

11n-HT40	MCS0	134	5670	1.34	0.54	0.17	0.00	90.20	7.01	≤ 7.48	Pass
11n-HT40	MCS0	142	5710	1.01	0.57	0.51	0.95	90.20	7.23	≤ 7.48	Pass
11ax-HE20	MCS0	36	5180	6.86	5.95	6.17	3.79	95.25	12.06	≤ 13.48	Pass
11ax-HE20	MCS0	44	5220	6.60	6.40	6.40	4.49	95.25	12.28	≤ 13.48	Pass
11ax-HE20	MCS0	48	5240	6.62	5.74	7.29	5.00	95.25	12.48	≤ 13.48	Pass
11ax-HE20	MCS0	52	5260	0.22	-0.31	0.55	-2.22	95.25	5.92	≤ 7.48	Pass
11ax-HE20	MCS0	60	5300	0.55	-0.49	0.21	-1.33	95.25	6.02	≤ 7.48	Pass
11ax-HE20	MCS0	64	5320	-0.22	-1.31	-0.14	-1.58	95.25	5.47	≤ 7.48	Pass
11ax-HE20	MCS0	100	5500	0.47	-0.31	0.83	-0.47	95.25	6.40	≤ 7.48	Pass
11ax-HE20	MCS0	120	5600	0.72	1.02	1.40	0.59	95.25	7.17	≤ 7.48	Pass
11ax-HE20	MCS0	140	5700	1.80	0.22	0.54	0.28	95.25	6.99	≤ 7.48	Pass
11ax-HE20	MCS0	144	5720	0.96	0.75	0.96	1.15	95.25	7.19	≤ 7.48	Pass
11ax-HE40	MCS0	38	5190	0.69	0.69	0.21	-1.44	95.17	6.35	≤ 13.48	Pass
11ax-HE40	MCS0	46	5230	4.67	3.66	4.93	2.86	95.17	10.34	≤ 13.48	Pass
11ax-HE40	MCS0	54	5270	0.46	-0.73	0.31	-1.71	95.17	5.90	≤ 7.48	Pass
11ax-HE40	MCS0	62	5310	0.50	-0.87	0.46	-1.00	95.17	6.06	≤ 7.48	Pass
11ax-HE40	MCS0	102	5510	1.06	1.12	1.89	-0.11	95.17	7.28	≤ 7.48	Pass
11ax-HE40	MCS0	118	5590	1.36	0.85	1.00	0.85	95.17	7.26	≤ 7.48	Pass
11ax-HE40	MCS0	134	5670	1.67	1.33	1.37	-0.96	95.17	7.21	≤ 7.48	Pass
11ax-HE40	MCS0	142	5710	0.88	1.56	0.12	1.34	95.17	7.25	≤ 7.48	Pass
11ax-HE80	MCS0	42	5210	-4.25	-4.25	-4.25	-6.69	95.00	1.50	≤ 13.48	Pass
11ax-HE80	MCS0	58	5290	-1.14	-3.09	-1.25	-2.84	95.00	4.26	≤ 7.48	Pass
11ax-HE80	MCS0	106	5530	-2.52	-2.68	-3.00	-2.97	95.00	3.45	≤ 7.48	Pass
11ax-HE80	MCS0	122	5610	1.13	1.65	0.20	0.08	95.00	7.06	≤ 7.48	Pass
11ax-HE80	MCS0	138	5690	1.70	1.65	0.15	0.04	95.00	7.20	≤ 7.48	Pass
11ax-HE80 + 80	MCS0	42	5210	-3.13	-3.11			94.47	2.86	≤ 7.48	Pass
		58	5290			-3.07	-4.48				
11ax-HE80 + 80	MCS0	106	5530	0.28	-2.23			94.47	4.37	≤ 7.48	Pass
		122	5610			-3.00	-3.77				

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/MHz) = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/MHz).

Note 2: When EUT duty cycle < 98%, Total PSD (dBm/MHz) = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/MHz) + $10 \cdot \log(1/\text{Duty Cycle})$.

Note 3: PSD Limit (dBm/MHz) = 17dBm/MHz - (9.52dBi - 6dBi) = 13.48dBm/MHz.

PSD Limit (dBm/MHz) = 11dBm/MHz - (9.52dBi - 6dBi) = 7.48dBm/MHz.

Product	無線基地台	Temperature	22°C
Test Engineer	Peter Syu	Relative Humidity	56%
Test Site	SR1	Test Date	2020/03/15 ~ 2020/03/26
Model No.	OAW-AP1321	Test Item	Power Spectral Density (UNII-Band 4)

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/100kHz)	Ant 1 PSD (dBm/100kHz)	Ant 2 PSD (dBm/100kHz)	Ant 3 PSD (dBm/100kHz)	Duty Cycle (%)	Constant Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
Ant 0 + 1 + 2 + 3												
11a	6Mbps	149	5745	-0.61	-0.47	-1.99	-1.48	91.91	6.99	12.28	≤26.48	Pass
11a	6Mbps	157	5785	-2.00	-1.69	-1.45	-1.28	91.91	6.99	11.78	≤26.48	Pass
11a	6Mbps	165	5825	-0.94	-1.82	-1.45	-2.01	91.91	6.99	11.84	≤26.48	Pass
11n-HT20	MCS0	149	5745	-1.17	-0.52	-1.79	-1.93	94.5	6.99	11.94	≤26.48	Pass
11n-HT20	MCS0	157	5785	-1.70	-1.38	-2.06	-1.66	94.5	6.99	11.56	≤26.48	Pass
11n-HT20	MCS0	165	5825	-2.10	-2.49	-2.12	-2.46	94.5	6.99	10.97	≤26.48	Pass
11n-HT40	MCS0	151	5755	-3.92	-4.49	-4.81	-4.96	90.20	6.99	8.93	≤26.48	Pass
11n-HT40	MCS0	159	5795	-4.72	-5.55	-5.08	-5.32	90.20	6.99	8.30	≤26.48	Pass
11ax-HE20	MCS0	149	5745	-8.52	-8.23	-8.87	-8.72	95.25	6.99	4.64	≤26.48	Pass
11ax-HE20	MCS0	157	5785	-8.61	-8.84	-9.34	-9.59	95.25	6.99	4.14	≤26.48	Pass
11ax-HE20	MCS0	165	5825	-9.06	-9.57	-8.51	-9.01	95.25	6.99	4.20	≤26.48	Pass
11ax-HE40	MCS0	151	5755	-4.06	-4.85	-5.56	-5.44	95.17	6.99	8.29	≤26.48	Pass
11ax-HE40	MCS0	159	5795	-4.82	-6.26	-5.65	-5.75	95.17	6.99	7.64	≤26.48	Pass
11ax-HE80	MCS0	155	5775	-8.61	-8.57	-9.08	-9.09	95.00	6.99	4.40	≤26.48	Pass

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/500kHz) = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/100kHz) + Constant Factor.

Note 2: When EUT duty cycle < 98%, Total PSD (dBm/500kHz) = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/100kHz) + Constant Factor + $10 \cdot \log(1/\text{Duty Cycle})$.

Note 3: PSD Limit (dBm/500kHz) = 30dBm/500kHz - (9.52dBi - 6dBi) = 26.48dBm/500kHz.

Product	無線基地台	Temperature	22°C
Test Engineer	Peter Syu	Relative Humidity	56%
Test Site	SR1	Test Date	2020/03/15 ~ 2020/03/26
Model No.	OAW-AP1321	Test Item	Power Spectral Density Scan Antenna

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVGSPD (dBm / MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)	Result
11a	6Mbps	36	5180	0.70	95.95	0.88	≤ 17	Pass
11a	6Mbps	44	5220	0.57	95.95	0.75	≤ 17	Pass
11a	6Mbps	48	5240	0.52	95.95	0.69	≤ 17	Pass
11a	6Mbps	52	5260	0.53	95.95	0.71	≤ 17	Pass
11a	6Mbps	60	5300	0.53	95.95	0.70	≤ 17	Pass
11a	6Mbps	64	5320	0.38	95.95	0.56	≤ 17	Pass
11a	6Mbps	100	5500	0.76	95.95	0.94	≤ 17	Pass
11a	6Mbps	120	5600	0.59	95.95	0.76	≤ 17	Pass
11a	6Mbps	140	5700	0.14	95.95	0.32	≤ 17	Pass
11a	6Mbps	144	5720	-0.02	95.95	0.16	≤ 17	Pass

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/ MHz) = AVGSPD (dBm / MHz).

Note 2: When EUT duty cycle < 98%, Total PSD (dBm/ MHz) = AVGSPD (dBm / MHz) + 10*log(1/duty cycle).

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVGSPD (dBm / 100kHz)	Duty Cycle (%)	Constant Factor	Total AVGSPD (dBm / 500kHz)	Limit (dBm / 500kHz)	Result
11a	6Mbps	149	5745	-11.14	95.95	6.99	-10.96	≤ 30	Pass
11a	6Mbps	157	5785	-10.74	95.95	6.99	-10.56	≤ 30	Pass
11a	6Mbps	165	5825	-10.74	95.95	6.99	-10.56	≤ 30	Pass

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/500kHz) = AVGSPD (dBm / 100kHz) + Constant Factor.

Note 2: When EUT duty cycle < 98%, Total PSD (dBm/500kHz) = AVGSPD (dBm / 100kHz) + 10*log(1/duty cycle) + Constant Factor.

802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

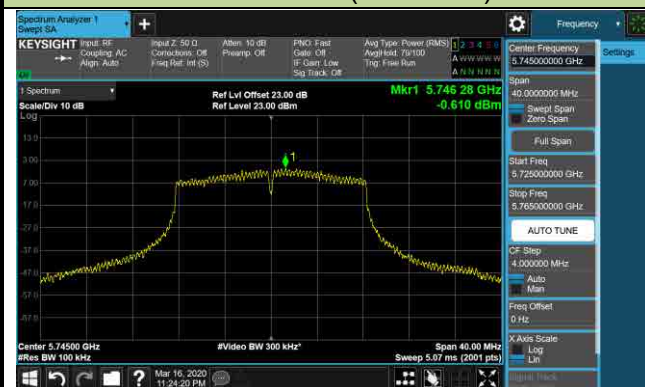
Channel 140 (5700MHz)



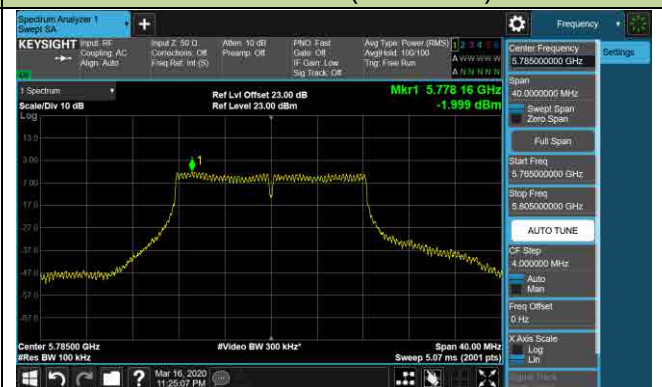
Channel 144 (5720MHz)



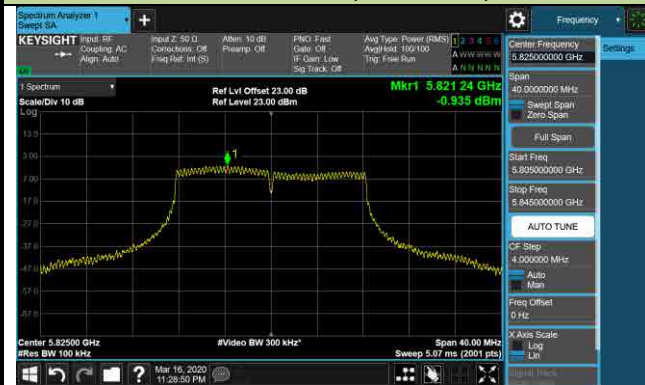
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11n-HT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



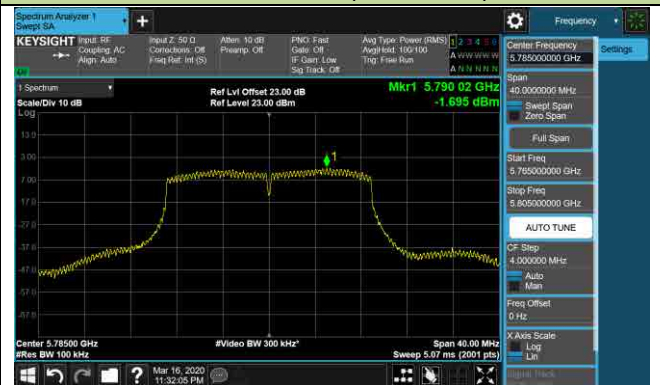
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 118 (5590MHz)



802.11n-HT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

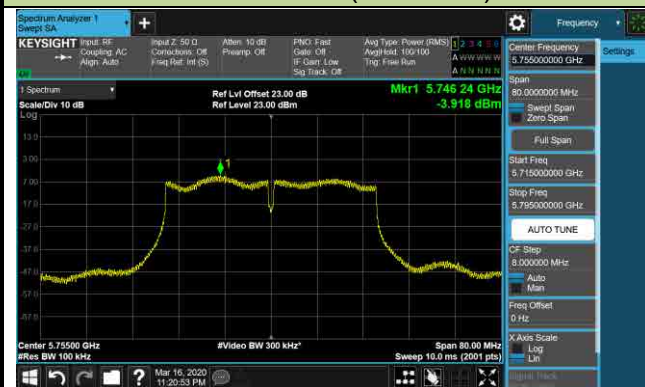
Channel 134 (5670MHz)



Channel 142 (5710MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



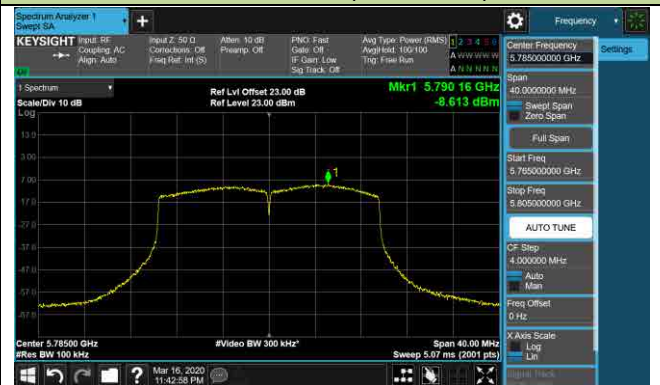
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11ax-HE40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 118 (5590MHz)



802.11ax-HE40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 134 (5670MHz)



Channel 142 (5710MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

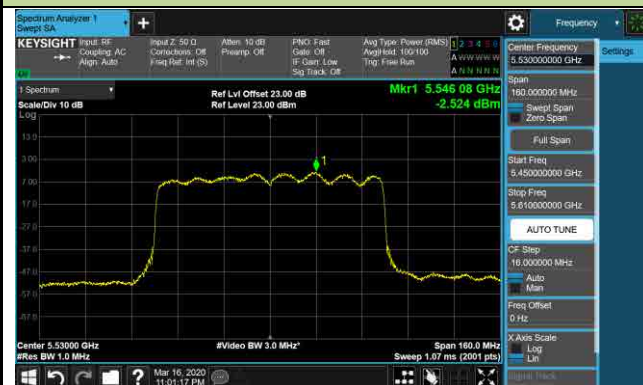
Channel 42 (5210MHz)



Channel 58 (5290MHz)



Channel 106 (5530MHz)



Channel 122 (5610MHz)



Channel 138 (5690MHz)



Channel 155 (5775MHz)



802.11ax-HE80+80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 42 (5210MHz)



Channel 106 (5530MHz)



802.11a Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11a Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



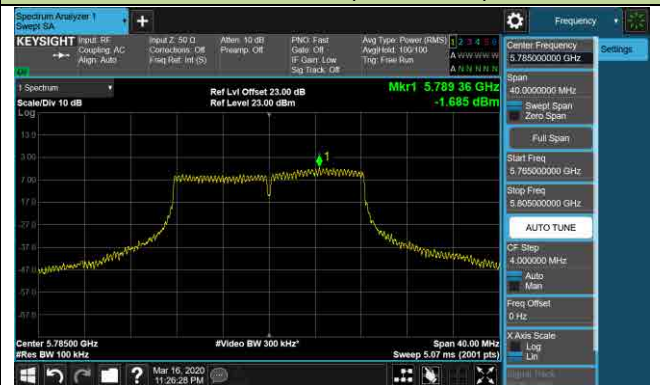
Channel 144 (5720MHz)



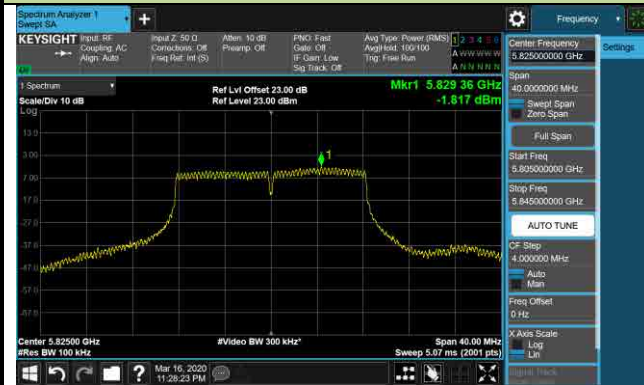
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



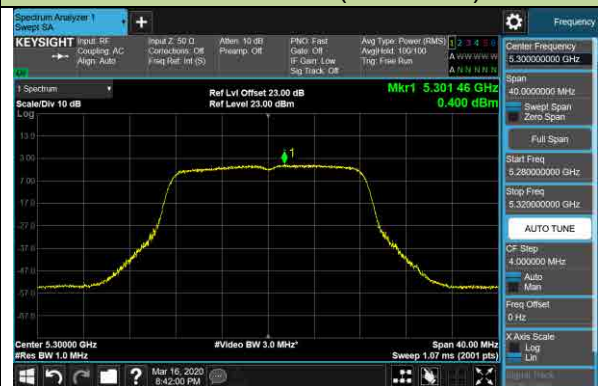
Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11n-HT20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



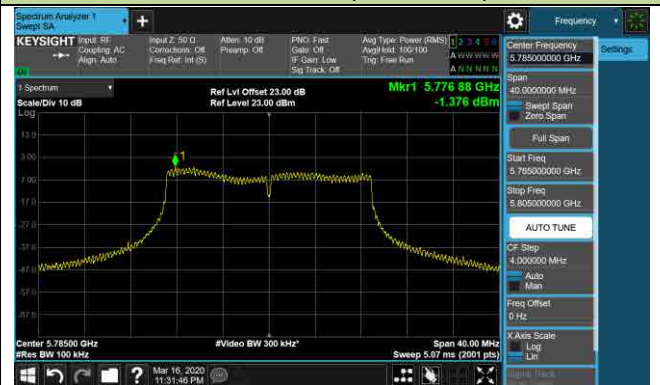
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT40 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



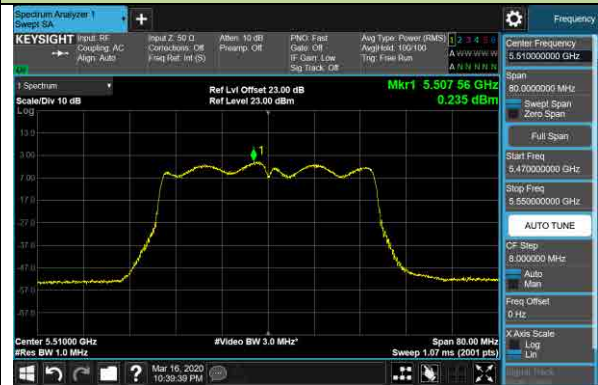
Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



Channel 142 (5710MHz)



802.11n-HT40 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



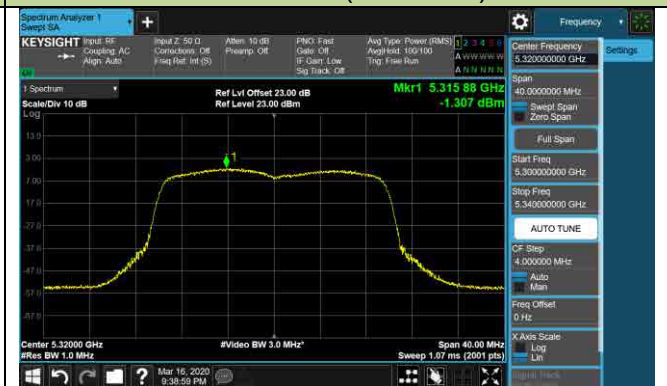
Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11ax-HE20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



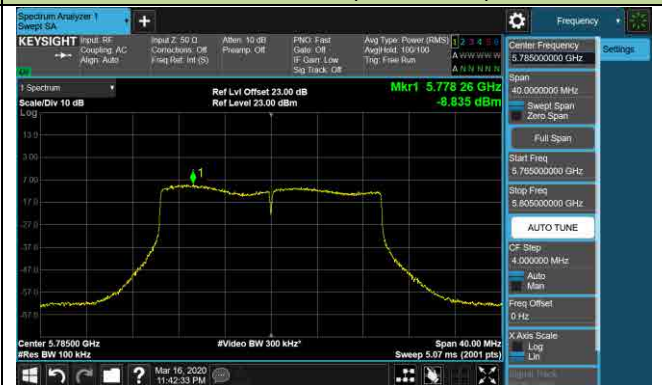
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11ax-HE40 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



Channel 142 (5710MHz)



802.11ax-HE40 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE80 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 42 (5210MHz)



Channel 58 (5290MHz)



Channel 106 (5530MHz)



Channel 122 (5610MHz)



Channel 138 (5690MHz)



Channel 155 (5775MHz)



802.11ax-HE80+80 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 42 (5210MHz)



Channel 106 (5530MHz)



802.11a Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



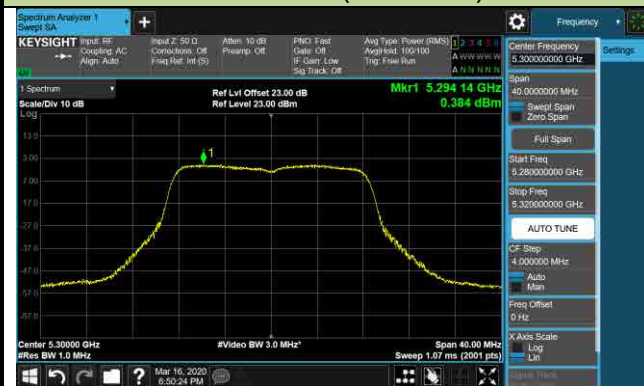
Channel 48 (5240MHz)



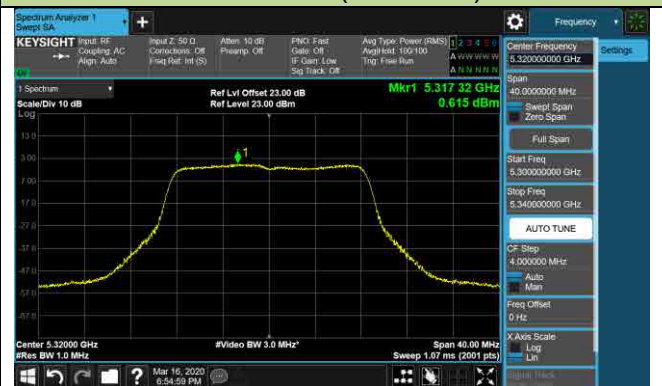
Channel 52 (5260MHz)



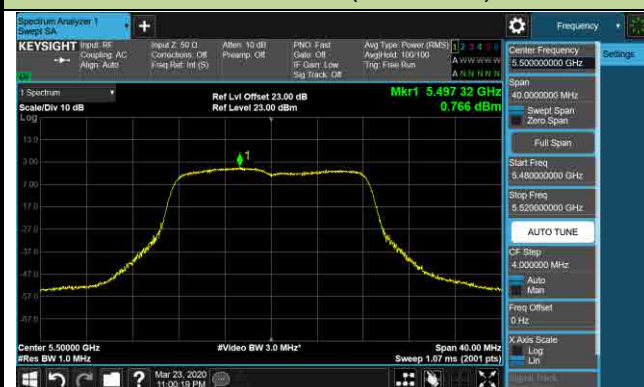
Channel 60 (5300MHz)



Channel 64 (5320MHz)

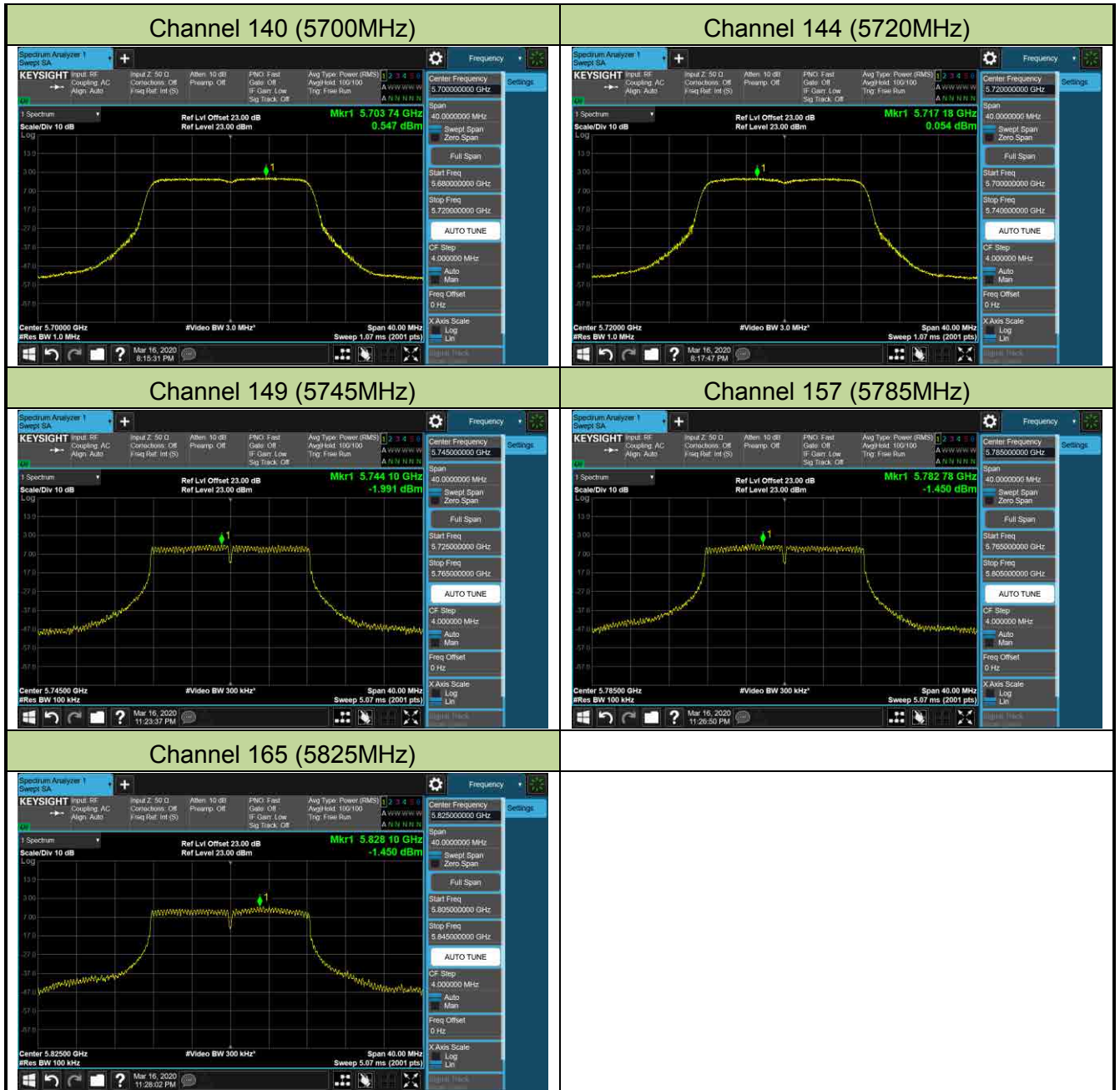


Channel 100 (5500MHz)



Channel 120 (5600MHz)





802.11n-HT20 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)



802.11n-HT20 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 140 (5700MHz)



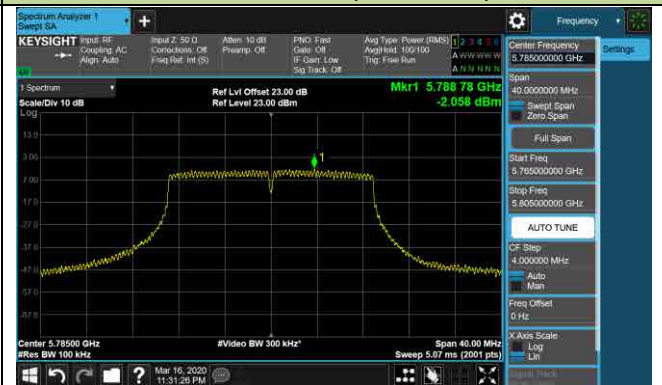
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11n-HT40 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 54 (5270MHz)



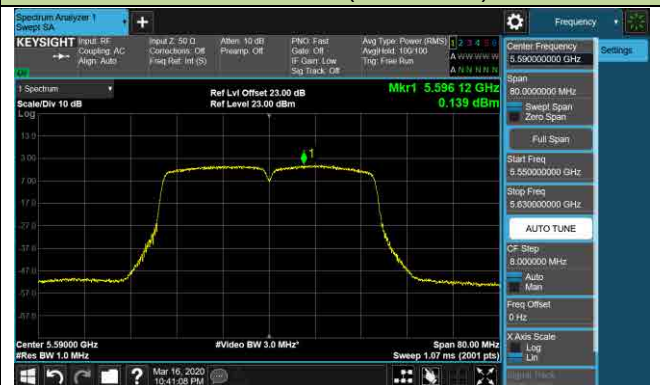
Channel 62 (5310MHz)



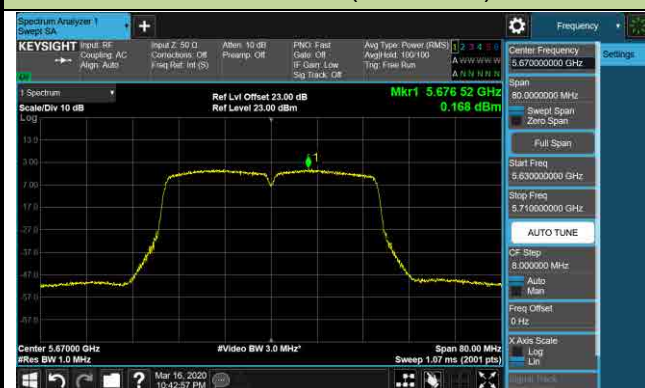
Channel 102 (5510MHz)



Channel 118 (5590MHz)



Channel 134 (5670MHz)



Channel 142 (5710MHz)

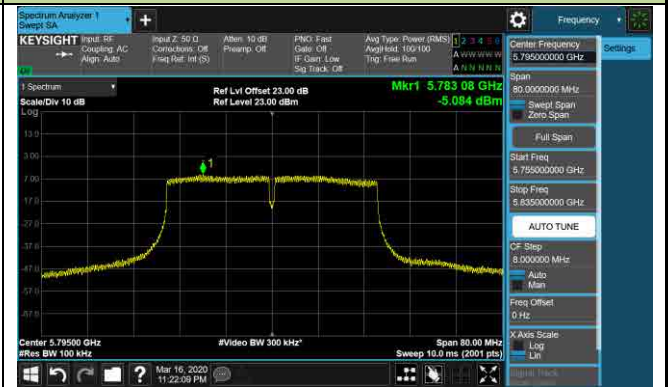


802.11n-HT40 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE20 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



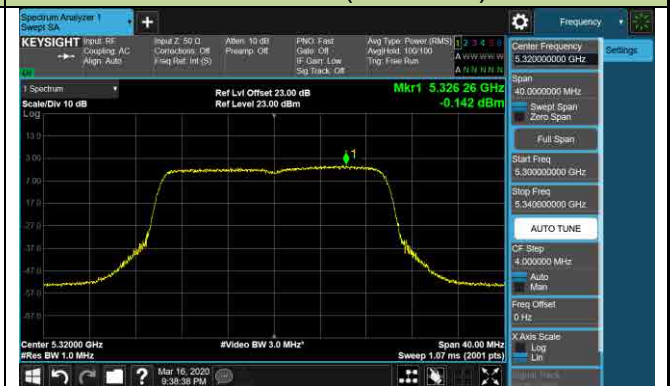
Channel 52 (5260MHz)



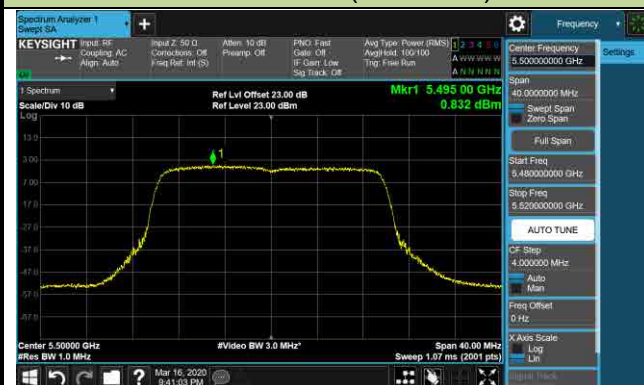
Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)

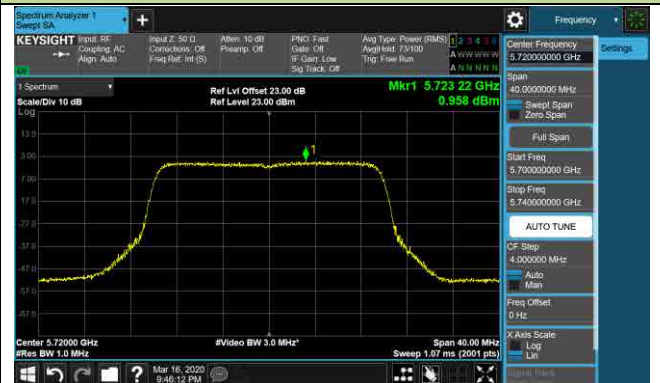


802.11ax-HE20 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

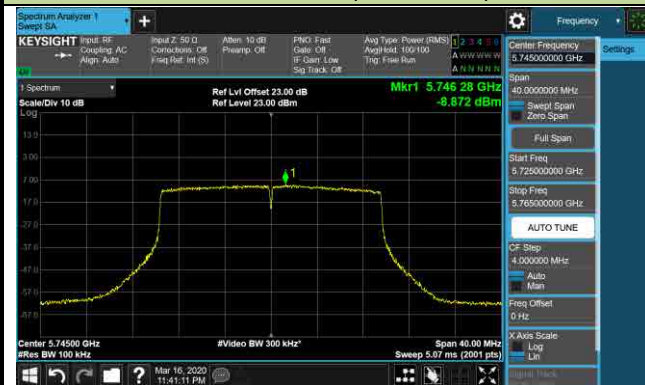
Channel 140 (5700MHz)



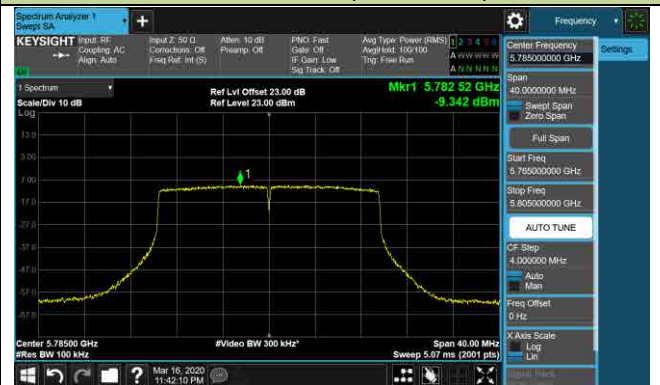
Channel 144 (5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



802.11ax-HE40 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 38 (5190MHz)



Channel 46 (5230MHz)



Channel 54 (5270MHz)



Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 118 (5590MHz)



802.11ax-HE40 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

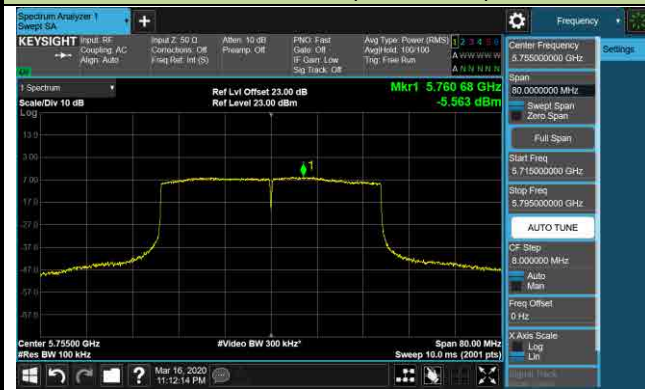
Channel 134 (5670MHz)



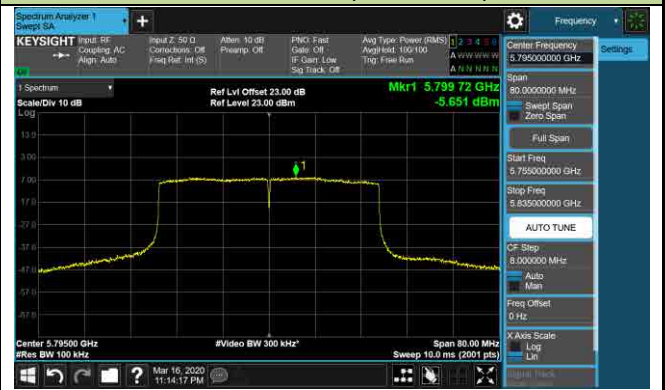
Channel 142 (5710MHz)



Channel 151 (5755MHz)



Channel 159 (5795MHz)



802.11ax-HE80 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

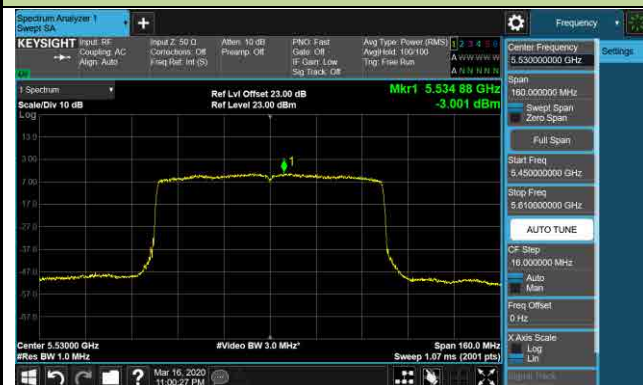
Channel 42 (5210MHz)



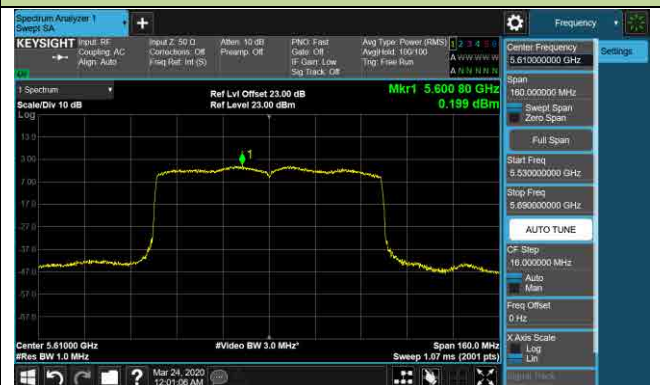
Channel 58 (5290MHz)



Channel 106 (5530MHz)



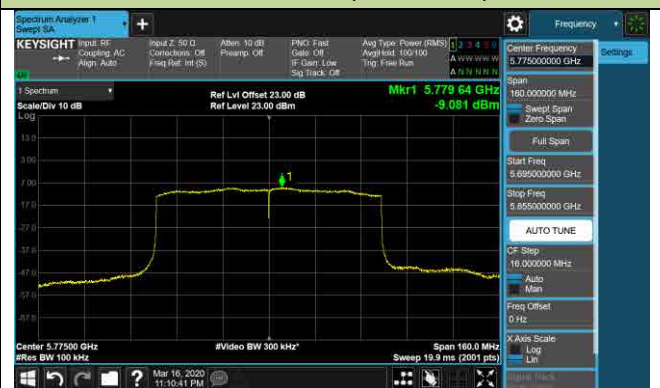
Channel 122 (5610MHz)



Channel 138 (5690MHz)



Channel 155 (5775MHz)



Channel 58 (5290MHz)



802.11a Power Spectral Density - Ant 3 / Ant 0 + 1 + 2 + 3

Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



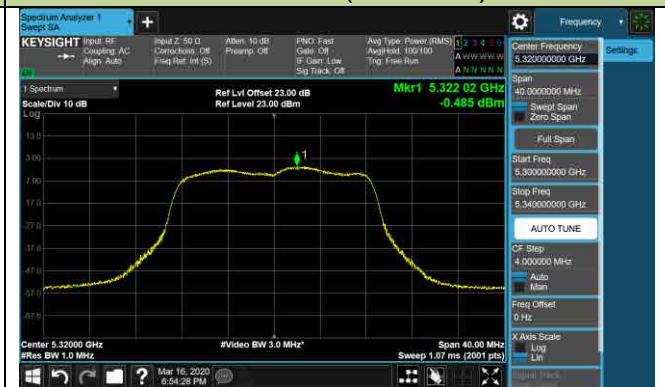
Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 120 (5600MHz)

