

802.11ac VHT80 UNII-2C ANT2

Lowest Channel (5 530 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 437.13 ¹⁾	H	40.64	34.47	-24.42	-	50.69	74.00	23.31
11 080.59 ¹⁾	V	56.80	37.76	-48.09	-	46.47	74.00	27.53
16 599.16	V	51.52	42.76	-44.60	-	49.68	68.20	18.52
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

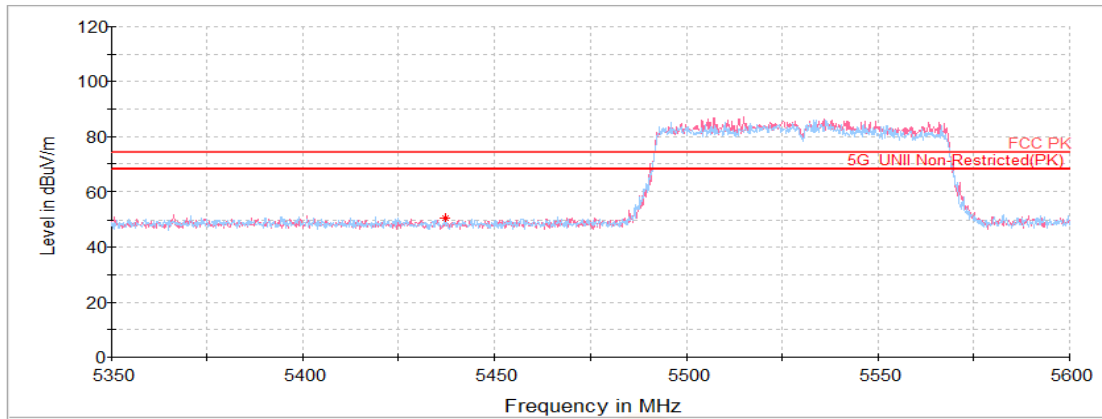
Highest Channel (5 610 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 732.41	V	40.47	34.88	-24.09	-	51.26	68.20	16.94
11 246.63 ¹⁾	V	58.51	37.90	-48.07	-	48.34	74.00	25.66
16 875.52	H	51.41	43.20	-44.61	-	50.00	68.20	18.20
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT80 UNII-2C ANT2

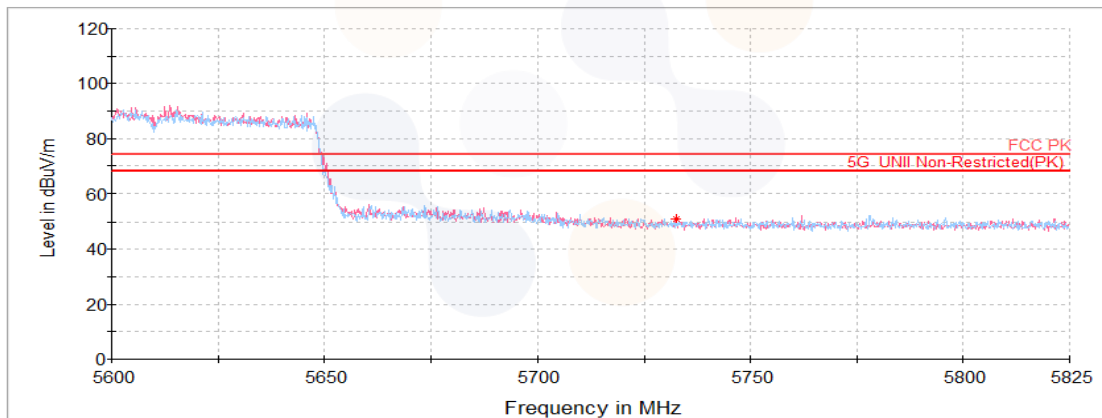
Lowest Channel (5 530 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 610 MHz)

Horizontal/Vertical for Band-edge



802.11ac VHT80 UNII-2C 2TX MIMO

Lowest Channel (5 530 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 459.87 ¹⁾	V	45.49	34.52	-24.41	-	55.60	74.00	18.40
11 025.61 ¹⁾	V	55.69	37.72	-48.10	-	45.31	74.00	28.69
16 612.09	V	52.07	42.78	-44.60	-	50.25	68.20	17.95
Average Data								
5 459.87 ¹⁾	V	35.91	34.52	-24.41	0.75	46.77	54.00	7.23

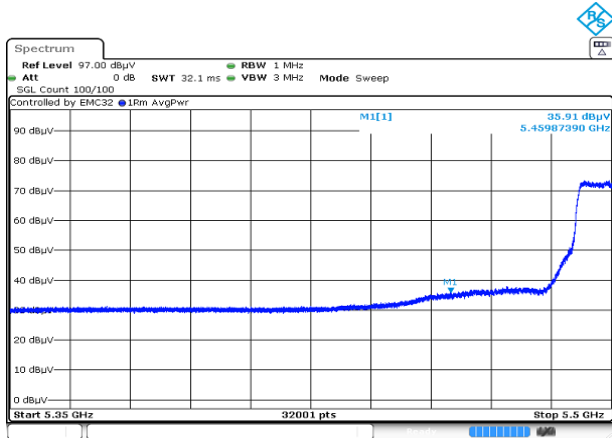
Highest Channel (5 610 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 728.97	H	41.43	34.87	-24.10	-	52.20	68.20	16.00
11 247.70 ¹⁾	H	57.89	37.90	-48.07	-	47.72	74.00	26.28
16 801.13	H	52.38	43.08	-44.61	-	50.85	68.20	17.35
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT80 UNII-2C 2TX MIMO

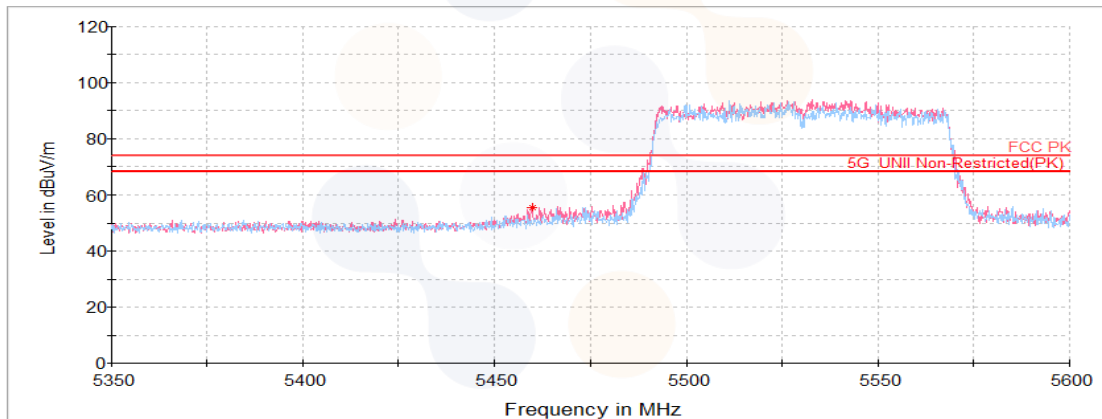
Lowest Channel (5 530 MHz)

Average data



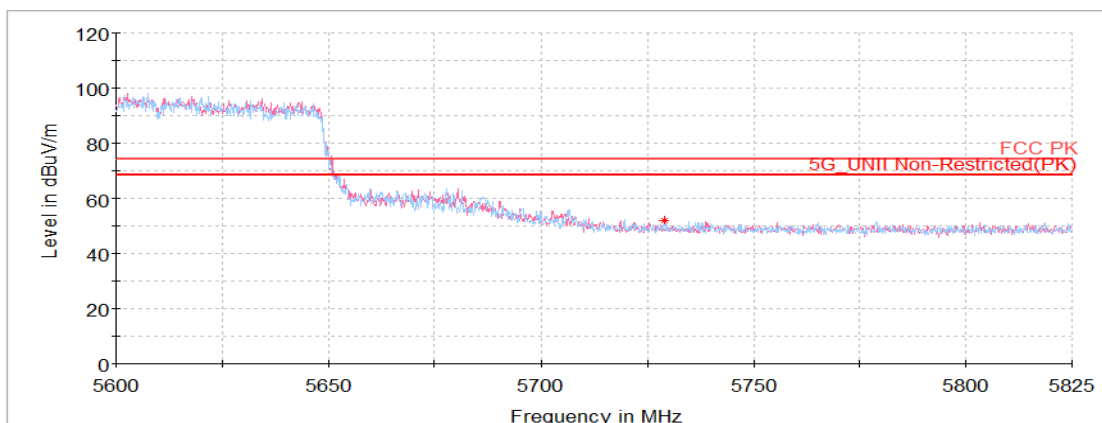
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Horizontal/Vertical for Band-edge



Highest Channel (5 610MHz)

Horizontal/Vertical for Band-edge

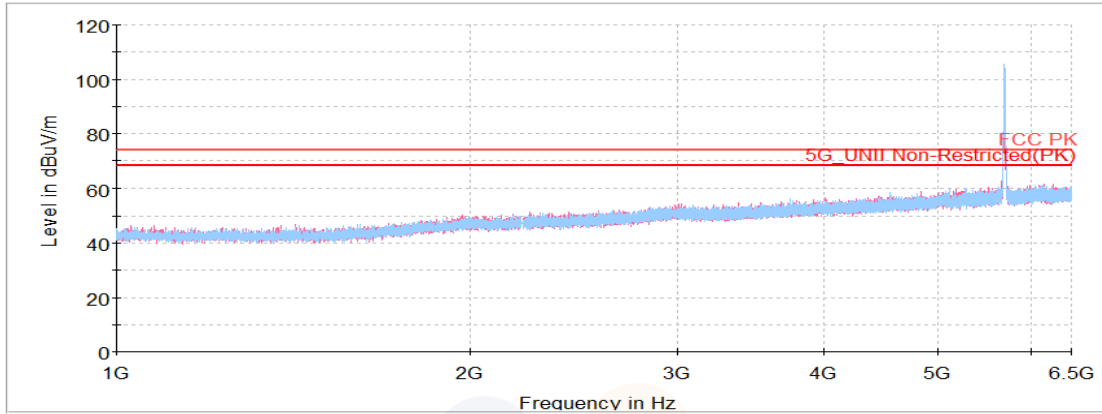


Plot of Harmonics and Spurious Emissions

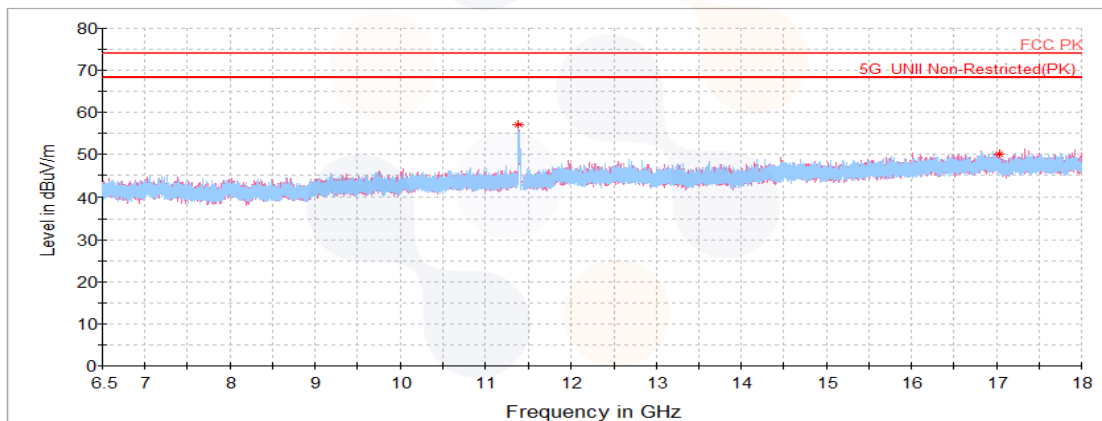
In order to simplify the report, attached plots were only the lowest margin condition

802.11a_UNII-2C_2TX MIMO_Highest Channel (5 700 MHz)

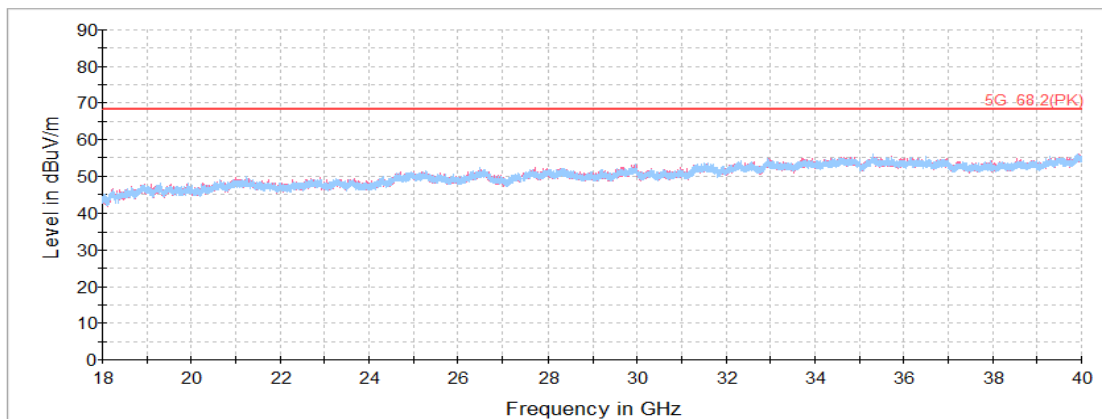
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 18 GHz ~ 40 GHz



Straddle Channel

ANT 1

802.11a (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 356.95 ¹⁾	V	57.15	37.99	-48.05	-	47.09	74.00	26.91
17 300.30	V	54.22	41.16	-44.65	-	50.73	68.20	17.47
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11n HT20 (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 394.69 ¹⁾	H	56.65	38.02	-48.04	-	46.63	74.00	27.37
17 266.16	V	53.05	41.22	-44.64	-	49.63	68.20	18.57
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11n HT40 (5 710 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 406.55 ¹⁾	H	56.72	38.03	-48.04	-	46.71	74.00	27.29
16 978.30	V	51.49	43.37	-44.61	-	50.25	68.20	17.95
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT20 (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 381.75 ¹⁾	V	56.21	38.01	-48.05	-	46.17	74.00	27.83
17 239.92	H	53.64	41.27	-44.64	-	50.27	68.20	17.93
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
www.kctl.co.kr

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**802.11ac VHT40 (5 710 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 325.33 ¹⁾	V	57.07	37.96	-48.05	-	46.98	74.00	27.02
17 002.02	V	52.86	41.70	-44.62	-	49.94	68.20	18.26
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT80 (5 690 MHz)

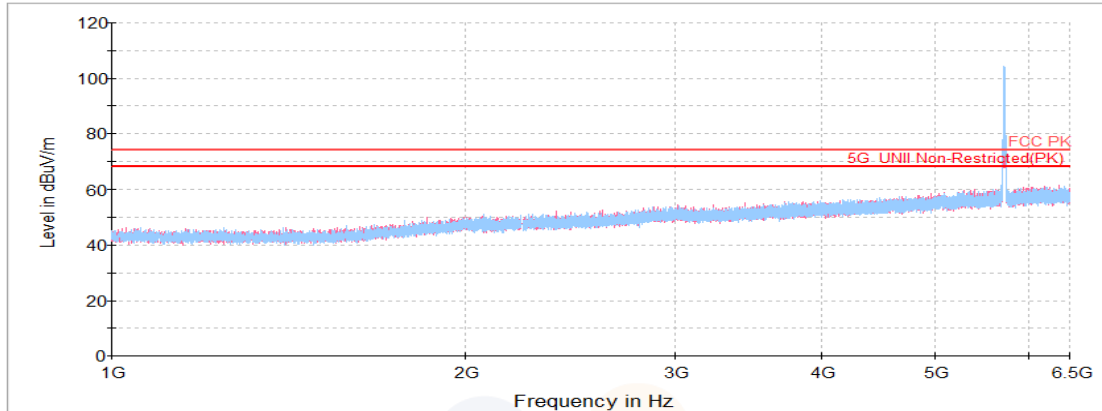
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 198.47 ¹⁾	V	57.30	37.86	-48.07	-	47.09	74.00	26.91
16 988.72	H	51.90	43.38	-44.62	-	50.66	68.20	17.54
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Plot of Harmonics and Spurious Emissions

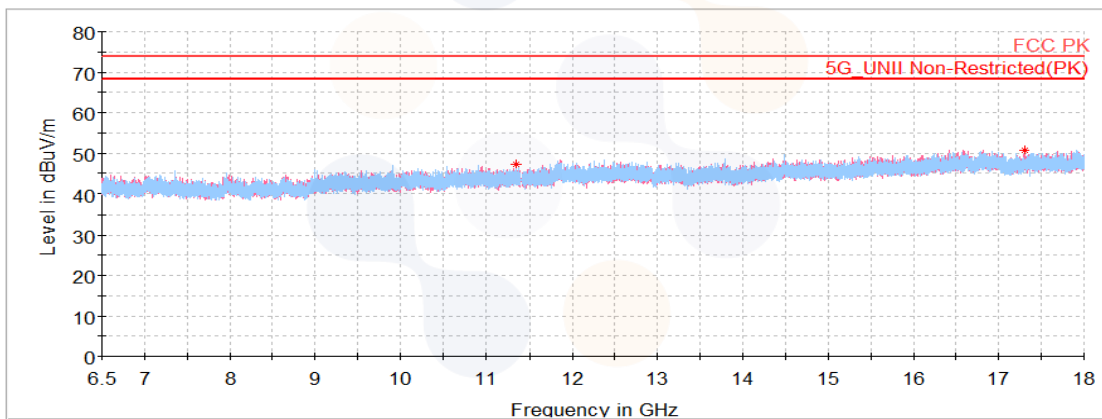
In order to simplify the report, attached plots were only the lowest margin condition

802.11a_Straddle Channel (5 720 MHz)

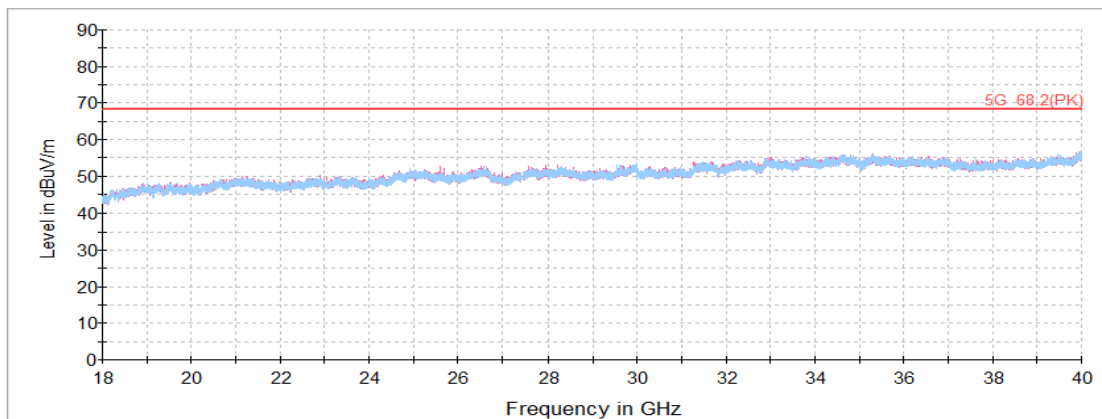
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 18 GHz ~ 40 GHz



ANT 2
802.11a (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
11 438.59 ¹⁾	V	66.18	38.05	-48.04	-	56.19	74.00	17.81
17 194.28	H	53.21	41.35	-44.64	-	49.92	68.20	18.28
Average Data								
11 438.59 ¹⁾	V	60.18	38.05	-48.04	0.11	50.30	54.00	3.70

802.11n HT20 (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
11 438.55 ¹⁾	V	65.70	38.05	-48.04	-	55.71	74.00	18.29
17 210.45	H	54.08	41.32	-44.64	-	50.76	68.20	17.44
Average Data								
11 438.55 ¹⁾	V	60.26	38.05	-48.04	0.12	50.39	54.00	3.61

802.11n HT40 (5 710 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
11 421.02 ¹⁾	H	61.37	38.04	-48.04	-	51.37	74.00	22.63
17 177.03	V	52.72	41.38	-44.63	-	49.47	68.20	18.73
Average Data								
11 421.02 ¹⁾	H	54.10	38.04	-48.04	0.23	44.33	54.00	9.67

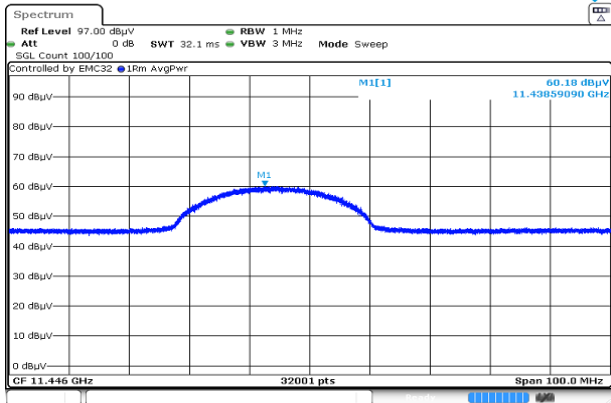
KCTL Inc.

65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
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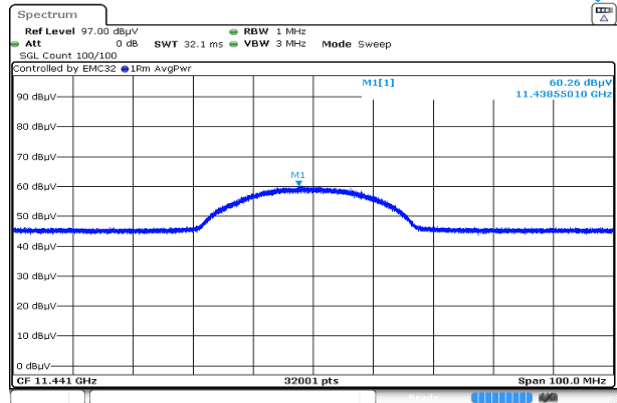
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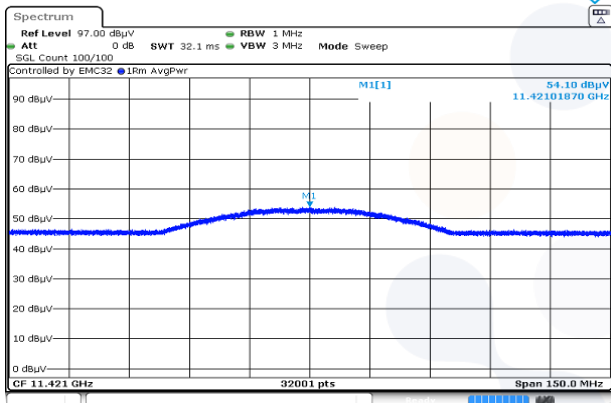
Average data_802.11a (5 720 MHz)



Average data_802.11n HT20 (5 720 MHz)



Average data_802.11n HT40 (5 710 MHz)



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802.11ac VHT20 (5 720 MHz)

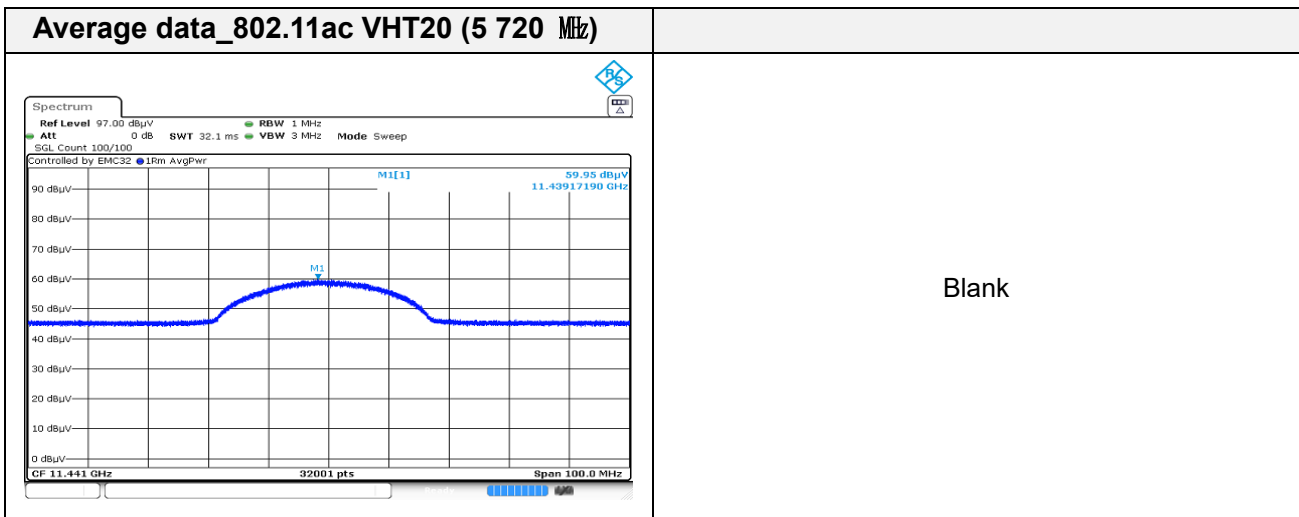
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 439.17 ¹⁾	V	66.74	38.05	-48.04	-	56.75	74.00	17.25
17 207.94	H	52.88	41.33	-44.64	-	49.57	68.20	18.63
Average Data								
11 439.17 ¹⁾	V	59.95	38.05	-48.04	0.12	50.08	54.00	3.92

802.11ac VHT40 (5 710 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 436.73 ¹⁾	H	60.69	38.05	-48.04	-	50.70	74.00	23.30
17 175.95	H	53.03	41.38	-44.63	-	49.78	68.20	18.42
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT80 (5 690 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 367.73 ¹⁾	V	58.23	37.99	-48.05	-	48.17	74.00	25.83
17 015.31	H	52.70	41.67	-44.62	-	49.75	68.20	18.45
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

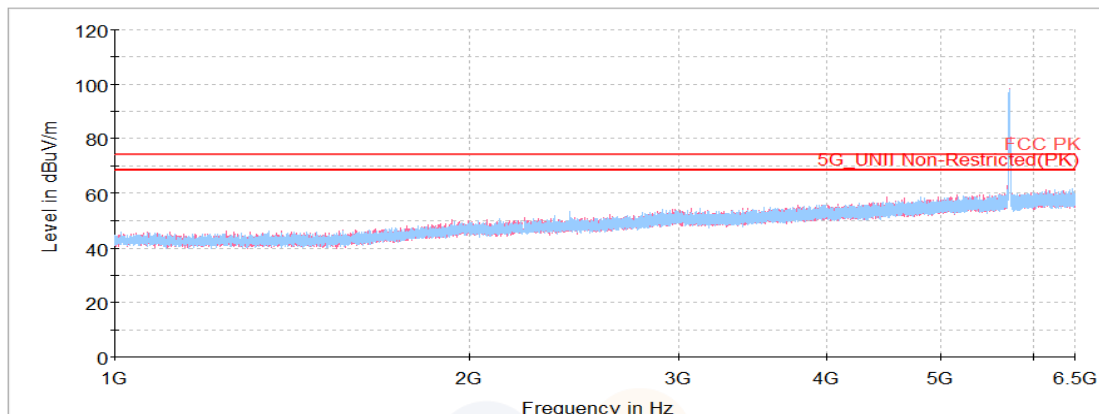


Plot of Harmonics and Spurious Emissions

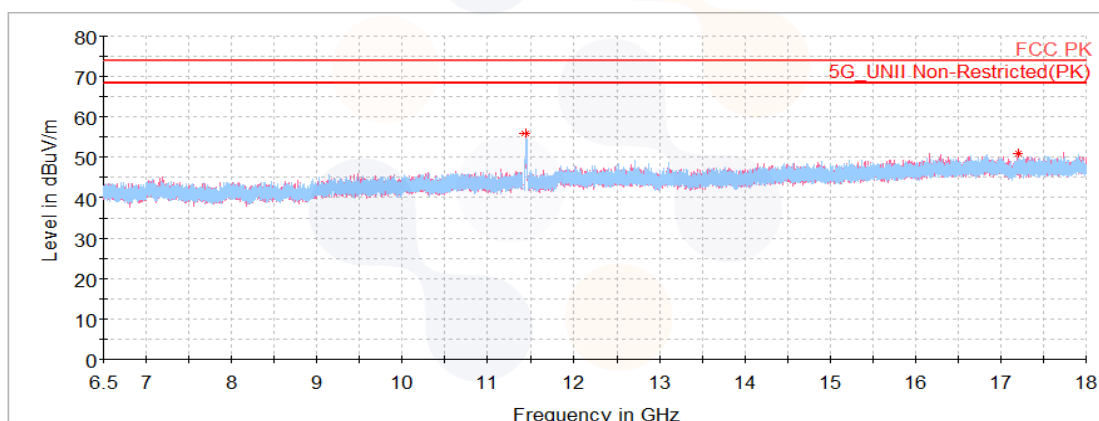
In order to simplify the report, attached plots were only the lowest margin condition

802.11n HT20_Straddle Channel (5 720 MHz)

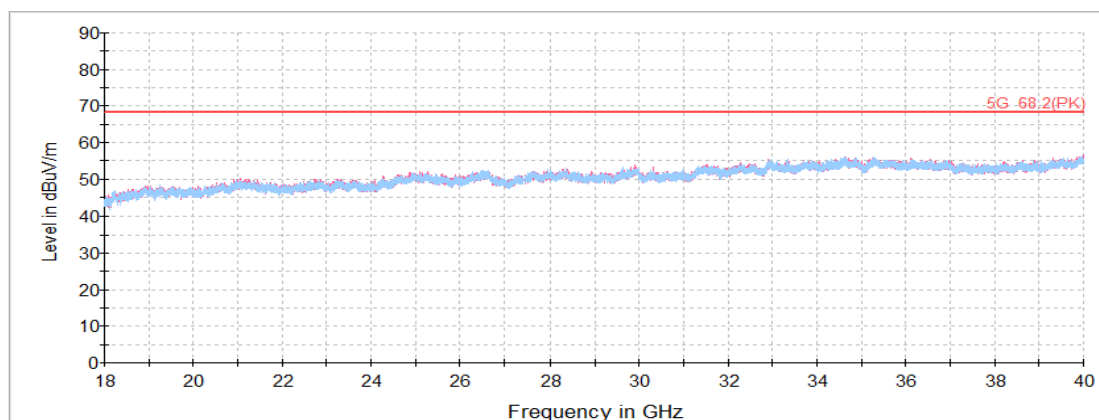
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 18 GHz ~ 40 GHz



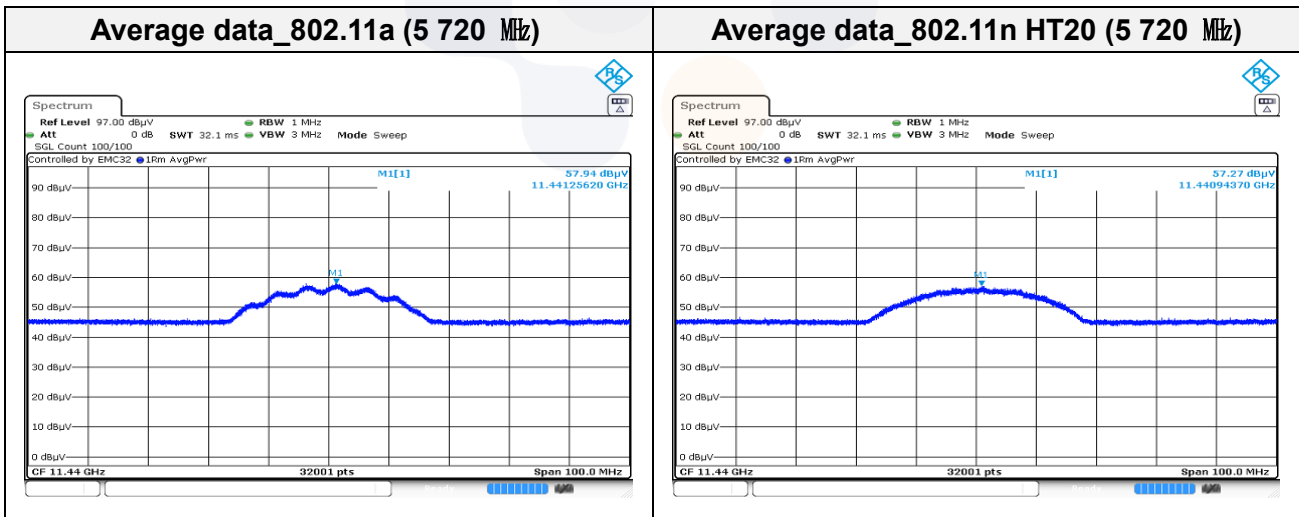
MIMO

802.11a (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
1 084.91	H	68.29	27.78	-48.09	-	47.98	74.00	26.02
11 441.26	H	64.83	38.05	-48.04	-	54.84	74.00	19.16
17 190.69	H	53.39	41.36	-44.64	-	50.11	68.20	18.09
Average Data								
11 441.26	H	57.94	38.05	-48.04	0.11	48.06	54.00	5.94

802.11n HT20 (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 440.94	H	64.08	38.05	-48.04	-	54.09	74.00	19.91
17 203.63	H	53.10	41.33	-44.64	-	49.79	68.20	18.41
Average Data								
11 440.94	H	57.27	38.05	-48.04	0.23	47.51	54.00	6.49



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Suwon-si, Gyeonggi-do, 16677, Korea
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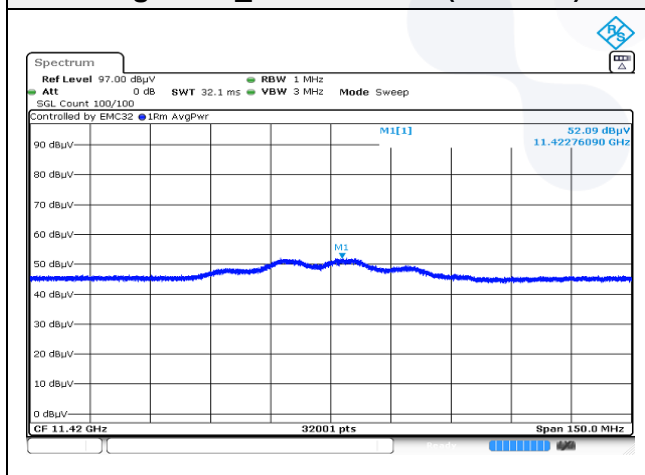
802.11n HT40 (5 710 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 402.33	V	67.75	31.99	-45.74	-	54.00	68.20	14.20
11 422.76	H	61.57	38.04	-48.04	-	51.57	74.00	22.43
17 172.00	V	52.43	41.39	-44.63	-	49.19	68.20	19.01
Average Data								
11 422.76	H	52.09	38.04	-48.04	0.42	42.51	54.00	11.49

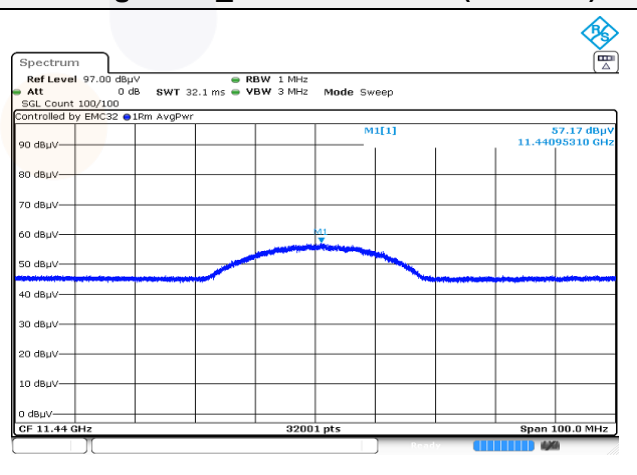
802.11ac VHT20 (5 720 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 440.95	H	64.35	38.05	-48.04	-	54.36	74.00	19.64
17 196.08	H	53.14	41.35	-44.64	-	49.85	68.20	18.35
Average Data								
11 440.95	H	57.17	38.05	-48.04	0.22	47.40	54.00	6.60

Average data_802.11n HT40 (5 710 MHz)



Average data_802.11ac VHT20 (5 720 MHz)

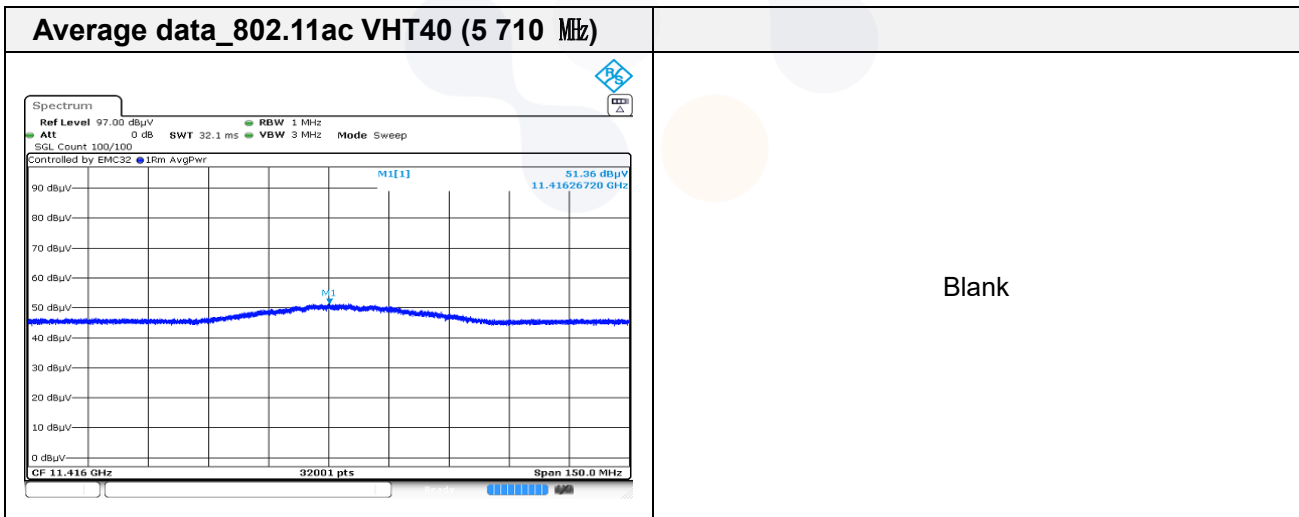


802.11ac VHT40 (5 710 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 416.27	H	61.57	38.03	-48.04	-	51.56	74.00	22.44
17 184.94	H	53.34	41.37	-44.64	-	50.07	68.20	18.13
Average Data								
11 416.27	H	51.36	38.03	-48.04	0.41	41.76	54.00	12.24

802.11ac VHT80 (5 690 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
1 240.63	V	67.88	27.75	-47.92	-	47.71	68.20	20.49
11 353.36	H	58.49	37.98	-48.05	-	48.42	74.00	25.58
17 021.78	V	54.26	41.66	-44.62	-	51.30	68.20	16.90
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

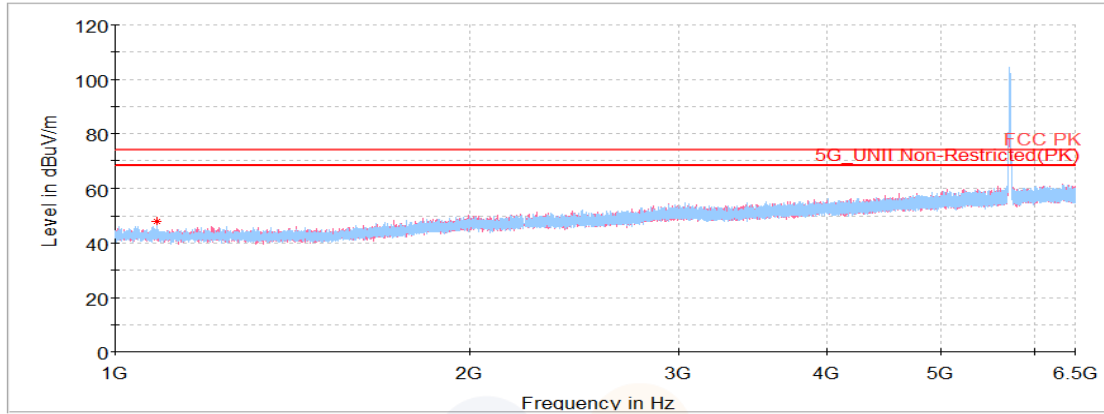


Plot of Harmonics and Spurious Emissions

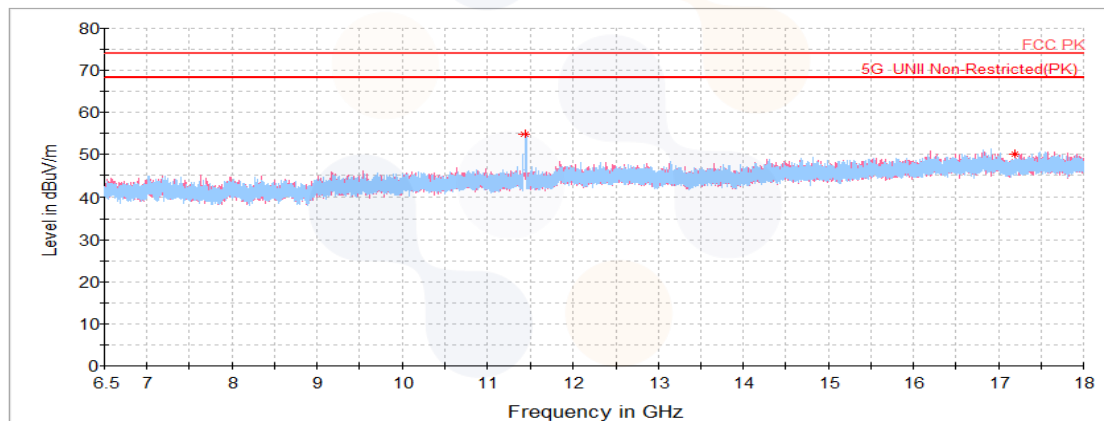
In order to simplify the report, attached plots were only the lowest margin condition

802.11a_Straddle Channel (5 720 MHz)

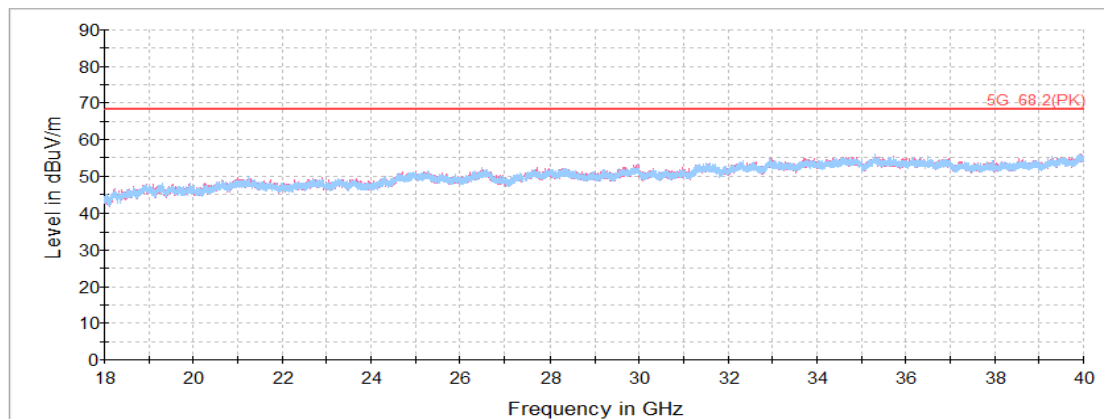
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 18 GHz ~ 40 GHz



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www.kctl.co.kr

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**802.11a UNII-3 ANT1****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 724.84	V	50.39	34.87	-24.10	-	61.16	121.84	60.69
11 829.89 ¹⁾	H	57.34	38.63	-47.50	-	48.47	74.00	25.53
17 304.61	H	54.46	41.15	-44.65	-	50.96	68.20	17.24
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 498.55 ¹⁾	H	56.54	38.10	-48.03	-	46.61	74.00	27.39
17 411.34	H	53.95	40.96	-44.66	-	50.25	68.20	17.95
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

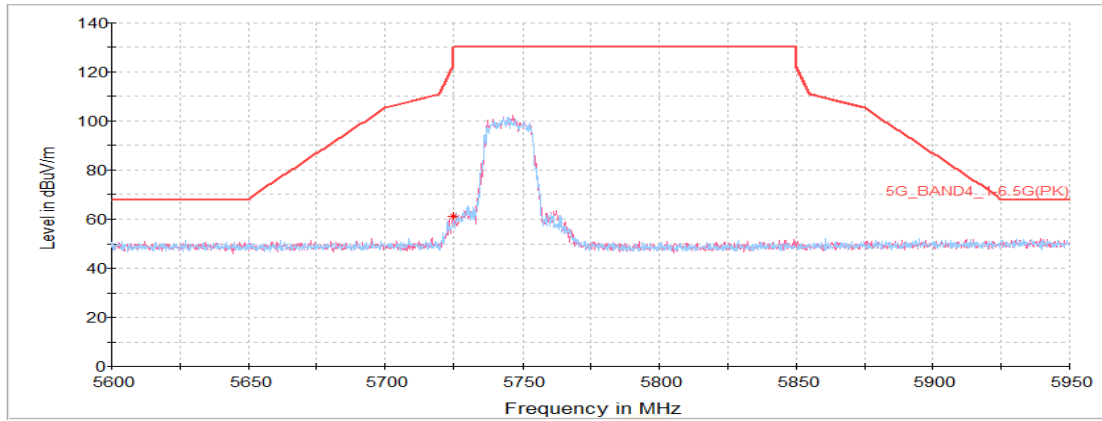
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 853.92	H	40.64	35.02	-23.65	-	52.01	113.26	61.25
11 833.13 ¹⁾	V	56.87	38.63	-47.50	-	48.00	74.00	26.00
17 330.13	H	53.99	41.11	-44.65	-	50.45	68.20	17.75
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11a UNII-3 ANT1

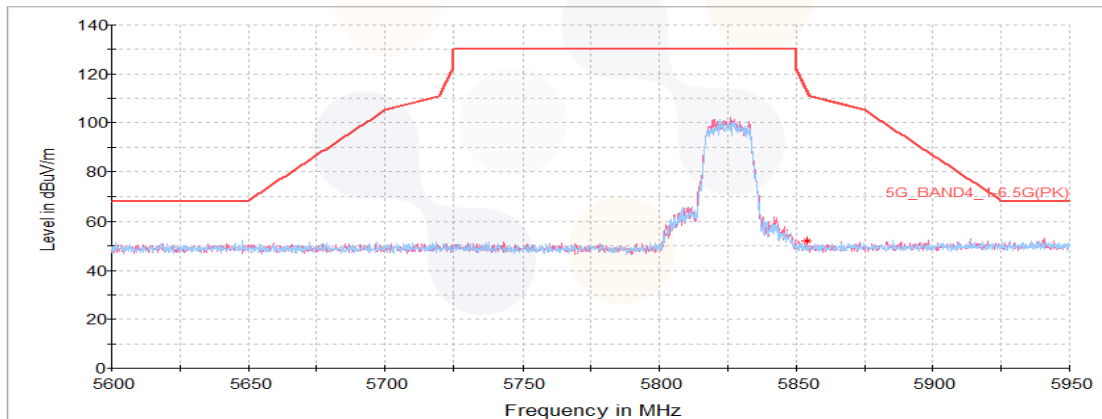
Lowest Channel (5 745 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 825 MHz)

Horizontal/Vertical for Band-edge



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**802.11a UNII-3 ANT2****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 722.09	H	42.12	34.87	-24.11	-	52.88	115.57	62.69
11 489.23 ¹⁾	H	66.04	38.09	-48.03	-	56.10	74.00	17.90
17 294.55	V	53.46	41.17	-44.65	-	49.98	68.20	18.22
Average Data								
11 489.23 ¹⁾	H	58.19	38.09	-48.03	0.11	48.36	54.00	5.64

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
11 569.10 ¹⁾	H	67.48	38.21	-47.92	-	57.77	74.00	16.23
17 367.50	V	53.87	41.04	-44.65	-	50.26	68.20	17.94
Average Data								
11 569.10 ¹⁾	H	60.06	38.21	-47.92	0.11	50.46	54.00	3.54

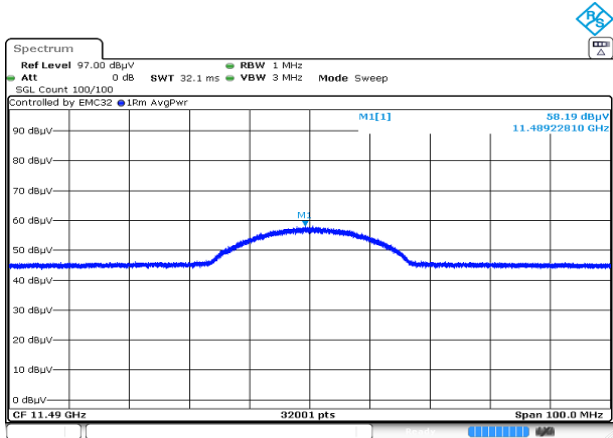
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 856.33	V	40.34	35.03	-23.64	-	51.73	110.43	58.70
10 637.13 ¹⁾	V	58.78	37.41	-48.30	-	47.89	74.00	26.11
11 649.47 ¹⁾	H	66.71	38.34	-47.79	-	57.26	74.00	16.74
17 559.77	V	55.58	40.80	-44.69	-	51.69	68.20	16.51
Average Data								
11 649.47 ¹⁾	H	59.65	38.34	-47.79	0.11	50.31	54.00	3.69

802.11a UNII-3 ANT2

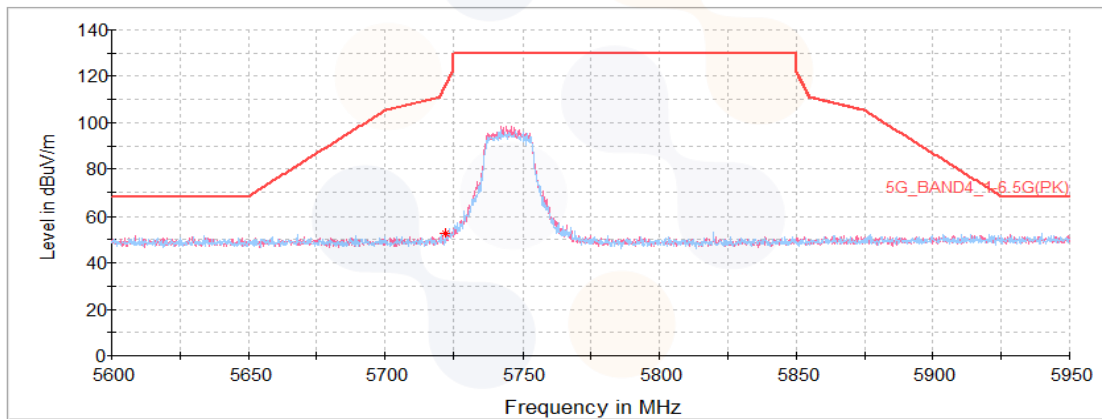
Lowest Channel (5 745 MHz)

Average data



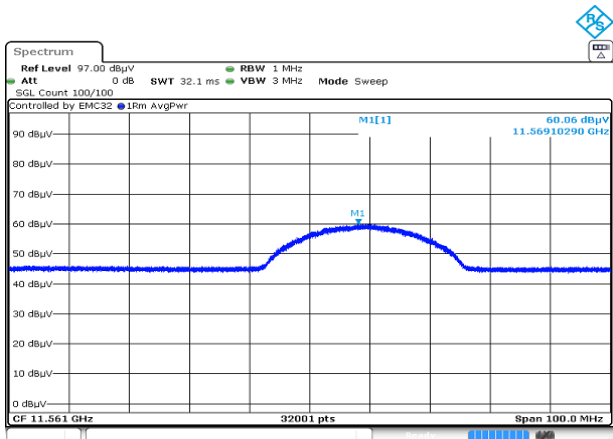
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Horizontal/Vertical for Band-edge



Middle Channel (5 785 MHz)

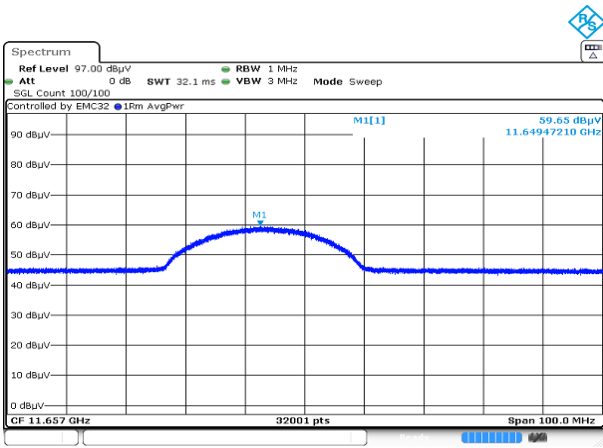
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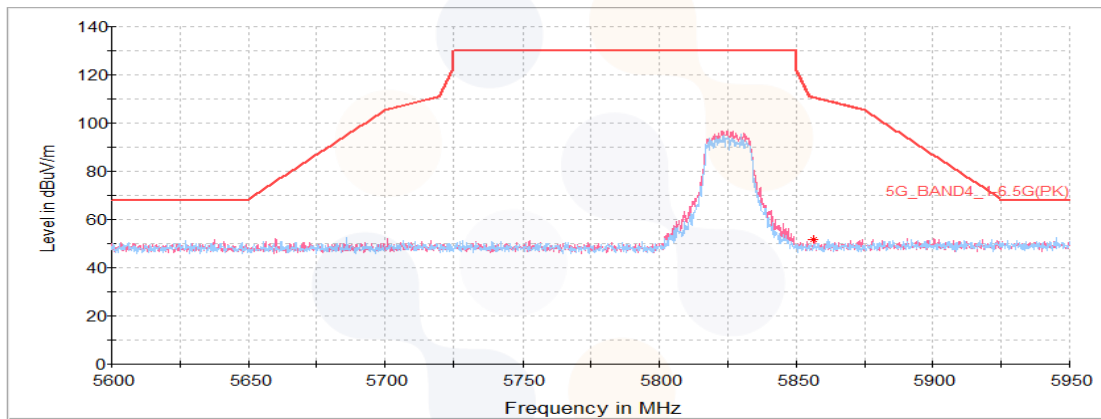
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11a UNII-3 2TX MIIMO****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 717.97	V	42.47	34.86	-24.11	-	53.22	110.23	57.01
11 491.06 ¹⁾	H	64.72	38.09	-48.03	-	54.78	74.00	19.22
17 229.50	V	53.61	41.29	-44.64	-	50.26	68.20	17.94
Average Data								
11 491.06 ¹⁾	H	57.96	38.09	-48.03	0.11	48.13	54.00	5.87

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 571.49 ¹⁾	V	66.16	38.21	-47.91	-	56.46	74.00	17.54
17 376.13	V	53.17	41.02	-44.66	-	49.53	68.20	18.67
Average Data								
11 571.49 ¹⁾	V	59.34	38.21	-47.91	0.11	49.75	54.00	4.25

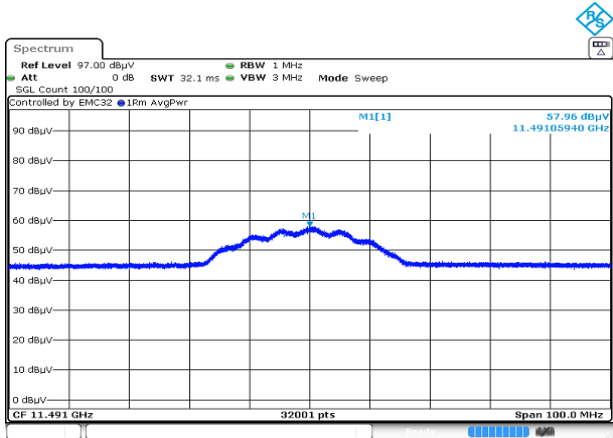
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 859.08	H	40.20	35.03	-23.62	-	51.61	109.66	58.05
11 651.21 ¹⁾	V	65.33	38.34	-47.79	-	55.88	74.00	18.12
17 440.09	H	54.22	40.91	-44.66	-	50.47	68.20	17.73
Average Data								
11 651.21 ¹⁾	V	59.43	38.34	-47.79	0.11	50.09	54.00	3.91

802.11a UNII-3 2TX MIIMO

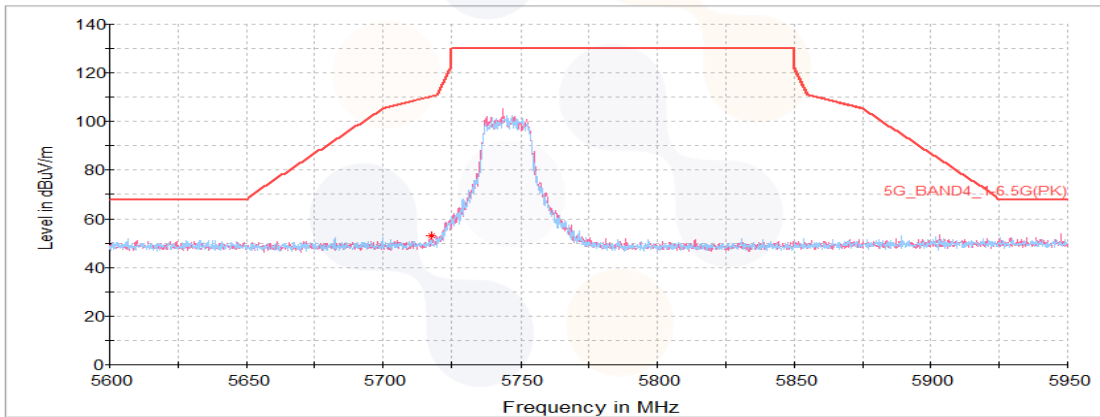
Lowest Channel (5 745 MHz)

Average data



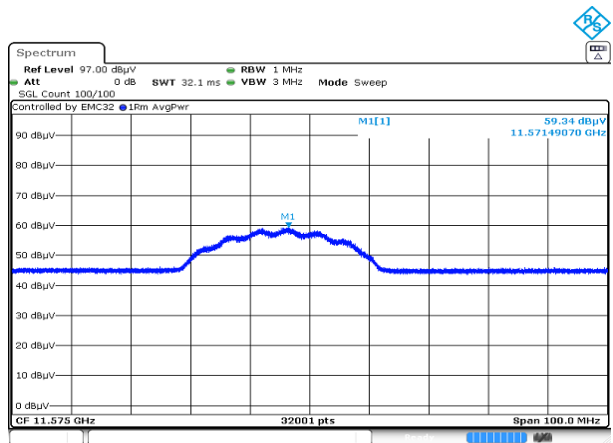
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Horizontal/Vertical for Band-edge



Middle Channel (5 785 MHz)

Average data



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KCTL Inc.

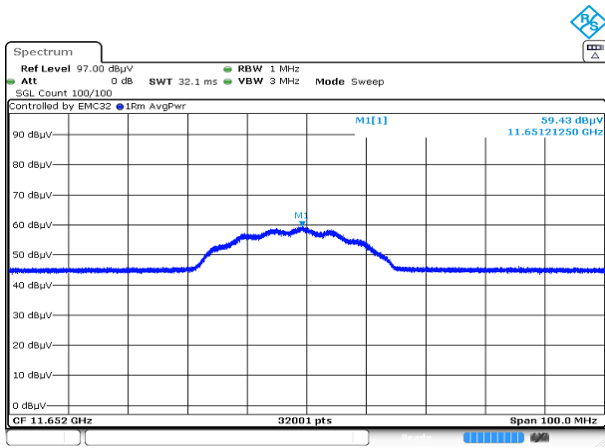
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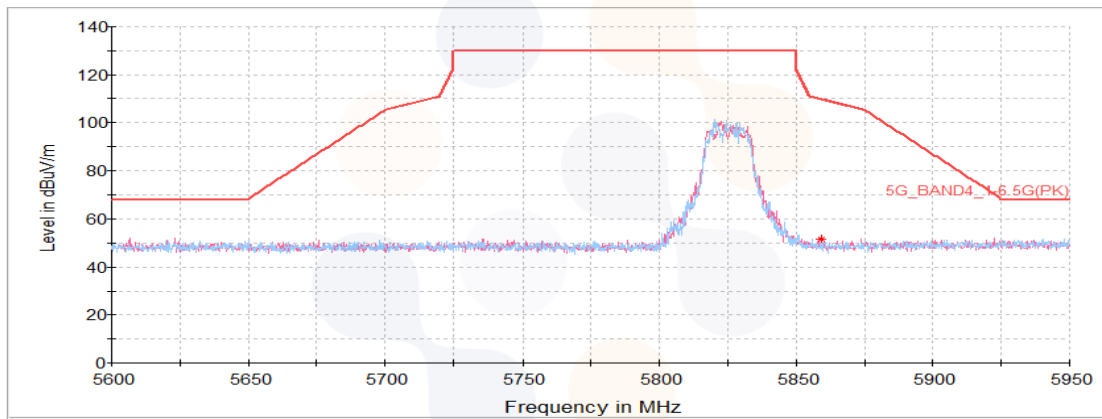
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11n HT20 UNII-3 ANT1****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 723.64	V	53.25	34.87	-24.11	-	64.01	119.10	55.09
11 476.27 ¹⁾	V	57.10	38.08	-48.03	-	47.15	74.00	26.85
17 309.28	V	53.59	41.14	-44.65	-	50.08	68.20	18.12
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 517.23 ¹⁾	H	56.03	38.13	-48.00	-	46.16	74.00	27.84
17 418.89	H	53.84	40.95	-44.66	-	50.13	68.20	18.07
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

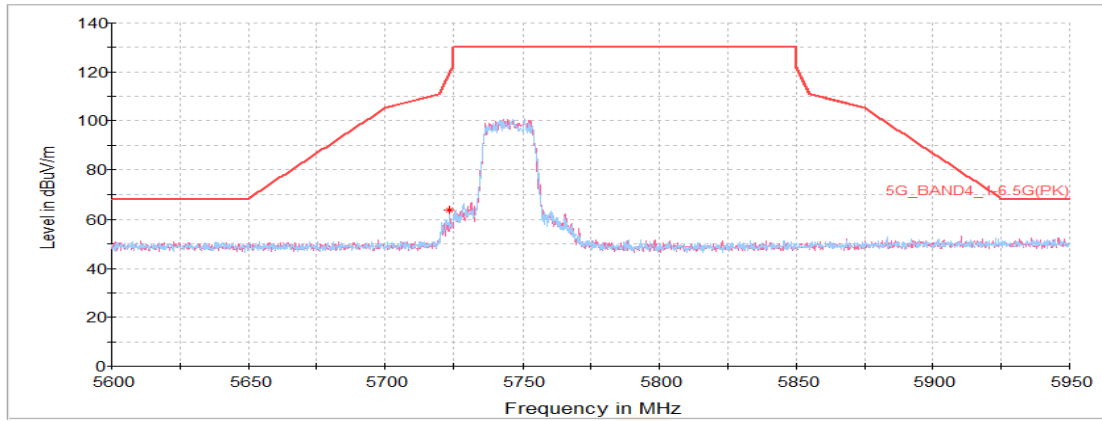
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 859.94	V	40.91	35.03	-23.62	-	52.32	109.42	57.10
11 652.00 ¹⁾	H	55.83	38.34	-47.79	-	46.38	74.00	27.62
17 572.34	V	54.35	40.78	-44.70	-	50.43	68.20	17.77
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11n HT20 UNII-3 ANT1

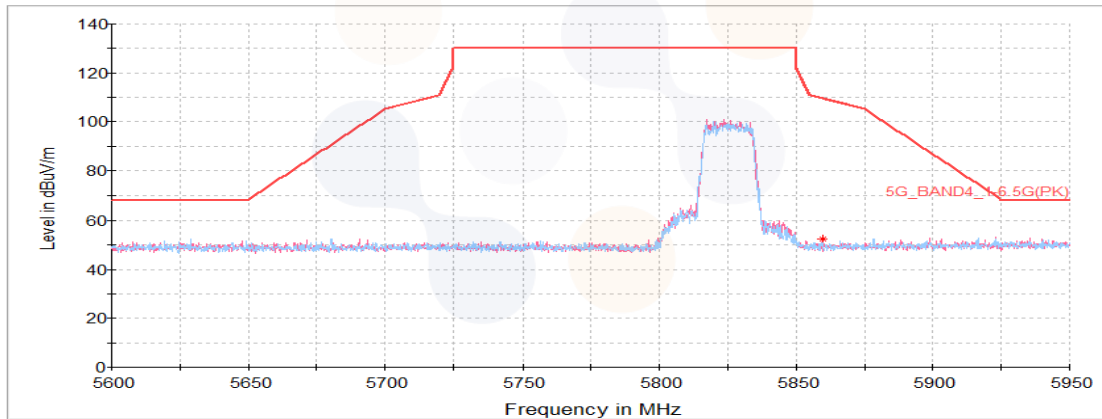
Lowest Channel (5 745 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 825 MHz)

Horizontal/Vertical for Band-edge



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**802.11n HT20 UNII-3 ANT2****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 723.81	V	45.97	34.87	-24.11	-	56.73	119.49	62.76
11 488.18 ¹⁾	H	65.13	38.09	-48.03	-	55.19	74.00	18.81
17 192.84	H	53.81	41.35	-44.64	-	50.52	68.20	17.68
Average Data								
11 488.18 ¹⁾	H	57.64	38.09	-48.03	0.12	47.82	54.00	6.18

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 569.43 ¹⁾	H	65.20	38.21	-47.92	-	55.49	74.00	18.51
17 321.50	H	53.90	41.12	-44.65	-	50.37	68.20	17.83
Average Data								
11 569.43 ¹⁾	H	59.47	38.21	-47.92	0.12	49.88	54.00	4.12

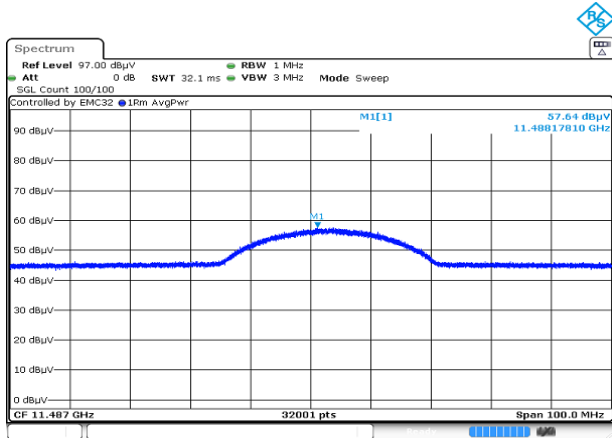
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 857.70	H	39.06	35.03	-23.63	-	50.46	110.04	59.59
11 648.80 ¹⁾	H	64.77	38.34	-47.79	-	55.32	74.00	18.68
17 444.05	V	53.47	40.90	-44.66	-	49.71	68.20	18.49
Average Data								
11 648.80 ¹⁾	H	60.12	38.34	-47.79	0.12	50.79	54.00	3.21

802.11n HT20 UNII-3 ANT2

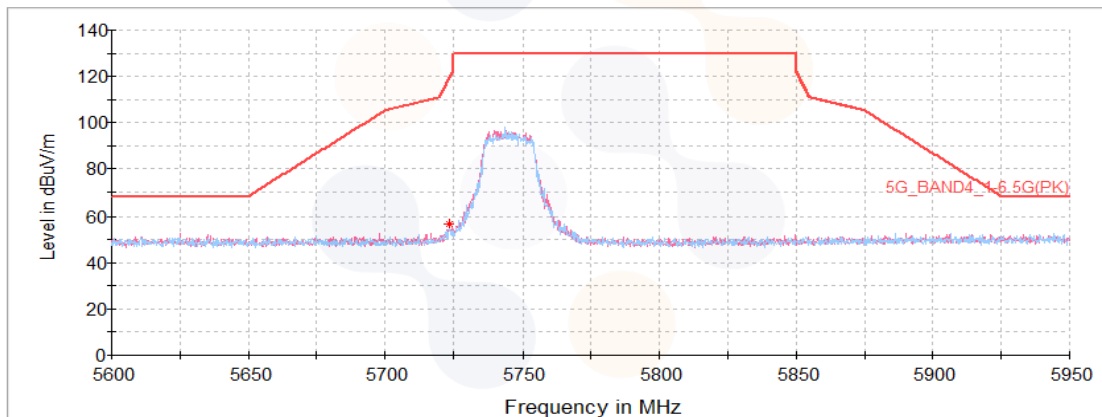
Lowest Channel (5 745 MHz)

Average data



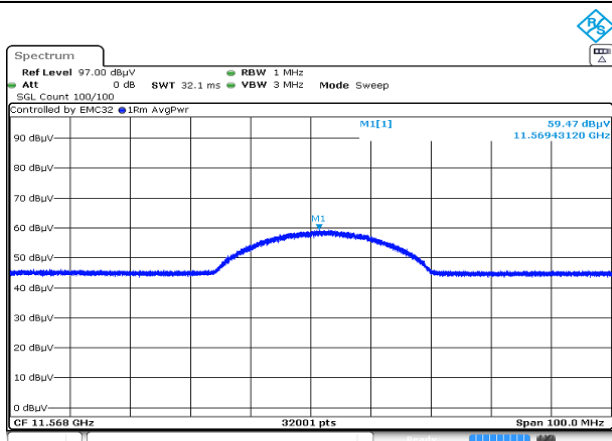
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Horizontal/Vertical for Band-edge



Middle Channel (5 785 MHz)

Average data



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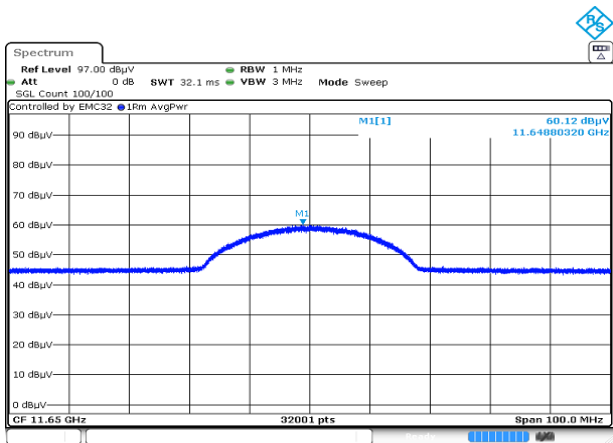
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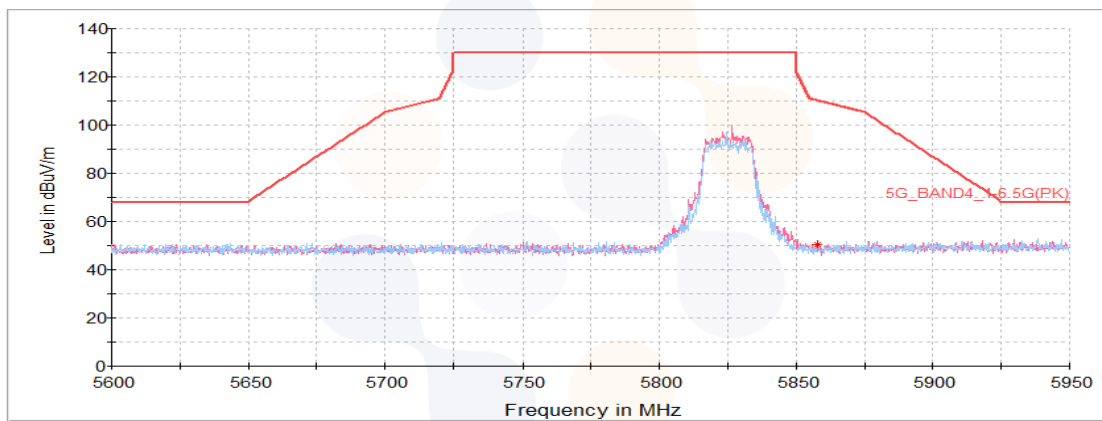
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11n HT20 UNII-3 2TX MIMO****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 721.92	V	48.49	34.87	-24.11	-	59.25	115.18	55.93
11 493.87 ¹⁾	H	63.73	38.10	-48.03	-	53.80	74.00	20.20
17 203.27	H	53.21	41.33	-44.64	-	49.90	68.20	18.30
Average Data								
11 493.87 ¹⁾	H	56.16	38.10	-48.03	0.23	46.46	54.00	7.54

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 572.00 ¹⁾	H	65.94	38.22	-47.91	-	56.25	74.00	17.75
17 366.06	H	53.69	41.04	-44.65	-	50.08	68.20	18.12
Average Data								
11 572.00 ¹⁾	H	59.50	38.22	-47.91	0.23	50.04	54.00	3.96

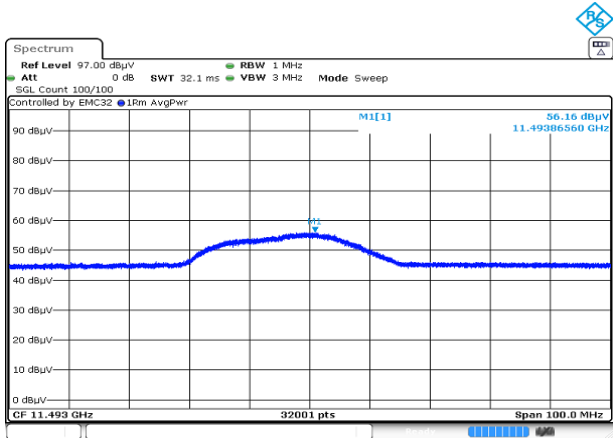
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 864.41	V	40.43	35.04	-23.59	-	51.88	108.17	56.29
11 651.07 ¹⁾	V	64.47	38.34	-47.79	-	55.02	74.00	18.98
16 258.11	V	54.18	42.47	-44.64	-	52.01	68.20	16.19
17 490.41	V	54.78	40.82	-44.67	-	50.93	68.20	17.27
Average Data								
11 651.07 ¹⁾	V	59.01	38.34	-47.79	0.23	49.79	54.00	4.21

802.11n HT20 UNII-3 2TX MIMO

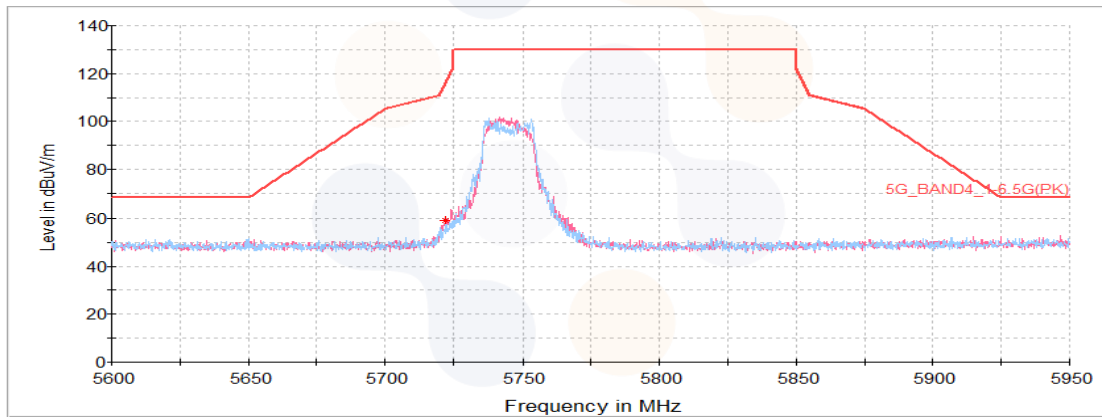
Lowest Channel (5 745 MHz)

Average data



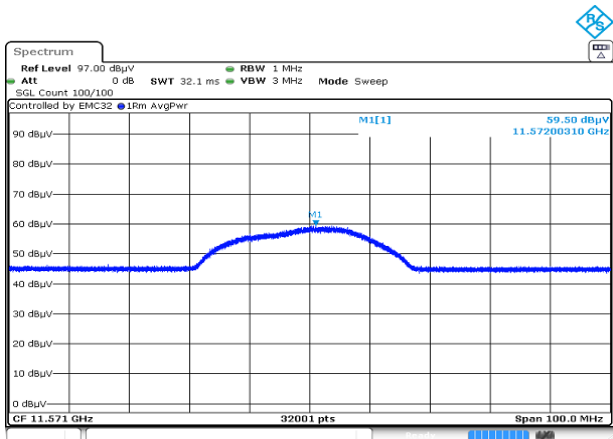
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Horizontal/Vertical for Band-edge



Middle Channel (5 785 MHz)

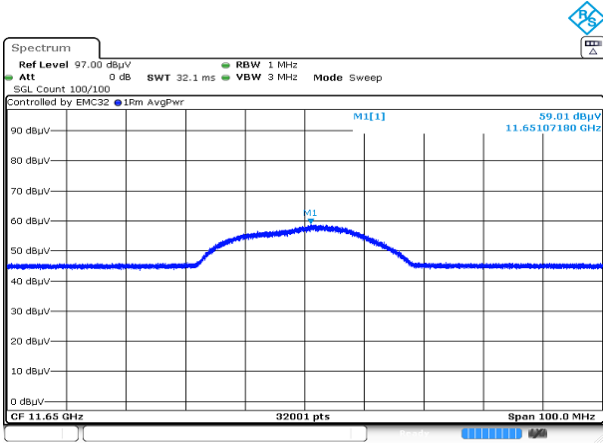
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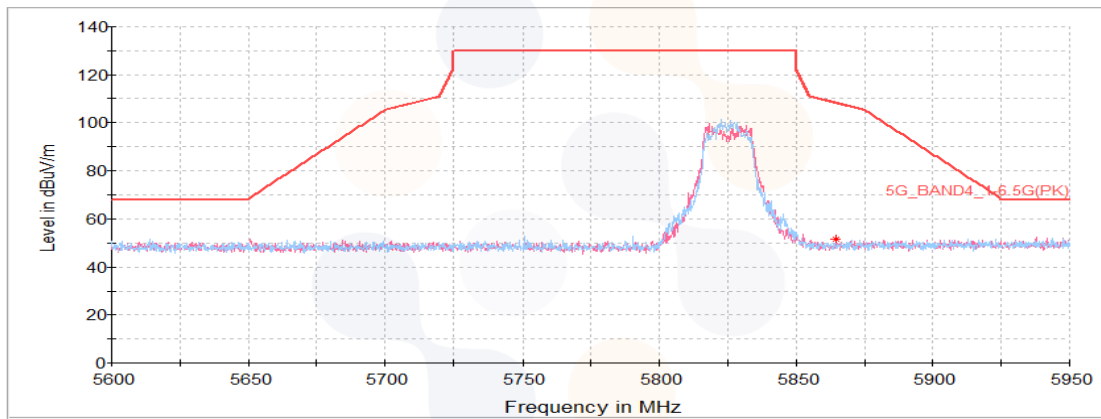
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



802.11n HT40 UNII-3 ANT1

Lowest Channel (5 755 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 716.08	H	57.77	34.86	-24.12	-	68.51	109.70	41.19
11 652.72 ¹⁾	H	57.09	38.34	-47.78	-	47.65	74.00	26.35
17 331.56	V	54.83	41.10	-44.65	-	51.28	68.20	16.92
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 872.66	V	41.89	35.05	-23.54	-	53.40	105.86	52.46
11 600.61 ¹⁾	V	55.75	38.26	-47.87	-	46.14	74.00	27.86
17 370.38	H	53.50	41.03	-44.66	-	49.87	68.20	18.33
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11n HT40 UNII-3 ANT1

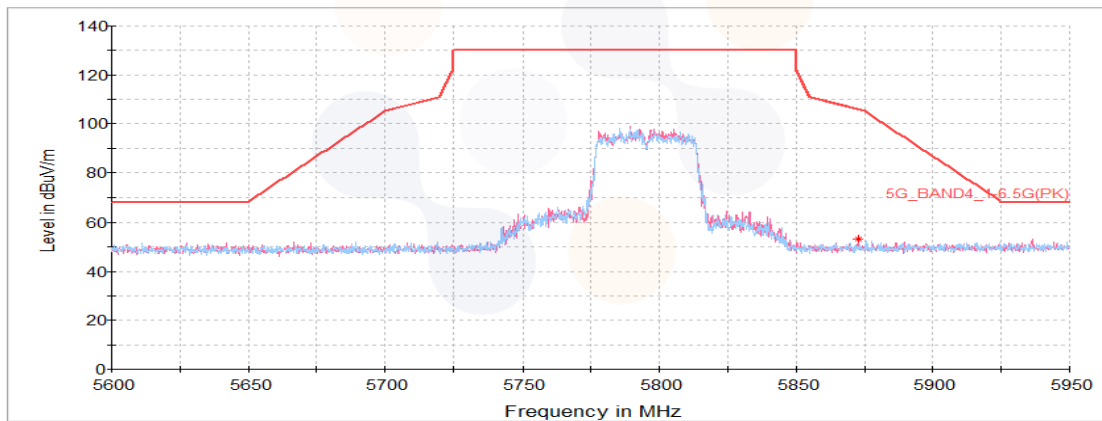
Lowest Channel (5 755 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 795 MHz)

Horizontal/Vertical for Band-edge



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**802.11n HT40 UNII-3 ANT2****Lowest Channel (5 755 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 711.78	V	46.99	34.85	-24.12	-	57.72	108.50	50.78
11 511.39 ¹⁾	H	63.63	38.12	-48.01	-	53.74	74.00	20.26
17 259.69	H	53.36	41.23	-44.64	-	49.95	68.20	18.25
Average Data								
11 511.39 ¹⁾	H	54.99	38.12	-48.01	0.23	45.33	54.00	8.67

Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 867.84	V	40.16	35.04	-23.57	-	51.63	107.20	55.58
11 597.67 ¹⁾	H	64.18	38.26	-47.87	-	54.57	74.00	19.43
17 431.11	V	53.71	40.92	-44.66	-	49.97	68.20	18.23
Average Data								
11 597.67 ¹⁾	H	56.17	38.26	-47.87	0.23	46.79	54.00	7.21

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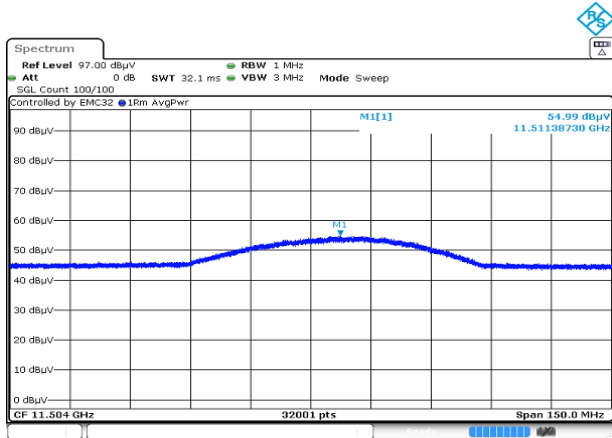
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802.11n HT40 UNII-3 ANT2

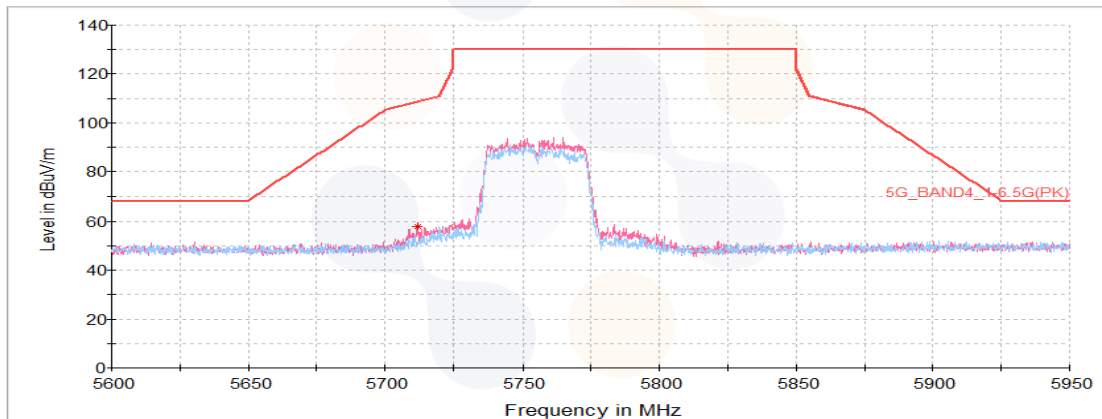
Lowest Channel (5 755 MHz)

Average data



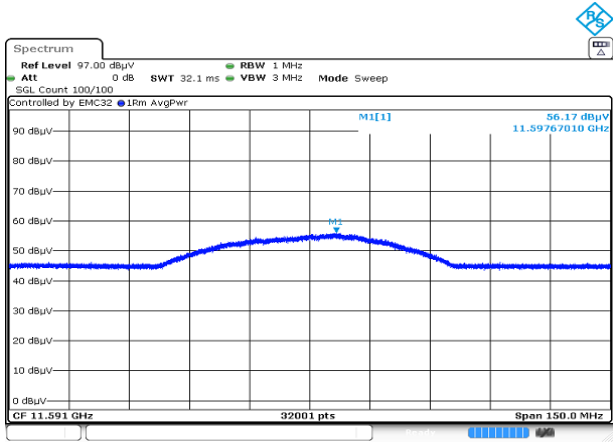
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Horizontal/Vertical for Band-edge



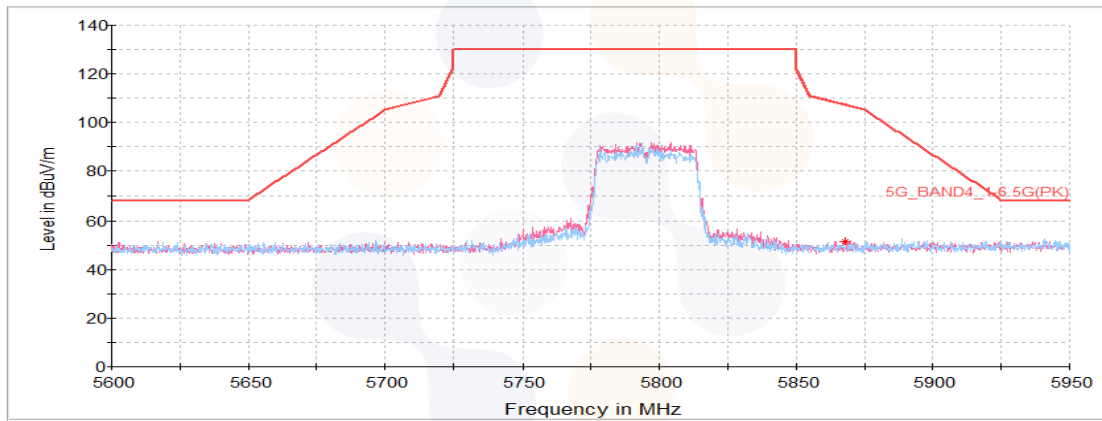
Highest Channel (5 795 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11n HT40 UNII-3 2TX MIMO****Lowest Channel (5 755 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 720.38	H	54.62	34.86	-24.11	-	65.37	111.66	46.28
11 497.64 ¹⁾	V	61.56	38.10	-48.03	-	51.63	74.00	22.37
17 214.41	H	53.11	41.31	-44.64	-	49.78	68.20	18.42
Average Data								
11 497.64 ¹⁾	V	52.62	38.10	-48.03	0.42	43.11	54.00	10.89

Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 858.73	H	40.55	35.03	-23.62	-	51.96	109.75	57.80
11 594.20 ¹⁾	V	64.87	38.25	-47.88	-	55.24	74.00	18.76
17 429.31	H	53.40	40.93	-44.66	-	49.67	68.20	18.53
Average Data								
11 594.20 ¹⁾	V	56.60	38.25	-47.88	0.42	47.39	54.00	6.61

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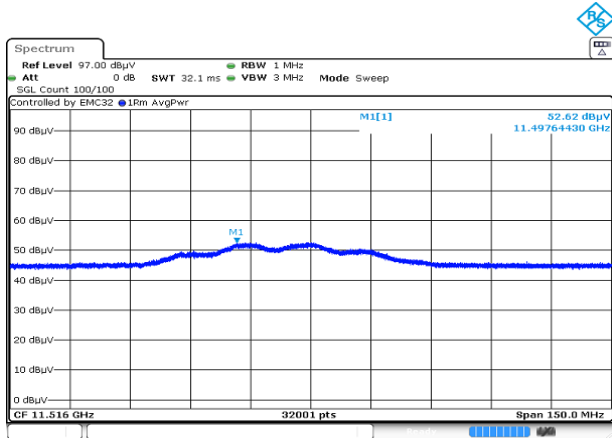
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802.11n HT40 UNII-3 2TX MIMO

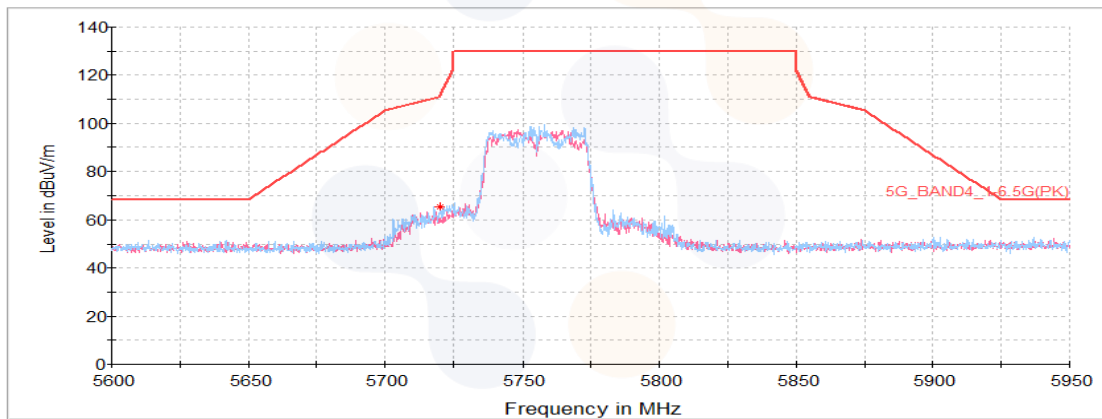
Lowest Channel (5 755 MHz)

Average data



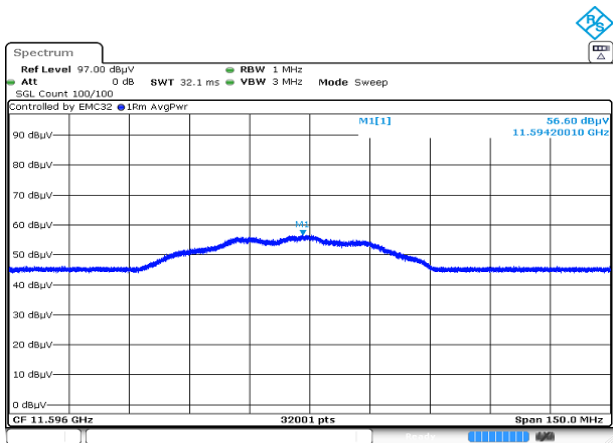
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Horizontal/Vertical for Band-edge



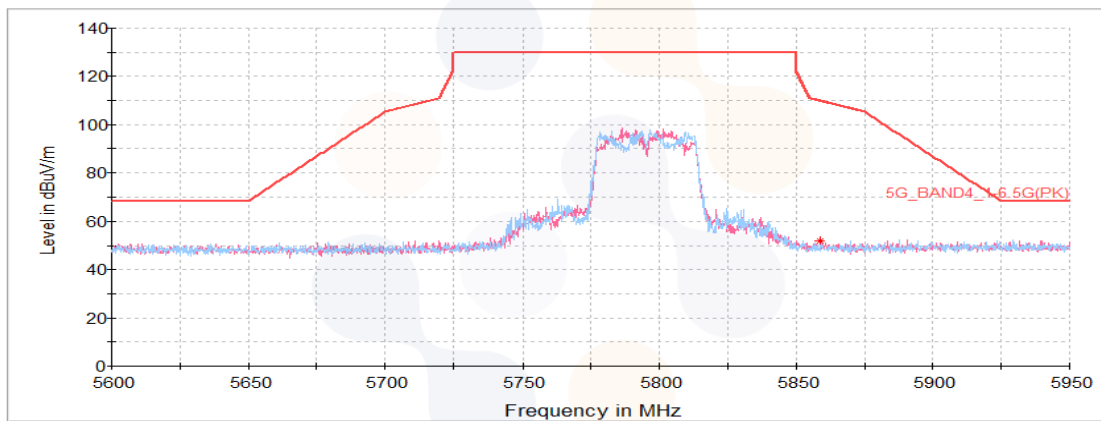
Highest Channel (5 795 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11ac VHT20 UNII-3 ANT1****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 724.84	H	51.66	34.87	-24.10	-	62.43	121.84	59.41
11 370.61 ¹⁾	H	56.46	38.00	-48.05	-	46.41	74.00	27.59
17 377.92	V	54.90	41.02	-44.66	-	51.26	68.20	16.94
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 575.81 ¹⁾	V	58.02	38.22	-47.91	-	48.33	74.00	25.67
17 370.02	H	54.04	41.03	-44.66	-	50.41	68.20	17.79
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

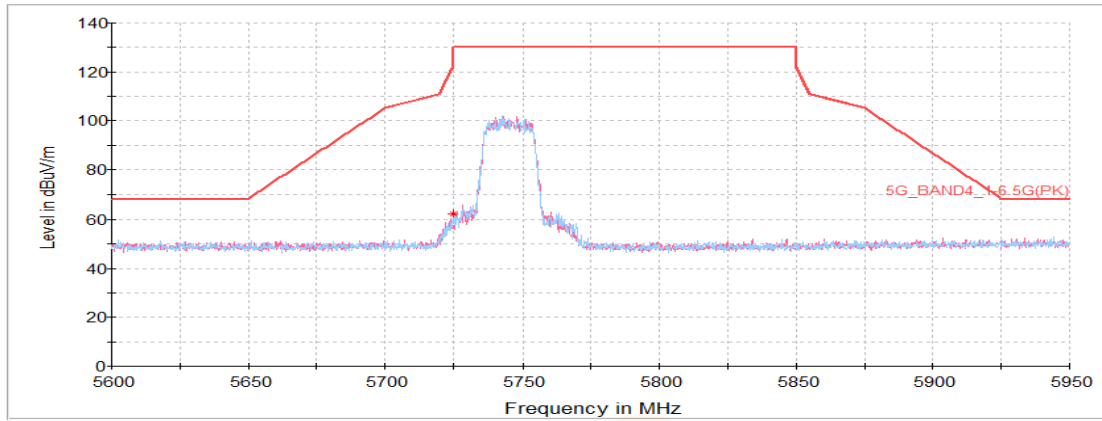
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 850.31	H	42.07	35.02	-23.68	-	53.41	121.49	68.08
11 654.52 ¹⁾	V	56.09	38.35	-47.78	-	46.66	74.00	27.34
17 522.03	H	54.25	40.86	-44.68	-	50.43	68.20	17.77
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT20 UNII-3 ANT1

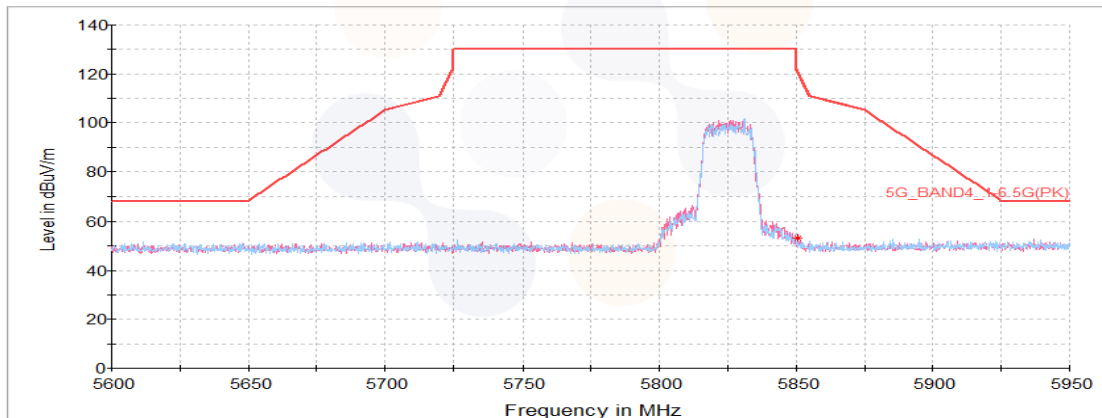
Lowest Channel (5 745 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 825 MHz)

Horizontal/Vertical for Band-edge



802.11ac VHT20 UNII-3 ANT2

Lowest Channel (5 745 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 720.55	V	42.69	34.86	-24.11	-	53.44	112.05	58.60
11 491.18	H	65.32	38.09	-48.03	-	55.38	74.00	18.62
17 233.09	V	53.83	41.28	-44.64	-	50.47	68.20	17.73
Average Data								
11 491.18	H	57.94	38.09	-48.03	0.12	48.12	54.00	5.88

Middle Channel (5 785 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
11 571.35	H	66.74	38.21	-47.91	-	57.04	74.00	16.96
17 391.22	V	54.49	41.00	-44.66	-	50.83	68.20	17.37
Average Data								
11 571.35	H	59.68	38.21	-47.91	0.12	50.10	54.00	3.90

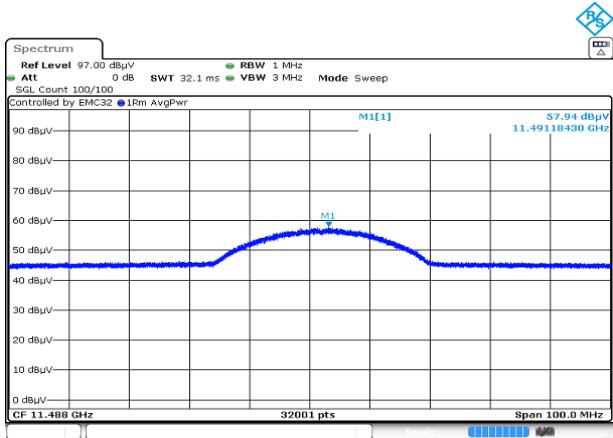
Highest Channel (5 825 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
5 853.58	H	41.12	35.02	-23.66	-	52.48	114.04	61.56
11 651.00	H	63.90	38.34	-47.79	-	54.45	74.00	19.55
17 476.75	V	54.35	40.84	-44.67	-	50.52	68.20	17.68
Average Data								
11 651.00	H	60.06	38.34	-47.79	0.12	50.73	54.00	3.27

802.11ac VHT20 UNII-3 ANT2

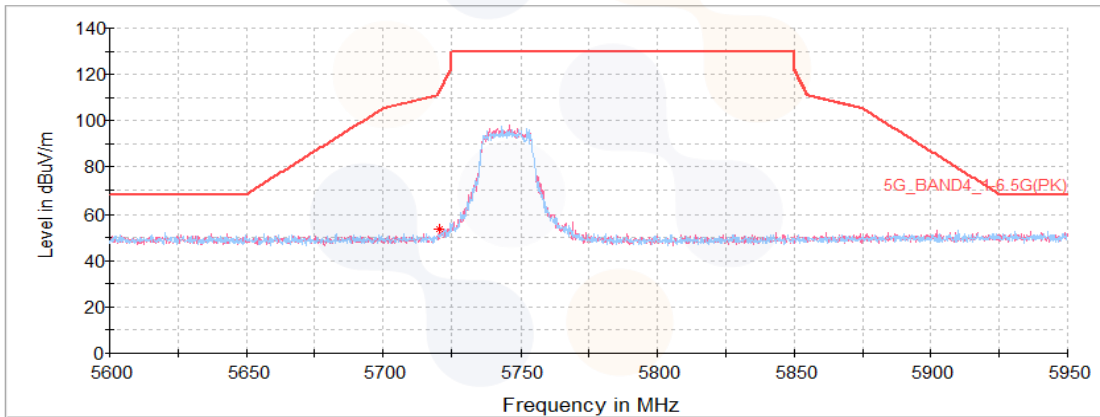
Lowest Channel (5 745 MHz)

Average data



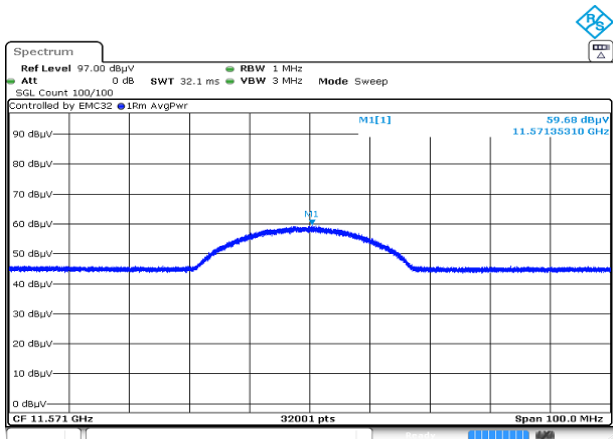
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Horizontal/Vertical for Band-edge



Middle Channel (5 785 MHz)

Average data



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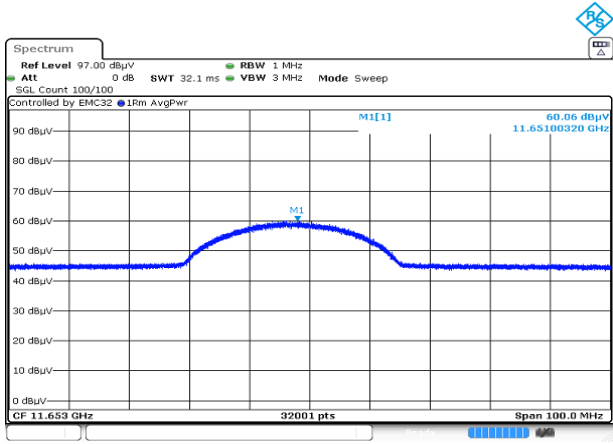
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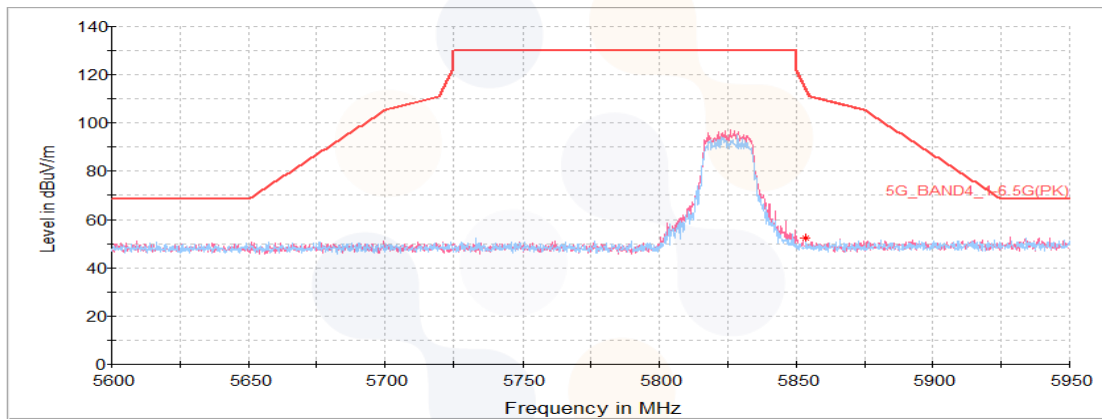
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



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**802.11ac VHT20 UNII-3 2TX MIMO****Lowest Channel (5 745 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 722.44	H	52.21	34.87	-24.11	-	62.97	116.36	53.39
11 488.73 ¹⁾	H	63.02	38.09	-48.03	-	53.08	74.00	20.92
17 224.83	H	53.42	41.30	-44.64	-	50.08	68.20	18.12
Average Data								
11 488.73 ¹⁾	H	56.28	38.09	-48.03	0.22	46.56	54.00	7.44

Middle Channel (5 785 MHz)

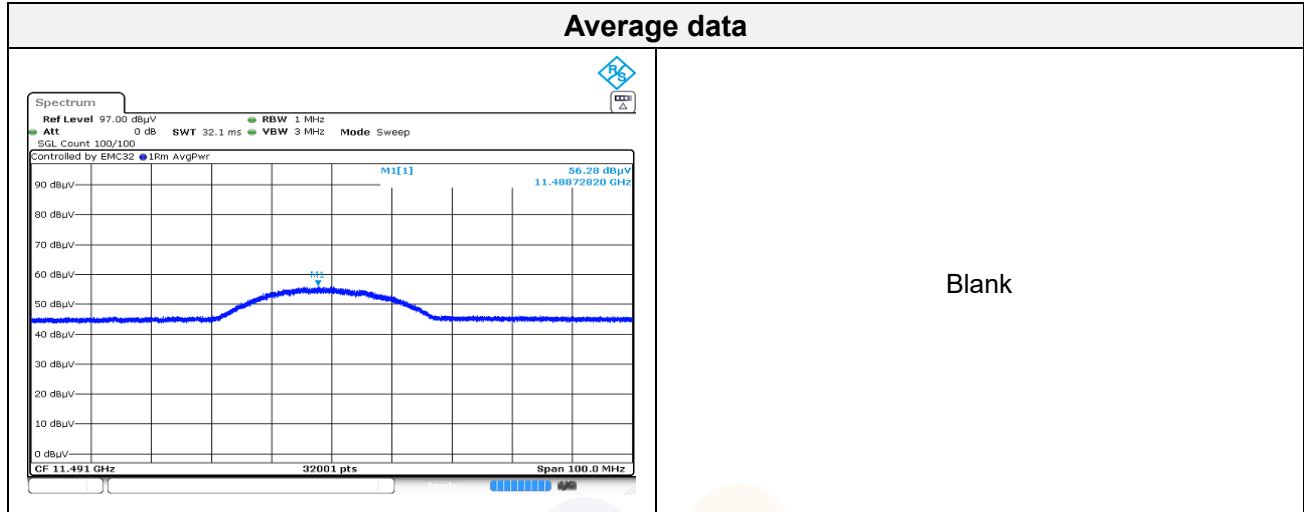
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
11 571.41 ¹⁾	H	68.54	38.21	-47.91	-	58.84	74.00	15.16
17 318.98	V	53.28	41.13	-44.65	-	49.76	68.20	18.44
Average Data								
11 571.41 ¹⁾	H	58.38	38.21	-47.91	0.22	48.90	54.00	5.10

Highest Channel (5 825 MHz)

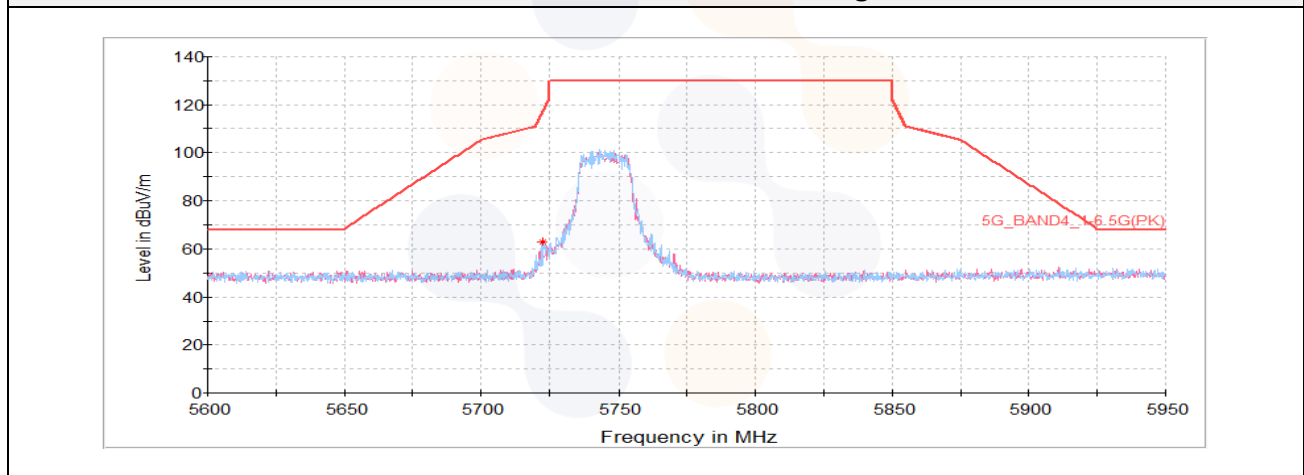
Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 855.13	H	41.21	35.03	-23.65	-	52.59	110.77	58.17
11 651.58 ¹⁾	V	66.32	38.34	-47.79	-	56.87	74.00	17.13
17 487.17	V	53.59	40.82	-44.67	-	49.74	68.20	18.46
Average Data								
11 651.58 ¹⁾	V	59.14	38.34	-47.79	0.22	49.91	54.00	4.09

802.11ac VHT20 UNII-3 2TX MIMO

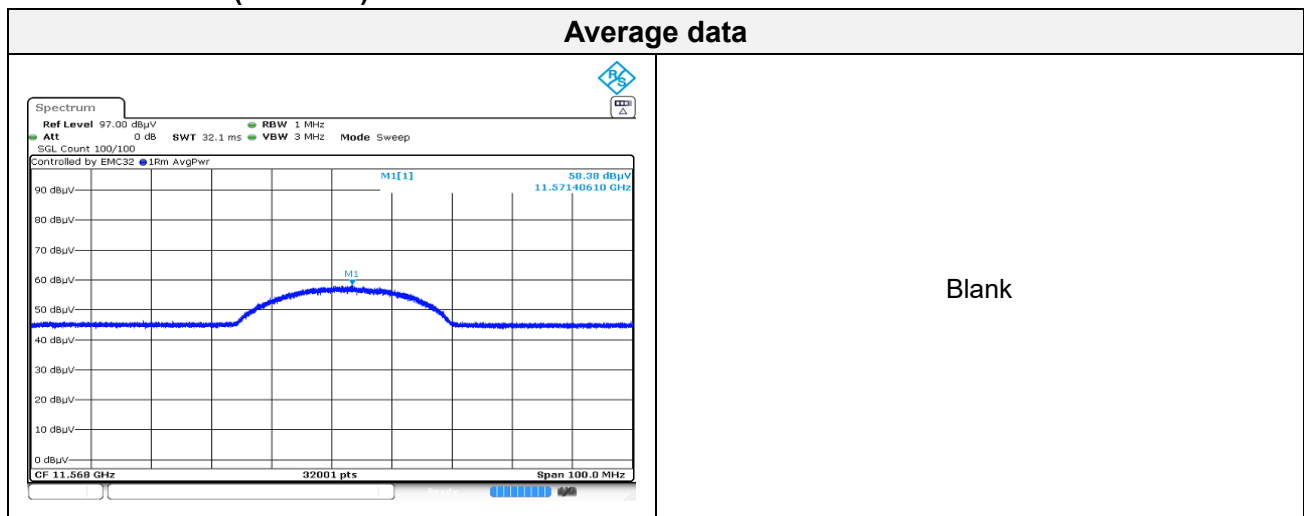
Lowest Channel (5 745 MHz)



Horizontal/Vertical for Band-edge

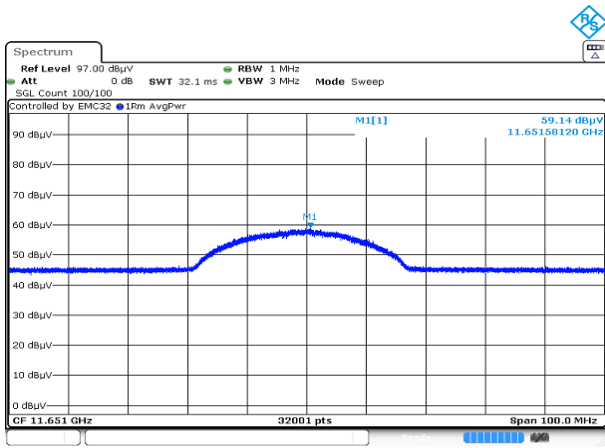


Middle Channel (5 785 MHz)



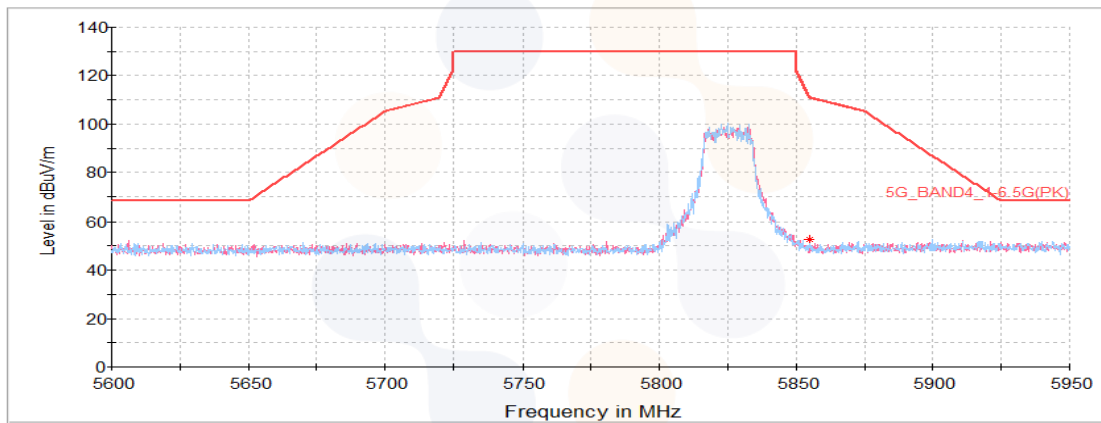
Highest Channel (5 825 MHz)

Average data



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Horizontal/Vertical for Band-edge



802.11ac VHT40 UNII-3 ANT1

Lowest Channel (5 755 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 723.47	V	55.60	34.87	-24.11	-	66.36	118.71	52.35
11 538.08 ¹⁾	H	55.81	38.16	-47.97	-	46.00	74.00	28.00
17 320.06	H	53.59	41.12	-44.65	-	50.06	68.20	18.14
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

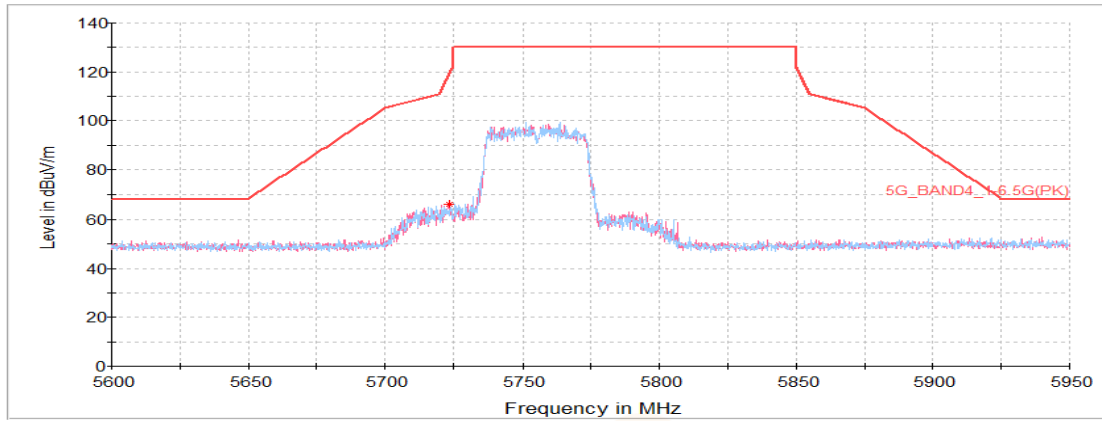
Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 850.31	V	42.56	35.02	-23.68	-	53.90	121.49	67.59
11 603.13 ¹⁾	H	55.58	38.27	-47.86	-	45.99	74.00	28.01
17 356.00	H	54.05	41.06	-44.65	-	50.46	68.20	17.74
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

802.11ac VHT40 UNII-3 ANT1

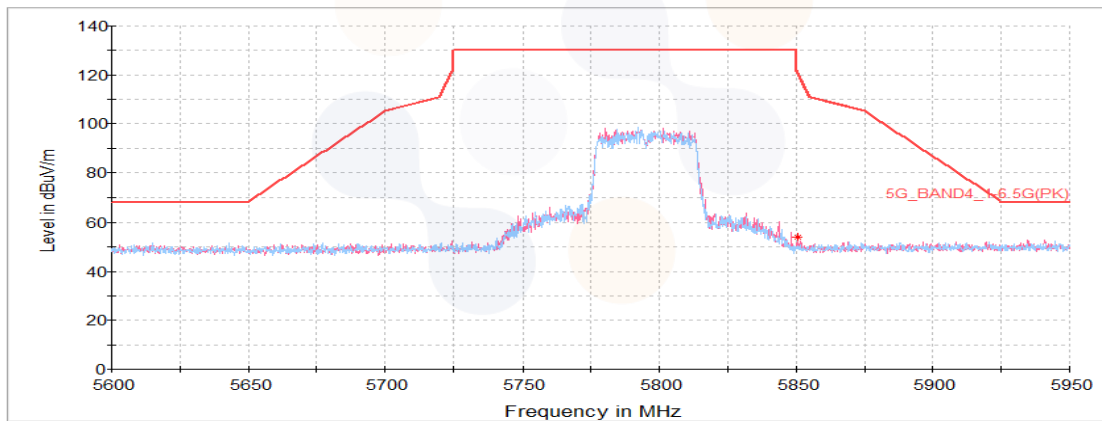
Lowest Channel (5 755 MHz)

Horizontal/Vertical for Band-edge



Highest Channel (5 795 MHz)

Horizontal/Vertical for Band-edge



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**802.11ac VHT40 UNII-3 ANT2****Lowest Channel (5 755 MHz)**

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 714.70	V	47.63	34.86	-24.12	-	58.37	109.32	50.95
11 509.44 ¹⁾	H	63.19	38.12	-48.01	-	53.30	74.00	20.70
17 300.66	H	54.25	41.16	-44.65	-	50.76	68.20	17.44
Average Data								
11 509.44 ¹⁾	H	55.07	38.12	-48.01	0.24	45.42	54.00	8.58

Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB($\mu V/m$))	(dB($\mu V/m$))	(dB)
Peak data								
5 868.19	V	40.22	35.04	-23.56	-	51.70	107.11	55.40
11 597.46 ¹⁾	H	64.27	38.26	-47.87	-	54.66	74.00	19.34
17 363.19	H	53.50	41.05	-44.65	-	49.90	68.20	18.30
Average Data								
11 597.46 ¹⁾	H	56.34	38.26	-47.87	0.24	46.97	54.00	7.03

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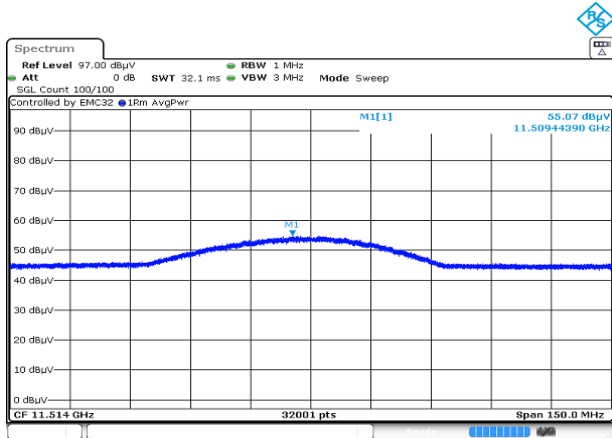
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802.11ac VHT40 UNII-3 ANT2

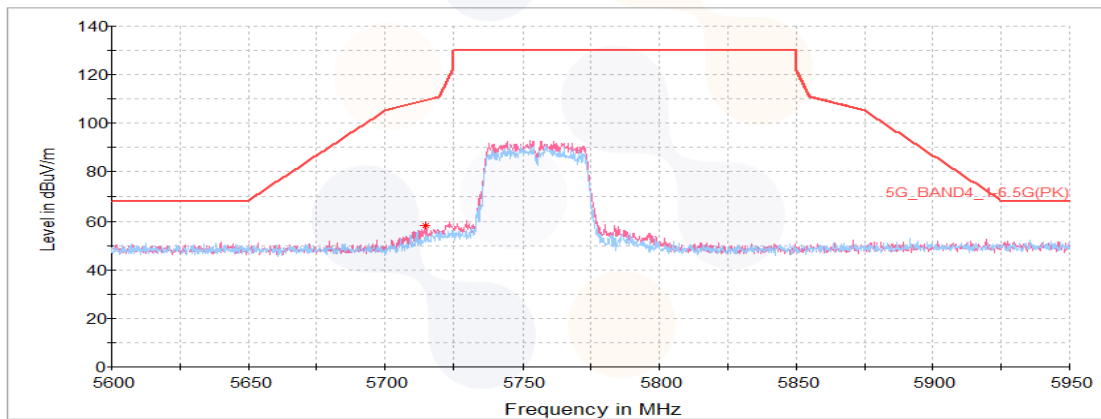
Lowest Channel (5 755 MHz)

Average data



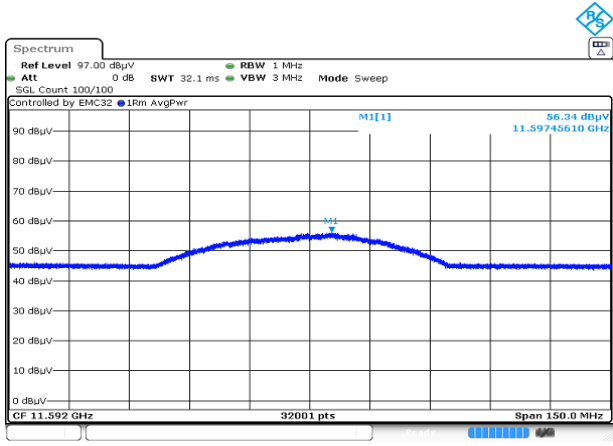
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Horizontal/Vertical for Band-edge



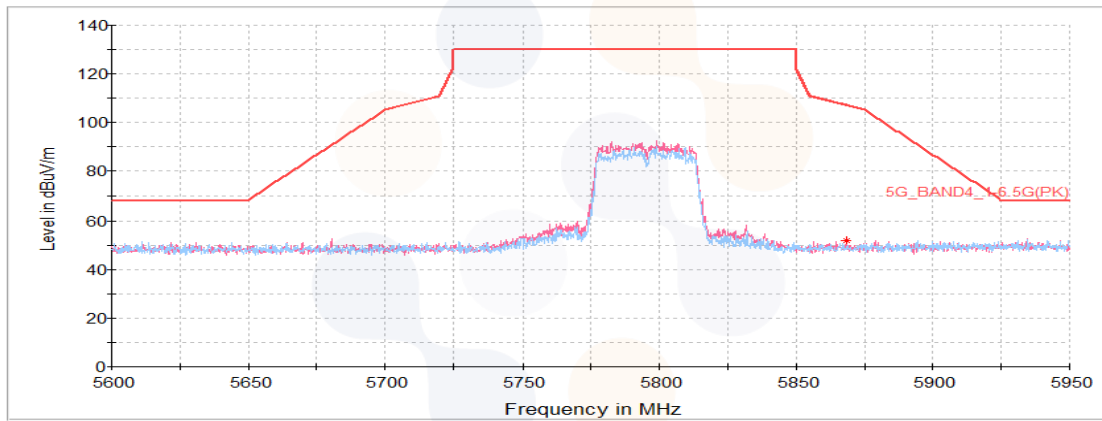
Highest Channel (5 795 MHz)

Average data



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Horizontal/Vertical for Band-edge



802.11ac VHT40 UNII-3 2TX MIMO

Lowest Channel (5 755 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 717.45	H	55.01	34.86	-24.12	-	65.75	110.09	44.33
11 516.88 ¹⁾	V	60.69	38.13	-48.00	-	50.82	74.00	23.18
17 249.27	H	54.05	41.25	-44.64	-	50.66	68.20	17.54
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

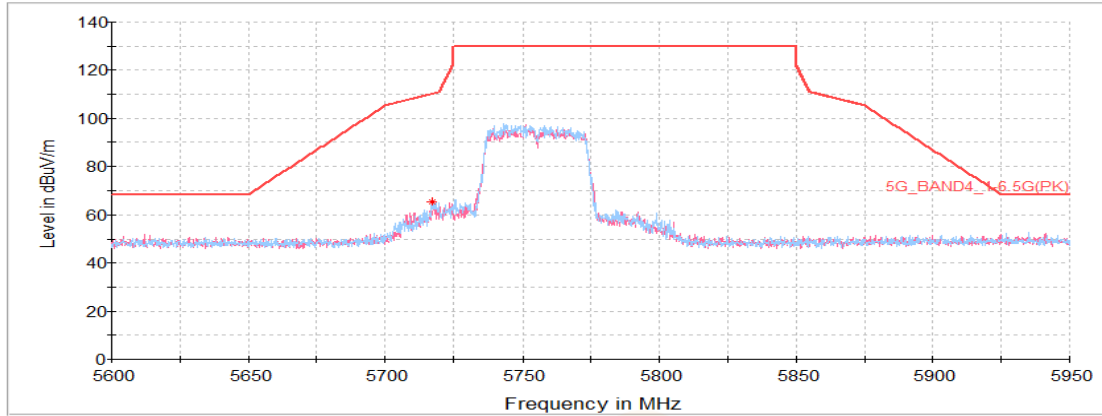
Highest Channel (5 795 MHz)

Frequency	Pol.	Reading	Ant. Factor	Amp.+Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
5 854.95	V	40.16	35.03	-23.65	-	51.54	110.91	59.37
11 591.17 ¹⁾	H	63.73	38.25	-47.88	-	54.10	74.00	19.90
17 390.86	H	54.00	41.00	-44.66	-	50.34	68.20	17.86
Average Data								
11 591.17 ¹⁾	H	56.06	38.25	-47.88	0.41	46.84	54.00	7.16

802.11ac VHT40 UNII-3 2TX MIMO

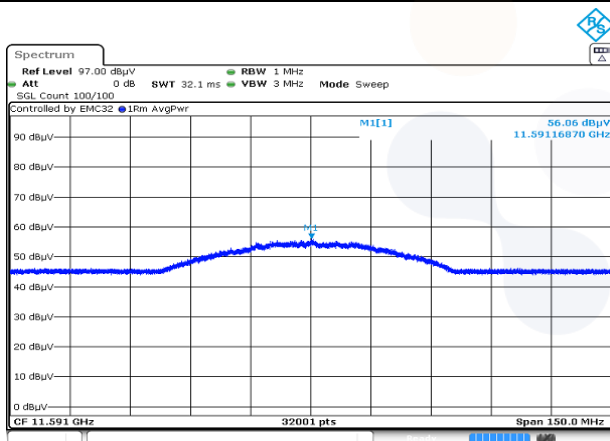
Lowest Channel (5 755 MHz)

Horizontal/Vertical for Band-edge



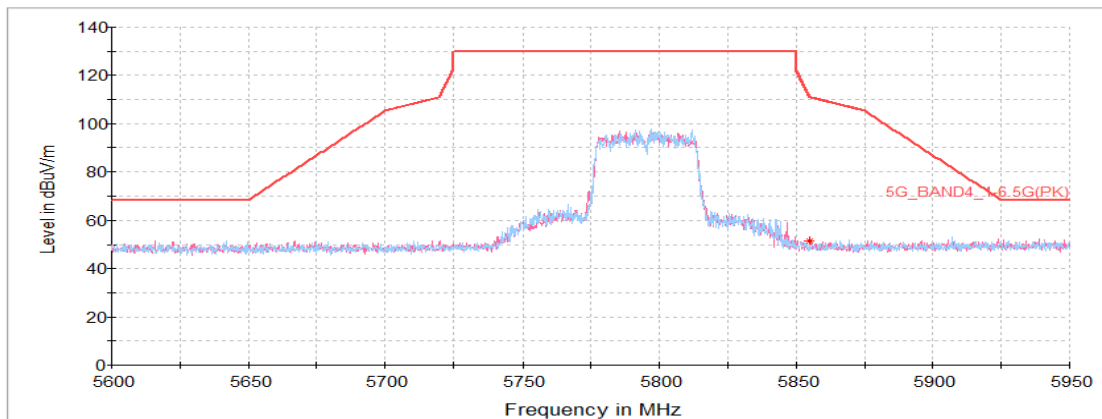
Highest Channel (5 795 MHz)

Average data



Blank

Horizontal/Vertical for Band-edge



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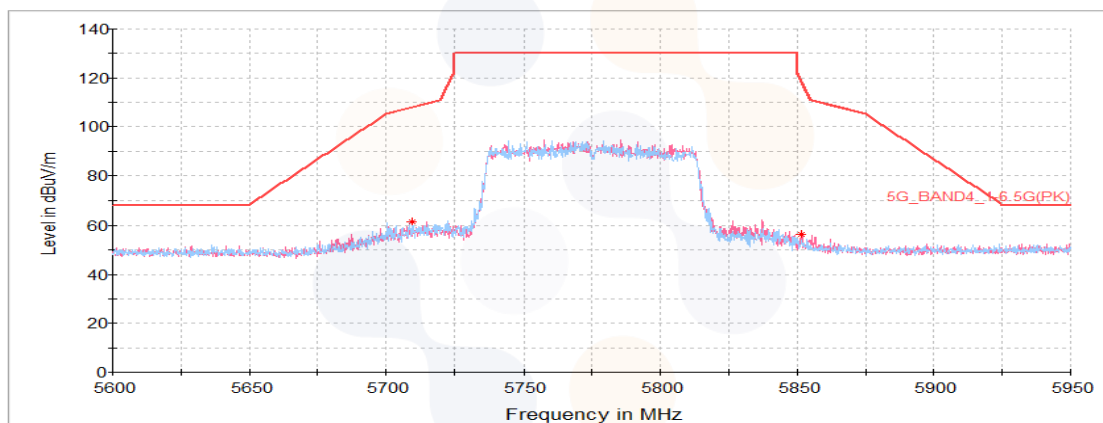


802.11ac VHT80 UNII-3 ANT1

Lowest Channel (5 775 MHz)

Frequency (MHz)	Pol. (V/H)	Reading (dB(μ V))	Ant. Factor (dB)	Amp.+Cable (dB)	DCF (dB)	Result (dB(μ V/m))	Limit (dB(μ V/m))	Margin (dB)
Peak data								
5 709.38	H	50.93	34.85	-24.13	-	61.65	107.83	46.17
5 851.69	V	45.07	35.02	-23.67	-	56.42	118.35	61.93
11 563.59 ¹⁾	H	55.62	38.20	-47.93	-	45.89	74.00	28.11
17 379.36	H	53.86	41.02	-44.66	-	50.22	68.20	17.98
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for Band-edge



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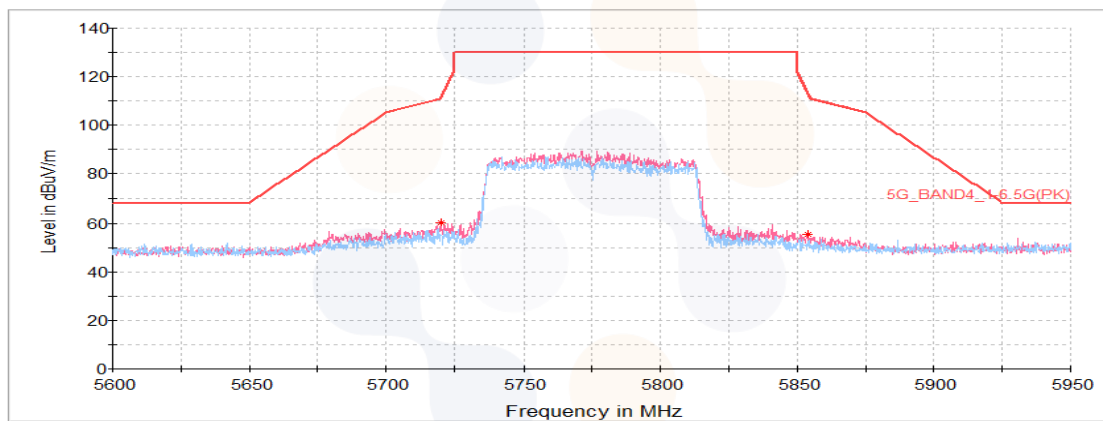


802.11ac VHT80 UNII-3 ANT2

Lowest Channel (5 775 MHz)

Frequency (MHz)	Pol. (V/H)	Reading (dB(μ V))	Ant. Factor (dB)	Amp.+Cable (dB)	DCF (dB)	Result (dB(μ V/m))	Limit (dB(μ V/m))	Margin (dB)
Peak data								
5 720.20	V	49.48	34.86	-24.11	-	60.23	111.26	51.04
5 853.92	V	44.11	35.02	-23.65	-	55.48	113.26	57.78
11 553.89 ¹⁾	H	60.39	38.19	-47.94	-	50.64	74.00	23.36
17 408.83	H	54.43	40.96	-44.66	-	50.73	68.20	17.47
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for Band-edge



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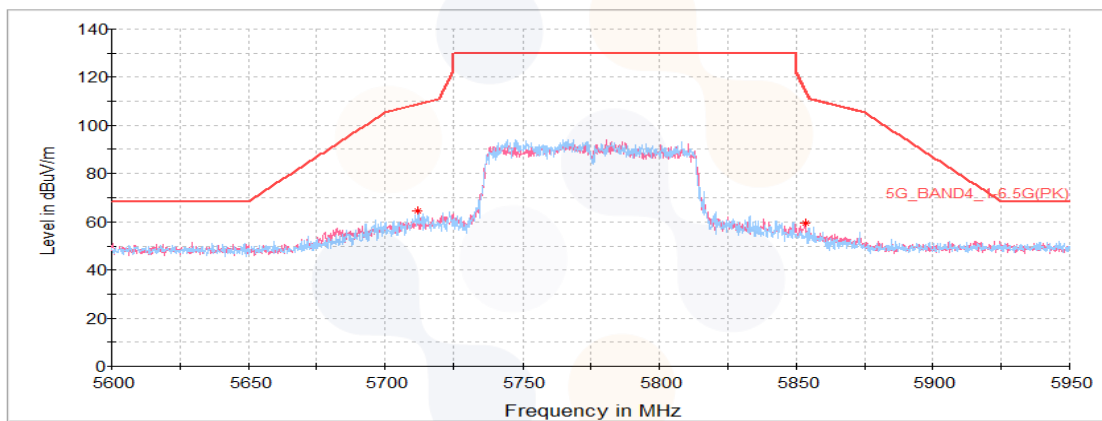


802.11ac VHT80 UNII-3 2TX MIMO

Lowest Channel (5 775 MHz)

Frequency (MHz)	Pol. (V/H)	Reading (dB(μ V))	Ant. Factor (dB)	Amp.+Cable (dB)	DCF (dB)	Result (dB(μ V/m))	Limit (dB(μ V/m))	Margin (dB)
Peak data								
5 712.13	H	53.94	34.85	-24.12		64.67	108.60	43.92
5 853.23	V	48.10	35.02	-23.66		59.46	114.83	55.37
11 557.84	H	58.90	38.19	-47.94		49.15	74.00	24.85
17 344.14	V	53.80	41.08	-44.65		50.23	68.20	17.97
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for Band-edge

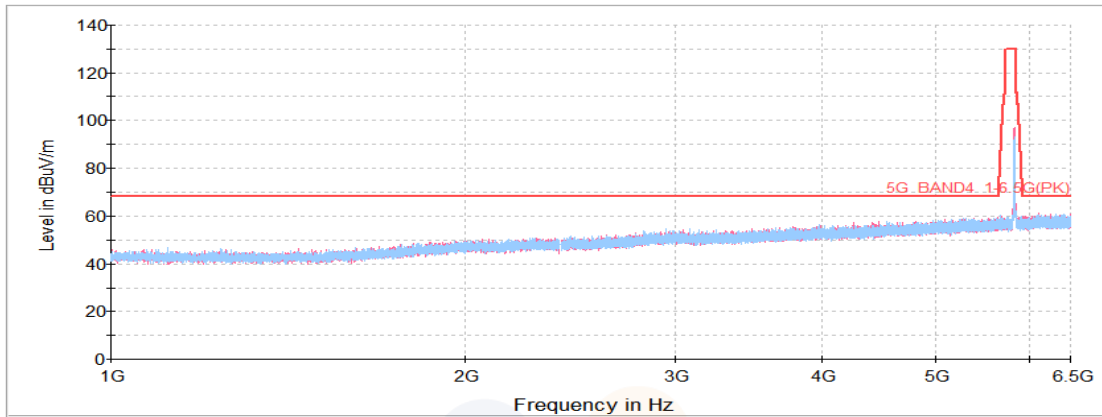


Plot of Harmonics and Spurious Emissions

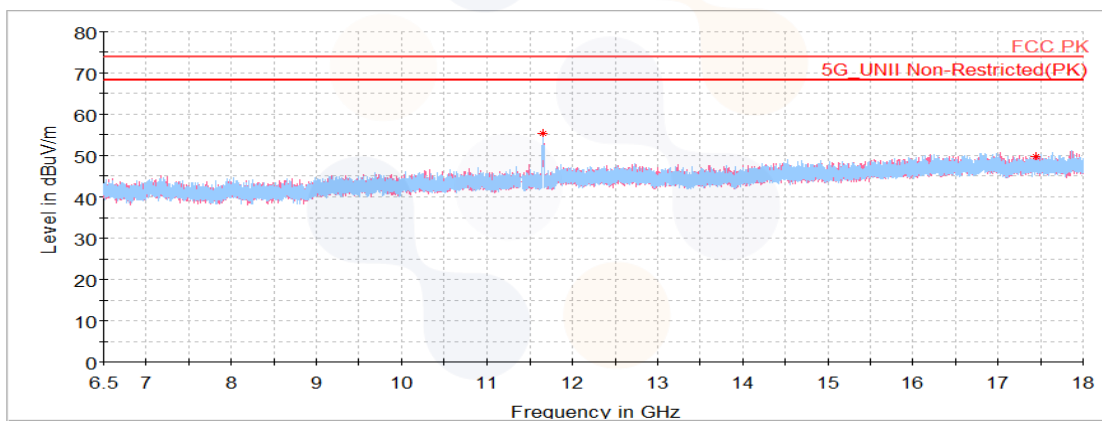
In order to simplify the report, attached plots were only the lowest margin condition

802.11n HT20_UNII-3_2TX MIMO_Highest Channel (5 825 MHz)

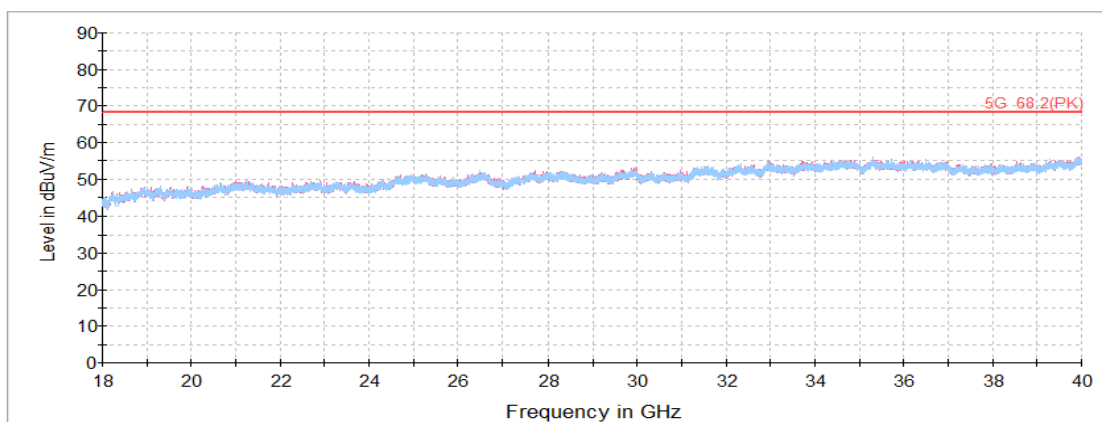
Horizontal/Vertical for 1 GHz ~ 6.5 GHz



Horizontal/Vertical for 6.5 GHz ~ 18 GHz



Horizontal/Vertical for 18 GHz ~ 40 GHz



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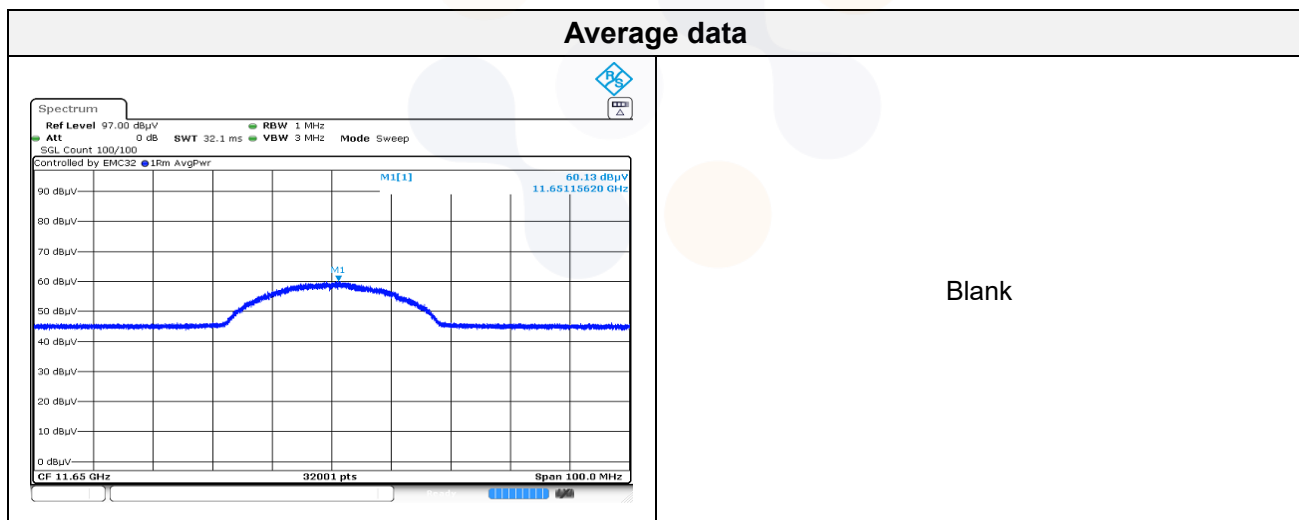
Spurious Emission for Simultaneous Tx Condition

Case	WLAN 5 GHz	Bluetooth
Mode	802.11n 20	BDR
Channel	165	78
Frequency	5 825 MHz	2 480 MHz
Data Rate	MCS0	DH1

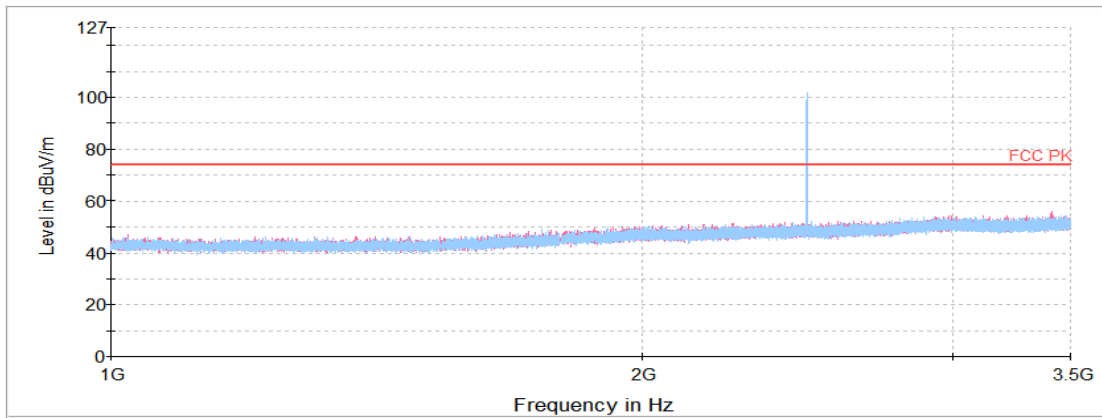
Notes.

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

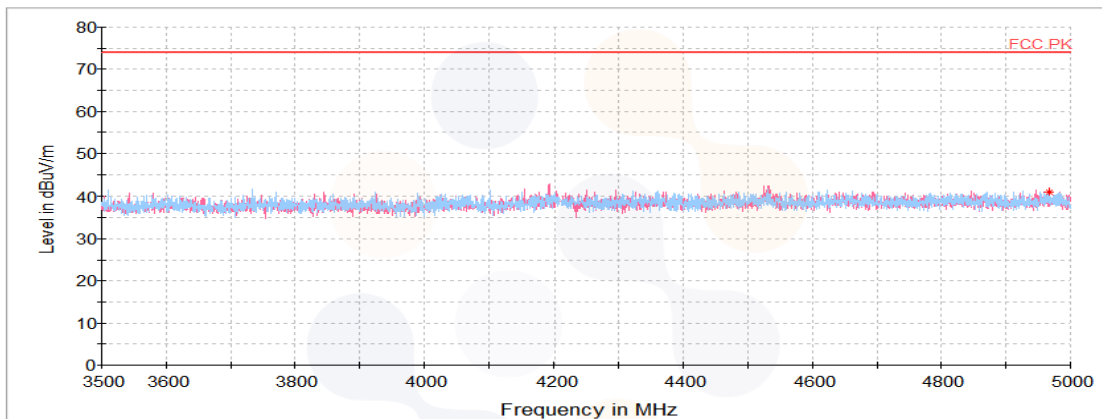
Frequency (MHz)	Pol. (V/H)	Reading (dB(μ V))	Ant. Factor (dB)	Amp.+Cable (dB)	DCF (dB)	Result (dB(μ V/m))	Limit (dB(μ V/m))	Margin (dB)
Peak data								
4 966.31	V	59.23	33.61	-51.92	-	40.92	74.00	33.08
11 651.16	V	66.10	38.34	-47.79	-	56.65	74.00	17.35
17 444.77	H	53.54	40.90	-44.66	-	49.78	68.20	18.42
Average Data								
11 651.16	V	60.13	38.34	-47.79	0.12	50.80	54.00	3.20



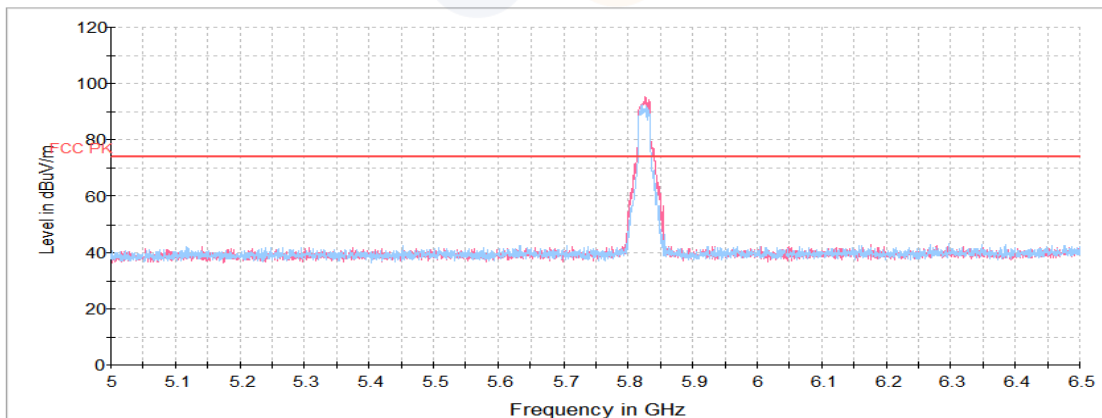
Horizontal/Vertical for 1 GHz ~ 3.5 GHz



Horizontal/Vertical for 3.5 GHz ~ 5 GHz



Horizontal/Vertical for 5 GHz ~ 6.5 GHz



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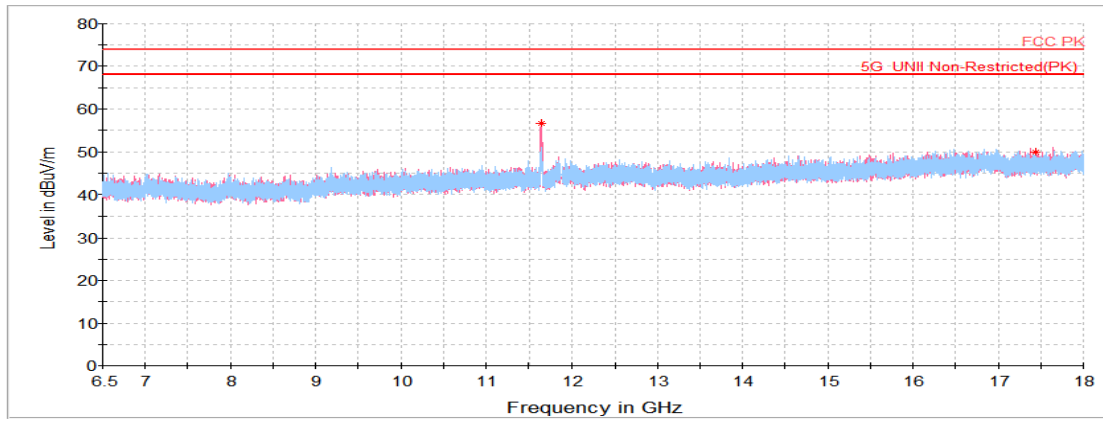
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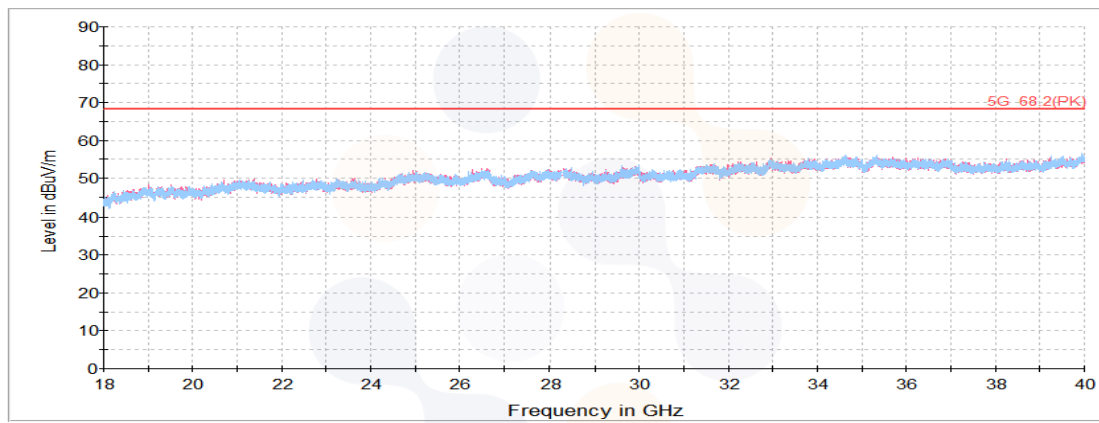


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Horizontal/Vertical for 6.5 GHz ~ 18 GHz

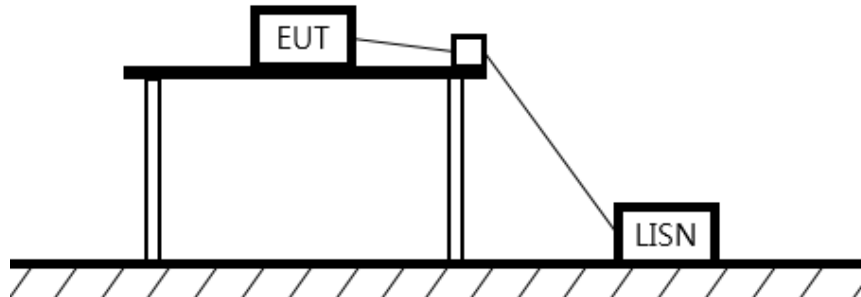


Horizontal/Vertical for 18 GHz ~ 40 GHz



7.7. AC Conducted emission

Test setup



Limit

§15.407

According to 15.207(a) and RSS-Gen (8.8), 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 kHz to 30 MHz, 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 (MHz)	Conducted limit (dB μ V/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 cm in which is located 40 cm 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 50 Ω /50 μ H LISN, which is an input transducer to a spectrum analyzer or an EMI/Field Intensity 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 MHz to 30 MHz.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 kHz or to quasi-peak and average within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

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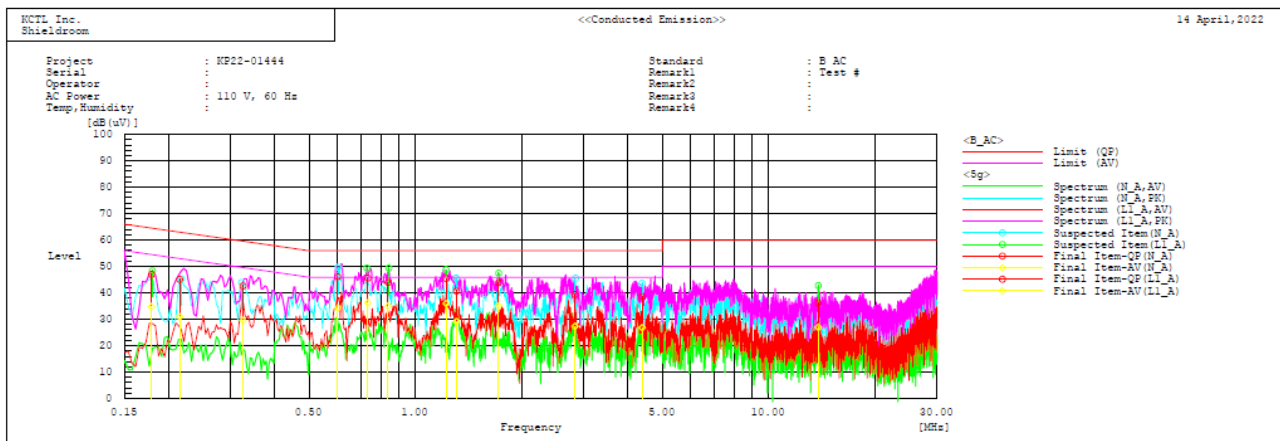
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Test results

Worst case: 802.11n HT 20 2TX MIMO / UNII-2C 5 500 MHz





Final Result

--- L2 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 CAV [dB]	Margin QP [dB]
1	0.21487	35.3	21.2	9.8	45.1	31.0	63.0	53.0	17.9	22.0
2	0.32475	32.9	19.8	9.8	42.7	29.6	59.6	49.6	16.9	20.0
3	0.60303	36.2	24.5	9.9	46.1	34.4	56.0	46.0	9.9	11.6
4	1.30602	30.9	19.4	9.8	40.7	29.2	56.0	46.0	15.3	16.8
5	2.8317	29.6	17.6	9.8	39.4	27.4	56.0	46.0	16.6	18.6
6	4.38567	28.9	17.0	9.8	38.7	26.8	56.0	46.0	17.3	19.2

--- L3 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 CAV [dB]	Margin QP [dB]
1	0.17882	36.9	24.7	10.1	47.0	34.8	64.5	54.5	17.5	19.7
2	0.73301	35.8	26.5	9.8	45.6	36.3	56.0	46.0	10.4	9.7
3	0.83634	34.2	25.3	9.8	44.0	35.1	56.0	46.0	12.0	10.9
4	1.22231	35.7	26.2	9.8	45.5	36.0	56.0	46.0	10.5	10.0
5	1.72136	34.1	25.3	9.8	43.9	35.1	56.0	46.0	12.1	10.9
6	13.82658	25.7	16.5	10.5	36.2	27.0	60.0	50.0	23.8	23.0

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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
DC Power Supply	AGILENT	E3632A	KR75304571	22.05.10
Attenuator	Weinschel ENGINEERING	40AH2W-10	11	22.05.11
Signal Generator	R&S	SMB100A	176206	23.01.19
Vector Signal Generator	R&S	SMBV100A	257566	22.07.09
Power Sensor	R&S	NRP-Z81	1137.9009.02-106223-bB	22.05.11
Attenuator	R&S	DNF Dämpfungsglied 10 dB in N-50 Ohm	31210	22.05.11
Spectrum Analyzer	R&S	FSV40	100989	22.12.21
EMI TEST RECEIVER	R&S	ESC17	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	23.01.19
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	ESC13	100001	22.08.19

End of test report