Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation.

HOKLAS 005
TEST

TEST REPORT

Report Number: 13070637HKG-002

Application
for
Original Grant of 47 CFR Part 15 Certification
Single New of RSS-210 Issue 8 Equipment Certification
Category II Equipment of RSS-310 Issue 3

1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion

FCC ID: AL8SEMPRE

IC: 1186C-SEMPRE

Prepared and Checked by:

Lau Chin Yu, Benny
Lead Engineer

Approved by:

Nip Ming Fung, Melvin
Assistant Manager
November 28, 2013

- The test report only allows to be revised within the retention period unless further standard or the requirement was noticed.
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GENERAL INFORMATION

Applicant Name (FCC):	Plantronics, Inc.
Applicant Address:	345 Encinal Street Santa Cruz, CA 95060 USA
FCC Specification Standard:	FCC Part 15, October 1, 2012 Edition
FCC ID:	AL8SEMPRE
FCC Model(s):	SEMPRE
Applicant Name (IC):	Clarity, A Division of Plantronics, Inc.
Applicant Address:	6131 Preservation Drive Chattanooga, TN 37416 USA
IC Specification Standard:	RSS-210 Issue 8, December 2010 RSS-Gen Issue 3, December 2010
IC:	1186C-SEMPRE
IC Model(s):	SEMPRE
Type of EUT:	Transmitter
Description of EUT:	1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion
Serial Number:	N/A
Sample Receipt Date:	July 15, 2013
Date of Test:	August 26, 2013 to August 28, 2013
Report Date:	November 28, 2013
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

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EXHIBIT 1
TEST RESULTS SUMMARY & STATEMENT OF COMPLIANCE

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1.0 Test Results Summary & Statement of Compliance

1.1 Summary of Test Results

Test Items	FCC Part 15 Section	RSS-210/ RSS-Gen#/ RSS-310^ Section	Results	Details see section
Antenna Requirement	15.203	7.1.2#	Pass	2.1
Security Code Information	15.214(d)	2.4	Pass	2.1
Radiated Emission Radiated Emission on the Bandedge	15.249(a), 209, & 109 15.249(d)	A2.9(a) A2.9(b)	Pass Pass	4.2 4.3
AC Power Line Conducted Emission	15.207 & 15.107	7.2.4#	Pass	4.4

Note: Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

1.2 Statement of Compliance

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2012 Edition
RSS-210 Issue 8, December 2010
RSS-Gen Issue 3, December 2010

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EXHIBIT 2
GENERAL DESCRIPTION

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2.0 General Description

2.1 Product Description

The SEMPRE is a 1.9GHz Digital Modulation Cordless Phone with Caller ID, Speakerphone, Digital Answering Machine and Bluetooth - Base Unit Bluetooth Portion. It operates at frequency range of 2400MHz-2483.5MHz. The EUT is powered by an adaptor 100-240VAC to 9VDC 800mA and/or 3 x "Ni-MH" type “AA” size rechargeable batteries (1.2V 1900mAh).

The antennas used in base unit is integral, and the test sample is a prototype.

The circuit description is saved with filename: descri.pdf.

Connection between the device and the telephone network is accomplished through the use of USOC RJ11C in the 2-wire loop calling central office line.

2.2 Test Methodology

Both AC power line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). Preliminary radiated scans and all radiated measurements were performed in Open Area Test Sites. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

2.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data and conducted data are at Roof Top and 2nd Floor respectively of Intertek Testing Services Hong Kong Ltd., which is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC and the Industry Canada.

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EXHIBIT 3
SYSTEM TEST CONFIGURATION

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3.0 System Test Configuration

3.1 Justification

For radiated emissions testing, the equipment under test (EUT) was setup to transmit continuously mode to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables (if any) were manipulated to produce worst case emissions.

The EUT was powered by a 100-240VAC to 9VDC 800mA adaptor and/or 3 x "Ni-MH" type "AA" size rechargeable batteries (1.2V 1900mAh).

For the measurements, the EUT was attached to a plastic stand if necessary and placed on the wooden turntable. If the base unit attached to peripherals, they were connected and operational to simulate typical use. The handset was remotely located as far from the antenna and the base as possible to ensure full power transmission from the base. Else, the base was wired to transmit full power.

The signal was maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization were varied during the search for maximum signal level. The antenna height was varied from 1 to 4 meters. Radiated emissions were taken at three meters unless the signal level was too low for measurement at that distance. If necessary, a pre-amplifier was used and/or the test was conducted at a closer distance.

For any intentional radiator powered by AC power line, measurements of the radiated signal level of the fundamental frequency component of the emission was performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

For transmitter radiated measurement, the spectrum analyzer resolution bandwidth was 100 kHz for frequencies below 1000 MHz. The resolution bandwidth was 1 MHz for frequencies above 1000 MHz.

For receiver radiated measurement, the spectrum analyzer resolution bandwidth was 1MHz for measurement above 1GHz while 100kHz for measurement from 30MHz to 1GHz.

For radiated measurement, the spectrum analyzer resolution bandwidth was 100 kHz for frequencies below 1000 MHz.

3.1 Justification (continuous)

Radiated emission measurement for transmitter was performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

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Radiated emission measurement was performed from the frequency 30MHz to 1GHz.

Emission that are directly caused by digital circuits in the transmit path and transmitter portion were measured, and the limit are according to FCC Part 15 Section 15.209. Digital circuitry used to control additional functions other than the operation of the transmitter are subject to FCC Part 15 Section 15.109 Limits.

The DECT module was put into transmission mode when taking radiated emission data for determining worst-case spurious emission.

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3.1 Justification - Cont'd

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in section 4.2.3.

Determination of pulse desensitization was made according to *Hewlett Packard Application Note 150-2, Spectrum Analysis... Pulsed RF.* The effective period (Teff) was 625µs. With the resolution bandwidth 1MHz and spectrum analyzer IF bandwidth 3dB, the pulse desensitization factor was 0dB.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)x1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50ohm coupling impedance for measuring instrument. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled.

All relevant operation modes have been tested, and the worst case data was included in this report.

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3.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

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3.3 Details of EUT and Description of Accessories

Details of EUT:

An AC adaptor and/or batteries (provided with the unit) were used to power the device. Their description are listed below.

(1) An AC adaptor (100-240VAC to 9VDC 800mA, Model: T09008U002, Brand: CLARiTY) (Supplied by Client)
(2) 3 x "Ni-MH" type rechargeable battery (1.2V 1900mA, Model: HR-3UTGA, Brand: SANYO) (Supplied by Client)

Description of Accessories:

(1) Telephone Line Simulator, Model: TLS-5D-01, S/N: 151101 (Supplied by Intertek)
(2) Nokia Mobile Phone, Model: 5300, FCC ID: PPIRM-146 (Supplied by Intertek)
(3) 3m Telephone Line (Supplied by Intertek)
(4) 1m Telephone Line with Termination (Supplied by Intertek)
(5) Telephone Headset, Model: M110, Brand: PLANTRONICS (Supplied by Client)
(6) BedShaker, Model: C2210, Brand: CLARiTY (Supplied by Client)
(7) Neckloop, Model: CE-30, Brand: CLARiTY (Supplied by Client)
(8) Handset, Model: XLC3.5HSD/HSBD, Brand: CLARiTY (Supplied by Client)

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

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EXHIBIT 4
TEST RESULTS

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4.0 **Test Results**

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

4.1 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD + AV

where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflects the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD +AV

Example
Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29 dB
PD = 0 dB
AV = -10 dB
FS = 62 + 7.4 +1.6 -29 +0 + (-10) = 32 dBμV/m

Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m

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04.2 Radiated Emissions

4.2.1 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at

Base Unit:163.056 MHz

The worst case radiated emission configuration photographs are saved with filename: config photos.pdf

4.2.2 Radiated Emission Data

The data in tables 1-5 list the significant emission frequencies, the limit and the margin of compliance.

Judgement -

Base Unit: Passed by 3.5 dB margin

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Mode: TX-Channel 00

Table 1

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	90.4	33	29.4	24	62.8	94.0	-31.2
V	**4804.000**	**49.7**	**33**	**34.9**	**24**	**27.6**	**54.0**	**-26.4**
H	7206.000	45.7	33	37.9	24	26.6	54.0	-27.4
H	9608.000	42.8	33	40.4	24	26.2	54.0	-27.8
H	**12010.000**	**42.0**	**33**	**40.5**	**24**	**25.5**	**54.0**	**-28.5**
H	14412.000	42.3	33	40.0	24	25.3	54.0	-28.7

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2402.000	90.4	33	29.4	86.8	114.0	-27.2
V	**4804.000**	**49.7**	**33**	**34.9**	**51.6**	**74.0**	**-22.4**
H	7206.000	45.7	33	37.9	50.6	74.0	-23.4
H	9608.000	42.8	33	40.4	50.2	74.0	-23.8
H	**12010.000**	**42.0**	**33**	**40.5**	**49.5**	**74.0**	**-24.5**
H	14412.000	42.3	33	40.0	49.3	74.0	-24.7

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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Mode: TX-Channel 39

Table 2

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	89.0	33	29.4	24	61.4	94.0	-32.6
V	**4882.000**	**49.3**	**33**	**34.9**	**24**	**27.2**	**54.0**	**-26.8**
H	**7323.000**	**45.5**	**33**	**37.9**	**24**	**26.4**	**54.0**	**-27.6**
H	9764.000	42.8	33	40.4	24	26.2	54.0	-27.8
H	**12205.000**	**42.0**	**33**	**40.5**	**24**	**25.5**	**54.0**	**-28.5**
H	14646.000	43.9	33	38.4	24	25.3	54.0	-28.7

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2441.000	89.0	33	29.4	85.4	114.0	-28.6
V	**4882.000**	**49.3**	**33**	**34.9**	**51.2**	**74.0**	**-22.8**
H	**7323.000**	**45.5**	**33**	**37.9**	**50.4**	**74.0**	**-23.6**
H	9764.000	42.8	33	40.4	50.2	74.0	-23.8
H	**12205.000**	**42.0**	**33**	**40.5**	**49.5**	**74.0**	**-24.5**
H	14646.000	43.9	33	38.4	49.3	74.0	-24.7

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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Mode: TX-Channel 78

Table 3

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Average Factor (dB)	Calculated at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	88.9	33	29.4	24	61.3	94.0	-32.7
V	**4960.000**	**49.4**	**33**	**34.9**	**24**	**27.3**	**54.0**	**-26.7**
H	**7440.000**	**45.4**	**33**	**37.9**	**24**	**26.3**	**54.0**	**-27.7**
H	9920.000	42.1	33	40.4	24	25.5	54.0	-28.5
H	**12400.000**	**41.9**	**33**	**40.5**	**24**	**25.4**	**54.0**	**-28.6**
H	14880.000	43.9	33	38.4	24	25.3	54.0	-28.7

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
V	2480.000	88.9	33	29.4	85.3	114.0	-28.7
V	**4960.000**	**49.4**	**33**	**34.9**	**51.3**	**74.0**	**-22.7**
H	**7440.000**	**45.4**	**33**	**37.9**	**50.3**	**74.0**	**-23.7**
H	9920.000	42.1	33	40.4	49.5	74.0	-24.5
H	**12400.000**	**41.9**	**33**	**40.5**	**49.4**	**74.0**	**-24.6**
H	14880.000	43.9	33	38.4	49.3	74.0	-24.7

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Horn antenna is used for the emission over 1000MHz.

5. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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Mode: Base Speakerphone Talk with selected Bluetooth

Table 4

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	54.300	38.8	16	11.0	33.8	40.0	-6.2
V	**117.365**	**40.7**	**16**	**14.0**	**38.7**	**43.5**	**-4.8**
H	**163.056**	**39.0**	**16**	**17.0**	**40.0**	**43.5**	**-3.5**
H	**168.587**	**37.1**	**16**	**18.0**	**39.1**	**43.5**	**-4.4**
H	206.965	35.2	16	17.0	36.2	43.5	-7.3
H	**331.800**	**25.5**	**16**	**24.0**	**33.5**	**46.0**	**-12.5**

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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Mode: Conference Talk with selected Bluetooth (Base Speakerphone and DECT Handset)

Table 5

Radiated Emission Data

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	55.300	38.6	16	11.0	33.6	40.0	-6.4
V	**115.653**	**40.1**	**16**	**14.0**	**38.1**	**43.5**	**-5.4**
H	**163.364**	**38.6**	**16**	**17.0**	**39.6**	**43.5**	**-3.9**
H	**168.587**	**37.9**	**16**	**18.0**	**39.9**	**43.5**	**-3.6**
H	**269.500**	**30.2**	**16**	**22.0**	**36.2**	**46.0**	**-9.8**
H	**331.800**	**25.5**	**16**	**24.0**	**33.5**	**46.0**	**-12.5**

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative value in the margin column shows emission below limit.

4. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

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4.2.3 Transmitter Duty Cycle Calculation

Based on the Bluetooth Specification Version 2.0 / 2.1 + EDR, the transmitter ON time for each timeslot of Bluetooth is 625μs. DH5 has the maximum duty cycle, which consists of 5 continuous Tx slots and 1 Rx slot. Therefore one hopset take (5+1) x 625μs = 3.75ms. For one period for a pseudo-random hopping through all 79 RF channels, it take: 79 x 3.75ms = 296.25ms.

For the worst case calculation, there are two transmissions might occur in 100ms.

Therefore,

Duty Cycle (DC) = Maximum On time in 100ms/100ms
= 3.125ms x 2 /100ms
= 0.0625

Average Factor (AF) of Bluetooth in dB = $20 \log_{10} (0.0625)$
= -24.0dB

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4.3 Radiated Emission on the Bandedge

From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz and 2483.5MHz). In case of emissions up to two standard bandwidths away from the bandedge, the delta measurement technique is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2009) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50 dB below the level of the fundamental or to the general radiated emission limits in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, whichever is the lesser attenuation, which meet the requirement of FCC Part 15 Section 15.249(d) / RSS-210 A2.9(b).

The plots of radiated emission on the bandedge are saved as below.

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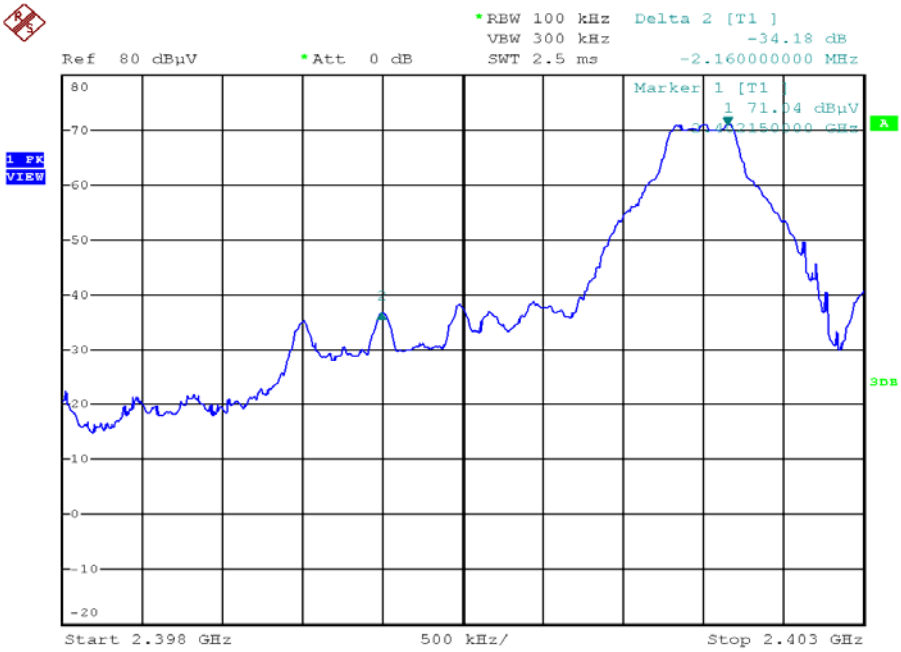
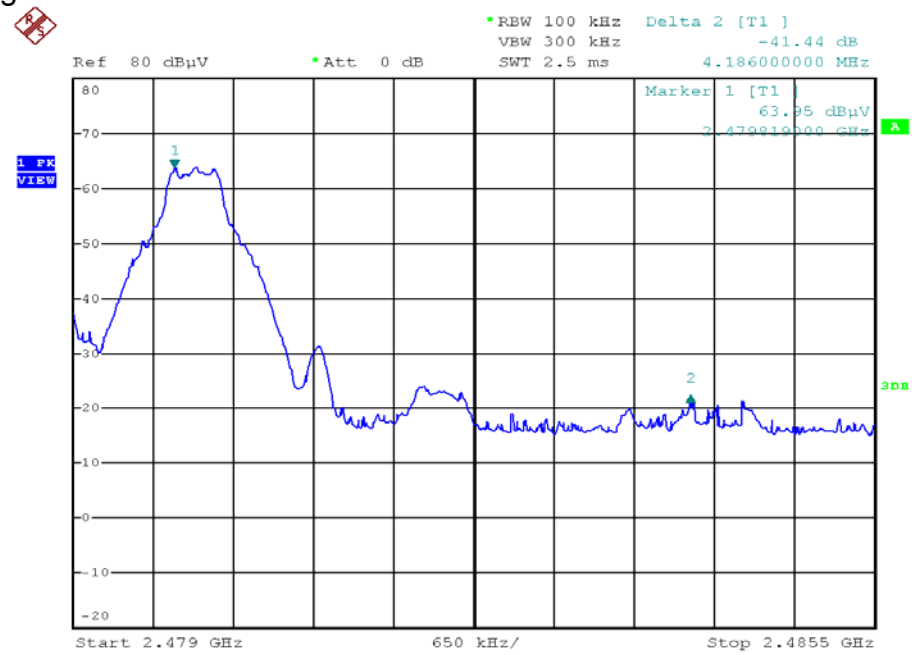
Plots of radiated emission on the bandedge

Lowest channel



Highest channel



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Bandedge compliance is determined by applying marker-delta method, i.e.

Resultant Field Strength = Fundamental Emissions - Delta from the plot

Resultant field strength for the lowest and/or highest channel(s), with corresponding average values are calculated as follows:

Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)
Lowest	62.8	34.18	28.62	54	-25.38
Highest	61.3	41.44	19.86	54	-34.14

Channel	Fundamental Emission (dBµV/m)	Delta from the Plot (dB)	Resultant Field Strength (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)
Lowest	86.8	34.18	52.62	74	-21.38
Highest	85.3	41.44	43.86	74	-30.14

The resultant field strength meets the general radiated emission limit in FCC Part 15 Section 15.209 / Table 5 of RSS-Gen, which does not exceed 74dBµV/m for peak limit and also 54dBµV/m for average limit.

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4.4 AC Power Line Conducted Emission

[ ] Not applicable – EUT is only powered by battery for operation.

[×] EUT connects to AC power line. Emission Data is listed in following pages.

[ ] Base Unit connects to AC power line and has transmission. Handset connects to AC power line but has no transmission. Emission Data of Base Unit is listed in following pages.

4.4.1 AC Power Line Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at

Base Unit: 4.848 MHz

The worst case line conducted configuration photographs are saved with filename: config photos.pdf.

4.4.2 AC Power Line Conducted Emission Data

The plot(s) and data in the following pages list the significant emission frequencies, the limit and the margin of compliance.

Passed by 2.75 dB margin compare with average limit

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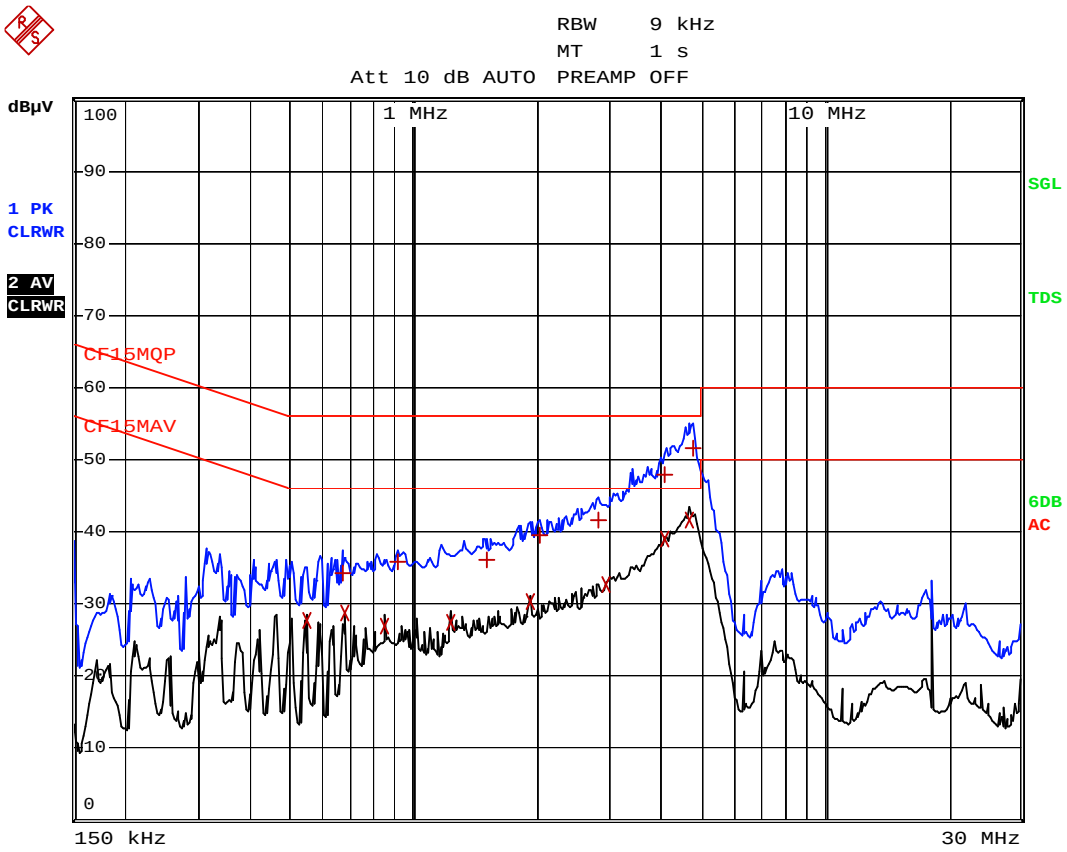
Worst Case: Base Handset Talk with selected Bluetooth



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Worst Case: Base Handset Talk with selected Bluetooth

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2	CISPR Average	550.5 kHz	27.69	N gnd	-18.30
1	Quasi Peak	672 kHz	34.26	N gnd	-21.74
2	CISPR Average	681 kHz	28.77	N gnd	-17.22
2	CISPR Average	847.5 kHz	26.87	N gnd	-19.12
1	Quasi Peak	915 kHz	35.92	N gnd	-20.07
2	CISPR Average	1.2255 MHz	27.54	N gnd	-18.45
1	Quasi Peak	1.5 MHz	35.97	N gnd	-20.02
2	CISPR Average	1.9275 MHz	30.22	N gnd	-15.78
1	Quasi Peak	2.0355 MHz	39.55	N gnd	-16.44
1	Quasi Peak	2.8095 MHz	41.72	N gnd	-14.27
2	CISPR Average	2.931 MHz	32.58	N gnd	-13.41
1	Quasi Peak	4.092 MHz	47.86	N gnd	-8.13
2	CISPR Average	4.1055 MHz	38.85	N gnd	-7.15
2	CISPR Average	4.704 MHz	41.69	L1 gnd	-4.30
1	Quasi Peak	4.785 MHz	51.64	N gnd	-4.35

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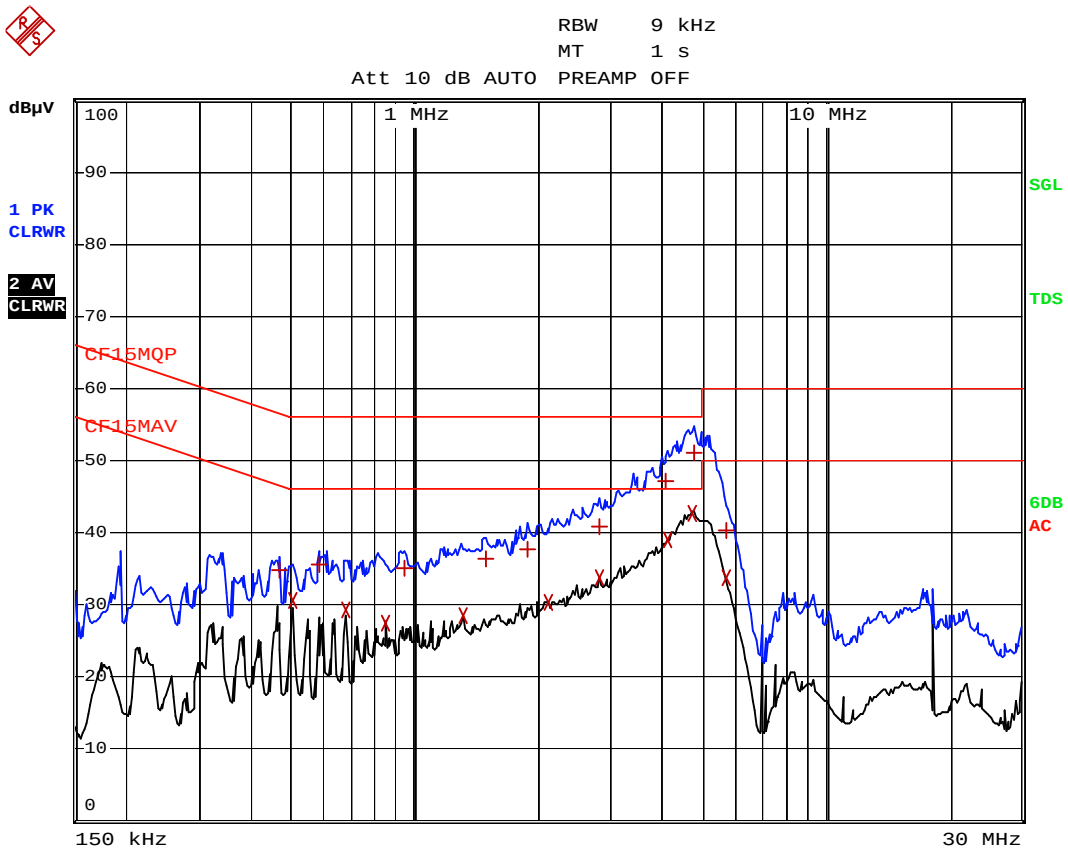
Worst Case: Conference Talk with selected Bluetooth (Base Handset and Cordless Handset)



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Worst Case: Conference Talk with selected Bluetooth (Base Handset and Cordless Handset)

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	465 kHz	34.74	N gnd	-21.85
2	CISPR Average	505.5 kHz	30.62	N gnd	-15.37
1	Quasi Peak	582 kHz	35.50	N gnd	-20.49
2	CISPR Average	676.5 kHz	29.26	N gnd	-16.73
2	CISPR Average	852 kHz	27.36	N gnd	-18.63
1	Quasi Peak	942 kHz	34.90	N gnd	-21.09
2	CISPR Average	1.311 MHz	28.50	N gnd	-17.49
1	Quasi Peak	1.4865 MHz	36.34	N gnd	-19.65
1	Quasi Peak	1.8915 MHz	37.56	N gnd	-18.43
2	CISPR Average	2.1075 MHz	30.32	N gnd	-15.67
1	Quasi Peak	2.805 MHz	40.78	N gnd	-15.21
2	CISPR Average	2.8275 MHz	33.69	N gnd	-12.30
1	Quasi Peak	4.1055 MHz	47.22	N gnd	-8.77
2	CISPR Average	4.11 MHz	39.09	N gnd	-6.90
2	CISPR Average	4.7625 MHz	42.71	N gnd	-3.28
1	Quasi Peak	4.7895 MHz	50.99	N gnd	-5.00
2	CISPR Average	5.7345 MHz	33.83	N gnd	-16.16
1	Quasi Peak	5.7435 MHz	40.38	N gnd	-19.61

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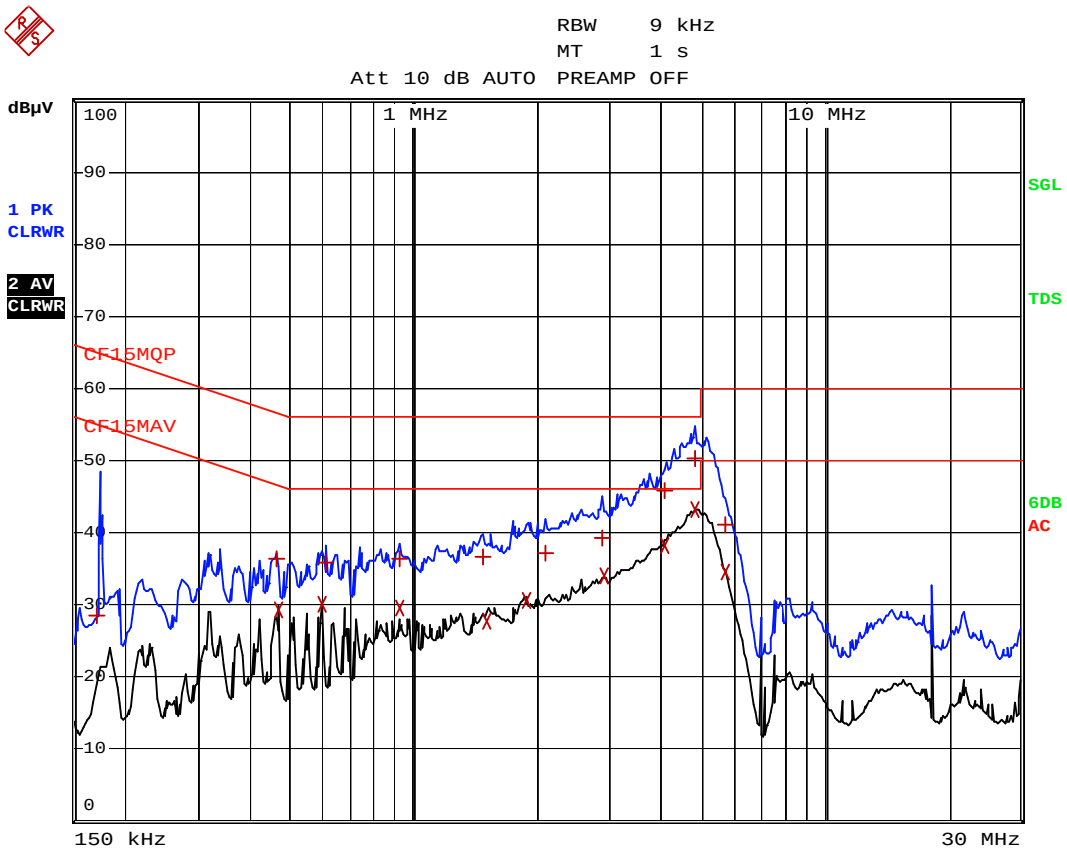
Worst Case: Conference Talk with selected Bluetooth (Base Speakerphone and Cordless Handset)



Date: 26.AUG.2013 18:47:48

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Worst Case: Conference Talk with selected Bluetooth (Base Speakerphone and Cordless Handset)

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

	TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
1	Quasi Peak	172.5 kHz	28.57	L1 gnd	-36.26
1	Quasi Peak	460.5 kHz	36.40	N gnd	-20.27
2	CISPR Average	465 kHz	29.34	N gnd	-17.26
2	CISPR Average	595.5 kHz	29.97	L1 gnd	-16.02
1	Quasi Peak	609 kHz	35.89	N gnd	-20.10
1	Quasi Peak	928.5 kHz	36.46	N gnd	-19.53
2	CISPR Average	928.5 kHz	29.47	N gnd	-16.52
1	Quasi Peak	1.482 MHz	36.59	N gnd	-19.40
2	CISPR Average	1.518 MHz	27.59	N gnd	-18.40
2	CISPR Average	1.887 MHz	30.47	N gnd	-15.52
1	Quasi Peak	2.085 MHz	37.19	N gnd	-18.80
1	Quasi Peak	2.877 MHz	39.12	N gnd	-16.87
2	CISPR Average	2.913 MHz	33.89	N gnd	-12.10
1	Quasi Peak	4.0875 MHz	45.69	N gnd	-10.30
2	CISPR Average	4.1055 MHz	38.14	N gnd	-7.85
2	CISPR Average	4.848 MHz	43.24	N gnd	-2.75
1	Quasi Peak	4.857 MHz	50.17	N gnd	-5.82
2	CISPR Average	5.739 MHz	34.42	N gnd	-15.57
1	Quasi Peak	5.757 MHz	40.99	N gnd	-19.00

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EXHIBIT 5
EQUIPMENT LIST

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5.0 **Equipment List**

1) Radiated Emissions Test

Equipment	EMI Test Receiver	Spectrum Analyzer	Biconical Antenna
Registration No.	EW-2500	EW-2188	EW-0571
Manufacturer	R&S	AGILENTTECH	EMCO
Model No.	ESCI	E4407B	3104C
Calibration Date	Mar. 22, 2013	Nov. 5, 2012	Apr. 5, 2012
Calibration Due Date	Feb. 28, 2014	Nov. 5, 2013	Oct. 5, 2013

Equipment	Log Periodic Antenna	Double Ridged Guide Antenna	Broad-Band Horn Antenna
Registration No.	EW-1042	EW-1015	EW-1679
Manufacturer	EMCO	EMCO	SCHWARZBECK
Model No.	3148	3115	BBHA9170
Calibration Date	Apr. 25, 2012	Mar. 5, 2013	Apr. 1, 2013
Calibration Due Date	Oct. 25, 2013	Sep. 5, 2014	Apr. 1, 2014

2) Conducted Emissions Test

Equipment	EMI Test Receiver	Artificial Mains	Pulse Limiter
Registration No.	EW-2666	EW-0192	EW-0700
Manufacturer	R&S	R&S	R&S
Model No.	ESCI7	ESH3-Z5	ESH3-Z2
Calibration Date	Jun. 20, 2013	May 15, 2013	Jul. 30, 2012
Calibration Due Date	Jun. 20, 2014	Apr. 15, 2014	Jan. 30, 2014

END OF TEST REPORT

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