

Report on the RF Testing of:

KYOCERA Corporation
Mobile Phone, Model: EB1190EM
FCC ID: JOYPC9699



In accordance with FCC Part 15 Subpart C (15.225)

Prepared for: KYOCERA Corporation
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Document Number: JPD-TR-24110-0

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EXECUTIVE SUMMARY – Result: Complied

A sample(s) of this product was tested and the result above was confirmed in accordance with FCC Part 15 Subpart C (15.225).



Certificate #3686.03

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1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-24110-0	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 15 Subpart C (15.225)

1.3 Test methods

ANSI C63.10-2013

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
2.1049 RSS-Gen 6.7	Occupied Bandwidth	Conducted	PASS	-
15.209 15.225 (a)(b)(c)(d)	Operation within the band 13.110-14.010MHz	Radiated	PASS	-
15.209 15.225 (d)	Transmitter Radiated Spurious Emissions	Radiated	PASS	-
15.225 (e)	Frequency Tolerance	Conducted	PASS	-
15.207	AC Power Line Conducted Emissions	Conducted	PASS	-

1.6 Test information

None

1.7 Test set up

Table-top

1.8 Test period

21-May-2024 – 31-May-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, Japan Phone: +81-45-943-6253 Fax: +81-45-943-6314
Equipment Under Test (EUT)	Mobile Phone
Model number	EB1190EM
Serial number	353343640002918, 353343640002926
Trade name	Kyocera
Number of sample(s)	2
EUT condition	Pre-Production
Power rating	Battery: DC 3.87 V
Size	(W) 73.0 mm × (D) 157.0 mm × (H) 11.43 mm
Environment	Indoor and Outdoor use
Terminal limitation	-20 °C to 60 °C
Hardware version	DMT1
Software version	0.151BX.0025.a
Firmware version	Not applicable
RF Specification	
Frequency range	13.56MHz
Modulation method	ASK
Antenna type	Loop antenna

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
Model: EB1190EM, Serial Number: 353343640002918, 353343640002926			
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)

EUT

Model number	EB1190EM *1	EB1201	EB1190	EB1190NC
Memory	expansion	standard	standard	standard
Camera	with	with	with	without
Fingerprint Sensor	with	with	without	without
NFC	with	with	without	without
size	73.0 × 157.0 × 11.43 [mm]			

*1:Tested model

2.3.2 Reason for selection of EUT

The applicant decided that the differences between the design had no EMC impact and selected EB1190EM with full function.

2.4 Operating mode

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.

The worst emission was found in Y-axis and the worst case recorded.

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.

2.5 Operating flow

[Tx mode]

- i) NFC test program setup to the Software
- ii) Start test mode

3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.3 System configuration” correspond to the list in “3.1 Equipment used” and “3.2 Cable(s) used”.

This test configuration is based on the manufacture’s instruction.

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.	FCC ID/DoC	Comment
1	Mobile Phone	KYOCERA	EB1190EM	353343640002918, 353343640002926	JOYPC9699	EUT
2	AC Adapter	KDDI	0602PQA	N/A	N/A	*

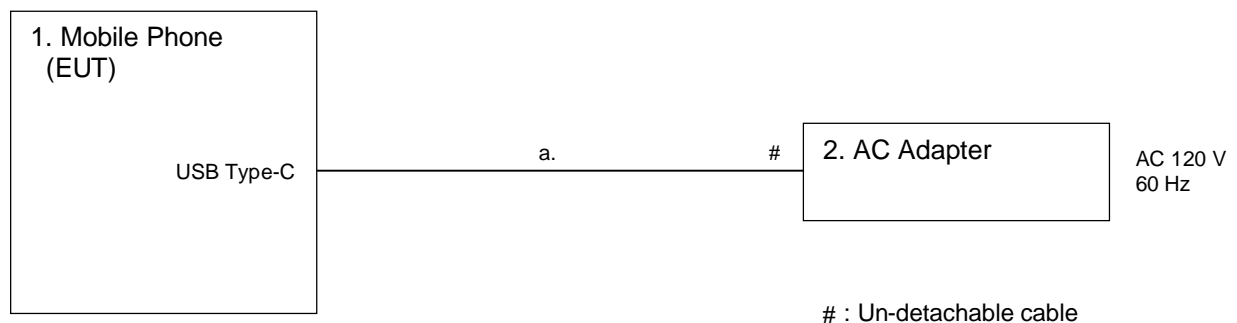
*:AC power line Conducted Emission Test.

3.2 Cable(s) used

No.	Equipment	Length[m]	Shield	Connector	Comment
a	USB cable (for AC Adapter)	1.5	No	Plastic	*

*:AC power line Conducted Emission Test.

3.3 System configuration



4 Test Result

4.1 Occupied Bandwidth

4.1.1 Measurement procedure

[FCC 2.1049, RSS-Gen 6.7]

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to approach 1% of the selected span or less than 1%. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

The spectrum analyzer is set to;

- RBW=1kHz, VBW=3kHz, Span=100kHz, Sweep=auto, Detector=Peak, Trace mode = max hold.

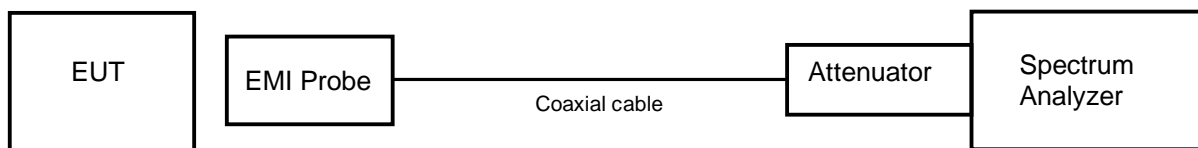
The EUT was set to operate with following conditions.

- 13.56MHz

The test mode of EUT is as follows.

- Transmit mode

- Test configuration



4.1.2 Limit

None

4.1.3 Measurement result

Date : 31-May-2024

Temperature : 22.3 [°C]

Humidity : 55.3 [%]

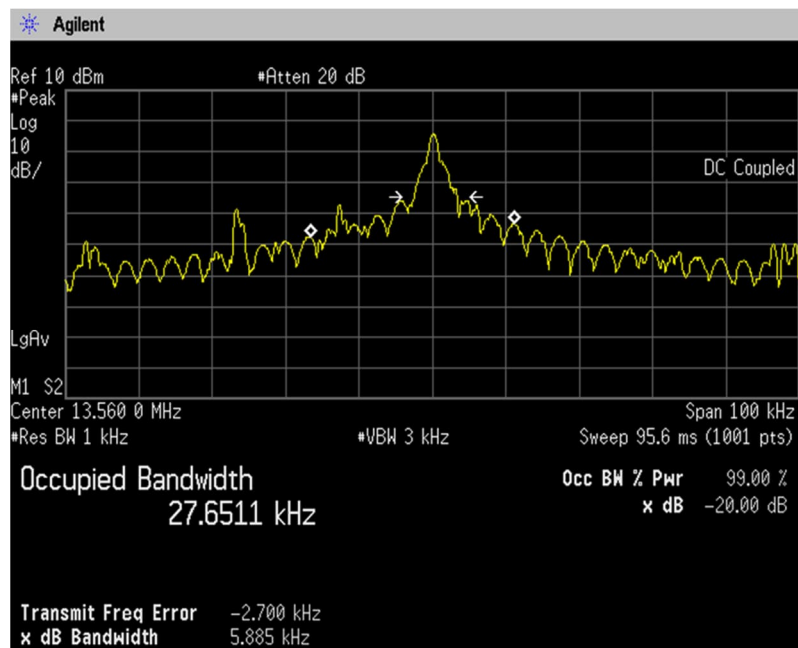
Test place : Shielded room No.4

Test engineer :

Kazunori Saito

Frequency (MHz)	Occupied Bandwidth (kHz)
13.56	27.6511

4.1.4 Trace data



4.2 Operation within the band 13.110-14.010MHz

4.2.1 Measurement procedure

[FCC 15.209, 15.225 (a)(b)(c)(d)]

Test was applied by following conditions.

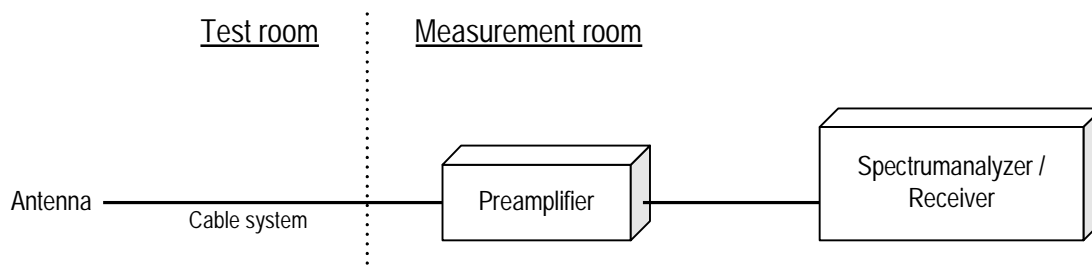
Test method	: ANSI C63.10
Frequency range	: 13.110MHz to 14.010MHz
Test place	: 3m Semi-anechoic chamber
EUT was placed on	: Styrofoam table / (W)1.0m × (D)1.0m × (H)0.8m
Antenna distance	: 3m

Test receiver setting

- Detector	: Quasi-peak
- Bandwidth	: 9kHz

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Then, emission measurements frequency range 13.110MHz to 14.010MHz were performed with test receiver in above setting. The turntable and the Loop antenna are rotated by 360 degrees and stopped at azimuth of producing the maximum emission. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition.

- Test configuration



4.2.2 Calculation method

Emission level = Reading + (Ant. factor + Cable system loss – Amp. Gain)

Margin = Limit – Emission level

4.2.3 Limit

- (a) The field strength of any emissions within the band 13.553-13.567MHz shall not exceed 15,848uV/m at 30m.
- (b) Within the band 13.410-13.553MHz and 13.567-13.710MHz, the field strength of any emissions shall not exceed 334uV/m at 30m.
- (c) Within the band 13.110-13.410MHz and 13.710-14.010MHz, the field strength of any emissions shall not exceed 106uV/m at 30m.
- (d) The field strength of any emissions appearing outside of the 13.110-14.010MHz and shall not exceed the general radiated emission limits in FCC 15.209.

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. Measurements were corrected to 30m using $40\log(3/30) = -40.0\text{dB}$

4.2.4 Test data

Date : 27-May-2024

Temperature : 19.8 [°C]

Humidity : 45.4 [%]

Test place : 3m Semi-anechoic chamber

Test engineer :

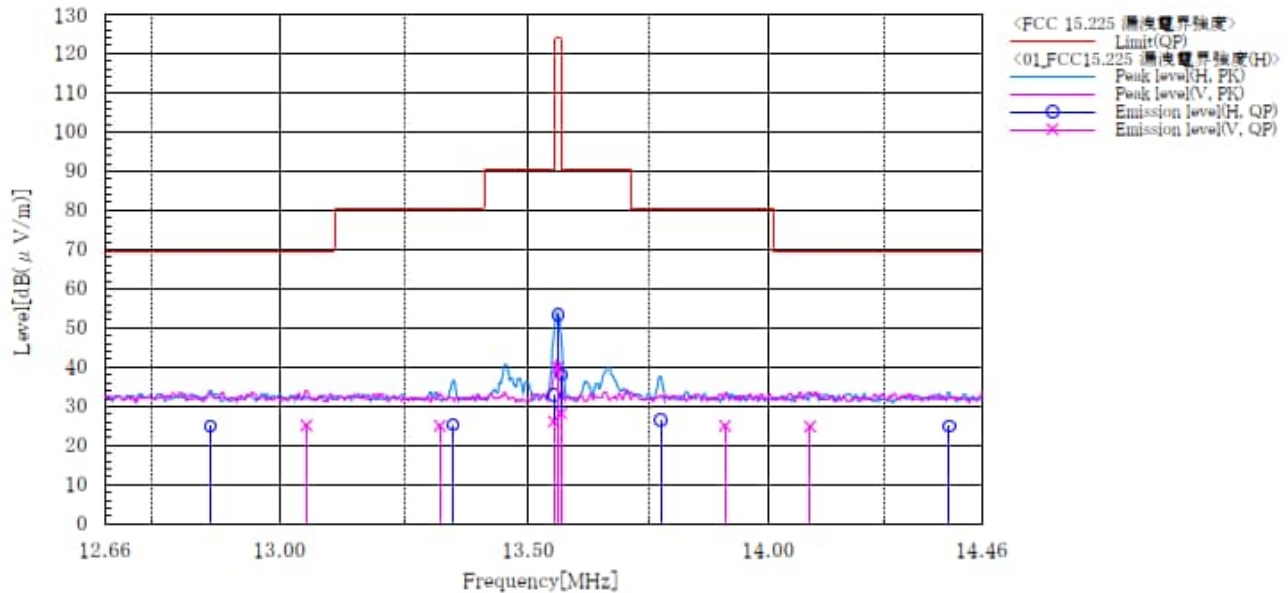
Chiaki Kanno

Frequency range (MHz)	Frequency (MHz)	Level		Limit (dBuV/m)	Margin (dB)	Result
		Measured at 3m (dBuV/m)	Measured at 30m (dBuV/m)			
13.553-13.567	13.560	68.8	28.8	84.0	55.2	PASS
13.41-13.553	13.552	47.0	7.0	50.5	43.5	PASS
13.567-13.71	13.568	52.9	12.9	50.5	37.6	PASS
13.11-13.41	13.347	39.2	-0.8	40.5	41.3	PASS
13.71-14.01	13.773	40.3	0.3	40.5	40.2	PASS
12.66-13.11	13.053	31.3	-8.7	29.5	38.2	PASS
14.01-14.46	14.089	31.4	-8.6	29.5	38.1	PASS

4.2.5 Trace data

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : FeliCa

Sheet No. : 01
 Standard : FCC 15.225
 Operator : C.Kanno
 Temp,Hum,Atm : 19.8 [°C], 45.4 [%]
 Note1 : Horizontal (X axis)

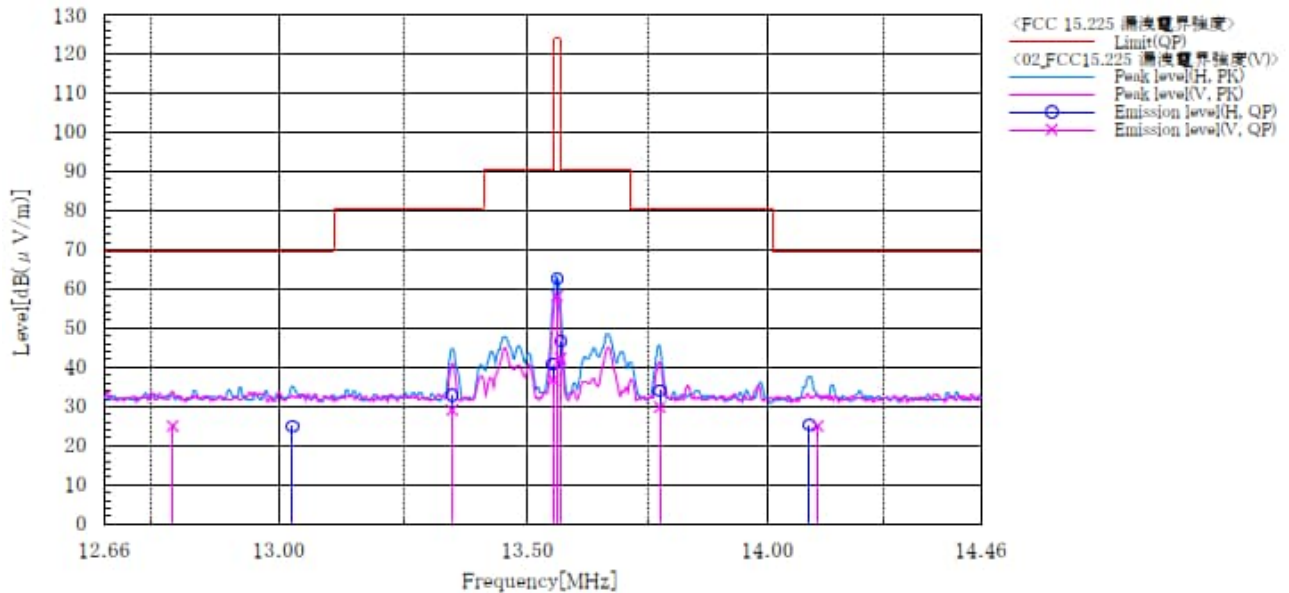


Final Result

No.	Frequency [MHz]	Pol	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	13.560	V	46.2	-6.2	40.0	124.0	84.0	100.0	117.0	
2	13.552	V	32.3	-6.2	26.1	90.5	64.4	100.0	117.0	
3	13.568	V	34.4	-6.2	28.2	90.5	62.3	100.0	117.0	
4	13.320	V	31.2	-6.2	25.0	80.5	55.5	100.0	0.0	
5	13.909	V	31.2	-6.2	25.0	80.5	55.5	100.0	138.0	
6	13.053	V	31.3	-6.2	25.1	69.5	44.4	100.0	241.0	
7	14.089	V	31.0	-6.2	24.8	69.5	44.7	100.0	218.0	
8	13.560	H	59.6	-6.2	53.4	124.0	70.6	100.0	21.0	
9	13.552	H	39.1	-6.2	32.9	90.5	57.6	100.0	21.0	
10	13.568	H	44.2	-6.2	38.0	90.5	52.5	100.0	21.0	
11	13.347	H	31.5	-6.2	25.3	80.5	55.2	100.0	263.0	
12	13.773	H	32.8	-6.2	26.6	80.5	53.9	100.0	358.0	
13	12.864	H	31.2	-6.2	25.0	69.5	44.5	100.0	351.0	
14	14.389	H	31.2	-6.2	25.0	69.5	44.5	100.0	14.0	

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : FeLiCa

Sheet No. : 02
 Standard : FCC 15.225
 Operator : C.Kanno
 Temp,Hum,Atm : 19.8 [°C], 45.4 [%]
 Note1 : Vertical (Y axis)



Final Result

No.	Frequency [MHz]	Pol	Reading QP [dB(μV)]	c. f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	13.560	V	64.3	-6.2	58.1	124.0	65.9	100.0	268.0	
2	13.552	V	42.9	-6.2	36.7	90.5	53.8	100.0	268.0	
3	13.568	V	48.5	-6.2	42.3	90.5	48.2	100.0	268.0	
4	13.347	V	35.2	-6.2	29.0	80.5	51.5	100.0	270.0	
5	13.773	V	35.9	-6.2	29.7	80.5	50.8	100.0	264.0	
6	12.793	V	31.2	-6.2	25.0	69.5	44.5	100.0	16.0	
7	14.107	V	31.1	-6.2	24.9	69.5	44.6	100.0	148.0	
8	13.560	H	68.8	-6.2	62.6	124.0	61.4	100.0	172.0	
9	13.552	H	47.0	-6.2	40.8	90.5	49.7	100.0	172.0	
10	13.568	H	52.9	-6.2	46.7	90.5	43.8	100.0	172.0	
11	13.347	H	39.2	-6.2	33.0	80.5	47.5	100.0	170.0	
12	13.773	H	40.3	-6.2	34.1	80.5	46.4	100.0	172.0	
13	13.027	H	31.2	-6.2	25.0	69.5	44.5	100.0	72.0	
14	14.089	H	31.4	-6.2	25.2	69.5	44.3	100.0	0.0	

4.3 Radiated Emissions

4.3.1 Measurement procedure

[FCC 15.209, 15.225 (d)]

Test was applied by following conditions.

Test method	: ANSI C63.10
Frequency range	: 9kHz to 30MHz
Test place	: 3m Semi-anechoic chamber
EUT was placed on	: Styrofoam table / (W)1.0m × (D)1.0m × (H)0.8m
Antenna distance	: 3m

Test receiver setting

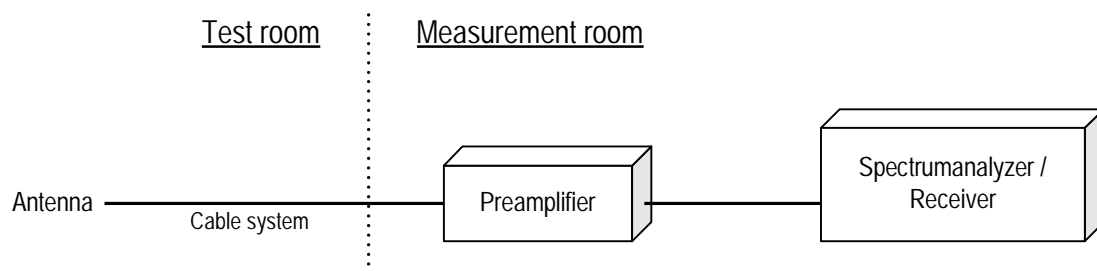
- Detector	: Average (9kHz-90kHz, 110kHz-490kHz), Quasi-peak
- Bandwidth	: 200Hz, 9kHz

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site.

Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Then, emission measurements up to 30MHz were performed with test receiver in above setting. The turntable and the Loop antenna are rotated by 360 degrees and stopped at azimuth of producing the maximum emission. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition.

- Test configuration



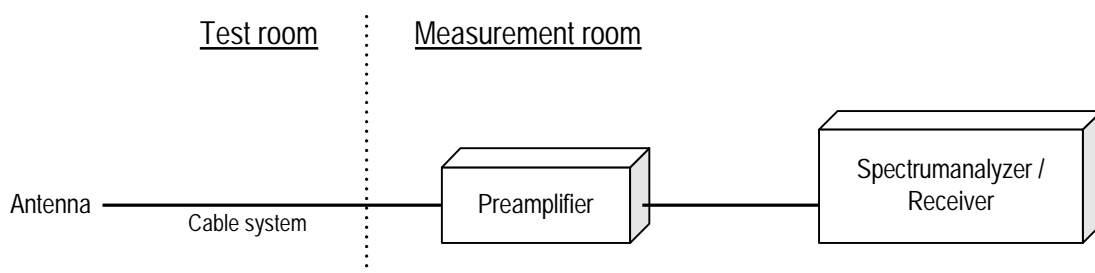
Test was applied by following conditions.

Test method	:	ANSI C63.10
Frequency range	:	30MHz to 1000MHz
Test place	:	3m Semi-anechoic chamber
EUT was placed on	:	Styrofoam table / (W)1.0m x (D)1.0m x (H)0.8m
Antenna distance	:	3m

Test receiver setting	:	
- Detector	:	Quasi-peak
- Bandwidth	:	120kHz

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Then, emission measurements up to 1000MHz were performed with test receiver in above setting. In order to find the maximum emissions, antenna is adjusted between 1m and 4m in height and varied its polarization (horizontal and vertical), and EUT azimuth was also varied by rotating turntable 0 to 360 degrees. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition.

- Test configuration



4.3.2 Calculation method

[9kHz to 150kHz]

Emission level = Reading + (Ant. factor + Cable system loss)

Margin = Limit – Emission level

[150kHz to 1000MHz]

Emission level = Reading + (Ant. factor + Cable system loss – Amp. Gain)

Margin = Limit – Emission level

4.3.3 Limit

Frequency [MHz]	Field strength		Distance [m]
	[uV/m]	[dBuV/m]	
0.009-0.490	$2400 / F$ [kHz]	$20\log E$ [uV/m]	300
0.490-1.705	$24000 / F$ [kHz]	$20\log E$ [uV/m]	30
1.705-30	30	29.5	30
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = $20\log$ Emission [uV/m]
3. Measurements were corrected to 300m using $40\log (3/300) = -80.0\text{dB}$
Measurements were corrected to 30m using $40\log (3/30) = -40.0\text{dB}$

4.3.4 Test data

Date : 27-May-2024

Temperature : 19.8 [°C]

Humidity : 45.4 [%]

Test place : 3m Semi-anechoic chamber

Test engineer :

Chiaki Kanno

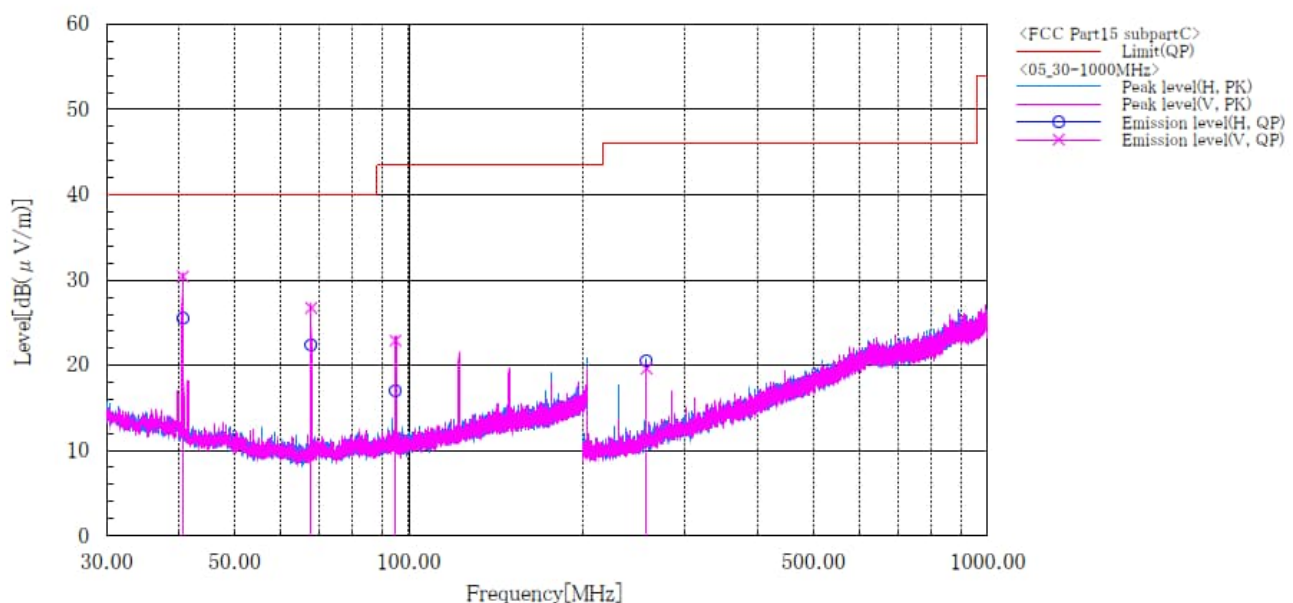
[9kHz to 30MHz]

Frequency (MHz)	Reading [dBuV] At 3m	c.f [dB(1/m)]	Result [dBuV/m] At 3m	Result [dBuV/m] At 30m	Limit [dBuV/m] At 30m	Margin (dB)	Result
27.12	29.8	-6.4	23.4	-16.6	29.5	46.1	PASS

[30MHz to 1000MHz]

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : NFC

Sheet No. : 05
 Standard : FCC Part15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 19.8 [°C], 45.4 [%]
 Note1 : Y axis



Final Result

No.	Frequency [MHz]	Pol	Reading QP [dB(μV)]	c. f [dB(1/m)]	Result QP [dB(μV/m)]	Limit QP [dB(μV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	40.682	H	40.3	-14.8	25.5	40.0	14.5	282.0	181.0	
2	40.682	V	45.2	-14.8	30.4	40.0	9.6	100.0	264.0	
3	67.800	V	43.8	-17.1	26.7	40.0	13.3	100.0	89.0	
4	67.809	H	39.5	-17.1	22.4	40.0	17.6	261.0	181.0	
5	94.921	H	33.0	-16.0	17.0	43.5	26.5	168.0	3.0	
6	94.922	V	38.9	-16.0	22.9	43.5	20.6	100.0	267.0	
7	257.648	V	34.9	-15.3	19.6	46.0	26.4	219.0	113.0	
8	257.655	H	35.8	-15.3	20.5	46.0	25.5	100.0	63.0	

4.4 Frequency Tolerance

4.4.1 Measurement procedure

[FCC 15.205 (e)]

The EUT was placed inside of a constant temperature chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10°C intervals and the unit was allowed to stabilize at each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

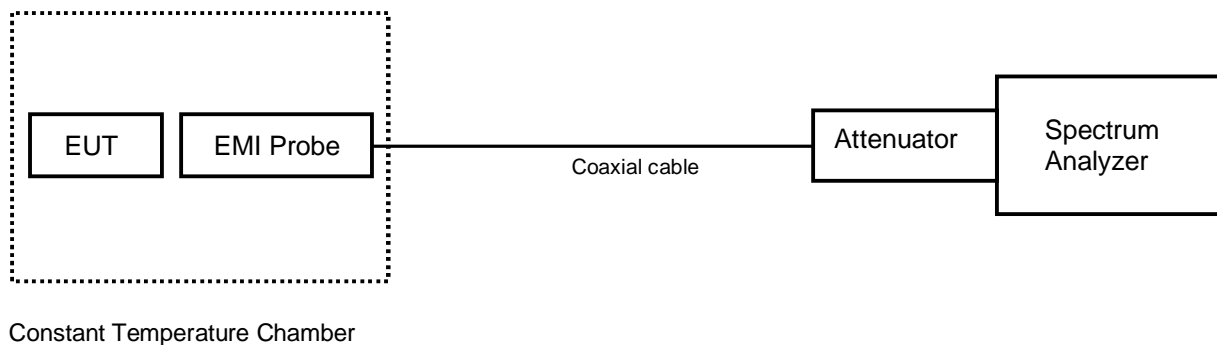
The EUT was set to operate with following conditions.

- 13.56MHz

The test mode of EUT is as follows.

- Transmit mode

- Test configuration



4.4.2 Limit

The Frequency tolerance of the carrier signal shall be maintained within +/- 0.01% over a temperature variation of -30 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.4.3 Test data

Date : 31-May-2024

Temperature : 22.3 [°C]

Humidity : 55.3 [%]

Test place : Shielded room No.4

Test engineer :

Kazunori Saito

Reference Frequency: EUT Channel 13.56MHz at 20°C											
Limit: $\pm 0.01\% = \pm 100\text{ppm} = \pm 0.135603\text{MHz}$											
Power Supply	Temperature	Measurements Frequency (startup)	Frequency Tolerance (startup)	Measurements Frequency (2mins)	Frequency Tolerance (2mins)	Measurements Frequency (5mins)	Frequency Tolerance (5mins)	Measurements Frequency (10mins)	Frequency Tolerance (10mins)	Limit	Result
[V]	[°C]	[MHz]	[ppm]	[MHz]	[ppm]	[MHz]	[ppm]	[MHz]	[ppm]	[ppm]	
3.87	50	13.560617	45.501	13.560598	44.100	13.560591	43.584	13.560584	43.068	± 100	PASS
	40	13.560600	44.248	13.560594	43.805	13.560593	43.732	13.560593	43.732		
	30	13.560644	47.493	13.560633	46.681	13.560629	46.386	13.560628	46.313		
	20	13.560000	-	13.560668	49.263	13.560667	49.189	13.560663	48.894		
	10	13.560723	53.319	13.560716	52.802	13.560713	52.581	13.560709	52.286		
	0	13.560741	54.646	13.560737	54.351	13.560733	54.056	13.560733	54.056		
	-10	13.560743	54.794	13.560746	55.015	13.560746	55.015	13.560751	55.383		
	-20	13.560739	54.499	13.560742	54.720	13.560742	54.720	13.560736	54.277		
	-30	13.560705	51.991	13.560713	52.581	13.560710	52.360	13.560704	51.917		
3.29	20	13.560655	48.304	13.560652	48.083	13.560655	48.304	13.560659	48.599		
4.45	20	13.560679	50.074	13.560669	49.336	13.560664	48.968	13.560666	49.115		

Note. Frequency Tolerance (ppm) = (Measurements Frequency (MHz) – Reference Frequency (MHz)) / Reference Frequency (MHz) x 1000000

The primary power supply voltage rating of this EUT is 85% to 115%

4.5 AC Power Line Conducted Emissions

4.5.1 Measurement procedure

[FCC 15.207]

Test was applied by following conditions.

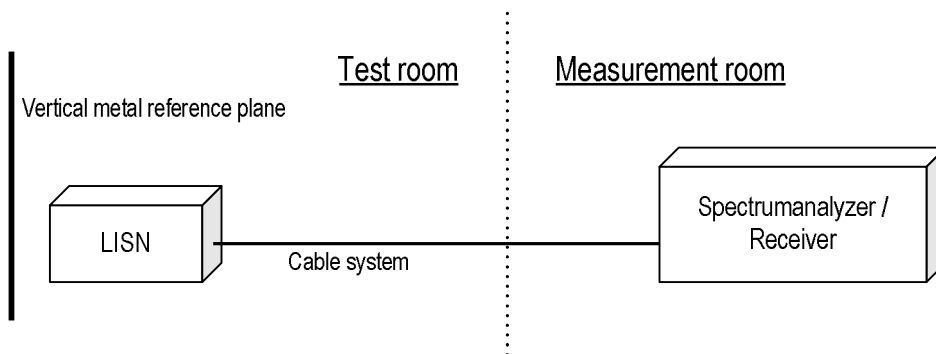
Test method	: ANSI C63.10
Frequency range	: 0.15 MHz to 30 MHz
Test place	: 3 m Semi-anechoic chamber
EUT was placed on	: Styrofoam table / (W)1.0m x (D)0.8m x (H)0.8m
Vertical Metal Reference Plane	: (W)2.0 m x (H)2.0 m 0.4 m away from EUT
Test receiver setting	
- Detector	: Quasi-peak, Average
- Bandwidth	: 9 kHz

EUT and peripherals are connected to 50Ω/50μH Line Impedance Stabilization Network (LISN) which are connected to reference ground plane, and are placed 80cm away from EUT. Excess of AC power cable is bundled in center.

LISN for peripheral is terminated in 50Ω.

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Maximum emission configuration is determined by manipulating the EUT, peripherals, interconnecting cables. Then, emission measurements are performed with test receiver in above setting to each current-carrying conductor of the mains port. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits.

- Test configuration



4.5.2 Calculation method

Emission level = Reading + (LISN. Factor + Cable system loss)

Margin = Limit – Emission level

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 c.f = 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 c.f = 10.3 dB

Emission level = 35.0 + 10.3 = 45.3 dB μ V

Margin = 50.0 – 45.3 = 4.7 dB

4.5.3 Limit

Frequency [MHz]	Limit	
	QP [dBuV]	AV [dBuV]
0.15-0.5	66-56*	56-46*
0.5-5	56	46
5-30	60	50

*: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

4.5.4 Measurement result

Date : 30-May-2024

Temperature : 21.5 [°C]

Humidity : 42.6 [%]

Test place : 3m Semi-anechoic chamber

Test engineer :

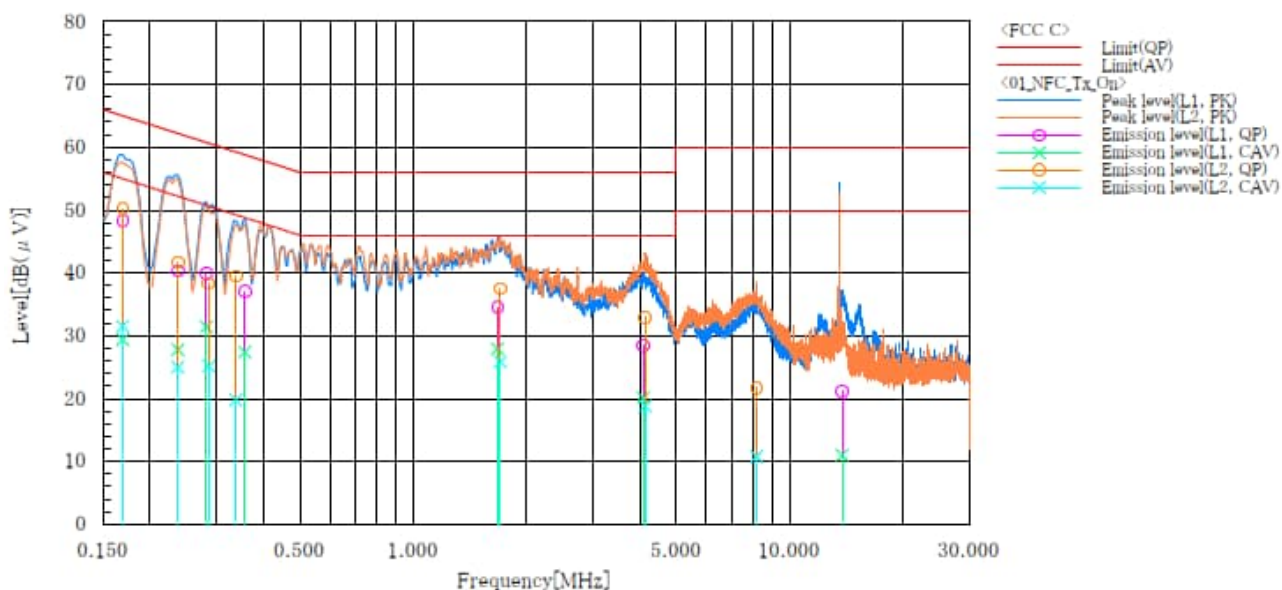
Chiaki Kanno

4.5.5 Test data

[Transmit ON]

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : NFC_13.56MHz_Tx_On

Standard : FCC Part 15 Subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.5 [°C], 42.6 [%]
 Note1 :
 Note2 :



Final Result

--- L1 ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result CAV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin CAV [dB]
1	0.169	37.9	19.0	10.4	48.3	29.4	65.0	55.0	16.7	25.6
2	0.237	30.0	17.5	10.3	40.3	27.8	62.2	52.2	21.9	24.4
3	0.282	29.7	21.1	10.3	40.0	31.4	60.8	50.8	20.8	19.4
4	0.357	26.7	17.1	10.3	37.0	27.4	58.8	48.8	21.8	21.4
5	1.676	24.2	17.6	10.3	34.5	27.9	56.0	46.0	21.5	18.1
6	4.084	18.0	9.6	10.5	28.5	20.1	56.0	46.0	27.5	25.9
7	13.773	9.7	-0.5	11.5	21.2	11.0	60.0	50.0	38.8	39.0

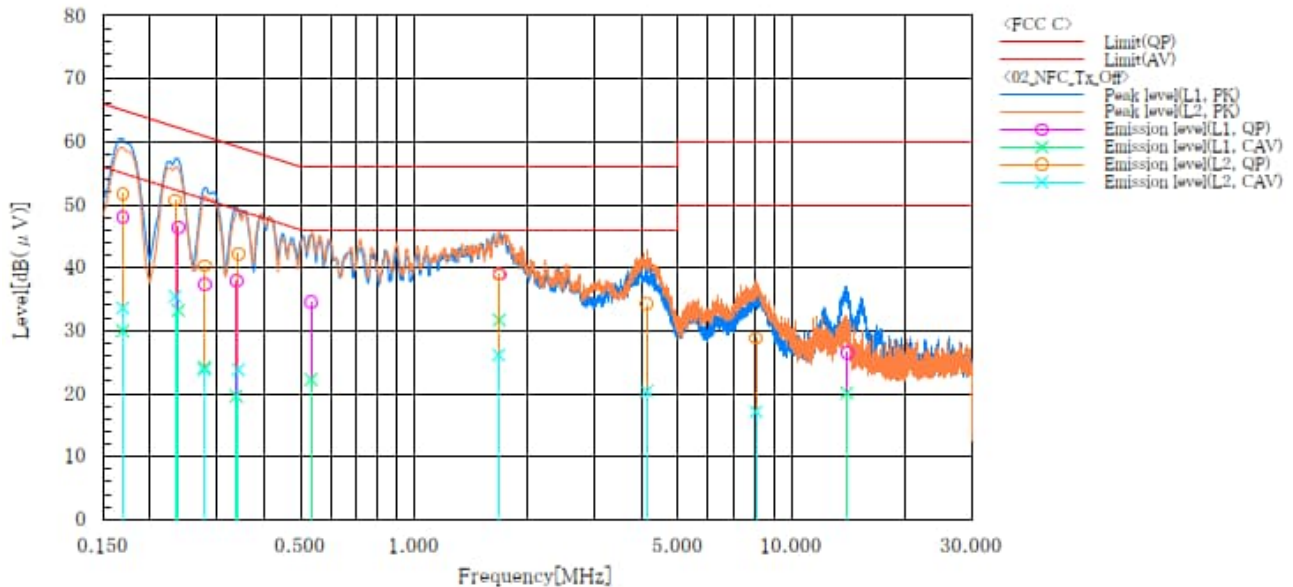
--- L2 ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result CAV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin CAV [dB]
1	0.169	39.8	21.1	10.4	50.2	31.5	65.0	55.0	14.8	23.5
2	0.237	31.4	14.7	10.3	41.7	25.0	62.2	52.2	20.5	27.2
3	0.286	28.0	14.9	10.3	38.3	25.2	60.6	50.6	22.3	25.4
4	0.338	29.2	9.5	10.3	39.5	19.8	59.3	49.3	19.8	29.5
5	1.703	27.1	15.4	10.4	37.5	25.8	56.0	46.0	18.5	20.2
6	4.122	22.3	8.2	10.6	32.9	18.8	56.0	46.0	23.1	27.2
7	8.158	10.8	-0.1	10.9	21.7	10.8	60.0	50.0	38.3	39.2

[Transmit OFF]

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : NFC_13.56MHz_Tx_Off

Standard : FCC Part 15 Subpart C
 Operator : C.Kanno
 Temp.Hum.Atmo : 21.5 [°C], 42.6 [%]
 Note1 :
 Note2 :

**Final Result****--- L1 ---**

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result CAV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin CAV [dB]
1	0.169	37.6	19.6	10.4	48.0	30.0	65.0	55.0	17.0	25.0
2	0.237	36.1	22.9	10.3	46.4	33.2	62.2	52.2	15.8	19.0
3	0.278	27.0	13.9	10.3	37.3	24.2	60.9	50.9	23.6	26.7
4	0.338	27.6	9.3	10.3	37.9	19.6	59.3	49.3	21.4	29.7
5	0.534	24.2	11.9	10.3	34.5	22.2	56.0	46.0	21.5	23.8
6	1.680	28.6	21.4	10.3	38.9	31.7	56.0	46.0	17.1	14.3
7	14.011	15.0	8.6	11.5	26.5	20.1	60.0	50.0	33.5	29.9

--- L2 ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading CAV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result CAV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin CAV [dB]
1	0.169	41.3	23.2	10.4	51.7	33.6	65.0	55.0	13.3	21.4
2	0.233	40.4	25.1	10.3	50.7	35.4	62.3	52.3	11.6	16.9
3	0.278	30.0	13.5	10.3	40.3	23.8	60.9	50.9	20.6	27.1
4	0.342	31.9	13.5	10.3	42.2	23.8	59.2	49.2	17.0	25.4
5	1.676	28.6	15.7	10.4	39.0	26.1	56.0	46.0	17.0	19.9
6	4.130	23.7	9.8	10.6	34.3	20.4	56.0	46.0	21.7	25.6
7	8.056	17.9	6.2	10.9	28.8	17.1	60.0	50.0	31.2	32.9

5 Antenna requirement

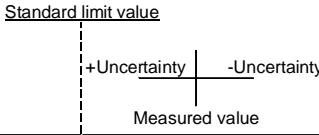
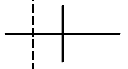
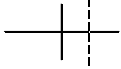
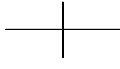
According to FCC section 15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device. The antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.

6 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 %.

3m Semi Anechoic Chamber	
Test item	Measurement uncertainty
Conducted emission, AMN (9 kHz – 150 kHz)	± 3.7 dB
Conducted emission, AMN (150 kHz – 30 MHz)	± 3.3 dB
Radiated emission (9 kHz – 30 MHz)	± 3.8 dB
Radiated emission (30 MHz – 1000 MHz)	± 5.4 dB
Radiated emission (1 GHz – 6 GHz)	± 4.6 dB
Radiated emission (6 GHz – 18 GHz)	± 4.7 dB
Radiated emission (18 GHz – 40 GHz)	± 6.3 dB
Radio Frequency	$\pm 1.3 \times 10^{-8}$
RF power, conducted	± 0.7 dB
Adjacent channel power	± 1.5 dB
Temperature	± 0.6 °C
Humidity	± 1.2 %
Voltage (DC)	± 0.4 %
Voltage (AC, <10kHz)	± 0.2 %

Measurement uncertainty of not listed immunity tests is considered to suffice because requirements of relevant standards are met.

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

7 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

Antenna port conducted test

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
Spectrum analyzer	Agilent Technologies	E4440A	US44302655	31-Oct-2024	06-Oct-2023
Attenuator	Weinschel	56-10	J4993	31-Dec-2024	19-Dec-2023
EMI Probe	ANRITSU	MA2601C	N/A(1753)	30-Nov-2024	10-Nov-2023
Micro wave cable	Junkosha Inc.	MWX221/1m	N/A(S400)	31-Mar-2025	7-Mar-2024
Low temperature and humidity chamber	Espec	PL1KP	14007261	30-Jun-2024	30-Jun-2023

Radiated emission

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESW44	103171	31-Oct-2024	19-Oct-2023
Preamplifier	SONOMA	310	372170	30-Sep-2024	21-Sep-2023
Loop antenna	TESEQ	HLA6121	65079	31-Aug-2024	01-Aug-2023
Attenuator	TOYO Connector	NA-PJ-6/6dB	N/A(S542)	30-Jun-2024	22-Jun-2023
Biconical antenna	Schwarzbeck	VHBB9124/BBA9106	1145	31-Jul-2024	14-Jul-2023
Log periodic antenna	Schwarzbeck	VUSLP9111B	346	31-Dec-2024	22-Dec-2023
Attenuator	TOYO Connector	NA-PJ-6/6dB	N/A(S541)	30-Sep-2024	21-Sep-2023
Attenuator	TAMAGAWA.ELEC	CFA-10/3dB	N/A(S503)	31-Jul-2024	20-Jul-2023
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	800690/4	31-Oct-2024	20-Oct-2023
		SUCOFLEX104/1m	my24610/4	31-Dec-2024	20-Dec-2023
		SUCOFLEX104/9m	2001099/4	31-Dec-2024	20-Dec-2023
		SUCOFLEX104/1m	MY32976/4	31-Dec-2024	20-Dec-2023
		SUCOFLEX104/2m	SN MY28404/4	31-Dec-2024	20-Dec-2023
		SUCOFLEX104/7m	41625/6	31-Dec-2024	21-Dec-2023
Software	TOYO Technica	ES10/RE-AJ	Ver.2023.01.001	N/A	N/A
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2024	28-May-2023
3m Semi an-echoic Chamber	TOKIN	N/A	N/A(9002-NSA)	31-May-2025	14-May-2024

Conducted emission at mains port

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ESW44	103171	31-Oct-2024	19-Oct-2023
Attenuator	HUBER+SUHNER	6810.01.A	N/A (S411)	31-Dec-2024	20-Dec-2023
Line impedance stabilization network	Kyoritsu Electrical Works, Ltd.	TNW-407F2	12-17-110-2	30-Jun-2024	22-Jun-2023
Microwave cable	HUBER+SUHNER	SUCOFLEX104/5m	MY33601/4	31-Dec-2024	20-Dec-2023
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	MY37268/4	31-Dec-2024	20-Dec-2023
Coaxial cable	HUBER+SUHNER	RG214/U/10m	N/A (S194)	31-Dec-2024	21-Dec-2023
Software	TOYO Technica	ES10/RE-AJ	Ver.2021.10.001	N/A	N/A

*: The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.