

**FCC PART 15, SUBPART B and C; FCC 15.249; RSS-210, RSS GEN  
TEST REPORT****for****Z-WAVE SIREN****Part Number: ISZW7-ECO**

Prepared for

ECOLINK INTELLIGENT TECHNOLOGY, INC.  
2055 CORTE DEL NOGAL  
CARLSBAD, CALIFORNIA 92011Prepared by: 

HARVEY SAMACO

Approved by: 

KYLE FUJIMOTO

COMPATIBLE ELECTRONICS INC.  
114 OLINDA DRIVE  
BREA, CALIFORNIA 92823  
(714) 579-0500

DATE: FEBRUARY 11, 2020

|       | REPORT<br>BODY | APPENDICES |   |   |    |    | TOTAL |
|-------|----------------|------------|---|---|----|----|-------|
|       |                | A          | B | C | D  | E  |       |
| PAGES | 19             | 2          | 2 | 2 | 17 | 73 | 115   |

This report shall not be reproduced except in full, without the written approval of Compatible Electronics.

**Brea Division**  
114 Olinda Drive  
Brea, CA 92823  
(714) 579-0500**Newbury Park Division**  
1050 Lawrence Drive  
Newbury Park, CA 91320  
(805) 480-4044**Lake Forest Division**  
20621 Pascal Way  
Lake Forest, CA 92630  
(949) 587-0400

**TABLE OF CONTENTS**

| <b>Section / Title</b>                                 | <b>PAGE</b> |
|--------------------------------------------------------|-------------|
| <b>GENERAL REPORT SUMMARY</b>                          | <b>4</b>    |
| <b>SUMMARY OF TEST RESULTS</b>                         | <b>5</b>    |
| <b>1. PURPOSE</b>                                      | <b>6</b>    |
| <b>2. ADMINISTRATIVE DATA</b>                          | <b>7</b>    |
| 2.1 Location of Testing                                | 7           |
| 2.2 Traceability Statement                             | 7           |
| 2.3 Cognizant Personnel                                | 7           |
| 2.4 Date Test Sample was Received                      | 7           |
| 2.5 Disposition of the Test Sample                     | 7           |
| 2.6 Abbreviations and Acronyms                         | 7           |
| <b>3. APPLICABLE DOCUMENTS</b>                         | <b>8</b>    |
| <b>4. DESCRIPTION OF TEST CONFIGURATION</b>            | <b>9</b>    |
| 4.1 Description of Test Configuration – Emissions      | 9           |
| 4.1.1 Cable Construction and Termination               | 9           |
| <b>5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT</b> | <b>10</b>   |
| 5.1 EUT and Accessory List                             | 10          |
| 5.2 Emissions Test Equipment                           | 11          |
| <b>6. TEST SITE DESCRIPTION</b>                        | <b>12</b>   |
| 6.1 Test Facility Description                          | 12          |
| 6.2 EUT Mounting, Bonding and Grounding                | 12          |
| 6.3 Measurement Uncertainty                            | 12          |
| <b>7. TEST PROCEDURES</b>                              | <b>13</b>   |
| 7.1 RF Emissions                                       | 13          |
| 7.1.1 Conducted Emissions Test                         | 13          |
| 7.1.2 Radiated Emissions Test                          | 14          |
| 7.1.3 RF Emissions Test Results                        | 15          |
| 7.1.4 Sample Calculations                              | 16          |
| 7.1.5 99% Bandwidth                                    | 17          |
| <b>8. CONCLUSIONS</b>                                  | <b>19</b>   |

## LIST OF APPENDICES

| APPENDIX | TITLE                                                                                                                                  |
|----------|----------------------------------------------------------------------------------------------------------------------------------------|
| A        | Laboratory Accreditations and Recognitions                                                                                             |
| B        | Modifications to the EUT                                                                                                               |
| C        | Additional Model Covered Under This Report                                                                                             |
| D        | Diagrams and Charts <ul style="list-style-type: none"><li>• Test Setup Diagrams</li><li>• Antenna and Effective Gain Factors</li></ul> |
| E        | Data Sheets                                                                                                                            |

## LIST OF FIGURES

| FIGURE | TITLE                                    |
|--------|------------------------------------------|
| 1      | Conducted Emissions Test Setup           |
| 2      | Layout of the Semi-Anechoic Test Chamber |

## LIST OF TABLES

| TABLE | TITLE                                    |
|-------|------------------------------------------|
| 1     | Conducted Emission Results               |
| 2     | Radiated Emission Results (AC mode)      |
| 3     | Radiated Emission Results (Battery mode) |

## GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

The client must not use this report to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the U.S. government.

Device Tested: Z-Wave Siren  
Part Number: ISZW7-ECO  
S/N: N/A

Product Description: The equipment under test is an alarm sensor.

Modifications: The EUT was not modified to meet the specifications.

Customer: Ecolink Intelligent Technology, Inc.  
2055 Corte Del Nogal  
Carlsbad, California 92011

Test Dates: February 6-8 and 10-12, 2020

Test Specifications covered by accreditation:

Test Specifications: Emissions requirements  
CFR Title 47, Part 15, Subpart B; and Subpart C, Sections 15.205, 15.209, and 15.249;  
RSS-210 Issue 9 (2017), and RSS-Gen Issue 5 (2018)



Test Procedures: ANSI C63.4: 2014 and ANSI C63.10: 2013

Test Deviations: The test procedure was not deviated from during the testing.

## SUMMARY OF TEST RESULTS

| TEST | DESCRIPTION                                                                                         | RESULTS                                                                                                                                                                                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Spurious Radiated RF Emissions,<br>9 kHz – 9300 MHz<br>(Transmitter, Receiver, and Digital portion) | Complies with the <b>Class B</b> limits of CFR Title 47,<br>Part 15 Subpart B; and the limits of CFR Title 47, Part 15<br>Subpart C, section 15.205, 15.209 and 15.249;<br>RSS-210 and RSS-Gen<br><br>Highest reading in relation to spec limit 93.70 dBuV/m (QP) @ 908.42 MHz (*U = 3.19 dB) |
| 2    | Conducted RF Emissions<br>150 kHz – 30 MHz to <b>Class B</b> Limits                                 | The EUT complies with the <b>Class B</b> limits of the CFR Title<br>47, Part 15 Subpart B.                                                                                                                                                                                                    |

## 1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the Z-Wave Siren, Part Number: ISZW7-ECO. The emissions measurements were performed according to the measurement procedure described in ANSI C63.4 and ANSI C63.10. The tests were performed to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by Code of Federal Regulations Title 47, Part 15 Subpart B sections 15.107, 15.109; and Part 15 Subpart C sections 15.205, 15.209 and 15.249; RSS-210 and RSS-Gen.

## 2. ADMINISTRATIVE DATA

### 2.1 Location of Testing

The emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

### 2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

### 2.3 Cognizant Personnel

Ecolink Intelligent Technology, Inc

|                |                        |
|----------------|------------------------|
| Keyoor Gosalia | Program Manager        |
| David Shepard  | Engineer               |
| Michael Lim    | Firmware Test Engineer |

Compatible Electronics Inc.

|               |                 |
|---------------|-----------------|
| Harvey Samaco | Test Technician |
| Kyle Fujimoto | Test Engineer   |

### 2.4 Date Test Sample was Received

The test sample was received prior to the date of this report.

### 2.5 Disposition of the Test Sample

The test sample has not been returned to Ecolink Intelligent Technology, Inc. as of the date of this test report.

### 2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

|      |                                  |
|------|----------------------------------|
| EMI  | Electromagnetic Interference     |
| EUT  | Equipment Under Test             |
| P/N  | Part Number                      |
| S/N  | Serial Number                    |
| ITE  | Information Technology Equipment |
| DoC  | Declaration of Conformity        |
| N/A  | Not Applicable                   |
| Tx   | Transmit                         |
| Rx   | Receive                          |
| Inc. | Incorporated                     |
| RF   | Radio Frequency                  |

### 3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this emission Test Report.

| SPEC                            | TITLE                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC Title 47, Part 15 Subpart C | FCC Rules – Radio frequency devices (including digital devices) – Intentional Radiators                                                                             |
| FCC Title 47, Part 15 Subpart B | FCC Rules – Radio frequency devices (including digital devices) – Unintentional Radiators                                                                           |
| RSS-210 Issue 9: 2017           | License-exempt Radio Apparatus: Category I Equipment                                                                                                                |
| RSS Gen Issue 5: 2018           | General Requirements for Compliance of Radio Apparatus                                                                                                              |
| ANSI C63.4: 2014                | 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 |
| ANSI C63.10: 2013               | American National Standard of procedure for compliance testing of unlicensed wireless devices                                                                       |

#### **4. DESCRIPTION OF TEST CONFIGURATION**

##### **4.1 Description of Test Configuration – Emissions**

The Z-Wave Siren, Part Number: ISZW7-ECO (EUT) is a standalone device. During the testing, the EUT was continuously transmitting or receiving.

The EUT was tested with an SD card that actively played an audible alarm that continuously loops for a period of 45 minutes.

The EUT is equipped with a non-user serviceable lithium-ion battery backup that can keep the device active up to 24 hours. It operated in the battery mode when it was disconnected from the AC mains.

The EUT was tested for emissions at the low, middle, and high channels while in the X, Y and Z axis. The X orientation is when the EUT is parallel to the ground. The Y orientation is when the EUT is perpendicular to the ground mounted vertically. The Z orientation is when the EUT is perpendicular to the ground mounted horizontally.

The final radiated emissions data for the EUT was taken in the configuration described above. Please see Appendix E for the data sheets.

##### **4.1.1 Cable Construction and Termination**

The EUT had no external cables.

**5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT****5.1 EUT and Accessory List**

| EQUIPMENT          | MANUFACTURER                               | MODEL NUMBER | PART NUMBER | FCC ID                             |
|--------------------|--------------------------------------------|--------------|-------------|------------------------------------|
| Z-WAVE SIREN (EUT) | ECOLINK<br>INTELLIGENT<br>TECHNOLOGY, INC. | N/A          | ISZW7-ECO   | XQC-ISZW7ECO<br>IC: 9863B-ISZW7ECO |

## 5.2 Emissions Test Equipment

| EQUIPMENT TYPE                                     | MANU-FACTURER              | MODEL NUMBER | SERIAL NUMBER | CAL. DATE         | CAL. CYCLE |
|----------------------------------------------------|----------------------------|--------------|---------------|-------------------|------------|
| RF RADIATED AND CONDUCTED EMISSIONS TEST EQUIPMENT |                            |              |               |                   |            |
| TDK TestLab                                        | TDK RF Solutions, Inc.     | 9.22         | 700145        | N/A               | N/A        |
| EMI Receiver, 20 Hz – 26.5 GHz                     | Keysight Technologies      | N9038A       | MY51210150    | August 23, 2019   | 1 Year     |
| System Controller                                  | Sunol Sciences Corporation | SC110V       | 112213-1      | N/A               | N/A        |
| Turntable                                          | Sunol Sciences Corporation | 2011VS       | N/A           | N/A               | N/A        |
| Antenna-Mast                                       | Sunol Sciences Corporation | TWR95-4      | 112213-3      | N/A               | N/A        |
| Loop Antenna                                       | Com-Power                  | AL-130R      | 121090        | February 5, 2019  | 2 Year     |
| CombiLog Antenna                                   | Com-Power                  | AC-220       | 61093         | June 5, 2019      | 2 Year     |
| Horn Antenna                                       | Com-Power                  | AH-118       | 071302        | February 22, 2018 | 2 Year     |
| Preamplifier                                       | Com-Power                  | PA-118       | 181653        | February 5, 2020  | 1 Year     |
| Computer                                           | Hewlett Packard            | p6716f       | MXX1030PX0    | N/A               | N/A        |
| LCD Monitor                                        | Hewlett Packard            | 52031a       | 3CQ046N3MG    | N/A               | N/A        |
| LISN (EUT)                                         | Com-Power                  | LI-215A      | 191951        | August 7, 2019    | 1 Year     |
| Attenuator 10 dB                                   | SureCall                   | SC-ATT-10    | 17100025      | October 28, 2019  | 1 Year     |

## 6. TEST SITE DESCRIPTION

### 6.1 Test Facility Description

Please refer to section 2.1 of this report for emissions test location.

### 6.2 EUT Mounting, Bonding and Grounding

**For frequencies 1 GHz and below:** The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

**For frequencies above 1 GHz:** The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 1.5 meters above the ground plane.

The EUT was not grounded.

### 6.3 Measurement Uncertainty

The uncertainty values are in the table below.

The uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level, using a coverage factor of  $k=2$

| MEASUREMENT TYPE            | PARTICULAR CONFIGURATION             | UNCERTAINTY VALUES                         |
|-----------------------------|--------------------------------------|--------------------------------------------|
| RADIATED EMISSIONS          | 3-METER CHAMBER,<br>COMBILOG ANTENNA | 3.27 dB (Vertical)<br>3.19 dB (Horizontal) |
| RADIATED EMISSIONS          | 3-METER CHAMBER,<br>HORN ANTENNA     | 3.63 dB (Both Vertical and<br>Horizontal)  |
| AC LINE CONDUCTED EMISSIONS | 3-METER CHAMBER,<br>COM-POWER LISN   | 2.72 dB                                    |

## 7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

### 7.1 RF Emissions

#### 7.1.1 Conducted Emissions Test

The EMI Receiver was used as a measuring meter. A quasi-peak and/or average reading was taken only where indicated in the data sheets. A 10 dB attenuator was used for the protection of the EMI Receiver input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the EMI Receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI 63:4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by computer software. The final qualification data is located in Appendix E.

The six highest emissions are listed in Table 1.

#### Test Results:

The EUT complies with the **Class B** limits of **CFR** Title 47, Part 15, Subpart B; and the limits of **CFR** Title 47, Part 15, Subpart C sections 15.207 for conducted emissions.

### 7.1.2 Radiated Emissions Test

The EMI Receiver was used as the measuring meter. Preamplifiers were used to increase the sensitivity of the instrument. The EMI Receiver was initially used with the Analyzer mode feature activated. In this mode, the EMI receiver can then record the actual frequency to be measured. This final reading is then taken accurately in the EMI Receiver mode, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit. The effective measurement bandwidth used for the radiated emissions test was according to the frequency measured.

The frequencies below 1 GHz were quasi-peaked using the quasi-peak detector of the EMI Receiver.

All other frequencies above 1 GHz were averaged using the average detector of the EMI Receiver.

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The EUT was tested at a 3-meter test distance. The six highest emissions are listed in Tables 2 and 3.

The measurement bandwidths and transducers used for the radiated emissions test were:

| FREQUENCY RANGE   | EFFECTIVE MEASUREMENT BANDWIDTH | TRANSDUCER       |
|-------------------|---------------------------------|------------------|
| 9 kHz to 150 kHz  | 200 Hz                          | Loop Antenna     |
| 150 kHz to 30 MHz | 9 kHz                           | Loop Antenna     |
| 30 MHz to 1 GHz   | 120 kHz                         | CombiLog Antenna |
| 1 GHz to 9.3 GHz  | 1 MHz                           | Horn Antenna     |

#### Test Results:

The EUT complies with the **Class B** limits of **CFR** Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C sections 15.205, 15.209 and 15.249 for radiated emissions.

**7.1.3 RF Emissions Test Results**Table 1 CONDUCTED EMISSION RESULTS  
Z-Wave Siren, Part Number: ISZW7-ECO

| Frequency<br>MHz | Average<br>Emission Level*<br>dBuV | Average<br>Specification Limit<br>dBuV | Delta<br>(Emission – Spec limit)<br>dB |
|------------------|------------------------------------|----------------------------------------|----------------------------------------|
| 0.414 (WL)       | 42.61                              | 47.36                                  | -4.75                                  |
| 1.002 (BL)       | 39.19                              | 46.00                                  | -6.81                                  |
| 0.998 (WL)       | 39.18                              | 46.00                                  | -6.82                                  |
| 0.998 (BL)       | 38.44                              | 46.00                                  | -7.56                                  |
| 0.422 (WL)       | 39.74                              | 47.30                                  | -7.56                                  |
| 1.666 (BL)       | 37.17                              | 46.00                                  | -8.83                                  |

Table 2 RADIATED EMISSION RESULTS  
Z-Wave Siren, Part Number: ISZW7-ECO  
AC mode

| Frequency<br>MHz | Quasi-Peak<br>Corrected Reading*<br>dBuV/m | Specification Limit<br>dBuV/m | Delta<br>(Cor. Reading – Spec. Limit)<br>dB |
|------------------|--------------------------------------------|-------------------------------|---------------------------------------------|
| 908.42 (H)       | 93.70                                      | 93.97                         | -0.27                                       |
| 915.90 (H)       | 45.11                                      | 46.00                         | -0.89                                       |
| 908.42 (V)       | 92.97                                      | 93.97                         | -1.00                                       |
| 916.00 (V)       | 44.93                                      | 46.00                         | -1.07                                       |
| 916.10 (H)       | 44.91                                      | 46.00                         | -1.09                                       |
| 908.42 (V)       | 91.94                                      | 93.97                         | -2.04                                       |

Table 3      **RADIATED EMISSION RESULTS**  
Z-Wave Siren, Part Number: ISZW7-ECO  
Battery mode

| Frequency<br>MHz | Quasi-Peak<br>Corrected Reading*<br>dBuV/m | Specification Limit<br>dBuV/m | Delta<br>(Cor. Reading – Spec. Limit)<br>dB |
|------------------|--------------------------------------------|-------------------------------|---------------------------------------------|
| 908.42 (H)       | 93.07                                      | 93.97                         | -0.90                                       |
| 908.42 (V)       | 92.89                                      | 93.97                         | -1.08                                       |
| 916.00 (H)       | 92.16                                      | 93.97                         | -1.81                                       |
| 908.42 (V)       | 91.34                                      | 93.97                         | -2.64                                       |
| 916.00 (V)       | 91.22                                      | 93.97                         | -2.75                                       |
| 908.42 (H)       | 90.72                                      | 93.97                         | -3.25                                       |

Notes:

- \*      The complete emissions data is given in Appendix E of this report.
- (BL)   Black Lead
- (WL)   White Lead
- (V)    Vertical
- (H)    Horizontal

#### 7.1.4 Sample Calculations

A correction factor for the antenna, cable and a distance factor (if any) must be applied to the meter reading before a true field strength reading can be obtained. This Corrected Meter Reading is then compared to the specification limit in order to determine compliance with the limits.

The equation can be derived in the following manner:

Specification limit ( $\mu\text{V/m}$ )  $\log \times 20$  = Specification Limit in dBuV

(Specification distance / test distance)  $\log \times 40$  = distance factor

Note: When using an Active Antenna, the Antenna factor shall be subtracted due to the combination of the internal amplification and antenna loss. At lower frequencies the cable loss is negligible.

OR

Corrected Meter Reading = meter reading + F – A + C

where: F = antenna factor  
A = amplifier gain  
C = cable loss

The correction factors for the antenna and the amplifier gain are attached in Appendix D of this report. The data sheets are attached in Appendix E.

The distance factor D is 0 when the test is performed at the required specification distance.

### 7.1.5 99% Bandwidth

The 99% Bandwidth was measured using an EMI Receiver and was taken after maximizing the worst case fundamental emission for both channels per section 7.1.

The following steps were performed for measuring the 99% bandwidth per RSS-GEN, Issue 5, clause 6.7.

1. Set RBW to 1% to 5% of the actual occupied bandwidth.
2. Set VBW to greater than 3 times the RBW.
3. Set the EMI Receiver to the Occupied Bandwidth Function set at 99%
4. Set the peak detector to max hold.
5. Set the sweep time to auto
6. Allow the trace to stabilize.

Please note that this was only used to determine the emission bandwidth and that there are no limits or pass/fail criteria for this test. Please see the data sheets located in Appendix E.

## 8. CONCLUSIONS

The Z-Wave Siren, Part Number: ISZW7-ECO (EUT), as tested, meets all of the specification limits defined in the RSS-210, RSS-Gen, **Class B** specification limits defined in FCC Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209 and 15.249.





## APPENDIX A

# ***LABORATORY ACCREDITATIONS AND RECOGNITIONS***

---

**Brea Division**  
114 Olinda Drive  
Brea, CA 92823  
(714) 579-0500

**Newbury Park Division**  
1050 Lawrence Drive  
Newbury Park, CA 91320  
(805) 480-4044

**Lake Forest Division**  
20621 Pascal Way  
Lake Forest, CA 92630  
(949) 587-0400

## LABORATORY ACCREDITATIONS AND RECOGNITIONS

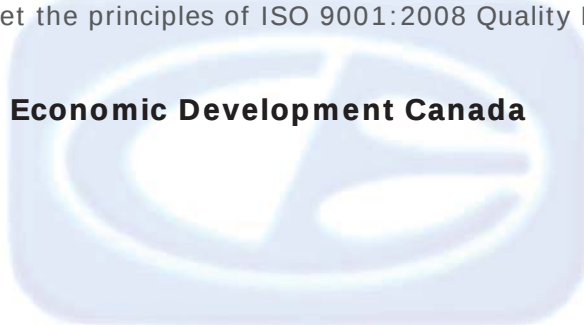


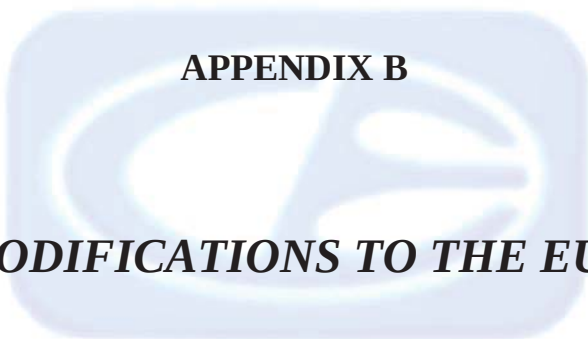
For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. **For the most up-to-date version of our scopes and certificates please visit <http://celectronics.com/quality/scope/>**

Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."

**Innovation, Science and Economic Development Canada  
Lab Code 2154A**





## **APPENDIX B**

# ***MODIFICATIONS TO THE EUT***

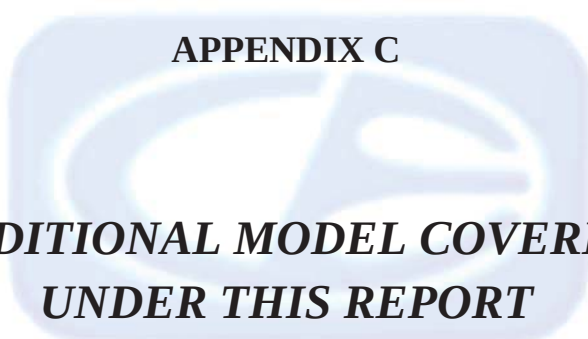
## MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.249 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.





## APPENDIX C

### ***ADDITIONAL MODEL COVERED UNDER THIS REPORT***

## ADDITIONAL MODEL COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

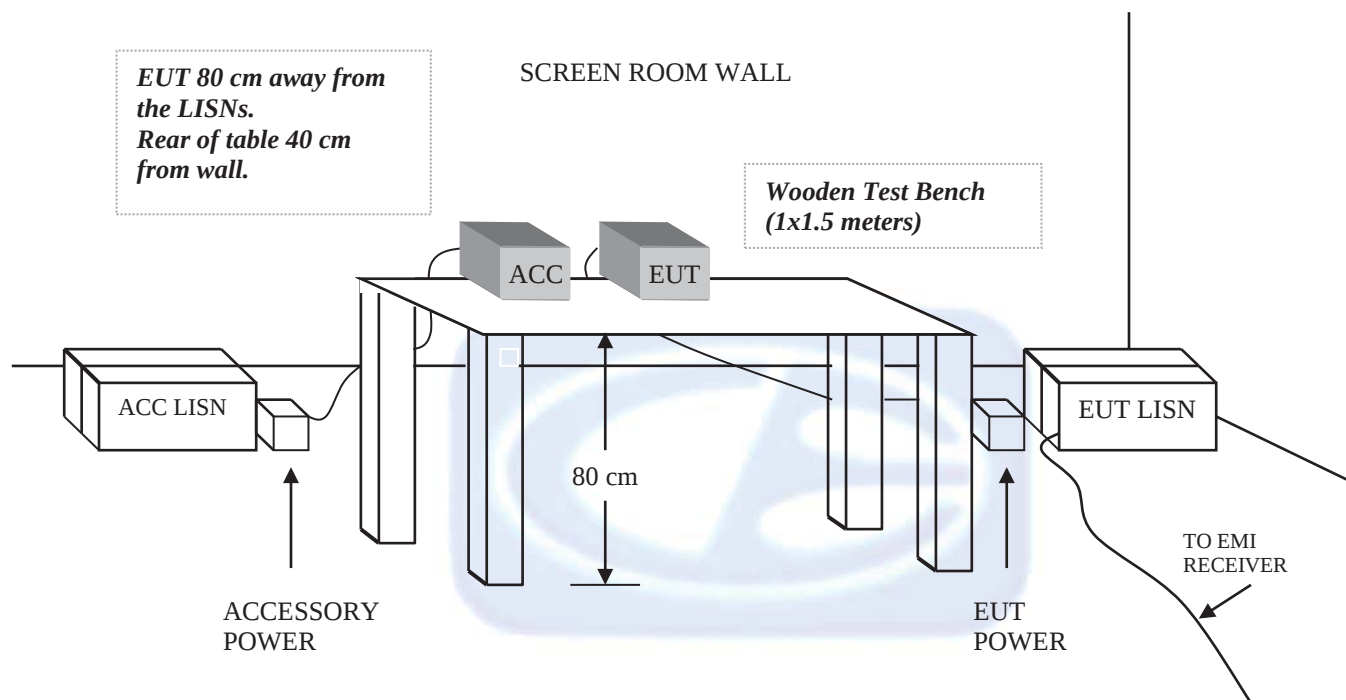
Z-Wave Siren  
Part Number: ISZW7-ECO  
S/N: N/A

There are no additional models covered under this report.

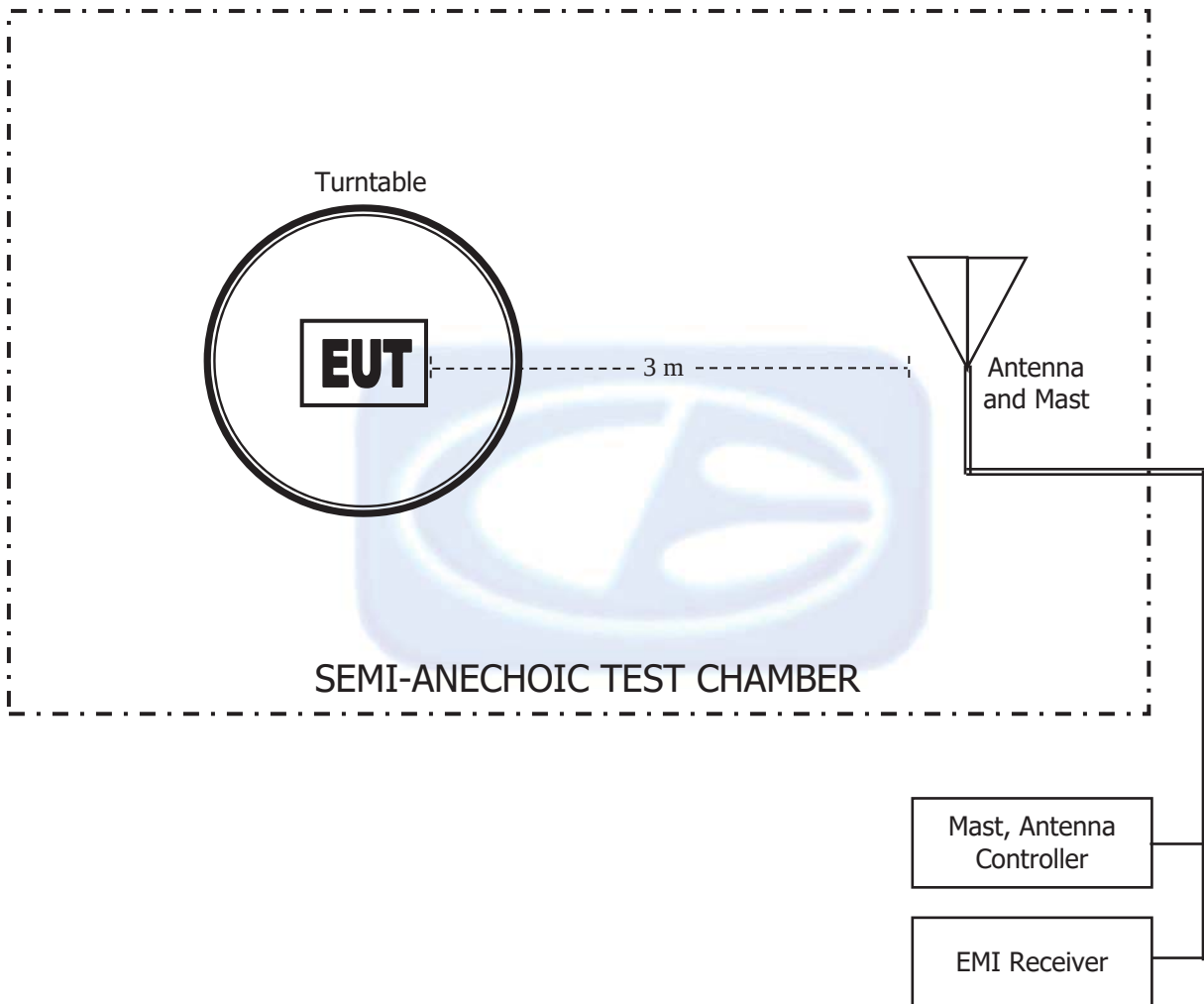


**APPENDIX D*****DIAGRAMS AND CHARTS***

**FIGURE 1: CONDUCTED EMISSIONS TEST SETUP**



**FIGURE 2: LAYOUT OF THE SEMI -ANECHOIC  
TEST CHAMBER**



**COM-POWER AL-130R****LOOP ANTENNA****S/N: 121090****CALIBRATION DATE: FEBRUARY 5, 2019**

| <b>FREQUENCY<br/>(MHz)</b> | <b>MAGNETIC<br/>(dB/m)</b> | <b>ELECTRIC<br/>(dB/m)</b> |
|----------------------------|----------------------------|----------------------------|
| 0.01                       | 15.6                       | -35.9                      |
| 0.02                       | 14.8                       | -36.7                      |
| 0.03                       | 15.6                       | -35.9                      |
| 0.04                       | 15.1                       | -36.4                      |
| 0.05                       | 14.4                       | -37.0                      |
| 0.06                       | 14.6                       | -36.9                      |
| 0.07                       | 14.4                       | -37.1                      |
| 0.08                       | 14.3                       | -37.1                      |
| 0.09                       | 14.5                       | -36.9                      |
| 0.10                       | 14.1                       | -37.3                      |
| 0.20                       | 14.1                       | -37.3                      |
| 0.30                       | 14.0                       | -37.4                      |
| 0.40                       | 14.0                       | -37.4                      |
| 0.50                       | 14.2                       | -37.2                      |
| 0.60                       | 14.2                       | -37.2                      |
| 0.70                       | 14.2                       | -37.2                      |
| 0.80                       | 14.2                       | -37.3                      |
| 0.90                       | 14.3                       | -37.2                      |
| 1.00                       | 14.5                       | -37.0                      |
| 2.00                       | 14.5                       | -36.9                      |
| 3.00                       | 14.5                       | -36.9                      |
| 4.00                       | 14.7                       | -36.8                      |
| 5.00                       | 14.6                       | -36.9                      |
| 6.00                       | 14.6                       | -36.9                      |
| 7.00                       | 14.6                       | -36.9                      |
| 8.00                       | 14.6                       | -36.9                      |
| 9.00                       | 14.6                       | -36.9                      |
| 10.00                      | 14.8                       | -36.6                      |
| 11.00                      | 14.9                       | -36.6                      |
| 12.00                      | 14.8                       | -36.6                      |
| 13.00                      | 14.8                       | -36.7                      |
| 14.00                      | 14.6                       | -36.8                      |
| 15.00                      | 14.5                       | -36.9                      |
| 16.00                      | 14.5                       | -37.0                      |
| 17.00                      | 14.6                       | -36.9                      |
| 18.00                      | 14.7                       | -36.7                      |
| 19.00                      | 14.8                       | -36.6                      |
| 20.00                      | 14.9                       | -36.6                      |
| 21.00                      | 14.6                       | -36.8                      |
| 22.00                      | 14.2                       | -37.2                      |
| 23.00                      | 13.7                       | -37.7                      |
| 24.00                      | 13.3                       | -38.2                      |
| 25.00                      | 13.0                       | -38.5                      |
| 26.00                      | 12.9                       | -38.6                      |
| 27.00                      | 13.0                       | -38.5                      |
| 28.00                      | 13.1                       | -38.4                      |
| 29.00                      | 13.1                       | -38.4                      |
| 30.00                      | 12.9                       | -38.5                      |

**COM-POWER AC-220****COMBILOG ANTENNA****S/N: 61093****CALIBRATION DATE: JUNE 5, 2019**

| <b>FREQUENCY<br/>(MHz)</b> | <b>FACTOR<br/>(dB)</b> | <b>FREQUENCY<br/>(MHz)</b> | <b>FACTOR<br/>(dB)</b> |
|----------------------------|------------------------|----------------------------|------------------------|
| 30                         | 22.10                  | 200                        | 15.30                  |
| 35                         | 20.90                  | 250                        | 16.80                  |
| 40                         | 20.10                  | 300                        | 19.00                  |
| 45                         | 19.40                  | 350                        | 19.60                  |
| 50                         | 18.40                  | 400                        | 21.70                  |
| 60                         | 15.10                  | 450                        | 21.60                  |
| 70                         | 12.00                  | 500                        | 22.20                  |
| 80                         | 11.60                  | 550                        | 22.70                  |
| 90                         | 13.50                  | 600                        | 24.20                  |
| 100                        | 14.70                  | 650                        | 24.40                  |
| 120                        | 15.90                  | 700                        | 24.50                  |
| 125                        | 15.90                  | 750                        | 25.40                  |
| 140                        | 14.80                  | 800                        | 26.30                  |
| 150                        | 15.50                  | 850                        | 26.70                  |
| 160                        | 19.80                  | 900                        | 27.50                  |
| 175                        | 15.20                  | 950                        | 27.80                  |
| 180                        | 14.90                  | 1000                       | 27.90                  |

**COM POWER AH-118****HORN ANTENNA****S/N: 071302****CALIBRATION DATE: FEBRUARY 22, 2018**

| <b>FREQUENCY<br/>(GHz)</b> | <b>FACTOR<br/>(dB)</b> | <b>FREQUENCY<br/>(GHz)</b> | <b>FACTOR<br/>(dB)</b> |
|----------------------------|------------------------|----------------------------|------------------------|
| 1.0                        | 23.87                  | 10.0                       | 38.74                  |
| 1.5                        | 25.54                  | 10.5                       | 39.65                  |
| 2.0                        | 28.81                  | 11.0                       | 38.53                  |
| 2.5                        | 28.16                  | 11.5                       | 39.28                  |
| 3.0                        | 29.32                  | 12.0                       | 40.28                  |
| 3.5                        | 30.05                  | 12.5                       | 41.69                  |
| 4.0                        | 30.79                  | 13.0                       | 41.61                  |
| 4.5                        | 32.15                  | 13.5                       | 41.71                  |
| 5.0                        | 34.04                  | 14.0                       | 40.75                  |
| 5.5                        | 33.79                  | 14.5                       | 41.40                  |
| 6.0                        | 34.50                  | 15.0                       | 42.87                  |
| 6.5                        | 35.42                  | 15.5                       | 41.05                  |
| 7.0                        | 37.20                  | 16.0                       | 40.43                  |
| 7.5                        | 37.21                  | 16.5                       | 40.17                  |
| 8.0                        | 37.70                  | 17.0                       | 42.63                  |
| 8.5                        | 37.68                  | 17.5                       | 43.83                  |
| 9.0                        | 38.45                  | 18.0                       | 46.38                  |
| 9.5                        | 39.44                  |                            |                        |

**COM-POWER PA-118****PREAMPLIFIER****S/N: 181653****CALIBRATION DATE: FEBRUARY 5, 2020**

| <b>FREQUENCY<br/>(GHz)</b> | <b>FACTOR<br/>(dB)</b> | <b>FREQUENCY<br/>(GHz)</b> | <b>FACTOR<br/>(dB)</b> |
|----------------------------|------------------------|----------------------------|------------------------|
| 1.0                        | 40.10                  | 6.0                        | 40.60                  |
| 1.1                        | 40.10                  | 6.5                        | 39.50                  |
| 1.2                        | 40.00                  | 7.0                        | 39.40                  |
| 1.3                        | 39.70                  | 7.5                        | 39.30                  |
| 1.4                        | 39.60                  | 8.0                        | 39.20                  |
| 1.5                        | 39.90                  | 8.5                        | 40.50                  |
| 1.6                        | 40.00                  | 9.0                        | 39.60                  |
| 1.7                        | 39.70                  | 9.5                        | 39.50                  |
| 1.8                        | 39.50                  | 10.0                       | 38.80                  |
| 1.9                        | 39.60                  | 11.0                       | 38.70                  |
| 2.0                        | 39.90                  | 12.0                       | 42.20                  |
| 2.5                        | 40.10                  | 13.0                       | 40.00                  |
| 3.0                        | 40.80                  | 14.0                       | 40.30                  |
| 3.5                        | 40.60                  | 15.0                       | 40.20                  |
| 4.0                        | 40.50                  | 16.0                       | 41.00                  |
| 4.5                        | 41.60                  | 17.0                       | 39.70                  |
| 5.0                        | 39.20                  | 18.0                       | 40.90                  |
| 5.5                        | 40.00                  |                            |                        |



**FRONT VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

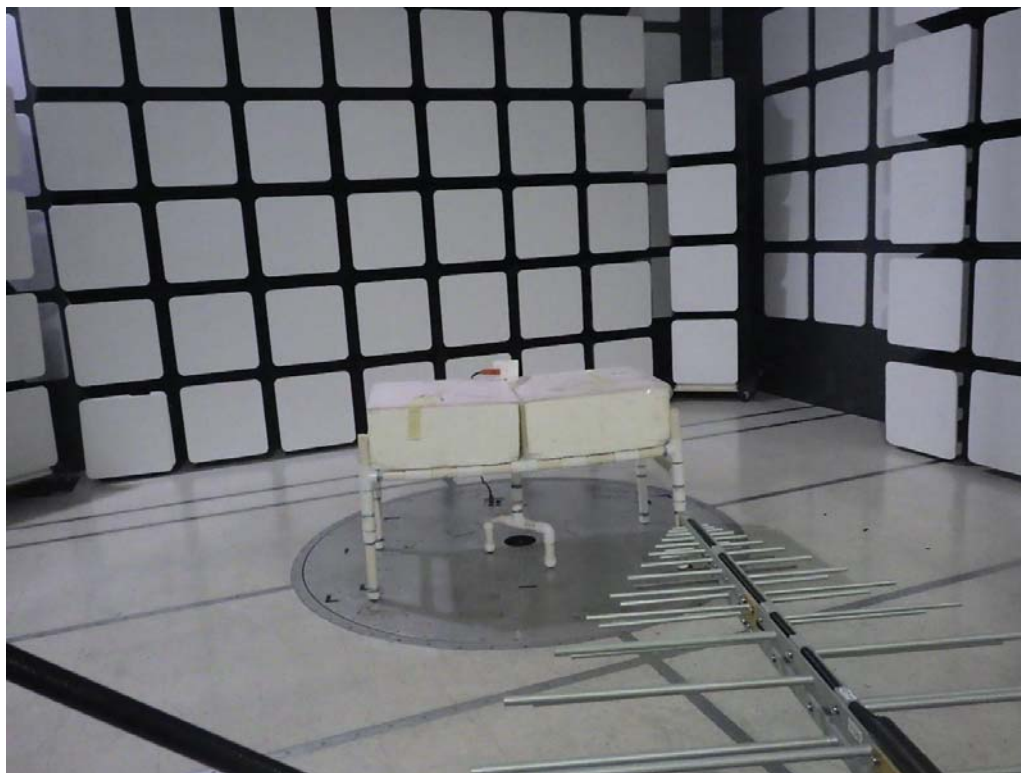
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

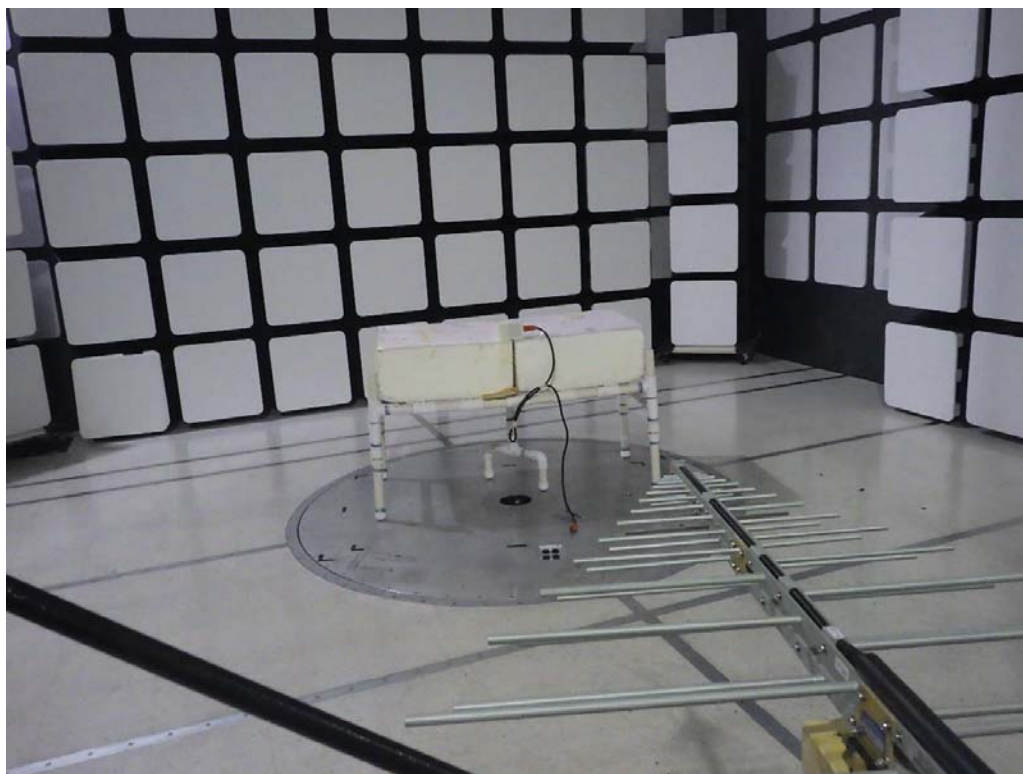
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

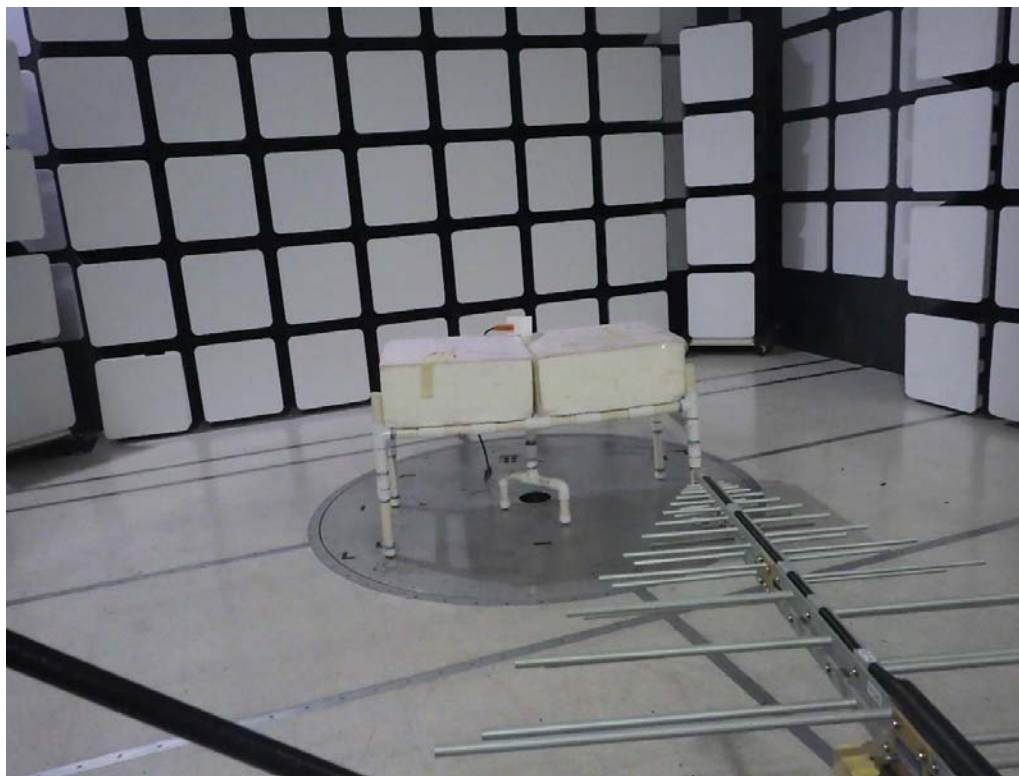
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**REAR VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

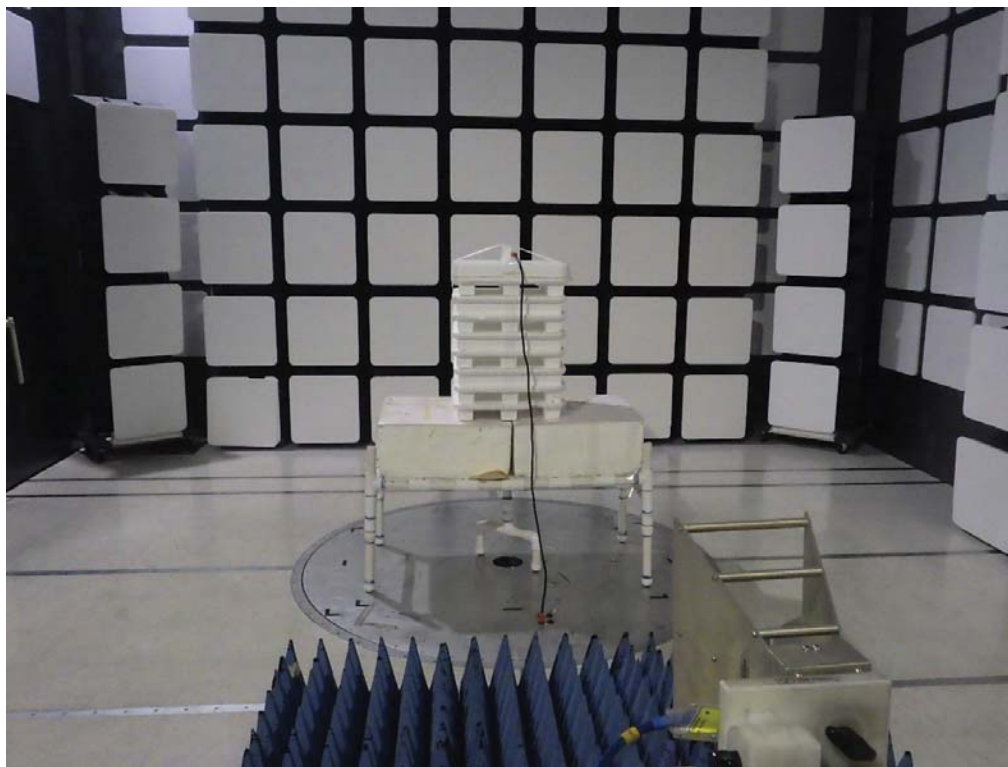
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**

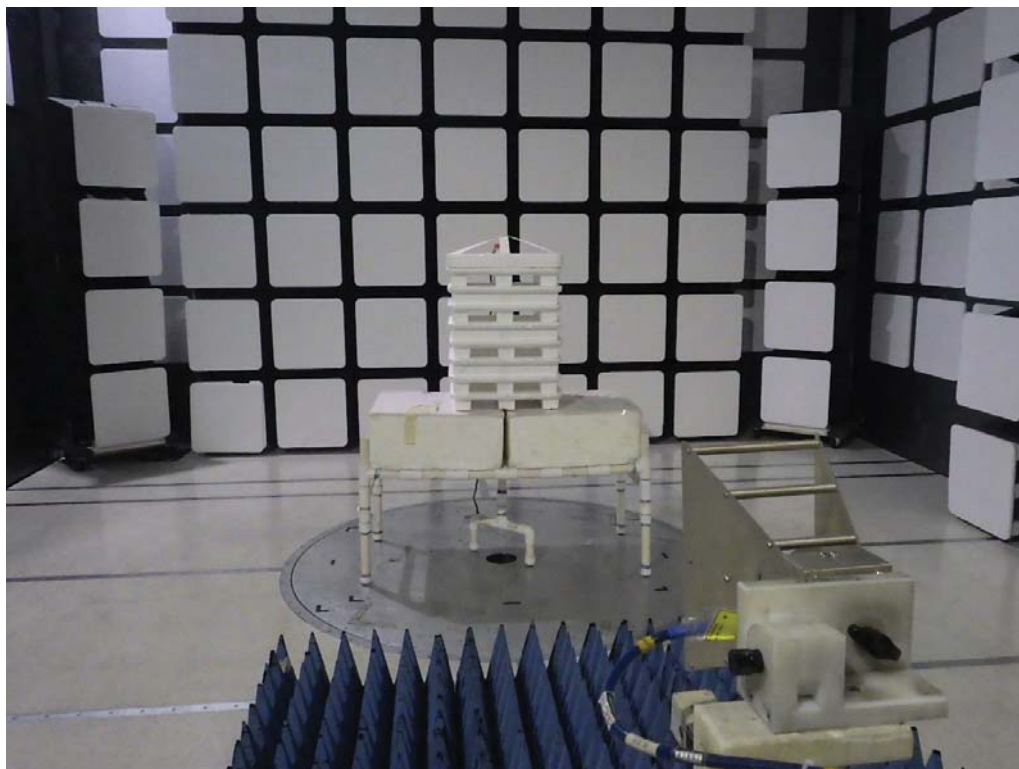


**FRONT VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.  
Z-WAVE SIREN  
PART NUMBER: ISZW7-ECO  
AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**

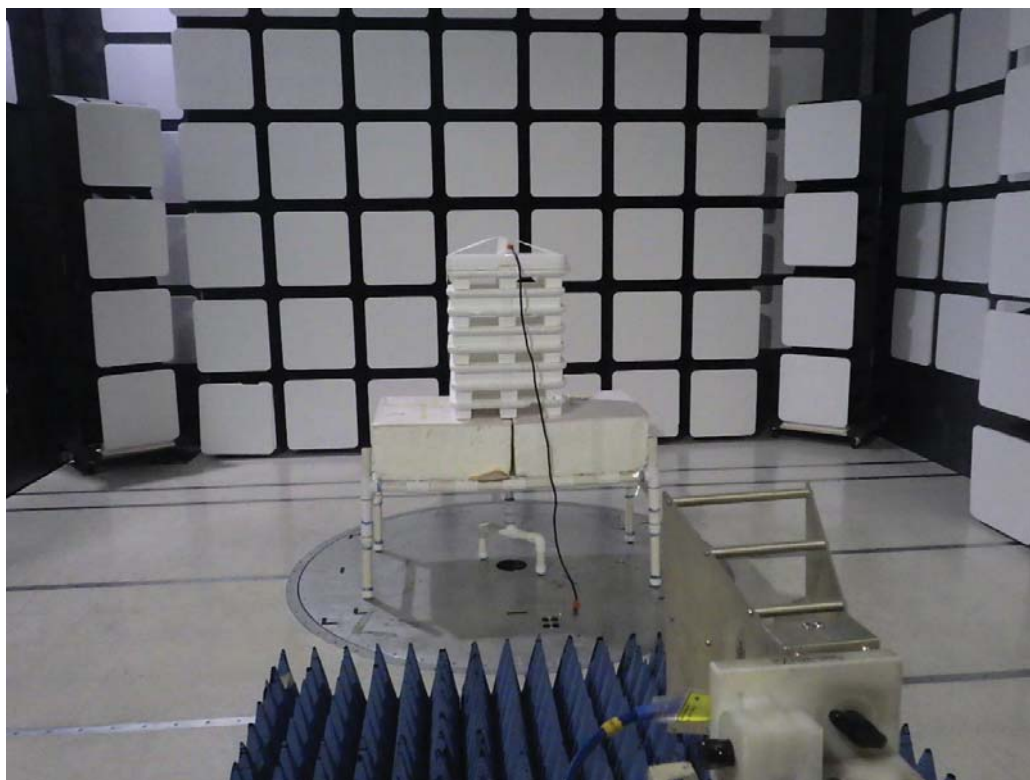


**REAR VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.  
Z-WAVE SIREN  
PART NUMBER: ISZW7-ECO  
AC MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**FRONT VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

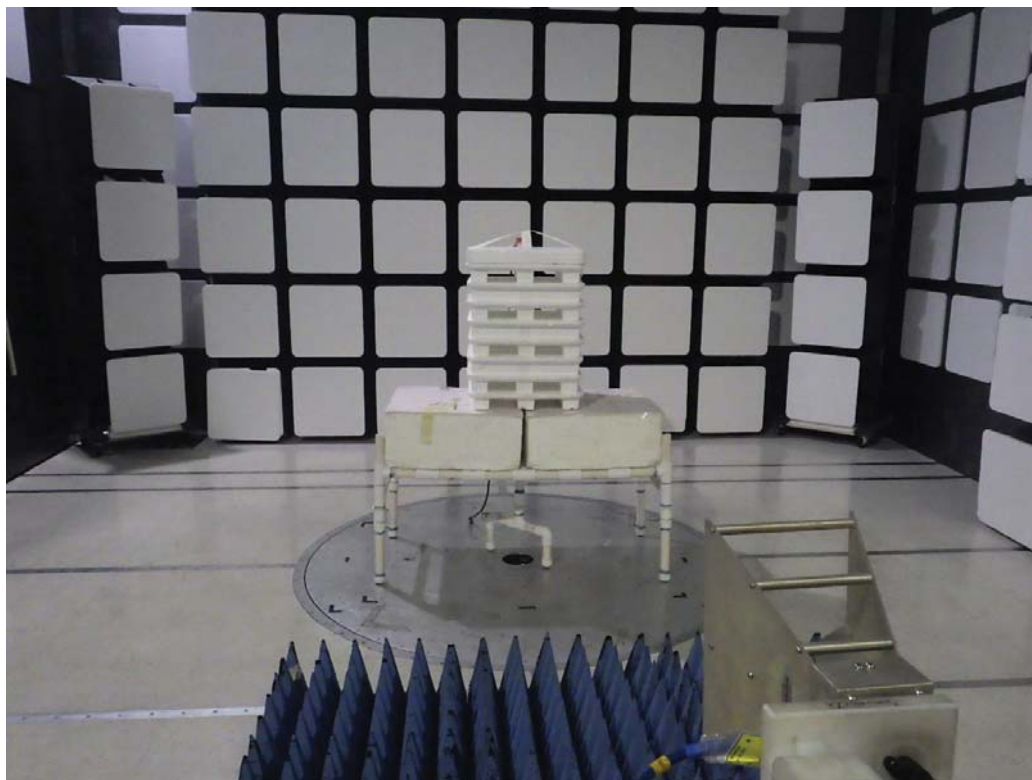
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONs**



**REAR VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.

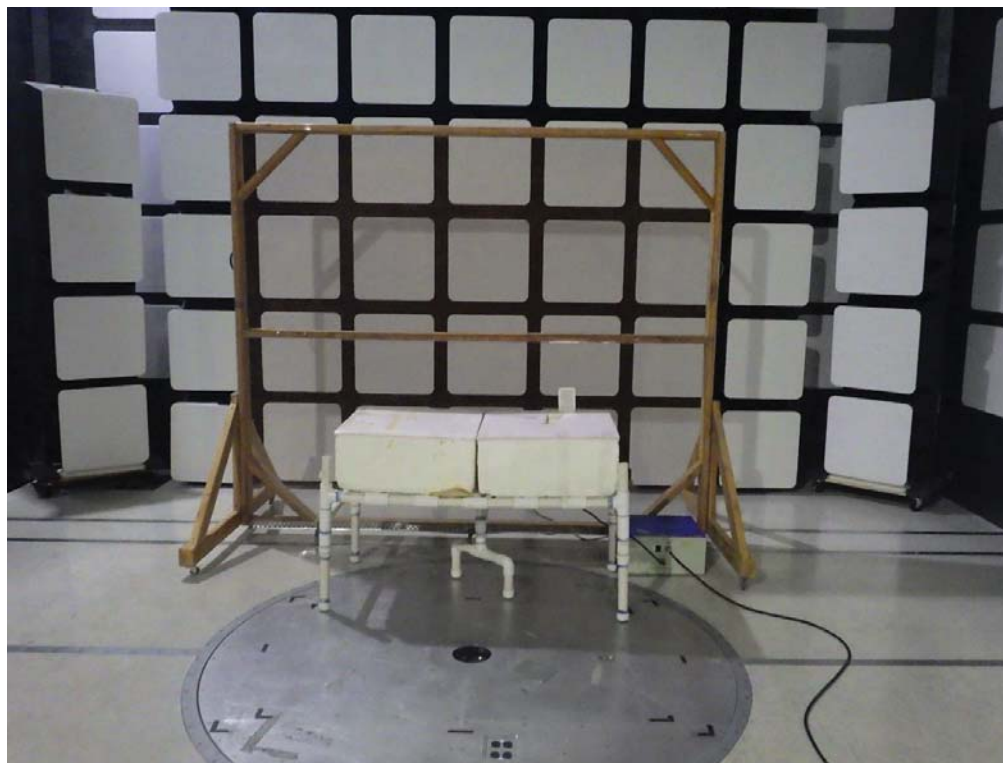
Z-WAVE SIREN

PART NUMBER: ISZW7-ECO

BATTERY MODE

FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONs**



**FRONT VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.  
Z-WAVE SIREN  
PART NUMBER: ISZW7-ECO  
AC MODE  
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONs**



**REAR VIEW**

ECOLINK INTELLIGENT TECHNOLOGY, INC.  
Z-WAVE SIREN  
PART NUMBER: ISZW7-ECO  
AC MODE  
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**



**APPENDIX E**

***DATA SHEETS***

## **RADIATED EMISSIONS**

### ***DATA SHEETS***

Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 908.42 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Low Channel, Z-axis (Worst case)  
Power level -16  
AC mode, Alarm active

2/7/2020 4:46:32 PM  
Sequence: Preliminary Scan



No emissions found below 30 MHz

Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 908.42 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Low Channel, Z-axis (Worst case)  
Power level -16  
AC mode, Alarm active

2/7/2020 4:55:25 PM  
Sequence: Final Measurements

## FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBμV/m) | (QP) EMI<br>(dBμV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBμV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Aql<br>(deq) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 64.10         | V   | 26.07                  | 21.34                | -13.93                | -18.66              | 40.00             | 13.61              | 0.94          | 249.25            | 143.22         |
| 67.10         | V   | 29.17                  | 25.25                | -10.83                | -14.75              | 40.00             | 12.82              | 0.97          | 65.50             | 111.46         |
| 67.80         | V   | 28.18                  | 24.36                | -11.82                | -15.64              | 40.00             | 12.62              | 0.98          | 340.00            | 127.16         |
| 830.40        | H   | 38.11                  | 33.40                | -7.89                 | -12.60              | 46.00             | 27.00              | 2.80          | 277.25            | 157.55         |
| 831.00        | H   | 38.74                  | 33.43                | -7.26                 | -12.57              | 46.00             | 27.00              | 2.80          | 50.75             | 158.68         |
| 833.10        | H   | 39.73                  | 33.35                | -6.27                 | -12.65              | 46.00             | 26.90              | 2.80          | 174.75            | 190.50         |



Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 916 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
High Channel, Z-axis (Worst case)  
Power level -16  
Alarm active, AC mode

2/7/2020 9:43:13 AM  
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 916 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
High Channel, Z-axis (worst case)  
Power level -16  
Alarm active, AC mode

2/7/2020 9:58:38 AM  
Sequence: Final Measurements

## FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBμV/m) | (QP) EMI<br>(dBμV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBμV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Agl<br>(deg) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 41.40         | V   | 34.12                  | 29.54                | -5.88                 | -10.46              | 40.00             | 19.88              | 0.90          | 233.00            | 190.92         |
| 43.10         | V   | 32.06                  | 27.31                | -7.94                 | -12.69              | 40.00             | 19.60              | 0.90          | 232.75            | 159.10         |
| 43.30         | V   | 36.04                  | 32.23                | -3.96                 | -7.77               | 40.00             | 19.57              | 0.90          | 220.50            | 111.46         |
| 43.70         | V   | 37.38                  | 33.52                | -2.62                 | -6.48               | 40.00             | 19.49              | 0.90          | 224.50            | 111.34         |
| 44.40         | V   | 37.79                  | 33.93                | -2.21                 | -6.07               | 40.00             | 19.48              | 0.90          | 257.50            | 111.22         |
| 44.70         | V   | 33.26                  | 28.97                | -6.74                 | -11.03              | 40.00             | 19.44              | 0.90          | 143.00            | 158.80         |



Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Receiver mode, Z-axis (Worst case)  
Power level -16  
AC mode

2/10/2020 12:00:26 PM  
Sequence: Preliminary Scan



No emissions found below 30 MHz

Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - AC mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Receiver Mode, Z-axis (Worst Case)  
Power level -16  
AC mode

2/10/2020 12:09:32 PM  
Sequence: Final Measurements

## FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBµV/m) | (QP) EMI<br>(dBµV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBµV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Aql<br>(deg) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 910.60        | H   | 38.64                  | 33.46                | -7.36                 | -12.54              | 46.00             | 27.90              | 2.48          | 44.50             | 397.97         |
| 911.80        | H   | 38.76                  | 33.49                | -7.24                 | -12.51              | 46.00             | 27.90              | 2.49          | 186.00            | 286.20         |
| 915.90        | H   | 47.52                  | 45.11                | 1.52                  | -0.89               | 46.00             | 27.90              | 2.51          | 268.25            | 222.68         |
| 916.00        | H   | 47.41                  | 43.78                | 1.41                  | -2.22               | 46.00             | 27.91              | 2.51          | 75.75             | 317.79         |
| 916.00        | V   | 47.20                  | 44.93                | 1.20                  | -1.07               | 46.00             | 27.90              | 2.51          | 289.50            | 286.02         |
| 916.10        | H   | 47.62                  | 44.91                | 1.62                  | -1.09               | 46.00             | 27.90              | 2.51          | 112.75            | 286.02         |



Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - Battery.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 908.42 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Low Channel, Z-axis (Worst case)  
Power level -16  
Alarm active, Battery mode

2/7/2020 3:07:00 PM  
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Low Ch - Z-axis - Alarm active - Battery mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 908.42 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Low Channel, Z-axis (Worst case)  
Power level -16  
Alarm active, Battery mode

2/7/2020 3:23:41 PM  
Sequence: Final Measurements

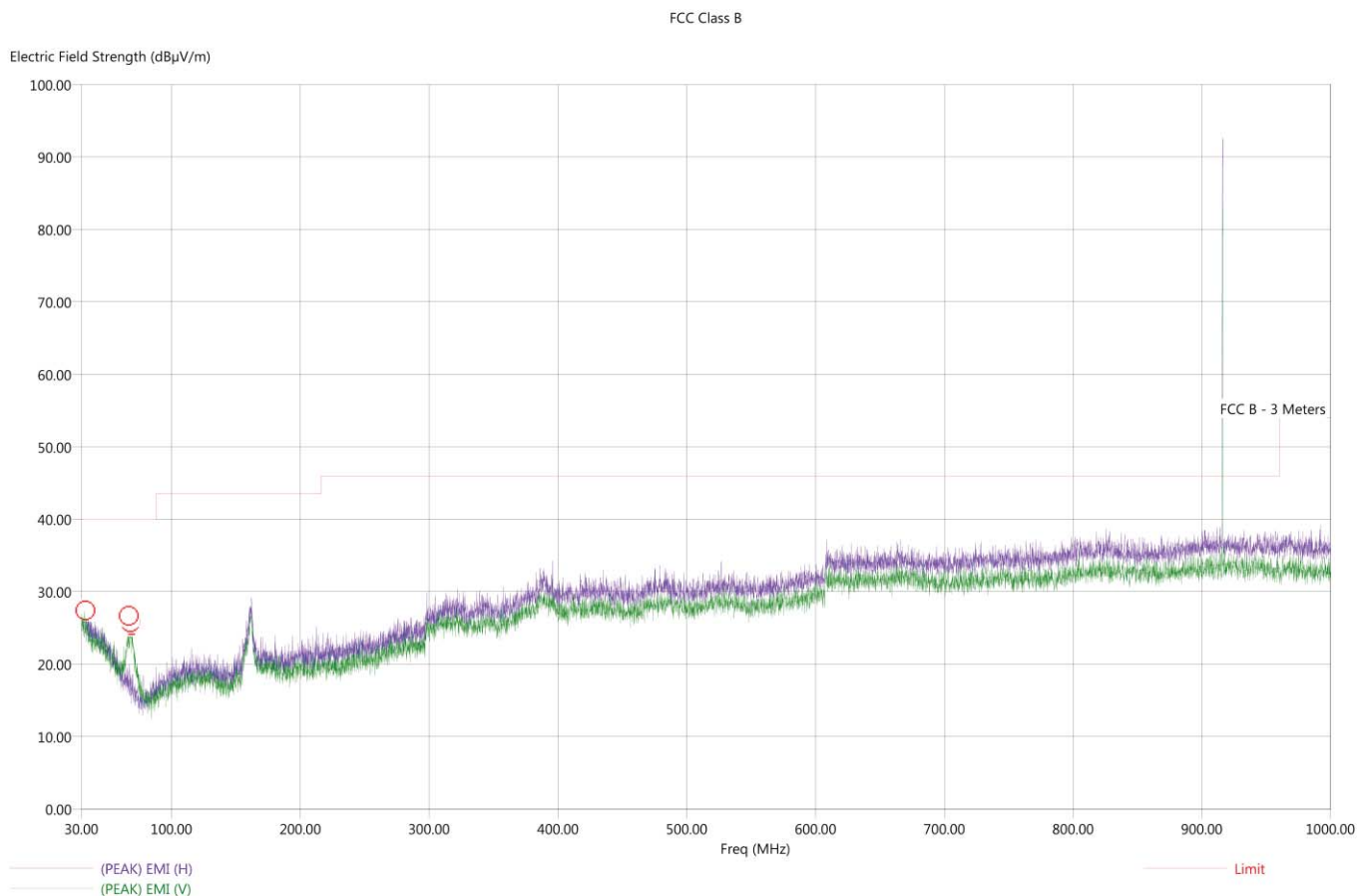
## FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBµV/m) | (QP) EMI<br>(dBµV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBµV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Aql<br>(deg) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 64.30         | V   | 27.17                  | 23.14                | -12.83                | -16.86              | 40.00             | 13.68              | 0.94          | 52.75             | 144.41         |
| 65.00         | V   | 28.52                  | 23.60                | -11.48                | -16.40              | 40.00             | 13.38              | 0.95          | 88.75             | 111.16         |
| 65.40         | V   | 28.37                  | 22.82                | -11.63                | -17.18              | 40.00             | 13.28              | 0.96          | 136.50            | 110.92         |
| 65.80         | V   | 29.59                  | 25.15                | -10.41                | -14.85              | 40.00             | 13.10              | 0.96          | 63.75             | 111.10         |
| 66.20         | V   | 28.28                  | 25.00                | -11.72                | -15.00              | 40.00             | 13.11              | 0.96          | 53.00             | 111.22         |
| 66.90         | V   | 29.02                  | 24.06                | -10.98                | -15.94              | 40.00             | 12.83              | 0.97          | 93.00             | 158.98         |



Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - Battery.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 916 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
High Channel, Z-axis (Worst case)  
Power level -16  
Alarm active, Battery mode

2/7/2020 10:24:36 AM  
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - High Ch - Z-axis - Alarm active - Battery mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously transmitting at 916 MHz  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
High Channel, Z-axis (Worst case)  
Power level -16  
Alarm active, Battery mode

2/7/2020 10:35:39 AM  
Sequence: Final Measurements

FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBμV/m) | (QP) EMI<br>(dBμV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBμV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Aql<br>(deq) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 33.00         | H   | 29.62                  | 24.37                | -10.38                | -15.63              | 40.00             | 21.34              | 0.84          | 286.25            | 206.98         |
| 33.30         | H   | 30.58                  | 23.93                | -9.42                 | -16.07              | 40.00             | 21.33              | 0.84          | 36.75             | 254.56         |
| 66.60         | V   | 28.37                  | 23.66                | -11.63                | -16.34              | 40.00             | 12.96              | 0.97          | 90.75             | 142.62         |
| 67.80         | V   | 29.09                  | 24.90                | -10.91                | -15.10              | 40.00             | 12.53              | 0.98          | 70.25             | 111.22         |
| 68.50         | V   | 27.78                  | 24.61                | -12.22                | -15.39              | 40.00             | 12.36              | 0.99          | 360.00            | 111.28         |
| 68.80         | V   | 28.40                  | 23.88                | -11.60                | -16.12              | 40.00             | 12.20              | 0.99          | 24.50             | 158.92         |



Title: Pre-Scan - FCC Class B  
File: 1 - Agilent - Pre-Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - Battery mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Receiver Mode, Z-axis (Worst Case)  
Power level -16  
Battery mode

2/10/2020 1:22:06 PM  
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B  
File: 1 - Agilent - Final Scan - FCC Class B - 30 MHz to 1000 MHz - Receiver Mode - Battery mode.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was continuously receiving at 916 MHz (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Receiver Mode, Z-axis (Worst Case)  
Power level -16  
Battery mode

2/10/2020 1:31:15 PM  
Sequence: Final Measurements

## FCC Class B

| Freq<br>(MHz) | Pol | (PEAK) EMI<br>(dBµV/m) | (QP) EMI<br>(dBµV/m) | (PEAK) Margin<br>(dB) | (QP) Margin<br>(dB) | Limit<br>(dBµV/m) | Transducer<br>(dB) | Cable<br>(dB) | Ttbl Aql<br>(deq) | Twr Ht<br>(cm) |
|---------------|-----|------------------------|----------------------|-----------------------|---------------------|-------------------|--------------------|---------------|-------------------|----------------|
| 830.30        | H   | 37.84                  | 32.85                | -8.16                 | -13.15              | 46.00             | 27.00              | 2.30          | 124.00            | 238.32         |
| 830.50        | H   | 38.57                  | 32.83                | -7.43                 | -13.17              | 46.00             | 27.00              | 2.30          | 63.50             | 401.25         |
| 830.60        | H   | 38.03                  | 32.82                | -7.97                 | -13.18              | 46.00             | 27.00              | 2.30          | 208.00            | 176.17         |
| 832.10        | V   | 37.84                  | 33.60                | -8.16                 | -12.40              | 46.00             | 26.90              | 2.30          | 179.00            | 397.37         |
| 832.20        | V   | 38.36                  | 32.71                | -7.64                 | -13.29              | 46.00             | 26.90              | 2.30          | 137.50            | 222.38         |
| 833.50        | V   | 38.50                  | 32.62                | -7.50                 | -13.38              | 46.00             | 26.82              | 2.30          | 65.25             | 206.38         |





## FCC 15.249

Ecolink Intelligent Technology, Inc.

## Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

## Fundamental - AC mode

## Low Channel

## Power level -16

[illegible]

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode**
**Transmit Mode - X-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 47.77             | V            | 73.97 | -26.20 | Peak                  | 0.00                    | 153.13                 |              |
| 1816.84        | 46.12             | V            | 53.97 | -7.85  | Avg                   | 0.00                    | 153.13                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 39.80             | V            | 73.97 | -34.17 | Peak                  | 0.00                    | 160.65                 |              |
| 2725.26        | 34.24             | V            | 53.97 | -19.73 | Avg                   | 0.00                    | 160.65                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.89             | V            | 73.97 | -31.08 | Peak                  | 255.00                  | 138.50                 |              |
| 5450.52        | 32.71             | V            | 53.97 | -21.26 | Avg                   | 255.00                  | 138.50                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode****Transmit Mode - Y-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 49.85             | V            | 73.97 | -24.12 | Peak                  | 0.00                    | 151.10                 |              |
| 1816.84        | 48.32             | V            | 53.97 | -5.65  | Avg                   | 0.00                    | 151.10                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 39.91             | V            | 73.97 | -34.06 | Peak                  | 149.00                  | 100.00                 |              |
| 2725.26        | 33.87             | V            | 53.97 | -20.10 | Avg                   | 149.00                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 43.24             | V            | 73.97 | -30.73 | Peak                  | 0.00                    | 124.29                 |              |
| 5450.52        | 34.62             | V            | 53.97 | -19.35 | Avg                   | 0.00                    | 124.29                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode****Transmit Mode - Z-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 41.90             | V            | 73.97 | -32.07 | Peak                  | 48.50                   | 141.31                 |              |
| 1816.84        | 38.09             | V            | 53.97 | -15.88 | Avg                   | 48.50                   | 141.31                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 37.10             | V            | 73.97 | -36.87 | Peak                  | 168.75                  | 100.00                 |              |
| 2725.26        | 27.91             | V            | 53.97 | -26.06 | Avg                   | 168.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.57             | V            | 73.97 | -31.40 | Peak                  | 155.50                  | 149.07                 |              |
| 5450.52        | 32.54             | V            | 53.97 | -21.43 | Avg                   | 155.50                  | 149.07                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode****Transmit Mode - X-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 46.72             | H            | 73.97 | -27.25 | Peak                  | 225.50                  | 168.05                 |              |
| 1816.84        | 44.96             | H            | 53.97 | -9.01  | Avg                   | 225.50                  | 168.05                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 39.66             | H            | 73.97 | -34.32 | Peak                  | 326.75                  | 234.68                 |              |
| 2725.26        | 34.06             | H            | 53.97 | -19.91 | Avg                   | 326.75                  | 234.68                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        |                   |              |       |        |                       |                         |                        | No emissions |
| 5450.52        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode****Transmit Mode - Y-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 40.75             | H            | 73.97 | -33.22 | Peak                  | 207.25                  | 191.52                 |              |
| 1816.84        | 37.50             | H            | 53.97 | -16.47 | Avg                   | 207.25                  | 191.52                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 38.80             | H            | 73.97 | -35.17 | Peak                  | 188.25                  | 163.52                 |              |
| 2725.26        | 30.59             | H            | 53.97 | -23.38 | Avg                   | 188.25                  | 163.52                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 43.16             | H            | 73.97 | -30.81 | Peak                  | 17.25                   | 193.31                 |              |
| 5450.52        | 35.26             | H            | 53.97 | -18.71 | Avg                   | 17.25                   | 193.31                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - AC mode****Transmit Mode - Z-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 48.54             | H            | 73.97 | -25.43 | Peak                  | 140.00                  | 168.41                 |              |
| 1816.84        | 46.96             | H            | 53.97 | -7.01  | Avg                   | 140.00                  | 168.41                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 44.01             | H            | 73.97 | -29.96 | Peak                  | 297.00                  | 171.76                 |              |
| 2725.26        | 40.38             | H            | 53.97 | -13.59 | Avg                   | 297.00                  | 171.76                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.98             | H            | 73.97 | -30.99 | Peak                  | 59.00                   | 100.00                 |              |
| 5450.52        | 33.72             | H            | 53.97 | -20.25 | Avg                   | 59.00                   | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

## Fundamental - AC mode

## High Channel

## Power Level -16

[illegible]

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode**
**Transmit Mode - X-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 45.15             | V            | 73.97 | -28.83 | Peak                  | 0.00                    | 152.89                 |              |
| 1832.00        | 43.10             | V            | 53.97 | -10.87 | Avg                   | 0.00                    | 152.89                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 38.58             | V            | 73.97 | -35.39 | Peak                  | 0.00                    | 221.31                 |              |
| 2748.00        | 29.18             | V            | 53.97 | -24.79 | Avg                   | 0.00                    | 221.31                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 3664.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.01             | V            | 73.97 | -31.96 | Peak                  | 293.75                  | 100.00                 |              |
| 5496.00        | 31.17             | V            | 53.97 | -22.80 | Avg                   | 293.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode**
**Transmit Mode - Y-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments                 |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------------------|
| 1832.00        | 49.19             | V            | 73.97 | -24.78 | Peak                  | 321.25                  | 146.74                 |                          |
| 1832.00        | 47.76             | V            | 53.97 | -6.21  | Avg                   | 321.25                  | 146.74                 |                          |
| 2748.00        | 41.18             | V            | 73.97 | -32.79 | Peak                  | 152.75                  | 143.64                 |                          |
| 2748.00        | 35.53             | V            | 53.97 | -18.44 | Avg                   | 152.75                  | 143.64                 |                          |
| 3664.00        | 37.68             | V            | 73.97 | -36.29 | Peak                  | 336.50                  | 157.61                 |                          |
| 3664.00        | 27.20             | V            | 53.97 | -26.77 | Avg                   | 336.50                  | 157.61                 |                          |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 4580.00        |                   |              |       |        |                       |                         |                        |                          |
| 5496.00        | 43.23             | V            | 73.97 | -30.74 | Peak                  | 0.00                    | 116.17                 |                          |
| 5496.00        | 34.50             | V            | 53.97 | -19.47 | Avg                   | 0.00                    | 116.17                 |                          |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 6412.00        |                   |              |       |        |                       |                         |                        |                          |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 7328.00        |                   |              |       |        |                       |                         |                        |                          |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 8244.00        |                   |              |       |        |                       |                         |                        |                          |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 9160.00        |                   |              |       |        |                       |                         |                        |                          |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode****Transmit Mode - Z-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 42.57             | V            | 73.97 | -31.40 | Peak                  | 282.50                  | 100.00                 |              |
| 1832.00        | 39.45             | V            | 53.97 | -14.52 | Avg                   | 282.50                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 36.49             | V            | 73.97 | -37.48 | Peak                  | 204.75                  | 100.00                 |              |
| 2748.00        | 26.39             | V            | 53.97 | -27.58 | Avg                   | 204.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 3664.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 41.96             | V            | 73.97 | -32.01 | Peak                  | 154.75                  | 100.00                 |              |
| 5496.00        | 31.65             | V            | 53.97 | -22.32 | Avg                   | 154.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode****Transmit Mode - X-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 45.41             | H            | 73.97 | -28.56 | Peak                  | 229.25                  | 164.24                 |              |
| 1832.00        | 43.19             | H            | 53.97 | -10.78 | Avg                   | 229.25                  | 164.24                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 38.57             | H            | 73.97 | -35.40 | Peak                  | 47.25                   | 167.28                 |              |
| 2748.00        | 30.53             | H            | 53.97 | -23.44 | Avg                   | 47.25                   | 167.28                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 3664.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 41.53             | H            | 73.97 | -32.44 | Peak                  | 45.00                   | 100.00                 |              |
| 5496.00        | 29.80             | H            | 53.97 | -24.17 | Avg                   | 45.00                   | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode**
**Transmit Mode - Y-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 41.59             | H            | 73.97 | -32.39 | Peak                  | 149.00                  | 212.65                 |              |
| 1832.00        | 38.89             | H            | 53.97 | -15.08 | Avg                   | 149.00                  | 212.65                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 38.06             | H            | 73.97 | -35.91 | Peak                  | 172.00                  | 100.00                 |              |
| 2748.00        | 27.67             | H            | 53.97 | -26.30 | Avg                   | 172.00                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        | 37.82             | H            | 73.97 | -36.16 | Peak                  | 350.00                  | 197.43                 |              |
| 3664.00        | 26.32             | H            | 53.97 | -27.65 | Avg                   | 350.00                  | 197.43                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.89             | H            | 73.97 | -31.09 | Peak                  | 14.50                   | 181.01                 |              |
| 5496.00        | 34.29             | H            | 53.97 | -19.68 | Avg                   | 14.50                   | 181.01                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - AC mode**
**Transmit Mode - Z-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 51.40             | H            | 73.97 | -22.58 | Peak                  | 159.50                  | 173.61                 |              |
| 1832.00        | 50.27             | H            | 53.97 | -3.71  | Avg                   | 159.50                  | 173.61                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 43.64             | H            | 73.97 | -30.34 | Peak                  | 301.75                  | 168.59                 |              |
| 2748.00        | 40.53             | H            | 53.97 | -13.44 | Avg                   | 301.75                  | 168.59                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        | 38.34             | H            | 73.97 | -35.63 | Peak                  | 171.75                  | 100.00                 |              |
| 3664.00        | 25.64             | H            | 53.97 | -28.34 | Avg                   | 171.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 43.59             | H            | 73.97 | -30.38 | Peak                  | 55.25                   | 118.92                 |              |
| 5496.00        | 34.65             | H            | 53.97 | -19.32 | Avg                   | 55.25                   | 118.92                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

### Non Harmonic Emissions from the Tx and Digital Portion - 9 kHz to 30 MHz - AC mode

### Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz - AC mode

## Power level -16

[illegible]

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

### Receive Mode - 1 GHz to 9.3 GHz - AC mode

## Power level -16

[illegible]



## FCC 15.249

Ecolink Intelligent Technology, Inc.

## Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

## Lab: D

Tested By: Harvey Samaco

## Fundamental - Battery mode

## Low Channel

## Power Level -16

[illegible]

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode****Transmit Mode - X-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 43.90             | V            | 73.97 | -30.07 | Peak                  | 328.50                  | 208.11                 |              |
| 1816.84        | 41.62             | V            | 53.97 | -12.35 | Avg                   | 328.50                  | 208.11                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 39.56             | V            | 73.97 | -34.41 | Peak                  | 0.00                    | 218.08                 |              |
| 2725.26        | 33.30             | V            | 53.97 | -20.67 | Avg                   | 0.00                    | 218.08                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.63             | V            | 73.97 | -31.35 | Peak                  | 259.00                  | 139.52                 |              |
| 5450.52        | 33.05             | V            | 53.97 | -20.92 | Avg                   | 259.00                  | 139.52                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode**
**Transmit Mode - Y-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 49.87             | V            | 73.97 | -24.10 | Peak                  | 23.50                   | 100.00                 |              |
| 1816.84        | 48.51             | V            | 53.97 | -5.46  | Avg                   | 23.50                   | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 40.17             | V            | 73.97 | -33.80 | Peak                  | 135.75                  | 153.73                 |              |
| 2725.26        | 36.04             | V            | 53.97 | -17.93 | Avg                   | 135.75                  | 153.73                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 43.02             | V            | 73.97 | -30.95 | Peak                  | 0.00                    | 117.13                 |              |
| 5450.52        | 34.33             | V            | 53.97 | -19.64 | Avg                   | 0.00                    | 117.13                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode****Transmit Mode - Z-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 44.07             | V            | 73.97 | -29.90 | Peak                  | 114.75                  | 100.00                 |              |
| 1816.84        | 40.91             | V            | 53.97 | -13.06 | Avg                   | 114.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 37.69             | V            | 73.97 | -36.28 | Peak                  | 245.75                  | 100.00                 |              |
| 2725.26        | 29.38             | V            | 53.97 | -24.59 | Avg                   | 245.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.19             | V            | 73.97 | -31.78 | Peak                  | 157.75                  | 178.80                 |              |
| 5450.52        | 32.27             | V            | 53.97 | -21.70 | Avg                   | 157.75                  | 178.80                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode****Transmit Mode - X-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 44.51             | H            | 73.97 | -29.46 | Peak                  | 229.00                  | 166.02                 |              |
| 1816.84        | 42.61             | H            | 53.97 | -11.36 | Avg                   | 229.00                  | 166.02                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 41.53             | H            | 73.97 | -32.44 | Peak                  | 80.50                   | 124.23                 |              |
| 2725.26        | 37.51             | H            | 53.97 | -16.46 | Avg                   | 80.50                   | 124.23                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 41.57             | H            | 73.97 | -32.41 | Peak                  | 117.00                  | 129.25                 |              |
| 5450.52        | 30.99             | H            | 53.97 | -22.98 | Avg                   | 117.00                  | 129.25                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode**
**Transmit Mode - Y-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 42.46             | H            | 73.97 | -31.51 | Peak                  | 179.25                  | 130.86                 |              |
| 1816.84        | 39.66             | H            | 53.97 | -14.31 | Avg                   | 179.25                  | 130.86                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 37.99             | H            | 73.97 | -35.99 | Peak                  | 172.50                  | 165.55                 |              |
| 2725.26        | 31.39             | H            | 53.97 | -22.58 | Avg                   | 172.50                  | 165.55                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 42.65             | H            | 73.97 | -31.32 | Peak                  | 72.25                   | 155.94                 |              |
| 5450.52        | 32.97             | H            | 53.97 | -21.00 | Avg                   | 72.25                   | 155.94                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - Low Channel - Battery mode****Transmit Mode - Z-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1816.84        | 46.66             | H            | 73.97 | -27.31 | Peak                  | 133.75                  | 164.59                 |              |
| 1816.84        | 45.05             | H            | 53.97 | -8.92  | Avg                   | 133.75                  | 164.59                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2725.26        | 43.42             | H            | 73.97 | -30.55 | Peak                  | 312.25                  | 120.59                 |              |
| 2725.26        | 39.96             | H            | 53.97 | -14.02 | Avg                   | 312.25                  | 120.59                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3633.68        |                   |              |       |        |                       |                         |                        | No emissions |
| 3633.68        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4542.10        |                   |              |       |        |                       |                         |                        | No emissions |
| 4542.10        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5450.52        | 43.12             | H            | 73.97 | -30.85 | Peak                  | 65.25                   | 145.79                 |              |
| 5450.52        | 34.37             | H            | 53.97 | -19.60 | Avg                   | 65.25                   | 145.79                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6358.94        |                   |              |       |        |                       |                         |                        | No emissions |
| 6358.94        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7267.36        |                   |              |       |        |                       |                         |                        | No emissions |
| 7267.36        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8175.78        |                   |              |       |        |                       |                         |                        | No emissions |
| 8175.78        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9084.20        |                   |              |       |        |                       |                         |                        | No emissions |
| 9084.20        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: JSZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

## Fundamental - Battery mode

## High Channel

## Power Level -16

[illegible]

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode**
**Transmit Mode - X-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 42.03             | V            | 73.97 | -31.94 | Peak                  | 332.25                  | 200.00                 |              |
| 1832.00        | 39.34             | V            | 53.97 | -14.63 | Avg                   | 332.25                  | 200.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 36.56             | V            | 73.97 | -37.41 | Peak                  | 0.00                    | 217.31                 |              |
| 2748.00        | 26.39             | V            | 53.97 | -27.58 | Avg                   | 0.00                    | 217.31                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        | 37.46             | V            | 73.97 | -36.51 | Peak                  | 0.00                    | 100.00                 |              |
| 3664.00        | 25.59             | V            | 53.97 | -28.38 | Avg                   | 0.00                    | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 43.10             | V            | 73.97 | -30.88 | Peak                  | 244.00                  | 136.95                 |              |
| 5496.00        | 33.42             | V            | 53.97 | -20.55 | Avg                   | 244.00                  | 136.95                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode**
**Transmit Mode - Y-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments                 |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------------------|
| 1832.00        | 50.53             | V            | 73.97 | -23.45 | Peak                  | 327.00                  | 145.19                 |                          |
| 1832.00        | 49.37             | V            | 53.97 | -4.60  | Avg                   | 327.00                  | 145.19                 |                          |
| 2748.00        | 41.42             | V            | 73.97 | -32.55 | Peak                  | 125.25                  | 145.61                 |                          |
| 2748.00        | 36.59             | V            | 53.97 | -17.38 | Avg                   | 125.25                  | 145.61                 |                          |
| 3664.00        | 37.89             | V            | 73.97 | -36.08 | Peak                  | 339.75                  | 159.22                 |                          |
| 3664.00        | 27.15             | V            | 53.97 | -26.82 | Avg                   | 339.75                  | 159.22                 |                          |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 4580.00        |                   |              |       |        |                       |                         |                        |                          |
| 5496.00        | 43.61             | V            | 73.97 | -30.36 | Peak                  | 0.00                    | 100.00                 |                          |
| 5496.00        | 34.35             | V            | 53.97 | -19.62 | Avg                   | 0.00                    | 100.00                 |                          |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 6412.00        |                   |              |       |        |                       |                         |                        |                          |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 7328.00        |                   |              |       |        |                       |                         |                        |                          |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 8244.00        |                   |              |       |        |                       |                         |                        |                          |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions<br>detected |
| 9160.00        |                   |              |       |        |                       |                         |                        |                          |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode**

Transmit Mode - Z-Axis

Power level -16

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 42.19             | V            | 73.97 | -31.78 | Peak                  | 356.25                  | 100.00                 |              |
| 1832.00        | 39.43             | V            | 53.97 | -14.54 | Avg                   | 356.25                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 36.99             | V            | 73.97 | -36.98 | Peak                  | 287.00                  | 142.86                 |              |
| 2748.00        | 27.36             | V            | 53.97 | -26.61 | Avg                   | 287.00                  | 142.86                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 3664.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.39             | V            | 73.97 | -31.58 | Peak                  | 135.00                  | 104.95                 |              |
| 5496.00        | 31.18             | V            | 53.97 | -22.79 | Avg                   | 135.00                  | 104.95                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode**
**Transmit Mode - X-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 44.64             | H            | 73.97 | -29.33 | Peak                  | 236.25                  | 164.95                 |              |
| 1832.00        | 42.45             | H            | 53.97 | -11.52 | Avg                   | 236.25                  | 164.95                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 39.10             | H            | 73.97 | -34.87 | Peak                  | 57.75                   | 117.43                 |              |
| 2748.00        | 32.95             | H            | 53.97 | -21.03 | Avg                   | 57.75                   | 117.43                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 3664.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.01             | H            | 73.97 | -31.96 | Peak                  | 159.25                  | 148.29                 |              |
| 5496.00        | 30.86             | H            | 53.97 | -23.11 | Avg                   | 159.25                  | 148.29                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode****Transmit Mode - Y-Axis****Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 41.99             | H            | 73.97 | -31.98 | Peak                  | 152.50                  | 158.14                 |              |
| 1832.00        | 38.48             | H            | 53.97 | -15.49 | Avg                   | 152.50                  | 158.14                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 36.68             | H            | 73.97 | -37.29 | Peak                  | 171.25                  | 222.14                 |              |
| 2748.00        | 26.02             | H            | 53.97 | -27.95 | Avg                   | 171.25                  | 222.14                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        | 37.31             | H            | 73.97 | -36.66 | Peak                  | 329.00                  | 152.17                 |              |
| 3664.00        | 26.17             | H            | 53.97 | -27.80 | Avg                   | 329.00                  | 152.17                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.47             | H            | 73.97 | -31.50 | Peak                  | 25.50                   | 164.17                 |              |
| 5496.00        | 33.68             | H            | 53.97 | -20.29 | Avg                   | 25.50                   | 164.17                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

**FCC 15.249**

Ecolink Intelligent Technology, Inc.

Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

Lab: D

Tested By: Harvey Samaco

**Harmonics - High Channel - Battery mode**
**Transmit Mode - Z-Axis**
**Power level -16**

| Freq.<br>(MHz) | Level<br>(dBuV/m) | Pol<br>(v/h) | Limit | Margin | Peak /<br>QP /<br>Avg | Table<br>Angle<br>(deg) | Ant.<br>Height<br>(cm) | Comments     |
|----------------|-------------------|--------------|-------|--------|-----------------------|-------------------------|------------------------|--------------|
| 1832.00        | 51.28             | H            | 73.97 | -22.69 | Peak                  | 156.50                  | 172.17                 |              |
| 1832.00        | 50.25             | H            | 53.97 | -3.72  | Avg                   | 156.50                  | 172.17                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 2748.00        | 41.37             | H            | 73.97 | -32.60 | Peak                  | 293.25                  | 169.43                 |              |
| 2748.00        | 36.74             | H            | 53.97 | -17.23 | Avg                   | 293.25                  | 169.43                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 3664.00        | 37.98             | H            | 73.97 | -35.99 | Peak                  | 102.75                  | 100.00                 |              |
| 3664.00        | 26.54             | H            | 53.97 | -27.43 | Avg                   | 102.75                  | 100.00                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 4580.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 4580.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 5496.00        | 42.86             | H            | 73.97 | -31.11 | Peak                  | 49.25                   | 163.16                 |              |
| 5496.00        | 33.83             | H            | 53.97 | -20.14 | Avg                   | 49.25                   | 163.16                 |              |
|                |                   |              |       |        |                       |                         |                        |              |
| 6412.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 6412.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 7328.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 7328.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 8244.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 8244.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |
| 9160.00        |                   |              |       |        |                       |                         |                        | No emissions |
| 9160.00        |                   |              |       |        |                       |                         |                        | detected     |
|                |                   |              |       |        |                       |                         |                        |              |

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

**Non Harmonic Emissions from the Tx and Digital Portion - 9 kHz to 30 MHz - Battery mode**  
**Non Harmonic Emissions from the Tx and Digital Portion - 1 GHz to 9.3 GHz - Battery mode**  
**Power level -16**

[illegible]

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

### Receive Mode - 1 GHz to 9.3 GHz - Battery mode

### Power level -16

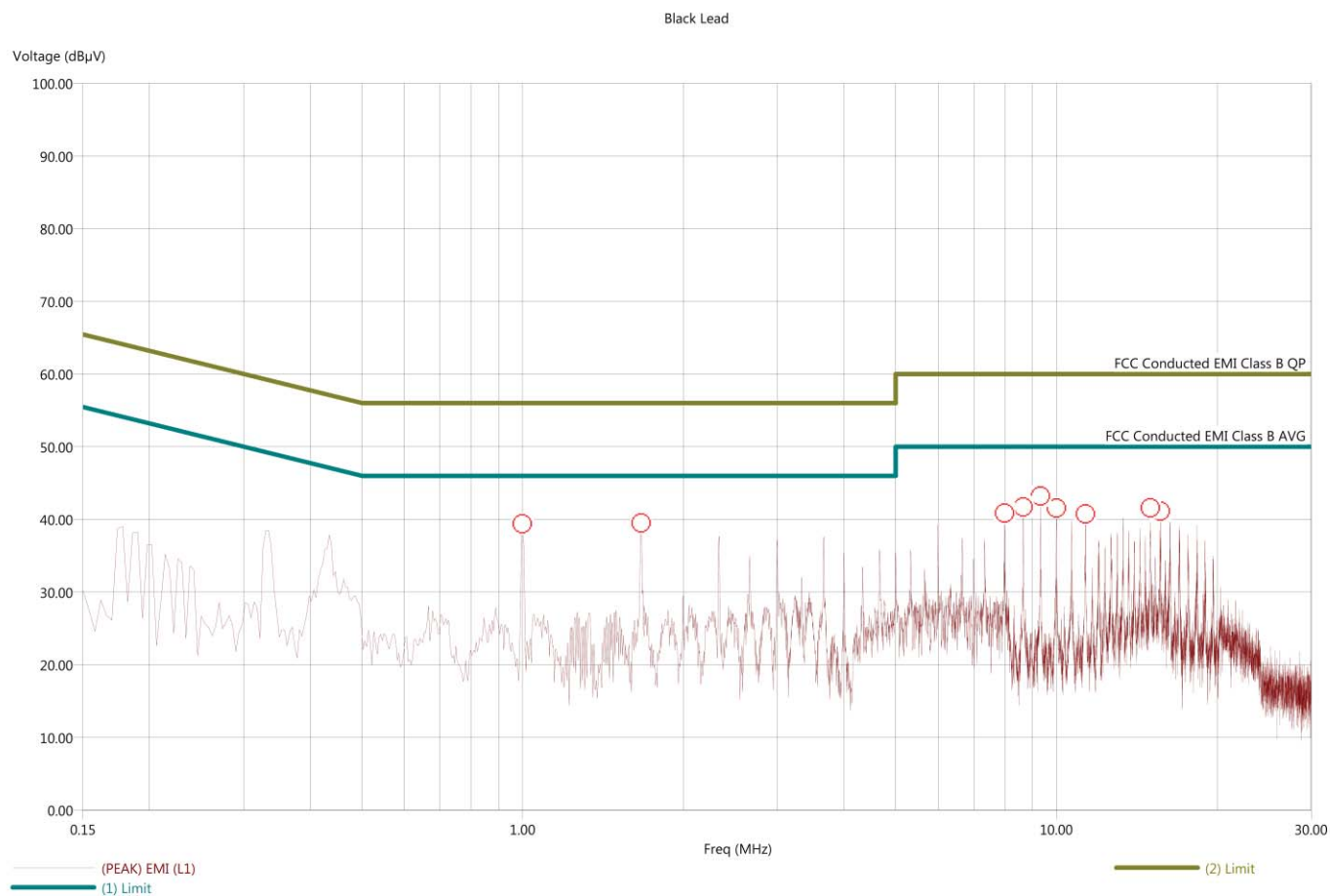
[illegible]



***CONDUCTED EMISSIONS  
DATA SHEETS***

Title: FCC Class B - Black Lead  
File: Keysight - Pre-Scan - Black Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Alarm active, AC mode

2/11/2020 11:22:08 AM  
Sequence: Preliminary Scan



Title: FCC Class B - Black Lead  
File: Keysight - Final Scan - Black Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-wave Siren  
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Alarm active, AC mode

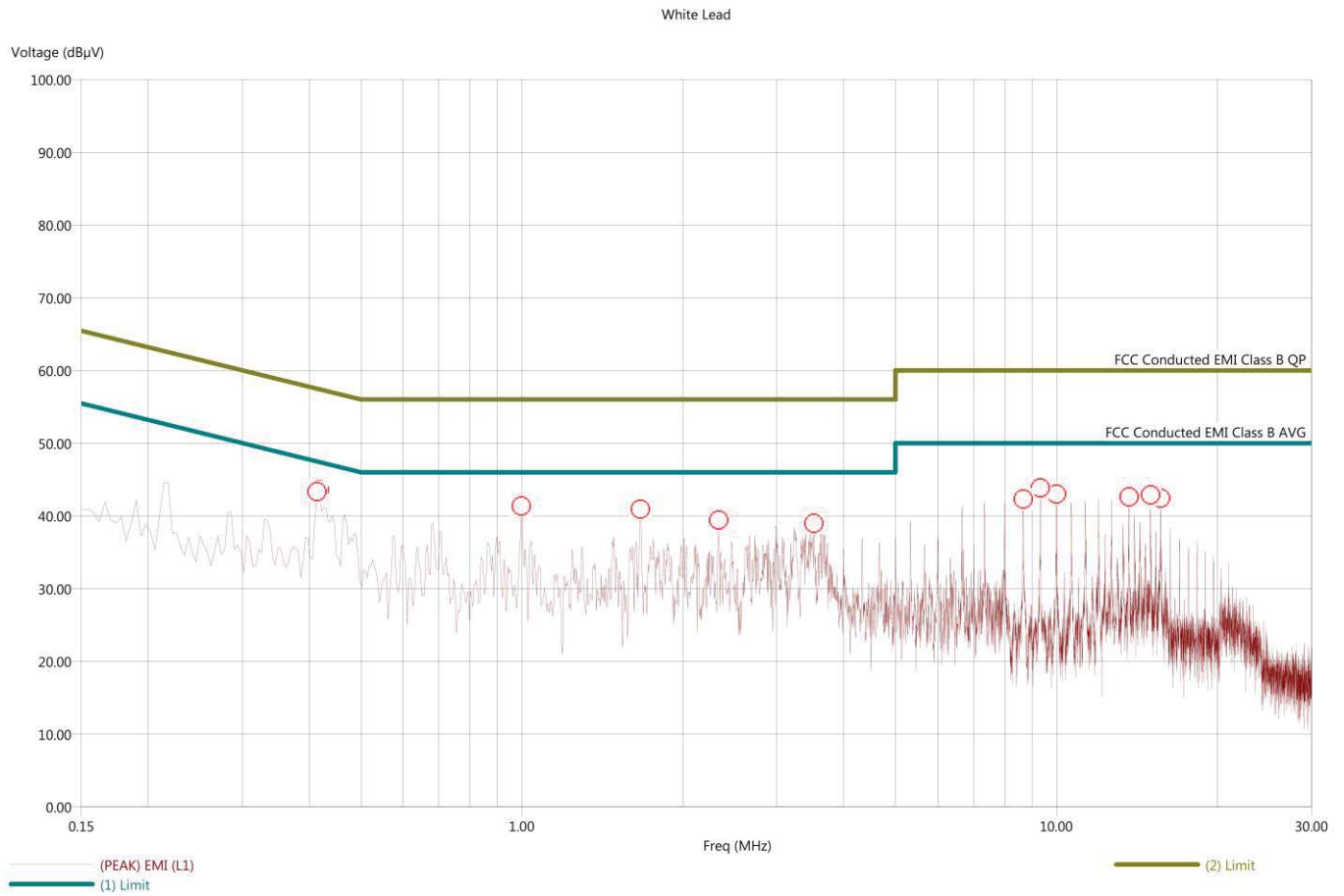
2/11/2020 11:30:37 AM  
Sequence: Final Measurements

| Black Lead    |                      |                     |                             |                      |                       |               |                    |                |  |
|---------------|----------------------|---------------------|-----------------------------|----------------------|-----------------------|---------------|--------------------|----------------|--|
| Freq<br>(MHz) | (PEAK) EMI<br>(dBμV) | (AVG) EMI<br>(dBμV) | (PEAK) Margin (AVG)<br>(dB) | (RMS) Margin<br>(dB) | (RMS) Limit<br>(dBμV) | Cable<br>(dB) | Transducer<br>(dB) | Filter<br>(dB) |  |
| 0.998         | 41.70                | 38.44               | -14.30                      | -7.56                | 46.00                 | 0.04          | 0.13               | 10.10          |  |
| 1.002         | 41.51                | 39.19               | -14.49                      | -6.81                | 46.00                 | 0.04          | 0.13               | 10.10          |  |
| 1.666         | 42.87                | 37.17               | -13.13                      | -8.83                | 46.00                 | 0.07          | 0.14               | 10.03          |  |
| 7.994         | 42.15                | 34.10               | -17.85                      | -15.90               | 50.00                 | 0.17          | 0.31               | 10.10          |  |
| 8.658         | 43.07                | 35.16               | -16.93                      | -14.84               | 50.00                 | 0.18          | 0.33               | 10.10          |  |
| 9.330         | 44.06                | 38.75               | -15.94                      | -11.25               | 50.00                 | 0.18          | 0.34               | 10.10          |  |
| 9.990         | 44.28                | 36.85               | -15.72                      | -13.15               | 50.00                 | 0.19          | 0.36               | 10.10          |  |
| 11.326        | 43.15                | 36.13               | -16.85                      | -13.87               | 50.00                 | 0.20          | 0.42               | 10.10          |  |
| 14.978        | 38.47                | 28.86               | -21.53                      | -21.14               | 50.00                 | 0.23          | 0.56               | 10.10          |  |
| 15.650        | 44.37                | 33.13               | -15.63                      | -16.87               | 50.00                 | 0.24          | 0.59               | 10.10          |  |



Title: FCC Class B - White Lead  
File: Keysight - Pre-Scan - White Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Alarm active, AC mode

2/11/2020 11:33:05 AM  
Sequence: Preliminary Scan



Title: FCC Class B - White Lead  
File: Keysight - Final Scan - White Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-wave Siren  
EUT Condition: The EUT was set to continuously transmit at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Alarm active, AC mode

2/11/2020 11:36:02 AM  
Sequence: Final Measurements

| White Lead    |                      |                     |                             |                      |                       |               |                    |                |
|---------------|----------------------|---------------------|-----------------------------|----------------------|-----------------------|---------------|--------------------|----------------|
| Freq<br>(MHz) | (PEAK) EMI<br>(dBµV) | (AVG) EMI<br>(dBµV) | (PEAK) Margin (AVG)<br>(dB) | (RMS) Margin<br>(dB) | (RMS) Limit<br>(dBµV) | Cable<br>(dB) | Transducer<br>(dB) | Filter<br>(dB) |
| 0.414         | 45.90                | 42.61               | -11.46                      | -4.75                | 47.36                 | 0.02          | 0.04               | 10.08          |
| 0.418         | 44.77                | 33.11               | -12.48                      | -14.14               | 47.25                 | 0.02          | 0.04               | 10.08          |
| 0.998         | 42.92                | 39.18               | -13.08                      | -6.82                | 46.00                 | 0.04          | 0.04               | 10.10          |
| 1.666         | 42.37                | 34.87               | -13.63                      | -11.13               | 46.00                 | 0.07          | 0.04               | 10.03          |
| 2.334         | 45.01                | 34.65               | -10.99                      | -11.35               | 46.00                 | 0.09          | 0.04               | 10.00          |
| 3.518         | 38.63                | 26.02               | -17.37                      | -19.98               | 46.00                 | 0.10          | 0.05               | 10.00          |
| 8.662         | 44.86                | 37.50               | -15.14                      | -12.50               | 50.00                 | 0.18          | 0.07               | 10.10          |
| 9.330         | 45.52                | 37.95               | -14.48                      | -12.05               | 50.00                 | 0.18          | 0.07               | 10.10          |
| 9.998         | 43.30                | 38.31               | -16.70                      | -11.69               | 50.00                 | 0.19          | 0.07               | 10.10          |
| 13.666        | 44.85                | 35.05               | -15.15                      | -14.95               | 50.00                 | 0.22          | 0.08               | 10.10          |
| 14.990        | 38.98                | 34.03               | -21.02                      | -15.97               | 50.00                 | 0.23          | 0.08               | 10.10          |
| 15.662        | 44.52                | 33.96               | -15.48                      | -16.04               | 50.00                 | 0.24          | 0.08               | 10.10          |



Title: FCC Class B - Black Lead

File: Keysight - Pre-Scan - Receiver mode - Black Lead - FCC Class B.set

Operator: Harvey Samaco

EUT Type: Z-Wave Siren

EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)

Company: Ecolink Intelligent Technology, Inc.

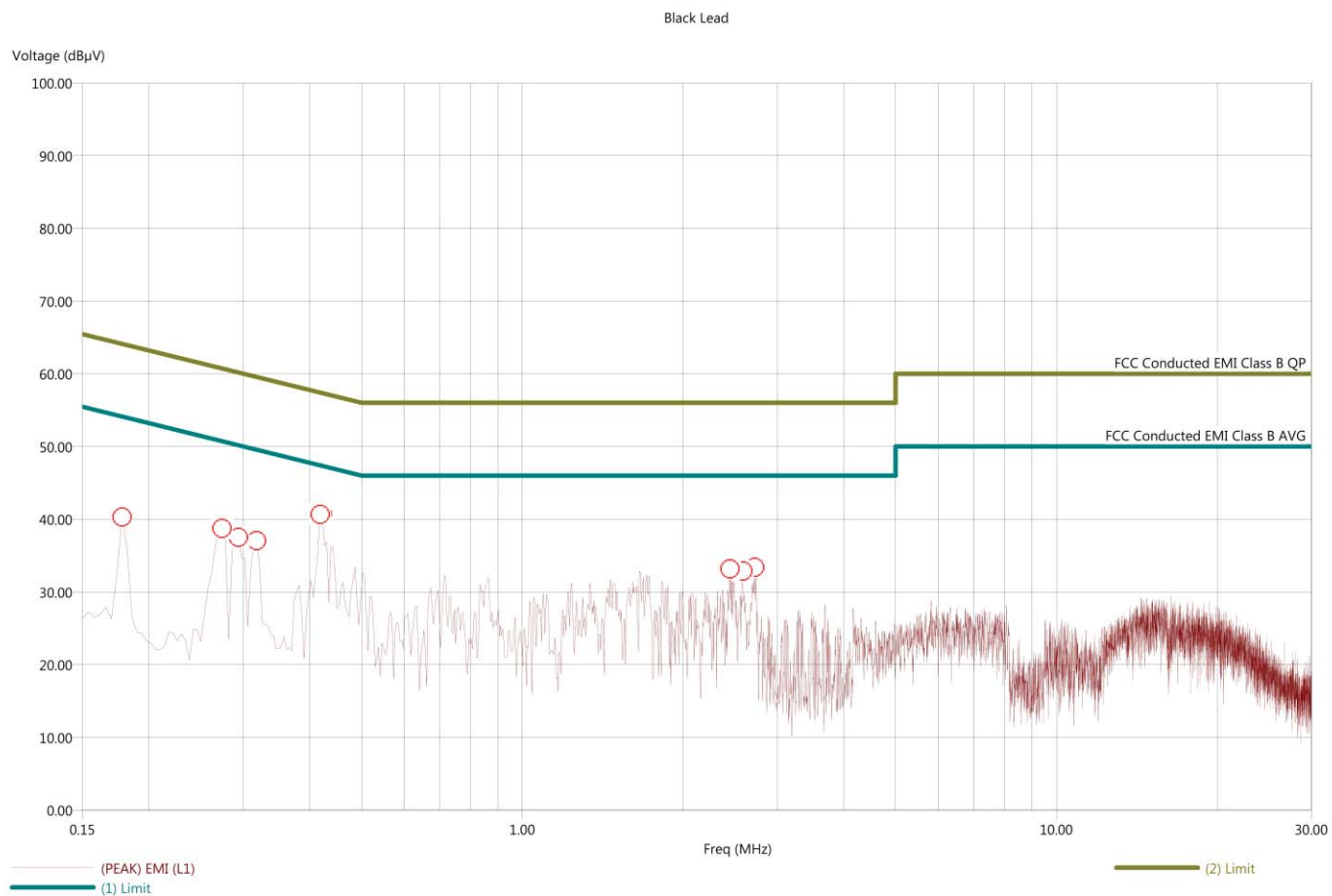
P/N: ISZW7-ECO

Power level -16

Receiver mode, AC mode

2/11/2020 11:41:10 AM

Sequence: Preliminary Scan



Title: FCC Class B - Black Lead  
File: Keysight - Final Scan - Receiver mode - Black Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-wave Siren  
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Receiver mode, AC mode

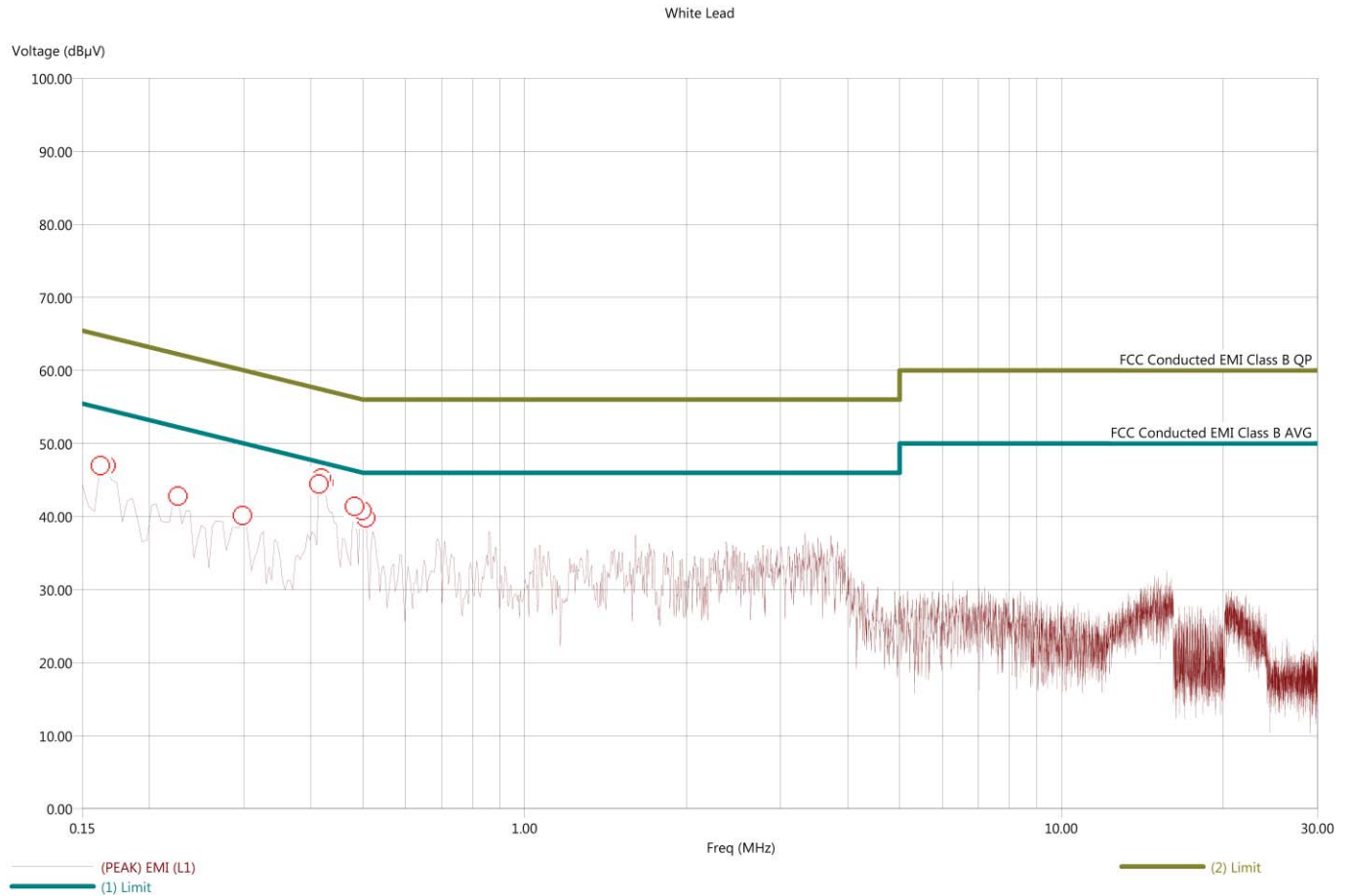
2/11/2020 11:42:40 AM  
Sequence: Final Measurements

| Black Lead    |                      |                     |                             |                      |                       |               |                    |                |       |
|---------------|----------------------|---------------------|-----------------------------|----------------------|-----------------------|---------------|--------------------|----------------|-------|
| Freq<br>(MHz) | (PEAK) EMI<br>(dBμV) | (AVG) EMI<br>(dBμV) | (PEAK) Margin (AVG)<br>(dB) | (RMS) Margin<br>(dB) | (RMS) Limit<br>(dBμV) | Cable<br>(dB) | Transducer<br>(dB) | Filter<br>(dB) |       |
| 0.178         | 45.66                | 31.82               | -18.07                      | -21.91               | 53.73                 | 0.02          | 0.40               |                | 10.01 |
| 0.274         | 38.79                | 29.85               | -21.93                      | -20.87               | 50.73                 | 0.02          | 0.23               |                | 10.03 |
| 0.294         | 38.89                | 29.81               | -21.36                      | -20.44               | 50.26                 | 0.02          | 0.20               |                | 10.04 |
| 0.318         | 37.90                | 29.21               | -21.80                      | -20.49               | 49.70                 | 0.02          | 0.17               |                | 10.05 |
| 0.418         | 41.59                | 38.28               | -15.83                      | -9.14                | 47.42                 | 0.02          | 0.12               |                | 10.08 |
| 0.422         | 41.95                | 28.81               | -15.27                      | -18.41               | 47.22                 | 0.02          | 0.12               |                | 10.08 |
| 2.446         | 36.64                | 26.25               | -19.36                      | -19.75               | 46.00                 | 0.09          | 0.16               |                | 10.00 |
| 2.586         | 32.98                | 24.33               | -23.02                      | -21.67               | 46.00                 | 0.09          | 0.16               |                | 10.00 |
| 2.722         | 35.82                | 24.35               | -20.18                      | -21.65               | 46.00                 | 0.09          | 0.17               |                | 10.00 |



Title: FCC Class B - White Lead  
File: Keysight - Pre-Scan - Receiver mode - White Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-Wave Siren  
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Receiver mode, AC mode

2/11/2020 11:44:32 AM  
Sequence: Preliminary Scan



Title: FCC Class B - White Lead  
File: Keysight - Final Scan - Receiver mode - White Lead - FCC Class B.set  
Operator: Harvey Samaco  
EUT Type: Z-wave Siren  
EUT Condition: The EUT was set to continuously receiving at 908.42 MHz in the low channel (Worst case)  
Company: Ecolink Intelligent Technology, Inc.  
P/N: ISZW7-ECO  
Power level -16  
Receiver mode, AC mode

2/11/2020 11:45:48 AM  
Sequence: Final Measurements

| White Lead    |                      |                     |                             |                      |                       |               |                    |                |
|---------------|----------------------|---------------------|-----------------------------|----------------------|-----------------------|---------------|--------------------|----------------|
| Freq<br>(MHz) | (PEAK) EMI<br>(dBµV) | (AVG) EMI<br>(dBµV) | (PEAK) Margin (AVG)<br>(dB) | (RMS) Margin<br>(dB) | (RMS) Limit<br>(dBµV) | Cable<br>(dB) | Transducer<br>(dB) | Filter<br>(dB) |
| 0.162         | 50.99                | 37.63               | -13.55                      | -16.91               | 54.54                 | 0.02          | 0.08               | 10.02          |
| 0.166         | 48.35                | 37.67               | -16.20                      | -16.88               | 54.55                 | 0.02          | 0.08               | 10.02          |
| 0.226         | 44.17                | 33.03               | -17.93                      | -19.07               | 52.09                 | 0.02          | 0.05               | 10.02          |
| 0.298         | 40.20                | 32.08               | -19.92                      | -18.04               | 50.12                 | 0.02          | 0.04               | 10.04          |
| 0.414         | 43.94                | 33.60               | -13.29                      | -13.63               | 47.23                 | 0.02          | 0.04               | 10.08          |
| 0.418         | 46.09                | 37.09               | -11.18                      | -10.18               | 47.27                 | 0.02          | 0.04               | 10.08          |
| 0.422         | 47.89                | 39.74               | -9.41                       | -7.56                | 47.30                 | 0.02          | 0.04               | 10.08          |
| 0.482         | 42.79                | 26.76               | -13.39                      | -19.42               | 46.18                 | 0.02          | 0.04               | 10.10          |
| 0.498         | 41.33                | 25.75               | -14.84                      | -20.42               | 46.16                 | 0.02          | 0.04               | 10.10          |
| 0.506         | 40.48                | 30.95               | -15.55                      | -15.08               | 46.02                 | 0.02          | 0.04               | 10.10          |



**BAND EDGES**

***DATA SHEETS***

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: ISZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

### Band Edges - AC mode

**Power level -16**

[illegible]

## FCC 15.249

Ecolink Intelligent Technology, Inc.

## Z-Wave Siren

Part Number: ISZW7-ECO

Date: 2/6/2020

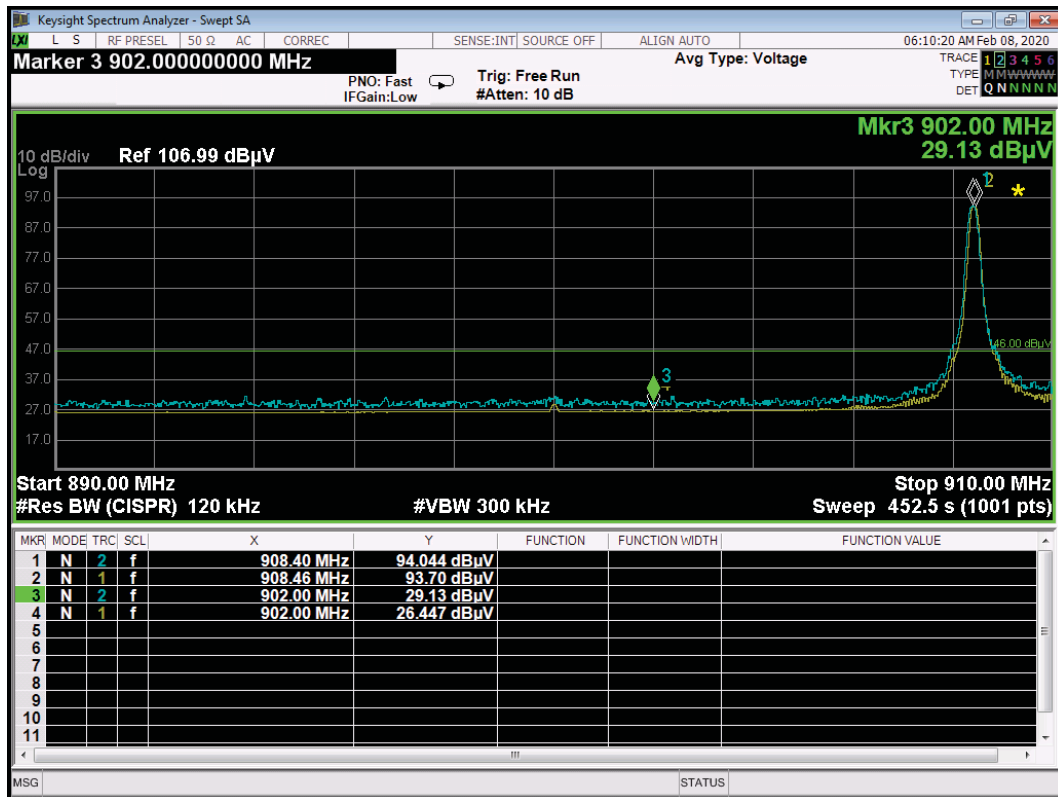
Lab: D

Tested By: Harvey Samaco

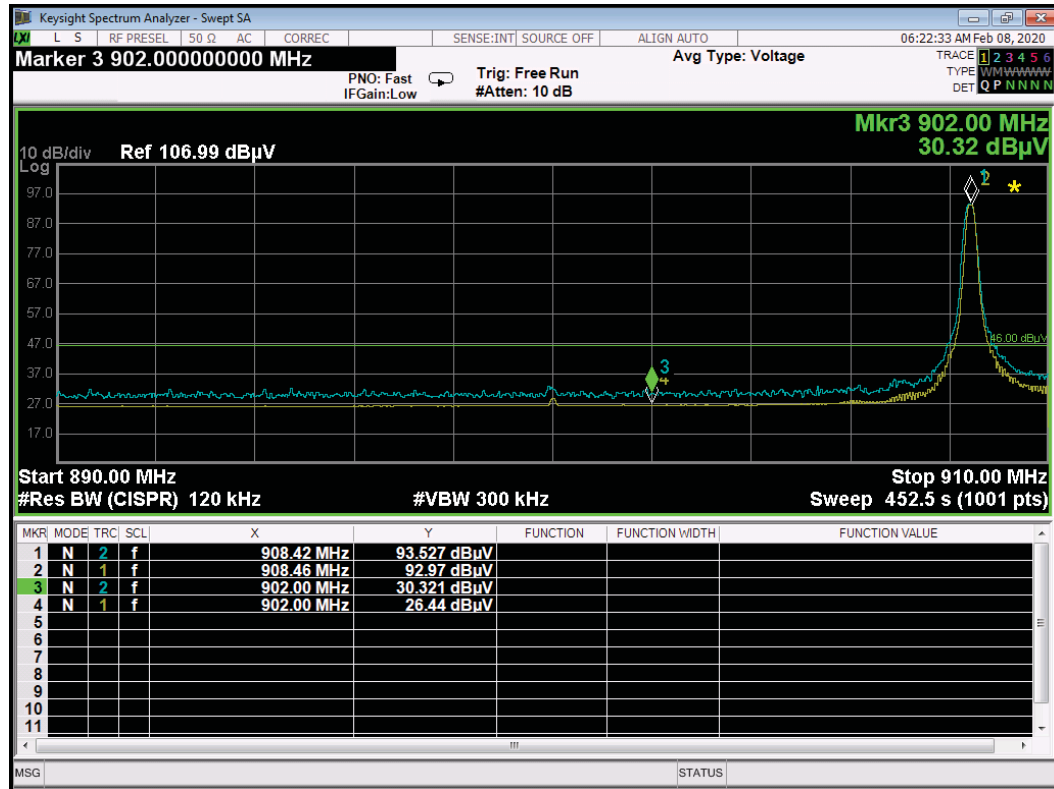
### Band Edges - AC mode

## Power level -16

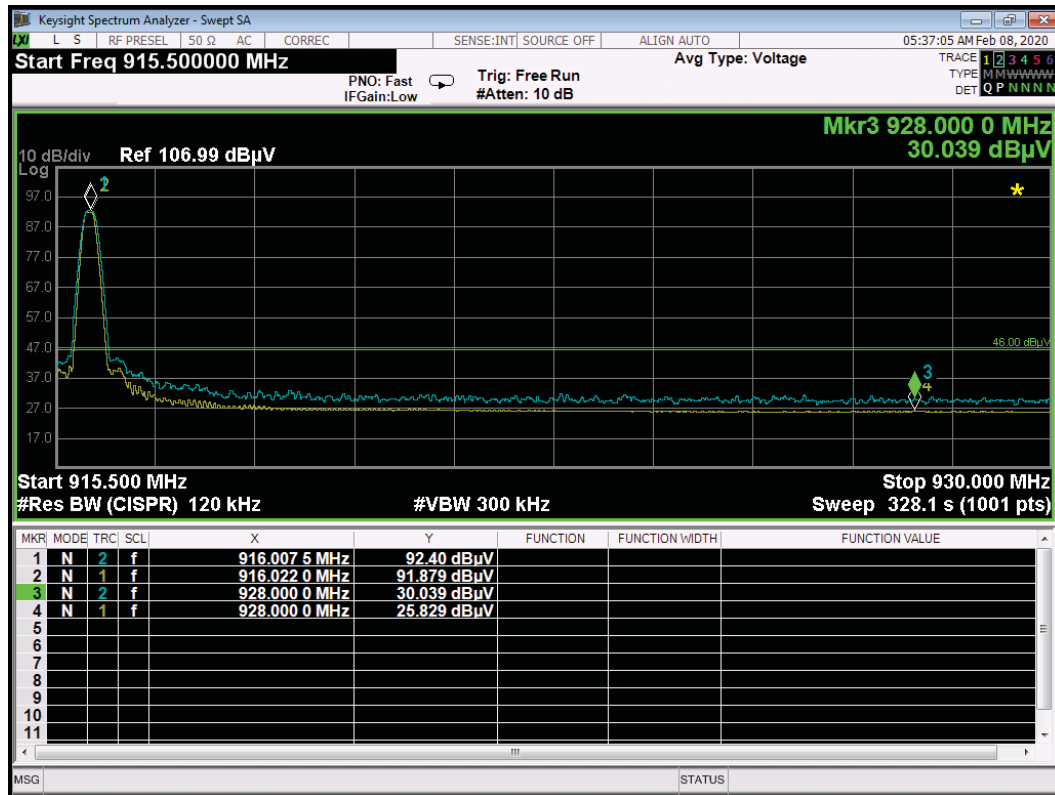
[illegible]



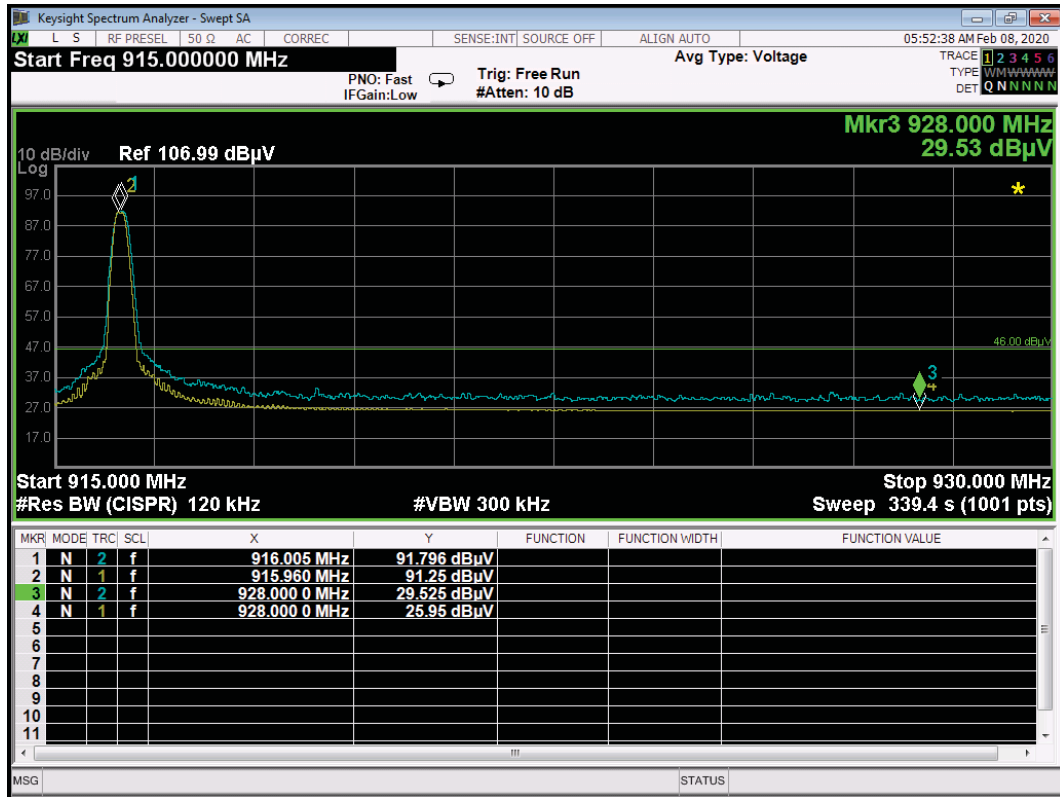
Low Band Edge – AC mode - Horizontal – Z-Axis



Low Band Edge – AC mode - Vertical – X-Axis



High Band Edge – AC mode - Horizontal – Z-Axis



High Band Edge – AC mode - Vertical – Y-Axis

## FCC 15.249

Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: JSZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

### Band Edges - Battery mode

**Power level -16**

[illegible]

## FCC 15.249

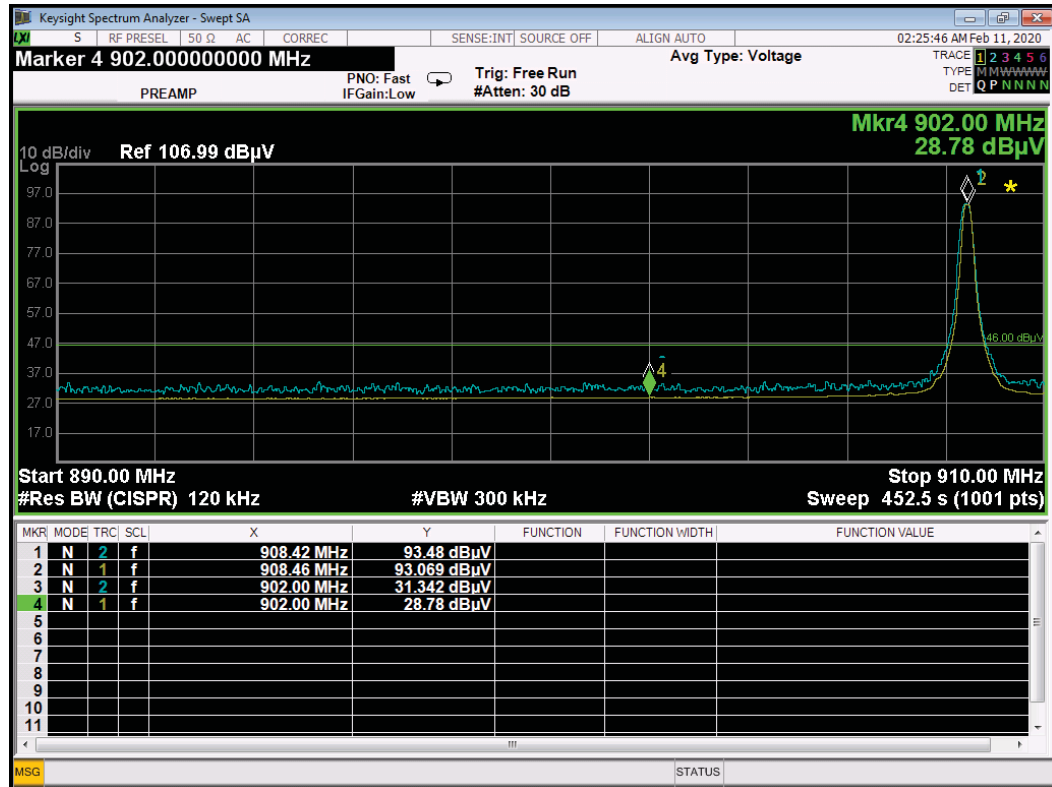
Ecolink Intelligent Technology, Inc.  
Z-Wave Siren  
Part Number: JSZW7-ECO

Date: 2/6/2020  
Lab: D  
Tested By: Harvey Samaco

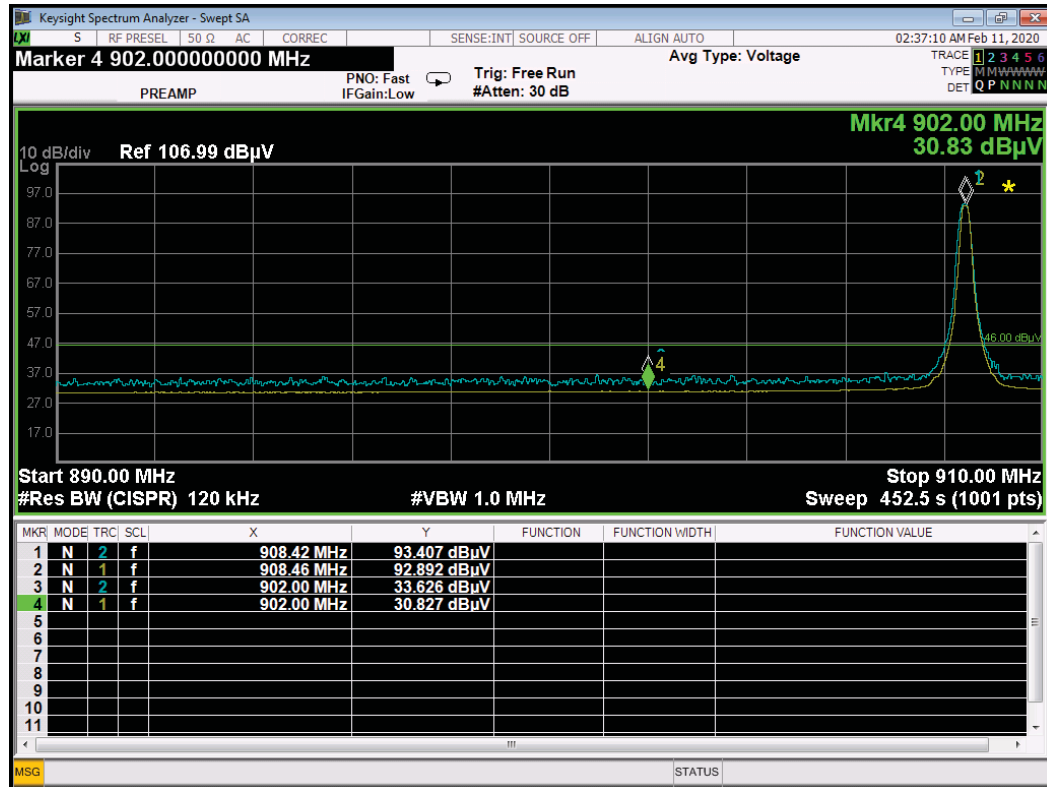
### Band Edges - Battery mode

### Power level -16

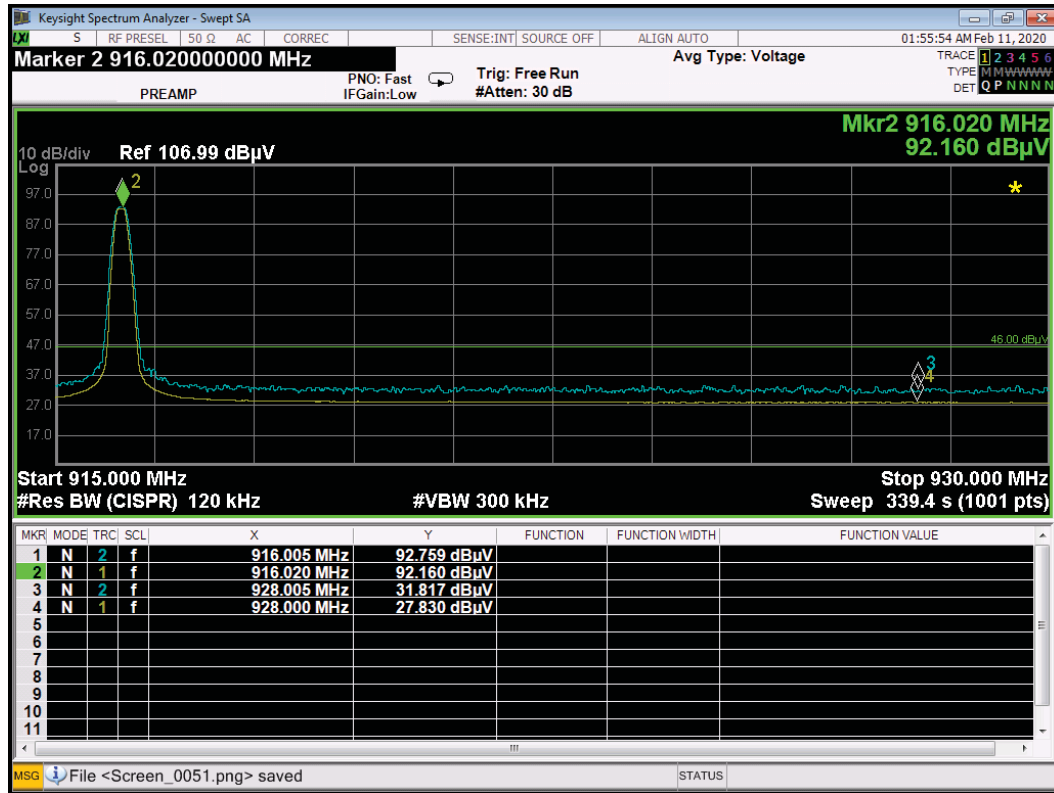
[illegible]



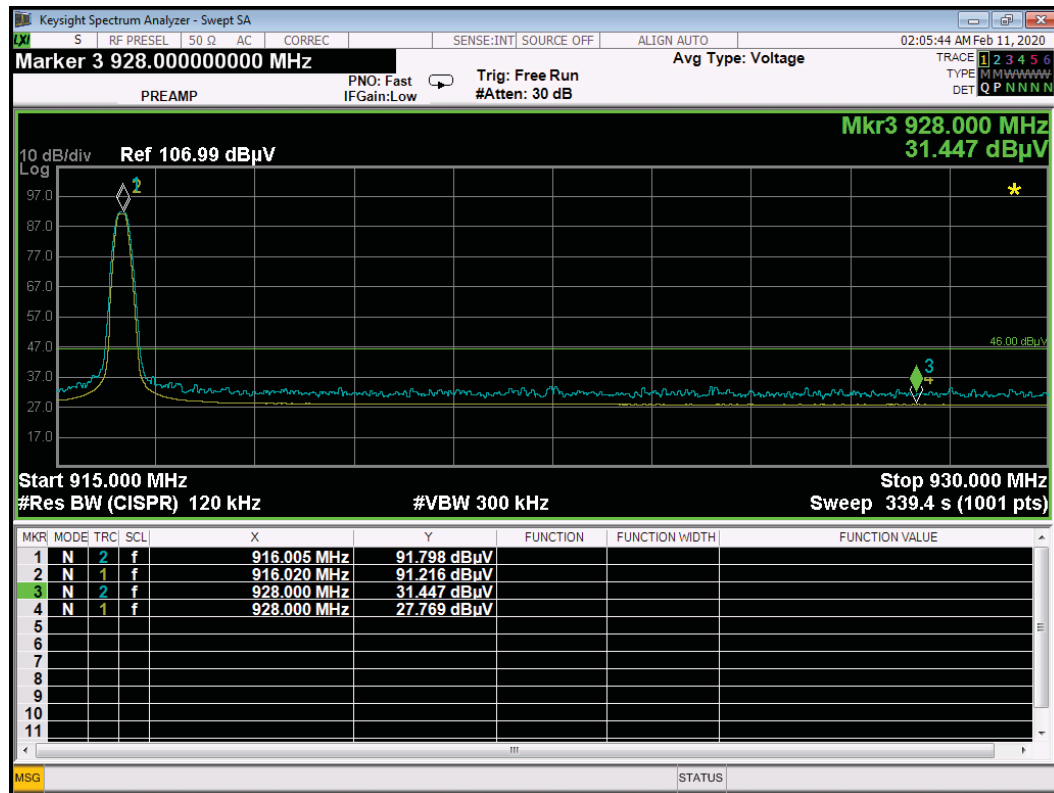
Low Band Edge – Battery mode - Horizontal – Z-Axis



Low Band Edge – Battery mode - Vertical – Y-Axis



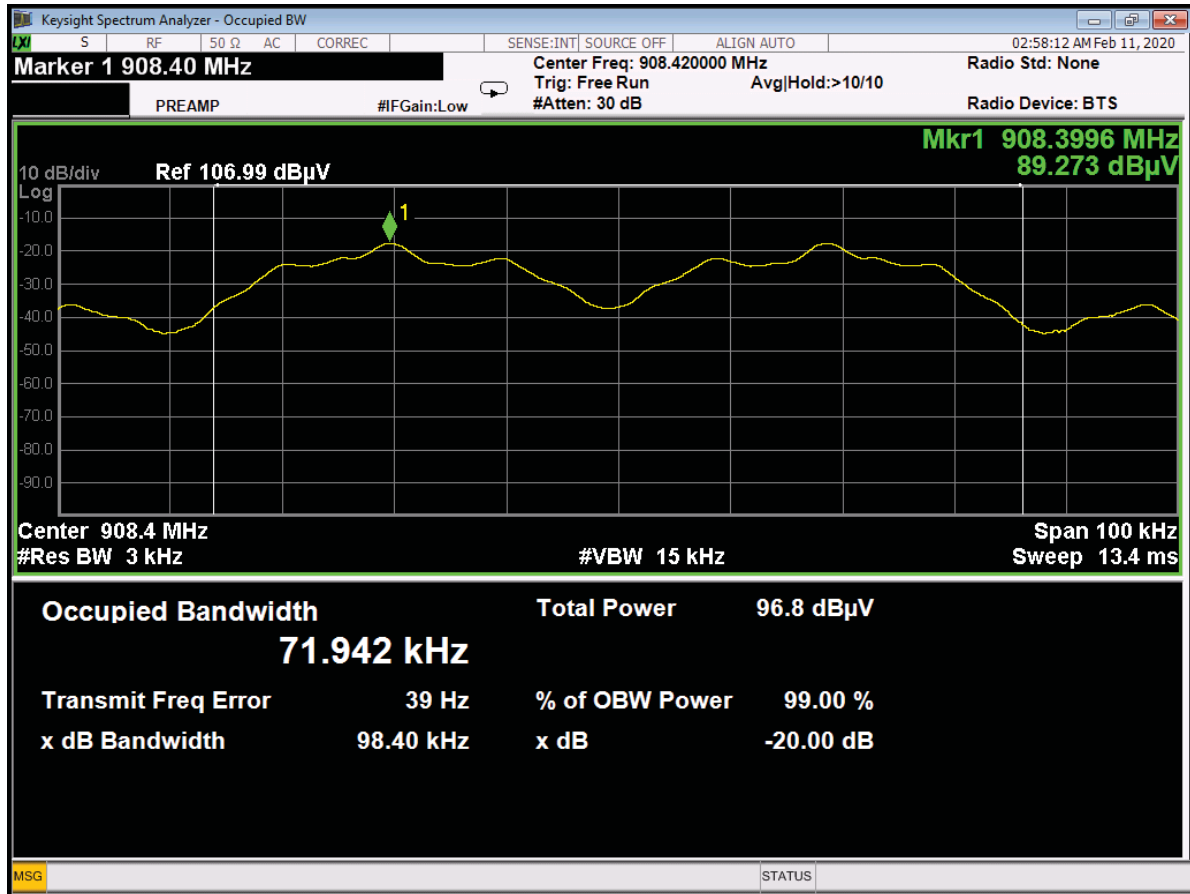
High Band Edge – Battery mode - Horizontal – Z-Axis



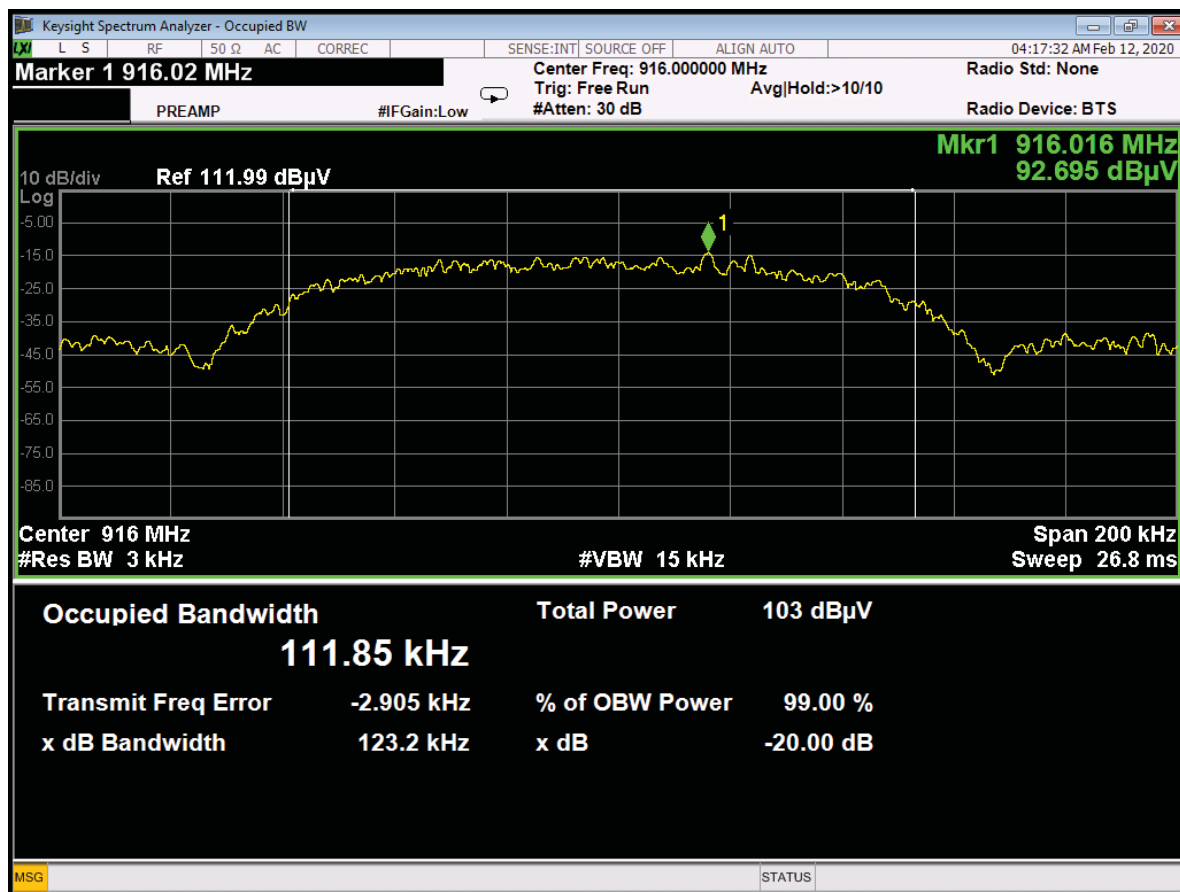
High Band Edge – Battery mode - Vertical – Y-Axis



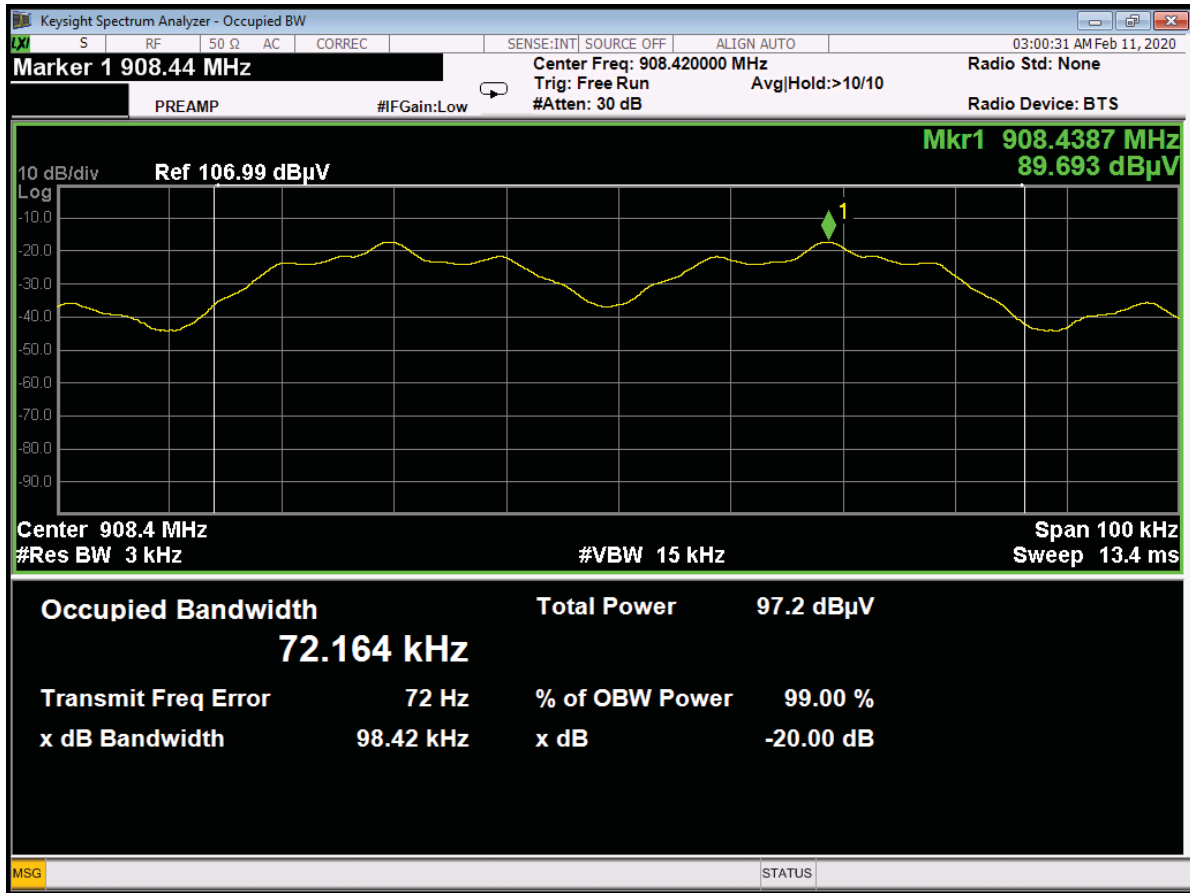
***99 % BANDWIDTH  
DATA SHEETS***



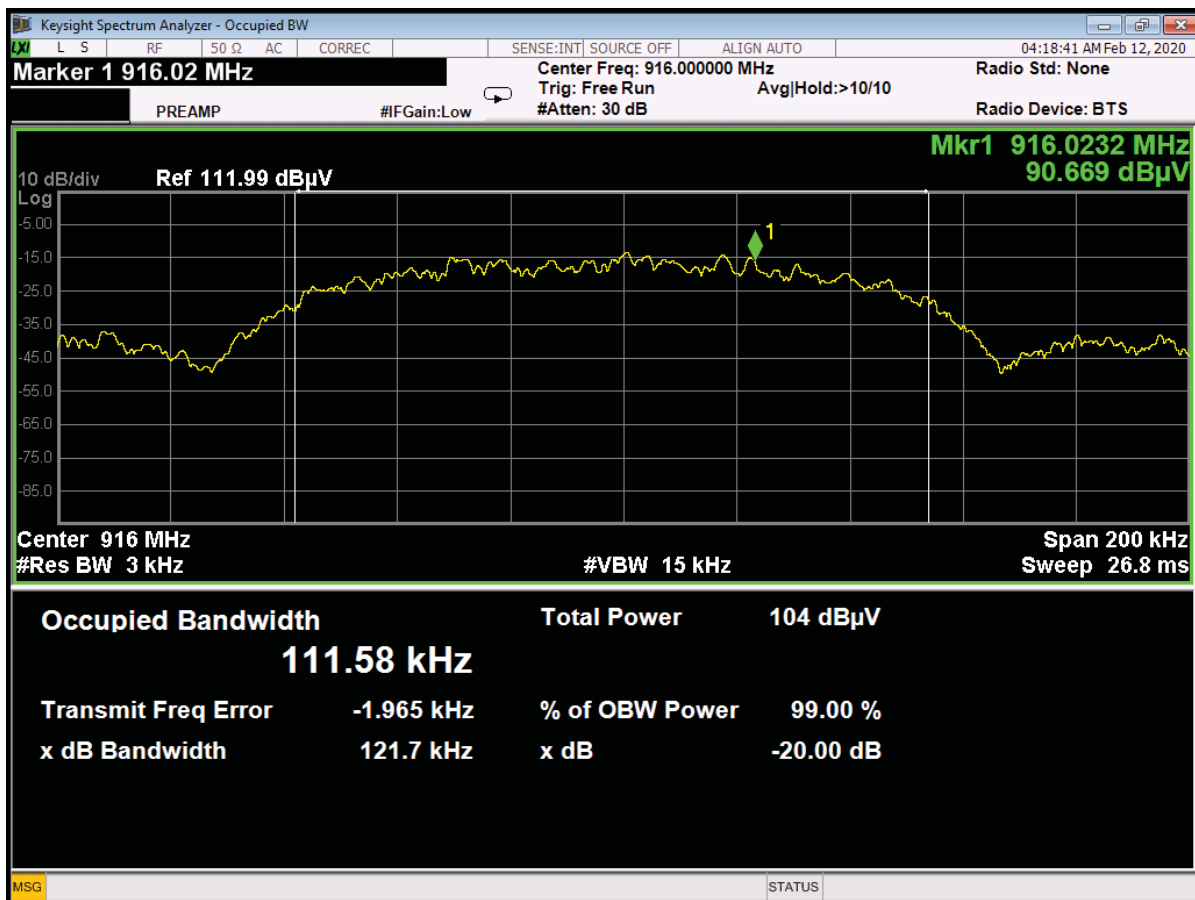
99 Percent BW – 908.42 MHz – AC mode - Low channel – Total Power



99 Percent BW – 916 MHz – AC mode - High channel – Total Power



99 Percent BW – 908.42 MHz – Battery mode - Low channel – Total Power



99 Percent BW – 916 MHz – Battery mode - High channel – Total Power