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		Limit	Margin	e.i.r.p. Result		Limit	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		Limit	Margin	e.i.r.p. Result		Limit	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		Limit	Margin	e.i.r.p. Result		Limit	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		Limit	Margin	e.i.r.p. Result		Limit	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	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		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[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				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	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:

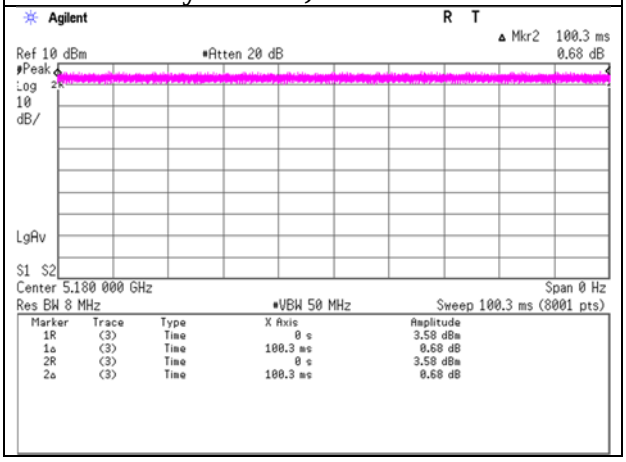
Burst power = Reading (timed average) + Duty factor

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

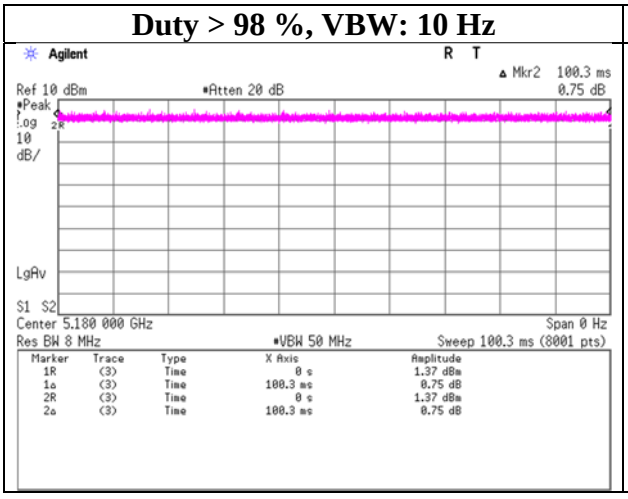
11a 36 Mbps

Duty > 98 %, VBW: 10 Hz



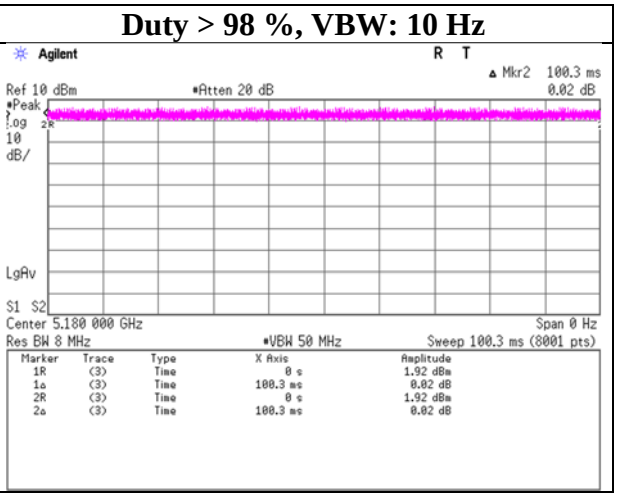
11n-20 MCS 4

Duty > 98 %, VBW: 10 Hz



11ac-20 MCS 6

Duty > 98 %, VBW: 10 Hz

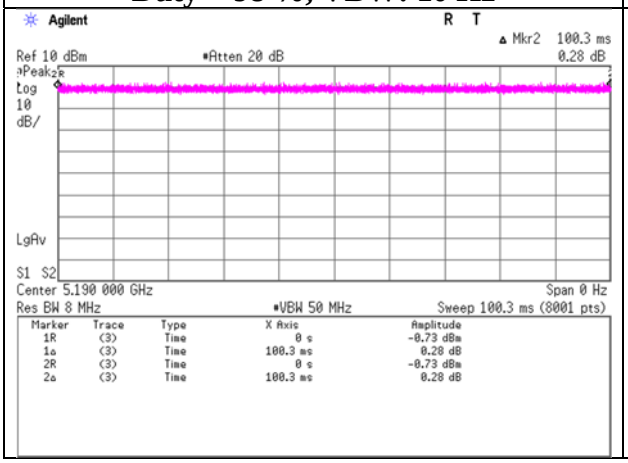


Burst rate confirmation

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

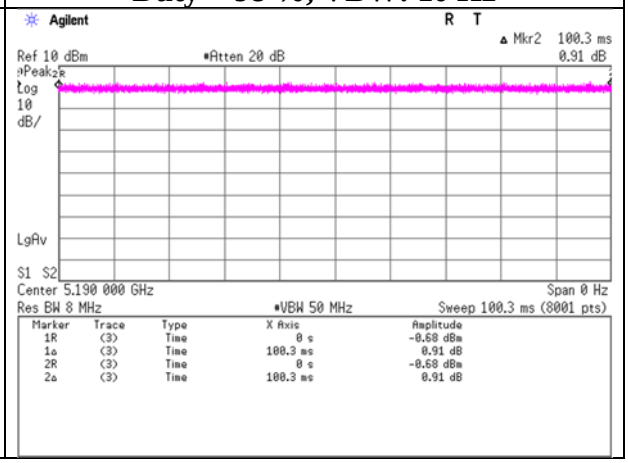
11n-40 MCS 1

Duty > 98 %, VBW: 10 Hz



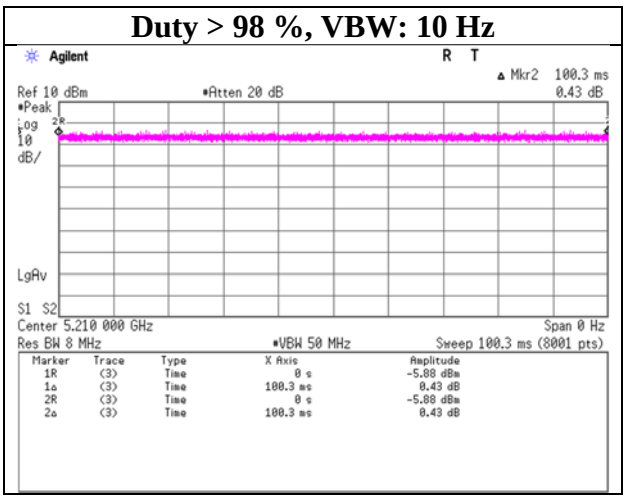
11ac-40 MCS 4

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 Correct
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 Correct
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 Correct
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 Correct
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]	Limit [dBm /MHz]	Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	Limit [dBm /MHz]	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 Correct
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

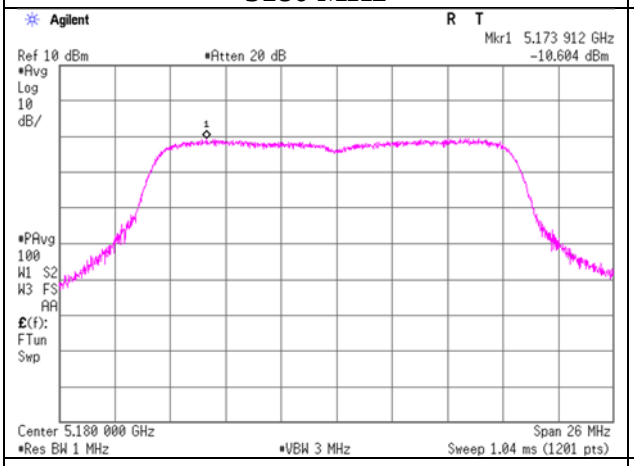
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correct
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

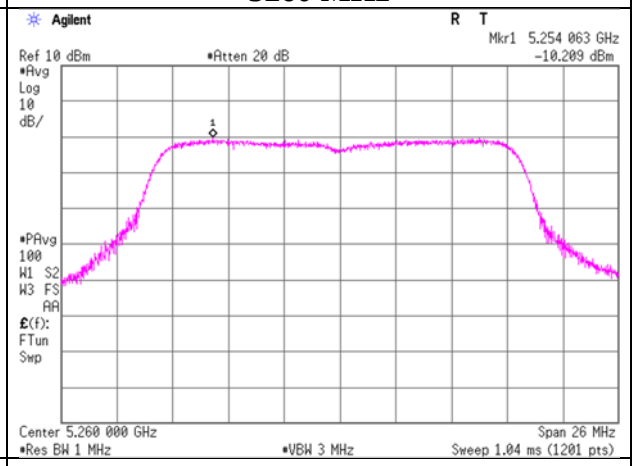
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

11a

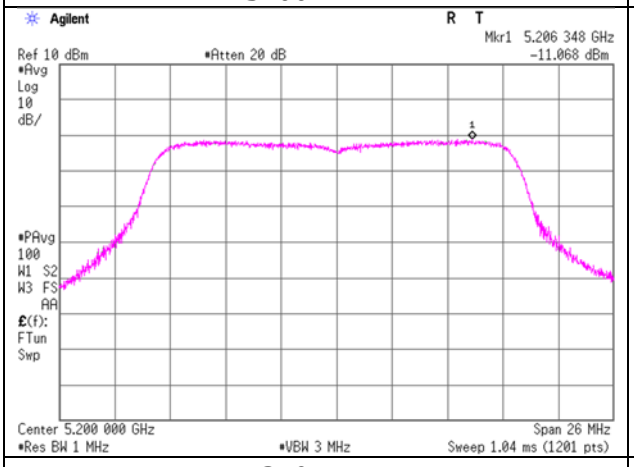
5180 MHz



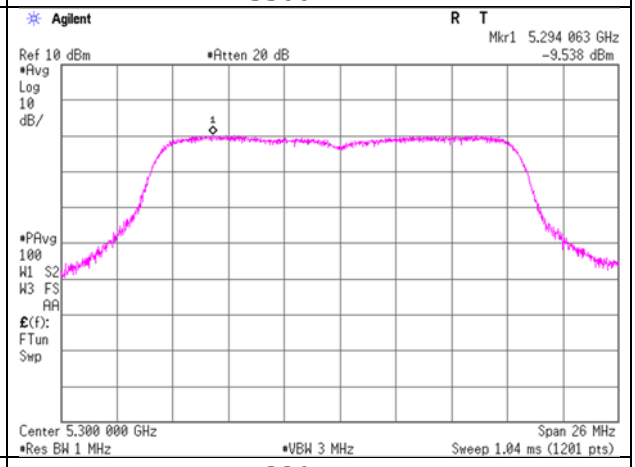
5260 MHz



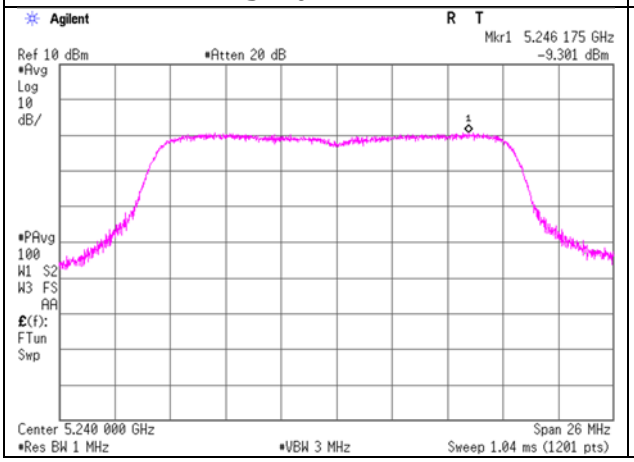
5200 MHz



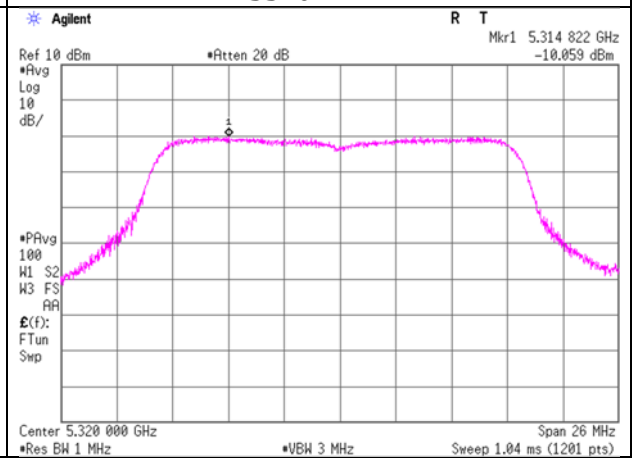
5300 MHz



5240 MHz



5320 MHz

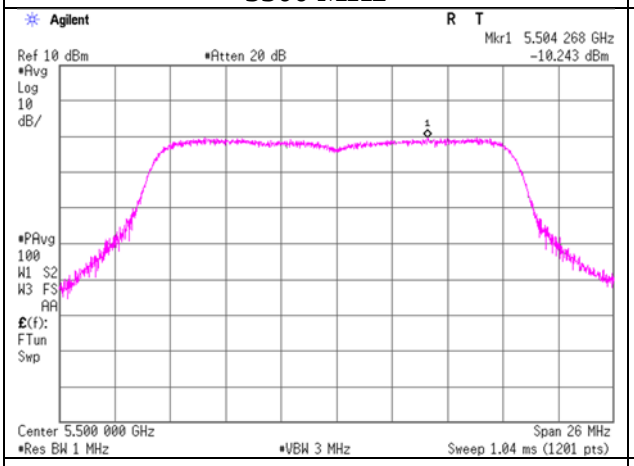


Maximum Power Spectral Density

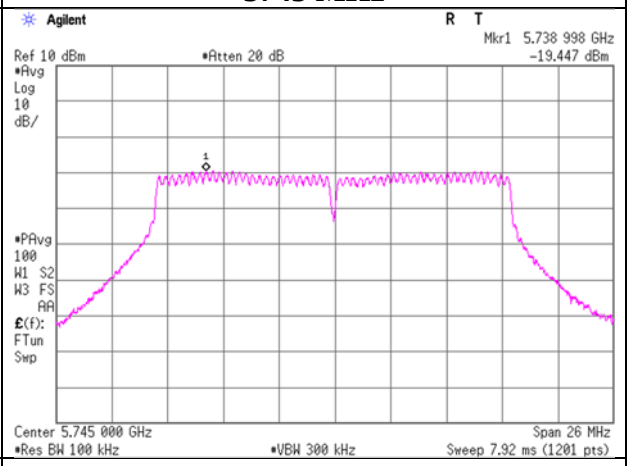
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11a

11a

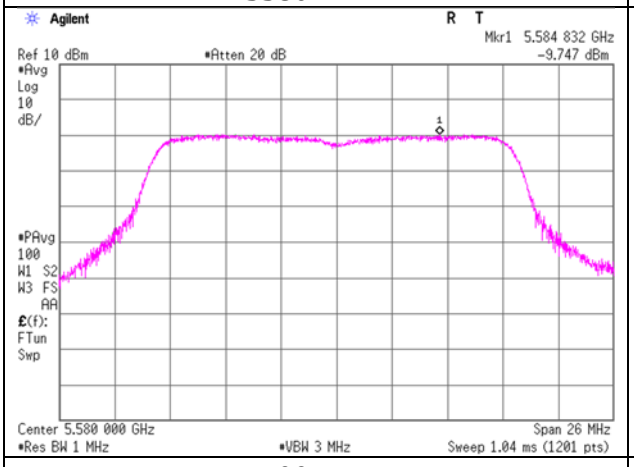
5500 MHz



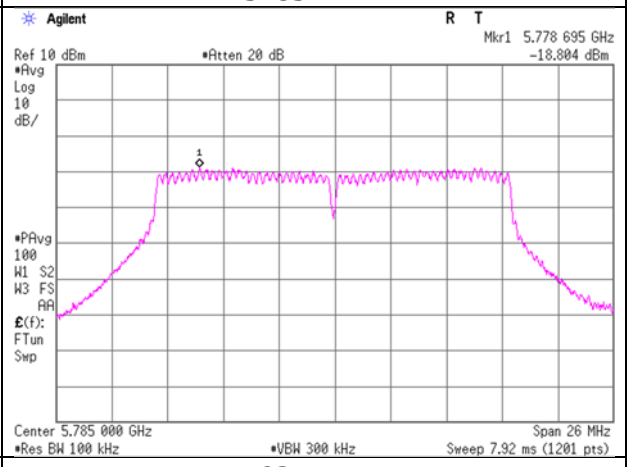
5745 MHz



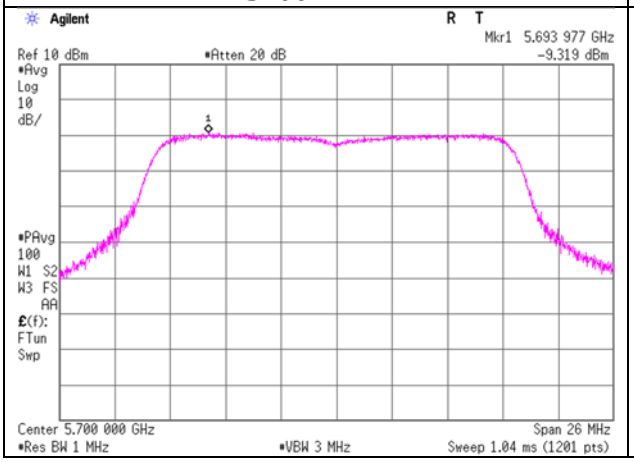
5580 MHz



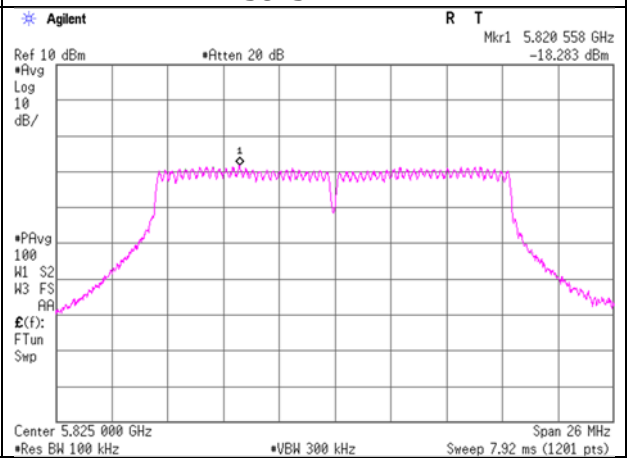
5785 MHz



5700 MHz



5825 MHz

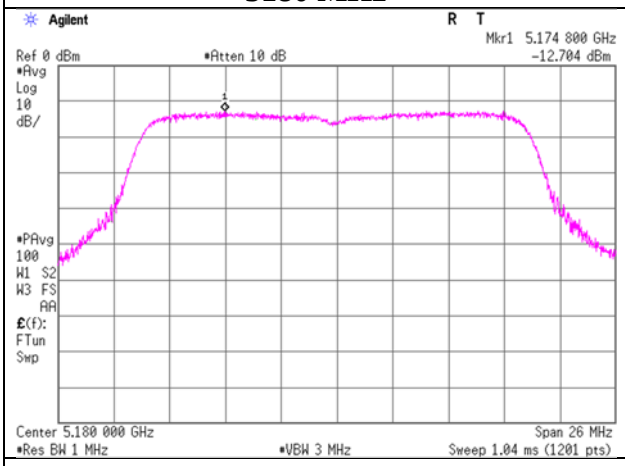


Maximum Power Spectral Density

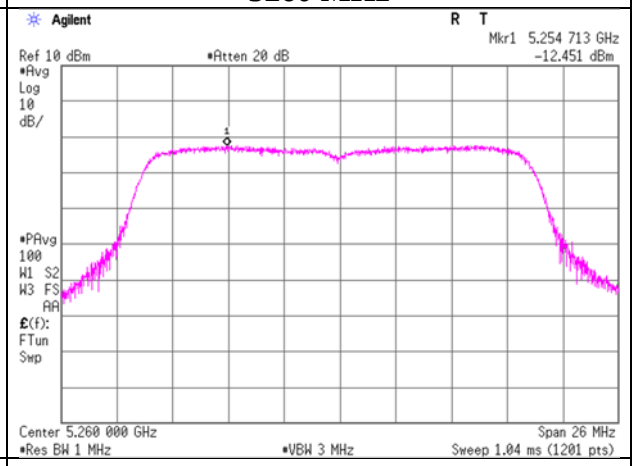
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-20

11n-20

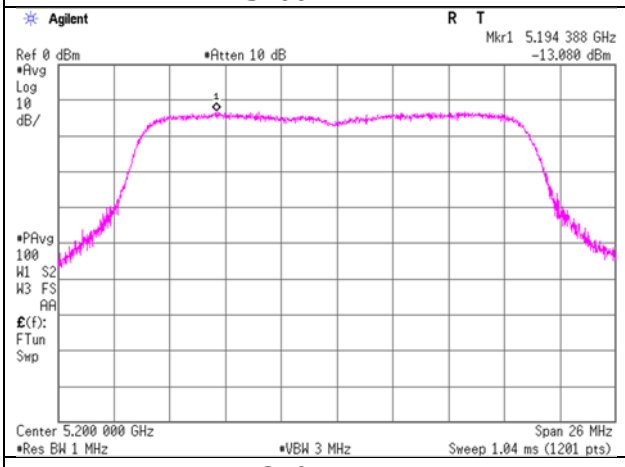
5180 MHz



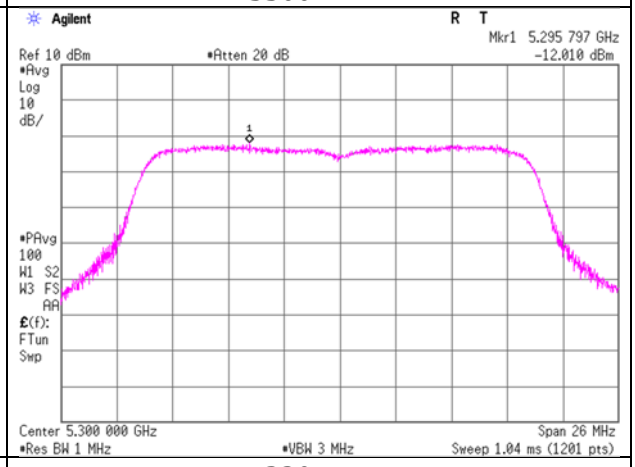
5260 MHz



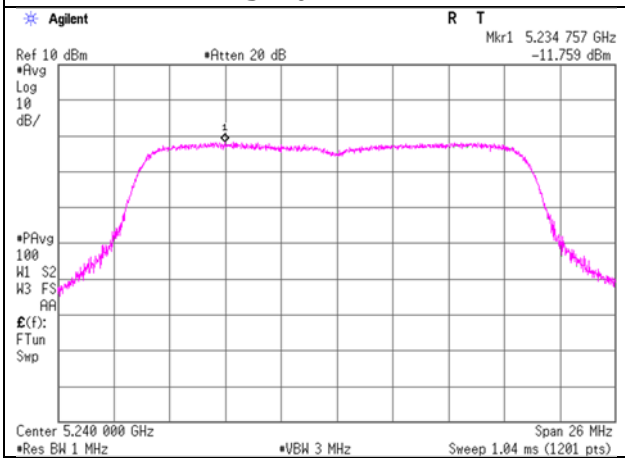
5200 MHz



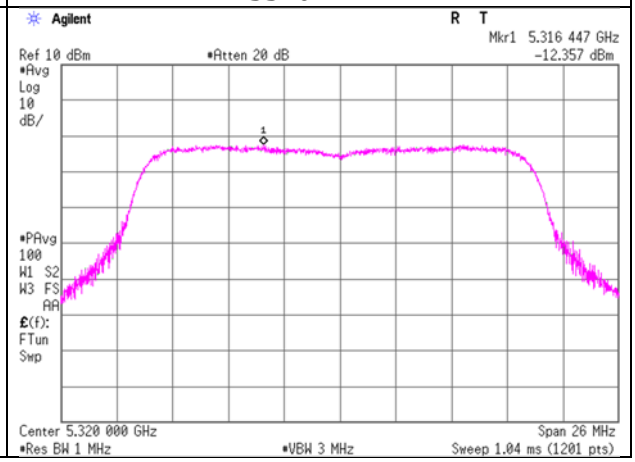
5300 MHz



5240 MHz



5320 MHz

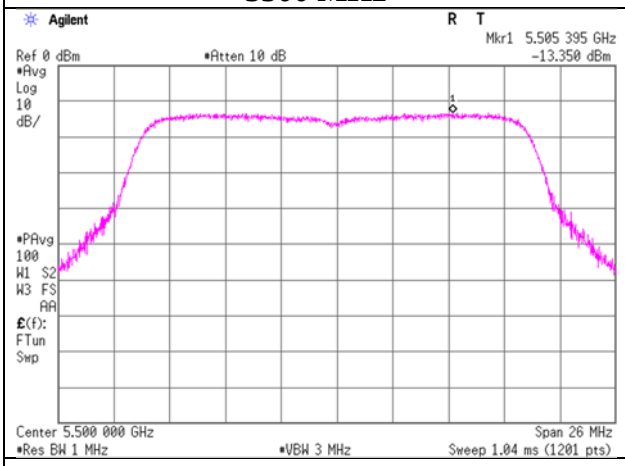


Maximum Power Spectral Density

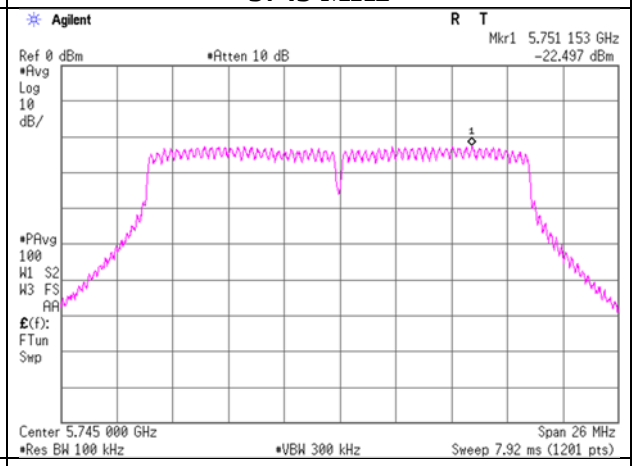
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-20	

11n-20

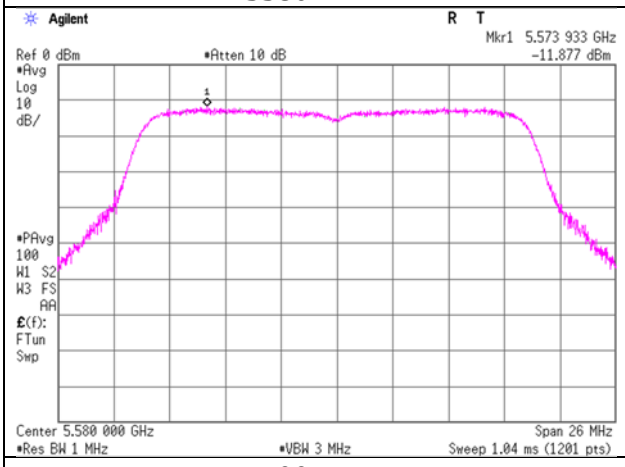
5500 MHz



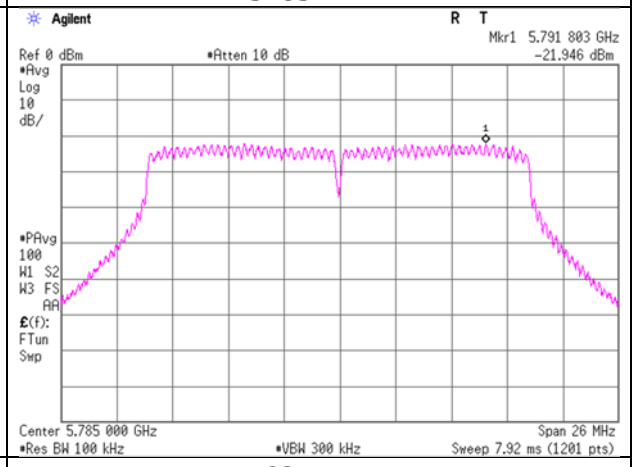
5745 MHz



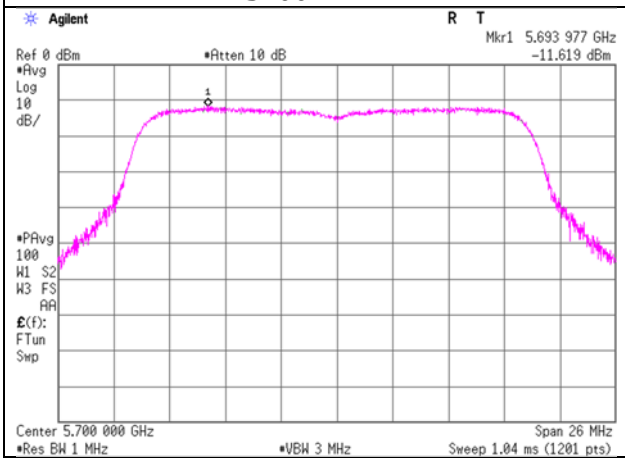
5580 MHz



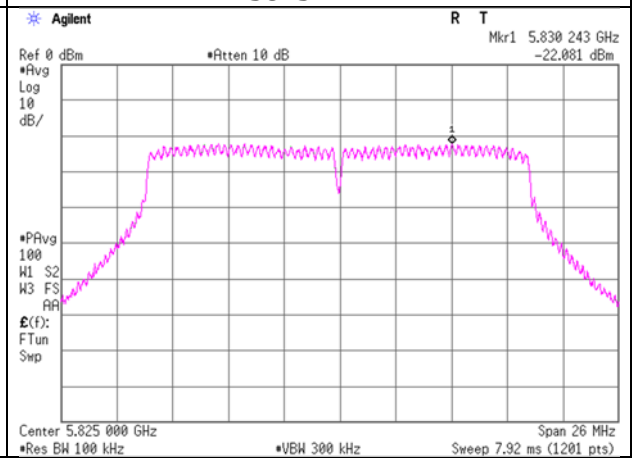
5785 MHz



5700 MHz



5825 MHz

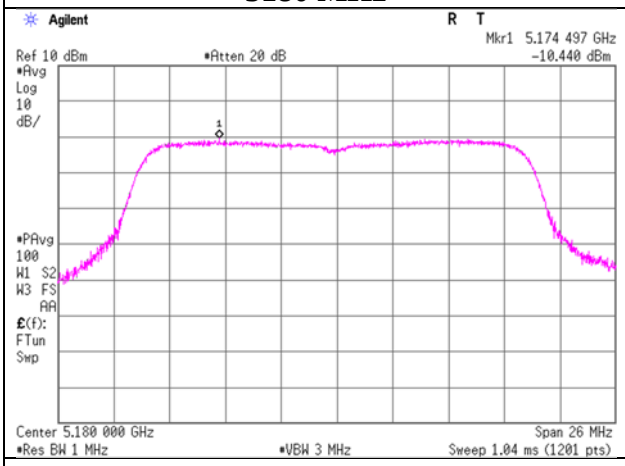


Maximum Power Spectral Density

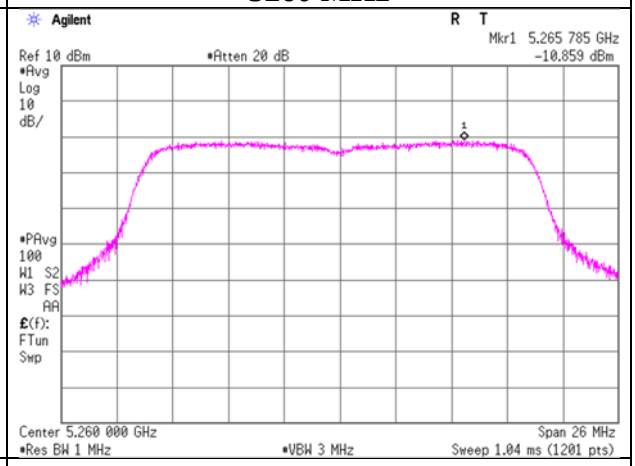
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

11ac-20

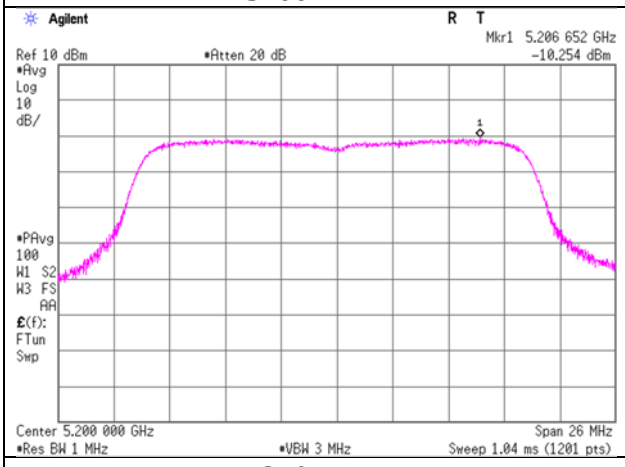
5180 MHz



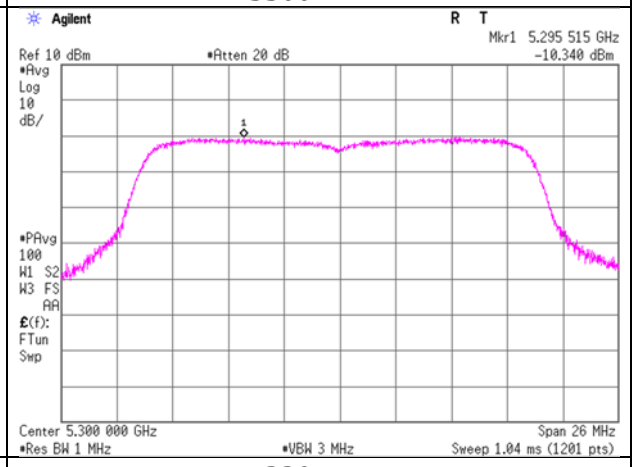
5260 MHz



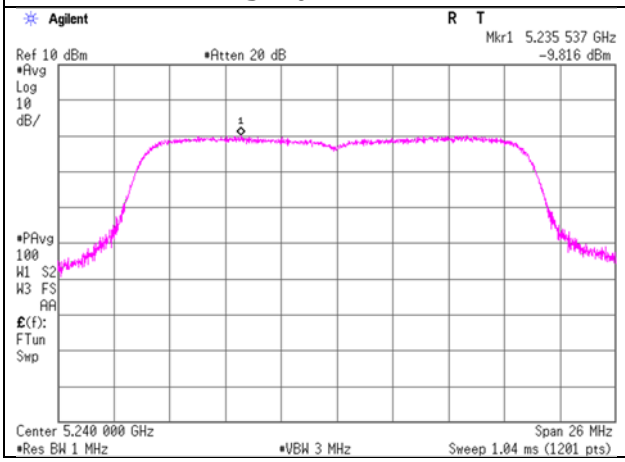
5200 MHz



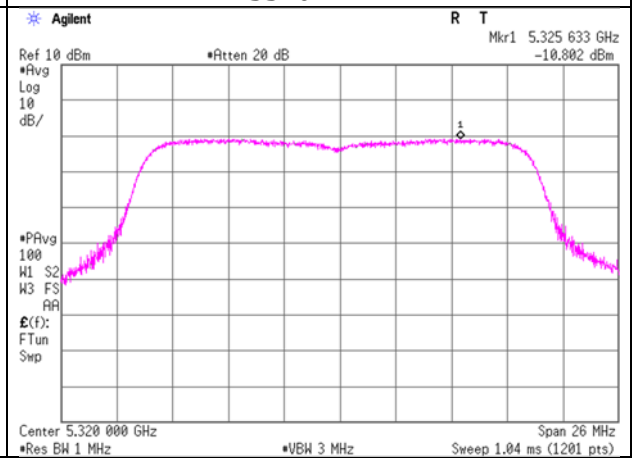
5300 MHz



5240 MHz



5320 MHz

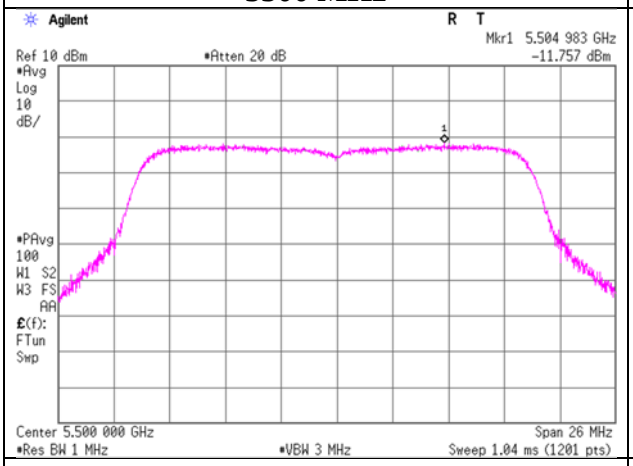


Maximum Power Spectral Density

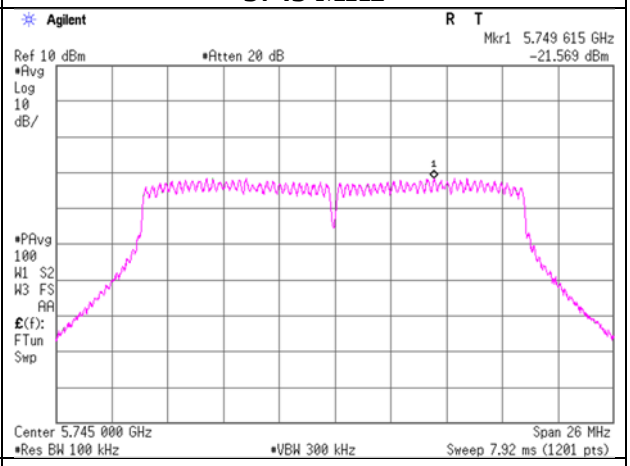
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-20

11ac-20

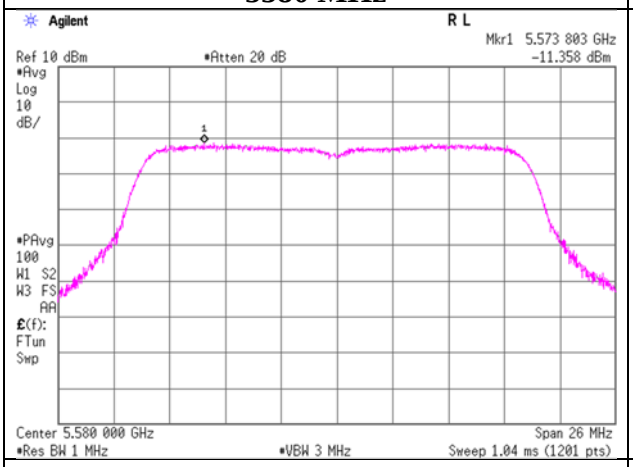
5500 MHz



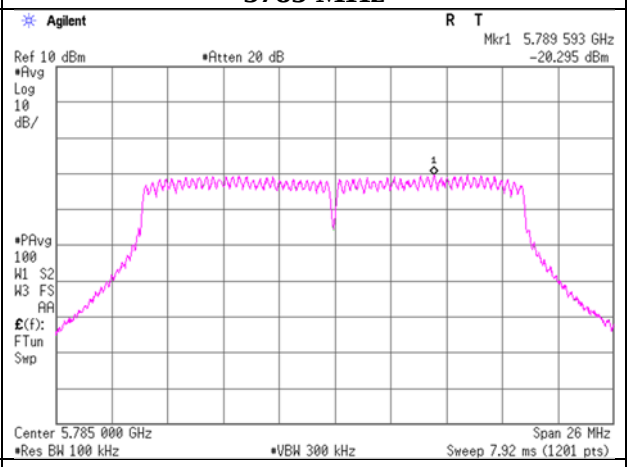
5745 MHz



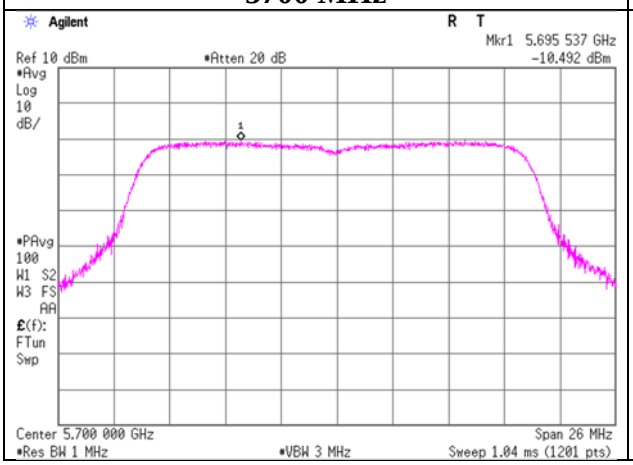
5580 MHz



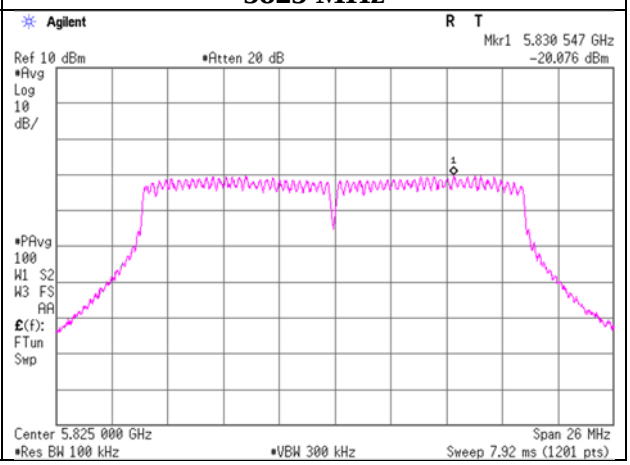
5785 MHz



5700 MHz



5825 MHz

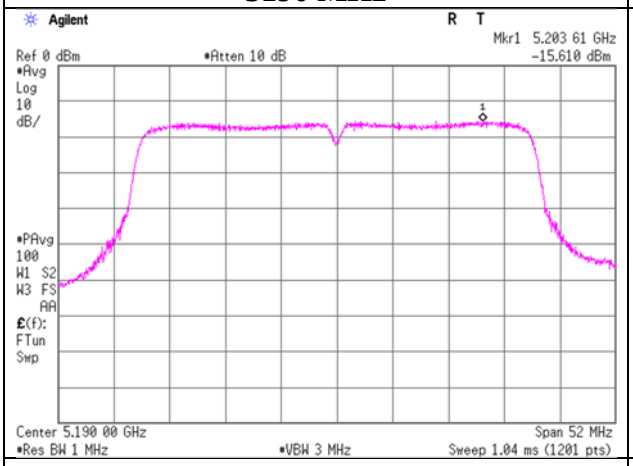


Maximum Power Spectral Density

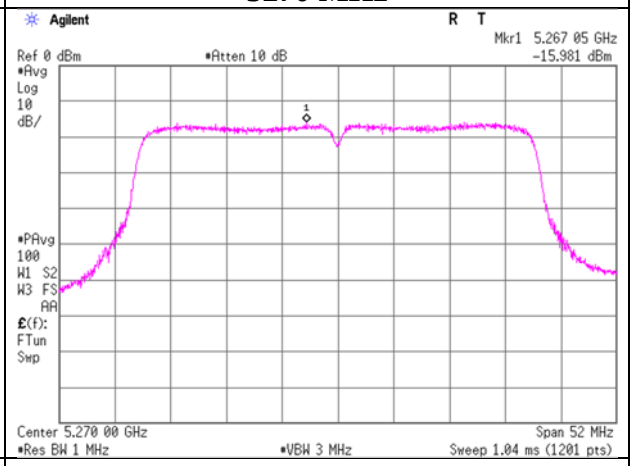
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11n-40

11n-40

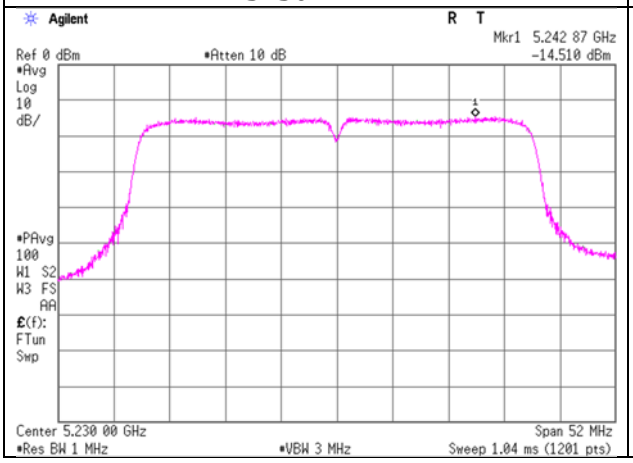
5190 MHz



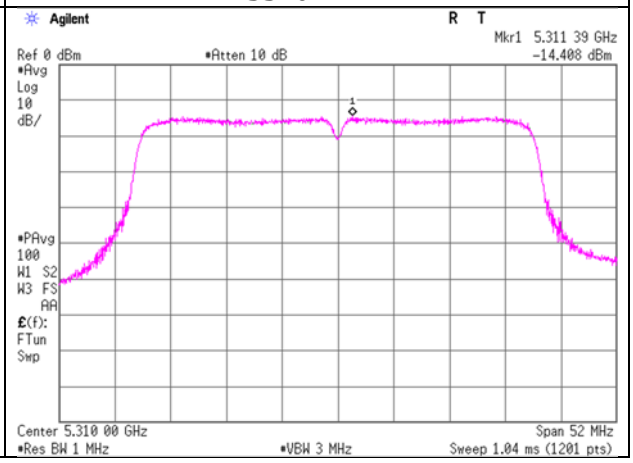
5270 MHz



5230 MHz



5310 MHz

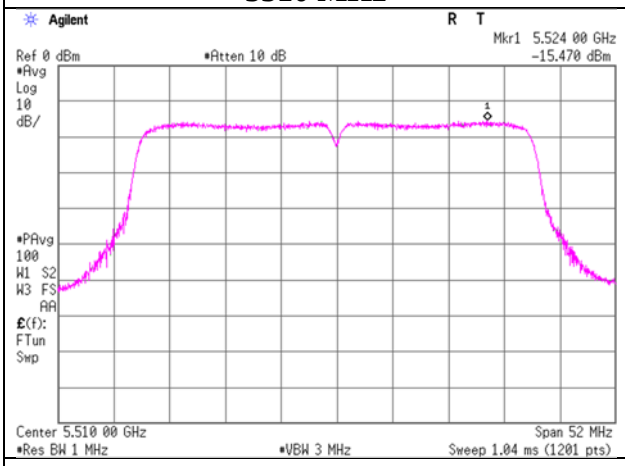


Maximum Power Spectral Density

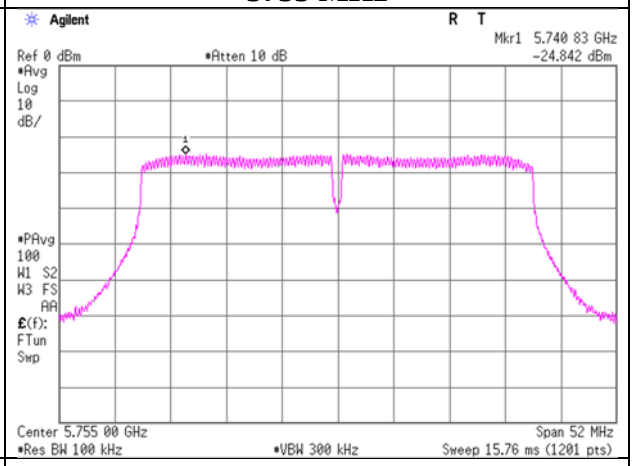
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	May 20, 2022	May 24, 2022
Temperature / Humidity	20 deg. C / 40 % RH	25 deg. C / 46 % RH
Engineer	Hiromasa Sato	Shiro Kobayashi
Mode	Tx 11n-40	

11n-40

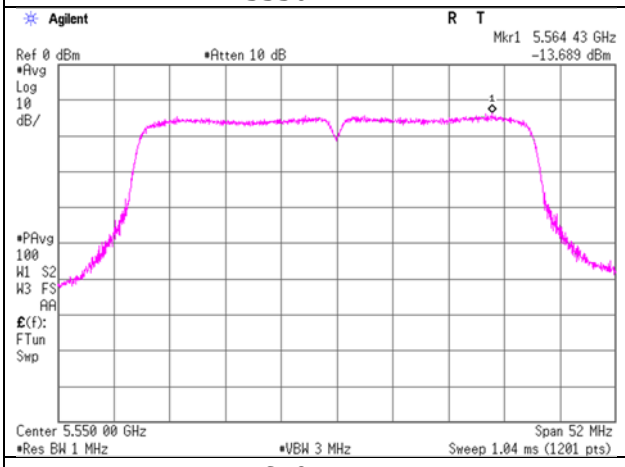
5510 MHz



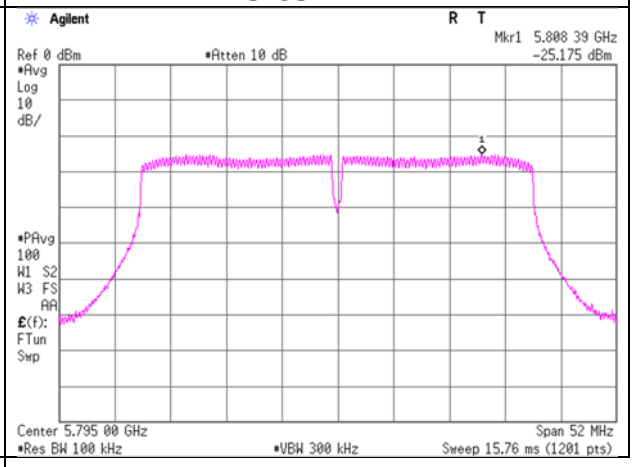
5755 MHz



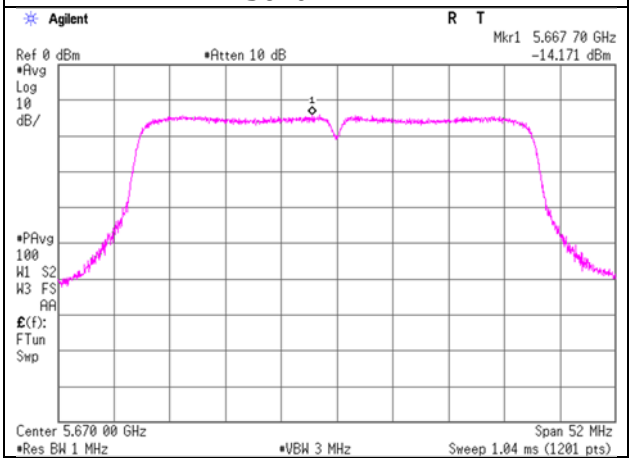
5550 MHz



5795 MHz



5670 MHz

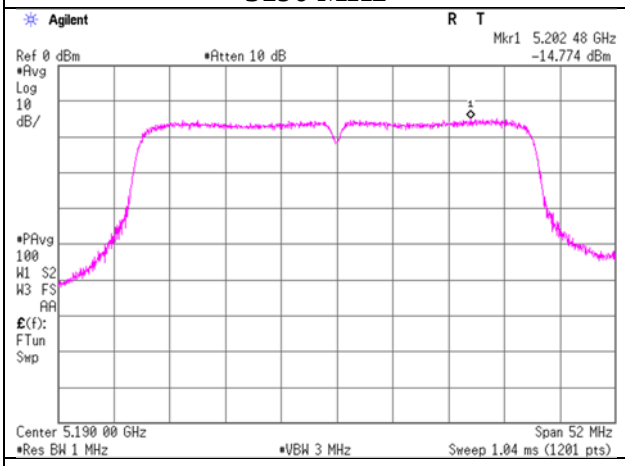


Maximum Power Spectral Density

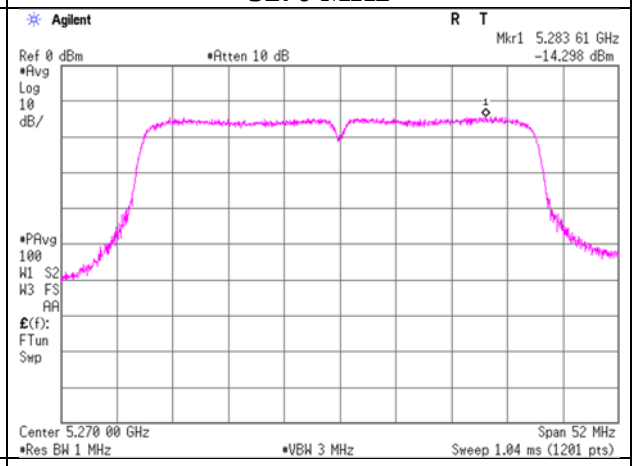
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

11ac-40

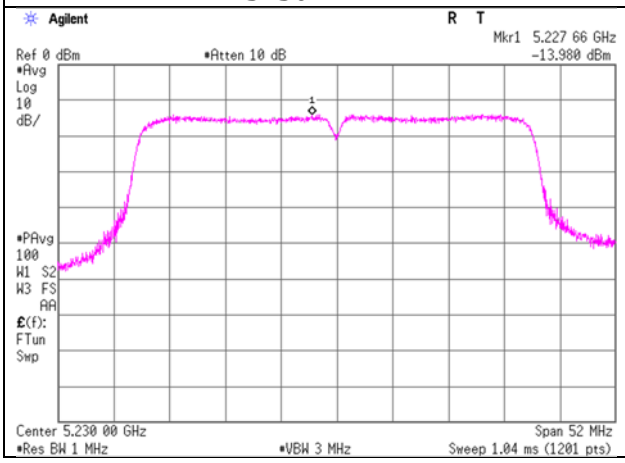
5190 MHz



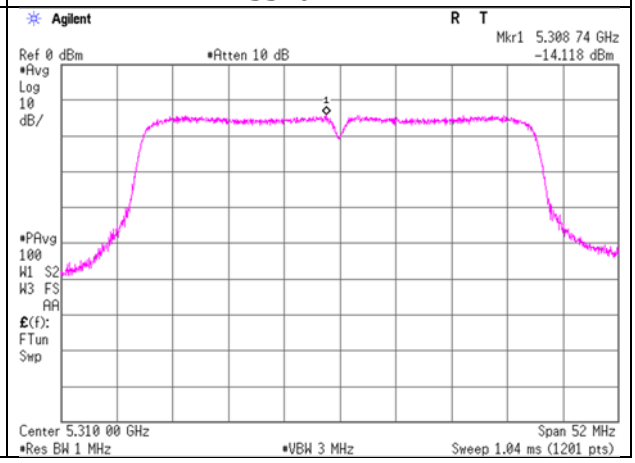
5270 MHz



5230 MHz



5310 MHz

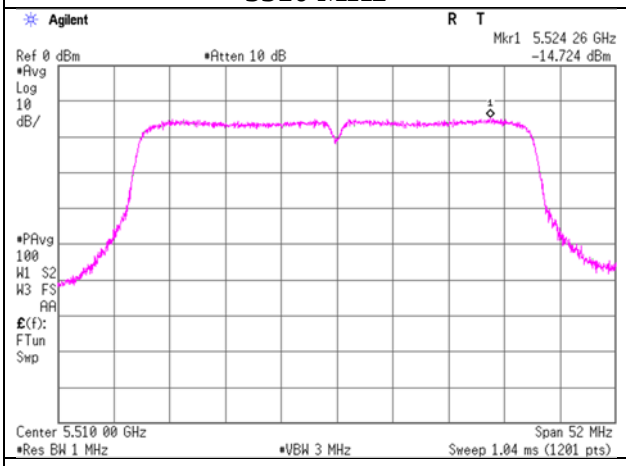


Maximum Power Spectral Density

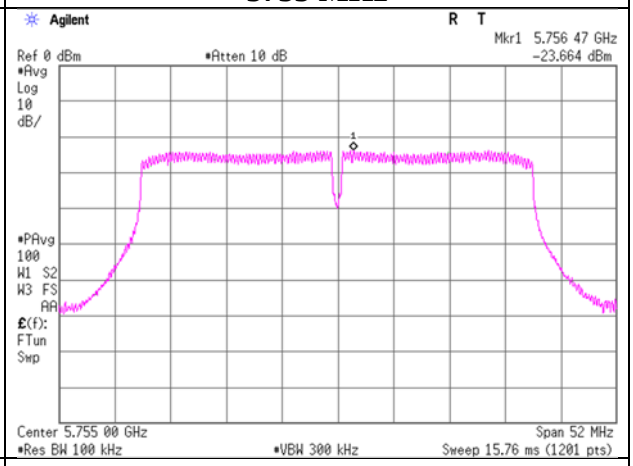
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40

11ac-40

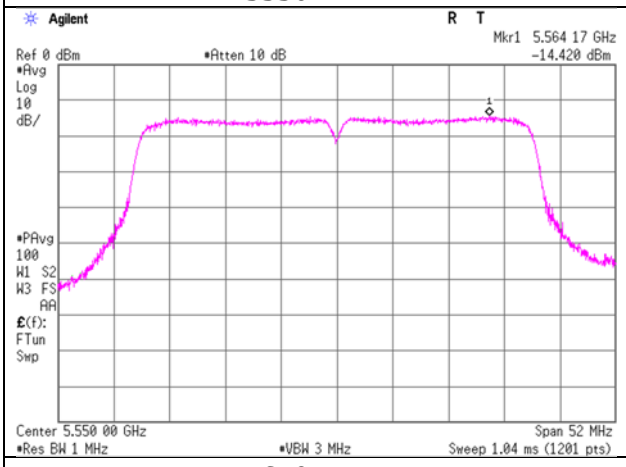
5510 MHz



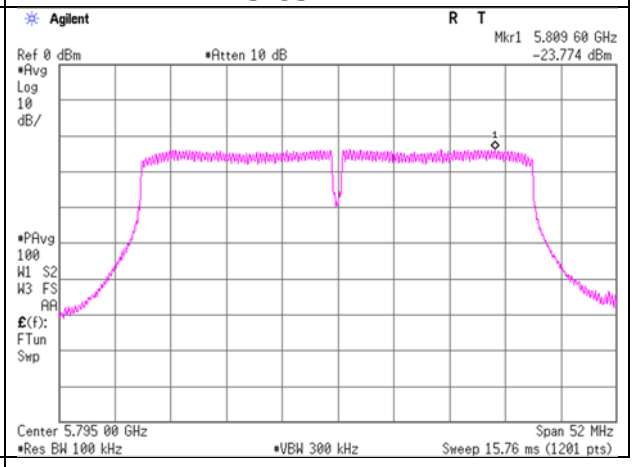
5755 MHz



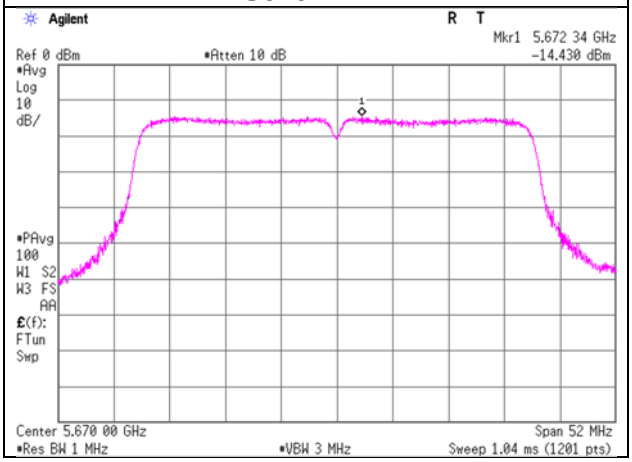
5550 MHz



5795 MHz



5670 MHz

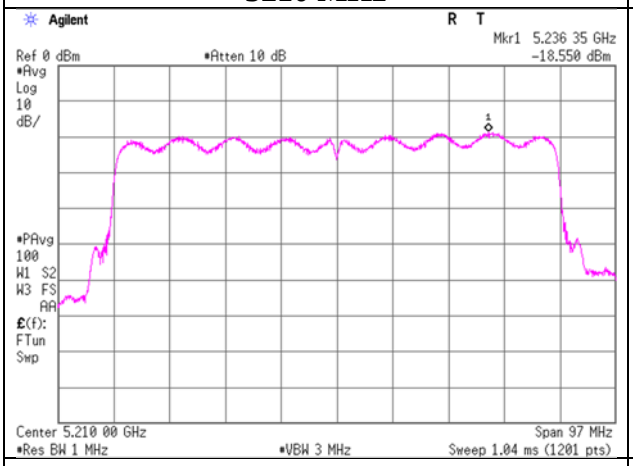


Maximum Power Spectral Density

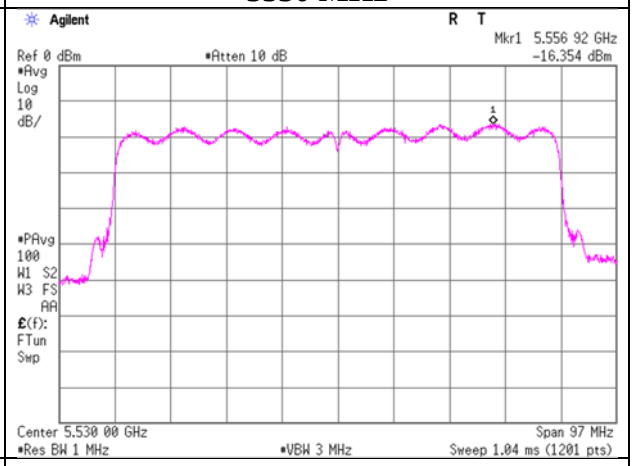
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	May 20, 2022
Temperature / Humidity	20 deg. C / 40 % RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80

11ac-80

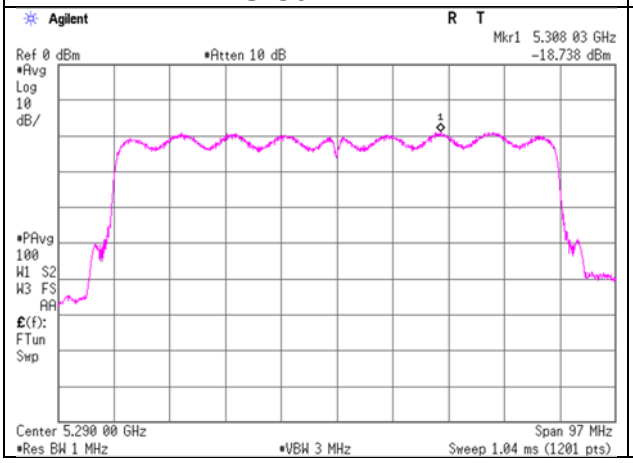
5210 MHz



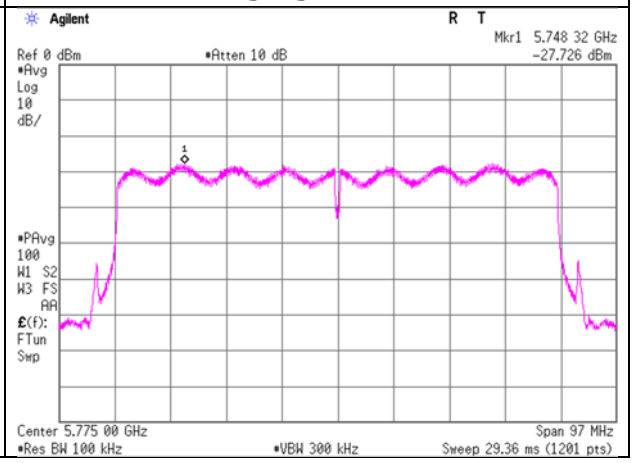
5530 MHz



5290 MHz



5775 MHz



Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	47.63	31.91	17.22	39.76	2.38	59.38	73.9	14.5	220	13	-
Hori.	5150.000	AV	34.35	31.91	17.22	39.76	2.38	46.10	53.9	**7.8**	220	13	VBW:10 Hz
Vert.	5150.000	PK	47.19	31.91	17.22	39.76	2.38	58.94	73.9	14.9	134	14	-
Vert.	5150.000	AV	34.01	31.91	17.22	39.76	2.38	45.76	53.9	8.1	134	14	VBW:10 Hz

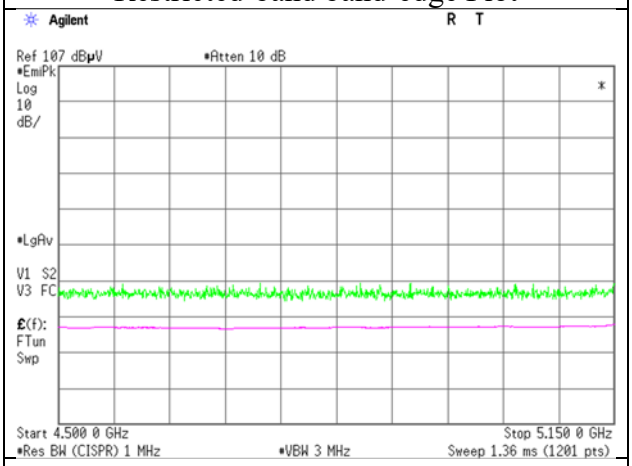
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5180 MHz

Horizontal

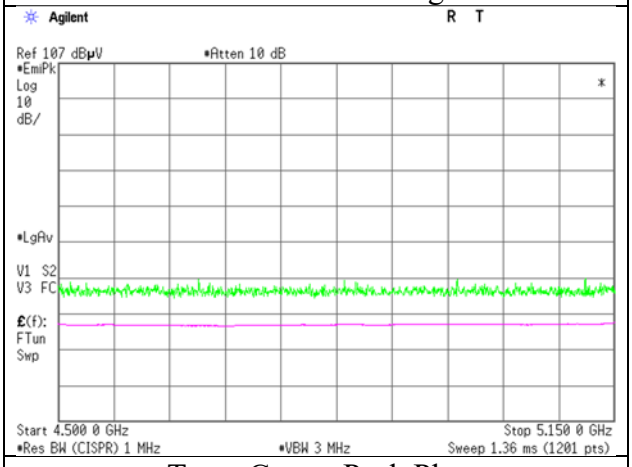
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
	(1 GHz -6.4 GHz)
Mode	Tx 11a 5320 MHz

(above 1 GHz Inside of the restricted band)

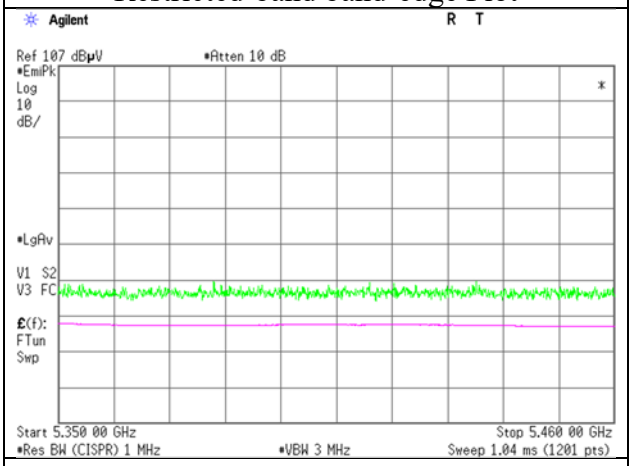
(* PK: Peak, AV: Average, QP: Quasi-Peak)

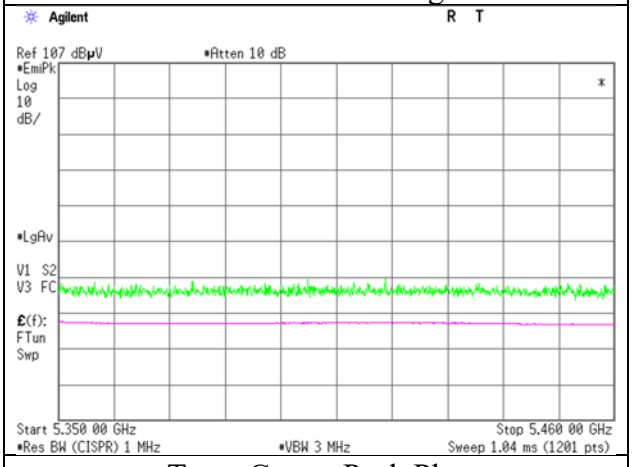
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	47.21	31.62	17.36	39.80	2.38	58.77	73.9	15.1	206	7	-
Hori.	5350.000	AV	34.61	31.62	17.36	39.80	2.38	46.17	53.9	**7.7**	206	7	VBW:10 Hz
Vert.	5350.000	PK	47.09	31.62	17.36	39.80	2.38	58.65	73.9	15.2	152	325	-
Vert.	5350.000	AV	34.24	31.62	17.36	39.80	2.38	45.80	53.9	8.1	152	325	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 (3.945 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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	46.25	31.84	17.45	39.82	2.38	58.10	73.9	15.8	197	11	-
Hori.	5460.000	AV	33.88	31.84	17.45	39.82	2.38	45.73	53.9	8.1	197	11	VBW:10 Hz
Vert.	5460.000	PK	45.43	31.84	17.45	39.82	2.38	57.28	73.9	16.6	284	19	-
Vert.	5460.000	AV	33.61	31.84	17.45	39.82	2.38	45.46	53.9	8.4	284	19	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 (3.945 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	48.37	31.85	17.45	39.82	2.38	60.23	-35.00	-27.0	**8.0**	197	11	-
Vert.	5470.000	PK	46.74	31.85	17.45	39.82	2.38	58.60	-36.63	-27.0	9.6	284	19	-

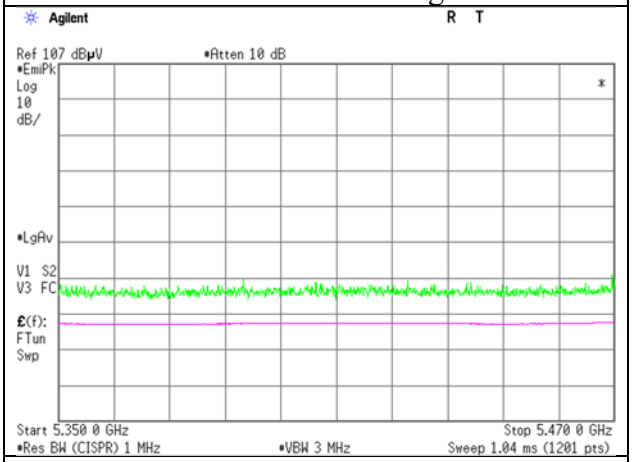
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5500 MHz

Horizontal

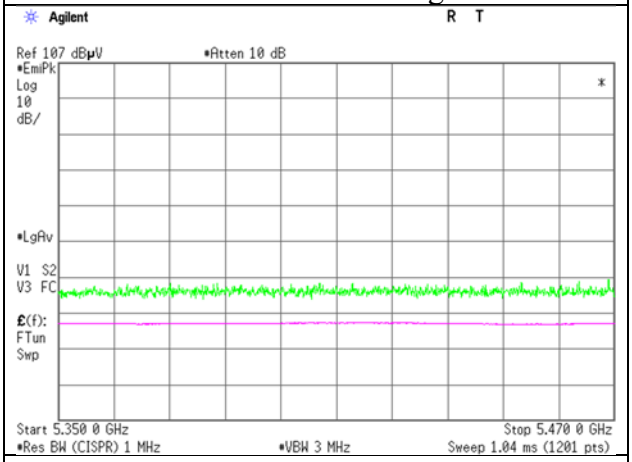
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	49.59	32.27	17.63	39.89	2.38	61.98	-33.25	-27.0	**6.2**	194	11	-
Vert.	5725.000	PK	47.69	32.27	17.63	39.89	2.38	60.08	-35.15	-27.0	8.1	383	12	-

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 (3.945 m / 3.0 m) = 2.38 dB

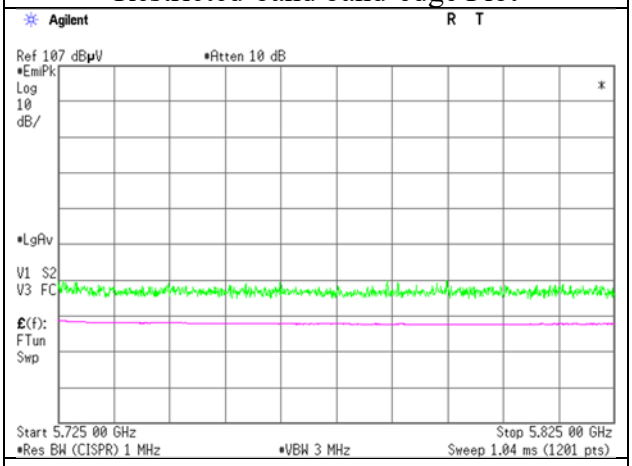
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5700 MHz

Horizontal

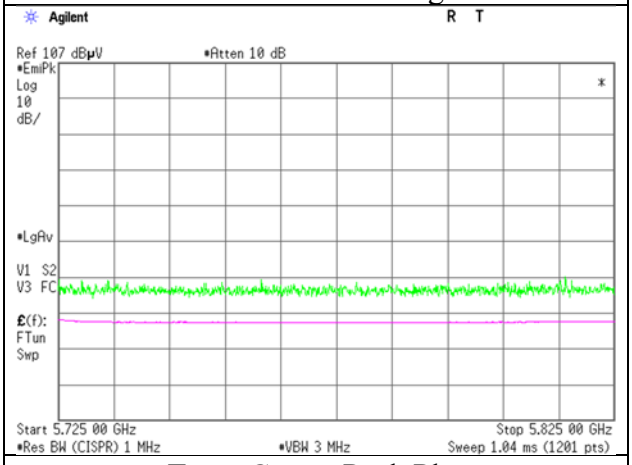
Restricted-band band-edge Plot



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	1	2	2	1
Date	April 17, 2022	April 30, 2022	April 18, 2022	April 29, 2022	April 14, 2022
Temperature / Humidity	20 deg.C, 43 %RH	20 deg.C, 51 %RH	22 deg.C, 48 %RH	21 deg.C, 47 %RH	22 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.	230.346	QP	30.60	17.25	9.48	31.76	0.00	25.57	46.0	20.4	143	71	-
Hori.	1499.950	PK	47.35	24.91	13.84	39.14	2.38	49.34	73.9	24.5	297	271	-
Hori.	11490.000	PK	46.97	37.80	10.28	40.35	-9.54	45.16	73.9	28.7	150	0	-
Hori.	1499.950	AV	38.39	24.91	13.84	39.14	2.38	40.38	53.9	13.5	297	271	-
Hori.	11490.000	AV	33.75	37.80	10.28	40.35	-9.54	31.94	53.9	21.9	150	0	VBW:10 Hz, Floor noise
Vert.	33.274	QP	28.20	17.12	7.12	31.84	0.00	20.60	40.0	19.4	100	242	-
Vert.	36.283	QP	28.90	16.24	7.19	31.84	0.00	20.49	40.0	19.5	100	138	-
Vert.	55.647	QP	36.40	9.32	7.42	31.83	0.00	21.31	40.0	18.6	100	111	-
Vert.	60.198	QP	43.30	8.13	7.27	31.83	0.00	26.87	40.0	13.1	100	18	-
Vert.	65.780	QP	44.40	7.15	7.27	31.82	0.00	27.00	40.0	13.0	100	111	-
Vert.	71.590	QP	51.80	6.50	7.67	31.82	0.00	34.15	40.0	**5.8**	100	155	-
Vert.	75.007	QP	45.20	6.34	7.99	31.82	0.00	27.71	40.0	12.2	100	150	-
Vert.	120.010	QP	38.40	13.06	8.20	31.80	0.00	27.86	43.5	15.6	100	151	-
Vert.	1499.986	PK	48.83	24.91	13.84	39.14	2.38	50.82	73.9	23.0	331	242	-
Vert.	11490.000	PK	47.02	37.80	10.28	40.35	-9.54	45.21	73.9	28.6	150	0	-
Vert.	1499.986	AV	41.37	24.91	13.84	39.14	2.38	43.36	53.9	10.5	331	242	-
Vert.	11490.000	AV	33.58	37.80	10.28	40.35	-9.54	31.77	53.9	22.1	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 (3.945 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	46.86	32.06	17.58	39.87	2.38	59.01	-36.22	-27.0	9.2	206	8	-
Hori.	5700.000	PK	47.15	32.19	17.62	39.89	2.38	59.45	-35.78	10.0	45.7	206	8	-
Hori.	5720.000	PK	53.11	32.25	17.63	39.89	2.38	65.48	-29.75	15.6	45.3	206	8	-
Hori.	5725.000	PK	57.98	32.27	17.63	39.89	2.38	70.37	-24.86	27.0	51.8	206	8	-
Hori.	17235.000	PK	44.63	39.82	12.75	37.20	-9.54	50.46	-44.77	-27.0	17.7	150	0	-
Vert.	5650.000	PK	46.20	32.06	17.58	39.87	2.38	58.35	-36.88	-27.0	9.8	360	7	-
Vert.	5700.000	PK	46.06	32.19	17.62	39.89	2.38	58.36	-36.87	10.0	46.8	360	7	-
Vert.	5720.000	PK	49.78	32.25	17.63	39.89	2.38	62.15	-33.08	15.6	48.6	360	7	-
Vert.	5725.000	PK	53.21	32.27	17.63	39.89	2.38	65.60	-29.63	27.0	56.6	360	7	-
Vert.	17235.000	PK	43.59	39.82	12.75	37.20	-9.54	49.42	-45.81	-27.0	18.8	150	0	-

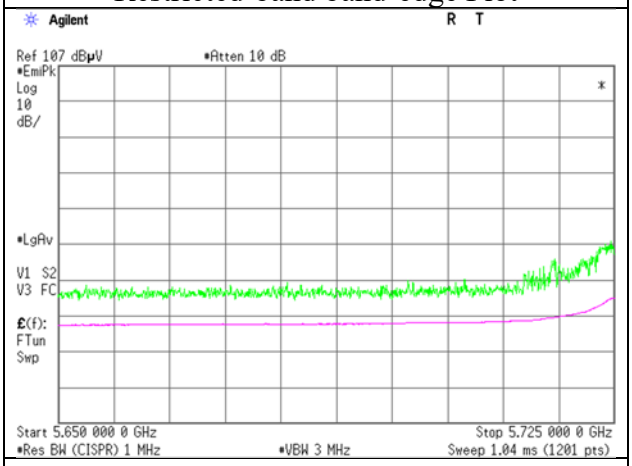
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5745 MHz

Horizontal

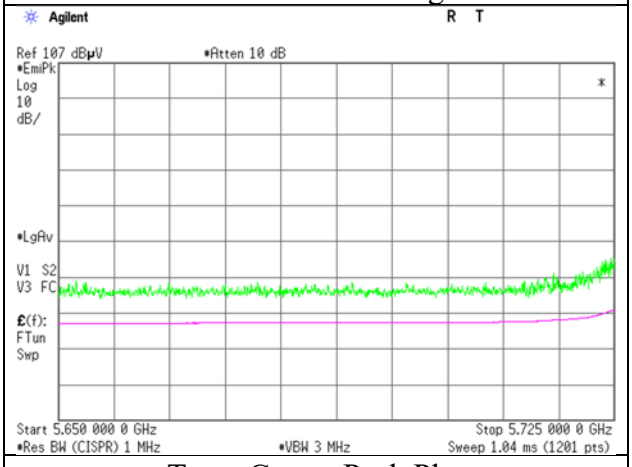
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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)

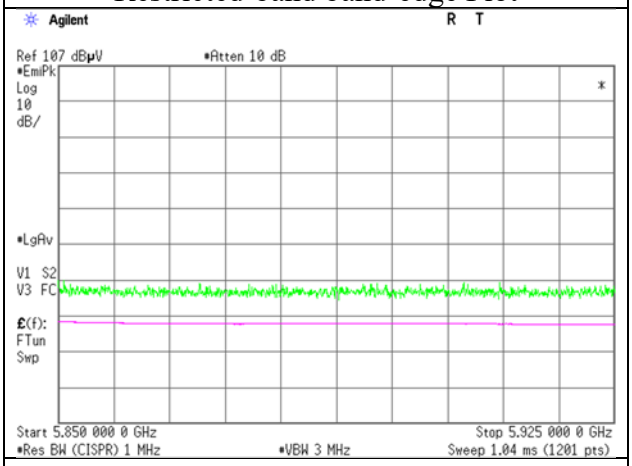
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	48.80	32.63	17.72	39.93	2.38	61.60	-33.63	27.0	60.6	201	7	-
Hori.	5855.000	PK	47.47	32.64	17.73	39.93	2.38	60.29	-34.94	15.6	50.5	201	7	-
Hori.	5875.000	PK	46.88	32.68	17.75	39.94	2.38	59.75	-35.48	10.0	45.4	201	7	-
Hori.	5925.000	PK	46.78	32.75	17.78	39.95	2.38	59.74	-35.49	-27.0	**8.4**	201	7	-
Vert.	5850.000	PK	47.58	32.63	17.72	39.93	2.38	60.38	-34.85	27.0	61.8	311	9	-
Vert.	5855.000	PK	46.31	32.64	17.73	39.93	2.38	59.13	-36.10	15.6	51.7	311	9	-
Vert.	5875.000	PK	46.29	32.68	17.75	39.94	2.38	59.16	-36.07	10.0	46.0	311	9	-
Vert.	5925.000	PK	46.50	32.75	17.78	39.95	2.38	59.46	-35.77	-27.0	8.7	311	9	-

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 (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

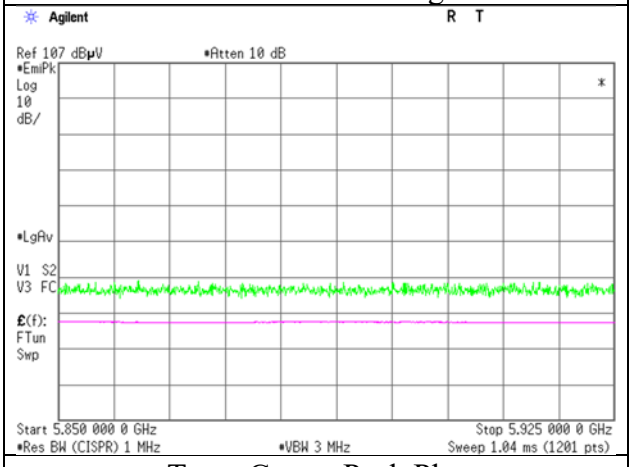
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11a 5825 MHz

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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	47.07	31.91	17.22	39.76	2.38	58.82	73.9	15.0	189	12	-
Hori.	5150.000	AV	34.32	31.91	17.22	39.76	2.38	46.07	53.9	**7.8**	189	12	VBW:10 Hz
Vert.	5150.000	PK	46.37	31.91	17.22	39.76	2.38	58.12	73.9	15.7	183	305	-
Vert.	5150.000	AV	33.85	31.91	17.22	39.76	2.38	45.60	53.9	8.3	183	305	VBW:10 Hz

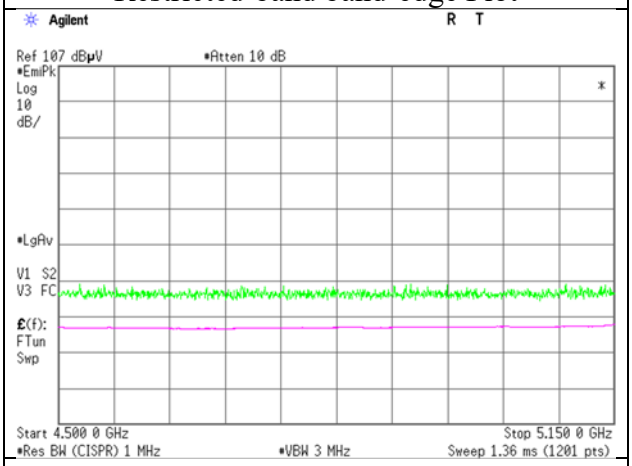
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-20 5180 MHz

Horizontal

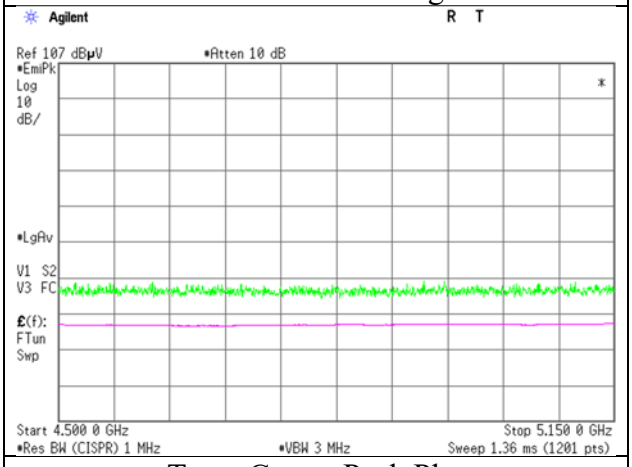
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	47.65	31.62	17.36	39.80	2.38	59.21	73.9	14.6	188	12	-
Hori.	5350.000	AV	34.95	31.62	17.36	39.80	2.38	46.51	53.9	**7.3**	188	12	VBW:10 Hz
Vert.	5350.000	PK	46.26	31.62	17.36	39.80	2.38	57.82	73.9	16.0	154	305	-
Vert.	5350.000	AV	33.94	31.62	17.36	39.80	2.38	45.50	53.9	8.4	154	305	VBW:10 Hz

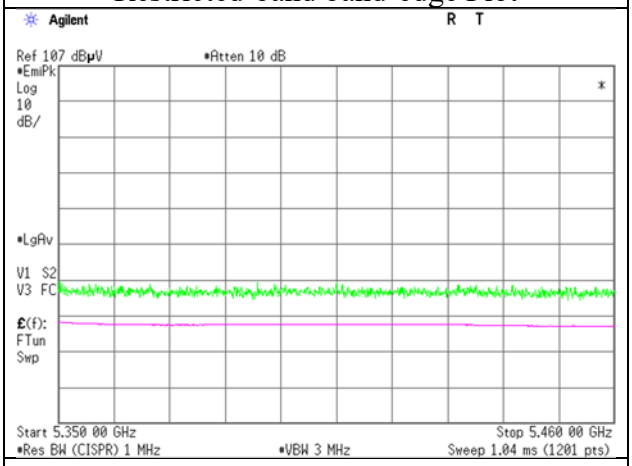
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5320 MHz

Horizontal

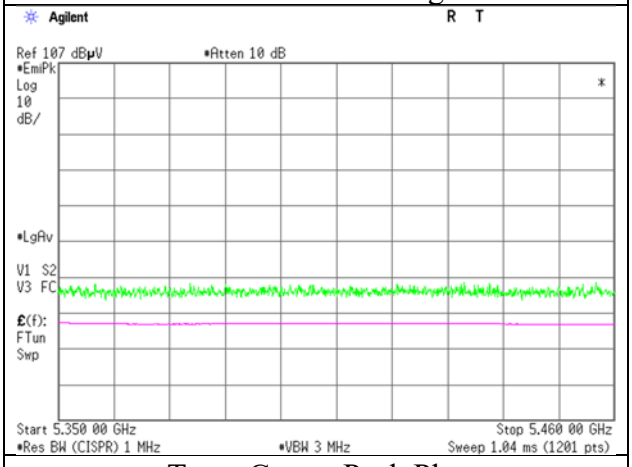
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	45.75	31.84	17.45	39.82	2.38	57.60	73.9	16.3	187	11	-
Hori.	5460.000	AV	33.86	31.84	17.45	39.82	2.38	45.71	53.9	**8.1**	187	11	VBW:10 Hz
Vert.	5460.000	PK	45.78	31.84	17.45	39.82	2.38	57.63	73.9	16.2	387	25	-
Vert.	5460.000	AV	33.62	31.84	17.45	39.82	2.38	45.47	53.9	8.4	387	25	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 (3.945 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)

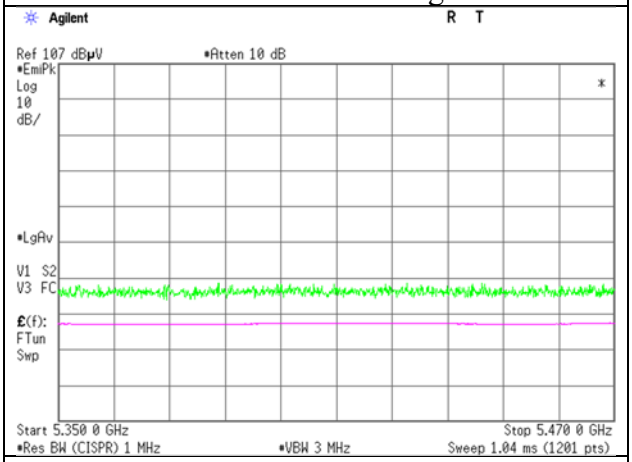
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	46.60	31.85	17.45	39.82	2.38	58.46	-36.77	-27.0	9.7	187	11	-
Vert.	5470.000	PK	46.29	31.85	17.45	39.82	2.38	58.15	-37.08	-27.0	10.0	387	25	-

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 (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

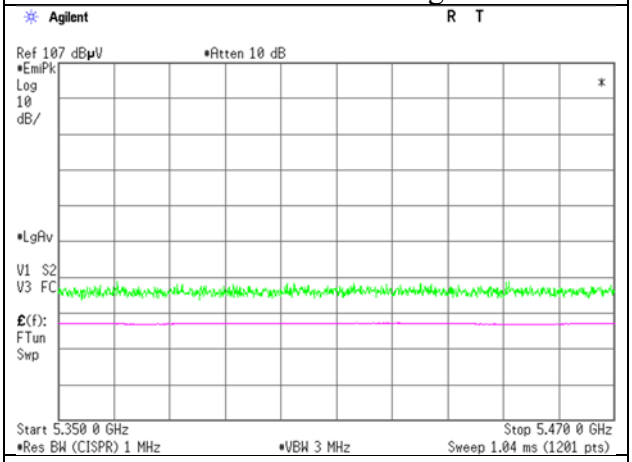
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5500 MHz

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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	49.13	32.27	17.63	39.89	2.38	61.52	-33.71	-27.0	**6.7**	197	12	-
Vert.	5725.000	PK	46.74	32.27	17.63	39.89	2.38	59.13	-36.10	-27.0	9.1	396	9	-

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 (3.945 m / 3.0 m) = 2.38 dB

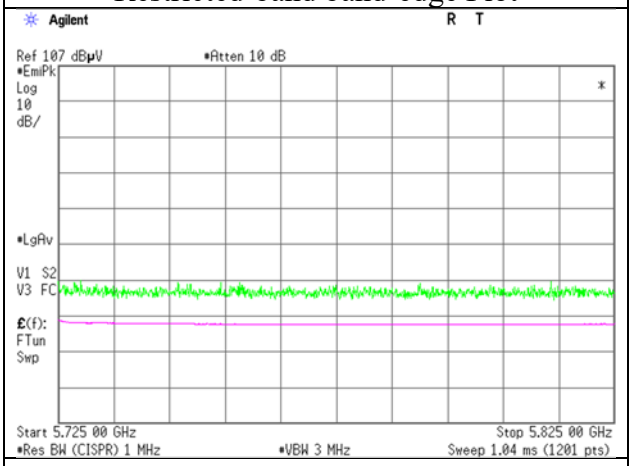
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5700 MHz

Horizontal

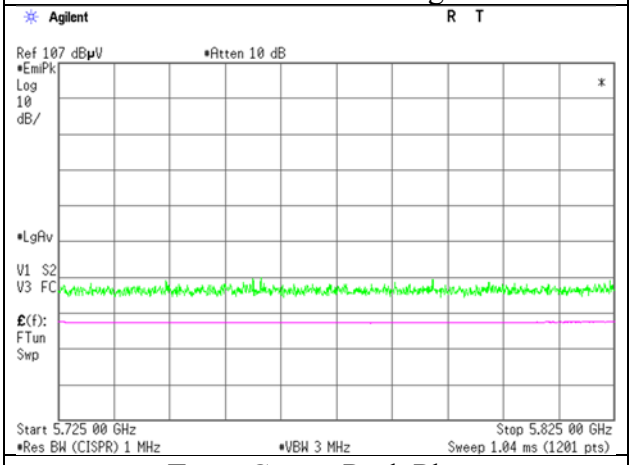
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	46.58	32.06	17.58	39.87	2.38	58.73	-36.50	-27.0	**9.5**	181	8	-
Hori.	5700.000	PK	46.69	32.19	17.62	39.89	2.38	58.99	-36.24	10.0	46.2	181	8	-
Hori.	5720.000	PK	48.52	32.25	17.63	39.89	2.38	60.89	-34.34	15.6	49.9	181	8	-
Hori.	5725.000	PK	52.07	32.27	17.63	39.89	2.38	64.46	-30.77	27.0	57.7	181	8	-
Vert.	5650.000	PK	46.08	32.06	17.58	39.87	2.38	58.23	-37.00	-27.0	10.0	223	6	-
Vert.	5700.000	PK	46.93	32.19	17.62	39.89	2.38	59.23	-36.00	10.0	46.0	223	6	-
Vert.	5720.000	PK	47.27	32.25	17.63	39.89	2.38	59.64	-35.59	15.6	51.1	223	6	-
Vert.	5725.000	PK	48.62	32.27	17.63	39.89	2.38	61.01	-34.22	27.0	61.2	223	6	-

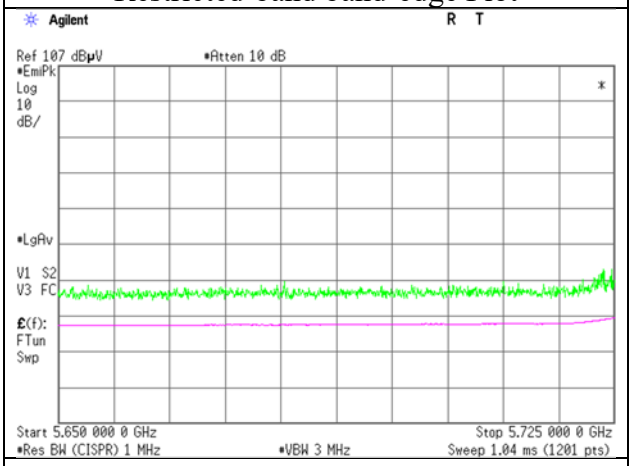
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5745 MHz

Horizontal

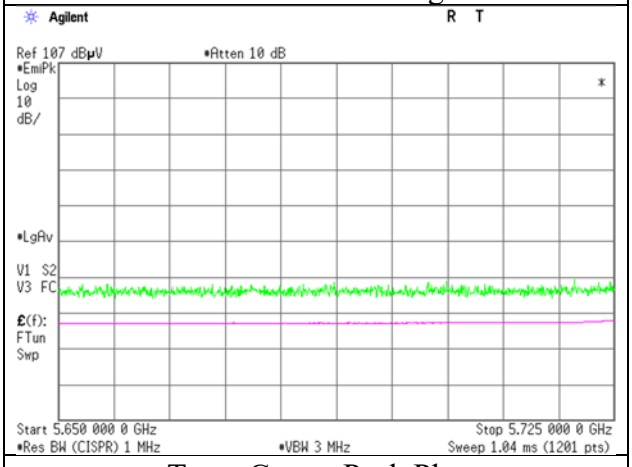
Restricted-band band-edge Plot



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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %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	47.81	32.63	17.72	39.93	2.38	60.61	-34.62	27.0	61.6	168	7	-
Hori.	5855.000	PK	46.52	32.64	17.73	39.93	2.38	59.34	-35.89	15.6	51.4	168	7	-
Hori.	5875.000	PK	46.08	32.68	17.75	39.94	2.38	58.95	-36.28	10.0	46.2	168	7	-
Hori.	5925.000	PK	46.15	32.75	17.78	39.95	2.38	59.11	-36.12	-27.0	9.1	168	7	-
Vert.	5850.000	PK	46.39	32.63	17.72	39.93	2.38	59.19	-36.04	27.0	63.0	193	3	-
Vert.	5855.000	PK	47.00	32.64	17.73	39.93	2.38	59.82	-35.41	15.6	51.0	193	3	-
Vert.	5875.000	PK	45.95	32.68	17.75	39.94	2.38	58.82	-36.41	10.0	46.4	193	3	-
Vert.	5925.000	PK	46.68	32.75	17.78	39.95	2.38	59.64	-35.59	-27.0	**8.5**	193	3	-

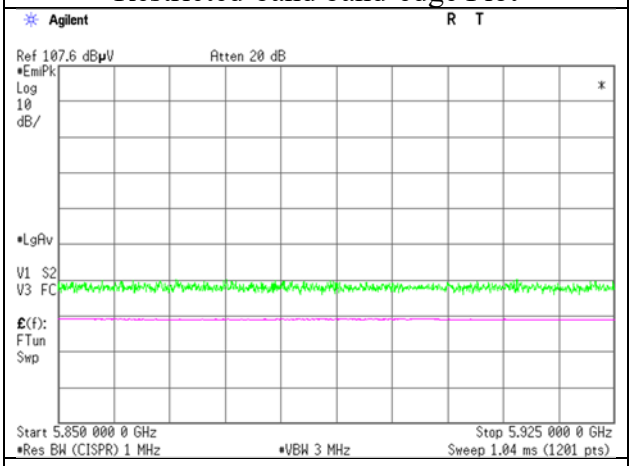
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 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	1
Date	April 30, 2022
Temperature / Humidity	20 deg.C, 51 %RH
Engineer	Miku Ikudome
Mode	Tx 11ac-20 5825 MHz

Horizontal

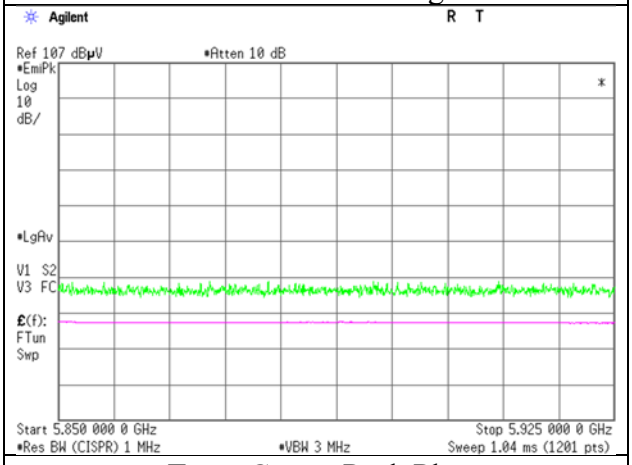
Restricted-band band-edge Plot



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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(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	51.75	32.18	16.41	42.99	2.38	59.73	73.9	14.1	220	9	-
Hori.	5150.000	AV	39.44	32.18	16.41	42.99	2.38	47.42	53.9	**6.4**	220	9	VBW:10 Hz
Vert.	5150.000	PK	50.27	32.18	16.41	42.99	2.38	58.25	73.9	15.6	165	145	-
Vert.	5150.000	AV	36.94	32.18	16.41	42.99	2.38	44.92	53.9	8.9	165	145	VBW:10 Hz

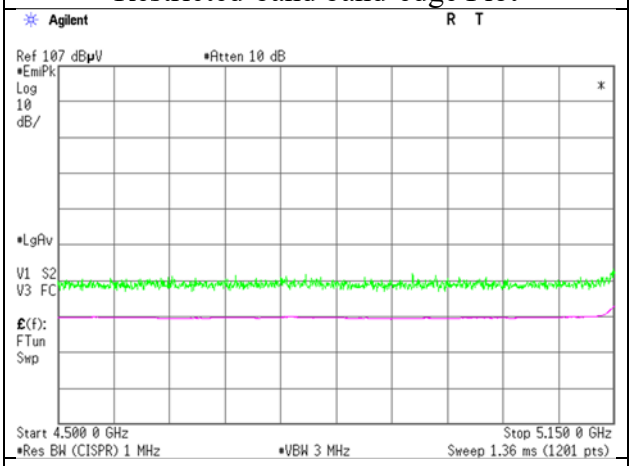
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5190 MHz

Horizontal

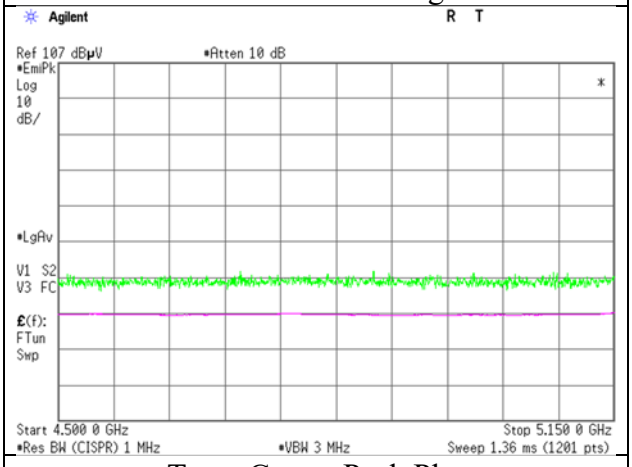
Restricted-band band-edge Plot



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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5310 MHz

(above 1 GHz Inside of the restricted band)

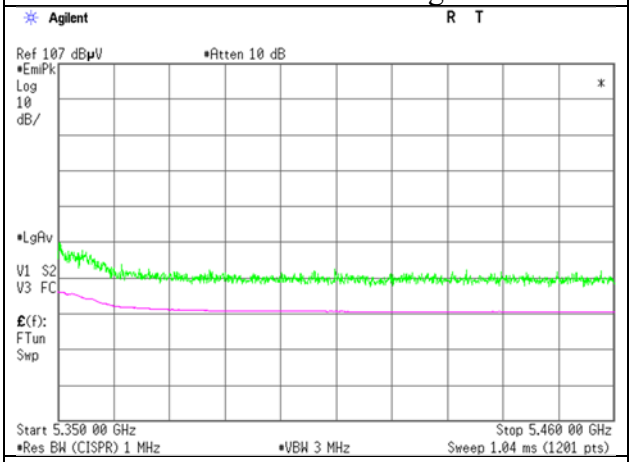
(* PK: Peak, AV: Average, QP: Quasi-Peak)

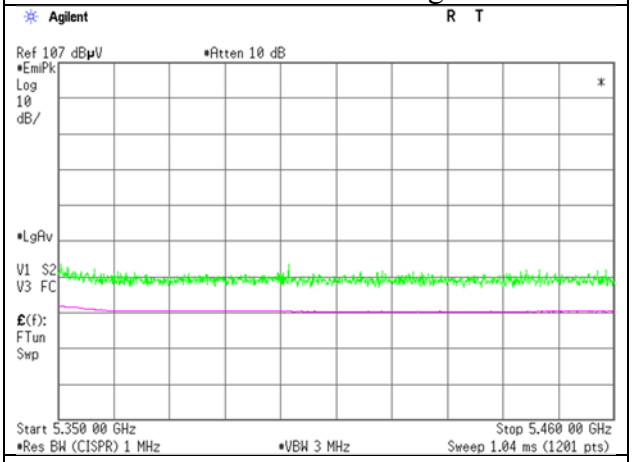
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	59.05	31.91	16.55	43.27	2.38	66.62	73.9	7.2	190	11	-
Hori.	5350.000	AV	42.76	31.91	16.55	43.27	2.38	50.33	53.9	**3.5**	190	11	VBW:10 Hz
Vert.	5350.000	PK	52.93	31.91	16.55	43.27	2.38	60.50	73.9	13.4	185	145	-
Vert.	5350.000	AV	38.34	31.91	16.55	43.27	2.38	45.91	53.9	7.9	185	145	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 (3.945 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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
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	45.81	32.16	16.67	43.42	2.38	53.60	73.9	20.3	128	20	-
Hori.	5460.000	AV	33.09	32.16	16.67	43.42	2.38	40.88	53.9	**13.0**	128	20	VBW:10 Hz
Vert.	5460.000	PK	46.07	32.16	16.67	43.42	2.38	53.86	73.9	20.0	202	4	-
Vert.	5460.000	AV	33.02	32.16	16.67	43.42	2.38	40.81	53.9	**13.0**	202	4	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 (3.945 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)

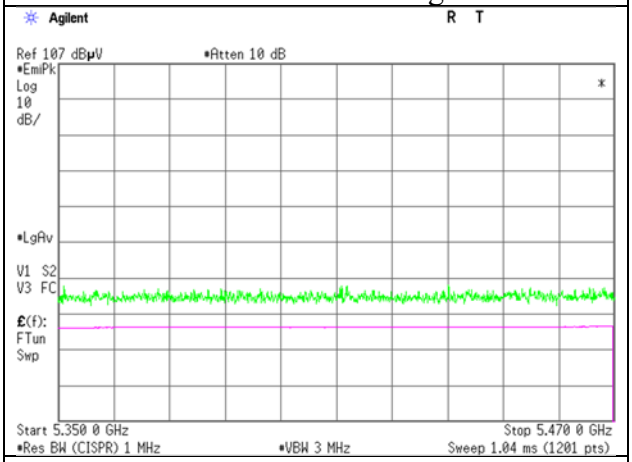
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	46.84	32.18	16.68	43.44	2.38	54.64	-40.59	-27.0	13.5	128	20	-
Vert.	5470.000	PK	46.15	32.18	16.68	43.44	2.38	53.95	-41.28	-27.0	14.2	202	4	-

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 (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

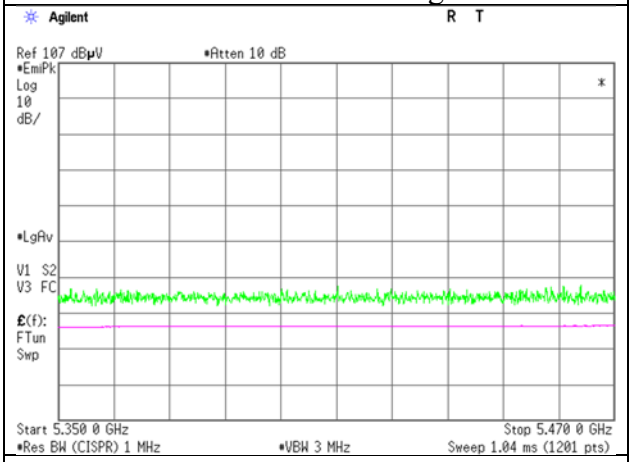
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5510 MHz

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	45.82	32.63	16.83	43.52	2.38	54.14	-41.09	-27.0	**14.0**	109	6	-
Vert.	5725.000	PK	44.23	32.63	16.83	43.52	2.38	52.55	-42.68	-27.0	15.6	249	260	-

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).

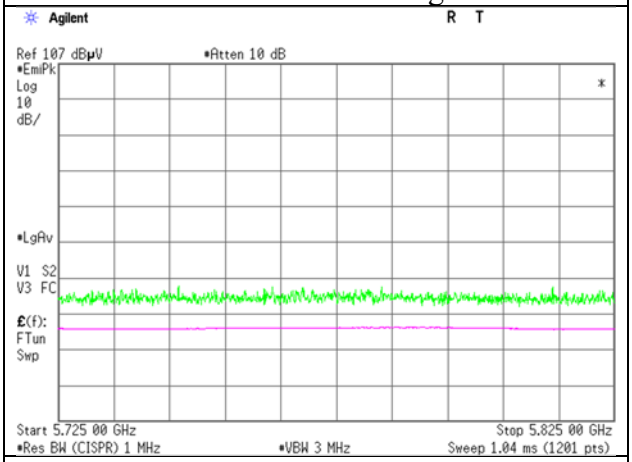
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB

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

Radiated Spurious Emission

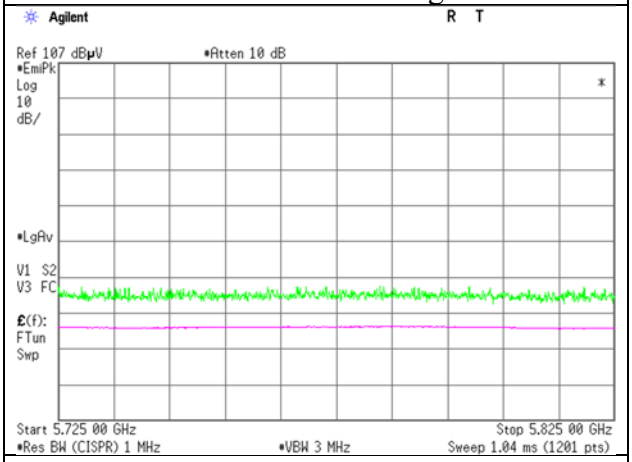
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-40 5670 MHz

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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(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)

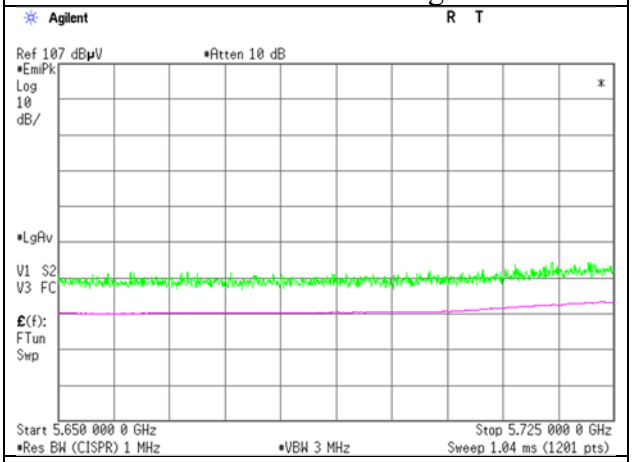
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.45	32.42	16.73	43.50	2.38	57.48	-37.75	-27.0	**10.7**	190	1	-
Hori.	5700.000	PK	50.03	32.55	16.75	43.51	2.38	58.20	-37.03	10.0	47.0	190	1	-
Hori.	5720.000	PK	53.22	32.61	16.76	43.52	2.38	61.45	-33.78	15.6	49.3	190	1	-
Hori.	5723.650	PK	53.81	32.62	16.76	43.52	2.38	62.05	-33.18	24.0	57.1	190	1	-
Hori.	5725.000	PK	52.77	32.63	16.76	43.52	2.38	61.02	-34.21	27.0	61.2	190	1	-
Vert.	5650.000	PK	48.04	32.42	16.73	43.50	2.38	56.07	-39.16	-27.0	12.1	399	243	-
Vert.	5700.000	PK	49.55	32.55	16.75	43.51	2.38	57.72	-37.51	10.0	47.5	399	243	-
Vert.	5720.000	PK	50.55	32.61	16.76	43.52	2.38	58.78	-36.45	15.6	52.0	399	243	-
Vert.	5723.650	PK	51.67	32.62	16.76	43.52	2.38	59.91	-35.32	24.0	59.3	399	243	-
Vert.	5725.000	PK	50.89	32.63	16.76	43.52	2.38	59.14	-36.09	27.0	63.0	399	243	-

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 (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

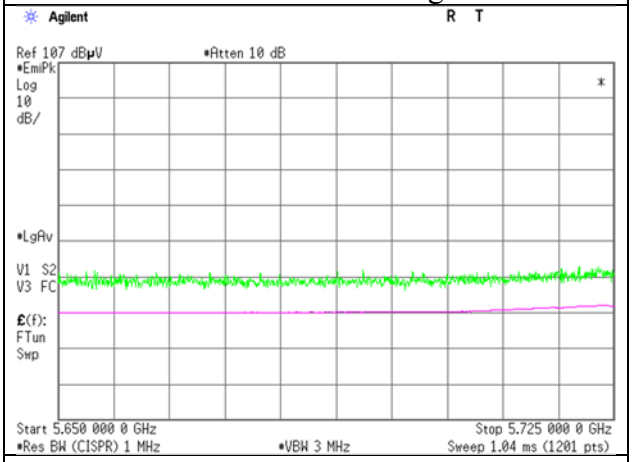
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
Mode	Tx 11ac-40 5755 MHz

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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-40 5795 MHz

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

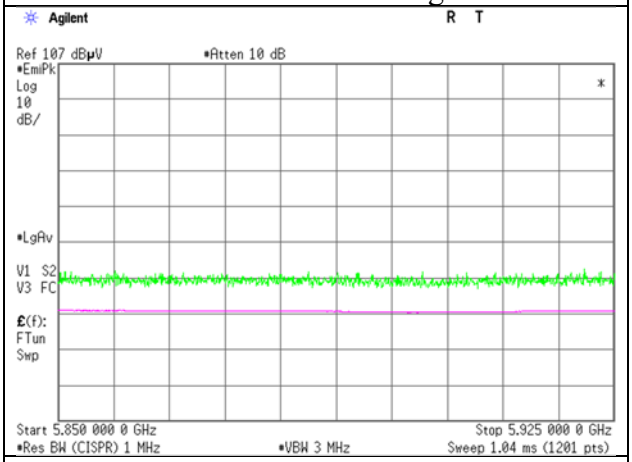
(* PK: Peak, AV: Average, QP: Quasi-Peak)

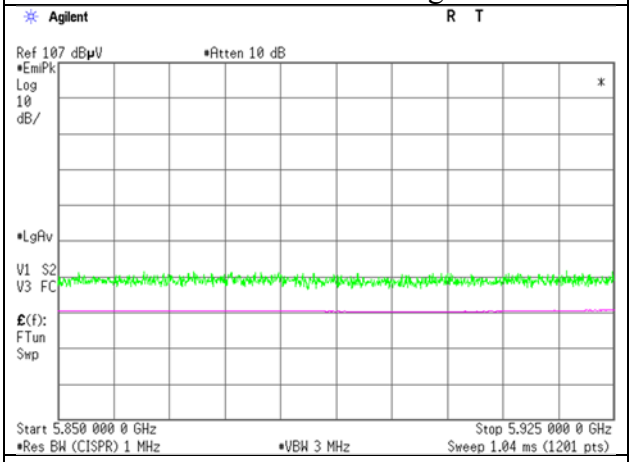
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5850.000	PK	51.47	32.99	16.84	43.54	2.38	60.14	-35.09	27.0	62.0	210	0	-
Hori.	5855.000	PK	51.26	33.00	16.84	43.54	2.38	59.94	-35.29	15.6	50.8	210	0	-
Hori.	5875.000	PK	50.39	33.03	16.87	43.54	2.38	59.13	-36.10	10.0	46.1	210	0	-
Hori.	5925.000	PK	50.23	33.10	16.89	43.55	2.38	59.05	-36.18	-27.0	**9.1**	210	0	-
Vert.	5850.000	PK	50.05	32.99	16.84	43.54	2.38	58.72	-36.51	27.0	63.5	399	241	-
Vert.	5855.000	PK	49.95	33.00	16.84	43.54	2.38	58.63	-36.60	15.6	52.2	399	241	-
Vert.	5875.000	PK	49.79	33.03	16.87	43.54	2.38	58.53	-36.70	10.0	46.7	399	241	-
Vert.	5925.000	PK	49.54	33.10	16.89	43.55	2.38	58.36	-36.87	-27.0	9.8	399	241	-

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 (3.945 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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
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	45.37	32.18	16.47	42.99	2.38	53.41	73.9	20.4	103	18	-
Hori.	5150.000	AV	33.17	32.18	16.47	42.99	2.38	41.21	53.9	**12.6**	103	18	VBW:10 Hz
Vert.	5150.000	PK	45.33	32.18	16.47	42.99	2.38	53.37	73.9	20.5	110	172	-
Vert.	5150.000	AV	32.85	32.18	16.47	42.99	2.38	40.89	53.9	13.0	110	172	VBW:10 Hz

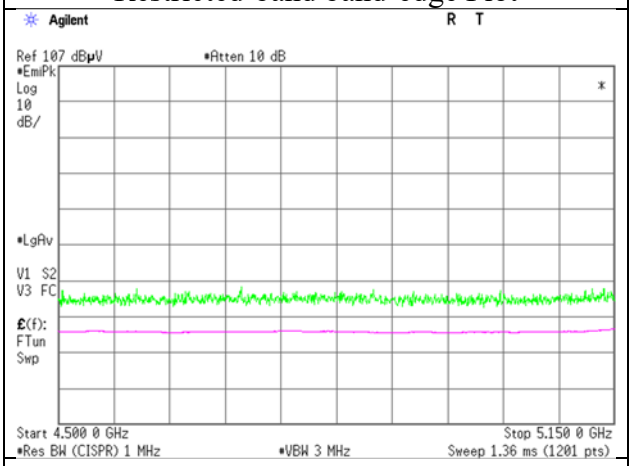
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amplifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 10 GHz : 20log (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 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

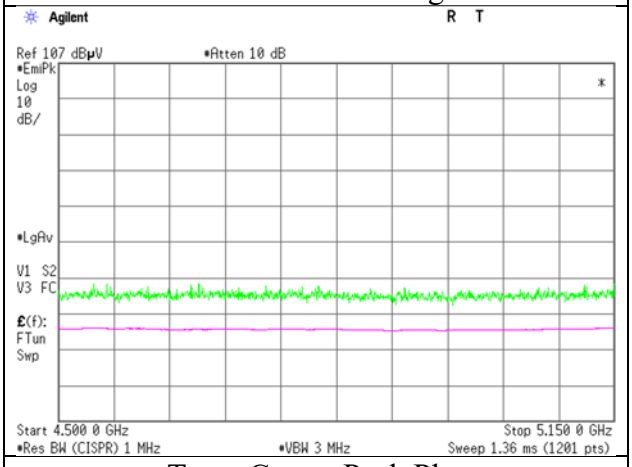
Restricted-band band-edge Plot



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)

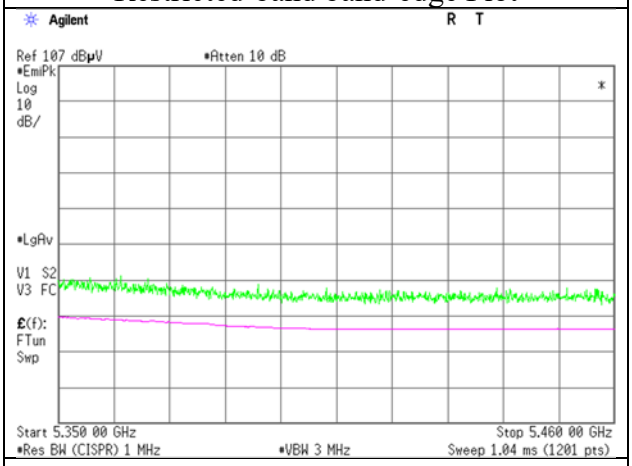
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.98	31.91	16.61	43.27	2.38	57.61	73.9	16.2	105	15	-
Hori.	5350.000	AV	36.39	31.91	16.61	43.27	2.38	44.02	53.9	**9.8**	105	15	VBW:10 Hz
Vert.	5350.000	PK	48.24	31.91	16.61	43.27	2.38	55.87	73.9	18.0	115	173	-
Vert.	5350.000	AV	35.06	31.91	16.61	43.27	2.38	42.69	53.9	11.2	115	173	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 (3.945 m / 3.0 m) = 2.38 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

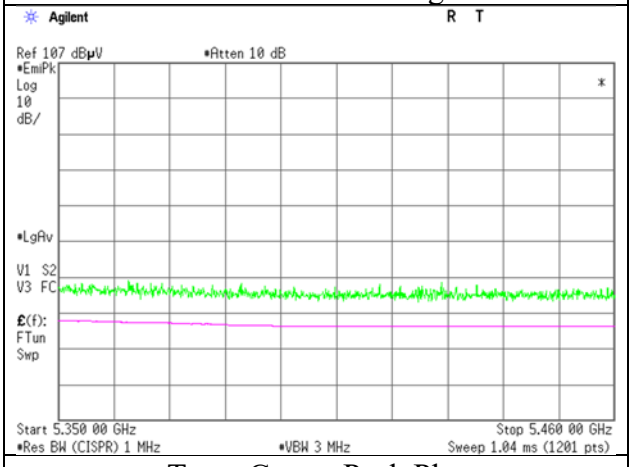
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	2
Date	April 28, 2022
Temperature / Humidity	21 deg.C, 47 %RH
Engineer	Hiromasa Sato
Mode	Tx 11ac-80 5290 MHz

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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(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	51.64	32.16	16.61	43.42	2.38	59.37	73.9	14.5	208	5	-
Hori.	5460.000	AV	37.93	32.16	16.61	43.42	2.38	45.66	53.9	**8.2**	208	5	VBW:10 Hz
Vert.	5460.000	PK	50.52	32.16	16.61	43.42	2.38	58.25	73.9	15.6	399	240	-
Vert.	5460.000	AV	37.34	32.16	16.61	43.42	2.38	45.07	53.9	8.8	399	240	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 (3.945 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)

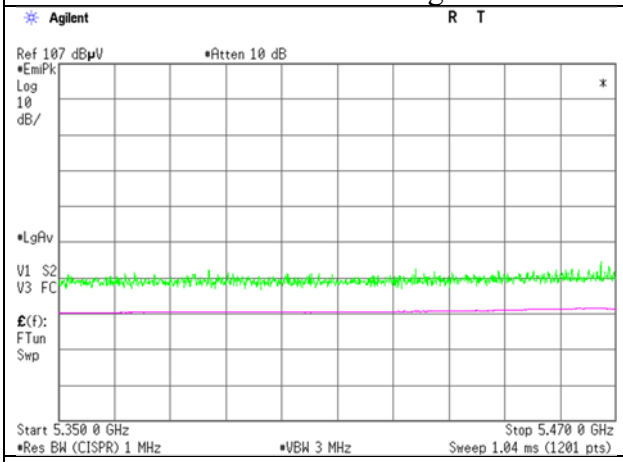
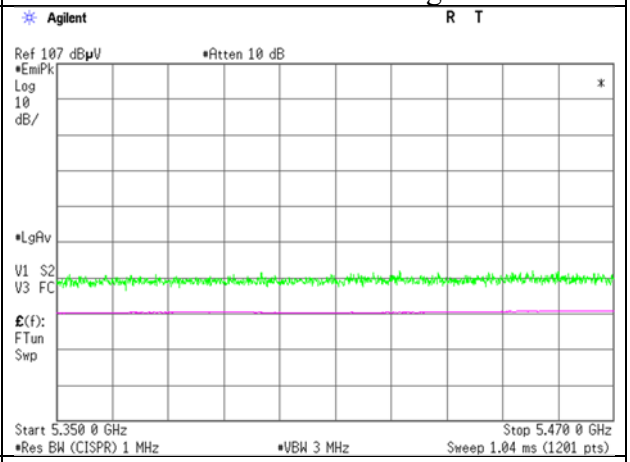
(* PK: Peak, AV: Average, QP: Quasi-Peak)

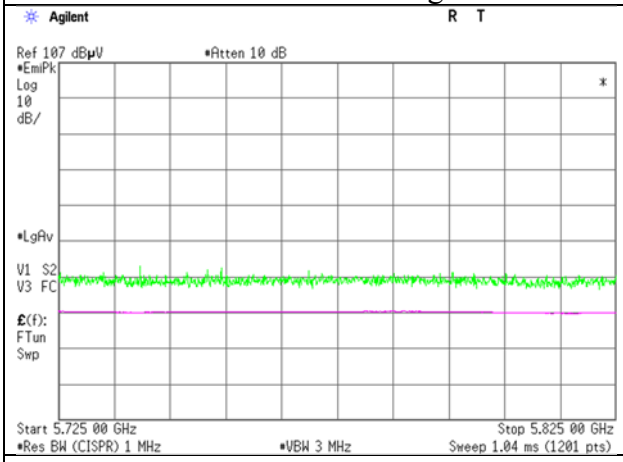
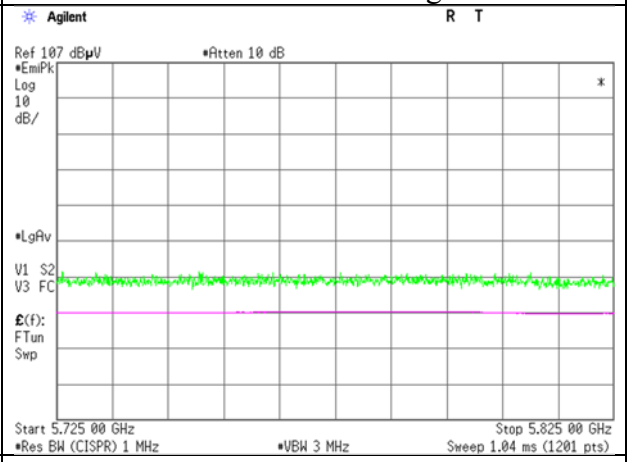
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5470.000	PK	52.20	32.18	16.62	43.44	2.38	59.94	-35.29	-27.0	**8.2**	208	5	-
Hori.	5725.000	PK	50.85	32.63	16.76	43.52	2.38	59.10	-36.13	-27.0	9.1	214	2	-
Vert.	5470.000	PK	51.12	32.18	16.62	43.44	2.38	58.86	-36.37	-27.0	9.3	399	240	-
Vert.	5725.000	PK	50.44	32.63	16.76	43.52	2.38	58.69	-36.54	-27.0	9.5	400	245	-

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 (3.945 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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
Mode	Tx 11ac-80 5530 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

Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	April 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
	(1 GHz -6.4 GHz)
Mode	Tx 11ac-80 5775 MHz

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

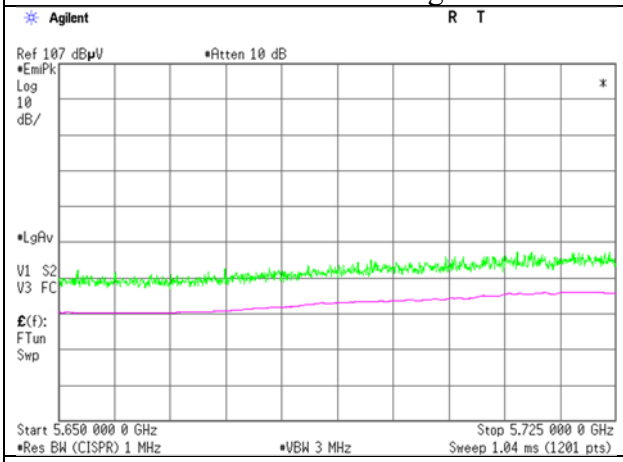
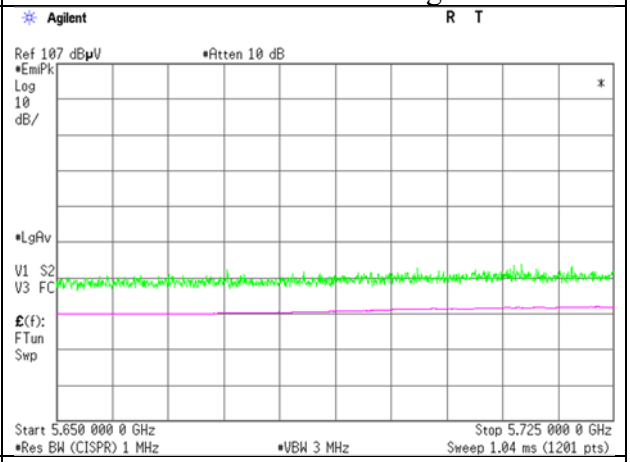
(* PK: Peak, AV: Average, QP: Quasi-Peak)

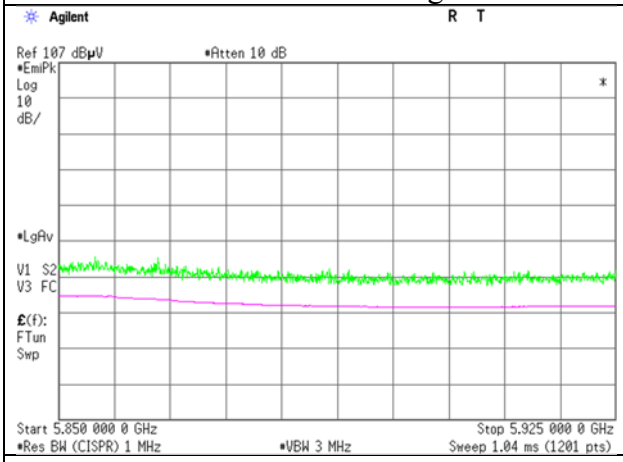
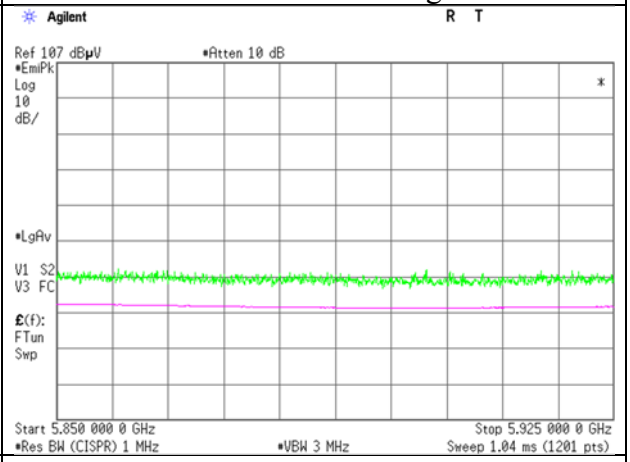
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	49.05	32.42	16.73	43.50	2.38	57.08	-38.15	-27.0	11.1	216	0	-
Hori.	5700.000	PK	52.73	32.55	16.75	43.51	2.38	60.90	-34.33	10.0	44.3	216	0	-
Hori.	5720.000	PK	55.11	32.61	16.76	43.52	2.38	63.34	-31.89	15.6	47.4	216	0	-
Hori.	5721.565	PK	55.65	32.61	16.76	43.52	2.38	63.88	-31.35	19.2	50.5	216	0	-
Hori.	5725.000	PK	54.91	32.63	16.76	43.52	2.38	63.16	-32.07	27.0	59.0	216	0	-
Hori.	5850.000	PK	52.93	32.99	16.84	43.54	2.38	61.60	-33.63	27.0	60.6	216	0	-
Hori.	5855.000	PK	52.70	33.00	16.84	43.54	2.38	61.38	-33.85	15.6	49.4	216	0	-
Hori.	5875.000	PK	50.02	33.03	16.87	43.54	2.38	58.76	-36.47	10.0	46.4	216	0	-
Hori.	5925.000	PK	49.28	33.10	16.89	43.55	2.38	58.10	-37.13	-27.0	10.1	216	0	-
Vert.	5650.000	PK	49.57	32.42	16.73	43.50	2.38	57.60	-37.63	-27.0	10.6	399	240	-
Vert.	5700.000	PK	51.13	32.55	16.75	43.51	2.38	59.30	-35.93	10.0	45.9	399	240	-
Vert.	5720.000	PK	51.14	32.61	16.76	43.52	2.38	59.37	-35.86	15.6	51.4	399	240	-
Vert.	5721.565	PK	51.80	32.61	16.76	43.52	2.38	60.03	-35.20	19.2	54.4	399	240	-
Vert.	5725.000	PK	51.82	32.63	16.76	43.52	2.38	60.07	-35.16	27.0	62.1	399	240	-
Vert.	5850.000	PK	51.46	32.99	16.84	43.54	2.38	60.13	-35.10	27.0	62.1	399	240	-
Vert.	5855.000	PK	50.68	33.00	16.84	43.54	2.38	59.36	-35.87	15.6	51.4	399	240	-
Vert.	5875.000	PK	50.30	33.03	16.87	43.54	2.38	59.04	-36.19	10.0	46.1	399	240	-
Vert.	5925.000	PK	49.32	33.10	16.89	43.55	2.38	58.14	-37.09	-27.0	**10.0**	399	240	-

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 (3.945 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 20, 2022
Temperature / Humidity	23 deg.C, 43 %RH
Engineer	Yasumasa Owaki
Mode	Tx 11ac-80 5775 MHz

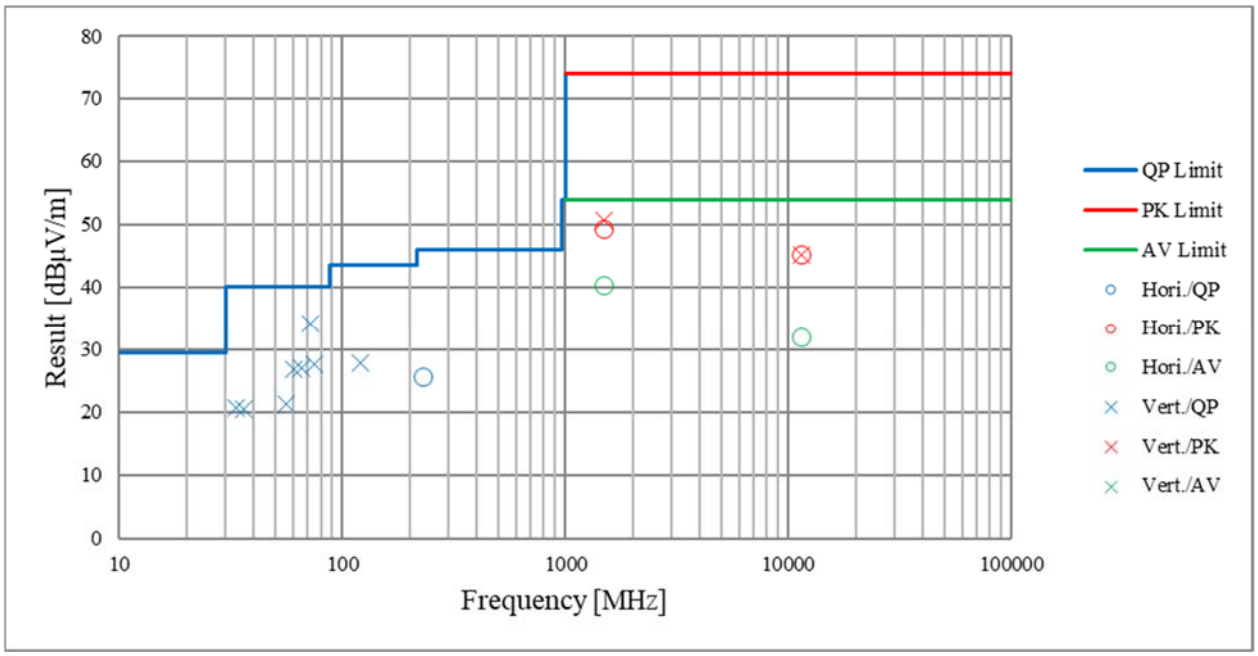
Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

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	1	2	2	1
Date	April 17, 2022	April 30, 2022	April 18, 2022	April 29, 2022	April 14, 2022
Temperature / Humidity	20 deg.C, 43 %RH	20 deg.C, 51 %RH	22 deg.C, 48 %RH	21 deg.C, 47 %RH	22 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				

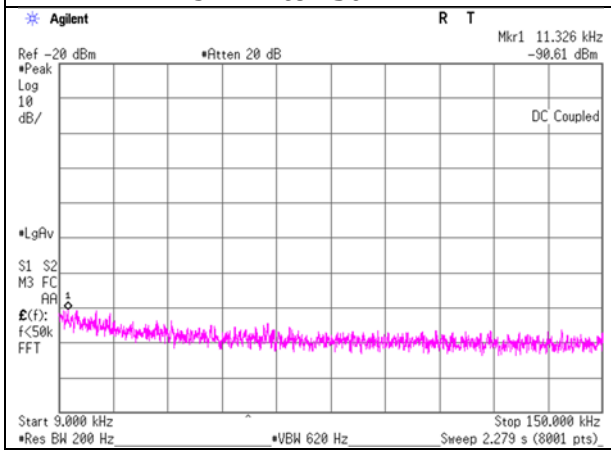


*These plots data contains sufficient number to show the trend of characteristic features for EUT.

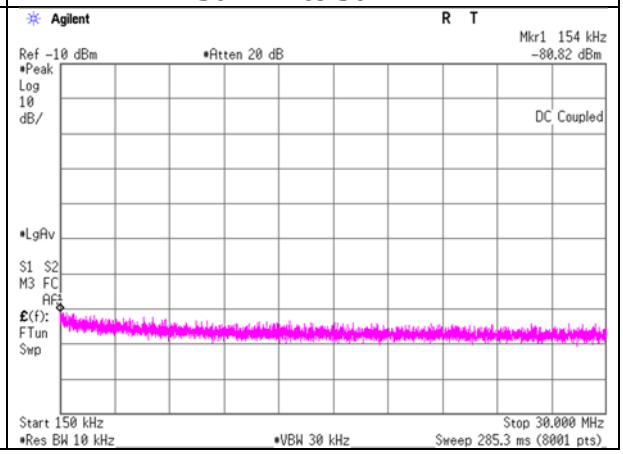
Conducted Spurious Emission

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-04	145127	Pre Amplifier	Toyo Corporation	TPA0118-36	2072554	2021/05/17	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/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/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2022/04/20	12
RE	SCC-G05	145039	Coaxial Cable	Junkosha	J12J102207-00	APR-30-15-037	2022/01/06	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	SCC-G62	196985	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	803650/2	2022/03/08	12

Test Equipment [2/2]

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
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-21	207278	Measuring Tool, Tape Measure	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	SRENT-15	160899	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46185516	2022/02/02	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
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