Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-0.39	3.46	9.89	0.00	5.94	-	16.818	12.96	19.77	23.97	11.01	18.90	77.62	29.97	11.07
5200	0.31	3.46	9.89	0.00	5.94	-	16.835	13.66	23.23	23.97	10.31	19.60	91.20	29.97	10.37
5240	0.95	3.46	9.89	0.00	5.94	-	16.853	14.30	26.92	23.97	9.67	20.24	105.68	29.97	9.73
5260	-0.28	3.46	9.89	0.00	5.94	19.775	16.824	13.07	20.28	23.96	10.89	19.01	79.62	29.97	10.96
5300	0.19	3.46	9.89	0.00	5.94	19.825	16.828	13.54	22.59	23.97	10.43	19.48	88.72	29.97	10.49
5320	0.43	3.47	9.89	0.00	5.94	19.852	16.841	13.79	23.93	23.97	10.18	19.73	93.97	29.97	10.24
5500	-0.38	3.49	9.89	0.00	6.29	19.649	16.818	13.00	19.95	23.64	10.64	19.29	84.92	29.97	10.68
5580	0.73	3.49	9.89	0.00	6.29	19.680	16.833	14.11	25.76	23.65	9.54	20.40	109.65	29.97	9.57
5700	0.77	3.51	9.89	0.00	6.29	19.721	16.833	14.17	26.12	23.65	9.48	20.46	111.17	29.97	9.51
5745	0.90	3.51	9.90	0.00	7.12	-	16.810	14.31	26.98	28.88	14.57	21.43	139.00	36.00	14.57
5785	0.51	3.51	9.90	0.00	7.12	-	16.820	13.92	24.66	28.88	14.96	21.04	127.06	36.00	14.96
5825	0.77	3.52	9.90	0.00	7.12	-	16.827	14.19	26.24	28.88	14.69	21.31	135.21	36.00	14.69

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-1.11	3.46	9.89	0.00	5.94	-	17.860	12.24	16.75	23.97	11.73	18.18	65.77	29.97	11.79
5200	-1.15	3.46	9.89	0.00	5.94	-	17.830	12.20	16.60	23.97	11.77	18.14	65.16	29.97	11.83
5240	-0.33	3.46	9.89	0.00	5.94	-	17.804	13.02	20.04	23.97	10.95	18.96	78.70	29.97	11.01
5260	-0.84	3.46	9.89	0.00	5.94	20.913	17.815	12.51	17.82	23.97	11.46	18.45	69.98	29.97	11.52
5300	-0.93	3.46	9.89	0.00	5.94	20.901	17.867	12.42	17.46	23.97	11.55	18.36	68.55	29.97	11.61
5320	-0.71	3.47	9.89	0.00	5.94	20.804	17.867	12.65	18.41	23.97	11.32	18.59	72.28	29.97	11.38
5500	-1.69	3.49	9.89	0.00	6.29	20.540	17.804	11.69	14.76	23.68	11.99	17.98	62.81	29.97	11.99
5580	-1.27	3.49	9.89	0.00	6.29	20.539	17.836	12.11	16.26	23.68	11.57	18.40	69.18	29.97	11.57
5700	-0.37	3.51	9.89	0.00	6.29	20.757	17.817	13.03	20.09	23.68	10.65	19.32	85.51	29.97	10.65
5745	-1.22	3.51	9.90	0.00	7.12	-	17.822	12.19	16.56	28.88	16.69	19.31	85.31	36.00	16.69
5785	-0.65	3.51	9.90	0.00	7.12	-	17.867	12.76	18.88	28.88	16.12	19.88	97.27	36.00	16.12
5825	-1.05	3.52	9.90	0.00	7.12	-	17.845	12.37	17.26	28.88	16.51	19.49	88.92	36.00	16.51

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-0.65	3.46	9.89	0.00	5.94	-	17.837	12.70	18.62	23.97	11.27	18.64	73.11	29.97	11.33
5200	-0.26	3.46	9.89	0.00	5.94	-	17.840	13.09	20.37	23.97	10.88	19.03	79.98	29.97	10.94
5240	-0.52	3.46	9.89	0.00	5.94	-	17.858	12.83	19.19	23.97	11.14	18.77	75.34	29.97	11.20
5260	-0.53	3.46	9.89	0.00	5.94	20.947	17.834	12.82	19.14	23.97	11.15	18.76	75.16	29.97	11.21
5300	-0.37	3.46	9.89	0.00	5.94	20.983	17.840	12.98	19.86	23.97	10.99	18.92	77.98	29.97	11.05
5320	-0.46	3.47	9.89	0.00	5.94	20.946	17.839	12.90	19.50	23.97	11.07	18.84	76.56	29.97	11.13
5500	-1.05	3.49	9.89	0.00	6.29	20.830	17.826	12.33	17.10	23.68	11.35	18.62	72.78	29.97	11.35
5580	-0.51	3.49	9.89	0.00	6.29	20.828	17.830	12.87	19.36	23.68	10.81	19.16	82.41	29.97	10.81
5700	-0.55	3.51	9.89	0.00	6.29	20.848	17.827	12.85	19.28	23.68	10.83	19.14	82.04	29.97	10.83
5745	-1.44	3.51	9.90	0.00	7.12	-	17.821	11.97	15.74	28.88	16.91	19.09	81.10	36.00	16.91
5785	-1.10	3.51	9.90	0.00	7.12	-	17.821	12.31	17.02	28.88	16.57	19.43	87.70	36.00	16.57
5825	-1.56	3.52	9.90	0.00	7.12	-	17.819	11.86	15.35	28.88	17.02	18.98	79.07	36.00	17.02

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-0.98	3.46	9.89	0.00	5.94	-	36.176	12.37	17.26	23.97	11.60	18.31	67.76	29.97	11.66
5230	-0.42	3.46	9.89	0.00	5.94	-	36.257	12.93	19.63	23.97	11.04	18.87	77.09	29.97	11.10
5270	-1.20	3.47	9.89	0.00	5.94	40.414	36.279	12.16	16.44	23.97	11.81	18.10	64.57	29.97	11.87
5310	-0.39	3.47	9.89	0.00	5.94	40.511	36.283	12.97	19.82	23.97	11.00	18.91	77.80	29.97	11.06
5510	-1.76	3.49	9.89	0.00	6.29	40.287	36.145	11.62	14.52	23.68	12.06	17.91	61.80	29.97	12.06
5550	-1.06	3.49	9.89	0.00	6.29	39.586	36.217	12.32	17.06	23.68	11.36	18.61	72.61	29.97	11.36
5670	-0.91	3.50	9.89	0.00	6.29	39.789	36.209	12.48	17.70	23.68	11.20	18.77	75.34	29.97	11.20
5755	-0.38	3.51	9.90	0.00	7.12	-	36.282	13.03	20.09	28.88	15.85	20.15	103.51	36.00	15.85
5795	-0.57	3.51	9.90	0.00	7.12	-	36.249	12.84	19.23	28.88	16.04	19.96	99.08	36.00	16.04

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-1.20	3.46	9.89	0.00	5.94	-	36.322	12.15	16.41	23.97	11.82	18.09	64.42	29.97	11.88
5230	-1.40	3.46	9.89	0.00	5.94	-	36.371	11.95	15.67	23.97	12.02	17.89	61.52	29.97	12.08
5270	-0.70	3.47	9.89	0.00	5.94	40.883	36.340	12.66	18.45	23.97	11.31	18.60	72.44	29.97	11.37
5310	-1.01	3.47	9.89	0.00	5.94	40.855	36.331	12.35	17.18	23.97	11.62	18.29	67.45	29.97	11.68
5510	-1.66	3.49	9.89	0.00	6.29	40.919	36.307	11.72	14.86	23.68	11.96	18.01	63.24	29.97	11.96
5550	-0.92	3.49	9.89	0.00	6.29	40.934	36.318	12.46	17.62	23.68	11.22	18.75	74.99	29.97	11.22
5670	-0.89	3.50	9.89	0.00	6.29	40.758	36.300	12.50	17.78	23.68	11.18	18.79	75.68	29.97	11.18
5755	-0.19	3.51	9.90	0.00	7.12	-	36.308	13.22	20.99	28.88	15.66	20.34	108.14	36.00	15.66
5795	-1.01	3.51	9.90	0.00	7.12	-	36.305	12.40	17.38	28.88	16.48	19.52	89.54	36.00	16.48

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
e.i.r.p. Result = Conducted Power Result + Antenna Gain
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5210	-1.71	3.46	9.89	0.00	5.94	-	75.758	11.64	14.59	23.97	12.33	17.58	57.28	29.97	12.39
5290	-1.19	3.47	9.89	0.00	5.94	80.876	75.730	12.17	16.48	23.97	11.80	18.11	64.71	29.97	11.86
5530	-0.98	3.49	9.89	0.00	6.29	80.892	75.800	12.40	17.38	23.68	11.28	18.69	73.96	29.97	11.28
5775	-1.42	3.51	9.90	0.00	7.12	-	75.792	11.99	15.81	28.88	16.89	19.11	81.47	36.00	16.89

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

The conducted power limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725-5850MHz for ISED)

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

5180 MHz

Mode	Rate Mbps	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11a	6	-1.26	0.00	-1.26	-
	9	-1.10	0.00	-1.10	-
	12	-0.88	0.00	-0.88	-
	18	-0.74	0.00	-0.74	-
	24	-0.53	0.00	-0.53	-
	36	-0.39	0.00	-0.39	*
	48	-0.64	0.00	-0.64	-
	54	-0.90	0.00	-0.90	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20

5180 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-20	0	-1.42	0.00	-1.42	-
	1	-1.35	0.00	-1.35	-
	2	-1.32	0.00	-1.32	-
	3	-1.63	0.00	-1.63	-
	4	-1.11	0.00	-1.11	*
	5	-1.29	0.00	-1.29	-
	6	-1.31	0.00	-1.31	-
	7	-1.14	0.00	-1.14	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

5180 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-20	0	-0.78	0.00	-0.78	-
	1	-0.68	0.00	-0.68	-
	2	-0.94	0.00	-0.94	-
	3	-0.89	0.00	-0.89	-
	4	-0.91	0.00	-0.91	-
	5	-1.17	0.00	-1.17	-
	6	-0.65	0.00	-0.65	*
	7	-1.10	0.00	-1.10	-
	8	-0.98	0.00	-0.98	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-40

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11n-40	0	-1.36	0.00	-1.36	-
	1	-0.98	0.00	-0.98	*
	2	-1.41	0.00	-1.41	-
	3	-1.28	0.00	-1.28	-
	4	-1.41	0.00	-1.41	-
	5	-1.08	0.00	-1.08	-
	6	-1.06	0.00	-1.06	-
	7	-1.12	0.00	-1.12	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-40	0	-1.57	0.00	-1.57	-
	1	-1.21	0.00	-1.21	-
	2	-1.35	0.00	-1.35	-
	3	-1.30	0.00	-1.30	-
	4	-1.20	0.00	-1.20	*
	5	-1.64	0.00	-1.64	-
	6	-1.57	0.00	-1.57	-
	7	-1.60	0.00	-1.60	-
	8	-1.63	0.00	-1.63	-
	9	-1.53	0.00	-1.53	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80

5210 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
11ac-80	0	-2.00	0.00	-2.00	-
	1	-1.87	0.00	-1.87	-
	2	-2.02	0.00	-2.02	-
	3	-1.76	0.00	-1.76	-
	4	-2.06	0.00	-2.06	-
	5	-1.94	0.00	-1.94	-
	6	-1.99	0.00	-1.99	-
	7	-1.99	0.00	-1.99	-
	8	-2.10	0.00	-2.10	-
	9	-1.71	0.00	-1.71	*

* Worst rate

Sample Calculation:

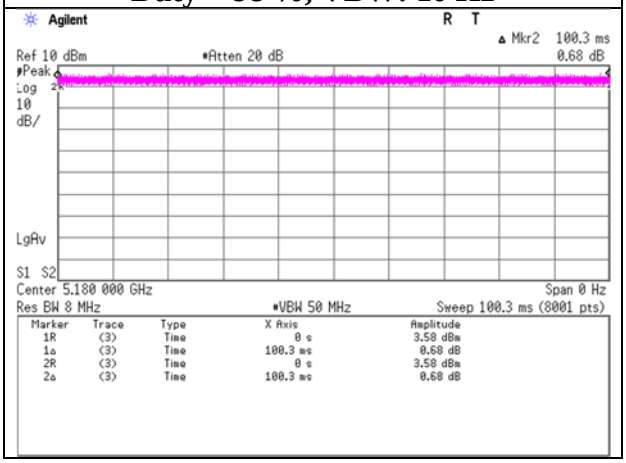
Burst power = Reading (timed average) + Duty factor

Burst rate confirmation

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx

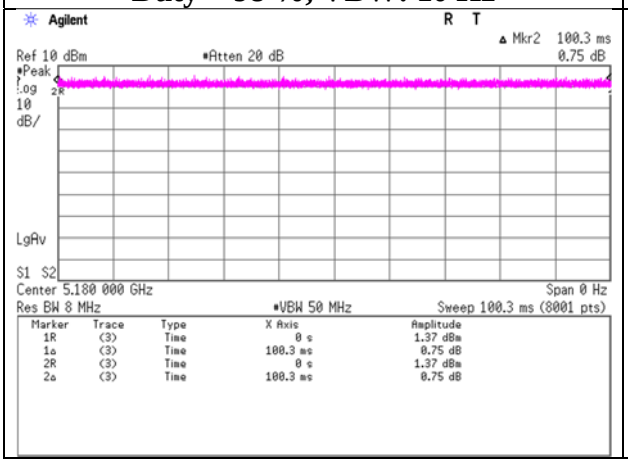
11a 36 Mbps

Duty > 98 %, VBW: 10 Hz



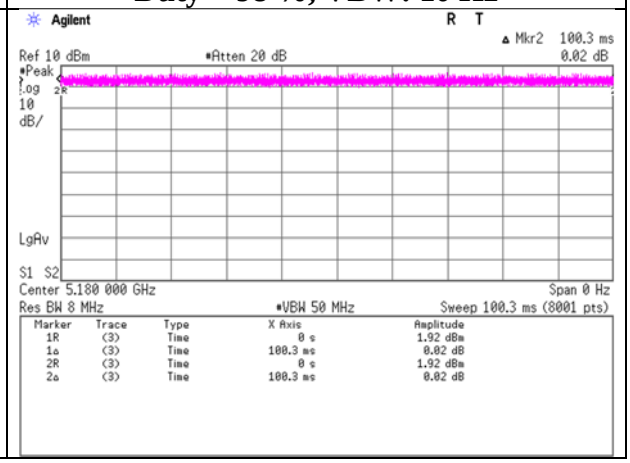
11n-20 MCS 4

Duty > 98 %, VBW: 10 Hz



11ac-20 MCS 6

Duty > 98 %, VBW: 10 Hz

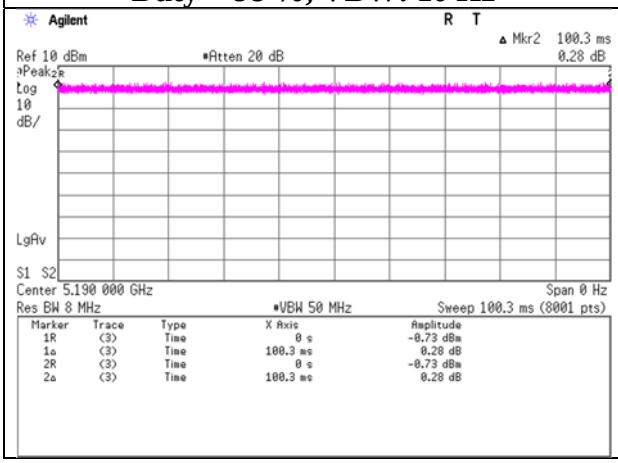


Burst rate confirmation

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	April 12, 2022
Temperature / Humidity	24 deg. C / 49 % RH
Engineer	Hiromasa Sato
Mode	Tx

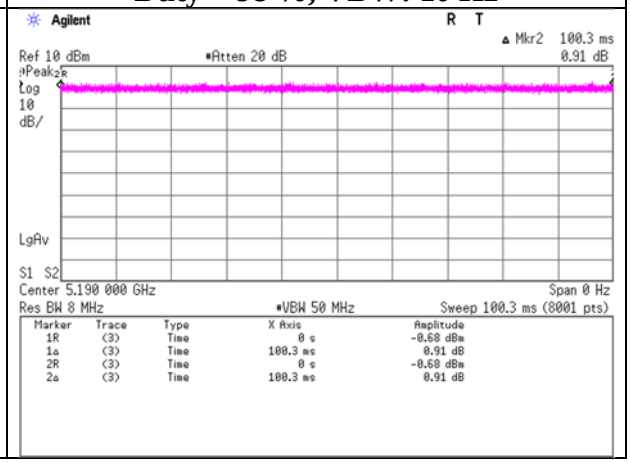
11n-40 MCS 1

Duty > 98 %, VBW: 10 Hz



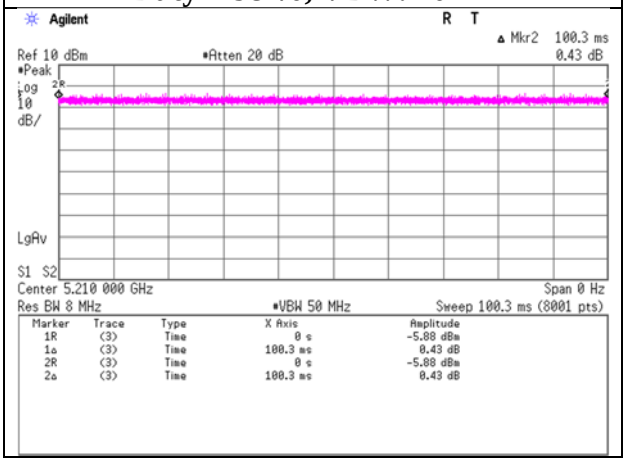
11ac-40 MCS 4

Duty > 98 %, VBW: 10 Hz



11ac-80 MCS 9

Duty > 98 %, VBW: 10 Hz



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-10.60	3.46	9.89	0.00	5.94	0.00	2.75	11.00	8.25	8.69	17.00	8.31
5200	-11.07	3.46	9.89	0.00	5.94	0.00	2.28	11.00	8.72	8.22	17.00	8.78
5240	-9.30	3.46	9.89	0.00	5.94	0.00	4.05	11.00	6.95	9.99	17.00	7.01
5260	-10.21	3.46	9.89	0.00	5.94	0.00	3.14	11.00	7.86	9.08	17.00	7.92
5300	-9.54	3.47	9.89	0.00	5.94	0.00	3.82	11.00	7.18	9.76	17.00	7.24
5320	-10.06	3.47	9.89	0.00	5.94	0.00	3.30	11.00	7.70	9.24	17.00	7.76
5500	-10.24	3.49	9.89	0.00	6.29	0.00	3.14	10.71	7.57	9.43	17.00	7.57
5580	-9.75	3.49	9.89	0.00	6.29	0.00	3.63	10.71	7.08	9.92	17.00	7.08
5700	-9.32	3.51	9.89	0.00	6.29	0.00	4.08	10.71	6.63	10.37	17.00	6.63
5745	-19.45	3.51	9.90	0.00	7.12	6.99	0.95	28.88	27.93	8.07	36.00	27.93
5785	-18.80	3.51	9.90	0.00	7.12	6.99	1.60	28.88	27.28	8.72	36.00	27.28
5825	-18.28	3.52	9.90	0.00	7.12	6.99	2.13	28.88	26.75	9.25	36.00	26.75

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-20	

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-12.70	3.46	9.89	0.00	5.94	0.00	0.65	11.00	10.35	6.59	17.00	10.41
5200	-13.08	3.46	9.89	0.00	5.94	0.00	0.27	11.00	10.73	6.21	17.00	10.79
5240	-11.76	3.46	9.89	0.00	5.94	0.00	1.59	11.00	9.41	7.53	17.00	9.47
5260	-12.45	3.46	9.89	0.00	5.94	0.00	0.90	11.00	10.10	6.84	17.00	10.16
5300	-12.01	3.47	9.89	0.00	5.94	0.00	1.35	11.00	9.65	7.29	17.00	9.71
5320	-12.36	3.47	9.89	0.00	5.94	0.00	1.00	11.00	10.00	6.94	17.00	10.06
5500	-13.35	3.49	9.89	0.00	6.29	0.00	0.03	10.71	10.68	6.32	17.00	10.68
5580	-11.88	3.49	9.89	0.00	6.29	0.00	1.50	10.71	9.21	7.79	17.00	9.21
5700	-11.62	3.51	9.89	0.00	6.29	0.00	1.78	10.71	8.93	8.07	17.00	8.93
5745	-22.50	3.51	10.22	0.00	7.12	6.99	-1.78	28.88	30.66	5.34	36.00	30.66
5785	-21.95	3.51	10.22	0.00	7.12	6.99	-1.23	28.88	30.11	5.89	36.00	30.11
5825	-22.08	3.52	10.22	0.00	7.12	6.99	-1.35	28.88	30.23	5.77	36.00	30.23

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-10.44	3.46	9.89	0.00	5.94	0.00	2.91	11.00	8.09	8.85	17.00	8.15
5200	-10.25	3.46	9.89	0.00	5.94	0.00	3.10	11.00	7.90	9.04	17.00	7.96
5240	-9.82	3.46	9.89	0.00	5.94	0.00	3.53	11.00	7.47	9.47	17.00	7.53
5260	-10.86	3.46	9.89	0.00	5.94	0.00	2.49	11.00	8.51	8.43	17.00	8.57
5300	-10.34	3.47	9.89	0.00	5.94	0.00	3.02	11.00	7.98	8.96	17.00	8.04
5320	-10.80	3.47	9.89	0.00	5.94	0.00	2.56	11.00	8.44	8.50	17.00	8.50
5500	-11.76	3.49	9.89	0.00	6.29	0.00	1.62	10.71	9.09	7.91	17.00	9.09
5580	-11.36	3.49	9.89	0.00	6.29	0.00	2.02	10.71	8.69	8.31	17.00	8.69
5700	-10.49	3.51	9.89	0.00	6.29	0.00	2.91	10.71	7.80	9.20	17.00	7.80
5745	-21.57	3.51	9.90	0.00	7.12	6.99	-1.17	28.88	30.05	5.95	36.00	30.05
5785	-20.30	3.51	9.90	0.00	7.12	6.99	0.10	28.88	28.78	7.22	36.00	28.78
5825	-20.08	3.52	9.90	0.00	7.12	6.99	0.33	28.88	28.55	7.45	36.00	28.55

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-40	

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-15.61	3.46	9.89	0.00	5.94	0.00	-2.26	11.00	13.26	3.68	17.00	13.32
5230	-14.51	3.46	9.89	0.00	5.94	0.00	-1.16	11.00	12.16	4.78	17.00	12.22
5270	-15.98	3.47	9.89	0.00	5.94	0.00	-2.62	11.00	13.62	3.32	17.00	13.68
5310	-14.41	3.47	9.89	0.00	5.94	0.00	-1.05	11.00	12.05	4.89	17.00	12.11
5510	-15.47	3.49	9.89	0.00	6.29	0.00	-2.09	10.71	12.80	4.20	17.00	12.80
5550	-13.69	3.49	9.89	0.00	6.29	0.00	-0.31	10.71	11.02	5.98	17.00	11.02
5670	-14.17	3.50	9.89	0.00	6.29	0.00	-0.78	10.71	11.49	5.51	17.00	11.49
5755	-24.84	3.51	10.22	0.00	7.12	6.99	-4.12	28.88	33.00	3.00	36.00	33.00
5795	-25.18	3.52	10.22	0.00	7.12	6.99	-4.45	28.88	33.33	2.67	36.00	33.33

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-14.77	3.46	9.89	0.00	5.94	0.00	-1.42	11.00	12.42	4.52	17.00	12.48
5230	-13.98	3.46	9.89	0.00	5.94	0.00	-0.63	11.00	11.63	5.31	17.00	11.69
5270	-14.30	3.47	9.89	0.00	5.94	0.00	-0.94	11.00	11.94	5.00	17.00	12.00
5310	-14.12	3.47	9.89	0.00	5.94	0.00	-0.76	11.00	11.76	5.18	17.00	11.82
5510	-14.72	3.49	9.89	0.00	6.29	0.00	-1.34	10.71	12.05	4.95	17.00	12.05
5550	-14.42	3.49	9.89	0.00	6.29	0.00	-1.04	10.71	11.75	5.25	17.00	11.75
5670	-14.43	3.50	9.89	0.00	6.29	0.00	-1.04	10.71	11.75	5.25	17.00	11.75
5755	-23.66	3.51	9.90	0.00	7.12	6.99	-3.26	28.88	32.14	3.86	36.00	32.14
5795	-23.77	3.51	9.90	0.00	7.12	6.99	-3.37	28.88	32.25	3.75	36.00	32.25

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-18.55	3.46	9.89	0.00	5.94	0.00	-5.20	11.00	16.20	0.74	17.00	16.26
5290	-18.74	3.47	9.89	0.00	5.94	0.00	-5.38	11.00	16.38	0.56	17.00	16.44
5530	-16.35	3.49	9.89	0.00	6.29	0.00	-2.97	10.71	13.68	3.32	17.00	13.68
5775	-27.73	3.51	9.90	0.00	7.12	6.99	-7.33	28.88	36.21	-0.21	36.00	36.21

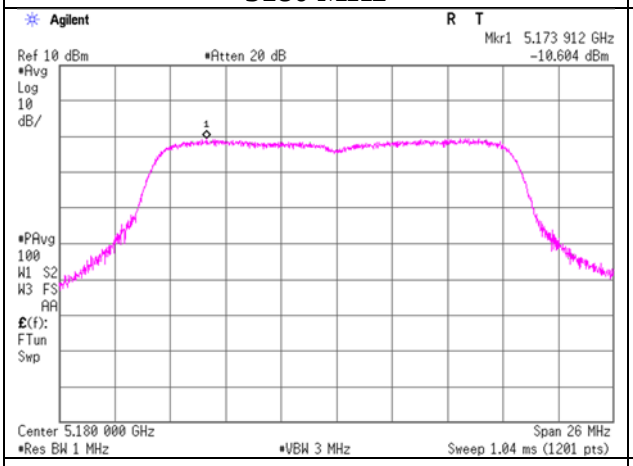
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correc
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. (All frequencies for FCC, 5725 MHz-5850 MHz for ISED)

Maximum Power Spectral Density

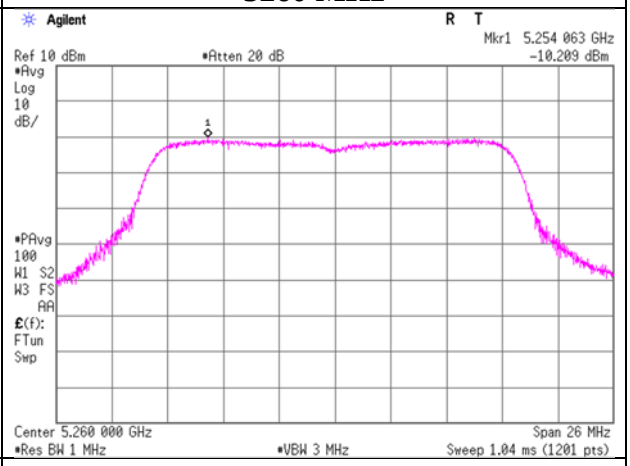
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

11a

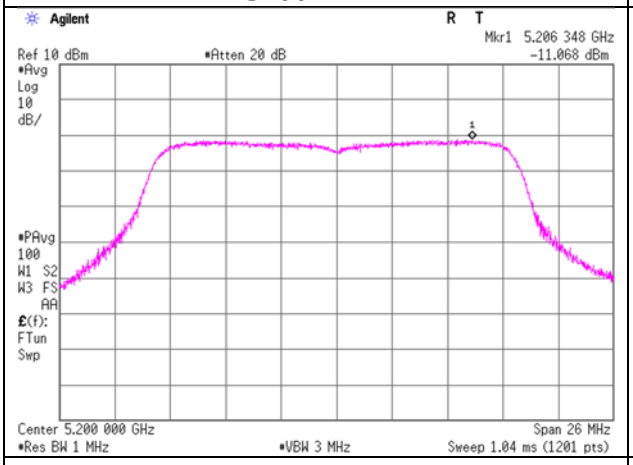
5180 MHz



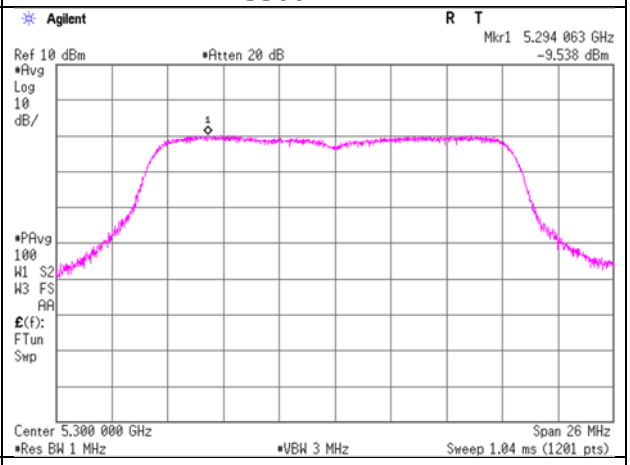
5260 MHz



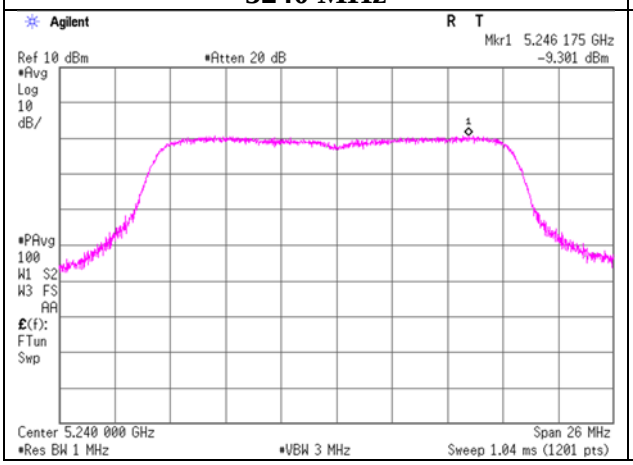
5200 MHz



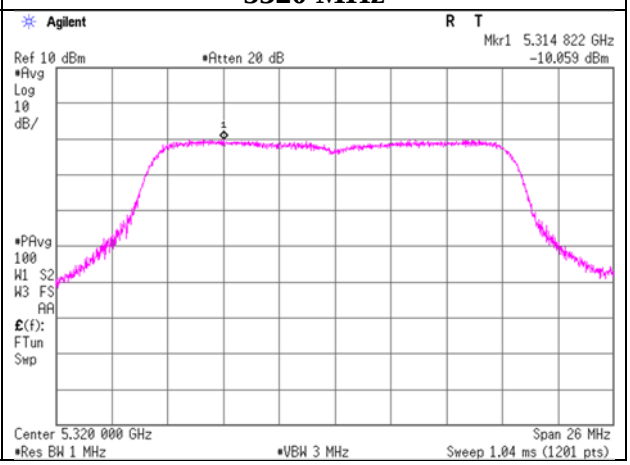
5300 MHz



5240 MHz



5320 MHz

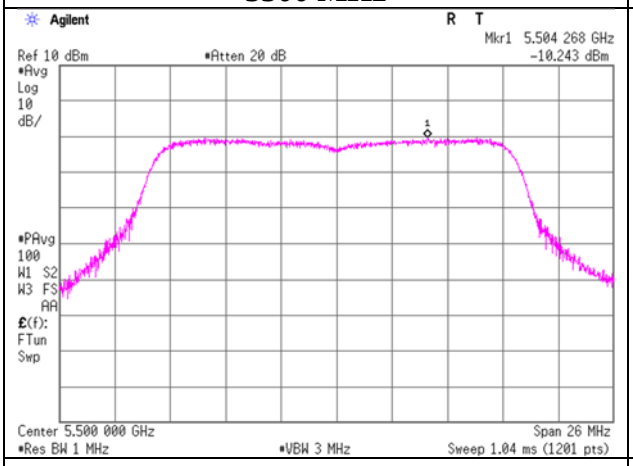


Maximum Power Spectral Density

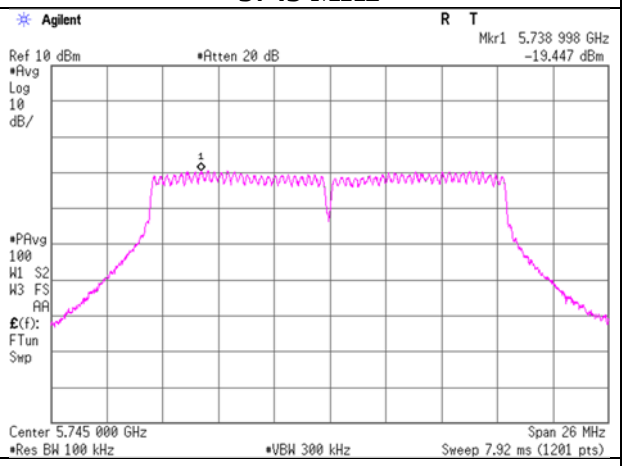
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

11a

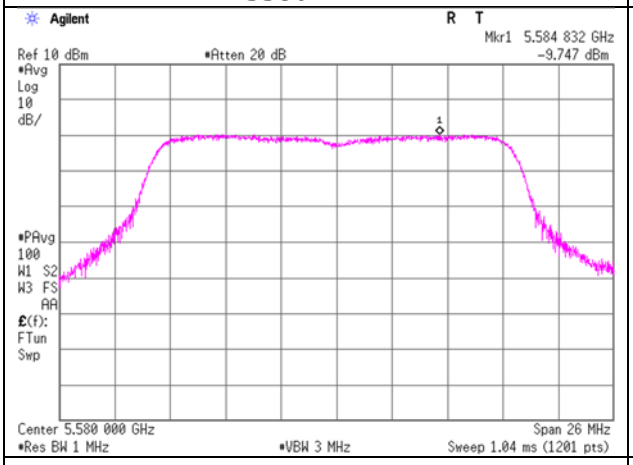
5500 MHz



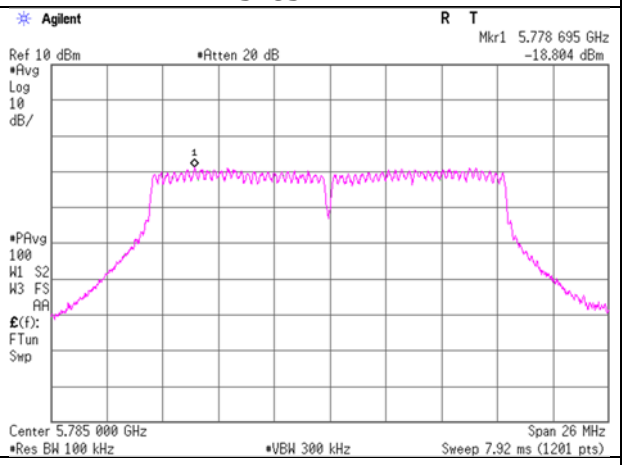
5745 MHz



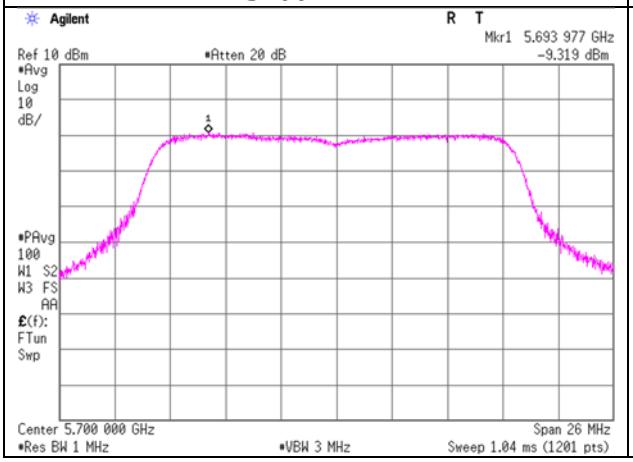
5580 MHz



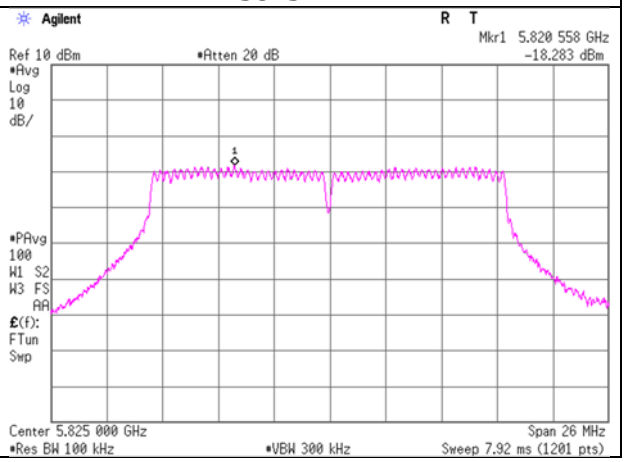
5785 MHz



5700 MHz



5825 MHz

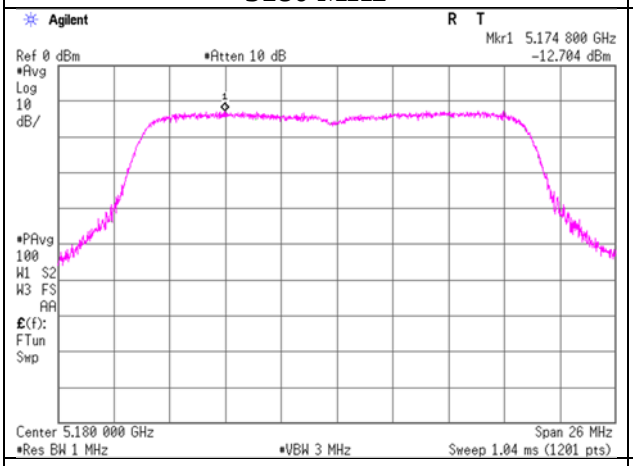


Maximum Power Spectral Density

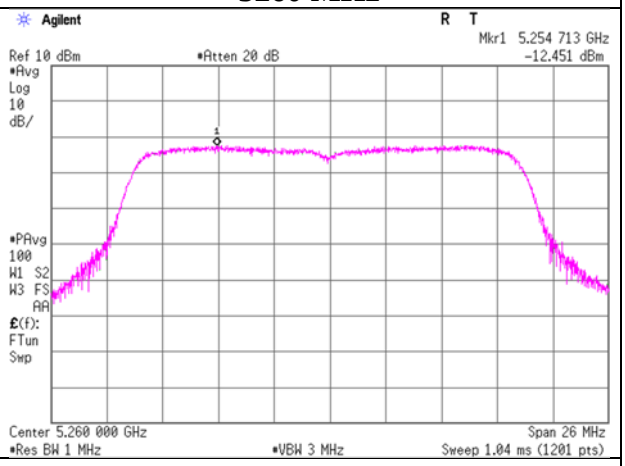
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20

11n-20

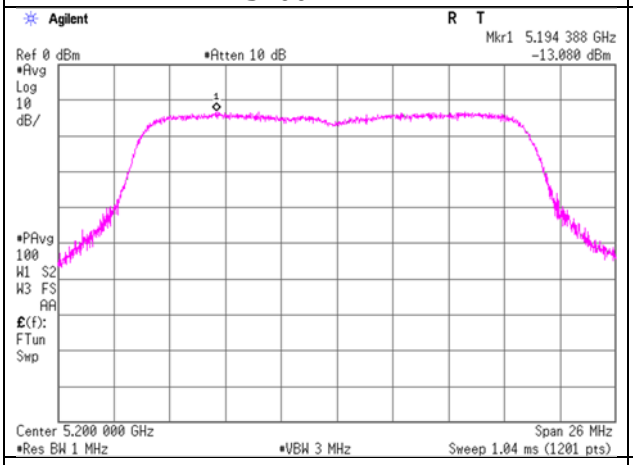
5180 MHz



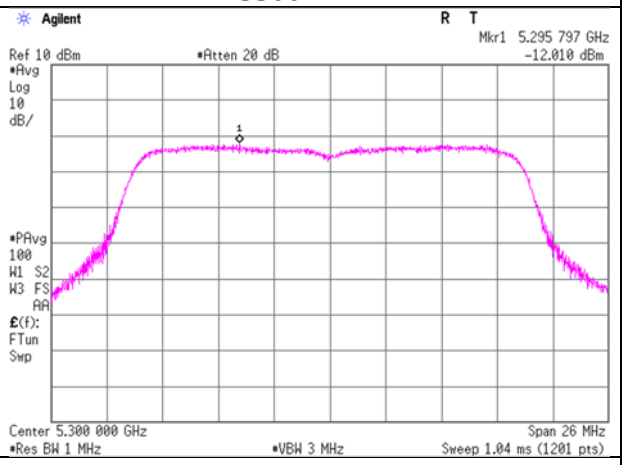
5260 MHz



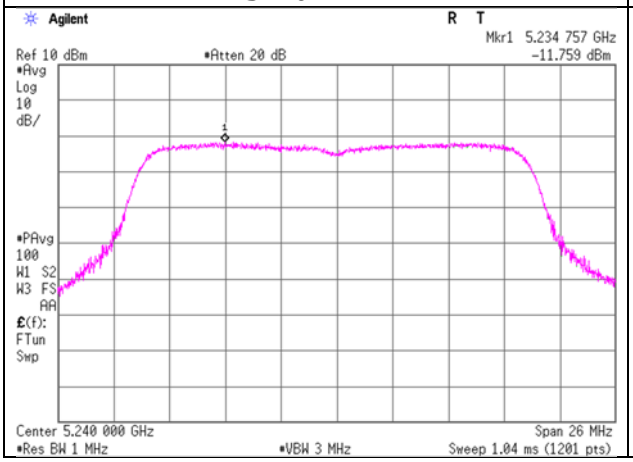
5200 MHz



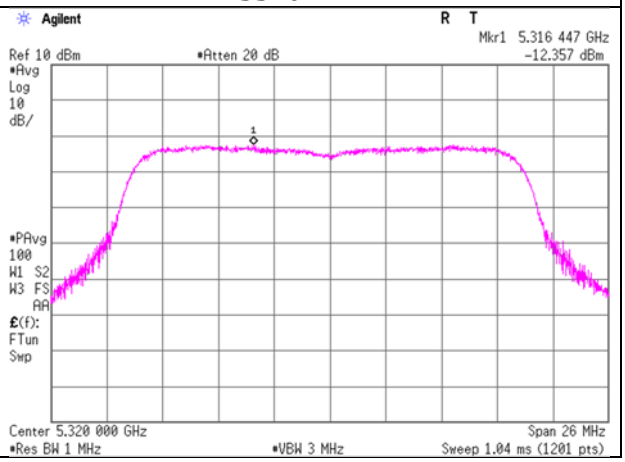
5300 MHz



5240 MHz



5320 MHz

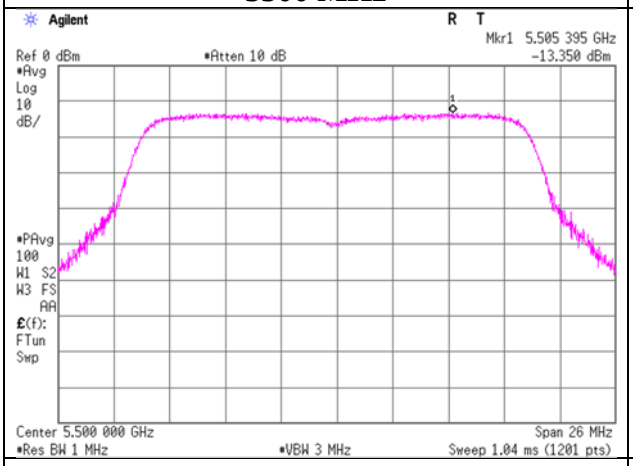


Maximum Power Spectral Density

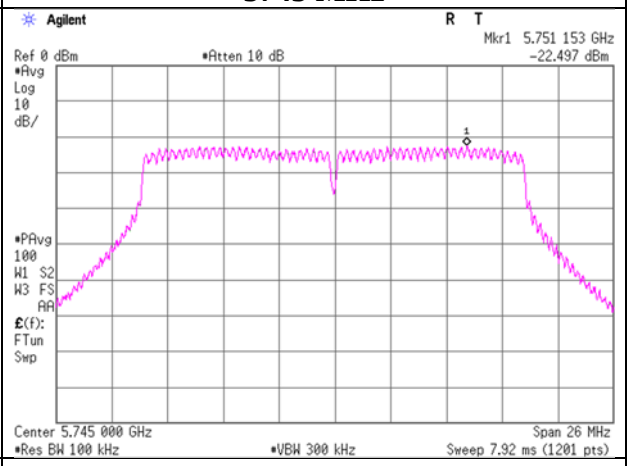
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-20	

11n-20

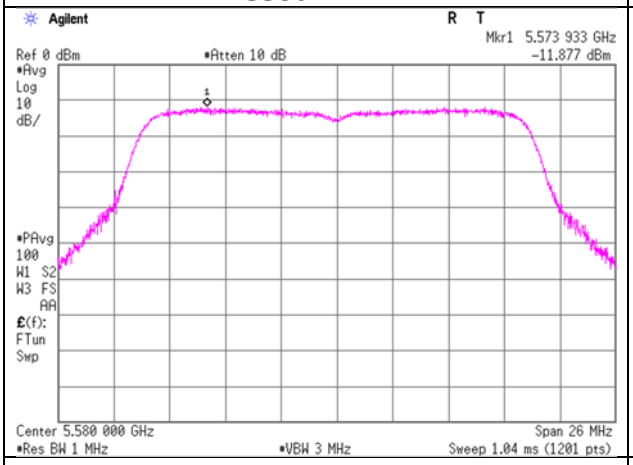
5500 MHz



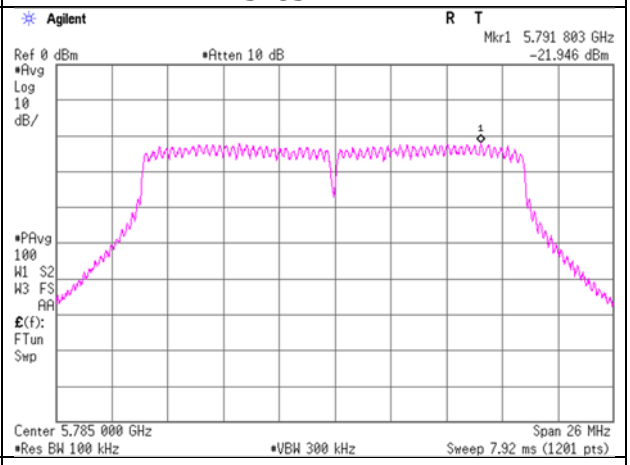
5745 MHz



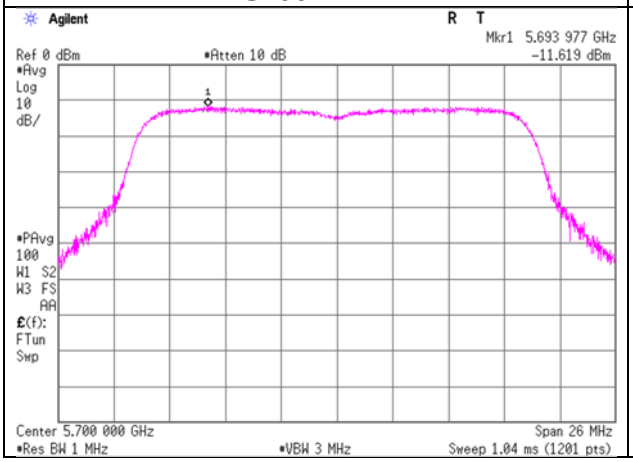
5580 MHz



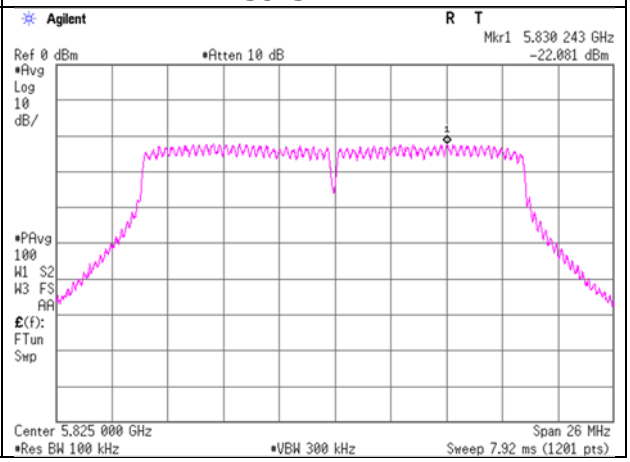
5785 MHz



5700 MHz



5825 MHz

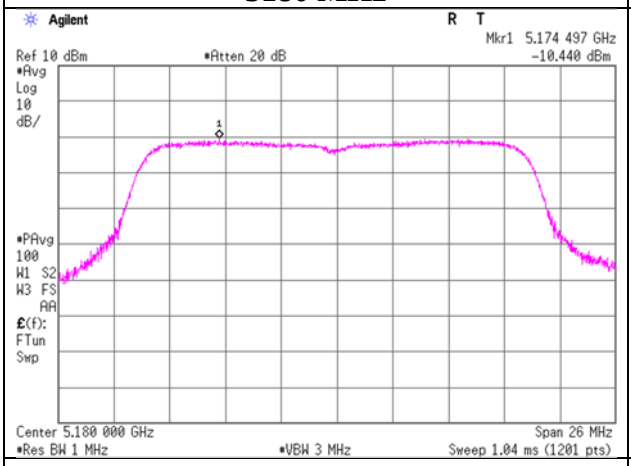


Maximum Power Spectral Density

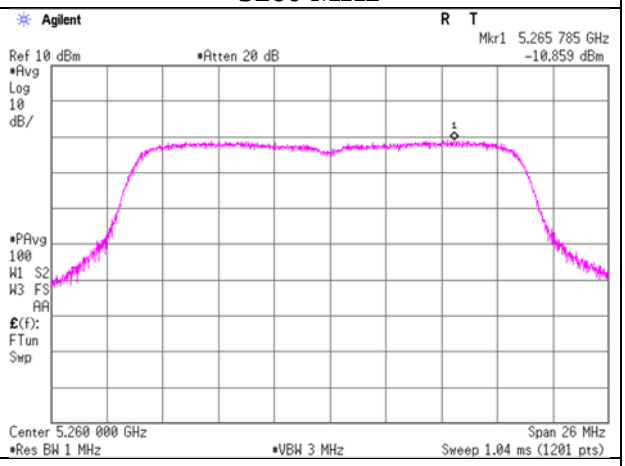
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

11ac-20

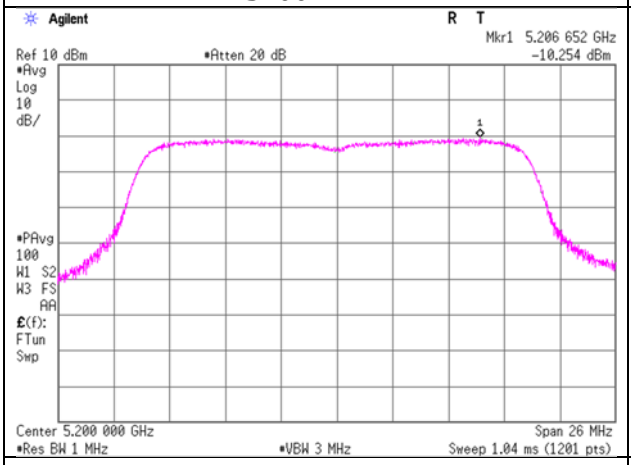
5180 MHz



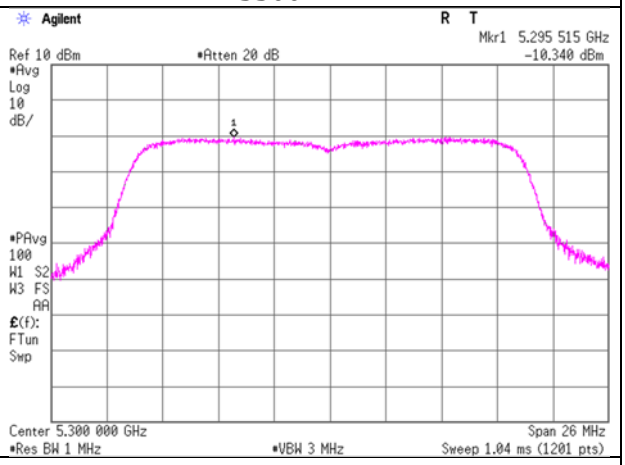
5260 MHz



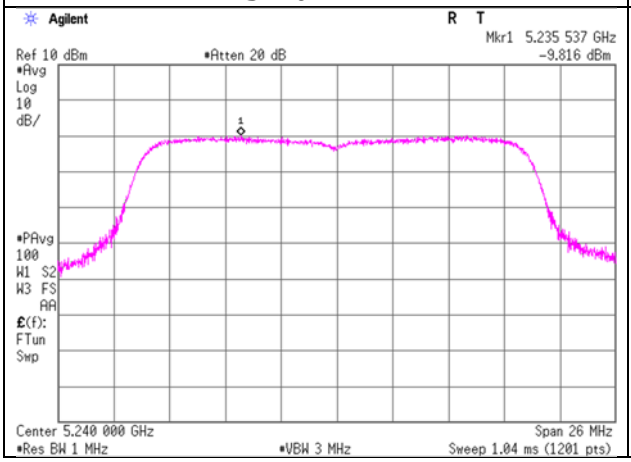
5200 MHz



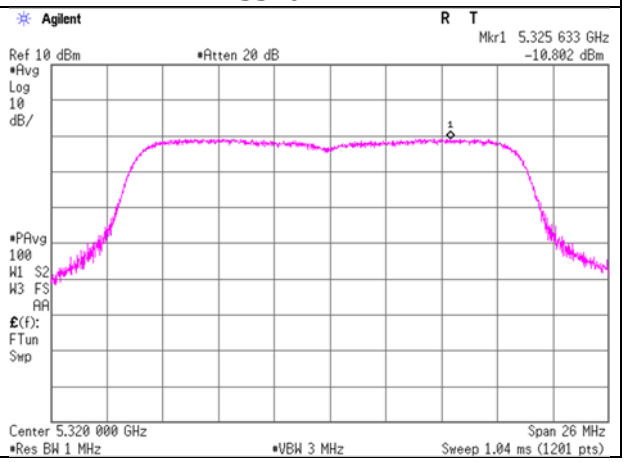
5300 MHz



5240 MHz



5320 MHz

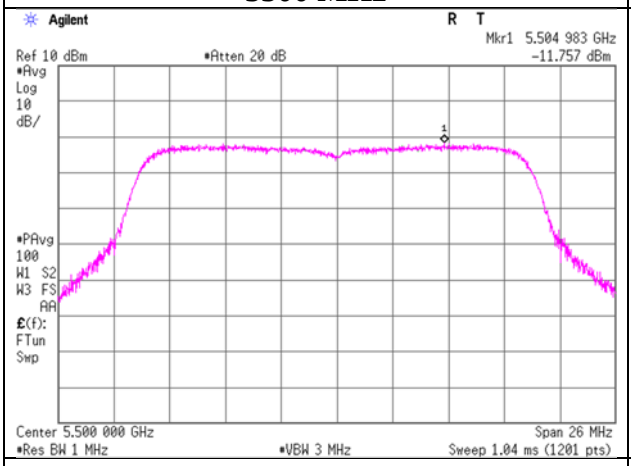


Maximum Power Spectral Density

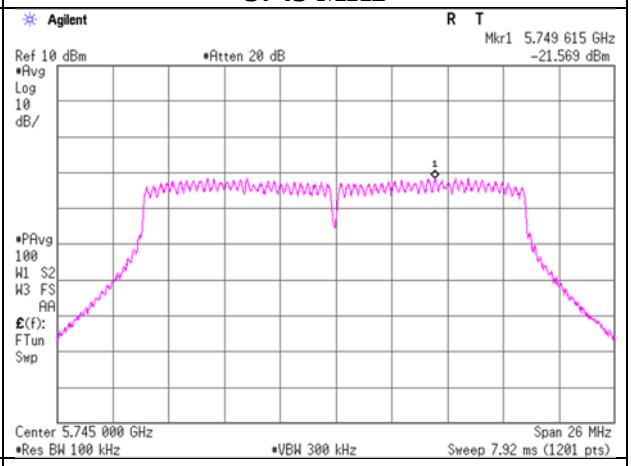
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

11ac-20

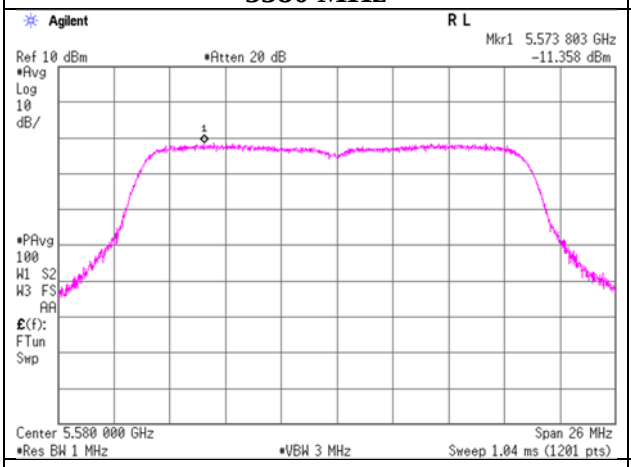
5500 MHz



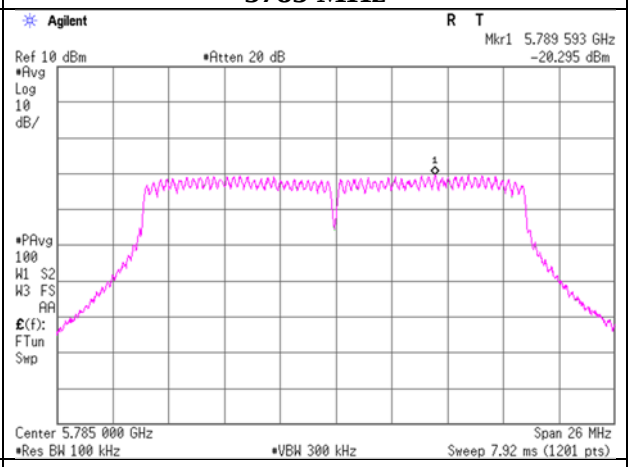
5745 MHz



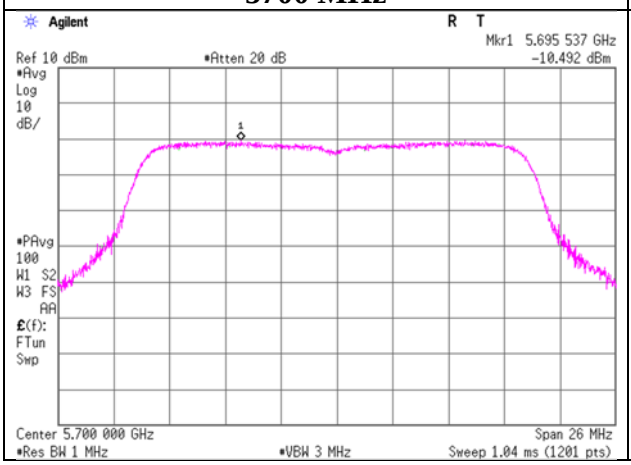
5580 MHz



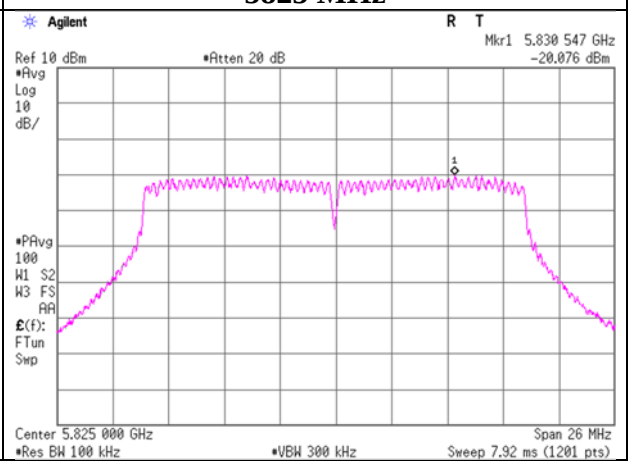
5785 MHz



5700 MHz



5825 MHz

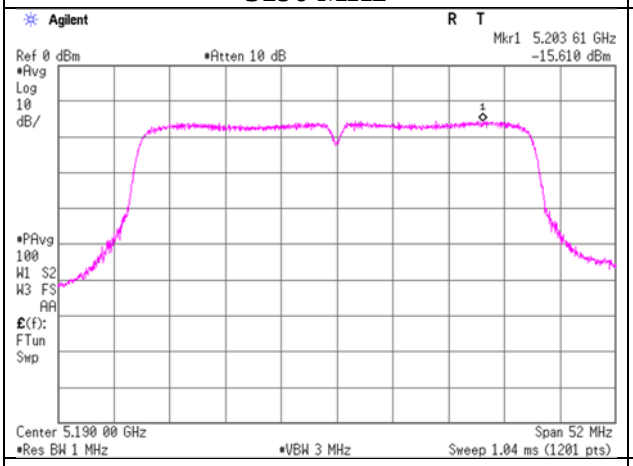


Maximum Power Spectral Density

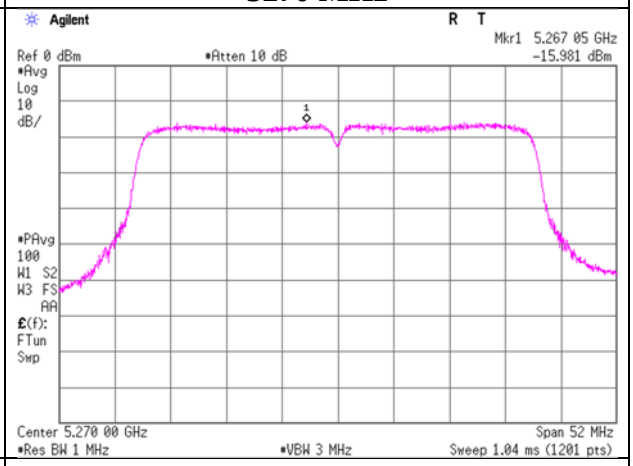
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-40

11n-40

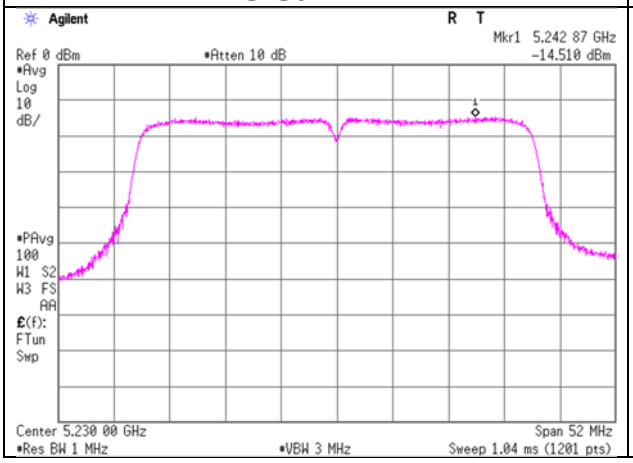
5190 MHz



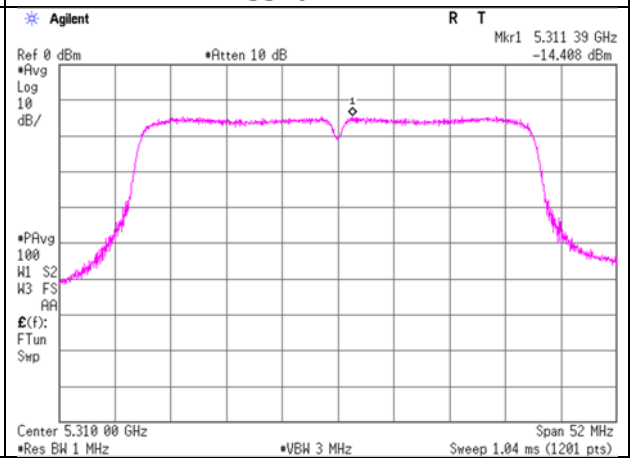
5270 MHz



5230 MHz



5310 MHz

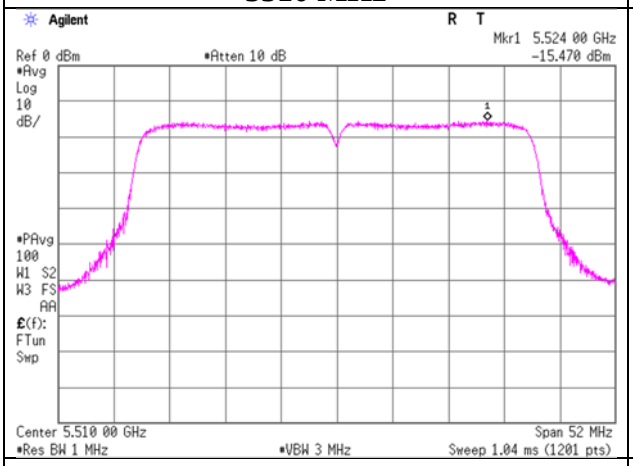


Maximum Power Spectral Density

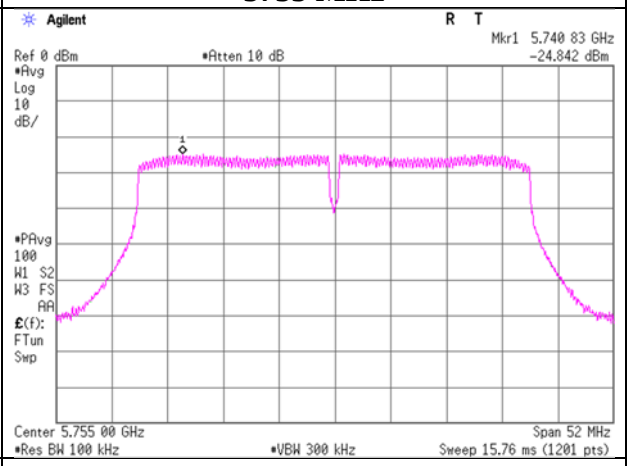
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-40	

11n-40

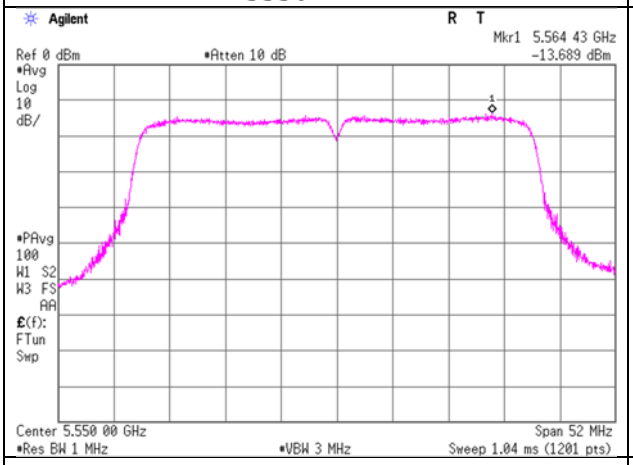
5510 MHz



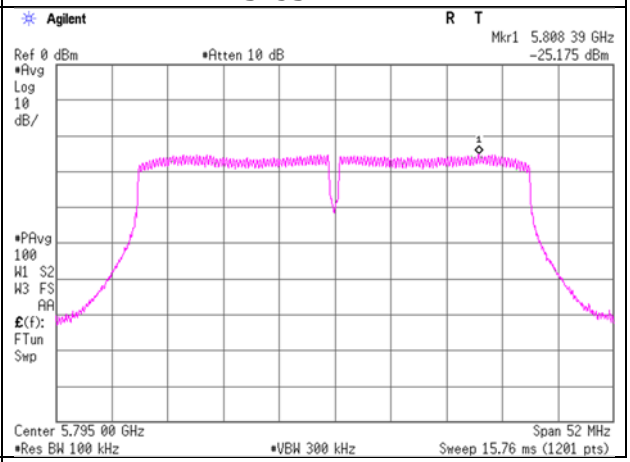
5755 MHz



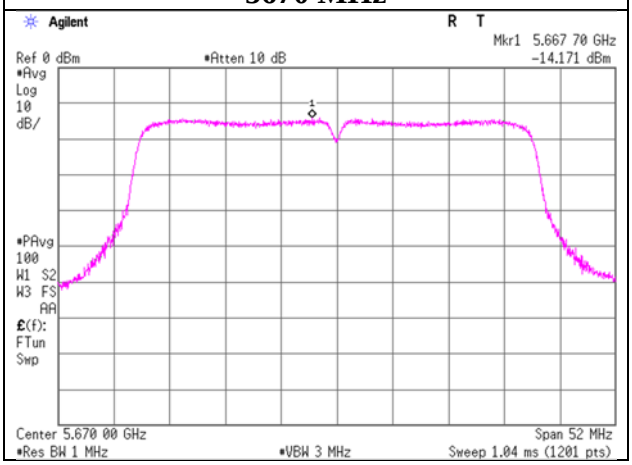
5550 MHz



5795 MHz



5670 MHz

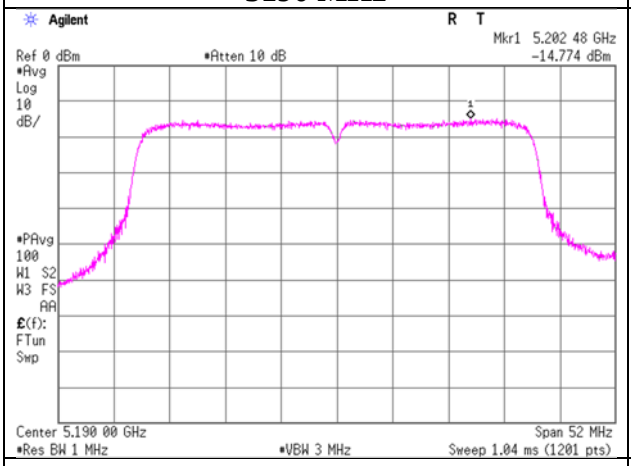


Maximum Power Spectral Density

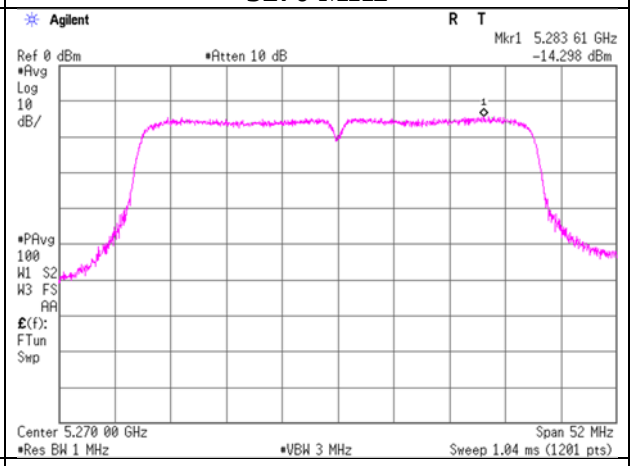
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

11ac-40

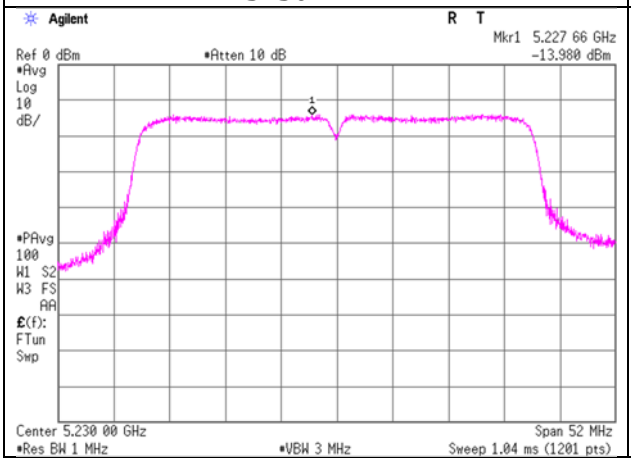
5190 MHz



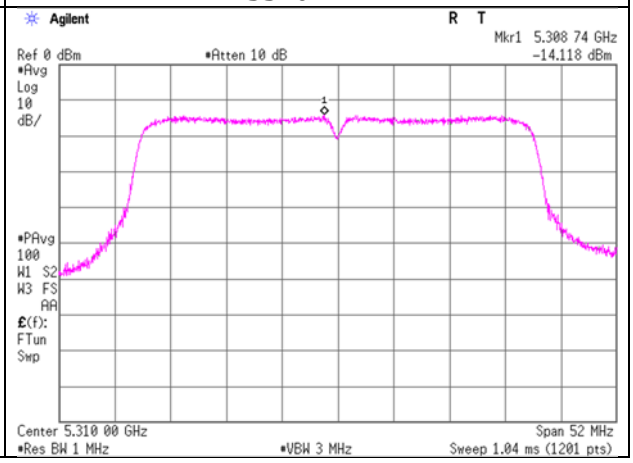
5270 MHz



5230 MHz



5310 MHz

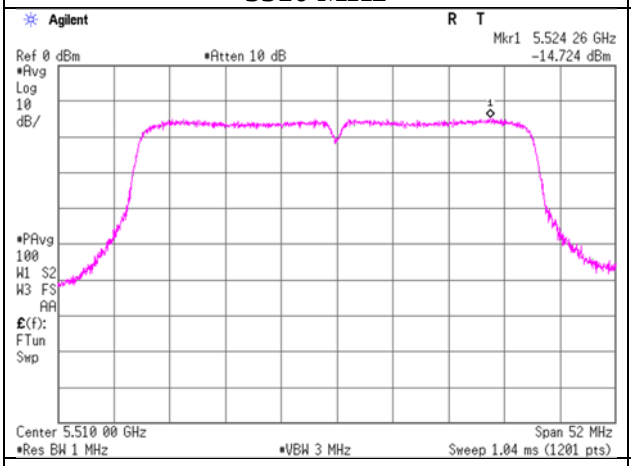


Maximum Power Spectral Density

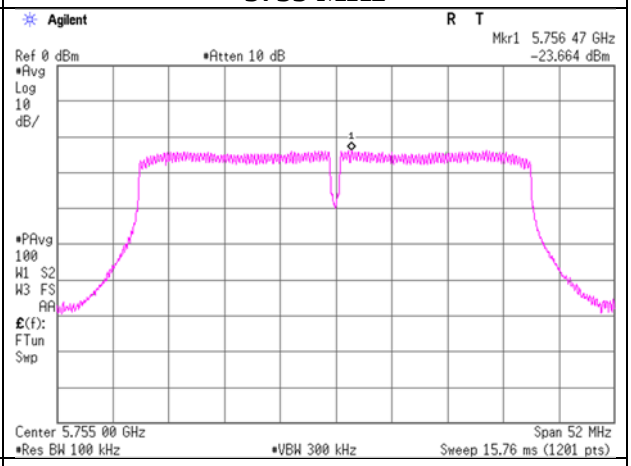
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

11ac-40

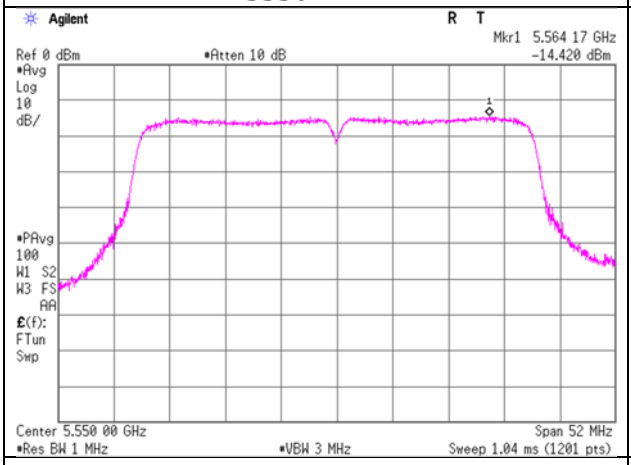
5510 MHz



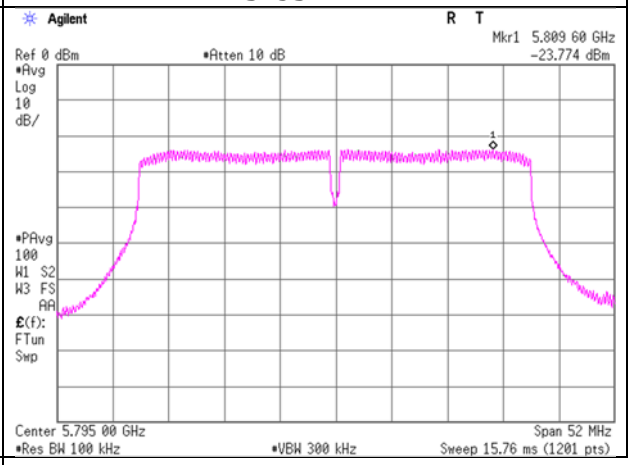
5755 MHz



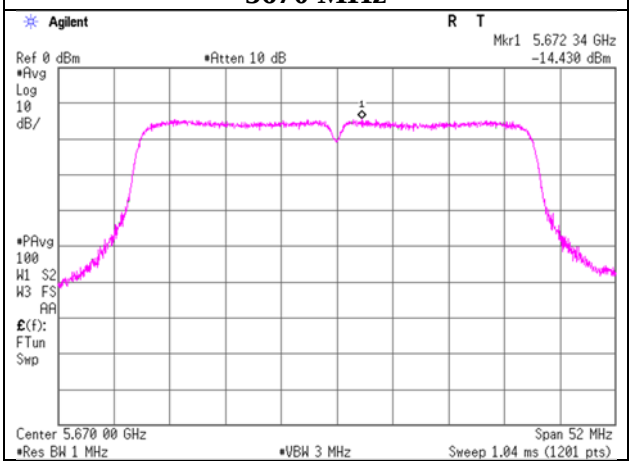
5550 MHz



5795 MHz



5670 MHz

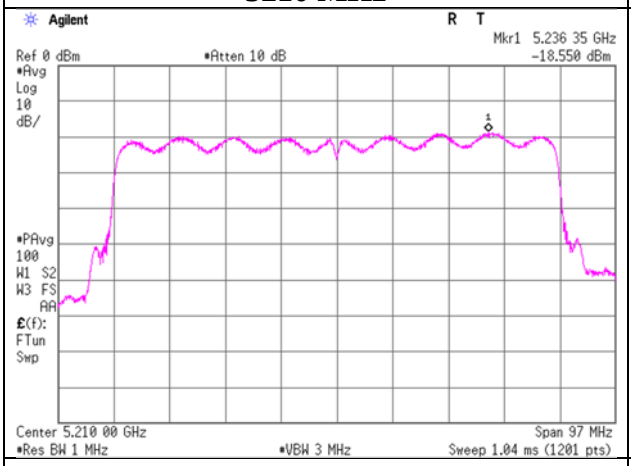


Maximum Power Spectral Density

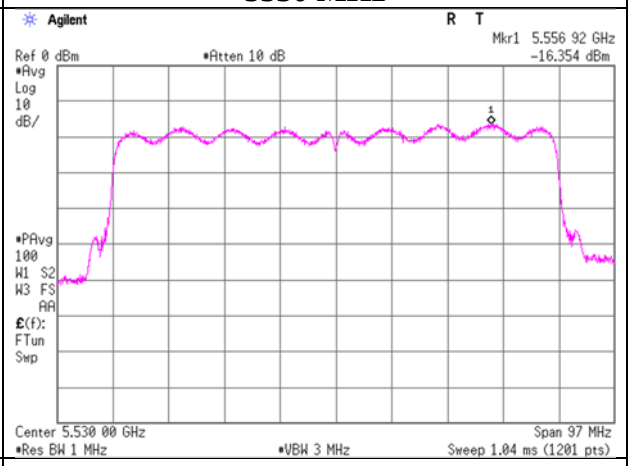
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80

11ac-80

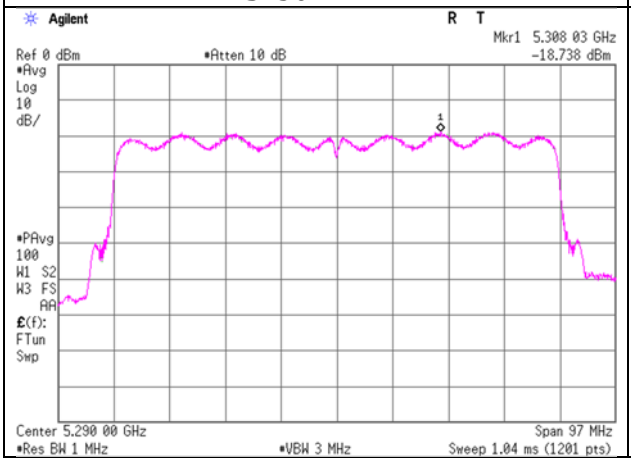
5210 MHz



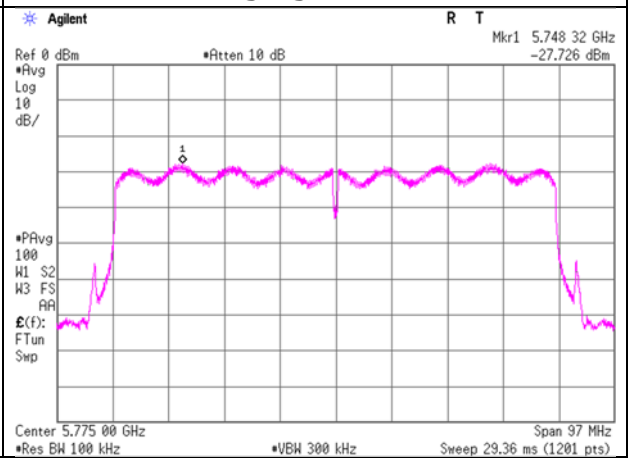
5530 MHz



5290 MHz



5775 MHz



Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (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	54.39	32.18	16.41	42.99	2.38	62.37	73.9	11.5	171	1	-
Hori.	5150.000	AV	39.38	32.18	16.41	42.99	2.38	47.36	53.9	**6.5**	171	1	VBW: 10 Hz
Vert.	5150.000	PK	52.41	32.18	16.41	42.99	2.38	60.39	73.9	13.5	100	32	-
Vert.	5150.000	AV	37.85	32.18	16.41	42.99	2.38	45.83	53.9	8.0	100	32	VBW: 10 Hz

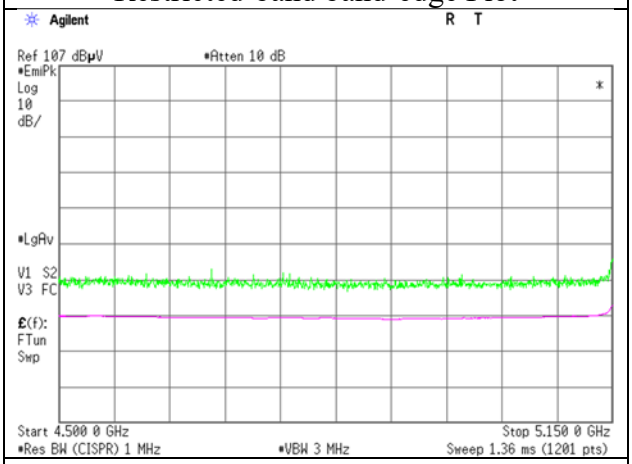
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11a 5180 MHz

Horizontal

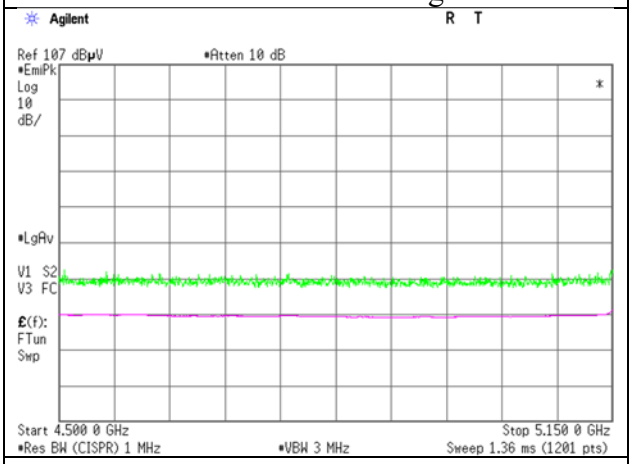
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (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	55.83	31.91	16.55	43.27	2.38	63.40	73.9	10.5	189	14	-
Hori.	5350.000	AV	40.00	31.91	16.55	43.27	2.38	47.57	53.9	**6.3**	189	14	VBW: 10 Hz
Vert.	5350.000	PK	51.48	31.91	16.55	43.27	2.38	59.05	73.9	14.8	267	70	-
Vert.	5350.000	AV	37.70	31.91	16.55	43.27	2.38	45.27	53.9	8.6	267	70	VBW: 10 Hz

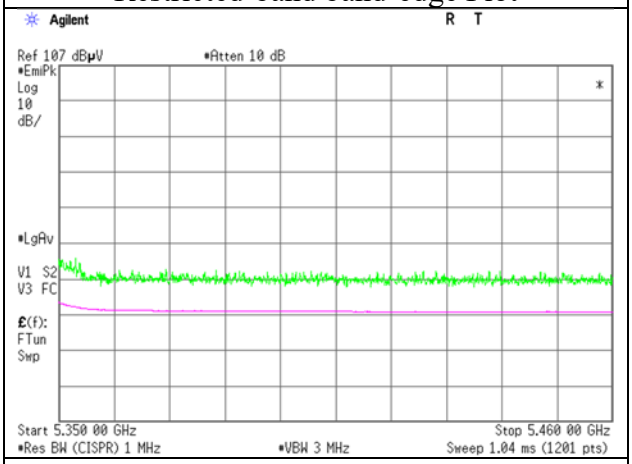
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5320 MHz

Horizontal

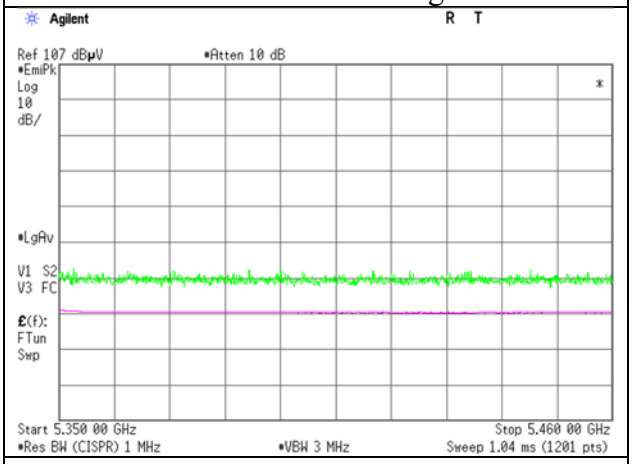
Restricted-band band-edge Plot



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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (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	49.85	32.16	16.61	43.42	2.38	57.58	73.9	16.3	205	18	-
Hori.	5460.000	AV	37.58	32.16	16.61	43.42	2.38	45.31	53.9	8.5	205	18	VBW: 10 Hz
Vert.	5460.000	PK	49.39	32.16	16.61	43.42	2.38	57.12	73.9	16.7	175	69	-
Vert.	5460.000	AV	37.10	32.16	16.61	43.42	2.38	44.83	53.9	9.0	175	69	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	55.64	32.18	16.62	43.44	2.38	63.38	-31.85	-27.0	**4.8**	205	18	-
Vert.	5470.000	PK	51.42	32.18	16.62	43.44	2.38	59.16	-36.07	-27.0	9.0	175	69	-

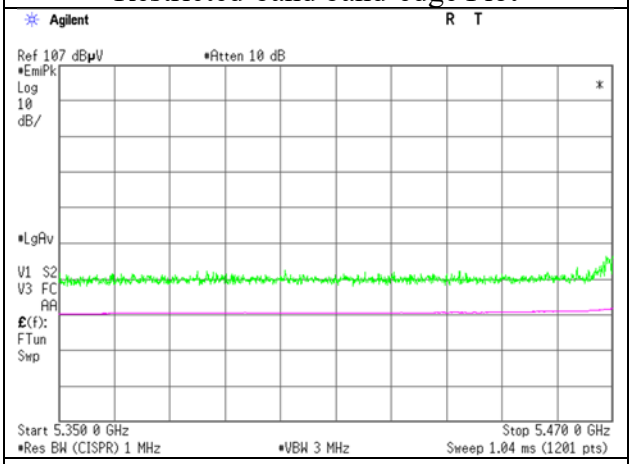
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5500 MHz

Horizontal

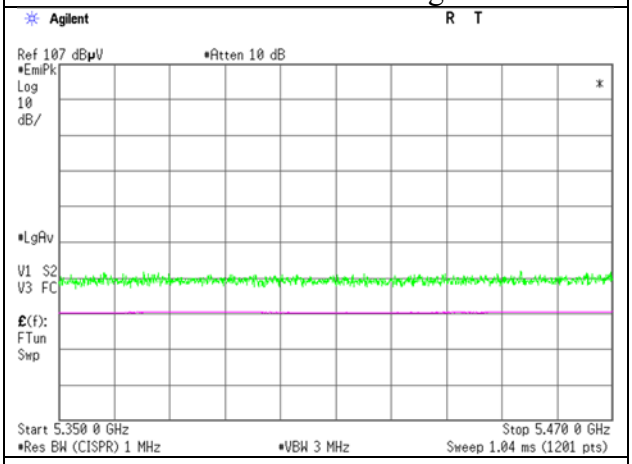
Restricted-band band-edge Plot



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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11a 5700 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	53.91	32.63	16.76	43.52	2.38	62.16	-33.07	-27.0	**6.0**	197	11	-
Vert.	5725.000	PK	50.71	32.63	16.76	43.52	2.38	58.96	-36.27	-27.0	9.2	117	332	-

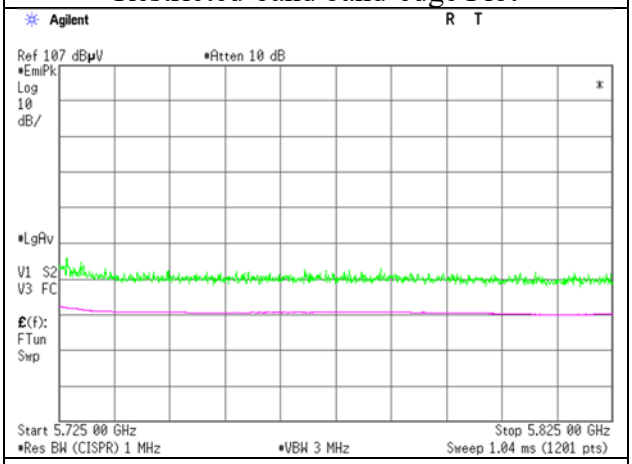
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5700 MHz

Horizontal

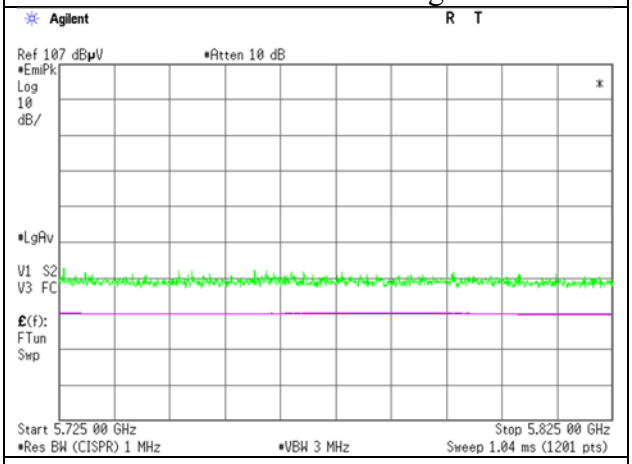
Restricted-band band-edge Plot



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	1	3	2	2	1
Date	April 17, 2022	April 19, 2022	April 18, 2022	April 28, 2022	April 14, 2022
Temperature / Humidity	20 deg.C, 43 %RH	22 deg.C, 44 %RH	22 deg.C, 48 %RH	21 deg.C, 47 %RH	20 deg.C, 52 %RH
Engineer	Shiro Kobayashi	Miku Ikudome	Shiro Kobayashi	Hiromasa Sato	Hiromasa Sato
	(30 MHz -1 GHz)	(1 GHz -6.4 GHz)	(6.4 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -40 GHz)
Mode	Tx 11a 5745 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.	228.653	QP	26.20	17.20	9.46	31.76	0.00	21.10	46.0	24.9	135	67	-
Hori.	1665.312	PK	51.74	25.14	13.52	41.26	2.38	51.52	73.9	22.3	181	169	-
Hori.	11490.000	PK	46.84	37.80	10.28	40.35	-9.54	45.03	73.9	28.8	150	0	-
Hori.	1665.312	AV	35.47	25.14	13.52	41.26	2.38	35.25	53.9	18.6	181	169	VBW: 10 Hz
Hori.	11490.000	AV	35.25	37.80	10.28	40.35	-9.54	33.44	53.9	20.4	150	0	VBW: 10 Hz, Floor noise
Vert.	36.577	QP	30.50	16.17	7.19	31.84	0.00	22.02	40.0	17.9	100	88	-
Vert.	57.263	QP	37.10	8.88	7.36	31.83	0.00	21.51	40.0	18.4	100	122	-
Vert.	61.004	QP	42.70	7.95	7.26	31.83	0.00	26.08	40.0	13.9	100	119	-
Vert.	66.246	QP	41.20	7.08	7.30	31.82	0.00	23.76	40.0	16.2	100	140	-
Vert.	71.590	QP	43.40	6.50	7.67	31.82	0.00	25.75	40.0	14.2	100	137	-
Vert.	132.715	QP	32.60	14.08	8.44	31.80	0.00	23.32	43.5	20.1	100	129	-
Vert.	219.806	QP	33.00	16.90	9.38	31.77	0.00	27.51	46.0	18.4	242	137	-
Vert.	1660.108	PK	52.37	25.13	13.51	41.26	2.38	52.13	73.9	21.7	157	223	-
Vert.	11490.000	PK	47.23	37.80	10.28	40.35	-9.54	45.42	73.9	28.4	150	0	-
Vert.	1660.108	AV	36.01	25.13	13.51	41.26	2.38	35.77	53.9	18.1	157	223	VBW: 10 Hz
Vert.	11490.000	AV	35.46	37.80	10.28	40.35	-9.54	33.65	53.9	20.2	150	0	VBW: 10 Hz, Floor noise

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 (3.95 m / 3.0 m) = 2.38 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	50.11	32.42	16.73	43.50	2.38	58.14	-37.09	-27.0	**10.0**	187	11	-
Hori.	5700.000	PK	50.68	32.55	16.75	43.51	2.38	58.85	-36.38	10.0	46.3	187	11	-
Hori.	5720.000	PK	55.89	32.61	16.76	43.52	2.38	64.12	-31.11	15.6	46.7	187	11	-
Hori.	5725.000	PK	59.59	32.63	16.76	43.52	2.38	67.84	-27.39	27.0	54.3	187	11	-
Hori.	17235.000	PK	46.48	39.82	12.75	37.20	-9.54	52.31	-42.92	-27.0	15.9	150	0	-
Vert.	5650.000	PK	49.04	32.42	16.73	43.50	2.38	57.07	-38.16	-27.0	11.1	100	331	-
Vert.	5700.000	PK	49.27	32.55	16.75	43.51	2.38	57.44	-37.79	10.0	47.7	100	331	-
Vert.	5720.000	PK	50.54	32.61	16.76	43.52	2.38	58.77	-36.46	15.6	52.0	100	331	-
Vert.	5725.000	PK	53.75	32.63	16.76	43.52	2.38	62.00	-33.23	27.0	60.2	100	331	-
Vert.	17235.000	PK	45.71	39.82	12.75	37.20	-9.54	51.54	-43.69	-27.0	16.6	150	0	-

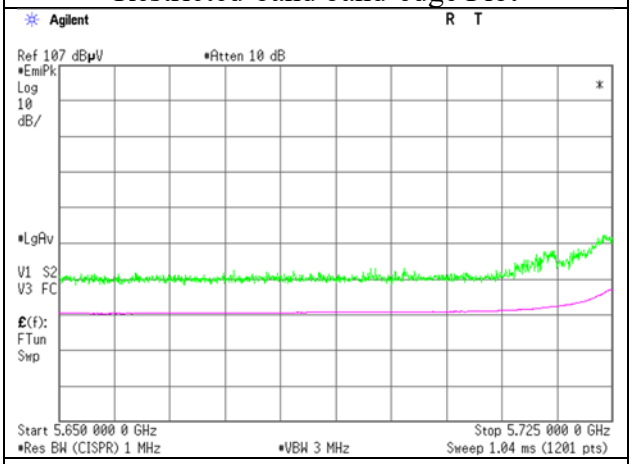
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5745 MHz

Horizontal

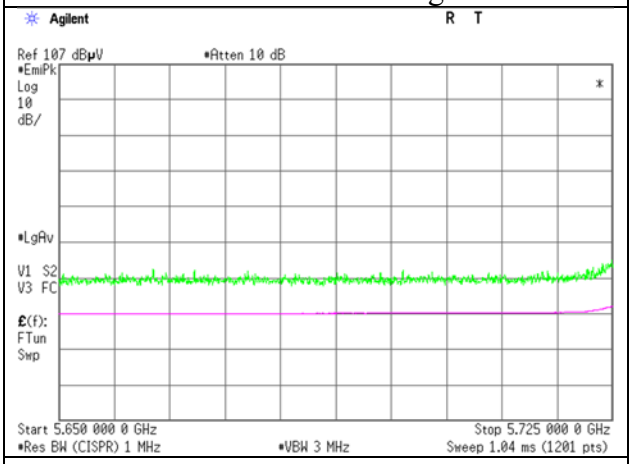
Restricted-band band-edge Plot



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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (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	54.26	32.99	16.84	43.54	2.38	62.93	-32.30	27.0	59.3	169	15	-
Hori.	5855.000	PK	51.59	33.00	16.84	43.54	2.38	60.27	-34.96	15.6	50.5	169	15	-
Hori.	5875.000	PK	50.14	33.03	16.87	43.54	2.38	58.88	-36.35	10.0	46.3	169	15	-
Hori.	5925.000	PK	49.72	33.10	16.89	43.55	2.38	58.54	-36.69	-27.0	**9.6**	169	15	-
Vert.	5850.000	PK	50.13	32.99	16.84	43.54	2.38	58.80	-36.43	27.0	63.4	175	138	-
Vert.	5855.000	PK	49.47	33.00	16.84	43.54	2.38	58.15	-37.08	15.6	52.6	175	138	-
Vert.	5875.000	PK	49.38	33.03	16.87	43.54	2.38	58.12	-37.11	10.0	47.1	175	138	-
Vert.	5925.000	PK	48.80	33.10	16.89	43.55	2.38	57.62	-37.61	-27.0	10.6	175	138	-

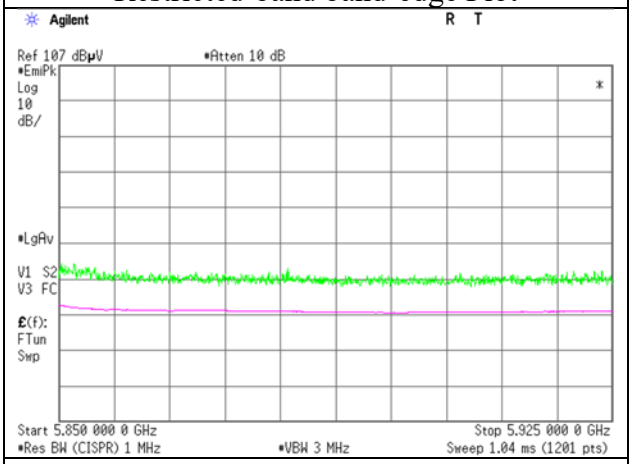
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5825 MHz

Horizontal

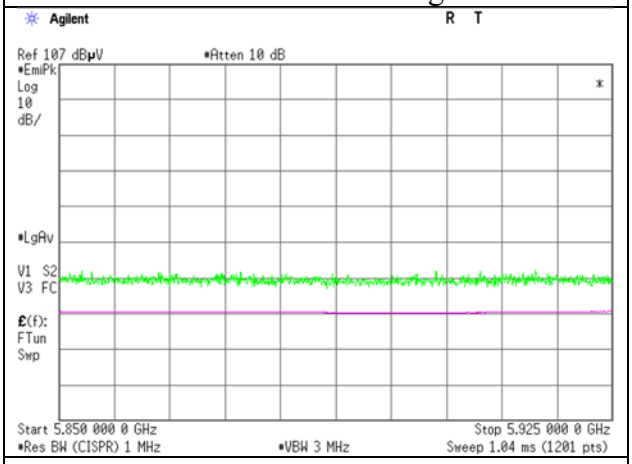
Restricted-band band-edge Plot



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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	50.11	32.18	16.41	42.99	2.38	58.09	73.9	15.8	180	22	-
Hori.	5150.000	AV	37.19	32.18	16.41	42.99	2.38	45.17	53.9	**8.7**	180	22	VBW: 10 Hz
Vert.	5150.000	PK	49.24	32.18	16.41	42.99	2.38	57.22	73.9	16.6	155	151	-
Vert.	5150.000	AV	36.74	32.18	16.41	42.99	2.38	44.72	53.9	9.1	155	151	VBW: 10 Hz

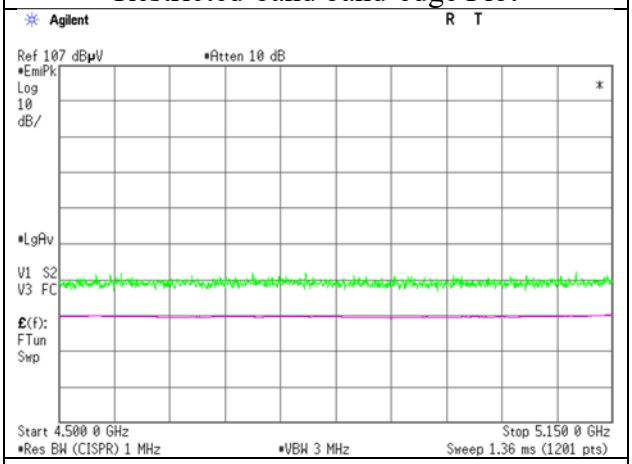
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-20 5180 MHz

Horizontal

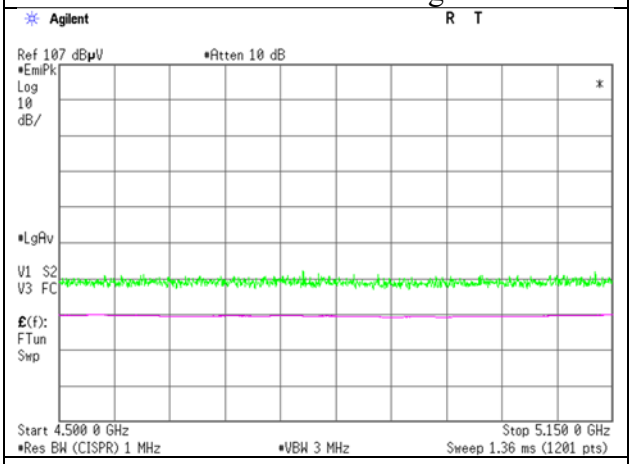
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	52.53	31.91	16.55	43.27	2.38	60.10	73.9	13.8	149	25	-
Hori.	5350.000	AV	38.37	31.91	16.55	43.27	2.38	45.94	53.9	**7.9**	149	25	VBW: 10 Hz
Vert.	5350.000	PK	50.46	31.91	16.55	43.27	2.38	58.03	73.9	15.8	163	138	-
Vert.	5350.000	AV	37.01	31.91	16.55	43.27	2.38	44.58	53.9	9.3	163	138	VBW: 10 Hz

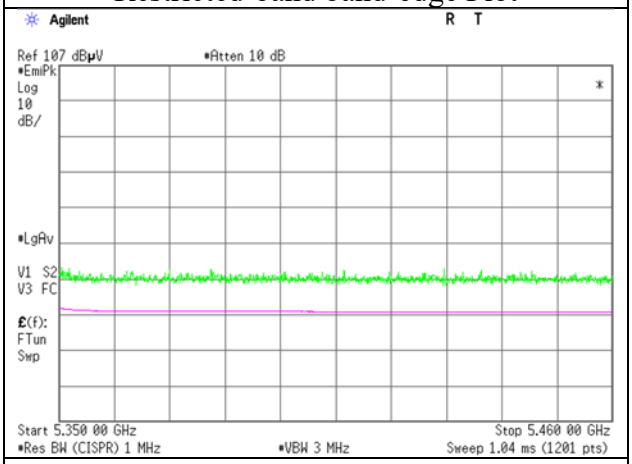
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5320 MHz

Horizontal

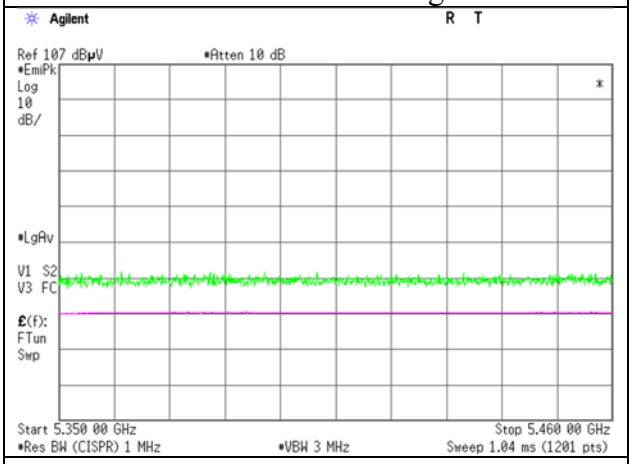
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	50.54	32.16	16.61	43.42	2.38	58.27	73.9	15.6	162	20	-
Hori.	5460.000	AV	37.48	32.16	16.61	43.42	2.38	45.21	53.9	8.6	162	20	VBW: 10 Hz
Vert.	5460.000	PK	49.14	32.16	16.61	43.42	2.38	56.87	73.9	17.0	220	332	-
Vert.	5460.000	AV	37.12	32.16	16.61	43.42	2.38	44.85	53.9	9.0	220	332	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	52.46	32.18	16.62	43.44	2.38	60.20	-35.03	-27.0	**8.0**	162	20	-
Vert.	5470.000	PK	49.09	32.18	16.62	43.44	2.38	56.83	-38.40	-27.0	11.4	220	332	-

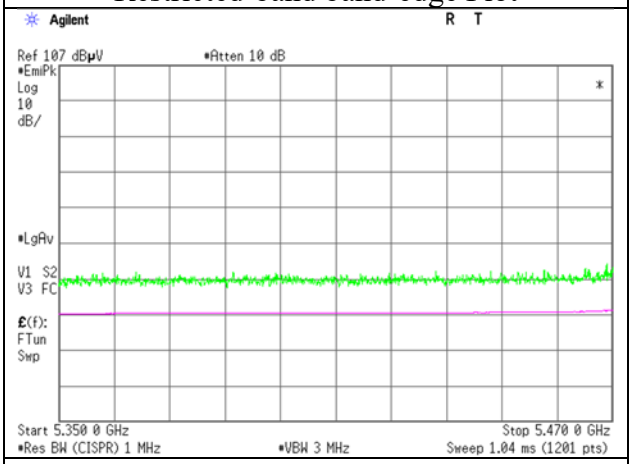
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5500 MHz

Horizontal

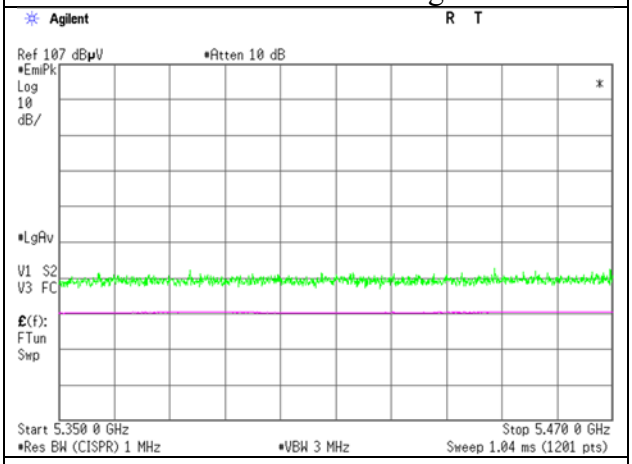
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-20 5700 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	52.45	32.63	16.76	43.52	2.38	60.70	-34.53	-27.0	**7.5**	175	12	-
Vert.	5725.000	PK	49.94	32.63	16.76	43.52	2.38	58.19	-37.04	-27.0	10.0	287	333	-

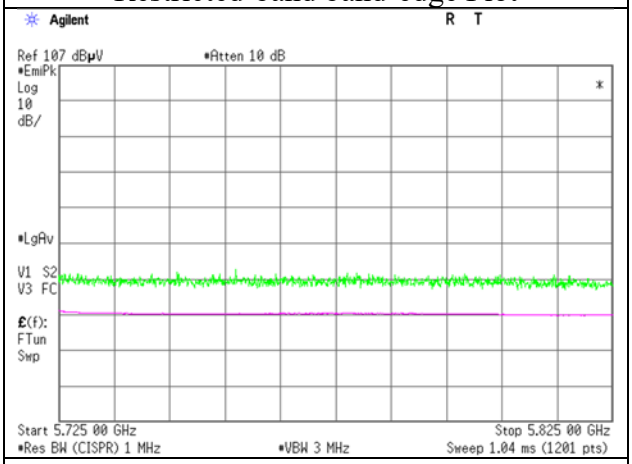
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5700 MHz

Horizontal

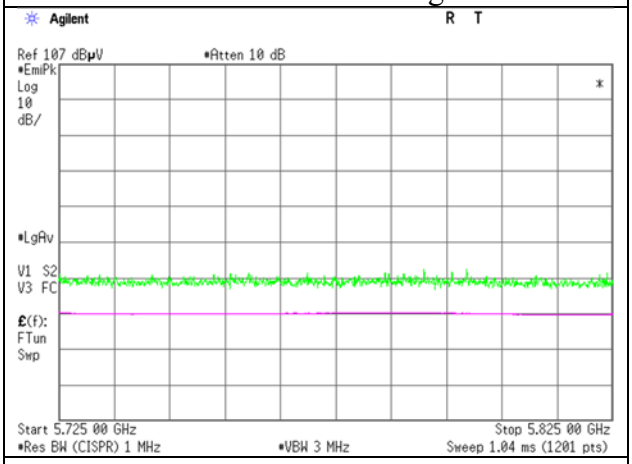
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-20 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	49.52	32.42	16.73	43.50	2.38	57.55	-37.68	-27.0	**10.6**	204	18	-
Hori.	5700.000	PK	49.96	32.55	16.75	43.51	2.38	58.13	-37.10	10.0	47.1	204	18	-
Hori.	5720.000	PK	52.75	32.61	16.76	43.52	2.38	60.98	-34.25	15.6	49.8	204	18	-
Hori.	5725.000	PK	57.10	32.63	16.76	43.52	2.38	65.35	-29.88	27.0	56.8	204	18	-
Vert.	5650.000	PK	48.76	32.42	16.73	43.50	2.38	56.79	-38.44	-27.0	11.4	344	328	-
Vert.	5700.000	PK	48.98	32.55	16.75	43.51	2.38	57.15	-38.08	10.0	48.0	344	328	-
Vert.	5720.000	PK	49.99	32.61	16.76	43.52	2.38	58.22	-37.01	15.6	52.6	344	328	-
Vert.	5725.000	PK	51.20	32.63	16.76	43.52	2.38	59.45	-35.78	27.0	62.7	344	328	-

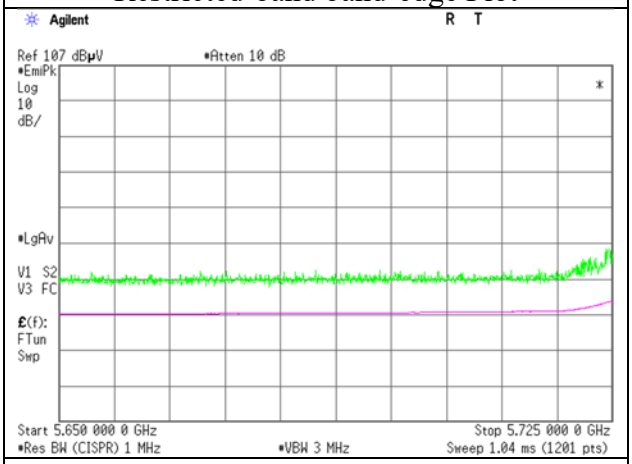
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5745 MHz

Horizontal

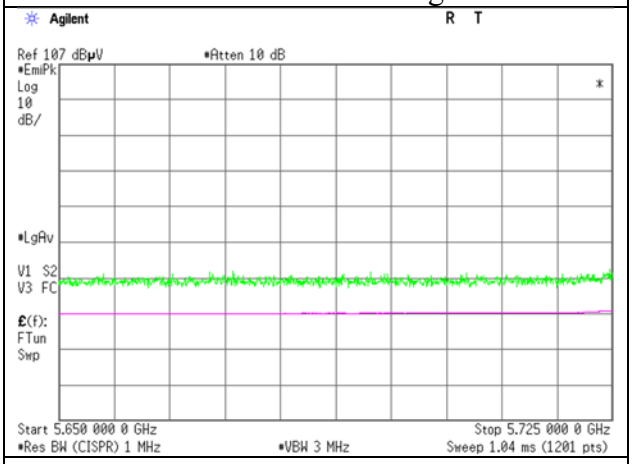
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome (1 GHz -6.4 GHz)
Mode	Tx 11ac-20 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	50.83	32.99	16.84	43.54	2.38	59.50	-35.73	27.0	62.7	180	16	-
Hori.	5855.000	PK	49.80	33.00	16.84	43.54	2.38	58.48	-36.75	15.6	52.3	180	16	-
Hori.	5875.000	PK	49.61	33.03	16.87	43.54	2.38	58.35	-36.88	10.0	46.8	180	16	-
Hori.	5925.000	PK	49.59	33.10	16.89	43.55	2.38	58.41	-36.82	-27.0	9.8	180	16	-
Vert.	5850.000	PK	49.91	32.99	16.84	43.54	2.38	58.58	-36.65	27.0	63.6	135	10	-
Vert.	5855.000	PK	49.79	33.00	16.84	43.54	2.38	58.47	-36.76	15.6	52.3	135	10	-
Vert.	5875.000	PK	49.52	33.03	16.87	43.54	2.38	58.26	-36.97	10.0	46.9	135	10	-
Vert.	5925.000	PK	49.71	33.10	16.89	43.55	2.38	58.53	-36.70	-27.0	**9.7**	135	10	-

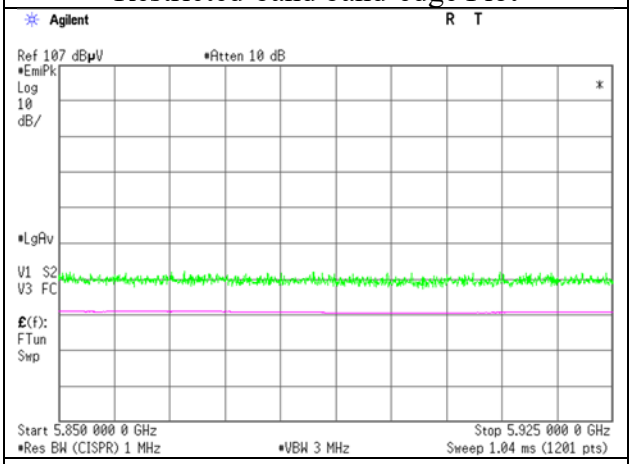
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	22 deg.C, 44 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5825 MHz

Horizontal

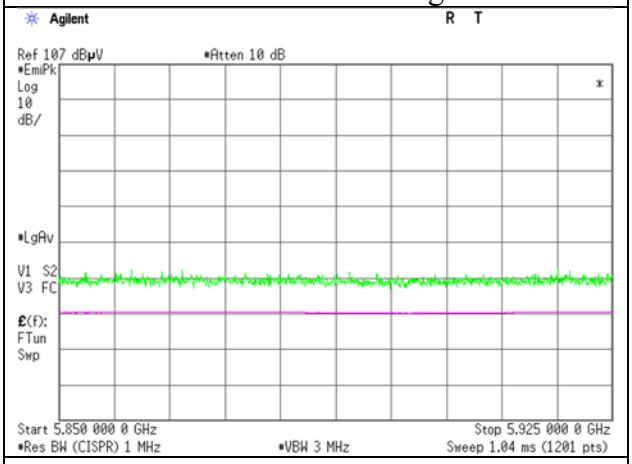
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	51.25	32.18	16.41	42.99	2.38	59.23	73.9	14.6	363	355	-
Hori.	5150.000	AV	38.76	32.18	16.41	42.99	2.38	46.74	53.9	**7.1**	363	355	VBW: 10 Hz
Vert.	5150.000	PK	49.84	32.18	16.41	42.99	2.38	57.82	73.9	16.0	219	177	-
Vert.	5150.000	AV	37.49	32.18	16.41	42.99	2.38	45.47	53.9	8.4	219	177	VBW: 10 Hz

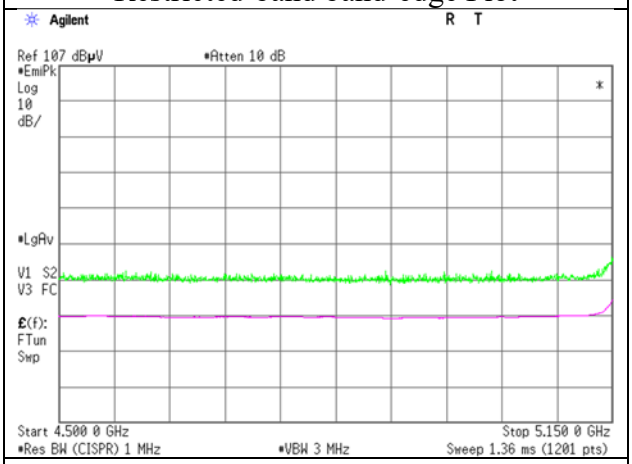
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5190 MHz

Horizontal

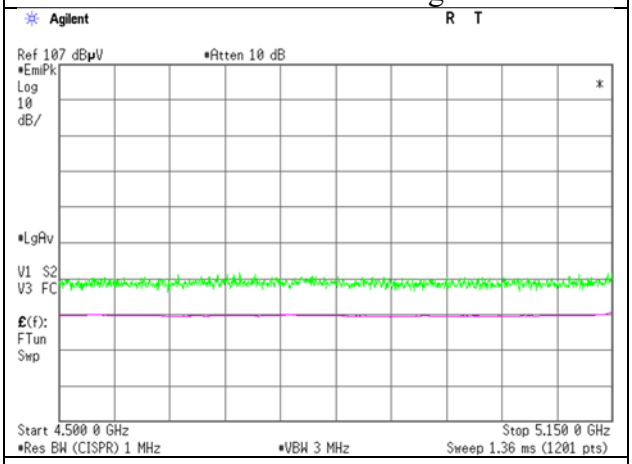
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	61.37	31.91	16.55	43.27	2.38	68.94	73.9	4.9	348	349	-
Hori.	5350.000	AV	44.89	31.91	16.55	43.27	2.38	52.46	53.9	**1.4**	348	349	VBW: 10 Hz
Vert.	5350.000	PK	53.20	31.91	16.55	43.27	2.38	60.77	73.9	13.1	253	174	-
Vert.	5350.000	AV	38.55	31.91	16.55	43.27	2.38	46.12	53.9	7.7	253	174	VBW: 10 Hz

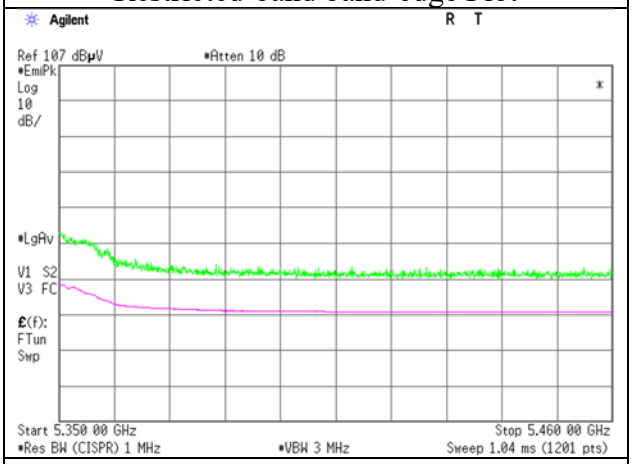
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5310 MHz

Horizontal

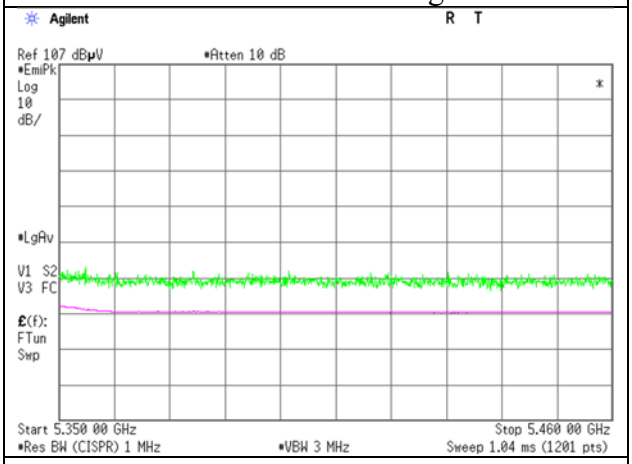
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-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	44.79	32.16	16.67	43.42	2.38	52.58	73.9	21.3	261	354	-
Hori.	5460.000	AV	33.02	32.16	16.67	43.42	2.38	40.81	53.9	13.0	261	354	VBW: 10 Hz
Vert.	5460.000	PK	46.25	32.16	16.67	43.42	2.38	54.04	73.9	19.8	148	223	-
Vert.	5460.000	AV	33.28	32.16	16.67	43.42	2.38	41.07	53.9	**12.8**	148	223	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	45.55	32.18	16.68	43.44	2.38	53.35	-41.88	-27.0	14.8	261	354	-
Vert.	5470.000	PK	46.53	32.18	16.68	43.44	2.38	54.33	-40.90	-27.0	13.9	148	223	-

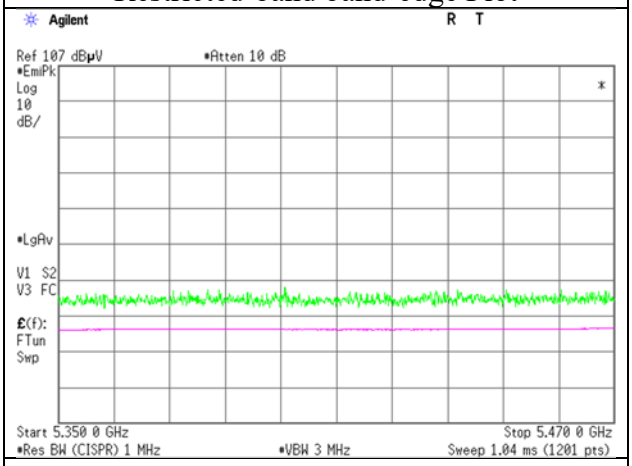
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5510 MHz

Horizontal

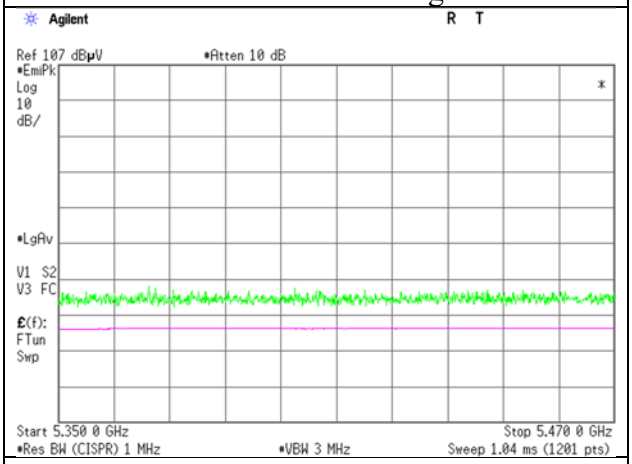
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5670 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	45.46	32.63	16.83	43.52	2.38	53.78	-41.45	-27.0	**14.4**	232	332	-
Vert.	5725.000	PK	45.09	32.63	16.83	43.52	2.38	53.41	-41.82	-27.0	14.8	244	80	-

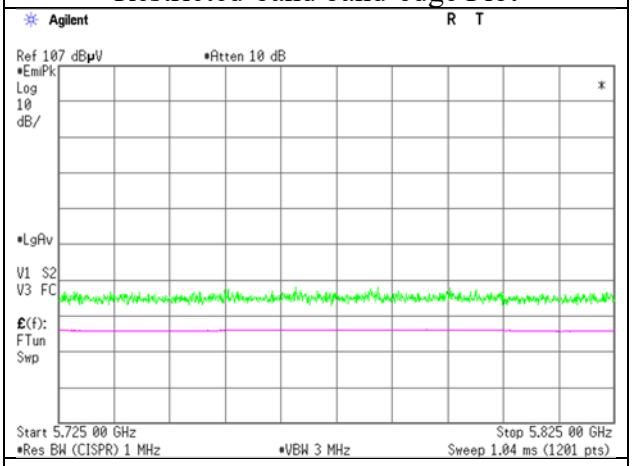
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5670 MHz

Horizontal

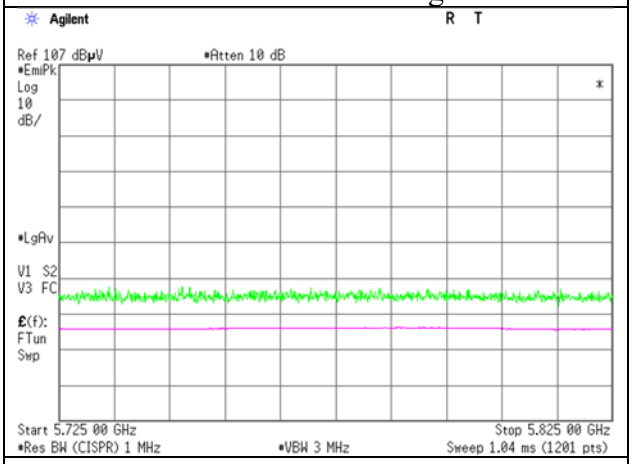
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5755 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	49.41	32.42	16.73	43.50	2.38	57.44	-37.79	-27.0	**10.7**	339	354	-
Hori.	5700.000	PK	51.05	32.55	16.75	43.51	2.38	59.22	-36.01	10.0	46.0	339	354	-
Hori.	5720.000	PK	56.03	32.61	16.76	43.52	2.38	64.26	-30.97	15.6	46.5	339	354	-
Hori.	5723.125	PK	56.57	32.62	16.76	43.52	2.38	64.81	-30.42	22.8	53.2	339	354	-
Hori.	5725.000	PK	56.56	32.63	16.76	43.52	2.38	64.81	-30.42	27.0	57.4	339	354	-
Vert.	5650.000	PK	49.19	32.42	16.73	43.50	2.38	57.22	-38.01	-27.0	11.0	225	130	-
Vert.	5700.000	PK	49.90	32.55	16.75	43.51	2.38	58.07	-37.16	10.0	47.1	225	130	-
Vert.	5720.000	PK	51.50	32.61	16.76	43.52	2.38	59.73	-35.50	15.6	51.1	225	130	-
Vert.	5723.375	PK	51.77	32.62	16.76	43.52	2.38	60.01	-35.22	23.3	58.5	225	130	-
Vert.	5725.000	PK	51.98	32.63	16.76	43.52	2.38	60.23	-35.00	27.0	62.0	225	130	-

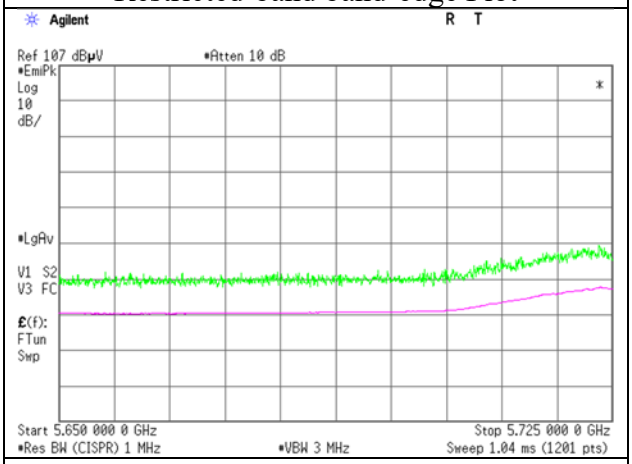
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5755 MHz

Horizontal

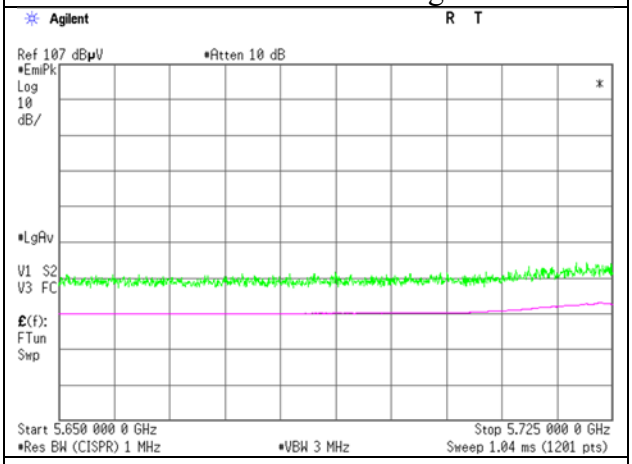
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5795 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	50.73	32.99	16.84	43.54	2.38	59.40	-35.83	27.0	62.8	342	356	-
Hori.	5855.000	PK	48.97	33.00	16.84	43.54	2.38	57.65	-37.58	15.6	53.1	342	356	-
Hori.	5875.000	PK	49.92	33.03	16.87	43.54	2.38	58.66	-36.57	10.0	46.5	342	356	-
Hori.	5925.000	PK	50.11	33.10	16.89	43.55	2.38	58.93	-36.30	-27.0	**9.2**	342	356	-
Vert.	5850.000	PK	49.86	32.99	16.84	43.54	2.38	58.53	-36.70	27.0	63.7	301	195	-
Vert.	5855.000	PK	48.84	33.00	16.84	43.54	2.38	57.52	-37.71	15.6	53.3	301	195	-
Vert.	5875.000	PK	48.91	33.03	16.87	43.54	2.38	57.65	-37.58	10.0	47.5	301	195	-
Vert.	5925.000	PK	50.02	33.10	16.89	43.55	2.38	58.84	-36.39	-27.0	9.3	301	195	-

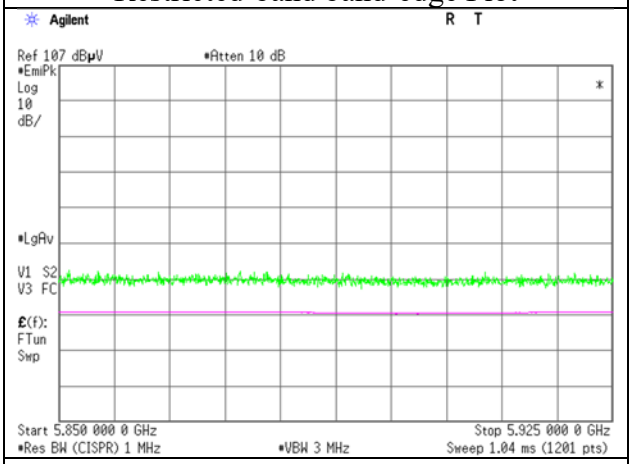
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5795 MHz

Horizontal

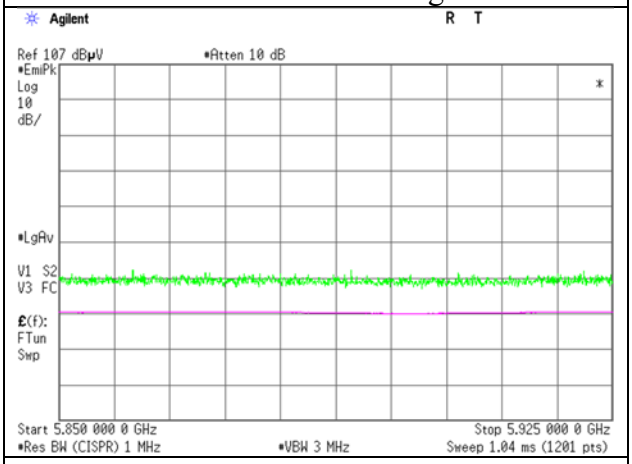
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5210 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	45.98	32.18	16.47	42.99	2.38	54.02	73.9	19.8	351	331	-
Hori.	5150.000	AV	33.34	32.18	16.47	42.99	2.38	41.38	53.9	**12.5**	351	331	VBW: 10 Hz
Vert.	5150.000	PK	46.02	32.18	16.47	42.99	2.38	54.06	73.9	19.8	202	270	-
Vert.	5150.000	AV	33.22	32.18	16.47	42.99	2.38	41.26	53.9	12.6	202	270	VBW: 10 Hz

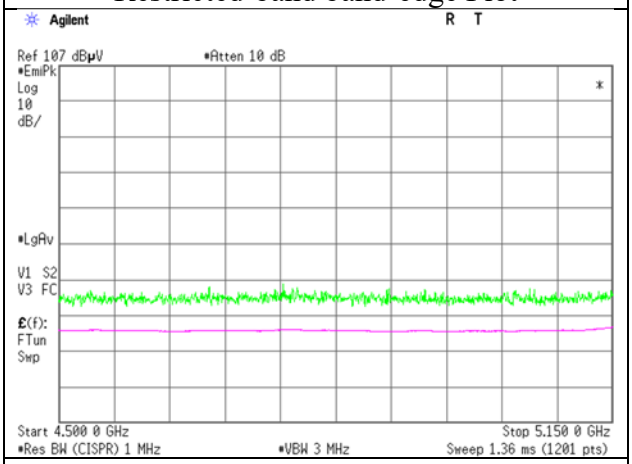
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5210 MHz

Horizontal

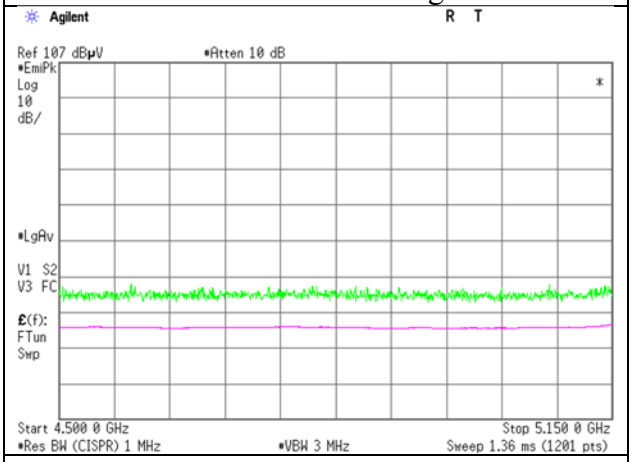
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5290 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	48.72	31.91	16.61	43.27	2.38	56.35	73.9	17.5	178	89	-
Hori.	5350.000	AV	35.63	31.91	16.61	43.27	2.38	43.26	53.9	**10.6**	178	89	VBW: 10 Hz
Vert.	5350.000	PK	48.57	31.91	16.61	43.27	2.38	56.20	73.9	17.7	183	271	-
Vert.	5350.000	AV	35.28	31.91	16.61	43.27	2.38	42.91	53.9	10.9	183	271	VBW: 10 Hz

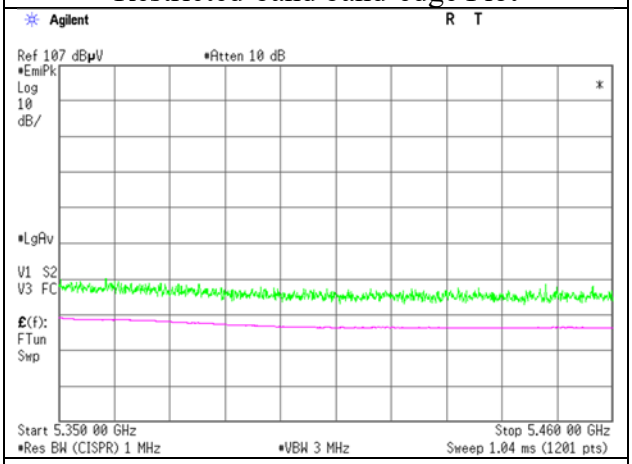
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80 5290 MHz

Horizontal

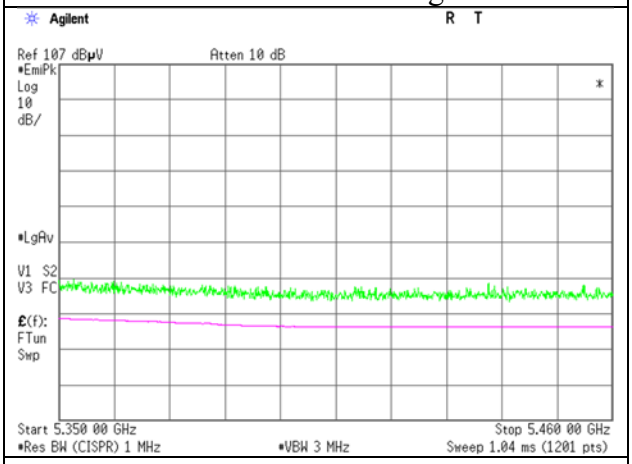
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5530 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	56.95	32.16	16.61	43.42	2.38	64.68	73.9	9.2	364	350	-
Hori.	5460.000	AV	37.41	32.16	16.61	43.42	2.38	45.14	53.9	8.7	364	350	VBW: 10 Hz
Vert.	5460.000	PK	51.95	32.16	16.61	43.42	2.38	59.68	73.9	14.2	233	174	-
Vert.	5460.000	AV	37.47	32.16	16.61	43.42	2.38	45.20	53.9	8.7	233	174	VBW: 10 Hz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	58.79	32.18	16.62	43.44	2.38	66.53	-28.70	-27.0	**1.7**	364	350	-
Vert.	5470.000	PK	54.03	32.18	16.62	43.44	2.38	61.77	-33.46	-27.0	6.4	233	174	-

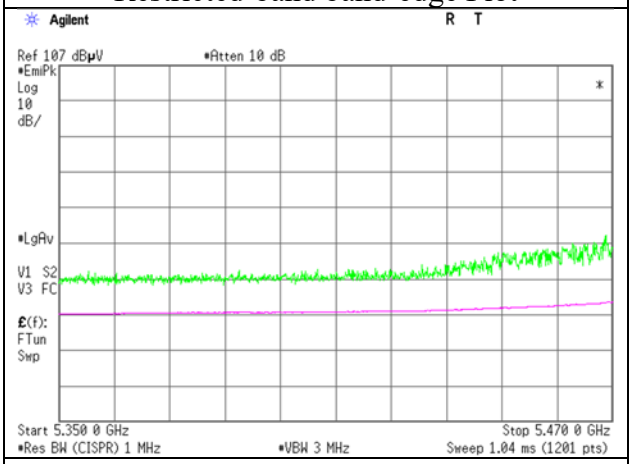
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80 5530 MHz

Horizontal

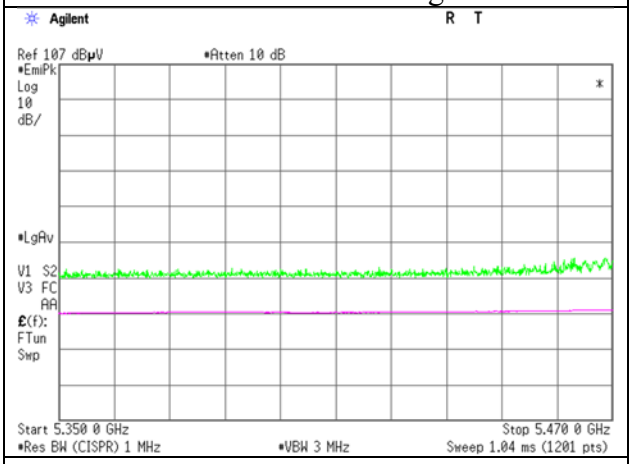
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

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

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato (1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5775 MHz

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

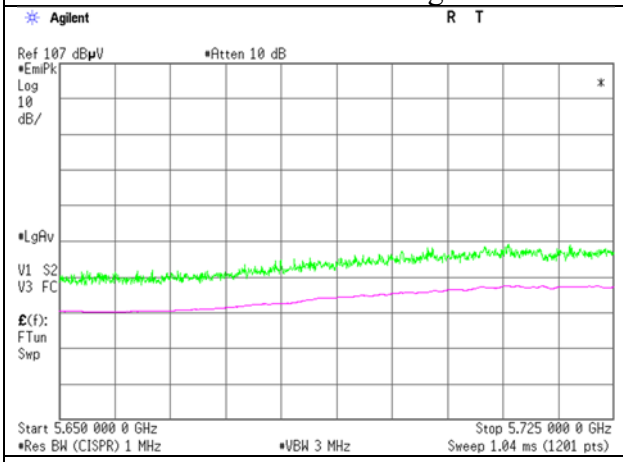
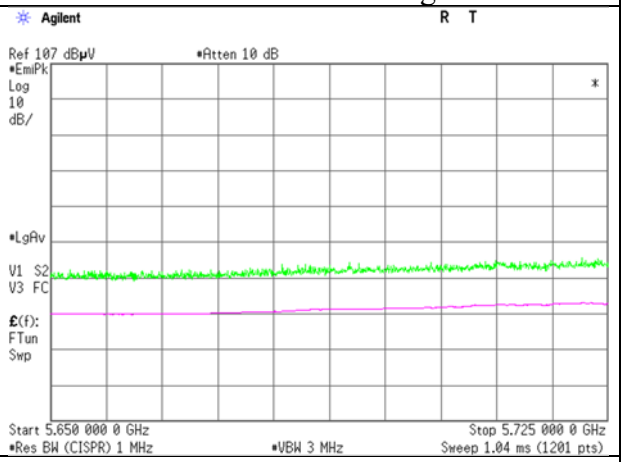
(* PK: Peak, AV: Average, QP: Quasi-Peak)

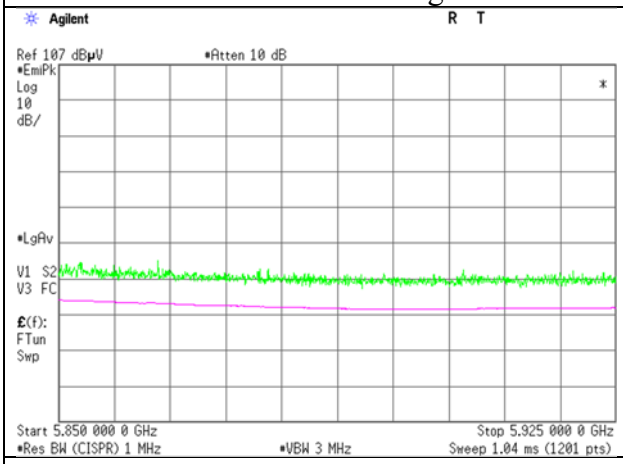
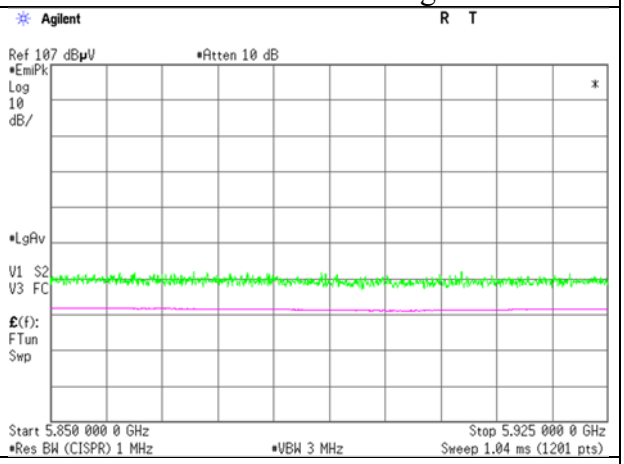
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.96	32.42	16.73	43.50	2.38	56.99	-38.24	-27.0	11.2	350	356	-
Hori.	5700.000	PK	55.14	32.55	16.75	43.51	2.38	63.31	-31.92	10.0	41.9	350	356	-
Hori.	5720.000	PK	55.91	32.61	16.76	43.52	2.38	64.14	-31.09	15.6	46.6	350	356	-
Hori.	5725.000	PK	56.24	32.63	16.76	43.52	2.38	64.49	-30.74	27.0	57.7	350	356	-
Hori.	5850.000	PK	52.78	32.99	16.84	43.54	2.38	61.45	-33.78	27.0	60.7	350	356	-
Hori.	5855.000	PK	51.73	33.00	16.84	43.54	2.38	60.41	-34.82	15.6	50.4	350	356	-
Hori.	5875.000	PK	51.66	33.03	16.87	43.54	2.38	60.40	-34.83	10.0	44.8	350	356	-
Hori.	5925.000	PK	50.74	33.10	16.89	43.55	2.38	59.56	-35.67	-27.0	**8.6**	350	356	-
Vert.	5650.000	PK	48.37	32.42	16.73	43.50	2.38	56.40	-38.83	-27.0	11.8	289	197	-
Vert.	5700.000	PK	50.19	32.55	16.75	43.51	2.38	58.36	-36.87	10.0	46.8	289	197	-
Vert.	5720.000	PK	51.75	32.61	16.76	43.52	2.38	59.98	-35.25	15.6	50.8	289	197	-
Vert.	5725.000	PK	52.22	32.63	16.76	43.52	2.38	60.47	-34.76	27.0	61.7	289	197	-
Vert.	5850.000	PK	49.34	32.99	16.84	43.54	2.38	58.01	-37.22	27.0	64.2	289	197	-
Vert.	5855.000	PK	49.11	33.00	16.84	43.54	2.38	57.79	-37.44	15.6	53.0	289	197	-
Vert.	5875.000	PK	49.24	33.03	16.87	43.54	2.38	57.98	-37.25	10.0	47.2	289	197	-
Vert.	5925.000	PK	49.27	33.10	16.89	43.55	2.38	58.09	-37.14	-27.0	10.1	289	197	-

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 (3.95 m / 3.0 m) = 2.38 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	3
Date	April 19, 2022
Temperature / Humidity	24 deg.C, 43 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80 5775 MHz

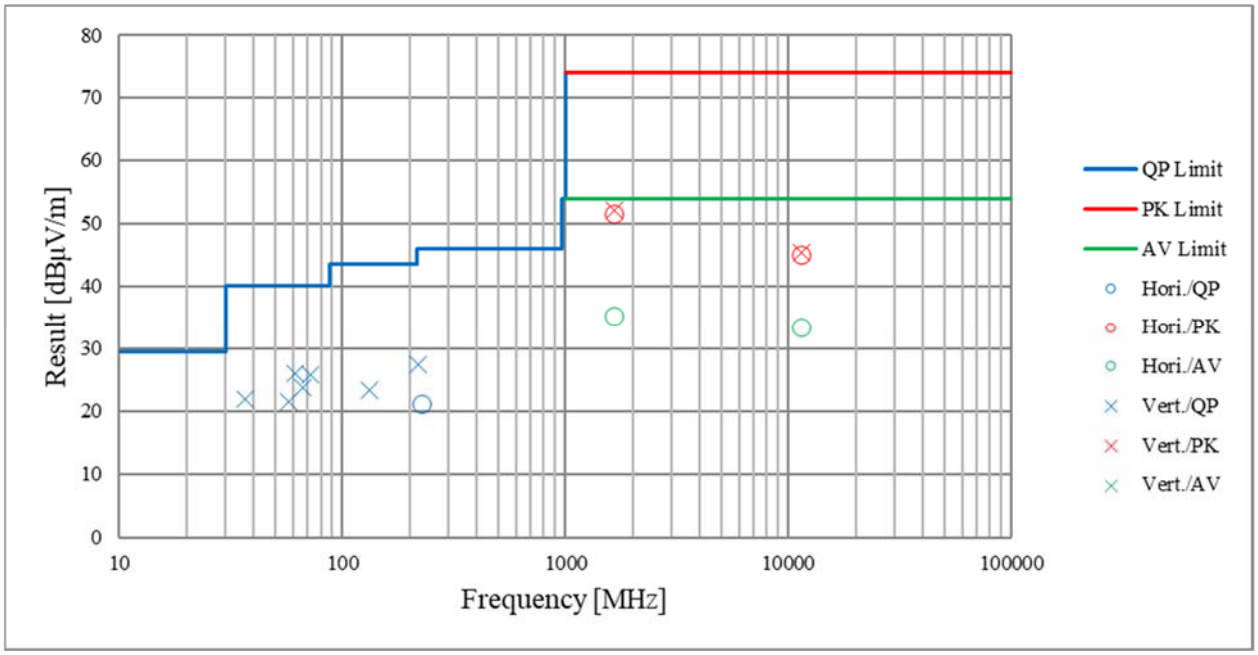
Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

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

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

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

Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	1	3	2	2	1
Date	April 17, 2022	April 19, 2022	April 18, 2022	April 28, 2022	April 14, 2022
Temperature / Humidity	20 deg.C, 43 %RH	22 deg.C, 44 %RH	22 deg.C, 48 %RH	21 deg.C, 47 %RH	20 deg.C, 52 %RH
Engineer	Shiro Kobayashi (30 MHz -1 GHz)	Miku Ikudome (1 GHz -6.4 GHz)	Shiro Kobayashi (6.4 GHz -10 GHz)	Hiromasa Sato (10 GHz -18 GHz)	Hiromasa Sato (18 GHz -40 GHz)
Mode	Tx 11a 5745 MHz				

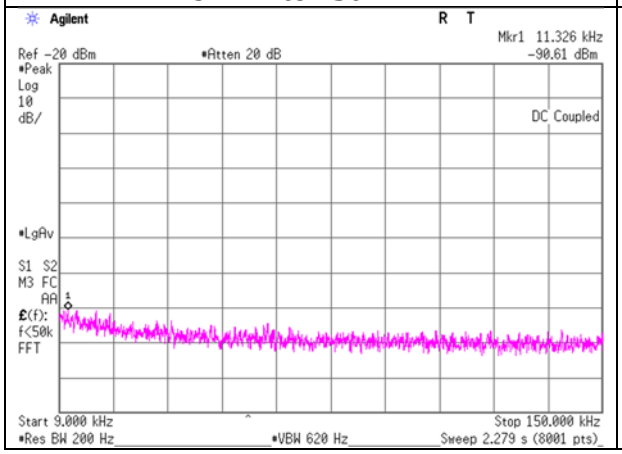


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

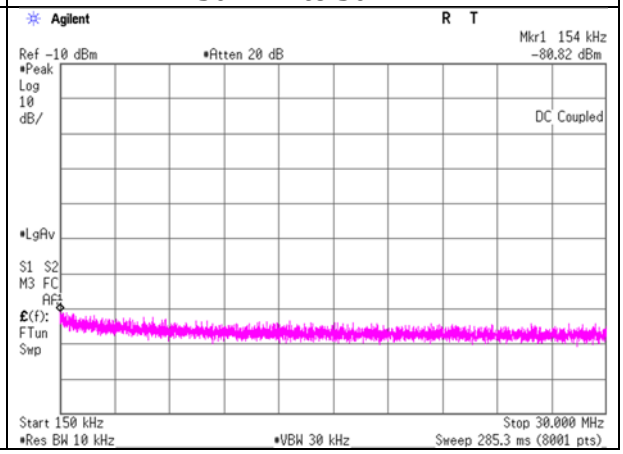
Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 17, 2022
Temperature / Humidity	25 deg. C / 48 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a 5745 MHz

9 kHz to 150 kHz



150 kHz to 30 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenuator [dB]	Antenna Gain [dBi]	N (Number of Output)	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
11.326	-90.61	2.99	9.81	7.12	1	-70.7	300	6.0	-9.4	46.5	55.9	-
154.000	-80.82	2.99	9.81	7.12	1	-60.9	300	6.0	0.4	23.8	23.4	-

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

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

N: Number of output

APPENDIX 2: Test Instruments

Test Equipment [1/2]

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	COTS-SEMI-5	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3 (RE,CE,ME,PE)	-	-	-
RE	KAT6-04	144899	Attenuator	Inmet	18N-6dB	-	2021/12/10	12
RE	KBA-01	146343	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	BBA9106	1748	2021/06/12	12
RE	KFL-15	144938	Highpass Filter	MICRO-TRONICS	HPM50112	7	2021/10/05	12
RE	KJM-02	146432	Measure	TAJIMA	GL19-55	-	-	-
RE	KSA-08	145089	Spectrum Analyzer	Keysight Technologies Inc	E4446A	MY46180525	2021/10/13	12
RE	SAEC-01(NSA)	145597	Semi-Anechoic Chamber	TDK	SAEC-01(NSA)	1	2022/04/11	12
RE	SAEC-01(SVSWR)	145561	Semi-Anechoic Chamber	TDK	SAEC-01(SVSWR)	1	2021/05/09	12
RE	SAEC-02(SVSWR)	145598	Semi-Anechoic Chamber	TDK	SAEC-02(SVSWR)	2	2021/05/20	12
RE	SAEC-03(SVSWR)	145566	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	2021/05/21	12
RE	SAF-01	145003	Pre Amplifier	SONOMA	310N	290211	2022/02/24	12
RE	SAF-05	145128	Pre Amplifier	Toyo Corporation	TPA0118-36	1440490	2021/05/17	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	SAT10-05	145136	Attenuator	Keysight Technologies Inc	8493C-010	74864	2021/10/07	12
RE	SAT10-06	145137	Attenuator	Keysight Technologies Inc	8493C-010	74865	2021/10/05	12
RE	SAT3-09	144959	Attenuator	JFW	50HF-003N	-	2021/08/16	12
RE	SCC-A1/A3/A5/A7/A8/A13/SRSE-01	144967	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2022/04/20	12
RE	SCC-A2/A4/A6/A7/A8/A13/SRSE-01	144968	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2022/04/20	12
RE	SCC-G15	145176	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	2022/03/03	12
RE	SCC-G40	166491	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S005	2022/01/06	12
RE	SCC-G41	151617	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S006	2022/01/06	12
RE	SCC-G43	156380	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	SN MY 13406/4E	2021/05/17	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	2021/05/18	12
RE	SCC-G58	183047	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800287/4A	2021/05/17	12
RE	SFL-03	145377	Highpass Filter	MICRO-TRONICS	HPM50112	28	2021/10/05	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

Test Equipment [2/2]

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	SHA-04	145512	Horn Antenna	ETS-Lindgren	3160-09	00094868	2021/06/14	12
RE	SHA-06	145514	Horn Antenna	ETS-Lindgren	3160-10	00092383	2021/06/14	12
RE	SHA-09	194684	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	695	2022/03/10	12
RE	SJM-20	207277	Measuring	ASKUL	-	-	-	-
RE	SJM-22	207279	Measuring Tool, Tape Measure	ASKUL	-	-	-	-
RE	SLA-01	145531	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	UHALP9108A	UHALP 9108-A 0888	2021/06/12	12
RE	SOS-20	191837	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2021/08/02	12
RE	SOS-21	191838	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2021/08/02	12
RE	SOS-23	191840	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2021/08/02	12
RE	SSA-03	145801	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY48250152	2021/08/09	12
RE	STR-01	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2022/04/28	12
RE	STS-01	145792	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997812	2021/09/14	12
RE	STS-02	145793	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997819	2022/04/07	12
RE	STS-03	146210	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997823	2021/09/14	12
RE	SCC-G69	200009	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575617/4	2021/07/06	12
AT	SAT10-14	154591	Attenuator	Weinschel Corp.	54A-10	81595	2022/04/01	12
AT	SAT10-15	160493	Attenuator	Weinschel Corp.	54A-10	83406	2021/12/07	12
AT	SCC-G63	196946	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	803411/2	2022/03/01	12
AT	SCC-G65	196942	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	803416/2	2022/03/01	12
AT	SOS-27	191845	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2021/08/02	12
AT	SPM-13	169910	Power Meter	Keysight Technologies Inc	8990B	MY51000448	2022/01/25	12
AT	SPSS-06	169911	Power sensor	Keysight Technologies Inc	N1923A	MY57270004	2022/01/25	12
AT	SRENT-22	202830	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY48250036	2021/12/01	12

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

The expiration date of the calibration is the end of the expired month.
As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

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

Test item:

RE: Radiated Emission
AT: Antenna Terminal Conducted test