# TEST REPORT

| | | |
|---|---|---|
| **APPLICANT** | : | Wuxi iData Technology Co., Ltd. |
| **PRODUCT NAME** | : | Desktop RFID Reader-writer |
| **MODEL NAME** | : | Refer to section 1.2 |
| **BRAND NAME** | : | iData |
| **FCC ID** | : | 2ADE3IDATAA500 |
| **STANDARD(S)** | : | 47 CFR Part 15 Subpart C |
| **RECEIPT DATE** | : | 2025-02-24 |
| **TEST DATE** | : | 2025-03-25 to 2025-05-07 |
| **ISSUE DATE** | : | 2025-05-07 |

Edited by: Zeng Xiaoying (Rapporteur)

Approved by: Shen Junsheng (Supervisor)

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| Change History | | |
|---|---|---|
| Version | Date | Reason for change |
| 1.0 | 2025-05-07 | First edition |
| | | |

# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

| | |
|---|---|
| **Applicant:** | Wuxi iData Technology Co., Ltd. |
| **Applicant Address:** | Floor 11, Building B1, No.999 Gaolang East Road, Wuxi City, China |
| **Manufacturer:** | Wuxi iData Technology Co., Ltd. |
| **Manufacturer Address:** | Floor 11, Building B1, No.999 Gaolang East Road, Wuxi City, P.R.C. |

## 1.2. Equipment Under Test (EUT) Description

| | |
|---|---|
| **Product Name:** | Desktop RFID Reader-writer |
| **Model Name:** | iData A500, A500, A501, A502, A503, A505, A506, A507, A508, A509, A510, A511, A512,<br>A500-01, A500-02, A500-03, A500-05, A500-06, A500-07, A500-08, A500-09, A500-10, A500-11, A500-12,<br>A500S, A501S, A502S, A503S, A505S, A506S, A507S, A508S, A509S, A510S, A511S, A512S,<br>A500 plus, A501 plus, A502 plus, A503 plus, A505 plus, A506 plus, A507 plus, A508 plus, A509 plus, A510 plus, A511 plus, A512 plus,<br>A500E, A501E, A502E, A503E, A505E, A506E, A507SE, A508E, A509E, A510E, A511E, A512E,<br>A510a, A510b, A510c, A510d, A510f, A510g, A510h, A510i, A510j, A510k, A510m, A510n, A510p,<br>A520a, A520b, A520c, A520d, A520f, A520g, A520h, A520i, A520j, A520k, A520m, A520n, A520p,<br>A530a, A530b, A530c, A530d, A530f, A530g, A530h, A530i, A530j, A530k, A530m, A530n, A530p |
| **Sample No.:** | 2#, 5# |
| **Hardware Version:** | V1.1 |
| **Software Version:** | V01.03 |
| **Operating Frequency Range:** | 920.75MHz-927.25MHz |
| **Channel Number:** | 50 |
| **Antenna Type:** | Near Field Antenna |

| | | |
|---|---|---|
| **Antenna Gain:** | -15.00dBi | |
| **Accessory Information:** | AC Adapter 1 | |
| | Brand Name: | NA |
| | Model No.: | TPQ-228F120200VW01 |
| | Serial No.: | N/A |
| | Rated Output: | 12V⎓2A |
| | Rated Input: | 100-240V~50/60Hz, 0.8A |
| | Manufacturer: | Shenzhen Tianyin Electronics Co.. Ltd. |
| | AC Adapter 2 | |
| | Brand Name: | NA |
| | Model No.: | TPQ-228F120200UW01 |
| | Serial No.: | N/A |
| | Rated Output: | 12V⎓2A |
| | Rated Input: | 100-240V~50/60Hz, 0.8A |
| | Manufacturer: | Shenzhen Tianyin Electronics Co.. Ltd. |

**Note 1:** According to the certificate holder, they declared that the models iData A500, A500, A501, A502, A503, A505, A506, A507, A508, A509, A510, A511, A512, A500-01, A500-02, A500-03, A500-05, A500-06, A500-07, A500-08, A500-09, A500-10, A500-11, A500-12, A500S, A501S, A502S, A503S, A505S, A506S, A507S, A508S, A509S, A510S, A511S, A512S, A500 plus, A501 plus, A502 plus, A503 plus, A505 plus, A506 plus, A507 plus, A508 plus, A509 plus, A510 plus, A511 plus, A512 plus, A500E, A501E, A502E, A503E, A505E, A506E, A507SE, A508E, A509E, A510E, A511E, A512E, A510a, A510b, A510c, A510d, A510f, A510g, A510h, A510i, A510j, A510k, A510m, A510n, A510p, A520a, A520b, A520c, A520d, A520f, A520g, A520h, A520i, A520j, A520k, A520m, A520n, A520p, A530a, A530b, A530c, A530d, A530f, A530g, A530h, A530i, A530j, A530k, A530m, A530n, A530p only the model names are different, their electrical circuit design, layout, components used and internal wiring are identical. No other changes. The main measuring model is iData A500, only the results for iData A500 were recorded in this report.

**Note 2:** For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

## 1.3. The Channel Number and Frequency

| Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|---|---|---|
| **1** | **902.75** | 14 | 909.25 | 27 | 915.75 | 40 | 922.25 |
| 2 | 903.25 | 15 | 909.75 | 28 | 916.25 | 41 | 922.75 |
| 3 | 903.75 | 16 | 910.25 | 29 | 916.75 | 42 | 923.25 |
| 4 | 904.25 | 17 | 910.75 | 30 | 917.25 | 43 | 923.75 |
| 5 | 904.75 | 18 | 911.25 | 31 | 917.75 | 44 | 924.25 |
| 6 | 905.25 | 19 | 911.75 | 32 | 918.25 | 45 | 924.75 |
| 7 | 905.75 | 20 | 912.25 | 33 | 918.75 | 46 | 925.25 |
| 8 | 906.25 | 21 | 912.75 | 34 | 919.25 | 47 | 925.75 |
| 9 | 906.75 | 22 | 913.25 | 35 | 919.75 | 48 | 926.25 |
| 10 | 907.25 | 23 | 913.75 | 36 | 920.25 | 49 | 926.75 |
| 11 | 907.75 | 24 | 914.25 | 37 | 920.75 | **50** | **927.25** |
| 12 | 908.25 | **25** | **914.75** | 38 | 921.25 | | |
| 13 | 908.75 | 26 | 915.25 | 39 | 921.75 | | |

**Note 1:** The black bold channels were selected for test.

## 1.4. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

| No. | Identity | Document Title |
|---|---|---|
| 1 | 47 CFR Part 15 | Radio Frequency Devices |

Test detailed items/section required by FCC rules and results are as below:

| No. | Section | Description | Test Date | Test Engineer | Result | Method Determination /Remark |
|---|---|---|---|---|---|---|
| 1 | 15.203 | Antenna Requirement | N/A | N/A | PASS | No deviation |
| 2 | 15.215 | Bandwidth | Apr. 08, 2025 | Lin Haoyang | PASS | No deviation |
| 3 | 15.207 | Conducted Emission | May. 07, 2025 | Fan Shengquan | PASS | No deviation |
| 4 | 15.249 | Field strength | Mar. 25, 2025 | Tian Xin | PASS | No deviation |
| 5 | 15.209, 15.249 | Radiated Emission and field strength of harmonics | Apr. 17, 2025 | Tian Xin | PASS | No deviation |

**Note 1:** The tests were performed according to the method of measurements prescribed in ANSIC63.10-2013.

**Note 2:** Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

**Note 3:** When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

## 1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

| | |
|---|---|
| Temperature (°C): | 15-35 |
| Relative Humidity (%): | 30-60 |
| Atmospheric Pressure (kPa): | 86-106 |

# 2. 47 CFR Part 15C Requirements

## 2.1. Antenna Requirement

### 2.1.1. Applicable Standard

According to FCC 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.

### 2.1.2. Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

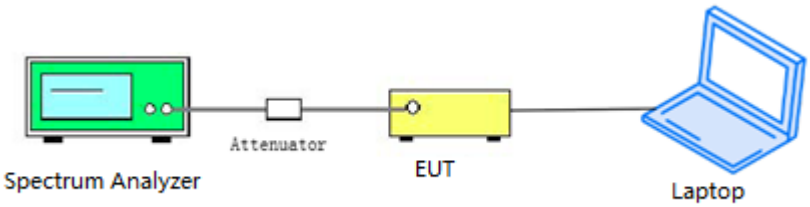
## 2.2. Bandwidth

### 2.2.1. Requirement

Refer to FCC 15.215

### 2.2.2. Test Description

**Test Setup:**




The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

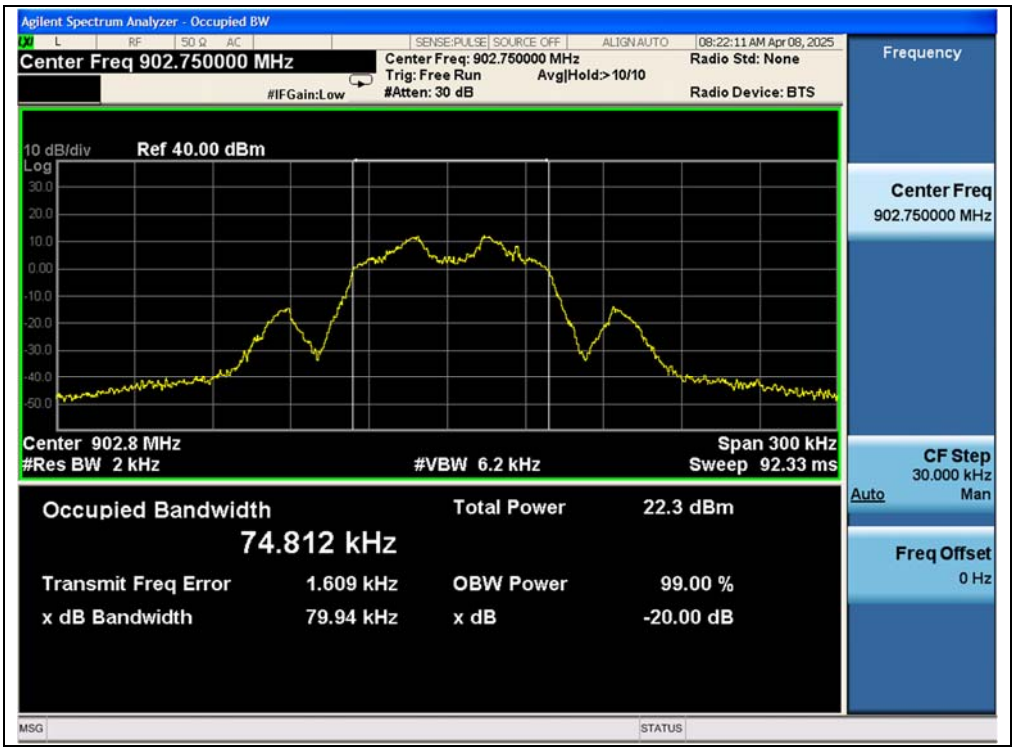
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) in the range of 1% to 5% of the measured bandwidth and video bandwidth (VBW) shall be approximately three times RBW.

### 2.2.3. Test Result

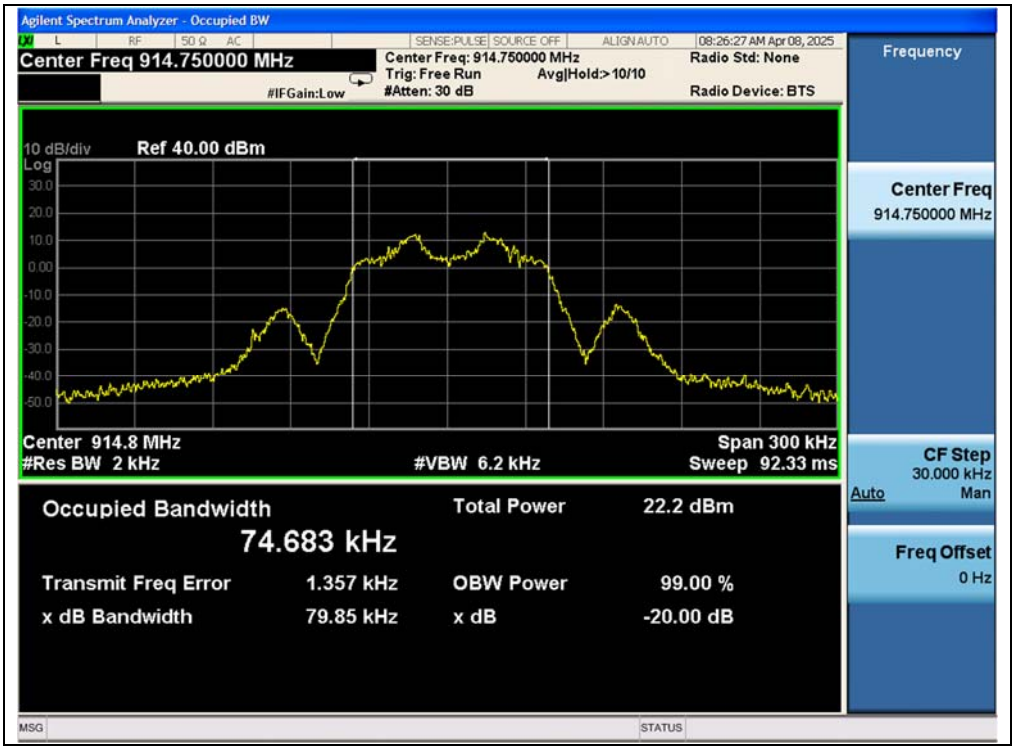
**A.Test Verdict:**

| Channel | Frequency (MHz) | 20 dB Bandwidth (kHz) | Result |
|---|---|---|---|
| 1 | 902.75 | 79.94 | PASS |
| 25 | 914.75 | 79.85 | PASS |
| 50 | 927.25 | 81.03 | PASS |

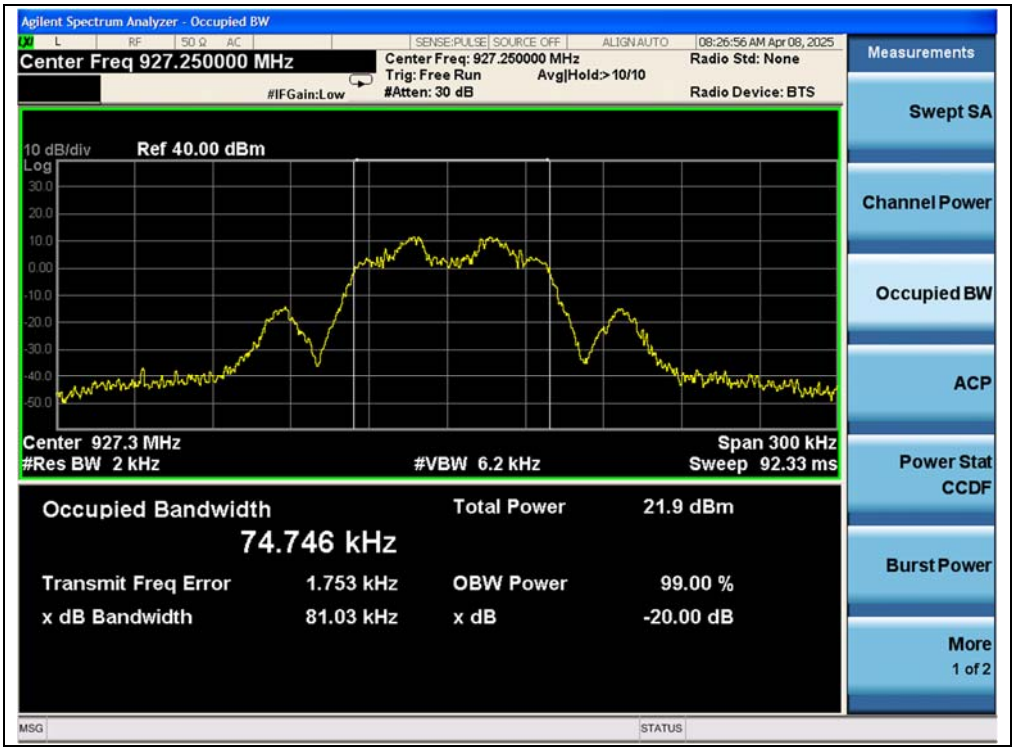
**B.Test Plot:**




(Channel 1, 902.75MHz)




(Channel 25, 914.75MHz)




(Channel 50, 927.25MHz)

## 2.3. Conducted Emission

### 2.3.1. Requirement

According to FCC section 15.207, 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 within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

| Frequency Range (MHz) | Conducted Limit (dBμV) | |
|---|---|---|
| | Quai-peak | Average |
| 0.15 - 0.50 | 66 to 56 | 56 to 46 |
| 0.50 - 5 | 56 | 46 |
| 5 - 30 | 60 | 50 |

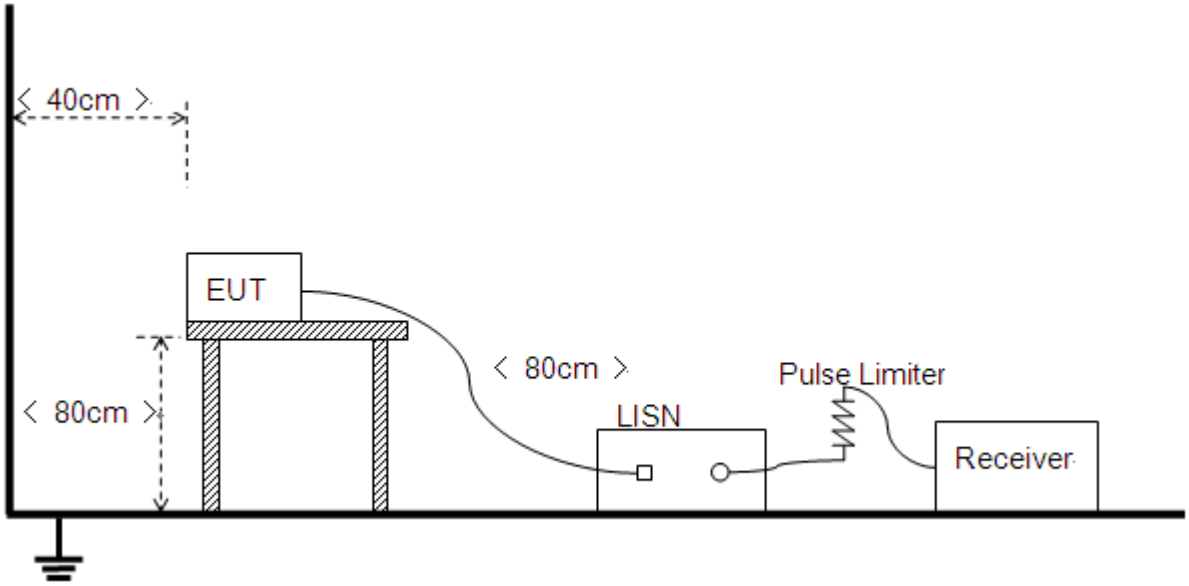
Note:

(a) The lower limit shall apply at the band edges.

(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

### 2.3.2. Test Description

**Test Setup:**




The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

### 2.3.1. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

**Note:** Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

**A.Test Setup:**

Test Mode: EUT + Adapter + USB Cable + RJ45 Cable + PC + RFID Label + RFID TX

Test voltage: AC 120V/60Hz

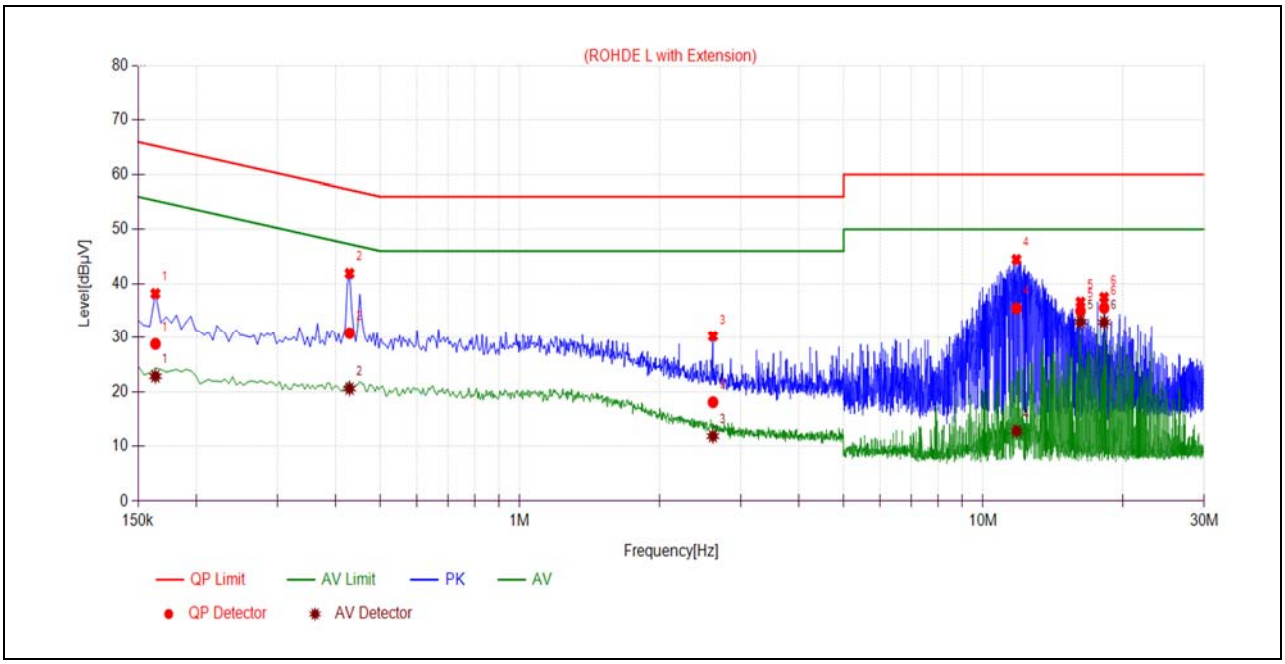
The measurement results are obtained as below:

$E\ [dB\mu V] = U_R + L_{Cable\ loss}\ [dB] + A_{Factor}$

$U_R$: Receiver Reading

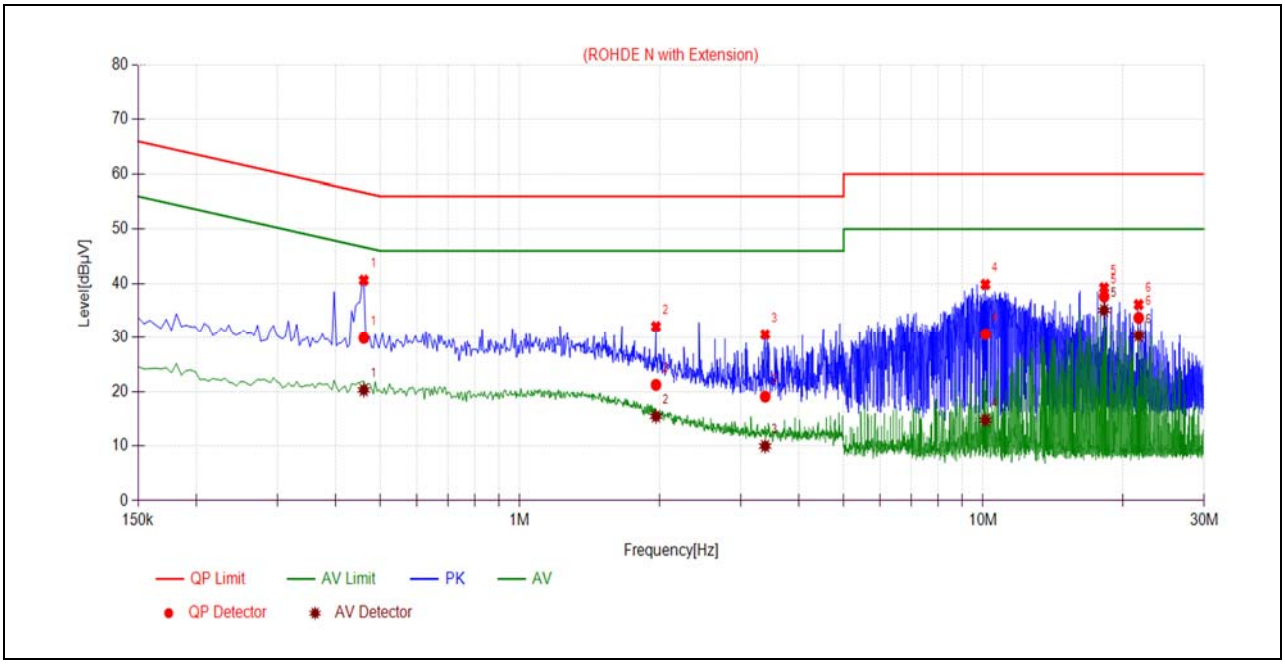
$A_{Factor}$: Voltage division factor of LISN

**B.Test Plot:**




(L Phase)

| No. | Fre. (MHz) | Emission Level (dBµV) | | Limit (dBµV) | | Power-line | Verdict |
|---|---|---|---|---|---|---|---|
| | | Quai-peak | Average | Quai-peak | Average | | |
| 1 | 0.1635 | 28.78 | 22.82 | 65.28 | 55.28 | Line | PASS |
| 2 | 0.4290 | 30.81 | 20.55 | 57.27 | 47.27 | | PASS |
| 3 | 2.6115 | 18.06 | 11.83 | 56.00 | 46.00 | | PASS |
| 4 | 11.8060 | 35.46 | 12.77 | 60.00 | 50.00 | | PASS |
| 5 | 16.2281 | 34.98 | 32.97 | 60.00 | 50.00 | | PASS |
| 6 | 18.2440 | 35.55 | 32.91 | 60.00 | 50.00 | | PASS |




(N Phase)

| No. | Fre. (MHz) | Emission Level (dBµV) | | Limit (dBµV) | | Power-line | Verdict |
|---|---|---|---|---|---|---|---|
| | | Quai-peak | Average | Quai-peak | Average | | |
| 1 | 0.4605 | 29.91 | 20.27 | 56.68 | 46.68 | Neutral | PASS |
| 2 | 1.9679 | 21.21 | 15.42 | 56.00 | 46.00 | | PASS |
| 3 | 3.3854 | 19.06 | 9.95 | 56.00 | 46.00 | | PASS |
| 4 | 10.1171 | 30.62 | 14.72 | 60.00 | 50.00 | | PASS |
| 5 | 18.2437 | 37.62 | 35.09 | 60.00 | 50.00 | | PASS |
| 6 | 21.6623 | 33.72 | 30.33 | 60.00 | 50.00 | | PASS |

# 2.4. Field Strength of Fundamental

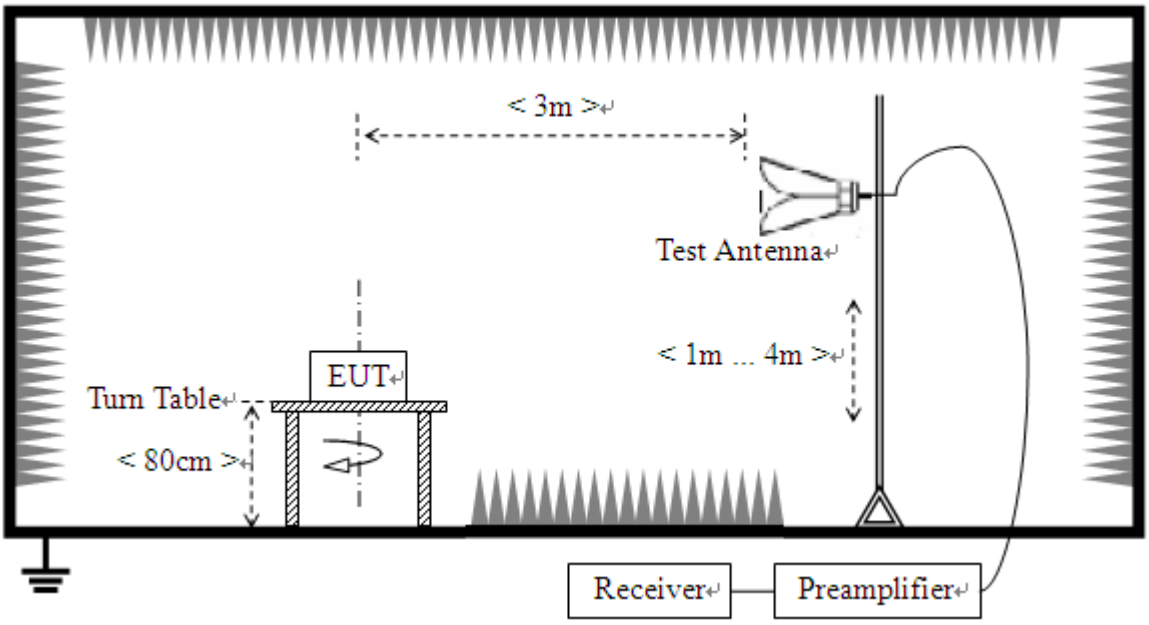
### 2.4.1. Requirement

According to FCC section 15.249(a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|---|---|---|
| 902-928 MHz | 50 | 500 |
| 2400-2483.5 MHz | 50 | 500 |
| 5725-5875 MHz | 50 | 500 |
| 24.0-24.25 GHz | 250 | 2500 |

### 2.4.2. Test Description

**Test Setup:**




The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

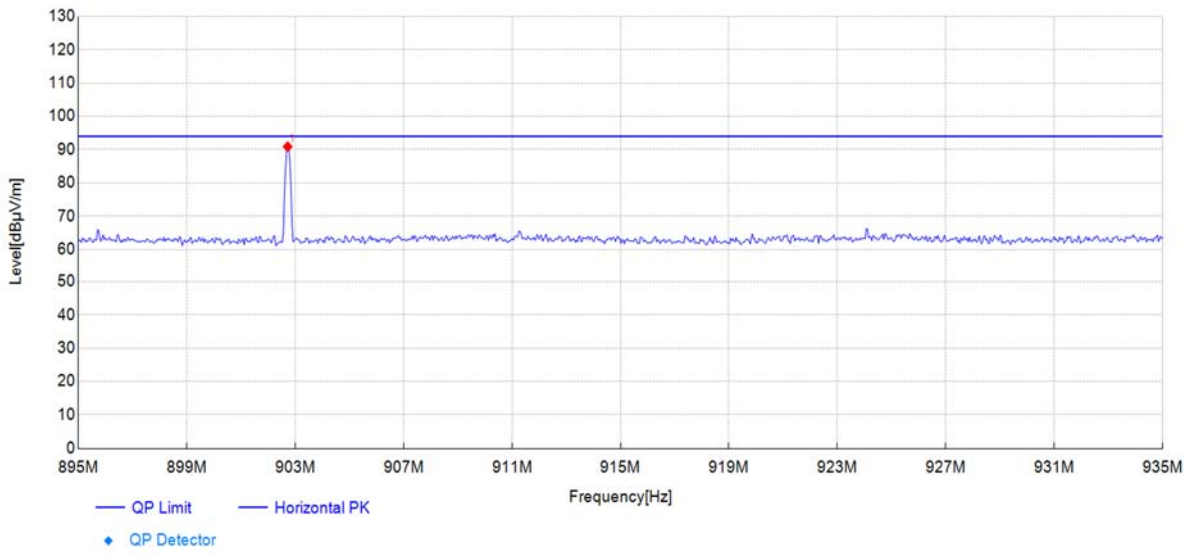
Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

### 2.4.3. Test Procedure

Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured
RBW = 120 kHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

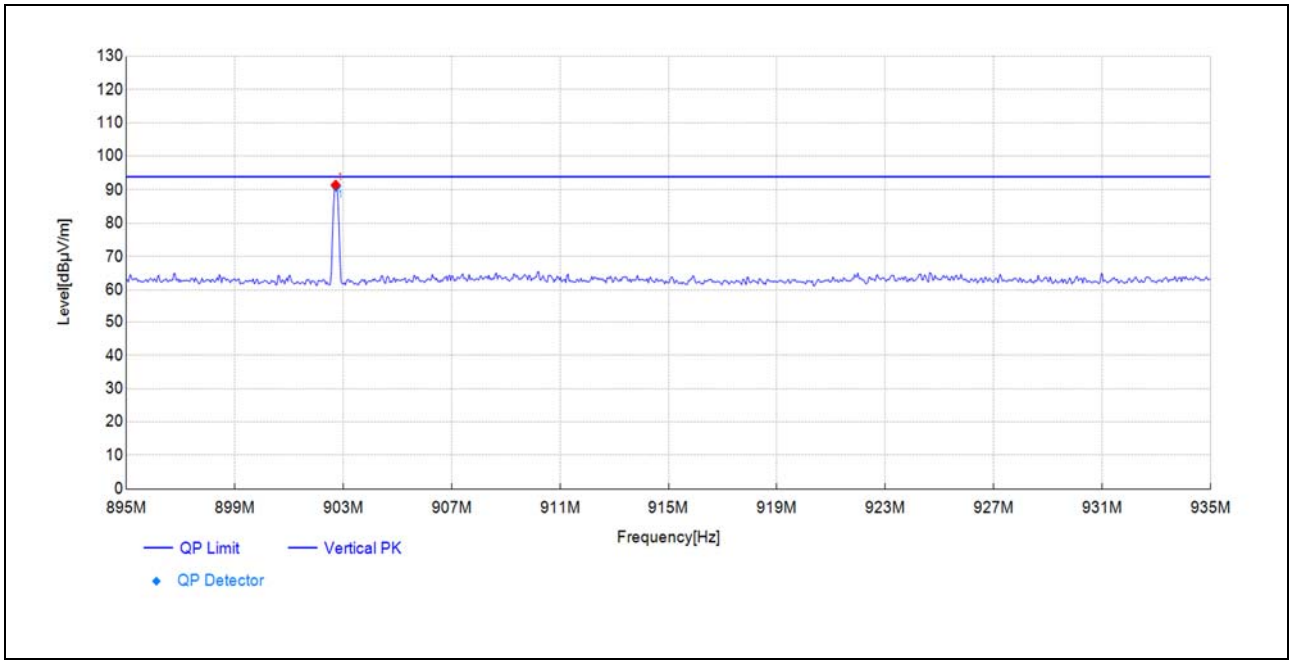
### 2.4.4. Test Result

**Note1:** All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis (Z axis) test condition was recorded in this test report.




(902.75MHz, Antenna Horizontal)

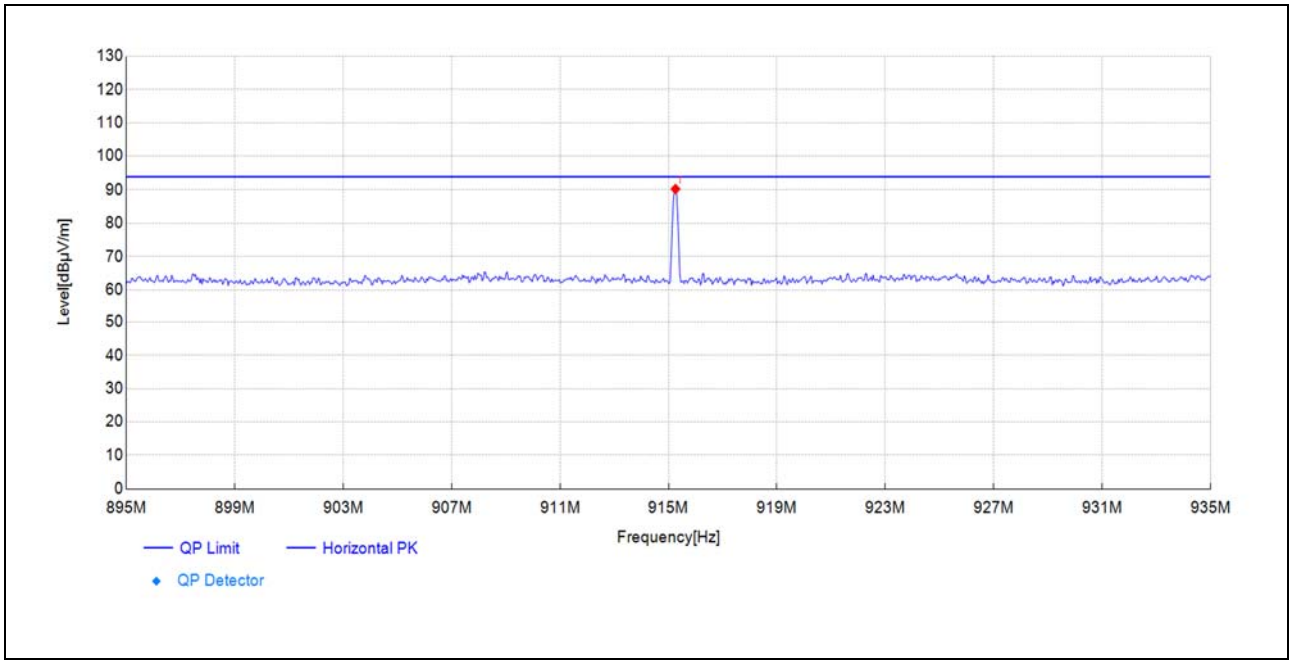
| Fre. (MHz) | Reading [dBμV] | Level [dBμV/m] | Factor [dB/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 902.73 | 65.0 | 90.89 | 25.920 | 93.98 | 3.09 | 150 | 112 | PK | PASS |




(902.75MHz, Antenna Vertical)

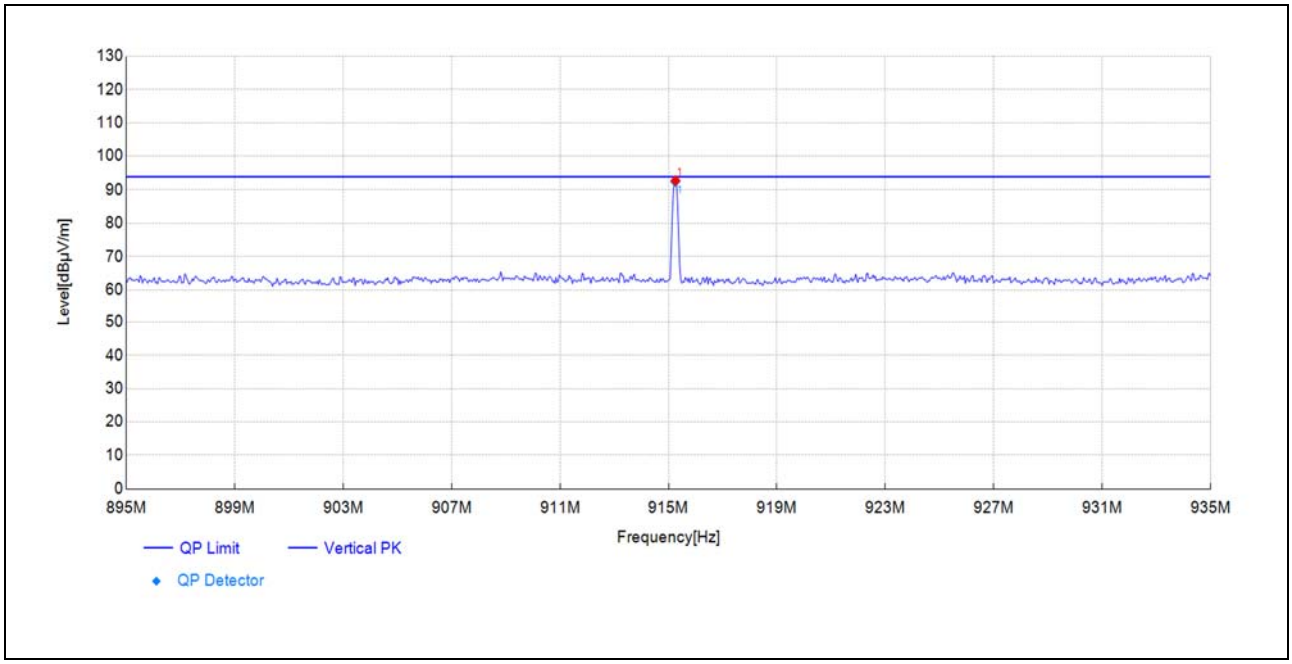
| Fre. (MHz) | Reading [dBμV] | Level [dBμV/m] | Factor [dB/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 902.73 | 65.6 | 91.54 | 25.920 | 93.98 | 2.44 | 150 | 66 | PK | PASS |

| Fre. (MHz) | Factor [dB/m] | QP Reading [dBμV] | QP Value [dBμV/m] | QP Limit [dBμV/m] | QP Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 902.75 | 25.92 | 65.18 | 91.10 | 93.98 | 2.88 | 150 | 66 | QP | PASS |




(915.25MHz, Antenna Horizontal)

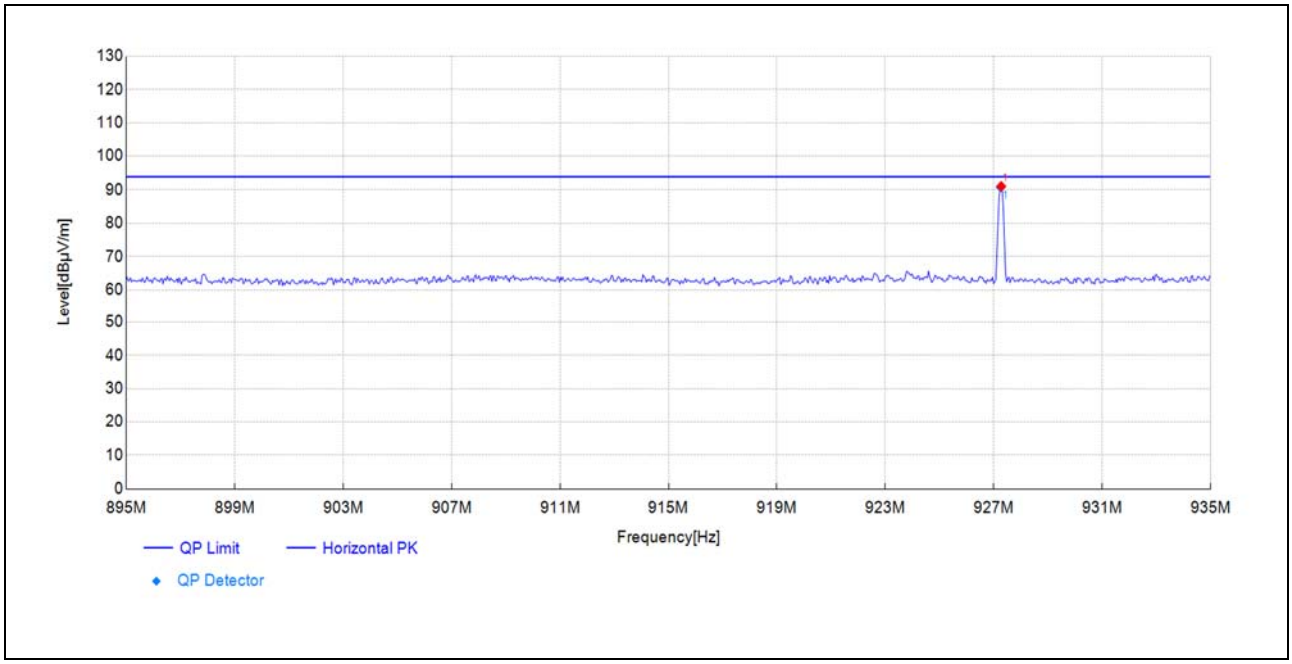
| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 915.26 | 64.3 | 90.31 | 25.970 | 93.98 | 3.67 | 150 | 46 | PK | PASS |




(915.25MHz, Antenna Vertical)

| Fre. (MHz) | Reading [dBμV] | Level [dBμV/m] | Factor [dB/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 915.26 | 66.9 | 92.85 | 25.970 | 93.98 | 1.13 | 150 | 66 | PK | PASS |

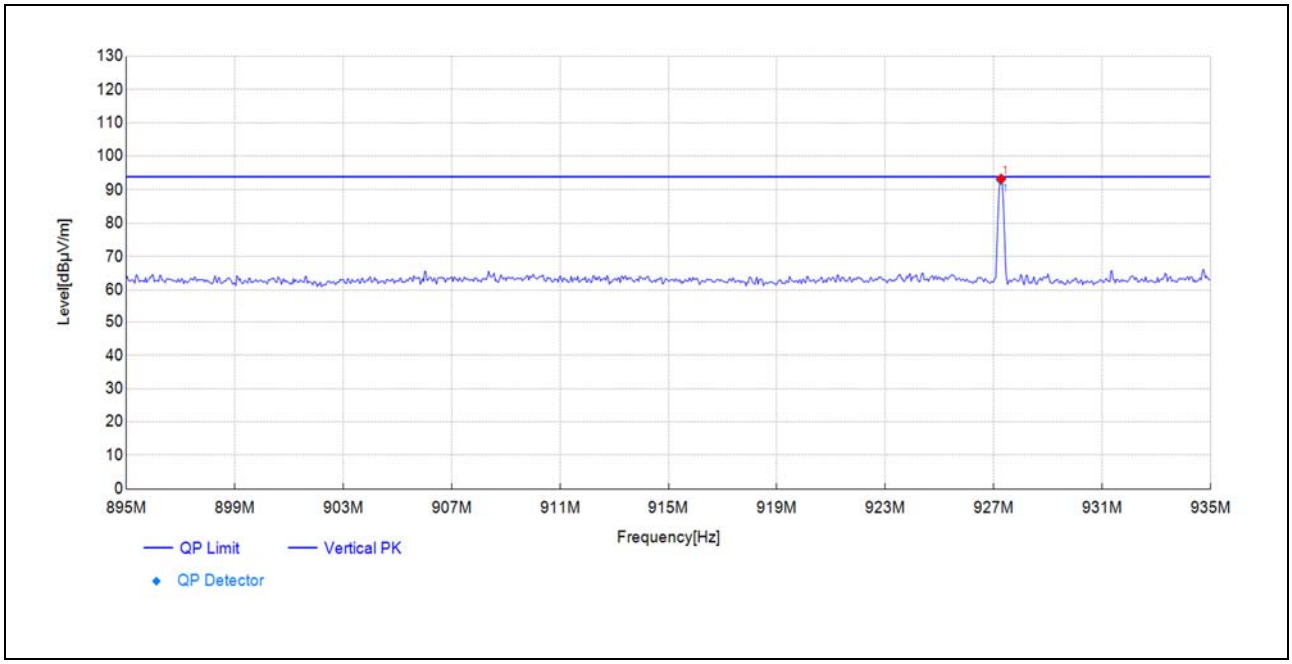
| Fre. (MHz) | Factor [dB/m] | QP Reading [dBμV] | QP Value [dBμV/m] | QP Limit [dBμV/m] | QP Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 915.25 | 25.97 | 66.57 | 92.54 | 93.98 | 1.44 | 150 | 66 | QP | PASS |




(927.25MHz, Antenna Horizontal)

| Fre. (MHz) | Reading [dBμV] | Level [dBμV/m] | Factor [dB/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 927.27 | 65.1 | 91.12 | 26.070 | 93.98 | 2.86 | 150 | 56 | PK | PASS |

| Fre. (MHz) | Factor [dB/m] | QP Reading [dBμV] | QP Value [dBμV/m] | QP Limit [dBμV/m] | QP Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 927.25 | 26.07 | 64.85 | 90.92 | 93.98 | 3.06 | 150 | 56 | QP | PASS |




(920.8MHz, Antenna Vertical)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 927.27 | 67.3 | 93.36 | 26.070 | 93.98 | 0.62 | 150 | 74 | PK | PASS |

| Fre. (MHz) | Factor [dB/m] | QP Reading [dBµV] | QP Value [dBµV/m] | QP Limit [dBµV/m] | QP Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 927.25 | 26.07 | 67.04 | 93.11 | 93.98 | 0.87 | 150 | 74 | QP | PASS |

# 2.5. Radiated Emission and Field Strength of Harmonics

### 2.5.1. Requirement

According to section 15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

| Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|---|---|---|
| 902-928 MHz | 50 | 500 |
| 2400-2483.5 MHz | 50 | 500 |
| 5725-5875 MHz | 50 | 500 |
| 24.0-24.25 GHz | 250 | 2500 |

According to section 15.249(d), Emission Radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in Section 15.209:

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) | Field Strength Limitation at 3m Measurement Distance | |
|---|---|---|---|---|
| | | | (uV/m) | (dBuV/m) |
| 0.009 - 0.490 | 2400/F(kHz) | 300 | 10000* 2400/F(KHz) | 20log 2400/F(KHz) + 80 |
| 0.490 - 1.705 | 24000/F(kHz) | 30 | 100* 2400/F(KHz) | 20log 2400/F(KHz) + 40 |
| 1.705 - 30.0 | 30 | 30 | 100*30 | 20log 30 + 40 |
| 30 - 88 | 100 | 3 | 100 | 20log 100 |
| 88 - 216 | 150 | 3 | 150 | 20log 150 |
| 216 - 960 | 200 | 3 | 200 | 20log 200 |
| Above 960 | 500 | 3 | 500 | 20log 500 |

According to section 15.249(e), for frequencies above 1000MHz, the above field strength limits are based on average limits. The peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20dB under any condition of modulation.

**Note:**

1) The tighter limit shall apply at the boundary between two frequency range.

2) Limitation expressed in dBuV/m is calculated by 20log Emission Level(uV/m).

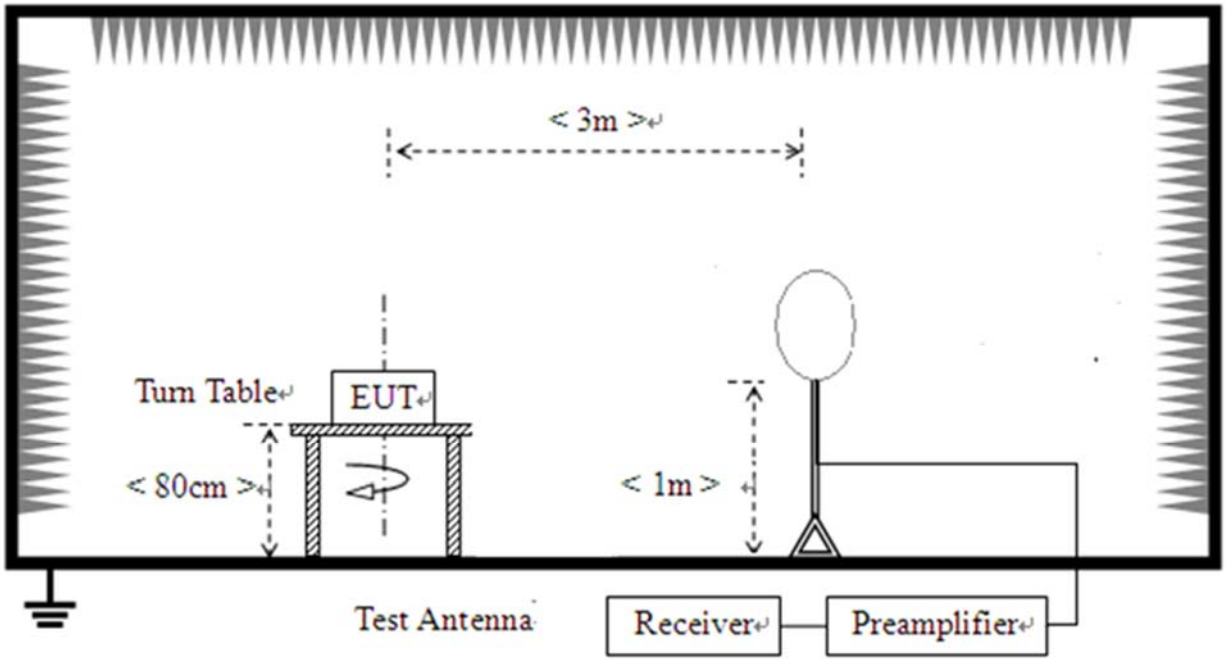
3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $Ld1 = Ld2 * (d2/d1)^2$.

Example: F.S Limit at 30m distance is 30uV/m, then F.S Limitation at 3m distance is adjusted as $Ld1 = L1 = 30uV/m * (10)^2 = 100 * 30uV/m$

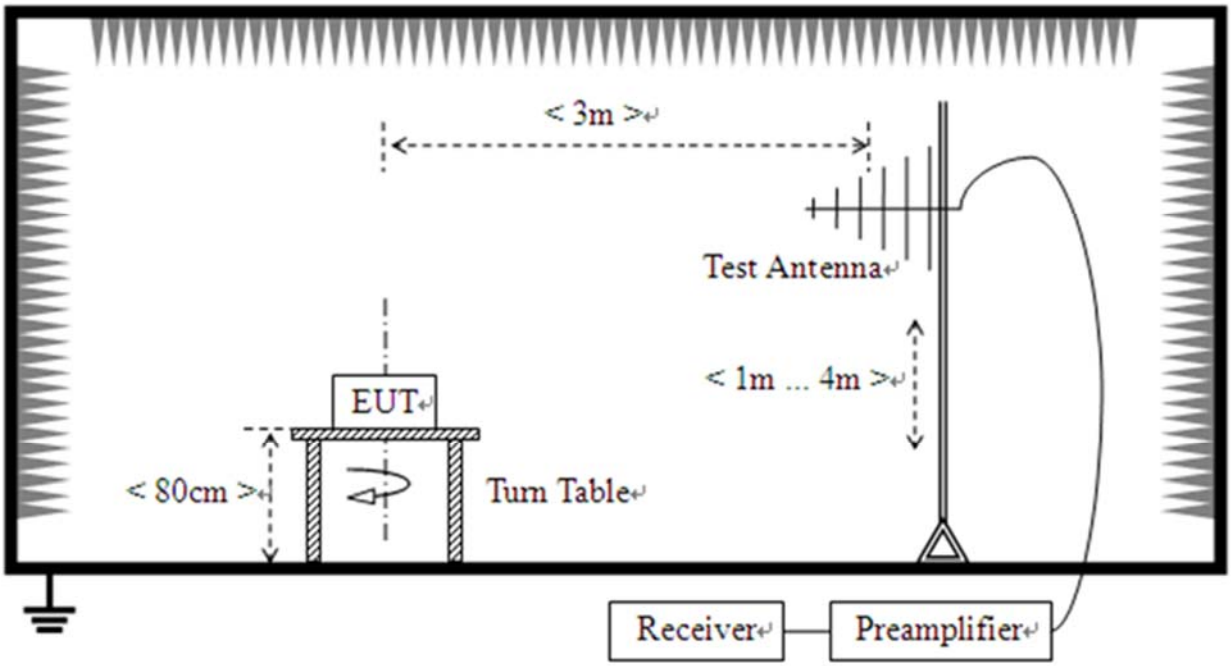
### 2.5.2. Test Description

**Test Setup:**

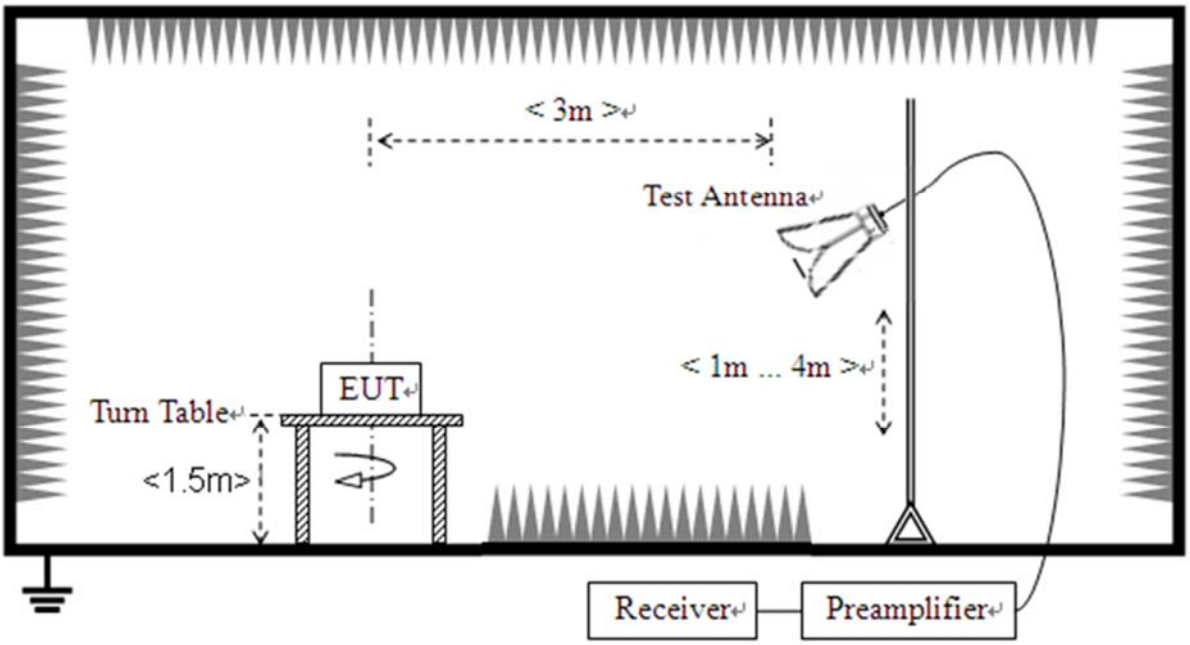
1) For radiated emissions from 9kHz to 30MHz




2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz




The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz.The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

### 2.5.3. Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$E$ [dBμV/m] $=U_R + A_T + A_{Factor}$ [dB]; $A_T = L_{Cable\ loss}$ [dB]$-G_{preamp}$ [dB]

$A_T$: Total correction Factor except Antenna

$U_R$: Receiver Reading

$G_{preamp}$: Preamplifier Gain

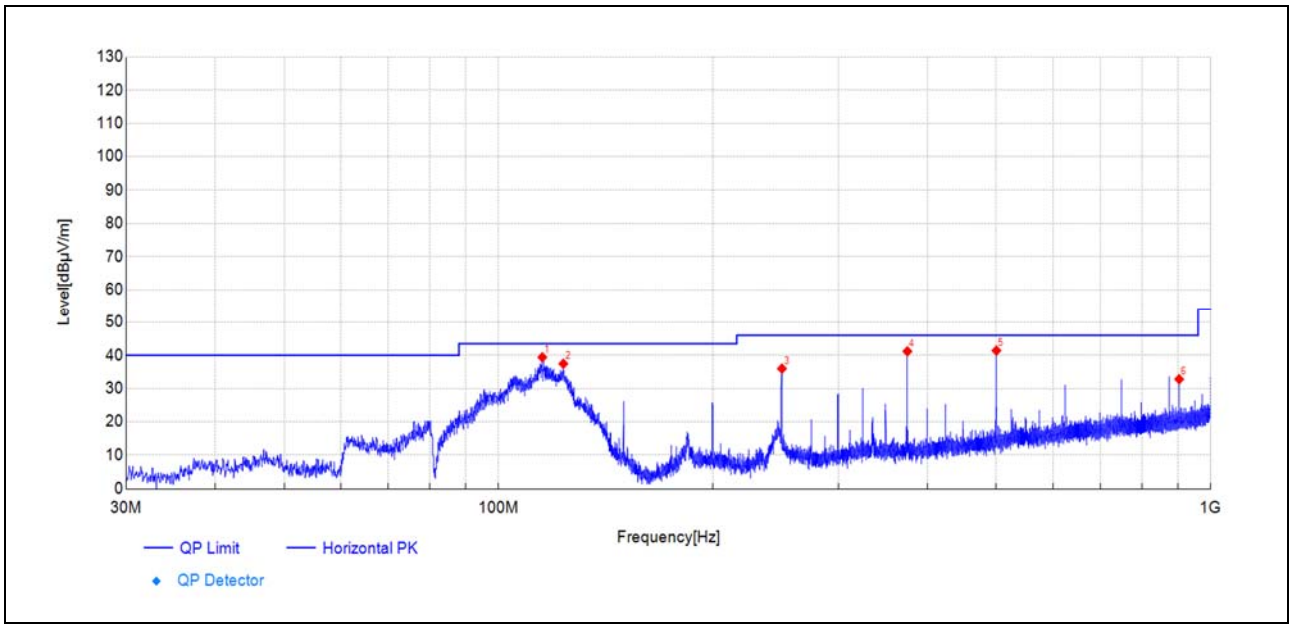
$A_{Factor}$: Antenna Factor at 3m

During the test, the total correction Factor $A_T$ and $A_{Factor}$ were built in test software.

**Note:** All emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition (Z axis) was recorded in this test report.

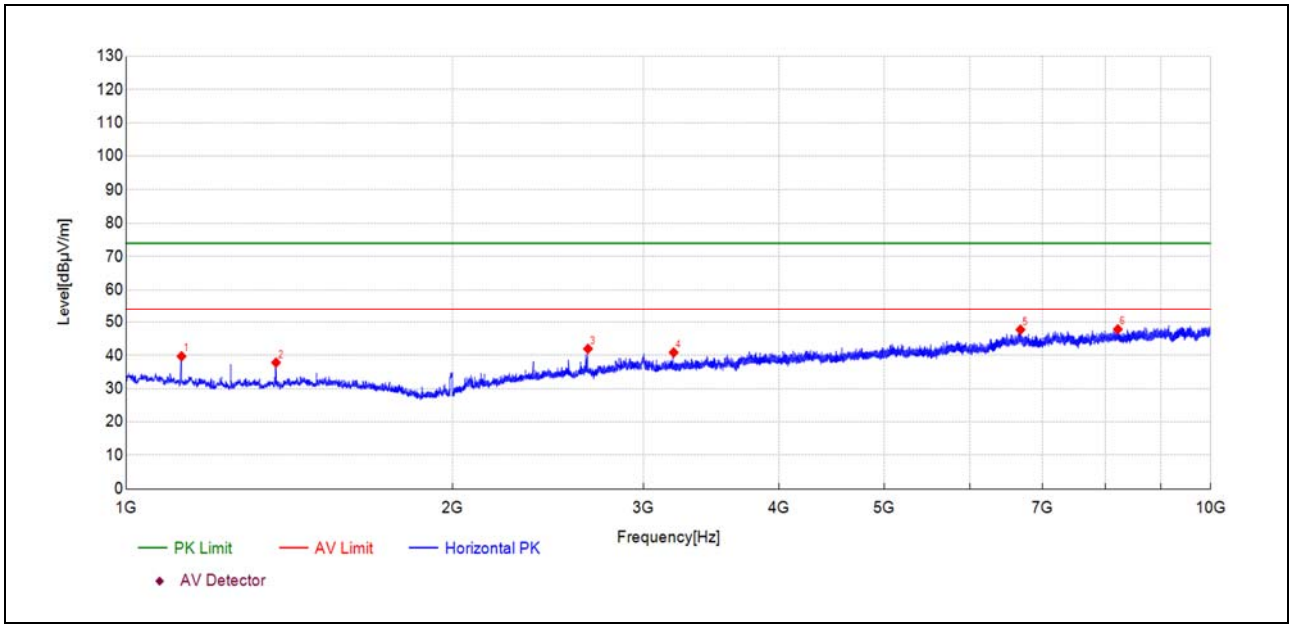
**Note 2:** The low frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Plot for 902.75MHz



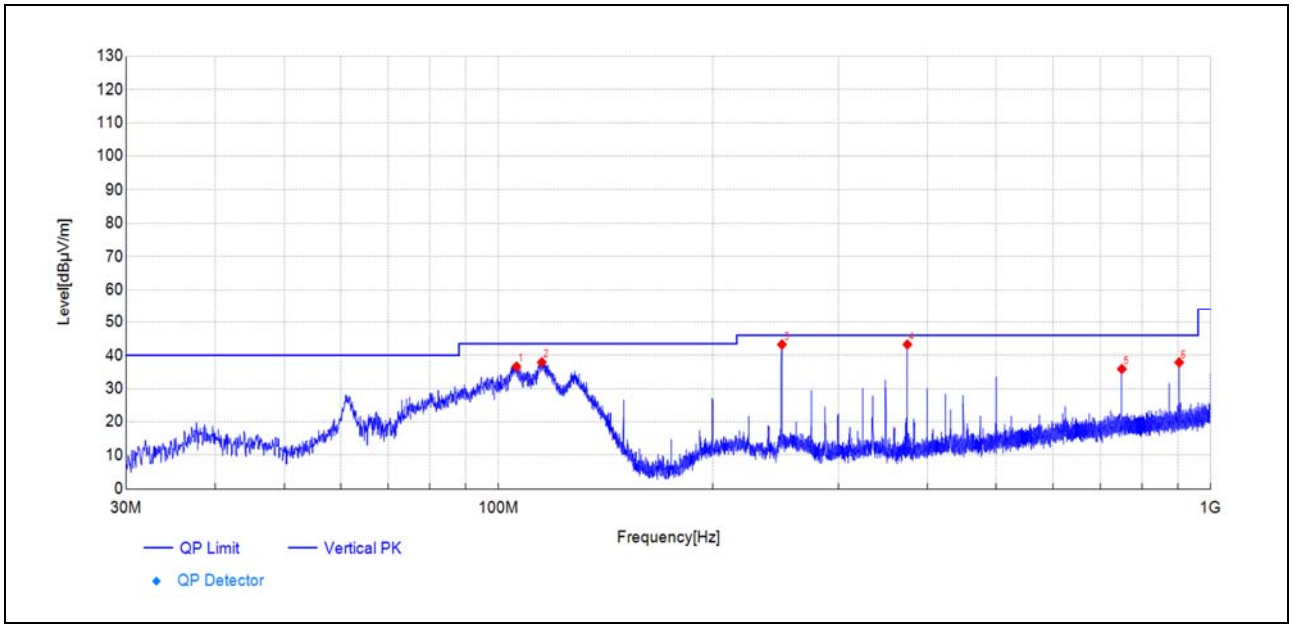

(Antenna Horizontal, 30MHz to 1GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 115.22 | 70.9 | 39.40 | -31.490 | 43.50 | 4.10 | 150 | 10 | PK | PASS |
| 123.32 | 70.2 | 37.45 | -32.700 | 43.50 | 6.05 | 150 | 10 | PK | PASS |
| 250.01 | 64.1 | 35.97 | -28.120 | 46.00 | 10.03 | 150 | 10 | PK | PASS |
| 375.00 | 66.0 | 41.18 | -24.850 | 46.00 | 4.82 | 150 | 10 | PK | PASS |
| 500.04 | 63.1 | 41.40 | -21.660 | 46.00 | 4.60 | 150 | 10 | PK | PASS |
| 902.76 | 47.7 | 32.79 | -14.880 | 46.00 | 24.71 | 150 | 10 | PK | NA |



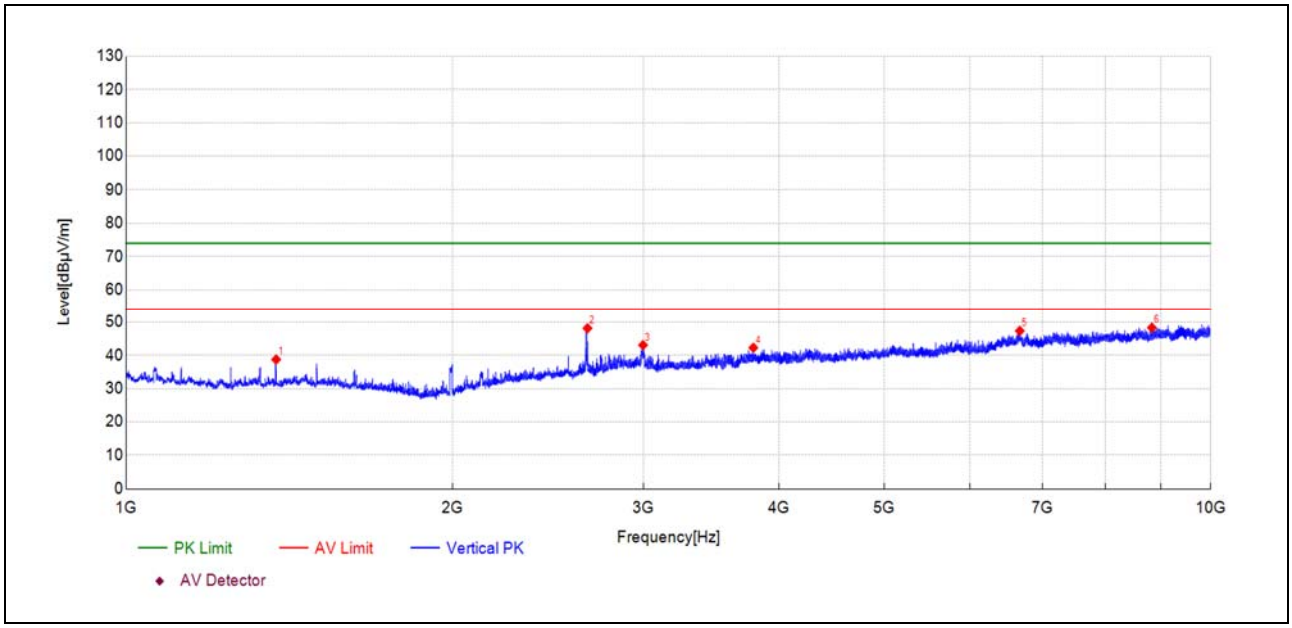

(Antenna Horizontal, 1GHz to 10GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1124.92 | 61.8 | 39.70 | -22.130 | 74.00 | 34.30 | 150 | 178 | PK | PASS |
| 1374.75 | 60.6 | 37.80 | -22.790 | 74.00 | 36.20 | 150 | 209 | PK | PASS |
| 2665.70 | 60.0 | 41.95 | -18.030 | 74.00 | 32.05 | 150 | 300 | PK | PASS |
| 3197.46 | 56.4 | 40.84 | -15.510 | 74.00 | 33.16 | 150 | 317 | PK | PASS |
| 6676.46 | 51.5 | 47.70 | -3.810 | 74.00 | 26.30 | 150 | 10 | PK | PASS |
| 8209.32 | 51.0 | 47.83 | -3.150 | 74.00 | 26.17 | 150 | 329 | PK | PASS |




(Antenna Vertical, 30MHz to 1GHz)

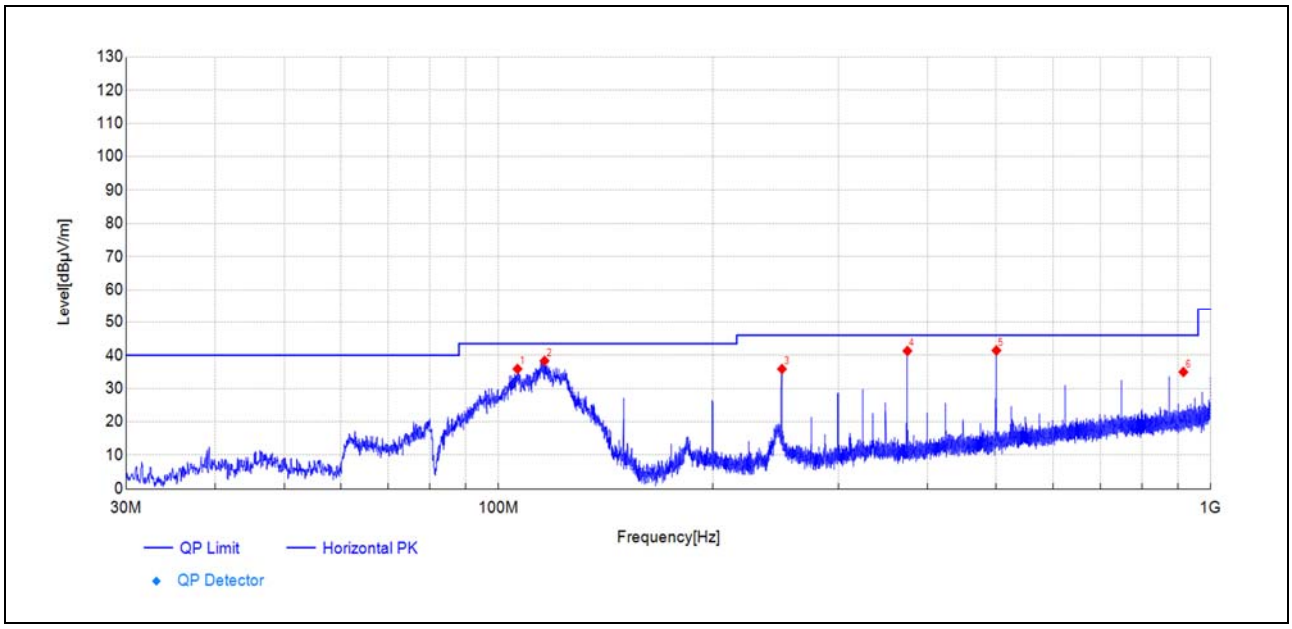
| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 105.95 | 67.0 | 36.58 | -30.410 | 43.50 | 6.92 | 150 | 10 | PK | PASS |
| 115.02 | 69.4 | 37.89 | -31.470 | 43.50 | 5.61 | 150 | 10 | PK | PASS |
| 250.01 | 71.4 | 43.25 | -28.120 | 46.00 | 2.75 | 150 | 10 | PK | PASS |
| 375.00 | 68.1 | 43.24 | -24.850 | 46.00 | 2.76 | 150 | 10 | PK | PASS |
| 750.02 | 52.9 | 35.88 | -16.970 | 46.00 | 10.12 | 150 | 10 | PK | PASS |
| 902.76 | 52.7 | 37.86 | -14.880 | 46.00 | 18.64 | 150 | 10 | PK | PASS |




(Antenna Vertical, 1GHz to 10GHz)

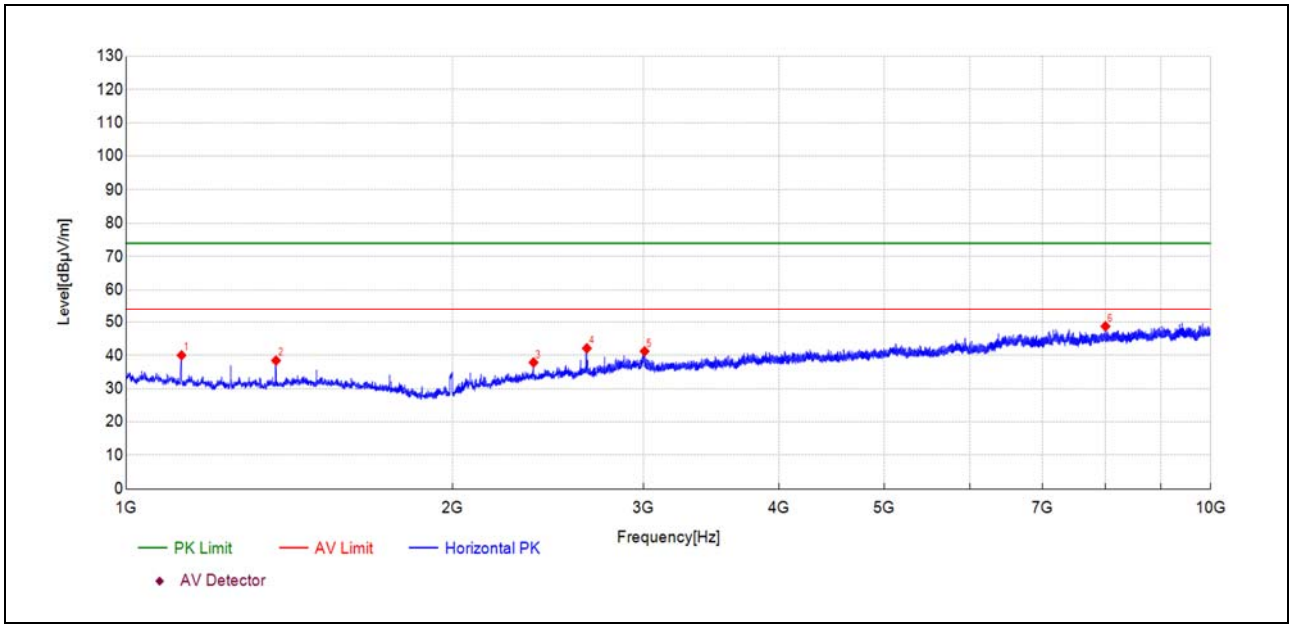
| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1375.19 | 61.5 | 38.73 | -22.790 | 74.00 | 35.27 | 150 | 261 | PK | PASS |
| 2663.04 | 66.1 | 48.12 | -18.020 | 74.00 | 25.88 | 150 | 0 | PK | PASS |
| 2996.44 | 59.8 | 43.07 | -16.710 | 74.00 | 30.93 | 150 | 160 | PK | PASS |
| 3786.95 | 56.0 | 42.27 | -13.760 | 74.00 | 31.73 | 150 | 243 | PK | PASS |
| 6666.80 | 51.1 | 47.34 | -3.780 | 74.00 | 26.66 | 150 | 59 | PK | PASS |
| 8824.40 | 50.8 | 48.31 | -2.510 | 74.00 | 25.69 | 150 | 10 | PK | PASS |

Plot for 915.25MHz



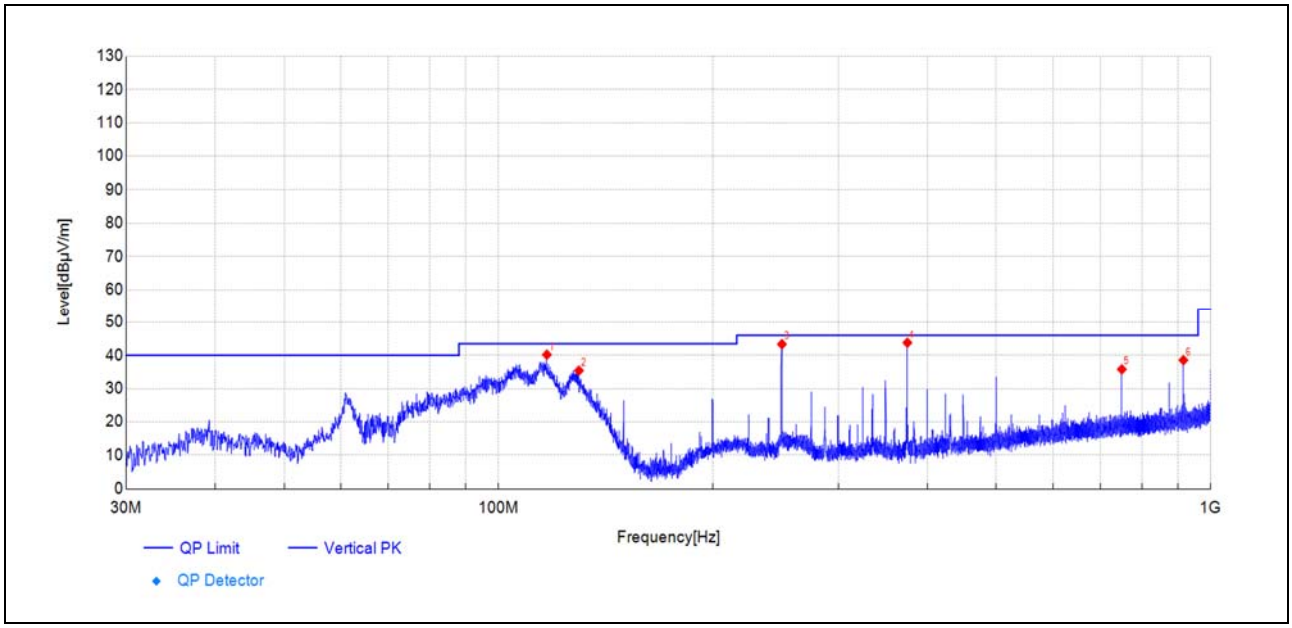

(Antenna Horizontal, 30MHz to 1GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 106.34 | 66.3 | 35.88 | -30.440 | 43.50 | 7.62 | 150 | 10 | PK | PASS |
| 116.04 | 69.9 | 38.29 | -31.580 | 43.50 | 5.21 | 150 | 10 | PK | PASS |
| 250.01 | 64.0 | 35.86 | -28.120 | 46.00 | 10.14 | 150 | 10 | PK | PASS |
| 375.00 | 66.1 | 41.29 | -24.850 | 46.00 | 4.71 | 150 | 10 | PK | PASS |
| 500.04 | 63.1 | 41.43 | -21.660 | 46.00 | 4.57 | 150 | 10 | PK | PASS |
| 915.27 | 49.7 | 34.96 | -14.730 | 46.00 | 11.04 | 150 | 10 | PK | NA |



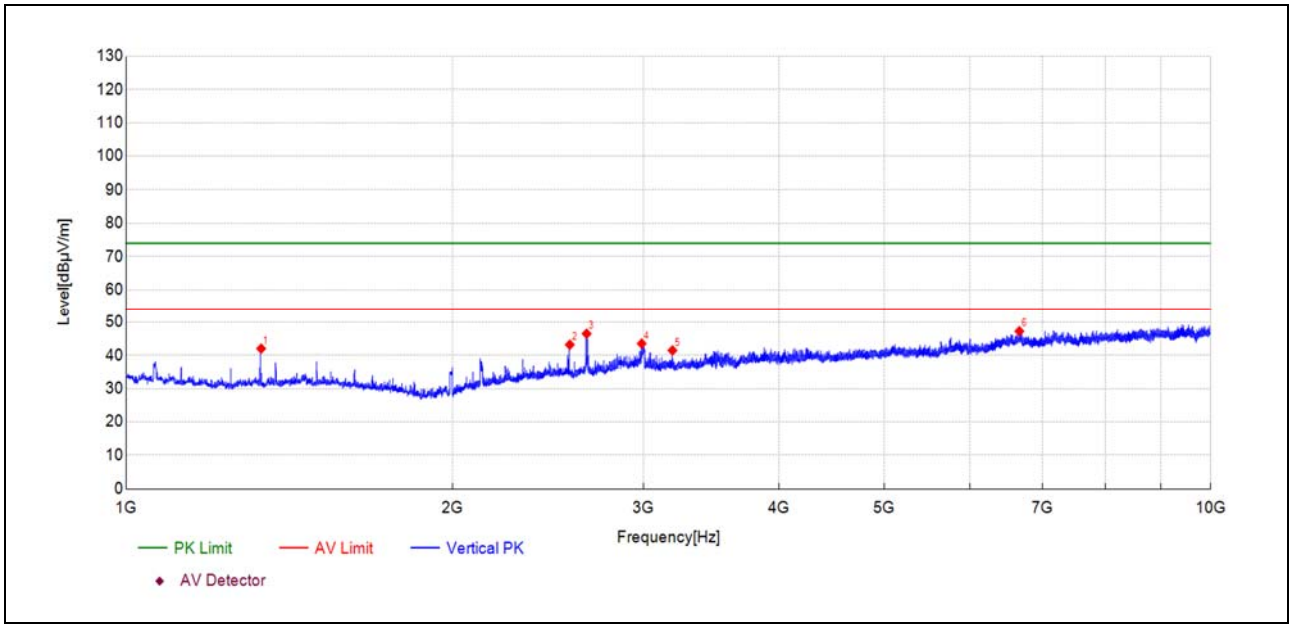

(Antenna Horizontal, 1GHz to 10GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1124.92 | 62.1 | 40.01 | -22.130 | 74.00 | 33.99 | 150 | 178 | PK | PASS |
| 1374.75 | 61.2 | 38.41 | -22.790 | 74.00 | 35.59 | 150 | 178 | PK | PASS |
| 2374.97 | 57.2 | 37.86 | -19.380 | 74.00 | 36.14 | 150 | 98 | PK | PASS |
| 2659.48 | 60.1 | 42.10 | -18.010 | 74.00 | 31.90 | 150 | 148 | PK | PASS |
| 3006.28 | 57.1 | 41.20 | -15.900 | 74.00 | 32.80 | 150 | 168 | PK | PASS |
| 7996.90 | 52.0 | 48.72 | -3.320 | 74.00 | 25.28 | 150 | 341 | PK | PASS |




(Antenna Vertical, 30MHz to 1GHz)

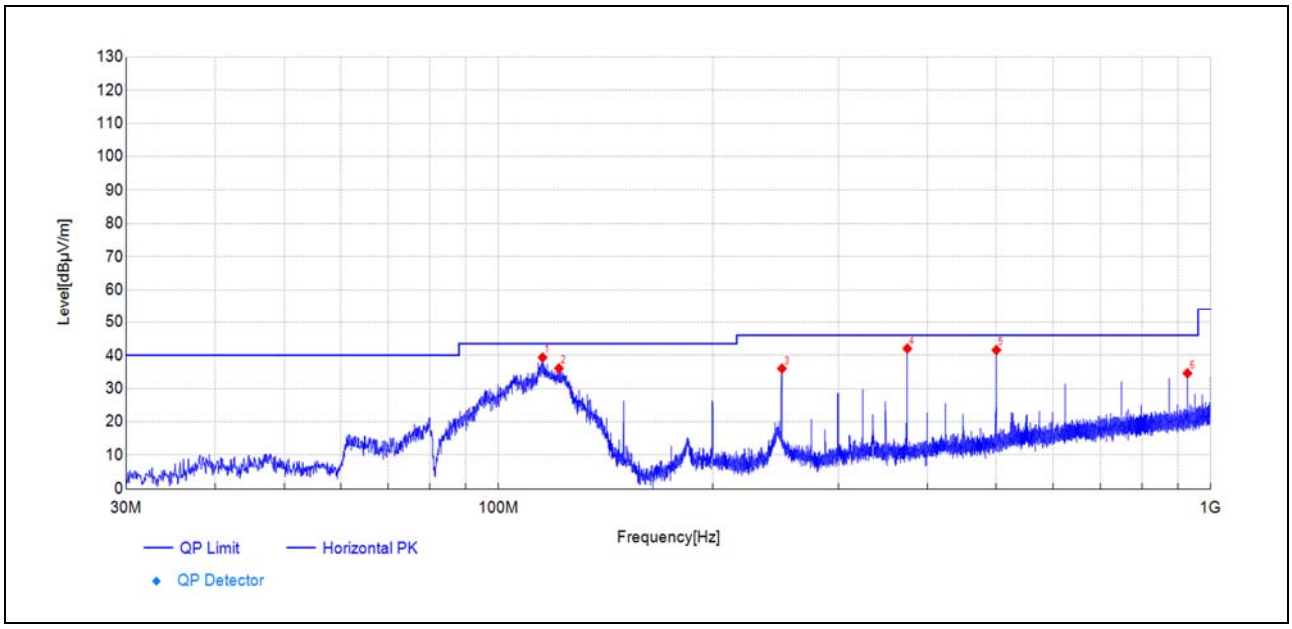
| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 116.92 | 71.9 | 40.18 | -31.750 | 43.50 | 3.32 | 150 | 11 | PK | PASS |
| 129.67 | 68.7 | 35.39 | -33.260 | 43.50 | 8.11 | 150 | 11 | PK | PASS |
| 250.01 | 71.5 | 43.34 | -28.120 | 46.00 | 2.66 | 150 | 11 | PK | PASS |
| 375.00 | 68.6 | 43.79 | -24.850 | 46.00 | 2.21 | 150 | 11 | PK | PASS |
| 750.02 | 52.8 | 35.78 | -16.970 | 46.00 | 10.22 | 150 | 11 | PK | PASS |
| 915.27 | 53.3 | 38.55 | -14.730 | 46.00 | 7.45 | 150 | 11 | PK | NA |




(Antenna Vertical, 1GHz to 10GHz)

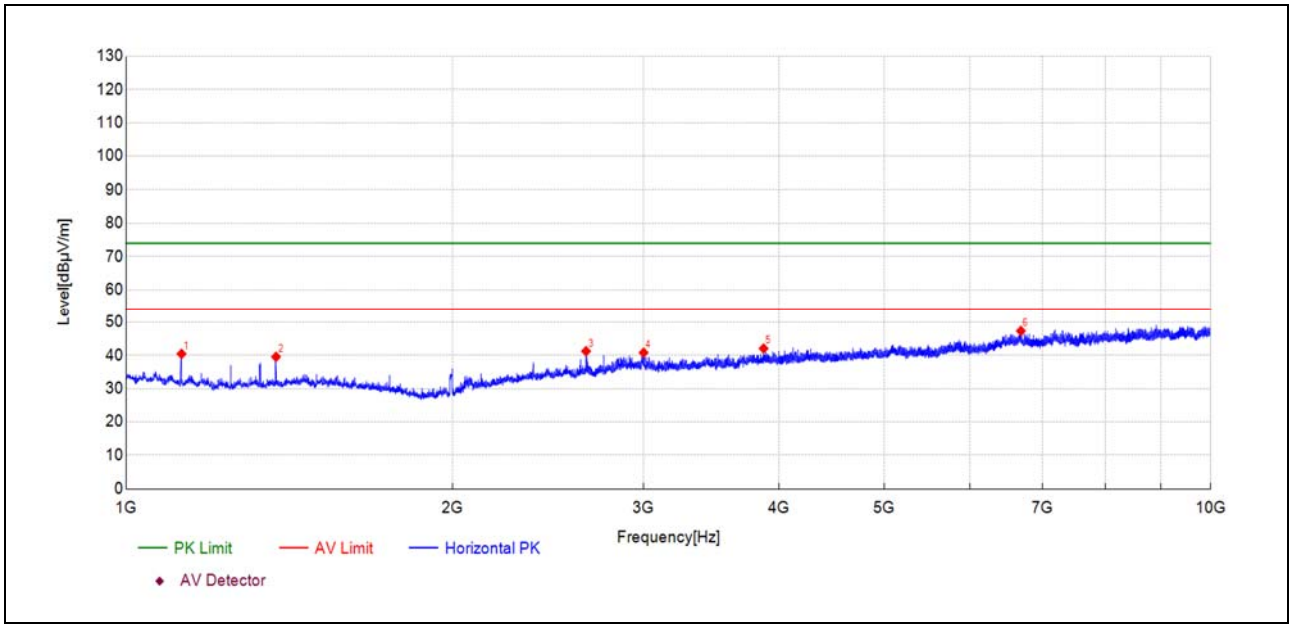
| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1332.07 | 65.1 | 42.02 | -23.040 | 74.00 | 31.98 | 150 | 239 | PK | PASS |
| 2564.79 | 61.5 | 43.19 | -18.340 | 74.00 | 30.81 | 150 | 230 | PK | PASS |
| 2658.15 | 64.5 | 46.49 | -18.010 | 74.00 | 27.51 | 150 | 120 | PK | PASS |
| 2988.00 | 60.3 | 43.52 | -16.740 | 74.00 | 30.48 | 150 | 79 | PK | PASS |
| 3189.74 | 57.0 | 41.47 | -15.540 | 74.00 | 32.53 | 150 | 360 | PK | PASS |
| 6661.01 | 51.0 | 47.25 | -3.760 | 74.00 | 26.75 | 150 | 106 | PK | PASS |

Plot for 927.25MHz



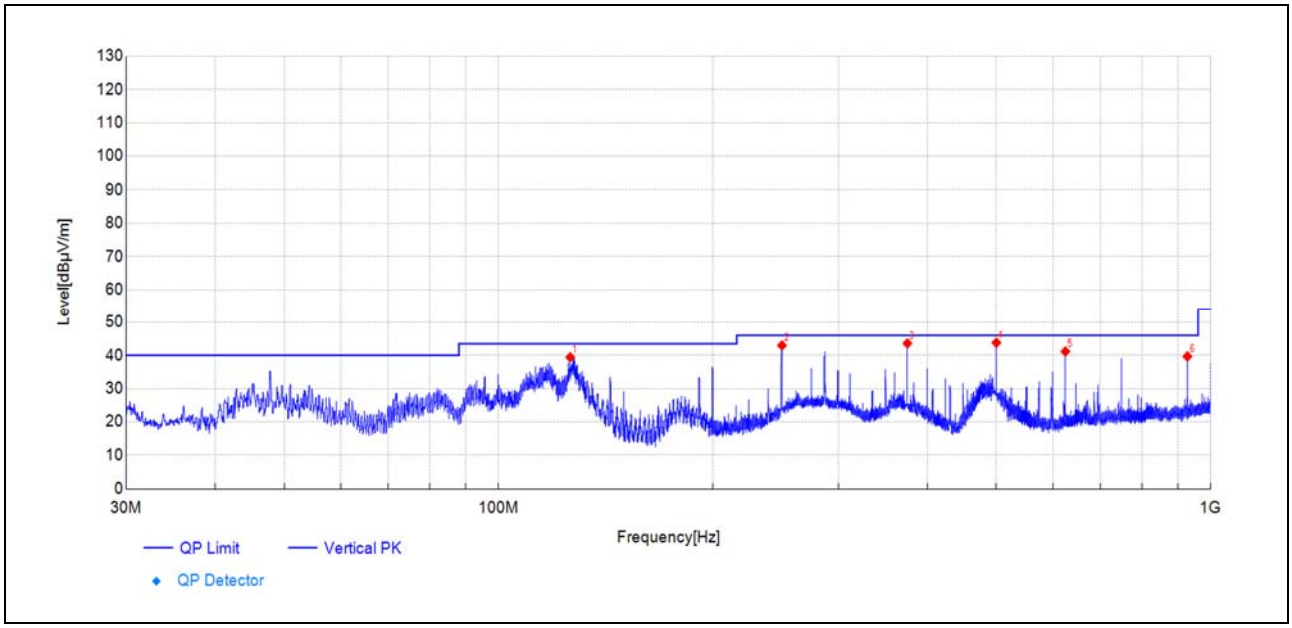

(Antenna Horizontal, 30MHz to 1GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 115.32 | 70.8 | 39.32 | -31.500 | 43.50 | 4.18 | 150 | 11 | PK | PASS |
| 121.57 | 68.6 | 36.05 | -32.510 | 43.50 | 7.45 | 150 | 11 | PK | PASS |
| 250.01 | 64.1 | 35.99 | -28.120 | 46.00 | 10.01 | 150 | 11 | PK | PASS |
| 375.00 | 66.9 | 42.00 | -24.850 | 46.00 | 4.00 | 150 | 11 | PK | PASS |
| 500.04 | 63.2 | 41.58 | -21.660 | 46.00 | 4.42 | 150 | 11 | PK | PASS |
| 927.26 | 49.1 | 34.58 | -14.540 | 46.00 | 11.42 | 150 | 11 | PK | PASS |



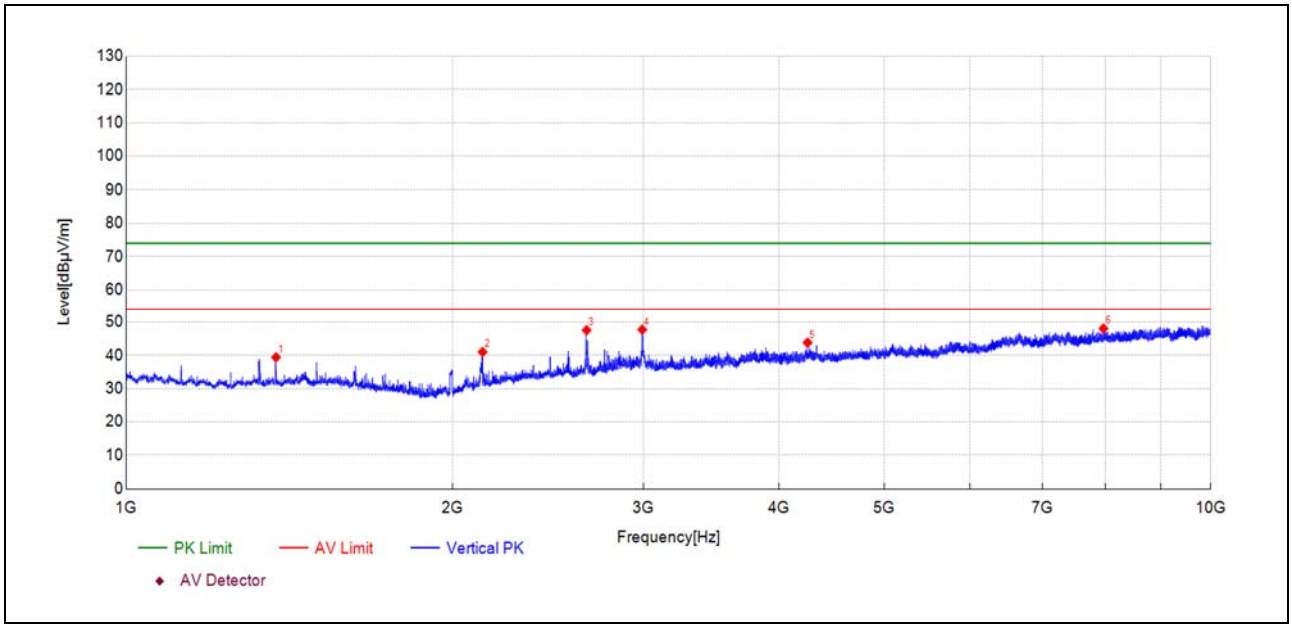

(Antenna Horizontal, 1GHz to 10GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1124.92 | 62.6 | 40.44 | -22.130 | 74.00 | 33.56 | 150 | 178 | PK | PASS |
| 1374.75 | 62.3 | 39.55 | -22.790 | 74.00 | 34.45 | 150 | 138 | PK | PASS |
| 2655.03 | 59.2 | 41.24 | -18.000 | 74.00 | 32.76 | 150 | 228 | PK | PASS |
| 3000.00 | 57.5 | 40.79 | -16.700 | 74.00 | 33.21 | 150 | 117 | PK | PASS |
| 3869.99 | 55.4 | 42.04 | -13.340 | 74.00 | 31.96 | 150 | 82 | PK | PASS |
| 6682.25 | 51.2 | 47.34 | -3.830 | 74.00 | 26.66 | 150 | 207 | PK | PASS |




(Antenna Vertical, 30MHz to 1GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 126.08 | 72.1 | 39.41 | -32.720 | 43.50 | 4.09 | 150 | 147 | PK | PASS |
| 250.01 | 70.9 | 42.97 | -27.970 | 46.00 | 3.03 | 150 | 228 | PK | PASS |
| 375.00 | 68.1 | 43.58 | -24.520 | 46.00 | 2.42 | 150 | 147 | PK | PASS |
| 500.04 | 65.2 | 43.80 | -21.400 | 46.00 | 2.20 | 150 | 160 | PK | PASS |
| 625.03 | 60.3 | 41.15 | -19.140 | 46.00 | 4.85 | 150 | 323 | PK | PASS |
| 927.29 | 53.8 | 39.66 | -14.100 | 46.00 | 6.34 | 150 | 1 | PK | NA |




(Antenna Vertical, 1GHz to 10GHz)

| Fre. (MHz) | Reading [dBµV] | Level [dBµV/m] | Factor [dB/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1374.75 | 62.2 | 39.40 | -22.790 | 74.00 | 34.60 | 150 | 169 | PK | PASS |
| 2131.36 | 61.0 | 40.99 | -19.980 | 74.00 | 33.01 | 150 | 139 | PK | PASS |
| 2658.15 | 65.5 | 47.53 | -18.010 | 74.00 | 26.47 | 150 | 30 | PK | PASS |
| 2991.55 | 64.5 | 47.72 | -16.730 | 74.00 | 26.28 | 150 | 181 | PK | PASS |
| 4248.50 | 55.8 | 43.80 | -11.980 | 74.00 | 30.20 | 150 | 246 | PK | PASS |
| 7962.62 | 51.5 | 48.03 | -3.420 | 74.00 | 25.97 | 150 | 35 | PK | PASS |

# Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

| Test Items | Uncertainty |
|---|---|
| Bandwidth | ±5% |
| Radiated Emission | ±2.95dB |

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

# Annex B Testing Laboratory Information

## 1. Identification of the Responsible Testing Laboratory

| | |
|---|---|
| **Laboratory Name:** | Shenzhen Morlab Communications Technology Co., Ltd. |
| **Laboratory Address:** | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |
| **Telephone:** | +86 755 36698555 |
| **Facsimile:** | +86 755 36698525 |

## 2. Identification of the Responsible Testing Location

| | |
|---|---|
| **Name:** | Shenzhen Morlab Communications Technology Co., Ltd. |
| **Address:** | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |

## 3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.

## 4. Test Equipments Utilized

### 4.1 Conducted Test Equipment

| Equipment | Serial No. | Type | Manufacturer | Cal. Date | Cal. Due |
|---|---|---|---|---|---|
| EXA Signal Analyzer | MY53470836 | N9010A | Agilent | 2025.01.15 | 2026.01.14 |
| RF Cable (30MHz-26GHz) | CB01 | RF01 | Morlab | N/A | N/A |
| Coaxial Cable | CB02 | RF02 | Morlab | N/A | N/A |
| SMA Connector | CN01 | RF03 | HUBER-SUHNER | N/A | N/A |
| USB Wideband Power Sensor | MY54180008 | U2021XA | Agilent | 2024.09.11 | 2025.09.10 |

### 4.2 List of Software Used

| Description | Manufacturer | Software Version |
|---|---|---|
| Test System | Tonscend | V2.5.77.0418 |
| JS32-RE | Tonscend | 5.0.0 |

### 4.3 Radiated Test Equipment

| Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Due Date |
|---|---|---|---|---|---|
| Signal Analyzer | MY56060145 | N9020A | Agilent | 2024.05.30 | 2025.05.29 |
| Test Antenna - Bi-Log | 9163-519 | VULB 9163 | Schwarzbeck | 2024.06.22 | 2025.06.21 |
| Test Antenna - Loop | 1519-022 | FMZB1519 | Schwarzbeck | 2024.06.03 | 2025.06.02 |
| Test Antenna – Horn | 01774 | BBHA 9120D | Schwarzbeck | 2024.06.22 | 2025.06.21 |
| Test Antenna – Horn | BBHA9170 #773 | BBHA9170 | Schwarzbeck | 2024.06.22 | 2025.06.21 |
| Preamplifier (10MHz-6GHz) | 46732 | S10M100L3802 | LUCIX CORP. | 2024.05.30 | 2025.05.29 |
| Preamplifier (2GHz-18GHz) | 61171/61172 | S020180L3203 | LUCIX CORP. | 2024.05.30 | 2025.05.29 |
| Preamplifier (18GHz-40GHz) | DS77209 | DCLNA0118-40C-S | Decentest | 2024.05.30 | 2025.05.29 |
| RF Coaxial Cable (DC-18GHz) | MRE001 | PE330 | Pasternack | 2024.05.30 | 2025.05.29 |

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|---|---|---|---|---|---|
| RF Coaxial Cable (DC-18GHz) | MRE002 | CLU18 | Pasternack | 2024.05.30 | 2025.05.29 |
| RF Coaxial Cable (DC-18GHz) | MRE003 | CLU18 | Pasternack | 2024.05.30 | 2025.05.29 |
| RF Coaxial Cable (DC-40GHz) | 22290045 | QA360-40-K K-0.5 | Qualwave | 2024.07.03 | 2025.07.02 |
| RF Coaxial Cable (DC-40GHz) | 22290046 | QA360-40-K KF-2 | Qualwave | 2024.07.03 | 2025.07.02 |
| RF Coaxial Cable (DC-18GHz) | 22120181 | QA500-18-N N-5 | Qualwave | 2024.07.03 | 2025.07.02 |
| Notch Filter | N/A | WRCG-2400-2483.5-60SS | Wainwright | N/A | N/A |
| Anechoic Chamber | N/A | 9m*6m*6m | CRT | 2022.05.10 | 2025.05.09 |

END OF REPORT