

Report on the EMC Testing of:

KYOCERA Corporation
Mobile Phone, Model: EB1220



In accordance with FCC Part 15 Subpart B Class B

Prepared for: KYOCERA Corporation
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COMMERCIAL-IN-CONFIDENCE

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SIGNATURE

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Takuya Osato	EMC Lab Technical Manager	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.)



Certificate #3686.03

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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
Akihiro Goto	Testing	as proxy
Nobuhiko Iwasawa	Testing	
Yuki Shindo	Testing	

Contents

1	Summary of Test	4
1.1	Modification history of the test report	4
1.2	Standards	4
1.3	Measurement standards	4
1.4	Deviation from standards	4
1.5	List of applied test(s) of the EUT	4
1.6	Test information.....	5
1.7	Test set up.....	5
1.8	Test period	5
2	Equipment Under Test.....	6
2.1	EUT information	6
2.2	Modification to the EUT	6
2.3	Variation of family model(s).....	7
2.4	Operation mode.....	7
3	Configuration of Equipment.....	8
3.1	Equipment used	8
3.2	Cable(s) used	8
3.3	System configuration.....	9
4	Test Result	10
4.1	Conducted emission at mains port.....	10
4.2	Radiated emission (below 1 GHz).....	14
4.3	Radiated emission (above 1 GHz)	20
5	Measurement Uncertainty	27
6	Laboratory Information.....	28
	Appendix A. Test Equipment.....	29

1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPX-TR-25199-0	First Issue	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 determination of conformity to the 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	AC 120 V 60 Hz MP4 with Display + DP Alt mode, S/N: EMC① (353379980000872) L1 0.594 MHz AV 6.9 dB	Pass	-
Radiated emission (below 1 GHz)	Class B	Applied	AC 120 V 60 Hz MP4 + USB Read with PC mode, S/N: EMC① (353379980000872) H 86.515 MHz QP 5.4 dB	Pass	-
Radiated emission (above 1 GHz)	Class B	Applied	AC 120 V 60 Hz MP4 with Display + DP Alt mode, EMC③ (353379980000948) H 5399.974 MHz AV 2.4 dB	Pass	-

1.6 Test information

This product supports two types of main memory Samsung (model number: KM9YC001XM-B627) and Micron (model number: MT30AZZZCD94TKXL-023 W.237).

All operating modes were performed with the EUT's Samsung main memory at the applicant's discretion, with the worst-case test being performed with the Micron main memory.

This product is a standalone wireless device. Therefore, the risk of spurious emissions generated by its wireless functions is considered covered by test results based on CFR Part 15C. Consequently, this report does not include spurious emissions generated by the wireless functions.

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

- Tested supply voltage and supply frequency
- Operation mode

1.7 Test set up

Table-top

1.8 Test period

05-November-2025 - 27-November-2025

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: +81-90-6100-4946
Equipment Under Test (EUT)	Mobile Phone
Model number	EB1220
Serial number	EMC① (353379980000872) EMC③ (353379980000948)
Authorization	JOYEB1220
Number of sample(s)	2
EUT condition	Pre-production
Maximum frequency	4200 MHz
Power rating	Battery: DC 3.87 V USB: DC 5.0~9.0V 2.0A
Size	(W) 75 × (D) 14.6 × (H) 157 mm
Hardware Version	0.070KB.0015.a
Firmware/Software Version	DMT1

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
EB1220, S/N: EMC① (353379980000872)			
0	As supplied by the applicant	Not Applicable	Not Applicable
EB1220, S/N: EMC③ (353379980000948)			
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

1. In Camera with ADP mode

i) Power ON

ii) Record

2. MP4 with Earphone mode

i) Power ON

ii) Execution of Color Bar moving picture data

3. MP4 + 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

4. MP4 with Display + DP Alt mode

i) Power ON

ii) Execution of Color Bar moving picture data

iii) Play on the display

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

No.	Equipment	Company	Model No.	Serial No.	Authorization	Remarks
EUT1	Mobile Phone	KYOCERA	EB1220	EMC① (353379980000872)	JOYEB1220	EUT*1
				EMC③ (353379980000948)	JOYEB1220	EUT*2
AE1	AC adapter	KDDI	0602PQA	N/A	N/A	*3
AE2	USB to AUDIO conversion adapter	RASTABA NANA	RHECC35D04BK	N/A	N/A	-
AE3	Earphone	N/A	N/A	N/A	N/A	-
AE4	Personal Computer	HP	TPN-C139 (HP 250 G8)	JPH207Y7Q2	DoC	*4
AE5	AC adapter	HP	TPN-DA16	0CDDFS0IO	N/A	*4
AE6	Monitor	DELL	P2725QE	CN-04YTK5-FCC00-52E-A9UB-A00	DoC	-

*1: Memory: Samsung (model number: KM9YC001XM-B627)

*2: Memory: Micron (model number: MT30AZZZCD94TKXL-023 W.237), used in "MP4 + USB Read with PC mode", "MP4 with Display + DP Alt mode"

*3: AC adapter is connected to keep operating.

*4: The property of TÜV SÜD Japan was used.

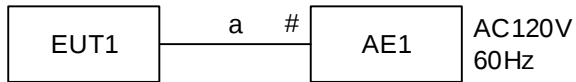
3.2 Cable(s) used

No.	Cable	Length (m)	Shield	EUT accessory Ferrite core	Remarks
a	DC cable	1.5	Yes	-	-
b	USB to AUDIO conversion cable	0.05	Yes	-	-
c	Earphone cable	0.7	No	-	-
d	USB cable	0.8	Yes	-	-
e	DC cable	1.8	No	-	*1
f	AC power cord	1.0	No	-	*1
g	AC power cord	1.8	No	-	-

*1: The property of TÜV SÜD Japan was used.

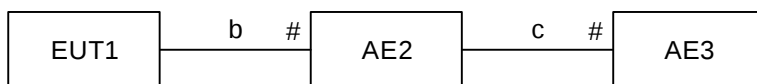
3.3 System configuration

1. In Camera with ADP mode



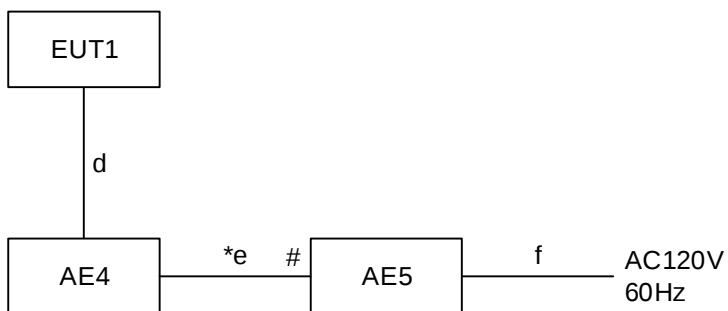
: Un-detachable cable

2. MP4 with Earphone mode



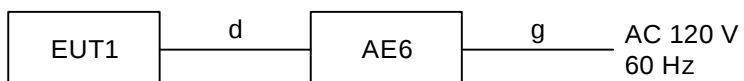
: Un-detachable cable

3. MP4 + USB Read with PC mode



: Un-detachable cable

4. MP4 with Display + DP Alt mode



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 cord 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 cord of a peripheral is connected to LISN and terminated into 50 Ω .

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
Line Impedance Stabilization Network (LISN)	Specification: 50 Ω /50 μ H Distance from EUT: 0.8 m
Test receiver setting	Detector: Quasi-peak, Average Bandwidth: 9 kHz

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 dB μ V (Quasi-peak)
50.0 dB μ V (Average)

Quasi-peak Reading = 41.2 dB μ V Factor = 10.3 dB
Emission level = 41.2 + 10.3 = 51.5 dB μ V
Margin = 60.0 - 51.5 = 8.5 dB

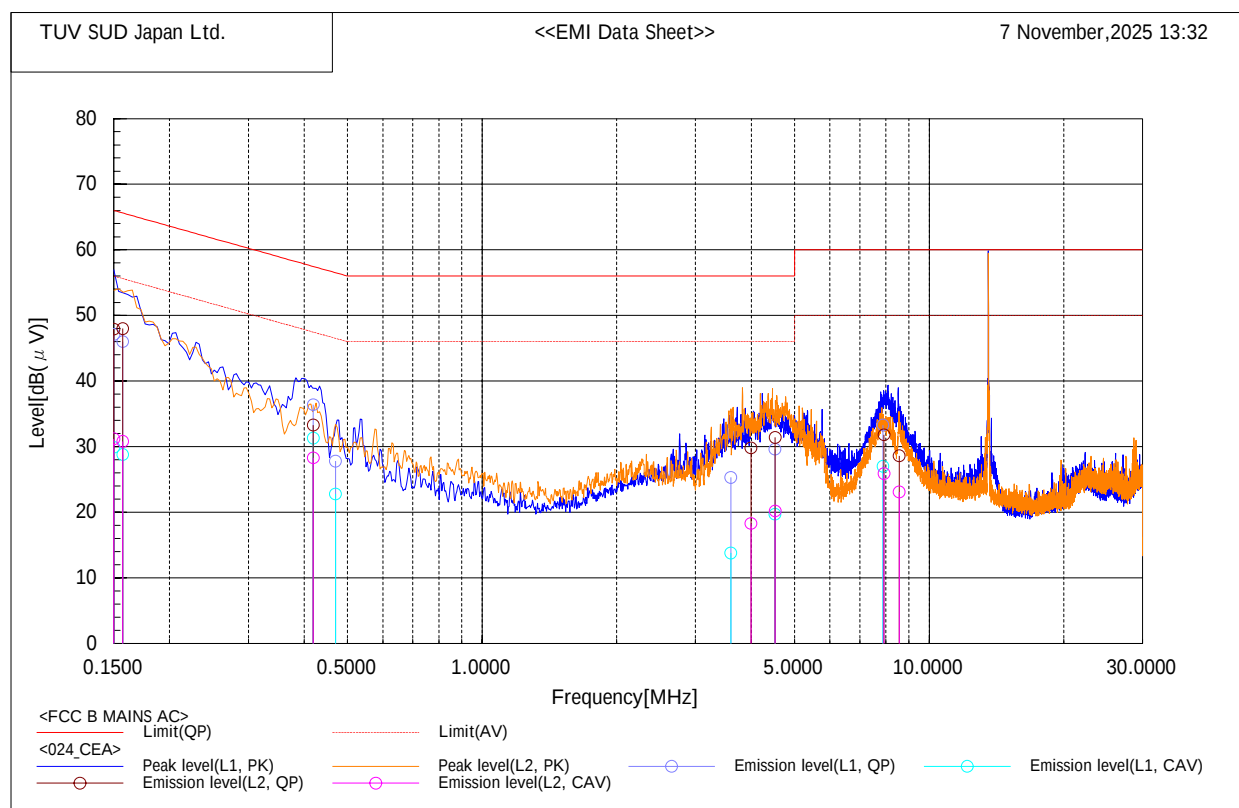
Average Reading = 35.0 dB μ V Factor = 10.3 dB
Emission level = 35.0 + 10.3 = 45.3 dB μ V
Margin = 50.0 - 45.3 = 4.7 dB

4.1.3 Test data

Operation mode	MP4 + USB Read with PC mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 7 November, 2025 13:32
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 22.0 [°C], 37.2 [%], 989 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



Final Result

Line	Frequency MHz	Reading dB(μV)		Factor dB	Level dB(μV)		Limit dB(μV)		Margin dB	
		QP	CAV		QP	CAV	QP	AV	QP	AV
L1	0.150	36.7	19.5	10.4	47.1	29.9	66.0	56.0	18.9	26.1
L1	0.157	35.6	18.4	10.4	46.0	28.8	65.6	55.6	19.6	26.8
L1	0.419	26.2	21.1	10.2	36.4	31.3	57.5	47.5	21.1	16.2
L1	0.470	17.5	12.5	10.3	27.8	22.8	56.5	46.5	28.7	23.7
L1	3.600	14.8	3.3	10.5	25.3	13.8	56.0	46.0	30.7	32.2
L1	4.518	19.0	9.1	10.6	29.6	19.7	56.0	46.0	26.4	26.3
L1	7.880	22.5	16.2	10.8	33.3	27.0	60.0	50.0	26.7	23.0
L2	0.150	37.5	20.8	10.4	47.9	31.2	66.0	56.0	18.1	24.8
L2	0.157	37.6	20.4	10.4	48.0	30.8	65.6	55.6	17.6	24.8
L2	0.419	23.1	18.1	10.2	33.3	28.3	57.5	47.5	24.2	19.2
L2	3.992	19.3	7.8	10.5	29.8	18.3	56.0	46.0	26.2	27.7
L2	4.522	20.8	9.6	10.6	31.4	20.2	56.0	46.0	24.6	25.8
L2	7.924	21.0	15.1	10.8	31.8	25.9	60.0	50.0	28.2	24.1
L2	8.566	17.8	12.3	10.8	28.6	23.1	60.0	50.0	31.4	26.9

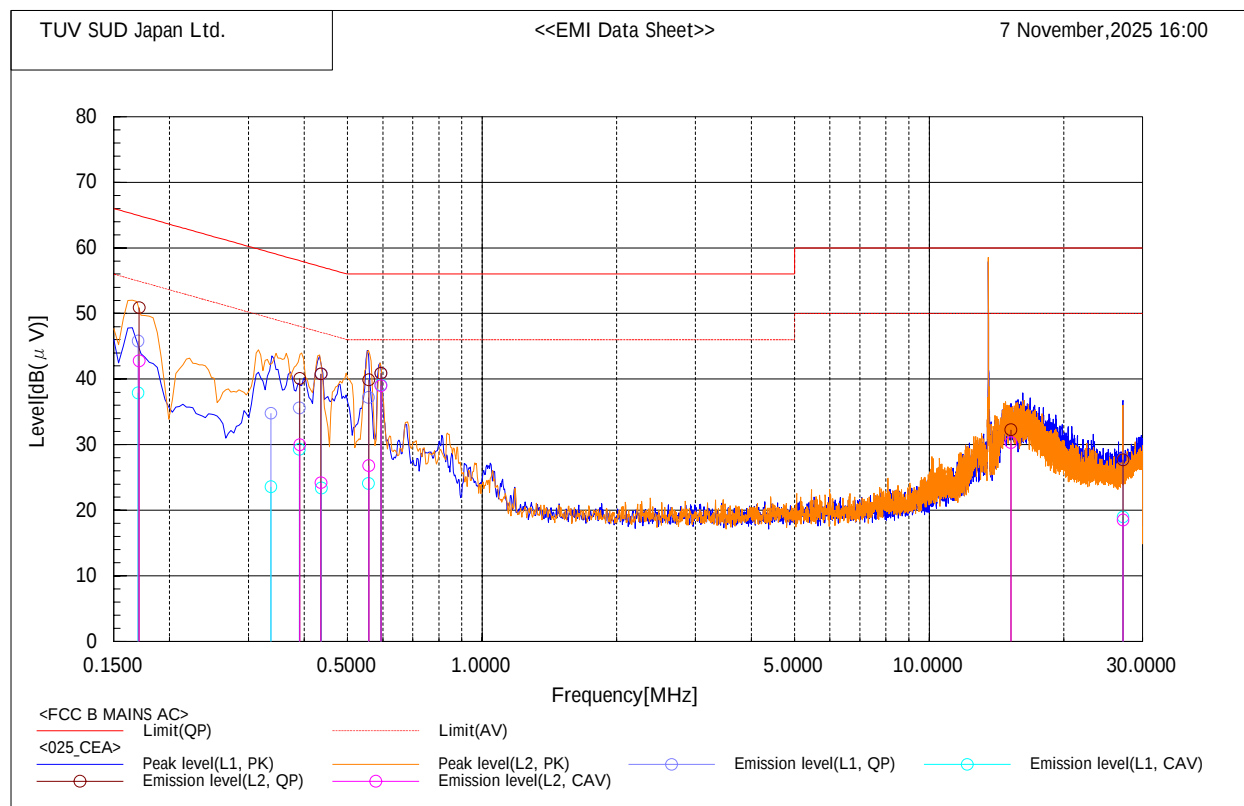
The noise of 13.560 MHz was excluded because it is a fundamental frequency of NFC.

Operation mode	MP4 with Display + DP Alt mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0 EB1220, S/N: EMC③ (353379980000948) - Modification State 0

S/N: EMC① (353379980000872)

Standard : FCC Part 15 Class B
 Date of test : 7 November, 2025 16:00
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 22.0 [°C], 37.2 [%], 989 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



Final Result

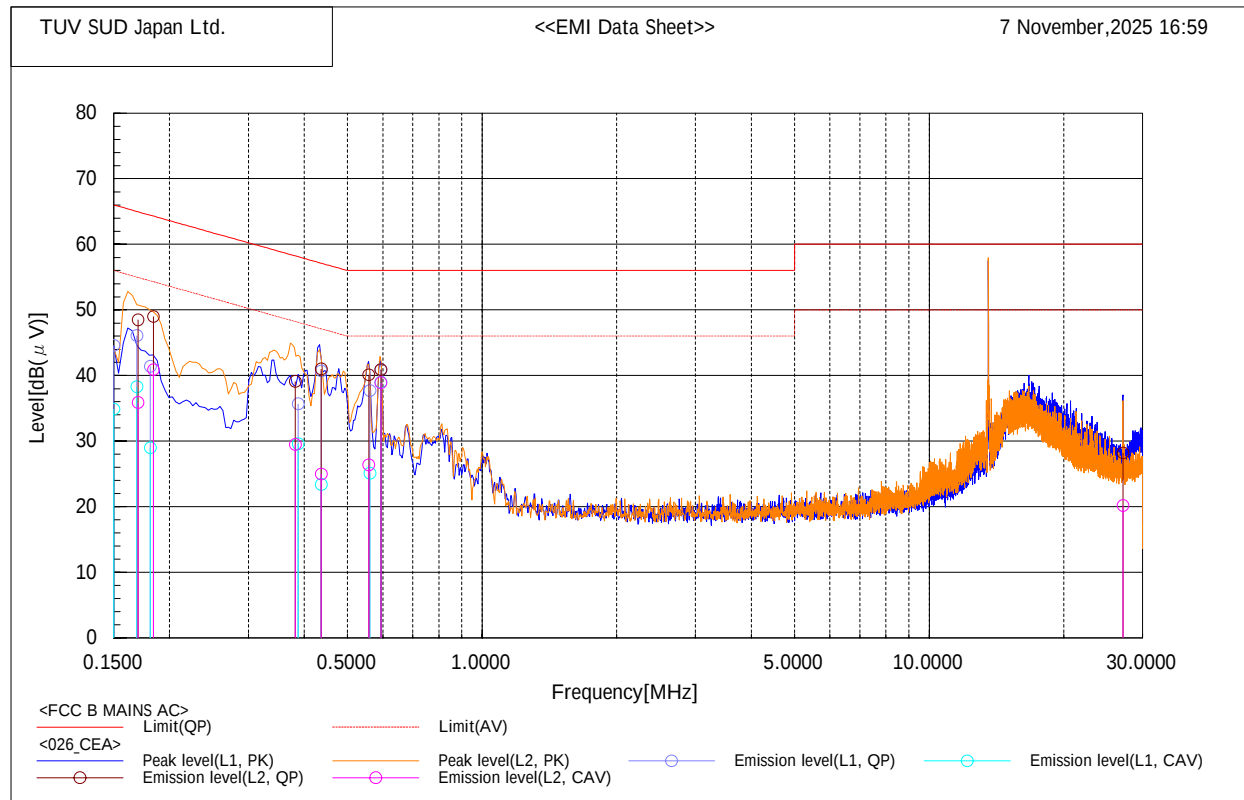
Line	Frequency MHz	Reading dB(μV)		Factor dB	Level dB(μV)		Limit dB(μV)		Margin dB	
		QP	CAV		QP	CAV	QP	AV	QP	AV
L1	0.170	35.4	27.5	10.4	45.8	37.9	65.0	55.0	19.2	17.1
L1	0.337	24.5	13.3	10.3	34.8	23.6	59.3	49.3	24.5	25.7
L1	0.390	25.4	19.1	10.2	35.6	29.3	58.1	48.1	22.5	18.8
L1	0.437	30.6	13.2	10.2	40.8	23.4	57.1	47.1	16.3	23.7
L1	0.557	26.9	13.8	10.3	37.2	24.1	56.0	46.0	18.8	21.9
L1	0.594	30.6	28.8	10.3	40.9	39.1	56.0	46.0	15.1	6.9
L1	27.120	16.5	7.7	11.3	27.8	19.0	60.0	50.0	32.2	31.0
L2	0.171	40.5	32.4	10.4	50.9	42.8	64.9	54.9	14.0	12.1
L2	0.391	29.9	19.8	10.2	40.1	30.0	58.0	48.0	17.9	18.0
L2	0.436	30.6	14.0	10.2	40.8	24.2	57.1	47.1	16.3	22.9
L2	0.558	29.6	16.5	10.3	39.9	26.8	56.0	46.0	16.1	19.2
L2	0.594	30.6	28.7	10.3	40.9	39.0	56.0	46.0	15.1	7.0
L2	15.232	21.3	19.3	11.0	32.3	30.3	60.0	50.0	27.7	19.7
L2	27.120	16.3	7.1	11.4	27.7	18.5	60.0	50.0	32.3	31.5

The noise of 13.560 MHz was excluded because it is a fundamental frequency of NFC.

S/N: EMC③ (353379980000948)

Standard : FCC Part 15 Class B
 Date of test : 7 November, 2025 16:59
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 22.0 [°C], 37.2 [%], 989 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



Final Result

Line	Frequency	Reading		Factor	Level		Limit		Margin		
	MHz	dB(μV)			dB	dB(μV)		dB(μV)		dB	
		QP	CAV			QP	CAV	QP	AV	QP	AV
L1	0.150	34.2	24.5	10.4	44.6	34.9	66.0	56.0	21.4	21.1	
L1	0.169	35.7	27.9	10.4	46.1	38.3	65.0	55.0	18.9	16.7	
L1	0.181	31.0	18.6	10.4	41.4	29.0	64.4	54.4	23.0	25.4	
L1	0.388	25.5	19.4	10.2	35.7	29.6	58.1	48.1	22.4	18.5	
L1	0.437	30.5	13.2	10.2	40.7	23.4	57.1	47.1	16.4	23.7	
L1	0.561	27.4	14.8	10.3	37.7	25.1	56.0	46.0	18.3	20.9	
L1	0.594	30.6	28.7	10.3	40.9	39.0	56.0	46.0	15.1	7.0	
L2	0.170	38.1	25.5	10.4	48.5	35.9	65.0	55.0	16.5	19.1	
L2	0.184	38.7	30.6	10.3	49.0	40.9	64.3	54.3	15.3	13.4	
L2	0.382	28.9	19.3	10.2	39.1	29.5	58.2	48.2	19.1	18.7	
L2	0.437	30.8	14.8	10.2	41.0	25.0	57.1	47.1	16.1	22.1	
L2	0.558	29.8	16.1	10.3	40.1	26.4	56.0	46.0	15.9	19.6	
L2	0.594	30.6	28.6	10.3	40.9	38.9	56.0	46.0	15.1	7.1	
L2	27.120	16.8	8.8	11.4	28.2	20.2	60.0	50.0	31.8	29.8	

The noise of 13.560 MHz was excluded because it is a fundamental frequency of NFC.

4.2 Radiated emission (below 1 GHz)

4.2.1 Measurement condition

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.

Items	Description
Frequency range	30 MHz-1000 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
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

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)

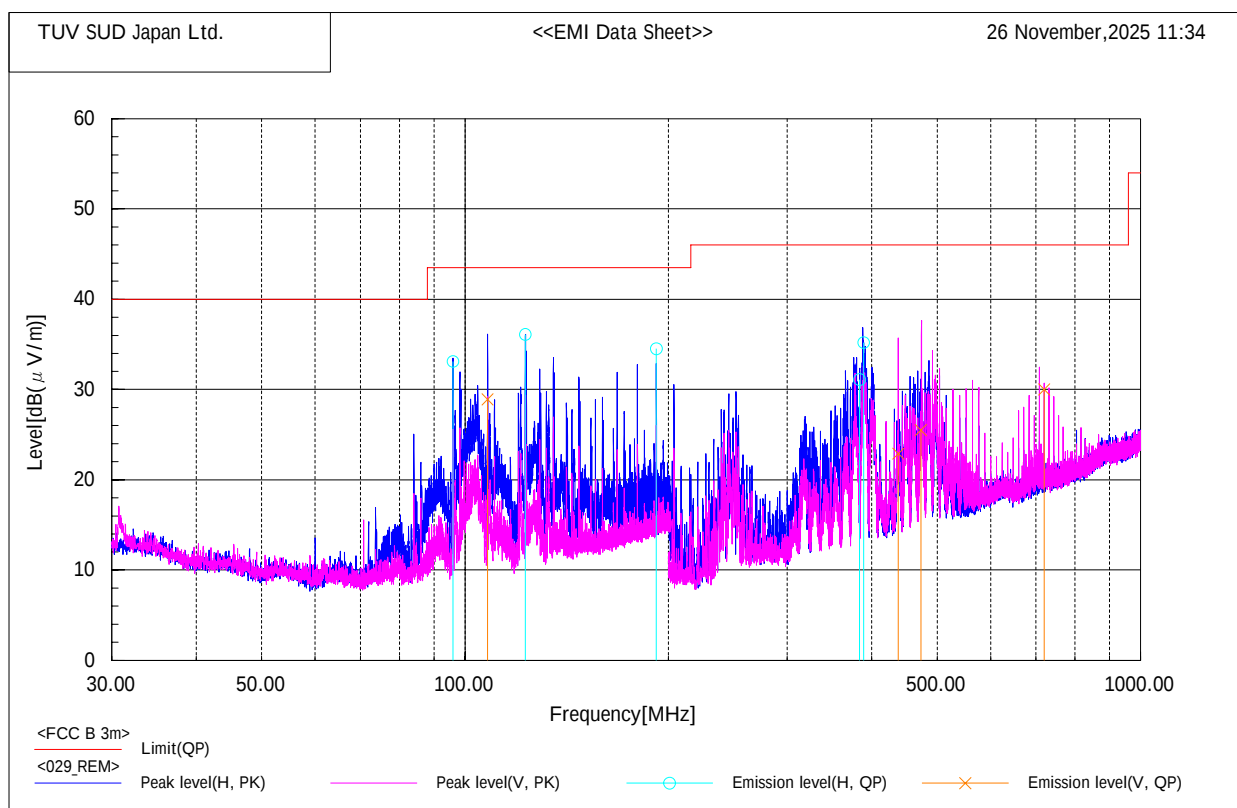
Quasi-peak Reading = 41.1 dBμV Factor = -11.8 dB/m
Emission level = 41.1 - 11.8 = 29.3 dBμV/m
Margin = 37.0 - 29.3 = 7.7 dB

4.2.3 Test data

Operation mode	MP4 with Earphone mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 26 November, 2025 11:34
 Operator : Yuki Shindo
 Temp, Hum, Atm : 20.9 [°C], 36.3 [%], 983 [hPa]
 Supply power : DC 3.87 V (Battery)

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



Final Result

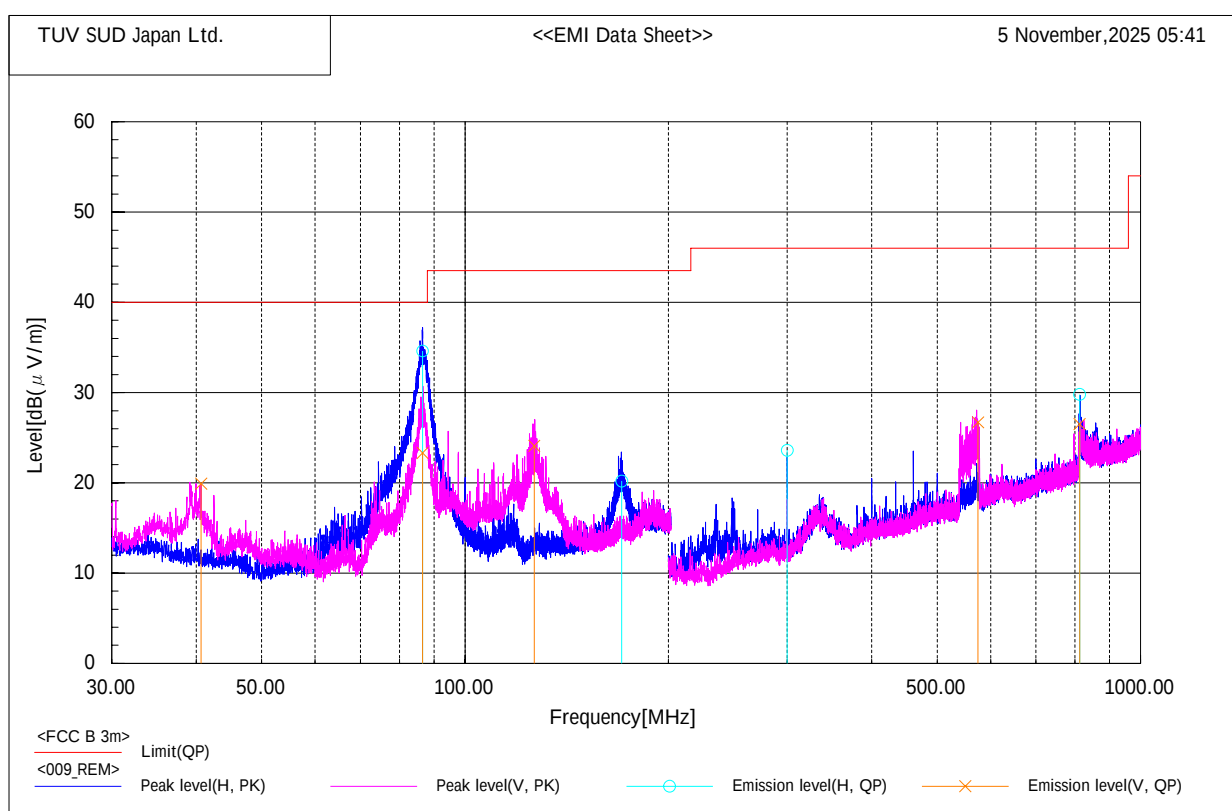
Frequency	Pol.	Reading	Factor	Level	Limit	Margin	Height	Angle
MHz		dB(μV)	dB(1/m)	dB(μV/m)	dB(μV/m)	dB	cm	deg
		QP		QP	QP	QP		
96.002	H	49.3	-16.2	33.1	43.5	10.4	251.0	93.0
108.000	V	44.5	-15.6	28.9	43.5	14.6	400.0	181.0
122.859	H	50.8	-14.7	36.1	43.5	7.4	175.0	271.0
191.999	H	45.6	-11.1	34.5	43.5	9.0	178.0	273.0
384.004	H	42.9	-11.8	31.1	46.0	14.9	100.0	50.0
389.230	H	46.7	-11.5	35.2	46.0	10.8	100.0	317.0
438.003	V	33.4	-10.5	22.9	46.0	23.1	225.0	331.0
473.006	V	35.1	-9.6	25.5	46.0	20.5	238.0	181.0
720.002	V	35.5	-5.5	30.0	46.0	16.0	144.0	1.0

Operation mode	MP4 + USB Read with PC mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0 EB1220, S/N: EMC③ (353379980000948) - Modification State 0

EMC① (353379980000872)

Standard : FCC Part 15 Class B
 Date of test : 5 November, 2025 05:41
 Operator : Akihiro Goto
 Temp, Hum, Atm : 21.8 [°C], 36.1 [%], 996 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



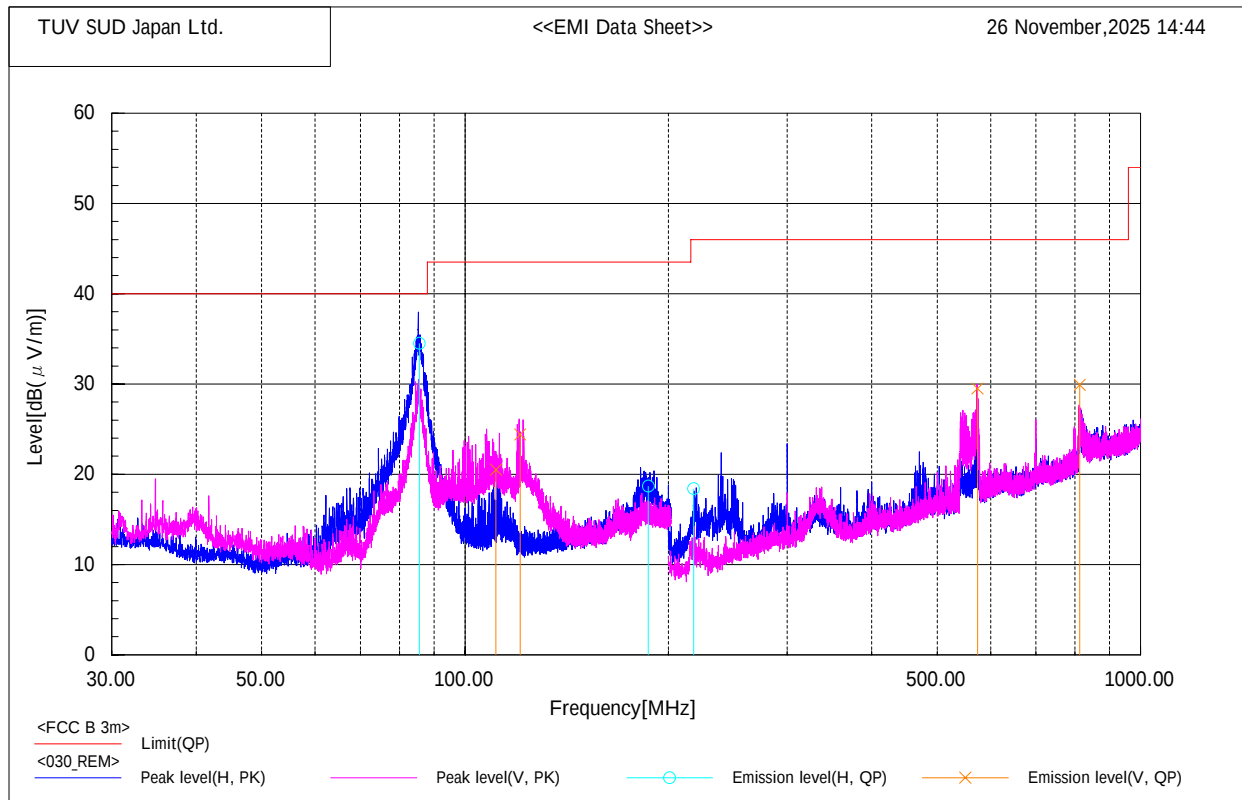
Final Result

Frequency	Pol.	Reading	Factor	Level	Limit	Margin	Height	Angle
MHz		dB(μV)		dB(μV/m)	dB(μV/m)	dB	cm	deg
		QP	dB(1/m)	QP	QP	QP		
40.680	V	34.9	-15.0	19.9	40.0	20.1	100.0	251.0
86.515	H	51.2	-16.6	34.6	40.0	5.4	400.0	182.0
86.515	V	39.9	-16.6	23.3	40.0	16.7	100.0	257.0
126.685	V	38.6	-14.5	24.1	43.5	19.4	100.0	90.0
170.594	H	32.5	-12.3	20.2	43.5	23.3	203.0	143.0
300.001	H	37.6	-14.0	23.6	46.0	22.4	100.0	151.0
574.628	V	34.6	-7.9	26.7	46.0	19.3	100.0	188.0
812.625	H	33.9	-4.1	29.8	46.0	16.2	121.0	152.0
812.625	V	30.6	-4.1	26.5	46.0	19.5	100.0	277.0

EMC③ (353379980000948)

Standard : FCC Part 15 Class B
 Date of test : 26 November, 2025 14:44
 Operator : Yuki Shindo
 Temp, Hum, Atm : 20.9 [°C], 36.3 [%], 983 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



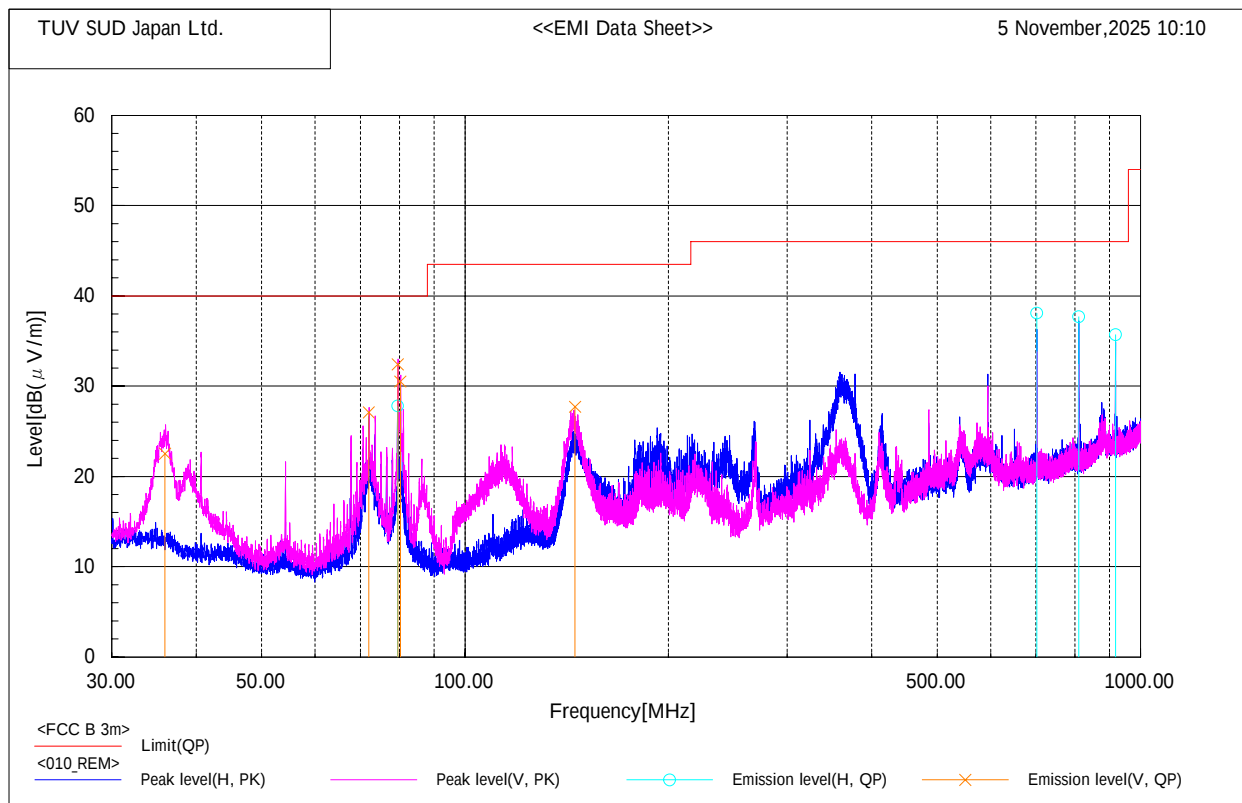
Final Result

Frequency	Pol.	Reading	Factor	Level	Limit	Margin	Height	Angle
MHz		$\text{dB}(\mu\text{V})$	$\text{dB}(1/\text{m})$	$\text{dB}(\mu\text{V/m})$	$\text{dB}(\mu\text{V/m})$	dB	cm	deg
		QP		QP	QP	QP		
85.596	H	51.1	-16.6	34.5	40.0	5.5	229.0	173.0
111.136	V	35.9	-15.4	20.5	43.5	23.0	100.0	128.0
120.701	V	39.3	-14.9	24.4	43.5	19.1	100.0	89.0
186.784	H	30.1	-11.4	18.7	43.5	24.8	173.0	288.0
217.977	H	35.2	-16.8	18.4	46.0	27.6	159.0	184.0
573.806	V	37.4	-7.9	29.5	46.0	16.5	100.0	178.0
812.915	V	34.0	-4.1	29.9	46.0	16.1	100.0	302.0

Operation mode	MP4 with Display + DP Alt mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 5 November, 2025 10:10
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 20.2 [°C], 35.8 [%], 997 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase

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



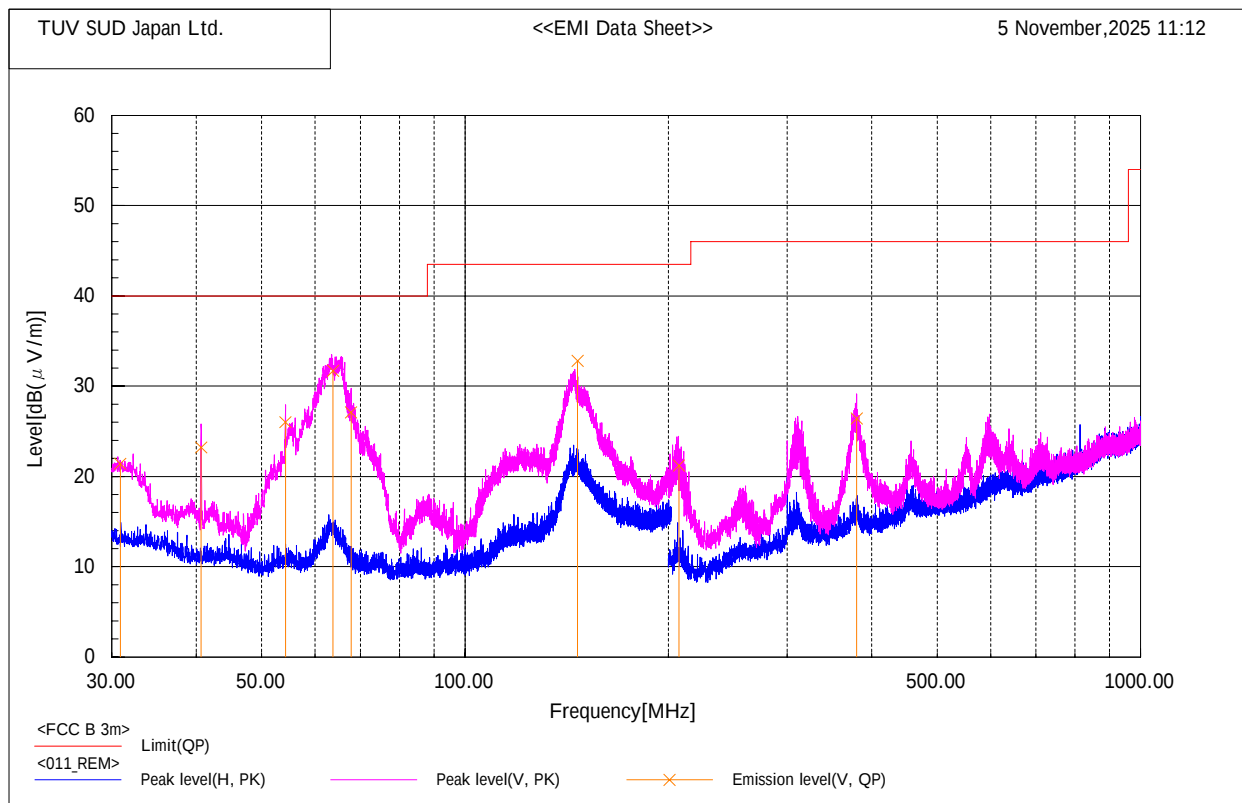
Final Result

Frequency	Pol.	Reading	Factor	Level	Limit	Margin	Height	Angle
MHz		dB(μV)		dB(μV/m)	dB(μV/m)	dB	cm	deg
		QP	dB(1/m)	QP	QP	QP		
35.974	V	36.8	-14.3	22.5	40.0	17.5	100.0	112.0
72.066	V	43.9	-16.8	27.1	40.0	12.9	100.0	113.0
79.498	H	44.5	-16.7	27.8	40.0	12.2	400.0	312.0
79.506	V	49.1	-16.7	32.4	40.0	7.6	137.0	234.0
80.245	V	47.2	-16.7	30.5	40.0	9.5	142.0	219.0
145.537	V	41.2	-13.5	27.7	43.5	15.8	100.0	273.0
701.997	H	43.9	-5.8	38.1	46.0	7.9	103.0	165.0
809.996	H	41.9	-4.2	37.7	46.0	8.3	100.0	194.0
917.997	H	37.6	-1.9	35.7	46.0	10.3	100.0	213.0

Operation mode	In Camera with ADP mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 5 November, 2025 11:12
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 20.2 [°C], 35.8 [%], 997 [hPa]
 Supply power : DC 5 V

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



Final Result

Frequency	Pol.	Reading	Factor	Level	Limit	Margin	Height	Angle
MHz		$\text{dB}(\mu\text{V})$	$\text{dB}(1/\text{m})$	$\text{dB}(\mu\text{V/m})$	$\text{dB}(\mu\text{V/m})$	dB	cm	deg
		QP		QP	QP	QP		
30.886	V	34.6	-13.2	21.4	40.0	18.6	100.0	158.0
40.680	V	38.2	-15.0	23.2	40.0	16.8	100.0	207.0
54.239	V	42.4	-16.4	26.0	40.0	14.0	100.0	141.0
63.770	V	48.5	-16.8	31.7	40.0	8.3	100.0	211.0
67.804	V	43.9	-16.8	27.1	40.0	12.9	100.0	220.0
146.817	V	46.2	-13.4	32.8	43.5	10.7	100.0	87.0
207.334	V	37.9	-16.7	21.2	43.5	22.3	100.0	197.0
380.152	V	38.3	-11.9	26.4	46.0	19.6	102.0	234.0

4.3 Radiated emission (above 1 GHz)

4.3.1 Measurement condition

EUT is placed on a styrene foam table for table-top equipment or on insulation material for a floor-standing equipment. The styrene foam 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.

Items	Description
Frequency range	1000 MHz-21000 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
Axis	0°-360°
Antenna	Distance from EUT: 365 cm, 392 cm, 396 cm Height: 100-400 cm Polarity: Horizontal/Vertical
Test receiver setting	Detector: Peak, Average Bandwidth: 1 MHz

Antenna 3 dB beamwidth (antenna used: 3117)

Frequency (GHz)	θ3 dB (°)	3 dB beamwidth w (m)
1.0	83	5.31
2.0	51	2.86
3.0	64	3.75
4.0	51	2.86
5.0	52	2.93
6.0	51	2.86

Measurement distance: $d = 3.0 \text{ m}$

$W = 2 \times d \times \tan(0.5 \times \theta_{3 \text{ dB}})$

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 dB μ V/m (Peak)
50.0 dB μ V/m (Average)

Measurement distance: 3.25 m

Distance conversion Factor: $20 \log (3.25\text{m}/3.0\text{m}) = 0.7 \text{ dB}$

Peak Reading = 50.2 dB μ V CF = 2.4 dB
 Emission level = $50.2 + 2.4 = 52.6 \text{ dB}\mu\text{V/m}$
 Margin = $70.0 - 52.6 = 17.4 \text{ dB}$

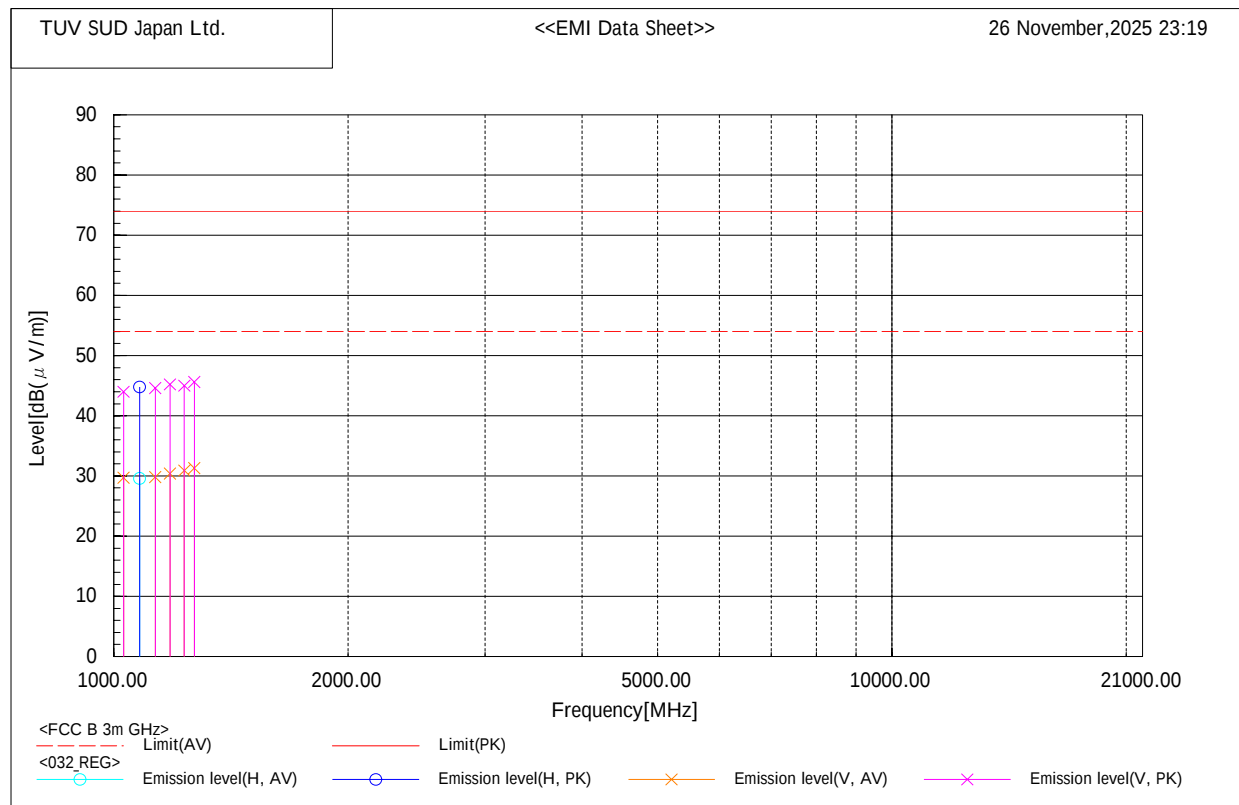
Average Reading = 32.0 dB μ V CF = 2.4 dB
 Emission level = $32.0 + 2.4 = 34.4 \text{ dB}\mu\text{V/m}$
 Margin = $50.0 - 34.4 = 15.6 \text{ dB}$

4.3.3 Test data

Operation mode	MP4 with Earphone mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 26 November, 2025 23:19
 Operator : Akihiro Goto
 Temp, Hum, Atm : 21.3 [°C], 35.5 [%], 990 [hPa]
 Supply power : DC 3.87 V (Battery)
 Antenna distance (cm) : 396
 Antenna height (cm) : 100 - 400

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



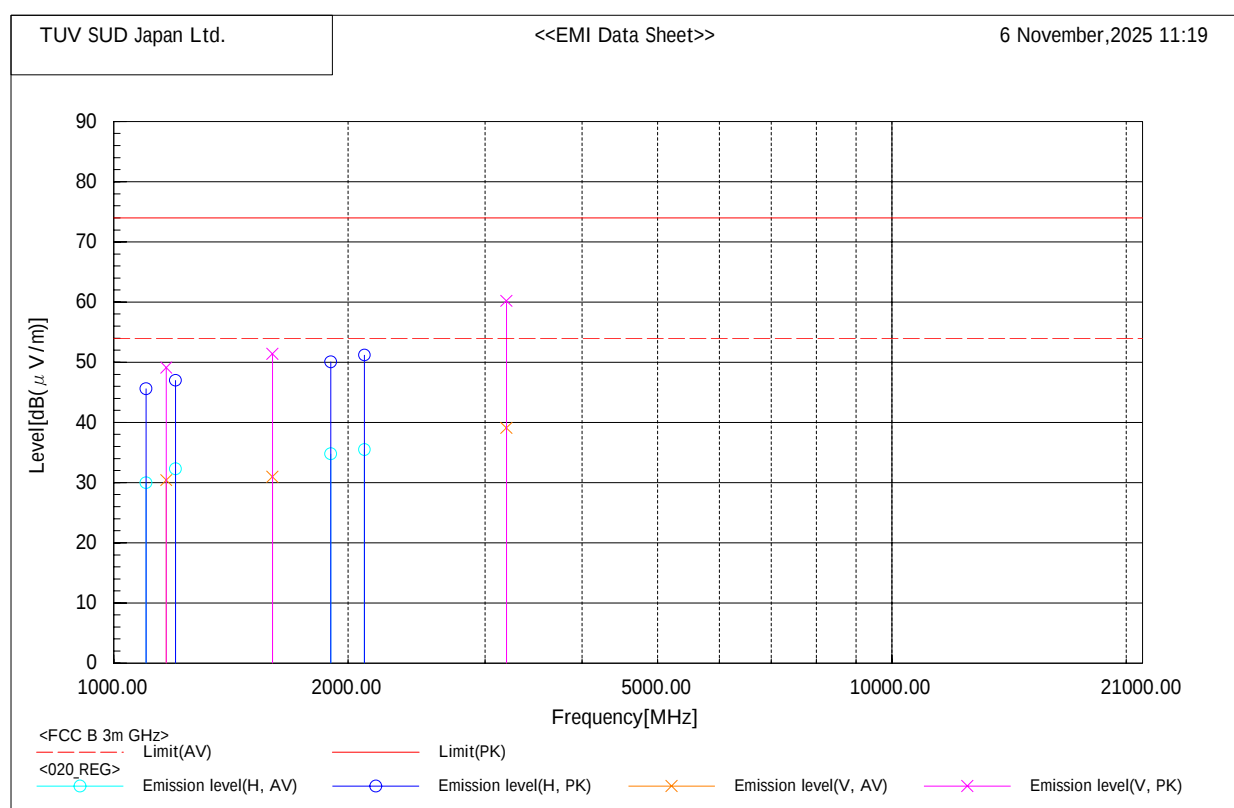
Final Result

Frequency MHz	Pol.	Reading dB(μV)		Factor dB(1/m)				Level dB(μV/m)		Limit dB(μV/m)		Margin dB		Height cm	Angle deg	Tilt deg
		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK			
1029.304	V	36.7	51.0	-7.0	27.9	-37.3	2.4	29.7	44.0	54.0	74.0	24.3	30.0	100.0	141.0	0.0
1079.462	H	36.6	51.8	-7.0	27.7	-37.1	2.4	29.6	44.8	54.0	74.0	24.4	29.2	100.0	112.0	0.0
1130.930	V	36.4	51.2	-6.6	28.0	-37.0	2.4	29.8	44.6	54.0	74.0	24.2	29.4	100.0	265.0	0.0
1180.749	V	36.3	51.1	-5.9	28.4	-36.7	2.4	30.4	45.2	54.0	74.0	23.6	28.8	100.0	234.0	0.0
1232.060	V	36.2	50.3	-5.3	29.0	-36.7	2.4	30.9	45.0	54.0	74.0	23.1	29.0	100.0	80.0	0.0
1269.278	V	36.1	50.4	-4.8	29.4	-36.6	2.4	31.3	45.6	54.0	74.0	22.7	28.4	100.0	322.0	0.0

Operation mode	MP4 + USB Read with PC mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 6 November, 2025 11:19
 Operator : Nobuhiko Iwasawa
 Temp, Hum, Atm : 22.1 [°C], 35.7 [%], 992 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase
 Antenna distance (cm) : 392
 Antenna height (cm) : 100 - 400

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



Final Result

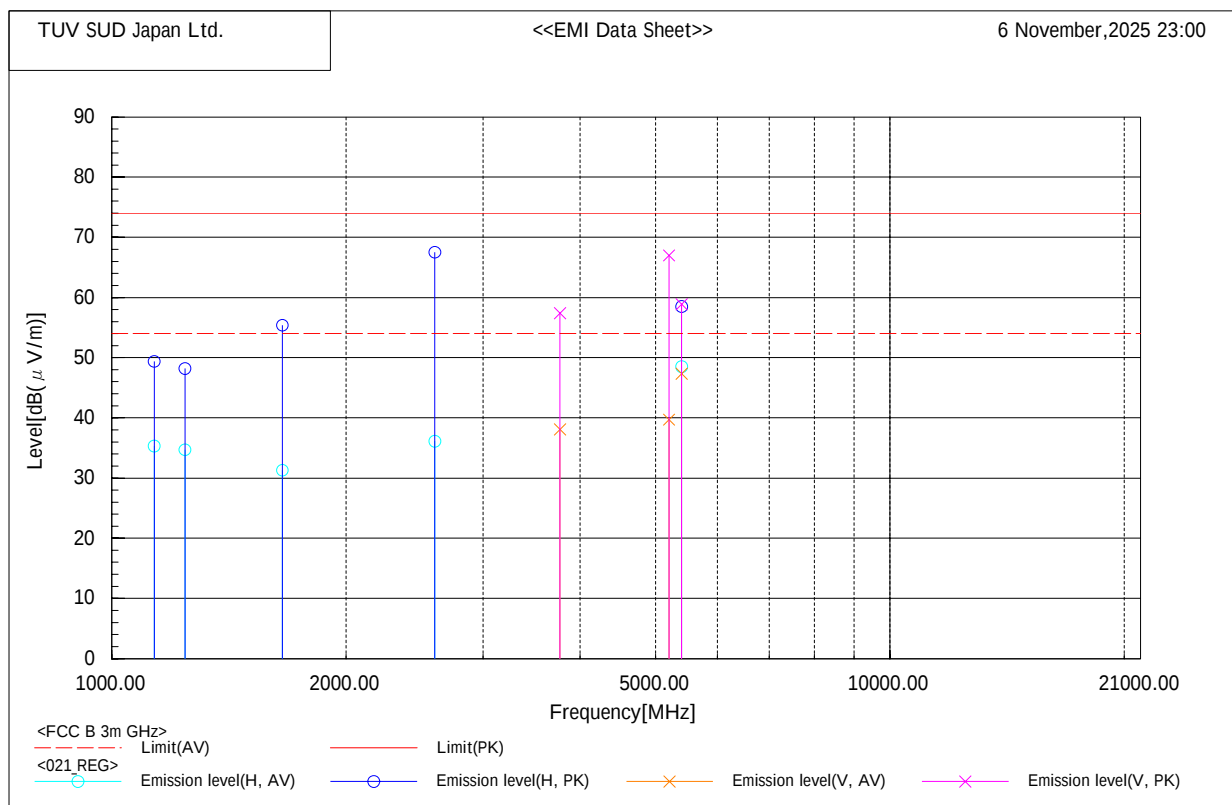
Frequency MHz	Pol.	Reading dB(μV)		Factor dB(1/m)				Level dB(μV/m)		Limit dB(μV/m)		Margin dB		Height cm	Angle deg	Tilt deg
		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK			
1100.097	H	37.1	52.7	-7.1	27.6	-37.0	2.3	30.0	45.6	54.0	74.0	24.0	28.4	232.0	14.0	23.0
1167.865	V	36.6	55.3	-6.2	28.3	-36.8	2.3	30.4	49.1	54.0	74.0	23.6	24.9	241.0	62.0	24.3
1200.023	H	38.1	52.8	-5.8	28.6	-36.7	2.3	32.3	47.0	54.0	74.0	21.7	27.0	252.0	206.0	26.1
1599.166	V	36.0	56.4	-5.0	28.2	-35.5	2.3	31.0	51.4	54.0	74.0	23.0	22.6	229.0	54.0	22.7
1900.245	H	35.8	51.1	-1.0	31.3	-34.6	2.3	34.8	50.1	54.0	74.0	19.2	23.9	181.0	215.0	14.8
2100.092	H	35.7	51.4	-0.2	31.6	-34.1	2.3	35.5	51.2	54.0	74.0	18.5	22.8	282.0	3.0	30.1
3195.955	V	35.2	56.3	3.9	33.0	-31.4	2.3	39.1	60.2	54.0	74.0	14.9	13.8	248.0	10.0	25.5

Operation mode	MP4 with Display + DP Alt mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0 EB1220, S/N: EMC③ (353379980000948) - Modification State 0

EMC① (353379980000872)

Standard : FCC Part 15 Class B
 Date of test : 6 November, 2025 23:00
 Operator : Akihiro Goto
 Temp, Hum, Atm : 22.3 [°C], 35.8 [%], 988 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase
 Antenna distance (cm) : 365
 Antenna height (cm) : 100 - 400

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



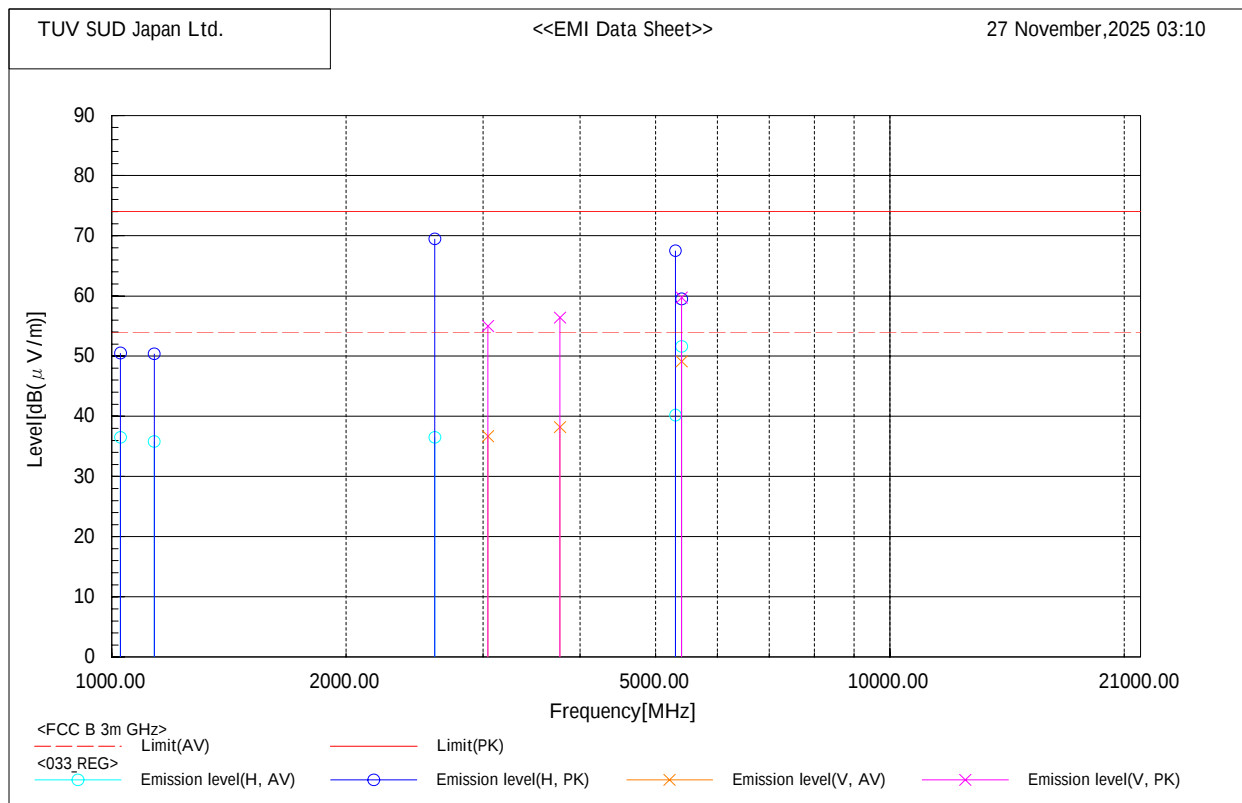
Final Result

Frequency MHz	Pol.	Reading		Factor				Level		Limit		Margin		Height cm	Angle deg	Tilt deg
		dB(μV)		dB(1/m)				dB(μV/m)		dB(μV/m)		dB				
		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK			
1133.992	H	42.6	56.7	-7.3	28.0	-37.0	1.7	35.3	49.4	54.0	74.0	18.7	24.6	114.0	121.0	2.6
1241.994	H	40.5	54.0	-5.8	29.1	-36.6	1.7	34.7	48.2	54.0	74.0	19.3	25.8	105.0	116.0	0.9
1656.600	H	36.2	60.3	-4.9	28.8	-35.4	1.7	31.3	55.4	54.0	74.0	22.7	18.6	140.0	160.0	7.5
2600.950	H	34.6	66.0	1.5	32.6	-32.8	1.7	36.1	67.5	54.0	74.0	17.9	6.5	236.0	164.0	23.7
3766.686	V	33.3	52.6	4.8	33.4	-30.3	1.7	38.1	57.4	54.0	74.0	15.9	16.6	117.0	160.0	3.2
5201.880	V	31.8	59.1	7.9	34.3	-28.1	1.7	39.7	67.0	54.0	74.0	14.3	7.0	100.0	153.0	0.0
5399.968	H	39.9	49.9	8.6	34.7	-27.8	1.7	48.5	58.5	54.0	74.0	5.5	15.5	119.0	197.0	3.7
5399.968	V	38.7	50.3	8.6	34.7	-27.8	1.7	47.3	58.9	54.0	74.0	6.7	15.1	199.0	142.0	17.9

EMC③ (353379980000948)

Standard : FCC Part 15 Class B
 Date of test : 27 November, 2025 03:10
 Operator : Akihiro Goto
 Temp, Hum, Atm : 21.3 [°C], 35.5 [%], 990 [hPa]
 Supply power : AC 120 V, 60 Hz, 1 phase
 Antenna distance (cm) : 365
 Antenna height (cm) : 100 - 400

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



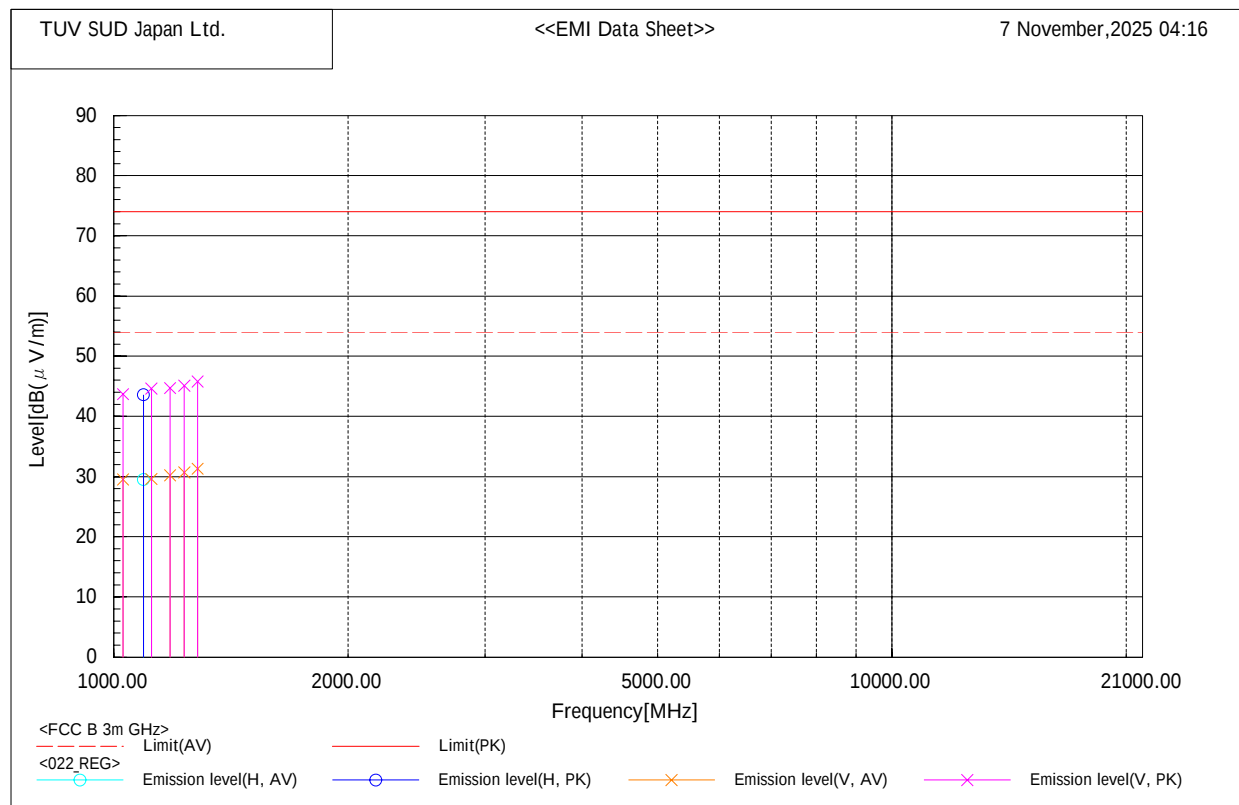
Final Result

Frequency MHz	Pol.	Reading		Factor				Level		Limit		Margin		Height cm	Angle deg	Tilt deg
		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK			
1025.994	H	44.2	58.2	-7.7	28.0	-37.4	1.7	36.5	50.5	54.0	74.0	17.5	23.5	202.0	209.0	18.4
1133.994	H	43.1	57.7	-7.3	28.0	-37.0	1.7	35.8	50.4	54.0	74.0	18.2	23.6	176.0	187.0	13.9
2601.015	H	35.0	68.0	1.5	32.6	-32.8	1.7	36.5	69.5	54.0	74.0	17.5	4.5	375.0	183.0	38.0
3043.900	V	33.9	52.2	2.8	32.8	-31.7	1.7	36.7	55.0	54.0	74.0	17.3	19.0	108.0	153.0	1.7
3767.708	V	33.4	51.6	4.8	33.4	-30.3	1.7	38.2	56.4	54.0	74.0	15.8	17.6	100.0	152.0	0.0
5303.600	H	32.0	59.3	8.2	34.4	-27.9	1.7	40.2	67.5	54.0	74.0	13.8	6.5	138.0	165.0	7.1
5399.974	H	43.0	50.9	8.6	34.7	-27.8	1.7	51.6	59.5	54.0	74.0	2.4	14.5	103.0	191.0	0.7
5399.974	V	40.5	51.1	8.6	34.7	-27.8	1.7	49.1	59.7	54.0	74.0	4.9	14.3	221.0	138.0	21.5

Operation mode	In Camera with ADP mode
EUT	EB1220, S/N: EMC① (353379980000872) - Modification State 0

Standard : FCC Part 15 Class B
 Date of test : 7 November, 2025 04:16
 Operator : Akihiro Goto
 Temp, Hum, Atm : 22.3 [°C], 35.8 [%], 988 [hPa]
 Supply power : DC 5 V
 Antenna distance (cm) : 396
 Antenna height (cm) : 100 - 400

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



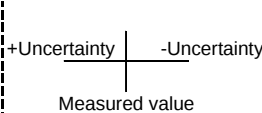
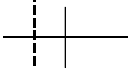
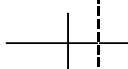
Final Result

Frequency MHz	Pol.	Reading		Factor				Level		Limit		Margin		Height cm	Angle deg	Tilt deg
		AV	PK	CF	TF	PF	DF	AV	PK	AV	PK	AV	PK			
1028.020	V	36.5	50.7	-7.0	27.9	-37.3	2.4	29.5	43.7	54.0	74.0	24.5	30.3	100.0	59.0	0.0
1091.546	H	36.5	50.6	-7.0	27.7	-37.1	2.4	29.5	43.6	54.0	74.0	24.5	30.4	100.0	162.0	0.0
1117.756	V	36.4	51.4	-6.8	27.8	-37.0	2.4	29.6	44.6	54.0	74.0	24.4	29.4	100.0	190.0	0.0
1181.344	V	36.1	50.6	-5.9	28.5	-36.8	2.4	30.2	44.7	54.0	74.0	23.8	29.3	100.0	302.0	0.0
1232.196	V	36.0	50.4	-5.3	29.0	-36.7	2.4	30.7	45.1	54.0	74.0	23.3	28.9	100.0	229.0	0.0
1281.536	V	35.9	50.4	-4.6	29.5	-36.5	2.4	31.3	45.8	54.0	74.0	22.7	28.2	100.0	119.0	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	U_{lab}	U_{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	± 2.8 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	± 5.1 dB	± 5.2 dB
Radiated Emission	6 GHz to 18 GHz	± 4.8 dB	± 5.5 dB
Radiated Emission	18GHz to 40GHz	± 6.0 dB	
Radiated Emission	9 kHz to 30 MHz	± 3.7 dB	-

Judge	Measured value and standard limit value	
PASS	Standard limit value Case1  Even if it takes uncertainty into consideration, a standard limit value is fulfilled.	
	Case2  Although measured value is in a standard limit value, a limit value won't be fulfilled if uncertainty is taken into consideration.	
FAIL	Case3  Although measured value exceeds a standard limit value, a limit value will be fulfilled if uncertainty is taken into consideration.	
	Case4  Even if it takes uncertainty into consideration, a standard limit value isn't fulfilled.	

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

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

VCCI Council

Equipment name	Classification	Registration number
10 m Semi-Anechoic Chamber No.1	Conducted emission at mains port	C-20200
	Conducted emission at wired network / telecommunication / network port	T-20200
	Radiated emission (below 1 GHz)	R-20245
	Radiated emission (above 1 GHz)	G-20237
10 m Semi-Anechoic Chamber No.2	Conducted emission at mains port	C-20204
	Conducted emission at wired network / telecommunication / network port	T-20205
	Radiated emission (below 1 GHz)	R-20250
	Radiated emission (above 1 GHz)	G-20242
3 m Semi-Anechoic Chamber	Conducted emission at mains port	C-20205
	Conducted emission at wired network / telecommunication / network port	T-20204
	Radiated emission (below 1 GHz)	R-20249
	Radiated emission (above 1 GHz)	G-20241

Appendix A. Test Equipment

Conducted emission at mains port

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
EMI receiver	ROHDE&SCHWARZ	ESR7	102352	31-Mar-2026	17-Mar-2025
Line impedance stabilization network for EUT	Kyoritsu Technology Corporation	TNW-407F2	12-17-110-2	30-Jun-2026	18-Jun-2025
Attenuator	HUBER+SUHNER	6810.01.A	N/A(S420)	31-Mar-2026	17-Mar-2025
Coaxial cable	FUJIKURA	5D-2W/4m	N/A(S349)	31-Oct-2026	23-Oct-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	317672/4	31-Oct-2026	23-Oct-2025
Coaxial cable	HUBER+SUHNER	RG214/U/25m	N/A(S191)	31-Oct-2026	23-Oct-2025
Software	TOYO Technica	ES10/CE-AJ	Ver.2023.01.001	N/A	N/A

Radiated emission (below 1 GHz)

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
EMI receiver	ROHDE&SCHWARZ	ESR7	102352	31-Mar-2026	17-Mar-2025
Biconical antenna	Schwarzbeck	VHBB9124/BBA9106	2143	31-Jul-2026	11-Jul-2025
Log-periodic antenna	Schwarzbeck	VUSLP9111B	0829	31-Jul-2026	11-Jul-2025
Attenuator	TDC	TAT-43B-06	N/A(S209)	31-Jul-2026	09-Jul-2025
Attenuator	TAMAGAWA.ELEC	CFA-01/3dB	N/A(S504)	31-Jul-2026	09-Jul-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/10m	2001613/4	31-Oct-2026	23-Oct-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1m	MY38347/4	31-Dec-2025	19-Dec-2024
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	MY37295/4	30-Sep-2026	11-Sep-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX106/13m	MY1159/6	31-Oct-2026	23-Oct-2025
Preamplifier	SONOMA	310	400315	31-Mar-2026	17-Mar-2025
10m Semi-anechoic Chamber	TOKIN	N/A	N/A(9001-NSA3m)	31-May-2026	16-May-2025
Software	TOYO Technica	ES10/RE-AJ	Ver.2023.01.001	N/A	N/A

Radiated emission (above 1 GHz)

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
Spectrum analyzer	ROHDE&SCHWARZ	FSV40	101732	30-Jun-2026	05-Jun-2025
Preamplifier	Techno Science Japan	MLA-0118-J02-40	14882	31-Oct-2026	23-Oct-2025
Double ridged guide antenna	ETS LINDGREN	3117	00224193	28-Feb-2026	06-Feb-2025
Attenuator	Agilent Technologies	8491B	MY39268633	30-Jun-2026	18-Jun-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	811445/4	31-Oct-2026	23-Oct-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1.5m	SN MY19304/4	31-Oct-2026	23-Oct-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	MY37295/4	30-Sep-2026	11-Sep-2025
Microwave cable	HUBER+SUHNER	SUCOFLEX106/13m	MY1159/6	31-Oct-2026	23-Oct-2025
DRGH antenna	A.H.Systems Inc.	SAS-574	469	30-Sep-2026	17-Sep-2025
Preamplifier	Techno Science Japan	MLA-1840-B03-35	1240332	30-Sep-2026	17-Sep-2025
Microwave cable	HUBER SUNER	Sucoflex 102/5m	31647	31-Jul-2026	08-Jul-2025
Absorber	RIKEN	PFP30	N/A	N/A	N/A
10m Semi-anechoic Chamber	TOKIN	N/A	N/A(9001-SVSWR)	31-May-2026	17-May-2025
Software	TOYO Technica	ES10/RE-AJ	Ver.2023.01.001	N/A	N/A