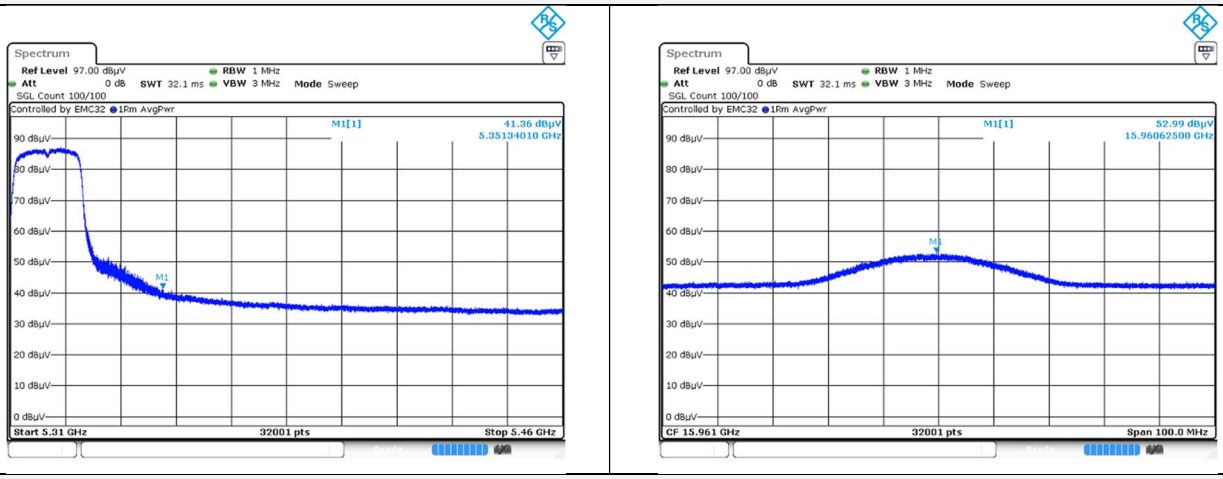
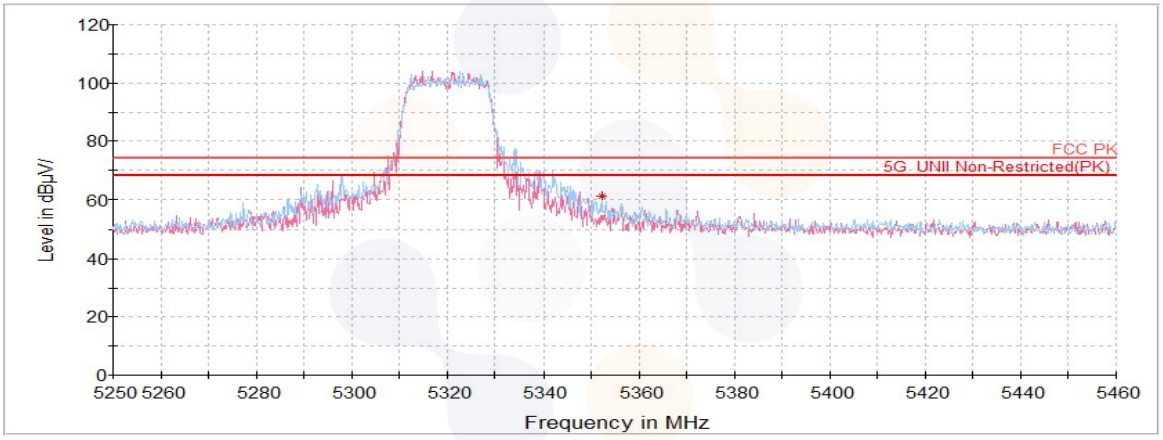
High Channel (5 320 ㎒)

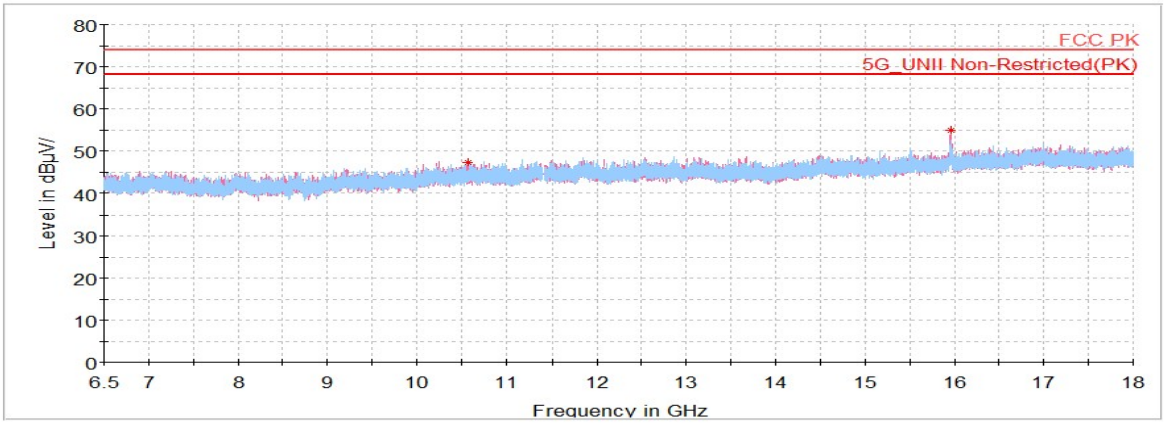
Average data



Horizontal/Vertical for Band-edge



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



802.11n HT40_UNII-2A

Low Channel (5 270 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
10 546.92	H	59.26	37.34	-49.73	-	46.87	68.20	21.33
15 802.48[1)]	V	57.61	40.74	-45.73	-	52.62	74.00	21.38
Average Data								
15 802.48[1)]	V	49.17	40.74	-45.73	0.65	44.83	54.00	9.17

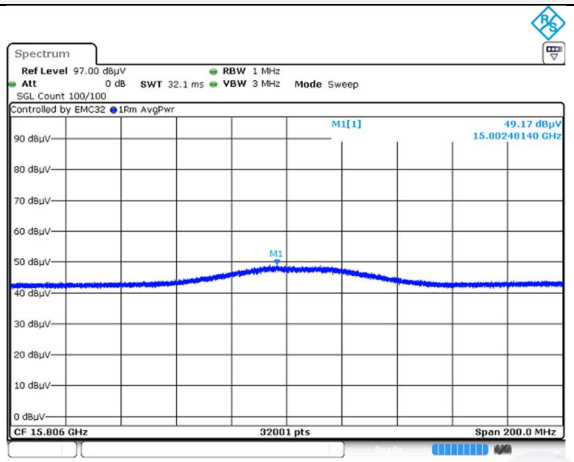
High Channel (5 310 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 350.92[1)]	H	50.22	34.30	-24.66	-	59.86	74.00	14.14
10 740.98[1)]	V	59.83	37.49	-49.48	-	47.84	74.00	26.16
15 932.24[1)]	V	58.13	40.85	-45.83	-	53.15	74.00	20.85
Average Data								
5 350.92[1)]	H	41.33	34.30	-24.66	0.65	51.62	54.00	2.38
15 932.24[1)]	V	45.90	40.85	-45.83	0.65	41.57	54.00	12.43

802.11n HT40_UNII-2A

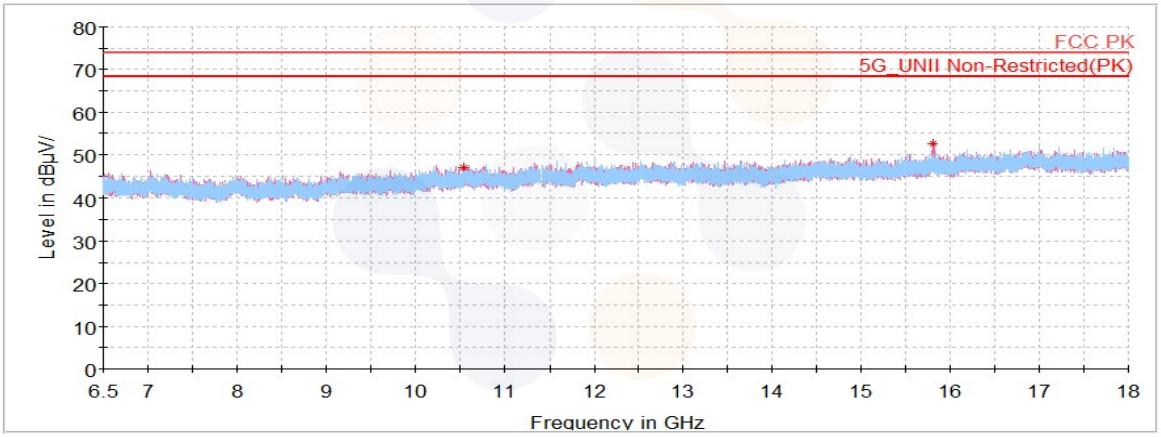
Low Channel (5 270 ㎒)

Average data



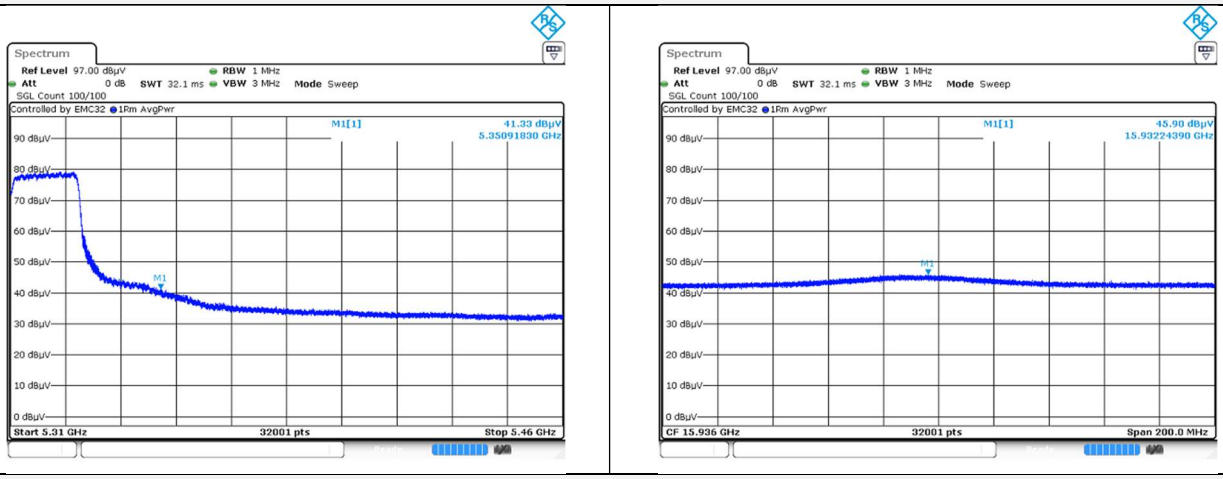
Blank

Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓

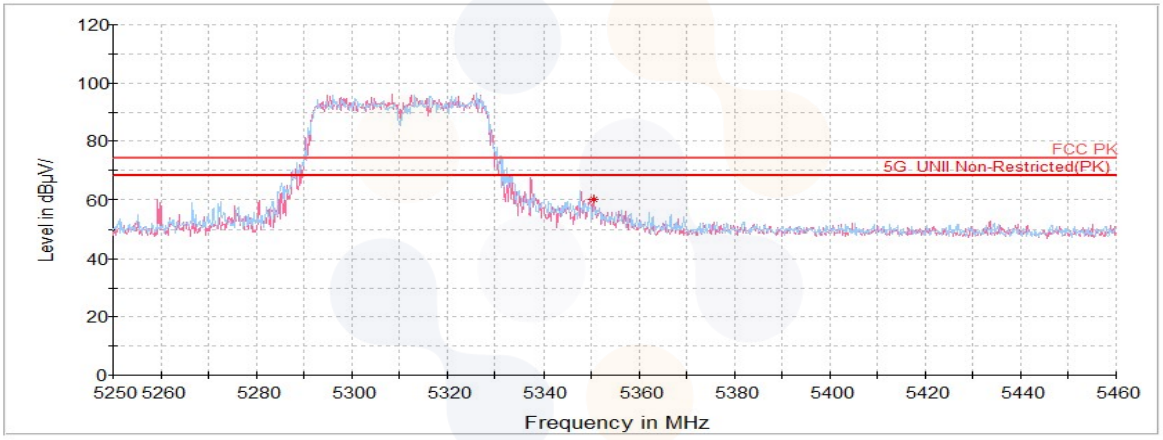


High Channel (5 310 ㎒)

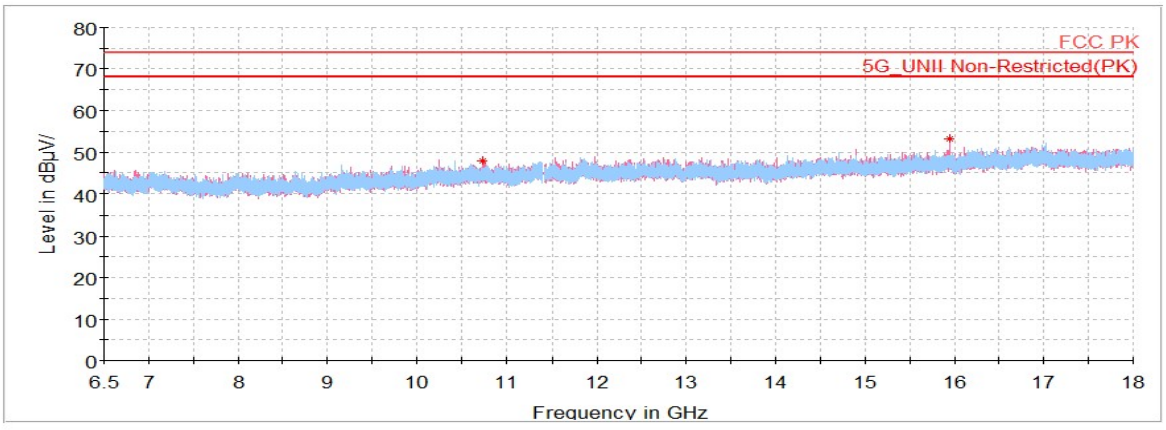
Average data



Horizontal/Vertical for Band-edge



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



802.11ac VHT20_UNII-2A

Low Channel (5 260 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 055.52[1)]	H	67.08	27.79	-48.07	-	46.80	74.00	27.20
10 620.23[1)]	H	60.08	37.40	-49.63	-	47.85	74.00	26.15
15 780.54[1)]	V	62.73	40.72	-45.72	-	57.73	74.00	16.27
Average Data								
15 780.54[1)]	V	54.52	40.72	-45.72	0.39	49.91	54.00	4.09

Mid Channel (5 280 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 074.77[1)]	H	67.85	27.79	-48.04	-	47.60	74.00	26.40
10 552.31	V	60.46	37.34	-49.72	-	48.08	68.20	20.12
15 837.66[1)]	V	61.50	40.77	-45.76	-	56.51	74.00	17.49
Average Data								
15 837.66[1)]	V	53.50	40.77	-45.76	0.39	48.90	54.00	5.10

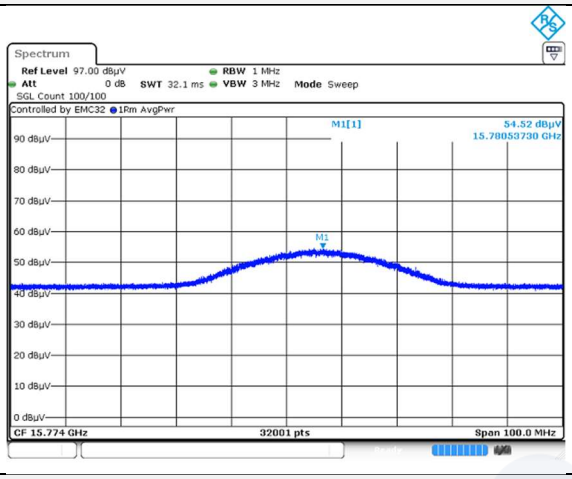
High Channel (5 320 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 117.56[1)]	V	67.49	27.78	-48.00	-	47.27	74.00	26.73
5 350.19[1)]	V	54.35	34.30	-24.66	-	63.99	74.00	10.01
10 590.41	H	59.64	37.37	-49.67	-	47.34	68.20	20.86
15 958.84[1)]	V	62.22	40.87	-45.84	-	57.25	74.00	16.75
Average Data								
5 350.19[1)]	V	41.66	34.30	-24.66	0.39	51.69	54.00	2.31
15 958.84[1)]	V	52.20	40.87	-45.84	0.39	47.62	54.00	6.38

802.11ac VHT20 UNII-2A

Low Channel (5 260 ㎒)

Average data



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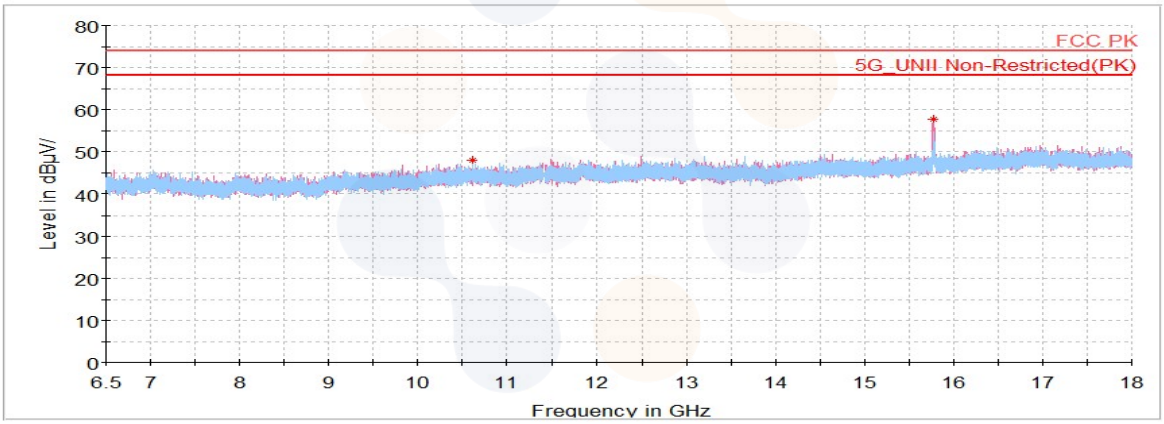
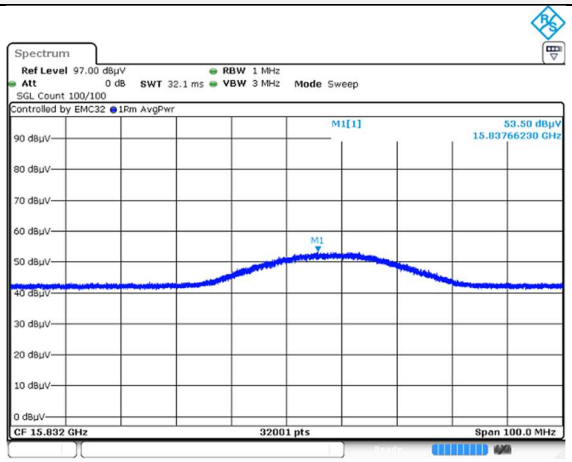
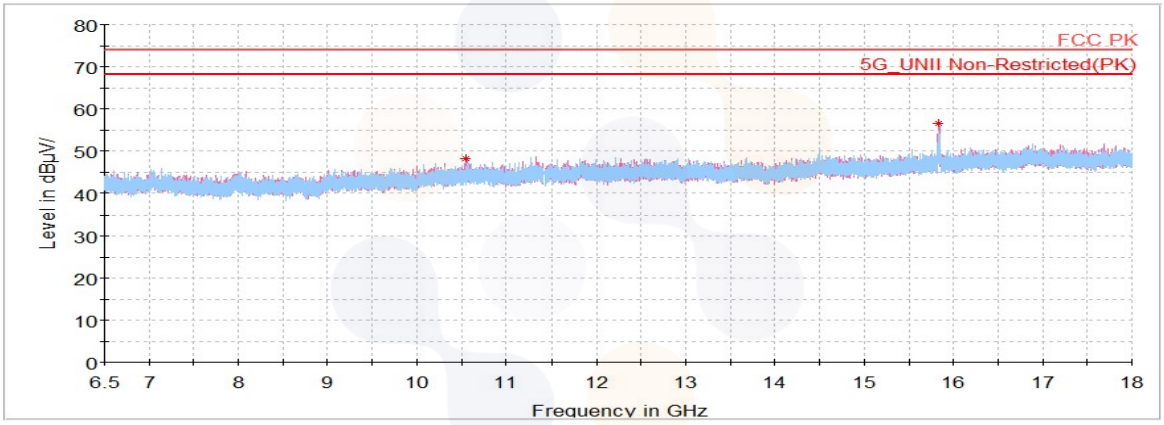
Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



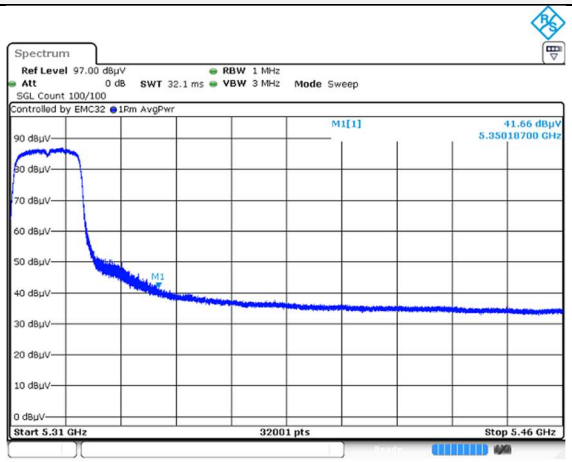
Mid Channel (5 280 ㎒)

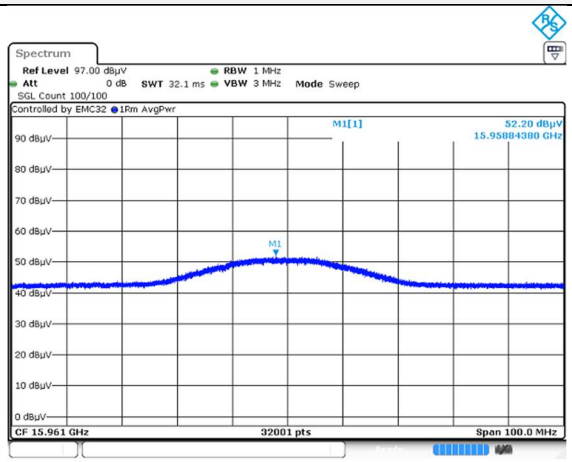
Average data	
	Blank

Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓


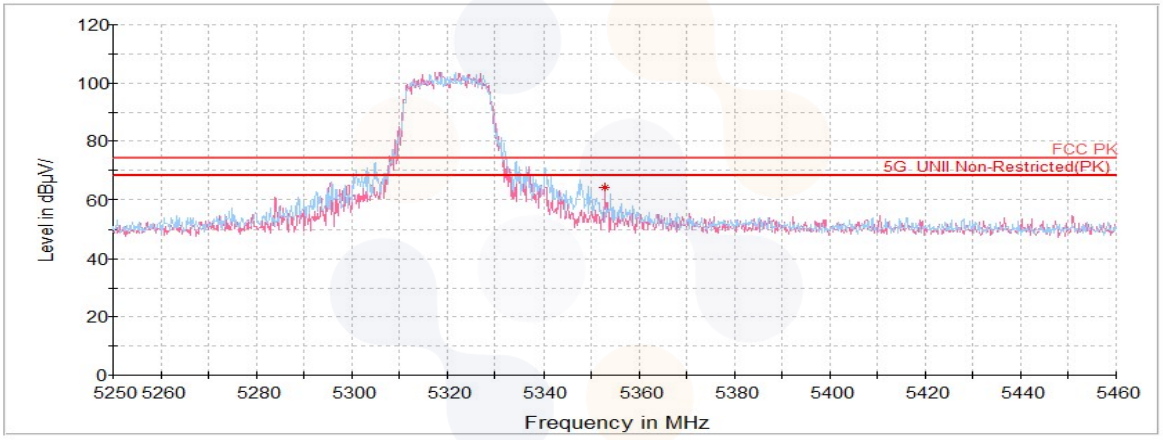
High Channel (5 320 ㎒)

Average data

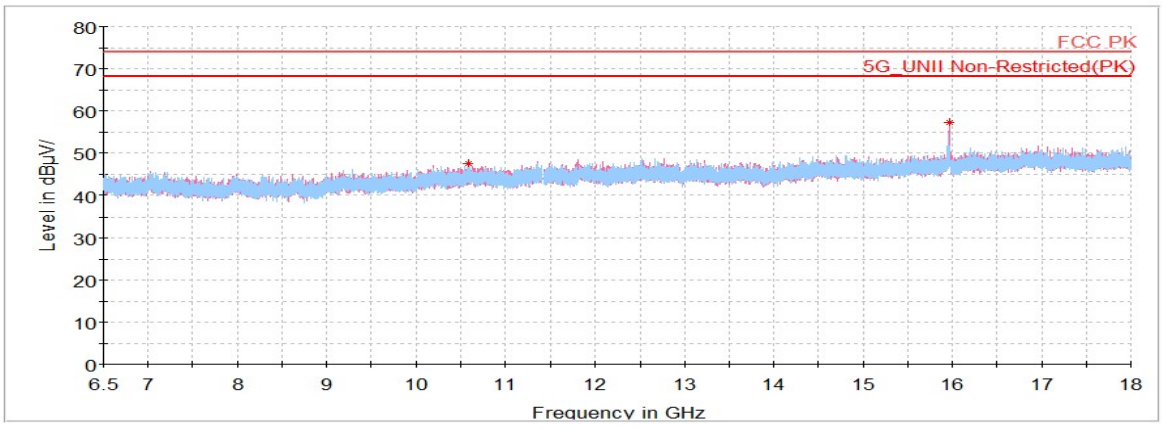




Horizontal/Vertical for Band-edge



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



802.11ac VHT40_UNII-2A

Low Channel (5 270 ㎒)

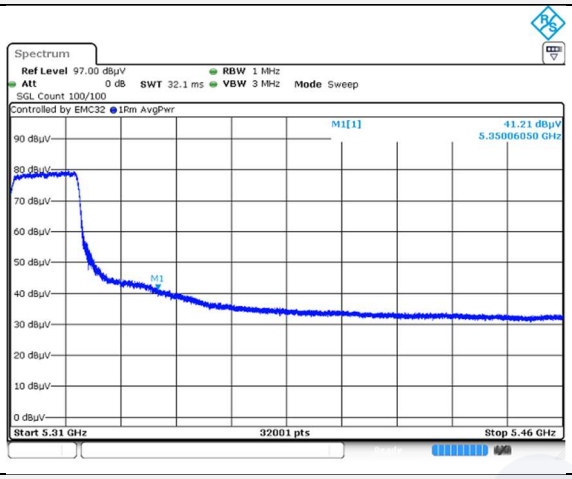
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
10 596.88	V	58.96	37.38	-49.66	-	46.68	68.20	21.52
15 807.81[1)]	V	55.54	40.75	-45.74	-	50.55	74.00	23.45
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

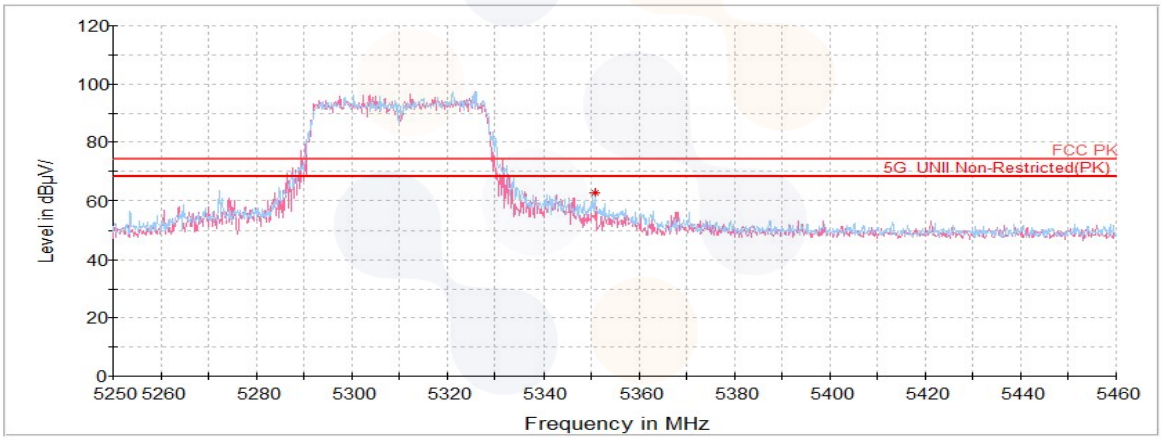
High Channel (5 310 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 350.06[1)]	H	53.00	34.30	-24.66	-	62.64	74.00	11.36
10 549.08	V	59.54	37.34	-49.72	-	47.16	68.20	21.04
15 940.06[1)]	V	55.58	40.85	-45.83	-	50.60	74.00	23.40
Average Data								
5 350.06[1)]	H	41.21	34.30	-24.66	0.65	51.50	54.00	2.50

802.11ac VHT40_UNII-2A

High Channel (5 310 ㎒)

Average data	
	Blank

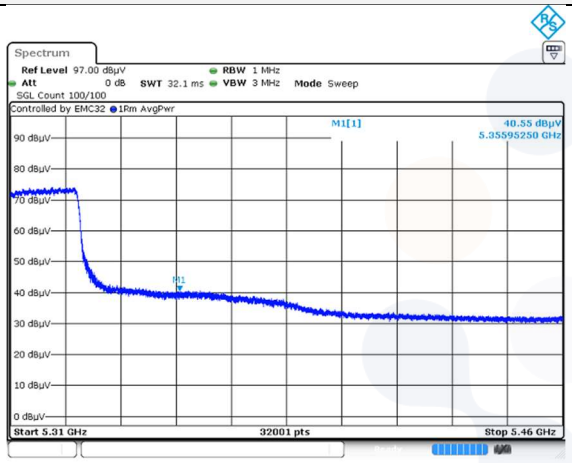
Horizontal/Vertical for Band-edge


802.11ac VHT80_UNII-2A

Low Channel (5 290 ㎒)

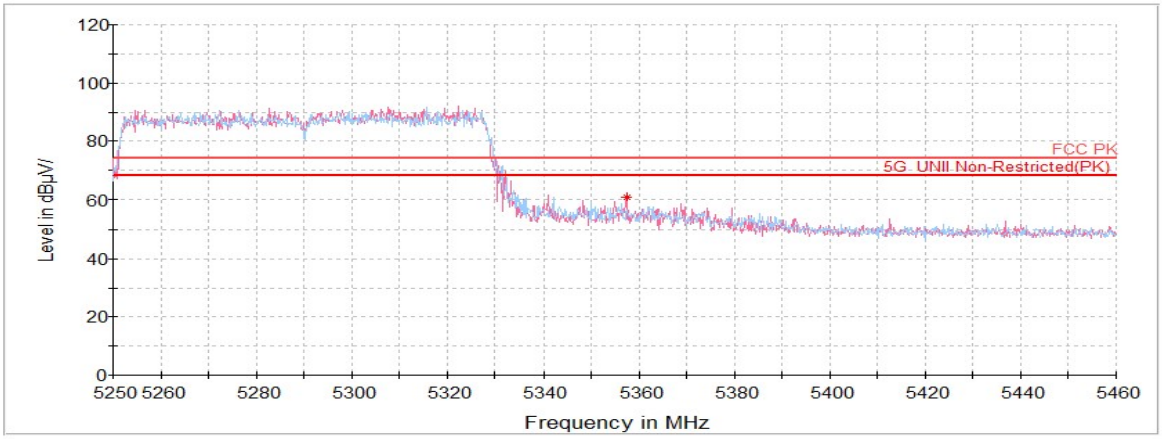
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 355.95[1)]	H	51.06	34.31	-24.66	-	60.71	74.00	13.29
10 657.25[1)]	H	59.97	37.43	-49.59	-	47.81	74.00	26.19
15 711.50[1)]	H	55.65	40.67	-45.67	-	50.65	74.00	23.35
Average Data								
5 355.95[1)]	H	40.55	34.31	-24.66	1.22	51.42	54.00	2.58

Average data



Blank

Horizontal/Vertical for Band-edge

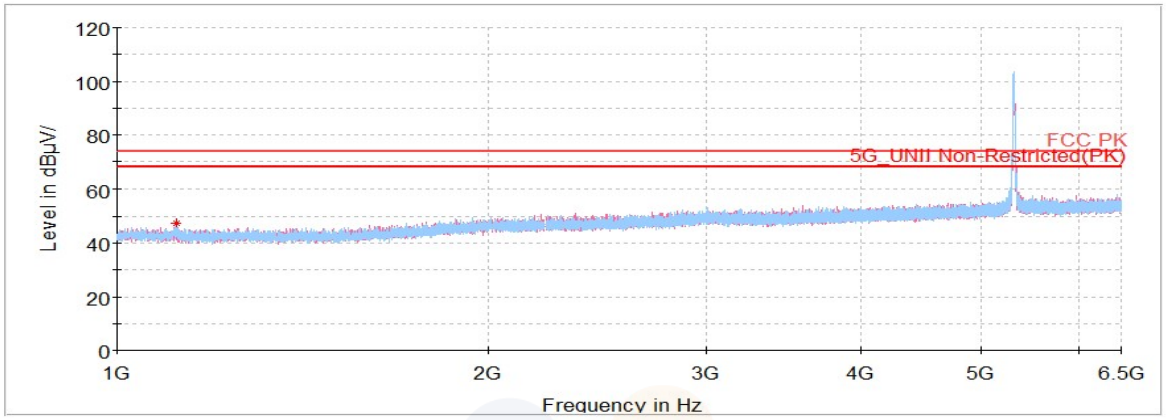


Plot of Harmonics and Spurious Emissions

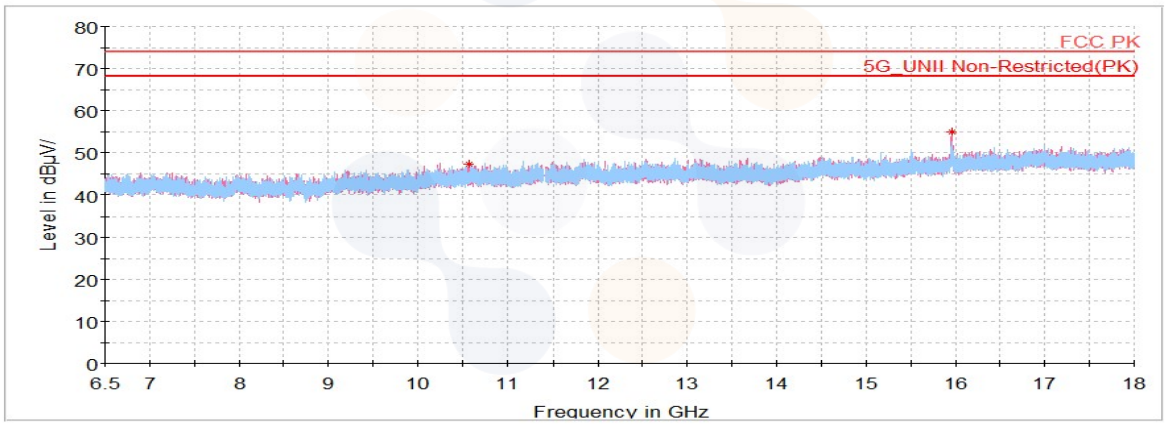
In order to simplify the report, attached plots were only the lowest margin condition

802.11ac VHT20_UNII-2A_High Channel (5 320 ㎒)

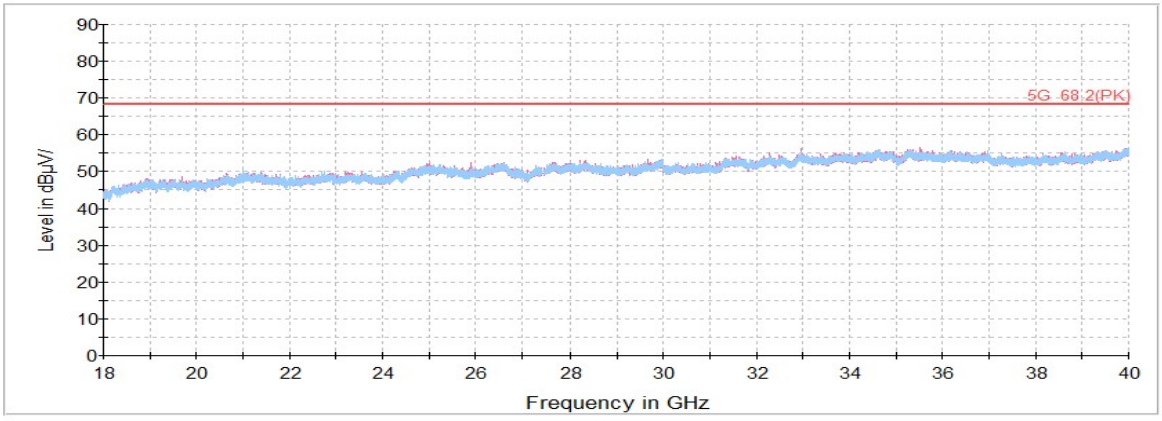
Horizontal/Vertical for 1 ㎓ ~ 6.5 ㎓



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



Horizontal/Vertical for 18 ㎓ ~ 40 ㎓



802.11a UNII-2C

Low Channel (5 500 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 291.84	H	68.57	27.74	-47.71	-	48.60	68.20	19.60
5 459.14[1)]	V	47.56	34.52	-24.48	-	57.60	74.00	16.40
11 005.84[1)]	V	59.05	37.70	-49.17	-	47.58	74.00	26.42
16 491.34	V	57.86	43.08	-47.33	-	53.61	68.20	14.59
Average Data								
5 459.14[1)]	V	39.57	34.52	-24.48	0.27	49.88	54.00	4.12

Mid Channel (5 600 ㎒)

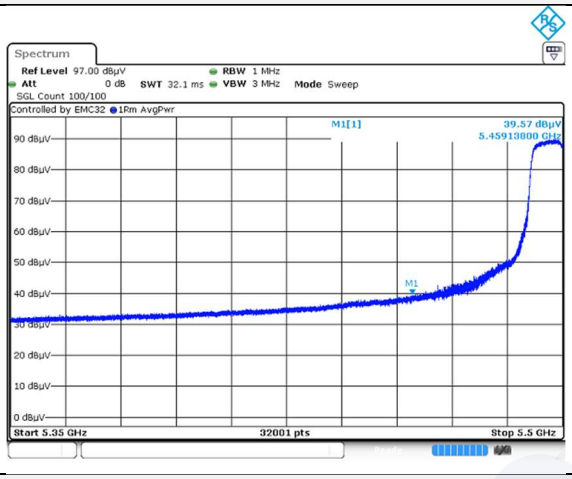
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 395.66[1)]	H	70.52	27.72	-47.37	-	50.87	74.00	23.13
11 203.14[1)]	V	59.60	37.86	-49.22	-	48.24	74.00	25.76
16 795.02	V	58.55	43.07	-46.95	-	54.67	68.20	13.53
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

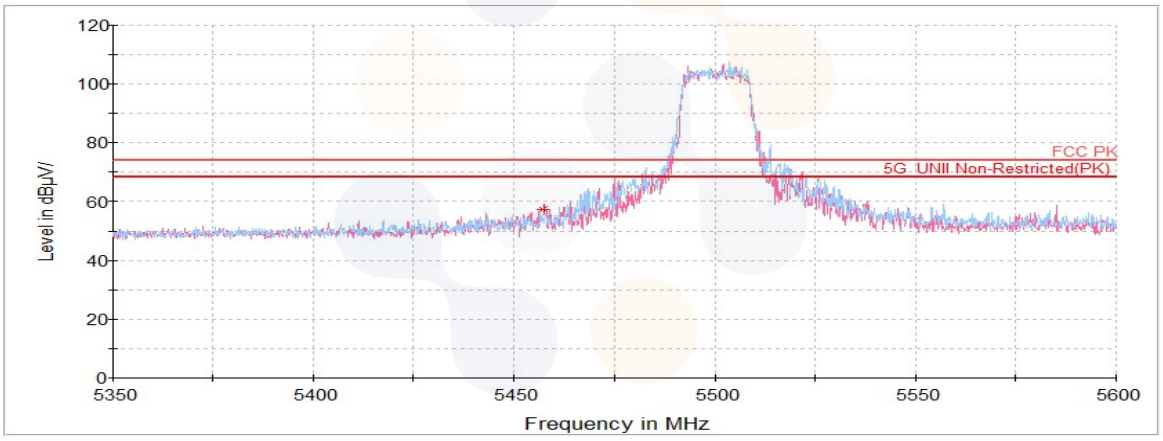
High Channel (5 700 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 492.25[1)]	V	66.40	27.70	-47.16	-	46.94	74.00	27.06
5 732.92	H	49.85	34.88	-24.25	-	60.48	68.20	7.72
11 212.84[1)]	H	57.91	37.87	-49.22	-	46.56	74.00	27.44
17 095.81	V	55.79	41.53	-46.69	-	50.63	68.20	17.57
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

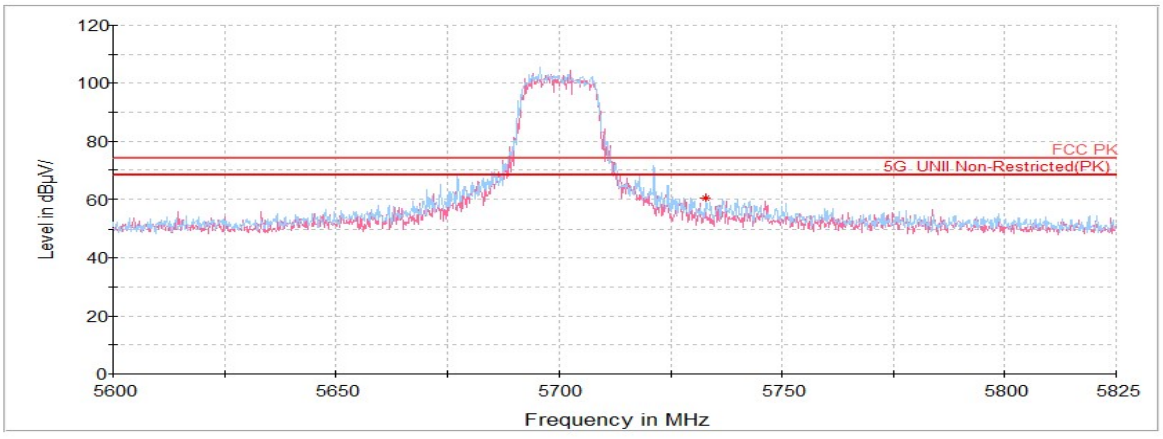
802.11a_UNII-2C

Low Channel (5 500 ㎒)

Average data	
	Blank

Horizontal/Vertical for Band-edge


High Channel (5 700 ㎒)

Horizontal/Vertical for Band-edge


802.11n HT20_UNII-2C

Low Channel (5 500 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 292.53	V	68.61	27.74	-47.71	-	48.64	68.20	19.56
5 459.99[1)]	V	49.07	34.52	-24.48	-	59.11	74.00	14.89
11 838.16[1)]	V	60.18	38.64	-49.58	-	49.24	74.00	24.76
16 499.97	V	58.59	43.10	-47.36	-	54.33	68.20	13.87
Average Data								
5 459.99[1)]	V	39.92	34.52	-24.48	0.37	50.33	54.00	3.67

Mid Channel (5 600 ㎒)

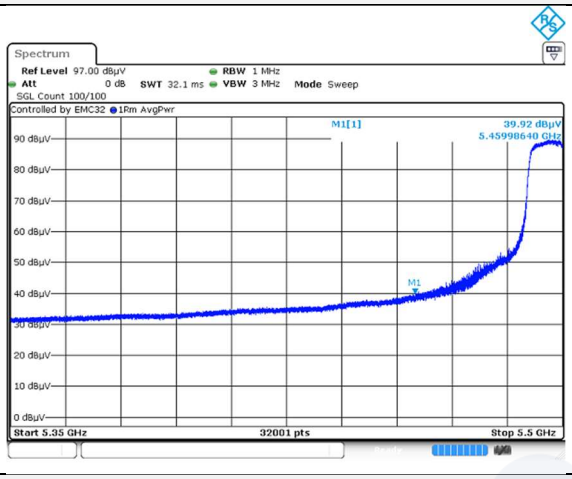
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 396.00[1)]	H	70.02	27.72	-47.37	-	50.37	74.00	23.63
10 967.39[1)]	H	58.85	37.67	-49.20	-	47.32	74.00	26.68
16 803.64	V	58.14	43.09	-46.94	-	54.29	68.20	13.91
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

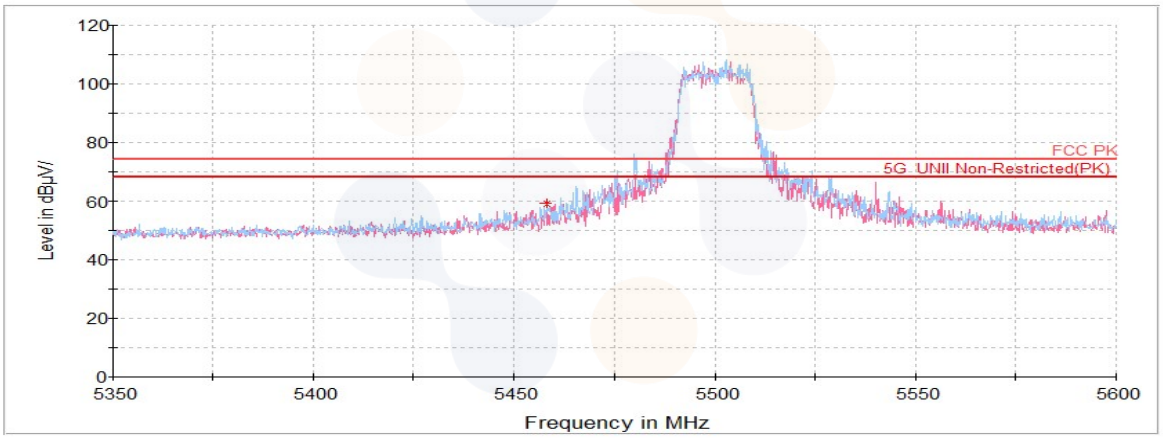
High Channel (5 700 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 726.39	H	54.96	34.87	-24.25	-	65.58	68.20	2.62
11 355.52[1)]	H	59.44	37.98	-49.26	-	48.16	74.00	25.84
16 913.25	H	55.32	43.26	-46.78	-	51.80	68.20	16.40
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

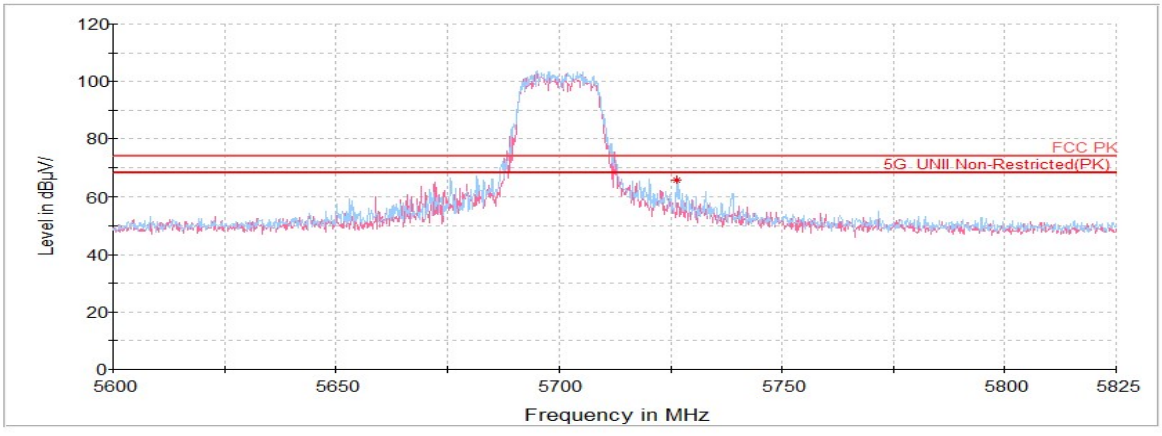
802.11n HT20_UNII-2C

Low Channel (5 500 ㎒)

Average data	
	Blank

Horizontal/Vertical for Band-edge


High Channel (5 700 ㎒)

Horizontal/Vertical for Band-edge


802.11n HT40_UNII-2C

Low Channel (5 510 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 459.45[1)]	H	52.66	34.52	-24.48	-	62.70	74.00	11.30
11 080.23[1)]	H	58.69	37.76	-49.19	-	47.26	74.00	26.74
16 527.28	V	55.98	42.64	-47.32	-	51.30	68.20	16.90
Average Data								
5 459.45[1)]	H	41.06	34.52	-24.48	0.65	51.75	54.00	2.25

Mid Channel (5 590 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
11 200.63[1)]	V	59.78	37.86	-49.22	-	48.42	74.00	25.58
16 765.19	V	55.32	43.02	-46.99	-	51.35	68.20	16.85
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

High Channel (5 670 ㎒)

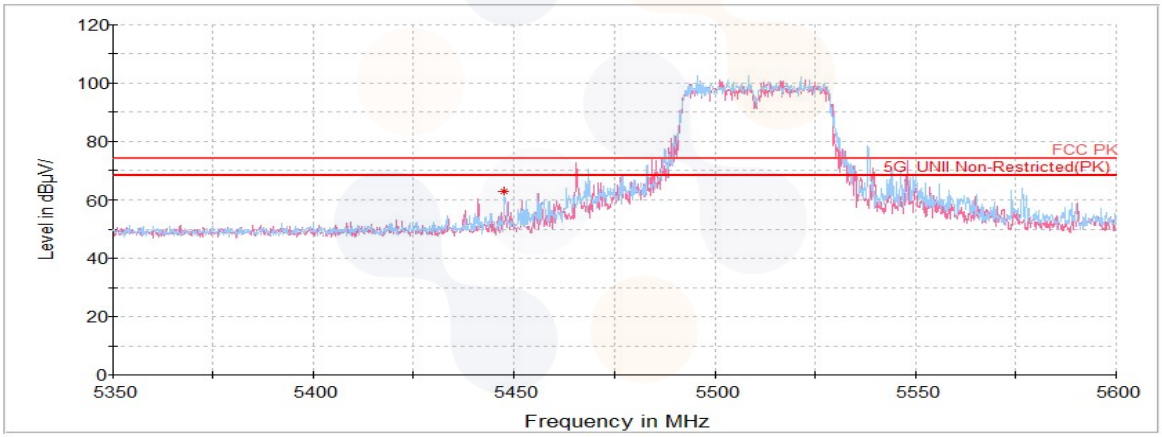
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 725.88	H	52.91	34.87	-24.25	-	63.53	68.20	4.67
11 343.30[1)]	V	59.08	37.97	-49.26	-	47.79	74.00	26.21
17 024.30	H	57.37	41.66	-46.67	-	52.36	68.20	15.84
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11n HT40_UNII-2C

Low Channel (5 510 ㎒)

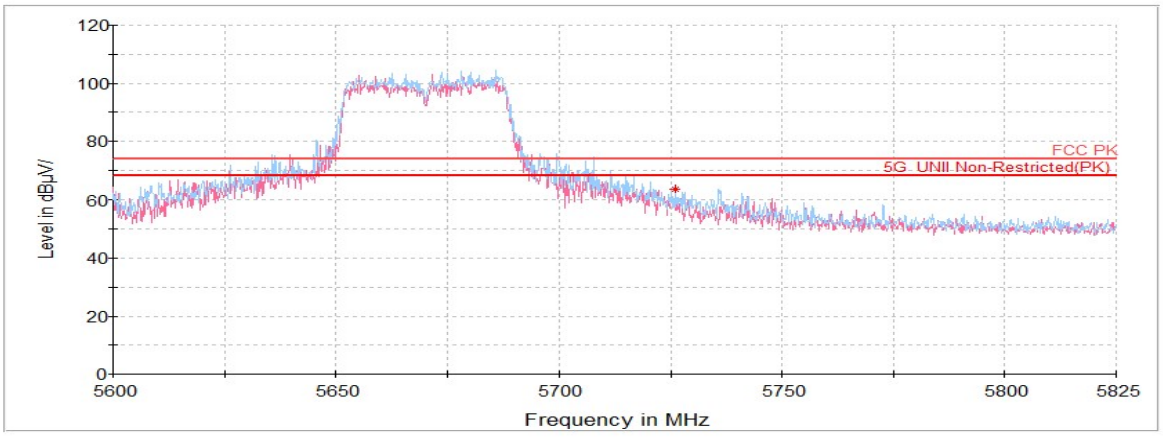
Average data	
	Blank

Horizontal/Vertical for Band-edge



High Channel (5 670 ㎒)

Horizontal/Vertical for Band-edge



802.11ac VHT20_UNII-2C

Low Channel (5 500 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 298.38	H	68.97	27.74	-47.70	-	49.01	68.20	19.19
5 459.92[1)]	H	51.31	34.52	-24.48	-	61.35	74.00	12.65
10 947.98[1)]	H	58.92	37.66	-49.23	-	47.35	74.00	26.65
16 503.56	V	60.42	42.61	-47.35	-	55.68	68.20	12.52
Average Data								
5 459.92[1)]	H	40.63	34.52	-24.48	0.39	51.06	54.00	2.94

Mid Channel (5 600 ㎒)

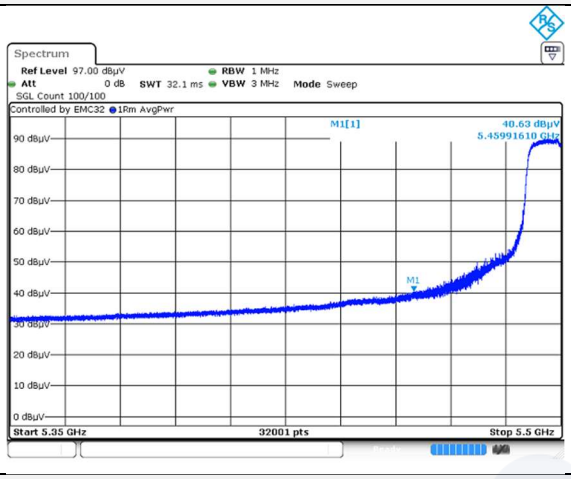
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 394.63[1)]	H	69.45	27.72	-47.38	-	49.79	74.00	24.21
11 195.23[1)]	V	59.87	37.86	-49.22	-	48.51	74.00	25.49
16 800.77	V	59.39	43.08	-46.94	-	55.53	68.20	12.67
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

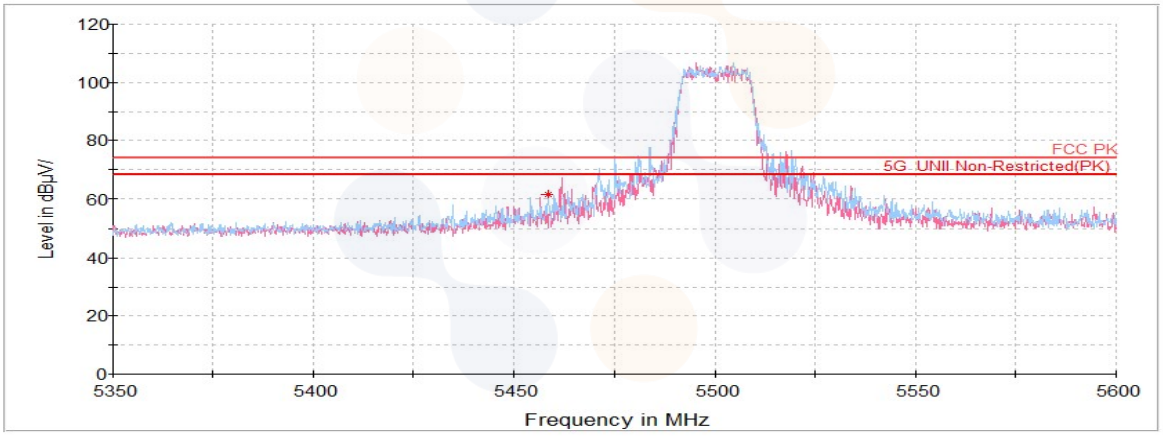
High Channel (5 700 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 730.69	H	53.15	34.88	-24.25	-	63.78	68.20	4.42
10 737.75[1)]	V	60.29	37.49	-49.49	-	48.29	74.00	25.71
11 399.00[1)]	V	59.50	38.02	-49.28	-	48.24	74.00	25.76
17 023.22	H	57.25	41.66	-46.67	-	52.24	68.20	15.96
Average Data								

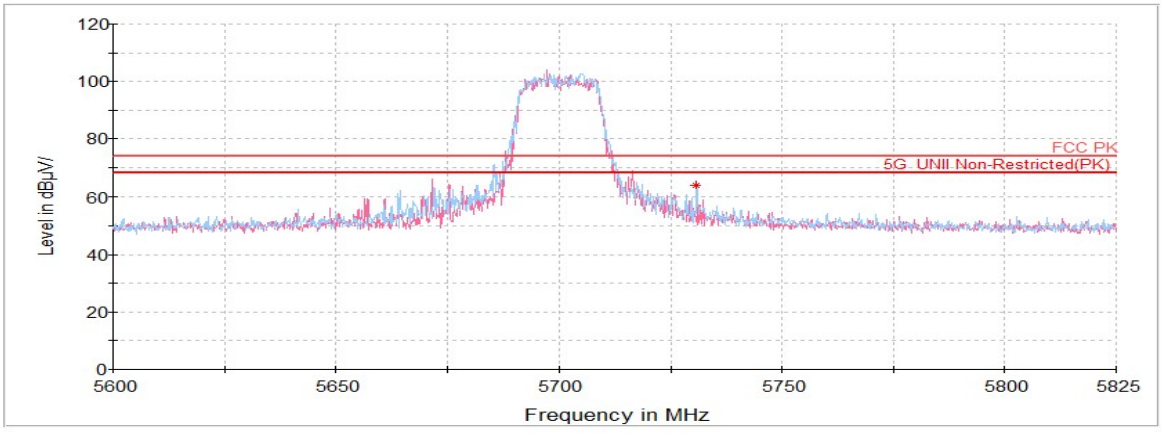
802.11ac VHT20_UNII-2C

Low Channel (5 500 ㎒)

Average data	
	Blank

Horizontal/Vertical for Band-edge


High Channel (5 700 ㎒)

Horizontal/Vertical for Band-edge


802.11ac VHT40_UNII-2C

Low Channel (5 510 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 459.55[1)]	H	54.71	34.52	-24.48	-	64.75	74.00	9.25
11 010.88[1)]	V	58.51	37.71	-49.17	-	47.05	74.00	26.95
16 440.67	H	55.23	42.95	-47.18	-	51.00	68.20	17.20
Average Data								
5 459.55[1)]	H	41.05	34.52	-24.48	0.65	51.74	54.00	2.26

Mid Channel (5 590 ㎒)

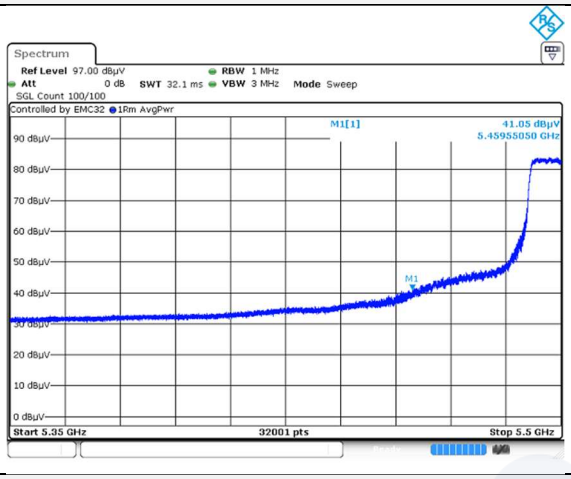
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
11 630.08[1)]	V	60.04	38.31	-49.41	-	48.94	74.00	25.06
16 779.20	V	55.80	43.05	-46.97	-	51.88	68.20	16.32
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

High Channel (5 670 ㎒)

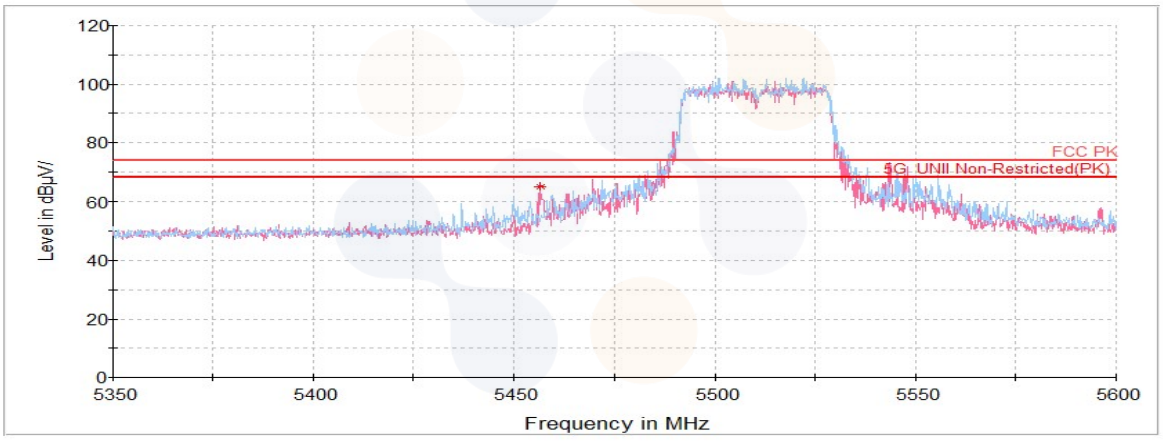
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 730.86	H	54.02	34.88	-24.25	-	64.65	68.20	3.55
11 366.66[1)]	H	59.30	37.99	-49.27	-	48.02	74.00	25.98
16 908.94	V	55.98	43.25	-46.79	-	52.44	68.20	15.76
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT40_UNII-2C

Low Channel (5 510 ㎒)

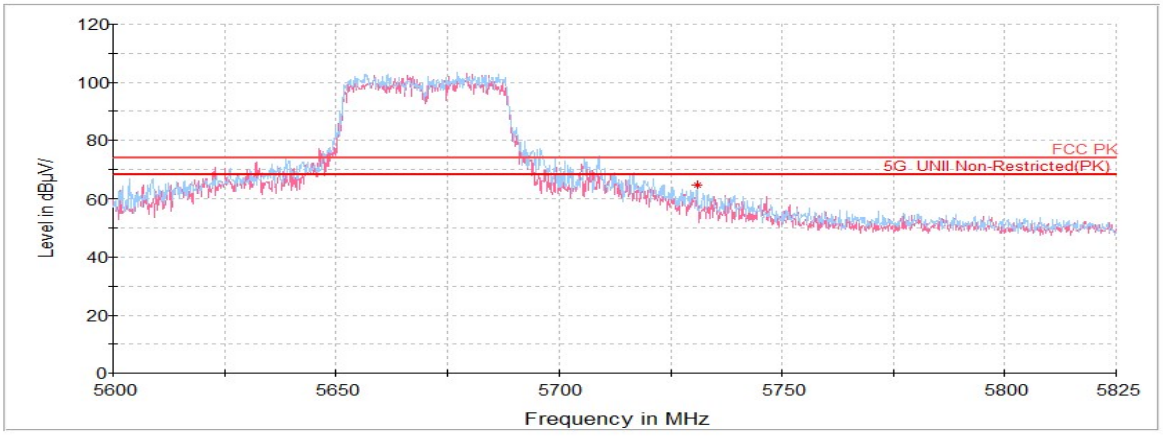
Average data	
	Blank

Horizontal/Vertical for Band-edge



High Channel (5 670 ㎒)

Horizontal/Vertical for Band-edge



802.11ac VHT80_UNII-2C

Low Channel (5 530 ㎒)

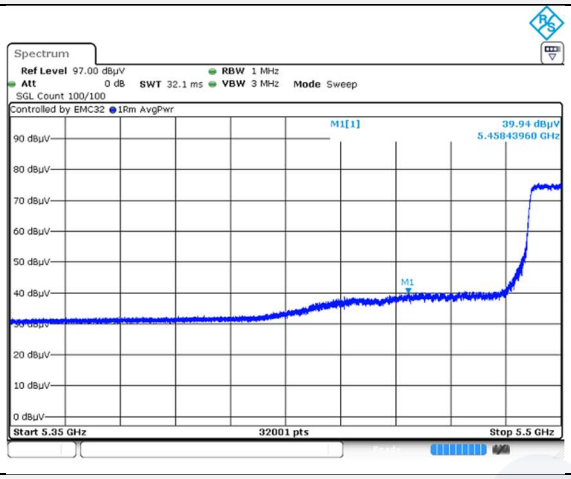
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 458.44[1)]	H	48.84	34.52	-24.49	-	58.87	74.00	15.13
11 051.13[1)]	H	59.08	37.74	-49.18	-	47.64	74.00	26.36
16 879.11	V	56.73	43.21	-46.83	-	53.11	68.20	15.09
Average Data								
5 458.44[1)]	H	39.94	34.52	-24.49	1.22	51.19	54.00	2.81

High Channel (5 610 ㎒)

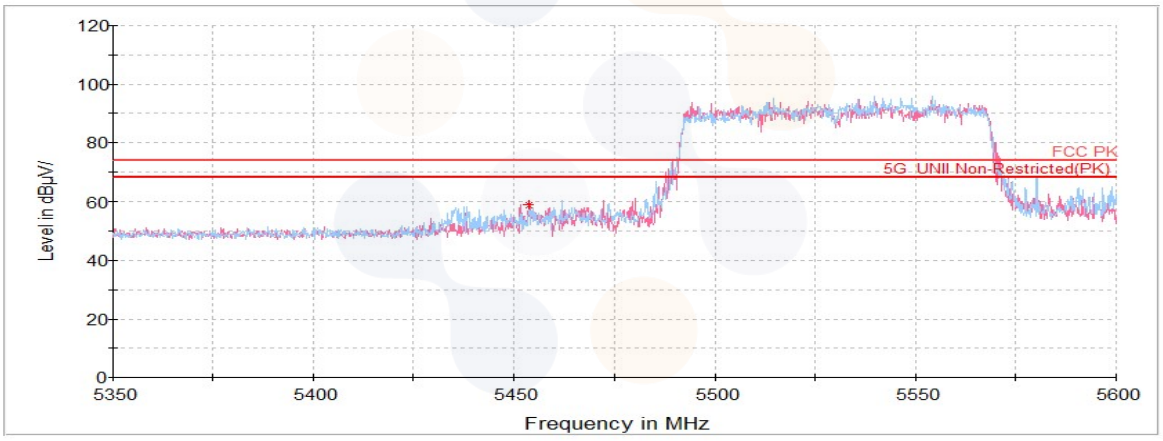
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 727.08	H	48.23	34.87	-24.25	-	58.85	68.20	9.35
10 793.81[1)]	V	60.63	37.54	-49.42	-	48.75	74.00	25.25
16 510.03	H	55.70	42.62	-47.35	-	50.97	68.20	17.23
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT80_UNII-2C

Low Channel (5 530 ㎒)

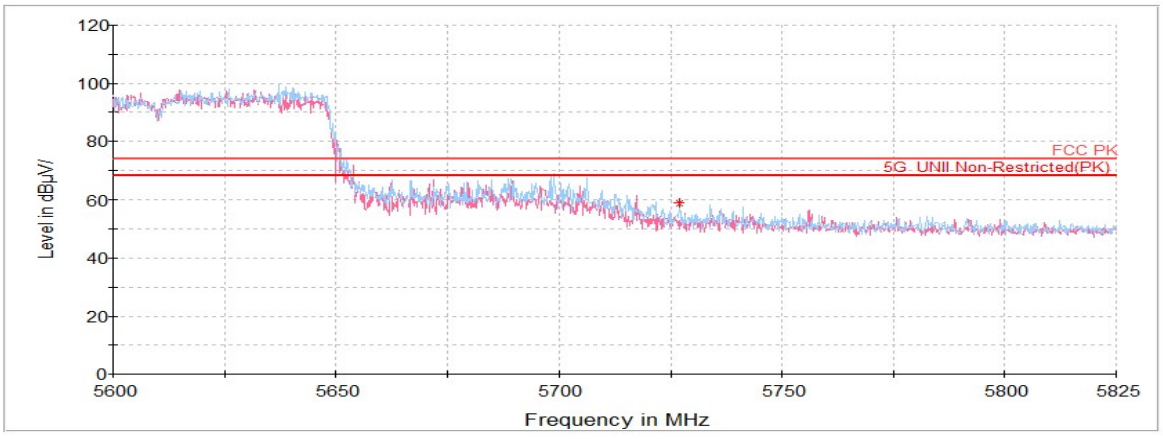
Average data	
	Blank

Horizontal/Vertical for Band-edge



High Channel (5 610 ㎒)

Horizontal/Vertical for Band-edge

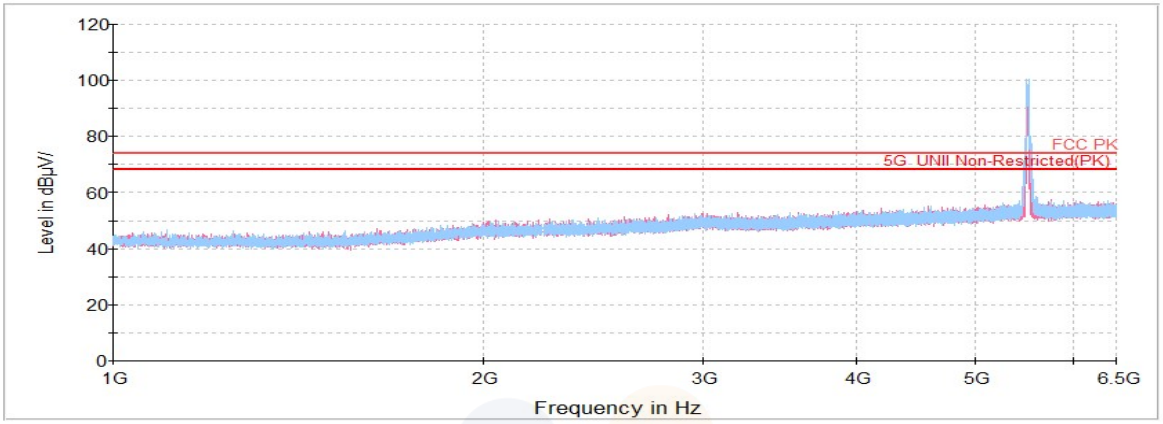


Plot of Harmonics and Spurious Emissions

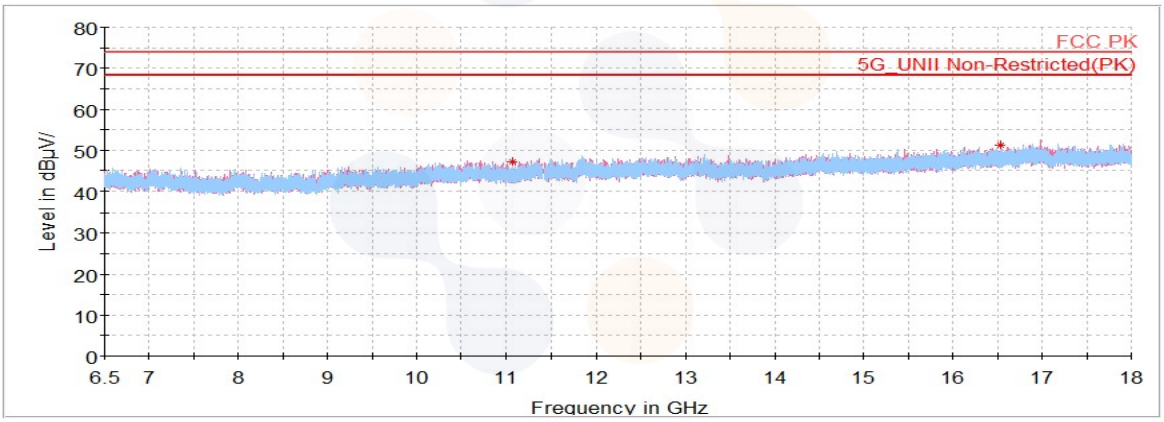
In order to simplify the report, attached plots were only the lowest margin condition

802.11n HT40_UNII-2C_Low Channel (5 510 ㎒)

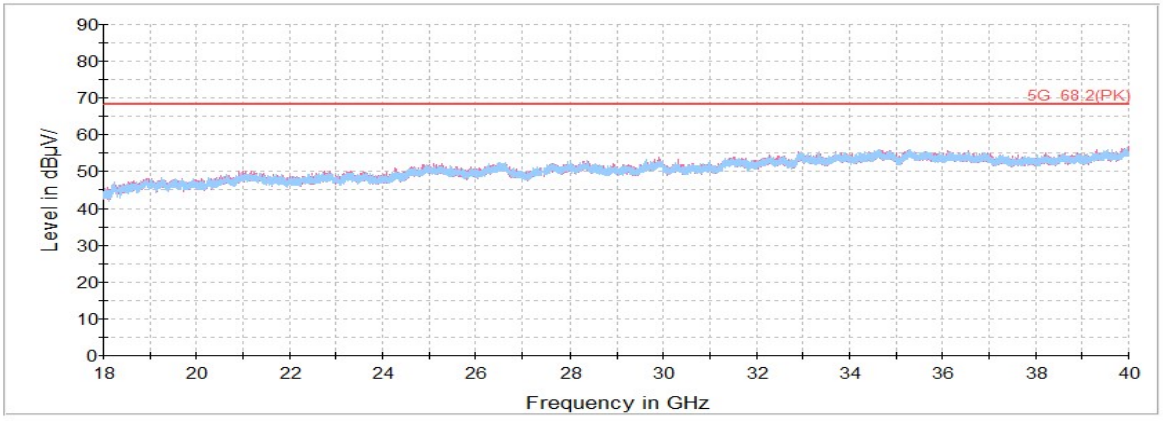
Horizontal/Vertical for 1 ㎓ ~ 6.5 ㎓



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



Horizontal/Vertical for 18 ㎓ ~ 40 ㎓



Straddle Channel

802.11a (5 720 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 514.94[1)]	H	67.63	27.80	-47.12	-	48.31	74.00	25.69
11 438.53[1)]	V	59.13	38.05	-49.29	-	47.89	74.00	26.11
17 151.16	V	59.37	41.43	-46.70	-	54.10	68.20	14.10
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11n HT20 (5 720 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 511.84[1)]	H	47.66	27.78	-28.13	-	47.31	74.00	26.69
11 468.36[1)]	V	59.36	38.07	-49.30	-	48.13	74.00	25.87
17 163.38	V	59.91	41.41	-46.71	-	54.61	68.20	13.59
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11n HT40 (5 710 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
11 488.48[1)]	V	60.16	38.09	-49.30	-	48.95	74.00	25.05
16 963.20	V	54.73	43.34	-46.71	-	51.36	68.20	16.84
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT20 (5 720 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 513.73[1)]	H	68.27	27.79	-47.12	-	48.94	74.00	25.06
12 273.72[1)]	V	59.43	39.34	-49.63	-	49.14	74.00	24.86
17 167.69	V	59.76	41.40	-46.71	-	54.45	68.20	13.75
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT40 (5 710 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
11 470.52[1)]	V	59.57	38.08	-49.30	-	48.35	74.00	25.65
17 115.58	V	56.53	41.49	-46.69	-	51.33	68.20	16.87
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT80 (5 690 ㎒)

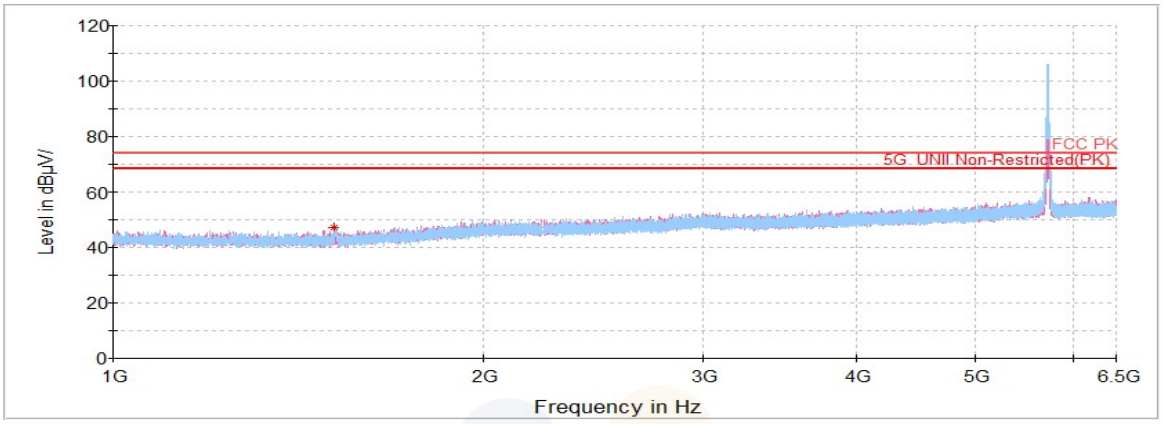
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
11 042.86[1)]	V	58.21	37.73	-49.18	-	46.76	74.00	27.24
16 662.05	H	55.03	42.86	-47.13	-	50.76	68.20	17.44
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

Plot of Harmonics and Spurious Emissions

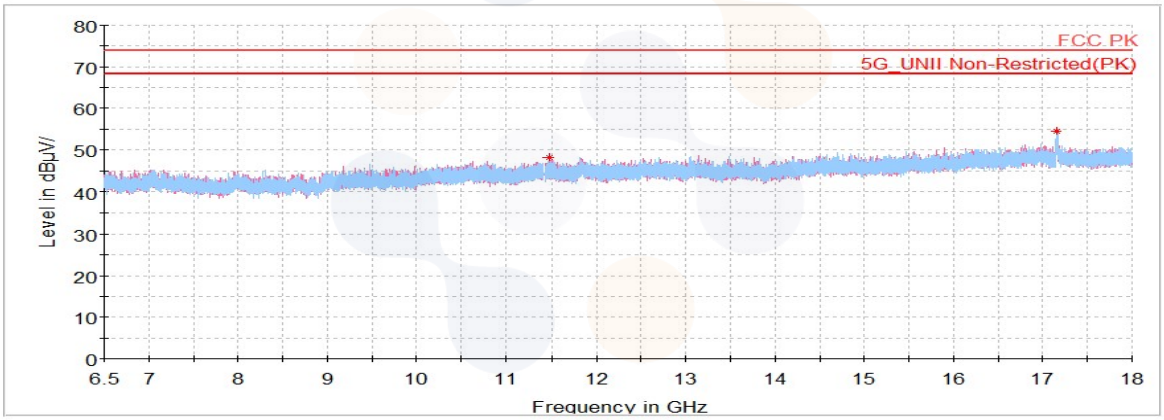
In order to simplify the report, attached plots were only the lowest margin condition

802.11n HT20_Straddle Channel (5 720 ㎒)

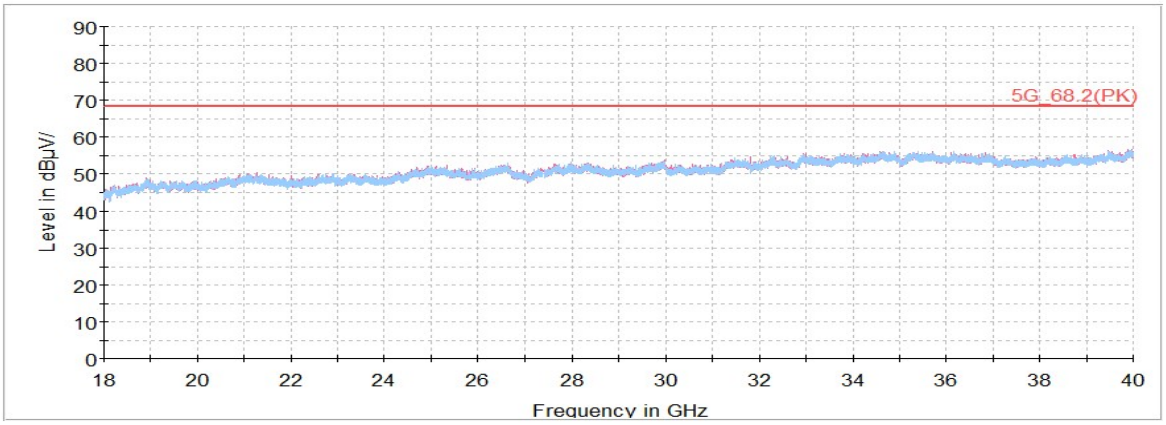
Horizontal/Vertical for 1 ㎓ ~ 6.5 ㎓



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



Horizontal/Vertical for 18 ㎓ ~ 40 ㎓



802.11a UNII-3

Low Channel (5 745 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 539.34[1)]	H	67.47	27.97	-47.08	-	48.36	74.00	25.64
5 723.64	H	62.38	34.87	-24.25	-	73.00	119.10	46.10
11 491.36[1)]	H	60.95	38.09	-49.30	-	49.74	74.00	24.26
17 231.30	V	59.43	41.28	-46.72	-	53.99	68.20	14.21
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Mid Channel (5 785 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 580.25[1)]	H	67.01	28.25	-47.02	-	48.24	74.00	25.76
11 562.16[1)]	V	60.57	38.20	-49.35	-	49.42	74.00	24.58
17 352.77	H	60.17	41.07	-46.76	-	54.48	68.20	13.72
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

High Channel (5 825 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 623.22[1)]	H	66.54	28.54	-46.94	-	48.14	74.00	25.86
5 851.00	V	58.22	35.02	-23.96	-	69.28	119.92	50.64
11 659.91[1)]	V	60.67	38.36	-49.43	-	49.60	74.00	24.40
17 475.67	V	59.45	40.84	-46.79	-	53.50	68.20	14.70
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11n HT20_UNII-3

Low Channel (5 745 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 539.52[1)]	H	69.16	27.97	-47.08	-	50.05	74.00	23.95
5 724.50	V	64.24	34.87	-24.25	-	74.86	121.06	46.20
11 481.30[1)]	V	59.86	38.09	-49.30	-	48.65	74.00	25.35
12 003.83[1)]	H	60.23	38.91	-49.70	-	49.44	74.00	24.56
17 233.09	V	60.34	41.28	-46.73	-	54.89	68.20	13.31
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

Mid Channel (5 785 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 579.91[1)]	H	66.40	28.24	-47.02	-	47.62	74.00	26.38
11 572.94[1)]	V	59.98	38.22	-49.36	-	48.84	74.00	25.16
14 500.05	V	56.96	39.60	-46.24	-	50.32	68.20	17.88
17 354.56	V	59.34	41.06	-46.76	-	53.64	68.20	14.56
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

High Channel (5 825 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 621.50[1)]	H	68.49	28.53	-46.95	-	50.07	74.00	23.93
5 852.03	H	59.72	35.02	-23.95	-	70.79	117.57	46.78
11 639.42[1)]	H	59.17	38.32	-49.42	-	48.07	74.00	25.93
17 477.47	V	60.05	40.84	-46.79	-	54.10	68.20	14.10
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11n HT40_UNII-3

Low Channel (5 755 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 676.03	H	56.51	34.81	-24.31	-	67.01	87.46	20.46
11 489.56[1)]	H	59.57	38.09	-49.30	-	48.36	74.00	25.64
17 250.34	H	56.80	41.25	-46.73	-	51.32	68.20	16.88
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

High Channel (5 795 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 861.31	H	52.56	35.03	-23.90	-	63.69	109.03	45.34
11 530.53[1)]	H	58.94	38.15	-49.33	-	47.76	74.00	26.24
17 377.20	H	57.87	41.02	-46.76	-	52.13	68.20	16.07
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT20_UNII-3

Low Channel (5 745 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 541.75[1)]	H	67.90	27.98	-47.08	-	48.80	74.00	25.20
5 721.58	H	61.41	34.87	-24.25	-	72.03	114.40	42.36
9 547.50	H	57.78	36.46	-47.22	-	47.02	68.20	21.18
11 482.73[1)]	H	60.54	38.09	-49.30	-	49.33	74.00	24.67
17 243.16	V	59.69	41.26	-46.73	-	54.22	68.20	13.98
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Mid Channel (5 785 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 579.73[1)]	H	66.61	28.24	-47.02	-	47.83	74.00	26.17
11 512.92[1)]	V	59.33	38.12	-49.32	-	48.13	74.00	25.87
17 364.98	V	59.70	41.04	-46.76	-	53.98	68.20	14.22
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

High Channel (5 825 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
1 619.95[1)]	H	68.51	28.52	-46.95	-	50.08	74.00	23.92
5 855.47	H	57.13	35.03	-23.93	-	68.23	110.67	42.44
11 645.17[1)]	H	59.88	38.33	-49.42	-	48.79	74.00	25.21
17 468.84	V	59.57	40.86	-46.79	-	53.64	68.20	14.56
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT40_UNII-3

Low Channel (5 755 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 710.92	H	61.83	34.85	-24.26	-	72.42	108.26	35.84
11 489.56[1)]	V	59.46	38.09	-49.30	-	48.25	74.00	25.75
17 251.42	H	56.89	41.25	-46.73	-	51.41	68.20	16.79
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

High Channel (5 795 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 856.50	V	53.09	35.03	-23.93	-	64.19	110.38	46.19
11 324.25[1)]	H	60.36	37.96	-49.26	-	49.06	74.00	24.94
17 359.59	V	57.59	41.05	-46.76	-	51.88	68.20	16.32
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

802.11ac VHT80_UNII-3

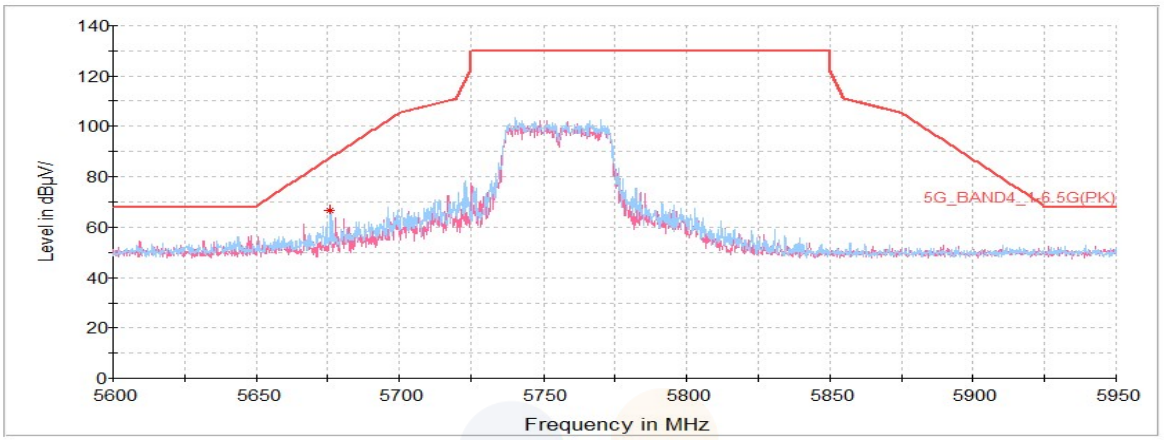
Low Channel (5 775 ㎒)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
5 719.17	H	60.97	34.86	-24.26	-	71.57	110.57	38.99
5 864.41	H	52.57	35.04	-23.89	-	63.72	108.17	44.44
11 567.91[1)]	H	59.44	38.21	-49.36	-	48.29	74.00	25.71
17 283.41	H	56.98	41.19	-46.74	-	51.43	68.20	16.77
Average Data								
No spurious emissions were detected within 20 ㏈ of the limit.								

Plot of Band-edge, Harmonics and Spurious Emissions

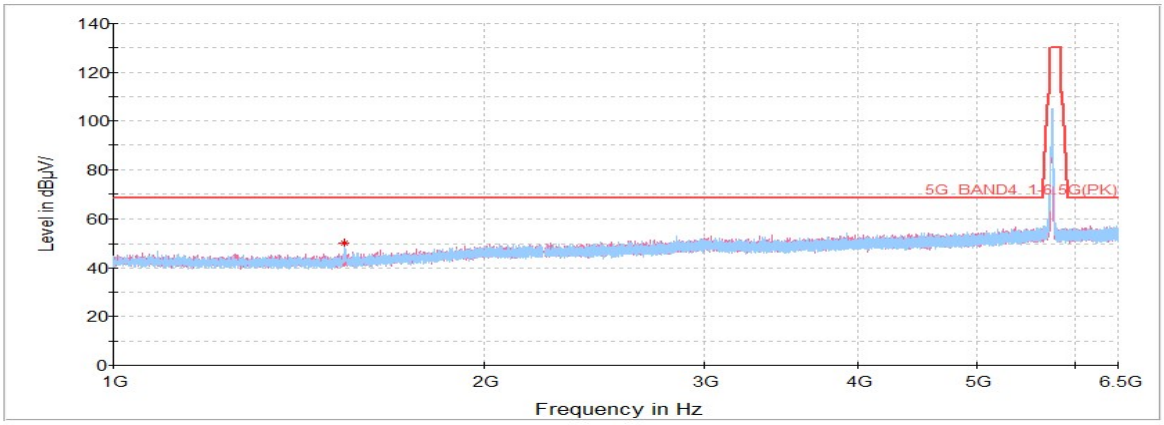
In order to simplify the report, attached plots were only the lowest margin condition

802.11n HT40_UNII-3_Low Channel (5 755 ㎒)

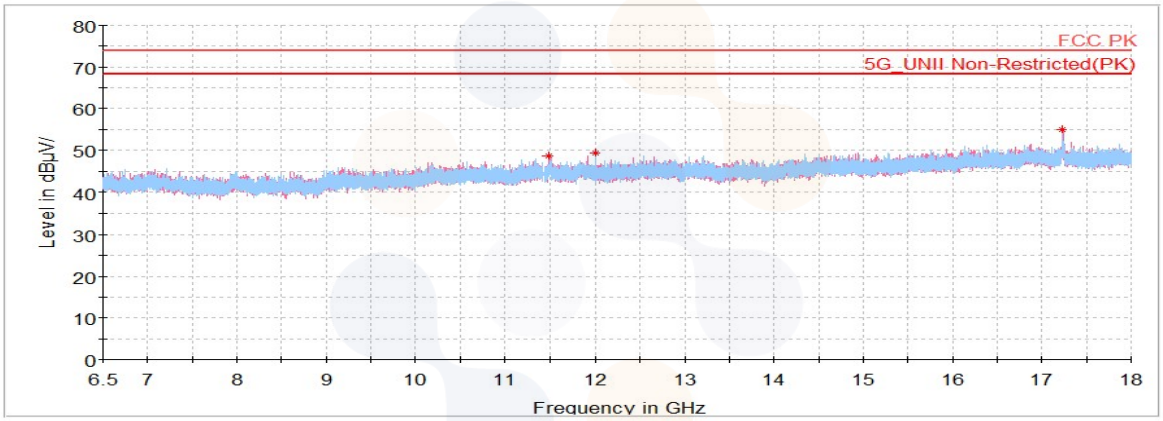
Horizontal/Vertical for Band-edge


802.11n HT20_UNII-3_Low Channel (5 745 ㎒)

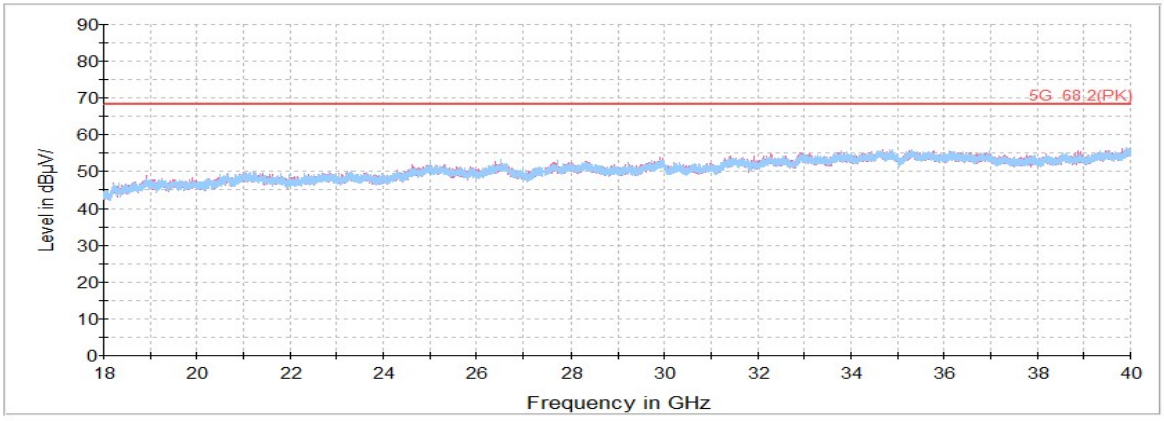
Horizontal/Vertical for 1 ㎓ ~ 6.5 ㎓



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓



Horizontal/Vertical for 18 ㎓ ~ 40 ㎓

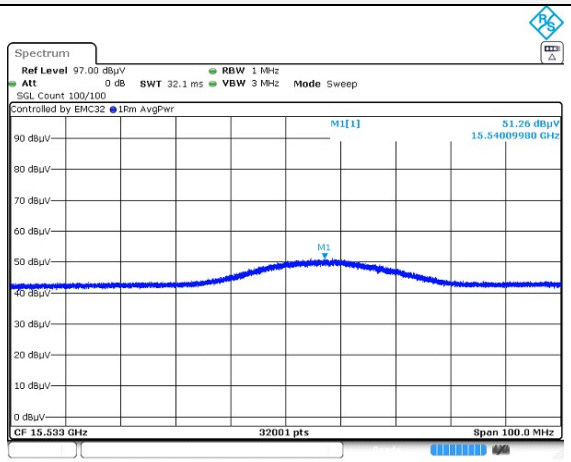


Spurious Emission for Simultaneous Tx Condition

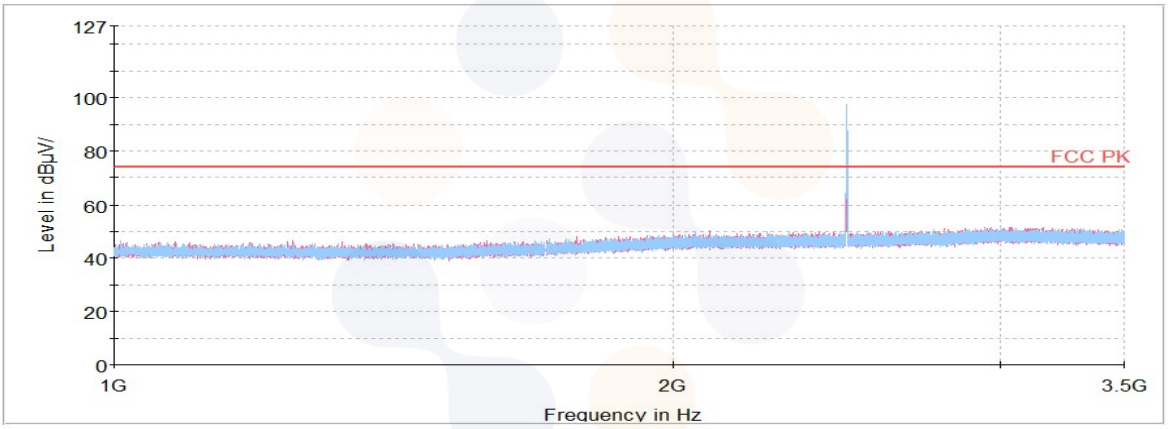
Case	WLAN 5 ㎓	Bluetooth LE
Mode	802.11n HT20	2M Bits/s, 37 Packet
Channel	36	39
Frequency	5 180	2 480
Data Rate	MCS0	2M

Notes.
The lowest margin condition among the channels and modes were selected for test.

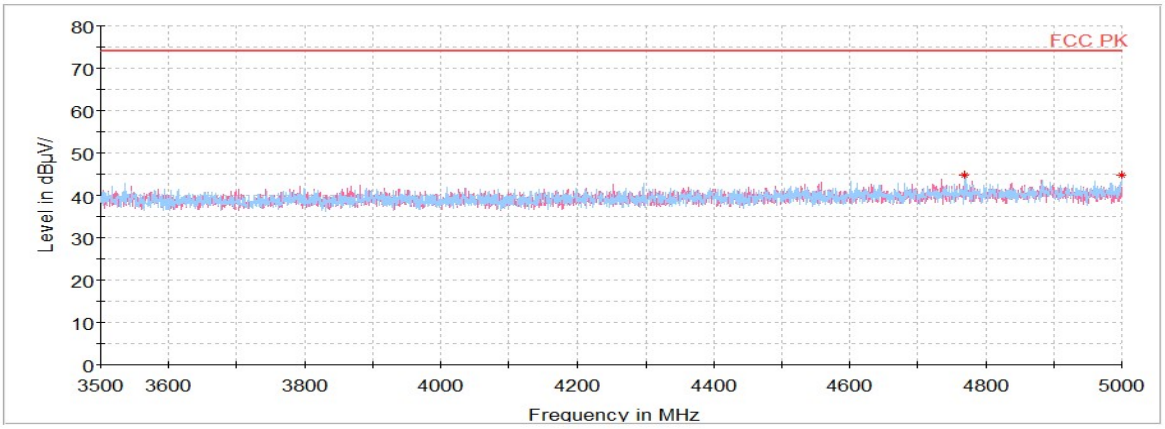
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(㎒)	(V/H)	(dB(㎶))	(dB)	(dB)	(dB)	(dB(㎶/m))	(dB(㎶/m))	(dB)
Peak data								
4 769.66[1)]	H	62.69	33.65	-51.57	-	44.77	74.00	29.23
4 999.39[1)]	H	62.73	33.60	-51.77	-	44.56	74.00	29.44
10 347.11	V	59.01	37.21	-49.70	-	46.52	68.20	21.68
15 540.10[1)]	V	59.35	40.53	-45.54	-	54.34	74.00	19.66
Average Data								
15 540.10[1)]	V	51.26	40.53	-45.54	0.37	46.62	54.00	7.38

Average data	
	Blank

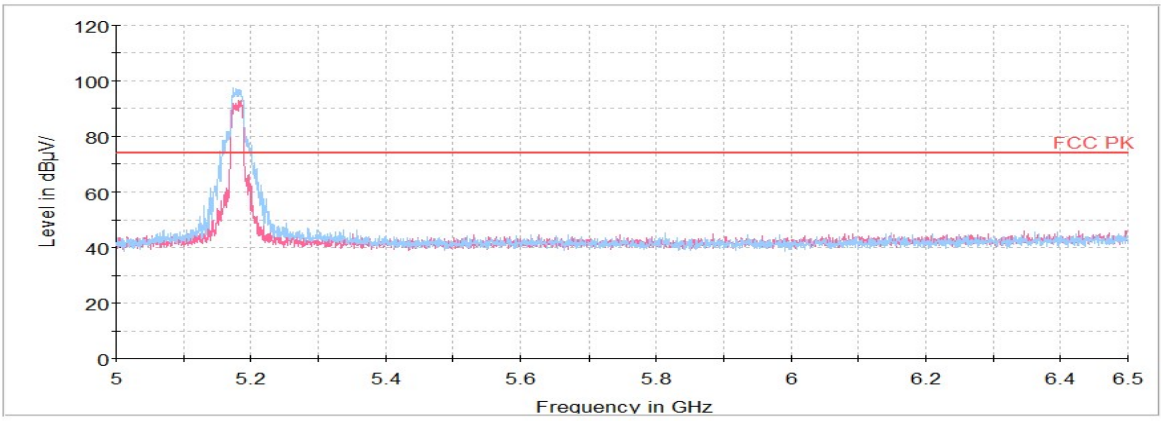
Horizontal/Vertical for 1 ㎓ ~ 3.5 ㎓



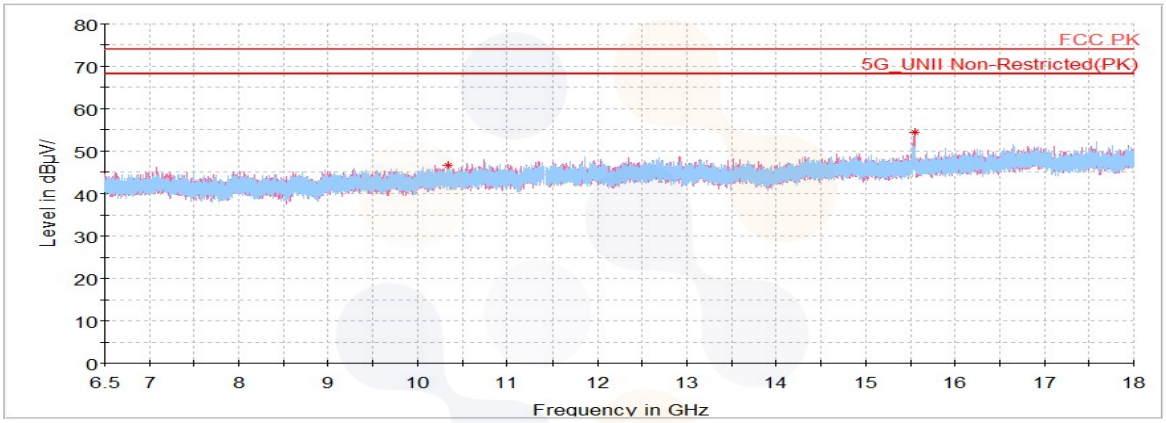
Horizontal/Vertical for 3.5 ㎓ ~ 5 ㎓



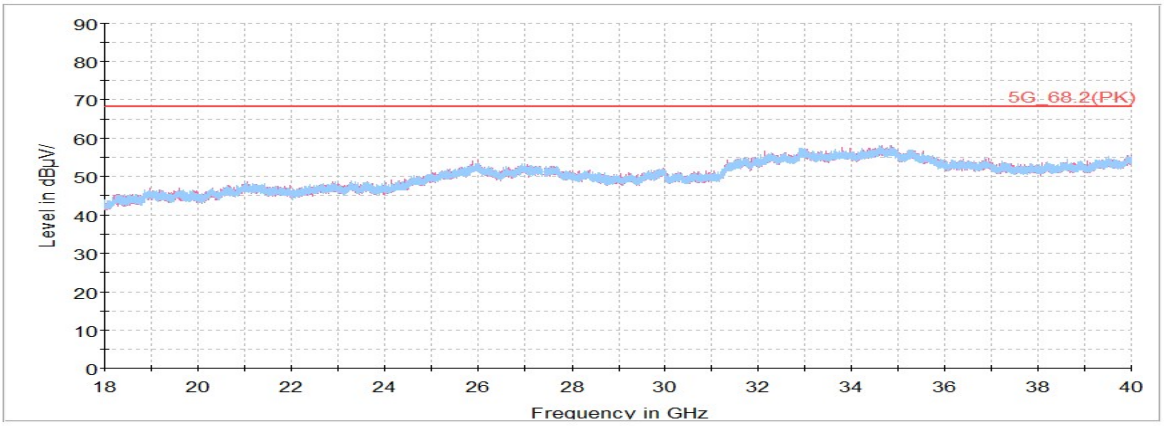
Horizontal/Vertical for 5 ㎓ ~ 6.5 ㎓



Horizontal/Vertical for 6.5 ㎓ ~ 18 ㎓

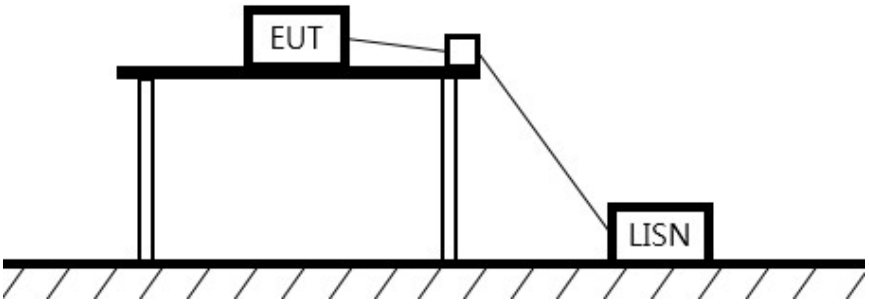


Horizontal/Vertical for 18 ㎓ ~ 40 ㎓



7.7. AC Conducted emission

Test setup



Limit

§15.407

According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

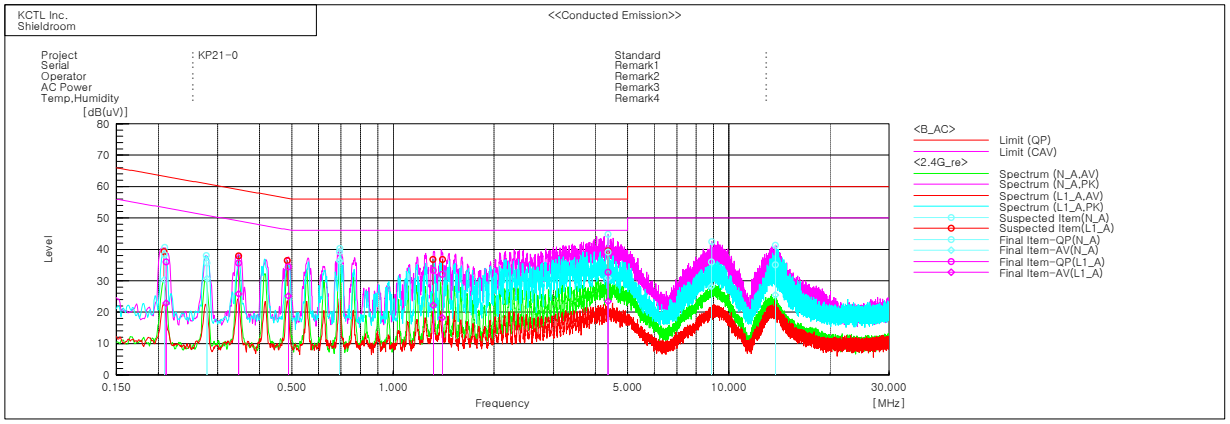
Frequency of Emission (㎒)	Conducted limit (dB㎶/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Measurement procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 ㎝ in which is located 40 ㎝ away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH LISN, which is an input transducer to a spectrum analyzer or an EMI/Field Intensity ㅡ Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 ㎒ to 30 ㎒.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 ㎑ or to quasi-peak and average within a bandwidth of 9 ㎑. The EUT was in transmitting mode during the measurements.

Test results

Worst case: 802.11n HT20 / UNII-2C 5 600 ㎒



Final Result

--- N_A Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.20832	28.4	20.5	9.9	38.3	30.4	63.3	53.3	25.0	22.9
2	0.27886	26.0	20.9	9.7	35.7	30.6	60.8	50.8	25.1	20.2
3	0.69332	29.3	26.4	9.9	39.2	36.3	56.0	46.0	16.8	9.7
4	4.37291	29.4	21.1	9.8	39.2	30.9	56.0	46.0	16.8	15.1
5	8.88245	26.0	18.2	10.0	36.0	28.2	60.0	50.0	24.0	21.8
6	13.75429	24.7	15.1	10.4	35.1	25.5	60.0	50.0	24.9	24.5

--- L1_A Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.21085	26.1	12.9	9.9	36.0	22.8	63.2	53.2	27.2	30.4
2	0.34639	25.8	16.0	9.8	35.6	25.8	59.0	49.0	23.4	23.2
3	0.48769	24.5	15.2	9.9	34.4	25.1	56.2	46.2	21.8	21.1
4	1.31604	23.5	12.4	9.8	33.3	22.2	56.0	46.0	22.7	23.8
5	1.40184	22.2	8.4	9.8	32.0	18.2	56.0	46.0	24.0	27.8
6	4.36471	22.9	13.7	9.8	32.7	23.5	56.0	46.0	23.3	22.5

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV3030	1330.5000K30-101710-Wt	22.12.02
Attenuator	Weinschel ENGINEERING	56-10	51395	23.01.21
Signal Generator	R&S	SMB100A	176206	23.01.19
Vector Signal Generator	R&S	SMBV100A	257566	22.07.09
DC Power Supply	Agilent	E3632A	KR75304571	22.05.10
Spectrum Analyzer	R&S	FSV40	100989	22.12.21
EMI TEST RECEIVER	R&S	ESCI7	100732	23.01.19
Bi-Log Antenna	TESEQ	CBL 6112D	55545	23.01.14
Amplifier	SONOMA INSTRUMENT	310N	284608	22.08.19
ATTENUATOR	KEYSIGHT	8491B-6dB	MY39271060	23.01.14
Horn antenna	ETS.lindgren	3117	155787	22.10.05
Horn antenna	ETS.lindgren	3116	00086635	22.05.17
Attenuator	API Inmet	40AH2W-10	12	22.05.11
Broadband PreAmplifier	SCHWARZBECK	BBV9718	216	22.07.27
AMPLIFIER	L-3 Narda-MITEQ	AMF-7D-01001800-22-10P	2003683	22.08.19
AMPLIFIER	L-3 Narda-MITEQ	JS44-18004000-33-8P	2000996	23.01.21
LOOP Antenna	R&S	HFH2-Z2	100355	22.08.21
Antenna Mast	Innco Systems	MA4640-XP-ET	-	-
Turn Table	Innco Systems	CO3000	1175/45850319/P	-
Antenna Mast	Innco Systems	MA4000-EP	303	-
Turn Table	Innco Systems	CO3000	1175/45850319/P	-
Highpass Filter	WT	WT-A1699-HS	WT160411002	22.05.10
TWO-LINE V - NETWORK	R&S	ENV216	101358	22.09.29
EMI TEST RECEIVER	R&S	ESCI3	100001	22.08.19
Cable Assembly	RadiAll	2301761768000PJ	1724.659	-
Cable Assembly	HUER+SUHNER	SUCOFLEX 102	804320/2	-
Cable Assembly	HUER+SUHNER	SUCOFLEX 102	804320/2	-

End of test report