

RADIO TEST REPORT

Test Report No. 15994060S-C-R1

Customer	Nintendo Co., Ltd.
Description of EUT	Game controller
Model Number of EUT	BEE-008(-01)
FCC ID	BKEBEE00801
Test Regulation	FCC Part 15 Subpart C
Test Result	Complied
Issue Date	October 1, 2026
Remarks	RFID part

Representative Test EngineerHiromasa Sato
Engineer**Approved By**Shunsaku Yumi
Engineer

CERTIFICATE 1266.03

- ☐ 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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- If the latest version is a revision, it replaces the previous version. See the table below for revisions and versions.

REVISION HISTORY

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	15994060S-C	January 27, 2026	-
1	15994060S-C-R1	October 1, 2026	Section 2.2 - Corrected typo Bluetooth (BR/BDR) to Bluetooth (BR/EDR) Section 3.3 Corrected typo *1) EUT cannot operated to *1) EUT cannot operate APPENDIX 1 (Fundamental Emission and Spectrum Mask) Corrected typos Outside filed to Outside field

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	Nintendo Co., Ltd.
Address	11-1 Hokotate-cho, Kamitoba, Minami-ku, Kyoto 601-8501, Japan
Telephone Number	+81-75-662-9600
Contact Person	Yosuke Ishikawa

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	Game controller
Model Number	BEE-008(-01)
Serial Number	Refer to SECTION 4.2
Condition	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	November 12, 2025
Test Date	November 20 to December 19, 2025

2.2 Product Description

General Specification

Rating	DC 5 V (*.Supply voltage from connector) (*. DC 3.9 V from Re-chargeable Li-ion battery for the internal circuit)
Operating temperature	5 deg. C to 35 deg. C

Radio Specification

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz to 2480 MHz
Type of Modulation	GFSK
Antenna Gain	1.55 dBi

Bluetooth (BR/EDR)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz to 2480 MHz
Type of Modulation	FHSS (GFSK, $\pi/4$ DQPSK, 8 DPSK)
Antenna Gain	1.55 dBi

RFID

Equipment Type	Transceiver
Frequency of Operation	13.56 MHz
Type of Modulation	ASK

SECTION 3: Test Summary

3.1 Test Specification

Test Specification	FCC Part 15 Subpart C The latest version on the first day of the testing period
Title	FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators Section 15.207 Conducted limits Section 15.225 Operation within the band 13.110-14.010 MHz.

* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Reference Standards

ANSI/USEMCSC C63.2-2023
ANSI C63.4-2014+C63.4a-2017
ANSI C63.5-2017
ANSI C63.10-2020
ANSI/USEMCSC C63.10/Cor 1-2023
ANSI/USEMCSC C63.10a-2024 (incl. Errata) for ISSED
ANSI C63.25.1-2018

3.3 Summary of Test Results

Item	Specification	Results	Remarks
Conducted Emission	<FCC> Section 15.207 <ISSED> RSS-Gen 8.8	Complied	-
Electric Field Strength of Fundamental Emission	<FCC> Section 15.225(a) <ISSED> RSS-210 B.6 (a)	Complied	Radiated
Spectrum Mask	<FCC> Section 15.225(b)(c) <ISSED> RSS-210 B.6 (a)	Complied	Radiated
20 dB Bandwidth	<FCC> Section15.215(c) <ISSED> -	Complied	Radiated
Electric Field Strength of Spurious Emission	<FCC> Section 15.209, Section 15.225 (d) <ISSED> RSS-210 B.6 (a), RSS-Gen 8.9	Complied	Radiated
Frequency Tolerance	<FCC> Section 15.225(e) <ISSED> RSS-210 B.6 (b)	Complied	Radiated
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.			

FCC Part 15.31 (e)

The EUT is supplied the power from battery or connector (from host device).

In either method, this EUT provides the stable voltage constantly to RF Part regardless of input voltage. In the case of battery method, the test was performed with the full-charged battery other than the frequency tolerance test. However, the supply voltage was varied and tested at 85 % and 115 % (Battery part), 90 % *1) and 115 % (Connector part) of the nominal rated supply voltage during frequency tolerance test according to Section 15.225(e).

Therefore, this EUT complies with the requirement.

*1) EUT cannot operate by lower 90 % of the normal rated voltage.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.4 Addition to standard

Item	Test Procedure	Results	Remarks
99 % emission bandwidth	<ISED>RSS-Gen 6.7	-	Radiated
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.			

Other than above, no addition, exclusion nor deviation has been made from the standard.

3.5 Uncertainty

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

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

Item	Frequency range	Uncertainty (+/-)
Conducted Emission (AC Mains) LISN	150 kHz to 30 MHz	3.2 dB
Radiated Emission (Measurement distance: 3 m)	9 kHz to 30 MHz	3.4 dB
	30 MHz to 200 MHz	4.8 dB
	200 MHz to 1 GHz	6.0 dB

Antenna terminal test	Uncertainty (+/-)
Bandwidth Measurement	0.012 %
Duty Cycle and Time Measurement	0.27 %
Temperature	2.2 deg.C.
Humidity	3.2 %
Voltage	0.92 %
Frequency Measurement (Normal condition)	7.7×10^{-8}
Frequency Measurement (Extreme condition)	1.1×10^{-7}

3.6 Test Location

UL Japan, Inc. Shonan EMC Lab.

1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 Japan

Telephone: +81-463-50-6400

A2LA Certificate Number: 1266.03

(FCC test firm registration number: 626366, ISED lab company number: 2973D / CAB identifier: JP0001)

Test room	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber (SAC1)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber (SAC2)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber (SAC3)	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber (SAC4)	8.1 x 5.1 x 3.55	8.1 x 5.1	-
Wireless anechoic chamber 1 (WAC1)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
Wireless anechoic chamber 2 (WAC2)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
No.1 Shielded room (SR1)	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room (SR2)	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room (SR3)	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room (SR4)	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room (SR5)	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room (SR6)	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.8 Shielded room (SR8)	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room (MR1)	2.55 x 4.1 x 2.5	-	-
No.2 Measurement room (MR2)	4.5 x 3.5 x 2.5	-	-
Wireless shielded room 1 (WSR1)	3.0 x 4.5 x 2.7	3.0 x 4.5	-
Wireless shielded room 2 (WSR2)	3.0 x 4.5 x 2.7	3.0 x 4.5	-

3.7 Test data, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

4.1 Operating Mode(s)

The mode is used:

Test mode	Remarks
1) Transmitting mode (Tx)	The EUT Transmits and Receives at the same time and there is no receiving mode.
The EUT was operated in a manner similar to typical use during the tests.	
*Power of the EUT was set by the software as follows; Software: NfcCertification Version: 0.2 (Date: 2025.11 12, Storage location: EUT memory) *This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.	
Justification: The system was configured in typical fashion (as a user would normally use it) for testing.	

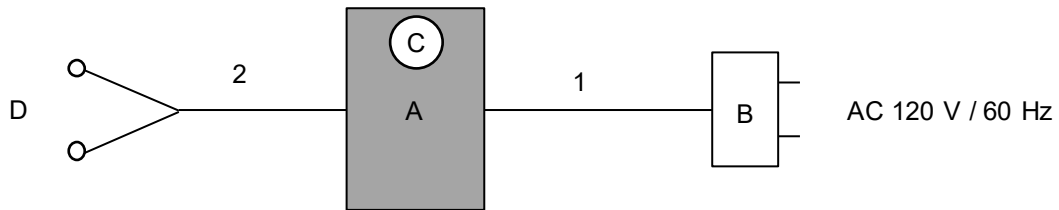
Test Item	Operating mode*
Conducted Emission	Tx Mod on, with Tag / Antenna terminated
Electric Field Strength of Fundamental Emission	Tx Mod on, with Tag
Spectrum Mask	Tx Mod on, with Tag
20 dB Bandwidth and 99 % Occupied Bandwidth	Tx Mod on, without Tag
Electric Field Strength of Spurious Emission	Tx Mod on, with Tag
Frequency Tolerance	Tx Mod off

* After the comparison of the test data between with Tag and without Tag, the tests were performed with the worst case. See Section 6 or data for worst case tag.

Frequency Tolerance	
Temperature	-20 deg. C to +50 deg. C Step 10 deg. C
Voltage	Connector part Normal Voltage DC 5 V Maximum Voltage DC 5.75 V (DC 5 V +15 %) Minimum Voltage DC 4.5 V (V_min) *1)
	Battery part Normal Voltage DC 3.9 V Maximum Voltage DC 4.485 V (DC 3.9 V +15 %) Minimum Voltage DC 3.315 V (DC 3.9 V -15 %)
*This EUT provides stable voltage constantly to RF Part regardless of input voltage. *1) The EUT cannot operate if a voltage of 85 % rated voltage is supplied, so the test was performed at the lowest operating voltage (DC 5 V -10 %).	

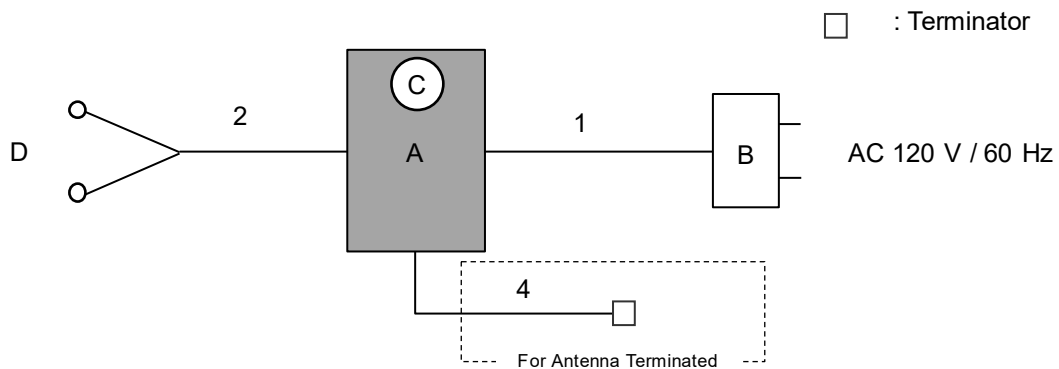
4.2 Configuration and peripherals

Radiated Emission test

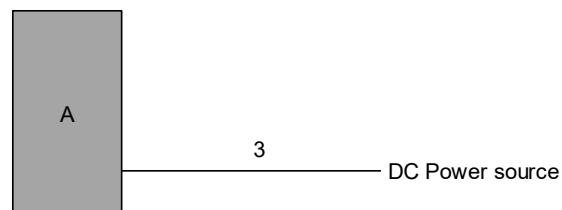


* The carrier level and noise levels were confirmed at each condition of standalone and connected by support equipment, and the test was made at the condition that has the maximum noise.

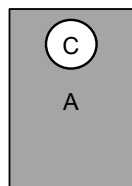
Conducted Emission test



Frequency Tolerance test



Other tests



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

*As a result of comparing AC 120 V and AC 240 V at pre-check, conducted emission test was performed with AC 120 V of the worst voltage as representative.

Description of EUT and Support Equipment

No.	Item	Model Number	Serial Number	Manufacturer	Remarks
A	Game controller	BEE-008(-01)	HPL01000021002 *1) HPL01000021095 *2) HPL01000020838 *3) HPL01000020845 *4)	Nintendo Co., Ltd.	EUT
B	AC Adaptor	NGN-01	0A00000189	Nintendo Co., Ltd.	-
C	Tag	-	-	-	Type A
		-	-	-	Type B
		-	-	-	Type F
		-	-	-	ISO 15693
D	Earphones	MDR-EX255AP	-	Sony	-

List of Cables Used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB	1.5	Shielded	Shielded	-
2	Earphones	1.25	Unshielded	Unshielded	-
3	DC	0.4 + 1.5	Unshielded	Unshielded	*3), *4)
4	Coaxial	0.2	Shielded	Shielded	*5)

*1) Used for Radiated Emission test, Conducted emission test (except for Antenna terminated) and Bandwidth measurement.

*2) Used for Conducted emission test (Antenna terminated).

*3) Used for Frequency Tolerance test (Battery part).

*4) Used for Frequency Tolerance test (Connector part).

*5) Cable for antenna terminated.

SECTION 5: Conducted Emission

Test Procedure and conditions

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

The rear of the platform was located 40 cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of the platform. All other surfaces of the platform were at least 80 cm from any other grounded conducting surface. EUT was located 80 cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN).

For the tests on EUT with other peripherals (as a whole system)

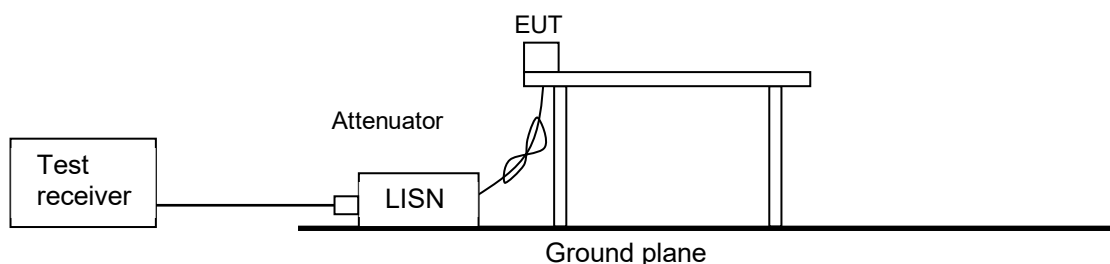
I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Shielded room.

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

Figure 1: Test Setup



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

Detector	: QP and CISPR AV
Measurement range	: 0.15 MHz to 30 MHz
Test data	: APPENDIX
Test result	: Pass

SECTION 6: Radiated Emission (Fundamental, Spurious Emission and Spectrum Mask)

Test Procedure

EUT was placed on the platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

[Limit conversion]

The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ohms. For example, the measurement at frequency 9 kHz resulted in a level of 45.5 dBuV/m, which is equivalent to $45.5 - 51.5 = -6.0$ dBuA/m, which has the same margin, 3 dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

[Frequency: From 9 kHz to 30 MHz]

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

The measurements were performed for vertical polarization (antenna angle: 0 deg., 45 deg., 90 deg., and 135 deg.) and horizontal polarization.

*Refer to Figure 3 about Direction of the Loop Antenna.

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open field test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

These tests were performed in semi anechoic chamber. Therefore the measured level of emissions may be higher than if measurements were made without a ground plane. However test results were confirmed to pass against standard limit.

[Frequency: From 30 MHz to 1 GHz]

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

The measurements were performed for both vertical and horizontal antenna polarization.

[Test instruments and test settings]

Frequency	Below 30 MHz	30 MHz to 200 MHz	200 MHz to 1 GHz
Antenna Type	Loop	Biconical	Logperiodic

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

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

Frequency	From 9 kHz to 90 kHz and From 110 kHz to 150 kHz	From 90 kHz to 110 kHz	From 150 kHz to 490 kHz	From 490 kHz to 30 MHz	From 30 MHz to 1 GHz
Instrument used	Test Receiver				
Detector	PK / AV	QP	PK / AV	QP	QP
IF Bandwidth	200 Hz	200 Hz	9 kHz	9 kHz	120 kHz
Test Distance	3 m *1)	3 m *1)	3 m *1)	3 m *2)	3 m

*1) Distance Factor: $40 \times \log (3 \text{ m} / 300 \text{ m}) = -80 \text{ dB}$

*2) Distance Factor: $40 \times \log (3 \text{ m} / 30 \text{ m}) = -40 \text{ dB}$

Figure 2: Test Setup

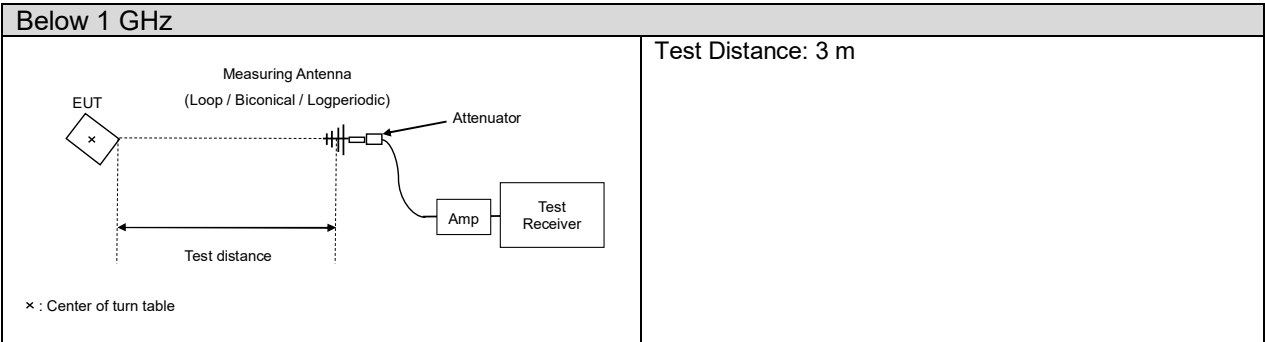
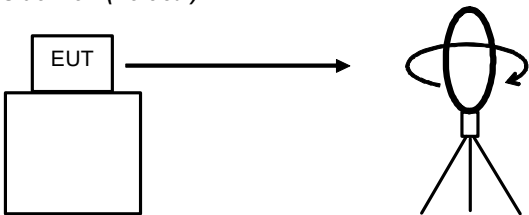
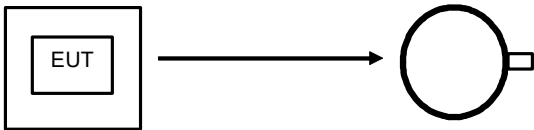


Figure 3: Direction of the Loop Antenna

Side View (Vertical)

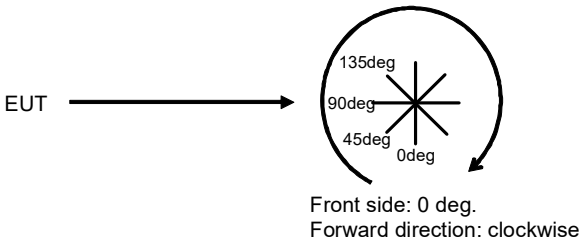


Top View (Horizontal)



Antenna was not rotated.

Top View (Vertical)



- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

EUT Axis	Carrier	Below 30 MHz	Above 30 MHz
Horizontal	X	X	X
Vertical	Z	X	Y

- The carrier level and noise levels were confirmed to see the tag type of maximum noise, and the test was made at the tag type that has the maximum noise.

Tag	Carrier	Below 30 MHz	Above 30 MHz
Horizontal	ISO 15693	Type F	Type F
Vertical	Type A	Type B	Type F

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

Measurement range : 9 kHz to 1 GHz

Test data : APPENDIX

Test result : Pass

SECTION 7: Other tests

Test	Span	RBW	VBW	Sweep	Detector	Trace	Instrument used
20 dB Bandwidth	2.2 MHz	12 kHz	36 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth	Enough width to display emission skirts	1 to 5 % of OBW	Three times of RBW	Auto	Peak *1)	Max Hold *1)	Spectrum Analyzer
Frequency Tolerance	-	-	-	-	-	-	Frequency counter

*1) The measurement was performed with Peak detector, Max Hold since the duty cycle was not 100 %.

Test data : APPENDIX

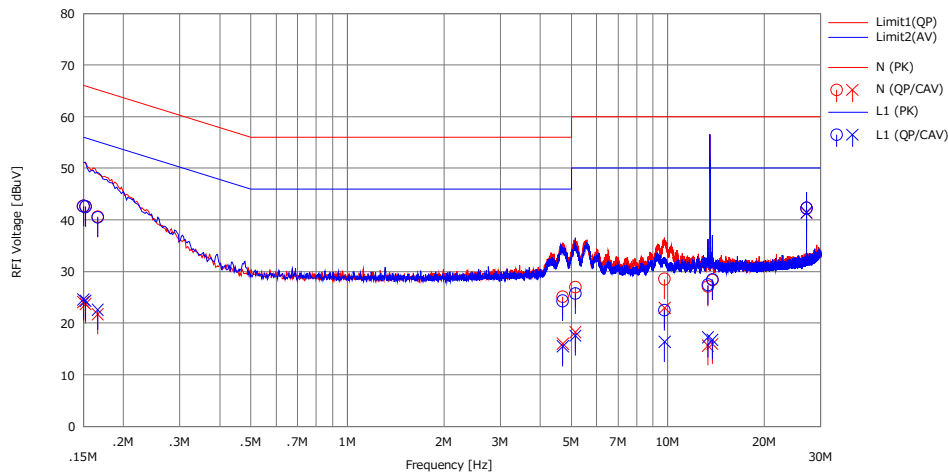
Test result : Pass

APPENDIX 1: Test data

Conducted Emission

Mode	Tx Mod on, with Tag (Type F)				
Date	Test site	Temperature	Humidity	Engineer	Power
December 19, 2025	SR3	21 deg. C	32 % RH	Makoto Hosaka	AC 120 V / 60 Hz

Limit: FCC Part 15 Subpart C (15.207)



No.	Freq. [MHz]	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		<QP> [dBuV]	<CAV> [dBuV]		<QP> [dBuV]	<CAV> [dBuV]	<QP> [dBuV]	<AV> [dBuV]	<QP> [dB]	<AV> [dB]		
1	0.15000	27.43	8.81	15.22	42.65	24.03	66.00	56.00	23.3	31.9	N	
2	0.15220	27.35	8.51	15.22	42.57	23.73	65.88	55.88	23.3	32.1	N	
3	0.16630	25.34	6.46	15.24	40.58	21.70	65.14	55.14	24.5	33.4	N	
4	4.70310	9.46	0.37	15.64	25.10	16.01	56.00	46.00	30.9	29.9	N	
5	5.14830	11.27	2.60	15.68	26.95	18.28	60.00	50.00	33.0	31.7	N	
6	9.77310	12.42	6.84	16.11	28.53	22.95	60.00	50.00	31.4	27.0	N	
7	13.34790	10.68	-0.76	16.43	27.11	15.67	60.00	50.00	32.8	34.3	N	
8	13.77270	11.84	-0.53	16.47	28.31	15.94	60.00	50.00	31.6	34.0	N	
9	27.12000	25.25	24.35	17.01	42.26	41.36	60.00	50.00	17.7	8.6	N	
10	0.15000	27.43	9.38	15.21	42.64	24.59	66.00	56.00	23.3	31.4	L1	
11	0.15220	27.33	9.10	15.21	42.54	24.31	65.88	55.88	23.3	31.5	L1	
12	0.16630	25.29	7.34	15.22	40.51	22.56	65.14	55.14	24.6	32.5	L1	
13	4.70310	8.71	-0.08	15.58	24.29	15.50	56.00	46.00	31.7	30.5	L1	
14	5.14830	10.08	1.95	15.60	25.68	17.55	60.00	50.00	34.3	32.4	L1	
15	9.77310	6.51	0.42	15.96	22.47	16.38	60.00	50.00	37.5	33.6	L1	
16	13.34790	11.20	1.01	16.21	27.41	17.22	60.00	50.00	32.5	32.7	L1	
17	13.77270	12.17	0.54	16.24	28.41	16.78	60.00	50.00	31.5	33.2	L1	
18	27.12000	25.35	24.48	16.92	42.27	41.40	60.00	50.00	17.7	8.6	L1	

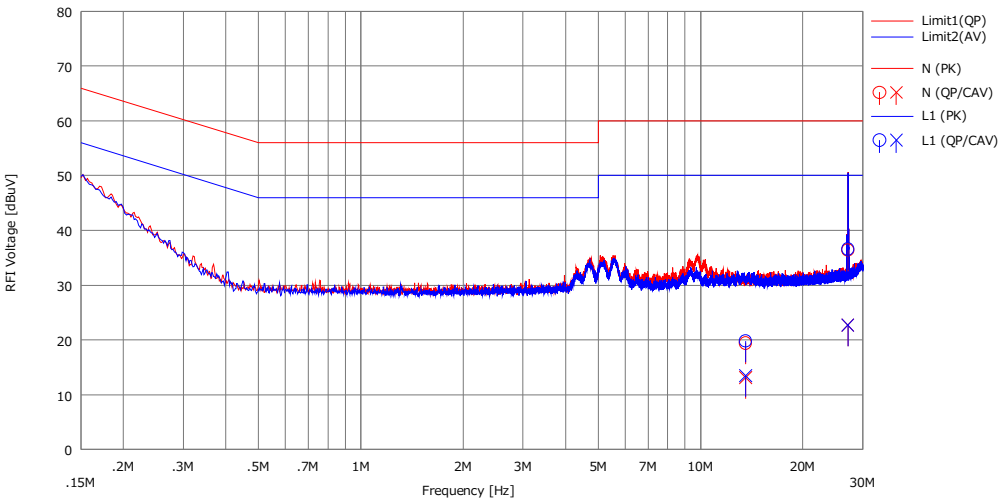
Calculation: Result[dBuV] = Reading[dBuV] + C.Fac(LISN(AMN) + Cable + ATT)[dB]
LISN(AMN): ULID=145539

Conducted Emission

Mode	Tx Mod on, without Tag (Type F) / Antenna terminated				
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Date	Test site	Temperature	Humidity	Engineer	Power
December 19, 2025	SR3	21 deg. C	32 % RH	Makoto Hosaka	AC 120 V / 60 Hz

Limit: FCC Part 15 Subpart C (15.207)



No.	Freq. [MHz]	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		<QP>	<CAV>		<QP>	<CAV>	<QP>	<AV>	<QP>	<AV>		
		[dBuV]	[dBuV]		[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	13.55970	2.94	-3.38	16.45	19.39	13.07	60.00	50.00	40.6	36.9	N	
2	27.11990	19.37	5.72	17.01	36.38	22.73	60.00	50.00	23.6	27.2	N	
3	13.55970	3.58	-2.77	16.22	19.80	13.45	60.00	50.00	40.2	36.5	L1	
4	27.11990	19.68	5.79	16.92	36.60	22.71	60.00	50.00	23.4	27.2	L1	

Calculation: Result[dBuV]=Reading[dBuV]+C.Fac(LISN(AMN)+Cable+ATT)[dB]
LISN(AMN): ULID=145539

Fundamental Emission and Spectrum Mask

Mode	Tx Mod on, with Tag
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Date	Test site	Temperature	Humidity	Engineer
November 20, 2025	SAC3	23 deg. C	40 % RH	Hiromasa Sato

Fundamental emission

No.	FREQ [MHz]	Test Receiver Reading		Antenna Factor [dB/m]	Loss [dB]	AMP GAIN [dB]	Distance factor [dB]	RESULT		LIMIT (30 m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]					Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.560	62.9	73.1	9.4	6.5	32.2	-40.0	6.6	16.8	83.9	77.3	67.1

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+Distance factor[dB]

Distance factor: $40 \times \log(3 \text{ m} / 30 \text{ m}) = -40 \text{ dB}$

Spurious emission within the band

No.	FREQ [MHz]	Test Receiver Reading		Antenna Factor [dB/m]	Loss [dB]	AMP GAIN [dB]	Distance factor [dB]	RESULT		LIMIT (30 m) [dBuV/m]	MARGIN	
		Hor [dBuV]	Ver [dBuV]					Hor [dBuV/m]	Ver [dBuV/m]		Hor [dB]	Ver [dB]
1	13.110	28.8	28.5	9.5	6.5	32.2	-40.0	-27.5	-27.7	29.5	57.0	57.2
2	13.340	28.8	40.3	9.5	6.5	32.2	-40.0	-27.5	-15.9	40.5	68.0	56.4
3	13.410	30.0	44.1	9.5	6.5	32.2	-40.0	-26.3	-12.2	40.5	66.8	52.7
4	13.452	30.1	-	9.5	6.5	32.2	-40.0	-26.2	-	50.4	76.6	-
5	13.453	-	52.2	9.5	6.5	32.2	-40.0	-	-4.1	50.4	-	54.5
6	13.553	48.3	58.1	9.4	6.5	32.2	-40.0	-8.0	1.8	50.4	58.4	48.6
7	13.567	48.8	58.8	9.4	6.5	32.2	-40.0	-7.5	2.5	50.4	57.9	47.9
8	13.568	45.4	-	9.4	6.5	32.2	-40.0	-10.9	-	50.4	61.3	-
9	13.649	-	45.3	9.4	6.5	32.2	-40.0	-	-11.0	50.4	-	61.4
10	13.710	29.6	43.4	9.4	6.5	32.2	-40.0	-26.7	-12.9	40.5	67.2	53.4
11	13.761	-	36.0	9.4	6.5	32.2	-40.0	-	-20.3	40.5	-	60.8
12	13.765	29.3	-	9.4	6.5	32.2	-40.0	-27.0	-	40.5	67.5	-
13	14.010	28.2	27.9	9.4	6.5	32.2	-40.0	-28.2	-28.4	29.5	57.7	57.9

Calculation: Result[dBuV/m]=Reading[dBuV]+Ant.Fac[dB/m]+Loss(Cable+ATT)[dB]-Gain(AMP)[dB]+Distance factor[dB]

Distance factor: $40 \times \log(3 \text{ m} / 30 \text{ m}) = -40 \text{ dB}$

Outside field strength frequencies

- Fc±7 kHz: 13.553 MHz to 13.567 MHz
- Fc±150 kHz: 13.410 MHz to 13.710 MHz
- Fc±450 kHz: 13.110 MHz to 14.010 MHz

Fc = 13.56 MHz

Spurious Emission

Mode	Tx Mod on, with Tag
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
November 20, 2025	SAC3	23 deg. C	40 % RH	Hiromasa Sato	Below 30 MHz
November 20, 2025	WAC2	22 deg. C	42 % RH	Masahide Ozaki	Above 30 MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	13.032	QP	28.6	9.5	6.5	32.2	-40.0	-27.6	29.5	57.1	-	206	* Limit: 30 m
Hori.	14.096	QP	28.7	9.4	6.5	32.2	-40.0	-27.6	29.5	57.1	-	206	* Limit: 30 m
Hori.	27.120	QP	58.4	7.0	6.8	32.2	-40.0	0.0	29.5	29.6	-	323	* Limit: 30 m
Hori.	81.360	QP	43.7	9.0	6.9	33.2	0.0	26.4	40.0	13.6	400	89	
Hori.	176.288	QP	48.3	13.1	7.5	33.1	0.0	35.7	43.5	7.8	194	274	
Hori.	203.400	QP	44.8	11.6	7.4	33.1	0.0	30.7	43.5	12.9	161	123	
Vert.	13.033	QP	38.2	9.5	6.5	32.2	-40.0	-18.0	29.5	47.5	-	174	* Limit: 30 m
Vert.	14.096	QP	36.1	9.4	6.5	32.2	-40.0	-20.3	29.5	49.8	-	174	* Limit: 30 m
Vert.	27.120	QP	62.9	7.0	6.8	32.2	-40.0	4.4	29.5	25.1	-	16	* Limit: 30 m
Vert.	34.572	QP	45.7	12.6	6.4	32.8	0.0	31.9	40.0	8.1	100	321	
Vert.	40.680	QP	45.6	11.4	6.5	33.0	0.0	30.5	40.0	9.5	100	153	
Vert.	54.240	QP	41.6	9.8	6.6	33.1	0.0	24.9	40.0	15.1	100	11	
Vert.	81.360	QP	40.8	9.0	6.9	33.2	0.0	23.5	40.0	16.5	100	72	
Vert.	135.600	QP	44.5	11.5	7.0	33.2	0.0	29.7	43.5	13.8	100	252	
Vert.	162.720	QP	39.4	12.3	7.4	33.2	0.0	25.9	43.5	17.6	100	110	
Vert.	176.280	QP	41.7	13.1	7.5	33.1	0.0	29.1	43.5	14.4	100	150	
Vert.	358.715	QP	37.5	15.1	7.9	32.7	0.0	27.8	46.0	18.2	100	246	

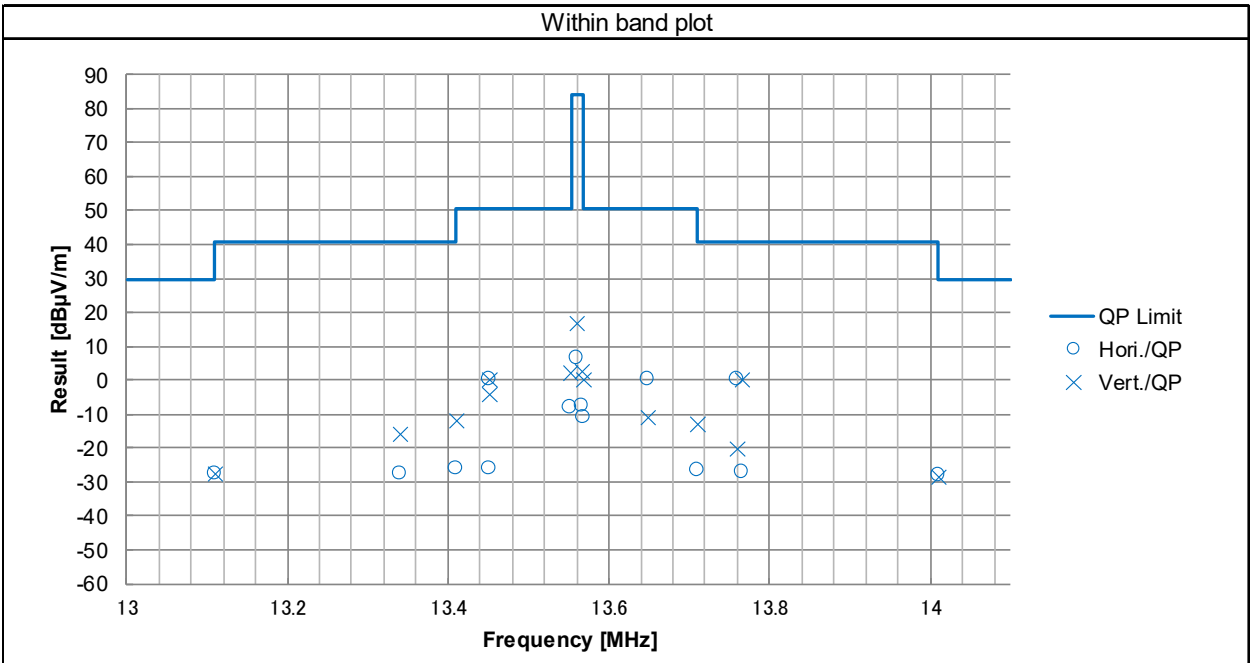
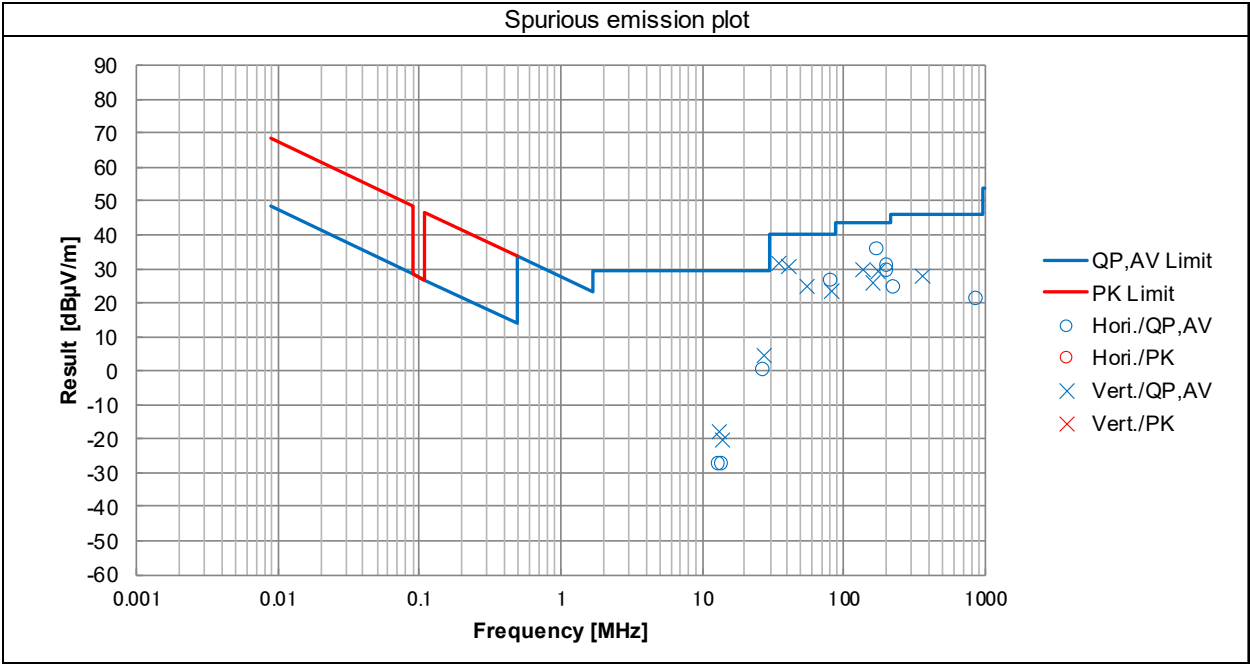
Result = Reading + Ant Factor + Loss (Cable+ATT+ΔAF(above 30 MHz)) - Gain(Amplifier) + Distance factor(below 30 MHz)

* Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

* Carrier level (Result at 3 m): Hor= 46.6 dBuV/m, Ver= 56.8 dBuV/m

Radiated Spurious Emission
(Plot data, Worst case for Spurious Emission)

Mode	Tx Mod on, with Tag				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
November 20, 2025	SAC3	23 deg. C	40 % RH	Hiromasa Sato	Below 30 MHz
November 20, 2025	WAC2	22 deg. C	42 % RH	Masahide Ozaki	Above 30 MHz

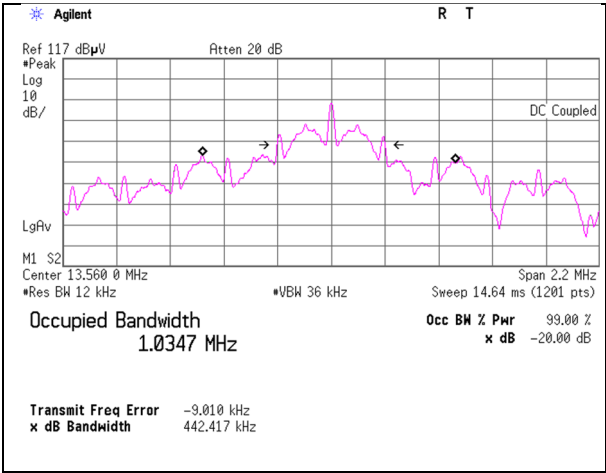


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

20 dB Bandwidth and 99 % Occupied Bandwidth

Mode	Tx Mod on, without Tag (Type A)			
Date	Test site	Temperature	Humidity	Engineer
December 10, 2025	SR5	22 deg. C	33 % RH	Miku Ikudome

FREQ [MHz]	20 dB Bandwidth [kHz]	99 % Occupied Bandwidth [kHz]
13.56	442.42	1034.70



Frequency Tolerance

Mode	Tx Mod off
Voltage	Battery part

Date	Test site	Temperature	Humidity	Engineer
November 28, 2025	SR5	25 deg. C	46 % RH	Miku Ikudome

Test condition		Tested timing	Measured frequency [MHz]	Frequency error [MHz]	Result		Limit [+/- %]
Temp. [deg. C]	Voltage [V]				[%]	[ppm]	
50	3.9	Power on	13.560040	0.000040	0.00029	2.9	0.01
		+ 2 min.	13.560037	0.000037	0.00027	2.7	0.01
		+ 5 min.	13.560032	0.000032	0.00024	2.4	0.01
		+ 10 min.	13.560031	0.000031	0.00023	2.3	0.01
40	3.9	Power on	13.560055	0.000055	0.00041	4.1	0.01
		+ 2 min.	13.560049	0.000049	0.00036	3.6	0.01
		+ 5 min.	13.560049	0.000049	0.00036	3.6	0.01
		+ 10 min.	13.560048	0.000048	0.00035	3.5	0.01
30	3.9	Power on	13.560108	0.000108	0.00080	8.0	0.01
		+ 2 min.	13.560094	0.000094	0.00069	6.9	0.01
		+ 5 min.	13.560091	0.000091	0.00067	6.7	0.01
		+ 10 min.	13.560089	0.000089	0.00066	6.6	0.01
20	3.9	Power on	13.560147	0.000147	0.00108	10.8	0.01
		+ 2 min.	13.560134	0.000134	0.00099	9.9	0.01
		+ 5 min.	13.560131	0.000131	0.00097	9.7	0.01
		+ 10 min.	13.560129	0.000129	0.00095	9.5	0.01
20	3.315 (3.9 V -15 %)	Power on	13.560137	0.000137	0.00101	10.1	0.01
		+ 2 min.	13.560126	0.000126	0.00093	9.3	0.01
		+ 5 min.	13.560124	0.000124	0.00091	9.1	0.01
		+ 10 min.	13.560121	0.000121	0.00089	8.9	0.01
20	4.485 (3.9 V +15 %)	Power on	13.560125	0.000125	0.00092	9.2	0.01
		+ 2 min.	13.560118	0.000118	0.00087	8.7	0.01
		+ 5 min.	13.560117	0.000117	0.00086	8.6	0.01
		+ 10 min.	13.560116	0.000116	0.00086	8.6	0.01
10	3.9	Power on	13.560180	0.000180	0.00133	13.3	0.01
		+ 2 min.	13.560171	0.000171	0.00126	12.6	0.01
		+ 5 min.	13.560167	0.000167	0.00123	12.3	0.01
		+ 10 min.	13.560164	0.000164	0.00121	12.1	0.01
0	3.9	Power on	13.560197	0.000197	0.00145	14.5	0.01
		+ 2 min.	13.560193	0.000193	0.00142	14.2	0.01
		+ 5 min.	13.560192	0.000192	0.00142	14.2	0.01
		+ 10 min.	13.560191	0.000191	0.00141	14.1	0.01
-10	3.9	Power on	13.560188	0.000188	0.00139	13.9	0.01
		+ 2 min.	13.560193	0.000193	0.00142	14.2	0.01
		+ 5 min.	13.560194	0.000194	0.00143	14.3	0.01
		+ 10 min.	13.560194	0.000194	0.00143	14.3	0.01
-20	3.9	Power on	13.560161	0.000161	0.00119	11.9	0.01
		+ 2 min.	13.560170	0.000170	0.00125	12.5	0.01
		+ 5 min.	13.560172	0.000172	0.00127	12.7	0.01
		+ 10 min.	13.560173	0.000173	0.00128	12.8	0.01

Calculation formula: Frequency error = Measured frequency - Tested frequency
Result [%] = Frequency error / Tested frequency * 100

Tested frequency: 13.56 MHz
Limit (+/-): 0.01 % (+/- 100 ppm)

*The test was begun from 50 deg. C and the temperature was lowered each 10 deg. C.

Frequency Tolerance

Mode	Tx Mod off
Voltage	Connector part

Date	Test site	Temperature	Humidity	Engineer
November 28, 2025	SR5	25 deg. C	46 % RH	Miku Ikudome

Test condition Temp. [deg. C]	Voltage [V]	Tested timing	Measured frequency [MHz]	Frequency error [MHz]	Result		Limit [+/- %]
					[%]	[ppm]	
50	5	Power on	13.559969	-0.000031	-0.00023	-2.3	0.01
		+ 2 min.	13.559964	-0.000036	-0.00027	-2.7	0.01
		+ 5 min.	13.559963	-0.000037	-0.00027	-2.7	0.01
		+ 10 min.	13.559963	-0.000037	-0.00027	-2.7	0.01
40	5	Power on	13.559990	-0.000010	-0.00007	-0.7	0.01
		+ 2 min.	13.559982	-0.000018	-0.00013	-1.3	0.01
		+ 5 min.	13.559981	-0.000019	-0.00014	-1.4	0.01
		+ 10 min.	13.559982	-0.000018	-0.00013	-1.3	0.01
30	5	Power on	13.560026	0.000026	0.00019	1.9	0.01
		+ 2 min.	13.560018	0.000018	0.00013	1.3	0.01
		+ 5 min.	13.560015	0.000015	0.00011	1.1	0.01
		+ 10 min.	13.560013	0.000013	0.00010	1.0	0.01
20	5	Power on	13.560069	0.000069	0.00051	5.1	0.01
		+ 2 min.	13.560056	0.000056	0.00041	4.1	0.01
		+ 5 min.	13.560054	0.000054	0.00040	4.0	0.01
		+ 10 min.	13.560053	0.000053	0.00039	3.9	0.01
20	4.5 (V_min)	Power on	13.560147	0.000147	0.00108	10.8	0.01
		+ 2 min.	13.560134	0.000134	0.00099	9.9	0.01
		+ 5 min.	13.560131	0.000131	0.00097	9.7	0.01
		+ 10 min.	13.560129	0.000129	0.00095	9.5	0.01
20	5.75 (5 V +15 %)	Power on	13.560137	0.000137	0.00101	10.1	0.01
		+ 2 min.	13.560129	0.000129	0.00095	9.5	0.01
		+ 5 min.	13.560125	0.000125	0.00092	9.2	0.01
		+ 10 min.	13.560125	0.000125	0.00092	9.2	0.01
10	5	Power on	13.560102	0.000102	0.00075	7.5	0.01
		+ 2 min.	13.560094	0.000094	0.00069	6.9	0.01
		+ 5 min.	13.560091	0.000091	0.00067	6.7	0.01
		+ 10 min.	13.560089	0.000089	0.00066	6.6	0.01
0	5	Power on	13.560123	0.000123	0.00091	9.1	0.01
		+ 2 min.	13.560119	0.000119	0.00088	8.8	0.01
		+ 5 min.	13.560118	0.000118	0.00087	8.7	0.01
		+ 10 min.	13.560116	0.000116	0.00086	8.6	0.01
-10	5	Power on	13.560118	0.000118	0.00087	8.7	0.01
		+ 2 min.	13.560123	0.000123	0.00091	9.1	0.01
		+ 5 min.	13.560124	0.000124	0.00091	9.1	0.01
		+ 10 min.	13.560124	0.000124	0.00091	9.1	0.01
-20	5	Power on	13.560090	0.000090	0.00066	6.6	0.01
		+ 2 min.	13.560095	0.000095	0.00070	7.0	0.01
		+ 5 min.	13.560097	0.000097	0.00072	7.2	0.01
		+ 10 min.	13.560097	0.000097	0.00072	7.2	0.01

Calculation formula: Frequency error = Measured frequency - Tested frequency
Result [%] = Frequency error / Tested frequency * 100

Tested frequency: 13.56 MHz
Limit (+/-): 0.01 % (+/- 100 ppm)

*The test was begun from 50 deg. C and the temperature was lowered each 10 deg. C.

APPENDIX 2: Test instruments

Test Equipment

Test Item	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
BW	145800	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY48250106	2025/03/31	12
BW,FT	145111	Digital Tester	SANWA	PC500	7019232	2025/09/11	12
BW,FT	146178	Search coil	Langer	RF-R 400-1	02-0634	-	-
BW,FT	259713	Thermo-Hygrometer	CUSTOM. Inc	CTH-230	-	2025/04/11	12
CE	248304	Attenuator	JFW	50HFFA-006-2/18N	-	2025/05/14	12
CE	145036	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS 4906	-/0901-271(RF Selector)	2025/04/05	12
CE	145539	LISN	Rohde & Schwarz	ENV216	100512	2025/02/01	12
CE	150463	Test Receiver	Rohde & Schwarz	ESW44	101581	2025/08/29	12
CE	259711	Thermo-Hygrometer	CUSTOM. Inc	CTH-230	-	2025/04/11	12
CE,RE	146210	Digital Hitester	HIOKI E. E. CORPORATION	3805-50	80997823	2025/09/10	12
CE,RE	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,PE)	Ver 3.1.0612	-	-
CE,RE	146432	Tape Measure	TAJIMA	GL19-55	-	-	-
FT	183119	Microwave Counter	Keysight Technologies Inc	53151A	US40511493	2025/12/19	12
FT	145200	Temperature and Humidity Chamber	Espec	PL-1KT	14020837	2025/04/10	12
RE	167096	Attenuator	JFW	50HF-006N	-	2025/02/19	12
RE	199783	Attenuator	JFW	50HF-006N	-	2025/06/04	12
RE	239787	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHBB 9124+BBA9106	01908	2025/08/14	12
RE	194601	Coaxial Cable	Fjikura	5D-2W	-	2025/11/12	12
RE	236724	Coaxial Cable	Hayashi-Repic co., Ltd.	SF106(HUBER+SUHNER)/LMR400UF/GL310C/GL310C	2000430/47753-2/47256-01-04/47256-01-02	2025/05/12	12
RE	253628	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	5D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	2025/04/05	12
RE	235640	DIGITAL MULTIMETER	HIOKI E. E. CORPORATION	DT4261	230313157	2025/05/22	12
RE	145528	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	195	2025/03/18	12
RE	245074	Loop(Active) Antenna	ETS-Lindgren	6502	00262458	2025/04/09	12
RE	145126	Pre Amplifier	SONOMA	310N	290213	2025/02/19	12
RE	236967	Pre Amplifier	TSJ (Techno Science Japan)	MLA-9K01-L01	23050010	2025/06/04	12
RE	145568	Semi Anechoic Chamber(ME)	TDK	Semi Anechoic Chamber 3m/10m	1, 2, 3	2024/10/12	24
RE	145565	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	2025/04/07	12
RE	236615	Semi-Anechoic Chamber	TDK	SWAC-02(NSA)	2	2025/05/12	12
RE	207281	Tape Measure	ASKUL	-	-	-	-
RE	213530	Test Receiver	Rohde & Schwarz	ESW44	103068	2025/02/12	12
RE	235268	Test Receiver	Rohde & Schwarz	ESW44	103212	2025/12/19	12
RE	175822	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	2025/08/15	12
RE	235738	Thermo-Hygrometer	CUSTOM. Inc	CTH-230	-	2025/04/16	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:

CE: Conducted Emission

RE: Radiated Emission

FT: Frequency Tolerance

BW: Bandwidth