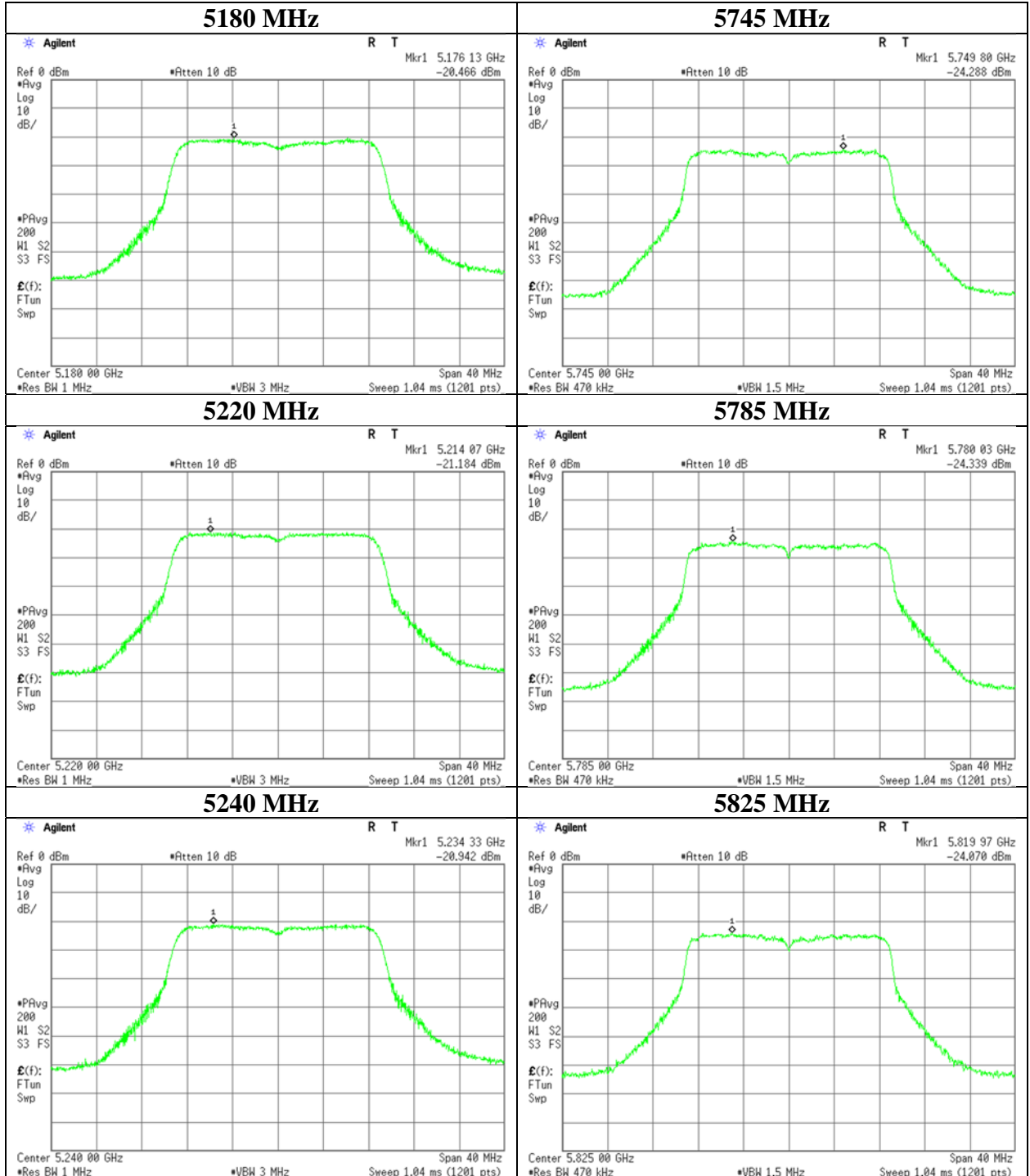


Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20 Antenna 1



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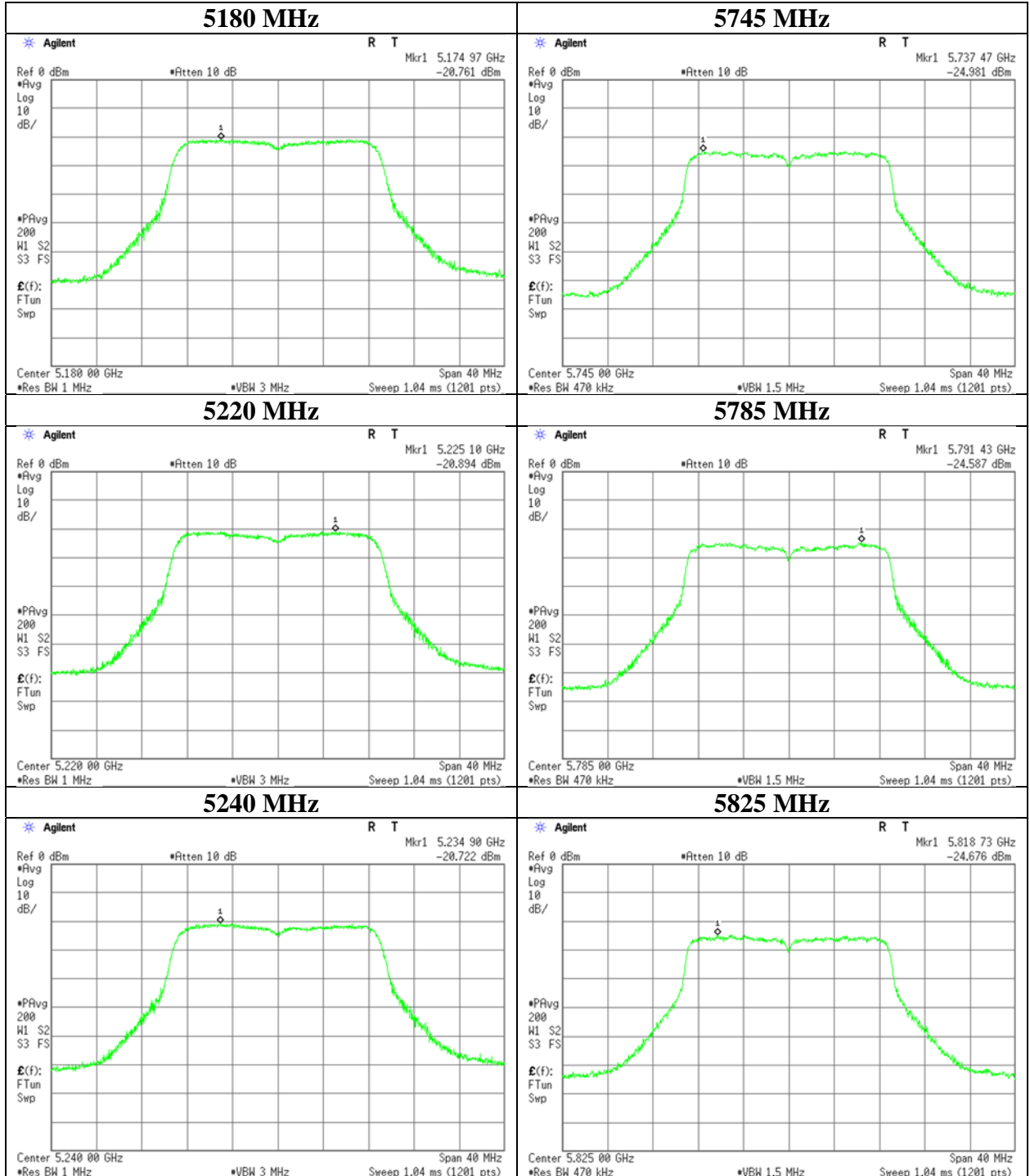
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-20 Antenna 1



UL Japan, Inc.

Ise EMC Lab.

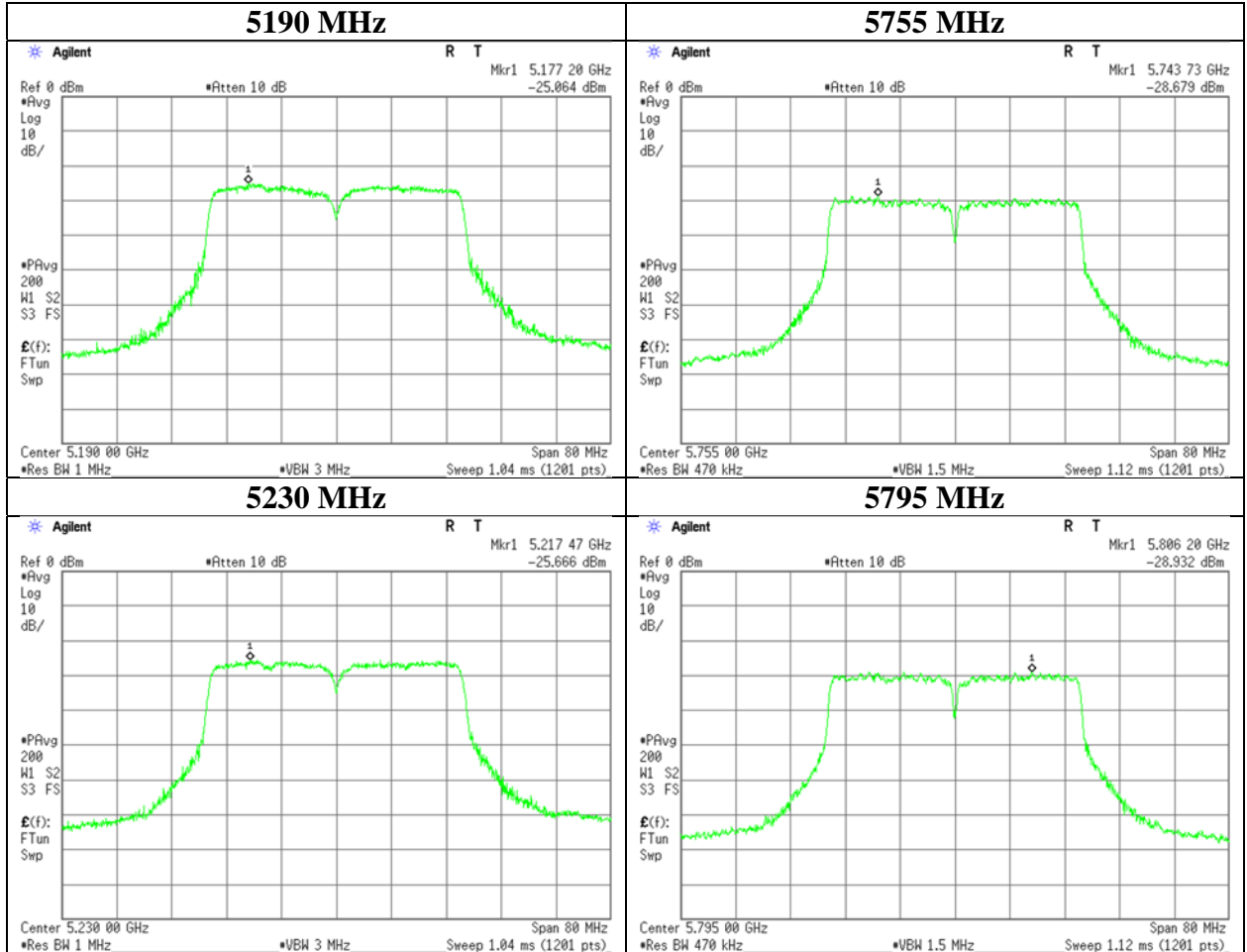
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40 Antenna 1



UL Japan, Inc.

Ise EMC Lab.

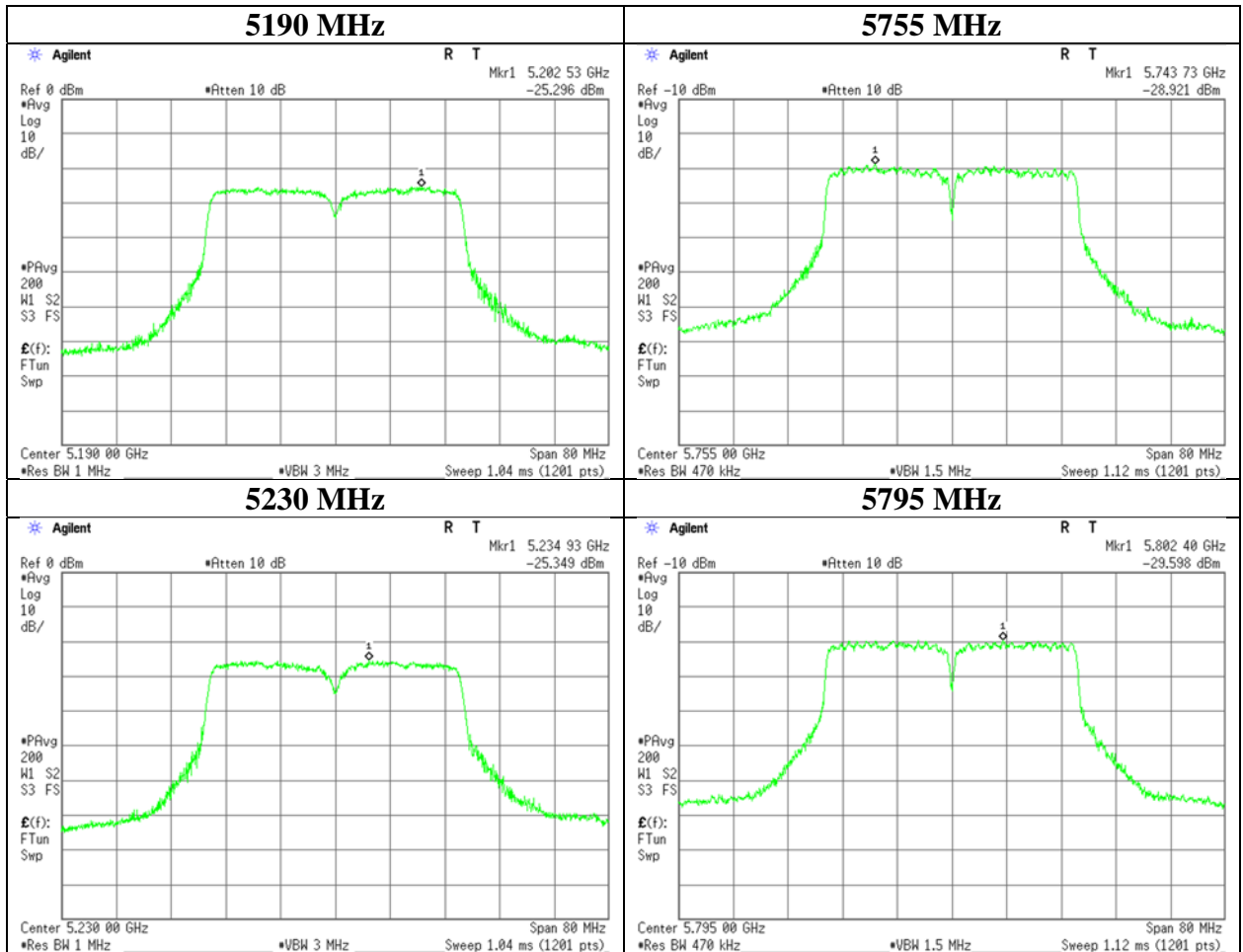
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11n-40 Antenna 2



UL Japan, Inc.

Ise EMC Lab.

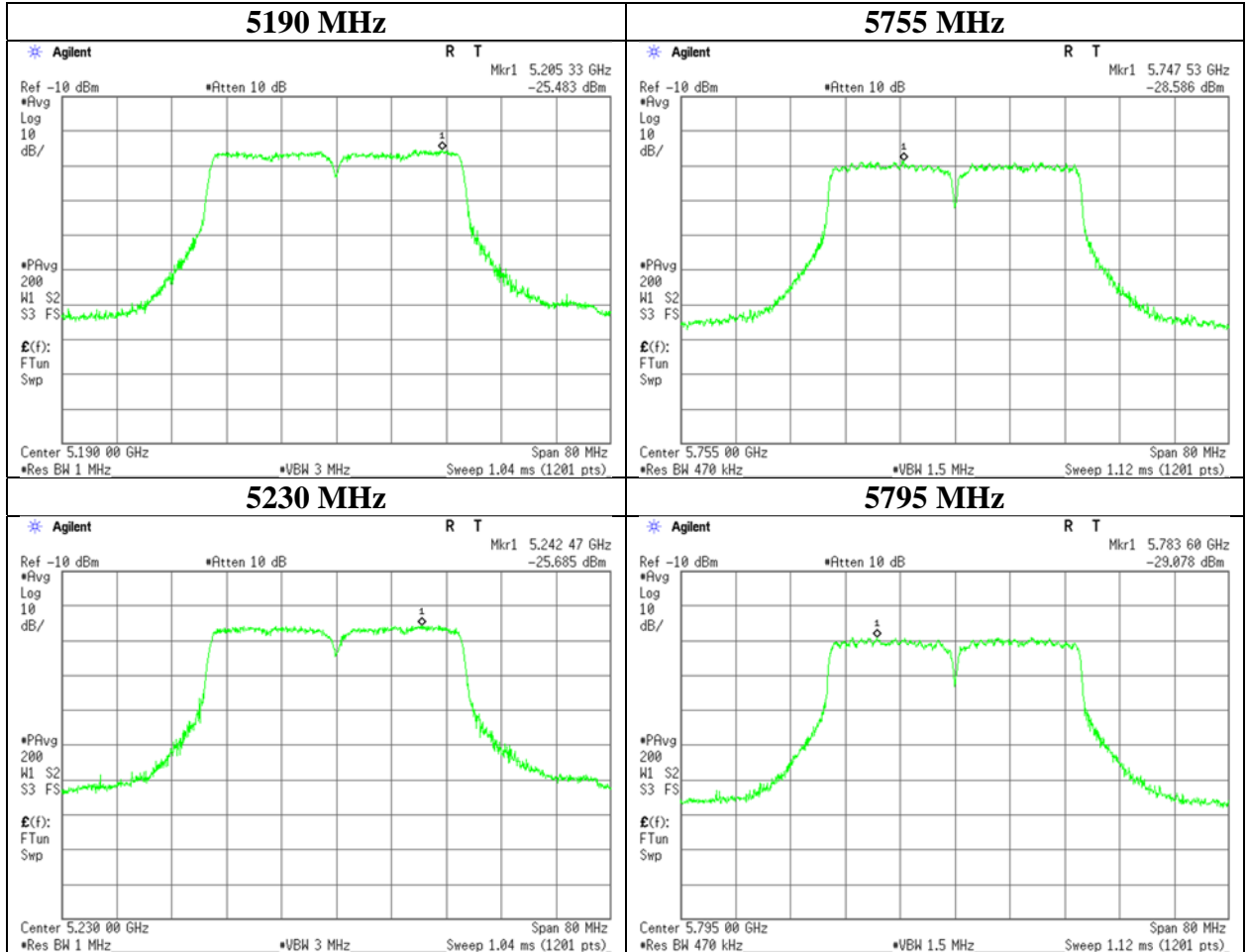
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 Antenna 1



UL Japan, Inc.

Ise EMC Lab.

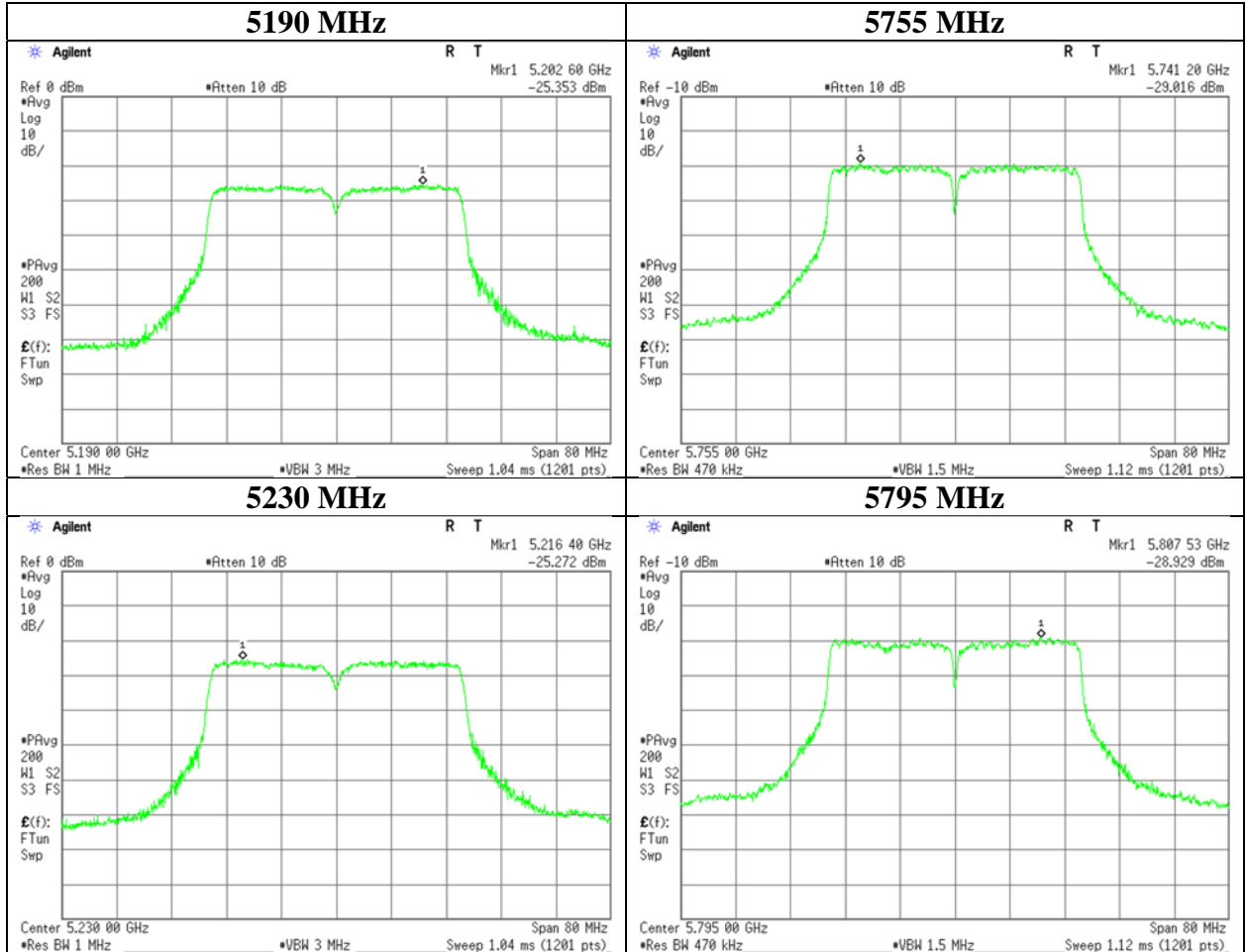
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-40 Antenna 2



UL Japan, Inc.

Ise EMC Lab.

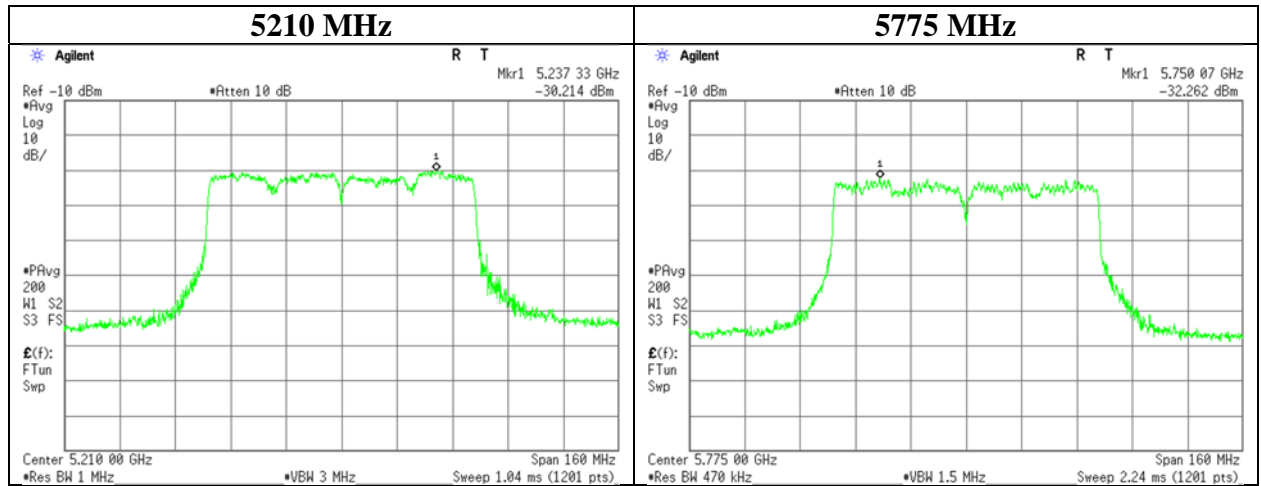
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No. 13828809H
Test place Ise EMC Lab. No.6 Measurement Room
Date June 18, 2021
Temperature / Humidity 22 deg. C / 62 % RH
Engineer Takafumi Noguchi
Mode Tx 11ac-80 Antenna 1



UL Japan, Inc.

Ise EMC Lab.

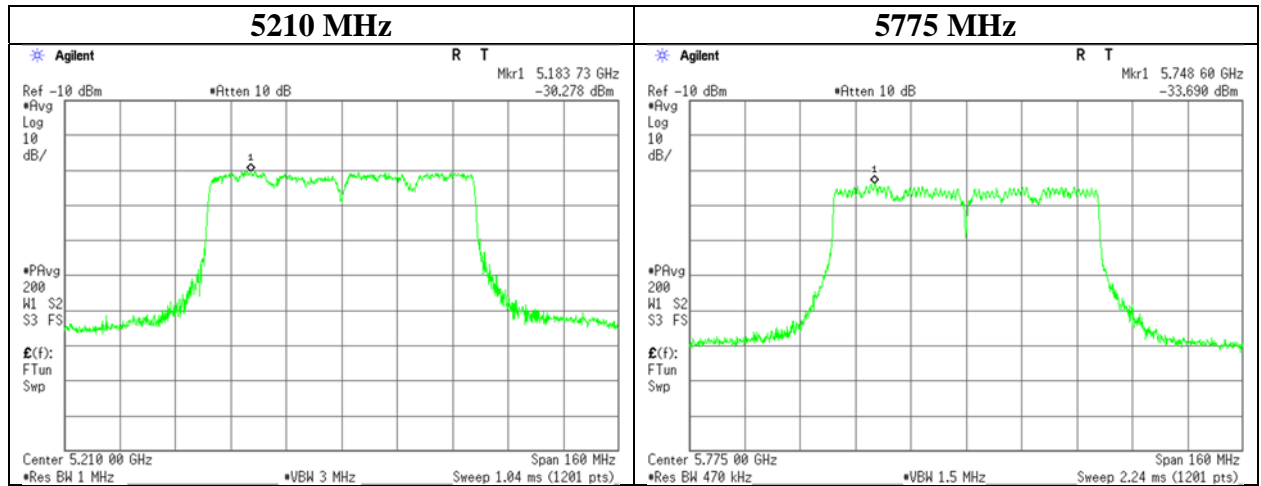
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Maximum Power Spectral Density

Report No.	13828809H
Test place	Ise EMC Lab. No.6 Measurement Room
Date	June 18, 2021
Temperature / Humidity	22 deg. C / 62 % RH
Engineer	Takafumi Noguchi
Mode	Tx 11ac-80 Antenna 2



Radiated Spurious Emission

Report No.	13828809H					
Test place	Ise EMC Lab.					
Semi Anechoic Chamber	No.2	No.2	No.2	No.2	No.2	No.2
Date	June 17, 2021	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	20 deg. C / 60 % RH	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH	23 deg. C / 66 % RH
Engineer	Junya Okuno	Junki Nagatomi	Junya Okuno	Junya Okuno	Junya Okuno	Takafumi Noguchi
Mode	(Below 1 GHz)	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
	Tx 11a 5180 MHz					

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	30.000	QP	22.1	18.5	6.7	28.5	-	18.9	40.0	21.1	
Hori.	106.962	QP	22.5	11.2	7.5	28.3	-	13.0	43.5	30.5	
Hori.	191.520	QP	25.6	16.0	8.1	27.9	-	21.8	43.5	21.7	
Hori.	214.695	QP	29.4	11.2	8.3	27.8	-	21.1	43.5	22.5	
Hori.	233.352	QP	33.0	11.3	8.4	27.7	-	25.0	46.0	21.0	
Hori.	913.954	QP	27.0	22.1	11.4	28.7	-	31.7	46.0	14.3	
Hori.	1579.983	PK	61.3	25.3	3.6	35.1	-	55.1	73.9	18.9	
Hori.	2500.000	PK	46.8	27.4	4.1	34.6	-	43.7	68.2	24.5	
Hori.	4999.883	PK	48.1	31.6	5.2	33.8	-	51.0	73.9	22.9	
Hori.	5150.000	PK	49.7	31.9	5.3	33.7	-	53.2	73.9	20.7	
Hori.	10000.000	PK	48.2	39.3	-2.8	34.3	-	50.4	68.2	17.8	
Hori.	10360.000	PK	44.0	40.2	-2.7	34.0	-	47.5	68.2	20.8	
Hori.	15540.000	PK	43.7	37.4	-1.1	32.9	-	47.0	73.9	27.0	Floor noise
Hori.	1579.983	AV	52.4	25.3	3.6	35.1	-	46.2	53.9	7.8	
Hori.	2500.000	AV	39.5	27.4	4.1	34.6	-	36.5	53.9	17.4	
Hori.	4999.883	AV	43.9	31.6	5.2	33.8	-	46.8	53.9	7.1	
Hori.	5150.000	AV	40.1	31.9	5.3	33.7	2.2	45.8	53.9	8.1	*1)
Hori.	15540.000	AV	35.2	37.4	-1.1	32.9	-	38.5	53.9	15.4	Floor noise
Vert.	30.128	QP	23.7	18.5	6.7	28.5	-	20.4	40.0	19.6	
Vert.	82.212	QP	27.7	6.8	7.3	28.4	-	13.5	40.0	26.5	
Vert.	191.623	QP	22.4	16.0	8.1	27.9	-	18.6	43.5	24.9	
Vert.	214.690	QP	23.0	11.2	8.3	27.8	-	14.7	43.5	28.9	
Vert.	233.418	QP	25.9	11.3	8.4	27.7	-	17.9	46.0	28.1	
Vert.	913.966	QP	24.4	22.1	11.4	28.7	-	29.1	46.0	16.9	
Vert.	1579.983	PK	63.4	25.3	3.6	35.1	-	57.1	73.9	16.8	
Vert.	2500.000	PK	47.6	27.4	4.1	34.6	-	44.5	68.2	23.7	
Vert.	4999.883	PK	47.7	31.6	5.2	33.8	-	50.7	73.9	23.2	
Vert.	5150.000	PK	44.7	31.9	5.3	33.7	-	48.1	73.9	25.8	
Vert.	6906.601	PK	46.4	34.6	5.9	33.5	-	53.5	68.2	14.7	
Vert.	10000.000	PK	46.7	39.3	-2.8	34.3	-	48.9	68.2	19.3	
Vert.	10360.000	PK	42.8	40.2	-2.7	34.0	-	46.3	68.2	21.9	Floor noise
Vert.	15540.000	PK	43.4	37.4	-1.1	32.9	-	46.7	73.9	27.3	Floor noise
Vert.	1579.983	AV	52.4	25.3	3.6	35.1	-	46.1	53.9	7.8	
Vert.	2500.000	AV	42.5	27.4	4.1	34.6	-	39.4	53.9	14.5	
Vert.	4999.883	AV	42.9	31.6	5.2	33.8	-	45.8	53.9	8.1	
Vert.	5150.000	AV	34.4	31.9	5.3	33.7	2.2	40.1	53.9	13.8	*1)
Vert.	15540.000	AV	35.1	37.4	-1.1	32.9	-	38.4	53.9	15.5	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

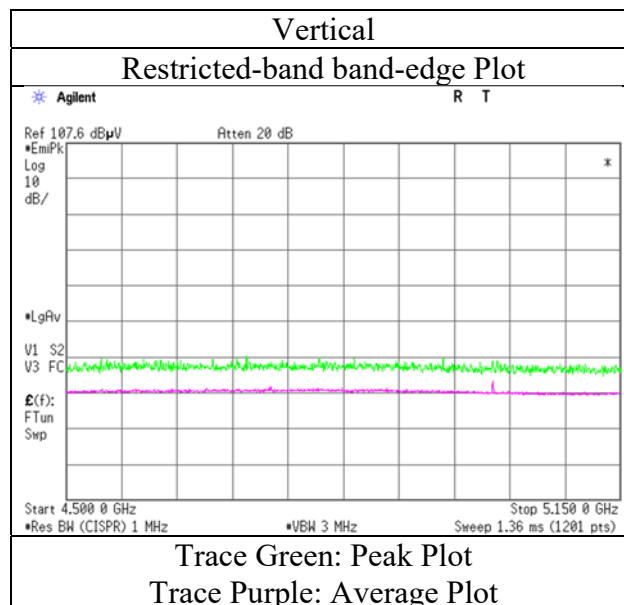
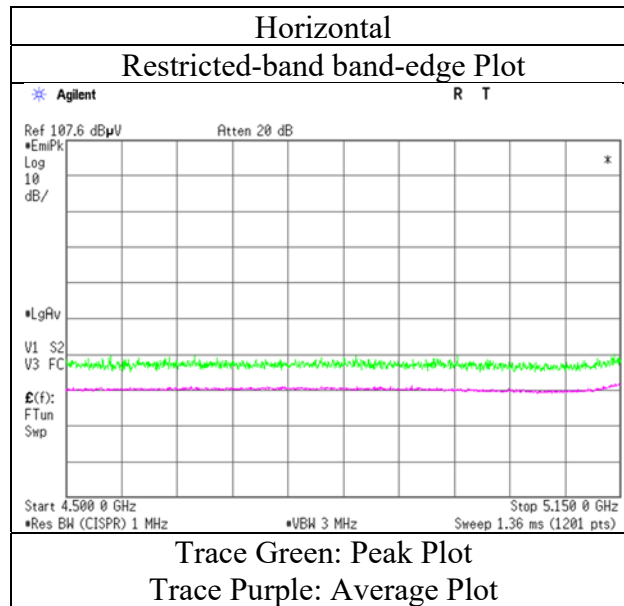
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Junya Okuno
(1 GHz - 10 GHz)
Mode Tx 11a 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Junya Okuno	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11a 5220 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.983	PK	61.2	25.3	3.6	35.1	-	54.9	73.9	19.0	
Hori.	2500.000	PK	46.4	27.4	4.1	34.6	-	43.3	68.2	24.9	
Hori.	4999.883	PK	48.0	31.6	5.2	33.8	-	51.0	73.9	23.0	
Hori.	10000.000	PK	48.0	39.3	-2.8	34.3	-	50.2	68.2	18.0	
Hori.	10440.000	PK	44.6	40.3	-2.7	34.0	-	48.2	68.2	20.0	
Hori.	15660.000	PK	45.8	37.4	-1.1	33.0	-	49.0	73.9	24.9	Floor noise
Hori.	1579.983	AV	52.6	25.3	3.6	35.1	-	46.3	53.9	7.6	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	4999.883	AV	43.2	31.6	5.2	33.8	-	46.1	53.9	7.8	
Hori.	15660.000	AV	35.6	37.4	-1.1	33.0	-	38.8	53.9	15.1	Floor noise
Vert.	1579.983	PK	63.2	25.3	3.6	35.1	-	56.9	73.9	17.0	
Vert.	2500.000	PK	47.4	27.4	4.1	34.6	-	44.3	68.2	23.9	
Vert.	4999.883	PK	47.7	31.6	5.2	33.8	-	50.7	73.9	23.2	
Vert.	6959.997	PK	47.7	35.0	5.9	33.5	-	55.1	68.2	13.1	
Vert.	10000.000	PK	46.8	39.3	-2.8	34.3	-	49.0	68.2	19.2	
Vert.	10440.000	PK	43.1	40.3	-2.7	34.0	-	46.7	68.2	21.5	Floor noise
Vert.	15660.000	PK	44.4	37.4	-1.1	33.0	-	47.7	73.9	26.3	Floor noise
Vert.	1579.983	AV	52.3	25.3	3.6	35.1	-	46.0	53.9	7.9	
Vert.	2500.000	AV	41.8	27.4	4.1	34.6	-	38.8	53.9	15.1	
Vert.	4999.883	AV	43.7	31.6	5.2	33.8	-	46.6	53.9	7.3	
Vert.	15660.000	AV	35.5	37.4	-1.1	33.0	-	38.8	53.9	15.1	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Junya Okuno	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11a 5240 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.981	PK	64.7	25.3	3.6	35.1	-	58.4	73.9	15.5	
Hori.	2500.000	PK	48.2	27.4	4.1	34.6	-	45.2	68.2	23.0	
Hori.	5000.078	PK	51.0	31.6	5.2	33.8	-	53.9	73.9	20.0	
Hori.	5350.000	PK	47.7	31.5	5.3	33.6	-	51.0	73.9	23.0	
Hori.	10000.080	PK	48.7	39.3	-2.8	34.3	-	50.9	68.2	17.3	
Hori.	10480.000	PK	43.4	40.1	-2.7	34.0	-	46.9	68.2	21.4	
Hori.	15720.000	PK	43.9	37.0	-1.1	33.0	-	46.6	73.9	27.3	Floor noise
Hori.	1579.981	AV	52.3	25.3	3.6	35.1	-	46.0	53.9	7.9	
Hori.	2500.000	AV	41.1	27.4	4.1	34.6	-	38.1	53.9	15.8	
Hori.	5000.078	AV	45.0	31.6	5.2	33.8	-	47.9	53.9	6.0	
Hori.	5350.000	AV	39.1	31.5	5.3	33.6	2.2	44.5	53.9	9.4	*1)
Hori.	15720.000	AV	35.5	37.0	-1.1	33.0	-	38.3	53.9	15.6	Floor noise
Vert.	1579.981	PK	57.9	25.3	3.6	35.1	-	51.6	73.9	22.3	
Vert.	2500.000	PK	49.0	27.4	4.1	34.6	-	46.0	68.2	22.2	
Vert.	5000.078	PK	48.9	31.6	5.2	33.8	-	51.9	73.9	22.0	
Vert.	5350.000	PK	43.8	31.5	5.3	33.6	-	47.0	73.9	26.9	
Vert.	6986.556	PK	50.8	34.9	5.9	33.5	-	58.1	68.2	10.1	
Vert.	10000.080	PK	47.7	39.3	-2.8	34.3	-	49.9	68.2	18.3	
Vert.	10480.000	PK	44.1	40.1	-2.7	34.0	-	47.6	68.2	20.6	
Vert.	15720.000	PK	44.0	37.0	-1.1	33.0	-	46.7	73.9	27.2	Floor noise
Vert.	1579.981	AV	49.9	25.3	3.6	35.1	-	43.6	53.9	10.3	
Vert.	2500.000	AV	42.8	27.4	4.1	34.6	-	39.8	53.9	14.1	
Vert.	5000.078	AV	43.5	31.6	5.2	33.8	-	46.4	53.9	7.5	
Vert.	5350.000	AV	34.1	31.5	5.3	33.6	2.2	39.5	53.9	14.4	*1)
Vert.	15720.000	AV	35.3	37.0	-1.1	33.0	-	38.1	53.9	15.8	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

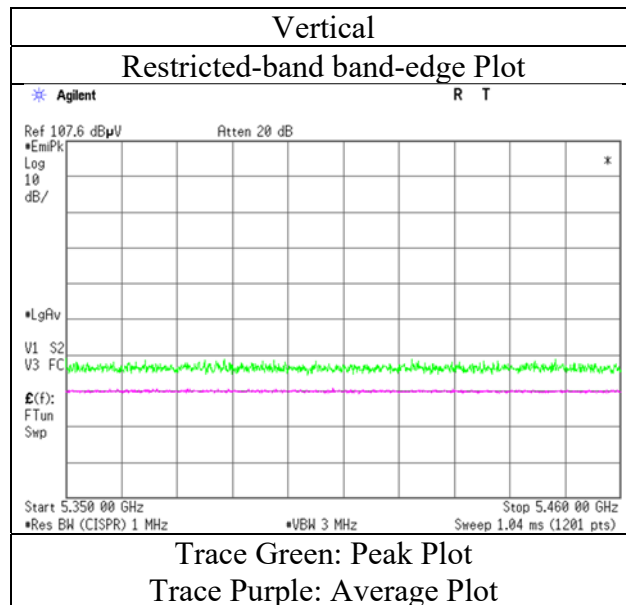
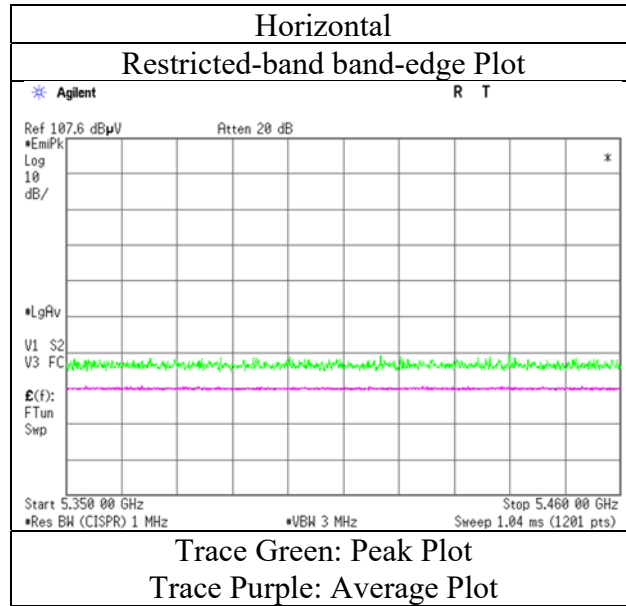
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Junya Okuno
(1 GHz - 10 GHz)
Mode Tx 11a 5240 MHz



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

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

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Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 22, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 68 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Junya Okuno	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11a 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.903	PK	61.9	25.3	3.6	35.1	-	55.6	73.9	18.3	
Hori.	2500.000	PK	45.6	27.4	4.1	34.6	-	42.5	68.2	25.7	
Hori.	4999.975	PK	47.3	31.6	5.2	33.8	-	50.2	73.9	23.7	
Hori.	5650.000	PK	43.2	31.8	5.5	33.5	-	46.9	68.2	21.3	
Hori.	5700.000	PK	43.2	31.8	5.5	33.5	-	47.0	105.2	58.2	
Hori.	5720.000	PK	44.6	31.9	5.5	33.5	-	48.4	110.8	62.4	
Hori.	5725.000	PK	45.9	31.9	5.5	33.5	-	49.7	122.2	72.5	
Hori.	10000.000	PK	48.0	39.3	-2.8	34.3	-	50.2	68.2	18.1	
Hori.	11490.000	PK	44.8	39.9	-2.2	33.5	-	49.1	73.9	24.9	
Hori.	17235.000	PK	43.9	41.8	-0.6	32.4	-	52.6	68.2	15.6	Floor noise
Hori.	1579.903	AV	51.4	25.3	3.6	35.1	-	45.2	53.9	8.8	
Hori.	2500.000	AV	38.5	27.4	4.1	34.6	-	35.4	53.9	18.5	
Hori.	4999.975	AV	42.7	31.6	5.2	33.8	-	45.7	53.9	8.2	
Hori.	11490.000	AV	37.1	39.9	-2.2	33.5	2.2	43.6	53.9	10.3	
Vert.	1579.903	PK	61.1	25.3	3.6	35.1	-	54.8	73.9	19.1	
Vert.	2500.000	PK	47.9	27.4	4.1	34.6	-	44.9	68.2	23.3	
Vert.	4999.975	PK	47.4	31.6	5.2	33.8	-	50.3	73.9	23.6	
Vert.	5650.000	PK	43.0	31.8	5.5	33.5	-	46.8	68.2	21.5	
Vert.	5700.000	PK	44.1	31.8	5.5	33.5	-	47.9	105.2	57.3	
Vert.	5720.000	PK	45.2	31.9	5.5	33.5	-	49.0	110.8	61.8	
Vert.	5725.000	PK	46.4	31.9	5.5	33.5	-	50.2	122.2	72.0	
Vert.	10000.000	PK	47.1	39.3	-2.8	34.3	-	49.3	68.2	19.0	
Vert.	11490.000	PK	45.2	39.9	-2.2	33.5	-	49.4	73.9	24.5	
Vert.	17235.000	PK	43.6	41.8	-0.6	32.4	-	52.4	68.2	15.8	Floor noise
Vert.	1579.903	AV	52.8	25.3	3.6	35.1	-	46.6	53.9	7.4	
Vert.	2500.000	AV	42.6	27.4	4.1	34.6	-	39.6	53.9	14.3	
Vert.	4999.975	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	7.9	
Vert.	11490.000	AV	37.3	39.9	-2.2	33.5	2.2	43.8	53.9	10.1	

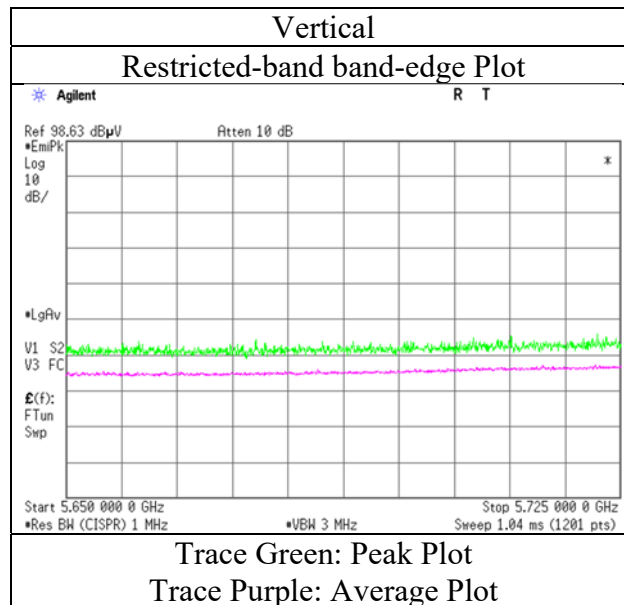
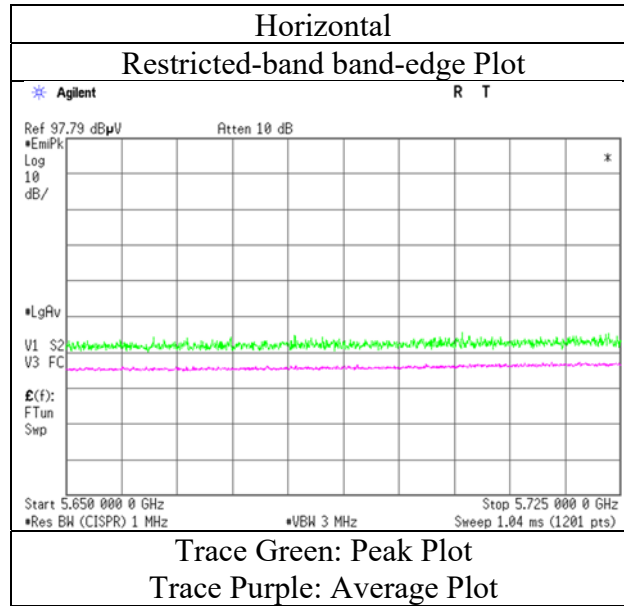
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 22, 2021
Temperature / Humidity 22 deg. C / 68 % RH
Engineer Junya Okuno
(1 GHz - 10 GHz)
Mode Tx 11a 5745 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 22, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 68 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Junya Okuno	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11a 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.974	PK	61.7	25.3	3.6	35.1	-	55.4	73.9	18.5	
Hori.	2500.000	PK	45.9	27.4	4.1	34.6	-	42.8	68.2	25.4	
Hori.	5000.044	PK	48.1	31.6	5.2	33.8	-	51.0	73.9	22.9	
Hori.	10000.000	PK	47.8	39.3	-2.8	34.3	-	49.9	68.2	18.3	
Hori.	11570.000	PK	44.0	39.7	-2.1	33.4	-	48.1	73.9	25.8	
Hori.	17355.000	PK	44.0	43.0	-0.6	32.4	-	54.0	68.2	14.2	Floor noise
Hori.	1579.974	AV	51.7	25.3	3.6	35.1	-	45.5	53.9	8.5	
Hori.	2500.000	AV	39.0	27.4	4.1	34.6	-	36.0	53.9	17.9	
Hori.	5000.044	AV	43.9	31.6	5.2	33.8	-	46.8	53.9	7.1	
Hori.	11570.000	AV	37.3	39.7	-2.1	33.4	2.2	43.6	53.9	10.3	
Vert.	1579.974	PK	59.7	25.3	3.6	35.1	-	53.4	73.9	20.5	
Vert.	2500.000	PK	47.1	27.4	4.1	34.6	-	44.1	68.2	24.1	
Vert.	5000.044	PK	48.2	31.6	5.2	33.8	-	51.1	73.9	22.8	
Vert.	10000.000	PK	46.5	39.3	-2.8	34.3	-	48.7	68.2	19.5	
Vert.	11570.000	PK	45.5	39.7	-2.1	33.4	-	49.6	73.9	24.3	
Vert.	17355.000	PK	44.3	43.0	-0.6	32.4	-	54.3	68.2	13.9	Floor noise
Vert.	1579.974	AV	52.0	25.3	3.6	35.1	-	45.7	53.9	8.2	
Vert.	2500.000	AV	41.2	27.4	4.1	34.6	-	38.2	53.9	15.7	
Vert.	5000.044	AV	44.0	31.6	5.2	33.8	-	47.0	53.9	6.9	
Vert.	11570.000	AV	36.4	39.7	-2.1	33.4	2.2	42.7	53.9	11.2	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 22, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 68 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Junya Okuno	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11a 5825 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.980	PK	64.0	25.3	3.6	35.1	-	57.7	73.9	16.2	
Hori.	2500.000	PK	47.3	27.4	4.1	34.6	-	44.2	68.2	24.0	
Hori.	5000.033	PK	47.4	31.6	5.2	33.8	-	50.4	73.9	23.5	
Hori.	5850.000	PK	43.6	32.3	5.5	33.5	-	47.8	122.2	74.4	
Hori.	5855.000	PK	43.7	32.3	5.5	33.5	-	48.0	110.8	62.8	
Hori.	5875.000	PK	43.0	32.3	5.5	33.5	-	47.3	105.2	57.9	
Hori.	5925.000	PK	43.0	32.4	5.5	33.5	-	47.4	68.2	20.9	
Hori.	10000.000	PK	48.2	39.3	-2.8	34.3	-	50.4	68.2	17.8	
Hori.	11650.000	PK	44.8	39.4	-2.1	33.4	-	48.8	73.9	25.1	
Hori.	17475.000	PK	43.5	44.1	-0.5	32.4	-	54.7	68.2	13.6	Floor noise
Hori.	1579.980	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Hori.	2500.000	AV	40.3	27.4	4.1	34.6	-	37.2	53.9	16.7	
Hori.	5000.033	AV	42.9	31.6	5.2	33.8	-	45.9	53.9	8.0	
Hori.	11650.000	AV	38.1	39.4	-2.1	33.4	2.2	44.3	53.9	9.6	
Vert.	1579.980	PK	63.9	25.3	3.6	35.1	-	57.6	73.9	16.3	
Vert.	2500.000	PK	47.4	27.4	4.1	34.6	-	44.4	68.2	23.8	
Vert.	5000.033	PK	47.9	31.6	5.2	33.8	-	50.9	73.9	23.0	
Vert.	5850.000	PK	43.3	32.3	5.5	33.5	-	47.5	122.2	74.7	
Vert.	5855.000	PK	43.7	32.3	5.5	33.5	-	48.0	110.8	62.8	
Vert.	5875.000	PK	43.1	32.3	5.5	33.5	-	47.4	105.2	57.8	
Vert.	5925.000	PK	43.0	32.4	5.5	33.5	-	47.4	68.2	20.8	
Vert.	10000.000	PK	46.8	39.3	-2.8	34.3	-	49.0	68.2	19.2	
Vert.	11650.000	PK	44.9	39.4	-2.1	33.4	-	48.9	73.9	25.0	
Vert.	17475.000	PK	43.2	44.1	-0.5	32.4	-	54.3	68.2	13.9	Floor noise
Vert.	1579.980	AV	52.0	25.3	3.6	35.1	-	45.7	53.9	8.2	
Vert.	2500.000	AV	41.8	27.4	4.1	34.6	-	38.7	53.9	15.2	
Vert.	5000.033	AV	43.5	31.6	5.2	33.8	-	46.5	53.9	7.4	
Vert.	11650.000	AV	37.8	39.4	-2.1	33.4	2.2	43.9	53.9	10.0	

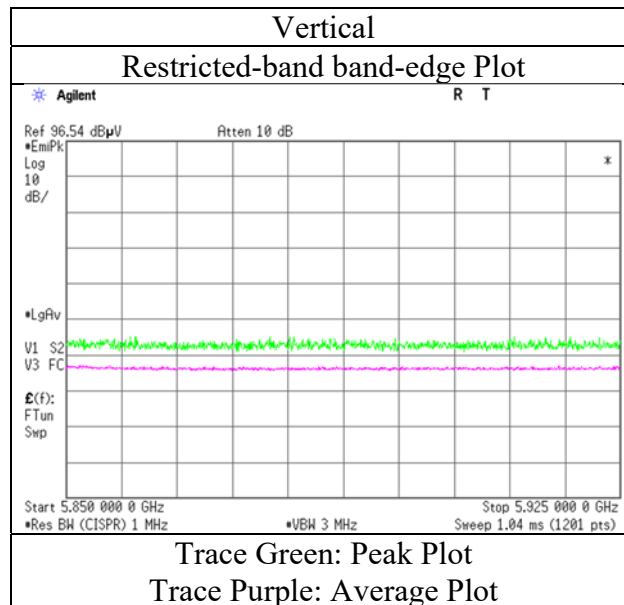
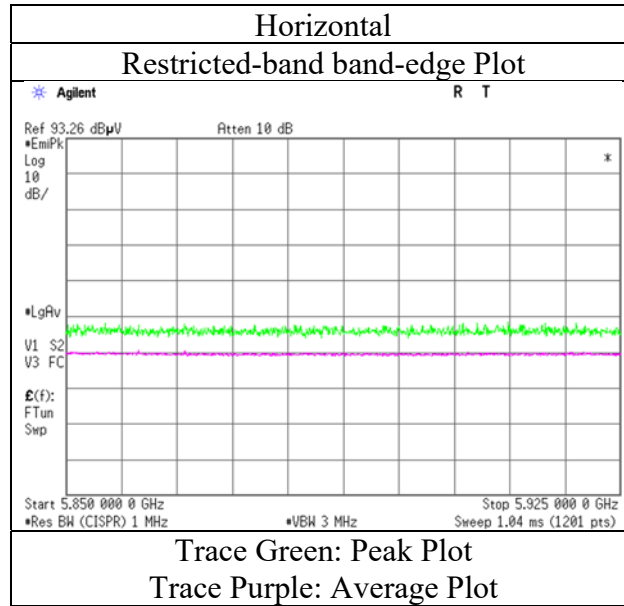
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 13828809H
 Test place Ise EMC Lab.
 Semi Anechoic Chamber No.2
 Date June 22, 2021
 Temperature / Humidity 22 deg. C / 68 % RH
 Engineer Junya Okuno
 (1 GHz - 10 GHz)
 Mode Tx 11a 5825 MHz



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

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

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5180 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.5	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5150.000	PK	47.6	31.9	5.3	33.7	-	51.1	73.9	22.8	
Hori.	6906.623	PK	46.7	34.6	5.9	33.5	-	53.8	68.2	14.5	
Hori.	10000.000	PK	49.3	39.3	-2.8	34.3	-	51.5	68.2	16.7	
Hori.	10360.000	PK	46.1	40.2	-2.7	34.0	-	49.6	68.2	18.6	
Hori.	15540.000	PK	43.9	37.4	-1.1	32.9	-	47.2	73.9	26.7	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	5150.000	AV	36.0	31.9	5.3	33.7	2.6	42.0	53.9	11.9	*1)
Hori.	15540.000	AV	35.9	37.4	-1.1	32.9	-	39.2	53.9	14.7	Floor noise
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.6	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.6	
Vert.	5150.000	PK	47.7	31.9	5.3	33.7	-	51.1	73.9	22.8	
Vert.	6906.623	PK	48.1	34.6	5.9	33.5	-	55.1	68.2	13.1	
Vert.	10000.000	PK	47.4	39.3	-2.8	34.3	-	49.6	68.2	18.6	
Vert.	10360.000	PK	45.5	40.2	-2.7	34.0	-	48.9	68.2	19.3	
Vert.	15540.000	PK	44.0	37.4	-1.1	32.9	-	47.3	73.9	26.6	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.4	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	8.0	
Vert.	5150.000	AV	36.0	31.9	5.3	33.7	2.6	42.0	53.9	11.9	*1)
Vert.	15540.000	AV	36.0	37.4	-1.1	32.9	-	39.2	53.9	14.7	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

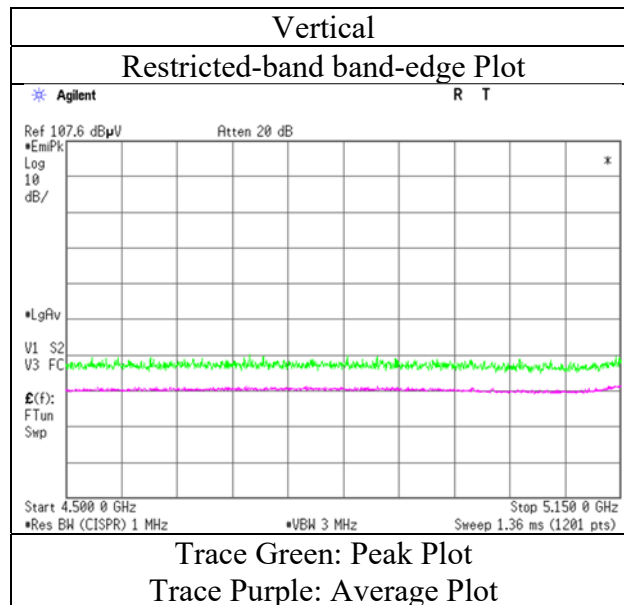
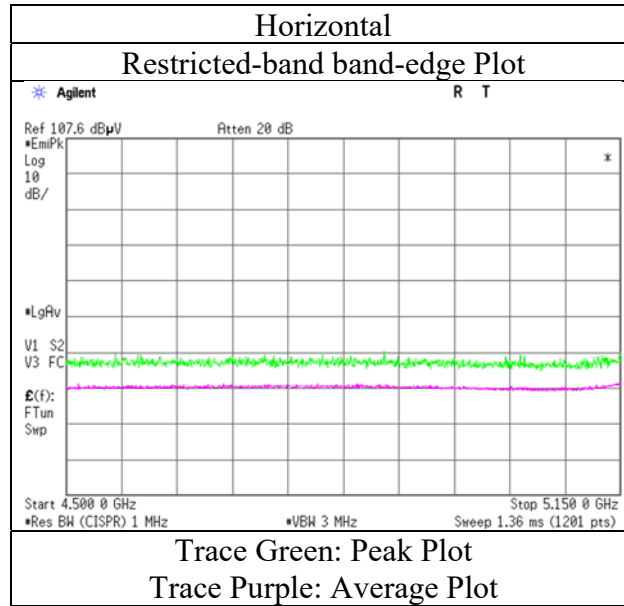
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-20 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5220 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	64.9	25.3	3.6	35.1	-	58.6	73.9	15.3	
Hori.	2500.000	PK	47.4	27.4	4.1	34.6	-	44.4	68.2	23.8	
Hori.	5000.000	PK	48.7	31.6	5.2	33.8	-	51.6	73.9	22.3	
Hori.	6959.960	PK	47.1	35.0	5.9	33.5	-	54.5	68.2	13.7	
Hori.	10000.000	PK	49.3	39.3	-2.8	34.3	-	51.5	68.2	16.7	
Hori.	10440.000	PK	45.8	40.3	-2.7	34.0	-	49.4	68.2	18.8	
Hori.	15660.000	PK	44.4	37.4	-1.1	33.0	-	47.6	73.9	26.3	Floor noise
Hori.	1580.000	AV	51.7	25.3	3.6	35.1	-	45.4	53.9	8.5	
Hori.	2500.000	AV	39.0	27.4	4.1	34.6	-	36.0	53.9	17.9	
Hori.	5000.000	AV	43.1	31.6	5.2	33.8	-	46.1	53.9	7.8	
Hori.	15660.000	AV	36.5	37.4	-1.1	33.0	-	39.8	53.9	14.1	Floor noise
Vert.	1580.000	PK	66.0	25.3	3.6	35.1	-	59.7	73.9	14.2	
Vert.	2500.000	PK	48.5	27.4	4.1	34.6	-	45.5	68.2	22.7	
Vert.	5000.000	PK	48.2	31.6	5.2	33.8	-	51.2	73.9	22.7	
Vert.	6959.960	PK	48.5	35.0	5.9	33.5	-	55.9	68.2	12.3	
Vert.	10000.000	PK	47.4	39.3	-2.8	34.3	-	49.6	68.2	18.6	
Vert.	10440.000	PK	45.0	40.3	-2.7	34.0	-	48.6	68.2	19.6	
Vert.	15660.000	PK	44.4	37.4	-1.1	33.0	-	47.6	73.9	26.3	Floor noise
Vert.	1580.000	AV	52.8	25.3	3.6	35.1	-	46.5	53.9	7.4	
Vert.	2500.000	AV	42.2	27.4	4.1	34.6	-	39.2	53.9	14.7	
Vert.	5000.000	AV	42.9	31.6	5.2	33.8	-	45.9	53.9	8.0	
Vert.	15660.000	AV	36.4	37.4	-1.1	33.0	-	39.7	53.9	14.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5240 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.5	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5350.000	PK	43.3	31.5	5.3	33.6	-	46.6	73.9	27.3	
Hori.	6986.624	PK	46.6	34.9	5.9	33.5	-	54.0	68.2	14.2	
Hori.	10000.000	PK	49.3	39.3	-2.8	34.3	-	51.5	68.2	16.8	
Hori.	10480.000	PK	45.4	40.1	-2.7	34.0	-	48.9	68.2	19.3	
Hori.	15720.000	PK	44.1	37.0	-1.1	33.0	-	46.9	73.9	27.0	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.9	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	5350.000	AV	34.3	31.5	5.3	33.6	2.6	40.2	53.9	13.8	*1)
Hori.	15720.000	AV	36.0	37.0	-1.1	33.0	-	38.7	53.9	15.2	Floor noise
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.7	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.6	
Vert.	5350.000	PK	43.4	31.5	5.3	33.6	-	46.7	73.9	27.3	
Vert.	6986.624	PK	47.9	34.9	5.9	33.5	-	55.3	68.2	12.9	
Vert.	10000.000	PK	47.4	39.3	-2.8	34.3	-	49.6	68.2	18.6	
Vert.	10480.000	PK	45.4	40.1	-2.7	34.0	-	48.9	68.2	19.3	
Vert.	15720.000	PK	44.1	37.0	-1.1	33.0	-	46.8	73.9	27.1	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	8.0	
Vert.	5350.000	AV	34.2	31.5	5.3	33.6	2.6	40.1	53.9	13.9	*1)
Vert.	15720.000	AV	35.9	37.0	-1.1	33.0	-	38.7	53.9	15.2	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

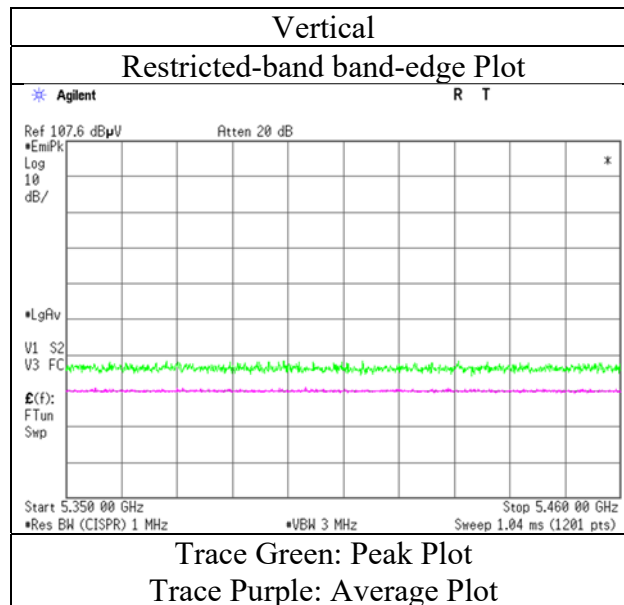
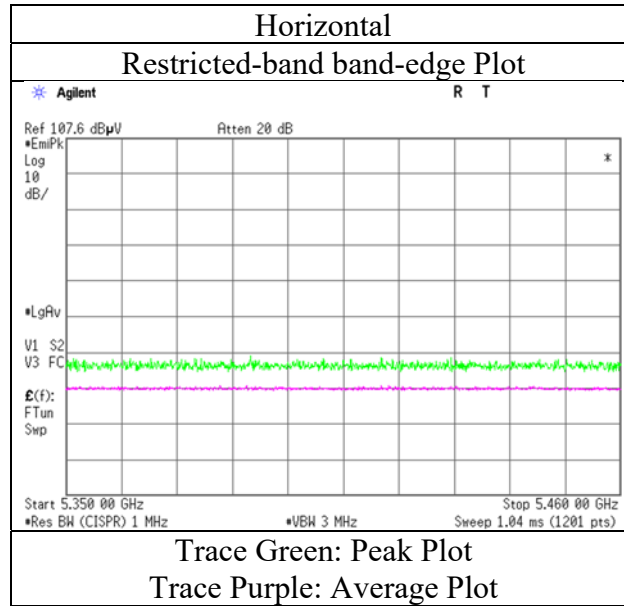
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No.	13828809H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	June 21, 2021
Temperature / Humidity	22 deg. C / 61 % RH
Engineer	Takafumi Noguchi
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5240 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5745 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.6	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5650.000	PK	43.7	31.8	5.5	33.5	-	47.4	68.2	20.8	
Hori.	5700.000	PK	44.8	31.8	5.5	33.5	-	48.6	105.2	56.6	
Hori.	5720.000	PK	46.5	31.9	5.5	33.5	-	50.3	110.8	60.5	
Hori.	5725.000	PK	47.7	31.9	5.5	33.5	-	51.5	122.2	70.7	
Hori.	10000.000	PK	49.2	39.3	-2.8	34.3	-	51.4	68.2	16.8	
Hori.	11490.000	PK	46.4	39.9	-2.2	33.5	-	50.6	73.9	23.3	
Hori.	17235.000	PK	44.7	41.8	-0.6	32.4	-	53.5	68.2	14.7	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	5000.000	AV	43.3	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	11490.000	AV	37.3	39.9	-2.2	33.5	2.6	44.1	53.9	9.8	
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.7	27.4	4.1	34.6	-	45.7	68.2	22.6	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.7	
Vert.	5650.000	PK	43.6	31.8	5.5	33.5	-	47.3	68.2	20.9	
Vert.	5700.000	PK	44.7	31.8	5.5	33.5	-	48.5	105.2	56.7	
Vert.	5720.000	PK	45.8	31.9	5.5	33.5	-	49.6	110.8	61.2	
Vert.	5725.000	PK	46.6	31.9	5.5	33.5	-	50.4	122.2	71.8	
Vert.	10000.000	PK	47.3	39.3	-2.8	34.3	-	49.5	68.2	18.7	
Vert.	11490.000	PK	45.8	39.9	-2.2	33.5	-	50.0	73.9	23.9	
Vert.	17235.000	PK	44.6	41.8	-0.6	32.4	-	53.4	68.2	14.8	Floor noise
Vert.	1580.000	AV	53.0	25.3	3.6	35.1	-	46.7	53.9	7.2	
Vert.	2500.000	AV	42.4	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	8.0	
Vert.	11490.000	AV	36.3	39.9	-2.2	33.5	2.6	43.1	53.9	10.8	

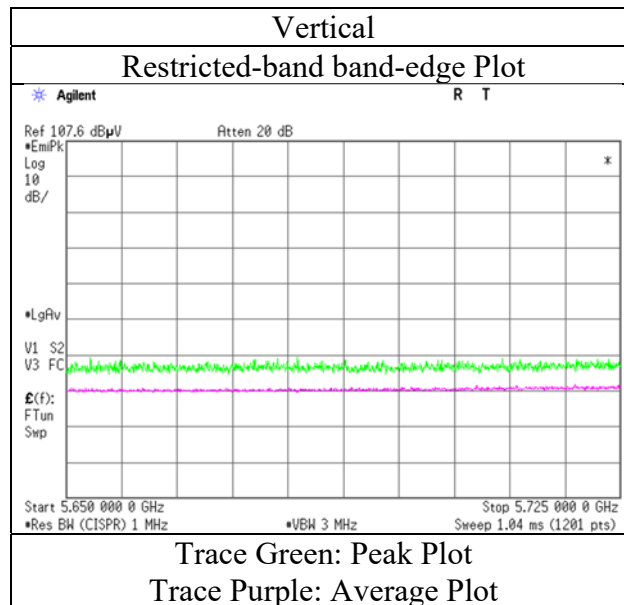
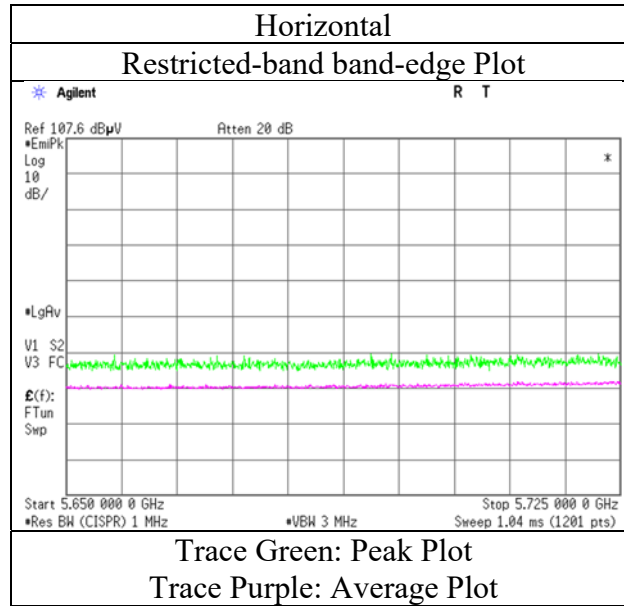
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-20 5745 MHz



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

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

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5785 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	64.9	25.3	3.6	35.1	-	58.6	73.9	15.3	
Hori.	2500.000	PK	47.4	27.4	4.1	34.6	-	44.4	68.2	23.8	
Hori.	5000.000	PK	48.7	31.6	5.2	33.8	-	51.7	73.9	22.3	
Hori.	10000.000	PK	49.2	39.3	-2.8	34.3	-	51.4	68.2	16.8	
Hori.	11570.000	PK	45.4	39.7	-2.1	33.4	-	49.4	73.9	24.5	
Hori.	17355.000	PK	43.9	43.0	-0.6	32.4	-	54.0	68.2	14.2	Floor noise
Hori.	1580.000	AV	51.7	25.3	3.6	35.1	-	45.4	53.9	8.5	
Hori.	2500.000	AV	39.0	27.4	4.1	34.6	-	36.0	53.9	17.9	
Hori.	5000.000	AV	43.1	31.6	5.2	33.8	-	46.1	53.9	7.8	
Hori.	11570.000	AV	36.3	39.7	-2.1	33.4	2.6	42.9	53.9	11.0	
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.5	27.4	4.1	34.6	-	45.5	68.2	22.7	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.2	73.9	22.7	
Vert.	10000.000	PK	47.3	39.3	-2.8	34.3	-	49.5	68.2	18.7	
Vert.	11570.000	PK	45.5	39.7	-2.1	33.4	-	49.5	73.9	24.4	
Vert.	17355.000	PK	44.1	43.0	-0.6	32.4	-	54.1	68.2	14.1	Floor noise
Vert.	1580.000	AV	52.8	25.3	3.6	35.1	-	46.5	53.9	7.4	
Vert.	2500.000	AV	42.2	27.4	4.1	34.6	-	39.2	53.9	14.7	
Vert.	5000.000	AV	42.9	31.6	5.2	33.8	-	45.9	53.9	8.0	
Vert.	11570.000	AV	36.4	39.7	-2.1	33.4	2.6	43.0	53.9	10.9	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Takafumi Noguchi	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 5825 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.5	27.4	4.1	34.6	-	44.5	68.2	23.8	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5850.000	PK	44.9	32.3	5.5	33.5	-	49.1	122.2	73.1	
Hori.	5855.000	PK	44.1	32.3	5.5	33.5	-	48.4	110.8	62.4	
Hori.	5875.000	PK	43.6	32.3	5.5	33.5	-	47.9	105.2	57.3	
Hori.	5925.000	PK	43.3	32.4	5.5	33.5	-	47.7	68.2	20.5	
Hori.	10000.000	PK	49.3	39.3	-2.8	34.3	-	51.5	68.2	16.7	
Hori.	11650.000	PK	46.0	39.4	-2.1	33.4	-	49.9	73.9	24.0	
Hori.	17475.000	PK	44.1	44.1	-0.5	32.4	-	55.3	68.2	13.0	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.9	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	11650.000	AV	37.3	39.4	-2.1	33.4	2.6	43.8	53.9	10.1	
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.6	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.7	
Vert.	5850.000	PK	45.2	32.3	5.5	33.5	-	49.4	122.2	72.8	
Vert.	5855.000	PK	44.0	32.3	5.5	33.5	-	48.2	110.8	62.6	
Vert.	5875.000	PK	43.7	32.3	5.5	33.5	-	48.0	105.2	57.2	
Vert.	5925.000	PK	43.5	32.4	5.5	33.5	-	47.8	68.2	20.4	
Vert.	10000.000	PK	47.4	39.3	-2.8	34.3	-	49.6	68.2	18.6	
Vert.	11650.000	PK	46.4	39.4	-2.1	33.4	-	50.4	73.9	23.6	
Vert.	17475.000	PK	44.0	44.1	-0.5	32.4	-	55.2	68.2	13.1	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	8.0	
Vert.	11650.000	AV	37.5	39.4	-2.1	33.4	2.6	44.0	53.9	9.9	

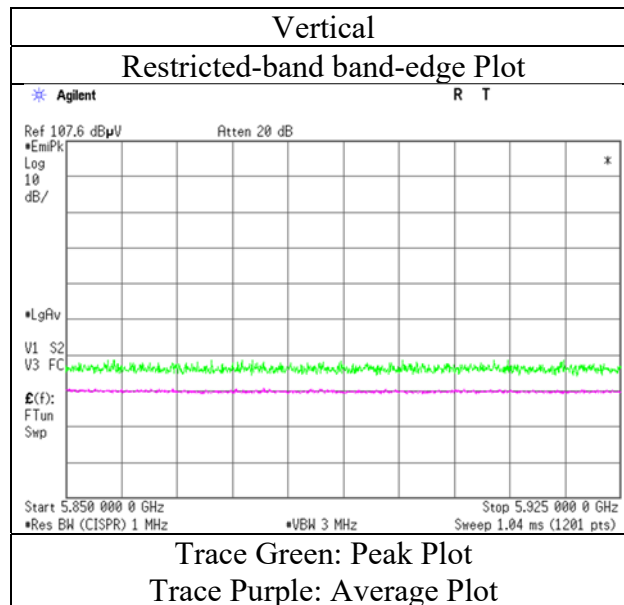
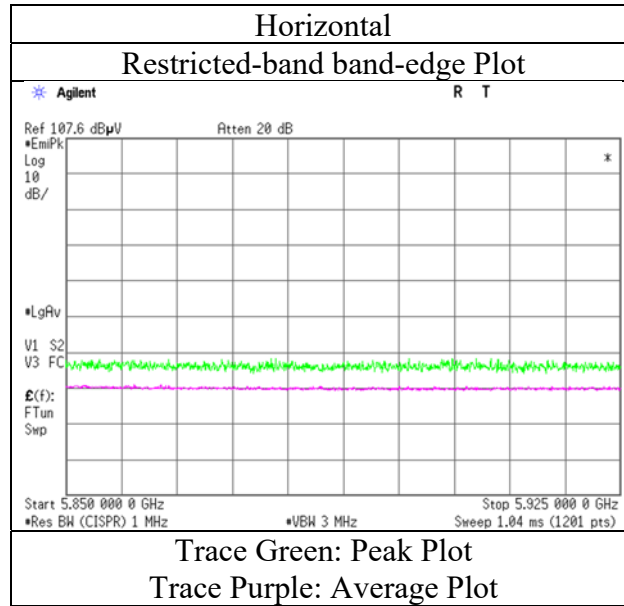
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-20 5825 MHz



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

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

UL Japan, Inc.

Ise EMC Lab.

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Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-40 5190 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.6	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5150.000	PK	56.6	31.9	5.3	33.7	-	60.0	73.9	13.9	
Hori.	6919.958	PK	46.3	34.7	5.9	33.5	-	53.4	68.2	14.8	
Hori.	10000.000	PK	48.3	39.3	-2.8	34.3	-	50.4	68.2	17.8	
Hori.	10380.000	PK	44.5	40.2	-2.7	34.0	-	47.9	68.2	20.3	
Hori.	15570.000	PK	43.9	37.1	-1.1	32.9	-	47.0	73.9	26.9	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	5000.000	AV	43.3	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	5150.000	AV	36.5	31.9	5.3	33.7	3.7	43.6	53.9	10.3	*1)
Hori.	15570.000	AV	35.2	37.1	-1.1	32.9	-	38.2	53.9	15.7	Floor noise
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.7	
Vert.	5000.000	PK	48.4	31.6	5.2	33.8	-	51.3	73.9	22.6	
Vert.	5150.000	PK	56.0	31.9	5.3	33.7	-	59.4	73.9	14.5	
Vert.	6919.958	PK	48.3	34.7	5.9	33.5	-	55.4	68.2	12.8	
Vert.	10000.000	PK	46.3	39.3	-2.8	34.3	-	48.4	68.2	19.8	
Vert.	10380.000	PK	43.3	40.2	-2.7	34.0	-	46.8	68.2	21.4	Floor noise
Vert.	15570.000	PK	43.9	37.1	-1.1	32.9	-	47.0	73.9	26.9	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.4	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	7.9	
Vert.	5150.000	AV	36.2	31.9	5.3	33.7	3.7	43.3	53.9	10.6	*1)
Vert.	15570.000	AV	35.1	37.1	-1.1	32.9	-	38.2	53.9	15.7	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

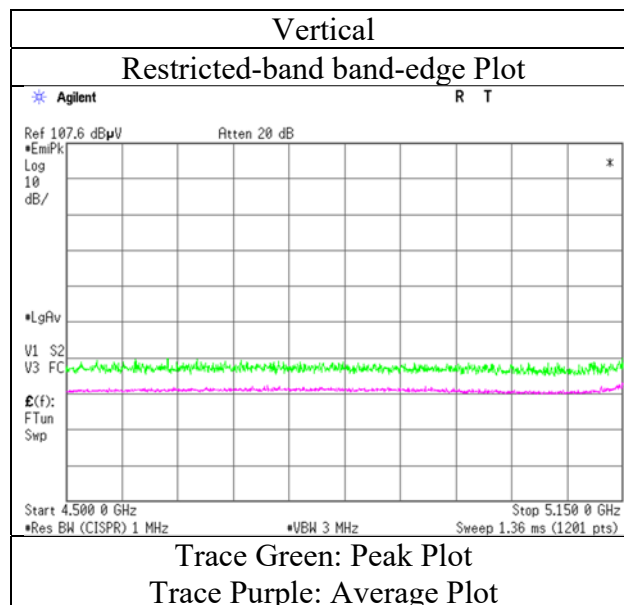
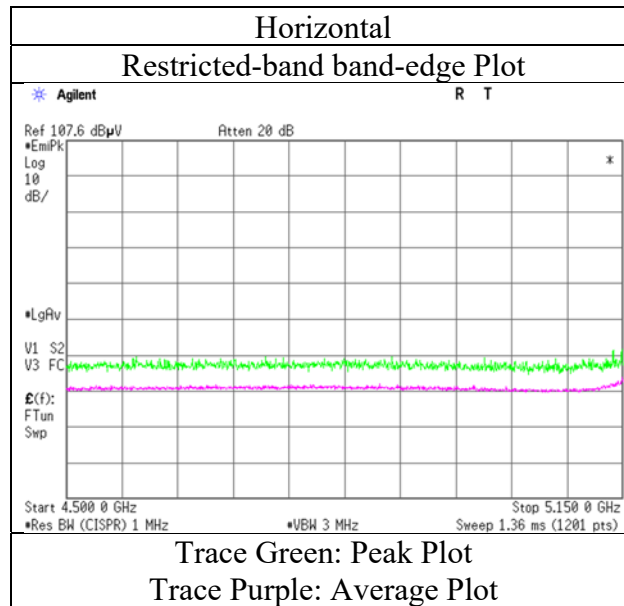
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-40 5190 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi	Takafumi Noguchi	Junya Okuno	Takafumi Noguchi
	(26.5 GHz - 40 GHz)	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-40 5230 MHz			

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.1	25.3	3.6	35.1	-	58.8	73.9	15.1	
Hori.	2500.000	PK	47.6	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5350.000	PK	43.9	31.5	5.3	33.6	-	47.2	73.9	26.7	
Hori.	6973.292	PK	47.4	35.0	5.9	33.5	-	54.7	68.2	13.5	
Hori.	10000.000	PK	48.7	39.3	-2.8	34.3	-	50.9	68.2	17.3	
Hori.	10460.000	PK	43.8	40.2	-2.7	34.0	-	47.4	68.2	20.8	
Hori.	15690.000	PK	44.2	36.7	-1.1	33.0	-	46.7	73.9	27.2	Floor noise
Hori.	1580.000	AV	51.9	25.3	3.6	35.1	-	45.6	53.9	8.3	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	5350.000	AV	34.2	31.5	5.3	33.6	3.7	41.2	53.9	12.8	*1)
Hori.	15690.000	AV	35.5	36.7	-1.1	33.0	-	38.0	53.9	15.9	Floor noise
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.6	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.2	73.9	22.7	
Vert.	5350.000	PK	43.7	31.5	5.3	33.6	-	46.9	73.9	27.0	
Vert.	6973.292	PK	48.2	35.0	5.9	33.5	-	55.6	68.2	12.6	
Vert.	10000.000	PK	46.3	39.3	-2.8	34.3	-	48.5	68.2	19.7	
Vert.	10460.000	PK	43.3	40.2	-2.7	34.0	-	46.9	68.2	21.3	Floor noise
Vert.	15690.000	PK	44.4	36.7	-1.1	33.0	-	46.9	73.9	27.0	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.4	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	7.9	
Vert.	5350.000	AV	34.0	31.5	5.3	33.6	3.7	40.9	53.9	13.0	*1)
Vert.	15690.000	AV	35.4	36.7	-1.1	33.0	-	37.9	53.9	16.0	Floor noise

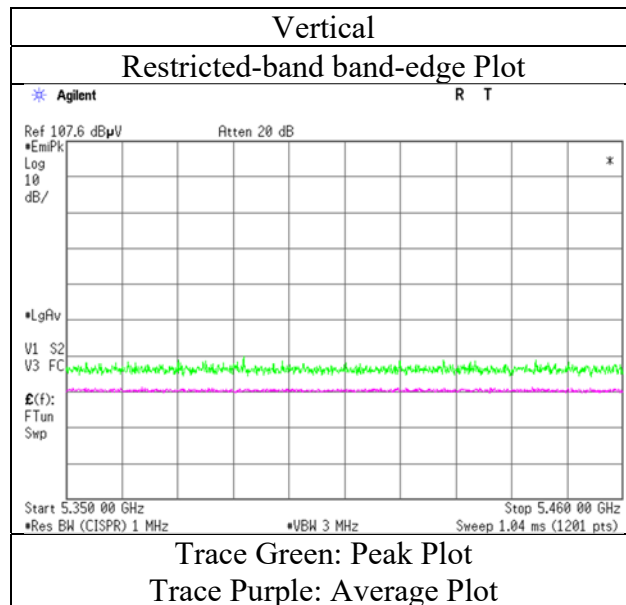
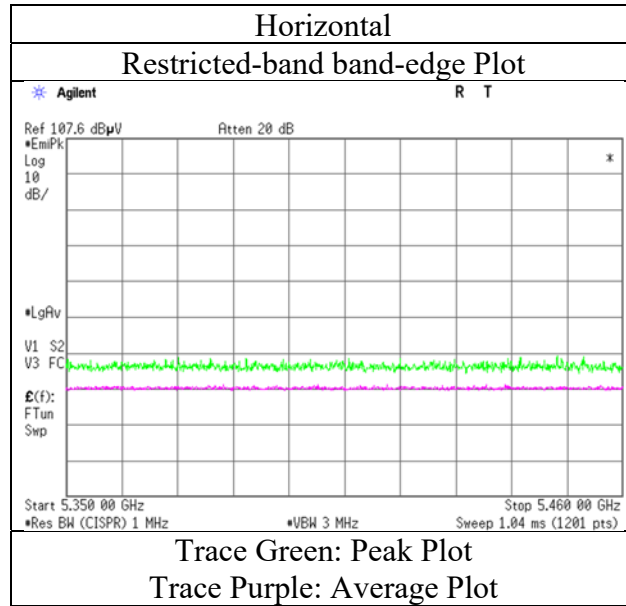
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-40 5230 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi (26.5 GHz - 40 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Takafumi Noguchi (10 GHz - 26.5 GHz)
Mode	Tx 11ac-40 5755 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.5	27.4	4.1	34.6	-	44.4	68.2	23.8	
Hori.	5000.000	PK	48.7	31.6	5.2	33.8	-	51.6	73.9	22.3	
Hori.	5650.000	PK	45.8	31.8	5.5	33.5	-	49.5	68.2	18.7	
Hori.	5700.000	PK	47.1	31.8	5.5	33.5	-	50.9	105.2	54.3	
Hori.	5720.000	PK	54.8	31.9	5.5	33.5	-	58.6	110.8	52.2	
Hori.	5725.000	PK	55.6	31.9	5.5	33.5	-	59.4	122.2	62.8	
Hori.	10000.000	PK	49.1	39.3	-2.8	34.3	-	51.3	68.2	16.9	
Hori.	11510.000	PK	45.9	39.8	-2.2	33.5	-	50.1	73.9	23.8	
Hori.	17265.000	PK	44.2	42.0	-0.6	32.4	-	53.2	68.2	15.0	Floor noise
Hori.	1580.000	AV	51.9	25.3	3.6	35.1	-	45.6	53.9	8.3	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.0	53.9	17.9	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.1	53.9	7.8	
Hori.	11510.000	AV	37.0	39.8	-2.2	33.5	3.7	44.9	53.9	9.0	
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.7	27.4	4.1	34.6	-	45.6	68.2	22.6	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.2	73.9	22.7	
Vert.	5650.000	PK	44.7	31.8	5.5	33.5	-	48.4	68.2	19.8	
Vert.	5700.000	PK	46.2	31.8	5.5	33.5	-	50.0	105.2	55.2	
Vert.	5720.000	PK	53.8	31.9	5.5	33.5	-	57.6	110.8	53.2	
Vert.	5725.000	PK	54.3	31.9	5.5	33.5	-	58.1	122.2	64.1	
Vert.	10000.000	PK	47.5	39.3	-2.8	34.3	-	49.7	68.2	18.5	
Vert.	11510.000	PK	44.9	39.8	-2.2	33.5	-	49.1	73.9	24.8	
Vert.	17265.000	PK	43.9	42.0	-0.6	32.4	-	52.9	68.2	15.3	Floor noise
Vert.	1580.000	AV	53.0	25.3	3.6	35.1	-	46.7	53.9	7.2	
Vert.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.2	53.9	14.7	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	45.9	53.9	8.0	
Vert.	11510.000	AV	36.3	39.8	-2.2	33.5	3.7	44.2	53.9	9.7	

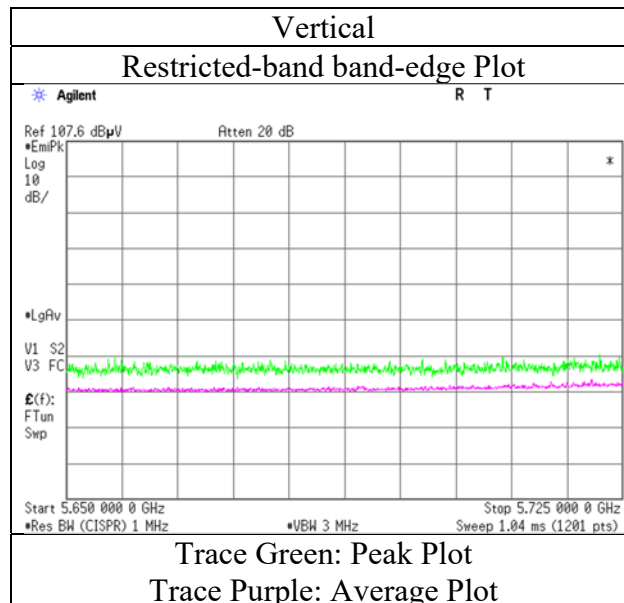
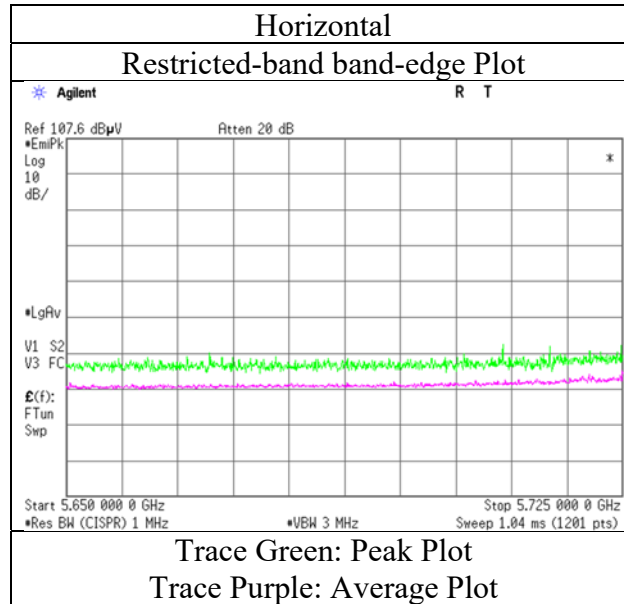
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	June 21, 2021
Temperature / Humidity	22 deg. C / 61 % RH
Engineer	Takafumi Noguchi
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5755 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi (26.5 GHz - 40 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Takafumi Noguchi (10 GHz - 26.5 GHz)
Mode	Tx 11ac-40 5795 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.5	27.4	4.1	34.6	-	44.5	68.2	23.7	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.7	73.9	22.2	
Hori.	5850.000	PK	43.7	32.3	5.5	33.5	-	48.0	122.2	74.2	
Hori.	5855.000	PK	43.3	32.3	5.5	33.5	-	47.6	110.8	63.2	
Hori.	5875.000	PK	43.1	32.3	5.5	33.5	-	47.4	105.2	57.8	
Hori.	5925.000	PK	42.9	32.4	5.5	33.5	-	47.3	68.2	20.9	
Hori.	10000.000	PK	49.2	39.3	-2.8	34.3	-	51.4	68.2	16.8	
Hori.	11590.000	PK	45.4	39.4	-2.1	33.4	-	49.2	73.9	24.7	
Hori.	17385.000	PK	44.1	43.5	-0.6	32.4	-	54.6	68.2	13.6	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.1	27.4	4.1	34.6	-	36.1	53.9	17.8	
Hori.	5000.000	AV	43.2	31.6	5.2	33.8	-	46.2	53.9	7.7	
Hori.	11590.000	AV	36.8	39.4	-2.1	33.4	3.7	44.3	53.9	9.6	
Vert.	1580.000	PK	66.1	25.3	3.6	35.1	-	59.8	73.9	14.1	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.7	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.6	
Vert.	5850.000	PK	43.8	32.3	5.5	33.5	-	48.0	122.2	74.2	
Vert.	5855.000	PK	43.2	32.3	5.5	33.5	-	47.4	110.8	63.4	
Vert.	5875.000	PK	43.1	32.3	5.5	33.5	-	47.4	105.2	57.8	
Vert.	5925.000	PK	43.0	32.4	5.5	33.5	-	47.4	68.2	20.8	
Vert.	10000.000	PK	47.5	39.3	-2.8	34.3	-	49.7	68.2	18.5	
Vert.	11590.000	PK	45.0	39.4	-2.1	33.4	-	48.8	73.9	25.1	
Vert.	17385.000	PK	43.8	43.5	-0.6	32.4	-	54.3	68.2	13.9	Floor noise
Vert.	1580.000	AV	52.9	25.3	3.6	35.1	-	46.6	53.9	7.3	
Vert.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.3	53.9	14.6	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	7.9	
Vert.	11590.000	AV	35.9	39.4	-2.1	33.4	3.7	43.4	53.9	10.5	

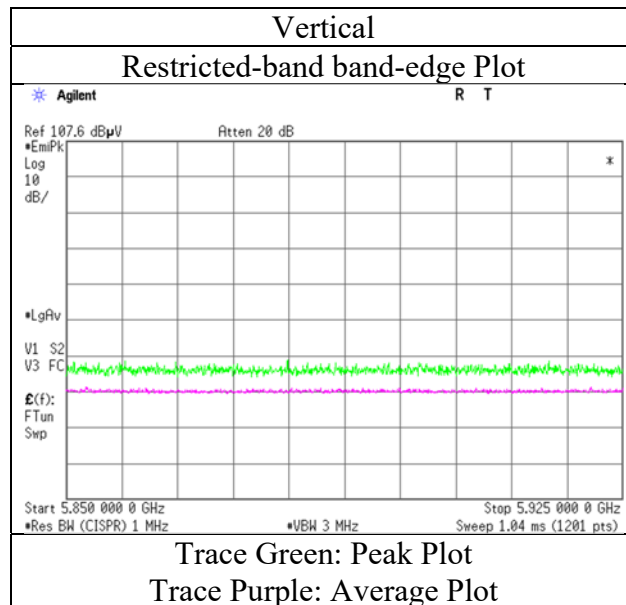
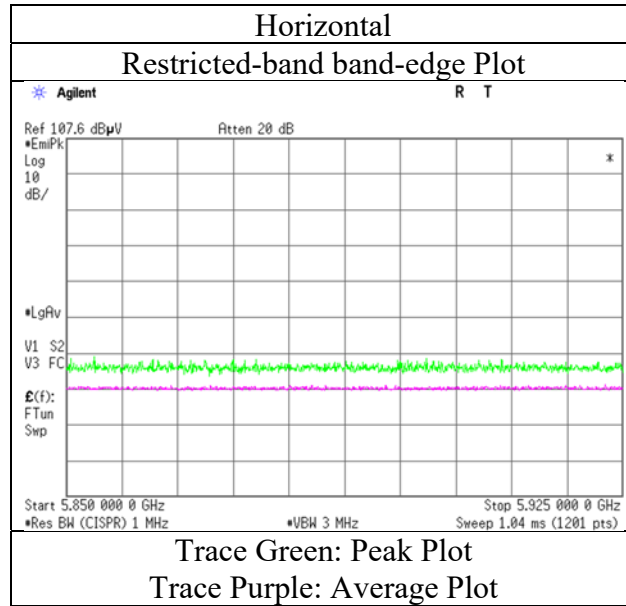
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2
Date June 21, 2021
Temperature / Humidity 22 deg. C / 61 % RH
Engineer Takafumi Noguchi
(1 GHz - 10 GHz)
Mode Tx 11ac-40 5795 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Report No.	13828809H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.2
Date	June 19, 2021	June 21, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	22 deg. C / 61 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi (26.5 GHz - 40 GHz)	Junya Okuno (1 GHz - 10 GHz)	Takafumi Noguchi (10 GHz - 26.5 GHz)
Mode	Tx 11ac-80 5210 MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1579.965	PK	61.5	25.3	3.6	35.1	-	55.2	73.9	18.7	
Hori.	2500.000	PK	49.3	27.4	4.1	34.6	-	46.3	68.2	21.9	
Hori.	5000.061	PK	49.8	31.6	5.2	33.8	-	52.7	73.9	21.2	
Hori.	5150.000	PK	52.7	31.9	5.3	33.7	-	56.1	73.9	17.8	
Hori.	5350.000	PK	46.4	31.5	5.3	33.6	-	49.6	73.9	24.3	
Hori.	10000.000	PK	49.2	39.3	-2.8	34.3	-	51.4	68.2	16.8	
Hori.	10420.000	PK	45.0	40.2	-2.7	34.0	-	48.5	68.2	19.7	
Hori.	15630.000	PK	43.5	37.2	-1.1	33.0	-	46.6	73.9	27.3	Floor noise
Hori.	1579.965	AV	52.2	25.3	3.6	35.1	-	45.9	53.9	8.0	
Hori.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.2	53.9	14.7	
Hori.	5000.061	AV	44.1	31.6	5.2	33.8	-	47.1	53.9	6.8	
Hori.	5150.000	AV	37.1	31.9	5.3	33.7	5.0	45.5	53.9	8.4	*1)
Hori.	5350.000	AV	35.5	31.5	5.3	33.6	5.0	43.7	53.9	10.2	*1)
Hori.	15630.000	AV	35.3	37.2	-1.1	33.0	-	38.5	53.9	15.5	Floor noise
Vert.	1579.965	PK	63.8	25.3	3.6	35.1	-	57.5	73.9	16.4	
Vert.	2500.000	PK	46.8	27.4	4.1	34.6	-	43.8	68.2	24.4	
Vert.	3159.940	PK	45.7	28.7	4.4	34.2	-	44.6	73.9	29.3	
Vert.	5000.061	PK	46.4	31.6	5.2	33.8	-	49.4	73.9	24.5	
Vert.	5150.000	PK	51.1	31.9	5.3	33.7	-	54.6	73.9	19.3	
Vert.	5350.000	PK	48.0	31.5	5.3	33.6	-	51.3	73.9	22.6	
Vert.	6946.631	PK	51.0	35.0	5.9	33.5	-	58.4	68.2	9.8	
Vert.	10000.000	PK	47.5	39.3	-2.8	34.3	-	49.7	68.2	18.5	
Vert.	10420.000	PK	44.8	40.2	-2.7	34.0	-	48.3	68.2	19.9	
Vert.	15630.000	PK	43.4	37.2	-1.1	33.0	-	46.5	73.9	27.4	Floor noise
Vert.	1579.965	AV	51.5	25.3	3.6	35.1	-	45.2	53.9	8.7	
Vert.	2500.000	AV	40.9	27.4	4.1	34.6	-	37.9	53.9	16.0	
Vert.	5000.061	AV	42.2	31.6	5.2	33.8	-	45.1	53.9	8.8	
Vert.	5150.000	AV	36.2	31.9	5.3	33.7	5.0	44.6	53.9	9.3	*1)
Vert.	5350.000	AV	38.6	31.5	5.3	33.6	5.0	46.8	53.9	7.1	*1)
Vert.	15630.000	AV	35.4	37.2	-1.1	33.0	-	38.6	53.9	15.4	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

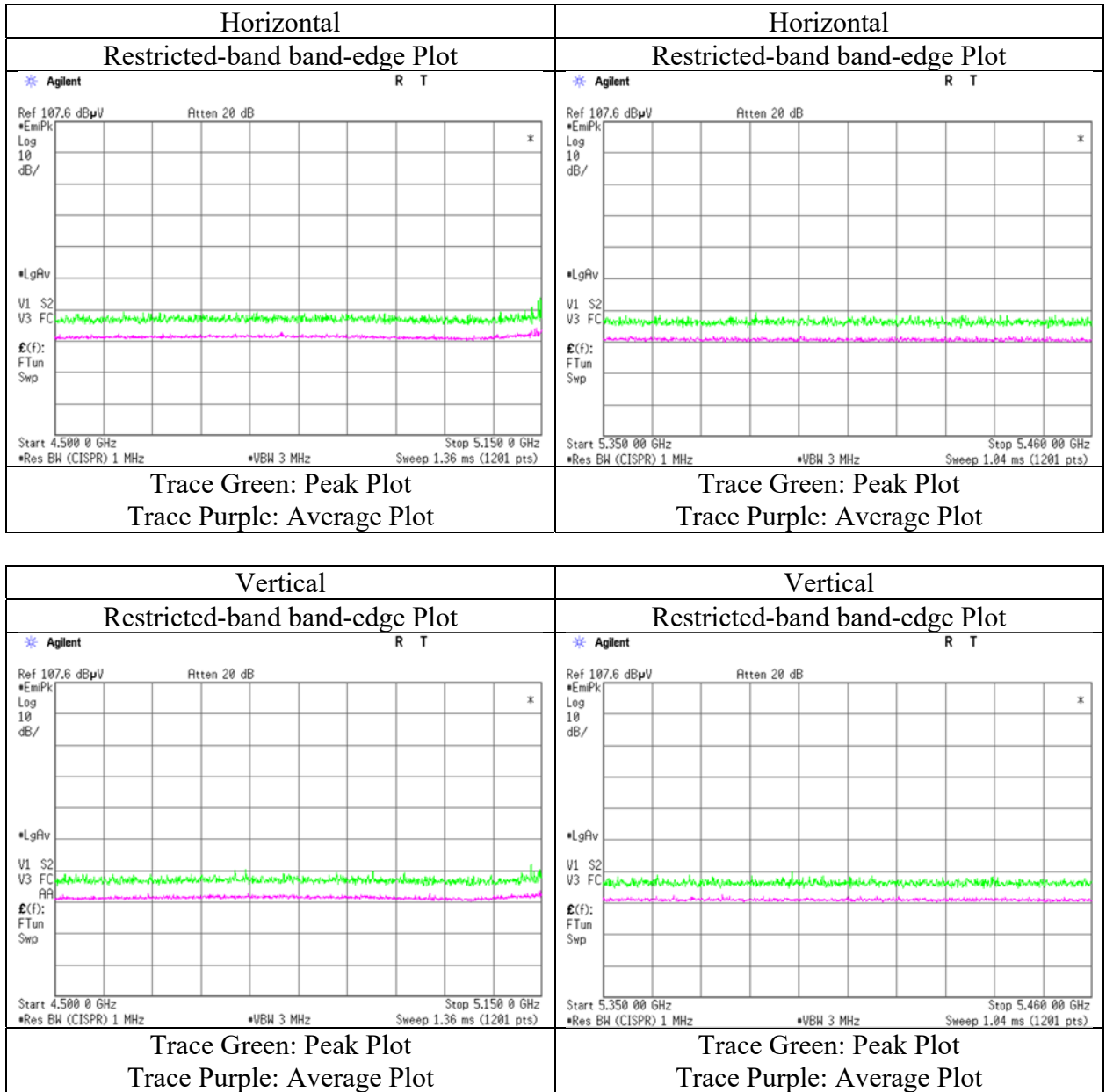
Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB

10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

Radiated Spurious Emission

Report No.	13828809H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	June 21, 2021
Temperature / Humidity	22 deg. C / 61 % RH
Engineer	Junya Okuno
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5210 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

UL Japan, Inc.

Ise EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Radiated Spurious Emission

Report No.	13828809H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.2
Date	June 19, 2021	June 22, 2021	June 23, 2021
Temperature / Humidity	23 deg. C / 68 % RH	23 deg. C / 68 % RH	23 deg. C / 66 % RH
Engineer	Junki Nagatomi (26.5 GHz - 40 GHz)	Takafumi Noguchi (1 GHz - 10 GHz)	Takafumi Noguchi (10 GHz - 26.5 GHz)
Mode	Tx 11ac-80 5775MHz		

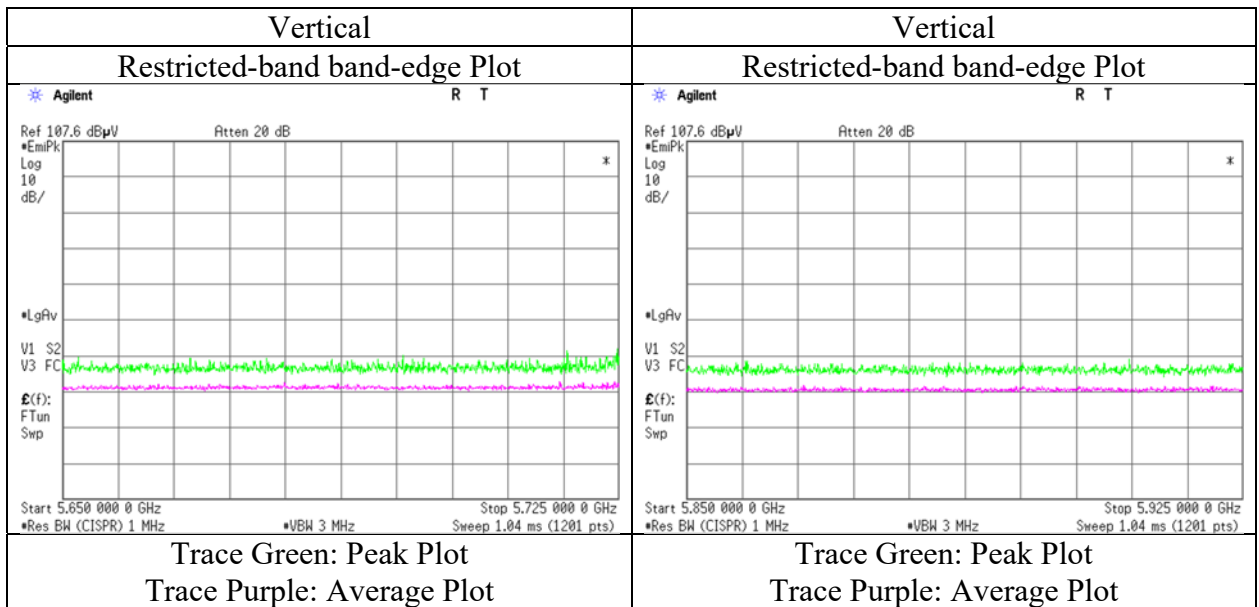
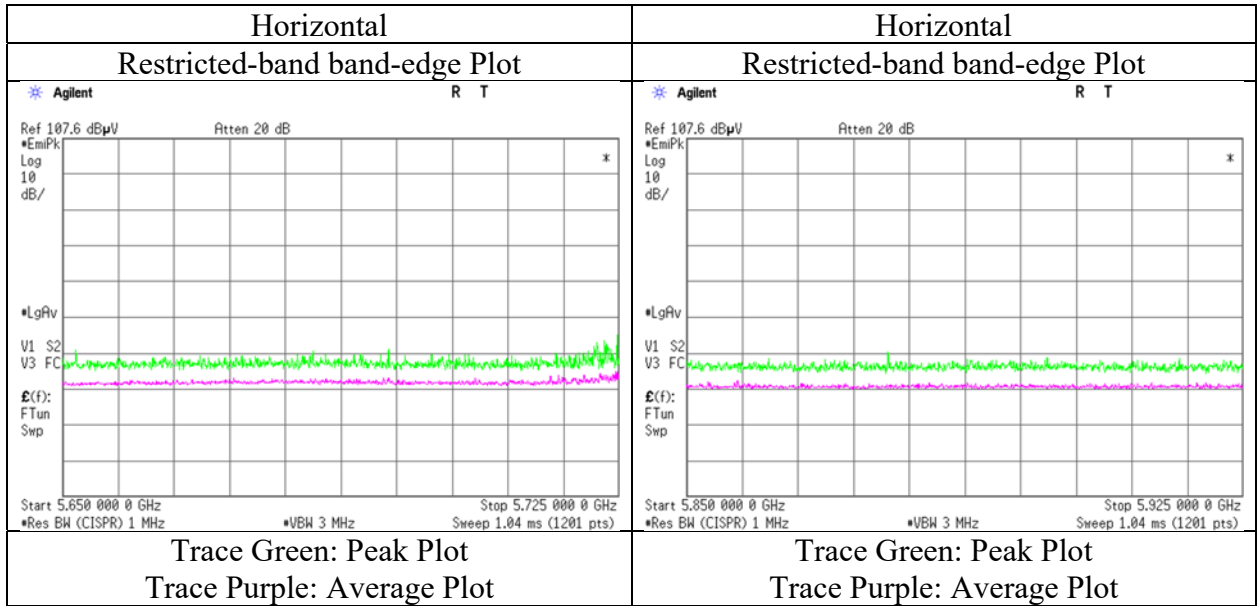
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	1580.000	PK	65.0	25.3	3.6	35.1	-	58.7	73.9	15.2	
Hori.	2500.000	PK	47.8	27.4	4.1	34.6	-	44.8	68.2	23.5	
Hori.	5000.000	PK	48.8	31.6	5.2	33.8	-	51.8	73.9	22.2	
Hori.	5650.000	PK	48.0	31.8	5.5	33.5	-	51.8	68.2	16.4	
Hori.	5700.000	PK	50.4	31.8	5.5	33.5	-	54.2	105.2	51.0	
Hori.	5720.000	PK	53.4	31.9	5.5	33.5	-	57.2	110.8	53.6	
Hori.	5725.000	PK	54.6	31.9	5.5	33.5	-	58.4	122.2	63.8	
Hori.	5850.000	PK	46.7	32.3	5.5	33.5	-	50.9	122.2	71.3	
Hori.	5855.000	PK	46.0	32.3	5.5	33.5	-	50.2	110.8	60.6	
Hori.	5875.000	PK	45.0	32.3	5.5	33.5	-	49.4	105.2	55.9	
Hori.	5925.000	PK	43.6	32.4	5.5	33.5	-	47.9	68.2	20.3	
Hori.	10000.000	PK	49.2	39.3	-2.8	34.3	-	51.4	68.2	16.8	
Hori.	11550.000	PK	45.5	39.9	-2.1	33.4	-	49.8	73.9	24.1	
Hori.	17325.000	PK	43.9	42.9	-0.6	32.4	-	53.8	68.2	14.5	Floor noise
Hori.	1580.000	AV	51.8	25.3	3.6	35.1	-	45.5	53.9	8.4	
Hori.	2500.000	AV	39.3	27.4	4.1	34.6	-	36.3	53.9	17.7	
Hori.	5000.000	AV	43.1	31.6	5.2	33.8	-	46.1	53.9	7.9	
Hori.	11550.000	AV	36.7	39.9	-2.1	33.4	5.0	46.1	53.9	7.8	
Vert.	1580.000	PK	66.0	25.3	3.6	35.1	-	59.7	73.9	14.2	
Vert.	2500.000	PK	48.6	27.4	4.1	34.6	-	45.6	68.2	22.7	
Vert.	5000.000	PK	48.3	31.6	5.2	33.8	-	51.3	73.9	22.7	
Vert.	5650.000	PK	47.3	31.8	5.5	33.5	-	51.0	68.2	17.2	
Vert.	5700.000	PK	49.2	31.8	5.5	33.5	-	53.0	105.2	52.2	
Vert.	5720.000	PK	52.4	31.9	5.5	33.5	-	56.2	110.8	54.6	
Vert.	5725.000	PK	53.5	31.9	5.5	33.5	-	57.3	122.2	64.9	
Vert.	5850.000	PK	45.5	32.3	5.5	33.5	-	49.7	122.2	72.5	
Vert.	5855.000	PK	44.9	32.3	5.5	33.5	-	49.1	110.8	61.7	
Vert.	5875.000	PK	44.0	32.3	5.5	33.5	-	48.4	105.2	56.9	
Vert.	5925.000	PK	43.4	32.4	5.5	33.5	-	47.7	68.2	20.5	
Vert.	10000.000	PK	47.5	39.3	-2.8	34.3	-	49.6	68.2	18.6	
Vert.	11550.000	PK	44.8	39.9	-2.1	33.4	-	49.1	73.9	24.8	
Vert.	17325.000	PK	43.7	42.9	-0.6	32.4	-	53.6	68.2	14.6	Floor noise
Vert.	1580.000	AV	52.8	25.3	3.6	35.1	-	46.6	53.9	7.4	
Vert.	2500.000	AV	42.3	27.4	4.1	34.6	-	39.3	53.9	14.7	
Vert.	5000.000	AV	43.0	31.6	5.2	33.8	-	46.0	53.9	8.0	
Vert.	11550.000	AV	35.7	39.9	-2.1	33.4	5.0	45.0	53.9	8.9	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log(3.6 m / 3.0 m) = 1.59 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	13828809H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	June 22, 2021
Temperature / Humidity	23 deg. C / 68 % RH
Engineer	Takafumi Noguchi
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5775 MHz



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

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

UL Japan, Inc.

Ise EMC Lab.

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Radiated Spurious Emission

Report No. 13828809H
Test place Ise EMC Lab.
Semi Anechoic Chamber No.2 No.3
Date October 18, 2021 October 19, 2021
Temperature / Humidity 22 deg. C / 53 % RH 22 deg. C / 53 % RH
Engineer Hiroki Numata Kiyoshiro Okazaki
(1 GHz - 40 GHz) (30 MHz - 1 GHz)
Mode Tx 11a 5240 MHz + BT DH5 Hopping On

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	31.269	QP	22.7	18.1	7.1	32.3	-	15.6	40.0	24.4	
Hori.	134.829	QP	24.3	14.2	8.5	32.2	-	14.8	43.5	28.7	
Hori.	196.555	QP	29.3	16.7	9.1	32.2	-	23.0	43.5	20.5	
Hori.	214.550	QP	32.7	11.7	9.3	32.2	-	21.5	43.5	22.0	
Hori.	239.670	QP	29.7	12.1	9.5	32.1	-	19.2	46.0	26.8	
Hori.	914.805	QP	21.9	22.3	13.7	30.9	-	26.9	46.0	19.1	
Hori.	1579.981	PK	60.8	25.1	4.0	35.1	-	54.8	73.9	19.1	
Hori.	2500.000	PK	46.3	27.3	4.7	34.6	-	43.6	73.9	30.3	
Hori.	5000.078	PK	49.8	31.8	6.2	33.8	-	53.9	73.9	20.0	
Hori.	5150.000	PK	47.9	32.0	6.2	33.7	-	52.3	73.9	21.6	
Hori.	5350.000	PK	41.9	31.5	6.3	33.6	-	46.2	73.9	27.7	
Hori.	10000.000	PK	47.3	39.2	-2.6	34.3	-	49.6	68.2	18.6	
Hori.	10480.000	PK	44.7	40.0	-2.5	34.0	-	48.3	68.2	19.9	
Hori.	15720.000	PK	44.2	36.9	-0.8	33.0	-	47.3	73.9	26.6	Floor noise
Hori.	1579.981	AV	51.3	25.1	4.0	35.1	-	45.2	53.9	8.7	
Hori.	2500.000	AV	39.7	27.3	4.7	34.6	-	37.1	53.9	16.8	
Hori.	5000.078	AV	43.4	31.8	6.2	33.8	-	47.5	53.9	6.4	
Hori.	5150.000	AV	34.3	32.0	6.2	33.7	2.2	41.0	53.9	12.9	*1)
Hori.	5350.000	AV	33.5	31.5	6.3	33.6	2.2	40.0	53.9	13.9	*1)
Hori.	15720.000	AV	36.1	36.9	-0.8	33.0	-	39.2	53.9	14.7	Floor noise
Vert.	31.269	QP	26.3	18.1	7.1	32.3	-	19.2	40.0	20.8	
Vert.	134.829	QP	22.4	14.2	8.5	32.2	-	12.9	43.5	30.6	
Vert.	196.555	QP	23.0	16.7	9.1	32.2	-	16.7	43.5	26.8	
Vert.	214.550	QP	32.1	11.7	9.3	32.2	-	20.9	43.5	22.6	
Vert.	239.670	QP	28.7	12.1	9.5	32.1	-	18.2	46.0	27.8	
Vert.	914.805	QP	21.8	22.3	13.7	30.9	-	26.8	46.0	19.2	
Vert.	1579.981	PK	64.3	25.1	4.0	35.1	-	58.2	73.9	15.7	
Vert.	2500.000	PK	48.2	27.3	4.7	34.6	-	45.6	73.9	28.3	
Vert.	5000.078	PK	43.8	31.8	6.2	33.8	-	47.9	73.9	26.0	
Vert.	5150.000	PK	44.6	32.0	6.2	33.7	-	49.0	73.9	24.9	
Vert.	5350.000	PK	42.1	31.5	6.3	33.6	-	46.3	73.9	27.6	
Vert.	6986.559	PK	48.7	35.3	7.1	33.5	-	57.7	68.2	10.5	
Vert.	10000.000	PK	45.5	39.2	-2.6	34.3	-	47.8	68.2	20.4	
Vert.	10480.000	PK	44.5	40.0	-2.5	34.0	-	48.1	68.2	20.1	
Vert.	15720.000	PK	44.0	36.9	-0.8	33.0	-	47.1	73.9	26.8	Floor noise
Vert.	1579.981	AV	52.6	25.1	4.0	35.1	-	46.5	53.9	7.4	
Vert.	2500.000	AV	41.3	27.3	4.7	34.6	-	38.7	53.9	15.2	
Vert.	5000.078	AV	40.9	31.8	6.2	33.8	-	45.0	53.9	8.9	
Vert.	5150.000	AV	34.0	32.0	6.2	33.7	2.2	40.7	53.9	13.2	*1)
Vert.	5350.000	AV	33.7	31.5	6.3	33.6	2.2	40.2	53.9	13.7	*1)
Vert.	15720.000	AV	35.8	36.9	-0.8	33.0	-	38.9	53.9	15.0	Floor noise

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

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

Distance factor: 1 GHz - 10 GHz 20log (3.6 m / 3.0 m) = 1.59 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

*1) Not Out of Band emission(Leakage Power)

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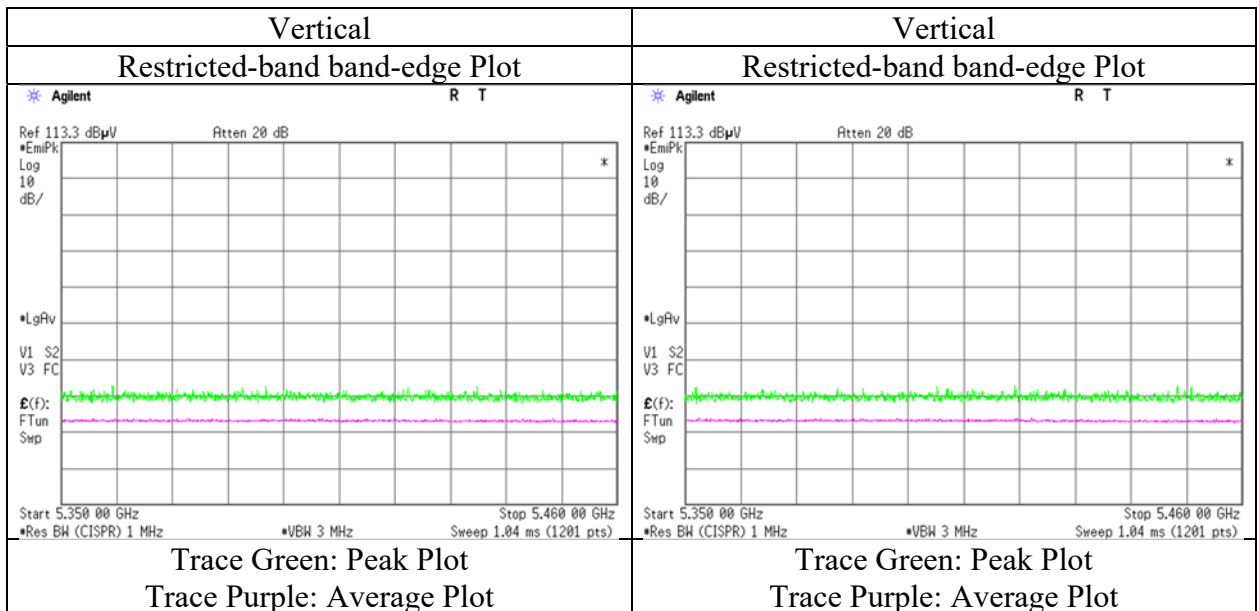
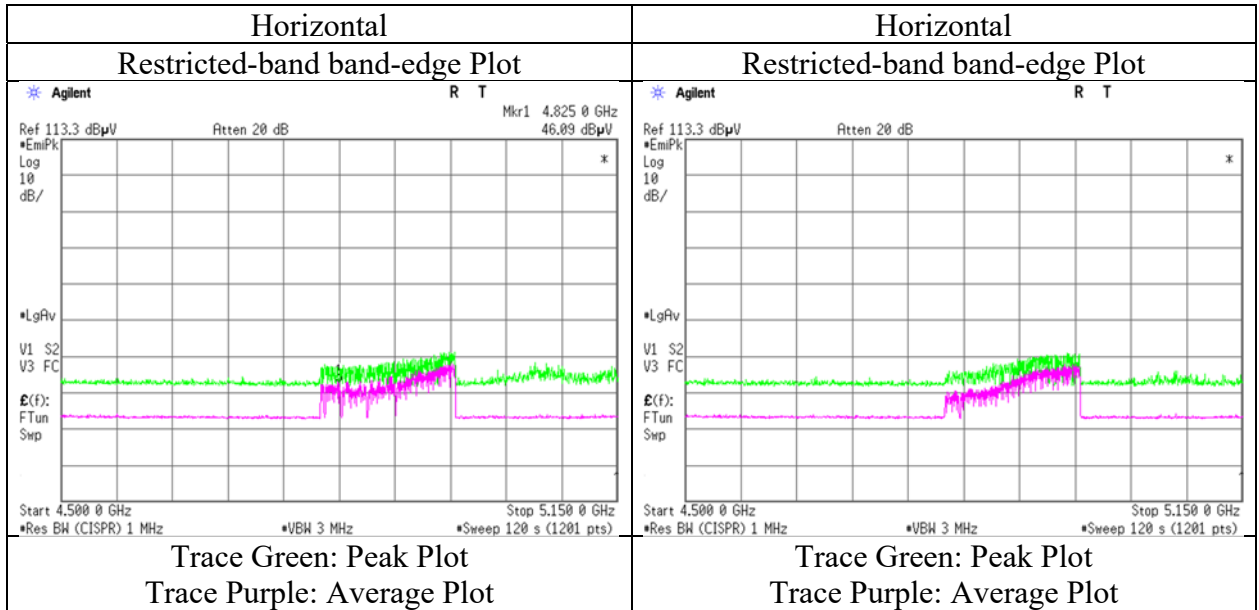
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Radiated Spurious Emission

Report No.	13828809H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	October 18, 2021
Temperature / Humidity	22 deg. C / 53 % RH
Engineer	Hiroki Numata
	(1 GHz - 40 GHz)
Mode	Tx 11a 5240 MHz + Tx Hopping On DH5



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

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

UL Japan, Inc.

Ise EMC Lab.

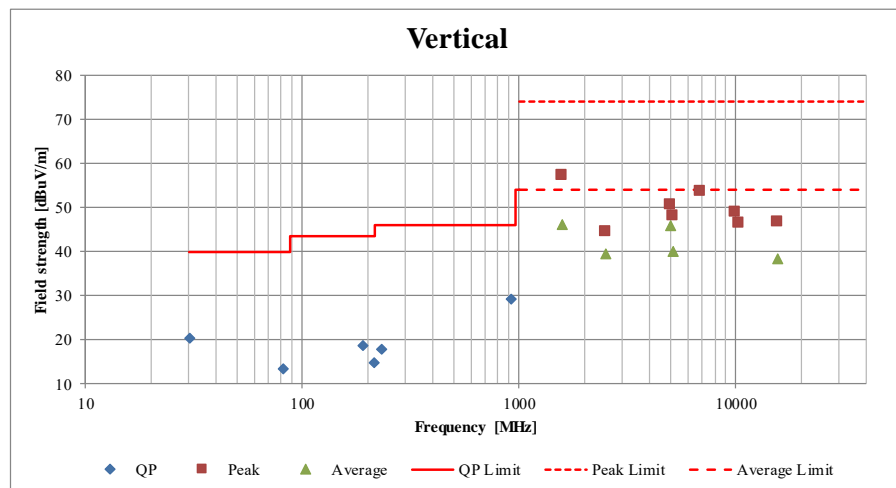
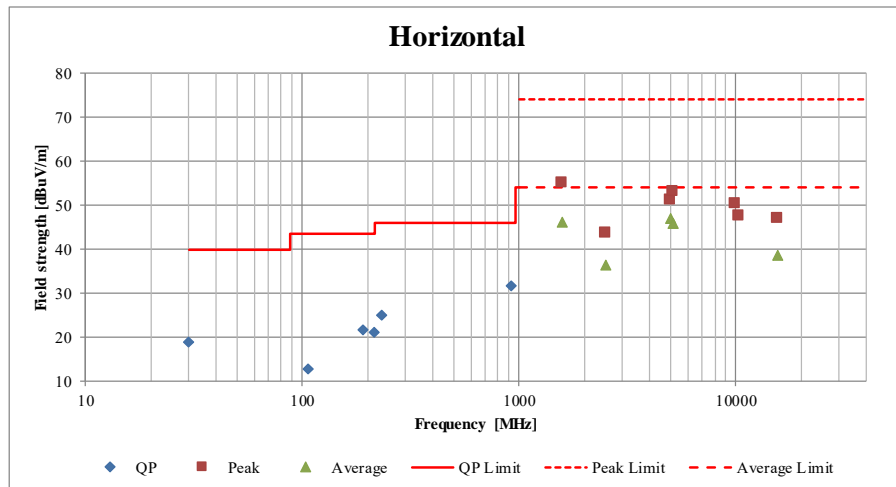
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Radiated Spurious Emission
(Plot data, Worst case)

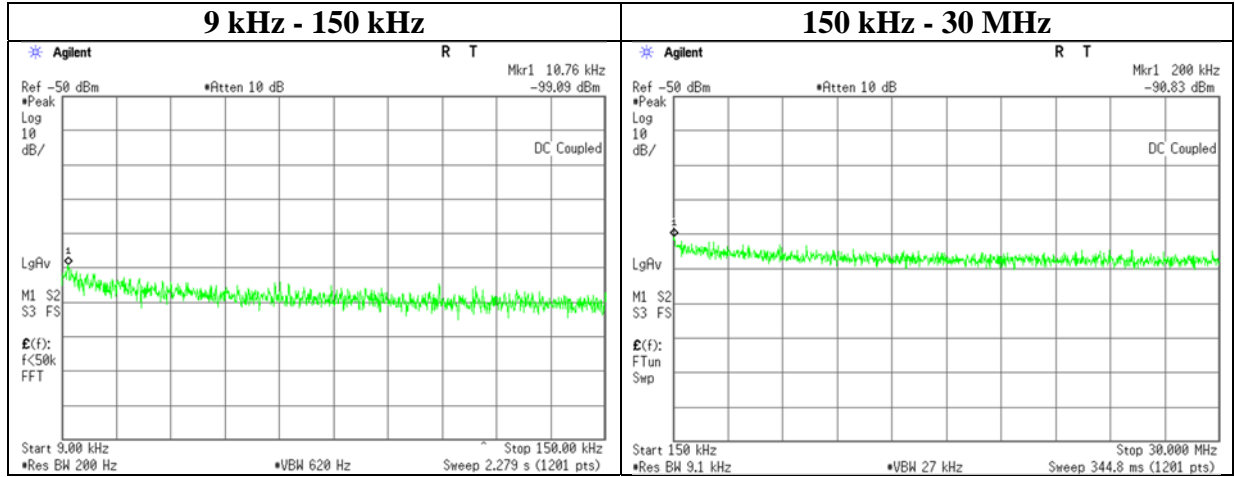
Report No.	13828809H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.2	No.2	No.2	No.2	No.2
Date	June 17, 2021	June 19, 2021	June 21, 2021	June 23, 2021	June 23, 2021
Temperature / Humidity	20 deg. C / 60 % RH	23 deg. C / 68 % RH	22 deg. C / 61 % RH	25 deg. C / 71 % RH	23 deg. C / 66 % RH
Engineer	Junya Okuno (Below 1GHz)	Junki Nagatomi (26.5 GHz - 40 GHz)	Junya Okuno (1 GHz - 10 GHz)	Junya Okuno (10 GHz - 18 GHz)	Takafumi Noguchi (18 GHz - 26.5 GHz)
Mode	Tx 11a 5180 MHz				



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

Conducted Spurious Emission

Report No. 13828809H
 Test place Ise EMC Lab. No.6 Measurement Room
 Date June 21, 2021
 Temperature / Humidity 22 deg. C / 57 % RH
 Engineer Nachi Konegawa
 Mode Tx 11a 5180 MHz Antenna 1



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
10.76	-99.1	2.17	10.1	3.3	1	-83.5	300	6.0	-22.3	46.9	69.2	
200.00	-90.8	2.17	10.1	3.3	1	-75.3	300	6.0	-14.0	21.5	35.5	

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

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

N: Number of output

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APPENDIX 2: Test instruments

Test equipment (Test on June 17 to 23, 2021)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	MSA-16	141903	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46186390	12/18/2020	12
AT	MPM-17	141813	Power Meter	Raditec (Formerly DARE!! Instruments)	RPR3006W	14100048SNO081	11/06/2020	12
AT	MAT-58	141334	Attenuator(10dB)	Suhner	6810.19.A	-	12/07/2020	12
AT	MCC-244	197219	Microwave cable	Huber+Suhner	SF126E/11PC35/11PC35/2000MM	536999/126E	03/04/2021	12
AT	MCC-206	141286	Microwave Cable	RS Pro	R-132G7210200CD	-	02/03/2021	12
AT	MCC-208	141287	Microwave Cable	RS Pro	R-132G7210200CD	-	02/03/2021	12
AT	MOS-14	141561	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1401	01/15/2021	12
AT	MMM-12	141547	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	60500120	02/01/2021	12
AT	MJM-24	142225	Measure	ASKUL	-	-	-	-
AT	COTS-MPM	141176	measurement software	All	All	-	-	-
RE	MAEC-02	142004	AC2_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	05/26/2020	24
RE	MOS-41	192300	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0013	12/06/2020	12
RE	MMM-01	141542	Digital Tester	Fluke Corporation	FLUKE 26-3	78030611	08/18/2020	12
RE	MJM-27	142228	Measure	KOMELON	KMC-36	-	-	-
RE	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	MAT-07	141203	Attenuator(6dB)	Weinschel Corp	2	BK7970	11/13/2020	12
RE	MBA-08	141427	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103B+BBA9106	8031	07/29/2020	12
RE	MCC-12	141317	Coaxial Cable	UL Japan Inc.	-	-	09/25/2020	12
RE	MLA-21	141265	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-190	07/29/2020	12
RE	MPA-24	141594	Pre Amplifier	Keysight Technologies Inc	8447D	2944A10150	02/18/2021	12
RE	MTR-08	141949	Test Receiver	Rohde & Schwarz	ESCI	100767	08/18/2020	12
RE	MRENT-130	141855	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46187750	11/18/2020	12
RE	MAEC-02-SVSWR	142006	AC2_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-06902	04/09/2021	24
RE	MSA-03	141884	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY44020357	03/10/2021	12
RE	MHA-29	141517	Horn Antenna 26.5-40GHz	ETS-Lindgren	3160-10	152399	08/03/2020	12
RE	MPA-22	141588	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 / 1871328	09/07/2020	12
RE	MCC-224	160324	Coaxial Cable	Huber+Suhner	SUCOFLEX 102A	MY009/2A	11/17/2020	12
RE	MHA-06	141512	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	254	09/14/2020	12
RE	MCC-218	141394	Microwave Cable	Junkosha	MWX221	1607S141(1 m) / 1608S264(5 m)	09/23/2020	12
RE	MPA-10	141579	Pre Amplifier	Keysight Technologies Inc	8449B	3008A02142	02/18/2021	12
RE	MCC-176	141279	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S303	03/01/2021	12
RE	MHF-16	141406	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	09/23/2020	12
RE	MHA-17	141506	Horn Antenna 15-40GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9170	BBHA9170307	07/16/2020	12

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Test equipment (Test on October 18 and 19, 2021)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	MOS-41	192300	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0013	12/06/2020	12
RE	MMM-01	141542	Digital Tester	Fluke Corporation	FLUKE 26-3	78030611	08/10/2021	12
RE	MJM-27	142228	Measure	KOMELON	KMC-36	-	-	-
RE	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	MRENT-130	141855	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46187750	11/18/2020	12
RE	MAEC-02-SVSWR	142006	AC2_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-06902	04/09/2021	24
RE	MHA-29	141517	Horn Antenna 26.5-40GHz	ETS-Lindgren	3160-10	152399	08/27/2021	12
RE	MPA-22	141588	Pre Amplifier	MITEQ, Inc	AMF-6F-2600400-33-8P / AMF-4F-2600400-33-8P	1871355 / 1871328	09/30/2021	12
RE	MCC-224	160324	Coaxial Cable	Huber+Suhner	SUCOFLEX 102A	MY009/2A	11/17/2020	12
RE	MCC-218	141394	Microwave Cable	Junkosha	MWX221	1607S141(1 m) / 1608S264(5 m)	09/30/2021	12
RE	MPA-10	141579	Pre Amplifier	Keysight Technologies Inc	8449B	3008A02142	02/18/2021	12
RE	MCC-176	141279	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S303	03/01/2021	12
RE	MHF-16	141406	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	09/30/2021	12
RE	MHA-20	141507	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	258	10/01/2020	12
RE	MHA-02	141503	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	06/28/2021	12
RE	MSA-04	141885	Spectrum Analyzer	Keysight Technologies Inc	E4448A	US44300523	11/09/2020	12
RE	MAEC-03	142008	AC3_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	05/22/2020	24
RE	MOS-13	141554	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1301	01/15/2021	12
RE	MMM-08	141532	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201197	01/07/2021	12
RE	MJM-16	142183	Measure	KOMELON	KMC-36	-	-	-
RE	MAT-95	142314	Attenuator	Pasternack Enterprises	PE7390-6	D/C 1504	06/09/2021	12
RE	MBA-03	141424	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103+BBA9106	1915	08/21/2021	12
RE	MCC-51	141323	Coaxial cable	UL Japan	-	-	07/19/2021	12
RE	MLA-22	141266	Logperiodic Antenna(200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-191	08/21/2021	12
RE	MPA-13	141582	Pre Amplifier	SONOMA INSTRUMENT	310	260834	02/18/2021	12
RE	MTR-03	141942	Test Receiver	Rohde & Schwarz	ESCI	100300	08/05/2021	12

*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

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

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

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

Test item:

RE: Radiated Emission

AT: Antenna Terminal Conducted test

UL Japan, Inc.

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