

TEST REPORT



Test Report File No. : S25024-1(1)

Date of Issue : 27 January, 2026

Type : Commercial Microwave Oven

Model No. : NE-SCV3N

Applicant : Panasonic Corporation of North America

Address : Two Riverfront Plaza, Newark, New Jersey, United States 07102-5490

Manufacturer : Panasonic Corporation Living Appliance and Solutions Company

Address : 2-3-1-3, Nojihigashi, Kusatsu City, Shiga, 525-0058, Japan

Test Result Accord : ☒ **Positive** ☐ **Negative** to the standards at page 4

Approved by:

Reviewed by:

Naoto Ishibashi

Laboratory Director,
EMC Test Laboratory

Masaki Yamanaka

Technical Manager,
EMC Test Laboratory

The test laboratory is not responsible for the data and information provided by the applicant, which may affect the validity of the results.

The results in this report apply only to the tested sample.

This test report shall not be reproduced in full or partial, without the written approval of the test laboratory.

This test report must not be used by the customer to claim product certification, approval, or endorsement by any agency of the U.S. Government.

This test report replaces already issued S25024-1 (26 August, 2025).

Revision History

Revision	Test Report No.	Date	Description
-	S25024-1	26 August, 2025	Original Issue
(1)	S25024-1(1)	27 January, 2026	Page 6: Added "Test Firm Registration Number" and "Designation Number" to the "Test Site Description". Page 40: Added "Appendix B External Photographs".

Directory

Documentation

	Page
Definitions for Symbols used in this Test Report	4
Test Standards	4
Deviation From The Standards	4
Purpose	4
Requirement	5
Summary	6
Environmental Conditions	7
Measurement Uncertainty	7
Equipment under Test*	8
Operation of the EUT during Testing*	9
Test Results and Conditions	11
Radiated Emission (9 kHz - 30 MHz : Electric Field)	11
Radiated Emission (Below 1 GHz : Electric Field)	18
Radiated Emission (Above 1 GHz : Electric Field)	24
Operating Frequency measurements (OST MP-5, 4.5)	34
Variation in Operating Frequency with Line Voltage (OST MP-5, 4.5)	36
Appendix A Lists of the Test Equipment	37
Appendix B External Photographs	40

(*) Data and information are provided by the applicant.
The information on the cover and data is also provided by the customer.

Definitions for Symbols used in this Test Report

Black box indicates (■) that the listed condition, standard, or equipment was applicable for this Report.

Blank box indicates (□) that the listed condition, standard, or equipment was not applicable for this Report.

Test Standards

The tests were performed according to the following standards:

- FCC Part 18 Subpart C Industrial, Scientific, and Medical Equipment
- FCC / OST MP-5 : 1986 - Test Procedure.

Deviation From The Standards

Deviations from or additions to the test method: No deviation or addition

Purpose

The purpose of this report is to show compliance of the Commercial Microwave Oven/Model NE-SCV3N to the requirement of Part 18 of the FCC Rules and Regulations (47 CFR, PART 18, Subpart C).

Requirement

The test requirements are as follows.

Field strength limits (FCC Part 18, 18.305)

The measured output power was found to be more than 500 W (see 6.3). Therefore, in accordance with Section 18.305 of Subpart C, the measured out-of-band emissions were compared with the limit calculated as following:

$$\text{LFS} = 25 * \text{SQRT} (\text{RF Power Output [W]}/500)$$

AC 208 V / 60 Hz :

$$\text{LFS} = 25 * \text{SQRT} (1145 / 500)$$

$$\text{LFS} \approx 37.832 \text{ } \mu\text{V/m}$$

AC 240 V / 60 Hz :

$$\text{LFS} = 25 * \text{SQRT} (1149 / 500)$$

$$\text{LFS} \approx 37.898 \text{ } \mu\text{V/m}$$

Where: LFS is the maximum allowable field strength for out-of-band emissions in $\mu\text{V/m}$ at a 300 m measurement distance. Power Output is the measure output power in watts.

Test Voltage	Limit @300 m [$\mu\text{V/m}$]	Limit @300 m [$\text{dB}\mu\text{V/m}$]	Limit @3 m [$\text{dB}\mu\text{V/m}$]
AC 208 V / 60 Hz	37.832	31.557	71.557
AC 240 V / 60 Hz	37.898	31.572	71.572

Frequency measurements (OST MP-5, Sec. 4.5)

Measurements are made of:

(a) The variation of frequency with time, using the load specified in Section 4.1 (OST MP-5), starting with the EUT and load at 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.

(b) The variation of frequency for line voltage variation from 80 % to 125 % of nominal rated voltage, starting with the EUT warm from at least 10 minutes use, with a load as specified in Section 4.1 (OST MP-5), and with this load at room temperature at the beginning of the test.

Summary

◆ General Remarks:

-The tests were all good result.

◆ The Equipment Under Test:

- Fulfill the general approval requirements cited on page 4.
- Not fulfill the general approval requirements cited on page 4.

EUT received date : 18 July, 2025

Testing Start Date : 28 July, 2025

Testing End Date : 6 August, 2025

◆ Final Judgment:

The requirements according to the technical regulations and tested operation modes are

- MET.
- NOT MET.

AC 208 V / 60 Hz :

	Frequency Range (MHz)	Minimum Margin (dB)	Detector
Radiated Emission	0.009 - 30	18.5	AV
	30 - 1000	41.4	AV
	1000 - 25000	24.6	AV
Remark: Port applicable to test : Refer to "Operation of the EUT during Testing " .			

AC 240 V / 60 Hz :

	Frequency Range (MHz)	Minimum Margin (dB)	Detector
Radiated Emission	0.009 - 30	18.2	AV
	30 - 1000	41.4	AV
	1000 - 25000	21.0	AV
Remark: Port applicable to test : Refer to "Operation of the EUT during Testing " .			

◆ Test Site Description:

This testing was performed at following site:

Name of the Test Site : Panasonic Holdings Corporation, Product Analysis Center, EMC Test Laboratory
Sasayama EMC Site

Address : 231-1 Yashiro, Tamba Sasayama City, Hyogo, 669-2356 Japan

TEL : +81(79) 552-5681

FAX : +81(79) 552-5682

Sasayama EMC Site is accredited by The Japan Accreditation Board for Conformity Assessment (JAB)
for the specific scope of accreditation under Lab. Certificate No. : RTL02730

Test Firm Registration Number: 536635

Designation Number: JP5177

Environmental Conditions

See each Test Data.

Measurement Uncertainty

The data and results referenced in this document are true and accurate. The test results are traceable to the National or International Standards.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%.

- Measurement instrumentation uncertainty was “not” taken into account in the determination of compliance.
- Measurement instrumentation uncertainty was taken into account in the determination of compliance.

Our laboratory quotes measurement uncertainty as follows.

Radiated Emission (Electric Field) :

0.009 MHz - 30 MHz (0.6 m Loop antenna)	3 m distance	± 3.8 dB
---	--------------	--------------

Radiated Emissions (Below 1 GHz : Electric Field) : 3 m Anechoic Chamber

30 MHz - 200 MHz (Biconical Antenna)	3 m distance	Horizontal	± 3.7 dB
		Vertical	± 3.8 dB
200 MHz - 1000 MHz (Logperiodic Antenna)	3 m distance	Horizontal	± 3.2 dB
		Vertical	± 3.3 dB

Radiated Emissions (Above 1 GHz : Electric Field) :

1 GHz - 6 GHz (Horn Antenna)	3 m distance	± 5.2 dB
6 GHz - 18 GHz (Horn Antenna)	3 m distance	± 5.1 dB
18 GHz - 40 GHz (Horn Antenna)	3 m distance	± 5.1 dB

Equipment under Test*

◆ Applicant

Company Name : Panasonic Corporation of North America

Address : Two Riverfront Plaza, Newark, New Jersey, United States 07102-5490

◆ Identification of EUT A

Type	: <u>Commercial Microwave Oven</u>	Rated Voltage	: <u>AC 208, 240 V / 60 Hz</u>
Model	: <u>NE-SCV3N</u>	Rated Power	: <u>3750 W</u>
Serial No	: <u>FES-016</u>	Protection class	: <u>Class 1</u>
Operating Frequency	: <u>2450 MHz ± 50 MHz</u>	Dimensions	: <u>474 x 565 x 412</u>
Firmware Version	: <u>FES</u>	W x D x H (mm)	
Software Version	: <u>FES-R01</u>		

Equipment authorization : Supplier's Declaration of Conformity FCC ID : ACLAP3K21

◆ Source of Interference & Internal Frequencies : Highest Frequency 2450 ± 50 MHz

Clock Source	Frequency (MHz)	Clock Source	Frequency (MHz)
Oscillator	8 MHz	System clock	4 MHz
Microcomputer AU	: 20 MHz	Inverter	: 0.02 - 0.05 MHz
Microcomputer BU	: 32 MHz	SMPS(24V)	: 0.06 - 0.13 MHz
Microcomputer FU	: 24 MHz	SMPS(12V)	: 0.1 MHz
DC/DC Converter	350 kHz	Magnetron	2450 MHz ± 50 MHz

◆ Noise Suppression Components

Inside

X-Capacitor: 3.3 µF x 2

Y-Capacitor: 3300 pF x 2

Common mode choke : 3 mH x 2

Ferrite: Power supply cord is inserted in to the core

Outside

-

Operation of the EUT during Testing*

◆ Modification of the EUT

The test laboratory did not modify the EUT during the test.

◆ Power Supply System Utilized

Power supply system : AC 208 V / 60 Hz 1 ϕ
AC 240 V / 60 Hz 1 ϕ

◆ Operation mode of the EUT

The equipment under test was operated during the measurement under the following conditions.
Refer to “ Details of Ports “ and “ Block diagram of the equipment under test (EUT) “ for all relevant ports.

- High Power Mode: 1200 W

◆ Description of EUT:

Symbol	Type	Model	Serial No.	Manufacturer	EUT condition
A	Commercial Microwave Oven	NE-SCV3N	FES-016	Panasonic	Pre-Production

EUT A : [Refer to Identification of EUT A]

Front View



Front View with Door Open



Rear View



◆ Information for the Similar Model

NE-SCV2N

The following interface cables and the peripheral devices were connected during the measurement:

◆ Power Cables

No.	Name of Cable	Pin	Length (m)	Shield	Ferrite Quantity	Ground Line
	Model / Manufacturer					
1	AC Power Cord of AC Adaptor (*1) - Alternate use	3	1.5	Unshielded	1	Yes
	PHINO / SJTOW					

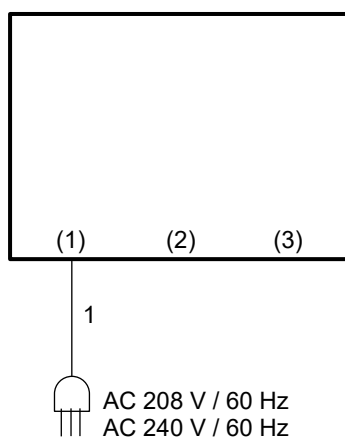
Note: (*1) Enclosed cable with EUT A.

◆ Details of ports

Port No.	Name of port	Remarks
(1)	AC IN	EUT / AC
(2)	LAN	-
(3)	USB	USB memory usage is only permitted when not in operation.

◆ Block diagram of the EUT

·High Power Mode: 1200 W



EUT

■ : Ferrite

Test Results and Conditions

Radiated Emission (9 kHz - 30 MHz : Electric Field)

The measurement of the Radiated Emission (9 kHz - 30 MHz : Electric Field) in the frequency range 9 kHz - 30 MHz was performed in horizontal and vertical antenna position according to FCC Part 18 at:

Test Location:

- 3 m anechoic chamber

Test Distance:

- 3 m (with a 0.6 m loop antenna)

Test Volume:

- $\varnothing$ 0.737 m

Data of Test Environmental Conditions: Refer to Test Data

Lists of the Test Equipment: Refer to Appendix A

The requirements are

☒ **MET**

☐ **NOT MET**

AC 208 V / 60 Hz :

Min. limit margin 18.5 dB at 0.039 MHz
(AV detector receiver with 0 deg antenna polarization)

AC 240 V / 60 Hz :

Min. limit margin 18.2 dB at 0.044 MHz
(AV detector receiver with 0 deg antenna polarization)

Description of calculation

9 kHz to 30 MHz

Calculation Formula to get field strength at 300 m from the measured at 3 m.

Calculation Formula:

Emission Level at 300 m [μ V/m]
 $= 10^{\{(Emission\ Level\ at\ 3\ m\ [dB\mu V/m]) / 20\} * (3/300)^2}$

Example: Frequency 0.044 MHz,
Emission Level at 3 m 93.4 dB μ V/m

Emission Level at 300 m [μ V/m]
 $= 10^{(93.4 / 20) * (3/300)^2}$
 $= 4.677\ \mu$ V/m

Remarks: The LAN port is measured in a disconnected state.

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

Test Data

Test Condition of Instrument

Resolution Bandwidth : 200 Hz (9 kHz to 150 kHz)
9 kHz (150 MHz to 30 MHz)

EUT Warm-up Time: 10 minutes

Date: 28 July, 2025

Environment: 24 deg.C / 69 % / 979 hPa

Detector Function : Average
Test Mode : High Power Mode : 1200 W

Test Voltage : AC 208 V / 60Hz
Load : 1050 ml Center

Meas- ured Fre- quency [MHz]	Polarity [deg]	Meter Readin g at 3 m [dBμV]	Factor [dB(1/ m)]	Emissi on Level at 3 m [dBμV/ m]	Emissi on Level at 300 m [dBμV/ m]	Emissi on Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
0.027	0	65.9	19.3	85.2	5.2	1.820	37.832	36.012	26.4	200	316
0.039	0	73.8	19.3	93.1	13.1	4.519	37.832	33.313	18.5	200	108
0.055	0	55.3	19.2	74.5	-5.5	0.531	37.832	37.301	37.1	200	285
0.079	0	59.8	19.2	79	-1.0	0.891	37.832	36.941	32.6	200	305
0.118	0	42.2	19.1	61.3	-18.7	0.116	37.832	37.716	50.3	200	285
0.157	0	41.7	19.1	60.8	-19.2	0.110	37.832	37.722	50.8	200	230
0.027	45	68.6	19.3	87.9	7.9	2.483	37.832	35.349	23.7	200	243
0.039	45	73.5	19.3	92.8	12.8	4.365	37.832	33.467	18.8	200	263
0.055	45	53	19.2	72.2	-7.8	0.407	37.832	37.425	39.4	200	259
0.079	45	58.4	19.2	77.6	-2.4	0.759	37.832	37.073	34.0	200	266
0.118	45	40.1	19.1	59.2	-20.8	0.091	37.832	37.741	52.4	200	49
0.157	45	40.4	19.1	59.5	-20.5	0.094	37.832	37.738	52.1	200	347
0.027	90	65.3	19.3	84.6	4.6	1.698	37.832	36.134	27.0	200	340
0.039	90	71.5	19.3	90.8	10.8	3.467	37.832	34.365	20.8	200	10
0.055	90	51.8	19.2	71.0	-9.0	0.355	37.832	37.477	40.6	200	357
0.079	90	56.2	19.2	75.4	-4.6	0.589	37.832	37.243	36.2	200	36
0.118	90	38.1	19.1	57.2	-22.8	0.072	37.832	37.760	54.4	200	184
0.157	90	38.9	19.1	58.0	-22.0	0.079	37.832	37.753	53.6	200	302
0.027	135	67.6	19.3	86.9	6.9	2.213	37.832	35.619	24.7	200	318
0.039	135	73.2	19.3	92.5	12.5	4.217	37.832	33.615	19.1	200	326
0.054	135	53.8	19.2	73.0	-7.0	0.447	37.832	37.385	38.6	200	326
0.079	135	58.8	19.2	78.0	-2.0	0.794	37.832	37.038	33.6	200	326
0.118	135	40.7	19.1	59.8	-20.2	0.098	37.832	37.734	51.8	200	312
0.157	135	41.5	19.1	60.6	-19.4	0.107	37.832	37.725	51.0	200	247
0.027	Z	64.9	19.3	84.2	4.2	1.622	37.832	36.210	27.4	200	298
0.039	Z	71.5	19.3	90.8	10.8	3.467	37.832	34.365	20.8	200	313
0.054	Z	50.8	19.2	70.0	-10.0	0.316	37.832	37.516	41.6	200	291

0.079	Z	56.0	19.2	75.2	-4.8	0.575	37.832	37.257	36.4	200	291
0.118	Z	38.3	19.1	57.4	-22.6	0.074	37.832	37.758	54.2	200	280
0.157	Z	41.1	19.1	60.2	-19.8	0.102	37.832	37.730	51.4	200	26

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3 m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [dBμV/m] = Emission Level at 3 m [dBμV/m] + 40log(3/300) [dB]

Test Condition of Instrument

Resolution Bandwidth : 200 Hz (9 kHz to 150 kHz) EUT Warm-up Time: 10 minutes
9 kHz (150 MHz to 30 MHz) Date: 30 July, 2025
Environment: 23 deg.C / 64 % / 974 hPa

Detector Function : Average
Test Mode : High Power Mode : 1200 W

Test Voltage : AC 240 V / 60Hz
Load : 1050 ml Center

Meas- ured Fre- quency [MHz]	Polarity [deg]	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 300 m [dBμV/ m]	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Lim- its at 300 m [μV/m]	Margin for Lim- its at 300 m [dB]	Height [cm]	Angle [deg.]
0.031	0	68.4	19.3	87.7	7.7	2.427	37.898	35.471	23.9	200	272
0.044	0	74.1	19.3	93.4	13.4	4.677	37.898	33.221	18.2	200	290
0.062	0	51.9	19.2	71.1	-8.9	0.359	37.898	37.539	40.5	200	272
0.087	0	56.6	19.1	75.7	-4.3	0.610	37.898	37.288	35.9	200	301
0.173	0	35.8	19.1	54.9	-25.1	0.056	37.898	37.842	56.7	200	252
0.043	45	72.5	19.3	91.8	11.8	3.890	37.898	34.008	19.8	200	271
0.031	45	65.9	19.3	85.2	5.2	1.820	37.898	36.078	26.4	200	262
0.062	45	49.5	19.2	68.7	-11.3	0.272	37.898	37.626	42.9	200	65
0.087	45	53.9	19.1	73.0	-7.0	0.447	37.898	37.451	38.6	200	72
0.173	45	34.0	19.1	53.1	-26.9	0.045	37.898	37.853	58.5	200	232
0.031	90	65.4	19.3	84.7	4.7	1.718	37.898	36.180	26.9	200	3
0.043	90	70.8	19.3	90.1	10.1	3.199	37.898	34.699	21.5	200	17
0.062	90	48.7	19.2	67.9	-12.1	0.248	37.898	37.650	43.7	200	348
0.087	90	51.5	19.1	70.6	-9.4	0.339	37.898	37.559	41.0	200	6
0.131	90	33.1	19.1	52.2	-27.8	0.041	37.898	37.857	59.4	200	6
0.175	90	37.9	19.1	57.0	-23.0	0.071	37.898	37.827	54.6	200	279
0.031	135	66.9	19.3	86.2	6.2	2.042	37.898	35.856	25.4	200	296
0.043	135	72.2	19.3	91.5	11.5	3.758	37.898	34.140	20.1	200	346
0.061	135	51.0	19.2	70.2	-9.8	0.324	37.898	37.574	41.4	200	300
0.087	135	54.6	19.1	73.7	-6.3	0.484	37.898	37.414	37.9	200	351
0.130	135	37.1	19.1	56.2	-23.8	0.065	37.898	37.833	55.4	200	278
0.173	135	39.3	19.1	58.4	-21.6	0.083	37.898	37.815	53.2	200	23

0.031	Z	65.2	19.3	84.5	4.5	1.679	37.898	36.219	27.1	200	118
0.043	Z	69.9	19.3	89.2	9.2	2.884	37.898	35.014	22.4	200	85
0.062	Z	48.3	19.2	67.5	-12.5	0.237	37.898	37.661	44.1	200	109
0.087	Z	53.3	19.1	72.4	-7.6	0.417	37.898	37.481	39.2	200	305
0.130	Z	33.8	19.1	52.9	-27.1	0.044	37.898	37.854	58.7	200	87
0.173	Z	39.2	19.1	58.3	-21.7	0.082	37.898	37.816	53.3	200	7

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3 m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [dBμV/m] = Emission Level at 3 m [dBμV/m] + 40log(3/300) [dB]

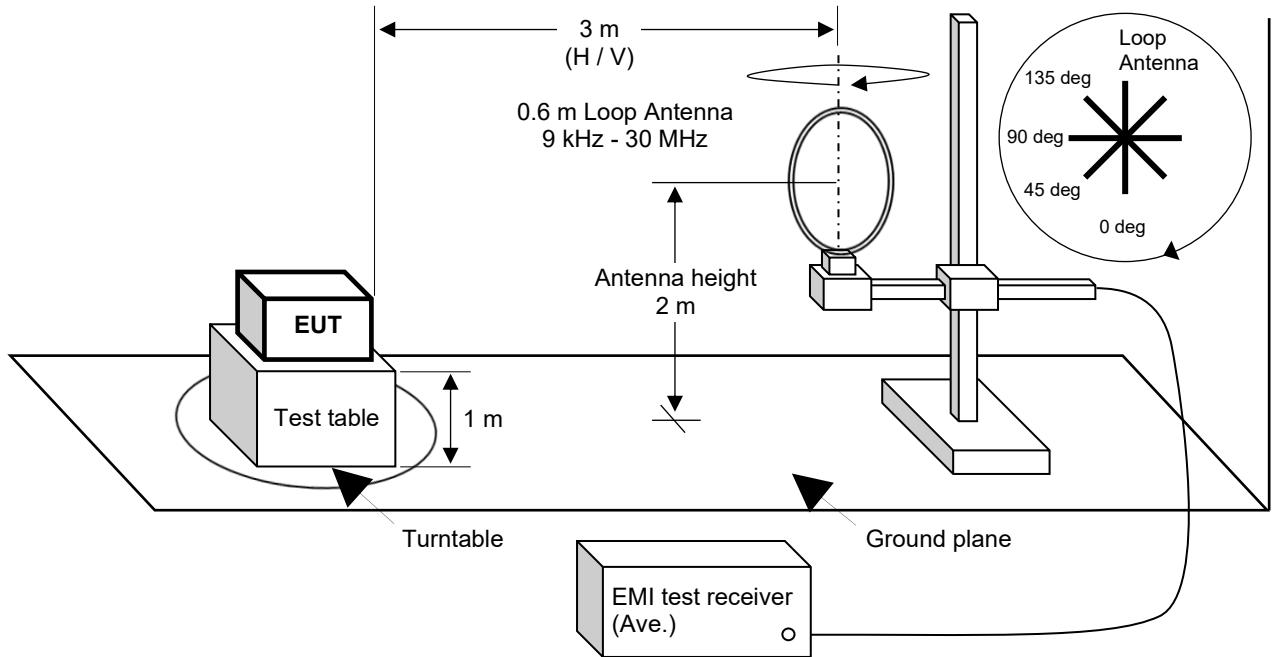
Photo of the Test Set-up

Pre-check : A loop antenna was set at a height of 2 m and a level with a small margin of Vertical axis (0° , 45° , 90° , 135°) and Horizontal Axis was measured using a spectrum analyzer.

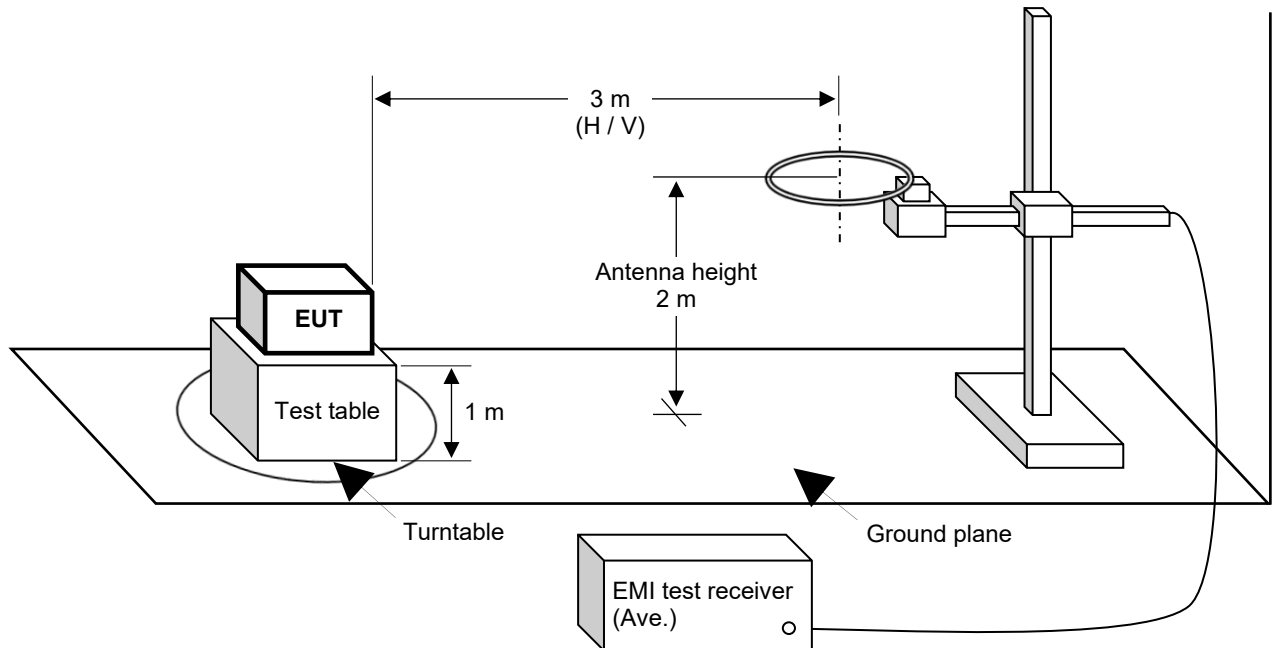
Final measurement : Emission levels (Ave. value) were measured by means of the test receiver referring the result of Pre-check.

Drawing:

Vertical axis

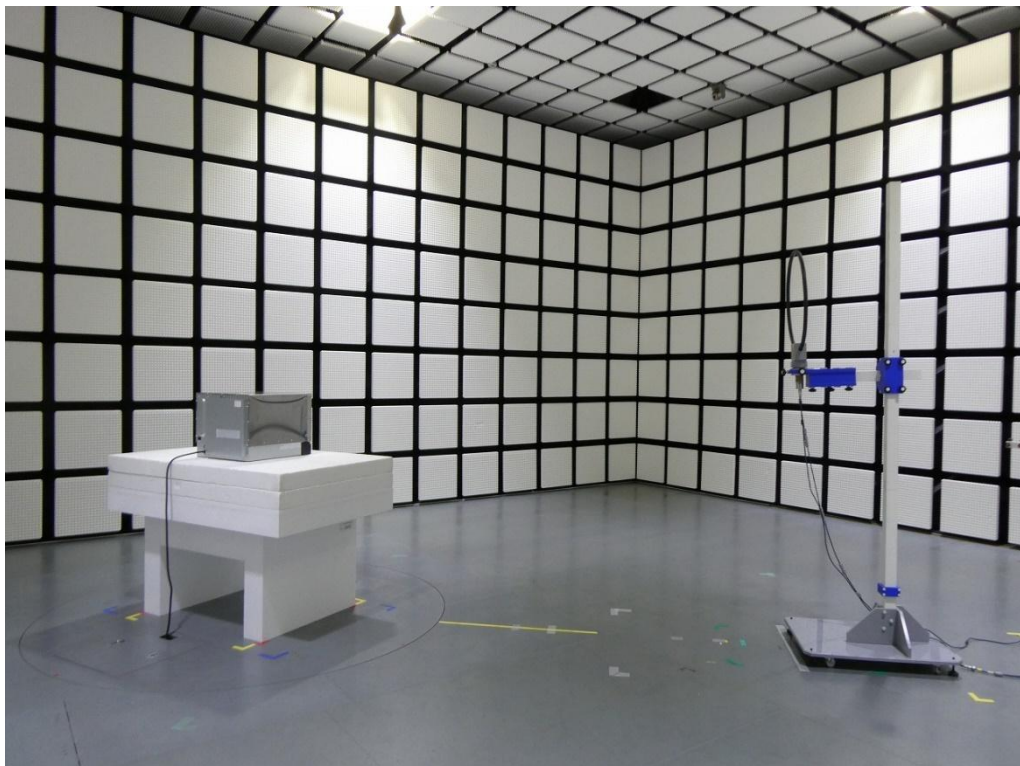


Horizontal Axis

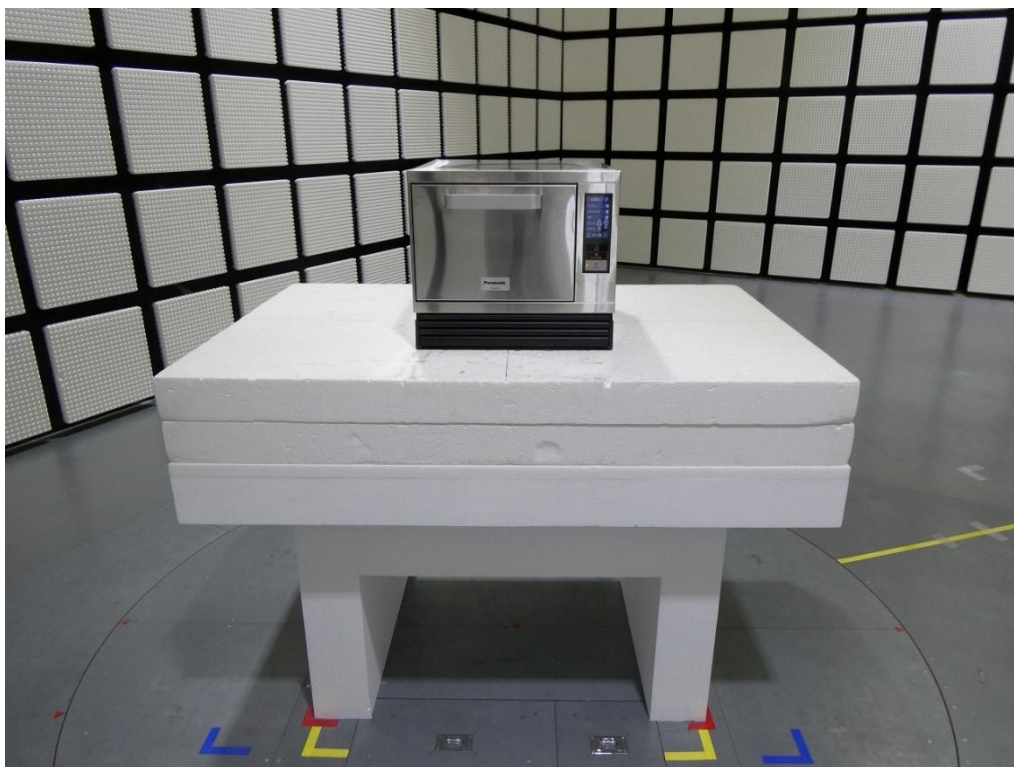




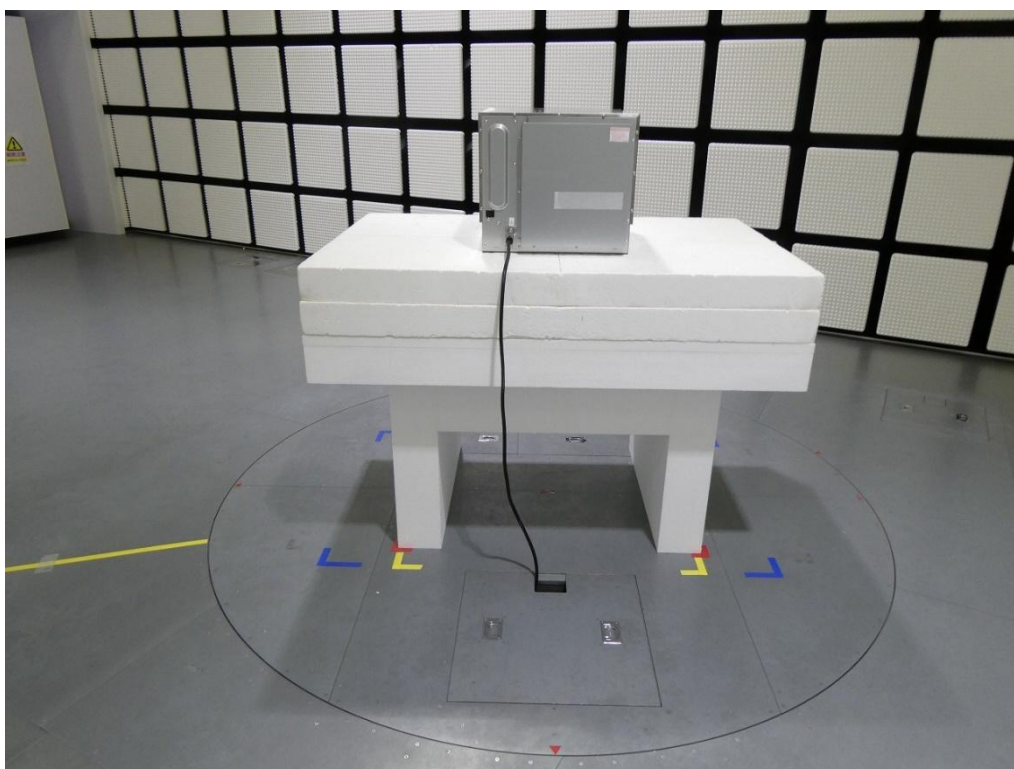
AC 208 V / 60 Hz Worst angle



AC 240 V / 60 Hz Worst angle



Front View



Rear View

Radiated Emission (Below 1 GHz : Electric Field)

The measurement of the Radiated Emission (Below 1 GHz : Electric Field) in the frequency range 30 MHz - 1000 MHz was performed in horizontal and vertical antenna position according to FCC Part 18 at:

Test Location:

- 3 m anechoic chamber

Test Distance:

- 3 m

Test Volume:

- $\varnothing$ 0.737 m

Data of Test Environmental Conditions: Refer to Test Data

Lists of the Test Equipment: Refer to Appendix A

The requirements are

■ MET

□ NOT MET

AC 208 V / 60 Hz :

Min. limit margin 41.4 dB at 400.01 MHz
(AV detector receiver with Vertical antenna polarization)

AC 240 V / 60 Hz :

Min. limit margin 41.4 dB at 400.01 MHz
(AV detector receiver with Vertical antenna polarization)

Description of calculation

30 MHz to 1 GHz

Calculation Formula to get field strength at 300 m from the measured at 3 m.

Calculation Formula:

$$\begin{aligned} & \text{Emission Level at 300 m } [\mu\text{V/m}] \\ &= 10^{\{(\text{Emission Level at 3 m } [\text{dB}\mu\text{V/m}] / 20 \} * (3/300)} \end{aligned}$$

Example: Frequency 400.01 MHz,
Emission Level at 3 m 30.2 dB μ V/m

$$\begin{aligned} & \text{Emission Level at 300 m } [\mu\text{V/m}] \\ &= 10^{(30.2 / 20) * (3/300)} \\ &= 0.324 \mu\text{V/m} \end{aligned}$$

Remarks: The LAN port is measured in a disconnected state.

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

Test Data

Test Condition of Instrument : EUT Warm-up Time: 10 minutes
Resolution Bandwidth : 120 kHz (30 MHz to 1 GHz) Date: 28 July, 2025
Environment: 24 deg.C / 69 % / 979 hPa
Detector Function : Average
Test Mode : High Power Mode : 1200 W
Test Voltage : AC 208 V / 60Hz
Load : 1050 ml Center

Meas- ured Fre- quency [MHz]	Polarity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 300 m [dBμV/ m]	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Lim- its at 300 m [μV/m]	Margin for Lim- its at 300 m [dB]	Height [cm]	Angle [deg.]
30.09	H	17.9	-6.6	11.3	-28.7	0.037	37.832	37.795	60.3	377	273
100.02	H	27.1	-14.3	12.8	-27.2	0.044	37.832	37.788	58.8	180	261
299.37	H	29.6	-16.6	13.0	-27.0	0.045	37.832	37.787	58.6	211	351
399.99	H	35.8	-13.6	22.2	-17.8	0.129	37.832	37.703	49.4	184	346
736.41	H	23.8	-7.4	16.4	-23.6	0.066	37.832	37.766	55.2	245	228
36.55	V	24.6	-9.0	15.6	-24.4	0.060	37.832	37.772	56.0	100	0
39.93	V	21.6	-10.2	11.4	-28.6	0.037	37.832	37.795	60.2	126	10
104.82	V	26.7	-13.5	13.2	-26.8	0.046	37.832	37.786	58.4	125	246
299.34	V	36.9	-16.6	20.3	-19.7	0.104	37.832	37.728	51.3	148	351
400.01	V	43.8	-13.6	30.2	-9.8	0.324	37.832	37.508	41.4	100	359
584.57	V	24.2	-9.3	14.9	-25.1	0.056	37.832	37.776	56.7	116	359
659.92	V	23.2	-8.2	15.0	-25.0	0.056	37.832	37.776	56.6	123	151

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3 m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [dBμV/m] = Emission Level at 3 m [dBμV/m] + 20log(3/300) [dB]

Test Condition of Instrument
Resolution Bandwidth : 120 kHz (30 MHz to 1 GHz)
Detector Function : Average
Test Mode : High Power Mode : 1200 W
Test Voltage : AC 240 V / 60Hz
Load : 1050 ml Center

EUT Warm-up Time: 10 minutes
Date: 28 July, 2025
Environment: 24 deg.C / 69 % / 979 hPa

Meas- ured Fre- quency [MHz]	Polarity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 300 m [dBμV/ m]	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Lim- its at 300 m [μV/m]	Margin for Lim- its at 300 m [dB]	Height [cm]	Angle [deg.]
30.00	H	16.8	-6.6	10.2	-29.8	0.032	37.898	37.866	61.4	299	237
100.00	H	27.7	-14.3	13.4	-26.6	0.047	37.898	37.851	58.2	168	64
400.01	H	36.1	-13.6	22.5	-17.5	0.133	37.898	37.765	49.1	181	349
534.43	H	22.6	-10.7	11.9	-28.1	0.039	37.898	37.859	59.7	178	260
30.14	V	21.7	-6.6	15.1	-24.9	0.057	37.898	37.841	56.5	187	83
104.69	V	26.8	-13.5	13.3	-26.7	0.046	37.898	37.852	58.3	112	237
249.99	V	43.1	-18.0	25.1	-14.9	0.180	37.898	37.718	46.5	171	0
400.01	V	43.8	-13.6	30.2	-9.8	0.324	37.898	37.574	41.4	100	0
579.41	V	24.1	-9.4	14.7	-25.3	0.054	37.898	37.844	56.9	109	359
703.00	V	23.7	-8.0	15.7	-24.3	0.061	37.898	37.837	55.9	100	340

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3 m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [dBμV/m] = Emission Level at 3 m [dBμV/m] + 20log(3/300) [dB]

Photographs of the Test Set-up

The EUT (with the peripherals) was placed on a 0.8 m high nonconductive turntable along.

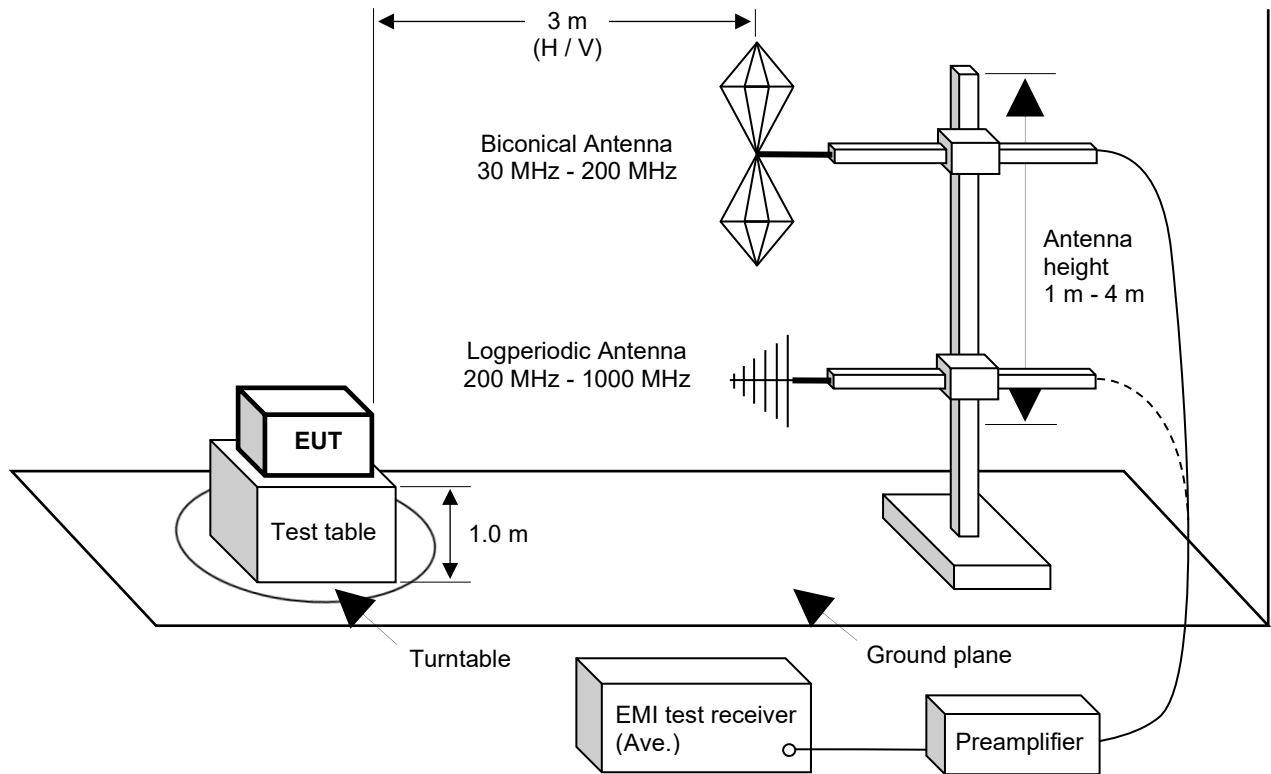
The turntable was separated from the antenna by a distance of 3 m.

Cables for peripherals were placed in a position to produce maximum emissions as determined by experimentation, and the operation mode was selected for maximum emission.

Pre-check: Radiated emission levels (PEAK value) which have small margin for the regulation were measured by means of spectrum analyzer changing antenna movement (1 m - 4 m) and table rotation (0 degree - 360 degree).
Final measurement: Emission levels (Ave. value) were measured by means of the test receiver referring the result of Pre-check.

The emission levels from the EUT were maximized changing conditions; Turntable rotation, Antenna height and arrangement of the EUT.

Drawing :

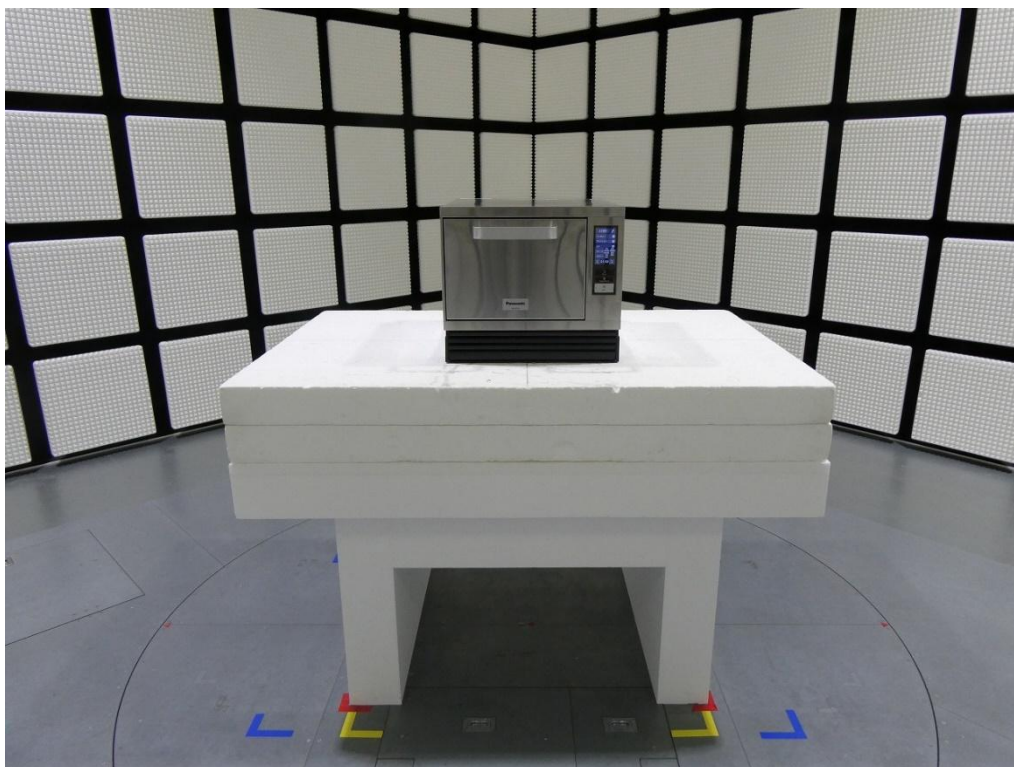




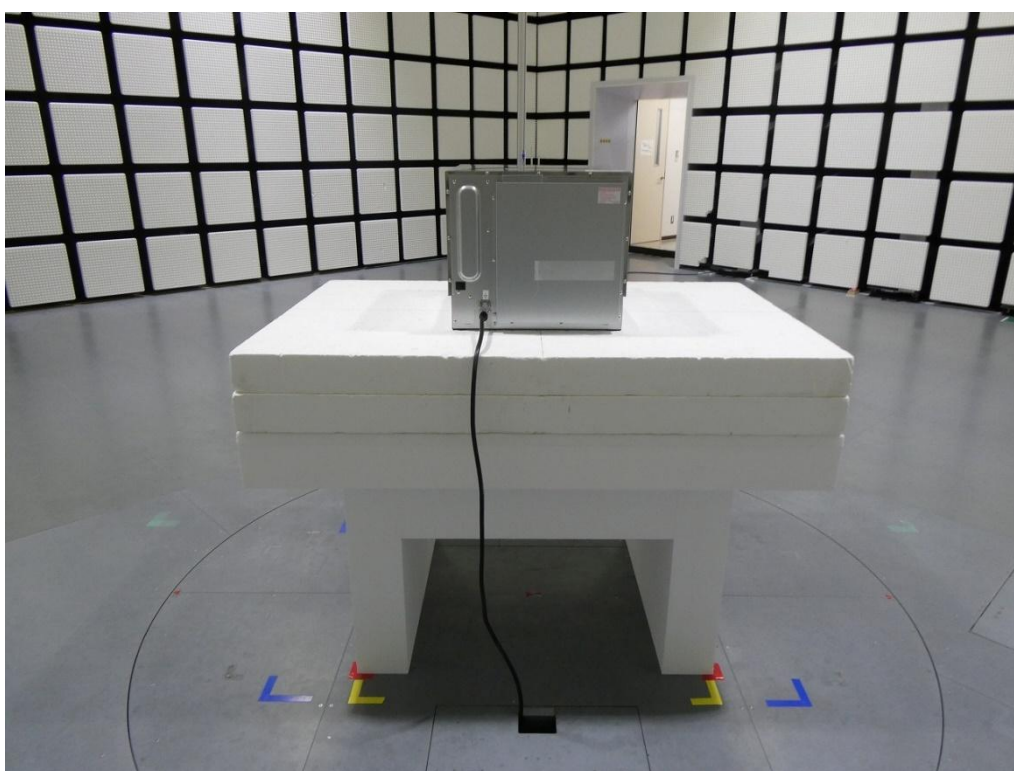
AC 208 V / 60 Hz Worst angle



AC 240 V / 60 Hz Worst angle



Front View



Rear View

Radiated Emission (Above 1 GHz : Electric Field)

The measurement of the Radiated Emission (Above 1 GHz : Electric Field) in the frequency range 1 GHz - 25 GHz was performed in horizontal and vertical antenna position according to FCC Part 18 at:

Test Location:

- 3 m anechoic chamber

Test Distance:

- 3 m

Test Volume:

- φ 0.737 m

Data of Test Environmental Conditions: Refer to Test Data

Lists of the Test Equipment: Refer to Appendix A

The requirements are

■ MET

□ NOT MET

AC 208 V / 60 Hz :

Min. limit margin 24.6 dB at 2399.92 MHz
(AV detector signal analyzer with Vertical antenna polarization at 1050 ml Center)

AC 240 V / 60 Hz :

Min. limit margin 21.0 dB at 2398.83 MHz
(AV detector signal analyzer with Vertical antenna polarization at 1050 ml Center)

1 GHz - 6 GHz

Frequency [GHz]	θ_{3dB} E Plane [°]	θ_{3dB} H Plane [°]	θ_{3dB} min [°]	W min [m]	Frequency [GHz]	θ_{3dB} E Plane [°]	θ_{3dB} H Plane [°]	θ_{3dB} min [°]	W min [m]
1	87.7	61.2	61.2	3.55	4	32.1	52.5	32.1	1.73
2	48.6	38.5	38.5	2.10	5	54.6	44.3	44.3	2.44
3	37.4	51.6	37.4	2.03	6	48.4	38.1	38.1	2.07

θ_{3dB} : The minimum 3 dB beam width of receive antenna.

W : The dimension of the line tangent to the EUT formed by θ_{3dB} at 3 m.

$$W = 2 \times 3 \text{ [m]} \times \tan(0.5 \times \theta_{3dB}) \approx 1.73 \text{ m}$$

6 GHz - 18 GHz

Frequency [GHz]	θ_{3dB} E Plane [°]	θ_{3dB} H Plane [°]	θ_{3dB} min [°]	W min [m]	Frequency [GHz]	θ_{3dB} E Plane [°]	θ_{3dB} H Plane [°]	θ_{3dB} min [°]	W min [m]
6	37	44	37	2.01	13	25	23	23	1.22
7	38	39	38	2.07	14	30	23	23	1.22
8	30	33	30	1.61	15	32	19	19	1.00
9	28	29	28	1.50	16	29	19	19	1.00
10	27	27	27	1.44	17	28	18	18	0.95
11	29	24	24	1.28	18	29	17	17	0.90
12	33	26	26	1.39					

θ_{3dB} : The minimum 3 dB beam width of receive antenna.

W : The dimension of the line tangent to the EUT formed by θ_{3dB} at 3 m.

$$W = 2 \times 3 \text{ [m]} \times \tan(0.5 \times \theta_{3dB}) \approx 0.90 \text{ m}$$

18 GHz - 25 GHz

Frequency [GHz]	θ_{3dB} E Plane [°]	θ_{3dB} H Plane [°]	θ_{3dB} min [°]	W min [m]
18	52	40	40	2.18
19	48	38	38	2.07
20	51	39	39	2.12
21	50	38	38	2.07
22	50	38	38	2.07
23	50	38	38	2.07
24	48	37	37	2.01
25	50	38	38	2.07

θ_{3dB} : The minimum 3 dB beam width of receive antenna.

W : The dimension of the line tangent to the EUT formed by θ_{3dB} at 3 m.

$$W = 2 \times 3 \text{ [m]} \times \tan(0.5 \times \theta_{3dB}) \approx 2.01 \text{ m}$$

Description of calculation

1 GHz to 25 GHz

Calculation Formula to get field strength at 300 m from the measured at 3 m.

Calculation Formula:

$$\begin{aligned} &\text{Emission Level at 300 m } [\mu\text{V/m}] \\ &= K \times 10^{\{(\text{Emission Level at 3 m } [\text{dB}\mu\text{V/m}]) / 20 \}} \\ &K: \text{Conversion Factor for 3 m to 300 m} \end{aligned}$$

Example: Frequency 2398.83 MHz,
Emission Level at 3 m 53.7 dB μ V/m

$$\begin{aligned} &\text{Emission Level at 300 m } [\mu\text{V/m}] \\ &= 0.007 \times 10^{(53.7 / 20)} \\ &= 4.842 \mu\text{V/m} \end{aligned}$$

Remarks: The LAN port is measured in a disconnected state.

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

Test Data

Test Condition of Instrument EUT Warm-up Time: 10 minutes
Resolution Bandwidth : 1 MHz (1 GHz to 25 GHz) Date: 31 July, 2025
1 August, 2025
Environment: 25 deg.C / 58 % / 974 hPa (31 July, 2025)
24 deg.C / 73 % / 975 hPa (1 August, 2025)

Detector Function : Average
Test Mode : High Power Mode : 1200 W

Test Voltage : AC 208 V / 60Hz
Load : 1050 ml Center

Meas- ured Fre- quency [MHz]	Po- lar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
2399.99	H	19	29.3	48.3	260.0	0.007	1.820	37.832	36.012	26.4	100	120
4910.90	H	45.6	-10.1	35.5	59.6	0.010	0.596	37.832	37.236	36.1	100	293
7076.25	H	44.6	-8	36.6	67.6	0.010	0.676	37.832	37.156	35.0	100	200
7346.22	H	36	-8.6	27.4	23.4	0.010	0.234	37.832	37.598	44.2	100	71
8661.55	H	36.7	-7.5	29.2	28.8	0.010	0.288	37.832	37.544	42.4	100	213
9899.61	H	40.2	-5.7	34.5	53.1	0.010	0.531	37.832	37.301	37.1	100	202
11028.30	H	35	-4.3	30.7	34.3	0.010	0.343	37.832	37.489	40.9	100	355
24546.93	H	34.2	-1	33.2	45.7	0.010	0.457	37.832	37.375	38.4	100	0
2399.92	V	20.8	29.3	50.1	319.9	0.007	2.239	37.832	35.593	24.6	100	230
4379.51	V	52.4	-10.8	41.6	120.2	0.010	1.202	37.832	36.630	30.0	100	352
4910.57	V	45.2	-10.1	35.1	56.9	0.010	0.569	37.832	37.263	36.5	100	345
7097.02	V	44.8	-8.1	36.7	68.4	0.010	0.684	37.832	37.148	34.9	100	351
7365.78	V	41.2	-8.6	32.6	42.7	0.010	0.427	37.832	37.405	39.0	100	359
8657.90	V	36.9	-7.5	29.4	29.5	0.010	0.295	37.832	37.537	42.2	100	346
9890.88	V	49.9	-5.7	44.2	162.2	0.010	1.622	37.832	36.210	27.4	100	173
11050.06	V	34.8	-4.3	30.5	33.5	0.010	0.335	37.832	37.497	41.1	100	142
24540.63	V	35.1	-1	34.1	50.7	0.010	0.507	37.832	37.325	37.5	100	0

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB] + Distance Factor [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [μV/m] = K * Emission Level at 3m [μV/m]

Test Voltage : AC 208 V / 60Hz
Load : 1050 ml Right Front

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4914.52	H	47.7	-10.1	37.6	75.9	0.010	0.759	37.832	37.073	34.0	100	317
7367.48	H	37.8	-8.6	29.2	28.8	0.010	0.288	37.832	37.544	42.4	100	191
4912.76	V	47.8	-10.1	37.7	76.7	0.010	0.767	37.832	37.065	33.9	100	302
7354.96	V	37.5	-8.6	28.9	27.9	0.010	0.279	37.832	37.553	42.7	100	308

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB] + Distance Factor [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [μV/m] = K * Emission Level at 3m [μV/m]

Test Voltage : AC 208 V / 60Hz
Load : 450 ml Center

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4909.72	H	48	-10.1	37.9	78.5	0.010	0.785	37.832	37.047	33.7	100	52
7355.65	H	41.6	-8.6	33.0	44.7	0.010	0.447	37.832	37.385	38.6	100	181
4903.41	V	50.4	-10.1	40.3	103.5	0.010	1.035	37.832	36.797	31.3	100	271
7376.12	V	39.2	-8.6	30.6	33.9	0.010	0.339	37.832	37.493	41.0	100	181

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB] + Distance Factor [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [μV/m] = K * Emission Level at 3m [μV/m]

Test Voltage : AC 208 V / 60Hz
Load : 450 ml Right Front

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4922.37	H	52.1	-10.1	42.0	125.9	0.010	1.259	37.832	36.573	29.6	100	356
7372.98	H	39.1	-8.6	30.5	33.5	0.010	0.335	37.832	37.497	41.1	100	22
4915.88	V	55.3	-10.1	45.2	182.0	0.010	1.820	37.832	36.012	26.4	100	326
7372.47	V	47.3	-8.6	38.7	86.1	0.010	0.861	37.832	36.971	32.9	100	318

Factor [dB(1/m)] = Antenna Factor [dB(1/m)] + Cable Loss [dB] - Amp. Gain [dB] + Distance Factor [dB]

Emission Level at 3 m [dBμV/m] = Reading at 3m [dBμV] + Factor [dB(1/m)]

Emission Level at 300 m [μV/m] = K * Emission Level at 3m [μV/m]

EUT Warm-up Time: 10 minutes

Resolution Bandwidth : 1 MHz (1 GHz to 25 GHz)

Date: 31 July, 2025

1 August, 2025

Environment: 25 deg.C / 58 % / 974 hPa (31 July, 2025)

24 deg.C / 73 % / 975 hPa (1 August, 2025)

Detector Function : Average

Test Mode : High Power Mode : 1200 W

Test Voltage : AC 240 V / 60Hz

Load : 1050 ml Center

Measured Frequency [MHz]	Polarity	Meter Reading at 3 m [dBμV]	Factor [dB(1/m)]	Emission Level at 3 m [dBμV/m]	Emission Level at 3 m [μV/m]	K	Emission Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
2395.00	H	19.8	29.3	49.1	285.1	0.007	1.996	37.898	35.902	25.6	100	309
4907.58	H	43.8	-10.1	33.7	48.4	0.010	0.484	37.898	37.414	37.9	100	317
7070.56	H	48.9	-7.9	41.0	112.2	0.010	1.122	37.898	36.776	30.6	100	305
7363.67	H	38.6	-8.6	30.0	31.6	0.010	0.316	37.898	37.582	41.6	100	147
8650.68	H	35.9	-7.5	28.4	26.3	0.010	0.263	37.898	37.635	43.2	100	337
9892.24	H	45.1	-5.7	39.4	93.3	0.010	0.933	37.898	36.965	32.2	100	158
11050.30	H	34.3	-4.3	30.0	31.6	0.010	0.316	37.898	37.582	41.6	100	311
24579.96	H	33.2	-1	32.2	40.7	0.010	0.285	37.898	37.613	42.5	100	270
2398.83	V	24.4	29.3	53.7	484.2	0.007	3.389	37.898	34.509	21.0	100	43
4363.41	V	50.2	-10.8	39.4	93.3	0.010	0.933	37.898	36.965	32.2	100	2
4912.52	V	47.7	-10.1	37.6	75.9	0.010	0.759	37.898	37.139	34.0	100	23
7065.36	V	53.1	-7.9	45.2	182.0	0.010	1.820	37.898	36.078	26.4	100	3
7422.42	V	43.1	-8.7	34.4	52.5	0.010	0.525	37.898	37.373	37.2	100	3
9898.21	V	48.6	-5.7	42.9	139.6	0.010	1.396	37.898	36.502	28.7	100	188
10154.66	V	38.5	-6	32.5	42.2	0.010	0.422	37.898	37.476	39.1	100	177
24539.87	V	33.5	-1.0	32.5	42.2	0.010	0.422	37.898	37.476	39.1	100	113

Test Voltage : AC 240 V / 60Hz
Load : 1050 ml Right Front

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4917.04	H	47.8	-10.1	37.7	76.7	0.010	0.767	37.832	37.065	33.9	100	291
7371.49	H	40.5	-8.6	31.9	39.4	0.010	0.394	37.832	37.438	39.7	100	0
4914.74	V	54.9	-10.1	44.8	173.8	0.010	1.738	37.832	36.094	26.8	100	7
7415.74	V	35.8	-8.7	27.1	22.6	0.010	0.226	37.832	37.606	44.5	100	7

Test Voltage : AC 240 V / 60Hz
Load : 450 ml Center

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4908.21	H	45.5	-10.1	35.4	58.9	0.010	0.589	37.832	37.243	36.2	100	12
7352.92	H	38.1	-8.6	29.5	29.9	0.010	0.299	37.832	37.533	42.1	100	38
4907.58	V	48	-10.1	37.9	78.5	0.010	0.785	37.832	37.047	33.7	100	303
7355.44	V	38.4	-8.6	29.8	30.9	0.010	0.309	37.832	37.523	41.8	100	38

Test Voltage : AC 240 V / 60Hz
Load : 450 ml Right Front

Meas- ured Fre- quency [MHz]	Pol- ar- ity	Meter Read- ing at 3 m [dBμV]	Factor [dB(1/ m)]	Emis- sion Level at 3 m [dBμV/ m]	Emis- sion Level at 3 m [μV/m]	K	Emis- sion Level at 300 m [μV/m]	Limits at 300 m [μV/m]	Margin for Limits at 300 m [μV/m]	Margin for Limits at 300 m [dB]	Height [cm]	Angle [deg.]
4919.54	H	51.5	-10.1	41.4	117.5	0.010	1.175	37.832	36.657	30.2	100	312
7365.67	H	46	-8.6	37.4	74.1	0.010	0.741	37.832	37.091	34.2	100	46
4914.92	V	55.3	-10.1	45.2	182.0	0.010	1.820	37.832	36.012	26.4	100	347
7376.00	V	43.3	-8.6	34.7	54.3	0.010	0.543	37.832	37.289	36.9	100	3

Photographs of the Test Set-up

The EUT(with the peripherals) was placed on a 0.8 m high nonconductive turntable along.

The turntable was separated from the antenna by a distance of 3 m.

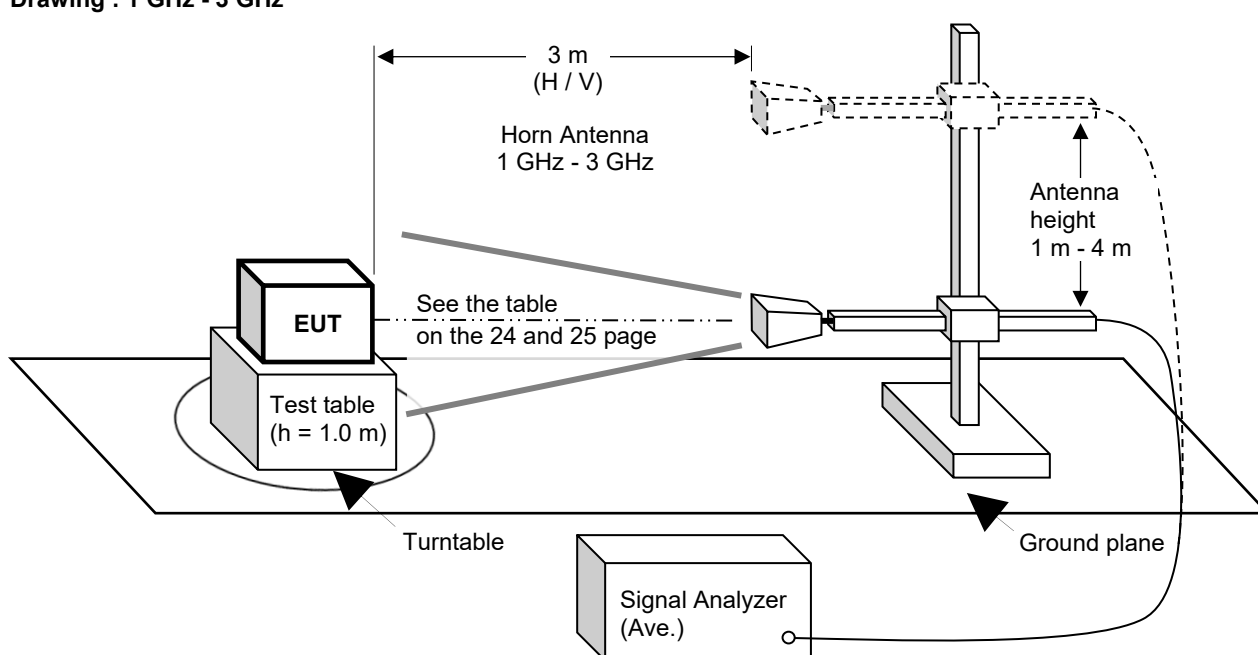
Cables for peripherals were placed in a position to produce maximum emissions as determined by experimentation, and the operation mode was selected for maximum emission.

Pre-check: Radiated emission levels (Ave. value) which have small margin for the regulation were measured by means of spectrum analyzer changing antenna movement (1 m - 4 m) and table rotation (0 degree - 360 degree).
Final measurement: Emission levels (Ave. value) were measured by means of the signal analyzer (1 GHz - 25 GHz) referring

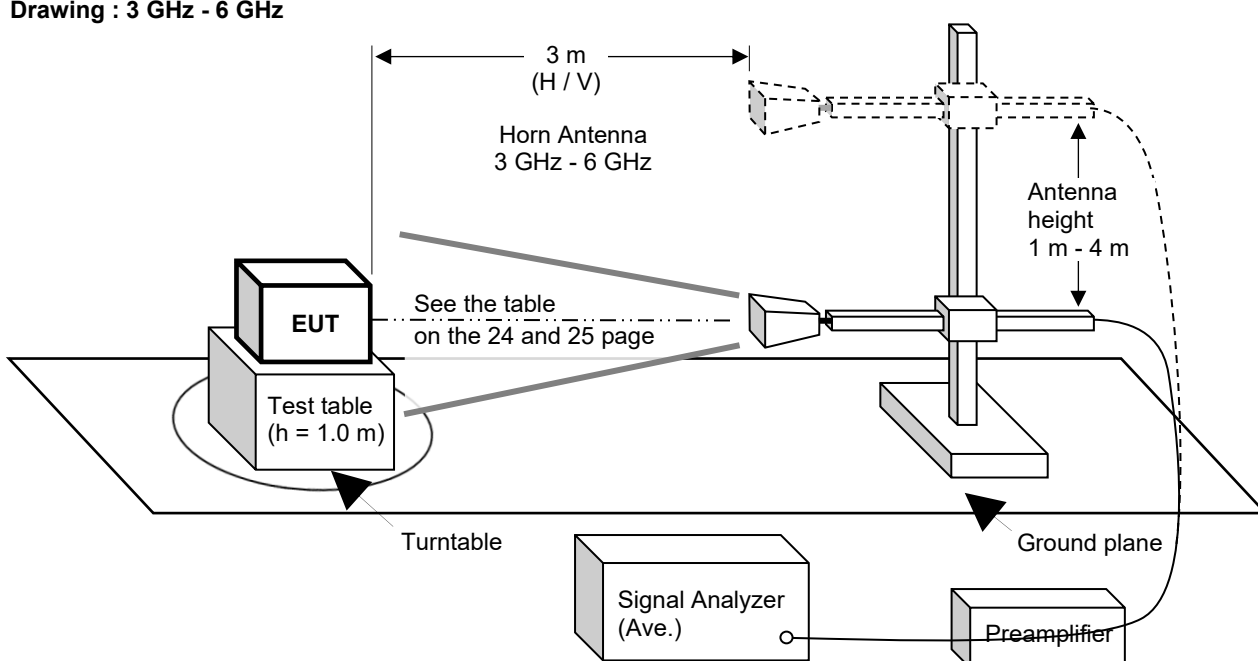
the result of Pre-check.

The emission level from the EUT were maximized changing conditions; Turn table rotation, Antenna height, azimuth and arrangement of the EUT.

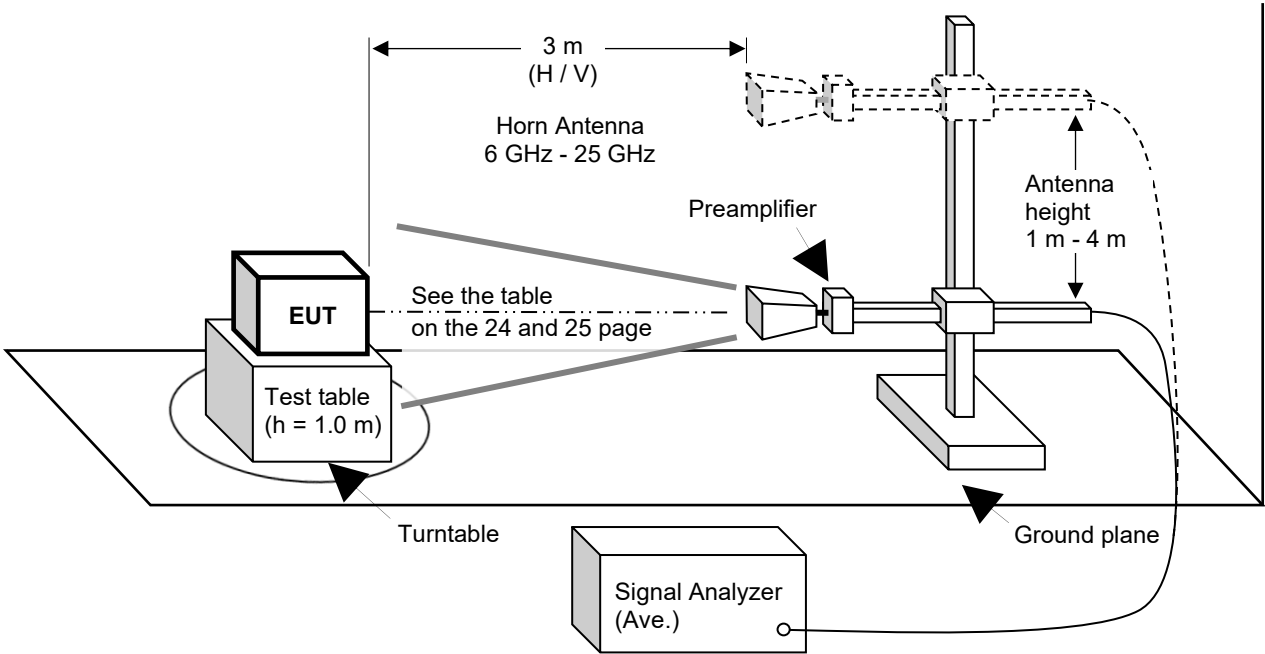
Drawing : 1 GHz - 3 GHz



Drawing : 3 GHz - 6 GHz



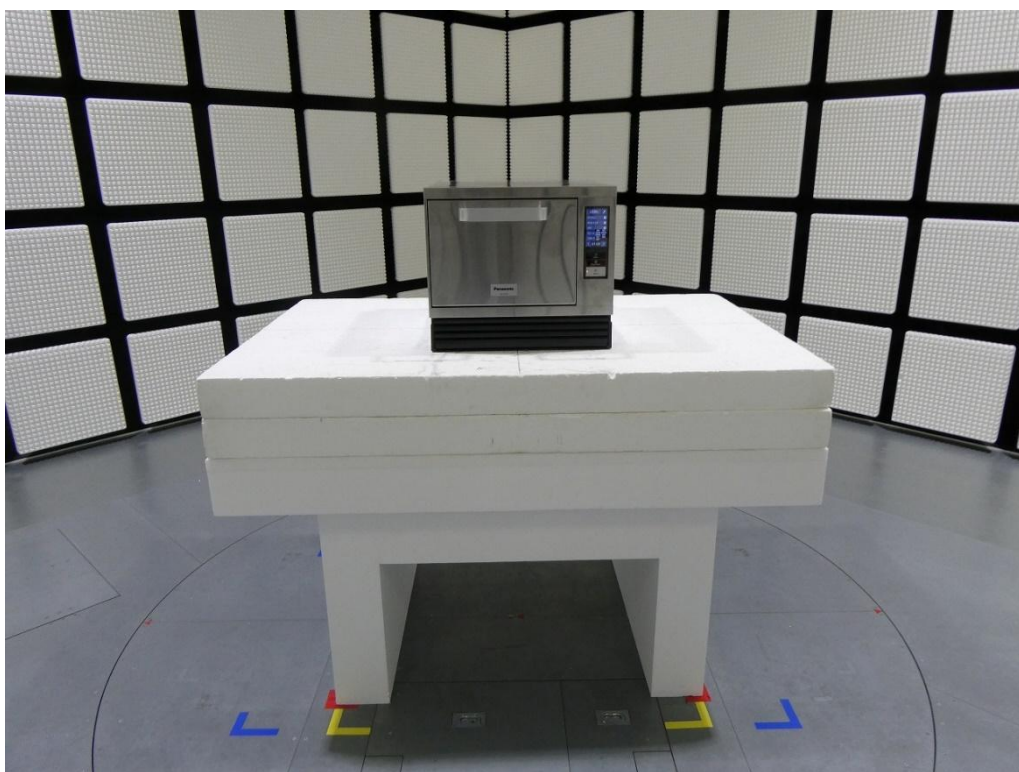
Drawing : 6 GHz - 25 GHz



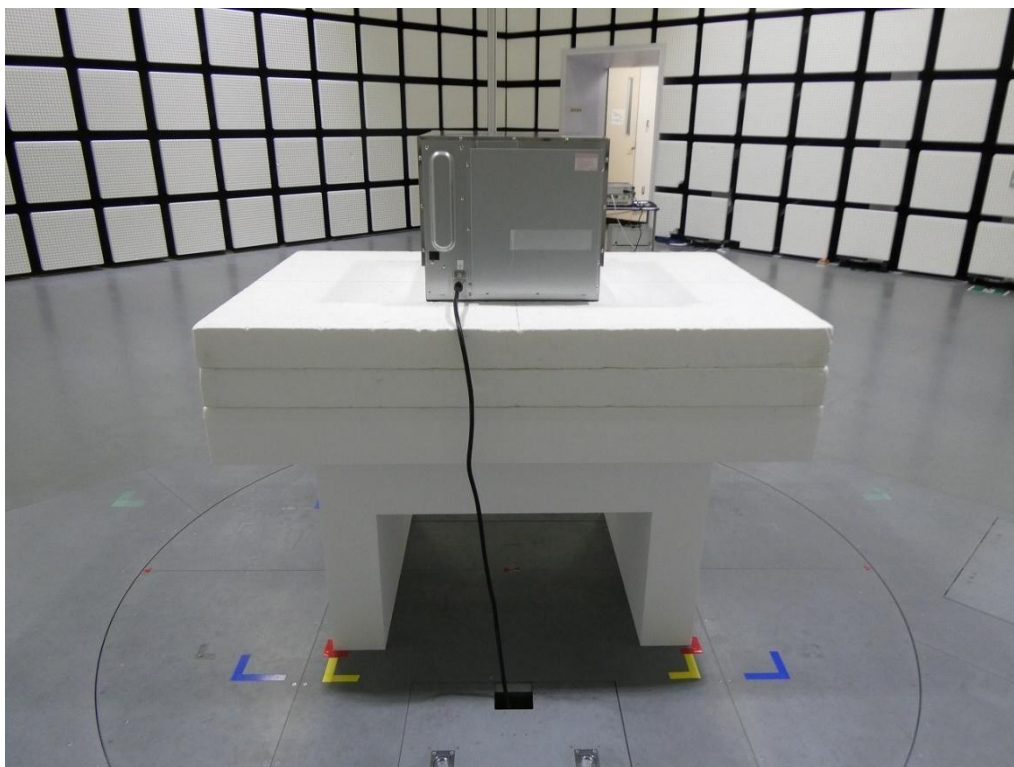
AC 208 V / 60 Hz Worst angle



AC 208 V / 60 Hz Worst angle



Front View



Rear View

Operating Frequency measurements (OST MP-5, 4.5)

The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1500 ml water load was placed in the center of the oven was operated at maximum output power. The fundamental operating frequency was monitored until the water load was reduced to 20 % of the original load.

Test Location:

- 10 m anechoic chamber
- 3 m anechoic chamber

Lists of the Test Equipment:

Refer to Appendix A

- AC 208 V / 60 Hz

Maximum frequency variation

Variation of frequency with time, using the Load

2.4752 GHz – 2.4522 GHz (1500 ml ~ 300 ml / Load)

Date: 1 August, 2025

Environment: 24 deg.C / 73 % / 975 hPa

	Time (minutes)	Frequency (GHz)
100%	0	2.45424
	2	2.45220
	4	2.47312
	6	2.45284
	8	2.45392
	10	2.47124
	12	2.46982
	14	2.45526
	16	2.47110
	18	2.47234
	20	2.47366
	22	2.47218
	24	2.47290
	26	2.47386
	28	2.47262
	30	2.47406
	32	2.47394
	34	2.47360
	36	2.47414
	38	2.47402
	40	2.45596
	42	2.47402
	44	2.47524
	46	2.45556
20%	48	2.47508
	50	2.45508

- AC 240 V / 60 Hz
Maximum frequency variation
Variation of frequency with time, using the Load
2.4790 GHz – 2.4549 GHz (1500 ml ~ 300 ml / Load)

Date: 6 August, 2025
Environment: 21 deg.C / 56 % / 982 hPa

	Time (minutes)	Frequency (GHz)
100%	0	2.47904
	2	2.47458
	4	2.45674
	6	2.45714
	8	2.47314
	10	2.47352
	12	2.47218
	14	2.47284
	16	2.47174
	18	2.47454
	20	2.47370
	22	2.47334
	24	2.47458
	26	2.47408
	28	2.47434
	30	2.45682
	32	2.47470
	34	2.45672
	36	2.47410
	38	2.45782
	40	2.47486
	42	2.47286
	44	2.47294
	46	2.47664
	48	2.47454
20%	50	2.45486

Remarks: The LAN port is measured in a disconnected state.

Variation in Operating Frequency with Line Voltage (OST MP-5, 4.5)

The EUT was operated / warmed by at least 10 minutes of use with a 1500 ml water load at room temperature at the beginning of the test. Then the operating frequency was monitored as the input voltage was varied between 80 % and 125 % of the nominal rating.

Test Location:

- 10 m anechoic chamber

Lists of the Test Equipment:

Refer to Appendix A

• AC 208 V / 60 Hz

Variation of frequency for Line Voltage variation

2.47460 GHz – 2.45620 GHz (166.4 V ~ 260.0 V / 1500 ml Load)

EUT Warm-up Time: 10 minutes

Date: 6 August, 2025

Environment: 21 deg.C / 56 % / 982 hPa

input voltage (%)	Voltage (V)	Frequency (GHz)
80	166.4	2.45718
85	176.8	2.47460
90	187.2	2.45672
95	197.6	2.45620
100	208.0	2.47254
105	218.4	2.47330
110	228.8	2.47284
115	239.2	2.47284
120	249.6	2.47284
125	260.0	2.47370

• AC 240 V / 60 Hz

Variation of frequency for Line Voltage variation

2.47306 GHz – 2.47204 GHz (192.0 V ~ 300.0 V / 1500 ml Load)

EUT Warm-up Time: 10 minutes

Date: 6 August, 2025

Environment: 21 deg.C / 56 % / 982 hPa

input voltage (%)	Voltage (V)	Frequency (GHz)
80	192.0	2.47484
85	204.0	2.47442
90	216.0	2.47204
95	228.0	2.47306
100	240.0	2.47248
105	252.0	2.47350
110	264.0	2.47314
115	276.0	2.47382
120	288.0	*
125	300	*

* : Powered down for protection.

Remarks: The LAN port is measured in a disconnected state.

Appendix A Lists of the Test Equipment

Radiated Emission (9 kHz - 30 MHz : Electric Field)

Frequency range: 0.009 MHz - 30 MHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
EMI Test Receiver	ESW8	Rohde & Schwarz	103451	RCV0451	9 kHz - 8 GHz	17 December, 2024	31 December, 2025
Loop antenna	HFH2-Z2	Rohde & Schwarz	100014	ANT5063	9 kHz - 30 MHz	6 June, 2025	30 June, 2026

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Radiated Emission (Below 1 GHz : Electric Field)

Frequency range: 30 MHz - 1000 MHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
EMI Test Receiver	ESW8	Rohde & Schwarz	103451	RCV0451	9 kHz - 8 GHz	17 December, 2024	31 December, 2025
Biconical Antenna	VHA 9103 & BBA 9106	Schwarzbeck	9103-1847	ANT0510	30 MHz - 300 MHz	3 July, 2025	31 July, 2026
Logperiodic Antenna	VULP9118B	Schwarzbeck	00953	ANT0953	160 MHz - 1 GHz	3 July, 2025	31 July, 2026
Preamplifier	310N	SONOMA	243817	AMP0854	30 MHz - 1 GHz	8 April, 2024	30 April, 2026

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Radiated Emission (Above 1 GHz : Electric Field)

Frequency range: 1 GHz - 3 GHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY59070439	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	BBHA 9120D	Schwarzbeck	1632	ANT1632	1 GHz - 18 GHz	4 April, 2025	30 April, 2026

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Frequency range: 3 GHz - 6 GHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY590704 39	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	BBHA 9120D	Schwarzbeck	1632	ANT1632	1 GHz - 18 GHz	4 April, 2025	30 April, 2026
Preamplifier	TPA0108-40	Toyo Corporation	0452	AMP0722	1 GHz - 8 GHz	5 June, 2025	30 June, 2027
Highpass Filter	WHKX 10-2700-3000-18000-40SS	Wainwright	SN 101	FIL0105	3 GHz - 18 GHz	5 June, 2025	30 June, 2027

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Frequency range: 6 GHz - 18 GHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY590704 39	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	HAP06-18A	Schwarzbeck	-	ANT5059	6 GHz - 18 GHz	14 August, 2024	31 August, 2025
Preamplifier	HAP06-18A (Preamplifier)	TOYO Corporation	-	AMP5032	6 GHz - 18 GHz	14 August, 2024	31 August, 2025

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Frequency range: 18 GHz - 26.5 GHz

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY590704 39	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	HAP18-26A	Schwarzbeck	-	ANT5060	18 GHz - 26.5 GHz	14 August, 2024	31 August, 2025
Preamplifier	HAP18-26A (Preamplifier)	TOYO Corporation	-	AMP5033	18 GHz - 26.5 GHz	14 August, 2024	31 August, 2025

Device	Model No.	Manufacturer	Version	Reg. No.
Software	ES10/RE	TOYO Corporation	2024.10.001	S-SW049-1

Operating Frequency measurements (OST MP-5, 4.5)

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY590704 39	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	BBHA 9120D	Schwarzbeck	1632	ANT1632	1 GHz - 18 GHz	4 April, 2025	30 April, 2026

Variation in Operating Frequency with Line Voltage (OST MP-5, 4.5)

Device	Model No.	Manufacturer	Serial No.	Reg. No.	Freq. range	Last Cal.	Next Cal.
Signal Analyzer	N9010B	Keysight Technologies	MY59070439	SPA0439	9 kHz - 40 GHz	10 December, 2024	31 December, 2025
Horn antenna	BBHA 9120D	Schwarzbeck	1632	ANT1632	1 GHz - 18 GHz	4 April, 2025	30 April, 2026

Thermo-hygrometer

Test Room	Device	Model No.	Manufacturer	Serial. No.	Reg. No.	Last Cal.	Next Cal.
10 m anechoic chamber	Thermo-hygrometer	TR-73U	T&D Corporation	F8066D71	MTR0824	4 April, 2024	30 April, 2026
3 m anechoic chamber	Thermo-hygrometer	TR-73U	T&D Corporation	F8066BC1	MTR0819	5 April, 2024	30 April, 2026

Appendix B External Photographs

Front View



Rear View



Left View



Right View



Top View



Bottom View



Front View with Door Open

