

TEST REPORT

APPLICANT : Sharp Corporation.
Quality Promotion Office.

ADDRESS : 1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan.

PRODUCTS : Microwave Oven

MODEL No. : R-21LCFS

SERIAL No. : 200472

FCC ID : APYDMR0158

TEST STANDARD : CFR 47 FCC Rules and Regulations Part 18

TEST RESULTS : Passed

DATE OF TEST : September 22, 2022 – October 11, 2022



Kousei Shibata
Manager
Japan Quality Assurance Organization
Kitakansai Testing Center
Saito EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan



-
- The test results in this test report was made by using the measuring instruments which are traceable to national standards of measurement in accordance with ISO/IEC 17025.
 - The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
 - The test results presented in this report relate only to the offered test sample.
 - The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
 - This test report shall not be reproduced except in full without the written approval of JQA.
 - VLAC does not approve, certify or warrant the product by this test report.

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Definitions for Abbreviation and Symbols Used In This Test Report

“EUT” means Equipment Under the Test.

“AE” means Associated Equipment.

“N/A” means that Not Applicable.

“N/T” means that Not Tested.

- indicates that the listed condition, standard or equipment is applicable for this report.

- indicates that the listed condition, standard or equipment is not applicable for this report.

1 Description of the Equipment Under Test

- 1 Manufacturer : Sharp Appliances (Thailand) Limited
64 Moo 5, Tambol Bangsamak, Amphur Bangpakong,
Chachoengsao Province, Thailand
- 2 Products : Microwave Oven
- 3 Model No. : R-21LCFS
- 4 Serial No. : 200472
- 5 Product Type : Pre-production
- 6 Date of Manufacture : April, 2022
- 7 Power Rating : 120VAC 60Hz (1.55 kW)
- 8 Rated RF Power Output : 1000 W
- 9 EUT Grounding : Grounded at the plug end of the power line
- 10 Category : Consumer ISM equipment
- 11 EUT Authorization : Certification
- 12 EUT Highest Frequency : (Magnetron) 2450MHz
Used/Generated (Control unit LSI) 8MHz
- 13 Upper Frequency of : 25 GHz
Measurement
- 14 Received Date of EUT : September 15, 2022

2 Summary of Test Results

Applied Standard : CFR 47 FCC Rules and Regulations Part 18
Industrial, Scientific, and Medical Equipment

The EUT described in clause 1 was tested according to the applied standard shown above.
Details of the test configuration is shown in clause 6.

The conclusion for the test items of which are required by the applied standard is indicated under the test result.

- The test result was **passed** for the test requirements of the applied standard.
- The test result was **failed** for the test requirements of the applied standard.
- The test result was **not judged** the test requirements of the applied standard.

In the approval of test results,

- Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- No deviations were employed from the applied standard.
- No modifications were conducted by JQA to achieve compliance to the limitations.

Reviewed by
Hiroyuki Nakamura / Manager



Tested by
Yohei Kitayama / Deputy Manager



3 Test Procedure

FCC/OET MP-5 (1986)

FCC Methods of Measurements of Radio Noise Emissions from Industrial, Scientific, and Medical equipment

4 Test Location

Japan Quality Assurance Organization
 Kitakansai Testing Center
 7-7, Ishimaru, 1-chome, Minoh-shi, Osaka, 562-0027, Japan

Saito EMC Branch
 7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

5 Recognition of Test Laboratory

JQA Kitakansai Testing Center Saito EMC Branch is accredited under ISO/IEC 17025 by following accreditation bodies and the test facility of Testing Division is registered by the following bodies .

Test Facility	Accreditation or Registration		Expiry Date
	Body	Code/Number	
Saito EMC Branch	VLAC	VLAC-001-2	March 30, 2024
	A2LA	5498.01	November 30, 2023
	VCCI	A-0002	March 30, 2024
	FCC	JP5008	March 30, 2024
	ISED	JP0014	November 30, 2023
	Conformity assessment body for Japan electrical appliances and material by METI		February 22, 2025

6 Description of Test Setup

6.1 Test Configuration

The equipment under test consists of :

No.	Item	Manufacturer	Model No.	Serial No.
A	Microwave Oven	Sharp Appliances (Thailand) Limited	R-21LCFS	200472

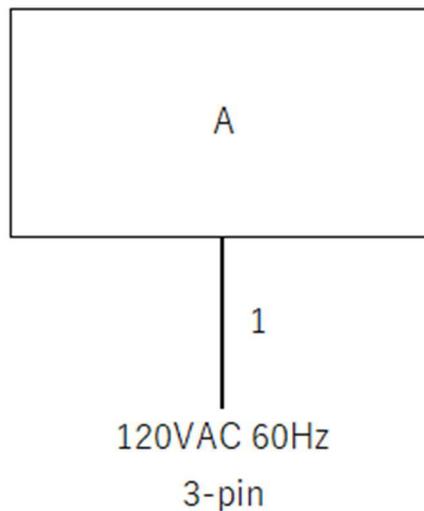
The auxiliary equipment used for testing :

None

Type of Cable:

No.	Description	Identification (Manu. Etc.)	Connector Shielded	Cable Shielded	Ferrite Core	Length (m)
1	AC Cable	--	--	No	No	1.0

6.2 Test Arrangement (Drawings)



6.3 Operating Condition

Power Supply Voltage : 120VAC 60Hz

Operation Mode :

The EUT is tested with the dummy load located in the center of the oven.

The load consists of a quantity of tap water in a beaker, which is as follows.

Power output measurement : 1000 ml

ISM frequency measurement : 1000 ml

Conducted powerline measurement : 700 ml

Radiated emission measurement : 700 ml

For measurement of radiation on 2nd and 3rd harmonic, two loads, one of 300 ml and the other of 700 ml, of water are used. Each load is tested both with the beaker located in the center of the oven and with it in the right front corner.

Type of Magnetron

Type No. 2M246, manufactured by LG Electronics

Clock Frequency

Magnetron : 2450 MHz

Control unit LSI : 8 MHz

7 Test Requirements

7.1 Power Output

For the requirements, - Applicable - Tested. - Not tested by applicant request.]
 - Not Applicable

7.1.1 Test Results

Power Output (calorimetric method) 880 watts

Field Strength Limit 33.2 $\mu\text{V/m}$ at 300 meters

AC Power Input 1576.8 watts

Remarks : _____

7.1.2 Test Instruments

Kitakansai Testing Center 3 rd Floor Testing Room				
Type	Model	Serial No. (ID)	Manufacturer	Cal. Due
Power HiTESTER	3331	060218709(G4700528)	HIOKI E.E. CORPORATION	2023/06/15
STOP WATCH	S321-4000	-- (Q47097356)	SEIKO	2023/05/08
DIGITAL THERMOMETER	245506	-- (Q47097361)	YOKOGAWA	2023/04/12

7.1.3 Test Procedure

The power output is measured by the calorimetric method, computing from the observed temperature rise of the load over a period of time. The measured value of power output is used to determine the allowable out-of-band field strength.

7.1.4 Test Data

RF Power Output Measurement

ISM Frequency Device

Test Date: October 6, 2022

Temp.: 24 °C, Humi: 64 %

The power output was measured by the calorimetric method, computing the power output from the observed temperature rise of the load over a period of time.

Rated RF Power: 1000W
 Load(water): 2000ml (750ml× 2)
 Time: 84sec $T = \frac{4.2 \times Load(ml) \times 10}{RFPower}$

	t_1 (before test)		t_2 (after test)	$t_2 - t_1$	RF Power**
1st	10.6°C	→	19.1°C	8.5°C	
	10.9°C	→	20.0°C	9.1°C	
Average				8.80°C	880.0W
2nd	10.6°C	→	19.9°C	9.3°C	
	10.2°C	→	18.3°C	8.1°C	
Average				8.70°C	870.0W
3rd	11.1°C	→	18.5°C	7.4°C	
	10.2°C	→	20.4°C	10.2°C	
Average				8.80°C	880.0W
4th	9.8°C	→	18.5°C	8.7°C	
	10.3°C	→	19.8°C	9.5°C	
Average				9.10°C	910.0W
5th	9.6°C	→	18.5°C	8.9°C	
	10.7°C	→	19.0°C	8.3°C	
Average				8.60°C	860.0W

$$**RFPower = \frac{4.2 \times Load(ml) \times (t_2 - t_1)}{T}$$

Results of Average RF Power: 880.0W

The limit of the radiated emission at 300m : $25\sqrt{880/500}[\mu V/m]=33.2[\mu V/m]$
 $25\sqrt{880/500}[\mu V/m]=30.4[dB(\mu V/m)]$

The AC power input to the oven is measured to determine if the oven is operating in accordance with the manufacturer's specifications.

Rated Power Supply:AC120V/60Hz, 1550W

Measured Input Power :AC120V 60Hz 13.692A, 1576.78W

7.2 ISM Frequency

For the requirements, - Applicable - Tested. - Not tested by applicant request.]
 - Not Applicable

7.2.1 Test Results

For the standard, - Passed - Failed - Not judged

7.2.2 Test Instruments

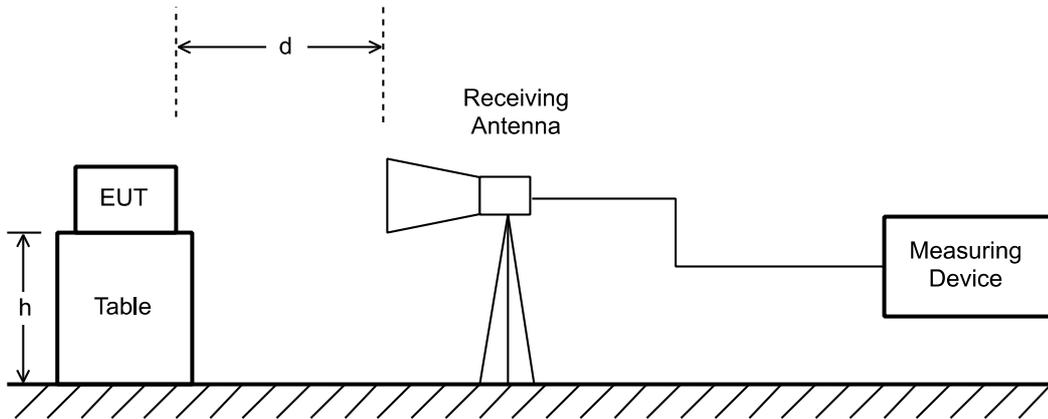
Anechoic Chamber A2				
Type	Model	Serial No. (ID)	Manufacturer	Cal. Due
Spectrum Analyzer	E4446A	US44300388 (A-39)	Agilent	2023/04/05
Horn Antenna	91889-2	568 (C-41-2)	EATON	2023/05/24
Attenuator	2-10	BA6214 (D-79)	Weinschel	2022/12/16
RF Cable	SF126	MY4596/26 (C-78)	HUBER+SUHNER	2023/01/25

7.2.3 Preliminary Test and Test Setup

For the EUT was operated with a fundamental frequency in one of the designated band listed in International Telecommunication Union for use as ISM frequencies, the frequency was checked with measuring equipment.

The variation of frequency with time, starting with the EUT and load at the room temperature and continuing until the load quantity has been reduced by evaporation to approximately 20 % of the original quantity. This test is made with nominal rated ac supply voltage.

The variation of frequency for line voltage variation from 80 % to 125 % of nominal rated voltage, starting from the EUT warm from at least 10 minutes use, with the load at room temperature at the beginning of the test.



NOTE

- d : Arbitrary distance
- h : Arbitrary height

7.2.4 Test Data

Test Date : October 11, 2022
 Temp. : 22°C Humi. : 51 % Atm.:1001hPa

1) Variation in Operating Frequency with Time

The maximum frequency deviation was measured at -20dB with respect to the maximum level.

Test Voltage	Frequency[MHz]		Remarks
	Lower	Upper	
120V(100%)	2407.2	2476.2	A

The results were within 2450MHz±50MHz.

2) Deviation in Operating Frequency with power supply volatage

The maximum frequency deviation was measured at -20dB with respect to the maximum level.

Test Voltage	Frequency[MHz]		Remarks
	Lower	Upper	
96V(80%)	2412.3	2469.2	A
150V(125%)	2415.9	2473.9	A

The results were within 2450MHz±50MHz.

Remarks					
	Detector Function	RES B.W.	V.B.W.	Sweep Time	Span
A	Peak	1 MHz	3 MHz	AUTO	200 MHz

7.3 Conducted Powerline

For the requirements, - Applicable - Tested. - Not tested by applicant request.]
 - Not Applicable

7.3.1 Test Results

For the standard, - Passed - Failed - Not judged

Min. Limit Margin (Quasi-Peak) 6.4 dB at 0.5232 MHz

Uncertainty of measurement results ± 2.6 dB(2σ)

Remarks : _____

7.3.2 Test Instruments

Measurement Room M2				
Type	Model	Serial No. (ID)	Manufacturer	Cal. Due
Test Receiver	ESR 26	101690 (A-7)	Rohde & Schwarz	2023/09/26
AMN (main)	KNW-242	8-431-14 (D-7)	Kyoritsu	2022/11/07
RF Cable	RG223/U	--- (H-35)	HUBER+SUHNER	2023/06/26

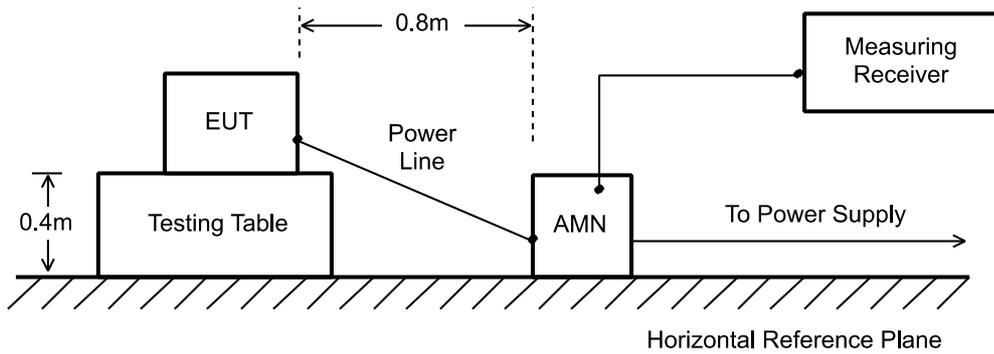
7.3.3 Preliminary Test and Test Setup

The preliminary tests were performed using the scan mode of test receiver or spectrum analyzer to observe the emissions characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configurations was used for final tests.

(Reference divisional instruction No. G703649)



NOTE

AMN : Artificial Mains Network

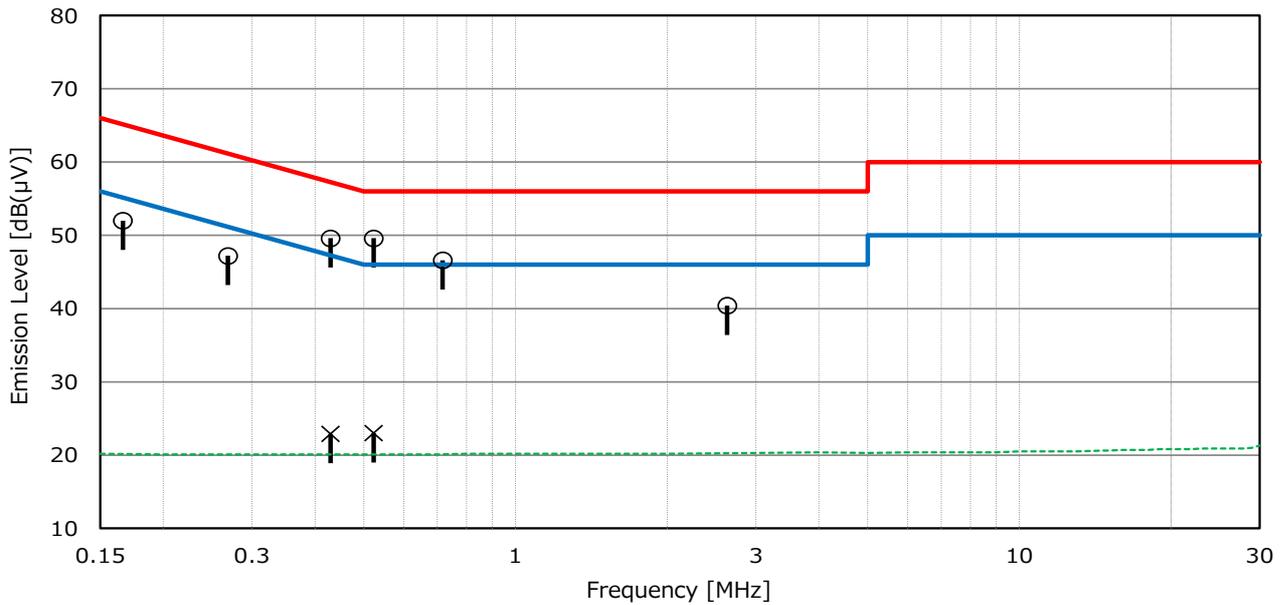
7.3.4 Test Data

Test voltage : 120VAC 60Hz

Test Date: October 11, 2022
 Temp.: 20 °C, RH: 51 %, Atm.: 1010 hPa

Measured phase : L1

Frequency [MHz]	Factor [dB]	Readings [dB(μV)]		Limits [dB(μV)]		Results [dB(μV)]		Margin [dB]		Remarks
		QP	AVE	QP	AVE	QP	AVE	QP	AVE	
0.1663	10.2	41.8	--	65.1	55.1	52.0	--	+ 13.1	--	-
0.2687	10.1	37.1	--	61.2	51.2	47.2	--	+ 14.0	--	-
0.4295	10.1	39.5	12.8	57.3	47.3	49.6	22.9	+ 7.7	+ 24.4	-
0.5232	10.1	39.5	12.9	56.0	46.0	49.6	23.0	+ 6.4	+ 23.0	-
0.7170	10.2	36.4	< 10.0	56.0	46.0	46.6	< 20.2	+ 9.4	> + 25.8	-
2.6313	10.2	30.2	--	56.0	46.0	40.4	--	+ 15.6	--	-



NOTES

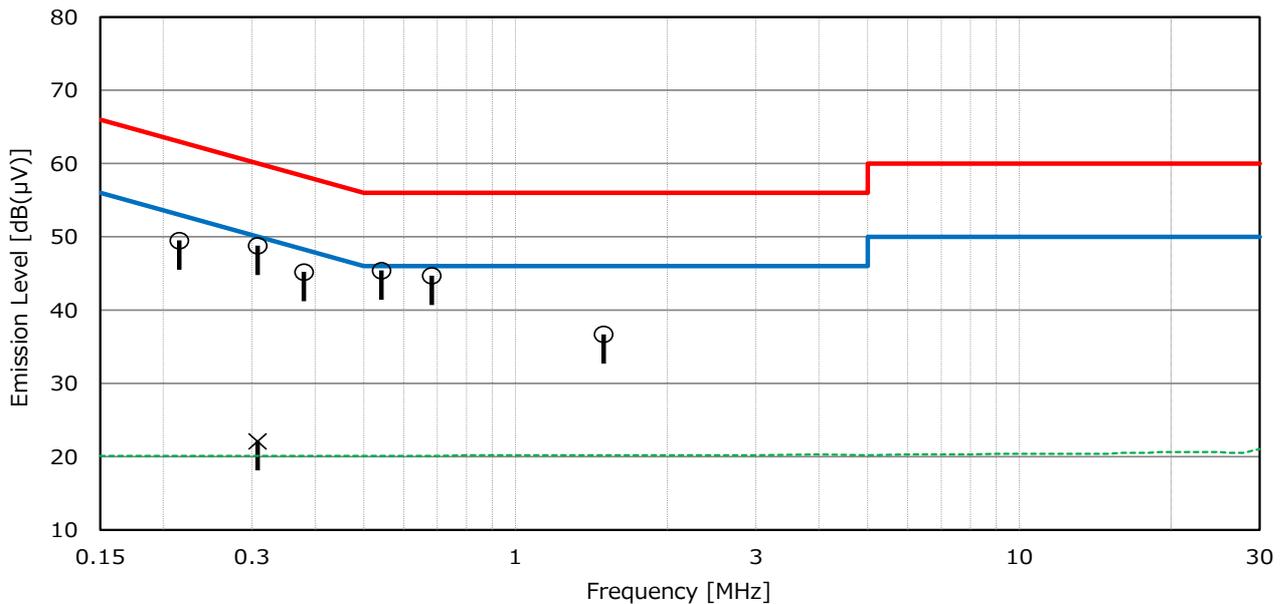
- 1) The spectrum was checked from 150 kHz to 30 MHz.
- 2) The factor includes the AMN voltage division factor and the cable loss.
- 3) The symbol of "<" means "or less".
- 4) The symbol of ">" means "more than".
- 5) The symbol of "--" means "not applicable".
- 6) Calculated result as the worst point shown on underline :
 Factor + Reading (QP) = 10.1 + 39.5 = 49.6 dB(μV) at 0.5232 MHz
- 7) QP : Quasi-Peak detector, AVE : Average detector
- 8) Bandwidth : 9 kHz (150 kHz - 30 MHz)

Test voltage : 120VAC 60Hz

Test Date: October 11, 2022
 Temp.: 20 °C, RH: 51 %, Atm.: 1010 hPa

Measured phase : L2

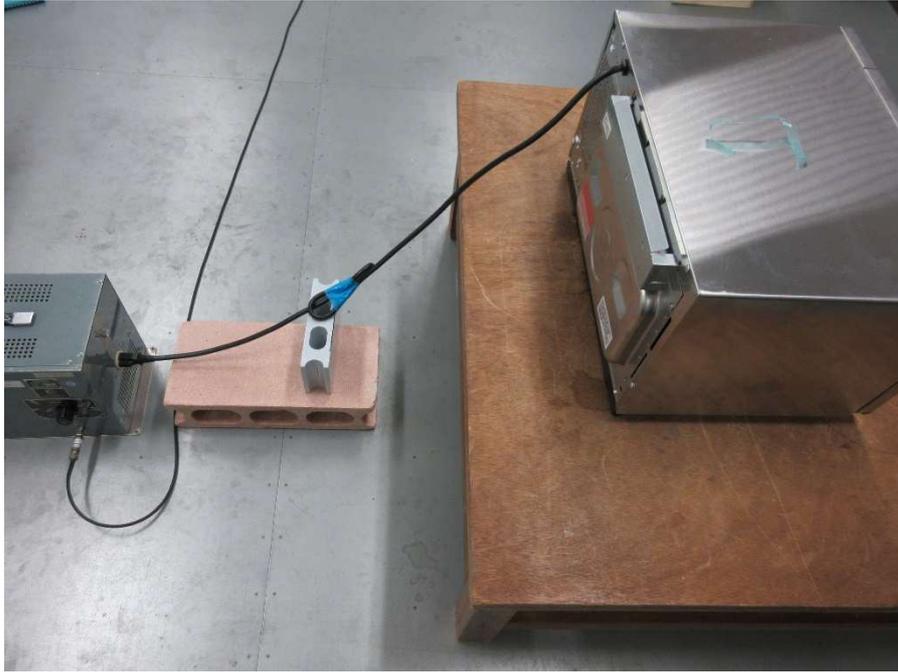
Frequency [MHz]	Factor [dB]	Readings [dB(μV)]		Limits [dB(μV)]		Results [dB(μV)]		Margin [dB]		Remarks
		QP	AVE	QP	AVE	QP	AVE	QP	AVE	
0.2152	10.1	39.4	--	63.0	53.0	49.5	--	+ 13.5	--	-
0.3078	10.1	38.7	12.0	60.0	50.0	48.8	22.1	+ 11.2	+ 27.9	-
0.3803	10.1	35.1	--	58.3	48.3	45.2	--	+ 13.1	--	-
0.5418	10.1	35.3	< 10.0	56.0	46.0	45.4	< 20.1	+ 10.6	> + 25.9	-
0.6819	10.1	34.6	< 10.0	56.0	46.0	44.7	< 20.1	+ 11.3	> + 25.9	-
1.4961	10.2	26.5	--	56.0	46.0	36.7	--	+ 19.3	--	-



NOTES

- 1) The spectrum was checked from 150 kHz to 30 MHz.
- 2) The factor includes the AMN voltage division factor and the cable loss.
- 3) The symbol of "<" means "or less".
- 4) The symbol of ">" means "more than".
- 5) The symbol of "--" means "not applicable".
- 6) Calculated result as the worst point shown on underline :
 Factor + Reading (QP) = 10.1 + 35.3 = 45.4 dB(μV) at 0.5418 MHz
- 7) QP : Quasi-Peak detector, AVE : Average detector
- 8) Bandwidth : 9 kHz (150 kHz - 30 MHz)

7.3.5 Setup Photographs



– Side View –



– Rear View –

Photograph present configuration with maximum emission

7.4 Radiated Emission 9 kHz – 30 MHz

For the requirements, - Applicable - Tested. - Not tested by applicant request.]
 - Not Applicable

7.4.1 Test Results

For the standard, - Passed - Failed - Not judged

Min. Limit Margin (Average) >15.0 dB at -- MHz

Uncertainty of measurement results 0.009 - 30 MHz ± 3.0 dB(2σ)

Test Distance 10 m

Remarks : All emission levels were below the noise floor, or more than 15 dB.

7.4.2 Test Instruments

Anechoic Chamber A1				
Type	Model	Serial No. (ID)	Manufacturer	Cal. Due
Test Receiver	ESCI	100453 (A-42)	Rohde & Schwarz	2022/11/29
Loop Antenna	HFH2-Z2	872096/25 (C-2)	Rohde & Schwarz	2023/05/25
RF Cable	RG213/U	--- (H-28)	HUBER+SUHNER	2023/05/25

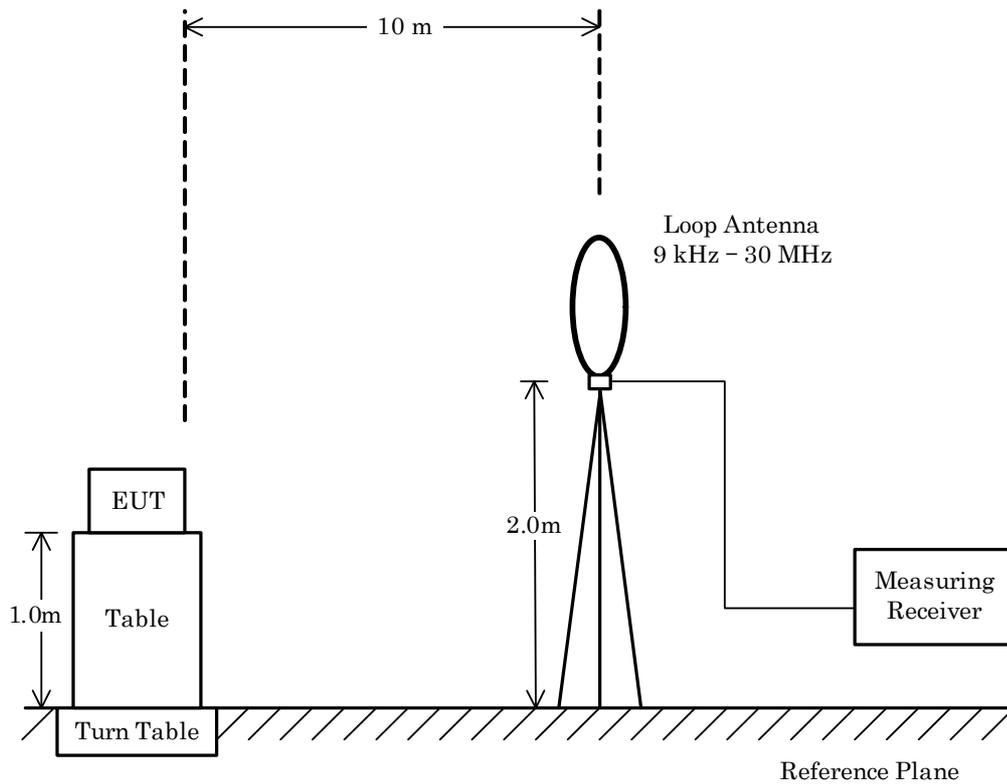
7.4.3 Preliminary Test and Test Setup

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configurations was used for the final tests.

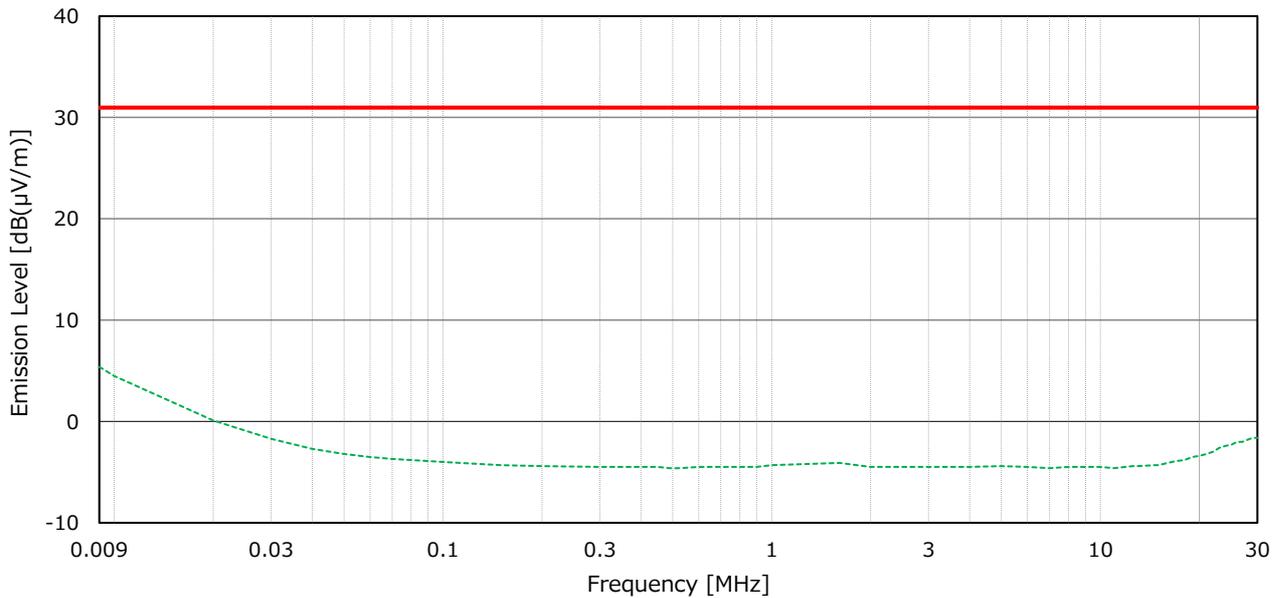
(Reference divisional instruction No. G703649)



7.4.4 Test Data

Test voltage : 120VAC 60Hz

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa



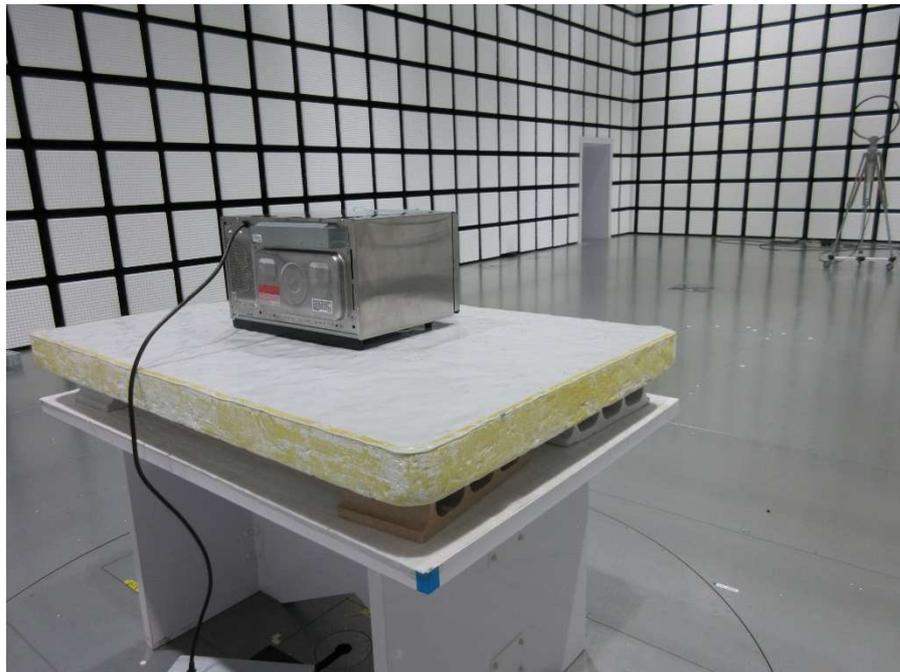
NOTES

- 1) Measurement Distance : 10 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log} (10\text{m} / 300\text{m}) = -29.5 \text{ dB}$)
- 2) The spectrum was checked from 9 kHz to 30 MHz.
- 3) The factor includes the antenna factor, the cable loss and the distance correction.
 Factor = Antenna factor (includes the value of the pre-amplifier's gain) + Cable loss + Distance correction
- 4) AVE : Average detector
- 5) Bandwidth : 200 Hz (9 kHz - 150 kHz), 9 kHz (150 kHz - 30 MHz)
- 6) All emission levels were below the noise floor, or more than 15dB below the applied limits.

7.4.5 Setup Photographs



– Front View –



– Side View –

Photograph present configuration with maximum emission

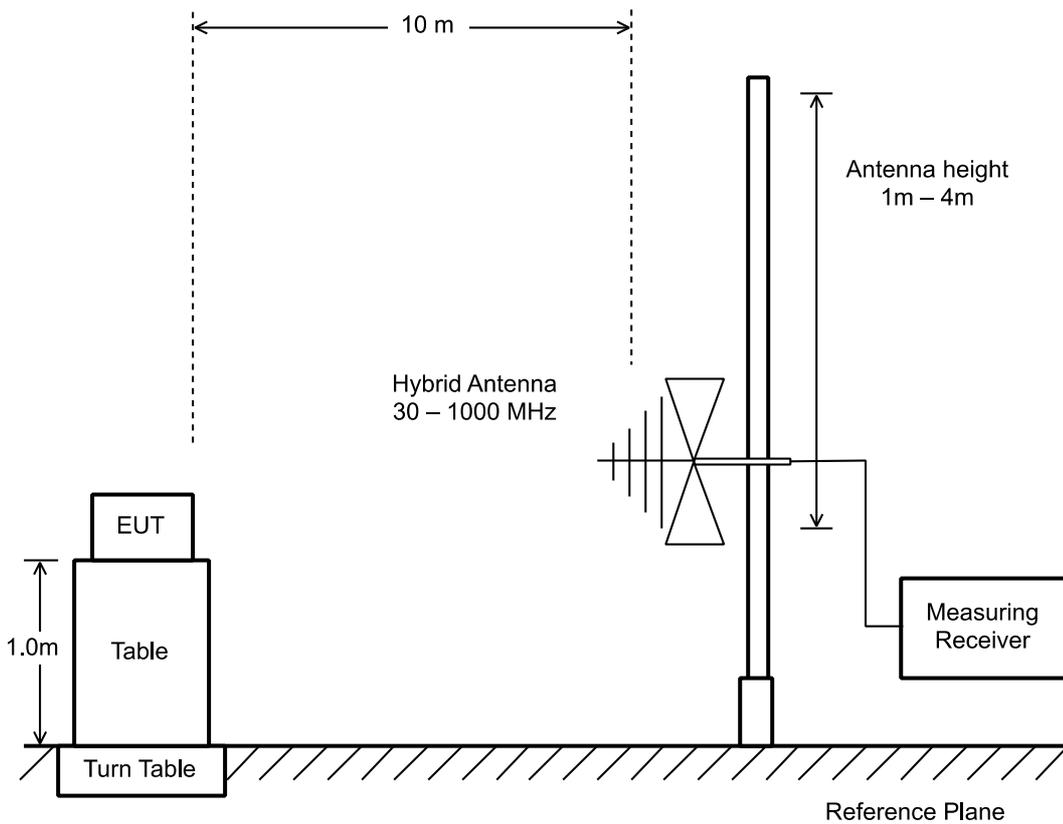
7.5.3 Preliminary Test and Test Setup

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configurations was used for the final tests.

(Reference divisional instruction No. G703649)



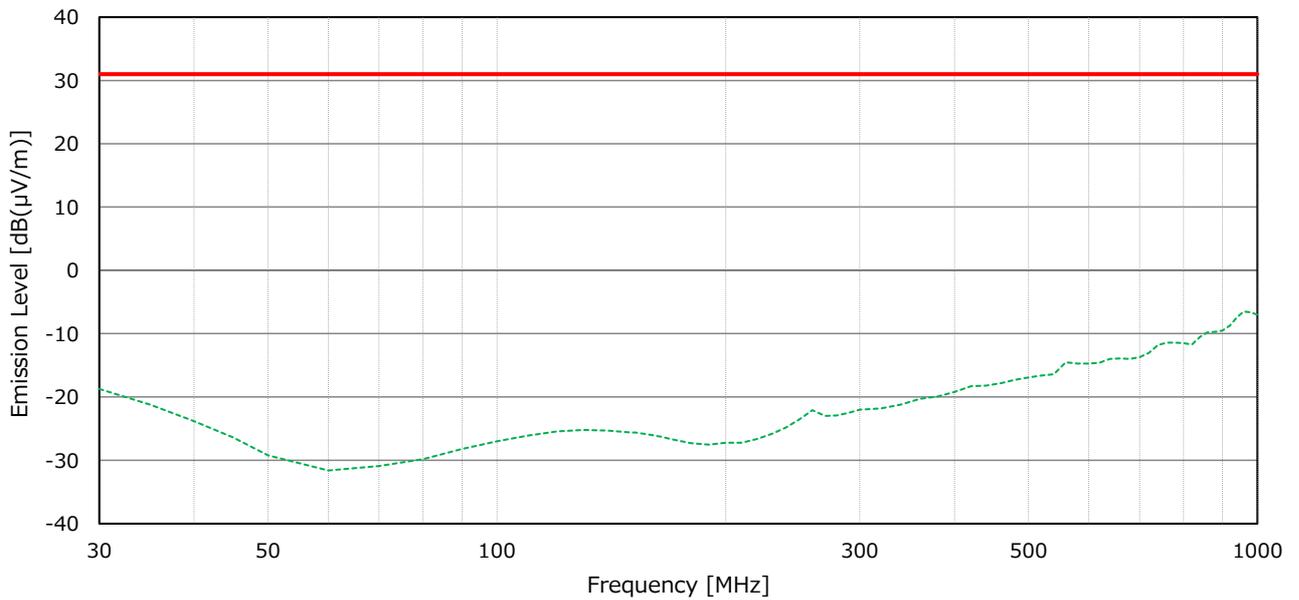
7.5.4 Test Data

Test voltage : 120VAC 60Hz

Test Date: September 23, 2022

Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Antenna polarization : Horizontal



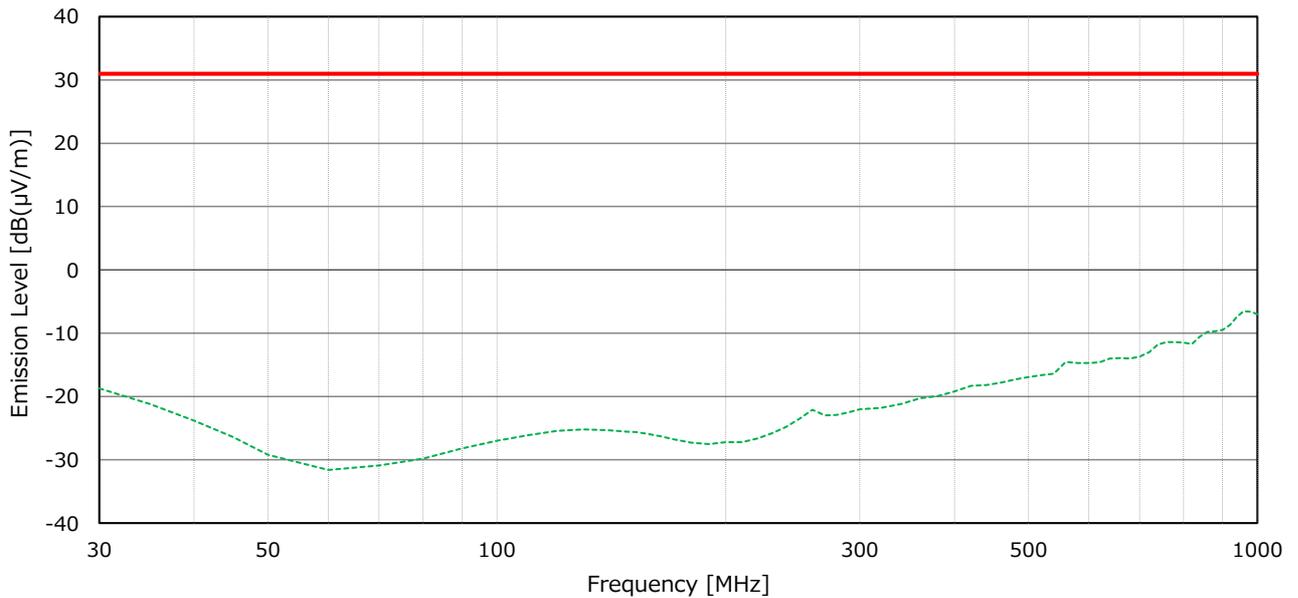
NOTES

- 1) Measurement Distance : 10 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log} (10\text{m} / 300\text{m}) = -29.5 \text{ dB}$)
- 2) The spectrum was checked from 30 MHz to 1000 MHz.
- 3) The factor includes the antenna factor, the cable loss and the distance correction.
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
- 4) AVE : Average detector
- 5) Bandwidth : 120 kHz (30 MHz - 1000 MHz)
- 6) All emission levels were below the noise floor, or more than 15 dB below the applied limits.

Test voltage : 120VAC 60Hz

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Antenna polarization : Vertical



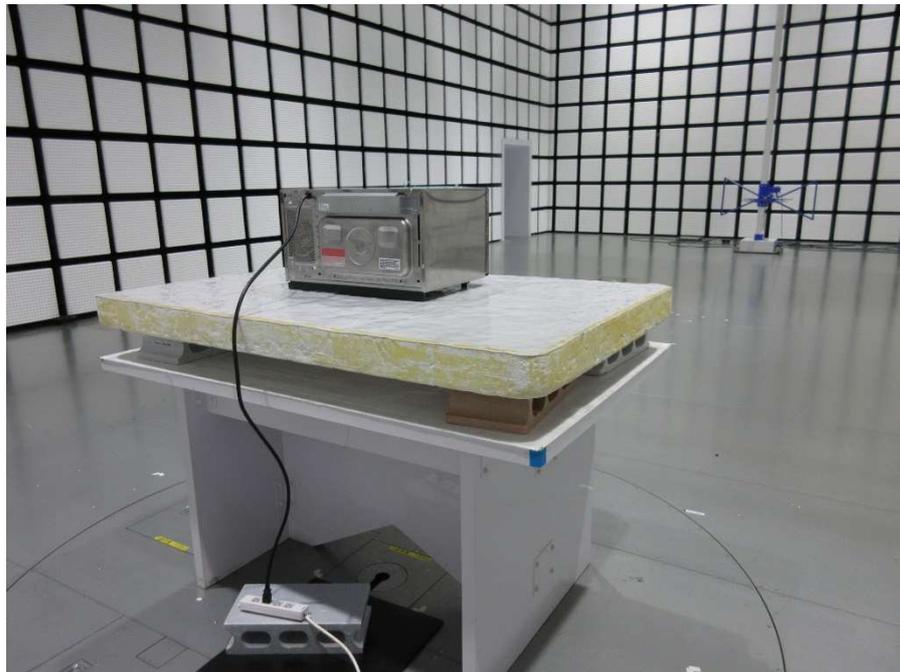
NOTES

- 1) Measurement Distance : 10 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log} (10\text{m} / 300\text{m}) = -29.5 \text{ dB}$)
- 2) The spectrum was checked from 30 MHz to 1000 MHz.
- 3) The factor includes the antenna factor, the cable loss and the distance correction.
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
- 4) AVE : Average detector
- 5) Bandwidth : 120 kHz (30 MHz - 1000 MHz)
- 6) All emission levels were below the noise floor, or more than 15 dB below the applied limits.

7.5.5 Setup Photographs



– Front View –



– Rear View –

Photograph present configuration with maximum emission

7.6 Radiated Emission above 1 GHz

For the requirements, - Applicable - Tested. - Not tested by applicant request.]
 - Not Applicable

7.6.1 Test Results

For the standard, - Passed - Failed - Not judged

Min. Limit Margin (Average) 3.4 dB at 4910.02 MHz

Uncertainty of measurement results

1 - 6	GHz	<u>± 4.7</u>	dB(2 σ)
6 - 18	GHz	<u>± 4.6</u>	dB(2 σ)
18 - 40	GHz	<u>± 5.5</u>	dB(2 σ)

Test Distance 3 m

Antenna Height at the worst point 1.2 m

Degree of the turntable at the worst point 30 degree

Remarks : The measurement results is within the range of measurement uncertainty.

7.6.2 Test Instruments

Anechoic Chamber A2				
Type	Model	Serial No. (ID)	Manufacturer	Cal. Due
Spectrum Analyzer	E4446A	US44300388 (A-39)	Agilent	2023/04/05
Horn Antenna	91888-2	560 (C-40-1)	EATON	2023/05/24
Horn Antenna	91889-2	560 (C-40-2)	EATON	2023/05/24
Horn Antenna	3160-04	9903-1053 (C-55)	EMCO	2023/06/07
Horn Antenna	3160-05	9902-1061 (C-56)	EMCO	2023/05/24
Horn Antenna	3160-06	9712-1045 (C-57)	EMCO	2023/05/24
Horn Antenna	3160-07	9902-1113 (C-58)	EMCO	2023/05/24
Horn Antenna	3160-08	9904-1099 (C-59)	EMCO	2023/05/24
Horn Antenna	3160-09	9808-1117 (C-48)	EMCO	2023/07/19
Pre-Amplifier	RP1826G-45H	RP140121-11 (A-53)	EMCS	2023/07/19
Pre-Amplifier	BZR-01001800-201040-182323-HS	23804 (A-65)	B&Z	2022/12/15
Attenuator	2-10	BA6214 (D-79)	Weinschel	2022/12/16
Band Rejection Filter	BRM50702	371 (D-121)	MICRO-TRONICS	2023/10/04
RF Cable	SF104	267415/4 (C-68)	HUBER+SUHNER	2023/01/25
RF Cable	SF126	MY4596/26 (C-78)	HUBER+SUHNER	2023/01/25

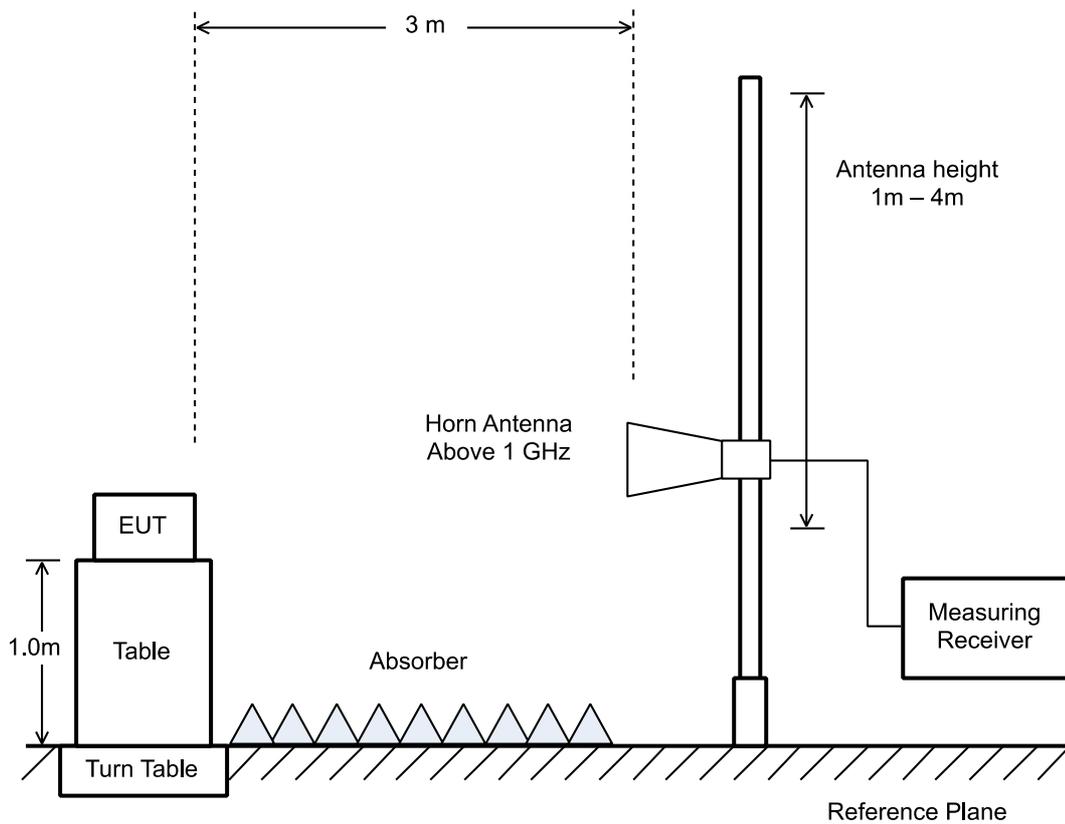
7.6.3 Preliminary Test and Test Setup

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.

This configurations was used for the final tests.

(Reference divisional instruction No. G703649)



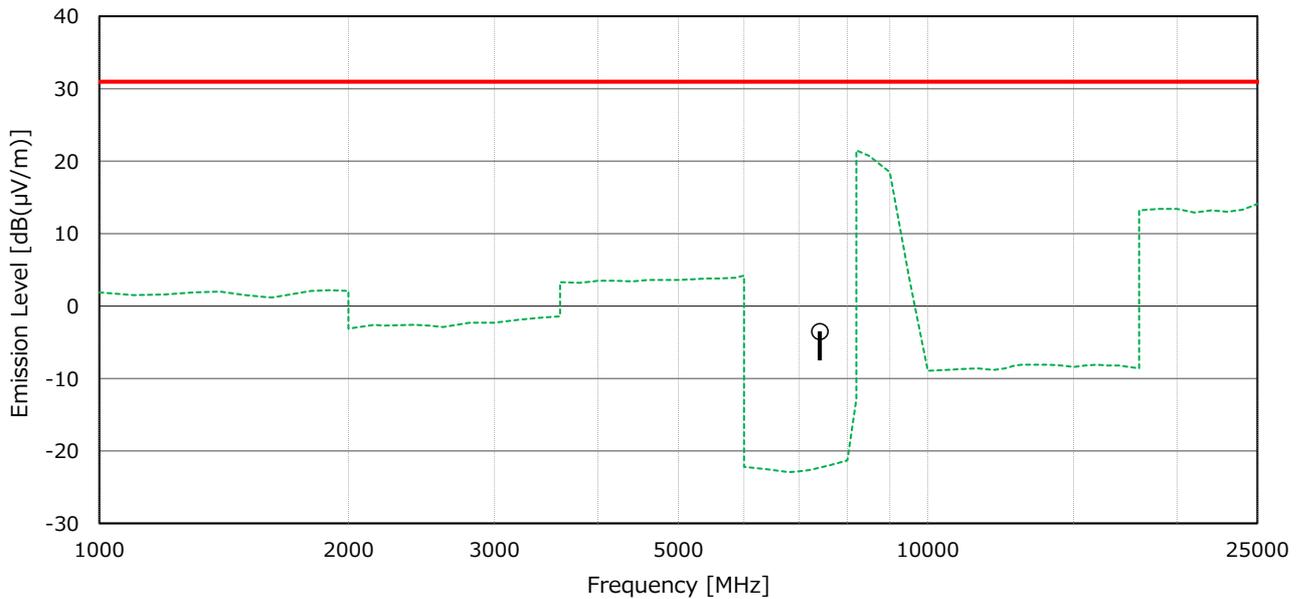
7.6.4 Test Data

Radiation on second and third harmonic

Test voltage : 120VAC 60Hz
Test condition : Center 300mL
Antenna polarization : Horizontal

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency [MHz]	Factor [dB]	Readings [dB(μV)]	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks
7410.13	-37.3	33.8	31.0	- 3.5	+ 34.5	-



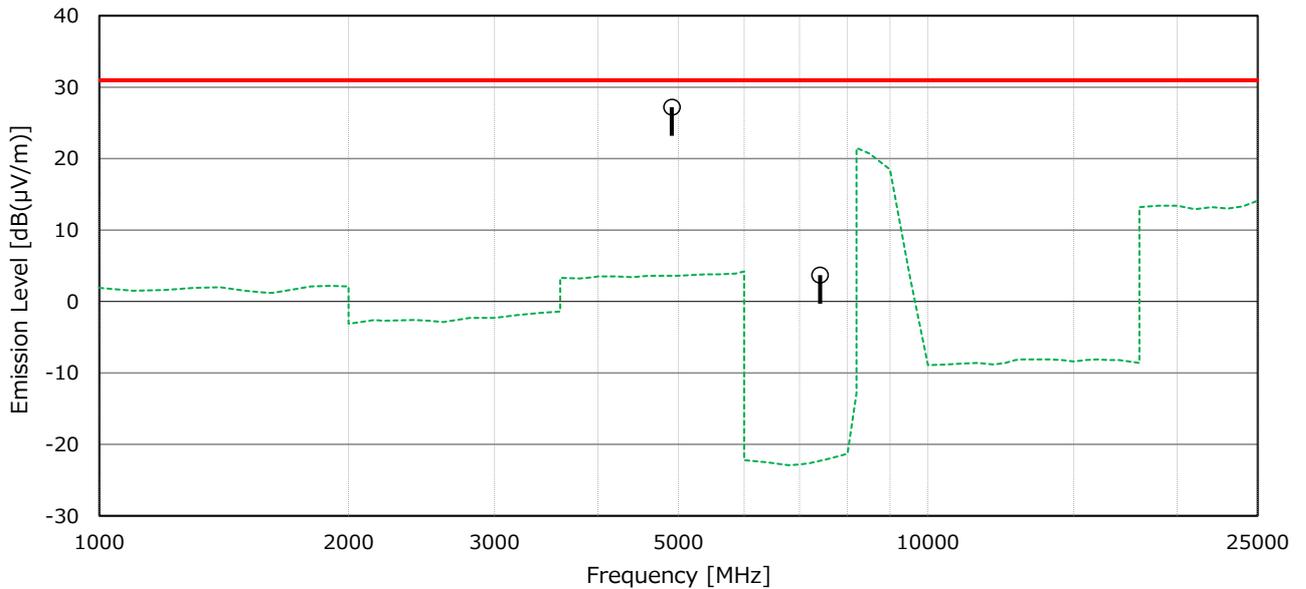
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log } (3\text{m} / 300\text{m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-37.3 + 33.8 = -3.5 \text{ dB}(\mu\text{V})$ at 7410.13 MHz
 Factor = Antenna factor - Pre-Amplifier + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 0°
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Center 300mL
Antenna polarization : Vertical

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency	Factor	Readings	Limits	Results	Margin	Remarks
[MHz]	[dB]	[dB(μV)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	
4909.12	- 1.4	28.6	31.0	27.2	+ 3.8	-
7410.13	-37.3	41.0	31.0	3.7	+ 27.3	-



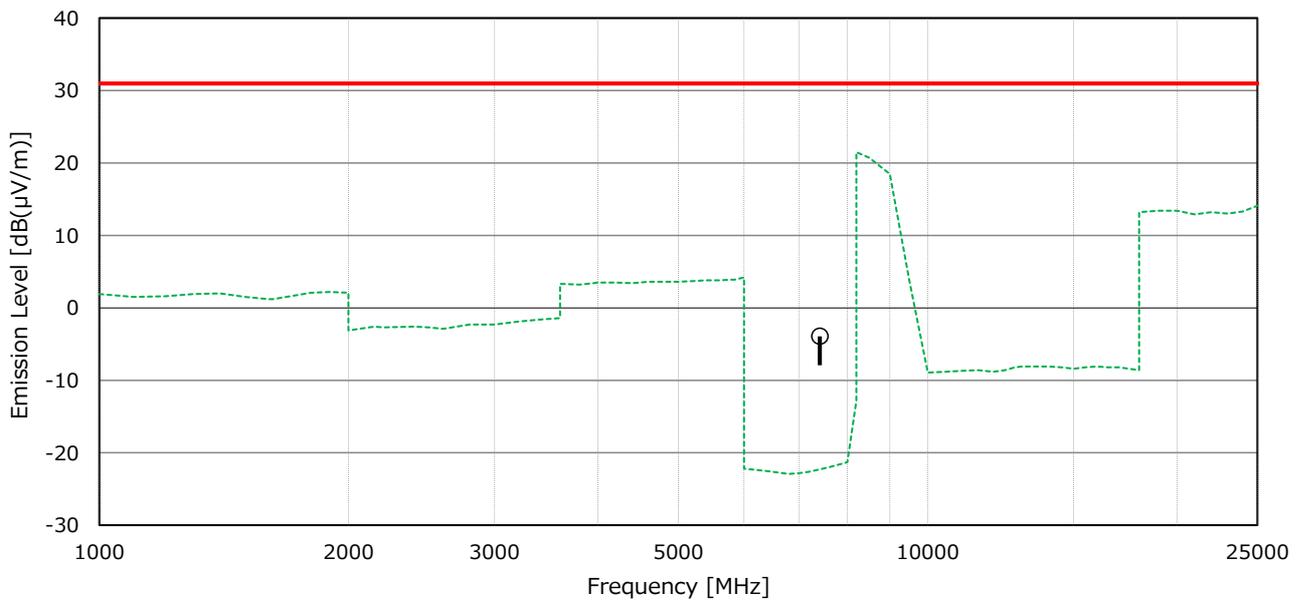
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log} (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-1.4 + 28.6 = 27.2 \text{ dB}(\mu\text{V})$ at 4909.12 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 30 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)
- 7) The measurement result (worst point) is within the range of measurement uncertainty.

Test voltage : 120VAC 60Hz
Test condition : Right front corner 300mL
Antenna polarization : Horizontal

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency	Factor	Readings	Limits	Results	Margin	Remarks
[MHz]	[dB]	[dB(μV)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	
7410.10	-37.3	33.4	31.0	- 3.9	+ 34.9	-



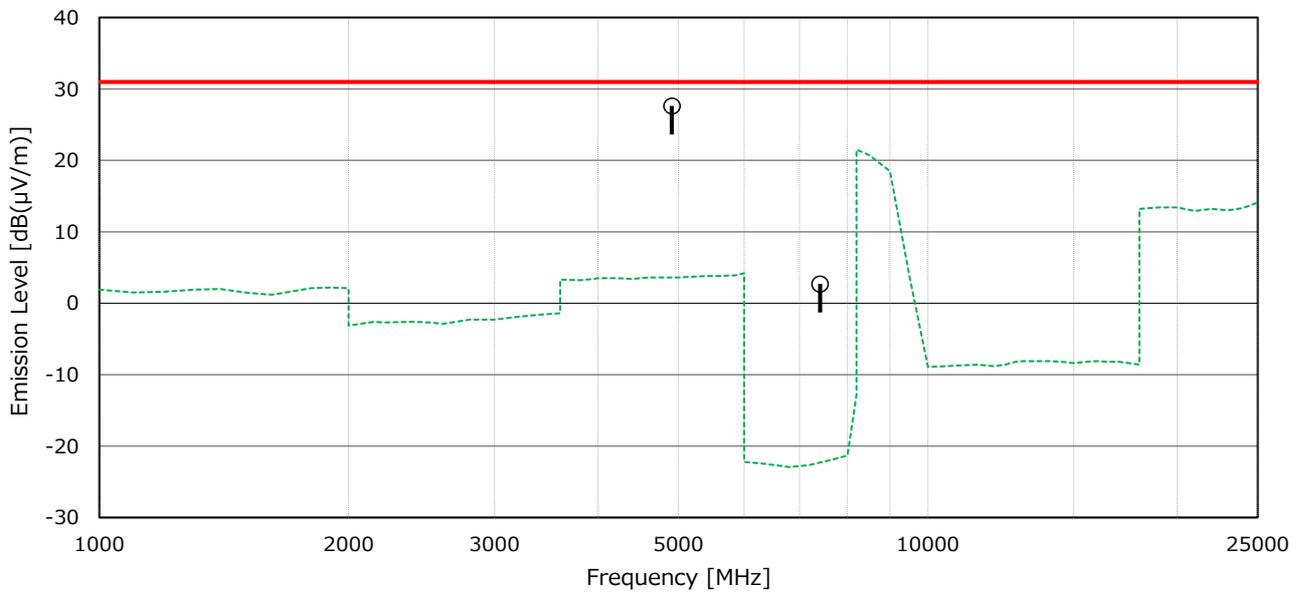
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log } (3\text{m} / 300\text{m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-37.3 + 33.4 = -3.9 \text{ dB}(\mu\text{V})$ at 7410.10 MHz
 Factor = Antenna factor - Pre-Amplifier + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 0 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Right front corner 300mL
Antenna polarization : Vertical

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency [MHz]	Factor [dB]	Readings [dB(μV)]	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks
4910.02	- 1.4	29.0	31.0	27.6	+ 3.4	-
7409.11	-37.3	40.0	31.0	2.7	+ 28.3	-



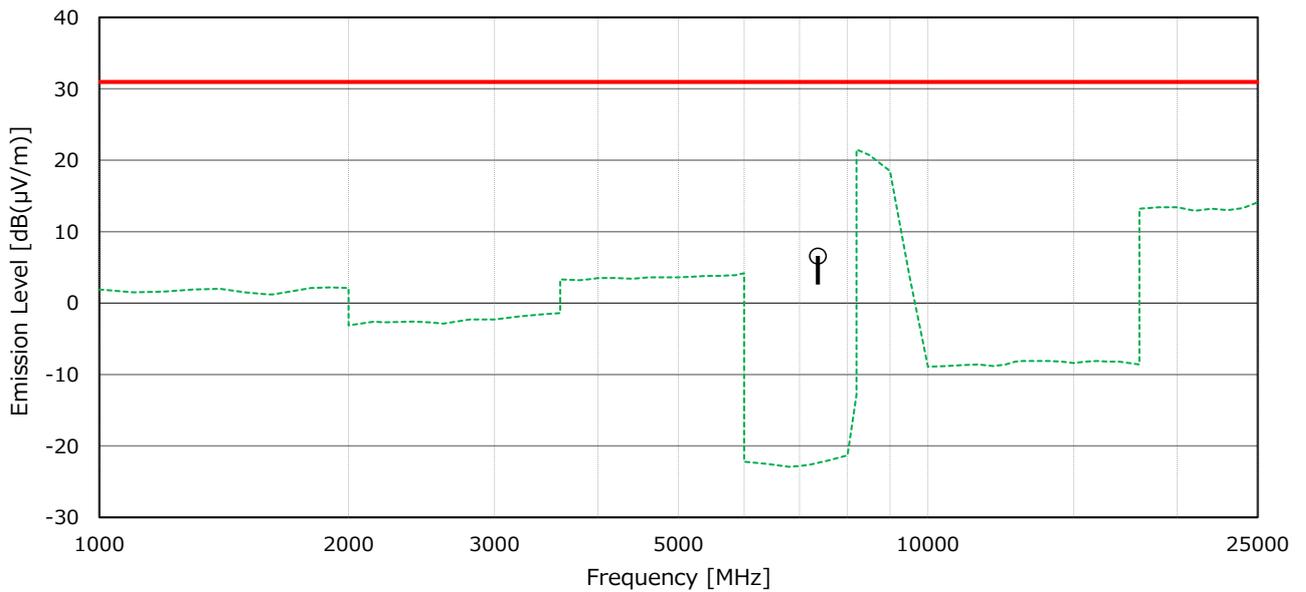
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = $20 \text{ Log } (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-1.4 + 29.0 = 27.6 \text{ dB}(\mu\text{V})$ at 4910.02 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 30 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)
- 7) The measurement result (worst point) is within the range of measurement uncertainty.

Test voltage : 120VAC 60Hz
Test condition : Center 700mL
Antenna polarization : Horizontal

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency	Factor	Readings	Limits	Results	Margin	Remarks
[MHz]	[dB]	[dB(μV)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	
7364.80	-37.4	44.0	31.0	6.6	+ 24.4	-



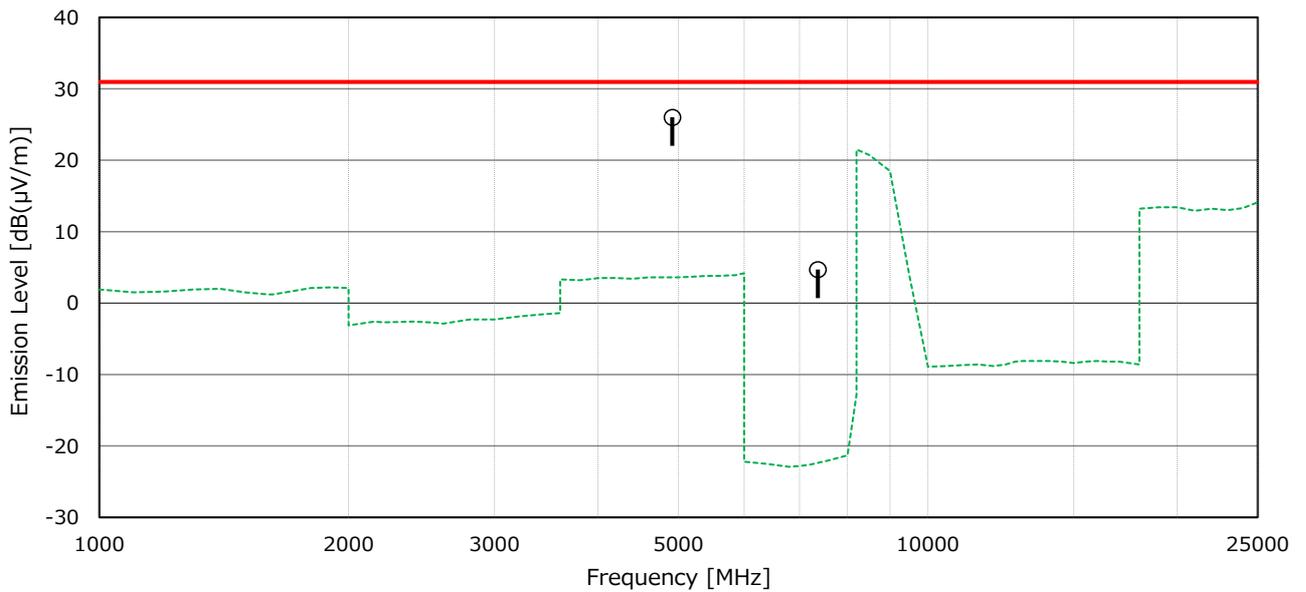
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = 20 Log (3 m / 300 m) = -40 dB)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = -37.4 + 44.0 = 6.6 dB(μV) at 7364.80 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 30 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Center 700mL
Antenna polarization : Vertical

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency [MHz]	Factor [dB]	Readings [dB(μV)]	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks
4915.55	- 1.4	27.4	31.0	26.0	+ 5.0	-
7364.80	-37.4	42.1	31.0	4.7	+ 26.3	-



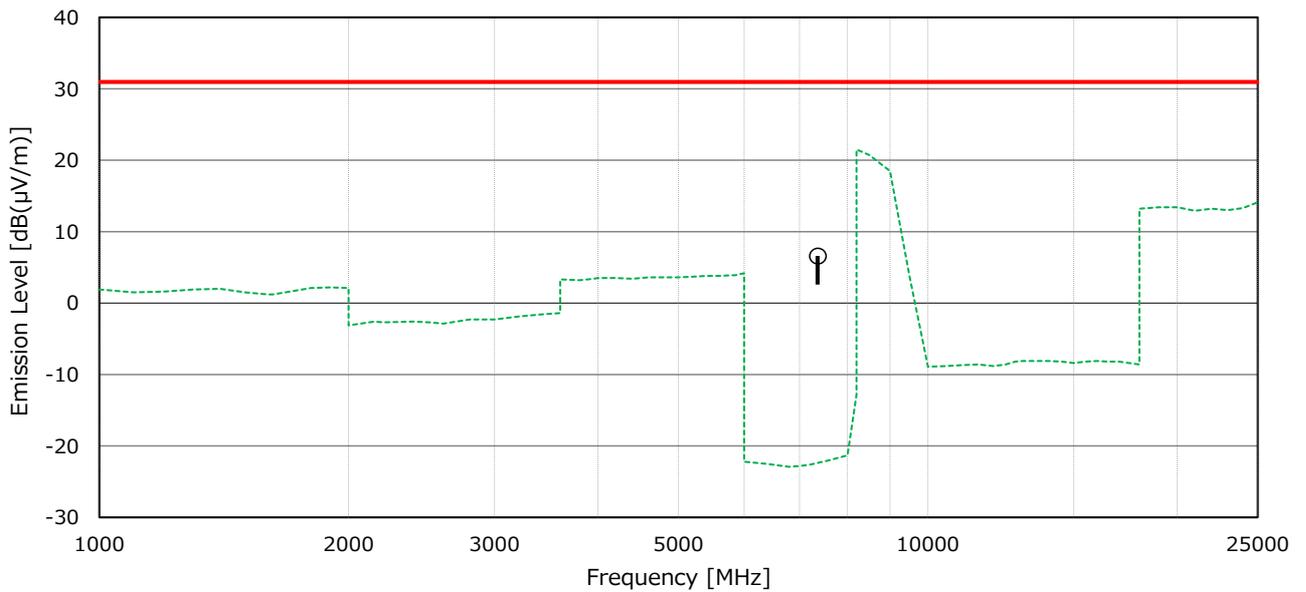
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = $20 \text{ Log } (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-1.4 + 27.4 = 26.0 \text{ dB}(\mu\text{V})$ at 4915.55 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 0 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Right front corner 700mL
Antenna polarization : Horizontal

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency	Factor	Readings	Limits	Results	Margin	Remarks
[MHz]	[dB]	[dB(μV)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	
7363.90	-37.4	44.0	31.0	6.6	+ 24.4	-



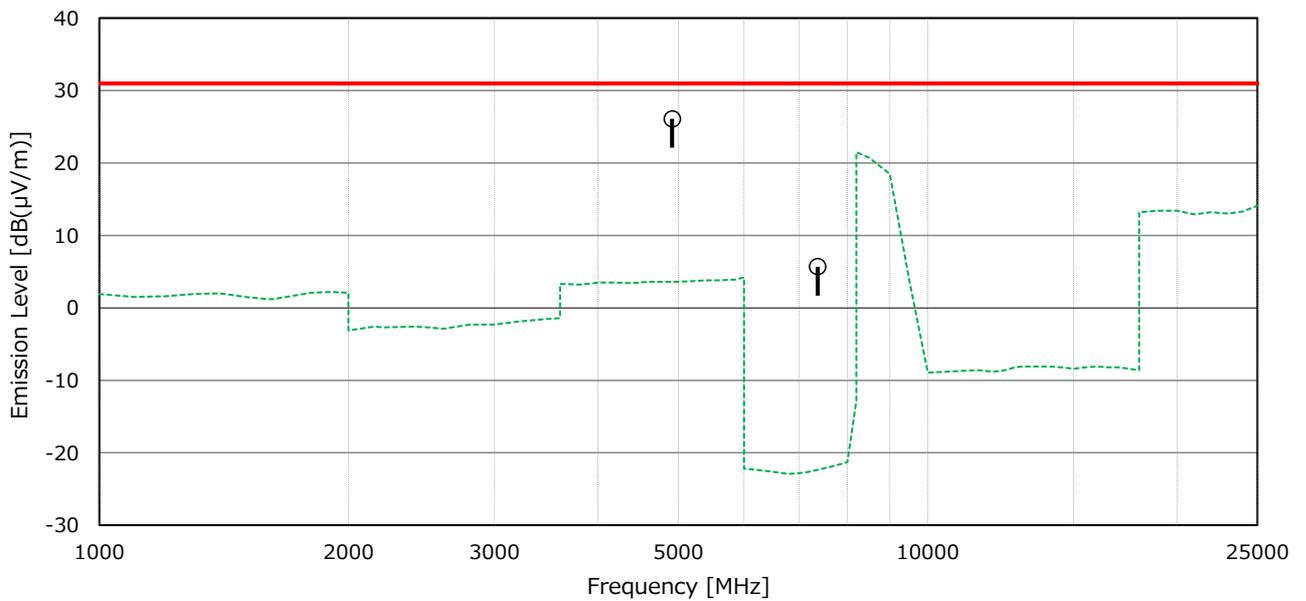
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = $20 \text{ Log } (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-37.4 + 44.0 = 6.6 \text{ dB}(\mu\text{V})$ at 7363.90 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 0 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Right front corner 700mL
Antenna polarization : Vertical

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency	Factor	Readings	Limits	Results	Margin	Remarks
[MHz]	[dB]	[dB(μV)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	
4915.57	- 1.4	27.5	31.0	26.1	+ 4.9	-
7364.90	-37.4	43.1	31.0	5.7	+ 25.3	-



NOTES

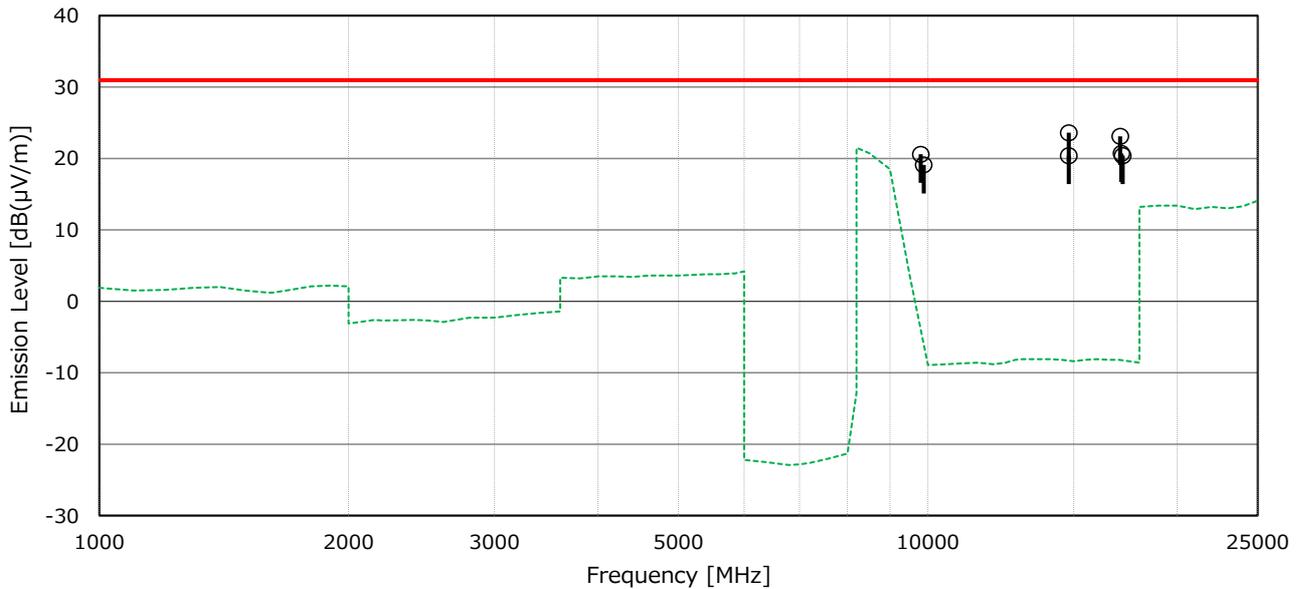
- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correction = $20 \text{ Log } (3\text{m} / 300\text{m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-1.4 + 27.5 = 26.1 \text{ dB}(\mu\text{V})$ at 4915.57 MHz
 Factor = Antenna factor - Pre-Amplifier + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 0°
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

For all other frequency

Test voltage : 120VAC 60Hz
Test condition : Center 700mL
Antenna polarization : Horizontal

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

Frequency [MHz]	Factor [dB]	Readings [dB(μV)]	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks
9804.20	-26.2	46.8	31.0	20.6	+ 10.4	-
9883.40	-27.9	47.0	31.0	19.1	+ 11.9	-
14793.70	-28.1	48.5	31.0	20.4	+ 10.6	-
14793.80	-28.1	51.7	31.0	23.6	+ 7.4	-
17058.30	-28.5	51.6	31.0	23.1	+ 7.9	-
17118.60	-28.5	49.2	31.0	20.7	+ 10.3	-
17179.90	-28.5	48.9	31.0	20.4	+ 10.6	-



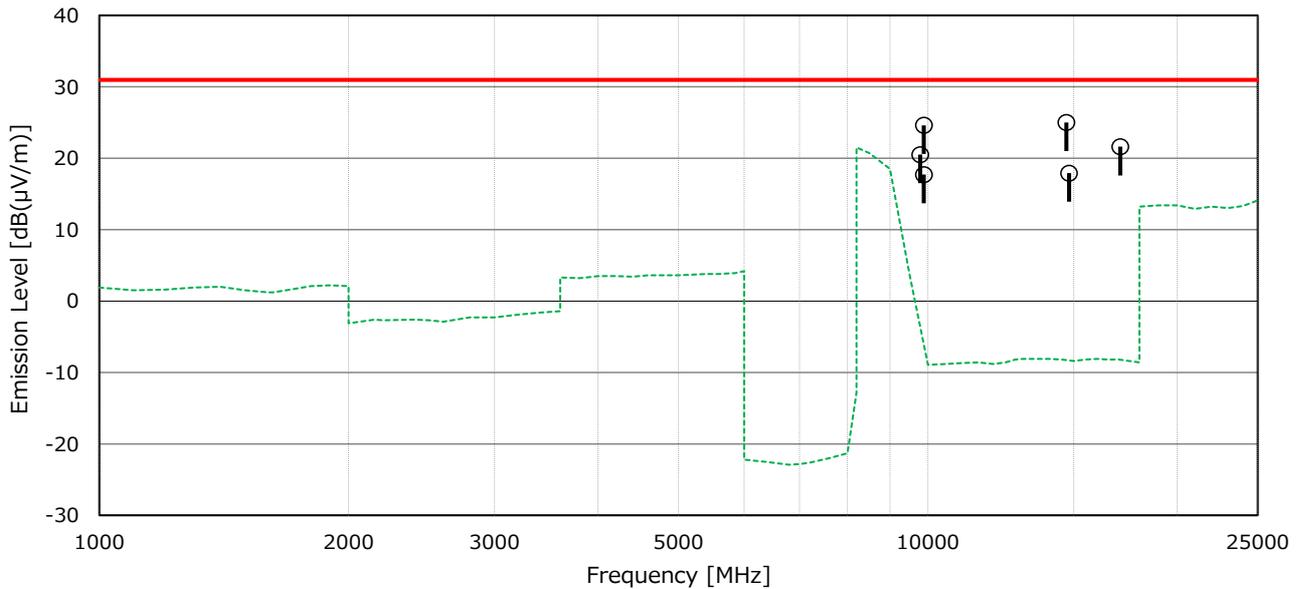
NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = $20 \text{ Log} (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance correction.
- 4) Calculated result as the worst point shown on underline :
 Factor + Reading (AVE) = $-28.1 + 51.7 = 23.6 \text{ dB}(\mu\text{V})$ at 14793.80 MHz
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Antenna Height : 120 cm, Turntable Rotation Position : 30 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

Test voltage : 120VAC 60Hz
Test condition : Center 700mL
Antenna polarization : Vertical

Test Date: September 23, 2022
 Temp.: 23 °C, RH: 77 %, Atm.: 1005 hPa

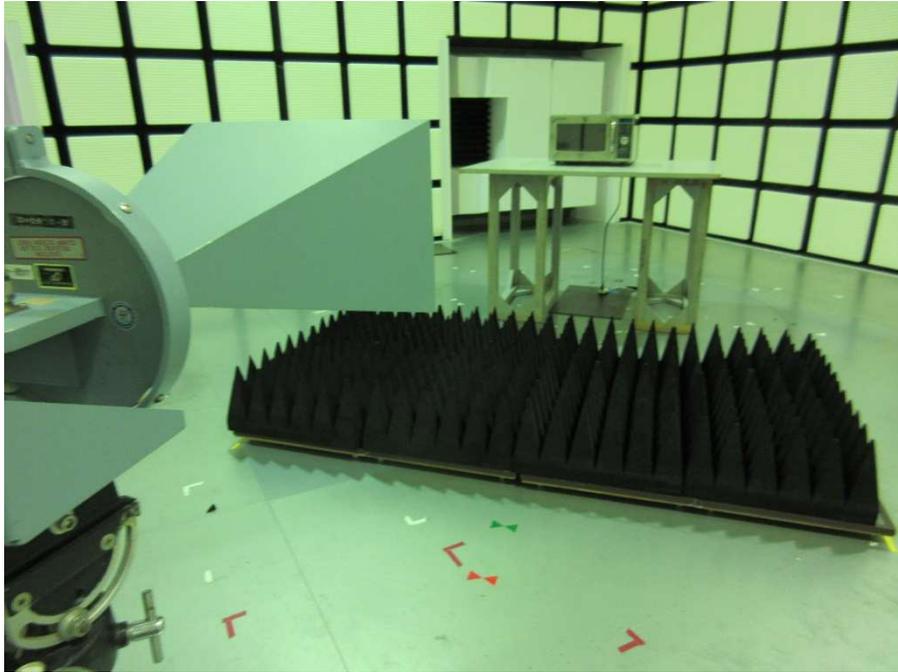
Frequency [MHz]	Factor [dB]	Readings [dB(μV)]	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks
9789.90	-25.9	46.4	31.0	20.5	+ 10.5	-
9886.40	-27.8	52.4	31.0	24.6	+ 6.4	-
9887.50	-27.8	45.5	31.0	17.7	+ 13.3	-
14689.80	-28.1	53.1	31.0	25.0	+ 6.0	-
14800.90	-28.1	46.0	31.0	17.9	+ 13.1	-
17066.60	-28.5	50.1	31.0	21.6	+ 9.4	-



NOTES

- 1) Measurement Distance : 3 m (Specified Distance : 300 m ; Distance correctin = $20 \text{ Log } (3 \text{ m} / 300 \text{ m}) = -40 \text{ dB}$)
- 2) The spectrum was checked from 1 GHz to 25 GHz.
- 3) The factor includes the antenna factor, the pre-amplifier gain, the cable loss and the distance conversion.
- 4) Calculated result as the worst point shown on underline :
 Factor = Antenna factor - Pre-Amplifier gain + Cable loss + Distance correction
 Factor + Reading (AVE) = $-28.1 + 53.1 = 25.0 \text{ dB}(\mu\text{V})$ at 14689.80 MHz
 Antenna Height : 120 cm, Turntable Rotation Position : 60 °
- 5) AVE : Average detector
- 6) Bandwidth : 1 MHz (1 GHz - 25 GHz)

7.6.5 Setup Photographs



– Front View –



– Rear View –

Photograph present configuration with maximum emission

--- END OF TEST REPORT ---