

SteadyServ Technologies, LLC

Application For Certification

FCC ID: 2ABVCIKEG-CS1

iKeg Sensor

Model: iKeg CS1

Band Name: SteadyServ

2.4GHz Transceiver

Report No.: 140128003SZN-002

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-13]

Prepared and Checked by:	Approved by:

Sign on file

Duamanad anad Obaalcad by

Harry Wu Billy Li Engineer Supervisor

Date: February 27, 2014

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample
 may be said to have been obtained.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF No.: FCC 15C_TX_b

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TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

GENERAL INFORMATION

SteadyServ Technologies, LLC Model: iKeg CS1

Grantee:	SteadyServ Technologies, LLC
Grantee Address:	12758 Hamilton Crossing Blvd, Carmel, Indiana,
	46032 USA
Contact Person:	Bill Carson
Tel:	(317) 296-7474 709
Manufacturer:	SteadyServ Technologies, LLC
Manufacturer Address:	12758 Hamilton Crossing Blvd, Carmel, Indiana,
	46032 USA
Model:	iKeg CS1
Type of EUT:	2.4GHz Transmitter
FCC ID:	2ABVCIKEG-CS1
Description of EUT:	iKeg Sensor
Date of Sample Submitted:	December 4, 2013
Date of Test:	January 11, 2014
Report No.:	140128003SZN-002
Report Date:	February 27, 2014
Environmental Conidtions:	Temperature: +10 to 40°C
	Humidity: 10 to 90%

SUMMARY OF TEST RESULT

Aleph Electronics (Shenzhen) Co., LTD. Model: iKeg CS1

TEST SPECIFICATION	REFERENCE	RESULTS
Maximum Peak Output Power	15.247(b), (c) / RSS-210 A8.4	N/A
Hopping Channel Carrier Frequencies	15.247(e) / RSS-210 A8.1	N/A
Separation		
20dB Bandwidth of the Hopping Channel	15.247(a) / RSS-210 A8.1	N/A
Number of Hopping Frequencies	15.247(e) / RSS-210 A8.1	N/A
Average Time of Occupancy of Hopping	15.247(e) / RSS-210 A8.1	N/A
Frequency		
Antenna Conducted Spurious Emissions	15.247(d) / RSS-210 A8.5	N/A
Radiated Spurious Emissions	15.247(d) / RSS-210 A8.5	N/A
RF Exposure Compliance	15.247(i) / RSS-Gen 5.5	N/A
Transmitter Power Line Conducted	15.207 / RSS-Gen 7.2.2	N/A
Emissions		
Transmitter Field Strength	15.225 / RSS-210 A2.6	N/A
Transmitter Field Strength	15.227 / RSS-310 3.8	N/A
Transmitter Field Strength	15.229 / RSS-210 A2.7	N/A
Transmitter Field Strength, Bandwidth and	15.231(a) / RSS-210 A1.1.1	N/A
Timing Requirement		
Transmitter Field Strength, Bandwidth	15.231(e) / RSS-210 A1.1.5	N/A
and Timing Requirement		
Transmitter Field Strength and Bandwidth	15.239 / RSS-210 A2.8	N/A
Requirement		
Transmitter Field Strength and Bandwidth	15.249 / RSS-210 A2.9	Pass
Requirement		
Transmitter Field Strength and Bandwidth	15.235 / RSS-310 3.9	N/A
Requirement		
Receiver / Digital Device Radiated	15.109 / ICES-003	N/A
Eissions		
Digital Device Conducted Emissions	15.107 / ICES-003	N/A

Note: 1. The EUT uses an Integral antenna which, in accordance to section 15.203, is considered sufficient to comply with the pervisions of this section.

2. Pursuant to FCC part 15 Section 15.215(c), the 20 dB 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 excepted variations in temperature and supply voltage were considered.

MEASUREMENT/TECHNICAL REPORT

SteadyServ Technologies, LLC Model: iKeg CS1

FCC ID: 2ABVCIKEG-CS1

This report concerns (check one:)	Original Grant <u>X</u>	Class II Change
Equipment Type: DXX - Part 15 Low Pow	er Communication Devi	ce Transmitter
Deferred grant requested per 47 CFR 0.4		s No _X_
	If yes, defer until	: date
Company Name agrees to notify the Com	mission by:	
of the intended date of announcement of date.	the product so that the	date grant can be issued on that
Transition Rules Request per 15.37?	Yes	s No <u>X</u>
If no, assumed Part 15, Subpart C for Edition] provision.	intentional radiator -	the new 47 CFR [10-1-13
Report prepared by:		
	Harry Wu Intertek Testing Servic Kejiyuan Branch 6F, Block D, Huahan I Nanshan District, She Phone: (86 755) 860 Fax: (86 755) 860	Building, Langshan Road, nzhen, P. R. China 1 0716

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List of attached file

Exhibit type	File Description	Filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Report	Bandedge Plot	bandedge.pdf
Test Report	20dB BW Plot	bw.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Confidentiality Letter	request.pdf
Cover Letter	Letter of Agency	agency.pdf

EXHIBIT 1 GENERAL DESCRIPTION

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

1.0 General Description

1.1 Product Description

The equipment under test (EUT) is a transmitter for a iKeg Sensor model: iKeg CS1 operating at 2.4 GHz band and 13.56MHz. The EUT is powered by a 3.6V Lithium battery. For more detail information pls. refer to the user manual.

Antenna Type: Integral antenna

Modulation Type: GFSK

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

1.2 Related Submittal(s) Grants

This is an application for certification of a transceiver for the iKeg Sensor which has Zigbee function, and there is RF ID function for certification in report 140128003SZN-001.

1.3 Test Methodology

Radiated emission measurement was performed according to the procedures in ANSI C63.4 (2009). Radiated emission measurement was performed in Semi-anechoic chamber. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Justification Section" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

1.4 Test Facility

The Semi-anechoic chamber used to collect the radiated data is **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC(Registration Number: 242492).

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EXHIBIT 2 SYSTEM TEST CONFIGURATION

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1

2.0 **System Test Configuration**

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2009).

The EUT was powered by a fully 3.6V Lithium battery during test.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.

The unit was operated stand alone and placed in the centre of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

The EUT exercise program (provided by client) used during testing was designed to exercise the various system components in a manner similar to a typical use.

2.3 Special Accessories

N/A

2.4 Equipment Modification

Any modifications installed previous to testing by SteadyServ Technologies, LLC will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd Kejiyuan Branch.

2.5 Measurement Uncertainty

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

2.6 Support Equipment List and Description

N/A.

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EXHIBIT 3 EMISSION RESULTS

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

3.0 **Emission Results**

Data is included 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.

TRF No.: FCC 15C_TX_b
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3.1 Radiated Test Results

A sample calculation, configuration photographs and data tables of the emissions are included.

3.1.1 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. A sample calculation is included below.

Where $FS = Field Strength in dB\mu V/m$

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

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

Assume a receiver reading of 62.0 dB μ V 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. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

 $RA = 62.0 \text{ dB}\mu\text{V}$ AF = 7.4 dB

CF = 1.6 dB

AG = 29.0 dB

PD = 0 dB

 $FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 dB\mu V/m$

Level in μ V/m = Common Antilogarithm [(42 dB μ V/m)/20] = 125.9 μ V/m

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3.1.2 Radiated Emission Configuration Photograph

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

3.1.3 Radiated Emissions

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission at 40.700 MHz

Judgement: Passed by 15.4 dB

Sign on file
Harry Wu, Engineer
Typed/Printed Name
January 11, 2014
Date

TEST PERSONNEL:

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1

Applicant: SteadyServ Technologies, LLC Date of Test: January 11, 2014

Model: iKeg CS1 Sample: 1/1

Worst Case Operating Mode: Transmit

Table 1

Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	30.500	25.5	20.0	16.8	22.3	40.0	-17.7
Horizontal	161.820	21.1	20.0	20.8	21.9	43.5	-21.6
Horizontal	260.230	20.7	20.0	22.7	23.4	46.0	-22.6
Vertical	40.700	33.9	20.0	10.7	24.6	40.0	-15.4
Vertical	82.060	35.0	20.0	5.8	20.8	40.0	-19.2
Vertical	541.980	33.1	20.0	17.4	30.5	46.0	-15.5

NOTES: 1. Quasi-Peak detector is used except for others stated.

- 2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances 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 harmonic 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. All emissions are below the QP limit.

3.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission at 2440.000 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: radiated photos. pdf.

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 1.7 dB

TEST PERSONNEL:

Sign on file

Harry Wu, Engineer
Typed/Printed Name

January 11, 2014

Date

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1 Report No.: 140128003SZN-002

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Applicant: SteadyServ Technologies, LLC Date of Test: January 11, 2014

Model: iKeg CS1 Sample: 1/1

Worst Case Operating Mode: Transmit with charging

Table 2

Radiated Emissions

(2410MHz)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)	, ,	` ' '	, , ,	
Vertical	2410.000	119.8	36.7	28.5	111.6	114.0	-2.4
Vertical	4820.000	60.4	36.7	28.5	52.2	74.0	-21.8
Vertical	7230.000	54.0	36.1	33.1	51.0	74.0	-23.0
Vertical	9640.000	54.0	36.2	37.8	55.6	74.0	-18.4

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Vertical	2410.000	102.2	36.7	28.5	72.4	94.0	-21.6
Vertical	4820.000	62.2	36.7	28.5	23.5	54.0	-30.5
Vertical	7230.000	57.0	36.1	33.1	28.0	54.0	-26.0
Vertical	9640.000	52.4	36.2	37.8	31.1	54.0	-22.9

Notes: 1. Peak Detector Data unless otherwise stated. RBW=1MHz and VBW=3MHz for peak test value, RBW=1MHz and VBW=10Hz for average test value.

- 2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Harry Wu

Applicant: SteadyServ Technologies, LLC Date of Test: January 11, 2014

Model: iKeg CS1 Sample: 1/1

Worst Case Operating Mode: Transmit with charging

Table 3

Radiated Emissions

(2440MHz)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Vertical	2440.000	120.5	36.7	28.5	112.3	114.0	-1.7
Vertical	4880.000	60.1	36.7	28.5	51.9	74.0	-22.1
Vertical	7320.000	53.4	36.1	33.1	50.4	74.0	-23.6
Vertical	9760.000	53.7	36.2	37.8	55.3	74.0	-18.7

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Vertical	2440.000	102.2	36.7	28.5	82.6	94.0	-11.4
Vertical	4880.000	62.2	36.7	28.5	22.8	54.0	-31.2
Vertical	7320.000	57.0	36.1	33.1	27.3	54.0	-26.7
Vertical	9760.000	52.4	36.2	37.8	30.7	54.0	-23.3

Notes: 1. Peak Detector Data unless otherwise stated. RBW=1MHz and VBW=3MHz for peak test value, RBW=1MHz and VBW=10Hz for average test value.

- 2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Harry Wu

Applicant: SteadyServ Technologies, LLC Date of Test: January 11, 2014

Model: iKeg CS1 Sample: 1/1

Worst Case Operating Mode: Transmit with charging

Table 4

Radiated Emissions

(2475MHz)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)	, ,	, , ,	, , ,	
Vertical	2475.000	114.5	36.7	28.6	106.4	114.0	-7.6
Vertical	4950.000	58.6	36.7	28.6	50.5	74.0	-23.5
Vertical	7425.000	52.4	36.1	33.4	49.7	74.0	-24.3
Vertical	9900.000	52.9	36.2	38.2	54.9	74.0	-19.1

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Vertical	2475.000	102.1	36.7	28.6	71.9	94.0	-22.1
Vertical	4950.000	62.1	36.7	28.6	22.1	54.0	-31.9
Vertical	7425.000	56.7	36.1	33.4	26.8	54.0	-27.2
Vertical	9900.000	52.0	36.2	38.2	29.7	54.0	-24.3

Notes: 1. Peak Detector Data unless otherwise stated. RBW=1MHz and VBW=3MHz for peak test value, RBW=1MHz and VBW=10Hz for average test value.

- 2. All measurements were made at 3 meter. Harmonic 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 harmonic 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.

Test Engineer: Harry Wu

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

4.0 **Equipment Photographs**

For electronic filing, the photographs of the tested EUT are saved with filename: external photos.pdf & internal photos.pdf.

EXHIBIT 5 PRODUCT LABELLING

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1

5.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

EXHIBIT 6 TECHNICAL SPECIFICATIONS

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1

6.0 <u>Technical Specifications</u>

For electronic filing, the block diagram and schematics of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

EXHIBIT 7

INSTRUCTION MANUAL

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1

7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

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EXHIBIT 8 MISCELLANEOUS INFORMATION

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

8.0 <u>Miscellaneous Information</u>

This miscellaneous information includes details of the measured bandedge, the test procedure and calculation of factor such as pulse desensitization.

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8.1 Bandedge Plot

For electronic filing, the plot shows the fundamental emission when modulated is saved with filename: bandedge.pdf. From the plot, the field strength of any emissions outside of the specified frequency band are attenuated to the general radiated emission limits in section 15.209. It fulfils the requirement of 15.249(d).

Peak Measurement

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

(i) Lower channel 2410MHz:

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the bandedge plot = 111.6 dBμv/m-38.8 dB = 72.8 dBμv/m

Average Resultant field strength = Fundamental emissions (Average value) – delta from the bandedge plot = 72.4 dBµv/m –38.8dB = 33.6 dBµv/m

(ii) Upper channel 2475MHz:

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the bandedge plot = 106.4 dBμv/m-38.0 dB = 68.4 dBμv/m

Average Resultant field strength = Fundamental emissions (Average value) – delta from the bandedge plot = $71.9 \text{ dB}\mu\text{v/m} - 38.0 \text{ dB}$ = $33.9 \text{ dB}\mu\text{v/m}$

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74dBµv/m (Peak Limit) and 54dBµv/m (Average Limit).

8.1 Bandedge Plot (cont'd)

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 excepted variations in temperature and supply voltage were considered.

Figure 8.1 Bandwidth

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8.2 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 - 2009.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjust through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode.

The frequency range scanned is 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 40 GHz, whichever is lower.

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

TRF No.: FCC 15C_TX_b
FCC ID: 2ABVCIKEG-CS1
Papert No.: 140128003S7N 0

EXHIBIT 9

CONFIDENTIALITY REQUEST

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

9.0 **Confidentiality Request**

For electronic filing, the confidentiality request of the tested EUT is saved with filename: request.pdf.

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

EXHIBIT 10 TEST EQUIPMENT LIST

TRF No.: FCC 15C_TX_b FCC ID: 2ABVCIKEG-CS1

10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	29-Jun-13	29-Jun-14
SZ185-01	EMI Receiver	R&S	ESCI	100547	12-Mar-13	12-Mar-14
SZ061-08	Horn Antenna	ETS	3115	00092346	26-Oct-13	26-Oct-14
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	27-Aug-13	27-Aug-14
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	13-May-13	13-May-14
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	12-Mar-13	12-Mar-14
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	12-Mar-13	12-Mar-14
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	2-Mar-13	2-Mar-14
SZ062-02	RF Cable	RADIALL	RG 213U		20-Jul-13	20-Jan-14
SZ062-06	RF Cable	RADIALL	0.04- 26.5GHz		20-Jul-13	20-Jan-14
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz		17-Oct-13	17-Apr-14
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02		21-May-13	21-May-14

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