

RADIO TEST REPORT

Test Report No. 15994050S-B-R1

Customer	Nintendo Co., Ltd.
Description of EUT	Game controller
Model Number of EUT	BEE-014(-01)
FCC ID	BKEBEE01401
Test Regulation	FCC Part 15 Subpart C
Test Result	Complied
Issue Date	October 5, 2026
Remarks	Bluetooth (BR / EDR) parts

Representative Test EngineerMakoto Hosaka
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)	15994050S-B	January 27, 2026	-
1	15994050S-B-R1	October 5, 2026	Section 4.1 - Corrected typo power setting to power settings - Corrected note *2) High power setting was to Normal power settings were Section 4.2 - Corrected cable name (List of Cables Used) No.4 : DC to USB Section 6 - Deleted section and table number from the reference Table 4 of RSS-Gen 8.9 to RSS-Gen Table 6 of RSS-Gen 8.9 to RSS-Gen

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	IEC	International Electrotechnical Commission
AC	Alternating Current	IEEE	Institute of Electrical and Electronics Engineers
AFH	Adaptive Frequency Hopping	IF	Intermediate Frequency
AM	Amplitude Modulation	ILAC	International Laboratory Accreditation Conference
Amp, AMP	Amplifier	ISED	Innovation, Science and Economic Development Canada
ANSI	American National Standards Institute	ISO	International Organization for Standardization
Ant, ANT	Antenna	JAB	Japan Accreditation Board
AP	Access Point	LAN	Local Area Network
ASK	Amplitude Shift Keying	LIMS	Laboratory Information Management System
Atten., ATT	Attenuator	MCS	Modulation and Coding Scheme
AV	Average	MRA	Mutual Recognition Arrangement
BPSK	Binary Phase-Shift Keying	N/A	Not Applicable
BR	Bluetooth Basic Rate	NIST	National Institute of Standards and Technology
BT	Bluetooth	NS	No signal detect.
BT LE	Bluetooth Low Energy	NSA	Normalized Site Attenuation
BW	BandWidth	NVLAP	National Voluntary Laboratory Accreditation Program
Cal Int	Calibration Interval	OBW	Occupied Band Width
CCK	Complementary Code Keying	OFDM	Orthogonal Frequency Division Multiplexing
Ch., CH	Channel	OFDMA	Orthogonal Frequency Division Multiple Access
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	PP	Preamble Puncturing
DSSS	Direct Sequence Spread Spectrum	PRBS	Pseudo-Random Bit Sequence
EDR	Enhanced Data Rate	PSD	Power Spectral Density
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	QAM	Quadrature Amplitude Modulation
EMC	ElectroMagnetic Compatibility	QP	Quasi-Peak
EMI	ElectroMagnetic Interference	QPSK	Quadri-Phase Shift Keying
EN	European Norm	RBW	Resolution Band Width
ERP, e.r.p.	Effective Radiated Power	RDS	Radio Data System
EU	European Union	RE	Radio Equipment
EUT	Equipment Under Test	RF	Radio Frequency
Fac.	Factor	RMS	Root Mean Square
FCC	Federal Communications Commission	RSS	Radio Standards Specifications
FHSS	Frequency Hopping Spread Spectrum	Rx	Receiving
FM	Frequency Modulation	SA, S/A	Spectrum Analyzer
Freq.	Frequency	SG	Signal Generator
FSK	Frequency Shift Keying	SVSWR	Site-Voltage Standing Wave Ratio
GFSK	Gaussian Frequency-Shift Keying	TR	Test Receiver
GNSS	Global Navigation Satellite System	Tx	Transmitting
GPS	Global Positioning System	VBW	Video BandWidth
Hori.	Horizontal	Vert.	Vertical
ICES	Interference-Causing Equipment Standard	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-014(-01)
Serial Number	Refer to SECTION 4.2
Condition	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	September 26 and October 9, 2025
Test Date	October 12 to 27, 2025

2.2 Product Description

General Specification

Rating	DC 5 V (*.Supply voltage from connector) (*. DC 3.89 V from Re-chargeable Li-ion battery for the internal circuit)
Operating temperature	5 deg. C to 35 deg. C

Radio Specification

This report contains data provided by the customer which can impact the validity of results. UL Japan, Inc. is only responsible for the validity of results after the integration of the data provided by the customer. The data provided by the customer is marked "a)" in the table below.

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz to 2480 MHz
Type of Modulation	GFSK
Antenna Gain _{a)}	1.15 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 _{a)}	1.15 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 47 CFR Part 15 Radio Frequency Device Subpart C Intentional Radiators Section 15.207 Conducted limits Section 15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 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
KDB 558074 D01 v05r02
KDB 662911 D01 v02r01 for FCC MIMO device

3.3 Summary of Test Results

Item	Specification	Results	Remarks
Conducted Emission	FCC: Section 15.207 ISSED: RSS-Gen 8.8	Complied	-
Carrier Frequency Separation	FCC: Section 15.247(a)(1) ISSED: RSS-247 6.2.3.1 (a)	Complied	Conducted
20 dB Bandwidth	FCC: Section 15.247(a)(1) ISSED: RSS-247 6.2.1 (a)	Complied	Conducted
Number of Hopping Frequency	FCC: Section 15.247(a)(1)(iii) ISSED: RSS-247 6.2.3.1 (b)	Complied	Conducted
Dwell time	FCC: Section 15.247(a)(1)(iii) ISSED: RSS-247 6.2.3.1 (b)	Complied	Conducted
Maximum Peak Output Power	FCC: Section 15.247(b)(1) ISSED: RSS-247 6.2.3.2 (b)	Complied	Conducted
Spurious Emission & Band Edge Compliance	FCC: Section 15.247(d) ISSED: RSS-247 6.6 RSS-Gen 8.9 RSS-Gen 8.10	Complied	Conducted/ Radiated (above 30 MHz) *1)
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.			
*1) Radiated test was selected over 30 MHz based on section 15.247(d).			

FCC Part 15.31 (e)

This EUT provides the stable voltage constantly to RF Part regardless of input voltage.
Therefore, this EUT complies with the requirement.

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	Specification	Results	Remarks
99 % Occupied Bandwidth	ISED: -	-	Conducted

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	3.0 dB
Radiated Emission (Measurement distance: 3 m)	9 kHz to 30 MHz	3.3 dB
	30 MHz to 200 MHz	4.8 dB
	200 MHz to 1 GHz	6.1 dB
	1 GHz to 6 GHz	4.7 dB
	6 GHz to 18 GHz	5.3 dB
	18 GHz to 40 GHz	5.5 dB
Radiated Emission (Measurement distance: 1 m)	1 GHz to 18 GHz	5.6 dB
	18 GHz to 40 GHz	5.8 dB

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)	1.3 dB
Power Measurement above 1 GHz (Peak Detector)	1.5 dB
Spurious Emission (Conducted) below 1 GHz	0.93 dB
Conducted Emissions Power Density Measurement 1 GHz to 3 GHz	0.93 dB
Conducted Emissions Power Density Measurement 3 GHz to 18 GHz	3.0 dB
Spurious Emission (Conducted) 18 GHz to 26.5 GHz	2.8 dB
Spurious Emission (Conducted) 26.5 GHz to 40 GHz	2.3 dB
Bandwidth Measurement	0.012 %
Duty Cycle and Time Measurement	0.27 %
Temperature	2.2 deg.C.
Humidity	3.4 %
Voltage	0.92 %

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)

Mode	Remarks*
Bluetooth (BT)	BR / EDR, Payload: PRBS9
*EUT has the power settings by the software as follows; Power Setting: Normal power settings: 5 dBm (BR), 2 dBm (EDR) Lowest power settings: -10 dBm Software: InspectionFwPackage Version: V1.1.2 (Date: 2025.09 26, 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.	

Details of Operating Mode(s)

Test Item	Mode *2)	Hopping	Tested Frequency
Conducted Emission, Radiated Spurious Emission (Below 1 GHz)	Tx DH5 *1)	Off	2402 MHz
Radiated Spurious Emission (Above 1 GHz), Conducted Spurious Emission	Tx DH5 Tx 3DH5	Off	2402 MHz 2441 MHz 2480 MHz
Carrier Frequency Separation	Tx DH5 Tx 3DH5	On	2402 MHz 2441 MHz 2480 MHz
20 dB Bandwidth	Tx DH5 Tx 3DH5	Off	2402 MHz 2441 MHz 2480 MHz
Number of Hopping Frequency	Tx DH5 Tx 3DH5	On	-
Dwell time	Tx DH1, DH3, DH5 Tx 3DH1, 3DH3, 3DH5	On	-
Maximum Peak Output Power	Tx DH5 Tx 2DH5 Tx 3DH5	Off	2402 MHz 2441 MHz 2480 MHz
Band Edge Compliance (Conducted)	Tx DH5 Tx 3DH5	On ----- Off	2402 MHz 2480 MHz
99 % Occupied Bandwidth	Tx DH5 Tx 3DH5	On ----- Off	2402 MHz 2441 MHz 2480 MHz

*As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload length (except Dwell time test)

*2DH mode (2Mb/s EDR: pi/4DQPSK) was excluded for other tests than power measurement by using 3DH mode (3 Mb/s EDR: 8DPSK) as a representative.

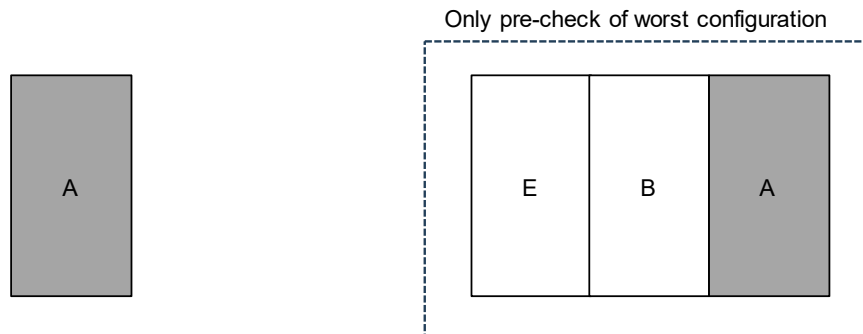
*It is considered that the non-tested packet type (e.g. inquiry) can be omitted as it is complied with above all the test items based on Bluetooth Core specification.

*1) Conducted emissions and Spurious emissions for frequencies below 1 GHz were limited to the channel that had the highest power during the antenna terminal test, as preliminary testing indicated that changing the operating frequency had no significant impact on the emissions in those frequency bands.

*2) Except for Maximum Peak Output Power, Normal power settings were tested as representative.

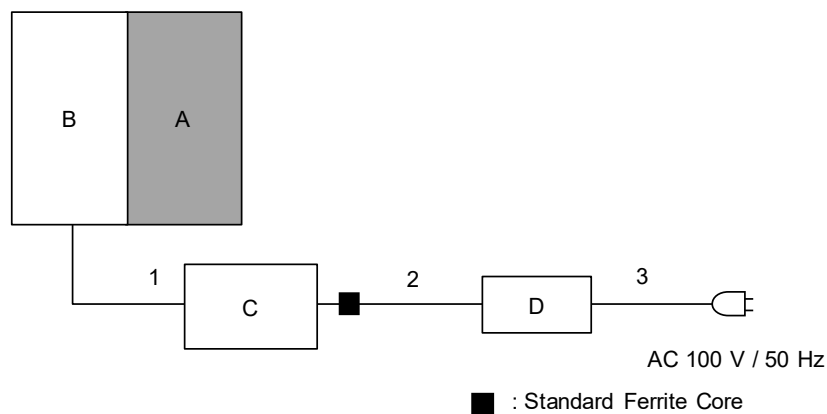
4.2 Configuration and Peripherals

Radiated Emission test

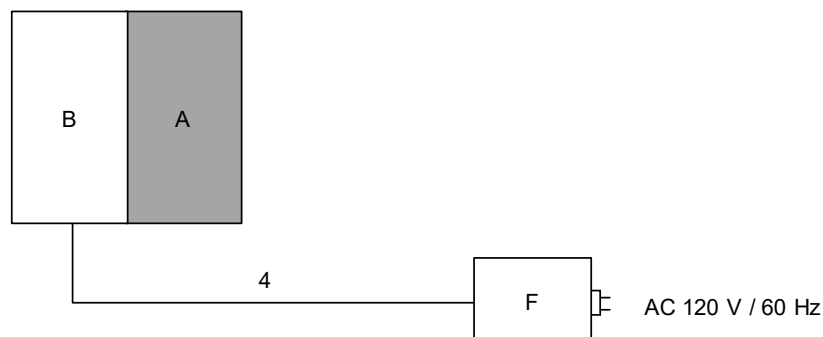


* The carrier level and noise levels were confirmed at each condition of standalone and connected by support equipment, and the test was made at the condition that has the maximum noise.

Antenna Terminal Conducted test



Conducted Emission test



* Cabling and setup(s) 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-014(-01)	HNL01000020715 *1) HNL01000021309 *2)	Nintendo Co., Ltd.	EUT
B	Charging Grip	BEE-010	HDL04000009643	Nintendo Co., Ltd.	-
C	Laptop PC	CF-SV9RDQVS	0JKSC39510	Panasonic	-
D	AC Adaptor	CF-AA65D2A M1	65D2AM1208002424WA	Panasonic	-
E	Controller	BEE-012(-01)	HML01000021613	Nintendo Co., Ltd.	-
F	AC Adaptor	NGN-01	0A00000189	Nintendo Co., Ltd.	-

List of Cables Used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB	1.5	Shielded	Shielded	-
2	DC	1.0	Unshielded	Unshielded	-
3	AC	0.8	Unshielded	Unshielded	-
4	USB	1.5	Shielded	Shielded	-

*1) Used for Radiated Emission test and Conducted emission test.

*2) Used for Antenna Terminal Conducted test.

SECTION 5: Conducted Emission

Test Procedure and Conditions

EUT was placed on the platform of nominal size, 0.8 m by 1.6 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 was 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.

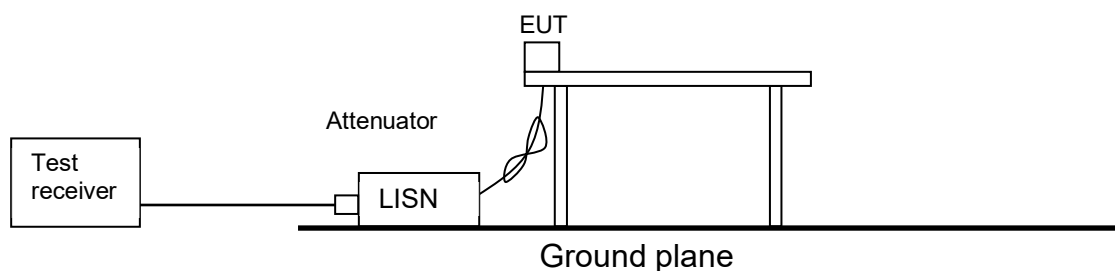
The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

Test results are rounded off and limit are rounded down, 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

Figure 1: Test Setup



SECTION 6: Radiated Spurious Emission

Test Procedure

[For below 1 GHz]

EUT was placed on the platform of nominal size, 1.5 m by 1.0 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.

[For above 1 GHz]

EUT was placed on the platform of nominal size, 0.5 m by 0.5 m, raised 1.5 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane. Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

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

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

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).

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.

Test Antennas are used as below;

Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

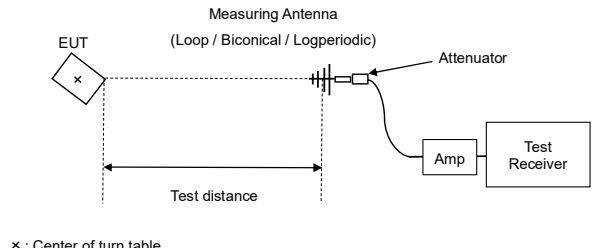
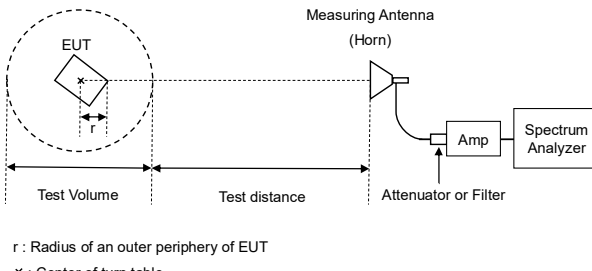
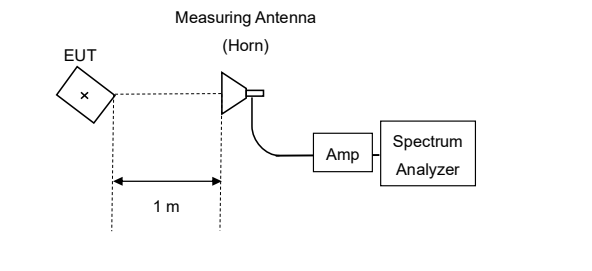
In any 100 kHz bandwidth outside the restricted band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

20 dBc was applied to the frequency over the limit of FCC 15.209 / RSS-Gen (ISED) and outside the restricted band of FCC15.205 / RSS-Gen (ISED).

It was measured with the settings below based on ANSI C63.10.

Frequency	Below 1 GHz	Above 1 GHz		20 dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV	PK
IF Bandwidth	BW 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: 100 traces Duty factor was added to the results.	RBW: 100 kHz VBW: 300 kHz

Figure 2: Test Setup

Below 1 GHz	
 × : Center of turn table	Test Distance: 3 m
1 GHz to 10 GHz	
 r : Radius of an outer periphery of EUT × : Center of turn table	Distance Factor: $20 \times \log (3.98 \text{ m} / 3.0 \text{ m}) = 2.46 \text{ dB}$ * Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.98 \text{ m}$ SVSWR Volume : 2.0 m (SVSWR Volume has been calibrated based on CISPR 16-1-4.) r = 0.02 m
10 GHz to 26.5 GHz	
 × : Center of turn table	Distance Factor: $20 \times \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$ *Test Distance: 1 m

The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT and with or without the grip, to see the position of maximum noise, and the test was made at the position that has the maximum noise.

	Below 1 GHz	1 GHz to 2.8 GHz	2.8 GHz to 10 GHz	Above 10 GHz
Horizontal	X without Grip	X without Grip	X without Grip	X without Grip
Vertical	X without Grip	Y without Grip	Y without Grip	X without Grip

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

Measurement Range : 30 MHz to 26.5 GHz
Test Data : APPENDIX
Test Result : Pass

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

The tests were made with below setting connected to the antenna port.

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument Used
20 dB Bandwidth	3 MHz	30 kHz	100 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	Max Hold *1)	Spectrum Analyzer
Maximum Peak Output Power	-	-	-	Auto	Peak	-	Power Meter (Sensor: 160 MHz BW)
Carrier Frequency Separation	3 MHz	300 kHz	1 MHz	Auto	Peak	Max Hold	Spectrum Analyzer
Number of Hopping Frequency	30 MHz	300 kHz	1 MHz	Auto	Peak	Max Hold	Spectrum Analyzer
Dwell Time	Zero Span	100 kHz	300 kHz	As necessary capture the entire dwell time per hopping channel	Peak	Clear Write	Spectrum Analyzer
Conducted Spurious Emission *2) *3)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 kHz				
	30 MHz to 25 GHz	100 kHz	300 kHz				
Conducted Spurious Emission Band Edge compliance	2390 MHz to 2403 MHz	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
	2479 MHz to 2493.5 MHz						

*1) The measurement was performed with Max Hold since the duty cycle was not 100 %. Peak hold was applied as Worst-case measurement.

*2) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents.
Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart.
(9 kHz -150 kHz: RBW = 200 Hz, 150 kHz - 30 MHz: RBW = 10 kHz)

*3) 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.

Test results are rounded off and limit are rounded down, so some differences might be observed.
The equipment and cables were not used for factor 0 dB of the data sheets.

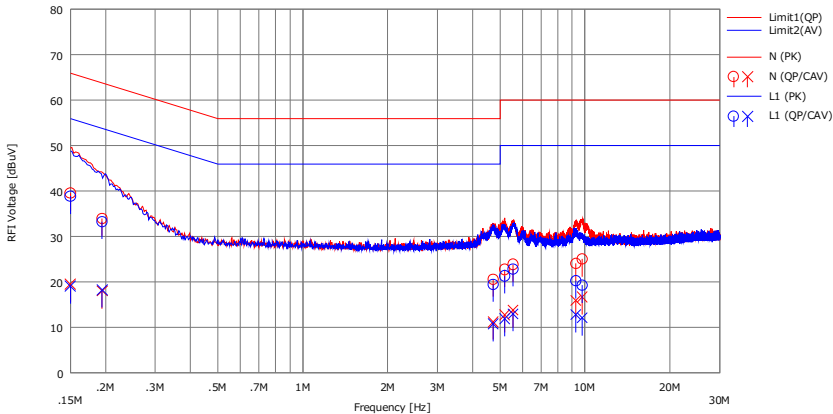
Test Data : APPENDIX
Test Result : Pass

APPENDIX 1: Test data

Conducted Emission

Mode	Tx, Hopping Off, DH5, 2402 MHz				
Date	Test site	Temperature	Humidity	Engineer	Power
October 27, 2025	SR8	24 deg. C	54 % RH	Kouki Yamada	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	24.42	4.38	15.15	39.57	19.53	66.00	56.00	26.4	36.4	N	
2	0.19470	18.86	2.89	15.15	34.01	18.04	63.83	53.83	29.8	36.7	N	
3	4.73040	5.26	-4.17	15.38	20.64	11.21	56.00	46.00	35.3	34.7	N	
4	5.18870	7.38	-2.65	15.41	22.79	12.76	60.00	50.00	37.2	37.2	N	
5	5.55370	8.43	-1.58	15.45	23.88	13.87	60.00	50.00	36.1	36.1	N	
6	9.28900	8.39	0.22	15.71	24.10	15.93	60.00	50.00	35.9	34.0	N	
7	9.75850	9.32	0.97	15.74	25.06	16.71	60.00	50.00	34.9	33.2	N	
8	0.15000	23.71	3.97	15.14	38.85	19.11	66.00	56.00	27.1	36.8	L1	
9	0.19470	18.13	3.10	15.16	33.29	18.26	63.83	53.83	30.5	35.5	L1	
10	4.73040	4.17	-4.50	15.32	19.49	10.82	56.00	46.00	36.5	35.1	L1	
11	5.18870	6.02	-3.36	15.33	21.35	11.97	60.00	50.00	38.6	38.0	L1	
12	5.55370	7.49	-2.35	15.36	22.85	13.01	60.00	50.00	37.1	36.9	L1	
13	9.28900	4.72	-2.74	15.57	20.29	12.83	60.00	50.00	39.7	37.1	L1	
14	9.75850	3.69	-3.47	15.59	19.28	12.12	60.00	50.00	40.7	37.8	L1	

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

20 dB Bandwidth, 99 % Occupied Bandwidth and Carrier Frequency Separation

Mode	Hopping On / Off
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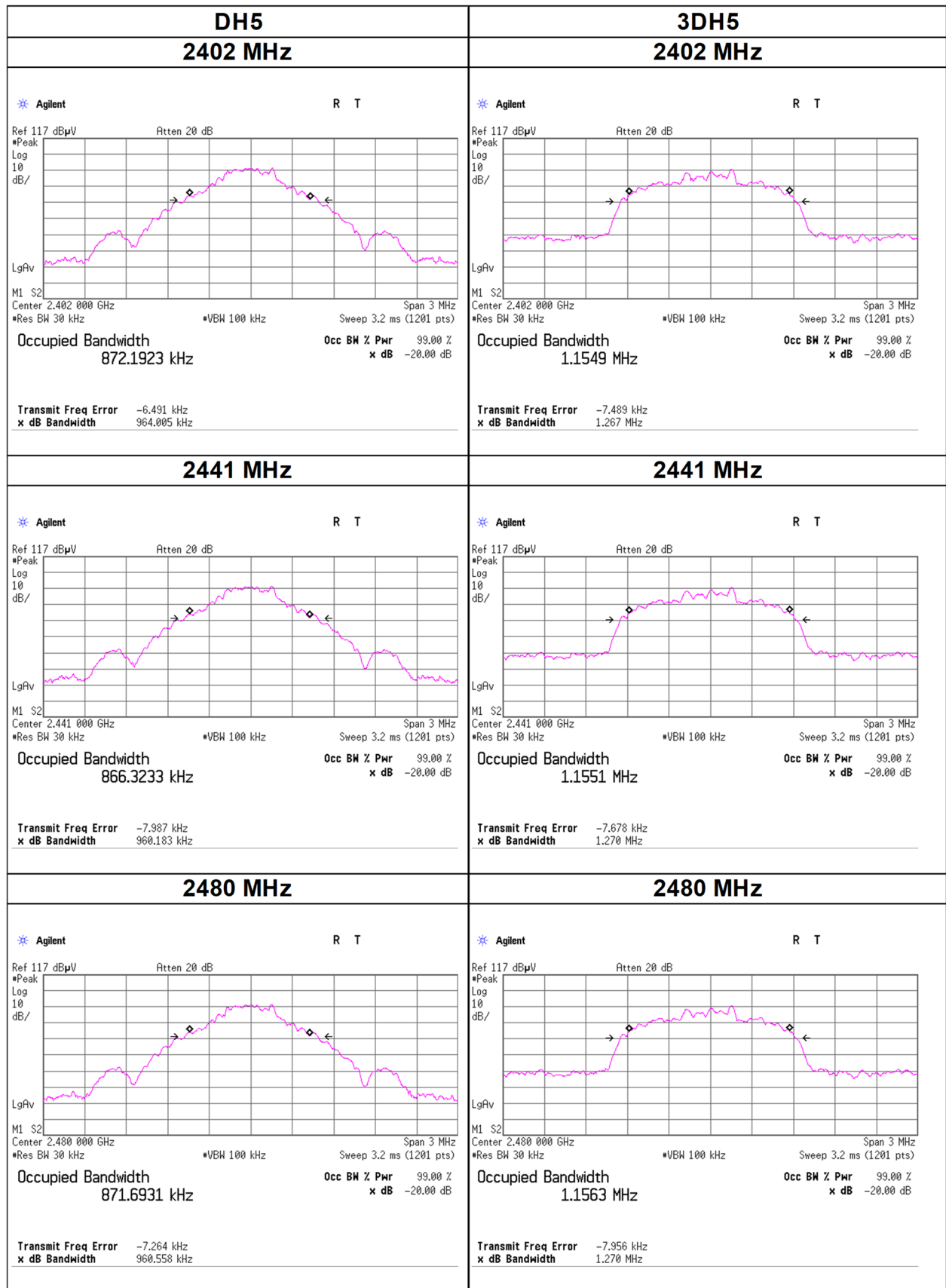
Date	Test site	Temperature	Humidity	Engineer
October 21, 2025	MR1	25 deg. C	42 % RH	Makoto Hosaka

Mode	Freq. [MHz]	20 dB Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402	0.964	872.2	1.000	>= 0.643
DH5	2441	0.960	866.3	1.000	>= 0.640
DH5	2480	0.961	871.7	1.000	>= 0.641
DH5	Hopping On	-	78661.8	-	-
3DH5	2402	1.267	1154.9	1.000	>= 0.845
3DH5	2441	1.270	1155.1	1.000	>= 0.847
3DH5	2480	1.270	1156.3	1.000	>= 0.847
3DH5	Hopping On	-	78673.4	-	-

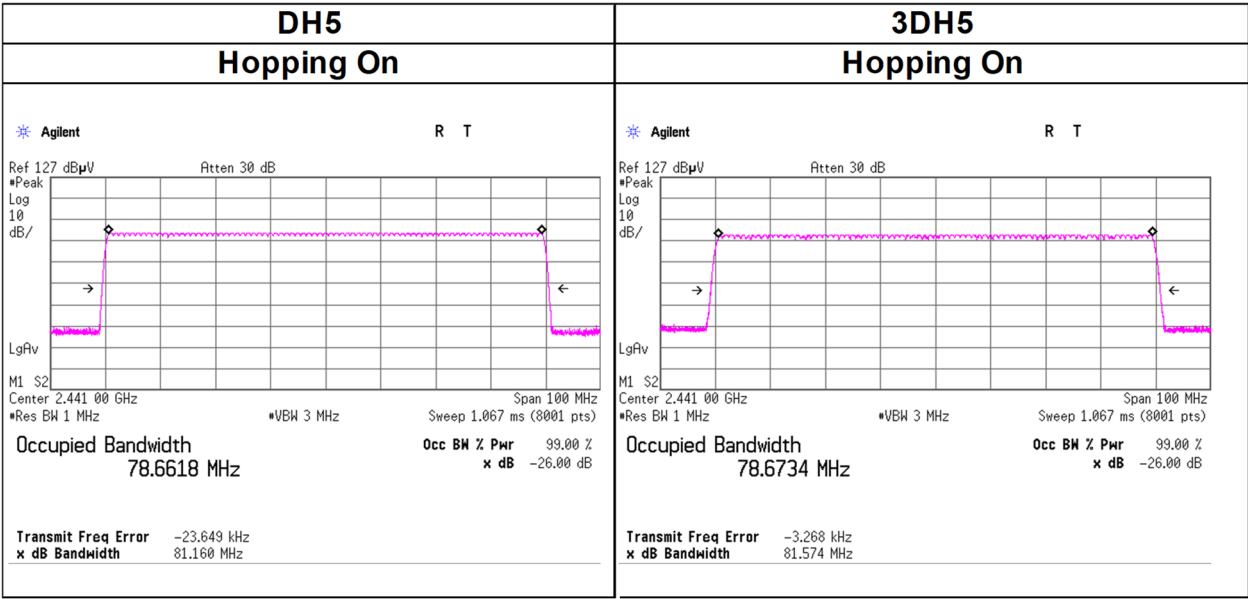
Limit: Two-thirds of 20 dB Bandwidth or 25 kHz (whichever is greater).

No limit applies to 20 dB Bandwidth.

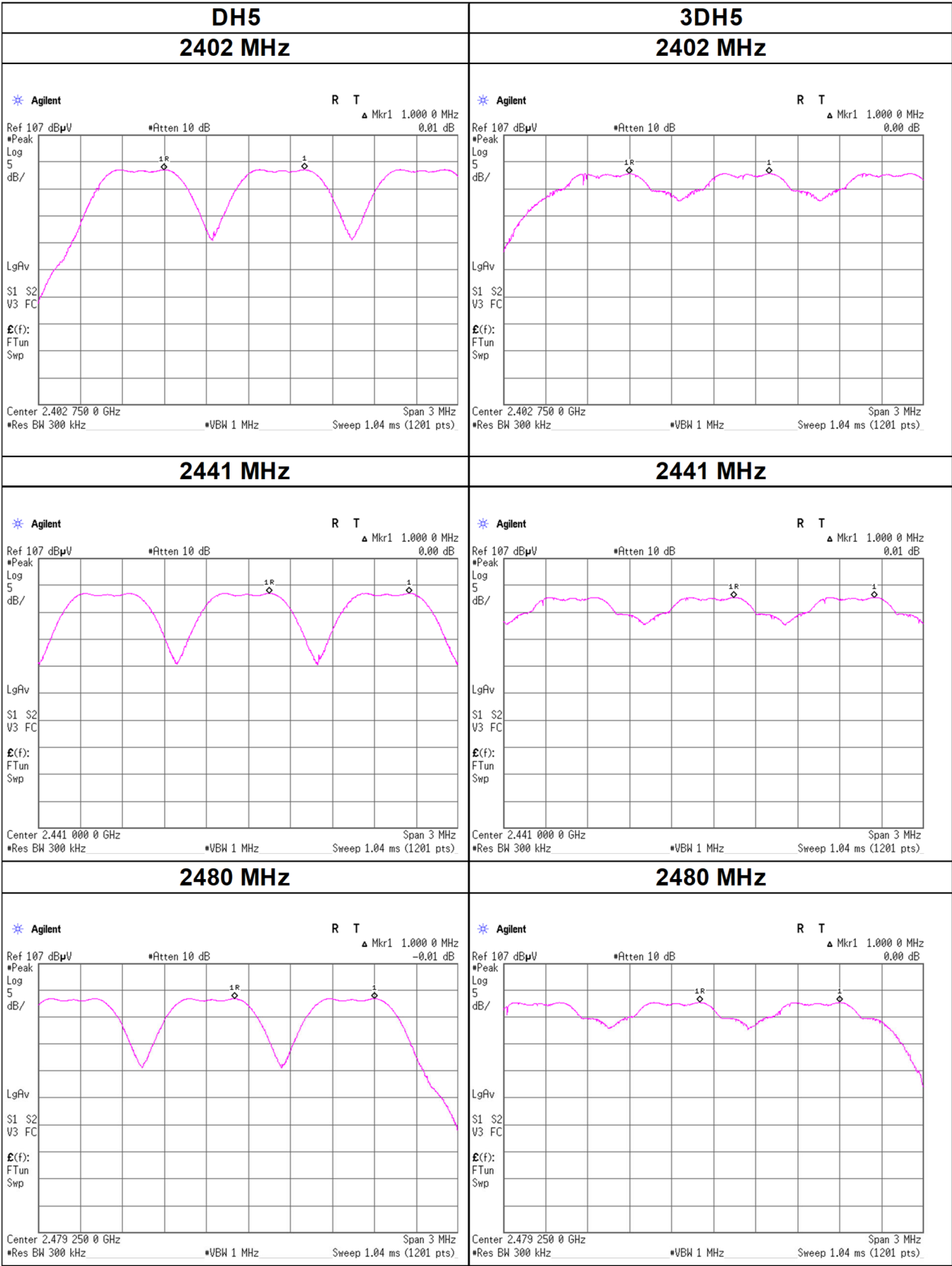
20 dB Bandwidth and 99 % Occupied Bandwidth



20 dB Bandwidth and 99 % Occupied Bandwidth



Carrier Frequency Separation



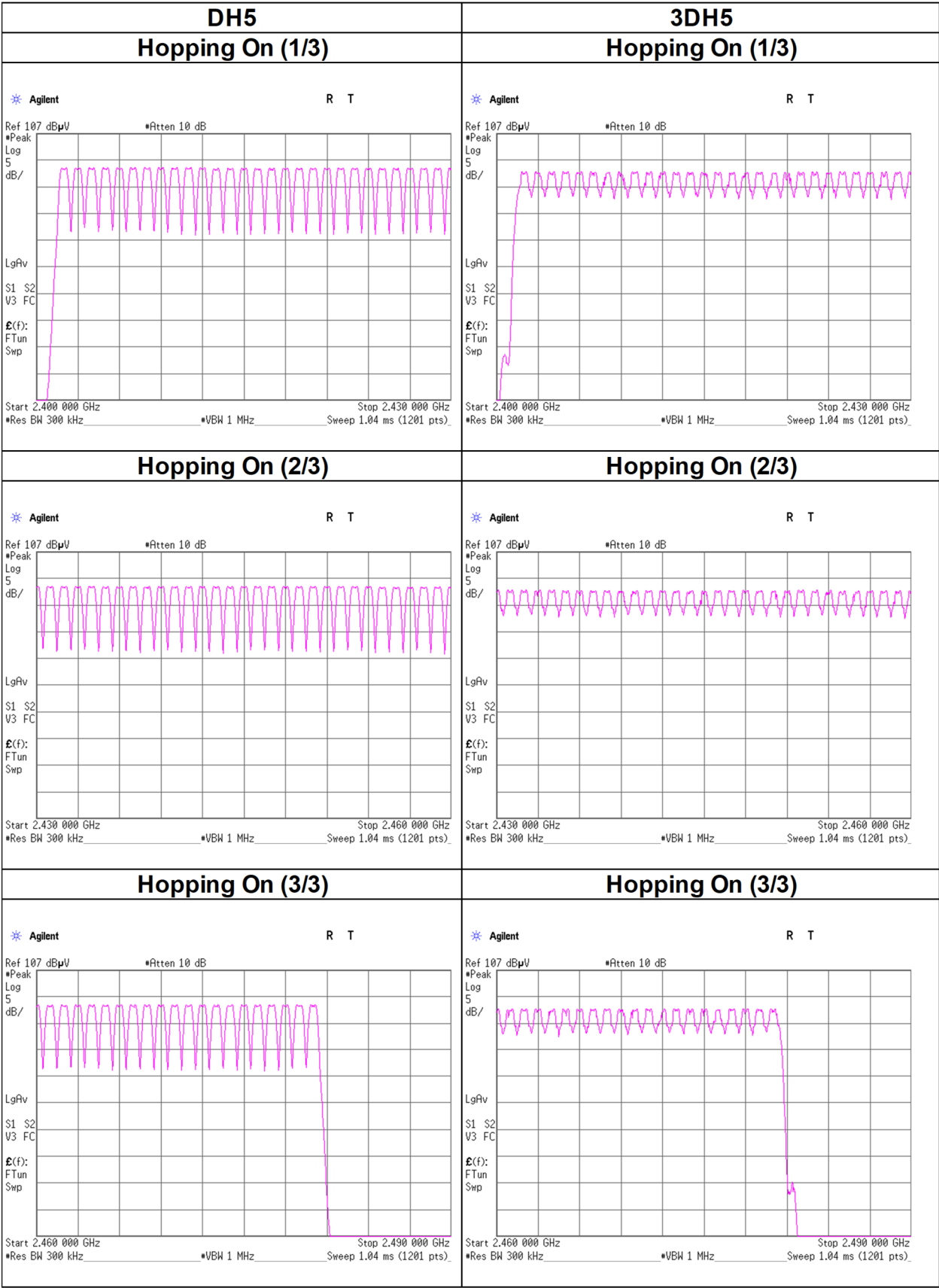
Number of Hopping Frequency

Mode	Tx, Hopping On			
Date	Test site	Temperature	Humidity	Engineer
October 21, 2025	MR1	25 deg. C	42 % RH	Makoto Hosaka

Mode	Number of channel [channels]	Limit [channels]
DH5	79	>= 15
3DH5	79	>= 15

Test was not performed at AFH mode whose number of hopping channel is 20 channels because this Bluetooth radio is in compliance of Bluetooth Specification.

Number of Hopping Frequency



Dwell time

Mode	Tx, Hopping On
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Date	Test site	Temperature	Humidity	Engineer
October 22, 2025	MR1	22 deg. C	50 % RH	Makoto Hosaka

Mode	Number of transmission in a 31.6 (79 Hopping x 0.4)	Length of transmission [ms]	Result [ms]	Limit [ms]
DH1	50.4 times / 5 s x 31.6 s = 319 times	0.407	130	400
DH3	24.8 times / 5 s x 31.6 s = 157 times	1.661	261	400
DH5	20.2 times / 5 s x 31.6 s = 128 times	2.909	372	400
3DH1	50.4 times / 5 s x 31.6 s = 319 times	0.412	132	400
3DH3	26.0 times / 5 s x 31.6 s = 165 times	1.668	275	400
3DH5	20.8 times / 5 s x 31.6 s = 132 times	2.915	385	400

Sample Calculation

Result = Number of transmission x Length of transmission

* Also compliance with the requirements for minimum number of channels(20 hops) made by Bluetooth AFH Specification.

*Average data of 5 tests.

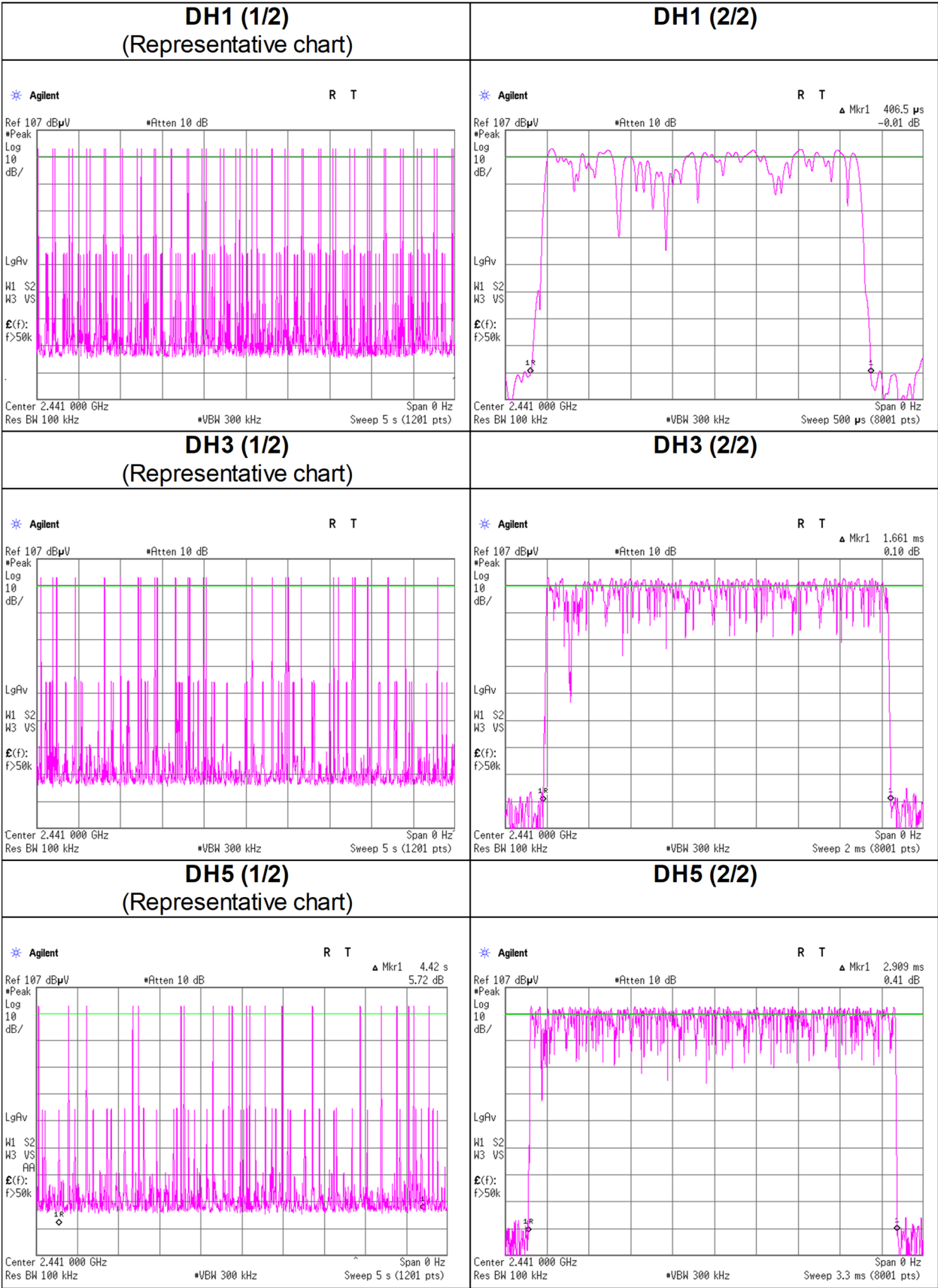
Mode	Sampling [times]					Average [times]
	1	2	3	4	5	
DH1	50	51	50	51	50	50.4
DH3	28	22	25	26	23	24.8
DH5	21	18	19	21	22	20.2
3DH1	51	49	50	51	51	50.4
3DH3	30	28	24	23	25	26
3DH5	21	21	20	19	23	20.8

Sample Calculation

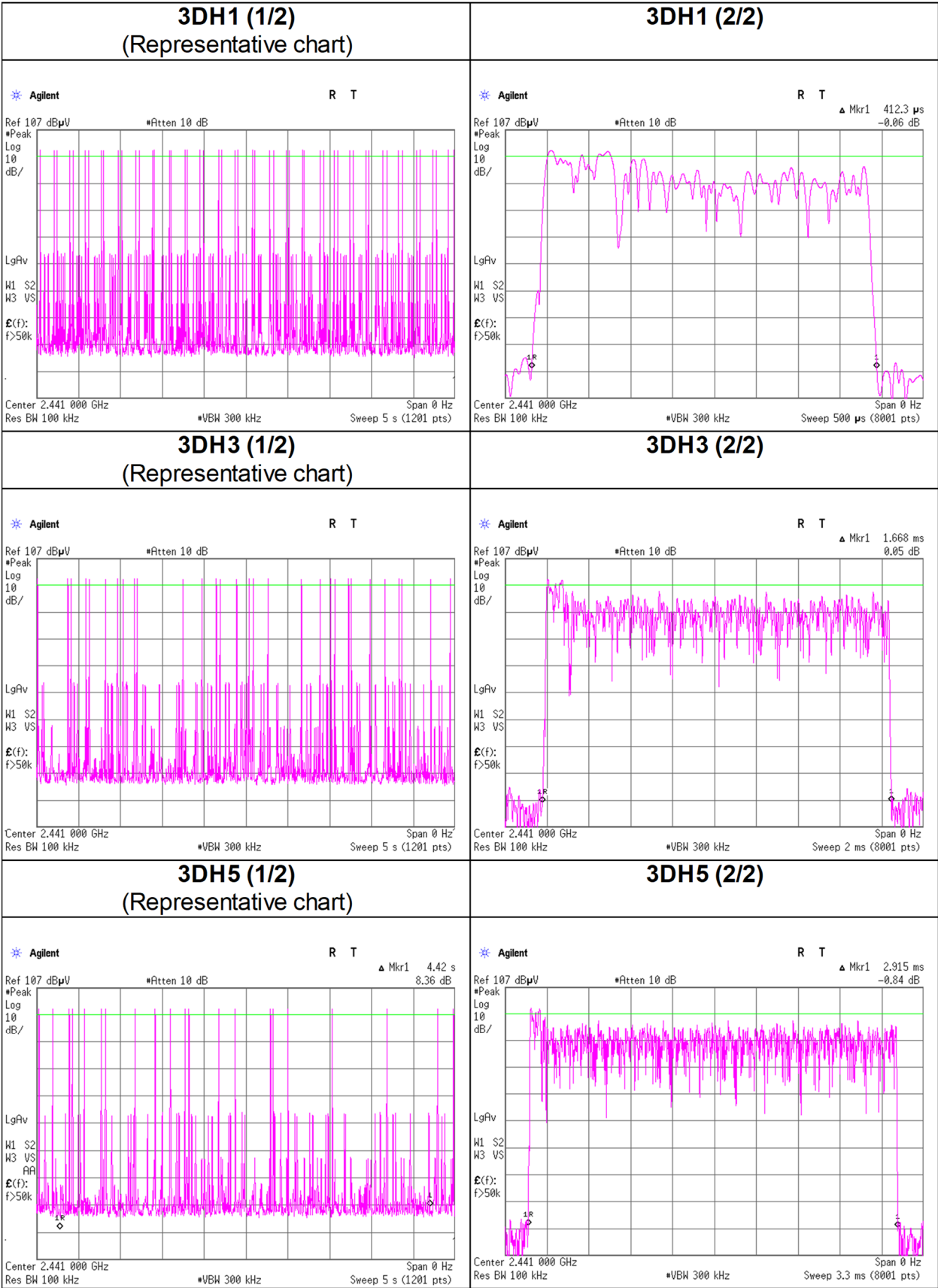
Average = Summation (Sampling 1 to 5) / 5

This device complies with the Bluetooth protocol for FHSS operation, employing a pseudo random channel selection and hopping rate to ensure that the occupancy time in $N \times 0.4$ s, where N is the number of channels being used in the hopping sequence ($20 \leq N \leq 79$), is always less than 0.4 s regardless of packet size. This is confirmed in the test report for $N = 79$.

Dwell time



Dwell time



Maximum Peak Output Power

Mode	Tx, Hopping Off
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Date	Test site	Temperature	Humidity	Engineer
October 15, 2025	MR1	24 deg. C	53 % RH	Hiromasa Sato
October 24, 2025	MR1	24 deg. C	45 % RH	Makoto Hosaka

Mode	Freq.	Reading	Cable Loss	Atten. Loss	Conducted Power					Antenna Gain	e.i.r.p. for RSS-247				
					Result		Limit		Margin		Result		Limit		Margin
					[dBm]	[mW]	[dBm]	[mW]			[dBm]	[mW]			
DH5	2402	-6.24	1.67	10.17	5.60	3.63	20.97	125	15.37	1.15	6.75	4.73	36.02	4000	29.27
DH5	2441	-6.31	1.68	10.17	5.54	3.58	20.97	125	15.43	1.15	6.69	4.66	36.02	4000	29.33
DH5	2480	-6.35	1.68	10.17	5.50	3.55	20.97	125	15.47	1.15	6.65	4.63	36.02	4000	29.37
2DH5	2402	-6.97	1.67	10.17	4.87	3.07	20.97	125	16.10	1.15	6.02	4.00	36.02	4000	30.00
2DH5	2441	-7.05	1.68	10.17	4.80	3.02	20.97	125	16.17	1.15	5.95	3.93	36.02	4000	30.07
2DH5	2480	-7.08	1.68	10.17	4.77	3.00	20.97	125	16.20	1.15	5.92	3.91	36.02	4000	30.10
3DH5	2402	-6.90	1.67	10.17	4.94	3.12	20.97	125	16.03	1.15	6.09	4.06	36.02	4000	29.93
3DH5	2441	-6.91	1.68	10.17	4.94	3.12	20.97	125	16.03	1.15	6.09	4.06	36.02	4000	29.93
3DH5	2480	-6.93	1.68	10.17	4.92	3.11	20.97	125	16.05	1.15	6.07	4.05	36.02	4000	29.95

Lowest power					Conducted Power					e.i.r.p. for RSS-247					
Mode	Freq.	Reading	Cable Loss	Atten. Loss	Result		Limit		Margin	Antenna Gain	Result		Limit		Margin
					[dBm]	[mW]	[dBm]	[mW]			[dB]	[dBm]	[mW]	[dBm]	
DH5	2402	-11.96	1.67	0.00	-10.29	0.09	20.97	125	31.26	1.15	-9.14	0.12	36.02	4000	45.16
DH5	2441	-11.92	1.68	0.00	-10.24	0.09	20.97	125	31.21	1.15	-9.09	0.12	36.02	4000	45.11
DH5	2480	-11.61	1.68	0.00	-9.93	0.10	20.97	125	30.89	1.15	-8.78	0.13	36.02	4000	44.80
2DH5	2402	-9.18	1.67	0.00	-7.51	0.18	20.97	125	28.48	1.15	-6.36	0.23	36.02	4000	42.38
2DH5	2441	-9.27	1.68	0.00	-7.59	0.17	20.97	125	28.56	1.15	-6.44	0.23	36.02	4000	42.46
2DH5	2480	-8.94	1.68	0.00	-7.26	0.19	20.97	125	28.22	1.15	-6.11	0.25	36.02	4000	42.13
3DH5	2402	-9.03	1.67	0.00	-7.36	0.18	20.97	125	28.33	1.15	-6.21	0.24	36.02	4000	42.23
3DH5	2441	-9.07	1.68	0.00	-7.39	0.18	20.97	125	28.36	1.15	-6.24	0.24	36.02	4000	42.26
3DH5	2480	-8.69	1.68	0.00	-7.01	0.20	20.97	125	27.97	1.15	-5.86	0.26	36.02	4000	41.88

Sample Calculation:

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss

e.i.r.p. Result = Conducted Power Result + Antenna Gain

*The equipment and cables were not used for factor 0 dB of the data sheets.

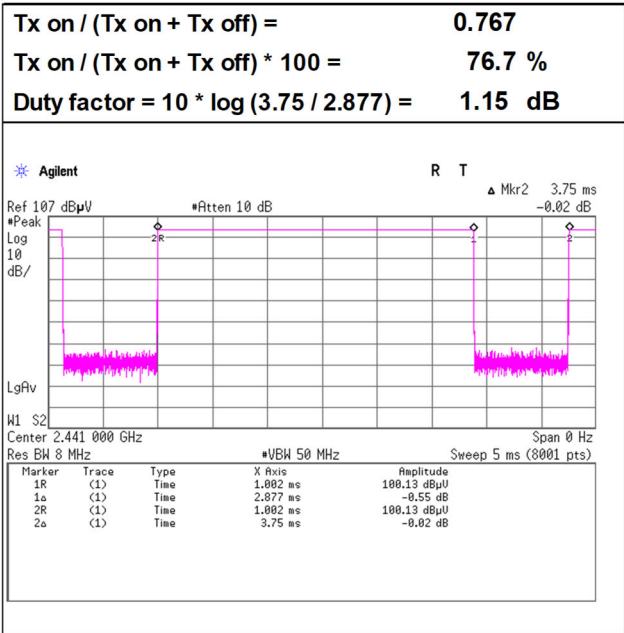
Test was not performed at AFH mode, because the decrease of number of channel (min: 20 ch) at AFH mode does not influence on the output power and bandwidth of the EUT.

As this device had AFH mode and frequency separation could not meet the requirement of over 20 dB BW without 2/3 relaxation, 125 mW power limit was applied to it.

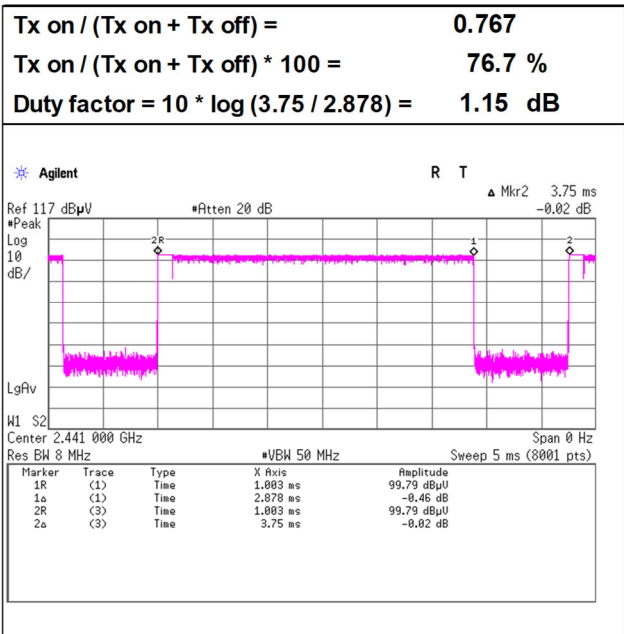
Burst Rate Confirmation

Mode	Tx, Hopping Off			
Date	Test site	Temperature	Humidity	Engineer
October 15, 2025	MR1	24 deg. C	53 % RH	Hiromasa Sato

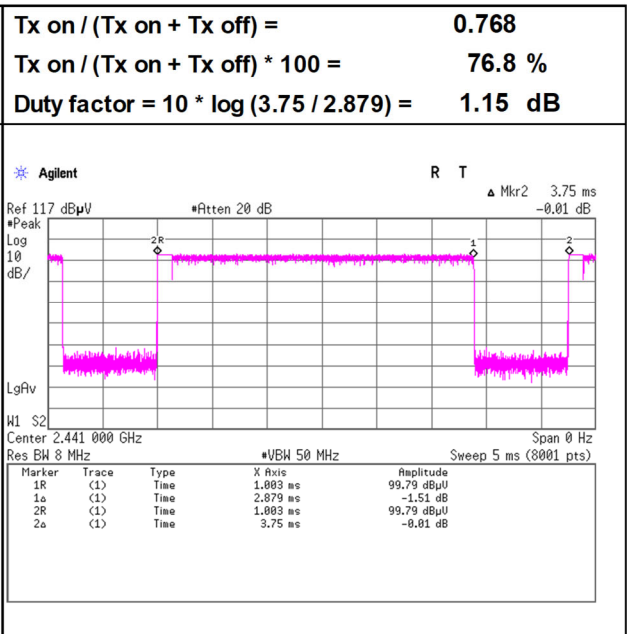
DH5



2DH5



3DH5



Radiated Spurious Emission

Mode	Tx, Hopping Off, DH5, 2402 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 22, 2025	WAC2	22 deg. C	48 % RH	Hiromasa Sato	Below 1 GHz
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency	Detector	Reading	Ant.Fac.	Loss	Gain	Distance Fac.	Result	Limit	Margin	Height	Angle	Remark
	[MHz]		[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[cm]	[deg.]	
Hori.	42.159	QP	22.83	11.16	6.48	32.97	0.00	7.50	40.0	32.5	100	41	-
Hori.	55.671	QP	23.35	9.76	6.53	33.13	0.00	6.51	40.0	33.4	100	45	-
Hori.	185.824	QP	22.28	13.66	7.41	33.13	0.00	10.22	43.5	33.2	100	219	-
Hori.	865.792	QP	20.37	21.84	9.06	30.67	0.00	20.60	46.0	25.4	100	237	-
Hori.	2390.000	PK	47.95	27.71	-28.27	-	2.46	49.85	73.9	24.0	145	153	-
Hori.	4804.000	PK	50.48	31.83	-35.97	-	2.46	48.80	73.9	25.1	110	18	-
Hori.	7206.000	PK	46.91	36.28	-34.41	-	2.46	51.24	73.9	22.6	150	0	Floor Noise
Hori.	9608.000	PK	46.21	38.04	-31.33	-	2.46	55.38	73.9	18.5	150	0	Floor Noise
Hori.	7206.000	AV	35.42	36.28	-34.41	-	2.46	39.75	53.9	14.1	150	0	Floor Noise
Hori.	9608.000	AV	35.04	38.04	-31.33	-	2.46	44.21	53.9	9.6	150	0	Floor Noise
Vert.	139.999	QP	28.49	11.59	7.04	33.20	0.00	13.92	43.5	29.5	100	36	-
Vert.	272.237	QP	22.11	12.98	7.61	32.91	0.00	9.79	46.0	36.2	100	88	-
Vert.	541.281	QP	22.46	17.69	8.34	32.13	0.00	16.36	46.0	29.6	100	222	-
Vert.	604.967	QP	22.39	19.36	8.48	31.96	0.00	18.27	46.0	27.7	100	38	-
Vert.	2390.000	PK	47.30	27.71	-28.27	-	2.46	49.20	73.9	24.7	298	250	-
Vert.	4804.000	PK	50.59	31.83	-35.97	-	2.46	48.91	73.9	24.9	263	94	-
Vert.	7206.000	PK	46.63	36.28	-34.41	-	2.46	50.96	73.9	22.9	150	0	Floor Noise
Vert.	9608.000	PK	45.87	38.04	-31.33	-	2.46	55.04	73.9	18.8	150	0	Floor Noise
Vert.	7206.000	AV	35.44	36.28	-34.41	-	2.46	39.77	53.9	14.1	150	0	Floor Noise
Vert.	9608.000	AV	35.01	38.04	-31.33	-	2.46	44.18	53.9	9.7	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m]/3.0[m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00[m]/3.0[m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency	Detector	Reading	Ant.Fac.	Loss	Gain	Duty Fac.	Distance Fac.	Result	Limit	Margin	Remark
	[MHz]		[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
Hori.	2390.000	AV	36.13	27.71	-28.27	-	1.15	2.46	39.18	53.9	14.7	*1)
Hori.	4804.000	AV	42.60	31.83	-35.97	-	1.15	2.46	42.07	53.9	11.8	-
Vert.	2390.000	AV	35.98	27.71	-28.27	-	1.15	2.46	39.03	53.9	14.8	*1)
Vert.	4804.000	AV	42.64	31.83	-35.97	-	1.15	2.46	42.11	53.9	11.7	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m]/3.0[m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00[m]/3.0[m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

*1) Not out of band emission (Leakage Power)

20 dBc Data Sheet

(RBW 100 kHz, VBW 300 kHz)

Polarity	Frequency	Detector	Reading	Ant.Fac.	Loss	Gain	Distance Fac.	Result	Limit	Margin	Remark
	[MHz]		[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
Hori.	2402.000	PK	99.06	27.74	-28.26	-	2.46	101.00	-	-	Carrier
Hori.	2400.000	PK	42.15	27.73	-28.26	-	2.46	44.08	81.0	36.9	-
Vert.	2402.000	PK	99.39	27.74	-28.26	-	2.46	101.33	-	-	Carrier
Vert.	2400.000	PK	41.00	27.73	-28.26	-	2.46	42.93	81.3	38.3	-

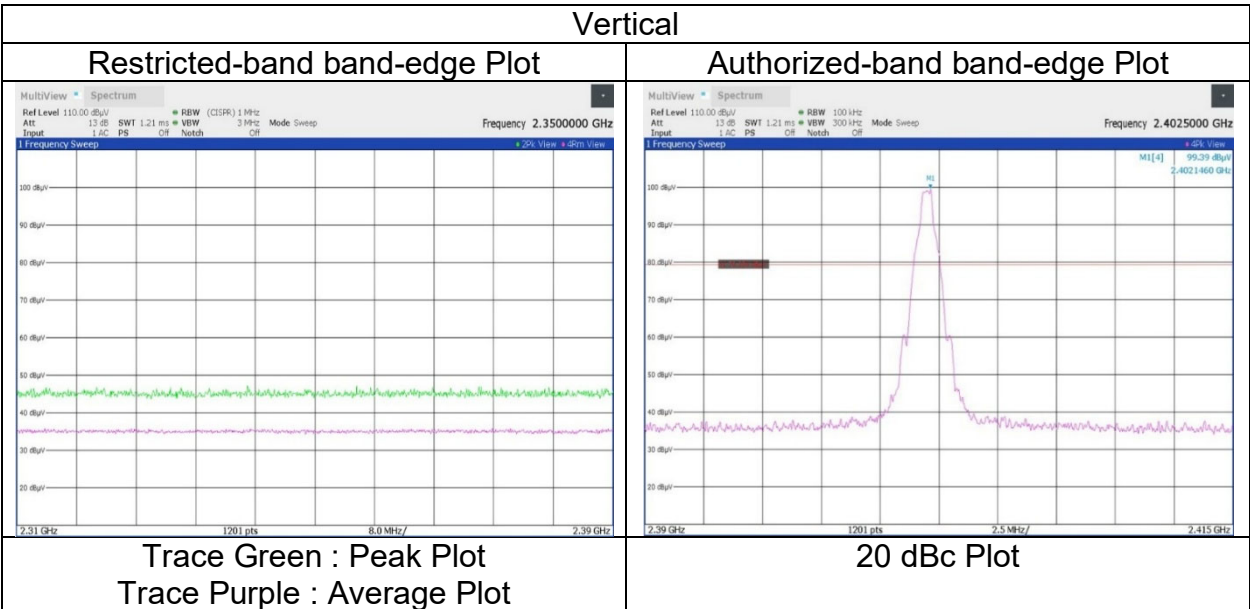
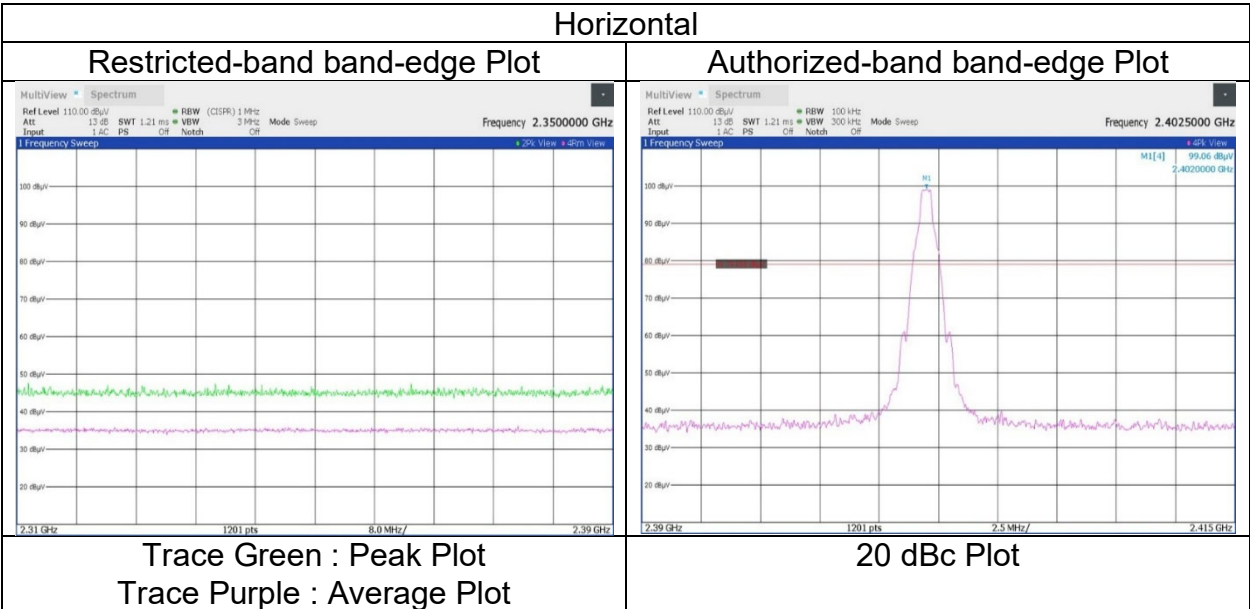
Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m]/3.0[m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00[m]/3.0[m]) = -9.54 [dB]$

Radiated Spurious Emission
(Reference Plot for band-edge)

Mode	Tx, Hopping Off, DH5, 2402 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge and authorized band edge were shown in tabular data.

Radiated Spurious Emission

Mode	Tx, Hopping Off, DH5, 2441 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	4882.000	PK	48.23	32.28	-35.95	-	2.46	47.02	73.9	26.8	179	87	-
Hori.	7323.000	PK	46.76	36.66	-34.19	-	2.46	51.69	73.9	22.2	150	0	Floor Noise
Hori.	9764.000	PK	45.61	38.09	-31.12	-	2.46	55.04	73.9	18.8	150	0	Floor Noise
Hori.	7323.000	AV	35.62	36.66	-34.19	-	2.46	40.55	53.9	13.3	150	0	Floor Noise
Hori.	9764.000	AV	34.49	38.09	-31.12	-	2.46	43.92	53.9	9.9	150	0	Floor Noise
Vert.	4882.000	PK	47.70	32.28	-35.95	-	2.46	46.49	73.9	27.4	264	103	-
Vert.	7323.000	PK	46.81	36.66	-34.19	-	2.46	51.74	73.9	22.1	150	0	Floor Noise
Vert.	9764.000	PK	45.43	38.09	-31.12	-	2.46	54.86	73.9	19.0	150	0	Floor Noise
Vert.	7323.000	AV	35.73	36.66	-34.19	-	2.46	40.66	53.9	13.2	150	0	Floor Noise
Vert.	9764.000	AV	34.53	38.09	-31.12	-	2.46	43.96	53.9	9.9	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Fac. [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4882.000	AV	38.05	32.28	-35.95	-	1.15	2.46	37.99	53.9	15.9	-
Vert.	4882.000	AV	38.15	32.28	-35.95	-	1.15	2.46	38.09	53.9	15.8	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

Radiated Spurious Emission

Mode	Tx, Hopping Off, DH5, 2480 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	2483.500	PK	48.84	27.77	-28.21	-	2.46	50.86	73.9	23.0	137	156	-
Hori.	4960.000	PK	48.38	32.58	-35.92	-	2.46	47.50	73.9	26.4	205	54	-
Hori.	7440.000	PK	46.84	36.79	-33.97	-	2.46	52.12	73.9	21.7	150	0	Floor Noise
Hori.	9920.000	PK	46.27	38.15	-30.92	-	2.46	55.96	73.9	17.9	150	0	Floor Noise
Hori.	7440.000	AV	35.80	36.79	-33.97	-	2.46	41.08	53.9	12.8	150	0	Floor Noise
Hori.	9920.000	AV	34.80	38.15	-30.92	-	2.46	44.49	53.9	9.4	150	0	Floor Noise
Vert.	2483.500	PK	48.73	27.77	-28.21	-	2.46	50.75	73.9	23.1	221	266	-
Vert.	4960.000	PK	47.60	32.58	-35.92	-	2.46	46.72	73.9	27.1	254	104	-
Vert.	7440.000	PK	47.59	36.79	-33.97	-	2.46	52.87	73.9	21.0	150	0	Floor Noise
Vert.	9920.000	PK	46.16	38.15	-30.92	-	2.46	55.85	73.9	18.0	150	0	Floor Noise
Vert.	7440.000	AV	35.90	36.79	-33.97	-	2.46	41.18	53.9	12.7	150	0	Floor Noise
Vert.	9920.000	AV	34.72	38.15	-30.92	-	2.46	44.41	53.9	9.4	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m]/3.0[m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00[m]/3.0[m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Fac. [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2483.500	AV	37.22	27.77	-28.21	-	1.15	2.46	40.39	53.9	13.5	*1)
Hori.	4960.000	AV	37.42	32.58	-35.92	-	1.15	2.46	37.69	53.9	16.2	-
Vert.	2483.500	AV	37.24	27.77	-28.21	-	1.15	2.46	40.41	53.9	13.4	*1)
Vert.	4960.000	AV	37.10	32.58	-35.92	-	1.15	2.46	37.37	53.9	16.5	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m]/3.0[m]) = 2.46 [dB]$

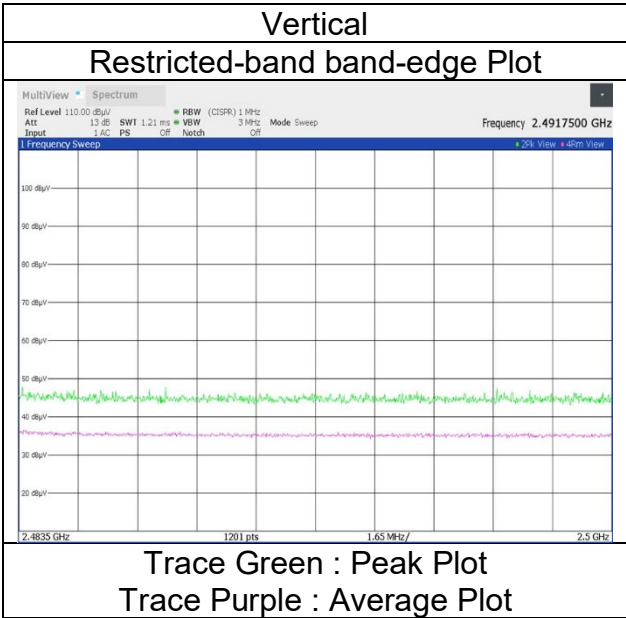
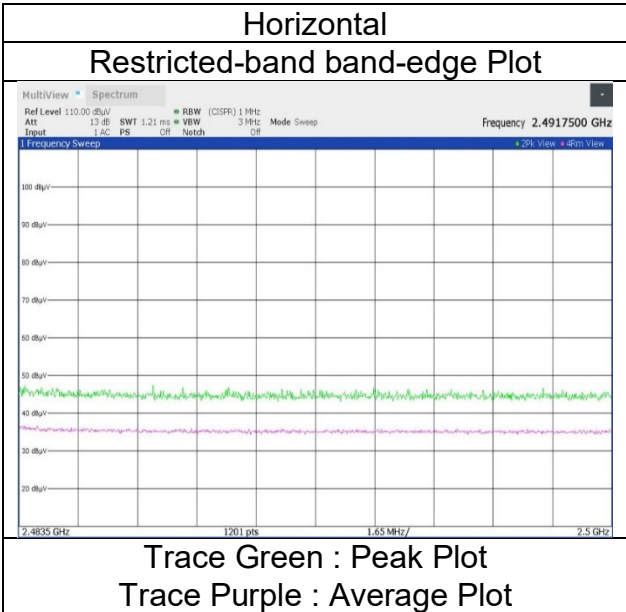
10 GHz to 40 GHz : $20\log(1.00[m]/3.0[m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

*1) Not out of band emission (Leakage Power)

Radiated Spurious Emission
(Reference Plot for band-edge)

Mode	Tx, Hopping Off, DH5, 2480 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Mode	Tx, Hopping Off, 3DH5, 2402 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	2390.000	PK	47.16	27.71	-28.27	-	2.46	49.06	73.9	24.8	144	154	-
Hori.	4804.000	PK	49.10	31.83	-35.97	-	2.46	47.42	73.9	26.4	112	40	-
Hori.	7206.000	PK	47.22	36.28	-34.41	-	2.46	51.55	73.9	22.3	150	0	Floor Noise
Hori.	9608.000	PK	45.90	38.04	-31.33	-	2.46	55.07	73.9	18.8	150	0	Floor Noise
Hori.	7206.000	AV	35.35	36.28	-34.41	-	2.46	39.68	53.9	14.2	150	0	Floor Noise
Hori.	9608.000	AV	34.83	38.04	-31.33	-	2.46	44.00	53.9	9.9	150	0	Floor Noise
Vert.	2390.000	PK	46.93	27.71	-28.27	-	2.46	48.83	73.9	25.0	301	260	-
Vert.	4804.000	PK	49.12	31.83	-35.97	-	2.46	47.44	73.9	26.4	264	96	-
Vert.	7206.000	PK	46.55	36.28	-34.41	-	2.46	50.88	73.9	23.0	150	0	Floor Noise
Vert.	9608.000	PK	45.88	38.04	-31.33	-	2.46	55.05	73.9	18.8	150	0	Floor Noise
Vert.	7206.000	AV	35.37	36.28	-34.41	-	2.46	39.70	53.9	14.2	150	0	Floor Noise
Vert.	9608.000	AV	34.95	38.04	-31.33	-	2.46	44.12	53.9	9.7	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Fac. [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2390.000	AV	35.91	27.71	-28.27	-	1.15	2.46	38.96	53.9	14.9	*1)
Hori.	4804.000	AV	38.43	31.83	-35.97	-	1.15	2.46	37.90	53.9	16.0	-
Vert.	2390.000	AV	35.89	27.71	-28.27	-	1.15	2.46	38.94	53.9	14.9	*1)
Vert.	4804.000	AV	38.21	31.83	-35.97	-	1.15	2.46	37.68	53.9	16.2	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

*1) Not out of band emission (Leakage Power)

20 dBc Data Sheet

(RBW 100 kHz, VBW 300 kHz)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	98.27	27.74	-28.26	-	2.46	100.21	-	-	Carrier
Hori.	2400.000	PK	43.61	27.73	-28.26	-	2.46	45.54	80.2	34.6	-
Vert.	2402.000	PK	98.26	27.74	-28.26	-	2.46	100.20	-	-	Carrier
Vert.	2400.000	PK	43.28	27.73	-28.26	-	2.46	45.21	80.2	34.9	-

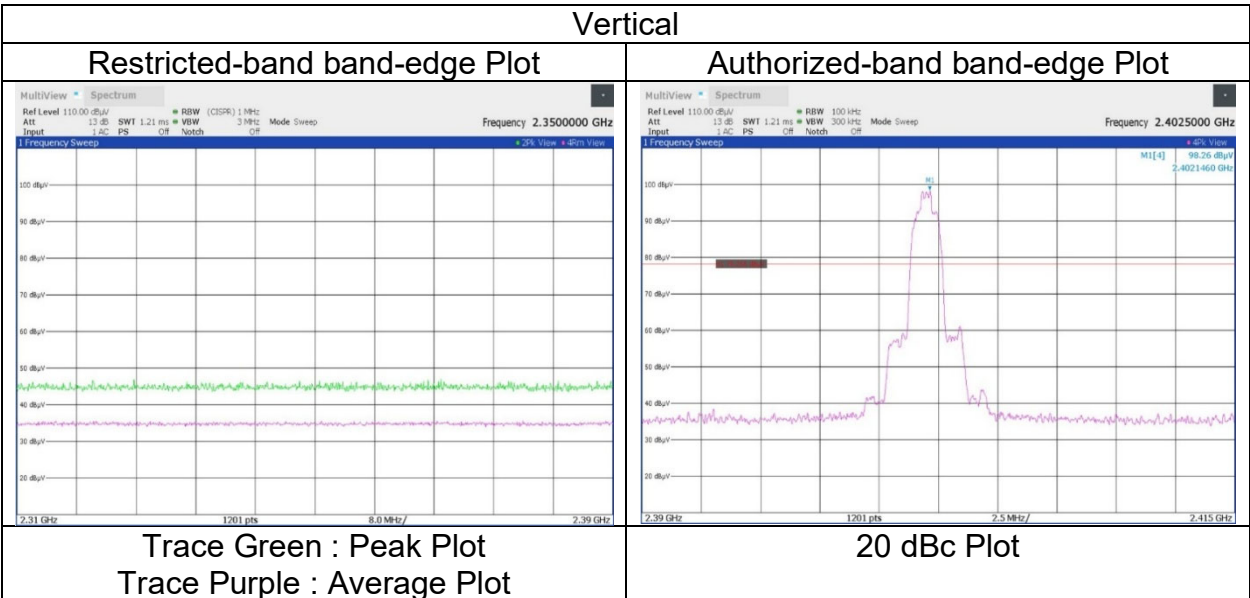
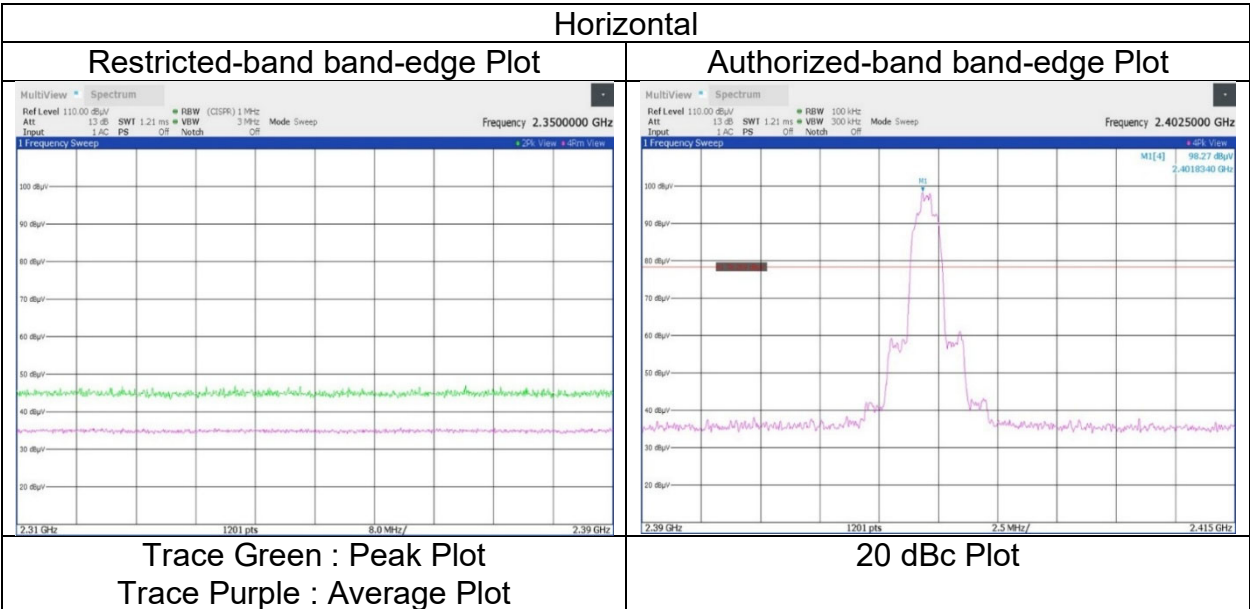
Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Radiated Spurious Emission
(Reference Plot for band-edge)

Mode	Tx, Hopping Off, 3DH5, 2402 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge and authorized band edge were shown in tabular data.

Radiated Spurious Emission

Mode	Tx, Hopping Off, 3DH5, 2441 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	4882.000	PK	47.39	32.28	-35.95	-	2.46	46.18	73.9	27.7	179	87	-
Hori.	7323.000	PK	46.47	36.66	-34.19	-	2.46	51.40	73.9	22.5	150	0	Floor Noise
Hori.	9764.000	PK	45.74	38.09	-31.12	-	2.46	55.17	73.9	18.7	150	0	Floor Noise
Hori.	7323.000	AV	35.73	36.66	-34.19	-	2.46	40.66	53.9	13.2	150	0	Floor Noise
Hori.	9764.000	AV	34.47	38.09	-31.12	-	2.46	43.90	53.9	10.0	150	0	Floor Noise
Vert.	4882.000	PK	47.16	32.28	-35.95	-	2.46	45.95	73.9	27.9	257	87	-
Vert.	7323.000	PK	47.02	36.66	-34.19	-	2.46	51.95	73.9	21.9	150	0	Floor Noise
Vert.	9764.000	PK	45.61	38.09	-31.12	-	2.46	55.04	73.9	18.8	150	0	Floor Noise
Vert.	7323.000	AV	35.56	36.66	-34.19	-	2.46	40.49	53.9	13.4	150	0	Floor Noise
Vert.	9764.000	AV	34.62	38.09	-31.12	-	2.46	44.05	53.9	9.8	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Fac. [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4882.000	AV	36.10	32.28	-35.95	-	1.15	2.46	36.04	53.9	17.8	-
Vert.	4882.000	AV	36.24	32.28	-35.95	-	1.15	2.46	36.18	53.9	17.7	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98 [m] / 3.0 [m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00 [m] / 3.0 [m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

Radiated Spurious Emission

Mode	Tx, Hopping Off, 3DH5, 2480 MHz
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Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	2483.500	PK	51.89	27.77	-28.21	-	2.46	53.91	73.9	19.9	191	151	-
Hori.	4960.000	PK	47.89	32.58	-35.92	-	2.46	47.01	73.9	26.8	384	59	-
Hori.	7440.000	PK	46.79	36.79	-33.97	-	2.46	52.07	73.9	21.8	150	0	Floor Noise
Hori.	9920.000	PK	45.80	38.15	-30.92	-	2.46	55.49	73.9	18.4	150	0	Floor Noise
Hori.	7440.000	AV	35.78	36.79	-33.97	-	2.46	41.06	53.9	12.8	150	0	Floor Noise
Hori.	9920.000	AV	34.73	38.15	-30.92	-	2.46	44.42	53.9	9.4	150	0	Floor Noise
Vert.	2483.500	PK	51.72	27.77	-28.21	-	2.46	53.74	73.9	20.1	224	266	-
Vert.	4960.000	PK	47.69	32.58	-35.92	-	2.46	46.81	73.9	27.0	202	111	-
Vert.	7440.000	PK	46.42	36.79	-33.97	-	2.46	51.70	73.9	22.2	150	0	Floor Noise
Vert.	9920.000	PK	45.80	38.15	-30.92	-	2.46	55.49	73.9	18.4	150	0	Floor Noise
Vert.	7440.000	AV	35.73	36.79	-33.97	-	2.46	41.01	53.9	12.8	150	0	Floor Noise
Vert.	9920.000	AV	34.90	38.15	-30.92	-	2.46	44.59	53.9	9.3	150	0	Floor Noise

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Distance Fac.

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

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m] / 3.0[m]) = 2.46 [dB]$

10 GHz to 40 GHz : $20\log(1.00[m] / 3.0[m]) = -9.54 [dB]$

Average measurement value with Duty Factor

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Fac. [dB]	Distance Fac. [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2483.500	AV	38.91	27.77	-28.21	-	1.15	2.46	42.08	53.9	11.8	*1)
Hori.	4960.000	AV	36.99	32.58	-35.92	-	1.15	2.46	37.26	53.9	16.6	-
Vert.	2483.500	AV	38.31	27.77	-28.21	-	1.15	2.46	41.48	53.9	12.4	*1)
Vert.	4960.000	AV	36.31	32.58	-35.92	-	1.15	2.46	36.58	53.9	17.3	-

Result = Reading + Ant.Fac. + Loss (Cable + (Atten or Filter)(below 18 GHz) - Gain(Amp) (1 GHz to 18 GHz)) - Gain(Amp) (only below 1 GHz & above 18 GHz) + Duty Fac. + Distance Fac.

Distance Fac. : 1 GHz to 10 GHz : $20\log(3.98[m] / 3.0[m]) = 2.46 [dB]$

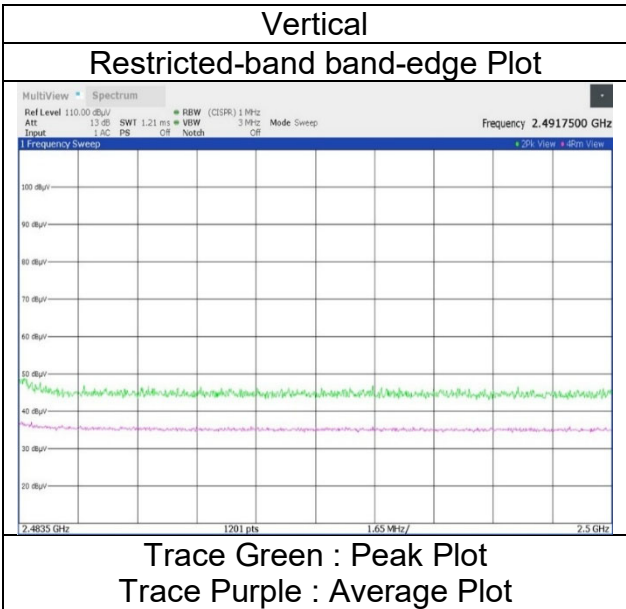
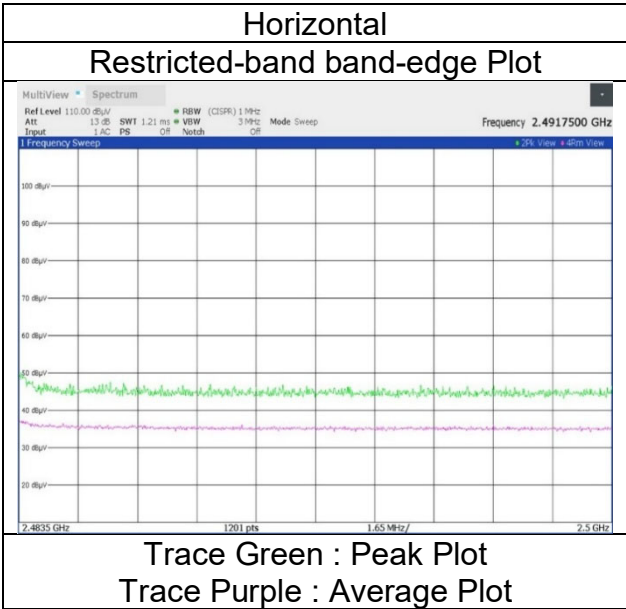
10 GHz to 40 GHz : $20\log(1.00[m] / 3.0[m]) = -9.54 [dB]$

Duty factor refer to "Burst rate confirmation" sheet.

*1) Not out of band emission (Leakage Power)

**Radiated Spurious Emission
(Reference Plot for band-edge)**

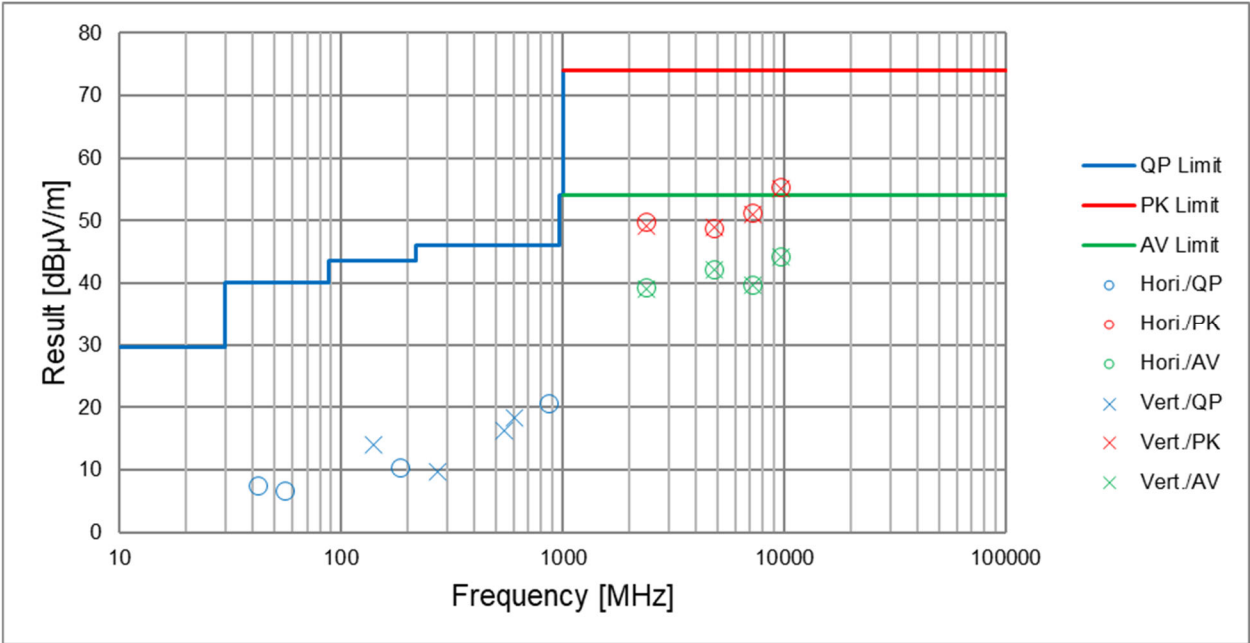
Mode	Tx, Hopping Off, 3DH5, 2480 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission
(Plot data, Worst case mode for Maximum Peak Output Power)

Mode	Tx, Hopping Off, DH5, 2402 MHz				
Date	Test site	Temperature	Humidity	Engineer	Measurement Range
October 22, 2025	WAC2	22 deg. C	48 % RH	Hiromasa Sato	Below 1 GHz
October 12, 2025	WAC2	22 deg. C	49 % RH	Makoto Hosaka	1 GHz to 10 GHz
October 20, 2025	WAC2	23 deg. C	51 % RH	Makoto Hosaka	10 GHz to 18 GHz
October 21, 2025	WAC2	20 deg. C	59 % RH	Masahide Ozaki	18 GHz to 26.5 GHz



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