

EMI TEST REPORT

Test Report No. 15366605H-R1

Customer	Panasonic Automotive Systems Co., Ltd.
Description of EUT	Wireless Charger
Model Number of EUT	AT2501
FCC ID	ACJ932AT2501
Test Regulation	FCC Part 18
Test Result	Complied
Issue Date	April 25, 2025
Remarks	-

Representative test engineerJunya Okuno
Engineer**Approved by**Akihiko Maeda
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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REVISION HISTORY

Original Test Report No. 15366605H

This report is a revised version of 15366605H. 15366605H is replaced with this report.

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	15366605H	August 29, 2024	-
1	15366605H-R1	April 25, 2025	Correction of the Extrapolation Factor value of the test data; P.18) 0.3810 MHz: -75.0 → -86.4

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	ICES	Interference-Causing Equipment Standard
AC	Alternating Current	IEC	International Electrotechnical Commission
AFH	Adaptive Frequency Hopping	IEEE	Institute of Electrical and Electronics Engineers
AM	Amplitude Modulation	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	ISO	International Organization for Standardization
AP	Access Point	JAB	Japan Accreditation Board
ASK	Amplitude Shift Keying	LAN	Local Area Network
Atten., ATT	Attenuator	LIMS	Laboratory Information Management System
AV	Average	MCS	Modulation and Coding Scheme
BPSK	Binary Phase-Shift Keying	MRA	Mutual Recognition Arrangement
BR	Bluetooth Basic Rate	N/A	Not Applicable
BT	Bluetooth	NIST	National Institute of Standards and Technology
BT LE	Bluetooth Low Energy	NS	No signal detect.
BW	BandWidth	NSA	Normalized Site Attenuation
Cal Int	Calibration Interval	NVLAP	National Voluntary Laboratory Accreditation Program
CCK	Complementary Code Keying	OBW	Occupied Band Width
Ch., CH	Channel	OFDM	Orthogonal Frequency Division Multiplexing
CISPR	Comite International Special des Perturbations Radioelectriques	P/M	Power meter
CW	Continuous Wave	PCB	Printed Circuit Board
DBPSK	Differential BPSK	PER	Packet Error Rate
DC	Direct Current	PHY	Physical Layer
D-factor	Distance factor	PK	Peak
DFS	Dynamic Frequency Selection	PN	Pseudo random Noise
DQPSK	Differential QPSK	PRBS	Pseudo-Random Bit Sequence
DSSS	Direct Sequence Spread Spectrum	PSD	Power Spectral Density
EDR	Enhanced Data Rate	QAM	Quadrature Amplitude Modulation
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	QP	Quasi-Peak
EMC	ElectroMagnetic Compatibility	QPSK	Quadri-Phase Shift Keying
EMI	ElectroMagnetic Interference	RBW	Resolution Band Width
EN	European Norm	RDS	Radio Data System
ERP, e.r.p.	Effective Radiated Power	RE	Radio Equipment
EU	European Union	RF	Radio Frequency
EUT	Equipment Under Test	RMS	Root Mean Square
Fac.	Factor	RSS	Radio Standards Specifications
FCC	Federal Communications Commission	Rx	Receiving
FHSS	Frequency Hopping Spread Spectrum	SA, S/A	Spectrum Analyzer
FM	Frequency Modulation	SG	Signal Generator
Freq.	Frequency	SVSWR	Site-Voltage Standing Wave Ratio
FSK	Frequency Shift Keying	TR	Test Receiver
GFSK	Gaussian Frequency-Shift Keying	Tx	Transmitting
GNSS	Global Navigation Satellite System	VBW	Video BandWidth
GPS	Global Positioning System	Vert.	Vertical
Hori.	Horizontal	WLAN	Wireless LAN

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SECTION 1: Customer Information

Company Name	Panasonic Automotive Systems Co., Ltd.*1)
Address	4261, Ikonobe-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken 224-8520, Japan
Telephone Number	+81-80-3444-7148
Contact Person	Takahisa Sakai

*1) The Grantee name in the FCC application is "Panasonic Corporation of North America".

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	Wireless Charger
Model Number	AT2501
Serial Number	Refer to SECTION 4.2
Condition	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	July 2, 2024
Test Date	July 8 to 12, 2024

2.2. Product Description

General Specification

Rating	DC +10.5 V to +16 V (Typ: +12 V)
Feature of EUT	Use the ACC KEY of the car to turn the Wireless charger power ON/OFF. Place the charging side of the portable device (etc. mobile phone) down. When charging, the operation indicator light (orange) comes on. If charging is not occurring, try placing the portable device as close to the center of the charging area as possible When charging is complete, the operation indicator light (green) comes on.

Radio Specification

Frequency Band	120.3 kHz / 127.0 kHz / 127.5 kHz / 116.4 kHz to 132.2 kHz
Rated Output Power	5 W / 15 W
Coil system	Single Coil
Charging distance	Contact

SECTION 3: Test Specification, Procedures & Results

3.1 Test specification

Test Specification	FCC Part 18 The latest version on the first day of the testing period
Title	FCC 47CFR Part18 Industrial, scientific, and medical equipment

3.2 Procedures and results

Item	Test Procedure & Limits	Worst margin	Result	Remarks
Radiated Emission	Section 18.305 FCC/OET MP-5	15.1 dB 0.2406 MHz, 0 deg. (Mode 1)	Complied	-
Conducted Emission	Section 18.307 FCC/OET MP-5	-	N/A	*1)
* Note: UL Japan, Inc.'s EMI Work Procedure: Work Instructions-ULID-003591.				
*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.				

3.3 Addition to standard

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

3.4 Uncertainty

EMI

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	4.7
		Vertical	dB	4.7
	200 MHz to 1000 MHz	Horizontal	dB	4.8
		Vertical	dB	6.0
10 m	30 MHz to 200 MHz	Horizontal	dB	5.2
		Vertical	dB	5.1
	200 MHz to 1000 MHz	Horizontal	dB	5.2
		Vertical	dB	5.2

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)

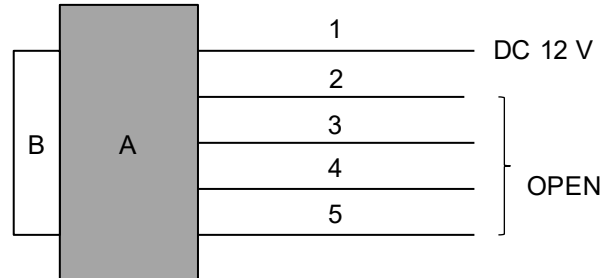
Test mode	Remarks
1) Normal Operating mode (120.3 kHz / BPP 0 W)	*1)
2) Normal Operating mode (127.0 kHz / BPP 0 W)	*1)
3) Normal Operating mode (127.5 kHz / BPP 0 W)	*1)
4) Normal Operating mode (120.3 kHz / EPP 0 W)	*2)
5) Normal Operating mode (127.0 kHz / EPP 0 W)	*2)
6) Normal Operating mode (127.5 kHz / EPP 0 W)	*2)
7) Normal Operating mode (116.4 kHz / EPP 15 W)	-
8) Normal Operating mode (119.4 kHz / EPP 15 W)	-
9) Normal Operating mode (124.5 kHz / EPP 15 W)	-
10) Normal Operating mode (122.6 kHz / EPP 15 W)	-
11) Normal Operating mode (126.0 kHz / EPP 15 W)	-
12) Normal Operating mode (131.7 kHz / EPP 15 W)	-
13) Normal Operating mode (123.1 kHz / EPP 15 W)	-
14) Normal Operating mode (126.5 kHz / EPP 15 W)	-
15) Normal Operating mode (132.2 kHz / EPP 15 W)	-

*1) After the output level between 5 W, 2.5 W, and 0 W were compared at pre-check, all the tests were performed only with 0 W as representative, which had the worst result.

*2) After the output level between 15 W, 7.5 W, and 0 W were compared at pre-check, all the tests were performed only with 0 W as representative, which had the worst result.

4.2. Configuration and peripherals

Mode 1 to 6



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

*Item A and Item B communicates and charges via air interface.

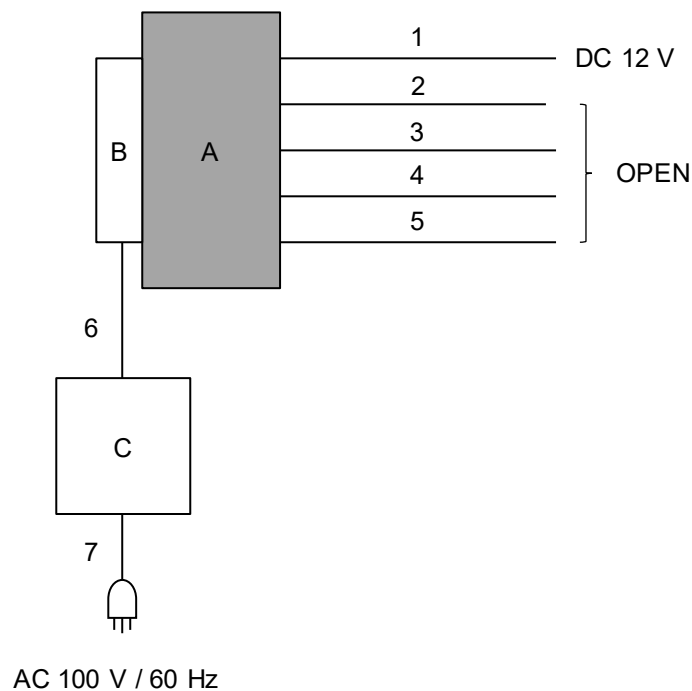
Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Wireless Charger	AT2501	500008	Panasonic Automotive Systems Co., Ltd.	EUT
B	LOAD-JIG	LOAD-JIG BPP(0W)	-	Panasonic Automotive Systems Co., Ltd.	for Mode 1 to 3
		LOAD-JIG EPP(0W)	-		for Mode 4 to 6

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	DC Cable	2.0	Unshielded	Unshielded	-
2	CAN Cable	2.0	Unshielded	Unshielded	-
3	Signal Cable	2.0	Unshielded	Unshielded	-
4	Signal Cable	2.0	Unshielded	Unshielded	-
5	Signal Cable	2.0	Unshielded	Unshielded	-

Mode 7 to 15



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

*Item A and Item B communicates and charges via air interface.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Wireless Charger	AT2501	500008	Panasonic Automotive Systems Co., Ltd.	EUT
B	Reference Receiver	TRP#MP1B	1	Nok9	-
C	Qi Reference Tester	LP/MP/FOD	200134-1807	Nok9	-

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	DC Cable	2.0	Unshielded	Unshielded	-
2	CAN Cable	2.0	Unshielded	Unshielded	-
3	Signal Cable	2.0	Unshielded	Unshielded	-
4	Signal Cable	2.0	Unshielded	Unshielded	-
5	Signal Cable	2.0	Unshielded	Unshielded	-
6	Communication Cable	0.6	Unshielded	Unshielded	-
7	AC Cable	1.5	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
Mode	See data

5.2 Test configuration

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

The EUT was set on the edge of the tabletop.

Test was made with the antenna positioned in 0 deg., 45 deg., 90 deg., 135 deg., 180 deg., and Horizontal. 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.

*Refer to Figure 1 about Direction of the Loop Antenna.

5.3 Test conditions

Frequency range	9 kHz to 30 MHz (Loop antenna)
	30 MHz to 200 MHz (Biconical antenna)
	200 MHz to 400 MHz (Logperiodic antenna)
Test distance	3 m / 10 m
EUT position	Table top
EUT operation mode	See Clause 4.1

5.4 Test procedure

[Below 30 MHz]

The height of antenna was fixed in 2 m.

EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed in 0 deg., 45 deg., 90 deg., 135deg., 180 deg., and Horizontal with the Test Receiver.

The electric field intensity at a distance of 300 m was calculated from the measurement results at distances of 3 m and 10 m.

[Above 30 MHz]

Maximum electric field intensity was confirmed with the measurements at distances of 3 m and 10 m.

The electric field intensity at a distance of 300 m was calculated from the measurement results at distances of 3 m and 10 m.

The radiated emission measurements were made with the following detector function of the test receiver.

The test was made with the detector (RBW) in the following table.

Frequency	9 kHz to 150 kHz	150 kHz to 30 MHz	30 MHz to 400 MHz
Instrument used	Test Receiver		
IF Bandwidth	AV: 200 Hz	AV: 9 kHz	AV: 120 kHz

The measurement result was calculated by the following formula:

[Frequency at which the signal was confirmed at both 10 m and 3 m]

Result = Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain

Extrapolation Factor = decade * Log (Test distance (3 m) / Separate distance (300 m))

decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*Refer to Part 18 Section 305 Notes 2 and KDB 629601.

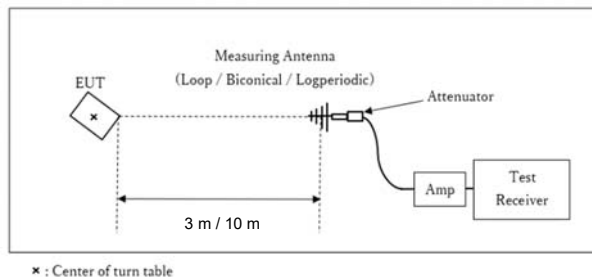
[Other Frequency]

Result = Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain

Extrapolation Factor = 20 * Log (Test distance (3 m) / Separate distance (300 m))

<Test Setup>

Below 400 MHz



Test Distance: 3 m / 10 m

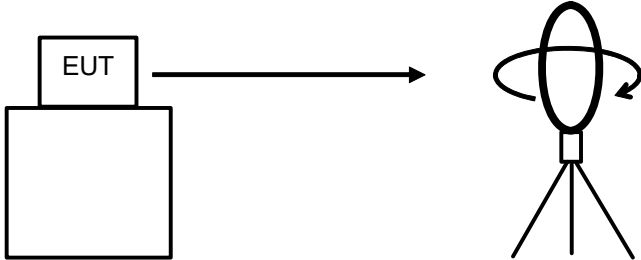
The test results and limit are rounded off to one decimal place, so some differences might be observed.

5.5 Test result

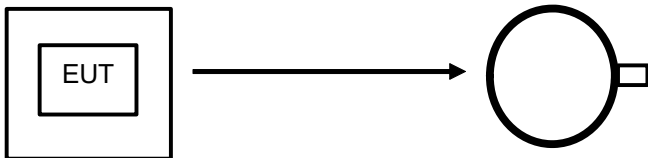
Summary of the test results: Pass

Figure 1: Direction of the Loop Antenna

Side View (Vertical)

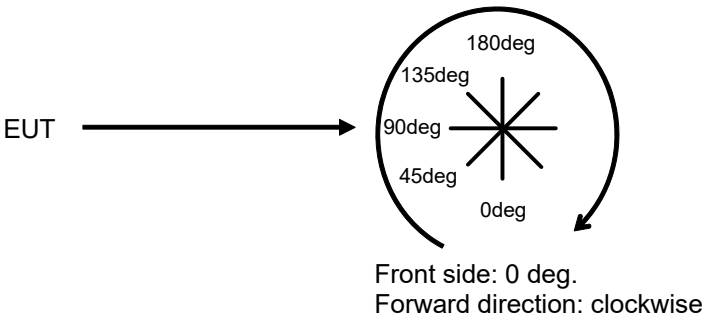


Top View (Horizontal)



Antenna was not rotated.

Top View (Vertical)



APPENDIX 1: Test Data

Radiated Emission

Test place Ise EMC Lab.
Semi Anechoic Chamber No.1
Date July 8, 2024
Temperature / Humidity 22 deg. C / 62 % RH
Engineer Junya Okuno
 (Below 30 MHz)
Mode Mode 1

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP Gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna [deg]	Remarks
0.1203	89.1	60.8	19.5	6.0	32.2	-108.2	-25.8	23.5	49.3	0	
0.1203	87.8	60.2	19.5	6.0	32.2	-105.6	-24.4	23.5	47.9	45	
0.1203	86.1	60.2	19.5	6.0	32.2	-99.1	-19.6	23.5	43.1	90	
0.1203	87.8	60.6	19.5	6.0	32.2	-104.0	-22.9	23.5	46.4	135	
0.1203	89.0	60.7	19.5	6.0	32.2	-108.2	-25.9	23.5	49.4	180	
0.1203	86.0	52.2	19.5	6.0	32.2	-129.3	-49.9	23.5	73.4	Horizontal	
0.2406	36.8	31.1	19.6	6.0	32.2	-21.8	8.4	23.5	15.1	0	
0.3609	53.1	29.6	19.7	6.1	32.2	-89.9	-43.2	23.5	66.7	0	
0.4812	28.0	NS	19.7	6.1	32.2	-40.0	-18.4	23.5	41.9	0	Reading(10 m) is No-Signal *1)
0.6015	39.8	NS	19.7	6.1	32.2	-40.0	-6.6	23.5	30.1	0	Reading(10 m) is No-Signal *1)
0.7218	28.6	NS	19.7	6.1	32.2	-40.0	-17.7	23.5	41.2	0	Reading(10 m) is No-Signal *1)
0.8421	39.8	NS	19.7	6.2	32.2	-40.0	-6.5	23.5	30.0	0	Reading(10 m) is No-Signal *1)
0.9624	25.5	NS	19.7	6.2	32.2	-40.0	-20.8	23.5	44.3	0	Reading(10 m) is No-Signal *1)
1.0827	35.4	NS	19.7	6.2	32.2	-40.0	-10.9	25.5	36.4	0	Reading(10 m) is No-Signal *1)
1.2030	25.3	NS	19.7	6.2	32.2	-40.0	-20.9	23.5	44.4	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 8, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 2

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBμV]	[dBμV]	[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]	[dBμV/m]	[dB]	[deg]	
0.1270	89.3	61.1	19.5	6.0	32.2	-107.9	-25.2	23.5	48.7	0	
0.1270	88.1	60.6	19.5	6.0	32.2	-105.2	-23.7	23.5	47.2	45	
0.1270	86.4	60.4	19.5	6.0	32.2	-99.4	-19.7	23.5	43.2	90	
0.1270	88.1	60.9	19.5	6.0	32.2	-104.0	-22.6	23.5	46.1	135	
0.1270	89.2	61.0	19.5	6.0	32.2	-107.9	-25.3	23.5	48.8	180	
0.1270	86.1	52.4	19.5	6.0	32.2	-128.9	-49.5	23.5	73.0	Horizontal	
0.2540	38.2	29.9	19.6	6.0	32.2	-31.7	-0.1	23.5	23.6	0	
0.3810	52.0	29.0	19.7	6.1	32.2	-88.0	-42.4	23.5	65.9	0	
0.5080	27.3	NS	19.7	6.1	32.2	-40.0	-19.1	23.5	42.6	0	Reading(10 m) is No-Signal *1)
0.6350	41.4	NS	19.7	6.1	32.2	-40.0	-4.9	23.5	28.4	0	Reading(10 m) is No-Signal *1)
0.7620	26.2	NS	19.7	6.2	32.2	-40.0	-20.1	23.5	43.6	0	Reading(10 m) is No-Signal *1)
0.8890	41.1	NS	19.7	6.2	32.2	-40.0	-5.2	23.5	28.7	0	Reading(10 m) is No-Signal *1)
1.0160	25.4	NS	19.7	6.2	32.2	-40.0	-20.9	23.5	44.4	0	Reading(10 m) is No-Signal *1)
1.1430	33.7	NS	19.7	6.2	32.2	-40.0	-12.5	25.5	38.0	0	Reading(10 m) is No-Signal *1)
1.2700	25.3	NS	19.7	6.2	32.2	-40.0	-20.9	23.5	44.4	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain

$$\text{Extrapolation Factor} = \text{decade} * \text{Log} (\text{Test distance}(3 \text{ m}) / \text{Separate distance}(300 \text{ m}))$$
$$\text{decade} = (10 \text{ m reading} - 3 \text{ m reading}) / (\log 3 \text{ m} - \log 10 \text{ m})$$

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)

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

10 m Reading of Extrapolation Factor is used the value of 0 deg.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 8, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 3

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBμV]	[dBμV]	[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]	[dBμV/m]	[dB]	[deg]	
0.1275	88.6	60.4	19.5	6.0	32.2	-107.9	-25.9	23.5	49.4	0	
0.1275	87.3	59.8	19.5	6.0	32.2	-105.2	-24.5	23.5	48.0	45	
0.1275	85.7	59.8	19.5	6.0	32.2	-99.1	-20.0	23.5	43.5	90	
0.1275	87.5	60.2	19.5	6.0	32.2	-104.4	-23.6	23.5	47.1	135	
0.1275	88.5	60.3	19.5	6.0	32.2	-107.9	-26.0	23.5	49.5	180	
0.1275	85.3	51.7	19.5	6.0	32.2	-128.5	-49.9	23.5	73.4	Horizontal	
0.2550	39.6	30.7	19.6	6.0	32.2	-34.0	-1.0	23.5	24.5	0	
0.3825	51.0	28.9	19.7	6.1	32.2	-84.5	-40.0	23.5	63.5	0	
0.5100	27.4	NS	19.7	6.1	32.2	-40.0	-19.0	23.5	42.5	0	Reading(10 m) is No-Signal *1)
0.6375	40.6	NS	19.7	6.1	32.2	-40.0	-5.7	23.5	29.2	0	Reading(10 m) is No-Signal *1)
0.7650	26.2	NS	19.7	6.2	32.2	-40.0	-20.1	23.5	43.6	0	Reading(10 m) is No-Signal *1)
0.8925	40.6	NS	19.7	6.2	32.2	-40.0	-5.7	23.5	29.2	0	Reading(10 m) is No-Signal *1)
1.0200	25.5	NS	19.7	6.2	32.2	-40.0	-20.8	23.5	44.3	0	Reading(10 m) is No-Signal *1)
1.1475	33.2	NS	19.7	6.2	32.2	-40.0	-13.0	25.5	38.5	0	Reading(10 m) is No-Signal *1)
1.2750	25.2	NS	19.7	6.2	32.2	-40.0	-21.0	23.5	44.5	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place Ise EMC Lab.
Semi Anechoic Chamber No.1
Date July 9, 2024
Temperature / Humidity 22 deg. C / 60 % RH
Engineer Daiki Matsui
(Below 30 MHz)
Mode Mode 4

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP Gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna [deg]	Remarks
0.1203	91.6	61.9	18.9	6.0	32.3	-113.6	-29.4	23.5	52.9	0	
0.1203	90.2	61.1	18.9	6.0	32.3	-111.3	-28.5	23.5	52.0	45	
0.1203	88.9	61.5	18.9	6.0	32.3	-104.8	-23.3	23.5	46.8	90	
0.1203	90.3	61.8	18.9	6.0	32.3	-109.0	-26.1	23.5	49.6	135	
0.1203	90.8	61.8	18.9	6.0	32.3	-110.9	-27.5	23.5	51.0	180	
0.1203	87.0	59.4	18.9	6.0	32.3	-105.6	-26.0	23.5	49.5	Horizontal	
0.2406	41.0	30.5	18.9	6.0	32.3	-40.2	-6.6	23.5	30.1	0	
0.3609	65.4	30.3	18.8	6.1	32.3	-134.3	-76.3	23.5	99.8	0	
0.4812	32.0	NS	18.8	6.1	32.4	-40.0	-15.5	23.5	39.0	0	Reading(10 m) is No-Signal *1)
0.6015	55.7	27.2	18.8	6.1	32.4	-109.0	-60.8	23.5	84.3	0	
0.7218	28.9	NS	18.8	6.2	32.4	-40.0	-18.6	23.5	42.1	0	Reading(10 m) is No-Signal *1)
0.8421	49.7	NS	18.8	6.2	32.4	-40.0	2.2	23.5	21.3	0	Reading(10 m) is No-Signal *1)
0.9624	27.7	NS	18.8	6.2	32.4	-40.0	-19.7	23.5	43.2	0	Reading(10 m) is No-Signal *1)
1.0827	45.3	NS	18.8	6.2	32.4	-40.0	-2.1	25.5	27.6	0	Reading(10 m) is No-Signal *1)
1.2030	27.0	NS	18.8	6.2	32.4	-40.0	-20.4	23.5	43.9	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	22 deg. C / 60 % RH
Engineer	Daiki Matsui (Below 30 MHz)
Mode	Mode 5

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBμV]	[dBμV]	[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]	[dBμV/m]	[dB]	[deg]	
0.1270	91.3	60.7	18.9	6.0	32.3	-117.0	-33.1	23.5	56.6	0	
0.1270	90.7	60.0	18.9	6.0	32.3	-117.4	-34.1	23.5	57.6	45	
0.1270	88.5	59.8	18.9	6.0	32.3	-109.8	-28.7	23.5	52.2	90	
0.1270	89.3	60.6	18.9	6.0	32.3	-109.8	-27.9	23.5	51.4	135	
0.1270	91.1	60.7	18.9	6.0	32.3	-116.3	-32.6	23.5	56.1	180	
0.1270	88.3	58.9	18.9	6.0	32.3	-112.5	-31.6	23.5	55.1	Horizontal	
0.2540	39.2	32.8	18.9	6.0	32.3	-24.5	7.3	23.5	16.2	0	
0.3810	52.0	29.4	18.8	6.1	32.3	-86.4	-41.9	23.5	65.4	0	
0.5080	30.1	NS	18.8	6.1	32.4	-40.0	-17.4	23.5	40.9	0	Reading(10 m) is No-Signal *1)
0.6350	47.0	27.4	18.8	6.1	32.4	-75.0	-35.4	23.5	58.9	0	
0.7620	32.1	NS	18.8	6.2	32.4	-40.0	-15.4	23.5	38.9	0	Reading(10 m) is No-Signal *1)
0.8890	45.4	NS	18.8	6.2	32.4	-40.0	-2.1	23.5	25.6	0	Reading(10 m) is No-Signal *1)
1.0160	29.8	NS	18.8	6.2	32.4	-40.0	-17.6	23.5	41.1	0	Reading(10 m) is No-Signal *1)
1.1430	37.6	NS	18.8	6.2	32.4	-40.0	-9.8	23.5	35.3	0	Reading(10 m) is No-Signal *1)
1.2700	26.8	NS	18.8	6.2	32.4	-40.0	-20.6	23.5	44.1	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	22 deg. C / 60 % RH
Engineer	Daiki Matsui (Below 30 MHz)
Mode	Mode 6

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP Gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna [deg]	Remarks
0.1275	92.2	61.6	18.9	6.0	32.3	-117.0	-32.2	23.5	55.7	0	
0.1275	91.0	61.4	18.9	6.0	32.3	-113.2	-29.6	23.5	53.1	45	
0.1275	89.3	61.3	18.9	6.0	32.3	-107.1	-25.2	23.5	48.7	90	
0.1275	90.1	61.7	18.9	6.0	32.3	-108.6	-25.9	23.5	49.4	135	
0.1275	91.3	61.5	18.9	6.0	32.3	-114.0	-30.1	23.5	53.6	180	
0.1275	89.0	59.2	18.9	6.0	32.3	-114.0	-32.4	23.5	55.9	Horizontal	
0.2550	41.9	32.6	18.9	6.0	32.3	-35.6	-1.1	23.5	24.6	0	
0.3825	52.7	28.8	18.8	6.1	32.3	-91.4	-46.2	23.5	69.7	0	
0.5100	30.8	27.4	18.8	6.1	32.4	-40.0	-16.7	23.5	40.2	0	Reading(10 m) is No-Signal *1)
0.6375	46.7	27.1	18.8	6.1	32.4	-75.0	-35.7	23.5	59.2	0	
0.7650	31.0	26.2	18.8	6.2	32.4	-40.0	-16.5	23.5	40.0	0	Reading(10 m) is No-Signal *1)
0.8925	44.1	26.0	18.8	6.2	32.4	-40.0	-3.4	23.5	26.9	0	Reading(10 m) is No-Signal *1)
1.0200	28.8	25.6	18.8	6.2	32.4	-40.0	-18.6	23.5	42.1	0	Reading(10 m) is No-Signal *1)
1.1475	36.6	25.7	18.8	6.2	32.4	-40.0	-10.8	25.5	36.3	0	Reading(10 m) is No-Signal *1)
1.2750	26.3	25.5	18.8	6.2	32.4	-40.0	-21.1	23.5	44.6	0	Reading(10 m) is No-Signal *1)

$$\text{Extrapolation Factor} = \text{decade} * \text{Log}(\text{Test distance}(3 \text{ m}) / \text{Separate distance}(300 \text{ m}))$$

decade (10 m reading 0 m reading), (10g 0 m 10g 10 m)

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

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

10 m Reading of Extrapolation Factor is used the value of 0 deg.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno
	(Below 30 MHz)
Mode	Mode 7

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP Gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna [deg]	Remarks
0.1164	97.0	69.0	19.5	6.0	32.2	-107.1	-16.8	23.5	40.3	0	
0.1164	96.0	68.4	19.5	6.0	32.2	-105.6	-16.2	23.5	39.7	45	
0.1164	94.5	68.2	19.5	6.0	32.2	-100.6	-12.8	23.5	36.3	90	
0.1164	95.8	68.6	19.5	6.0	32.2	-104.0	-14.9	23.5	38.4	135	
0.1164	96.9	68.9	19.5	6.0	32.2	-107.1	-16.9	23.5	40.4	180	
0.1164	95.0	60.4	19.5	6.0	32.2	-132.3	-44.0	23.5	67.5	Horizontal	
0.2328	48.7	30.2	19.6	6.0	32.2	-70.8	-28.7	23.5	52.2	0	
0.3492	63.7	36.1	19.7	6.1	32.2	-105.6	-48.3	23.5	71.8	0	
0.4656	32.5	NS	19.7	6.1	32.2	-40.0	-13.9	23.5	37.4	0	Reading(10 m) is No-Signal *1)
0.5820	56.1	30.0	19.7	6.1	32.2	-99.8	-50.1	23.5	73.6	0	
0.6984	28.9	NS	19.7	6.1	32.2	-40.0	-17.4	23.5	40.9	0	Reading(10 m) is No-Signal *1)
0.8148	50.2	27.2	19.7	6.2	32.2	-88.0	-44.1	23.5	67.6	0	
0.9312	27.3	NS	19.7	6.2	32.2	-40.0	-19.0	23.5	42.5	0	Reading(10 m) is No-Signal *1)
1.0476	45.6	25.9	19.7	6.2	32.2	-75.4	-36.0	25.5	61.5	0	
1.1640	25.8	NS	19.7	6.2	32.2	-40.0	-20.4	23.5	43.9	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 8

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBµV]	[dBµV]	[dB/m]	[dB]	[dB]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[deg]	
0.1194	96.9	68.9	19.5	6.0	32.2	-107.1	-16.9	23.5	40.4	0	
0.1194	96.0	68.4	19.5	6.0	32.2	-105.6	-16.2	23.5	39.7	45	
0.1194	94.6	68.3	19.5	6.0	32.2	-100.6	-12.7	23.5	36.2	90	
0.1194	95.8	68.6	19.5	6.0	32.2	-104.0	-14.9	23.5	38.4	135	
0.1194	96.8	68.8	19.5	6.0	32.2	-107.1	-17.0	23.5	40.5	180	
0.1194	95.1	60.5	19.5	6.0	32.2	-132.3	-43.9	23.5	67.4	Horizontal	
0.2388	48.8	30.0	19.6	6.0	32.2	-71.9	-29.7	23.5	53.2	0	
0.3582	63.7	36.2	19.7	6.1	32.2	-105.2	-47.9	23.5	71.4	0	
0.4776	32.5	NS	19.7	6.1	32.2	-40.0	-13.9	23.5	37.4	0	Reading(10 m) is No-Signal *1)
0.5970	56.0	30.0	19.7	6.1	32.2	-99.4	-49.8	23.5	73.3	0	
0.7164	29.0	NS	19.7	6.1	32.2	-40.0	-17.3	23.5	40.8	0	Reading(10 m) is No-Signal *1)
0.8358	50.2	27.0	19.7	6.2	32.2	-88.7	-44.8	23.5	68.3	0	
0.9552	27.3	NS	19.7	6.2	32.2	-40.0	-19.0	23.5	42.5	0	Reading(10 m) is No-Signal *1)
1.0746	45.5	25.9	19.7	6.2	32.2	-75.0	-35.7	25.5	61.2	0	
1.1940	25.7	NS	19.7	6.2	32.2	-40.0	-20.5	23.5	44.0	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain

$$\text{Extrapolation Factor} = \text{decade} * \text{Log} (\text{Test distance}(3 \text{ m}) / \text{Separate distance}(300 \text{ m}))$$
$$\text{decade} = (10 \text{ m reading} - 3 \text{ m reading}) / (\log 3 \text{ m} - \log 10 \text{ m})$$

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)

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

10 m Reading of Extrapolation Factor is used the value of 0 deg.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 9

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBμV]	[dBμV]	[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]	[dBμV/m]	[dB]	[deg]	
0.1245	97.1	69.0	19.5	6.0	32.2	-107.5	-17.1	23.5	40.6	0	
0.1245	95.9	68.4	19.5	6.0	32.2	-105.2	-16.0	23.5	39.5	45	
0.1245	94.5	68.3	19.5	6.0	32.2	-100.2	-12.4	23.5	35.9	90	
0.1245	95.9	68.7	19.5	6.0	32.2	-104.0	-14.8	23.5	38.3	135	
0.1245	97.0	68.9	19.5	6.0	32.2	-107.5	-17.2	23.5	40.7	180	
0.1245	95.1	60.5	19.5	6.0	32.2	-132.3	-43.9	23.5	67.4	Horizontal	
0.2490	48.7	30.1	19.6	6.0	32.2	-71.1	-29.0	23.5	52.5	0	
0.3735	63.7	36.2	19.7	6.1	32.2	-105.2	-47.9	23.5	71.4	0	
0.4980	32.5	NS	19.7	6.1	32.2	-40.0	-13.9	23.5	37.4	0	Reading(10 m) is No-Signal *1)
0.6225	56.0	30.0	19.7	6.1	32.2	-99.4	-49.8	23.5	73.3	0	
0.7470	29.0	NS	19.7	6.1	32.2	-40.0	-17.3	23.5	40.8	0	Reading(10 m) is No-Signal *1)
0.8715	50.2	27.1	19.7	6.2	32.2	-88.4	-44.5	23.5	68.0	0	
0.9960	27.2	NS	19.7	6.2	32.2	-40.0	-19.1	23.5	42.6	0	Reading(10 m) is No-Signal *1)
1.1205	45.6	25.9	19.7	6.2	32.2	-75.4	-36.0	25.5	61.5	0	
1.2450	25.8	NS	19.7	6.2	32.2	-40.0	-20.4	23.5	43.9	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain

$$\text{Extrapolation Factor} = \text{decade} * \text{Log} (\text{Test distance}(3 \text{ m}) / \text{Separate distance}(300 \text{ m}))$$
$$\text{decade} = (10 \text{ m reading} - 3 \text{ m reading}) / (\log 3 \text{ m} - \log 10 \text{ m})$$

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)

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

10 m Reading of Extrapolation Factor is used the value of 0 deg.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 10, 2024
Temperature / Humidity	20 deg. C / 63 % RH
Engineer	Masaya Minami (Below 30 MHz)
Mode	Mode 10

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBµV]	[dBµV]	[dB/m]	[dB]	[dB]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[deg]	
0.1226	97.5	68.9	19.5	6.0	32.2	-109.4	-18.6	23.5	42.1	0	
0.1226	96.2	68.4	19.5	6.0	32.2	-106.3	-16.8	23.5	40.3	45	
0.1226	94.4	68.4	19.5	6.0	32.2	-99.4	-11.7	23.5	35.2	90	
0.1226	96.1	68.7	19.5	6.0	32.2	-104.8	-15.4	23.5	38.9	135	
0.1226	97.3	68.8	19.5	6.0	32.2	-109.0	-18.4	23.5	41.9	180	
0.1226	93.0	59.5	19.5	6.0	32.2	-128.1	-41.8	23.5	65.3	Horizontal	
0.2452	49.3	29.9	19.6	6.0	32.2	-74.2	-31.5	23.5	55.0	0	
0.3678	66.9	38.6	19.7	6.0	32.2	-108.2	-47.8	23.5	71.3	0	
0.4904	31.4	27.0	19.7	6.1	32.2	-40.0	-15.0	23.5	38.5	0	Reading(10 m) is No-Signal *1)
0.6130	56.5	29.9	19.7	6.1	32.2	-101.7	-51.6	23.5	75.1	0	
0.7356	28.1	26.0	19.7	6.1	32.2	-40.0	-18.3	23.5	41.8	0	Reading(10 m) is No-Signal *1)
0.8582	49.5	26.7	19.7	6.1	32.2	-87.2	-44.0	23.5	67.5	0	
0.9808	26.1	25.5	19.7	6.2	32.2	-40.0	-20.2	23.5	43.7	0	Reading(10 m) is No-Signal *1)
1.1034	44.7	29.4	19.7	6.2	32.2	-58.5	-20.1	25.5	45.6	0	
1.2260	42.2	25.6	19.7	6.2	32.2	-40.0	-4.0	23.5	27.5	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 10, 2024
Temperature / Humidity	20 deg. C / 63 % RH
Engineer	Masaya Minami (Below 30 MHz)
Mode	Mode 11

FREQ	Reading	Reading	ANT	Atten + Cable	AMP	Extrapolation	Result	Limit	Margin	Antenna	Remarks
[MHz]	(3 m) [dBμV]	(10 m) [dBμV]	Factor [dB/m]	loss [dB]	Gain [dB]	Factor [dB]	(300 m) [dBμV/m]	(300 m) [dBμV/m]	[dB]	[deg]	
0.1260	97.3	68.7	19.5	6.0	32.2	-109.4	-18.8	23.5	42.3	0	
0.1260	96.0	68.3	19.5	6.0	32.2	-106.0	-16.6	23.5	40.1	45	
0.1260	94.4	68.6	19.5	6.0	32.2	-98.7	-11.0	23.5	34.5	90	
0.1260	96.0	68.5	19.5	6.0	32.2	-105.2	-15.9	23.5	39.4	135	
0.1260	97.1	68.6	19.5	6.0	32.2	-109.0	-18.6	23.5	42.1	180	
0.1260	93.2	59.6	19.5	6.0	32.2	-128.5	-42.0	23.5	65.5	Horizontal	
0.2520	49.1	29.8	19.6	6.0	32.2	-73.8	-31.3	23.5	54.8	0	
0.3780	66.6	38.3	19.7	6.0	32.2	-108.2	-48.1	23.5	71.6	0	
0.5040	31.2	27.0	19.7	6.1	32.2	-40.0	-15.2	23.5	38.7	0	Reading(10 m) is No-Signal *1)
0.6300	56.2	29.7	19.7	6.1	32.2	-101.4	-51.5	23.5	75.0	0	
0.7560	27.8	26.0	19.7	6.1	32.2	-40.0	-18.6	23.5	42.1	0	Reading(10 m) is No-Signal *1)
0.8820	45.0	26.7	19.7	6.2	32.2	-70.0	-31.3	23.5	54.8	0	
1.0080	26.2	25.6	19.7	6.2	32.2	-40.0	-20.1	23.5	43.6	0	Reading(10 m) is No-Signal *1)
1.1340	44.2	25.7	19.7	6.2	32.2	-70.8	-32.8	25.5	58.3	0	
1.2600	42.0	25.3	19.7	6.2	32.2	-40.0	-4.2	23.5	27.7	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 10, 2024
Temperature / Humidity	20 deg. C / 63 % RH
Engineer	Masaya Minami (Below 30 MHz)
Mode	Mode 12

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno
	(Below 30 MHz)
Mode	Mode 13

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP Gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna [deg]	Remarks
0.1231	95.9	67.7	19.5	6.0	32.2	-107.9	-18.6	23.5	42.1	0	
0.1231	94.8	67.2	19.5	6.0	32.2	-105.6	-17.4	23.5	40.9	45	
0.1231	93.2	66.9	19.5	6.0	32.2	-100.6	-14.1	23.5	37.6	90	
0.1231	94.5	67.4	19.5	6.0	32.2	-103.7	-15.8	23.5	39.3	135	
0.1231	95.8	67.6	19.5	6.0	32.2	-107.9	-18.7	23.5	42.2	180	
0.1231	94.1	59.1	19.5	6.0	32.2	-133.9	-46.4	23.5	69.9	Horizontal	
0.2462	46.2	29.7	19.6	6.0	32.2	-63.1	-23.5	23.5	47.0	0	
0.3693	65.2	37.4	19.7	6.1	32.2	-106.3	-47.6	23.5	71.1	0	
0.4924	30.1	NS	19.7	6.1	32.2	-40.0	-16.3	23.5	39.8	0	Reading(10 m) is No-Signal *1)
0.6155	56.0	29.6	19.7	6.1	32.2	-101.0	-51.3	23.5	74.8	0	
0.7386	28.2	NS	19.7	6.1	32.2	-40.0	-18.1	23.5	41.6	0	Reading(10 m) is No-Signal *1)
0.8617	49.3	26.4	19.7	6.2	32.2	-87.6	-44.6	23.5	68.1	0	
0.9848	26.8	NS	19.7	6.2	32.2	-40.0	-19.5	23.5	43.0	0	Reading(10 m) is No-Signal *1)
1.1079	44.4	25.7	19.7	6.2	32.2	-71.5	-33.4	25.5	58.9	0	
1.2310	26.0	NS	19.7	6.2	32.2	-40.0	-20.2	23.5	43.7	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 14

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBμV]	[dBμV]	[dB/m]	[dB]	[dB]	[dB]	[dBμV/m]	[dBμV/m]	[dB]	[deg]	
0.1265	96.0	67.7	19.5	6.0	32.2	-108.2	-18.9	23.5	42.4	0	
0.1265	94.6	67.1	19.5	6.0	32.2	-105.2	-17.2	23.5	40.7	45	
0.1265	93.1	67.0	19.5	6.0	32.2	-99.8	-13.4	23.5	36.9	90	
0.1265	94.5	67.4	19.5	6.0	32.2	-103.7	-15.8	23.5	39.3	135	
0.1265	95.9	67.6	19.5	6.0	32.2	-108.2	-19.0	23.5	42.5	180	
0.1265	94.2	59.0	19.5	6.0	32.2	-134.6	-47.1	23.5	70.6	Horizontal	
0.2530	46.5	29.8	19.6	6.0	32.2	-63.9	-23.9	23.5	47.4	0	
0.3795	65.3	37.2	19.7	6.1	32.2	-107.5	-48.6	23.5	72.1	0	
0.5060	30.1	NS	19.7	6.1	32.2	-40.0	-16.3	23.5	39.8	0	Reading(10 m) is No-Signal *1)
0.6325	56.0	29.5	19.7	6.1	32.2	-101.4	-51.7	23.5	75.2	0	
0.7590	28.3	NS	19.7	6.2	32.2	-40.0	-18.0	23.5	41.5	0	Reading(10 m) is No-Signal *1)
0.8855	49.5	26.6	19.7	6.2	32.2	-87.6	-44.4	23.5	67.9	0	
1.0120	26.8	NS	19.7	6.2	32.2	-40.0	-19.5	23.5	43.0	0	Reading(10 m) is No-Signal *1)
1.1385	44.6	25.8	19.7	6.2	32.2	-71.9	-33.5	25.5	59.0	0	
1.2650	25.8	NS	19.7	6.2	32.2	-40.0	-20.4	23.5	43.9	0	Reading(10 m) is No-Signal *1)

$$\text{decay} = (10 \text{ m reading} - 3 \text{ m reading}) / (\log 3 \text{ m} - \log 10 \text{ m})$$

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 9, 2024
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Junya Okuno (Below 30 MHz)
Mode	Mode 15

FREQ	Reading (3 m)	Reading (10 m)	ANT Factor	Atten + Cable loss	AMP Gain	Extrapolation Factor	Result (300 m)	Limit (300 m)	Margin	Antenna	Remarks
[MHz]	[dBµV]	[dBµV]	[dB/m]	[dB]	[dB]	[dB]	[dBµV/m]	[dBµV/m]	[dB]	[deg]	
0.1322	96.1	67.8	19.5	6.0	32.2	-108.2	-18.8	23.5	42.3	0	
0.1322	94.8	67.3	19.5	6.0	32.2	-105.2	-17.0	23.5	40.5	45	
0.1322	93.0	67.0	19.5	6.0	32.2	-99.4	-13.1	23.5	36.6	90	
0.1322	94.6	67.5	19.5	6.0	32.2	-103.7	-15.7	23.5	39.2	135	
0.1322	96.0	67.7	19.5	6.0	32.2	-108.2	-18.9	23.5	42.4	180	
0.1322	94.2	59.1	19.5	6.0	32.2	-134.3	-46.7	23.5	70.2	Horizontal	
0.2644	46.5	29.9	19.6	6.0	32.2	-63.5	-23.5	23.5	47.0	0	
0.3966	65.3	37.4	19.7	6.1	32.2	-106.7	-47.8	23.5	71.3	0	
0.5288	30.0	NS	19.7	6.1	32.2	-40.0	-16.4	23.5	39.9	0	Reading(10 m) is No-Signal *1)
0.6610	56.0	29.6	19.7	6.1	32.2	-101.0	-51.3	23.5	74.8	0	
0.7932	28.3	NS	19.7	6.2	32.2	-40.0	-18.0	23.5	41.5	0	Reading(10 m) is No-Signal *1)
0.9254	49.5	26.5	19.7	6.2	32.2	-88.0	-44.8	23.5	68.3	0	
1.0576	26.8	NS	19.7	6.2	32.2	-40.0	-19.5	23.5	43.0	0	Reading(10 m) is No-Signal *1)
1.1898	44.5	25.8	19.7	6.2	32.2	-71.5	-33.3	25.5	58.8	0	
1.3220	25.7	NS	19.7	6.2	32.2	-40.0	-20.5	23.5	44.0	0	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
 Extrapolation Factor = decade * Log (Test distance(3 m) / Separate distance(300 m))
 decade = (10 m reading - 3 m reading) / (log 3 m - log 10 m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

10 m Reading of Extrapolation Factor is used the value of 0 deg.
Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 1

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
36.039	21.6	NS	12.2	7.4	38.9	-40.0	-37.7	23.5	61.3	Horizontal	Reading(10 m) is No-Signal *1)
64.000	27.0	NS	9.1	7.9	38.9	-40.0	-34.9	23.5	58.4	Horizontal	Reading(10 m) is No-Signal *1)
70.546	21.9	NS	9.0	8.0	38.9	-40.0	-40.0	23.5	63.5	Horizontal	Reading(10 m) is No-Signal *1)
82.658	21.7	NS	9.2	8.2	38.9	-40.0	-39.8	23.5	63.4	Horizontal	Reading(10 m) is No-Signal *1)
125.000	21.6	NS	11.2	8.8	39.0	-40.0	-37.4	23.5	60.9	Horizontal	Reading(10 m) is No-Signal *1)
285.000	21.2	NS	13.5	10.4	38.8	-40.0	-33.7	23.5	57.2	Horizontal	Reading(10 m) is No-Signal *1)
36.039	23.0	NS	12.2	7.4	38.9	-40.0	-36.3	23.5	59.9	Vertical	Reading(10 m) is No-Signal *1)
64.000	48.7	40.4	9.1	7.9	38.9	-31.7	-4.9	23.5	28.4	Vertical	
64.837	37.6	NS	9.1	7.9	38.9	-40.0	-24.3	23.5	47.8	Vertical	Reading(10 m) is No-Signal *1)
70.546	29.6	NS	9.0	8.0	38.9	-40.0	-32.3	23.5	55.8	Vertical	Reading(10 m) is No-Signal *1)
125.000	21.6	NS	11.2	8.8	39.0	-40.0	-37.4	23.5	60.9	Vertical	Reading(10 m) is No-Signal *1)
285.000	21.2	NS	13.5	10.4	38.8	-40.0	-33.7	23.5	57.2	Vertical	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 2

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
37.124	21.9	NS	11.9	7.4	38.9	-40.0	-37.7	23.5	61.2	Horizontal	Reading(10 m) is No-Signal *1)
64.000	26.9	NS	9.1	7.9	38.9	-40.0	-35.0	23.5	58.5	Horizontal	Reading(10 m) is No-Signal *1)
76.469	21.8	NS	9.1	8.1	38.9	-40.0	-40.0	23.5	63.5	Horizontal	Reading(10 m) is No-Signal *1)
86.417	21.7	NS	9.3	8.3	38.9	-40.0	-39.7	23.5	63.2	Horizontal	Reading(10 m) is No-Signal *1)
145.000	21.5	NS	11.9	9.0	39.0	-40.0	-36.6	23.5	60.1	Horizontal	Reading(10 m) is No-Signal *1)
362.000	20.7	NS	15.2	11.0	38.6	-40.0	-31.7	23.5	55.3	Horizontal	Reading(10 m) is No-Signal *1)
37.124	22.5	NS	11.9	7.4	38.9	-40.0	-37.1	23.5	60.6	Vertical	Reading(10 m) is No-Signal *1)
53.060	30.1	NS	9.6	7.7	38.9	-40.0	-31.4	23.5	55.0	Vertical	Reading(10 m) is No-Signal *1)
54.744	33.8	NS	9.5	7.8	38.9	-40.0	-27.9	23.5	51.4	Vertical	Reading(10 m) is No-Signal *1)
64.000	48.9	40.5	9.1	7.9	38.9	-32.1	-5.1	23.5	28.6	Vertical	
64.838	38.0	NS	9.1	7.9	38.9	-40.0	-23.9	23.5	47.4	Vertical	Reading(10 m) is No-Signal *1)
362.000	20.7	NS	15.2	11.0	38.6	-40.0	-31.7	23.5	55.3	Vertical	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 3

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
34.607	21.8	NS	12.5	7.4	38.9	-40.0	-37.3	23.5	60.8	Horizontal	Reading(10 m) is No-Signal *1)
53.902	21.7	NS	9.6	7.7	38.9	-40.0	-39.9	23.5	63.4	Horizontal	Reading(10 m) is No-Signal *1)
64.000	27.0	NS	9.1	7.9	38.9	-40.0	-34.9	23.5	58.4	Horizontal	Reading(10 m) is No-Signal *1)
70.745	21.9	NS	9.0	8.0	38.9	-40.0	-40.0	23.5	63.5	Horizontal	Reading(10 m) is No-Signal *1)
100.000	21.8	NS	9.9	8.4	38.9	-40.0	-38.8	23.5	62.3	Horizontal	Reading(10 m) is No-Signal *1)
300.000	21.2	NS	13.6	10.5	38.7	-40.0	-33.4	23.5	57.0	Horizontal	Reading(10 m) is No-Signal *1)
34.607	23.0	NS	12.5	7.4	38.9	-40.0	-36.1	23.5	59.6	Vertical	Reading(10 m) is No-Signal *1)
53.902	33.0	NS	9.6	7.7	38.9	-40.0	-28.6	23.5	52.1	Vertical	Reading(10 m) is No-Signal *1)
64.000	48.0	40.6	9.1	7.9	38.9	-28.3	-2.2	23.5	25.7	Vertical	
70.745	30.1	NS	9.0	8.0	38.9	-40.0	-31.8	23.5	55.3	Vertical	Reading(10 m) is No-Signal *1)
100.000	21.8	NS	9.9	8.4	38.9	-40.0	-38.8	23.5	62.3	Vertical	Reading(10 m) is No-Signal *1)
300.000	21.2	NS	13.6	10.5	38.7	-40.0	-33.4	23.5	57.0	Vertical	Reading(10 m) is No-Signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 4

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
39.465	21.8	NS	11.5	7.5	38.9	-40.0	-38.1	23.5	61.7	Horizontal	Reading(10 m) is No-signal *1)
59.216	22.5	NS	9.3	7.8	38.9	-40.0	-39.3	23.5	62.8	Horizontal	Reading(10 m) is No-signal *1)
64.000	26.0	NS	9.1	7.9	38.9	-40.0	-35.9	23.5	59.4	Horizontal	Reading(10 m) is No-signal *1)
98.021	21.8	NS	9.8	8.4	38.9	-40.0	-38.9	23.5	62.4	Horizontal	Reading(10 m) is No-signal *1)
115.000	21.7	NS	10.7	8.6	39.0	-40.0	-37.9	23.5	61.4	Horizontal	Reading(10 m) is No-signal *1)
310.500	21.2	NS	13.9	10.6	38.7	-40.0	-33.1	23.5	56.6	Horizontal	Reading(10 m) is No-signal *1)
39.465	25.1	NS	11.5	7.5	38.9	-40.0	-34.8	23.5	58.4	Vertical	Reading(10 m) is No-signal *1)
54.556	32.8	NS	9.5	7.7	38.9	-40.0	-28.9	23.5	52.4	Vertical	Reading(10 m) is No-signal *1)
61.836	36.4	NS	9.1	7.9	38.9	-40.0	-25.5	23.5	49.0	Vertical	Reading(10 m) is No-signal *1)
64.000	46.5	40.3	9.1	7.9	38.9	-23.7	0.9	23.5	22.6	Vertical	
79.817	22.4	NS	9.1	8.2	38.9	-40.0	-39.3	23.5	62.8	Vertical	Reading(10 m) is No-signal *1)
301.500	21.2	NS	13.7	10.5	38.7	-40.0	-33.4	23.5	56.9	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 5

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
39.611	21.5	NS	11.5	7.5	38.9	-40.0	-38.5	23.5	62.0	Horizontal	Reading(10 m) is No-signal *1)
59.215	22.5	NS	9.3	7.8	38.9	-40.0	-39.3	23.5	62.8	Horizontal	Reading(10 m) is No-signal *1)
64.000	25.9	NS	9.1	7.9	38.9	-40.0	-36.0	23.5	59.5	Horizontal	Reading(10 m) is No-signal *1)
97.650	21.8	NS	9.8	8.4	38.9	-40.0	-38.9	23.5	62.5	Horizontal	Reading(10 m) is No-signal *1)
118.000	21.7	NS	10.9	8.7	39.0	-40.0	-37.7	23.5	61.2	Horizontal	Reading(10 m) is No-signal *1)
288.000	21.7	NS	13.5	10.4	38.8	-40.0	-33.2	23.5	56.7	Horizontal	Reading(10 m) is No-signal *1)
39.611	24.7	NS	11.5	7.5	38.9	-40.0	-35.3	23.5	58.8	Vertical	Reading(10 m) is No-signal *1)
55.596	31.8	NS	9.4	7.8	38.9	-40.0	-29.9	23.5	53.4	Vertical	Reading(10 m) is No-signal *1)
61.486	35.8	NS	9.2	7.9	38.9	-40.0	-26.1	23.5	49.6	Vertical	Reading(10 m) is No-signal *1)
64.000	46.8	40.5	9.1	7.9	38.9	-24.1	0.8	23.5	22.7	Vertical	
97.650	21.8	NS	9.8	8.4	38.9	-40.0	-38.9	23.5	62.5	Vertical	Reading(10 m) is No-signal *1)
288.000	21.7	NS	13.5	10.4	38.8	-40.0	-33.2	23.5	56.7	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 11, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Junya Okuno
	(Above 30 MHz)
Mode	Mode 6

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
33.645	21.9	NS	12.7	7.3	38.9	-40.0	-37.0	23.5	60.5	Horizontal	Reading(10 m) is No-signal *1)
41.886	21.5	NS	11.0	7.5	38.9	-40.0	-38.8	23.5	62.4	Horizontal	Reading(10 m) is No-signal *1)
64.000	26.1	NS	9.1	7.9	38.9	-40.0	-35.8	23.5	59.3	Horizontal	Reading(10 m) is No-signal *1)
80.000	21.9	NS	9.1	8.2	38.9	-40.0	-39.8	23.5	63.3	Horizontal	Reading(10 m) is No-signal *1)
132.000	21.7	NS	11.5	8.8	39.0	-40.0	-37.0	23.5	60.5	Horizontal	Reading(10 m) is No-signal *1)
342.000	21.0	NS	15.1	10.8	38.6	-40.0	-31.8	23.5	55.3	Horizontal	Reading(10 m) is No-signal *1)
41.887	22.0	NS	11.0	7.5	38.9	-40.0	-38.3	23.5	61.9	Vertical	Reading(10 m) is No-signal *1)
55.580	31.7	NS	9.4	7.8	38.9	-40.0	-30.0	23.5	53.5	Vertical	Reading(10 m) is No-signal *1)
61.455	35.0	NS	9.2	7.9	38.9	-40.0	-26.9	23.5	50.4	Vertical	Reading(10 m) is No-signal *1)
64.000	45.8	40.4	9.1	7.9	38.9	-20.7	3.3	23.5	20.3	Vertical	
66.542	32.0	NS	9.0	8.0	38.9	-40.0	-29.9	23.5	53.4	Vertical	Reading(10 m) is No-signal *1)
342.000	21.0	NS	15.1	10.8	38.6	-40.0	-31.8	23.5	55.3	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami
	(Above 30 MHz)
Mode	Mode 7

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	27.3	NS	13.5	7.3	38.9	-40.0	-30.9	23.5	54.4	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.6	NS	11.5	7.4	38.9	-40.0	-35.3	23.5	58.8	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.5	NS	9.2	7.9	38.9	-40.0	-25.4	23.5	48.9	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.3	NS	9.2	8.2	38.9	-40.0	-36.3	23.5	59.8	Horizontal	Reading(10 m) is No-signal *1)
109.059	31.8	NS	10.4	8.6	39.0	-40.0	-28.2	23.5	51.7	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.6	NS	13.6	10.4	38.8	-40.0	-16.2	23.5	39.7	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.6	NS	13.5	7.3	38.9	-40.0	-12.6	23.5	36.1	Vertical	Reading(10 m) is No-signal *1)
39.272	33.7	NS	11.5	7.4	38.9	-40.0	-26.2	23.5	49.7	Vertical	Reading(10 m) is No-signal *1)
60.595	39.6	NS	9.2	7.9	38.9	-40.0	-22.3	23.5	45.8	Vertical	Reading(10 m) is No-signal *1)
82.149	33.8	NS	9.2	8.2	38.9	-40.0	-27.8	23.5	51.3	Vertical	Reading(10 m) is No-signal *1)
109.059	39.1	NS	10.4	8.6	39.0	-40.0	-20.9	23.5	44.4	Vertical	Reading(10 m) is No-signal *1)
290.000	45.1	NS	13.6	10.4	38.8	-40.0	-9.7	23.5	33.2	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami
	(Above 30 MHz)
Mode	Mode 8

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.8	NS	13.5	7.3	38.9	-40.0	-31.4	23.5	54.9	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.4	NS	11.5	7.4	38.9	-40.0	-35.5	23.5	59.0	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.6	NS	9.2	7.9	38.9	-40.0	-25.3	23.5	48.8	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.3	NS	9.2	8.2	38.9	-40.0	-36.3	23.5	59.8	Horizontal	Reading(10 m) is No-signal *1)
109.059	31.9	NS	10.4	8.6	39.0	-40.0	-28.1	23.5	51.6	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.3	NS	13.6	10.4	38.8	-40.0	-16.5	23.5	40.0	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.2	NS	13.5	7.3	38.9	-40.0	-13.0	23.5	36.5	Vertical	Reading(10 m) is No-signal *1)
39.272	33.8	NS	11.5	7.4	38.9	-40.0	-26.1	23.5	49.6	Vertical	Reading(10 m) is No-signal *1)
60.595	39.1	NS	9.2	7.9	38.9	-40.0	-22.8	23.5	46.3	Vertical	Reading(10 m) is No-signal *1)
82.149	33.6	NS	9.2	8.2	38.9	-40.0	-28.0	23.5	51.5	Vertical	Reading(10 m) is No-signal *1)
109.059	39.0	NS	10.4	8.6	39.0	-40.0	-21.0	23.5	44.5	Vertical	Reading(10 m) is No-signal *1)
290.000	45.1	NS	13.6	10.4	38.8	-40.0	-9.7	23.5	33.2	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place Ise EMC Lab.
Semi Anechoic Chamber No.1
Date July 12, 2024
Temperature / Humidity 22 deg. C / 62 % RH
Engineer Masaya Minami
(Above 30 MHz)
Mode Mode 9

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.8	NS	13.5	7.3	38.9	-40.0	-31.4	23.5	54.9	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.6	NS	11.5	7.4	38.9	-40.0	-35.3	23.5	58.8	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.3	NS	9.2	7.9	38.9	-40.0	-25.6	23.5	49.1	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.2	NS	9.2	8.2	38.9	-40.0	-36.4	23.5	59.9	Horizontal	Reading(10 m) is No-signal *1)
109.059	31.9	NS	10.4	8.6	39.0	-40.0	-28.1	23.5	51.6	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.5	NS	13.6	10.4	38.8	-40.0	-16.3	23.5	39.8	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.4	NS	13.5	7.3	38.9	-40.0	-12.8	23.5	36.3	Vertical	Reading(10 m) is No-signal *1)
39.272	34.2	NS	11.5	7.4	38.9	-40.0	-25.7	23.5	49.2	Vertical	Reading(10 m) is No-signal *1)
60.595	39.5	NS	9.2	7.9	38.9	-40.0	-22.4	23.5	45.9	Vertical	Reading(10 m) is No-signal *1)
82.149	33.6	NS	9.2	8.2	38.9	-40.0	-28.0	23.5	51.5	Vertical	Reading(10 m) is No-signal *1)
109.059	39.7	NS	10.4	8.6	39.0	-40.0	-20.3	23.5	43.8	Vertical	Reading(10 m) is No-signal *1)
290.000	45.5	NS	13.6	10.4	38.8	-40.0	-9.3	23.5	32.8	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami (Above 30 MHz)
Mode	Mode 10

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.5	NS	13.5	7.3	38.9	-40.0	-31.7	23.5	55.2	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.2	NS	11.5	7.4	38.9	-40.0	-35.7	23.5	59.2	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.6	NS	9.2	7.9	38.9	-40.0	-25.3	23.5	48.8	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.5	NS	9.2	8.2	38.9	-40.0	-36.1	23.5	59.6	Horizontal	Reading(10 m) is No-signal *1)
109.059	32.3	NS	10.4	8.6	39.0	-40.0	-27.7	23.5	51.2	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.4	NS	13.6	10.4	38.8	-40.0	-16.4	23.5	39.9	Horizontal	Reading(10 m) is No-signal *1)
30.540	44.7	NS	13.5	7.3	38.9	-40.0	-13.5	23.5	37.0	Vertical	Reading(10 m) is No-signal *1)
39.272	33.7	NS	11.5	7.4	38.9	-40.0	-26.2	23.5	49.7	Vertical	Reading(10 m) is No-signal *1)
60.595	39.4	NS	9.2	7.9	38.9	-40.0	-22.5	23.5	46.0	Vertical	Reading(10 m) is No-signal *1)
82.149	33.0	NS	9.2	8.2	38.9	-40.0	-28.6	23.5	52.1	Vertical	Reading(10 m) is No-signal *1)
109.059	39.2	NS	10.4	8.6	39.0	-40.0	-20.8	23.5	44.3	Vertical	Reading(10 m) is No-signal *1)
290.000	45.4	NS	13.6	10.4	38.8	-40.0	-9.4	23.5	32.9	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami (Above 30 MHz)
Mode	Mode 11

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.9	NS	13.5	7.3	38.9	-40.0	-31.3	23.5	54.8	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.4	NS	11.5	7.4	38.9	-40.0	-35.5	23.5	59.0	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.6	NS	9.2	7.9	38.9	-40.0	-25.3	23.5	48.8	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.2	NS	9.2	8.2	38.9	-40.0	-36.4	23.5	59.9	Horizontal	Reading(10 m) is No-signal *1)
109.059	32.9	NS	10.4	8.6	39.0	-40.0	-27.1	23.5	50.6	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.5	NS	13.6	10.4	38.8	-40.0	-16.3	23.5	39.8	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.1	NS	13.5	7.3	38.9	-40.0	-13.1	23.5	36.6	Vertical	Reading(10 m) is No-signal *1)
39.272	34.1	NS	11.5	7.4	38.9	-40.0	-25.8	23.5	49.3	Vertical	Reading(10 m) is No-signal *1)
60.595	39.8	NS	9.2	7.9	38.9	-40.0	-22.1	23.5	45.6	Vertical	Reading(10 m) is No-signal *1)
82.149	33.4	NS	9.2	8.2	38.9	-40.0	-28.2	23.5	51.7	Vertical	Reading(10 m) is No-signal *1)
109.059	40.1	NS	10.4	8.6	39.0	-40.0	-19.9	23.5	43.4	Vertical	Reading(10 m) is No-signal *1)
290.000	45.4	NS	13.6	10.4	38.8	-40.0	-9.4	23.5	32.9	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami
	(Above 30 MHz)
Mode	Mode 12

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.9	NS	13.5	7.3	38.9	-40.0	-31.3	23.5	54.8	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.4	NS	11.5	7.4	38.9	-40.0	-35.5	23.5	59.0	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.8	NS	9.2	7.9	38.9	-40.0	-25.1	23.5	48.6	Horizontal	Reading(10 m) is No-signal *1)
82.149	25.7	NS	9.2	8.2	38.9	-40.0	-35.9	23.5	59.4	Horizontal	Reading(10 m) is No-signal *1)
109.059	33.4	NS	10.4	8.6	39.0	-40.0	-26.6	23.5	50.1	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.5	NS	13.6	10.4	38.8	-40.0	-16.3	23.5	39.8	Horizontal	Reading(10 m) is No-signal *1)
30.540	44.8	NS	13.5	7.3	38.9	-40.0	-13.4	23.5	36.9	Vertical	Reading(10 m) is No-signal *1)
39.272	33.5	NS	11.5	7.4	38.9	-40.0	-26.4	23.5	49.9	Vertical	Reading(10 m) is No-signal *1)
60.595	39.8	NS	9.2	7.9	38.9	-40.0	-22.1	23.5	45.6	Vertical	Reading(10 m) is No-signal *1)
82.149	34.3	NS	9.2	8.2	38.9	-40.0	-27.3	23.5	50.8	Vertical	Reading(10 m) is No-signal *1)
109.059	40.7	NS	10.4	8.6	39.0	-40.0	-19.3	23.5	42.8	Vertical	Reading(10 m) is No-signal *1)
290.000	45.4	NS	13.6	10.4	38.8	-40.0	-9.4	23.5	32.9	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami
	(Above 30 MHz)
Mode	Mode 13

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.2	NS	13.5	7.3	38.9	-40.0	-32.0	23.5	55.5	Horizontal	Reading(10 m) is No-signal *1)
39.272	24.8	NS	11.5	7.4	38.9	-40.0	-35.1	23.5	58.6	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.4	NS	9.2	7.9	38.9	-40.0	-25.5	23.5	49.0	Horizontal	Reading(10 m) is No-signal *1)
82.149	26.7	NS	9.2	8.2	38.9	-40.0	-34.9	23.5	58.4	Horizontal	Reading(10 m) is No-signal *1)
109.059	34.1	NS	10.4	8.6	39.0	-40.0	-25.9	23.5	49.4	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.5	NS	13.6	10.4	38.8	-40.0	-16.3	23.5	39.8	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.5	NS	13.5	7.3	38.9	-40.0	-12.7	23.5	36.2	Vertical	Reading(10 m) is No-signal *1)
39.272	35.6	NS	11.5	7.4	38.9	-40.0	-24.3	23.5	47.8	Vertical	Reading(10 m) is No-signal *1)
60.595	40.1	NS	9.2	7.9	38.9	-40.0	-21.8	23.5	45.3	Vertical	Reading(10 m) is No-signal *1)
82.149	34.3	NS	9.2	8.2	38.9	-40.0	-27.3	23.5	50.8	Vertical	Reading(10 m) is No-signal *1)
109.059	40.8	NS	10.4	8.6	39.0	-40.0	-19.2	23.5	42.7	Vertical	Reading(10 m) is No-signal *1)
290.000	45.4	NS	13.6	10.4	38.8	-40.0	-9.4	23.5	32.9	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami (Above 30 MHz)
Mode	Mode 14

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.6	NS	13.5	7.3	38.9	-40.0	-31.6	23.5	55.1	Horizontal	Reading(10 m) is No-signal *1)
39.272	25.2	NS	11.5	7.4	38.9	-40.0	-34.7	23.5	58.2	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.7	NS	9.2	7.9	38.9	-40.0	-25.2	23.5	48.7	Horizontal	Reading(10 m) is No-signal *1)
82.149	26.9	NS	9.2	8.2	38.9	-40.0	-34.7	23.5	58.2	Horizontal	Reading(10 m) is No-signal *1)
109.059	34.3	NS	10.4	8.6	39.0	-40.0	-25.7	23.5	49.2	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.7	NS	13.6	10.4	38.8	-40.0	-16.1	23.5	39.6	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.2	NS	13.5	7.3	38.9	-40.0	-13.0	23.5	36.5	Vertical	Reading(10 m) is No-signal *1)
39.272	35.8	NS	11.5	7.4	38.9	-40.0	-24.1	23.5	47.6	Vertical	Reading(10 m) is No-signal *1)
60.595	40.5	NS	9.2	7.9	38.9	-40.0	-21.4	23.5	44.9	Vertical	Reading(10 m) is No-signal *1)
82.149	34.7	NS	9.2	8.2	38.9	-40.0	-26.9	23.5	50.4	Vertical	Reading(10 m) is No-signal *1)
109.059	40.6	NS	10.4	8.6	39.0	-40.0	-19.4	23.5	42.9	Vertical	Reading(10 m) is No-signal *1)
290.000	45.5	NS	13.6	10.4	38.8	-40.0	-9.3	23.5	32.8	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

Radiated Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.1
Date	July 12, 2024
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Masaya Minami
	(Above 30 MHz)
Mode	Mode 15

FREQ [MHz]	Reading (3 m) [dBμV]	Reading (10 m) [dBμV]	ANT Factor [dB/m]	Atten + Cable loss [dB]	AMP gain [dB]	Extrapolation Factor [dB]	Result (300 m) [dBμV/m]	Limit (300 m) [dBμV/m]	Margin [dB]	Antenna Polarization	Remarks
30.540	26.6	NS	13.5	7.3	38.9	-40.0	-31.6	23.5	55.1	Horizontal	Reading(10 m) is No-signal *1)
39.272	25.0	NS	11.5	7.4	38.9	-40.0	-34.9	23.5	58.4	Horizontal	Reading(10 m) is No-signal *1)
60.595	36.9	NS	9.2	7.9	38.9	-40.0	-25.0	23.5	48.5	Horizontal	Reading(10 m) is No-signal *1)
82.149	27.2	NS	9.2	8.2	38.9	-40.0	-34.4	23.5	57.9	Horizontal	Reading(10 m) is No-signal *1)
109.059	34.1	NS	10.4	8.6	39.0	-40.0	-25.9	23.5	49.4	Horizontal	Reading(10 m) is No-signal *1)
290.000	38.6	NS	13.6	10.4	38.8	-40.0	-16.2	23.5	39.7	Horizontal	Reading(10 m) is No-signal *1)
30.540	45.0	NS	13.5	7.3	38.9	-40.0	-13.2	23.5	36.7	Vertical	Reading(10 m) is No-signal *1)
39.272	35.7	NS	11.5	7.4	38.9	-40.0	-24.2	23.5	47.7	Vertical	Reading(10 m) is No-signal *1)
60.595	40.4	NS	9.2	7.9	38.9	-40.0	-21.5	23.5	45.0	Vertical	Reading(10 m) is No-signal *1)
82.149	34.9	NS	9.2	8.2	38.9	-40.0	-26.7	23.5	50.2	Vertical	Reading(10 m) is No-signal *1)
109.059	40.8	NS	10.4	8.6	39.0	-40.0	-19.2	23.5	42.7	Vertical	Reading(10 m) is No-signal *1)
290.000	45.5	NS	13.6	10.4	38.8	-40.0	-9.3	23.5	32.8	Vertical	Reading(10 m) is No-signal *1)

CALCULATION(Result) : Reading + ANT Factor + Cable loss + Atten loss + Extrapolation Factor - AMP gain
Extrapolation Factor = decade * Log (Test distance(3m) / Separate distance(300m))
decade = (10m reading - 3m reading) / (log 3m - log 10m)

*1) Used for the square of an inverse linear distance extrapolation factor (20 dB/decade)
Except for the above table : adequate margin data below the limits.

Worst direction of EUT was decided by test result performed on test distance at 3 m, and test distance at 10 m was performed worst direction.

APPENDIX 2: Test Instruments

Test equipment

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	141213	Attenuator(6dB)	Weinschel Corp	2	BK7971	11/16/2023	12
RE	141350	Coaxial Cable	Suhner/storm/Agilent/TSJ	-	-	03/05/2024	12
RE	141530	Digital Tester	Fluke Corporation	FLUKE 26-3	78030621	02/01/2024	12
RE	141568	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	2901	01/10/2024	12
RE	141583	Pre Amplifier	SONOMA INSTRUMENT	310	260833	04/04/2024	12
RE	141585	Pre Amplifier	L3 Narda-MITEQ	MLA-10K01-B01-35	1237616	02/17/2024	12
RE	141950	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	11/20/2023	12
RE	141998	AC1 Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	12/06/2023	24
RE	142152	Loop Antenna	Rohde & Schwarz	HFH2-Z2	836553/009	10/17/2023	12
RE	142226	Measure, Tape, Steel	KOMELON	KMC-36	-	-	-
RE	159670	Coaxial Cable	UL Japan	-	-	11/21/2023	12
RE	160924	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	225	11/29/2023	12
RE	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	197990	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHBB 9124 + BBA 9106	01365	11/29/2023	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