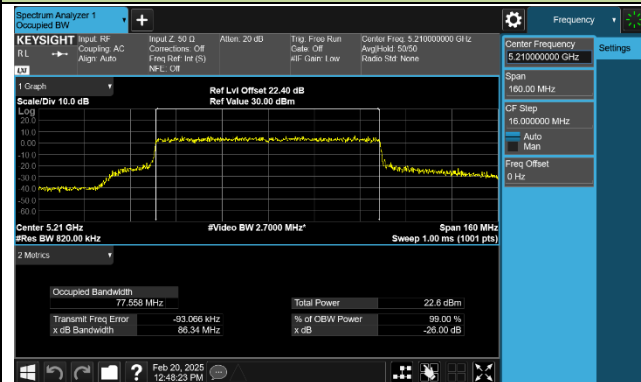
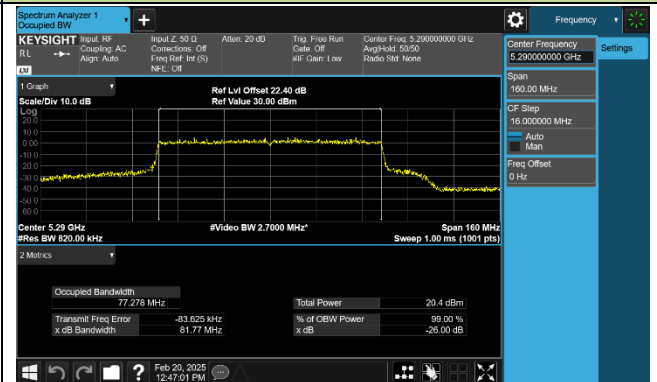


802.11ax-HE80 26dB Bandwidth & 99% Bandwidth

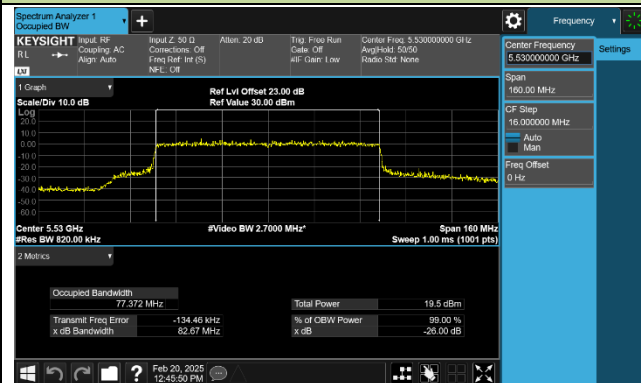
Channel 42 (5210MHz)



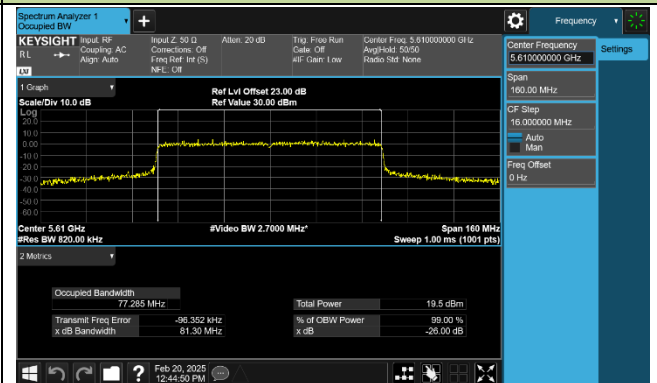
Channel 58 (5290MHz)



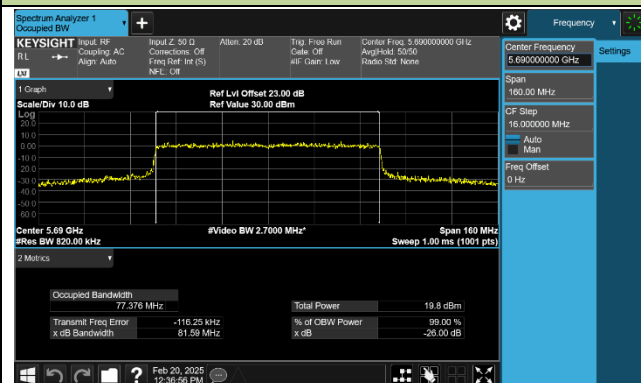
Channel 106 (5530MHz)



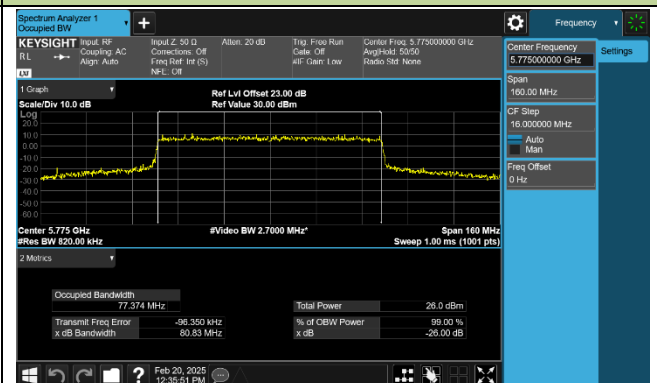
Channel 122 (5610MHz)



Channel 138 (5690MHz)

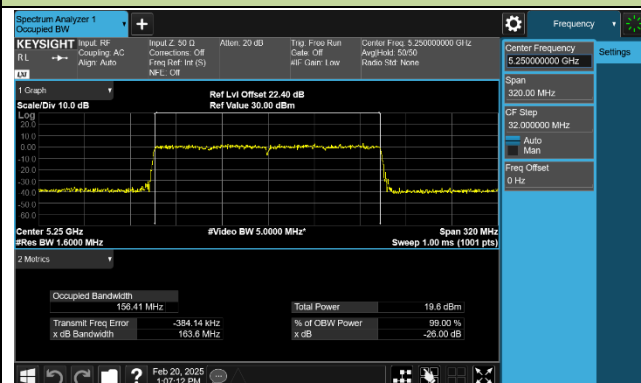


Channel 155 (5775MHz)

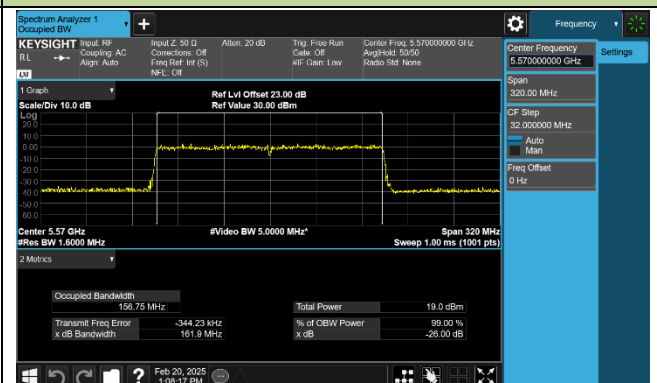


802.11ax-HE160 26dB Bandwidth & 99% Bandwidth

Channel 50 (5250MHz)

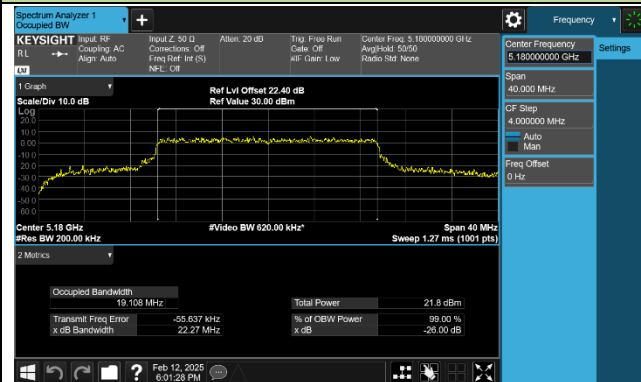


Channel 114 (5570MHz)

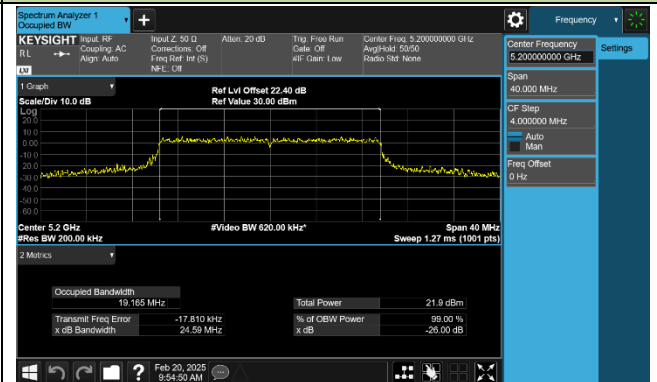


802.11be-EHT20 26dB Bandwidth & 99% Bandwidth

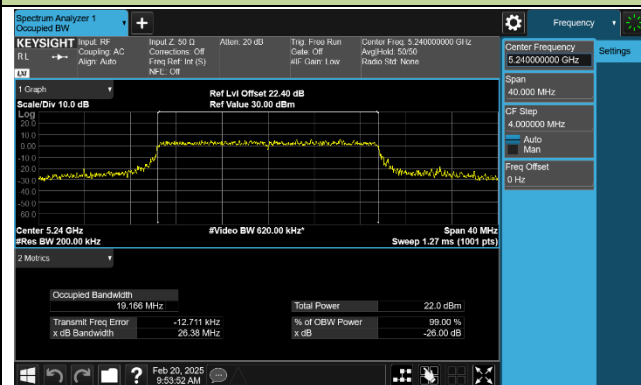
Channel 36 (5180MHz)



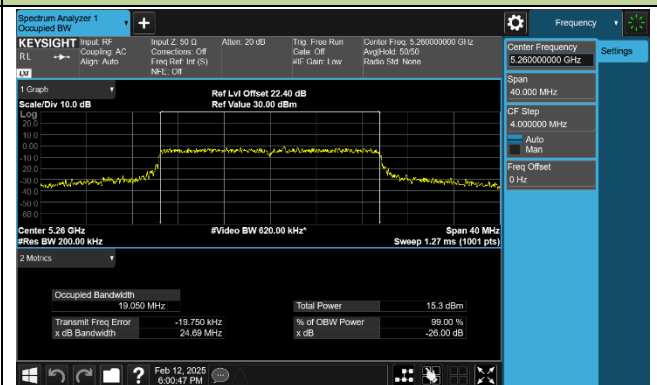
Channel 40 (5200MHz)



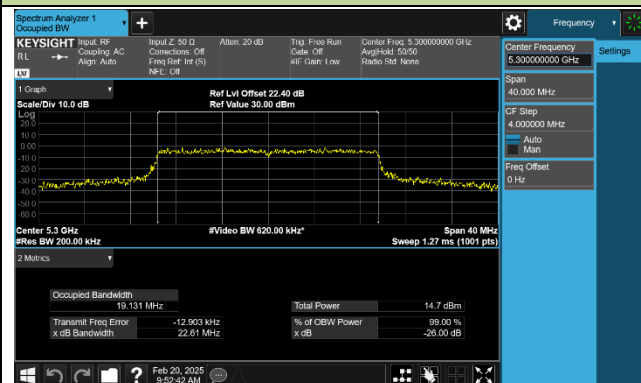
Channel 48 (5240MHz)



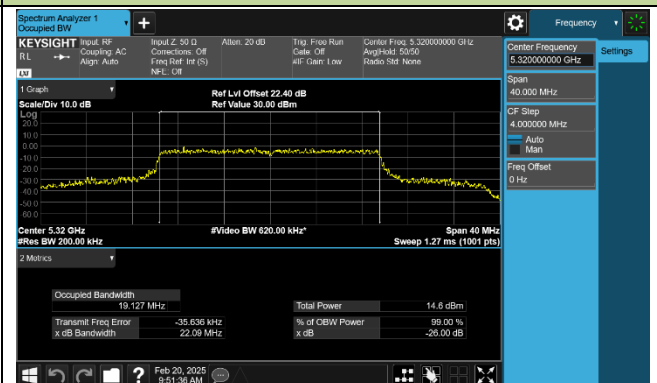
Channel 52 (5260MHz)



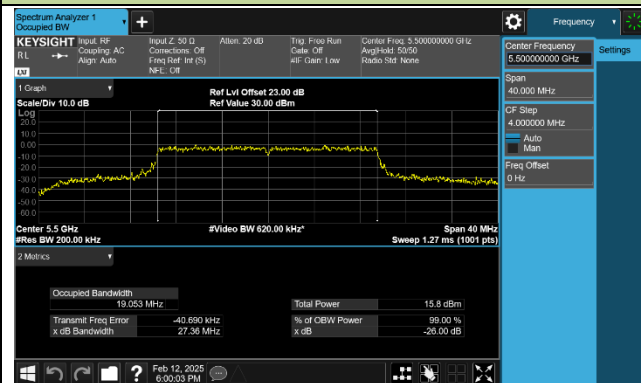
Channel 60 (5300MHz)



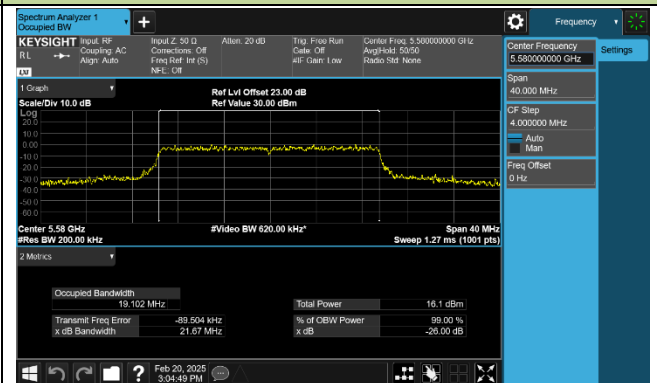
Channel 64 (5320MHz)

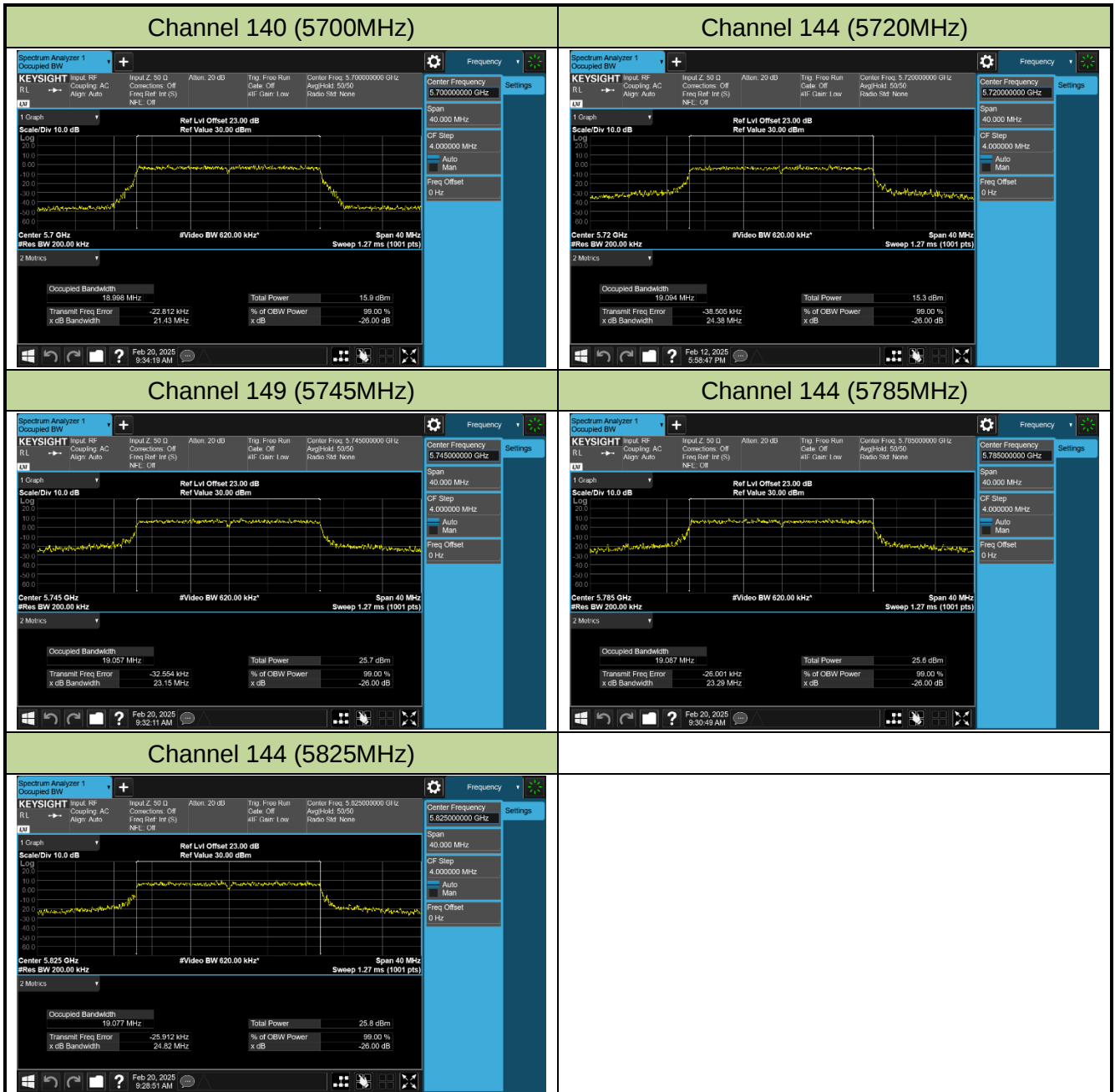


Channel 100 (5500MHz)



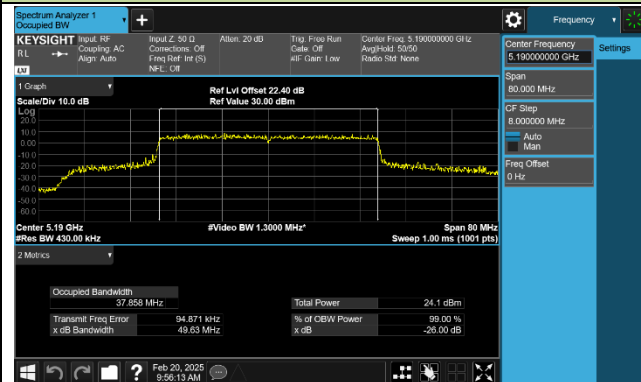
Channel 116 (5580MHz)



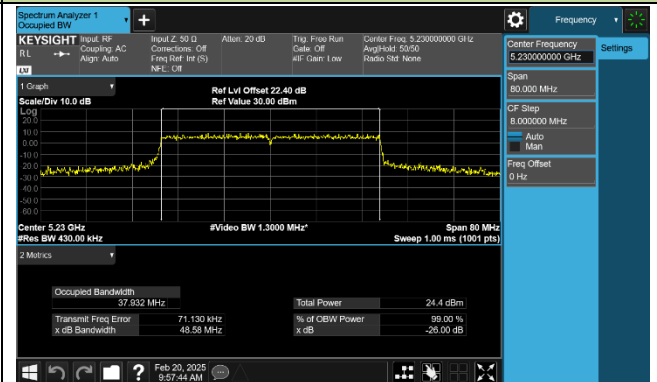


802.11be-EHT40 26dB Bandwidth & 99% Bandwidth

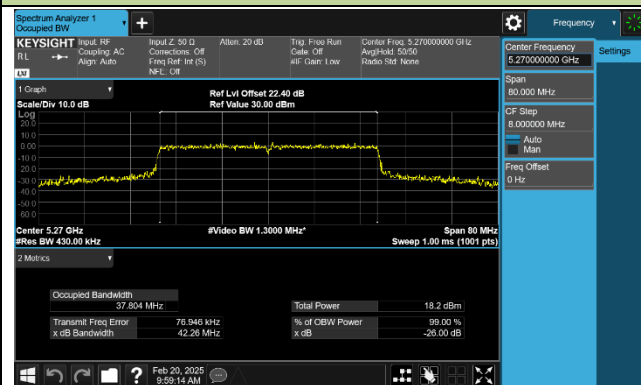
Channel 38 (5190MHz)



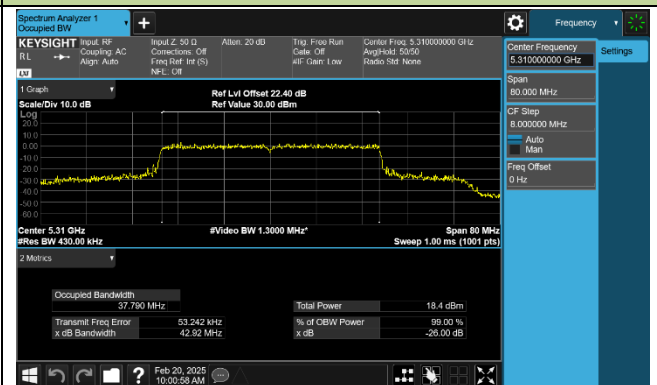
Channel 46 (5230MHz)



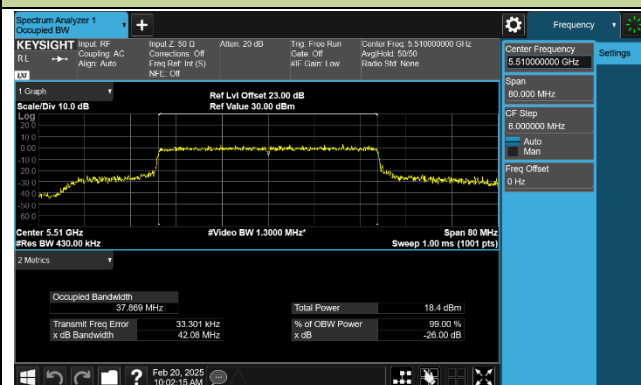
Channel 54 (5270MHz)



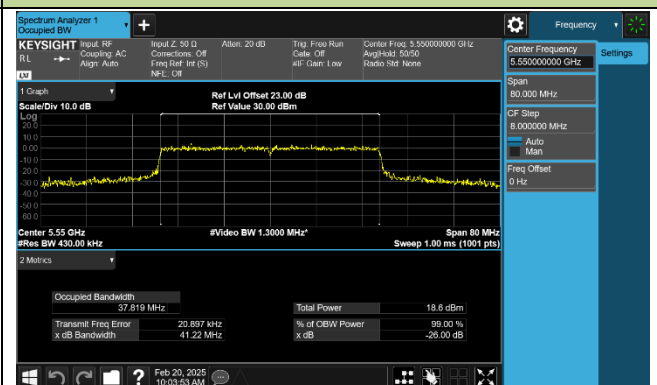
Channel 62 (5310MHz)



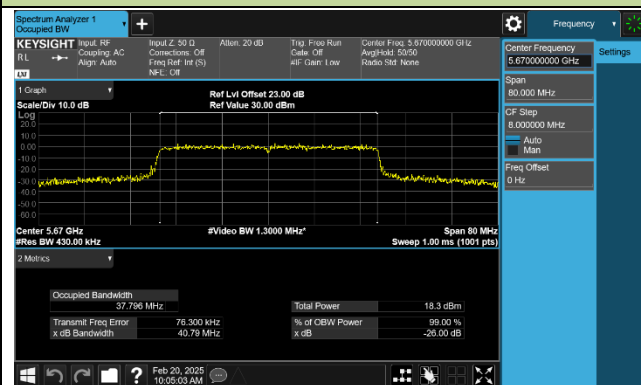
Channel 102 (5510MHz)



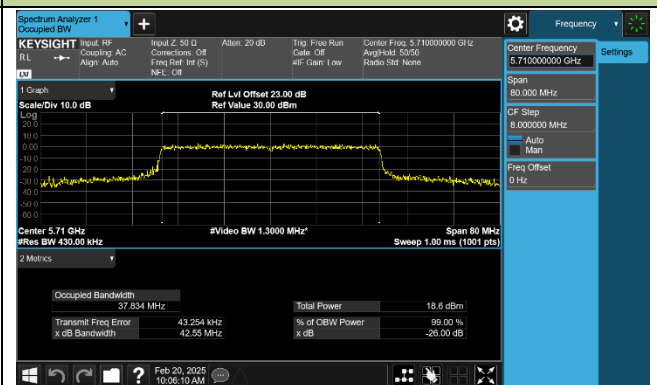
Channel 110 (5550MHz)

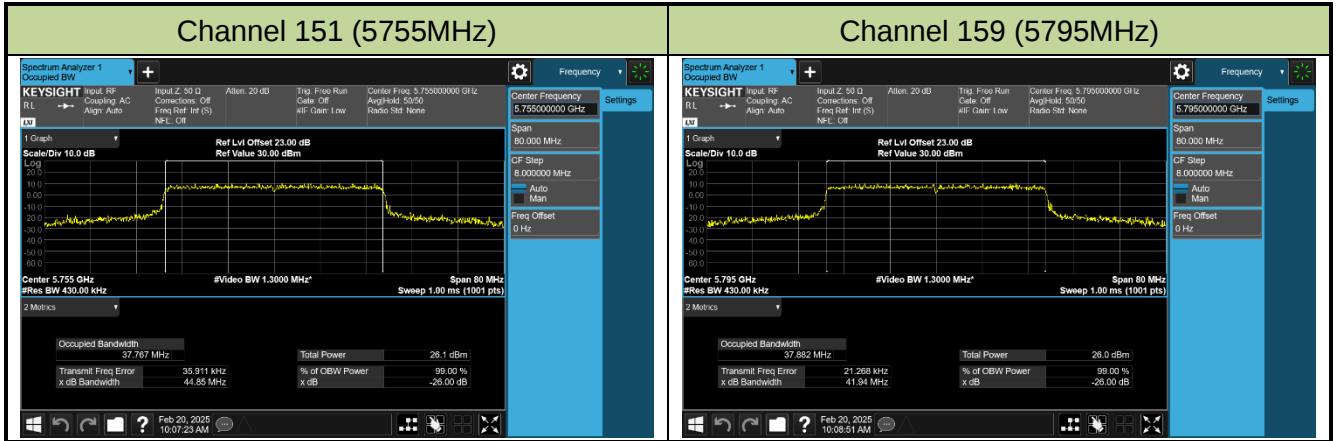


Channel 134 (5670MHz)



Channel 142 (5710MHz)



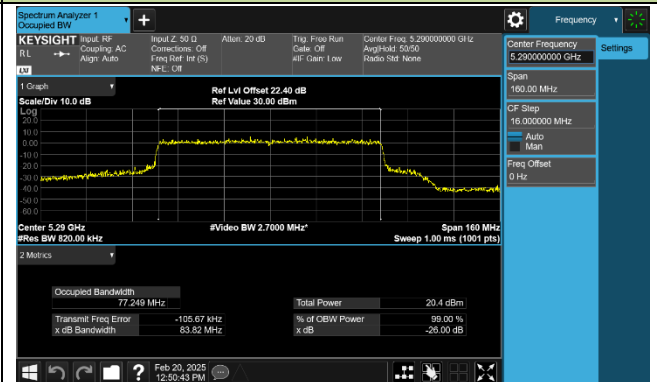


802.11be-EHT80 26dB Bandwidth & 99% Bandwidth

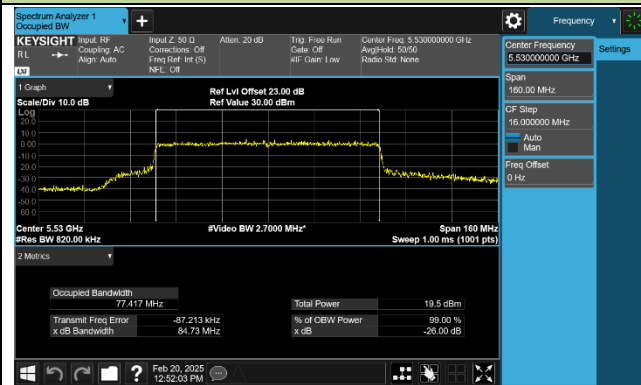
Channel 42 (5210MHz)



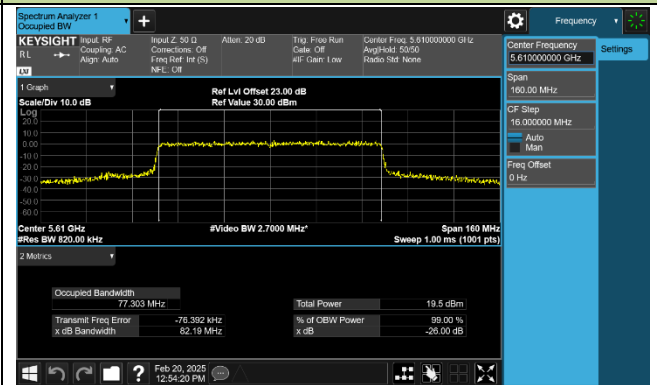
Channel 58 (5290MHz)



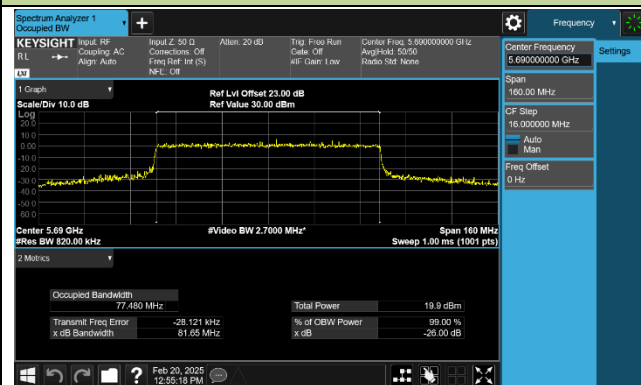
Channel 106 (5530MHz)



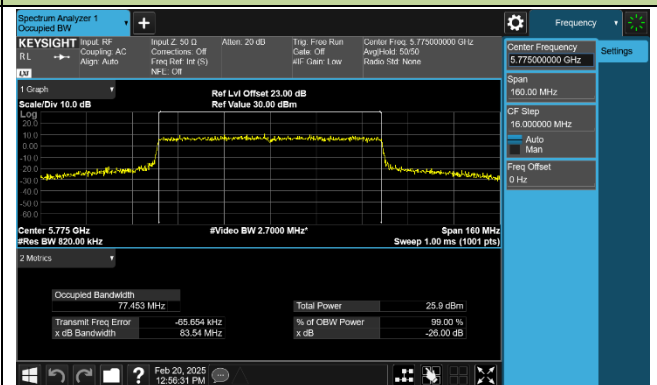
Channel 122 (5610MHz)



Channel 138 (5690MHz)

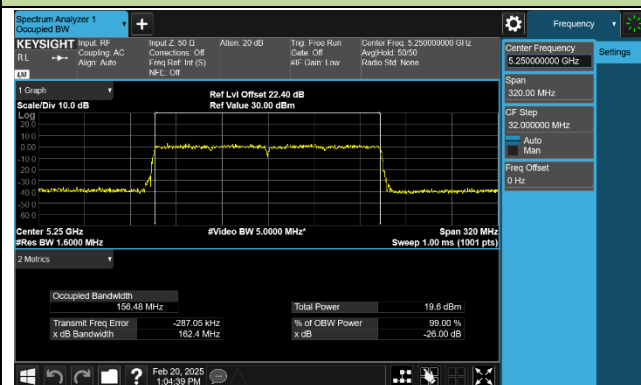


Channel 155 (5775MHz)

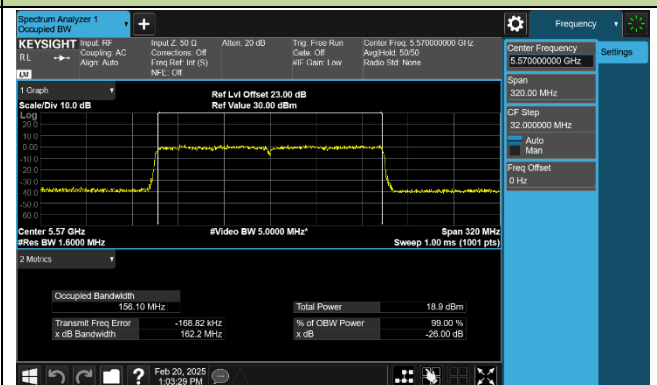


802.11be-EHT160 26dB Bandwidth & 99% Bandwidth

Channel 50 (5250MHz)



Channel 114 (5570MHz)



7.3. 6dB Bandwidth Measurement

7.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

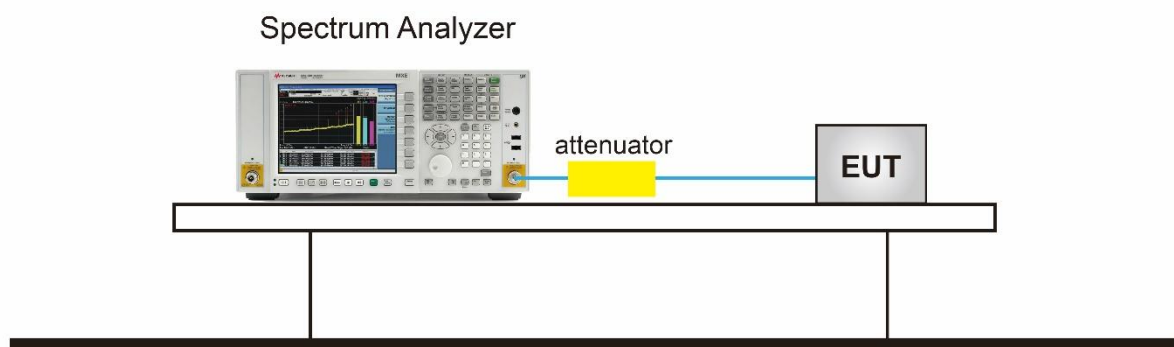
7.3.2. Test Procedure used

KDB 789033 D02v02r01- Section C.2

7.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW $3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.3.4. Test Setup



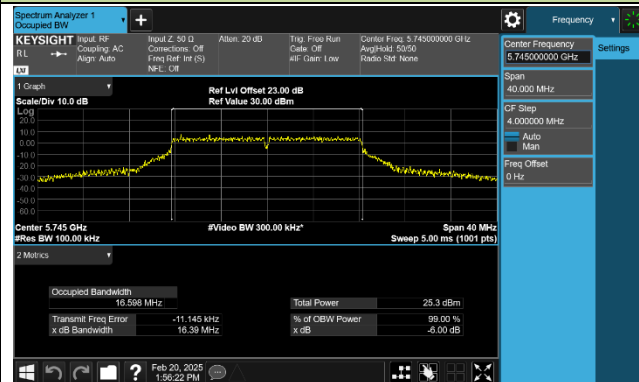
7.3.5.TestResult

Product	BE6500 Dual-Band Wi-Fi 7 Gaming Router	Test Engineer	Peter
Test Site	SR6	Test Date	2025/2/20

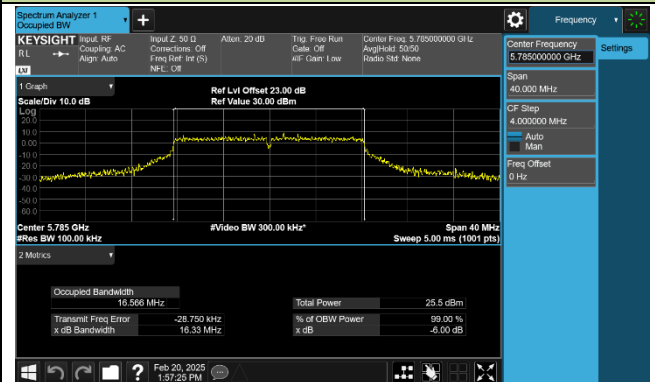
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
Ant 1						
802.11a	6Mbps	149	5745	16.390	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.330	≥ 0.5	Pass
802.11a	6Mbps	165	5825	16.410	≥ 0.5	Pass
802.11ac-VHT20	MCS0	149	5745	17.600	≥ 0.5	Pass
802.11ac-VHT20	MCS0	157	5785	17.640	≥ 0.5	Pass
802.11ac-VHT20	MCS0	165	5825	17.610	≥ 0.5	Pass
802.11ac-VHT40	MCS0	151	5755	36.350	≥ 0.5	Pass
802.11ac-VHT40	MCS0	159	5795	36.440	≥ 0.5	Pass
802.11ac-VHT80	MCS0	155	5775	76.390	≥ 0.5	Pass
802.11ax-HE20	MCS0	149	5745	18.800	≥ 0.5	Pass
802.11ax-HE20	MCS0	157	5785	18.880	≥ 0.5	Pass
802.11ax-HE20	MCS0	165	5825	18.960	≥ 0.5	Pass
802.11ax-HE40	MCS0	151	5755	37.220	≥ 0.5	Pass
802.11ax-HE40	MCS0	159	5795	37.470	≥ 0.5	Pass
802.11ax-HE80	MCS0	155	5775	77.500	≥ 0.5	Pass
802.11be-EHT20	MCS0	149	5745	18.720	≥ 0.5	Pass
802.11be-EHT20	MCS0	157	5785	19.070	≥ 0.5	Pass
802.11be-EHT20	MCS0	165	5825	18.840	≥ 0.5	Pass
802.11be-EHT40	MCS0	151	5755	37.670	≥ 0.5	Pass
802.11be-EHT40	MCS0	159	5795	37.380	≥ 0.5	Pass
802.11be-EHT80	MCS0	155	5775	76.640	≥ 0.5	Pass

802.11a 6dB Bandwidth

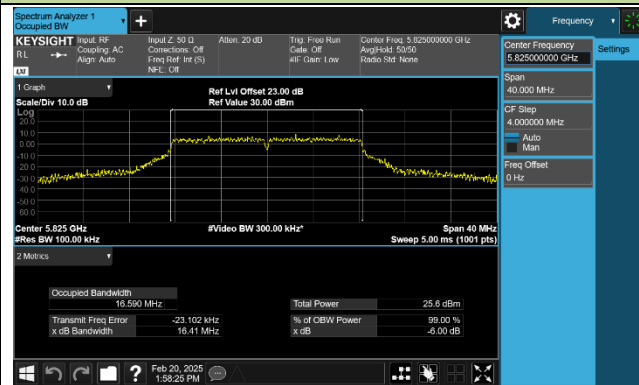
Channel 149 (5745MHz)



Channel 157 (5785MHz)

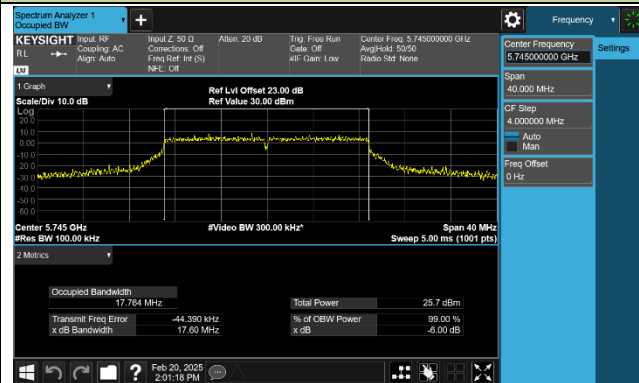


Channel 165 (5825MHz)

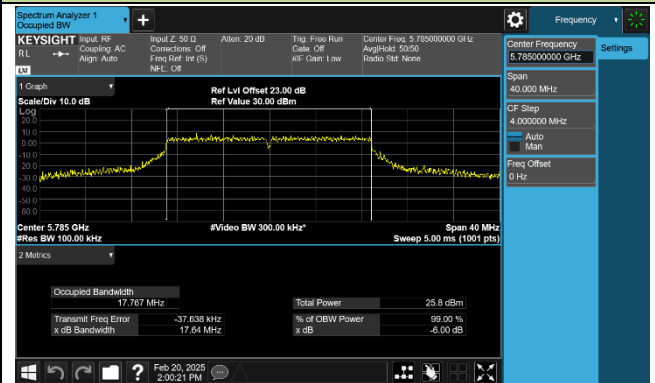


802.11ac-VHT20 6dB Bandwidth

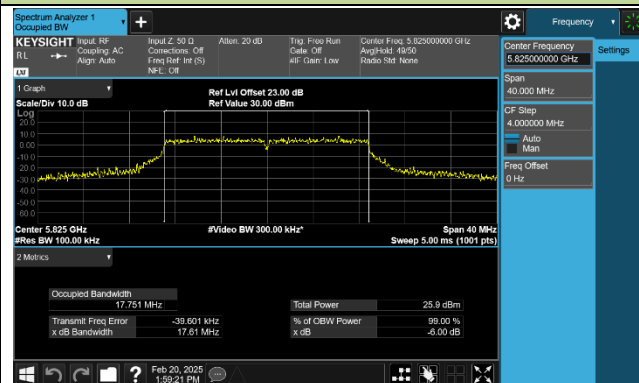
Channel 149 (5745MHz)



Channel 157 (5785MHz)

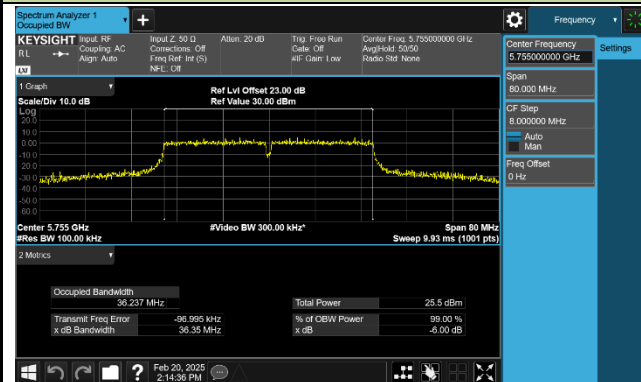


Channel 165 (5825MHz)

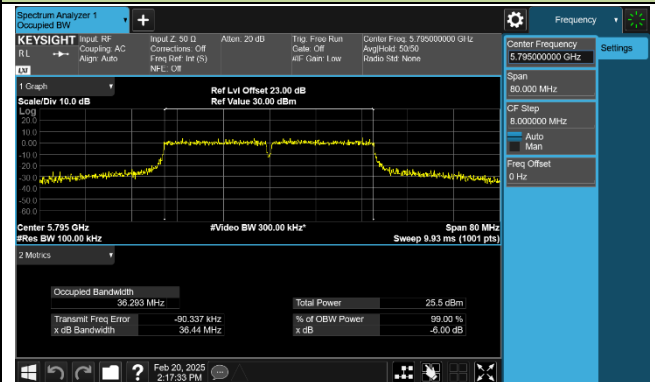


802.11ac-VHT40 6dB Bandwidth

Channel 151 (5755MHz)

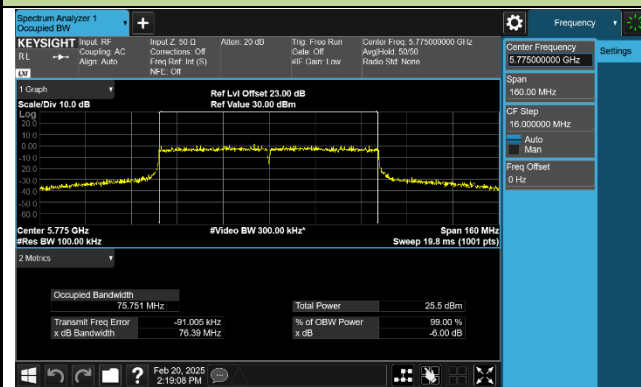


Channel 159 (5795MHz)



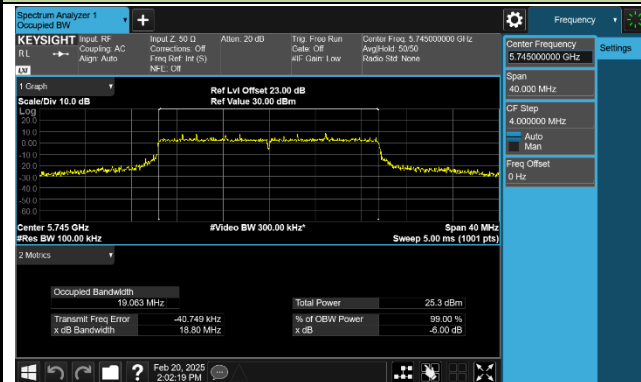
802.11ac-VHT80 6dB Bandwidth

Channel 155 (5775MHz)

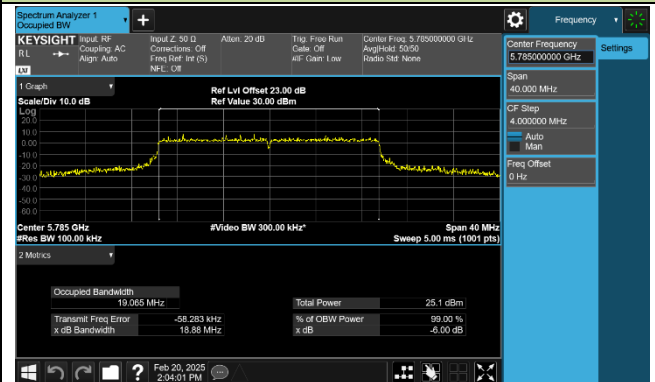


802.11ax-HE20 6dB Bandwidth

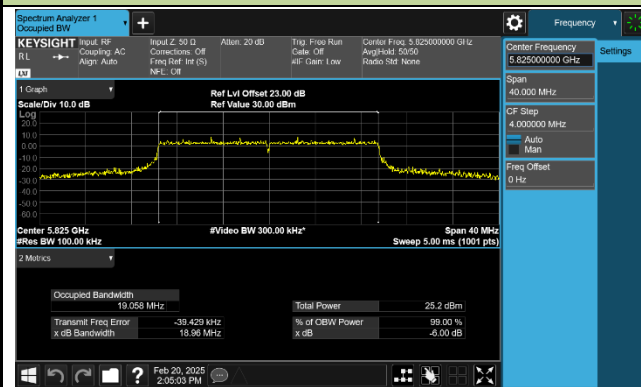
Channel 149 (5745MHz)



Channel 157 (5785MHz)

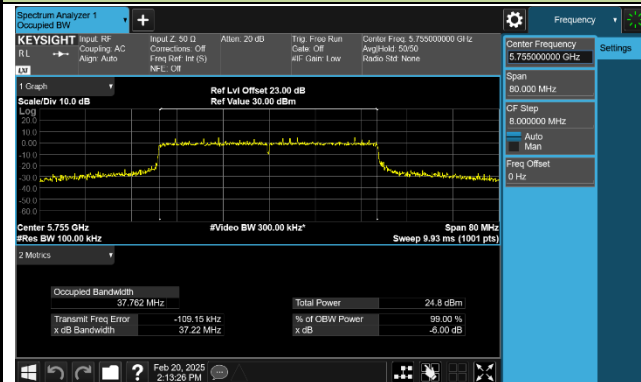


Channel 165 (5825MHz)

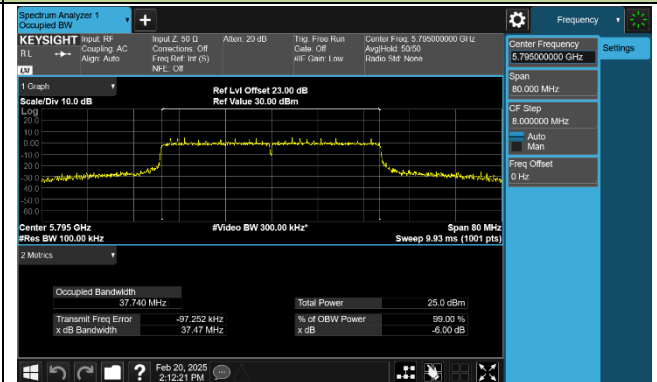


802.11ax-HE40 6dB Bandwidth

Channel 151 (5755MHz)

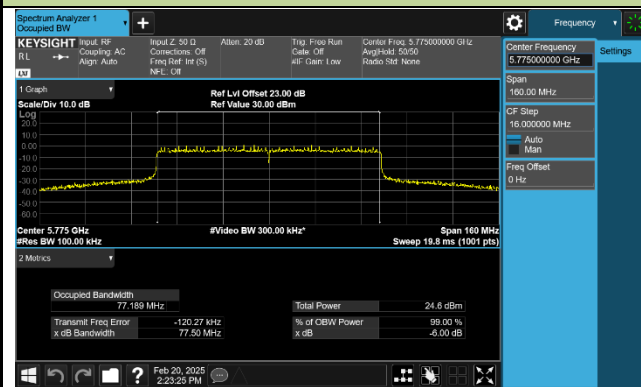


Channel 159 (5795MHz)



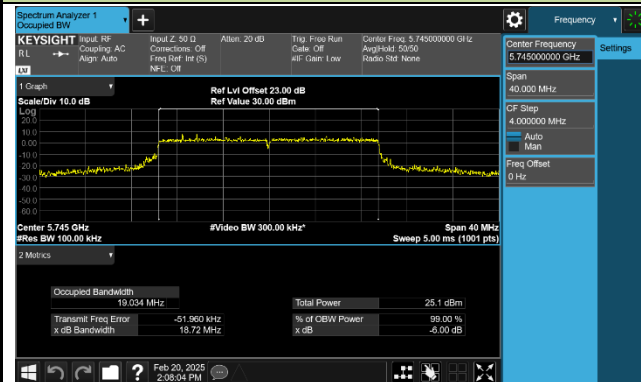
802.11ax-HE80 6dB Bandwidth

Channel 155 (5775MHz)

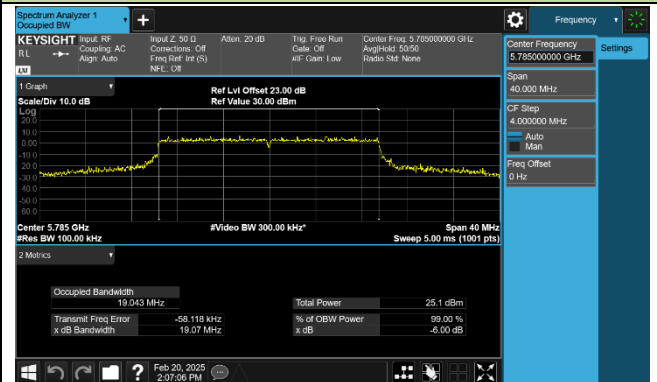


802.11be-EHT20 6dB Bandwidth

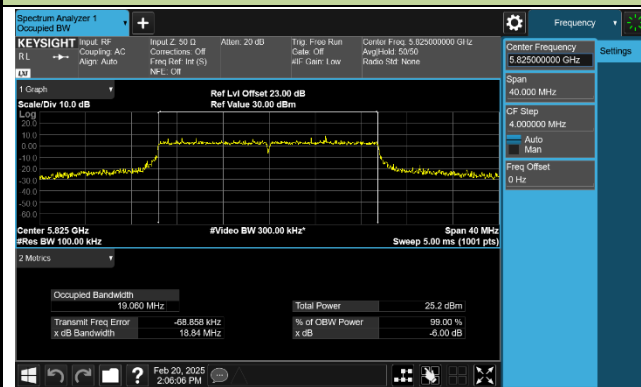
Channel 149 (5745MHz)



Channel 157 (5785MHz)

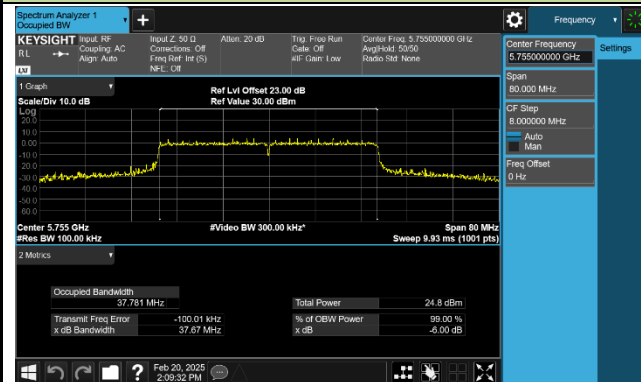


Channel 165 (5825MHz)

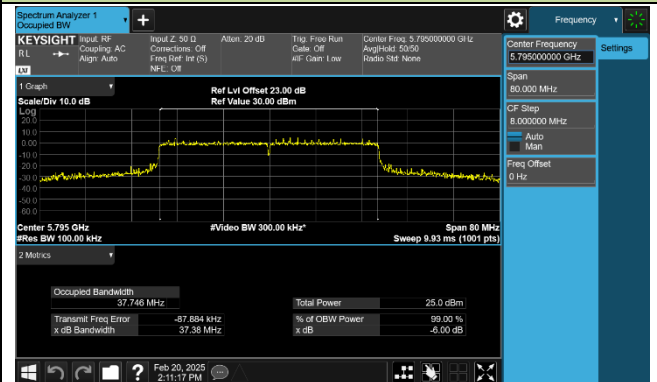


802.11be-EHT40 6dB Bandwidth

Channel 151 (5755MHz)

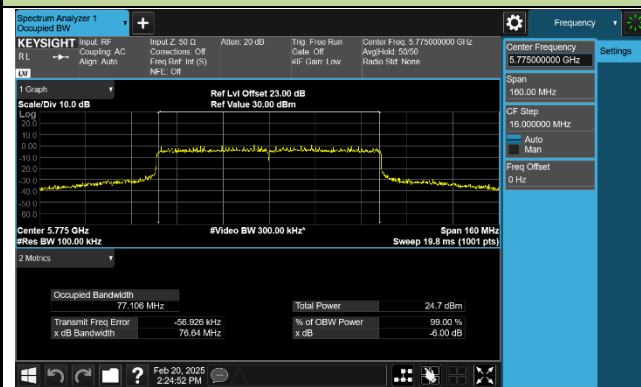


Channel 159 (5795MHz)



802.11be-EHT80 6dB Bandwidth

Channel 155 (5775MHz)



7.4. Output Power Measurement

7.4.1. Test Limit

For the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

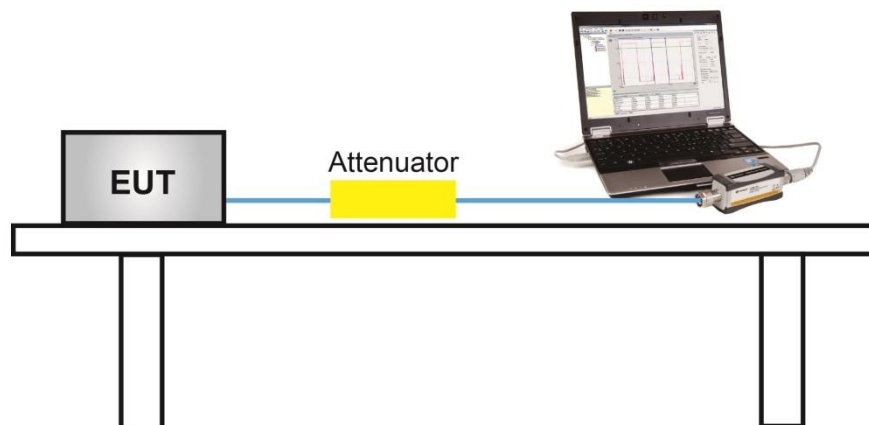
7.4.2. Test Procedure Used

KDB 789033D02v02r01- Section E)3)b) Method PM-G

7.4.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

7.4.4. Test Setup



7.4.5. Test Result

Product	BE6500 Dual-Band Wi-Fi 7 Gaming Router	Test Engineer	Peter
Test Site	SR6	Test Date	2025/2/20 ~ 2025/2/21
Test Mode	CDD Mode		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
11a	6Mbps	36	5180	16.45	17.43	16.94	15.87	22.73	≤ 30.00	Pass
11a	6Mbps	40	5200	16.45	17.11	16.94	15.82	22.63	≤ 30.00	Pass
11a	6Mbps	48	5240	16.31	17.09	16.73	15.72	22.51	≤ 30.00	Pass
11a	6Mbps	52	5260	10.62	10.97	10.61	9.10	16.40	≤ 23.21	Pass
11a	6Mbps	60	5300	10.28	10.76	10.62	8.98	16.23	≤ 23.21	Pass
11a	6Mbps	64	5320	9.38	10.60	10.45	8.77	15.89	≤ 23.21	Pass
11a	6Mbps	100	5500	10.80	11.38	10.13	10.03	16.64	≤ 23.59	Pass
11a	6Mbps	116	5580	10.57	11.08	10.38	10.12	16.57	≤ 23.59	Pass
11a	6Mbps	140	5700	10.79	11.44	11.05	10.31	16.94	≤ 23.59	Pass
11a	6Mbps	144	5720	11.16	11.75	11.14	10.18	17.11	≤ 22.98	Pass
11a	6Mbps	149	5745	23.74	23.79	23.21	23.26	29.53	≤ 29.78	Pass
11a	6Mbps	157	5785	23.40	23.74	23.10	23.03	29.35	≤ 29.78	Pass
11a	6Mbps	165	5825	23.53	23.76	23.10	22.92	29.36	≤ 29.78	Pass
11ac-VHT20	MCS0	36	5180	16.83	17.89	17.43	16.57	23.23	≤ 30.00	Pass
11ac-VHT20	MCS0	40	5200	17.17	18.09	17.68	16.75	23.47	≤ 30.00	Pass
11ac-VHT20	MCS0	48	5240	17.23	17.96	17.61	16.67	23.41	≤ 30.00	Pass
11ac-VHT20	MCS0	52	5260	10.39	11.03	11.23	9.49	16.61	≤ 23.21	Pass
11ac-VHT20	MCS0	60	5300	10.23	10.73	11.04	9.20	16.37	≤ 23.21	Pass
11ac-VHT20	MCS0	64	5320	9.91	10.99	11.05	9.06	16.35	≤ 23.21	Pass
11ac-VHT20	MCS0	100	5500	11.51	11.53	10.89	10.22	17.09	≤ 23.59	Pass
11ac-VHT20	MCS0	116	5580	11.21	11.11	10.38	10.14	16.75	≤ 23.59	Pass
11ac-VHT20	MCS0	140	5700	11.02	11.20	10.79	10.26	16.85	≤ 23.59	Pass
11ac-VHT20	MCS0	144	5720	11.19	11.74	11.28	10.39	17.20	≤ 23.02	Pass
11ac-VHT20	MCS0	149	5745	23.99	23.95	23.29	23.21	29.65	≤ 29.78	Pass
11ac-VHT20	MCS0	157	5785	23.80	23.96	23.23	23.22	29.59	≤ 29.78	Pass
11ac-VHT20	MCS0	165	5825	23.73	23.90	23.02	23.03	29.46	≤ 29.78	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
11ac-VHT40	MCS0	38	5190	19.97	20.70	20.82	19.55	26.31	≤ 30.00	Pass
11ac-VHT40	MCS0	46	5230	20.65	21.14	21.11	19.86	26.74	≤ 30.00	Pass
11ac-VHT40	MCS0	54	5270	13.43	14.41	13.88	12.76	19.68	≤ 23.21	Pass
11ac-VHT40	MCS0	62	5310	13.33	14.29	13.68	12.36	19.49	≤ 23.21	Pass
11ac-VHT40	MCS0	102	5510	13.79	14.38	13.56	12.87	19.70	≤ 23.59	Pass
11ac-VHT40	MCS0	110	5550	14.30	14.91	14.20	13.55	20.29	≤ 23.59	Pass
11ac-VHT40	MCS0	134	5670	13.87	14.02	13.83	13.25	19.77	≤ 23.59	Pass
11ac-VHT40	MCS0	142	5710	13.76	13.92	13.83	13.30	19.73	≤ 23.59	Pass
11ac-VHT40	MCS0	151	5755	23.50	23.81	22.89	23.32	29.41	≤ 29.78	Pass
11ac-VHT40	MCS0	159	5795	23.47	23.82	22.93	23.31	29.41	≤ 29.78	Pass
11ac-VHT80	MCS0	42	5210	20.30	20.06	20.27	19.82	26.14	≤ 30.00	Pass
11ac-VHT80	MCS0	58	5290	16.15	16.27	16.55	14.83	22.02	≤ 23.21	Pass
11ac-VHT80	MCS0	106	5530	17.54	17.72	16.94	16.00	23.12	≤ 23.59	Pass
11ac-VHT80	MCS0	122	5610	17.53	17.72	16.61	16.04	23.05	≤ 23.59	Pass
11ac-VHT80	MCS0	138	5690	17.33	17.62	16.48	15.99	22.92	≤ 23.59	Pass
11ac-VHT80	MCS0	155	5775	23.88	24.19	23.44	22.33	29.54	≤ 29.78	Pass
11ac-VHT160	MCS0	50	5250	16.87	17.07	17.68	16.05	22.98	≤ 23.21	Pass
11ac-VHT160	MCS0	114	5570	17.27	17.60	17.00	17.02	23.25	≤ 23.59	Pass
11ax-HE20	MCS0	36	5180	17.16	18.10	17.69	16.73	23.47	≤ 30.00	Pass
11ax-HE20	MCS0	40	5200	17.49	18.33	17.97	16.90	23.73	≤ 30.00	Pass
11ax-HE20	MCS0	48	5240	17.30	18.31	17.77	16.84	23.61	≤ 30.00	Pass
11ax-HE20	MCS0	52	5260	10.51	11.15	11.36	8.82	16.59	≤ 23.21	Pass
11ax-HE20	MCS0	60	5300	10.17	11.25	11.07	8.86	16.46	≤ 23.21	Pass
11ax-HE20	MCS0	64	5320	10.07	11.21	11.03	8.67	16.38	≤ 23.21	Pass
11ax-HE20	MCS0	100	5500	11.33	11.99	10.80	10.58	17.23	≤ 23.59	Pass
11ax-HE20	MCS0	116	5580	11.08	11.68	10.98	10.61	17.13	≤ 23.59	Pass
11ax-HE20	MCS0	140	5700	11.72	11.80	11.39	10.81	17.47	≤ 23.59	Pass
11ax-HE20	MCS0	144	5720	11.44	12.26	11.57	10.77	17.56	≤ 23.07	Pass
11ax-HE20	MCS0	149	5745	23.86	23.92	23.25	23.28	29.61	≤ 29.78	Pass
11ax-HE20	MCS0	157	5785	23.72	23.84	23.16	22.91	29.45	≤ 29.78	Pass
11ax-HE20	MCS0	165	5825	23.70	23.77	22.93	22.98	29.38	≤ 29.78	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
11ax-HE40	MCS0	38	5190	20.20	20.57	20.69	19.42	26.27	≤ 30.00	Pass
11ax-HE40	MCS0	46	5230	20.04	20.49	20.57	19.40	26.17	≤ 30.00	Pass
11ax-HE40	MCS0	54	5270	13.08	14.18	13.54	12.32	19.35	≤ 23.21	Pass
11ax-HE40	MCS0	62	5310	12.98	13.96	13.38	12.15	19.19	≤ 23.21	Pass
11ax-HE40	MCS0	102	5510	13.98	14.54	13.83	13.39	19.98	≤ 23.59	Pass
11ax-HE40	MCS0	110	5550	14.16	14.89	14.16	13.58	20.24	≤ 23.59	Pass
11ax-HE40	MCS0	134	5670	14.01	14.29	14.06	13.43	19.98	≤ 23.59	Pass
11ax-HE40	MCS0	142	5710	13.94	14.16	14.02	13.60	19.96	≤ 23.59	Pass
11ax-HE40	MCS0	151	5755	23.69	23.77	22.81	23.31	29.43	≤ 29.78	Pass
11ax-HE40	MCS0	159	5795	23.60	23.71	22.87	23.16	29.37	≤ 29.78	Pass
11ax-HE80	MCS0	42	5210	18.82	18.64	18.79	18.46	24.70	≤ 30.00	Pass
11ax-HE80	MCS0	58	5290	15.91	16.11	16.58	15.12	21.98	≤ 23.21	Pass
11ax-HE80	MCS0	106	5530	16.51	17.01	16.45	15.78	22.48	≤ 23.59	Pass
11ax-HE80	MCS0	122	5610	16.48	17.22	16.21	15.88	22.50	≤ 23.59	Pass
11ax-HE80	MCS0	138	5690	16.58	17.19	16.43	16.02	22.60	≤ 23.59	Pass
11ax-HE80	MCS0	155	5775	23.13	23.96	23.38	23.04	29.41	≤ 29.78	Pass
11ax-HE160	MCS0	50	5250	16.79	17.16	17.57	16.00	22.94	≤ 23.21	Pass
11ax-HE160	MCS0	114	5570	17.17	17.61	17.04	16.96	23.22	≤ 23.59	Pass
11be-EHT20	MCS0	36	5180	17.22	18.26	17.71	16.79	23.55	≤ 30.00	Pass
11be-EHT20	MCS0	40	5200	17.24	18.26	17.74	16.72	23.55	≤ 30.00	Pass
11be-EHT20	MCS0	48	5240	17.06	18.06	17.64	16.65	23.41	≤ 30.00	Pass
11be-EHT20	MCS0	52	5260	10.65	11.68	11.30	9.68	16.91	≤ 23.21	Pass
11be-EHT20	MCS0	60	5300	10.10	11.17	10.97	8.85	16.38	≤ 23.21	Pass
11be-EHT20	MCS0	64	5320	9.95	11.03	10.90	8.56	16.24	≤ 23.21	Pass
11be-EHT20	MCS0	100	5500	11.93	11.84	11.20	10.53	17.43	≤ 23.59	Pass
11be-EHT20	MCS0	116	5580	11.62	11.99	10.66	10.49	17.26	≤ 23.59	Pass
11be-EHT20	MCS0	140	5700	10.86	11.67	11.29	10.83	17.20	≤ 23.59	Pass
11be-EHT20	MCS0	144	5720	11.33	11.70	11.55	10.78	17.37	≤ 23.35	Pass
11be-EHT20	MCS0	149	5745	23.83	23.98	23.23	23.20	29.59	≤ 29.78	Pass
11be-EHT20	MCS0	157	5785	23.72	23.76	23.09	23.01	29.43	≤ 29.78	Pass
11be-EHT20	MCS0	165	5825	23.68	23.84	23.04	22.90	29.40	≤ 29.78	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
11be-EHT40	MCS0	38	5190	19.68	20.16	20.43	19.07	25.89	≤ 30.00	Pass
11be-EHT40	MCS0	46	5230	20.04	20.38	20.60	19.22	26.11	≤ 30.00	Pass
11be-EHT40	MCS0	54	5270	12.97	13.97	13.57	12.26	19.26	≤ 23.21	Pass
11be-EHT40	MCS0	62	5310	12.94	13.93	13.38	12.17	19.17	≤ 23.21	Pass
11be-EHT40	MCS0	102	5510	13.90	14.42	13.82	13.54	19.95	≤ 23.59	Pass
11be-EHT40	MCS0	110	5550	14.06	14.77	14.05	13.66	20.17	≤ 23.59	Pass
11be-EHT40	MCS0	134	5670	13.91	14.14	14.11	13.44	19.93	≤ 23.59	Pass
11be-EHT40	MCS0	142	5710	13.81	14.02	13.98	13.51	19.86	≤ 23.59	Pass
11be-EHT40	MCS0	151	5755	23.56	23.78	23.22	23.27	29.48	≤ 29.78	Pass
11be-EHT40	MCS0	159	5795	23.45	23.71	23.16	23.21	29.41	≤ 29.78	Pass
11be-EHT80	MCS0	42	5210	18.97	19.16	18.92	18.70	24.96	≤ 30.00	Pass
11be-EHT80	MCS0	58	5290	15.77	16.01	16.35	14.68	21.77	≤ 23.21	Pass
11be-EHT80	MCS0	106	5530	17.30	17.16	16.55	16.02	22.81	≤ 23.59	Pass
11be-EHT80	MCS0	122	5610	16.46	17.32	17.12	16.13	22.80	≤ 23.59	Pass
11be-EHT80	MCS0	138	5690	16.51	17.48	16.40	16.18	22.69	≤ 23.59	Pass
11be-EHT80	MCS0	155	5775	22.11	22.89	22.31	21.96	28.35	≤ 29.78	Pass
11be-EHT160	MCS0	50	5250	16.70	17.16	17.61	15.88	22.90	≤ 23.21	Pass
11be-EHT160	MCS0	114	5570	17.29	17.70	17.09	17.00	23.30	≤ 23.59	Pass

Note 1:

The Total Average Power (dBm) = $10 \cdot \log \{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)} + 10^{(\text{Ant 2 Average Power} / 10)} + 10^{(\text{Ant 3 Average Power} / 10)}\}$.

Note 2:

For 5150 - 5250MHz Bands: Average Power Limit (dBm) = 30.00 dBm.

For 5250- 5350MHz Band: Average Power Limit (dBm) = 23.98 - (6.77- 6) = 23.21 dBm.

For 5470 - 5725MHz Band: Average Power Limit (dBm) = 23.98 - (6.39- 6) = 23.59 dBm.

For 5725 - 5850MHz Bands: Average Power Limit (dBm) = 30- (6.22- 6) = 29.78 dBm.

For Channel 144 (5720MHz), Average Power Limit (dBm) = $11 + 10 \cdot \log(5\text{MHz} + \text{BW}_{26\text{dBc}}/2)$

7.5. Transmit Power Control

7.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

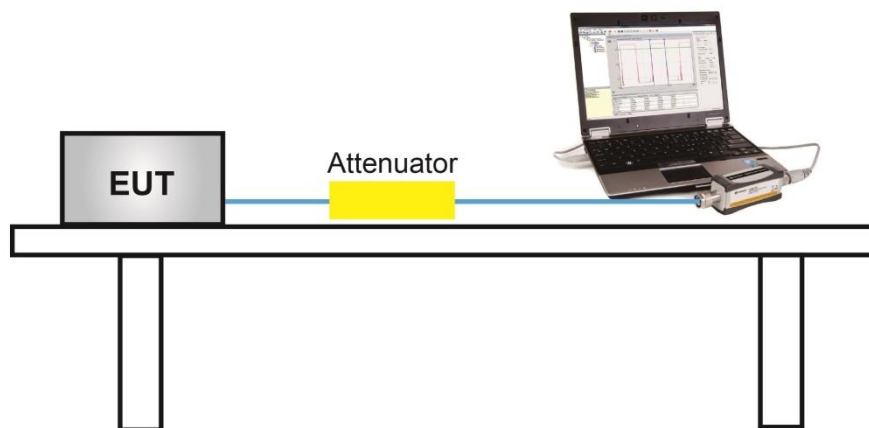
7.5.2. Test Procedure Used

KDB 789033 D02v02r01- Section E)3)b) Method PM-G

7.5.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

7.5.4. Test Setup



7.5.5. Test Result

Device supports TPC mechanism, details refer to the operational description.

7.6. Power Spectral Density Measurement

7.6.1. Test Limit

For the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

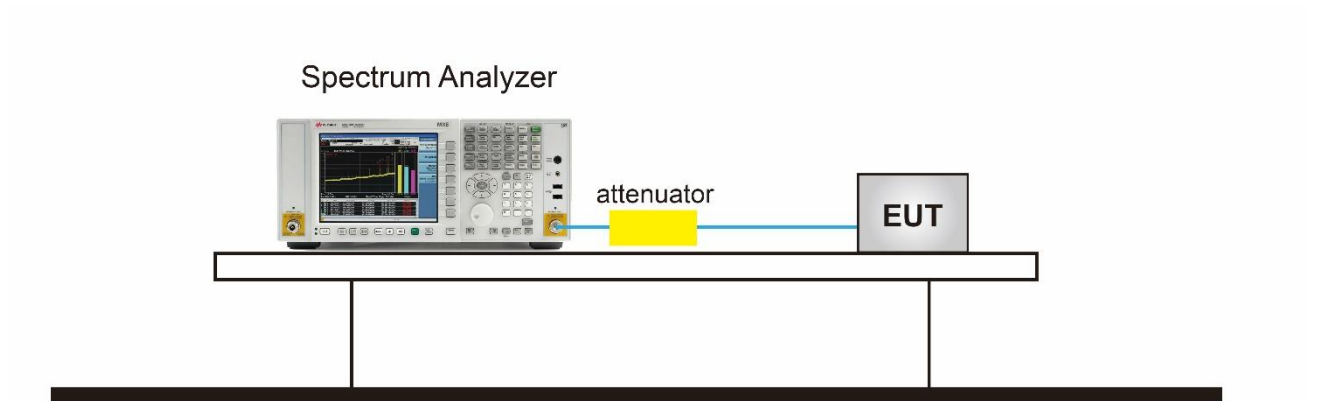
7.6.2. Test Procedure Used

KDB 789033 D02v02r01-SectionF

7.6.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz,
RBW = 510 kHz
4. VBW = 3MHz
5. Number of sweep points $\geq 2 \times (\text{span} / \text{RBW})$
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add $10 \cdot \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add $10 \cdot \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

7.6.4. Test Setup



7.6.5.Test Result

Product	BE6500 Dual-Band Wi-Fi 7 Gaming Router	Test Engineer	Peter
Test Site	SR6	Test Date	2025/2/9~2025/2/23
Mode	Power Spectral Density (U-NII- 1/-2a / -2c) CDD Mode		

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11a	6Mbps	36	5180	4.263	5.188	4.854	3.802	94.91%	10.807	≤ 11.09	Pass
11a	6Mbps	40	5200	4.310	5.249	4.455	4.064	94.91%	10.790	≤ 11.09	Pass
11a	6Mbps	48	5240	4.246	5.182	4.529	3.979	94.91%	10.755	≤ 11.09	Pass
11a	6Mbps	52	5260	-2.432	-1.398	-1.637	-3.713	94.91%	4.042	≤ 4.24	Pass
11a	6Mbps	60	5300	-2.469	-1.492	-1.612	-3.597	94.91%	4.033	≤ 4.24	Pass
11a	6Mbps	64	5320	-2.568	-1.410	-1.436	-3.563	94.91%	4.092	≤ 4.24	Pass
11a	6Mbps	100	5500	-1.347	-1.236	-2.277	-2.065	94.91%	4.539	≤ 4.65	Pass
11a	6Mbps	116	5580	-1.781	-1.163	-2.253	-2.160	94.91%	4.430	≤ 4.65	Pass
11a	6Mbps	140	5700	-1.642	-1.118	-1.493	-2.475	94.91%	4.593	≤ 4.65	Pass
11a	6Mbps	144	5720	-1.830	-1.196	-1.562	-2.619	94.91%	4.476	≤ 4.65	Pass
11ac-VHT20	MCS0	36	5180	4.220	5.019	4.706	4.135	98.47%	10.623	≤ 11.09	Pass
11ac-VHT20	MCS0	40	5200	4.192	5.409	5.137	4.008	98.47%	10.815	≤ 11.09	Pass
11ac-VHT20	MCS0	48	5240	4.333	5.529	4.961	4.003	98.47%	10.834	≤ 11.09	Pass
11ac-VHT20	MCS0	52	5260	-2.323	-1.463	-1.125	-3.491	98.47%	4.079	≤ 4.24	Pass
11ac-VHT20	MCS0	60	5300	-2.172	-1.329	-1.285	-3.564	98.47%	4.093	≤ 4.24	Pass
11ac-VHT20	MCS0	64	5320	-2.373	-1.504	-1.195	-3.289	98.47%	4.072	≤ 4.24	Pass
11ac-VHT20	MCS0	100	5500	-1.376	-0.914	-1.956	-1.922	98.47%	4.567	≤ 4.65	Pass
11ac-VHT20	MCS0	116	5580	-1.476	-1.149	-1.839	-2.211	98.47%	4.437	≤ 4.65	Pass
11ac-VHT20	MCS0	140	5700	-1.845	-1.082	-1.485	-2.458	98.47%	4.399	≤ 4.65	Pass
11ac-VHT20	MCS0	144	5720	-1.845	-1.124	-1.081	-2.481	98.47%	4.492	≤ 4.65	Pass

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11ac-VHT40	MCS0	38	5190	4.492	5.018	5.272	4.023	96.57%	10.900	≤ 11.09	Pass
11ac-VHT40	MCS0	46	5230	4.417	4.980	5.264	3.779	96.57%	10.819	≤ 11.09	Pass
11ac-VHT40	MCS0	54	5270	-2.599	-1.322	-1.802	-2.977	96.57%	4.046	≤ 4.24	Pass
11ac-VHT40	MCS0	62	5310	-2.430	-1.341	-1.689	-2.749	96.57%	4.156	≤ 4.24	Pass
11ac-VHT40	MCS0	102	5510	-2.263	-1.219	-2.228	-2.257	96.57%	4.204	≤ 4.65	Pass
11ac-VHT40	MCS0	110	5550	-1.993	-1.289	-1.916	-2.090	96.57%	4.362	≤ 4.65	Pass
11ac-VHT40	MCS0	134	5670	-1.830	-1.625	-1.618	-2.159	96.57%	4.370	≤ 4.65	Pass
11ac-VHT40	MCS0	142	5710	-2.076	-1.411	-1.569	-1.951	96.57%	4.429	≤ 4.65	Pass
11ac-VHT80	MCS0	42	5210	1.529	0.857	1.949	0.774	93.55%	7.615	≤ 11.09	Pass
11ac-VHT80	MCS0	58	5290	-1.862	-2.184	-1.227	-3.462	93.55%	4.200	≤ 4.24	Pass
11ac-VHT80	MCS0	106	5530	-1.483	-1.233	-1.250	-3.111	93.55%	4.606	≤ 4.65	Pass
11ac-VHT80	MCS0	122	5610	-1.574	-1.349	-1.485	-2.603	93.55%	4.585	≤ 4.65	Pass
11ac-VHT80	MCS0	138	5690	-1.344	-1.368	-1.646	-3.395	93.55%	4.449	≤ 4.65	Pass
11ac-VHT160	MCS0	50	5250	-4.468	-4.780	-3.742	-5.257	89.08%	1.996	≤ 4.24	Pass
11ac-VHT160	MCS0	114	5570	-3.800	-4.347	-4.230	-4.983	89.08%	2.203	≤ 4.65	Pass
11ax-HE20	MCS0	36	5180	4.128	5.100	4.916	4.003	97.83%	10.679	≤ 11.09	Pass
11ax-HE20	MCS0	40	5200	4.271	5.267	5.009	4.332	97.83%	10.857	≤ 11.09	Pass
11ax-HE20	MCS0	48	5240	4.289	5.382	5.093	4.235	97.83%	10.894	≤ 11.09	Pass
11ax-HE20	MCS0	52	5260	-1.706	-1.509	-1.580	-3.271	97.83%	4.156	≤ 4.24	Pass
11ax-HE20	MCS0	60	5300	-2.440	-1.152	-1.506	-3.279	97.83%	4.099	≤ 4.24	Pass
11ax-HE20	MCS0	64	5320	-2.053	-1.404	-1.279	-3.302	97.83%	4.177	≤ 4.24	Pass
11ax-HE20	MCS0	100	5500	-1.333	-1.037	-1.936	-2.443	97.83%	4.462	≤ 4.65	Pass
11ax-HE20	MCS0	116	5580	-1.571	-1.137	-1.860	-2.375	97.83%	4.403	≤ 4.65	Pass
11ax-HE20	MCS0	140	5700	-1.379	-0.875	-1.792	-2.345	97.83%	4.552	≤ 4.65	Pass
11ax-HE20	MCS0	144	5720	-1.773	-1.066	-1.602	-2.198	97.83%	4.475	≤ 4.65	Pass

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11ax-HE40	MCS0	38	5190	4.304	4.647	5.066	3.704	95.47%	10.681	≤ 11.09	Pass
11ax-HE40	MCS0	46	5230	4.271	4.864	5.227	3.935	95.47%	10.825	≤ 11.09	Pass
11ax-HE40	MCS0	54	5270	-2.574	-1.412	-1.722	-3.057	95.47%	4.080	≤ 4.24	Pass
11ax-HE40	MCS0	62	5310	-2.575	-1.342	-1.816	-2.703	95.47%	4.149	≤ 4.24	Pass
11ax-HE40	MCS0	102	5510	-2.249	-1.265	-1.533	-1.942	95.47%	4.491	≤ 4.65	Pass
11ax-HE40	MCS0	110	5550	-1.964	-1.046	-1.527	-2.186	95.47%	4.563	≤ 4.65	Pass
11ax-HE40	MCS0	134	5670	-1.955	-1.441	-1.652	-1.967	95.47%	4.474	≤ 4.65	Pass
11ax-HE40	MCS0	142	5710	-1.840	-1.628	-1.466	-2.100	95.47%	4.470	≤ 4.65	Pass
11ax-HE80	MCS0	42	5210	0.172	-0.271	0.124	-0.711	92.62%	6.196	≤ 11.09	Pass
11ax-HE80	MCS0	58	5290	-2.138	-2.053	-1.652	-3.739	92.62%	4.027	≤ 4.24	Pass
11ax-HE80	MCS0	106	5530	-1.607	-1.930	-1.797	-3.464	92.62%	4.213	≤ 4.65	Pass
11ax-HE80	MCS0	122	5610	-1.779	-1.046	-2.242	-3.625	92.62%	4.279	≤ 4.65	Pass
11ax-HE80	MCS0	138	5690	-1.783	-1.770	-1.604	-3.430	92.62%	4.266	≤ 4.65	Pass
11ax-HE160	MCS0	50	5250	-4.597	-4.452	-3.702	-6.060	88.87%	1.911	≤ 4.24	Pass
11ax-HE160	MCS0	114	5570	-3.772	-3.879	-4.333	-5.192	88.87%	2.274	≤ 4.65	Pass
11be-EHT20	MCS0	36	5180	4.410	5.153	5.163	3.905	98.36%	10.782	≤ 11.09	Pass
11be-EHT20	MCS0	40	5200	4.107	5.059	4.812	3.940	98.36%	10.597	≤ 11.09	Pass
11be-EHT20	MCS0	48	5240	4.140	5.244	4.792	3.761	98.36%	10.614	≤ 11.09	Pass
11be-EHT20	MCS0	52	5260	-2.130	-1.294	-1.537	-3.160	98.36%	4.120	≤ 4.24	Pass
11be-EHT20	MCS0	60	5300	-2.100	-1.777	-1.845	-3.239	98.36%	3.890	≤ 4.24	Pass
11be-EHT20	MCS0	64	5320	-2.330	-1.523	-1.339	-3.533	98.36%	3.993	≤ 4.24	Pass
11be-EHT20	MCS0	100	5500	-1.395	-1.043	-1.861	-2.658	98.36%	4.394	≤ 4.65	Pass
11be-EHT20	MCS0	116	5580	-1.499	-1.287	-1.647	-2.262	98.36%	4.434	≤ 4.65	Pass
11be-EHT20	MCS0	140	5700	-1.504	-1.049	-1.791	-1.976	98.36%	4.527	≤ 4.65	Pass
11be-EHT20	MCS0	144	5720	-1.345	-0.897	-1.526	-2.332	98.36%	4.598	≤ 4.65	Pass

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11be-EHT40	MCS0	38	5190	4.247	4.262	4.682	3.492	96.31%	10.375	≤ 11.09	Pass
11be-EHT40	MCS0	46	5230	4.351	4.816	5.160	3.937	96.31%	10.774	≤ 11.09	Pass
11be-EHT40	MCS0	54	5270	-2.424	-1.351	-1.893	-2.960	96.31%	4.068	≤ 4.24	Pass
11be-EHT40	MCS0	62	5310	-2.461	-1.283	-1.736	-2.860	96.31%	4.142	≤ 4.24	Pass
11be-EHT40	MCS0	102	5510	-1.903	-1.012	-1.625	-2.042	96.31%	4.557	≤ 4.65	Pass
11be-EHT40	MCS0	110	5550	-2.088	-1.167	-1.414	-2.117	96.31%	4.507	≤ 4.65	Pass
11be-EHT40	MCS0	134	5670	-1.934	-1.212	-1.306	-1.920	96.31%	4.604	≤ 4.65	Pass
11be-EHT40	MCS0	142	5710	-1.932	-1.372	-1.433	-2.240	96.31%	4.454	≤ 4.65	Pass
11be-EHT80	MCS0	42	5210	0.003	-0.211	0.283	-0.589	92.79%	6.229	≤ 11.09	Pass
11be-EHT80	MCS0	58	5290	-2.488	-2.220	-1.504	-2.689	92.79%	4.144	≤ 4.24	Pass
11be-EHT80	MCS0	106	5530	-1.732	-1.635	-1.829	-3.277	92.79%	4.276	≤ 4.65	Pass
11be-EHT80	MCS0	122	5610	-1.701	-1.851	-2.208	-3.188	92.79%	4.146	≤ 4.65	Pass
11be-EHT80	MCS0	138	5690	-1.696	-1.560	-1.964	-3.060	92.79%	4.314	≤ 4.65	Pass
11be-EHT160	MCS0	50	5250	-4.358	-4.314	-3.380	-5.735	89.05%	2.157	≤ 4.24	Pass
11be-EHT160	MCS0	114	5570	-3.928	-4.449	-3.568	-4.877	89.05%	2.347	≤ 4.65	Pass

Note 1: The total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\} + 10 \cdot \log (1/\text{Duty Cycle})(\text{dBm/MHz})$.

Note 2:

For 5125 - 5250MHz Band: PSD Limit (dBm/MHz) = 17 - (11.91- 6) = 11.09 dBm/MHz.

For 5250- 5350MHz Band: PSD Limit (dBm/MHz) = 11 - (12.76- 6) = 4.24 dBm/MHz.

For 5470 - 5725MHz Band: PSD Limit (dBm/MHz) = 11 - (12.35- 6) = 4.65 dBm/MHz.

Product	BE6500 Dual-Band Wi-Fi 7 Gaming Router	Test Engineer	Peter
Test Site	SR6	Test Date	2025/2/9~2025/2/23
Test Item	Power Spectral Density (U-NII-3) CDD Mode		

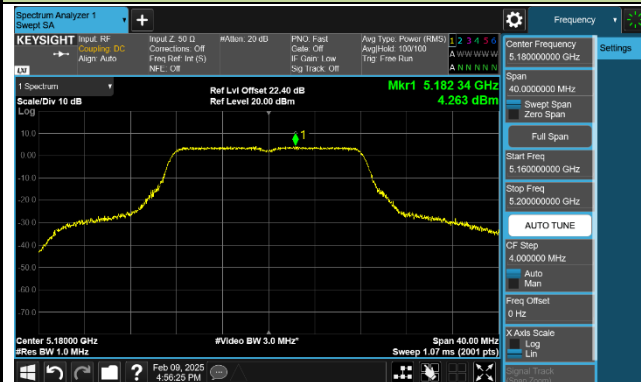
Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/ 510KHz)	Ant 0 PSD (dBm/ 510KHz)	Ant 0 PSD (dBm/ 510KHz)	Ant 0 PSD (dBm/ 510KHz)	Duty Cycle (%)	Total PSD (dBm/ 510kHz)	Limit (dBm/ 500kHz)	Result
11a	6Mbps	149	5745	8.970	8.192	7.786	6.709	94.91%	14.237	≤ 24.10	Pass
11a	6Mbps	157	5785	8.812	8.061	8.060	7.087	94.91%	14.295	≤ 24.10	Pass
11a	6Mbps	165	5825	9.019	8.341	8.052	7.312	94.91%	14.471	≤ 24.10	Pass
11ac-VHT20	MCS0	149	5745	9.169	7.910	8.040	7.282	98.47%	14.242	≤ 24.10	Pass
11ac-VHT20	MCS0	157	5785	8.488	7.718	7.829	6.935	98.47%	13.865	≤ 24.10	Pass
11ac-VHT20	MCS0	165	5825	9.358	7.972	7.502	7.595	98.47%	14.261	≤ 24.10	Pass
11ac-VHT40	MCS0	151	5755	5.591	4.981	5.340	3.836	96.57%	11.159	≤ 24.10	Pass
11ac-VHT40	MCS0	159	5795	5.592	4.990	4.867	4.294	96.57%	11.132	≤ 24.10	Pass
11ac-VHT80	MCS0	155	5775	2.647	1.911	2.786	1.561	93.55%	8.566	≤ 24.10	Pass
11ax-HE20	MCS0	149	5745	8.010	7.369	6.999	6.025	97.83%	13.275	≤ 24.10	Pass
11ax-HE20	MCS0	157	5785	8.036	7.181	7.168	6.258	97.83%	13.322	≤ 24.10	Pass
11ax-HE20	MCS0	165	5825	8.282	7.280	7.465	6.636	97.83%	13.572	≤ 24.10	Pass
11ax-HE40	MCS0	151	5755	5.862	4.601	5.119	3.941	95.47%	11.160	≤ 24.10	Pass
11ax-HE40	MCS0	159	5795	5.456	4.801	4.958	3.959	95.47%	11.048	≤ 24.10	Pass
11ax-HE80	MCS0	155	5775	2.393	1.618	2.917	1.143	92.62%	8.425	≤ 24.10	Pass
11be-EHT20	MCS0	149	5745	8.692	7.368	7.673	6.712	98.36%	13.763	≤ 24.10	Pass
11be-EHT20	MCS0	157	5785	8.361	7.324	7.684	6.830	98.36%	13.678	≤ 24.10	Pass
11be-EHT20	MCS0	165	5825	8.910	7.609	7.262	6.758	98.36%	13.803	≤ 24.10	Pass
11be-EHT40	MCS0	151	5755	5.245	4.595	4.822	4.044	96.31%	10.882	≤ 24.10	Pass
11be-EHT40	MCS0	159	5795	5.367	5.174	4.674	4.079	96.31%	11.036	≤ 24.10	Pass
11be-EHT80	MCS0	155	5775	1.114	1.166	1.567	0.067	92.79%	7.358	≤ 24.10	Pass

Note 1: The total PSD (dBm/510kHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$
(dBm/510kHz) + $10 \cdot \log (1/\text{Duty Cycle})$.

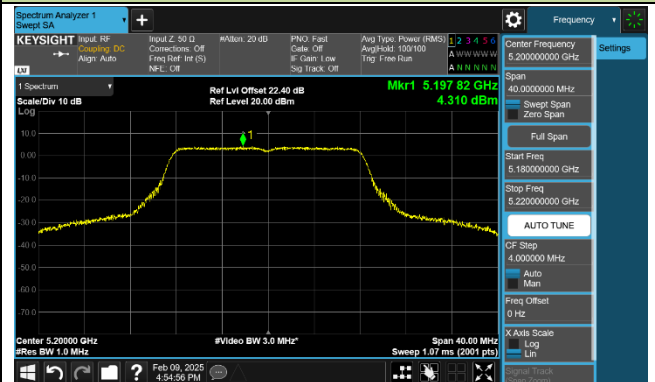
Note 2: For 5725 - 5850MHz Bands: PSD Limit (dBm/500kHz) = 30- (11.90- 6) = 24.10 dBm/500kHz.

802.11a Power Spectral Density - Ant 0

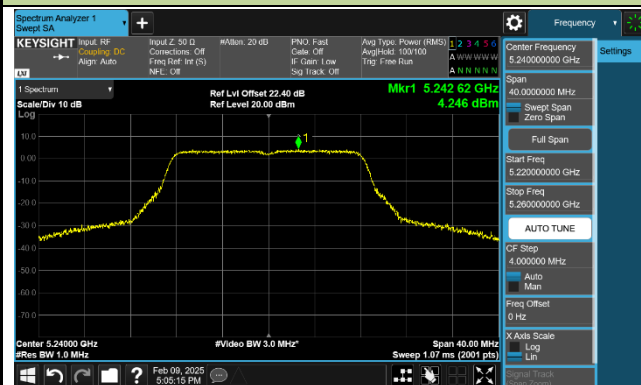
Channel 36 (5180MHz)



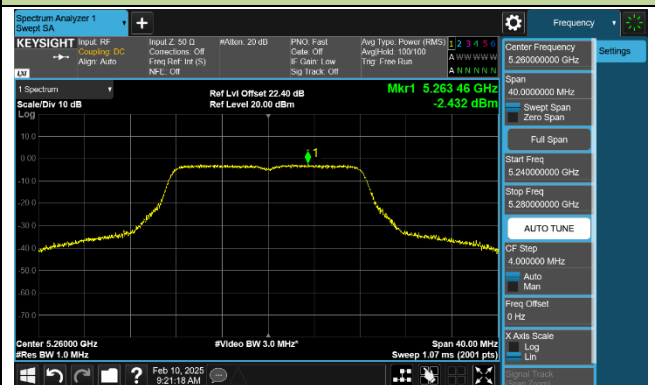
Channel 40 (5200MHz)



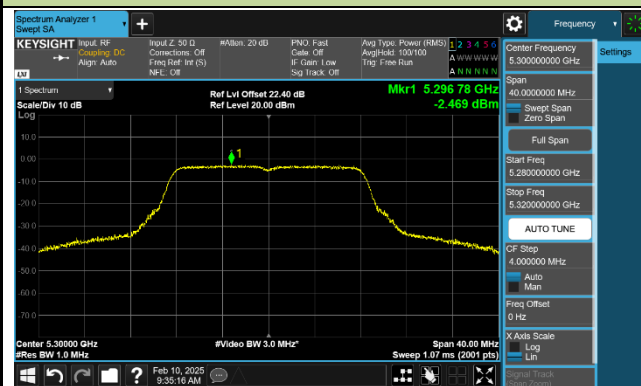
Channel 48 (5240MHz)



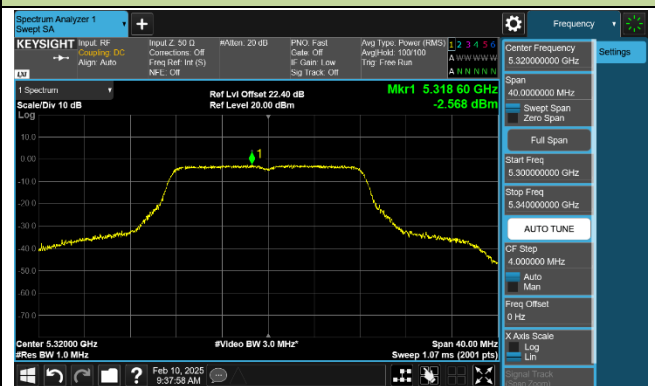
Channel 52 (5260MHz)



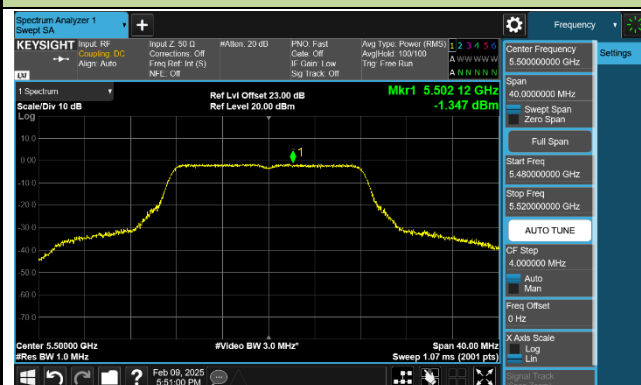
Channel 60 (5300MHz)



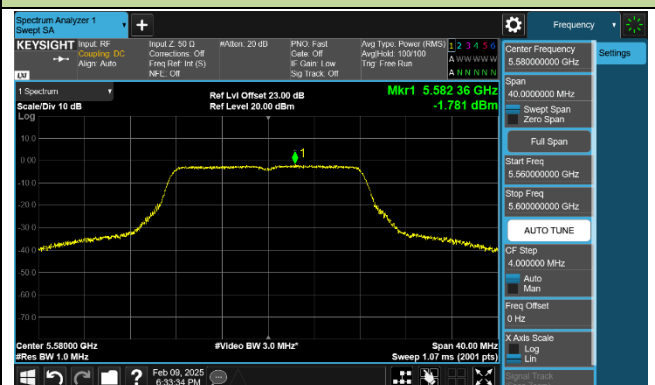
Channel 64 (5320MHz)

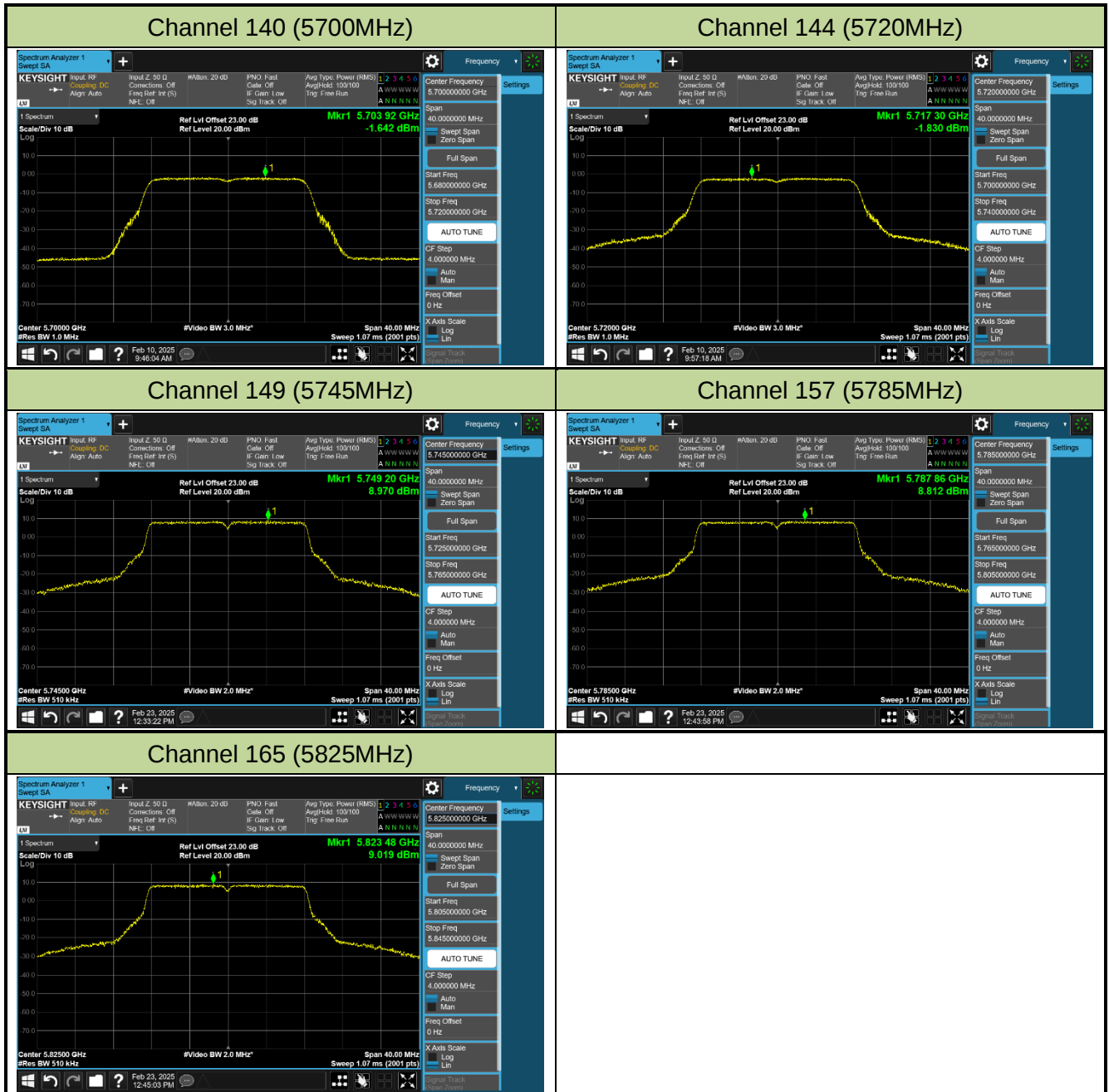


Channel 100 (5500MHz)



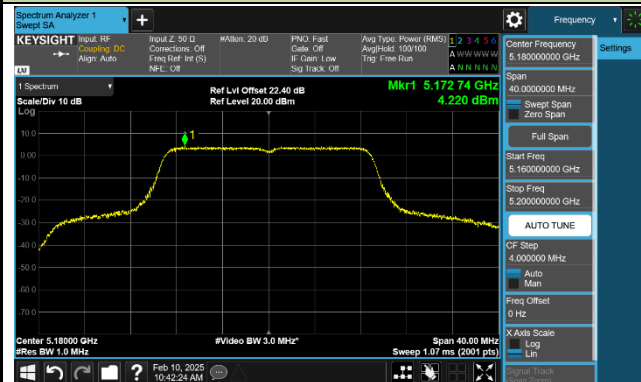
Channel 116 (5580MHz)



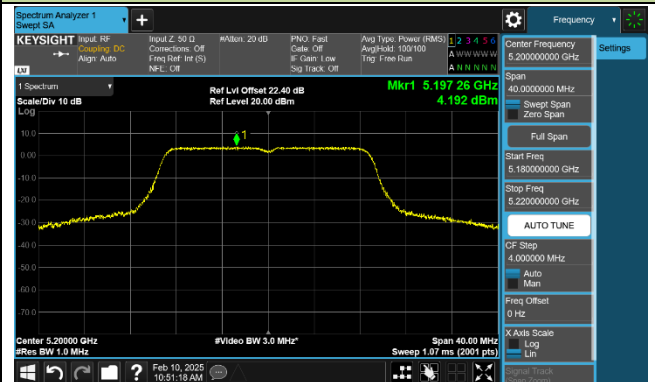


802.11ac-VHT20 Power Spectral Density - Ant 0

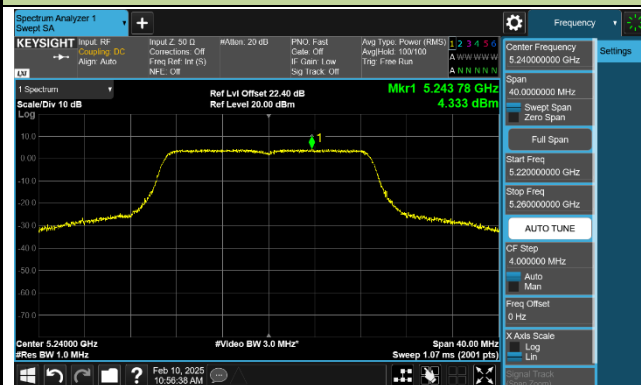
Channel 36 (5180MHz)



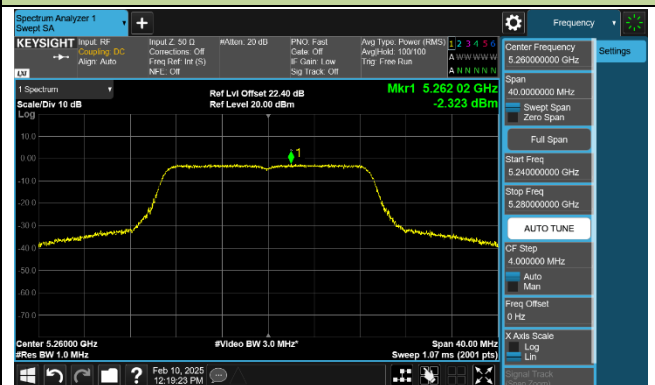
Channel 40 (5200MHz)



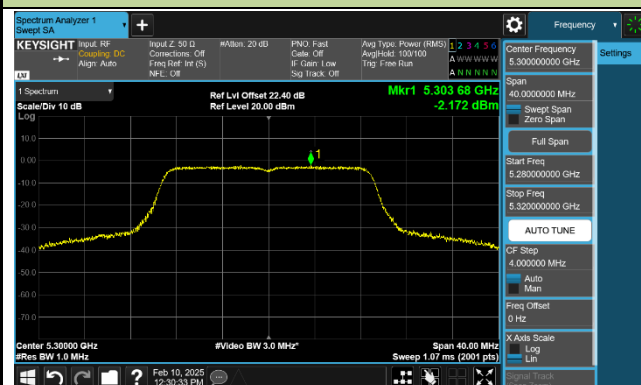
Channel 48 (5240MHz)



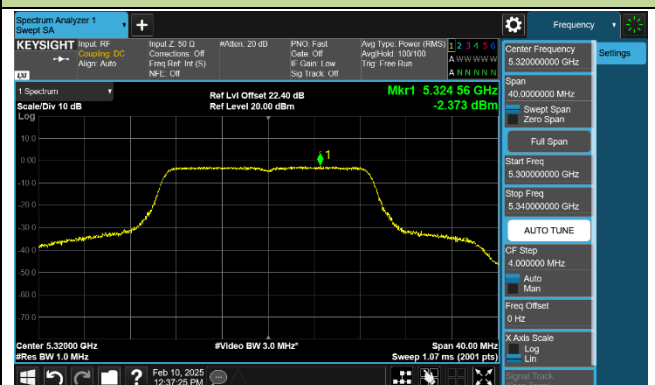
Channel 52 (5260MHz)



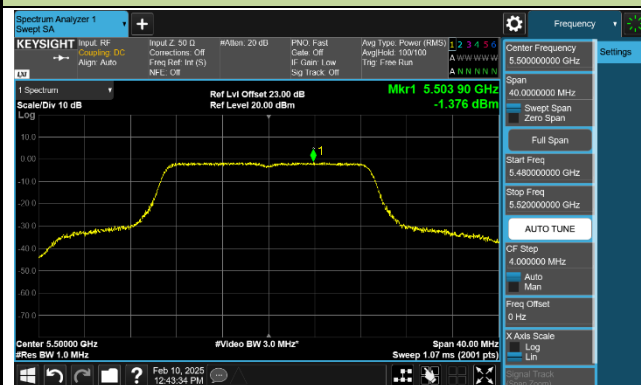
Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 116 (5580MHz)

