



NVLAP LAB CODE 200707-0



FCC PART 15D

MEASUREMENT AND TEST REPORT

For

Shenzhen Guo Wei Electronics (H.K.) Co. Ltd.

Unit 20-21, 12/F, Goldfield Industrial Centre,
1 Sui Wo Road, Fo Tan, Shatin, Hong Kong

FCC ID: WSWDECT20-B96BS

Report Type: Original Report	Product Type: Digital Cordless Telephone (Base)
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Report Number: <u>RSZA08112102</u>	
Report Date: <u>2008-12-12</u>	
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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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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Shenzhen Guo Wei Electronics (H.K.) Co. Ltd.*'s product, model number: *Oslo* or the "EUT" as referred to in this report is a Base for *Digital Cordless Telephone*, which measures approximately: 13.5 cm L x 12.4 cm W x 4.7 cm H, input voltage: DC 7.5V adapter.

*Note: The original model "studio" (FCC ID: WSWDECT49B94TAMBS) and new model "Oslo", the RF module and line interface are same, the software/key board circuit/antenna/PCB layout are difference, but the antenna gain is same, see the Technical Specification.

The "studio" is an answering machine with TAM control key, MIC and speaker, but "Oslo" does not have.

Adapter Information:

Model: OH-1048A0750300U;

Input: AC100-240V 50/60Hz 0.2A Max;

Output: DC 7.5V 300mA

** All measurement and test data in this report was gathered from production sample serial number: 08110255 (Assigned by BACL, Shenzhen). The EUT was received on 2008-11-21.*

Objective

This document is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.17 – 2006, and ANSI C63.4-2003

The tests were performed in order to determine compliance with FCC Part 15, Subpart D, and section 15.203, 15.315, 15.317, 15.319 and 15.323 rules.

Related Submittal(s)/Grant(s)

None.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.17 - 2006 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

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

No modification was made to the unit tested.

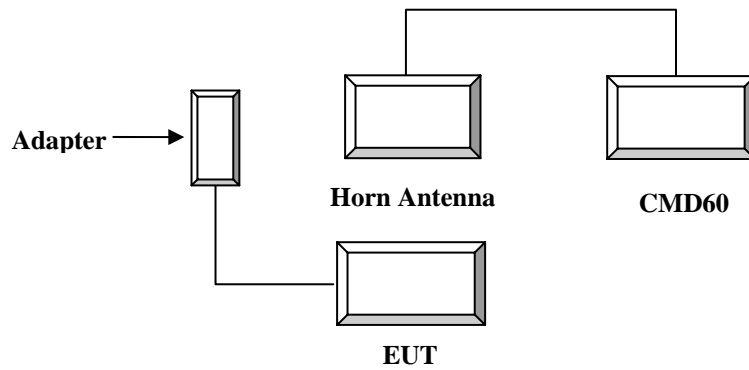
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
R & S	Digital Radio Communication Tester	CMD60	8281461029	DoC

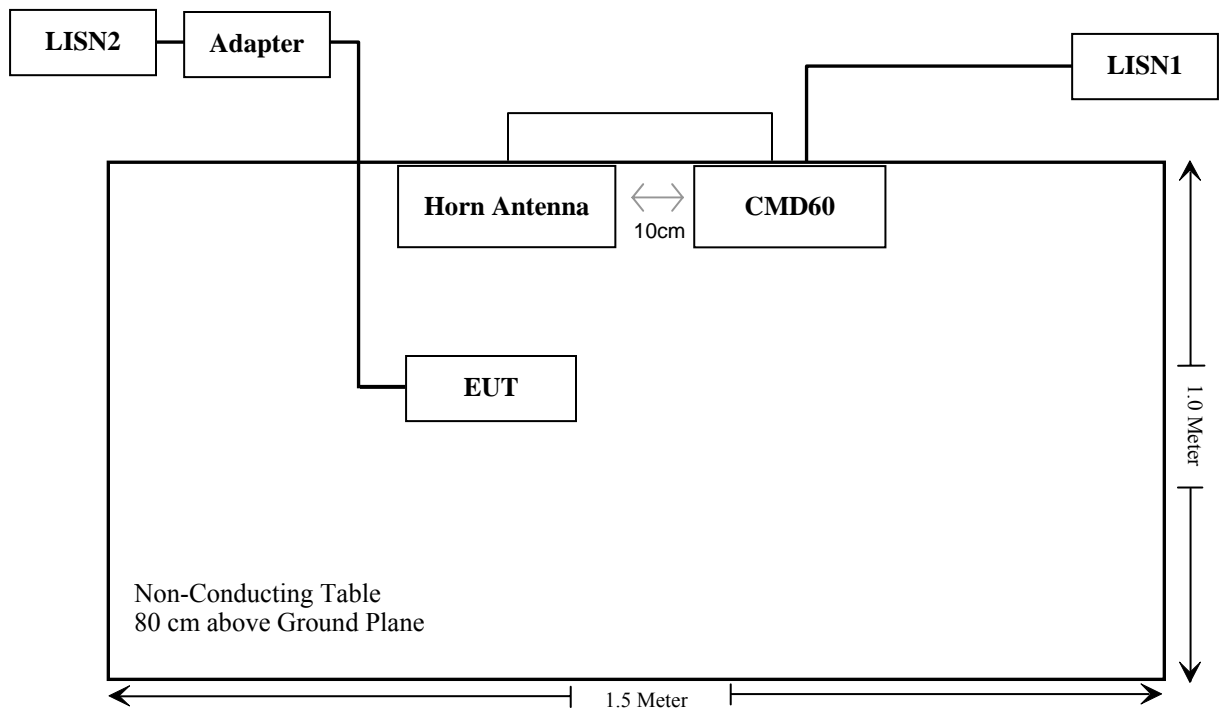
External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Detectable Power Cable	2.0	EUT	Adapter

Configuration of Test Setup



Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 15.319 (i)	RF Radiation Exposure	Compliant
§ 15.317 § 15.203	Antenna Requirement	Compliant
§ 15.319 (e)	Antenna Gain	Compliant
§ 15.315 § 15.207	Conducted Emission	Compliant
§ 15.323 (a)	Emission Bandwidth	Compliant *
§ 15.319 (c)	Peak Transmit Power	Compliant *
§ 15.319 (d)	Power Spectral Density	Compliant *
§ 15.323 (d)	Emission Inside and Outside the sub-band	Compliant
§ 15.319 (g)	Radiated Emission	Compliant
§ 15.323 (f)	Frequency Stability	Compliant *
§ 15.323 (c)(e) § 15.319 (f)	Specific Requirements for UPCS	Compliant *

Note: * Please refer to FCC ID: WSWDECT49B94TAMBS filed on 2008-12-04, Report No.: RSZ08112002

§ 15.319 (i) - RF RADIATION EXPOSURE

Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	842/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500.	/	/	f/1500	30
1500-100,000.	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

Equation from page 19 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Maximum peak output power at antenna input terminal: 20.86 (dBm)

Maximum peak output power at antenna input terminal: 121.90 (mW)

Prediction distance: >20 (cm)

Predication frequency: 1921.53 6(MHz)

Antenna Gain (typical): 3(dBi)

Antenna Gain (typical): 2 numeric

The worst case is power density at predication frequency at 20 cm: 0.0485 (mW/cm²)

MPE limit for general population exposure at prediction frequency: 1 (mW/cm²)

$$0.0485(\text{mW/cm}^2) < 1 (\text{mW/cm}^2)$$

Result: Compliance at 20 cm distance.

§15.317&§15.203 - ANTENNA REQUIREMENT

Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has two integrated antennas arrangement, one is vertical polarity, the other is horizontal polarity, please refer to the internal photos. Their maximum gains are 3 dBi, fulfill the requirement of this section.

Result: Compliance.

Please refer to the EUT internal photos.

§15.319 (e) - ANTENNA GAIN

Standard Applicable

According to CFR 47 §15.319 (e):

The peak transmit power shall be reduced by the amount in decibels that the maximum directional gain of the antenna exceeds 3 dBi.

Result: The antenna gain is less than 3 dBi provided by manufacturer.

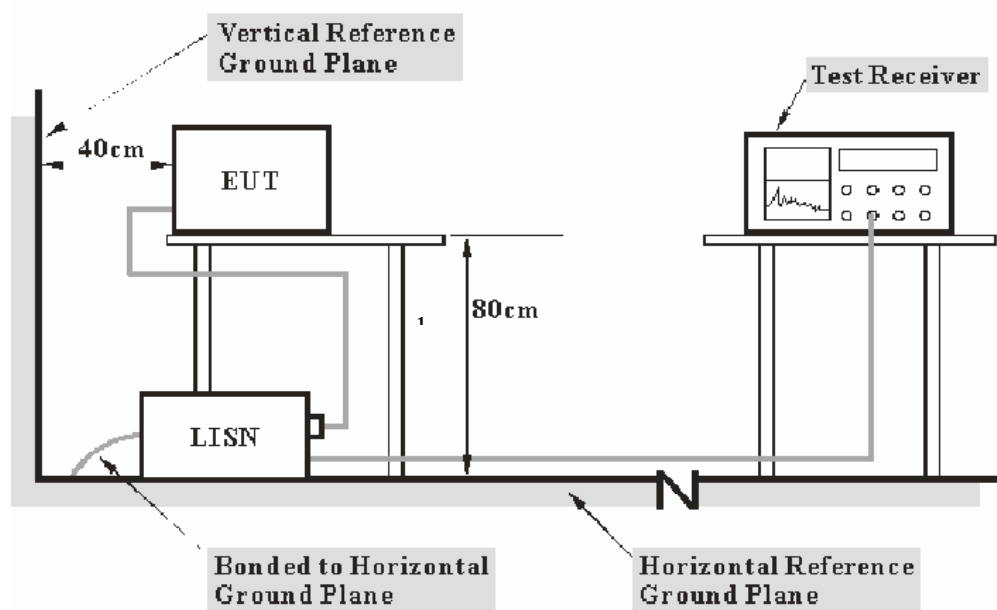
§15.315 §15.207 - CONDUCTED EMISSIONS

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 15.315 and FCC 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 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:

<i>Frequency Range</i>	<i>IF B/W</i>
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, with the worst margin reading of:

8.46 dB at 0.3500 MHz in the **Neutral** conductor mode.

Test Data**Environmental Conditions**

Temperature:	26 °C
Relative Humidity:	58 %
ATM Pressure:	100.2kPa

The testing was performed by Bruce Zhang on 2008-12-12.

Test Mode: Talking

Line Conducted Emissions				FCC Part 15.207	
Frequency (MHz)	Amplitude (dBμV)	Detector (QP/AV)	Conductor (Line/Neutral)	Limit (dBμV)	Margin (dB)
0.3500	40.50	AV	Neutral	48.96	8.46
0.1500	55.10	QP	Neutral	66.00	10.90
0.3500	47.90	QP	Neutral	58.96	11.06
1.2000	44.80	QP	Line	56.00	11.20
0.1650	53.90	QP	Line	65.21	11.31
0.3500	47.20	QP	Line	58.96	11.76
1.2700	32.80	AV	Line	46.00	13.20
1.2550	32.60	AV	Neutral	46.00	13.40
1.2500	42.00	QP	Neutral	56.00	14.00
21.3300	42.00	QP	Line	60.00	18.00
18.2400	41.30	QP	Line	60.00	18.70
4.9050	36.50	QP	Line	56.00	19.50
20.7550	40.00	QP	Neutral	60.00	20.00
1.8800	24.40	AV	Neutral	46.00	21.60
0.3500	27.10	AV	Line	48.96	21.86
1.8800	34.10	QP	Neutral	56.00	21.90
17.7450	36.90	QP	Neutral	60.00	23.10
0.1500	31.00	AV	Neutral	56.00	25.00
0.1650	26.90	AV	Line	55.21	28.31
21.4700	20.80	AV	Line	50.00	29.20
4.9000	16.10	AV	Line	46.00	29.90
18.2250	19.90	AV	Line	50.00	30.10
20.7700	19.00	AV	Neutral	50.00	31.00
17.9150	17.50	AV	Neutral	50.00	32.50

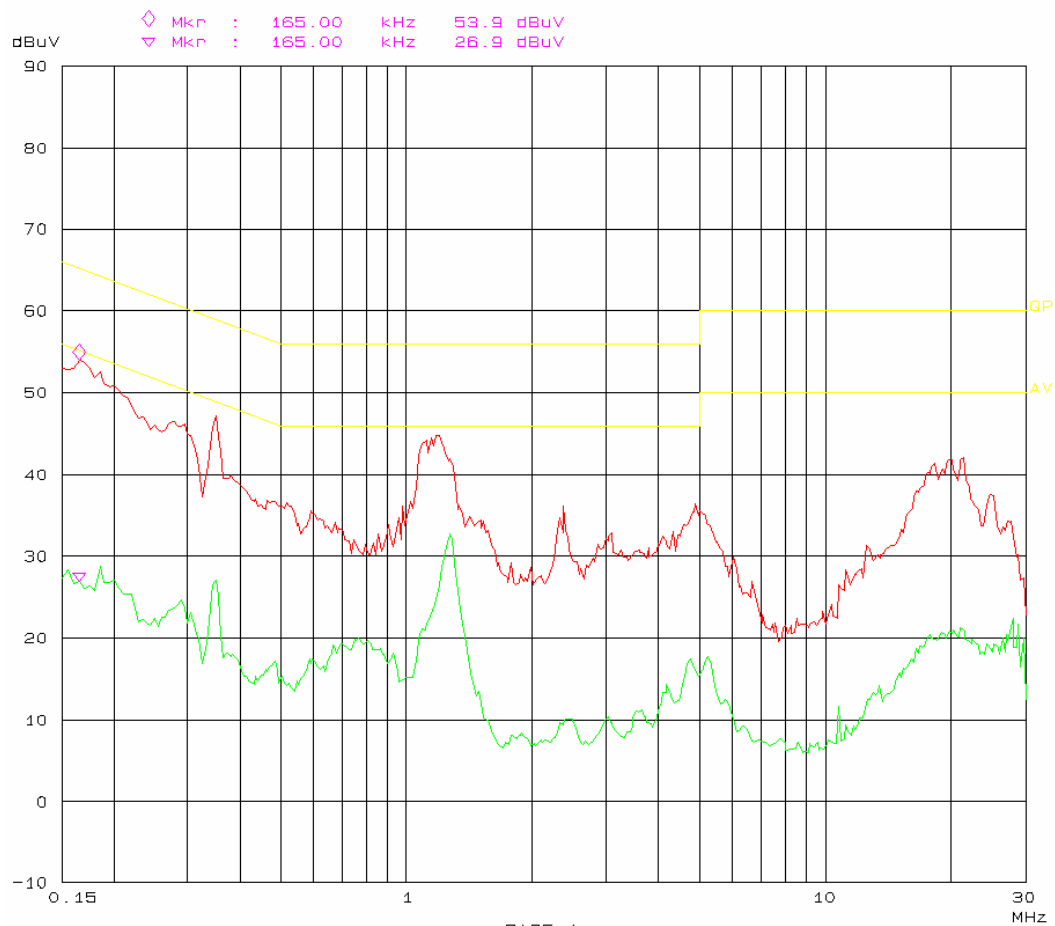
Plot(s) of Test Data

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

Conducted emission
FCC part 15

12. Dec 08 17:52

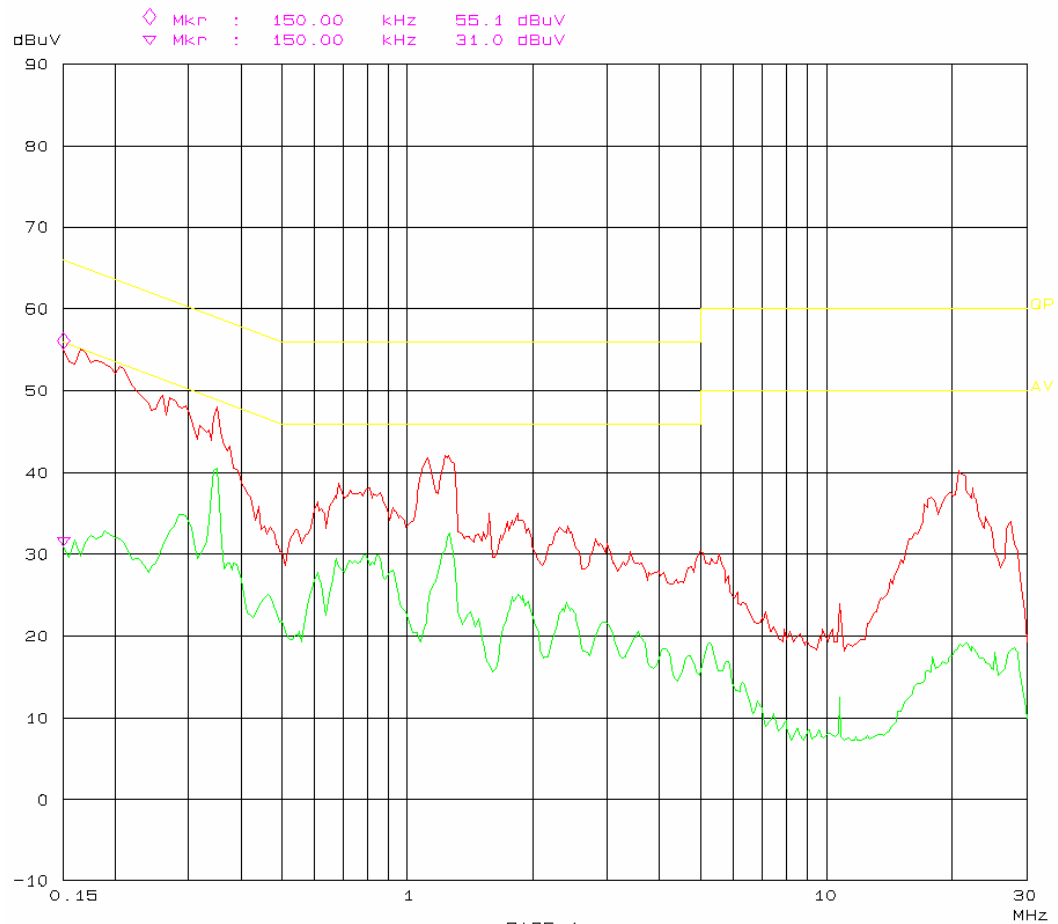
EUT: Digital cordless telephone M/N: Oslo
Manuf: Guowei
Op Cond: talking
Operator: Bruce
Test Spec: AC 120V/60Hz line
Comment: Temp: 25 Hum: 56%
BACL



Conducted emission
FCC part 15

12. Dec 08 18:12

EUT: Digital cordless telephone M/N: 0s10
Manuf: Guowei
Op Cond: talking
Operator: Bruce
Test Spec: AC 120V/60Hz neutral
Comment: Temp: 25 Hum: 56%
BACL

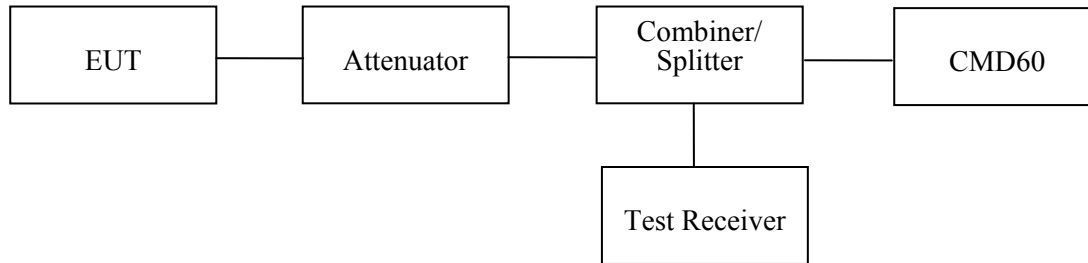


§15.323 (a) - EMISSION BANDWIDTH

Standard Applicable

Operation shall be contained within the 1920–1930 MHz band. The emission bandwidth shall be less than 2.5 MHz and greater than 50 kHz.

The emission bandwidth is measured in accordance with ANSI C63.17 sub-clause 6.1.3 using the setup below:



The width, in Hz, of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that is 26 dB down relative to the maximum level of the modulated carrier. It is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1% of the emission band-width of the device under measurement. [Extraction from 47 VFR 15, subpart D, 15.303 (C)].

Test Data

Please refer to FCC ID: WSWDECT49B94TAMBS certified on December 04, 2008, report No.: RSZ08112002.

§15.319 (c) - PEAK TRANSMIT POWER

Standard Applicable

The peak transmit power is according to ANSI C63.17-2006 §6.1.2

Per FCC Part15.319 (a), Peak transmit power shall not exceed 100 microwatts multiplied by the square root of the emission bandwidth in hertz.

Per FCC Part15.319 (e), The peak transmit power shall be reduced by the amount in decibels that the maximum directional gain of the antenna exceeds 3 dBi.

Calculation of Peak Transmit Power Limit (P_{\max}):

$$P_{\max} = 100\mu\text{W} \times (\text{EBW})^{1/2}$$

EBW is the transmit emission bandwidth in Hz determined in the other test item:

Test Data:

$$\text{EBW} = 1760000\text{Hz}$$

$$P_{\max} = 100 \mu\text{W} \times (1760000)^{1/2} = 21.23 \text{ dBm}$$

Test Data

Please refer to FCC ID: WSWDECT49B94TAMBS certified on December 04, 2008, report No.: RSZ08112002.

§15.319 (d) - POWER SPECTRAL DENSITY

Standard Applicable

The power spectral density is according to ANSI C63.17-2006 §6.1.5

The average pulse energy in a 3 kHz bandwidth is divided by the pulse duration.

The power spectral density shall not exceed 3mW in any 3 kHz bandwidth as measured with a spectrum analyzer having a resolution bandwidth of 3 kHz.

Test Data

Please refer to FCC ID: WSWDECT49B94TAMBS certified on December 04, 2008, report No.: RSZ08112002.

§15.323 (d) - EMISSION INSIDE AND OUTSIDE THE SUB-BAND

Standard Applicable

Emissions inside the sub-band must comply with the following emission mask:

1. In the bands between 1B and 2B measured from the center of the emission bandwidth the total power emitted by the device shall be at least 30 dB below the transmit power permitted for that device;
2. in the bands between 2B and 3B measured from the center of the emission bandwidth the total power emitted by an intentional radiator shall be at least 50 dB below the transmit power permitted for that radiator;
3. in the bands between 3B and the sub-band edge the total power emitted by an intentional radiator in the measurement bandwidth shall be at least 60 dB below the transmit power permitted for that radiator.

Where B = emission bandwidth

Emission Outside the sub-band shall be attenuated below a reference power of 112 mw (20.5 dBm) as follows:

1. 30 dB between the sub-band and 1.25 MHz above or below the sub-band;
2. 50 dB between 1.25 and 2.5 MHz above or below the sub-band;
3. 60 dB at 2.5 MHz or greater above or below the sub-band.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2008-08-25	2009-08-25

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

Test Data

Environmental Conditions

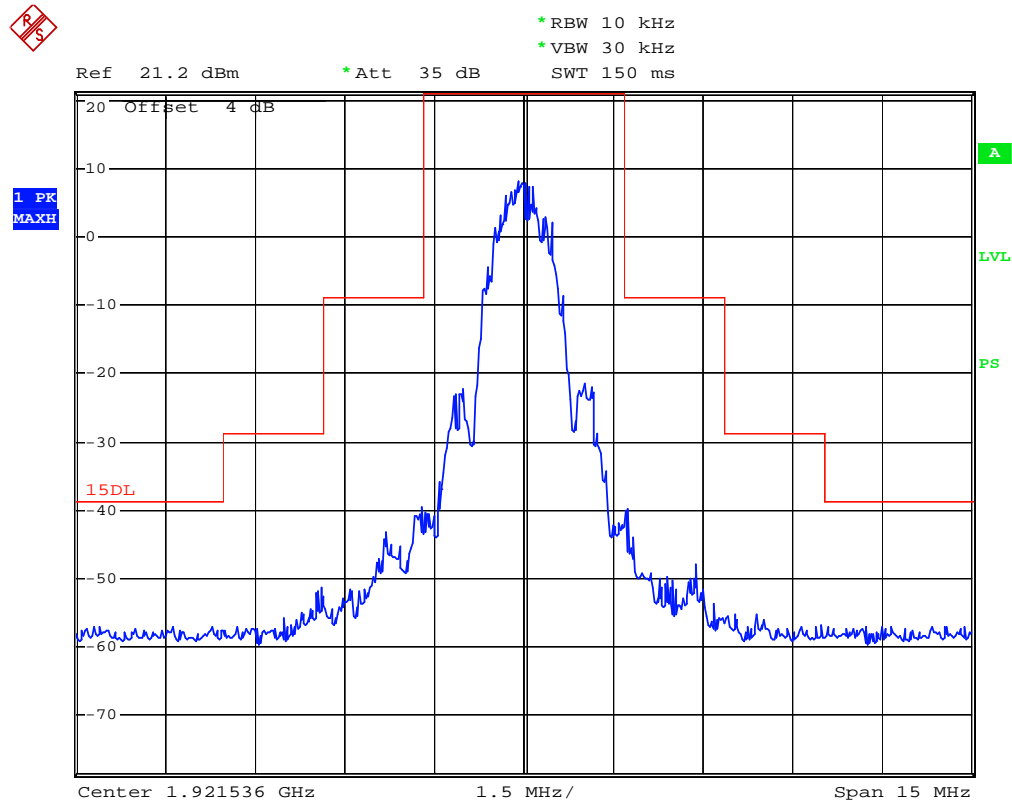
Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.8 kPa

The testing was performed by Bruce Zhang on 2008-11-20, 2008-11-25.

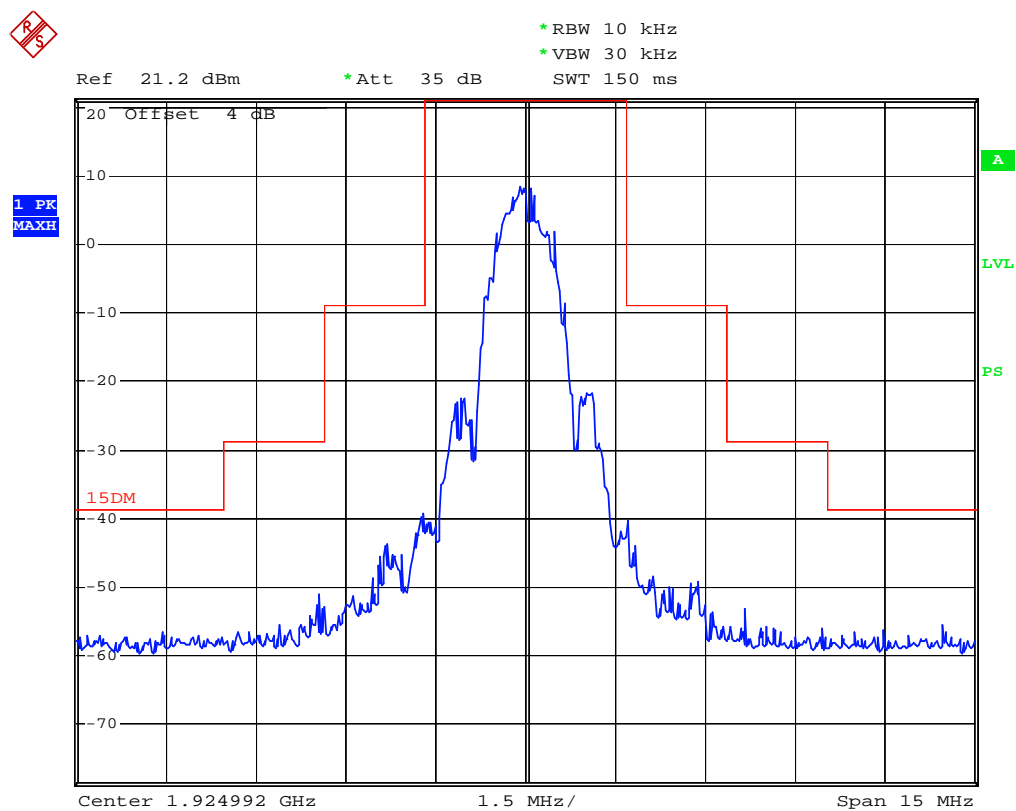
Test Mode: Transmitting

Test Result: Compliance.

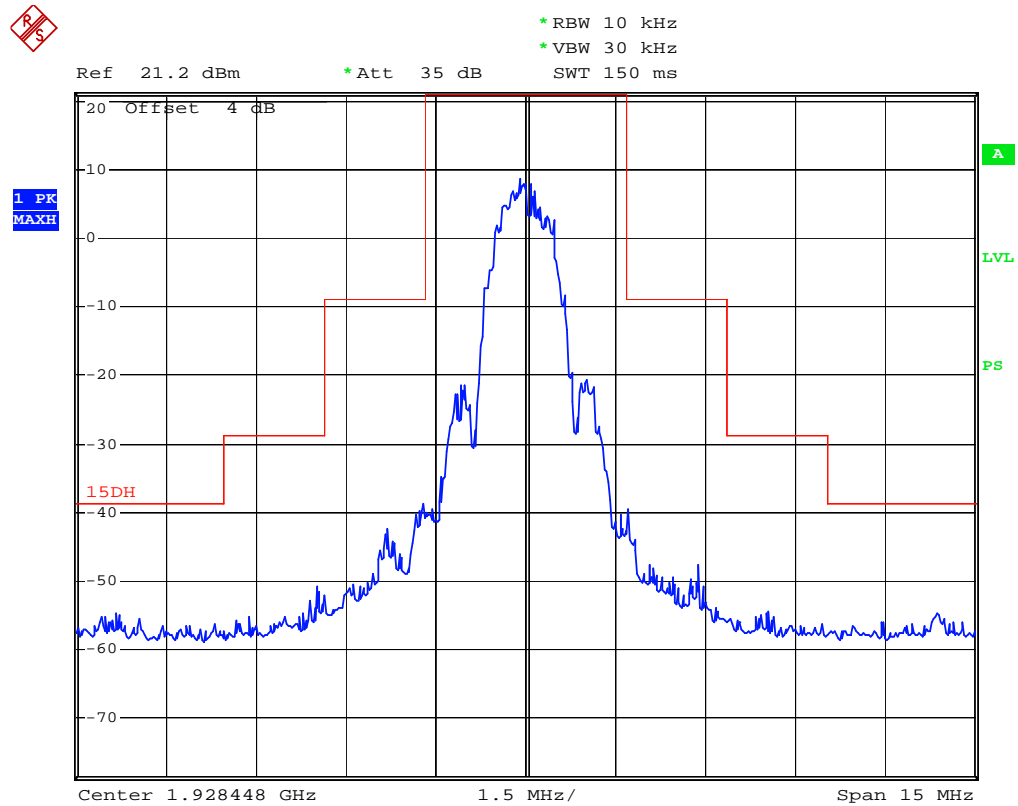
Please refer to following plots

Low Channel (Unwanted Emission inside the Sub-band)

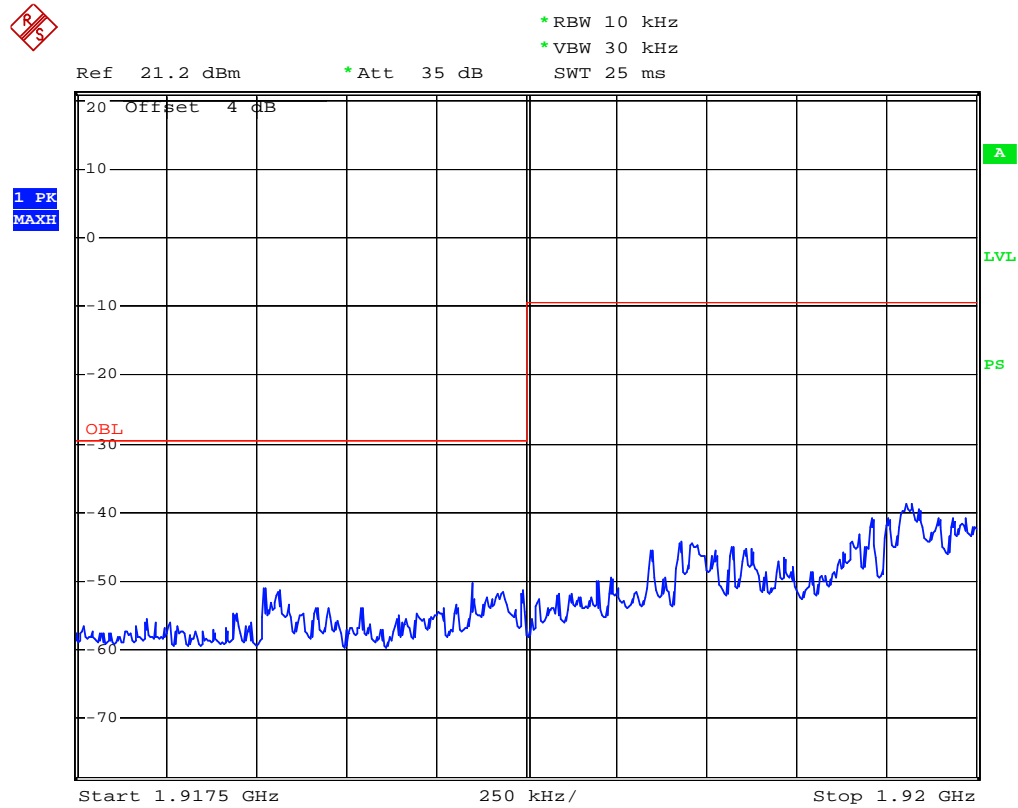
Date: 25.NOV.2008 15:14:50

Middle Channel (Unwanted Emission inside the Sub-band)

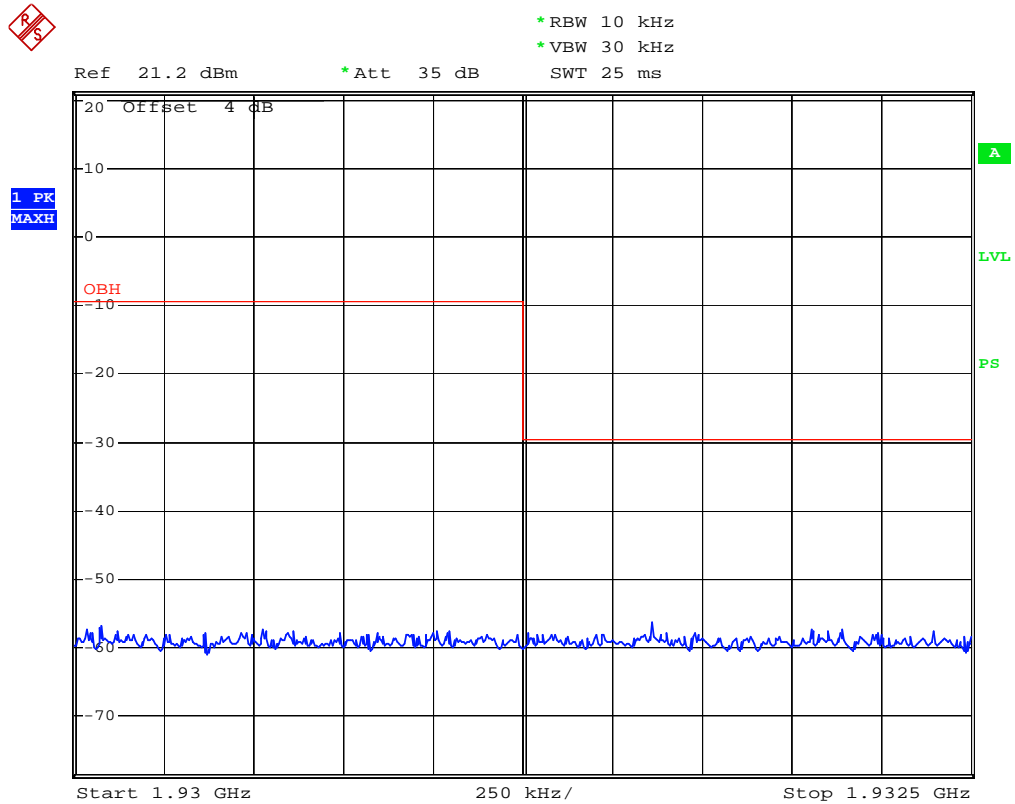
Date: 25.NOV.2008 15:12:43

High Channel (Unwanted Emission inside the Sub-band)

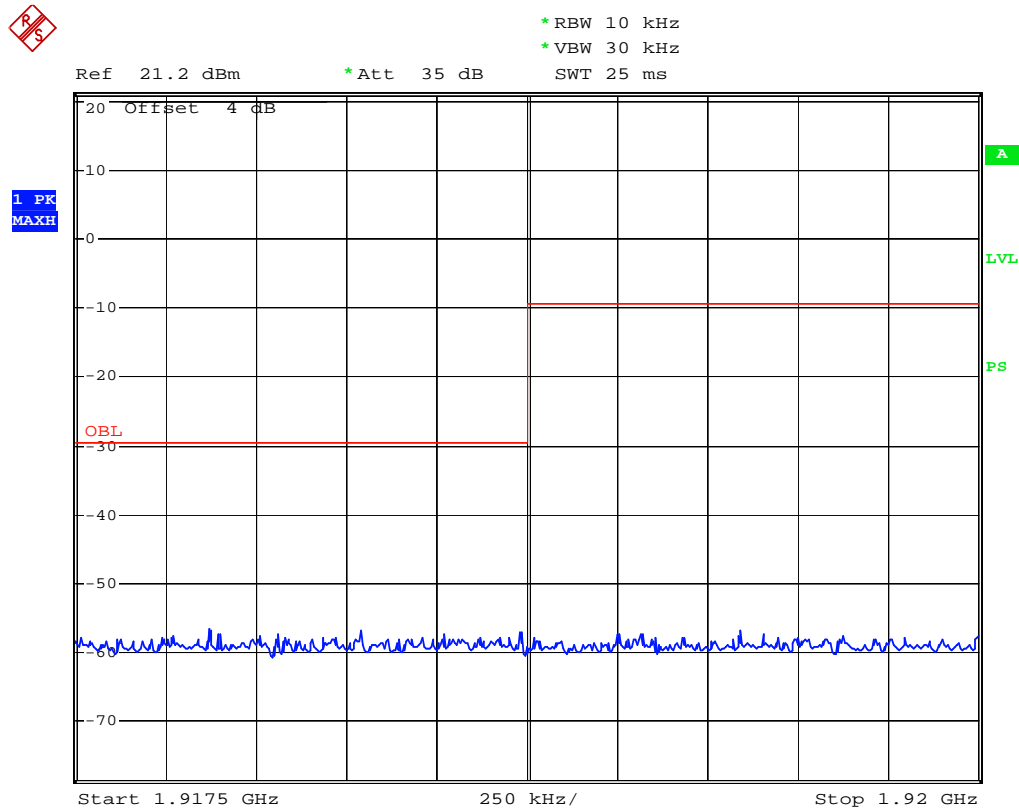
Date: 25.NOV.2008 15:10:41

Low Channels (Unwanted Emission outside the Sub-band)

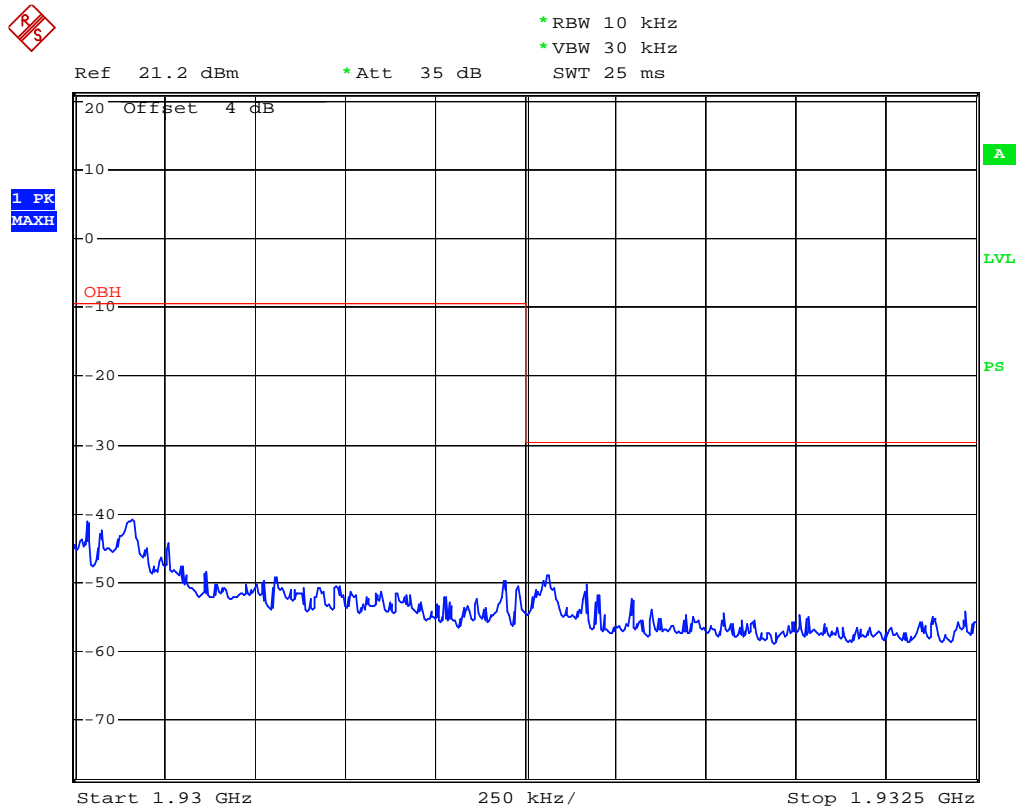
Date: 20.NOV.2008 10:29:14



Date: 20.NOV.2008 10:20:09

High Channels (Unwanted Emission outside the Sub-band)

Date: 20.NOV.2008 10:16:16



Date: 20.NOV.2008 10:14:35

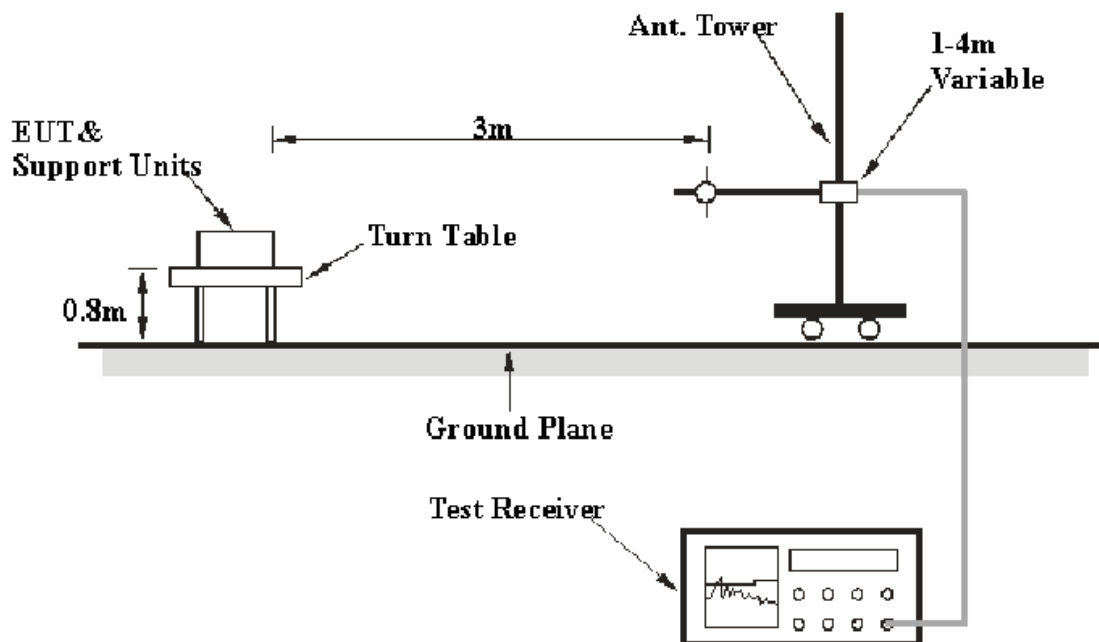
§15.319 (g) - RADIATED EMISSIONS

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 C63.17 - 2006. The specification used was the FCC 15 § 15.319(g).

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 & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

<i>Frequency Range</i>	<i>RBW</i>	<i>Video B/W</i>
30MHz – 1000 MHz	100 kHz	300 kHz
Above 1 GHz	1 MHz	3 MHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2008-11-15	2009-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2008-10-16	2009-10-16
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2008-03-11	2009-03-11
HP	Amplifier	8449B	3008A00277	2008-09-29	2009-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2008-09-25	2009-09-25
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 adapter 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.

Data was recorded in Quasi-peak detection mode for frequency range of 30MHz-1GHz and peak and Average detection modes for frequencies above 1GHz.

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 maximum 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 15.319 (g), with the worst margin reading of:

Transmitting Mode (30 – 1000 MHz):

1.2 dB at 40.999750 MHz in the Vertical polarization (Low Channel)

0.6 dB at 41.437700 MHz in the Vertical polarization (High Channel)

Transmitting Mode (Above 1 GHz):

3.77 dB at 3843.072 MHz in the Horizontal polarization (Low Channel)

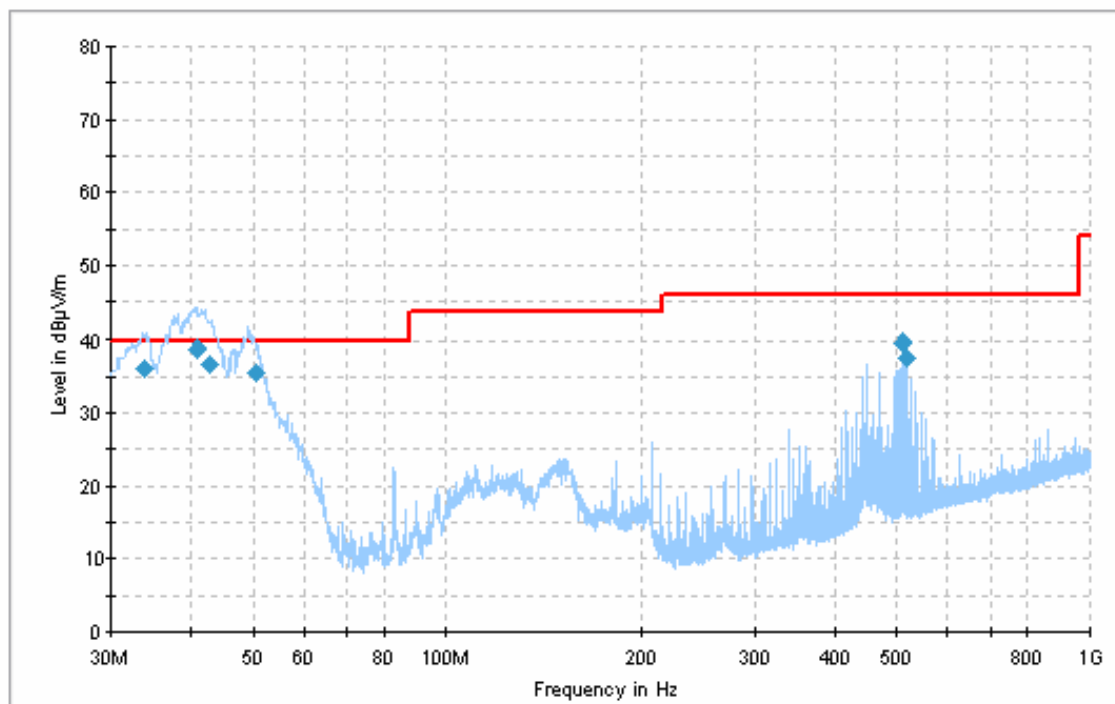
3.34 dB at 3856.896 MHz in the Horizontal polarization (High Channel)

Test Data

Environmental Conditions

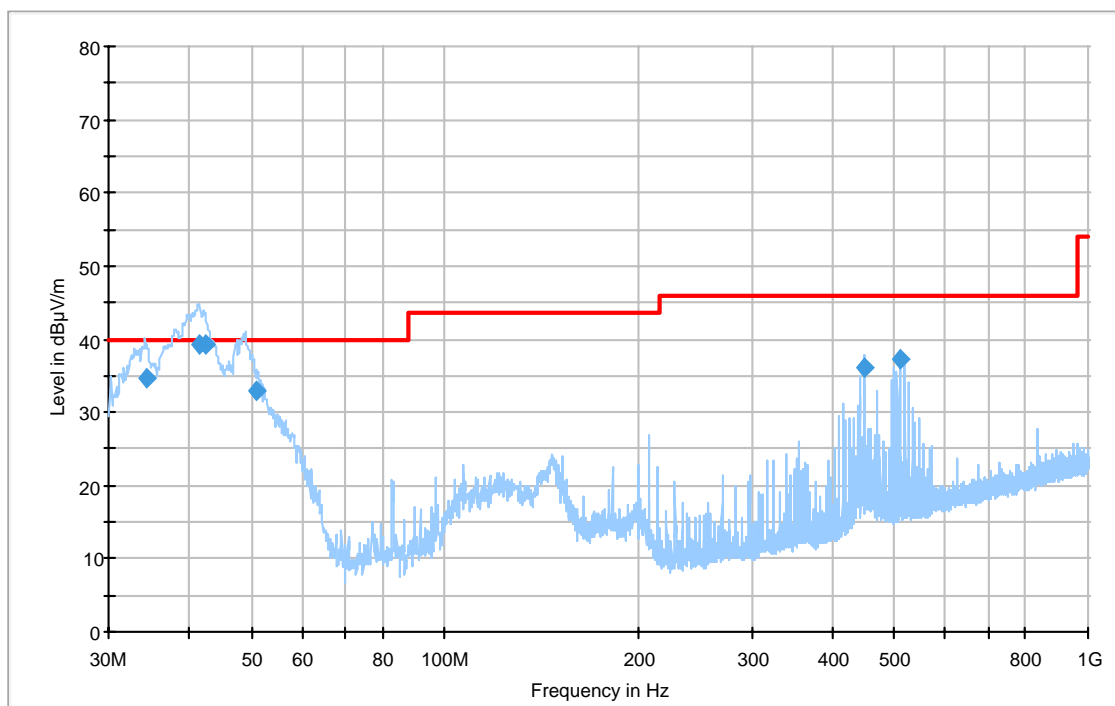
Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.9 kPa

The testing was performed by Bruce Zhang on 2008-11-25.

Test Mode: Transmitting Low Channel

Frequency (MHz)	Corrected Amp. (dBμV/m)	Ant. Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
40.999750	38.8	110.0	V	124.0	-16.0	40.0	1.2*
42.738325	36.8	111.0	V	126.0	-16.9	40.0	3.2*
33.907725	36.0	109.0	V	28.0	-11.2	40.0	4.0*
50.600000	35.6	118.0	V	222.0	-20.3	40.0	5.4
511.503025	39.6	108.0	V	106.0	-10.6	46.0	6.4
518.388475	37.6	109.0	V	105.0	-10.3	46.0	8.4

* Within measurement uncertainty.

Test Mode: Transmitting High Channel

Frequency (MHz)	Corrected Amp. (dBμV/m)	Ant. Height (cm)	Ant. Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBμV/m)	Margin (dB)
41.437700	39.4	107.0	V	69.0	-16.2	40.0	0.6*
42.353725	39.2	106.0	V	125.0	-16.7	40.0	0.8*
34.362800	34.7	107.0	V	12.0	-11.5	40.0	5.3
50.756800	33.0	105.0	V	230.0	-20.4	40.0	7.0
511.496350	37.4	106.0	V	105.0	-10.6	46.0	8.6
450.010750	36.2	210.0	V	39.0	-3.9	46.0	9.8

* Within measurement uncertainty.

Test Mode: Transmitting (Above 1GHz)

Freq. (MHz)	Meter Reading (dBμV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre- Amp. Gain (dB)	Cord. Amp. (dBuV/m)	FCC Part 15.319(g) / 209		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dBuV/m)	Margin (dB)	Remarks
Low Channel												
3843.072	67.51	PK	202	2.0	H	32.1	4.32	33.7	70.23	74	3.77	Harmonic
3843.072	62.14	PK	68	1.6	V	32.1	4.32	33.7	64.86	74	9.14	Harmonic
5764.608	46.69	PK	200	2.0	H	34.5	6.50	33.6	54.09	74	19.91	Harmonic
5764.608	44.73	PK	70	1.8	V	34.5	6.50	33.6	52.13	74	21.87	Harmonic
High Channel												
3856.896	67.94	PK	221	1.6	H	32.1	4.32	33.7	70.66	74	3.34	Harmonic
3856.896	63.94	PK	72	1.5	V	32.1	4.32	33.7	66.66	74	7.34	Harmonic
5785.344	47.21	PK	200	2.0	H	34.5	6.50	33.6	54.61	74	19.39	Harmonic
5785.344	44.62	PK	70	1.8	V	34.5	6.50	33.6	52.02	74	21.98	Harmonic

Field Strength of Spurious Emission (Average)							
Freq. (MHz)	Peak Corrected Amplitude. @ 3m (dBμV/m)	Ant. Polar (H/V)	Duty Cycle Factor (dB)	Corrected Amplitude. (dBμV/m)	FCC 15.319(g)		Comment
					Limit (dBμV/m)	Margin	
Low Channel							
3843.072	70.23	H	-27.83	42.4	54	11.60	Harmonic
3843.072	64.86	V	-27.83	37.03	54	16.97	Harmonic
5764.608	54.09	H	-27.83	26.26	54	27.74	Harmonic
5764.608	52.13	H	-27.83	24.3	54	29.70	Harmonic
High Channel							
3843.072	70.66	H	-27.83	42.83	54	11.17	Harmonic
3843.072	66.66	V	-27.83	38.83	54	15.17	Harmonic
5764.608	54.61	H	-27.83	26.78	54	27.22	Harmonic
5764.608	52.02	H	-27.83	24.19	54	29.81	Harmonic

Note: Duty Cycle = $T_{on}/T_p \times 100\%$ $T_{on} = 406\mu s = 0.406ms$ $T_p = 10ms$

Duty Cycle = 4.06%

Duty Cycle Factor = $20\lg(\text{Duty Cycle}) = -27.83\text{ dB}$

AV = PK + Duty Cycle Factor

§15.323 (f) - FREQUENCY STABILITY

Standard Applicable

Per §15.323(f), the frequency stability of the carrier frequency of the intentional radiator shall be maintained within ± 10 ppm over 1 hour or the interval between channel access monitoring, whichever is shorter. The frequency stability shall be maintained over a temperature variation of -20° to $+50^{\circ}$ °C at normal supply voltage, and over a variation in the primary supply voltage of 85 percent to 115 percent of the rated supply voltage at a temperature of 20 °C. For equipment that is capable only of operating from a battery, the frequency stability tests shall be performed using a new battery without any further requirement to vary supply voltage.

Test Data

Please refer to FCC ID: WSWDECT49B94TAMBS certified on December 04, 2008, report No.: RSZ08112002.

§15.323 (c) (e) & §15.319(f) – SPECIFIC REQUIREMENTS FOR UPCS DEVICE

Test Data

Please refer to FCC ID: WSWDECT49B94TAMBS certified on December 04, 2008, report No.: RSZ08112002.

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