Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5180 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	47.27	32.70	16.34	38.82	2.31	59.80	73.9	14.1	110	264	-
Hori.	5150.000	AV	36.71	32.70	16.34	38.82	2.31	49.24	53.9	4.6	110	264	VBW: 5.6 kHz
Vert.	5150.000	PK	50.91	32.70	16.34	38.82	2.31	63.44	73.9	10.4	114	309	-
Vert.	5150.000	AV	38.12	32.70	16.34	38.82	2.31	50.65	53.9	**3.2**	114	309	VBW: 5.6 kHz

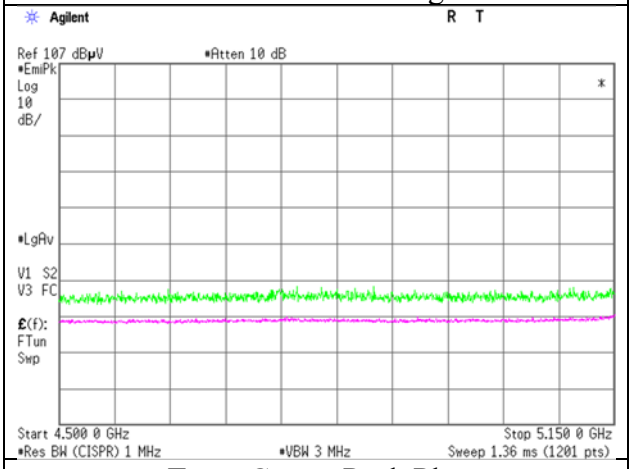
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
Mode	Tx 11a 5180 MHz

Horizontal

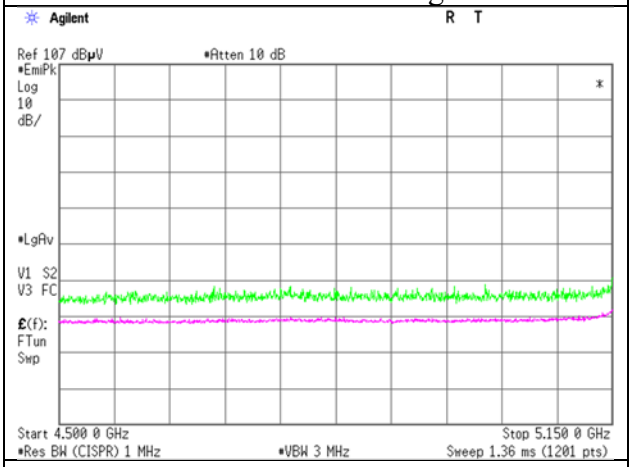
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5320 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.36	32.43	16.49	38.92	2.31	62.67	73.9	11.2	103	284	-
Hori.	5350.000	AV	38.22	32.43	16.49	38.92	2.31	50.53	53.9	3.3	103	284	VBW: 5.6 kHz
Vert.	5350.000	PK	51.50	32.43	16.49	38.92	2.31	63.81	73.9	10.0	109	310	-
Vert.	5350.000	AV	39.06	32.43	16.49	38.92	2.31	51.37	53.9	**2.5**	109	310	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	45.73	32.44	16.43	38.87	2.31	58.04	-37.19	-27.0	10.1	103	284	-
Vert.	5250.000	PK	45.26	32.44	16.43	38.87	2.31	57.57	-37.66	-27.0	10.6	109	310	-

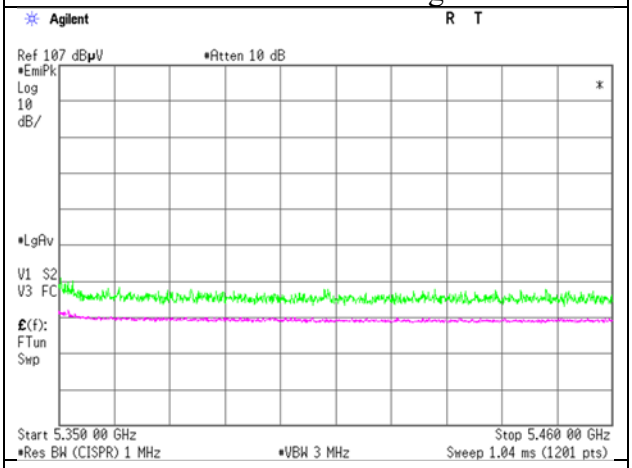
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
Mode	Tx 11a 5320 MHz

Horizontal

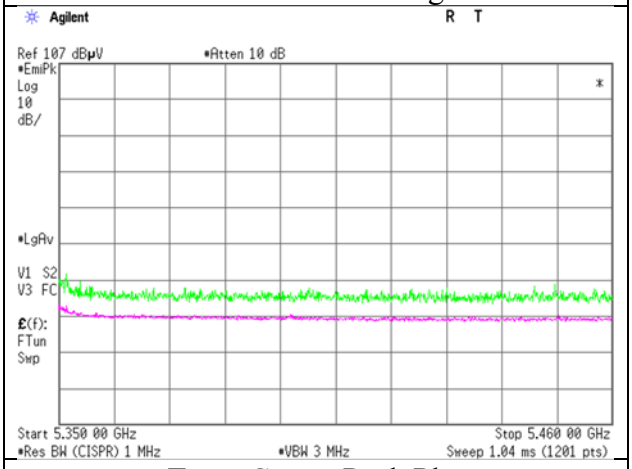
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5500 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.86	32.16	16.88	43.42	2.31	58.79	73.9	15.1	100	267	-
Hori.	5460.000	AV	39.77	32.16	16.88	43.42	2.31	47.70	53.9	6.2	100	267	VBW: 5.6 kHz
Vert.	5460.000	PK	51.95	32.16	16.88	43.42	2.31	59.88	73.9	14.0	120	307	-
Vert.	5460.000	AV	40.64	32.16	16.88	43.42	2.31	48.57	53.9	**5.3**	120	307	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	54.90	32.18	16.89	43.44	2.31	62.84	-32.39	-27.0	**5.3**	100	267	-
Vert.	5470.000	PK	54.88	32.18	16.89	43.44	2.31	62.82	-32.41	-27.0	5.4	120	307	-

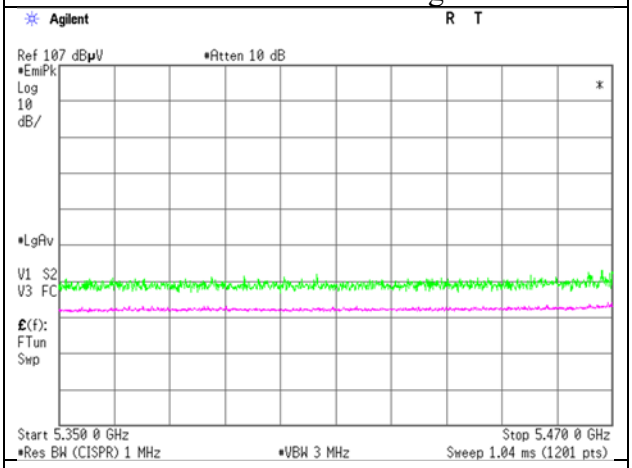
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11a 5500 MHz

Horizontal

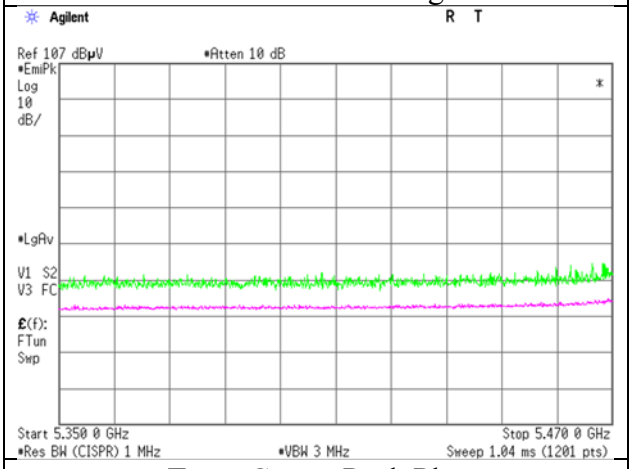
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5700 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	52.43	32.63	17.03	43.52	2.31	60.88	-34.35	-27.0	7.3	134	264	-
Vert.	5725.000	PK	54.19	32.63	17.03	43.52	2.31	62.64	-32.59	-27.0	**5.5**	100	305	-

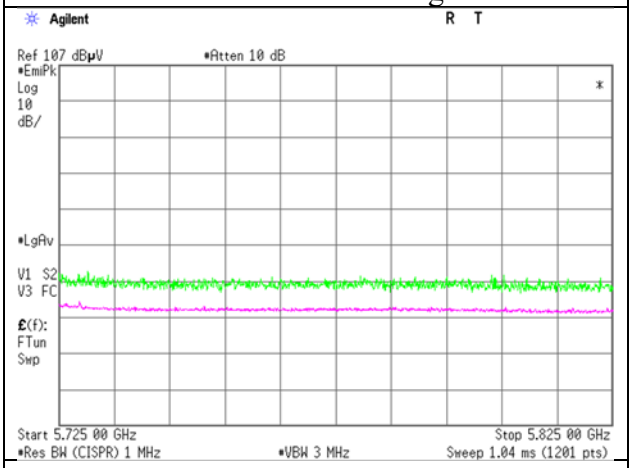
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11a 5700 MHz

Horizontal

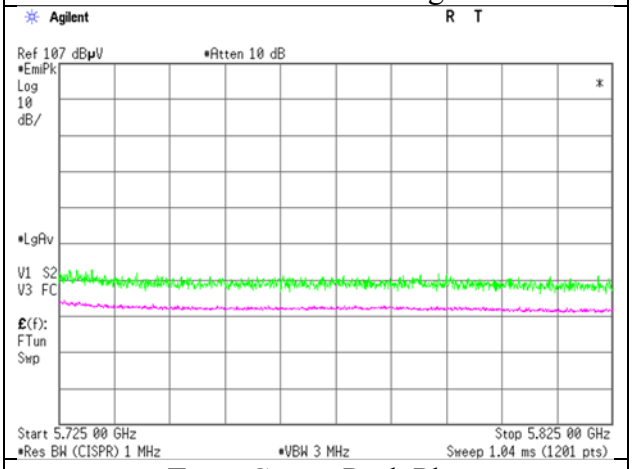
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5745 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.93	32.42	16.99	43.50	2.31	58.15	-37.08	-27.0	**10.0**	100	259	-
Hori.	5700.000	PK	49.98	32.55	17.01	43.51	2.31	58.34	-36.89	10.0	46.8	100	259	-
Hori.	5720.000	PK	59.52	32.61	17.02	43.52	2.31	67.94	-27.29	15.6	42.8	100	259	-
Hori.	5725.000	PK	60.69	32.63	17.03	43.52	2.31	69.14	-26.09	27.0	53.0	100	259	-
Vert.	5650.000	PK	49.00	32.42	16.99	43.50	2.31	57.22	-38.01	-27.0	11.0	175	187	-
Vert.	5700.000	PK	50.01	32.55	17.01	43.51	2.31	58.37	-36.86	10.0	46.8	175	187	-
Vert.	5720.000	PK	59.64	32.61	17.02	43.52	2.31	68.06	-27.17	15.6	42.7	175	187	-
Vert.	5725.000	PK	60.22	32.63	17.03	43.52	2.31	68.67	-26.56	27.0	53.5	175	187	-

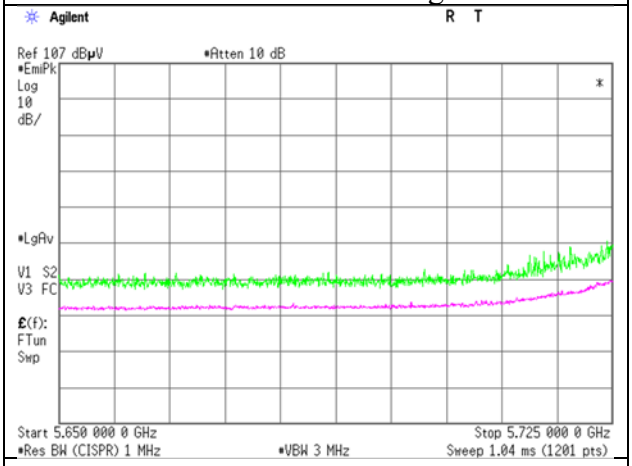
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11a 5745 MHz

Horizontal

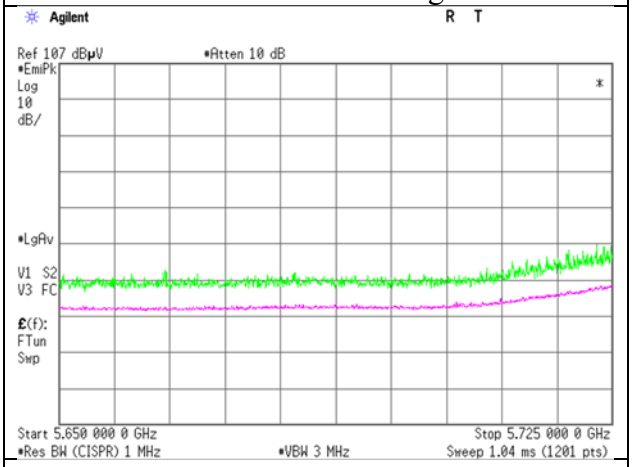
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
	(1 GHz - 6.4 GHz)
Mode	Tx 11a 5825 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	58.12	32.99	17.11	43.54	2.31	66.99	-28.24	27.0	55.2	106	273	-
Hori.	5855.000	PK	55.91	33.00	17.11	43.54	2.31	64.79	-30.44	15.6	46.0	106	273	-
Hori.	5875.000	PK	50.01	33.03	17.14	43.54	2.31	58.95	-36.28	10.0	46.2	106	273	-
Hori.	5925.000	PK	48.85	33.10	17.16	43.55	2.31	57.87	-37.36	-27.0	10.3	106	273	-
Vert.	5850.000	PK	58.62	32.99	17.11	43.54	2.31	67.49	-27.74	27.0	54.7	171	189	-
Vert.	5855.000	PK	55.54	33.00	17.11	43.54	2.31	64.42	-30.81	15.6	46.4	171	189	-
Vert.	5875.000	PK	50.28	33.03	17.14	43.54	2.31	59.22	-36.01	10.0	46.0	171	189	-
Vert.	5925.000	PK	49.99	33.10	17.16	43.55	2.31	59.01	-36.22	-27.0	**9.2**	171	189	-

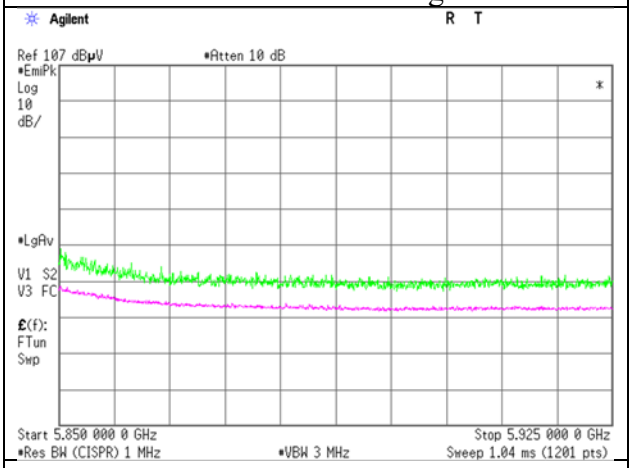
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11a 5825 MHz

Horizontal

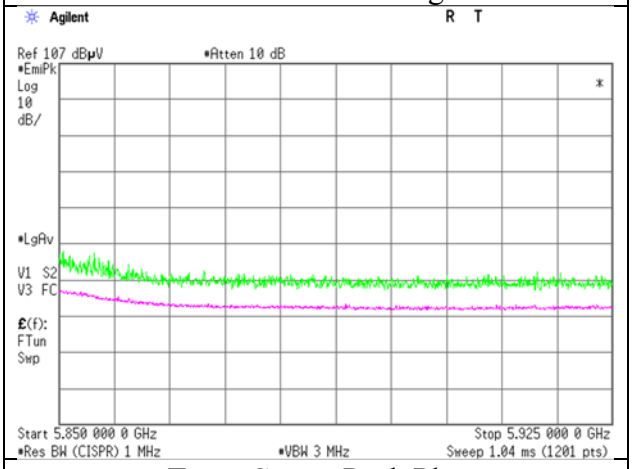
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.3
Date	December 28, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	23 deg.C, 38 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yohsuke Matsuzawa	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5180 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.36	32.70	16.34	38.82	2.31	61.89	73.9	12.0	100	270	-
Hori.	15540.000	PK	45.62	39.40	11.61	37.33	-9.54	49.76	73.9	24.1	150	0	-
Hori.	20720.000	PK	55.22	40.08	14.38	47.02	-9.54	53.12	73.9	20.7	160	110	-
Hori.	5150.000	AV	37.11	32.70	16.34	38.82	2.31	49.64	53.9	4.2	100	270	VBW: 6.2 kHz
Hori.	15540.000	AV	35.50	39.40	11.61	37.33	-9.54	39.64	53.9	14.2	150	0	VBW: 6.2 kHz, Floor noise
Hori.	20720.000	AV	53.24	40.08	14.38	47.02	-9.54	51.14	53.9	**2.7**	160	110	VBW: 6.2 kHz
Vert.	5150.000	PK	49.30	32.70	16.34	38.82	2.31	61.83	73.9	12.0	115	314	-
Vert.	15540.000	PK	45.81	39.40	11.61	37.33	-9.54	49.95	73.9	23.9	150	0	-
Vert.	20720.000	PK	53.48	40.08	14.38	47.02	-9.54	51.38	73.9	22.5	139	174	-
Vert.	5150.000	AV	38.23	32.70	16.34	38.82	2.31	50.76	53.9	3.1	115	314	VBW: 6.2 kHz
Vert.	15540.000	AV	35.58	39.40	11.61	37.33	-9.54	39.72	53.9	14.1	150	0	VBW: 6.2 kHz, Floor noise
Vert.	20720.000	AV	51.43	40.08	14.38	47.02	-9.54	49.33	53.9	4.5	139	174	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	46.14	36.35	9.21	39.96	-9.54	42.20	-53.03	-27.0	26.0	150	0	-
Hori.	31080.000	PK	58.99	43.54	18.01	66.92	-9.54	44.08	-51.15	-27.0	24.1	155	99	-
Vert.	10360.000	PK	46.29	36.35	9.21	39.96	-9.54	42.35	-52.88	-27.0	25.8	150	0	-
Vert.	31080.000	PK	56.98	43.54	18.01	66.92	-9.54	42.07	-53.16	-27.0	26.1	152	87	-

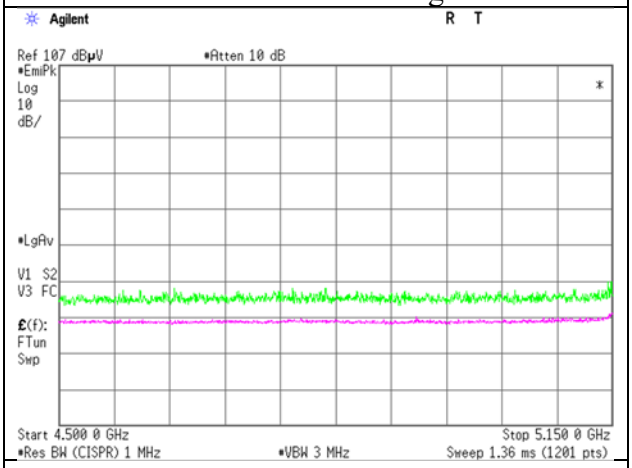
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
Mode	Tx 11n-20 5180 MHz

Horizontal

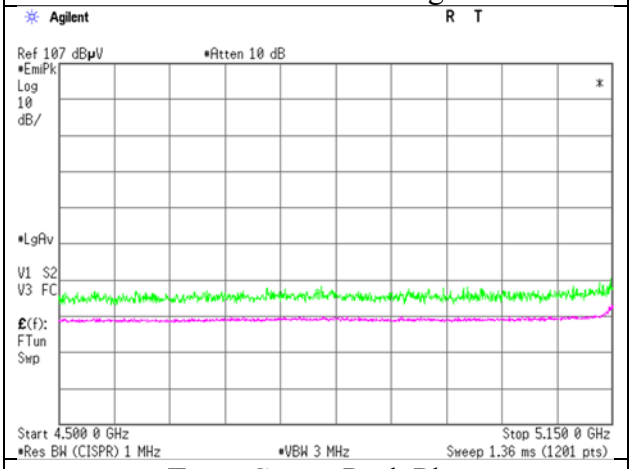
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.3
Date	December 28, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	23 deg.C, 38 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yohsuke Matsuzawa	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5240 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	15720.000	PK	44.87	39.63	11.58	37.30	-9.54	49.24	73.9	24.6	150	0	-
Hori.	20960.000	PK	56.01	40.07	14.50	47.01	-9.54	54.03	73.9	19.8	155	113	-
Hori.	31440.000	PK	57.05	43.64	18.11	65.33	-9.54	43.93	73.9	29.9	156	98	-
Hori.	15720.000	AV	35.28	39.63	11.58	37.30	-9.54	39.65	53.9	14.2	150	0	VBW: 6.2 kHz, Floor noise
Hori.	20960.000	AV	54.08	40.07	14.50	47.01	-9.54	52.10	53.9	**1.8**	155	113	VBW: 6.2 kHz
Hori.	31440.000	AV	50.54	43.64	18.11	65.33	-9.54	37.42	53.9	16.4	156	98	VBW: 6.2 kHz
Vert.	15720.000	PK	45.36	39.63	11.58	37.30	-9.54	49.73	73.9	24.1	150	0	-
Vert.	20960.000	PK	53.63	40.07	14.50	47.01	-9.54	51.65	73.9	22.2	149	171	-
Vert.	31440.000	PK	55.15	43.64	18.11	65.33	-9.54	42.03	73.9	31.8	162	102	-
Vert.	15720.000	AV	35.38	39.63	11.58	37.30	-9.54	39.75	53.9	14.1	150	0	VBW: 6.2 kHz, Floor noise
Vert.	20960.000	AV	51.53	40.07	14.50	47.01	-9.54	49.55	53.9	4.3	149	171	VBW: 6.2 kHz
Vert.	31440.000	AV	46.34	43.64	18.11	65.33	-9.54	33.22	53.9	20.6	162	102	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	45.70	36.54	9.26	39.99	-9.54	41.97	-53.26	-27.0	26.2	150	0	-
Vert.	10480.000	PK	46.32	36.54	9.26	39.99	-9.54	42.59	-52.64	-27.0	25.6	150	0	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.2	No.2	No.2	No.3
Date	December 28, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	23 deg.C, 38 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yohsuke Matsuzawa	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5320 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	52.63	32.43	16.49	38.92	2.31	64.94	73.9	8.9	112	270	-
Hori.	10640.000	PK	48.90	37.05	9.34	40.06	-9.54	45.69	73.9	28.2	142	50	-
Hori.	15960.000	PK	44.27	39.80	11.54	37.27	-9.54	48.80	73.9	25.1	150	0	-
Hori.	21280.000	PK	57.43	40.09	14.63	47.09	-9.54	55.52	73.9	18.3	147	136	-
Hori.	5350.000	AV	38.51	32.43	16.49	38.92	2.31	50.82	53.9	3.0	112	270	VBW: 6.2 kHz
Hori.	10640.000	AV	39.50	37.05	9.34	40.06	-9.54	36.29	53.9	17.6	142	50	VBW: 6.2 kHz
Hori.	15960.000	AV	34.37	39.80	11.54	37.27	-9.54	38.90	53.9	15.0	150	0	VBW: 6.2 kHz, Floor noise
Hori.	21280.000	AV	55.22	40.09	14.63	47.09	-9.54	53.31	53.9	**0.5**	147	136	VBW: 6.2 kHz
Vert.	5350.000	PK	51.27	32.43	16.49	38.92	2.31	63.58	73.9	10.3	114	310	-
Vert.	10640.000	PK	48.92	37.05	9.34	40.06	-9.54	45.71	73.9	28.1	176	199	-
Vert.	15960.000	PK	44.13	39.80	11.54	37.27	-9.54	48.66	73.9	25.2	150	0	-
Vert.	21280.000	PK	55.73	40.09	14.63	47.09	-9.54	53.82	73.9	20.0	144	174	-
Vert.	5350.000	AV	39.00	32.43	16.49	38.92	2.31	51.31	53.9	2.5	114	310	VBW: 6.2 kHz
Vert.	10640.000	AV	38.60	37.05	9.34	40.06	-9.54	35.39	53.9	18.5	176	199	VBW: 6.2 kHz
Vert.	15960.000	AV	34.39	39.80	11.54	37.27	-9.54	38.92	53.9	14.9	150	0	VBW: 6.2 kHz, Floor noise
Vert.	21280.000	AV	53.79	40.09	14.63	47.09	-9.54	51.88	53.9	2.0	144	174	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	45.25	32.44	16.43	38.87	2.31	57.56	-37.67	-27.0	10.6	112	270	-
Hori.	31920.000	PK	56.72	43.76	18.23	66.06	-9.54	43.11	-52.12	-27.0	25.1	149	136	-
Vert.	5250.000	PK	44.65	32.44	16.43	38.87	2.31	56.96	-38.27	-27.0	11.2	114	310	-
Vert.	31920.000	PK	55.06	43.76	18.23	66.06	-9.54	41.45	-53.78	-27.0	26.7	151	112	-

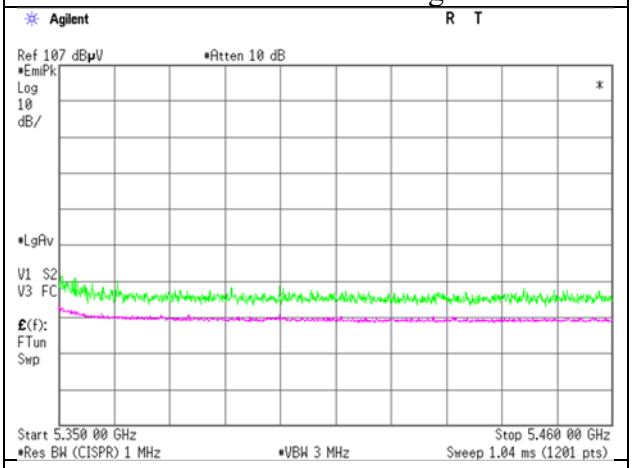
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 28, 2022
Temperature / Humidity	23 deg. C / 38 % RH
Engineer	Yohsuke Matsuzawa
Mode	Tx 11n-20 5320 MHz

Horizontal

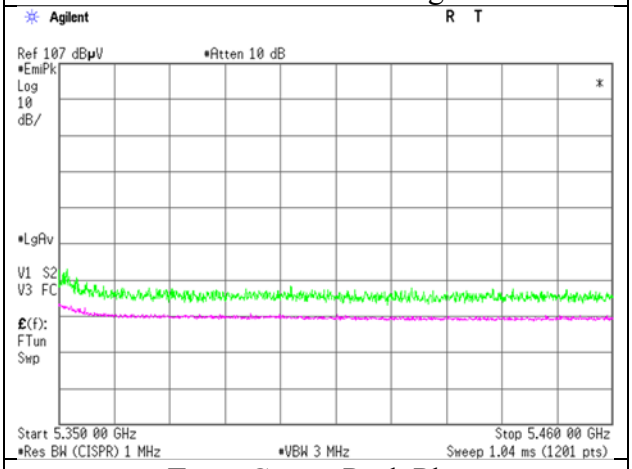
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	December 29, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5500 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.55	32.16	16.88	43.42	2.31	60.48	73.9	13.4	107	264	-
Hori.	11000.000	PK	49.16	37.30	9.48	40.24	-9.54	46.16	73.9	27.7	144	46	-
Hori.	5460.000	AV	40.25	32.16	16.88	43.42	2.31	48.18	53.9	5.7	107	264	VBW: 6.2 kHz
Hori.	11000.000	AV	39.71	37.30	9.48	40.24	-9.54	36.71	53.9	17.1	144	46	VBW: 6.2 kHz
Vert.	5460.000	PK	52.44	32.16	16.88	43.42	2.31	60.37	73.9	13.5	128	308	-
Vert.	11000.000	PK	48.66	37.30	9.48	40.24	-9.54	45.66	73.9	28.2	144	68	-
Vert.	5460.000	AV	40.73	32.16	16.88	43.42	2.31	48.66	53.9	5.2	128	308	VBW: 6.2 kHz
Vert.	11000.000	AV	39.18	37.30	9.48	40.24	-9.54	36.18	53.9	17.7	144	68	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	54.84	32.18	16.89	43.44	2.31	62.78	-32.45	-27.0	5.4	107	264	-
Hori.	16500.000	PK	46.28	39.73	12.23	37.14	-9.54	51.56	-43.67	-27.0	16.6	150	0	-
Hori.	22000.000	PK	55.64	40.25	14.91	47.43	-9.54	53.83	-41.40	-27.0	14.4	138	163	-
Hori.	33000.000	PK	57.04	43.97	18.64	66.26	-9.54	43.85	-51.38	-27.0	24.3	155	89	-
Vert.	5470.000	PK	55.21	32.18	16.89	43.44	2.31	63.15	-32.08	-27.0	**5.0**	128	308	-
Vert.	16500.000	PK	46.09	39.73	12.23	37.14	-9.54	51.37	-43.86	-27.0	16.8	150	0	-
Vert.	22000.000	PK	51.90	40.25	14.91	47.43	-9.54	50.09	-45.14	-27.0	18.1	151	205	-
Vert.	33000.000	PK	56.59	43.97	18.64	66.26	-9.54	43.40	-51.83	-27.0	24.8	152	105	-

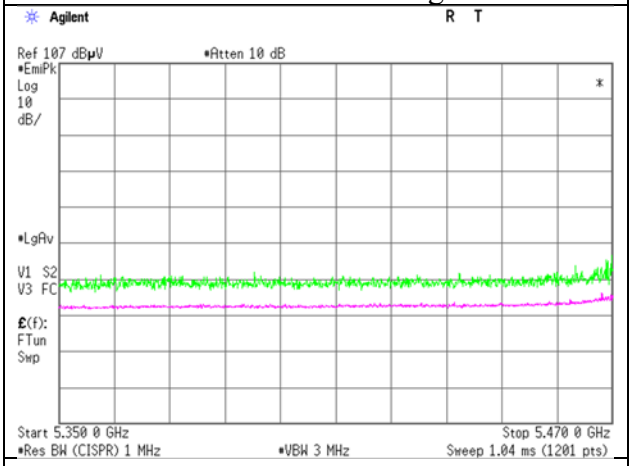
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-20 5500 MHz

Horizontal

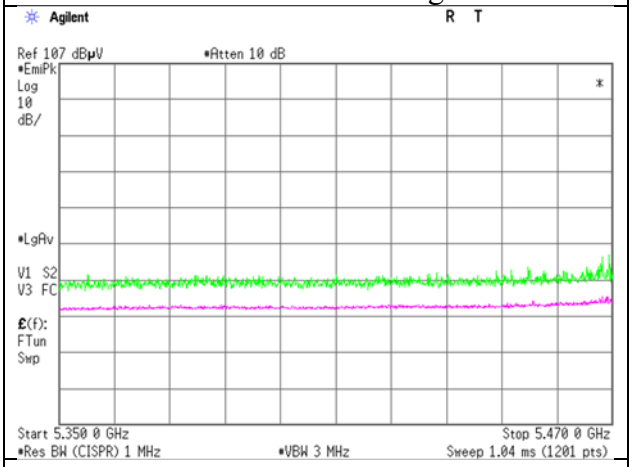
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	No.3	No.3	No.2	No.2	No.3
Date	January 11, 2023	December 29, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	23 deg.C, 27 %RH	22 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Miku Ikudome	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(30 MHz -1 GHz)	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5580 MHz				

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	66.012	QP	28.42	7.12	6.55	32.14	0.00	9.95	40.0	30.0	339	153	-
Hori.	11160.000	PK	50.70	37.30	9.57	40.31	-9.54	47.72	73.9	26.1	137	48	-
Hori.	22320.000	PK	55.53	40.28	14.97	47.47	-9.54	53.77	73.9	20.1	143	165	-
Hori.	11160.000	AV	41.45	37.30	9.57	40.31	-9.54	38.47	53.9	15.4	137	48	VBW: 6.2 kHz
Hori.	22320.000	AV	52.30	40.28	14.97	47.47	-9.54	50.54	53.9	**3.3**	143	165	VBW: 6.2 kHz
Vert.	50.989	QP	35.29	10.90	6.79	32.15	0.00	20.83	40.0	19.1	100	113	-
Vert.	55.897	QP	35.70	9.30	6.72	32.15	0.00	19.57	40.0	20.4	100	118	-
Vert.	65.673	QP	43.38	7.17	6.53	32.14	0.00	24.94	40.0	15.0	100	201	-
Vert.	78.921	QP	36.16	6.42	7.49	32.13	0.00	17.94	40.0	22.0	115	185	-
Vert.	113.550	QP	34.58	12.37	7.24	32.11	0.00	22.08	43.5	21.4	100	258	-
Vert.	126.578	QP	31.25	13.62	7.35	32.09	0.00	20.13	43.5	23.3	100	301	-
Vert.	11160.000	PK	47.76	37.30	9.57	40.31	-9.54	44.78	73.9	29.1	141	71	-
Vert.	22320.000	PK	51.40	40.28	14.97	47.47	-9.54	49.64	73.9	24.2	148	206	-
Vert.	11160.000	AV	38.26	37.30	9.57	40.31	-9.54	35.28	53.9	18.6	141	71	VBW: 6.2 kHz
Vert.	22320.000	AV	48.31	40.28	14.97	47.47	-9.54	46.55	53.9	7.3	148	206	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16740.000	PK	43.44	39.44	12.35	37.25	-9.54	48.44	-46.79	-27.0	19.7	150	0	-
Hori.	33480.000	PK	59.94	43.90	18.88	67.83	-9.54	45.35	-49.88	-27.0	22.8	150	147	-
Vert.	16740.000	PK	44.24	39.44	12.35	37.25	-9.54	49.24	-45.99	-27.0	18.9	150	0	-
Vert.	33480.000	PK	57.61	43.90	18.88	67.83	-9.54	43.02	-52.21	-27.0	25.2	152	103	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	December 29, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5700 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11400.000	PK	52.86	37.69	9.72	40.41	-9.54	50.32	73.9	23.5	141	37	-
Hori.	22800.000	PK	55.38	40.19	15.10	47.30	-9.54	53.83	73.9	20.0	143	160	-
Hori.	11400.000	AV	42.70	37.69	9.72	40.41	-9.54	40.16	53.9	13.7	141	37	VBW: 6.2 kHz
Hori.	22800.000	AV	51.68	40.19	15.10	47.30	-9.54	50.13	53.9	3.7	143	160	VBW: 6.2 kHz
Vert.	11400.000	PK	49.33	37.69	9.72	40.41	-9.54	46.79	73.9	27.1	137	74	-
Vert.	22800.000	PK	50.96	40.19	15.10	47.30	-9.54	49.41	73.9	24.4	155	224	-
Vert.	11400.000	AV	39.60	37.69	9.72	40.41	-9.54	37.06	53.9	16.8	137	74	VBW: 6.2 kHz
Vert.	22800.000	AV	47.78	40.19	15.10	47.30	-9.54	46.23	53.9	7.6	155	224	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	55.56	32.63	17.03	43.52	2.31	64.01	-31.22	-27.0	4.2	115	265	-
Hori.	17100.000	PK	44.11	39.59	12.51	37.36	-9.54	49.31	-45.92	-27.0	18.9	150	0	-
Hori.	34200.000	PK	58.00	43.90	18.98	67.96	-9.54	43.38	-51.85	-27.0	24.8	146	124	-
Vert.	5725.000	PK	56.77	32.63	17.03	43.52	2.31	65.22	-30.01	-27.0	**3.0**	113	309	-
Vert.	17100.000	PK	44.88	39.59	12.51	37.36	-9.54	50.08	-45.15	-27.0	18.1	150	0	-
Vert.	34200.000	PK	56.82	43.90	18.98	67.96	-9.54	42.20	-53.03	-27.0	26.0	150	98	-

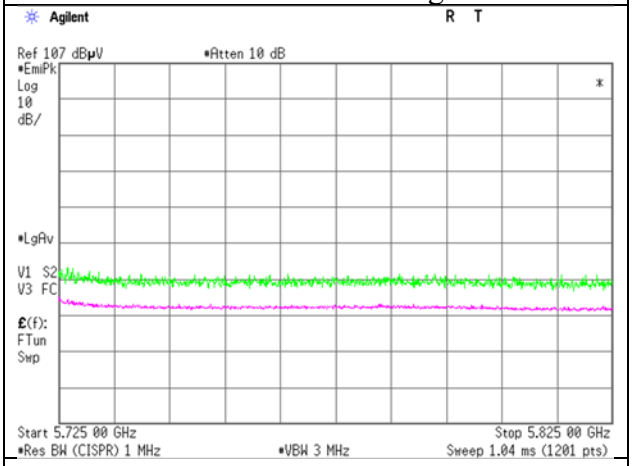
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	December 29, 2022
Temperature / Humidity	22 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-20 5700 MHz

Horizontal

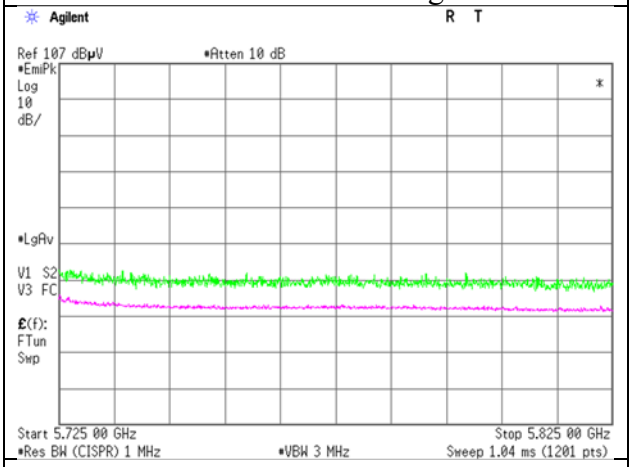
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	December 29, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5745 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11490.000	PK	56.00	37.80	9.78	40.45	-9.54	53.59	73.9	20.3	140	38	-
Hori.	22980.000	PK	55.15	40.16	15.17	47.17	-9.54	53.77	73.9	20.1	149	164	-
Hori.	11490.000	AV	46.13	37.80	9.78	40.45	-9.54	43.72	53.9	10.1	140	38	VBW: 6.2 kHz
Hori.	22980.000	AV	50.51	40.16	15.17	47.17	-9.54	49.13	53.9	**4.7**	149	164	VBW: 6.2 kHz
Vert.	11490.000	PK	51.12	37.80	9.78	40.45	-9.54	48.71	73.9	25.1	145	72	-
Vert.	22980.000	PK	50.74	40.16	15.17	47.17	-9.54	49.36	73.9	24.5	152	216	-
Vert.	11490.000	AV	41.80	37.80	9.78	40.45	-9.54	39.39	53.9	14.5	145	72	VBW: 6.2 kHz
Vert.	22980.000	AV	47.48	40.16	15.17	47.17	-9.54	46.10	53.9	7.8	152	216	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.48	32.42	16.99	43.50	2.31	57.70	-37.53	-27.0	10.5	100	267	-
Hori.	5700.000	PK	49.98	32.55	17.01	43.51	2.31	58.34	-36.89	10.0	46.8	100	267	-
Hori.	5720.000	PK	56.30	32.61	17.02	43.52	2.31	64.72	-30.51	15.6	46.1	100	267	-
Hori.	5725.000	PK	60.58	32.63	17.03	43.52	2.31	69.03	-26.20	27.0	53.2	100	267	-
Hori.	17235.000	PK	44.35	39.82	12.55	37.35	-9.54	49.83	-45.40	-27.0	18.4	150	0	-
Hori.	34470.000	PK	60.28	43.82	19.04	68.41	-9.54	45.19	-50.04	-27.0	23.0	152	152	-
Vert.	5650.000	PK	49.05	32.42	16.99	43.50	2.31	57.27	-37.96	-27.0	10.9	167	186	-
Vert.	5700.000	PK	49.69	32.55	17.01	43.51	2.31	58.05	-37.18	10.0	47.1	167	186	-
Vert.	5720.000	PK	56.73	32.61	17.02	43.52	2.31	65.15	-30.08	15.6	45.6	167	186	-
Vert.	5725.000	PK	62.41	32.63	17.03	43.52	2.31	70.86	-24.37	27.0	51.3	167	186	-
Vert.	17235.000	PK	45.10	39.82	12.55	37.35	-9.54	50.58	-44.65	-27.0	17.6	150	0	-
Vert.	34470.000	PK	59.36	43.82	19.04	68.41	-9.54	44.27	-50.96	-27.0	23.9	150	99	-

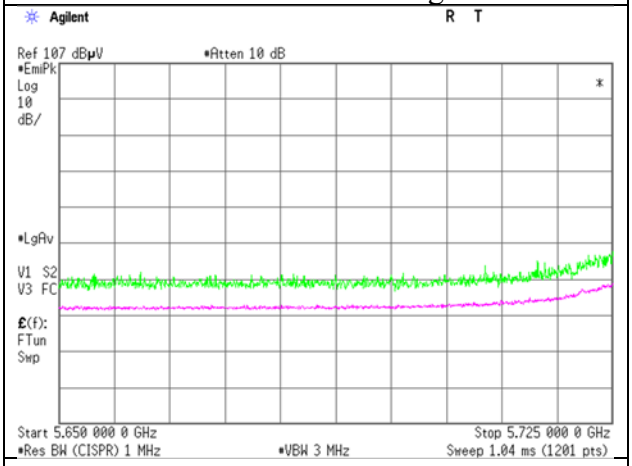
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 5, 2023
Temperature / Humidity	20 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-20 5745 MHz

Horizontal

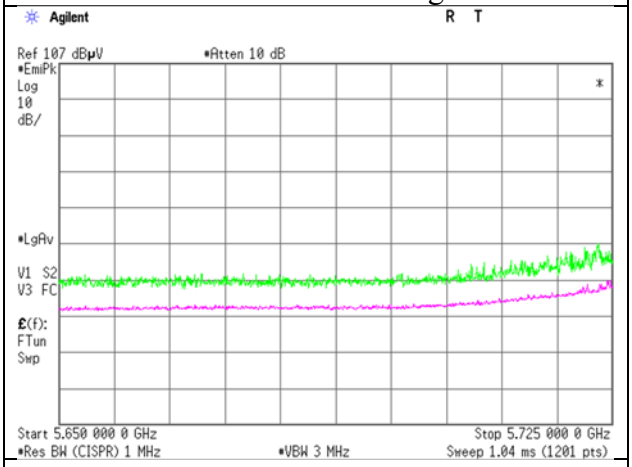
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5785 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11570.000	PK	54.58	37.90	9.83	40.41	-9.54	52.36	73.9	21.5	143	38	-
Hori.	11570.000	AV	45.12	37.90	9.83	40.41	-9.54	42.90	53.9	**11.0**	143	38	VBW: 6.2 kHz
Vert.	11570.000	PK	50.86	37.90	9.83	40.41	-9.54	48.64	73.9	25.2	140	72	-
Vert.	11570.000	AV	41.40	37.90	9.83	40.41	-9.54	39.18	53.9	14.7	140	72	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	17355.000	PK	44.62	39.95	12.60	37.34	-9.54	50.29	-44.94	-27.0	17.9	150	0	-
Hori.	23140.000	PK	55.26	40.14	15.25	47.01	-9.54	54.10	-41.13	-27.0	14.1	145	166	-
Hori.	34710.000	PK	59.30	43.80	19.13	68.76	-9.54	43.93	-51.30	-27.0	24.3	146	149	-
Vert.	17355.000	PK	44.91	39.95	12.60	37.34	-9.54	50.58	-44.65	-27.0	17.6	150	0	-
Vert.	23140.000	PK	50.63	40.14	15.25	47.01	-9.54	49.47	-45.76	-27.0	18.7	151	207	-
Vert.	34710.000	PK	58.75	43.80	19.13	68.76	-9.54	43.38	-51.85	-27.0	24.8	149	103	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5825 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	53.66	37.97	9.88	40.37	-9.54	51.60	73.9	22.3	142	40	-
Hori.	11650.000	AV	44.47	37.97	9.88	40.37	-9.54	42.41	53.9	11.4	142	40	VBW: 6.2 kHz
Vert.	11650.000	PK	50.88	37.97	9.88	40.37	-9.54	48.82	73.9	25.0	141	76	-
Vert.	11650.000	AV	41.56	37.97	9.88	40.37	-9.54	39.50	53.9	14.4	141	76	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	60.64	32.99	17.11	43.54	2.31	69.51	-25.72	27.0	52.7	118	263	-
Hori.	5855.000	PK	57.58	33.00	17.11	43.54	2.31	66.46	-28.77	15.6	44.3	118	263	-
Hori.	5875.000	PK	52.32	33.03	17.14	43.54	2.31	61.26	-33.97	10.0	43.9	118	263	-
Hori.	5925.000	PK	51.86	33.10	17.16	43.55	2.31	60.88	-34.35	-27.0	**7.3**	118	263	-
Hori.	17475.000	PK	44.68	40.03	12.63	37.33	-9.54	50.47	-44.76	-27.0	17.7	150	0	-
Hori.	23300.000	PK	54.81	40.13	15.33	46.85	-9.54	53.88	-41.35	-27.0	14.3	147	163	-
Hori.	34950.000	PK	59.85	43.67	19.24	69.10	-9.54	44.12	-51.11	-27.0	24.1	153	143	-
Vert.	5850.000	PK	59.55	32.99	17.11	43.54	2.31	68.42	-26.81	27.0	53.8	223	194	-
Vert.	5855.000	PK	58.77	33.00	17.11	43.54	2.31	67.65	-27.58	15.6	43.1	223	194	-
Vert.	5875.000	PK	51.91	33.03	17.14	43.54	2.31	60.85	-34.38	10.0	44.3	223	194	-
Vert.	5925.000	PK	51.45	33.10	17.16	43.55	2.31	60.47	-34.76	-27.0	7.7	223	194	-
Vert.	17475.000	PK	43.74	40.03	12.63	37.33	-9.54	49.53	-45.70	-27.0	18.7	150	0	-
Vert.	23300.000	PK	51.62	40.13	15.33	46.85	-9.54	50.69	-44.54	-27.0	17.5	151	204	-
Vert.	34950.000	PK	59.06	43.67	19.24	69.10	-9.54	43.33	-51.90	-27.0	24.9	149	95	-

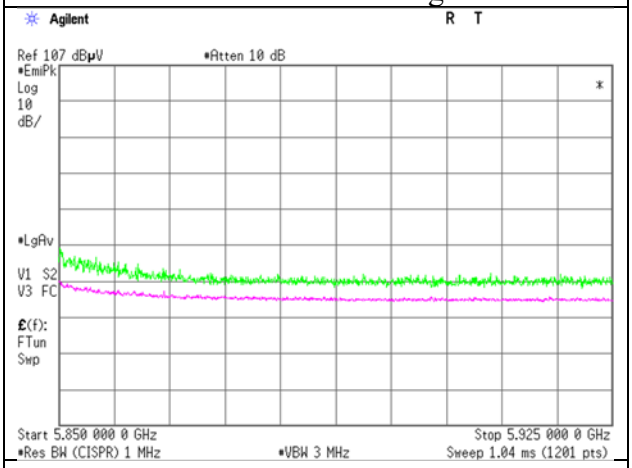
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5825 MHz

Horizontal

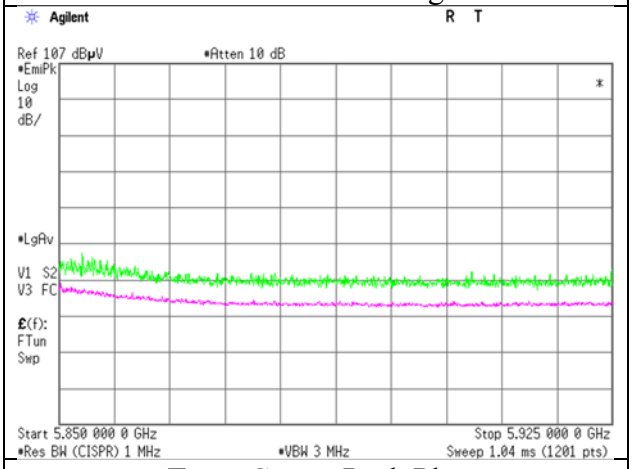
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.3
Date	January 5, 2023	December 26, 2022	January 10, 2023	January 7, 2023
Temperature / Humidity	20 deg.C, 30 %RH	22 deg.C, 31 %RH	22 deg.C, 31 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Takahiro Suzuki	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5190 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	53.40	32.18	16.68	42.99	2.31	61.58	73.9	12.3	104	269	-
Hori.	15570.000	PK	49.31	39.53	11.85	40.63	-9.54	50.52	73.9	23.3	150	0	-
Hori.	20760.000	PK	53.87	40.09	14.39	47.01	-9.54	51.80	73.9	22.1	152	112	-
Hori.	5150.000	AV	42.61	32.18	16.68	42.99	2.31	50.79	53.9	3.1	104	269	VBW: 10 kHz
Hori.	15570.000	AV	38.63	39.53	11.85	40.63	-9.54	39.84	53.9	14.0	150	0	VBW: 10 kHz, Floor noise
Hori.	20760.000	AV	52.04	40.09	14.39	47.01	-9.54	49.97	53.9	3.9	152	112	VBW: 10 kHz
Vert.	5150.000	PK	57.12	32.18	16.68	42.99	2.31	65.30	73.9	8.6	128	291	-
Vert.	15570.000	PK	48.91	39.53	11.85	40.63	-9.54	50.12	73.9	23.7	150	0	-
Vert.	20760.000	PK	53.03	40.09	14.39	47.01	-9.54	50.96	73.9	22.9	147	166	-
Vert.	5150.000	AV	45.13	32.18	16.68	42.99	2.31	53.31	53.9	**0.5**	128	291	VBW: 10 kHz
Vert.	15570.000	AV	38.75	39.53	11.85	40.63	-9.54	39.96	53.9	13.9	150	0	VBW: 10 kHz, Floor noise
Vert.	20760.000	AV	51.08	40.09	14.39	47.01	-9.54	49.01	53.9	4.8	147	166	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

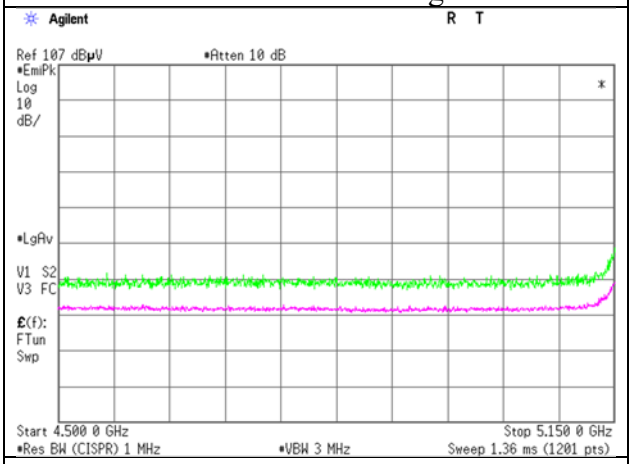
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10380.000	PK	50.74	36.44	9.57	42.88	-9.54	44.33	-50.90	-27.0	23.9	140	333	-
Hori.	31140.000	PK	58.87	43.55	18.02	66.66	-9.54	44.24	-50.99	-27.0	23.9	155	98	-
Vert.	10380.000	PK	50.41	36.44	9.57	42.88	-9.54	44.00	-51.23	-27.0	24.2	154	211	-
Vert.	31140.000	PK	56.14	43.55	18.02	66.66	-9.54	41.51	-53.72	-27.0	26.7	156	104	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

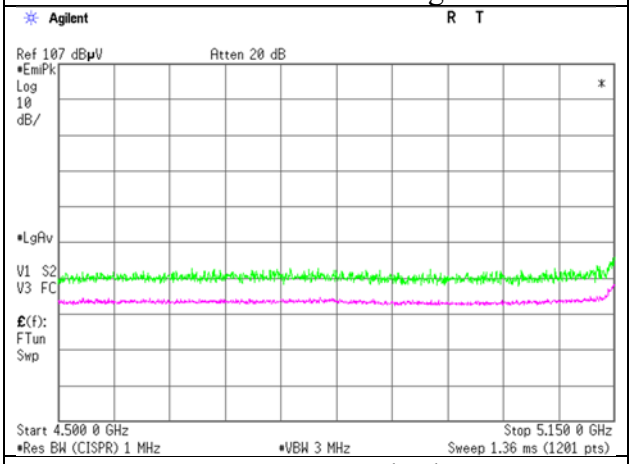
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 5, 2023
Temperature / Humidity	20 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-40 5190 MHz

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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 5, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	20 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5230 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.88	32.18	16.68	42.99	2.31	58.06	73.9	15.8	100	272	-
Hori.	15690.000	PK	44.83	39.60	11.59	37.31	-9.54	49.17	73.9	24.7	150	0	-
Hori.	20920.000	PK	55.31	40.09	14.47	47.01	-9.54	53.32	73.9	20.5	156	111	-
Hori.	31380.000	PK	56.83	43.62	18.10	65.59	-9.54	43.42	73.9	30.4	152	135	-
Hori.	5150.000	AV	40.61	32.18	16.68	42.99	2.31	48.79	53.9	5.1	100	272	VBW: 10 kHz
Hori.	15690.000	AV	35.28	39.60	11.59	37.31	-9.54	39.62	53.9	14.2	150	0	VBW: 10 kHz, Floor noise
Hori.	20920.000	AV	53.69	40.09	14.47	47.01	-9.54	51.70	53.9	**2.2**	156	111	VBW: 10 kHz
Hori.	31380.000	AV	50.86	43.62	18.10	65.59	-9.54	37.45	53.9	16.4	152	135	VBW: 10 kHz
Vert.	5150.000	PK	49.80	32.18	16.68	42.99	2.31	57.98	73.9	15.9	161	296	-
Vert.	15690.000	PK	44.80	39.60	11.59	37.31	-9.54	49.14	73.9	24.7	150	0	-
Vert.	20920.000	PK	53.49	40.09	14.47	47.01	-9.54	51.50	73.9	22.4	138	159	-
Vert.	31380.000	PK	55.09	43.62	18.10	65.59	-9.54	41.68	73.9	32.2	155	99	-
Vert.	5150.000	AV	40.36	32.18	16.68	42.99	2.31	48.54	53.9	5.3	161	296	VBW: 10 kHz
Vert.	15690.000	AV	35.29	39.60	11.59	37.31	-9.54	39.63	53.9	14.2	150	0	VBW: 10 kHz, Floor noise
Vert.	20920.000	AV	51.51	40.09	14.47	47.01	-9.54	49.52	53.9	4.3	138	159	VBW: 10 kHz
Vert.	31380.000	AV	47.55	43.62	18.10	65.59	-9.54	34.14	53.9	19.7	155	99	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

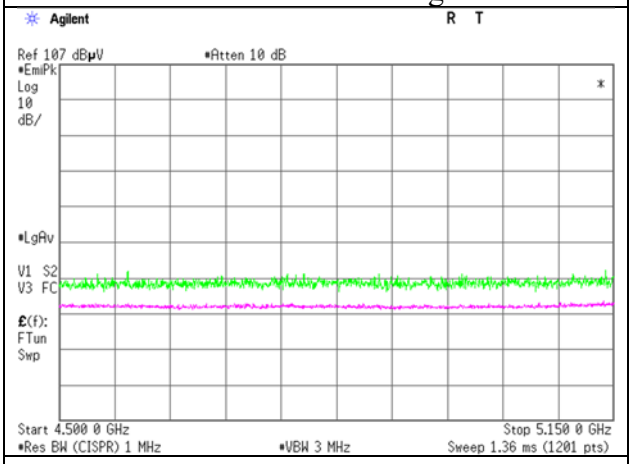
(* PK: Peak, AV: Average, QP: Quasi-Peak)

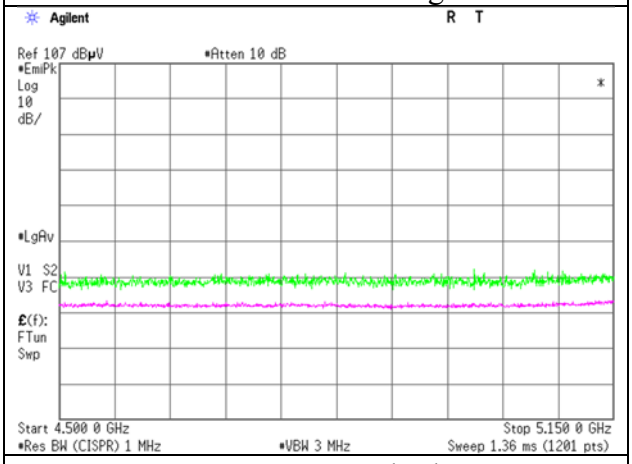
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	45.20	36.50	9.25	39.98	-9.54	41.43	-53.80	-27.0	26.8	150	0	-
Vert.	10460.000	PK	45.72	36.50	9.25	39.98	-9.54	41.95	-53.28	-27.0	26.2	150	0	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 5, 2023
Temperature / Humidity	20 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-40 5230 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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki (1 GHz -6.4 GHz)
Mode	Tx 11n-40 5270 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	52.15	31.91	16.81	43.27	2.31	59.91	73.9	13.9	100	270	-
Hori.	5350.000	AV	40.53	31.91	16.81	43.27	2.31	48.29	53.9	5.6	100	270	VBW: 10 kHz
Vert.	5350.000	PK	51.93	31.91	16.81	43.27	2.31	59.69	73.9	14.2	127	291	-
Vert.	5350.000	AV	40.83	31.91	16.81	43.27	2.31	48.59	53.9	**5.3**	127	291	VBW: 10 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB

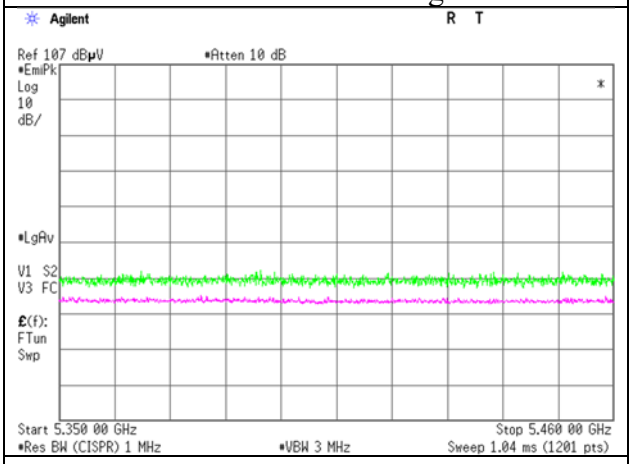
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5270 MHz

Horizontal

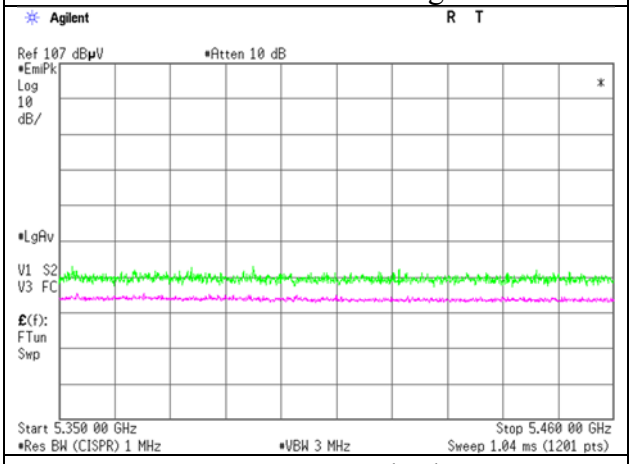
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.3	No.3
Date	January 5, 2023	December 26, 2022	January 10, 2023	January 7, 2023
Temperature / Humidity	20 deg.C, 30 %RH	22 deg.C, 31 %RH	22 deg.C, 31 %RH	22 deg.C, 32 %RH
Engineer	Yasumasa Owaki	Takahiro Kawakami	Takahiro Suzuki	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5310 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	52.28	31.91	16.81	43.27	2.31	60.04	73.9	13.8	100	270	-
Hori.	10620.000	PK	49.63	36.98	9.66	42.97	-9.54	43.76	73.9	30.1	145	302	-
Hori.	15930.000	PK	48.27	39.93	11.74	40.63	-9.54	49.77	73.9	24.1	150	0	-
Hori.	21240.000	PK	55.62	40.08	14.61	47.08	-9.54	53.69	73.9	20.2	151	138	-
Hori.	5350.000	AV	42.56	31.91	16.81	43.27	2.31	50.32	53.9	3.5	100	270	VBW: 10 kHz
Hori.	10620.000	AV	38.38	36.98	9.66	42.97	-9.54	32.51	53.9	21.3	145	302	VBW: 10 kHz
Hori.	15930.000	AV	37.06	39.93	11.74	40.63	-9.54	38.56	53.9	15.3	150	0	VBW: 10 kHz, Floor noise
Hori.	21240.000	AV	54.24	40.08	14.61	47.08	-9.54	52.31	53.9	**1.5**	151	138	VBW: 10 kHz
Vert.	5350.000	PK	53.91	31.91	16.81	43.27	2.31	61.67	73.9	12.2	105	296	-
Vert.	10620.000	PK	49.70	36.98	9.66	42.97	-9.54	43.83	73.9	30.0	136	348	-
Vert.	15930.000	PK	47.89	39.93	11.74	40.63	-9.54	49.39	73.9	24.5	150	0	-
Vert.	21240.000	PK	54.68	40.08	14.61	47.08	-9.54	52.75	73.9	21.1	155	155	-
Vert.	5350.000	AV	43.83	31.91	16.81	43.27	2.31	51.59	53.9	2.3	105	296	VBW: 10 kHz
Vert.	10620.000	AV	39.15	36.98	9.66	42.97	-9.54	33.28	53.9	20.6	136	348	VBW: 10 kHz
Vert.	15930.000	AV	37.03	39.93	11.74	40.63	-9.54	38.53	53.9	15.3	150	0	VBW: 10 kHz, Floor noise
Vert.	21240.000	AV	53.11	40.08	14.61	47.08	-9.54	51.18	53.9	2.7	155	155	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	31860.000	PK	56.40	43.75	18.22	65.92	-9.54	42.91	-52.32	-27.0	25.3	137	131	-
Vert.	31860.000	PK	55.35	43.75	18.22	65.92	-9.54	41.86	-53.37	-27.0	26.3	153	107	-

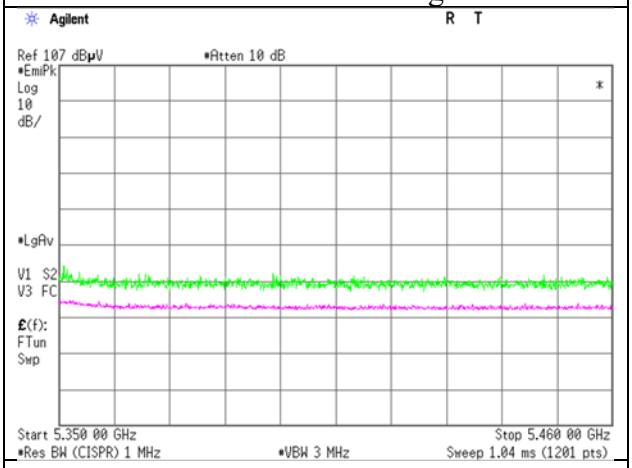
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 5, 2023
Temperature / Humidity	20 deg. C / 30 % RH
Engineer	Yasumasa Owaki
Mode	Tx 11n-40 5310 MHz

Horizontal

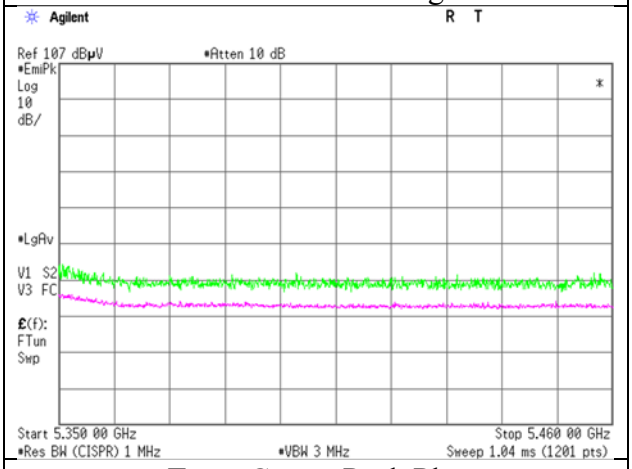
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5510 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	54.41	32.16	16.88	43.42	2.31	62.34	73.9	11.5	100	266	-
Hori.	11020.000	PK	49.23	37.26	9.49	40.25	-9.54	46.19	73.9	27.7	150	0	-
Hori.	22040.000	PK	55.31	40.27	14.92	47.44	-9.54	53.52	73.9	20.3	164	145	-
Hori.	5460.000	AV	41.92	32.16	16.88	43.42	2.31	49.85	53.9	4.0	100	266	VBW: 10 kHz
Hori.	11020.000	AV	40.54	37.26	9.49	40.25	-9.54	37.50	53.9	16.4	150	0	VBW: 10 kHz
Hori.	22040.000	AV	52.73	40.27	14.92	47.44	-9.54	50.94	53.9	2.9	164	145	VBW: 10 kHz
Vert.	5460.000	PK	57.65	32.16	16.88	43.42	2.31	65.58	73.9	8.3	148	306	-
Vert.	11020.000	PK	49.49	37.26	9.49	40.25	-9.54	46.45	73.9	27.4	139	69	-
Vert.	22040.000	PK	50.89	40.27	14.92	47.44	-9.54	49.10	73.9	24.8	149	214	-
Vert.	5460.000	AV	43.00	32.16	16.88	43.42	2.31	50.93	53.9	2.9	148	306	VBW: 10 kHz
Vert.	11020.000	AV	39.50	37.26	9.49	40.25	-9.54	36.46	53.9	17.4	139	69	VBW: 10 kHz
Vert.	22040.000	AV	48.32	40.27	14.92	47.44	-9.54	46.53	53.9	7.3	149	214	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	58.14	32.18	16.89	43.44	2.31	66.08	-29.15	-27.0	2.1	100	266	-
Hori.	16530.000	PK	45.08	39.68	12.24	37.15	-9.54	50.31	-44.92	-27.0	17.9	150	0	-
Hori.	33060.000	PK	58.37	43.94	18.67	66.46	-9.54	44.98	-50.25	-27.0	23.2	154	84	-
Vert.	5470.000	PK	59.25	32.18	16.89	43.44	2.31	67.19	-28.04	-27.0	**1.0**	148	306	-
Vert.	16530.000	PK	45.26	39.68	12.24	37.15	-9.54	50.49	-44.74	-27.0	17.7	150	0	-
Vert.	33060.000	PK	56.51	43.94	18.67	66.46	-9.54	43.12	-52.11	-27.0	25.1	153	105	-

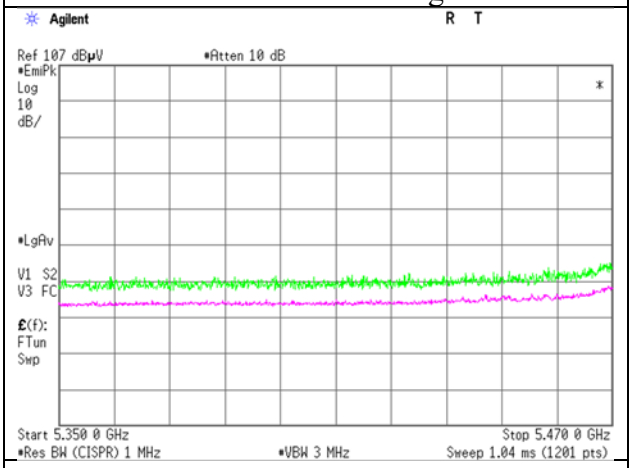
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5510 MHz

Horizontal

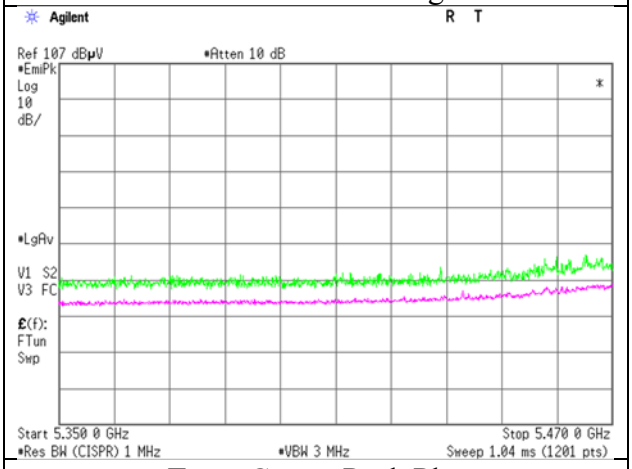
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5550 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11100.000	PK	49.12	37.28	9.54	40.28	-9.54	46.12	73.9	27.7	144	50	-
Hori.	22200.000	PK	55.16	40.27	14.95	47.46	-9.54	53.38	73.9	20.5	162	147	-
Hori.	11100.000	AV	40.97	37.28	9.54	40.28	-9.54	37.97	53.9	15.9	144	50	VBW: 10 kHz
Hori.	22200.000	AV	52.45	40.27	14.95	47.46	-9.54	50.67	53.9	**3.2**	162	147	VBW: 10 kHz
Vert.	11100.000	PK	48.05	37.28	9.54	40.28	-9.54	45.05	73.9	28.8	140	70	-
Vert.	22200.000	PK	50.99	40.27	14.95	47.46	-9.54	49.21	73.9	24.6	151	204	-
Vert.	11100.000	AV	39.35	37.28	9.54	40.28	-9.54	36.35	53.9	17.5	140	70	VBW: 10 kHz
Vert.	22200.000	AV	48.63	40.27	14.95	47.46	-9.54	46.85	53.9	7.0	151	204	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16650.000	PK	45.03	39.53	12.31	37.21	-9.54	50.12	-45.11	-27.0	18.1	150	0	-
Hori.	33300.000	PK	58.32	43.92	18.79	67.24	-9.54	44.25	-50.98	-27.0	23.9	156	147	-
Vert.	16650.000	PK	45.45	39.53	12.31	37.21	-9.54	50.54	-44.69	-27.0	17.6	150	0	-
Vert.	33300.000	PK	57.39	43.92	18.79	67.24	-9.54	43.32	-51.91	-27.0	24.9	154	104	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5670 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11340.000	PK	50.18	37.62	9.69	40.38	-9.54	47.57	73.9	26.3	140	52	-
Hori.	22680.000	PK	54.87	40.21	15.06	47.38	-9.54	53.22	73.9	20.6	164	144	-
Hori.	11340.000	AV	42.34	37.62	9.69	40.38	-9.54	39.73	53.9	14.1	140	52	VBW: 10 kHz
Hori.	22680.000	AV	52.15	40.21	15.06	47.38	-9.54	50.50	53.9	**3.4**	164	144	VBW: 10 kHz
Vert.	11340.000	PK	49.18	37.62	9.69	40.38	-9.54	46.57	73.9	27.3	142	73	-
Vert.	22680.000	PK	51.23	40.21	15.06	47.38	-9.54	49.58	73.9	24.3	149	208	-
Vert.	11340.000	AV	40.12	37.62	9.69	40.38	-9.54	37.51	53.9	16.3	142	73	VBW: 10 kHz
Vert.	22680.000	AV	48.74	40.21	15.06	47.38	-9.54	47.09	53.9	6.8	149	208	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	53.53	32.63	17.03	43.52	2.31	61.98	-33.25	-27.0	6.2	134	228	-
Hori.	17010.000	PK	45.15	39.47	12.49	37.37	-9.54	50.20	-45.03	-27.0	18.0	150	0	-
Hori.	34020.000	PK	58.89	43.85	18.94	67.65	-9.54	44.49	-50.74	-27.0	23.7	149	147	-
Vert.	5725.000	PK	54.22	32.63	17.03	43.52	2.31	62.67	-32.56	-27.0	5.5	125	200	-
Vert.	17010.000	PK	44.85	39.47	12.49	37.37	-9.54	49.90	-45.33	-27.0	18.3	150	0	-
Vert.	34020.000	PK	57.35	43.85	18.94	67.65	-9.54	42.95	-52.28	-27.0	25.2	147	101	-

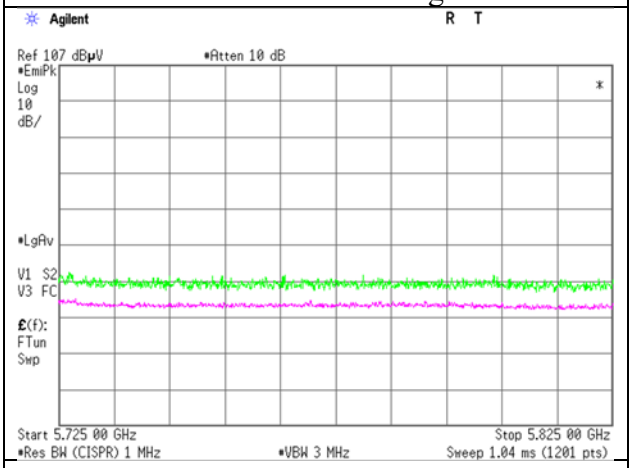
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5670 MHz

Horizontal

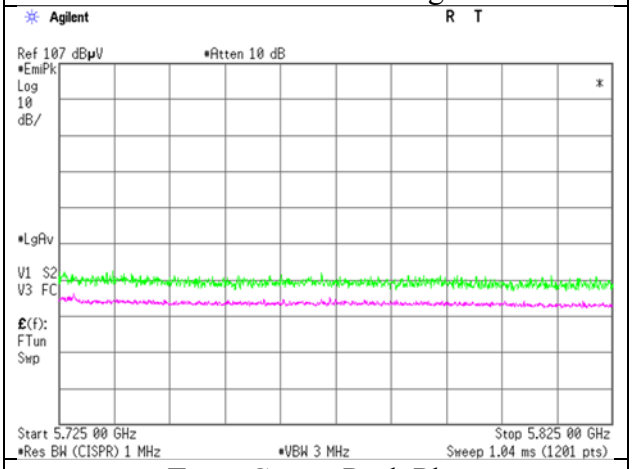
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5755 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	53.27	37.81	9.78	40.44	-9.54	50.88	73.9	23.0	141	39	-
Hori.	23020.000	PK	54.53	40.16	15.19	47.14	-9.54	53.20	73.9	20.7	157	153	-
Hori.	11510.000	AV	45.94	37.81	9.78	40.44	-9.54	43.55	53.9	10.3	141	39	VBW: 10 kHz
Hori.	23020.000	AV	51.80	40.16	15.19	47.14	-9.54	50.47	53.9	**3.4**	157	153	VBW: 10 kHz
Vert.	11510.000	PK	50.99	37.81	9.78	40.44	-9.54	48.60	73.9	25.3	133	49	-
Vert.	23020.000	PK	50.28	40.16	15.19	47.14	-9.54	48.95	73.9	24.9	150	215	-
Vert.	11510.000	AV	42.97	37.81	9.78	40.44	-9.54	40.58	53.9	13.3	133	49	VBW: 10 kHz
Vert.	23020.000	AV	48.11	40.16	15.19	47.14	-9.54	46.78	53.9	7.1	150	215	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.94	32.42	16.99	43.50	2.31	60.16	-35.07	-27.0	8.0	130	260	-
Hori.	5700.000	PK	55.42	32.55	17.01	43.51	2.31	63.78	-31.45	10.0	41.4	130	260	-
Hori.	5720.000	PK	62.27	32.61	17.02	43.52	2.31	70.69	-24.54	15.6	40.1	130	260	-
Hori.	5725.000	PK	62.66	32.63	17.03	43.52	2.31	71.11	-24.12	27.0	51.1	130	260	-
Hori.	17265.000	PK	44.03	39.87	12.58	37.35	-9.54	49.59	-45.64	-27.0	18.6	150	0	-
Hori.	34530.000	PK	59.25	43.81	19.06	68.50	-9.54	44.08	-51.15	-27.0	24.1	143	148	-
Vert.	5650.000	PK	52.11	32.42	16.99	43.50	2.31	60.33	-34.90	-27.0	7.9	100	303	-
Vert.	5700.000	PK	55.97	32.55	17.01	43.51	2.31	64.33	-30.90	10.0	40.9	100	303	-
Vert.	5720.000	PK	61.88	32.61	17.02	43.52	2.31	70.30	-24.93	15.6	40.5	100	303	-
Vert.	5725.000	PK	62.65	32.63	17.03	43.52	2.31	71.10	-24.13	27.0	51.1	100	303	-
Vert.	17265.000	PK	44.46	39.87	12.58	37.35	-9.54	50.02	-45.21	-27.0	18.2	150	0	-
Vert.	34530.000	PK	58.98	43.81	19.06	68.50	-9.54	43.81	-51.42	-27.0	24.4	149	95	-

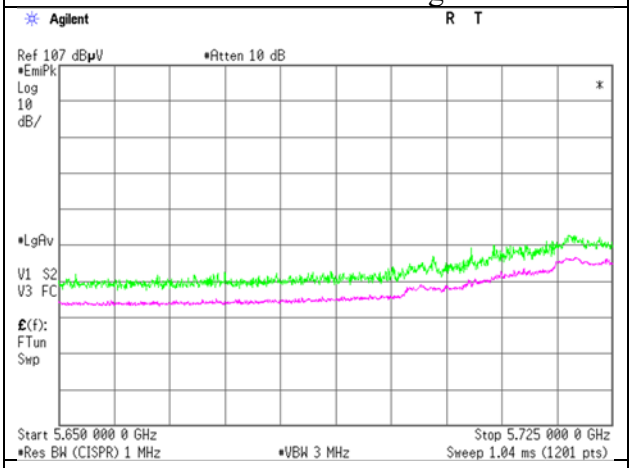
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5755 MHz

Horizontal

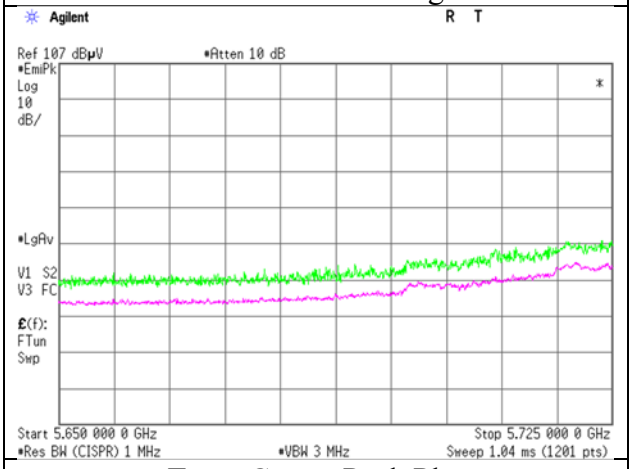
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.2	No.2	No.3
Date	January 6, 2023	December 26, 2022	December 28, 2022	January 7, 2023
Temperature / Humidity	22 deg.C, 34 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Takahiro Suzuki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-40 5795 MHz			

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11590.000	PK	53.13	37.92	9.84	40.40	-9.54	50.95	73.9	22.9	139	40	-
Hori.	11590.000	AV	45.59	37.92	9.84	40.40	-9.54	43.41	53.9	10.4	139	40	VBW: 10 kHz
Vert.	11590.000	PK	50.94	37.92	9.84	40.40	-9.54	48.76	73.9	25.1	139	73	-
Vert.	11590.000	AV	43.06	37.92	9.84	40.40	-9.54	40.88	53.9	13.0	139	73	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	57.36	32.99	17.11	43.54	2.31	66.23	-29.00	27.0	56.0	130	257	-
Hori.	5855.000	PK	54.56	33.00	17.11	43.54	2.31	63.44	-31.79	15.6	47.3	130	257	-
Hori.	5875.000	PK	52.26	33.03	17.14	43.54	2.31	61.20	-34.03	10.0	44.0	130	257	-
Hori.	5925.000	PK	52.22	33.10	17.16	43.55	2.31	61.24	-33.99	-27.0	**6.9**	130	257	-
Hori.	17385.000	PK	44.29	39.99	12.61	37.34	-9.54	50.01	-45.22	-27.0	18.2	150	0	-
Hori.	23180.000	PK	54.49	40.14	15.27	46.97	-9.54	53.39	-41.84	-27.0	14.8	153	159	-
Hori.	34770.000	PK	59.90	43.79	19.16	68.84	-9.54	44.47	-50.76	-27.0	23.7	150	148	-
Vert.	5850.000	PK	56.37	32.99	17.11	43.54	2.31	65.24	-29.99	27.0	56.9	151	294	-
Vert.	5855.000	PK	54.40	33.00	17.11	43.54	2.31	63.28	-31.95	15.6	47.5	151	294	-
Vert.	5875.000	PK	52.11	33.03	17.14	43.54	2.31	61.05	-34.18	10.0	44.1	151	294	-
Vert.	5925.000	PK	51.19	33.10	17.16	43.55	2.31	60.21	-35.02	-27.0	8.0	151	294	-
Vert.	17385.000	PK	44.76	39.99	12.61	37.34	-9.54	50.48	-44.75	-27.0	17.7	150	0	-
Vert.	23180.000	PK	50.36	40.14	15.27	46.97	-9.54	49.26	-45.97	-27.0	18.9	147	206	-
Vert.	34770.000	PK	59.38	43.79	19.16	68.84	-9.54	43.95	-51.28	-27.0	24.2	150	97	-

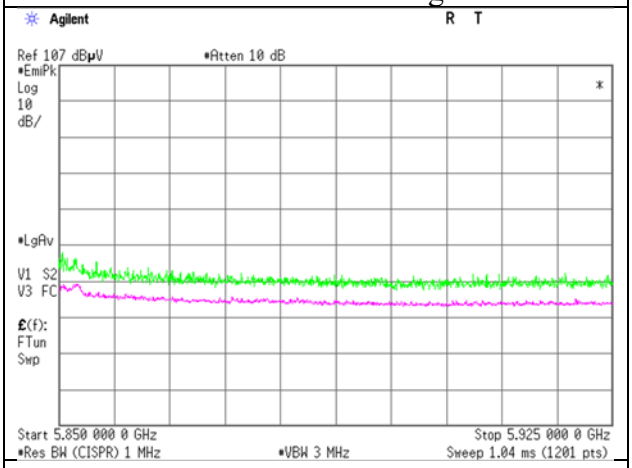
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 6, 2023
Temperature / Humidity	22 deg. C / 34 % RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5795 MHz

Horizontal

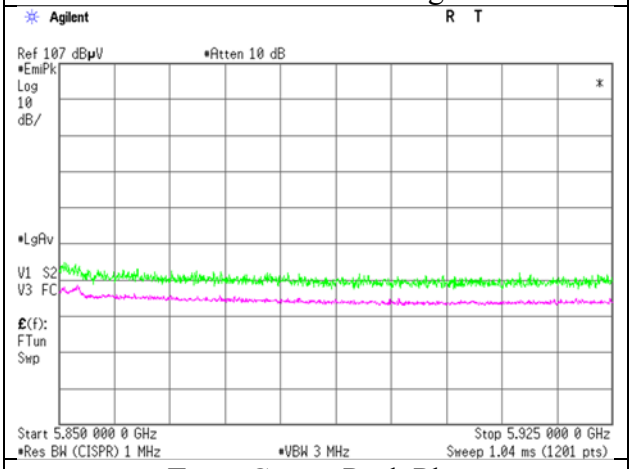
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5180 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	56.83	32.18	17.21	42.99	2.31	65.54	73.9	8.3	138	262	-
Hori.	5150.000	AV	41.83	32.18	17.21	42.99	2.31	50.54	53.9	**3.3**	138	262	VBW: 5.6 kHz
Vert.	5150.000	PK	57.15	32.18	17.21	42.99	2.31	65.86	73.9	8.0	158	284	-
Vert.	5150.000	AV	41.12	32.18	17.21	42.99	2.31	49.83	53.9	4.0	158	284	VBW: 5.6 kHz

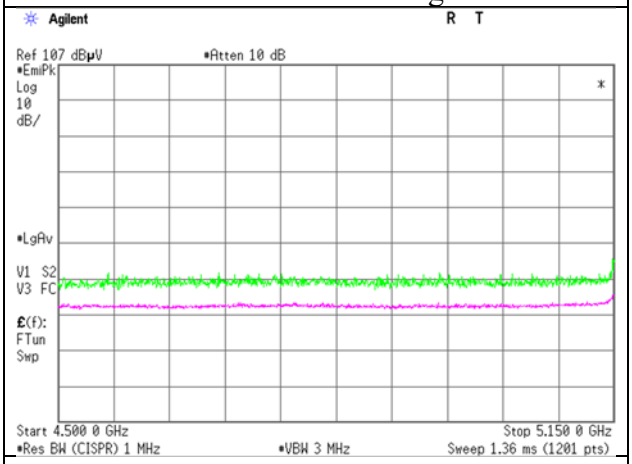
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5180 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

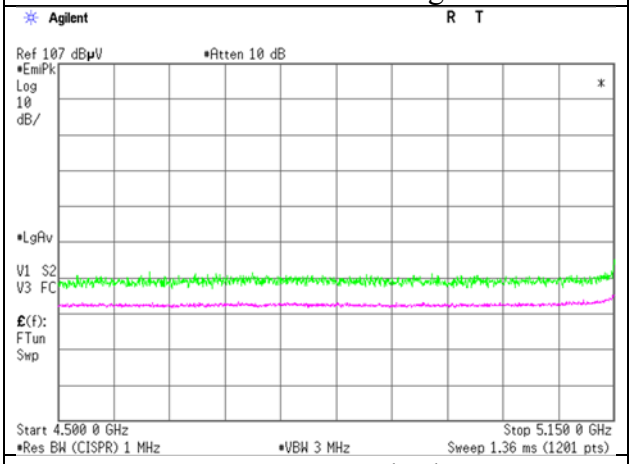
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5320 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	58.74	31.91	17.34	43.27	2.31	67.03	73.9	6.8	118	266	-
Hori.	5350.000	AV	42.11	31.91	17.34	43.27	2.31	50.40	53.9	**3.5**	118	266	VBW: 5.6 kHz
Vert.	5350.000	PK	58.34	31.91	17.34	43.27	2.31	66.63	73.9	7.2	138	285	-
Vert.	5350.000	AV	41.45	31.91	17.34	43.27	2.31	49.74	53.9	4.1	138	285	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	49.79	31.86	17.28	43.13	2.31	58.11	-37.12	-27.0	10.1	118	266	-
Vert.	5250.000	PK	50.26	31.86	17.28	43.13	2.31	58.58	-36.65	-27.0	9.6	138	266	-

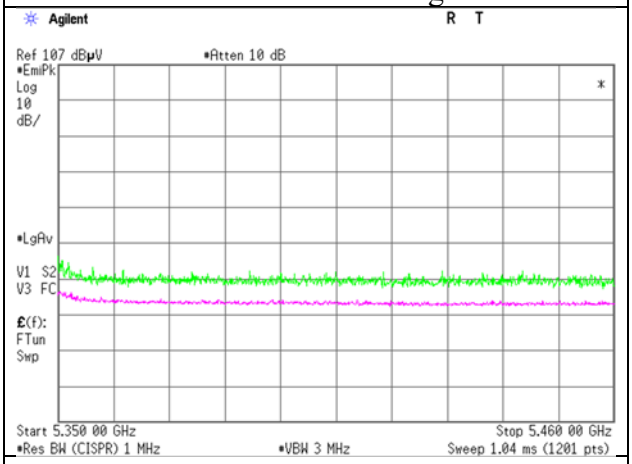
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5320 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

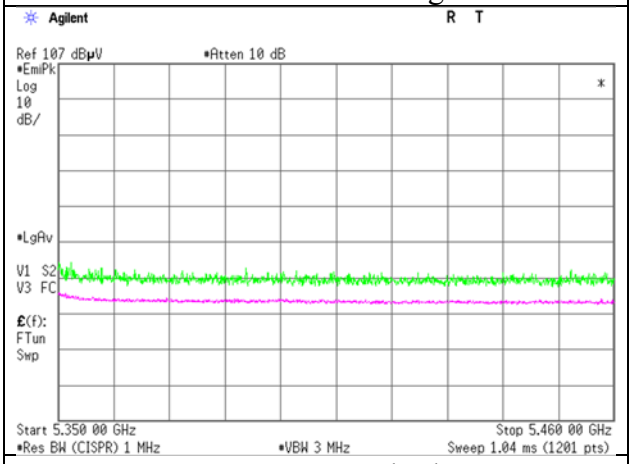
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5500 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	54.07	32.16	17.41	43.42	2.31	62.53	73.9	11.3	100	268	-
Hori.	5460.000	AV	39.91	32.16	17.41	43.42	2.31	48.37	53.9	5.5	100	268	VBW: 5.6 kHz
Vert.	5460.000	PK	53.92	32.16	17.41	43.42	2.31	62.38	73.9	11.5	134	284	-
Vert.	5460.000	AV	40.11	32.16	17.41	43.42	2.31	48.57	53.9	5.3	134	284	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	56.20	32.18	17.42	43.44	2.31	64.67	-30.56	-27.0	3.5	100	268	-
Vert.	5470.000	PK	56.50	32.18	17.42	43.44	2.31	64.97	-30.26	-27.0	**3.2**	134	284	-

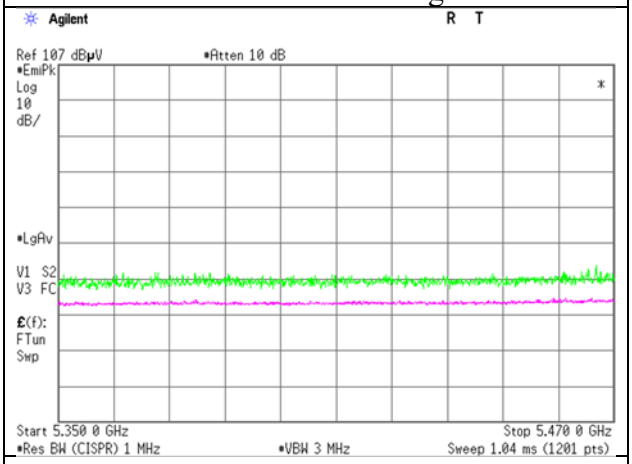
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5500 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

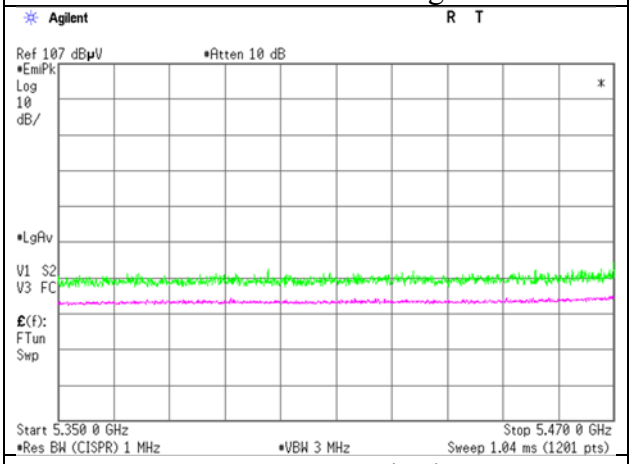
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5700 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	55.42	32.63	17.56	43.52	2.31	64.40	-30.83	-27.0	**3.8**	100	277	-
Vert.	5725.000	PK	53.83	32.63	17.56	43.52	2.31	62.81	-32.42	-27.0	5.4	103	314	-

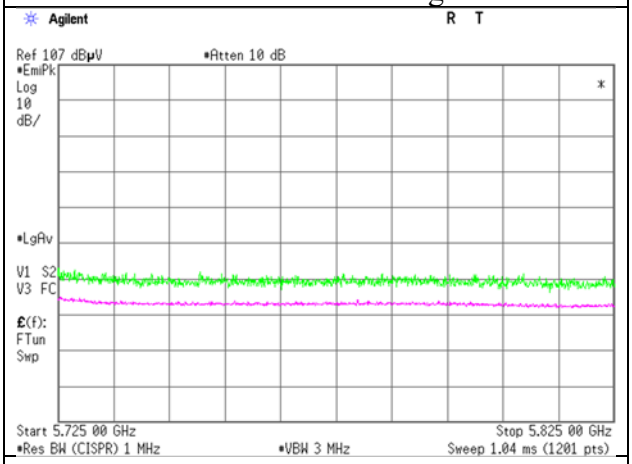
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5700 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

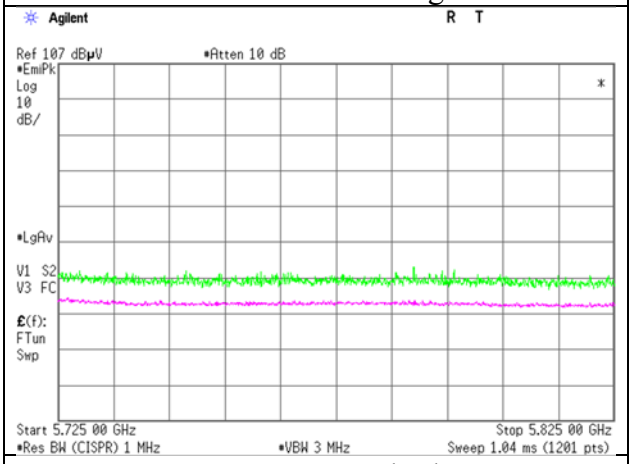
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5745 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	51.01	32.42	17.52	43.50	2.31	59.76	-35.47	-27.0	**8.4**	100	281	-
Hori.	5700.000	PK	51.63	32.55	17.54	43.51	2.31	60.52	-34.71	10.0	44.7	100	281	-
Hori.	5720.000	PK	61.72	32.61	17.55	43.52	2.31	70.67	-24.56	15.6	40.1	100	281	-
Hori.	5725.000	PK	65.13	32.63	17.56	43.52	2.31	74.11	-21.12	27.0	48.1	100	281	-
Vert.	5650.000	PK	50.72	32.42	17.52	43.50	2.31	59.47	-35.76	-27.0	8.7	147	304	-
Vert.	5700.000	PK	52.34	32.55	17.54	43.51	2.31	61.23	-34.00	10.0	44.0	147	304	-
Vert.	5720.000	PK	59.87	32.61	17.55	43.52	2.31	68.82	-26.41	15.6	42.0	147	304	-
Vert.	5725.000	PK	60.82	32.63	17.56	43.52	2.31	69.80	-25.43	27.0	52.4	147	304	-

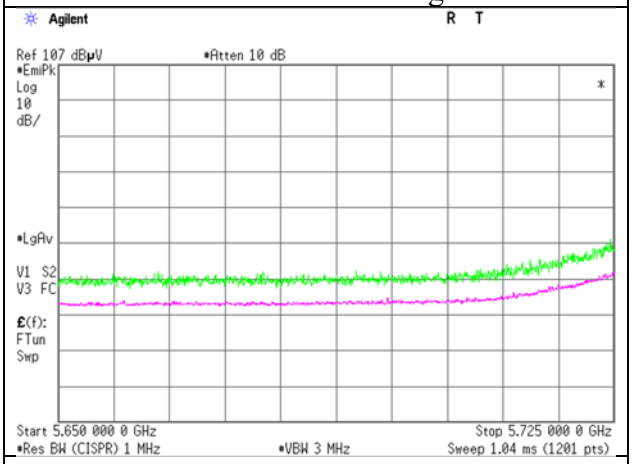
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5745 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

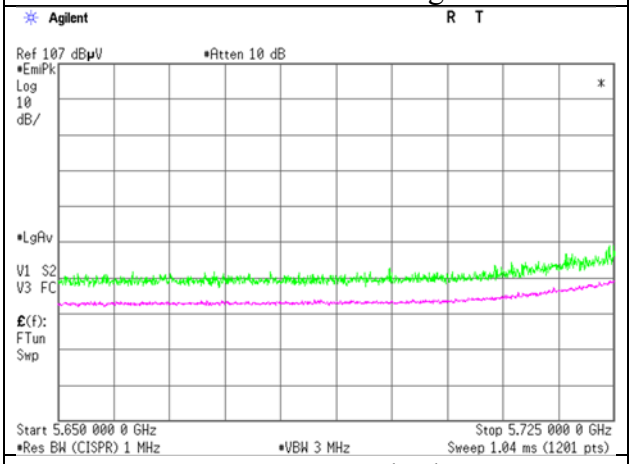
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5825 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	62.85	32.99	17.64	43.54	2.31	72.25	-22.98	27.0	49.9	100	279	-
Hori.	5855.000	PK	59.63	33.00	17.64	43.54	2.31	69.04	-26.19	15.6	41.7	100	279	-
Hori.	5875.000	PK	52.07	33.03	17.67	43.54	2.31	61.54	-33.69	10.0	43.6	100	279	-
Hori.	5925.000	PK	51.29	33.10	17.69	43.55	2.31	60.84	-34.39	-27.0	7.3	100	279	-
Vert.	5850.000	PK	61.24	32.99	17.64	43.54	2.31	70.64	-24.59	27.0	51.5	100	314	-
Vert.	5855.000	PK	58.23	33.00	17.64	43.54	2.31	67.64	-27.59	15.6	43.1	100	314	-
Vert.	5875.000	PK	52.07	33.03	17.67	43.54	2.31	61.54	-33.69	10.0	43.6	100	314	-
Vert.	5925.000	PK	51.50	33.10	17.69	43.55	2.31	61.05	-34.18	-27.0	**7.1**	100	314	-

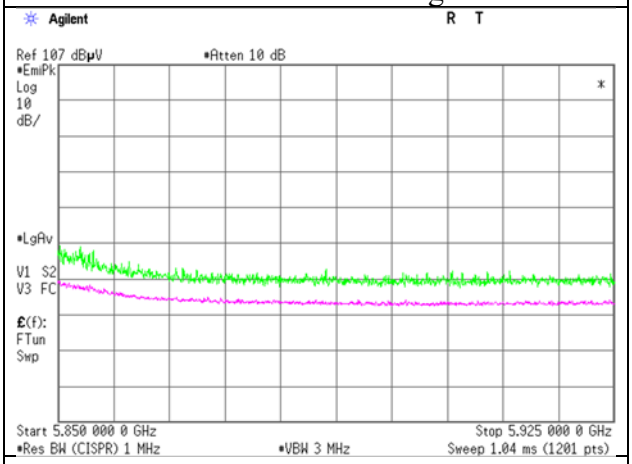
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11a 5825 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

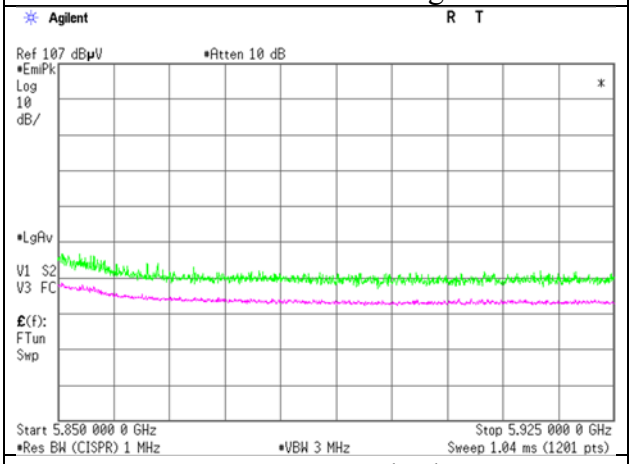
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5180 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	58.30	32.18	17.21	42.99	2.31	67.01	73.9	6.8	100	274	-
Hori.	5150.000	AV	42.19	32.18	17.21	42.99	2.31	50.90	53.9	**3.0**	100	274	VBW: 6.2 kHz
Vert.	5150.000	PK	55.70	32.18	17.21	42.99	2.31	64.41	73.9	9.4	100	305	-
Vert.	5150.000	AV	40.99	32.18	17.21	42.99	2.31	49.70	53.9	4.2	100	305	VBW: 6.2 kHz

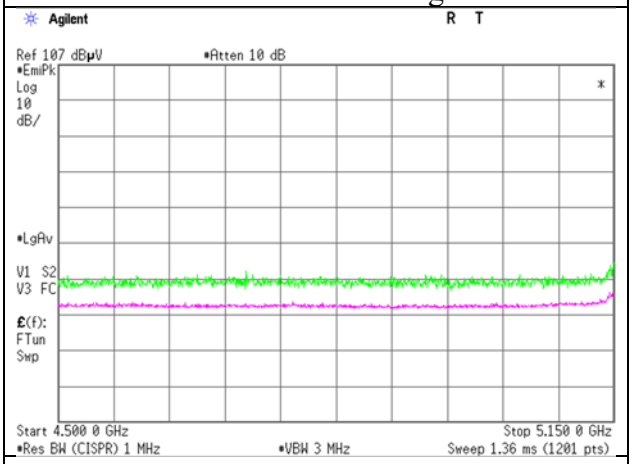
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 16, 2023
Temperature / Humidity	21 deg.C, 33 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5180 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

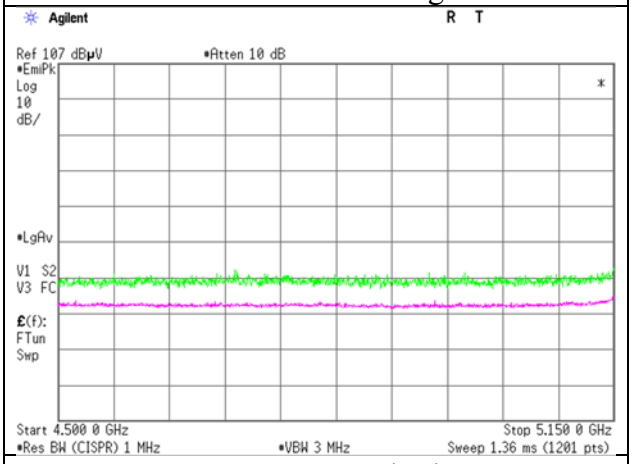
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5320 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	53.86	31.91	17.34	43.27	2.31	62.15	73.9	11.7	100	247	-
Hori.	5350.000	AV	40.69	31.91	17.34	43.27	2.31	48.98	53.9	4.9	100	247	VBW: 6.2 kHz
Vert.	5350.000	PK	56.69	31.91	17.34	43.27	2.31	64.98	73.9	8.9	134	347	-
Vert.	5350.000	AV	41.22	31.91	17.34	43.27	2.31	49.51	53.9	**4.3**	134	347	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	51.60	31.86	17.28	43.13	2.31	59.92	-35.31	-27.0	8.3	100	247	-
Vert.	5250.000	PK	51.72	31.86	17.28	43.13	2.31	60.04	-35.19	-27.0	8.1	134	347	-

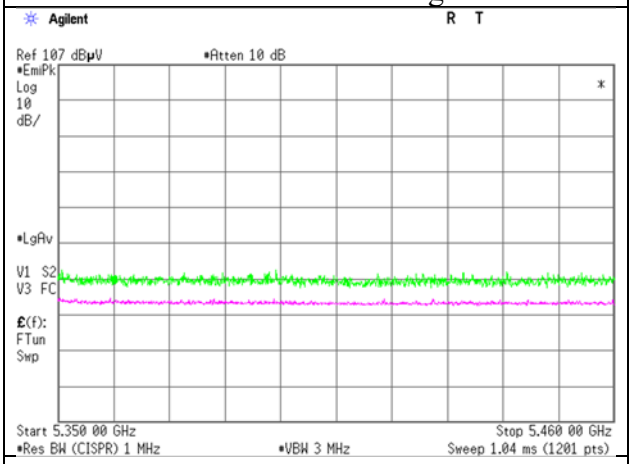
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5320 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

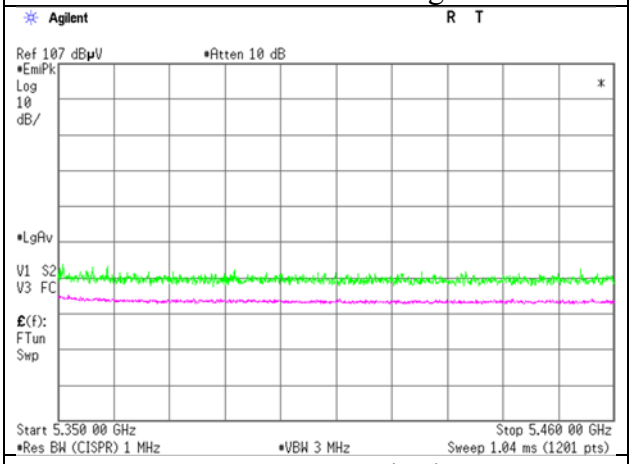
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5500 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.27	32.16	17.41	43.42	2.31	60.73	73.9	13.1	104	264	-
Hori.	5460.000	AV	40.03	32.16	17.41	43.42	2.31	48.49	53.9	5.4	104	264	VBW: 6.2 kHz
Vert.	5460.000	PK	53.10	32.16	17.41	43.42	2.31	61.56	73.9	12.3	142	286	-
Vert.	5460.000	AV	40.47	32.16	17.41	43.42	2.31	48.93	53.9	4.9	142	286	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	55.22	32.18	17.42	43.44	2.31	63.69	-31.54	-27.0	4.5	104	264	-
Vert.	5470.000	PK	56.94	32.18	17.42	43.44	2.31	65.41	-29.82	-27.0	**2.8**	142	286	-

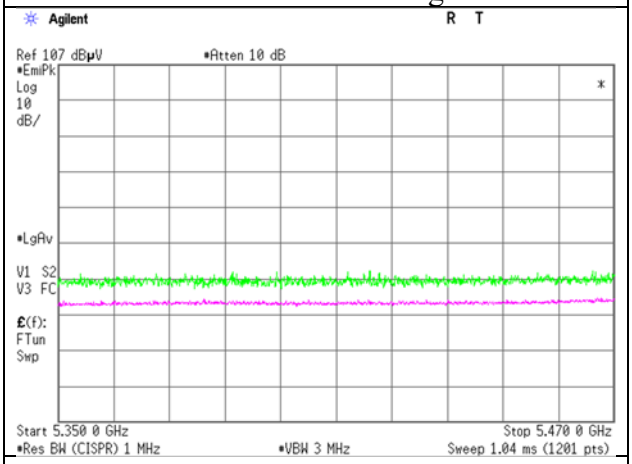
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5500 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

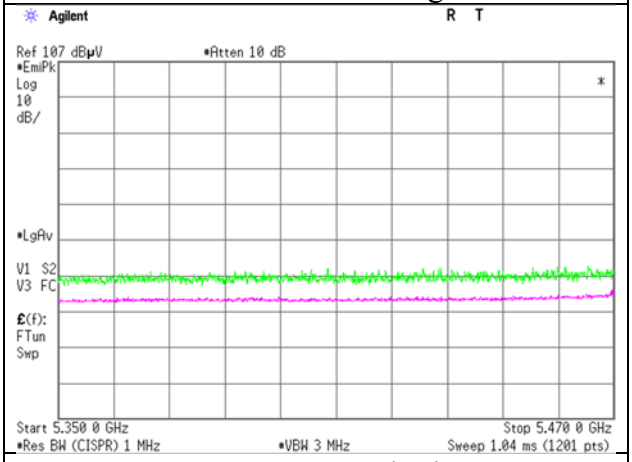
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.3
Date	January 19, 2023	January 17, 2023	January 18, 2023
Temperature / Humidity	22 deg.C, 29 %RH	22 deg.C, 31 %RH	22 deg.C, 28 %RH
Engineer	Hiromasa Sato	Takahiro Suzuki	Yusuke Tanikawara
	(30 MHz -1 GHz)	(1 GHz -10 GHz)	(10 GHz -26.5 GHz)
Mode	Tx 11n-20 5580 MHz with Tx BT LE 2M-PHY 2402 MHz		

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	54.940	QP	36.50	9.59	6.75	32.15	0.00	20.69	40.0	19.3	400	354	-
Hori.	96.012	QP	40.53	9.44	7.45	32.12	0.00	25.30	43.5	18.2	319	6	-
Hori.	381.408	QP	35.61	15.21	9.00	31.91	0.00	27.91	46.0	18.0	100	357	-
Hori.	11160.000	PK	48.52	37.44	9.87	42.87	-9.54	43.42	73.9	30.4	146	250	-
Hori.	22320.000	PK	53.47	40.28	14.97	47.47	-9.54	51.71	73.9	22.1	173	126	-
Hori.	11160.000	AV	38.99	37.44	9.87	42.87	-9.54	33.89	53.9	20.0	146	250	VBW: 6.2 kHz
Hori.	22320.000	AV	50.17	40.28	14.97	47.47	-9.54	48.41	53.9	**5.4**	173	126	VBW: 6.2 kHz
Vert.	31.115	QP	33.26	18.29	6.48	32.17	0.00	25.86	40.0	14.1	100	304	-
Vert.	54.936	QP	41.33	9.59	6.75	32.15	0.00	25.52	40.0	14.4	100	268	-
Vert.	114.653	QP	47.10	12.51	7.23	32.11	0.00	34.73	43.5	8.7	100	230	-
Vert.	259.289	QP	33.61	12.16	8.37	31.97	0.00	22.17	46.0	23.8	122	329	-
Vert.	381.647	QP	33.26	15.21	9.00	31.91	0.00	25.56	46.0	20.4	138	5	-
Vert.	609.632	QP	38.55	19.47	9.94	31.90	0.00	36.06	46.0	9.9	100	358	-
Vert.	998.937	QP	25.74	22.45	11.29	30.09	0.00	29.39	53.9	24.5	147	7	-
Vert.	11160.000	PK	49.30	37.44	9.87	42.87	-9.54	44.20	73.9	29.7	171	71	-
Vert.	22320.000	PK	52.82	40.28	14.97	47.47	-9.54	51.06	73.9	22.8	146	176	-
Vert.	11160.000	AV	39.34	37.44	9.87	42.87	-9.54	34.24	53.9	19.6	171	71	VBW: 6.2 kHz
Vert.	22320.000	AV	49.10	40.28	14.97	47.47	-9.54	47.34	53.9	6.5	146	176	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16740.000	PK	47.19	39.43	12.55	40.60	-9.54	49.03	-46.20	-27.0	19.2	150	0	-
Hori.	33480.000	PK	59.93	43.90	18.88	67.83	-9.54	45.34	-49.89	-27.0	22.8	149	142	-
Vert.	16740.000	PK	46.90	39.43	12.55	40.60	-9.54	48.74	-46.49	-27.0	19.4	150	0	-
Vert.	33480.000	PK	57.77	43.90	18.88	67.83	-9.54	43.18	-52.05	-27.0	25.0	160	112	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5700 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	57.55	32.63	17.56	43.52	2.31	66.53	-28.70	-27.0	1.7	149	268	-
Vert.	5725.000	PK	58.11	32.63	17.56	43.52	2.31	67.09	-28.14	-27.0	**1.1**	151	280	-

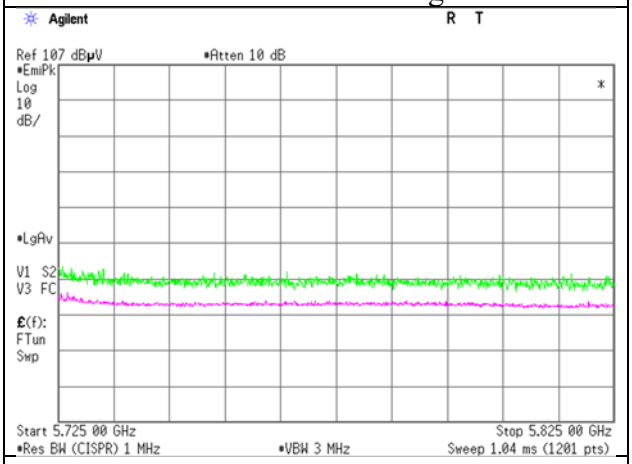
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5700 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

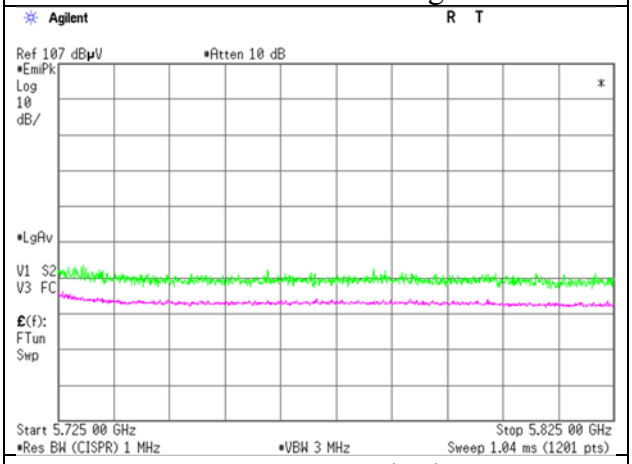
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5745 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	50.88	32.42	17.52	43.50	2.31	59.63	-35.60	-27.0	8.5	155	265	-
Hori.	5700.000	PK	51.52	32.55	17.54	43.51	2.31	60.41	-34.82	10.0	44.8	155	265	-
Hori.	5720.000	PK	58.36	32.61	17.55	43.52	2.31	67.31	-27.92	15.6	43.5	155	265	-
Hori.	5725.000	PK	63.03	32.63	17.56	43.52	2.31	72.01	-23.22	27.0	50.2	155	265	-
Vert.	5650.000	PK	51.68	32.42	17.52	43.50	2.31	60.43	-34.80	-27.0	**7.8**	155	294	-
Vert.	5700.000	PK	52.75	32.55	17.54	43.51	2.31	61.64	-33.59	10.0	43.5	155	294	-
Vert.	5720.000	PK	58.97	32.61	17.55	43.52	2.31	67.92	-27.31	15.6	42.9	155	294	-
Vert.	5725.000	PK	65.22	32.63	17.56	43.52	2.31	74.20	-21.03	27.0	48.0	155	294	-

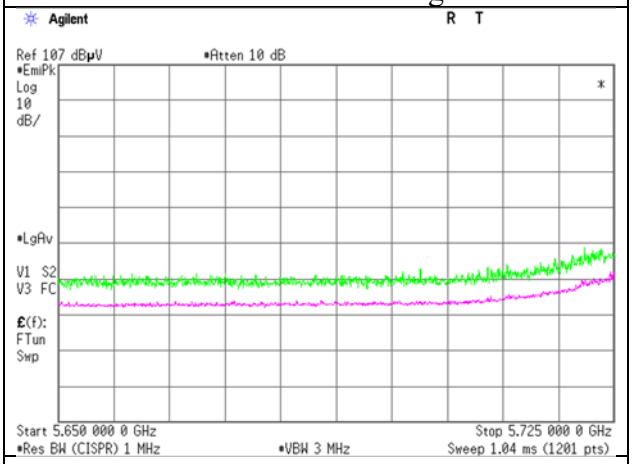
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5745 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

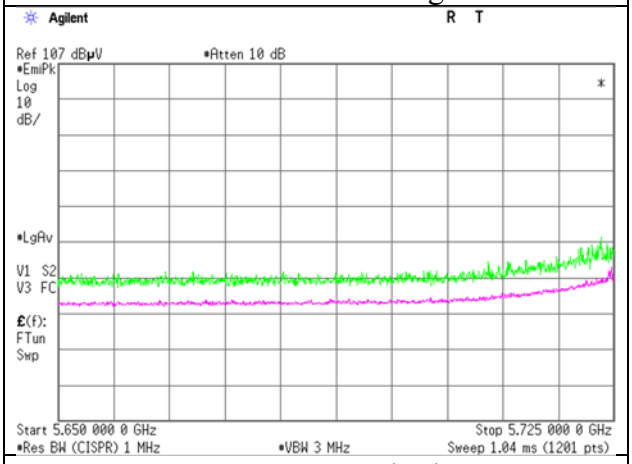
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5825 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	60.22	32.99	17.64	43.54	2.31	69.62	-25.61	27.0	52.6	151	263	-
Hori.	5855.000	PK	58.46	33.00	17.64	43.54	2.31	67.87	-27.36	15.6	42.9	151	263	-
Hori.	5875.000	PK	51.95	33.03	17.67	43.54	2.31	61.42	-33.81	10.0	43.8	151	263	-
Hori.	5925.000	PK	52.19	33.10	17.69	43.55	2.31	61.74	-33.49	-27.0	**6.4**	151	263	-
Vert.	5850.000	PK	59.44	32.99	17.64	43.54	2.31	68.84	-26.39	27.0	53.3	131	296	-
Vert.	5855.000	PK	56.87	33.00	17.64	43.54	2.31	66.28	-28.95	15.6	44.5	131	296	-
Vert.	5875.000	PK	52.14	33.03	17.67	43.54	2.31	61.61	-33.62	10.0	43.6	131	296	-
Vert.	5925.000	PK	51.51	33.10	17.69	43.55	2.31	61.06	-34.17	-27.0	7.1	131	296	-

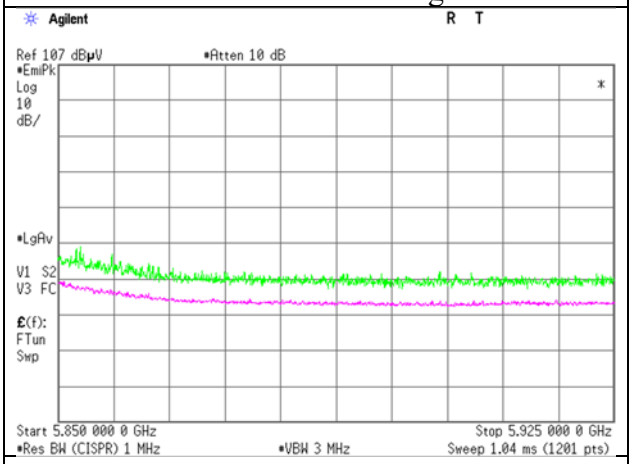
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-20 5825 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

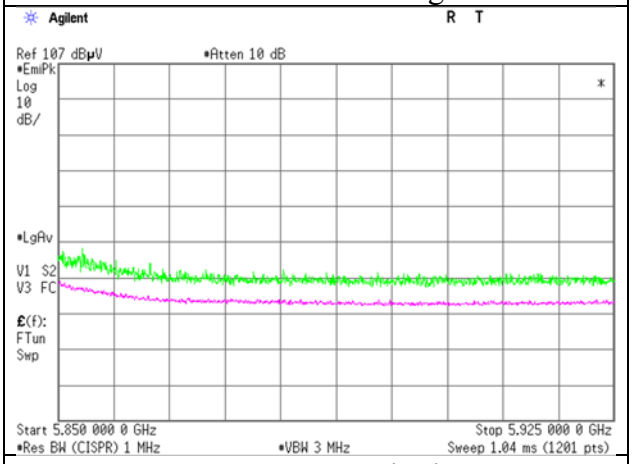
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5190 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	54.22	32.18	17.21	42.99	2.31	62.93	73.9	10.9	100	265	-
Hori.	5150.000	AV	41.04	32.18	17.21	42.99	2.31	49.75	53.9	4.1	100	265	VBW: 10 kHz
Vert.	5150.000	PK	57.60	32.18	17.21	42.99	2.31	66.31	73.9	7.5	100	281	-
Vert.	5150.000	AV	41.79	32.18	17.21	42.99	2.31	50.50	53.9	**3.4**	100	281	VBW: 10 kHz

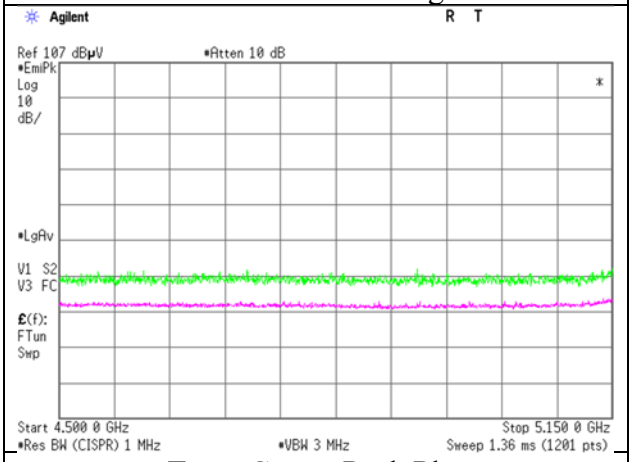
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5190 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

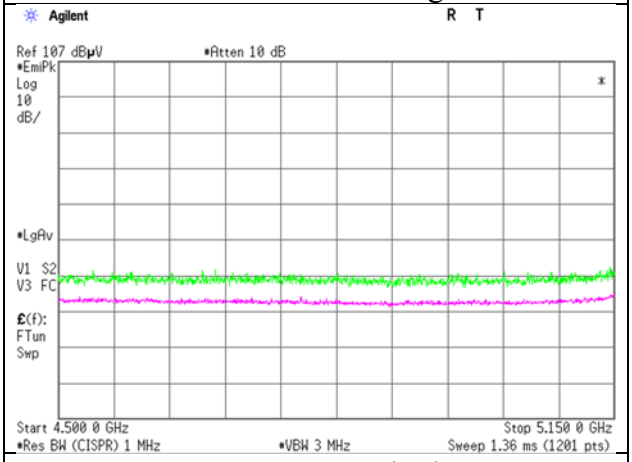
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5230 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.03	32.18	17.21	42.99	2.31	59.74	73.9	14.1	100	270	-
Hori.	5150.000	AV	39.65	32.18	17.21	42.99	2.31	48.36	53.9	5.5	100	270	VBW: 10 kHz
Vert.	5150.000	PK	51.40	32.18	17.21	42.99	2.31	60.11	73.9	13.7	100	348	-
Vert.	5150.000	AV	40.20	32.18	17.21	42.99	2.31	48.91	53.9	**4.9**	100	348	VBW: 10 kHz

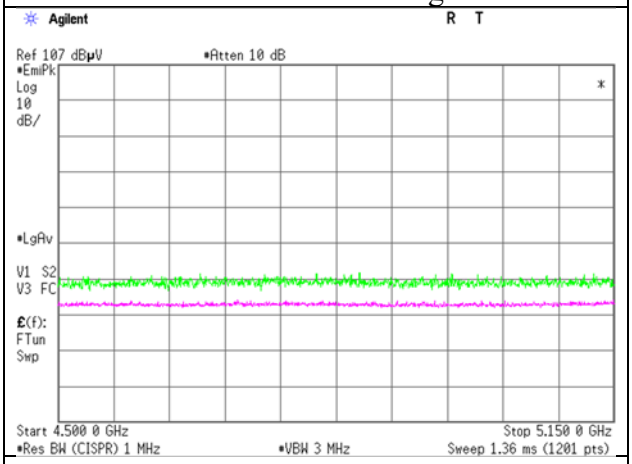
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5230 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

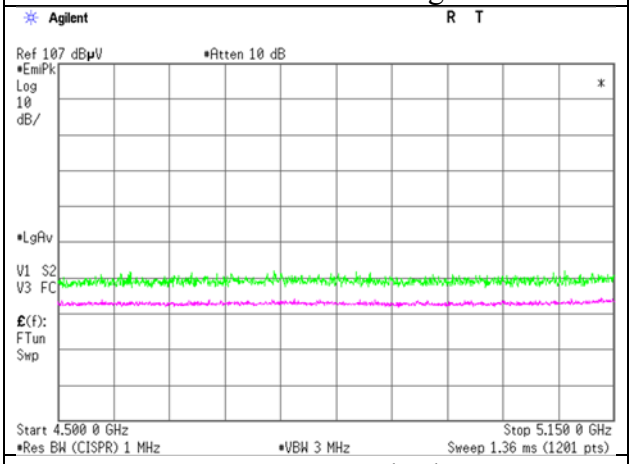
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5270 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.62	31.91	17.34	43.27	2.31	59.91	73.9	13.9	100	270	-
Hori.	5350.000	AV	39.66	31.91	17.34	43.27	2.31	47.95	53.9	5.9	100	270	VBW: 10 kHz
Vert.	5350.000	PK	51.63	31.91	17.34	43.27	2.31	59.92	73.9	13.9	100	343	-
Vert.	5350.000	AV	40.18	31.91	17.34	43.27	2.31	48.47	53.9	**5.4**	100	343	VBW: 10 kHz

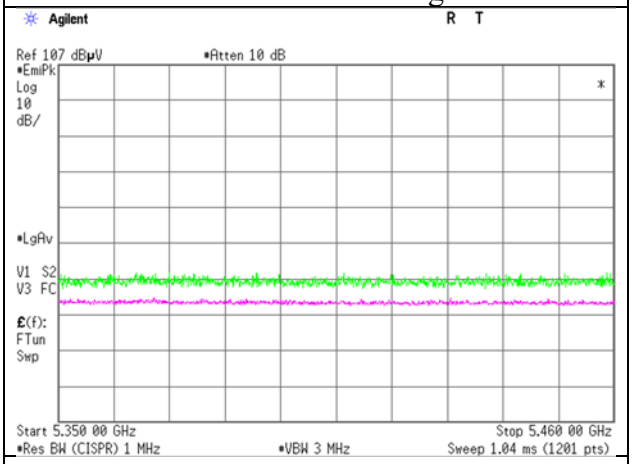
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5270 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

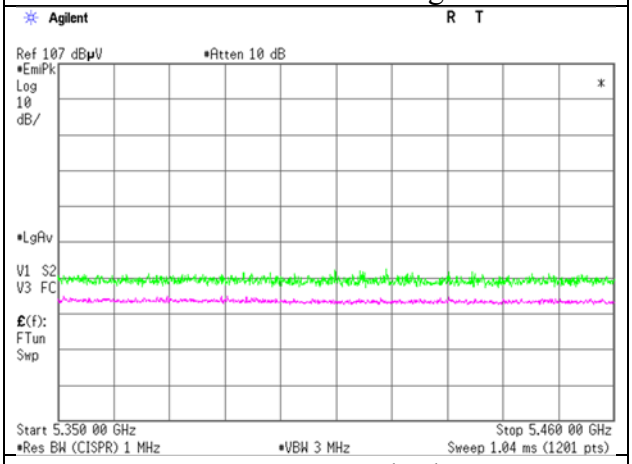
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5310 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.61	31.91	17.34	43.27	2.31	59.90	73.9	14.0	119	268	-
Hori.	5350.000	AV	40.11	31.91	17.34	43.27	2.31	48.40	53.9	5.5	119	268	VBW: 10 kHz
Vert.	5350.000	PK	54.23	31.91	17.34	43.27	2.31	62.52	73.9	11.3	100	286	-
Vert.	5350.000	AV	41.75	31.91	17.34	43.27	2.31	50.04	53.9	**3.8**	100	286	VBW: 10 kHz

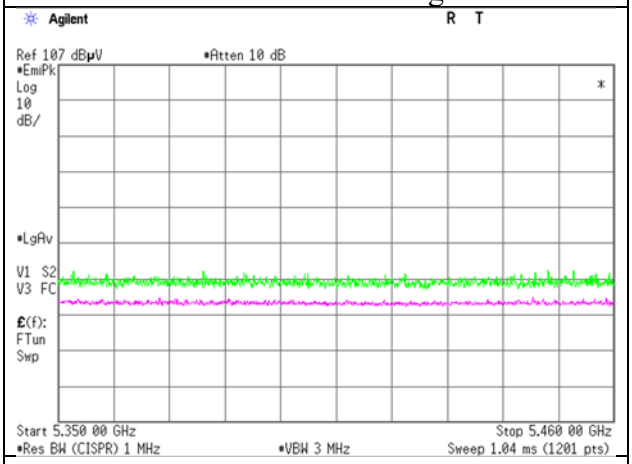
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	22 deg.C, 31 %RH
Engineer	Takahiro Suzuki
Mode	Tx 11n-40 5310 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

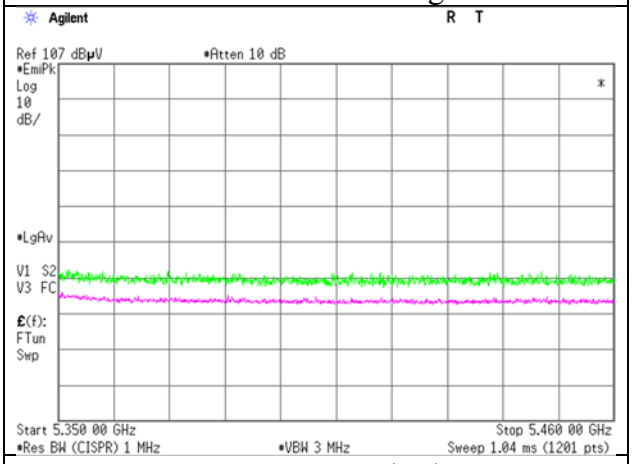
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5510 MHz with Tx BT LE 2M-PHY 2402 MHz

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	52.46	32.16	17.41	43.42	2.31	60.92	73.9	12.9	101	274	-
Hori.	5460.000	AV	42.51	32.16	17.41	43.42	2.31	50.97	53.9	**2.9**	101	274	VBW: 10 kHz
Vert.	5460.000	PK	50.92	32.16	17.41	43.42	2.31	59.38	73.9	14.5	216	282	-
Vert.	5460.000	AV	41.58	32.16	17.41	43.42	2.31	50.04	53.9	3.8	216	282	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	55.59	32.18	17.42	43.44	2.31	64.06	-31.17	-27.0	4.1	101	274	-
Vert.	5470.000	PK	52.95	32.18	17.42	43.44	2.31	61.42	-33.81	-27.0	6.8	216	282	-

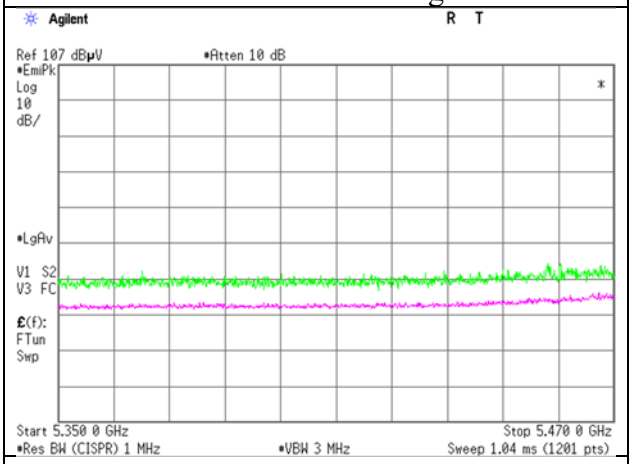
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5510 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

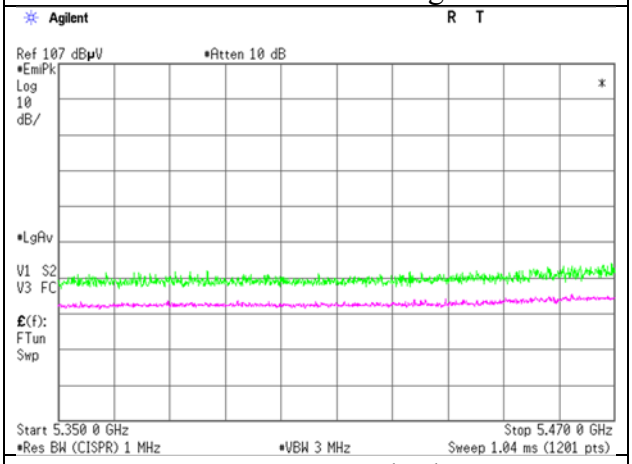
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5670 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	49.88	32.63	17.56	43.52	2.31	58.86	-36.37	-27.0	**9.3**	111	273	-
Vert.	5725.000	PK	49.90	32.63	17.56	43.52	2.31	58.88	-36.35	-27.0	**9.3**	222	350	-

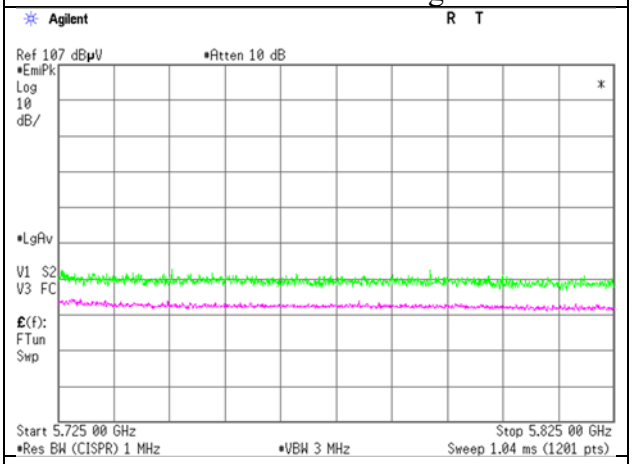
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5670 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

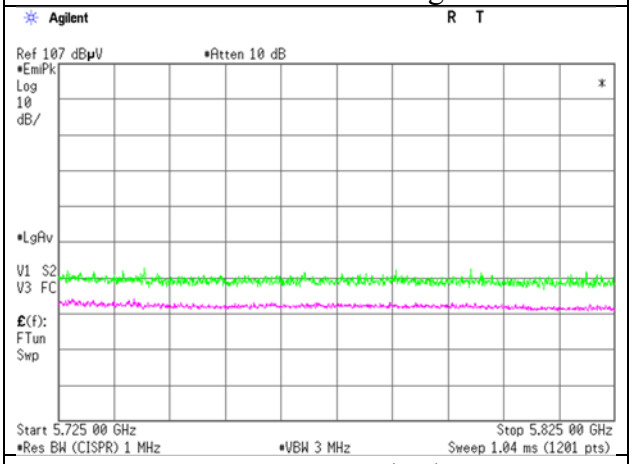
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5755 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.59	32.42	17.52	43.50	2.31	57.34	-37.89	-27.0	10.8	229	235	-
Hori.	5700.000	PK	50.23	32.55	17.54	43.51	2.31	59.12	-36.11	10.0	46.1	229	235	-
Hori.	5720.000	PK	54.26	32.61	17.55	43.52	2.31	63.21	-32.02	15.6	47.6	229	235	-
Hori.	5725.000	PK	54.25	32.63	17.56	43.52	2.31	63.23	-32.00	27.0	59.0	229	235	-
Vert.	5650.000	PK	49.59	32.42	17.52	43.50	2.31	58.34	-36.89	-27.0	**9.8**	223	151	-
Vert.	5700.000	PK	51.99	32.55	17.54	43.51	2.31	60.88	-34.35	10.0	44.3	223	151	-
Vert.	5720.000	PK	56.58	32.61	17.55	43.52	2.31	65.53	-29.70	15.6	45.3	223	151	-
Vert.	5725.000	PK	56.59	32.63	17.56	43.52	2.31	65.57	-29.66	27.0	56.6	223	151	-

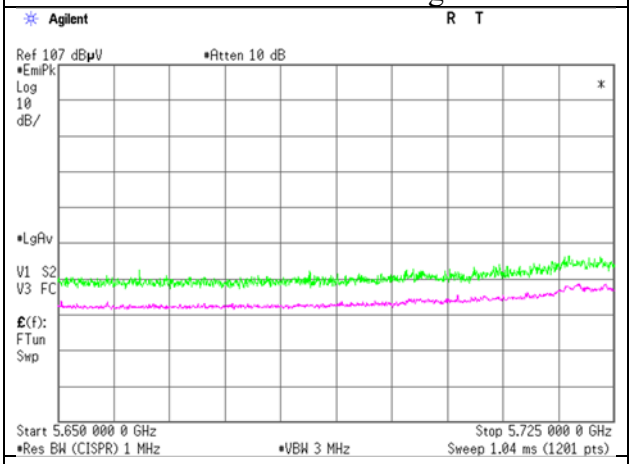
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5755 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

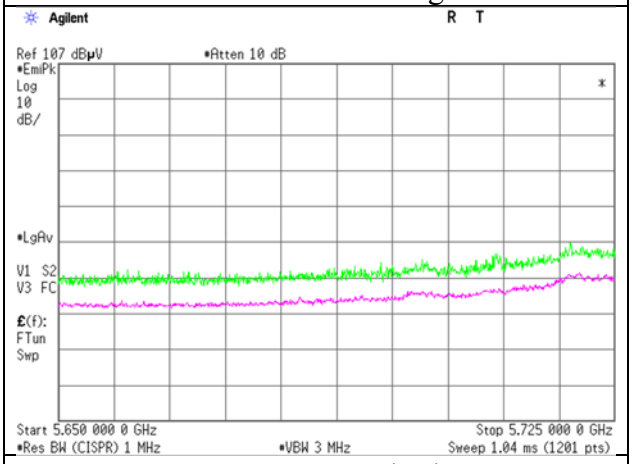
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5795 MHz with Tx BT LE 2M-PHY 2402 MHz

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	53.26	32.99	17.64	43.54	2.31	62.66	-32.57	27.0	59.5	164	268	-
Hori.	5855.000	PK	52.00	33.00	17.64	43.54	2.31	61.41	-33.82	15.6	49.4	164	268	-
Hori.	5875.000	PK	50.06	33.03	17.67	43.54	2.31	59.53	-35.70	10.0	45.7	164	268	-
Hori.	5925.000	PK	49.98	33.10	17.69	43.55	2.31	59.53	-35.70	-27.0	**8.7**	164	268	-
Vert.	5850.000	PK	54.41	32.99	17.64	43.54	2.31	63.81	-31.42	27.0	58.4	101	289	-
Vert.	5855.000	PK	52.84	33.00	17.64	43.54	2.31	62.25	-32.98	15.6	48.5	101	289	-
Vert.	5875.000	PK	50.49	33.03	17.67	43.54	2.31	59.96	-35.27	10.0	45.2	101	289	-
Vert.	5925.000	PK	49.88	33.10	17.69	43.55	2.31	59.43	-35.80	-27.0	8.8	101	289	-

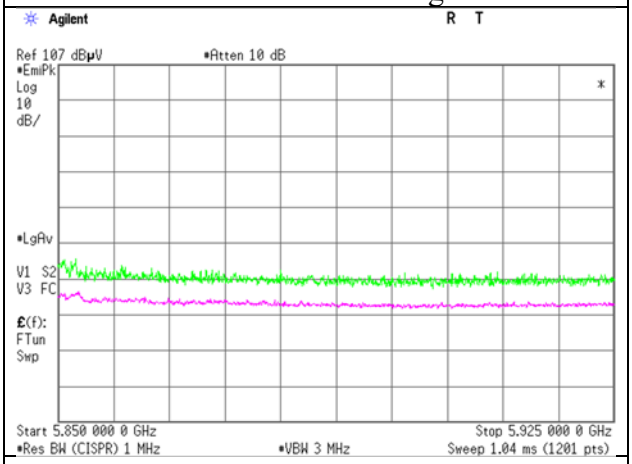
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5795 MHz with Tx BT LE 2M-PHY 2402 MHz

Horizontal

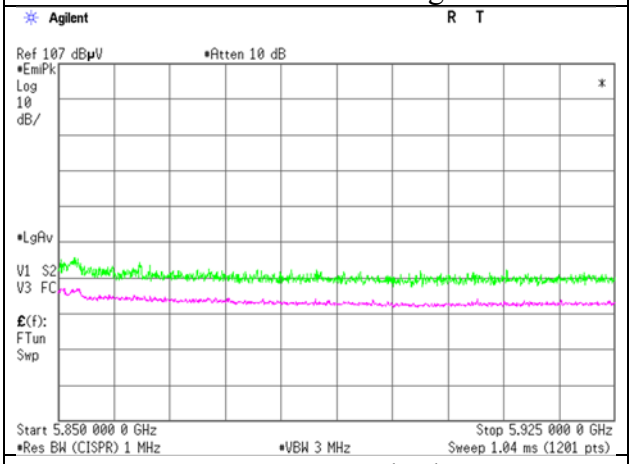
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5180 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.43	32.18	17.21	42.99	2.31	59.14	73.9	14.7	235	263	-
Hori.	5150.000	AV	40.04	32.18	17.21	42.99	2.31	48.75	53.9	5.1	235	263	VBW: 5.6 kHz
Vert.	5150.000	PK	52.71	32.18	17.21	42.99	2.31	61.42	73.9	12.4	141	5	-
Vert.	5150.000	AV	41.43	32.18	17.21	42.99	2.31	50.14	53.9	**3.7**	141	5	VBW: 5.6 kHz

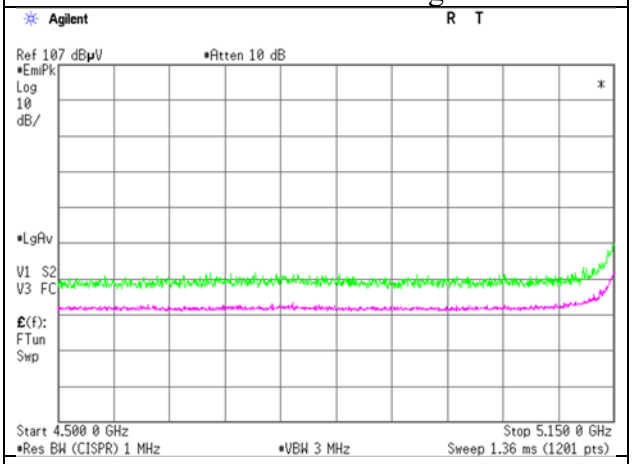
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11a 5180 MHz with Tx Hopping ON, 3DH5

Horizontal

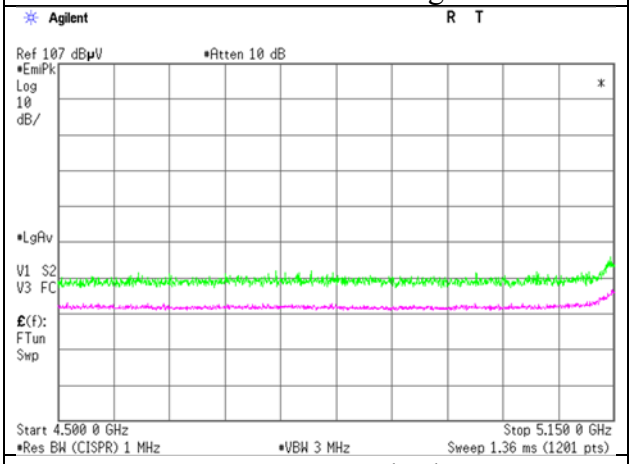
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5320 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	54.55	31.91	17.34	43.27	2.31	62.84	73.9	11.0	137	275	-
Hori.	5350.000	AV	41.45	31.91	17.34	43.27	2.31	49.74	53.9	**4.1**	137	275	VBW: 5.6 kHz
Vert.	5350.000	PK	54.59	31.91	17.34	43.27	2.31	62.88	73.9	11.0	235	311	-
Vert.	5350.000	AV	40.94	31.91	17.34	43.27	2.31	49.23	53.9	4.6	235	311	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	49.31	31.86	17.28	43.13	2.31	57.63	-37.60	-27.0	10.6	137	275	-
Vert.	5250.000	PK	48.88	31.86	17.28	43.13	2.31	57.20	-38.03	-27.0	11.0	235	311	-

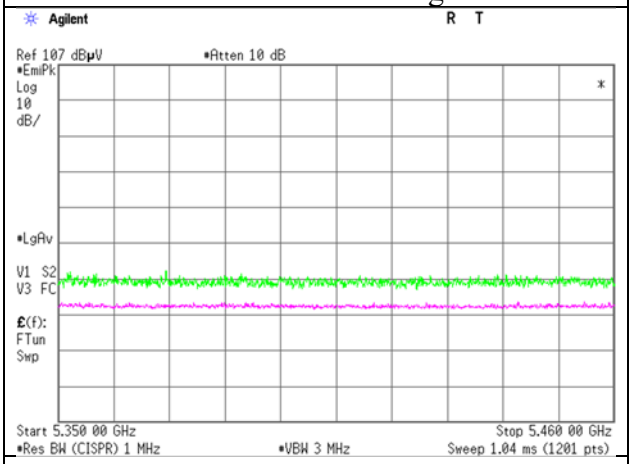
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11a 5320 MHz with Tx Hopping ON, 3DH5

Horizontal

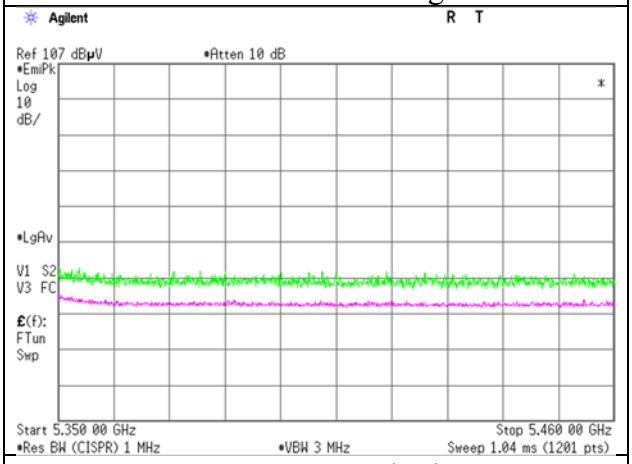
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5500 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	50.65	32.16	17.41	43.42	2.31	59.11	73.9	14.7	107	267	-
Hori.	5460.000	AV	40.10	32.16	17.41	43.42	2.31	48.56	53.9	**5.3**	107	267	VBW: 5.6 kHz
Vert.	5460.000	PK	49.74	32.16	17.41	43.42	2.31	58.20	73.9	15.7	101	296	-
Vert.	5460.000	AV	39.92	32.16	17.41	43.42	2.31	48.38	53.9	5.5	101	296	VBW: 5.6 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	54.00	32.18	17.42	43.44	2.31	62.47	-32.76	-27.0	5.7	107	267	-
Vert.	5470.000	PK	53.08	32.18	17.42	43.44	2.31	61.55	-33.68	-27.0	6.6	101	296	-

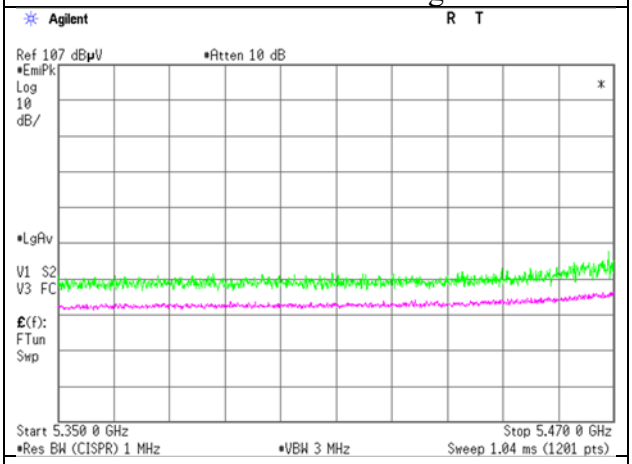
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11a 5500 MHz with Tx Hopping ON, 3DH5

Horizontal

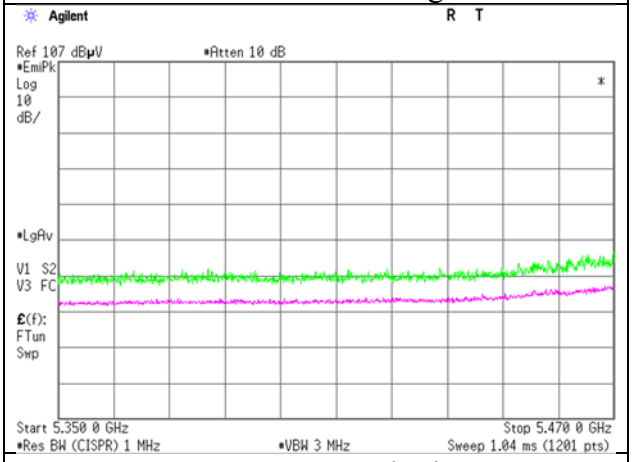
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5700 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	54.36	32.63	17.56	43.52	2.31	63.34	-31.89	-27.0	**4.8**	119	281	-
Vert.	5725.000	PK	51.80	32.63	17.56	43.52	2.31	60.78	-34.45	-27.0	7.4	224	297	-

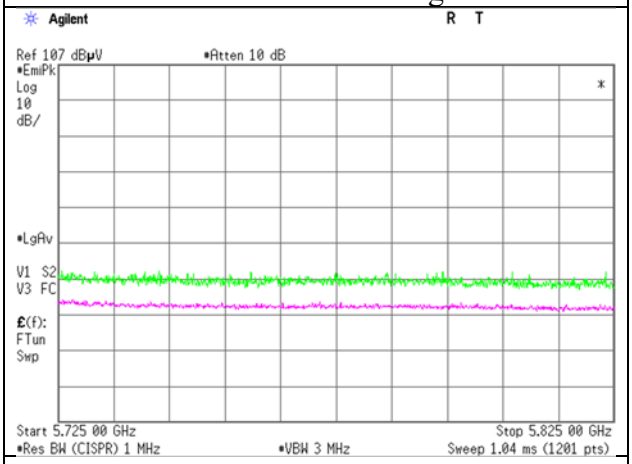
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 17, 2023
Temperature / Humidity	26 deg.C, 24 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11a 5700 MHz with Tx Hopping ON, 3DH5

Horizontal

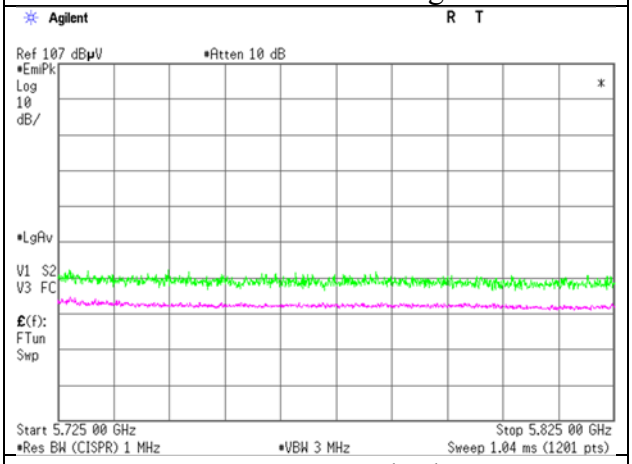
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5745 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	54.36	32.63	17.56	43.52	2.31	63.34	-31.89	-27.0	**4.8**	119	281	-
Vert.	5725.000	PK	51.80	32.63	17.56	43.52	2.31	60.78	-34.45	-27.0	7.4	224	297	-

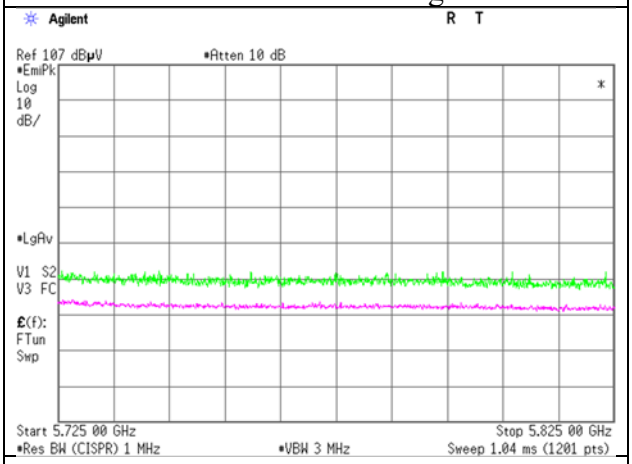
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11a 5745 MHz with Tx Hopping ON, 3DH5

Horizontal

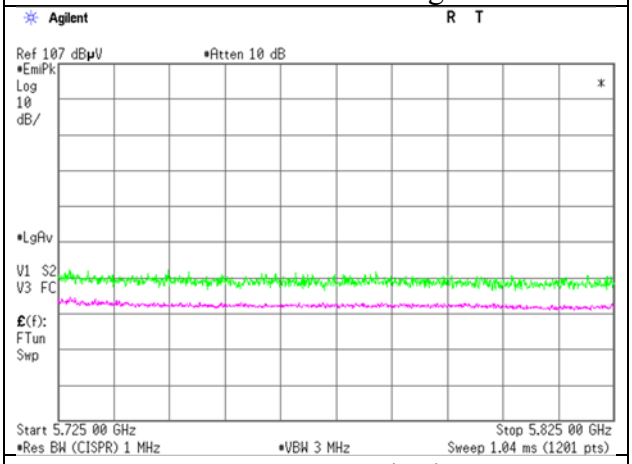
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5825 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	59.64	32.99	17.64	43.54	2.31	69.04	-26.19	27.0	53.1	100	264	-
Hori.	5855.000	PK	56.85	33.00	17.64	43.54	2.31	66.26	-28.97	15.6	44.5	100	264	-
Hori.	5875.000	PK	49.09	33.03	17.67	43.54	2.31	58.56	-36.67	10.0	46.6	100	264	-
Hori.	5925.000	PK	49.31	33.10	17.69	43.55	2.31	58.86	-36.37	-27.0	9.3	100	264	-
Vert.	5850.000	PK	57.29	32.99	17.64	43.54	2.31	66.69	-28.54	27.0	55.5	226	289	-
Vert.	5855.000	PK	55.89	33.00	17.64	43.54	2.31	65.30	-29.93	15.6	45.5	226	289	-
Vert.	5875.000	PK	49.47	33.03	17.67	43.54	2.31	58.94	-36.29	10.0	46.2	226	289	-
Vert.	5925.000	PK	50.24	33.10	17.69	43.55	2.31	59.79	-35.44	-27.0	**8.4**	226	289	-

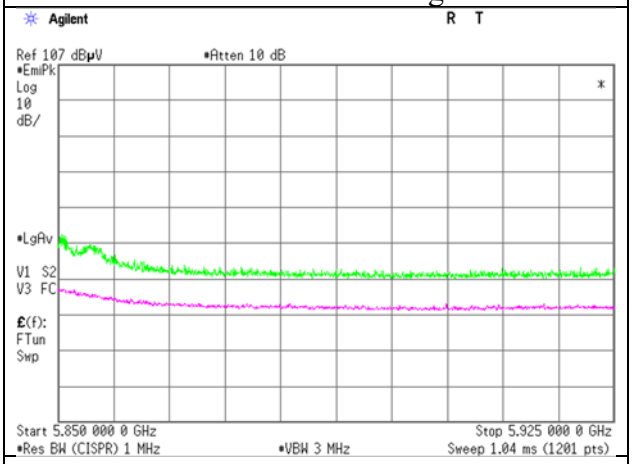
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11a 5825 MHz with Tx Hopping ON, 3DH5

Horizontal

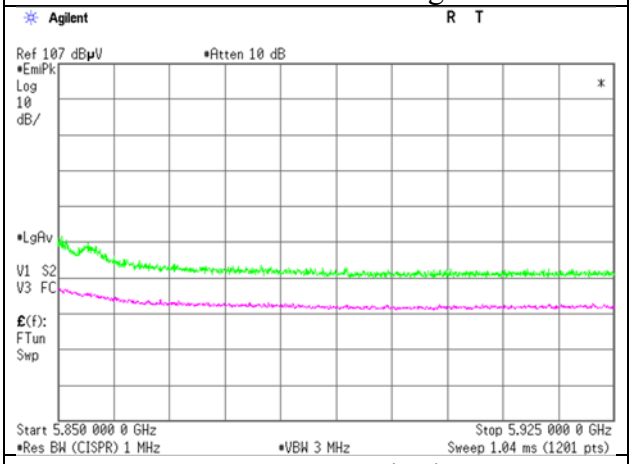
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5180 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	52.45	32.18	17.21	42.99	2.31	61.16	73.9	12.7	100	255	-
Hori.	5150.000	AV	40.12	32.18	17.21	42.99	2.31	48.83	53.9	5.0	100	255	VBW: 6.2 kHz
Vert.	5150.000	PK	53.93	32.18	17.21	42.99	2.31	62.64	73.9	11.2	159	346	-
Vert.	5150.000	AV	42.19	32.18	17.21	42.99	2.31	50.90	53.9	**3.0**	159	346	VBW: 6.2 kHz

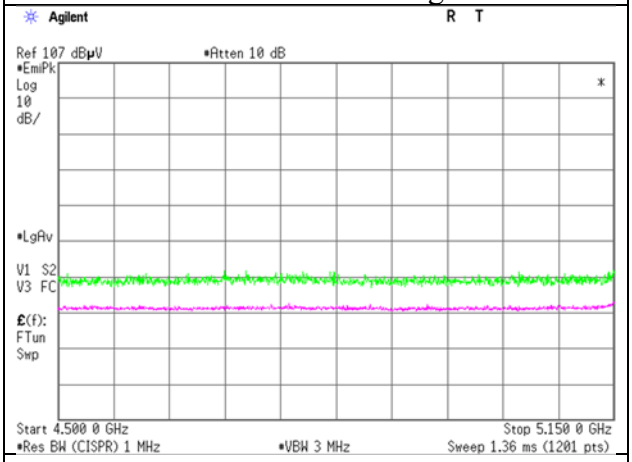
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5180 MHz with Tx Hopping ON, 3DH5

Horizontal

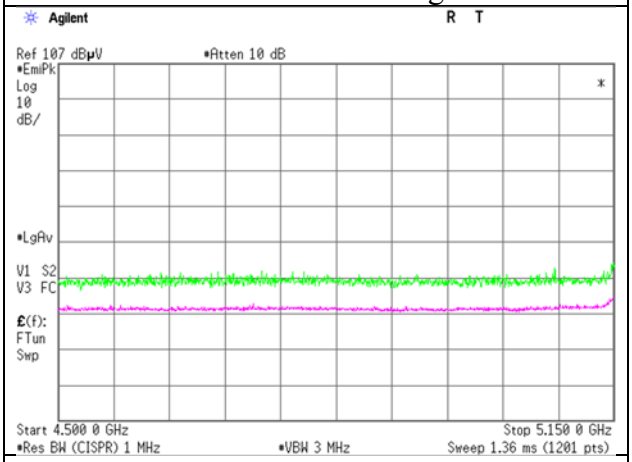
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5320 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	51.33	31.91	17.34	43.27	2.31	59.62	73.9	14.2	103	269	-
Hori.	5350.000	AV	38.26	31.91	17.34	43.27	2.31	46.55	53.9	7.3	103	269	VBW: 6.2 kHz
Vert.	5350.000	PK	50.94	31.91	17.34	43.27	2.31	59.23	73.9	14.6	160	351	-
Vert.	5350.000	AV	38.37	31.91	17.34	43.27	2.31	46.66	53.9	**7.2**	160	351	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5250.000	PK	48.32	31.86	17.28	43.13	2.31	56.64	-38.59	-27.0	11.5	103	269	-
Vert.	5250.000	PK	48.98	31.86	17.28	43.13	2.31	57.30	-37.93	-27.0	10.9	160	351	-

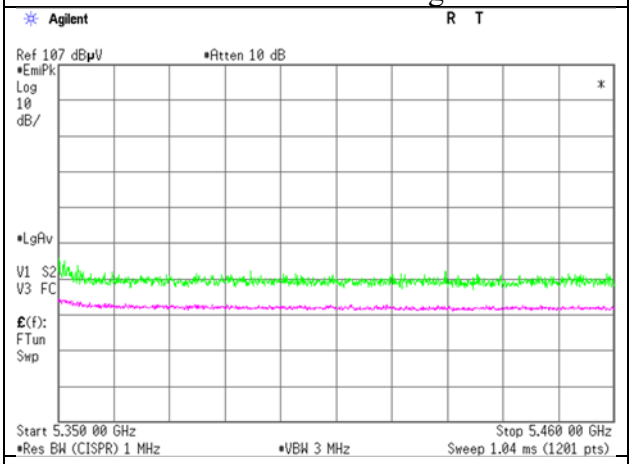
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5320 MHz with Tx Hopping ON, 3DH5

Horizontal

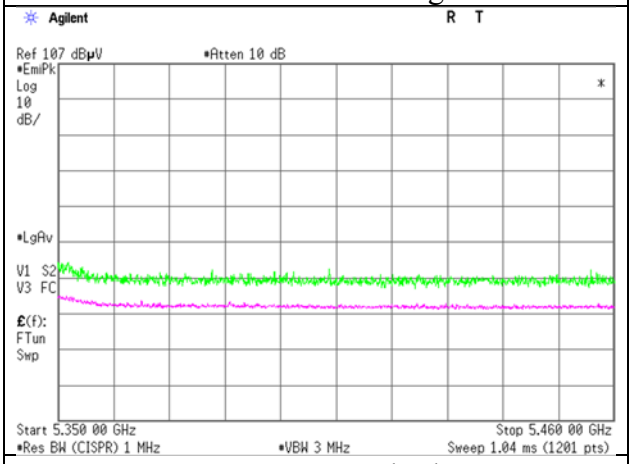
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5500 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	49.55	32.16	17.41	43.42	2.31	58.01	73.9	15.8	100	251	-
Hori.	5460.000	AV	39.83	32.16	17.41	43.42	2.31	48.29	53.9	5.6	100	251	VBW: 6.2 kHz
Vert.	5460.000	PK	49.92	32.16	17.41	43.42	2.31	58.38	73.9	15.5	184	270	-
Vert.	5460.000	AV	39.97	32.16	17.41	43.42	2.31	48.43	53.9	**5.4**	184	270	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	51.76	32.18	17.42	43.44	2.31	60.23	-35.00	-27.0	8.0	100	251	-
Vert.	5470.000	PK	51.73	32.18	17.42	43.44	2.31	60.20	-35.03	-27.0	8.0	184	270	-

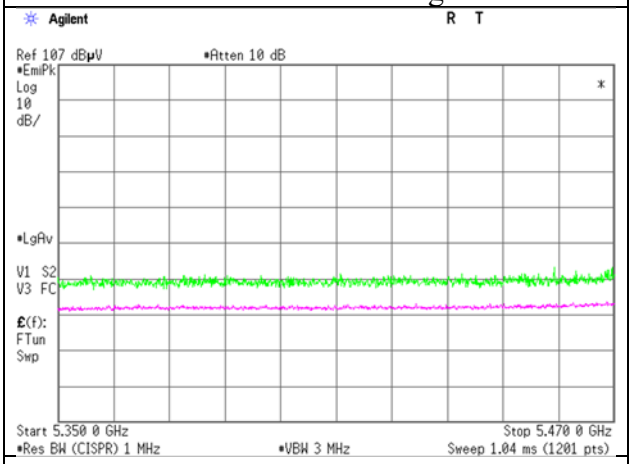
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5500 MHz with Tx Hopping ON, 3DH5

Horizontal

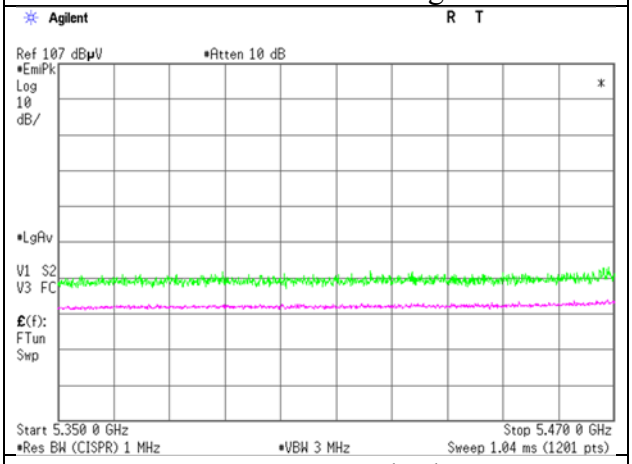
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 19, 2023	January 18, 2023	January 18, 2023	January 19, 2023
Temperature / Humidity	22 deg.C, 32 %RH	24 deg.C, 32 %RH	22 deg.C, 28 %RH	23 deg.C, 25 %RH
Engineer	Hiromasa Sato	Hiromasa Sato	Yusuke Tanikawara	Yusuke Tanikawara
	(30 MHz -1 GHz)	(1 GHz -6.4 GHz)	(6.4 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5580 MHz with Tx Hopping ON, 3DH5			

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	55.121	QP	36.28	9.53	6.74	32.15	0.00	20.40	40.0	19.6	397	354	-
Hori.	96.001	QP	40.57	9.44	7.45	32.12	0.00	25.34	43.5	18.1	335	5	-
Hori.	381.433	QP	35.32	15.21	9.00	31.91	0.00	27.62	46.0	18.3	100	359	-
Hori.	11160.000	PK	47.13	37.44	9.87	42.87	-9.54	42.03	73.9	31.8	154	303	-
Hori.	22320.000	PK	54.87	40.28	14.97	47.47	-9.54	53.11	73.9	20.7	153	171	-
Hori.	11160.000	AV	37.30	37.44	9.87	42.87	-9.54	32.20	53.9	21.7	154	303	VBW: 6.2 kHz
Hori.	22320.000	AV	52.22	40.28	14.97	47.47	-9.54	50.46	53.9	**3.4**	153	171	VBW: 6.2 kHz
Vert.	31.378	QP	33.41	18.19	6.49	32.17	0.00	25.92	40.0	14.0	100	308	-
Vert.	55.024	QP	41.36	9.56	6.75	32.15	0.00	25.52	40.0	14.4	100	275	-
Vert.	114.950	QP	47.16	12.54	7.23	32.11	0.00	34.82	43.5	8.6	100	231	-
Vert.	259.387	QP	33.85	12.16	8.37	31.97	0.00	22.41	46.0	23.5	126	335	-
Vert.	381.445	QP	33.48	15.21	9.00	31.91	0.00	25.78	46.0	20.2	136	4	-
Vert.	609.633	QP	38.69	19.47	9.94	31.90	0.00	36.20	46.0	9.8	100	356	-
Vert.	998.961	QP	25.57	22.45	11.29	30.09	0.00	29.22	53.9	24.6	149	3	-
Vert.	11160.000	PK	47.97	37.44	9.87	42.87	-9.54	42.87	73.9	31.0	278	10	-
Vert.	22320.000	PK	51.63	40.28	14.97	47.47	-9.54	49.87	73.9	24.0	161	155	-
Vert.	11160.000	AV	38.64	37.44	9.87	42.87	-9.54	33.54	53.9	20.3	278	10	VBW: 6.2 kHz
Vert.	22320.000	AV	48.39	40.28	14.97	47.47	-9.54	46.63	53.9	7.2	161	155	VBW: 6.2 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	16740.000	PK	46.43	39.43	12.55	40.60	-9.54	48.27	-46.96	-27.0	19.9	150	0	-
Hori.	33480.000	PK	60.50	43.90	18.88	67.83	-9.54	45.91	-49.32	-27.0	22.3	132	144	-
Vert.	16740.000	PK	47.33	39.43	12.55	40.60	-9.54	49.17	-46.06	-27.0	19.0	150	0	-
Vert.	33480.000	PK	58.15	43.90	18.88	67.83	-9.54	43.56	-51.67	-27.0	24.6	158	114	-

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5700 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	55.46	32.63	17.56	43.52	2.31	64.44	-30.79	-27.0	**3.7**	100	266	-
Vert.	5725.000	PK	54.69	32.63	17.56	43.52	2.31	63.67	-31.56	-27.0	4.5	176	33	-

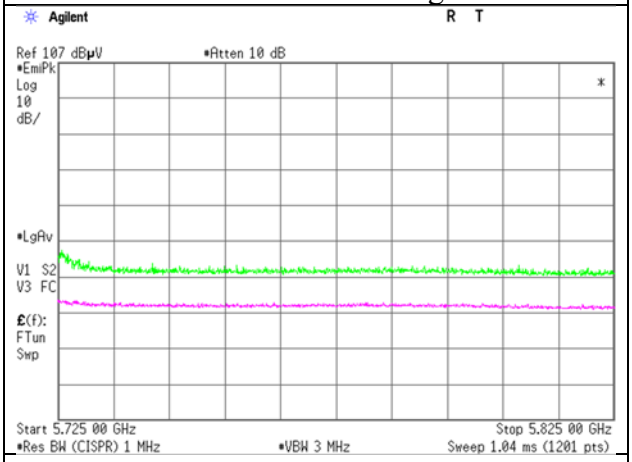
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5700 MHz with Tx Hopping ON, 3DH5

Horizontal

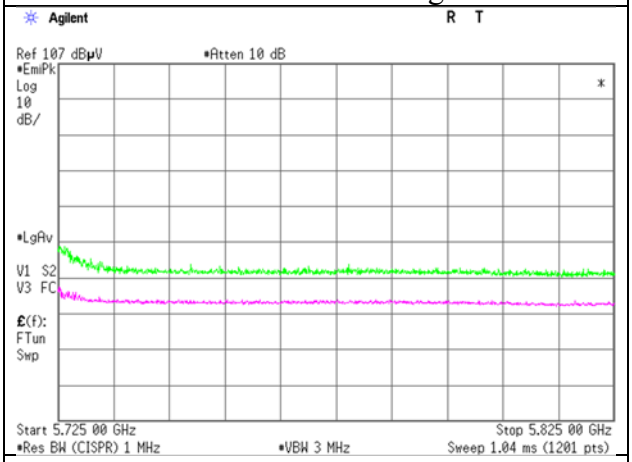
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5745 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.62	32.42	17.52	43.50	2.31	58.37	-36.86	-27.0	9.8	109	271	-
Hori.	5700.000	PK	49.63	32.55	17.54	43.51	2.31	58.52	-36.71	10.0	46.7	109	271	-
Hori.	5720.000	PK	58.26	32.61	17.55	43.52	2.31	67.21	-28.02	15.6	43.6	109	271	-
Hori.	5725.000	PK	61.67	32.63	17.56	43.52	2.31	70.65	-24.58	27.0	51.5	109	271	-
Vert.	5650.000	PK	49.85	32.42	17.52	43.50	2.31	58.60	-36.63	-27.0	**9.6**	182	334	-
Vert.	5700.000	PK	50.02	32.55	17.54	43.51	2.31	58.91	-36.32	10.0	46.3	182	334	-
Vert.	5720.000	PK	56.43	32.61	17.55	43.52	2.31	65.38	-29.85	15.6	45.4	182	334	-
Vert.	5725.000	PK	60.31	32.63	17.56	43.52	2.31	69.29	-25.94	27.0	52.9	182	334	-

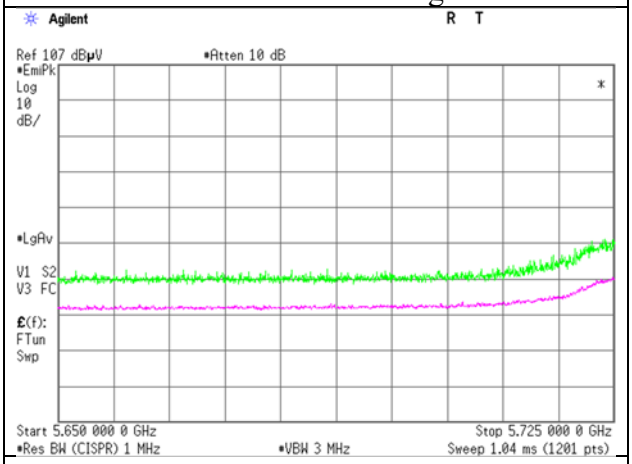
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5745 MHz with Tx Hopping ON, 3DH5

Horizontal

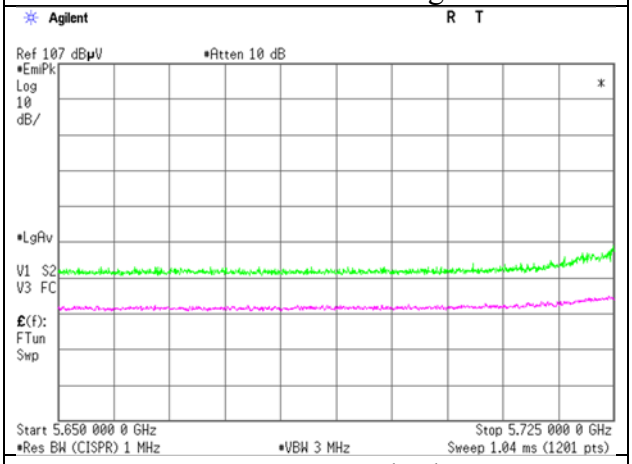
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-20 5825 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	60.12	32.99	17.64	43.54	2.31	69.52	-25.71	27.0	52.7	100	261	-
Hori.	5855.000	PK	56.41	33.00	17.64	43.54	2.31	65.82	-29.41	15.6	45.0	100	261	-
Hori.	5875.000	PK	50.24	33.03	17.67	43.54	2.31	59.71	-35.52	10.0	45.5	100	261	-
Hori.	5925.000	PK	50.65	33.10	17.69	43.55	2.31	60.20	-35.03	-27.0	**8.0**	100	261	-
Vert.	5850.000	PK	56.81	32.99	17.64	43.54	2.31	66.21	-29.02	27.0	56.0	168	281	-
Vert.	5855.000	PK	53.80	33.00	17.64	43.54	2.31	63.21	-32.02	15.6	47.6	168	281	-
Vert.	5875.000	PK	48.96	33.03	17.67	43.54	2.31	58.43	-36.80	10.0	46.8	168	281	-
Vert.	5925.000	PK	48.72	33.10	17.69	43.55	2.31	58.27	-36.96	-27.0	9.9	168	281	-

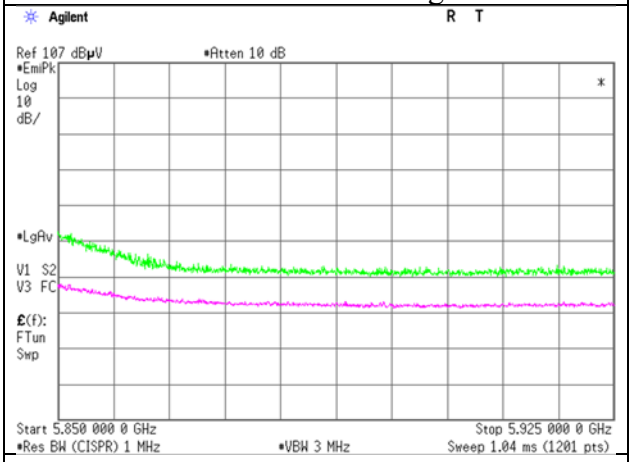
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20 5825 MHz with Tx Hopping ON, 3DH5

Horizontal

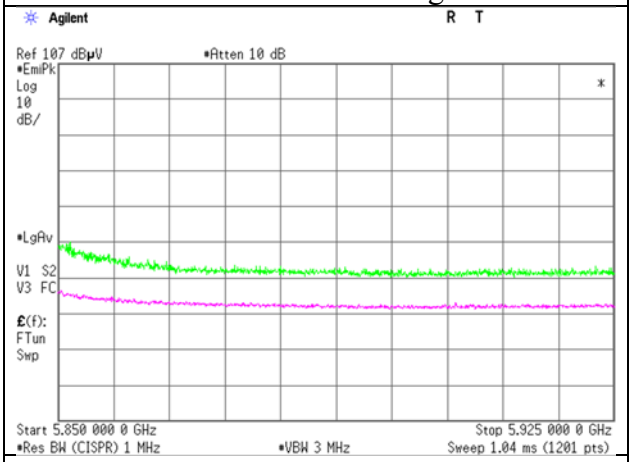
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 19, 2023
Temperature / Humidity	23 deg.C, 25 %RH
Engineer	Yusuke Tanikwara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5190 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	53.86	32.18	17.21	42.99	2.31	62.57	73.9	11.3	102	282	-
Hori.	5150.000	AV	44.44	32.18	17.21	42.99	2.31	53.15	53.9	**0.7**	102	282	VBW: 10 kHz
Vert.	5150.000	PK	51.75	32.18	17.21	42.99	2.31	60.46	73.9	13.4	161	288	-
Vert.	5150.000	AV	41.81	32.18	17.21	42.99	2.31	50.52	53.9	3.3	161	288	VBW: 10 kHz

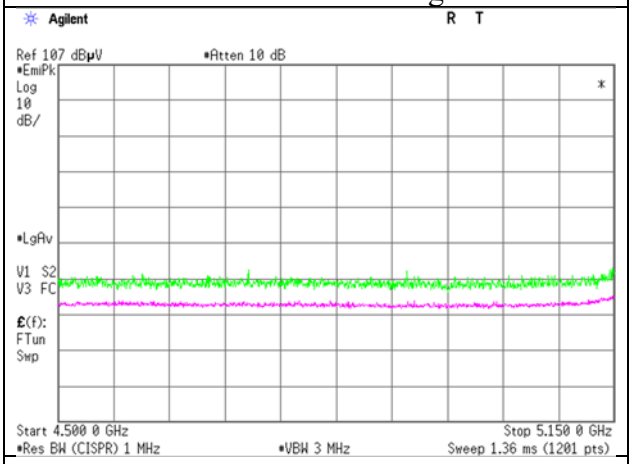
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 19, 2023
Temperature / Humidity	23 deg.C, 25 %RH
Engineer	Yusuke Tanikwara
Mode	Tx 11n-40 5190 MHz with Tx Hopping ON, 3DH5

Horizontal

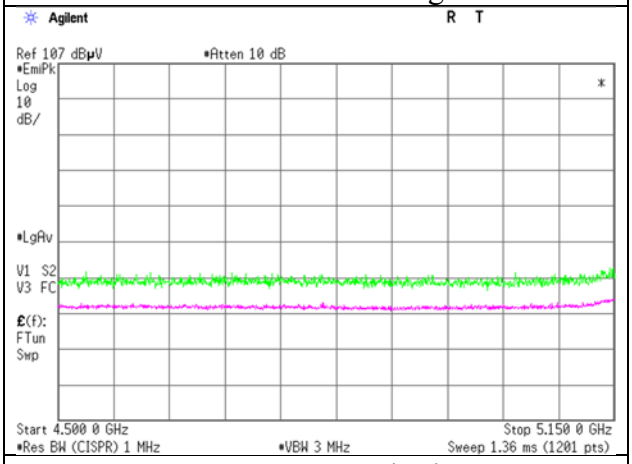
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5230 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	50.27	32.18	16.68	42.99	2.31	58.45	73.9	15.4	167	273	-
Hori.	5150.000	AV	40.40	32.18	16.68	42.99	2.31	48.58	53.9	**5.3**	167	273	VBW: 10 kHz
Vert.	5150.000	PK	50.89	32.18	16.68	42.99	2.31	59.07	73.9	14.8	135	294	-
Vert.	5150.000	AV	40.29	32.18	16.68	42.99	2.31	48.47	53.9	5.4	135	294	VBW: 10 kHz

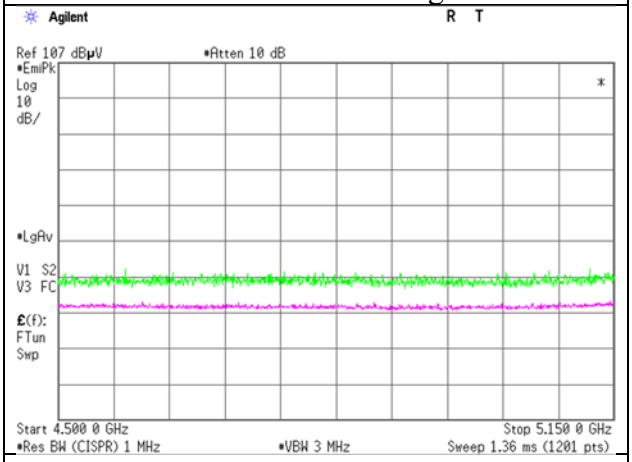
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5230 MHz with Tx Hopping ON, 3DH5

Horizontal

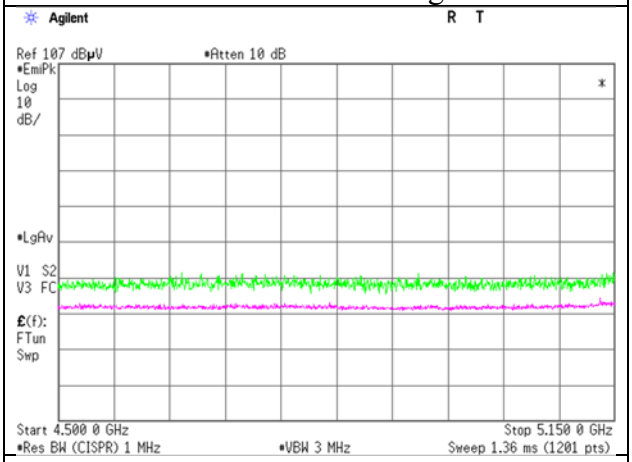
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5270 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.30	31.91	17.34	43.27	2.31	58.59	73.9	15.3	126	272	-
Hori.	5350.000	AV	40.32	31.91	17.34	43.27	2.31	48.61	53.9	**5.2**	126	272	VBW: 10 kHz
Vert.	5350.000	PK	48.52	31.91	17.34	43.27	2.31	56.81	73.9	17.0	219	298	-
Vert.	5350.000	AV	40.02	31.91	17.34	43.27	2.31	48.31	53.9	5.5	219	298	VBW: 10 kHz

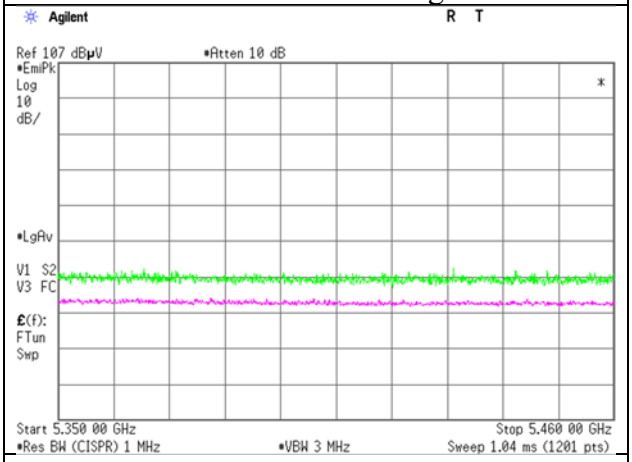
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5270 MHz with Tx Hopping ON, 3DH5

Horizontal

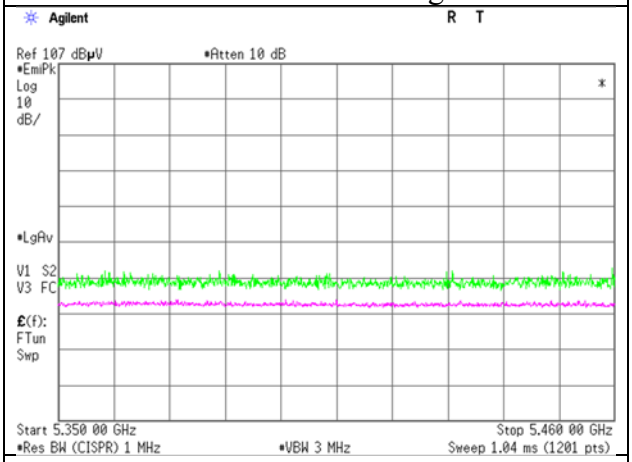
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5310 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	50.22	31.91	16.81	43.27	2.31	57.98	73.9	15.9	127	287	-
Hori.	5350.000	AV	40.58	31.91	16.81	43.27	2.31	48.34	53.9	5.5	127	287	VBW: 10 kHz
Vert.	5350.000	PK	51.46	31.91	16.81	43.27	2.31	59.22	73.9	14.6	176	289	-
Vert.	5350.000	AV	40.91	31.91	16.81	43.27	2.31	48.67	53.9	**5.2**	176	289	VBW: 10 kHz

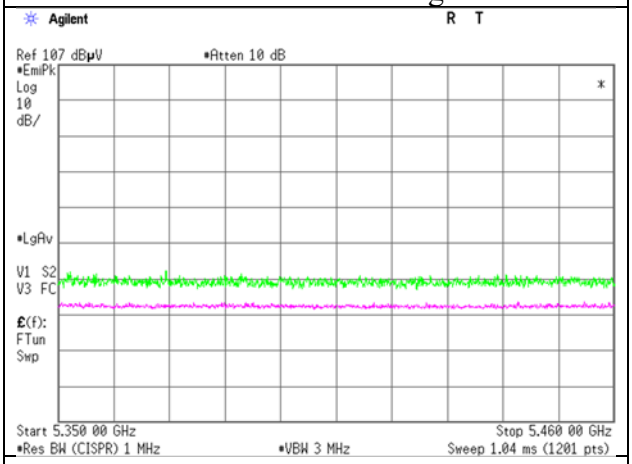
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5310 MHz with Tx Hopping ON, 3DH5

Horizontal

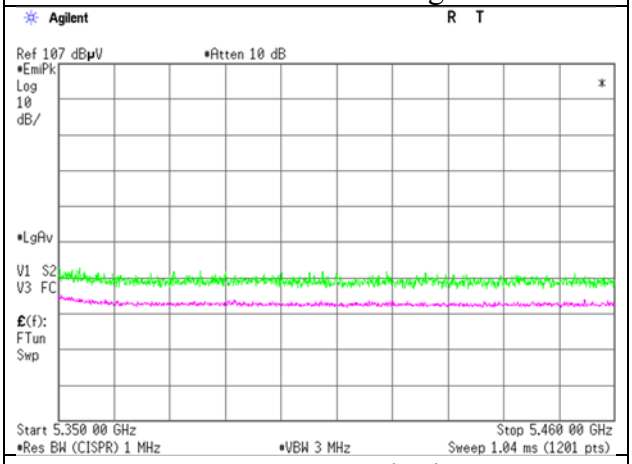
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5510 MHz with Tx Hopping ON, 3DH5

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5460.000	PK	53.28	32.16	16.88	43.42	2.31	61.21	73.9	12.6	162	269	-
Hori.	5460.000	AV	42.13	32.16	16.88	43.42	2.31	50.06	53.9	3.8	162	269	VBW: 10 kHz
Vert.	5460.000	PK	52.81	32.16	16.88	43.42	2.31	60.74	73.9	13.1	174	282	-
Vert.	5460.000	AV	42.85	32.16	16.88	43.42	2.31	50.78	53.9	**3.1**	174	282	VBW: 10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	55.66	32.18	16.89	43.44	2.31	63.60	-31.63	-27.0	4.6	162	269	-
Vert.	5470.000	PK	54.65	32.18	16.89	43.44	2.31	62.59	-32.64	-27.0	5.6	174	282	-

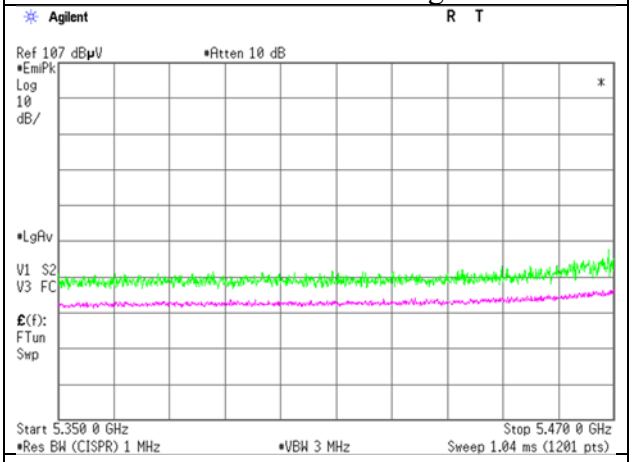
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5510 MHz with Tx Hopping ON, 3DH5

Horizontal

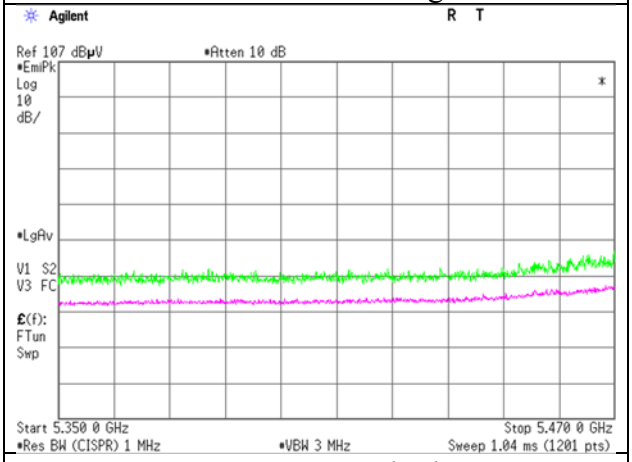
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5670 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5725.000	PK	51.14	32.63	17.03	43.52	2.31	59.59	-35.64	-27.0	8.6	101	249	-
Vert.	5725.000	PK	51.38	32.63	17.03	43.52	2.31	59.83	-35.40	-27.0	**8.4**	198	297	-

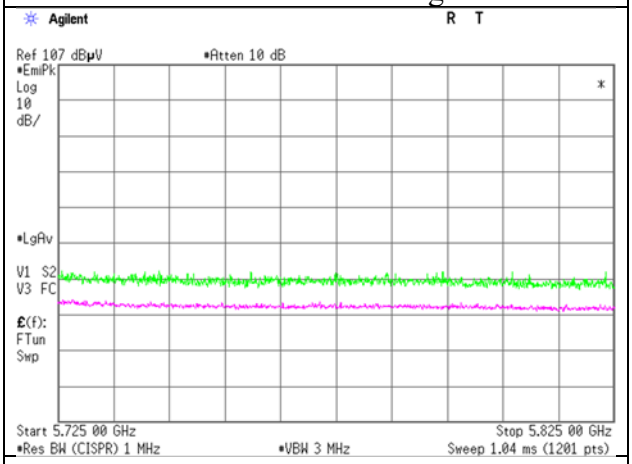
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5510 MHz with Tx Hopping ON, 3DH5

Horizontal

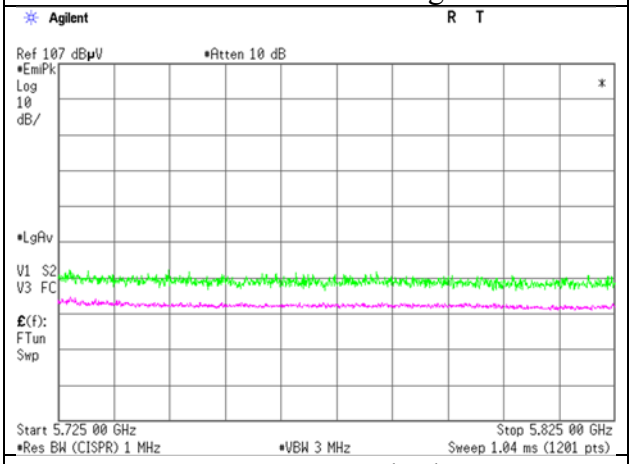
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5755 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.24	32.42	17.52	43.50	2.31	57.99	-37.24	-27.0	10.2	100	259	-
Hori.	5700.000	PK	53.95	32.55	17.54	43.51	2.31	62.84	-32.39	10.0	42.3	100	259	-
Hori.	5720.000	PK	60.06	32.61	17.55	43.52	2.31	69.01	-26.22	15.6	41.8	100	259	-
Hori.	5725.000	PK	59.60	32.63	17.56	43.52	2.31	68.58	-26.65	27.0	53.6	100	259	-
Vert.	5650.000	PK	49.48	32.42	17.52	43.50	2.31	58.23	-37.00	-27.0	**10.0**	202	277	-
Vert.	5700.000	PK	53.31	32.55	17.54	43.51	2.31	62.20	-33.03	10.0	43.0	202	277	-
Vert.	5720.000	PK	58.15	32.61	17.55	43.52	2.31	67.10	-28.13	15.6	43.7	202	277	-
Vert.	5725.000	PK	60.31	32.63	17.56	43.52	2.31	69.29	-25.94	27.0	52.9	202	277	-

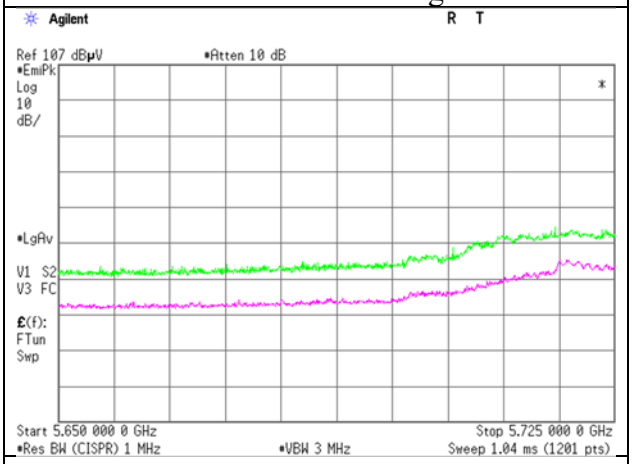
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5755 MHz with Tx Hopping ON, 3DH5

Horizontal

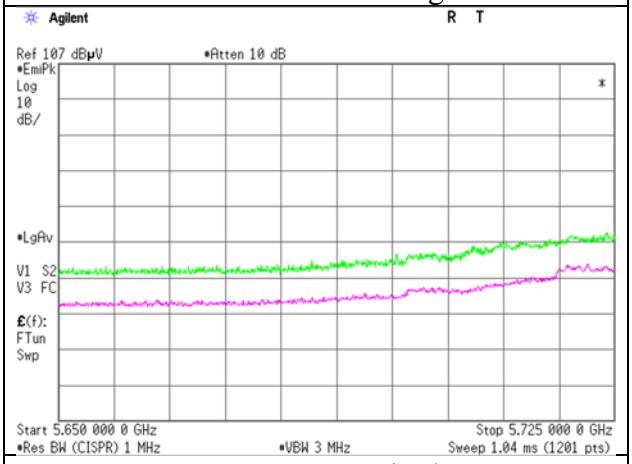
Restricted-band band-edge Plot



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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	24 deg.C, 32 %RH
Engineer	Hiromasa Sato
	(1 GHz -6.4 GHz)
Mode	Tx 11n-40 5795 MHz with Tx Hopping ON, 3DH5

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	53.85	32.99	17.64	43.54	2.31	63.25	-31.98	27.0	58.9	113	267	-
Hori.	5855.000	PK	51.73	33.00	17.64	43.54	2.31	61.14	-34.09	15.6	49.6	113	267	-
Hori.	5875.000	PK	51.61	33.03	17.67	43.54	2.31	61.08	-34.15	10.0	44.1	113	267	-
Hori.	5925.000	PK	50.11	33.10	17.69	43.55	2.31	59.66	-35.57	-27.0	**8.5**	113	267	-
Vert.	5850.000	PK	52.98	32.99	17.64	43.54	2.31	62.38	-32.85	27.0	59.8	176	283	-
Vert.	5855.000	PK	51.04	33.00	17.64	43.54	2.31	60.45	-34.78	15.6	50.3	176	283	-
Vert.	5875.000	PK	47.52	33.03	17.67	43.54	2.31	56.99	-38.24	10.0	48.2	176	283	-
Vert.	5925.000	PK	49.21	33.10	17.69	43.55	2.31	58.76	-36.47	-27.0	9.4	176	283	-

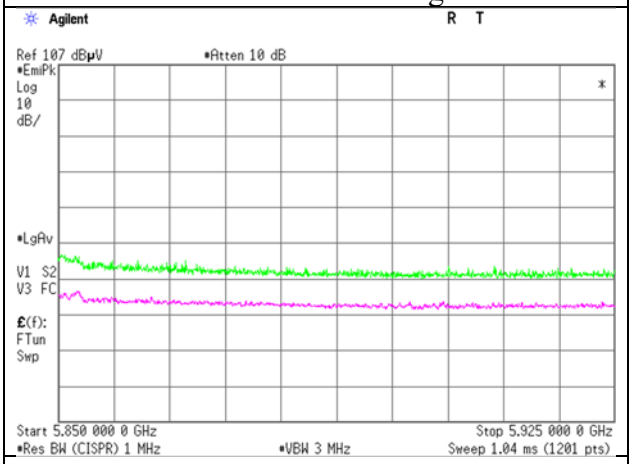
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.3
Date	January 18, 2023
Temperature / Humidity	22 deg.C, 28 %RH
Engineer	Yusuke Tanikawara
Mode	Tx 11n-40 5795 MHz with Tx Hopping ON, 3DH5

Horizontal

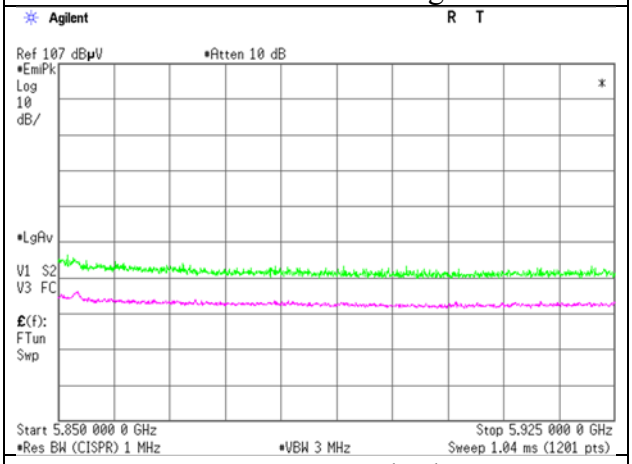
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot

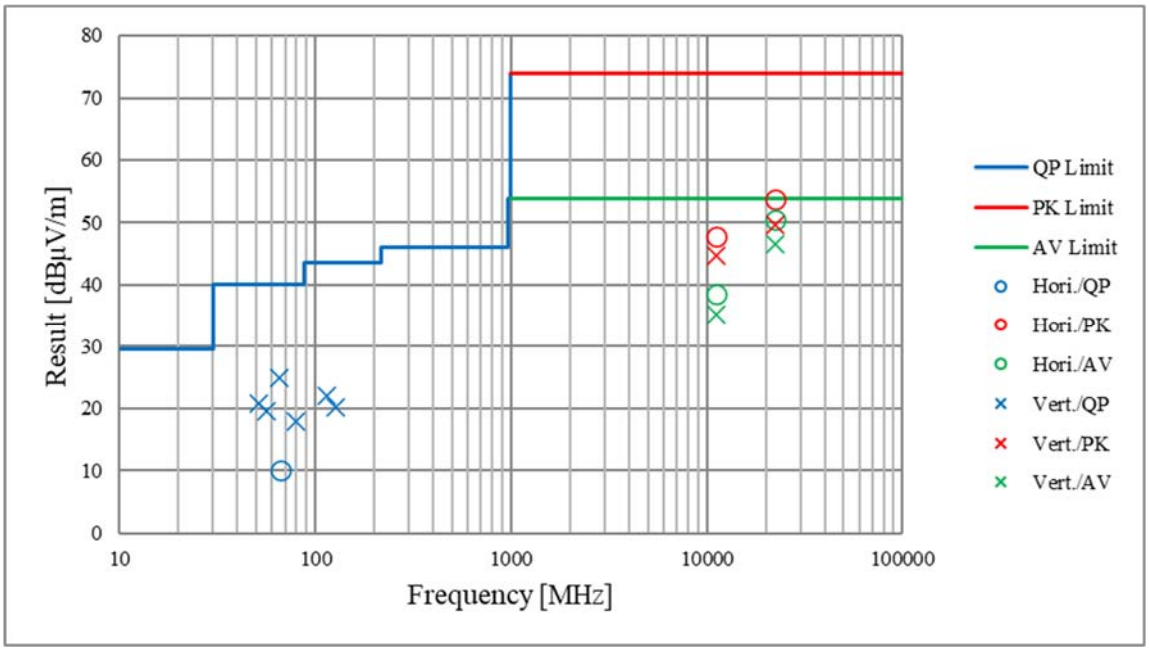


Trace Green: Peak Plot
Trace Purple: Average Plot

* 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
(Plot data, Worst case mode for Maximum Conducted Output Power)

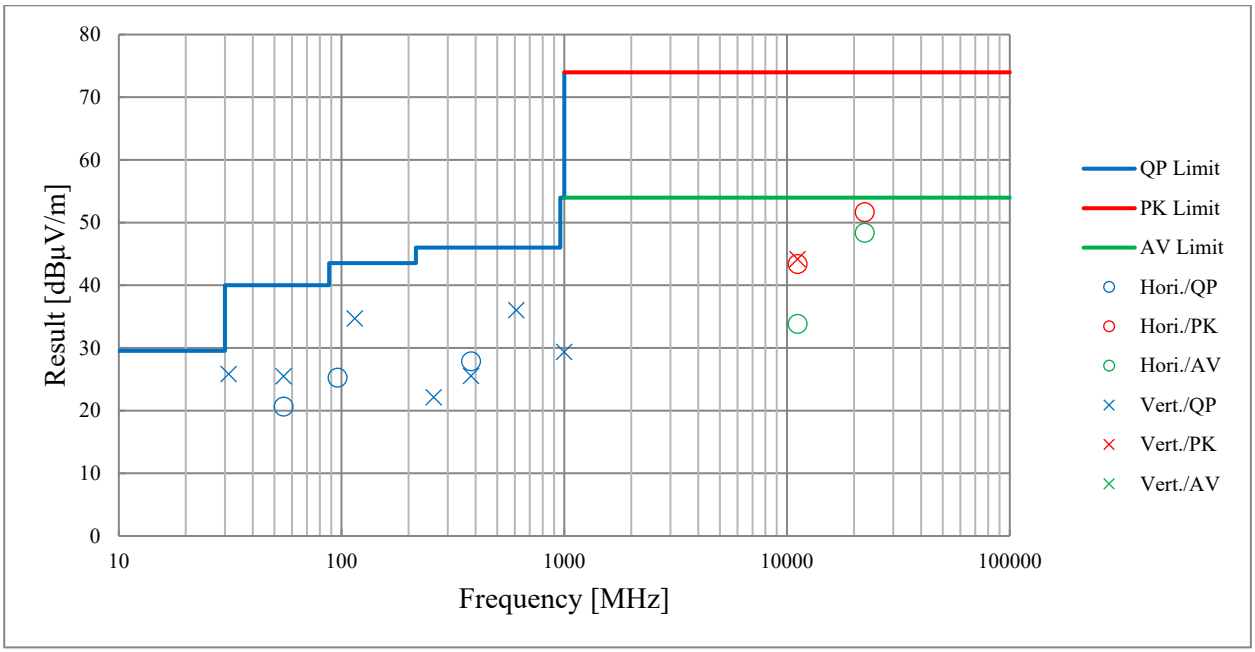
Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	No.3	No.3	No.2	No.2	No.3
Date	January 11, 2023	December 29, 2022	December 26, 2022	December 27, 2022	January 7, 2023
Temperature / Humidity	23 deg.C, 27 %RH	22 deg.C, 30 %RH	22 deg.C, 31 %RH	25 deg.C, 30 %RH	22 deg.C, 32 %RH
Engineer	Miku Ikudome	Yasumasa Owaki	Takahiro Kawakami	Yohsuke Matsuzawa	Hiromasa Sato
	(30 MHz -1 GHz)	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)
Mode	Tx 11n-20 5580 MHz				



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

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

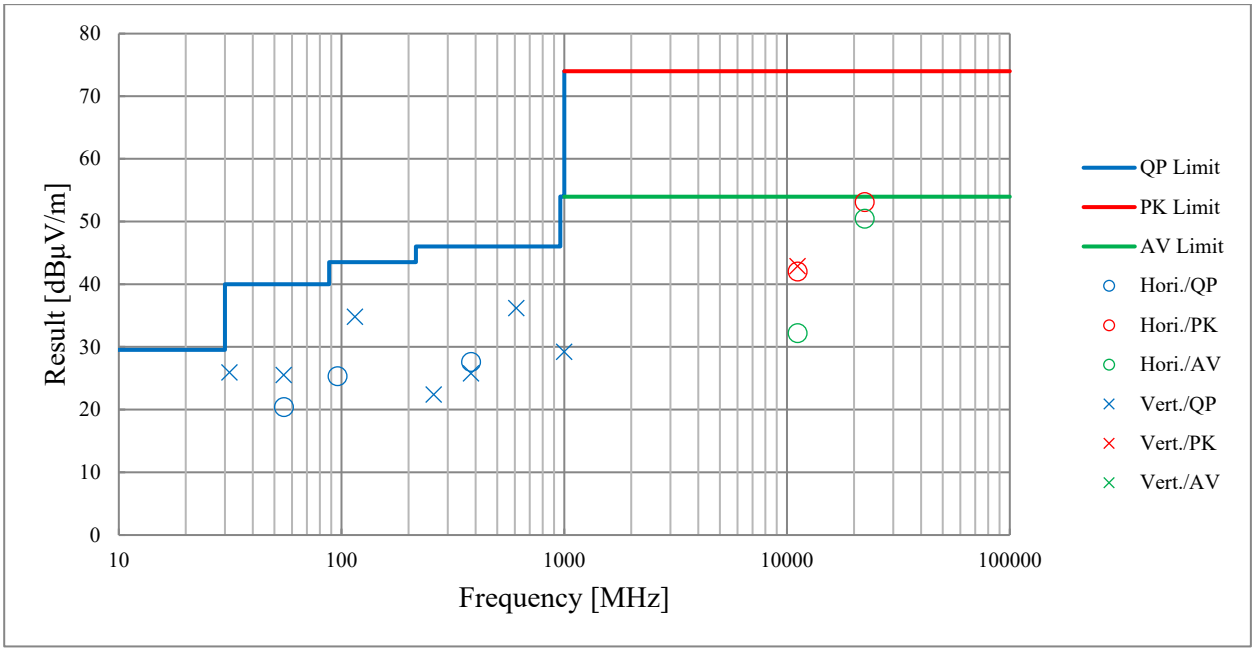
Test place Semi Anechoic Chamber	Shonan EMC Lab.			
Date	January 19, 2023	January 17, 2023	January 18, 2023	January 19, 2023
Temperature / Humidity	22 deg.C, 29 %RH	22 deg.C, 31 %RH	22 deg.C, 28 %RH	23 deg.C, 25 %RH
Engineer	Hiromasa Sato	Takahiro Suzuki	Yusuke Tanikawara	Yusuke Tanikawara
	(30 MHz -1 GHz)	(1 GHz -10 GHz)	(10 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5580 MHz with Tx BT LE 2M-PHY 2402 MHz			



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

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

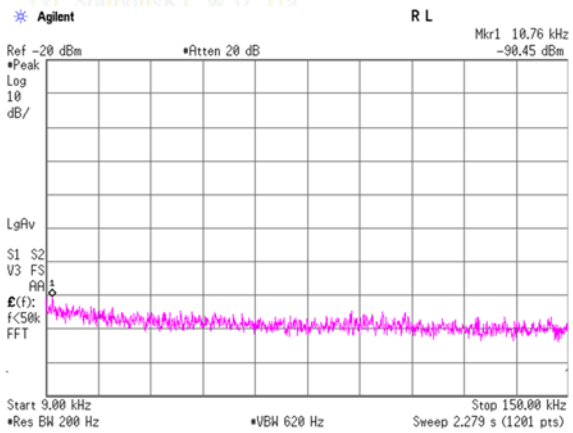
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	No.3	No.3	No.3	No.3
Date	January 19, 2023	January 18, 2023	January 18, 2023	January 19, 2023
Temperature / Humidity	22 deg.C, 32 %RH	24 deg.C, 32 %RH	22 deg.C, 28 %RH	23 deg.C, 25 %RH
Engineer	Hiromasa Sato	Hiromasa Sato	Yusuke Tanikawara	Yusuke Tanikawara
	(30 MHz -1 GHz)	(1 GHz -6.4 GHz)	(6.4 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5580 MHz with Tx Hopping ON, 3DH5			



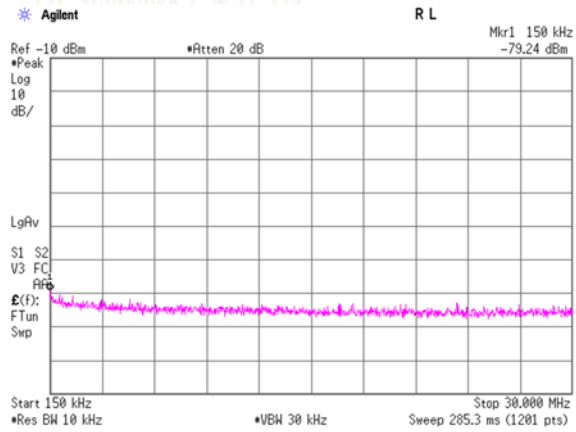
Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	November 16, 2022
Temperature / Humidity	24 deg. C / 34 % RH
Engineer	Miku Ikudome
Mode	Tx 11n-20 5580 MHz

9 kHz - 150 kHz



150 kHz - 30 MHz



FREQ [kHz]	Reading [dBm]	Cable Loss [dB]	Anttenuato Loss [dB]	Antenna Gain *1)	N (Number of output)	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field Strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]
10.8	-90.45	0.01	20.14	2.00	1	-68.30	300.00	6.00	-7.04	46.90	53.94
150.0	-79.24	0.01	20.14	2.00	1	-57.09	300.00	6.00	4.17	24.00	19.83

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

EIRP [dBm] = Reading [dBm] + Cable Loss [dB] + Attenuator Loss [dB] + Antenna Gain [dBi] + 10 x log (N)

N: Number of output port

*1) 2.0 dBi was applied to the 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
AT	KTS-07	145111	Digital Tester	SANWA	PC500	7019232	2022/09/20	12
AT	SAT20-03	145144	Attenuator	Keysight Technologies Inc	8493C-020	74891	2022/03/01	12
AT	SCC-G65	196942	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	803416/2	2022/03/01	12
AT	SCC-H23	199603	Microwave cable	RS Pro	R-132G7210 100CO	-	2022/06/03	12
AT	SOS-27	191845	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	2022/08/08	12
AT	SPM-13	169910	Power Meter	Keysight Technologies Inc	8990B	MY51000448	2022/11/08	12
AT	SPSS-06	169911	Power sensor	Keysight Technologies Inc	N1923A	MY57270004	2022/11/08	12
AT	SSA-02	145800	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY48250106	2022/05/17	12
AT	STS-05	146212	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997828	2022/09/20	12
AT,RE	KSA-08	145089	Spectrum Analyzer	Keysight Technologies Inc	E4446A	MY46180525	2022/11/01	12
AT,RE	SSA-03	145801	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY48250152	2022/08/04	12
CE	SAT3-10	144960	Attenuator	JFW	50HF-003N	-	2022/08/23	12
CE	SAT3-13	150923	Attenuator	JFW	50HF-003N	-	2022/02/21	12
CE	SCC-C9/C10/SRSE-03	145036	Coaxial Cable&RF Selector	Suhner/Suhner/TOYO	RG223U/141PE/NS4906	-/0901-271(RF Selector)	2022/04/20	12
CE	SLS-02	145539	LISN	Rohde & Schwarz	ENV216	100512	2022/02/23	12
CE	SLS-05	145542	LISN	Rohde & Schwarz	ENV216	100516	2022/02/24	12
CE	SOS-06	146294	Humidity Indicator	A&D Company	AD-5681	4062118	-	-
CE	STM-05	145762	Terminator	TME	CT-01 BP	-	2022/12/16	12
CE,RE	COTS-SEMI-5	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,PE)	-	-	-
CE,RE	KJM-02	146432	Measure	TAJIMA	GL19-55	-	-	-
CE,RE	STR-07	146209	Test Receiver	Rohde & Schwarz	ESU26	100484	2022/09/14	12
CE,RE	STS-03	146210	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997823	2022/09/20	12
RE	SAEC-02(SVSWR)	145598	Semi-Anechoic Chamber	TDK	SAEC-02(SVSWR)	2	2022/05/16	12
RE	SAEC-03(NSA)	145565	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	2022/04/15	12
RE	SAEC-03(SVSWR)	145566	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	2022/05/18	12
RE	SAF-03	145126	Pre Amplifier	SONOMA	310N	290213	2022/02/24	12
RE	SAF-05	145128	Pre Amplifier	Toyo Corporation	TPA0118-36	1440490	2022/05/12	12
RE	SAF-06	145005	Pre Amplifier	Toyo Corporation	TPA0118-36	1440491	2022/02/04	12
RE	SAF-08	145007	Pre Amplifier	Toyo Corporation	HAP18-26W	19	2022/03/03	12
RE	SAF-10	145129	Pre Amplifier	Toyo Corporation	HAP26-40W	10	2022/03/03	12
RE	SAJ-03	146105	Antenna Tilt Jig	Intelligent System Engineering Co., Ltd	Antenna Tilt Jig	T-S003	-	-
RE	SAT10-06	145137	Attenuator	Keysight Technologies Inc	8493C-010	74865	2022/10/20	12
RE	SAT6-13	167094	Attenuator	JFW	50HF-006N	-	2022/02/21	12
RE	SBA-03	145023	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	BBA9106	91032666	2022/05/14	12
RE	SCC-C1/C2/C3/C4/C5/C10/SRSE-03	145171	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	2022/04/20	12
RE	SCC-G15	145176	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	2022/03/03	12

Test Equipment (2/2)

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	SCC-G40	166491	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S005	2023/01/12	12
RE	SCC-G41	151617	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S006	2023/01/12	12
RE	SCC-G43	156380	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	SN MY 13406/4E	2022/05/20	12
RE	SCC-G44	168300	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800375/4A	2022/11/10	12
RE	SCC-G50	178573	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	MY13407/4E	2022/03/03	12
RE	SCC-G51	178572	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800288 /4A	2022/03/03	12
RE	SCC-G57	179540	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	802815/2	2022/05/12	12
RE	SCC-G69	200009	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575617/4	2022/07/21	12
RE	SCC-G70	200010	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575618/4	2022/07/22	12
RE	SFL-03	145377	Highpass Filter	MICRO-TRONICS	HPM50112	28	2022/10/20	12
RE	SFL-18	145305	Highpass Filter	MICRO-TRONICS	HPM50111	119	2022/03/02	12
RE	SHA-02	145384	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	9120D-726	2022/03/10	12
RE	SHA-03	145501	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	9120D-739	2022/03/16	12
RE	SHA-04	145512	Horn Antenna	ETS-Lindgren	3160-09	00094868	2022/06/06	12
RE	SHA-06	145514	Horn Antenna	ETS-Lindgren	3160-10	00092383	2022/06/06	12
RE	SHA-09	194684	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	695	2022/03/10	12
RE	SHA-10	194685	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	711	2022/03/16	12
RE	SJM-20	207277	Measuring	ASKUL	-	-	-	-
RE	SLA-07	145529	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	196	2022/05/14	12
RE	SOS-21	191838	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	2022/08/08	12
RE	SOS-23	191840	Thermo-Hygrometer	CUSTOM. Inc	CTH-201	-	2022/08/08	12
RE	STS-02	145793	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997819	2022/04/07	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