

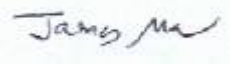

# FCC PART 24 TYPE APPROVALS EMI MEASUREMENT AND TEST REPORT

For

**Amoi Mobile Co., Ltd**

102 Xianguang Road, Haicang, Xiamen, Fujian, China

**FCC ID: WGLWMA8709**

<b>This Report Concerns:</b> <input checked="" type="checkbox"/> Original Report		<b>Equipment Type:</b> Dual mode GSM/WCDMA Mobile Phone with Bluetooth
<b>Test Engineer:</b>	James Ma 	
<b>Report No.:</b>	R0806119-24	
<b>Report Date:</b>	2008-06-27	
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\* This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk “\*”

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## 1 - GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

The Amoi Mobile Co., Ltd.'s product, FCC ID: WGLWMA8709 or the "EUT" as referred to in this report is a PCS 1900 Mobile Phone with Bluetooth. Amoi Mobile Co., Ltd.'s WMA8709 uses the powerful Qualcomm 6260 multimedia platform. The screen is 2.2-inch QVGA screen (240 x320 pixels), support for 200k color at most; two million pixel CMOS camera, support full-screen photo; support T card; support for MP3 music player; support GPRS and EDGE wireless Internet functions; support applications such as Bluetooth and java games; support function of USB2.0 full speed, U Disk; it also has more practical tools, such as e-books, calendar, alarm clock, etc.

### 1.2 Mechanical Description

Approximate measurement is: 10.20cm (L) x 4.60cm (W) x 1.30cm (H).

*\* The test data gathered are from typical production sample, serial number: B1851, provided by the manufacturer.*

### 1.3 EUT Photo



*Please see additional photos in Exhibit C*

## 1.4 Objective

This type approval report is prepared on behalf of Amoi Mobile Co., Ltd. in accordance with Part 2, Subpart J, and Part 24 Subpart E of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for RF Output Power, Modulation Characteristic, Occupied Bandwidth, Spurious Emissions at Antenna Terminal, Field Strength of Spurious Radiation, Frequency Stability, Band Edge, and Conducted and Radiated margin.

## 1.5 Related Submittal(s)/Grant(s)

No Related Submittals

## 1.6 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 24 Subpart E - PCS

Applicable Standards: TIA EIA 98-C, TIA/EIA603-C, ANSI C63.4-2003.

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

## 1.7 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the 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 values ranging from  $\pm 2.0$  dB for Conducted Emissions tests and  $\pm 4.0$  dB for Radiated Emissions tests are the most accurate estimates pertaining to uncertainty of EMC measurements at BACL Corp.

Detailed instrumentation measurement uncertainties can be found in BACL Corp. report QAP-018.

## 1.8 Test Facility

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test site at BACL Corp. has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). 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 11, 1997 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the test methods and procedures set forth in ANSI C63.4-2003 & TIA/EIA-603.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: R-2463 and C-2698. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL Corp. is a National Institute of Standards and Technology (NIST) accredited laboratory under the National Voluntary Laboratory Accredited Program (Lab Code 200167-0). The current scope of accreditations can be found at <http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm>.

## 2 - SYSTEM TEST CONFIGURATION

### 2.1 Justification

The EUT was configured for testing according to TIA/EIA-603-C.

The final qualification test was performed with the EUT operating at normal mode.

### 2.2 Equipment Modifications

No modifications were made to the EUT.

### 2.3 Power Supply and Line Filters

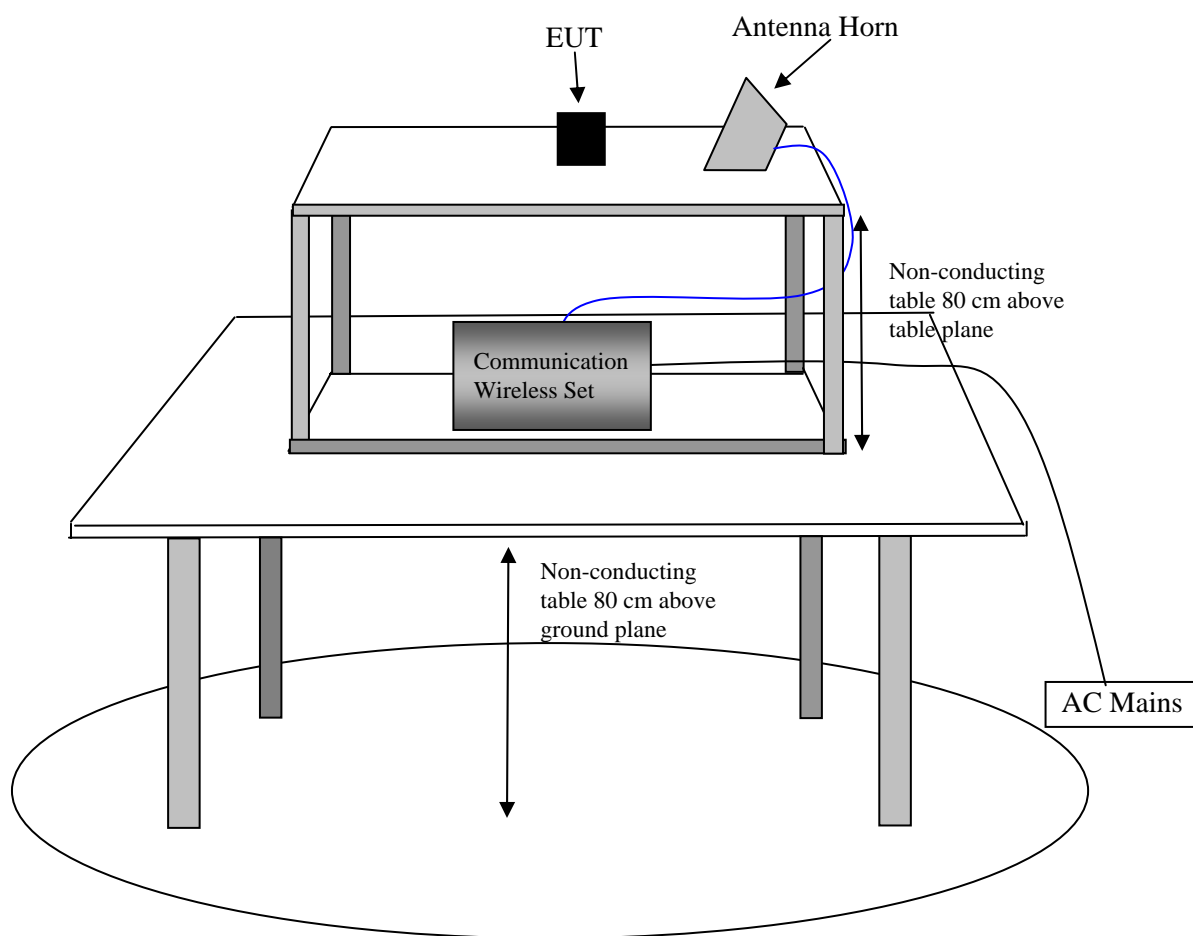
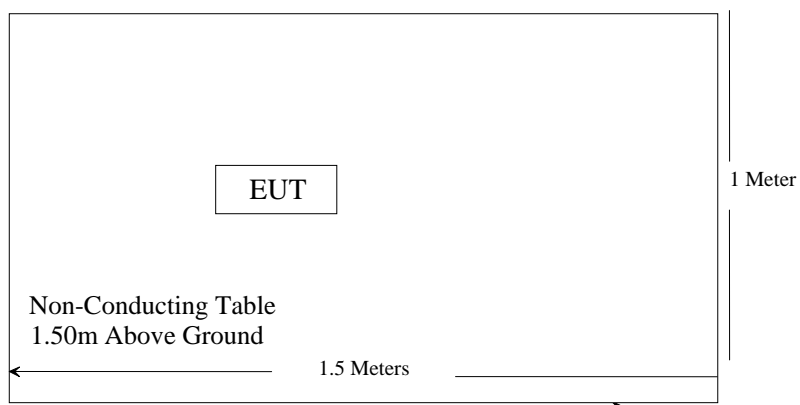
Manufacturer	Description	Model	Serial Number
Amoi	AC Adaptor	TM350-UK-10PIN	5007

### 2.4 Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Agilent	Wireless Communications Test Set	8960 Series 10 E5515C	GB44051221
Mini-Circuits	Splitter	ZFRSC-42	SF874700404
Midwest Microwave	10dB Attenuator Pad	ATT-0263-10-000-02	N/A

### 2.5 Interface Ports and Cabling

Cable Description	Length (m)	From	To
RF cable	0.30	Communications Test Set	Splitter
RF cable	0.30	Antenna Port on EUT	Splitter

**Test setup Block Diagram for EIRP & Radiated Emissions Tests****Test setup Block Diagram for Receive Radiated Emissions Tests**



### 3 - SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§ 2.1047	Modulation Characteristics	Compliant
§2.1093	RF Exposure	Compliant Please See SAR Report R0806119-SAR
§ 2.1046, § 24.232	RF Output Power	Compliant
§ 2.1053 § 24.238	Spurious Radiated Emissions	Compliant
§ 15.109	Receive Radiated Emissions	Compliant
§ 15.107	Conducted Emissions	Compliant
§ 2.1049 § 24.238	26 dB Occupied Bandwidth	Compliant
§ 2.1053, § 24.238	Spurious Emissions at Antenna Terminals	Compliant
§ 2.1055 § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant
§24.238	Band Edge	Compliant

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## **4 - §2.1047 - MODULATION CHARACTERISTIC**

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### **4.1 Applicable Standard**

According to FCC § 2.1047(d), part 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

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## **5 - §1.1307(b) (1) & §2.1093 - RF EXPOSURE**

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### **5.1 Applicable Standard**

CFR47 §1.1310 and §2.1093.

### **Test Result**

**Compliant:** The EUT is a hand portable device and thus requires SAR evaluation, please refer to BACL SAR Report R0806119-SAR for measurement and testing details.

## 6 - §2.1046, §24.232 – RF OUTPUT POWER

### 6.1 Applicable Standard

According to FCC §2.1046 and §24.232 (c), in no case may the peak output power of a Mobile / portable station transmitter exceed 2 watts EIRP.

### 6.2 Test Procedure

#### Conducted:

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

#### EIRP:

TIA 603-C section 2.2.17.2

#### Environmental Conditions

<b>Temperature:</b>	20° C
<b>Relative Humidity:</b>	58%
<b>ATM Pressure:</b>	1018mbar

\* The testing was performed by James Ma on 2008-06-24.

### 6.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2008-05-19
Agilent	Wireless Communications Test Set	8960 Series 10 E5515C	GB44051221	2007-08-08
HP	Amplifier, Pre, Microwave	8449B	3147A00400	2007-11-02
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2007-06-07*
A.R.A.	Antenna, Horn	DRG-118/A	1132	2007-06-18*
HP	Generator, Signal	83650B	3614A00276	2008-05-28

\* 2 yrs cycle

\* **Statement of Traceability:** BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

## 6.4 Test Results

### Conducted Output Power

Output Power ( dBm )		
Low Channel (1850.2 MHz)	Middle Channel (1880.0 MHz)	High Channel (1909.8 MHz)
29.86	29.79	29.64

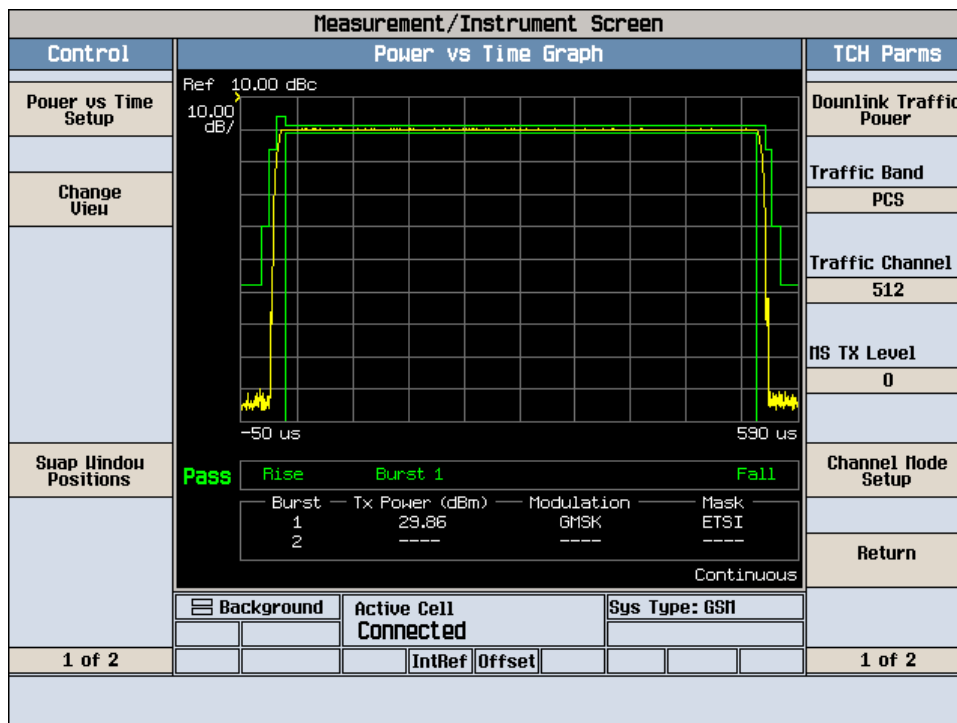
### EIRP – Radiated Output Power

Indicated		Table Angle (Degree)	Test Antenna		Substituted		Ant. Gain Correction (dB)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)		Height (m)	Polar (H/V)	Freq. (MHz)	Level (dBm)					
1909.80	93.20	150	2.2	H	1909.80	24.70	8.20	1.50	31.40	33	-1.60
1850.20	93.40	150	2.2	H	1850.20	23.60	8.20	1.50	30.30	33	-2.70
1880.00	93.70	150	2.2	H	1880.00	23.20	8.20	1.50	29.90	33	-3.10
1909.80	91.10	140	1.2	V	1909.80	22.20	8.20	1.50	28.90	33	-4.10
1850.20	91.20	140	1.2	V	1850.20	20.10	8.20	1.50	26.80	33	-6.20
1880.00	91.30	140	1.2	V	1880.00	20.00	8.20	1.50	26.70	33	-6.30

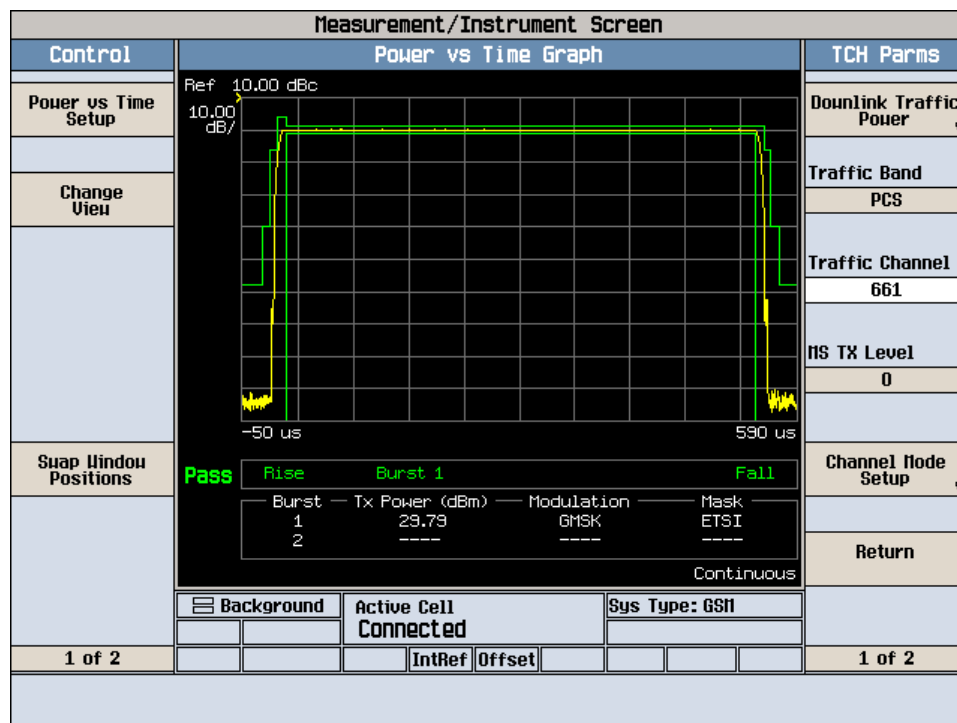
\*Note: Data Measured Without Pre-Amp

## Plots of Conducted Output Power

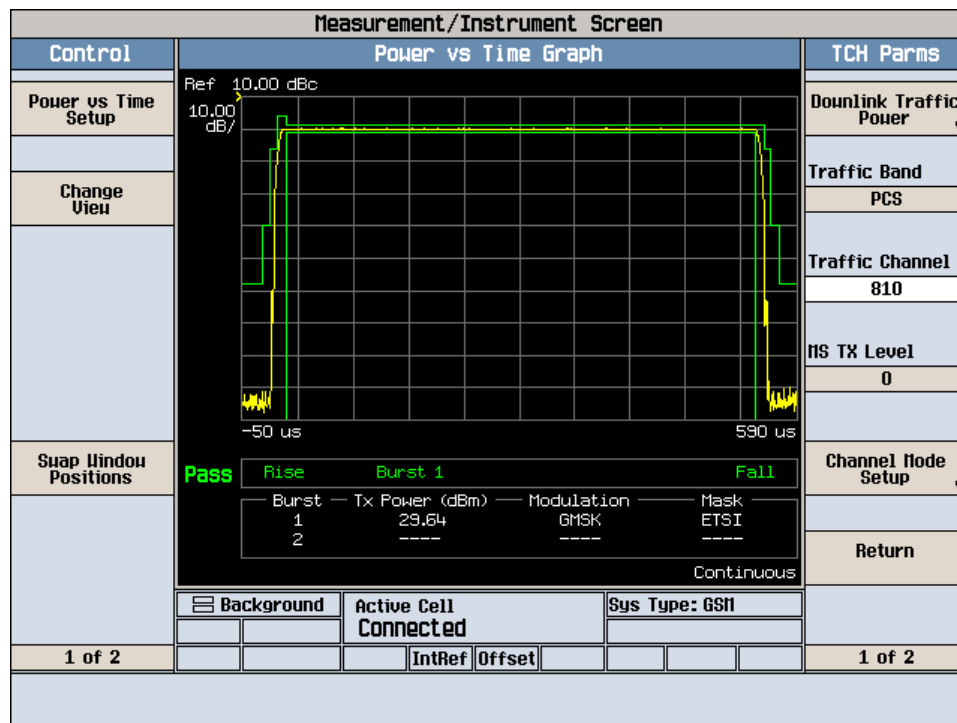
## Low Channel



## Middle Channel



## High Channel



## 7 - §2.1053 & §24.238 - SPURIOUS RADIATED EMISSIONS

### 7.1 Applicable Standard

Requirements: CFR 47, § 2.1053, § 24.238.

### 7.2 Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log<sub>10</sub> (power out in Watts)

#### Environmental Conditions

<b>Temperature:</b>	20° C
<b>Relative Humidity:</b>	55%
<b>ATM Pressure:</b>	1020mbar

\* The testing was performed by James Ma on 2008-06-24.

### 7.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2008-05-19
Agilent	Wireless Communications Test Set	8960 Series 10 E5515C	GB44051221	2007-08-08
HP	Amplifier, Pre, Microwave	8449B	3147A00400	2007-11-02
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	2007-06-07*
A.R.A.	Antenna, Horn	DRG-118/A	1132	2007-06-18*
HP	Generator, Signal	83650B	3614A00276	2008-05-28

\* 2 yrs cycle

\* **Statement of Traceability:** BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.



## 7.4 Test Result

Worst case reading as follows:

**-19.0 dB at 5640.00 MHz in the Horizontal Polarization**

30MHz -20GHz Middle Channel

Indicated		Table Angle (Degree)	Test Antenna		Substituted		Antenna Gain Correction	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Freq. (MHz)	Amp. (dBuV)		Height (Meter)	Polar (H/V)	Freq. (MHz)	Level (dBm)					
5640.00	37.60	140	1.8	H	5640.00	-38.20	10.60	4.40	-32.00	-13	-19.00
3760.00	47.30	170	1.8	V	3760.00	-51.40	10.40	3.90	-44.90	-13	-31.90
5640.00	40.80	140	1.5	V	5640.00	-55.40	10.60	4.40	-49.20	-13	-36.20
3760.00	44.90	160	2.4	H	3760.00	-57.00	10.40	3.90	-50.50	-13	-37.50
7520.00	39.40	180	1.6	V	7520.00	-56.10	9.90	4.50	-50.70	-13	-37.70
7520.00	37.20	140	1.9	H	7520.00	-57.20	9.90	4.50	-51.80	-13	-38.80

## 8 - §2.1049 & §24.238 - OCCUPIED BANDWIDTH

### 8.1 Applicable Standard

Requirements: CFR 47, Section 2.1049, and Section 24.238.

### 8.2 Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 30 kHz (Cellular /PCS) and the 26 dB & 99% bandwidth was recorded.

#### Environmental Conditions

<b>Temperature:</b>	20° C
<b>Relative Humidity:</b>	58%
<b>ATM Pressure:</b>	1018mbar

\* The testing was performed by James Ma on 2008-06-26.

### 8.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2008-05-19

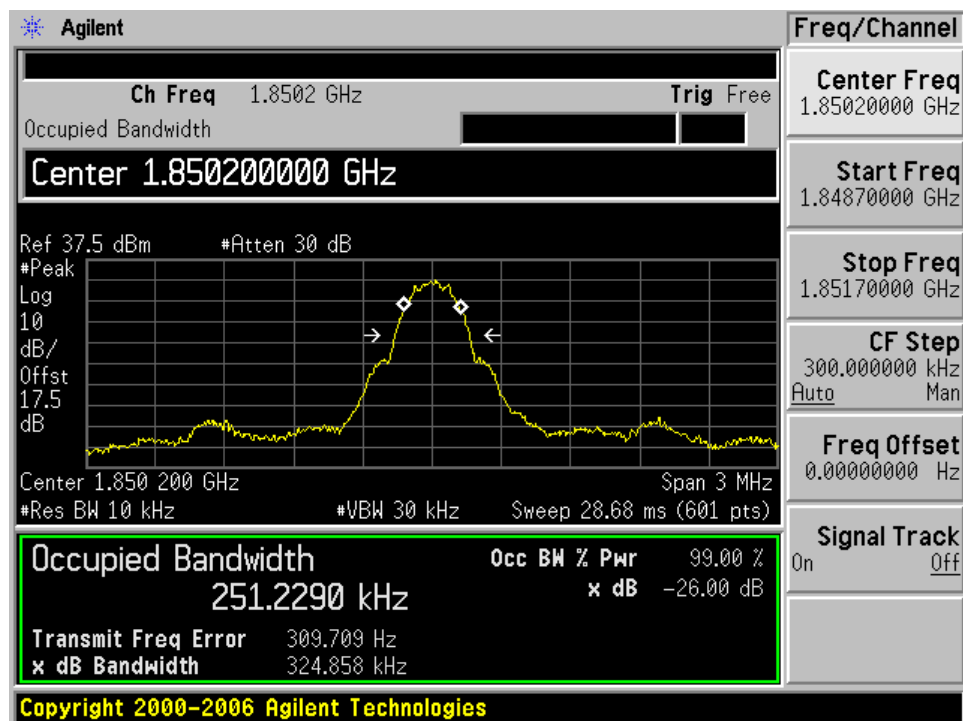
\* **Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

### 8.4 Test Results

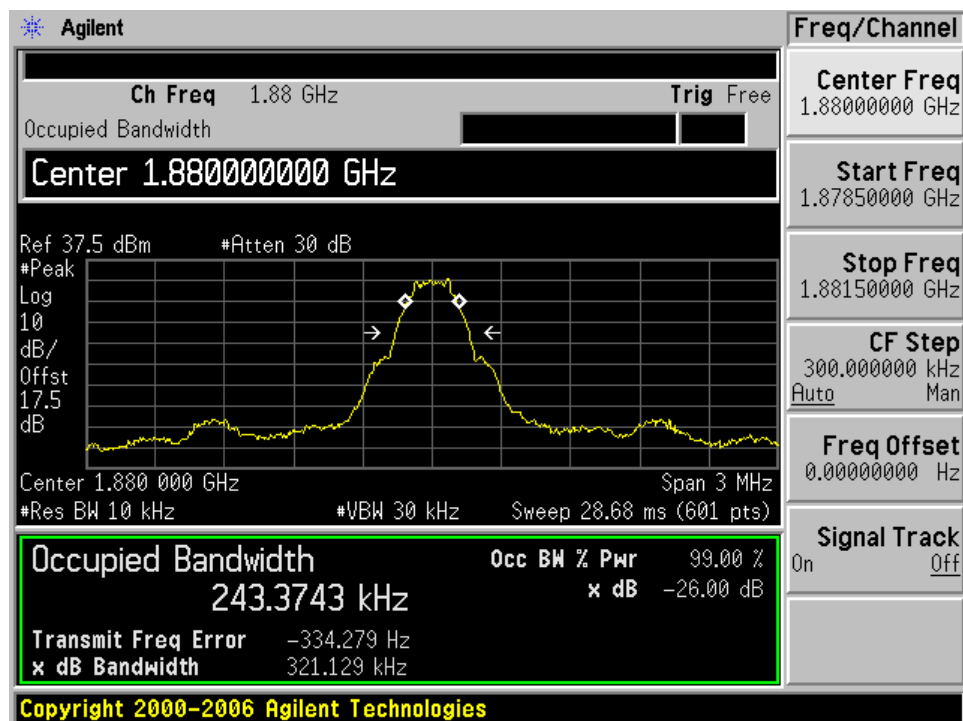
Channel	Frequency (MHz)	26 dB Bandwidth (kHz)	99% Bandwidth (kHz)
Low	1850.20	324.858	251.229
Middle	1880.00	321.129	243.3743
High	1909.80	317.345	252.8494

Please refer to the following plots.

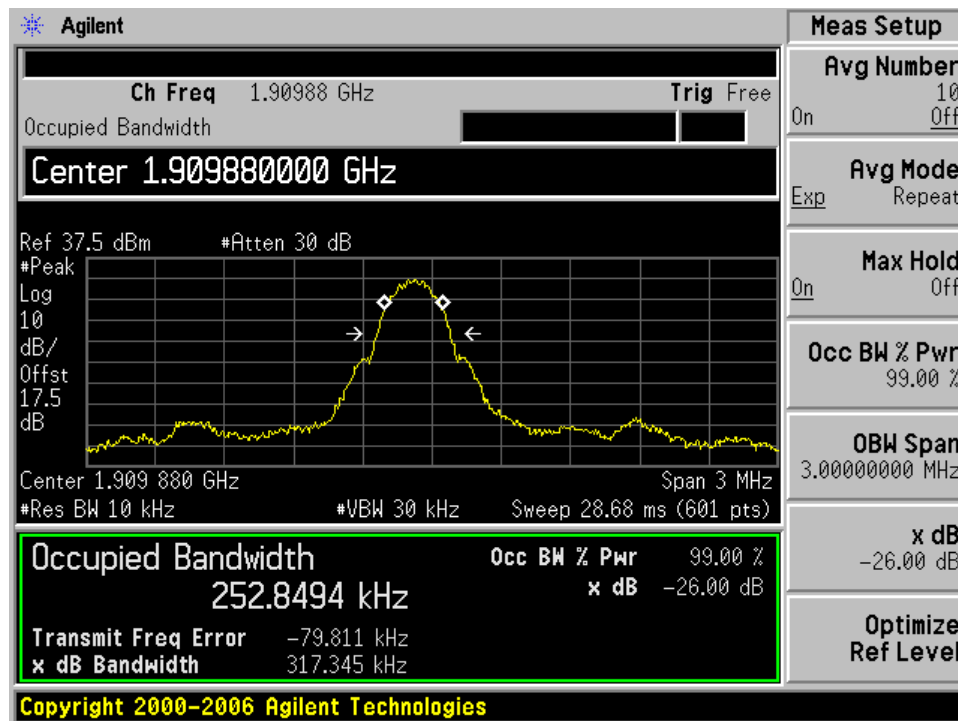
## Low Channel



## Middle Channel



## High Channel



## 9 - §2.1053, & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

### 9.1 Applicable Standard

Requirements: CFR 47, § 2.1053 & §24.238(a).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1057.

### 9.2 Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.

#### Environmental Conditions

Temperature:	20° C
Relative Humidity:	58%
ATM Pressure:	1018mbar

\* The testing was performed by James Ma on 2008-06-26.

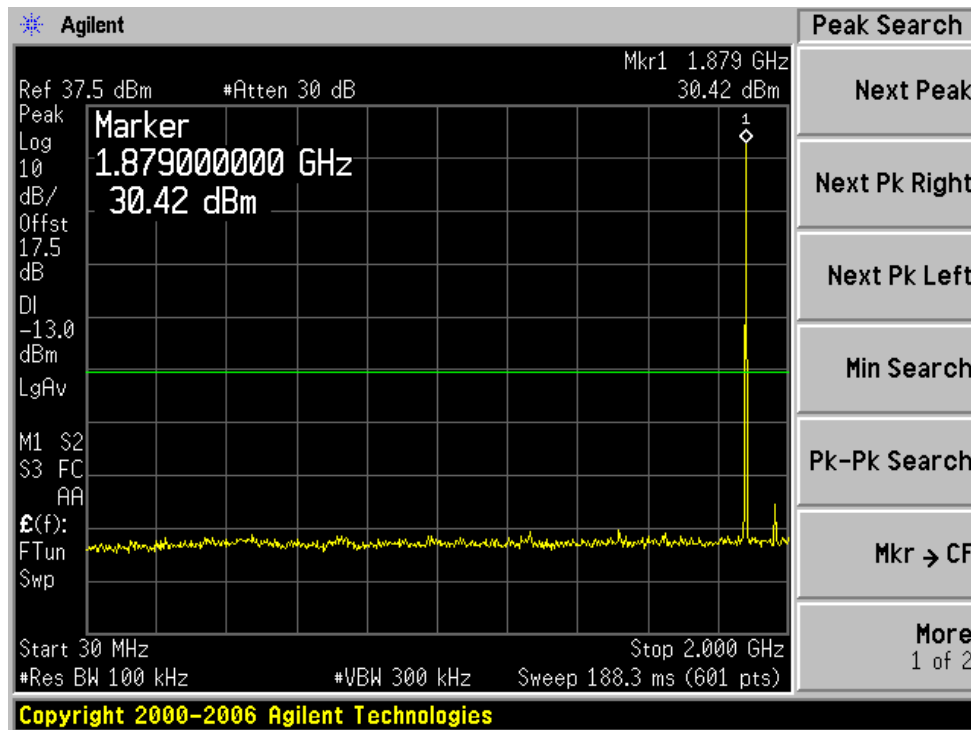
### 9.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2008-05-19

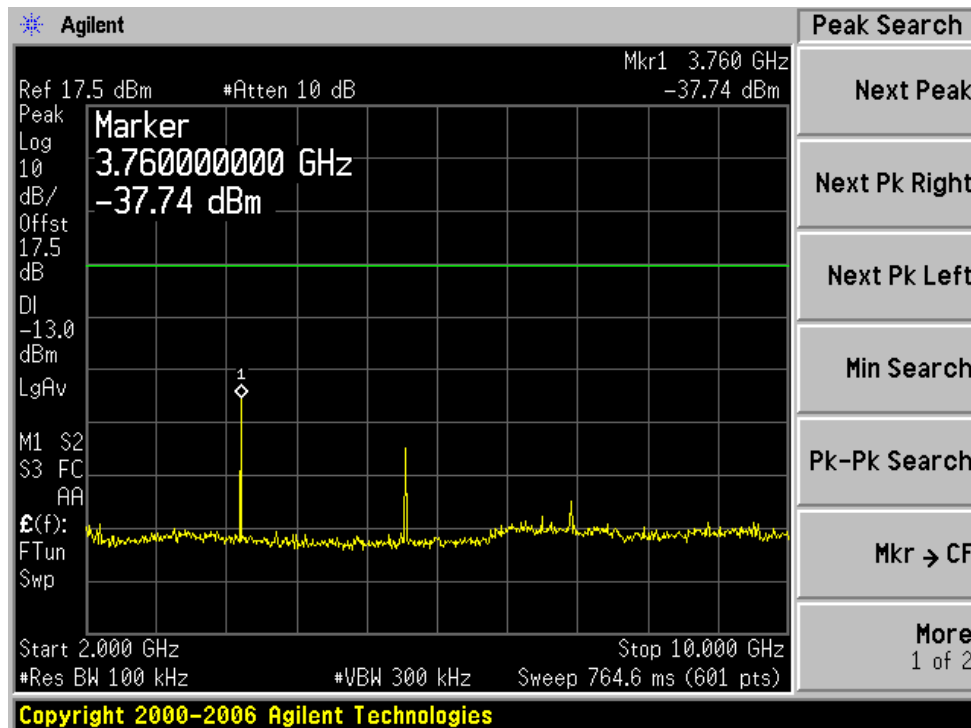
\* **Statement of Traceability:** BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

### 9.4 Test Results

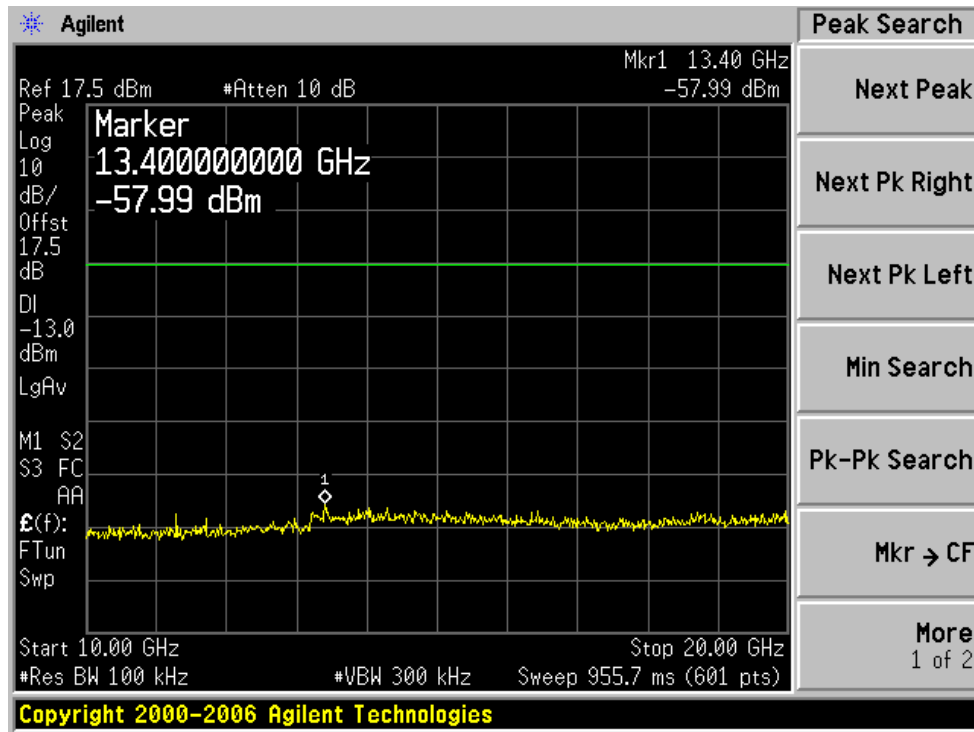
Please refer to the hereinafter plots.

**Middle Channel**

Plot 1: 30 MHz - 2 GHz



Plot 2: 2 GHz - 10 GHz



Plot 3: 10 GHz – 20 GHz

## 10 - §2.1055 (a), §2.1055 (d), & §24.235 - FREQUENCY STABILITY

### 10.1 Applicable Standard

Requirements: FCC § 2.1055 (a), § 2.1055 (d) & following:

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C-1\_Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile [le]3 watts (ppm)	Mobile [le]3 watts (ppm)
25 to 50.....	20.0	20.0	50.0
50 to 450.....	5.0	5.0	50.0
450 to 512.....	2.5	5.0	5.0
821 to 896.....	1.5	2.5	2.5
928 to 929.....	5.0	n/a	n/a
929 to 960.....	1.5	n/a	n/a
2110 to 2220.....	10.0	n/a	n/a

According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

### 10.2 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.

### 10.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Analyzer, Spectrum	E4446A	US44300386	2008-05-19
ESPEC	Oven, Temperature	ESL-4CA	18010	N/R

\* **Statement of Traceability:** BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.



## 10.4 Test Results

### Environmental Conditions

<b>Temperature:</b>	20° C
<b>Relative Humidity:</b>	58%
<b>ATM Pressure:</b>	1018mbar

\* The testing was performed by James Ma on 2008-06-26.

### Frequency Stability versus Temperature

Reference Frequency: 1880 MHz, Limit: 2.5 ppm				
Environment Temperature (°C)	Power Supplied (Vdc)	Frequency Measured (MHz)	Frequency Measure with Time Elapsed	
			Frequency Error (ppm)	Limit (ppm)
50	3.8	1879.9960	-2.1277	2.5
30	3.8	1879.9962	-2.0213	2.5
20	3.8	1879.9972	-1.4894	2.5
0	3.8	1879.9986	-0.7447	2.5
-20	3.8	1880.0029	1.5160	2.5
-30	3.8	1880.0045	2.3936	2.5

### Frequency Stability versus Voltage

Reference Frequency: 1880 MHz, Limit: 2.5 ppm				
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measured (MHz)	Frequency Measure with Time Elapsed	
			Frequency Error (ppm)	Limit (ppm)
20	3.23	1879.9980	-1.0638	2.5

## 11 - §24.238 – BAND EDGE

### 11.1 Applicable Standard

According to § 24.238, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

### 11.2 Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency, RBW set to 10 kHz.

### 11.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Cal. Date
Agilent	Spectrum Analyzer	E4440A	MY44303352	2008-04-28
Agilent	Wireless Communication Test Set	8960 Series 10	GB44051221	2007-08-08

\* **Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

### 11.4 Test Results

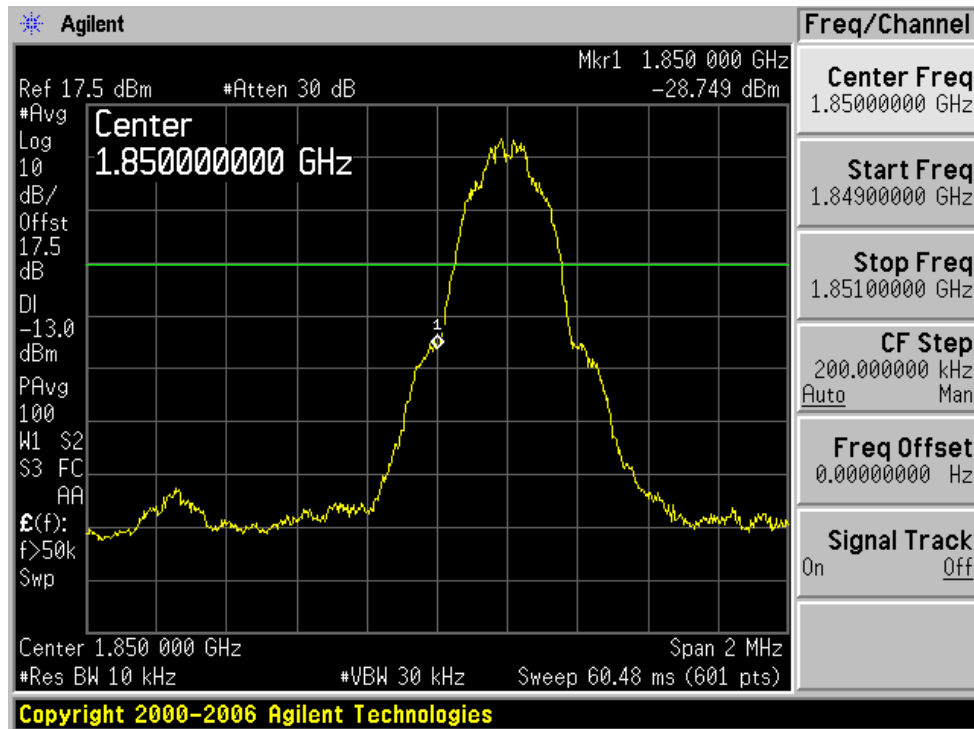
#### Environmental Conditions

<b>Temperature:</b>	20° C
<b>Relative Humidity:</b>	58%
<b>ATM Pressure:</b>	1018mbar

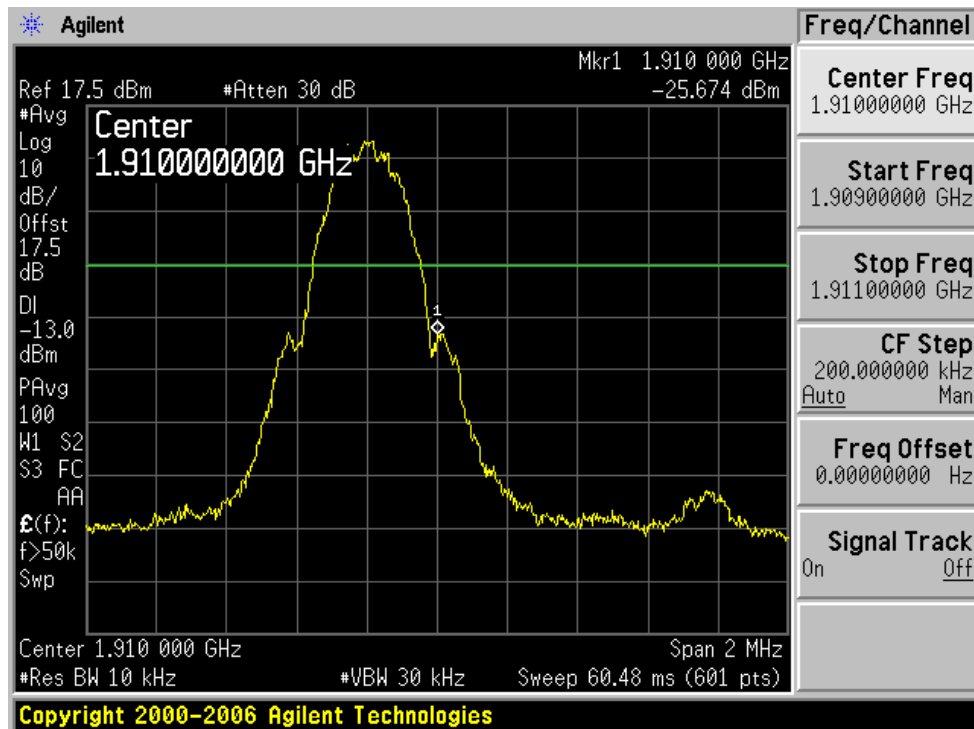
\* *The testing was performed by James Ma on 2008-06-26.*

Please refer to the following plots.

## Low Channel



## High Channel



## 12- §15.109 – RECEIVE RADIATED EMISSIONS

### 12.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are receiver, 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 EMI Measurements, the best estimate of the uncertainty of a radiation emission measurement at BACL is  $\pm 4.0$  dB.

### 12.2 EUT Setup

The radiated emission tests were performed in the 5 meter chamber site by using the setup in accordance with the ANSI C63.4-2003. The specification used was the FCC15 Class B.

The charger of EUT was connected to 120VAC/60Hz power source.

### 12.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
HP	Amplifier, Pre	8447D	2944A10198	2007-08-08
Sunol Science Corp	Combination Antenna	JB3 Antenna	A020106-3	2008-03-24
Rohde & Schwarz	EMI Test Receiver	ESCI 1166.595 0K03	20-174821	2008-03-24
Sunol Science Corp	System Controller	SC99V	113005-1	NA

\* **Statement of Traceability: BACL Corp.** attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

### Test Procedure

For the radiated emissions test, the EUT all support equipment were connected to the AC outlet on the turntable.

Maximizing procedure was performed on the six (6) highest emissions in the described configurations.

All data were recorded in the peak detection mode. Quasi-peak readings were distinguished with a "QP" in the data table and performed only when an emission was found to be marginal (within -4 dB of specification limits).

### Environmental Conditions

Temperature:	24°C
Relative Humidity:	34 %
ATM Pressure:	1020 mbar

\*Testing was performed by James Ma 2008-06-25.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor, and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

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 maximum limit for Class B. The equation for margin calculation is as follows:

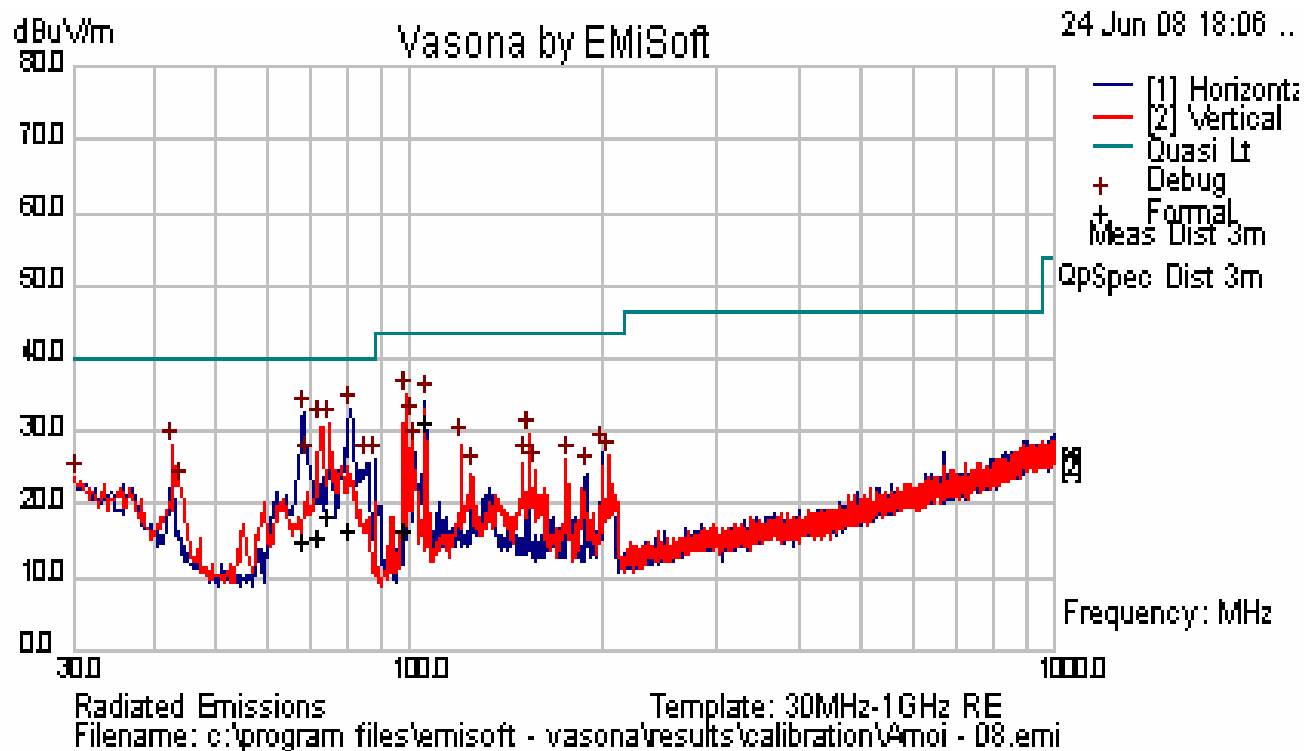
$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Summary of Test Results

According to the data in the following table, the EUT complied with the FCC Part 15 Class B standards and the test results are deemed satisfactory evidence of compliance displaying the worst margin of:

**-14.70 dB at 105.74 MHz in the Horizontal polarization.**

## Radiated Emissions Test Data @ 3m Distance



Frequency (MHz)	Reading (dBuV)	Cable Loss (dB)	Ant. Factor (dB)	Amp. (dBuV/m)	Measurement Type	Ant. Polar. (V/H)	Ant. Height (cm)	Azimuth (Degree)	Limit (dBuV/m)	Margin (dB)
105.74	36.31	10.58	-5.01	28.80	Quasi-Peak	H	206	120	43.50	-14.70
75.00	27.09	10.52	-13.41	16.35	Quasi-Peak	V	120	52	40.00	-23.65
80.89	25.08	10.53	-12.77	14.11	Quasi-Peak	H	196	180	40.00	-25.89
72.67	24.00	10.52	-19.93	13.25	Quasi-Peak	V	98	25	40.00	-26.75
68.47	23.85	10.51	-20.15	12.82	Quasi-Peak	H	219	153	40.00	-27.18
98.44	23.74	10.57	-19.78	14.20	Quasi-Peak	V	183	260	43.50	-29.30

## 13 - §15.107 - CONDUCTED EMISSIONS

### 13.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are receiver, cable loss, and LISN.

Based on NIS 81, the Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emission measurement at BACL is  $\pm 2.4$  dB.

### 13.2 EUT Setup

The measurements were performed in the shielded room by using the same setup per ANSI C63.4-2003 measurement procedure. The specification used was FCC 15 Class B limits.

The adaptor of EUT was connected to 120VAC/60 Hz power source.

### 13.3 Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date
Solar Electronics	LISN	9252-R-24-BNC	511205	2007-07-30
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2008-03-23

\* **Statement of Traceability:** BACL Corp. attests that all calibrations have been performed per the NVLAP requirements, traceable to the NIST.

### 13.4 Test Procedure

During the conducted emission test, the power cord of the EUT was connected to the main outlet of the LISN-1, and the power cord of the monitor and modem were connected to the LISN-2.

Maximizing procedure was performed on the twelve (12) highest provided emissions of the EUT. All data were recorded in the peak detection mode, quasi-peak and average. Average readings are distinguished with an "Ave" when Quasi-Peak readings are distinguished with a "QP".

#### Environmental Conditions

Temperature:	23°C
Relative Humidity:	35 %
ATM Pressure:	1019 mbar

\*Testing was performed by James Ma 2008-06-25.

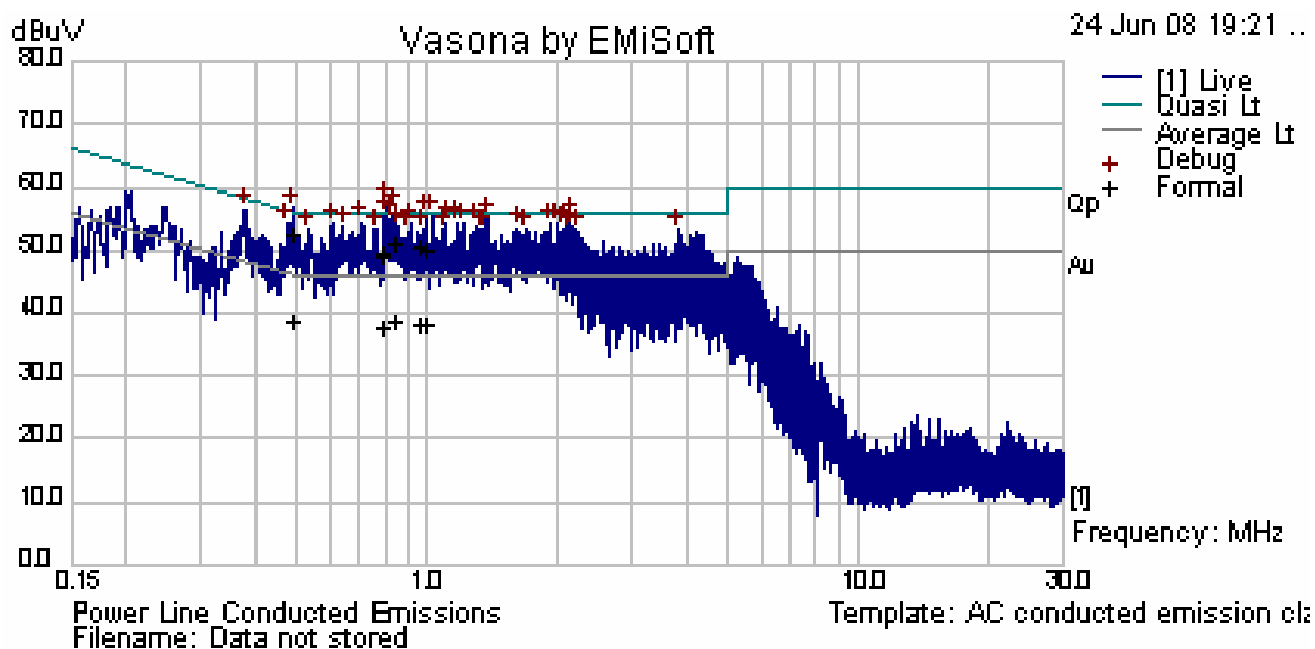
### 13.5 Test Results Summary

According to the recorded data in the following tables, the EUT complied with the FCC 15 Class B conducted limits for a Class B device, with the worst margin reading of:

**-5.76 dB at 0.49 MHz in the Live conductor mode.**

## Conducted Emissions Test Plots and Data

### 120V/60H – Line



### Quasi-Peak Measurements

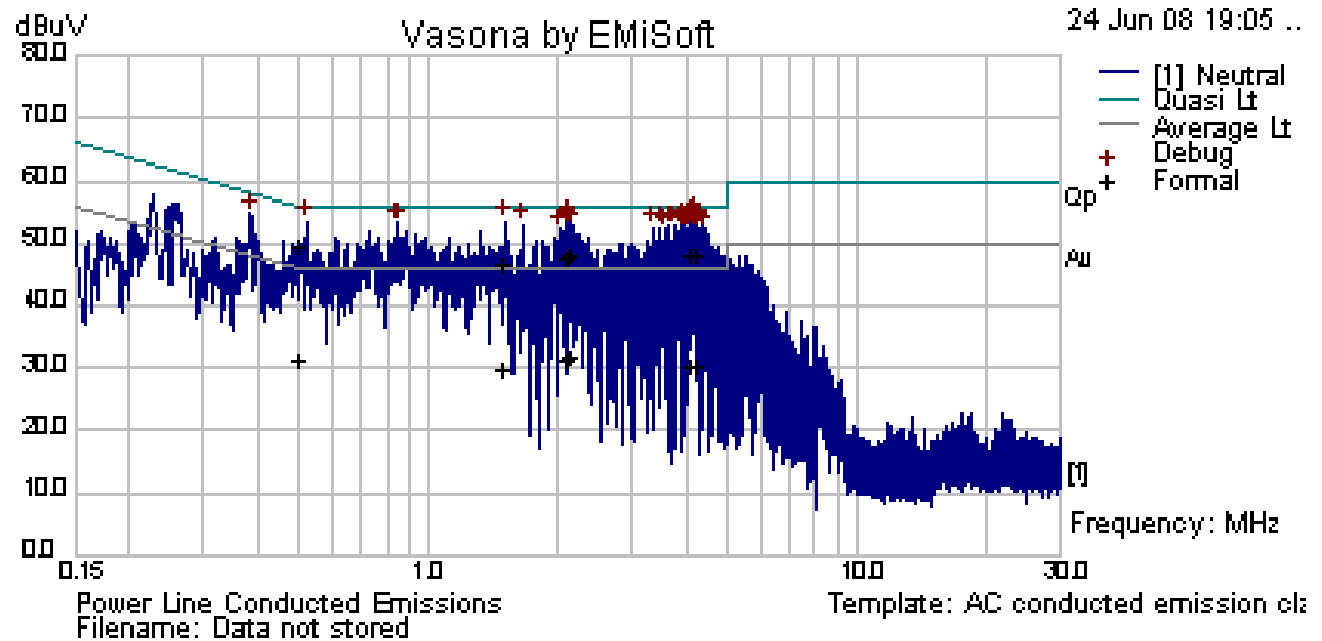
Frequency (MHz)	Quasi-Peak (dBμV)	Conduction (Live/ Neutral)	Limit (dBμV)	Margin (dB)
0.49	50.34	Live	56.10	-5.76
0.86	48.66	Live	56.00	-7.34
0.99	48.23	Live	56.00	-7.77
1.02	47.65	Live	56.00	-8.35
0.81	47.43	Live	56.00	-8.57
0.80	46.99	Live	56.00	-9.01

### Average Measurements

Frequency (MHz)	Average (dBμV)	Conduction (Live/ Neutral)	Limit (dBμV)	Margin (dB)
0.49	36.52	Live	46.10	-9.59
0.86	36.22	Live	46.00	-9.78
0.99	35.94	Live	46.00	-10.06
1.02	35.69	Live	46.00	-10.31
0.80	35.43	Live	46.00	-10.57
0.81	35.33	Live	46.00	-10.67



## 120V/60H – Neutral



## Quasi-Peak Measurements

Frequency (MHz)	Quasi-Peak (dBμV)	Conduction (Live/ Neutral)	Limit (dBμV)	Margin (dB)
0.51	47.05	Neutral	56.00	-8.95
4.15	45.93	Neutral	56.00	-10.07
4.25	45.64	Neutral	56.00	-10.36
2.16	45.62	Neutral	56.00	-10.38
2.14	45.50	Neutral	56.00	-10.50
1.51	44.29	Neutral	56.00	-11.71

## Average Measurements

Frequency (MHz)	Average (dBμV)	Conduction (Live/ Neutral)	Limit (dBμV)	Margin (dB)
2.16	29.27	Neutral	46.00	-16.73
2.14	29.13	Neutral	46.00	-16.87
0.51	28.75	Neutral	46.00	-17.25
4.25	28.02	Neutral	46.00	-17.98
4.15	28.02	Neutral	46.00	-17.98
1.51	27.49	Neutral	46.00	-18.51