



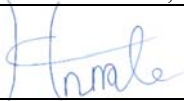
EMI TEST REPORT

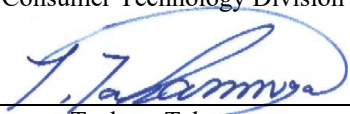
Test Report No. : 13481459H-R1

Applicant : DENSO TEN Limited
Type of EUT : Car Audio
Model Number of EUT : FT0025A
FCC ID : BABFT0025A
Test regulation : FCC Part 15 Subpart B: 2020
ICES-003 Issue 6: 2016 (updated April 2019)
Test Result : Complied (Refer to SECTION 3.2)

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
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6. This test report covers EMC technical requirements. It does not cover administrative issues such as Manual or non-EMC test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Ise EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 13481459H. 13481459H is replaced with this report.

Date of test: September 14 and 15, 2020

Representative test engineer: 
Hiroki Numata
Engineer
Consumer Technology Division

Approved by: 
Tsubasa Takayama
Leader
Consumer Technology Division



CERTIFICATE 5107.02

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

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REVISION HISTORY

Original Test Report No.: 13481459H

| Revision | Test report No. | Date | Page revised | Contents |
|-----------------|-----------------|-----------------------|--------------|--|
| - (Original) | 13481459H | September 28, 2020 | - | - |
| 1 | 13481459H-R1 | October 2, 2020 | P.1 | Deletion of “Class B” from test regulation |
| 1 | 13481459H-R1 | October 2, 2020 | P. 6 | Correction of Limits |
| 1 | 13481459H-R1 | October 2, 2020 | P. 6 | Addition of Remarks *2) |
| 1 | 13481459H-R1 | October 2, 2020 | P.11 | Correction of Test distance: from “3 m” to “3 m (30 MHz - 10000 MHz) / 1 m (10000 MHz - 40000 MHz)” |
| 1 | 13481459H-R1 | October 2, 2020 | P.11 | Correction of sentence for *1) of above table: from Figure 2 to Figure 1 |
| 1 | 13481459H-R1 | October 2, 2020 | P.13 | Correction of IF Bandwidth for Frequency range Below 1 GHz: from VBW: 100 kHz to VBW: 300 kHz |

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Reference: Abbreviations (Including words undescribed in this report)

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

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SECTION 1: Customer information

Company Name : DENSO TEN Limited
Address : 2-28, Goshō-dori 1-Chome, Hyogo-ku, Kobe 652-8510, JAPAN
Telephone Number : +81-78-682-2159
Facsimile Number : +81-78-682-2169
Contact Person : Daisuke Fukii

The information provided from the customer is as follows;

- Applicant, Type 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
- SECTION 4: Operation of EUT during testing

* The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

SECTION 2: Equipment under test (EUT)

2.1 Identification of EUT

Type : Car Audio
Model Number : FT0025A
Serial Number : Refer to SECTION 4.2
Rating : DC 12 V
Receipt Date : September 14, 2020
Country of Mass-production : Thailand
Condition : Production model
Modification : No Modification by the test lab

2.2 Product Description

Model: FT0025A (referred to as the EUT in this report) is a Car Audio.

General Specification

Feature of EUT:

Clock frequency(ies) in the system : 3.93216 MHz: System Microcomputer
5 MHz: Panel Micon
16.9344 MHz, 48.0 MHz: USB Decoder IC
35.28 MHz: Crystal Oscillator

Radio Specification

[AM / FM]

Type of Receiver : Receiver
Frequency of Operation : AM: 531 kHz to 1602 kHz
FM: 87.5 MHz to 108.0 MHz
Channel spacing : AM: 9 kHz
FM: 0.05 MHz
Antenna connector type : HFC

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart B
FCC Part 15 final revised on June 26, 2020 and effective July 27, 2020
Title : FCC 47CFR Part15 Radio Frequency Device
Subpart B Unintentional Radiators

Test specification : ICES-003 Issue 6: 2016 (updated April 2019)
Title : Spectrum Management and Telecommunications
Interference-Causing Equipment Standard
Information Technology Equipment (Including Digital Apparatus) –
Limits and Methods of Measurement

3.2 Procedures and results

| Item | Test Procedure | Limits | Deviation | Worst margin | Result | Remarks |
|---|---|--|-----------|-------------------------------------|-----------------|---------|
| Conducted emission | FCC: ANSI C63.4: 2014 7. AC power - line conducted emission measurements IEEE 187:2003 ----- IC: ICES-003 Issue 6: 2016 + Amendment 1: 2017 | FCC:Part 15 Subpart B 15.107(a) | N/A | - | N/A | *1) |
| Radiated emission | FCC: ANSI C63.4: 2014 8. Radiated emission measurements IEEE 187:2003 ----- IC: ICES-003 Issue 6: 2016 + Amendment 1: 2017 | FCC: Part 15 Subpart B 15.109(a) | N/A | 1.5 dB 84.024 MHz, Horizontal | Complied# a) | *2) |
| Antenna Terminal | FCC: ANSI C63.4: 2014 12. Measurement of unintentional radiators other than ITE IEEE 187:2003 ----- IC: - | FCC: Part 15 Subpart B 15.111(a) | N/A | 21.93 dB 1410.888 MHz | Complied b) | *2) |
| <p>*Note: UL Japan, Inc's EMI Work Procedure 13-EM-W0420. *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. *2) Measurements were limited up to 40 GHz according to the customer's request.</p> <p>a) Refer to APPENDIX 1 (data of Radiated Emission) b) Refer to APPENDIX 1 (data of Antenna Terminal Conducted Emission)</p> <p>Symbols: Complied The data of this test item has enough margin, more than the measurement uncertainty. Complied# The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.</p> | | | | | | |

3.3 Addition to standard

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

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3.4 Uncertainty

There is no applicable rule of uncertainty in this applied standard. Therefore, the results are derived depending on whether or not laboratory uncertainty is applied.

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 | Uncertainty (+/-) |
|----------------------|---|-------------------|
| 3 m | 30 MHz to 200 MHz (Horizontal) (Vertical) | 4.8 dB |
| | | 5.0 dB |
| | 200 MHz to 1000 MHz (Horizontal) (Vertical) | 5.2 dB |
| | | 6.3 dB |
| 10 m | 30 MHz to 200 MHz (Horizontal) (Vertical) | 4.8 dB |
| | | 4.8 dB |
| | 200 MHz to 1000 MHz (Horizontal) (Vertical) | 5.0 dB |
| | | 5.0 dB |
| 3 m | 1 GHz to 6 GHz | 4.9 dB |
| | 6 GHz to 18 GHz | 5.2 dB |
| 1 m | 10 GHz to 26.5 GHz | 5.5 dB |
| | 26.5 GHz to 40 GHz | 5.5 dB |
| 0.5 m | 26.5 GHz to 40 GHz | 5.5 dB |
| 10 m | 1 GHz to 18 GHz | 5.2 dB |

Antenna Terminal test

| Test Item | Uncertainty (+/-) |
|---|-------------------|
| Antenna terminal conducted emission / Power density / Burst power | 2.6 dB |

3.5 Test Location

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* A2LA Certificate Number: 5107.02/ FCC Test Firm Registration Number: 199967 / ISED Lab Company Number: 2973C

| 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.11 measurement room | 6.2 x 4.7 x 3.0 | 4.8 x 4.6 | - | - |

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

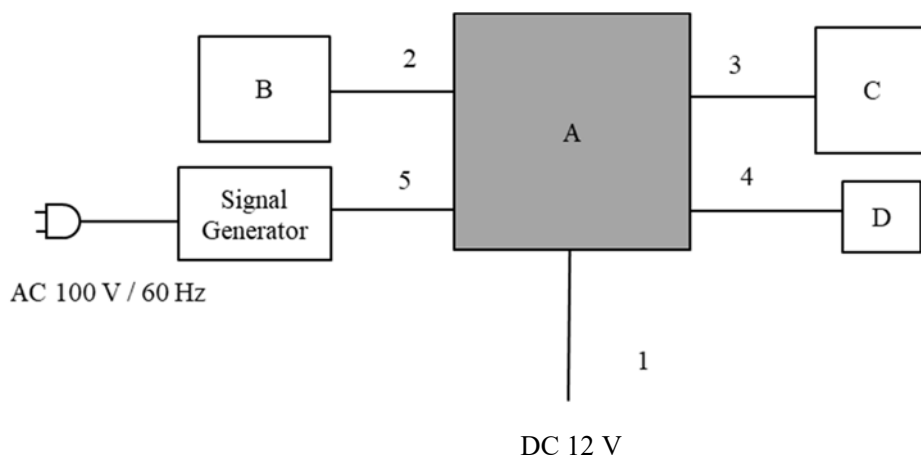
4.1 Operating Mode(s)

| Mode | Remarks |
|------------------------------|---------|
| 1. USB Play Mode | - |
| 2. FM Receiving Mode (Other) | - |
| 3. FM Receiving Mode (Local) | - |

Software : Main Micon Soft Ver. 0A182008

4.2 Configuration and peripherals

Radiated Emission



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

Description of EUT and Support equipment

| No. | Item | Model number | Serial number | Manufacturer | Remarks |
|-----|---------------|----------------|---------------|-------------------|---------|
| A | Car Audio | FT0025A | BN400183 | DENSO TEN Limited | EUT |
| B | Speaker Dummy | - | - | - | - |
| C | Jig Board | - | - | - | - |
| D | USB memory | RUF3-K8GA-BK/N | P90611 | Buffalo | - |

List of cables used

| No. | Name | Length (m) | Shield | | Remarks |
|-----|---------------|------------|------------|------------|---------|
| | | | Cable | Connector | |
| 1 | DC Cable | 1.6 | Unshielded | Unshielded | - |
| 2 | Speaker Cable | 1.8 | Unshielded | Unshielded | - |
| 3 | Signal Cable | 1.7 | Unshielded | Unshielded | - |
| 4 | USB Cable | 2.7 | Shielded | Shielded | - |
| 5 | BNC Cable | 1.5 | Shielded | Shielded | - |

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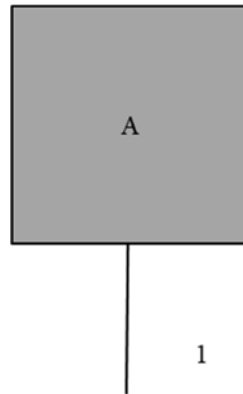
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Antenna Terminal



DC 12 V

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

Description of EUT

| No. | Item | Model number | Serial number | Manufacturer | Remarks |
|-----|-----------|--------------|---------------|-------------------|---------|
| A | Car Audio | FT0025A | BN400183 | DENSO TEN Limited | EUT |

List of cables used

| No. | Name | Length (m) | Shield | | Remarks |
|-----|----------|------------|------------|------------|---------|
| | | | Cable | Connector | |
| 1 | DC Cable | 1.6 | Unshielded | Unshielded | - |

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SECTION 5: Radiated Emission

5.1 Operating environment

Test place : No.4 semi anechoic chamber
Temperature : See data
Humidity : 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 center 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 - 200 MHz (Biconical antenna) / 200 MHz - 1000 MHz (Logperiodic antenna)
1000 MHz - 40000 MHz (Horn antenna)
Test distance : 3 m (30 MHz - 10000 MHz) / 1 m (10000 MHz - 40000 MHz)
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, or the Spectrum Analyzer.

The radiated emission measurements were made with the following detector function of the Test Receiver and the Spectrum Analyzer.

The test of Local oscillator spurious has been measured up to appropriate frequency based on the result of the antenna terminal test.

For above 1 GHz, test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

| | | |
|-----------------|----------------|--|
| Frequency | Below 1 GHz | 1 GHz - 26.5 GHz *1) |
| Instrument used | Test Receiver | Spectrum Analyzer |
| IF Bandwidth | QP: BW 120 kHz | PK: RBW: 1 MHz / VBW: 3 MHz AV *2): RBW: 1 MHz / VBW: 10 Hz |

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

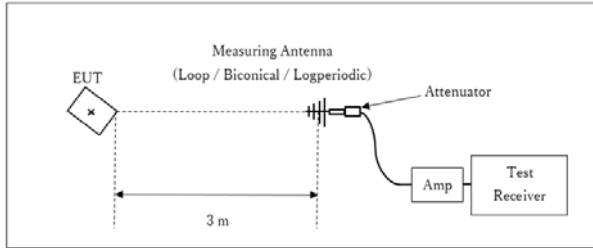
*2) When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

| | |
|-----------------|----------------------------------|
| Frequency | Above 26.5 GHz *1) |
| Instrument used | Test Receiver |
| IF Bandwidth | PK: BW 1 MHz, CISPR AV: 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

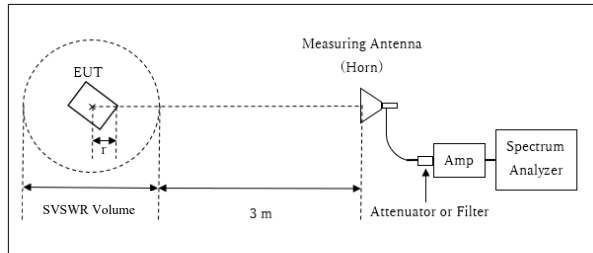
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz - 10 GHz



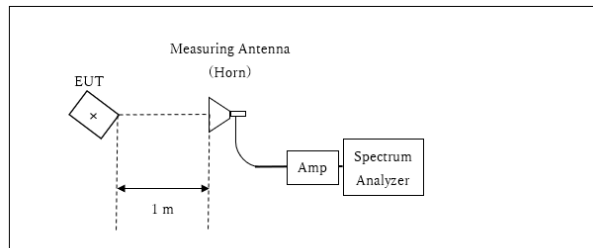
r : Radius of an outer periphery of EUT

× : Center of turn table

Distance Factor: $20 \times \log(3.50 \text{ m}^*/3.0 \text{ m}) = 1.34 \text{ dB}$
* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.50 \text{ m}$

SVSWR Volume: 2 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
r = 0.50 m

10 GHz - 40 GHz



× : Center of turn table

Distance Factor: $20 \times \log(1.0 \text{ m}^* / 3.0 \text{ m}) = -9.54 \text{ dB}$
*Test Distance: 1 m

The test was made on EUT at the normal use position.

5.5 Test result

Summary of the test results: Pass

The limit is rounded down to one decimal place.

The test result is rounded off to one or two decimal places, so some differences might be observed.

Date: September 14, 2020
Date: September 15, 2020

Test engineer: Kiyoshiro Okazaki
Test engineer: Hiroki Numata

SECTION 6: Antenna Terminal

6.1 Operating environment

Test place : No.6 Measurement room
Temperature : See data
Humidity : See data

6.2 Test configuration

EUT was placed on a wooden table 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 - 1000 MHz / 1000 MHz - 40000 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 | Spectrum Analyzer | Spectrum Analyzer *1) |
| IF Bandwidth | PK: RBW: 100 kHz / VBW: 300 kHz | PK: RBW: 1 MHz / VBW: 3 MHz |

*1) The Spectrum Analyzer was used in 3 dB resolution bandwidth.

6.5 Test result

Summary of the test results: Pass

Date: September 14, 2020

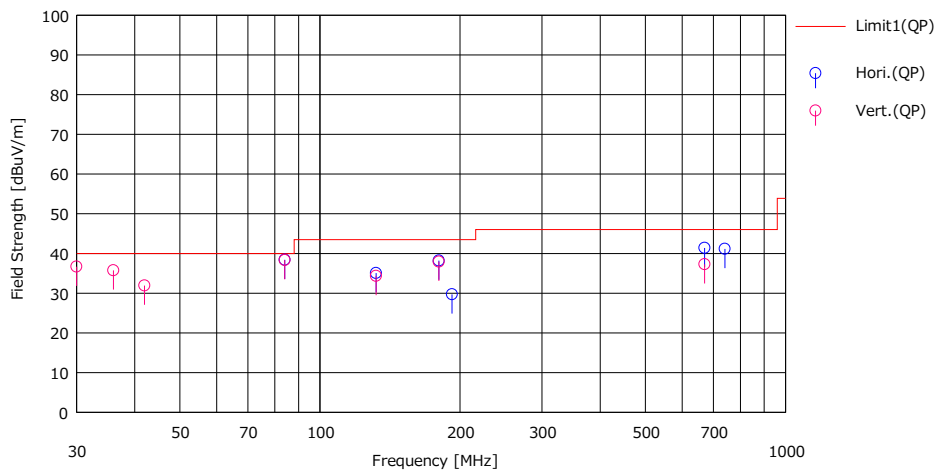
Test engineer: Masaya Minami

APPENDIX 1: Test data

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 15, 2020
Temperature / Humidity 22 deg. C / 66 % RH
Engineer Hiroki Numata
(Below 1 GHz)
Mode Mode 1

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result | Limit | Margin | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|-------------|---------|-----------------|-----------|-----------|----------|-------|--------|-------------|-------------|-------------|-----------|---------|
| | | [dBuV] | | | | [dBuV/m] | [QP] | [QP] | | | | | |
| 1 | 84.024 | 55.10 | 7.35 | 7.91 | 31.94 | 38.42 | 40.00 | 1.5 | Hori. | 264 | 274 | BA | |
| 2 | 132.031 | 44.70 | 13.84 | 8.39 | 31.88 | 35.05 | 43.50 | 8.4 | Hori. | 185 | 111 | BA | |
| 3 | 180.043 | 45.20 | 16.03 | 8.82 | 31.84 | 38.21 | 43.50 | 5.2 | Hori. | 180 | 129 | BA | |
| 4 | 192.205 | 36.30 | 16.31 | 8.92 | 31.83 | 29.70 | 43.50 | 13.8 | Hori. | 150 | 309 | BA | |
| 5 | 670.328 | 42.10 | 19.53 | 11.80 | 32.05 | 41.38 | 46.00 | 4.6 | Hori. | 100 | 180 | LA23 | |
| 6 | 740.883 | 40.80 | 20.11 | 12.11 | 31.88 | 41.14 | 46.00 | 4.8 | Hori. | 100 | 48 | LA23 | |
| 7 | 30.005 | 43.10 | 18.41 | 7.15 | 31.99 | 36.67 | 40.00 | 3.3 | Vert. | 100 | 359 | BA | |
| 8 | 36.011 | 44.30 | 16.16 | 7.25 | 31.98 | 35.73 | 40.00 | 4.2 | Vert. | 100 | 359 | BA | |
| 9 | 42.000 | 42.50 | 14.07 | 7.35 | 31.98 | 31.94 | 40.00 | 8.0 | Vert. | 100 | 127 | BA | |
| 10 | 84.024 | 55.00 | 7.35 | 7.91 | 31.94 | 38.32 | 40.00 | 1.6 | Vert. | 100 | 359 | BA | |
| 11 | 132.031 | 44.00 | 13.84 | 8.39 | 31.88 | 34.35 | 43.50 | 9.1 | Vert. | 100 | 279 | BA | |
| 12 | 180.043 | 44.90 | 16.03 | 8.82 | 31.84 | 37.91 | 43.50 | 5.5 | Vert. | 100 | 190 | BA | |
| 13 | 670.328 | 38.00 | 19.53 | 11.80 | 32.05 | 37.28 | 46.00 | 8.7 | Vert. | 100 | 0 | LA23 | |

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.

UL Japan, Inc.

Ise EMC Lab.

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

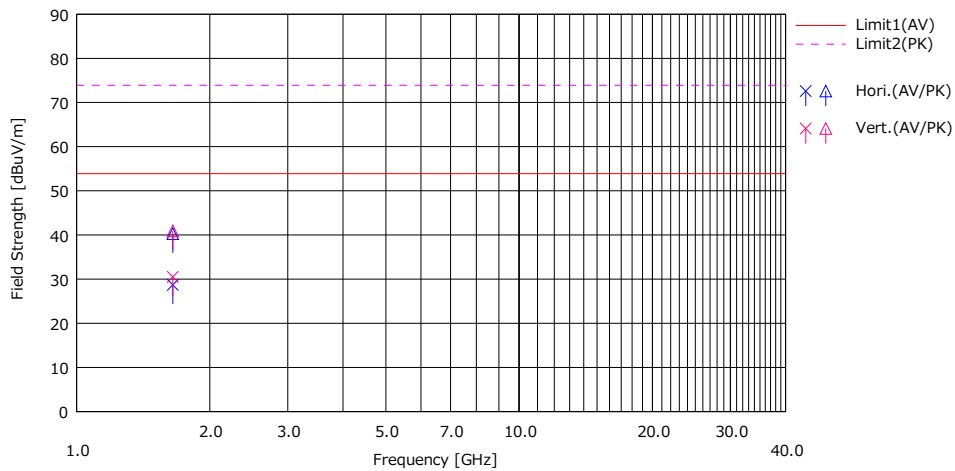
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 14, 2020
Temperature / Humidity 22 deg. C / 60 % RH
Engineer Kiyoshiro Okazaki
(Above 1 GHz)
Mode Mode 1

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading | | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result | | Limit | | Margin | | Pola [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|----------------|----------------|----------------|--------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
| | | (AV) [dBuV] | (PK) [dBuV] | | | | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dB] | (PK) [dB] | | | | | |
| 1 | 1650.000 | 33.50 | 45.10 | 24.88 | 3.27 | 32.95 | 28.70 | 40.30 | 53.90 | 73.90 | 25.2 | 33.6 | Hori. | 141 | 333 | H2.1 | |
| 2 | 1650.000 | 35.30 | 45.70 | 24.88 | 3.27 | 32.95 | 30.50 | 40.90 | 53.90 | 73.90 | 23.4 | 33.0 | Vert. | 100 | 348 | H2.1 | |

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 + D-factor) - GAIN(AMP)

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

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Ise EMC Lab.

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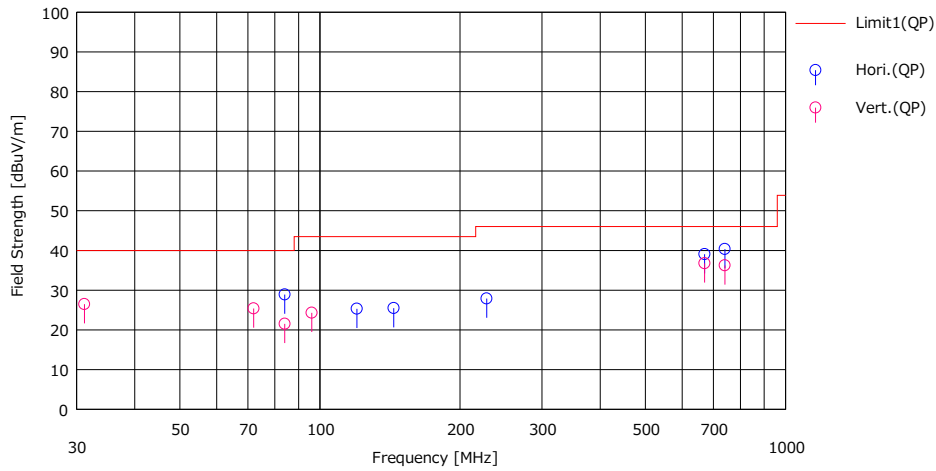
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 15, 2020
Temperature / Humidity 22 deg. C / 66 % RH
Engineer Hiroki Numata
(Below 1 GHz)
Mode Mode 2

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | Result | Limit | Margn | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|----------------|---------|-------------------|--------------|--------------|--------|-------|-------|----------------|----------------|----------------|--------------|---------|
| | | [dBuV] | | | | [dBP] | [dBP] | [dBP] | | | | | |
| 1 | 84.024 | 45.60 | 7.35 | 7.91 | 31.94 | 28.92 | 40.00 | 11.0 | Hori. | 287 | 258 | BA | |
| 2 | 120.038 | 36.20 | 12.71 | 8.28 | 31.89 | 25.30 | 43.50 | 18.2 | Hori. | 311 | 97 | BA | |
| 3 | 144.035 | 34.20 | 14.64 | 8.51 | 31.87 | 25.48 | 43.50 | 18.0 | Hori. | 215 | 107 | BA | |
| 4 | 228.093 | 39.20 | 11.27 | 9.21 | 31.80 | 27.88 | 46.00 | 18.1 | Hori. | 140 | 303 | LA23 | |
| 5 | 670.328 | 39.80 | 19.53 | 11.80 | 32.05 | 39.08 | 46.00 | 6.9 | Hori. | 100 | 200 | LA23 | |
| 6 | 740.893 | 40.00 | 20.11 | 12.11 | 31.88 | 40.34 | 46.00 | 5.6 | Hori. | 100 | 0 | LA23 | |
| 7 | 31.190 | 33.40 | 17.90 | 7.17 | 31.99 | 26.48 | 40.00 | 13.5 | Vert. | 100 | 355 | BA | |
| 8 | 72.057 | 43.30 | 6.27 | 7.77 | 31.96 | 25.38 | 40.00 | 14.6 | Vert. | 100 | 188 | BA | |
| 9 | 84.024 | 38.20 | 7.35 | 7.91 | 31.94 | 21.52 | 40.00 | 18.4 | Vert. | 115 | 0 | BA | |
| 10 | 96.027 | 38.80 | 9.38 | 8.04 | 31.92 | 24.30 | 43.50 | 19.2 | Vert. | 100 | 171 | BA | |
| 11 | 670.328 | 37.50 | 19.53 | 11.80 | 32.05 | 36.78 | 46.00 | 9.2 | Vert. | 100 | 145 | LA23 | |
| 12 | 740.893 | 35.90 | 20.11 | 12.11 | 31.88 | 36.24 | 46.00 | 9.7 | Vert. | 100 | 146 | LA23 | |

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.

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Ise EMC Lab.

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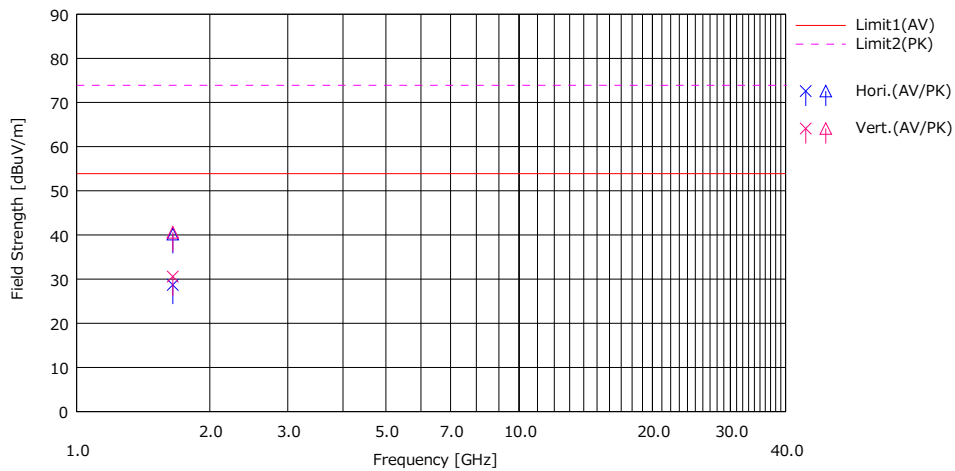
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 14, 2020
Temperature / Humidity 22 deg. C / 60 % RH
Engineer Kiyoshiro Okazaki
(Above 1 GHz)
Mode Mode 2

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading | | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result | | Limit | | Margin | | Pola [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|----------------|----------------|----------------|--------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
| | | (AV) [dBuV] | (PK) [dBuV] | | | | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dB] | (PK) [dB] | | | | | |
| 1 | 1650.040 | 33.50 | 45.00 | 24.88 | 3.27 | 32.95 | 28.70 | 40.20 | 53.90 | 73.90 | 25.2 | 33.7 | Hori. | 142 | 359 | H2.1 | |
| 2 | 1650.040 | 35.40 | 45.40 | 24.88 | 3.27 | 32.95 | 30.60 | 40.60 | 53.90 | 73.90 | 23.3 | 33.3 | Vert. | 100 | 134 | H2.1 | |

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 + D-factor) - GAIN(AMP)

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

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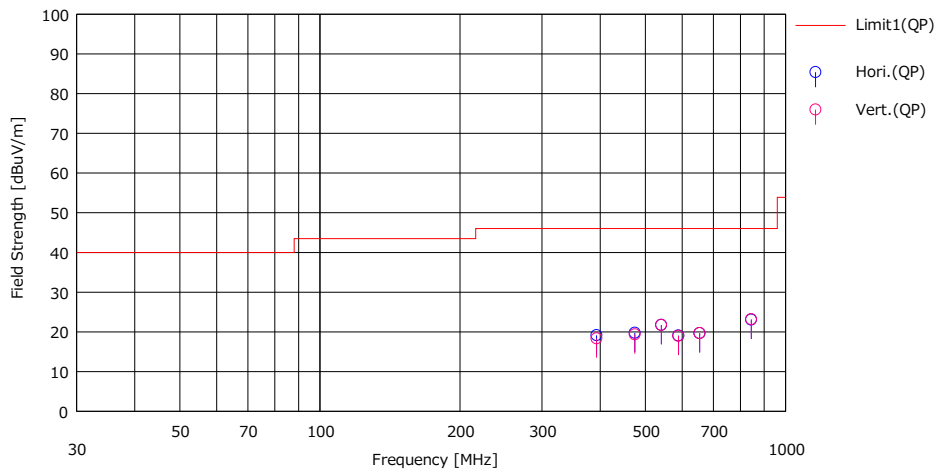
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 15, 2020
Temperature / Humidity 22 deg. C / 66 % RH
Engineer Hiroki Numata
(Below 1 GHz)
Mode Mode 3

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading (QP) | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | Result (QP) | Limit (QP) | Margin (QP) | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|-------------|--------------|----------------|-----------|-----------|-------------|------------|-------------|-------------|-------------|-------------|-----------|---------|
| | | [dBuV] | | | | [dBuV/m] | [dBuV/m] | [dB] | | | | | |
| 1 | 392.829 | 25.10 | 15.55 | 10.31 | 31.81 | 19.15 | 46.00 | 26.8 | Hori. | 100 | 60 | LA23 | |
| 2 | 474.789 | 23.80 | 17.02 | 10.78 | 31.85 | 19.75 | 46.00 | 26.2 | Hori. | 100 | 320 | LA23 | |
| 3 | 540.944 | 24.70 | 17.79 | 11.16 | 31.91 | 21.74 | 46.00 | 24.2 | Hori. | 100 | 320 | LA23 | |
| 4 | 589.124 | 20.70 | 18.93 | 11.40 | 31.96 | 19.07 | 46.00 | 26.9 | Hori. | 100 | 0 | LA23 | |
| 5 | 653.982 | 20.70 | 19.27 | 11.72 | 32.03 | 19.66 | 46.00 | 26.3 | Hori. | 100 | 0 | LA23 | |
| 6 | 844.403 | 20.60 | 21.24 | 12.57 | 31.36 | 23.05 | 46.00 | 22.9 | Hori. | 100 | 0 | LA23 | |
| 7 | 392.829 | 24.30 | 15.55 | 10.31 | 31.81 | 18.35 | 46.00 | 27.6 | Vert. | 100 | 336 | LA23 | |
| 8 | 474.789 | 23.40 | 17.02 | 10.78 | 31.85 | 19.35 | 46.00 | 26.6 | Vert. | 100 | 100 | LA23 | |
| 9 | 540.944 | 24.70 | 17.79 | 11.16 | 31.91 | 21.74 | 46.00 | 24.2 | Vert. | 100 | 62 | LA23 | |
| 10 | 589.124 | 20.60 | 18.93 | 11.40 | 31.96 | 18.97 | 46.00 | 27.0 | Vert. | 100 | 0 | LA23 | |
| 11 | 653.982 | 20.70 | 19.27 | 11.72 | 32.03 | 19.66 | 46.00 | 26.3 | Vert. | 100 | 0 | LA23 | |
| 12 | 844.403 | 20.70 | 21.24 | 12.57 | 31.36 | 23.15 | 46.00 | 22.8 | Vert. | 100 | 0 | LA23 | |

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.

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Ise EMC Lab.

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

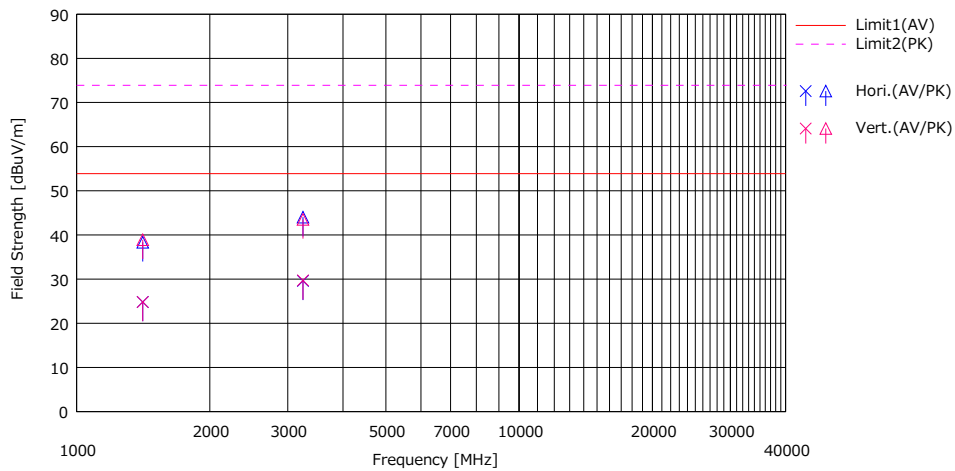
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Emission

Report No. 13481459H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.4
Date September 14, 2020
Temperature / Humidity 22 deg. C / 60 % RH
Engineer Kiyoshiro Okazaki
(Above 1 GHz)
Mode Mode 3

Limit : FCC_Part 15 Subpart B(15.109)_Class B



| No. | Freq. [MHz] | Reading | | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | Result | | Limit | | Margin | | Pola [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|----------------|----------------|----------------|-------------------|--------------|--------------|------------------|------------------|------------------|------------------|--------------|--------------|---------------|----------------|----------------|--------------|---------|
| | | (AV) [dBuV] | (PK) [dBuV] | | | | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dBuV/m] | (PK) [dBuV/m] | (AV) [dB] | (PK) [dB] | | | | | |
| 1 | 1410.888 | 30.00 | 43.50 | 25.31 | 3.11 | 33.59 | 24.83 | 38.33 | 53.90 | 73.90 | 29.0 | 35.5 | Hori. | 100 | 123 | H21 | |
| 2 | 3248.180 | 28.30 | 42.70 | 28.77 | 4.11 | 31.56 | 29.62 | 44.02 | 53.90 | 73.90 | 24.2 | 29.8 | Hori. | 100 | 211 | H21 | |
| 3 | 1410.888 | 30.00 | 44.10 | 25.31 | 3.11 | 33.59 | 24.83 | 38.93 | 53.90 | 73.90 | 29.0 | 34.9 | Vert. | 100 | 41 | H21 | |
| 4 | 3248.180 | 28.40 | 42.20 | 28.77 | 4.11 | 31.56 | 29.72 | 43.52 | 53.90 | 73.90 | 24.1 | 30.3 | Vert. | 100 | 242 | H21 | |

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.

* No signal was detected above 10 GHz.

UL Japan, Inc.

Ise EMC Lab.

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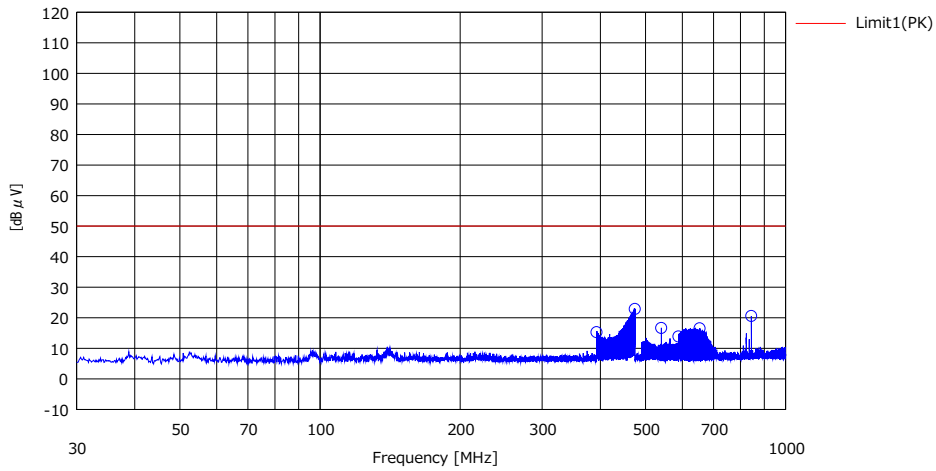
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Antenna Terminal Conducted Emission

Report No. 13481459H
Test place Ise EMC Lab.
Shielded room No.6
Date September 14, 2020
Temperature / Humidity 23 deg. C / 51 % RH
Engineer Masaya Minami
(Below 1 GHz)
Mode Mode 3

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq. | Reading | Ant.Fac | Loss | Gain | Result | Limit*1) | Margin | Pola. | Height | Angle | Ant. Type | Comment |
|-----|---------|---------|---------|------|-------|--------|----------|--------|-------|--------|-------|-----------|----------------|
| | [MHz] | [dBuV] | [dB/m] | [dB] | [dB] | [dBuV] | [dBuV] | [dB] | | | | | |
| 1 | 392.829 | 36.86 | --- | 6.89 | 28.51 | 15.24 | 50.00 | 34.76 | --- | --- | --- | --- | |
| 2 | 474.788 | 44.88 | --- | 7.02 | 29.06 | 22.84 | 50.00 | 27.16 | --- | --- | --- | --- | LOCAL:108.0MHz |
| 3 | 540.944 | 38.83 | --- | 7.09 | 29.30 | 16.62 | 50.00 | 33.38 | --- | --- | --- | --- | |
| 4 | 589.124 | 36.11 | --- | 7.10 | 29.37 | 13.84 | 50.00 | 36.16 | --- | --- | --- | --- | |
| 5 | 653.982 | 38.72 | --- | 7.14 | 29.37 | 16.49 | 50.00 | 33.51 | --- | --- | --- | --- | |
| 6 | 844.403 | 42.28 | --- | 7.31 | 29.06 | 20.53 | 50.00 | 29.47 | --- | --- | --- | --- | |

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

CHART: WITH FACTOR

CALCULATION: RESULT = READING + LOSS (CABLE + ATT) - GAIN(AMP))

*1) 2 nW = -57 dBm = 50 dBuV

UL Japan, Inc.

Ise EMC Lab.

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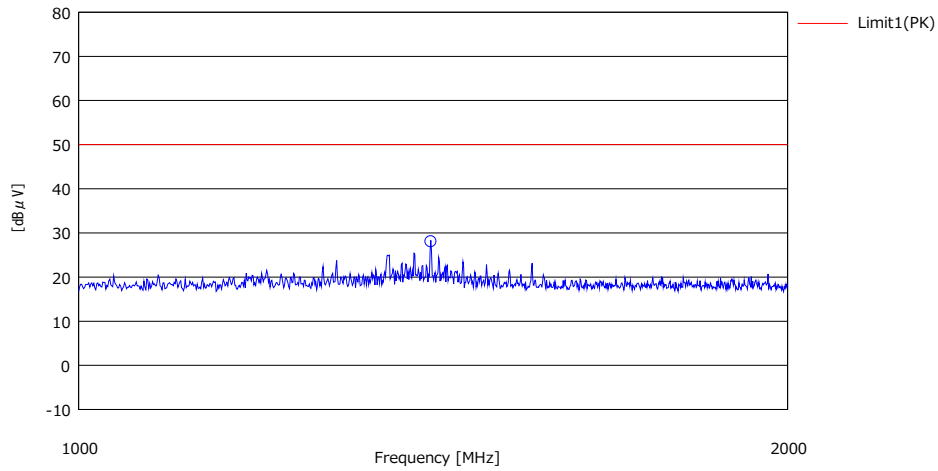
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Antenna Terminal Conducted Emission

Report No. 13481459H
Test place Ise EMC Lab.
Shielded room No.6
Date September 14, 2020
Temperature / Humidity 23 deg. C / 51 % RH
Engineer Masaya Minami
(1 GHz - 2 GHz)
Mode Mode 3

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq. | Reading | Ant.Fac | Loss | Gain | Result | Limit*1) | Margin | Pola. | Height | Angle | Ant. Type | Comment |
|-----|----------|---------|---------|------|-------|--------|----------|--------|-------|--------|-------|-----------|---------|
| | [MHz] | [dBμV] | [dB/m] | [dB] | [dB] | [dBμV] | [dBμV] | [dB] | | | | | |
| 1 | 1410.888 | 55.95 | --- | 8.02 | 35.90 | 28.07 | 50.00 | 21.93 | --- | --- | --- | --- | |

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

CHART: WITH FACTOR

CALCULATION: RESULT = READING + LOSS (CABLE + ATT) - GAIN(AMP)

*1) 2 nW = -57 dBm = 50 dBμV

UL Japan, Inc.

Ise EMC Lab.

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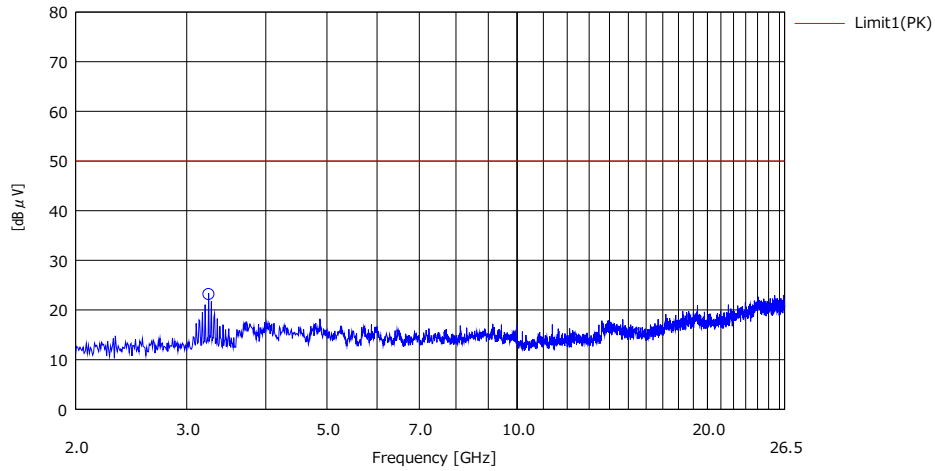
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Antenna Terminal Conducted Emission

Report No. 13481459H
Test place Ise EMC Lab.
Shielded room No.6
Date September 14, 2020
Temperature / Humidity 23 deg. C / 51 % RH
Engineer Masaya Minami
(2 GHz - 26.5 GHz)
Mode Mode 3

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq. | Reading | Ant.Fac | Loss | Gain | Result | Limit*1) | Margin | Pola. | Height | Angle | Ant. Type | Comment |
|-----|----------|---------|---------|------|-------|--------|----------|--------|-------|--------|-------|-----------|---------|
| | [MHz] | [dBuV] | [dB/m] | [dB] | [dB] | [dBuV] | [dB] | | | | | | |
| 1 | 3248.180 | 53.34 | --- | 4.60 | 34.78 | 23.16 | 50.00 | 26.84 | --- | --- | --- | --- | |

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

CHART: WITH FACTOR

CALCULATION: RESULT = READING + LOSS (CABLE + ATT) - GAIN(AMP)

*1) 2 nW = -57 dBm = 50 dBuV

UL Japan, Inc.

Ise EMC Lab.

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

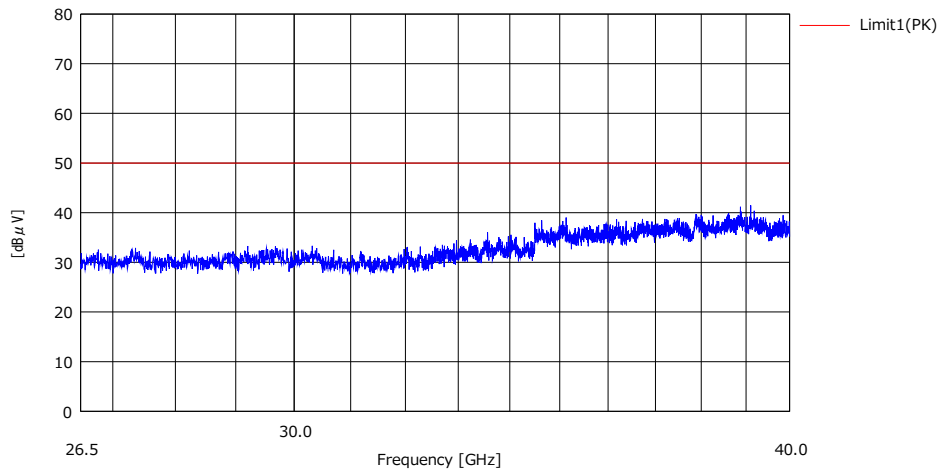
Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Antenna Terminal Conducted Emission

Report No. 13481459H
 Test place Ise EMC Lab.
 Shielded room No.6
 Date September 14, 2020
 Temperature / Humidity 23 deg. C / 51 % RH
 Engineer Masaya Minami
 (Above 26.5 GHz)
 Mode Mode 3

Limit : FCC15.111 Antenna terminal measurement



| No. | Freq. [MHz] | Reading [dBμV] | Ant.Fac [dB/m] | Loss [dB] | Gain [dB] | Result [dBμV] | Limit | Margin | Pola. [H/V] | Height [cm] | Angle [deg] | Ant. Type | Comment |
|-----|----------------|-------------------|-------------------|--------------|--------------|------------------|----------------|--------------|----------------|----------------|----------------|--------------|---------|
| | | | | | | | <PK> [dBμV] | <PK> [dB] | | | | | |
| | | | | | | | | | | | | | |

CHART: WITH FACTOR
 CALCULATION: RESULT = READING + LOSS (CABLE + ATT) - GAIN(AMP))

* No signal detected.

APPENDIX 2: Test instruments

Test equipment

| Test Item | Local ID | LIMS ID | Description | Manufacturer | Model | Serial | Last Calibration Date | Cal Int |
|-----------|---------------|---------|-----------------------------------|-------------------------------|---|----------------------------------|-----------------------|---------|
| AT | MSA-17 | 141904 | Spectrum Analyzer | Keysight Technologies Inc | N9030A | US51350215 | 09/20/2019 | 12 |
| AT | MCC-64 | 141327 | Coaxial Cable | UL Japan | - | - | 02/04/2020 | 12 |
| AT | MCC-38 | 141395 | Coaxial Cable | UL Japan | - | - | 11/12/2019 | 12 |
| AT | MPA-24 | 141594 | Pre Amplifier | Keysight Technologies Inc | 8447D | 2944A10150 | 02/10/2020 | 12 |
| AT | MMP-01 | 141550 | Matching Pad Anritsu | ANRITSU | MB-009 | 40063 | 07/02/2020 | 12 |
| AT | MCC-216 | 141392 | Microwave Cable | Junkosha | MWX221 | 1604S253(1 m) / 537073/126E(5 m) | 02/18/2020 | 12 |
| AT | MPA-10 | 141579 | Pre Amplifier | Keysight Technologies Inc | 8449B | 3008A02142 | 01/07/2020 | 12 |
| AT | MCC-55 | 141326 | Microwave Cable | Suhner | SUCOFLEX101 | 2874(1m) / 2877(5m) | 03/24/2020 | 12 |
| AT | MPA-03 | 141577 | Microwave System Power Amplifier | Keysight Technologies Inc | 83050A | MY39500610 | 10/01/2019 | 12 |
| AT | MOS-34 | 141572 | Thermo-Hygrometer | CUSTOM. Inc | CTH-201 | 3401 | 01/07/2020 | 12 |
| AT | MMM-16 | 141360 | DIGITAL HiTESTER | Hioki | 3805 | 70900532 | 01/06/2020 | 12 |
| AT | MJM-04 | 142178 | Measure | PROMART | SEN1635 | - | - | - |
| RE | MAEC-04 | 142011 | AC4 Semi Anechoic Chamber(NSA) | TDK | Semi Anechoic Chamber 3m | DA-10005 | 05/25/2020 | 24 |
| RE | MOS-15 | 141562 | Thermo-Hygrometer | CUSTOM. Inc | CTH-201 | 0010 | 01/07/2020 | 12 |
| RE | MMM-10 | 141545 | DIGITAL HiTESTER | Hioki | 3805 | 51201148 | 01/06/2020 | 12 |
| RE | MJM-29 | 142230 | Measure | KOMELON | KMC-36 | - | - | - |
| RE | COTS-MEMI-02 | 178648 | EMI measurement program | TSJ (Techno Science Japan) | TEPTO-DV | - | - | - |
| RE | MAEC-04-SVSWR | 142017 | AC4 Semi Anechoic Chamber(SVSWR) | TDK | Semi Anechoic Chamber 3m | DA-10005 | 04/04/2019 | 24 |
| RE | MHA-21 | 141508 | Horn Antenna 1-18GHz | Schwarzbeck Mess - Elektronik | BBHA9120D | 557 | 05/22/2020 | 12 |
| RE | MPA-12 | 141581 | MicroWave System Amplifier | Keysight Technologies Inc | 83017A | 650 | 10/16/2019 | 12 |
| RE | MSA-03 | 141884 | Spectrum Analyzer | Keysight Technologies Inc | E4448A | MY44020357 | 03/04/2020 | 12 |
| RE | MTR-10 | 141951 | EMI Test Receiver | Rohde & Schwarz | ESR26 | 101408 | 03/10/2020 | 12 |
| RE | MCC-246 | 199563 | Microwave Cable | HUBER+SUNER | SF126E/11PC35/11PC35/1000M,5000M | 537061/126E / 537072/126E | 06/11/2020 | 12 |
| RE | MCC-224 | 160324 | Coaxial Cable | Huber+Suhner | SUCOFLEX 102A | MY009/2A | 11/22/2019 | 12 |
| RE | MPA-22 | 141588 | Pre Amplifier | MITEQ, Inc | AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P | 1871355 / 1871328 | 09/27/2019 | 12 |
| RE | MHA-02 | 141503 | Horn Antenna 18-26.5GHz | EMCO | 3160-09 | 1265 | 06/15/2020 | 12 |
| RE | MHA-29 | 141517 | Horn Antenna 26.5-40GHz | ETS LINDGREN | 3160-10 | 152399 | 08/03/2020 | 12 |
| RE | MSG-02 | 141905 | Signal Generator | Rohde & Schwarz | SML03 | 100332 | 09/03/2019 | 12 |
| RE | MMP-01 | 141550 | Matching Pad Anritsu | ANRITSU | MB-009 | 40063 | 07/02/2020 | 12 |
| RE | MJM-26 | 142227 | Measure | KOMELON | KMC-36 | - | - | - |
| RE | MAT-34 | 141331 | Attenuator(6dB) | TME | UFA-01 | - | 02/05/2020 | 12 |
| RE | MBA-05 | 141425 | Biconical Antenna | Schwarzbeck Mess - Elektronik | VHA9103+BBA9106 | VHA 91031302 | 08/31/2020 | 12 |
| RE | MCC-50 | 141397 | Coaxial Cable | UL Japan | - | - | 03/24/2020 | 12 |
| RE | MLA-23 | 141267 | Logperiodic Antenna (200-1000MHz) | Schwarzbeck Mess - Elektronik | VUSLP9111B | 9111B-192 | 09/02/2020 | 12 |
| RE | MPA-14 | 141583 | Pre Amplifier | SONOMA INSTRUMENT | 310 | 260833 | 02/18/2020 | 12 |

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*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 test