

RF TEST REPORT



Report No.: FCC_IC_RF_SL16071801-ZBR-020_Rev. 1.0
 Supersede Report No.: NONE

| | |
|---|--|
| Applicant | : Zebra Technologies Corporation |
| Product Name | : Contactless Encoder Module |
| Module Model No. | : CPMFS02 |
| Host Model No. | : ZXP Series 8, ZXP Series 9 |
| Test Standard | : FCC 15.225 RSS-210 Issue 8: 2010 |
| Test Method | : FCC 15.225 ANSI C63.10 2013 RSS Gen Issue 4 2014 |
| FCC ID | : I28RFID-CPMFS-02 |
| IC ID | : 3798B-CPMFS02 |
| Dates of test | : 08/08/2016 – 08/11/2016 |
| Issue Date | : 08/29/2016 |
| Test Result | : <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Equipment complied with the specification | <input checked="" type="checkbox"/> [X] |
| Equipment did not comply with the specification | <input type="checkbox"/> [] |

| | |
|--|-------------------|
| This Test Report is Issued Under the Authority of: | |
| | |
| Rachana Khanduri | Chen Ge |
| Test Engineer | Engineer Reviewer |
| This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only | |

Issued By:
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| USA | FCC, A2LA | EMC, RF/Wireless, Telecom |
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| Israel | MOC, NIST | EMC, RF, Telecom, Safety |

Accreditations for Product Certifications

| Country | Accreditation Body | Scope |
|-----------|--------------------|-----------------------|
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| Canada | IC FCB, NIST | EMC, RF, Telecom |
| Singapore | iDA, NIST | EMC, RF, Telecom |
| EU | NB | EMC & R&TTE Directive |
| Japan | MIC (RCB 208) | RF, Telecom |
| Hong Kong | OFTA (US002) | RF, Telecom |

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1 Report Revision History

| Report No. | Report Version | Description | Issue Date |
|--------------------------------------|----------------|-------------------------|------------|
| FCC_IC_RF_SL16071801-ZBR-020 | - | Original | 08/22/2016 |
| FCC_IC_RF_SL16071801-ZBR-020_Rev 1.0 | Rev 1.0 | Updated EUT Description | 08/29/2016 |

2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: Zebra Technologies Corporation
Product: Contactless Encoder Module
Module Model: CPMFS02
Host Model: ZXP Series 8, ZXP Series 9

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1st page.

Both ZXP Series 8 and ZXP Series 9 models are electrically and mechanically identical.

3 Customer information

| | | |
|----------------------|---|---|
| Applicant Name | : | Zebra Technologies Corporation |
| Applicant Address | : | 333 Corporate Woods Parkway, Vernon Hills, IL, 60061, USA |
| Manufacturer Name | : | Zebra Technologies Corporation |
| Manufacturer Address | : | 333 Corporate Woods Parkway, Vernon Hills, IL, 60061, USA |

4 Test site information

| | | |
|----------------------|---|---|
| Lab performing tests | : | SIEMIC Laboratories |
| Lab Address | : | 775 Montague Expressway, Milpitas, CA 95035 |
| FCC Test Site No. | : | 881796 |
| IC Test Site No. | : | 4842D-2 |
| VCCI Test Site No. | : | A0133 |

5 Modification

| Index | Item | Description | Note |
|-------|------|-------------|------|
| - | - | - | - |

6 EUT Information

6.1 EUT Description

| | |
|---------------------------|----------------------------------|
| Product Name | Contactless Encoder Module |
| Module Model No. | CPMFS02 |
| Host Model No. | ZXP Series 8, ZXP Series 9 |
| Trade Name | Zebra |
| Serial No. | Z9J162100021 |
| Input Power | 100-240V _{AC} , 50-60Hz |
| Product Hardware version | N/A |
| Product Software version | v01.xx.xx |
| Radio Hardware version | Rev A |
| Radio Software version | 7.48 |
| Test SW Version | ZMotif Test App.exe |
| Date of EUT received | 08/08/2016 |
| Equipment Class/ Category | DXX |
| Working Frequencies | 13.56MHz |
| Port/Connectors | USB, Ethernet |

6.2 Radio Description

Specifications for Radio:

| Radio Type | RFID |
|------------------------|------------------|
| Operating Frequency | 13.56MHz |
| Modulation | ASK (13.56MHz) |
| Channel Spacing | None |
| Antenna Type | PCB Loop Antenna |
| Antenna Gain | -20 dBi |
| Antenna Connector Type | N/A |

Channel List:

| Type | Mode | Channel No. | Frequency (MHz) | Available (Y/N) |
|------|----------|-------------|-----------------|-----------------|
| RFID | 13.56MHz | 1 | 13.56 | Y |

6.3 EUT test modes/configuration Description

| Mode | Note |
|-------------------|--|
| RF test | EUT is set to transmit continuously at 13.56MHz. |
| | |
| | |
| Note: None | |

| Test Item | Operating mode | Tested antenna port | Test frequencies |
|--|---------------------|---------------------|------------------|
| Antenna Requirement | N/A | - | 13.56MHz |
| Conducted Emissions Voltage | Continuous Transmit | - | |
| Limit in the band of 13.553 – 13.567 MHz | Continuous Transmit | - | |
| Limit in the band of 13.410 – 13.553 MHz and 13.567 – 13.710 MHz | Continuous Transmit | - | |
| Limit in the band of 13.110 – 13.410 MHz and 13.710 – 14.010 MHz | Continuous Transmit | - | |
| Limit outside the band of 13.110 – 14.010 MHz | Continuous Transmit | - | |
| Frequency Stability | Continuous Transmit | - | |
| Occupied Bandwidth | Continuous Transmit | - | |

Note: EUT uses a PCB trace antenna attached to the PCB board. Only radiated measurements performed during the test.

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

| Index | Supporting Equipment Description | Model | Serial No | Manu | Note |
|-------|----------------------------------|---------------|-----------|------|------|
| 1 | Laptop | Latitude D610 | N/A | Dell | - |

7.2 Cabling Description

| Name | Connection Start | | Connection Stop | | Length / shielding Info | | Note |
|------|------------------|----------|-----------------|----------|-------------------------|-----------|------|
| | From | I/O Port | To | I/O Port | Length (m) | Shielding | |
| USB | EUT | I/O | Laptop | USB | 1m | No | - |

7.3 Test Software Description

| Test Item | Software | Description |
|------------|---------------------|--------------------------------------|
| RF Testing | ZMotif Test App.exe | Set the EUT to transmit at 13.56MHz. |
| | | |

8 Test Summary

| Test Item | Test standard | | Test Method/Procedure | Pass / Fail |
|--------------------------------|---------------|-----------------|--|--|
| Antenna Requirement | FCC | 15.203 | ANSI C63.10 – 2013 558074 D01 DTS Meas. Guidance v03r02 | <input checked="" type="checkbox"/> Pass |
| | IC | | | <input type="checkbox"/> N/A |
| AC Conducted Emissions Voltage | FCC | 15.225(a) | ANSI C63.10 2013 RSS Gen. 8.8 | <input checked="" type="checkbox"/> Pass |
| | IC | RSS Gen (7.2.2) | | <input type="checkbox"/> N/A |

| Test Item | Test standard | | Test Method/Procedure | Pass / Fail | |
|--|---|-------------------|-----------------------|------------------|--|
| Limit in the band of 13.553 – 13.567 MHz | FCC | 15.225(a) | FCC | ANSI C63.10 2013 | <input checked="" type="checkbox"/> Pass |
| | IC | RSS210(A2.6) | IC | RSS Gen 6.13 | <input type="checkbox"/> N/A |
| Limit in the band of 13.410 – 13.553 MHz and 13.567 – 13.710 MHz | FCC | 15.225(b) | FCC | ANSI C63.10 2013 | <input checked="" type="checkbox"/> Pass |
| | IC | RSS210(A2.6) | IC | RSS Gen 6.13 | <input type="checkbox"/> N/A |
| Limit in the band of 13.110 – 13.410 MHz and 13.710 – 14.010 MHz | FCC | 15.225(c) | FCC | ANSI C63.10 2013 | <input checked="" type="checkbox"/> Pass |
| | IC | RSS210(A2.6) | IC | RSS Gen 6.13 | <input type="checkbox"/> N/A |
| Limit outside the band of 13.110 – 14.010 MHz | FCC | 15.225(d), 15.209 | FCC | ANSI C63.10 2013 | <input checked="" type="checkbox"/> Pass |
| | IC | RSS210(A2.6) | IC | RSS Gen 6.13 | <input type="checkbox"/> N/A |
| Receiver Spurious Emission | IC | - | IC | RSS Gen 7.1 | <input type="checkbox"/> Pass <input checked="" type="checkbox"/> N/A |
| Frequency Stability | FCC | 15.225(e) | FCC | - | <input checked="" type="checkbox"/> Pass |
| | IC | RSS210(A2.6) | IC | RSS Gen 6.11 | <input type="checkbox"/> N/A |
| Occupied Bandwidth | FCC | - | FCC | - | <input checked="" type="checkbox"/> Pass |
| | IC | RSS-210(5.9.1) | IC | RSS Gen 6.6 | <input type="checkbox"/> N/A |
| Remark | <ol style="list-style-type: none"> All measurement uncertainties are not taken into consideration for all presented test result. The applicant shall ensure frequency stability by showing that an emission is maintained within the band of operation under all normal operating conditions as specified in the user's manual. Test Method: ANSI C63.10: 2013 / RSS – Gen Issue 4: November 2014. | | | | |

9 Measurement Uncertainty

| Test Item | Description | Uncertainty |
|--|---|---------------|
| AC Conducted Emissions Voltage | Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 | ±3.5dB |
| Limit in the band of 13.553 – 13.567 MHz | | +5.6dB/-4.5dB |
| Limit in the band of 13.410 – 13.553 MHz and 13.567 – 13.710 MHz | | +5.6dB/-4.5dB |
| Limit in the band of 13.110 – 13.410 MHz and 13.710 – 14.010 MHz | | +5.6dB/-4.5dB |
| Limit outside the band of 13.110 – 14.010 MHz | | +5.6dB/-4.5dB |
| Radiated Spurious Emissions | | +5.6dB/-4.5dB |

10 Measurements, examination and derived results

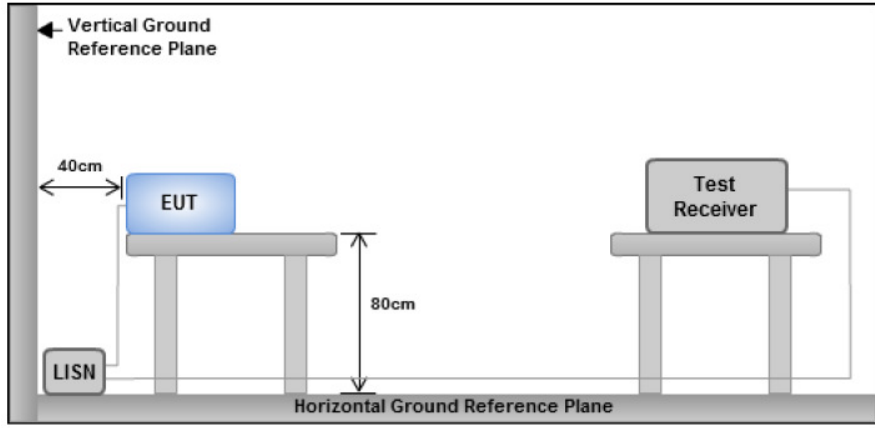
10.1 Antenna Requirement

| Spec | Requirement | Applicable |
|---------|--|------------|
| §15.203 | <p>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.</p> <p>Antenna requirement must meet at least one of the following:</p> <p>a) Antenna must be permanently attached to the device. b) The antenna must use a unique type of connector to attach to the device. c) Device must be professionally installed. The installer shall be responsible for ensuring that the correct antenna is employed by the device.</p> | ☒ |
| Remark | The RFID antenna is integral to the PCB board permanently to the device which meets the requirement (See Internal Photographs submitted as another Exhibit). | |
| Result | ☒ PASS ☐ FAIL | |

10.2 Conducted Emissions Test Result

Conducted Emission Limit

| Section | Frequency ranges (MHz) | Limit (dBuV) | |
|-----------------|------------------------|--------------|---------|
| | | QP | Average |
| Class B devices | 0.15 ~ 0.5 | 66 – 56 | 56 – 46 |
| | 0.5 ~ 5 | 56 | 46 |
| | 5 ~ 30 | 60 | 50 |

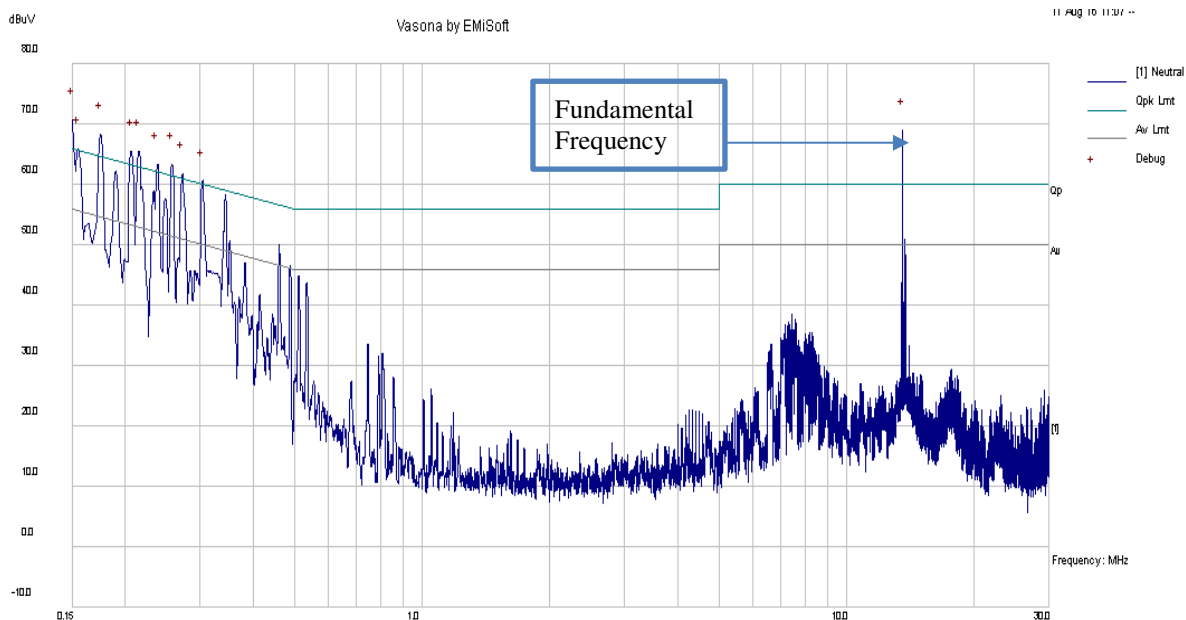
| Spec | Item | Requirement | Applicable |
|------------------------|---|--|---|
| § 15.207, RSS210(A8.1) | a) | For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits set in § 15.207, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). AC Line conducted emission within the band 150kHz to 30MHz | <input checked="" type="checkbox"/> |
| Test Setup |  <p style="text-align: center;">Note: 1. Support units were connected to second LISN. 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes</p> | | |
| Procedure | <ul style="list-style-type: none"> - The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B. - The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains. - The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. - All other supporting equipment was powered separately from another main supply. | | |
| Test Date | 08/11/2016 | Environmental conditions | Temperature 21.5 °C Relative Humidity 45.5 % Atmospheric Pressure 1013.7 mbar |
| Remark | The EUT was tested at 120VAC, 60Hz. | | |
| Result | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail | | |

Test Data Yes N/A

Test Plot Yes N/A

Test was done by Rachana Khanduri at Conducted Emission test site.

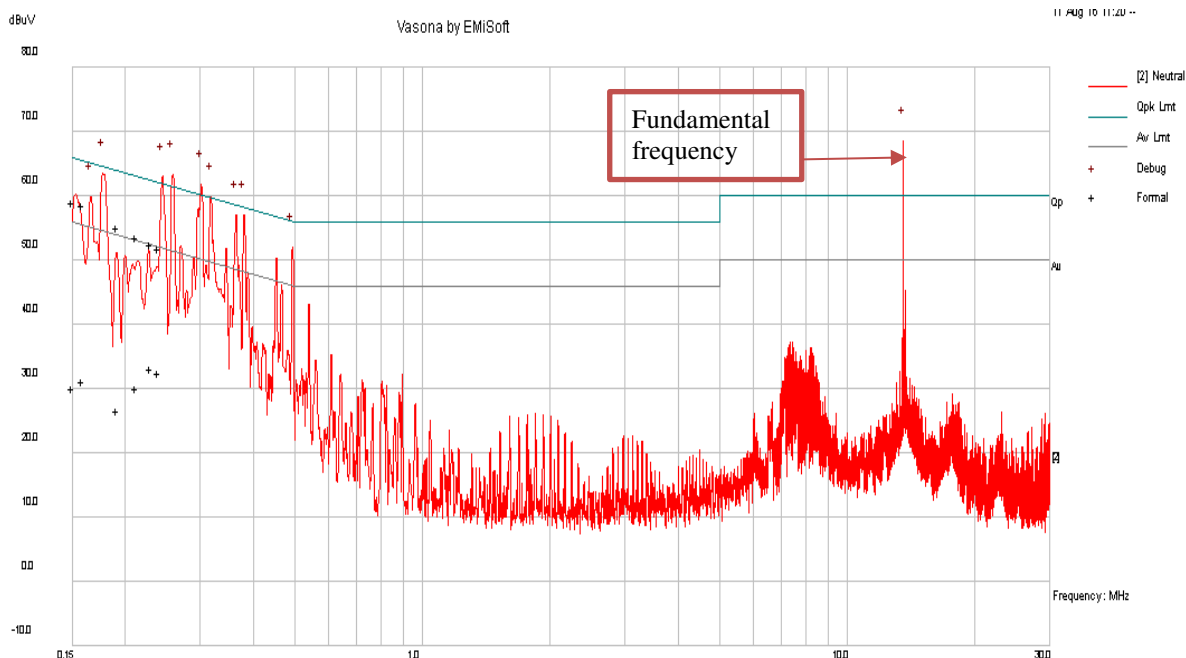
| | | | |
|---------------------------|---------------------|--|---------|
| Test specification: | Conducted Emissions | | |
| Environmental Conditions: | Temp(°C): | 21.5 | Result: |
| | Humidity (%): | 45.5 | |
| | Atmospheric(mbar): | 1013.7 | |
| Mains Power: | 120VAC, 60Hz | <input checked="" type="checkbox"/> Pass | |
| Tested by: | Rachana Khanduri | <input type="checkbox"/> Fail | |
| Test Date: | 08/11/2016 | | |
| Remarks: | AC Line @ Neutral | | |



Neutral Measurements

| Frequency MHz | Raw dBuV | Cable Loss | Factors dB | Level dBuV | Measurement Type | Line/ Neutral | Limit dBuV | Margin dB | Pass /Fail |
|---------------|----------|------------|------------|------------|------------------|---------------|------------|-----------|------------|
| 0.150377 | 47.89 | 10 | 1.24 | 59.13 | Quasi Peak | Neutral | 65.98 | -6.85 | Pass |
| 0.158899 | 47.42 | 10 | 1.15 | 58.57 | Quasi Peak | Neutral | 65.52 | -6.95 | Pass |
| 0.212565 | 42.80 | 10 | 0.79 | 53.59 | Quasi Peak | Neutral | 63.10 | -9.51 | Pass |
| 0.191306 | 44.32 | 10 | 0.89 | 55.22 | Quasi Peak | Neutral | 63.98 | -8.76 | Pass |
| 0.23943 | 41.19 | 10 | 0.69 | 51.88 | Quasi Peak | Neutral | 62.12 | -10.24 | Pass |
| 0.230404 | 41.78 | 10 | 0.72 | 52.50 | Quasi Peak | Neutral | 62.44 | -9.94 | Pass |
| 0.150377 | 18.96 | 10 | 1.24 | 30.20 | Average | Neutral | 55.98 | -25.78 | Pass |
| 0.158899 | 20.20 | 10 | 1.15 | 31.35 | Average | Neutral | 55.52 | -24.17 | Pass |
| 0.212565 | 19.37 | 10 | 0.79 | 30.16 | Average | Neutral | 53.10 | -22.94 | Pass |
| 0.191306 | 15.84 | 10 | 0.89 | 26.74 | Average | Neutral | 53.98 | -27.24 | Pass |
| 0.23943 | 21.80 | 10 | 0.69 | 32.49 | Average | Neutral | 52.12 | -19.62 | Pass |
| 0.230404 | 22.46 | 10 | 0.72 | 33.18 | Average | Neutral | 52.44 | -19.26 | Pass |

| | | | |
|---------------------------|---------------------|--------|--|
| Test specification: | Conducted Emissions | | |
| Environmental Conditions: | Temp(°C): | 21.5 | Result: |
| | Humidity (%): | 45.5 | |
| | Atmospheric(mbar): | 1013.7 | |
| Mains Power: | 120VAC, 60Hz | | <input checked="" type="checkbox"/> Pass |
| Tested by: | Rachana Khanduri | | <input type="checkbox"/> Fail |
| Test Date: | 08/11/2016 | | |
| Remarks: | AC Line @ Line | | |



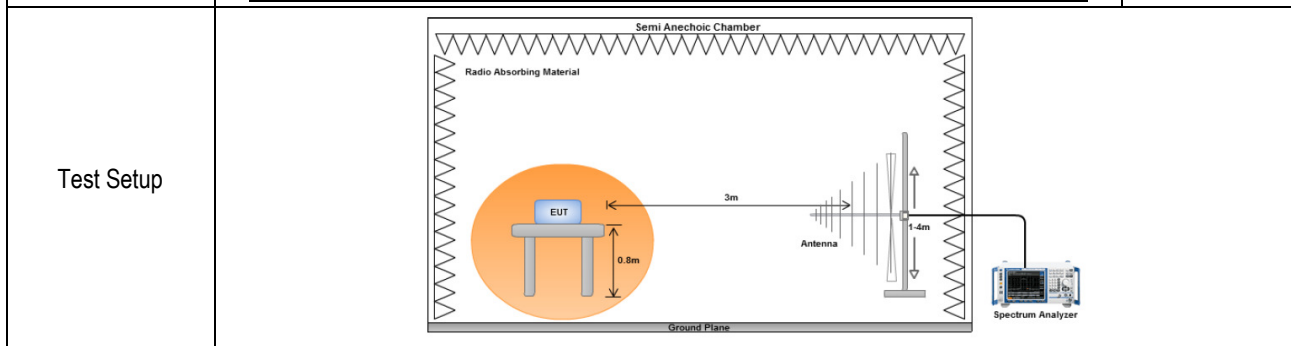
Line Measurements

| Frequency MHz | Raw dBµV | Cable Loss | Factors dB | Level dBµV | Measurement Type | Line/ Neutral | Limit dBµV | Margin dB | Pass /Fail |
|---------------|----------|------------|------------|------------|------------------|---------------|------------|-----------|------------|
| 0.241834 | 40.83 | 10 | 0.68 | 51.51 | Quasi Peak | Neutral | 62.03 | -10.52 | Pass |
| 0.317476 | 39.32 | 10 | 0.50 | 49.83 | Quasi Peak | Neutral | 59.77 | -9.94 | Pass |
| 0.232609 | 41.69 | 10 | 0.71 | 52.40 | Quasi Peak | Neutral | 62.36 | -9.95 | Pass |
| 0.317805 | 37.85 | 10 | 0.50 | 48.36 | Quasi Peak | Neutral | 59.76 | -11.41 | Pass |
| 0.175002 | 45.58 | 10 | 1.00 | 56.58 | Quasi Peak | Neutral | 64.72 | -8.14 | Pass |
| 0.379276 | 33.91 | 10 | 0.44 | 44.35 | Quasi Peak | Neutral | 58.30 | -13.94 | Pass |
| 0.241834 | 23.43 | 10 | 0.68 | 34.11 | Average | Neutral | 52.03 | -17.93 | Pass |
| 0.317476 | 20.85 | 10 | 0.50 | 31.36 | Average | Neutral | 49.77 | -18.41 | Pass |
| 0.232609 | 26.12 | 10 | 0.71 | 36.83 | Average | Neutral | 52.36 | -15.53 | Pass |
| 0.317805 | 21.36 | 10 | 0.50 | 31.87 | Average | Neutral | 49.76 | -17.89 | Pass |
| 0.175002 | 19.79 | 10 | 1.00 | 30.80 | Average | Neutral | 54.72 | -23.92 | Pass |
| 0.379276 | 13.67 | 10 | 0.44 | 24.12 | Average | Neutral | 48.30 | -24.18 | Pass |

10.3 Radiated Measurements 30MHz to 1GHz

Requirement(s):

| Spec | Requirement | Applicable | | | | | | | | | | |
|----------------------------------|---|-----------------------|-----------------------|---------|-----|----------|-----|---------|-----|-----------|-----|---|
| 47 CFR §15.225 RSS-210 (A2.6) | <p>Operation within the band 13.110–14.010 MHz:</p> <p>(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.</p> <p>(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.</p> <p>(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.</p> <p>(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.</p> <table border="1"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength (uV/m)</th> </tr> </thead> <tbody> <tr> <td>30 – 88</td> <td>100</td> </tr> <tr> <td>88 – 216</td> <td>150</td> </tr> <tr> <td>216 960</td> <td>200</td> </tr> <tr> <td>Above 960</td> <td>500</td> </tr> </tbody> </table> | Frequency range (MHz) | Field Strength (uV/m) | 30 – 88 | 100 | 88 – 216 | 150 | 216 960 | 200 | Above 960 | 500 | ☒ |
| Frequency range (MHz) | Field Strength (uV/m) | | | | | | | | | | | |
| 30 – 88 | 100 | | | | | | | | | | | |
| 88 – 216 | 150 | | | | | | | | | | | |
| 216 960 | 200 | | | | | | | | | | | |
| Above 960 | 500 | | | | | | | | | | | |



| Procedure |
|--|
| <ol style="list-style-type: none"> The EUT was switched on and allowed to warm up to its normal operating condition. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: <ol style="list-style-type: none"> Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. The EUT was then rotated to the direction that gave the maximum emission. Finally, the antenna height was adjusted to the height that gave the maximum emission. A Quasi-peak measurement was then made for that frequency point. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured. |

| | | | |
|-----------|-------------------------|--------------------------|---|
| Test Date | 08/08/2016 – 08/09/2016 | Environmental conditions | Temperature 21.7°C Relative Humidity 45.6% Atmospheric Pressure 1007.4 mbar |
|-----------|-------------------------|--------------------------|---|

| | |
|--------|---|
| Remark | - |
|--------|---|

| | |
|--------|--------------------|
| Result | ☒ Pass ☐ Fail |
|--------|--------------------|

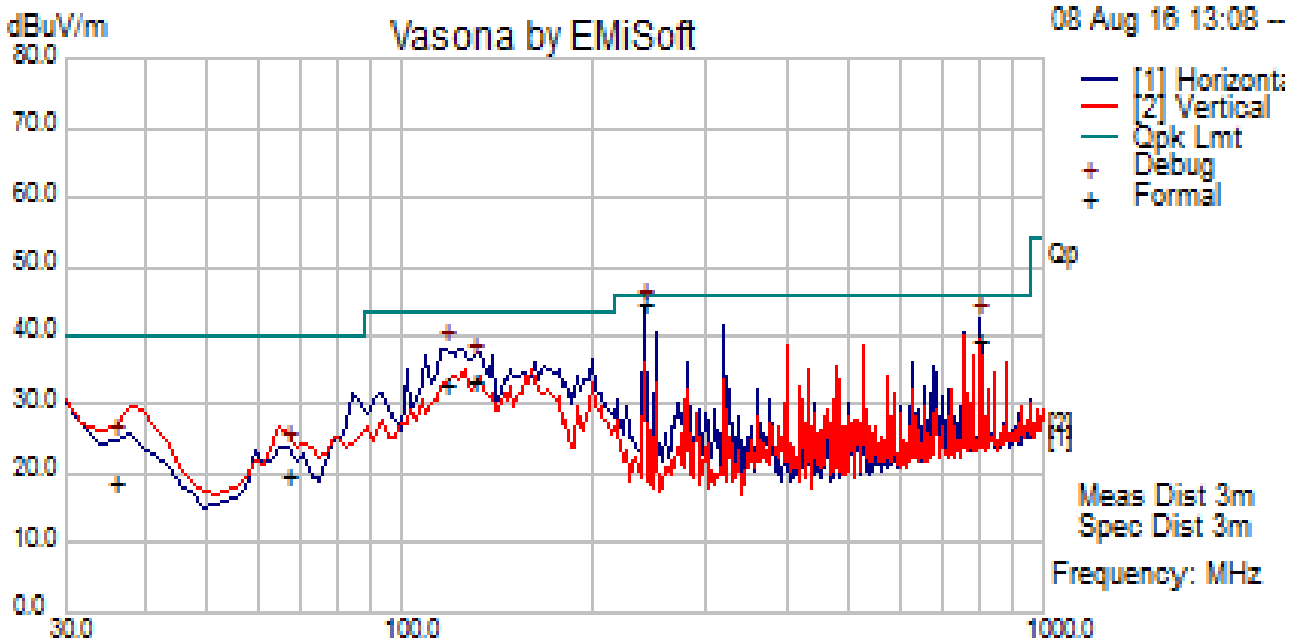
Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Rachana Khanduri at 10 meter chamber.

| | | | |
|---------------------------|--------------------------------|--------|---|
| Test specification: | Radiated Emission 30MHz – 1GHz | | |
| Environmental Conditions: | Temp(°C): | 21.7 | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| | Humidity (%): | 45.6 | |
| | Atmospheric(mbar): | 1007.4 | |
| Mains Power: | 120VAC, 60Hz | | |
| Tested by: | Rachana Khanduri | | |
| Test Date: | 08/08/2016 | | |
| Remarks: | RFID 13.56MHz CEM | | |

f=30MHz – 1000MHz plot and 3 meter distance

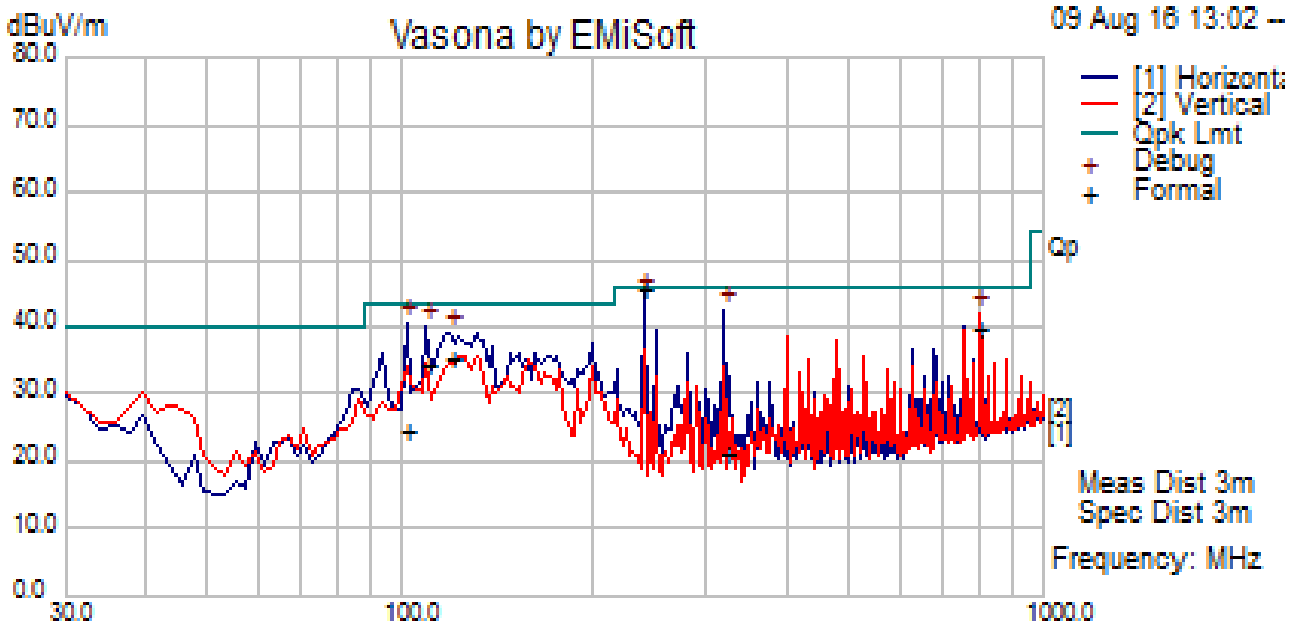


f=30MHz – 1000MHz Measurements

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 240.00 | 70.62 | 2.33 | 11.79 | 39.92 | 44.82 | Quasi Max | H | 124 | 208 | 46.02 | -1.20 | Pass |
| 797.67 | 52.36 | 4.53 | 21.58 | 39.34 | 39.13 | Quasi Max | H | 104 | 305 | 46.02 | -6.89 | Pass |
| 117.23 | 58.77 | 1.61 | 12.19 | 39.67 | 32.90 | Quasi Max | H | 380 | 316 | 43.52 | -10.62 | Pass |
| 129.21 | 57.16 | 1.71 | 14.31 | 39.73 | 33.45 | Quasi Max | H | 215 | 5 | 43.52 | -10.07 | Pass |
| 35.87 | 33.79 | 0.86 | 21.54 | 37.49 | 18.70 | Quasi Max | H | 347 | 346 | 40.00 | -21.30 | Pass |
| 66.49 | 50.19 | 1.23 | 7.27 | 38.88 | 19.81 | Quasi Max | H | 342 | 277 | 40.00 | -20.19 | Pass |

| | | | |
|---------------------------|---|--------|---|
| Test specification: | Radiated Emission 30MHz – 1GHz | | |
| Environmental Conditions: | Temp(°C): | 21.7 | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| | Humidity (%): | 45.6 | |
| | Atmospheric(mbar): | 1007.4 | |
| Mains Power: | 120VAC, 60Hz | | |
| Tested by: | Rachana Khanduri | | |
| Test Date: | 08/09/2016 | | |
| Remarks: | 13.56MHz RFID CEM, 13.56MHz RFID MAICD and WLAN b/g radio transmitting. | | |

f=30MHz – 1000MHz plot and 3 meter distance

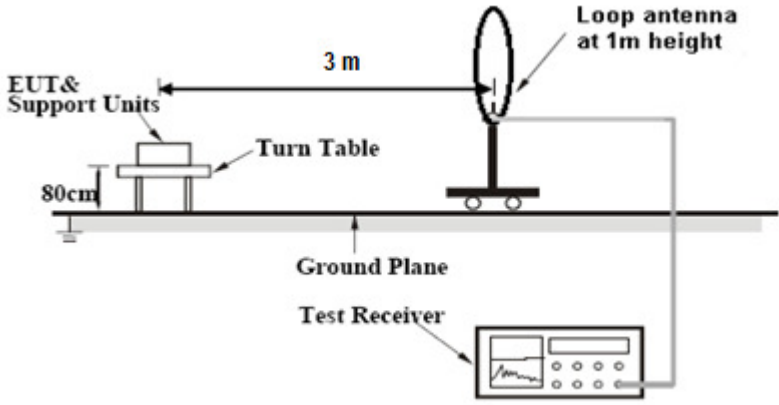


f=30MHz – 1000MHz Measurements

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 239.99 | 71.41 | 2.33 | 11.79 | 39.92 | 45.61 | Quasi Max | H | 130 | 206 | 46.02 | -0.41 | Pass |
| 101.93 | 53.11 | 1.55 | 9.66 | 39.67 | 24.65 | Quasi Max | H | 343 | 172 | 43.52 | -18.87 | Pass |
| 109.95 | 60.46 | 1.54 | 12.19 | 39.67 | 34.52 | Quasi Max | H | 302 | 151 | 43.52 | -9.00 | Pass |
| 319.4 | 43.83 | 2.73 | 14.36 | 39.77 | 21.15 | Quasi Max | H | 111 | 261 | 46.02 | -24.87 | Pass |
| 797.77 | 52.71 | 4.53 | 21.58 | 39.19 | 39.63 | Quasi Max | V | 141 | 235 | 46.02 | -6.39 | Pass |
| 119.64 | 59.21 | 1.64 | 13.95 | 39.67 | 35.13 | Quasi Max | H | 303 | 9 | 43.52 | -8.39 | Pass |

10.4 Radiated Measurements below 30MHz

Requirement(s):

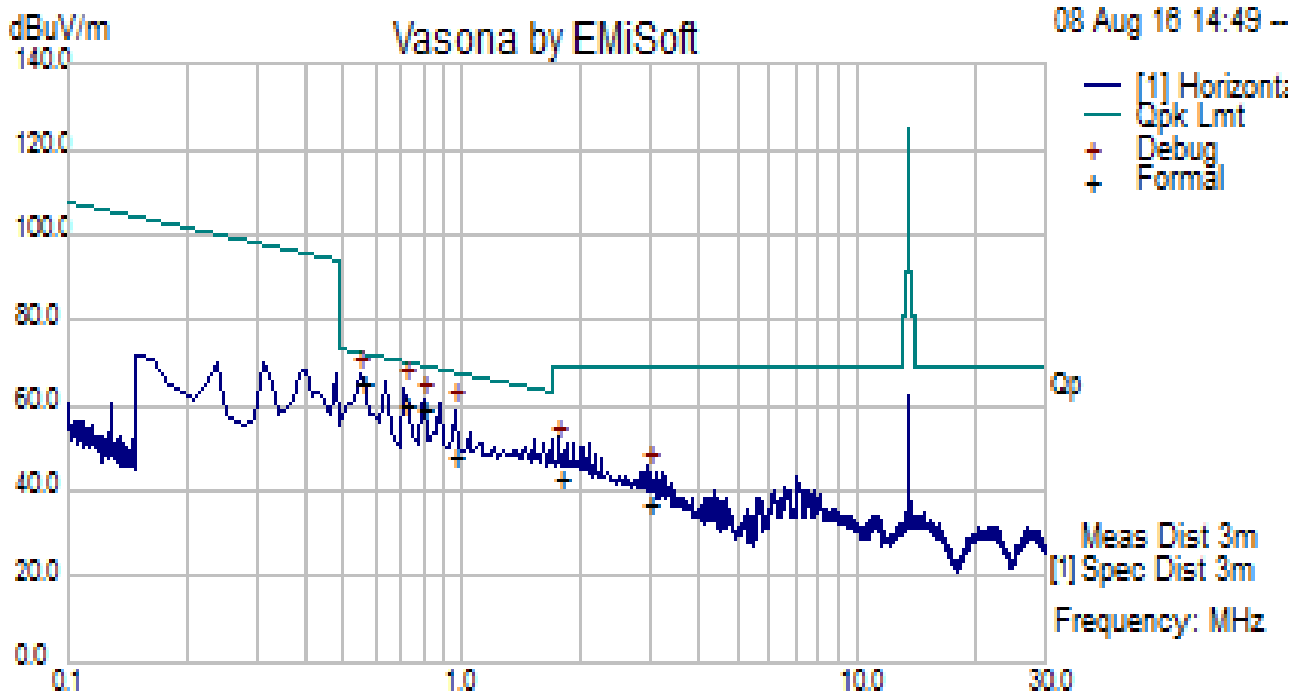
| Spec | Requirement | Applicable | | | | | | | | | |
|----------------------------------|--|---|--------------------------|-------------|--------|--|-------------------|-------|--|----------------------|------------|
| 47 CFR §15.225 RSS-210 (A2.6) | <p>Operation within the band 13.110–14.010 MHz</p> <p>(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.</p> <p>(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.</p> <p>(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.</p> <p>(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.</p> | ☒ | | | | | | | | | |
| Test Setup |  | | | | | | | | | | |
| Procedure | <p>For < 30MHz, Radiated emissions were measured according to ANSI C63.10. The EUT was set to transmit at the highest output power.</p> <p>The EUT was set 3 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 kHz.</p> <p>The limit is converted from microvolt/meter to decibel microvolt/meter.</p> | | | | | | | | | | |
| Test Date | 08/08/2016 | <table border="1"> <tr> <td>Environmental conditions</td> <td>Temperature</td> <td>21.7°C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>45.6%</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1007.4mbar</td> </tr> </table> | Environmental conditions | Temperature | 21.7°C | | Relative Humidity | 45.6% | | Atmospheric Pressure | 1007.4mbar |
| Environmental conditions | Temperature | 21.7°C | | | | | | | | | |
| | Relative Humidity | 45.6% | | | | | | | | | |
| | Atmospheric Pressure | 1007.4mbar | | | | | | | | | |
| Remark | - | | | | | | | | | | |
| Result | ☒ Pass ☐ Fail | | | | | | | | | | |

Test Data ☒ Yes (See below) ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

Test was done by Rachana Khanduri at 10 meter chamber.

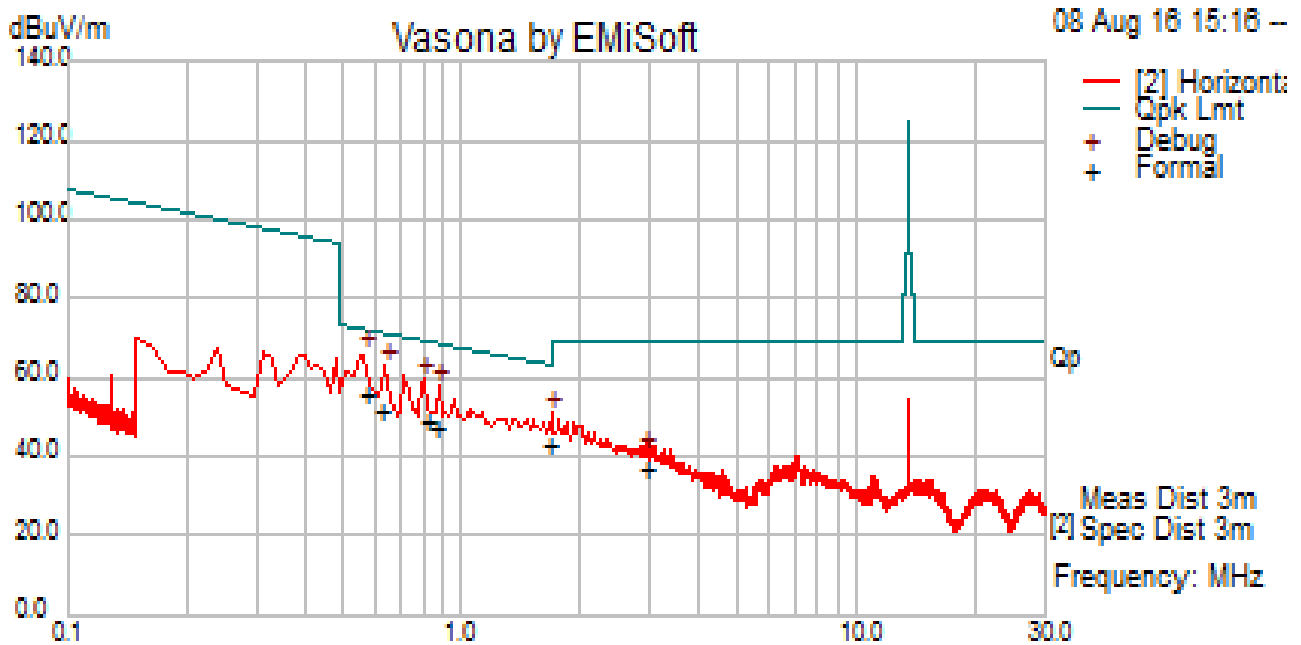
| | | | |
|---------------------------|---|--------|---|
| Test specification: | Radiated Spurious Emissions (below 30MHz) | | |
| Environmental Conditions: | Temp(°C): | 21.7 | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| | Humidity (%): | 45.6 | |
| | Atmospheric(mbar): | 1007.4 | |
| Mains Power: | 120VAC, 60Hz | | |
| Tested by: | Rachana Khanduri | | |
| Test Date: | 08/08/2016 | | |
| Remarks: | RFID1 13.56MHz CEM @ 0 Degree | | |



Quasi Max Measurement

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 0.56 | 99.30 | 0.18 | 0.30 | 34.80 | 64.98 | Quasi Max | 0 | 100 | 182 | 72.61 | -7.64 | Pass |
| 0.72 | 97.11 | 0.20 | -2.40 | 34.75 | 60.16 | Quasi Max | 0 | 100 | 187 | 70.43 | -10.27 | Pass |
| 0.80 | 97.51 | 0.20 | -3.40 | 34.73 | 59.58 | Quasi Max | 0 | 100 | 340 | 69.51 | -9.93 | Pass |
| 0.96 | 87.01 | 0.21 | -4.40 | 34.70 | 48.12 | Quasi Max | 0 | 100 | 231 | 68.00 | -19.88 | Pass |
| 1.76 | 83.33 | 0.26 | -5.30 | 35.18 | 43.11 | Quasi Max | 0 | 100 | 3 | 69.54 | -26.43 | Pass |
| 2.97 | 84.88 | 0.31 | -13.50 | 35.18 | 36.51 | Quasi Max | 0 | 100 | 354 | 69.54 | -33.03 | Pass |

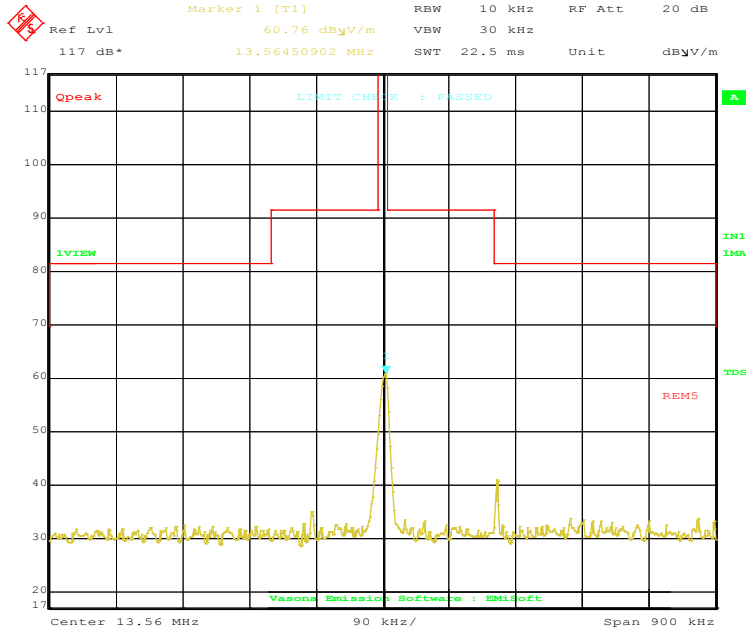
| | | | | |
|---------------------------|---|--------|--|--|
| Test specification: | Radiated Spurious Emissions (below 30MHz) | | | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| Environmental Conditions: | Temp(°C): | 21.7 | | |
| | Humidity (%): | 45.6 | | |
| | Atmospheric(mbar): | 1007.4 | | |
| Mains Power: | 120VAC, 60Hz | | | |
| Tested by: | Rachana Khanduri | | | |
| Test Date: | 08/08/2016 | | | |
| Remarks: | RFID1 13.56MHz @ 90 Degree | | | |



Quasi Max Measurement

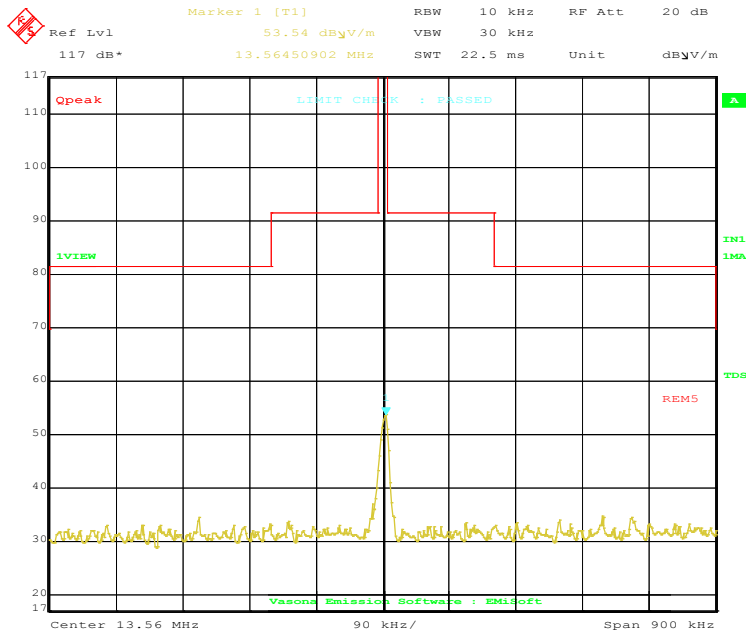
| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 0.57 | 90.06 | 0.18 | 0.30 | 34.79 | 55.75 | Quasi Max | 90 | 100 | 147 | 72.42 | -16.68 | Pass |
| 0.62 | 86.92 | 0.19 | -1.10 | 34.78 | 51.23 | Quasi Max | 90 | 100 | 23 | 71.71 | -20.47 | Pass |
| 0.81 | 86.96 | 0.20 | -3.50 | 34.72 | 48.94 | Quasi Max | 90 | 100 | 186 | 69.45 | -20.51 | Pass |
| 0.86 | 85.57 | 0.21 | -3.50 | 34.72 | 47.56 | Quasi Max | 90 | 100 | 286 | 68.89 | -21.33 | Pass |
| 1.67 | 83.13 | 0.26 | -5.30 | 35.18 | 42.91 | Quasi Max | 90 | 100 | 272 | 63.16 | -20.25 | Pass |
| 2.92 | 85.07 | 0.31 | -13.50 | 35.18 | 36.70 | Quasi Max | 90 | 100 | 35 | 69.54 | -32.84 | Pass |

Loop antenna at 0 degree



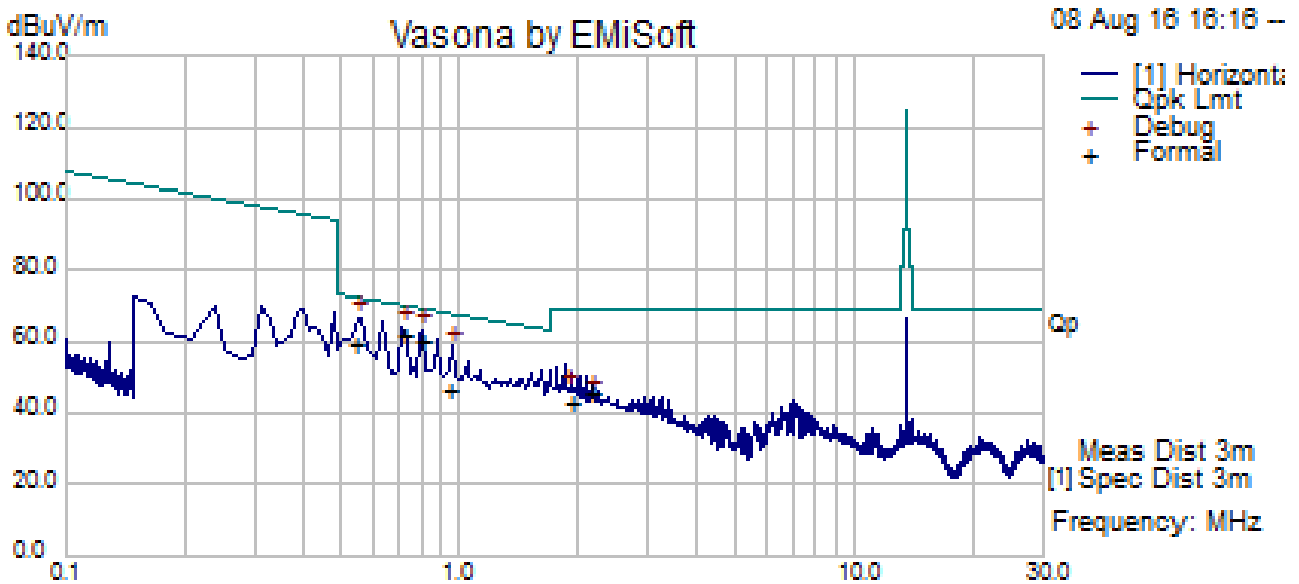
| Frequency (MHz) | Amplitude (dBμV/m) |
|-----------------|--------------------|
| 13.560450 | 60.76 |

Loop antenna at 90 degree



| Frequency (MHz) | Amplitude (dBμV/m) |
|-----------------|--------------------|
| 13.560450 | 53.54 |

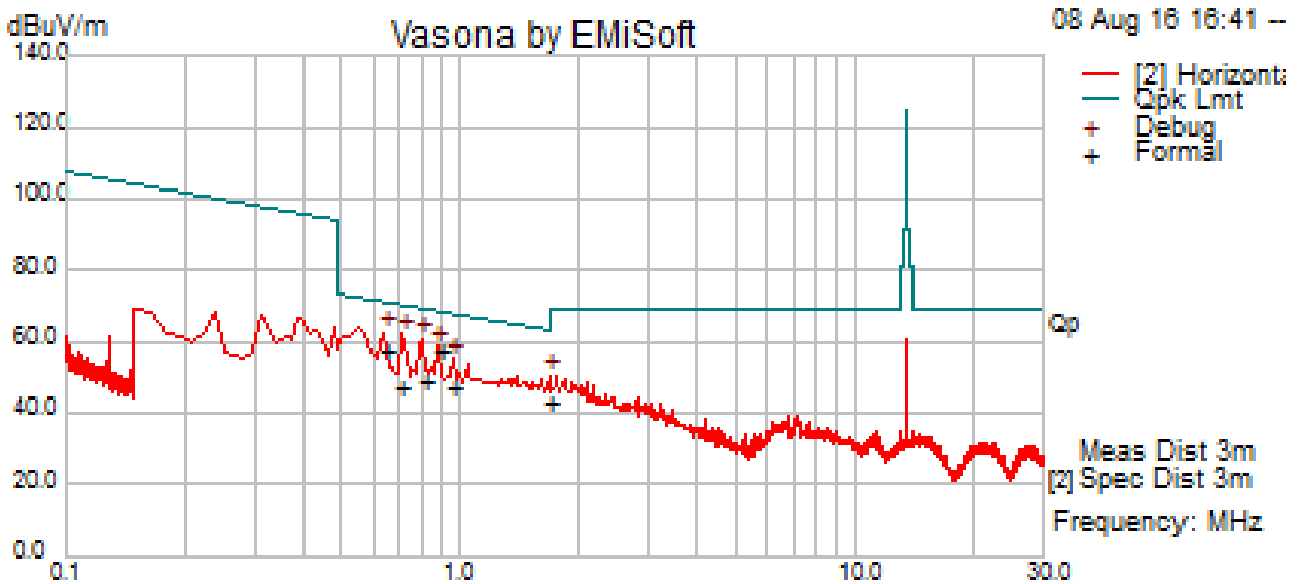
| | | | |
|---------------------------|--|--------|---|
| Test specification: | Radiated Spurious Emissions (below 30MHz) | | |
| Environmental Conditions: | Temp(°C): | 21.1 | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| | Humidity (%): | 46.5 | |
| | Atmospheric(mbar): | 1007.2 | |
| Mains Power: | 120VAC, 60Hz | | |
| Tested by: | Rachana Khanduri | | |
| Test Date: | 08/08/2016 | | |
| Remarks: | RFID1 13.56MHz CEM ,13.56MHz RFID MAICD and WLAN b/g radio transmitting @ 0 Degree | | |



Quasi Max Measurement

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 0.54 | 93.2 | 0.18 | 0.3 | 34.79 | 58.89 | Quasi Max | 0 | 100 | 322 | 72.98 | -14.09 | Pass |
| 0.72 | 99.01 | 0.20 | -2.4 | 34.75 | 62.06 | Quasi Max | 0 | 100 | 158 | 70.45 | -8.38 | Pass |
| 0.80 | 98.45 | 0.20 | -3.5 | 34.73 | 60.42 | Quasi Max | 0 | 100 | 14 | 69.52 | -9.10 | Pass |
| 0.94 | 85.56 | 0.21 | -4.4 | 34.71 | 46.66 | Quasi Max | 0 | 100 | 254 | 68.18 | -21.52 | Pass |
| 1.90 | 82.89 | 0.28 | -5.3 | 35.18 | 42.69 | Quasi Max | 0 | 100 | 255 | 69.54 | -26.86 | Pass |
| 2.16 | 91.07 | 0.29 | -10.6 | 35.18 | 45.58 | Quasi Max | 0 | 100 | 142 | 69.54 | -23.96 | Pass |

| | | | |
|---------------------------|---|--------|---|
| Test specification: | Radiated Spurious Emissions (below 30MHz) | | |
| Environmental Conditions: | Temp(°C): | 21.6 | Result: <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
| | Humidity (%): | 46.5 | |
| | Atmospheric(mbar): | 1007.2 | |
| Mains Power: | 120VAC, 60Hz | | |
| Tested by: | Rachana Khanduri | | |
| Test Date: | 08/08/2016 | | |
| Remarks: | 13.56MHz CEM ,13.56MHz RFID MAICD and WLAN b/g radio transmitting @ 90 Degree | | |

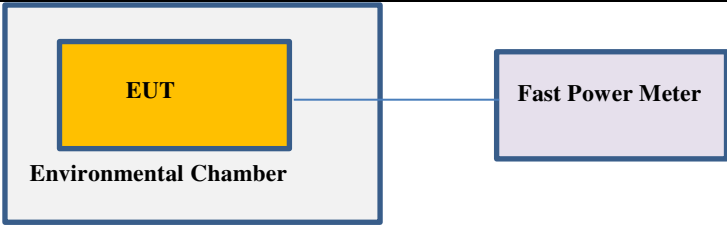


Quasi Max Measurement

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Amp dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------|--------------|------------------|-----|--------|-----|--------------|-----------|------------|
| 0.71 | 84.29 | 0.20 | -2.40 | 34.76 | 47.33 | Quasi Max | 90 | 100 | 237 | 70.63 | -23.31 | Pass |
| 0.81 | 87.01 | 0.20 | -3.50 | 34.72 | 48.99 | Quasi Max | 90 | 100 | 126 | 69.44 | -20.45 | Pass |
| 0.65 | 93.05 | 0.19 | -1.10 | 34.77 | 57.37 | Quasi Max | 90 | 100 | 79 | 71.41 | -14.04 | Pass |
| 0.88 | 96.03 | 0.21 | -4.40 | 34.72 | 57.12 | Quasi Max | 90 | 100 | 72 | 68.70 | -11.58 | Pass |
| 1.68 | 83.04 | 0.26 | -5.30 | 35.18 | 42.82 | Quasi Max | 90 | 100 | 351 | 63.12 | -20.30 | Pass |
| 0.95 | 86.31 | 0.21 | -4.40 | 34.71 | 47.41 | Quasi Max | 90 | 100 | 357 | 68.08 | -20.67 | Pass |

10.5 Frequency Stability

Requirement(s):

| Spec | Requirement | Applicable | | | | | | | | | |
|-------------------------------------|--|--|--------------------------|-------------|---------|--|-------------------|--------|--|----------------------|-------------|
| 47 CFR §15.225 e) RSS-210 (A2.6) | Limit: $\pm 0.01\%$ of 13.56 MHz = 1356 Hz | <input checked="" type="checkbox"/> | | | | | | | | | |
| Test Setup |  <ol style="list-style-type: none"> The EUT was set up inside an environmental chamber. The EUT was placed in the centre of the environmental. | | | | | | | | | | |
| Procedure | Frequency Stability was measured according to 47 CFR §2.1055. Measurement was taken with spectrum analyzer. The spectrum analyzer bandwidth and span was set to read in hertz. A voltmeter was used to monitor when varying the voltage. | | | | | | | | | | |
| Test Date | 08/10/2016 | <table border="1"> <tr> <td>Environmental conditions</td> <td>Temperature</td> <td>21.8 °C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>45.6 %</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1010.2 mbar</td> </tr> </table> | Environmental conditions | Temperature | 21.8 °C | | Relative Humidity | 45.6 % | | Atmospheric Pressure | 1010.2 mbar |
| Environmental conditions | Temperature | 21.8 °C | | | | | | | | | |
| | Relative Humidity | 45.6 % | | | | | | | | | |
| | Atmospheric Pressure | 1010.2 mbar | | | | | | | | | |
| Remark | None | | | | | | | | | | |
| Result | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail | | | | | | | | | | |

Test Data Yes (See below) N/A

Test Plot Yes (See below) N/A

Test was done by Rachana Khanduri at RF test site.

Test Result for 13.56MHz Radio

Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20°C to $+50^{\circ}\text{C}$ at normal supply voltage.

Reference Frequency: 13.56 MHz

| Temperature | Measured Freq. | Freq. Drift | Freq. Deviation | Pass/Fail |
|------------------------|----------------|-------------|-----------------|-----------|
| ($^{\circ}\text{C}$) | (MHz) | (Hz) | (Limit: 0.01%) | |
| 50 | 13.5603 | 300 | <0.01 | Pass |
| 40 | 13.5603 | 300 | <0.01 | Pass |
| 30 | 13.5603 | 300 | <0.01 | Pass |
| 20 | 13.5603 | 300 | <0.01 | Pass |
| 10 | 13.5603 | 300 | <0.01 | Pass |
| 0 | 13.5603 | 300 | <0.01 | Pass |
| -10 | 13.5603 | 300 | <0.01 | Pass |
| -20 | 13.5603 | 300 | <0.01 | Pass |

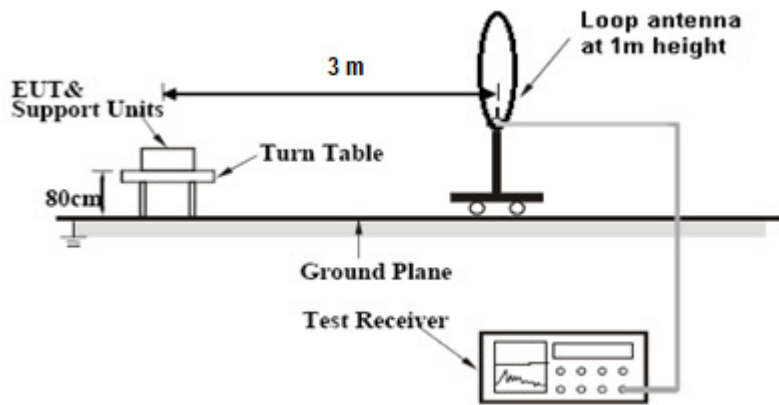
Frequency Stability versus Input Voltage: The Frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$, the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at a 20°C environmental temperature.

Carrier Frequency: 13.56 MHz

| Measured Voltage $\pm 15\%$ of nominal (AC) | Measured Freq. (MHz) | Freq. Drift (Hz) | Freq. Deviation (Limit: 0.01%) | Pass/Fail |
|---|-------------------------|---------------------|-----------------------------------|-----------|
| 13.8 | 13.56 | 0 | <0.01 | Pass |
| 10.2 | 13.56 | 0 | <0.01 | Pass |

10.6 Occupied Bandwidth

Requirement(s):

| Spec | Requirement | Applicable | | | | | | | | | |
|--------------------------|---|--|--------------------------|-------------|---------|--|-------------------|--------|--|----------------------|-------------|
| RSS-Gen 4.6.1 | The transmitter shall be operated at its maximum carrier power measured under normal test conditions. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used given that a peak or peak hold may produce a wider bandwidth than actual. The trace data points are recovered and directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth. | <input checked="" type="checkbox"/> | | | | | | | | | |
| Test Setup |  | | | | | | | | | | |
| Procedure | <ol style="list-style-type: none"> The EUT was switched on and allowed to warm up to its normal operating condition. To measure conducted, a SMA cable was used to replace the EUT antenna. To measure radiated, an external antenna was used to detect EUT transmission signal. Measurement of the 99% Occupied Bandwidth of EUT transmission signal and make record. | | | | | | | | | | |
| Test Date | 08/10/2016 | <table border="1"> <tr> <td>Environmental conditions</td> <td>Temperature</td> <td>21.8 °C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>45.6 %</td> </tr> <tr> <td></td> <td>Atmospheric Pressure</td> <td>1010.2 mbar</td> </tr> </table> | Environmental conditions | Temperature | 21.8 °C | | Relative Humidity | 45.6 % | | Atmospheric Pressure | 1010.2 mbar |
| Environmental conditions | Temperature | 21.8 °C | | | | | | | | | |
| | Relative Humidity | 45.6 % | | | | | | | | | |
| | Atmospheric Pressure | 1010.2 mbar | | | | | | | | | |
| Remark | - | | | | | | | | | | |
| Result | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail | | | | | | | | | | |

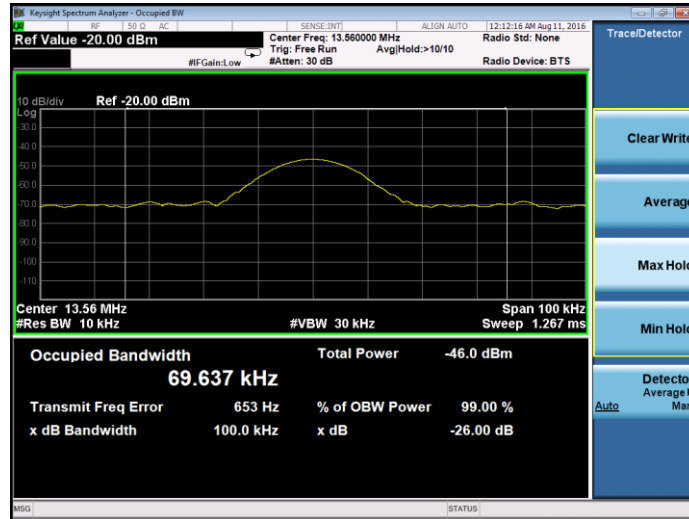
Test Data Yes (See below) N/A

Test Plot Yes (See below) N/A

Test was done by Rachana Khanduri at 10 meter chamber.

Test results:

13.56 MHz



| Frequency (MHz) | Occupied Bandwidth (KHz) |
|-----------------|--------------------------|
| 13.56 | 69.64 |
















Annex A. TEST INSTRUMENT








| Instrument | Model | Manufacturer | Serial # | Cal Date | Cal Cycle | Cal Due | In use |
|---------------------------------|----------|-----------------|------------|------------|-----------|------------|-------------------------------------|
| Conducted Emissions | | | | | | | |
| R & S Receiver | ESIB 40 | Rohde & Schwarz | 100179 | 06/08/2016 | 1 Year | 06/08/2017 | <input checked="" type="checkbox"/> |
| CHASE LISN (9k-30MHz) | MN2050B | Chase | 1018 | 08/07/2015 | 1 Year | 08/07/2016 | <input checked="" type="checkbox"/> |
| Radiated Emissions | | | | | | | |
| R & S Receiver | ESIB 40 | Rohde & Schwarz | 100179 | 06/08/2016 | 1 Year | 06/08/2017 | <input checked="" type="checkbox"/> |
| Pre-Amplifier (1-26.5GHz) | 8449B | Hewlett Packard | 3008A00715 | 03/30/2016 | 1 Year | 03/30/2017 | <input type="checkbox"/> |
| Preamplifier (100KHz-7GHz) | LPA-6-30 | RF Bay, Inc. | 11140711 | 02/10/2016 | 1 Year | 02/10/2017 | <input checked="" type="checkbox"/> |
| ETS-Lingren Loop Antenna | 6512 | ETS-Lingren | 00049120 | 07/14/2016 | 1 Year | 07/14/2017 | <input checked="" type="checkbox"/> |
| Bi-Log antenna (30MHz~2GHz) | JB1 | Sunol Sciences | A030702 | 07/08/2016 | 1 Year | 07/08/2017 | <input checked="" type="checkbox"/> |
| Horn Antenna (1-26.5GHz) | 3115 | EMCO | 10SL0059 | 08/25/2015 | 1 Year | 08/25/2016 | <input type="checkbox"/> |
| 3 Meters SAC | 3M | ETS-Lingren | N/A | 06/09/2016 | 1 Year | 06/09/2017 | <input type="checkbox"/> |
| 10 Meters SAC | 10M | ETS-Lingren | N/A | 09/05/2015 | 1 Year | 09/05/2016 | <input checked="" type="checkbox"/> |
| RF Conducted Measurement | | | | | | | |
| Spectrum Analyzer | N9010A | Keysight | 10SL0219 | 08/20/2015 | 1 Year | 08/20/2016 | <input checked="" type="checkbox"/> |
| Test Equity Environment Chamber | 1007H | Test Equity | 61201 | 07/21/2016 | 1 Year | 07/21/2017 | <input checked="" type="checkbox"/> |
| USB RF Power Sensor | 7002-006 | ETS-Lingren | 10SL0190 | 09/03/2015 | 1 Year | 09/03/2016 | <input type="checkbox"/> |

Test Software Version

| Test Item | Vendor | Software | Version |
|--------------------|---------|----------------|---------|
| Radiated Emission | EMISoft | EMISoft Vasona | V5.0 |
| Conducted Emission | EMISoft | EMISoft Vasona | V5.0 |

Annex B. SIEMIC Accreditation

| Accreditations | Document | Scope / Remark |
|---|---|---|
| ISO 17025 (A2LA) |  | Please see the documents for the detailed scope |
| ISO Guide 65 (A2LA) |  | Please see the documents for the detailed scope |
| TCB Designation | | A1, A2, A3, A4, B1, B2, B3, B4, C |
| FCC DoC Accreditation |  | FCC Declaration of Conformity Accreditation |
| FCC Site Registration |  | 3 meter site |
| FCC Site Registration |  | 10 meter site |
| IC Site Registration |  | 3 meter site |
| IC Site Registration |  | 10 meter site |
| EU NB |  | Radio & Telecommunications Terminal Equipment: EN45001 – EN ISO/IEC 17025 |
| |  | Electromagnetic Compatibility: EN45001 – EN ISO/IEC 17025 |
| Singapore iDA CB(Certification Body) |  | Phase I, Phase II |
| Vietnam MIC CAB Accreditation |  | Please see the document for the detailed scope |
| Hong Kong OFCA |  | (Phase II) OFCA Foreign Certification Body for Radio and Telecom |
| |  | (Phase I) Conformity Assessment Body for Radio and Telecom |
| Industry Canada CAB |  | Radio: Scope A – All Radio Standard Specification in Category I |
| |  | Telecom: CS-03 Part I, II, V, VI, VII, VIII |

| | | |
|---|---|--|
| Japan Recognized Certification Body Designation |  | <p>Radio: A1. Terminal equipment for purpose of calling</p> <p>Telecom: B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p> |
| Korea CAB Accreditation |  | <p>EMI: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI KN22: Test Method for EMI</p> <p>EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS</p> |
| | | <p>Radio: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68</p> <p>Telecom: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4</p> |
| Taiwan NCC CAB Recognition |  | LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08 |
| Taiwan BSMI CAB Recognition |  | CNS 13438 |
| Japan VCCI |  | <p>R-3083: Radiation 3 meter site</p> <p>C-3421: Main Ports Conducted Interference Measurement</p> <p>T-1597: Telecommunication Ports Conducted Interference Measurements</p> |
| Australia CAB Recognition |  | <p>EMC: AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p> |
| | | <p>Radio communications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771</p> |
| | | <p>Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1</p> |
| Australia NATA Recognition |  | AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2 |