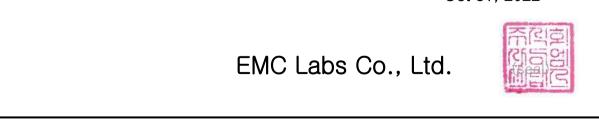


| Test Report | | | | | |
|---|--|--|--|--|--|
| 1. Client | | | | | |
| • Name : • Address : | Apulse Technology Co.,Ltd A-1403, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do, Republic of Korea. | | | | |
| 2. Use of Report : | FCC Approval | | | | |
| 3. Sample Description | | | | | |
| • Product Name: RFID Fixed Reader • Model Name: a313 | | | | | |
| 4. Date of Receipt : | 2022-10-05 | | | | |
| 5. Date of Test : | 2022-10-11 ~ 2022-10-24 | | | | |
| 6. Test Method : | FCC Part 15 Subpart C 15.247 | | | | |
| 7. Test Results : | Refer to the test results | | | | |
| This test report must not be reproduced or reproduced in any way. The results shown in this test report are the results of testing the samples provided. This test report is prepared according to the requirements of ISO / IEC 17025. | | | | | |
| Tested b | by Technical Manager | | | | |
| Affirmation Dae-Se | ong, Choi Yong-Min, Won | | | | |
| ·i | Oct 31, 2022 | | | | |



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<u>Version</u>

| TEST REPORT NO. | DATE | DESCRIPTION |
|-------------------|--------------|---------------|
| KR0140-RF2210-006 | Oct 31, 2022 | Initial Issue |
| | | |
| | | |

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1. Applicant & Manufacturer & Test Laboratory Information

1.1 Applicant Information

| Applicant Apulse Technology Co.,Ltd | |
|--|--------------------------|
| Applicant Address A-1403, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do, Repu | |
| Contact Person | Robin, Jang |
| Telephone No. | +82-10-5526-0605 |
| Fax No. | +82-70-4222-5686 |
| E-mail | robinjang@apulsetech.com |

1.2. Manufacturer Information

| Manufacturer | Apulse Technology Co.,Ltd |
|----------------------|--|
| Manufacturer Address | A-1403, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do, Republic of Korea. |

1.3 Test Laboratory Information

| Laboratory | EMC Labs Co., Ltd. |
|--------------------------|--|
| Laboratory Address | 100, Jangjateo-ro, Hobeop-myeon, Icheon-si, Gyeonggi-do, Republic of |
| Laboratory Address | Korea |
| Contact Person | Yongmin Won |
| Telephone No. | +82-2-508-7778 |
| Fax No. | +82-2-538-3668 |
| FCC Designation No. | KR0140 |
| FCC Registration No. | 58000 |
| IC Site Registration No. | 28751 |

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2. Equipment under Test(EUT) Information

2.1 General Information

| Product Name | RFID Fixed Reader |
|--------------|-------------------|
| Model Name | a313 |
| FCC ID | 2AWMDA313 |
| Power Supply | DC 12.0 V |

2.2 Additional Information

| Operating Frequency | 902.75 MHz ~ 927.25 MHz |
|---------------------|-------------------------|
| Number of channel | 50 |
| Modulation Type | A1D |
| Antenna Type | Patch Antenna |
| Antenna Gain | 5.34dBi |
| Firmware Version | 1.0 |
| Hardware Version | 1.0 |
| Test software | Certihost/v1.0.2 |

2.3 Test Frequency

| Test mode | Test Frequency (MHz) | | |
|------------------------|----------------------|------------------|----------------|
| | Low Frequency | Middle Frequency | High Frequency |
| RFID (900 MHz FHSS) | 902.75 | 915.75 | 927.25 |

2.4 Used Test Software Setting Value

| Test Mode | Setting Item | |
|------------------------|--------------|--|
| | Power | |
| RFID (900 MHz FHSS) | 27 | |

2.7 Mode of operation during the test

- The EUT continuous transmission mode during the test with set at Low Channel, Middle Channel, and High Channel. To get a maximum radiated emission levels from the EUT, the EUT was moved throughout the XY, YZ, XZ planes.

2.8 Modifications of EUT

- None

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3. Test Summary

| Applied | FCC Rule | IC Rule | Test Items | Test Condition | Result |
|---------|---------------------------------|--|--------------------------------|----------------------|--------|
| | 15.203 | _ | Antenna Requirement | | С |
| | 15.247(a) | _ | 20 dB Bandwidth | | С |
| | _ | RSS GEN (6.7) | Occupied Bandwidth (99%) | | С |
| | 15.247(a) | RSS-247 (5.1) | Number of Hopping Frequencies | Conducted | С |
| | 15.247(a) | RSS-247 (5.1) | Time of Occupancy (Dwell Time) | Conducted | С |
| | 15.247(a) | RSS-247 (5.1) | Carrier Frequencies Separation | | С |
| | 15.247(b) | RSS-247 (5.4) | Peak Output Power | | С |
| | 15.247(d) | RSS-247 (5.5) | Conducted Spurious Emission | | С |
| | 15.247(d) 15.205 & 15.209 | RSS-247 (5.5) RSS-GEN (8.9 & 8.10) | Radiated Spurious Emission | Radiated | С |
| | 15.207 | RSS-GEN (8.8) | | AC Line Conducted | С |

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

The sample was tested according to the following specification: ANSI C63.10:2013.

Compliance was determined by specification limits of the applicable standard according to customer requirements.



4. Used equipment on test

| Description | Manufacturer | Model Name | Serial Name | Next Cal. |
|---------------------------------|-------------------|---------------------------|-------------------|------------|
| TEMP & HUMID CHAMBER | JFM | JFMA-001 | 20200929-01 | 2022.12.17 |
| CONTROLLER | AMWON TECHNOLOGY | TEMI2500 | S7800VK191 0707 | 2022.12.17 |
| PSA SERIES SPECTRUM ANALYZER | AGILENT | E4440A | MY45304057 | 2022.12.15 |
| MXG ANALOG SIGNAL GENERATOR | AGILENT | N5183A | MY50141890 | 2022.12.15 |
| SYSTEM DC POWER SUPPLY | AGILENT | 6674A | MY53000118 | 2022.12.15 |
| VECTOR SIGNAL GENERATOR | ROHDE & SCHWARZ | SMBV100A | 257524 | 2022.12.15 |
| BLUETOOTH TESTER | TESCOM | TC-3000A | 3000A480088 | 2022.12.15 |
| DIRECTIONAL COUPLER | AGILENT | 773D | 2839A01855 | 2022.12.15 |
| ATTENUATOR | AGILENT | 8493C | 73193 | 2022.12.15 |
| ATTENUATOR | ACE RF COMM | ATT SMA 20W 20dB 8 GHz | A-0820.SM20.2 | 2023.04.11 |
| TERMINATIOM | HEWLETT PACKARD | 909D | 07492 | 2022.12.15 |
| POWER DIVIDER | HEWLETT PACKARD | 11636A | 06916 | 2022.12.15 |
| SLIDE-AC | DAEKWANG TECH | SV-1023 | - | _ |
| DIGITAL MULTIMETER | HUMANTECHSTORE | 15B+ | 50561541WS | 2022.12.15 |
| ACTIVE LOOP ANTENNA | TESEQ | HLA 6121 | 55685 | 2022.12.30 |
| Biconilog ANT | Schwarzbeck | VULB 9160 | 3260 | 2023.02.03 |
| Biconilog ANT | Schwarzbeck | VULB9168 | 902 | 2023.01.14 |
| Horn Ant. | Schwarzbeck | BBHA9120D | 974 | 2023.01.08 |
| Horn Ant. | S/B | BBHA9120D | 1497 | 2023.01.25 |
| Amplifier | TESTEK | TK-PA18H | 200104-L | 2023.03.17 |
| EMI TEST RECEIVER | ROHDE& SCHWARZ | ESW44 | 101952 | 2023.04.07 |
| PROGRAMMABLE DC POWER SUPPLY | ODA | OPE-305Q | oda-01-09-23-1831 | 2023.01.10 |
| DC POWER SUPPLY | AGILENT | E3634A | MY40012120 | 2023.02.03 |
| POWER SENSOR | AGILENT | U2001H | MY51140028 | 2023.02.19 |
| Test Receiver | ROHDE & SCHWARZ | ESR7 | 101616 | 2023.06.28 |
| LISN | ROHDE & SCHWARZ | ENV216 | 100409 | 2023.01.10 |
| PULSE LIMITER | lignex1 | EPL-30 | NONE | 2023.01.24 |

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5. Antenna Requirement

According to §15.203 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.

According to §15.247(b)(4) e conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.1 Result

Complies

(The transmitter has a Patch Antenna. The directional peak gain of the antenna is 5.34 dBi.)



6. 20 dB Bandwidth & Occupied Bandwidth (99%)

6.1 Test Setup

Refer to the APPENDIX I.

6.2 Limit

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.3 Test Procedure

- 1. The 20 dB bandwidth & Occupied bandwidth were measured with a spectrum analyzer connected to RF antenna Connector (conducted measurement) while EUT was operating in transmit mode. The analyzer center frequency was set to the EUT carrier frequency, using the analyzer.
- 2. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using below setting:
 RBW = 1% to 5% of the 20 dB Bandwidth & Occupied Bandwidth
 VBW ≥ 3 × RBW
 Span = between two times and five times the 20 dB Bandwidth & Occupied Bandwidth
 Sweep = Auto
 Detector function = Peak
 Trace = Max Hold

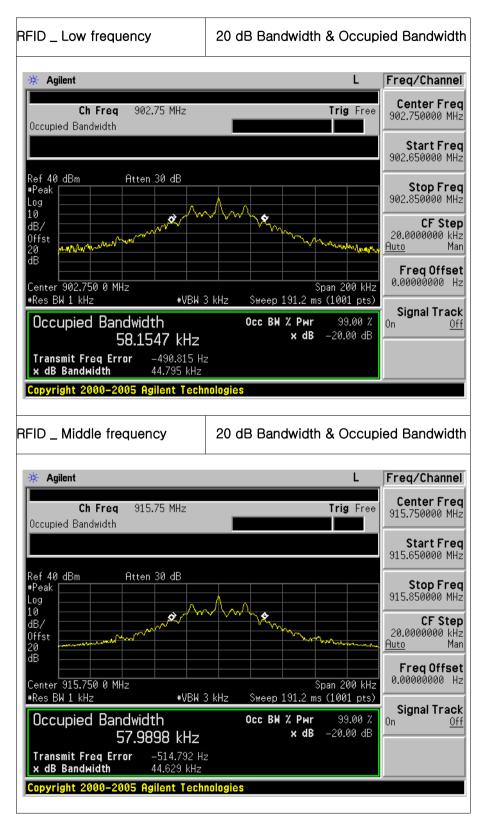
6.4 Test Result

| Test Mode | Test Frequency | 20 dB Bandwidth (kHz) | Occupied Bandwidth (kHz) |
|-----------|----------------|--------------------------|-----------------------------|
| | Low | 44.795 | 58.155 |
| RFID | Middle | 44.629 | 57.990 |
| | High | 44.918 | 58.318 |

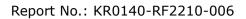
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6.5 Test Plot



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| RFID _ High frequency | 20 dB Bandwidth & Occup | ied Bandwidth |
|---|---|---|
| * Agilent | L | Freq/Channel |
| Ch Freq 927.25 MHz Occupied Bandwidth | Trig Free | Center Freq 927.250000 MHz |
| | | Start Freq 927.150000 MHz |
| Ref 40 dBm Atten 30 dB #Peak Log 10 | | Stop Freq 927.350000 MHz |
| dB/ Offst 20 dB | A A A A A A A A A A A A A A A A A A A | CF Step 20.0000000 kHz <u>Auto</u> Man |
| Center 927.250 0 MHz | Span 200 kHz 3 kHz Sweep 191.2 ms (1001 pts) | Freq Offset 0.00000000 Hz |
| Occupied Bandwidth 58.3183 kHz | Осс В₩ % Рwr 99.00 % x dB -20.00 dB | Signal Track On <u>Off</u> |
| Transmit Freq Error -44.310 Hz x dB Bandwidth 44.918 kHz | | |
| Copyright 2000-2005 Agilent Tech | nologies | |

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7. Number of Hopping Frequencies

7.1 Test Setup

Refer to the APPENDIX I.

7.2 Limit

Limit : >= 50 hops

7.3 Test Procedure

The number of hopping frequencies was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

To get higher resolution, two frequency ranges for FH mode within the 902 \sim 928 MHz were examined.

The spectrum analyzer is set to:

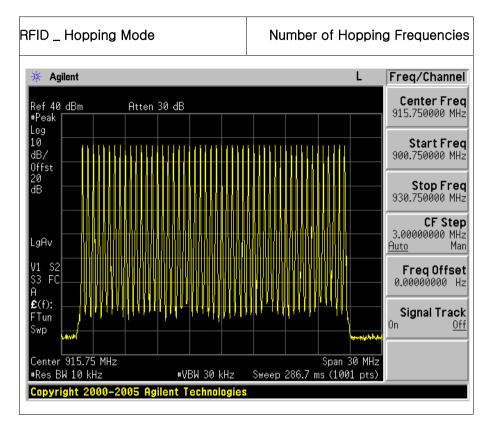
Span = 30 MHzRBW = To identify clearly the individual channels, set the RBW to less than 30% of the
channel spacing or the 20 dB bandwidth, whichever is smaller.VBW ≥ RBWSweep = AutoDetector = PeakTrace = Max hold

7.4 Test Result

| Test Mode | Number of Hopping Channels |
|-----------|----------------------------|
| RFID | 50 |



7.5 Test Plot



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8. Time of Occupancy (Dwell Time)

8.1 Test Setup

Refer to the APPENDIX I.

8.2 Limit

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

8.3 Test Procedure

The dwell time was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

The spectrum analyzer is set to:

Center frequency = 921.9 MHz Span = Zero RBW = 100 kHz (RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel) VBW ≥ RBW Detector = Peak Trace = Max hold

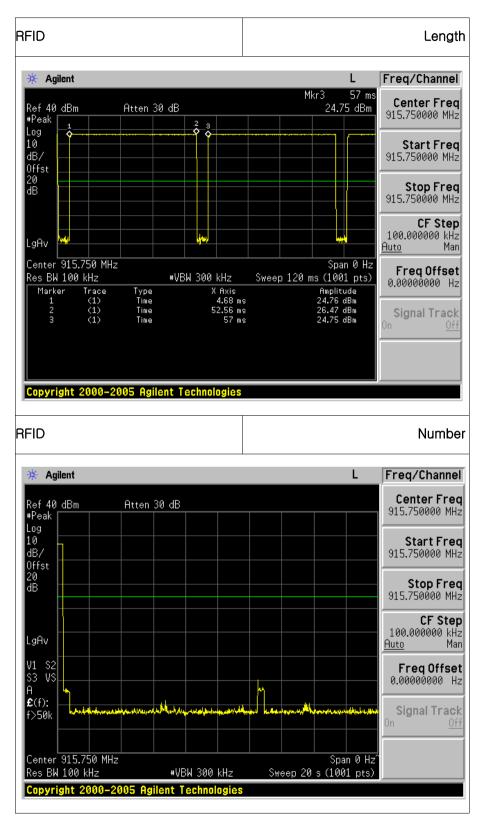
8.4 Test Result

| Test Frequency | Length | Number | Dwell Time |
|----------------|--------|--------|------------|
| (MHz) | (ms) | | (ms) |
| 915.75 | 47.88 | 1 | 47.88 |

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8.5 Test Plot



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9. Carrier Frequencies Separation

9.1 Test Setup

Refer to the APPENDIX I.

9.2 Limit

Limit : \geq 25 kHz or \geq 20 dB Bandwidth whichever is greater.

9.3 Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

After the trace being stable, the reading value between the peaks of the adjacent channels using the marker delta function was recorded as the measurement results.

The spectrum analyzer is set to:

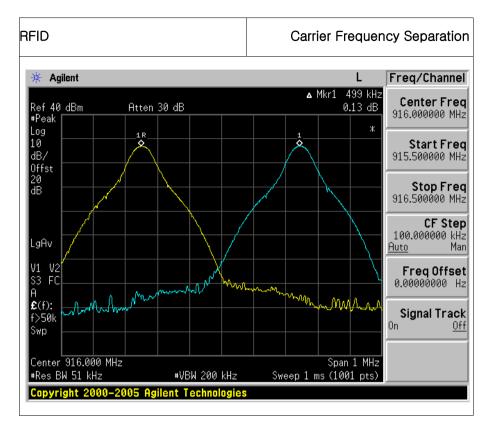
9.4 Test Result

| Test Mode | Carrier Frequencies Separation (kHz) | Min. Limit (kHz) |
|-----------|--|---------------------|
| RFID | 499.00 | 57.99 |

Note: Limit (kHz) = Test Result of 20 dB BW



9.5 Test Plot



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10. Peak Output Power

10.1 Test Setup

Refer to the APPENDIX I.

10.2 Limit

The maximum peak output power of the intentional radiator shall not exceed the following:

\$15.247(b)(2) and RSS-247(5.4) (a), For frequency hopping systems operating in the 902-928 MHz band:

1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) and 5.4(a) of this section.

10.3 Test Procedure

- 1. The RF output power was measured with a spectrum analyzer connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate center frequency, a spectrum analyzer was used to record the shape of the transmit signal.
- 2. The peak output power of the fundamental frequency was measured with the spectrum analyzer using;

Span = approximately 5 times of the 20 dB bandwidth, centered on a hopping channel PRW > 20 dR Received with

RBW ≥ 20 dB Bandwidth VBW ≥ RBW Sweep = Auto Detector function = Peak Trace = Max Hold



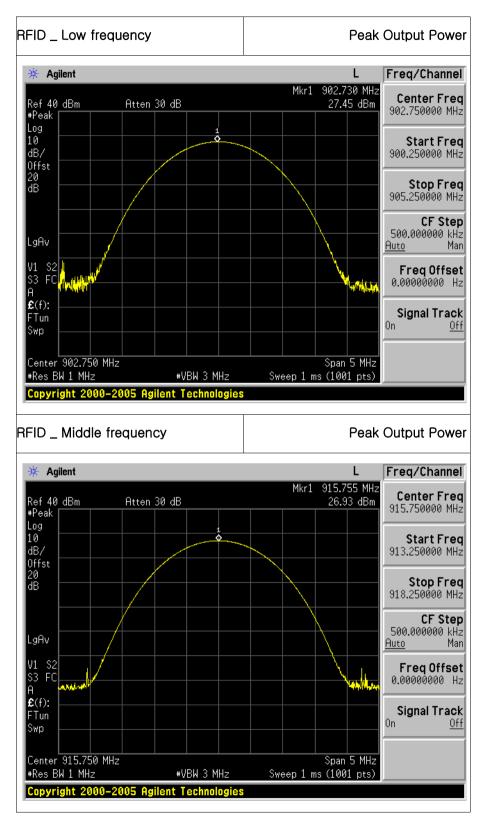
10.4 Test Result

| Test Mode | Test Frequency | Peak Out | out Power |
|-----------|----------------|----------|-----------|
| Test Mode | Test Frequency | dBm | mW |
| | Low | 27.45 | 555.90 |
| RFID | Middle | 26.93 | 493.17 |
| | High | 26.90 | 489.78 |

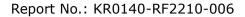
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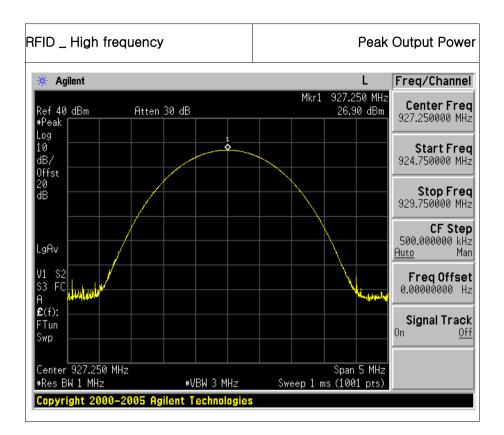
10.5 Test Plot



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11. TX Radiated Spurious Emission and Conducted Spurious Emission

11.1 Test Setup

Refer to the APPENDIX I.

11.2 Limit

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in section §15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section §15.205(a), must also comply the radiated emission limits specified in section §15.209(a) (see section §15.205(c))

According to § 15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional

| | nola strongth levels specifica in | the following table |
|-----------------|-----------------------------------|------------------------------|
| Frequency (MHz) | Limit (uV/m) | Measurement Distance (meter) |
| 0.009 ~ 0.490 | 2400/F (kHz) | 300 |
| 0.490 ~ 1705 | 24000/F (kHz) | 30 |
| 1705 ~ 30.0 | 30 | 30 |
| 30 ~ 88 | 100 ** | 3 |
| 88 ~ 216 | 150 ** | 3 |
| 216 ~ 960 | 200 ** | 3 |
| Above 960 | 500 | 3 |

radiator shall not exceed the field strength levels specified in the following table

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 - 72 MHz, 76 - 88 MHz, 174 - 216 MHz or 470 - 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

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| | | N 41 1- | 015 |
|---------------------|-----------------------|-----------------|---------------|
| MHz | MHz | MHz | GHz |
| 0.009 ~ 0.110 | 16.42 ~ 16.423 | 399.90 ~ 410 | 4.5 ~ 5.15 |
| $0.495 \sim 0.505$ | 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. | 1435 ~ 1626.5 | 9.0 ~ 9.2 |
| 4.20725 ~ 4.20775 | 25 73 ~ 74.6 | 1645.5 ~ 1646.5 | 9.3 ~ 9.5 |
| 4.17725 ~ 4.17775 | 74.8 ~ 75.2 | 1660 ~ 1710 | 10.6 ~ 12.7 |
| 6.215 ~ 6.218 | 108 ~ 121.94 | 1718.8 ~ 1722.2 | 13.25 ~ 13.4 |
| 6.26775 ~ 6.26825 | 149.9 ~ 150.05 | 2200 ~ 2300 | 14.47 ~ 14.5 |
| 6.31175 ~ 6.31225 | 156.52475 ~ 156.52525 | 2310 ~ 2390 | 15.35 ~ 16.2 |
| 8.291 ~ 8.294 | 156.7 ~ 156.9 | 2483.5 ~ 2500 | 17.7 ~ 21.4 |
| 8.362 ~ 8.366 | 162.0125 ~ 167.17 | 2690 ~ 2900 | 22.01 ~ 23.12 |
| 8.37625 ~ 8.38675 | 3345.8 ~ 3358 | 3260 ~ 3267 | 23.6 ~ 24.0 |
| 8.41425 ~ 8.41475 | 3600 ~ 4400 | 3332 ~ 3339 | 31.2 ~ 31.8 |
| 12.51975 ~ 12.52025 | 3345.8 ~ 3358 | 240 ~ 285 | 36.43 ~ 36.5 |
| 12.57675 ~ 12.57725 | 3600 ~ 4400 | 322 ~ 335.4 | Above 38.6 |
| 13.36 ~ 13.41 | | | |

According to § 15.205(a) and (b), only spurious emissions are permitted in any of The frequency bands listed below:

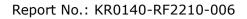
The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.



11.3 Test Procedure for Radiated Spurious Emission

- 1. The EUT is placed on a non-conductive table. For emission measurements at or below 1 GHz, the table height is 80 cm. For emission measurements above 1 GHz, the table height is 1.5 m. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2. During performing radiated emission below 1 ^{GHz}, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 ^{GHz}, the EUT was set 3.75 meter away from the interference-receiving antenna.
- 3. For measurements above 1 ^{GHz} absorbers are placed on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1 ^{GHz}, the absorbers are removed.
- 4. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then The antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
 (The EUT was pre-tested with three axes (X, Y, Z) and the final test was performed at the worst case.)
- 6. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 7. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

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Measurement Instrument Setting

- 1. Frequency Range: Below 1 ^{GHz} RBW = 100 or 120 kHz, VBW = 3 x RBW, Detector = Peak or Quasi Peak
- Frequency Range: Above 1 ^{GHz} Peak Measurement RBW = 1 MHz, VBW = 3 MHz, Detector = Peak, Sweep time = Auto, Trace mode = Max Hold until the trace stabilizes

Average Measurement RBW = 1MHz, VBW ≥ 1/T, Detector = Peak, Sweep Time = Auto, Trace Mode = Max Hold until the trace stabilizes

11.4 Test Procedure for Conducted Spurious Emission

- 1. The transmitter output was connected to the spectrum analyzer.
- The reference level of the fundamental frequency was measured with the spectrumanalyzer using RBW = 100 kHz, VBW = 300 kHz.
- The conducted spurious emission was tested each ranges were set as below. Frequency range: 30 MHz ~ 26.5 ଔ RBW = 100 kHz, VBW = 300 kHz, Sweep Time = Auto, Detector = Peak, Trace = Max Hold

LIMIT LINE = 20 dB below of the reference level of above measurement procedure Step 2. (RBW = 100 kHz, VBW = 300 kHz)

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11.5 Test Result

9 kHz \sim 10 GHz Data

• Low frequency

| Frequency | Rea | ding | | | 0.005 | Lin | nits | Re | sult | Ма | rgin |
|-----------|-------|--------|------|-------------|--------------|------|------|------|------|------|------|
| Frequency | (dBu | V/m) | Pol. | T.F (dB) | DCCF (dB) | (dBu | V/m) | (dBu | V/m) | (d | IB) |
| (MHz) | AV , | / Peak | | | (00) | AV / | Peak | AV / | Peak | AV / | Peak |
| 1 805.48 | 44.09 | 50.60 | V | -11.56 | N/A | 54.0 | 74.0 | 32.5 | 39.0 | 21.5 | 35.0 |
| 2 708.33 | 55.59 | 60.47 | V | -6.89 | N/A | 54.0 | 74.0 | 48.7 | 53.6 | 5.3 | 20.4 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Middle frequency

| Fraguanay | Rea | ding | | | 0.005 | Lin | nits | Re | sult | Ма | rgin |
|-----------|-------|--------|------|-------------|--------------|------|------|------|------|------|------|
| Frequency | (dBu | V/m) | Pol. | T.F (dB) | DCCF (dB) | (dBu | V/m) | (dBu | V/m) | (d | в) |
| (MHz) | AV / | / Peak | | (60) | (60) | AV / | Peak | AV / | Peak | AV / | Peak |
| 1 831.37 | 45.45 | 52.10 | V | -11.56 | N/A | 54.0 | 74.0 | 33.9 | 40.5 | 20.1 | 33.5 |
| 2 747.28 | 49.94 | 55.84 | V | -6.89 | N/A | 54.0 | 74.0 | 43.1 | 49.0 | 11.0 | 25.1 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

• High frequency

| Fraguapay | Rea | ding | | | | Lin | nits | Re | sult | Ма | rgin |
|-----------|-------|--------|------|-------------|--------------|------|-------|------|------|------|------|
| Frequency | (dBu | V/m) | Pol. | T.F (dB) | DCCF (dB) | (dBu | IV/m) | (dBu | V/m) | (d | B) |
| (MHz) | AV , | / Peak | | (48) | (00) | AV / | Peak | AV / | Peak | AV / | Peak |
| 1 854.51 | 48.39 | 54.05 | V | -11.46 | N/A | 54.0 | 74.0 | 36.9 | 42.6 | 17.1 | 31.4 |
| 2 781.75 | 58.34 | 63.76 | V | -6.59 | N/A | 54.0 | 74.0 | 51.8 | 57.2 | 2.2 | 16.8 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note 1: The radiated emissions were inverstigated 9 kHz to 10 ^{GHz}. And no other spurious and harmonic emissions were found above listed frequencies.

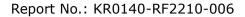
Note 2: DCCF(Duty Cycle Correction Factor)

Note 3: Sample Calculation.

Margin = Limit - Result / Peak Result = Peak Reading + TF / Average Result = Average Reading + TF

TF = Ant factor + Cable Loss + Filter Loss - Amp Gain + Distance Factor

Distance Factor = 20log(applied distance/required distance) = 20log(3.75m/3m) = 1.94





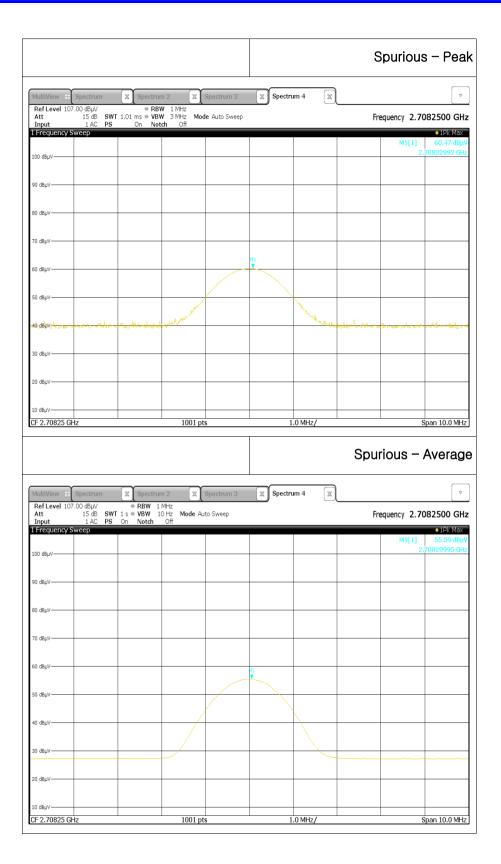
11.6 Test Plot for Radiated Spurious Emission

• RFID _ Low frequency

| MultiView 🕀 | Spectrum | X Spectro | um 2 🕅 | Spectrum 3 | Spectru | im 4 🕱 | | | ▽ |
|--|--|-------------------------------|--------------------------------------|--|-----------------------|---|-------|---------------------------|---|
| Ref Level 107 Att Input | 15 dB SWT 15 dB SWT 1 AC PS | ● RI 1.01 ms ● VE On No | 3W 1 MHz 3W 3 MHz Moo otch Off | le Auto Sweep | | | Fre | equency 1.80 | 55000 GH |
| Frequency S | | | | | | | | M1[1] | ●1Pk Max 50.60 dBµ' |
| 00 dBµV | | | | | | | | 1. | 80548000 GH |
|) dBµV | | | | | | | | | |
| I dBµV | | | | | | | | | |
| dBµV | | | | | | | | | |
| dBµV | | | | | | | | | |
| din ar | | | | | 4 | | | | |
| dBµV | Muhmun | Mercela - de | Langenam Mere | and a start and a start and a start a st | and the second second | the way and the start and the | mound | walderstation | antick consistents. |
| dBµV | | | | | | | | | |
| dΒμ∨−−−− | | | | | | | | | |
| dBµV | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| о dвµv F 1.8055 GH | 2 | | 1001 pt | S | 1 | .0 MHz/ | Spu | | |
| 1.8055 GH | | X Spectri | | s Spectrum 3 | 1 | | Spui | rious – , | |
| altiView | Spectrum .00 dBµV 15 dB SWT | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | | Averag |
| LI.8055 GH | Spectrum 100 dBµV 15 dB SWI 1 AC PS | RBW | um 2 🕅 🕱 🕽 | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH 1Pk Max 44.09 dBµ |
| I 1.8055 GH | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH 1Pk Max 44.09 dBµ |
| ultiView = tef Level 107 ttt rrequency S 0 d8µV | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiview e kef Level 107 trequency S 0 dBµV | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiView Fi ultiView Fi ultiView Fi tef Level 107 trequency S 0 d8µV d8µv d8µv | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiview # ultiview # tef Level 107 tt приt # requency S dbµv dbµv dbµv dbµv | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiView FF ultiView FF tef Level 107 requency S dBµV | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiView FF ultiView FF tef Level 107 requency S dBµV | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiview Fi ultiview Fi ultiview Fi tef Level 107 It requency G dBµV G | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 ito Sweep | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| ultiview E ultiview E tef Level IO dbµv G dbµv G | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 ito Sweep | | | | rious — , equency 1.80 | Averag 555000 GH • 1Pk Max 44.09 dBµ |
| | Spectrum 100 dBµV 15 dB SWI 1 AC PS | ● RBW 1 s ● VBW | um 2 🕅 1 MHz 10 Hz Mode Au | Spectrum 3 ito Sweep | | | | rious — , equency 1.80 | ▽ |

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• RFID _ Middle frequency

| | | | | | | | S | purious | s - Pea |
|--|---|------------------------|------------------------------|------------------|---------------------|--------------------|----------|-------------------------|--|
| 1ultiView 🕀 | Spectrum | X Spectru | m 2 🕱 | Spectrum 3 | X Spectru | ım 4 🕱 | | | ▽ |
| RefLevel 107 Att | 15 dB SW | T 1.01 ms 🖶 VB | WF 1 MHz WF 3 MHz Mo | de Auto Sweep | | | Fr | equency 1.8 | 315000 GH |
| Input Frequency S | 1 AC PS weep | On No | tch Off | | | | | | • 1Pk Max |
| 00 dBµV | | | | | | | | M1[1] 1 | 52.10 dBµ\ .83137013 GH |
| | | | | | | | | | |
| 0 dBµV | | | | | | | | | |
|) dвµV | | | | | | | | | |
| | | | | | | | | | |
|) dBµV | | | | | | | | | |
|) dBµV | | | | | | | | | |
| | | | | M1 | | | | | |
|) dBµV | | | | Annue Marine | and a second second | | | | |
|) dBµV | homono | | manuture | 1 | | and the second and | monumber | mensherman | all the same the |
| | | | | | | | | | |
| I dBµV | | | | | | | | | |
|) dBµV | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| о dBµV F 1.8315 GHz | 2 | | 1001 p | lts | 1 | .0 MHz/ | Spu | rious – | |
| | | X Spectru | | ts Spectrum 3 | 1 X Spectru | | Spu | | |
| F 1.8315 GHz | Spectrum .00 dBµV 15 dB SW | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | | | | | | Averag |
| F 1.8315 GHz | Spectrum .00 dBµV 15 dB SW 1 AC PS | • RBW 1 | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag 315000 GH |
| F 1.8315 GHz HultiView = Ref Level 107 Att Input Frequency S | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| F 1.8315 GHz | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag 315000 GH 1Pk Max 45.45 dBp |
| F 1.8315 GHz | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag 315000 GH 1Pk Max 45.45 dBp |
| E 1.8315 GHz | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| F 1.8315 GHz IuliiView E Ref Level 107 Att Input Frequency S 10 dbµV 0 dbµV 0 dbµv 0 dbµv | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| F 1.8315 GHz IuliiView E Ref Level 107 Att Input Frequency S 10 dbµV 0 dbµV 0 dbµv 0 dbµv | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| F 1.8315 GHz IuliiView Ref Level 107 Att Input Frequency S 30 dbµV 0 dbµV 0 dbµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| E 1.8315 GHz IultiView E Ref Level 107 Att Input Frequency S 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| F 1.8315 GHz IuliiView Ref Level 107 Att Input Frequency S 30 dbµV 0 dbµV 0 dbµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| E 1.8315 GHz IultiView E Ref Level 107 Att Input Frequency S 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| E 1.8315 GHz IultiView E Ref Level 107 Att Input Frequency S 0 dBµV 0 dBµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| E 1.8315 GHz IultiView E Ref Level 107 Att Input Frequency S 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV 0 d | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| 1.8315 GHz Iultiview Vef Level 107 Yet Level 107 In dbµv | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | Averag v 315000 GH • 1Pk Max 45.45 dBµ |
| E 1.8315 GHz IultiView E Ref Level 107 Att Input Frequency S 0 dBµV 0 dBµV | Spectrum .00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | m 2 🕱 MHz 10 Hz Mode A | Spectrum 3 | | | | rious — equency 1.83 | ▽ |

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| Spurious – Pea | | | | | | | |
|---|----------------|----------------|------------------|-------------------------------|------------------------|--|---|
| _ ⊽ | ım 4 🕱 | Spectr | Spectrum 3 | m 2 🕱 | X Spectru | Spectrum | MultiView 🕀 |
| Frequency 2.7472500 GF | | | | W 1 MHz | ● RB 「 1.01 ms ● VB | 7.00 dBuV | Ref Level 107 |
| • 1Pk Max | | | | tch Off | On No | | Input Frequency S |
| M1[1] 55.84 dBµ 2.74727997 GH | | | | | | | 100 dBµV |
| | | | | | | | |
| | | | | | | | Ю dBµV |
| | | | | | | | 80 dBµV |
| | | | | | | | '0 dBµV |
| | | | | | | | |
| | | 1 | | | | | 0 dBµV |
| | | | | | | | 0 dBµV |
| men have march with which | Marmon Marcala | | | and the second second | anon markan | Marine | 0 dBµV |
| | | | | | | | |
| | | | | | | | 0 dBµV |
| | | | | | | | 0 dBµV |
| | | | | | 1 | 1 | |
| | | | | | | | |
| Span 10.0 MH Spurious – Averag | .0 MHz/ | 1 | ts | 1001 p | | Hz | |
| | | 1 X Spectri | ts Spectrum 3 | | X Spectru | Hz | F 2.74725 G |
| Spurious – Averag | | | | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB S₩ | F 2.74725 Gł AultiView H Ref Level 107 Att |
| Spurious – Averag | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 Gł MultiView Ref Level 107 Att Input |
| Spurious - Averag Trequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 Gł AultiView : Ref Level 107 Att Input Frequency S |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G AultiView F Ref Level 107 Att Input Frequency S 00 dBµV |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G AultiView F Reflevel 107 Att Input Frequency S 00 dBµV |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G AultiView F Reflevel 107 Att Input Frequency S 00 dBµV |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G AultiView F Reflevel 107 Att Input Input F Frequency S 0 0 dBμV 0 dBμV 0 dBμV |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | T 2.74725 G MultiView F Reflexel 107 Att Input Frequency S 00 00 dbµV 00 dbµV 00 dbµV 00 dbµV 10 dbµV 10 dbµV |
| Spurious – Averag Frequency 2.7472500 GH | | | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | T 2.74725 G MultiView F Reflexel 107 Att Input Frequency S 00 00 dbµV 00 dbµV 00 dbµV 00 dbµV 10 dbµV 10 dbµV |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G AultiView F Reflexel 107 Att Input Frequency S 00 dbμV 00 dbμV 00 dbμV 00 dbμV 00 dbμV 00 dbμV |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | IF 2.74725 G Autriview Reflevel 107 Att Input Frequency S 00 dbµv |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G Autriview F Reflexel 107 Att Input Reflexel 107 Att Input Frequency S 0 0 dbµV |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G Autriview F Reflexel 107 Att Input Reflexel 107 Att Input Frequency S 0 0 dbµV |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | F 2.74725 G Autüview E Ref evel 107 Att Input Frequency S 0 dbµV |
| Spurious – Averag Frequency 2.7472500 GH | | Spectre | Spectrum 3 | m 2 🛛 🕅 MHz O Hz Mode A | ● RBW 1 「1s ● VBW | Spectrum 7.00 dBμV 15 dB SW 1 AC PS | 0 dbµV F 2.74725 Gi AultiView El Ci Ref Level 107 Alti Input Frequency Si 0 dbµV 0 dbµV |

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• RFID _ High frequency

| | | | | | | | 5 | Spuriou | s - Pea |
|--|----------------------------------|--|--------------|-----------------|----------|---------|---|---------------|--|
| 1ultiView ⊞ | Spectrum | X Spectru | | Spectrum 3 | Spectrur | m 4 🕱 | L | | \Box |
| Ref Level 103 Att Input | 15 dB SW 1 AC PS | T 1.01 ms ⊜ VB | | Mode Auto Sweep | | | F | requency 1.8 | 8545000 GH |
| Frequency S | Sweep | | | | | | | M1[1] | 1Pk Max 54.05 dBµ\ 1.85451000 GH; |
| 00 dBµV | | | | | | | | | 1.85451000 GH |
| 0 dBµV | | | | | | | | | |
| 0 dBµV | | | | | | | | | |
|) dвµV | | | | | | | | | |
| | | | | | | | | | |
| I dBµV | | | | | 1 | | | | |
|) dBµV−−−− | | | | | - Way | × | | | |
|) dBµV | kennennen | Anthender | granger glar | | | - Marka | and all and | which we have | Menninan |
|) dBµV | | | | | | | | | |
|) dBµV | | | | | | | | | |
| | | | | | | | | | |
| і dbµv = 1.8545 GH | Iz | | 100 |)1 pts | | | | | |
| | | | 100 | 51 pts | 1.0 | 0 MHz/ | Spu | rious – | - |
| | Spectrum | X Spectru | im 2 | X Spectrum 3 | 1.1 | | Spu | rious – | Averag |
| Ref Level 10 Att Input | 7.00 dBµV 15 dB SW 1 AC PS | Spectru BBW 1 T 1s • VBW On Notch | im 2 | | | | | | Averag |
| Ref Level 10 Att Input Frequency S | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| Ref Level 10 Att Input Frequency S | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| Ref Level 107 Att Input Frequency S | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| Ref Level 10: Att Input Frequency S ID dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| Ref Level 107 Att Input Frequency 9 00 dBµV 0 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| IultiView Image: Comparison of the compariso | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBy |
| RefLevel 107 Att Input Frequency 9 00 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBy |
| RefLevel 107 Att Input Frequency 5 0 dBµV 0 dBµV 0 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | 8545000 GH |
| RefLevel 107 Att Frequency 9 Ю dBµV 0 dBµV 0 dBµV 0 dBµV 0 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBy |
| Ref Level 107 Att nput Frequency S 0 dBµV 1 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBµ |
| RefLevel 107 Att nput Frequency S 0 dBµV 1 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBy |
| Ref Level 107 Att nput Frequency S 0 dBµV 0 dBµV 1 dBµV | 7.00 dBµV 15 dB SW 1 AC PS | ● RBW 1 T 1 s ● VBW | im 2 | X Spectrum 3 | | | | requency 1.8 | Averag ▼ ▼ ■ 19k Max ■ 48.39 dBy |

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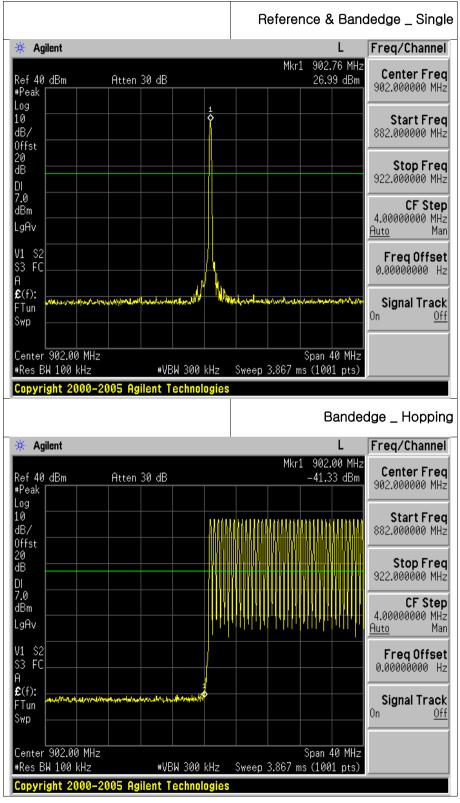
| | | | | S | purious – | Pea |
|---|--|------------------------------|------------|-------------|--|--|
| AultiView 🕀 Spectrum | X Spectrum 2 | Spectrum 3 | Spectrum 4 | Ĵ | | |
| RefLevel 107.00 dBµV Att 15 dB S | ● RBW 1 MH WT 1.01 ms ● VBW 3 MH | | | L | quency 2.78175 | 600 GH |
| Input 1 AC P Frequency Sweep | S On Notch O | ff | | | • | 1Pk Max |
| 00 dBµV | | | | | | 3.76 dBµ' 5000 GH |
| | | | | | | |
|) dBµV | | | | | | |
|) dBµV | | | | | | |
| | | | | | | |
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| ungen and with the | moundmallow | AND I | Martin | matchnowhow | u have month | whenha |
| 1 00µ* | | | | | | |
|) dBµV | | | | | | |
|) dBµV | | | | | | |
| · · · · · | | | | | | |
|) dBµV | | | | 1 | | |
| F 2.78175 GHz | | 1001 pts | 1.0 MHz/ | Spuri | _{span} | |
| 2.78175 GHz | | 1001 pts | 1.0 MHz/ | 9 | | erag |
| 2.78175 GHz | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | | |] | | erag |
| Spectrum Ref Level 107.00 dBµV Att 15 dB Sinput 1 AC | Spectrum 2 • RBW 1 MHz | X Spectrum 3 | |] | ious – Ave quency 2.78175 | erag v |
| F 2.78175 GHz IultiView E Spectrum Ref Level 107.00 dBµV Att 15 dB S Input 1AC P Frequency Sweep | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBp |
| 2.78175 GHz | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| 2.78175 GHz | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| 2.78175 GHz | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| 2.78175 GHz IultiView :: Spectrum Ref Level 107.00 dBµV Att 15 dB S Input 1 AC P Frequency Sweep 10 dBµV 10 dBµV | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| F 2.78175 GHz | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| F 2.78175 GHz IultiView Espectrum Ref Level 107.00 dBµV Att 15 dB S Input 1 AC P Frequency Sweep 0 dBµV 0 dBµV 0 dBµV | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| F 2.78175 GHz IultiView. # Spectrum Ref Level 107.00 dBµV Att 15 dB Input 1 AC P Frequency Sweep 30 dBµV 0 0 dBµV 0 | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| E2.78175 GHz IultiView E Spectrum Ref Level 107.00 dBµV 15 dB S Att 15 dB S Input 1 AC P Frequency Sweep 0 00 dBµV 0 | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| E2.78175 GHz IultiView E Spectrum Ref Level 107.00 dBµV 15 dB S Att 15 dB S Input 1 AC P Frequency Sweep 0 00 dBµV 0 | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| F 2.78175 GHz IultiView E Spectrum Ref Level 107.00 dBµV Att 15 dB S Input 1 AC P Frequency Sweep 0 dBµV 10 dBµV 0 10 dBµV 0 10 dBµV 0 10 dBµV 0 | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| 2.78175 GHz IultiView E Spectrum Xef Level 107.00 dBµV Att 15 dB S input 1 AC P Frequency Sweep 10 dBµV 10 dBµV 10 dBµV 10 dBµV 11 dBµV | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | erag ⊽ 500 GH 1Pk Max 3.34 dBµ |
| F 2.78175 GHz IultiView E Spectrum Ref Level 107.00 dBµV Att 15 dB S Input 1 AC P Frequency Sweep 00 dBµV 0 0 dBµV 0 | Spectrum 2 BBW 1 MHz WT 1s = VBW 10 Hz | X Spectrum 3 Aode Auto Sweep | |] | ious – Ave quency 2.78175 M1[1] 58 | ▽ |

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11.7 Test Plot for Conducted Spurious Emission

• RFID _ Low frequency



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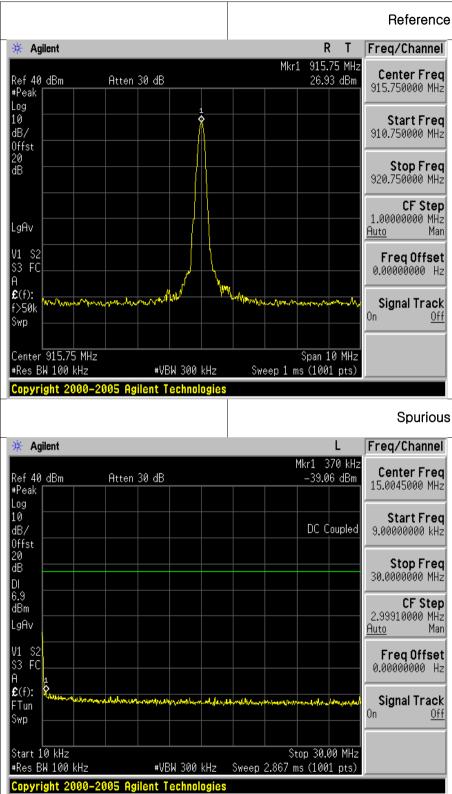


| | | | | | | | | Spurio |
|---|-----------------------|---------------------------------|---------------|--|-------------|---|----------------------|---|
| Agilent | | | | | | | L | Freq/Channe |
| 40 dBm | Atten 3 | 30 dB | | | | | 10 kHz 7 dBm | Center Fre |
| ak | | | | | | | | 15.0045000 MH |
| / | | | | | | DC C | oupled | Start Fre 9.00000000 kH |
| | | | | | | | | Stop Fre 30.0000000 M⊦ |
| 1 | | | | | | | | CF Ste 2.99910000 MH <u>Auto</u> Ma |
| S2 FC | | | | | | | | FreqOffse 0.00000000 ⊦ |
|): \$ in ¹⁴ ************************************ | ittive and a startest | Ya iline Washiriki Manad | hymrogenad | andronal terres | Improvation | q ^{da.} noranyyattilija ⁽ | drale Marson | Signal Trac On <u>O</u> |
| | | | | | | | | |
| rt 10 kHz | | | | | | op 30.0 | | |
| s BW 100 kHz | 2 | #VRM | 1300 kHz | Sween | 2.867 m | ารเเทศ | i nts) | |
| yright 2000 | | lent Te | chnologie | | | | 1 pto/ | Spurio |
| | | lent Te | chnologie | | | | L | |
| oyright 2000 Agilent |)–2005 Agi | | chnologie | | | r1 2.7 | L 12 GHz | Freq/Channe |
| Agilent 40 dBm | | | chnologie | | | r1 2.7 | L | Freq/Channe Center Fre |
| Agilent 40 dBm ak |)–2005 Agi | | chnologie | | | r1 2.7 | L 12 GHz | Freq/Channe Center Fre 5.01500000 GH |
| yright 2000 Agilent 40 dBm ak |)–2005 Agi | | chnologie | | | r1 2.7 | L 12 GHz | Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre |
| yright 2000 Agilent 40 dBm ak it |)–2005 Agi | | chnologie | | | r1 2.7 | L 12 GHz | Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH |
| yright 2000 Agilent 40 40 dBm ak 1 ak 1 yr 1 yr 1 \$2 1 |)–2005 Agi | | chnologie | | | r1 2.7 | L 12 GHz | Spurio Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH OF Ste 997.000000 MH Auto Ma Freq Offse 0.00000000 H |
| Agilent 40 dBm ak | Atten 3 | 30 dB | chnologie | | | r1 2.7 | L 12 GHz | Start Fre 30.0000000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH Auto Mathematical |
| Agilent 40 dBm ak , , , , , , , , , , , , , | Atten 3 | 30 dB | | | Mk | r1 2.7 -27.3 | L 12 GHz 9 dBm | Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH Auto Freq Offse 0.0000000 H Signal Trac |
| Agilent 40 dBm ak / st n S2 FC | Atten 3 | 30 dB | | S S A A A A A A A A A A A A | Mk | r1 2.7 -27.3 | L 12 GHz 9 dBm | Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH Auto Freq Offse 0.0000000 H Signal Trac |

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• RFID _ Middle frequency

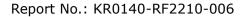


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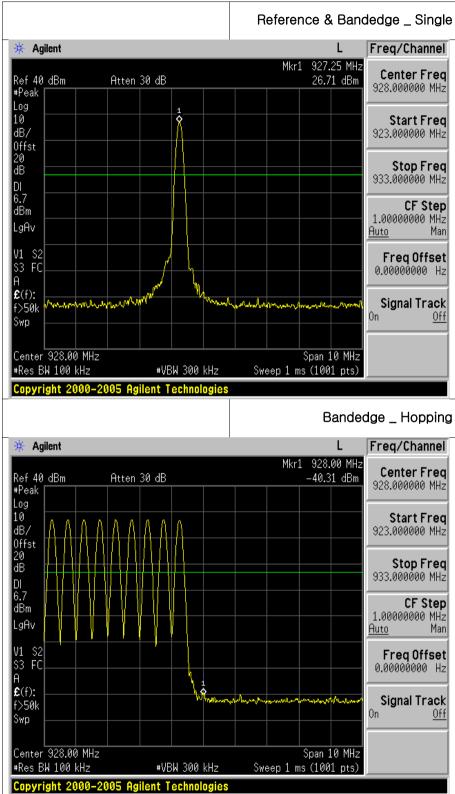
| | | | | | | | Spuriou |
|-------------------------------------|--|-------------------------------------|--------------|-----------------------------|--------------------|-------------------|-------------------------------|
| 🔆 Agilent | | | | | | L | Freq/Channel |
| Ref 40 dBm | Atten 30 dB | | | Mkr | | 52 GHz 8 dBm | Center Freq 5.01500000 GHz |
| ŧPeak _og | | | | | | | |
| 10 dB/ | | | | | | | Start Freq 30.0000000 MHz |
| Offst 20 dB | | | | | | | Stop Freq 10.0000000 GHz |
| DI 6.9 dBm | | | | | | | CF Step 997.000000 MHz |
| LgAv | | | | | | | Auto Mar |
| V1 S2 S3 FC | | | | | | | Freq Offset 0.00000000 Hz |
| n €(f): FTun | and gal it has a been preserved and a second s | Nord the second state of the second | de agental f | ور ا ^ر مارد ارد. | raha-gagaaharatiga | and shirts and go | Signal Track |
| Swp | | | | | | | 0n <u>0ff</u> |
| Start 30 MHz | | | | | o 10.00 | | |
| #Res BW 100 kHz Copyright 2000-2 | | 3W 300 kHz | Sweep S | 952.9 m | s (100 | 1 pts) | |

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• RFID _ High frequency



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| | | | | | | | Spurio |
|---|-------------|-------------------|------------------|---|---------------------|--------------------|---|
| Agilent | | | | | | L | Freq/Channe |
| 10 dBm | Atten 30 | 0 dR | | | Mkr1 61 -40.37 | 0 kHz dBm | Center Fre |
| | | | | | -40.37 | UDIII | 15.0045000 MH |
| | | | | | | | Start Fre |
| | | | | | DC Co | upled | 9.00000000 kł |
| | | | | | | | Stop Fre |
| | | | | | | | 30.0000000 MH |
| | | | | | | | CF Ste 2.99910000 MH |
| | | | | | | | <u>Auto</u> Ma |
| 2 | | | | | | | Freq Offse |
| C | | | | | | | 0.00000000 |
| - | monoraneted | -Walter demonstra | - Manual Manuary | and the state of the | ANN Mayber | AND HAVE | Signal Trac |
| | | | | | | | 0n <u>0</u> |
| 10 kHz | | | | | top 30.00 |) MU- | |
| | | | | | | | |
| BW 100 kHz | | #VBW 300 |)kHz Swe | ep 2.867 r | | | |
| BW 100 kHz | -2005 Agila | | | | | | |
| BW 100 kHz •right 2000 | | | | | ns (1001 | pts) | Spurio |
| BW 100 kHz | | | | ep 2.867 r | ns (1001 | pts) L | Freq/Channe |
| BW 100 kHz rright 2000 Agilent 10 dBm | | ent Techno | | ep 2.867 r | ns (1001 | pts) L 2 GHz | Freq/Channe Center Fre |
| BW 100 kHz rright 2000 Agilent | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 GH |
| BW 100 kHz right 2000 Agilent 0 dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 GH Start Fre |
| BW 100 kHz right 2000 Agilent 40 dBm 40 dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 GH Start Fre 30.0000000 MH |
| BW 100 kHz right 2000 Agilent 10 dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 Gi Start Fre 30.0000000 Mi Stop Fre |
| BW 100 kHz rright 2000 Agilent 10 dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 Gl Start Fre 30.0000000 Ml Stop Fre 10.0000000 Gl |
| BW 100 kHz right 2000 Agilent 10 dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channel Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH |
| BW 100 kHz Agilent d dBm | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 GH Start Fre 30.0000000 MH Stop Fre 10.0000000 GH CF Ste 997.000000 MH |
| BW 100 kHz right 2000 Agilent d dBm | Atten 30 | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channel Center Fre 5.01500000 GF 30.0000000 MF 30.0000000 GF 10.0000000 GF 10.0000000 GF 20000000 MF 00000000 MF 2000000 MF Auto Me |
| BW 100 kHz rright 2000 Agilent | –2005 Agila | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 Gf Start Fre 30.0000000 Mf Stop Fre 10.0000000 Gf CF Ste 997.000000 Mf <u>Auto</u> M |
| BW 100 kHz right 2000 Agilent d dBm | Atten 30 | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 Gf 30.0000000 Mf Stop Fre 10.0000000 Gf CF Ste 997.000000 Mf <u>Auto M</u> Freq Offse 0.00000000 f Signal Trac |
| BW 100 kHz right 2000 Agilent | Atten 30 | ent Techno | | ep 2.867 r | ns (1001 r1 2.78 | pts) L 2 GHz | Freq/Channe Center Fre 5.01500000 Gl Start Fre 30.0000000 Ml Stop Fre 10.0000000 Gl CF Ste 997.000000 Ml <u>Auto</u> M |
| BW 100 kHz right 2000 Agilent | -2005 Agila | ent Techno | | Mk | r1 2.78 -31.27 | pts) | Freq/Channe Center Fre 5.01500000 Gf 30.0000000 Mf Stop Fre 10.0000000 Gf CF Ste 997.000000 Mf <u>Auto M</u> Freq Offse 0.00000000 f Signal Trac |

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12. Conducted Emission

12.1 Test Setup

See test photographs for the actual connections between EUT and support equipment.

12.2 Limit

According to §15.207(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 in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network (LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

| | Conducted Limit (dBuV) | | | | |
|-----------------------|------------------------|------------|--|--|--|
| Frequency Range (MHz) | Quasi-Peak | Average | | | |
| 0.15 ~ 0.5 | 66 to 56 * | 56 to 46 * | | | |
| 0.5 ~ 5 | 56 | 46 | | | |
| 5 ~ 30 | 60 | 50 | | | |

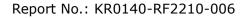
* Decreases with the logarithm of the frequency

12.3 Test Procedure

Conducted emissions from the EUT were measured according to the ANSI C63.10.

- The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
- The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
- 3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
- 4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

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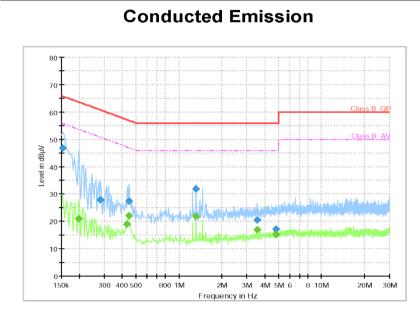




12.4 Test Result

• AC Line Conducted Emission (Graph)

a313_RFID_L1

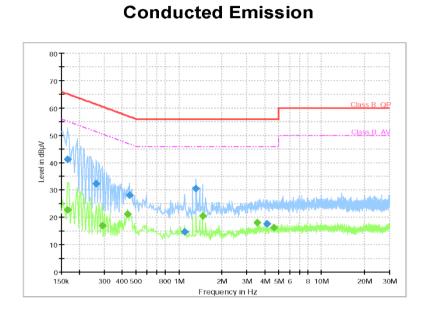


Final_Result

| Frequency | QuasiPeak | CAverage | Limit | Margin | Bandwidth | Line | Corr. |
|-----------|-----------|----------|--------|--------|-----------|------|-------|
| (MHz) | (dBµV) | (dBµV) | (dBµV) | (dB) | (kHz) | | (dB) |
| 0.154 | 46.88 | | 65.78 | 18.90 | 9 | L1 | 19.3 |
| 0.198 | | 21.00 | 53.69 | 32.69 | 9 | L1 | 19.4 |
| 0.282 | 27.86 | | 60.76 | 32.90 | 9 | L1 | 19.4 |
| 0.430 | | 19.04 | 47.25 | 28.21 | 9 | L1 | 19.8 |
| 0.446 | | 21.99 | 46.95 | 24.96 | 9 | L1 | 19.8 |
| 0.446 | 27.41 | | 56.95 | 29.54 | 9 | L1 | 19.8 |
| 1.320 | 31.76 | | 56.00 | 24.24 | 9 | L1 | 19.7 |
| 1.320 | | 21.93 | 46.00 | 24.07 | 9 | L1 | 19.7 |
| 3.530 | 20.54 | | 56.00 | 35.46 | 9 | L1 | 19.8 |
| 3.530 | | 17.03 | 46.00 | 28.97 | 9 | L1 | 19.8 |
| 4.770 | | 15.26 | 46.00 | 30.74 | 9 | L1 | 19.8 |
| 4.770 | 17.07 | | 56.00 | 38.93 | 9 | L1 | 19.8 |

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a313_RFID_N

Final_Result

| Frequency (MHz) | QuasiPeak (dBµV) | CAverage (dBµV) | Limit (dBµV) | Margin (dB) | Bandwidth (kHz) | Line | Corr. (dB) |
|--------------------|---------------------|--------------------|-----------------|----------------|--------------------|------|---------------|
| 0.166 | (ubµv) | 22.77 | 55.16 | 32.39 | 9 | N | 19.5 |
| 0.166 | 41.13 | | 65.16 | 24.02 | 9 | N | 19.5 |
| 0.262 | 32.40 | | 61.37 | 28.97 | 9 | N | 19.3 |
| 0.290 | | 16.98 | 50.52 | 33.54 | 9 | N | 19.4 |
| 0.438 | | 21.28 | 47.10 | 25.82 | 9 | N | 19.8 |
| 0.450 | 28.16 | | 56.88 | 28.72 | 9 | N | 19.8 |
| 1.100 | 14.79 | | 56.00 | 41.21 | 9 | N | 19.7 |
| 1.320 | 30.44 | | 56.00 | 25.56 | | N | 19.7 |
| 1.470 | | 20.56 | 46.00 | 25.44 | 9 | N | 19.7 |
| 3.530 | | 17.98 | 46.00 | 28.02 | 9 | N | 19.8 |
| 4.120 | 17.54 | | 56.00 | 38.46 | 9 | N | 19.8 |
| 4.630 | | 16.25 | 46.00 | 29.75 | 9 | N | 19.8 |

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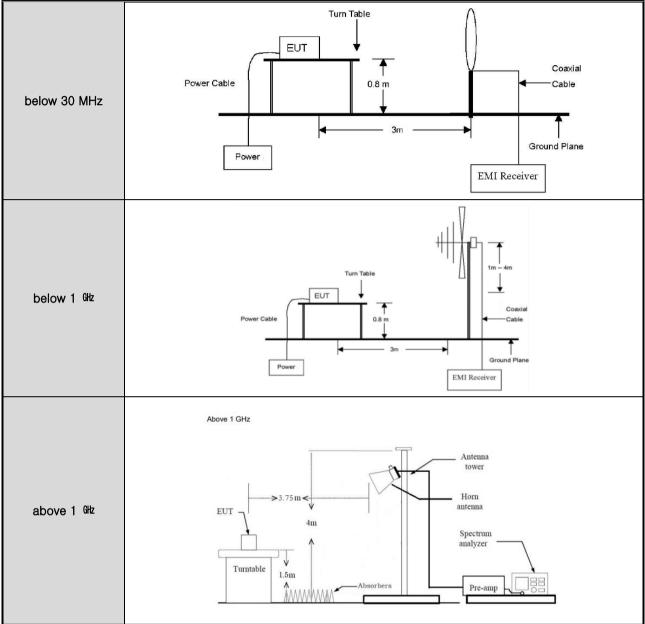
APPENDIX I

TEST SETUP

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Radiated Measurement



• Conducted Measurement

| Conducted | EUT | Attenuator | Spectrum Analyzer |
|-----------|-----|------------|----------------------|

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APPENDIX II

UNCERTAINTY

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| Measurement Item | Expanded Uncertainty U = <i>k</i> Uc (<i>k</i> =2) | | |
|------------------------------|--|--|--|
| Conducted RF power | 0.32 dB | | |
| Conducted Spurious Emissions | 0.32 dB | | |
| Radiated Spurious Emissions | 6.34 dB | | |
| Conducted Emissions | 1.74 dB | | |