Lab Code: 200707-0

FCC PART 15B

MEASUREMENT AND TEST REPORT

For

Verykool USA Inc.

4350 Executive Dr. #100, San Diego, CA 92121, USA

FCC ID: WA6R13

Report Type:	Product Type:
Original Report	GSM/GPRS Quad-Band Mobile Phone

Test Engineer:	Jimmy Xiao
Report Number:	RDG11032101
Report Date:	2011-04-18
Reviewed By:	Merry Zhao EMC Engineer
Prepared By:	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

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Verykool USA Inc*'s product, model number: *R13 (FCC ID: WA6R13)* or the "EUT" as referred to in this report is a *GSM/GPRS Quad-Band Mobile phone*, which measures approximately: 11.0 cm (L) x 5.0 cm (W) x 1.4 cm (H), rated input voltage: DC 3.7 V battery.

** All measurement and test data in this report was gathered from production sample serial number: 1103017 (Assigned by BACL, Shenzhen). The EUT was received on 2011-03-21.*

Objective

This Type approval 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 compliance with FCC Part 15 Class B.

Related Submittal(s)/Grant(s)

FCC Part 22H&24E and FCC Part 15.247 submissions with FCC ID: WA6R13

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in 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 a National Institute of Standards and Technology (NIST) accredited laboratory, under the 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	FCC ID
DELL	Motherboard	OWC297	CN-OWC297-70821-566-02BR	DOC
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E8NBM	DOC
Seagate	Hard Disk	ST340014A	5JXK3NAD	DOC
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02OZ	DOC
Lite-ON	CD-Rom	LTN-489S	N/A	DOC
Intel	CPU	Celeron D-2533	N/A	N/A
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700	N/A
Intel	Ethernet	PRO 10/100 VE	N/A	DOC

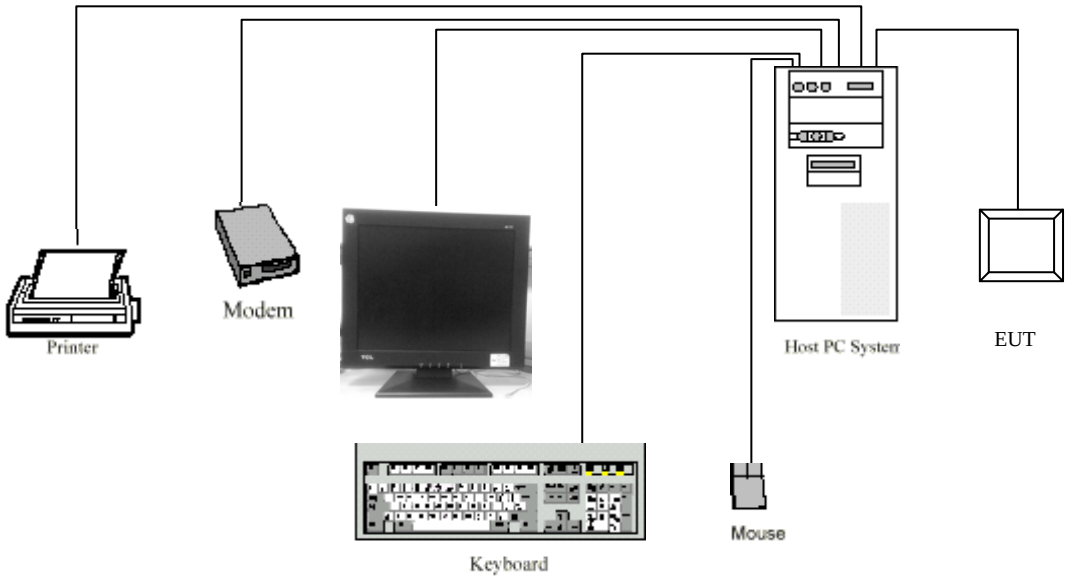
Local Support Equipment List and Details

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

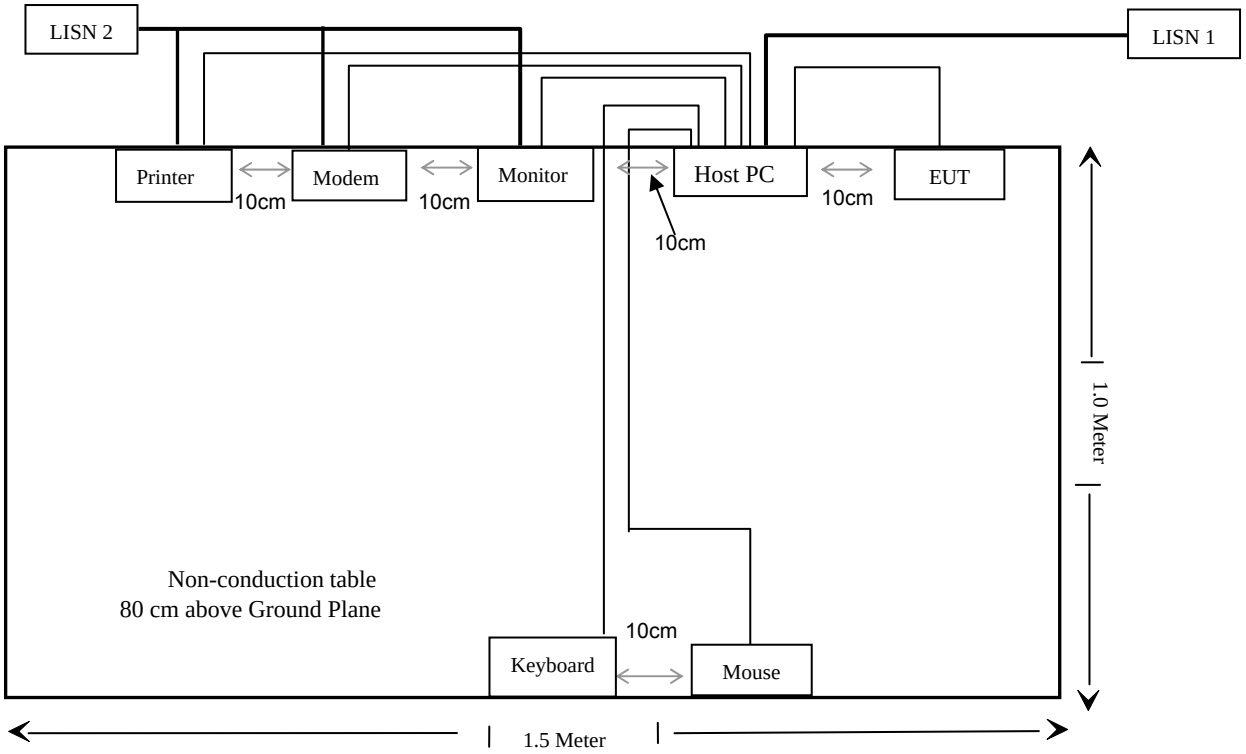
External I/O Cable

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
Unshielded Detachable Power Cable	1.5	PC	LISN
Unshielded Detachable USB Cable	1.0	EUT	PC

Configuration of Test Setup



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 Spurious Emissions	Compliance

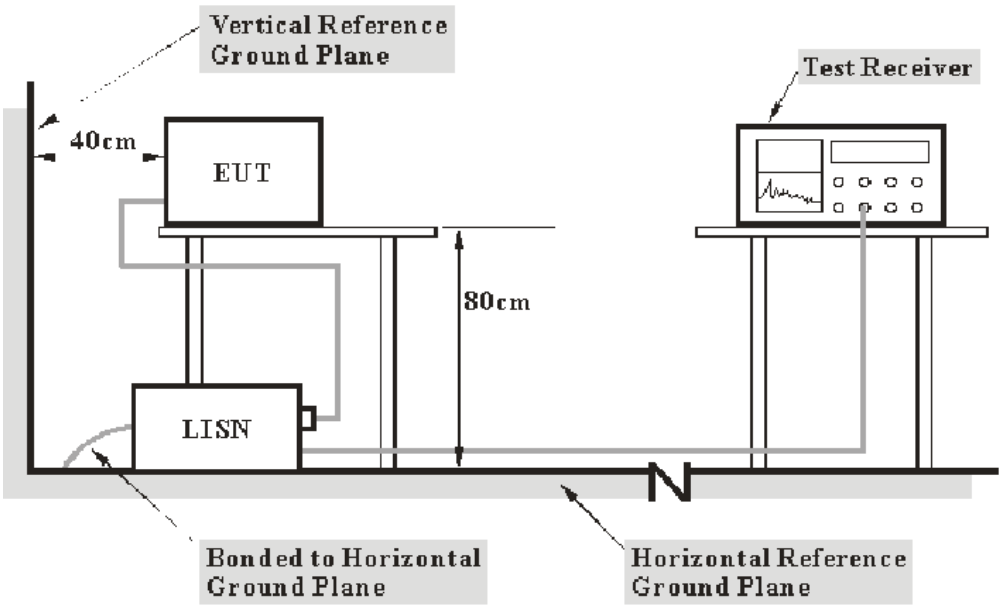
FCC §15.107 – AC LINE CONDUCTED EMISSIONS

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 (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 B/W***
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 conncected 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
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:

10.54 dB at **1.515 MHz** in the **Neutral** conducted mode for USB charging mode

Test Data

Environmental Conditions

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

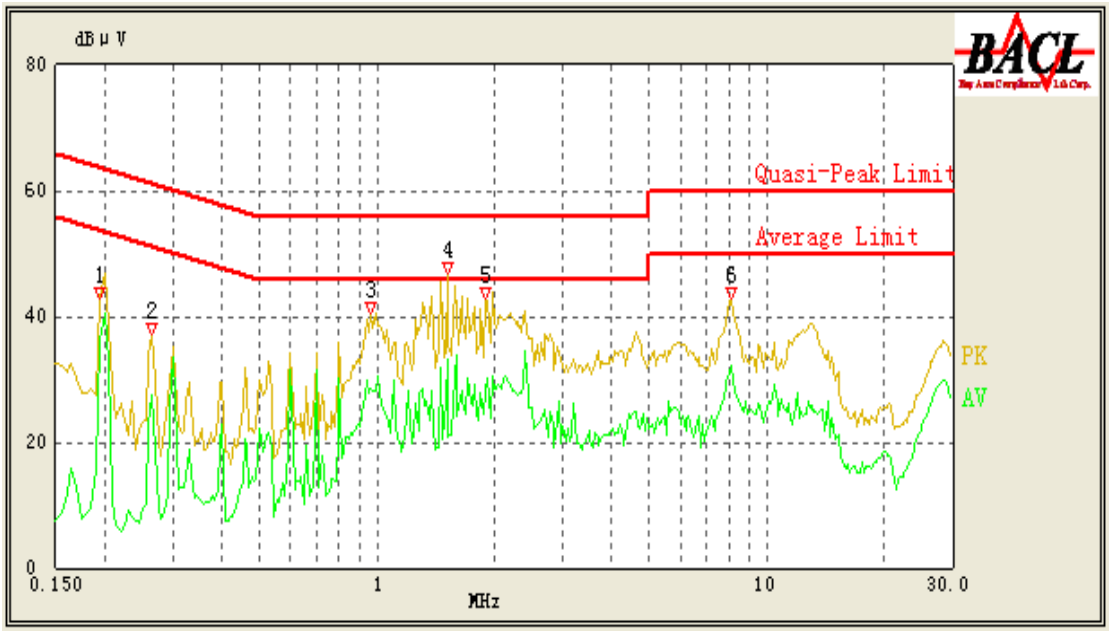
The testing was performed by Jimmy Xiao on 2011-04-07.

Test Mode: USB Charging

AC 120V/60 Hz, Line

Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	**Corrected Result (dBμV)**	**Correction Factor (dB)**	**Limit (dBμV)**	**Margin (dB)**	**Remark (PK/ QP/Ave.)**
1.510	44.47	10.15	56.00	11.53	QP
1.000	34.33	10.10	46.00	11.67	Ave.
1.505	33.94	10.15	46.00	12.06	Ave.
1.445	43.43	10.14	56.00	12.57	QP
1.445	32.94	10.14	46.00	13.06	Ave.
8.115	36.69	10.10	50.00	13.31	Ave.
1.000	38.71	10.10	56.00	17.29	QP
0.195	36.90	10.07	54.71	17.81	Ave.
8.115	38.43	10.10	60.00	21.57	QP
0.195	38.79	10.07	64.71	25.92	QP
0.260	25.63	10.03	52.86	27.23	Ave.
0.260	29.18	10.03	62.86	33.68	QP

AC 120V/60 Hz, Neutral



Conducted Emissions			FCC Part 15.107, Class B		
Frequency (MHz)	**Corrected Result (dBµV)**	**Correction Factor (dB)**	**Limit (dBµV)**	**Margin (dB)**	**Remark (PK/ QP/Ave.)**
1.515	45.46	10.15	56.00	10.54	QP
1.515	33.26	10.15	46.00	12.74	Ave.
0.965	28.66	10.11	46.00	17.34	Ave.
8.065	32.28	10.10	50.00	17.72	Ave.
1.905	28.16	10.19	46.00	17.84	Ave.
0.195	36.29	10.07	54.71	18.42	Ave.
1.905	36.24	10.19	56.00	19.76	QP
0.965	35.00	10.11	56.00	21.00	QP
0.195	41.43	10.07	64.71	23.28	QP
0.265	27.35	10.02	52.71	25.36	Ave.
8.075	32.56	10.10	60.00	27.44	QP
0.265	34.33	10.02	62.71	28.38	QP

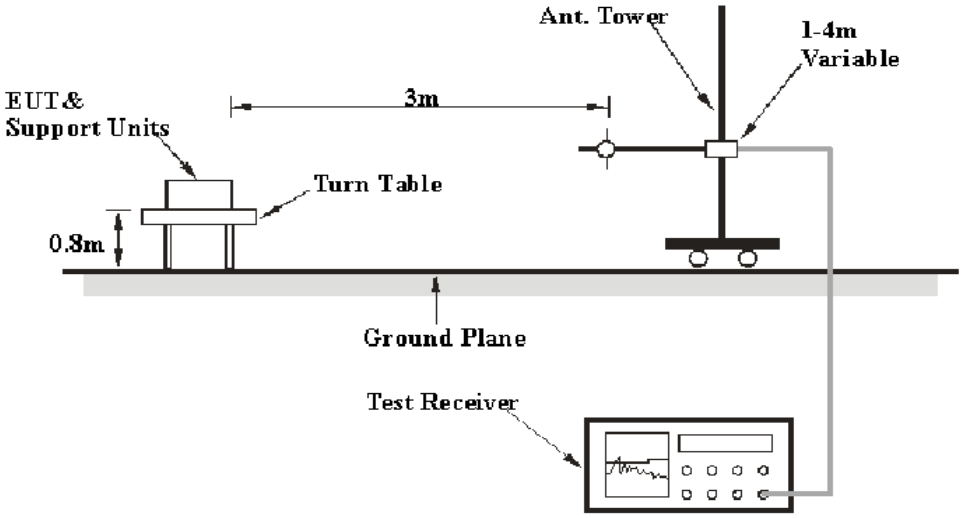
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

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 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	***RB/W***	***VB/W***	***IF B/W***	***Detection***
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz	Quasi-peak

Test Procedure

For the radiated emissions test, the host PC and all the other relevant equipments were connected to AC floor outlet.

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

All data was recorded in the Quasi-peak detection mode from 30 MHz to 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 7 dB means the emission is 7 dB 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
HP	Amplifier	HP8447E	1937A01046	2010-08-02	2011-08-02
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2010-11-11	2011-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2010-07-05	2011-07-04

*** 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:

3.6 dB at **85.892250 MHz** in the **Vertical** polarization for USB charging mode

23.8 dB at **30.748750 MHz** in the **Vertical** polarization for Media playing mode

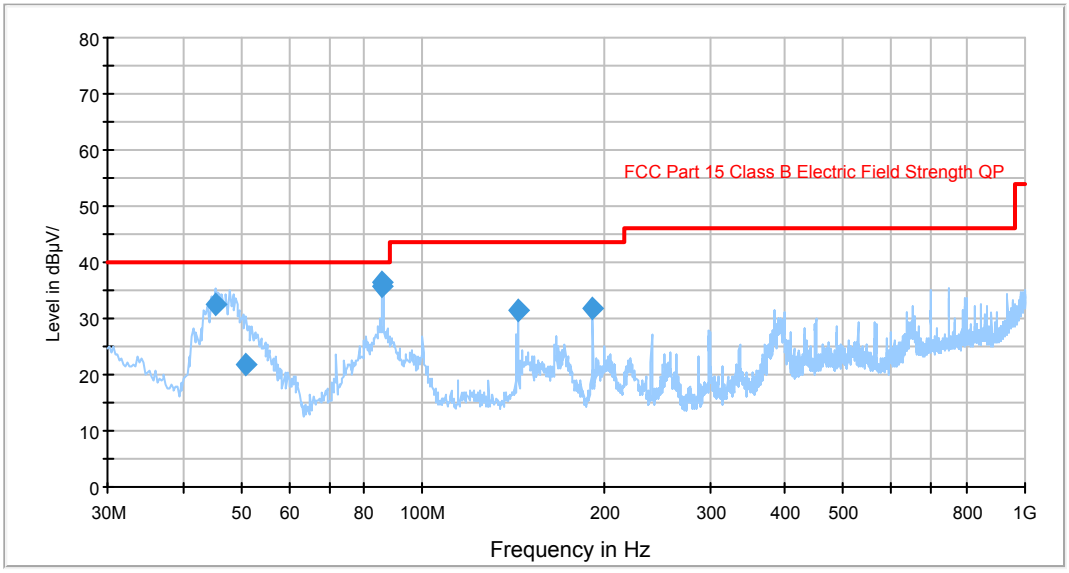
Test Data

Environmental Conditions

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

The testing was performed by Jimmy Xiao on 2011-04-09.

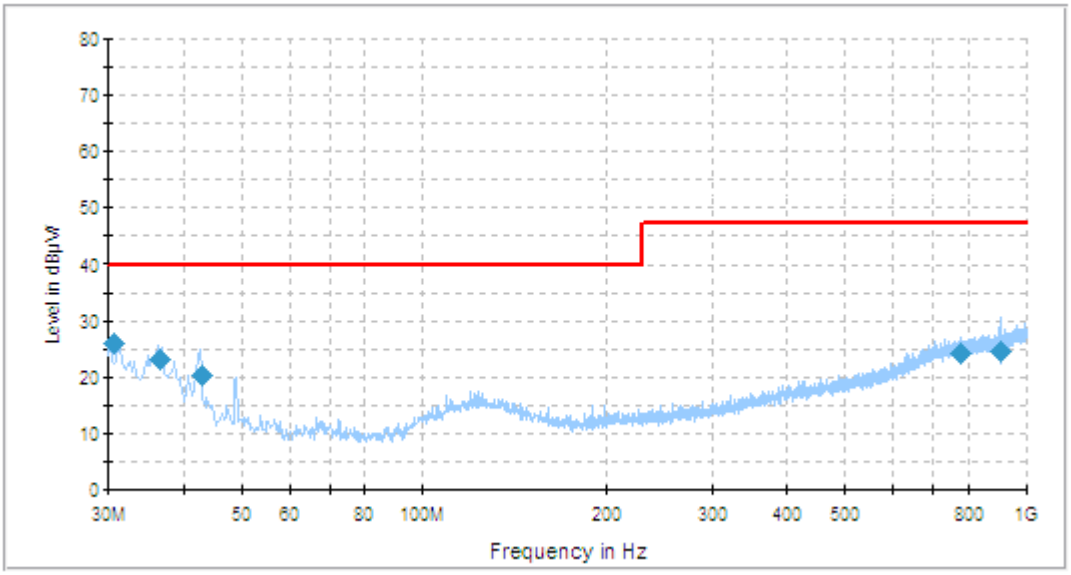
Test Mode: USB Charging



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
85.892250	36.4	161.0	V	253.0	-17.8	40.0	3.6*
85.876750	35.6	116.0	V	268.0	-17.8	40.0	4.4
45.337250	32.4	105.0	V	283.0	-15.3	40.0	7.6
191.995750	31.6	133.0	H	89.0	-14.7	43.5	11.9
143.980500	31.5	174.0	H	60.0	-13.5	43.5	12.0
50.852500	21.7	116.0	V	254.0	-17.4	40.0	18.3

**Within measurement uncertainty!*

Test Mode: Media Playing



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Position (degree)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
30.748750	26.2	328.0	V	195.0	-5.9	40.0	23.8
903.292000	24.6	110.0	H	190.0	-0.7	47.0	26.4
36.721750	23.2	100.0	V	0.0	-10.0	40.0	26.8
777.987500	24.1	368.0	H	156.0	-2.1	47.0	26.9
42.958250	20.2	123.0	V	233.0	-13.9	40.0	29.8

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