NVLAP LAB CODE 200707-0

FCC PART 15 SUBPART B

MEASUREMENT AND TEST REPORT

For

Sakar Internation Inc.

195 Carter Drive, Edison, New Jersey 08817, USA

FCC ID: XKK25012AND25010

Report Type: Original Report	**Product Type:** Digital Camera

Test Engineer:	Gavin Niu
Report Number:	RSZ09061902
Report Date:	2009-08-18
Reviewed By:	Lisa Zhu EMC Engineer
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Sakar Internation Inc. 's* product, model number: *25012(FCC ID: XKK25012AND25010) o*r the "EUT" as referred to in this report is a *Digital Camera*, which measures approximately: 13.0 cm L x 8.0 cm W x 2.0 cm H, input voltage: DC 5V (from PC).

*Note: The series products, model 25012/25010, we select 25012 to test, there is no electrical change has been made to the equipment, the difference between them is the model number only, which was explained in the attached Declaration Letter.

** All measurement and test data in this report was gathered from production sample serial number: 0906075 (Assigned by BACL, Shenzhen). The EUT was received on 2009-06-19.*

Objective

The following test report is prepared on behalf of *Sakar Internation Inc.* in accordance with Part 2, Subpart J, and 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)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

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 November 21, 2007. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

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 typical fashion (as normally used by a typical user).

EUT Exercise Software

CT3.

Special Accessories

The special accessories were supplied by Bay Area Compliance Laboratories Corp. (Shenzhen).

Equipment Modifications

No modification was made to the unit tested.

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	Motherboard	OWC297	CN-OWC297-70821-564-00NI	DoC
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E-80BM	DoC
Seagate	Hard Disk	ST340014A	5JXK3GXE	DoC
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02P0	DoC
Lite-ON	CD-Rom	LTN-489S	N/A	DoC
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700	N/A
Intel	CPU	Celeron D-2533	N/A	N/A
Intel	Ethernet	PRO 10/100 VE	N/A	DoC

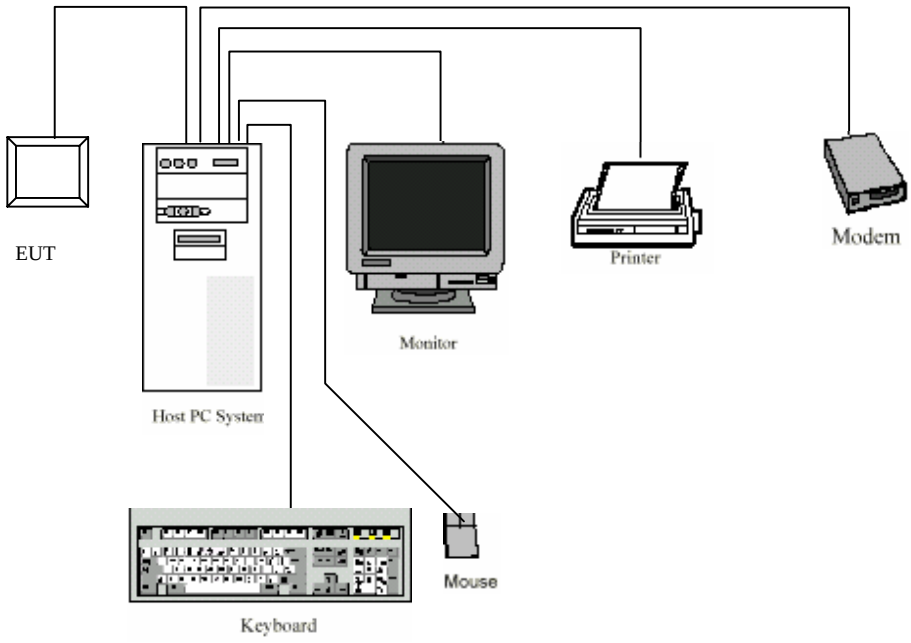
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	PC	DELL 170L	CN-0TC670-70821-560-F4Q6	DoC
DELL	Keyboard	SK-8110	CN07N244-71616-56A-1B1E	DoC
DELL	Mouse	M071KC	520027907	DoC
DELL	LCD Monitor	1505FP	Y4287-7168-571-GBSH	DoC
HP	Laser Jet5L	C3941A	JPTVOB2337	DoC
SAST	Modem	AEM-2100	0293	DoC

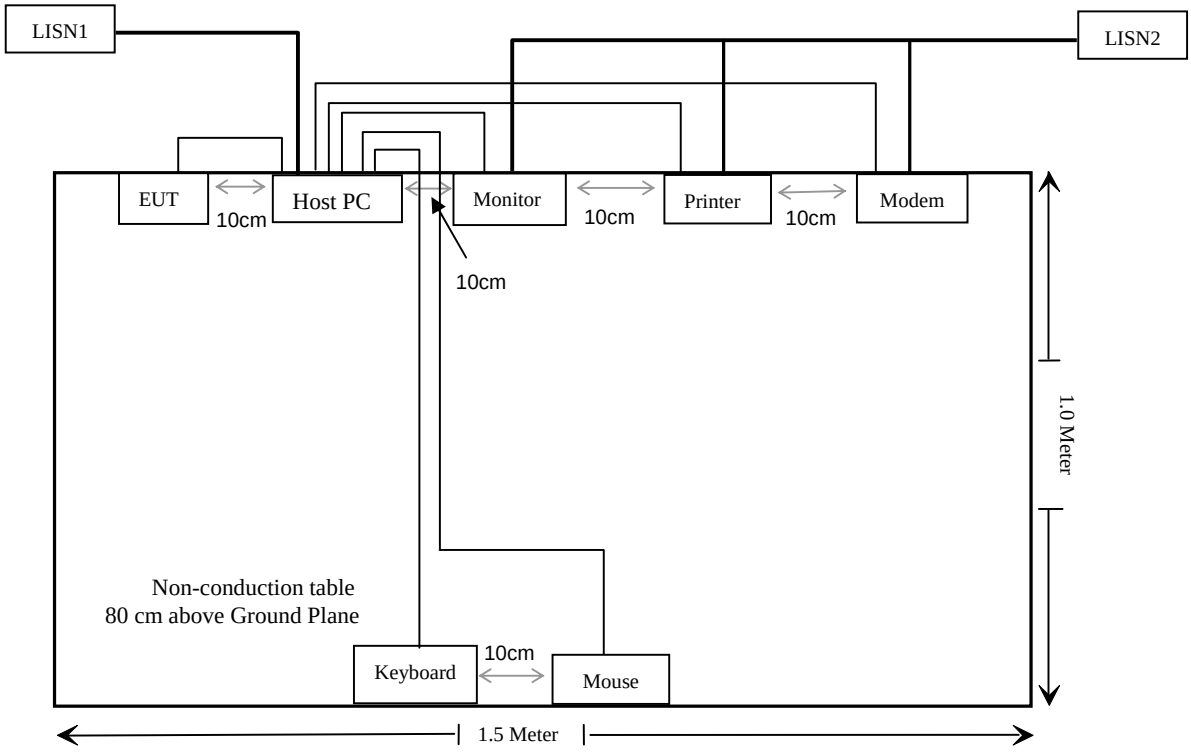
External I/O Cable

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 USB Cable	0.4	PC	EUT

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST REPORT

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant*

Note: * Within measurement uncertainty.

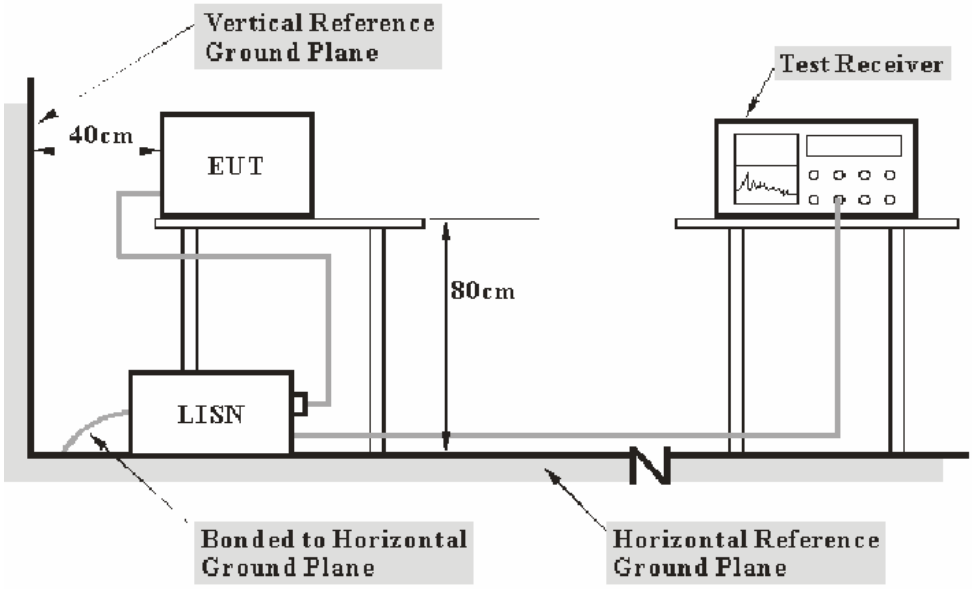
FCC §15.107 - CONDUCTED EMISSIONS

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.

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 C63.4-2003 measurement procedure. The specification used was with the FCC Part 15 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 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 Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
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*
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2009-04-28	2010-04-27
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2009-04-28	2010-04-27

***** Com-Power's LISN were used as the supporting equipment.
*** 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 Procedure

During the conducted emission test, the host PC was connected to the outlet of the first LISN, and the modem, monitor, and printer were connected to 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 Class B, with the worst margin reading of:

9.70 dB at **0.180 MHz** in the **Line** conductor mode.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54 %
ATM Pressure:	100.0 kPa

The testing was performed by Gavin Niu on 2009-07-13.

Test Mode: Downloading

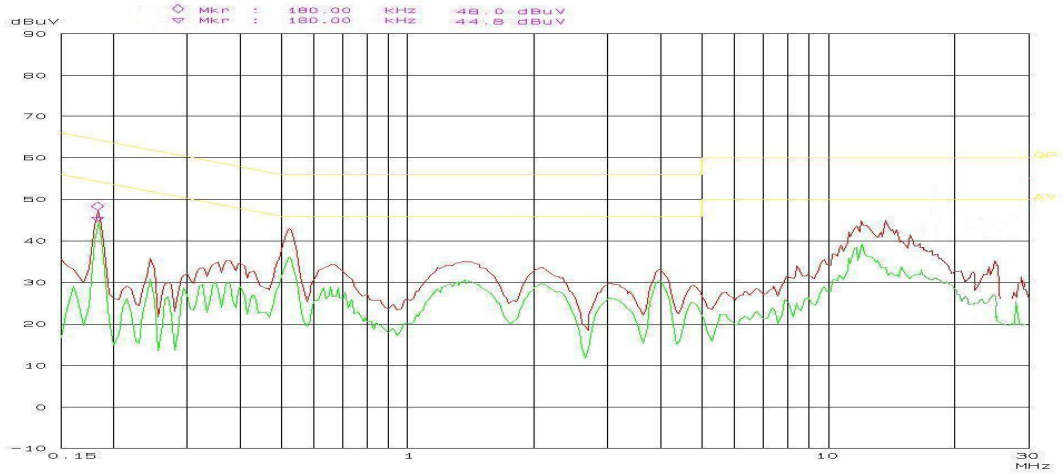
Line Conducted Emissions				FCC Part15.107 Class B	
Frequency (MHz)	**Amplitude (dBμV)**	**Detector (QP/AV)**	**Conductor (Line/Neutral)**	**Limit (dBμV)**	**Margin (dB)**
0.180	44.80	AV	Line	54.50	9.70
0.520	35.80	AV	Line	46.00	10.20
0.525	35.70	AV	Neutral	46.00	10.30
0.180	43.50	AV	Neutral	54.50	11.00
11.550	39.00	AV	Line	50.00	11.00
0.520	42.80	QP	Line	56.00	13.20
0.525	42.60	QP	Neutral	56.00	13.40
12.505	35.70	AV	Neutral	50.00	14.30
11.550	45.60	QP	Line	60.00	14.40
13.756	45.60	QP	Line	60.00	14.40
18.702	35.60	AV	Neutral	50.00	14.40
1.340	30.40	AV	Neutral	46.00	15.60
1.395	30.40	AV	Line	46.00	15.60
2.045	29.90	AV	Line	46.00	16.10
12.505	43.70	QP	Neutral	60.00	16.30
0.180	48.00	QP	Line	64.50	16.50
18.768	43.00	QP	Neutral	60.00	17.00
13.756	32.50	AV	Line	50.00	17.50
2.011	28.20	AV	Neutral	46.00	17.80
0.180	46.10	QP	Neutral	64.50	18.40
1.340	35.00	QP	Neutral	56.00	21.00
1.395	34.90	QP	Line	56.00	21.10
2.045	34.00	QP	Line	56.00	22.00
2.011	33.30	QP	Neutral	56.00	22.70

Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

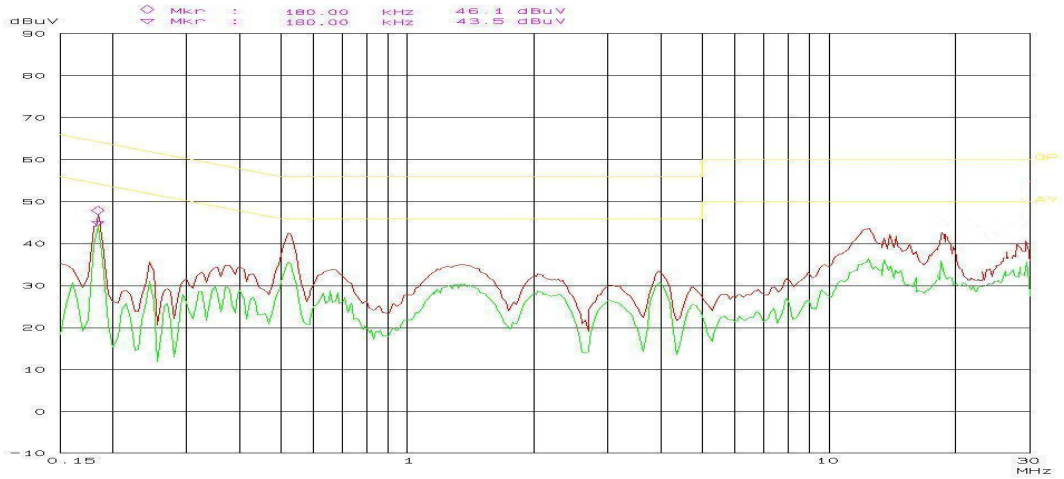
Conducted Emission
FCC Part 15 Class B

EUT:	Digital Camera M/N: 25012
Manuf:	Sakar Internation Inc.
Op Cond:	Downloading
Operator:	Gavin
Test Spec:	AC 120V/60Hz L
Comment:	Temp: 25 Hum: 54% BACL



Conducted Emission
FCC Part 15 Class B

EUT:	Digital Camera M/N: 25012
Manuf:	Sakar Internation Inc.
Op Cond:	Downloading
Operator:	Gavin
Test Spec:	AC 120V/60Hz N
Comment:	Temp: 25 Hum: 54% BACL



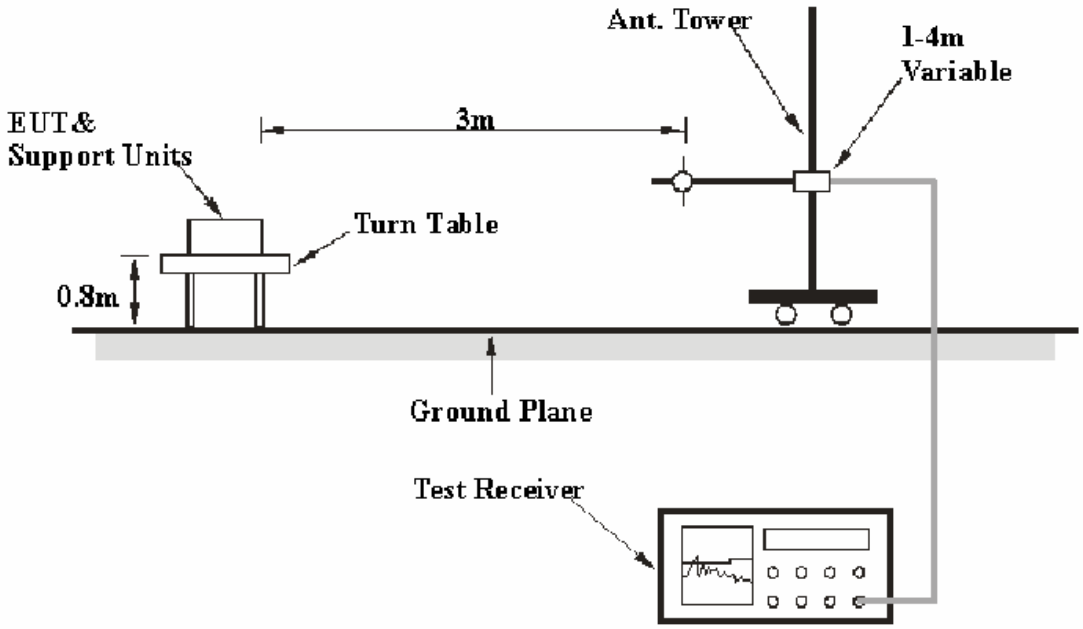
FCC §15.109 - RADIATED EMISSIONS

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 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.

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC Part 15 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	***RB/W***	***VB/W***	***IF B/W***
30 MHz-1 GHz	100 kHz	300 kHz	120 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2008-11-07	2009-11-06
HP	Amplifier	HP8447E	1937A01046	2008-08-02	2009-08-02
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2009-05-05	2010-05-04

*** 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 Procedure

For the radiated emissions test, the host PC and the modem, monitor, and printer 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.

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 for CLASS B. 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 Part 15 CLASS B, with the worst margin reading of:

2.1 dB at **324.022500 MHz** in the **Horizontal** polarization.

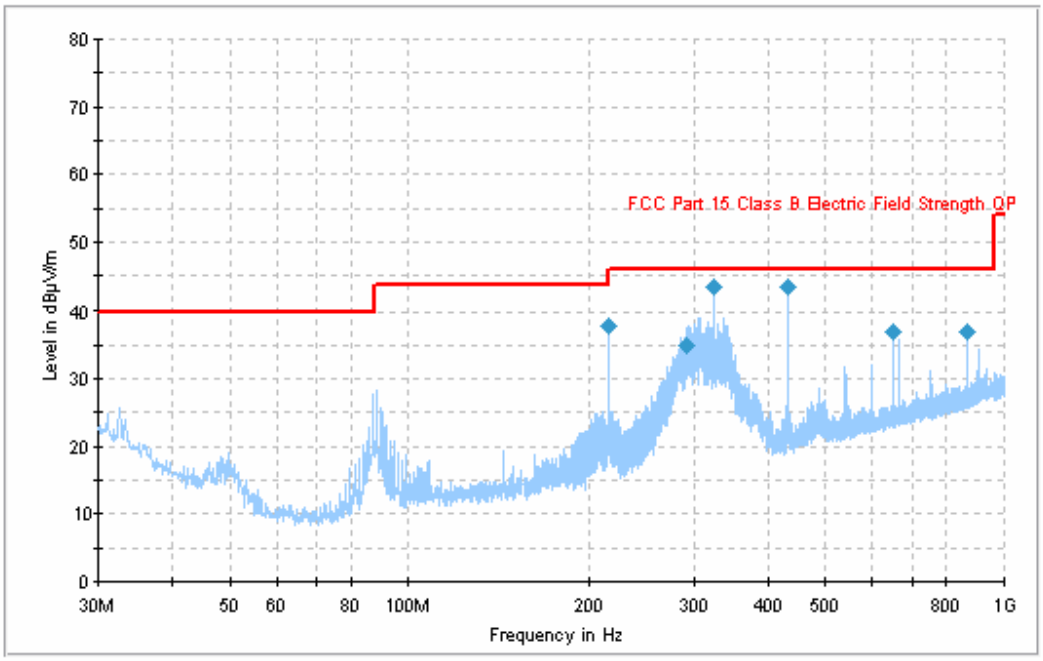
Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54 %
ATM Pressure:	100.0 kPa

The testing was performed by Gavin Niu on 2009-07-13.

Test mode: Downloading



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Test Antenna		Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
		Height (cm)	Polarity (H/V)				
324.022500	43.9	116.0	H	228.0	-13.7	46.0	2.1*
432.027500	43.3	106.0	H	264.0	-11.8	46.0	2.7*
216.024875	37.7	156.0	H	21.0	-17.2	46.0	8.3
864.071375	37.0	107.0	H	230.0	-4.3	46.0	9.0
292.116812	34.9	109.0	H	205.0	-14.7	46.0	11.1
648.054438	37.1	109.0	V	280.0	-7.7	46.0	18.9

Note: * Within measurement uncertainty.

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