

## Co-location Report

**FCC ID:** Q9DASIN0306

**Application:** Hewlett Packard Enterprise

**Product:** HPE Aruba User Experience Sensor

**Model No.:** ASIN0306

**Trademark:**  , 

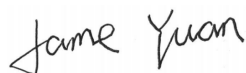
**FCC Rule Part(s):** Part 2, 22 (H), 24 (E), 27  
Part 15 Subpart C (Section 15.247)  
Part 15 Subpart E (Section 15.407)

**Result:** Complies

**Received Date:** 2023-06-15

**Test Date:** 2023-07-14 ~ 2023-10-30

**Reviewed By:**



Jame Yuan

**Approved By:**



Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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### Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 2306RSU027-U7 | V01     | Initial Report | 2023-10-31 | Valid |
|               |         |                |            |       |

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### 1.1. Applicant

## 1.2. Manufacturer

### 1.3. Testing Facility

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#### 1.4. Product Information

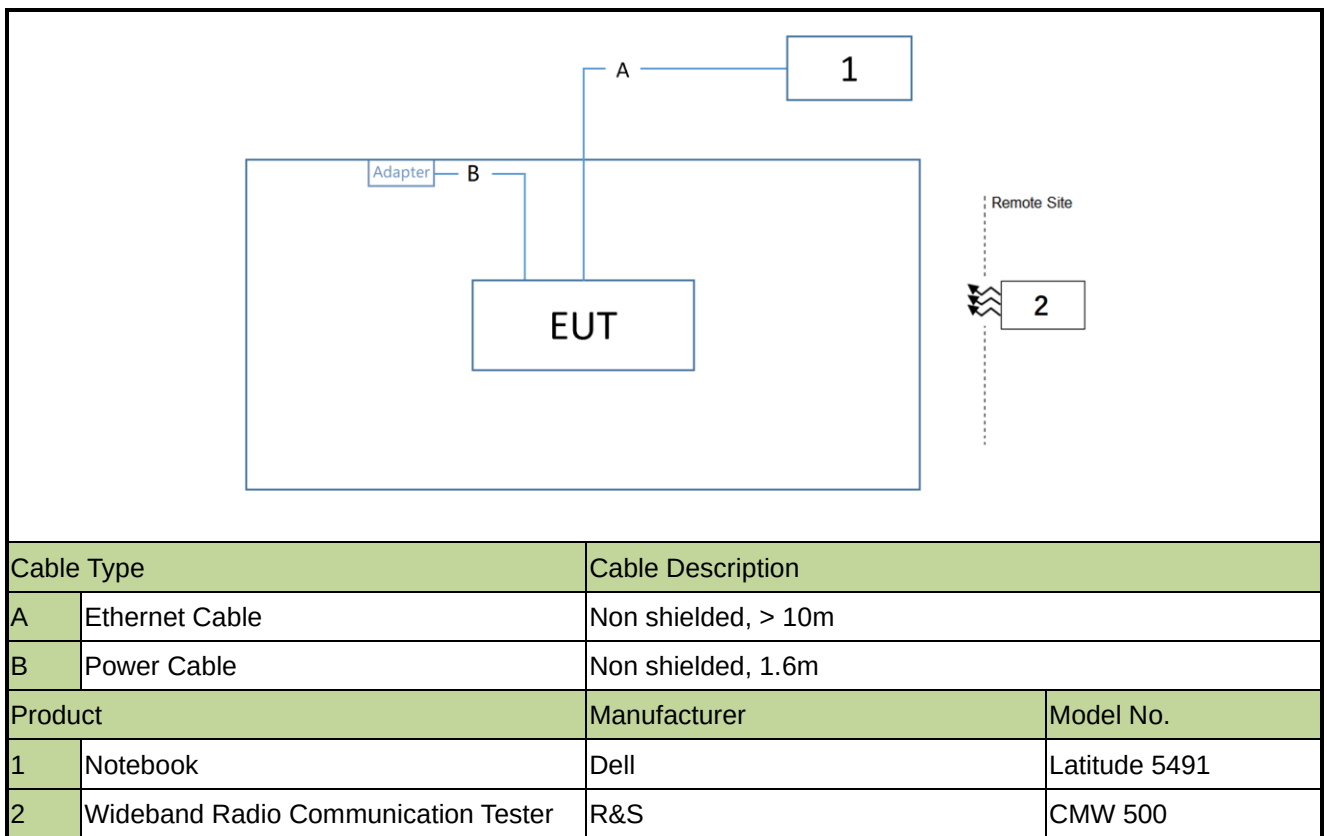
|                                                                                                                                                     |                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name                                                                                                                                        | HPE Aruba User Experience Sensor                                                                                                                                                                                           |
| Model No.                                                                                                                                           | ASIN0306                                                                                                                                                                                                                   |
| Serial No.                                                                                                                                          | CNQGLPM00G                                                                                                                                                                                                                 |
| Wi-Fi Specification                                                                                                                                 | 802.11a/b/g/n/ac/ax                                                                                                                                                                                                        |
| Bluetooth Specification                                                                                                                             | BLE only                                                                                                                                                                                                                   |
| ZigBee Specification                                                                                                                                | 802.15.4                                                                                                                                                                                                                   |
| Power Type                                                                                                                                          | AC/DC Adapter Input                                                                                                                                                                                                        |
| Operating Temperature                                                                                                                               | 0 ~ 40 °C                                                                                                                                                                                                                  |
| Operating Environment                                                                                                                               | Indoor Use                                                                                                                                                                                                                 |
| Integrated Modular Information                                                                                                                      |                                                                                                                                                                                                                            |
| Specification                                                                                                                                       | Model Number: EG21-G<br>FCC ID: XMR201906EG21G<br>GSM 850, PCS 1900<br>Supported UTRA Band: 2, 4, 5<br>Supported E-UTRA Band:<br>FDD Band: 2, 4, 5, 7, 12, 13, 25, 26 TDD Band: 38, 41<br>GNSS: GPS, BDS, GLONASS, Galileo |
| Accessories                                                                                                                                         |                                                                                                                                                                                                                            |
| AC/DC Adapter                                                                                                                                       | Model No.: WB-12G12R<br>Input: 100-240V, 50/60Hz, 0.3A Max<br>Output: 12.0V=1.0A 12.0W                                                                                                                                     |
| Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. |                                                                                                                                                                                                                            |

## 2. Test Configuration

### 2.1. Test Mode

|                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Mode 1: Transmit by 802.11b at 2412MHz (Radio 0) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 1) + Transmit by ZigBee at 2405MHz + GSM 1900       |
| Test Mode 2: Transmit by 802.11a at 5180MHz (Radio 0) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 1) + Transmit by ZigBee at 2405MHz + LTE Band 41    |
| Test Mode 3: Transmit by 802.11a at 5180MHz (Radio 0) + Transmit by 802.11b at 2412MHz (Radio 1) + Transmit by ZigBee at 2405MHz + WCDMA Band 5         |
| Test Mode 4: Transmit by 802.11b at 2412MHz (Radio 0) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 1) + Transmit by BLE 1Mbps at 2480MHz + GSM 1900    |
| Test Mode 5: Transmit by 802.11a at 5180MHz (Radio 0) + Transmit by 802.11ax-HE20 at 5955MHz (Radio 1) + Transmit by BLE 1Mbps at 2480MHz + LTE Band 41 |
| Test Mode 6: Transmit by 802.11a at 5180MHz (Radio 0) + Transmit by 802.11b at 2412MHz (Radio 1) + Transmit by BLE 1Mbps at 2480MHz + WCDMA Band 5      |

### 2.2. Test System Connection Diagram



### 2.3. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC Part 15 Subpart E §15.407
- KDB 558074 D01v05r02
- ANSI C63.10-2013
- FCC KDB 414788 D01v01r01
- FCC KDB 412172 D01v01r01

### 2.4. Test Environment Condition

|                     |             |
|---------------------|-------------|
| Ambient Temperature | 15 ~ 35°C   |
| Relative Humidity   | 20% ~ 75%RH |

### 3. Measuring Instrument

| Instrument        | Manufacturer | Model No.   | Asset No.   | Cali. Interval | Cali. Due Date | Test Site |
|-------------------|--------------|-------------|-------------|----------------|----------------|-----------|
| Horn Antenna      | Schwarzbeck  | BBHA 9170   | MRTSUE06597 | 1 year         | 2023-11-05     | WZ-AC2    |
| Preamplifier      | EMCI         | EMC184045SE | MRTSUE06640 | 1 year         | 2024-01-12     | WZ-AC2    |
| TRILOG Antenna    | Schwarzbeck  | VULB 9162   | MRTSUE06022 | 1 year         | 2024-05-15     | WZ-AC2    |
| EMI Test Receiver | Agilent      | N9038A      | MRTSUE06125 | 1 year         | 2024-05-23     | WZ-AC2    |
| Thermohygrometer  | Mingle       | ETH529      | MRTSUE06170 | 1 year         | 2023-11-27     | WZ-AC2    |
| Horn Antenna      | Schwarzbeck  | BBHA 9120D  | MRTSUE06171 | 1 year         | 2023-10-13     | WZ-AC2    |
| Horn Antenna      | Schwarzbeck  | BBHA 9120D  | MRTSUE06171 | 1 year         | 2024-10-11     | WZ-AC2    |
| Preamplifier      | Schwarzbeck  | BBV 9718    | MRTSUE06176 | 1 year         | 2024-05-07     | WZ-AC2    |
| Anechoic Chamber  | RIKEN        | WZ-AC2      | MRTSUE06213 | 1 year         | 2024-04-20     | WZ-AC2    |
| Thermohygrometer  | testo        | 608-H1      | MRTSUE11038 | 1 year         | 2023-11-01     | WZ-AC2    |
| EMI Test Receiver | R&S          | ESR7        | MRTSUE06001 | 1 year         | 2023-12-28     | WZ-AC1    |
| Horn Antenna      | Schwarzbeck  | BBHA 9120D  | MRTSUE06023 | 1 year         | 2023-08-22     | WZ-AC1    |
| Horn Antenna      | Schwarzbeck  | BBHA 9120D  | MRTSUE06023 | 1 year         | 2024-08-09     | WZ-AC1    |
| Preamplifier      | Agilent      | 83017A      | MRTSUE06076 | 1 year         | 2024-05-07     | WZ-AC1    |
| TRILOG Antenna    | Schwarzbeck  | VULB 9168   | MRTSUE06172 | 1 year         | 2024-06-09     | WZ-AC1    |
| Anechoic Chamber  | TDK          | WZ-AC1      | MRTSUE06212 | 1 year         | 2024-04-20     | WZ-AC1    |
| Thermohygrometer  | testo        | 608-H1      | MRTSUE06403 | 1 year         | 2024-05-31     | WZ-AC1    |
| Signal Analyzer   | Keysight     | N9010B      | MRTSUE06607 | 1 year         | 2023-12-28     | WZ-AC1    |
| Thermohygrometer  | testo        | 608-H1      | MRTSUE11039 | 1 year         | 2023-11-01     | WZ-AC1    |
| Horn Antenna      | Schwarzbeck  | BBHA 9170   | MRTSUE06597 | 1 year         | 2023-11-05     | WZ-AC1    |
| Preamplifier      | EMCI         | EMC184045SE | MRTSUE06640 | 1 year         | 2024-01-12     | WZ-AC1    |

| Software           | Version | Function               |
|--------------------|---------|------------------------|
| EMI Software       | V3.0.0  | EMI Test Software      |
| Controller_MF 7802 | 2.03C   | RE Antenna & Turntable |
| Controller_MF 7802 | 1.02    | RE Antenna & Turntable |

## 4. Decision Rules and Measurement Uncertainty

### 4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 4.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

#### Radiated Spurious Emissions

Measurement Uncertainty for a Level of Confidence of 95% ( $U=2U_c(y)$ ):

Coaxial: 9kHz~30MHz: 2.59dB

Coplanar: 9kHz~30MHz: 2.60dB

Horizontal: 30MHz~200MHz: 3.85dB

200MHz~1GHz: 4.36dB

1GHz~40GHz: 4.98dB

Vertical: 30MHz~200MHz: 4.06dB

200MHz~1GHz: 5.28dB

1GHz~40GHz: 4.91dB

## 5. Radiated Spurious Emissions Measurement (Co-location)

### 5.1. Test Limit

#### For 15.247(d) requirement

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15 Subpart C Paragraph 15.209 |                                       |                               |
|----------------------------------------|---------------------------------------|-------------------------------|
| Frequency<br>[MHz]                     | Field Strength<br>[ $\mu\text{V/m}$ ] | Measured Distance<br>[Meters] |
| 0.009 - 0.490                          | 2400/F (kHz)                          | 300                           |
| 0.490 - 1.705                          | 24000/F (kHz)                         | 30                            |
| 1.705 - 30                             | 30                                    | 30                            |
| 30 - 88                                | 100                                   | 3                             |
| 88 - 216                               | 150                                   | 3                             |
| 216 - 960                              | 200                                   | 3                             |
| Above 960                              | 500                                   | 3                             |

#### For 15.407(b) requirement

For transmitters operating in the 5.15–5.25 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of  $-27$  dBm/MHz.

For transmitters operating solely in the 5.725–5.850 GHz band: All emissions shall be limited to a level of  $-27$  dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

For transmitters operating solely in the 5.850–5.895 GHz band or operating on a channel that spans across 5.725–5.895 GHz: For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of  $-7$  dBm/MHz at or above

5.925 GHz.

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

FCC Part 22 (H) & 24 (E) & 27 & 90

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to -13dBm.

For Band 7: For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth.

For LTE Band 13, For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz (-40dBm/MHz) equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW (-50dBm) EIRP for discrete emissions of less than 700 Hz bandwidth.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$ ; where D is the measurement distance in meters. The emission limit equal to 82.3dB $\mu$ V/m or 70.3dB $\mu$ V/m.

Note: Spurious emissions from the Part 15 device, is subject to the Part 15 rules.

Spurious emissions from the Part 22 & 24 & 27 device, is subject to the Part 22 & 24 & 27 rules.

If the spurious emission is caused by the simultaneous operation of more radio devices, the limit is the highest level allowed by either rule part.

## **5.2. Test Procedure**

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

ANSI C63.26-2015 - Section 5.2.7 & 5.5

### 5.3. Test Setting

1. RBW = 1MHz
2. VBW  $\geq 3 \times$  RBW
3. Sweep time  $\geq 10 \times$  (number of points in sweep)  $\times$  (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

#### Peak Measurements above 1GHz

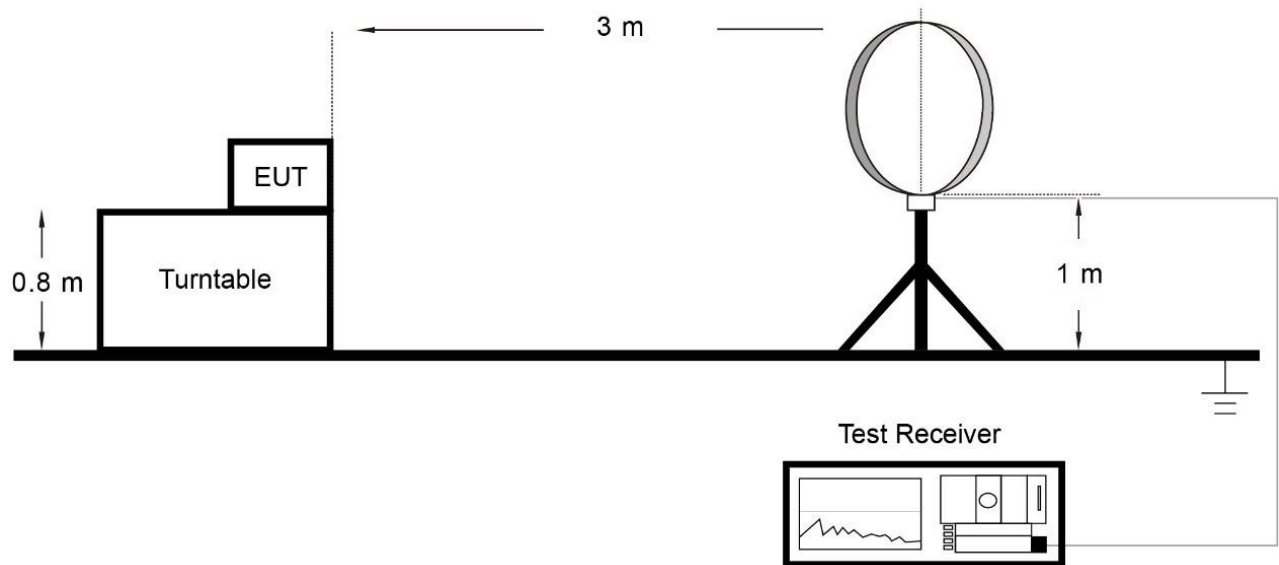
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### Average Measurements above 1GHz (Method VB)

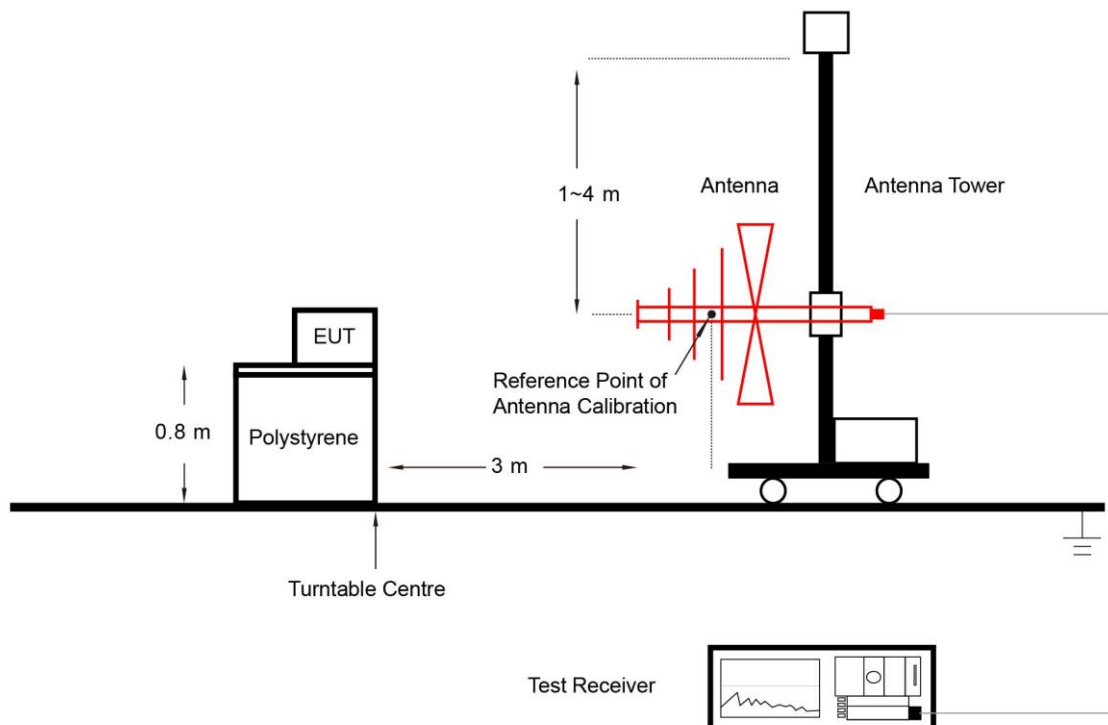
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### 5.4. Test Setup

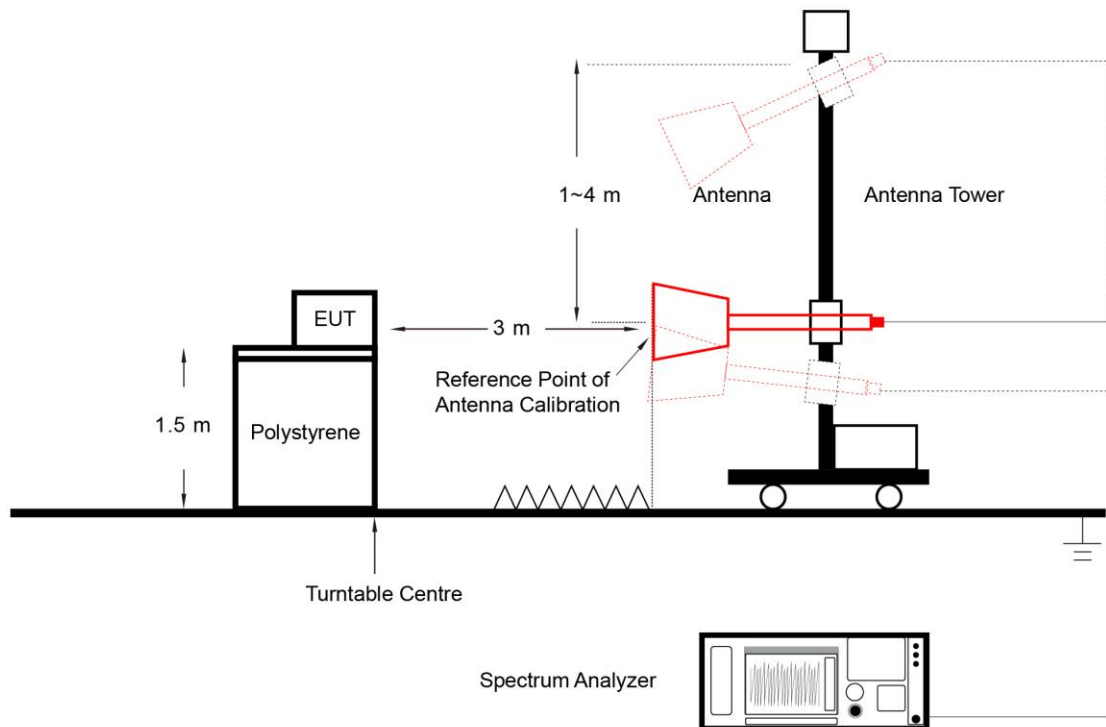
Below 30MHz Test Setup:



Below 1GHz Test Setup:



### Above 1GHz Test Setup:



### 5.5. Test Result

|           |            |               |            |
|-----------|------------|---------------|------------|
| Test Site | WZ-AC1     | Test Engineer | Carl Jiang |
| Test Date | 2023-07-14 |               |            |

| Test Mode | Frequency<br>(MHz) | Reading<br>Level<br>(dBμV) | Factor<br>(dB/m) | Measure<br>Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Detector | Polarization |
|-----------|--------------------|----------------------------|------------------|------------------------------|-------------------|----------------|----------|--------------|
| 1         | 9432.0             | 35.4                       | 12.2             | 47.6                         | 74.0              | -26.4          | Peak     | Horizontal   |
|           | 11251.0            | 34.9                       | 12.8             | 47.7                         | 74.0              | -26.3          | Peak     | Horizontal   |
|           | 12041.5            | 36.5                       | 12.3             | 48.8                         | 74.0              | -25.2          | Peak     | Horizontal   |
|           | 7494.0             | 38.6                       | 8.5              | 47.1                         | 74.0              | -26.9          | Peak     | Vertical     |
|           | 11030.0            | 35.6                       | 13.5             | 49.1                         | 74.0              | -24.9          | Peak     | Vertical     |
|           | 11914.0            | 35.9                       | 12.2             | 48.1                         | 74.0              | -25.9          | Peak     | Vertical     |
| 2         | 8386.5             | 35.4                       | 8.8              | 44.2                         | 74.0              | -29.8          | Peak     | Horizontal   |
|           | 11548.5            | 36.3                       | 12.8             | 49.1                         | 74.0              | -24.9          | Peak     | Horizontal   |
|           | 12024.5            | 36.8                       | 12.3             | 49.1                         | 74.0              | -24.9          | Peak     | Horizontal   |
|           | 8267.5             | 36.0                       | 8.5              | 44.5                         | 74.0              | -29.5          | Peak     | Vertical     |
|           | 11089.5            | 36.3                       | 13.4             | 49.7                         | 74.0              | -24.3          | Peak     | Vertical     |
|           | 11956.5            | 36.6                       | 12.1             | 48.7                         | 74.0              | -25.3          | Peak     | Vertical     |
| 3         | 9126.0             | 34.6                       | 11.2             | 45.8                         | 74.0              | -28.2          | Peak     | Horizontal   |
|           | 11489.0            | 35.2                       | 13.2             | 48.4                         | 74.0              | -25.6          | Peak     | Horizontal   |
|           | 12050.0            | 36.9                       | 12.3             | 49.2                         | 74.0              | -24.8          | Peak     | Horizontal   |
|           | 8199.5             | 36.4                       | 8.7              | 45.1                         | 74.0              | -28.9          | Peak     | Vertical     |
|           | 11072.5            | 35.0                       | 13.5             | 48.5                         | 74.0              | -25.5          | Peak     | Vertical     |
|           | 12024.5            | 36.7                       | 12.3             | 49.0                         | 74.0              | -25.0          | Peak     | Vertical     |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

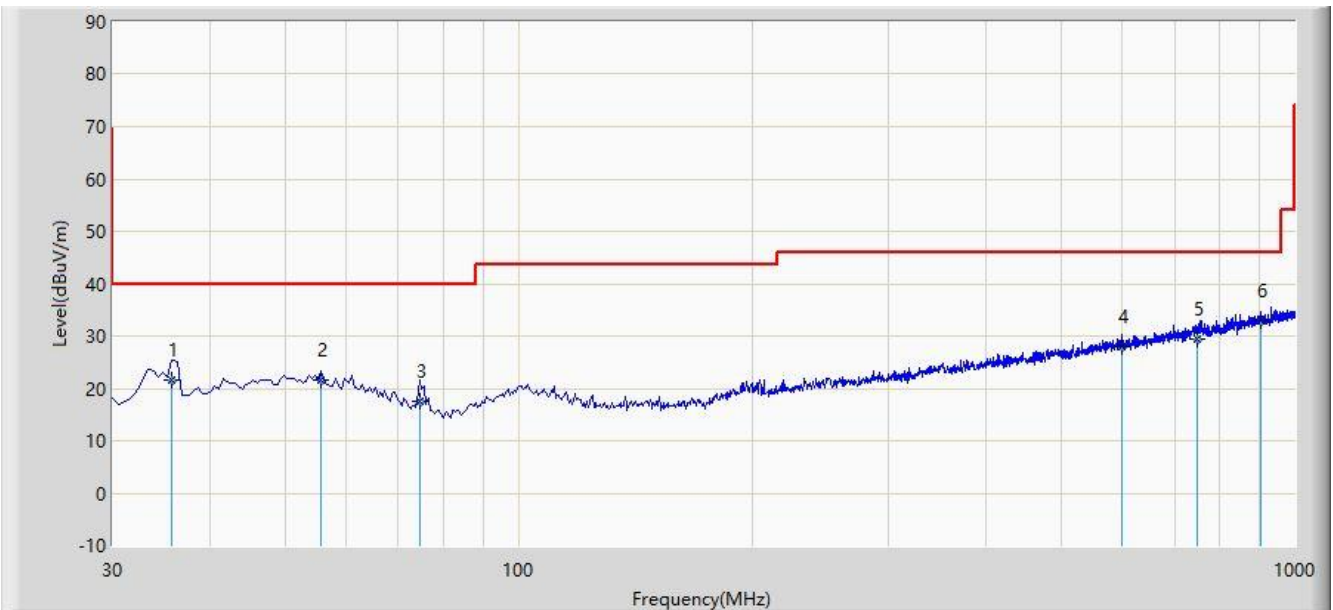
|           |            |               |            |
|-----------|------------|---------------|------------|
| Test Site | WZ-AC1     | Test Engineer | Carl Jiang |
| Test Date | 2023-07-14 |               |            |

| Test Mode | Frequency<br>(MHz) | Reading<br>Level<br>(dBμV) | Factor<br>(dB/m) | Measure<br>Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Detector | Polarization |
|-----------|--------------------|----------------------------|------------------|------------------------------|-------------------|----------------|----------|--------------|
| 4         | 8310.0             | 35.0                       | 8.6              | 43.6                         | 74.0              | -30.4          | Peak     | Horizontal   |
|           | 10919.5            | 34.7                       | 13.6             | 48.3                         | 74.0              | -25.7          | Peak     | Horizontal   |
|           | 11956.5            | 36.4                       | 12.1             | 48.5                         | 74.0              | -25.5          | Peak     | Horizontal   |
|           | 8199.5             | 34.0                       | 8.7              | 42.7                         | 74.0              | -31.3          | Peak     | Vertical     |
|           | 11030.0            | 35.0                       | 13.5             | 48.5                         | 74.0              | -25.5          | Peak     | Vertical     |
|           | 12109.5            | 37.3                       | 12.2             | 49.5                         | 74.0              | -24.5          | Peak     | Vertical     |
| 5         | 8276.0             | 34.8                       | 8.4              | 43.2                         | 74.0              | -30.8          | Peak     | Horizontal   |
|           | 11514.5            | 36.5                       | 13.0             | 49.5                         | 74.0              | -24.5          | Peak     | Horizontal   |
|           | 12118.0            | 36.8                       | 12.3             | 49.1                         | 74.0              | -24.9          | Peak     | Horizontal   |
|           | 7604.5             | 35.3                       | 8.2              | 43.5                         | 74.0              | -30.5          | Peak     | Vertical     |
|           | 11072.5            | 33.3                       | 13.5             | 46.8                         | 74.0              | -27.2          | Peak     | Vertical     |
|           | 11786.5            | 35.5                       | 11.9             | 47.4                         | 74.0              | -26.6          | Peak     | Vertical     |
| 6         | 3737.0             | 39.4                       | 0.2              | 39.6                         | 74.0              | -34.4          | Peak     | Horizontal   |
|           | 7451.5             | 36.8                       | 8.5              | 45.3                         | 74.0              | -28.7          | Peak     | Horizontal   |
|           | 11140.5            | 36.3                       | 13.1             | 49.4                         | 74.0              | -24.6          | Peak     | Horizontal   |
|           | 3847.5             | 39.5                       | 0.5              | 40.0                         | 74.0              | -34.0          | Peak     | Vertical     |
|           | 7536.5             | 36.7                       | 8.4              | 45.1                         | 74.0              | -28.9          | Peak     | Vertical     |
|           | 11506.0            | 35.9                       | 13.0             | 48.9                         | 74.0              | -25.1          | Peak     | Vertical     |

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

### The Result of Radiated Emission below 1GHz:

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC2                          | Test Date: 2023-08-14 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Bob Zhang   |
| Probe: VULB9162_30-7000MHz            | Polarity: Horizontal  |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 1                           |                       |



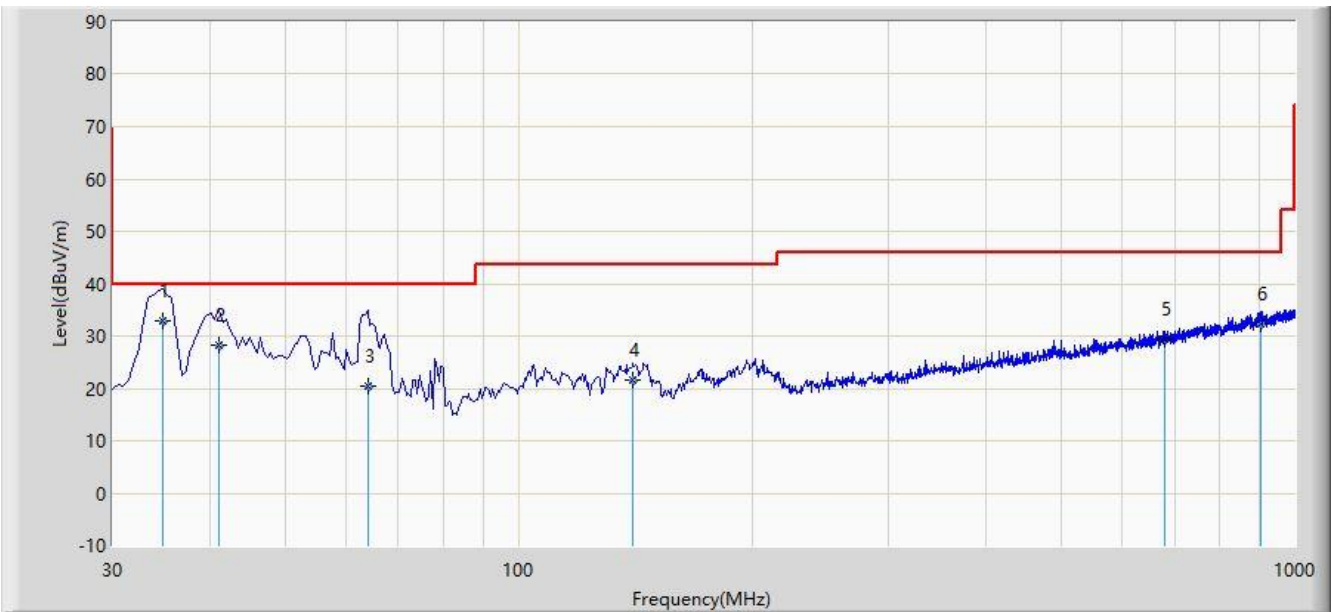
| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Margin (dB) | Limit (dBuV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  |      | 35.820          | 21.548                 | 4.100                | -18.452     | 40.000         | 17.448        | QP   |
| 2  |      | 55.705          | 21.630                 | 1.400                | -18.370     | 40.000         | 20.229        | QP   |
| 3  |      | 74.620          | 17.560                 | 2.300                | -22.440     | 40.000         | 15.260        | QP   |
| 4  |      | 598.420         | 28.079                 | 1.100                | -17.921     | 46.000         | 26.979        | QP   |
| 5  |      | 747.800         | 29.533                 | 0.100                | -16.467     | 46.000         | 29.433        | QP   |
| 6  | *    | 903.970         | 32.847                 | 1.600                | -13.153     | 46.000         | 31.247        | QP   |

Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC2                          | Test Date: 2023-08-14 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Bob Zhang   |
| Probe: VULB9162_30-7000MHz            | Polarity: Vertical    |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 1                           |                       |



| No | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  | *    | 34.850          | 32.840                 | 15.580               | -7.160      | 40.000         | 17.260        | QP   |
| 2  |      | 41.155          | 28.383                 | 9.268                | -11.617     | 40.000         | 19.115        | QP   |
| 3  |      | 63.950          | 20.300                 | 1.600                | -19.700     | 40.000         | 18.700        | QP   |
| 4  |      | 140.580         | 21.607                 | 6.400                | -21.893     | 43.500         | 15.207        | QP   |
| 5  |      | 679.415         | 29.412                 | 1.200                | -16.588     | 46.000         | 28.211        | QP   |
| 6  |      | 905.420         | 32.447                 | 1.190                | -13.553     | 46.000         | 31.256        | QP   |

Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

### The Result of Radiated Emission 1GHz ~ 18GHz:

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC1                          | Test Date: 2023-07-14 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Carl Jiang  |
| Probe: BBHA9120D_1167_1-18GHz         | Polarity: Horizontal  |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 2                           |                       |



| No | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  |      | 8386.500        | 44.221                 | 35.442               | -29.779     | 74.000         | 8.779         | PK   |
| 2  |      | 11548.500       | 49.108                 | 36.290               | -24.892     | 74.000         | 12.818        | PK   |
| 3  |      | 12024.500       | 49.060                 | 36.779               | -24.940     | 74.000         | 12.281        | PK   |
| 4  |      | 17991.500       | 58.499                 | 35.558               | -15.501     | 74.000         | 22.941        | PK   |
| 5  | *    | 17991.500       | 45.195                 | 22.254               | -8.805      | 54.000         | 22.941        | AV   |

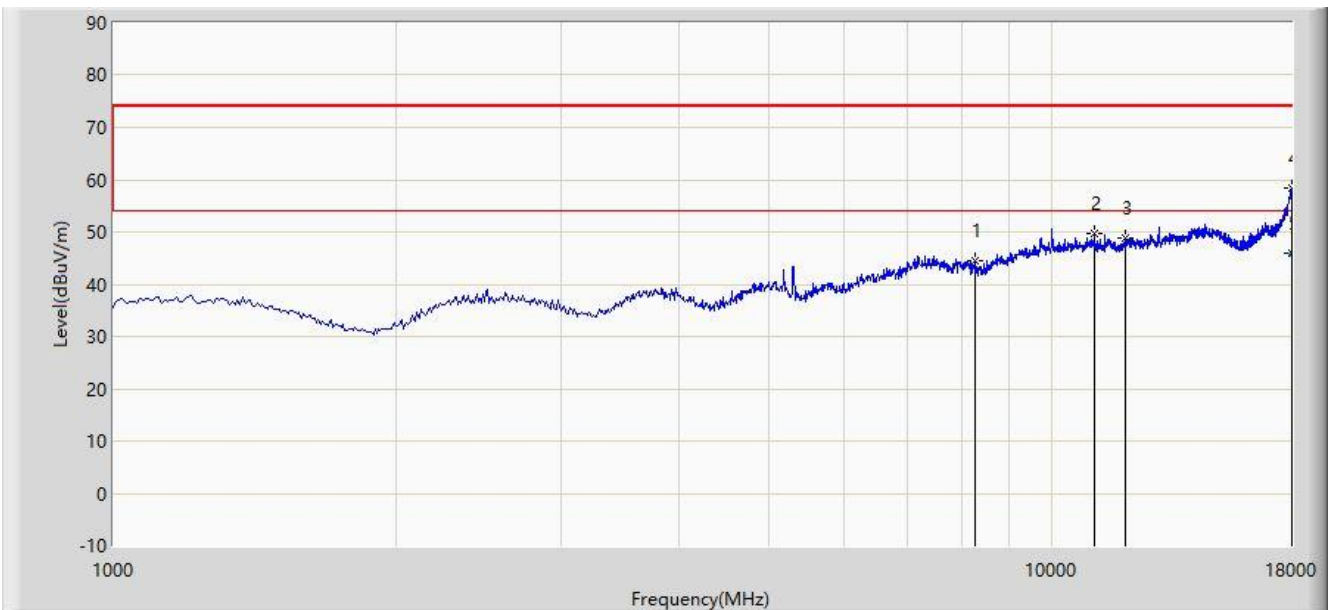
Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC1                          | Test Date: 2023-07-14 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Carl Jiang  |
| Probe: BBHA9120D_1167_1-18GHz         | Polarity: Vertical    |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 2                           |                       |



| No | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  |      | 8267.500        | 44.498                 | 35.991               | -29.502     | 74.000         | 8.507         | PK   |
| 2  |      | 11089.500       | 49.764                 | 36.331               | -24.236     | 74.000         | 13.433        | PK   |
| 3  |      | 11956.500       | 48.698                 | 36.612               | -25.302     | 74.000         | 12.086        | PK   |
| 4  |      | 17974.500       | 58.499                 | 35.690               | -15.501     | 74.000         | 22.809        | PK   |
| 5  | *    | 17974.500       | 45.866                 | 23.057               | -8.134      | 54.000         | 22.809        | AV   |

Note 1: " \* ", means this data is the worst emission level.

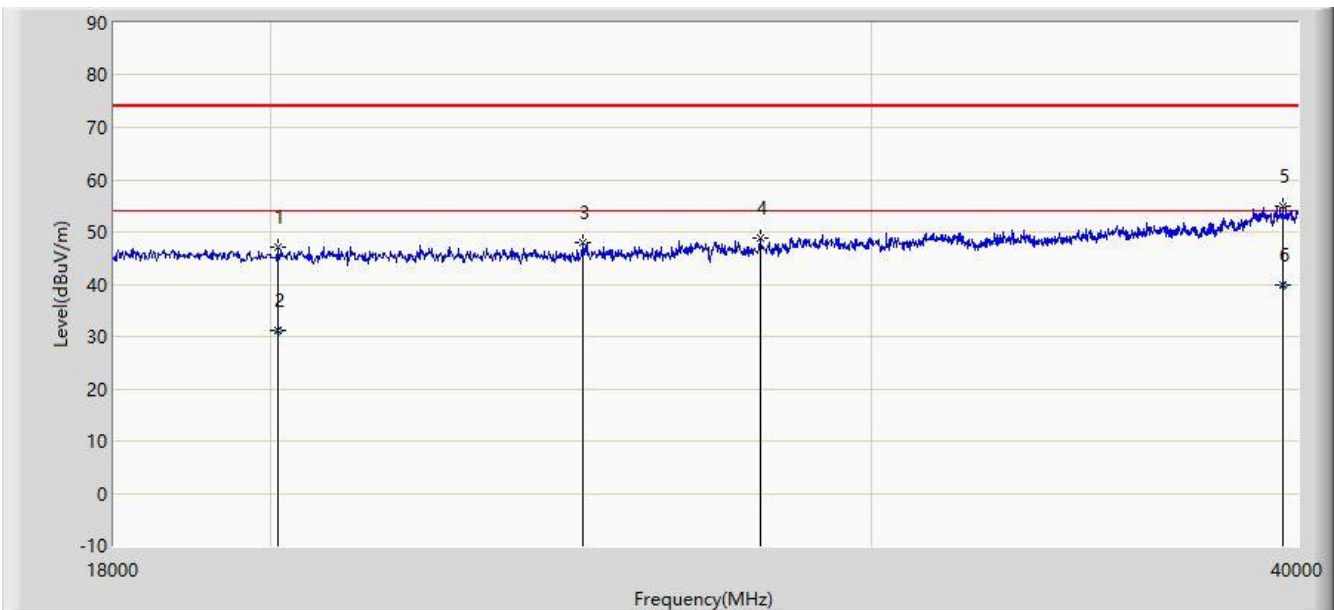
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

### The Result of Radiated Emission 18GHz ~ 40GHz:

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC1                          | Test Date: 2023-10-30 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Carl Jiang  |
| Probe: BBHA9170_993_18-40GHz          | Polarity: Horizontal  |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 2                           |                       |



| No | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  |      | 20101.000       | 47.144                 | 57.112               | -26.856     | 74.000         | -9.968        | PK   |
| 2  |      | 20101.000       | 31.062                 | 41.030               | -22.938     | 54.000         | -9.968        | AV   |
| 3  |      | 24710.000       | 48.085                 | 54.274               | -25.915     | 74.000         | -6.189        | PK   |
| 4  |      | 27856.000       | 48.696                 | 55.695               | -25.304     | 74.000         | -6.999        | PK   |
| 5  |      | 39604.000       | 55.012                 | 55.285               | -18.988     | 74.000         | -0.273        | PK   |
| 6  | *    | 39604.000       | 39.957                 | 40.230               | -14.043     | 54.000         | -0.273        | AV   |

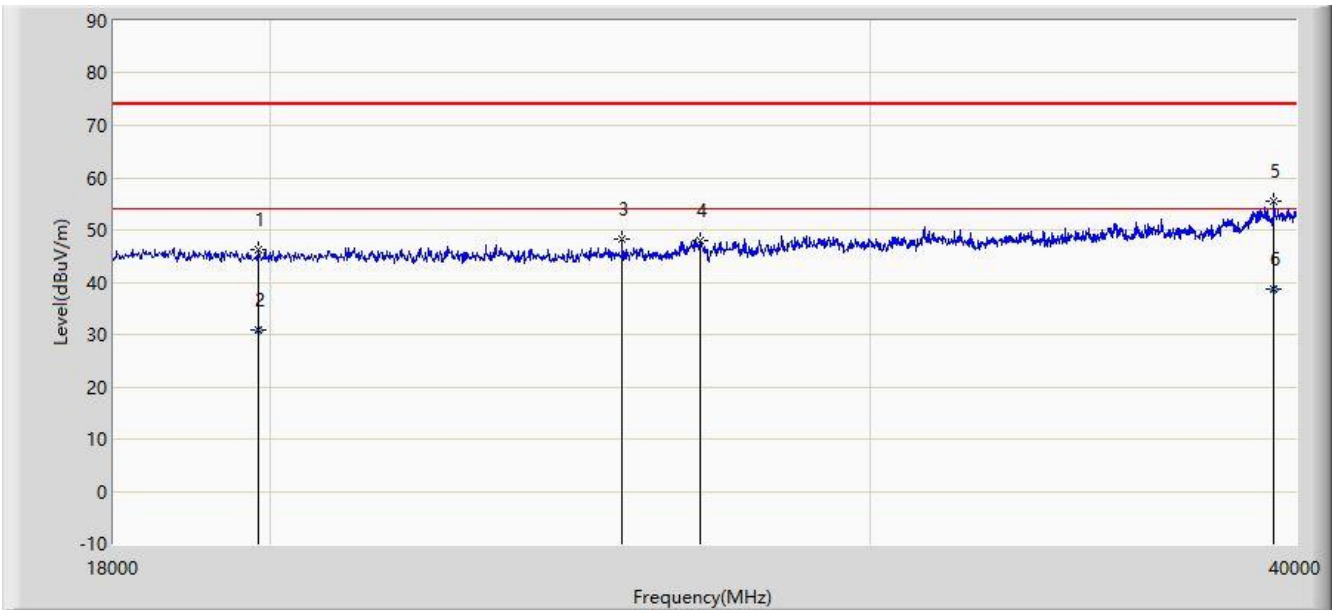
Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

|                                       |                       |
|---------------------------------------|-----------------------|
| Site: WZ-AC1                          | Test Date: 2023-10-30 |
| Limit: FCC_Part15.209_RSE(3m)         | Engineer: Carl Jiang  |
| Probe: BBHA9170_993_18-40GHz          | Polarity: Vertical    |
| EUT: HPE Aruba User Experience Sensor | Power: AC 120V/60Hz   |
| Test Mode 2                           |                       |



| No | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|----|------|-----------------|------------------------|----------------------|-------------|----------------|---------------|------|
| 1  |      | 19859.000       | 46.238                 | 55.605               | -27.762     | 74.000         | -9.367        | PK   |
| 2  |      | 19859.000       | 30.923                 | 40.290               | -23.077     | 54.000         | -9.367        | AV   |
| 3  |      | 25381.000       | 48.168                 | 55.236               | -25.832     | 74.000         | -7.067        | PK   |
| 4  |      | 26745.000       | 47.941                 | 54.055               | -26.059     | 74.000         | -6.114        | PK   |
| 5  |      | 39417.000       | 55.614                 | 56.032               | -18.386     | 74.000         | -0.418        | PK   |
| 6  | *    | 39417.000       | 38.832                 | 39.250               | -15.168     | 54.000         | -0.418        | AV   |

Note 1: " \* ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

Note 4: Average measurement was not performed when peak measure level was lower than the average limit.

## **Appendix A - Test Setup Photograph**

Refer to “2306RSU027-UT” file.

## **Appendix B - EUT Photograph**

Refer to “2306RSU027-UE” file.

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The End

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