05	0.49	56.00	14.95	QP
2.170	40.60	0.48	56.00	15.40	QP

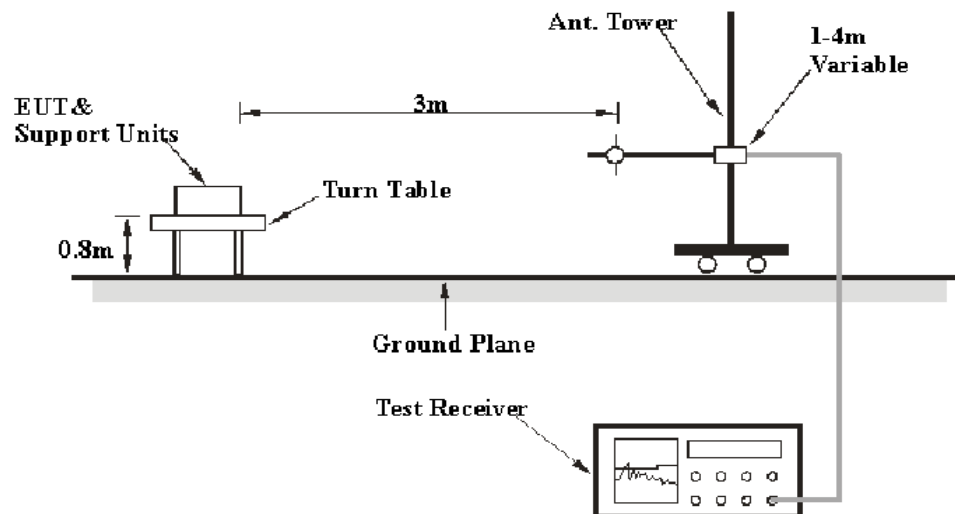
FCC §15.109 - RADIATED EMISSIONS

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 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 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:

<i>Frequency</i>	<i>RBW</i>	<i>VBW</i>	<i>IF BW</i>	<i>Detection</i>
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

* **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:

4.24 dB at 132.8200 MHz in the **Vertical** polarization for USB downloading.

Test Data

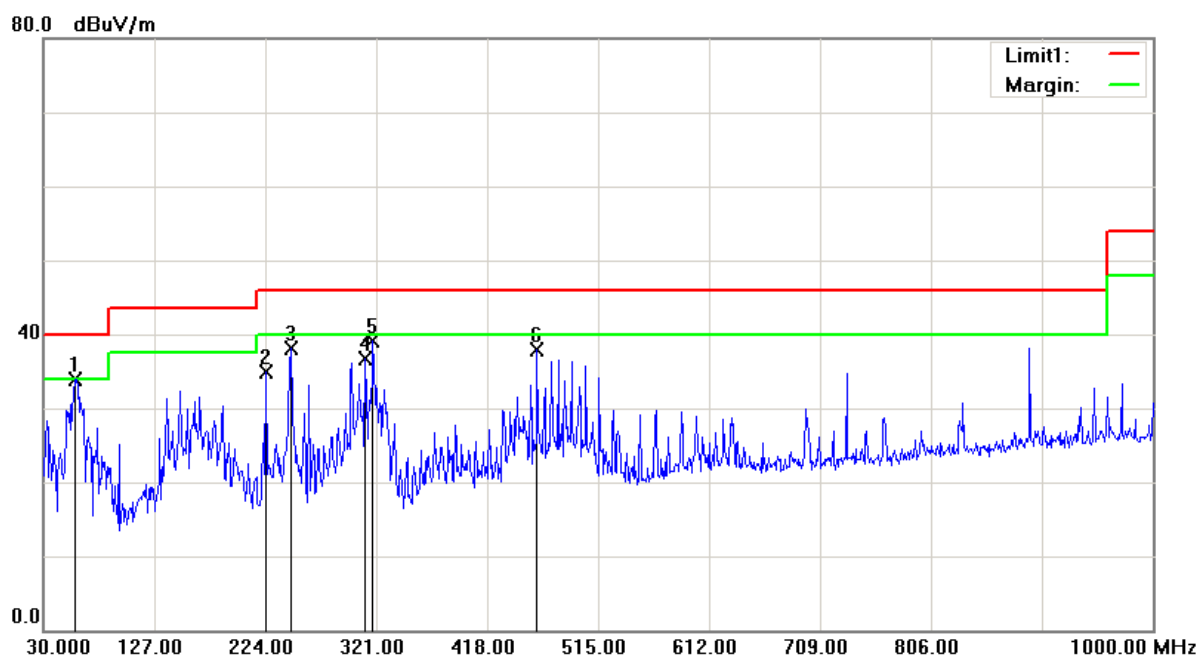
Environmental Conditions

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

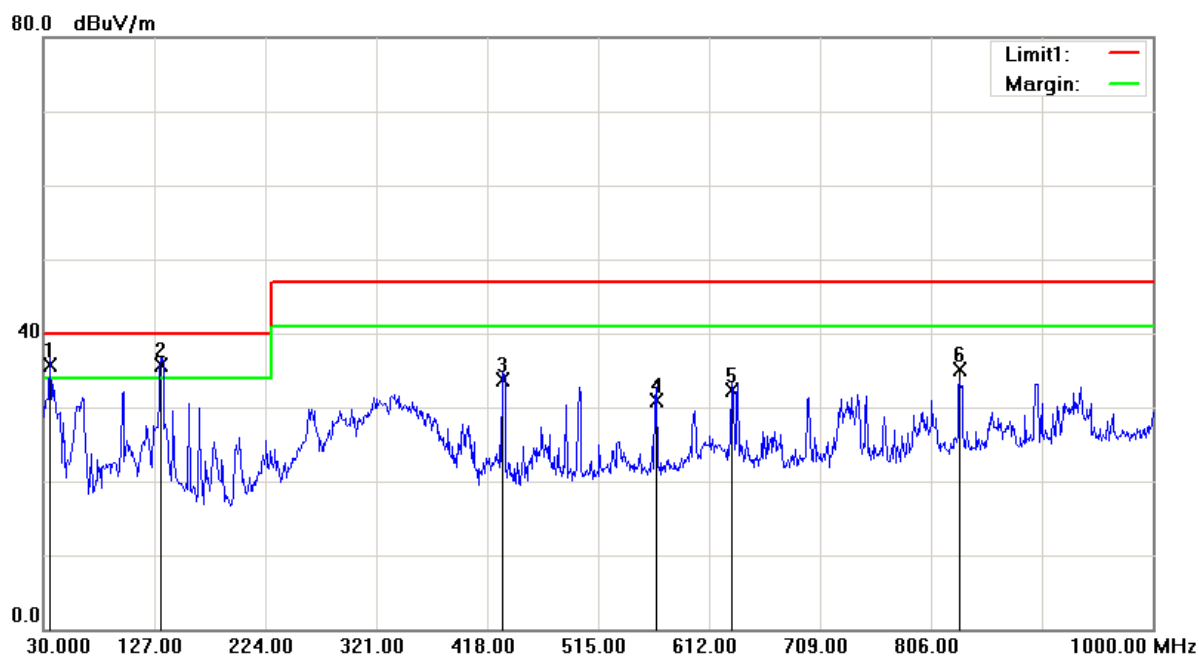
The testing was performed by Bin Jiang on 2012-04-27.

EUT Operation Mode: USB downloading

Horizontal



Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
58.1300	47.00	QP	-13.01	33.99	40.00	6.01
318.0900	44.13	QP	-4.99	39.14	46.00	6.86
246.3100	46.08	QP	-7.88	38.20	46.00	7.80
461.6500	40.47	QP	-2.63	37.84	46.00	8.16
311.3000	42.65	QP	-5.85	36.80	46.00	9.20
224.9700	43.44	QP	-8.44	35.00	46.00	11.00

Vertical

Frequency (MHz)	Reading (dBμV)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
132.8200	42.10	QP	-6.34	35.76	40.00	4.24
35.8200	38.62	QP	-2.89	35.73	40.00	4.27
831.2200	33.21	QP	1.86	35.07	47.00	11.93
431.5800	37.14	QP	-3.40	33.74	47.00	13.26
632.3700	32.67	QP	-0.34	32.33	47.00	14.67
566.4100	32.09	QP	-1.27	30.82	47.00	16.18

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