

FCC PART 15.249
 MEASUREMENT AND TEST REPORT

For

Clearsounds Communications Inc.

8160 S. Madison Street, Burr Ridge, IL 60527

FCC ID: WG8-A55

This Report Concerns: <input checked="" type="checkbox"/> Original Report	Equipment Type: Amplified 900MHz Cordless
Test Engineer: <u>Jim Li</u> <i>Jim Li</i>	
Report No.: <u>RSZ08062308</u>	
Test Date: <u>2008-07-05</u>	
Report Date: <u>2008-07-11</u>	
Reviewed By: <u>EMC Manager: Green Xu</u> <i>Green Xu</i>	
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	

Note: This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Shenzhen). This report **must not** be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	3
TEST FACILITY	3
SYSTEM TEST CONFIGURATION.....	5
JUSTIFICATION	5
EQUIPMENT MODIFICATIONS	5
EXTERNAL I/O CABLE.....	5
CONFIGURATION OF TEST SETUP	5
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS	7
CFR47 §15.203 - ANTENNA REQUIREMENT.....	8
APPLICABLE STANDARD	8
ANTENNA CONNECTOR CONSTRUCTION	8
CFR47 §15.207(A) - CONDUCTED EMISSIONS.....	9
MEASUREMENT UNCERTAINTY	9
EUT SETUP	9
EMI TEST RECEIVER SETUP.....	10
TEST EQUIPMENT LIST AND DETAILS.....	10
TEST PROCEDURE	10
TEST RESULTS SUMMARY.....	10
TEST DATA	11
PLOT(S) OF TEST DATA	11
CFR47 §15.205(A) §15.209(A) §15.249(A) §15.249(D) - RADIATED EMISSIONS.....	14
APPLICABLE STANDARD	14
MEASUREMENT UNCERTAINTY	14
TEST EQUIPMENT SETUP	14
EUT SETUP	15
TEST EQUIPMENT LIST AND DETAILS.....	15
TEST PROCEDURE	16
CORRECTED AMPLITUDE & MARGIN CALCULATION	16
TEST RESULTS SUMMARY.....	16
TEST DATA	17
CFR47 §15.249(D) – OUT OF BAND EMISSIONS	23
APPLICABLE STANDARD	23
TEST PROCEDURE	23
TEST EQUIPMENT LIST AND DETAILS.....	23
TEST DATA	23

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Clearsounds Communications Inc* 's product, model number: A55, the "EUT" as referred to in this report is a *Amplified 900 MHz Cordless phone*, which measures approximately 12.5cmL x 0.9cmW x 4.0cmH(Base), 17.0cmL x 5.5cmW x 2.0cmH (Handset)rated input voltage: DC 9V adapter for base and DC 3.6V Battery for handset.

Adapter Model: S012BU0900100;
Input: 100-240V~50/60HZ, 450mA;
Output: 9.0V---1000mA

** All measurement and test data in this report was gathered from production sample serial number: 0806061 (Assigned by BAACL, Shenzhen). The EUT was received on 2008-06-23.*

Objective

This Type approval report is prepared on behalf of *Clearsounds Communications Inc* in accordance with Part 2, Subpart J, and Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.249 rules.

Related Submittal(s)/Grant(s)

No Related Submittals.

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 Laboratories 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 04, 2004. 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).



NVLAP 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).

Equipment Modifications

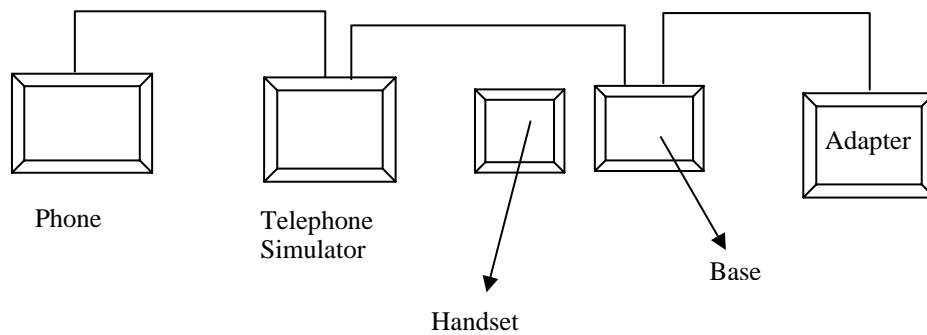
No modifications were made to the unit tested.

External I/O Cable

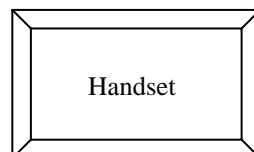
Cable Description	Length (m)	From/Port	To
Unshielded Detachable DC adapter	3.0	EUT	Adapter
Unshielded Detachable RJ11	3.0	EUT	Telephone simulator

Configuration of Test Setup

Conducted Emission test for base

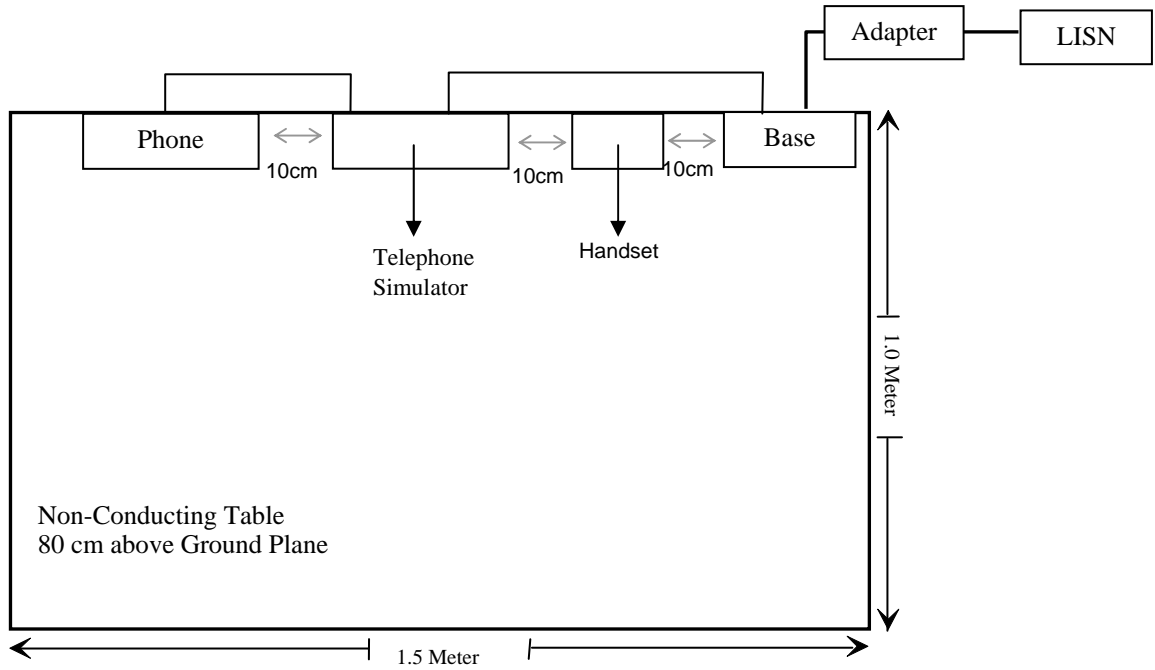


Radiated Emission test for handset

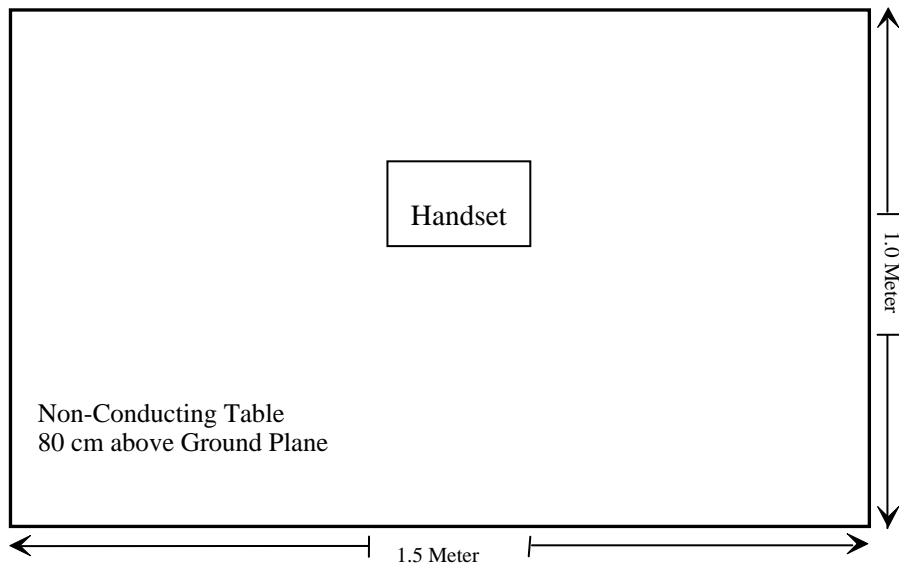


Block Diagram of Test Setup

Conducted Emission test for base



Radiated Emission test for handset



SUMMARY OF TEST RESULTS

Base:

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conduction Emissions	Compliant
§15.205(a), §15.209(a), 15.249(a), §15.249(c)	Radiated Emissions	Compliant
§15.249(d)	Out of Band Emissions	Compliant

Handset:

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Conduction Emissions	N/A *
§15.205(a), §15.209(a), 15.249(a), §15.249(c)	Radiated Emissions	Compliant
§15.249(d)	Out of Band Emissions	Compliant

Note: * Handset is battery operations.

CFR47 §15.203 - ANTENNA REQUIREMENT

Applicable Standard

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used.

Antenna Connector Construction

Base:

The EUT antenna is a wire antenna permanently soldered to the PCB board, which in accordance to section 15.203, is considered sufficient to comply with the provisions of this section.

Handset:

The EUT antenna is a wire antenna permanently soldered to the PCB board, which in accordance to section 15.203, is considered sufficient to comply with the provisions of this section.

Result: Compliant.

Please refer to the EUT internal photos.

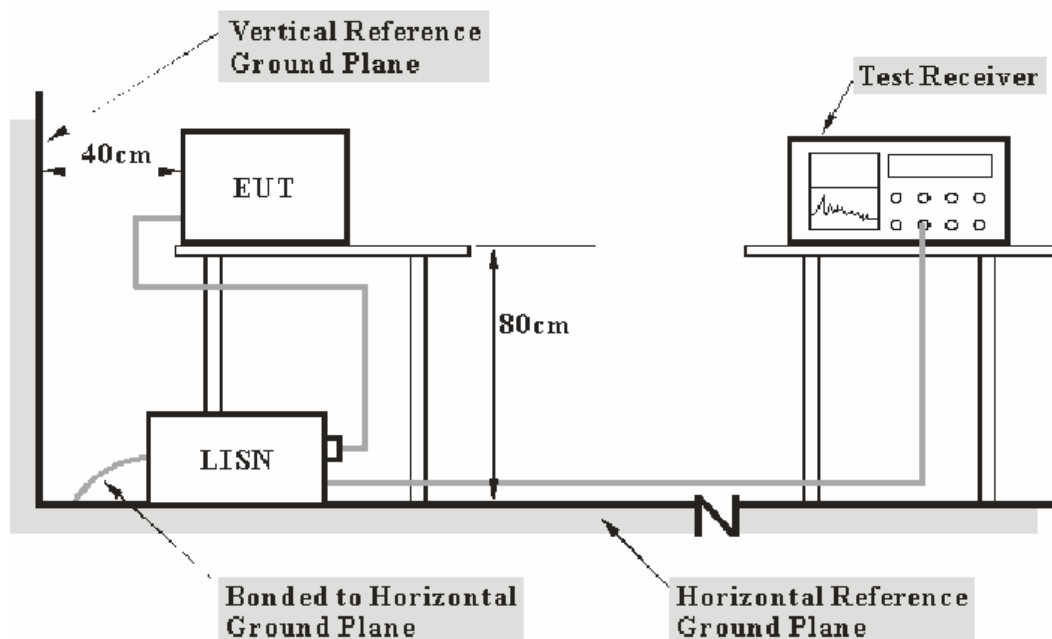
CFR47 §15.207(a) - CONDUCTED EMISSIONS

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 .207 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 adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The 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><i>Frequency Range</i></u>	<u><i>IFBW</i></u>
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	DE25330	2008-03-25	2009-03-25
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2008-03-25	2009-03-25

* 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 adapter was connected to the outlet of the 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 15.207(a), with the worst margin reading of:

8.53 dB at 0.3600 MHz in the **Neutral** conductor mode.

Test Data**Environmental Conditions**

Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2 kPa

The testing was performed by Jim Li on 2008-07-05.

Test Mode: Operating (for base)

Line Conducted Emissions				FCC Part15.207	
Frequency (MHz)	Amplitude (dB μ V)	Detector (QP/AV)	Conductor (Hot/Neutral)	Limit (dB μ V)	Margin (dB)
0.3600	50.20	QP	Neutral	58.73	8.53
0.3000	51.60	QP	Neutral	60.24	8.64
0.6150	46.90	QP	Neutral	56.00	9.10
1.1000	45.80	QP	Neutral	56.00	10.20
0.6200	44.60	QP	Hot	56.00	11.40
0.3650	46.00	QP	Hot	58.61	12.61
1.4800	42.40	QP	Hot	56.00	13.60
0.2600	46.40	QP	Hot	61.43	15.03
0.3600	30.00	AV	Neutral	48.73	18.73
0.6150	25.20	AV	Neutral	46.00	20.80
0.3000	27.20	AV	Neutral	50.24	23.04
1.1000	23.00	AV	Neutral	46.00	23.00
0.3650	23.90	AV	Hot	48.61	24.71
12.7600	25.00	AV	Neutral	50.00	25.00
12.7600	34.40	QP	Neutral	60.00	25.60
0.6200	20.10	AV	Hot	46.00	25.90
19.6500	33.10	QP	Neutral	60.00	26.90
7.9600	32.70	QP	Hot	60.00	27.30
0.2600	22.40	AV	Hot	51.43	29.03
15.0050	30.90	QP	Hot	60.00	29.10
1.4650	14.30	AV	Hot	46.00	31.70
19.8150	15.00	AV	Neutral	50.00	35.00
7.8900	13.80	AV	Hot	50.00	36.20
15.0100	9.60	AV	Hot	50.00	40.40

Plot(s) of Test Data

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

Conduction Emission

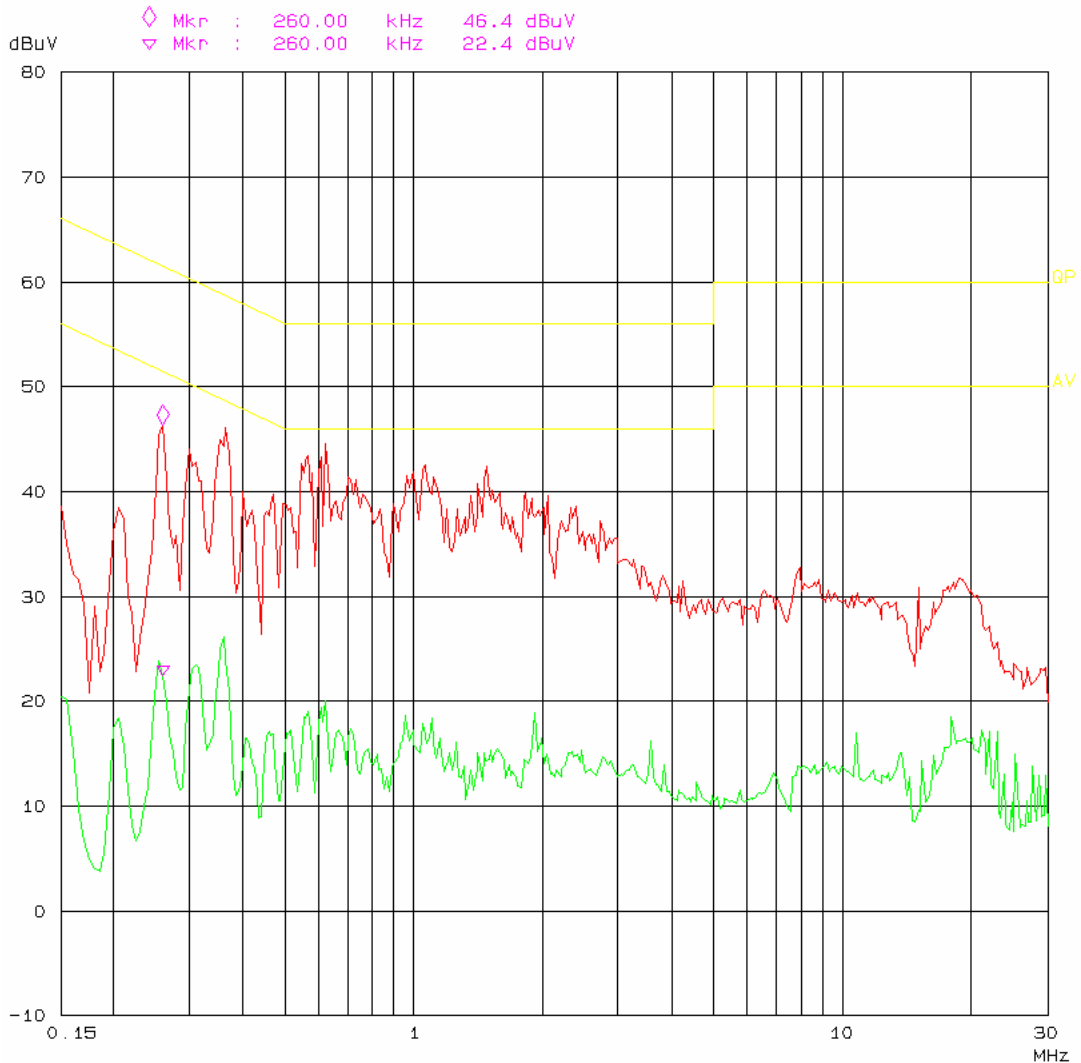
05. Jul 08 15:09

EUT: Amplified 900MHz Cordless
 Manuf: Clearsounds M/N: A55, CL3108
 Op Cond: operating
 Operator: Jim
 Test Spec: AC120V/60Hz hot
 Comment: Temp: 25 Hum: 56%

Scan Settings (1 Range)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	30M	5k	9k	PK+AV	10ms	AUTO LN	OFF

Transducer	No.	Start	Stop	Name
	5	9k	30M	ESH2_Z5



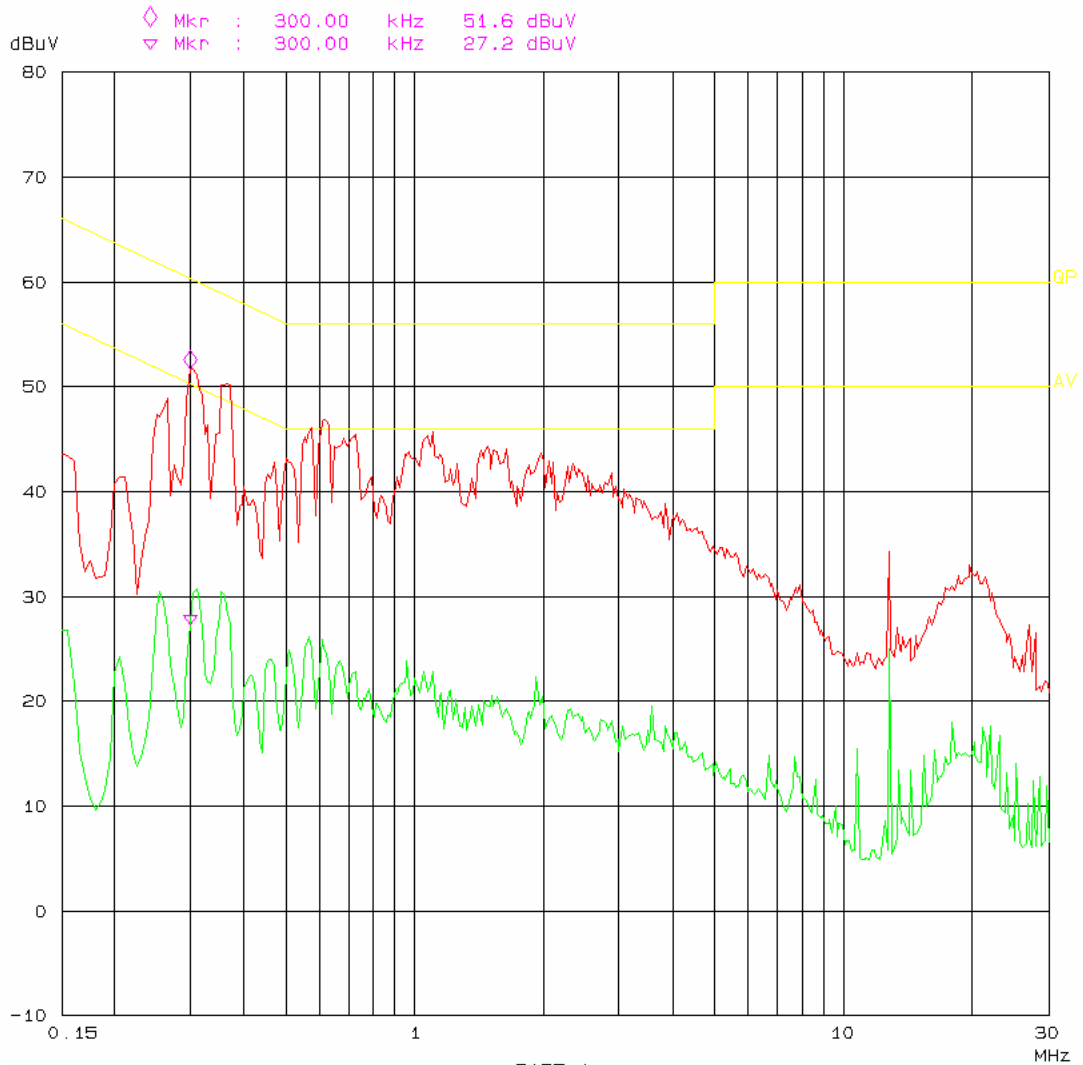
Conduction Emission

05. Jul 08 14:59

EUT: Amplified 900MHz Cordless
Manuf: Clearsounds M/N: A55, CL3108
Op Cond: operating
Operator: Jim
Test Spec: AC120V/60Hz neutral
Comment: Temp: 25 Hum: 56%

Scan Settings (1 Range)

Frequencies			Receiver Settings								
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	Transducer No.	Start	Stop	Name
150k	30M	5k	9k	PK+AV	10ms	AUTO LN	OFF	5	9k	30M	ESH2_Z5



CFR47 §15.205(a) §15.209(a) §15.249(a) §15.249(d) - RADIATED EMISSIONS**Applicable Standard**

As per §15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per §15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

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.

Test Equipment Setup

The spectrum analyzer or receiver is set as:

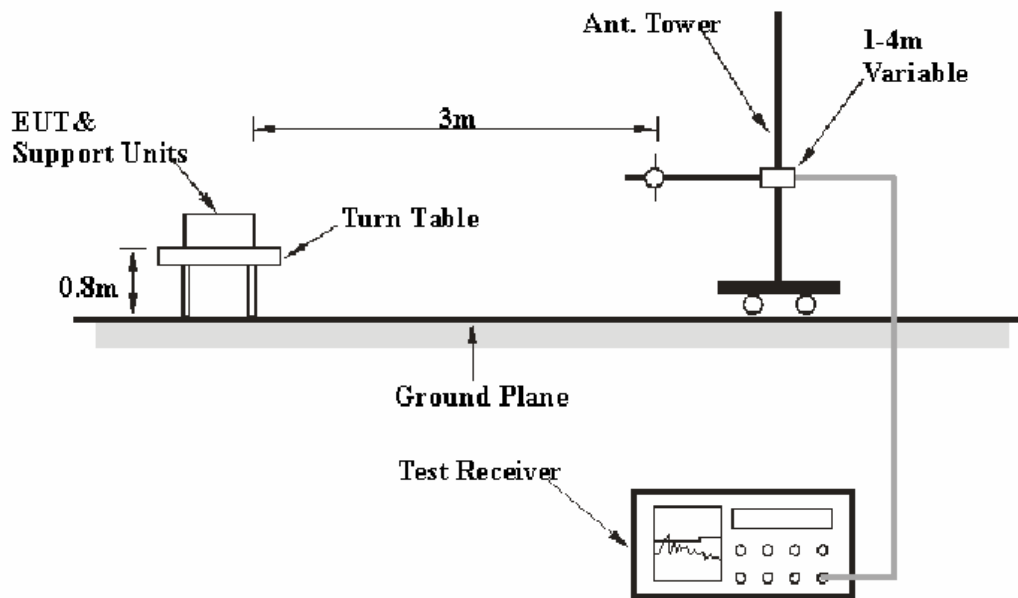
Below 1000MHz:

$$\text{RBW} = 100 \text{ kHz} / \text{VBW} = 300 \text{ kHz} / \text{Sweep} = \text{Auto}$$

Above 1000MHz:

- (1) Peak: RBW = 1MHz / VBW = 1MHz / Sweep = Auto
- (2) Average: RBW = 1MHz / VBW = 10Hz / Sweep = Auto

EUT Setup



The radiated emission and out of band emission tests were performed in the 3 meters chamber B, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209 and FCC 15.249 limits.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2007-11-15	2008-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2007-10-16	2008-10-16
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2007-08-14	2008-08-14
HP	Amplifier	8449B	3008A00277	2007-09-29	2008-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2007-09-25	2008-09-25
Rohde&Schwarz	Spectrum Analyzer	FSEM30	849720/019	2008-05-09	2009-05-09

* **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 EUT, and all support equipment power cords was connected to the AC floor outlet.

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

The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 mete, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.

Corrected Amplitude & Margin Calculation

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

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

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 Part 15.209 & 15.249, with the worst margin reading of:

30 -1000 MHz:

Base:

Low channel: 4.8 dB at 446.172150 MHz in the Horizontal polarization.

High channel: 8.8 dB at 446.172150 MHz in the Horizontal polarization.

Handset:

Low channel: 6.8 dB at 446.172150 MHz in the Horizontal polarization.

High channel: 4.8 dB at 446.172150 MHz in the Horizontal polarization.

Above 1GHz:

Base:

Low channel: 8.63 dB at 1805.60 MHz in the Horizontal polarization.

High channel: 8.50 dB at 1808.50 MHz in the Vertical polarization.

Handset:

Low channel: 6.55 dB at 1850.6 MHz in the Horizontal polarization.

High channel: 5.67 dB at 1854.5 MHz in the Vertical polarization.

Test Data

Environmental Conditions

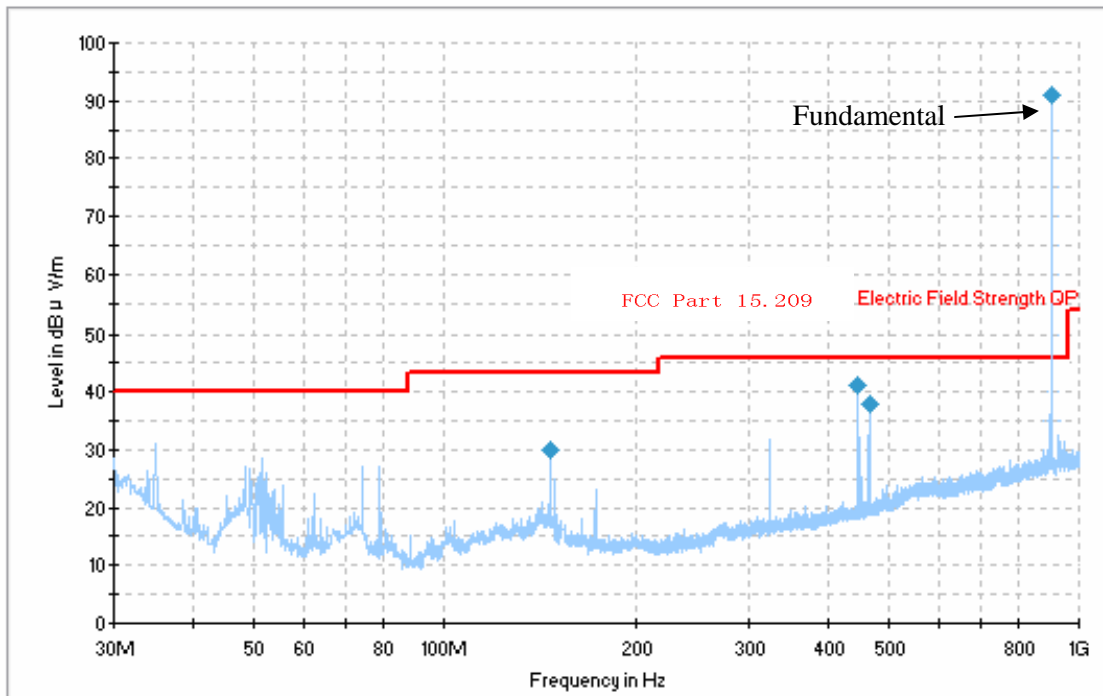
Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.2 kPa

The testing was performed by Jim Li on 2008-07-10.

30-1000 MHz:

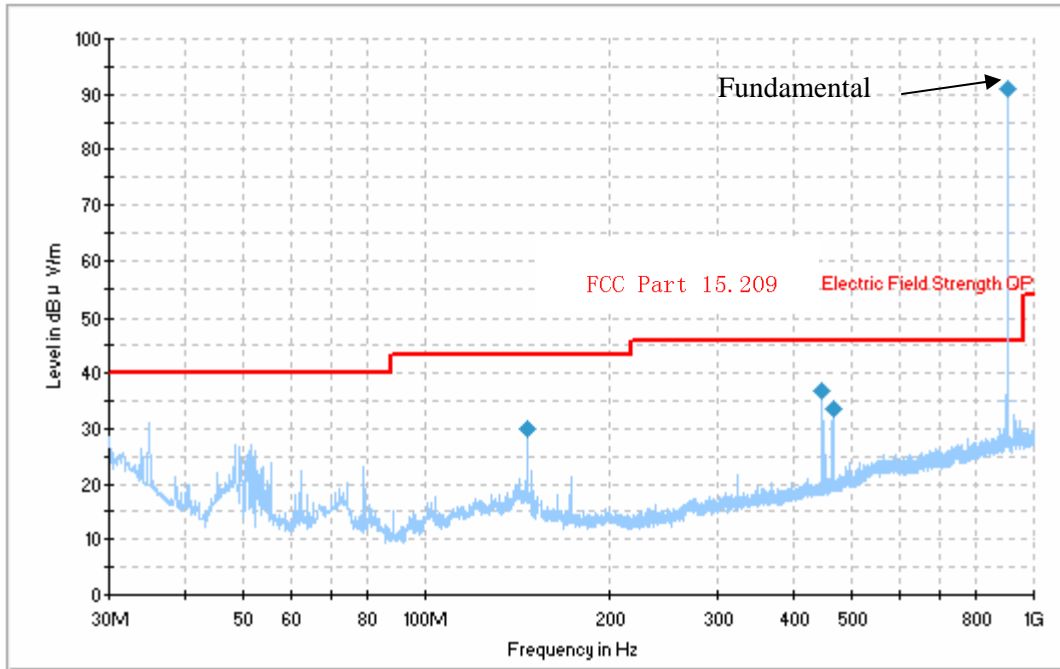
Base:

Low channel



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
446.172150	41.2	107.0	H	39.0	-7.4	46.0	4.8
468.132950	37.8	107.0	H	21.0	-6.8	46.0	8.2
152.050225	29.3	156.0	V	29.3	15.0	43.5	14.2

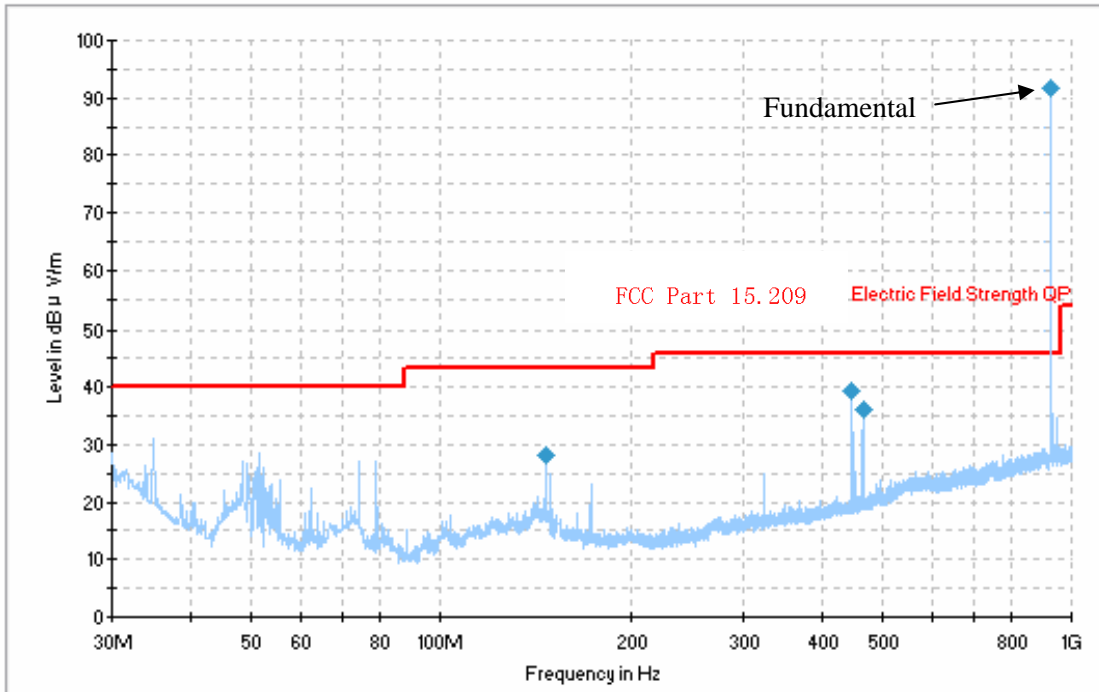
High channel



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
446.172150	37.2	107.0	H	39.0	-7.4	46.0	8.8
468.132950	34.2	107.0	H	21.0	-6.8	46.0	11.8
152.050225	29.3	156.0	V	29.3	15.0	43.5	14.2

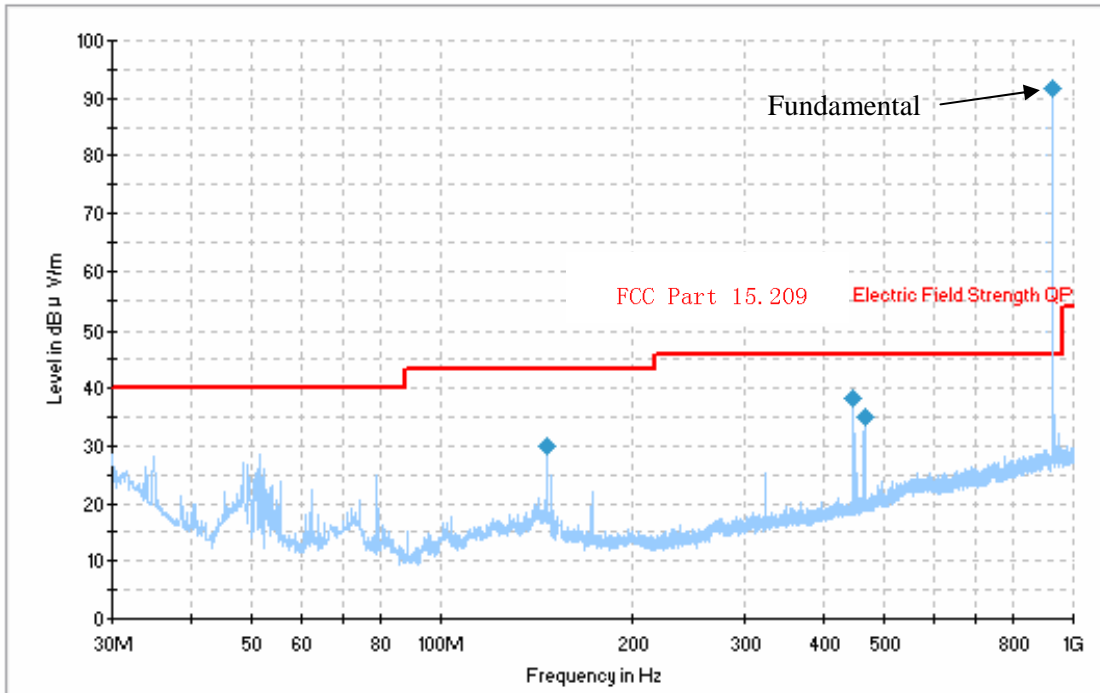
Handset:

Low channel



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
446.172150	39.2	107.0	H	39.0	-7.4	46.0	6.8
468.132950	32.8	107.0	H	21.0	-6.8	46.0	13.2
152.050225	27.3	156.0	V	29.3	15.0	43.5	12.2

High channel



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
446.172150	41.2	107.0	H	39.0	-7.4	46.0	4.8
468.132950	37.8	107.0	H	21.0	-6.8	46.0	8.2
152.050225	29.3	156.0	V	29.3	15.0	43.5	14.2

Fundamental:

Base:

Freq. (MHz)	Meter Reading (dB μ V)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC Part 15.249		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	Comment
Low Channel												
902.80	95.20	QP	155	1.0	V	20.4	7.97	32.41	91.16	94	2.84	Fund
902.80	93.40	QP	90	1.5	H	20.4	7.97	32.41	89.36	94	4.64	Fund
High Channel												
904.75	94.30	QP	155	1.0	V	20.4	7.97	32.41	90.26	94	3.74	Fund
904.75	92.20	QP	90	1.5	H	20.4	7.97	32.41	88.16	94	5.84	Fund

Handset:

Freq. (MHz)	Meter Reading (dB μ V)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dB μ V/m)	FCC Part 15.249		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dB μ V/m)	Margin (dB)	Comment
Low Channel												
925.30	94.50	QP	155	1.0	V	20.5	8.04	32.68	90.36	94	3.64	Fund
925.30	93.30	QP	90	1.5	H	20.5	8.04	32.68	89.16	94	4.84	Fund
High Channel												
927.25	94.60	QP	155	1.0	V	20.6	8.07	32.71	90.56	94	3.44	Fund
927.25	92.60	QP	90	1.5	H	20.6	8.07	32.71	88.56	94	5.44	Fund

Note: *Fund.* - Fundamental

Spurious Emission above 1GHz:

Base:

Freq. (MHz)	Meter Reading (dBµV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	FCC Part 15.209 & 15.249		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	Comment
Low Channel												
1805.60	45.87	AV	166	1.6	H	28.8	4.90	34.2	45.37	54	8.63	Harmonics
1805.60	45.23	AV	148	1.2	V	28.8	4.90	34.2	44.73	54	9.27	Harmonics
1805.60	48.56	PK	166	1.6	H	28.8	4.90	34.2	48.06	74	25.94	Harmonics
1805.60	48.05	PK	148	1.2	V	28.8	4.90	34.2	47.55	74	26.45	Harmonics
High Channel												
1808.50	44.50	AV	148	1.5	V	29.8	5.20	34	45.50	54	8.50	Harmonics
1808.50	44.03	AV	324	1.3	H	29.8	5.20	34	45.03	54	8.97	Harmonics
1808.50	47.50	PK	324	1.3	H	29.8	5.20	34	48.50	74	25.5	Harmonics
1808.50	47.33	PK	148	1.5	V	29.8	5.20	34	48.33	74	25.67	Harmonics

Handset:

Freq. (MHz)	Meter Reading (dBµV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBµV/m)	FCC Part 15.209 & 15.249		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dBµV/m)	Margin (dB)	Comment
Low Channel												
1850.60	44.23	AV	148	1.2	H	31.6	4.12	32.5	47.45	54	6.55	Harmonics
1850.60	44.17	AV	166	1.6	V	28.3	4.02	35.0	41.49	54	12.51	Harmonics
1850.60	48.33	PK	148	1.2	H	31.6	4.12	32.5	51.55	74	22.45	Harmonics
1850.60	48.30	PK	166	1.6	V	28.3	4.02	35.0	45.62	74	28.38	Harmonics
High Channel												
1854.50	44.63	AV	324	1.3	V	32.4	4.70	33.4	48.33	54	5.67	Harmonics
1854.50	44.50	AV	148	1.5	H	28.3	4.02	35.0	41.82	54	12.18	Harmonics
1854.50	48.50	PK	324	1.3	V	32.4	4.70	33.4	52.20	74	21.80	Harmonics
1854.50	48.33	PK	148	1.5	H	28.3	4.02	35.0	45.65	74	28.35	Harmonics

CFR47 §15.249(d) – OUT OF BAND EMISSIONS

Applicable Standard

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Test Procedure

1. The EUT is set 3 meter away from the testing antenna, which is varied from 1-4 mete, and the EUT is placed on a turntable, which is 0.8 meter above ground plane, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna should be changed the polarization both of horizontal and vertical.
2. Set the RBW to 10 kHz and VBW of spectrum analyzer to 30 kHz with a convenient frequency span including the specified frequencies of band edges.
3. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
4. Repeat above procedures until all measured frequencies were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2007-10-16	2008-10-16
HP	Amplifier	8449B	3008A00277	2007-09-29	2008-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2007-09-25	2008-09-25

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) Corp. attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56%
ATM Pressure:	100.2 kPa

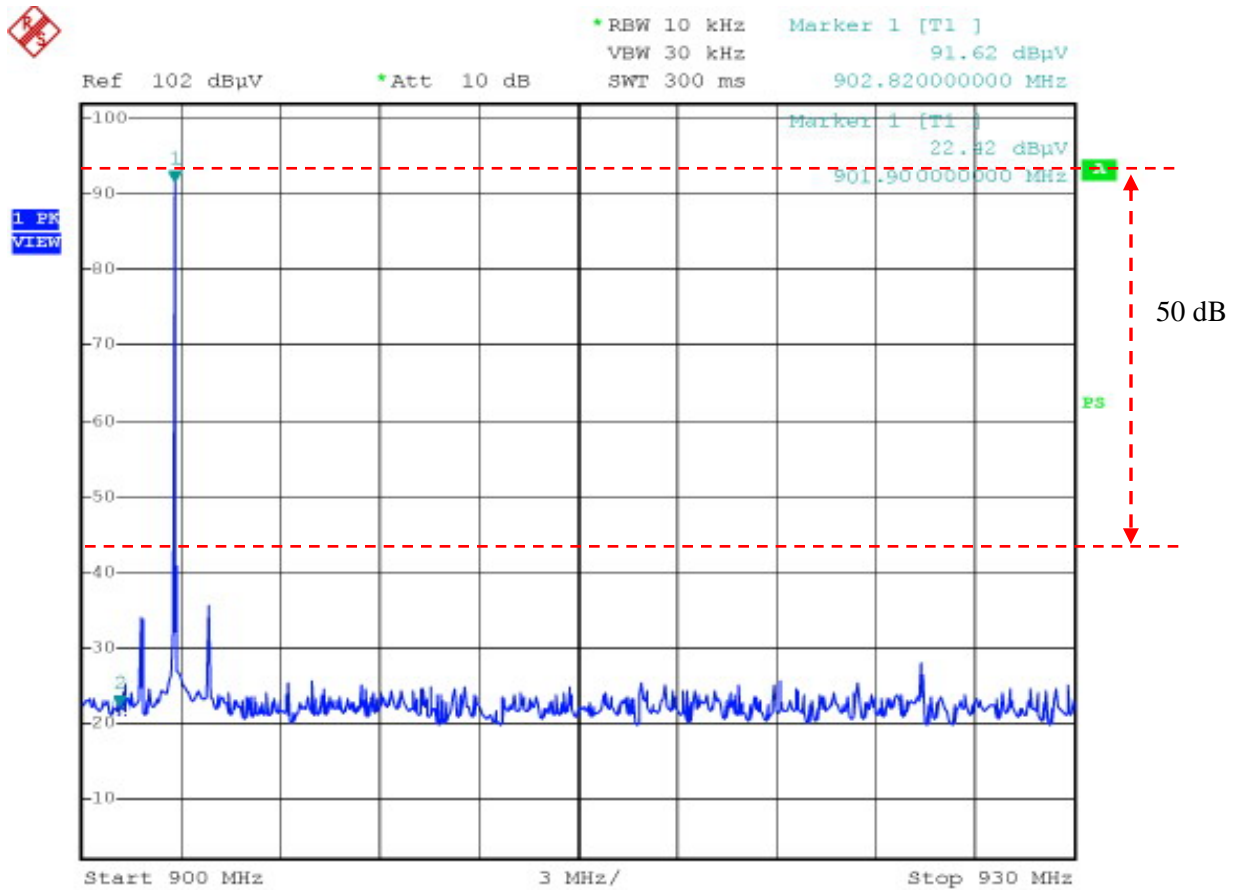
The testing was performed by Jim Li on 2008-07-10

Test Mode: Transmitting

Please refer to below plots.

Base:

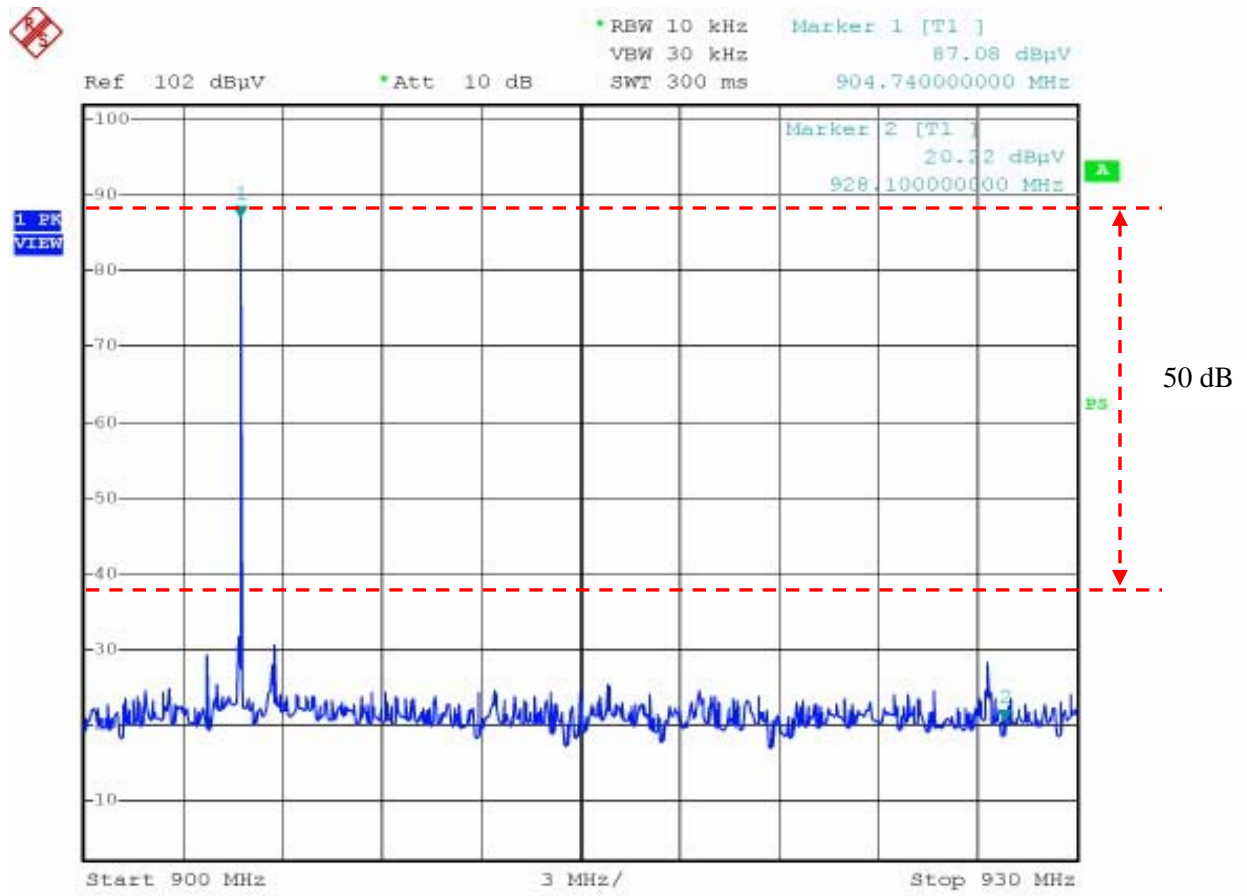
Low Band Edge



LOW CHANNEL-BASE

Date: 10.JUL.2008 21:30:57

High Band Edge

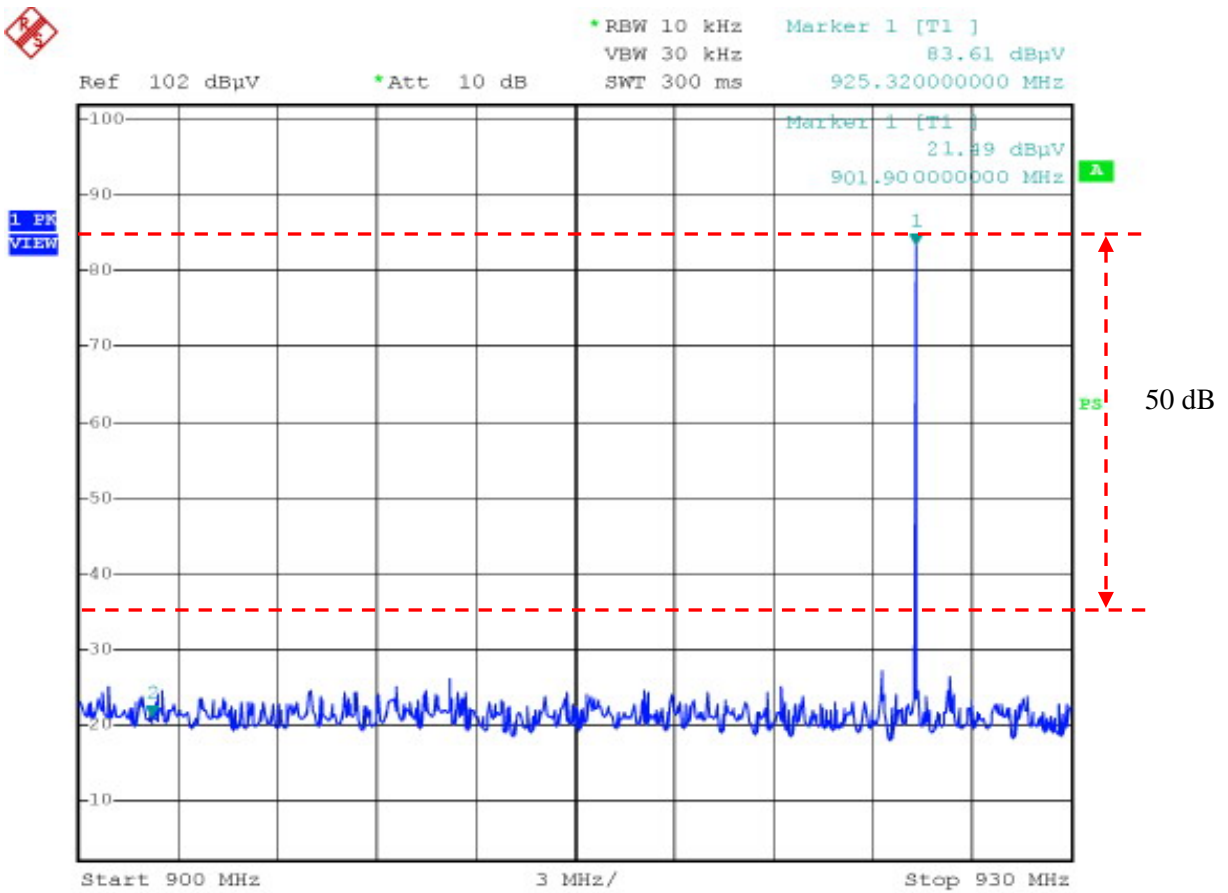


HIGH CHANNEL-BASE

Date: 10.JUL.2008 21:33:39

Handset:

Low Band Edge



LOW CHANNEL-HANDSET

Date: 10.JUL.2008 21:25:55

