

Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 21, 2020
Temperature / Humidity 24 deg. C / 58 % RH
Engineer Toshinori Yamada
(1 GHz – 6.4 GHz)
Mode Tx 11ac-40 MIMO 5755 MHz with 11g 2437 MHz
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.75	32.49	17.48	43.46	2.13	58.39	-36.83	-27.0	9.8	186	122	-
Hori.	5700.000	PK	50.35	32.60	17.51	43.45	2.13	59.14	-36.08	10.0	46.0	186	122	
Hori.	5720.000	PK	53.35	32.66	17.52	43.44	2.13	62.22	-33.00	15.6	48.6	186	122	
Hori.	5725.000	PK	56.20	32.68	17.53	43.44	2.13	65.10	-30.12	27.0	57.1	186	122	
Vert.	5650.000	PK	49.68	32.49	17.48	43.46	2.13	58.32	-36.90	-27.0	9.9	247	245	
Vert.	5700.000	PK	49.82	32.60	17.51	43.45	2.13	58.61	-36.61	10.0	46.6	247	245	
Vert.	5720.000	PK	51.21	32.66	17.52	43.44	2.13	60.08	-35.14	15.6	50.7	247	245	
Vert.	5725.000	PK	54.15	32.68	17.53	43.44	2.13	63.05	-32.17	27.0	59.1	247	245	

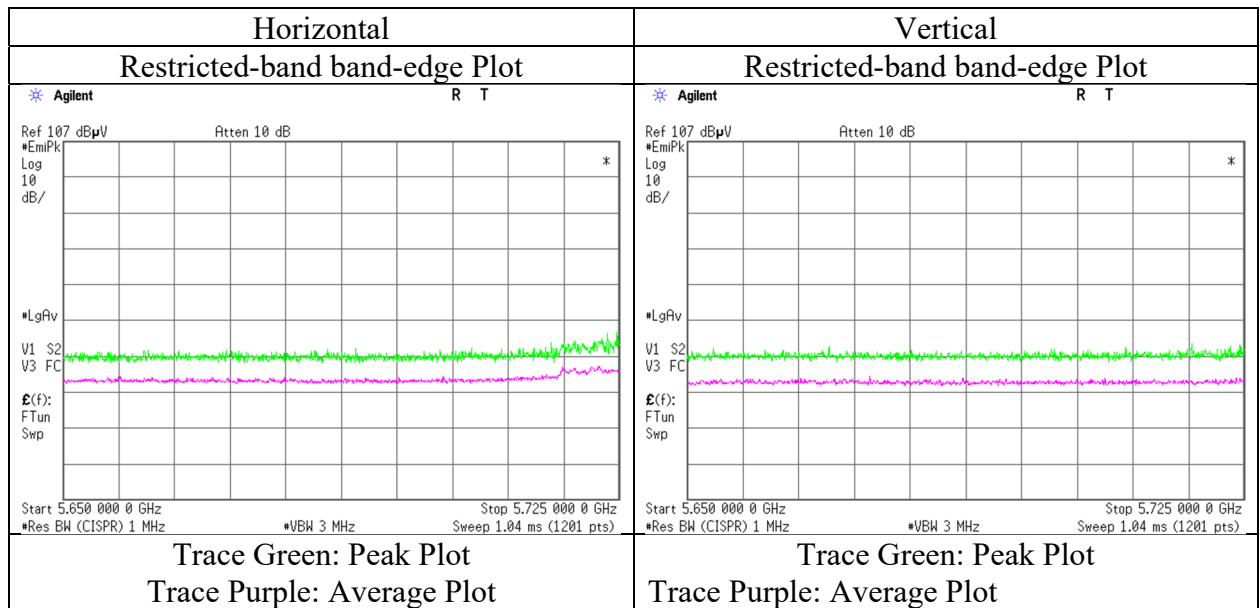
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.94	33.07	17.60	43.41	2.13	59.33	-35.89	27.0	62.8	117	281	-
Hori.	5855.000	PK	49.54	33.08	17.60	43.41	2.13	58.94	-36.28	15.6	51.8	117	281	
Hori.	5875.000	PK	49.47	33.12	17.63	43.41	2.13	58.94	-36.28	10.0	46.2	117	281	
Hori.	5925.000	PK	49.49	33.21	17.64	43.40	2.13	59.07	-36.15	-27.0	9.1	117	281	
Vert.	5850.000	PK	49.75	33.07	17.60	43.41	2.13	59.14	-36.08	27.0	63.0	308	250	
Vert.	5855.000	PK	49.60	33.08	17.60	43.41	2.13	59.00	-36.22	15.6	51.8	308	250	
Vert.	5875.000	PK	49.67	33.12	17.63	43.41	2.13	59.14	-36.08	10.0	46.0	308	250	
Vert.	5925.000	PK	49.45	33.21	17.64	43.40	2.13	59.03	-36.19	-27.0	9.1	308	250	

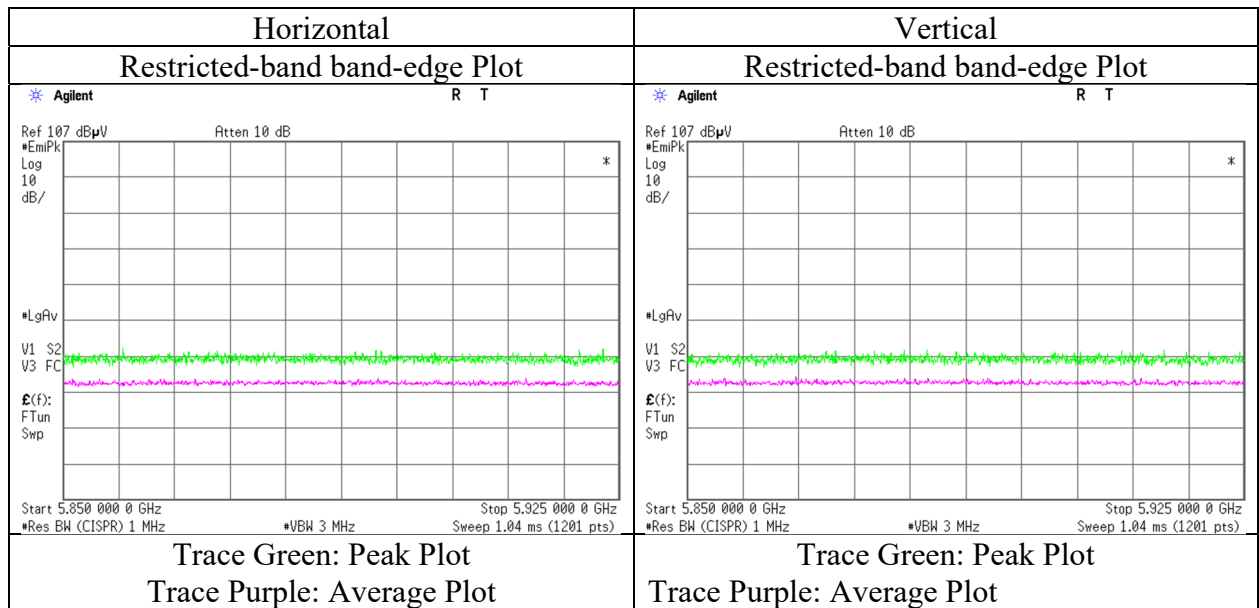
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

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Final result of restricted band edge was shown in tabular data.

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Engineer Toshinori Yamada
(1 GHz – 6.4 GHz)
Mode Tx 11ac-80 MIMO 5210 MHz with 11g 2437 MHz
EUT Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.77	32.12	17.10	43.11	2.13	58.01	73.9	15.8	274	78	
Hori.	5350.000	PK	49.96	31.83	17.27	43.33	2.13	57.86	73.9	16.0	274	78	
Hori.	5150.000	AV	41.28	32.12	17.10	43.11	2.13	49.52	53.9	4.3	274	78	VBW:18 kHz
Hori.	5350.000	AV	41.15	31.83	17.27	43.33	2.13	49.05	53.9	4.8	274	78	VBW:18 kHz
Vert.	5150.000	PK	50.25	32.12	17.10	43.11	2.13	58.49	73.9	15.4	282	246	
Vert.	5350.000	PK	50.43	31.83	17.27	43.33	2.13	58.33	73.9	15.5	282	246	
Vert.	5150.000	AV	41.54	32.12	17.10	43.11	2.13	49.78	53.9	4.1	282	246	VBW:18 kHz
Vert.	5350.000	AV	41.74	31.83	17.27	43.33	2.13	49.64	53.9	4.2	282	246	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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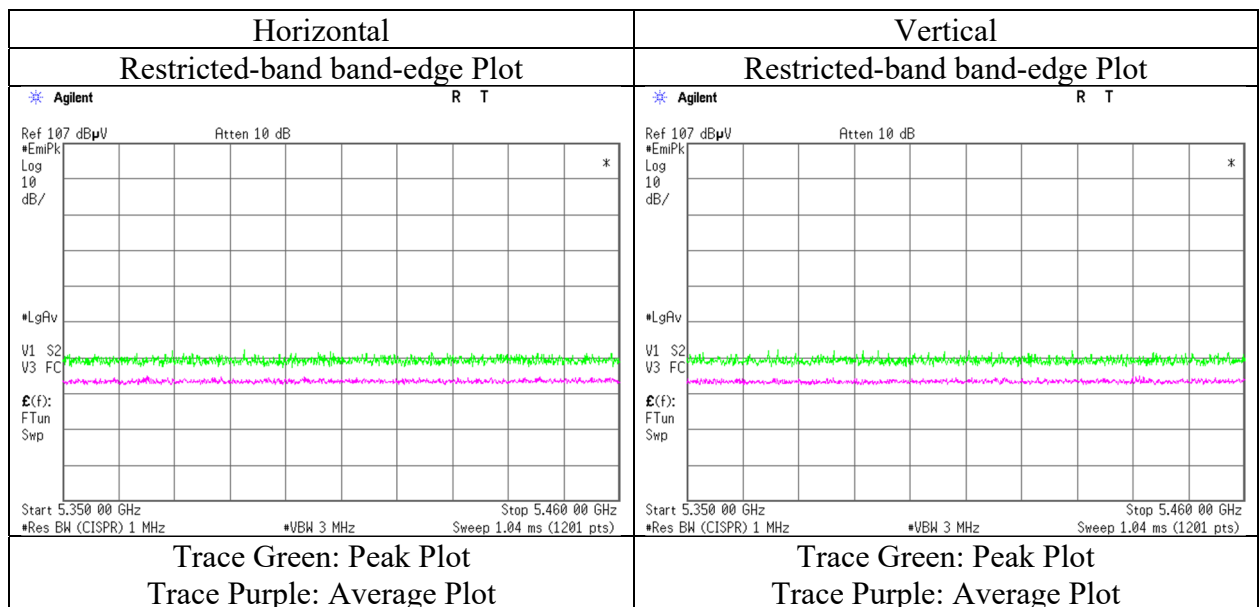
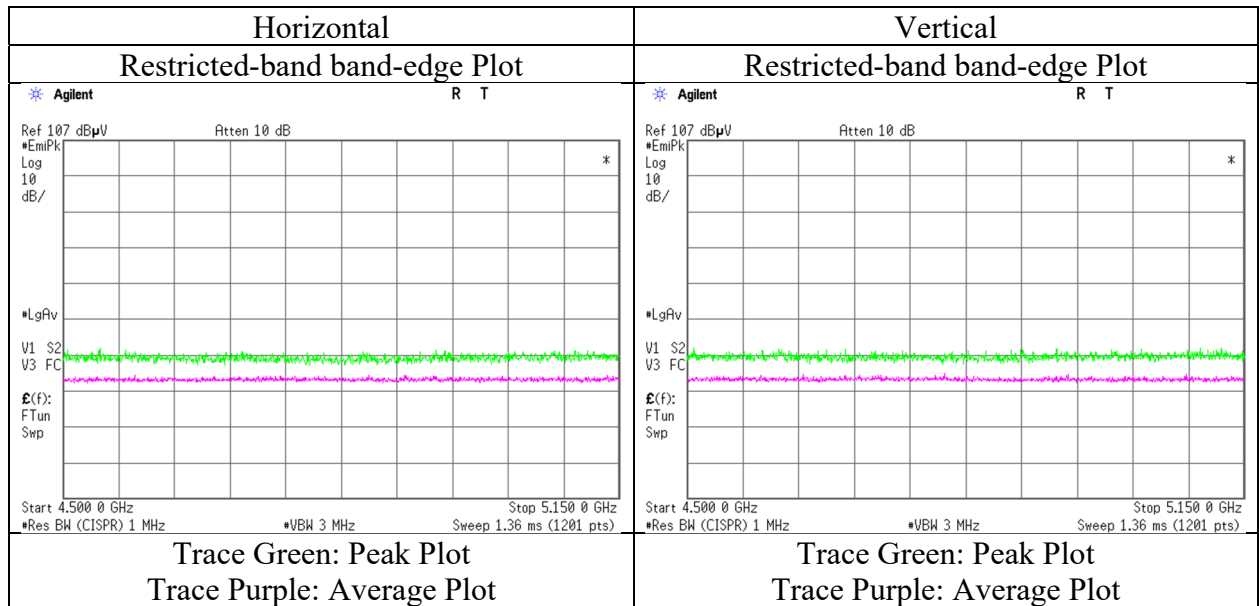
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Mode	Tx 11ac-80 MIMO 5210 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Engineer Toshinori Yamada
(1 GHz – 6.4 GHz)
Mode Tx 11ac-80 MIMO 5775 MHz with 11g 2437 MHz
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.85	32.49	17.48	43.46	2.13	58.49	-36.73	-27.0	9.7	102	114	-
Hori.	5679.250	PK	54.23	32.55	17.49	43.45	2.13	62.95	-32.27	-5.3	26.9	102	114	
Hori.	5690.875	PK	55.85	32.57	17.51	43.45	2.13	64.61	-30.61	3.2	33.8	102	114	
Hori.	5699.250	PK	56.31	32.60	17.51	43.45	2.13	65.10	-30.12	9.4	39.5	102	114	
Hori.	5700.000	PK	54.50	32.60	17.51	43.45	2.13	63.29	-31.93	10.0	41.9	102	114	
Hori.	5702.625	PK	54.81	32.61	17.52	43.45	2.13	63.62	-31.60	10.7	42.3	102	114	
Hori.	5719.313	PK	55.83	32.66	17.52	43.44	2.13	64.70	-30.52	15.4	45.9	102	114	
Hori.	5720.000	PK	55.53	32.66	17.52	43.44	2.13	64.40	-30.82	15.6	46.4	102	114	
Hori.	5725.000	PK	53.42	32.68	17.53	43.44	2.13	62.32	-32.90	27.0	59.9	102	114	
Hori.	5850.000	PK	49.87	33.07	17.60	43.41	2.13	59.26	-35.96	27.0	62.9	100	114	
Hori.	5855.000	PK	49.70	33.08	17.60	43.41	2.13	59.10	-36.12	15.6	51.7	100	114	
Hori.	5875.000	PK	49.68	33.12	17.63	43.41	2.13	59.15	-36.07	10.0	46.0	100	114	
Hori.	5925.000	PK	49.62	33.21	17.64	43.40	2.13	59.20	-36.02	-27.0	9.0	100	114	
Vert.	5650.000	PK	50.03	32.49	17.48	43.46	2.13	58.67	-36.55	-27.0	9.5	100	114	
Vert.	5700.000	PK	50.16	32.60	17.51	43.45	2.13	58.95	-36.27	10.0	46.2	315	246	
Vert.	5720.000	PK	50.41	32.66	17.52	43.44	2.13	59.28	-35.94	15.6	51.5	315	246	
Vert.	5725.000	PK	50.50	32.68	17.53	43.44	2.13	59.40	-35.82	27.0	62.8	315	246	
Vert.	5850.000	PK	50.10	33.07	17.60	43.41	2.13	59.49	-35.73	27.0	62.7	315	246	
Vert.	5855.000	PK	49.93	33.08	17.60	43.41	2.13	59.33	-35.89	15.6	51.4	315	246	
Vert.	5875.000	PK	49.65	33.12	17.63	43.41	2.13	59.12	-36.10	10.0	46.1	315	246	
Vert.	5925.000	PK	49.41	33.21	17.64	43.40	2.13	58.99	-36.23	-27.0	9.2	315	246	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

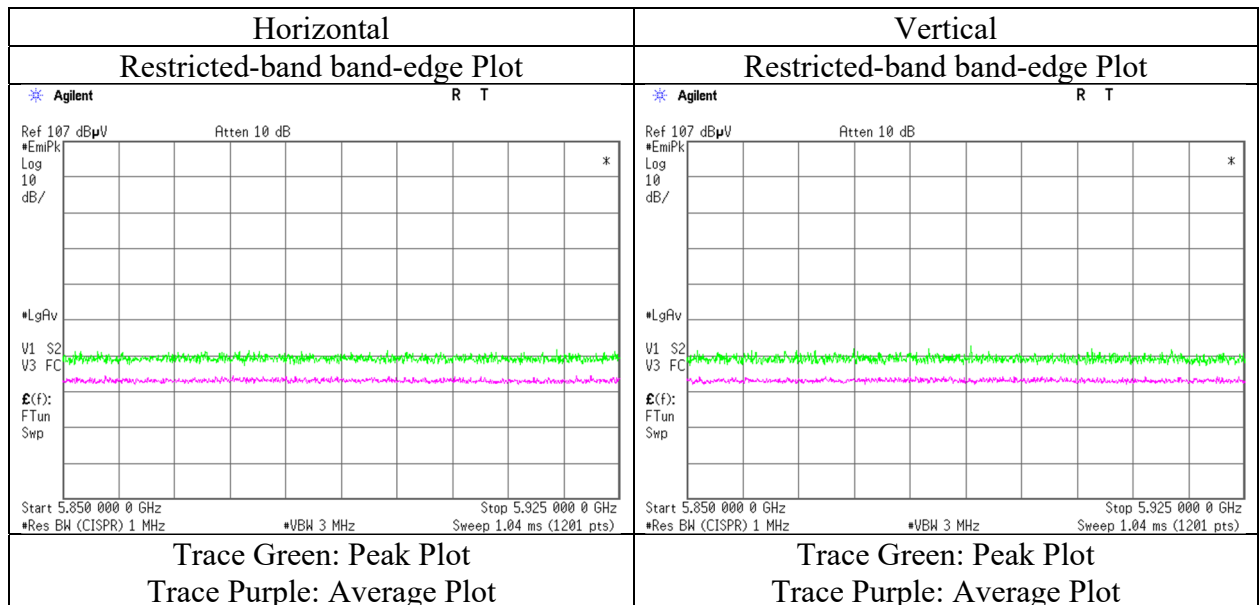
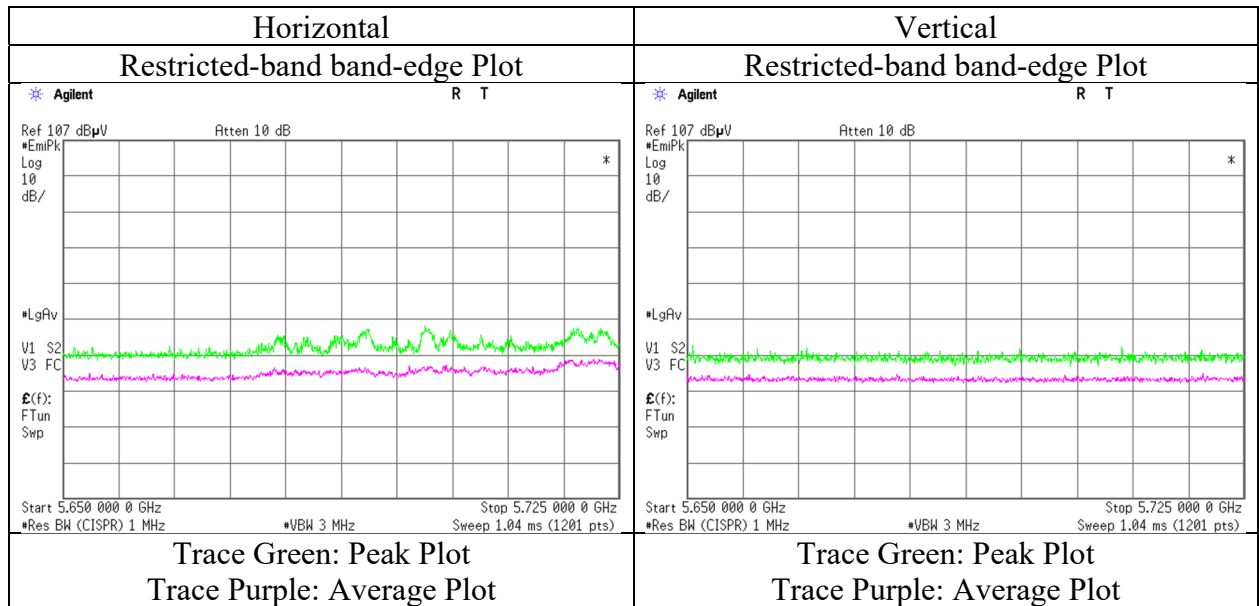
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
Mode	Tx 11ac-80 MIMO 5775 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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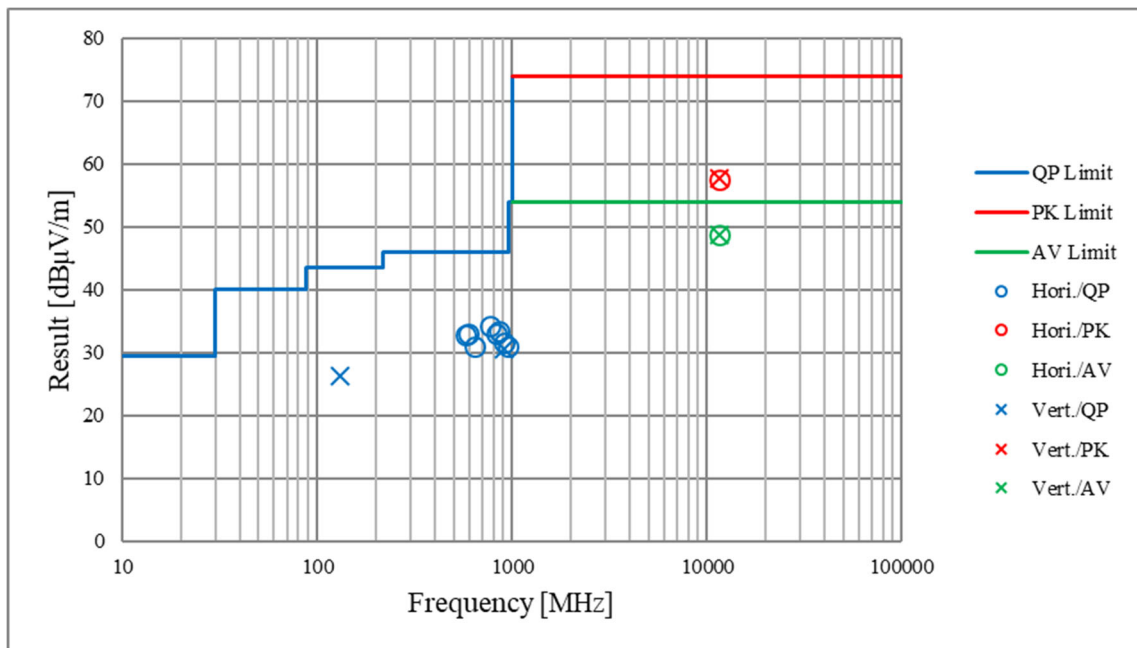
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission
(Plot data, Worst case)

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 21, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	25 deg. C / 64 % RH	24 deg. C / 58 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Makoto Hosaka (30 MHz - 1 GHz)	Toshinori Yamada (1 GHz - 13 GHz)	Toshinori Yamada (13 GHz - 18 GHz) (26.5 GHz - 40 GHz)	Takahiro Suzuki (18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz with 11g 2437 MHz			
EUT	Hi type(14 inch Display)			



*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 11, 2020
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-20 MIMO 5180 MHz with BT Hopping On DH5
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

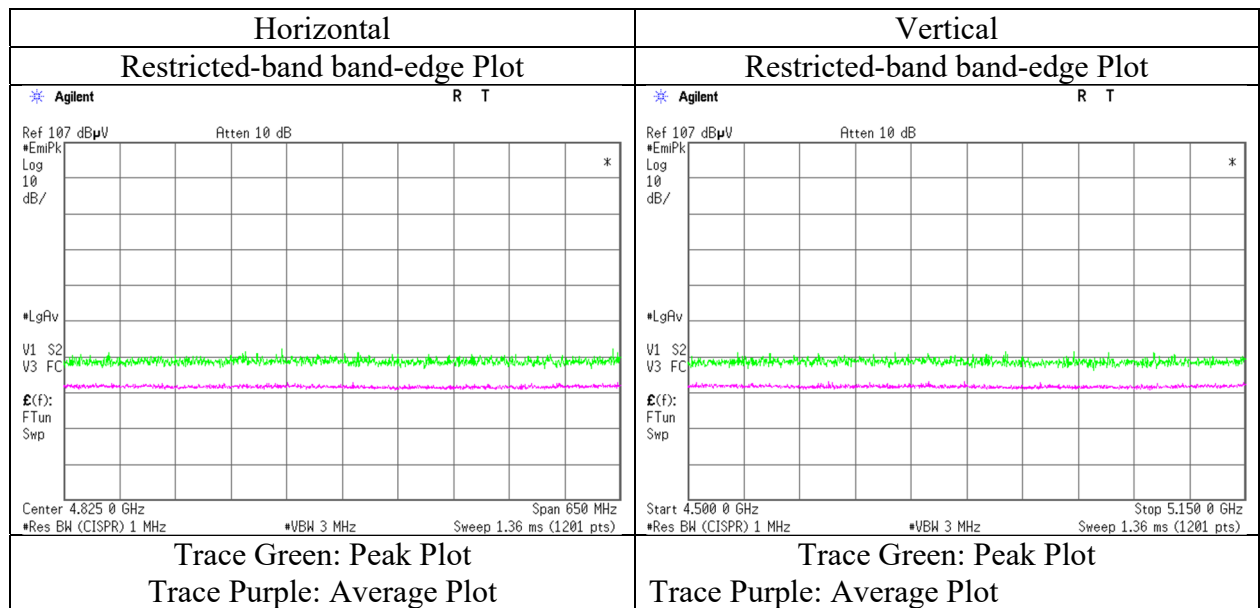
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.32	32.12	17.10	43.11	2.13	57.56	73.9	16.3	123	48	VBW:10 kHz
Hori.	5150.000	AV	39.42	32.12	17.10	43.11	2.13	47.66	53.9	6.2	123	48	
Vert.	5150.000	PK	48.71	32.12	17.10	43.11	2.13	56.95	73.9	17.0	163	180	VBW:10 kHz
Vert.	5150.000	AV	39.34	32.12	17.10	43.11	2.13	47.58	53.9	6.3	163	180	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor: 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$



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Final result of restricted band edge was shown in tabular data.

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Semi Anechoic Chamber 3
Date July 11, 2020
Temperature / Humidity 23 deg. C / 63 % RH
Engineer Toshinori Yamada
(1 GHz – 6.4 GHz)
Mode Tx 11ac-20 MIMO 5240 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

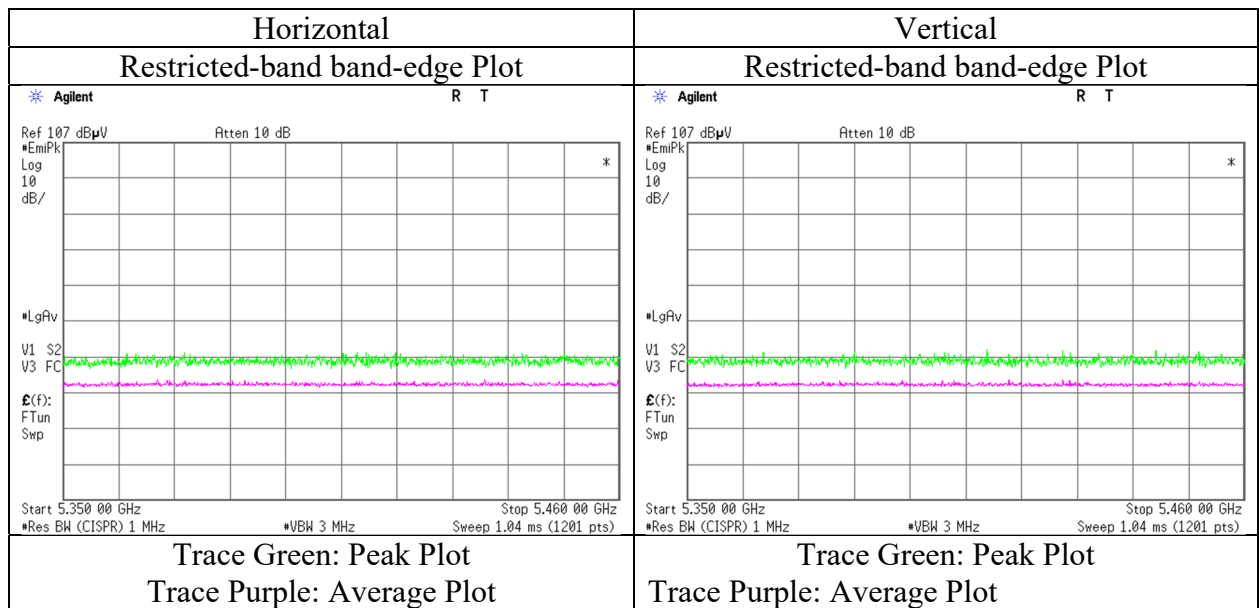
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	48.87	31.83	17.27	43.33	2.13	56.77	73.9	17.1	210	109	VBW:10 kHz
Hori.	5350.000	AV	39.77	31.83	17.27	43.33	2.13	47.67	53.9	6.2	210	109	
Vert.	5350.000	PK	49.01	31.83	17.27	43.33	2.13	56.91	73.9	17.0	219	283	VBW:10 kHz
Vert.	5350.000	AV	39.45	31.83	17.27	43.33	2.13	47.35	53.9	6.6	219	283	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$



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Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 11, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	23 deg. C / 59 % RH	23 deg. C / 63 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Toshinori Yamada (30 MHz - 1 GHz)	Toshinori Yamada (1 GHz - 13 GHz)	Toshinori Yamada (13 GHz - 18 GHz) (26.5 GHz - 40 GHz)	Takahiro Suzuki (18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz with BT Hopping On DH5			
EUT	Hi type(14 inch Display)			

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	387.506	QP	38.40	15.36	8.94	31.93	0.00	30.77	46.0	15.2	100	97	
Hori.	580.366	QP	36.40	18.76	9.73	31.96	0.00	32.93	46.0	13.0	162	181	
Hori.	592.078	QP	36.40	19.14	9.77	31.95	0.00	33.36	46.0	12.6	152	183	
Hori.	640.001	QP	33.60	19.27	9.94	31.95	0.00	30.86	46.0	15.1	149	225	
Hori.	768.885	QP	34.30	20.43	10.40	31.71	0.00	33.42	46.0	12.5	125	201	
Hori.	827.909	QP	32.90	21.01	10.59	31.47	0.00	33.03	46.0	12.9	202	222	
Hori.	844.784	QP	33.80	21.30	10.65	31.35	0.00	34.40	46.0	11.6	127	33	
Hori.	913.976	QP	28.70	22.13	10.86	30.94	0.00	30.75	46.0	15.2	100	177	
Hori.	11490.000	PK	48.12	39.69	10.05	42.63	2.13	57.36	73.9	16.5	100	0	
Hori.	11490.000	AV	39.65	39.69	10.05	42.63	2.13	48.89	53.9	5.0	100	0	VBW:10 kHz
Vert.	130.572	QP	37.20	13.92	7.39	32.10	0.00	26.41	43.5	17.0	100	181	
Vert.	913.976	QP	29.40	22.13	10.86	30.94	0.00	31.45	46.0	14.5	164	181	
Vert.	11490.000	PK	48.43	39.69	10.05	42.63	2.13	57.67	73.9	16.2	100	0	
Vert.	11490.000	AV	39.56	39.69	10.05	42.63	2.13	48.80	53.9	5.1	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.26	32.49	17.48	43.46	2.13	58.90	-36.32	-27.0	9.3	149	118	-
Hori.	5700.000	PK	51.45	32.60	17.51	43.45	2.13	60.24	-34.98	10.0	44.9	149	118	
Hori.	5720.000	PK	54.66	32.66	17.52	43.44	2.13	63.53	-31.69	15.6	47.2	149	118	
Hori.	5725.000	PK	57.86	32.68	17.53	43.44	2.13	66.76	-28.46	27.0	55.4	149	118	
Hori.	17235.000	PK	47.10	41.57	12.73	40.31	-9.54	51.55	-43.67	-27.0	16.6	100	0	
Vert.	5650.000	PK	48.94	32.49	17.48	43.46	2.13	57.58	-37.64	-27.0	10.6	114	171	
Vert.	5700.000	PK	49.37	32.60	17.51	43.45	2.13	58.16	-37.06	10.0	47.0	114	171	
Vert.	5720.000	PK	50.99	32.66	17.52	43.44	2.13	59.86	-35.36	15.6	50.9	114	171	
Vert.	5725.000	PK	51.26	32.68	17.53	43.44	2.13	60.16	-35.06	27.0	62.0	114	171	
Vert.	17235.000	PK	47.23	41.57	12.73	40.31	-9.54	51.68	-43.54	-27.0	16.5	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance : 3 [m]})^2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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Shonan EMC Lab.

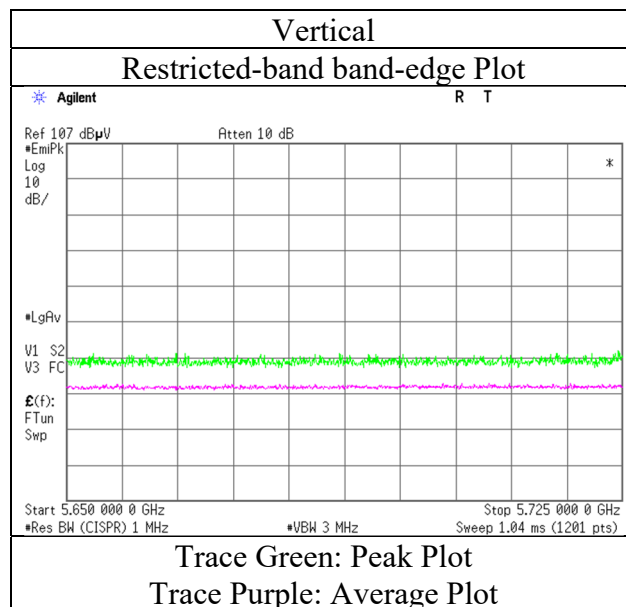
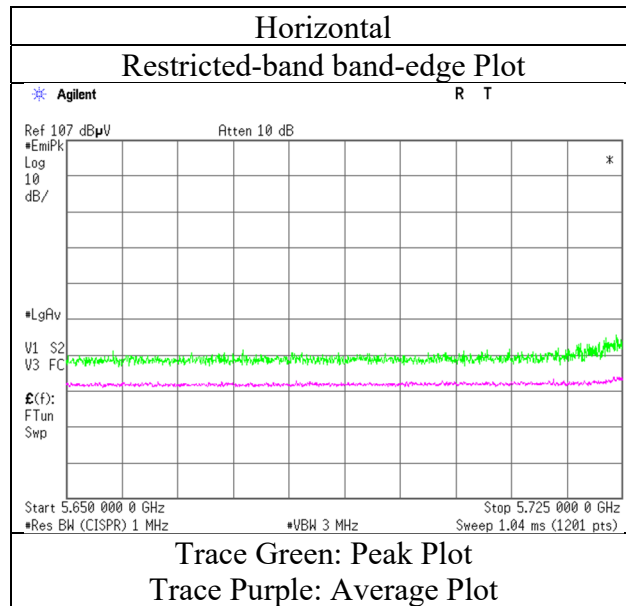
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 11, 2020
Temperature / Humidity	23 deg. C / 63 % RH
Engineer	Toshinori Yamada
Mode	Tx 11ac-20 MIMO 5745 MHz with BT Hopping On DH5
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 11, 2020
Temperature / Humidity 23 deg. C / 63 % RH
Engineer Toshinori Yamada
(1 GHz – 6.4 GHz)
Mode Tx 11ac-20 MIMO 5825 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.56	33.07	17.60	43.41	2.13	58.95	-36.27	27.0	63.3	114	209	-
Hori.	5855.000	PK	49.19	33.08	17.60	43.41	2.13	58.59	-36.63	15.6	52.2	114	209	-
Hori.	5875.000	PK	48.85	33.12	17.63	43.41	2.13	58.32	-36.90	10.0	46.9	114	209	-
Hori.	5925.000	PK	48.88	33.21	17.64	43.40	2.13	58.46	-36.76	-27.0	9.8	114	209	-
Vert.	5850.000	PK	49.06	33.07	17.60	43.41	2.13	58.45	-36.77	27.0	63.8	143	173	-
Vert.	5855.000	PK	48.75	33.08	17.60	43.41	2.13	58.15	-37.07	15.6	52.7	143	173	-
Vert.	5875.000	PK	48.54	33.12	17.63	43.41	2.13	58.01	-37.21	10.0	47.2	143	173	-
Vert.	5925.000	PK	48.49	33.21	17.64	43.40	2.13	58.07	-37.15	-27.0	10.2	143	173	-

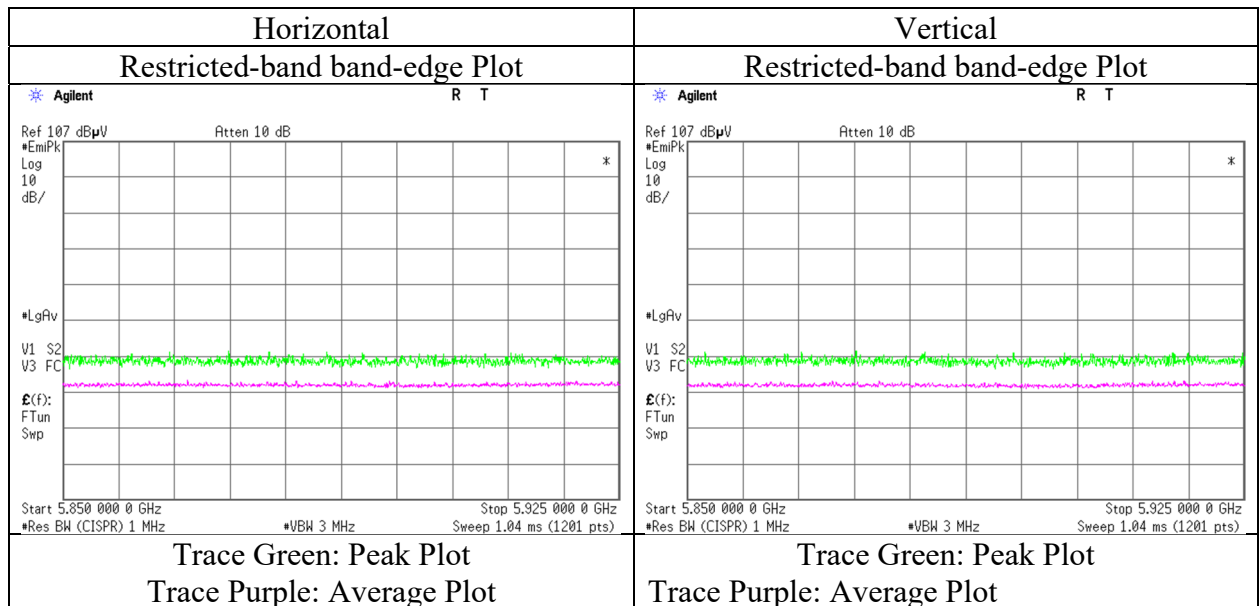
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 12, 2020
Temperature / Humidity 23 deg. C / 65 % RH
Engineer Takahiro Kawakami
(1 GHz – 6.4 GHz)
Mode Tx 11ac-40 MIMO 5190 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

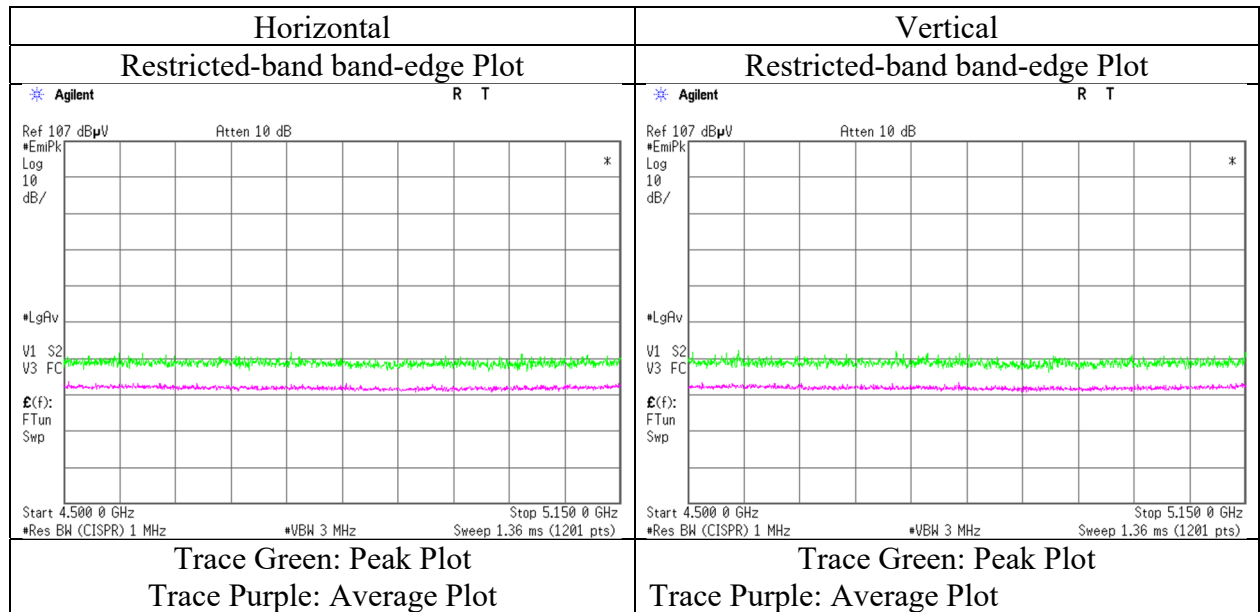
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.64	32.12	17.10	43.11	2.13	58.88	73.9	15.0	143	45	VBW:13 kHz
Hori.	5150.000	AV	40.26	32.12	17.10	43.11	2.13	48.50	53.9	5.4	143	45	
Vert.	5150.000	PK	49.93	32.12	17.10	43.11	2.13	58.17	73.9	15.7	286	178	VBW:13 kHz
Vert.	5150.000	AV	40.23	32.12	17.10	43.11	2.13	48.47	53.9	5.4	286	178	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 12, 2020
Temperature / Humidity 23 deg. C / 65 % RH
Engineer Takahiro Kawakami
(1 GHz – 6.4 GHz)
Mode Tx 11ac-40 MIMO 5230 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

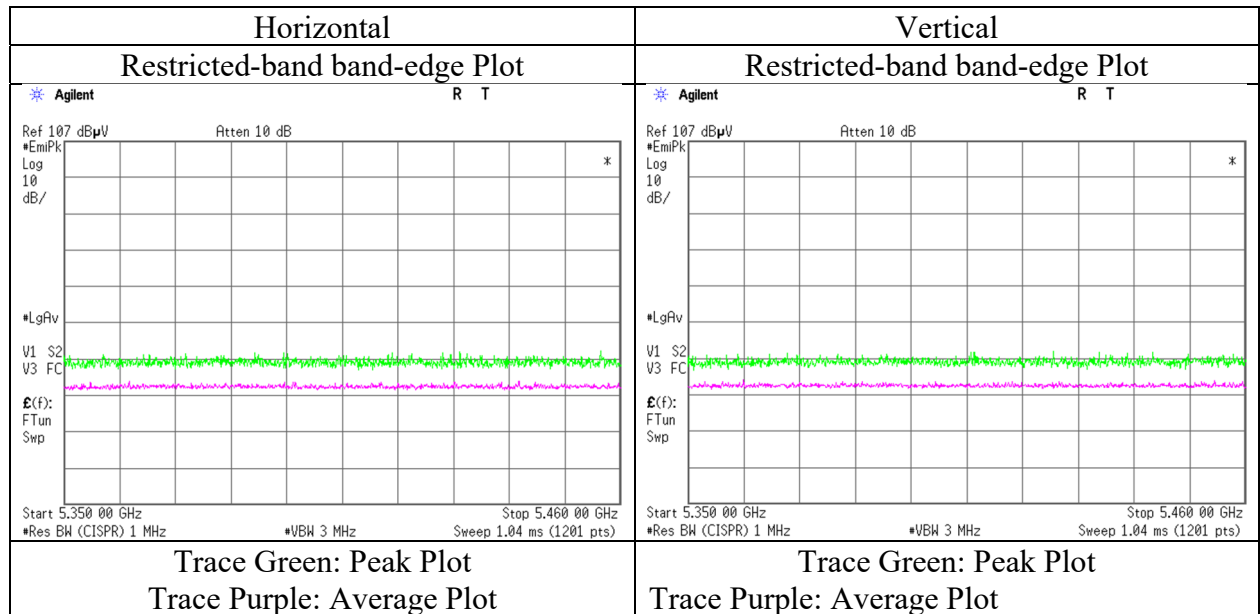
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	48.82	31.83	17.27	43.33	2.13	56.72	73.9	17.1	185	108	VBW:13 kHz
Hori.	5350.000	AV	39.92	31.83	17.27	43.33	2.13	47.82	53.9	6.0	185	108	
Vert.	5350.000	PK	49.49	31.83	17.27	43.33	2.13	57.39	73.9	16.5	267	285	VBW:13 kHz
Vert.	5350.000	AV	40.07	31.83	17.27	43.33	2.13	47.97	53.9	5.9	267	285	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83\text{ m} / 3.0\text{ m}) = 2.13\text{ dB}$

13 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 12, 2020
Temperature / Humidity 23 deg. C / 65 % RH
Engineer Takahiro Kawakami
(1 GHz – 6.4 GHz)
Mode Tx 11ac-40 MIMO 5755 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.81	32.49	17.48	43.46	2.13	57.45	-37.77	-27.0	10.7	170	117	-
Hori.	5700.000	PK	49.60	32.60	17.51	43.45	2.13	58.39	-36.83	10.0	46.8	170	117	-
Hori.	5720.000	PK	54.23	32.66	17.52	43.44	2.13	63.10	-32.12	15.6	47.7	170	117	-
Hori.	5725.000	PK	56.00	32.68	17.53	43.44	2.13	64.90	-30.32	27.0	57.3	170	117	-
Vert.	5650.000	PK	48.58	32.49	17.48	43.46	2.13	57.22	-38.00	-27.0	11.0	187	281	-
Vert.	5700.000	PK	49.26	32.60	17.51	43.45	2.13	58.05	-37.17	10.0	47.1	187	281	-
Vert.	5720.000	PK	49.39	32.66	17.52	43.44	2.13	58.26	-36.96	15.6	52.5	187	281	-
Vert.	5725.000	PK	52.12	32.68	17.53	43.44	2.13	61.02	-34.20	27.0	61.2	187	281	-

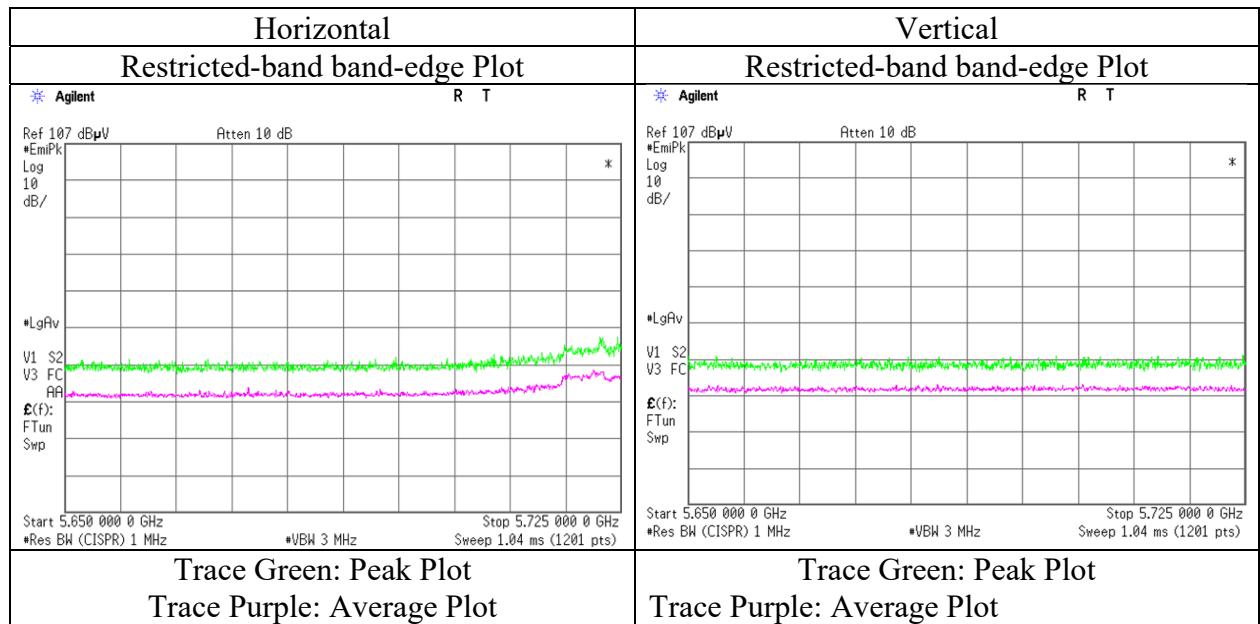
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 12, 2020
Temperature / Humidity 23 deg. C / 65 % RH
Engineer Takahiro Kawakami
(1 GHz – 6.4 GHz)
Mode Tx 11ac-40 MIMO 5795 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.35	33.07	17.60	43.41	2.13	58.74	-36.48	27.0	63.4	260	60	-
Hori.	5855.000	PK	49.50	33.08	17.60	43.41	2.13	58.90	-36.32	15.6	51.9	260	60	
Hori.	5875.000	PK	49.79	33.12	17.63	43.41	2.13	59.26	-35.96	10.0	45.9	260	60	
Hori.	5925.000	PK	49.64	33.21	17.64	43.40	2.13	59.22	-36.00	-27.0	9.0	260	60	
Vert.	5850.000	PK	50.01	33.07	17.60	43.41	2.13	59.40	-35.82	27.0	62.8	158	276	
Vert.	5855.000	PK	49.41	33.08	17.60	43.41	2.13	58.81	-36.41	15.6	52.0	158	276	
Vert.	5875.000	PK	49.07	33.12	17.63	43.41	2.13	58.54	-36.68	10.0	46.6	158	276	
Vert.	5925.000	PK	49.63	33.21	17.64	43.40	2.13	59.21	-36.01	-27.0	9.0	158	276	

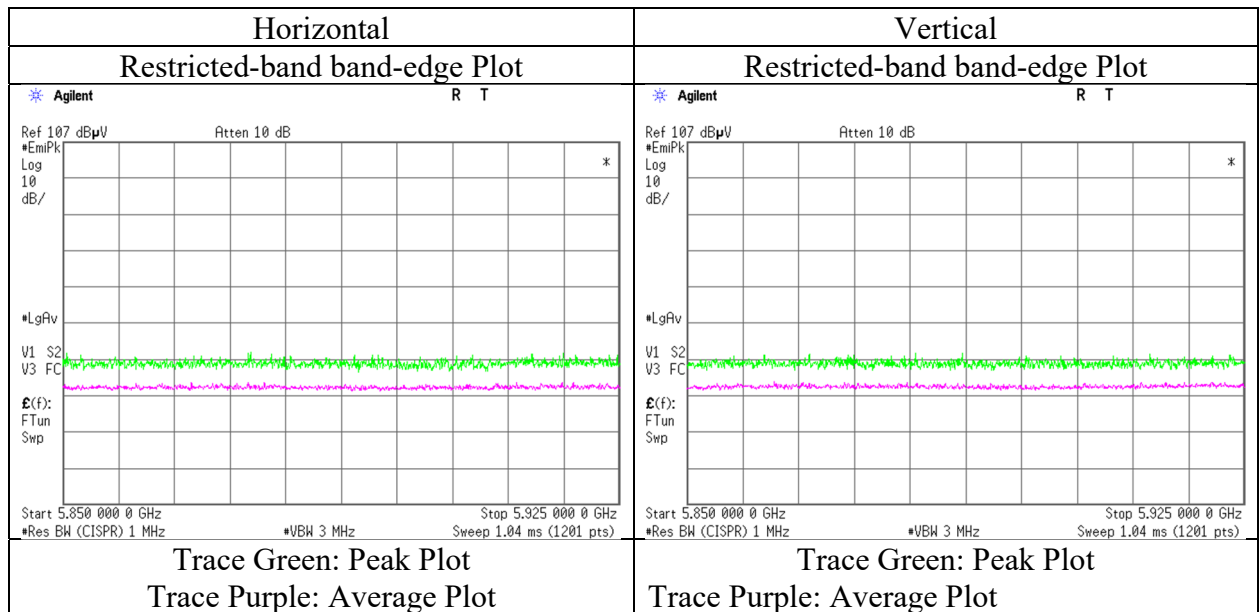
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 12, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Takahiro Kawakami
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-80 MIMO 5210 MHz with BT Hopping On DH5
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	48.66	32.12	17.10	43.11	2.13	56.90	73.9	17.0	119	58	
Hori.	5350.000	PK	49.76	31.83	17.27	43.33	2.13	57.66	73.9	16.2	119	58	
Hori.	5150.000	AV	40.94	32.12	17.10	43.11	2.13	49.18	53.9	4.7	119	58	VBW:18 kHz
Hori.	5350.000	AV	40.80	31.83	17.27	43.33	2.13	48.70	53.9	5.2	119	58	VBW:18 kHz
Vert.	5150.000	PK	48.59	32.12	17.10	43.11	2.13	56.83	73.9	17.0	271	279	
Vert.	5350.000	PK	48.65	31.83	17.27	43.33	2.13	56.55	73.9	17.3	271	279	
Vert.	5150.000	AV	40.01	32.12	17.10	43.11	2.13	48.25	53.9	5.6	271	279	VBW:18 kHz
Vert.	5350.000	AV	40.72	31.83	17.27	43.33	2.13	48.62	53.9	5.2	271	279	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

UL Japan, Inc.

Shonan EMC Lab.

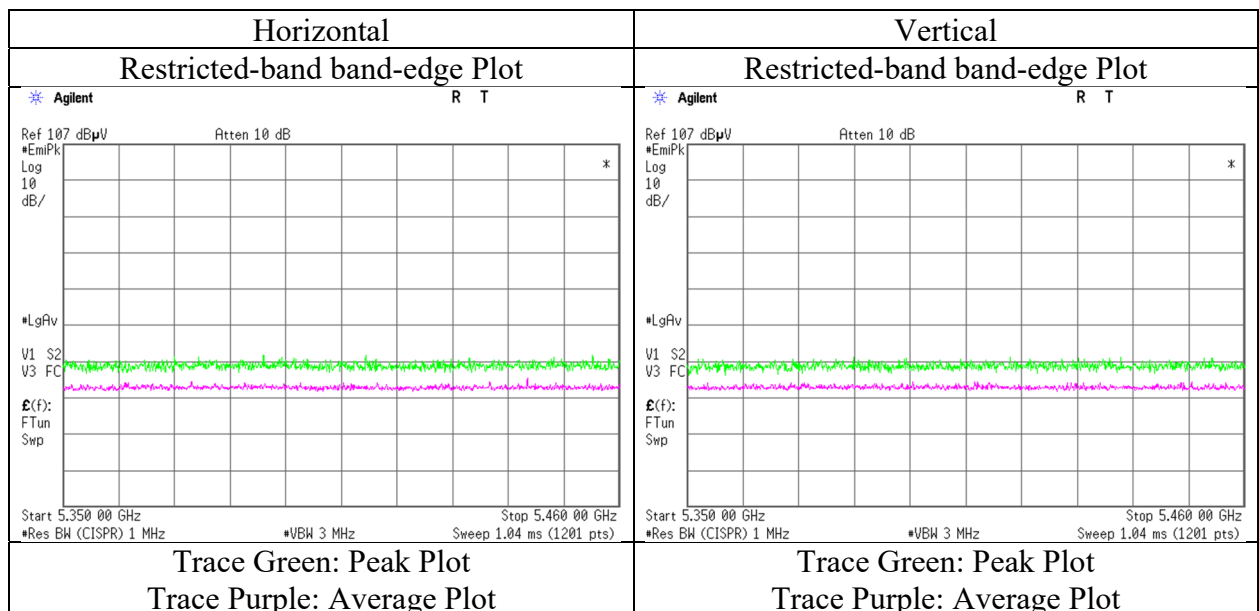
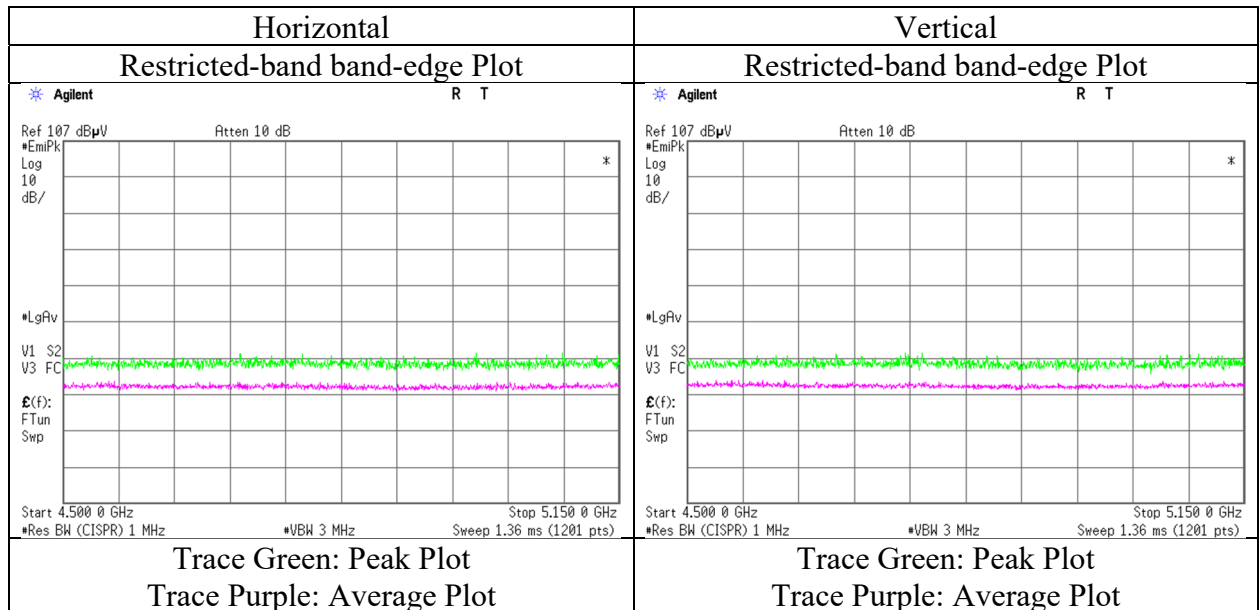
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 12, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Takahiro Kawakami
Mode	Tx 11ac-80 MIMO 5210 MHz with BT Hopping On DH5
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 12, 2020
Temperature / Humidity 23 deg. C / 65 % RH
Engineer Takahiro Kawakami
(1 GHz – 6.4 GHz)
Mode Tx 11ac-80 MIMO 5775 MHz with BT Hopping On DH5
EUT Hi type(14 inch Display)

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.50	32.49	17.48	43.46	2.13	57.14	-38.08	-27.0	11.0	123	115	-
Hori.	5679.375	PK	53.47	32.55	17.49	43.45	2.13	62.19	-33.03	-5.3	27.7	123	115	
Hori.	5690.438	PK	54.65	32.57	17.51	43.45	2.13	63.41	-31.81	2.9	34.7	123	115	
Hori.	5699.375	PK	55.65	32.60	17.51	43.45	2.13	64.44	-30.78	9.5	40.2	123	115	
Hori.	5700.000	PK	54.04	32.60	17.51	43.45	2.13	62.83	-32.39	10.0	42.3	123	115	
Hori.	5702.438	PK	54.33	32.61	17.52	43.45	2.13	63.14	-32.08	10.6	42.6	123	115	
Hori.	5720.000	PK	54.10	32.66	17.52	43.44	2.13	62.97	-32.25	15.6	47.8	123	115	
Hori.	5722.563	PK	54.32	32.67	17.53	43.44	2.13	63.21	-32.01	21.4	53.4	123	115	
Hori.	5725.000	PK	52.08	32.68	17.53	43.44	2.13	60.98	-34.24	27.0	61.2	123	115	
Hori.	5850.000	PK	50.25	33.07	17.60	43.41	2.13	59.64	-35.58	27.0	62.5	123	115	
Hori.	5855.000	PK	49.19	33.08	17.60	43.41	2.13	58.59	-36.63	15.6	52.2	123	115	
Hori.	5875.000	PK	49.53	33.12	17.63	43.41	2.13	59.00	-36.22	10.0	46.2	123	115	
Hori.	5925.000	PK	49.03	33.21	17.64	43.40	2.13	58.61	-36.61	-27.0	9.6	123	115	
Vert.	5650.000	PK	48.53	32.49	17.48	43.46	2.13	57.17	-38.05	-27.0	11.0	181	280	
Vert.	5700.000	PK	48.75	32.60	17.51	43.45	2.13	57.54	-37.68	10.0	47.6	181	280	
Vert.	5720.000	PK	48.25	32.66	17.52	43.44	2.13	57.12	-38.10	15.6	53.7	181	280	
Vert.	5725.000	PK	49.02	32.68	17.53	43.44	2.13	57.92	-37.30	27.0	64.3	181	280	
Vert.	5850.000	PK	48.85	33.07	17.60	43.41	2.13	58.24	-36.98	27.0	63.9	181	280	
Vert.	5855.000	PK	49.05	33.08	17.60	43.41	2.13	58.45	-36.77	15.6	52.3	181	280	
Vert.	5875.000	PK	48.97	33.12	17.63	43.41	2.13	58.44	-36.78	10.0	46.7	181	280	
Vert.	5925.000	PK	49.46	33.21	17.64	43.40	2.13	59.04	-36.18	-27.0	9.1	181	280	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20)) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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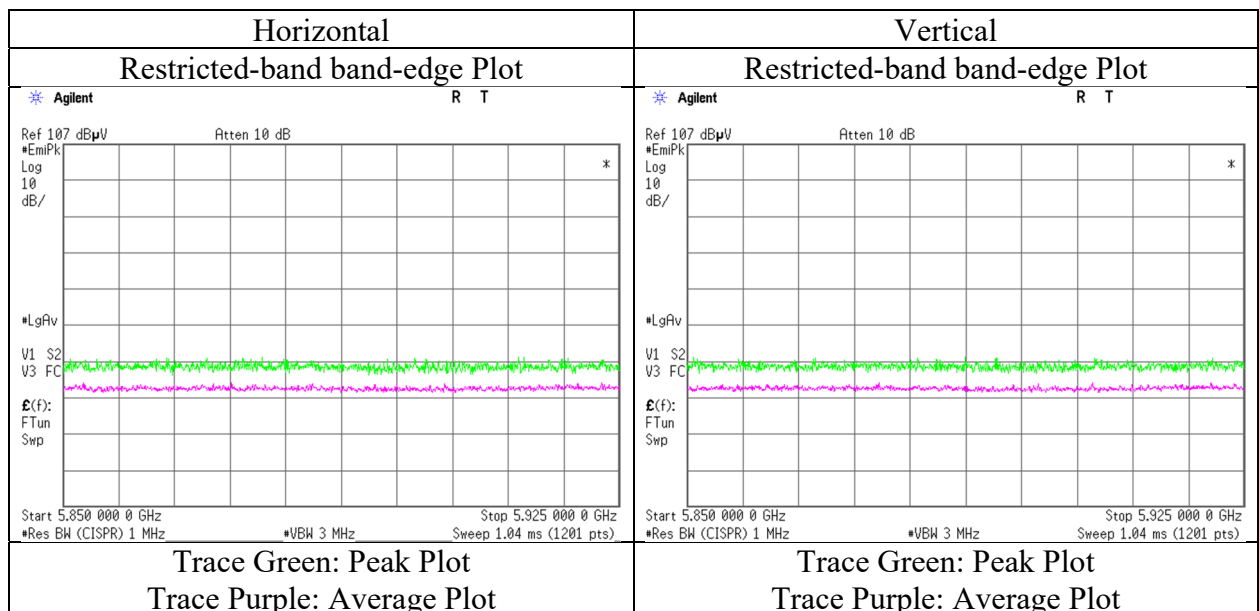
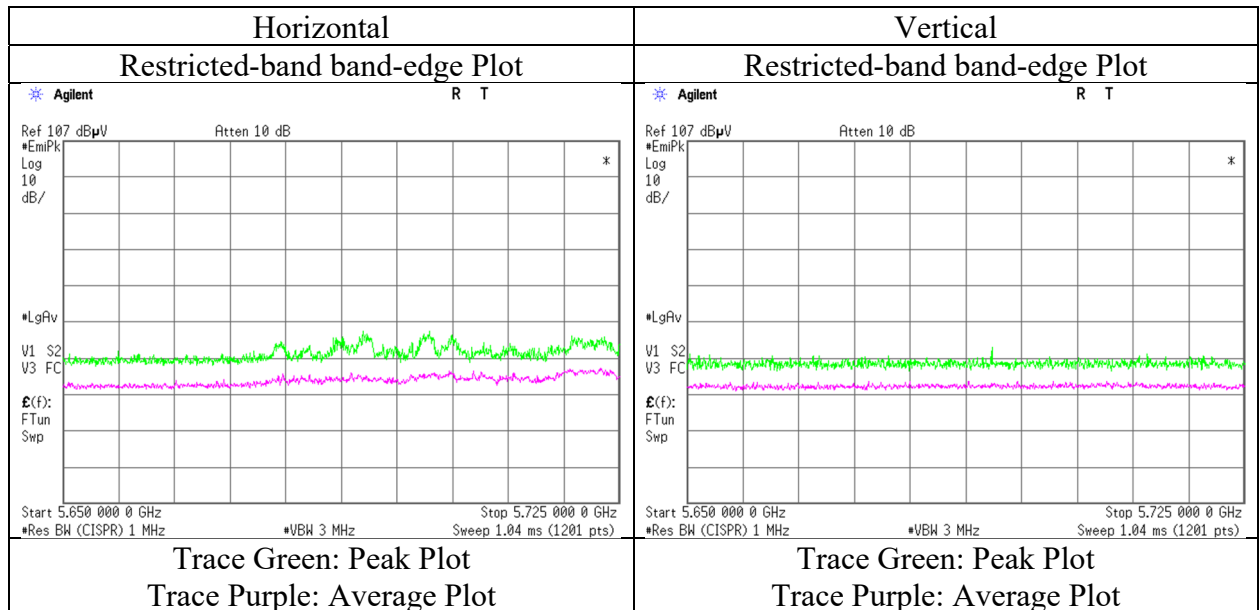
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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 12, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Takahiro Kawakami
Mode	Tx 11ac-80 MIMO 5775 MHz with BT Hopping On DH5
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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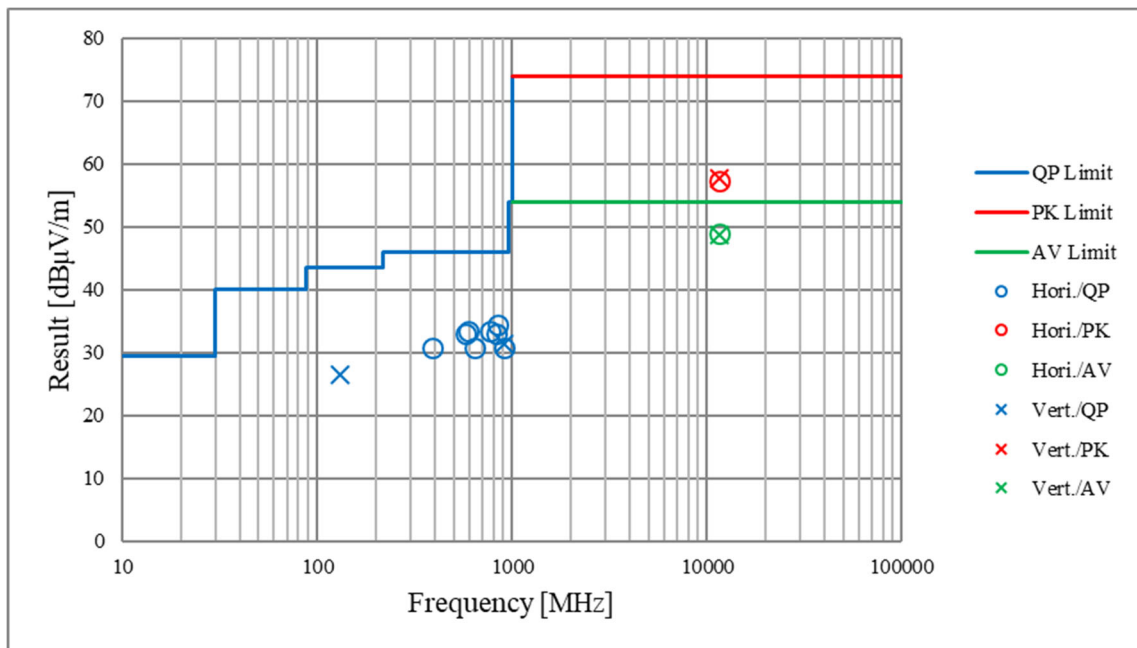
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission
(Plot data, Worst case)

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 11, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	23 deg. C / 59 % RH	23 deg. C / 63 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Toshinori Yamada (30 MHz - 1 GHz)	Toshinori Yamada (1 GHz - 13 GHz)	Toshinori Yamada (13 GHz - 18 GHz) (26.5 GHz - 40 GHz)	Takahiro Suzuki (18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz with BT Hopping On DH5			
EUT	Hi type(14 inch Display)			



*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date November 10, 2020
Temperature / Humidity 25 deg. C / 41 % RH
Engineer Kazuya Noda
(1 GHz – 13 GHz)
Mode Tx 11ac-80 MIMO 5210 MHz with 11g 2437 MHz and BT Hopping On DH5
EUT Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.56	32.12	17.10	43.11	2.13	57.80	73.9	16.1	123	182	
Hori.	5350.000	PK	49.67	31.83	17.26	43.33	2.13	57.56	73.9	16.3	123	182	
Hori.	5150.000	AV	40.84	32.12	17.10	43.11	2.13	49.08	53.9	4.8	123	182	VBW:18 kHz
Hori.	5350.000	AV	40.81	31.83	17.26	43.33	2.13	48.70	53.9	5.2	123	182	VBW:18 kHz
Vert.	5150.000	PK	49.97	32.12	17.10	43.11	2.13	58.21	73.9	15.6	152	292	
Vert.	5350.000	PK	49.53	31.83	17.26	43.33	2.13	57.42	73.9	16.4	152	292	
Vert.	5150.000	AV	40.85	32.12	17.10	43.11	2.13	49.09	53.9	4.8	152	292	VBW:18 kHz
Vert.	5350.000	AV	40.62	31.83	17.26	43.33	2.13	48.51	53.9	5.3	152	292	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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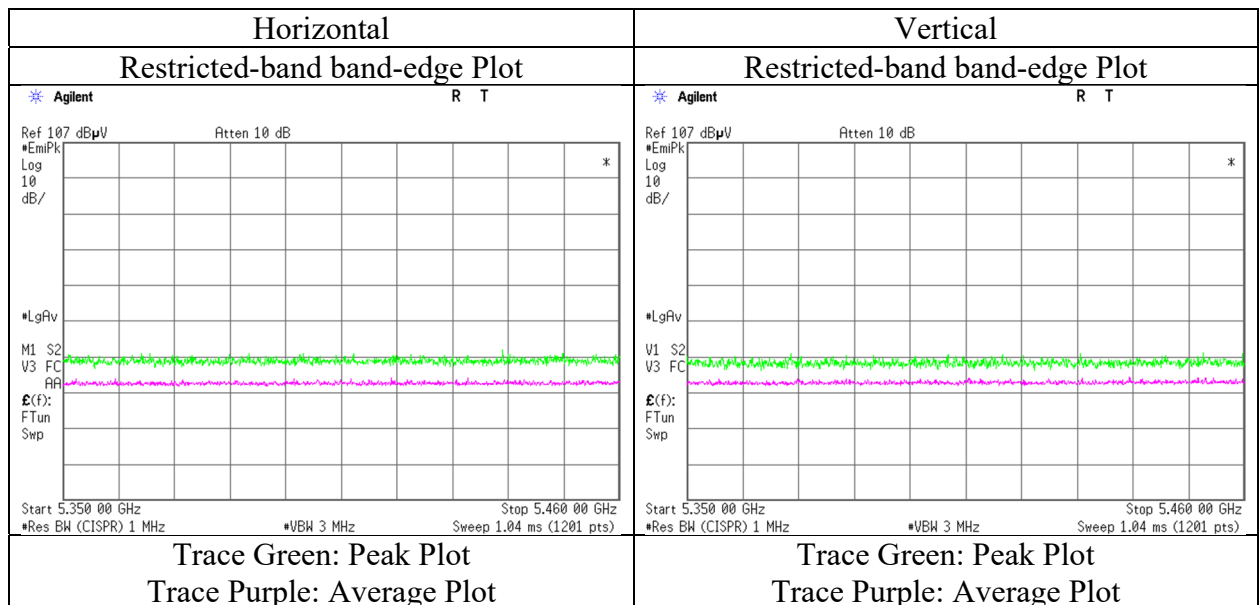
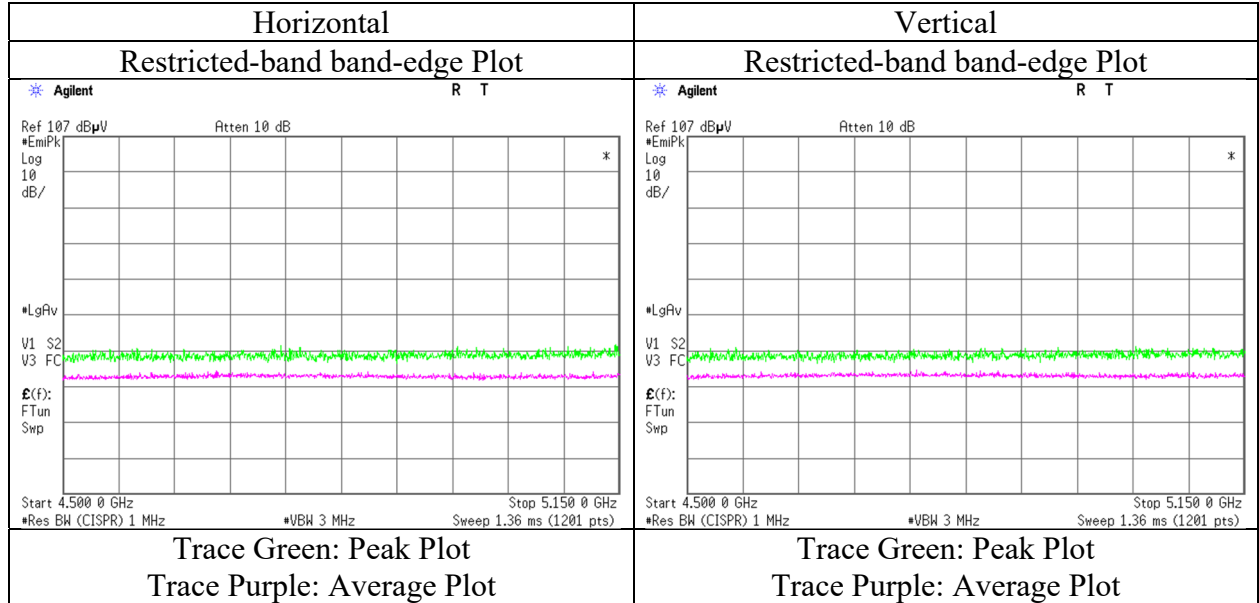
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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	November 10, 2020
Temperature / Humidity	25 deg. C / 41 % RH
Engineer	Kazuya Noda
	(1 GHz – 13 GHz)
Mode	Tx 11ac-80 MIMO 5210 MHz with 11g 2437 MHz and BT Hopping On DH5
EUT	Hi type(14 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5180 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	48.52	32.12	16.41	43.11	2.13	56.07	73.9	17.8	151	231	
Hori.	15540.000	PK	47.59	39.60	11.93	40.42	-9.54	49.16	73.9	24.7	100	0	
Hori.	5150.000	AV	39.41	32.12	16.41	43.11	2.13	46.96	53.9	6.9	151	231	VBW:10 kHz
Hori.	15540.000	AV	38.41	39.60	11.93	40.42	-9.54	39.98	53.9	13.9	100	0	VBW:10 kHz
Vert.	5150.000	PK	48.78	32.12	16.41	43.11	2.13	56.33	73.9	17.5	128	282	
Vert.	15540.000	PK	47.47	39.60	11.93	40.42	-9.54	49.04	73.9	24.8	100	0	
Vert.	5150.000	AV	39.37	32.12	16.41	43.11	2.13	46.92	53.9	6.9	128	282	VBW:10 kHz
Vert.	15540.000	AV	38.07	39.60	11.93	40.42	-9.54	39.64	53.9	14.2	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	47.73	39.48	9.49	42.70	2.13	56.13	-39.09	-27.0	12.0	100	0	-
Vert.	10360.000	PK	48.13	39.48	9.49	42.70	2.13	56.53	-38.69	-27.0	11.6	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance : } 3 [\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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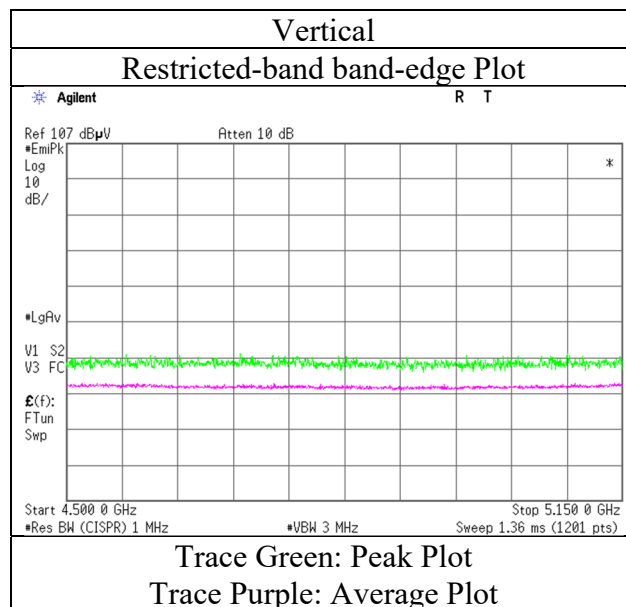
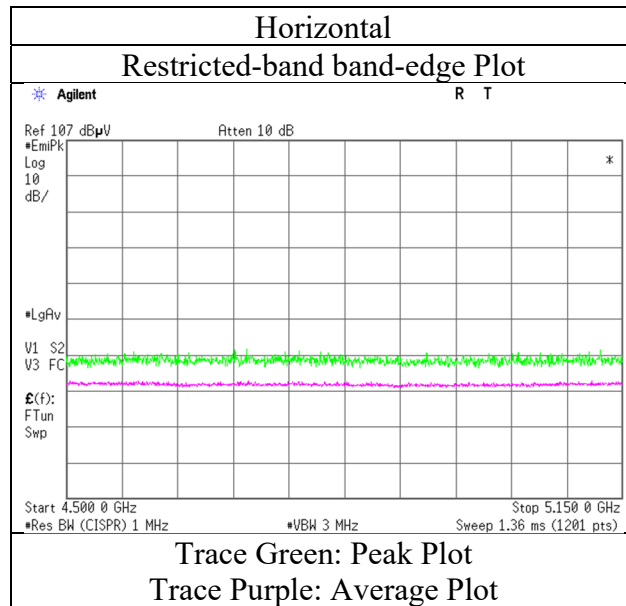
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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5180 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5220 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	15660.000	PK	47.51	39.15	11.93	40.37	-9.54	48.68	73.9	25.2	100	0	
Hori.	15660.000	AV	38.56	39.15	11.93	40.37	-9.54	39.73	53.9	14.1	100	0	VBW:10 kHz
Vert.	15660.000	PK	47.32	39.15	11.93	40.37	-9.54	48.49	73.9	25.4	100	0	
Vert.	15660.000	AV	38.31	39.15	11.93	40.37	-9.54	39.48	53.9	14.4	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10440.000	PK	48.06	39.69	9.51	42.70	2.13	56.69	-38.53	-27.0	11.5	100	0	-
Vert.	10440.000	PK	47.87	39.69	9.51	42.70	2.13	56.50	-38.72	-27.0	11.7	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \log((10^{\frac{1}{10}} \text{ (Electric Field Strength [dBuV/m])} / 20) * 10^{(-6)} * \text{Distance} [3 \text{ [m]}]^2 / 30 * 10^{\frac{1}{10}})$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5240 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	48.67	31.83	16.56	43.33	2.13	55.86	73.9	18.0	114	210	
Hori.	15720.000	PK	47.24	38.93	11.92	40.35	-9.54	48.20	73.9	25.7	100	0	
Hori.	5350.000	AV	39.41	31.83	16.56	43.33	2.13	46.60	53.9	7.3	114	210	VBW:10 kHz
Hori.	15720.000	AV	38.13	38.93	11.92	40.35	-9.54	39.09	53.9	14.8	100	0	VBW:10 kHz
Vert.	5350.000	PK	48.98	31.83	16.56	43.33	2.13	56.17	73.9	17.7	147	289	
Vert.	15720.000	PK	47.61	38.93	11.92	40.35	-9.54	48.57	73.9	25.3	100	0	
Vert.	5350.000	AV	39.45	31.83	16.56	43.33	2.13	46.64	53.9	7.2	147	289	VBW:10 kHz
Vert.	15720.000	AV	38.05	38.93	11.92	40.35	-9.54	39.01	53.9	14.8	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	48.37	39.77	9.51	42.70	2.13	57.08	-38.14	-27.0	11.1	100	0	-
Vert.	10480.000	PK	48.26	39.77	9.51	42.70	2.13	56.97	-38.25	-27.0	11.2	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance : 3 [m]})^2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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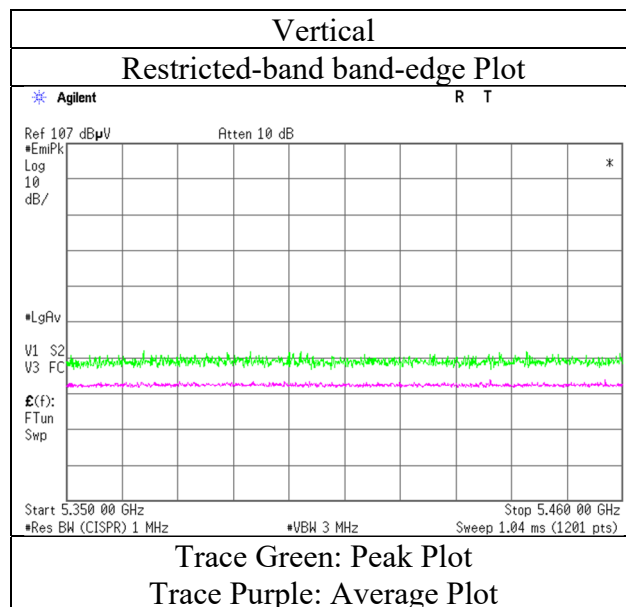
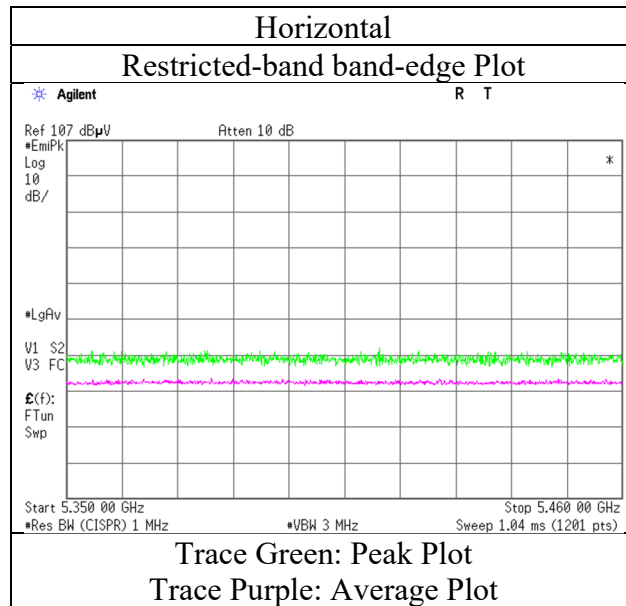
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	July 9, 2020
Date	25 deg. C / 63 % RH
Temperature / Humidity	Kazuya Noda
Engineer	July 9, 2020
Mode	Tx 11ac-20 MIMO 5240 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

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Radiated Spurious Emission

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	August 3, 2020	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	23 deg. C / 56 % RH	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Shiro Kobayashi (30 MHz - 1 GHz)	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz			
EUT	Lo type(9.8 inch Display)			

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	195.867	QP	25.50	16.51	7.80	32.05	0.00	17.76	43.5	25.7	177	38	
Hori.	224.910	QP	40.60	11.26	8.12	32.01	0.00	27.97	46.0	18.0	169	53	
Hori.	594.568	QP	29.60	19.20	9.78	31.95	0.00	26.63	46.0	19.3	159	133	
Hori.	760.248	QP	33.30	20.30	10.38	31.72	0.00	32.26	46.0	13.7	136	144	
Hori.	831.231	QP	30.70	21.05	10.60	31.45	0.00	30.90	46.0	15.1	100	173	
Hori.	11490.000	PK	47.79	39.69	10.05	42.63	2.13	57.03	73.9	16.8	100	0	
Hori.	11490.000	AV	38.59	39.69	10.05	42.63	2.13	47.83	53.9	6.0	100	0	VBW:10 kHz
Vert.	37.715	QP	31.10	15.74	6.60	32.17	0.00	21.27	40.0	18.7	100	252	
Vert.	65.814	QP	40.20	7.11	6.52	32.15	0.00	21.68	40.0	18.3	100	203	
Vert.	195.854	QP	30.60	16.51	7.80	32.05	0.00	22.86	43.5	20.6	100	1	
Vert.	213.054	QP	36.80	11.25	8.05	32.03	0.00	24.07	43.5	19.4	103	318	
Vert.	640.010	QP	30.00	19.27	9.94	31.95	0.00	27.26	46.0	18.7	100	163	
Vert.	11490.000	PK	47.85	39.69	10.05	42.63	2.13	57.09	73.9	16.8	100	0	
Vert.	11490.000	AV	38.61	39.69	10.05	42.63	2.13	47.85	53.9	6.0	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.01	32.49	16.76	43.46	2.13	56.93	-38.29	-27.0	11.2	127	224	-
Hori.	5700.000	PK	49.72	32.60	16.79	43.45	2.13	57.79	-37.43	10.0	47.4	127	224	
Hori.	5720.000	PK	49.51	32.66	16.80	43.44	2.13	57.66	-37.56	15.6	53.1	127	224	
Hori.	5725.000	PK	53.66	32.68	16.81	43.44	2.13	61.84	-33.38	27.0	60.3	127	224	
Hori.	17235.000	PK	47.21	41.57	12.73	40.31	-9.54	51.66	-43.56	-27.0	16.5	100	0	
Vert.	5650.000	PK	49.10	32.49	16.76	43.46	2.13	57.02	-38.20	-27.0	11.2	113	286	
Vert.	5700.000	PK	49.55	32.60	16.79	43.45	2.13	57.62	-37.60	10.0	47.6	113	286	
Vert.	5720.000	PK	50.41	32.66	16.80	43.44	2.13	58.56	-36.66	15.6	52.2	113	286	
Vert.	5725.000	PK	54.82	32.68	16.81	43.44	2.13	63.00	-32.22	27.0	59.2	113	286	
Vert.	17235.000	PK	46.68	41.57	12.73	40.31	-9.54	51.13	-44.09	-27.0	17.0	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP) [dBm] = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance : 3 [m]})^2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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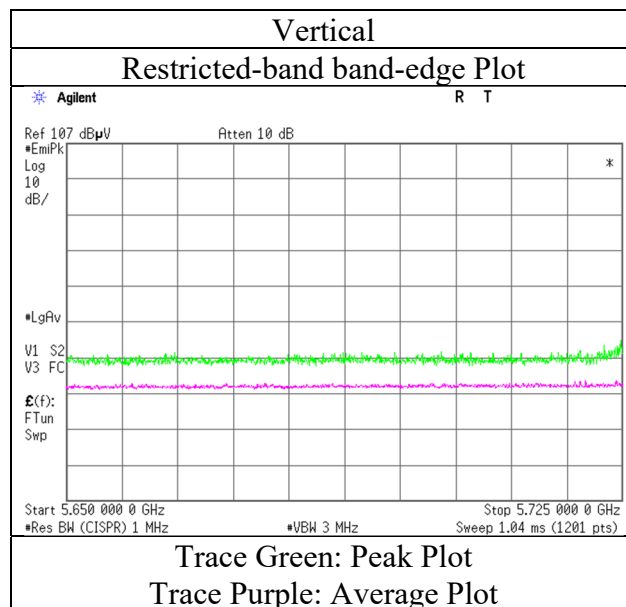
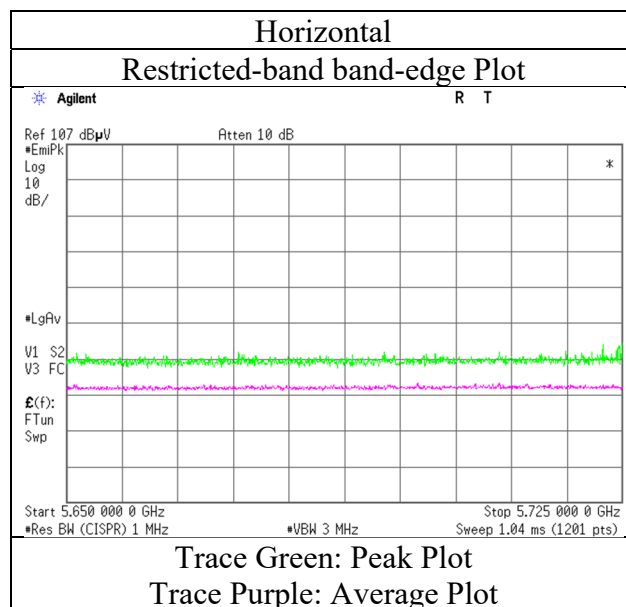
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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5745 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5785 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11570.000	PK	48.05	39.65	10.09	42.62	2.13	57.30	73.9	16.6	100	0	
Hori.	11570.000	AV	38.65	39.65	10.09	42.62	2.13	47.90	53.9	6.0	100	0	VBW:10 kHz
Vert.	11570.000	PK	47.81	39.65	10.09	42.62	2.13	57.06	73.9	16.8	100	0	
Vert.	11570.000	AV	38.56	39.65	10.09	42.62	2.13	47.81	53.9	6.0	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17355.000	PK	46.20	42.40	12.75	40.28	-9.54	51.53	-43.69	-27.0	16.6	100	0	-
Vert.	17355.000	PK	46.14	42.40	12.75	40.28	-9.54	51.47	-43.75	-27.0	16.7	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \log((10^{\frac{1}{10}} * (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{-6}) * \text{Distance} [3 \text{ m}]^2 / 30 * 10^3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-20 MIMO 5825 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	47.19	39.50	10.16	42.61	2.13	56.37	73.9	17.5	100	0	
Hori.	11650.000	AV	38.14	39.50	10.16	42.61	2.13	47.32	53.9	6.5	100	0	VBW:10 kHz
Vert.	11650.000	PK	47.27	39.50	10.16	42.61	2.13	56.45	73.9	17.4	100	0	
Vert.	11650.000	AV	37.96	39.50	10.16	42.61	2.13	47.14	53.9	6.7	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.69	33.07	16.89	43.41	2.13	58.37	-36.85	27.0	63.8	147	211	-
Hori.	5855.000	PK	49.58	33.08	16.89	43.41	2.13	58.27	-36.95	15.6	52.5	147	211	
Hori.	5875.000	PK	49.53	33.12	16.92	43.41	2.13	58.29	-36.93	10.0	46.9	147	211	
Hori.	5925.000	PK	49.34	33.21	16.94	43.40	2.13	58.22	-37.00	-27.0	10.0	147	211	
Hori.	17475.000	PK	45.72	43.11	12.79	40.26	-9.54	51.82	-43.40	-27.0	16.4	100	0	
Vert.	5850.000	PK	51.01	33.07	16.89	43.41	2.13	59.69	-35.53	27.0	62.5	121	283	
Vert.	5855.000	PK	49.92	33.08	16.89	43.41	2.13	58.61	-36.61	15.6	52.2	121	283	
Vert.	5875.000	PK	49.22	33.12	16.92	43.41	2.13	57.98	-37.24	10.0	47.2	121	283	
Vert.	5925.000	PK	49.38	33.21	16.94	43.40	2.13	58.26	-36.96	-27.0	9.9	121	283	
Vert.	17475.000	PK	45.34	43.11	12.79	40.26	-9.54	51.44	-43.78	-27.0	16.7	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \text{LOG}((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)) * 10^{\wedge}(-6)) * \text{Distance} : 3 [\text{m}]^{\wedge}2 / 30 * 10^{\wedge}3$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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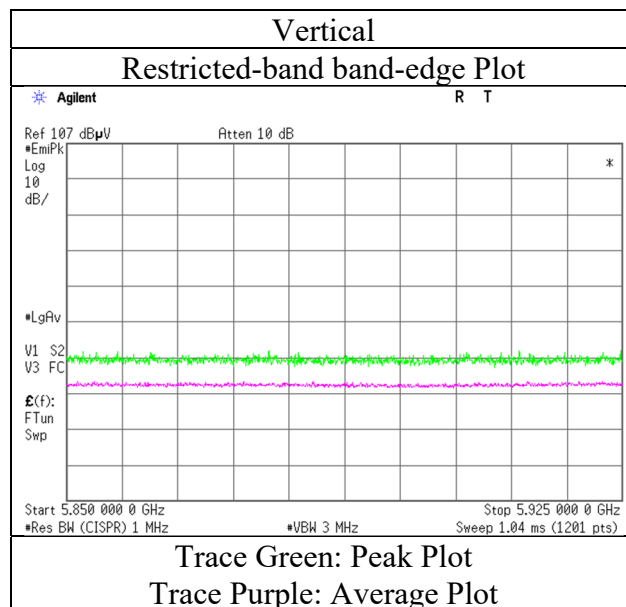
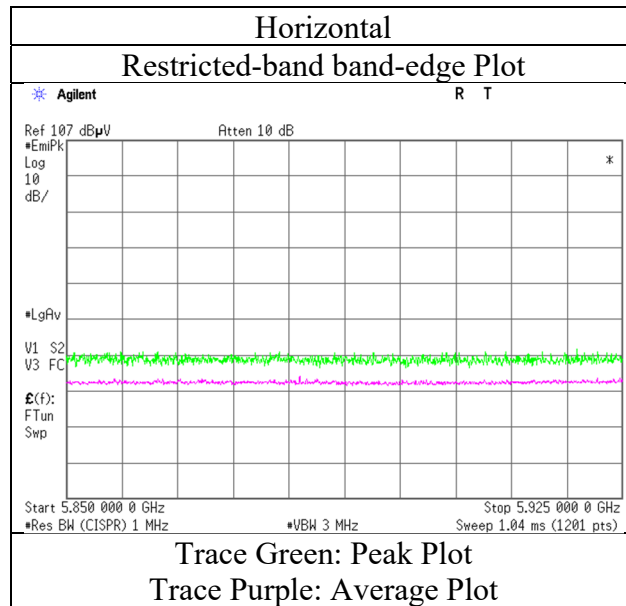
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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5825 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 8, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 59 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 MIMO 5190 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.27	32.12	16.41	43.11	2.13	56.82	73.9	17.0	135	182	
Hori.	15570.000	PK	47.74	39.49	11.93	40.41	-9.54	49.21	73.9	24.6	100	0	
Hori.	5150.000	AV	39.78	32.12	16.41	43.11	2.13	47.33	53.9	6.5	135	182	VBW:13 kHz
Hori.	15570.000	AV	38.39	39.49	11.93	40.41	-9.54	39.86	53.9	14.0	100	0	VBW:13 kHz
Vert.	5150.000	PK	49.36	32.12	16.41	43.11	2.13	56.91	73.9	16.9	153	287	
Vert.	15570.000	PK	47.22	39.49	11.93	40.41	-9.54	48.69	73.9	25.2	100	0	
Vert.	5150.000	AV	39.81	32.12	16.41	43.11	2.13	47.36	53.9	6.5	153	287	VBW:13 kHz
Vert.	15570.000	AV	37.50	39.49	11.93	40.41	-9.54	38.97	53.9	14.9	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10380.000	PK	48.38	39.54	9.49	42.70	2.13	56.84	-38.38	-27.0	11.3	100	0	-
Vert.	10380.000	PK	48.09	39.54	9.49	42.70	2.13	56.55	-38.67	-27.0	11.6	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

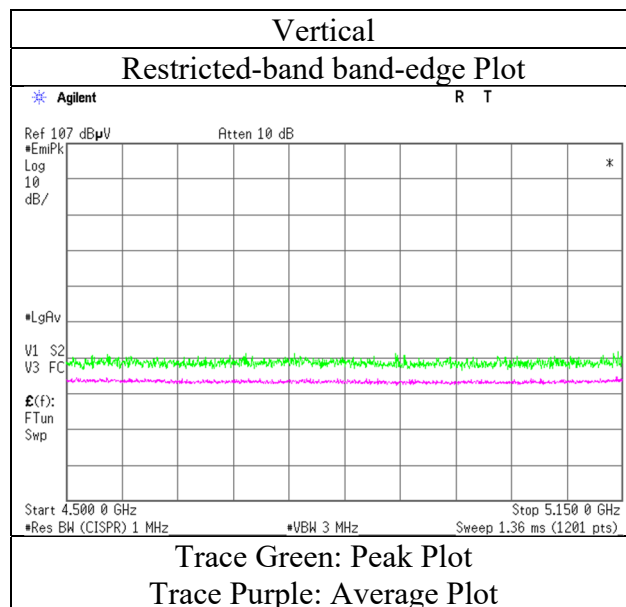
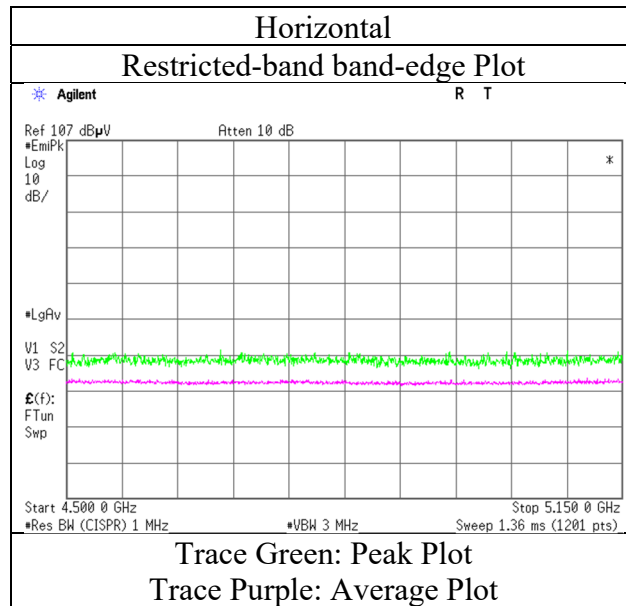
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 8, 2020
Temperature / Humidity	25 deg. C / 59 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5190 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 8, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 59 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 MIMO 5230 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.06	31.83	16.56	43.33	2.13	56.25	73.9	17.6	130	183	
Hori.	15690.000	PK	47.33	39.03	11.93	40.36	-9.54	48.39	73.9	25.5	100	0	
Hori.	5350.000	AV	40.29	31.83	16.56	43.33	2.13	47.48	53.9	6.4	130	183	VBW:13 kHz
Hori.	15690.000	AV	37.19	39.03	11.93	40.36	-9.54	38.25	53.9	15.6	100	0	VBW:13 kHz
Vert.	5350.000	PK	48.67	31.83	16.56	43.33	2.13	55.86	73.9	18.0	144	289	
Vert.	15690.000	PK	46.70	39.03	11.93	40.36	-9.54	47.76	73.9	26.1	100	0	
Vert.	5350.000	AV	40.09	31.83	16.56	43.33	2.13	47.28	53.9	6.6	144	289	VBW:13 kHz
Vert.	15690.000	AV	37.14	39.03	11.93	40.36	-9.54	38.20	53.9	15.7	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	47.89	39.73	9.51	42.70	2.13	56.56	-38.66	-27.0	11.6	100	0	-
Vert.	10460.000	PK	47.72	39.73	9.51	42.70	2.13	56.39	-38.83	-27.0	11.8	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \text{LOG}((10^{(Electric Field Strength [dBuV/m] / 20)} * 10^{(-6)} * Distance : 3 [m])^2 / 30 * 10^{-3})$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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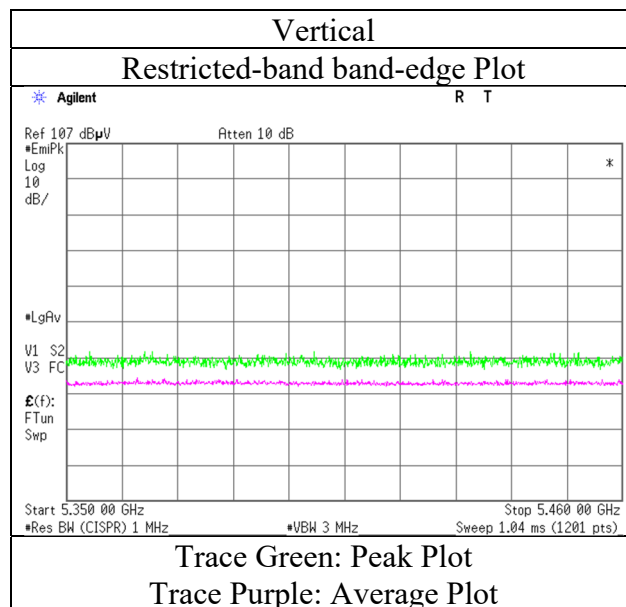
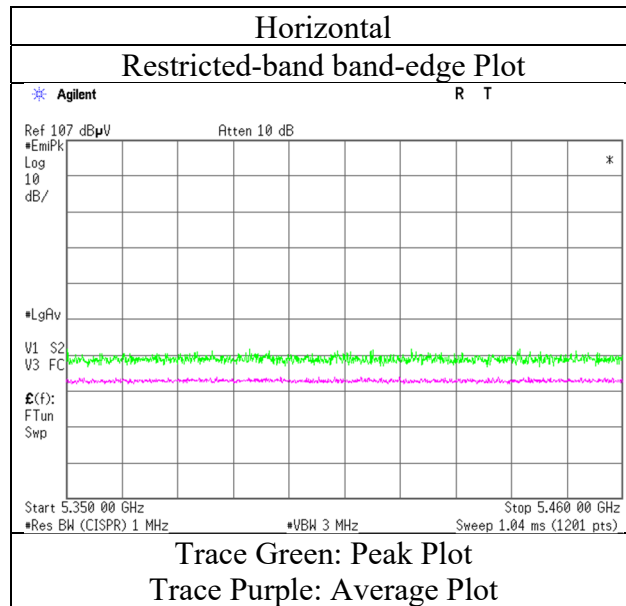
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

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Radiated Spurious Emission

Report No. 13385909S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 8, 2020
Temperature / Humidity 25 deg. C / 59 % RH
Engineer Kazuya Noda
Mode Tx 11ac-40 MIMO 5230 MHz
EUT Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 MIMO 5755 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	48.35	39.69	10.05	42.62	2.13	57.60	73.9	16.3	100	0	
Hori.	11510.000	AV	38.94	39.69	10.05	42.62	2.13	48.19	53.9	5.7	100	0	VBW:13 kHz
Vert.	11510.000	PK	48.21	39.69	10.05	42.62	2.13	57.46	73.9	16.4	100	0	
Vert.	11510.000	AV	38.88	39.69	10.05	42.62	2.13	48.13	53.9	5.7	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.89	32.49	16.76	43.46	2.13	56.81	-38.41	-27.0	11.4	126	223	
Hori.	5700.000	PK	49.05	32.60	16.79	43.45	2.13	57.12	-38.10	10.0	48.1	126	223	
Hori.	5720.000	PK	52.69	32.66	16.80	43.44	2.13	60.84	-34.38	15.6	49.9	126	223	
Hori.	5725.000	PK	55.22	32.68	16.81	43.44	2.13	63.40	-31.82	27.0	58.8	126	223	
Hori.	17265.000	PK	46.02	41.76	12.74	40.30	-9.54	50.68	-44.54	-27.0	17.5	100	0	
Vert.	5650.000	PK	48.84	32.49	16.76	43.46	2.13	56.76	-38.46	-27.0	11.4	121	286	
Vert.	5700.000	PK	49.28	32.60	16.79	43.45	2.13	57.35	-37.87	10.0	47.8	121	286	
Vert.	5720.000	PK	52.49	32.66	16.80	43.44	2.13	60.64	-34.58	15.6	50.1	121	286	
Vert.	5725.000	PK	55.81	32.68	16.81	43.44	2.13	63.99	-31.23	27.0	58.2	121	286	
Vert.	17265.000	PK	47.29	41.76	12.74	40.30	-9.54	51.95	-43.27	-27.0	16.2	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

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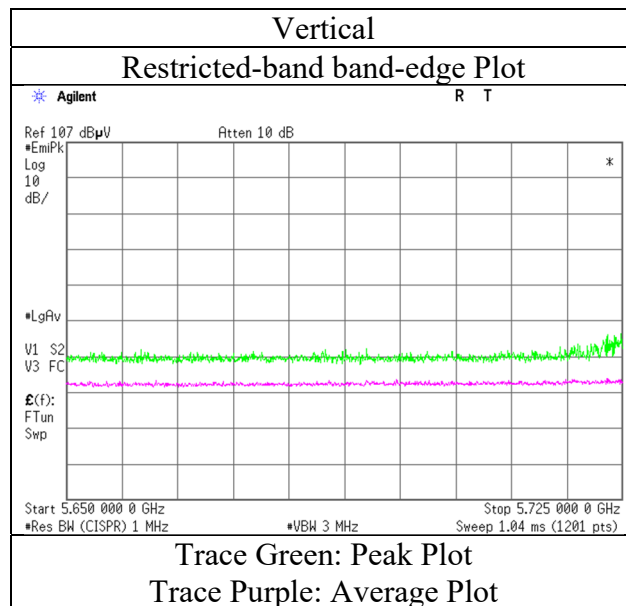
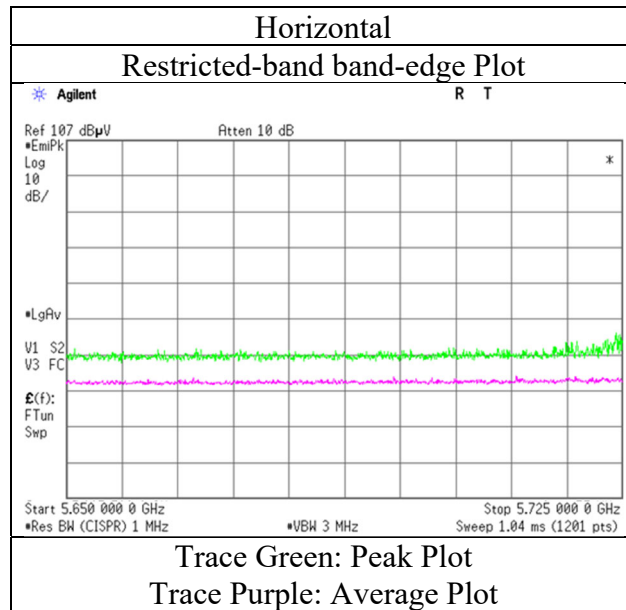
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5755 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-40 MIMO 5795 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11590.000	PK	47.89	39.63	10.12	42.62	2.13	57.15	73.9	16.7	100	0	
Hori.	11590.000	AV	38.82	39.63	10.12	42.62	2.13	48.08	53.9	5.8	100	0	VBW:13 kHz
Vert.	11590.000	PK	47.58	39.63	10.12	42.62	2.13	56.84	73.9	17.0	100	0	
Vert.	11590.000	AV	39.13	39.63	10.12	42.62	2.13	48.39	53.9	5.5	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	49.74	33.07	16.89	43.41	2.13	58.42	-36.80	27.0	63.8	156	214	-
Hori.	5855.000	PK	49.35	33.08	16.89	43.41	2.13	58.04	-37.18	15.6	52.7	156	214	
Hori.	5875.000	PK	49.52	33.12	16.92	43.41	2.13	58.28	-36.94	10.0	46.9	156	214	
Hori.	5925.000	PK	49.46	33.21	16.94	43.40	2.13	58.34	-36.88	-27.0	9.8	156	214	
Hori.	17385.000	PK	45.83	42.61	12.77	40.28	-9.54	51.39	-43.83	-27.0	16.8	100	0	
Vert.	5850.000	PK	49.73	33.07	16.89	43.41	2.13	58.41	-36.81	27.0	63.8	128	287	
Vert.	5855.000	PK	49.51	33.08	16.89	43.41	2.13	58.20	-37.02	15.6	52.6	128	287	
Vert.	5875.000	PK	49.53	33.12	16.92	43.41	2.13	58.29	-36.93	10.0	46.9	128	287	
Vert.	5925.000	PK	49.26	33.21	16.94	43.40	2.13	58.14	-37.08	-27.0	10.0	128	287	
Vert.	17385.000	PK	46.54	42.61	12.77	40.28	-9.54	52.10	-43.12	-27.0	16.1	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : 20log(3.83 m / 3.0 m) = 2.13 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.54 dB

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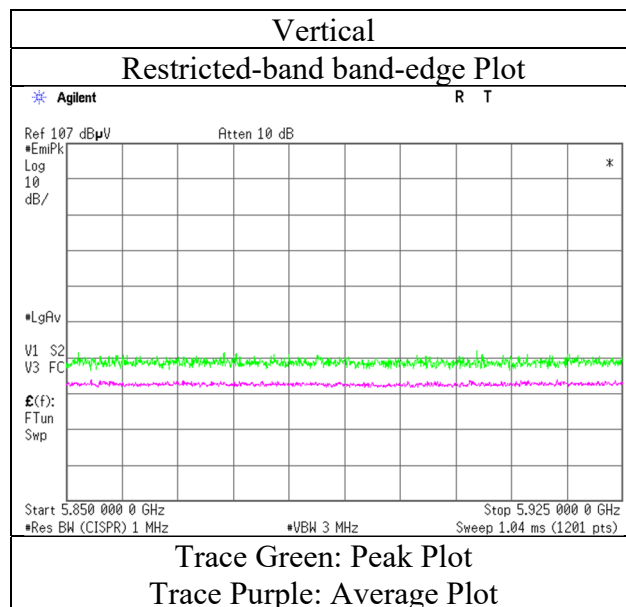
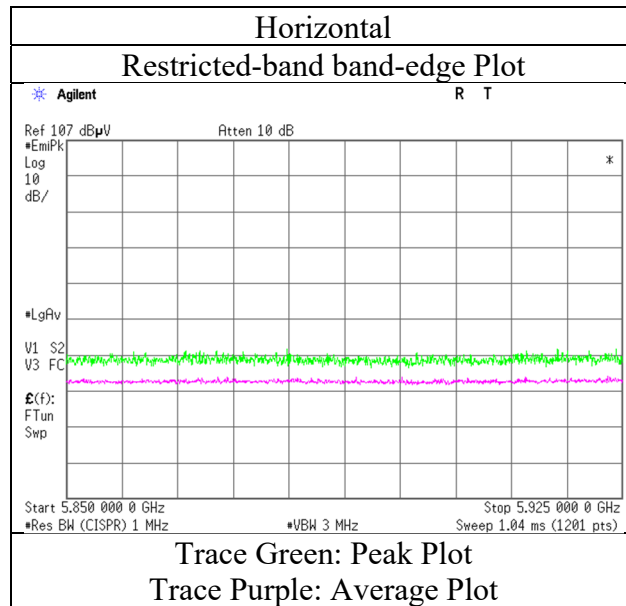
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5795 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 MIMO 5210 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	48.64	32.12	16.41	43.11	2.13	56.19	73.9	17.7	117	213	
Hori.	5350.000	PK	48.89	31.83	16.56	43.33	2.13	56.08	73.9	17.8	117	213	
Hori.	15630.000	PK	46.68	39.24	11.93	40.39	-9.54	47.92	73.9	25.9	100	0	
Hori.	5150.000	AV	40.51	32.12	16.41	43.11	2.13	48.06	53.9	5.8	117	213	VBW:18 kHz
Hori.	5350.000	AV	40.78	31.83	16.56	43.33	2.13	47.97	53.9	5.9	117	213	VBW:18 kHz
Hori.	15630.000	AV	38.39	39.24	11.93	40.39	-9.54	39.63	53.9	14.2	100	0	VBW:18 kHz
Vert.	5150.000	PK	48.72	32.12	16.41	43.11	2.13	56.27	73.9	17.6	116	287	
Vert.	5350.000	PK	49.02	31.83	16.56	43.33	2.13	56.21	73.9	17.6	116	287	
Vert.	15630.000	PK	46.43	39.24	11.93	40.39	-9.54	47.67	73.9	26.2	100	0	
Vert.	5150.000	AV	40.36	32.12	16.41	43.11	2.13	47.91	53.9	5.9	116	287	VBW:18 kHz
Vert.	5350.000	AV	40.81	31.83	16.56	43.33	2.13	48.00	53.9	5.9	116	287	VBW:18 kHz
Vert.	15630.000	AV	38.84	39.24	11.93	40.39	-9.54	40.08	53.9	13.8	100	0	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10420.000	PK	48.15	39.64	9.51	42.70	2.13	56.73	-38.49	-27.0	11.4	100	0	-
Vert.	10420.000	PK	48.25	39.64	9.51	42.70	2.13	56.83	-38.39	-27.0	11.3	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance : 3 [m]}))^2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

UL Japan, Inc.

Shonan EMC Lab.

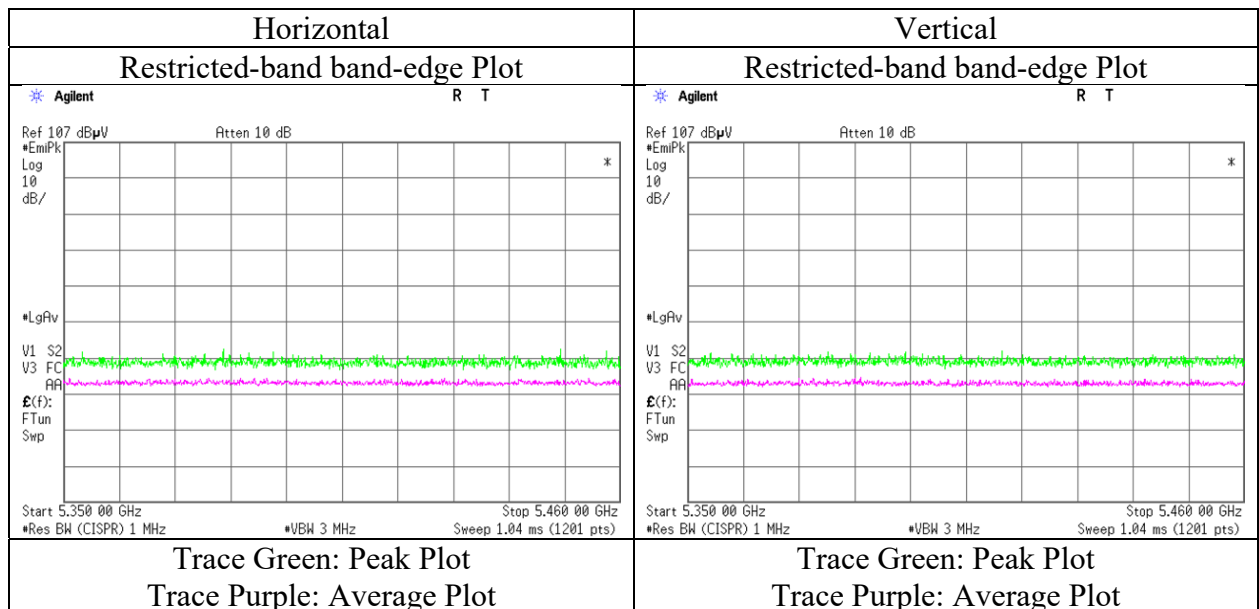
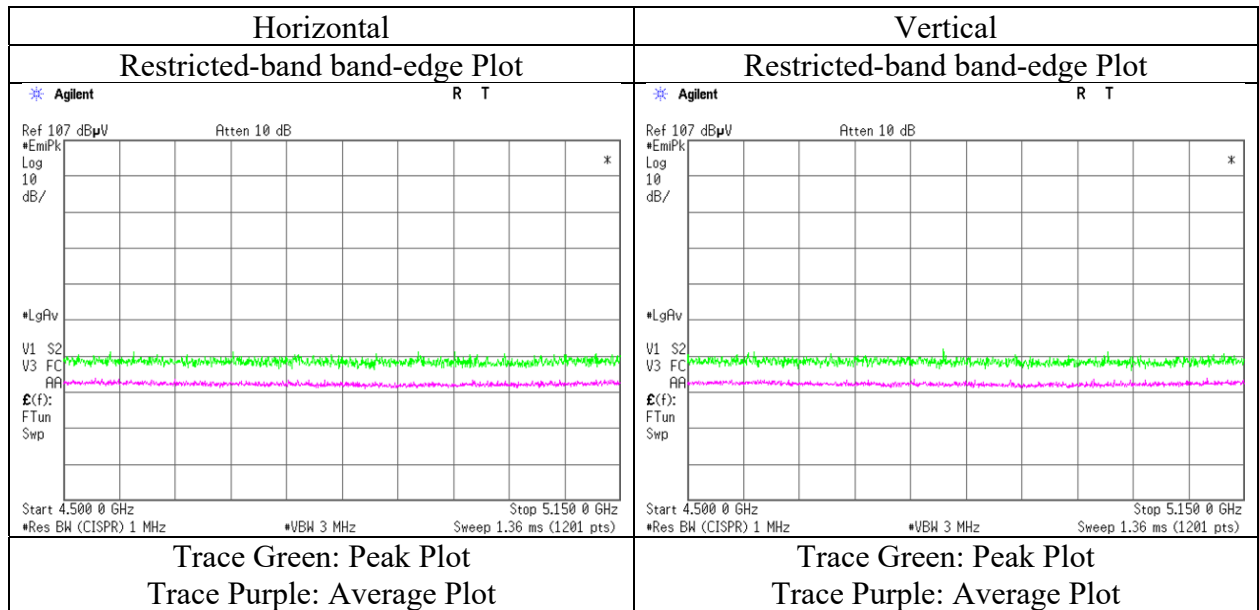
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

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Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 9, 2020
Temperature / Humidity	25 deg. C / 63 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-80 MIMO 5210 MHz
EUT	Lo type(9.8 inch Display)



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

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Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 9, 2020	July 23, 2020	July 23, 2020
Temperature / Humidity	25 deg. C / 63 % RH	24 deg. C / 61 % RH	22 deg. C / 63 % RH
Engineer	Kazuya Noda (1 GHz - 13 GHz)	Hiromasa Sato (13 GHz - 18 GHz)	Toshinori Yamada (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)
Mode	Tx 11ac-80 MIMO 5775 MHz		
EUT	Lo type(9.8 inch Display)		

(above 1 GHz Inside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11550.000	PK	48.42	39.69	10.08	42.62	2.13	57.70	73.9	16.2	100	0	
Hori.	11550.000	AV	39.42	39.69	10.08	42.62	2.13	48.70	53.9	5.2	100	0	VBW:18 kHz
Vert.	11550.000	PK	48.27	39.69	10.08	42.62	2.13	57.55	73.9	16.3	100	0	
Vert.	11550.000	AV	39.29	39.69	10.08	42.62	2.13	48.57	53.9	5.3	100	0	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.72	32.49	16.76	43.46	2.13	56.64	-38.58	-27.0	11.5	152	222	-
Hori.	5700.000	PK	48.87	32.60	16.79	43.45	2.13	56.94	-38.28	10.0	48.2	152	222	
Hori.	5720.000	PK	48.77	32.66	16.80	43.44	2.13	56.92	-38.30	15.6	53.9	152	222	
Hori.	5725.000	PK	48.79	32.68	16.81	43.44	2.13	56.97	-38.25	27.0	65.2	152	222	
Hori.	5850.000	PK	48.95	33.07	16.89	43.41	2.13	57.63	-37.59	27.0	64.5	152	222	
Hori.	5855.000	PK	48.65	33.08	16.89	43.41	2.13	57.34	-37.88	15.6	53.4	152	222	
Hori.	5875.000	PK	48.96	33.12	16.92	43.41	2.13	57.72	-37.50	10.0	47.5	152	222	
Hori.	5925.000	PK	48.98	33.21	16.94	43.40	2.13	57.86	-37.36	-27.0	10.3	152	222	
Hori.	17325.000	PK	46.53	42.22	12.75	40.29	-9.54	51.67	-43.55	-27.0	16.5	100	0	
Vert.	5650.000	PK	48.51	32.49	16.76	43.46	2.13	56.43	-38.79	-27.0	11.7	123	286	
Vert.	5700.000	PK	48.95	32.60	16.79	43.45	2.13	57.02	-38.20	10.0	48.2	123	286	
Vert.	5720.000	PK	48.82	32.66	16.80	43.44	2.13	56.97	-38.25	15.6	53.8	123	286	
Vert.	5725.000	PK	48.91	32.68	16.81	43.44	2.13	57.09	-38.13	27.0	65.1	123	286	
Vert.	5850.000	PK	48.95	33.07	16.89	43.41	2.13	57.63	-37.59	27.0	64.5	123	286	
Vert.	5855.000	PK	48.74	33.08	16.89	43.41	2.13	57.43	-37.79	15.6	53.3	123	286	
Vert.	5875.000	PK	48.71	33.12	16.92	43.41	2.13	57.47	-37.75	10.0	47.7	123	286	
Vert.	5925.000	PK	49.02	33.21	16.94	43.40	2.13	57.90	-37.32	-27.0	10.3	123	286	
Vert.	17325.000	PK	46.51	42.22	12.75	40.29	-9.54	51.65	-43.57	-27.0	16.5	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor

Result (EIRP [dBm]) = $10 * \text{LOG}((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)) * 10^{\wedge}(-6)) * \text{Distance} : 3 [\text{m}]^{\wedge}2 / 30 * 10^{\wedge}3)$

*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.83 \text{ m} / 3.0 \text{ m}) = 2.13 \text{ dB}$

13 GHz - 40 GHz : $20\log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

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