



MPE TEST REPORT

Test Report No.: 13226969H-C-R2

Applicant : Panasonic Corporation

Type of EUT : Wireless Charger

Model Number of EUT : AT2001

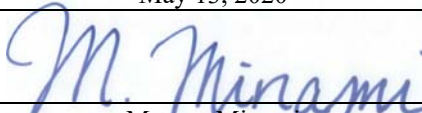
FCC ID : ACJ932AT2001


Test standard : FCC rule §1.1310
Radiofrequency radiation exposure limits.
 *This test report has issued for MPE testing by wireless charger according to KDB 680106 D01 Ver.3.

Test Result : Complied (Refer to SECTION 3.2)

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
6. The all test items in this test report are conducted by UL Japan, Inc. Ise EMC Lab.
7. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.
8. The information provided from the customer for this report is identified in SECTION 1.
9. This report is a revised version of 13226969H-C-R1. 13226969H-C-R1 is replaced with this report.

Date of test: May 13, 2020

Representative test engineer: 
 Masaya Minami
 Engineer
 Consumer Technology Division

Approved by: 
 Tsubasa Takayama
 Leader
 Consumer Technology Division



This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.
 *As for the range of Accreditation in NVLAP, you may refer to the WEB address,
http://japan.ul.com/resources/emc_accredited/

- This report contains data that are not covered by the NVLAP accreditation.
- There is no testing item of "Non-accreditation".

REVISION HISTORY

Original Test Report No.: 13226969H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13226969H-C	May 18, 2020	-	-
1	13226969H-C-R1	June 11, 2020	P.1	Correction of the Test standard in cover page; From KDB 680106 D01 RF Exposure Wireless Charging Apps V.3 to FCC rule §1.1310 Radiofrequency radiation exposure limits.
1	13226969H-C-R1	June 11, 2020	P.6	Correction of Operating Frequency in Radio Specification of Clause 2.2; From 127.5 kHz To 120.3 kHz / 127.0 kHz / 127.5 kHz / 126.515 kHz to 128.549 kHz
1	13226969H-C-R1	June 11, 2020	P.6	Deletion of Frequency Band from Radio Specification of Clause 2.2.
1	13226969H-C-R1	June 11, 2020	P.7	Correction of the Title and Purpose of test in Clause 3.1 From Title: KDB 680106 D01 RF Exposure Wireless Charging Apps Purpose of test FCC rule §1.1310 Radiofrequency radiation exposure limits. to Title: FCC rule §1.1310 Radiofrequency radiation exposure limits. Purpose of test Compliance with Radiofrequency radiation exposure limits.
1	13226969H-C-R1	June 11, 2020	P.7	Correction of the Test Procedure in Clause 3.2; From “-” to KDB 680106 D01 RF Exposure Wireless Charging Apps V.3
1	13226969H-C-R1	June 11, 2020	P.7, 8	Correction of references to KDB 680106 D01 in Clause 3.2; From Clause 3.3) to Section 3 c)
1	13226969H-C-R1	June 11, 2020	P.8	Deletion of the following sentences from Clause 3.2; “Rated output power of the EUT is 5 W and 10 W as shown in clause 2.2 of this report. So, the EUT could not be complied above content b). And the others were complied.”
1	13226969H-C-R1	June 11, 2020	P.13	Deletion of “(step 10cm)” from Clause 5.4.
1	13226969H-C-R1	June 11, 2020	P.14 to 35	Change the following note sentence of APPENDIX 1. From *The result is 50 percent of Limit or more. to *Test result is less than 50 % of the MPE limit.
1	13226969H-C-R1	June 11, 2020	P.14 to 35	Addition of the measurement data for 15 cm distance.
1	13226969H-C-R1	June 11, 2020	P.15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35	Deletion of the following sentences under the data; *1) Not applicable because it does not correspond to product specifications. *Since the Rear side is installed internally, the test was excluded.
1	13226969H-C-R1	June 11, 2020	P.15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35	Change from “*2)” to “*1)”. Change from “*3)” to “*2)”.
1	13226969H-C-R1	June 11, 2020	P.39, 45	Addition of the setup photo for 15 cm distance.
2	13226969H-C-R2	June 16, 2020	P.14	Correction of operating frequency for Mode 1; From 0.120.3 MHz to 0.1203 MHz
2	13226969H-C-R2	June 16, 2020	P.37, 39, 40, 45, 47	Correction of test setup photo

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Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	MRA	Mutual Recognition Arrangement
AC	Alternating Current	NIST	National Institute of Standards and Technology
AFH	Adaptive Frequency Hopping	NS	No signal detect.
AM	Amplitude Modulation	NSA	Normalized Site Attenuation
Amp, AMP	Amplifier	NVLAP	National Voluntary Laboratory Accreditation Program
ANSI	American National Standards Institute	OBW	Occupied Band Width
Ant, ANT	Antenna	OFDM	Orthogonal Frequency Division Multiplexing
AP	Access Point	OOK	On Off Keying
ASK	Amplitude Shift Keying	P/M	Power meter
Atten., ATT	Attenuator	PCB	Printed Circuit Board
AV	Average	PER	Packet Error Rate
BPSK	Binary Phase-Shift Keying	PHY	Physical Layer
BR	Bluetooth Basic Rate	PK	Peak
BT	Bluetooth	PN	Pseudo random Noise
BT LE	Bluetooth Low Energy	PRBS	Pseudo-Random Bit Sequence
BW	BandWidth	PSD	Power Spectral Density
Cal Int	Calibration Interval	QAM	Quadrature Amplitude Modulation
CCK	Complementary Code Keying	QP	Quasi-Peak
Ch., CH	Channel	QPSK	Quadri-Phase Shift Keying
CISPR	Comite International Special des Perturbations Radioelectriques	RBW	Resolution Band Width
CW	Continuous Wave	RDS	Radio Data System
DBPSK	Differential BPSK	RE	Radio Equipment
DC	Direct Current	RF	Radio Frequency
DFS	Dynamic Frequency Selection	RMS	Root Mean Square
DQPSK	Differential QPSK	RSS	Radio Standards Specifications
DSSS	Direct Sequence Spread Spectrum	Rx	Receiving
EDR	Enhanced Data Rate	SA, S/A	Spectrum Analyzer
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	SG	Signal Generator
EMC	ElectroMagnetic Compatibility	SVSWR	Site-Voltage Standing Wave Ratio
EMI	ElectroMagnetic Interference	TR	Test Receiver
EN	European Norm	Tx	Transmitting
ERP, e.r.p.	Effective Radiated Power	VBW	Video BandWidth
EU	European Union	Vert.	Vertical
EUT	Equipment Under Test	WLAN	Wireless LAN
Fac.	Factor		
FCC	Federal Communications Commission		
FHSS	Frequency Hopping Spread Spectrum		
FM	Frequency Modulation		
Freq.	Frequency		
FSK	Frequency Shift Keying		
GFSK	Gaussian Frequency-Shift Keying		
GNSS	Global Navigation Satellite System		
GPS	Global Positioning System		
Hori.	Horizontal		
ICES	Interference-Causing Equipment Standard		
IEC	International Electrotechnical Commission		
IEEE	Institute of Electrical and Electronics Engineers		
IF	Intermediate Frequency		
ILAC	International Laboratory Accreditation Conference		
ISED	Innovation, Science and Economic Development Canada		
ISO	International Organization for Standardization		
JAB	Japan Accreditation Board		
LAN	Local Area Network		
LIMS	Laboratory Information Management System		
MCS	Modulation and Coding Scheme		

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SECTION 1 : Customer information

Company Name : Panasonic Corporation
Address : 4261, Ikonobe-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken,
224-8520, Japan
Telephone Number : +81-50-3689-7112
Facsimile Number : +81-45-931-0806
Contact Person : Takahisa Sakai

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 : Wireless Charger for mobile phone
Model Number : AT2001
Serial Number : Refer to SECTION 4.2
Rating : DC 10.5 V to 16.0 V
Receipt Date : March 18, 2020
Country of Mass-production : Japan, China, Czech Republic, and Thailand
Condition : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification : No Modification by the test lab.

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2.2 Product Description

Model: AT2001 (referred to as the EUT in this report) is a Wireless Charger.

Feature of EUT : Press the supply switch of the wireless charger. Each press the power supply switch it on/off.
When turned the hybrid system off, the state of the power supply for wireless charger is memorized.
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

Operating Frequency : 120.3 kHz / 127.0 kHz / 127.5 kHz / 126.515 kHz to 128.549 kHz
Rated Output Power : 5 W / 10 W
Coil system : Single Coil
Charging distance : Contact
Clock frequency (maximum) : 8 MHz

*Test limit was applied to the test limit of 100 kHz - 300 kHz based on FCC rule Section 1.1310, according to KDB 680106 D01 RF Exposure Wireless Charging Apps Clause 3).

SECTION 3 : Test specification, procedures and results

3.1 Test specification

Title : FCC rule §1.1310 Radiofrequency radiation exposure limits.

Purpose of test : Compliance with Radiofrequency radiation exposure limits.

3.2 Procedures & results

Item	Test Procedure	Limits	Deviation	Worst Margin	Result
MPE Limit	KDB 680106 D01 RF Exposure Wireless Charging Apps V.3	Table 1(B)	N/A	Refer to section.5	Complied

*These tests were performed without any deviations from test procedure.

Table 1—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3 - 3.0	614	1.63	*(100)	6
3.0 - 30	1842/f	4.89/f	*(900/f ²)	6
30 - 300	61.4	0.163	1.0	6
300 - 1500			f/300	6
1500 - 100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3 - 1.34	614	1.63	*(100)	30
1.34 - 30	824/f	2.19/f	*(180/f ²)	30
30 - 300	27.5	0.073	0.2	30
300 - 1500			f/1500	30
1500 - 100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Note 1 to Table 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2 to Table 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Test limit was applied to the test limit of 100 kHz - 300 kHz based on FCC rule Section 1.1310, according to KDB 680106 D01 RF Exposure Wireless Charging Apps Section 3 c).

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KDB 680106 D01 RF Exposure Wireless Charging Apps requires following contents in order to exclude RF exposure evaluation.

- a). Power transfer frequency is less than 1 MHz.
- b). Output power from each primary coil is less than or equal to 15 watts.
- c). The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
- d). Client device is placed directly in contact with the transmitter.
- e). Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- f). The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

All requests were complied.

Also, Test data used Exposure Level Tester is complied KDB 680106 D01 RF Exposure Wireless Charging Apps Section 3 c).

3.3 Confirmation

UL Japan, Inc. hereby confirms that EUT, in the configuration tested, complies with the specifications KDB 680106 D01 RF Exposure Wireless Charging Apps.
And Model: AT2001 (referred to as the EUT in this report) is a Wireless Charger.

3.4 Uncertainty

EMF

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

Electromagnetic fields

The uncertainty of the applied Electromagnetic field is within the tolerance specified by the standard.

The error of test level for this test system is less than $\pm 0.95\%$ for the level of standard.

3.5 Test Location

UL Japan, Inc. Ise EMC Lab.

*NVLAP Lab. code: 200572-0 / FCC Test Firm Registration Number: 199967 / ISED Lab Company Number: 2973C

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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	-	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0 m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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SECTION 4 : Operation of EUT during testing

4.1 Operating modes

The EUT exercise program used during testing was designed to exercise the various system components in a manner similar to typical use. Test configuration was adjusted maximum output power of EUT.

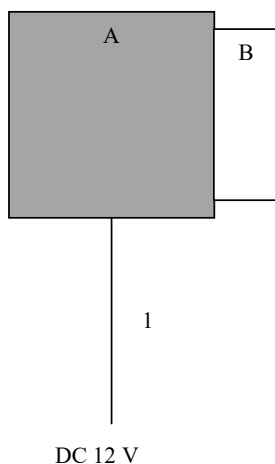
Test sequence is used:

Test mode	Remarks
1) Normal Operating mode (120.3 kHz / 5 W)	Mode 1
2) Normal Operating mode (127.5 kHz / 10 W)	Mode 2
3) Normal Operating mode (127.0 kHz / 5 W)	Mode 3
4) Normal Operating mode (127.627 kHz / 10 W)	Mode 4
5) Normal Operating mode (127.756 kHz / 10 W)	Mode 5
6) Normal Operating mode (128.016 kHz / 10 W)	Mode 6
7) Normal Operating mode (128.549 kHz / 10 W)	Mode 7
8) Normal Operating mode (127.373 kHz / 10 W)	Mode 8
9) Normal Operating mode (127.248 kHz / 10 W)	Mode 9
10) Normal Operating mode (126.999 kHz / 10 W)	Mode 10
11) Normal Operating mode (126.515 kHz / 10 W)	Mode 11

Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals

[Mode 1 to 3]



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Wireless Charger	AT2001	1.5S-003	Panasonic Corporation	EUT
B	Test Jig	PAS-JS100	103	Panasonic Corporation	-

*A and B communicates and charges via air interface.

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Power Cable	2.3	Unshielded	Unshielded	-

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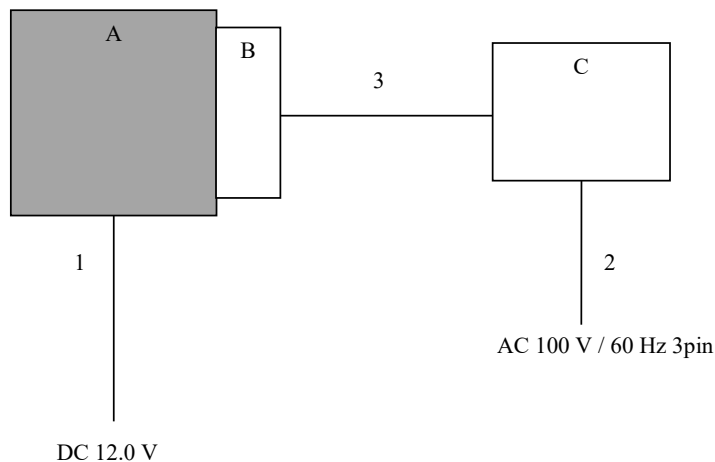
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[Mode 4 to 11]



* 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	Wireless Charger	AT2001	1.5S-003	Panasonic Corporation	EUT
B	Communication probe	-	-	nok9	-
C	Desk top PC	LP/MP/FOD	200134-1807	nok9	-

*A and B communicates and charges via air interface.

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	Power Cable	2.3	Unshielded	Unshielded	-
2	Power Cable	1.5	Unshielded	Unshielded	-
3	Communication cable	0.6	Shielded	Shielded	-

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SECTION 5 : MPE Limit [KDB 680106 Section 3) (FCC § 1.1310)]

5.1. Operating environment

This test was carried out in No.6 shielded room

Date	: May 13, 2020	May 13, 2020
Temperature	: 22 deg.C	23 deg.C
Humidity	: 50 % RH	36 % RH
Engineer	: Masaya Minami	Ken Fujita

5.2. Test configuration

The EUT was placed on a non-metallic of 0.8m above the reference ground plane.
Worst position is shown in the photos in Appendix 2.

5.3. Test conditions

EUT position : Table top

5.4. Test procedure

The test of the weighted result has been performed using time domain evaluation.
Sensor locations : Around from 0cm to 40cm

5.5. Results

Summary of the test results : Complied

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APPENDIX 1: Test data

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 1

Operating Frequency		0.1203 MHz	
		1.63 A/m *1)	
Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5620	0.4471	pass
10cm	0.4060	0.3230	pass
15cm	0.3520	0.2800	pass
20cm	0.2410	0.1917	pass
30cm	0.1450	0.1154	pass
40cm	0.1100	0.0875	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.1440	0.1146	pass
10cm	0.1210	0.0963	pass
15cm	0.1120	0.0891	pass
20cm	0.1050	0.0835	pass
30cm	0.1020	0.0811	pass
40cm	0.1020	0.0811	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3840	0.3055	pass
10cm	0.2240	0.1782	pass
15cm	0.2030	0.1615	pass
20cm	0.1860	0.1480	pass
30cm	0.1340	0.1066	pass
40cm	0.1210	0.0963	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2960	0.2355	pass
10cm	0.1860	0.1480	pass
15cm	0.1610	0.1281	pass
20cm	0.1540	0.1225	pass
30cm	0.1290	0.1026	pass
40cm	0.1060	0.0843	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2880	0.2291	pass
10cm	0.2420	0.1925	pass
15cm	0.2310	0.1838	pass
20cm	0.2110	0.1679	pass
30cm	0.1310	0.1042	pass
40cm	0.1100	0.0875	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6220	0.4948	pass
10cm	0.2860	0.2275	pass
15cm	0.2150	0.1710	pass
20cm	0.1660	0.1321	pass
30cm	0.1210	0.0963	pass
40cm	0.1030	0.0819	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / $4\pi \cdot 10^{-7}$

*Test result is less than 50 % of the MPE limit.

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Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 1

Operating Frequency	0.1203 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	1.02	pass	1.31	pass	1.02	pass	1.58	pass	2.76	pass	1.06	pass
10cm	0.76	pass	1.21	pass	0.62	pass	0.73	pass	1.06	pass	0.85	pass
15cm	0.72	pass	0.94	pass	0.57	pass	0.65	pass	0.95	pass	0.81	pass
20cm	0.65	pass	0.62	pass	0.51	pass	0.41	pass	0.85	pass	0.77	pass
30cm	0.62	pass	0.43	pass	0.47	pass	0.26	pass	0.42	pass	0.62	pass
40cm	0.60	pass	0.32	pass	0.33	pass	0.25	pass	0.31	pass	0.41	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Ken Fujita
Mode Mode 2

Operating Frequency		0.1275 MHz	
		1.63 A/m *1)	
Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5271	0.4193	pass
10cm	0.2292	0.0497	pass
15cm	0.2182	0.0366	pass
20cm	0.2171	0.0338	pass
30cm	0.1174	0.0313	pass
40cm	0.1093	0.0293	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.1382	0.1099	pass
10cm	0.1223	0.0497	pass
15cm	0.1201	0.0361	pass
20cm	0.1172	0.0338	pass
30cm	0.1064	0.0313	pass
40cm	0.1052	0.0293	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3601	0.2865	pass
10cm	0.1834	0.1459	pass
15cm	0.1433	0.0983	pass
20cm	0.1227	0.0976	pass
30cm	0.1153	0.0917	pass
40cm	0.1128	0.0897	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2704	0.2151	pass
10cm	0.1317	0.1048	pass
15cm	0.1188	0.0955	pass
20cm	0.1154	0.0918	pass
30cm	0.1096	0.0872	pass
40cm	0.1062	0.0845	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2792	0.2221	pass
10cm	0.1582	0.1259	pass
15cm	0.1492	0.1190	pass
20cm	0.1476	0.1174	pass
30cm	0.1151	0.0916	pass
40cm	0.1126	0.0896	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5203	0.4139	pass
10cm	0.2143	0.1705	pass
15cm	0.1432	0.1012	pass
20cm	0.1226	0.0975	pass
30cm	0.1222	0.0972	pass
40cm	0.1109	0.0882	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁽⁻⁷⁾

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Ken Fujita
Mode Mode 2

Operating Frequency	0.1275 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	1.09	pass	1.44	pass	0.96	pass	1.62	pass	2.90	pass	0.93	pass
10cm	0.83	pass	1.28	pass	0.67	pass	0.70	pass	0.99	pass	0.74	pass
15cm	0.75	pass	0.77	pass	0.51	pass	0.48	pass	0.88	pass	0.70	pass
20cm	0.73	pass	0.56	pass	0.47	pass	0.40	pass	0.85	pass	0.64	pass
30cm	0.71	pass	0.38	pass	0.47	pass	0.29	pass	0.56	pass	0.62	pass
40cm	0.64	pass	0.32	pass	0.33	pass	0.25	pass	0.31	pass	0.47	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 3

Operating Frequency	0.127 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.7510	0.5975	pass
10cm	0.6020	0.4789	pass
15cm	0.6020	0.4789	pass
20cm	0.6000	0.4773	pass
30cm	0.5320	0.4232	pass
40cm	0.4860	0.3866	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.1580	0.1257	pass
10cm	0.1360	0.1082	pass
15cm	0.1240	0.0986	pass
20cm	0.1170	0.0931	pass
30cm	0.1020	0.0811	pass
40cm	0.1000	0.0796	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3640	0.2896	pass
10cm	0.1960	0.1559	pass
15cm	0.1660	0.1321	pass
20cm	0.1330	0.1058	pass
30cm	0.1200	0.0955	pass
40cm	0.1040	0.0827	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2650	0.2108	pass
10cm	0.1710	0.1360	pass
15cm	0.1680	0.1337	pass
20cm	0.1520	0.1209	pass
30cm	0.1210	0.0963	pass
40cm	0.1020	0.0811	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.2640	0.2100	pass
10cm	0.1550	0.1233	pass
15cm	0.1430	0.1138	pass
20cm	0.1340	0.1066	pass
30cm	0.1110	0.0883	pass
40cm	0.1060	0.0843	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5250	0.4177	pass
10cm	0.2130	0.1695	pass
15cm	0.1770	0.1408	pass
20cm	0.1410	0.1122	pass
30cm	0.1210	0.0963	pass
40cm	0.1040	0.0827	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁽⁻⁷⁾

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 3

Operating Frequency	0.127 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	1.07	pass	1.22	pass	0.91	pass	1.56	pass	2.68	pass	1.02	pass
10cm	0.81	pass	1.07	pass	0.66	pass	1.24	pass	2.21	pass	0.74	pass
15cm	0.77	pass	1.05	pass	0.58	pass	1.16	pass	1.76	pass	0.74	pass
20cm	0.70	pass	1.03	pass	0.41	pass	1.01	pass	1.05	pass	0.72	pass
30cm	0.62	pass	0.82	pass	0.38	pass	0.65	pass	0.88	pass	0.62	pass
40cm	0.60	pass	0.38	pass	0.33	pass	0.31	pass	0.31	pass	0.31	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 4

Operating Frequency	0.127627 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5640	0.4487	pass
10cm	0.3020	0.2403	pass
15cm	0.3000	0.2387	pass
20cm	0.2990	0.2379	pass
30cm	0.2930	0.2331	pass
40cm	0.2850	0.2267	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5900	0.4694	pass
10cm	0.2960	0.2355	pass
15cm	0.2950	0.2347	pass
20cm	0.2910	0.2315	pass
30cm	0.2890	0.2299	pass
40cm	0.1480	0.1177	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3220	0.2562	pass
10cm	0.3010	0.2395	pass
15cm	0.2990	0.2379	pass
20cm	0.2970	0.2363	pass
30cm	0.2960	0.2355	pass
40cm	0.2830	0.2251	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3520	0.2800	pass
10cm	0.2950	0.2347	pass
15cm	0.2650	0.2108	pass
20cm	0.2190	0.1742	pass
30cm	0.1390	0.1106	pass
40cm	0.1220	0.0971	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6280	0.4996	pass
10cm	0.6100	0.4853	pass
15cm	0.5810	0.4622	pass
20cm	0.1010	0.0804	pass
30cm	0.0480	0.0382	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4460	0.3548	pass
10cm	0.3110	0.2474	pass
15cm	0.2650	0.2108	pass
20cm	0.1490	0.1185	pass
30cm	0.1270	0.1010	pass
40cm	0.0350	0.0278	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁽⁻⁷⁾

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 4

Operating Frequency	0.127627 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	37.64	pass	35.64	pass	34.25	pass	33.49	pass	33.58	pass	34.46	pass
10cm	29.38	pass	28.14	pass	26.54	pass	27.87	pass	26.92	pass	28.85	pass
15cm	28.31	pass	28.02	pass	26.51	pass	27.05	pass	26.84	pass	28.66	pass
20cm	27.55	pass	26.98	pass	26.34	pass	26.94	pass	26.51	pass	28.03	pass
30cm	27.35	pass	26.35	pass	25.44	pass	25.78	pass	25.66	pass	27.66	pass
40cm	23.48	pass	23.14	pass	22.71	pass	23.11	pass	23.43	pass	23.12	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 5

Operating Frequency	0.127756 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5460	0.4344	pass
10cm	0.2950	0.2347	pass
15cm	0.2920	0.2323	pass
20cm	0.2860	0.2275	pass
30cm	0.2810	0.2235	pass
40cm	0.2780	0.2212	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6420	0.5107	pass
10cm	0.2960	0.2355	pass
15cm	0.2960	0.2355	pass
20cm	0.2940	0.2339	pass
30cm	0.2830	0.2251	pass
40cm	0.2720	0.2164	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3240	0.2578	pass
10cm	0.3090	0.2458	pass
15cm	0.2950	0.2347	pass
20cm	0.2910	0.2315	pass
30cm	0.2780	0.2212	pass
40cm	0.1780	0.1416	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3260	0.2593	pass
10cm	0.3030	0.2411	pass
15cm	0.2860	0.2275	pass
20cm	0.2410	0.1917	pass
30cm	0.1540	0.1225	pass
40cm	0.1250	0.0994	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5860	0.4662	pass
10cm	0.5510	0.4383	pass
15cm	0.2560	0.2037	pass
20cm	0.1160	0.0923	pass
30cm	0.0500	0.0398	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4540	0.3612	pass
10cm	0.2560	0.2037	pass
15cm	0.2340	0.1862	pass
20cm	0.2180	0.1734	pass
30cm	0.1200	0.0955	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 5

Operating Frequency	0.127756 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	38.98	pass	37.39	pass	34.67	pass	34.51	pass	35.48	pass	37.82	pass
10cm	30.11	pass	29.48	pass	27.04	pass	27.33	pass	26.98	pass	29.66	pass
15cm	29.16	pass	28.88	pass	26.89	pass	26.92	pass	26.78	pass	28.55	pass
20cm	27.34	pass	26.44	pass	26.34	pass	26.73	pass	26.57	pass	27.14	pass
30cm	25.66	pass	24.52	pass	25.59	pass	26.02	pass	26.01	pass	25.58	pass
40cm	23.12	pass	21.90	pass	22.71	pass	22.51	pass	22.57	pass	23.33	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 6

Operating Frequency	0.128016 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5860	0.4662	pass
10cm	0.3050	0.2426	pass
15cm	0.2985	0.2375	pass
20cm	0.2870	0.0338	pass
30cm	0.2710	0.0313	pass
40cm	0.2670	0.0293	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6100	0.4853	pass
10cm	0.2985	0.0497	pass
15cm	0.2976	0.2368	pass
20cm	0.2955	0.0338	pass
30cm	0.1864	0.0313	pass
40cm	0.1653	0.0293	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3540	0.2816	pass
10cm	0.2981	0.2372	pass
15cm	0.2643	0.2103	pass
20cm	0.2166	0.1723	pass
30cm	0.1679	0.1336	pass
40cm	0.1152	0.0916	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3346	0.2662	pass
10cm	0.2985	0.2375	pass
15cm	0.2766	0.2200	pass
20cm	0.2210	0.1758	pass
30cm	0.1664	0.1324	pass
40cm	0.1393	0.1108	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5921	0.4710	pass
10cm	0.5843	0.4648	pass
15cm	0.3514	0.2796	pass
20cm	0.1525	0.1213	pass
30cm	0.0417	0.0332	pass
40cm	0.0392	0.0312	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5314	0.4228	pass
10cm	0.3276	0.2606	pass
15cm	0.2655	0.2112	pass
20cm	0.1305	0.1038	pass
30cm	0.1252	0.0996	pass
40cm	0.0374	0.0298	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 6

Operating Frequency	0.128016 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	36.53	pass	35.88	pass	35.45	pass	34.43	pass	35.25	pass	38.21	pass
10cm	30.15	pass	30.12	pass	27.66	pass	27.88	pass	26.39	pass	30.46	pass
15cm	29.69	pass	28.91	pass	27.11	pass	27.35	pass	26.26	pass	28.98	pass
20cm	28.21	pass	26.78	pass	26.98	pass	26.54	pass	26.01	pass	27.49	pass
30cm	26.55	pass	24.51	pass	26.31	pass	26.33	pass	25.88	pass	26.55	pass
40cm	23.38	pass	22.36	pass	23.03	pass	23.98	pass	23.48	pass	23.36	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 7

Operating Frequency	0.128549 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5746	0.4571	pass
10cm	0.2931	0.2332	pass
15cm	0.2906	0.2312	pass
20cm	0.2850	0.2267	pass
30cm	0.2810	0.2235	pass
40cm	0.2690	0.2140	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6110	0.4861	pass
10cm	0.3020	0.2403	pass
15cm	0.2990	0.2379	pass
20cm	0.2950	0.2347	pass
30cm	0.2900	0.2307	pass
40cm	0.1810	0.1440	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3600	0.2864	pass
10cm	0.3010	0.2395	pass
15cm	0.2980	0.2371	pass
20cm	0.2950	0.2347	pass
30cm	0.2310	0.1838	pass
40cm	0.1280	0.1018	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3270	0.2601	pass
10cm	0.3070	0.2442	pass
15cm	0.2780	0.2212	pass
20cm	0.2540	0.2021	pass
30cm	0.1630	0.1297	pass
40cm	0.1262	0.1004	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5920	0.4710	pass
10cm	0.5700	0.4535	pass
15cm	0.1870	0.1488	pass
20cm	0.1150	0.0915	pass
30cm	0.0520	0.0414	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4490	0.3572	pass
10cm	0.2610	0.2076	pass
15cm	0.2110	0.1679	pass
20cm	0.1690	0.1344	pass
30cm	0.1200	0.0955	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 7

Operating Frequency	0.128549 MHz
Limit	614.00 V/m *1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	36.54	pass	35.84	pass	35.64	pass	34.55	pass	34.96	pass	37.88	pass
10cm	30.11	pass	29.93	pass	27.66	pass	28.32	pass	28.01	pass	30.02	pass
15cm	28.94	pass	28.33	pass	27.16	pass	28.01	pass	27.67	pass	28.45	pass
20cm	26.88	pass	26.11	pass	26.83	pass	26.92	pass	27.05	pass	27.36	pass
30cm	26.51	pass	25.02	pass	26.21	pass	26.55	pass	26.63	pass	26.19	pass
40cm	22.99	pass	22.59	pass	23.47	pass	23.52	pass	23.31	pass	23.33	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 8

Operating Frequency	0.127373 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5710	0.4543	pass
10cm	0.2920	0.2323	pass
15cm	0.2890	0.2299	pass
20cm	0.2871	0.2284	pass
30cm	0.2840	0.2259	pass
40cm	0.2800	0.2228	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6390	0.5084	pass
10cm	0.3020	0.2403	pass
15cm	0.2920	0.2323	pass
20cm	0.2910	0.2315	pass
30cm	0.2900	0.2307	pass
40cm	0.2880	0.2291	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3600	0.2864	pass
10cm	0.2990	0.2379	pass
15cm	0.2790	0.2220	pass
20cm	0.2270	0.1806	pass
30cm	0.1530	0.1217	pass
40cm	0.1280	0.1018	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3270	0.2601	pass
10cm	0.3020	0.2403	pass
15cm	0.2980	0.2371	pass
20cm	0.2940	0.2339	pass
30cm	0.1600	0.1273	pass
40cm	0.1162	0.0924	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5930	0.4718	pass
10cm	0.5760	0.4582	pass
15cm	0.3850	0.3063	pass
20cm	0.1176	0.0936	pass
30cm	0.0510	0.0406	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4370	0.3477	pass
10cm	0.2650	0.2108	pass
15cm	0.2310	0.1838	pass
20cm	0.2160	0.1718	pass
30cm	0.1222	0.0972	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 8

Operating Frequency	0.127373 MHz
Limit	614.00 V/m *1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	37.33	pass	36.53	pass	35.45	pass	34.97	pass	35.44	pass	38.12	pass
10cm	30.51	pass	29.89	pass	27.66	pass	27.88	pass	27.68	pass	30.11	pass
15cm	28.69	pass	29.01	pass	27.03	pass	27.31	pass	27.21	pass	28.85	pass
20cm	27.66	pass	26.36	pass	26.58	pass	26.75	pass	26.66	pass	27.38	pass
30cm	26.91	pass	24.94	pass	26.33	pass	26.31	pass	26.34	pass	26.53	pass
40cm	23.84	pass	22.88	pass	23.38	pass	23.23	pass	23.79	pass	23.41	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 9

Operating Frequency	0.127248 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5671	0.4512	pass
10cm	0.2920	0.2323	pass
15cm	0.2902	0.2309	pass
20cm	0.2871	0.2284	pass
30cm	0.2814	0.2239	pass
40cm	0.2800	0.2228	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6210	0.4940	pass
10cm	0.2990	0.2379	pass
15cm	0.2920	0.2323	pass
20cm	0.2910	0.2315	pass
30cm	0.2840	0.2259	pass
40cm	0.1502	0.0293	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3610	0.2872	pass
10cm	0.2990	0.2379	pass
15cm	0.2910	0.2315	pass
20cm	0.2410	0.1917	pass
30cm	0.1520	0.1209	pass
40cm	0.1220	0.0971	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3560	0.2832	pass
10cm	0.2920	0.2323	pass
15cm	0.2780	0.2212	pass
20cm	0.2390	0.1901	pass
30cm	0.1496	0.1190	pass
40cm	0.1062	0.0845	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6060	0.4821	pass
10cm	0.5480	0.4360	pass
15cm	0.3230	0.2570	pass
20cm	0.1260	0.1002	pass
30cm	0.0510	0.0406	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4203	0.3344	pass
10cm	0.3143	0.2500	pass
15cm	0.2960	0.2355	pass
20cm	0.2126	0.1691	pass
30cm	0.1220	0.0971	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 9

Operating Frequency	0.127248 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	37.59	pass	36.65	pass	34.99	pass	34.55	pass	35.58	pass	37.93	pass
10cm	30.33	pass	30.21	pass	27.57	pass	27.36	pass	27.27	pass	29.88	pass
15cm	29.04	pass	28.74	pass	27.17	pass	26.95	pass	27.01	pass	28.38	pass
20cm	26.81	pass	26.59	pass	26.68	pass	26.76	pass	26.61	pass	27.63	pass
30cm	26.15	pass	25.11	pass	26.59	pass	26.11	pass	26.15	pass	26.56	pass
40cm	23.35	pass	22.59	pass	23.23	pass	23.55	pass	24.02	pass	23.13	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 10

Operating Frequency	0.126999 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5230	0.4161	pass
10cm	0.3120	0.2482	pass
15cm	0.2950	0.2347	pass
20cm	0.2930	0.2331	pass
30cm	0.2910	0.2315	pass
40cm	0.2820	0.2243	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6360	0.5060	pass
10cm	0.3020	0.2403	pass
15cm	0.3010	0.2395	pass
20cm	0.2930	0.2331	pass
30cm	0.2880	0.2291	pass
40cm	0.1560	0.1241	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3600	0.2864	pass
10cm	0.2834	0.2255	pass
15cm	0.2810	0.2235	pass
20cm	0.2750	0.2188	pass
30cm	0.2710	0.2156	pass
40cm	0.2670	0.2124	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3340	0.2657	pass
10cm	0.3010	0.2395	pass
15cm	0.2790	0.2220	pass
20cm	0.2450	0.1949	pass
30cm	0.1580	0.1257	pass
40cm	0.1062	0.0845	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6310	0.5020	pass
10cm	0.5920	0.4710	pass
15cm	0.3520	0.2800	pass
20cm	0.1150	0.0915	pass
30cm	0.0500	0.0398	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5020	0.3994	pass
10cm	0.2650	0.2108	pass
15cm	0.2330	0.1854	pass
20cm	0.2010	0.1599	pass
30cm	0.1200	0.0955	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁻⁷)

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 10

Operating Frequency	0.126999 MHz
Limit	614.00 V/m

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	37.85	pass	35.88	pass	35.45	pass	34.39	pass	35.11	pass	37.88	pass
10cm	30.01	pass	29.59	pass	27.63	pass	27.88	pass	27.68	pass	30.11	pass
15cm	29.34	pass	28.46	pass	27.12	pass	27.15	pass	27.06	pass	28.83	pass
20cm	27.62	pass	26.76	pass	26.55	pass	26.81	pass	26.55	pass	27.33	pass
30cm	26.76	pass	25.11	pass	26.26	pass	26.06	pass	26.02	pass	26.56	pass
40cm	23.46	pass	22.98	pass	23.15	pass	23.41	pass	23.63	pass	23.01	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

Magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 11

Operating Frequency	0.126515 MHz
	1.63 A/m *1)

Measurement distance *2)	Front		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5930	0.4718	pass
10cm	0.3120	0.2482	pass
15cm	0.3030	0.2411	pass
20cm	0.2970	0.2363	pass
30cm	0.2900	0.2307	pass
40cm	0.2900	0.2307	pass
Measurement distance *2)	Rear		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.6310	0.5020	pass
10cm	0.3220	0.2562	pass
15cm	0.3150	0.2506	pass
20cm	0.3110	0.2474	pass
30cm	0.3020	0.2403	pass
40cm	0.2120	0.1687	pass
Measurement distance *2)	Left		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3100	0.2466	pass
10cm	0.2940	0.2339	pass
15cm	0.2910	0.2315	pass
20cm	0.2890	0.2299	pass
30cm	0.2840	0.2259	pass
40cm	0.2770	0.2204	pass
Measurement distance *2)	Right		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.3110	0.2474	pass
10cm	0.2920	0.2323	pass
15cm	0.2890	0.2299	pass
20cm	0.2880	0.2291	pass
30cm	0.2810	0.2235	pass
40cm	0.2750	0.2188	pass
Measurement distance *2)	Top		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.5990	0.4765	pass
10cm	0.5620	0.4471	pass
15cm	0.3120	0.2482	pass
20cm	0.1430	0.1138	pass
30cm	0.0500	0.0398	pass
40cm	0.0370	0.0294	pass
Measurement distance *2)	Bottom		
	Actual magnetic density(μT)	Magnetic field strength(A/m) *3)	Result
5cm	0.4960	0.3946	pass
10cm	0.2790	0.2220	pass
15cm	0.2680	0.2132	pass
20cm	0.2210	0.1758	pass
30cm	0.1200	0.0955	pass
40cm	0.0370	0.0294	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*3): This value was calculated by following formula.

Reading is from measurement tool ELT-400.

Reading(%) = (Actual magnetic density*100) / 6.25

(*Where the value 6.25 is decided IEC 62233:2005 Annex B Table B.2)

*Magnetic field strength [A/m]= Magnetic density / 4π*10⁽⁻⁷⁾

*Test result is less than 50 % of the MPE limit.

Electro-magnetic field strength

Report No. 13226969H
Test place Ise EMC Lab. No.6 shielded room
Date May 13, 2020
Temperature / Humidity 22 deg. C / 50 % RH
Engineer Masaya Minami
Mode Mode 11

Operating Frequency	0.126515 MHz
Limit	614.00 V/m

*1)

*2)	Front		Rear		Right		Left		Top		Bottom	
	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result	Reading (V/m)	Result
3cm	38.02	pass	36.51	pass	35.15	pass	34.84	pass	35.31	pass	37.69	pass
10cm	30.69	pass	29.59	pass	27.09	pass	27.69	pass	27.69	pass	29.88	pass
15cm	28.88	pass	28.36	pass	27.04	pass	27.11	pass	27.35	pass	29.17	pass
20cm	27.61	pass	27.02	pass	26.66	pass	26.76	pass	26.51	pass	27.46	pass
30cm	26.55	pass	26.58	pass	26.15	pass	26.10	pass	26.03	pass	26.39	pass
40cm	23.47	pass	23.16	pass	23.31	pass	23.18	pass	23.38	pass	23.12	pass

*1): For this limit value, "General Population / Uncontrolled Exposure" of FCC § 1.1310 (e) (B) was used.

*2): This is the distance between the center of the probe and the edges of the EUT.

*Test result is less than 50 % of the MPE limit.

APPENDIX 2: Test instruments

Test equipment

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
EMF	MOS-34	141572	Thermo-Hygrometer	CUSTOM	CTH-201	3401	01/07/2020	12
EMF	MJM-04	142178	Measure	PROMART	SEN1635	-	-	-
EMF	SEF-01	145494	Broadband Field Meter	NARDA	NBM-520	C-0520	09/17/2018	36
EMF	SEF-05	145498	Probe EF0391(E-Field)	NARDA	EF0391	2402/01	09/17/2018	36
EMF	SMM-01	146284	Exposure Level Tester	NARDA	ELT-400	M-0163	09/13/2019	12
EMF	SMS-01	146315	Broadband Field Probe	NARDA	Magnetic Field Probe 100cm ²	M-0180	09/13/2019	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:

EMF: Electromagnetic field