

FCC Test Report

Product Name : Bluetooth Headset
Model No. : HSC040Wa

Applicant : GN Audio A/S
Address : Lautrupbjerg 7, 2750 Ballerup, Denmark

Date of Receipt : 2022/03/18
Issued Date : 2022/04/28
Report No. : 2230636R-E3012110001-A
Report Version : V1.0




The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
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Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Issued Date : 2022/04/28
Report No.:2230636R-E3012110001-A



Product Name : Bluetooth Headset
Applicant : GN Audio A/S
Address : Lautrupbjerg 7, 2750 Ballerup, Denmark
Manufacturer : GN Audio A/S
Model No. : HSC040Wa
EUT Rated Voltage : DC 5V by USB or DC 3.7V by Battery
EUT Test Voltage : AC 120 V / 60Hz by PC , DC 3.7V by Battery
Trade Name : Jabra
Applicable Standard : FCC CFR Title 47 Part 15 Subpart B: 2020, Class B
Test Result : Complied
Performed Location : DEKRA Testing and Certification Co., Ltd.
Linkou Laboratory
No. 5-22, Ruishukeng
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Documented By : 
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Approved By : 
(Director / Vincent Lin)

Laboratory Information

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| | | |
|---------------|----------|-----------------------|
| Taiwan | : | BSMI, NCC, TAF |
| Norway | : | DNVGL |
| USA | : | FCC |
| Japan | : | VCCI |

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Product Photos: Please refer to the file: 2230636R-Product Photos

Revision History

| Report No. | Version | Description | Issued Date |
|------------------------|---------|--------------------------|-------------|
| 2230636R-E3012110001-A | V1.0 | Initial issue of report. | 2022-04-28 |

1. General Information

1.1. EUT Description

| | |
|-------------------|-------------------|
| Product Name | Bluetooth Headset |
| Trade Name | Jabra |
| Model No. | HSC040Wa |
| EUT Max Frequency | 2483.5MHz |

| Component | | |
|--------------------------------------|---------------------------|--|
| Item | Brand Name (Manufacturer) | Model Name |
| Micro USB B male to USB A male cable | Jabra (GN Audio A/S) | Micro USB B male to USB A male cable Shielded, 1.5m |
| USB Dongle | Jabra (GN Audio A/S) | END060W |

1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

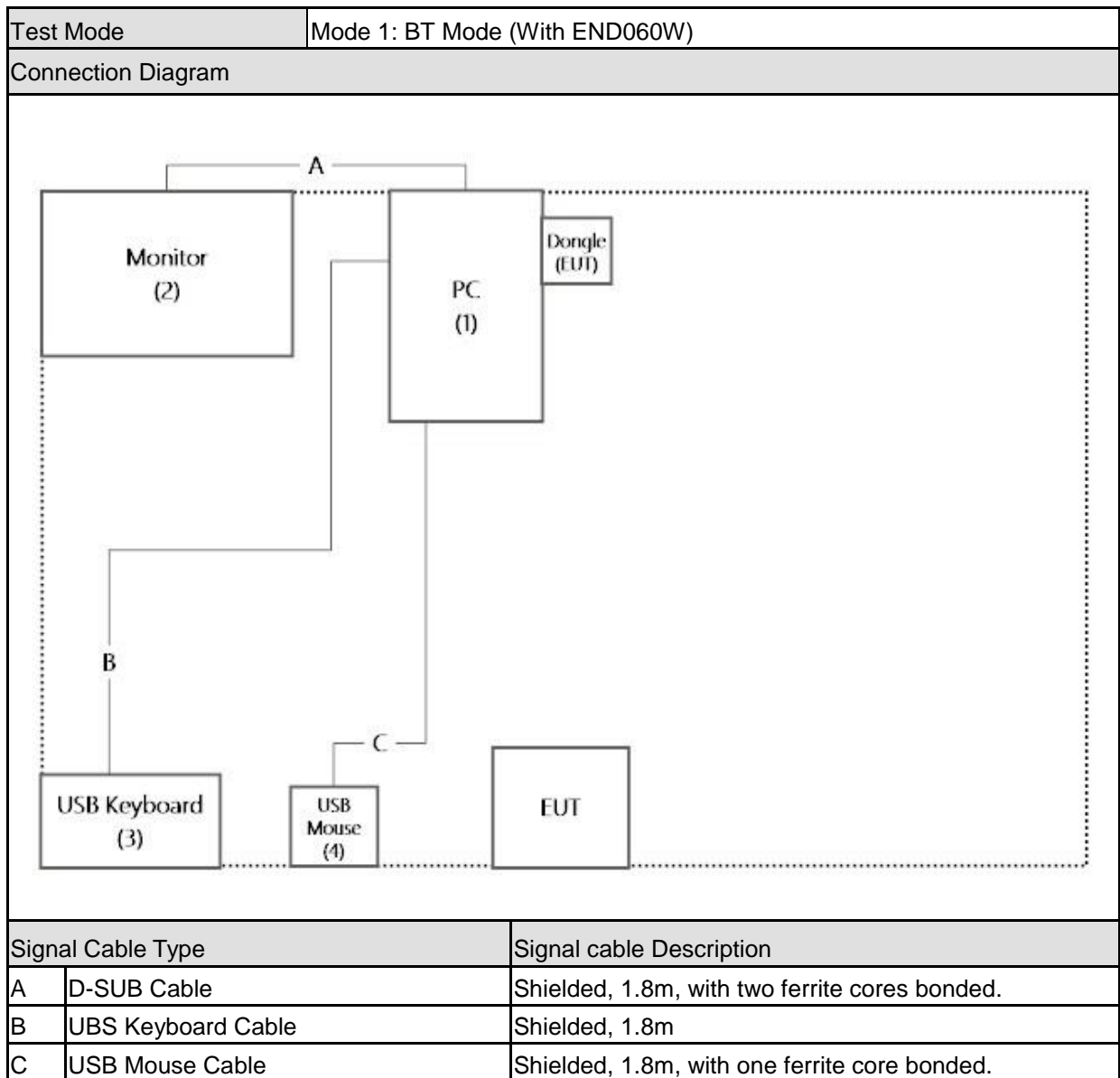
| | |
|--------------------------------|---|
| Pre-Test Mode | |
| Mode 1: BT Mode (With END060W) | |
| Mode 2: USB & Charging Mode | |
| Final Test Mode | |
| Emission | Mode 1: BT Mode (With END060W) Mode 2: USB & Charging Mode |

1.3. Tested System Details

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

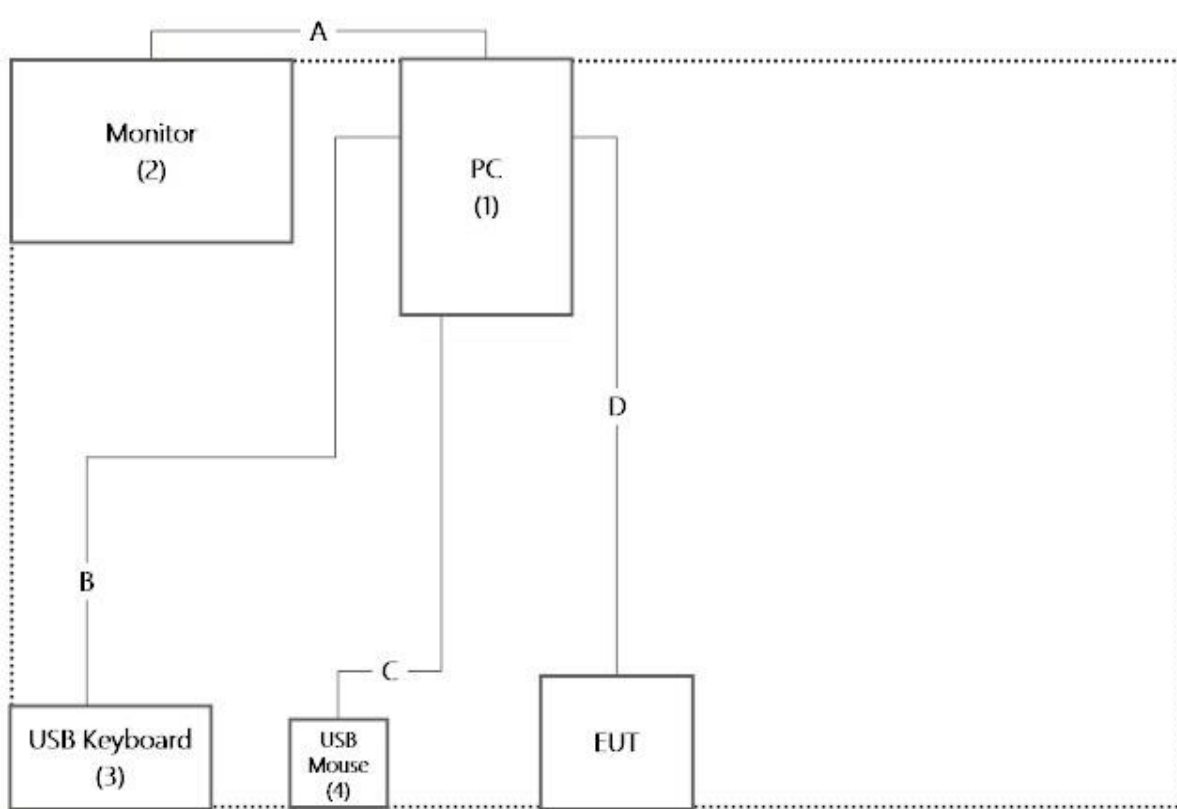
| Product | Manufacturer | Model No. | Serial No. | Power Cord | |
|---------|--------------|-----------|------------|--------------------------|--------------------|
| 1 | PC | ASUS | E500 G5 | J9S0GX00023K | Non-Shielded, 1.8m |
| 2 | Monitor | DELL | U2410 | CN-0J257M-72872-985-0A6L | Non-Shielded, 1.8m |
| 3 | USB Keyboard | Microsoft | 1576 | 65809394843 | N/A |
| 4 | USB Mouse | Microsoft | 1113 | N/A | N/A |

1.4. Configuration of Tested System



Note:

- Use Full system setup configuration determines Worst-Case Mode.
- Use 2dB law program determines Max. Cable Configuration and Worst-Case Mode.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth to 3m from the EUT size sufficient to cover the procedure.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth non 3m distance sufficient to cover the size of the EUT program.

| | | |
|--|--------------------------------------|--|
| Test Mode | | Mode 2: USB & Charging Mode |
| Connection Diagram | | |
|  <p>The diagram shows a PC (1) connected to a Monitor (2) via cable A. A USB Keyboard (3) is connected to the PC via cable B. A USB Mouse (4) is connected to the PC via cable C. The PC (1) is connected to the EUT via cable D. All components are enclosed in a dashed-line box.</p> | | |
| Signal Cable Type | | Signal cable Description |
| A | D-SUB Cable | Shielded, 1.8m, with two ferrite cores bonded. |
| B | UBS Keyboard Cable | Shielded, 1.8m |
| C | USB Mouse Cable | Shielded, 1.8m, with one ferrite core bonded. |
| D | Micro USB B male to USB A male Cable | Shielded, 1.5m |

Note:

- Use Full system setup configuration determines Worst-Case Mode.
- Use 2dB law program determines Max. Cable Configuration and Worst-Case Mode.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth to 3m from the EUT size sufficient to cover the procedure.
- Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth non 3m distance sufficient to cover the size of the EUT program.

1.5. EUT Exercise Software

| | |
|---|---|
| 1 | Setup the EUT and simulators as shown on 1.4. |
| 2 | Turn on the power of all equipment. |
| 3 | All the features of the EUT operation normally. |

2. Technical Test

2.1. Summary of Test Result

- No deviations from the test standards
 Deviations from the test standards as below description:

| Emission | | | |
|--------------------|--|----------------|-----------|
| Performed Item | Normative References | Test Performed | Deviation |
| Conducted Emission | FCC CFR Title 47 Part 15 Subpart B: 2020, Class B CISPR 22: 2008 ANSI C63.4-2014, ANSI C63.4a-2017 | Yes | No |
| Radiated Emission | FCC CFR Title 47 Part 15 Subpart B: 2020, Class B CISPR 22: 2008 ANSI C63.4-2014, ANSI C63.4a-2017 | Yes | No |

2.2. List of Test Equipment

Conducted Emission / LK-SR08 (SR8)

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date | Due. Date |
|--------------------|--------------|----------|-----------|------------|------------|
| EMI Test Receiver | R&S | ESR3 | 101973 | 2021/11/12 | 2022/11/11 |
| Two-Line V-Network | R&S | ENV216 | 101479 | 2021/08/13 | 2022/08/12 |
| Two-Line V-Network | R&S | ENV216 | 101105 | 2021/05/04 | 2022/05/03 |
| Coaxial Cable | SUHNER | RG 400 | LC018-RG | 2021/06/18 | 2022/06/17 |

Test Software version : DEKRA Test System V2.0

Note: Test Receiver Detector: Quasipeak and Average Bandwidth: 9kHz

Radiated Emission / LK-Site02 (Site2)

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date | Due. Date |
|-------------------|--------------|-------------|------------------------|------------|------------|
| Bilog Antenna | Schaffner | CBL6112B | 2921 | 2021/08/11 | 2022/08/10 |
| EMI Test Receiver | R&S | ESCS 30 | 100369 | 2021/12/15 | 2022/12/14 |
| Coaxial Cable | SUHNER | RG 214 | LC002A-RG LC002B-RG | 2021/06/10 | 2022/06/09 |
| Coaxial Switch | Anritsu | MP59B | 6200436230 | 2021/06/10 | 2022/06/09 |
| Preamplifier | Jet-Power | JPA-10M1G33 | 170101000330009 | 2021/06/10 | 2022/06/09 |
| NSA | DEKRA | N/A | N/A | 2021/06/10 | 2022/06/09 |

Test Software version : DEKRA Test System V2.0

Note: Test Receiver Detector: Quasipeak Bandwidth: 120kHz

Radiated Emission (Above 1GHz) / LK-CB05 (CB7)

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date | Due. Date |
|----------------------------------|--------------|---------------|-----------|------------|------------|
| Double Ridged Guide Horn Antenna | ETS-Lindgren | 3117 | 00202723 | 2021/10/12 | 2022/10/11 |
| EMI Test Receiver | R&S | ESU26 | 100433 | 2022/01/12 | 2023/01/11 |
| Coaxial Cable | SUHNER | SUCOFLEX 104 | LC034-SF | 2021/06/21 | 2022/06/20 |
| Coaxial Cable | ROSNOL | R-Test EW0630 | LC046-SF | 2021/06/21 | 2022/06/20 |
| Coaxial Cable | ROSNOL | MP533A | AC031-MP | 2021/06/21 | 2022/06/20 |
| Microwave Preamplifier | EMCI | EMC051845SE | 980359 | 2021/12/14 | 2022/12/13 |
| VSWR | DEKRA | N/A | N/A | 2021/06/22 | 2022/06/21 |

Test Software version : DEKRA Test System V2.0

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 3.49 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 5.16 dB.

Radiated Emission Above 1GHz

The measurement uncertainty is evaluated as ± 4.88 dB.

2.4. Test Environment

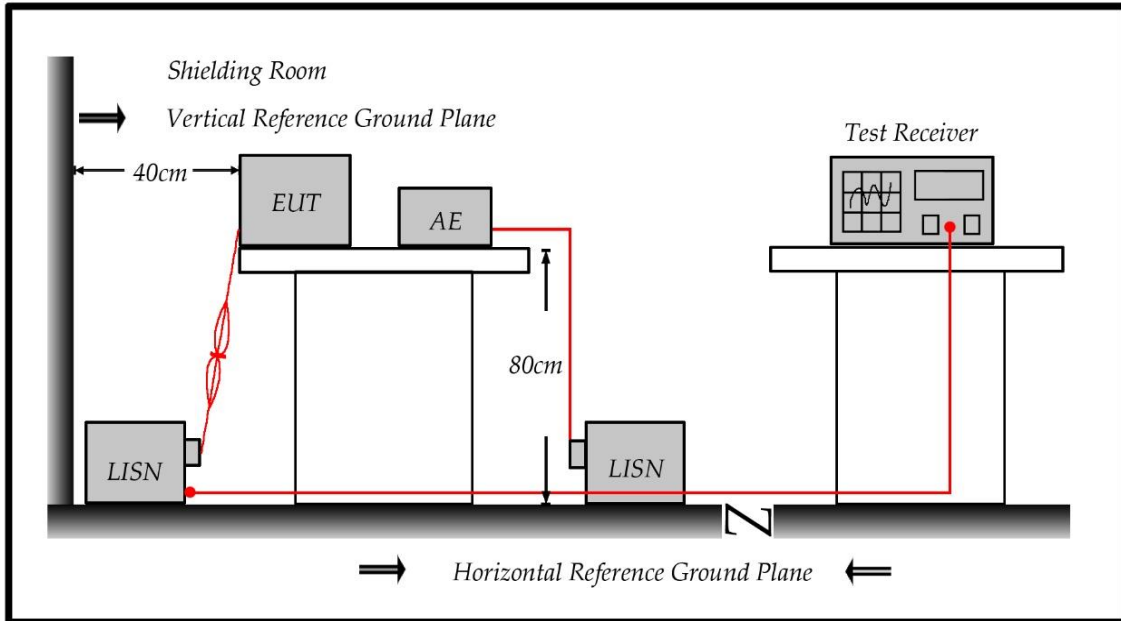
| Performed Item | Items | Required |
|--------------------|------------------|----------|
| Conducted Emission | Temperature (°C) | 10-40 |
| | Humidity (%RH) | 10-90 |
| Radiated Emission | Temperature (°C) | 10-40 |
| | Humidity (%RH) | 10-90 |

3. Conducted Emission

3.1. Test Specification

According to Standard : FCC Part 15 Subpart B, CISPR 22: 2008

3.2. Test Setup



3.3. Limit

| Conducted emissions limits (AC mains power terminals) | | | | |
|---|---------------------------|------------------------|---------------------------|------------------------|
| Frequency range (MHz) | Class A Quasi-peak (dBuV) | Class A Average (dBuV) | Class B Quasi-peak (dBuV) | Class B Average (dBuV) |
| 0.15 – 0.5 | 79 | 66 | 66 to 56 | 56 to 46 |
| 0.5 - 5 | 73 | 60 | 56 | 46 |
| 5 - 30 | 73 | 60 | 60 | 50 |

Note:

- The more stringent limit applies at transition frequencies.
- The limit level in dB μ V decreases linearly with the logarithm of frequency

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

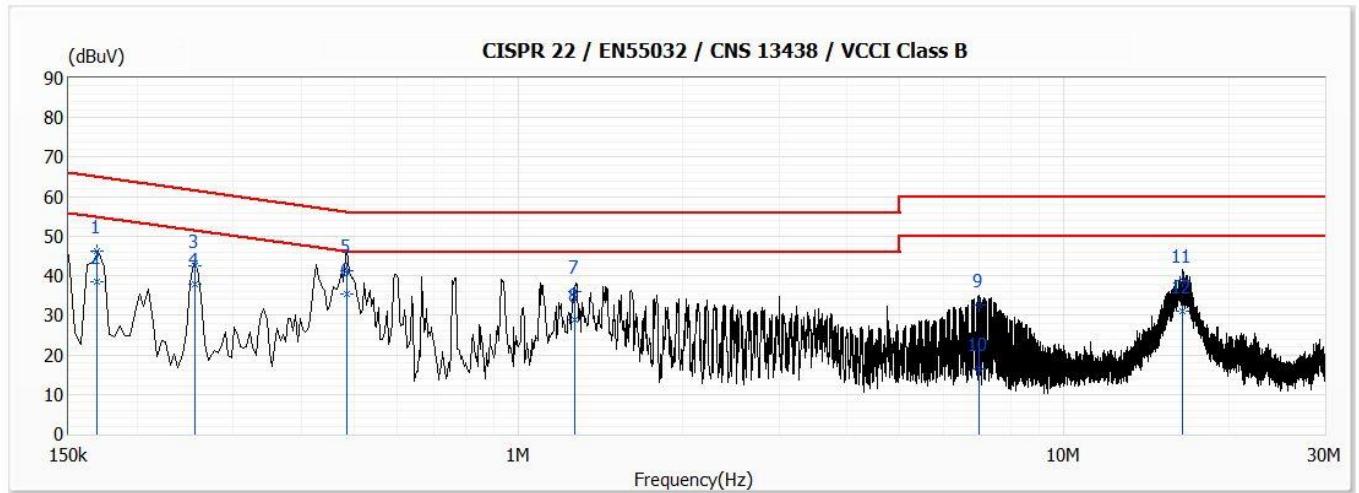
(Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

| | | | |
|----------------|--------------|------------------|----------|
| Model No | HSC040Wa | Site | SR8 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 1 | Engineer | Gary Luo |
| Phase | L1 | Temperature (°C) | 25.3 |
| Test Condition | -- | Humidity (%RH) | 46 |

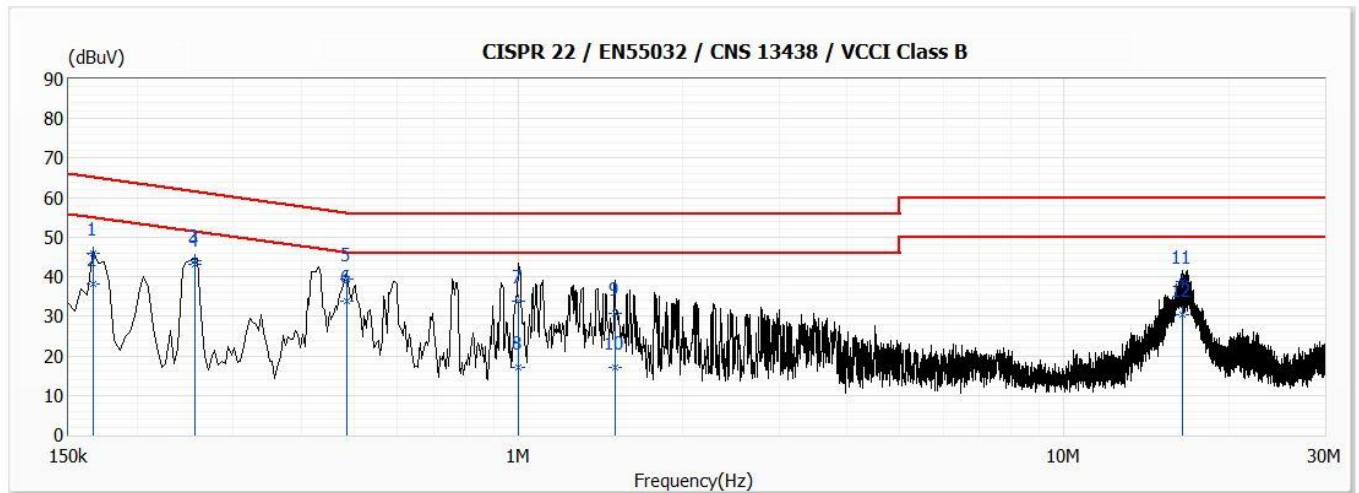


| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| 1 | 0.169 | 46.26 | 65.03 | -18.77 | 36.66 | 9.60 | QP |
| 2 | 0.169 | 38.48 | 55.03 | -16.55 | 28.88 | 9.60 | AV |
| 3 | 0.255 | 42.51 | 61.58 | -19.07 | 32.90 | 9.61 | QP |
| 4 | 0.255 | 37.94 | 51.58 | -13.64 | 28.33 | 9.61 | AV |
| 5 | 0.485 | 41.17 | 56.26 | -15.09 | 31.54 | 9.63 | QP |
| *6 | 0.485 | 35.46 | 46.26 | -10.80 | 25.83 | 9.63 | AV |
| 7 | 1.271 | 36.15 | 56.00 | -19.85 | 26.48 | 9.67 | QP |
| 8 | 1.271 | 28.80 | 46.00 | -17.20 | 19.13 | 9.67 | AV |
| 9 | 6.996 | 32.61 | 60.00 | -27.39 | 22.79 | 9.82 | QP |
| 10 | 6.996 | 16.41 | 50.00 | -33.59 | 6.59 | 9.82 | AV |
| 11 | 16.467 | 38.91 | 60.00 | -21.09 | 28.91 | 10.00 | QP |
| 12 | 16.467 | 31.09 | 50.00 | -18.91 | 21.09 | 10.00 | AV |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

| | | | |
|----------------|--------------|------------------|----------|
| Model No | HSC040Wa | Site | SR8 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 1 | Engineer | Gary Luo |
| Phase | N | Temperature (°C) | 25.3 |
| Test Condition | -- | Humidity (%RH) | 46 |

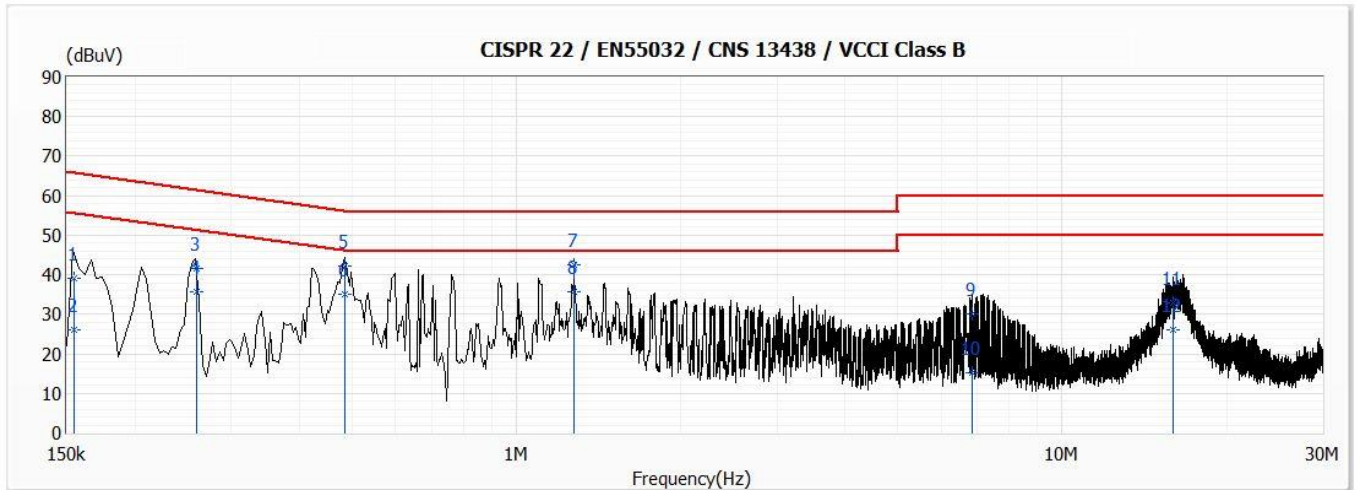


| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| 1 | 0.166 | 45.88 | 65.16 | -19.28 | 36.28 | 9.60 | QP |
| 2 | 0.166 | 38.24 | 55.16 | -16.92 | 28.64 | 9.60 | AV |
| 3 | 0.255 | 44.20 | 61.59 | -17.39 | 34.59 | 9.61 | QP |
| *4 | 0.255 | 43.00 | 51.59 | -8.59 | 33.39 | 9.61 | AV |
| 5 | 0.485 | 39.49 | 56.25 | -16.76 | 29.87 | 9.62 | QP |
| 6 | 0.485 | 33.75 | 46.25 | -12.50 | 24.13 | 9.62 | AV |
| 7 | 1.001 | 33.98 | 56.00 | -22.02 | 24.32 | 9.66 | QP |
| 8 | 1.001 | 17.00 | 46.00 | -29.00 | 7.34 | 9.66 | AV |
| 9 | 1.504 | 30.68 | 56.00 | -25.32 | 21.01 | 9.67 | QP |
| 10 | 1.504 | 17.15 | 46.00 | -28.85 | 7.48 | 9.67 | AV |
| 11 | 16.461 | 38.64 | 60.00 | -21.36 | 28.58 | 10.06 | QP |
| 12 | 16.461 | 30.52 | 50.00 | -19.48 | 20.46 | 10.06 | AV |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

| | | | |
|----------------|--------------|------------------|----------|
| Model No | HSC040Wa | Site | SR8 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 2 | Engineer | Gary Luo |
| Phase | L1 | Temperature (°C) | 25.3 |
| Test Condition | -- | Humidity (%RH) | 46 |

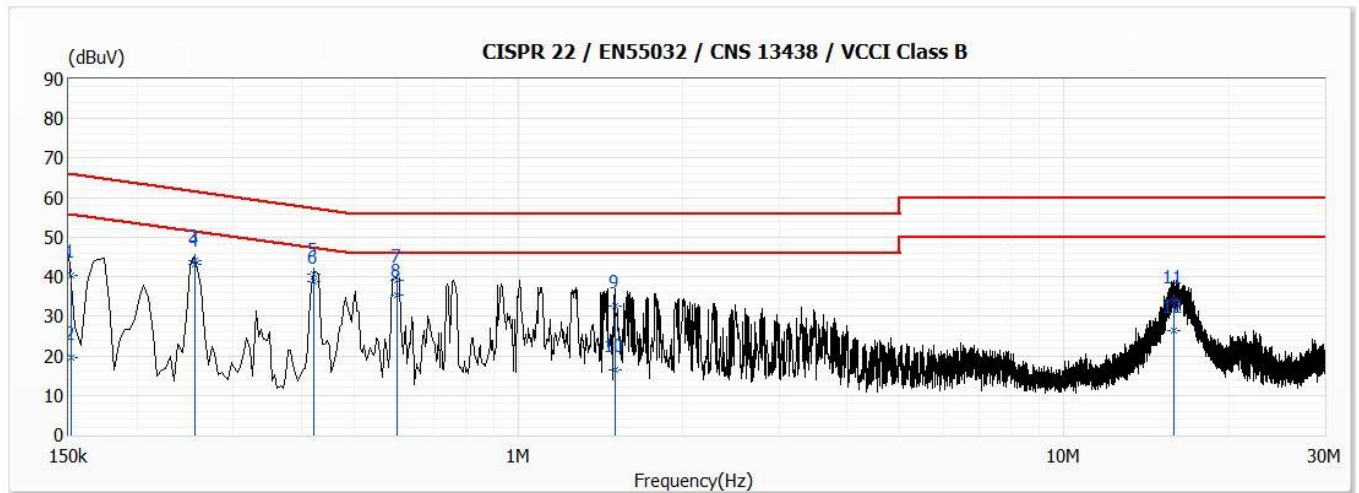


| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| 1 | 0.155 | 38.95 | 65.74 | -26.79 | 29.35 | 9.60 | QP |
| 2 | 0.155 | 25.99 | 55.74 | -29.75 | 16.39 | 9.60 | AV |
| 3 | 0.259 | 41.54 | 61.47 | -19.93 | 31.93 | 9.61 | QP |
| 4 | 0.259 | 35.70 | 51.47 | -15.77 | 26.09 | 9.61 | AV |
| 5 | 0.485 | 42.34 | 56.26 | -13.92 | 32.71 | 9.63 | QP |
| 6 | 0.485 | 35.15 | 46.26 | -11.11 | 25.52 | 9.63 | AV |
| 7 | 1.272 | 42.56 | 56.00 | -13.44 | 32.89 | 9.67 | QP |
| *8 | 1.272 | 35.58 | 46.00 | -10.42 | 25.91 | 9.67 | AV |
| 9 | 6.855 | 30.18 | 60.00 | -29.82 | 20.36 | 9.82 | QP |
| 10 | 6.855 | 15.19 | 50.00 | -34.81 | 5.37 | 9.82 | AV |
| 11 | 15.967 | 32.92 | 60.00 | -27.08 | 22.93 | 9.99 | QP |
| 12 | 15.967 | 25.96 | 50.00 | -24.04 | 15.97 | 9.99 | AV |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

| | | | |
|----------------|--------------|------------------|----------|
| Model No | HSC040Wa | Site | SR8 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 2 | Engineer | Gary Luo |
| Phase | N | Temperature (°C) | 25.3 |
| Test Condition | -- | Humidity (%RH) | 46 |



| No | Frequency (MHz) | Emission Level (dBuV) | Limit (dBuV) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB) | Detector Type |
|----|-----------------|-----------------------|--------------|-------------|----------------------|---------------------|---------------|
| 1 | 0.152 | 40.41 | 65.90 | -25.49 | 30.81 | 9.60 | QP |
| 2 | 0.152 | 19.68 | 55.90 | -36.22 | 10.08 | 9.60 | AV |
| 3 | 0.256 | 44.15 | 61.56 | -17.41 | 34.54 | 9.61 | QP |
| *4 | 0.256 | 43.27 | 51.56 | -8.29 | 33.66 | 9.61 | AV |
| 5 | 0.423 | 40.68 | 57.39 | -16.71 | 31.06 | 9.62 | QP |
| 6 | 0.423 | 38.80 | 47.39 | -8.59 | 29.18 | 9.62 | AV |
| 7 | 0.598 | 39.08 | 56.00 | -16.92 | 29.45 | 9.63 | QP |
| 8 | 0.598 | 35.44 | 46.00 | -10.56 | 25.81 | 9.63 | AV |
| 9 | 1.503 | 32.50 | 56.00 | -23.50 | 22.83 | 9.67 | QP |
| 10 | 1.503 | 16.59 | 46.00 | -29.41 | 6.92 | 9.67 | AV |
| 11 | 15.904 | 33.98 | 60.00 | -26.02 | 23.93 | 10.05 | QP |
| 12 | 15.904 | 26.26 | 50.00 | -23.74 | 16.21 | 10.05 | AV |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

3.6. Test Photograph

Test Mode : Mode 1: BT Mode (With END060W)

Description : Front View of Conducted Test



Test Mode : Mode 1: BT Mode (With END060W)

Description : Back View of Conducted Test



Test Mode : Mode 2: USB & Charging Mode

Description : Front View of Conducted Test



Test Mode : Mode 2: USB & Charging Mode

Description : Back View of Conducted Test



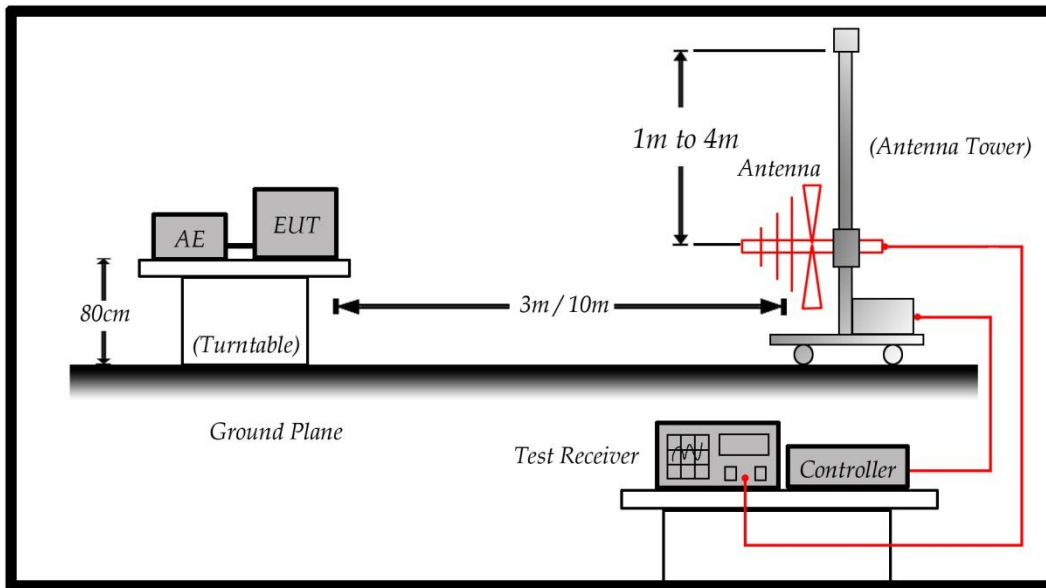
4. Radiated Emission

4.1. Test Specification

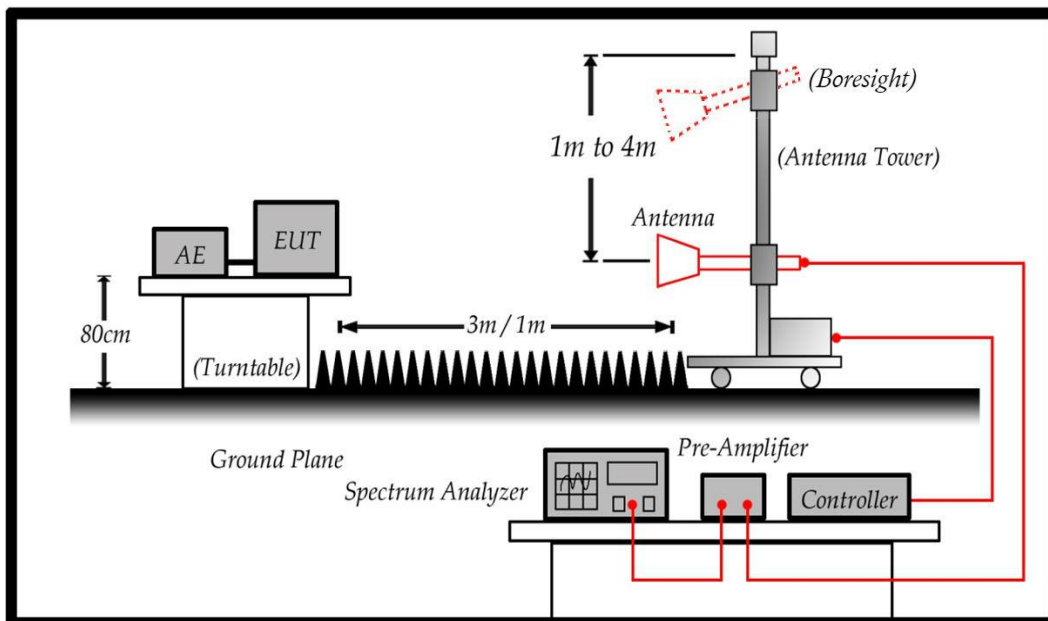
According to Standard : FCC Part 15 Subpart B, CISPR 22: 2008

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Under 1GHz test shall not exceed the following value:

| Limits | | |
|-----------------|--------------|--------|
| Frequency (MHz) | Distance (m) | dBuV/m |
| 30 – 230 | 10 | 30 |
| 230 – 1000 | 10 | 37 |

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Above 1GHz test shall not exceed the following value:

| FCC Part 15 Subpart B Paragraph 15.109 Limits (dBuV/m) | | |
|--|--------------|--------|
| Frequency (MHz) | Distance (m) | dBuV/m |
| 30-88 | 3 | 40 |
| 88-216 | 3 | 43.5 |
| 216-960 | 3 | 46.0 |
| 960-1000 | 3 | 54 |
| 1000-40000 | 3 | 54 |
| 18000-40000 | 1 | 63.5 |

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna (boresight antenna tower) can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measurement range (MHz) |
|--|---|
| Below 1.705 | 30 |
| 1.705 – 108 | 1000 |
| 108 – 500 | 2000 |
| 500 – 1000 | 5000 |
| Above 1000 | 5 th harmonic of the highest frequency or 40 GHz, whichever is lower |

On any frequency or frequencies below or equal to 1000 MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000 MHz, the radiated limits shown are based measuring equipment employing an average detector function.

When average radiated emission measurement are included emission measurement Above 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

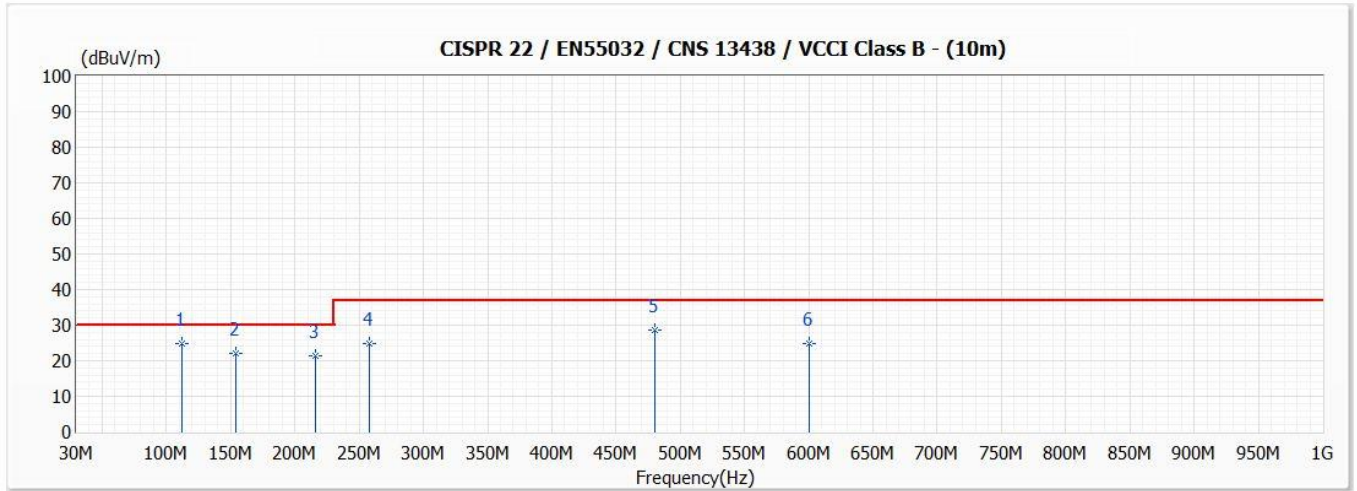
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

For class B, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and 3 meters for above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (Test Receiver) is 120 kHz and above 1GHz is 1MHz.

4.5. Test Result

| | | | |
|----------------|--------------|------------------|------------|
| Model No | HSC040Wa | Site | SITE2 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/11 |
| Test Mode | Mode 1 | Engineer | Edward Chi |
| Polarity | Horizontal | Temperature (°C) | 25.4 |
| Test Condition | -- | Humidity (%RH) | 71.4 |

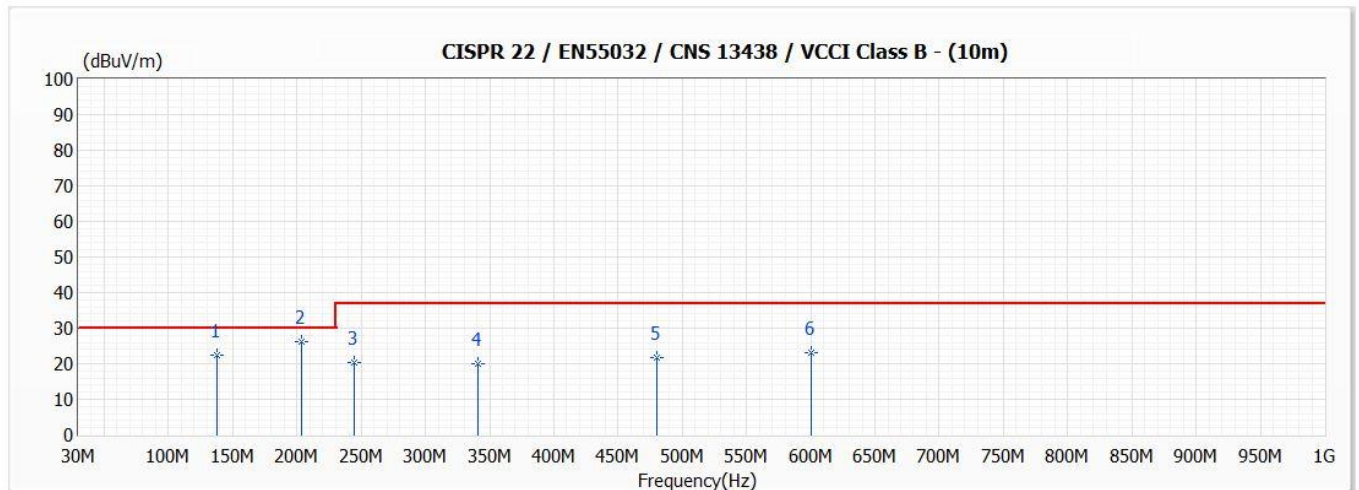


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| * 1 | 112.490 | 24.86 | 30.00 | -5.14 | 37.40 | -12.54 | 370 | -15 | QP |
| 2 | 154.130 | 22.10 | 30.00 | -7.90 | 35.70 | -13.60 | 370 | -93 | QP |
| 3 | 216.000 | 21.29 | 30.00 | -8.71 | 35.60 | -14.31 | 370 | -17 | QP |
| 4 | 258.200 | 24.85 | 37.00 | -12.15 | 34.30 | -9.45 | 370 | 178 | QP |
| 5 | 480.000 | 28.75 | 37.00 | -8.25 | 32.80 | -4.05 | 200 | 17 | QP |
| 6 | 600.000 | 24.84 | 37.00 | -12.16 | 26.40 | -1.56 | 100 | 87 | QP |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

| | | | |
|----------------|--------------|------------------|------------|
| Model No | HSC040Wa | Site | SITE2 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/11 |
| Test Mode | Mode 1 | Engineer | Edward Chi |
| Polarity | Vertical | Temperature (°C) | 25.4 |
| Test Condition | -- | Humidity (%RH) | 71.4 |

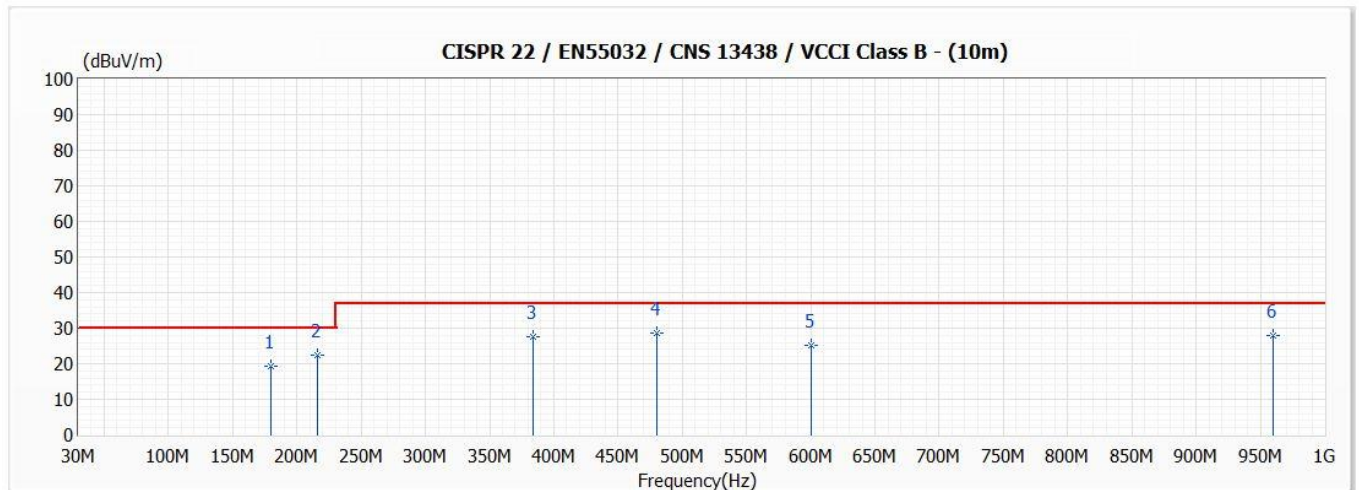


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| 1 | 137.750 | 22.47 | 30.00 | -7.53 | 35.20 | -12.73 | 100 | 27 | QP |
| * 2 | 203.900 | 26.12 | 30.00 | -3.88 | 40.20 | -14.08 | 100 | 64 | QP |
| 3 | 244.300 | 20.47 | 37.00 | -16.53 | 31.80 | -11.33 | 100 | 124 | QP |
| 4 | 340.800 | 19.96 | 37.00 | -17.04 | 28.20 | -8.24 | 100 | -19 | QP |
| 5 | 480.000 | 21.85 | 37.00 | -15.15 | 25.90 | -4.05 | 300 | -51 | QP |
| 6 | 600.000 | 23.24 | 37.00 | -13.76 | 24.80 | -1.56 | 250 | -107 | QP |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

| | | | |
|----------------|--------------|------------------|------------|
| Model No | HSC040Wa | Site | SITE2 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/11 |
| Test Mode | Mode 2 | Engineer | Edward Chi |
| Polarity | Horizontal | Temperature (°C) | 25.4 |
| Test Condition | -- | Humidity (%RH) | 71.4 |

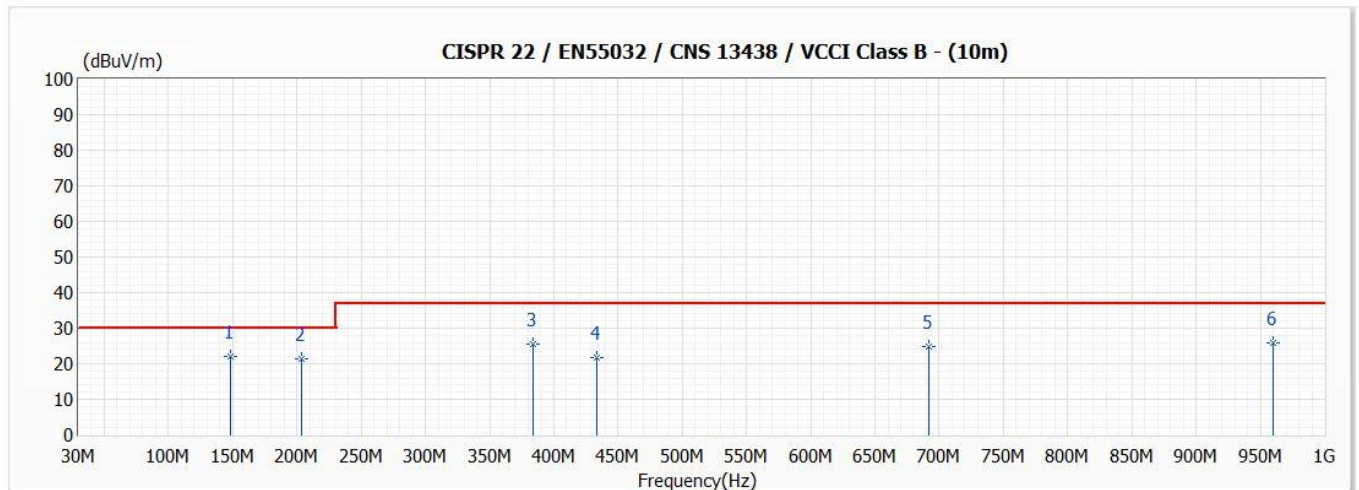


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| 1 | 180.000 | 19.15 | 30.00 | -10.85 | 33.70 | -14.55 | 370 | 192 | QP |
| * 2 | 216.000 | 22.39 | 30.00 | -7.61 | 36.70 | -14.31 | 370 | -94 | QP |
| 3 | 384.000 | 27.47 | 37.00 | -9.53 | 34.30 | -6.83 | 300 | -12 | QP |
| 4 | 480.000 | 28.75 | 37.00 | -8.25 | 32.80 | -4.05 | 100 | 95 | QP |
| 5 | 600.000 | 25.34 | 37.00 | -11.66 | 26.90 | -1.56 | 100 | 21 | QP |
| 6 | 960.000 | 27.77 | 37.00 | -9.23 | 23.40 | 4.37 | 100 | -113 | QP |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

| | | | |
|----------------|--------------|------------------|------------|
| Model No | HSC040Wa | Site | SITE2 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/11 |
| Test Mode | Mode 2 | Engineer | Edward Chi |
| Polarity | Vertical | Temperature (°C) | 25.4 |
| Test Condition | -- | Humidity (%RH) | 71.4 |

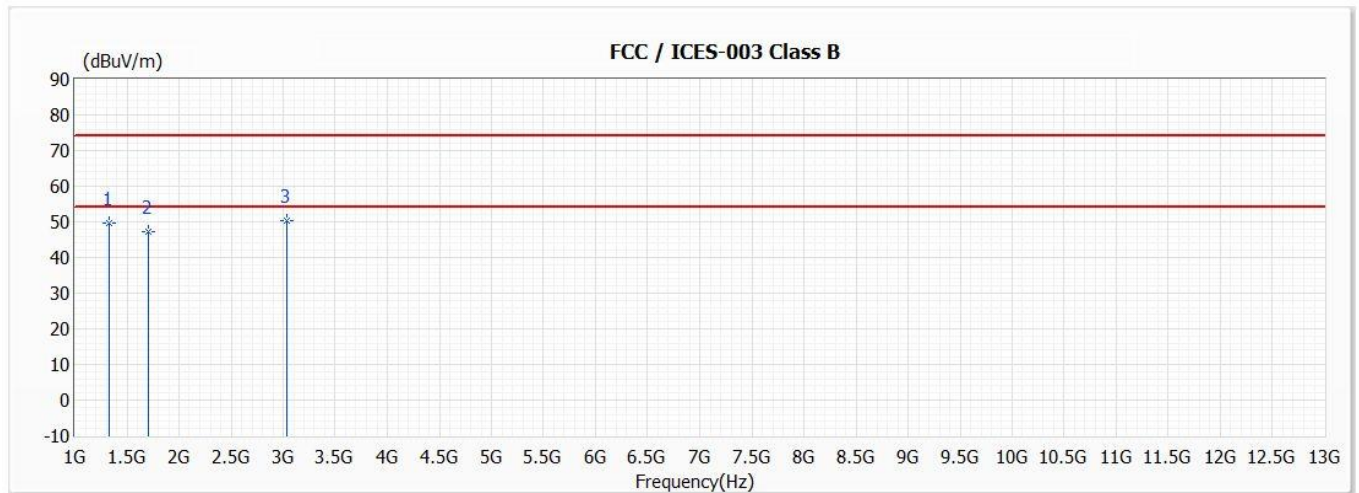


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| * 1 | 147.800 | 22.15 | 30.00 | -7.85 | 35.40 | -13.25 | 100 | -116 | QP |
| 2 | 203.300 | 21.21 | 30.00 | -8.79 | 35.30 | -14.09 | 100 | 92 | QP |
| 3 | 384.100 | 25.59 | 37.00 | -11.41 | 32.40 | -6.81 | 100 | -101 | QP |
| 4 | 433.800 | 21.70 | 37.00 | -15.30 | 26.80 | -5.10 | 300 | -42 | QP |
| 5 | 691.800 | 24.99 | 37.00 | -12.01 | 25.40 | -0.41 | 250 | -33 | QP |
| 6 | 960.000 | 25.87 | 37.00 | -11.13 | 21.50 | 4.37 | 150 | 34 | QP |

Remark:

1. "*" means this data is the worst emission level;"!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level-Limit.

| | | | |
|----------------|--------------|------------------|---------------|
| Model No | HSC040Wa | Site | CB7 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 1 | Engineer | Shianyu Chiou |
| Polarity | Horizontal | Temperature (°C) | 22.8 |
| Test Condition | -- | Humidity (%RH) | 68 |

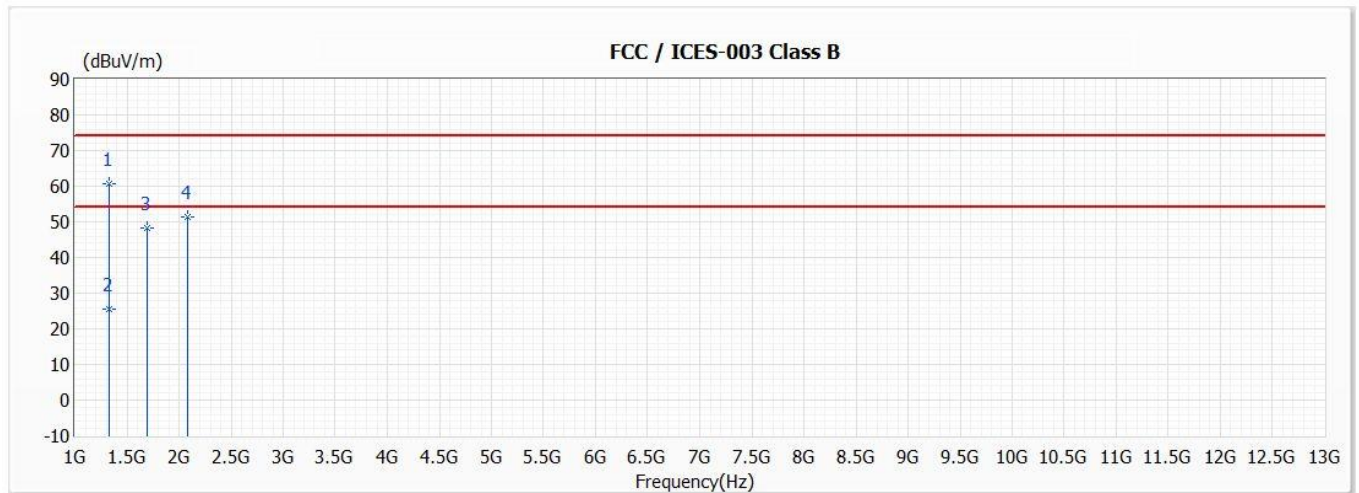


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| 1 | 1324.000 | 49.70 | 74.00 | -24.30 | 62.08 | -12.38 | 100 | 172 | PK |
| 2 | 1708.000 | 47.26 | 74.00 | -26.74 | 57.92 | -10.66 | 100 | 168 | PK |
| * 3 | 3040.000 | 50.24 | 74.00 | -23.76 | 55.17 | -4.93 | 100 | -135 | PK |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor (Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin= Emission Level-Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

| | | | |
|----------------|--------------|------------------|---------------|
| Model No | HSC040Wa | Site | CB7 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 1 | Engineer | Shianyu Chiou |
| Polarity | Vertical | Temperature (°C) | 22.8 |
| Test Condition | -- | Humidity (%RH) | 68 |

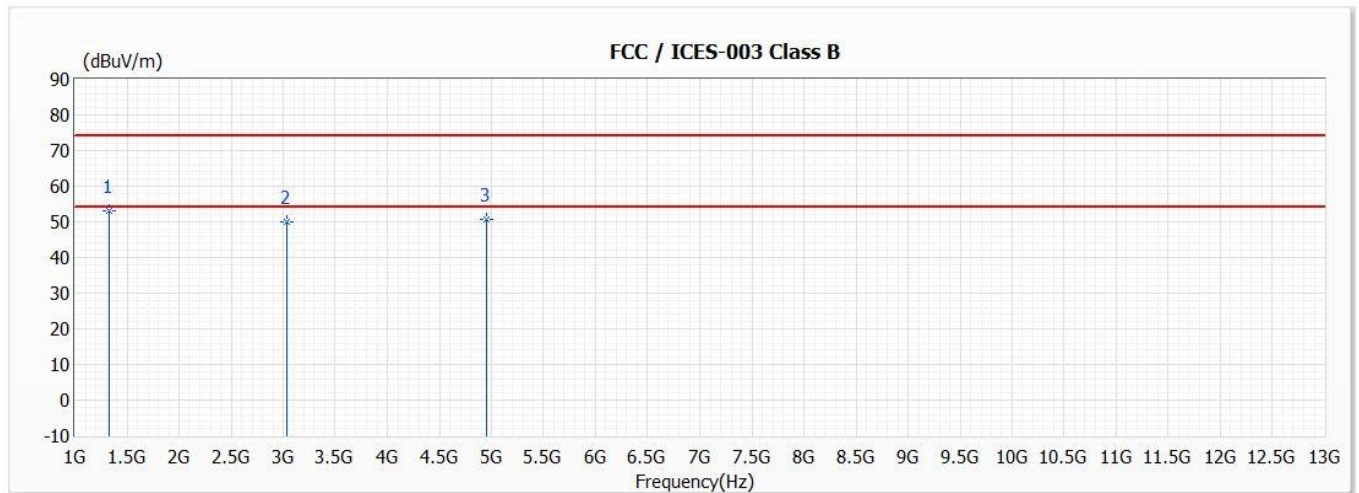


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| * 1 | 1324.000 | 60.58 | 74.00 | -13.42 | 72.96 | -12.38 | 100 | 129 | PK |
| 2 | 1324.000 | 25.60 | 54.00 | -28.40 | 37.98 | -12.38 | 100 | 129 | AV |
| 3 | 1696.000 | 48.25 | 74.00 | -25.75 | 59.03 | -10.78 | 100 | 184 | PK |
| 4 | 2080.000 | 51.41 | 74.00 | -22.59 | 59.61 | -8.20 | 150 | -106 | PK |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor (Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin= Emission Level-Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

| | | | |
|----------------|--------------|------------------|---------------|
| Model No | HSC040Wa | Site | CB7 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 2 | Engineer | Shianyu Chiou |
| Polarity | Horizontal | Temperature (°C) | 22.8 |
| Test Condition | -- | Humidity (%RH) | 68 |

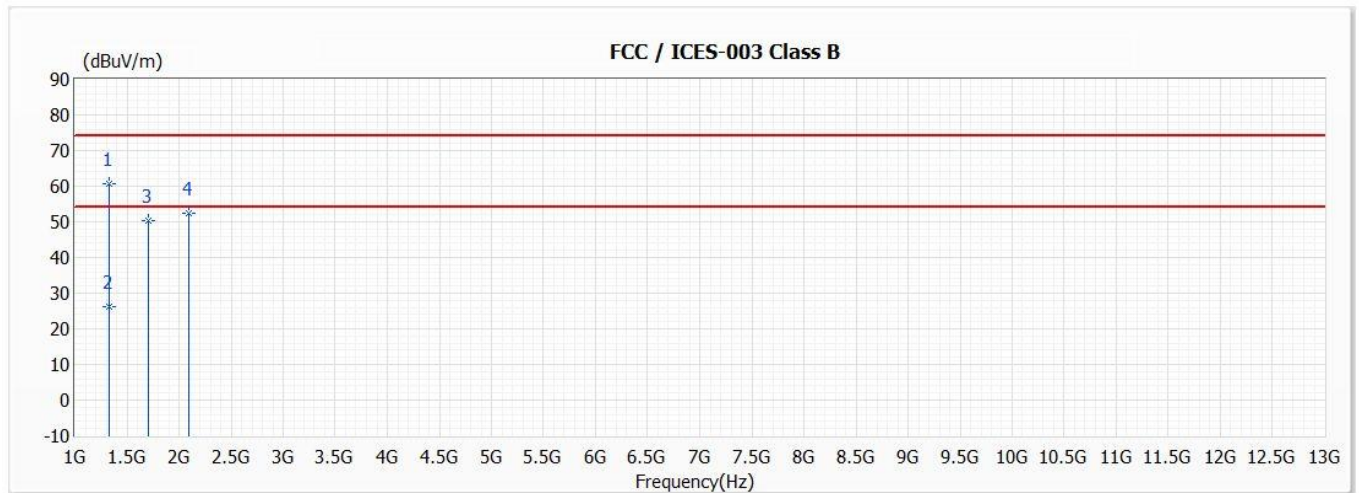


| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| * 1 | 1324.000 | 53.14 | 74.00 | -20.86 | 65.52 | -12.38 | 100 | -143 | PK |
| 2 | 3040.000 | 50.08 | 74.00 | -23.92 | 55.01 | -4.93 | 100 | 85 | PK |
| 3 | 4948.000 | 50.70 | 74.00 | -23.30 | 51.83 | -1.13 | 100 | 129 | PK |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor (Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin= Emission Level-Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

| | | | |
|----------------|--------------|------------------|---------------|
| Model No | HSC040Wa | Site | CB7 |
| Test Voltage | AC 120V/60Hz | Test Date | 2022/4/8 |
| Test Mode | Mode 2 | Engineer | Shianyu Chiou |
| Polarity | Vertical | Temperature (°C) | 22.8 |
| Test Condition | -- | Humidity (%RH) | 68 |



| No | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Reading Level (dBuV) | Correct Factor (dB/m) | Ant Pos (cm) | TT Pos (deg) | Detector Type |
|-----|-----------------|-------------------------|----------------|-------------|----------------------|-----------------------|--------------|--------------|---------------|
| * 1 | 1324.000 | 60.53 | 74.00 | -13.47 | 72.91 | -12.38 | 100 | -133 | PK |
| 2 | 1324.000 | 26.10 | 54.00 | -27.90 | 38.48 | -12.38 | 100 | -133 | AV |
| 3 | 1708.000 | 50.48 | 74.00 | -23.52 | 61.14 | -10.66 | 100 | 184 | PK |
| 4 | 2092.000 | 52.38 | 74.00 | -21.62 | 60.52 | -8.14 | 150 | -46 | PK |

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor (Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin= Emission Level-Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

4.6. Test Photograph

Test Mode : Mode 1: BT Mode (With END060W)

Description : Front View of Radiated Test



Test Mode : Mode 1: BT Mode (With END060W)

Description : Back View of Radiated Test



Test Mode : Mode 1: BT Mode (With END060W)

Description : Front View of High Frequency Radiated Test



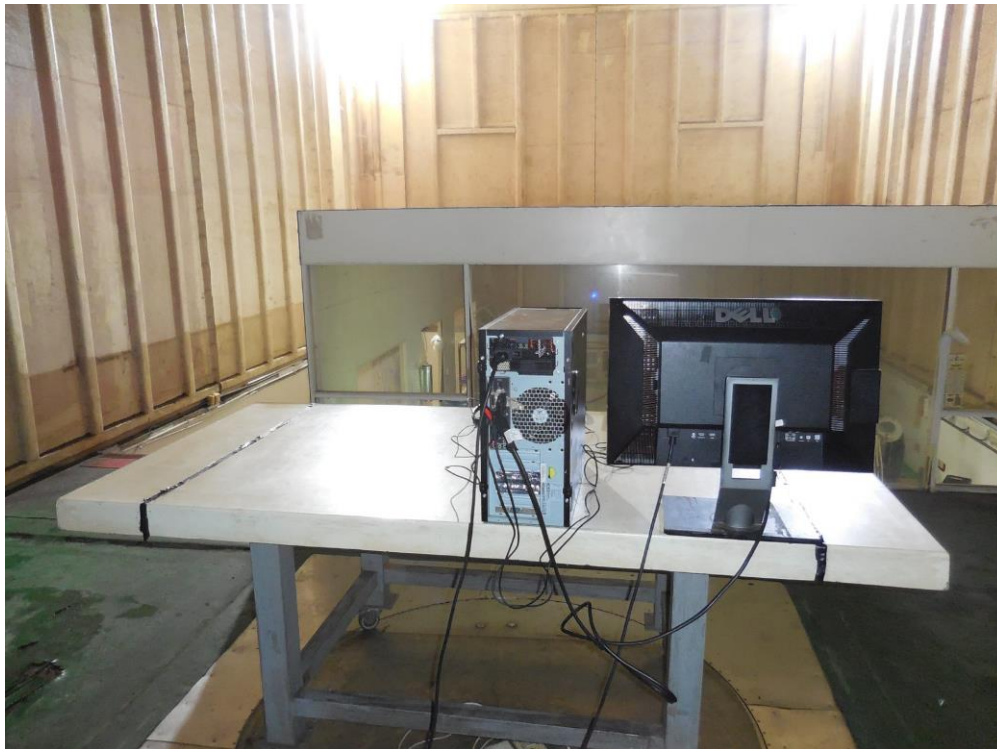
Test Mode : Mode 2: USB & Charging Mode

Description : Front View of Radiated Test



Test Mode : Mode 2: USB & Charging Mode

Description : Back View of Radiated Test



Test Mode : Mode 2: USB & Charging Mode

Description : Front View of High Frequency Radiated Test

