

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

Channel 149 (5745MHz)



Channel 157 (5785MHz)

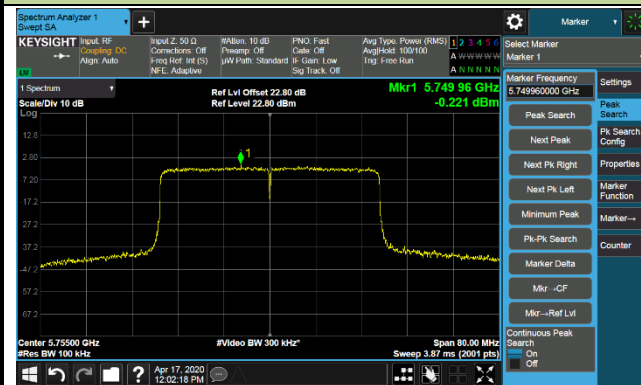


Channel 165 (5825MHz)



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

Channel 151 (5755MHz)



Channel 159 (5795MHz)



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

Channel 155 (5775MHz)



Product	AX3200 Tri-Band Wi-Fi 6 Router	Temperature	23 ~ 25°C
Test Engineer	Kevin Ker	Relative Humidity	40 ~ 56%
Test Site	SR1	Test Date	2020/04/15 ~ 2020/05/15
Mode	Power Spectral Density (U-NII- 1) Beamforming Mode		

Test Mode	Data Rate /MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11ac-VHT20	MCS0	36	5180	4.30	4.19	98.52	7.32	≤ 16.45	Pass
11ac-VHT20	MCS0	44	5220	12.62	13.32	98.52	16.06	≤ 16.45	Pass
11ac-VHT20	MCS0	48	5240	12.84	13.18	98.52	16.09	≤ 16.45	Pass
11ac-VHT40	MCS0	38	5190	-1.29	-1.40	96.96	1.80	≤ 16.45	Pass
11ac-VHT40	MCS0	46	5230	10.60	11.00	96.96	13.95	≤ 16.45	Pass
11ac-VHT80	MCS0	42	5210	0.64	0.51	93.88	3.86	≤ 16.45	Pass
11ax-HE20	MCS0	36	5180	4.11	4.05	97.89	7.18	≤ 16.45	Pass
11ax-HE20	MCS0	44	5220	13.03	13.39	97.89	16.32	≤ 16.45	Pass
11ax-HE20	MCS0	48	5240	13.05	13.35	97.89	16.31	≤ 16.45	Pass
11ax-HE40	MCS0	38	5190	2.33	2.09	96.02	5.40	≤ 16.45	Pass
11ax-HE40	MCS0	46	5230	9.32	9.73	96.02	12.71	≤ 16.45	Pass
11ax-HE80	MCS0	42	5210	-3.69	-3.56	92.58	-0.28	≤ 16.45	Pass

Note 1: When EUT duty cycle ≥ 98%,

For 5150 - 5250MHz, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$ (dBm/MHz).

When EUT duty cycle < 98%,

For 5150 - 5250MHz, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$ (dBm/MHz) + $10 \cdot \log (1/\text{Duty Cycle})$.

Note 2:

For 5150 - 5250MHz Bands: PSD Limit (dBm/MHz) = 17 - (6.55 - 6) = 16.45dBm/MHz.

Product	AX3200 Tri-Band Wi-Fi 6 Router	Temperature	24°C
Test Engineer	Kevin Ker	Relative Humidity	58%
Test Site	SR2	Test Date	2020/04/22 ~ 2020/05/13
Test Item	Power Spectral Density (U-NII-3) Beamforming Mode		

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 (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
11ac-VHT20	MCS0	149	5745	-4.81	-4.68	-4.47	-4.49	98.52	6.99	8.47	≤ 26.78	Pass
11ac-VHT20	MCS0	157	5785	-0.70	-0.84	-0.67	-0.67	98.52	6.99	12.29	≤ 26.78	Pass
11ac-VHT20	MCS0	165	5825	-4.58	-4.15	-4.67	-4.26	98.52	6.99	8.66	≤ 26.78	Pass
11ac-VHT40	MCS0	151	5755	-6.39	-6.63	-5.98	-7.08	96.96	6.99	6.64	≤ 26.78	Pass
11ac-VHT40	MCS0	159	5795	-4.15	-4.53	-3.67	-4.28	96.96	6.99	9.00	≤ 26.78	Pass
11ac-VHT80	MCS0	155	5775	-11.87	-11.21	-11.34	-11.47	93.88	6.99	1.82	≤ 26.78	Pass
11ax-HE20	MCS0	149	5745	-1.18	-1.46	-1.11	-1.17	97.89	6.99	11.88	≤ 26.78	Pass
11ax-HE20	MCS0	157	5785	-1.19	-1.11	-0.97	-0.99	97.89	6.99	12.04	≤ 26.78	Pass
11ax-HE20	MCS0	165	5825	-1.03	-1.08	-0.68	-0.71	97.89	6.99	12.23	≤ 26.78	Pass
11ax-HE40	MCS0	151	5755	-6.65	-6.63	-6.05	-6.39	96.02	6.99	6.77	≤ 26.78	Pass
11ax-HE40	MCS0	159	5795	-5.34	-5.37	-4.90	-5.32	96.02	6.99	7.96	≤ 26.78	Pass
11ax-HE80	MCS0	155	5775	-12.61	-12.58	-12.30	-12.47	92.58	6.99	0.86	≤ 26.78	Pass

Note 1: When EUT duty cycle ≥ 98%,

the 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 (dB).

When EUT duty cycle < 98%, the 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 (dB) + $10 \cdot \log (1/\text{Duty Cycle})$.

Note 2: PSD Limit (dBm/500kHz) = 30 - (9.22 - 6) = 26.78dBm/500kHz.

802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

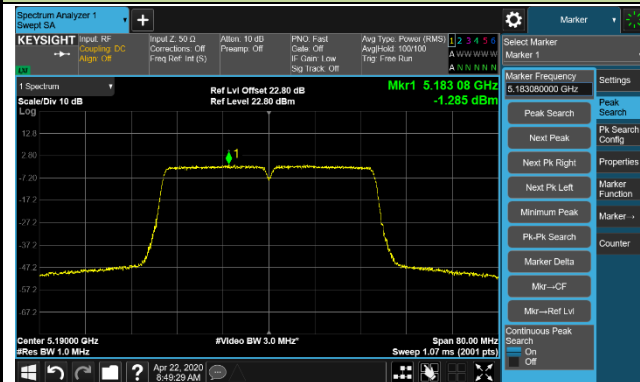


Channel 48 (5240MHz)



802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 38 (5190MHz)

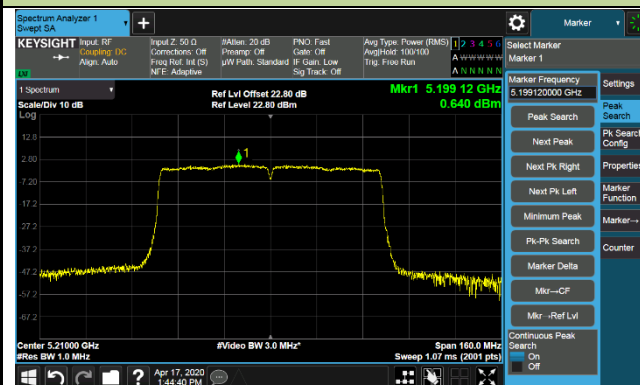


Channel 46 (5230MHz)



802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 42 (5210MHz)

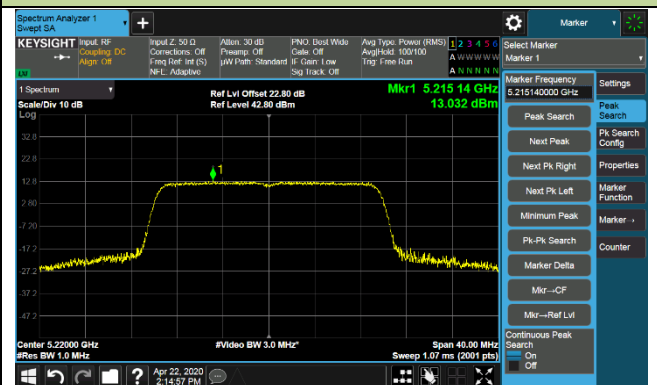


802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1

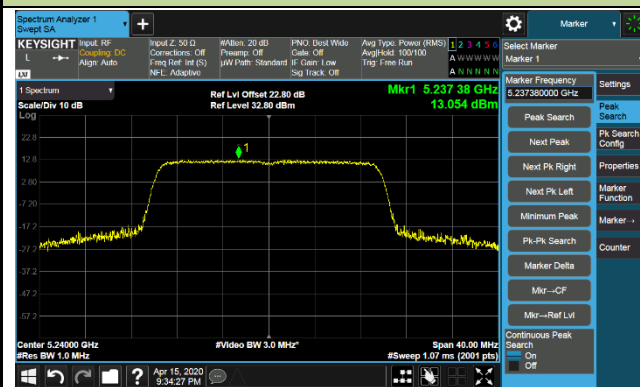
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



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

Channel 38 (5190MHz)

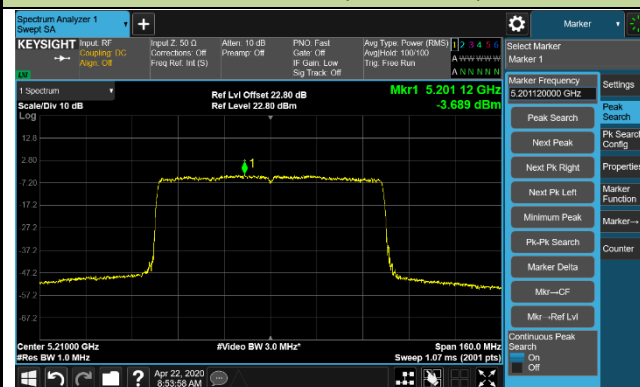


Channel 46 (5230MHz)



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

Channel 42 (5210MHz)



802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

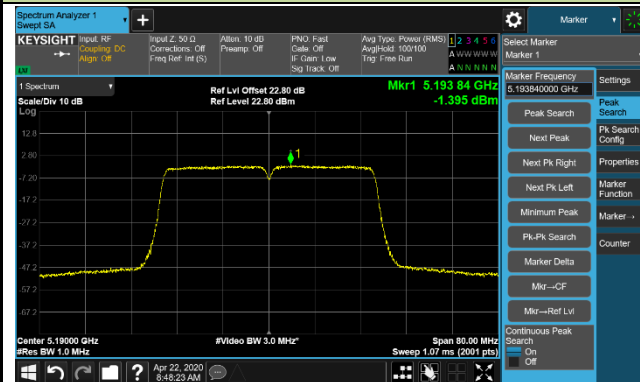


Channel 48 (5240MHz)



802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 38 (5190MHz)

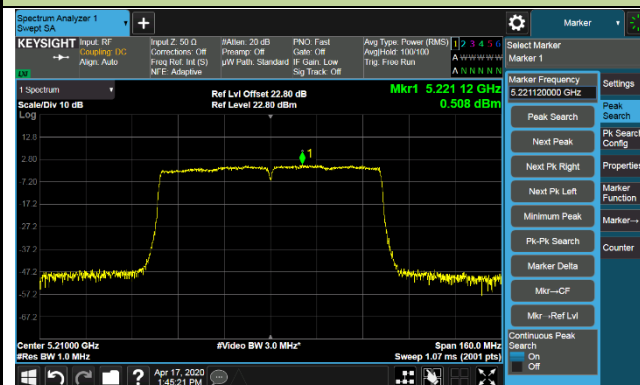


Channel 46 (5230MHz)



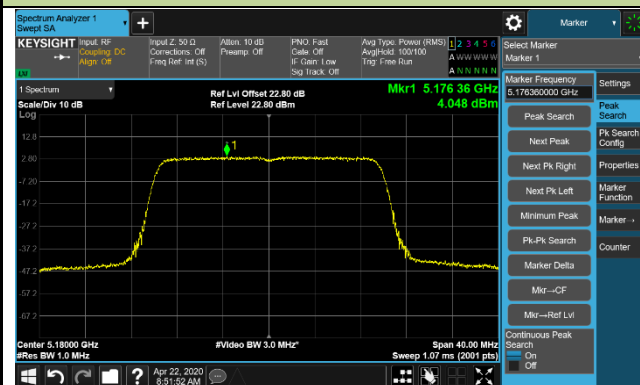
802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 42 (5210MHz)



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

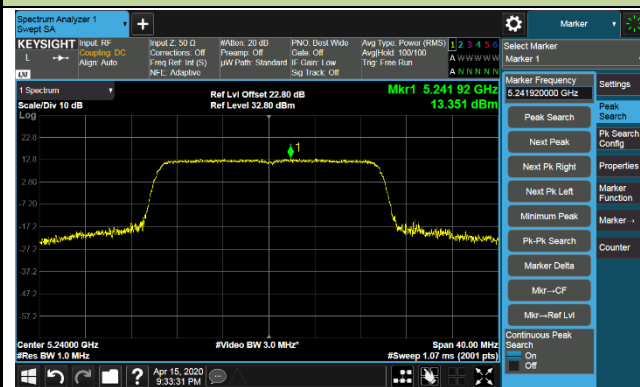
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)



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

Channel 38 (5190MHz)

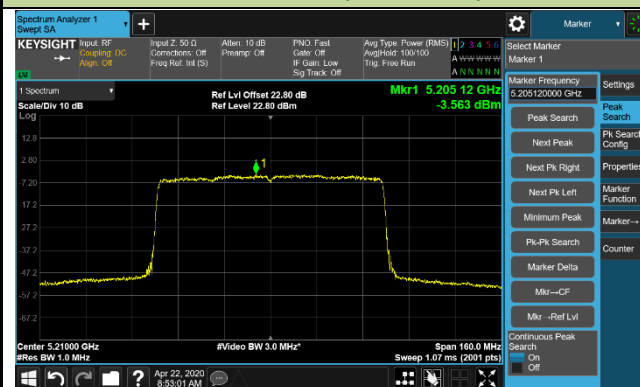


Channel 46 (5230MHz)



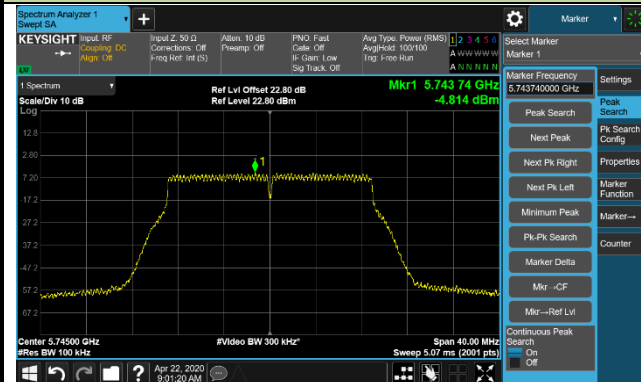
802.11ax-HE80 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 42 (5210MHz)

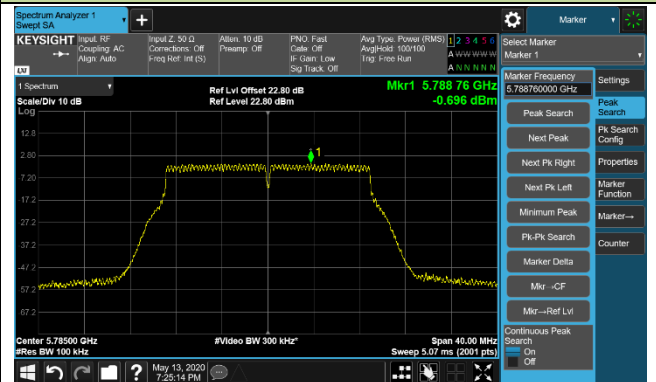


802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

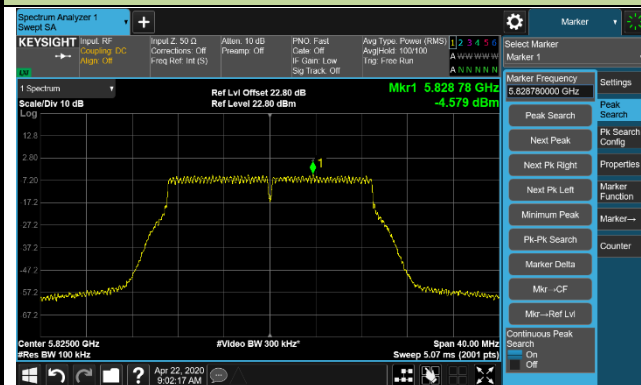
Channel 149 (5745MHz)



Channel 157 (5785MHz)

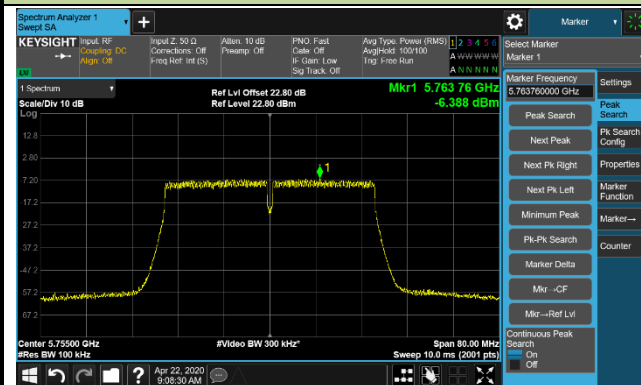


Channel 165 (5825MHz)

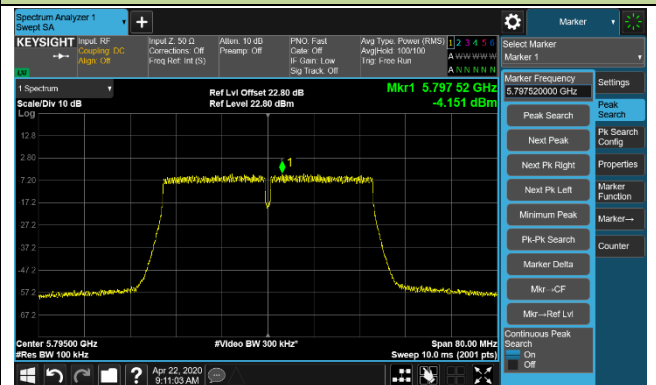


802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)

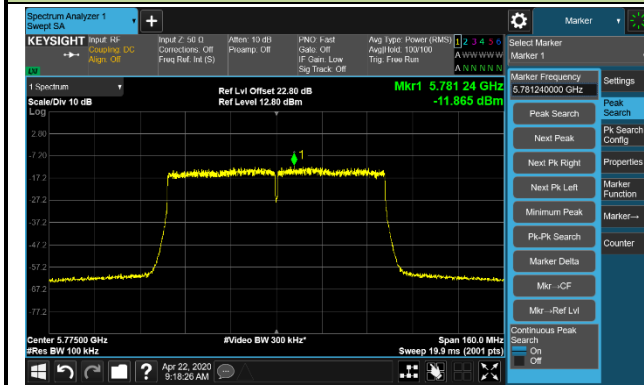


Channel 159 (5795MHz)



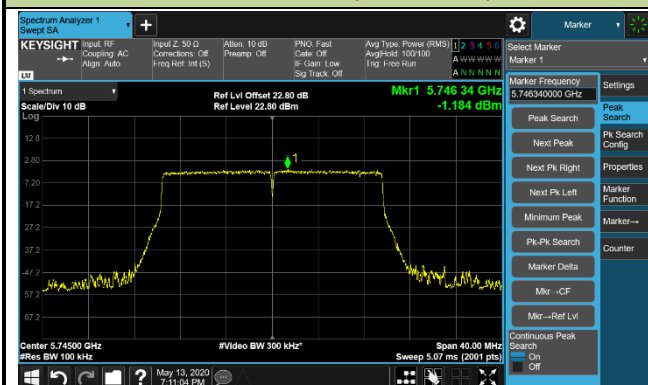
802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

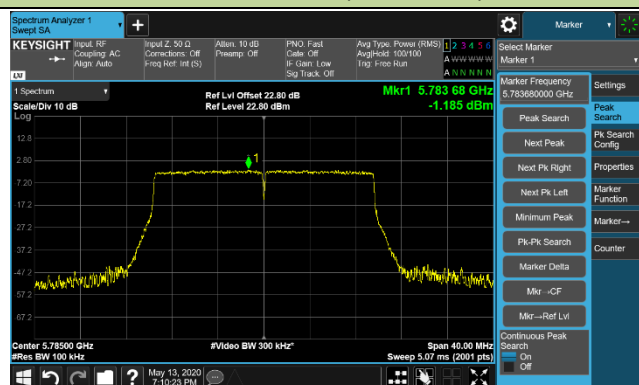


802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

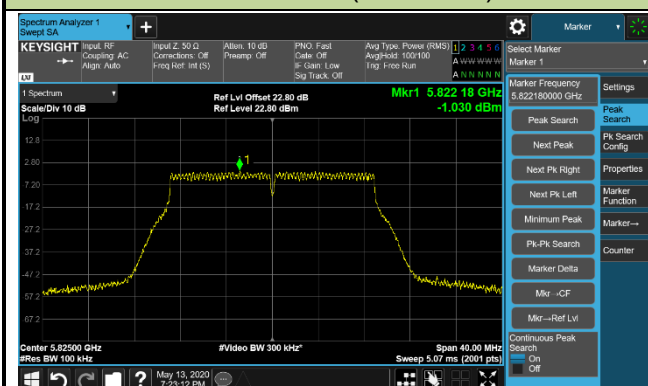
Channel 149 (5745MHz)



Channel 157 (5785MHz)

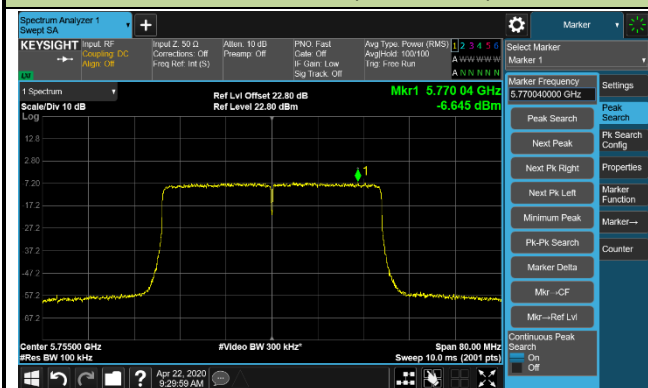


Channel 165 (5825MHz)

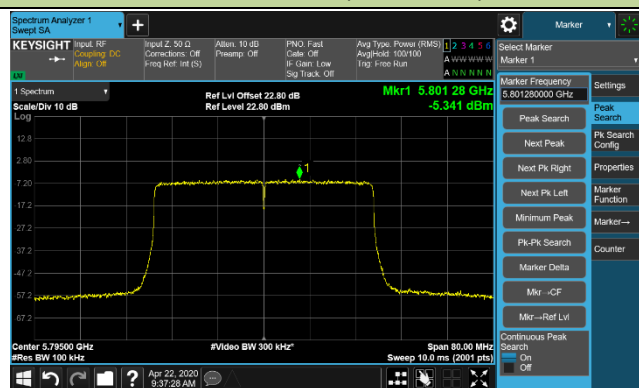


802.11ax-HE40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)



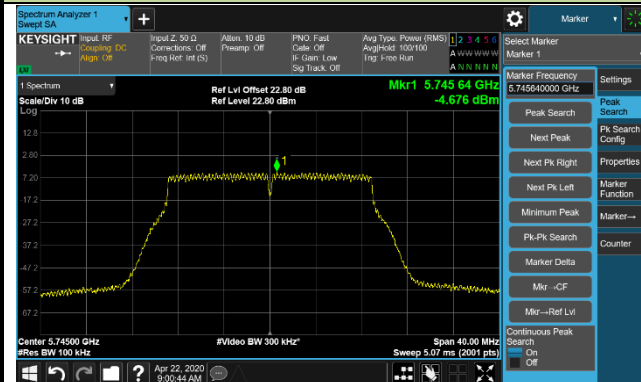
802.11ax-HE80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

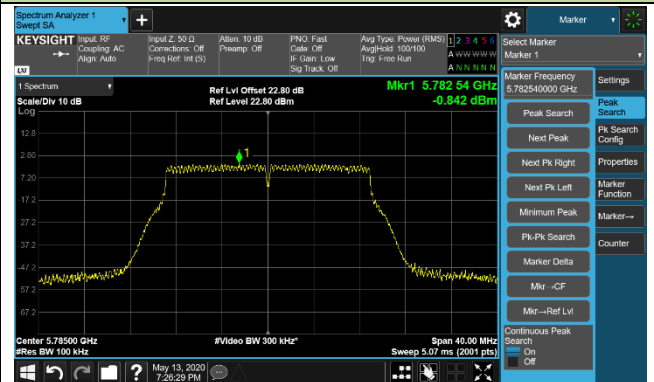


802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

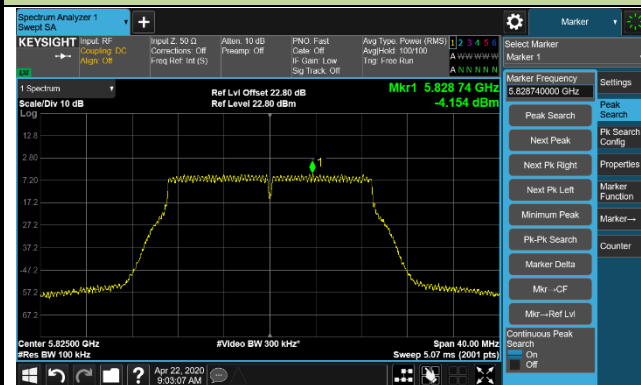
Channel 149 (5745MHz)



Channel 157 (5785MHz)

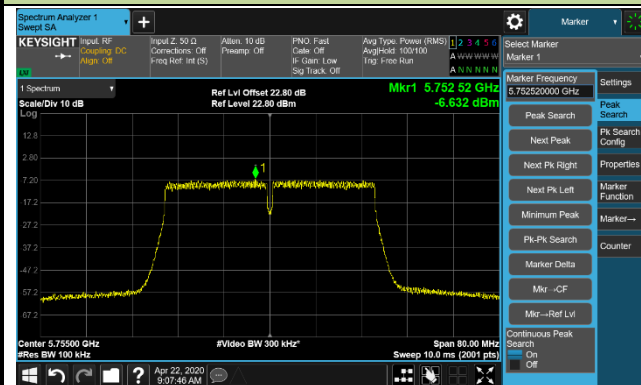


Channel 165 (5825MHz)

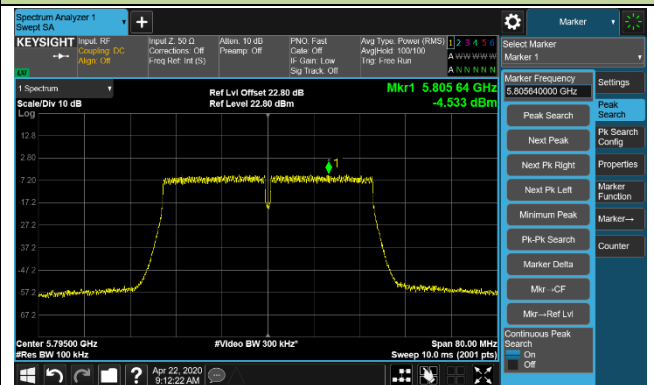


802.11ac-VHT40 Power Spectral Density -Ant 1 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)

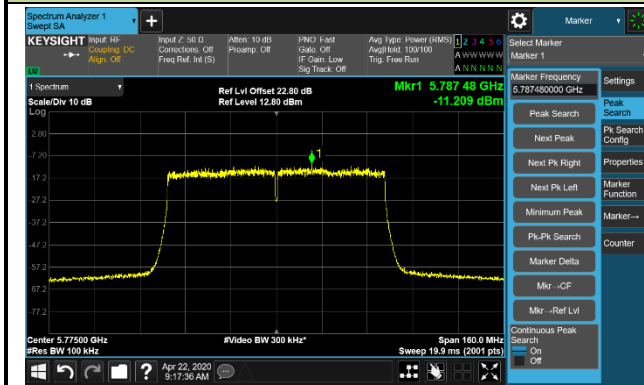


Channel 159 (5795MHz)



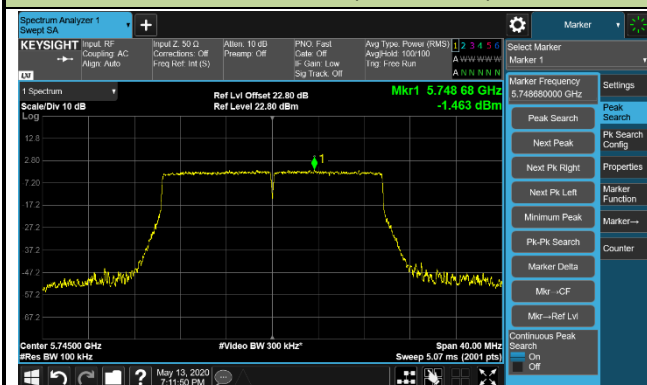
802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

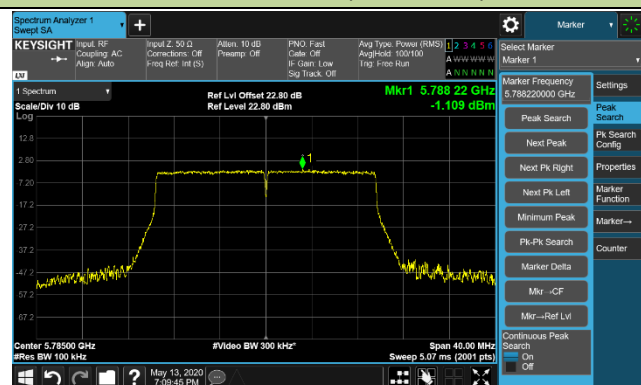


802.11ax-HE20 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 149 (5745MHz)



Channel 157 (5785MHz)

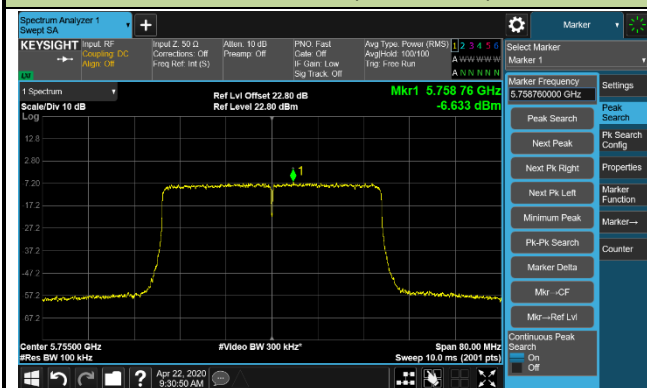


Channel 165 (5825MHz)

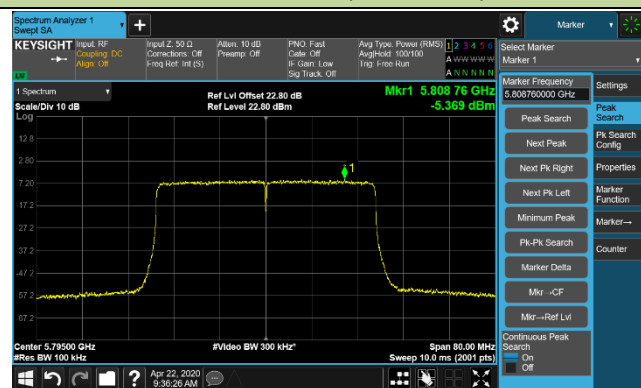


802.11ax-HE40 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)



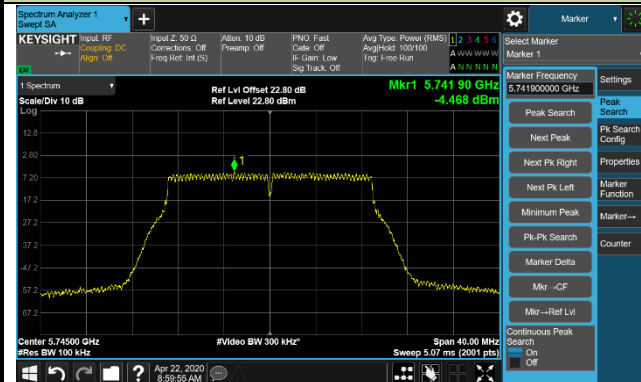
802.11ax-HE80 Power Spectral Density - Ant 1 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

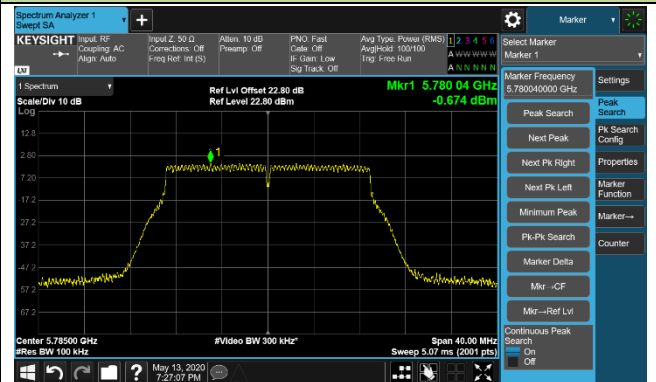


802.11ac-VHT20 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

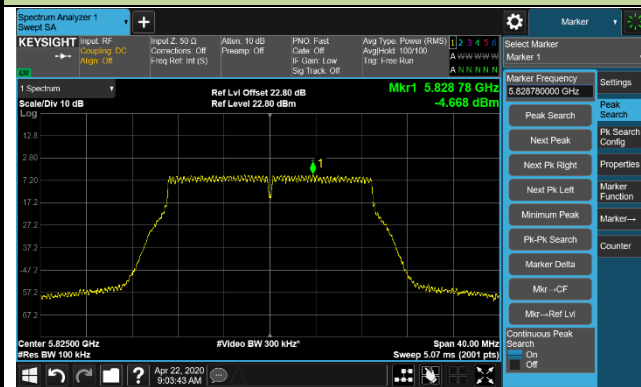
Channel 149 (5745MHz)



Channel 157 (5785MHz)

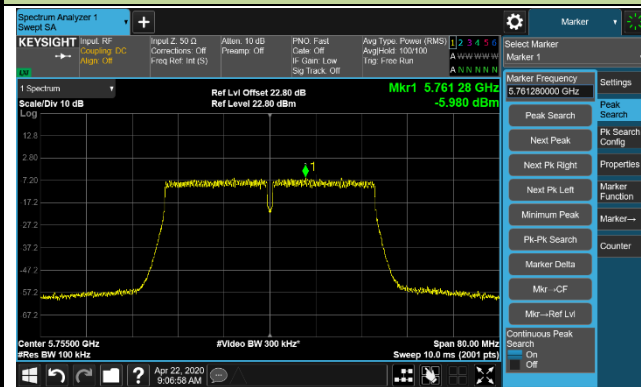


Channel 165 (5825MHz)

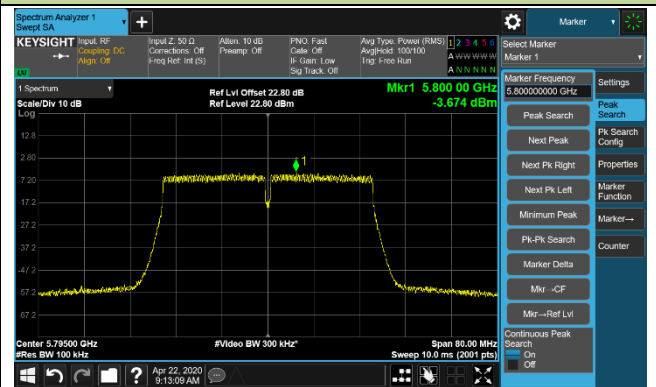


802.11ac-VHT40 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)

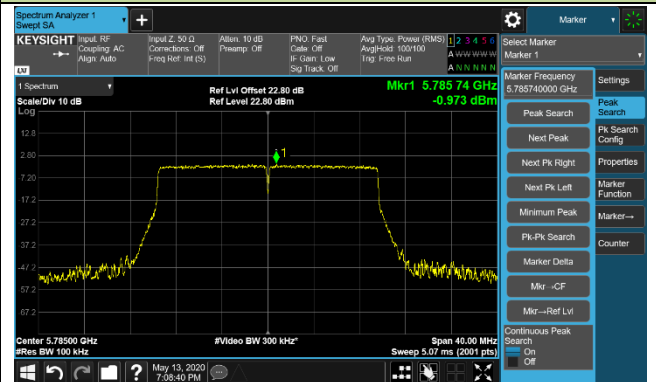


802.11ac-VHT80 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)



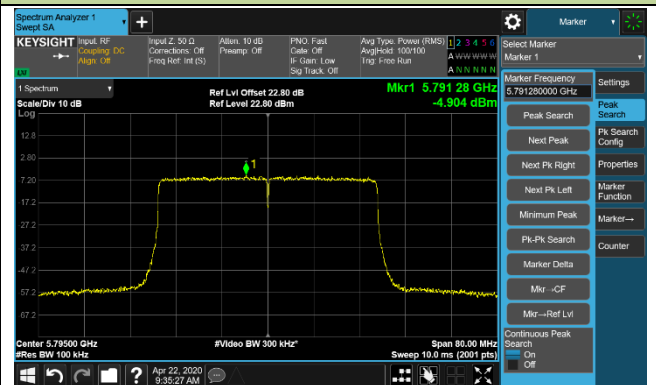
Channel 157 (5785MHz)



The following are some of the most common types of errors that can occur when using a calculator:

- **Incorrect input**: This occurs when the user enters the wrong numbers or symbols into the calculator.
- **Order of operations**: The calculator may not perform calculations in the correct order if the user does not use parentheses to group operations.
- **Rounding errors**: Calculators often round results to a certain number of decimal places, which can lead to small discrepancies over time.
- **Memory issues**: If the calculator has memory functions, users must ensure they are clearing or saving values correctly.
- **Power supply problems**: For handheld calculators, low batteries can cause unexpected shutdowns or incorrect readings.

Channel 159 (5795MHz)



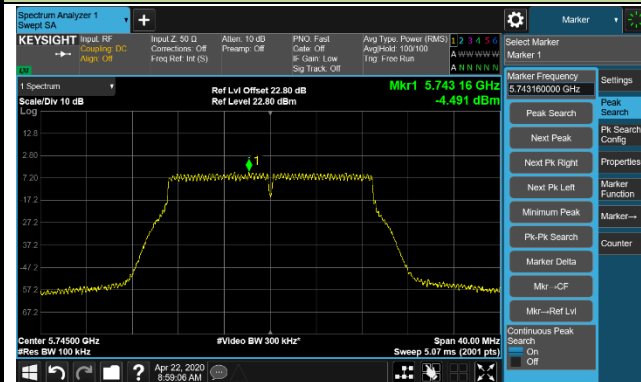
802.11ax-HE80 Power Spectral Density - Ant 2 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

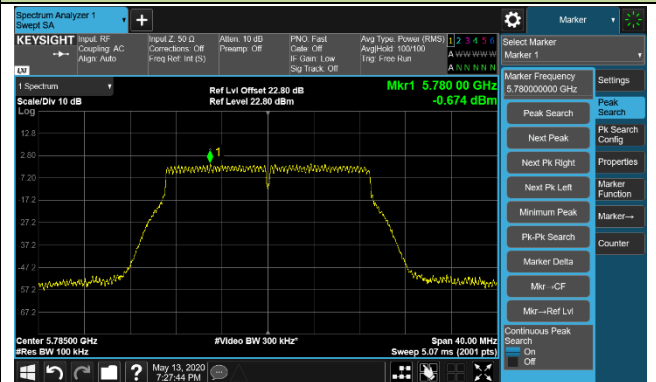


802.11ac-VHT20 Power Spectral Density - Ant 3 / Ant 0 + 1 + 2 + 3

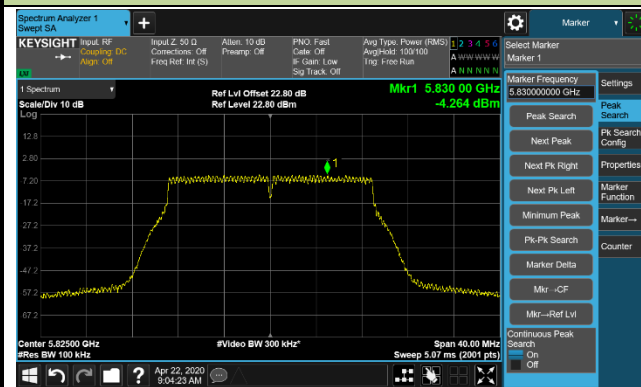
Channel 149 (5745MHz)



Channel 157 (5785MHz)

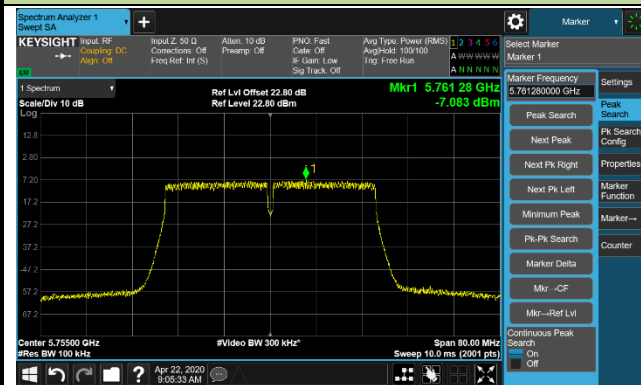


Channel 165 (5825MHz)

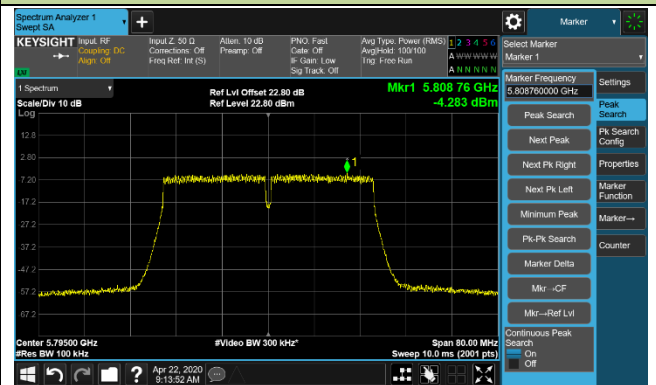


802.11ac-VHT40 Power Spectral Density - Ant 3 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)

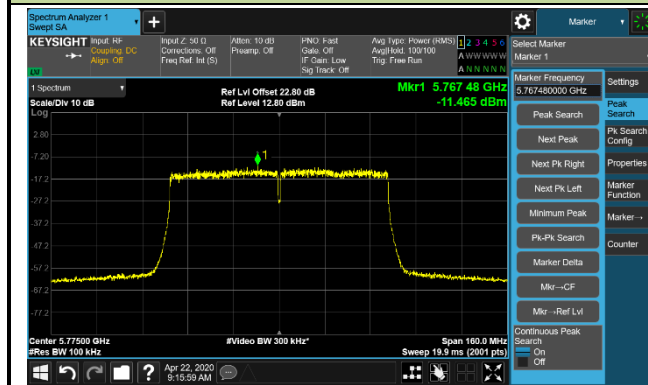


Channel 159 (5795MHz)



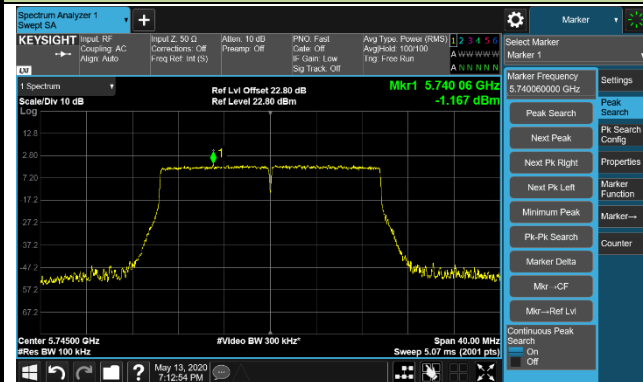
802.11ac-VHT80 Power Spectral Density - Ant 3 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)

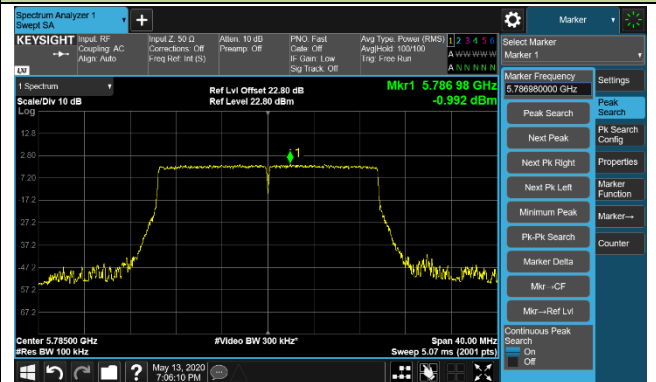


802.11ax-HE20 Power Spectral Density - Ant 3 / Ant 0 + 1 + 2 + 3

Channel 149 (5745MHz)



Channel 157 (5785MHz)

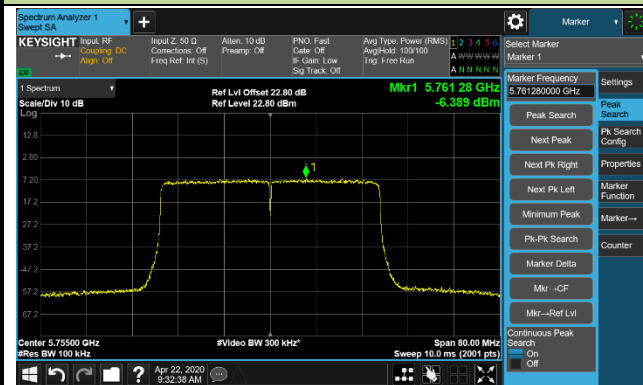


Channel 165 (5825MHz)



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

Channel 151 (5755MHz)



Channel 159 (5795MHz)

