# Report on the EMC Testing of:

KYOCERA Corporation Tablet, Model: KC-T303DT

# TÜV

# In accordance with FCC Part 15 Subpart B Class B

Prepared for: KYOCERA Corporation

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# COMMERCIAL-IN-CONFIDENCE

Document Number: JPD-TR-23006-1

SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Hiroaki Suzuki	Deputy Manager of RF Group	Approved Signatory	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Japan Ltd. document control rules.

#### **EXECUTIVE SUMMARY - Result: Complied**

A sample of this product was tested and the result above was confirmed in accordance with FCC Part 15 Subpart B (Applied the deviations mentioned in section 1.4 of this document and performed only the test items mentioned in section 1.5.)





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# Additional signatures required by FCC 47 CFR Part 2, § 2.938 (b) (10)

# Signatures of the individuals responsible for testing the product

#### **ENGINEERING STATEMENT**

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC Part 15 Subpart B. The sample tested was found Complied compliant with the requirements defined in the applied rules.

NAME	RESPONSIBLE FOR	SIGNATURE
Hiroomi Tsuchiya	Testing	
Chiaki Kanno	Testing	



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# 1 Summary of Test

# 1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-23006-0	First Issue	23-May-2023
JPD-TR-23006-1	This test report supersedes JPX-TR-23006-0. Addition AC adapter: Model: ADT306	Refer to the cover page

# 1.2 Standards

FCC Part 15 Subpart B

### 1.3 Measurement standards

ANSI C63.4 2014

#### 1.4 Deviation from standards

None

# 1.5 List of applied test(s) of the EUT

Regarding judgment of conformance to Emission test, a value of measurement uncertainty was not taken in account.

Test Name	Classification of EUT	Test	Worst Point (Margin)	Result	Remarks
Conducted emission at mains port	Class B	Applied	L2 0.172 MHz QP 4.4 dB	Pass	-
Radiated emission (below 1 GHz)	Class B	Applied	MP4 + USB Read with PC and ADP and USB mode V 131.705 MHz QP 8.3 dB	Pass	-
Radiated emission (above 1 GHz)	Class B	Applied	Out Camera with ADP and Earphone and USB mode V 5422.974 MHz AV 15.3 dB	Pass	-



#### 1.6 Test information

EUT, FCC ID: JOYEB1080, has been granted on Dec.22.2021.

Report No: JPX-TR-23006-0

Purpose of test is Class I Change.

Change: Change of memory.

Test was performed to the worst mode in accordance with the judgment of the applicant.

Only the following test was performed in accordance with the judgment of the applicant.

- Radiated emission (below 1 GHz)
- Radiated emission (above 1 GHz)

For other tests, refer to the original test report: JPD-TR-21162-0.

# Report No: JPX-TR-23006-1

Purpose of test is Class II Change.

Change: Add AC adapter (EUT accessory)

The AC adapter (Company: TENPAO, Model No. ADT306) used in the RE test and the AC adapter (Company: KYOCERA, Model No. ADT 306) used in the CEA test are the same.

Only the following test was performed in accordance with the judgment of the applicant.

- Conducted emission

The following EMC test conditions were applied based on the conditions specified by the applicant.

- Tested supply voltage and supply frequency
- Operation mode

Test was performed to the worst mode in accordance with the judgment of the applicant.

### 1.7 Test set up

Table-top

# 1.8 Test period

25-April-2023 - 26-April-2023 13-January-2024 - 13-January-2024



# **2** Equipment Under Test

All information in this chapter was provided by the applicant.

#### 2.1 EUT information

Applicant KYOCERA Corporation

Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku, Yokohama-shi,

Kanagawa, 224-8502 Japan

Phone: +81-45-943-6253 Fax: +81-45-943-6314

Equipment Under Test (EUT) Tablet

Model number KC-T303DT

Serial number No.1 (1080A001237)

1080FCCEMC1

Authorization JOYEB1080

Number of sample(s) 1

EUT condition Pre-production

Maximum frequency 2300 MHz

Power rating AC 100-240 V, 50/60 Hz, 0.3 A

Size (W)  $260 \times (D) 169 \times (H) 10.2 \text{ mm}$ 

JPX-TR-23006-0:

Hardware version Pre-Production

Software version 1.025JS Firmware version N/A

JPX-TR-23006-1:

Hardware version Pre-Production

Software version 1.025JS Firmware version N/A

#### 2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

Modification State	Description of Modification	Modification fitted by	Date of Modification
KC-T303DT, S/N: No.1 (1080A001237)			
0	As supplied by the applicant	Not Applicable	Not Applicable
KC-T303DT, S/N: 1080FCCEMC1			
0	As supplied by the applicant	Not Applicable	Not Applicable



# 2.3 Variation of family model(s)

# 2.3.1 List of family model(s)

Not applicable

### 2.3.2 Reason for selection of EUT

Not applicable

#### 2.4 Operation mode

Radiated emission (blow 1 GHz) Radiated emission (above 1 GHz)

- 1. MP4 + USB Read with PC and ADP and USB mode
- i) Power ON
- ii) EUT connects to PC via USB cable
- iii) Read / write of MP4 moving picture data
- iv) Execution of Color Bar moving picture data
- 2. Out Camera with ADP and Earphone and USB mode
- i) Power ON
- ii) Record

# **Conducted emission**

- 3. MP4(No earphone) and USB Read with PC mode
- i) Power ON
- ii) EUT connects to PC via USB cable
- iii) Read / write of MP4 moving picture data
- iv) Execution of Color Bar moving picture data



# 3 Configuration of Equipment

Numbers assigned to equipment or cables in "3.1 Equipment(s) used" and "3.2 Cable(s) used" correspond to numbers in "3.3 System configuration".

Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

# 3.1 Equipment used [Date of test: 25, 26-April-2023]

No.	Equipment	Company	Model No.	Serial No.	FCC ID /DoC	Remarks
EUT1	Tablet	KYOCERA	KC-T303DT	No.1 (1080A001237)	JOYEB1080	EUT
ACC1	EMR Pen	Wacom	CP-903E- 26B-2	N/A	N/A	Accessory
AE1	AC adapter	TENPAO	ADT306	N/A	N/A	*1
AE2	Earphone	N/A	N/A	N/A	N/A	-
AE3	Personal Computer	Lenovo	4334	CB07410173	DoC	*2
AE4	AC adapter	Lenovo	CPA-A065	11S36001943ZZ200 11I16S	N/A	*2

<sup>\*1:</sup> AC adapter is connected to keep operating.

# 3.2 Cable(s) used [Date of test: 25, 26-April-2023]

No.	Cable	Length (m)	Shield	EUT accessory Ferrite core	Remarks
а	DC cable	1.2	No	=	-
b	Earphone cable	0.75	No	-	-
С	USB cable	1.0	Yes	-	-
d	DC cable for PC AC adapter	1.8	No	-	*1
е	AC power cord for PC AC adapter	1.0	No	-	*1

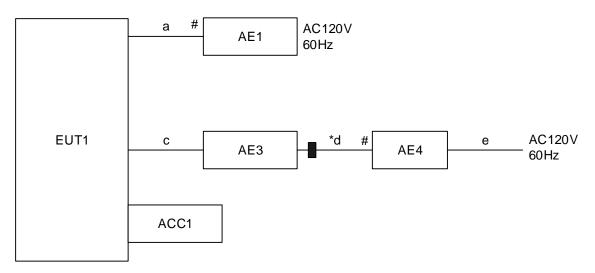
<sup>\*1:</sup> The property of TÜV SÜD Japan was used.

<sup>\*2:</sup> The property of TÜV SÜD Japan was used.



# 3.3 System configuration [Date of test: 25, 26-April-2023]

1. MP4 + USB Read with PC and ADP and USB mode

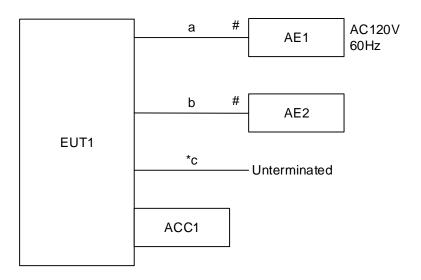


: Bundled excess cable

# : Un-detachable cable

: Ferrite core

2. Out Camera with ADP and Earphone and USB mode



\* : Bundled excess cable

# : Un-detachable cable



# 3.4 Equipment used [Date of test: 13-January-2024]

No.	Equipment	Company	Model No.	Serial No.	FCC ID /DoC	Remarks
EUT1	Tablet	KYOCERA	EB1080	1080FCCEMC1	JOYEB1080	EUT
EUT2	AC adapter	KYOCERA	ADT306	HLA	N/A	EUT, Accessory
ACC1	EMR Pen	Wacom	CP-903E-35B-2	No.1	N/A	Accessory
AE1	Personal Computer	NEC	PC- VK24LLNCMTRB	13001261A	N/A	*1
AE2	AC adapter	NEC	ADP-90YB E	0Z04007DB	N/A	*1

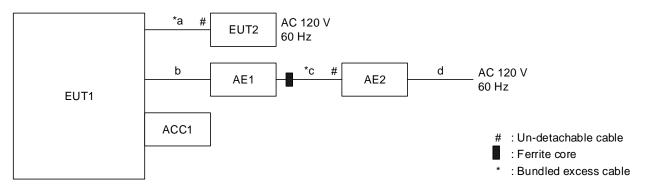
<sup>\*1:</sup> The property of TÜV SÜD Japan was used.

# 3.5 Cable(s) used [Date of test: 13-January-2024]

No.	Cable	Length (m)	Shield	EUT accessory Ferrite core	Remarks
а	DC cable	1.15	No	-	-
b	USB Type C cable	1.0	Yes	•	-
С	DC cable	0.9	No	-	*1
d	AC power cord	1.8	No	-	*1

<sup>\*1:</sup> The property of TÜV SÜD Japan was used.

# 3.6 System configuration [Date of test: 13-January-2024]





## 4 Test Result

### 4.1 Conducted emission at mains port

#### 4.1.1 Measurement condition

EUT is placed on a non-conducting table for table-top equipment or on insulation material for a floor-standing equipment. In addition, a table-top equipment is located 0.4 m to a metal reference plane.

Line Impedance Stabilization Network (LISN) is placed 0.8 m away from the EUT. The power code of the EUT is connected to LISN and its excess part is bundled in the center. The length of bundling is 0.3-0.4 m. A power code of a peripheral is connected to LISN and terminated into 50  $\Omega$ .

Excess cables between equipment are bundled in the center. The length of bundling is 0.3-0.4 m.

Where LISN cannot be applied, the test is performed using a voltage probe.

After overall frequency range is investigated with spectrum analyzer using peak detector, measurements are performed with test receiver in setting to the defined values.

Items	Description	
Frequency range	0.15 MHz-30 MHz	
Test place	10 m Semi-Anechoic Chamber No. 1	
EUT was placed on	Styrene foam table (W) 2.0 × (D) 1.0 × (H) 0.8 m	
Metal reference plane	Vertical	
Test receiver setting	Detector: Quasi-peak, Average	
-	Bandwidth: 9 kHz	
Line Impedance Stabilization	Specification: 50 Ω/50 μH	
Network (LISN)	Distance from EUT: 0.8 m	

#### 4.1.2 Calculation method

Emission Level = Reading + Factor\* Margin = Limit – Emission Level

\*Note: Factor = LISN factor + Cable system loss + ATT. loss

Example)

Limit @ 6.770 MHz: 60.0 dBµV (Quasi-peak)

50.0 dBµV (Average)

Quasi-peak Reading = 41.2 dBµV Factor = 10.3 dB

Emission level =  $41.2 + 10.3 = 51.5 \text{ dB}\mu\text{V}$ 

Margin =  $60.0 - 51.5 = 8.5 \, dB$ 

Average Reading =  $35.0 \text{ dB}\mu\text{V}$  Factor = 10.3 dB

Emission level =  $35.0 + 10.3 = 45.3 \text{ dB}\mu\text{V}$ 

Margin = 50.0 - 45.3 = 4.7 dB



# 4.1.3 Test data and Configuration photographs

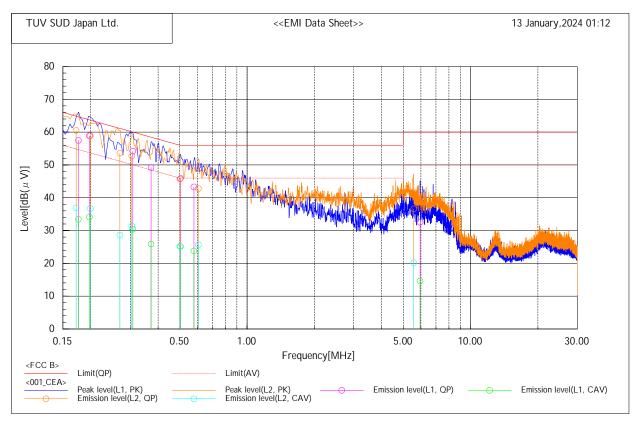
Operation mode	MP4(No earphone) and USB Read with PC mode
EUT	KC-T303DT, S/N: 1080FCCEMC1 - Modification State 0

Standard : FCC Part 15 Class B
Date of test : 13 January,2024 01:12

Operator : Chiaki Kanno

Temp, Hum, Atm : 20.2 [°C], 25.4 [%], 978 [hPa] Supply power : AC 120 V, 60 Hz, 1 phase

\*\*\*\*\*\* CONDUCTED EMISSION \*\*\*\*\*\*
[ 10m Semi-anechoic chamber #1 ]



# Final Result

	Frequency	Rea	ading	Factor	Le	evel	Limit		Margin		
Line	NAL 1-	dB	dB(uV)		dE	dB(uV)		dB(uV)		dB	
	MHz	QP	CAV	dB	QP	CAV	QP	AV	QP	AV	
L1	0.176	47.0	22.9	10.5	57.5	33.4	64.7	54.7	7.2	21.3	
L1	0.197	48.5	23.7	10.4	58.9	34.1	63.7	53.7	4.8	19.6	
L1	0.308	43.8	20.0	10.4	54.2	30.4	60.0	50.0	5.8	19.6	
L1	0.372	38.8	15.5	10.4	49.2	25.9	58.5	48.5	9.3	22.6	
L1	0.504	35.5	14.7	10.4	45.9	25.1	56.0	46.0	10.1	20.9	
L1	0.578	32.9	13.4	10.4	43.3	23.8	56.0	46.0	12.7	22.2	
L1	5.939	21.5	3.6	11.0	32.5	14.6	60.0	50.0	27.5	35.4	
L2	0.172	50.0	26.4	10.5	60.5	36.9	64.9	54.9	4.4	18.0	
L2	0.199	48.4	26.2	10.5	58.9	36.7	63.7	53.7	4.8	17.0	
L2	0.270	43.2	18.2	10.4	53.6	28.6	61.1	51.1	7.5	22.5	
L2	0.305	42.3	21.0	10.4	52.7	31.4	60.1	50.1	7.4	18.7	
L2	0.501	35.3	14.8	10.4	45.7	25.2	56.0	46.0	10.3	20.8	
L2	0.606	32.4	15.3	10.4	42.8	25.7	56.0	46.0	13.2	20.3	
L2	5.568	25.6	9.2	11.0	36.6	20.2	60.0	50.0	23.4	29.8	



# 4.2 Radiated emission (below 1 GHz)

#### 4.2.1 Measurement condition

Frequency range 30 MHz-1000 MHz

Test place 10 m Semi-Anechoic Chamber No. 2

EUT was placed on Styrene foam table (W)  $2.0 \times (D) 1.0 \times (H) 0.8 \text{ m}$ 

Axis 0°-360°

Antenna Distance from EUT: 3 m

Height: 1-4 m

Polarity: Horizontal/Vertical

Test receiver setting Detector: Quasi-peak

Bandwidth: 120 kHz

EUT is placed on a non-conducting table for table-top equipment or on insulation material for a floor-standing equipment. The non-conducting table or the insulation material is placed on a rotating turn table.

Excess cables between equipment are bundled in the center. The length of bundling is 0.3-0.4 m.

An antenna is adjusted between 1-4 m in height and varied its polarization (horizontal and vertical), and the EUT azimuth is varied by the rotating turntable 0 to 360 degrees.

After overall frequency range is investigated with spectrum analyzer using peak detector, measurements are performed with test receiver in setting to the defined values.

#### 4.2.2 Calculation method

Emission level = Reading + Factor\* Margin = Limit - Emission level

\*Note: Factor = Antenna factor + Cable system loss + ATT. loss - Amplifier Gain

Example)

Limit @ 350.0 MHz: 37.0 dBµV/m (Quasi-peak)

Quasi-peak Reading = 41.1 dBµV Factor = -11.8 dB/m

Emission level =  $41.1 - 11.8 = 29.3 \text{ dB}\mu\text{V/m}$ 

Margin = 37.0 - 29.3 = 7.7 dB



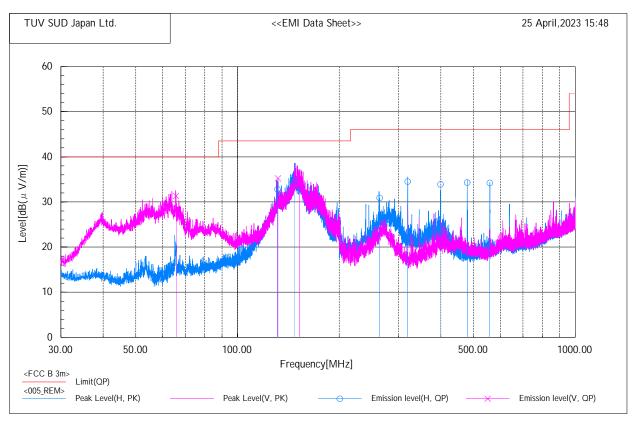
# 4.2.3 Test data and Configuration photographs

Operation mode	MP4 + USB Read with PC and ADP and USB mode
EUT	KC-T303DT, S/N: No.1 (1080A001237) - Modification State 0

Standard : FCC Part 15 Class B
Date of test : 25 April,2023 15:48
Operator : Hiroomi Tsuchiya

Temp, Hum, Atm : 18.2 [°C], 22.9 [%], 998 [hPa] Supply power : AC 120 V, 60 Hz, 1 phase

\*\*\*\*\*\* RADIATED EMISSION \*\*\*\*\*\*\*
[ 10m Semi-anechoic chamber #2 ]



#### **Final Result**

Filiai Nesuit								
Frequency		Reading	Factor	Level	Limit	Margin	Height	Angle
MHz	Pol.	dB(μV)	dD(1/m)	dB(μV/m)	dB(μV/m)	dB	000	
IVITZ		QP	dB(1/m)	QP	QP	QP	cm	deg
65.822	V	48.5	-17.2	31.3	40.0	8.7	100.0	213.0
131.360	Н	47.2	-14.4	32.8	43.5	10.7	253.0	262.0
131.705	V	49.5	-14.3	35.2	43.5	8.3	100.0	212.0
147.562	Н	48.3	-13.6	34.7	43.5	8.8	230.0	267.0
152.494	V	47.8	-13.4	34.4	43.5	9.1	124.0	225.0
263.596	Н	46.3	-15.4	30.9	46.0	15.1	100.0	184.0
319.174	Н	48.0	-13.5	34.5	46.0	11.5	100.0	163.0
398.943	Н	45.6	-11.7	33.9	46.0	12.1	100.0	105.0
478.714	Н	44.2	-9.9	34.3	46.0	11.7	100.0	168.0
558.488	Н	43.1	-8.9	34.2	46.0	11.8	189.0	155.0



# 4.3 Radiated emission (above 1 GHz)

#### 4.3.1 Measurement condition

Frequency range 1000 MHz-11500 MHz

Test place 10 m Semi-Anechoic Chamber No. 2

EUT was placed on Styrene foam table (W)  $2.0 \times (D) 1.0 \times (H) 0.8 \text{ m}$ 

Axis 0°-360°

Antenna Distance: 405 cm

Height: 100-400 cm

Polarity: Horizontal/Vertical

Test receiver setting Detector: Peak, Average

Bandwidth: 1 MHz

EUT is placed on a styrene form table for table-top equipment or on insulation material for a floor-standing equipment. The styrene form table or the insulation material is placed on a rotating turn table.

Excess cables between equipment are bundled in the center. The length of bundling is 0.3-0.4 m.

Absorbers are placed between the EUT and an antenna.

The antenna is adjusted between 1-4 m in height and varied its polarization (horizontal and vertical), and the EUT azimuth is varied by the rotating turntable 0 to 360 degrees. Where height of the antenna is changed, its angle is also adjusted to the position of the EUT.

After overall frequency range is investigated with spectrum analyzer using peak detector, measurements are performed with test receiver in setting to the defined values.

The antenna is positioned from the test volume that was predetermined by the site VSWR measurement. Since this predetermined test volume is different from maximum circumference where the EUT and the peripheral devices are actually placed, the measurement distance conversion factor is added to the measurement data.

# Antenna 3 dB beamwidth

Antenna: 3117

Frequency (GHz)	θ3 dB (°)	3 dB beamwidth w (m)		
1.0	82	5.22		
2.0	56	3.19		
3.0	61	3.53		
4.0	50	2.80		
5.0	53	2.99		
6.0	50	2.80		

Measurement distance: d = 3.0 mW = 2 × d × tan (0.5 ×  $\theta$ 3 dB)



# 4.3.2 Calculation method

Emission level = Reading + CF\*

Margin = Limit - Emission level

\*Note: CF (correction factor) = TF (Transducer Factor; Antenna factor) + PF (Path Factor; Cable system loss + ATT. loss - Amplifier Gain) +

DF (Distance correction Factor)

Example)

Limit @ 1100.0 MHz: 70.0 dBµV/m (Peak)

50.0 dBµV/m (Average)

Measurement distance: 3.25 m

Distance conversion Factor: 20 log (3.25m/3.0m) = 0.7 dB

Peak Reading =  $50.2 \text{ dB}\mu\text{V}$  CF = 2.4 dB

Emission level =  $50.2 + 2.4 = 52.6 \text{ dB}\mu\text{V/m}$ 

Margin = 70.0 - 52.6 = 17.4 dB

Average Reading =  $32.0 \text{ dB}\mu\text{V}$  CF = 2.4 dB

Emission level =  $32.0 + 2.4 = 34.4 \text{ dB}\mu\text{V/m}$ 

Margin = 50.0 - 34.4 = 15.6 dB



# 4.3.3 Test data and Configuration photographs

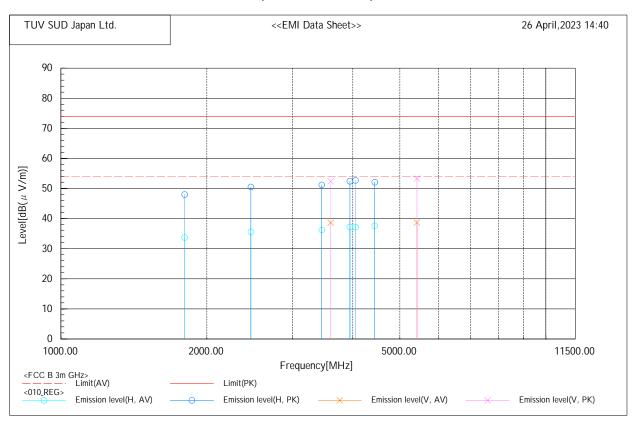
Operation mode	Out Camera with ADP and Earphone and USB mode
EUT	KC-T303DT, S/N: No.1 (1080A001237) - Modification State 0

Standard : FCC Part 15 Class B
Date of test : 26 April,2023 14:40
Operator : Hiroomi Tsuchiya

Temp, Hum, Atm : 20.9 [°C], 25.9 [%], 980 [hPa] Supply power : AC 120 V, 60 Hz, 1 phase

Antenna distance (cm) : 405 Antenna height (cm) : 100 - 400

\*\*\*\*\*\* RADIATED EMISSION \*\*\*\*\*\*\*
[ 10m Semi-anechoic chamber #2 ]



# **Final Result**

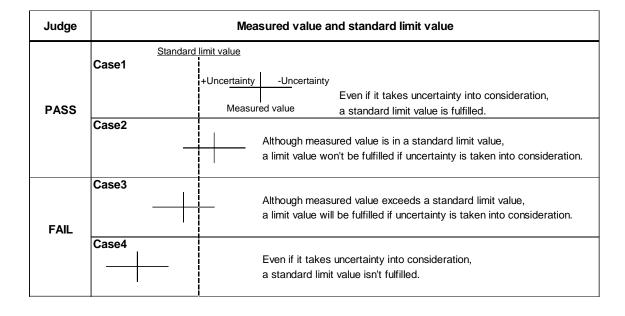
i iliai Nesuit																
Frequency		Rea	ding		Fac	ctor		Le	vel	Lir	nit	Ma	rgin	Height	Angle	Tilt
N 41 1-	Pol.	dB(	μV)		dB(	1/m)		dΒ(μ	V/m)	dΒ(μ	V/m)	d	В	om	doa	dog
MHz		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK	cm	deg	deg
1799.991	Н	37.9	52.2	-4.2	30.3	-37.1	2.6	33.7	48.0	54.0	74.0	20.3	26.0	100.0	220.0	0.0
2464.988	Н	36.4	51.3	-0.8	32.3	-35.7	2.6	35.6	50.5	54.0	74.0	18.4	23.5	220.0	327.0	21.3
3450.984	Н	35.1	50.1	1.1	32.6	-34.1	2.6	36.2	51.2	54.0	74.0	17.8	22.8	184.0	181.0	15.3
3599.982	٧	36.9	50.7	1.7	33.0	-33.9	2.6	38.6	52.4	54.0	74.0	15.4	21.6	351.0	324.0	35.5
3943.981	Н	34.0	49.2	3.2	33.9	-33.3	2.6	37.2	52.4	54.0	74.0	16.8	21.6	234.0	221.0	23.6
4049.980	Н	33.8	49.4	3.3	33.9	-33.2	2.6	37.1	52.7	54.0	74.0	16.9	21.3	314.0	304.0	33.9
4436.979	Н	33.7	48.2	3.9	33.8	-32.5	2.6	37.6	52.1	54.0	74.0	16.4	21.9	235.0	36.0	23.4
5422.974	V	32.9	47.5	5.8	34.5	-31.3	2.6	38.7	53.3	54.0	74.0	15.3	20.7	100.0	29.0	0.0



# 5 Measurement Uncertainty

The reported measurement uncertainty is based on a value obtained by multiplying standard uncertainty by coverage factor of k=2, and a level of confidence becomes 95 %.

Item	Parameter	<i>U</i> lab	<i>U</i> cispr
Conducted Emission, V-AMN	9 kHz to 150 kHz	± 3.7 dB	± 3.8 dB
Conducted Emission, V-AMN	150 kHz to 30 MHz	± 3.3 dB	± 3.4 dB
Conducted Emission, Δ-AN	150 kHz to 30 MHz	± 4.9 dB	-
Conducted Emission, AN	150 kHz to 30 MHz	± 3.3 dB	-
Conducted Emission, AAN	150 kHz to 30 MHz	± 4.8 dB	± 5.0 dB
Conducted Emission, Voltage Probe	9 kHz to 30 MHz	± 2.9 dB	± 2.9 dB
Conducted Emission, Current Probe	150 kHz to 30 MHz	± 2.9 dB	± 2.9 dB
Disturbance Power	30 MHz to 300 MHz	± 3.8 dB	± 4.5 dB
Radiated Emission	30 MHz to 1000 MHz	± 5.4 dB	± 6.3 dB
Radiated Emission	1 GHz to 6 GHz	± 5.2 dB	± 5.2 dB
Radiated Emission	6 GHz to 18 GHz	± 4.9 dB	± 5.5 dB
Radiated Emission	9 kHz to 30 MHz	± 3.8 dB	-





# **6** Laboratory Information

Testing was performed and the report was issued at:

# TÜV SÜD Japan Ltd. Yonezawa Testing Center

Address: 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan

Phone: +81-238-28-2881

# **Accreditation and Registration**

A2LA

Certificate #3686.03

**VLAC** 

Accreditation No.: VLAC-013

**BSMI** 

Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

ISED#: 4224A

VCCI Council

Registration number: A-0166



# **Appendix A. Test Equipment**

Conducted emission at mains port [Date of test: 13-January-2024]

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
EMI receiver	ROHDE&SCHWARZ	ESR7	101742	31-Jan-2024	18-Jan-2023
Line impedance stabilization network	Kyoritsu Technology Corporation	TNW-407F2	12-17-110-2	30-Jun-2024	22-Jun-2023
Line impedance stabilization network	Kyoritsu Technology Corporation	TNW-242F2	12-17-109-2	30-Jun-2024	22-Jun-2023
Coaxial cable	TUV SUD Zacta	N/A	N/A (S475)	30-Jun-2024	22-Jun-2023
Attenuator	HUBER+SUHNER	6810.01.A	N/A(S442)	29-Feb-2024	21-Feb-2023
Coaxial cable	FUJIKURA	5D-2W/4m	N/A(S349)	31-Oct-2024	18-Oct-2023
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	317672/4	31-Oct-2024	18-Oct-2023
Coaxial cable	HUBER+SUHNER	RG214/U/25m	N/A(S191)	31-Oct-2024	19-Oct-2023
50Ω terminator	TOYO Connector	BNC-TD 50Ω	N/A(S513)	31-Oct-2024	04-Oct-2023
Software	TOYO Technica	ES10/CE-AJ	Ver.2023.01.001	N/A	N/A

Radiated emission (below 1 GHz) [Date of test: 25-April-2023]

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date	
EMI receiver	ROHDE&SCHWARZ	ESR7	102352	31-Dec-2023	26-Dec-2022	
Biconical antenna	Schwarzbeck	VHBB9124/BBA9106	1145	30-Jun-2023	28-Jun-2022	
Log-periodic antenna	Schwarzbeck	VUSLP9111B	343	30-Sep-2023	07-Sep-2022	
Attenuator	TDC	TAT-43B-03	N/A(S396)	31-Oct-2023	26-Oct-2022	
Attenuator	TOYO Connector	NA-PJ-6	N/A(S549)	30-Sep-2023	28-Sep-2022	
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1m	SN MY20467/6	29-Feb-2024	20-Feb-2023	
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	811447/4	29-Feb-2024	20-Feb-2023	
Microwave cable	HUBER+SUHNER	SUCOFLEX106/10m	501942/6	29-Feb-2024	20-Feb-2023	
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	MY34424/4	29-Feb-2024	20-Feb-2023	
Preamplifier	SONOMA	310	400316	31-Mar-2024	16-Mar-2023	
10m Semi-anechoic	TOKIN	N/A	N/A(9005-	31-Oct-2023	02-Oct-2022	
Chamber	TOKIN	IN/PA	NSA3m/TTΦ3m)	31-001-2023	UZ-UCI-2UZZ	
Software	TOYO Corporation	ES10/RE-AJ	Ver.2021.10.001	N/A	N/A	

Radiated emission (above 1 GHz) [Date of test: 26-April-2023]

Radiated emission (above 1 GHz) [bate of test. 20-April-2025]										
Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date					
Spectrum analyzer	ROHDE&SCHWARZ	FSV40	101732	30-Apr-2024	07-Apr-2023					
Low Noise Pre Amplifier	TSJ	MLA-0118-J02-40	19326	31-Dec-2023	22-Dec-2022					
Double ridged guide antenna	ETS LINDGREN	3117	00224193	30-Apr-2023	27-Apr-2022					
Attenuator	HUBER+SUHNER	6803.17.B	N/A(2341)	31-Dec-2023	22-Dec-2022					
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1m	MY38347/4	29-Feb-2024	20-Feb-2023					
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	811446/4	29-Feb-2024	20-Feb-2023					
Microwave cable	HUBER+SUHNER	SUCOFLEX106/10m	501942/6	29-Feb-2024	20-Feb-2023					
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	MY34424/4	29-Feb-2024	20-Feb-2023					
Absorber	NEC TOKIN	TFA	N/A	N/A	N/A					
10m Semi-anechoic	TOKIN	N/A	N/A(9005-	31-Oct-2023	02-Oct-2022					
Chamber			SVSWR/TTΦ3m)		02-001-2022					
Software	TOYO Technica	ES10/RE-AJ	Ver.2021.10.001	N/A	N/A					