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2.8 Radiated emissions (for restricted frequency band)

Test setup

Test setup was implemented according to the method of ANSI C63.10 clause 6.

Test procedure

Measurement procedures were implemented according to the method of ANSI C63.10 clauses 6. The test receiver is set as below

[9 - 150 kHz]

RBW: 200 Hz, Detector: QP

[150 kHz - 30 MHz]

RBW: 9 kHz, Detector: OP

[30 - 1000 MHz]

RBW: 120 kHz, Detector: QP

[above 1000 MHz]

RBW: 1 MHz, Detector: Ave/PK

Applicable rule and limitation

FCC 15.205 restricted bands of operation

Except as shown in paragraph 15.205 (d) of this section, only spurious emissions are permitted in any of

the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
0.490 - 0.510	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	38.6 -

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in FCC 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in FCC 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions.



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FCC 15.209; Field strength limits

Frequency [MHz]	Field Strength [µV/m]	Measurement Distance [m]	Field Strength [dBµV/m]
30 - 88	100	3	40.0
88 –216	150	3	43.5
216 - 960	200	3	46.0
Above 960	500	3	53.9

In the emission table above, the tighter limit applies at the band edges.

The emission limits shown in the above table are based on measurements employing a quasi-peak detector.

Test results - Complied with requirement

Test equipment used (refer to List of utilized test equipment)

AC01	CL11	TR06	PR21	BA07	CL30	CL38	PR12
DH06	CH01	SH01	LP06	AT33	HPF4		

Test Date

(9 k - 30 MHz, 30 M - 1000 MHz, 1 G - 3 GHz)

Temperature: 18 degC Tested Date: March 12, 2018 Humidity: 45 % Atmos. Press: 1020 hPa

(3 G – 12 GHz, 12 G – 18 GHz, 18 GHz – 25 GHz)

Tested Date: March 15, 2018 Temperature: 22 degC Humidity: 45 % Atmos. Press: 1020 hPa

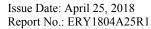
Test software used

EMI1 Ver. 5.7

Calculation method

The Correction Factor and Result are calculated as followings.

Correction Factor [dB/m] = Ant. Factor [dB/m] + Loss [dB] - Gain [dB]Result $[dB\mu V/m] = Reading [dB\mu V] + Correction Factor [dB/m]$







Test Data (9 kHz - 30MHz)

Operating mode: DH5, 2402 MHz, X-plane (Worst)

Test site: Yokohama Laboratory

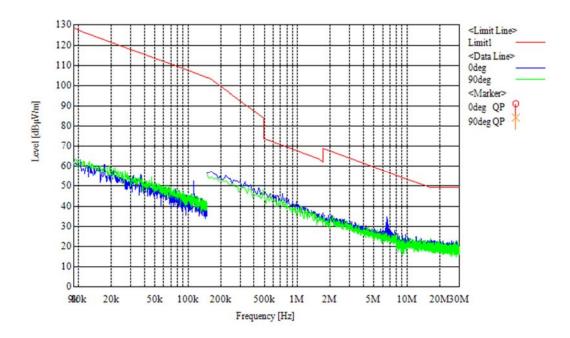
Measurement distance: 3 m

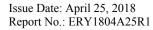
[Emission level]

No.	Frequency [MHz]	Reading [dBµV]	Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Ant.
-	-	-	-	-	-	-	-	-	-
-	-	-	•	•	-	-	-	-	•

Note: All other emissions were under noise floor.

[Chart]









Test Data (30 - 1000MHz)

Operating mode: DH5, 2402 MHz, X-plane (Worst)

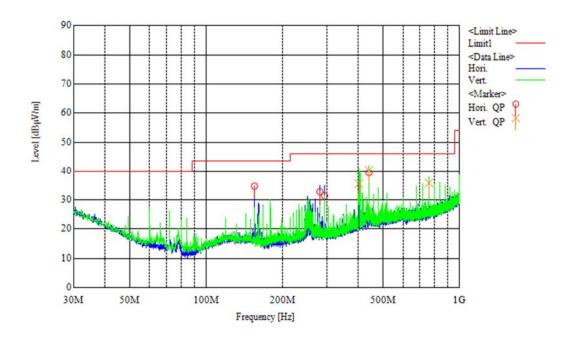
Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

Diffioo									
No.	Frequency [MHz]	Reading [dBµV]	Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Ant.
1	155.823	45.5	11.0	8.3	30.2	34.6	43.5	8.9	Hori.
2	281.593	40.9	12.9	9.3	30.2	32.9	46.0	13.1	Hori.
3	293.620	39.0	13.1	9.4	30.2	31.3	46.0	14.7	Hori.
4	439.978	42.8	16.5	10.4	30.2	39.5	46.0	6.5	Hori.
5	402.637	39.5	16.1	10.1	30.2	35.5	46.0	10.5	Vert.
6	439.981	43.5	16.5	10.4	30.2	40.2	46.0	5.8	Vert.
7	759.949	34.6	19.3	11.9	30.1	35.7	46.0	10.3	Vert.

[Chart]





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Test Data (above 1000MHz)

Operating mode: DH5, 2402 MHz, X-plane Test site: Yokohama Laboratory

Measurement distance:

[Emission level]

Lilli	obton tever										
No.	Frequency	Reading PK	Reading	C.Factor	Result PK	Result	Limit PK	Limit	Margin PK	Margin	A mt
NO.	[MHz]	[dBµV]	Ave [dBμV]	[dB]		Ave [dBµV/m]		Ave [dBμV/m]	[dB]	Ave [dB]	Ant.
1	4804.000	40.6	27.9	2.7	43.3	30.6	73.9	53.9	30.6	23.3	Hori.
2	4804.000	41.0	28.3	2.7	43.7	31.0	73.9	53.9	30.2	22.9	Vert.

Operating mode: DH5, 2441 MHz, X-plane Test site: Yokohama Laboratory

Measurement distance:

[Emission level]

No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	4882.000	41.7	29.6	2.9	44.6	32.5	73.9	53.9	29.3	21.4	Hori.
2	7323.000	40.0	26.8	7.5	47.5	34.3	73.9	53.9	26.4	19.6	Hori.
3	4882.000	41.8	29.6	2.9	44.7	32.5	73.9	53.9	29.2	21.4	Vert.
4	7323.000	40.2	26.8	7.5	47.7	34.3	73.9	53.9	26.2	19.6	Vert.

Operating mode: DH5, 2480 MHz, X-plane (Worst)

Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

1	No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	PK	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
	1	4960.000	42.8	31.5	3.4	46.2	34.9	73.9	53.9	27.7	19.0	Hori.
	2	7440.000	40.1	27.2	7.4	47.5	34.6	73.9	53.9	26.4	19.3	Hori.
	3	4960.000	40.9	27.8	3.4	44.3	31.2	73.9	53.9	29.6	22.7	Vert.
	4	7440.000	41.5	29.0	7.4	48.9	36.4	73.9	53.9	25.0	17.5	Vert.



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Operating mode: 3DH5, 2402 MHz, X-plane Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	4804.000	41.2	27.5	2.7	43.9	30.2	73.9	53.9	30.0	23.7	Hori.
3	4804.000	40.7	27.5	2.7	43.4	30.2	73.9	53.9	30.5	23.7	Vert.

Operating mode: 3DH5, 2441 MHz, X-plane Test site: Yokohama Laboratory

Measurement distance:

[Emission level]

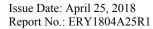
No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	PK	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	4882.000	41.7	28.3	2.9	44.6	31.2	73.9	53.9	29.3	22.7	Hori.
2	7323.000	40.2	26.9	7.5	47.7	34.4	73.9	53.9	26.2	19.5	Hori.
3	4882.000	41.1	27.9	2.9	44.0	30.8	73.9	53.9	29.9	23.1	Vert.
4	7323.000	40.4	27.4	7.5	47.9	34.9	73.9	53.9	26.0	19.0	Vert.

Operating mode: 3DH5, 2480 MHz, X-plane Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	PK	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	4960.000	41.4	28.5	3.4	44.8	31.9	73.9	53.9	29.1	22.0	Hori.
2	7440.000	40.3	27.3	7.4	47.7	34.7	73.9	53.9	26.2	19.2	Hori.
3	4960.000	41.3	27.5	3.4	44.7	30.9	73.9	53.9	29.2	23.0	Vert.
4	7440.000	41.7	27.7	7.4	49.1	35.1	73.9	53.9	24.8	18.8	Vert.







Restricted bandedge measurement

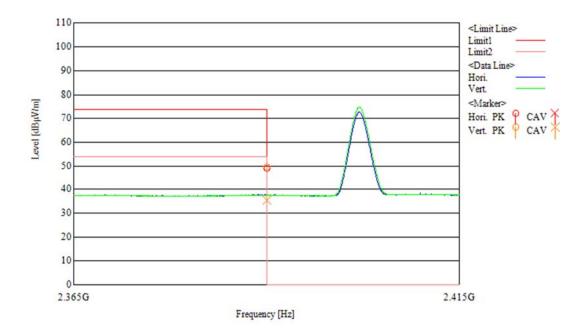
Operating mode: DH5, 2402 MHz, X-plane Test site: Yokohama Laboratory

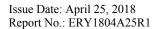
Measurement distance: 3 m

[Emission level]

	SSIOII ICVCI										
No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	2390.000	43.9	30.3	5.0	48.9	35.3	73.9	53.9	25.0	18.6	Hori.
2	2390.000	44.4	30.3	5.0	49.4	35.3	73.9	53.9	24.5	18.6	Vert.

[Chart]









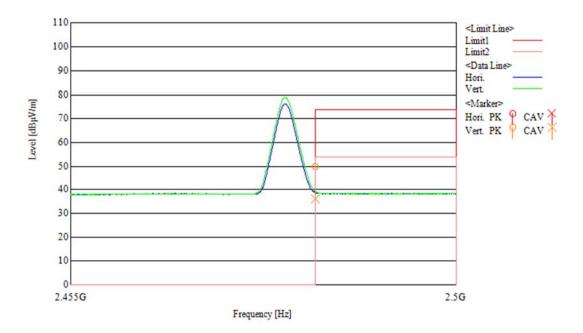
Operating mode: DH5, 2480 MHz, X-plane Test site: Yokohama Laboratory

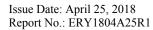
Measurement distance: 3 m

[Emission level]

L												
	No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
ĺ	1	2483.500	43.7	30.2	6.0	49.7	36.2	73.9	53.9	24.2	17.7	Hori.
	2	2483.500	43.7	30.1	6.0	49.7	36.1	73.9	53.9	24.2	17.8	Vert.

[Chart]









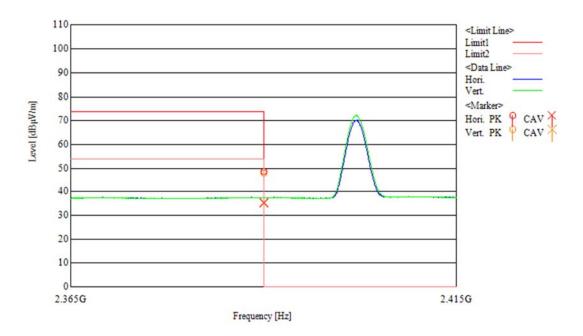
Operating mode: 3DH5, 2402 MHz, X-plane Test site: Yokohama Laboratory

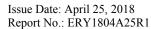
Measurement distance: 3 m

[Emission level]

L												
	No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
ĺ	1	2390.000	43.5	30.3	5.0	48.5	35.3	73.9	53.9	25.4	18.6	Hori.
	2	2390.000	43.0	30.2	5.0	48.0	35.2	73.9	53.9	25.9	18.7	Vert.

[Chart]









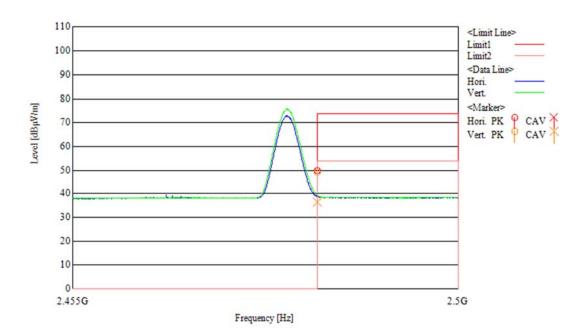
Operating mode: 3DH5, 2480 MHz, X-plane Test site: Yokohama Laboratory

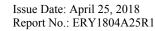
Measurement distance: 3 m

[Emission level]

	bbion ievei										
No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	Result PK [dBµV/m]	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	2483.500	43.8	30.3	6.0	49.8	36.3	73.9	53.9	24.1	17.6	Hori.
2	2483.500	43.2	30.4	6.0	49.2	36.4	73.9	53.9	24.7	17.5	Vert.

[Chart]





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2.9 AC power line conducted emissions

Test setup

Test setup was implemented according to the method of ANSI C63.10 clause 6.2.

Test procedure

Measurement procedures were implemented according to the method of ANSI C63.10 clause 6.2.

Applicable rule and limitation

FCC 15.207; AC power line conducted emissions limits

Frequency of Emission	Conducted emissions Limit [dBµV]					
[MHz]	Quasi-peak	Average				
0.15 - 0.5	66 to 56 *	56 to 46 *				
0.5 - 5	56	46				
5 - 30	60	50				

^{*} Decreases with the logarithm of the frequency. The lower limit applies at the band edges.

Test equipment used (refer to List of utilized test equipment)

LN06	CL18	TR06

Test Date

Tested Date: March 15, 2018 Temperature: 22 degC Humidity: 45 % Atmos. Press: 1020 hPa

Test software used

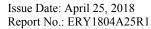
EMI Ver. 5.7

Calculation method

The Correction Factor and Result are calculated as followings.

Correction Factor [dB] = ISN Factor [dB] + Loss [dB]Result $[dB\mu V]$ = Reading $[dB\mu V]$ + Correction Factor [dB]

Test results - Complied with requirement





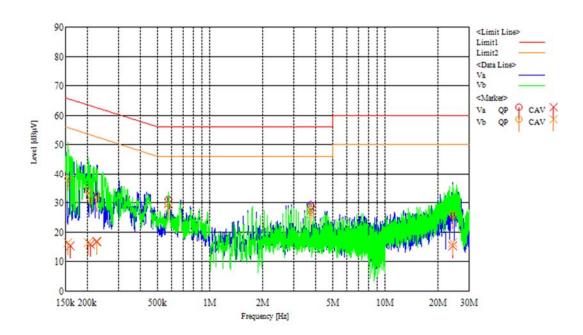


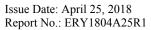
Test Data

Operating mode: DH5, Hopping Test site: Yokohama Laboratory

	E	Rea	ding	CE	Res	sult	Liı	nit	Ma	rgin	
No.	Frequency [MHz]	QP [dBuV]	AV [dBuV]	C.F. [dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	PHASE
1	0.16003	26.4	5.2	10.2	36.6	15.4	65.5	55.5	28.9	40.1	Va
2	0.20830	22.6	5.9	10.1	32.7	16.0	63.3	53.3	30.6	37.3	Va
3	0.22682	21.1	6.5	10.1	31.2	16.6	62.6	52.6	31.4	36.0	Va
4	0.58053	21.3	19.8	10.0	31.3	29.8	56.0	46.0	24.7	16.2	Va
5	3.77627	19.0	17.3	10.1	29.1	27.4	56.0	46.0	26.9	18.6	Va
6	24.33713	15.2	4.8	10.4	25.6	15.2	60.0	50.0	34.4	34.8	Va
7	0.15476	28.1	6.2	10.3	38.4	16.5	65.7	55.7	27.3	39.2	Vb
8	0.20218	23.9	6.3	10.2	34.1	16.5	63.5	53.5	29.4	37.0	Vb
9	0.22631	22.5	6.7	10.2	32.7	16.9	62.6	52.6	29.9	35.7	Vb
10	0.57848	19.5	18.2	10.1	29.6	28.3	56.0	46.0	26.4	17.7	Vb
11	3.77325	17.6	15.8	10.1	27.7	25.9	56.0	46.0	28.3	20.1	Vb
12	24.26515	15.5	6.0	10.5	26.0	16.5	60.0	50.0	34.0	33.5	Vb

[Chart]





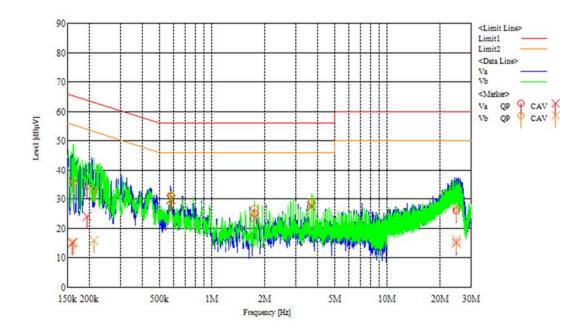




Operating mode: 3DH5, Hopping Test site: Yokohama Laboratory

	E	Rea	ding	CE	Re	sult	Liı	nit	Ma	rgin	
No.	Frequency [MHz]	QP [dBuV]	AV [dBuV]	C.F. [dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	PHASE
1	0.15935	26.2	4.9	10.2	36.4	15.1	65.5	55.5	29.1	40.4	Va
2	0.19442	24.4	14.1	10.1	34.5	24.2	63.8	53.8	29.3	29.6	Va
3	0.58164	21.3	19.8	10.0	31.3	29.8	56.0	46.0	24.7	16.2	Va
4	1.74325	15.3	13.3	10.0	25.3	23.3	56.0	46.0	30.7	22.7	Va
5	3.68326	19.0	17.2	10.1	29.1	27.3	56.0	46.0	26.9	18.7	Va
6	24.65307	15.6	4.6	10.5	26.1	15.1	60.0	50.0	33.9	34.9	Va
7	0.16207	25.8	5.1	10.2	36.0	15.3	65.4	55.4	29.4	40.1	Vb
8	0.21238	23.0	5.7	10.2	33.2	15.9	63.1	53.1	29.9	37.2	Vb
9	0.58137	21.0	19.7	10.1	31.1	29.8	56.0	46.0	24.9	16.2	Vb
10	1.74505	16.6	14.7	10.1	26.7	24.8	56.0	46.0	29.3	21.2	Vb
11	3.68326	19.3	17.5	10.1	29.4	27.6	56.0	46.0	26.6	18.4	Vb
12	24.74905	16.3	5.6	10.5	26.8	16.1	60.0	50.0	33.2	33.9	Vb

[Chart]





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2.10 Receiver Radiated spurious emissions

Test setup

Same as clause 2.8.

Test procedure

Same as clause 2.8.

Applicable rule and limitation

RSS-Gen 7.1.2 Radiated emission limitation

Frequency [MHz]	Field Strength [µV/m]	Measurement Distance [m]	Field Strength [dBµV/m]
30 - 88	100	3	40.0
88 –216	150	3	43.5
216 – 960	200	3	46.0
Above 960	500	3	53.9

In the emission table above, the tighter limit applies at the band edges.

The emission limits shown in the above table are based on measurements employing a quasi-peak detector.

Test results - Complied with requirement

Test equipment used (refer to List of utilized test equipment)

AC01	CL11	TR06	PR21	BA07	CL30	CL38	PR12
DH06	CH01	SH01					

Test Date

(30 M - 1000 MHz, 1 G - 3 GHz)

Tested Date: March 12, 2018 Temperature: 18 degC Humidity: 45 % Atmos. Press: 1020 hPa

(3 G – 12 GHz, 12 G – 18 GHz, 18 GHz – 25 GHz)

Tested Date: March 15, 2018 Temperature: 22 degC Humidity: 45 % 1020 hPa Atmos. Press:



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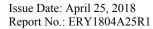
Test software used

EMI1 Ver. 5.7

Calculation method

The Correction Factor and Result are calculated as followings.

Correction Factor [dB/m] = Ant. Factor [dB/m] + Loss [dB] - Gain [dB]Result $[dB\mu V/m]$ = Reading $[dB\mu V]$ + Correction Factor [dB/m]







Test Data (Below 1 GHz)

Operating mode: Receiving, 2402 MHz, X-plane (Worst)

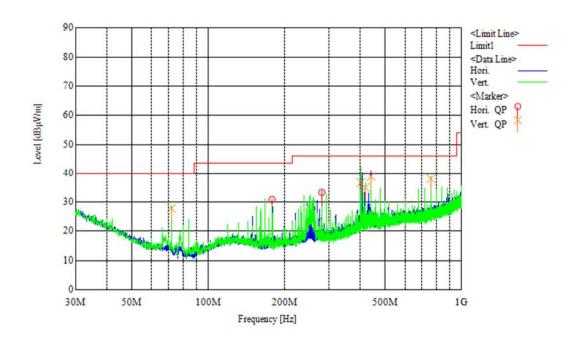
Test site: Yokohama Laboratory

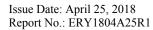
Measurement distance: 3 m

[Emission level]

Бинов	ion iever								
No.	Frequency [MHz]	Reading [dBµV]	Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Ant.
1	179.753	42.5	10.2	8.5	30.2	31.0	43.5	12.5	Hori.
2	281.593	41.3	12.9	9.3	30.2	33.3	46.0	12.7	Hori.
3	71.925	42.5	8.3	7.4	30.3	27.9	40.0	12.1	Vert.
4	402.540	40.7	16.1	10.1	30.2	36.7	46.0	9.3	Vert.
5	419.222	38.7	16.3	10.2	30.2	35.0	46.0	11.0	Vert.
6	439.978	42.3	16.5	10.4	30.2	39.0	46.0	7.0	Vert.
7	759.949	36.9	19.3	11.9	30.1	38.0	46.0	8.0	Vert.

[Chart]









Operating mode: Receiving, 2441 MHz, X-plane (Worst)

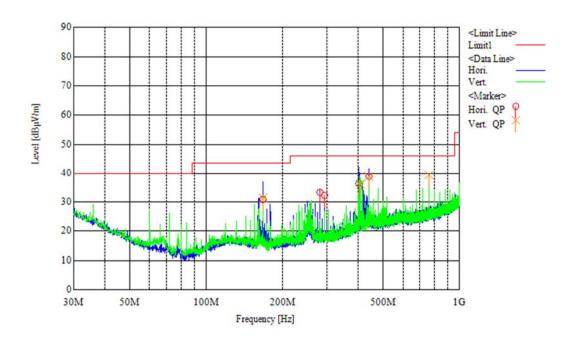
Test site: Yokohama Laboratory

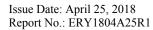
Measurement distance: 3 m

[Emission level]

Limss	ion iever								
No.	Frequency [MHz]	Reading [dBµV]	Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Ant.
1	167.816	42.3	10.4	8.4	30.2	30.9	43.5	12.6	Hori.
2	281.690	41.4	12.9	9.3	30.2	33.4	46.0	12.6	Hori.
3	293.717	40.0	13.1	9.4	30.2	32.3	46.0	13.7	Hori.
4	402.734	40.3	16.1	10.1	30.2	36.3	46.0	9.7	Hori.
5	439.881	42.3	16.5	10.4	30.2	39.0	46.0	7.0	Hori.
6	167.805	42.8	10.4	8.4	30.2	31.4	43.5	12.1	Vert.
7	406.322	39.9	16.2	10.1	30.2	36.0	46.0	10.0	Vert.
8	439.881	42.3	16.5	10.4	30.2	39.0	46.0	7.0	Vert.
9	759.987	38.4	19.3	11.9	30.1	39.5	46.0	6.5	Vert.

[Chart]









Operating mode: Receiving, 2480 MHz, X-plane (Worst)

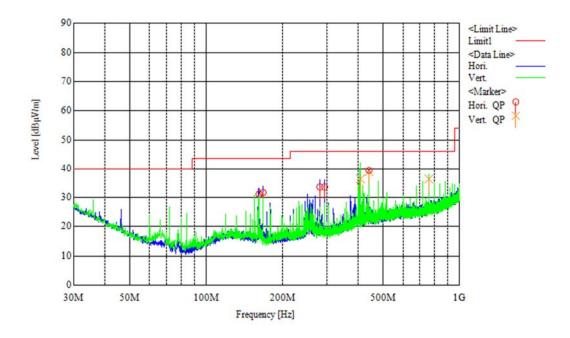
Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

No.	Frequency [MHz]	Reading [dBµV]	Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Ant.
1	161.810	42.5	10.6	8.3	30.2	31.2	43.5	12.3	Hori.
2	167.726	43.1	10.4	8.4	30.2	31.7	43.5	11.8	Hori.
3	281.593	41.5	12.9	9.3	30.2	33.5	46.0	12.5	Hori.
4	293.620	41.3	13.1	9.4	30.2	33.6	46.0	12.4	Hori.
5	439.978	42.8	16.5	10.4	30.2	39.5	46.0	6.5	Hori.
6	406.516	40.4	16.2	10.1	30.2	36.5	46.0	9.5	Vert.
7	439.978	42.1	16.5	10.4	30.2	38.8	46.0	7.2	Vert.
8	759.949	35.3	19.3	11.9	30.1	36.4	46.0	9.6	Vert.

[Chart]





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Test Data (above 1000MHz)

Operating mode: Receiving, 2402 MHz, X-plane

Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

Lilli	obton tever										
No.	Frequency [MHz]	Reading PK [dBuV]	Reading Ave [dBuV]	C.Factor [dB]	Result PK [dBuV/m]	Result Ave [dBuV/m]	Limit PK	Limit Ave	Margin PK [dB]	Margin Ave [dB]	Ant.
_	4004.000	1		2.1							
1	4804.000	39.8	27.0	2.1	41.9	29.1	73.9	53.9	32.0	24.8	Hori.
2	4804.000	40.1	27.0	2.1	42.2	29.1	73.9	53.9	31.7	24.8	Vert.

Operating mode: Receiving, 2441 MHz, X-plane

Test site: Yokohama Laboratory

Measurement distance:

[Emission level]

No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	PK	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
1	4882.000	40.7	27.6	2.3	43.0	29.9	73.9	53.9	30.9	24.0	Hori.
2	7323.000	39.9	26.5	7.0	46.9	33.5	73.9	53.9	27.0	20.4	Hori.
3	4882.000	40.9	27.6	2.3	43.2	29.9	73.9	53.9	30.7	24.0	Vert.
4	7323.000	39.5	26.5	7.0	46.5	33.5	73.9	53.9	27.4	20.4	Vert.

Operating mode: Receiving, 2480 MHz, X-plane

Test site: Yokohama Laboratory

Measurement distance: 3 m

[Emission level]

-												
	No.	Frequency [MHz]	Reading PK [dBµV]	Reading Ave [dBµV]	C.Factor [dB]	PK	Result Ave [dBµV/m]	Limit PK [dBµV/m]	Limit Ave [dBµV/m]	Margin PK [dB]	Margin Ave [dB]	Ant.
I	1	4960.000	41.1	26.9	2.8	43.9	29.7	73.9	53.9	30.0	24.2	Hori.
I	2	7440.000	40.3	27.1	6.8	47.1	33.9	73.9	53.9	26.8	20.0	Hori.
I	3	4960.000	40.4	26.9	2.8	43.2	29.7	73.9	53.9	30.7	24.2	Vert.
I	4	7440.000	41.1	27.1	6.8	47.9	33.9	73.9	53.9	26.0	20.0	Vert.



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2.11 Receiver AC power line conducted emissions

Test setup

Same as clause 2.9.

Test procedure

Same as clause 2.9.

Applicable rule and limitation

RSS-Gen 8.8 AC power line conducted emissions limits

Frequency of Emission	Conducted emissions Limit [dBµV]						
[MHz]	Quasi-peak	Average					
0.15 - 0.5	66 to 56 *	56 to 46 *					
0.5 - 5	56	46					
5 - 30	60	50					

^{*} Decreases with the logarithm of the frequency. The lower limit applies at the band edges.

Test equipment used (refer to List of utilized test equipment)

LN06	CL18	TR06

Test Date

Tested Date: March 15, 2018 Temperature: 22 degC 45 % Humidity: Atmos. Press: 1020 hPa

Test software used

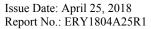
EMI Ver. 5.7

Calculation method

The Correction Factor and Result are calculated as followings.

Correction Factor [dB] = ISN Factor [dB] + Loss [dB]Result $[dB\mu V]$ = Reading $[dB\mu V]$ + Correction Factor [dB]

Test results - Complied with requirement





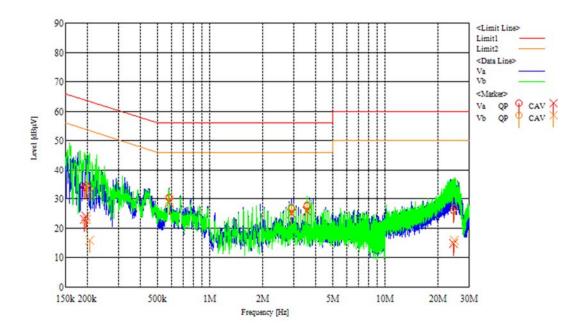


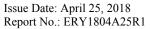
Test Data

Operating mode: Receiving, 2402 MHz Test site: Yokohama Laboratory

	E	Rea	ding	C.F.	Res	sult	Limit		Margin		
No.	Frequency [MHz]	QP [dBuV]	AV [dBuV]	C.F. [dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	PHASE
1	0.19178	23.7	12.8	10.2	33.9	23.0	64.0	54.0	30.1	31.0	Va
2	0.19518	24.4	13.9	10.1	34.5	24.0	63.8	53.8	29.3	29.8	Va
3	0.58375	20.4	18.8	10.0	30.4	28.8	56.0	46.0	25.6	17.2	Va
4	2.90942	16.8	14.9	10.0	26.8	24.9	56.0	46.0	29.2	21.1	Va
5	3.58788	17.5	15.6	10.1	27.6	25.7	56.0	46.0	28.4	20.3	Va
6	24.46111	15.7	4.4	10.4	26.1	14.8	60.0	50.0	33.9	35.2	Va
7	0.19664	24.7	12.7	10.2	34.9	22.9	63.8	53.8	28.9	30.9	Vb
8	0.20558	23.3	5.6	10.2	33.5	15.8	63.4	53.4	29.9	37.6	Vb
9	0.58307	20.7	19.4	10.1	30.8	29.5	56.0	46.0	25.2	16.5	Vb
10	2.90942	16.9	15.0	10.1	27.0	25.1	56.0	46.0	29.0	20.9	Vb
11	3.58968	17.7	15.8	10.1	27.8	25.9	56.0	46.0	28.2	20.1	Vb
12	24.65707	16.3	5.5	10.5	26.8	16.0	60.0	50.0	33.2	34.0	Vb

[Chart]





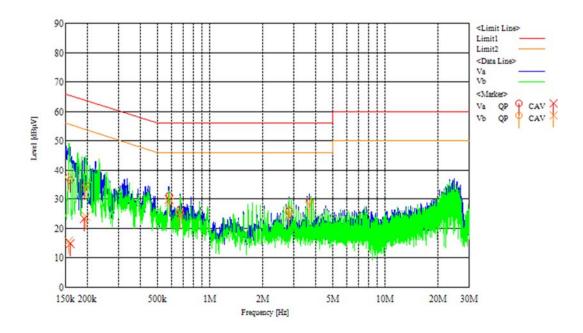


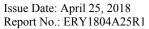


Operating mode: Receiving, 2441 MHz Test site: Yokohama Laboratory

	Eroguanav	Rea	ding	C.F.	Res	sult	Liı	mit	Margin		
No.	Frequency [MHz]	QP	AV	(dB)	QP	AV	QP	AV	QP	AV	PHASE
	[WITE]	[dBuV]	[dBuV]	լա	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
1	0.15935	26.2	4.7	10.2	36.4	14.9	65.5	55.5	29.1	40.6	Va
2	0.19215	23.7	13.2	10.2	33.9	23.4	63.9	53.9	30.0	30.5	Va
3	0.58205	21.3	19.8	10.0	31.3	29.8	56.0	46.0	24.7	16.2	Va
4	0.67689	16.6	14.7	10.0	26.6	24.7	56.0	46.0	29.4	21.3	Va
5	2.81224	16.1	14.2	10.0	26.1	24.2	56.0	46.0	29.9	21.8	Va
6	3.68686	19.4	17.6	10.1	29.5	27.7	56.0	46.0	26.5	18.3	Va
7	0.15680	27.3	5.4	10.3	37.6	15.7	65.6	55.6	28.0	39.9	Vb
8	0.19521	24.5	13.8	10.2	34.7	24.0	63.8	53.8	29.1	29.8	Vb
9	0.58392	20.1	18.7	10.1	30.2	28.8	56.0	46.0	25.8	17.2	Vb
10	0.67621	15.4	13.7	10.1	25.5	23.8	56.0	46.0	30.5	22.2	Vb
11	2.81404	16.5	14.6	10.1	26.6	24.7	56.0	46.0	29.4	21.3	Vb
12	3.68686	19.4	17.6	10.1	29.5	27.7	56.0	46.0	26.5	18.3	Vb

[Chart]









Operating mode: Receiving, 2480 MHz Test site: Yokohama Laboratory

	E	Rea	ding	C.F.	Re	sult	Liı	nit	Margin		
No.	Frequency [MHz]	QP [dBuV]	AV [dBuV]	[dB]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	PHASE
1	0.16020	25.7	4.5	10.2	35.9	14.7	65.5	55.5	29.6	40.8	Va
2	0.22326	21.5	5.8	10.1	31.6	15.9	62.7	52.7	31.1	36.8	Va
3	0.44200	17.3	8.6	10.0	27.3	18.6	57.0	47.0	29.7	28.4	Va
4	0.58324	21.1	19.6	10.0	31.1	29.6	56.0	46.0	24.9	16.4	Va
5	3.68686	19.2	17.4	10.1	29.3	27.5	56.0	46.0	26.7	18.5	Va
6	24.58908	16.0	4.4	10.5	26.5	14.9	60.0	50.0	33.5	35.1	Va
7	0.16207	25.5	4.7	10.2	35.7	14.9	65.4	55.4	29.7	40.5	Vb
8	0.22309	22.6	6.1	10.2	32.8	16.3	62.7	52.7	29.9	36.4	Vb
9	0.44047	16.5	7.4	10.1	26.6	17.5	57.1	47.1	30.5	29.6	Vb
10	0.58154	21.0	19.7	10.1	31.1	29.8	56.0	46.0	24.9	16.2	Vb
11	3.68686	19.1	17.4	10.1	29.2	27.5	56.0	46.0	26.8	18.5	Vb
12	24.96501	16.2	5.2	10.5	26.7	15.7	60.0	50.0	33.3	34.3	Vb

[Chart]

