

# EMI TEST REPORT

## Test Report No. 15411803H-A-R1

|                     |                                                 |
|---------------------|-------------------------------------------------|
| Customer            | DENSO CORPORATION                               |
| Description of EUT  | Remote Keyless Entry System and TPMS (Receiver) |
| Model Number of EUT | 23ACC                                           |
| FCC ID              | HYQ23ACC                                        |
| Test Regulation     | FCC Part 15 Subpart B                           |
| Test Result         | Complied                                        |
| Issue Date          | September 26, 2024                              |
| Remarks             | -                                               |

**Representative test engineer**Junya Okuno  
Engineer**Approved by**Shinichi Miyazono  
Leader

CERTIFICATE 5107.02

- ☐ The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan, Inc.
- ☒ There is no testing item of "Non-accreditation".

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- The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan, Inc. has been accredited.
- The information provided by the customer for this report is identified in SECTION 1.
- The laboratory is not responsible for information provided by the customer which can impact the validity of the results.
- For test report(s) referred in this report, the latest version (including any revisions) is always referred.

# REVISION HISTORY

## Original Test Report No. 15411803H-A

This report is a revised version of 15411803H-A. 15411803H-A is replaced with this report.

| Revision     | Test Report No. | Date               | Page Revised Contents                                                                                                                                                                                             |
|--------------|-----------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - (Original) | 15411803H-A     | September 18, 2024 | -                                                                                                                                                                                                                 |
| 1            | 15411803H-A-R1  | September 26, 2024 | Correction of the Figure 1: Test Setup as follows.<br>- Deletion of the "Test Distance:" part from the Test Distance calculating formula<br>- Change the Test Distance for 6 GHz to 10 GHz;<br>from 3 m to 3.25 m |
| 1            | 15411803H-A-R1  | September 26, 2024 | Correction of the Local oscillator frequency for Radiated Emission test data (Page 22, 32, 42, 52, 58).                                                                                                           |

## Reference: Abbreviations (Including words undescribed in this report)

|                  |                                                                 |                 |                                                                             |
|------------------|-----------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------|
| A2LA             | The American Association for Laboratory Accreditation           | Hori.           | Horizontal                                                                  |
| AAN              | Asymmetric Artificial Network                                   | ICES            | Interference-Causing Equipment Standard                                     |
| AC               | Alternating Current                                             | I/O             | Input/Output                                                                |
| AE               | Auxiliary equipment                                             | IEC             | International Electrotechnical Commission                                   |
| AM               | Amplitude Modulation                                            | IEEE            | Institute of Electrical and Electronics Engineers                           |
| AMN              | Artificial Mains Network                                        | IF              | Intermediate Frequency                                                      |
| Amp, AMP         | Amplifier                                                       | ILAC            | International Laboratory Accreditation Conference                           |
| ANSI             | American National Standards Institute                           | ISED            | Innovation, Science and Economic Development Canada                         |
| Ant, ANT         | Antenna                                                         | ISN             | Impedance Stabilization Network                                             |
| AP               | Access Point                                                    | ISO             | International Organization for Standardization                              |
| ASK              | Amplitude Shift Keying                                          | JAB             | Japan Accreditation Board                                                   |
| Atten., ATT      | Attenuator                                                      | LAN             | Local Area Network                                                          |
| AV               | Average                                                         | LCL             | Longitudinal Conversion Loss                                                |
| BPSK             | Binary Phase-Shift Keying                                       | LIMS            | Laboratory Information Management System                                    |
| BR               | Bluetooth Basic Rate                                            | LISN            | Line Impedance Stabilization Network                                        |
| BT               | Bluetooth                                                       | MRA             | Mutual Recognition Arrangement                                              |
| BT LE            | Bluetooth Low Energy                                            | N/A             | Not Applicable                                                              |
| BW               | BandWidth                                                       | NIST            | National Institute of Standards and Technology                              |
| C.F              | Correction Factor                                               | NS              | No signal detect.                                                           |
| Cal Int          | Calibration Interval                                            | NSA             | Normalized Site Attenuation                                                 |
| CAV              | CISPR AV                                                        | OBW             | Occupied BandWidth                                                          |
| CCK              | Complementary Code Keying                                       | OFDM            | Orthogonal Frequency Division Multiplexing                                  |
| CDN              | Coupling Decoupling Network                                     | PER             | Packet Error Rate                                                           |
| Ch., CH          | Channel                                                         | PK              | Peak                                                                        |
| CISPR            | Comite International Special des Perturbations Radioelectriques | P <sub>LT</sub> | long-term flicker severity                                                  |
| Corr.            | Correction                                                      | POHC(A)         | Partial Odd Harmonic Current                                                |
| CPE              | Customer premise equipment                                      | Pol., Pola.     | Polarization                                                                |
| CW               | Continuous Wave                                                 | PR-ASK          | Phase Reversal ASK                                                          |
| DBPSK            | Differential BPSK                                               | P <sub>ST</sub> | short-term flicker severity                                                 |
| DC               | Direct Current                                                  | QAM             | Quadrature Amplitude Modulation                                             |
| DET              | Detector                                                        | QP              | Quasi-Peak                                                                  |
| D-factor, D.fac. | Distance factor                                                 | QPSK            | Quadrature Phase Shift Keying                                               |
| Dmax             | maximum absolute voltage change during an observation period    | r.m.s., RMS     | Root Mean Square                                                            |
| DQPSK            | Differential QPSK                                               | RBW             | Resolution BandWidth                                                        |
| DSSS             | Direct Sequence Spread Spectrum                                 | RE              | Radio Equipment                                                             |
| DUT              | Device Under Test                                               | REV             | Reverse                                                                     |
| EDR              | Enhanced Data Rate                                              | RF              | Radio Frequency                                                             |
| e.i.r.p., EIRP   | Equivalent Isotropically Radiated Power                         | RFID            | Radio Frequency Identifier                                                  |
| EM clamp         | Electromagnetic clamp                                           | RNSS            | Radio Navigation Satellite Service                                          |
| EMC              | ElectroMagnetic Compatibility                                   | RSS             | Radio Standards Specifications                                              |
| EMI              | ElectroMagnetic Interference                                    | Rx              | Receiving                                                                   |
| EMS              | ElectroMagnetic Susceptibility                                  | S.fac.          | Site factor                                                                 |
| EN               | European Norm                                                   | SINAD           | Ratio of (Signal + Noise + Distortion) to (Noise + Distortion)              |
| e.r.p., ERP      | Effective Radiated Power                                        | S/N             | Signal to Noise ratio                                                       |
| ETSI             | European Telecommunications Standards Institute                 | SA, S/A         | Spectrum Analyzer                                                           |
| EU               | European Union                                                  | SABS            | South African Bureau of Standards                                           |
| EUT              | Equipment Under Test                                            | SANS            | South African National Standards                                            |
| Fac.             | Factor                                                          | SG              | Signal Generator                                                            |
| FCC              | Federal Communications Commission                               | SVSWR           | Site-Voltage Standing Wave Ratio                                            |
| FHSS             | Frequency Hopping Spread Spectrum                               | THC(A)          | Total Harmonic Current                                                      |
| FM               | Frequency Modulation                                            | THD(%)          | Total Harmonic Distortion                                                   |
| Freq.            | Frequency                                                       | TR, T/R         | Test Receiver                                                               |
| FSK              | Frequency Shift Keying                                          | Tx              | Transmitting                                                                |
| Fund             | Fundamental                                                     | UFA             | Uniform field area                                                          |
| FWD              | Forward                                                         | VBW             | Video BandWidth                                                             |
| GFSK             | Gaussian Frequency-Shift Keying                                 | Vert.           | Vertical                                                                    |
| GNSS             | Global Navigation Satellite System                              | WLAN            | Wireless LAN                                                                |
| GPS              | Global Positioning System                                       | xDSL            | Generic term for all types of DSL technology (DSL: Digital Subscriber Line) |

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## SECTION 1: Customer information

|                  |                                                        |
|------------------|--------------------------------------------------------|
| Company Name     | DENSO CORPORATION                                      |
| Address          | 1-1, Showa-cho, Kariya-shi, Aichi-ken, 448-8661, Japan |
| Telephone Number | +81-50-1800-3904                                       |
| Contact Person   | Shingo Moritoh                                         |

The information provided by the customer is as follows;

- Customer, Description of EUT, Model Number of EUT, FCC ID on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- SECTION 1: Customer Information
- SECTION 2: Equipment Under Test (EUT) other than the Receipt Date and Test Date
- SECTION 4: Operation of EUT during testing

## SECTION 2: Equipment under test (EUT)

### 2.1 Identification of EUT

|               |                                                                                            |
|---------------|--------------------------------------------------------------------------------------------|
| Description   | Remote Keyless Entry System and TPMS (Receiver)                                            |
| Model Number  | 23ACC                                                                                      |
| Serial Number | Refer to SECTION 4.2                                                                       |
| Condition     | Engineering prototype<br>(Not for Sale: This sample is equivalent to mass-produced items.) |
| Modification  | No Modification by the test lab                                                            |
| Receipt Date  | August 8, 2024                                                                             |
| Test Date     | August 23 and 27, 2024                                                                     |

### 2.2 Product Description

#### General Specification

|                                     |            |
|-------------------------------------|------------|
| Rating                              | DC 12 V    |
| Clock frequency (ies) in the system | 30.265 MHz |

#### Radio Specification

|                               |                                                                                                                                |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Type of receiving system      | Super-heterodyne                                                                                                               |
| Frequency of Operation        | RKES (CH1): 433.58 MHz<br>RKES (CH2): 434.42 MHz<br>TPMS: 433.90 MHz                                                           |
| Type of Modulation            | RKES: FSK (F1D)<br>TPMS: FSK (F1D)                                                                                             |
| Intermediate frequency        | 280 kHz                                                                                                                        |
| Voltage Controlled Oscillator | RKES (CH1): 1733.20 MHz<br>RKES (CH2): 1736.56 MHz<br>TPMS: 1734.48 MHz                                                        |
| Antenna Type                  | ANT1: Internal antenna (Inverse F antenna)<br>ANT2: Internal antenna (Inverse L antenna)<br>ANT3: External antenna (Connector) |

- \* RKES: Remote Keyless Entry System  
TPMS: Tire Pressure Monitoring System

## 2.3 Variant model(s)

23ACC has 9 variations. Details of the variations are as follows:

| Serial Number <sup>*1)</sup> | Variation | Inverse F Antenna (ANT1) | Inverse L Antenna (ANT2) | External Antenna (ANT3) |
|------------------------------|-----------|--------------------------|--------------------------|-------------------------|
| No.1                         | 1         | TYPE 1                   | -                        | TYPE 1                  |
| No.6                         | 2         | TYPE 1                   | -                        | TYPE 2                  |
| -                            | 3         | TYPE 2                   | -                        | TYPE 1                  |
| No.2                         | 4         | TYPE 2                   | -                        | TYPE 2                  |
| -                            | 5         | TYPE 3                   | -                        | TYPE 1                  |
| No.3                         | 6         | TYPE 3                   | -                        | TYPE 2                  |
| -                            | 7         | TYPE 4                   | -                        | TYPE 1                  |
| No.4                         | 8         | TYPE 4                   | -                        | TYPE 2                  |
| No.5                         | 9         | -                        | TYPE 1                   | TYPE 1                  |

### <Reference>

| Inverse F Antenna | Directivity | Resonance Capacitor/Inductor |
|-------------------|-------------|------------------------------|
| TYPE 1            | Normal      | Unmounted                    |
| TYPE 2            | Normal      | Mounted                      |
| TYPE 3            | Change      | Unmounted                    |
| TYPE 4            | Change      | Mounted                      |

| Inverse L Antenna | Directivity      |
|-------------------|------------------|
| TYPE 1            | Counterclockwise |

| External Antenna | Connector     | Connected to External Antenna |
|------------------|---------------|-------------------------------|
| TYPE 1           | 12pin         | No                            |
| TYPE 2           | 12pin+Coaxial | Yes                           |

\*1) Refer to the "Description of EUT and Support Equipment" table in Clause 4.2.

### SECTION 3: Test specification, procedures & results

#### 3.1 Test Specification

|                    |                                                                                    |
|--------------------|------------------------------------------------------------------------------------|
| Test Specification | FCC Part 15 Subpart B<br>The latest version on the first day of the testing period |
| Title              | FCC 47CFR Part15 Radio Frequency Device<br>Subpart B Unintentional Radiators       |

#### 3.2 Procedures and results

| Item                                                                                                                                                                                                                             | Test Procedure                                                                                                                       | Limits                                                              | Worst margin                                                                                  | Result   | Remarks |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------|---------|
| Conducted emission                                                                                                                                                                                                               | <b>FCC:</b> ANSI C63.4: 2014 + C63.4a: 2017<br>7. AC power - line conducted emission measurements<br><b>ISED:</b> RSS-Gen 7.1        | <b>FCC:</b> Part 15 Subpart B 15.107(a)<br><b>ISED:</b> RSS-Gen 7.2 | -                                                                                             | N/A      | *1)     |
| Radiated emission                                                                                                                                                                                                                | <b>FCC:</b> ANSI C63.4: 2014 + C63.4a: 2017<br>8. Radiated emission measurements<br><b>ISED:</b> RSS-Gen 7.1                         | <b>FCC:</b> Part 15 Subpart B 15.109(a)<br><b>ISED:</b> RSS-Gen 7.3 | 19.92 dB<br>868.280 MHz, Horizontal / Vertical, QP<br>(Mode 2, Variation 6, Internal Antenna) | Complied | -       |
| Antenna Terminal                                                                                                                                                                                                                 | <b>FCC:</b> ANSI C63.4: 2014 + C63.4a: 2017<br>12. Measurement of unintentional radiators other than ITE<br><b>ISED:</b> RSS-Gen 7.1 | <b>FCC:</b> Part 15 Subpart B 15.111(a)<br><b>ISED:</b> RSS-Gen 7.4 | 27.98 dB<br>1734.480 MHz, PK<br>(Mode 3)                                                      | Complied | -       |
| <p>* Note: UL Japan, Inc.'s EMI Work Procedure: Work Instructions-ULID-003591.</p> <p>*1) The test is not applicable since the EUT is not the device that is designed to be connected to the public utility (AC) power line.</p> |                                                                                                                                      |                                                                     |                                                                                               |          |         |

#### 3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

### 3.4 Uncertainty

Measurement uncertainty is not taken into account when stating conformity with a specified requirement.  
Note: When margins obtained from test results are less than the measurement uncertainty, the test results may exceed the limit.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor  $k = 2$ .

#### Radiated emission

| Measurement distance | Frequency range     |            | Unit | Calculated Uncertainty (+/-) |
|----------------------|---------------------|------------|------|------------------------------|
| 3 m                  | 9 kHz to 30 MHz     |            | dB   | 3.3                          |
| 10 m                 |                     |            | dB   | 3.1                          |
| 3 m                  | 30 MHz to 200 MHz   | Horizontal | dB   | 5.0                          |
|                      |                     | Vertical   | dB   | 5.0                          |
|                      | 200 MHz to 1000 MHz | Horizontal | dB   | 5.2                          |
|                      |                     | Vertical   | dB   | 6.2                          |
| 10 m                 | 30 MHz to 200 MHz   | Horizontal | dB   | 5.5                          |
|                      |                     | Vertical   | dB   | 5.4                          |
|                      | 200 MHz to 1000 MHz | Horizontal | dB   | 5.5                          |
|                      |                     | Vertical   | dB   | 5.5                          |
| 3 m                  | 1 GHz to 6 GHz      |            | dB   | 5.1                          |
|                      | 6 GHz to 18 GHz     |            | dB   | 5.4                          |
| 1 m                  | 10 GHz to 18 GHz    |            | dB   | 5.4                          |
|                      | 18 GHz to 26.5 GHz  |            | dB   | 5.3                          |
|                      | 26.5 GHz to 40 GHz  |            | dB   | 4.8                          |
| 0.5 m                | 26.5 GHz to 40 GHz  |            | dB   | 5.0                          |

#### Antenna Terminal test

| Item                                | Unit | Calculated Uncertainty (+/-) |
|-------------------------------------|------|------------------------------|
| Antenna terminal conducted emission | dB   | 3.1                          |



### 3.5 Test Location

UL Japan, Inc. Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 Japan

Telephone: +81-596-24-8999

A2LA Certificate Number: 5107.02 / FCC Test Firm Registration Number: 884919

ISED Lab Company Number: 2973C / CAB identifier: JP0002

| Test site                  | Width x Depth x Height (m) | Size of reference ground plane (m) / horizontal conducting plane | Other rooms            | Maximum measurement distance |
|----------------------------|----------------------------|------------------------------------------------------------------|------------------------|------------------------------|
| No.1 semi-anechoic chamber | 19.2 x 11.2 x 7.7          | 7.0 x 6.0                                                        | No.1 Power source room | 10 m                         |
| No.2 semi-anechoic chamber | 7.5 x 5.8 x 5.2            | 4.0 x 4.0                                                        | -                      | 3 m                          |
| No.3 semi-anechoic chamber | 12.0 x 8.5 x 5.9           | 6.8 x 5.75                                                       | No.3 Preparation room  | 3 m                          |
| No.3 shielded room         | 4.0 x 6.0 x 2.7            | N/A                                                              | -                      | -                            |
| No.4 semi-anechoic chamber | 12.0 x 8.5 x 5.9           | 6.8 x 5.75                                                       | No.4 Preparation room  | 3 m                          |
| No.4 shielded room         | 4.0 x 6.0 x 2.7            | N/A                                                              | -                      | -                            |
| No.5 semi-anechoic chamber | 6.0 x 6.0 x 3.9            | 6.0 x 6.0                                                        | -                      | -                            |
| No.5 measurement room      | 6.4 x 6.4 x 3.0            | 6.4 x 6.4                                                        | -                      | -                            |
| No.6 shielded room         | 4.0 x 4.5 x 2.7            | 4.0 x 4.5                                                        | -                      | -                            |
| No.6 measurement room      | 4.75 x 5.4 x 3.0           | 4.75 x 4.15                                                      | -                      | -                            |
| No.7 shielded room         | 4.7 x 7.5 x 2.7            | 4.7 x 7.5                                                        | -                      | -                            |
| No.8 measurement room      | 3.1 x 5.0 x 2.7            | 3.1 x 5.0                                                        | -                      | -                            |
| No.9 measurement room      | 8.8 x 4.6 x 2.8            | 2.4 x 2.4                                                        | -                      | -                            |
| No.10 shielded room        | 3.8 x 2.8 x 2.8            | 3.8 x 2.8                                                        | -                      | -                            |
| No.11 measurement room     | 4.0 x 3.4 x 2.5            | N/A                                                              | -                      | -                            |
| No.12 measurement room     | 2.6 x 3.4 x 2.5            | N/A                                                              | -                      | -                            |
| Large Chamber              | 16.9 x 22.1 x 10.17        | 16.9 x 22.1                                                      | -                      | 10 m                         |
| Small Chamber              | 5.3 x 6.69 x 3.59          | 5.3 x 6.69                                                       | -                      | -                            |

### 3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

## SECTION 4: Operation of EUT during testing

### 4.1 Operating Mode(s)

|             |                                     |
|-------------|-------------------------------------|
| Mode        | 1. RKES Receiving mode (433.58 MHz) |
|             | 2. RKES Receiving mode (434.42 MHz) |
|             | 3. TPMS Receiving mode (433.90 MHz) |
| Software(s) | DN-2586000010-01                    |

\*The test signal level was confirmed to be sufficient to stabilize the local oscillator of the EUT.

[for Antenna Terminal Conducted Emission]

\*Tuning was confirmed to be locked on each mode by checking local oscillator frequency to be stable using a search-coil.

[for Radiated Emission]

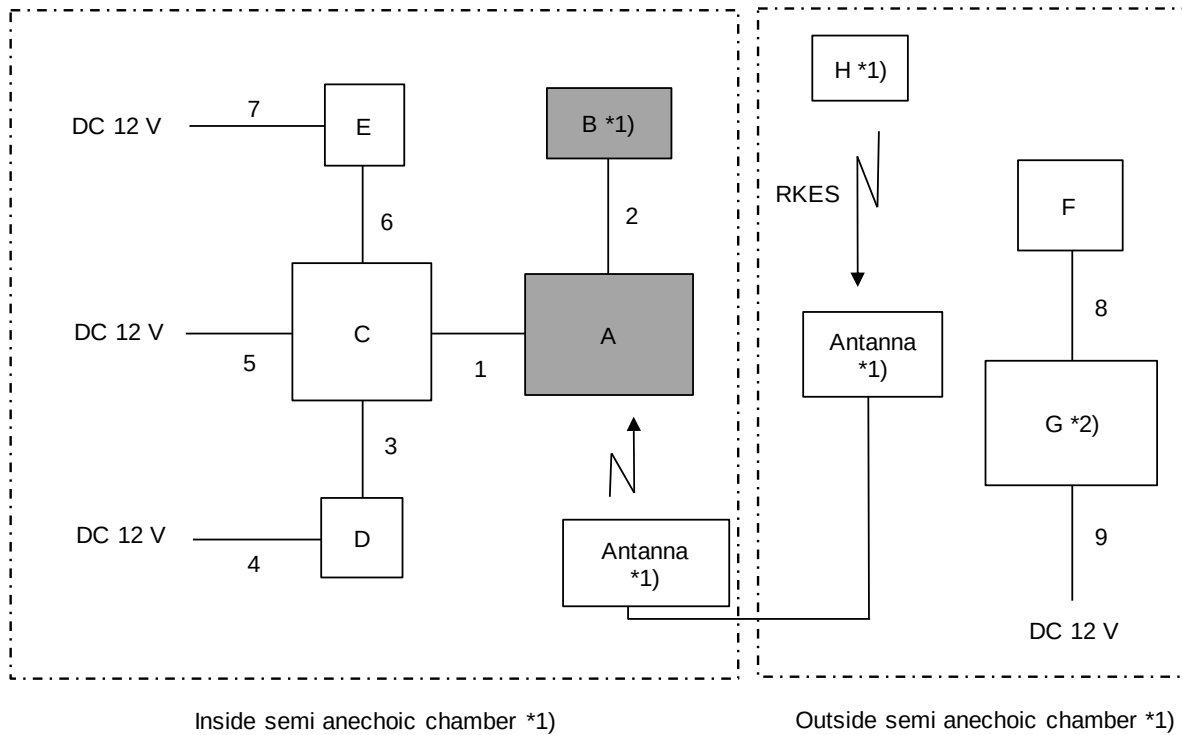
\* It was confirmed by using checker that the EUT receives the signal from the transmitter (pair of EUT).

<Test Mode>

|                              | Radiated Emission |          |          |          |          |          |          |          | Antenna Terminal |
|------------------------------|-------------------|----------|----------|----------|----------|----------|----------|----------|------------------|
| Serial No.                   | No.1              | No.2     |          | No.3     |          | No.4     |          | No.5     | No.6             |
| Variation No.                | 1                 | 4        |          | 6        |          | 8        |          | 9        | 2                |
| Receiving Ant.               | Internal          | Internal | External | Internal | External | Internal | External | Internal | External         |
| Mode 1<br>RKES<br>433.58 MHz | ✓                 | ✓        | ✓        | ✓        | ✓        | ✓        | ✓        | ✓        | ✓                |
| Mode 2<br>RKES<br>434.42 MHz | ✓                 | ✓        | ✓        | ✓        | ✓        | ✓        | ✓        | ✓        | ✓                |
| Mode 3<br>TPMS<br>433.90 MHz | ✓                 |          | ✓        |          | ✓        |          | ✓        | ✓        | ✓                |

## 4.2 Configuration and peripherals

### Mode 1 and 2



\*1) Used for Radiated Emission only

\*2) Power ON only

\* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.

\* Item No. A includes Receiver Antenna.

#### Description of EUT and Support Equipment

| No. | Item                                            | Model number | Serial Number                                                                                                                                                              | Manufacturer      | Remarks                                    |
|-----|-------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------|
| A   | Remote Keyless Entry System and TPMS (Receiver) | 23ACC        | No.1 (Variation No.1) *1)<br>No.2 (Variation No.4) *1)<br>No.3 (Variation No.6) *1)<br>No.4 (Variation No.8) *1)<br>No.5 (Variation No.9) *1)<br>No.6 (Variation No.2) *2) | DENSO CORPORATION | EUT                                        |
| B   | External Antenna                                | 89768-77020  | 158420-0410                                                                                                                                                                | DENSO CORPORATION | EUT<br>(For Item A:<br>No.2, 3, 4<br>only) |
| C   | Check bench                                     | -            | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                          |
| D   | CAN communication bench                         | 85XS0046     | J2406133-M01-240602                                                                                                                                                        | DENSO CORPORATION | -                                          |
| E   | Smart ECU                                       | 19CY_Ver.3   | No.3                                                                                                                                                                       | DENSO CORPORATION | -                                          |
| F   | TPMS Antenna                                    | -            | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                          |
| G   | TPMS signal bench                               | -            | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                          |
| H   | Smart transmitter                               | 19CY_Ver.3   | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                          |

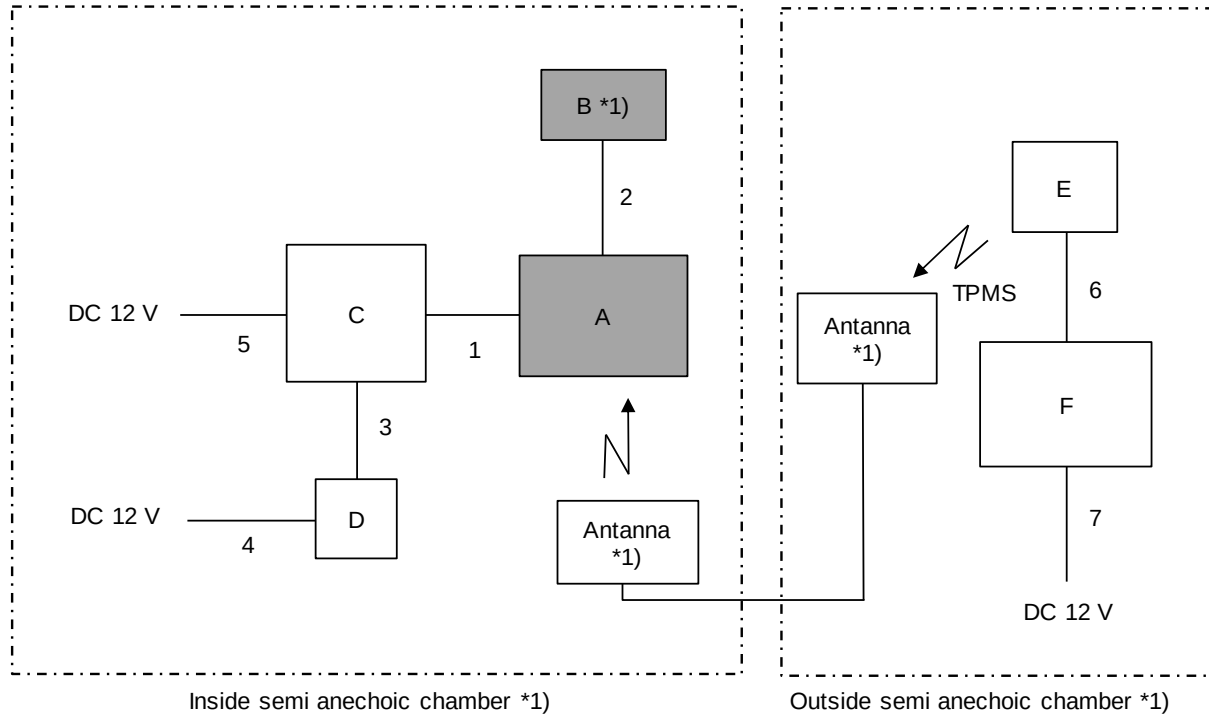
\*1) Used for Radiated Emission test

\*2) Used for Antenna Terminal conducted test

#### List of Cables Used

| No. | Name          | Length (m) | Shield     |            | Remarks |
|-----|---------------|------------|------------|------------|---------|
|     |               |            | Cable      | Connector  |         |
| 1   | Signal Cable  | 0.7        | Unshielded | Unshielded | -       |
| 2   | Antenna Cable | 3.2        | Shielded   | Shielded   | -       |
| 3   | Signal Cable  | 0.3        | Unshielded | Unshielded | -       |
| 4   | DC Cable      | 3.1        | Unshielded | Unshielded | -       |
| 5   | DC Cable      | 2.5        | Unshielded | Unshielded | -       |
| 6   | Signal Cable  | 0.6        | Unshielded | Unshielded | -       |
| 7   | DC Cable      | 2.6        | Unshielded | Unshielded | -       |
| 8   | Signal Cable  | 0.3        | Unshielded | Unshielded | -       |
| 9   | DC Cable      | 2.4        | Unshielded | Unshielded | -       |

### Mode 3



\*1) Used for Radiated Emission only

\* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.  
\* Item No. A includes Receiver Antenna.

### Description of EUT and Support Equipment

| No. | Item                                            | Model number | Serial Number                                                                                                                                                              | Manufacturer      | Remarks                              |
|-----|-------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------|
| A   | Remote Keyless Entry System and TPMS (Receiver) | 23ACC        | No.1 (Variation No.1) *1)<br>No.2 (Variation No.4) *1)<br>No.3 (Variation No.6) *1)<br>No.4 (Variation No.8) *1)<br>No.5 (Variation No.9) *1)<br>No.6 (Variation No.2) *2) | DENSO CORPORATION | EUT                                  |
| B   | External Antenna                                | 89768-77020  | 158420-0410                                                                                                                                                                | DENSO CORPORATION | EUT<br>(For Item A: No.2, 3, 4 only) |
| C   | Check bench                                     | -            | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                    |
| D   | CAN communication bench                         | 85XS0046     | J2406133-M01-240602                                                                                                                                                        | DENSO CORPORATION | -                                    |
| E   | TPMS Antenna                                    | 89740-5240   | 271300-7170                                                                                                                                                                | DENSO CORPORATION | -                                    |
| F   | TPMS signal bench                               | -            | No.1                                                                                                                                                                       | DENSO CORPORATION | -                                    |

\*1) Used for Radiated Emission test

\*2) Used for Antenna Terminal conducted test

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**List of Cables Used**

| No. | Name          | Length (m) | Shield     |            | Remarks |
|-----|---------------|------------|------------|------------|---------|
|     |               |            | Cable      | Connector  |         |
| 1   | Signal Cable  | 0.7        | Unshielded | Unshielded | -       |
| 2   | Antenna Cable | 3.2        | Shielded   | Shielded   | -       |
| 3   | Signal Cable  | 0.3        | Unshielded | Unshielded | -       |
| 4   | DC Cable      | 3.1        | Unshielded | Unshielded | -       |
| 5   | DC Cable      | 2.5        | Unshielded | Unshielded | -       |
| 6   | Signal Cable  | 0.3        | Unshielded | Unshielded | -       |
| 7   | DC Cable      | 2.4        | Unshielded | Unshielded | -       |

## **SECTION 5: Radiated Emission**

### **5.1 Operating environment**

Date : See data  
Test place : See data  
Temperature : See data  
Humidity : See data  
Test engineer : See data

### **5.2 Test configuration**

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.

The EUT was set on the edge of the tabletop.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

Photographs of the set up are shown in APPENDIX 3.

### **5.3 Test conditions**

Frequency range : 30 MHz to 200 MHz (Biconical antenna)  
200 MHz to 1000 MHz (Logperiodic antenna)  
1000 MHz to 10000 MHz (Horn antenna)  
Test distance : 3 m  
EUT position : Table top  
EUT operation mode : See Clause 4.1

### **5.4 Test procedure**

The height of the measuring antenna varied between 1 and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver.

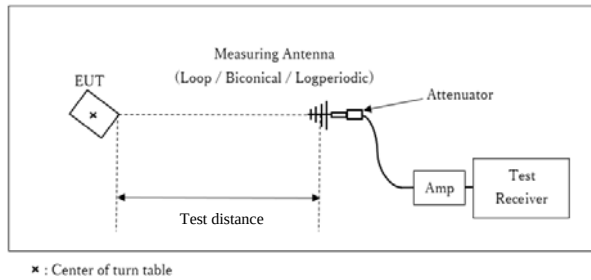
The radiated emission measurements were made with the following detector function of the Test Receiver. Test antenna was aimed at the emission source for receiving the maximum signal and always kept. (Above 1 GHz)

| Frequency       | Below 1 GHz    | Above 1 GHz *1)             |
|-----------------|----------------|-----------------------------|
| Instrument used | Test Receiver  | Test Receiver               |
| IF Bandwidth    | QP: BW 120 kHz | PK: BW 1 MHz, CAV: BW 1 MHz |

\*1) The measurement data was adjusted to a 3 m distance using the following Distance Factor.  
Distance Factor: See Figure 1

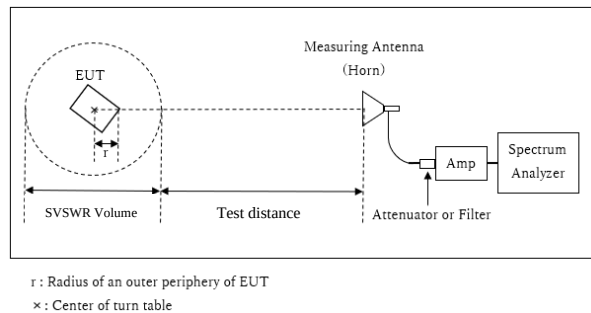
**Figure 1: Test Setup**

Below 1 GHz



Test Distance: 3 m

1 GHz to 6 GHz



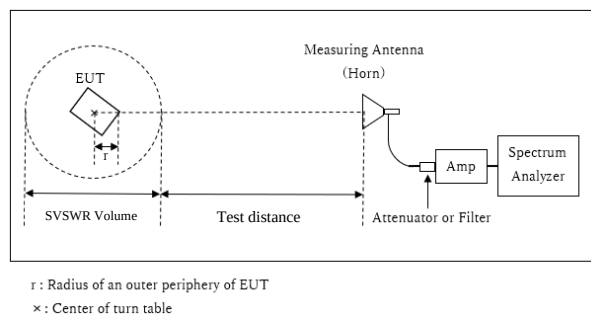
Test Distance: 3 m

Distance Factor:  $20 \times \log (3.3 \text{ m}^*/3.0 \text{ m}) = 0.83 \text{ dB}$   
\*  $(3 + \text{SVSWR Volume} / 2) - r = 3.3 \text{ m}$

SVSWR Volume: 1.5 m

(SVSWR Volume has been calibrated based on CISPR 16-1-4.)  
 $r = 0.45 \text{ m}$

6 GHz to 10 GHz



Test Distance: 3.25 m

Distance Factor:  $20 \times \log (3.3 \text{ m}^*/3.0 \text{ m}) = 0.83 \text{ dB}$   
\*  $(3.25 + \text{SVSWR Volume} / 2) - r = 3.3 \text{ m}$

SVSWR Volume: 1.0 m

(SVSWR Volume has been calibrated based on CISPR 16-1-4.)  
 $r = 0.45 \text{ m}$

The noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at representative X-axis since no difference was found among each position.

## 5.5 Test result

Summary of the test results: Pass

Test results are rounded off and limit are rounded down, so some differences might be observed.



## **SECTION 6: Antenna Terminal**

### **6.1 Operating environment**

Date : See data  
Test place : See data  
Temperature : See data  
Humidity : See data  
Test engineer : See data

### **6.2 Test configuration**

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m from the ground. Photographs of the set up are shown in APPENDIX 3.

### **6.3 Test conditions**

Frequency range : 30 MHz to 1000 MHz / 1000 MHz to 10000 MHz  
Test distance : N/A  
EUT position : Table top  
EUT operation mode : See Clause 4.1

### **6.4 Test procedure**

The Antenna Terminal was measured with a spectrum analyzer connected to the antenna port.

|                 |                  |                                |
|-----------------|------------------|--------------------------------|
| Frequency       | Below 1 GHz      | Above 1 GHz                    |
| Instrument used | Test Receiver    | Test Receiver                  |
| IF Bandwidth    | PK: RBW: 120 kHz | PK: BW: 1 MHz<br>AV: BW: 1 MHz |

### **6.5 Test result**

Summary of the test results: Pass

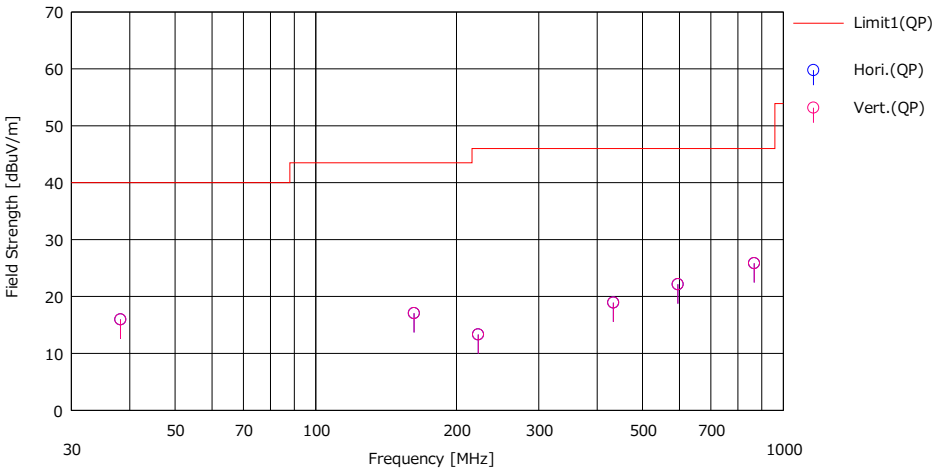
APPENDIX 1: Test data

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 1

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola<br>(H/V) | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|---------------|----------------|---------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                   |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |               |                |                |              |         |
| 1   | 38.222         | 22.30           | 15.46             | 6.74         | 28.54        | 15.96          | 40.00         | 24.04          | Hori.         | 100            | 0              | BA           |         |
| 2   | 162.245        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Hori.         | 100            | 0              | BA           |         |
| 3   | 222.572        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Hori.         | 100            | 0              | LA21         |         |
| 4   | 433.300        | 21.90           | 16.25             | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Hori.         | 100            | 0              | LA21         |         |
| 5   | 595.190        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Hori.         | 100            | 0              | LA21         |         |
| 6   | 866.600        | 21.80           | 21.86             | 11.10        | 28.92        | 25.84          | 46.00         | 20.16          | Hori.         | 100            | 0              | LA21         |         |
| 7   | 38.222         | 22.30           | 15.46             | 6.74         | 28.54        | 15.96          | 40.00         | 24.04          | Vert.         | 100            | 0              | BA           |         |
| 8   | 162.245        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Vert.         | 100            | 0              | BA           |         |
| 9   | 222.572        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Vert.         | 100            | 0              | LA21         |         |
| 10  | 433.300        | 21.90           | 16.25             | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Vert.         | 100            | 0              | LA21         |         |
| 11  | 595.190        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Vert.         | 100            | 0              | LA21         |         |
| 12  | 866.600        | 21.80           | 21.86             | 11.10        | 28.92        | 25.84          | 46.00         | 20.16          | Vert.         | 100            | 0              | LA21         |         |

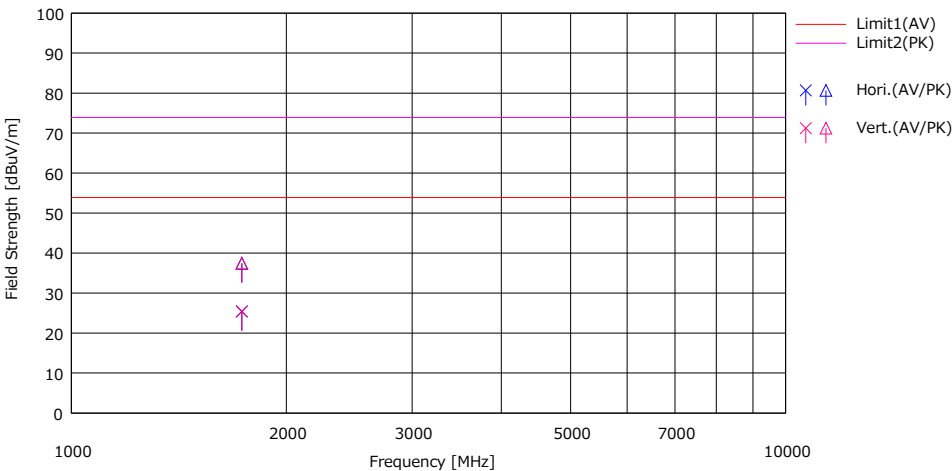
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 1

Limit : FCC15.247(d)(FCC15.209),3 m, below 1 GHz:QP, above 1 GHz:AV/PK



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1733.135       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Vert.          | 100            | 0              | HA6          |         |

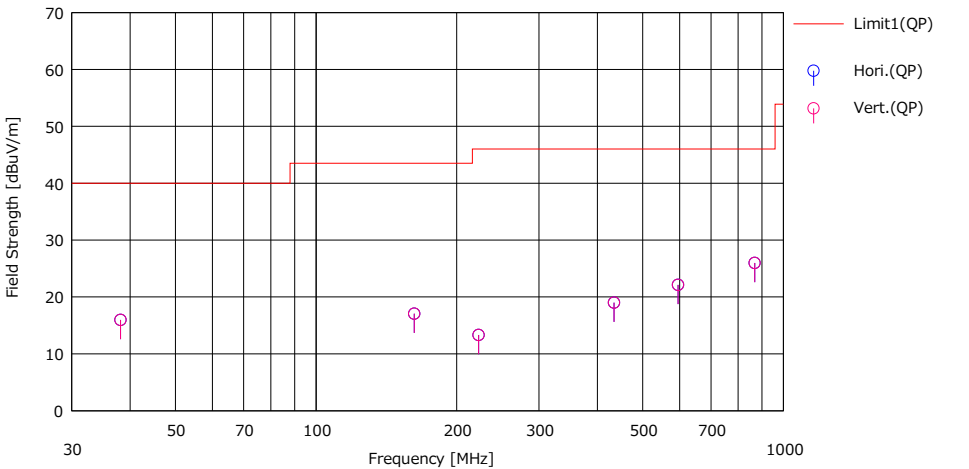
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 1

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



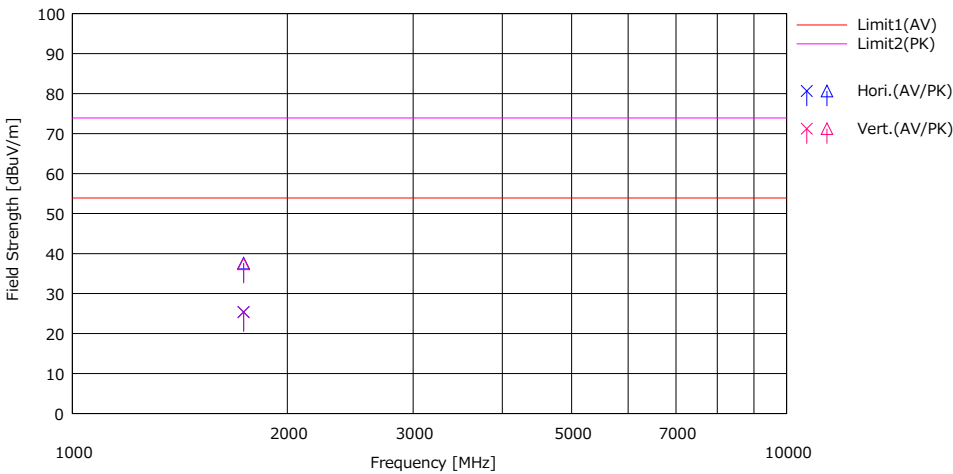
| No. | Freq.<br>[MHz] | Reading | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result | Limit | Margin | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|---------|--------------------|--------------|--------------|--------|-------|--------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBP]   |                    |              |              | [dBP]  | [dBP] | [dBP]  |                |                |                |              |         |
| 1   | 38.181         | 22.30   | 15.48              | 6.74         | 28.54        | 15.98  | 40.00 | 24.02  | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.233        | 21.80   | 15.58              | 7.84         | 28.17        | 17.05  | 43.50 | 26.45  | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.750        | 21.60   | 11.35              | 8.24         | 27.87        | 13.32  | 46.00 | 32.68  | Hori.          | 100            | 0              | LA21         |         |
| 4   | 434.140        | 22.00   | 16.26              | 9.49         | 28.74        | 19.01  | 46.00 | 26.99  | Hori.          | 100            | 0              | LA21         |         |
| 5   | 595.156        | 22.10   | 19.20              | 10.12        | 29.29        | 22.13  | 46.00 | 23.87  | Hori.          | 100            | 0              | LA21         |         |
| 6   | 868.280        | 21.90   | 21.88              | 11.11        | 28.91        | 25.98  | 46.00 | 20.02  | Hori.          | 100            | 0              | LA21         |         |
| 7   | 38.181         | 22.30   | 15.48              | 6.74         | 28.54        | 15.98  | 40.00 | 24.02  | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.233        | 21.80   | 15.58              | 7.84         | 28.17        | 17.05  | 43.50 | 26.45  | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.750        | 21.60   | 11.35              | 8.24         | 27.87        | 13.32  | 46.00 | 32.68  | Vert.          | 100            | 0              | LA21         |         |
| 10  | 434.140        | 22.00   | 16.26              | 9.49         | 28.74        | 19.01  | 46.00 | 26.99  | Vert.          | 100            | 0              | LA21         |         |
| 11  | 595.156        | 22.10   | 19.20              | 10.12        | 29.29        | 22.13  | 46.00 | 23.87  | Vert.          | 100            | 0              | LA21         |         |
| 12  | 868.280        | 21.90   | 21.88              | 11.11        | 28.91        | 25.98  | 46.00 | 20.02  | Vert.          | 100            | 0              | LA21         |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date August 23, 2024  
Temperature / Humidity 22 deg. C / 62 % RH  
Engineer Daiki Matsui  
Mode (Above 1 GHz)  
Mode 2, Variation 1

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



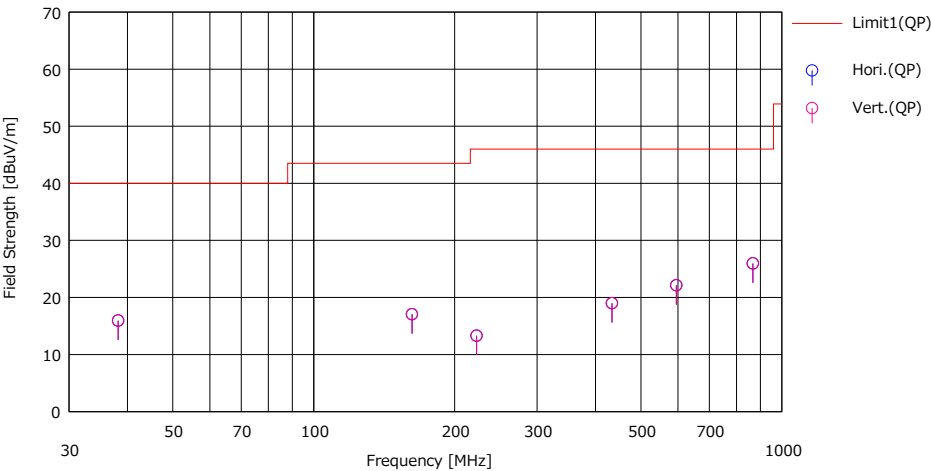
| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.40          | 25.15             | 3.05         | 32.99        | 25.41            | 37.61            | 53.90            | 73.90            | 28.49        | 36.29        | Hori.          | 100            | 0              |              |         |
| 2   | 1736.759       | 30.10          | 42.20          | 25.15             | 3.05         | 32.99        | 25.31            | 37.41            | 53.90            | 73.90            | 28.59        | 36.49        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date August 23, 2024  
Temperature / Humidity 22 deg. C / 62 % RH  
Engineer Daiki Matsui  
Mode (Below 1 GHz)  
Mode 3, Variation 1

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.   | Reading | Ant.Fac. | Loss  | Gain  | Result   | Limit    | Margn | Polz. | Height | Angle | Ant. Type | Comment |
|-----|---------|---------|----------|-------|-------|----------|----------|-------|-------|--------|-------|-----------|---------|
|     |         | [dBuV]  |          |       |       | [dBuV/m] | [dBuV/m] | [dB]  |       |        |       |           |         |
| 1   | 38.224  | 22.30   | 15.46    | 6.74  | 28.54 | 15.96    | 40.00    | 24.04 | Hori. | 100    | 0     | BA        |         |
| 2   | 162.201 | 21.80   | 15.58    | 7.84  | 28.17 | 17.05    | 43.50    | 26.45 | Hori. | 100    | 0     | BA        |         |
| 3   | 222.788 | 21.60   | 11.35    | 8.24  | 27.87 | 13.32    | 46.00    | 32.68 | Hori. | 100    | 0     | LA21      |         |
| 4   | 433.620 | 22.00   | 16.25    | 9.49  | 28.74 | 19.00    | 46.00    | 27.00 | Hori. | 100    | 0     | LA21      |         |
| 5   | 595.244 | 22.10   | 19.20    | 10.12 | 29.29 | 22.13    | 46.00    | 23.87 | Hori. | 100    | 0     | LA21      |         |
| 6   | 867.240 | 21.90   | 21.87    | 11.11 | 28.92 | 25.96    | 46.00    | 20.04 | Hori. | 100    | 0     | LA21      |         |
| 7   | 38.224  | 22.30   | 15.46    | 6.74  | 28.54 | 15.96    | 40.00    | 24.04 | Vert. | 100    | 0     | BA        |         |
| 8   | 162.201 | 21.80   | 15.58    | 7.84  | 28.17 | 17.05    | 43.50    | 26.45 | Vert. | 100    | 0     | BA        |         |
| 9   | 222.788 | 21.60   | 11.35    | 8.24  | 27.87 | 13.32    | 46.00    | 32.68 | Vert. | 100    | 0     | LA21      |         |
| 10  | 433.620 | 22.00   | 16.25    | 9.49  | 28.74 | 19.00    | 46.00    | 27.00 | Vert. | 100    | 0     | LA21      |         |
| 11  | 595.244 | 22.10   | 19.20    | 10.12 | 29.29 | 22.13    | 46.00    | 23.87 | Vert. | 100    | 0     | LA21      |         |
| 12  | 867.240 | 21.90   | 21.87    | 11.11 | 28.92 | 25.96    | 46.00    | 20.04 | Vert. | 100    | 0     | LA21      |         |

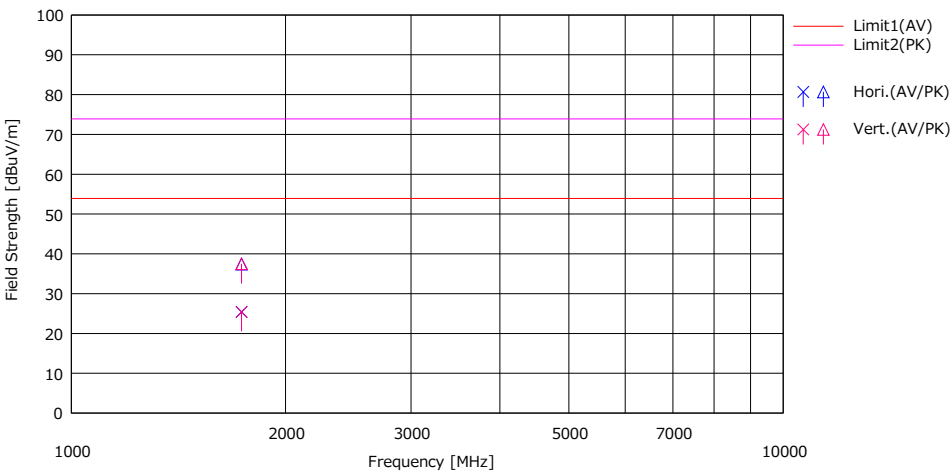
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 3, Variation 1

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1734.480       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1734.480       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 4, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

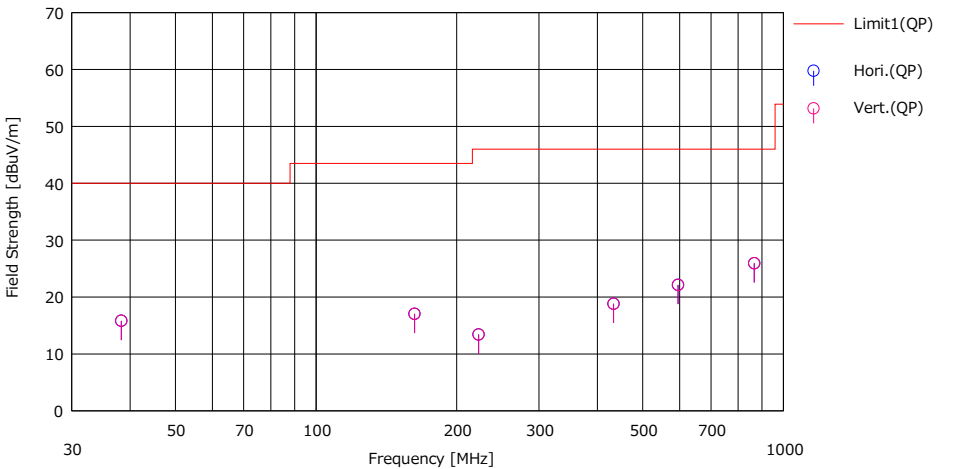


CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

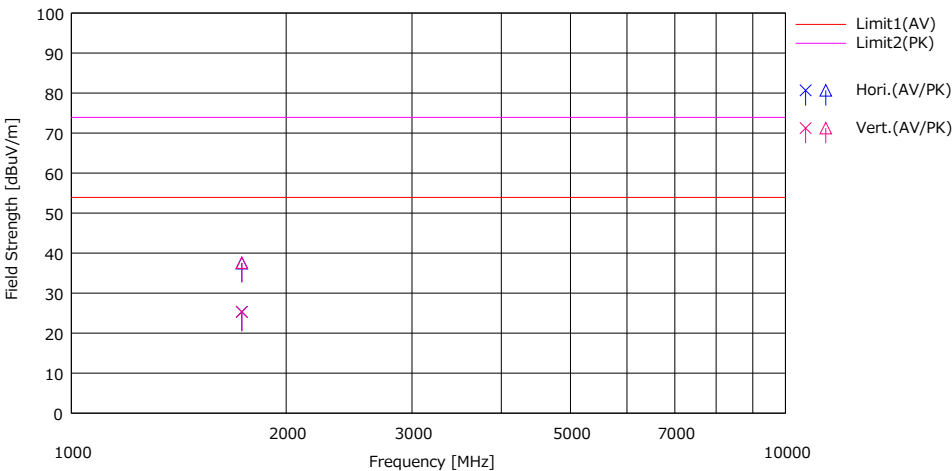


Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 4, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |               |                |                |              |         |
| 1   | 1733.135       | 30.10          | 42.30          | 25.15             | 3.05         | 33.00        | 25.30            | 37.50            | 53.90            | 73.90            | 28.60        | 36.40        | Hori.         | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.10          | 42.40          | 25.15             | 3.05         | 33.00        | 25.30            | 37.60            | 53.90            | 73.90            | 28.60        | 36.30        | Vert.         | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 4, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

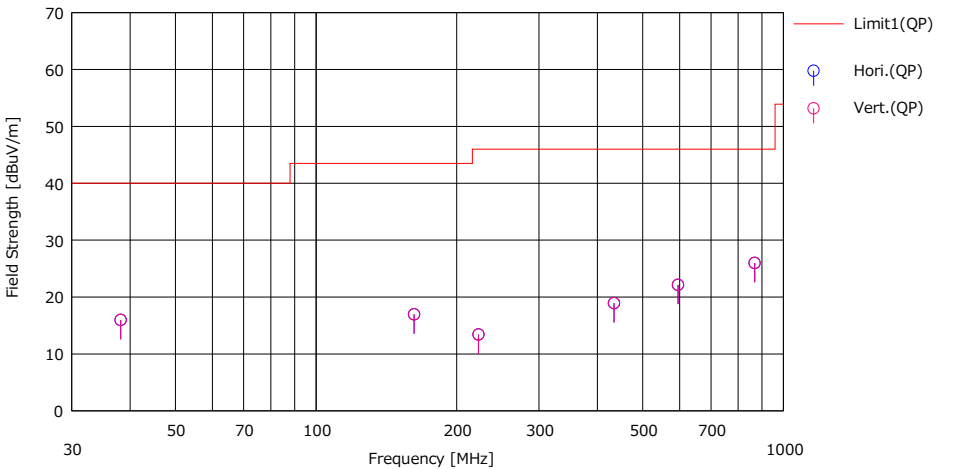


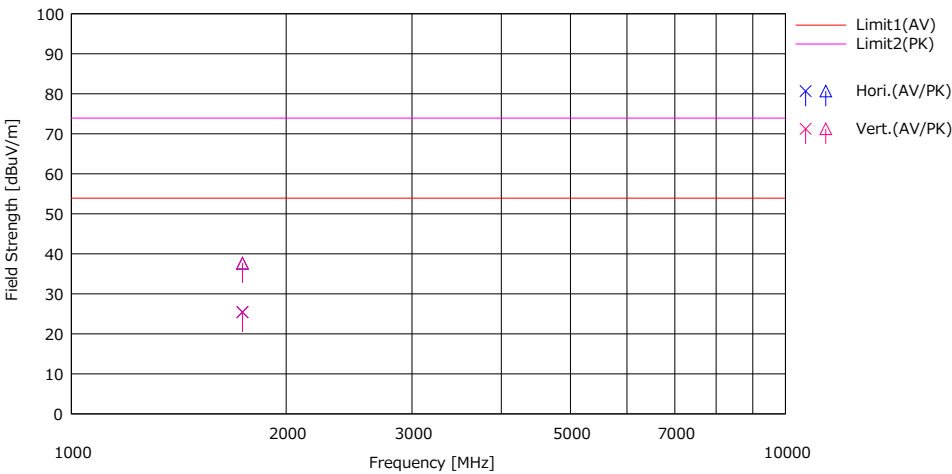
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 4, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.40          | 25.15             | 3.05         | 32.99        | 25.41            | 37.61            | 53.90            | 73.90            | 28.49        | 36.29        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 30.20          | 42.50          | 25.15             | 3.05         | 32.99        | 25.41            | 37.71            | 53.90            | 73.90            | 28.49        | 36.19        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

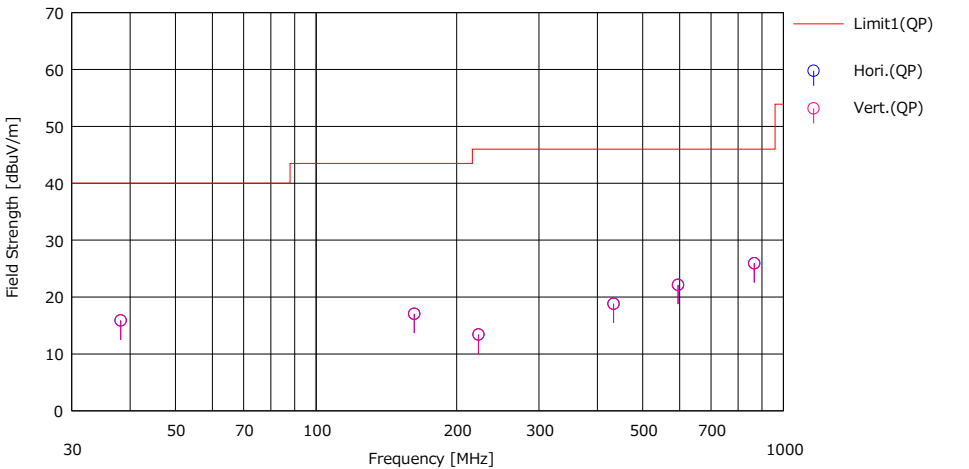


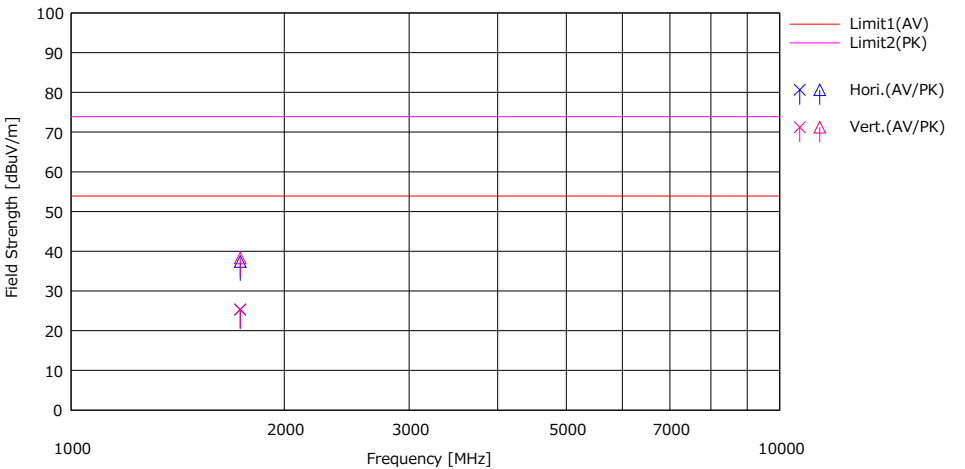
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pols.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1733.135       | 30.10          | 42.20          | 25.15             | 3.05         | 33.00        | 25.30            | 37.40            | 53.90            | 73.90            | 28.60        | 36.50        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.10          | 43.10          | 25.15             | 3.05         | 33.00        | 25.30            | 38.30            | 53.90            | 73.90            | 28.60        | 35.60        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

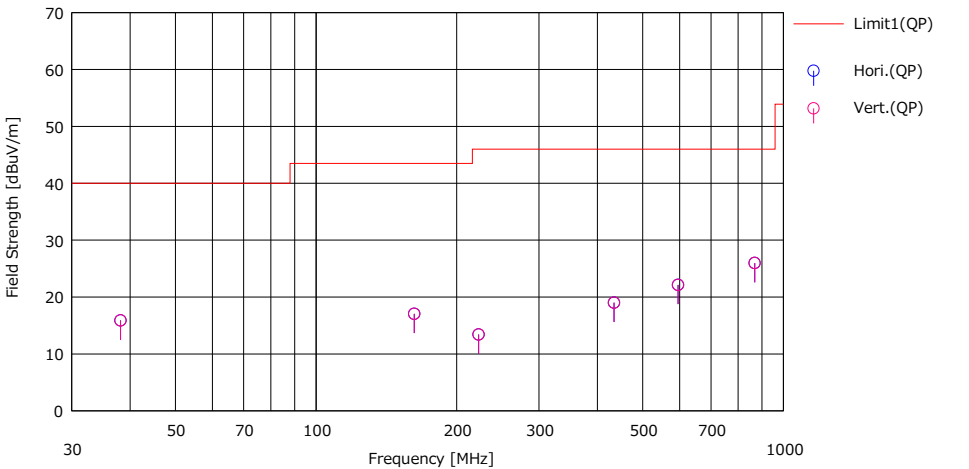


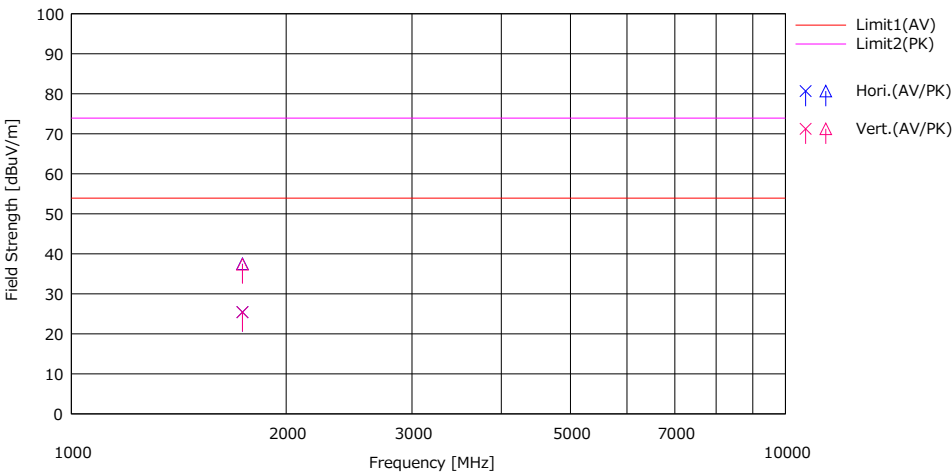
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Polz.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-----------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                 |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.30          | 25.15           | 3.05         | 32.99        | 25.41            | 37.51            | 53.90            | 73.90            | 28.49        | 36.39        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 30.20          | 42.20          | 25.15           | 3.05         | 32.99        | 25.41            | 37.41            | 53.90            | 73.90            | 28.49        | 36.49        | Vert.          | 100            | 0              | HA6          |         |

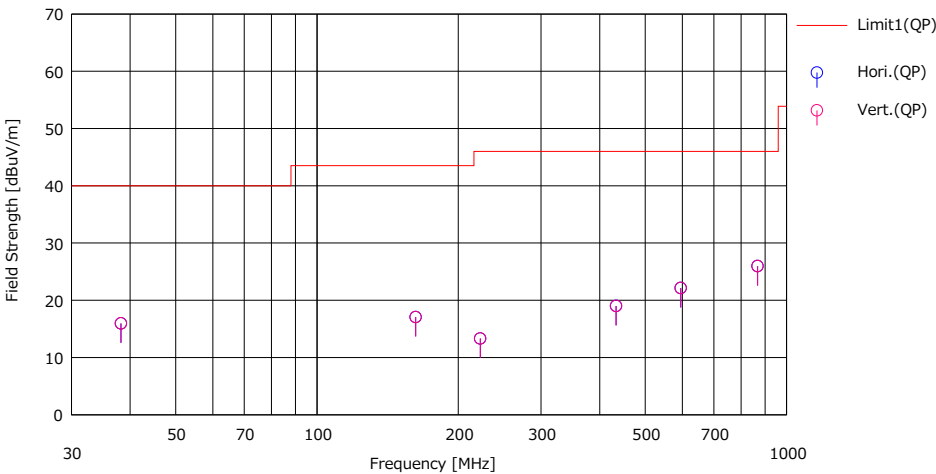
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Below 1 GHz)  
Mode 3, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|---------------|----------------|---------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                   |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |               |                |                |              |         |
| 1   | 38.242         | 22.30           | 15.45             | 6.74         | 28.54        | 15.95          | 40.00         | 24.05          | Hori.         | 100            | 0              | BA           |         |
| 2   | 162.211        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Hori.         | 100            | 0              | BA           |         |
| 3   | 222.692        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Hori.         | 100            | 0              | LA21         |         |
| 4   | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00          | Hori.         | 100            | 0              | LA21         |         |
| 5   | 595.200        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Hori.         | 100            | 0              | LA21         |         |
| 6   | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04          | Hori.         | 100            | 0              | LA21         |         |
| 7   | 38.242         | 22.30           | 15.45             | 6.74         | 28.54        | 15.95          | 40.00         | 24.05          | Vert.         | 100            | 0              | BA           |         |
| 8   | 162.211        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Vert.         | 100            | 0              | BA           |         |
| 9   | 222.692        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Vert.         | 100            | 0              | LA21         |         |
| 10  | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00          | Vert.         | 100            | 0              | LA21         |         |
| 11  | 595.200        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Vert.         | 100            | 0              | LA21         |         |
| 12  | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04          | Vert.         | 100            | 0              | LA21         |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

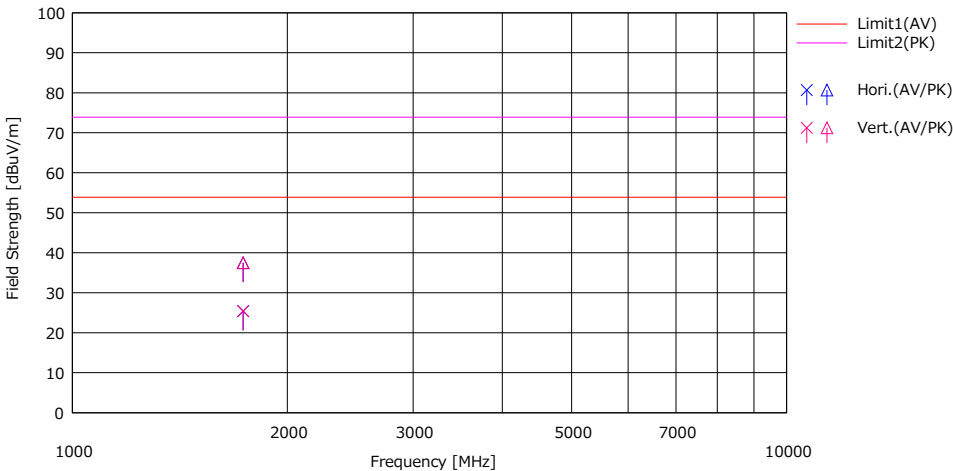


Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 3, Variation 4, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1734.480       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1734.480       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Vert.          | 100            | 0              | HA6          |         |

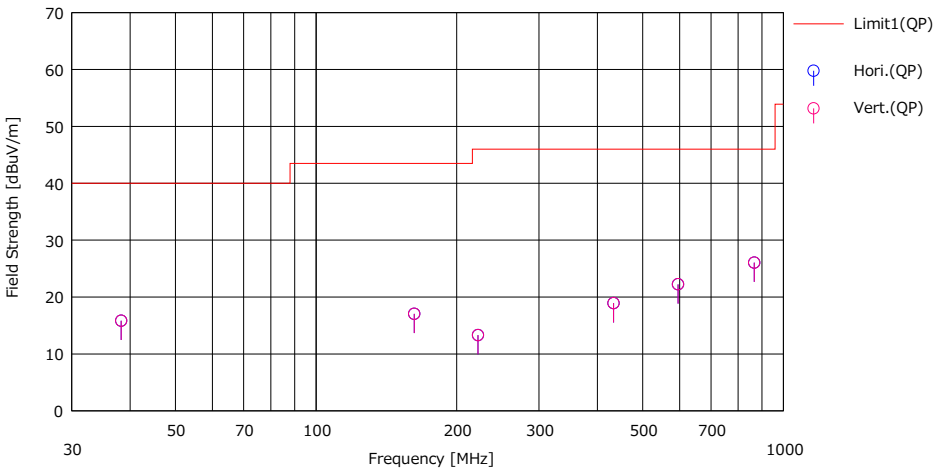
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 6, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|--------------------|--------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                    |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |                |                |                |              |         |
| 1   | 38.300         | 22.20           | 15.43              | 6.74         | 28.54        | 15.83          | 40.00         | 24.17          | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.267        | 21.80           | 15.58              | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.182        | 21.60           | 11.34              | 8.24         | 27.87        | 13.31          | 46.00         | 32.69          | Hori.          | 100            | 0              | LA2 1        |         |
| 4   | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Hori.          | 100            | 0              | LA2 1        |         |
| 5   | 595.223        | 22.20           | 19.20              | 10.12        | 29.29        | 22.23          | 46.00         | 23.77          | Hori.          | 100            | 0              | LA2 1        |         |
| 6   | 866.600        | 22.00           | 21.86              | 11.10        | 28.92        | 26.04          | 46.00         | 19.96          | Hori.          | 100            | 0              | LA2 1        |         |
| 7   | 38.300         | 22.20           | 15.43              | 6.74         | 28.54        | 15.83          | 40.00         | 24.17          | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.267        | 21.80           | 15.58              | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.182        | 21.60           | 11.34              | 8.24         | 27.87        | 13.31          | 46.00         | 32.69          | Vert.          | 100            | 0              | LA2 1        |         |
| 10  | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Vert.          | 100            | 0              | LA2 1        |         |
| 11  | 595.223        | 22.20           | 19.20              | 10.12        | 29.29        | 22.23          | 46.00         | 23.77          | Vert.          | 100            | 0              | LA2 1        |         |
| 12  | 866.600        | 22.00           | 21.86              | 11.10        | 28.92        | 26.04          | 46.00         | 19.96          | Vert.          | 100            | 0              | LA2 1        |         |

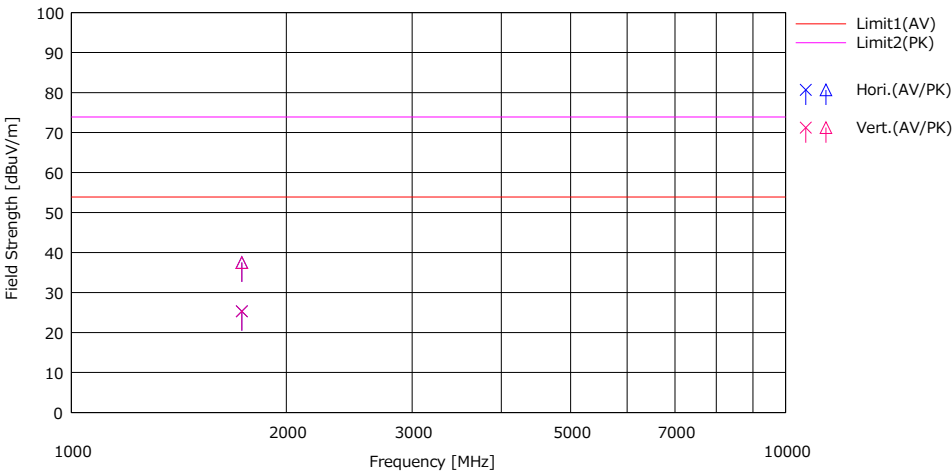
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 6, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pols.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|---------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                     |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1733.135       | 30.10          | 42.30          | 25.15               | 3.05         | 33.00        | 25.30            | 37.50            | 53.90            | 73.90            | 28.60        | 36.40        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.10          | 42.30          | 25.15               | 3.05         | 33.00        | 25.30            | 37.50            | 53.90            | 73.90            | 28.60        | 36.40        | Vert.          | 100            | 0              | HA6          |         |

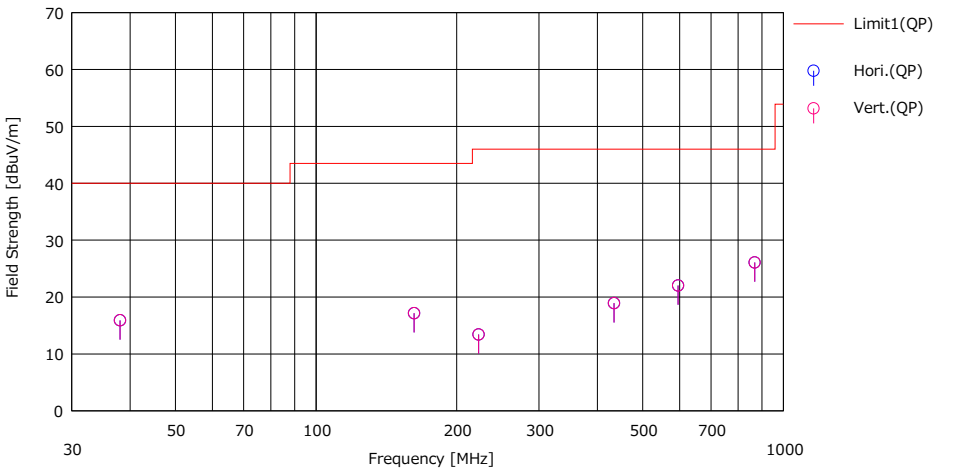
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 6, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result   | Limit    | Margin | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|---------|--------------------|--------------|--------------|----------|----------|--------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBUV]  |                    |              |              | [dBUV/m] | [dBUV/m] | [dB]   |                |                |                |              |         |
| 1   | 38.090         | 22.20   | 15.51              | 6.74         | 28.54        | 15.91    | 40.00    | 24.09  | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.177        | 21.90   | 15.58              | 7.84         | 28.17        | 17.15    | 43.50    | 26.35  | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.803        | 21.70   | 11.35              | 8.24         | 27.87        | 13.42    | 46.00    | 32.58  | Hori.          | 100            | 0              | LA2 1        |         |
| 4   | 434.140        | 21.90   | 16.26              | 9.49         | 28.74        | 18.91    | 46.00    | 27.09  | Hori.          | 100            | 0              | LA2 1        |         |
| 5   | 595.565        | 22.00   | 19.21              | 10.12        | 29.29        | 22.04    | 46.00    | 23.96  | Hori.          | 100            | 0              | LA2 1        |         |
| 6   | 868.280        | 22.00   | 21.88              | 11.11        | 28.91        | 26.08    | 46.00    | 19.92  | Hori.          | 100            | 0              | LA2 1        |         |
| 7   | 38.090         | 22.20   | 15.51              | 6.74         | 28.54        | 15.91    | 40.00    | 24.09  | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.177        | 21.90   | 15.58              | 7.84         | 28.17        | 17.15    | 43.50    | 26.35  | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.803        | 21.70   | 11.35              | 8.24         | 27.87        | 13.42    | 46.00    | 32.58  | Vert.          | 100            | 0              | LA2 1        |         |
| 10  | 434.140        | 21.90   | 16.26              | 9.49         | 28.74        | 18.91    | 46.00    | 27.09  | Vert.          | 100            | 0              | LA2 1        |         |
| 11  | 595.565        | 22.00   | 19.21              | 10.12        | 29.29        | 22.04    | 46.00    | 23.96  | Vert.          | 100            | 0              | LA2 1        |         |
| 12  | 868.280        | 22.00   | 21.88              | 11.11        | 28.91        | 26.08    | 46.00    | 19.92  | Vert.          | 100            | 0              | LA2 1        |         |

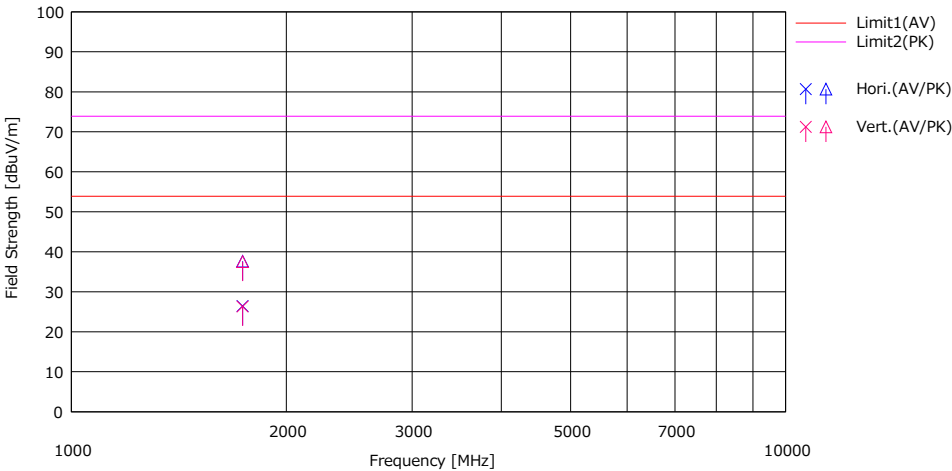
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 6, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 31.20          | 42.40          | 25.15             | 3.05         | 32.99        | 26.41            | 37.61            | 53.90            | 73.90            | 27.49        | 36.29        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 31.10          | 42.30          | 25.15             | 3.05         | 32.99        | 26.31            | 37.51            | 53.90            | 73.90            | 27.59        | 36.39        | Vert.          | 100            | 0              | HA6          |         |

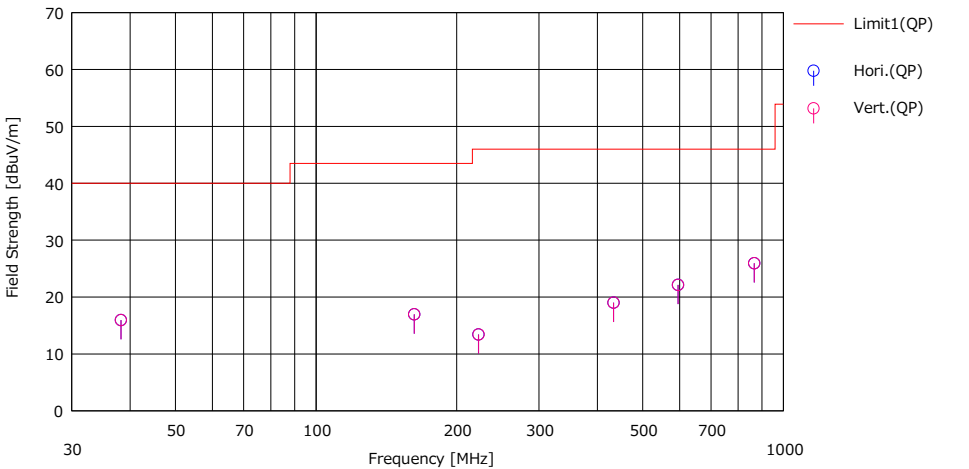
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|--------------------|--------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                    |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |                |                |                |              |         |
| 1   | 38.250         | 22.30           | 15.45              | 6.74         | 28.54        | 15.95          | 40.00         | 24.05          | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.263        | 21.70           | 15.58              | 7.84         | 28.17        | 16.95          | 43.50         | 26.55          | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.547        | 21.70           | 11.35              | 8.24         | 27.87        | 13.42          | 46.00         | 32.58          | Hori.          | 100            | 0              | LA21         |         |
| 4   | 433.300        | 22.00           | 16.25              | 9.49         | 28.73        | 19.01          | 46.00         | 26.99          | Hori.          | 100            | 0              | LA21         |         |
| 5   | 595.180        | 22.10           | 19.20              | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Hori.          | 100            | 0              | LA21         |         |
| 6   | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Hori.          | 100            | 0              | LA21         |         |
| 7   | 38.250         | 22.30           | 15.45              | 6.74         | 28.54        | 15.95          | 40.00         | 24.05          | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.263        | 21.70           | 15.58              | 7.84         | 28.17        | 16.95          | 43.50         | 26.55          | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.747        | 21.70           | 11.35              | 8.24         | 27.87        | 13.42          | 46.00         | 32.58          | Vert.          | 100            | 0              | LA21         |         |
| 10  | 433.300        | 22.00           | 16.25              | 9.49         | 28.73        | 19.01          | 46.00         | 26.99          | Vert.          | 100            | 0              | LA21         |         |
| 11  | 595.180        | 22.10           | 19.20              | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Vert.          | 100            | 0              | LA21         |         |
| 12  | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Vert.          | 100            | 0              | LA21         |         |

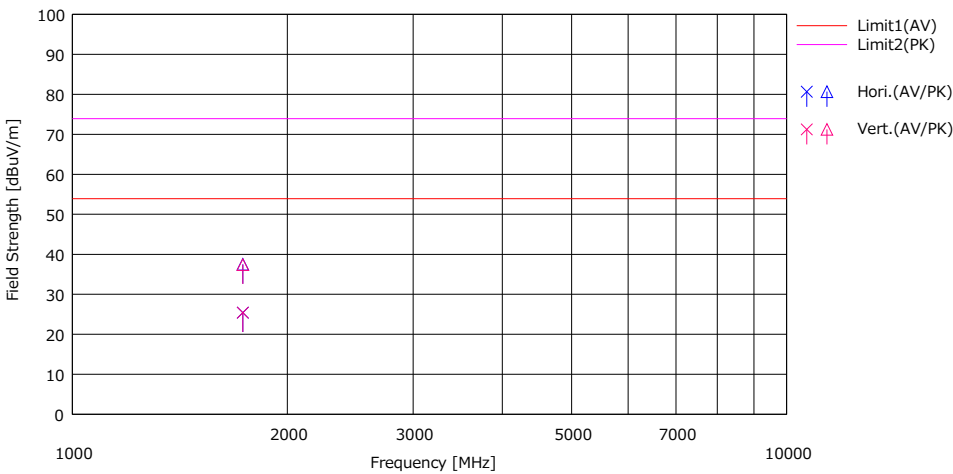
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-----------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                 |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |               |                |                |              |         |
| 1   | 1733.135       | 30.20          | 42.30          | 25.15           | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.         | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.20          | 42.20          | 25.15           | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Vert.         | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

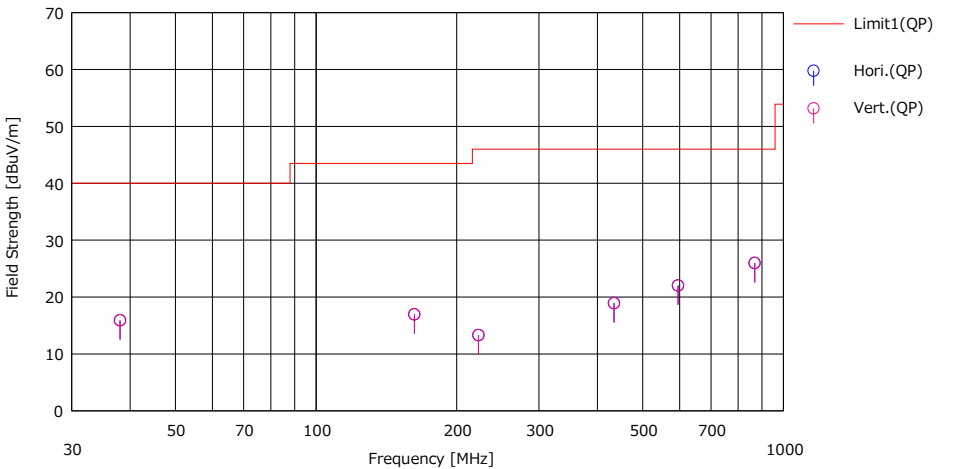


CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

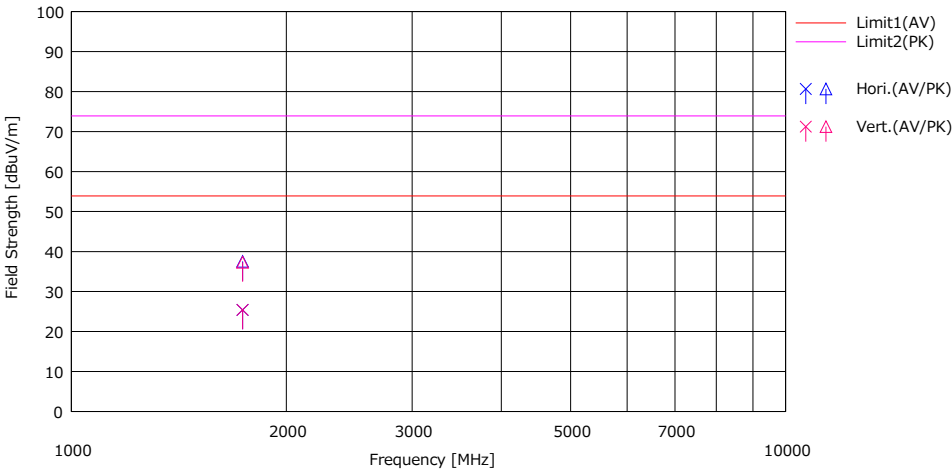


Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.30          | 25.15             | 3.05         | 32.99        | 25.41            | 37.51            | 53.90            | 73.90            | 28.49        | 36.39        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 30.20          | 42.10          | 25.15             | 3.05         | 32.99        | 25.41            | 37.31            | 53.90            | 73.90            | 28.49        | 36.59        | Vert.          | 100            | 0              | HA6          |         |

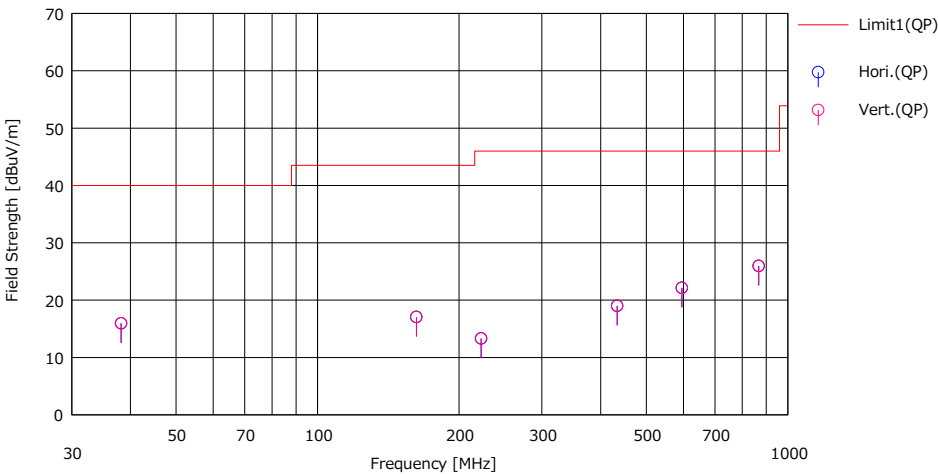
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Below 1 GHz)  
Mode 3, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result | Limit | Margn | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|---------|-------------------|--------------|--------------|--------|-------|-------|---------------|----------------|----------------|--------------|---------|
|     |                | (QP)    |                   |              |              | (QP)   | (QP)  | (QP)  |               |                |                |              |         |
| 1   | 38.222         | 22.30   | 15.46             | 6.74         | 28.54        | 15.96  | 40.00 | 24.04 | Hori.         | 100            | 0              | BA           |         |
| 2   | 162.245        | 21.80   | 15.58             | 7.84         | 28.17        | 17.06  | 43.50 | 26.45 | Hori.         | 100            | 0              | BA           |         |
| 3   | 222.752        | 21.60   | 11.35             | 8.24         | 27.87        | 13.32  | 46.00 | 32.68 | Hori.         | 100            | 0              | LA21         |         |
| 4   | 433.620        | 22.00   | 16.25             | 9.49         | 28.74        | 19.00  | 46.00 | 27.00 | Hori.         | 100            | 0              | LA21         |         |
| 5   | 595.190        | 22.10   | 19.20             | 10.12        | 29.29        | 22.13  | 46.00 | 23.87 | Hori.         | 100            | 0              | LA21         |         |
| 6   | 867.240        | 21.90   | 21.87             | 11.11        | 28.92        | 25.96  | 46.00 | 20.04 | Hori.         | 100            | 0              | LA21         |         |
| 7   | 38.222         | 22.30   | 15.46             | 6.74         | 28.54        | 15.96  | 40.00 | 24.04 | Vert.         | 100            | 0              | BA           |         |
| 8   | 162.245        | 21.80   | 15.58             | 7.84         | 28.17        | 17.06  | 43.50 | 26.45 | Vert.         | 100            | 0              | BA           |         |
| 9   | 222.752        | 21.60   | 11.35             | 8.24         | 27.87        | 13.32  | 46.00 | 32.68 | Vert.         | 100            | 0              | LA21         |         |
| 10  | 433.620        | 22.00   | 16.25             | 9.49         | 28.74        | 19.00  | 46.00 | 27.00 | Vert.         | 100            | 0              | LA21         |         |
| 11  | 595.190        | 22.10   | 19.20             | 10.12        | 29.29        | 22.13  | 46.00 | 23.87 | Vert.         | 100            | 0              | LA21         |         |
| 12  | 867.240        | 21.90   | 21.87             | 11.11        | 28.92        | 25.96  | 46.00 | 20.04 | Vert.         | 100            | 0              | LA21         |         |

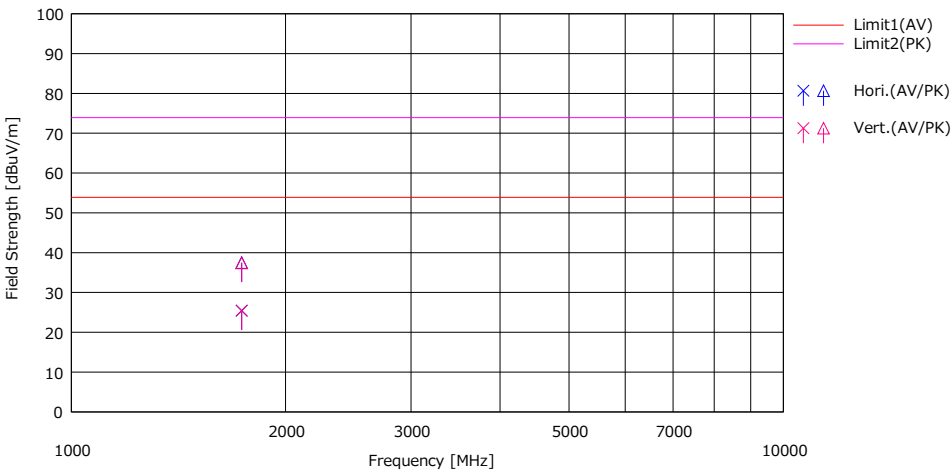
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 3, Variation 6, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1734.480       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1734.480       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Vert.          | 100            | 0              | HA6          |         |

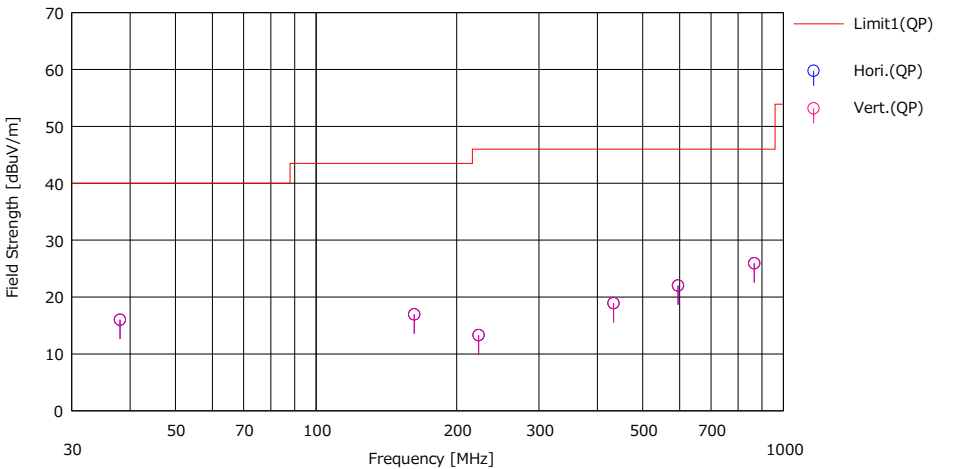
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 8, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac.<br>(dB/m) | Loss<br>(dB) | Gain<br>(dB) | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola.<br>(H/V) | Height<br>(cm) | Angle<br>(deg) | Ant.<br>Type | Comment |
|-----|----------------|-----------------|--------------------|--------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                    |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |                |                |                |              |         |
| 1   | 38.067         | 22.30           | 15.52              | 6.73         | 28.54        | 16.01          | 40.00         | 23.99          | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.222        | 21.70           | 15.58              | 7.84         | 28.17        | 16.95          | 43.50         | 26.55          | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.831        | 21.60           | 11.35              | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Hori.          | 100            | 0              | LA2 1        |         |
| 4   | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Hori.          | 100            | 0              | LA2 1        |         |
| 5   | 595.034        | 22.00           | 19.20              | 10.12        | 29.29        | 22.03          | 46.00         | 23.97          | Hori.          | 100            | 0              | LA2 1        |         |
| 6   | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Hori.          | 100            | 0              | LA2 1        |         |
| 7   | 38.067         | 22.30           | 15.52              | 6.73         | 28.54        | 16.01          | 40.00         | 23.99          | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.222        | 21.70           | 15.58              | 7.84         | 28.17        | 16.95          | 43.50         | 26.55          | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.831        | 21.60           | 11.35              | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Vert.          | 100            | 0              | LA2 1        |         |
| 10  | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Vert.          | 100            | 0              | LA2 1        |         |
| 11  | 595.034        | 22.00           | 19.20              | 10.12        | 29.29        | 22.03          | 46.00         | 23.97          | Vert.          | 100            | 0              | LA2 1        |         |
| 12  | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Vert.          | 100            | 0              | LA2 1        |         |

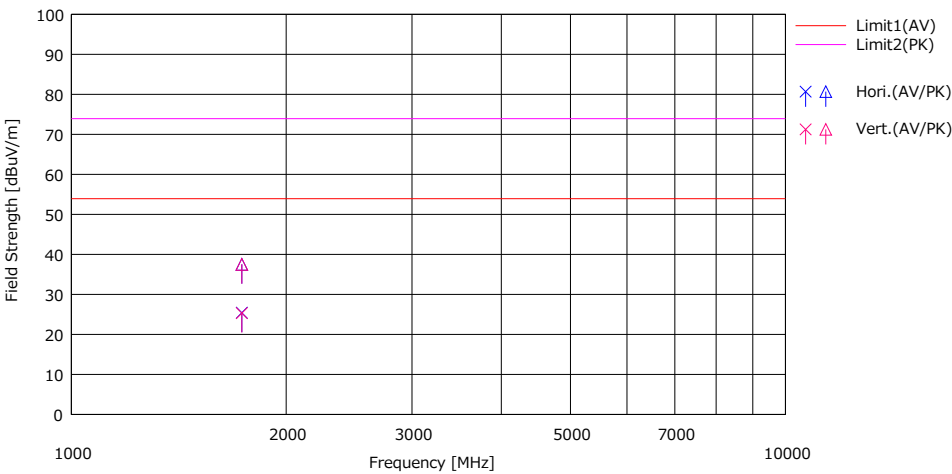
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 8, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-----------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                 |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1733.135       | 30.20          | 42.30          | 25.15           | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.10          | 42.30          | 25.15           | 3.05         | 33.00        | 25.30            | 37.50            | 53.90            | 73.90            | 28.60        | 36.40        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 8, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

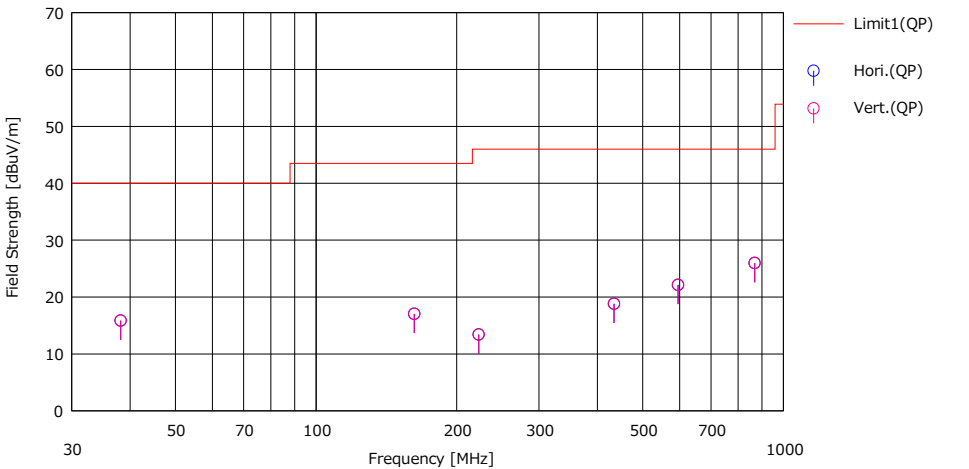


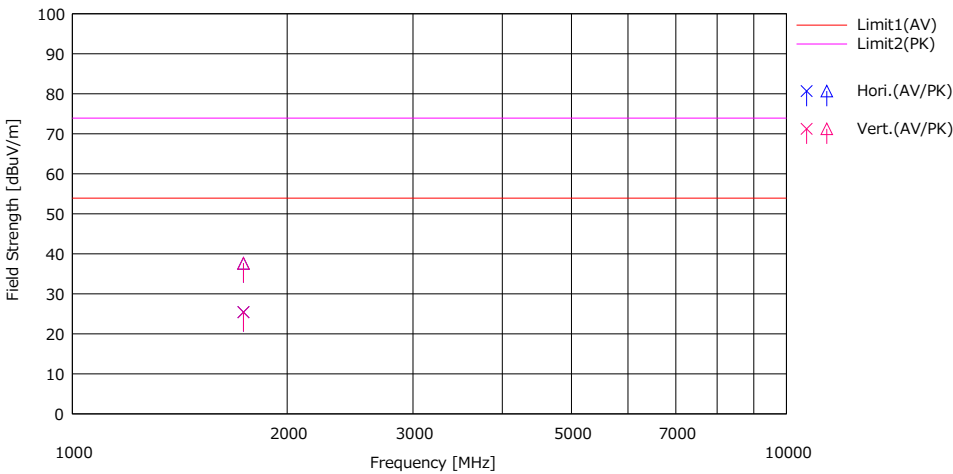
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 8, Internal Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant. Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|-----------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |           |         |
| 1   | 1736.759       | 30.20          | 42.40          | 25.15             | 3.05         | 32.99        | 25.41            | 37.61            | 53.90            | 73.90            | 28.49        | 36.29        | Hori.          | 100            | 0              | HA6       |         |
| 2   | 1736.759       | 30.20          | 42.40          | 25.15             | 3.05         | 32.99        | 25.41            | 37.61            | 53.90            | 73.90            | 28.49        | 36.29        | Vert.          | 100            | 0              | HA6       |         |

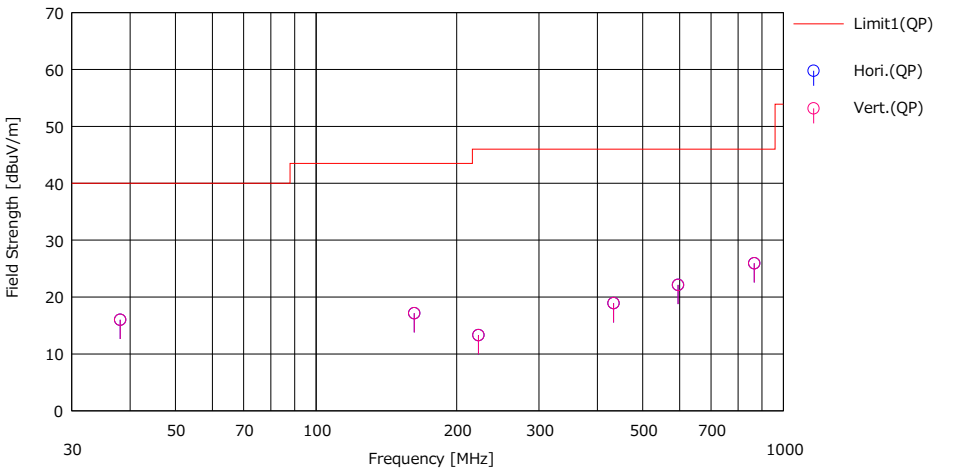
SS  
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margin<br>(QP) | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|--------------------|--------------|--------------|----------------|---------------|----------------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                    |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |                |                |                |              |         |
| 1   | 38.102         | 22.30           | 15.51              | 6.74         | 28.54        | 16.01          | 40.00         | 23.99          | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.273        | 21.90           | 15.58              | 7.84         | 28.17        | 17.15          | 43.50         | 26.35          | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.564        | 21.60           | 11.35              | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Hori.          | 100            | 0              | LA21         |         |
| 4   | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Hori.          | 100            | 0              | LA21         |         |
| 5   | 595.041        | 22.10           | 19.20              | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Hori.          | 100            | 0              | LA21         |         |
| 6   | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Hori.          | 100            | 0              | LA21         |         |
| 7   | 38.102         | 22.30           | 15.51              | 6.74         | 28.54        | 16.01          | 40.00         | 23.99          | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.273        | 21.90           | 15.58              | 7.84         | 28.17        | 17.15          | 43.50         | 26.35          | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.564        | 21.60           | 11.35              | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Vert.          | 100            | 0              | LA21         |         |
| 10  | 433.300        | 21.90           | 16.25              | 9.49         | 28.73        | 18.91          | 46.00         | 27.09          | Vert.          | 100            | 0              | LA21         |         |
| 11  | 595.041        | 22.10           | 19.20              | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Vert.          | 100            | 0              | LA21         |         |
| 12  | 866.600        | 21.90           | 21.86              | 11.10        | 28.92        | 25.94          | 46.00         | 20.06          | Vert.          | 100            | 0              | LA21         |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

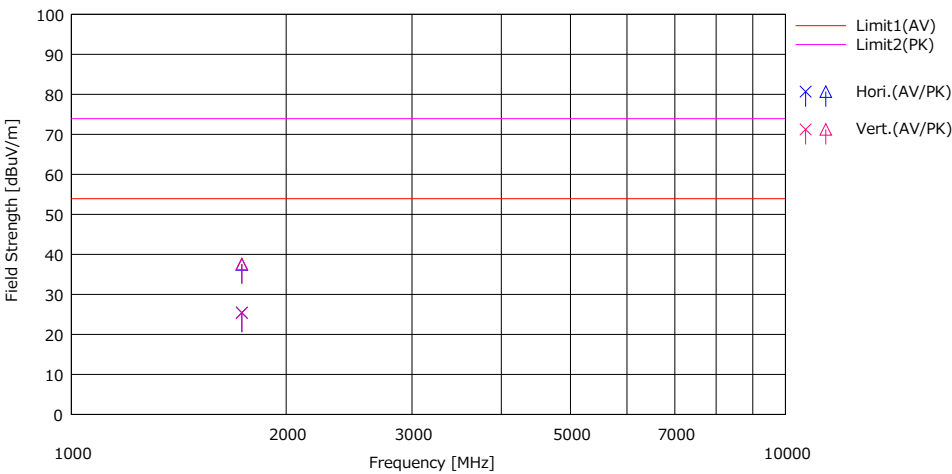


Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 1, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-----------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                 |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1733.135       | 30.20          | 42.30          | 25.15           | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.20          | 42.40          | 25.15           | 3.05         | 33.00        | 25.40            | 37.60            | 53.90            | 73.90            | 28.50        | 36.30        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B

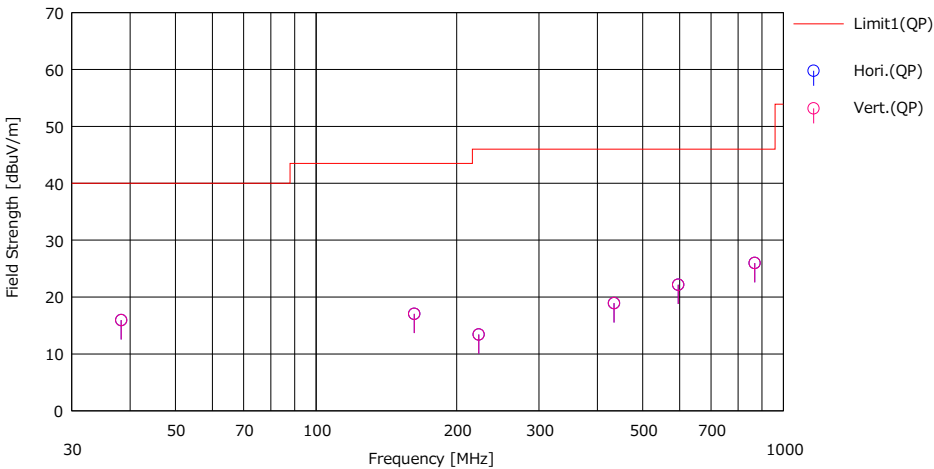


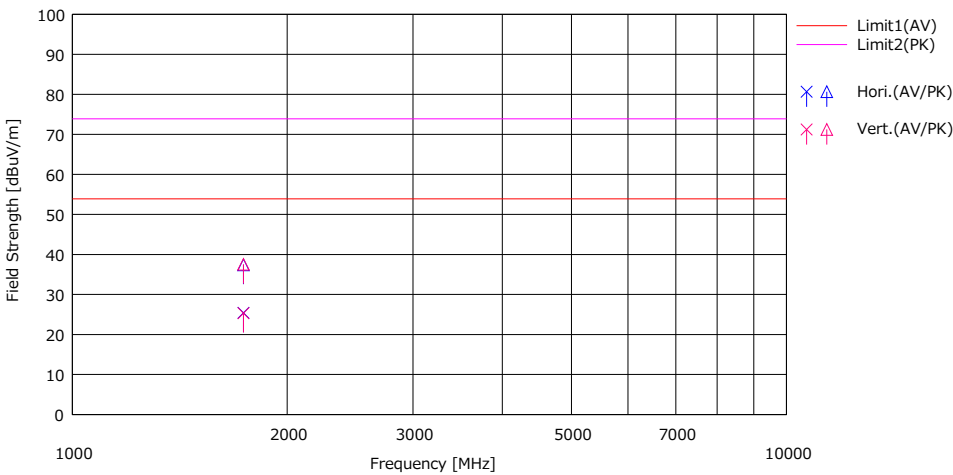
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | [AV]<br>[dBuV] | [PK]<br>[dBuV] |                   |              |              | [AV]<br>[dBuV/m] | [PK]<br>[dBuV/m] | [AV]<br>[dBuV/m] | [PK]<br>[dBuV/m] | [AV]<br>[dB] | [PK]<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.20          | 25.15             | 3.05         | 32.99        | 25.41            | 37.41            | 53.90            | 73.90            | 28.49        | 36.49        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 30.10          | 42.30          | 25.15             | 3.05         | 32.99        | 25.31            | 37.51            | 53.90            | 73.90            | 28.59        | 36.39        | Vert.          | 100            | 0              | HA6          |         |

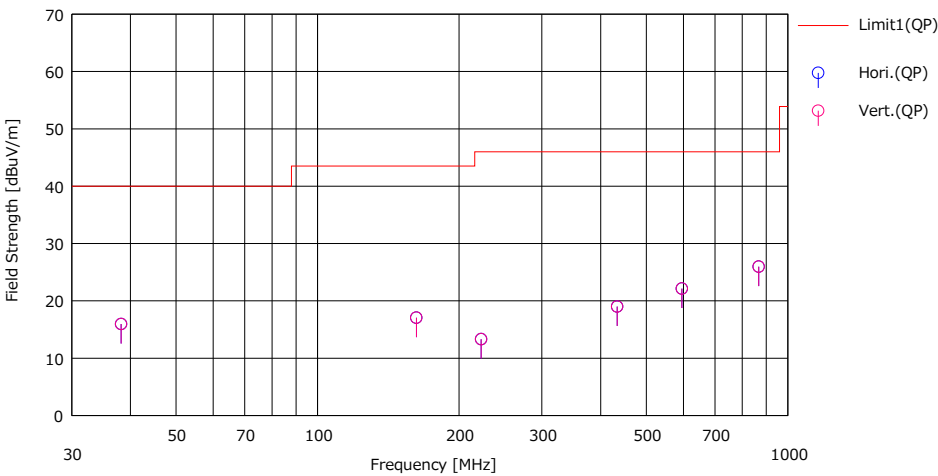
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Below 1 GHz)  
Mode 3, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margn<br>(QP) | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                   |              |              | [dBuV/m]       | [dBuV/m]      | [dB]          |               |                |                |              |         |
| 1   | 38.229         | 22.30           | 15.46             | 6.74         | 28.54        | 15.96          | 40.00         | 24.04         | Hori.         | 100            | 0              | BA           |         |
| 2   | 162.281        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45         | Hori.         | 100            | 0              | BA           |         |
| 3   | 222.777        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68         | Hori.         | 100            | 0              | LA21         |         |
| 4   | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00         | Hori.         | 100            | 0              | LA21         |         |
| 5   | 595.121        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87         | Hori.         | 100            | 0              | LA21         |         |
| 6   | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04         | Hori.         | 100            | 0              | LA21         |         |
| 7   | 38.229         | 22.30           | 15.46             | 6.74         | 28.54        | 15.96          | 40.00         | 24.04         | Vert.         | 100            | 0              | BA           |         |
| 8   | 162.281        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45         | Vert.         | 100            | 0              | BA           |         |
| 9   | 222.777        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68         | Vert.         | 100            | 0              | LA21         |         |
| 10  | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00         | Vert.         | 100            | 0              | LA21         |         |
| 11  | 595.121        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87         | Vert.         | 100            | 0              | LA21         |         |
| 12  | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04         | Vert.         | 100            | 0              | LA21         |         |

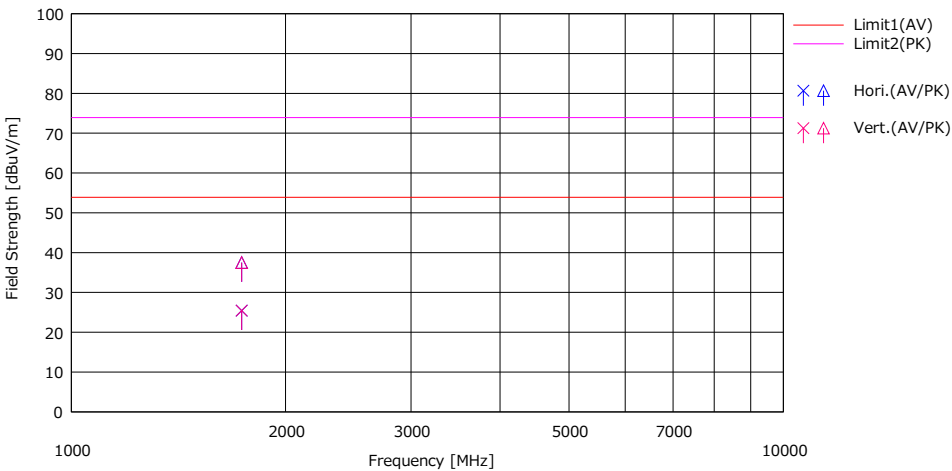
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 3, Variation 8, External Antenna

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant. Type | Comment |
|-----|----------------|----------------|----------------|--------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|-----------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                    |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |           |         |
| 1   | 1734.480       | 30.20          | 42.30          | 25.15              | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.          | 100            | 0              | HA6       |         |
| 2   | 1734.480       | 30.20          | 42.30          | 25.15              | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Vert.          | 100            | 0              | HA6       |         |

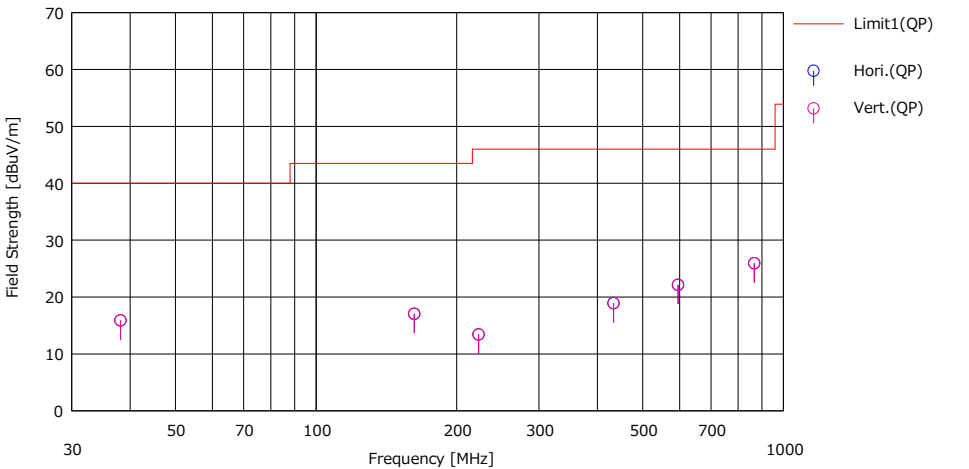
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 1, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



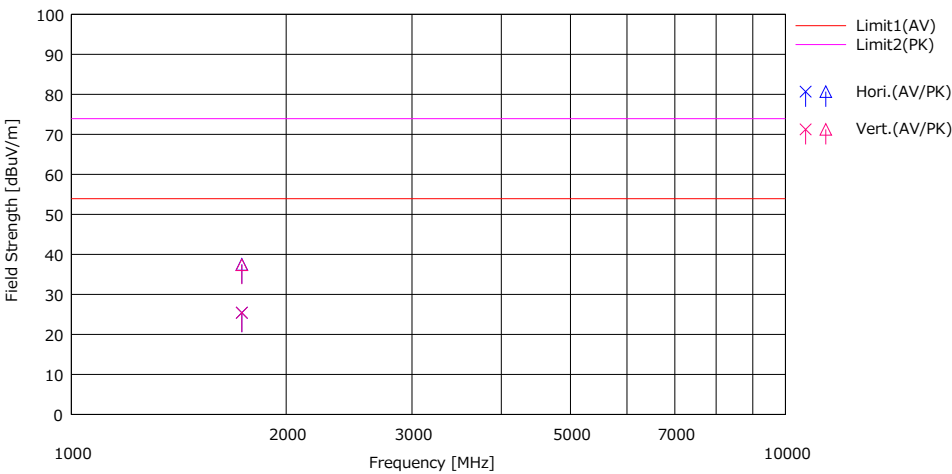
| No. | Freq.<br>[MHz] | Reading | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result   | Limit    | Margin | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|---------|--------------------|--------------|--------------|----------|----------|--------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBUV]  |                    |              |              | [dBUV/m] | [dBUV/m] | [dB]   |                |                |                |              |         |
| 1   | 38.172         | 22.20   | 15.48              | 6.74         | 28.54        | 15.88    | 40.00    | 24.12  | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.222        | 21.80   | 15.58              | 7.84         | 28.17        | 17.05    | 43.50    | 26.45  | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.803        | 21.70   | 11.35              | 8.24         | 27.87        | 13.42    | 46.00    | 32.58  | Hori.          | 100            | 0              | LA21         |         |
| 4   | 433.300        | 21.90   | 16.25              | 9.49         | 28.73        | 18.91    | 46.00    | 27.09  | Hori.          | 100            | 0              | LA21         |         |
| 5   | 595.119        | 22.10   | 19.20              | 10.12        | 29.29        | 22.13    | 46.00    | 23.87  | Hori.          | 100            | 0              | LA21         |         |
| 6   | 866.600        | 21.90   | 21.86              | 11.10        | 28.92        | 25.94    | 46.00    | 20.06  | Hori.          | 100            | 0              | LA21         |         |
| 7   | 38.172         | 22.20   | 15.48              | 6.74         | 28.54        | 15.88    | 40.00    | 24.12  | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.222        | 21.80   | 15.58              | 7.84         | 28.17        | 17.05    | 43.50    | 26.45  | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.803        | 21.70   | 11.35              | 8.24         | 27.87        | 13.42    | 46.00    | 32.58  | Vert.          | 100            | 0              | LA21         |         |
| 10  | 433.300        | 21.90   | 16.25              | 9.49         | 28.73        | 18.91    | 46.00    | 27.09  | Vert.          | 100            | 0              | LA21         |         |
| 11  | 595.119        | 22.10   | 19.20              | 10.12        | 29.29        | 22.13    | 46.00    | 23.87  | Vert.          | 100            | 0              | LA21         |         |
| 12  | 866.600        | 21.90   | 21.86              | 11.10        | 28.92        | 25.94    | 46.00    | 20.06  | Vert.          | 100            | 0              | LA21         |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date August 23, 2024  
Temperature / Humidity 22 deg. C / 62 % RH  
Engineer Daiki Matsui  
Mode (Above 1 GHz)  
Mode 1, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dBuV] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |               |                |                |              |         |
| 1   | 1733.135       | 30.20          | 42.30          | 25.15             | 3.05         | 33.00        | 25.40            | 37.50            | 53.90            | 73.90            | 28.50        | 36.40        | Hori.         | 100            | 0              | HA6          |         |
| 2   | 1733.135       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Vert.         | 100            | 0              | HA6          |         |

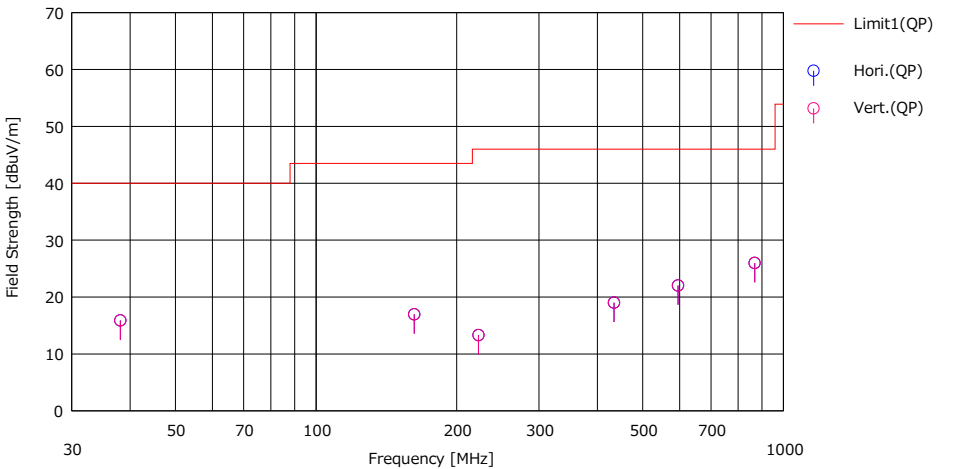
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 60 % RH  
Junya Okuno  
(Below 1 GHz)  
Mode 2, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result   | Limit    | Margin | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|---------|--------------------|--------------|--------------|----------|----------|--------|----------------|----------------|----------------|--------------|---------|
|     |                | [dBUV]  |                    |              |              | [dBUV/m] | [dBUV/m] | [dB]   |                |                |                |              |         |
| 1   | 38.144         | 22.20   | 15.49              | 6.74         | 28.54        | 15.89    | 40.00    | 24.11  | Hori.          | 100            | 0              | BA           |         |
| 2   | 162.270        | 21.70   | 15.58              | 7.84         | 28.17        | 16.95    | 43.50    | 26.55  | Hori.          | 100            | 0              | BA           |         |
| 3   | 222.684        | 21.60   | 11.35              | 8.24         | 27.87        | 13.32    | 46.00    | 32.68  | Hori.          | 100            | 0              | LA21         |         |
| 4   | 434.140        | 22.00   | 16.26              | 9.49         | 28.74        | 19.01    | 46.00    | 26.99  | Hori.          | 100            | 0              | LA21         |         |
| 5   | 595.141        | 22.00   | 19.20              | 10.12        | 29.29        | 22.03    | 46.00    | 23.97  | Hori.          | 100            | 0              | LA21         |         |
| 6   | 868.280        | 21.90   | 21.88              | 11.11        | 28.91        | 25.98    | 46.00    | 20.02  | Hori.          | 100            | 0              | LA21         |         |
| 7   | 38.144         | 22.20   | 15.49              | 6.74         | 28.54        | 15.89    | 40.00    | 24.11  | Vert.          | 100            | 0              | BA           |         |
| 8   | 162.270        | 21.70   | 15.58              | 7.84         | 28.17        | 16.95    | 43.50    | 26.55  | Vert.          | 100            | 0              | BA           |         |
| 9   | 222.684        | 21.60   | 11.35              | 8.24         | 27.87        | 13.32    | 46.00    | 32.68  | Vert.          | 100            | 0              | LA21         |         |
| 10  | 434.140        | 22.00   | 16.26              | 9.49         | 28.74        | 19.01    | 46.00    | 26.99  | Vert.          | 100            | 0              | LA21         |         |
| 11  | 595.141        | 22.00   | 19.20              | 10.12        | 29.29        | 22.03    | 46.00    | 23.97  | Vert.          | 100            | 0              | LA21         |         |
| 12  | 868.280        | 21.90   | 21.88              | 11.11        | 28.91        | 25.98    | 46.00    | 20.02  | Vert.          | 100            | 0              | LA21         |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

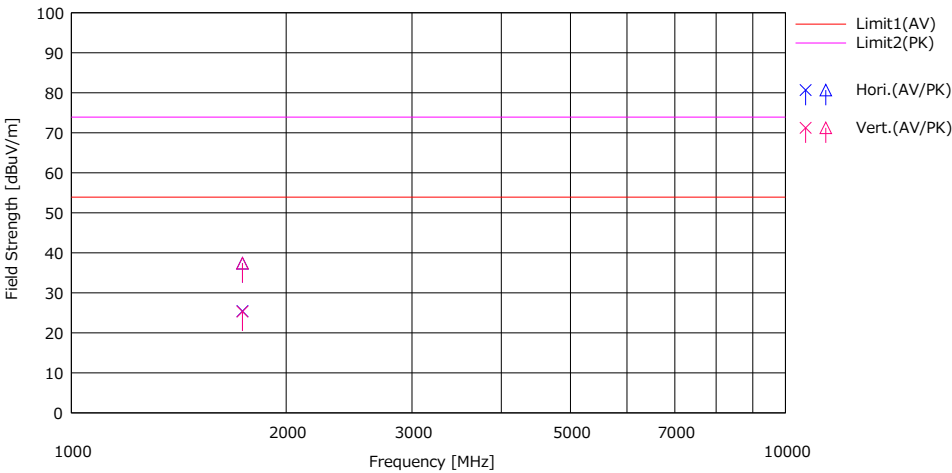


Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 2, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



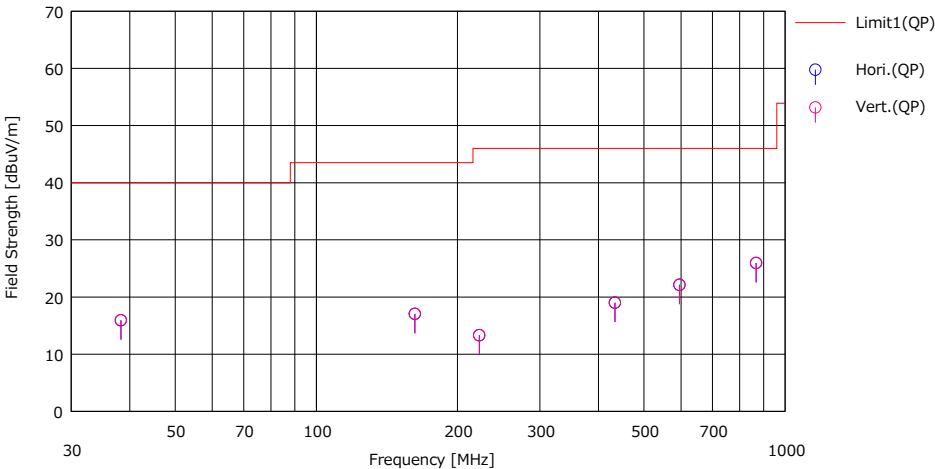
| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1736.759       | 30.20          | 42.20          | 25.15             | 3.05         | 32.99        | 25.41            | 37.41            | 53.90            | 73.90            | 28.49        | 36.49        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1736.759       | 30.10          | 42.20          | 25.15             | 3.05         | 32.99        | 25.31            | 37.41            | 53.90            | 73.90            | 28.59        | 36.49        | Vert.          | 100            | 0              | HA6          |         |

CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date August 23, 2024  
Temperature / Humidity 22 deg. C / 62 % RH  
Engineer Daiki Matsui  
Mode (Below 1 GHz)  
Mode 3, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading<br>(QP) | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>(QP) | Limit<br>(QP) | Margn.<br>(QP) | Pola<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|---------------|----------------|---------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                   |              |              | [dBuV/m]       | [dBuV/m]      | [dB]           |               |                |                |              |         |
| 1   | 38.291         | 22.30           | 15.43             | 6.74         | 28.54        | 15.93          | 40.00         | 24.07          | Hori.         | 100            | 0              | BA           |         |
| 2   | 162.292        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Hori.         | 100            | 0              | BA           |         |
| 3   | 222.682        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Hori.         | 100            | 0              | LA21         |         |
| 4   | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00          | Hori.         | 100            | 0              | LA21         |         |
| 5   | 595.236        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Hori.         | 100            | 0              | LA21         |         |
| 6   | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04          | Hori.         | 100            | 0              | LA21         |         |
| 7   | 38.291         | 22.30           | 15.43             | 6.74         | 28.54        | 15.93          | 40.00         | 24.07          | Vert.         | 100            | 0              | BA           |         |
| 8   | 162.292        | 21.80           | 15.58             | 7.84         | 28.17        | 17.05          | 43.50         | 26.45          | Vert.         | 100            | 0              | BA           |         |
| 9   | 222.682        | 21.60           | 11.35             | 8.24         | 27.87        | 13.32          | 46.00         | 32.68          | Vert.         | 100            | 0              | LA21         |         |
| 10  | 433.620        | 22.00           | 16.25             | 9.49         | 28.74        | 19.00          | 46.00         | 27.00          | Vert.         | 100            | 0              | LA21         |         |
| 11  | 595.236        | 22.10           | 19.20             | 10.12        | 29.29        | 22.13          | 46.00         | 23.87          | Vert.         | 100            | 0              | LA21         |         |
| 12  | 867.240        | 21.90           | 21.87             | 11.11        | 28.92        | 25.96          | 46.00         | 20.04          | Vert.         | 100            | 0              | LA21         |         |

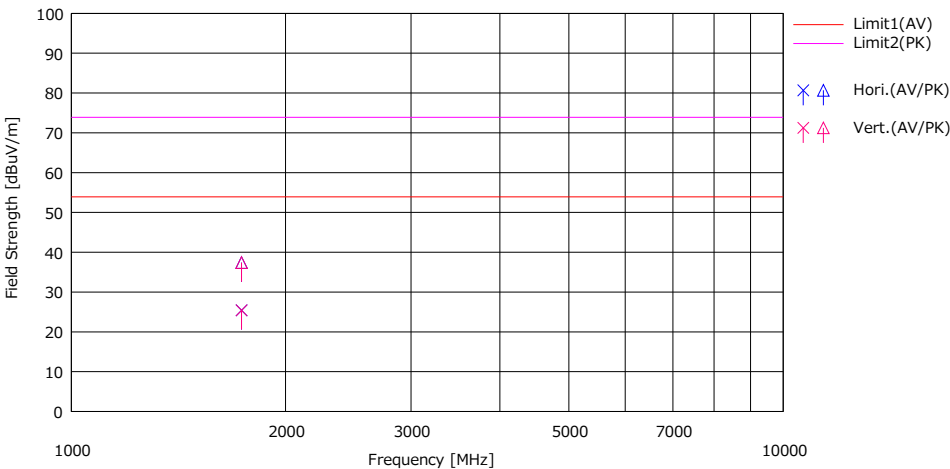
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + ATT) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Radiated Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.2  
August 23, 2024  
22 deg. C / 62 % RH  
Daiki Matsui  
(Above 1 GHz)  
Mode 3, Variation 9

Limit : FCC\_Part 15 Subpart B(15.109)\_Class B



| No. | Freq.<br>[MHz] | Reading        |                | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result           |                  | Limit            |                  | Margin       |              | Pola.<br>[H/V] | Height<br>[cm] | Angle<br>[deg] | Ant.<br>Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|----------------|----------------|----------------|--------------|---------|
|     |                | (AV)<br>[dBuV] | (PK)<br>[dBuV] |                   |              |              | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dBuV/m] | (PK)<br>[dBuV/m] | (AV)<br>[dB] | (PK)<br>[dB] |                |                |                |              |         |
| 1   | 1734.480       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Hori.          | 100            | 0              | HA6          |         |
| 2   | 1734.480       | 30.20          | 42.20          | 25.15             | 3.05         | 33.00        | 25.40            | 37.40            | 53.90            | 73.90            | 28.50        | 36.50        | Vert.          | 100            | 0              | HA6          |         |

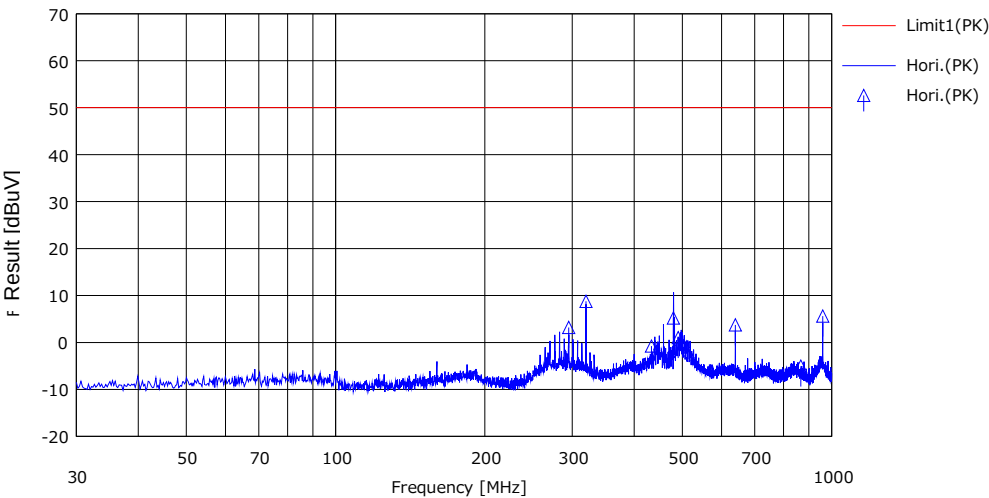
CHART: WITH FACTOR  
ANT TYPE: - 30 MHz: LOOP, 30 MHz - 200 MHz: BICONICAL, 200 MHz - 1000 MHz: LOGPERIODIC, 1000 MHz -: HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS(CABLE + D-factor) - GAIN(AMP)  
Except for the above table: adequate margin data below the limits.

Antenna Terminal Conducted Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.1  
August 27, 2024  
23 deg. C / 44 % RH  
Hiroyuki Furutaka  
(Below 1 GHz)  
Mode 1, Variation 2

Limit : FCC15.111 Antenna terminal measurement



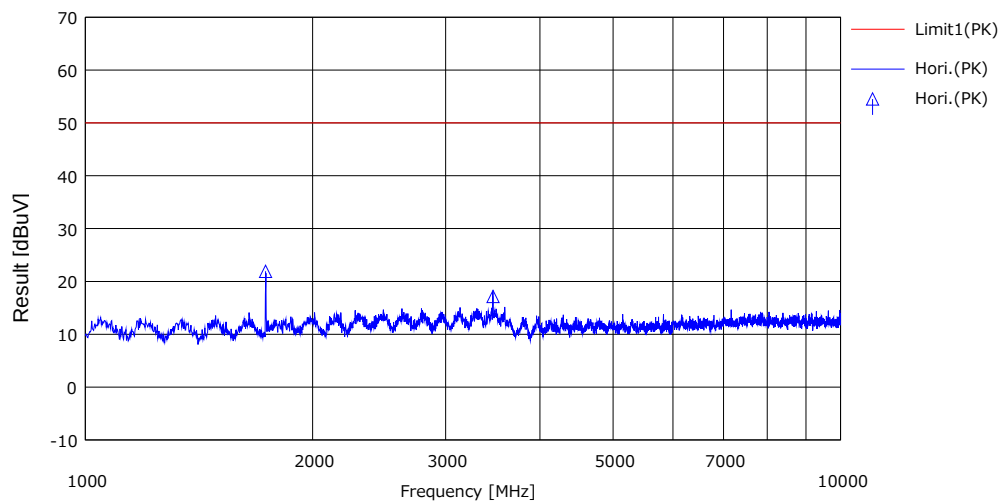
| No. | Freq.<br>[MHz] | Reading        | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result         | Limit *1)      | Margin       | Pola.<br>[H/V] | Ant.<br>Type | Comment |
|-----|----------------|----------------|-------------------|--------------|--------------|----------------|----------------|--------------|----------------|--------------|---------|
|     |                | <PK><br>[dBuV] |                   |              |              | <PK><br>[dBuV] | <PK><br>[dBuV] | <PK><br>[dB] |                |              |         |
| 1   | 295.154        | 41.70          | 0.00              | 0.25         | 38.75        | 3.20           | 50.00          | 46.80        | Hori.          | ---          |         |
| 2   | 319.825        | 47.20          | 0.00              | 0.25         | 38.69        | 8.76           | 50.00          | 41.24        | Hori.          | ---          |         |
| 3   | 433.300        | 37.40          | 0.00              | 0.31         | 38.47        | -0.76          | 50.00          | 50.76        | Hori.          | ---          |         |
| 4   | 479.728        | 43.30          | 0.00              | 0.33         | 38.42        | 5.21           | 50.00          | 44.79        | Hori.          | ---          |         |
| 5   | 490.764        | 39.10          | 0.00              | 0.34         | 38.41        | 1.03           | 50.00          | 48.97        | Hori.          | ---          |         |
| 6   | 639.630        | 41.60          | 0.00              | 0.37         | 38.24        | 3.73           | 50.00          | 46.27        | Hori.          | ---          |         |
| 7   | 866.600        | 32.60          | 0.00              | 0.45         | 38.10        | -50.5          | 50.00          | 55.05        | Hori.          | ---          |         |
| 8   | 959.460        | 42.90          | 0.00              | 0.47         | 37.76        | 5.61           | 50.00          | 44.39        | Hori.          | ---          |         |

\* 2 nW = -57 dBm = 50 dBuV  
CHART: WITH FACTOR  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN  
Except for the above table: adequate margin data below the limits.

## Antenna Terminal Conducted Emission

|                        |                                    |
|------------------------|------------------------------------|
| Test place             | Ise EMC Lab.                       |
| Semi Anechoic Chamber  | No.1                               |
| Date                   | August 27, 2024                    |
| Temperature / Humidity | 23 deg. C / 44 % RH                |
| Engineer               | Hiroyuki Furutaka<br>(Above 1 GHz) |
| Mode                   | Mode 1, Variation 2                |

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq.    | Reading | Ant.Fac | Loss | Gain  | Result | Limit *1) | Margin | Pola. | Ant.<br>Type | Comment |
|-----|----------|---------|---------|------|-------|--------|-----------|--------|-------|--------------|---------|
|     |          | <PKO    |         |      |       | <PKO   | <PKO      |        |       |              |         |
|     |          | [dBuV]  |         |      |       | [dB/m] | [dB]      | [dBuV] |       |              |         |
| 1   | 1733.135 | 54.30   | 0.00    | 0.62 | 33.00 | 21.92  | 50.00     | 28.08  | Hori. | ---          |         |
| 2   | 3466.271 | 48.00   | 0.00    | 0.90 | 31.74 | 17.16  | 50.00     | 32.84  | Hori. | ---          |         |

\* 2 nW = -57 dBm = 50 dBuV

CHART: WITH FACTOR

CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN

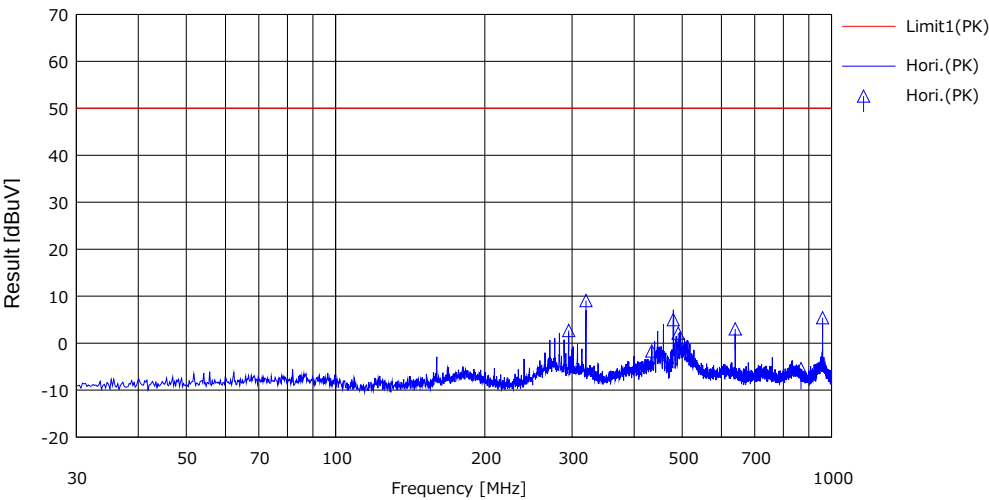
Except for the above table: adequate margin data below the limits.

Antenna Terminal Conducted Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.1  
August 27, 2024  
23 deg. C / 44 % RH  
Hiroyuki Furutaka  
(Below 1 GHz)  
Mode 2, Variation 2

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq.<br>[MHz] | Reading        | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result         | Limit*1)       | Margin<br>[dB] | Pola.<br>[H/V] | Ant.<br>Type | Comment |
|-----|----------------|----------------|-------------------|--------------|--------------|----------------|----------------|----------------|----------------|--------------|---------|
|     |                | <PK><br>[dBuV] |                   |              |              | <PK><br>[dBuV] | <PK><br>[dBuV] |                |                |              |         |
| 1   | 29.5154        | 41.20          | 0.00              | 0.25         | 38.75        | 2.70           | 50.00          | 47.30          | Hori.          | ---          |         |
| 2   | 31.9825        | 47.50          | 0.00              | 0.25         | 38.69        | 9.06           | 50.00          | 40.94          | Hori.          | ---          |         |
| 3   | 43.4140        | 36.50          | 0.00              | 0.31         | 38.47        | -1.66          | 50.00          | 51.66          | Hori.          | ---          |         |
| 4   | 47.9728        | 43.10          | 0.00              | 0.33         | 38.42        | 5.01           | 50.00          | 44.99          | Hori.          | ---          |         |
| 5   | 49.0765        | 40.20          | 0.00              | 0.34         | 38.41        | 2.13           | 50.00          | 47.87          | Hori.          | ---          |         |
| 6   | 63.9630        | 40.90          | 0.00              | 0.37         | 38.24        | 3.03           | 50.00          | 46.97          | Hori.          | ---          |         |
| 7   | 86.8280        | 32.20          | 0.00              | 0.45         | 38.10        | -5.45          | 50.00          | 55.45          | Hori.          | ---          |         |
| 8   | 95.9460        | 42.70          | 0.00              | 0.47         | 37.76        | 5.41           | 50.00          | 44.59          | Hori.          | ---          |         |

\* 2 nW = -57 dBm = 50 dBuV  
CHART: WITH FACTOR  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN  
Except for the above table: adequate margin data below the limits.

Antenna Terminal Conducted Emission

Test place

Semi Anechoic Chamber

Date

Temperature / Humidity

Engineer

Mode

Ise EMC Lab.

No.1

August 27, 2024

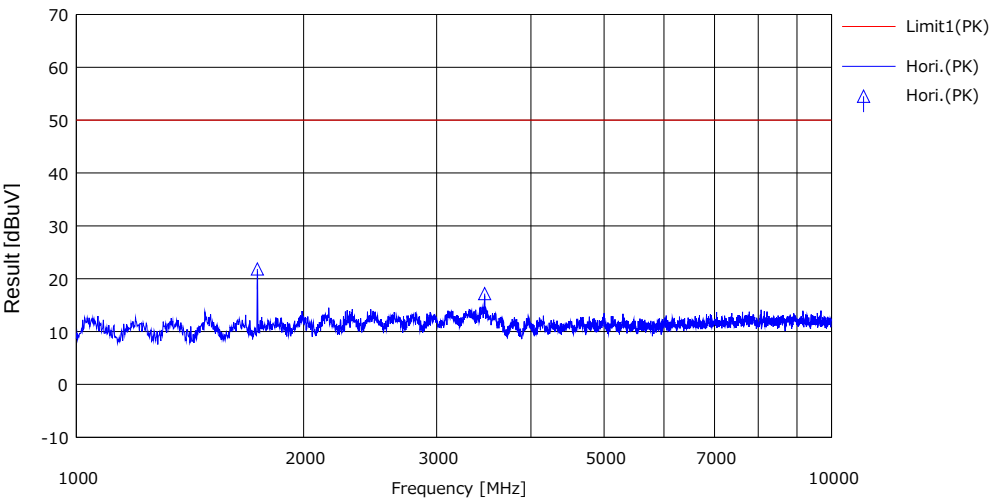
23 deg. C / 44 % RH

Hiroyuki Furutaka

(Above 1 GHz)

Mode 2, Variation 2

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq.<br>[MHz] | Reading        | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result         | Limit *1)      | Margin       | Pola.<br>[H/V] | Ant.<br>Type | Comment |
|-----|----------------|----------------|-------------------|--------------|--------------|----------------|----------------|--------------|----------------|--------------|---------|
|     |                | <PK><br>[dBuV] |                   |              |              | <PK><br>[dBuV] | <PK><br>[dBuV] | <PK><br>[dB] |                |              |         |
| 1   | 1736.759       | 54.20          | 0.00              | 0.62         | 32.99        | 21.83          | 50.00          | 28.17        | Hori.          | ---          |         |
| 2   | 3473.518       | 48.00          | 0.00              | 0.90         | 31.73        | 17.17          | 50.00          | 32.83        | Hori.          | ---          |         |

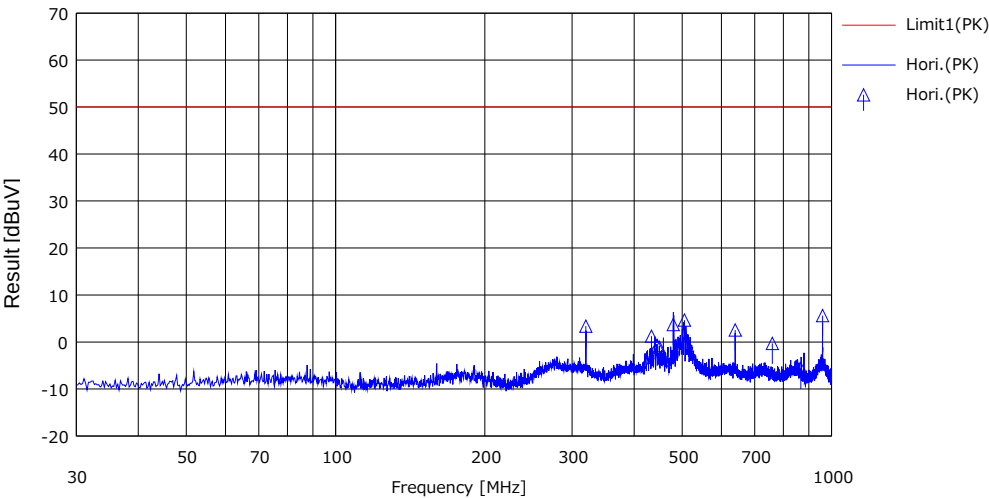
\* 2 nW = -57 dBm = 50 dBuV  
CHART: WITH FACTOR  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN  
Except for the above table: adequate margin data below the limits.

Antenna Terminal Conducted Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.1  
August 27, 2024  
23 deg. C / 44 % RH  
Hiroyuki Furutaka  
(Below 1 GHz)  
Mode 3, Variation 2

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq.<br>[MHz] | Reading<br>[PK] | Ant.Fac<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[PK] | Limit *1)<br>[PK] | Margin<br>[PK] | Pola.<br>[H/V] | Ant.<br>Type | Comment |
|-----|----------------|-----------------|-------------------|--------------|--------------|----------------|-------------------|----------------|----------------|--------------|---------|
|     |                | [dBuV]          |                   |              |              | [dBuV]         | [dBuV]            | [dB]           |                |              |         |
| 1   | 31.9745        | 41.80           | 0.00              | 0.25         | 38.69        | 3.36           | 50.00             | 46.64          | Hori.          | ---          |         |
| 2   | 43.3620        | 39.40           | 0.00              | 0.31         | 38.47        | 1.24           | 50.00             | 48.76          | Hori.          | ---          |         |
| 3   | 44.5505        | 37.40           | 0.00              | 0.31         | 38.46        | -0.75          | 50.00             | 50.75          | Hori.          | ---          |         |
| 4   | 450.000        | 37.00           | 0.00              | 0.32         | 38.46        | -1.14          | 50.00             | 51.14          | Hori.          | ---          |         |
| 5   | 47.9729        | 41.80           | 0.00              | 0.33         | 38.42        | 3.71           | 50.00             | 46.29          | Hori.          | ---          |         |
| 6   | 50.5158        | 42.70           | 0.00              | 0.34         | 38.39        | 4.65           | 50.00             | 45.35          | Hori.          | ---          |         |
| 7   | 63.9635        | 40.40           | 0.00              | 0.37         | 38.24        | 2.53           | 50.00             | 47.47          | Hori.          | ---          |         |
| 8   | 76.0000        | 37.50           | 0.00              | 0.42         | 38.23        | -0.31          | 50.00             | 50.31          | Hori.          | ---          |         |
| 9   | 86.7240        | 32.00           | 0.00              | 0.45         | 38.10        | -5.65          | 50.00             | 55.65          | Hori.          | ---          |         |
| 10  | 95.9452        | 42.90           | 0.00              | 0.47         | 37.76        | 5.61           | 50.00             | 44.39          | Hori.          | ---          |         |

\* 2 nW = -57 dBm = 50 dBuV  
CHART: WITH FACTOR  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN  
Except for the above table: adequate margin data below the limits.

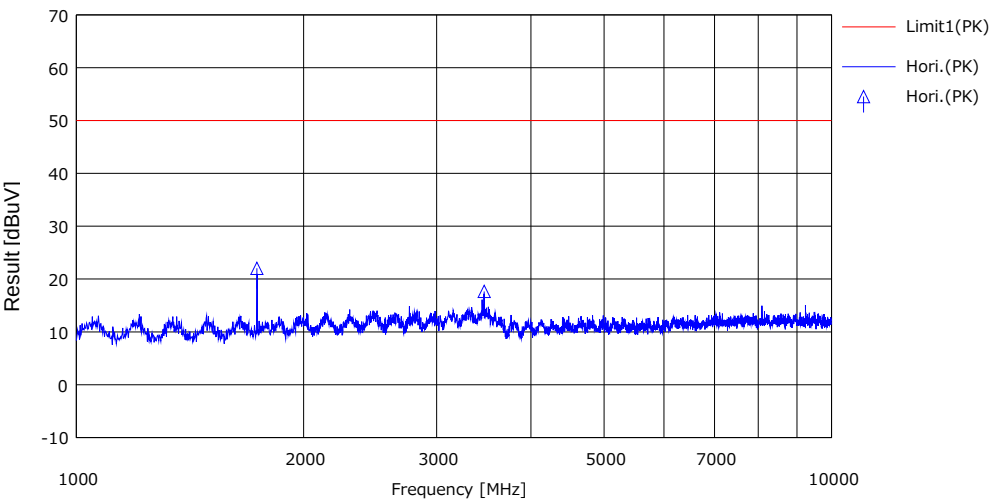


Antenna Terminal Conducted Emission

Test place  
Semi Anechoic Chamber  
Date  
Temperature / Humidity  
Engineer  
  
Mode

Ise EMC Lab.  
No.1  
August 27, 2024  
23 deg. C / 44 % RH  
Hiroyuki Furutaka  
(Above 1 GHz)  
Mode 3, Variation 2

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq.<br>[MHz] | Reading<br><PK> | Ant.Fac | Loss | Gain  | Result<br><PK> | Limit *1<br><PK> | Margin<br><PK> | Pol.  | Ant.<br>Type | Comment |
|-----|----------------|-----------------|---------|------|-------|----------------|------------------|----------------|-------|--------------|---------|
|     |                | [dBuV]          | [dB/m]  | [dB] | [dB]  | [dBuV]         | [dBuV]           | [dB]           | [H/V] |              |         |
| 1   | 1734.480       | 54.40           | 0.00    | 0.62 | 33.00 | 22.02          | 50.00            | 27.98          | Hori. | ---          |         |
| 2   | 3468.960       | 48.50           | 0.00    | 0.90 | 31.74 | 17.66          | 50.00            | 32.34          | Hori. | ---          |         |

\* 2 nW = -57 dBm = 50 dBuV  
CHART: WITH FACTOR  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE) - GAIN  
Except for the above table: adequate margin data below the limits.

## APPENDIX 2: Test instruments

### Test equipment

| Test Item | LIMS ID | Description                       | Manufacturer                    | Model                            | Serial                    | Last Calibration Date | Cal Int |
|-----------|---------|-----------------------------------|---------------------------------|----------------------------------|---------------------------|-----------------------|---------|
| RE        | 141261  | Logperiodic Antenna               | Schwarzbeck Mess-Elektronik OHG | USLP9143                         | 174                       | -                     | -       |
| RE        | 141262  | Logperiodic Antenna               | Schwarzbeck Mess-Elektronik OHG | UKLP9140-A                       | N/A                       | -                     | -       |
| RE        | 141265  | Logperiodic Antenna (200-1000MHz) | Schwarzbeck Mess-Elektronik OHG | VUSLP9111B                       | 9111B-190                 | 07/10/2024            | 12      |
| RE        | 141317  | Coaxial Cable                     | UL Japan                        | -                                | -                         | 09/12/2023            | 12      |
| RE        | 141427  | Biconical Antenna                 | Schwarzbeck Mess-Elektronik OHG | VHA9103B+BBA9106                 | 08031                     | 07/30/2024            | 12      |
| RE        | 141512  | Horn Antenna 1-18GHz              | Schwarzbeck Mess-Elektronik OHG | BBHA9120D                        | 254                       | 10/17/2023            | 12      |
| RE        | 141542  | Digital Tester                    | Fluke Corporation               | FLUKE 26-3                       | 78030611                  | 08/06/2024            | 12      |
| RE        | 141580  | MicroWave System Amplifier        | Keysight Technologies Inc       | 83017A                           | MY39500779                | 03/08/2024            | 12      |
| RE        | 141594  | Pre Amplifier                     | Keysight Technologies Inc       | 8447D                            | 2944A10150                | 02/17/2024            | 12      |
| RE        | 141949  | Test Receiver                     | Rohde & Schwarz                 | ESCI                             | 100767                    | 06/05/2024            | 12      |
| RE        | 141951  | EMI Test Receiver                 | Rohde & Schwarz                 | ESR26                            | 101408                    | 05/17/2024            | 12      |
| RE        | 142004  | AC2_Semi Anechoic Chamber(NSA)    | TDK                             | Semi Anechoic Chamber 3m         | DA-06902                  | 12/12/2023            | 24      |
| RE        | 142228  | Measure, Tape, Steel              | KOMELON                         | KMC-36                           | -                         | -                     | -       |
| RE        | 178648  | EMI measurement program           | TSJ (Techno Science Japan)      | TEPTO-DV                         | -                         | -                     | -       |
| RE        | 220646  | Attenuator                        | Huber+Suhner                    | 6806 N-50-1                      | -                         | 03/12/2024            | 12      |
| RE        | 234602  | Microwave Cable                   | Huber+Suhner                    | SF126E/11PC35/11PC35/1000M,5000M | 537063/126E / 537074/126E | 03/08/2024            | 12      |
| RE        | 238713  | Double Ridge Horn Antenna         | Schwarzbeck Mess-Elektronik OHG | BBHA 9120 C                      | 688                       | 08/10/2023            | 12      |
| RE        | 244707  | Thermo-Hygrometer                 | HIOKI E.E. CORPORATION          | LR5001                           | 231202102                 | 01/25/2024            | 12      |
| AT        | 141279  | Microwave Cable                   | Junkosha                        | MMX221-00500DMSDMS               | 1502S303                  | 03/04/2024            | 12      |
| AT        | 141530  | Digital Tester                    | Fluke Corporation               | FLUKE 26-3                       | 78030621                  | 02/01/2024            | 12      |
| AT        | 141568  | Thermo-Hygrometer                 | CUSTOM. Inc                     | CTH-201                          | 2901                      | 01/10/2024            | 12      |
| AT        | 141580  | MicroWave System Amplifier        | Keysight Technologies Inc       | 83017A                           | MY39500779                | 03/08/2024            | 12      |
| AT        | 141585  | Pre Amplifier                     | L3 Narda-MITEQ                  | MLA-10K01-B01-35                 | 1237616                   | 02/17/2024            | 12      |
| AT        | 141950  | EMI Test Receiver                 | Rohde & Schwarz                 | ESU26                            | 100412                    | 11/20/2023            | 12      |
| AT        | 141998  | AC1_Semi Anechoic Chamber(NSA)    | TDK                             | Semi Anechoic Chamber 10m        | DA-06881                  | 12/06/2023            | 24      |
| AT        | 178648  | EMI measurement program           | TSJ (Techno Science Japan)      | TEPTO-DV                         | -                         | -                     | -       |
| AT        | 248911  | Microwave Cable                   | Huber+Suhner                    | SF126E/11PC35/11PC35/1000MM      | 537060/126E               | 05/29/2024            | 12      |

\*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

The expiration date of the calibration is the end of the expired month.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

Test item:

RE: Radiated emission

AT: Antenna Terminal Conducted