

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5180 MHz

(above 1GHz 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	52.37	32.01	16.48	44.63	2.33	58.56	73.97	15.4	161	265	VBW: 10 Hz
Hori.	5150.000	AV	39.02	32.01	16.48	44.63	2.33	45.21	53.97	8.7	161	265	
Vert.	5150.000	PK	52.42	32.01	16.48	44.63	2.33	58.61	73.97	15.3	130	288	VBW: 10 Hz
Vert.	5150.000	AV	38.84	32.01	16.48	44.63	2.33	45.03	53.97	8.9	130	288	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

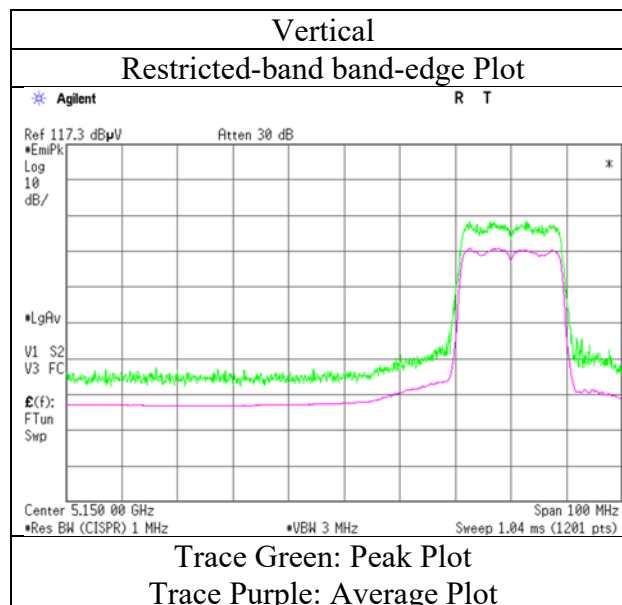
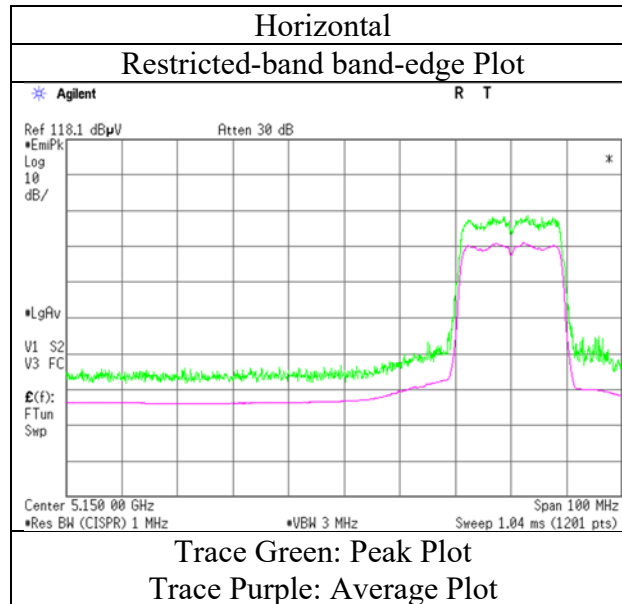
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5180 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5320 MHz

(above 1GHz 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	51.37	32.09	16.39	44.79	2.33	57.39	73.97	16.5	166	265	VBW: 10 Hz
Hori.	5350.000	AV	39.08	32.09	16.39	44.79	2.33	45.10	53.97	8.8	166	265	
Vert.	5350.000	PK	51.48	32.09	16.39	44.79	2.33	57.50	73.97	16.4	136	290	VBW: 10 Hz
Vert.	5350.000	AV	39.43	32.09	16.39	44.79	2.33	45.45	53.97	8.5	136	290	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

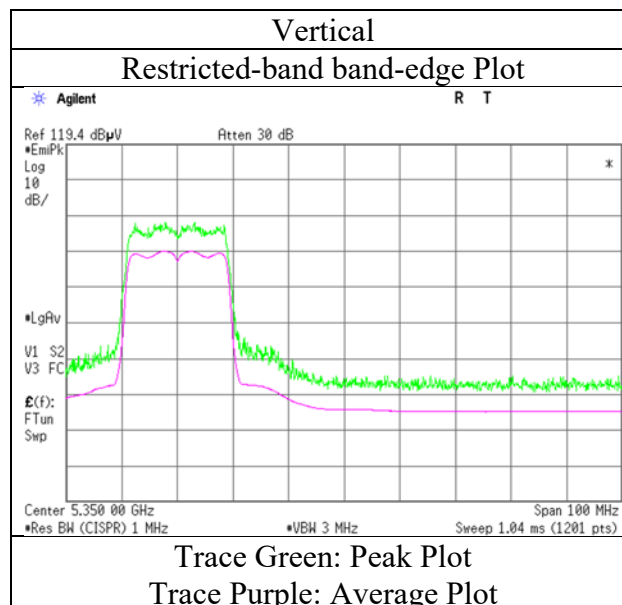
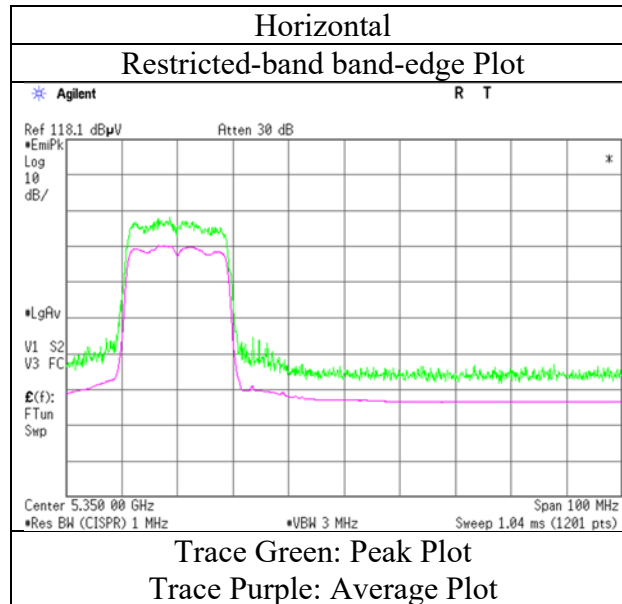
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5320 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 25, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Shiro Kobayashi
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-20 5500 MHz

(above 1GHz 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.	5460.000	PK	50.71	32.14	16.36	44.87	2.33	56.67	73.97	17.3	162	257	VBW: 10 Hz
Hori.	5460.000	AV	37.97	32.14	16.36	44.87	2.33	43.93	53.97	10.0	162	257	
Vert.	5460.000	PK	50.18	32.14	16.36	44.87	2.33	56.14	73.97	17.8	127	307	VBW: 10 Hz
Vert.	5460.000	AV	37.95	32.14	16.36	44.87	2.33	43.91	53.97	10.0	127	307	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	54.37	32.15	16.35	44.88	2.33	60.32	-34.88	-27.00	7.9	162	257	
Vert.	5470.000	PK	54.91	32.15	16.35	44.88	2.33	60.86	-34.34	-27.00	7.3	127	307	

*This mode was performed only band edges measurement.

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

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

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

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

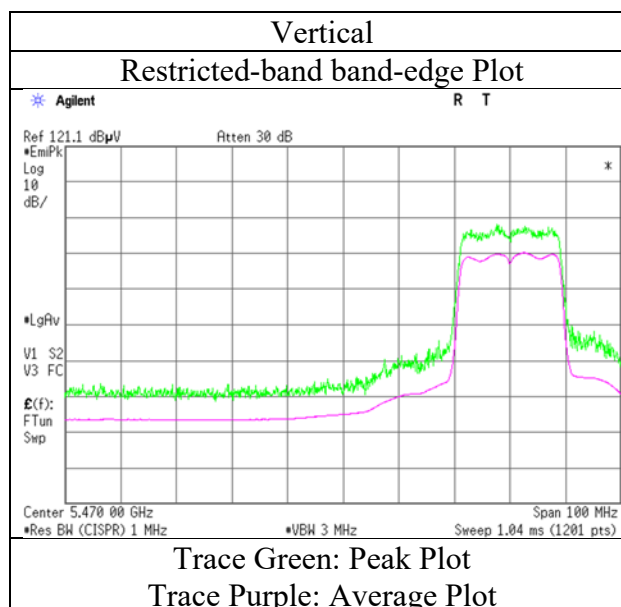
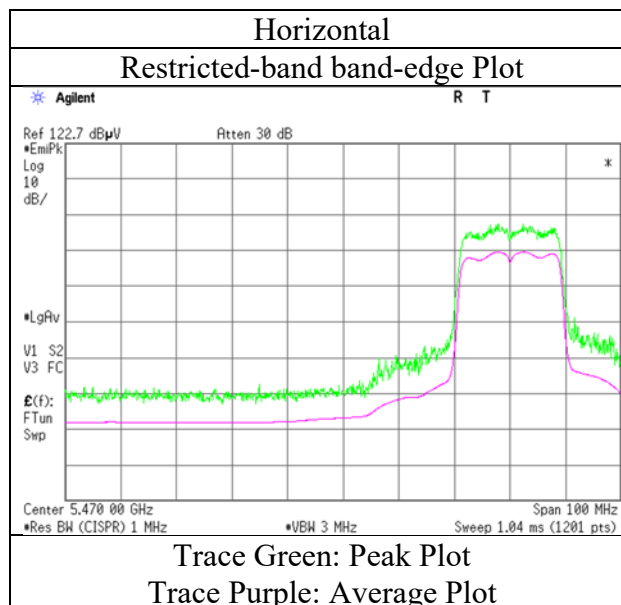
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5500 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 25, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Shiro Kobayashi
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-20 5700 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	59.75	32.53	16.59	44.87	2.33	66.33	-28.87	-27.00	1.9	142	260	
Vert.	5725.000	PK	57.99	32.53	16.59	44.87	2.33	64.57	-30.63	-27.00	3.6	114	310	

*This mode was performed only band edges measurement.

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)

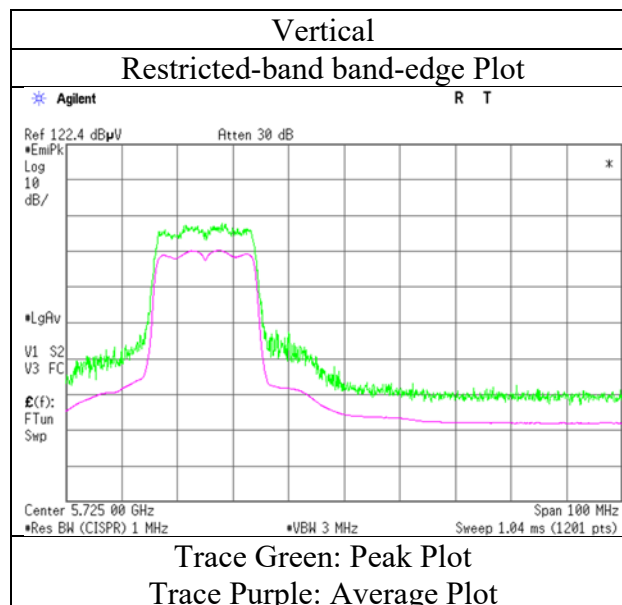
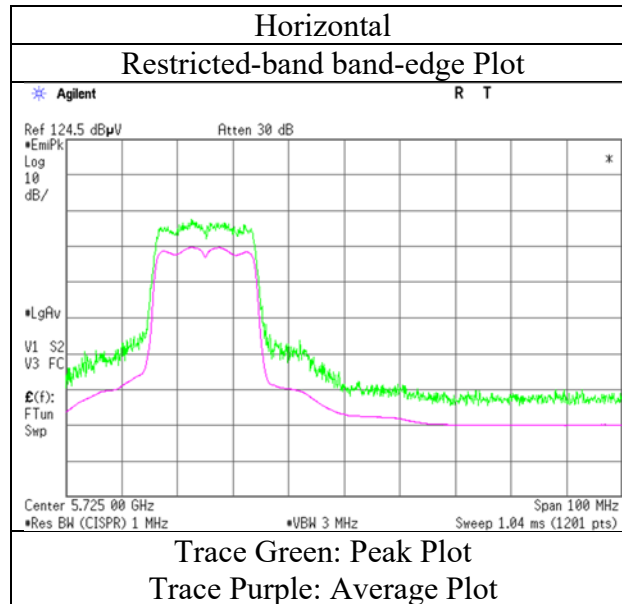
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5700 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5745 MHz

(Calculation) (above 1GHz 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	49.00	32.41	16.50	44.88	2.33	55.36	-39.84	-27.00	12.8	142	244	
Hori.	5700.000	PK	51.46	32.49	16.56	44.88	2.33	57.96	-37.24	10.00	47.2	142	244	
Hori.	5720.000	PK	60.74	32.53	16.59	44.87	2.33	67.32	-27.88	15.60	43.5	142	244	
Hori.	5725.000	PK	65.13	32.53	16.59	44.87	2.33	71.71	-23.49	27.00	50.5	142	244	
Vert.	5650.000	PK	49.21	32.41	16.50	44.88	2.33	55.57	-39.63	-27.00	12.6	156	234	
Vert.	5700.000	PK	50.35	32.49	16.56	44.88	2.33	56.85	-38.35	10.00	48.4	156	234	
Vert.	5720.000	PK	59.91	32.53	16.59	44.87	2.33	66.49	-28.71	15.60	44.3	156	234	
Vert.	5725.000	PK	65.54	32.53	16.59	44.87	2.33	72.12	-23.08	27.00	50.1	156	234	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

UL Japan, Inc.

Shonan EMC Lab.

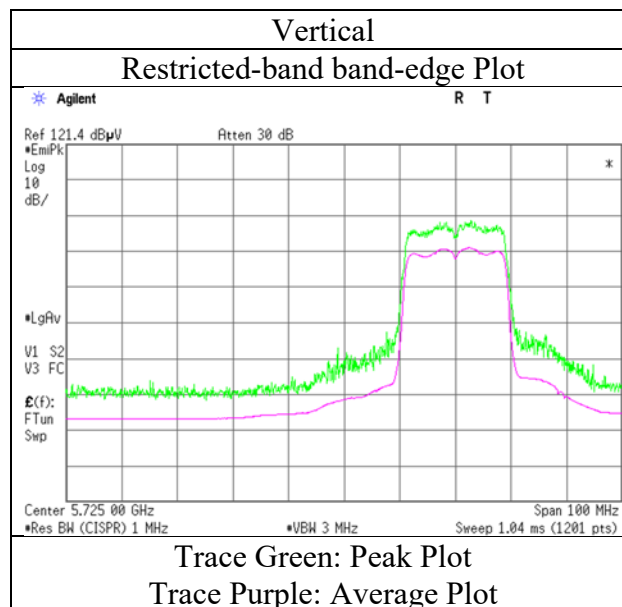
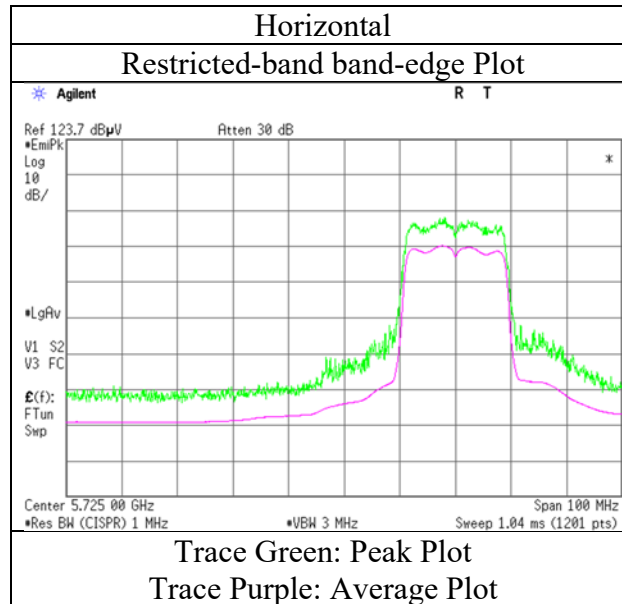
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5745 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 25, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Shiro Kobayashi
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-20 5825 MHz

(Calculation) (above 1GHz 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	59.76	32.74	16.73	44.86	2.33	66.70	-28.50	27.00	55.5	133	247	
Hori.	5855.000	PK	56.88	32.75	16.73	44.86	2.33	63.83	-31.37	15.60	47.0	133	247	
Hori.	5875.000	PK	50.42	32.78	16.76	44.86	2.33	57.43	-37.77	10.00	47.8	133	247	
Hori.	5925.000	PK	49.75	32.87	16.80	44.85	2.33	56.90	-38.30	-27.00	11.3	133	247	
Vert.	5850.000	PK	58.77	32.74	16.73	44.86	2.33	65.71	-29.49	27.00	56.5	123	228	
Vert.	5855.000	PK	55.33	32.75	16.73	44.86	2.33	62.28	-32.92	15.60	48.5	123	228	
Vert.	5875.000	PK	49.29	32.78	16.76	44.86	2.33	56.30	-38.90	10.00	48.9	123	228	
Vert.	5925.000	PK	49.53	32.87	16.80	44.85	2.33	56.68	-38.52	-27.00	11.5	123	228	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

UL Japan, Inc.

Shonan EMC Lab.

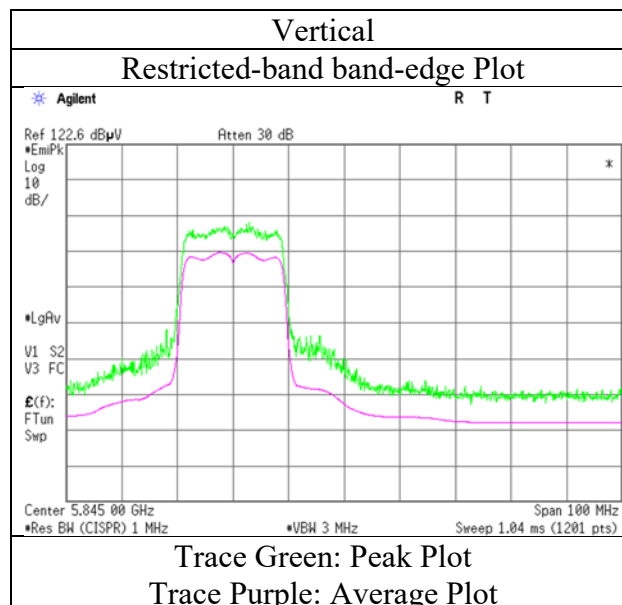
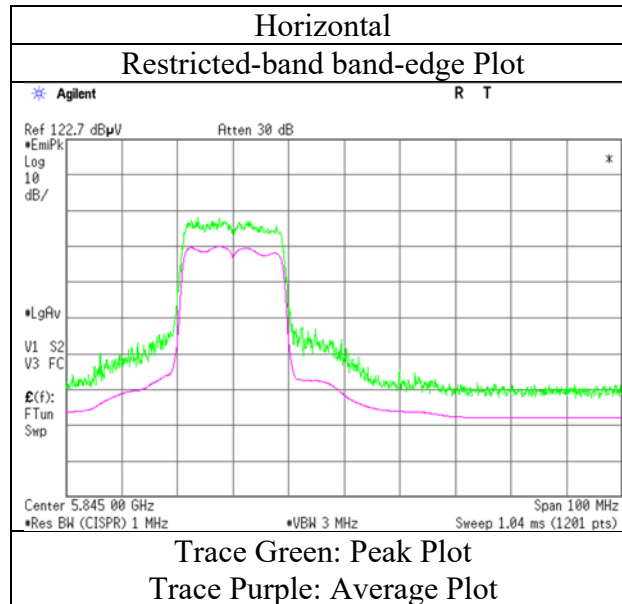
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-20 5825 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5190 MHz

(above 1GHz 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	51.87	32.01	16.48	44.63	2.33	58.06	73.97	15.9	130	252	VBW: 3.6 kHz
Hori.	5150.000	AV	41.09	32.01	16.48	44.63	2.33	47.28	53.97	6.6	130	252	
Vert.	5150.000	PK	52.38	32.01	16.48	44.63	2.33	58.57	73.97	15.4	162	289	VBW: 3.6 kHz
Vert.	5150.000	AV	41.39	32.01	16.48	44.63	2.33	47.58	53.97	6.3	162	289	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

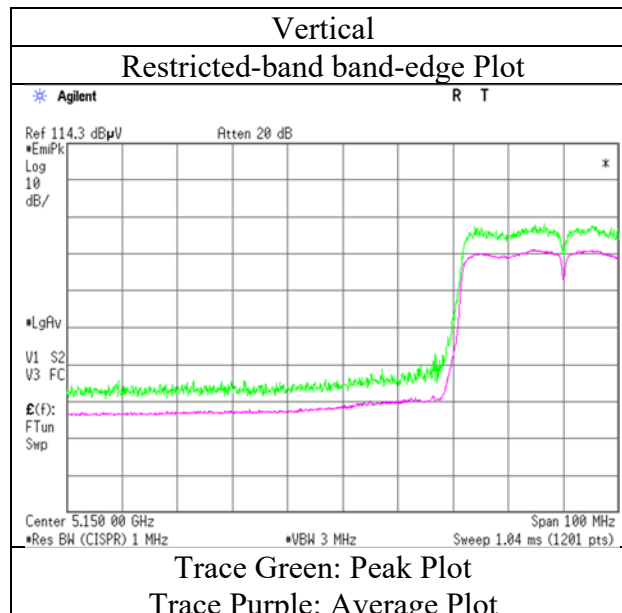
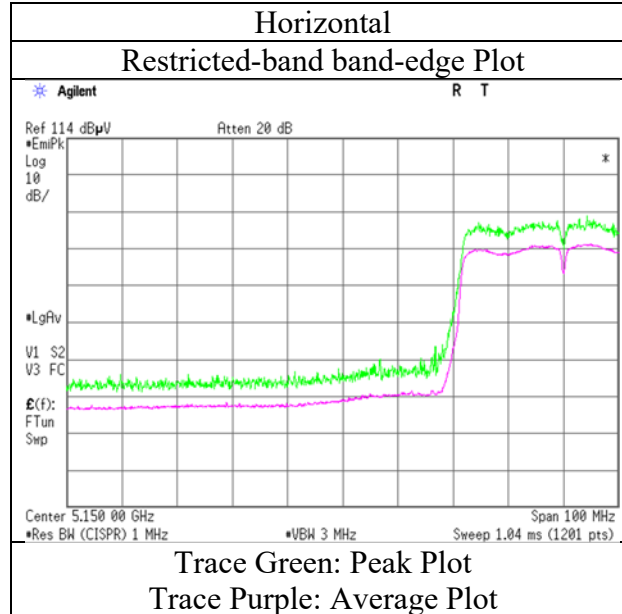
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
Antenna	1001932FT
Mode	Tx 11n-40 5190 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 25, 2018	March 31, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	21 deg. C / 32 % RH	22 deg. C / 30 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	HiroYuki Morikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Antenna	1001932FT			
Mode	Tx 11n-40 5230 MHz			

(above 1GHz 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.	10460.000	PK	48.72	39.84	9.43	43.55	2.33	56.77	73.97	17.2	191	259	
Hori.	15690.000	PK	47.40	39.61	11.71	42.13	-9.54	47.05	73.90	26.8	150	0	
Hori.	20920.000	PK	56.28	39.78	12.75	46.99	-9.54	52.28	73.90	21.6	152	66	
Hori.	26150.000	PK	40.56	39.98	14.52	47.65	-9.54	37.87	73.90	36.0	150	1	
Hori.	10460.000	AV	37.82	39.84	9.43	43.55	2.33	45.87	53.97	8.1	191	259	VBW:3.6 kHz
Hori.	15690.000	AV	37.56	39.61	11.71	42.13	-9.54	37.21	53.90	16.6	150	0	VBW:3.6 kHz
Hori.	20920.000	AV	55.26	39.78	12.75	46.99	-9.54	51.26	53.90	2.6	152	66	VBW:3.6 kHz
Hori.	26150.000	AV	29.19	39.98	14.52	47.65	-9.54	26.50	53.90	27.4	150	1	VBW:3.6 kHz
Vert.	10460.000	PK	48.93	39.84	9.43	43.55	2.33	56.98	73.97	16.9	227	132	
Vert.	15690.000	PK	46.77	39.61	11.71	42.13	-9.54	46.42	73.90	27.4	150	0	
Vert.	20920.000	PK	55.41	39.78	12.75	46.99	-9.54	51.41	73.90	22.4	139	14	
Vert.	26150.000	PK	39.91	39.98	14.52	47.65	-9.54	37.22	73.90	36.6	150	1	
Vert.	10460.000	AV	38.02	39.84	9.43	43.55	2.33	46.07	53.97	7.9	227	132	VBW:3.6 kHz
Vert.	15690.000	AV	37.79	39.61	11.71	42.13	-9.54	37.44	53.90	16.4	150	0	VBW:3.6 kHz
Vert.	20920.000	AV	54.03	39.78	12.75	46.99	-9.54	50.03	53.90	3.8	139	14	VBW:3.6 kHz
Vert.	26150.000	AV	29.71	39.98	14.52	47.65	-9.54	27.02	53.90	26.8	150	1	VBW:3.6 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 20dB).

*This mode was performed only band edges measurement.

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5310 MHz

(above 1GHz 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	52.07	32.09	16.39	44.79	2.33	58.09	73.97	15.8	119	272	VBW: 3.6 kHz
Hori.	5350.000	AV	40.52	32.09	16.39	44.79	2.33	46.54	53.97	7.4	119	272	
Vert.	5350.000	PK	51.78	32.09	16.39	44.79	2.33	57.80	73.97	16.1	128	292	VBW: 3.6 kHz
Vert.	5350.000	AV	40.45	32.09	16.39	44.79	2.33	46.47	53.97	7.5	128	292	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

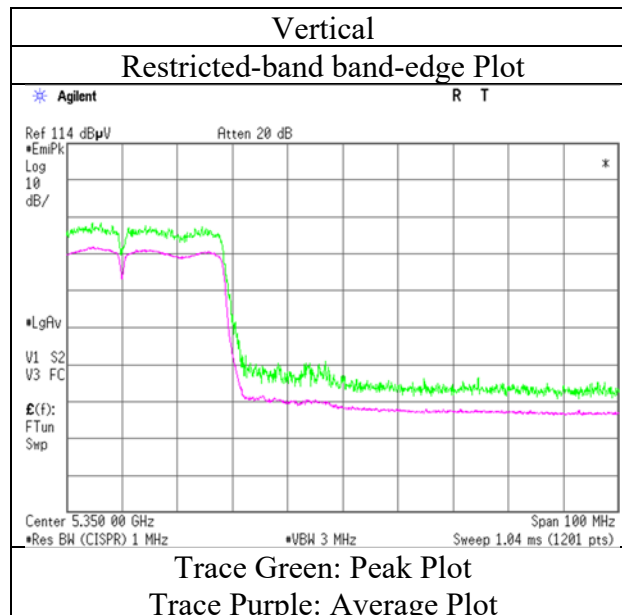
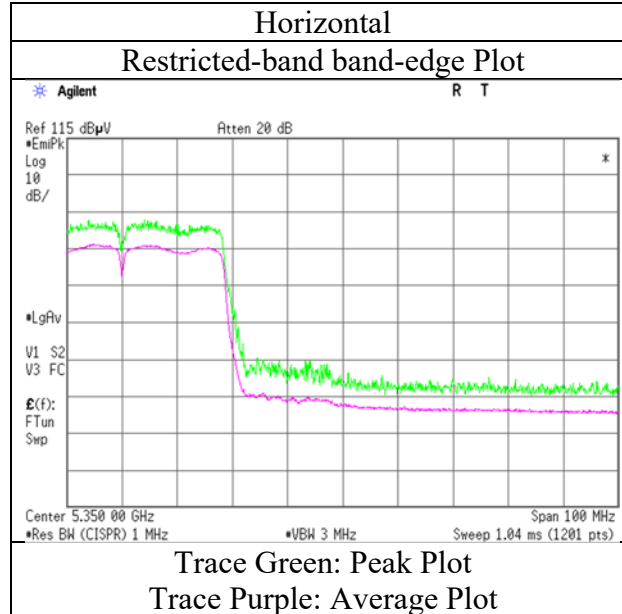
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5310 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 25, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Shiro Kobayashi
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11n-40 5510 MHz

(above 1GHz 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.	5460.000	PK	53.39	32.14	16.36	44.87	2.33	59.35	73.97	14.6	117	257	
Hori.	5460.000	AV	41.44	32.14	16.36	44.87	2.33	47.40	53.97	6.5	117	257	VBW: 3.6 kHz
Vert.	5460.000	PK	52.36	32.14	16.36	44.87	2.33	58.32	73.97	15.6	176	246	
Vert.	5460.000	AV	40.56	32.14	16.36	44.87	2.33	46.52	53.97	7.4	176	246	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	57.51	32.15	16.35	44.88	2.33	63.46	-31.74	-27.00	4.7	117	257	
Vert.	5470.000	PK	56.73	32.15	16.35	44.88	2.33	62.68	-32.52	-27.00	5.5	176	246	

*This mode was performed only band edges measurement.

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

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

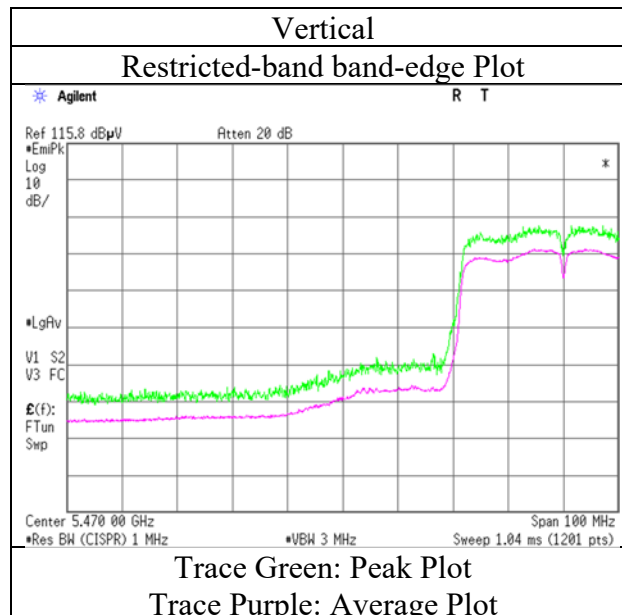
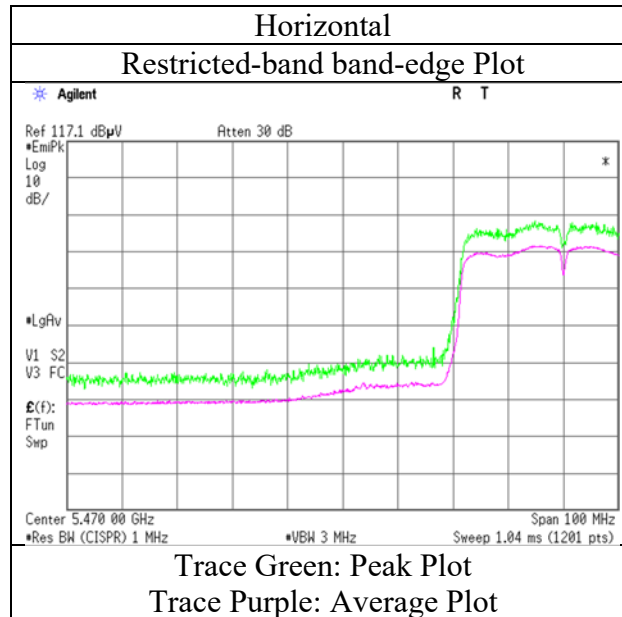
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5510 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 25, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Shiro Kobayashi
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11n-40 5670 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	51.85	32.53	16.59	44.87	2.33	58.43	-36.77	-27.00	9.8	148	263	
Vert.	5725.000	PK	50.87	32.53	16.59	44.87	2.33	57.45	-37.75	-27.00	10.8	108	233	

*This mode was performed only band edges measurement.

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)

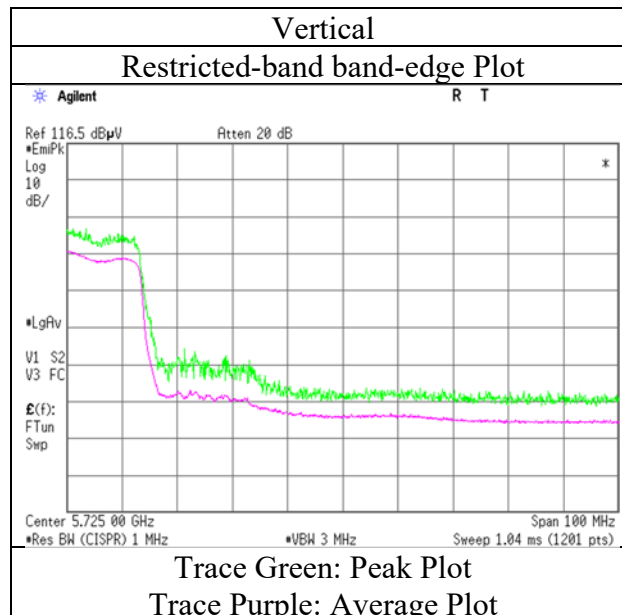
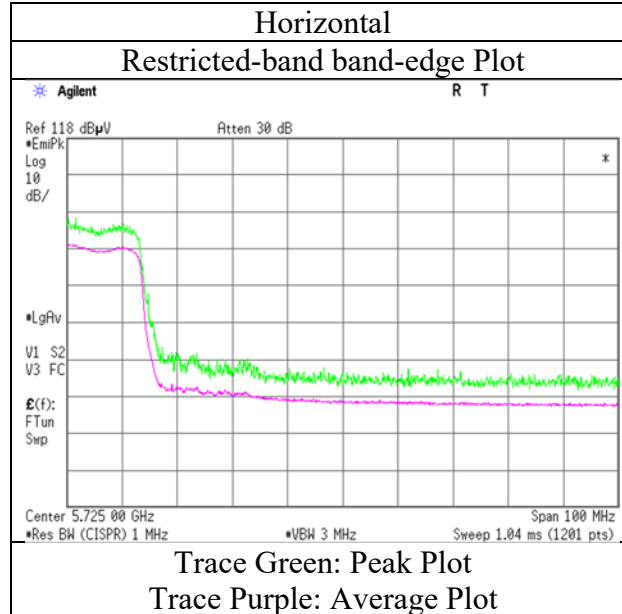
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 25, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Shiro Kobayashi
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5670 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 26, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Yosuke Ishikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11n-40 5755 MHz

(Calculation) (above 1GHz 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	49.24	32.41	16.50	44.88	2.33	55.60	-39.60	-27.00	12.6	143	261	
Hori.	5700.000	PK	53.11	32.49	16.56	44.88	2.33	59.61	-35.59	10.00	45.6	143	261	
Hori.	5720.000	PK	67.68	32.53	16.59	44.87	2.33	74.26	-20.94	15.60	36.5	143	261	
Hori.	5725.000	PK	66.65	32.53	16.59	44.87	2.33	73.23	-21.97	27.00	49.0	143	261	
Vert.	5650.000	PK	49.41	32.41	16.50	44.88	2.33	55.77	-39.43	-27.00	12.4	126	311	
Vert.	5700.000	PK	52.54	32.49	16.56	44.88	2.33	59.04	-36.16	10.00	46.2	126	311	
Vert.	5720.000	PK	66.53	32.53	16.59	44.87	2.33	73.11	-22.09	15.60	37.7	126	311	
Vert.	5725.000	PK	65.42	32.53	16.59	44.87	2.33	72.00	-23.20	27.00	50.2	126	311	

*This mode was performed only band edges measurement.

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)

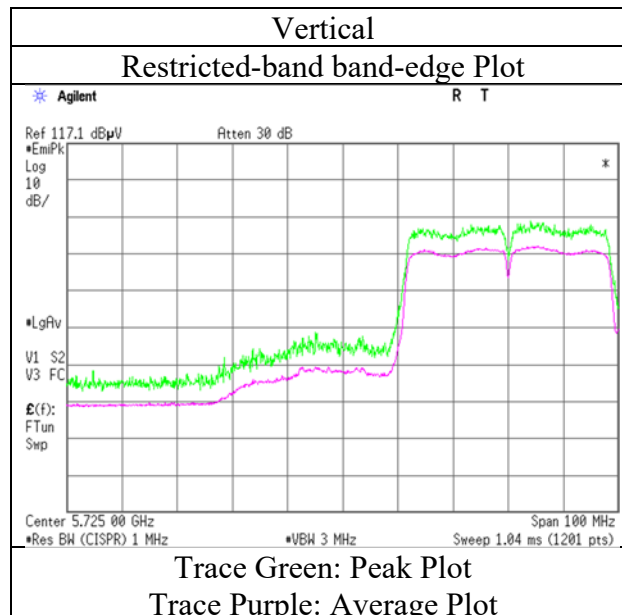
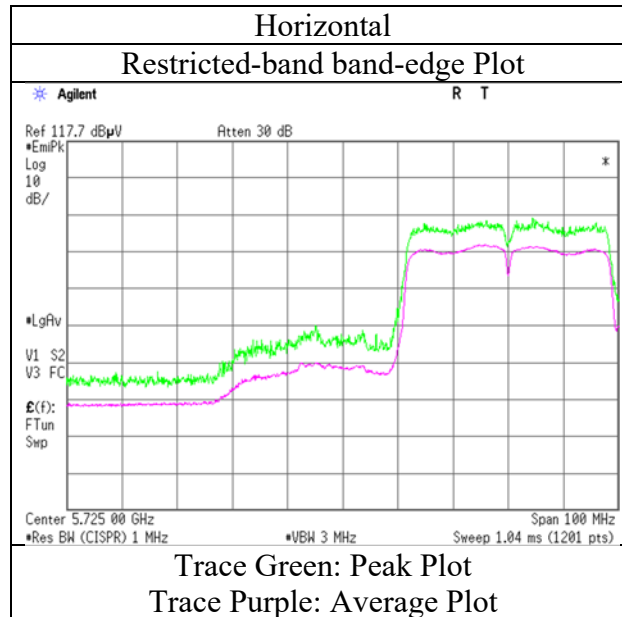
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5755 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 26, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Yosuke Ishikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11n-40 5795 MHz

(Calculation) (above 1GHz 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	50.96	32.74	16.73	44.86	2.33	57.90	-37.30	27.00	64.3	118	261	
Hori.	5855.000	PK	51.38	32.75	16.73	44.86	2.33	58.33	-36.87	15.60	52.5	118	261	
Hori.	5875.000	PK	49.84	32.78	16.76	44.86	2.33	56.85	-38.35	10.00	48.4	118	261	
Hori.	5925.000	PK	49.93	32.87	16.80	44.85	2.33	57.08	-38.12	-27.00	11.1	118	261	
Vert.	5850.000	PK	49.91	32.74	16.73	44.86	2.33	56.85	-38.35	27.00	65.4	121	306	
Vert.	5855.000	PK	50.55	32.75	16.73	44.86	2.33	57.50	-37.70	15.60	53.3	121	306	
Vert.	5875.000	PK	50.17	32.78	16.76	44.86	2.33	57.18	-38.02	10.00	48.0	121	306	
Vert.	5925.000	PK	49.83	32.87	16.80	44.85	2.33	56.98	-38.22	-27.00	11.2	121	306	

*This mode was performed only band edges measurement.

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)

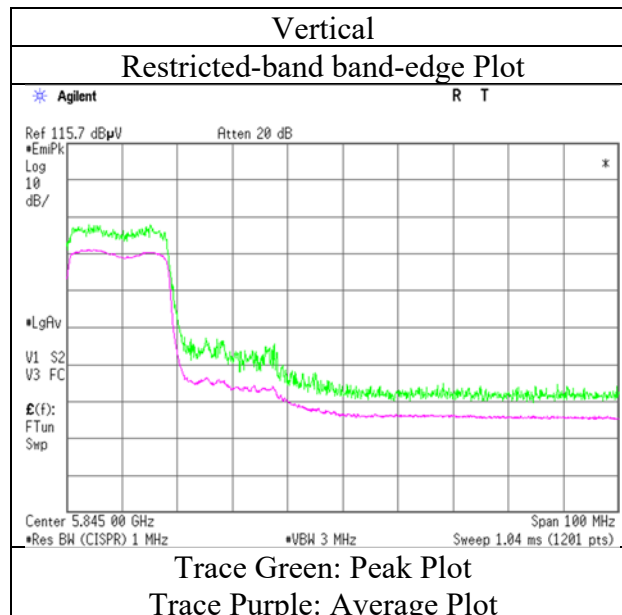
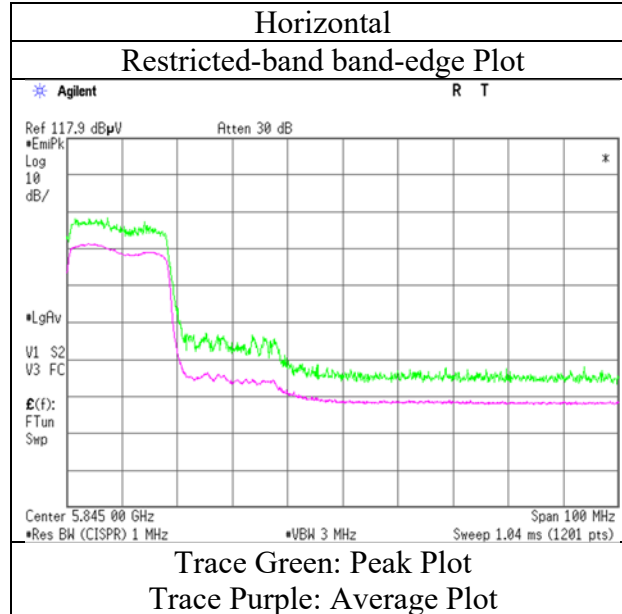
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11n-40 5795 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5190 MHz

(above 1GHz 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	53.79	32.01	16.48	44.63	2.33	59.98	73.97	13.9	126	241	VBW: 3 kHz
Hori.	5150.000	AV	41.65	32.01	16.48	44.63	2.33	47.84	53.97	6.1	126	241	
Vert.	5150.000	PK	54.13	32.01	16.48	44.63	2.33	60.32	73.97	13.6	128	288	VBW: 3 kHz
Vert.	5150.000	AV	41.32	32.01	16.48	44.63	2.33	47.51	53.97	6.4	128	288	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

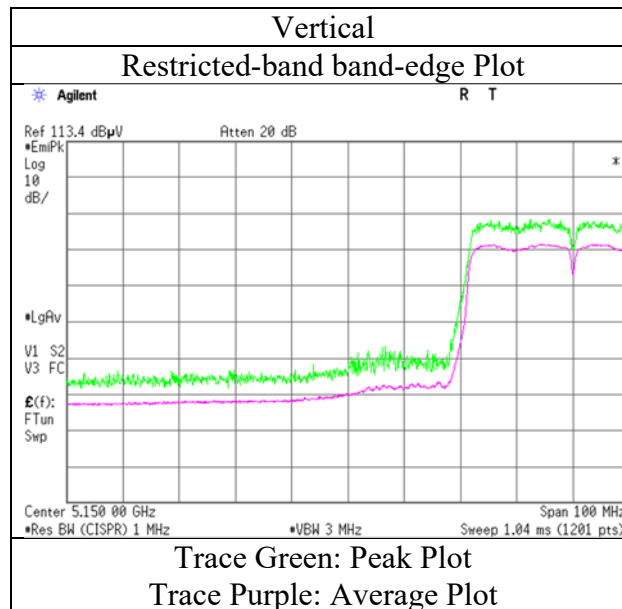
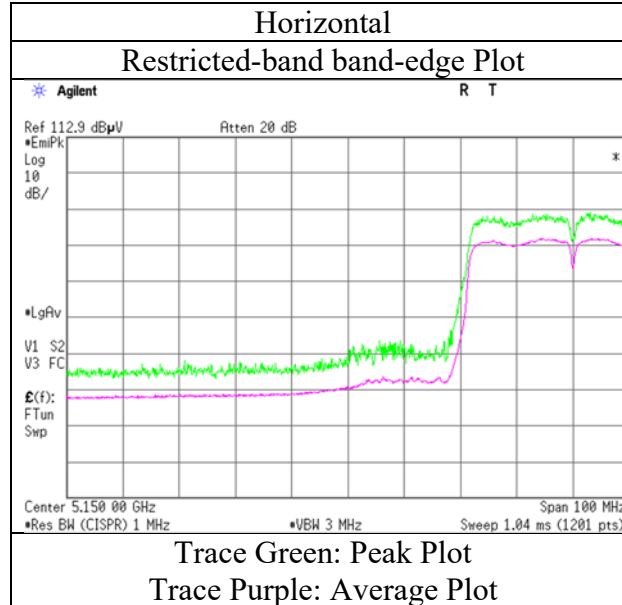
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5190 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5310 MHz

(above 1GHz 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	54.02	32.09	16.39	44.79	2.33	60.04	73.97	13.9	141	232	VBW: 3 kHz
Hori.	5350.000	AV	40.75	32.09	16.39	44.79	2.33	46.77	53.97	7.2	141	232	
Vert.	5350.000	PK	53.39	32.09	16.39	44.79	2.33	59.41	73.97	14.5	123	256	VBW: 3 kHz
Vert.	5350.000	AV	41.98	32.09	16.39	44.79	2.33	48.00	53.97	5.9	123	256	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

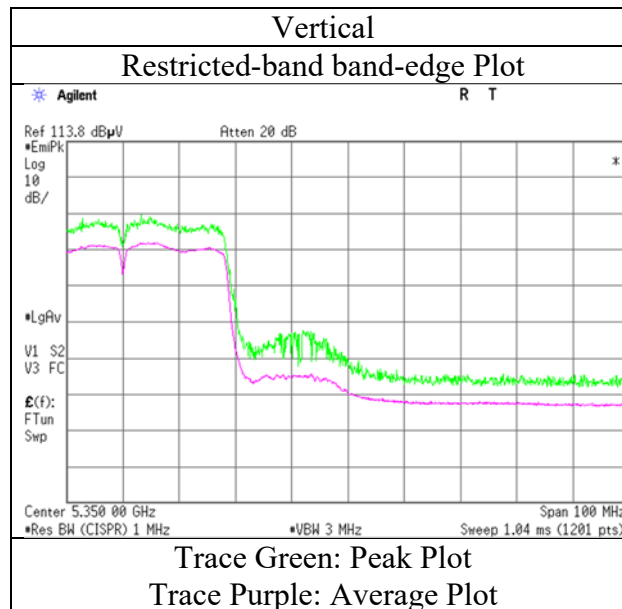
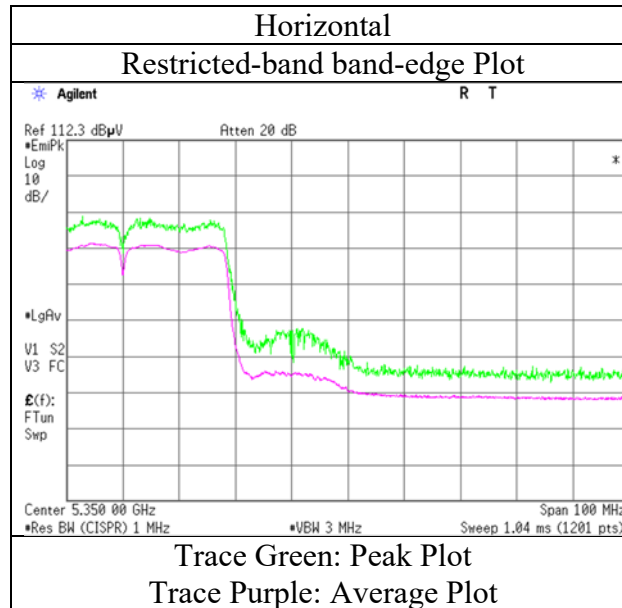
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5310 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 26, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Yosuke Ishikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-40 5510 MHz

(above 1GHz 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.	5460.000	PK	51.24	32.14	16.36	44.87	2.33	57.20	73.97	16.7	106	255	VBW: 3 kHz
Hori.	5460.000	AV	40.06	32.14	16.36	44.87	2.33	46.02	53.97	7.9	106	255	
Vert.	5460.000	PK	52.06	32.14	16.36	44.87	2.33	58.02	73.97	15.9	136	235	VBW: 3 kHz
Vert.	5460.000	AV	39.92	32.14	16.36	44.87	2.33	45.88	53.97	8.0	136	235	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	57.57	32.15	16.35	44.88	2.33	63.52	-31.68	-27.00	4.7	106	255	
Vert.	5470.000	PK	57.12	32.15	16.35	44.88	2.33	63.07	-32.13	-27.00	5.1	136	235	

*This mode was performed only band edges measurement.

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

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

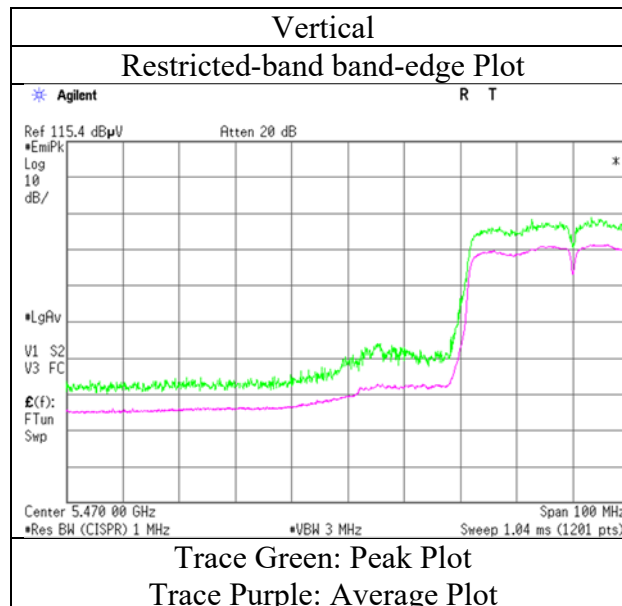
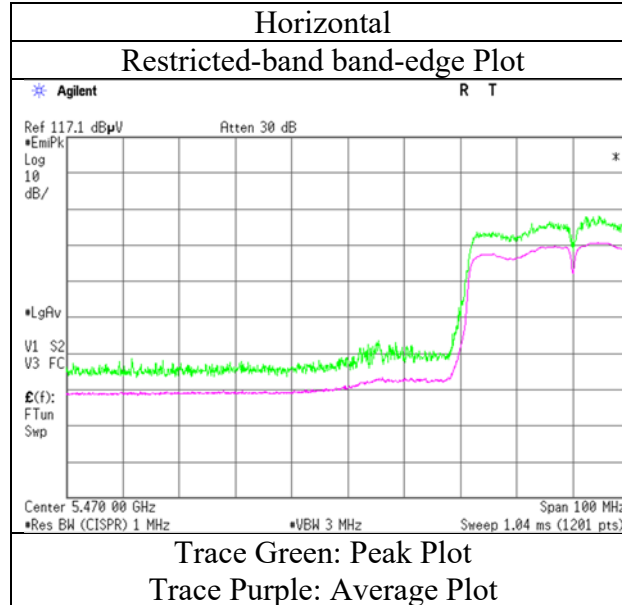
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5510 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 26, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Yosuke Ishikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-40 5670 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	52.81	32.53	16.59	44.87	2.33	59.39	-35.81	-27.00	8.8	149	249	
Vert.	5725.000	PK	52.70	32.53	16.59	44.87	2.33	59.28	-35.92	-27.00	8.9	118	242	

*This mode was performed only band edges measurement.

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)

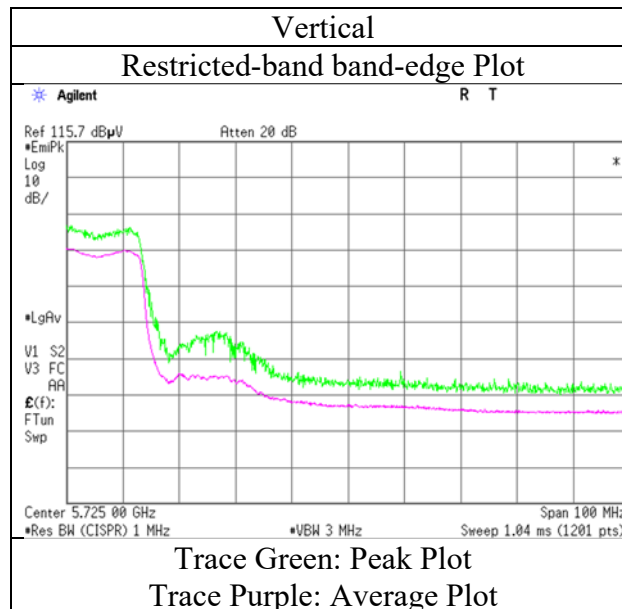
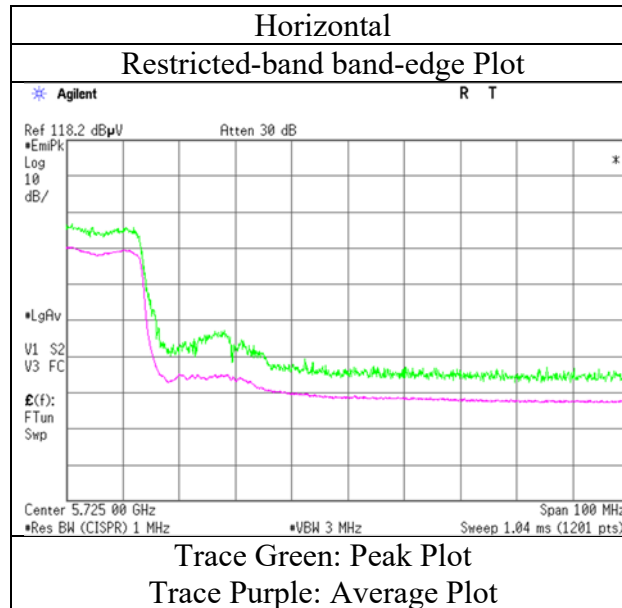
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5670 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 26, 2018
Temperature / Humidity 21 deg. C / 32 % RH
Engineer Yosuke Ishikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-40 5755 MHz

(Calculation) (above 1GHz 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	49.15	32.41	16.50	44.88	2.33	55.51	-39.69	-27.00	12.7	119	260	
Hori.	5700.000	PK	52.40	32.49	16.56	44.88	2.33	58.90	-36.30	10.00	46.3	119	260	
Hori.	5720.000	PK	60.33	32.53	16.59	44.87	2.33	66.91	-28.29	15.60	43.9	119	260	
Hori.	5725.000	PK	61.21	32.53	16.59	44.87	2.33	67.79	-27.41	27.00	54.4	119	260	
Vert.	5650.000	PK	48.97	32.41	16.50	44.88	2.33	55.33	-39.87	-27.00	12.9	133	228	
Vert.	5700.000	PK	52.17	32.49	16.56	44.88	2.33	58.67	-36.53	10.00	46.5	133	228	
Vert.	5720.000	PK	58.38	32.53	16.59	44.87	2.33	64.96	-30.24	15.60	45.8	133	228	
Vert.	5725.000	PK	60.37	32.53	16.59	44.87	2.33	66.95	-28.25	27.00	55.3	133	228	

*This mode was performed only band edges measurement.

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)

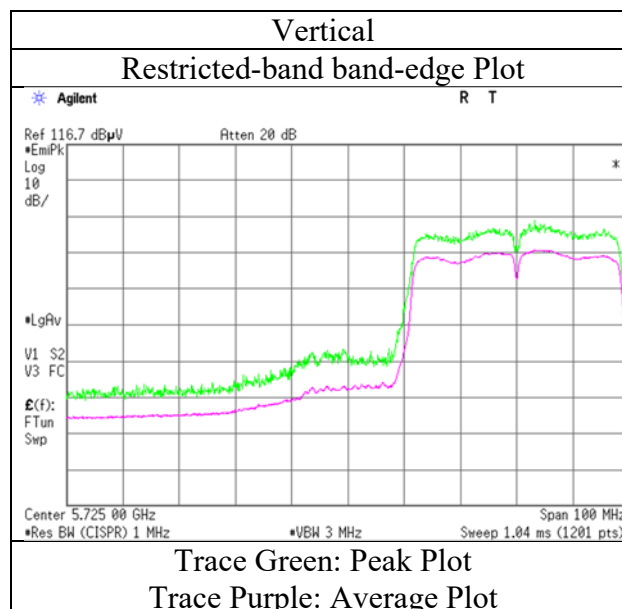
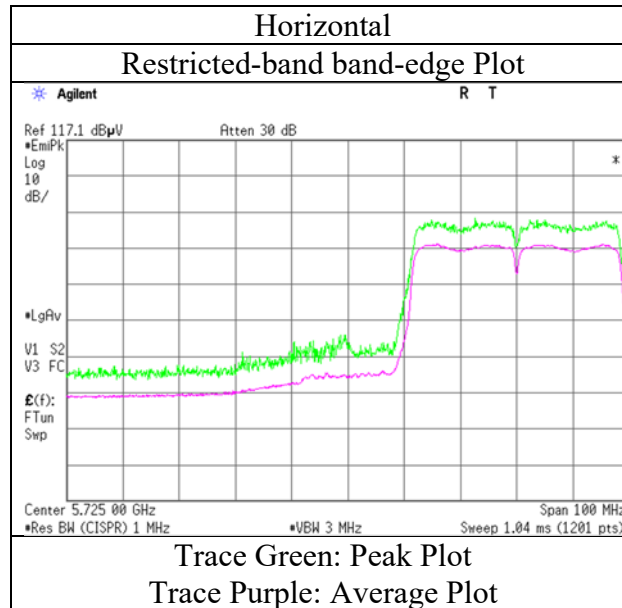
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5755 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5795 MHz

(Calculation) (above 1GHz 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	52.49	32.74	16.73	44.86	2.33	59.43	-35.77	27.00	62.8	149	259	
Hori.	5855.000	PK	51.13	32.75	16.73	44.86	2.33	58.08	-37.12	15.60	52.7	149	259	
Hori.	5875.000	PK	49.70	32.78	16.76	44.86	2.33	56.71	-38.49	10.00	48.5	149	259	
Hori.	5925.000	PK	50.15	32.87	16.80	44.85	2.33	57.30	-37.90	-27.00	10.9	149	259	
Vert.	5850.000	PK	56.35	32.74	16.73	44.86	2.33	63.29	-31.91	27.00	58.9	144	316	
Vert.	5855.000	PK	54.65	32.75	16.73	44.86	2.33	61.60	-33.60	15.60	49.2	144	316	
Vert.	5875.000	PK	51.75	32.78	16.76	44.86	2.33	58.76	-36.44	10.00	46.4	144	316	
Vert.	5925.000	PK	50.35	32.87	16.80	44.85	2.33	57.50	-37.70	-27.00	10.7	144	316	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

UL Japan, Inc.

Shonan EMC Lab.

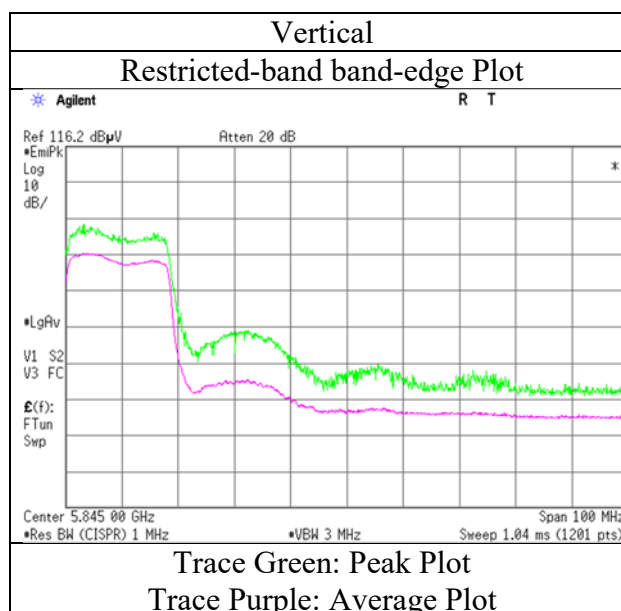
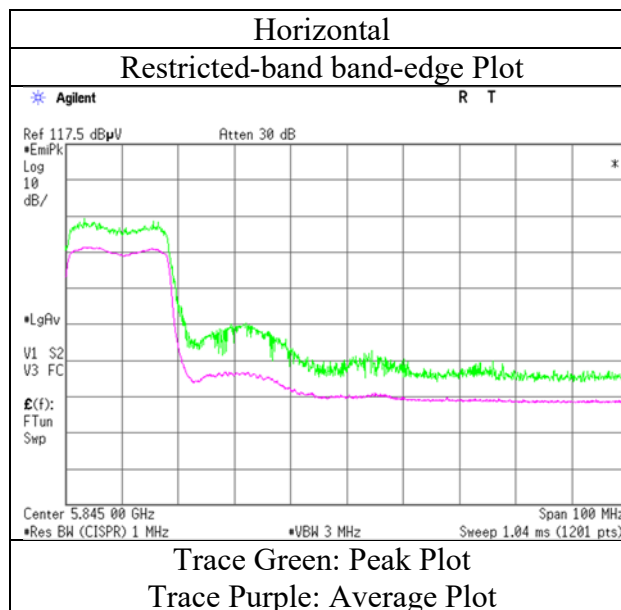
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-40 5795 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 26, 2018	March 31, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	21 deg. C / 32 % RH	22 deg. C / 30 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Yosuke Ishikawa	Hiroyuki Morikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Antenna	1001932FT			
Mode	Tx 11ac-80 5210 MHz			

(above 1GHz 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	54.14	32.01	16.48	44.63	2.33	60.33	73.97	13.6	139	252	
Hori.	10420.000	PK	48.11	39.78	9.40	43.58	2.33	56.04	73.97	17.9	182	256	
Hori.	15630.000	PK	48.21	39.86	11.68	42.12	-9.54	48.09	73.90	25.8	150	0	
Hori.	20840.000	PK	55.99	39.80	12.72	47.13	-9.54	51.84	73.90	22.0	148	77	
Hori.	26050.000	PK	39.45	39.99	14.54	47.60	-9.54	36.84	73.90	37.0	150	1	
Hori.	5150.000	AV	40.51	32.01	16.48	44.63	2.33	46.70	53.97	7.2	139	252	VBW: 10 Hz
Hori.	10420.000	AV	36.06	39.78	9.40	43.58	2.33	43.99	53.97	9.9	182	256	VBW: 10 Hz
Hori.	15630.000	AV	37.85	39.86	11.68	42.12	-9.54	37.73	53.90	16.1	150	0	VBW: 10 Hz
Hori.	20840.000	AV	54.98	39.80	12.72	47.13	-9.54	50.83	53.90	3.0	148	77	VBW: 10 Hz
Hori.	26050.000	AV	27.27	39.99	14.54	47.60	-9.54	24.66	53.90	29.2	150	1	VBW: 10 Hz
Vert.	5150.000	PK	52.78	32.01	16.48	44.63	2.33	58.97	73.97	15.0	140	301	
Vert.	10420.000	PK	48.51	39.78	9.40	43.58	2.33	56.44	73.97	17.5	136	258	
Vert.	15630.000	PK	47.95	39.86	11.68	42.12	-9.54	47.83	73.90	26.0	150	0	
Vert.	20840.000	PK	55.51	39.80	12.72	47.13	-9.54	51.36	73.90	22.5	141	19	
Vert.	26050.000	PK	39.65	39.99	14.54	47.60	-9.54	37.04	73.90	36.8	150	1	
Vert.	5150.000	AV	39.58	32.01	16.48	44.63	2.33	45.77	53.97	8.2	140	301	VBW: 10 Hz
Vert.	10420.000	AV	36.19	39.78	9.40	43.58	2.33	44.12	53.97	9.8	136	258	VBW: 10 Hz
Vert.	15630.000	AV	37.75	39.86	11.68	42.12	-9.54	37.63	53.90	16.2	150	0	VBW: 10 Hz
Vert.	20840.000	AV	54.39	39.80	12.72	47.13	-9.54	50.24	53.90	3.6	141	19	VBW: 10 Hz
Vert.	26050.000	AV	27.30	39.99	14.54	47.60	-9.54	24.69	53.90	29.2	150	1	VBW: 10 Hz

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 20dB).

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

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

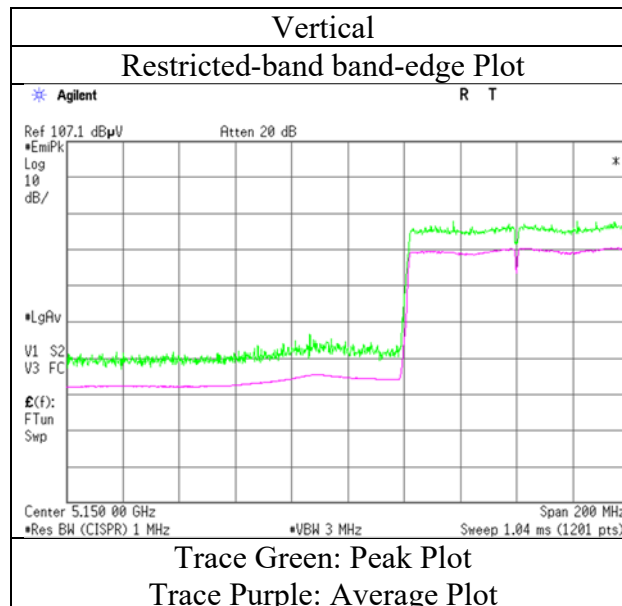
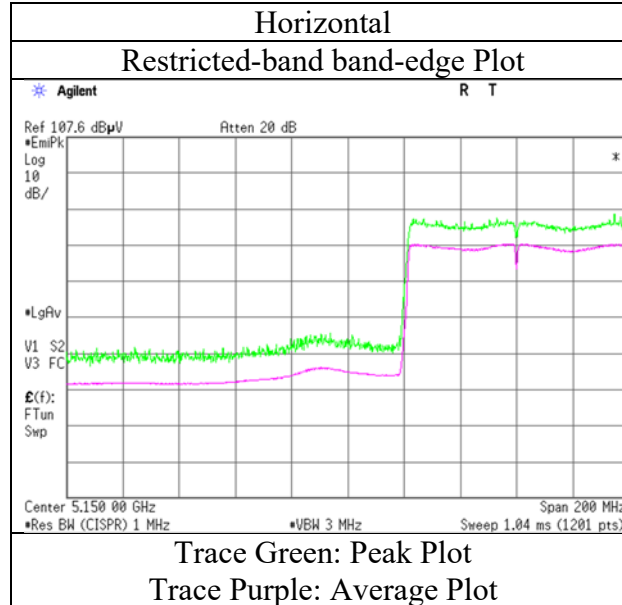
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz - 13 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5210 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5290 MHz

(above 1GHz 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	51.51	32.09	16.39	44.79	2.33	57.53	73.97	16.4	166	260	VBW: 10 Hz
Hori.	5350.000	AV	38.60	32.09	16.39	44.79	2.33	44.62	53.97	9.3	166	260	
Vert.	5350.000	PK	52.34	32.09	16.39	44.79	2.33	58.36	73.97	15.6	166	260	VBW: 10 Hz
Vert.	5350.000	AV	38.79	32.09	16.39	44.79	2.33	44.81	53.97	9.1	166	260	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

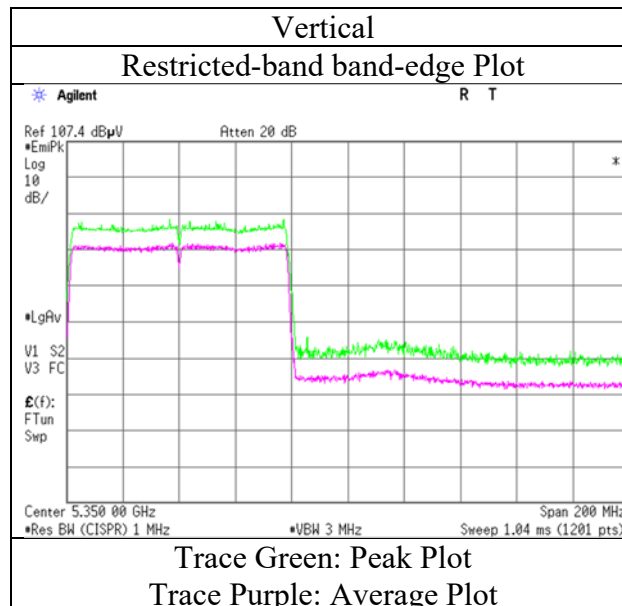
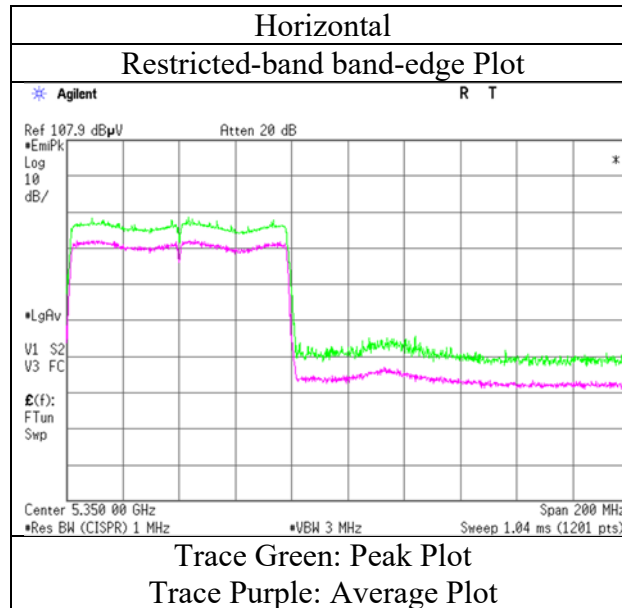
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5290 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5530 MHz

(above 1GHz 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.	5460.000	PK	62.32	32.14	16.36	44.87	2.33	68.28	73.97	5.6	148	259	VBW: 10 Hz
Hori.	5460.000	AV	46.98	32.14	16.36	44.87	2.33	52.94	53.97	1.0	148	259	
Vert.	5460.000	PK	59.25	32.14	16.36	44.87	2.33	65.21	73.97	8.7	160	304	VBW: 10 Hz
Vert.	5460.000	AV	44.34	32.14	16.36	44.87	2.33	50.30	53.97	3.6	160	304	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	60.35	32.15	16.35	44.88	2.33	66.30	-28.90	-27.00	1.9	148	259	
Vert.	5470.000	PK	57.07	32.15	16.35	44.88	2.33	63.02	-32.18	-27.00	5.2	160	304	

*This mode was performed only band edges measurement.

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

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

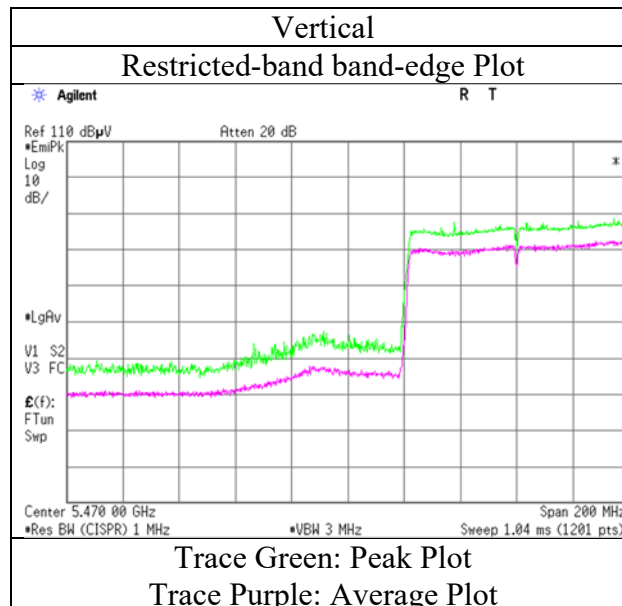
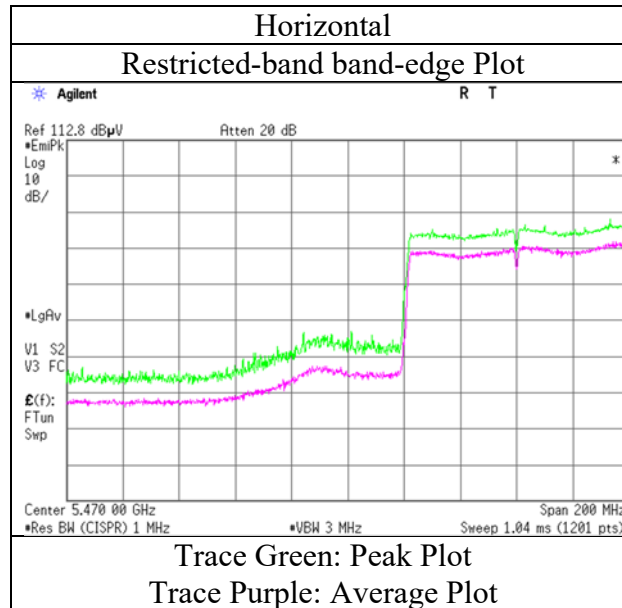
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.92\text{ m} / 3.0\text{ m}) = 2.33\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 26, 2018
Temperature / Humidity	21 deg. C / 32 % RH
Engineer	Yosuke Ishikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5530 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 27, 2018
Temperature / Humidity 22 deg. C / 35 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-80 5610 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	49.22	32.53	16.59	44.87	2.33	55.80	-39.40	-27.00	12.4	105	263	
Vert.	5725.000	PK	49.80	32.53	16.59	44.87	2.33	56.38	-38.82	-27.00	11.8	108	199	

*This mode was performed only band edges measurement.

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 20dB).

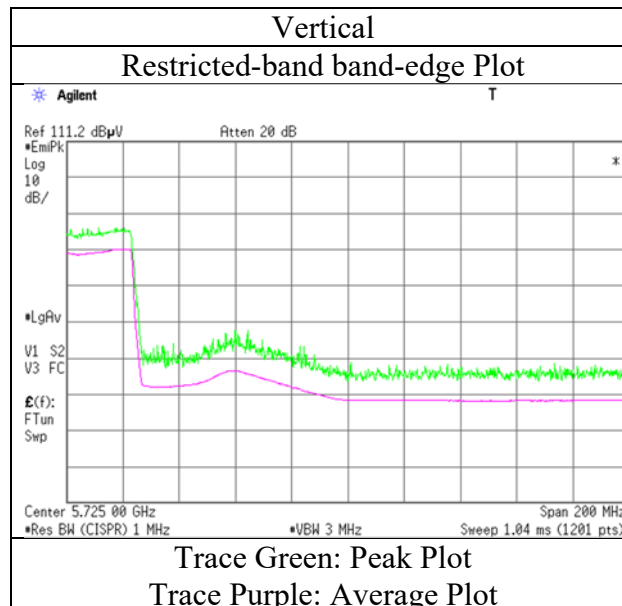
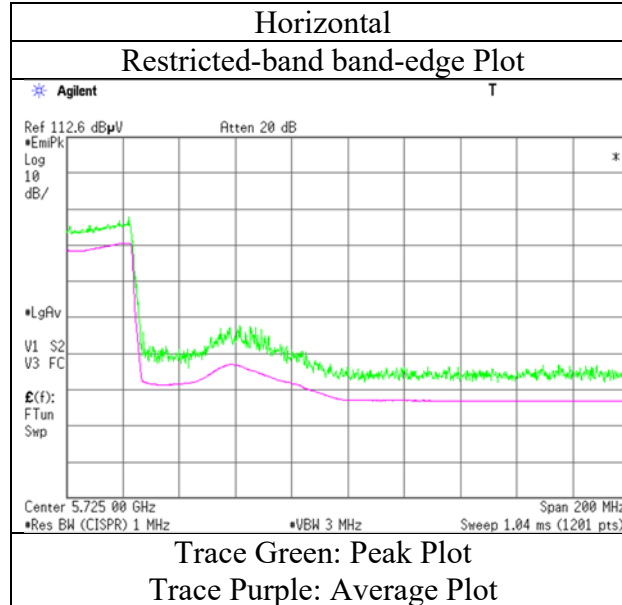
*The 4th harmonic was not seen so the result was its base noise level.

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5610 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 27, 2018
Temperature / Humidity 22 deg. C / 35 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna 1001932FT
Mode Tx 11ac-80 5775 MHz

(Calculation) (above 1GHz 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	49.00	32.41	16.50	44.88	2.33	55.36	-39.84	-27.00	12.8	137	250	
Hori.	5700.000	PK	61.13	32.49	16.56	44.88	2.33	67.63	-27.57	10.00	37.6	137	250	
Hori.	5720.000	PK	58.03	32.53	16.59	44.87	2.33	64.61	-30.59	15.60	46.2	137	250	
Hori.	5725.000	PK	59.20	32.53	16.59	44.87	2.33	65.78	-29.42	27.00	56.4	137	250	
Hori.	5850.000	PK	63.63	32.74	16.73	44.86	2.33	70.57	-24.63	27.00	51.6	137	250	
Hori.	5855.000	PK	61.35	32.75	16.73	44.86	2.33	68.30	-26.90	15.60	42.5	137	250	
Hori.	5875.000	PK	55.27	32.78	16.76	44.86	2.33	62.28	-32.92	10.00	42.9	137	250	
Hori.	5925.000	PK	48.64	32.87	16.80	44.85	2.33	55.79	-39.41	-27.00	12.4	137	250	
Vert.	5650.000	PK	49.30	32.41	16.50	44.88	2.33	55.66	-39.54	-27.00	12.5	128	137	
Vert.	5700.000	PK	59.81	32.49	16.56	44.88	2.33	66.31	-28.89	10.00	38.9	128	137	
Vert.	5720.000	PK	57.87	32.53	16.59	44.87	2.33	64.45	-30.75	15.60	46.4	128	137	
Vert.	5725.000	PK	57.44	32.53	16.59	44.87	2.33	64.02	-31.18	27.00	58.2	128	137	
Vert.	5850.000	PK	62.69	32.74	16.73	44.86	2.33	69.63	-25.57	27.00	52.6	128	137	
Vert.	5855.000	PK	60.37	32.75	16.73	44.86	2.33	67.32	-27.88	15.60	43.5	128	137	
Vert.	5875.000	PK	53.93	32.78	16.76	44.86	2.33	60.94	-34.26	10.00	44.3	128	137	
Vert.	5925.000	PK	48.76	32.87	16.80	44.85	2.33	55.91	-39.29	-27.00	12.3	128	137	

*This mode was performed only band edges measurement.

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

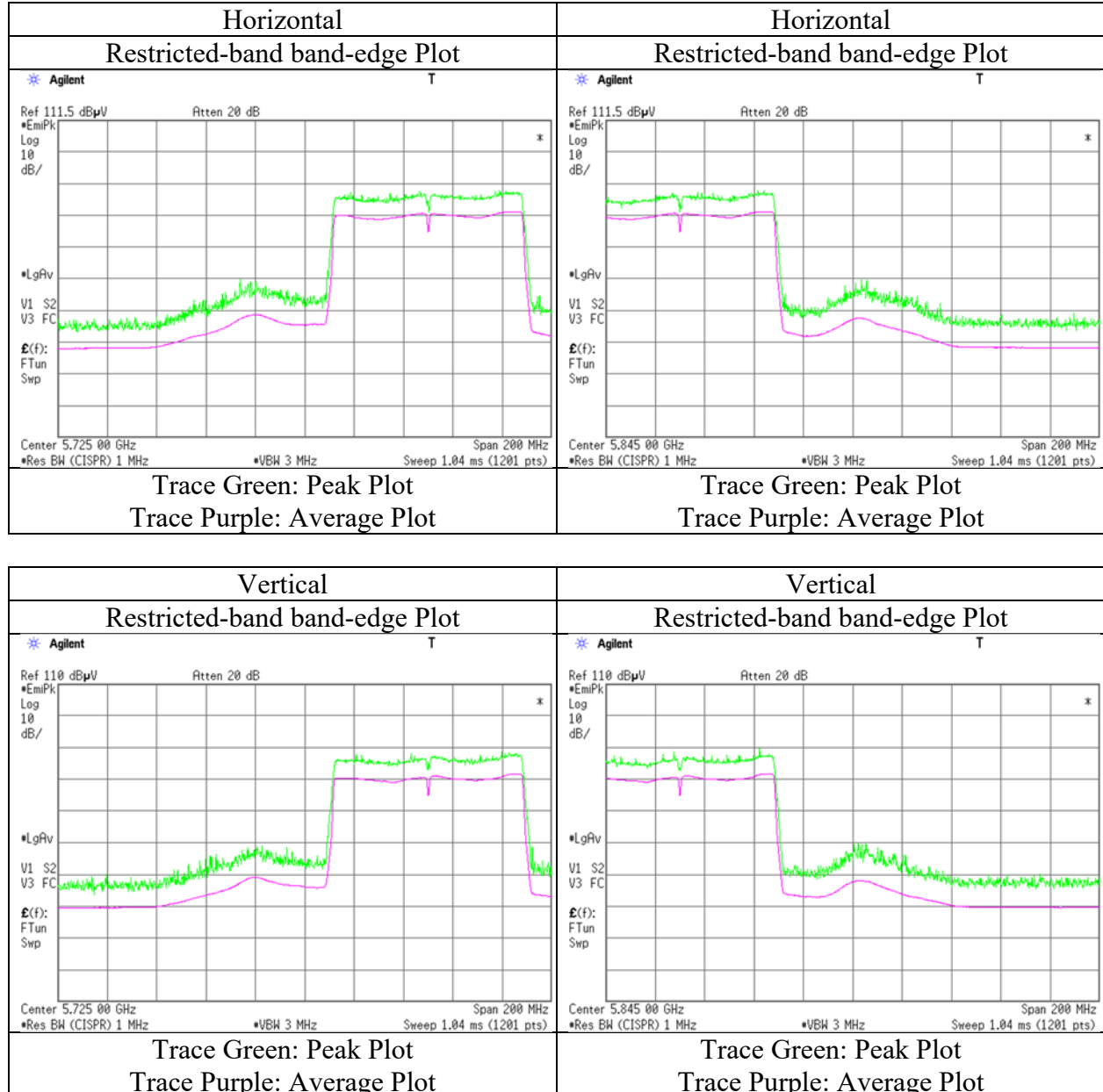
Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m] } ^ 2) / 30) *10^3

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

Distance factor : 1 GHz - 13 GHz : 20log (3.92 m / 3.0 m) = 2.33 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

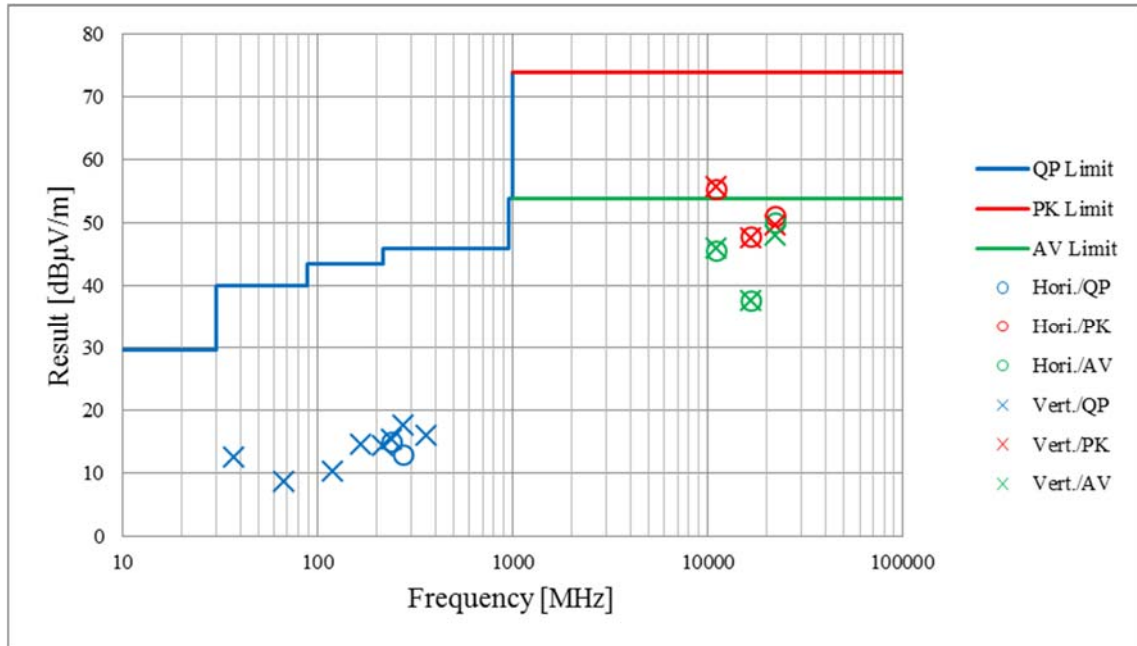
Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	1001932FT
Mode	Tx 11ac-80 5775 MHz



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

Radiated Spurious Emission
(Plot data, Worst case)

Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 24, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	22 deg. C / 34 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Yosuke Ishikawa	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Antenna	1001932FT				
Mode	Tx 11a 5580 MHz				



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5180 MHz

(above 1GHz 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	51.20	32.01	16.48	44.63	2.39	57.45	73.97	16.5	149	34	VBW: 3.6 kHz
Hori.	5150.000	AV	41.89	32.01	16.48	44.63	2.39	48.14	53.97	5.8	149	34	
Vert.	5150.000	PK	50.97	32.01	16.48	44.63	2.39	57.22	73.97	16.7	117	99	VBW: 3.6 kHz
Vert.	5150.000	AV	41.22	32.01	16.48	44.63	2.39	47.47	53.97	6.5	117	99	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

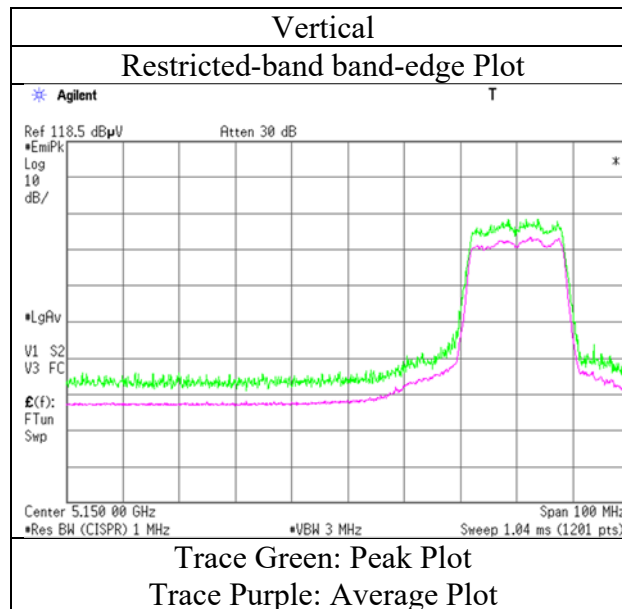
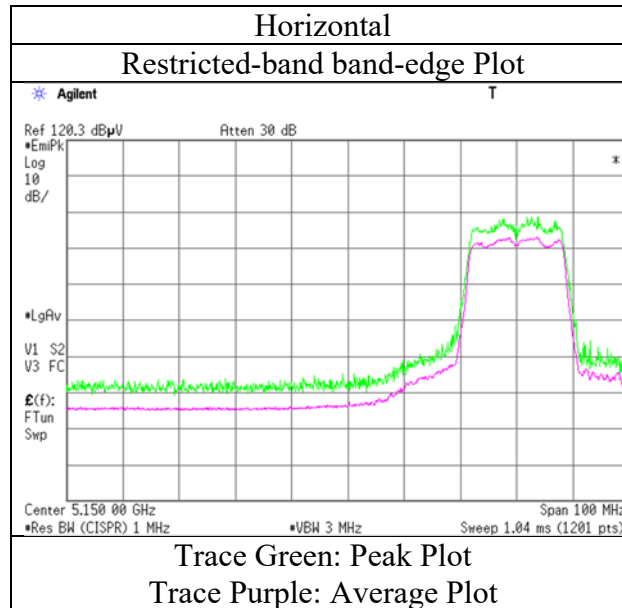
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5180 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5320 MHz

(above 1GHz 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	50.79	32.09	16.39	44.79	2.39	56.87	73.97	17.1	147	23	
Hori.	5350.000	AV	41.61	32.09	16.39	44.79	2.39	47.69	53.97	6.2	147	23	VBW: 3.6 kHz
Vert.	5350.000	PK	53.67	32.09	16.39	44.79	2.39	59.75	73.97	14.2	141	88	
Vert.	5350.000	AV	42.09	32.09	16.39	44.79	2.39	48.17	53.97	5.8	141	88	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

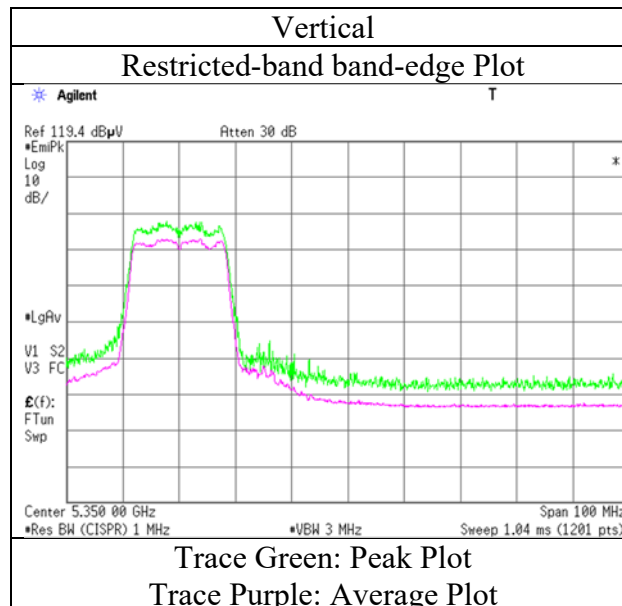
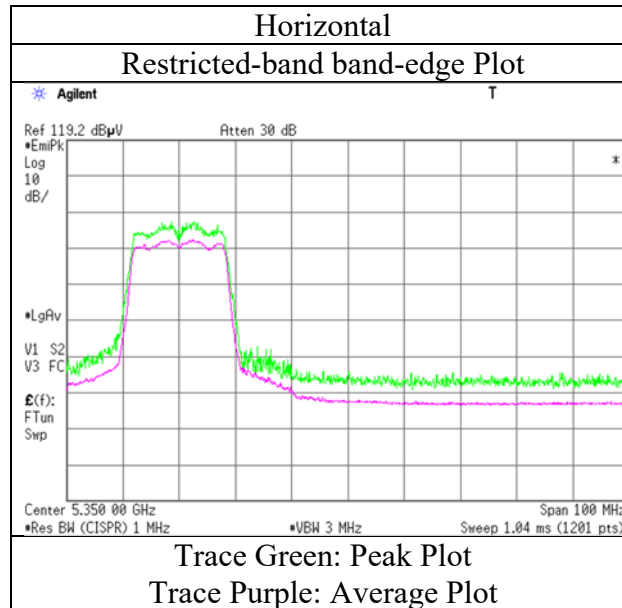
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5320 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 27, 2018
Temperature / Humidity 22 deg. C / 35 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11a 5500 MHz

(above 1GHz 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.	5460.000	PK	48.74	32.14	16.36	44.87	2.39	54.76	73.97	19.2	132	22	
Hori.	5460.000	AV	39.38	32.14	16.36	44.87	2.39	45.40	53.97	8.5	132	22	VBW: 3.6 kHz
Vert.	5460.000	PK	49.69	32.14	16.36	44.87	2.39	55.71	73.97	18.2	106	75	
Vert.	5460.000	AV	39.21	32.14	16.36	44.87	2.39	45.23	53.97	8.7	106	75	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	52.02	32.15	16.35	44.88	2.39	58.03	-37.17	-27.00	10.2	132	22	
Vert.	5470.000	PK	53.53	32.15	16.35	44.88	2.39	59.54	-35.66	-27.00	8.7	106	75	

*This mode was performed only band edges measurement.

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

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

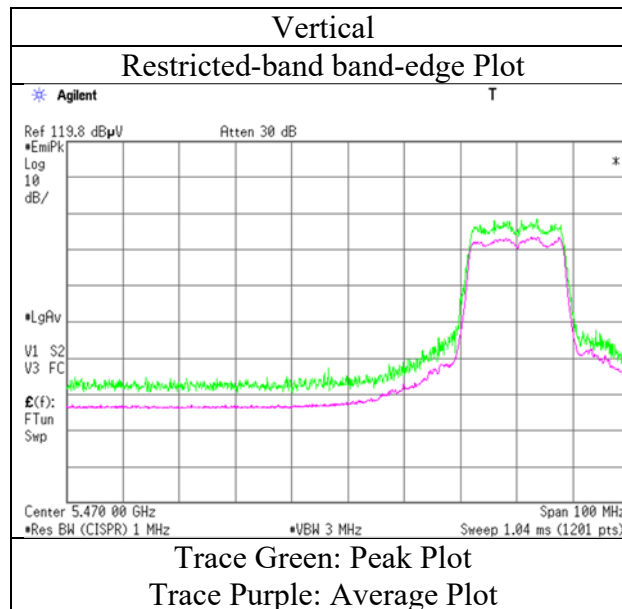
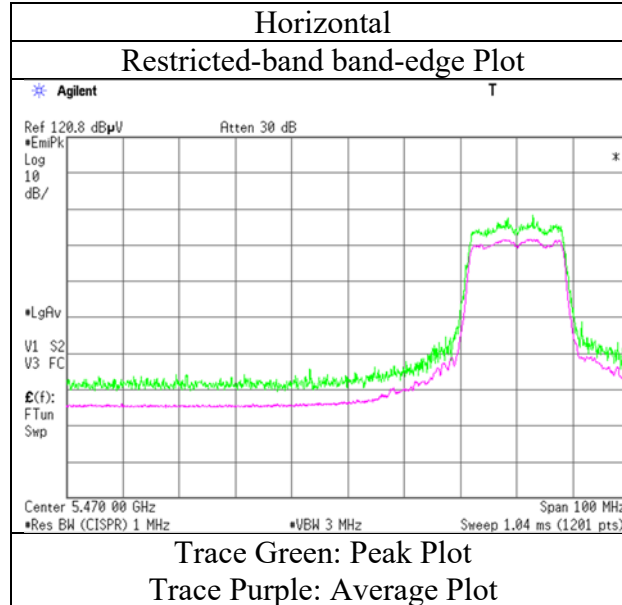
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5500 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 27, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	22 deg. C / 35 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi	Hiroiyuki Morikawa	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Antenna	AH104N2450D1				
Mode	Tx 11a 5580 MHz				

(below 1GHz and above 1GHz 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.	239.998	QP	26.77	11.57	8.38	32.03	0.00	14.69	46.00	31.3	211	193	
Hori.	480.000	QP	21.96	17.05	9.56	31.96	0.00	16.61	46.00	29.3	100	0	
Hori.	11160.000	PK	48.37	40.12	10.10	43.61	2.39	57.37	73.97	16.6	99	1	
Hori.	16740.000	PK	49.76	39.68	12.42	41.87	-9.54	50.45	73.90	23.4	156	156	
Hori.	22320.000	PK	56.15	39.97	13.24	47.87	-9.54	51.95	73.90	21.9	142	252	
Hori.	11160.000	AV	40.90	40.12	10.10	43.61	2.39	49.90	53.97	4.0	99	1	VBW: 3.6 kHz
Hori.	16740.000	AV	39.39	39.68	12.42	41.87	-9.54	40.08	53.90	13.8	156	156	VBW: 3.6 kHz
Hori.	22320.000	AV	55.01	39.97	13.24	47.87	-9.54	50.81	53.90	3.0	142	252	VBW: 3.6 kHz
Vert.	37.400	QP	22.84	15.13	6.77	32.20	0.00	12.54	40.00	27.4	100	0	
Vert.	68.125	QP	27.37	6.50	6.83	32.18	0.00	8.52	40.00	31.4	100	264	
Vert.	120.000	QP	22.96	12.97	7.40	32.14	0.00	11.19	43.50	32.3	100	69	
Vert.	168.000	QP	23.40	15.54	8.03	32.10	0.00	14.87	43.50	28.6	100	176	
Vert.	239.998	QP	27.38	11.57	8.38	32.03	0.00	15.30	46.00	30.7	215	336	
Vert.	262.323	QP	25.48	12.01	8.52	32.01	0.00	14.00	46.00	32.0	138	72	
Vert.	359.997	QP	22.42	14.57	9.03	31.95	0.00	14.07	46.00	31.9	108	218	
Vert.	480.000	QP	21.88	17.05	9.56	31.96	0.00	16.53	46.00	29.4	100	0	
Vert.	11160.000	PK	48.53	40.12	10.10	43.61	2.39	57.53	73.97	16.4	100	359	
Vert.	16740.000	PK	47.47	39.68	12.42	41.87	-9.54	48.16	73.90	25.7	150	348	
Vert.	22320.000	PK	52.63	39.97	13.24	47.87	-9.54	48.43	73.90	25.4	159	169	
Vert.	11160.000	AV	40.29	40.12	10.10	43.61	2.39	49.29	53.97	4.6	100	359	VBW: 3.6 kHz
Vert.	16740.000	AV	37.47	39.68	12.42	41.87	-9.54	38.16	53.90	15.7	150	348	VBW: 3.6 kHz
Vert.	22320.000	AV	50.47	39.97	13.24	47.87	-9.54	46.27	53.90	7.6	159	169	VBW: 3.6 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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 27, 2018
Temperature / Humidity 22 deg. C / 35 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11a 5700 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	53.69	32.53	16.59	44.87	2.39	60.33	-34.87	-27.00	7.9	149	29	
Vert.	5725.000	PK	53.61	32.53	16.59	44.87	2.39	60.25	-34.95	-27.00	8.0	126	90	

*This mode was performed only band edges measurement.

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)

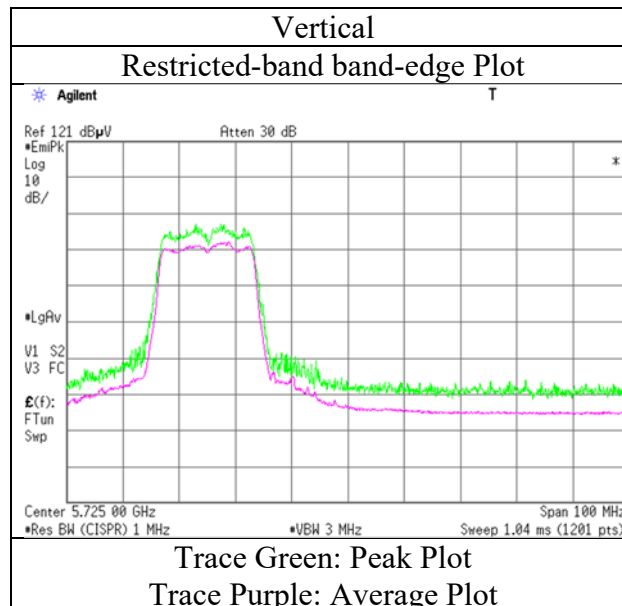
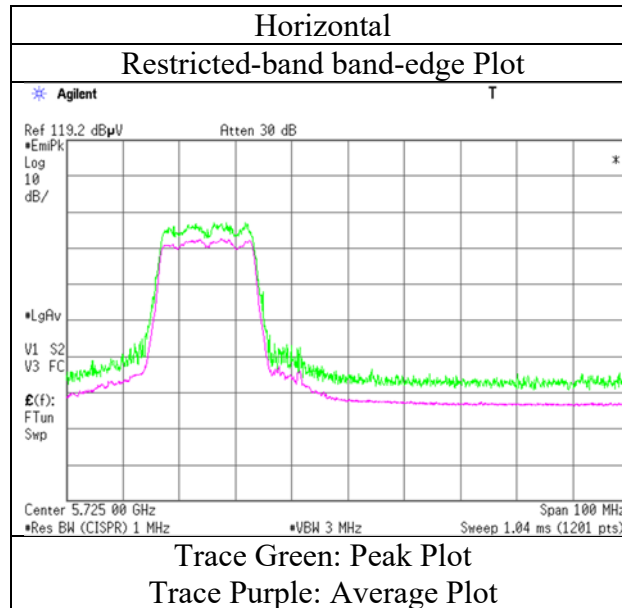
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5700 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 27, 2018
Temperature / Humidity 22 deg. C / 35 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11a 5745 MHz

(Calculation) (above 1GHz 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	48.59	32.41	16.50	44.88	2.39	55.01	-40.19	-27.00	13.2	100	27	
Hori.	5700.000	PK	49.29	32.49	16.56	44.88	2.39	55.85	-39.35	10.00	49.4	100	27	
Hori.	5720.000	PK	58.74	32.53	16.59	44.87	2.39	65.38	-29.82	15.60	45.4	100	27	
Hori.	5725.000	PK	63.60	32.53	16.59	44.87	2.39	70.24	-24.96	27.00	52.0	100	27	
Vert.	5650.000	PK	49.31	32.41	16.50	44.88	2.39	55.73	-39.47	-27.00	12.5	130	46	
Vert.	5700.000	PK	49.16	32.49	16.56	44.88	2.39	55.72	-39.48	10.00	49.5	130	46	
Vert.	5720.000	PK	57.67	32.53	16.59	44.87	2.39	64.31	-30.89	15.60	46.5	130	46	
Vert.	5725.000	PK	62.43	32.53	16.59	44.87	2.39	69.07	-26.13	27.00	53.1	130	46	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

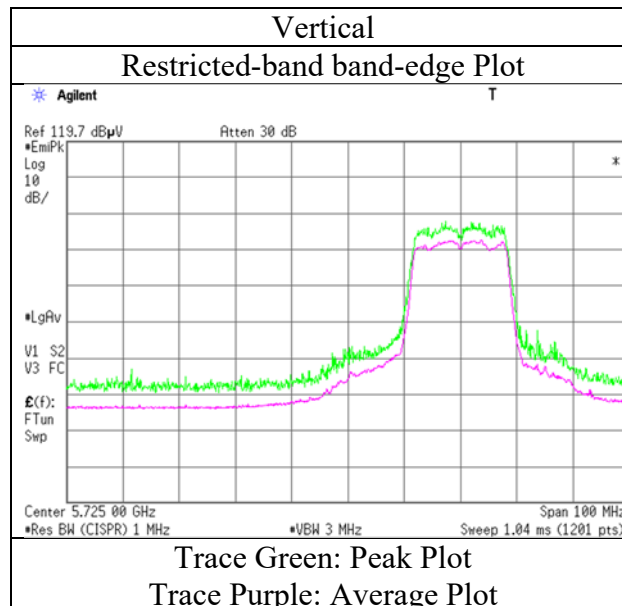
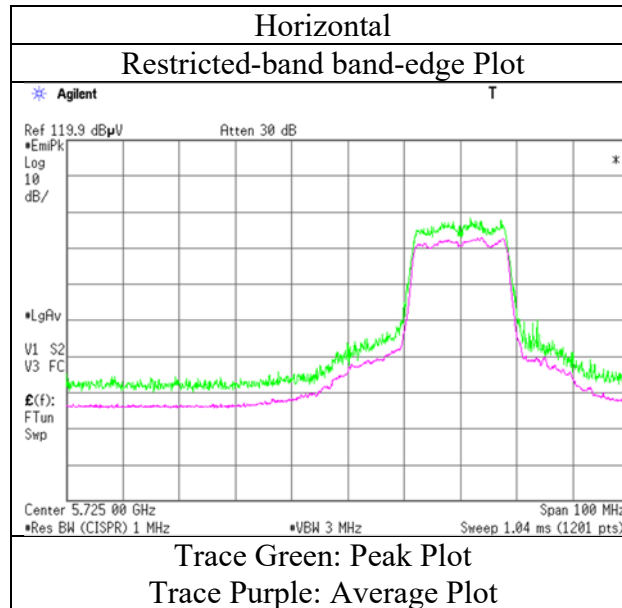
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5745 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5825 MHz

(Calculation) (above 1GHz 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	55.81	32.74	16.73	44.86	2.39	62.81	-32.39	27.00	59.4	116	30	
Hori.	5855.000	PK	53.32	32.75	16.73	44.86	2.39	60.33	-34.87	15.60	50.5	116	30	
Hori.	5875.000	PK	50.09	32.78	16.76	44.86	2.39	57.16	-38.04	10.00	48.0	116	30	
Hori.	5925.000	PK	49.08	32.87	16.80	44.85	2.39	56.29	-38.91	-27.00	11.9	116	30	
Vert.	5850.000	PK	54.82	32.74	16.73	44.86	2.39	61.82	-33.38	27.00	60.4	148	64	
Vert.	5855.000	PK	52.35	32.75	16.73	44.86	2.39	59.36	-35.84	15.60	51.4	148	64	
Vert.	5875.000	PK	49.91	32.78	16.76	44.86	2.39	56.98	-38.22	10.00	48.2	148	64	
Vert.	5925.000	PK	49.92	32.87	16.80	44.85	2.39	57.13	-38.07	-27.00	11.1	148	64	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

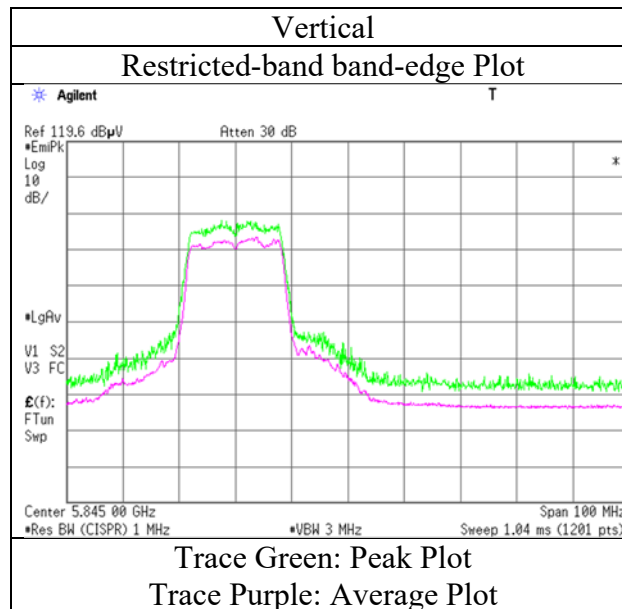
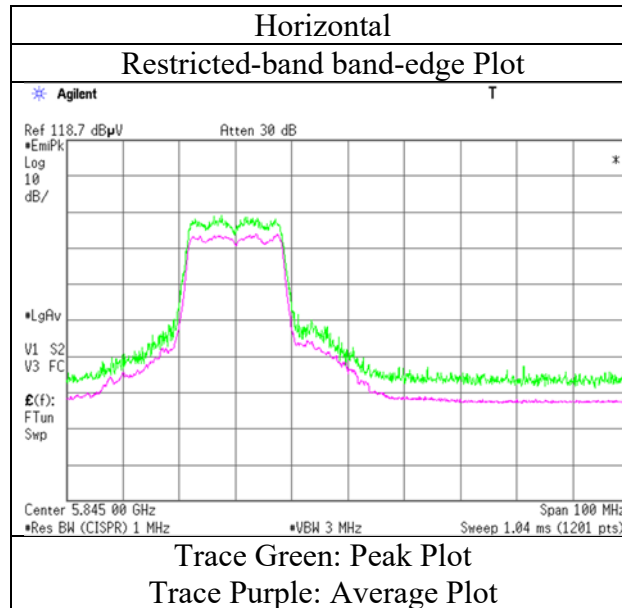
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 27, 2018
Temperature / Humidity	22 deg. C / 35 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11a 5825 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5180 MHz

(above 1GHz 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	52.42	32.01	16.48	44.63	2.39	58.67	73.97	15.3	153	36	VBW: 10 Hz
Hori.	5150.000	AV	38.88	32.01	16.48	44.63	2.39	45.13	53.97	8.8	153	36	
Vert.	5150.000	PK	52.94	32.01	16.48	44.63	2.39	59.19	73.97	14.7	111	278	VBW: 10 Hz
Vert.	5150.000	AV	38.80	32.01	16.48	44.63	2.39	45.05	53.97	8.9	111	278	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

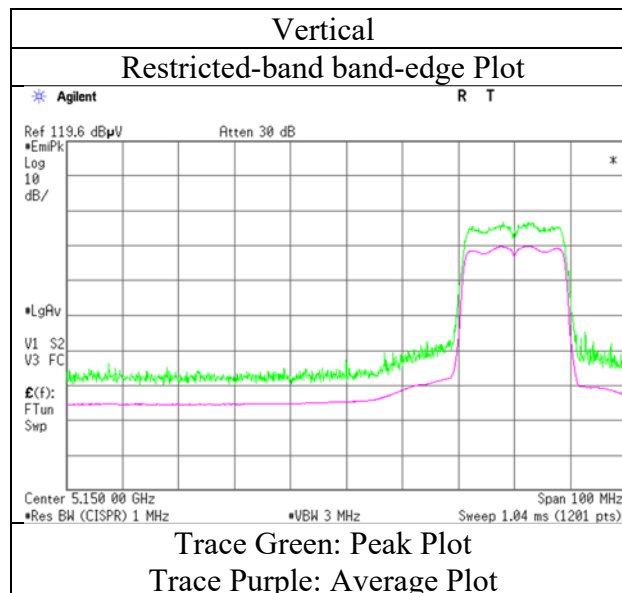
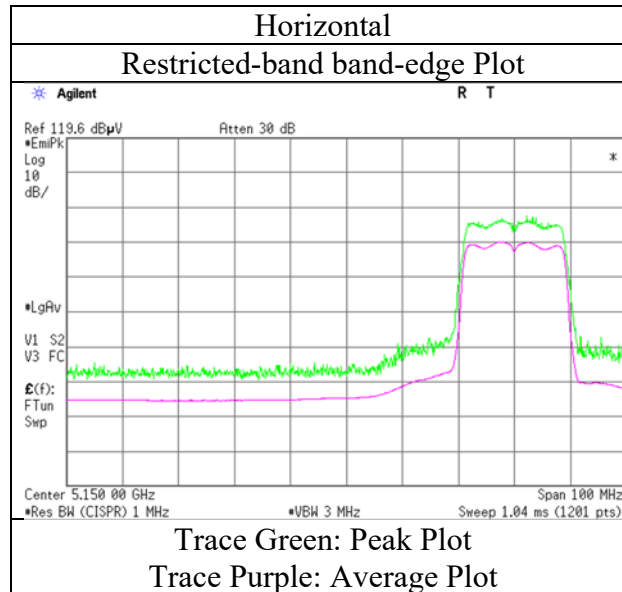
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5180 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5320 MHz

(above 1GHz 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	53.13	32.09	16.39	44.79	2.39	59.21	73.97	14.7	152	34	VBW: 10 Hz
Hori.	5350.000	AV	39.94	32.09	16.39	44.79	2.39	46.02	53.97	7.9	152	34	
Vert.	5350.000	PK	52.48	32.09	16.39	44.79	2.39	58.56	73.97	15.4	125	96	VBW: 10 Hz
Vert.	5350.000	AV	40.72	32.09	16.39	44.79	2.39	46.80	53.97	7.1	125	96	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

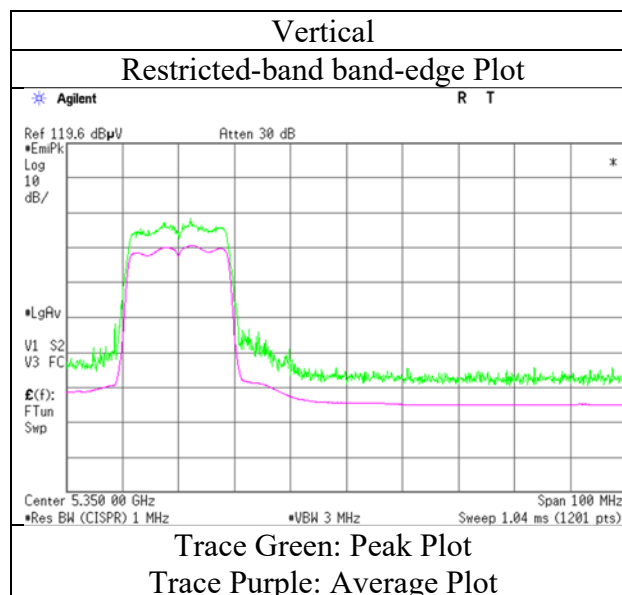
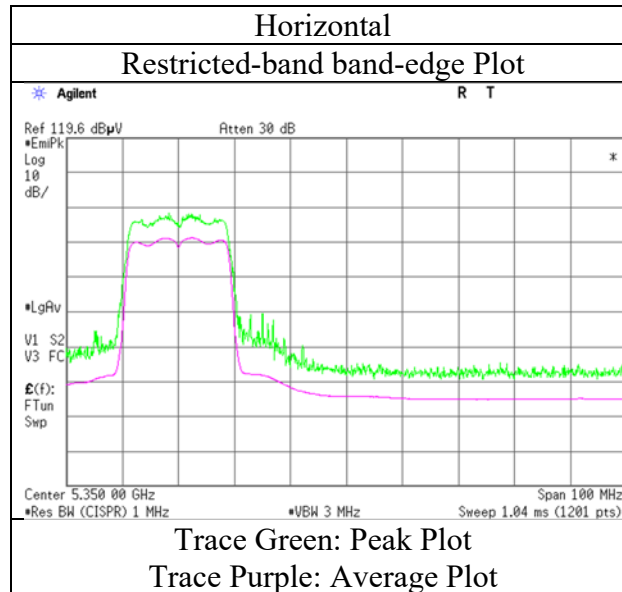
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5320 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-20 5500 MHz

(above 1GHz 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.	5460.000	PK	49.53	32.14	16.36	44.87	2.39	55.55	73.97	18.4	105	38	VBW: 10 Hz
Hori.	5460.000	AV	37.45	32.14	16.36	44.87	2.39	43.47	53.97	10.5	105	38	
Vert.	5460.000	PK	49.39	32.14	16.36	44.87	2.39	55.41	73.97	18.5	135	88	VBW: 10 Hz
Vert.	5460.000	AV	37.20	32.14	16.36	44.87	2.39	43.22	53.97	10.7	135	88	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	52.41	32.15	16.35	44.88	2.39	58.42	-36.78	-27.00	9.8	105	38	
Vert.	5470.000	PK	52.04	32.15	16.35	44.88	2.39	58.05	-37.15	-27.00	10.2	135	88	

*This mode was performed only band edges measurement.

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

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

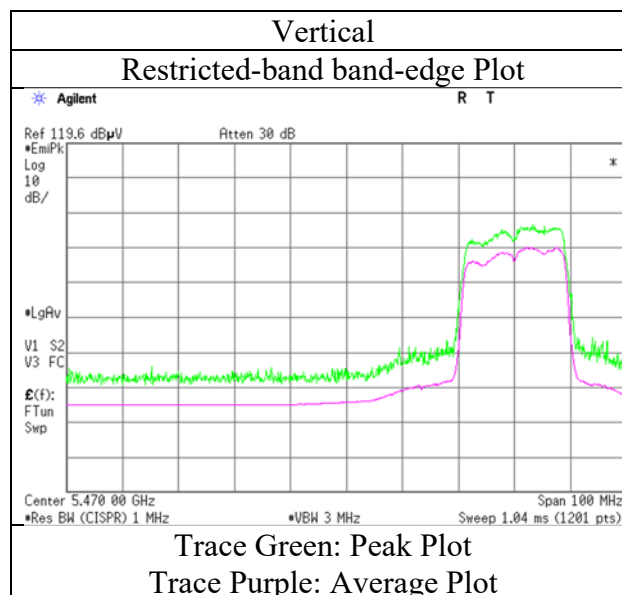
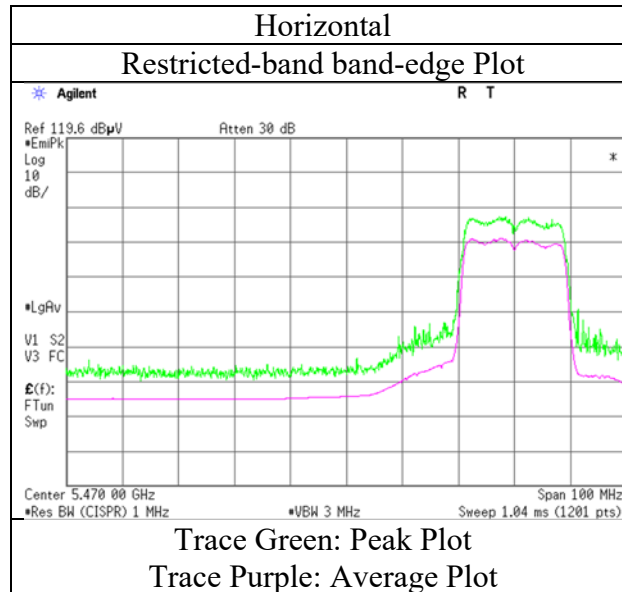
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5500 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-20 5700 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	54.62	32.53	16.59	44.87	2.39	61.26	-33.94	-27.00	6.9	107	41	
Vert.	5725.000	PK	54.38	32.53	16.59	44.87	2.39	61.02	-34.18	-27.00	7.2	146	84	

*This mode was performed only band edges measurement.

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)

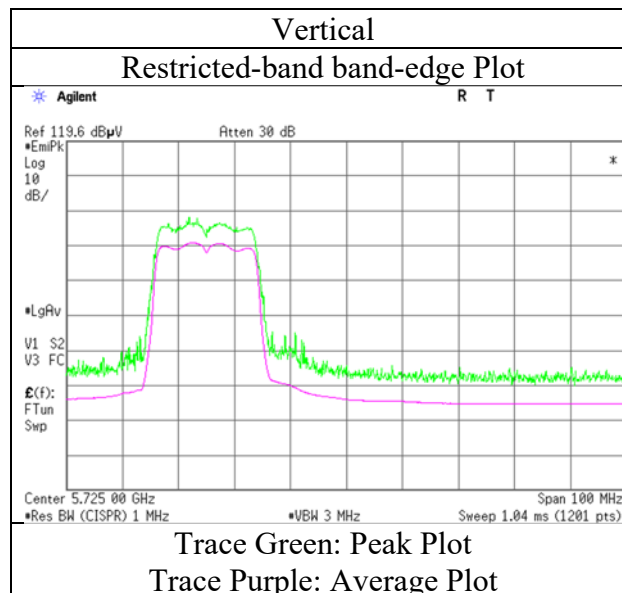
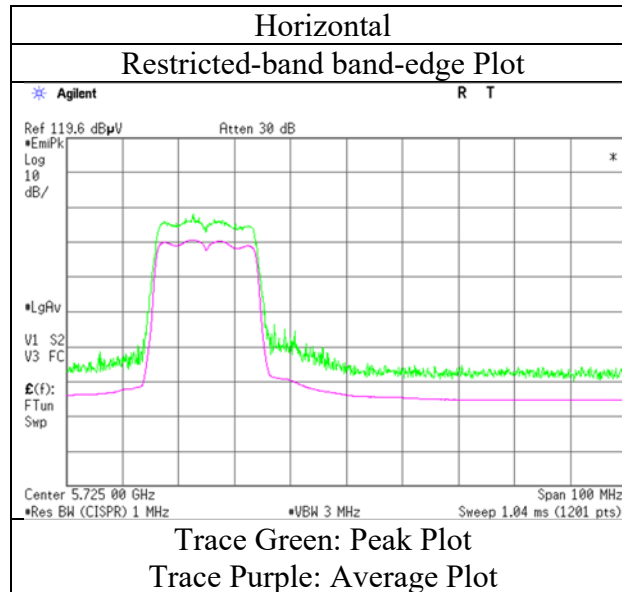
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5700 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-20 5745 MHz

(Calculation) (above 1GHz 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	49.21	32.41	16.50	44.88	2.39	55.63	-39.57	-27.00	12.6	153	31	
Hori.	5700.000	PK	49.69	32.49	16.56	44.88	2.39	56.25	-38.95	10.00	49.0	153	31	
Hori.	5720.000	PK	57.89	32.53	16.59	44.87	2.39	64.53	-30.67	15.60	46.3	153	31	
Hori.	5725.000	PK	62.97	32.53	16.59	44.87	2.39	69.61	-25.59	27.00	52.6	153	31	
Vert.	5650.000	PK	49.03	32.41	16.50	44.88	2.39	55.45	-39.75	-27.00	12.8	150	87	
Vert.	5700.000	PK	50.12	32.49	16.56	44.88	2.39	56.68	-38.52	10.00	48.5	150	87	
Vert.	5720.000	PK	57.52	32.53	16.59	44.87	2.39	64.16	-31.04	15.60	46.6	150	87	
Vert.	5725.000	PK	62.74	32.53	16.59	44.87	2.39	69.38	-25.82	27.00	52.8	150	87	

*This mode was performed only band edges measurement.

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)

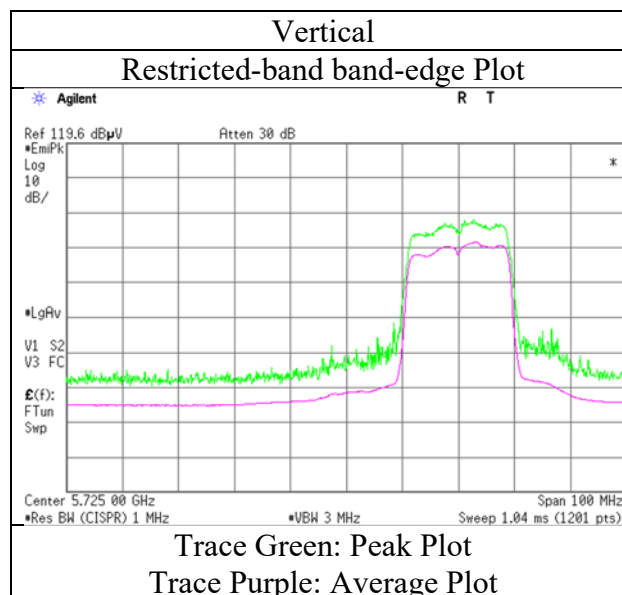
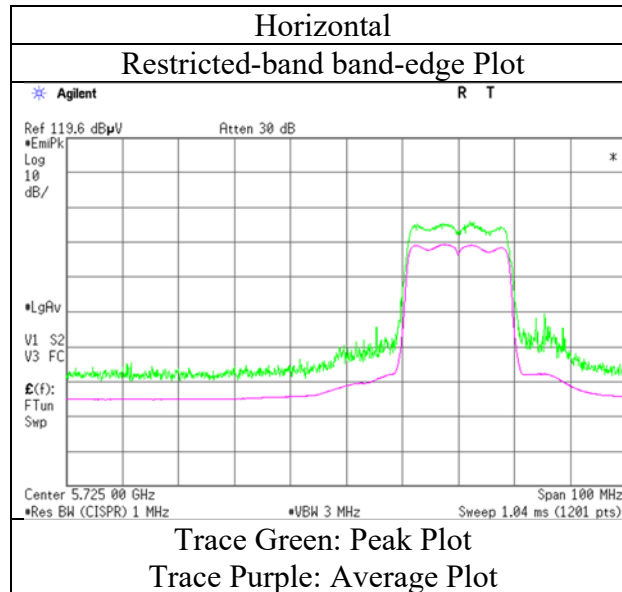
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-20 5745 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-20 5825 MHz

(Calculation) (above 1GHz 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	56.49	32.74	16.73	44.86	2.39	63.49	-31.71	27.00	58.7	183	31	
Hori.	5855.000	PK	53.20	32.75	16.73	44.86	2.39	60.21	-34.99	15.60	50.6	183	31	
Hori.	5875.000	PK	49.56	32.78	16.76	44.86	2.39	56.63	-38.57	10.00	48.6	183	31	
Hori.	5925.000	PK	49.65	32.87	16.80	44.85	2.39	56.86	-38.34	-27.00	11.3	183	31	
Vert.	5850.000	PK	53.25	32.74	16.73	44.86	2.39	60.25	-34.95	27.00	62.0	114	116	
Vert.	5855.000	PK	52.54	32.75	16.73	44.86	2.39	59.55	-35.65	15.60	51.3	114	116	
Vert.	5875.000	PK	49.97	32.78	16.76	44.86	2.39	57.04	-38.16	10.00	48.2	114	116	
Vert.	5925.000	PK	49.32	32.87	16.80	44.85	2.39	56.53	-38.67	-27.00	11.7	114	116	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

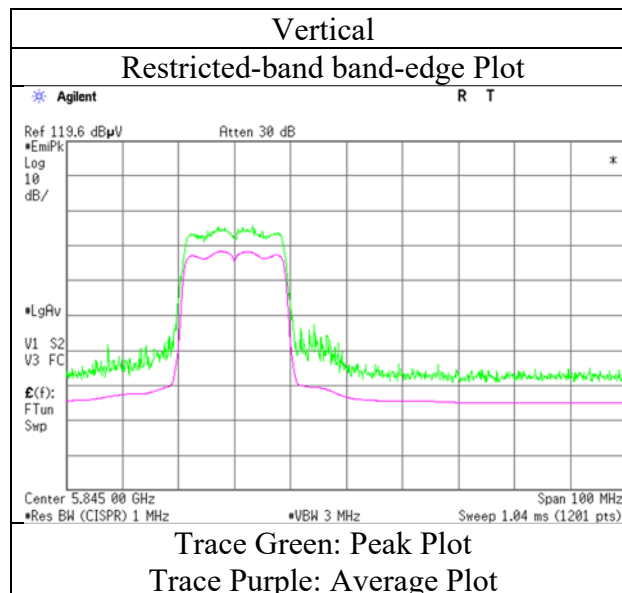
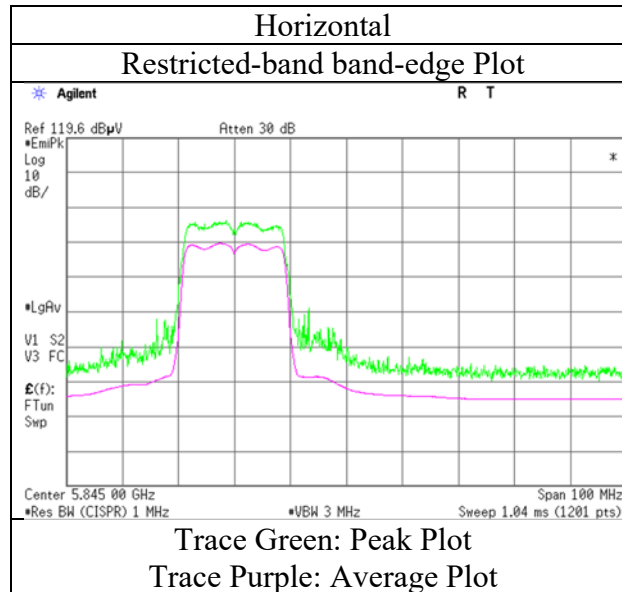
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-20 5825 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5180 MHz

(above 1GHz 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	52.11	32.01	16.48	44.63	2.39	58.36	73.97	15.6	151	33	VBW: 10 Hz
Hori.	5150.000	AV	38.92	32.01	16.48	44.63	2.39	45.17	53.97	8.8	151	33	
Vert.	5150.000	PK	52.05	32.01	16.48	44.63	2.39	58.30	73.97	15.6	210	82	VBW: 10 Hz
Vert.	5150.000	AV	39.13	32.01	16.48	44.63	2.39	45.38	53.97	8.5	210	82	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

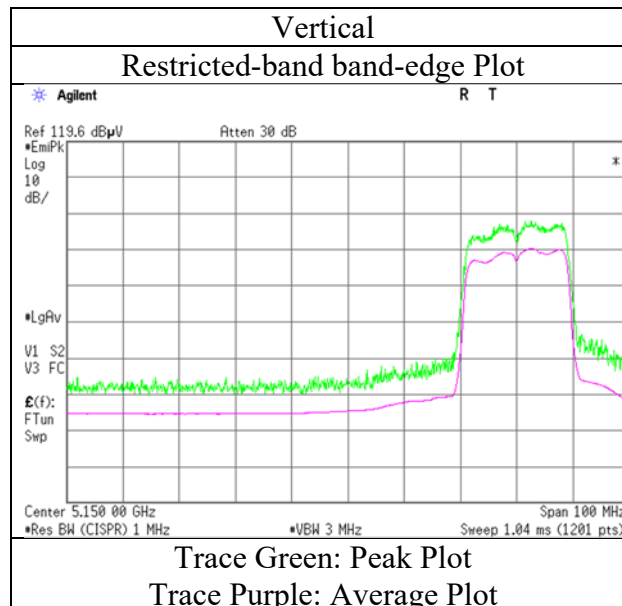
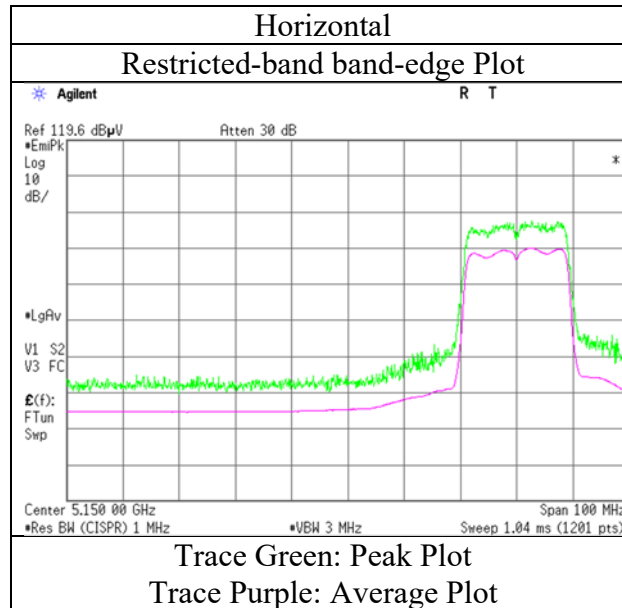
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5180 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5320 MHz

(above 1GHz 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	52.48	32.09	16.39	44.79	2.39	58.56	73.97	15.4	151	38	VBW: 10 Hz
Hori.	5350.000	AV	39.28	32.09	16.39	44.79	2.39	45.36	53.97	8.6	151	38	
Vert.	5350.000	PK	53.14	32.09	16.39	44.79	2.39	59.22	73.97	14.7	132	98	VBW: 10 Hz
Vert.	5350.000	AV	37.59	32.09	16.39	44.79	2.39	43.67	53.97	10.3	132	98	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

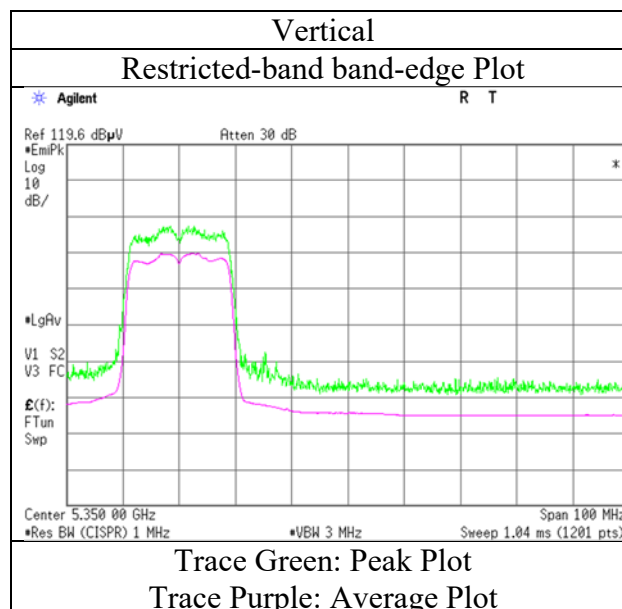
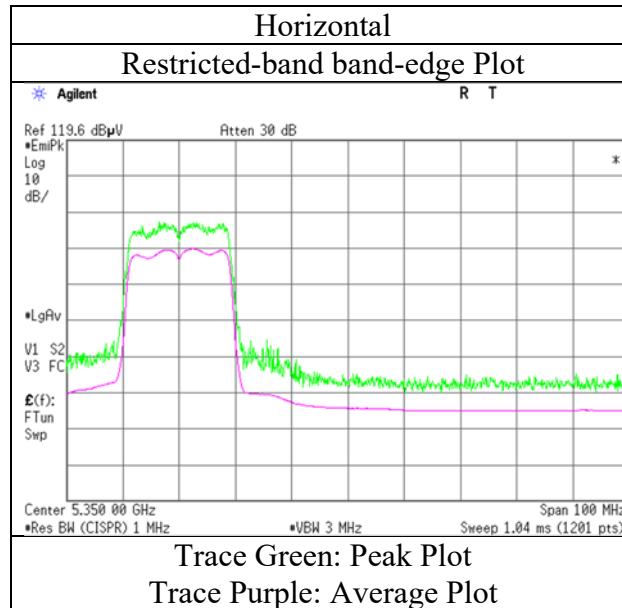
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5320 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-20 5500 MHz

(above 1GHz 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.	5460.000	PK	49.97	32.14	16.36	44.87	2.39	55.99	73.97	17.9	174	38	VBW: 10 Hz
Hori.	5460.000	AV	37.21	32.14	16.36	44.87	2.39	43.23	53.97	10.7	174	38	
Vert.	5460.000	PK	50.07	32.14	16.36	44.87	2.39	56.09	73.97	17.8	113	86	
Vert.	5460.000	AV	37.19	32.14	16.36	44.87	2.39	43.21	53.97	10.7	113	86	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	53.82	32.15	16.35	44.88	2.39	59.83	-35.37	-27.00	8.4	174	38	
Vert.	5470.000	PK	53.54	32.15	16.35	44.88	2.39	59.55	-35.65	-27.00	8.7	113	86	

*This mode was performed only band edges measurement.

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

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

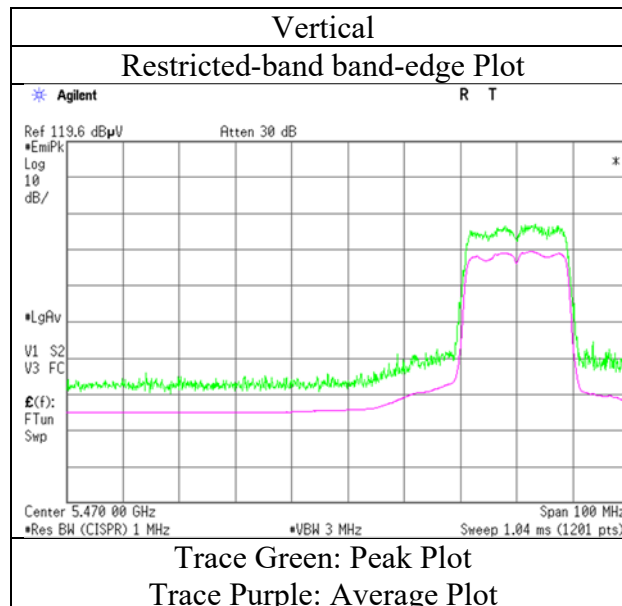
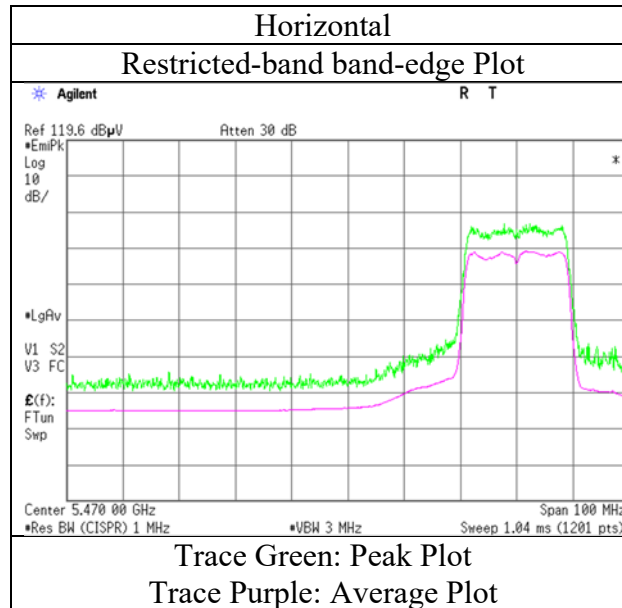
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5500 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-20 5700 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	54.12	32.53	16.59	44.87	2.39	60.76	-34.44	-27.00	7.4	107	29	
Vert.	5725.000	PK	54.16	32.53	16.59	44.87	2.39	60.80	-34.40	-27.00	7.4	149	93	

*This mode was performed only band edges measurement.

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)

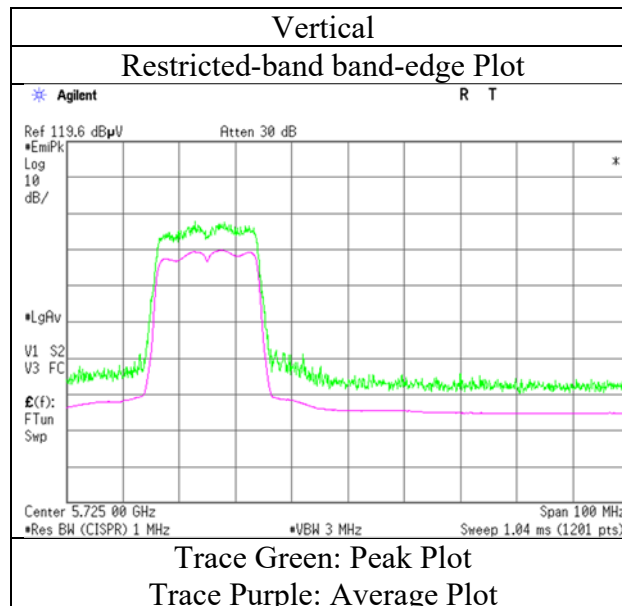
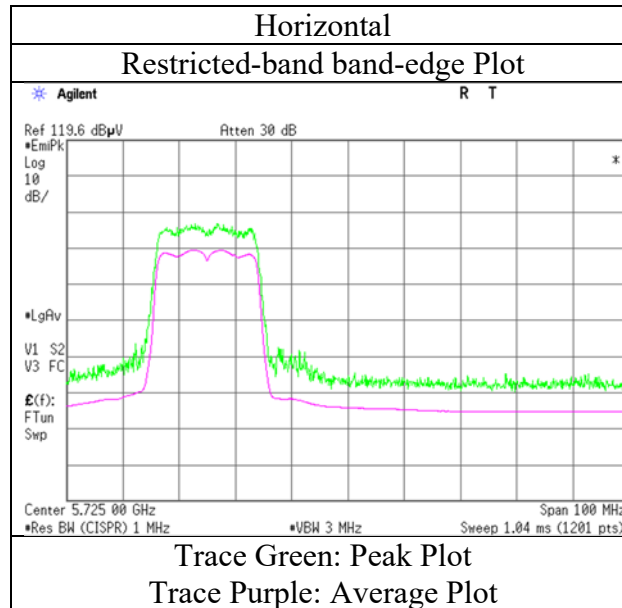
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5700 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 23 deg. C / 36 % RH
Engineer Hiroyuki Morikawa
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-20 5745 MHz

(Calculation) (above 1GHz 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	48.93	32.41	16.50	44.88	2.39	55.35	-39.85	-27.00	12.9	149	29	
Hori.	5700.000	PK	50.07	32.49	16.56	44.88	2.39	56.63	-38.57	10.00	48.6	149	29	
Hori.	5720.000	PK	58.01	32.53	16.59	44.87	2.39	64.65	-30.55	15.60	46.2	149	29	
Hori.	5725.000	PK	63.33	32.53	16.59	44.87	2.39	69.97	-25.23	27.00	52.2	149	29	
Vert.	5650.000	PK	49.23	32.41	16.50	44.88	2.39	55.65	-39.55	-27.00	12.6	143	104	
Vert.	5700.000	PK	50.21	32.49	16.56	44.88	2.39	56.77	-38.43	10.00	48.4	143	104	
Vert.	5720.000	PK	58.43	32.53	16.59	44.87	2.39	65.07	-30.13	15.60	45.7	143	104	
Vert.	5725.000	PK	63.42	32.53	16.59	44.87	2.39	70.06	-25.14	27.00	52.1	143	104	

*This mode was performed only band edges measurement.

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)

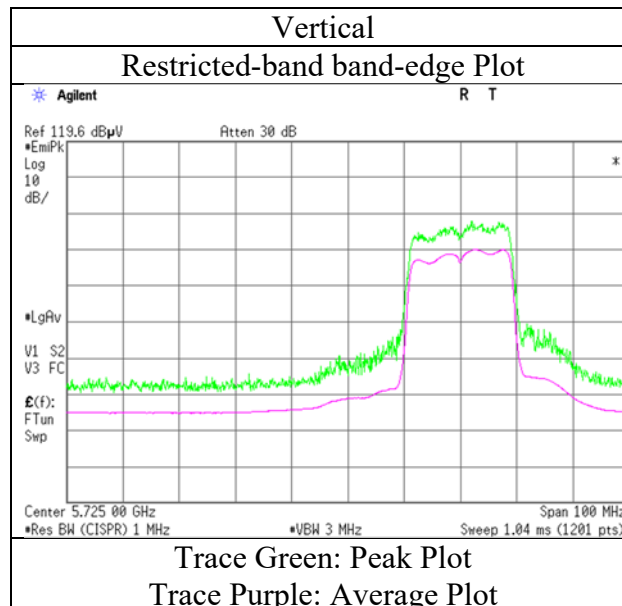
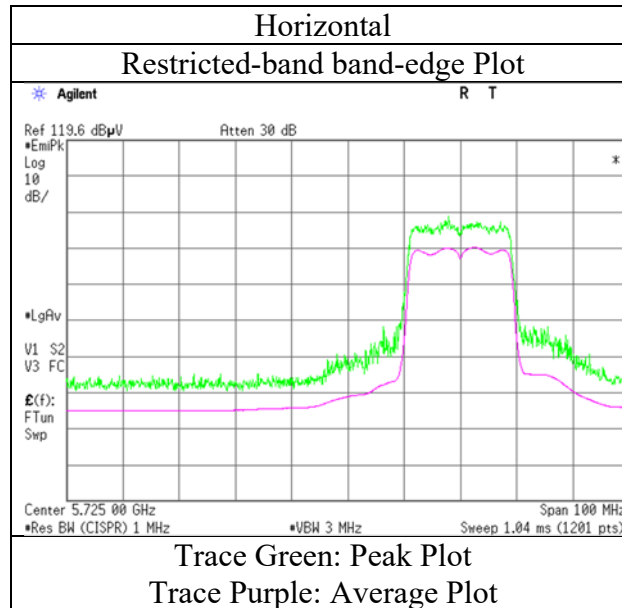
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5745 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5825 MHz

(Calculation) (above 1GHz 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	54.67	32.74	16.73	44.86	2.39	61.67	-33.53	27.00	60.5	152	30	
Hori.	5855.000	PK	52.63	32.75	16.73	44.86	2.39	59.64	-35.56	15.60	51.2	152	30	
Hori.	5875.000	PK	50.68	32.78	16.76	44.86	2.39	57.75	-37.45	10.00	47.5	152	30	
Hori.	5925.000	PK	49.89	32.87	16.80	44.85	2.39	57.10	-38.10	-27.00	11.1	152	30	
Vert.	5850.000	PK	55.14	32.74	16.73	44.86	2.39	62.14	-33.06	27.00	60.1	144	289	
Vert.	5855.000	PK	53.01	32.75	16.73	44.86	2.39	60.02	-35.18	15.60	50.8	144	289	
Vert.	5875.000	PK	49.68	32.78	16.76	44.86	2.39	56.75	-38.45	10.00	48.5	144	289	
Vert.	5925.000	PK	49.26	32.87	16.80	44.85	2.39	56.47	-38.73	-27.00	11.7	144	289	

*This mode was performed only band edges measurement.

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)

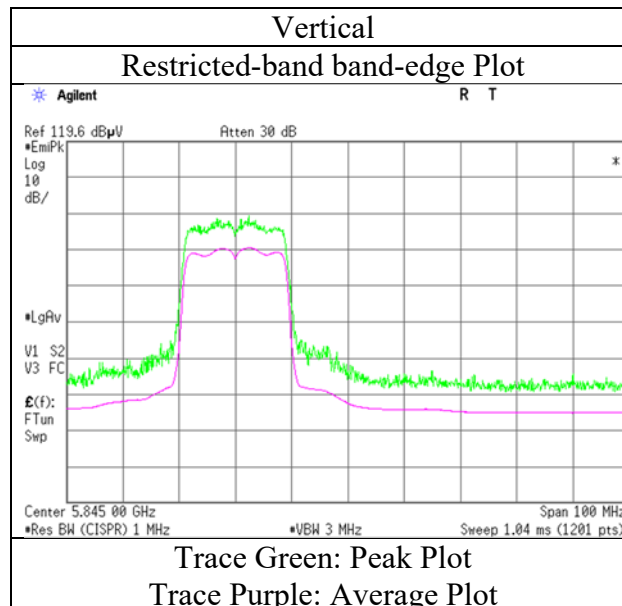
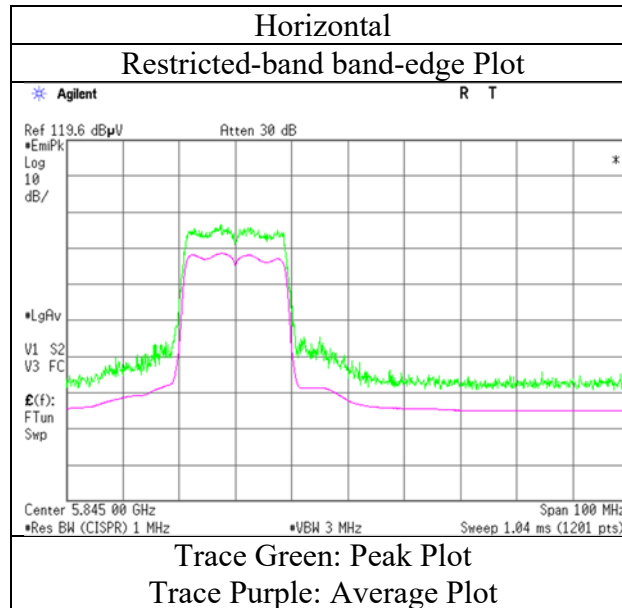
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	23 deg. C / 36 % RH
Engineer	Hiroyuki Morikawa
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-20 5825 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5190 MHz

(above 1GHz 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	53.77	32.01	16.48	44.63	2.39	60.02	73.97	13.9	157	38	VBW: 3.6 kHz
Hori.	5150.000	AV	42.34	32.01	16.48	44.63	2.39	48.59	53.97	5.3	157	38	
Vert.	5150.000	PK	52.82	32.01	16.48	44.63	2.39	59.07	73.97	14.9	132	110	VBW: 3.6 kHz
Vert.	5150.000	AV	41.44	32.01	16.48	44.63	2.39	47.69	53.97	6.2	132	110	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

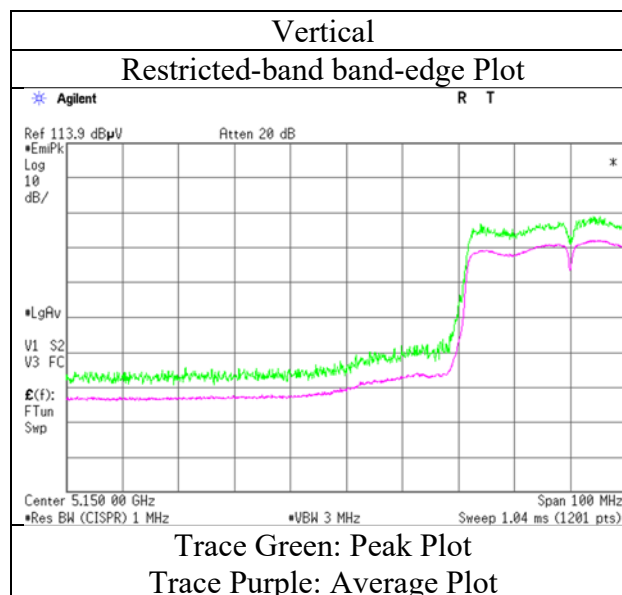
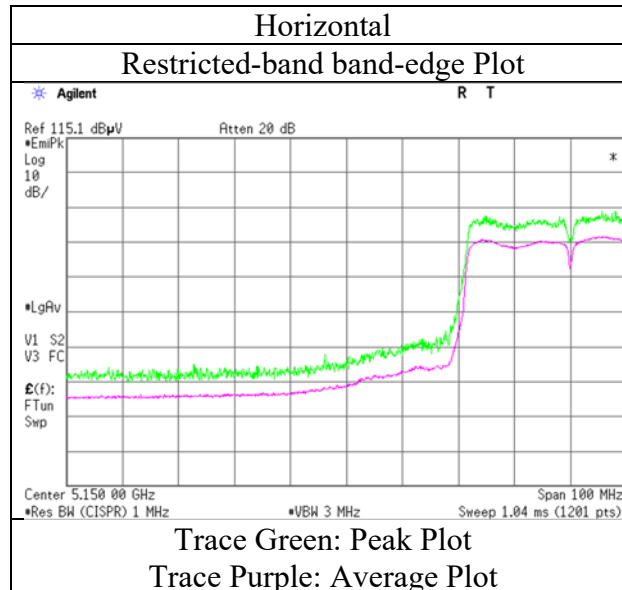
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5190 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	March 28, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	25 deg. C / 37 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Kazuya Noda	Yosuke Ishikawa	Shiro Kobayashi	Shiro Kobayashi
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Antenna	AH104N2450D1			
Mode	Tx 11n-40 5230 MHz			

(above 1GHz 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.	10460.000	PK	47.75	39.84	9.43	43.55	2.39	55.86	73.97	18.1	151	338	
Hori.	15690.000	PK	48.95	39.61	11.71	42.13	-9.54	48.60	73.90	25.3	158	153	
Hori.	20920.000	PK	56.63	39.78	12.75	46.99	-9.54	52.63	73.90	21.2	137	257	
Hori.	26150.000	PK	40.54	39.98	14.52	47.65	-9.54	37.85	73.90	36.0	150	1	
Hori.	10460.000	AV	37.91	39.84	9.43	43.55	2.39	46.02	53.97	7.9	151	338	VBW:3.6 kHz
Hori.	15690.000	AV	38.90	39.61	11.71	42.13	-9.54	38.55	53.90	15.3	158	153	VBW:3.6 kHz
Hori.	20920.000	AV	55.67	39.78	12.75	46.99	-9.54	51.67	53.90	2.2	137	257	VBW:3.6 kHz
Hori.	26150.000	AV	29.52	39.98	14.52	47.65	-9.54	26.83	53.90	27.0	150	1	VBW:3.6 kHz
Vert.	10460.000	PK	48.14	39.84	9.43	43.55	2.39	56.25	73.97	17.7	125	13	
Vert.	15690.000	PK	48.22	39.61	11.71	42.13	-9.54	47.87	73.90	26.0	151	345	
Vert.	20920.000	PK	56.54	39.78	12.75	46.99	-9.54	52.54	73.90	21.3	160	157	
Vert.	26150.000	PK	40.36	39.98	14.52	47.65	-9.54	37.67	73.90	36.2	150	1	
Vert.	10460.000	AV	38.15	39.84	9.43	43.55	2.39	46.26	53.97	7.7	125	13	VBW:3.6 kHz
Vert.	15690.000	AV	37.82	39.61	11.71	42.13	-9.54	37.47	53.90	16.4	151	345	VBW:3.6 kHz
Vert.	20920.000	AV	55.58	39.78	12.75	46.99	-9.54	51.58	53.90	2.3	160	157	VBW:3.6 kHz
Vert.	26150.000	AV	29.29	39.98	14.52	47.65	-9.54	26.60	53.90	27.3	150	1	VBW:3.6 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 20dB).

*This mode was performed only band edges measurement.

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5310 MHz

(above 1GHz 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	55.43	32.09	16.39	44.79	2.39	61.51	73.97	12.4	147	36	VBW: 3.6 kHz
Hori.	5350.000	AV	42.64	32.09	16.39	44.79	2.39	48.72	53.97	5.2	147	36	
Vert.	5350.000	PK	53.41	32.09	16.39	44.79	2.39	59.49	73.97	14.4	126	105	VBW: 3.6 kHz
Vert.	5350.000	AV	40.21	32.09	16.39	44.79	2.39	46.29	53.97	7.6	126	105	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

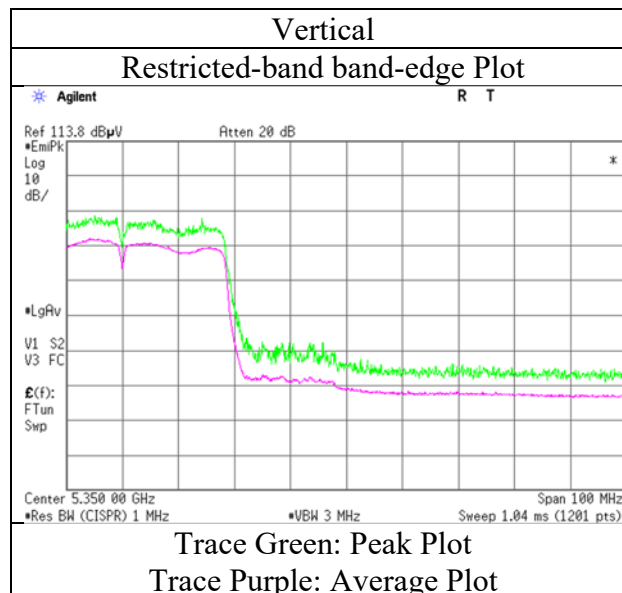
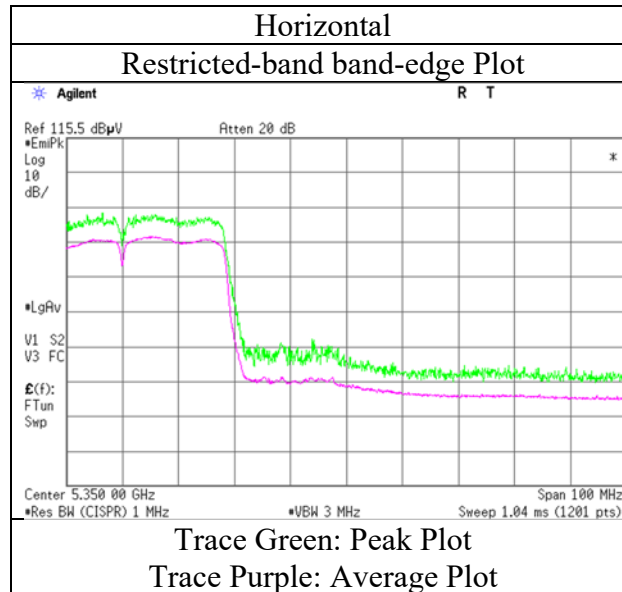
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5310 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-40 5510 MHz

(above 1GHz 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.	5460.000	PK	52.09	32.14	16.36	44.87	2.39	58.11	73.97	15.8	184	41	
Hori.	5460.000	AV	40.99	32.14	16.36	44.87	2.39	47.01	53.97	6.9	184	41	VBW: 3.6 kHz
Vert.	5460.000	PK	50.62	32.14	16.36	44.87	2.39	56.64	73.97	17.3	131	103	
Vert.	5460.000	AV	39.72	32.14	16.36	44.87	2.39	45.74	53.97	8.2	131	103	VBW: 3.6 kHz

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	53.47	32.15	16.35	44.88	2.39	59.48	-35.72	-27.00	8.7	184	41	
Vert.	5470.000	PK	53.02	32.15	16.35	44.88	2.39	59.03	-36.17	-27.00	9.2	131	103	

*This mode was performed only band edges measurement.

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

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

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

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

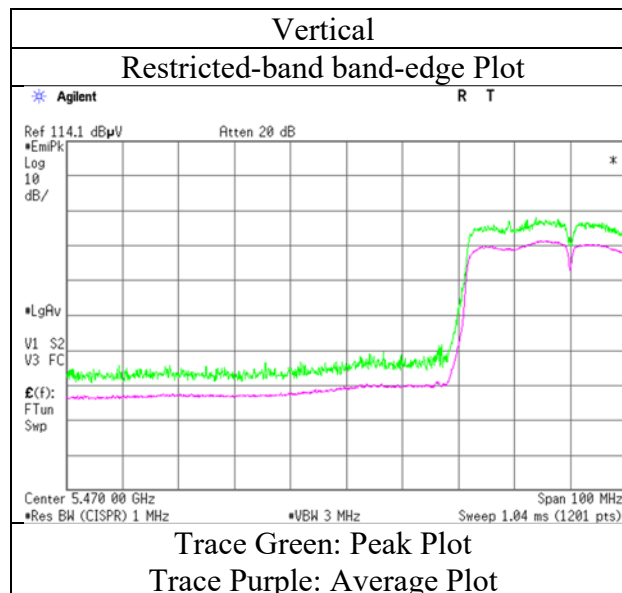
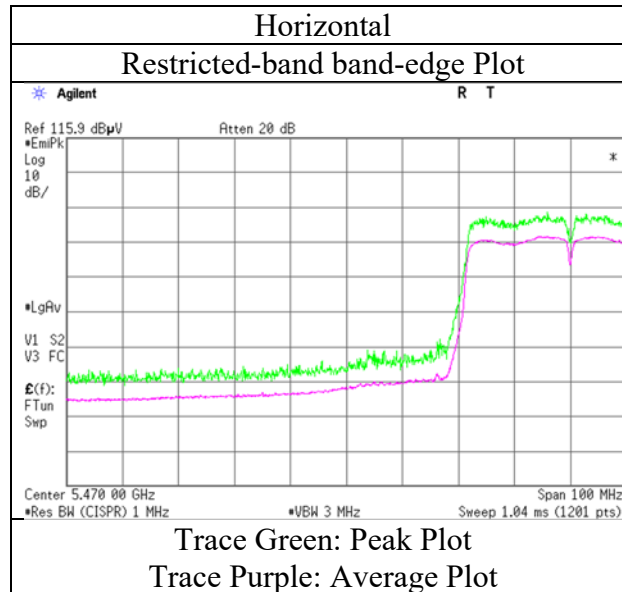
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-40 5510 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-40 5670 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	50.74	32.53	16.59	44.87	2.39	57.38	-37.82	-27.00	10.8	148	41	
Vert.	5725.000	PK	51.23	32.53	16.59	44.87	2.39	57.87	-37.33	-27.00	10.3	149	82	

*This mode was performed only band edges measurement.

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)

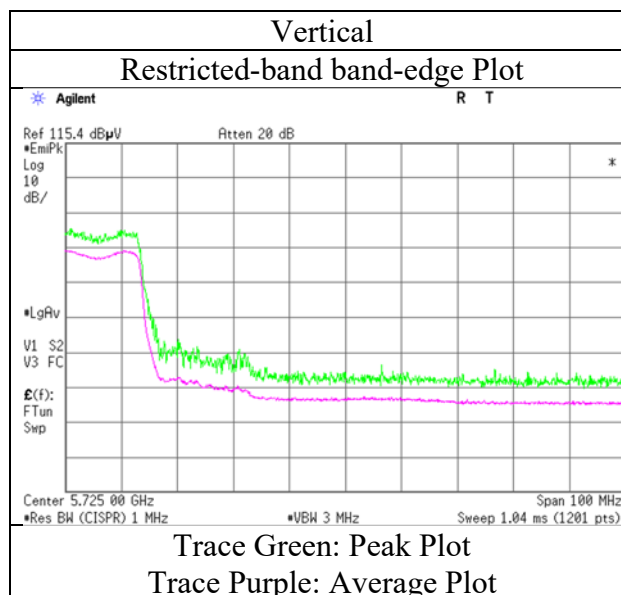
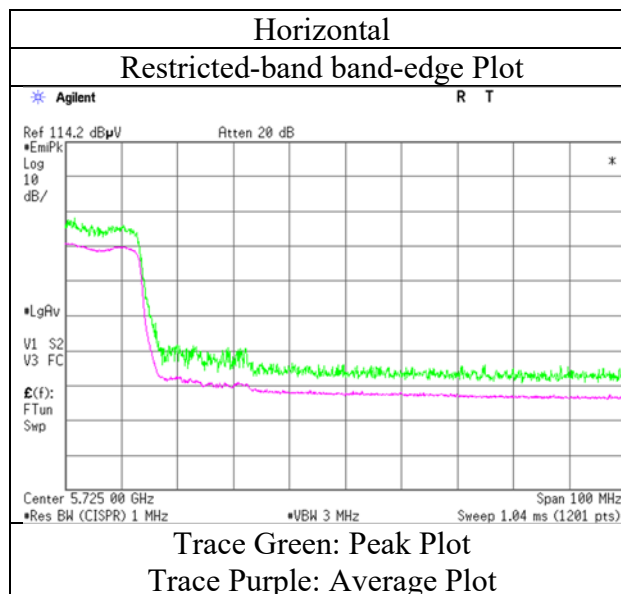
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5670 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11n-40 5755 MHz

(Calculation) (above 1GHz 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	50.21	32.41	16.50	44.88	2.39	56.63	-38.57	-27.00	11.6	157	33	
Hori.	5700.000	PK	51.56	32.49	16.56	44.88	2.39	58.12	-37.08	10.00	47.1	157	33	
Hori.	5720.000	PK	56.58	32.53	16.59	44.87	2.39	63.22	-31.98	15.60	47.6	157	33	
Hori.	5725.000	PK	56.44	32.53	16.59	44.87	2.39	63.08	-32.12	27.00	59.1	157	33	
Vert.	5650.000	PK	49.46	32.41	16.50	44.88	2.39	55.88	-39.32	-27.00	12.3	148	92	
Vert.	5700.000	PK	50.41	32.49	16.56	44.88	2.39	56.97	-38.23	10.00	48.2	148	92	
Vert.	5720.000	PK	55.73	32.53	16.59	44.87	2.39	62.37	-32.83	15.60	48.4	148	92	
Vert.	5725.000	PK	56.35	32.53	16.59	44.87	2.39	62.99	-32.21	27.00	59.2	148	92	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m/ 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

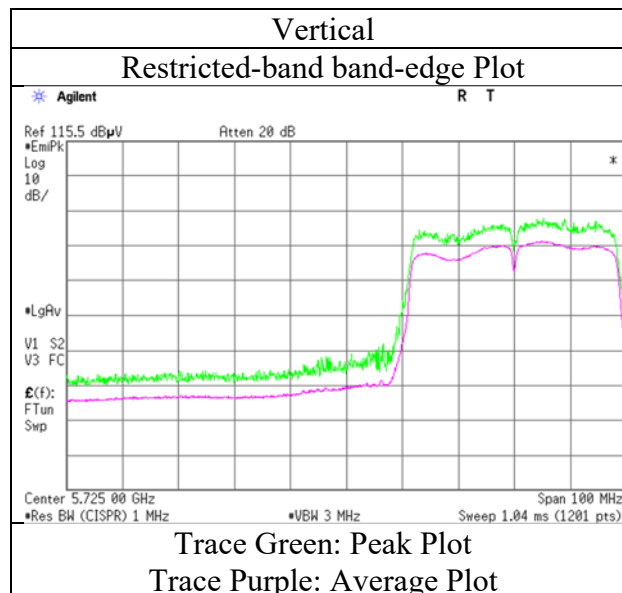
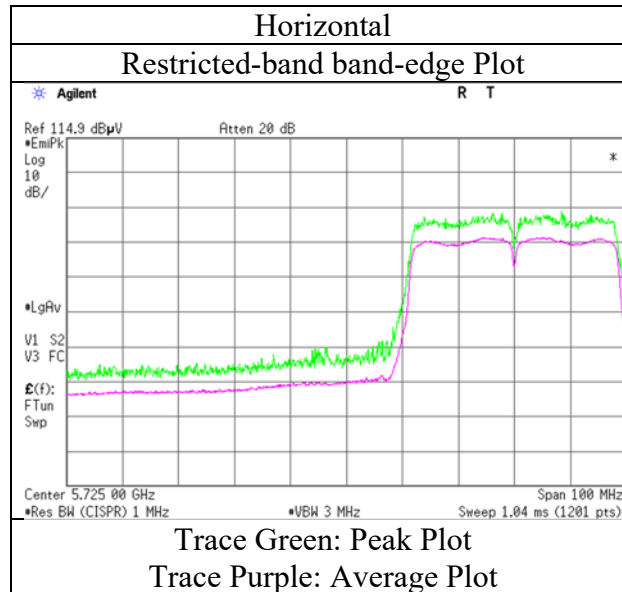
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5755 MHz



* 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

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5795 MHz

(Calculation) (above 1GHz 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	50.49	32.74	16.73	44.86	2.39	57.49	-37.71	27.00	64.7	148	32	
Hori.	5855.000	PK	50.02	32.75	16.73	44.86	2.39	57.03	-38.17	15.60	53.8	148	32	
Hori.	5875.000	PK	49.93	32.78	16.76	44.86	2.39	57.00	-38.20	10.00	48.2	148	32	
Hori.	5925.000	PK	49.38	32.87	16.80	44.85	2.39	56.59	-38.61	-27.00	11.6	148	32	
Vert.	5850.000	PK	50.42	32.74	16.73	44.86	2.39	57.42	-37.78	27.00	64.8	146	91	
Vert.	5855.000	PK	50.12	32.75	16.73	44.86	2.39	57.13	-38.07	15.60	53.7	146	91	
Vert.	5875.000	PK	49.93	32.78	16.76	44.86	2.39	57.00	-38.20	10.00	48.2	146	91	
Vert.	5925.000	PK	49.36	32.87	16.80	44.85	2.39	56.57	-38.63	-27.00	11.6	146	91	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

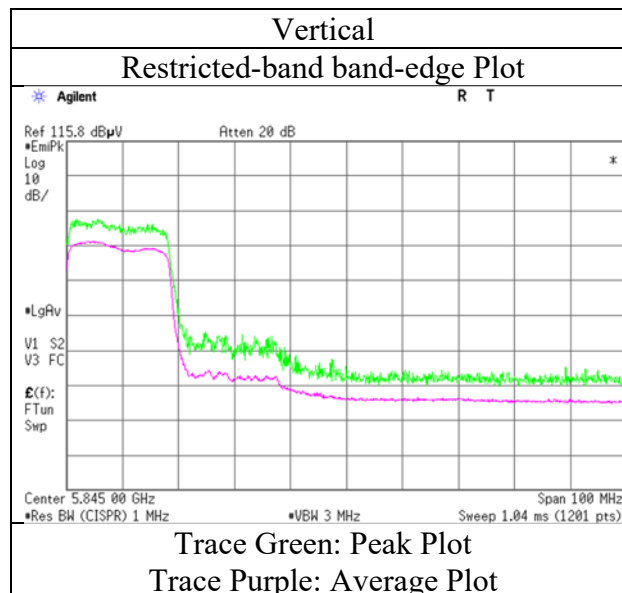
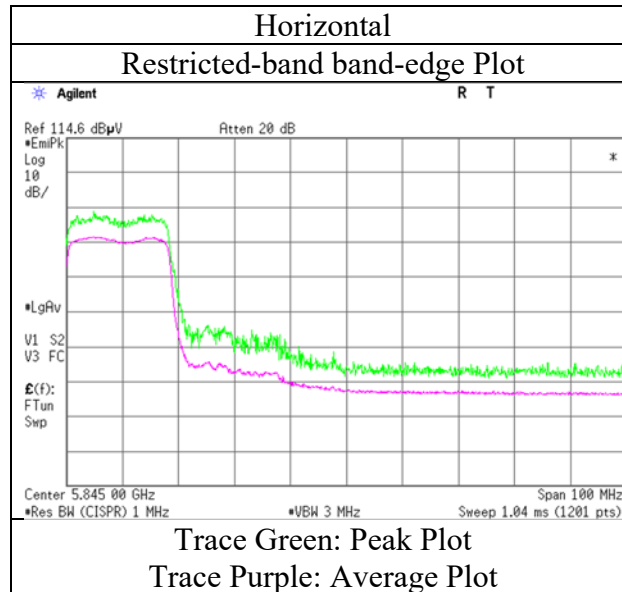
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11n-40 5795 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5190 MHz

(above 1GHz 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	54.70	32.01	16.48	44.63	2.39	60.95	73.97	13.0	147	33	VBW: 3 kHz
Hori.	5150.000	AV	42.23	32.01	16.48	44.63	2.39	48.48	53.97	5.4	147	33	
Vert.	5150.000	PK	53.95	32.01	16.48	44.63	2.39	60.20	73.97	13.7	104	257	VBW: 3 kHz
Vert.	5150.000	AV	42.15	32.01	16.48	44.63	2.39	48.40	53.97	5.5	104	257	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

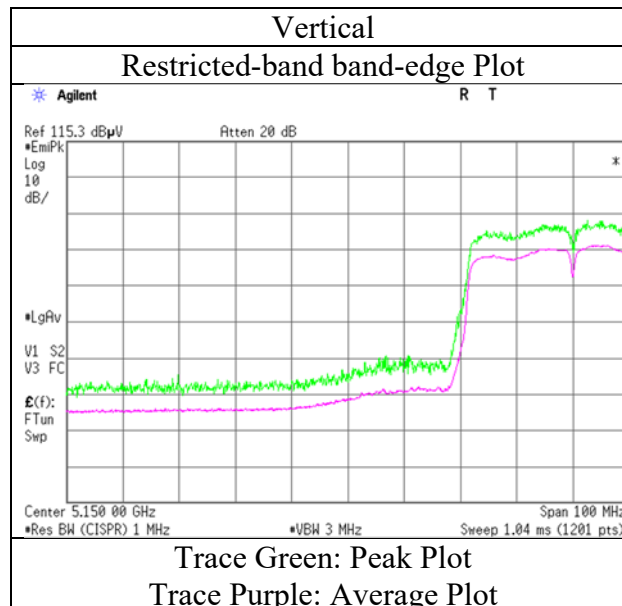
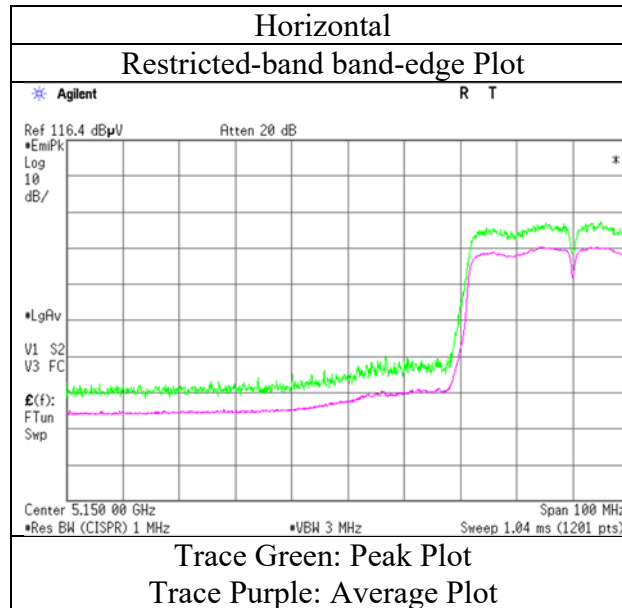
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5190 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5310 MHz

(above 1GHz 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	55.89	32.09	16.39	44.79	2.39	61.97	73.97	12.0	154	38	VBW: 3 kHz
Hori.	5350.000	AV	42.63	32.09	16.39	44.79	2.39	48.71	53.97	5.2	154	38	
Vert.	5350.000	PK	55.08	32.09	16.39	44.79	2.39	61.16	73.97	12.8	134	247	VBW: 3 kHz
Vert.	5350.000	AV	41.52	32.09	16.39	44.79	2.39	47.60	53.97	6.3	134	247	

*This mode was performed only band edges measurement.

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

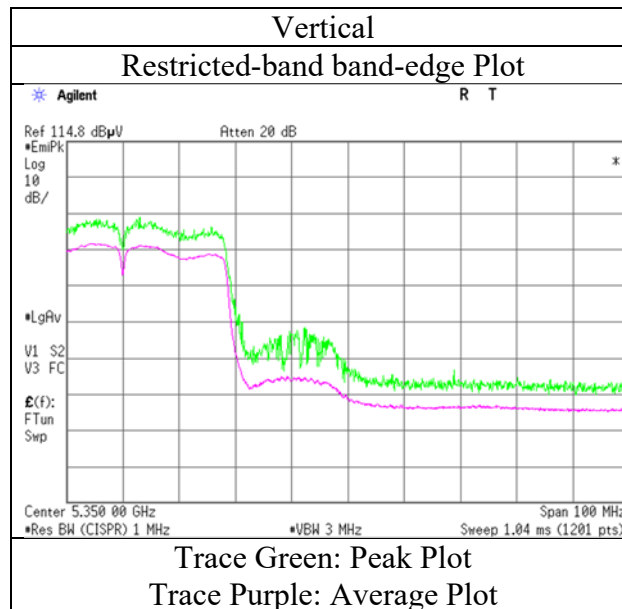
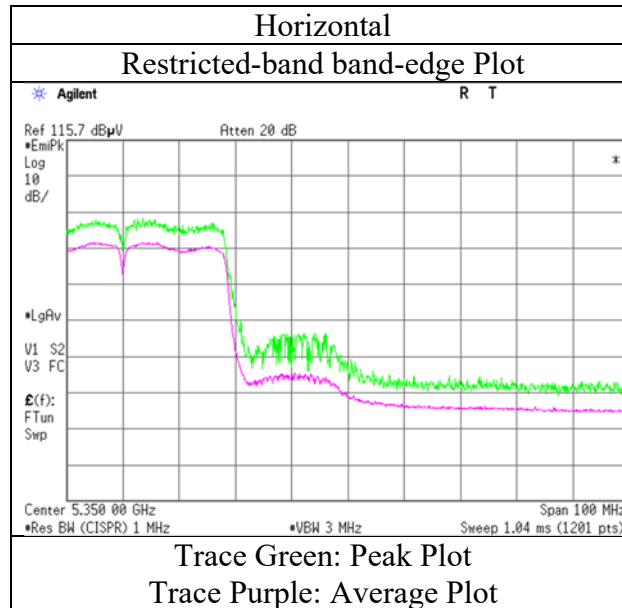
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5310 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-40 5510 MHz

(above 1GHz 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.	5460.000	PK	50.70	32.14	16.36	44.87	2.39	56.72	73.97	17.2	158	27	VBW: 3 kHz
Hori.	5460.000	AV	39.69	32.14	16.36	44.87	2.39	45.71	53.97	8.2	158	27	
Vert.	5460.000	PK	50.43	32.14	16.36	44.87	2.39	56.45	73.97	17.5	128	95	VBW: 3 kHz
Vert.	5460.000	AV	39.40	32.14	16.36	44.87	2.39	45.42	53.97	8.5	128	95	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	54.88	32.15	16.35	44.88	2.39	60.89	-34.31	-27.00	7.3	158	27	
Vert.	5470.000	PK	55.14	32.15	16.35	44.88	2.39	61.15	-34.05	-27.00	7.1	128	95	

*This mode was performed only band edges measurement.

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

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

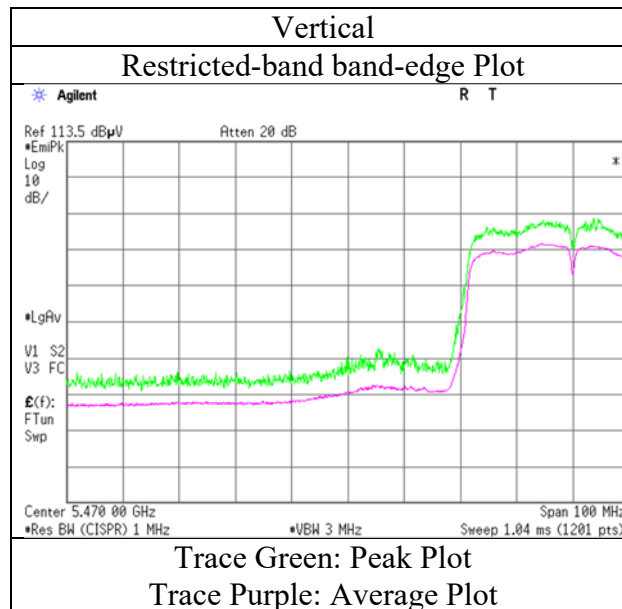
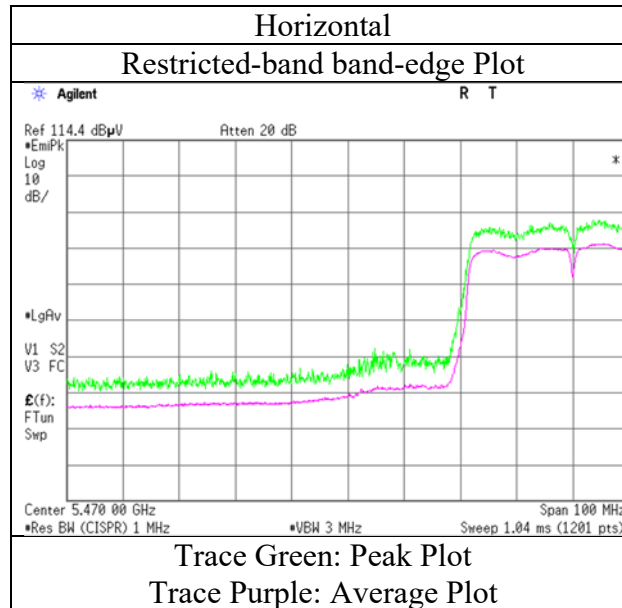
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5510 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 28, 2018
Temperature / Humidity 25 deg. C / 37 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-40 5670 MHz

(Calculation) (above 1GHz 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.	5725.000	PK	51.64	32.53	16.59	44.87	2.39	58.28	-36.92	-27.00	9.9	142	38	
Vert.	5725.000	PK	50.96	32.53	16.59	44.87	2.39	57.60	-37.60	-27.00	10.6	149	110	

*This mode was performed only band edges measurement.

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)

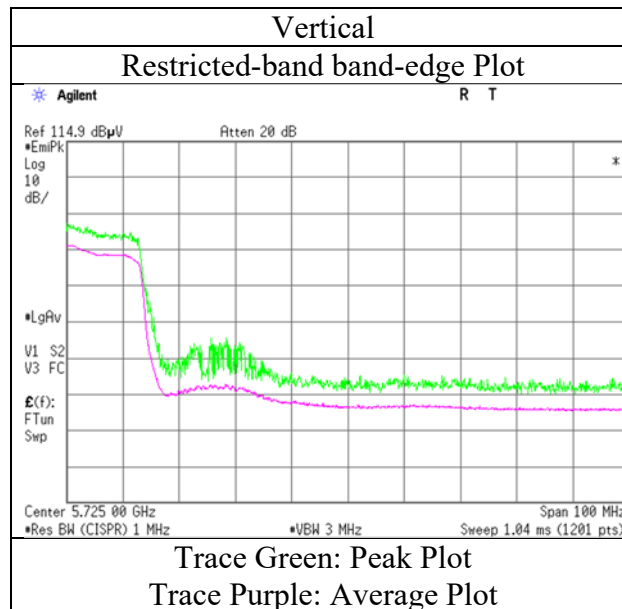
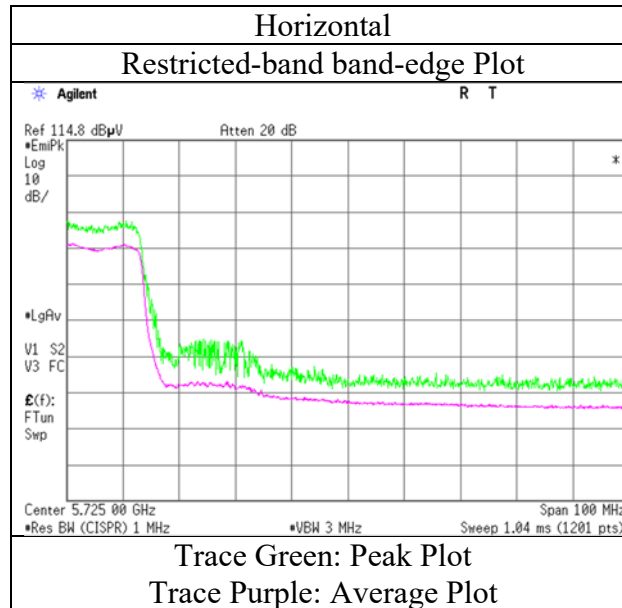
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 28, 2018
Temperature / Humidity	25 deg. C / 37 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5670 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 29, 2018
Temperature / Humidity 23 deg. C / 35 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-40 5755 MHz

(Calculation) (above 1GHz 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	49.91	32.41	16.50	44.88	2.39	56.33	-38.87	-27.00	11.9	154	34	
Hori.	5700.000	PK	51.41	32.49	16.56	44.88	2.39	57.97	-37.23	10.00	47.2	154	34	
Hori.	5720.000	PK	59.78	32.53	16.59	44.87	2.39	66.42	-28.78	15.60	44.4	154	34	
Hori.	5725.000	PK	59.06	32.53	16.59	44.87	2.39	65.70	-29.50	27.00	56.5	154	34	
Vert.	5650.000	PK	49.61	32.41	16.50	44.88	2.39	56.03	-39.17	-27.00	12.2	126	118	
Vert.	5700.000	PK	51.94	32.49	16.56	44.88	2.39	58.50	-36.70	10.00	46.7	126	118	
Vert.	5720.000	PK	59.94	32.53	16.59	44.87	2.39	66.58	-28.62	15.60	44.2	126	118	
Vert.	5725.000	PK	60.13	32.53	16.59	44.87	2.39	66.77	-28.43	27.00	55.4	126	118	

*This mode was performed only band edges measurement.

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)

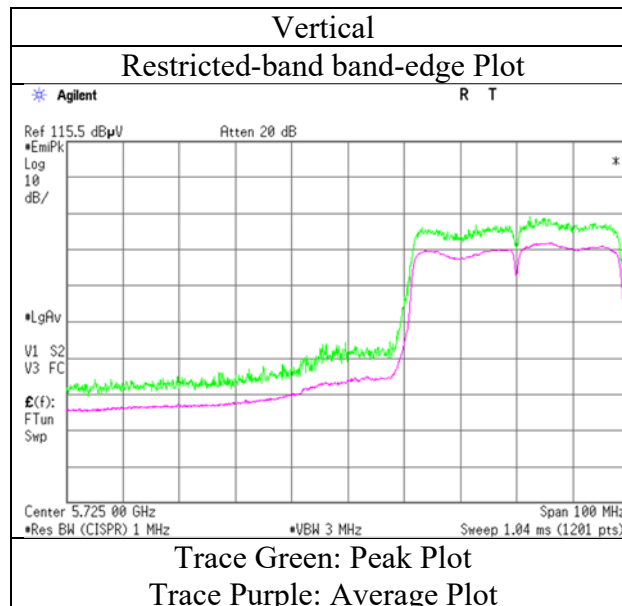
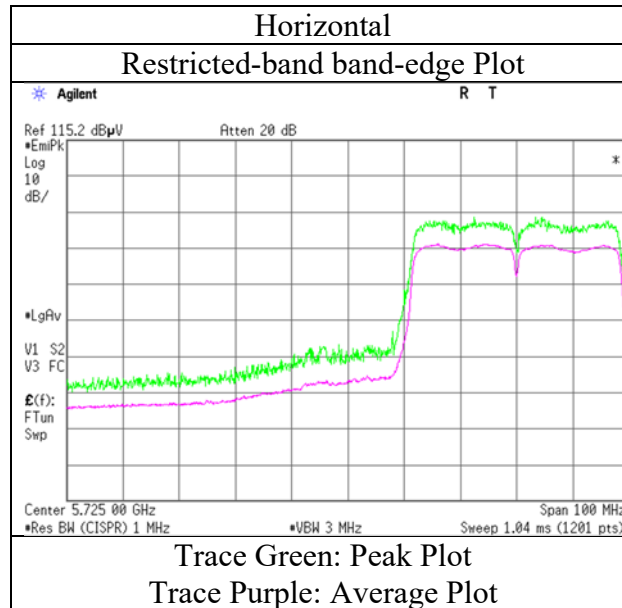
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5755 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 29, 2018
Temperature / Humidity 23 deg. C / 35 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-40 5795 MHz

(Calculation) (above 1GHz 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	51.07	32.74	16.73	44.86	2.39	58.07	-37.13	27.00	64.1	146	33	
Hori.	5855.000	PK	50.32	32.75	16.73	44.86	2.39	57.33	-37.87	15.60	53.5	146	33	
Hori.	5875.000	PK	49.91	32.78	16.76	44.86	2.39	56.98	-38.22	10.00	48.2	146	33	
Hori.	5925.000	PK	49.45	32.87	16.80	44.85	2.39	56.66	-38.54	-27.00	11.5	146	33	
Vert.	5850.000	PK	50.36	32.74	16.73	44.86	2.39	57.36	-37.84	27.00	64.8	147	114	
Vert.	5855.000	PK	50.04	32.75	16.73	44.86	2.39	57.05	-38.15	15.60	53.8	147	114	
Vert.	5875.000	PK	49.98	32.78	16.76	44.86	2.39	57.05	-38.15	10.00	48.2	147	114	
Vert.	5925.000	PK	49.53	32.87	16.80	44.85	2.39	56.74	-38.46	-27.00	11.5	147	114	

*This mode was performed only band edges measurement.

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)

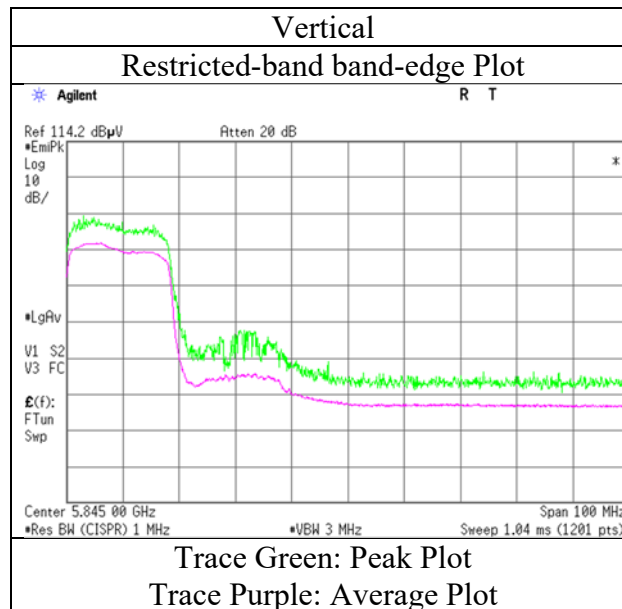
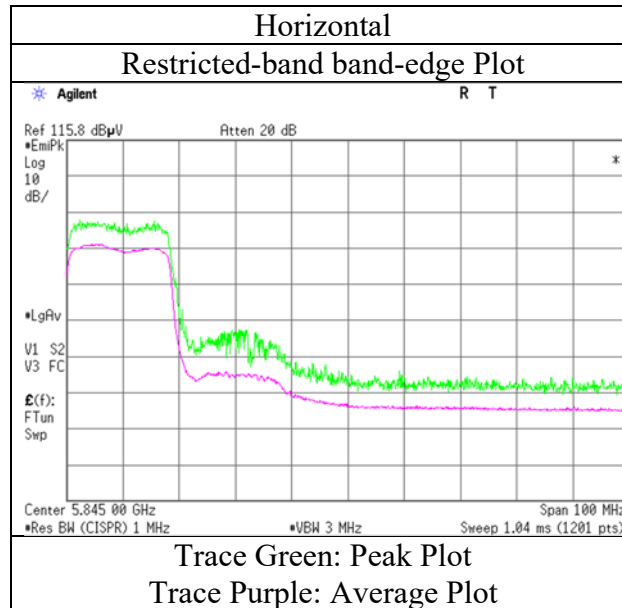
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-40 5795 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3 3 3 3
Date March 29, 2018 March 30, 2018 April 1, 2018 April 2, 2018
Temperature / Humidity 23 deg. C / 35 % RH 23 deg. C / 29 % RH 22 deg. C / 30 % RH 24 deg. C / 42 % RH
Engineer Kazuya Noda Yosuke Ishikawa Shiro Kobayashi Shiro Kobayashi
Antenna AH104N2450D1
Mode Tx 11ac-80 5210 MHz
(1 GHz - 13 GHz) (13 GHz - 18 GHz) (18 GHz - 26.5 GHz) (26.5 GHz - 40 GHz)

(above 1GHz 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	54.27	32.01	16.48	44.63	2.39	60.52	73.97	13.4	145	41	
Hori.	10420.000	PK	48.51	39.78	9.40	43.58	2.39	56.50	73.97	17.4	235	311	
Hori.	15630.000	PK	47.84	39.86	11.68	42.12	-9.54	47.72	73.90	26.1	157	151	
Hori.	20840.000	PK	56.60	39.80	12.72	47.13	-9.54	52.45	73.90	21.4	134	257	
Hori.	26050.000	PK	39.61	39.99	14.54	47.60	-9.54	37.00	73.90	36.9	150	1	
Hori.	5150.000	AV	40.79	32.01	16.48	44.63	2.39	47.04	53.97	6.9	145	41	VBW: 10 Hz
Hori.	10420.000	AV	36.29	39.78	9.40	43.58	2.39	44.28	53.97	9.6	235	311	VBW: 10 Hz
Hori.	15630.000	AV	36.82	39.86	11.68	42.12	-9.54	36.70	53.90	17.2	157	151	VBW: 10 Hz
Hori.	20840.000	AV	55.75	39.80	12.72	47.13	-9.54	51.60	53.90	2.3	134	257	VBW: 10 Hz
Hori.	26050.000	AV	27.25	39.99	14.54	47.60	-9.54	24.64	53.90	29.2	150	1	VBW: 10 Hz
Vert.	5150.000	PK	51.73	32.01	16.48	44.63	2.39	57.98	73.97	15.9	140	84	
Vert.	10420.000	PK	48.48	39.78	9.40	43.58	2.39	56.47	73.97	17.5	100	11	
Vert.	15630.000	PK	47.79	39.86	11.68	42.12	-9.54	47.67	73.90	26.2	152	342	
Vert.	20840.000	PK	56.97	39.80	12.72	47.13	-9.54	52.82	73.90	21.0	135	163	
Vert.	26050.000	PK	39.33	39.99	14.54	47.60	-9.54	36.72	73.90	37.1	150	1	
Vert.	5150.000	AV	37.24	32.01	16.48	44.63	2.39	43.49	53.97	10.4	140	84	VBW: 10 Hz
Vert.	10420.000	AV	36.51	39.78	9.40	43.58	2.39	44.50	53.97	9.4	100	11	VBW: 10 Hz
Vert.	15630.000	AV	36.69	39.86	11.68	42.12	-9.54	36.57	53.90	17.3	152	342	VBW: 10 Hz
Vert.	20840.000	AV	56.21	39.80	12.72	47.13	-9.54	52.06	53.90	1.8	135	163	VBW: 10 Hz
Vert.	26050.000	AV	27.19	39.99	14.54	47.60	-9.54	24.58	53.90	29.3	150	1	VBW: 10 Hz

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 20dB).

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

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

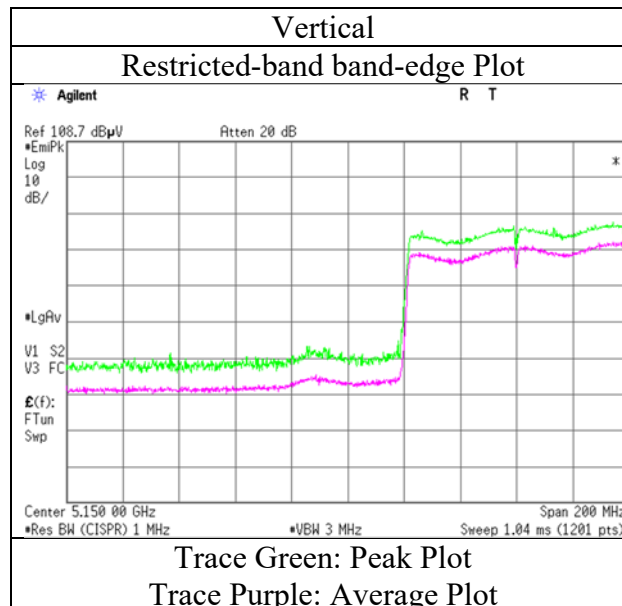
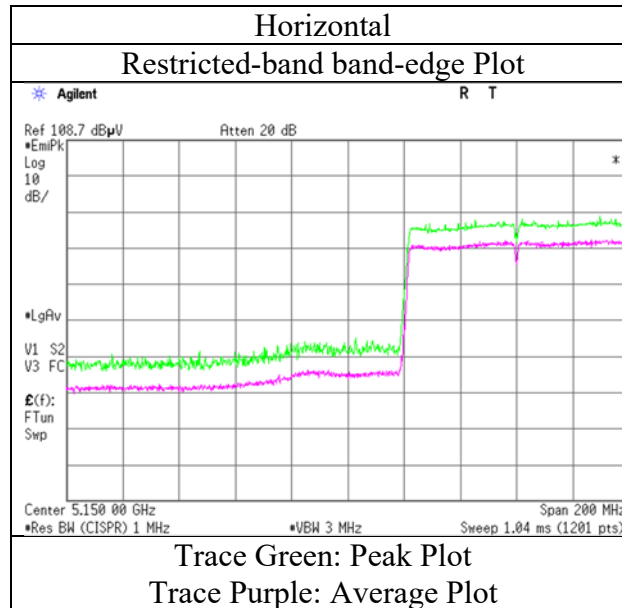
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz - 13 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5210 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5290 MHz

(above 1GHz 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	54.35	32.09	16.39	44.79	2.39	60.43	73.97	13.5	142	38	VBW: 10 Hz
Hori.	5350.000	AV	39.47	32.09	16.39	44.79	2.39	45.55	53.97	8.4	142	38	
Vert.	5350.000	PK	55.09	32.09	16.39	44.79	2.39	61.17	73.97	12.8	139	253	VBW: 10 Hz
Vert.	5350.000	AV	39.95	32.09	16.39	44.79	2.39	46.03	53.97	7.9	139	253	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

UL Japan, Inc.

Shonan EMC Lab.

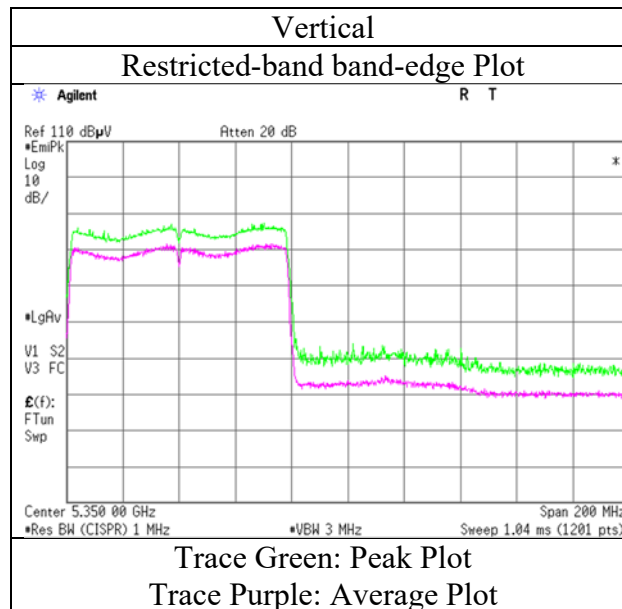
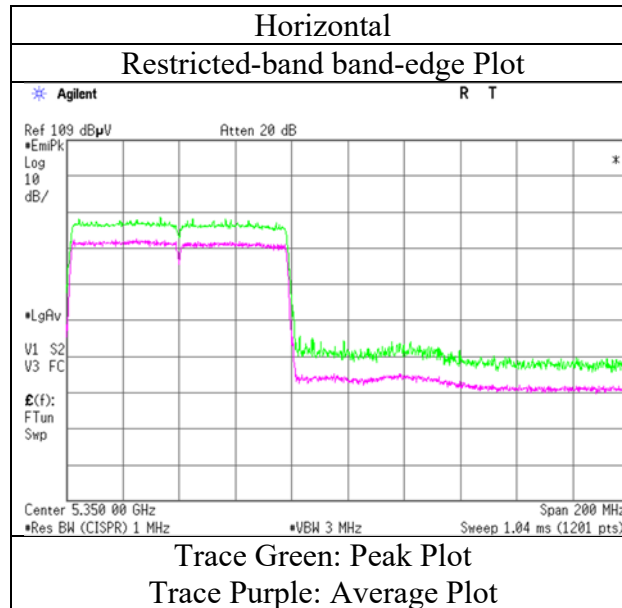
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5290 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5530 MHz

(above 1GHz 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.	5460.000	PK	56.46	32.14	16.36	44.87	2.39	62.48	73.97	11.4	143	45	VBW: 10 Hz
Hori.	5460.000	AV	41.12	32.14	16.36	44.87	2.39	47.14	53.97	6.8	143	45	
Vert.	5460.000	PK	55.43	32.14	16.36	44.87	2.39	61.45	73.97	12.5	125	102	VBW: 10 Hz
Vert.	5460.000	AV	41.05	32.14	16.36	44.87	2.39	47.07	53.97	6.9	125	102	

*This mode was performed only band edges measurement.

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 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

(Calculation) (above 1GHz 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.	5470.000	PK	54.09	32.15	16.35	44.88	2.39	60.10	-35.10	-27.00	8.1	143	45	
Vert.	5470.000	PK	52.47	32.15	16.35	44.88	2.39	58.48	-36.72	-27.00	9.7	125	102	

*This mode was performed only band edges measurement.

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

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

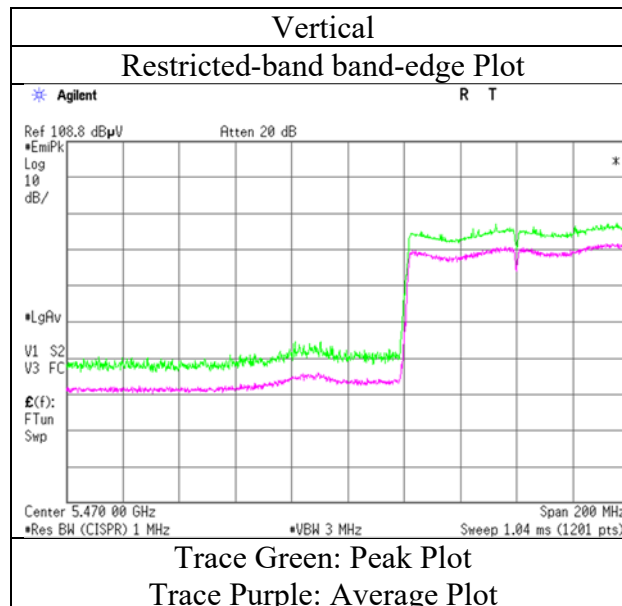
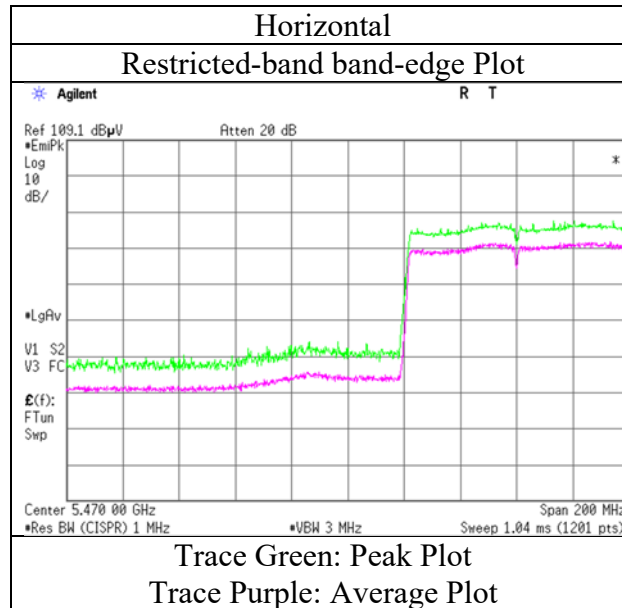
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20dB).

Distance factor : 1 GHz - 13 GHz : $20\log(3.95\text{ m} / 3.0\text{ m}) = 2.39\text{ dB}$

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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5530 MHz



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

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5610 MHz

(Calculation) (above 1GHz 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.	5470.000	PK	54.09	32.15	16.35	44.88	2.39	60.10	-35.10	-27.00	8.1	143	45	
Vert.	5470.000	PK	52.47	32.15	16.35	44.88	2.39	58.48	-36.72	-27.00	9.7	125	102	

*This mode was performed only band edges measurement.

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 20dB).

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

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB

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

UL Japan, Inc.

Shonan EMC Lab.

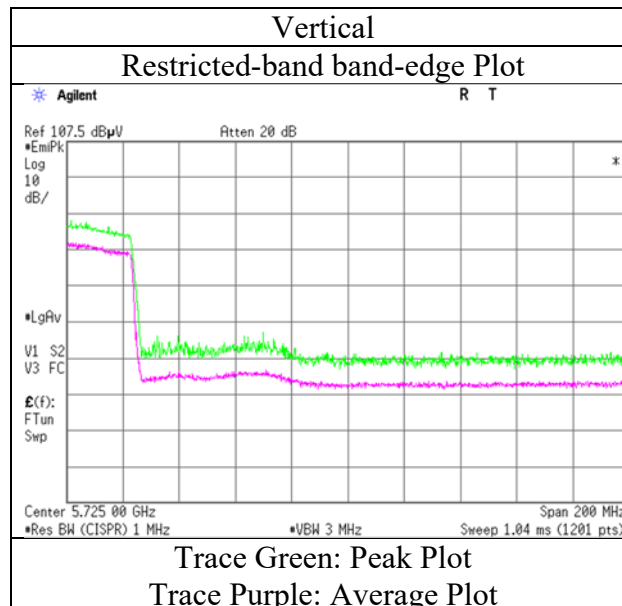
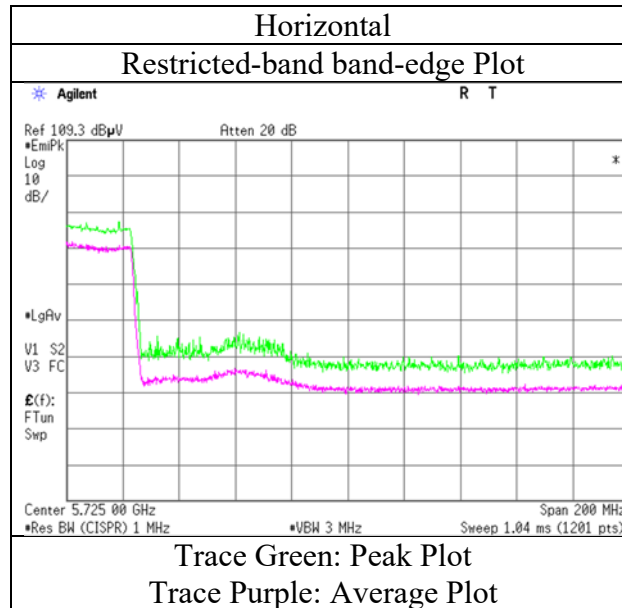
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5610 MHz



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

Radiated Spurious Emission

Report No. 12193629S-C-R2
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date March 29, 2018
Temperature / Humidity 23 deg. C / 35 % RH
Engineer Kazuya Noda
(1 GHz – 6.4 GHz)
Antenna AH104N2450D1
Mode Tx 11ac-80 5775 MHz

(Calculation) (above 1GHz 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	49.92	32.41	16.50	44.88	2.39	56.34	-38.86	-27.00	11.9	149	35	
Hori.	5700.000	PK	58.85	32.49	16.56	44.88	2.39	65.41	-29.79	10.00	39.8	149	35	
Hori.	5720.000	PK	56.81	32.53	16.59	44.87	2.39	63.45	-31.75	15.60	47.4	149	35	
Hori.	5725.000	PK	57.08	32.53	16.59	44.87	2.39	63.72	-31.48	27.00	58.5	149	35	
Hori.	5850.000	PK	60.98	32.74	16.73	44.86	2.39	67.98	-27.22	27.00	54.2	149	35	
Hori.	5855.000	PK	59.66	32.75	16.73	44.86	2.39	66.67	-28.53	15.60	44.1	149	35	
Hori.	5875.000	PK	53.36	32.78	16.76	44.86	2.39	60.43	-34.77	10.00	44.8	149	35	
Hori.	5925.000	PK	49.91	32.87	16.80	44.85	2.39	57.12	-38.08	-27.00	11.1	149	35	
Vert.	5650.000	PK	48.82	32.41	16.50	44.88	2.39	55.24	-39.96	-27.00	13.0	121	110	
Vert.	5700.000	PK	57.99	32.49	16.56	44.88	2.39	64.55	-30.65	10.00	40.7	121	110	
Vert.	5720.000	PK	55.17	32.53	16.59	44.87	2.39	61.81	-33.39	15.60	49.0	121	110	
Vert.	5725.000	PK	55.67	32.53	16.59	44.87	2.39	62.31	-32.89	27.00	59.9	121	110	
Vert.	5850.000	PK	57.71	32.74	16.73	44.86	2.39	64.71	-30.49	27.00	57.5	121	110	
Vert.	5855.000	PK	57.68	32.75	16.73	44.86	2.39	64.69	-30.51	15.60	46.1	121	110	
Vert.	5875.000	PK	52.67	32.78	16.76	44.86	2.39	59.74	-35.46	10.00	45.5	121	110	
Vert.	5925.000	PK	49.23	32.87	16.80	44.85	2.39	56.44	-38.76	-27.00	11.8	121	110	

*This mode was performed only band edges measurement.

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

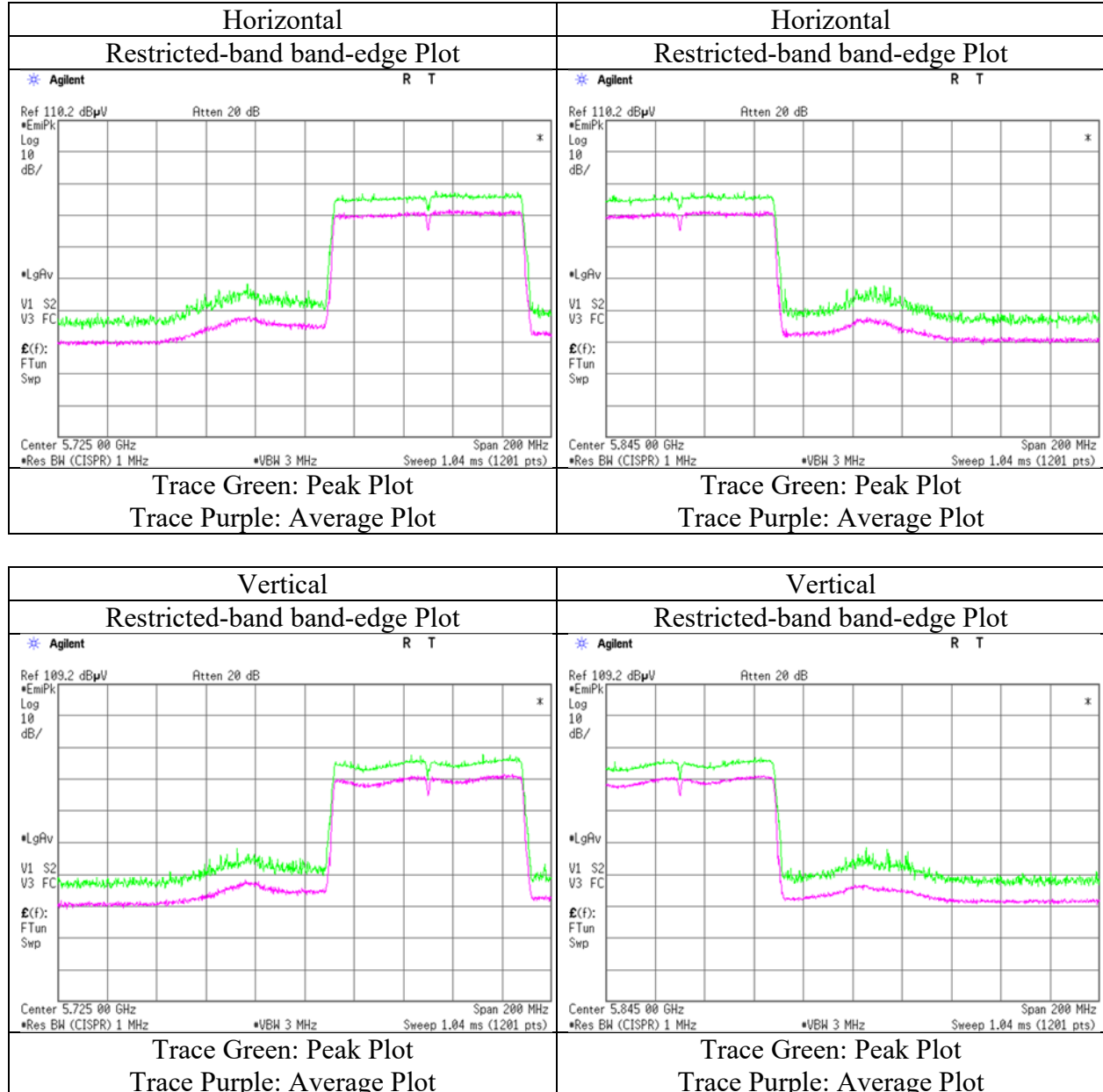
Result(EIRP[dBm])=10*LOG (({ 10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance:3[m]) ^ 2 } / 30) *10^3)

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

Distance factor : 1 GHz - 13 GHz : 20log (3.95 m / 3.0 m) = 2.39 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

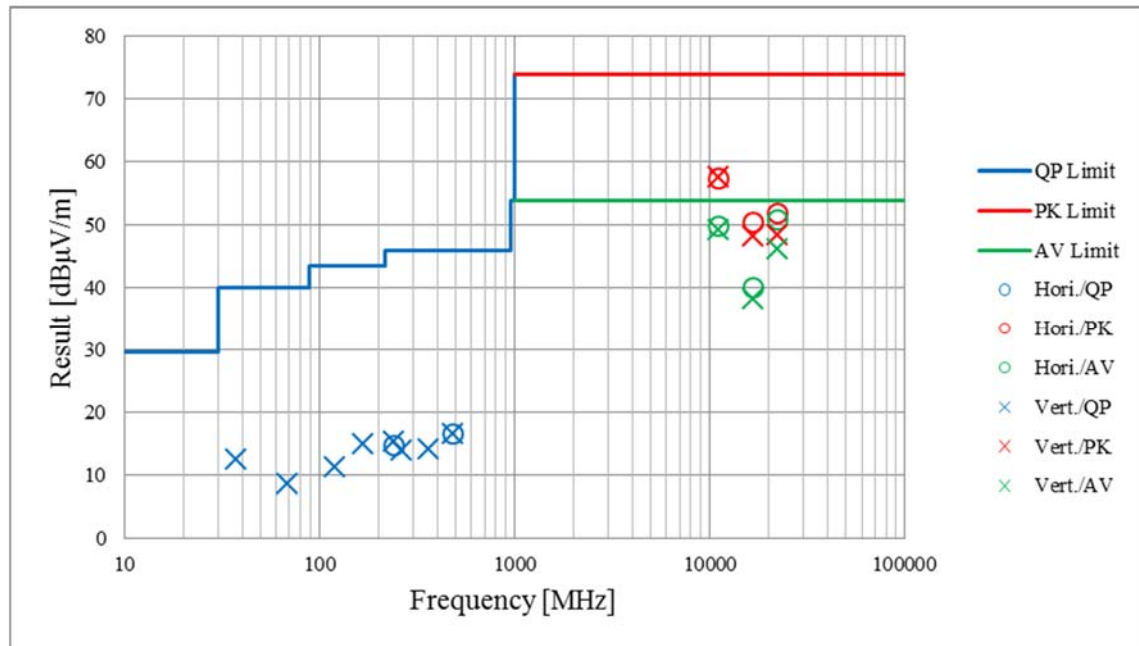
Report No.	12193629S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	March 29, 2018
Temperature / Humidity	23 deg. C / 35 % RH
Engineer	Kazuya Noda
	(1 GHz – 6.4 GHz)
Antenna	AH104N2450D1
Mode	Tx 11ac-80 5775 MHz



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

Radiated Spurious Emission
(Plot data, Worst case)

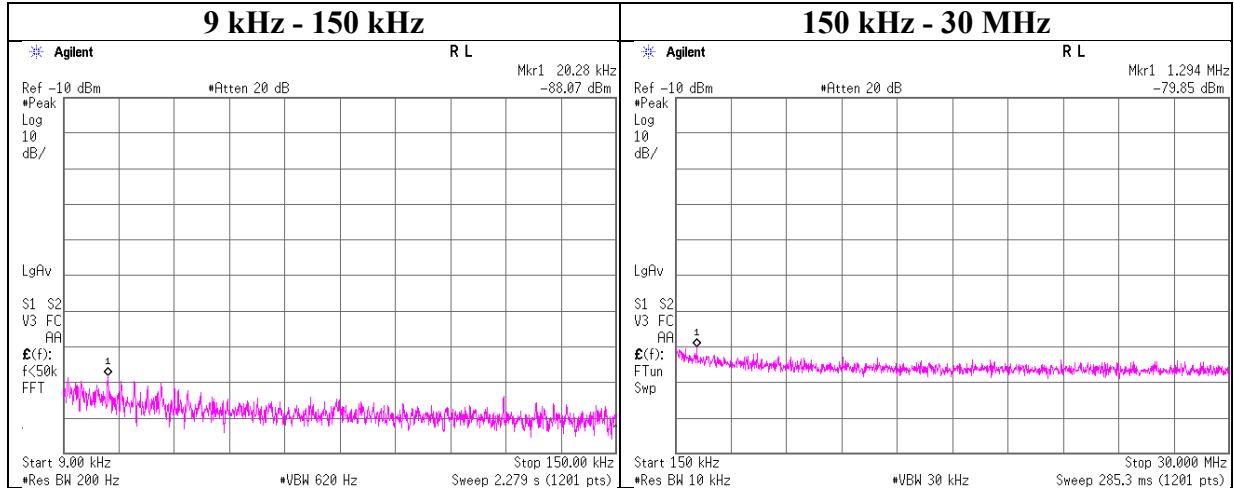
Report No.	12193629S-C-R2				
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	3	3	3	3	3
Date	April 4, 2018	March 27, 2018	March 30, 2018	April 1, 2018	April 2, 2018
Temperature / Humidity	20 deg. C / 57 % RH	22 deg. C / 35 % RH	23 deg. C / 29 % RH	22 deg. C / 30 % RH	24 deg. C / 42 % RH
Engineer	Shiro Kobayashi (30 MHz - 1 GHz)	Hiroyuki Morikawa (1 GHz - 13 GHz)	Yosuke Ishikawa (13 GHz - 18 GHz)	Shiro Kobayashi (18 GHz - 26.5 GHz)	Shiro Kobayashi (26.5 GHz - 40 GHz)
Antenna	AH104N2450D1				
Mode	Tx 11a 5580 MHz				



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

Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	12193629S-C-R2
Date	April 3, 2018
Temperature / Humidity	24 deg. C / 30 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a 5580 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenuator [dB]	Antenna Gain* [dBi]	N (Number of Output)	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
20.28	-88.1	0.01	9.8	4.5	1	-73.8	300	6.0	-12.5	41.4	53.9	
1294.00	-79.9	0.02	9.8	4.5	1	-65.5	30	6.0	15.7	25.3	9.6	

$E [dBuV/m] = EIRP [dBm] - 20 \log (Distance [m]) + Ground\ bounce [dB] + 104.8 [dBuV/m]$

$EIRP [dBm] = Reading [dBm] + Cable\ loss [dB] + Attenuator\ Loss [dB] + Antenna\ gain [dBi] + 10 * \log (N)$

N: Number of output

UL Japan, Inc.

Shonan EMC Lab.

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

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

APPENDIX 2: Test instruments

Test Instruments (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SRENT-09	Spectrum Analyzer	Agilent	E4440A	MY46186392	AT	2017/11/08 * 12
SPM-07	Power Meter	Agilent	8990B	MY5100272	AT	2017/05/01 * 12
SPSS-04	Power sensor	Agilent	N1923A	MY5326009	AT	2017/05/01 * 12
SAT10-16	Attenuator	Weinschel Corp.	54A-10	83420	AT	2017/12/08 * 12
SCC-G12	Coaxial Cable	Suhner	SUCOFLEX 102	30790/2	AT	2018/03/19 * 12
SOS-13	Humidity Indicator	Custom	CTH-202	Q.C.17	AT	2017/12/21 * 12
KTS-08	Digital Tester	SANWA	PC500	7019224	AT	2018/03/05 * 12
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	AT	2017/08/20 * 12
STS-05	Digital Hitester	Hioki	3805-50	080997828	AT	2017/10/16 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2017/12/21 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	2046104	RE	2017/09/22 * 12
SCC-G06	Coaxial Cable	Junkosha	J12J102207-00	MAY-23-16-091	RE	2017/06/13 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2017/05/08 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2017/08/23 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2017/10/30 * 12
KSA-08	Spectrum Analyzer	Agilent	E4446A	MY46180525	RE	2017/10/10 * 12
SJM-02	Measure	KOMELON	KMC-36	-	RE,CE	-
SAEC-03(SVS WR)	Semi-Anechoic Chamber	TDK	SAEC-03(SVSW R)	3	RE	2017/07/17 * 12
COTS-SEMI-I	EMI Software	TSJ	TEPTO-DV(RE, CE,RFI,MF)	-	RE,CE	-
STS-03	Digital Hitester	Hioki	3805-50	080997823	RE,CE	2017/10/16 * 12
SAT10-06	Attenuator	Agilent	8493C-010	74865	RE	2017/11/22 * 12
SFL-03	Highpass Filter	MICRO-TRONICS	HPM50112	028	RE	2017/11/16 * 12
SCC-G40	Coaxial Cable	Junkosha	MWX221-01000 NFSNMS/B	1612S005	RE	2018/01/29 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2017/06/11 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM9861	RE	2017/07/11 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2018/03/27 * 12
SCC-G33	Coaxial Cable	Junkosha	MWX241-01000 KMSKMS	-	RE	2017/04/20 * 12
SCC-G45	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102 E	800137/2EA	RE	2018/03/28 * 12
SHA-06	Horn Antenna	ETS LINDGREN	3160-10	LM3459	RE	2018/03/22 * 12
SAF-10	Pre Amplifier	TOYO Corporation	HAP26-40W	00000010	RE	2018/03/27 * 12
STR-08	Test Receiver	Rohde & Schwarz	ESW44	101581	RE,CE	2017/11/24 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2017/10/02 * 12
SLA-07	Logperiodic Antenna	Schwarzbeck	VUSLP9111B	196	RE	2018/01/30 * 12
SAT6-08	Attenuator	HIROSE ELECTRIC CO.,LTD.	AT-406(40)	-	RE	2017/08/24 * 12
SCC-C1/C2/C3/ C4/C5/C10/SRS E-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhn er/Suhner/Suhner/Suhn er/TOYO	8D2W/12DSFA/ 141PE/141PE/14 1PE/141PE/NS4 906	-/0901-271(RF Selector)	RE	2017/04/07 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2018/02/16 * 12

UL Japan, Inc.

Shonan EMC Lab.

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

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Test Instruments (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SCC-C9/C10/SR SE-03	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/ NS4906	-/0901-271(RF Selector)	CE	2018/04/09 * 12
SLS-05	LISN	Rohde & Schwarz	ENV216	100516	CE	2018/02/26 * 12
SAT3-10	Attenuator	JFW	50HF-003N	-	CE	2017/08/24 * 12
SOS-06	Humidity Indicator	A&D	AD-5681	4062118	CE	2017/12/21 * 12
STM-05	Terminator	TME	CT-01 BP	-	CE	2017/12/14 * 12
SLS-04	LISN	Rohde & Schwarz	ENV216	100514	CE	2018/02/27 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test item:

CE: Conducted Emission

RE: Radiated Emission

AT: Antenna Terminal Conducted test