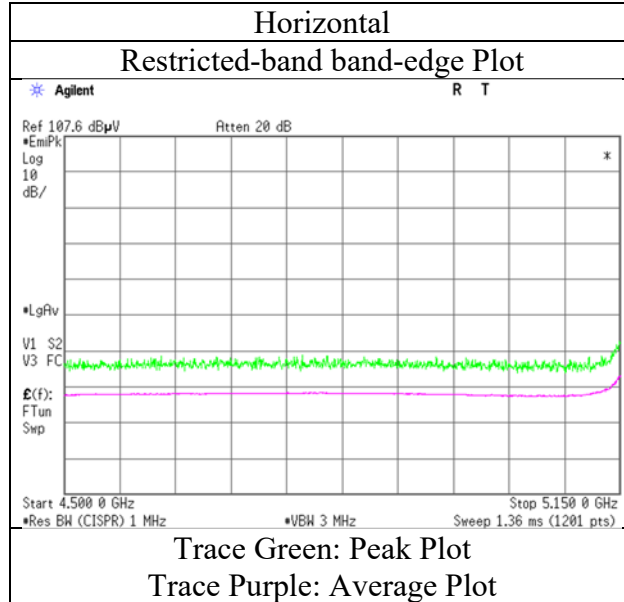


Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 10 GHz)	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-40 5270 MHz			

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	10540.0	43.1	-	39.5	-2.4	34.4	-	45.9	-	68.2	-	22.4	-	Floor noise
Hori.	15810.0	44.3	36.1	37.5	-0.7	33.7	-	47.4	39.2	73.9	53.9	26.5	14.7	Floor noise
Vert.	10540.0	43.0	-	39.5	-2.4	34.4	-	45.7	-	68.2	-	22.5	-	Floor noise
Vert.	15810.0	44.3	36.2	37.5	-0.7	33.7	-	47.4	39.3	73.9	53.9	26.5	14.6	Floor noise

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

Result (AV)= 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).

*QP detector was used up to 1GHz.

Distance factor:	1 GHz - 10 GHz	20log(4 m / 3.0 m) = 2.5 dB
	10 GHz - 40 GHz	20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
Mode	(1 GHz to 10 GHz) Tx 11ac-40 5310 MHz	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5350.0	50.2	31.7	31.7	6.7	31.9	-	56.6	38.1	73.9	53.9	17.3	15.8	
Hori.	10620.0	43.0	34.0	39.5	-2.4	34.3	-	45.9	36.8	73.9	53.9	28.1	17.1	Floor noise
Hori.	15930.0	44.4	36.0	37.6	-0.6	33.8	-	47.5	39.1	73.9	53.9	26.4	14.8	Floor noise
Vert.	5350.0	55.8	35.7	31.7	6.7	31.9	-	62.3	42.1	73.9	53.9	11.7	11.8	
Vert.	10620.0	43.1	34.0	39.5	-2.4	34.3	-	45.9	36.8	73.9	53.9	28.0	17.1	Floor noise
Vert.	15930.0	44.5	36.1	37.6	-0.6	33.8	-	47.6	39.2	73.9	53.9	26.3	14.7	Floor noise

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

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

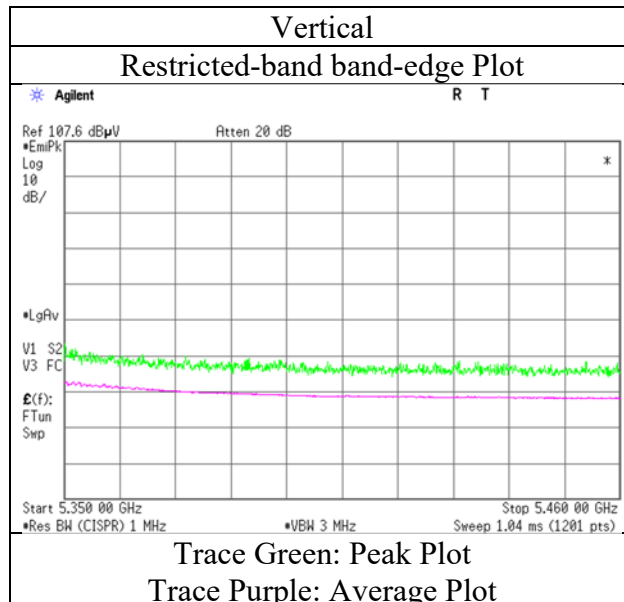
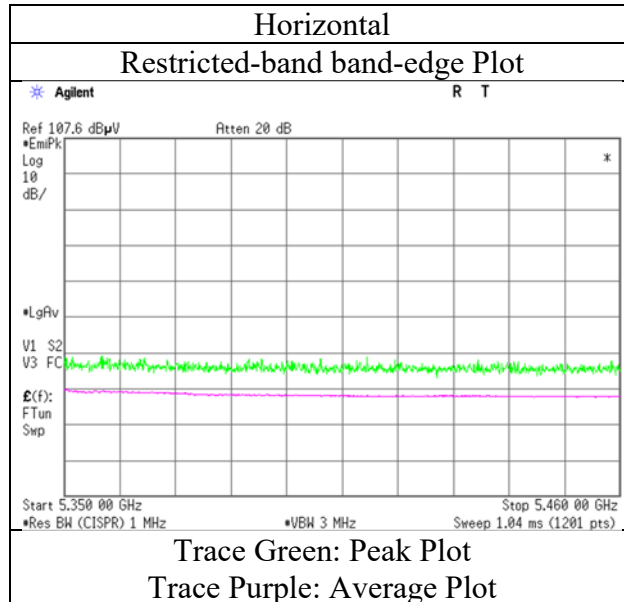
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz $20\log(4\text{ m} / 3.0\text{ m}) = 2.5\text{ dB}$
 10 GHz - 40 GHz $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-40 5310 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 10 GHz)	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-40 5510 MHz			

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	5460.0	47.7	33.0	31.9	6.7	31.9	-	54.3	39.6	73.9	53.9	19.6	14.3	
Hori.	5470.0	52.5	-	31.9	6.7	31.9	-	59.2	-	73.9	-	14.7	-	
Hori.	11020.0	42.8	34.0	40.0	-2.2	34.0	-	46.6	37.8	73.9	53.9	27.3	16.2	Floor noise
Hori.	16530.0	45.0	-	40.0	-0.5	33.4	-	51.0	-	68.2	-	17.2	-	Floor noise
Vert.	5460.0	51.4	35.2	31.9	6.7	31.9	-	58.1	41.8	73.9	53.9	15.8	12.1	
Vert.	5470.0	54.7	-	31.9	6.7	31.9	-	61.4	-	73.9	-	12.5	-	
Vert.	11020.0	42.9	34.0	40.0	-2.2	34.0	-	46.7	37.8	73.9	53.9	27.2	16.1	Floor noise
Vert.	16530.0	45.1	-	40.0	-0.5	33.4	-	51.2	-	68.2	-	17.1	-	Floor noise

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

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

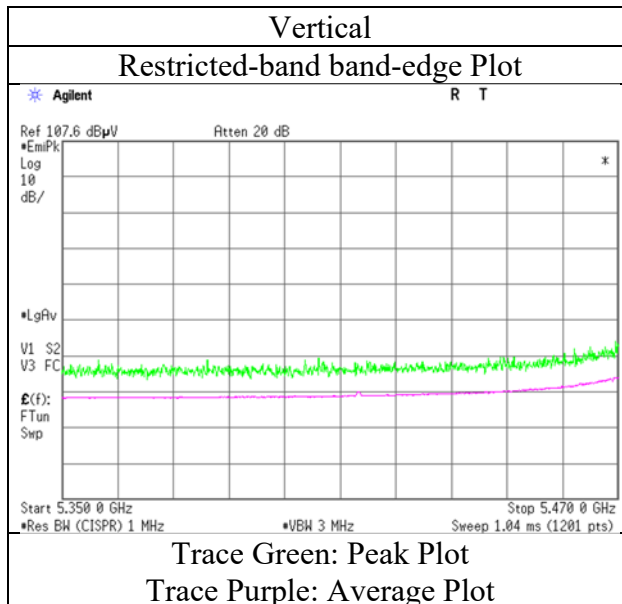
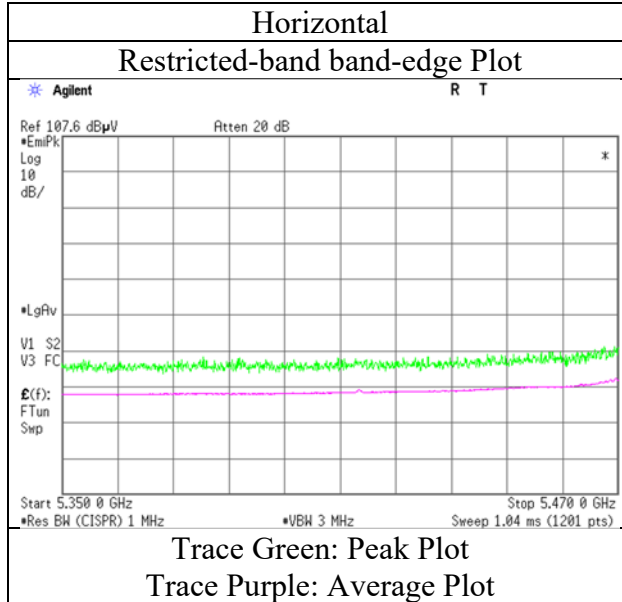
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz $20\log(4\text{ m} / 3.0\text{ m}) = 2.5\text{ dB}$
 10 GHz - 40 GHz $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-40 5510 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
Mode	(1 GHz to 10 GHz) Tx 11ac-40 5550 MHz	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	11100.0	42.9	34.0	39.9	-2.1	34.0	-	46.7	37.7	73.9	53.9	27.2	16.2	Floor noise
Hori.	16650.0	45.1	-	40.2	-0.5	33.3	-	51.5	-	68.2	-	16.7	-	Floor noise
Vert.	11100.0	43.0	34.1	39.9	-2.1	34.0	-	46.8	37.9	73.9	53.9	27.1	16.0	Floor noise
Vert.	16650.0	45.3	-	40.2	-0.5	33.3	-	51.7	-	68.2	-	16.5	-	Floor noise

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

Result (AV)= 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).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(4 m / 3.0 m) = 2.5 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 10 GHz)	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-40 5670 MHz			

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5725.0	45.7	-	32.1	6.8	32.0	-	52.7	-	73.9	-	21.2	-	
Hori.	11340.0	42.9	33.9	40.1	-2.0	34.0	-	47.1	38.1	73.9	53.9	26.9	15.9	Floor noise
Hori.	17010.0	45.0	-	41.1	-0.4	33.1	-	52.6	-	68.2	-	15.6	-	Floor noise
Vert.	5725.0	48.7	-	32.1	6.8	32.0	-	55.7	-	73.9	-	18.2	-	
Vert.	11340.0	43.0	34.0	40.1	-2.0	34.0	-	47.1	38.2	73.9	53.9	26.8	15.7	Floor noise
Vert.	17010.0	45.2	-	41.1	-0.4	33.1	-	52.8	-	68.2	-	15.4	-	Floor noise

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

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

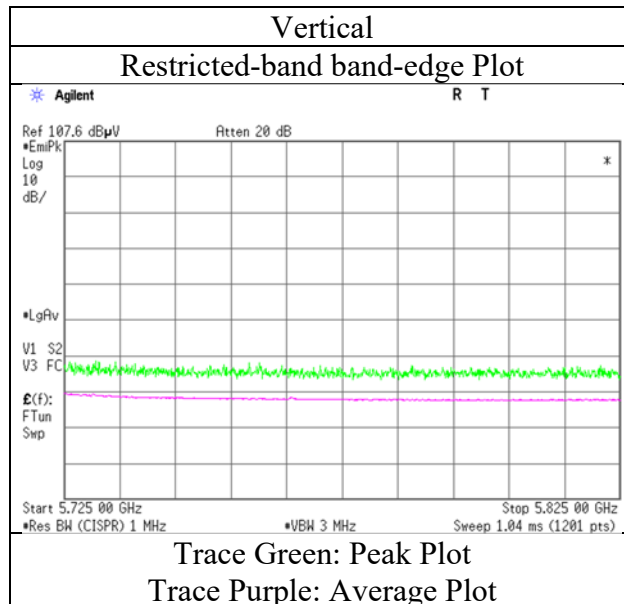
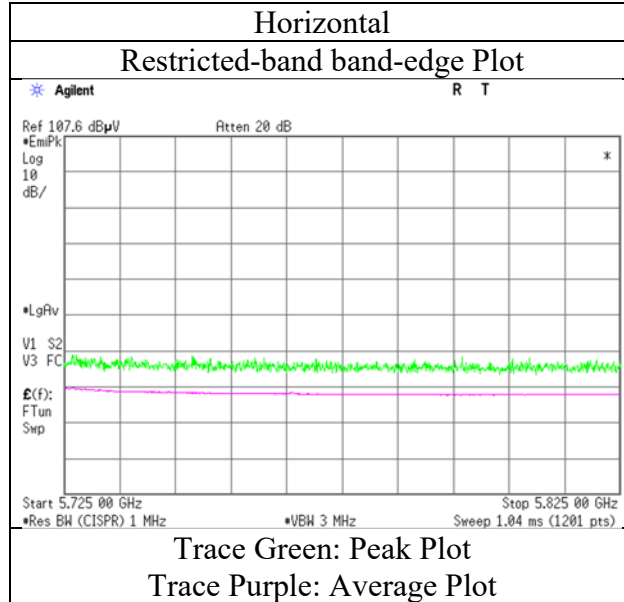
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor:
 1 GHz - 10 GHz 20log(4 m / 3.0 m) = 2.5 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-40 5670 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.2
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 10 GHz)	(10 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-40 5755 MHz			

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	5650.0	41.8	-	31.9	6.8	32.0	-	48.6	-	68.2	-	19.6	-	
Hori.	5700.0	46.5	-	32.1	6.8	32.0	-	53.4	-	105.2	-	51.8	-	
Hori.	5720.0	56.6	-	32.1	6.8	32.0	-	63.5	-	110.8	-	47.3	-	
Hori.	5725.0	57.5	-	32.1	6.8	32.0	-	64.5	-	122.2	-	57.7	-	
Hori.	11510.0	43.1	34.1	40.0	-1.8	33.9	-	47.3	38.4	73.9	53.9	26.6	15.5	Floor noise
Hori.	17265.0	45.2	-	42.4	-0.3	33.0	-	54.3	-	68.2	-	13.9	-	Floor noise
Vert.	5650.0	42.5	-	31.9	6.8	32.0	-	49.3	-	68.2	-	18.9	-	
Vert.	5700.0	46.9	-	32.1	6.8	32.0	-	53.8	-	105.2	-	51.4	-	
Vert.	5720.0	55.8	-	32.1	6.8	32.0	-	62.8	-	110.8	-	48.1	-	
Vert.	5725.0	56.8	-	32.1	6.8	32.0	-	63.8	-	122.2	-	58.4	-	
Vert.	11510.0	43.2	34.2	40.0	-1.8	33.9	-	47.4	38.5	73.9	53.9	26.5	15.4	Floor noise
Vert.	17265.0	45.4	-	42.4	-0.3	33.0	-	54.5	-	68.2	-	13.7	-	Floor noise

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

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

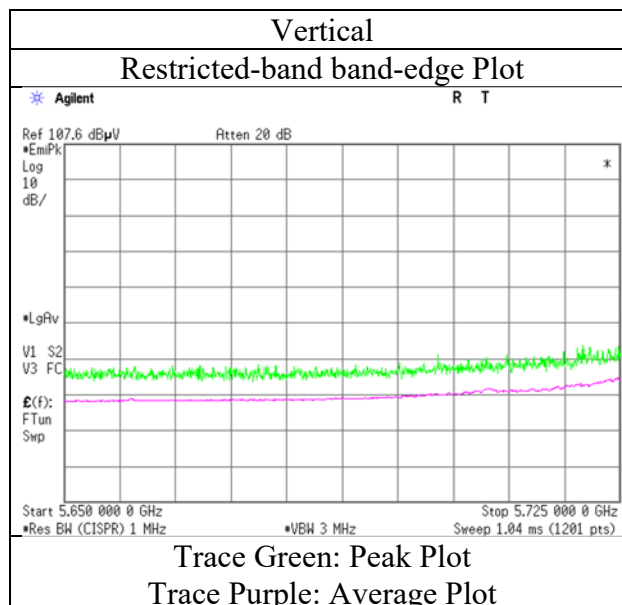
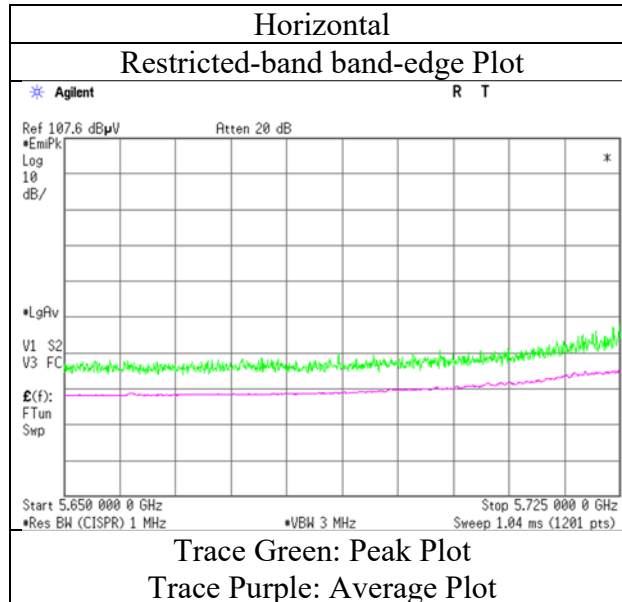
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(4 m / 3.0 m) = 2.5 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.3	No.2	No.3	No.2	No.1
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022	November 13, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH	23 deg. C / 58 % RH
Engineer	Tetsuro Yoshida (1 GHz to 10 GHz)	Tetsuro Yoshida (10 GHz to 18 GHz)	Tetsuro Yoshida (18 GHz to 26.5 GHz)	Tetsuro Yoshida (26.5 GHz to 40 GHz)	Tetsuro Yoshida (Below 1 GHz)
Mode	Tx 11ac-40 5795 MHz				

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	65.9	32.6	-	6.7	7.9	39.0	-	8.1	-	40.0	-	31.9	-	
Hori.	163.6	37.4	-	15.6	9.1	39.1	-	23.0	-	43.5	-	20.5	-	
Hori.	240.0	44.7	-	13.0	9.9	39.0	-	28.6	-	46.0	-	17.4	-	
Hori.	288.0	39.7	-	14.6	10.3	38.9	-	25.7	-	46.0	-	20.3	-	
Hori.	606.0	36.6	-	19.6	12.5	38.4	-	30.3	-	46.0	-	15.7	-	
Hori.	834.0	35.0	-	21.2	13.8	38.4	-	31.7	-	46.0	-	14.4	-	
Hori.	5850.0	48.8	-	32.5	6.9	32.0	-	56.1	-	122.2	-	66.1	-	
Hori.	5855.0	47.0	-	32.5	6.9	32.0	-	54.4	-	110.8	-	56.4	-	
Hori.	5875.0	42.9	-	32.5	6.9	32.0	-	50.3	-	105.2	-	54.9	-	
Hori.	5925.0	42.2	-	32.5	6.9	32.0	-	49.6	-	68.2	-	18.6	-	
Hori.	11590.0	43.0	34.1	39.7	-1.8	33.9	-	47.1	38.1	73.9	53.9	26.8	15.8	Floor noise
Hori.	17385.0	45.4	-	43.2	-0.3	32.9	-	55.4	-	68.2	-	12.8	-	Floor noise
Vert.	66.1	47.3	-	6.6	7.9	39.0	-	22.8	-	40.0	-	17.2	-	
Vert.	161.8	41.5	-	15.6	9.1	39.1	-	27.0	-	43.5	-	16.5	-	
Vert.	240.0	39.7	-	13.0	9.9	39.0	-	23.6	-	46.0	-	22.4	-	
Vert.	288.0	41.1	-	14.6	10.3	38.9	-	27.1	-	46.0	-	18.9	-	
Vert.	606.0	35.1	-	19.6	12.5	38.4	-	28.8	-	46.0	-	17.2	-	
Vert.	834.0	34.2	-	21.2	13.8	38.4	-	30.9	-	46.0	-	15.2	-	
Vert.	5850.0	48.5	-	32.5	6.9	32.0	-	55.8	-	122.2	-	66.4	-	
Vert.	5855.0	47.2	-	32.5	6.9	32.0	-	54.6	-	110.8	-	56.2	-	
Vert.	5875.0	42.5	-	32.5	6.9	32.0	-	49.8	-	105.2	-	55.4	-	
Vert.	5925.0	42.2	-	32.5	6.9	32.0	-	49.6	-	68.2	-	18.6	-	
Vert.	11590.0	43.2	34.2	39.7	-1.8	33.9	-	47.3	38.3	73.9	53.9	26.7	15.7	Floor noise
Vert.	17385.0	45.5	-	43.2	-0.3	32.9	-	55.5	-	68.2	-	12.7	-	Floor noise

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

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

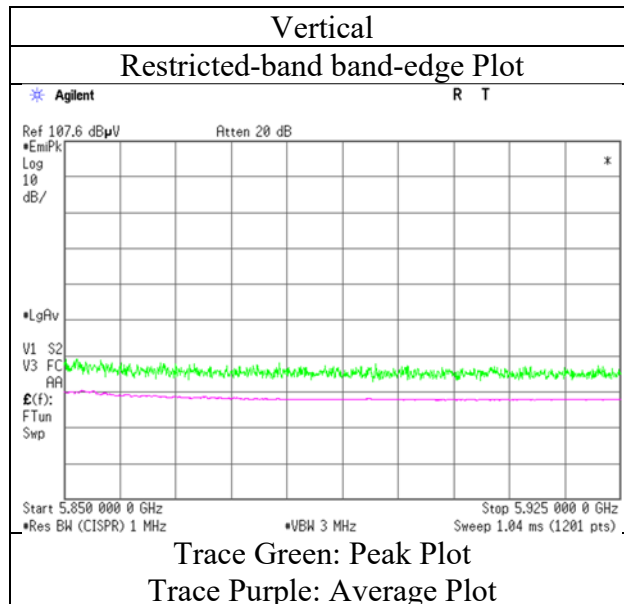
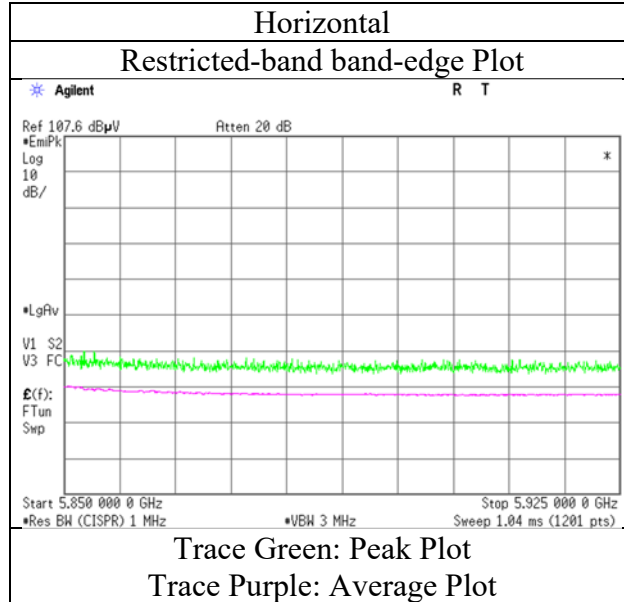
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(4 m / 3.0 m) = 2.5 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	November 6, 2022
Temperature / Humidity	21 deg. C / 35 % RH
Engineer	Tetsuro Yoshida
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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.2
Date	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-80 5210 MHz		

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5150.0	65.1	42.1	32.1	5.8	34.1	-	68.9	45.9	73.9	53.9	5.0	8.0	
Hori.	10420.0	43.4	-	39.7	-2.4	34.5	-	46.1	-	68.2	-	22.1	-	Floor noise
Hori.	15630.0	43.7	35.8	37.7	-0.8	33.6	-	47.1	39.1	73.9	53.9	26.8	14.8	Floor noise
Vert.	5150.0	65.3	43.0	32.1	5.8	34.1	-	69.1	46.8	73.9	53.9	4.8	7.2	
Vert.	10420.0	43.2	-	39.7	-2.4	34.5	-	46.0	-	68.2	-	22.2	-	Floor noise
Vert.	15630.0	43.6	36.0	37.7	-0.8	33.6	-	47.0	39.3	73.9	53.9	27.0	14.6	Floor noise

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

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

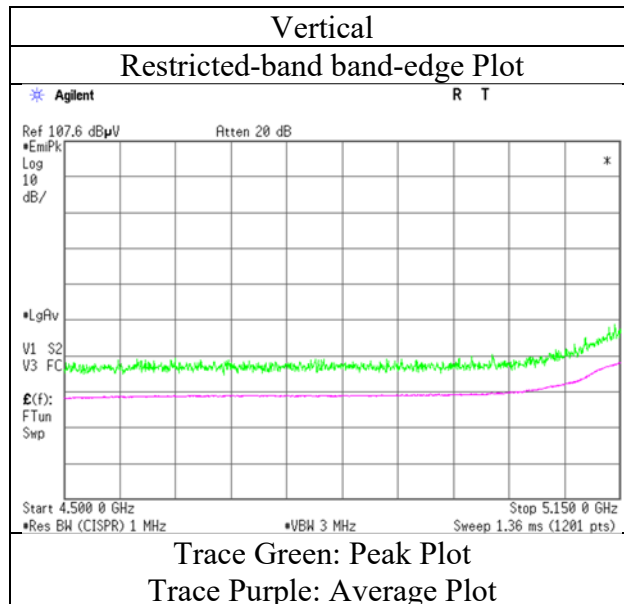
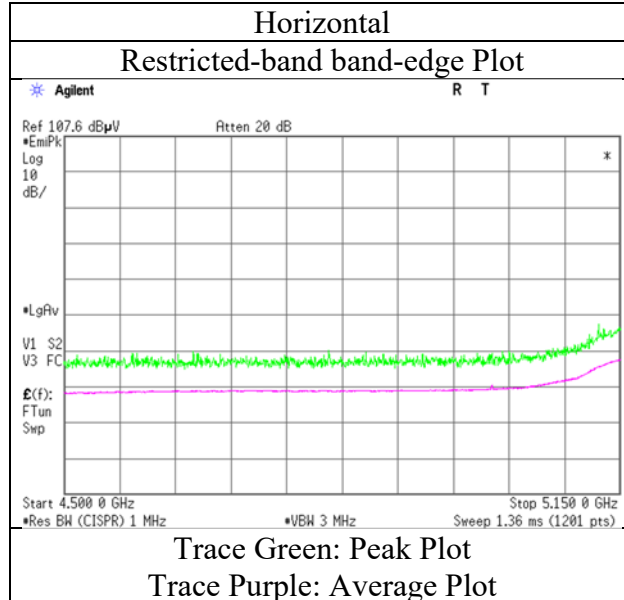
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$
 10 GHz - 40 GHz $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 7, 2022
Temperature / Humidity	23 deg. C / 46 % RH
Engineer	Tetsuro Yoshida
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.

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.2
Date	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-80 5290 MHz		

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5350.0	60.8	37.4	31.8	5.8	34.0	-	64.4	41.0	73.9	53.9	9.5	12.9	
Hori.	10580.0	43.2	-	39.5	-2.4	34.3	-	46.0	-	68.2	-	22.2	-	Floor noise
Hori.	15870.0	43.7	35.6	37.6	-0.7	33.8	-	46.8	38.8	73.9	53.9	27.1	15.1	Floor noise
Vert.	5350.0	62.2	38.8	31.8	5.8	34.0	-	65.9	42.5	73.9	53.9	8.0	11.4	
Vert.	10580.0	43.4	-	39.5	-2.4	34.3	-	46.2	-	68.2	-	22.0	-	Floor noise
Vert.	15870.0	43.4	35.8	37.6	-0.7	33.8	-	46.6	38.9	73.9	53.9	27.4	15.0	Floor noise

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

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

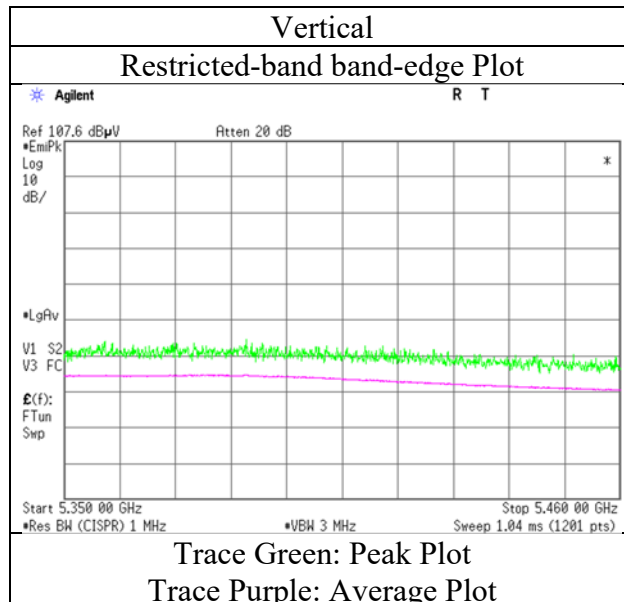
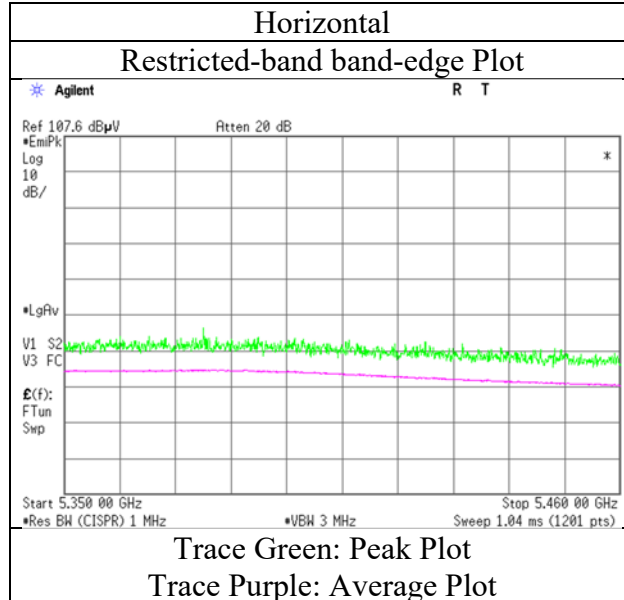
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(3.75 m / 3.0 m) = 1.94 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 7, 2022
Temperature / Humidity	23 deg. C / 46 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-80 5290 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.2
Date	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-80 5530 MHz		

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5460.0	62.2	40.2	31.9	5.9	33.9	-	66.1	44.1	73.9	53.9	7.8	9.8	
Hori.	5470.0	64.3	-	31.9	5.9	33.9	-	68.2	-	73.9	-	5.7	-	
Hori.	11060.0	43.5	34.1	40.0	-2.2	34.0	-	47.2	37.9	73.9	53.9	26.7	16.1	Floor noise
Hori.	16590.0	44.5	-	40.2	-0.5	33.4	-	50.9	-	68.2	-	17.3	-	Floor noise
Vert.	5460.0	63.9	40.6	31.9	5.9	33.9	-	67.8	44.5	73.9	53.9	6.1	9.4	
Vert.	5470.0	64.5	-	31.9	5.9	33.9	-	68.4	-	73.9	-	5.6	-	
Vert.	11060.0	43.5	34.1	40.0	-2.2	34.0	-	47.3	37.9	73.9	53.9	26.6	16.0	Floor noise
Vert.	16590.0	44.7	-	40.2	-0.5	33.4	-	51.0	-	68.2	-	17.2	-	Floor noise

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

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

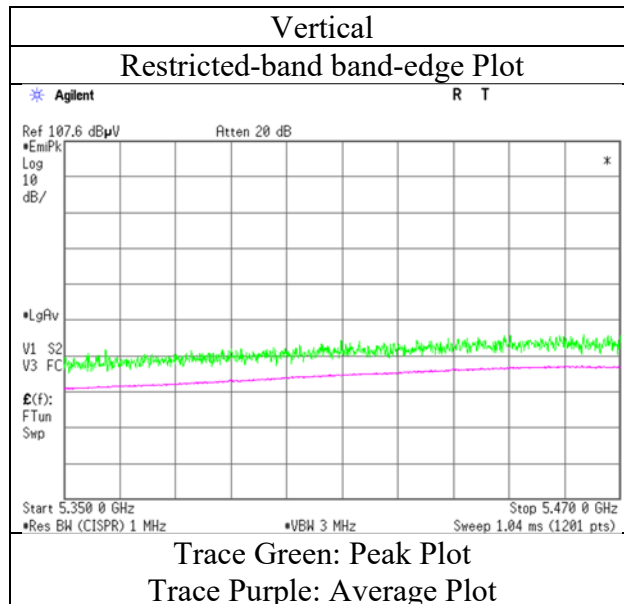
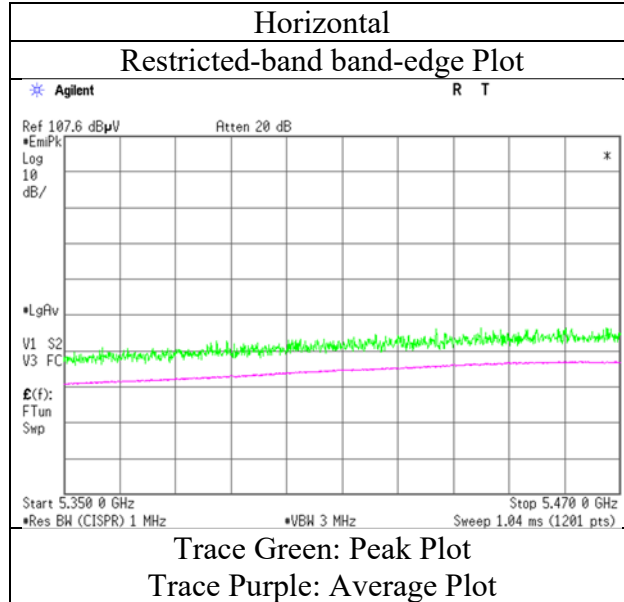
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(3.75 m / 3.0 m) = 1.94 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 7, 2022
Temperature / Humidity	23 deg. C / 46 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-80 5530 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.2
Date	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-80 5610 MHz		

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	5725.0	50.3	-	32.1	6.0	33.9	-	54.4	-	73.9	-	19.5	-	
Hori.	11220.0	43.5	34.1	39.9	-2.1	34.0	-	47.3	37.9	73.9	53.9	26.6	16.0	Floor noise
Hori.	16830.0	44.6	-	40.8	-0.4	33.2	-	51.7	-	68.2	-	16.5	-	Floor noise
Vert.	5725.0	51.7	-	32.1	6.0	33.9	-	55.8	-	73.9	-	18.1	-	
Vert.	11220.0	43.6	34.2	39.9	-2.1	34.0	-	47.4	38.1	73.9	53.9	26.5	15.8	Floor noise
Vert.	16830.0	44.7	-	40.8	-0.4	33.2	-	51.8	-	68.2	-	16.4	-	Floor noise

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

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

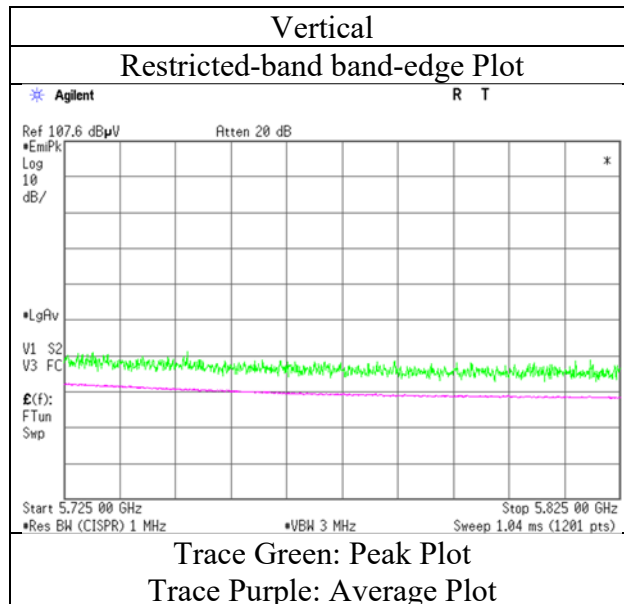
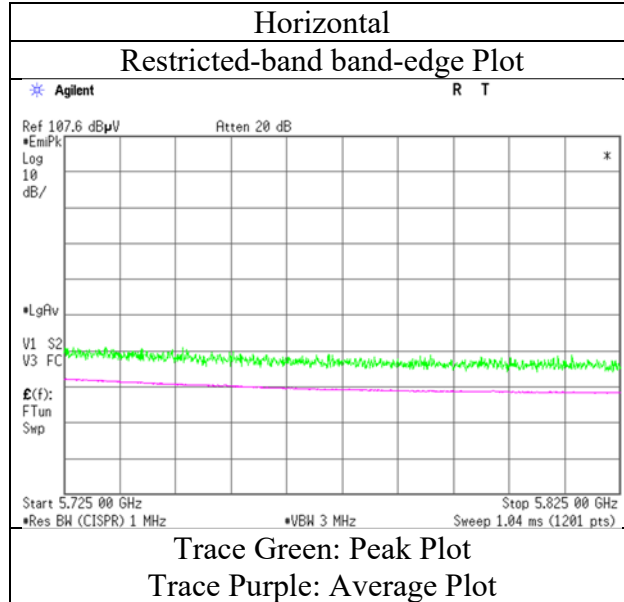
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(3.75 m / 3.0 m) = 1.94 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 7, 2022
Temperature / Humidity	23 deg. C / 46 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-80 5610 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
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.2
Date	November 7, 2022	November 8, 2022	November 9, 2022
Temperature / Humidity	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida	Tetsuro Yoshida	Tetsuro Yoshida
	(1 GHz to 18 GHz)	(18 GHz to 26.5 GHz)	(26.5 GHz to 40 GHz)
Mode	Tx 11ac-80 5775 MHz		

Polarity	Frequency	Reading (QP / PK)	Reading (AV)	Ant. Factor	Loss	Gain	Duty Factor	Result (QP / PK)	Result (AV)	Limit (QP / PK)	Limit (AV)	Margin (QP / PK)	Margin (AV)	Remark
[Hori/Vert]	[MHz]	[dBuV]	[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	
Hori.	5650.0	49.7	-	31.9	5.9	33.9	-	53.6	-	68.2	-	14.6	-	
Hori.	5700.0	60.0	-	32.0	6.0	33.9	-	64.1	-	105.2	-	41.1	-	
Hori.	5720.0	63.3	-	32.0	6.0	33.9	-	67.4	-	110.8	-	43.4	-	
Hori.	5725.0	64.4	-	32.1	6.0	33.9	-	68.5	-	122.2	-	53.7	-	
Hori.	5850.0	58.6	-	32.4	6.0	33.9	-	63.0	-	122.2	-	59.2	-	
Hori.	5855.0	57.7	-	32.4	6.0	33.9	-	62.1	-	110.8	-	48.7	-	
Hori.	5875.0	53.5	-	32.4	6.0	33.9	-	58.0	-	105.2	-	47.2	-	
Hori.	5925.0	45.2	-	32.5	6.0	33.9	-	49.7	-	68.2	-	18.5	-	
Hori.	11550.0	42.1	34.2	39.8	-1.8	33.9	-	46.3	38.3	73.9	53.9	27.6	15.6	Floor noise
Hori.	17325.0	44.0	-	42.8	-0.3	33.0	-	53.6	-	68.2	-	14.7	-	Floor noise
Vert.	5650.0	54.1	-	31.9	5.9	33.9	-	58.1	-	68.2	-	10.1	-	
Vert.	5700.0	63.1	-	32.0	6.0	33.9	-	67.1	-	105.2	-	38.1	-	
Vert.	5720.0	65.8	-	32.0	6.0	33.9	-	69.9	-	110.8	-	40.9	-	
Vert.	5725.0	67.3	-	32.1	6.0	33.9	-	71.4	-	122.2	-	50.8	-	
Vert.	5850.0	58.5	-	32.4	6.0	33.9	-	62.9	-	122.2	-	59.3	-	
Vert.	5855.0	57.2	-	32.4	6.0	33.9	-	61.7	-	110.8	-	49.2	-	
Vert.	5875.0	52.9	-	32.4	6.0	33.9	-	57.4	-	105.2	-	47.8	-	
Vert.	5925.0	44.6	-	32.5	6.0	33.9	-	49.1	-	68.2	-	19.1	-	
Vert.	11550.0	42.2	34.2	39.8	-1.8	33.9	-	46.4	38.4	73.9	53.9	27.5	15.6	Floor noise
Vert.	17325.0	44.1	-	42.8	-0.3	33.0	-	53.7	-	68.2	-	14.5	-	Floor noise

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

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

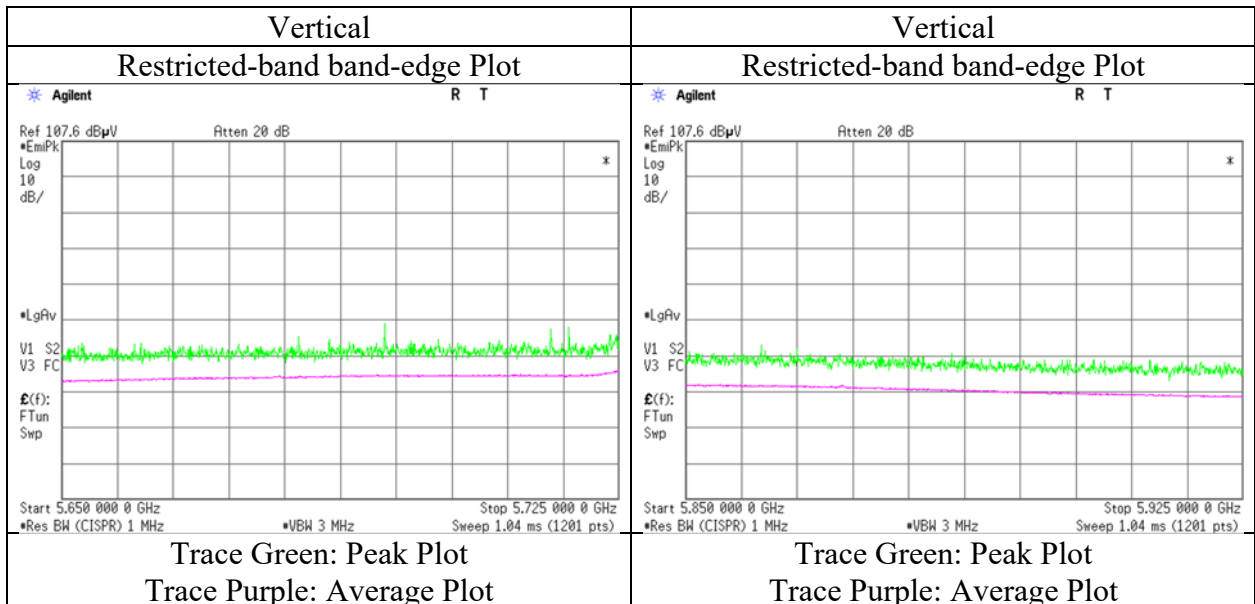
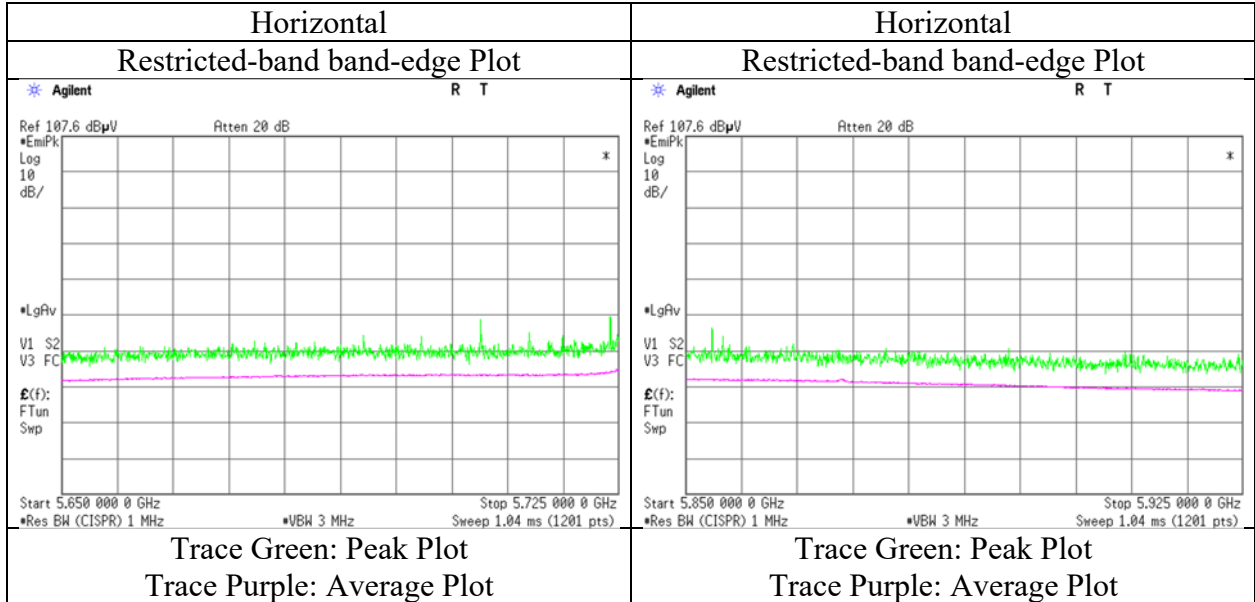
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(3.75 m / 3.0 m) = 1.94 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission
Chain 0 + 1 (MIMO)

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 7, 2022
Temperature / Humidity	23 deg. C / 46 % RH
Engineer	Tetsuro Yoshida
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.

Radiated Spurious Emission

Test place	Ise EMC Lab.	
Semi Anechoic Chamber	No.2	No.2
Date	November 9, 2022	November 11, 2022
Temperature / Humidity	24 deg. C / 38 % RH	22 deg. C / 42 % RH
Engineer	Tetsuro Yoshida	Junya Okuno
	(1 GHz to 40 GHz)	(Below 1 GHz)
Mode	Tx 11ac-80 5210 MHz + BT LE 2480 MHz	

Polarity [Hori/Vert]	Frequency [MHz]	Reading (QP / PK) [dBuV]	Reading (AV) [dBuV]	Ant. Factor [dB/m]	Loss [dB]	Gain [dB]	Duty Factor [dB]	Result (QP / PK) [dBuV/m]	Result (AV) [dBuV/m]	Limit (QP / PK) [dBuV/m]	Limit (AV) [dBuV/m]	Margin (QP / PK) [dB]	Margin (AV) [dB]	Remark
Hori.	82.6	29.7	-	7.3	7.2	28.5	-	15.8	-	40.0	-	24.3	-	
Hori.	118.1	31.5	-	12.8	7.5	28.4	-	23.4	-	43.5	-	20.1	-	
Hori.	164.6	22.9	-	15.6	7.9	28.2	-	18.1	-	43.5	-	25.4	-	
Hori.	228.0	32.9	-	12.0	8.3	27.9	-	25.3	-	46.0	-	20.7	-	
Hori.	282.0	34.2	-	14.0	8.6	27.7	-	29.0	-	46.0	-	17.0	-	
Hori.	702.0	31.5	-	20.0	10.6	29.3	-	32.8	-	46.0	-	13.3	-	
Hori.	2730.0	52.9	40.3	28.3	5.3	34.8	-	51.7	39.1	73.9	53.9	22.2	14.8	
Hori.	5150.0	58.8	43.0	32.2	6.7	34.1	-	63.6	47.9	73.9	53.9	10.3	6.1	
Hori.	10420.0	44.4	-	39.7	-2.4	34.5	-	47.2	-	68.2	-	21.0	-	Floor noise
Hori.	15630.0	45.0	35.6	37.7	-0.8	33.6	-	48.4	39.0	73.9	53.9	25.6	14.9	Floor noise
Vert.	81.6	42.0	-	7.1	7.2	28.5	-	27.9	-	40.0	-	12.2	-	
Vert.	118.3	39.5	-	12.8	7.5	28.4	-	31.4	-	43.5	-	12.1	-	
Vert.	176.3	30.2	-	15.9	7.9	28.1	-	26.0	-	43.5	-	17.6	-	
Vert.	234.0	27.1	-	12.2	8.3	27.8	-	19.7	-	46.0	-	26.3	-	
Vert.	282.0	32.5	-	14.0	8.6	27.7	-	27.3	-	46.0	-	18.7	-	
Vert.	690.0	25.8	-	19.7	10.5	29.3	-	26.8	-	46.0	-	19.2	-	
Vert.	2730.0	59.2	47.3	28.3	5.3	34.8	-	58.1	46.2	73.9	53.9	15.8	7.8	
Vert.	5150.0	58.1	42.3	32.2	6.7	34.1	-	63.0	47.1	73.9	53.9	10.9	6.8	
Vert.	10420.0	44.5	-	39.7	-2.4	34.5	-	47.3	-	68.2	-	20.9	-	Floor noise
Vert.	15630.0	45.0	35.7	37.7	-0.8	33.6	-	48.4	39.1	73.9	53.9	25.5	14.9	Floor noise

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

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

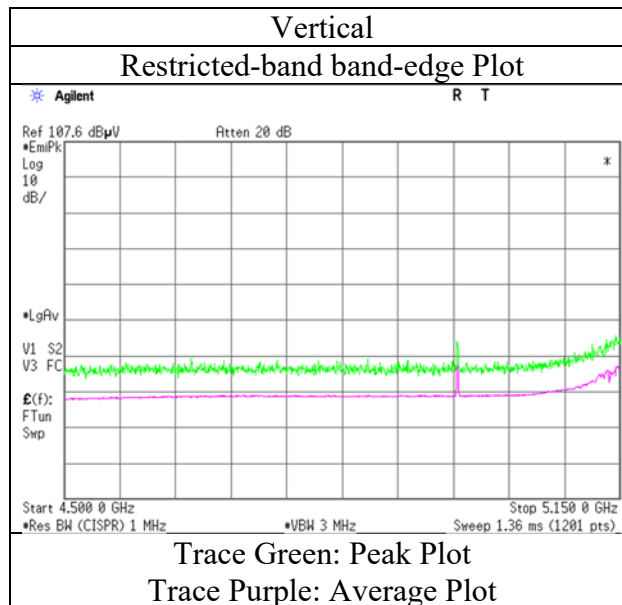
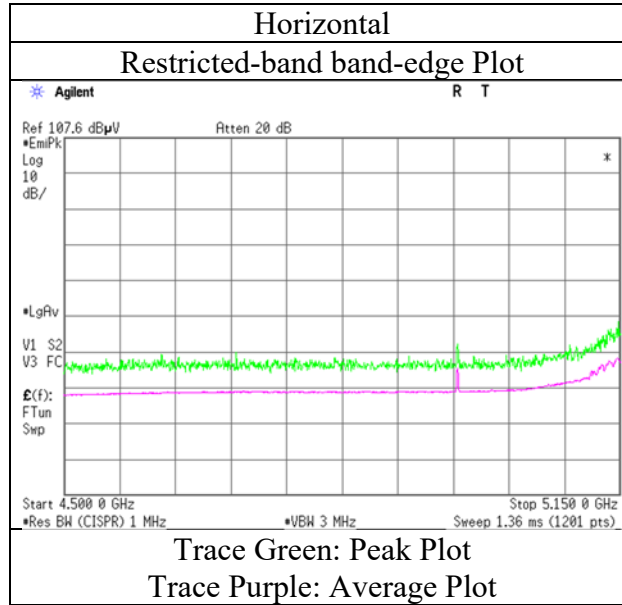
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

Distance factor: 1 GHz - 10 GHz 20log(3.75 m / 3.0 m) = 1.94 dB
 10 GHz - 40 GHz 20log(1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.2
Date	November 9, 2022
Temperature / Humidity	24 deg. C / 38 % RH
Engineer	Tetsuro Yoshida
Mode	Tx 11ac-80 5210 MHz + BLE 2480 MHz

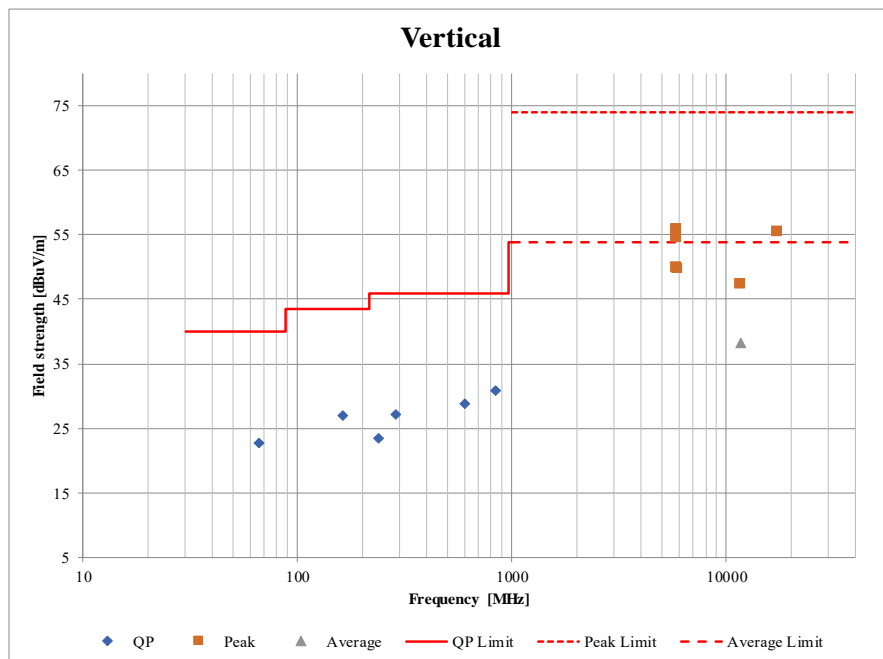
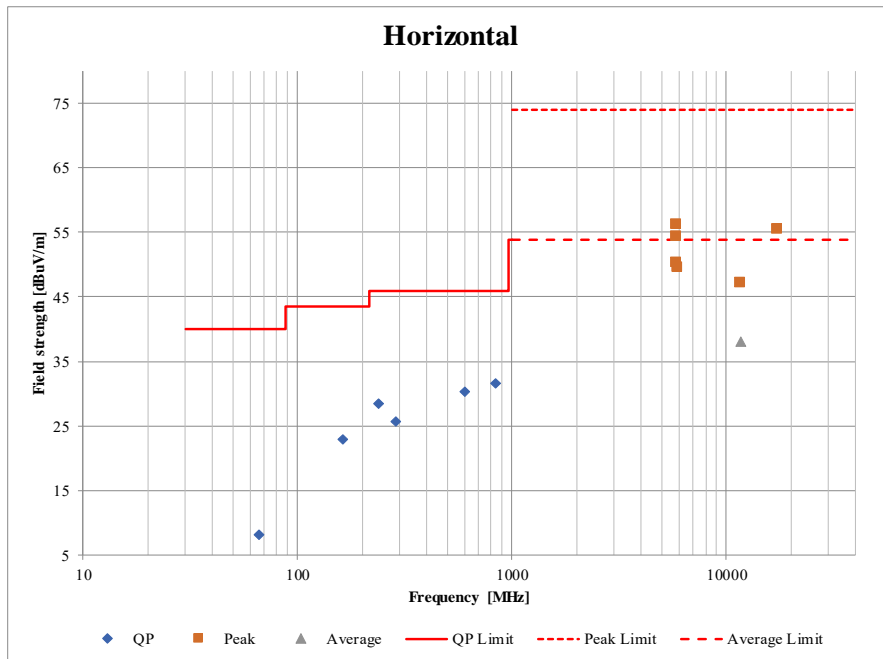


* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.

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

Radiated Spurious Emission
(Plot data, Worst case mode for Maximum Conducted Output Power)

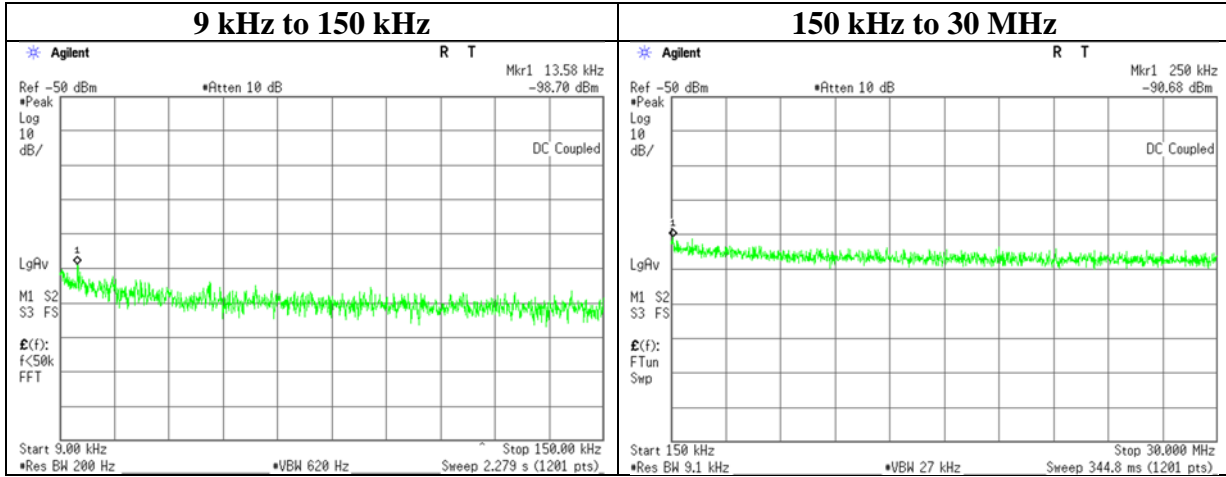
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.3	No.2	No.3	No.2	No.1
Date	November 6, 2022	November 7, 2022	November 8, 2022	November 9, 2022	November 13, 2022
Temperature / Humidity	21 deg. C / 35 % RH	23 deg. C / 46 % RH	25 deg. C / 45 % RH	24 deg. C / 38 % RH	23 deg. C / 58 % RH
Engineer	Tetsuro Yoshida (1 GHz to 10 GHz)	Tetsuro Yoshida (10 GHz to 18 GHz)	Tetsuro Yoshida (18 GHz to 26.5 GHz)	Tetsuro Yoshida (26.5 GHz to 40 GHz)	Tetsuro Yoshida (Below 1 GHz)
Mode	Tx 11ac-40 5795 MHz				



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

Conducted Spurious Emission

Test place	Ise EMC Lab. No.6 Measurement Room
Date	November 2, 2022
Temperature / Humidity	20 deg. C / 43 % RH
Engineer	Yuichiro Yamazaki
Mode	Tx 11ac-40 5795 MHz, Chain 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
13.58	-98.7	0.40	9.68	2.0	2	-83.6	300	6.0	-22.4	44.9	67.3	
250.00	-90.7	0.79	9.73	2.0	2	-75.1	300	6.0	-13.9	19.6	33.5	

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

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

N: Number of output

*2.0 dBi was applied to the test result based on KDB 789033 since antenna gain was less than 2.0 dBi.

APPENDIX 2: Test Instruments**Test Equipment (1/2)**

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
CE	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
CE	MAEC-01	141998	AC1_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	06/28/2022	24
CE	MAT-64	141290	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	12/17/2021	12
CE	MCC-03	141215	Coaxial Cable	Fujikura/Suhner/TSJ	5D-2W/3D-2W/RG400u/RFM-E421(SW)	-/01068 (Switcher)	06/11/2022	12
CE	MJM-25	142226	Measure	KOMELON	KMC-36	-	-	-
CE	MLS-25	141537	LISN(AMN)	Schwarzbeck Mess-Elektronik OHG	NSLK8127	8127-731	07/25/2022	12
CE	MLS-26	141538	LISN(AMN)	Schwarzbeck Mess-Elektronik OHG	NSLK8127	8127-732	07/25/2022	12
CE	MMM-09	141533	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201195	01/16/2022	12
CE	MOS-27	141566	Thermo-Hyrometer	CUSTOM. Inc	CTH-201	A08Q26	01/10/2022	12
CE	MTA-55	141937	Terminator	TME	CT-01BP	-	12/16/2021	12
CE	MTR-09	141950	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	10/11/2022	12
RE	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	KBA-05	141198	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103+BBA9106	2513	05/14/2022	12
RE	MAEC-01	141998	AC1_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	06/28/2022	24
RE	MAEC-02	142004	AC2_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	05/30/2022	24
RE	MAEC-02-SVSWR	142006	AC2_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-06902	04/09/2021	24
RE	MAEC-03	142008	AC3_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	05/23/2022	24
RE	MAEC-03-SVSWR	142013	AC3_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-10005	04/01/2021	24
RE	MAT-08	141213	Attenuator(6dB)	Weinschel Corp	2	BK7971	11/19/2022	12
RE	MAT-112	220646	Attenuator	Huber+Suhner	6806_N-50-1	-	06/07/2022	12
RE	MBA-08	141427	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103B+BBA9106	08031	07/30/2022	12
RE	MCC-02	141350	Coaxial Cable	Suhner/storm/Agilent/TSJ	-	-	03/08/2022	12
RE	MCC-12	141317	Coaxial Cable	UL Japan	-	-	09/27/2022	12
RE	MCC-176	141279	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S303	03/15/2022	12
RE	MCC-218	141394	Microwave Cable	Junkosha	MWX221	1607S141(1 m) / 1608S264(5 m)	09/12/2022	12
RE	MCC-231	177964	Microwave Cable	Junkosha INC.	MMX221	1901S329(1m)/ 1902S579(5m)	03/15/2022	12
RE	MCC-242	196409	Microwave Cable	Huber+Suhner	SF101EA/11PC24/11PC24/2500MM	SN 800093/1EA	01/20/2022	12
RE	MHA-06	141512	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	254	10/20/2022	12
RE	MHA-16	141513	Horn Antenna 15-40GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9170	BBHA9170306	07/05/2022	12
RE	MHA-20	141507	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	258	11/09/2021	12
RE	MHF-06	141404	High Pass Filter 3.5-24GHz	TOKIMEC	TF323DCA	601	05/19/2022	12
RE	MHF-16	141406	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	7001	09/07/2022	12

Test Equipment (2/2)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	MJM-16	142183	Measure	KOMELON	KMC-36	-	10/03/2022	12
RE	MJM-25	142226	Measure	KOMELON	KMC-36	-	-	-
RE	MJM-27	142228	Measure	KOMELON	KMC-36	-	-	-
RE	MLA-20	141264	Logperiodic Antenna(200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	189	05/14/2022/	12
RE	MLA-21	141265	Logperiodic Antenna(200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-190	07/30/2022/	12
RE	MMM-01	141542	Digital Tester	Fluke Corporation	FLUKE 26-3	78030611	08/12/2022/	12
RE	MMM-08	141532	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201197	01/16/2022	12
RE	MMM-09	141533	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201195	01/16/2022	12
RE	MOS-13	141554	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1301	01/10/2022	12
RE	MOS-27	141566	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	A08Q26	01/10/2022	12
RE	MOS-41	192300	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0013	12/19/2021	12
RE	MPA-10	141579	Pre Amplifier	Keysight Technologies Inc	8449B	3008A02142	02/22/2022	12
RE	MPA-11	141580	MicroWave System Amplifier	Keysight Technologies Inc	83017A	MY39500779	03/17/2022	12
RE	MPA-24	141594	Pre Amplifier	Keysight Technologies Inc	8447D	2944A10150	02/25/2022	12
RE	MPA-33	220253	Broadband Amplifier	SAGE Millimeter, Inc.	SBB-0115033218-2F2F-E3	0001	05/13/2022	12
RE	MSA-03	141884	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY44020357	03/31/2022	12
RE	MSA-10	141899	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY46180655	02/18/2022	12
RE	MTR-09	141950	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	10/11/2022	12
RE	MTR-10	141951	EMI Test Receiver	Rohde & Schwarz	ESR26	101408	07/25/2022	12
AT	MAT-26	141244	Attenuator(10dB)	Weinschel - API Technologies Corp	WA8-10-34	A198	02/01/2023	12
AT	MAT-58	141334	Attenuator(10dB)	Suhner	6810.19.A	-	12/08/2022	12
AT	MAT-90	141223	Attenuator	Weinschel Associates	WA56-10	56100306	05/12/2022	12
AT	MAT-91	141420	Attenuator	Weinschel Associates	WA56-10	56100307	05/02/2022	12
AT	MCC-144	141414	Microwave Cable	Junkosha	MWX221	12075407	08/01/2022	12
AT	MCC-245	197220	Microwave cable	Huber+Suhner	SF126E/11PC35/11PC35/2000MM	537003/126E	03/17/2022	12
AT	MCC-64	141327	Coaxial Cable	UL Japan	-	-	02/01/2023	12
AT	MJM-24	142225	Measure	ASKUL	-	-	-	-
AT	MMM-17	141557	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	70900530	01/18/2023	12
AT	MMM-18	141558	Digital Tester (TRUE RMS MULTIMETER)	Fluke Corporation	115	17930030	05/17/2022	12
AT	MOS-14	141561	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1401	01/13/2023	12
AT	MOS-28	141567	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0008	01/13/2023	12
AT	MPM-16	141812	Power Meter	Keysight Technologies Inc	8990B	MY51000271	08/05/2022	12
AT	MPM-17	141813	Power Meter	Raditeq (Formerly DARE!! Instruments)	RPR3006W	14I00048 SNO081	10/21/2022	12
AT	MPM-18	141814	Power Meter	Raditeq (Formerly DARE!! Instruments)	RPR3006W	14I00048 SNO082	10/21/2022	12
AT	MPSE-22	141842	Power sensor	Keysight Technologies Inc	N1923A	MY54070003	08/05/2022	12
AT	MPSE-23	141835	Power sensor	Keysight Technologies Inc	N1923A	MY54070004	08/05/2022	12
AT	MRENT-130	141855	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46187750	12/01/2022	12
AT	MSA-04	141885	Spectrum Analyzer	Keysight Technologies Inc	E4448A	US44300523	11/21/2022	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:

CE: Conducted Emission

RE: Radiated Emission

AT: Antenna Terminal Conducted test