











Test Report

FCC Part15 Subpart C RSS-Gen Issue 4

Product Name: August Smart Door Lock

Model No. : ASL-03

FCC ID : 2AB6UASL3

IC : 12163A-ASL3

Applicant: August Home Inc.

Address : 657 Bryant Street, San Francisco, 94107, USA

Date of Receipt: Feb. 21st, 2017

Test Date : Feb. 21st, 2017~ May. 17th, 2017

Issued Date : May. 17th, 2017

Report No. : 1722089R-RF-US- P06V02

Report Version: V1.2

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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Co., Ltd.



Test Report Certification

Issued Date: May. 17th, 2017

Report No. : 1722089R-RF-US-P06V02



Product Name : August Smart Door Lock

Applicant : August Home Inc.

Address : 657 Bryant Street, San Francisco, 94107, USA

Manufacturer : GoerTek Inc

Address : No.8877 Yingqian Street, High-Tech Industrial Development

District, Weifang, Shandong, 261031, P.R. China

Model No. : ASL-03 FCC ID : 2AB6UASL3

IC : 12163A-ASL3

EUT Voltage : DC 6V

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C

ANSI C63.4:2014 ANSI C63.10:2013 RSS-GEN Issue 4

Test Result : Complied

Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.

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History of This Test Report

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|-----------------------|---------|-------------------------------|-----------------|
| 1722089R-RF-US-P06V02 | V1.0 | Initial Issued Report | Mar. 28th, 2017 |
| 1722089R-RF-US-P06V02 | V1.1 | Modified the Applicant's name | Apr. 13th, 2017 |
| 1722089R-RF-US-P06V02 | V1.2 | The clause 5.6, P34, updated | May. 17th, 2017 |
| | | the data. | |
| | | | |



1. General Information

1.1. EUT Description

| Product Name | August Smart Door Lock |
|--------------------|------------------------|
| Model No. | ASL-03 |
| EUT Voltage | DC 6V |
| Z-wave | |
| Frequency Range | 908-916 MHz |
| Channel Number | 3 |
| Type of Modulation | FSK/GFSK |
| Data Rate | 9.6/40/100kbps |
| Channel Control | Auto |



1.2. Antenna information

| Model No. | | N/A | | | | | |
|----------------------|------|-----------|-------------|----------------------------|-------------|--|--|
| Antenna manufacturer | | N/A | | | | | |
| Antenna Delivery | | 1*TX+1*RX | | | ☐ 3*TX+3*RX | | |
| Antenna technology | | SISO | | | | | |
| | | | | Basic | | | |
| | | NAINAO | | CDD | | | |
| | | MIMO | | Sectorized | | | |
| | | | | Beam-forming | | | |
| Antenna Type | Exte | Cutomod. | | Dipole | | | |
| | | External | | Sector | ized | | |
| | | | | PIFA | | | |
| | | | \boxtimes | PCB | | | |
| | | Internal | | Ceramic Chip Antenna | | | |
| | | | | Metal plate type F antenna | | | |
| Antenna Technology | | Ant Gain | | | | | |
| | | (dBi) | | | | | |
| ⊠siso | 4 | | | | | | |



1.3. Mode of Operation

| Test Modes List | |
|------------------|--|
| Mode 1: Transmit | |

1.4. Tested System Details

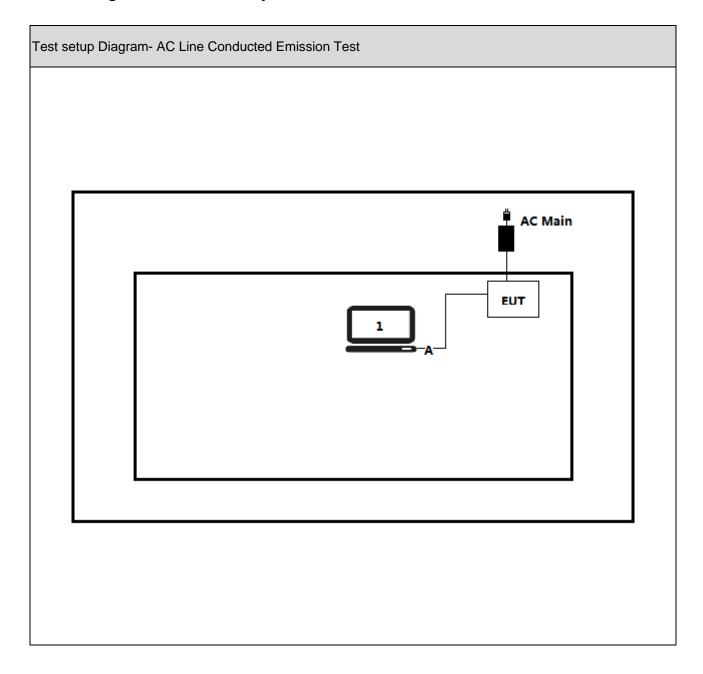
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| No. | Product | Manufacturer | Model No. | Serial No. | Power Cord |
|-----|---------|--------------|-----------|------------|------------|
| 1 | N/A | N/A | N/A | N/A | N/A |

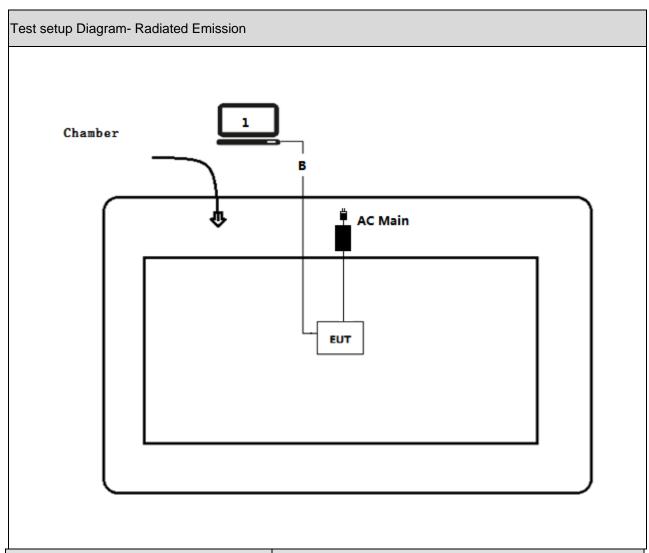
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1.5. Configuration of Tested System







| 5 | Signal Cable Type | | Signal cable Description |
|---|-------------------|------------------|--------------------------|
| / | 4 | Serial-USB Cable | Non-shielded, < 1m |
| E | 3 | Serial-USB Cable | Non-shielded, > 10m |



2. Technical Test

2.1. Summary of Test Result

For FCC

| Performed Test Item | Normative References | Limit | Result |
|----------------------------|-------------------------------------|------------|--------|
| AC Power Line Conducted | FCC CFR Title 47 Part 15 Subpart C: | FCC 15.207 | PASS |
| Emission | 2015 Section 15.207 | | |
| 20dB&99% Bandwidth | FCC CFR Title 47 Part 15 Subpart C: | FCC 15.215 | PASS |
| | 2015 | | |
| | Section 15.215(c) | | |
| Radiated Emission | FCC CFR Title 47 Part 15 Subpart C: | FCC 15.249 | PASS |
| | 2015 Section 15.209 and 15.249 | | |
| Band-edge Compliance of RF | FCC CFR Title 47 Part 15 Subpart C: | FCC 15.249 | PASS |
| Conducted Emissions | 2015 | | |
| | Section 15.249 | | |
| Antenna Requirement | FCC CFR Title 47 Part 15 Subpart C: | FCC 15.203 | PASS |
| | 2015 Section 15.203 | | |

For IC

| Normative References | Limit | Result |
|-------------------------------------|---|---|
| RSS-Gen Issue 4 November 2014 | RSS Gen | PASS |
| Section 8.8 | | |
| RSS-Gen Issue 4 November 2014 | RSS Gen | PASS |
| Section 6.6 | | |
| RSS-210 Issue 9 August 2016 B.10 a) | RSS 210 | PASS |
| RSS-210 Issue 9 August 2016 B.10 b) | RSS 210 | PASS |
| | | |
| | RSS Gen | PASS |
| | Normative References RSS-Gen Issue 4 November 2014 Section 8.8 RSS-Gen Issue 4 November 2014 Section 6.6 RSS-210 Issue 9 August 2016 B.10 a) RSS-210 Issue 9 August 2016 B.10 b) RSS-Gen Issue 4 November 2014 Section 8.3 | RSS-Gen Issue 4 November 2014 RSS Gen Section 8.8 RSS-Gen Issue 4 November 2014 RSS Gen Section 6.6 RSS-210 Issue 9 August 2016 B.10 a) RSS 210 RSS-210 Issue 9 August 2016 B.10 b) RSS 210 RSS-Gen Issue 4 November 2014 RSS Gen |

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2.2. Test Frequency configuration:

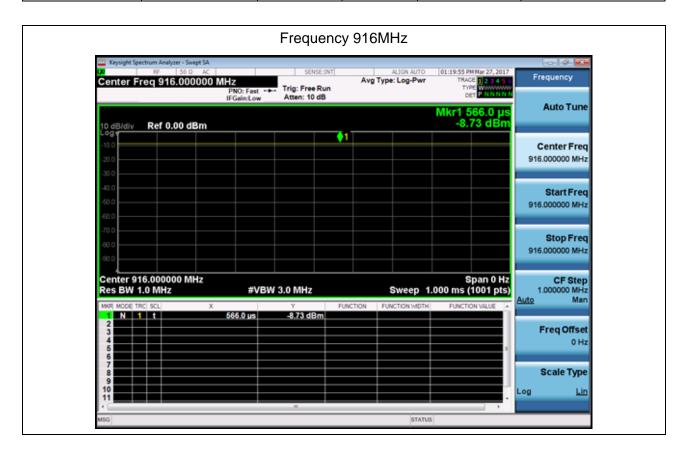
| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|------------|---------|-----------|
| Low | 908.4 MHz | Mid | 908.42 MHz | High | 916MHz |

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2.3. Duty Cycle

| Test Mode | Tx On (ms) | Tx Off (ms) | VBW | Tx On + Tx Off (ms) | Duty Cycle |
|-----------|---------------|----------------|------|---------------------|------------|
| 1 | | | 10Hz | | 100% |





2.4. Test Environment

| Items | Required (IEC 68-1) | Actual |
|----------------------------|---------------------|----------|
| Temperature (°C) | 15-35 | 21 |
| Humidity (%RH) | 25-75 | 50 |
| Barometric pressure (mbar) | 860-1060 | 950-1000 |

2.5. Measurement Uncertainty

| Test Items | Uncertainty |
|------------------------------------|---------------------|
| AC Power Line Conducted Emission | ± 2.02dB |
| Radiated Emission | Below 1GHz ± 3.8 dB |
| | Above 1GHz ± 3.9 dB |
| RF Antenna Port Conducted Emission | ± 1.27dB |
| Radiated Emission Band Edge | ± 3.9dB |
| Occupied Bandwidth | ± 1kHz |
| Power Spectral Density | ± 1.27dB |

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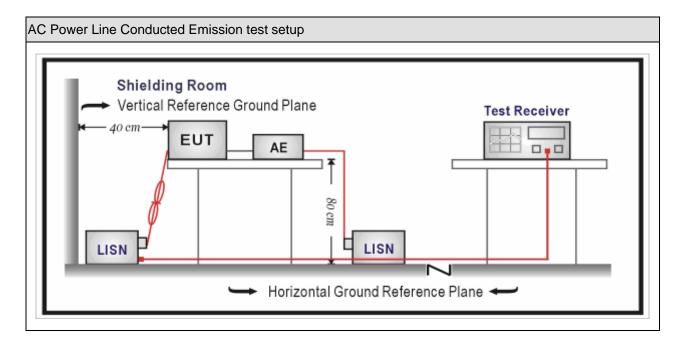
3. AC Power Line Conducted Emission

3.1. Test Equipment

| AC Power Line Conducted Emission / TR-1 | | | | | | | |
|---|--------------|----------|------------|------------|---------------|--|--|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date | | |
| EMI Test Receiver | R&S | ESCI | 100906 | 2017.03.05 | 2018.03.04 | | |
| Two-Line V-Network | R&S | ENV 216 | 101189 | 2016.07.16 | 2017.07.15 | | |
| Two-Line V-Network | R&S | ENV 216 | 101044 | 2016.09.04 | 2017.09.03 | | |
| 50ohm Coaxial Switch | Anritsu | MP59B | 6200464462 | N/A | N/A | | |
| 50ohm Termination | SHX | TF2 | 07081402 | 2016.09.04 | 2017.09.03 | | |
| Temperature/Humidity | Zhichen | ZC1-2 | TR1-TH | 2017.01.05 | 2018.01.04 | | |
| Meter | ZHICHEH | 201-2 | | 2017.01.05 | 2016.01.04 | | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup





3.3. **Limit**

| Frequency of Emission | Conducted Limit | | | |
|-----------------------|---------------------|-----------------|--|--|
| (MHz) | Quasi-peak (dB μ V) | Average(dB μ V) | | |
| 0.15-0.5 | 66 to 56 | 56 to 46 | | |
| 0.5-5 | 56 | 46 | | |
| 5-30 | 60 | 50 | | |

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.4. Test Procedure

| Test | Test Method | | | | | |
|------|------------------|---------|---|--|--|--|
| | References Rule | Chapter | ltem | | | |
| | ANSI C63.10-2013 | | Standard test method for ac power-line conducted emissions from unlicensed wireless devices | | | |
| | ANSI C63.4-2014 | | AC power-line conducted emission measurements | | | |

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3.5. Test Result

EUT is powered by battery, so this test item is not applicable.

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4. Emissions in restricted frequency bands

4.1. Test Equipment

| Radiated Emission(Below 1GHz) / AC-2 | | | | | | | | |
|---|--------------|-----------------|------------|------------|------------|--|--|--|
| Instrument Manufacturer Type No. Serial No. Cal. Date Cal. Due Da | | | | | | | | |
| EMI Test Receiver | R&S | ESCI | 100573 | 2017.03.05 | 2018.03.04 | | | |
| Loop Antenna | R&S | HFH2-Z2 | 833799/003 | 2016.11.07 | 2017.11.06 | | | |
| Bilog Antenna | Teseq GmbH | CBL6112D | 27611 | 2016.08.10 | 2017.08.09 | | | |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 106 | AC2-C | 2017.02.28 | 2018.02.27 | | | |
| Temperature/Humidity Meter | Zhichen | ZC1-2 | AC2-TH | 2017.01.05 | 2018.01.04 | | | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

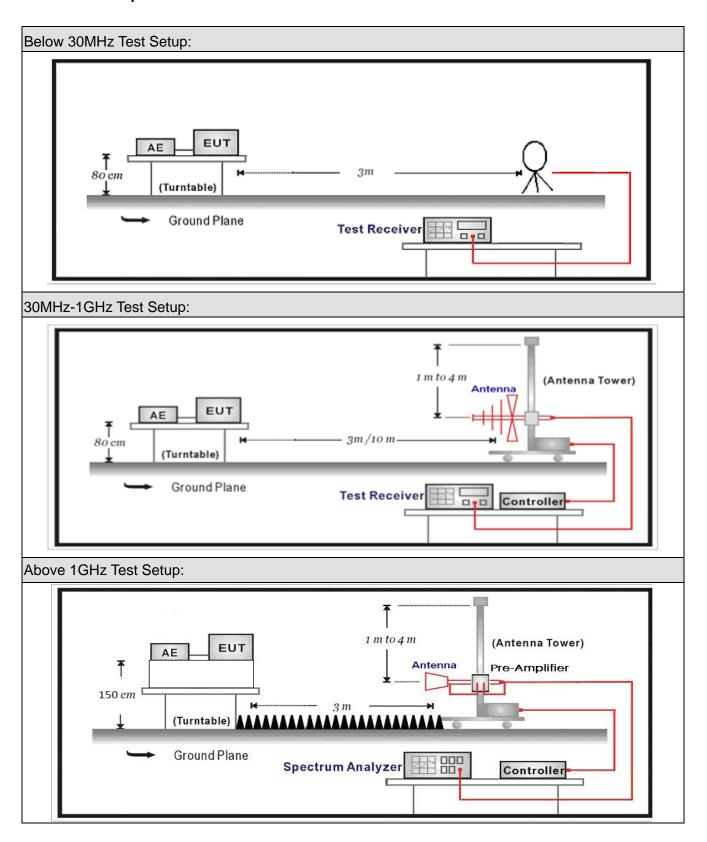
| Monufacturer | | | | |
|--------------|---|--|--|--|
| Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| Agilent | E4446A | MY45300103 | 2017.01.04 | 2018.01.03 |
| Miteq | NSP1800-25 | 1364185 | 2016.05.03 | 2017.05.02 |
| QuieTek | AP-040G | CHM-0906001 | 2016.05.06 | 2017.05.05 |
| ETS-Lindgren | 3117 | 00123988 | 2017.01.22 | 2018.01.20 |
| | | | | |
| Schwarzbeck | BBHA9170 | 294 | 2016.11.25 | 2017.11.23 |
| | SUCOFLEX | | | |
| Huber+Suhner | 106 | AC5-C1 | 2017.03.02 | 2018.03.01 |
| | SUCOFLEX | | | |
| Huber+Suhner | 106 | AC5-C2 | 2017.03.02 | 2018.03.01 |
| | SUCOFLEX | | | |
| Huber+Suhner | 102 | AC5-C3 | 2017.03.02 | 2018.03.01 |
| Agilent | N9038A | MY51210196 | 2016.06.10 | 2017.06.09 |
| | | | | |
| Zhichen | ZC1-2 | AC5-TH | 2017.01.04 | 2018.01.03 |
| | Miteq QuieTek ETS-Lindgren Schwarzbeck Huber+Suhner Huber+Suhner Huber+Suhner Agilent Zhichen | Miteq NSP1800-25 QuieTek AP-040G ETS-Lindgren 3117 Schwarzbeck BBHA9170 SUCOFLEX Huber+Suhner 106 SUCOFLEX Huber+Suhner 106 SUCOFLEX Huber+Suhner 102 Agilent N9038A Zhichen ZC1-2 | Miteq NSP1800-25 1364185 QuieTek AP-040G CHM-0906001 ETS-Lindgren 3117 00123988 Schwarzbeck BBHA9170 294 SUCOFLEX AC5-C1 Huber+Suhner 106 AC5-C1 Huber+Suhner 106 AC5-C2 SUCOFLEX Huber+Suhner 102 AC5-C3 Agilent N9038A MY51210196 Zhichen ZC1-2 AC5-TH | Miteq NSP1800-25 1364185 2016.05.03 QuieTek AP-040G CHM-0906001 2016.05.06 ETS-Lindgren 3117 00123988 2017.01.22 Schwarzbeck BBHA9170 294 2016.11.25 SUCOFLEX Huber+Suhner 106 AC5-C1 2017.03.02 Huber+Suhner 106 AC5-C2 2017.03.02 SUCOFLEX Huber+Suhner 102 AC5-C3 2017.03.02 Agilent N9038A MY51210196 2016.06.10 |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

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4.2. Test Setup





4.3. Limit

For FCC:

| Restricted Bands of operation | | | | | | |
|-------------------------------|-----------------------|--------------------|--------------------|--|--|--|
| Frequency (MHz) | Frequency (MHz) | Frequency (MHz) | Frequency (GHz) | | | |
| 0.090 - 0.110 | 16.42 – 16.423 | 399.9 – 410 | 4.5 – 5.15 | | | |
| 0.495 – 0.505 | 16.69475 –16.69525 | 608 – 614 | 5.35 – 5.46 | | | |
| 2.1735 – 2.1905 | 16.80425 – 16.80475 | 960 – 1240 | 7.25 – 7.75 | | | |
| 4.125 – 4.128 | 25.5 – 25.67 | 1300 – 1427 | 8.025 – 8.5 | | | |
| 4.17725 – 4.17775 | 37.5 – 38.25 | 1435 – 1626.5 | 9.0 – 9.2 | | | |
| 4.20725 – 4.20775 | 73 – 74.6 | 1645.5 – 1646.5 | 9.3 – 9.5 | | | |
| 6.215 – 6.218 | 74.8 – 75.2 | 1660 – 1710 | 10.6 – 12.7 | | | |
| 6.26775 – 6.26825 | 108 – 121.94 | 1718.8 – 1722.2 | 13.25 – 13.4 | | | |
| 6.31175 – 6.31225 | 123 – 138 | 2200 – 2300 | 14.47 – 14.5 | | | |
| 8.291 – 8.294 | 149.9 – 150.05 | 2310 – 2390 | 15.35 – 16.2 | | | |
| 8.362 – 8.366 | 156.52475 – 156.52525 | 2483.5 – 2500 | 17.7 – 21.4 | | | |
| 8.37625 – 8.38675 | 156.7 – 156.9 | 2690 – 2900 | 22.01 – 23.12 | | | |
| 8.81425 – 8.81475 | 162.0125 – 167.17 | 3260 – 3267 | 23.6 – 24.0 | | | |
| 12.29 – 12.293 | 167.72 – 173.2 | 3332 – 3339 | 31.2 – 31.8 | | | |
| 12.51975–12.52025 | 240 – 285 | 3345.8 – 3358 | 36.43 – 36.5 | | | |
| 12.57675–12.57725 | 322 – 335.4 | 3600 – 4400 | | | | |
| 13.36 – 13.41 | | | | | | |

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For IC:

| Restricted Bands of operation | | | | | | |
|-------------------------------|---------------------|--------------------|--------------------|--|--|--|
| Frequency (MHz) | Frequency (MHz) | Frequency (MHz) | Frequency (GHz) | | | |
| 0.090-0.110 | 13.36-13.41 | 1645.5-1646.5 | 9.0-9.2 | | | |
| 2.1735-2.1905 | 16.42-16.423 | 1660-1710 | 9.3-9.5 | | | |
| 3.020-3.026 | 16.69475-16.69525 | 1718.8-1722.2 | 10.6-12.7 | | | |
| 4.125-4.128 | 16.80425-16.80475 | 2200-2300 | 13.25-13.4 | | | |
| 4.17725-4.17775 | 25.5-25.67 | 2310-2390 | 14.47-14.5 | | | |
| 4.20725-4.20775 | 37.5-38.25 | 2655-2900 | 15.35-16.2 | | | |
| 5.677-5.683 | 73-74.6 | 3260-3267 | 17.7-21.4 | | | |
| 6.215-6.218 | 74.8-75.2 | 3332-3339 | 22.01-23.12 | | | |
| 6.26775-6.26825 | 108-138 | 3345.8-3358 | 23.6-24.0 | | | |
| 6.31175-6.31225 | 156.52475-156.52525 | 3500-4400 | 31.2-31.8 | | | |
| 8.291-8.294 | 156.7-156.9 | 4500-5150 | 36.43-36.5 | | | |
| 8.362-8.366 | 240-285 | 5350-5460 | Above 38.6 | | | |
| 8.37625-8.38675 | 322-335.4 | 7250-7750 | | | | |
| 8.41425-8.41475 | 399.9-410 | 8025-8500 | | | | |
| 12.29-12.293 | 608-614 | | | | | |
| 12.51975-12.52025 | 960-1427 | | | | | |
| 12.57675-12.57725 | 1435-1626.5 | | | | | |



| Restricted Band Emissions Limit | | | | | | | |
|---------------------------------|----------------------------|------------------------------|--------------------------|--|--|--|--|
| Frequency (MHz) | Field strength (μ V/m) | Field strength (dB μ V/m) | Measurement distance (m) | | | | |
| 0.009 - 0.49 | 2400/F(kHz) | 48.5 – 13.8 | 300 _(Note 1) | | | | |
| 0.49 - 1.705 | 24000/F(kHz) | 33.8 - 23 | 30 _(Note 1) | | | | |
| 1.705 - 30 | 30 | 29.5 | 30 _(Note 1) | | | | |
| 30 - 88 | 100 | 40 | 3 _(Note 2) | | | | |
| 88 - 216 | 150 | 43.5 | 3 _(Note 2) | | | | |
| 216 - 960 | 200 | 46 | 3 _(Note 2) | | | | |
| Above 960 | 500 | 54 | 3 _(Note 2) | | | | |

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).



4.4. Test Procedure

| Test | Test Method | | | | | |
|------|-------------------------|-------------|-------------|---|---|--|
| | References Rule Chapter | | Chapter | Description | | |
| | | \boxtimes | ANSI C63.10 | 6.4 | Radiated emissions from unlicensed wireless | |
| | | | | | devices below 30 MHz | |
| | | | 6.5 | Radiated emissions from unlicensed wireless | | |
| | | | | devices in the frequency range | | |
| | | | | | of 30 MHz to 1000 MHz | |
| | | \boxtimes | ANSI C63.10 | 6.6 | Radiated emissions from unlicensed wireless | |
| | | | | | devices above 1 GHz | |

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4.5. EUT test Axis definition

| Item | Emissions in restricted frequency bands | | | | | | |
|------------------|---|---------------------|------------|--------------|--|--|--|
| Device Category | | Fixed position use | | | | | |
| Device Outegory | | Mobile position use | | | | | |
| Test mode | Mode | ÷ 1 | | | | | |
| | | Radiated | | | | | |
| | | X Axis | Y Axis | Z Axis | | | |
| | | | | | | | |
| | | Worst Axis | Worst Axis | Worst Axis 🖂 | | | |
| | | Conducted | | | | | |
| To ak we akk a d | | Chain 1 | | | | | |
| Test method | | • | | | | | |
| | | Chain 1 | | Chain 2 | | | |
| | | | • • | | | | |
| | | Chain 1 | Chain 2 | Chain 3 | | | |
| | | | • • • | | | | |



4.6. Test Result

| Product Name | : | August Smart Door Lock | Power | : | DC 6V |
|--------------|---|------------------------|-----------|---|-------|
| Test Mode | : | Mode 1 | Test Site | : | AC-5 |
| Test Date | : | 2017.03.27 | | | |

| Frequency | Antenna | Reading | Factor | Measure | Limit | Over Limit | Type |
|-----------|---------|----------|--------|----------|----------|------------|------|
| (MHz) | | Level | (dB) | Level | (dBuV/m) | (dB) | |
| | | (dBuV/m) | | (dBuV/m) | | | |
| 000.4 | Н | 62.35 | 31.91 | 94.26 | 114 | -19.74 | PK |
| 908.4 | V | 54.34 | 31.91 | 86.25 | 114 | -27.75 | PK |
| 000.40 | Н | 62.36 | 31.91 | 94.27 | 114 | -19.73 | PK |
| 908.42 | V | 54.32 | 31.91 | 86.23 | 114 | -27.77 | PK |
| 242 | Н | 60.86 | 31.91 | 92.77 | 114 | -21.23 | PK |
| 916 | V | 52.86 | 31.91 | 84.77 | 114 | -29.23 | PK |

Note: 1. Measure Level = Reading Level + Factor.

2.Factor= Antenna factor +cable loss factor -preamp factor

| Frequency | Antenna | Reading | Factor | Measure | Limit | Over Limit | Type |
|-----------|---------|----------|--------|----------|----------|------------|------|
| (MHz) | | Level | (dB) | Level | (dBuV/m) | (dB) | |
| | | (dBuV/m) | | (dBuV/m) | | | |
| 000.4 | Н | 56.3 | 31.91 | 88.21 | 94 | -5.79 | QP |
| 908.4 | V | 48.2 | 31.91 | 80.11 | 94 | -13.89 | QP |
| 000.40 | Н | 57.32 | 31.91 | 89.23 | 94 | -4.77 | QP |
| 908.42 | V | 50.1 | 31.91 | 82.01 | 94 | -11.99 | QP |
| 040 | Н | 56.38 | 31.91 | 88.29 | 94 | -5.71 | QP |
| 916 | V | 48.35 | 31.91 | 80.26 | 94 | -13.74 | QP |

Note: 1. Average Measure Level = Reading Level + Factor.

2.Factor= Antenna factor +cable loss factor -preamp factor



| Frequency | Antenna | Reading | Factor | Measure | Limit | Over Limit | Туре |
|-----------|---------|----------|--------|----------|----------|------------|------|
| (MHz) | | Level | (dB) | Level | (dBuV/m) | (dB) | |
| | | (dBuV/m) | | (dBuV/m) | | | |
| 000.4 | Н | 51.27 | 31.91 | 83.18 | 94 | -10.82 | AV |
| 908.4 | V | 43.37 | 31.91 | 75.28 | 94 | -18.72 | AV |
| 000.40 | Н | 52.25 | 31.91 | 84.16 | 94 | -9.84 | AV |
| 908.42 | V | 44.15 | 31.91 | 76.06 | 94 | -17.94 | AV |
| 212 | Н | 50.74 | 31.91 | 82.65 | 94 | -11.35 | AV |
| 916 | V | 42.88 | 31.91 | 74.79 | 94 | -19.21 | AV |

Note: 1. Average Measure Level = Reading Level + Factor. 2.Factor= Antenna factor +cable loss factor -preamp factor



Harmonic Radiated Emission

| СН | Frequency | Antenna | Reading | Factor | Measure | Limit | Over | Type |
|--------|-----------|---------|----------|--------|----------|-----------|-------|------|
| (MHz) | (MHz) | | Level | (dB) | Level | (dBuV/m) | Limit | |
| | | | (dBuV/m) | | (dBuV/m) | | (dB) | |
| | 2725.5 | Н | 49.3 | 0.4 | 49.7 | 54(Note3) | -4.3 | PK |
| | 2725.1 | V | 48.2 | 0.4 | 48.6 | 54 | -5.4 | AV |
| | 2725.5 | V | 55.4 | 0.4 | 55.8 | 74 | -18.2 | PK |
| 908.4 | 3633.6 | Н | 39.4 | 2.2 | 41.6 | 54(Note3) | -12.4 | PK |
| | 3633.6 | V | 40.6 | 2.2 | 42.8 | 54(Note3) | -11.2 | PK |
| | 4542.0 | Н | 39.7 | 4.4 | 44.1 | 54(Note3) | -9.9 | PK |
| | 4542.0 | V | 43.3 | 4.4 | 47.7 | 54(Note3) | -6.3 | PK |
| | 1816.8 | Н | 40.6 | -2.5 | 38.1 | 54(Note3) | -15.9 | PK |
| | 1816.8 | V | 40.6 | -2.5 | 38.1 | 54(Note3) | -15.9 | PK |
| | 2725.5 | Н | 49.9 | 0.4 | 50.3 | 54(Note3) | -3.7 | PK |
| 908.42 | 2725.5 | V | 48.3 | 0.4 | 48.7 | 54 | -5.3 | AV |
| | 2725.5 | V | 56.8 | 0.4 | 57.2 | 74 | -16.8 | PK |
| | 3633.7 | Н | 40.4 | 2.2 | 42.6 | 54(Note3) | -11.4 | PK |
| | 3633.7 | V | 41.2 | 2.2 | 43.4 | 54(Note3) | -10.6 | PK |
| | 1832.0 | Н | 42.9 | -2.4 | 40.5 | 54(Note3) | -13.5 | PK |
| | 1832.0 | V | 41.0 | -2.4 | 38.6 | 54(Note3) | -15.4 | PK |
| 916 | 2751.0 | Н | 51.4 | 0.5 | 51.9 | 54(Note3) | -2.1 | PK |
| 910 | 2751.0 | V | 47.1 | 0.5 | 47.6 | 54(Note3) | -6.4 | PK |
| | 3664.0 | Н | 39.2 | 2.1 | 41.3 | 54(Note3) | -12.7 | PK |
| | 3664.0 | V | 39.3 | 2.1 | 41.4 | 54(Note3) | -12.6 | PK |

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

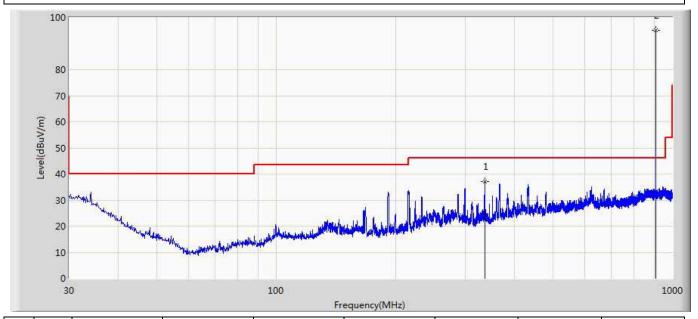
Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW set up, see Clause 6.6.



The worst case of Radiated Emission below 1GHz:

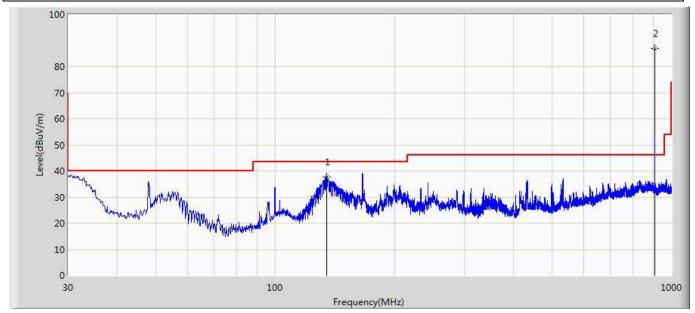
| Engineer: Damon | | | | | |
|------------------------------------|--------------------------|--|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:07 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Horizontal | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at 908.42MHz | | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 336.035 | 37.031 | 14.204 | -8.969 | 46.000 | 22.827 | PK |
| 2 | * | 908.420 | 94.960 | 62.360 | 48.960 | 46.000 | 32.600 | PK |



| Engineer: Damon | | | | | |
|------------------------------------|--------------------------|--|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:10 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Vertical | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at 908.42MHz | | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 134.881 | 37.786 | 17.935 | -5.714 | 43.500 | 19.851 | PK |
| 2 | * | 908.420 | 87.042 | 54.320 | 41.042 | 46.000 | 32.722 | PK |



5. Emissions in non-restricted frequency bands

5.1. Test Equipment

| Radiated Emission(Below 1GHz) / AC-2 | | | | | | | |
|--------------------------------------|--------------|-----------------|------------|------------|---------------|--|--|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date | | |
| EMI Test Receiver | R&S | ESCI | 100573 | 2017.03.05 | 2018.03.04 | | |
| Loop Antenna | R&S | HFH2-Z2 | 833799/003 | 2016.11.07 | 2017.11.06 | | |
| Bilog Antenna | Teseq GmbH | CBL6112D | 27611 | 2016.08.10 | 2017.08.09 | | |
| Coaxial Cable | Huber+Suhner | SUCOFLEX 106 | AC2-C | 2017.02.28 | 2018.02.27 | | |
| Temperature/Humidity Meter | Zhichen | ZC1-2 | AC2-TH | 2017.01.05 | 2018.01.04 | | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

| Radiated Emission(Below 1GHz) / AC-3 | | | | | | | |
|--------------------------------------|--------------|----------|------------|------------|---------------|--|--|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date | | |
| EMI Test Receiver | R&S | ESCI | 100176 | 2016.09.05 | 2017.09.04 | | |
| Bilog Antenna | Teseq GmbH | CBL6112D | 27613 | 2016.07.17 | 2017.07.18 | | |
| Coaxial Cable | Huber+Suhner | RG 214 | AC3-C | 2017.02.29 | 2018.02.28 | | |
| Temperature/Humidity Meter | zhicheng | ZC1-2 | AC3-TH | 2017.01.07 | 2018.01.06 | | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

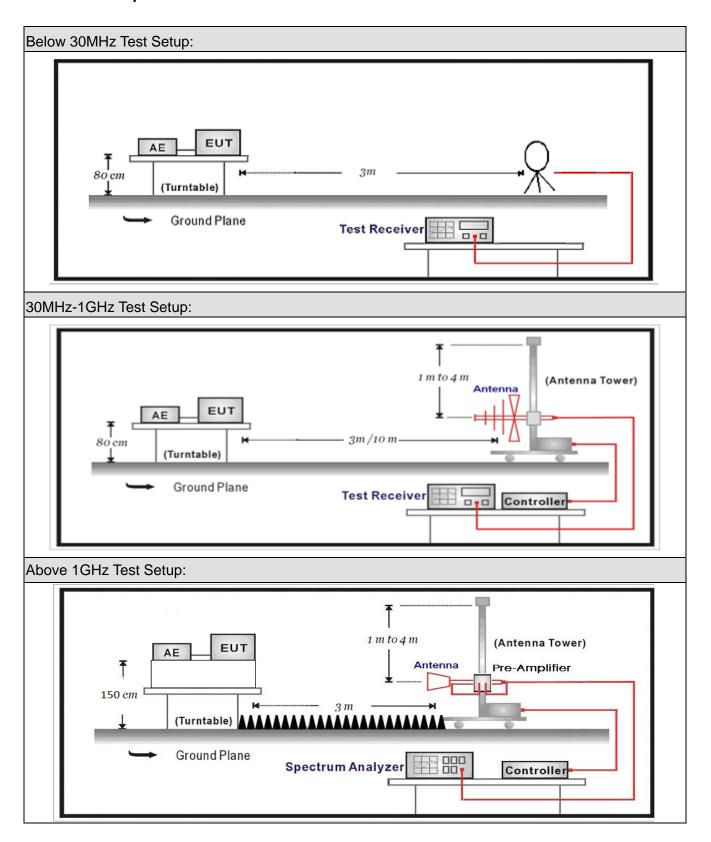


| Radiated Emission(Abo | Radiated Emission(Above 1GHz) / AC-5 | | | | | | | | |
|-----------------------|--------------------------------------|------------|-------------|------------|---------------|--|--|--|--|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date | | | | |
| Spectrum Analyzer | Agilent | E4446A | MY45300103 | 2017.01.04 | 2018.01.03 | | | | |
| Preamplifier | Miteq | NSP1800-25 | 1364185 | 2017.05.03 | 2018.05.02 | | | | |
| Preamplifier | QuieTek | AP-040G | CHM-0906001 | 2017.05.06 | 2018.05.05 | | | | |
| DRG Horn | ETS-Lindgren | 3117 | 00123988 | 2017.01.22 | 2018.01.20 | | | | |
| Broad-Band Horn | | | | | | | | | |
| Antenna | Schwarzbeck | BBHA9170 | 294 | 2016.11.25 | 2017.11.23 | | | | |
| | | SUCOFLEX | | | | | | | |
| Coaxial Cable | Huber+Suhner | 106 | AC5-C1 | 2017.03.02 | 2018.03.01 | | | | |
| | | SUCOFLEX | | | | | | | |
| Coaxial Cable | Huber+Suhner | 106 | AC5-C2 | 2017.03.02 | 2018.03.01 | | | | |
| | | SUCOFLEX | | | | | | | |
| Coaxial Cable | Huber+Suhner | 102 | AC5-C3 | 2017.03.02 | 2018.03.01 | | | | |
| EMI Receiver | Agilent | N9038A | MY51210196 | 2016.06.10 | 2017.06.09 | | | | |
| Temperature/Humidity | | | | | | | | | |
| Meter | Zhichen | ZC1-2 | AC5-TH | 2017.01.04 | 2018.01.03 | | | | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.



5.2. Test Setup





5.3. **Limit**

| Emissions in non-restricted frequency bands Limit | | | | | |
|---|------------|--|--|--|--|
| RF Output power (Detection methods) | Limit(dB) | | | | |
| RF Output power | 50c(Note1) | | | | |

Note 1: Emissions radiated outside of the specified frequency bands, except for harmonic emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent.

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5.4. Test Procedure

| Test Method | | | | | | | |
|-------------|-----------------|-------------|-------------|---|---|--|--|
| | References Rule | | | Chapter | Description | | |
| | | | | 6.4 | Radiated emissions from unlicensed wireless | | |
| | | | | | devices below 30 MHz | | |
| | | | 6.5 | Radiated emissions from unlicensed wireless | | | |
| | | | | devices in the frequency range | | | |
| | | | | | of 30 MHz to 1000 MHz | | |
| | | \boxtimes | ANSI C63.10 | 6.6 | Radiated emissions from unlicensed wireless | | |
| | | | | | devices above 1 GHz | | |

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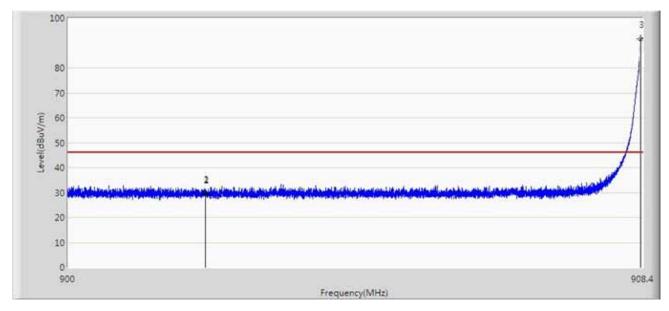
5.5. EUT test Axis definition

| Item | Emissions in non-restricted frequency bands | | | | | | |
|-----------------|---|---------------------|------------|--------------|--|--|--|
| Device Category | | Fixed position use | | | | | |
| | | Mobile position use | | | | | |
| Test mode | Mode 1 | | | | | | |
| | | Radiated | | | | | |
| | | X Axis | Y Axis | Z Axis | | | |
| | | | | | | | |
| | | Worst Axis | Worst Axis | Worst Axis 🖂 | | | |
| | Conducted | | | | | | |
| | | Chain 0 | | | | | |
| Test method | | • | | | | | |
| | | Chain 0 | | Chain 1 | | | |
| | | • • | | | | | |
| | | Chain 0 | Chain 1 | Chain 2 | | | |
| | | | • • • | | | | |



5.6. Test Result

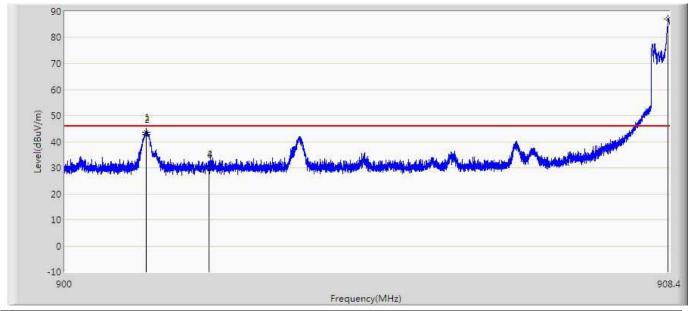
| Engineer: Damon | | | |
|---|--------------------------|--|--|
| Site: AC3 | Time: 2017/05/17 - 17:01 | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | |
| Probe: CBL6112D_27613(30-1000MHz) | Polarity: Horizontal | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 902.000 | 29.519 | -0.667 | -16.481 | 46.000 | 30.186 | PK |
| 2 | | 902.000 | 29.354 | -0.832 | -16.646 | 46.000 | 30.186 | QP |
| 3 | * | 908.371 | 92.984 | 62.783 | N/A | N/A | 30.201 | PK |



| Engineer: Damon | | | | | |
|---|--------------------------|--|--|--|--|
| Site: AC3 | Time: 2017/05/17 - 16:57 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: CBL6112D_27613(30-1000MHz) | Polarity: Vertical | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | | | | | |

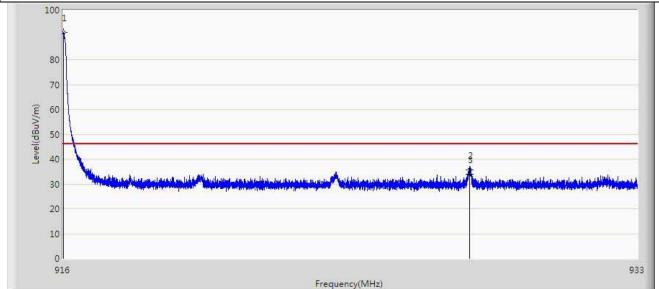


| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 901.133 | 43.641 | 13.458 | -2.359 | 46.000 | 30.183 | PK |
| 2 | | 901.133 | 42.781 | 12.598 | -3.219 | 46.000 | 30.183 | QP |
| 3 | | 902.000 | 29.509 | -0.677 | -16.491 | 46.000 | 30.186 | PK |
| 4 | | 902.000 | 29.475 | -0.711 | -16.525 | 46.000 | 30.186 | QP |
| 5 | * | 908.381 | 86.966 | 56.765 | N/A | N/A | 30.201 | PK |



| Site: AC3 Time: 2017/05/17 - 17:03 Limit: FCC_Part15.209_RE(3m) Margin: 0 Probe: CBL6112D_27613(30-1000MHz) Polarity: Horizontal | Engineer: Damon | | | | | |
|--|-----------------------------------|--------------------------|--|--|--|--|
| | Site: AC3 | Time: 2017/05/17 - 17:03 | | | | |
| Probe: CBL6112D_27613(30-1000MHz) Polarity: Horizontal | Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| | Probe: CBL6112D_27613(30-1000MHz) | Polarity: Horizontal | | | | |
| EUT: August Smart Door Lock Power: AC 120V/60Hz | EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |

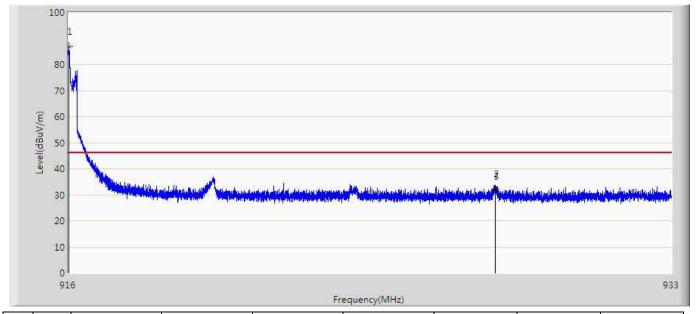
Note: Mode 1:Transmit at high channel 916MHz



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | * | 916.021 | 91.674 | 61.454 | N/A | N/A | 30.220 | PK |
| 2 | | 928.000 | 35.589 | 5.339 | -10.411 | 46.000 | 30.250 | PK |
| 3 | | 928.000 | 33.819 | 3.569 | -12.181 | 46.000 | 30.250 | QP |



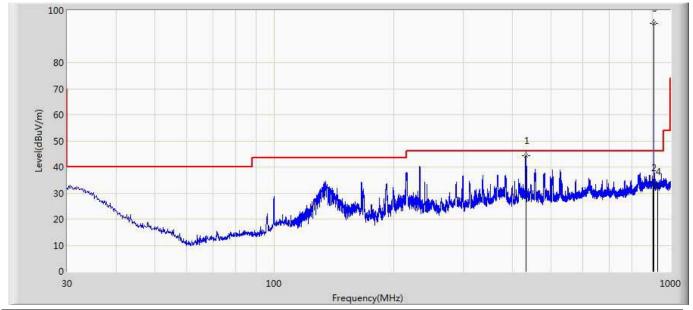
| Engineer: Damon | | | | | |
|--|--------------------------|--|--|--|--|
| Site: AC3 | Time: 2017/05/17 - 17:04 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: CBL6112D_27613(30-1000MHz) | Polarity: Vertical | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at high channel 916MHz | | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | * | 916.017 | 86.935 | 56.715 | N/A | N/A | 30.220 | PK |
| 2 | | 928.000 | 32.272 | 2.022 | -13.728 | 46.000 | 30.250 | PK |
| 3 | | 928.000 | 31.263 | 1.013 | -14.737 | 46.000 | 30.250 | QP |



| Engineer: Damon | | | | | |
|---|--------------------------|--|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 19:39 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Horizontal | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 431.095 | 44.368 | 17.982 | -1.632 | 46.000 | 26.385 | PK |
| 2 | | 902.000 | 34.003 | 0.757 | -11.997 | 46.000 | 33.246 | PK |
| 3 | * | 908.400 | 94.954 | 62.350 | N/A | N/A | 32.604 | PK |
| 4 | | 928.000 | 32.534 | 0.002 | -13.466 | 46.000 | 32.533 | PK |

Note: The test frequency range is outside of specified frequency bands(902~928MHz), and then the worst data are shown in the report,



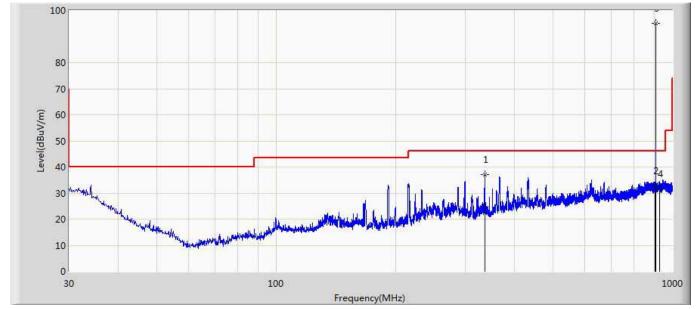
| Engineer: Damon | | | | | |
|---|--------------------------|--|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:00 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Vertical | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | | | | | |

(W) 60 Frequency(MHz)

| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 135.003 | 38.426 | 18.612 | -5.074 | 43.500 | 19.814 | PK |
| 2 | | 902.000 | 33.041 | 0.128 | -12.959 | 46.000 | 32.913 | PK |
| 3 | * | 908.400 | 87.061 | 54.340 | N/A | N/A | 32.721 | PK |
| 4 | | 928.000 | 31.833 | -0.357 | -14.167 | 46.000 | 32.191 | PK |



| Engineer: Damon | | | | | |
|--|--------------------------|--|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:07 | | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Horizontal | | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | | |
| Note: Mode 1:Transmit at Mid channel 908.42MHz | | | | | |

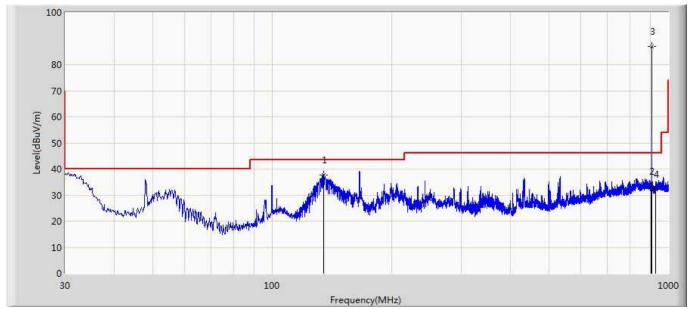


| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 336.035 | 37.031 | 14.204 | -8.969 | 46.000 | 22.827 | PK |
| 2 | | 902.000 | 32.611 | -0.635 | -13.389 | 46.000 | 33.246 | PK |
| 3 | * | 908.420 | 94.960 | 62.360 | 48.960 | 46.000 | 32.600 | PK |
| 4 | | 928.000 | 31.547 | -0.985 | -14.453 | 46.000 | 32.533 | PK |

Note: The test frequency range is outside of specified frequency bands(902~928MHz), and then the worst data are shown in the report,



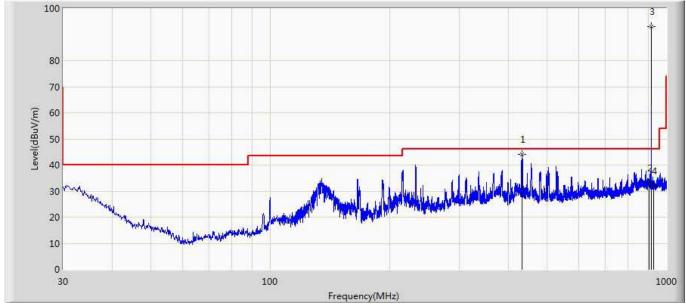
| Engineer: Damon | | | | |
|--|--------------------------|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:10 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Vertical | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at Mid channel 908.42MHz | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 134.881 | 37.786 | 17.935 | -5.714 | 43.500 | 19.851 | PK |
| 2 | | 902.000 | 33.204 | 0.291 | -12.796 | 46.000 | 32.913 | PK |
| 3 | * | 908.420 | 87.042 | 54.320 | 41.042 | 46.000 | 32.722 | PK |
| 4 | | 928.000 | 32.116 | -0.074 | -13.884 | 46.000 | 32.191 | PK |



| Engineer: Damon | | | | |
|--|--------------------------|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:16 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Horizontal | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at high channel 916MHz | | | | |

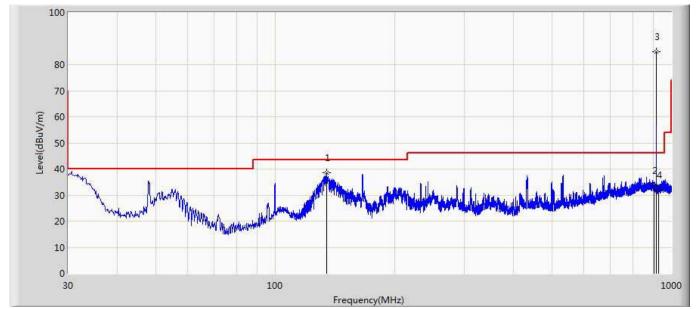


| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 431.337 | 44.200 | 17.824 | -1.800 | 46.000 | 26.377 | PK |
| 2 | | 902.000 | 32.945 | -0.301 | -13.055 | 46.000 | 33.246 | PK |
| 3 | * | 916.000 | 93.092 | 60.860 | N/A | N/A | 32.232 | PK |
| 4 | | 928.000 | 31.852 | -0.680 | -14.148 | 46.000 | 32.533 | PK |

Note: The test frequency range is outside of specified frequency bands(902~928MHz), and then the worst data are shown in the report,



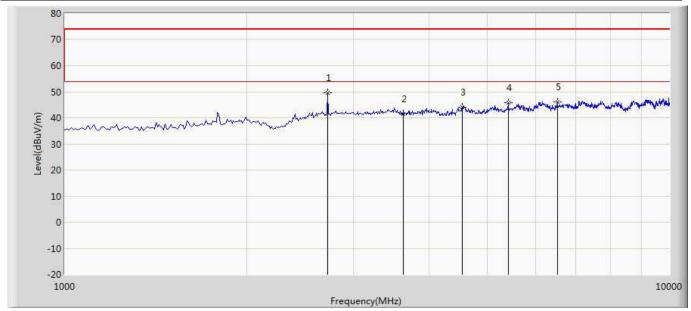
| Engineer: Damon | | | | |
|--|--------------------------|--|--|--|
| Site: AC2 | Time: 2017/05/15 - 20:19 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: AC2_3M(30-1000M) | Polarity: Vertical | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at high channel 916MHz | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 135.003 | 38.510 | 18.696 | -4.990 | 43.500 | 19.814 | PK |
| 2 | | 902.000 | 33.681 | 0.768 | -12.319 | 46.000 | 32.913 | PK |
| 3 | * | 916.000 | 84.893 | 52.860 | N/A | N/A | 32.033 | PK |
| 4 | | 928.000 | 31.876 | -0.314 | -14.124 | 46.000 | 32.191 | PK |



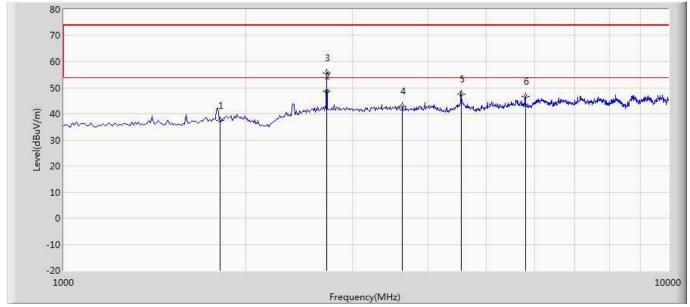
| Engineer: Damon | | | | |
|---|--------------------------|--|--|--|
| Site: AC5 | Time: 2017/05/14 - 11:51 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | * | 2725.500 | 49.627 | 49.259 | -24.373 | 74.000 | 0.368 | PK |
| 2 | | 3633.600 | 41.552 | 39.357 | -32.448 | 74.000 | 2.195 | PK |
| 3 | | 4542.000 | 44.035 | 39.666 | -29.965 | 74.000 | 4.368 | PK |
| 4 | | 5411.500 | 45.817 | 38.920 | -28.183 | 74.000 | 6.897 | PK |
| 5 | | 6525.000 | 46.169 | 37.563 | -27.831 | 74.000 | 8.606 | PK |



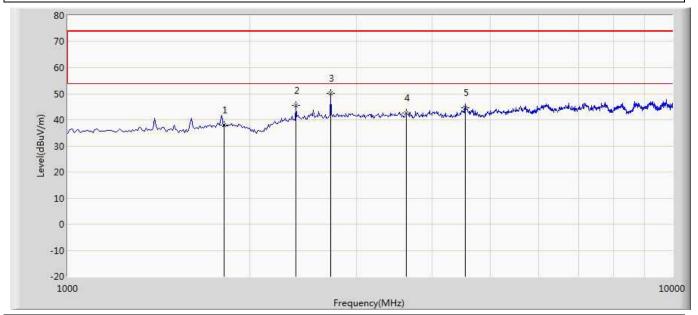
| Engineer: Damon | | | | |
|---|-------------------------|--|--|--|
| Site: AC5 | Time: 2017/05/14- 17:52 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at low channel 908.4MHz | • | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 1816.400 | 37.356 | 39.873 | -36.644 | 74.000 | -2.517 | PK |
| 2 | * | 2725.120 | 48.579 | 48.210 | -5.421 | 54.000 | 0.368 | AV |
| 3 | | 2725.500 | 55.763 | 55.395 | -18.237 | 74.000 | 0.368 | PK |
| 4 | | 3633.600 | 42.779 | 40.584 | -31.221 | 74.000 | 2.195 | PK |
| 5 | | 4542.000 | 47.665 | 43.296 | -26.335 | 74.000 | 4.368 | PK |
| 6 | | 5802.500 | 46.530 | 38.740 | -27.470 | 74.000 | 7.791 | PK |



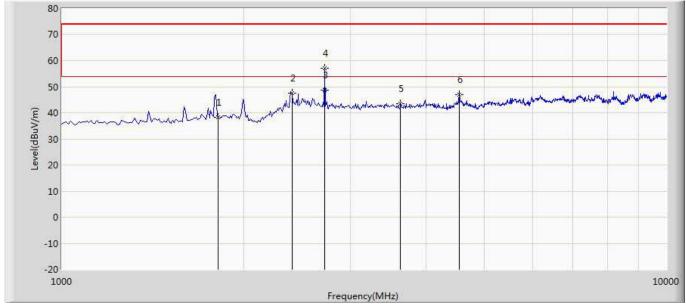
| Engineer: Damon | | | | |
|--|--------------------------|--|--|--|
| Site: AC5 | Time: 2017/05/14 - 18:04 | | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | | |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal | | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | | |
| Note: Mode 1:Transmit at Mid channel 908.42MHz | | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 1816.840 | 38.100 | 40.615 | -35.900 | 74.000 | -2.515 | PK |
| 2 | | 2385.500 | 45.432 | 45.760 | -28.568 | 74.000 | -0.328 | PK |
| 3 | * | 2725.500 | 50.259 | 49.891 | -23.741 | 74.000 | 0.368 | PK |
| 4 | | 3633.680 | 42.602 | 40.407 | -31.398 | 74.000 | 2.195 | PK |
| 5 | | 4542.100 | 44.681 | 40.310 | -29.319 | 74.000 | 4.371 | PK |



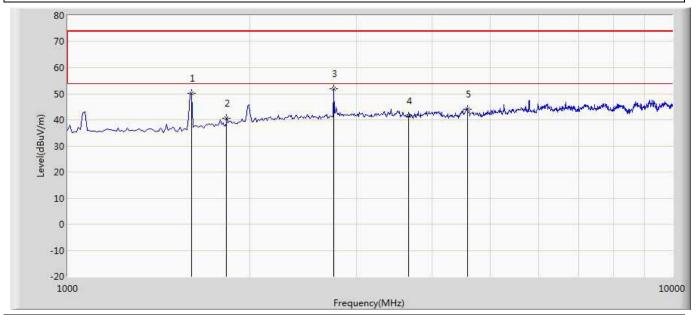
| Engineer: Damon | | | |
|--|--------------------------|--|--|
| Site: AC5 | Time: 2017/05/14 - 18:08 | | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | | |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical | | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | | |
| Note: Mode 1:Transmit at Mid channel 908.42MHz | | | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 1816.840 | 38.132 | 40.647 | -35.868 | 74.000 | -2.515 | PK |
| 2 | | 2402.500 | 47.566 | 47.857 | -26.434 | 74.000 | -0.291 | PK |
| 3 | * | 2725.480 | 48.624 | 48.256 | -5.376 | 54.000 | 0.367 | AV |
| 4 | | 2725.500 | 57.189 | 56.821 | -16.811 | 74.000 | 0.368 | PK |
| 5 | | 3633.680 | 43.356 | 41.161 | -30.644 | 74.000 | 2.195 | PK |
| 6 | | 4542.100 | 47.000 | 42.629 | -27.000 | 74.000 | 4.371 | PK |



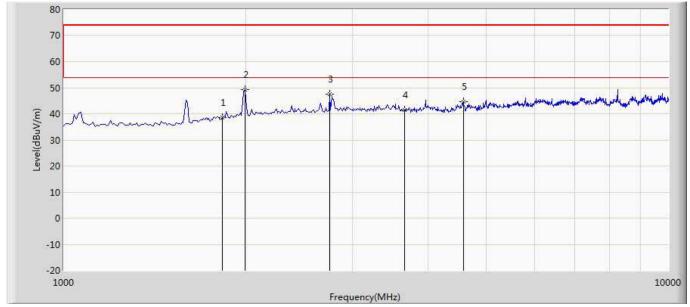
| Engineer: Damon | |
|--|--------------------------|
| Site: AC5 | Time: 2017/05/14 - 11:03 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz |
| Note: Mode 1:Transmit at high channel 916MHz | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 1603.500 | 50.249 | 54.584 | -23.751 | 74.000 | -4.335 | PK |
| 2 | | 1832.000 | 40.444 | 42.891 | -33.556 | 74.000 | -2.446 | PK |
| 3 | * | 2751.000 | 51.918 | 51.376 | -22.082 | 74.000 | 0.542 | PK |
| 4 | | 3664.000 | 41.336 | 39.212 | -32.664 | 74.000 | 2.124 | PK |
| 5 | | 4580.000 | 44.052 | 39.290 | -29.948 | 74.000 | 4.762 | PK |



| Engineer: Damon | | |
|--|--------------------------|--|
| Site: AC5 | Time: 2017/05/14 - 11:49 | |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 | |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical | |
| EUT: August Smart Door Lock | Power: AC 120V/60Hz | |
| Note: Mode 1:Transmit at high channel 916MHz | • | |



| No | Mark | Frequency | Measure Level | Reading Level | Over Limit | Limit | Factor | Туре |
|----|------|-----------|---------------|---------------|------------|----------|--------|------|
| | | (MHz) | (dBuV/m) | (dBuV) | (dB) | (dBuV/m) | (dB) | |
| 1 | | 1832.000 | 38.557 | 41.004 | -35.443 | 74.000 | -2.446 | PK |
| 2 | * | 1994.500 | 49.204 | 50.356 | -24.796 | 74.000 | -1.152 | PK |
| 3 | | 2751.000 | 47.665 | 47.123 | -26.335 | 74.000 | 0.542 | PK |
| 4 | | 3664.000 | 41.397 | 39.273 | -32.603 | 74.000 | 2.124 | PK |
| 5 | | 4580.000 | 44.535 | 39.773 | -29.465 | 74.000 | 4.762 | PK |



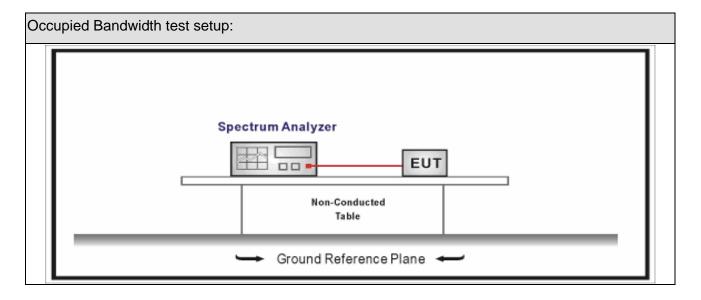
6. Occupied Bandwidth

6.1. Test Equipment

| Occupied Bandwidth / TR-8 | | | | | | |
|----------------------------|--------------|----------|------------|------------|---------------|--|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date | |
| Spectrum Analyzer | Agilent | N9010A | MY48030494 | 2017.02.04 | 2018.02.03 | |
| EXA Spectrum Analyzer | Keysight | N9010A | MY55370495 | 2016.04.09 | 2017.04.08 | |
| MXA Signal Anlyzer | Keysight | N9020A | MY56060147 | 2016.04.09 | 2017.04.08 | |
| Temperature/Humidity Meter | zhichen | ZC1-2 | TR8-TH | 2016.04.10 | 2017.04.09 | |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

6.2. Test Setup





6.3. Limit

Occupied Bandwidth

the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

6.4. Test Procedure

| Test | Test Method | | | | | | |
|------|----------------|---------|--|--|--|--|--|
| | Reference Rule | Chapter | Description | | | | |
| | ANSI C63.10 | 6.9 | DTS bandwidth | | | | |
| | | | Occupied bandwidth—relative measurement procedure | | | | |
| | | | Occupied bandwidth—power bandwidth (99%) measurement procedure | | | | |

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6.5. EUT test definition

| Item | Occupied Bandwidth | | | | | |
|-----------------|--------------------|-------------------|---------|---------|------------|--|
| Doving Catagory | | Fixed position us | е | | | |
| Device Category | | Mobile position u | se | | | |
| Test mode | Mode | : 1 | | | | |
| | | Radiated | | | | |
| | | X Axis | Y | Axis | Z Axis | |
| | | | | | | |
| | | Worst Axis | Worst A | xis 🗌 | Worst Axis | |
| | | Conducted | | | | |
| | | | Ch | ain 0 | | |
| Test method | | | • | | | |
| | | Chain 0 | | Chain 1 | | |
| | | | • | • | | |
| | | Chain 0 | Ch | ain 1 | Chain 2 | |
| | | | • • | • | | |



6.6. Test Result

| Product Name | : | August Smart Door Lock | Power | : | DC 6V |
|--------------|-----|------------------------|-----------|---|-------|
| Test Mode | • • | Mode1 | Test Site | | TR8 |
| Test Date | : | 2017.03.24 | | | |

| Mode | CH. | Test Freq. (MHz) | 99% Occupied Bandwidth (KHz) | 20dB Occupied Bandwidth (KHz) | Result |
|------|------|---------------------|------------------------------|-------------------------------------|--------|
| 1 | Low | 908.4 | 109.47 | 119.0 | Pass |
| 1 | Mid | 908.42 | 108.97 | 124.2 | Pass |
| 1 | High | 916 | 109.37 | 120.0 | Pass |

Note: The worst case of Occupied Bandwidth as below in next page:

Mode 1 Mid Channel (908.42MHz)



Report No: 1722089R-RF-US-P06V02



7. Antenna Requirement

7.1. Limit

Antenna Requirement Limit

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

7.2. Antenna Connector Construction

| Ante | Antenna Connector Construction | | | | | |
|-------------|--|--|--|--|--|--|
| \boxtimes | The use of a permanently attached antenna | | | | | |
| | The antenna use of a unique coupling to the intentional radiator | | | | | |
| | The use of a nonstandard antenna jack or electrical connector | | | | | |
| Plea | se refer to the attached document "Internal Photograph" to show the antenna connector. | | | | | |
| | | | | | | |
| | ————— The End | | | | | |

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