Japan

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1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-19180-0	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

Test Name	Classification of EUT	Test	Worst Point (Margin)	Result	Remark
Conducted emission at mains port	Class B	Applied	L2 0.193 MHz QP 15.0 dB	Pass	-
Radiated emission (below 1 GHz)	Class B	Applied	USB Read with PC H 402.170 MHz QP 8.6 dB	Pass	-
Radiated emission (above 1 GHz)	Class B	Applied	USB Read with PC V 2999.999 MHz AV 8.7 dB	Pass	-

1.6 Test information

None

1.7 Test set up

Table-top

1.8 Test period

04-September-2019 - 07-September-2019

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2 Equipment Under Test

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)	Mobile Phone
Model number	DB62
Serial number	358037100015585
Trade name	KYOCERA
Authorization	JOYDB62
Number of sample(s)	1
EUT condition	Pre-production
Maximum frequency	1094 MHz
Power rating	Battery DC 3.8 V
Size	(W) 51.3 mm × (D) 17.9 mm × (H) 112.3 mm

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
DB62, S/N: 358037100015585			
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)

DB62 has model with camera and without camera.
The test was performed on a model with camera.

2.3.2 Reason for selection of EUT

Measurements in all test modes were performed with CAMERA Model which includes all function in accordance with the judgment of the applicant.

2.4 Operation mode

1. Out Camera with ADP mode
i) Power ON
ii) Record

2. MP4 with ADP mode
i) Power ON
ii) Execution of Color Bar moving picture data

3. MP4 with Earphone mode
i) Power ON
ii) Execution of Color Bar moving picture data

4. USB Read with PC mode
i) Power ON
ii) EUT connects to PC via USB cable
iii) Read / write of MP4 moving picture data

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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".

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID /DoC	Remarks
EUT1	Mobile Phone	KYOCERA	DB62	358037100015585	JOYDB62	EUT
AE1	AC adapter	KDDI	0301PQA	HS-TFA	N/A	*1
AE2	Earphone	Hosiden	HDH0281-010060	N/A	N/A	-
AE3	Personal Computer	hp	Compaq 6720S	CNU8321Q6M	DoC	-
AE4	AC adapter	hp	PA-1650-02H	W92C401BMW6TY9	N/A	-

*1: AC adapter is connected to keep operating.

3.2 Cable(s) used

No.	Cable	Length (m)	Shield	EUT accessory Ferrite core	Remarks
a	USB cable	1.0	Yes	-	-
b	USB cable	0.1	Yes	-	-
c	Earphone cable	1.2	No	-	-
d	DC cable for PC AC adapter	1.8	No	-	-
e	AC power cord for PC AC adapter	1.8	No	-	-

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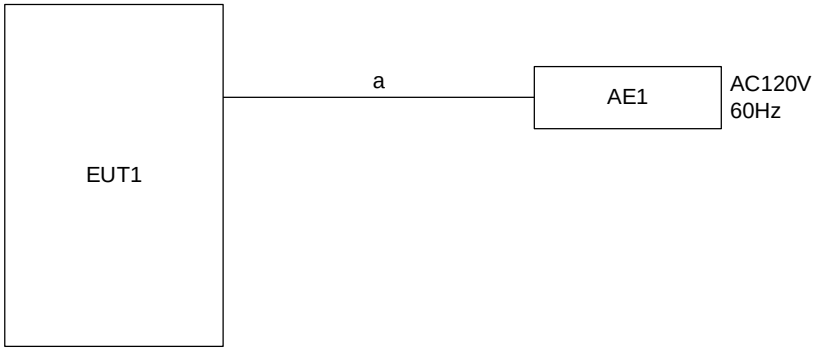
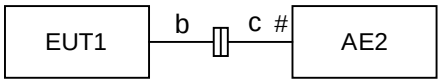
3.3 System configuration

1. Out Camera/ with ADP mode
2. MP4/ with ADP mode

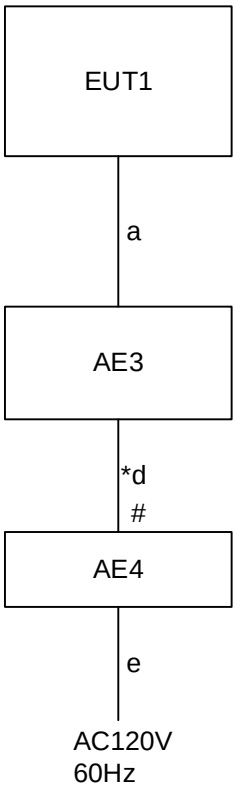


3. MP4/ with Earphone mode



: Un-detachable cable

4. USB Read/ with PC mode



\# : Un-detachable cable

* : Bundled excess cable

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4 Test Result

4.1 Conducted emission at mains port

4.1.1 Measurement condition

Frequency range	0.15 MHz-30 MHz
Test place	10 m Semi-Anechoic Chamber No. 1
EUT was placed on	FRP 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 Network (LISN)	Specification: 50 Ω/50 μH Distance from EUT: 0.8 m

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 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.

4.1.2 Calculation method

Emission level = Reading + c.f. (correction factor)*
Margin = Limit – Emission level

*Note: c.f. = LISN factor + Cable system loss + Attenuator loss

Example)

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

Quasi-peak
Reading = 41.2 dBμV c.f. = 10.3 dB
Emission level = 41.2 + 10.3 = 51.5 dBμV
Margin = 60.0 - 51.5 = 8.5 dB

Average
Reading = 35.0 dBμV c.f. = 10.3 dB
Emission level = 35.0 + 10.3 = 45.3 dBμV
Margin = 50.0 - 45.3 = 4.7 dB

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4.1.3 Test data and Configuration photographs

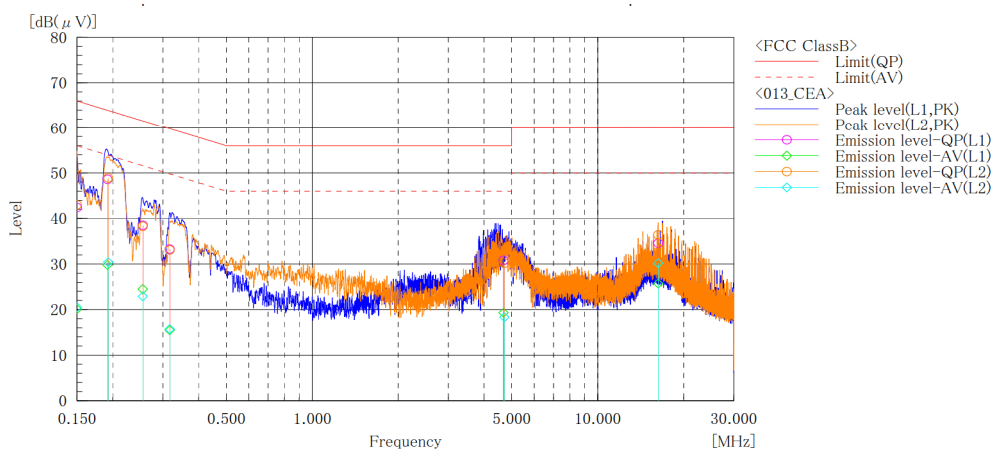
Operation mode	USB Read with PC mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

Date of test: 05-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

***** CONDUCTED EMISSION at MAINS PORT *****
[10m semi-anechoic chamber #1]

TUV SUD Japan Ltd. <<EMI Data Sheet>> 5 September,2019 00:30

Standard : FCC Part.15 Class B
Operator : Tsuyoshi Okumura
Temp,Hum,Atm : 22.8[℃] 68.8[%] 994[hPa]



Final Result

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dBμV]	Reading AV [dBμV]	c.f [dB]	Result QP [dBμV]	Result AV [dBμV]	Limit QP [dBμV]	Limit AV [dBμV]	Margin QP [dB]	Margin AV [dB]
1	0.150	31.9	9.6	10.5	42.4	20.1	66.0	56.0	23.6	35.9
2	0.192	38.2	19.4	10.4	48.6	29.8	63.9	53.9	15.3	24.1
3	0.255	28.2	14.2	10.3	38.5	24.5	61.6	51.6	23.1	27.1
4	0.317	23.0	5.2	10.3	33.3	15.5	59.8	49.8	26.5	34.3
5	4.676	20.1	8.6	10.7	30.8	19.3	56.0	46.0	25.2	26.7
6	16.292	23.5	14.6	11.1	34.6	25.7	60.0	50.0	25.4	24.3

--- L2 Phase ---

No.	Frequency [MHz]	Reading QP [dBμV]	Reading AV [dBμV]	c.f [dB]	Result QP [dBμV]	Result AV [dBμV]	Limit QP [dBμV]	Limit AV [dBμV]	Margin QP [dB]	Margin AV [dB]
1	0.150	32.5	10.0	10.5	43.0	20.5	66.0	56.0	23.0	35.5
2	0.193	38.5	20.0	10.4	48.9	30.4	63.9	53.9	15.0	23.5
3	0.255	28.0	12.6	10.3	38.3	22.9	61.6	51.6	23.3	28.7
4	0.317	22.8	5.4	10.3	33.1	15.7	59.8	49.8	26.7	34.1
5	4.710	19.5	7.6	10.7	30.2	18.3	56.0	46.0	25.8	27.7
6	16.292	25.2	19.0	11.2	36.4	30.2	60.0	50.0	23.6	19.8

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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. 1
EUT was placed on	FRP 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

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 + c.f. (correction factor)*
Margin = Limit - Emission level

*Note: c.f. = Antenna factor + Cable system loss + Attenuator loss - Amplifier Gain

Example)

Limit @ 350.0 MHz: 37.0 dBµV/m

Reading = 41.1 dBµV c.f. = -11.8 dB/m
Emission level = 41.1 - 11.8 = 29.3 dBµV/m
Margin = 37.0 - 29.3 = 7.7 dB

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4.2.3 Test data and Configuration photographs

Operation mode	Out Camera with ADP mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

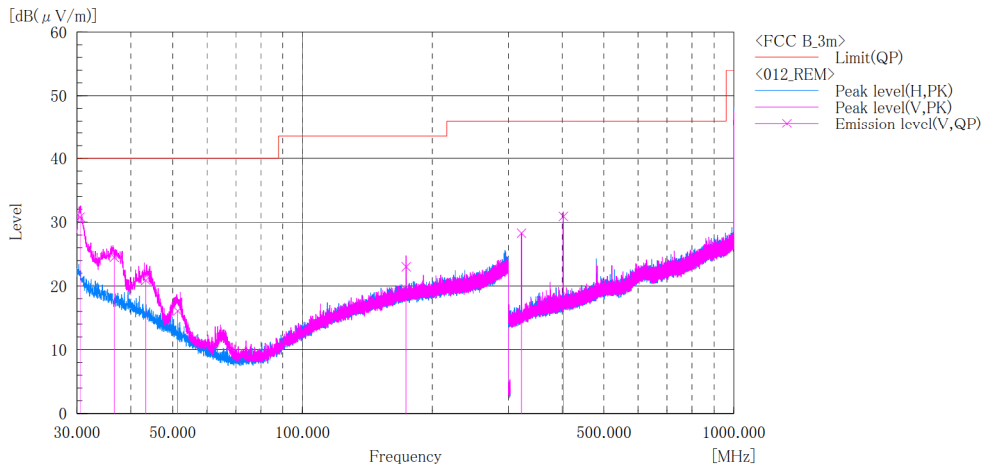
Date of test: 04-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

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

TUV SUD Japan Ltd. <<EMI Data Sheet>> 4 September,2019 23:02

Standard : FCC Part.15 Class B

Operator : Tsuyoshi Okumura
Temp,Hum,Atm : 22.6[℃] 69.0[%] 994[hPa]



Final Result

No.	Frequency [MHz]	(P)	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 [°]
1	30.475	V	35.5	-4.7	30.8	40.0	9.2	100.0	283.0
2	36.585	V	31.4	-6.9	24.5	40.0	15.5	100.0	172.0
3	43.309	V	30.1	-9.2	20.9	40.0	19.1	100.0	211.0
4	51.320	V	28.2	-12.1	16.1	40.0	23.9	100.0	84.0
5	173.844	V	28.6	-5.6	23.0	43.5	20.5	100.0	219.0
6	321.782	V	37.3	-9.0	28.3	46.0	17.7	174.0	37.0
7	402.302	V	38.1	-7.2	30.9	46.0	15.1	155.0	358.0

Operation mode	MP4 with ADP mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

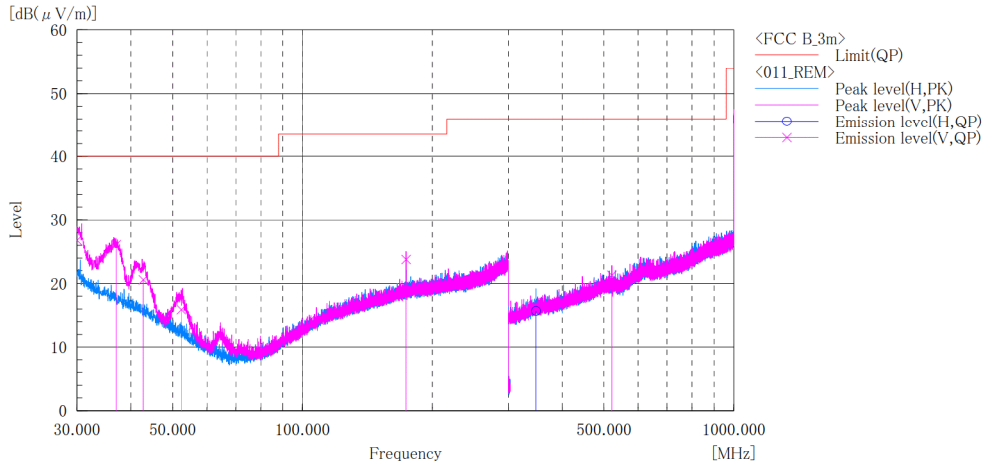
Date of test: 04-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

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

TUV SUD Japan Ltd. <<EMI Data Sheet>> 4 September,2019 06:58

Standard : FCC Part.15 Class B

Operator : Tsuyoshi Okumura
Temp,Hum,Atm : 22.1[℃] 68.9[%] 993[hPa]



Final Result

No.	Frequency [MHz]	(P)	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 [°]
1	30.009	V	31.3	-4.5	26.8	40.0	13.2	100.0	173.0
2	36.950	V	33.1	-7.0	26.1	40.0	13.9	100.0	169.0
3	42.750	V	29.6	-9.0	20.6	40.0	19.4	100.0	193.0
4	52.319	V	28.3	-12.4	15.9	40.0	24.1	113.0	156.0
5	173.844	V	29.4	-5.6	23.8	43.5	19.7	100.0	205.0
6	347.689	H	23.8	-8.1	15.7	46.0	30.3	100.0	267.0
7	521.533	V	25.8	-4.5	21.3	46.0	24.7	100.0	176.0

Operation mode	USB Read with PC mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

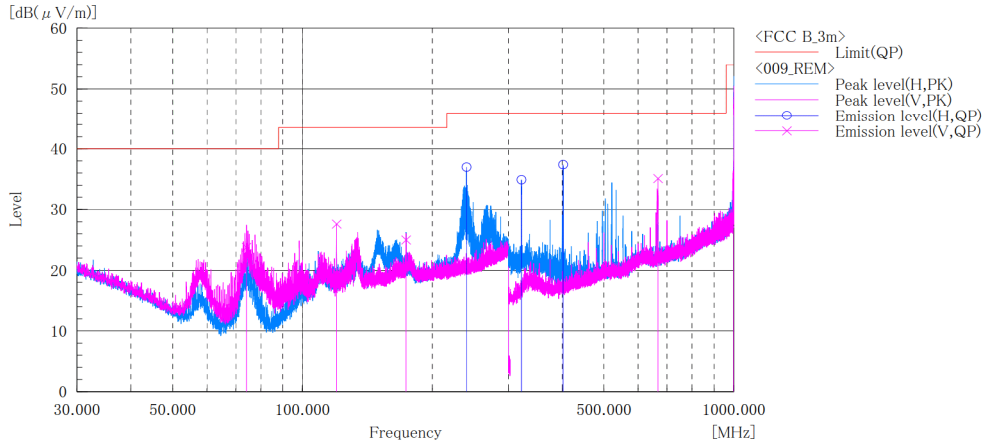
Date of test: 04-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

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

TUV SUD Japan Ltd. <<EMI Data Sheet>> 4 September,2019 05:03

Standard : FCC Part.15 Class B

Operator : Tsuyoshi Okumura
Temp,Hum,Atm : 22.1[℃] 68.9[%] 993[hPa]



Final Result

No.	Frequency [MHz]	(P)	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 [°]
1	74.127	V	39.9	-16.1	23.8	40.0	16.2	100.0	259.0
2	120.000	V	36.6	-9.0	27.6	43.5	15.9	100.0	260.0
3	173.846	V	30.6	-5.6	25.0	43.5	18.5	100.0	187.0
4	240.000	H	41.1	-4.1	37.0	46.0	9.0	137.0	203.0
5	321.691	H	43.9	-9.0	34.9	46.0	11.1	114.0	177.0
6	402.170	H	44.6	-7.2	37.4	46.0	8.6	100.0	86.0
7	666.669	V	37.2	-2.1	35.1	46.0	10.9	100.0	168.0
8	996.253	V	23.6	3.5	27.1	54.0	26.9	100.0	286.0

Operation mode	MP4/ with Earphone mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

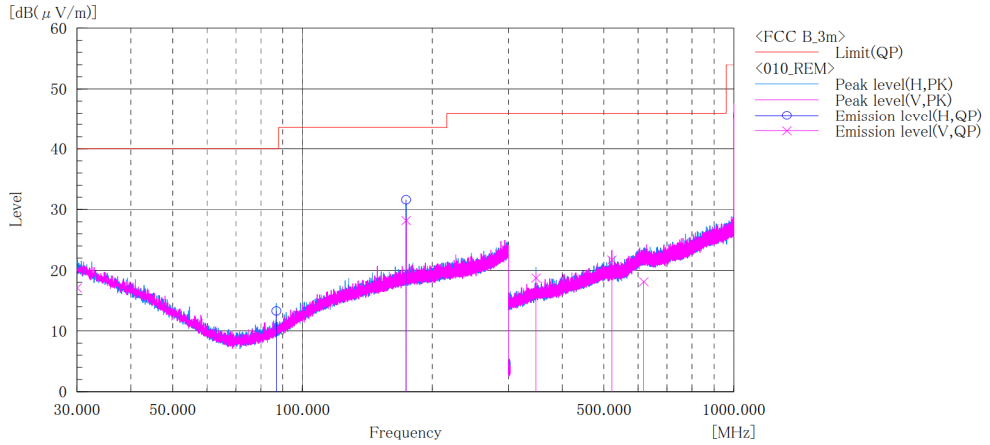
Date of test: 04-September-2019 Battery DC 3.8 V

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

TUV SUD Japan Ltd. <<EMI Data Sheet>> 4 September,2019 06:00

Standard : FCC Part.15 Class B

Operator : Tsuyoshi Okumura
Temp,Hum,Atm : 22.1[℃] 68.9[%] 993[hPa]



Final Result

No.	Frequency [MHz]	(P)	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 [°]
1	30.001	V	21.6	-4.5	17.1	40.0	22.9	100.0	183.0
2	86.922	H	27.8	-14.5	13.3	40.0	26.7	400.0	92.0
3	173.844	H	37.2	-5.6	31.6	43.5	11.9	183.0	306.0
4	173.844	V	33.8	-5.6	28.2	43.5	15.3	161.0	9.0
5	347.689	V	26.8	-8.1	18.7	46.0	27.3	152.0	166.0
6	521.533	V	26.2	-4.5	21.7	46.0	24.3	106.0	198.0
7	618.240	V	20.1	-2.0	18.1	46.0	27.9	100.0	170.0

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4.3 Radiated emission (above 1 GHz)

4.3.1 Measurement condition

Frequency range	1.0 GHz-6.0 GHz
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: 3.85 m, 3.95m, 4.05m Height: 1-4 m 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 used: 3117)

Antenna: 3115

Frequency (GHz)	θ3 dB (°)	3 dB beamwidth w (m)
1.0	63	3.68
2.0	47	2.61
3.0	38	2.07
4.0	36	1.95
5.0	40	2.18
6.0	44	2.42

Antenna: 3117

Frequency (GHz)	θ3 dB (°)	3 dB beamwidth w (m)
1.0	82	5.22
2.0	60	3.46
3.0	76	4.69
4.0	56	3.19
5.0	54	3.06
6.0	50	2.80

Measurement distance: d = 3.0 m

$W = 2 \times d \times \tan(0.5 \times \theta 3\ dB)$

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4.3.2 Calculation method

Emission level = Reading + Measurement distance conversion factor + c.f. (correction factor)*

Margin = Limit - Emission level

*Note: c.f. = Antenna factor + Cable system loss + Attenuator loss - Amplifier Gain

Example)

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

Measurement distance: 3.25 m

Measurement distance conversion factor: 20 log (3.25m/3.0m) = 0.7 dB

Peak	Reading = 50.2 dBµV, Measurement distance conversion factor = 0.7 dB, c.f. = 1.7 dB/m Emission level = 50.2 + 0.7 + 1.7 = 52.6 dBµV/m Margin = 70.0 – 52.6 = 17.4 dB
Average	Reading = 32.0 dBµV, Measurement distance conversion factor = 0.7 dB, c.f. = 1.7 dB/m Emission level = 32.0 + 0.7 + 1.7 = 34.4 dBµV/m Margin = 50.0 – 34.4 = 15.6 dB

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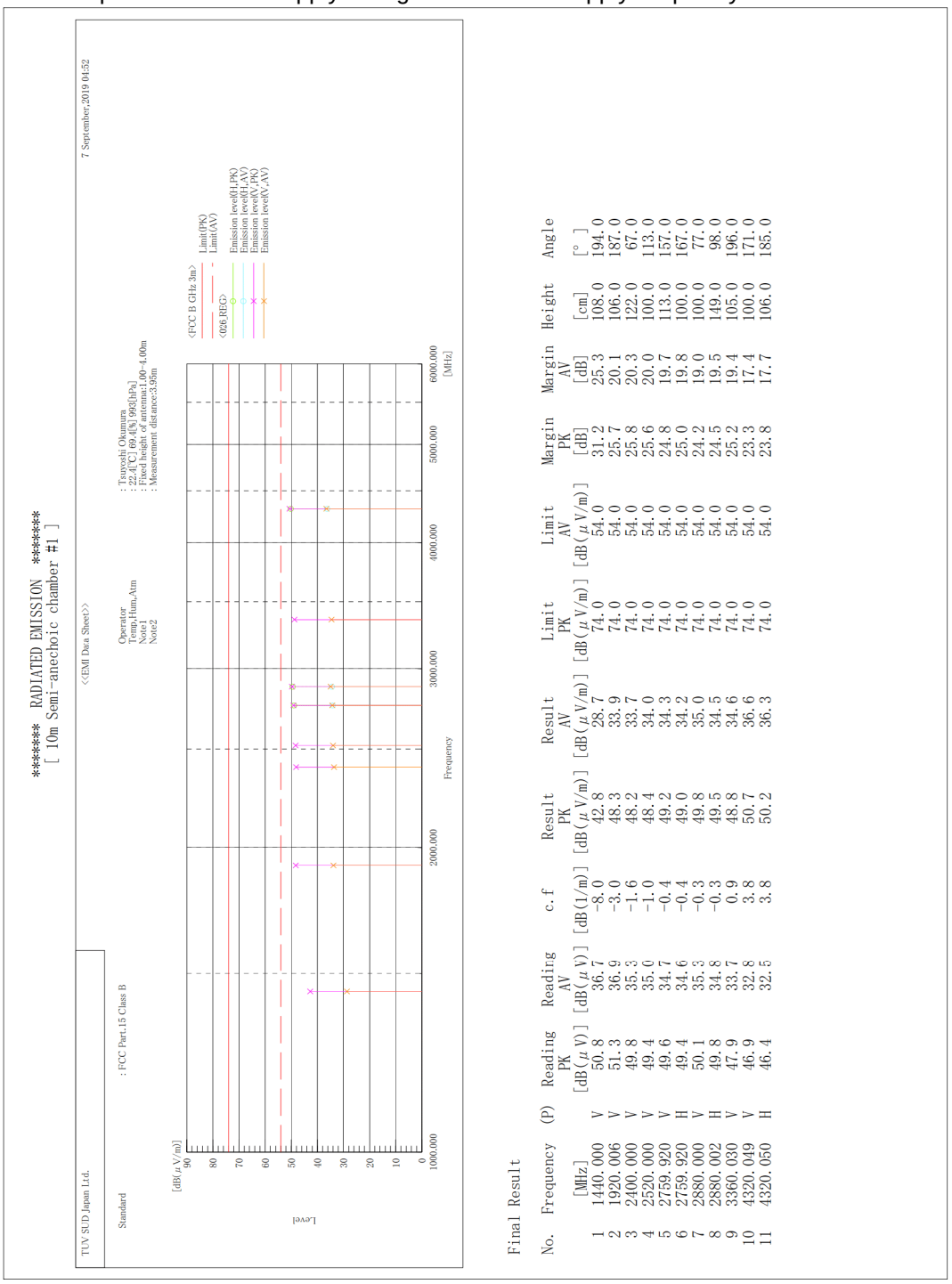
4.3.3 Test data and Configuration photographs

Operation mode	Out Camera with ADP mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

Date of test: 07-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

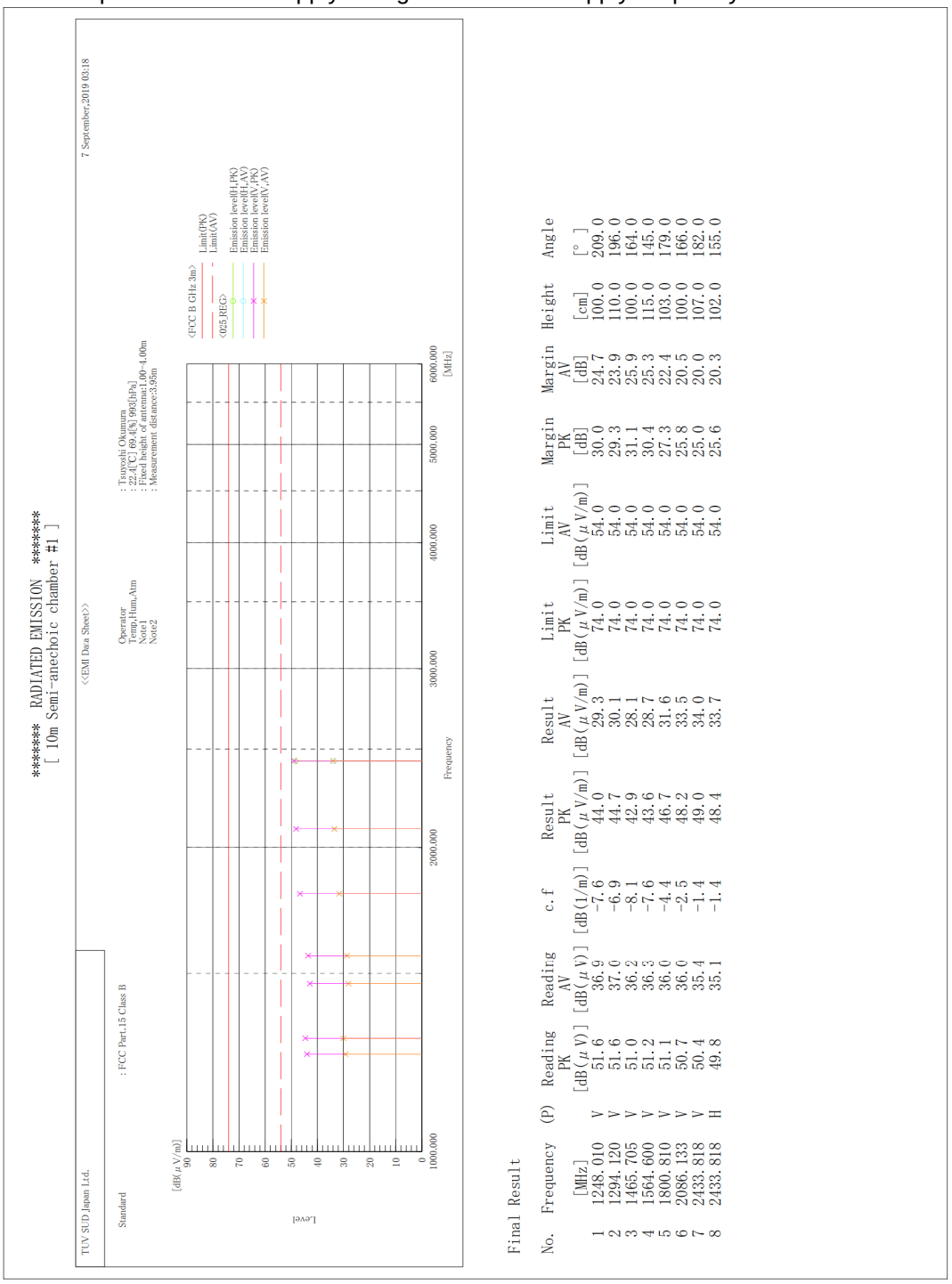


Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[°]
1	1440.000	V	50.8	36.7	-8.0	42.8	28.7	74.0	54.0	31.2	25.3	108.0	194.0
2	1920.006	V	51.3	36.9	-3.0	48.3	33.9	74.0	54.0	25.7	20.1	106.0	187.0
3	2400.000	V	49.8	35.3	-1.6	48.2	33.7	74.0	54.0	25.8	20.3	122.0	67.0
4	2520.000	V	49.4	35.0	-1.0	48.4	34.0	74.0	54.0	25.6	20.0	100.0	113.0
5	2759.920	V	49.6	34.7	-0.4	49.2	34.3	74.0	54.0	24.8	19.7	113.0	157.0
6	2759.920	H	49.4	34.6	-0.4	49.0	34.2	74.0	54.0	25.0	19.8	100.0	167.0
7	2880.000	V	50.1	35.3	-0.3	49.8	35.0	74.0	54.0	24.2	19.0	100.0	77.0
8	2880.002	H	49.8	34.8	-0.3	49.5	34.5	74.0	54.0	24.5	19.5	149.0	98.0
9	3360.030	V	47.9	33.7	0.9	48.8	34.6	74.0	54.0	25.2	19.4	105.0	196.0
10	4320.049	V	46.9	32.8	3.8	50.7	36.6	74.0	54.0	23.3	17.4	100.0	171.0
11	4320.050	H	46.4	32.5	3.8	50.2	36.3	74.0	54.0	23.8	17.7	106.0	185.0

Operation mode	MP4 with ADP mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

Date of test: 07-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

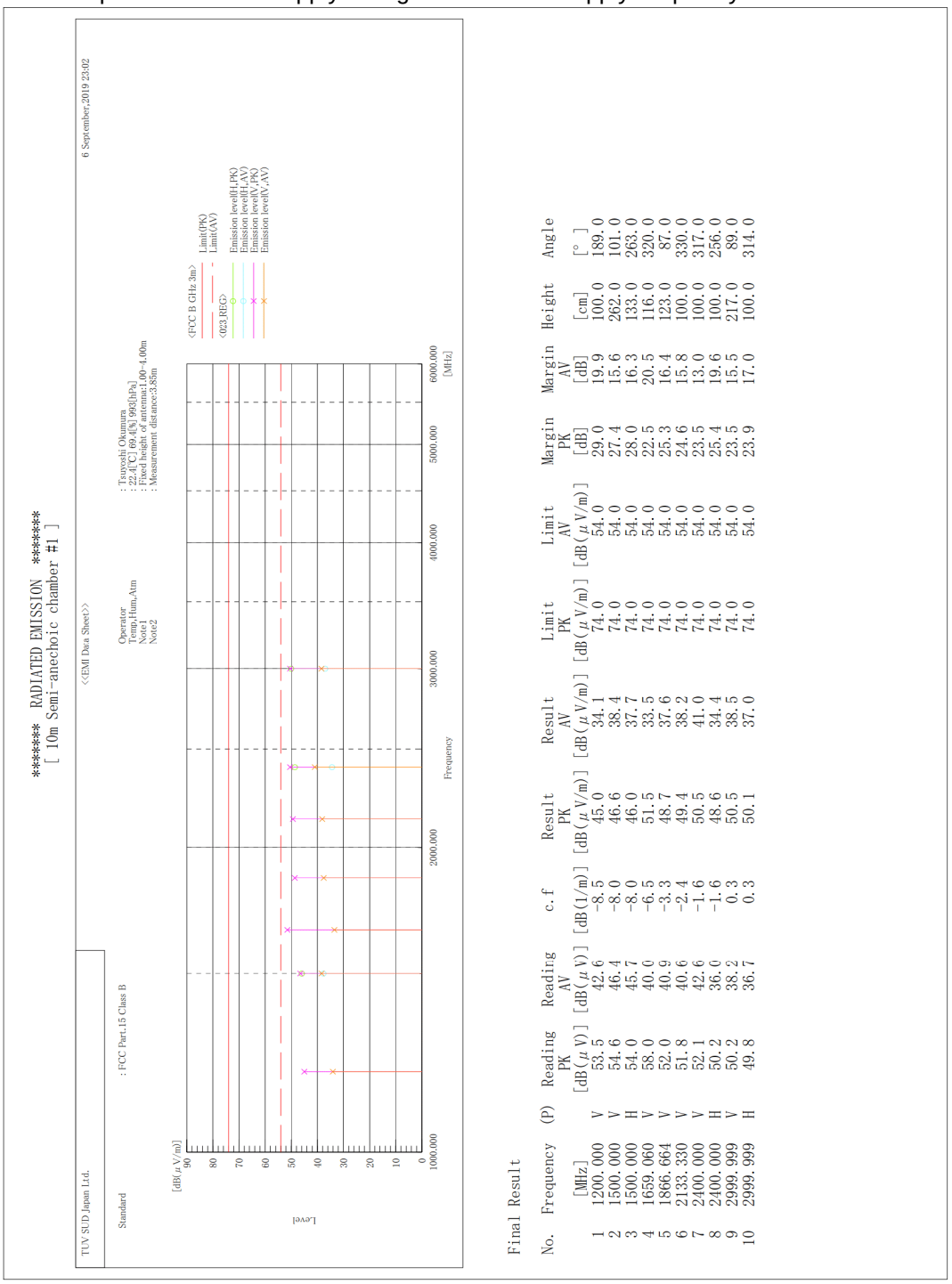


Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle
	[MHz]		[dBμV]	[dBμV]	[dB(1/m)]	[dBμV/m]	[dBμV/m]	[dBμV/m]	[dBμV/m]	[dB]	[dB]	[cm]	[°]
1	1248.010	V	51.6	36.9	-7.6	44.0	29.3	74.0	54.0	30.0	24.7	100.0	209.0
2	1294.120	V	51.6	37.0	-6.9	44.7	30.1	74.0	54.0	29.3	23.9	110.0	196.0
3	1465.705	V	51.0	36.2	-8.1	42.9	28.1	74.0	54.0	31.1	25.9	100.0	164.0
4	1564.600	V	51.2	36.3	-7.6	43.6	28.7	74.0	54.0	30.4	25.3	115.0	145.0
5	1800.810	V	51.1	36.0	-4.4	46.7	31.6	74.0	54.0	27.3	22.4	103.0	179.0
6	2086.133	V	50.7	36.0	-2.5	48.2	33.5	74.0	54.0	25.8	20.5	100.0	166.0
7	2433.818	V	50.4	35.4	-1.4	49.0	34.0	74.0	54.0	25.0	20.0	107.0	182.0
8	2433.818	H	49.8	35.1	-1.4	48.4	33.7	74.0	54.0	25.6	20.3	102.0	155.0

Operation mode	USB Read with PC mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

Date of test: 06-September-2019 Supply voltage: AC 120 V Supply frequency: 60 Hz

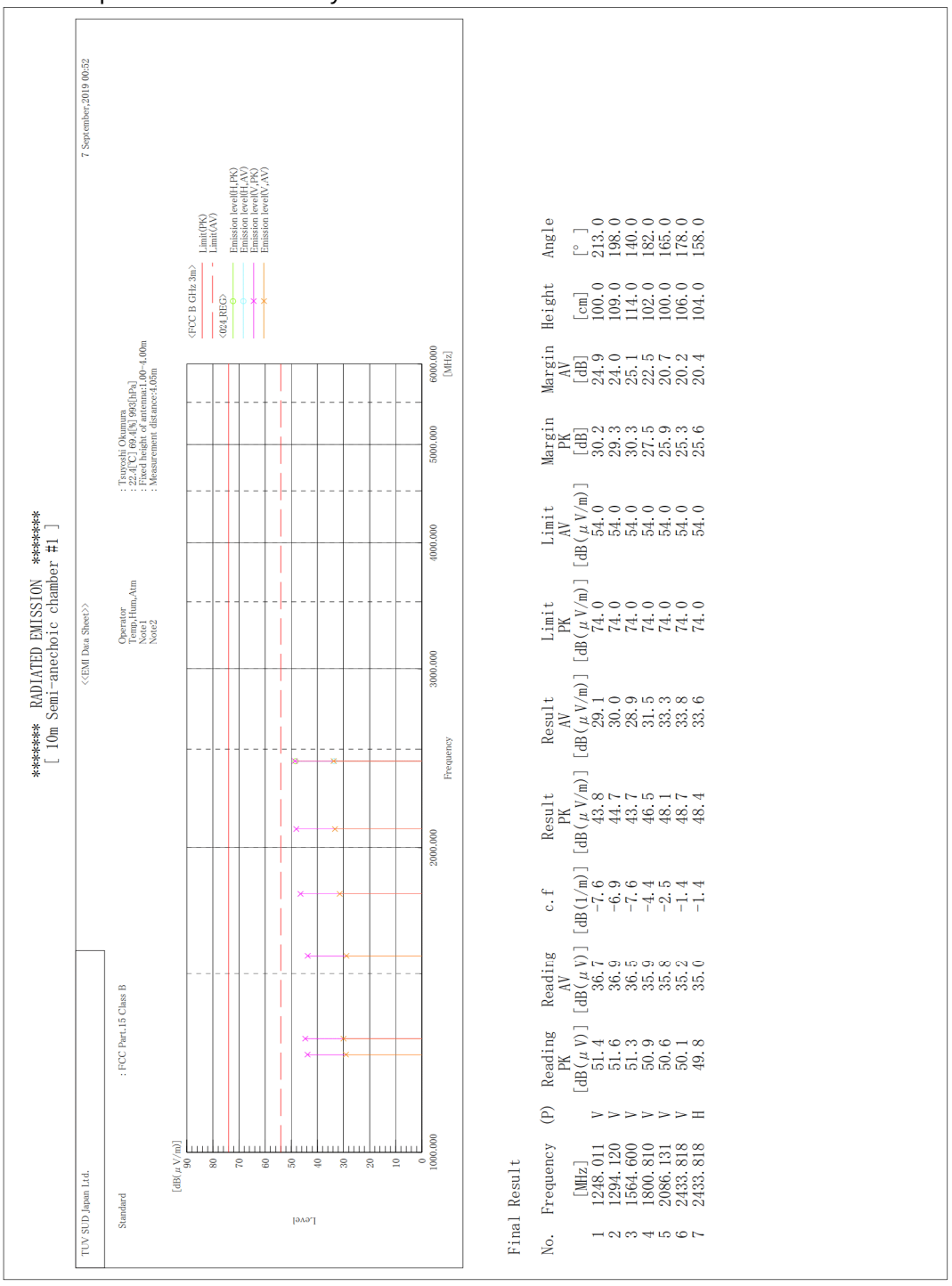


Final Result

No.	Frequency	(P)	Reading PK	Reading AV	c.f	Result PK	Result AV	Limit PK	Limit AV	Margin PK	Margin AV	Height	Angle
	[MHz]		[dBμV]	[dBμV]	[dB(1/m)]	[dBμV/m]	[dBμV/m]	[dBμV/m]	[dBμV/m]	[dB]	[dB]	[cm]	[°]
1	1200.000	V	53.5	42.6	-8.5	45.0	34.1	74.0	54.0	29.0	19.9	100.0	189.0
2	1500.000	V	54.6	46.4	-8.0	46.6	38.4	74.0	54.0	27.4	15.6	262.0	101.0
3	1500.000	H	54.0	45.7	-8.0	46.0	37.7	74.0	54.0	28.0	16.3	133.0	263.0
4	1659.060	V	58.0	40.0	-6.5	51.5	33.5	74.0	54.0	22.5	20.5	116.0	320.0
5	1866.664	V	52.0	40.9	-3.3	48.7	37.6	74.0	54.0	25.3	16.4	123.0	87.0
6	2133.330	V	51.8	40.6	-2.4	49.4	38.2	74.0	54.0	24.6	15.8	100.0	330.0
7	2400.000	V	52.1	42.6	-1.6	50.5	41.0	74.0	54.0	23.5	13.0	100.0	317.0
8	2400.000	H	50.2	36.0	-1.6	48.6	34.4	74.0	54.0	25.4	19.6	100.0	256.0
9	2999.999	V	50.2	38.2	0.3	50.5	38.5	74.0	54.0	23.5	15.5	217.0	89.0
10	2999.999	H	49.8	36.7	0.3	50.1	37.0	74.0	54.0	23.9	17.0	100.0	314.0

Operation mode	MP4 with Earphone mode
EUT	DB62, S/N: 358037100015585 - Modification State 0

Date of test: 07-September-2019 Battery DC 3.8 V



Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading AV [dB(μV)]	c.f [dB(1/m)]	Result PK [dB(μV/m)]	Result AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin AV [dB]	Height [cm]	Angle [°]
1	1248.011	V	51.4	36.7	-7.6	43.8	29.1	74.0	54.0	30.2	24.9	100.0	213.0
2	1294.120	V	51.6	36.9	-6.9	44.7	30.0	74.0	54.0	29.3	24.0	109.0	198.0
3	1564.600	V	51.3	36.5	-7.6	43.7	28.9	74.0	54.0	30.3	25.1	114.0	140.0
4	1800.810	V	50.9	35.9	-4.4	46.5	31.5	74.0	54.0	27.5	22.5	102.0	182.0
5	2086.131	V	50.6	35.8	-2.5	48.1	33.3	74.0	54.0	25.9	20.7	100.0	165.0
6	2433.818	V	50.1	35.2	-1.4	48.7	33.8	74.0	54.0	25.3	20.2	106.0	178.0
7	2433.818	H	49.8	35.0	-1.4	48.4	33.6	74.0	54.0	25.6	20.4	104.0	158.0

Japan

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, AMN	9kHz to 150kHz	± 3.8 dB	± 3.8 dB
Conducted Emission, AMN	150kHz to 30MHz	± 3.4 dB	± 3.4 dB
Conducted Emission, AN	150kHz to 30MHz	± 4.3 dB	-
Conducted Emission, Voltage Probe	9kHz to 30MHz	± 2.8 dB	± 2.9 dB
Conducted Emission, AAN	150kHz to 30MHz	± 4.9 dB	± 5.0 dB
Conducted Emission, Current Probe	150kHz to 30MHz	± 2.9 dB	± 2.9 dB
Disturbance Power	30MHz to 300MHz	± 4.3 dB	± 4.5 dB
Radiated Emission	30MHz to 1000MHz	± 4.9 dB	± 6.3 dB
Radiated Emission	1GHz to 6GHz	± 4.6 dB	± 5.2 dB
Radiated Emission	6GHz to 18GHz	± 4.9 dB	± 5.5 dB
Radiated Emission	9kHz to 30MHz	± 3.3 dB	-

Japan

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
Fax: +81-238-28-2888

Accreditation and Registration

VLAC
Accreditation No.: VLAC-013

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

VCCI Council

Registration number	Expiration date
A-0166	03-July-2021

Japan

Appendix A. Test Equipment

Conducted emission at mains port

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. Date
EMI receiver	ROHDE&SCHWARZ	ESR7	101742	31-Jan-2020	25-Jan-2019
Line impedance stabilization network for EUT	Kyoritsu Technology Corporation	TNW-407F2	12-17-110-2	31-May-2020	16-May-2019
Attenuator	HUBER+SUHNER	6810.01.A	N/A(S442)	31-Dec-2019	17-Dec-2018
Coaxial cable	FUJIKURA	5D-2W/4m	N/A(S349)	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	317672/4	31-Oct-2019	10-Oct-2018
Coaxial cable	HUBER+SUHNER	RG214/U/25m	N/A(S191)	31-Oct-2019	12-Oct-2018
PC	HP	dc7800small	JPA7450FPJ	N/A	N/A
Software	TOYO Corporation	EP5/CE-AJ	0611193/V5.4.11	N/A	N/A

Radiated emission (below 1 GHz)

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
EMI receiver	ROHDE&SCHWARZ	ESR7	101742	31-Jan-2020	25-Jan-2019
Biconical antenna	Schwarzbeck	VHA9103/BBA9106	VHA91032850	31-Oct-2019	17-Oct-2018
Log-periodic antenna	Schwarzbeck	VUSLP9111B	343	30-Apr-2020	08-Apr-2019
Attenuator	TDC	TAT-43B-06	N/A(S209)	31-Jul-2020	17-Jul-2019
Attenuator	TAMAGAWA.ELEC	CFA-01NPJ-3	N/A(S270)	31-May-2020	17-May-2019
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	MY23758/4	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1m	MY24628/4	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	SN MY28398/4	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX106/13m	MY1159/6	31-Oct-2019	12-Oct-2018
Preamplifier	ANRITSU	MH648A	M96057	31-Jan-2020	17-Jan-2019
10m Semi-anechoic Chamber	TOKIN	N/A	N/A(9001-NSA3m)	31-Oct-2019	12-Oct-2018
PC	HP	dc7800small	JPA7450FPJ	N/A	N/A
Software	TOYO Corporation	EP5/RE-AJ	0611193/V5.6.0	N/A	N/A

Radiated emission (above 1 GHz)

Equipment	Company	Model No.	Serial No.	Cal. due	Cal. date
EMI receiver	ROHDE&SCHWARZ	ESR7	101742	31-Jan-2020	25-Jan-2019
Preamplifier	TSJ	MLA-0118-J02-40	14882	31-Oct-2019	10-Oct-2018
Double ridged guide antenna	ETS LINDGREN	3117	00209352	30-Nov-2019	06-Nov-2018
Attenuator	Agilent Technologies	8491B	MY39268632	31-May-2020	17-May-2019
Microwave cable	HUBER+SUHNER	SUCOFLEX104/9m	800693/4	31-May-2020	16-May-2019
Microwave cable	HUBER+SUHNER	SUCOFLEX104/1.5m	SN MY19304/4	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX104/2m	SN MY28398/4	31-Oct-2019	10-Oct-2018
Microwave cable	HUBER+SUHNER	SUCOFLEX106/13m	MY1159/6	31-Oct-2019	12-Oct-2018
Absorber	RIKEN	PFP30	N/A	N/A	N/A
10m Semi-anechoic Chamber	TOKIN	N/A	N/A(9001-SVSWR)	31-Oct-2019	13-Oct-2018
PC	HP	dc7800small	JPA7450FPJ	N/A	N/A
Software	TOYO Corporation	EP5/RE-AJ	0611193/V5.6.0	N/A	N/A