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Yongin-si, Gyeonggi-do 17036, Korea (Republic of)
Main: +82-31-322-6767, Fax: +82-31-322-6768

Test report No.:
TREFCC24-0064

FCC SUPPLIER'S DECLARATION OF CONFORMITY TEST REPORT

Test report No. : TREFCC24-0064
Applicant : DAS Co., Ltd
Address : 61, Jipyeongseonsandan 3-gil, Gimje-si, Jeollabuk-do, Korea
Manufacturer : DAS Co., Ltd
Address : 61, Jipyeongseonsandan 3-gil, Gimje-si, Jeollabuk-do, Korea
Type of equipment : IRON-MD Receiver
Model name : IRON-MD-RD
Variant model name : Not applicable
Date of incoming : June 14, 2024
Date of test : July 29, 2024
Date of issue : August 14, 2024
Test standards : ANSI C 63.4-2014
47 CFR Part 15 Subpart B
Type of device : All other devices
Test Result : Complied Not Complied

Summary

The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of Lab-T, Inc.

Prepared by

Jae Hee Song / EMC test engineer

Approved by

Cheol Ho Lee / Technical manager

If this test report is required to confirmation of authenticity, please contact to info@lab-t.net
This test report is not related to KOLAS.



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Test report No.:
TREFCC24-0064

- CONTENTS -

| | |
|---|----|
| 1. REVISION HISTORY | 3 |
| 2. INFORMATION OF TEST LABORATORY | 4 |
| 3. APPLICANT INFORMATION | 5 |
| 4. DESCRIPTION OF EUT (EQUIPMENT UNDER TEST) | 6 |
| 4.1 Product description | 6 |
| 4.2 Product specification | 6 |
| 4.3 EUT internal operating frequency | 6 |
| 4.4 Information of additional model | 6 |
| 4.5 Peripheral equipment | 7 |
| 4.6 Connection cable | 7 |
| 4.7 Test set-up configuration | 7 |
| 4.8 EUT operating test mode(s) | 7 |
| 4.9 EUT modification | 7 |
| 5. TEST STANDARDS | 8 |
| 5.1 Standards | 8 |
| 6. EMISSION TEST RESULTS | 9 |
| 6.1 Conducted emission | 9 |
| 6.2 Radiated emission (30 MHz ~ 1 000 MHz) | 12 |
| 6.3 Radiated emission (Above 1 GHz) | 19 |
| 7. PHOTOGRAPHS OF THE PRODUCT | 26 |
| 8. COMPLIANCE INFORMATION AND INFORMATION TO USER REQUIREMENTS SUMMARIES | 29 |
| 8.1 Compliance Information | 29 |
| 8.2 Labeling requirements (Section 15.19) | 30 |
| 8.3 Information to the user | 32 |



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Test report No.:
TREFCC24-0064

1. Revision history

| Issued report No. | Version | Issued date | Revision |
|-------------------|---------|-----------------|----------|
| TREFCC24-0064 | Rev. 00 | August 14, 2024 | Original |



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Test report No.:
TREFCC24-0064

2. Information of test laboratory

| | |
|-----------------------|--|
| Corporate name | Lab-T, Inc. |
| Representative | Duke (Jongyoung) Kim |
| Address | 2182-42, Baegok-daero, Mohyeon-eup, Cheoin-gu, Yongin-si |
| | Gyeonggi-do 17036, Korea (Republic of) |
| Telephone | +82-31-322-6767 |
| Fax | +82-31-322-6768 |
| E-mail | info@lab-t.net |

| | |
|------------------|--|
| Test Site | Building L, A, T |
| Address | 2182-40, 2182-44, 2182-42 Baegok-daero, Mohyeon-eup, Cheoin-gu |
| | Yongin-si, Gyeonggi-do 17036, Korea (Republic of) |

* Lab-T, Inc. has been accredited / filed / authorized by the agencies listed in the following table.

| Certificate | Nation | Agency | Code | Mark |
|---------------|--------|----------------------|---|---|
| Accreditation | Korea | KOLAS | KT703 |  |
| Site filing | USA | FCC | KR0159 |  |
| | Japan | VCCI | R-14282, C-14764 T-12276, G-10886 G-10887 |  |
| | Canada | Industry Canada (IC) | 22000 |  |
| Certification | Korea | KC | KR0159 (RRA) KC2019-1 (KATS) |  |
| | EU | TUV SUD | CARAT 093449 0009 |  |
| | USA | UL | 1706-E-197 |  |



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Test report No.:
TREFCC24-0064

3. Applicant information

| | |
|------------------|---|
| Applicant | DAS Co., Ltd |
| Address | 61, Jipyeongseonsandan 3-gil, Gimje-si, Jeollabuk-do, Korea |

| | |
|--------------------------|---|
| Manufacturer | DAS Co., Ltd |
| Address | 61, Jipyeongseonsandan 3-gil, Gimje-si, Jeollabuk-do, Korea |
| Country of origin | Korea |



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Test report No.:
TREFCC24-0064

4. Description of EUT (Equipment under test)

4.1 Product description

| | |
|--------------------|------------------|
| Name of EUT | IRON-MD Receiver |
| Model name | IRON-MD-RD |

4.2 Product specification

| Classification | Specifications |
|---|------------------------------|
| LED Status Indication | 7 LED |
| T(Transmission)/R(Receiving) Radio Frequency | 433 MHz / 2.4 GHz(Bluetooth) |
| Supply Power | DC 8 - 26 V, 3 A Min |
| Communication Output Method | CAN |
| Contact Output | RELAY 10 A |
| Operating Temp. | - 20 °C to + 70 °C |
| Storage Temp. | - 40 °C to + 85 °C |
| Waterproof Rating | IP65 |
| Weight | 0.4 kg |

4.3 EUT internal operating frequency

| Frequency | Description | Frequency | Description |
|------------------|--------------------|------------------|--------------------|
| 433 MHz | - | 2 480 MHz | Bluetooth (BLE) |

4.4 Information of additional model

| Product | Model name | Difference |
|----------------|-------------------|-------------------|
| - | - | - |



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Test report No.:
TREFCC24-0064

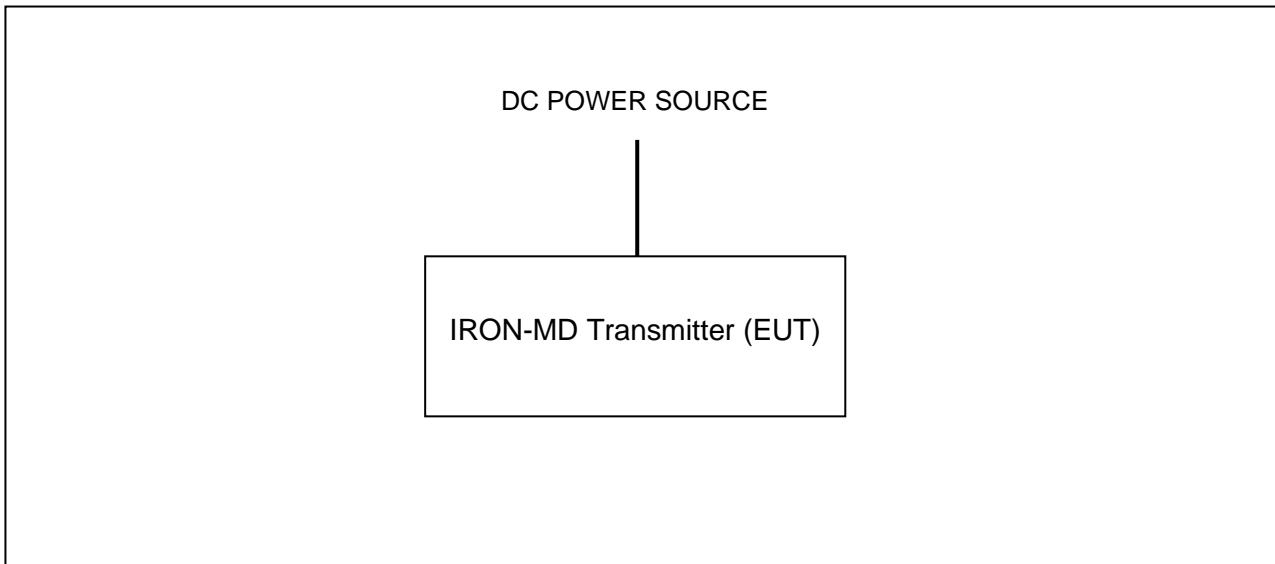
4.5 Peripheral equipment

| Product | Model name | Serial No. | Manufacturer |
|------------------------|------------|------------|----------------------|
| IRON-MD Receiver (EUT) | IRON-MD-RD | - | DAS Co., Ltd / Korea |

4.6 Connection cable

| Start-up device | | Connected end device | | Cable specification | |
|------------------------|----------|----------------------|----------|---------------------|----------|
| Name | I/O port | Name | I/O port | Length(m) | Spec. |
| IRON-MD receiver (EUT) | DC IN | DC POWER SOURCE | DC OUT | 5.0 | Unshield |

4.7 Test set-up configuration



4.8 EUT operating test mode(s)

- Test is conducted in transmit/receive standby state.
- Tested at DC 12V and 24V respectively.

4.9 EUT modification

- Not modification.



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Test report No.:
TREFCC24-0064

5. Test standards

5.1 Standards

| Test item | Applied standard | Result |
|--|---|------------------|
| Conducted emission | 47 CFR FCC Part 15 Subpart B §15.107 (Class A) | N/A (*Note 1) |
| Radiated emission (30 MHz ~ 1 000 MHz) | 47 CFR FCC Part 15 Subpart B §15.109 (Class A) | C |
| Radiated emission (Above 1 GHz) | 47 CFR FCC Part 15 Subpart B §15.109 (Class A) | C |

* C=Comply, N/A=Not applicable
* Note 1: The test excluded as EUT is using DC Power.

* Measurement uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC.

The factors contributing to uncertainties are test receiver, cable loss, antenna factor calibration, Antenna directivity, antenna factor variation with height, antenna phase center variation, antenna frequency interpolation, measurement distance variation, site imperfection, mismatch, and system repeatability. Based on CISPR 16-4-2, the measurement uncertainty level with a 95 % confidence level was applied.

| Test item | Uncertainty | Confidence level of approximately |
|---|--------------------|-----------------------------------|
| Radiated emission (30 MHz ~ 1 000 MHz) | 30 MHz ~ 1 000 MHz | 4.80 dB |
| Radiated emission (Above 1 GHz) | Above 1 GHz | 5.06 dB |



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Test report No.:
TREFCC24-0064

6. Emission test results

6.1 Conducted emission

| Test standard | 47 CFR FCC Part 15 Subpart B §15.107 |
|-------------------|--------------------------------------|
| Test date | - |
| Test facility | - |
| Test voltage | - |
| Temperature | - |
| Relative humidity | - |
| Test result | Not applicable |

6.1.1 Measurement procedure

If the EUT is table top equipment, it was placed on a non-metal table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed either directly on the reference ground plane or on insulating material as described in ANSI C 63.4 6.3.3.2. Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN & ISN, if any. Unused measuring port of the LISN & ISN was resistively terminated by 50 ohm terminator. The measuring port of the LISN for EUT was connected to spectrum analyzer. Using conducted emission test software, the emissions were scanned with peak detector mode. After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has quasi-peak detector and CISPR average detector. By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.



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Test report No.:
TREFCC24-0064

6.1.2 Test equipment used

| Equipment | Model | Manufacturer | Serial number | Next cal. date |
|-----------|-------|--------------|---------------|----------------|
| - | - | - | - | - |

* All test equipment used is calibrated on a regular basis

6.1.3 Conducted emission limits

| Frequency (MHz) | Class A (dB(μV)) | | Class B (dB(μV)) | |
|--------------------|------------------|---------------|------------------|---------------|
| | Quasi-peak | CISPR Average | Quasi-peak | CISPR Average |
| 0.15 to 0.5 | 79 | 66 | 66 ~ 56* | 56 ~ 46* |
| 0.5 to 5 | 73 | 60 | 56 | 46 |
| 5 to 30 | | | 60 | 50 |

Remark 1: (*) The limit decreases linearly with the logarithm of frequency.



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Test report No.:
TREFCC24-0064

6.1.4 Conducted emission limits test data

N/A

6.1.5 Test setup photos

N/A



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Test report No.:
TREFCC24-0064

6.2 Radiated emission (30 MHz ~ 1 000 MHz)

| Test standard | 47 CFR FCC Part 15 Subpart B §15.109 |
|-------------------|--------------------------------------|
| Test date | 2024.07.29 |
| Test facility | Building A 10 m chamber |
| Test voltage | DC 12 V, DC 24 V |
| Temperature | (19.1 ~ 19.4) °C |
| Relative humidity | (49.2 ~ 49.9) % R.H. |
| Test result | Complied |

6.2.1 Measurement procedure

If the EUT is tabletop equipment, it was placed on a non-metal table with a height of 0.8 m above the reference ground plane and 10 m away from the interference receiving antenna in the semi-anechoic chamber.

Also if the EUT is floor-standing equipment, it was placed either directly on the reference ground plane or on insulating material as described in ANSI C 63.4 6.3.3.2. Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report. For 30 MHz ~ 1 000 MHz frequency range, quasi-peak detector with 120 kHz RBW was used.



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Test report No.:
TREFCC24-0064

6.2.2 Test equipment used

| Equipment | Model | Manufacturer | Serial number | Next cal. date |
|------------------------|------------------|--------------|---------------|----------------|
| EMI Test Receiver | ESW44 | R&S | 101839 | 2025.05.30 |
| Low Noise Preamplifier | MLA-10k01-b01-14 | TSJ | 2060297 | 2025.05.31 |
| Bi-Log Antenna | VULB9168 | Schwarzbeck | 00822 | 2025.03.09 |
| Attenuator | 50FPE-006N | JFW | 6 dB-1 | 2025.03.09 |
| Controller | CO3000 | Innco | 45450119 | - |
| Antenna Mast | MA4000-EP | Innco | - | - |
| Turn Table | - | - | - | - |
| EMI RE Software | EMI-R | TSJ | - | - |

* All test equipment used is calibrated on a regular basis.

6.2.3 Radiated emission limits

- Limit for radiated emission below 1 000 MHz

| Frequency range (MHz) | Class A Equipment (10 m distance) | Class B Equipment (3 m distance) |
|--------------------------|--------------------------------------|-------------------------------------|
| | Quasi-peak (dB(µV/m)) | Quasi-peak (dB(µV/m)) |
| 30 to 88 | 39.1 | 40 |
| 88 to 216 | 43.5 | 43.5 |
| 216 to 960 | 46.4 | 46 |
| 960 to 1 000 | 49.5 | 54 |

Note 1 The lower limit shall apply at the transition frequency.

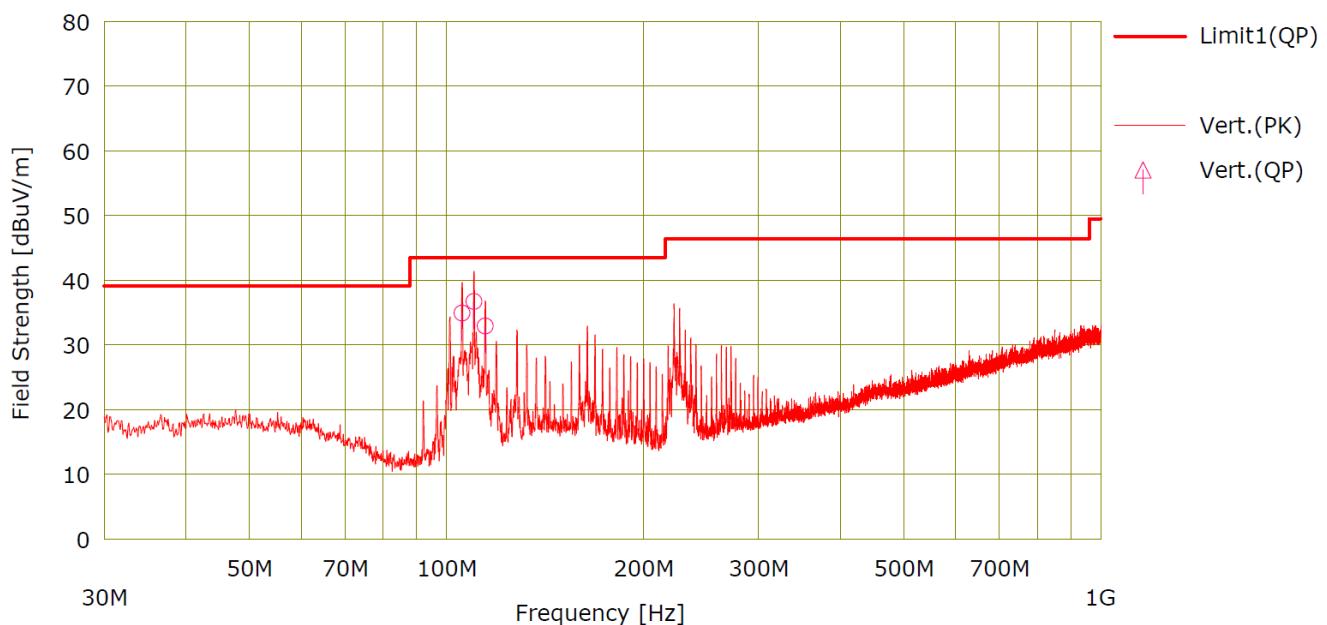
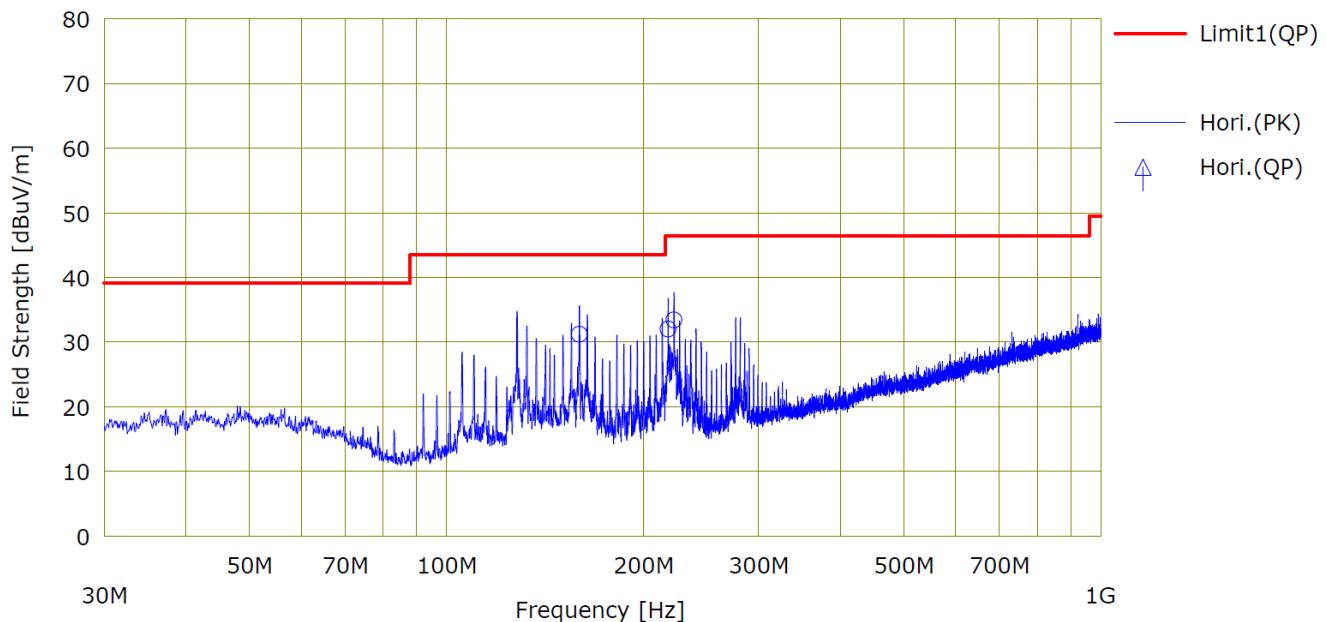
Note 2 Additional provisions may be required for cases where interference occurs.

Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

6.2.4 Radiated emission test data

[12 V]

* Minimum limit margin is 6.8 dB at 110.246 MHz. (Vertical)





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Test report No.:
TREFCC24-0064

<< QP DATA >>

| No. | Freq. [MHz] | Reading <QP> | Ant.Fac [dBuV] | Loss [dB] | Gain [dB] | Result <QP> | Limit <QP> | Margin <QP> | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|--------------|
| | | <QP> | | | | <QP> | <QP> | <QP> | | | | |
| | | [dBuV] | | | | [dBuV/m] | [dBuV/m] | [dB] | | | | |
| 1 | 159.683 | 50.3 | 18.8 | -37.9 | 0.0 | 31.2 | 43.5 | 12.3 | Hori. | 400 | 1 | VULB9 |
| 2 | 218.182 | 52.2 | 17.4 | -37.5 | 0.0 | 32.0 | 46.4 | 14.4 | Hori. | 400 | 354 | VULB9 |
| 3 | 222.812 | 52.9 | 18.0 | -37.5 | 0.0 | 33.4 | 46.4 | 13.0 | Hori. | 400 | 114 | VULB9 |
| 4 | 105.679 | 57.1 | 16.1 | -38.3 | 0.0 | 34.9 | 43.5 | 8.6 | Vert. | 100 | 2 | VULB9 |
| 5 | 110.246 | 58.3 | 16.6 | -38.2 | 0.0 | 36.7 | 43.5 | 6.8 | Vert. | 100 | 110 | VULB9 |
| 6 | 114.676 | 54.7 | 16.4 | -38.2 | 0.0 | 32.9 | 43.5 | 10.6 | Vert. | 100 | 128 | VULB9 |

* Results [dB(μ V/m)] = Reading [dB(μ V)] + Antenna factor [dB/m] - Loss

* Loss = Cable loss [dB] - Amp gain [dB]

* Margin [dB] = Limit [dB(μ V/m)] - Results [dB(μ V/m)]

* QP: Quasi-peak

* ex) Measure Value[QP]

Frequency: 159.683 MHz

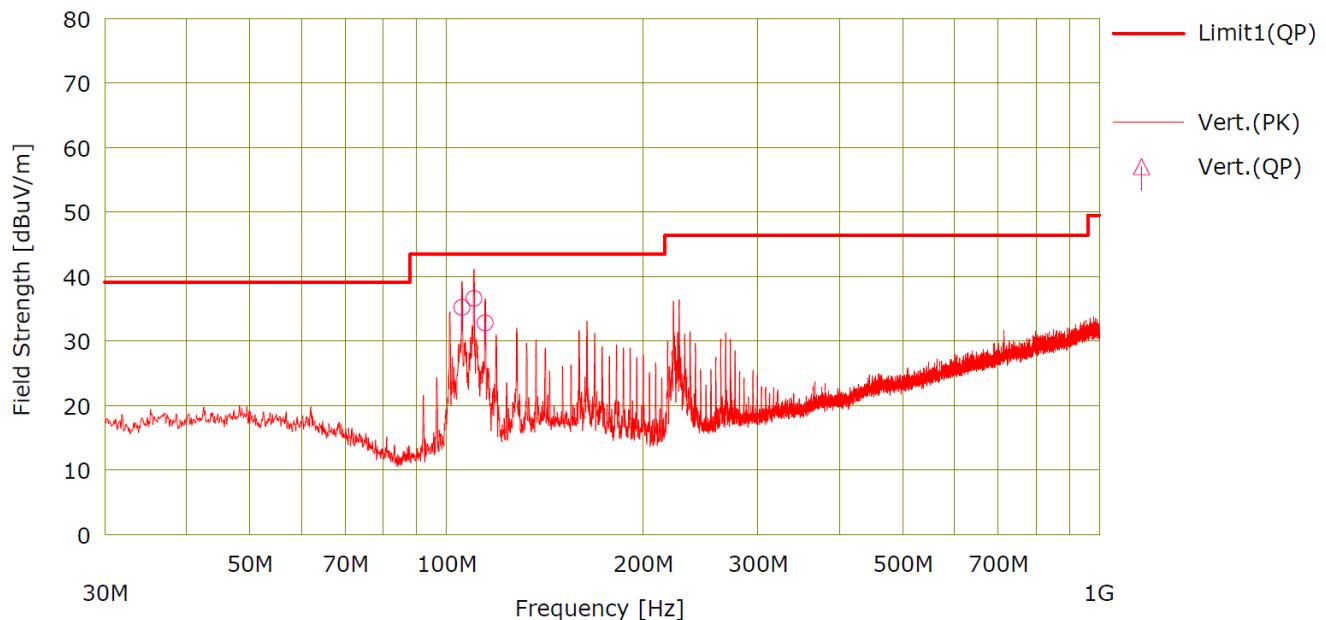
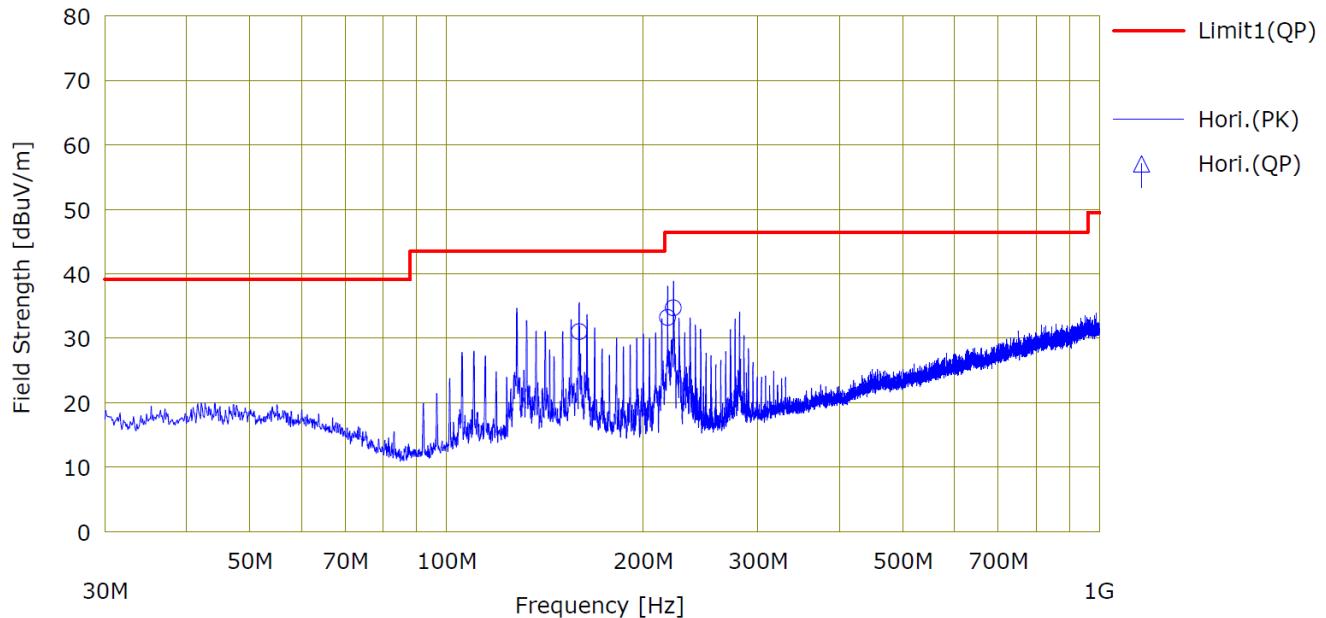
Results [dB μ V/m] = 31.2, Reading [dB μ V/m] = 50.3, Antenna factor [dB/m] = 18.8, Loss [dB] = - 37.9, Amp gain [dB] = 0.0
31.2 dB μ V/m = 50.3 dB μ V/m + 18.8 dB/m - 37.9 dB - 0.0 dB

Margin [dB μ V/m] = 12.3, Limit [dB μ V/m] = 43.5, Result [dB μ V/m] = 31.2

12.3 dB μ V/m = 43.5 dB μ V/m - 31.2 dB μ V/m

[24 V]

* Minimum limit margin is 6.9 dB at 110.294 MHz. (Vertical)





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Test report No.:
TREFCC24-0064

<< QP DATA >>

| No. | Freq. [MHz] | Reading <QP> | | Ant.Fac | Loss [dB] | Gain [dB] | Result <QP> | Limit <QP> | Margin <QP> | Pola. | Height [cm] | Angle [deg] | Ant. Type |
|-----|----------------|-----------------|--------|---------|--------------|--------------|----------------|----------------|----------------|-------|----------------|----------------|--------------|
| | | [dB μ V] | [dB/m] | | | | [dB μ V/m] | [dB μ V/m] | | | | | |
| | | 159.777 | 50.1 | 18.8 | -37.9 | 0.0 | 31.0 | 43.5 | 12.5 | Hori. | 400 | 192 | VULB9 |
| 1 | 218.202 | 53.4 | 17.4 | -37.5 | 0.0 | | 33.2 | 46.4 | 13.2 | Hori. | 400 | 336 | VULB9 |
| 2 | 222.722 | 54.2 | 18.0 | -37.5 | 0.0 | | 34.7 | 46.4 | 11.7 | Hori. | 400 | 336 | VULB9 |
| 3 | 105.719 | 57.4 | 16.1 | -38.3 | 0.0 | | 35.2 | 43.5 | 8.3 | Vert. | 100 | 10 | VULB9 |
| 4 | 110.294 | 58.2 | 16.6 | -38.2 | 0.0 | | 36.6 | 43.5 | 6.9 | Vert. | 100 | 133 | VULB9 |
| 5 | 114.715 | 54.6 | 16.4 | -38.2 | 0.0 | | 32.8 | 43.5 | 10.7 | Vert. | 100 | 96 | VULB9 |
| 6 | | | | | | | | | | | | | |

* Results [dB(μ N/m)] = Reading [dB(μ N)] + Antenna factor [dB/m] - Loss

* Loss = Cable loss [dB] - Amp gain [dB]

* Margin [dB] = Limit [dB(μ N/m)] - Results [dB(μ N/m)]

* QP: Quasi-peak

* ex) Measure Value[QP]

Frequency: 159.777 MHz

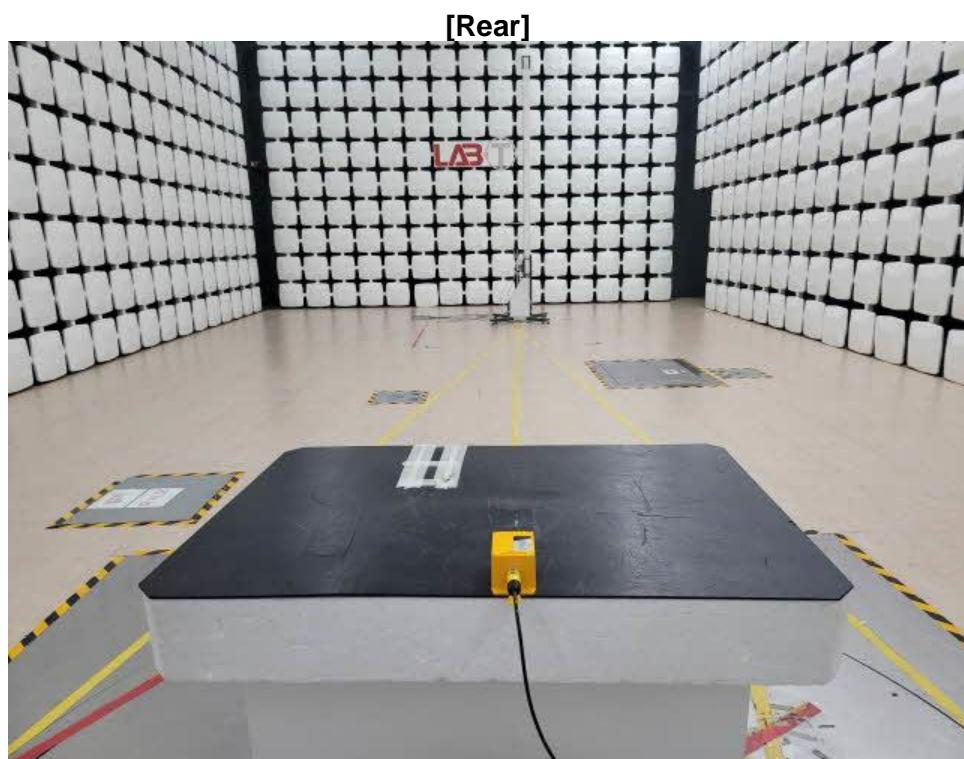
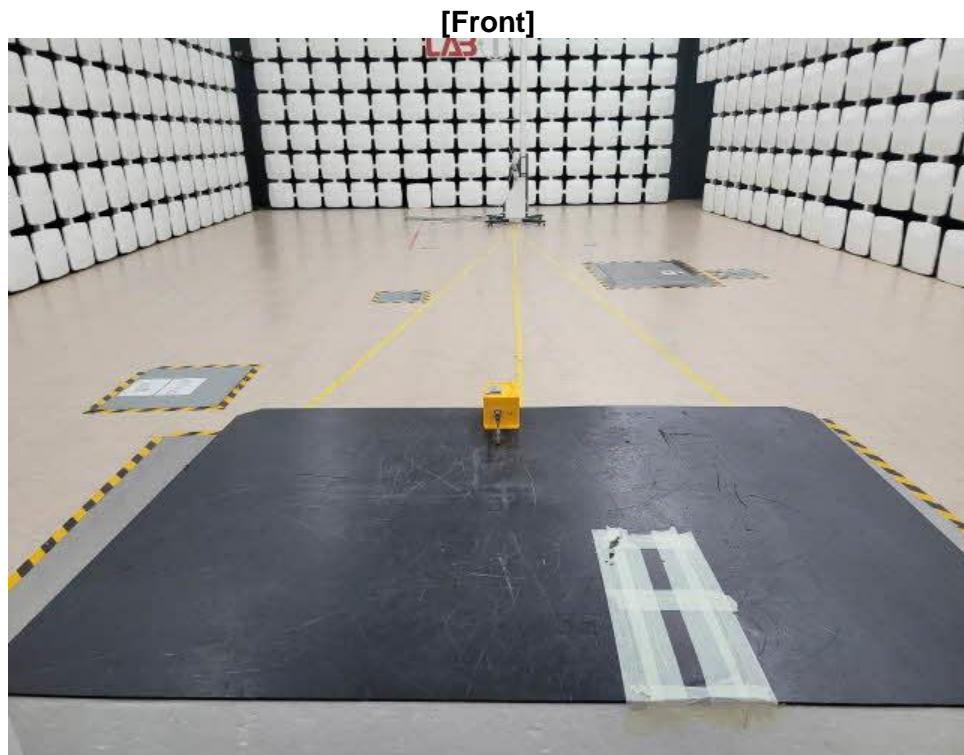
Results [dB μ V/m] = 31.0, Reading [dB μ V/m] = 50.1, Antenna factor [dB/m] = 18.8, Loss [dB] = - 37.9, Amp gain [dB] = 0.0

31.0 dB μ V/m = 50.1 dB μ V/m + 18.8 dB/m - 37.9 dB - 0.0 dB

Margin [dB μ V/m] = 12.5, Limit [dB μ V/m] = 43.5, Result [dB μ V/m] = 31.0

12.5 dB μ V/m = 43.5 dB μ V/m - 31.0 dB μ V/m

6.2.5 Test setup photos





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6.3 Radiated emission (Above 1 GHz)

| Test standard | 47 CFR FCC Part 15 Subpart B §15.109 |
|-------------------|--------------------------------------|
| Test date | 2024.07.29 |
| Test facility | Building A 10 m chamber |
| Test voltage | DC 12 V, DC 24 V |
| Temperature | (20.9 ~ 21.1) °C |
| Relative humidity | (50.7 ~ 51.4) % R.H. |
| Test result | Complied |

6.3.1 Measurement procedure

If the EUT is tabletop equipment, it was placed on a non-metal table with a height of 0.8 m above the reference ground plane and 3 m away from the interference receiving antenna in the chamber. Also if the EUT is floor-standing equipment, it was placed either directly on the reference ground plane or on insulating material as described in ANSI C 63.4 6.3.3.2. Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report. For peak and average detector with 1 MHz RBW were used for above 1 GHz frequency range.



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TREFCC24-0064

6.3.2 Test equipment used

| Equipment | Model | Manufacturer | Serial number | Next cal. date |
|---------------------|--------------|--------------|---------------|----------------|
| EMI Test Receiver | ESW44 | R&S | 101839 | 2025.05.30 |
| Horn Antenna | BBHA 9120 D | Schwarzbeck | 01735 | 2025.04.03 |
| Low Noise amplifier | TK-PA18H | TESTEK | 170004-L | 2025.04.01 |
| Controller | CO3000 | Innco | 45450119 | - |
| Antenna Mast | MA4640-XP-ET | Innco | - | - |
| Turn Table | - | - | - | - |
| EMI RE Software | EMI-R | TSJ | - | - |

* All test equipment used is calibrated on a regular basis

6.3.3 Radiated emission limits

- The test frequency range of radiated disturbance measurements are listed below

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measurement range (MHz) |
|--|---|
| Below 108 | 1 000 |
| 108 - 500 | 2 000 |
| 500 - 1 000 | 5 000 |
| Above 1 000 | 5th harmonic of the highest frequency or 40 GHz, whichever is lower |

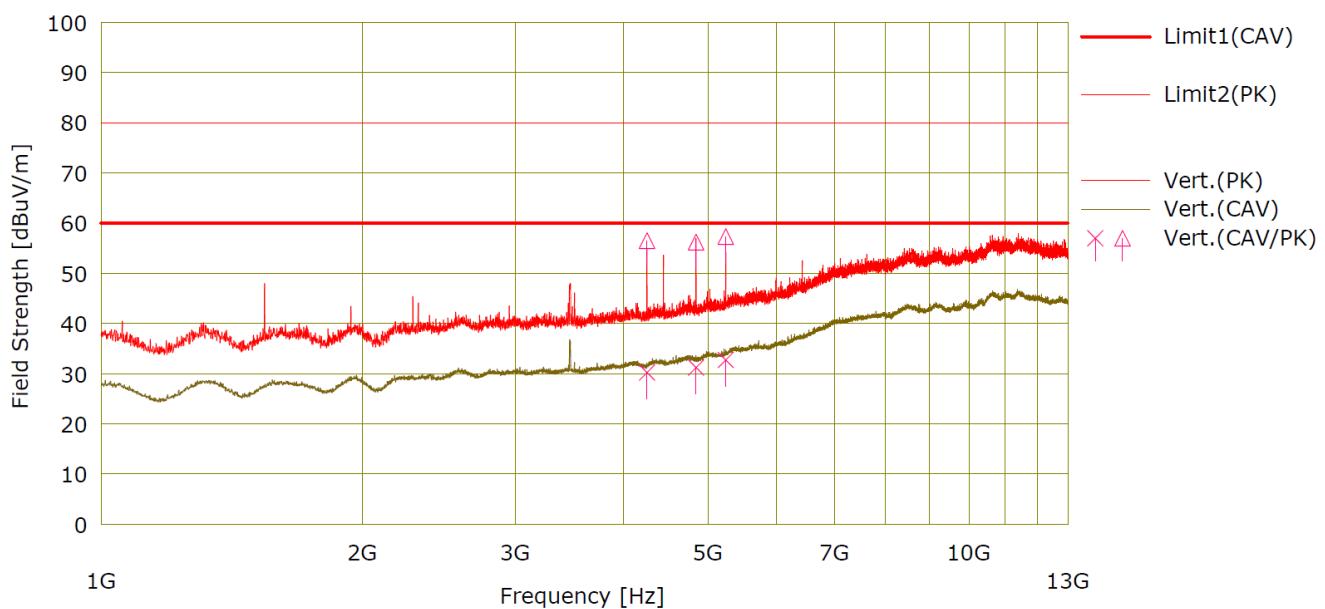
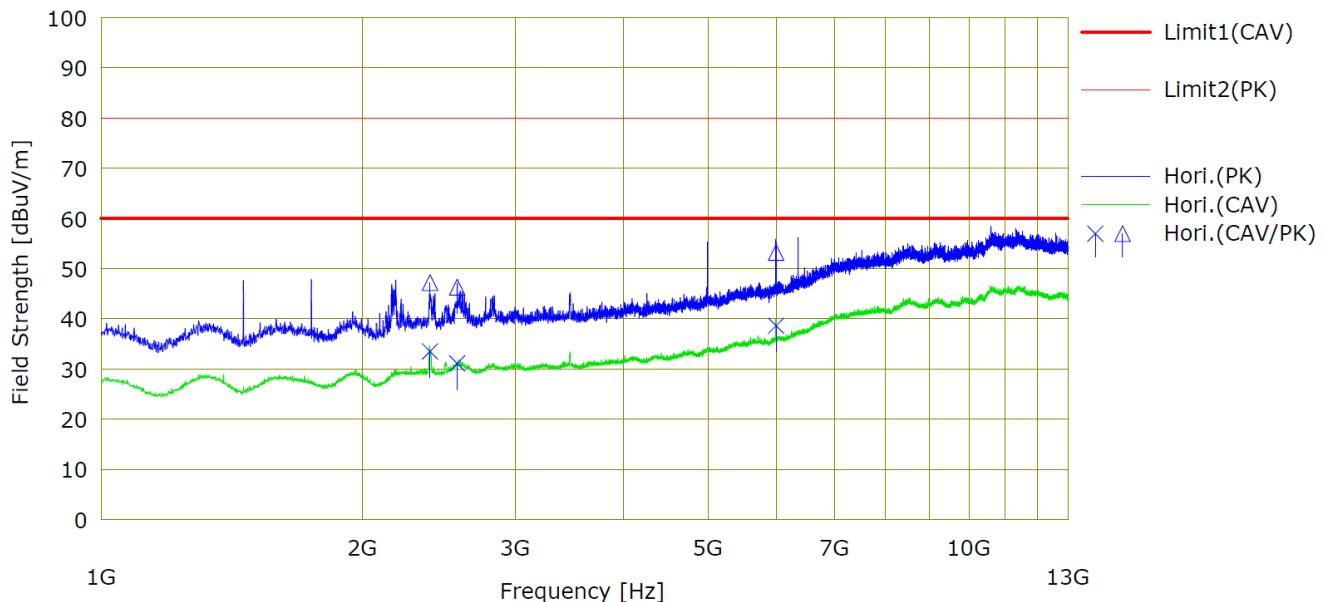
| Frequency (GHz) | Class A equipment (3 m distance) (dB(µV/m)) | | Class B equipment (3 m distance) (dB(µV/m)) | |
|-----------------|---|---------------|---|---------------|
| 1 to 18 | Peak | CISPR Average | Peak | CISPR Average |
| | 80 | 60 | 74 | 54 |

| Frequency (GHz) | Class A equipment (1 m distance) (dB(µV/m)) | | Class B equipment (1 m distance) (dB(µV/m)) | |
|-----------------|---|---------------|---|---------------|
| 18 to 40 | Peak | CISPR Average | Peak | CISPR Average |
| | 89.4 | 69.4 | 83.4 | 63.4 |

6.3.4 Radiated emission test data

[12 V]

* Minimum limit margin is 21.4 dB at 5993.278 MHz. (Horizontal)





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Test report No.:
TREFCC24-0064

<< CAV/PK DATA >>

| No. | Freq. [MHz] | Reading <CAV> [dBuV] | | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | S.Fac [dBuV/m] | Result <CAV> [dBuV/m] | | Limit <CAV> [dBuV/m] | | Margin <CAV> [dB] | | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type |
|-----|----------------|-------------------------|-----------------|-------------------|--------------|--------------|-------------------|--------------------------|-------------------|-------------------------|---------------|----------------------|------|----------------|----------------|----------------|--------------|
| | | <PK> [dBuV] | <CAV> [dBuV] | | | | | <PK> [dB] | <CAV> [dBuV/m] | <PK> [dBuV/m] | <CAV> [dB] | <PK> [dB] | | | | | |
| 1 | 2393.037 | 38.5 | 52.2 | 27.1 | 9.3 | 44.9 | 3.5 | 33.5 | 47.2 | 60.0 | 80.0 | 26.5 | 32.8 | Hori. | 101 | 35 | IORN_ |
| 2 | 2572.128 | 35.2 | 50.4 | 27.5 | 9.6 | 44.7 | 3.5 | 31.1 | 46.3 | 60.0 | 80.0 | 28.9 | 33.7 | Hori. | 101 | 216 | IORN_ |
| 3 | 5993.278 | 30.2 | 44.8 | 32.4 | 15.6 | 43.1 | 3.5 | 38.6 | 53.2 | 60.0 | 80.0 | 21.4 | 26.8 | Hori. | 101 | 279 | IORN_ |
| 4 | 4256.771 | 28.5 | 54.8 | 30.2 | 12.2 | 44.2 | 3.5 | 30.2 | 56.5 | 60.0 | 80.0 | 29.8 | 23.5 | Vert. | 101 | 119 | IORN_ |
| 5 | 4848.450 | 27.4 | 52.4 | 31.3 | 13.3 | 44.3 | 3.5 | 31.2 | 56.2 | 60.0 | 80.0 | 28.8 | 23.8 | Vert. | 101 | 250 | IORN_ |
| 6 | 5244.391 | 26.8 | 51.4 | 31.7 | 14.4 | 43.7 | 3.5 | 32.7 | 57.3 | 60.0 | 80.0 | 27.3 | 22.7 | Vert. | 101 | 224 | IORN_ |

* Results [dB(μV/m)] = Reading [dB(μV)] + Antenna factor [dB/m] - Loss [dB] + S.Fac

* Loss = Cable loss [dB] - Amp gain [dB]

* Margin [dB] = Limit [dB(μV/m)] - Results [dB(μV/m)]

* PK = Peak, CAV = CISPR Average

* ex) Measure Value[CAV]

Frequency: 2393.037 MHz

Results [dB μ V/m] = 33.5, Reading [dB μ V/m] = 38.5, Antenna factor [dB/m] = 27.1, S.Fac [dB] = 3.5,

Loss [dB] = - 9.3, Amp gain [dB] = 44.9

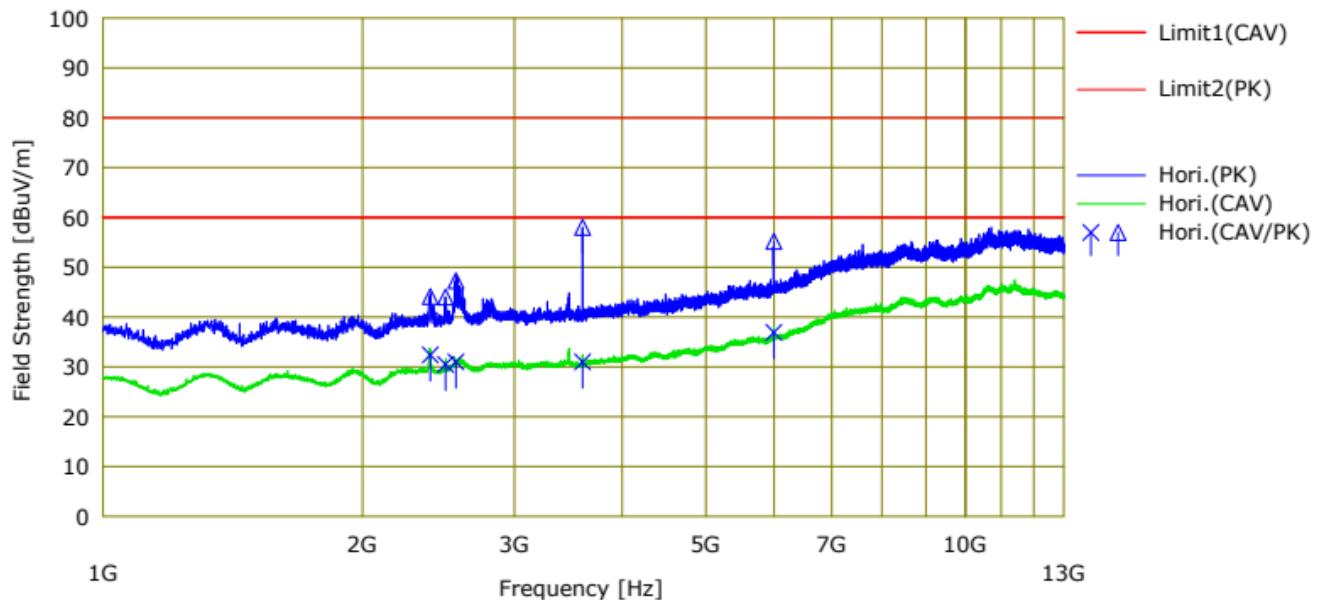
33.5 dB μ V/m = 38.5 dB μ V/m + 27.1 dB/m + 3.5 - 9.3 dB - 44.9 dB

Margin [dB μ V/m] = 26.5, Limit [dB μ V/m] = 60.0, Result [dB μ V/m] = 33.5

26.5 dB μ V/m = 60.0 dB μ V/m - 33.5 dB μ V/m

[24 V]

* Minimum limit margin is 22.0 dB at 3599.251 MHz. (Horizontal)





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Test report No.:
TREFCC24-0064

<< CAV/PK DATA >>

| No. | Freq. [MHz] | Reading | | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | S.Fac [dB] | Result | | Limit | | Margin | | Pola. | Height [cm] | Angle [deg] | Ant. Type |
|-----|----------------|-----------------|----------------|-------------------|--------------|--------------|---------------|-------------------|------------------|-------------------|------------------|---------------|--------------|-------|----------------|----------------|--------------|
| | | <CAV> [dBuV] | <PK> [dBuV] | | | | | <CAV> [dBuV/m] | <PK> [dBuV/m] | <CAV> [dBuV/m] | <PK> [dBuV/m] | <CAV> [dB] | <PK> [dB] | | | | |
| | | | | | | | | | | | | | | | | | |
| 1 | 2396.029 | 37.4 | 49.1 | 27.1 | 9.3 | 44.9 | 3.5 | 32.4 | 44.1 | 60.0 | 80.0 | 27.6 | 35.9 | Hori. | 101 | 249 | HORN |
| 2 | 2495.494 | 34.9 | 48.4 | 27.4 | 9.4 | 44.7 | 3.5 | 30.5 | 44.0 | 60.0 | 80.0 | 29.5 | 36.0 | Hori. | 101 | 28 | HORN |
| 3 | 2565.700 | 35.1 | 51.4 | 27.5 | 9.6 | 44.7 | 3.5 | 31.0 | 47.3 | 60.0 | 80.0 | 29.0 | 32.7 | Hori. | 101 | 82 | HORN |
| 4 | 3599.251 | 31.4 | 58.4 | 28.9 | 11.2 | 44.0 | 3.5 | 31.0 | 58.0 | 60.0 | 80.0 | 29.0 | 22.0 | Hori. | 101 | 316 | HORN |
| 5 | 5995.483 | 28.5 | 46.8 | 32.4 | 15.7 | 43.1 | 3.5 | 36.9 | 55.2 | 60.0 | 80.0 | 23.1 | 24.8 | Hori. | 101 | 172 | HORN |
| 6 | 3471.928 | 35.8 | 50.1 | 28.7 | 11.0 | 44.1 | 3.5 | 34.9 | 49.2 | 60.0 | 80.0 | 25.1 | 30.8 | Vert. | 101 | 262 | HORN |

* Results [dB(μ V/m)] = Reading [dB(μ V)] + Antenna factor [dB/m] - Loss [dB] + S.Fac

* Loss = Cable loss [dB] - Amp gain [dB]

* Margin [dB] = Limit [dB(μ V/m)] - Results [dB(μ V/m)]

* PK = Peak, CAV = CISPR Average

* ex) Measure Value[CAV]

Frequency: 2396.029 MHz

Results [dB μ V/m] = 32.4, Reading [dB μ V/m] = 37.4, Antenna factor [dB/m] = 27.1, S.Fac [dB] = 3.5,

Loss [dB] = - 9.3, Amp gain [dB] = 44.9

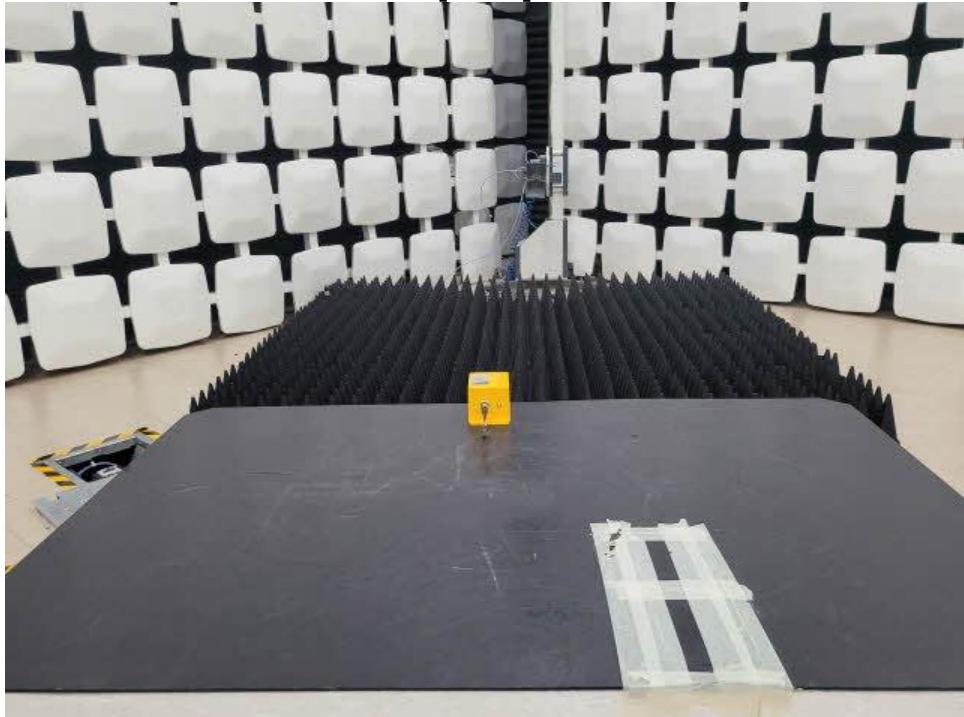
32.4 dB μ V/m = 37.4 dB μ V/m + 27.1 dB/m + 3.5 - 9.3 dB - 44.9 dB

Margin [dB μ V/m] = 27.6, Limit [dB μ V/m] = 60.0, Result [dB μ V/m] = 32.4

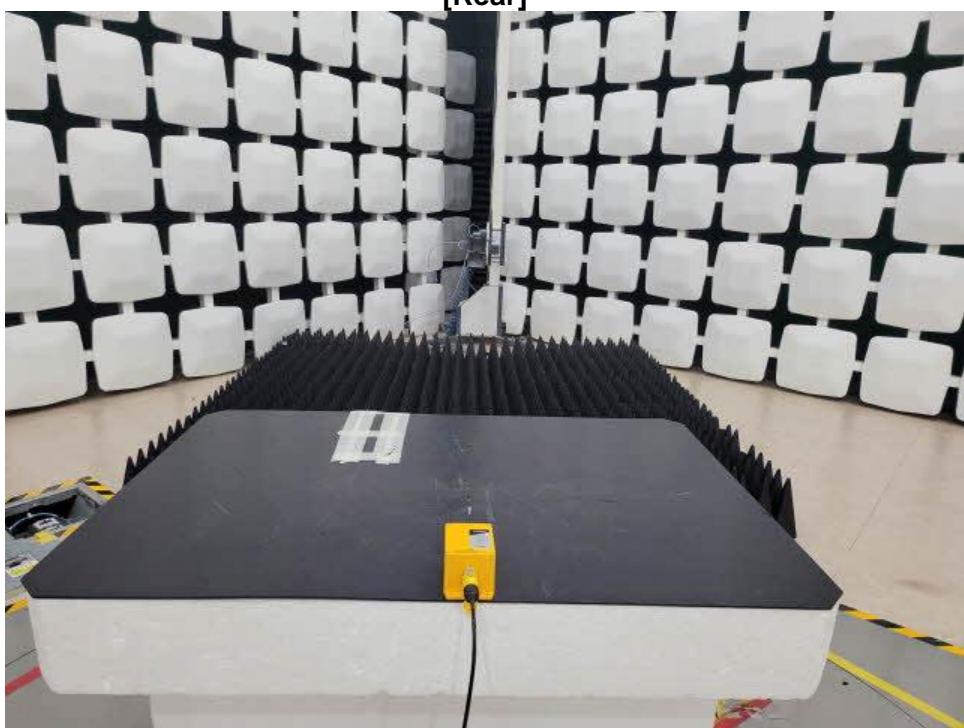
27.6 dB μ V/m = 60.0 dB μ V/m - 32.4 dB μ V/m

6.3.5 Test setup photos

[Front]



[Rear]



7. Photographs of the product

[Front]



[Rear]





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Test report No.:
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[Left]



[Right]





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[Top]



[Bottom]





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Test report No.:
TREFCC24-0064

8. Compliance information and information to user requirements summaries.

8.1 Compliance Information

This device labeling requirement is in addition to the SDoC compliance information statement and label requirements of Sections 2.1074 and 2.1077; however, placing the Part 15 compliance information will also satisfy the requirements for Sections 2.1074 and 2.1077. When the device is so small, or for such use that it is impracticable to label it with the compliance statement specified in a font that is four-point or larger, and the device does not have a display that can show electronic labeling,¹⁸ then the information required shall be placed in the instruction manual, and on the device packaging or on a removable label attached to the device. In cases where the instruction manual with the compliance information is a printed document provided along with the device, the arrangement is acceptable for compliance with the Part 2 and 15 rules for information to the user. Where the instruction manual is not a printed document, a paper slip printed with the Part 15 compliance information and included with the device will also meet the requirement of the rules.

Sections 2.1077

(a) If a product must be tested and authorized under Supplier's Declaration of Conformity, a compliance information statement shall be supplied with the product at the time of marketing or importation, containing the following information:

- (1) Identification of the product, e.g., name and model number;
- (2) A compliance statement as applicable, e.g., for devices subject to part 15 of this chapter as specified in §15.19(a)(3) of this chapter, that the product complies with the rules; and
- (3) The identification, by name, address and telephone number or Internet contact information, of the responsible party, as defined in §2.909. The responsible party for Supplier's Declaration of Conformity must be located within the United States.

(b) If a product is assembled from modular components (e.g., enclosures, power supplies and CPU boards) that, by themselves, are authorized under a Supplier's Declaration of Conformity and/or a grant of certification, and the assembled product is also subject to authorization under Supplier's Declaration of Conformity but, in accordance with the applicable regulations, does not require additional testing, the product shall be supplied, at the time of marketing or importation, with a compliance information statement containing the following information:

- (1) Identification of the assembled product, e.g., name and model number.
- (2) Identification of the modular components used in the assembly. A modular component authorized under Supplier's Declaration of Conformity shall be identified as specified in



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Test report No.:
TREFCC24-0064

paragraph (a)(1) of this section. A modular component authorized under a grant of certification shall be identified by name and model number (if applicable) along with the FCC Identifier number.

- (3) A statement that the product complies with part 15 of this chapter.
- (4) The identification, by name, address and telephone number or Internet contact information, of the responsible party who assembled the product from modular components, as defined in §2.909. The responsible party for Supplier's Declaration of Conformity must be located within the United States.
- (5) Copies of the compliance information statements for each modular component used in the system that is authorized under Supplier's Declaration of Conformity.

(c) The compliance information statement shall be included in the user's manual or as a separate sheet. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form. The information may be provided electronically as permitted in §2.935.

8.2 Labeling requirements (Section 15.19)

(a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or Supplier's Declaration of Conformity shall be labeled as follows:

- (1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under part 73 of this chapter, land mobile operation under part 90 of this chapter, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
- (2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules for use with cable television service.
- (3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- (4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.
- (5) When the device is so small or for such use that it is impracticable to label it with the statement specified under paragraph (a) of this section in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the information required by this paragraph shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.



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Test report No.:
TREFCC24-0064

(b)-(c) [Reserved]

(d) Consumer electronics TV receiving devices, including TV receivers, videocassette recorders, and similar devices, that incorporate features intended to be used with cable television service, but do not fully comply with the technical standards for cable ready equipment set forth in §15.118, shall not be marketed with terminology that describes the device as "cable ready" or "cable compatible," or that otherwise conveys the impression that the device is fully compatible with cable service. Factual statements about the various features of a device that are intended for use with cable service or the quality of such features are acceptable so long as such statements do not imply that the device is fully compatible with cable service. Statements relating to product features are generally acceptable where they are limited to one or more specific features of a device, rather than the device as a whole. This requirement applies to consumer TV receivers, videocassette recorders and similar devices manufactured or imported for sale in this country on or after October 31, 1994.



**Assembled from tested components
Complete system not tested**



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Test report No.:
TREFCC24-0064

8.3 Information to the user

8.3.1. For devices approved under Part 15, the user's manual or instruction manual for an intentional or unintentional radiator shall caution the user about changes or modifications to the device (Section 15.21).

8.3.2. For Class A and Class B digital devices, information to the user is required to include the following statements (Section 15.105):

For a Class A digital device or peripheral, the instructions furnished to the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For a Class B digital device or peripheral, the instructions furnished to the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.*
- Increase the separation between the equipment and receiver.*
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- Consult the dealer or an experienced radio/TV technician for help.*



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TREFCC24-0064

[Label location of EUT]



- END -