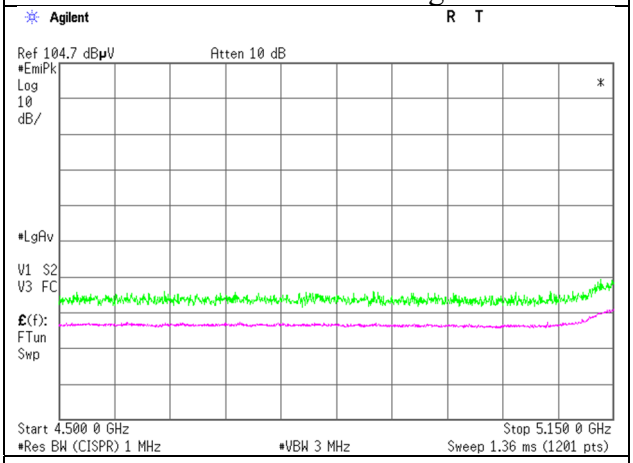
Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5180 MHz

Horizontal

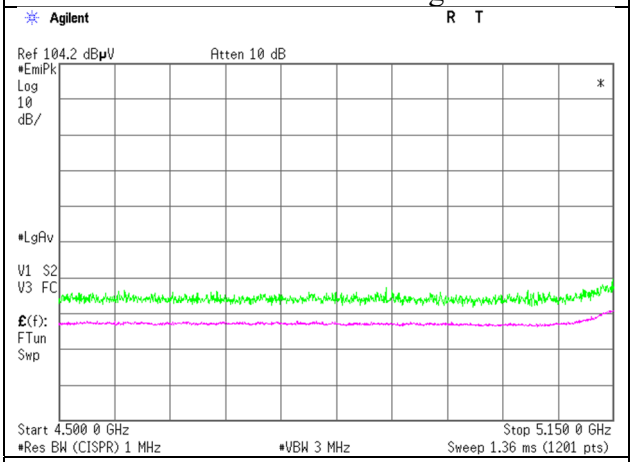
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5260 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.	10520.0	41.3	-	39.8	-2.3	33.3	-	45.5	-	68.2	-	22.7	-	Floor noise
Hori.	15780.0	43.8	34.9	37.5	0.6	32.2	-	49.7	40.8	73.9	53.9	24.2	13.1	Floor noise
Vert.	10520.0	41.5	-	39.8	-2.3	33.3	-	45.7	-	68.2	-	22.5	-	Floor noise
Vert.	15780.0	43.0	35.0	37.5	0.6	32.2	-	48.9	40.9	73.9	53.9	25.0	13.0	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 (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5320 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	46.9	37.4	31.7	6.3	31.6	1.1	53.2	44.8	73.9	53.9	20.7	9.2	*1)
Hori.	10640.0	42.2	34.2	39.8	-2.3	33.3	-	46.4	38.4	73.9	53.9	27.5	15.5	Floor noise
Hori.	15960.0	43.0	34.3	37.5	0.8	32.2	-	49.1	40.5	73.9	53.9	24.8	13.4	Floor noise
Vert.	5350.0	45.3	36.0	31.7	6.3	31.6	1.1	51.7	43.4	73.9	53.9	22.2	10.5	*1)
Vert.	10640.0	42.3	34.0	39.8	-2.3	33.3	-	46.5	38.3	73.9	53.9	27.4	15.7	Floor noise
Vert.	15960.0	43.0	34.8	37.5	0.8	32.2	-	49.1	40.9	73.9	53.9	24.8	13.0	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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

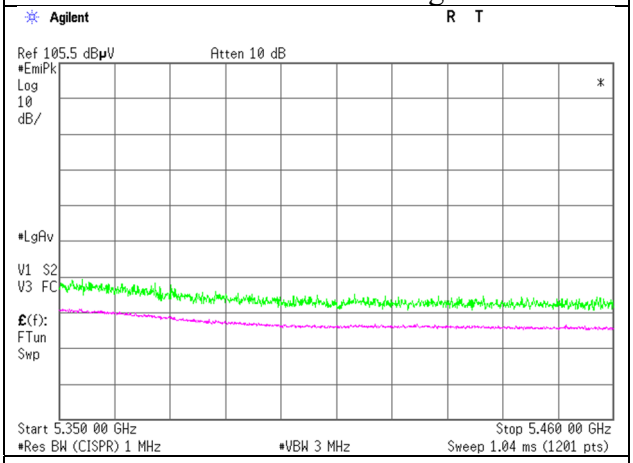
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5320 MHz

Horizontal

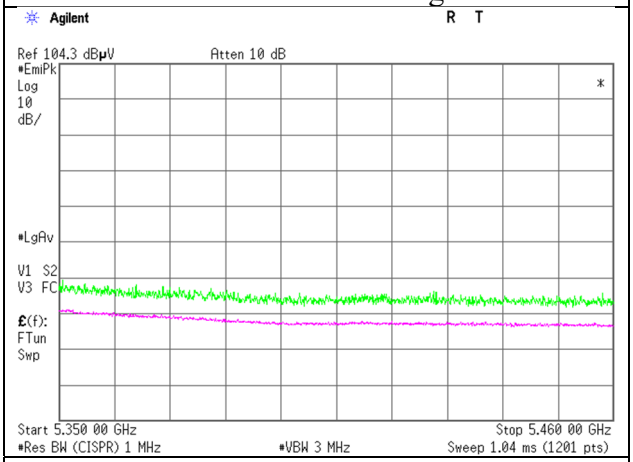
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5500 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	44.3	35.7	31.9	6.3	31.7	1.1	50.8	43.3	68.2	53.9	17.4	10.6	*1)
Hori.	5470.0	46.2	-	31.9	6.3	31.7	-	52.7	-	68.2	-	15.5	-	
Hori.	11000.0	41.6	33.9	40.3	-2.3	33.3	-	46.3	38.6	73.9	53.9	27.6	15.3	Floor noise
Hori.	16500.0	42.9	-	39.8	0.6	32.3	-	51.0	-	68.2	-	17.2	-	Floor noise
Vert.	5460.0	45.1	35.3	31.9	6.3	31.7	1.1	51.7	42.9	68.2	53.9	16.5	11.0	*1)
Vert.	5470.0	44.7	-	31.9	6.3	31.7	-	51.2	-	68.2	-	17.0	-	
Vert.	11000.0	41.6	33.9	40.3	-2.3	33.3	-	46.2	38.6	73.9	53.9	27.7	15.4	Floor noise
Vert.	16500.0	42.9	-	39.8	0.6	32.3	-	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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

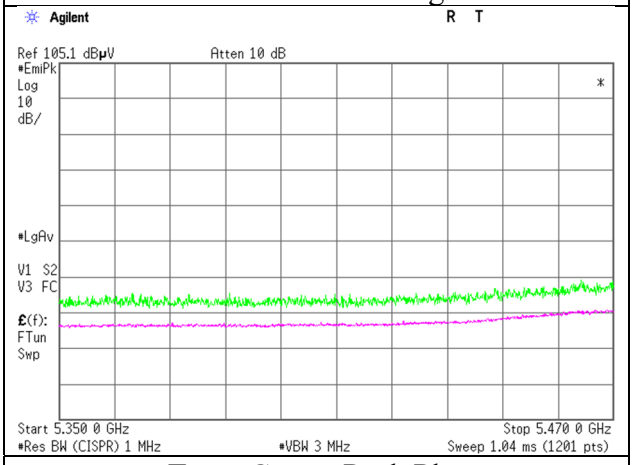
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5500 MHz

Horizontal

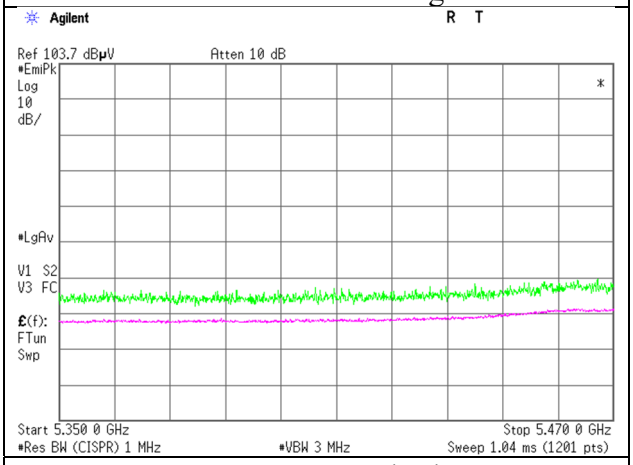
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5580 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.	11160.0	41.6	34.2	39.9	-2.1	33.3	-	46.1	38.7	73.9	53.9	27.8	15.2	Floor noise
Hori.	16740.0	43.0	-	40.8	0.5	32.3	-	52.0	-	68.2	-	16.2	-	Floor noise
Vert.	11160.0	41.4	34.0	39.9	-2.1	33.3	-	45.9	38.5	73.9	53.9	28.0	15.4	Floor noise
Vert.	16740.0	43.0	-	40.8	0.5	32.3	-	52.0	-	68.2	-	16.2	-	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 (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5700 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	53.6	-	32.1	6.5	31.7	-	60.4	-	68.2	-	7.8	-	
Hori.	11400.0	41.9	34.0	40.1	-2.0	33.2	-	46.9	39.0	73.9	53.9	27.1	15.0	Floor noise
Hori.	17100.0	43.8	-	42.0	0.4	32.4	-	53.8	-	68.2	-	14.4	-	Floor noise
Vert.	5725.0	50.8	-	32.1	6.5	31.7	-	57.7	-	68.2	-	10.5	-	
Vert.	11400.0	41.6	33.7	40.1	-2.0	33.2	-	46.6	38.7	73.9	53.9	27.4	15.2	Floor noise
Vert.	17100.0	43.7	-	42.0	0.4	32.4	-	53.8	-	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 (3.95 m / 3.0 m) = 2.39 dB

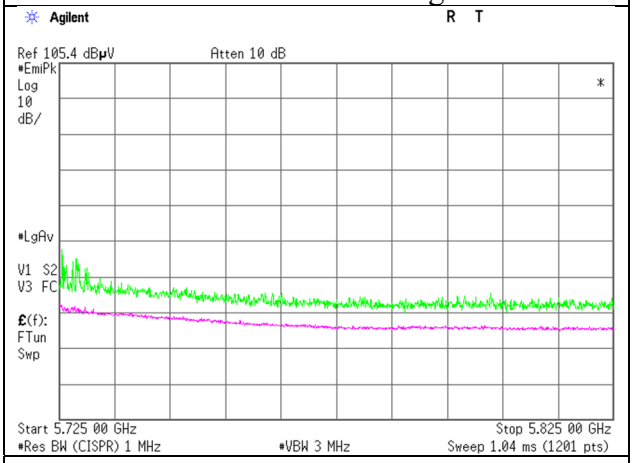
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5700 MHz

Horizontal

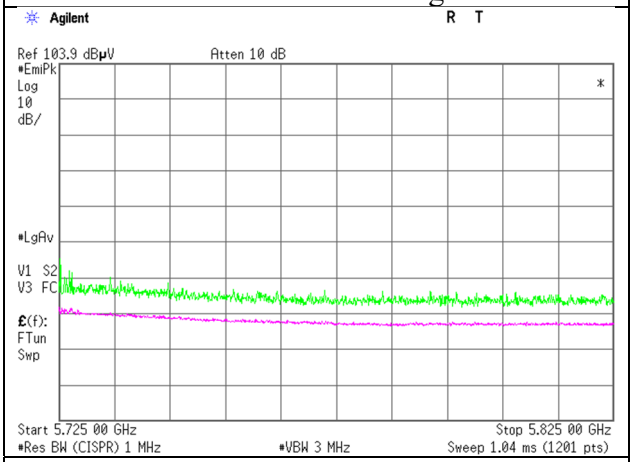
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H			
Test place	Ise EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5745 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	6.4	31.7	-	48.4	-	68.2	-	19.8	-	
Hori.	5700.0	44.3	-	32.1	6.4	31.7	-	51.1	-	105.2	-	54.1	-	
Hori.	5720.0	49.9	-	32.1	6.5	31.7	-	56.8	-	110.8	-	54.1	-	
Hori.	5725.0	53.0	-	32.1	6.5	31.7	-	59.9	-	122.2	-	62.3	-	
Hori.	11490.0	41.9	34.4	39.9	-1.9	33.2	-	46.8	39.2	73.9	53.9	27.1	14.7	Floor noise
Hori.	17235.0	44.2	-	43.0	0.4	32.4	-	55.2	-	68.2	-	13.0	-	Floor noise
Vert.	5650.0	40.9	-	31.9	6.4	31.7	-	47.6	-	68.2	-	20.6	-	
Vert.	5700.0	43.4	-	32.1	6.4	31.7	-	50.2	-	105.2	-	55.0	-	
Vert.	5720.0	47.9	-	32.1	6.5	31.7	-	54.7	-	110.8	-	56.1	-	
Vert.	5725.0	51.7	-	32.1	6.5	31.7	-	58.6	-	122.2	-	63.6	-	
Vert.	11490.0	41.8	34.1	39.9	-1.9	33.2	-	46.7	39.0	73.9	53.9	27.2	14.9	Floor noise
Vert.	17235.0	44.4	-	43.0	0.4	32.4	-	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 (3.95 m / 3.0 m) = 2.39 dB

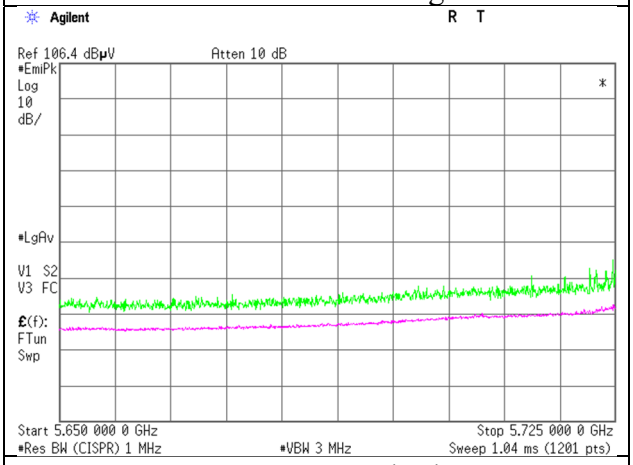
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5745 MHz

Horizontal

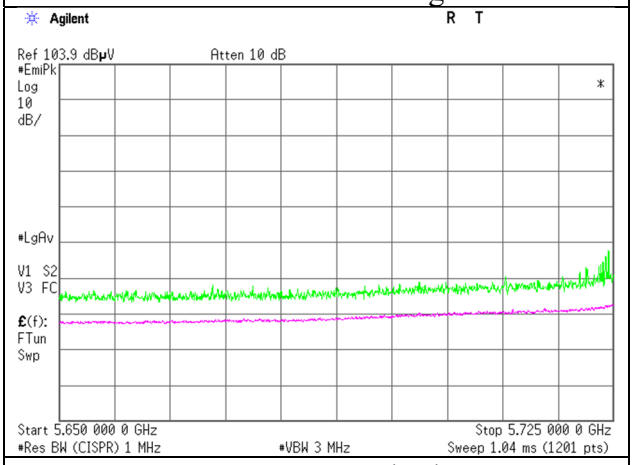
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5785 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.	11570.0	43.0	34.0	39.5	-1.8	33.1	-	47.6	38.5	73.9	53.9	26.3	15.4	Floor noise
Hori.	17355.0	43.6	-	44.0	0.4	32.3	-	55.7	-	68.2	-	12.5	-	Floor noise
Vert.	11570.0	43.0	34.0	39.5	-1.8	33.1	-	47.6	38.5	73.9	53.9	26.3	15.4	Floor noise
Vert.	17355.0	43.6	-	44.0	0.4	32.3	-	55.7	-	68.2	-	12.5	-	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 (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 7, 2021	December 9, 2021 (Night)	December 10, 2021
Temperature / Humidity	23 deg. C / 43 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH
Engineer	Nachi Konegawa	Takumi Nishida	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)
Mode	Tx 11a 5825 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.	5850.0	45.8	-	32.5	6.5	31.7	-	53.0	-	122.2	-	69.2	-	
Hori.	5855.0	43.5	-	32.5	6.5	31.7	-	50.7	-	110.8	-	60.1	-	
Hori.	5875.0	41.8	-	32.5	6.5	31.7	-	49.1	-	105.2	-	56.1	-	
Hori.	5925.0	41.6	-	32.5	6.5	31.7	-	48.9	-	68.2	-	19.3	-	
Hori.	11650.0	43.1	34.2	39.2	-1.8	33.1	-	47.4	38.5	73.9	53.9	26.5	15.4	Floor noise
Hori.	17475.0	43.3	-	44.7	0.5	32.3	-	56.2	-	68.2	-	12.0	-	Floor noise
Vert.	5850.0	44.7	-	32.5	6.5	31.7	-	51.9	-	122.2	-	70.3	-	
Vert.	5855.0	42.7	-	32.5	6.5	31.7	-	49.9	-	110.8	-	60.9	-	
Vert.	5875.0	41.5	-	32.5	6.5	31.7	-	48.8	-	105.2	-	56.4	-	
Vert.	5925.0	41.1	-	32.5	6.5	31.7	-	48.4	-	68.2	-	19.8	-	
Vert.	11650.0	43.1	34.2	39.2	-1.8	33.1	-	47.4	38.5	73.9	53.9	26.5	15.4	Floor noise
Vert.	17475.0	43.3	-	44.7	0.5	32.3	-	56.2	-	68.2	-	12.0	-	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 (3.95 m / 3.0 m) = 2.39 dB

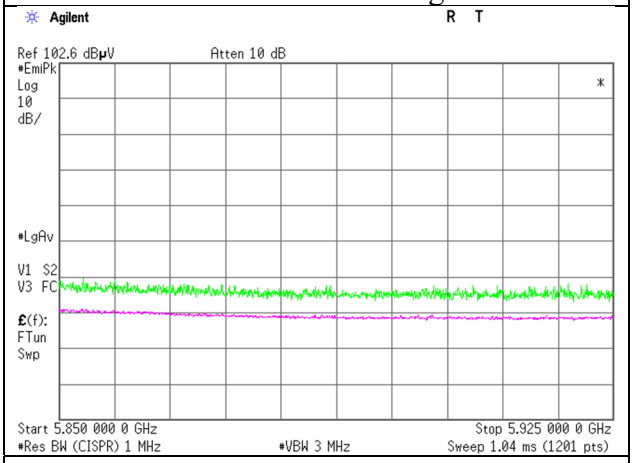
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11a 5825 MHz

Horizontal

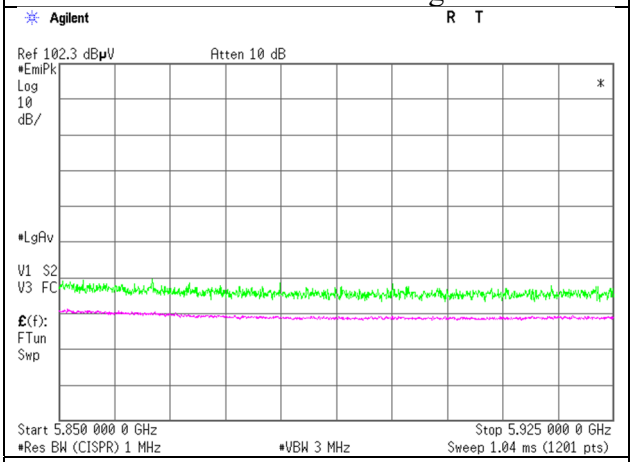
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5180 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	45.1	36.4	31.9	6.2	31.6	1.4	51.6	44.3	73.9	53.9	22.3	9.6	*1)
Vert.	5150.0	44.9	35.7	31.9	6.2	31.6	1.4	51.4	43.6	73.9	53.9	22.5	10.3	*1)

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.

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

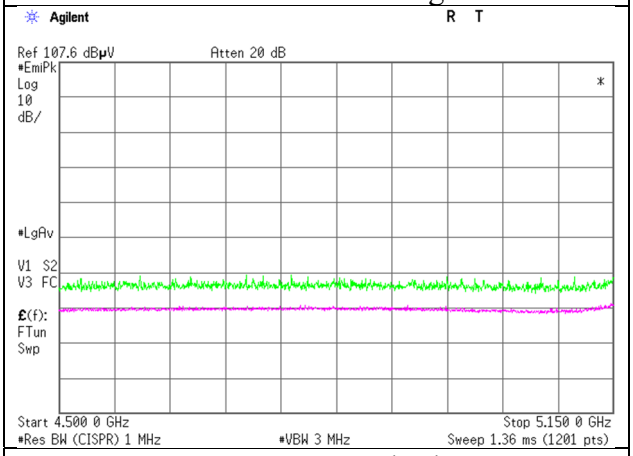
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5180 MHz

Horizontal

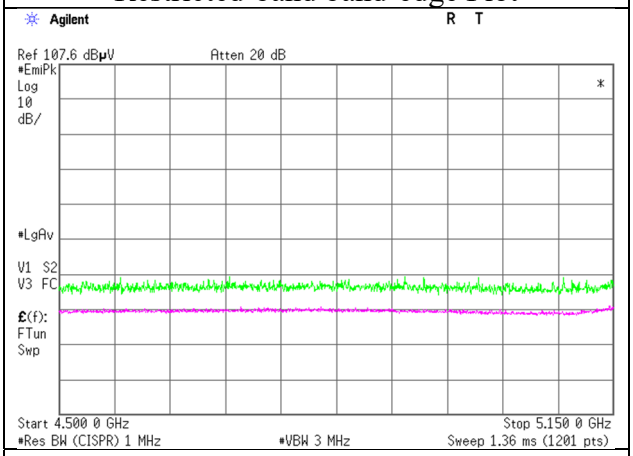
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5320 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	47.7	37.5	31.7	6.3	31.6	1.4	54.1	45.2	73.9	53.9	19.8	8.7	*1)
Vert.	5350.0	46.0	36.8	31.7	6.3	31.6	1.4	52.4	44.6	73.9	53.9	21.5	9.3	*1)

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.

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

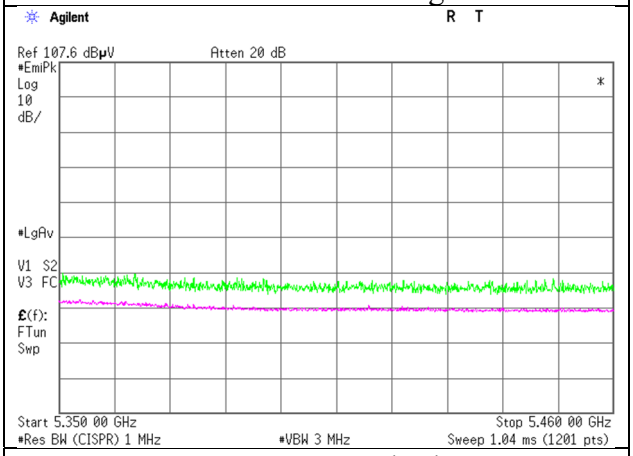
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5320 MHz

Horizontal

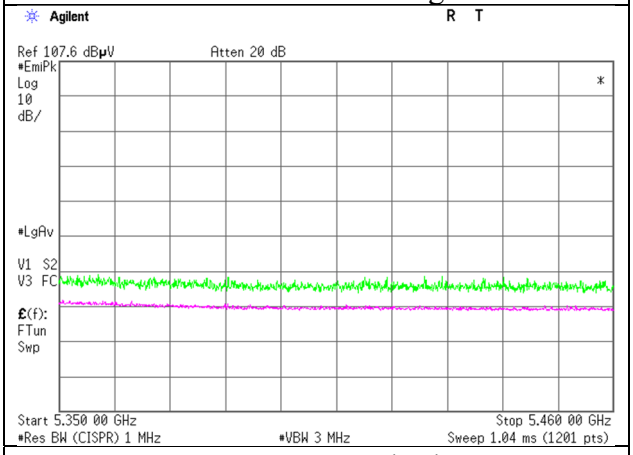
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5500 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	45.2	36.6	31.9	6.3	31.7	1.4	51.7	44.5	68.2	53.9	16.5	9.4	*1)
Hori.	5470.0	46.1	-	31.9	6.3	31.7	-	52.7	-	68.2	-	15.5	-	
Vert.	5460.0	44.3	35.4	31.9	6.3	31.7	1.4	50.8	43.4	68.2	53.9	17.4	10.5	*1)
Vert.	5470.0	45.8	-	31.9	6.3	31.7	-	52.4	-	68.2	-	15.8	-	

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.

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

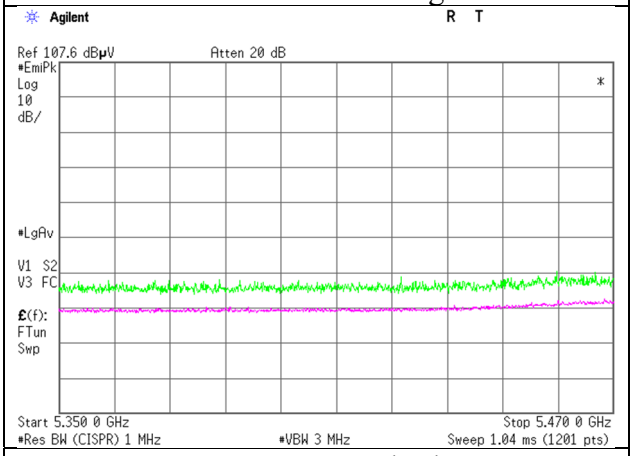
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5500 MHz

Horizontal

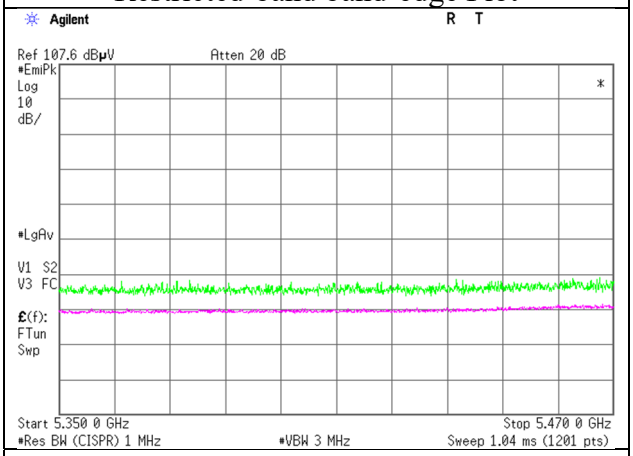
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5700 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	51.2	-	32.1	6.5	31.7	-	58.1	-	68.2	-	10.1	-	
Vert.	5725.0	49.0	-	32.1	6.5	31.7	-	55.9	-	68.2	-	12.3	-	

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.

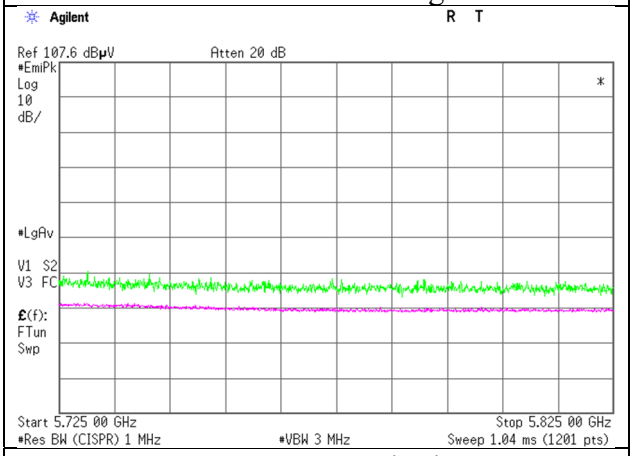
Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5700 MHz

Horizontal

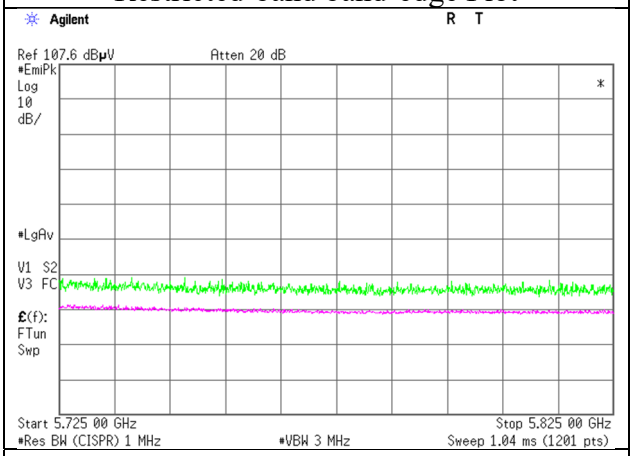
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5745 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.	5650.0	42.3	-	31.9	6.4	31.7	-	48.9	-	68.2	-	19.3	-	
Hori.	5700.0	44.7	-	32.1	6.4	31.7	-	51.5	-	105.2	-	53.7	-	
Hori.	5720.0	53.8	-	32.1	6.5	31.7	-	60.7	-	110.8	-	50.1	-	
Hori.	5725.0	56.7	-	32.1	6.5	31.7	-	63.6	-	122.2	-	58.6	-	
Vert.	5650.0	40.9	-	31.9	6.4	31.7	-	47.6	-	68.2	-	20.6	-	
Vert.	5700.0	43.2	-	32.1	6.4	31.7	-	50.0	-	105.2	-	55.2	-	
Vert.	5720.0	51.5	-	32.1	6.5	31.7	-	58.4	-	110.8	-	52.4	-	
Vert.	5725.0	54.2	-	32.1	6.5	31.7	-	61.1	-	122.2	-	61.2	-	

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.

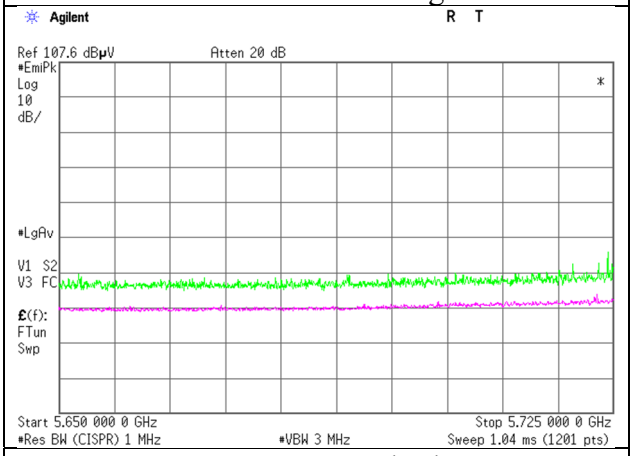
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5745 MHz

Horizontal

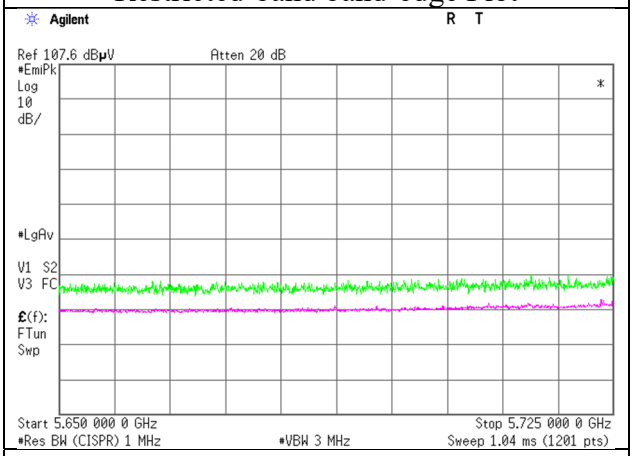
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5825 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.	5850.0	44.1	-	32.5	6.5	31.7	-	51.3	-	122.2	-	70.9	-	
Hori.	5855.0	42.4	-	32.5	6.5	31.7	-	49.6	-	110.8	-	61.2	-	
Hori.	5875.0	41.5	-	32.5	6.5	31.7	-	48.8	-	105.2	-	56.4	-	
Hori.	5925.0	41.0	-	32.5	6.5	31.7	-	48.3	-	68.2	-	19.9	-	
Vert.	5850.0	42.8	-	32.5	6.5	31.7	-	50.0	-	122.2	-	72.2	-	
Vert.	5855.0	42.3	-	32.5	6.5	31.7	-	49.5	-	110.8	-	61.3	-	
Vert.	5875.0	41.5	-	32.5	6.5	31.7	-	48.7	-	105.2	-	56.5	-	
Vert.	5925.0	40.9	-	32.5	6.5	31.7	-	48.2	-	68.2	-	20.0	-	

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.

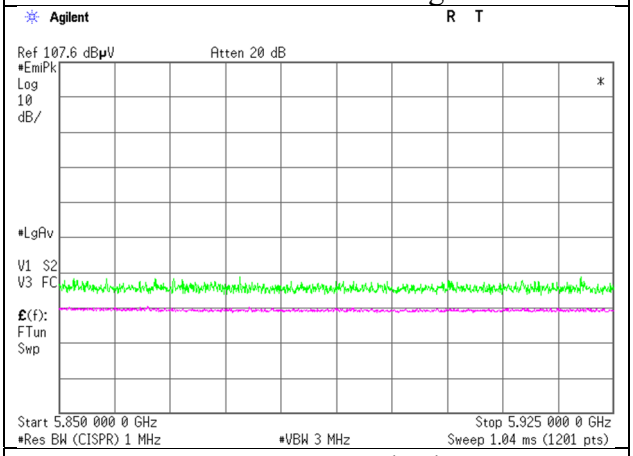
Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 7, 2021
Temperature / Humidity	23 deg. C / 43 % RH
Engineer	Nachi Konegawa
	(1 GHz - 10 GHz)
Mode	Tx 11n-20 5825 MHz

Horizontal

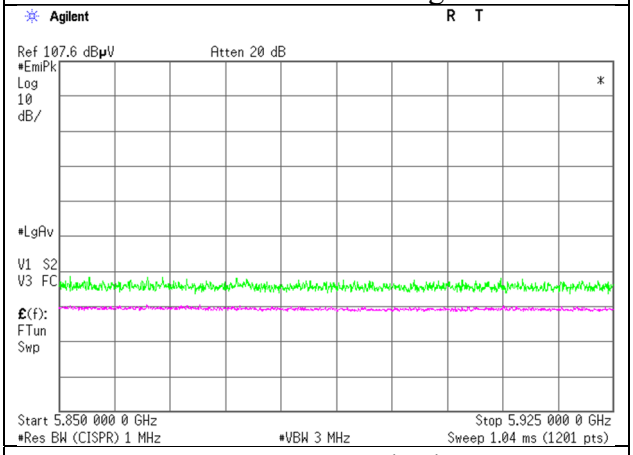
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5180 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	46.5	35.7	31.9	6.2	31.6	1.4	53.0	43.6	73.9	53.9	20.9	10.3	*1)
Vert.	5150.0	46.8	36.5	31.9	6.2	31.6	1.4	53.3	44.4	73.9	53.9	20.6	9.5	*1)

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.

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

Distance factor:

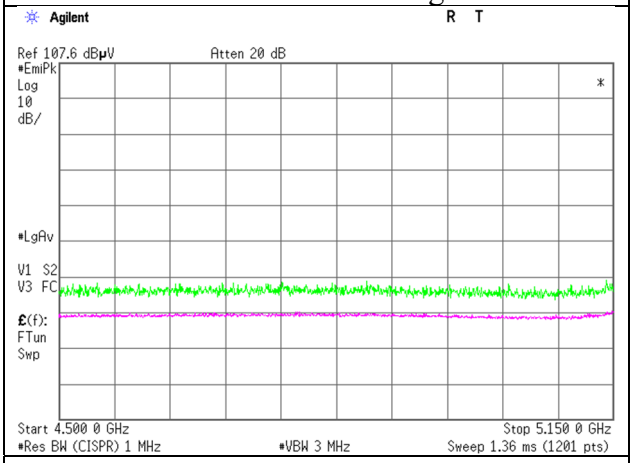
1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5180 MHz

Horizontal

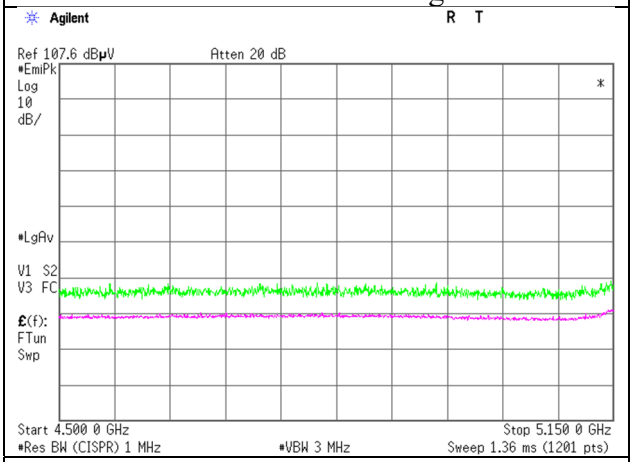
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5320 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	46.6	36.7	31.7	6.3	31.6	1.4	53.0	44.4	73.9	53.9	21.0	9.5	*1)
Vert.	5350.0	46.5	35.9	31.7	6.3	31.6	1.4	52.8	43.7	73.9	53.9	21.1	10.2	*1)

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.

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

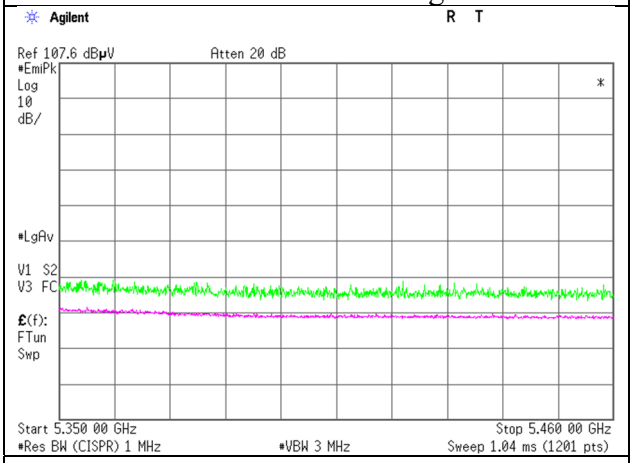
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5320 MHz

Horizontal

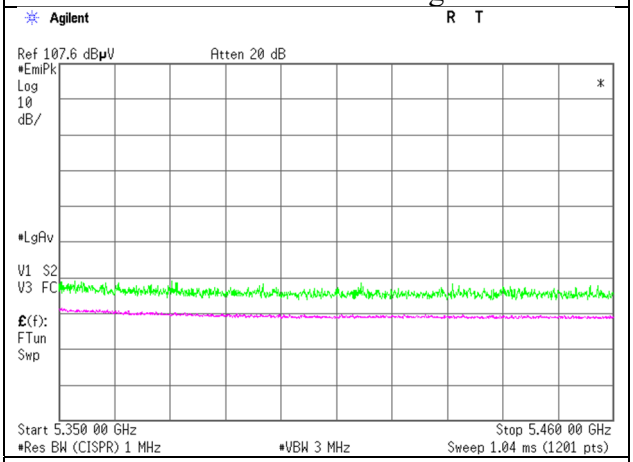
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5500 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	44.9	35.5	31.9	6.3	31.7	1.4	51.4	43.4	68.2	53.9	16.8	10.5	*1)
Hori.	5470.0	45.8	-	31.9	6.3	31.7	-	52.4	-	68.2	-	15.8	-	
Vert.	5460.0	44.2	35.0	31.9	6.3	31.7	1.4	50.7	43.0	73.9	53.9	23.2	10.9	*1)
Vert.	5470.0	45.3	-	31.9	6.3	31.7	-	51.8	-	68.2	-	16.4	-	

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.

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

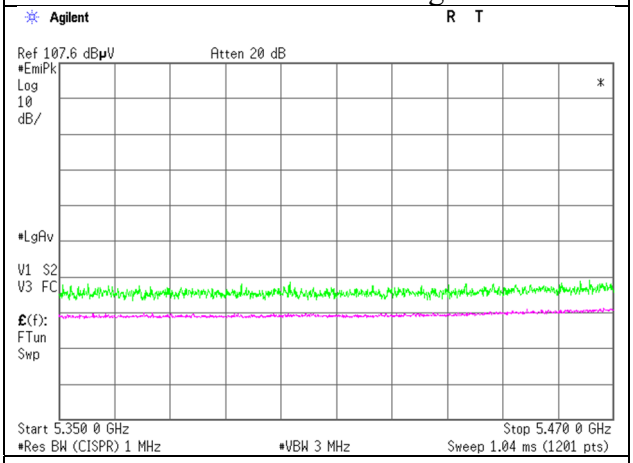
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5500 MHz

Horizontal

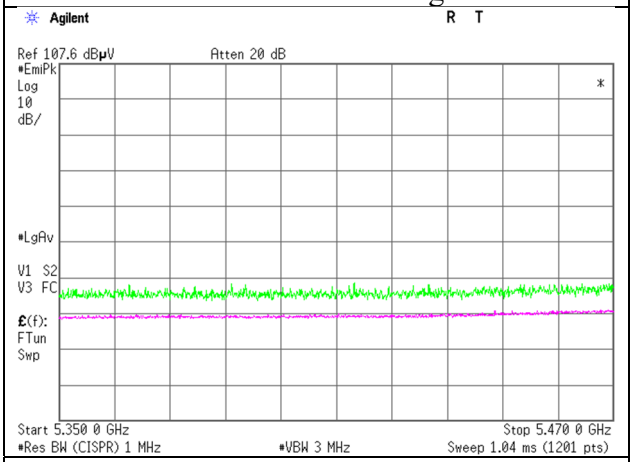
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5700 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	52.4	-	32.1	6.5	31.7	-	59.2	-	68.2	-	9.0	-	
Vert.	5725.0	51.4	-	32.1	6.5	31.7	-	58.3	-	68.2	-	9.9	-	

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.

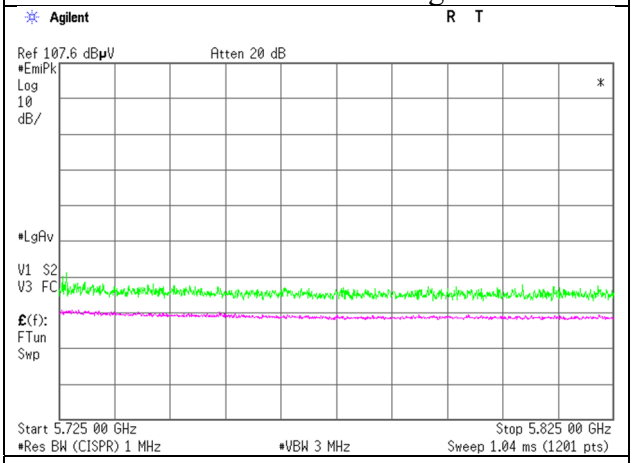
Distance factor:
1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5700 MHz

Horizontal

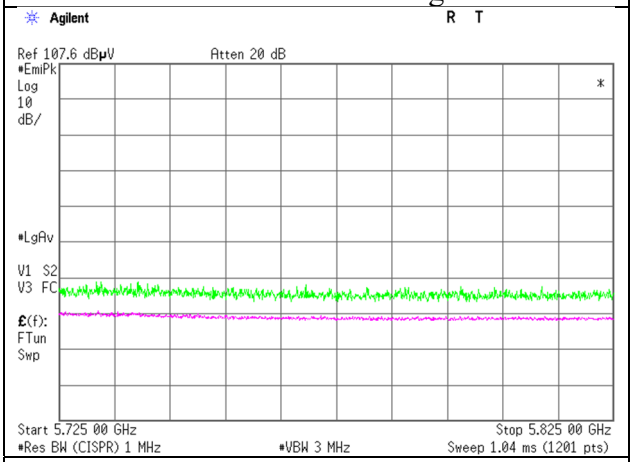
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5745 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.	5650.0	41.6	-	31.9	6.4	31.7	-	48.3	-	68.2	-	19.9	-	
Hori.	5700.0	44.0	-	32.1	6.4	31.7	-	50.8	-	105.2	-	54.4	-	
Hori.	5720.0	51.7	-	32.1	6.5	31.7	-	58.6	-	110.8	-	52.2	-	
Hori.	5725.0	54.4	-	32.1	6.5	31.7	-	61.3	-	122.2	-	60.9	-	
Vert.	5650.0	41.5	-	31.9	6.4	31.7	-	48.1	-	68.2	-	20.1	-	
Vert.	5700.0	43.6	-	32.1	6.4	31.7	-	50.4	-	105.2	-	54.8	-	
Vert.	5720.0	51.6	-	32.1	6.5	31.7	-	58.4	-	110.8	-	52.4	-	
Vert.	5725.0	53.6	-	32.1	6.5	31.7	-	60.4	-	122.2	-	61.8	-	

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.

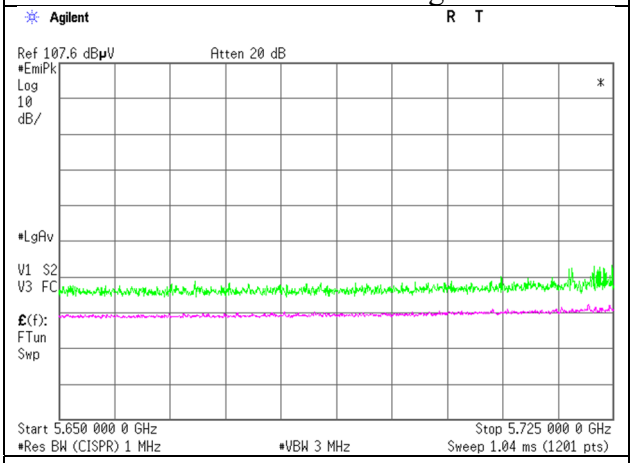
Distance factor:	1 GHz - 10 GHz	20log (3.95 m / 3.0 m) = 2.39 dB
	10 GHz - 40 GHz	20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5745 MHz

Horizontal

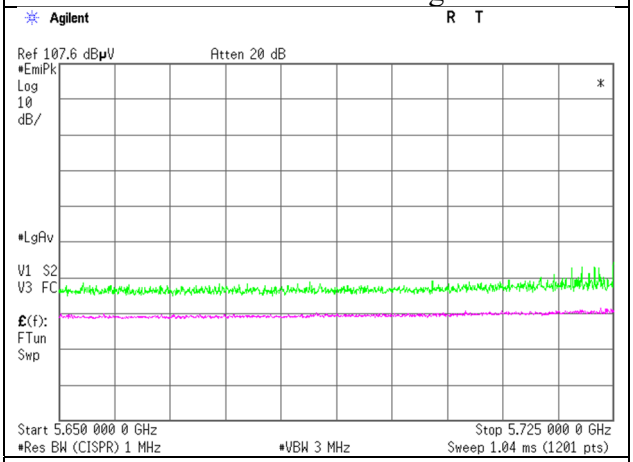
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5825 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.	5850.0	47.6	-	32.5	6.5	31.7	-	54.8	-	122.2	-	67.4	-	
Hori.	5855.0	43.7	-	32.5	6.5	31.7	-	50.9	-	110.8	-	59.9	-	
Hori.	5875.0	40.9	-	32.5	6.5	31.7	-	48.1	-	105.2	-	57.1	-	
Hori.	5925.0	40.5	-	32.5	6.5	31.7	-	47.8	-	68.2	-	20.4	-	
Vert.	5850.0	50.9	-	32.5	6.5	31.7	-	58.1	-	122.2	-	64.1	-	
Vert.	5855.0	46.3	-	32.5	6.5	31.7	-	53.6	-	110.8	-	57.2	-	
Vert.	5875.0	41.2	-	32.5	6.5	31.7	-	48.5	-	105.2	-	56.7	-	
Vert.	5925.0	40.5	-	32.5	6.5	31.7	-	47.8	-	68.2	-	20.4	-	

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 (3.95 m / 3.0 m) = 2.39 dB

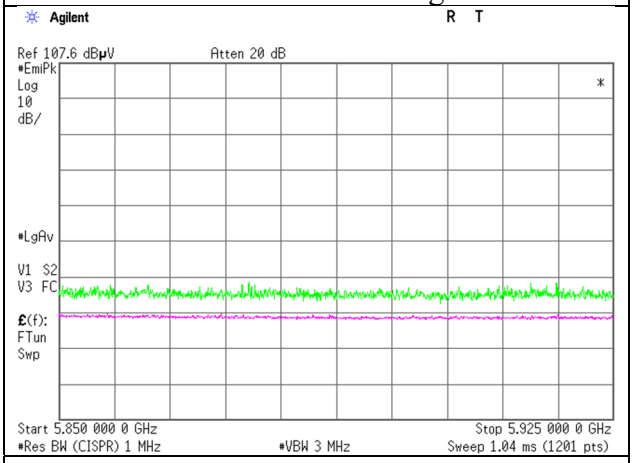
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 8, 2021
Temperature / Humidity	21 deg. C / 42 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-20 5825 MHz

Horizontal

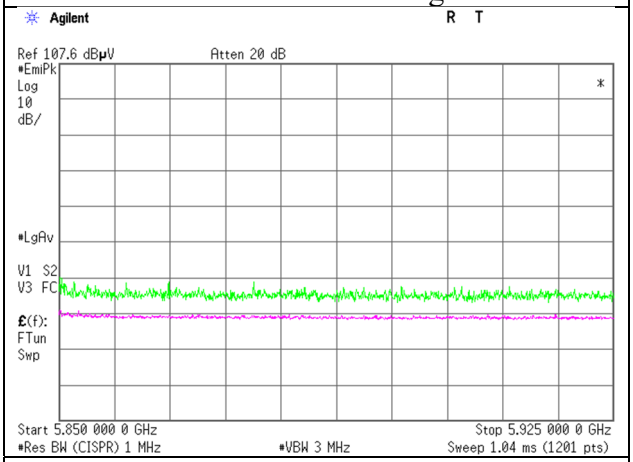
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-40 5190 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	48.8	35.4	31.9	6.2	31.6	2.7	55.3	44.6	73.9	53.9	18.6	9.3	*1)
Hori.	10380.0	41.2	-	39.9	-2.4	33.3	-	45.5	-	68.2	-	22.7	-	Floor noise
Hori.	15570.0	43.5	35.6	37.7	0.3	32.3	-	49.2	41.3	73.9	53.9	24.7	12.6	Floor noise
Hori.	20760.0	44.0	37.0	38.0	-1.3	32.5	2.7	48.3	43.9	73.9	53.9	25.6	10.0	
Vert.	5150.0	44.2	33.5	31.9	6.2	31.6	2.7	50.7	42.7	73.9	53.9	23.2	11.2	*1)
Vert.	10380.0	41.2	-	39.9	-2.4	33.3	-	45.5	-	68.2	-	22.7	-	Floor noise
Vert.	15570.0	43.5	35.4	37.7	0.3	32.3	-	49.2	41.1	73.9	53.9	24.7	12.8	Floor noise
Vert.	20760.0	45.1	36.7	38.0	-1.3	32.5	2.7	49.4	43.6	73.9	53.9	24.5	10.3	

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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

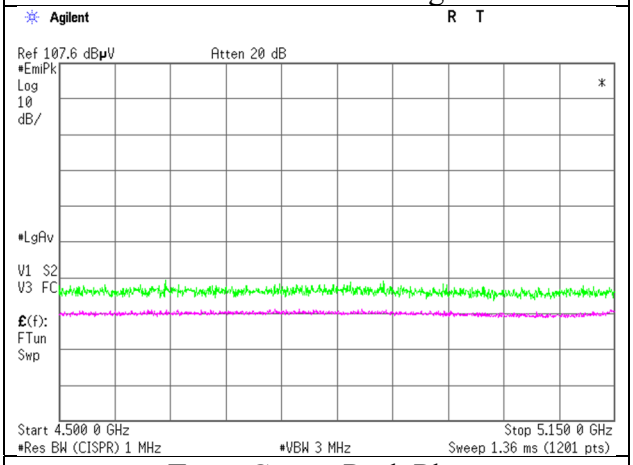
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5190 MHz

Horizontal

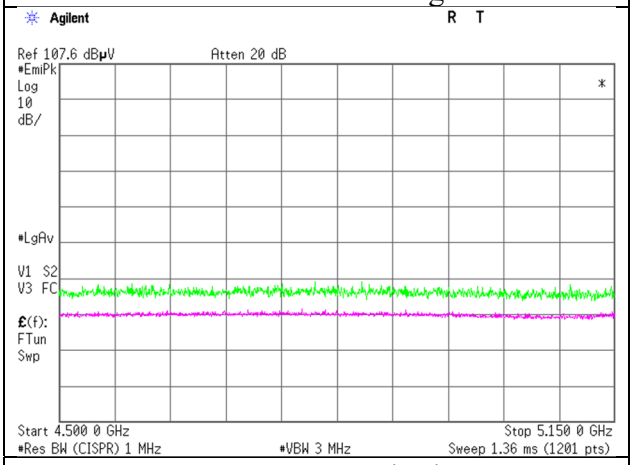
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 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	41.8	-	39.8	-2.3	33.3	-	45.9	-	68.2	-	22.3	-	
Hori.	15810.0	42.9	35.0	37.5	0.6	32.2	-	48.8	40.9	73.9	53.9	25.1	13.0	Floor noise
Hori.	21080.0	45.2	36.6	38.2	-1.2	32.5	2.7	49.7	43.7	73.9	53.9	24.3	10.2	
Vert.	10540.0	41.6	-	39.8	-2.3	33.3	-	45.8	-	68.2	-	22.4	-	
Vert.	15810.0	42.9	35.1	37.5	0.6	32.2	-	48.8	41.0	73.9	53.9	25.1	12.9	Floor noise
Vert.	21080.0	44.2	36.6	38.2	-1.2	32.5	2.7	48.6	43.8	73.9	53.9	25.3	10.2	

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 (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-40 5310 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	48.9	35.6	31.7	6.3	31.6	2.7	55.3	44.6	73.9	53.9	18.7	9.3	*1)
Hori.	10620.0	41.8	34.6	39.8	-2.3	33.3	-	46.0	38.8	73.9	53.9	27.9	15.1	Floor noise
Hori.	15930.0	43.4	35.6	37.5	0.8	32.2	-	49.5	41.6	73.9	53.9	24.5	12.3	Floor noise
Hori.	21240.0	46.1	37.4	38.2	-1.1	32.5	2.7	50.7	44.7	73.9	53.9	23.2	9.2	
Vert.	5350.0	47.3	34.7	31.7	6.3	31.6	2.7	53.6	43.7	73.9	53.9	20.3	10.2	*1)
Vert.	10620.0	41.7	34.5	39.8	-2.3	33.3	-	45.9	38.7	73.9	53.9	28.0	15.2	Floor noise
Vert.	15930.0	43.5	35.5	37.5	0.8	32.2	-	49.5	41.6	73.9	53.9	24.4	12.4	Floor noise
Vert.	21240.0	46.6	37.5	38.2	-1.1	32.5	2.7	51.2	44.8	73.9	53.9	22.7	9.1	

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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

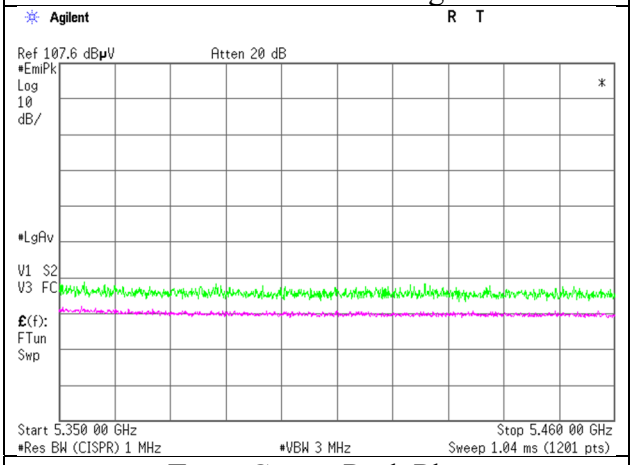
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5310 MHz

Horizontal

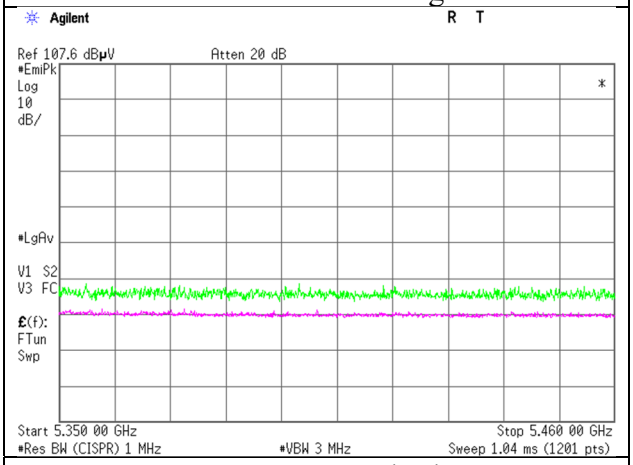
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-40 5510 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	43.7	33.5	31.9	6.3	31.7	2.7	50.3	42.7	68.2	53.9	17.9	11.2	*1)
Hori.	5470.0	48.5	-	31.9	6.3	31.7	-	55.1	-	68.2	-	13.1	-	
Hori.	11020.0	41.7	34.1	40.2	-2.3	33.3	-	46.3	38.7	73.9	53.9	27.6	15.2	Floor noise
Hori.	16530.0	43.5	-	40.0	0.6	32.3	-	51.9	-	68.2	-	16.4	-	Floor noise
Hori.	22040.0	45.5	38.1	38.2	-0.9	32.1	2.7	50.7	45.9	73.9	53.9	23.2	8.0	
Vert.	5460.0	43.3	33.5	31.9	6.3	31.7	2.7	49.9	42.8	68.2	53.9	18.3	11.2	*1)
Vert.	5470.0	48.9	-	31.9	6.3	31.7	-	55.4	-	68.2	-	12.8	-	
Vert.	11020.0	41.8	34.6	40.2	-2.3	33.3	-	46.4	39.3	73.9	53.9	27.5	14.7	Floor noise
Vert.	16530.0	43.4	-	40.0	0.6	32.3	-	51.8	-	68.2	-	16.4	-	Floor noise
Vert.	22040.0	45.9	38.7	38.2	-0.9	32.1	2.7	51.1	46.5	73.9	53.9	22.8	7.4	

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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

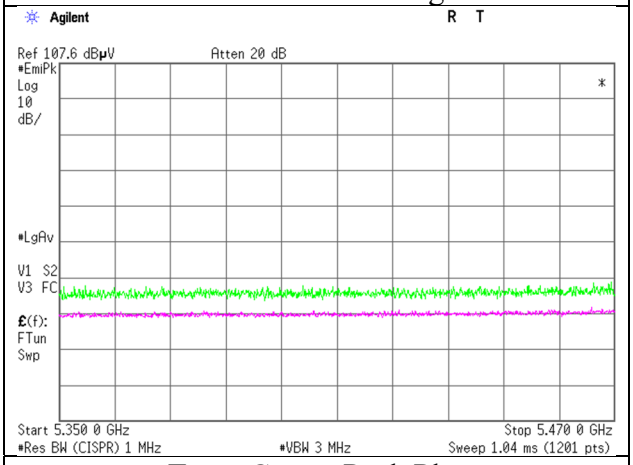
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5510 MHz

Horizontal

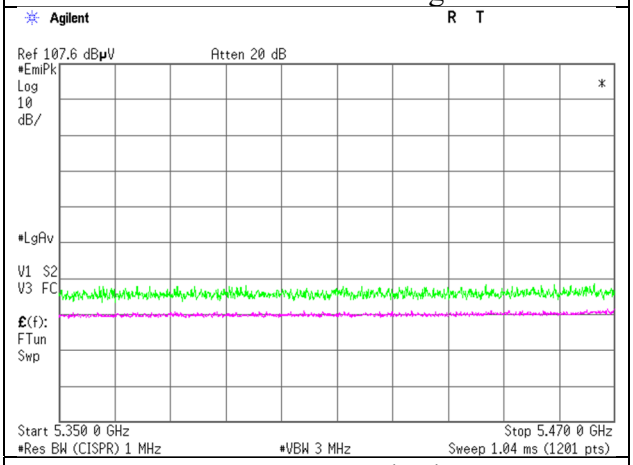
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-40 5550 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.	11100.0	41.8	34.1	40.0	-2.2	33.3	-	46.3	38.6	73.9	53.9	27.6	15.3	Floor noise
Hori.	16650.0	43.6	-	40.6	0.5	32.3	-	52.3	-	68.2	-	15.9	-	Floor noise
Hori.	22200.0	45.2	37.2	38.3	-0.9	32.1	2.7	50.5	45.2	73.9	53.9	23.4	8.7	
Vert.	11100.0	41.2	34.5	40.0	-2.2	33.3	-	45.7	39.0	73.9	53.9	28.2	14.9	Floor noise
Vert.	16650.0	43.3	-	40.6	0.5	32.3	-	52.1	-	68.2	-	16.1	-	Floor noise
Vert.	22200.0	46.6	37.7	38.3	-0.9	32.1	2.7	51.9	45.7	73.9	53.9	22.0	8.3	

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 (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-40 5670MHz		

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	43.0	-	32.1	6.5	31.7	-	49.9	-	68.2	-	18.4	-	
Hori.	11340.0	42.7	34.1	40.1	-2.0	33.2	-	47.5	38.9	73.9	53.9	26.4	15.0	Floor noise
Hori.	17010.0	42.9	-	41.6	0.4	32.4	-	52.5	-	68.2	-	15.7	-	Floor noise
Hori.	22680.0	43.9	37.4	38.4	-0.8	31.9	2.7	49.7	45.9	73.9	53.9	24.2	8.1	
Vert.	5725.0	41.7	-	32.1	6.5	31.7	-	48.6	-	68.2	-	19.6	-	
Vert.	11340.0	42.6	34.7	40.1	-2.0	33.2	-	47.4	39.6	73.9	53.9	26.5	14.3	Floor noise
Vert.	17010.0	42.8	-	41.6	0.4	32.4	-	52.3	-	68.2	-	15.9	-	Floor noise
Vert.	22680.0	44.8	38.2	38.4	-0.8	31.9	2.7	50.5	46.6	73.9	53.9	23.4	7.3	

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 (3.95 m / 3.0 m) = 2.39 dB

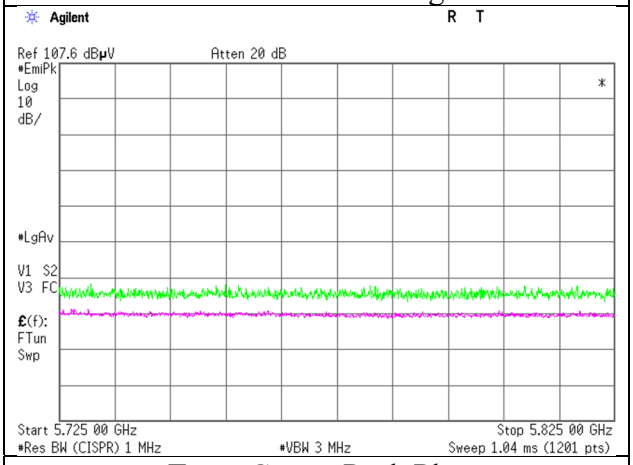
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5670 MHz

Horizontal

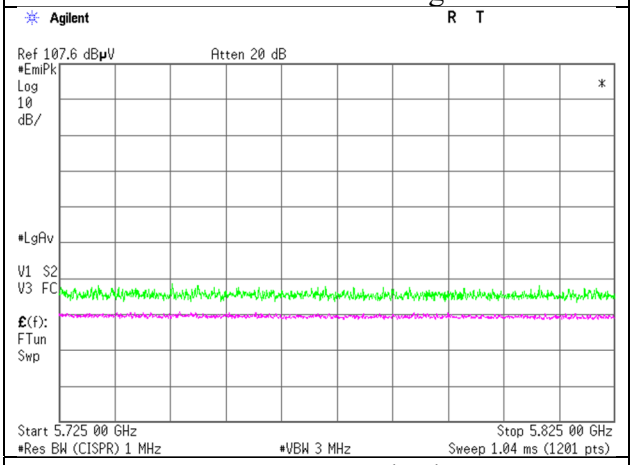
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 40 GHz)
Mode	Tx 11ac-40 5755 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.	5650.0	41.0	-	31.9	6.4	31.7	-	47.6	-	68.2	-	20.6	-	
Hori.	5700.0	43.1	-	32.1	6.4	31.7	-	49.9	-	105.2	-	55.3	-	
Hori.	5720.0	45.0	-	32.1	6.5	31.7	-	51.9	-	110.8	-	58.9	-	
Hori.	5725.0	50.6	-	32.1	6.5	31.7	-	57.5	-	122.2	-	64.7	-	
Hori.	11510.0	41.1	34.2	39.8	-1.9	33.2	-	45.9	39.0	73.9	53.9	28.0	14.9	Floor noise
Hori.	17265.0	43.5	-	43.3	0.4	32.3	-	54.9	-	68.2	-	13.4	-	Floor noise
Hori.	23020.0	44.1	37.1	38.6	-0.7	31.8	2.7	50.2	45.9	73.9	53.9	23.7	8.0	
Vert.	5650.0	41.4	-	31.9	6.4	31.7	-	48.1	-	68.2	-	20.1	-	
Vert.	5700.0	42.5	-	32.1	6.4	31.7	-	49.3	-	105.2	-	55.9	-	
Vert.	5720.0	50.8	-	32.1	6.5	31.7	-	57.7	-	110.8	-	53.1	-	
Vert.	5725.0	50.9	-	32.1	6.5	31.7	-	57.8	-	122.2	-	64.4	-	
Vert.	11510.0	41.4	34.2	39.8	-1.9	33.2	-	46.2	39.0	73.9	53.9	27.7	14.9	Floor noise
Vert.	17265.0	43.8	-	43.3	0.4	32.3	-	55.2	-	68.2	-	13.0	-	Floor noise
Vert.	23020.0	44.3	37.3	38.6	-0.7	31.8	2.7	50.4	46.1	73.9	53.9	23.5	7.9	

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 (3.95 m / 3.0 m) = 2.39 dB

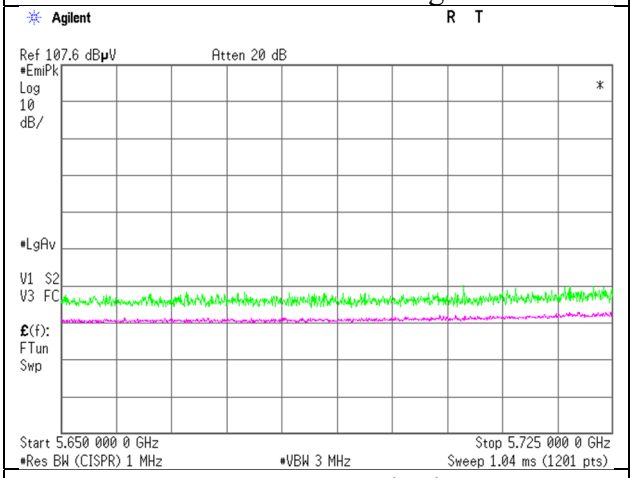
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5755 MHz

Horizontal

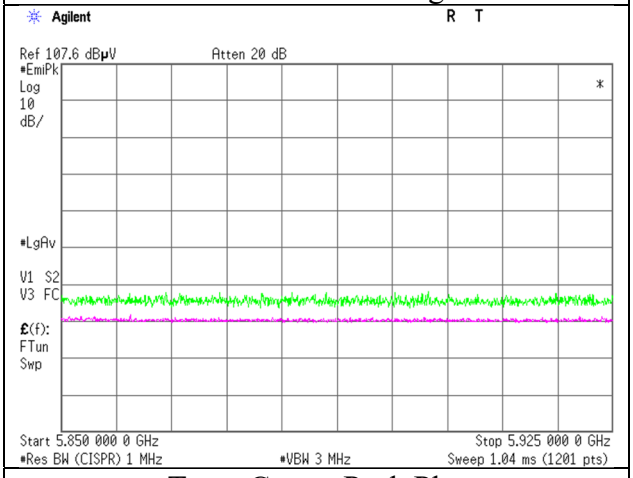
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 40 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.	5850.0	41.1	-	32.5	6.5	31.7	-	48.4	-	122.2	-	73.8	-	
Hori.	5855.0	41.2	-	32.5	6.5	31.7	-	48.4	-	110.8	-	62.4	-	
Hori.	5875.0	40.4	-	32.5	6.5	31.7	-	47.6	-	105.2	-	57.6	-	
Hori.	5925.0	40.1	-	32.5	6.5	31.7	-	47.4	-	68.2	-	20.8	-	
Hori.	11590.0	42.0	34.1	39.5	-1.8	33.1	-	46.6	38.6	73.9	53.9	27.4	15.3	Floor noise
Hori.	17385.0	43.2	-	44.3	0.5	32.3	-	55.6	-	68.2	-	12.6	-	Floor noise
Hori.	23180.0	46.3	37.7	38.7	-0.6	31.8	2.7	52.6	46.6	73.9	53.9	21.3	7.3	
Vert.	5850.0	41.0	-	32.5	6.5	31.7	-	48.2	-	122.2	-	74.0	-	
Vert.	5855.0	40.7	-	32.5	6.5	31.7	-	48.0	-	110.8	-	62.8	-	
Vert.	5875.0	40.3	-	32.5	6.5	31.7	-	47.6	-	105.2	-	57.6	-	
Vert.	5925.0	40.2	-	32.5	6.5	31.7	-	47.5	-	68.2	-	20.7	-	
Vert.	11590.0	42.4	34.5	39.5	-1.8	33.1	-	46.9	39.1	73.9	53.9	27.0	14.9	Floor noise
Vert.	17385.0	43.8	-	44.3	0.5	32.3	-	56.2	-	68.2	-	12.0	-	Floor noise
Vert.	23180.0	46.8	37.6	38.7	-0.6	31.8	2.7	53.1	46.5	73.9	53.9	20.8	7.4	

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 (3.95 m / 3.0 m) = 2.39 dB

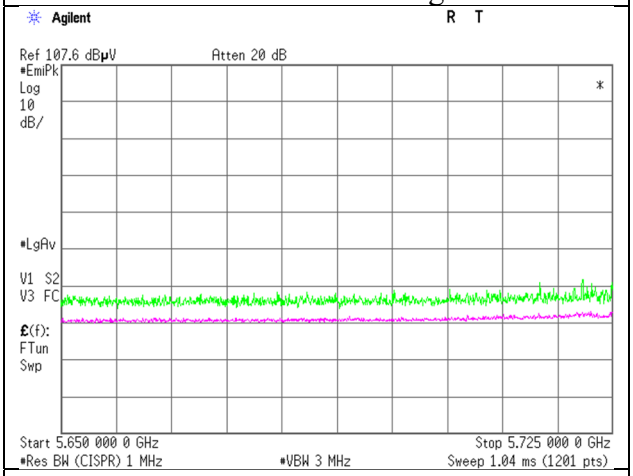
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 10 GHz)
Mode	Tx 11ac-40 5795 MHz

Horizontal

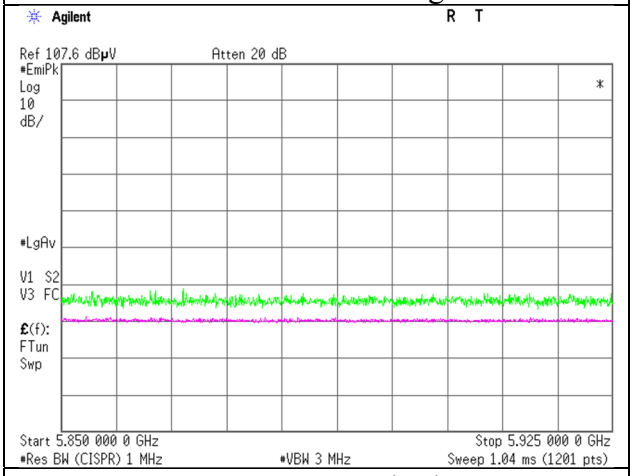
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 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	52.0	37.7	31.9	6.2	31.6	3.1	58.5	47.3	73.9	53.9	15.4	6.6	*1)
Hori.	10420.0	41.4	-	39.9	-2.4	33.3	-	45.7	-	68.2	-	22.5	-	Floor noise
Hori.	15630.0	43.6	36.0	37.6	0.4	32.2	-	49.4	41.7	73.9	53.9	24.5	12.2	Floor noise
Hori.	20840.0	45.9	36.9	38.1	-1.2	32.5	3.1	50.2	44.4	73.9	53.9	23.7	9.5	
Vert.	5150.0	48.6	35.0	31.9	6.2	31.6	3.1	55.1	44.7	73.9	53.9	18.8	9.3	*1)
Vert.	10420.0	41.4	-	39.9	-2.4	33.3	-	45.7	-	68.2	-	22.5	-	Floor noise
Vert.	15630.0	43.7	36.0	37.6	0.4	32.2	-	49.5	41.7	73.9	53.9	24.4	12.2	Floor noise
Vert.	20840.0	45.6	36.9	38.1	-1.2	32.5	3.1	50.0	44.4	73.9	53.9	23.9	9.5	

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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

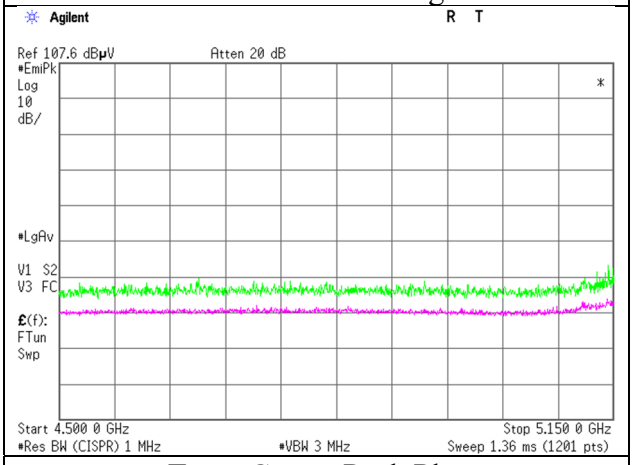
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5210 MHz

Horizontal

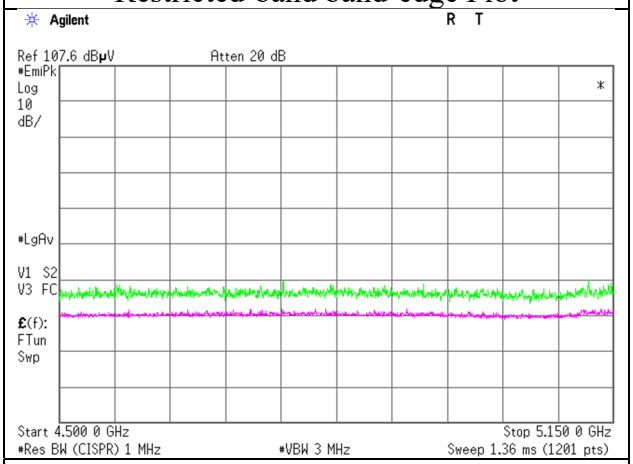
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 40 GHz)
Mode	Tx 11ac-80 5290 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.	5350.0	51.5	38.0	31.7	6.3	31.6	3.1	57.9	47.4	73.9	53.9	16.0	6.5	*1)
Hori.	10580.0	42.3	-	39.8	-2.3	33.3	-	46.5	-	68.2	-	21.7	-	Floor noise
Hori.	15870.0	42.5	34.9	37.5	0.7	32.2	-	48.5	40.8	73.9	53.9	25.5	13.1	Floor noise
Hori.	21160.0	45.7	36.8	38.2	-1.2	32.5	3.1	50.3	44.5	73.9	53.9	23.6	9.4	
Vert.	5350.0	51.9	37.4	31.7	6.3	31.6	3.1	58.2	46.9	73.9	53.9	15.7	7.0	*1)
Vert.	10580.0	42.4	-	39.8	-2.3	33.3	-	46.6	-	68.2	-	21.6	-	Floor noise
Vert.	15870.0	42.8	34.8	37.5	0.7	32.2	-	48.7	40.7	73.9	53.9	25.2	13.2	Floor noise
Vert.	21160.0	44.8	36.6	38.2	-1.2	32.5	3.1	49.3	44.3	73.9	53.9	24.6	9.6	

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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

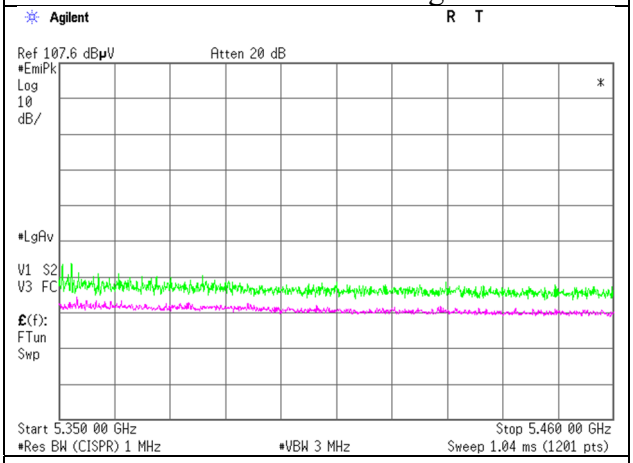
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5290 MHz

Horizontal

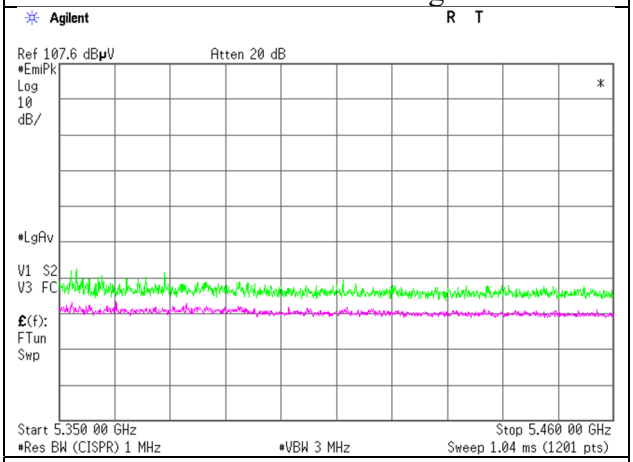
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H		
Test place	Ise EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	December 9, 2021 (Night)	December 9, 2021 (Day)	December 10, 2021
Temperature / Humidity	24 deg. C / 43 % RH	22 deg. C / 45 % RH	22 deg. C / 40 % RH
Engineer	Takumi Nishida	Hiroki Numata	Hiroki Numata
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 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	50.9	37.6	31.9	6.3	31.7	3.1	57.4	47.3	68.2	53.9	10.8	6.6	*1)
Hori.	5470.0	51.2	-	31.9	6.3	31.7	-	57.8	-	68.2	-	10.4	-	
Hori.	11060.0	42.4	34.5	40.1	-2.2	33.3	-	46.9	39.0	73.9	53.9	27.0	14.9	Floor noise
Hori.	16590.0	42.6	-	40.2	0.6	32.3	-	51.0	-	68.2	-	17.2	-	Floor noise
Vert.	5460.0	49.3	35.9	31.9	6.3	31.7	3.1	55.9	45.6	68.2	53.9	12.3	8.3	*1)
Vert.	5470.0	49.9	-	31.9	6.3	31.7	-	56.4	-	68.2	-	11.8	-	
Vert.	11060.0	42.5	34.6	40.1	-2.2	33.3	-	47.0	39.1	73.9	53.9	26.9	14.8	Floor noise
Vert.	16590.0	42.5	-	40.2	0.6	32.3	-	50.9	-	68.2	-	17.3	-	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.

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

Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

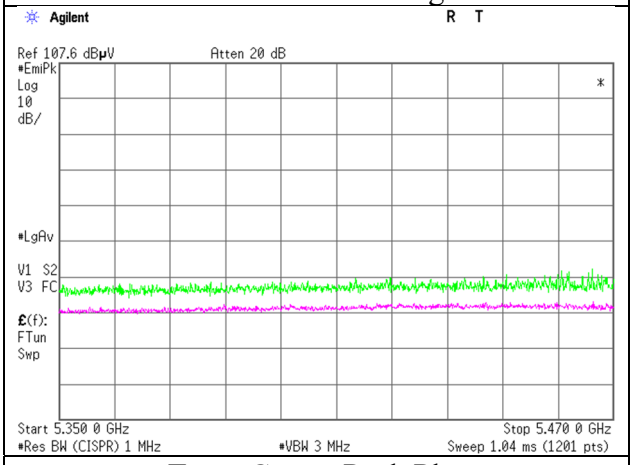
10 GHz - 40 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 9, 2021 (Night)
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Takumi Nishida
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5530 MHz

Horizontal

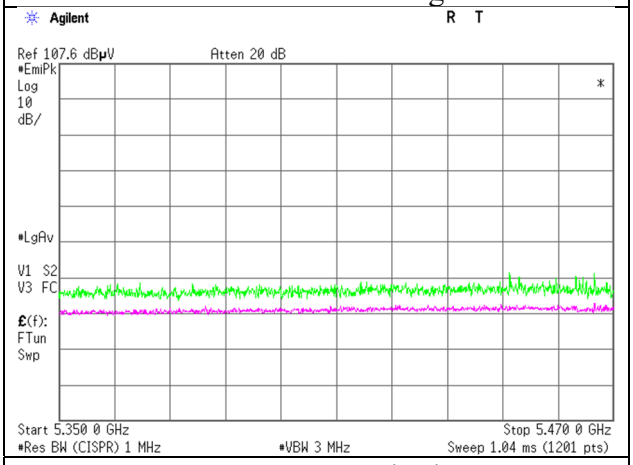
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 40 GHz)
Mode	Tx 11ac-80 5775 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.	5650.0	44.5	-	31.9	6.4	31.7	-	51.1	-	68.2	-	17.1	-	
Hori.	5700.0	47.8	-	32.1	6.4	31.7	-	54.6	-	105.2	-	50.6	-	
Hori.	5720.0	52.2	-	32.1	6.5	31.7	-	59.0	-	110.8	-	51.8	-	
Hori.	5725.0	55.7	-	32.1	6.5	31.7	-	62.6	-	122.2	-	59.6	-	
Hori.	5850.0	47.6	-	32.5	6.5	31.7	-	54.8	-	122.2	-	67.4	-	
Hori.	5855.0	44.1	-	32.5	6.5	31.7	-	51.3	-	110.8	-	59.5	-	
Hori.	5875.0	41.7	-	32.5	6.5	31.7	-	48.9	-	105.2	-	56.3	-	
Hori.	5925.0	40.5	-	32.5	6.5	31.7	-	47.8	-	68.2	-	20.4	-	
Hori.	11550.0	41.7	33.7	39.6	-1.8	33.1	-	46.4	38.4	73.9	53.9	27.5	15.5	Floor noise
Hori.	17325.0	43.4	-	43.8	0.4	32.3	-	55.3	-	68.2	-	12.9	-	Floor noise
Vert.	5650.0	43.9	-	31.9	6.4	31.7	-	50.6	-	68.2	-	17.6	-	
Vert.	5700.0	48.2	-	32.1	6.4	31.7	-	55.0	-	105.2	-	50.2	-	
Vert.	5720.0	52.0	-	32.1	6.5	31.7	-	58.9	-	110.8	-	51.9	-	
Vert.	5725.0	55.3	-	32.1	6.5	31.7	-	62.1	-	122.2	-	60.1	-	
Vert.	5850.0	47.5	-	32.5	6.5	31.7	-	54.8	-	122.2	-	67.4	-	
Vert.	5855.0	44.3	-	32.5	6.5	31.7	-	51.5	-	110.8	-	59.3	-	
Vert.	5875.0	43.1	-	32.5	6.5	31.7	-	50.3	-	105.2	-	54.9	-	
Vert.	5925.0	40.6	-	32.5	6.5	31.7	-	47.9	-	68.2	-	20.3	-	
Vert.	11550.0	41.6	33.8	39.6	-1.8	33.1	-	46.2	38.5	73.9	53.9	27.7	15.4	Floor noise
Vert.	17325.0	43.1	-	43.8	0.4	32.3	-	55.0	-	68.2	-	13.2	-	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).

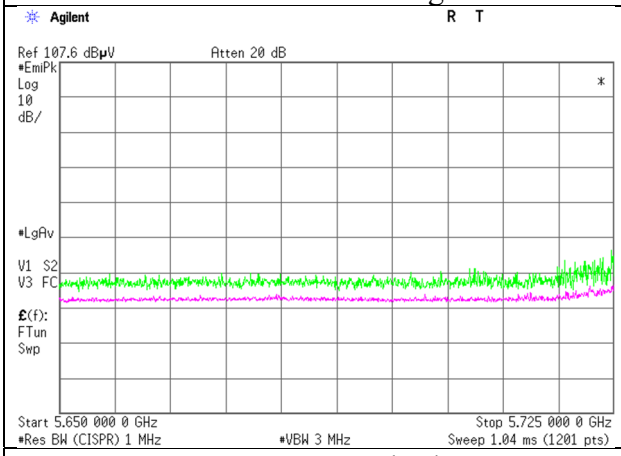
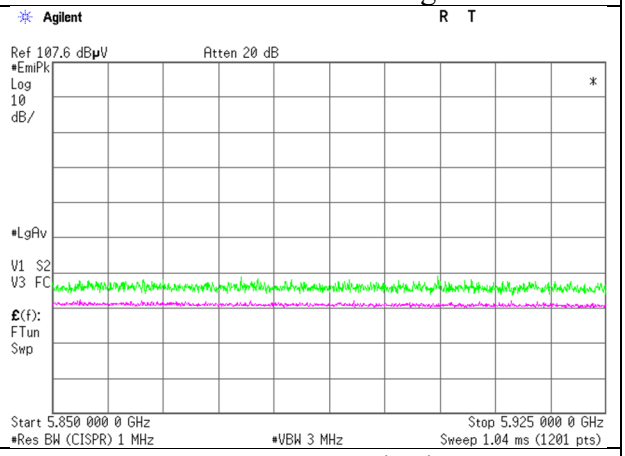
*QP detector was used up to 1GHz.

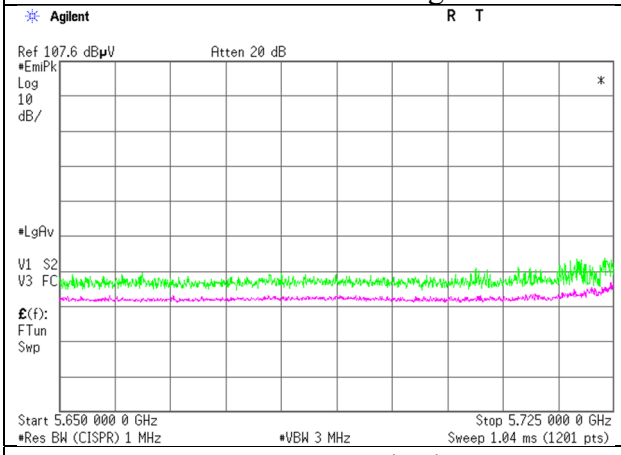
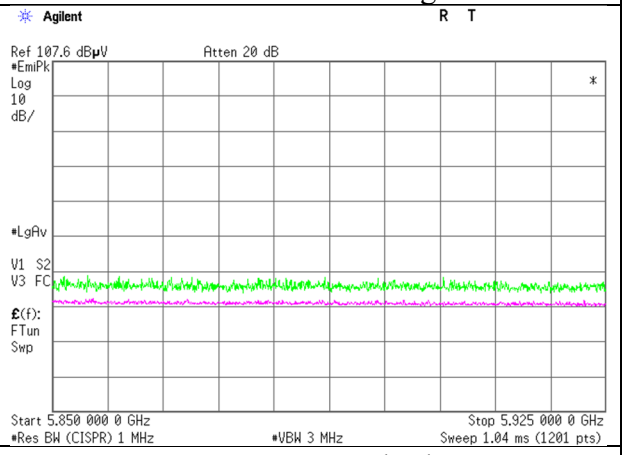
Distance factor: 1 GHz - 10 GHz 20log (3.95 m / 3.0 m) = 2.39 dB

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

Radiated Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 11, 2021
Temperature / Humidity	23 deg. C / 41 % RH
Engineer	Hiroki Numata
	(1 GHz - 10 GHz)
Mode	Tx 11ac-80 5755 MHz

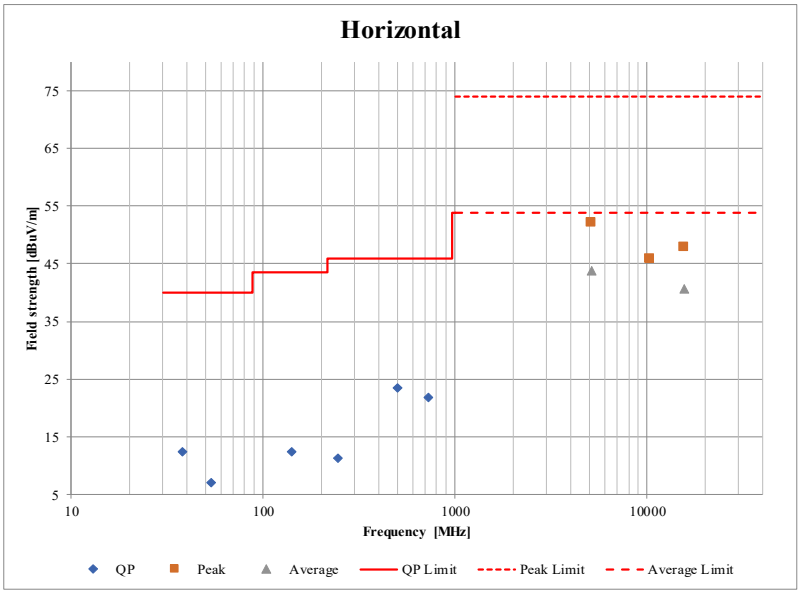
Horizontal	Horizontal
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

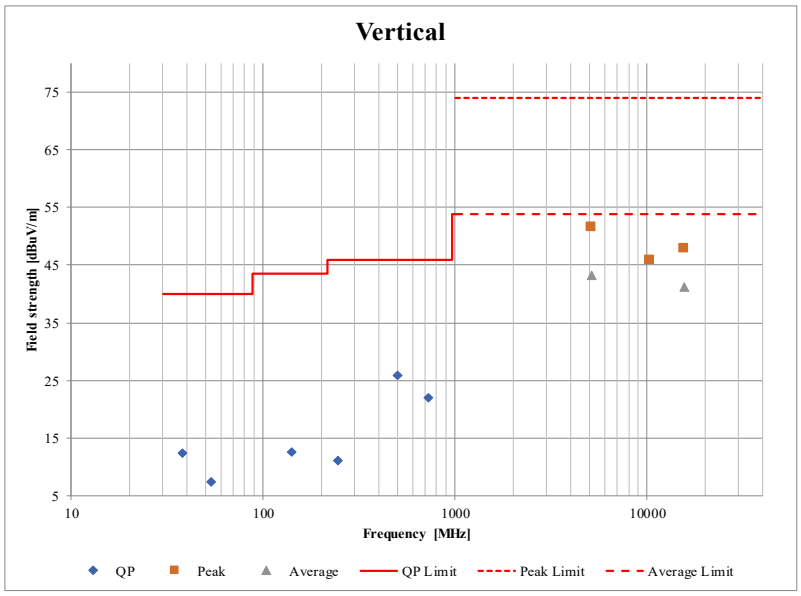
Vertical	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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)

Report No.	14118411H				
Test place	Ise EMC Lab.				
Semi Anechoic Chamber	No.3	No.3	No.3	No.3	No.4
Date	December 7, 2021	December 9, 2021 (Day)	December 9, 2021 (Night)	December 10, 2021	December 18, 2021
Temperature / Humidity	23 deg. C / 43 % RH	22 deg. C / 45 % RH	24 deg. C / 43 % RH	22 deg. C / 40 % RH	21 deg. C / 38 % RH
Engineer	Nachi Konegawa	Hiroki Numata	Takumi Nishida	Hiroki Numata	Nachi Konegawa
	(1 GHz - 10 GHz)	(10 GHz - 18 GHz)	(18 GHz - 26.5 GHz)	(26.5 GHz - 40 GHz)	(Below 1 GHz)
Mode	Tx 11a 5180 MHz				



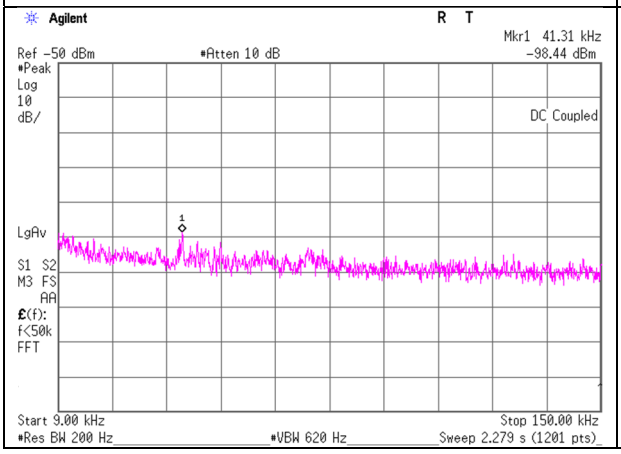


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

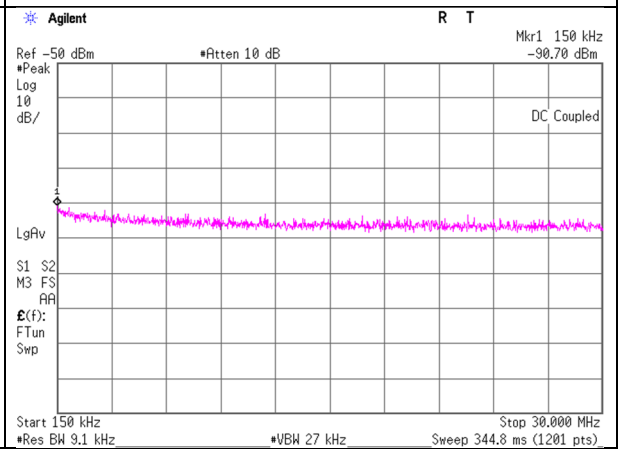
Conducted Spurious Emission

Report No.	14118411H
Test place	Ise EMC Lab. No.8 Measurement Room
Date	December 17, 2021
Temperature / Humidity	22deg. C / 35 % RH
Engineer	Nachi Konegawa
Mode	Tx 11a 5180 MHz

9 kHz - 150 kHz



150 kHz - 30 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenuator [dB]	Antenna Gain* [dBi]	N (Number of Output)	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
41.31	-98.4	0.00	9.8	2.0	1	-86.6	300	6.0	-25.3	35.2	60.5	
150.00	-90.7	0.01	9.8	2.0	1	-78.9	300	6.0	-17.6	24.0	41.6	

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

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

N: Number of output

*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
RE	MSA-03	141884	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY44020357	03/10/2021	12
RE	MCC-231	177964	Microwave Cable	Junkosha INC.	MMX221	1901S329(1m)/1902S579(5m)	03/04/2021	12
RE	MPA-11	141580	MicroWave System Amplifier	Keysight Technologies Inc	83017A	MY39500779	03/03/2021	12
RE	MHA-20	141507	Horn Antenna 1-18GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	258	11/09/2021	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	COTS-MEMI-02	178648	EMI measurement program	TSJ (Techno Science Japan)	TEPTO-DV	-	-	-
RE	MAEC-03-SVSWR	142013	AC3_Semi Anechoic Chamber(SVSWR)	TDK	Semi Anechoic Chamber 3m	DA-10005	04/01/2021	24
RE	MHF-22	141293	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCB	602	02/18/2021	12
RE	MCC-177	141226	Microwave Cable	Junkosha	MMX221-00500DMSDMS	1502S304	03/01/2021	12
RE	MHA-16	141513	Horn Antenna 15-40GHz	Schwarzbeck Mess-Elektronik OHG	BBHA9170	BBHA9170306	06/07/2021	12
RE	MHA-29	141517	Horn Antenna 26.5-40GHz	ETS-Lindgren	3160-10	152399	08/27/2021	12
RE	MCC-224	160324	Coaxial Cable	Huber+Suhner	SUCOFLEX 102A	MY009/2A	11/19/2021	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	MAEC-04	142011	AC4_Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	05/25/2020	24
RE	MOS-15	141562	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0010	01/15/2021	12
RE	MMM-10	141545	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	51201148	01/07/2021	12
RE	MJM-29	142230	Measure	KOMELON	KMC-36	-	-	-
RE	MAT-34	141331	Attenuator(6dB)	TME	UFA-01	-	02/02/2021	12
RE	MBA-05	141425	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	VHA9103+BBA9106	VHA 91031302	08/28/2021	12
RE	MCC-50	141397	Coaxial Cable	UL Japan	-	-	11/03/2021	12
RE	MLA-23	141267	Logperiodic Antenna (200-1000MHz)	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	9111B-192	08/28/2021	12
RE	MPA-14	141583	Pre Amplifier	SONOMA INSTRUMENT	310	260833	02/18/2021	12
RE	MTR-10	141951	EMI Test Receiver	Rohde & Schwarz	ESR26	101408	03/09/2021	12

Test equipment (2/2)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	MOS-24	90289	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0005	01/10/2022	12
AT	MMM-12	141547	DIGITAL HiTESTER	HIOKI E.E. CORPORATION	3805	60500120	02/01/2022	12
AT	MRENT-130	141855	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46187750	11/28/2021	12
AT	MPM-17	141813	Power Meter	Raditec (Formerly DARE!! Instruments)	RPR3006W	14I00048SNO081	11/01/2021	12
AT	COTS-MPM	141176	measurement software	Other	All	-	-	-
AT	MAT-23	141361	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	04/07/2021	12
AT	MCC-66	141328	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28636/2	04/16/2021	12
AT	MOS-14	141561	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	1401	01/15/2021	12
AT	MMM-18	141558	Digital Tester(TRUE RMS MULTIMETER)	Fluke Corporation	115	17930030	05/24/2021	12
AT	MSA-13	141900	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46185823	09/30/2021	12
AT	MPM-16	141812	Power Meter	Keysight Technologies Inc	8990B	MY51000271	08/11/2021	12
AT	MPSE-22	141842	Power sensor	Keysight Technologies Inc	N1923A	MY54070003	08/11/2021	12
AT	MCC-144	141414	Microwave Cable	Junkosha	MWX221	1207S407	08/11/2021	12
AT	MAT-58	141334	Attenuator(10dB)	Suhner	6810.19.A	-	12/08/2021	12
AT	MCC-64	141327	Coaxial Cable	UL Japan	-	-	02/03/2021	12
AT	MAT-10	141156	Attenuator(10dB)	Weinschel Corp	2	BL1173	11/09/2021	12
AT	MOS-28	141567	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	0008	01/15/2021	12
AT	MMM-17	141557	DIGIITAL HiTESTER	HIOKI E.E. CORPORATION	3805	70900530	01/07/2021	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