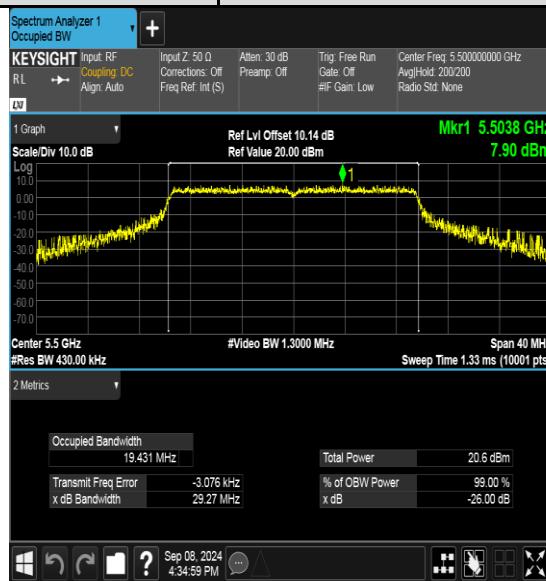
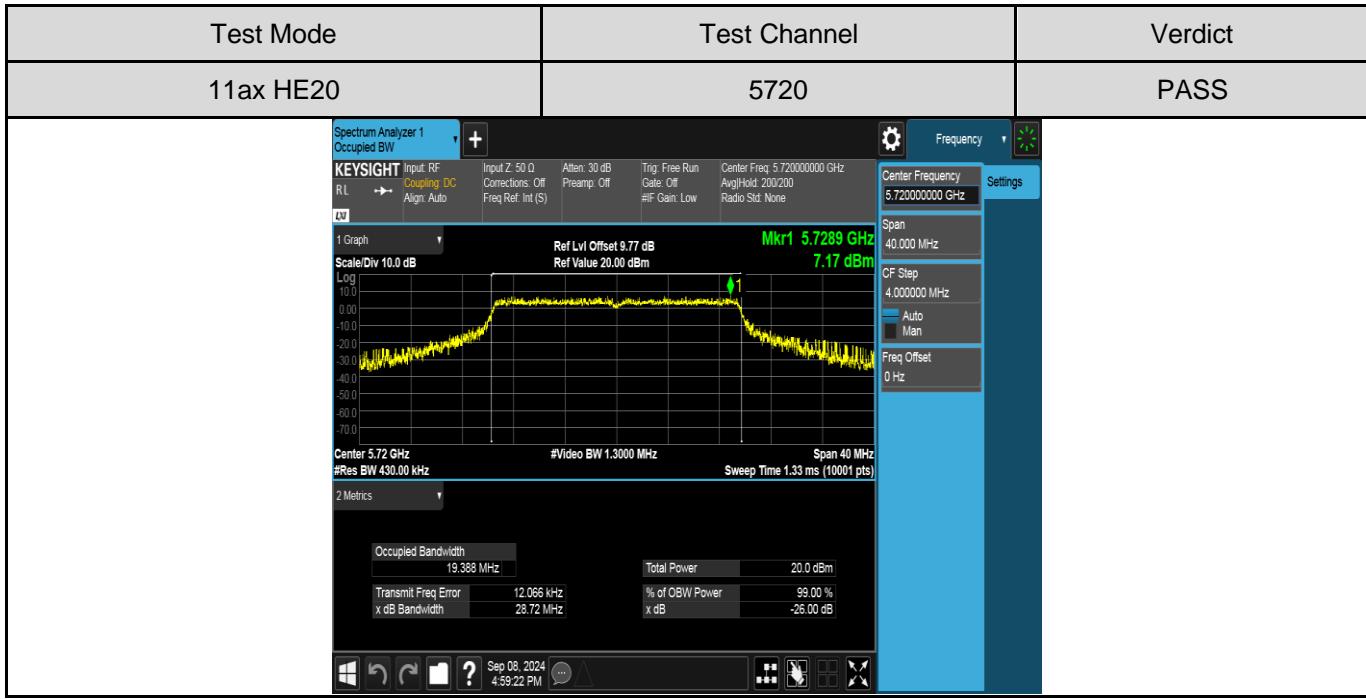
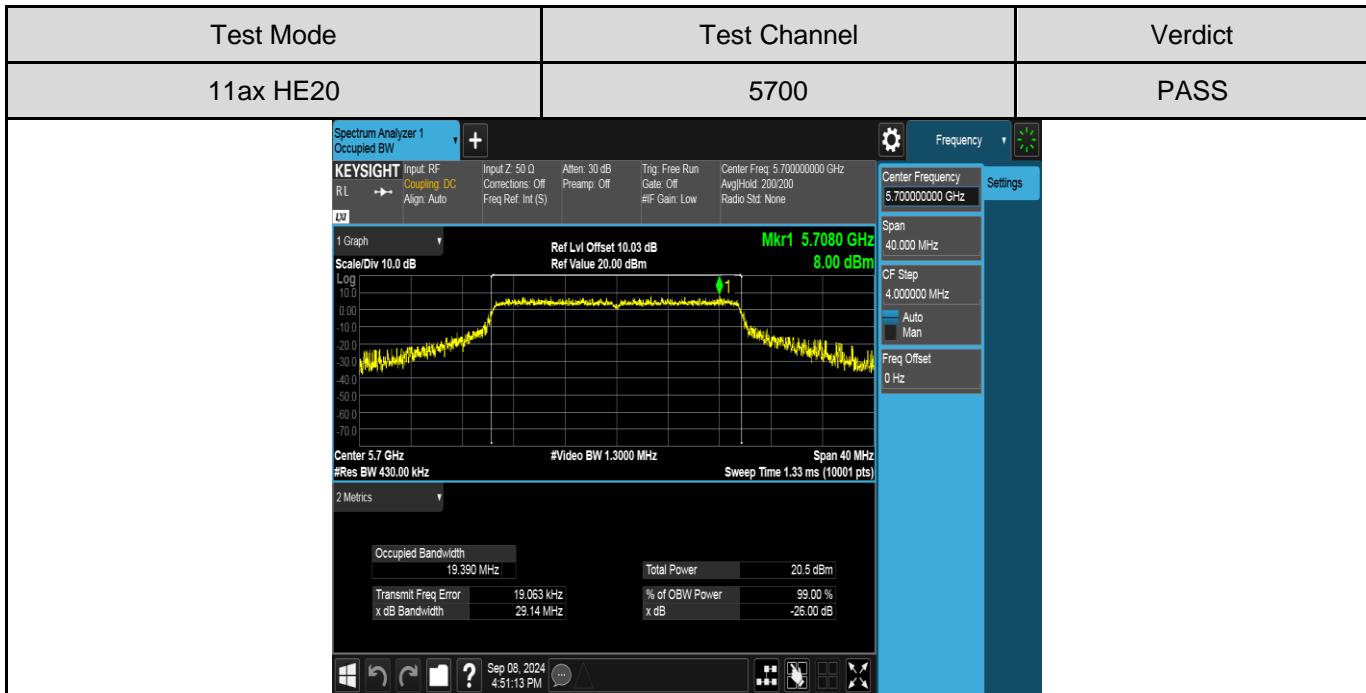
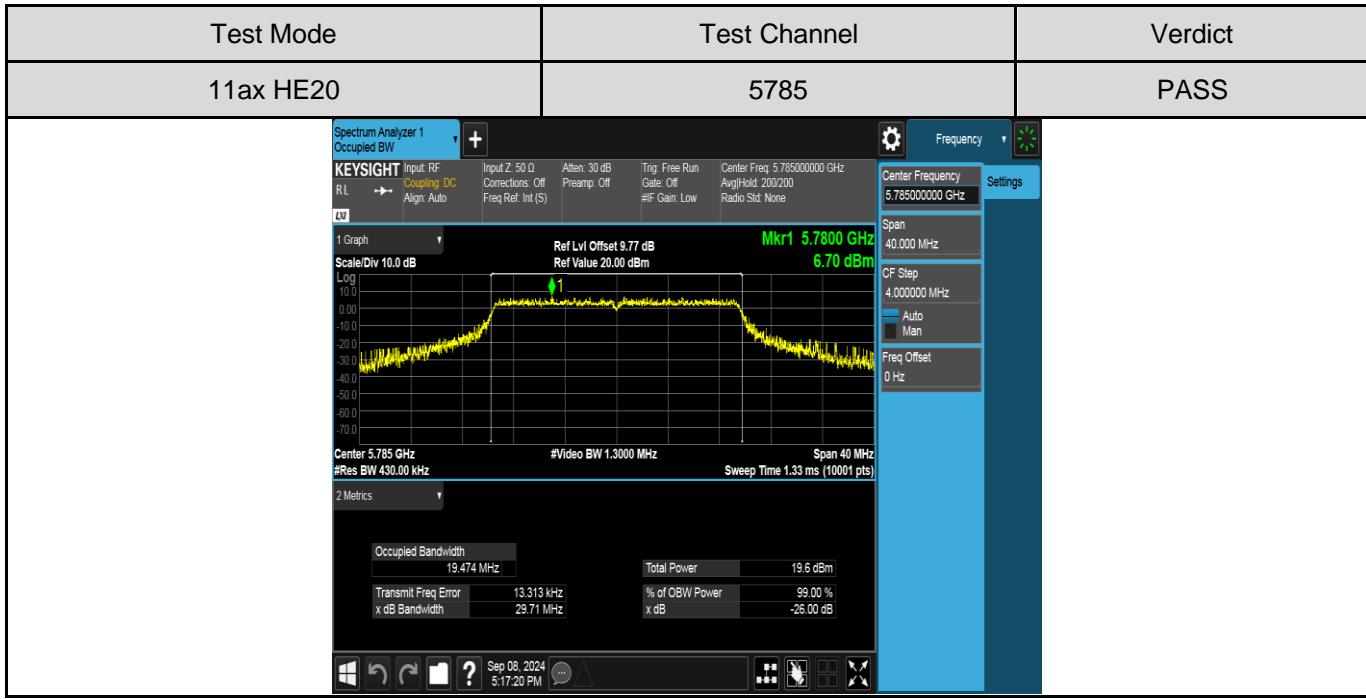
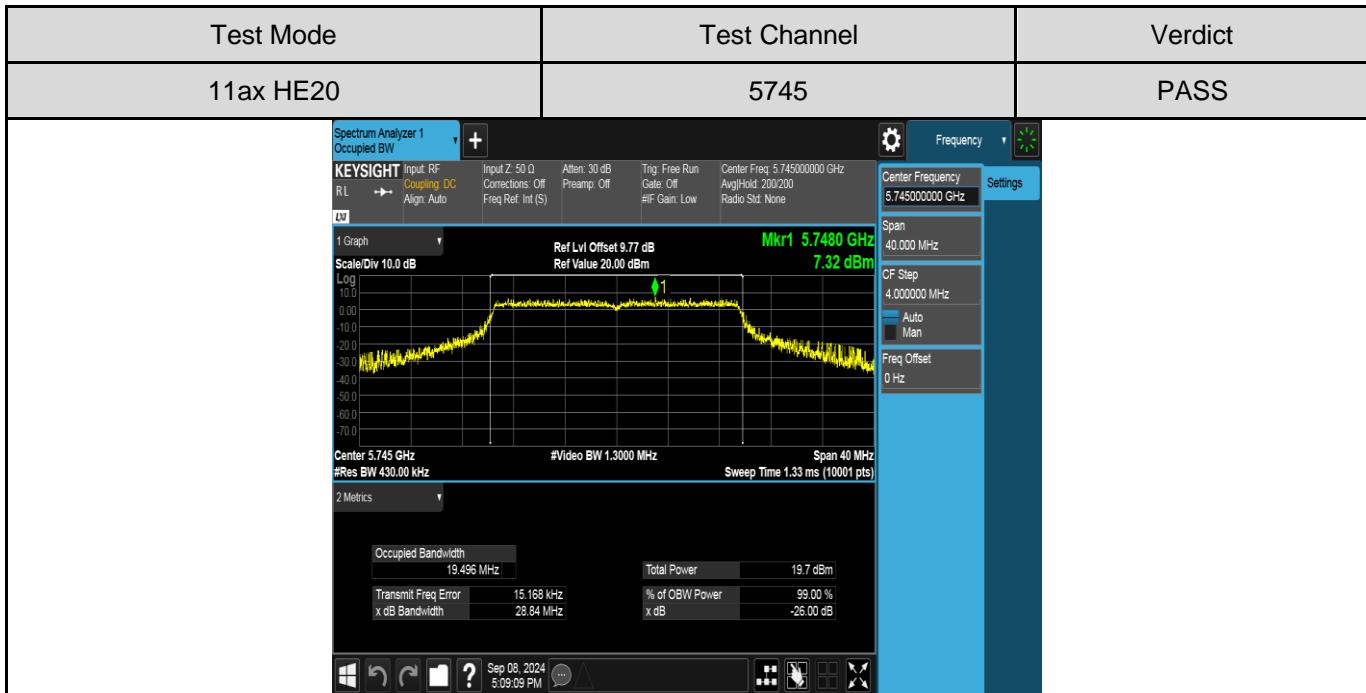
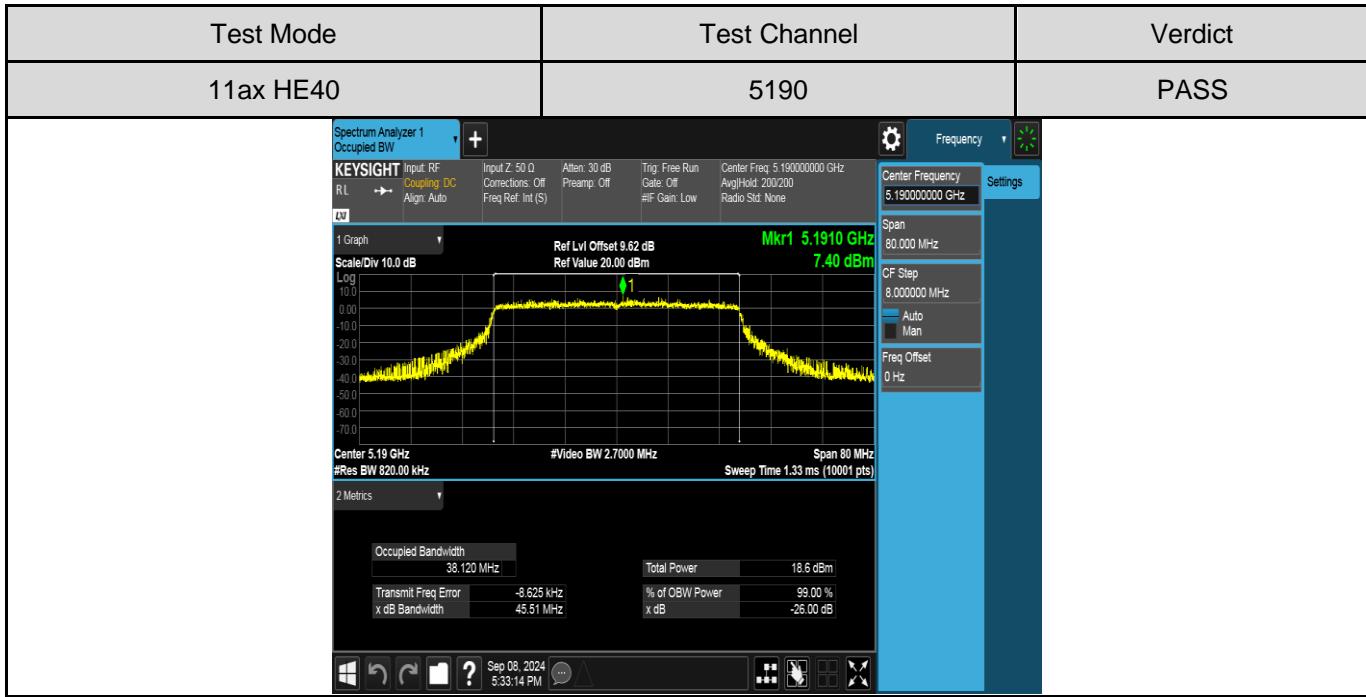
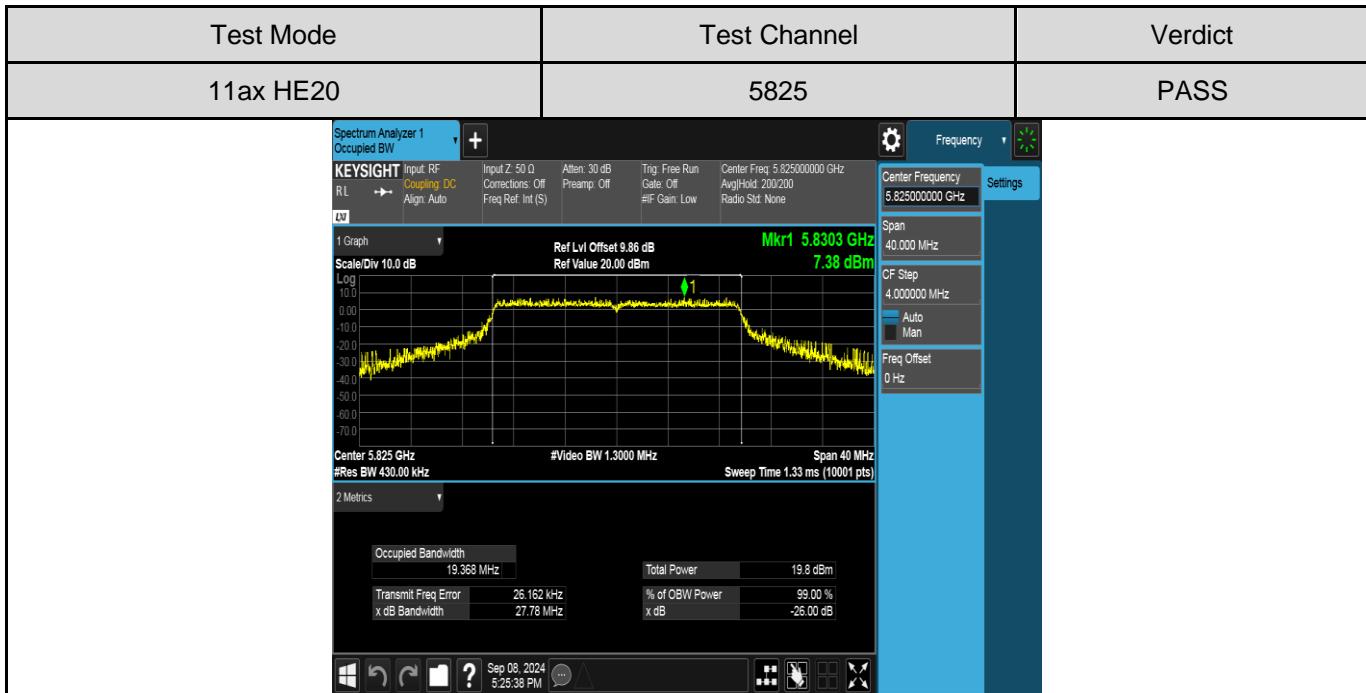


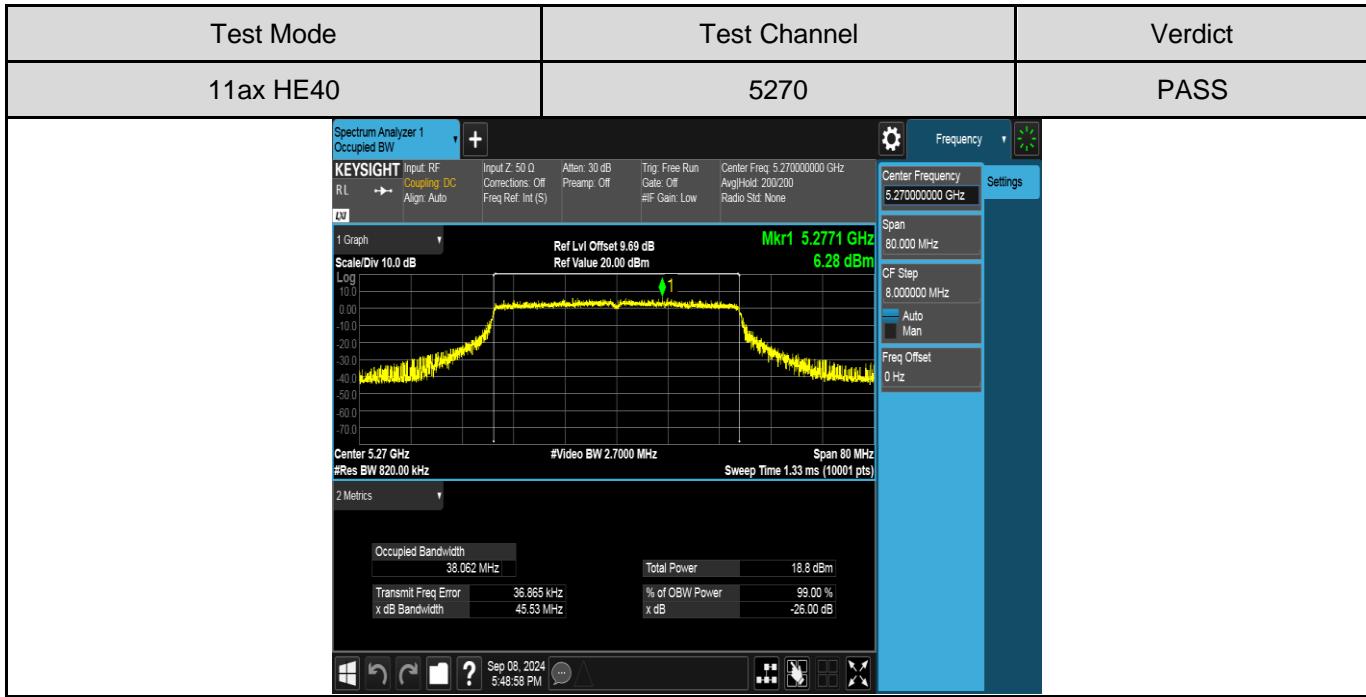
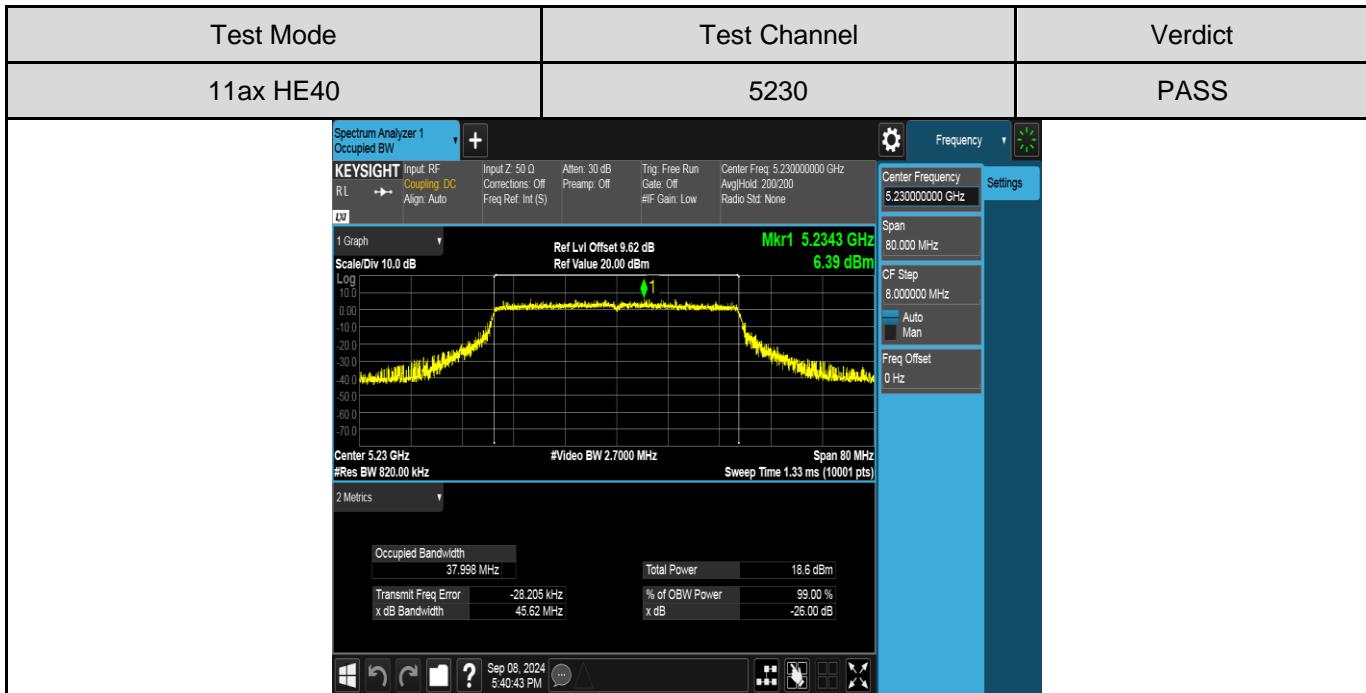
Test Mode	Test Channel	Verdict										
11ax HE20	5500	PASS										
 <div style="display: flex; justify-content: space-between;"> <div style="flex: 1;"> <p>KEYSIGHT Input: RF Coupling: DC RL → Align: Auto</p> <p>Input Z: 50 Ω Atten: 30 dB Trig: Free Run Corrections: Off Preamp: Off Gate: Off Avg/Hold: 200/200 File Ref. Int (S) #IF Gain: Low Radio Std: None</p> <p>1 Graph Ref Lvl Offset 10.14 dB Mkr1 5.5038 GHz Scale/Div 10.0 dB Ref Value 20.00 dBm 7.90 dBm</p> <p>Log</p> <p>10.0 0.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0</p> <p>Center 5.5 GHz #Video BW 1.3000 MHz Span 40 MHz #Res BW 430.00 kHz Sweep Time 1.33 ms (10001 pts)</p> <p>2 Metrics</p> <table border="1"> <tr><td>Occupied Bandwidth</td><td>19.431 MHz</td><td>Total Power</td><td>20.6 dBm</td></tr> <tr><td>Transmit Freq Error</td><td>-3.076 kHz</td><td>% of OBW Power</td><td>99.00 %</td></tr> <tr><td>x dB Bandwidth</td><td>29.27 MHz</td><td>x dB</td><td>-26.00 dB</td></tr> </table> <p>Sep 08, 2024 4:34:59 PM</p> </div> <div style="flex: 1; background-color: #0078D4; color: white; padding: 5px;"> <p>Frequency</p> <p>Center Frequency 5.50000000 GHz</p> <p>Span 40.000 MHz</p> <p>CF Step 4.00000 MHz</p> <p>Auto Man</p> <p>Freq Offset 0 Hz</p> </div> </div>	Occupied Bandwidth	19.431 MHz	Total Power	20.6 dBm	Transmit Freq Error	-3.076 kHz	% of OBW Power	99.00 %	x dB Bandwidth	29.27 MHz	x dB	-26.00 dB
Occupied Bandwidth	19.431 MHz	Total Power	20.6 dBm									
Transmit Freq Error	-3.076 kHz	% of OBW Power	99.00 %									
x dB Bandwidth	29.27 MHz	x dB	-26.00 dB									

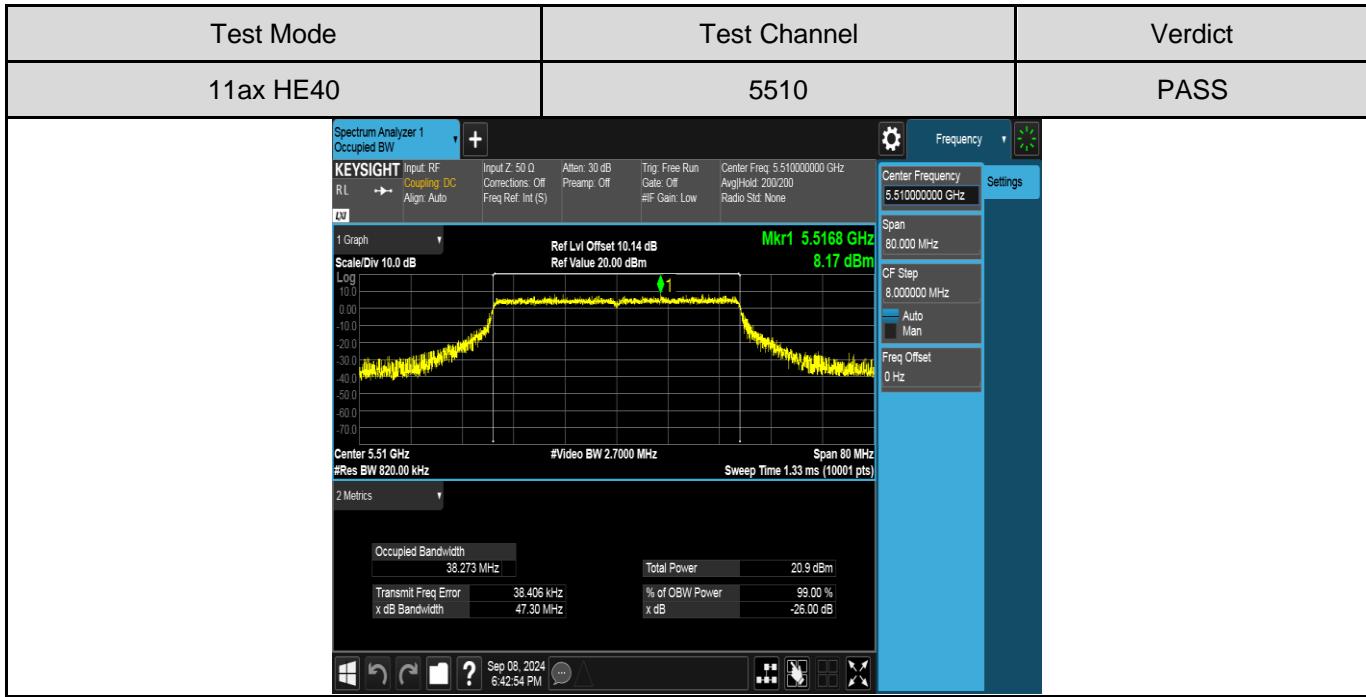
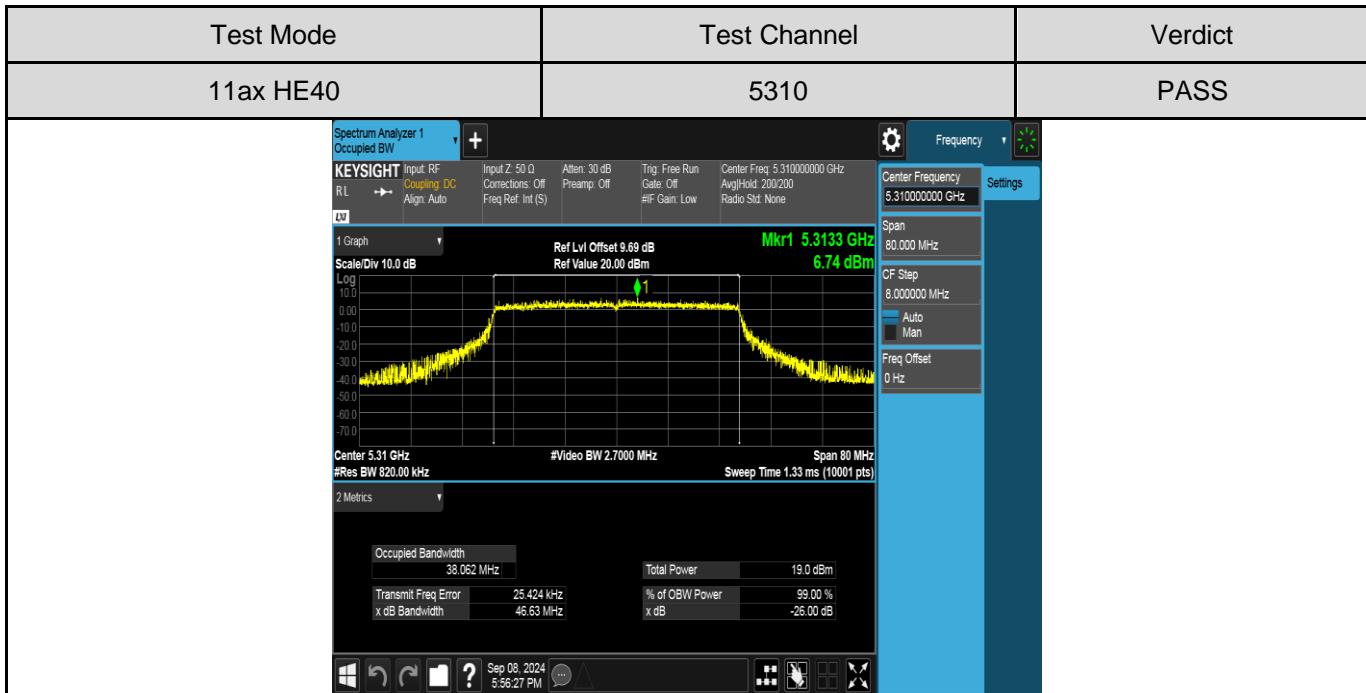
Test Mode	Test Channel	Verdict										
11ax HE20	5580	PASS										
 <div style="display: flex; justify-content: space-between;"> <div style="flex: 1;"> <p>KEYSIGHT Input: RF Coupling: DC RL → Align: Auto</p> <p>Input Z: 50 Ω Atten: 30 dB Trig: Free Run Corrections: Off Preamp: Off Gate: Off Avg/Hold: 200/200 File Ref. Int (S) #IF Gain: Low Radio Std: None</p> <p>1 Graph Ref Lvl Offset 10.14 dB Mkr1 5.5038 GHz Scale/Div 10.0 dB Ref Value 20.00 dBm 7.90 dBm</p> <p>Log</p> <p>10.0 0.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0</p> <p>Center 5.5 GHz #Video BW 1.3000 MHz Span 40 MHz #Res BW 430.00 kHz Sweep Time 1.33 ms (10001 pts)</p> <p>2 Metrics</p> <table border="1"> <tr><td>Occupied Bandwidth</td><td>19.431 MHz</td><td>Total Power</td><td>20.6 dBm</td></tr> <tr><td>Transmit Freq Error</td><td>-3.076 kHz</td><td>% of OBW Power</td><td>99.00 %</td></tr> <tr><td>x dB Bandwidth</td><td>29.27 MHz</td><td>x dB</td><td>-26.00 dB</td></tr> </table> <p>Sep 08, 2024 4:34:59 PM</p> </div> <div style="flex: 1; background-color: #0078D4; color: white; padding: 5px;"> <p>Frequency</p> <p>Center Frequency 5.50000000 GHz</p> <p>Span 40.000 MHz</p> <p>CF Step 4.00000 MHz</p> <p>Auto Man</p> <p>Freq Offset 0 Hz</p> </div> </div>	Occupied Bandwidth	19.431 MHz	Total Power	20.6 dBm	Transmit Freq Error	-3.076 kHz	% of OBW Power	99.00 %	x dB Bandwidth	29.27 MHz	x dB	-26.00 dB
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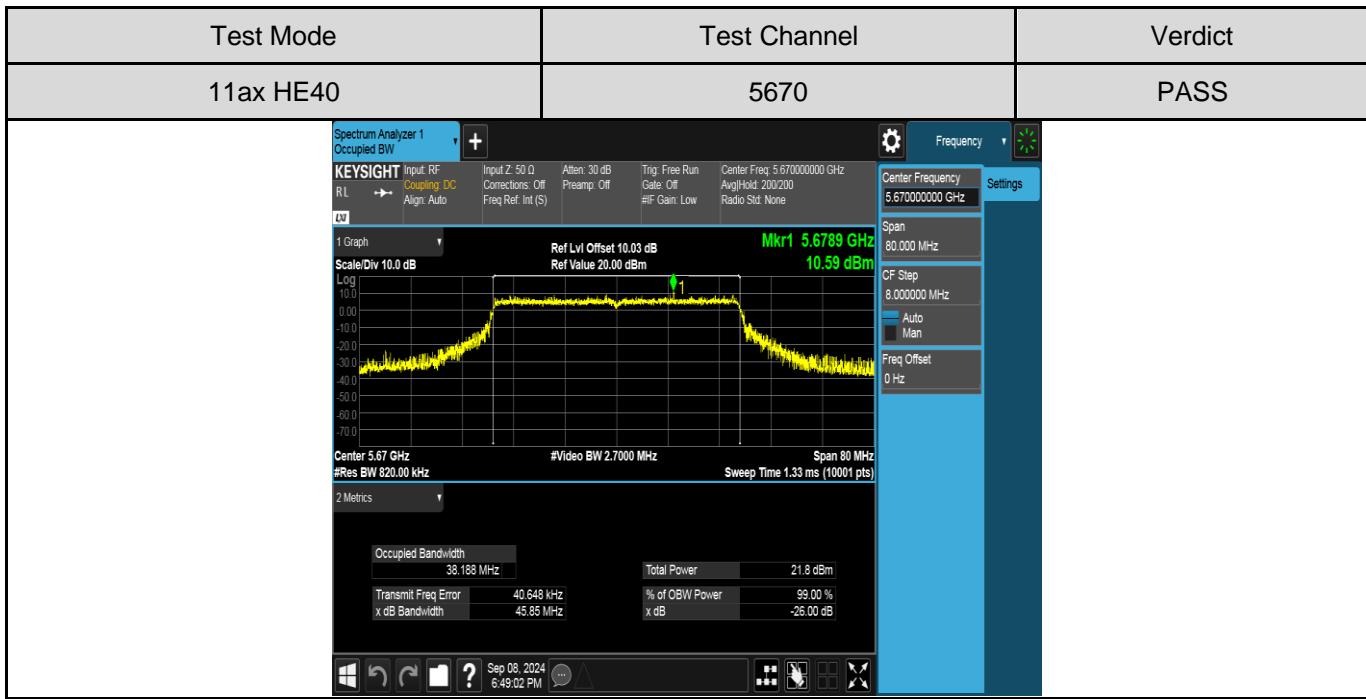
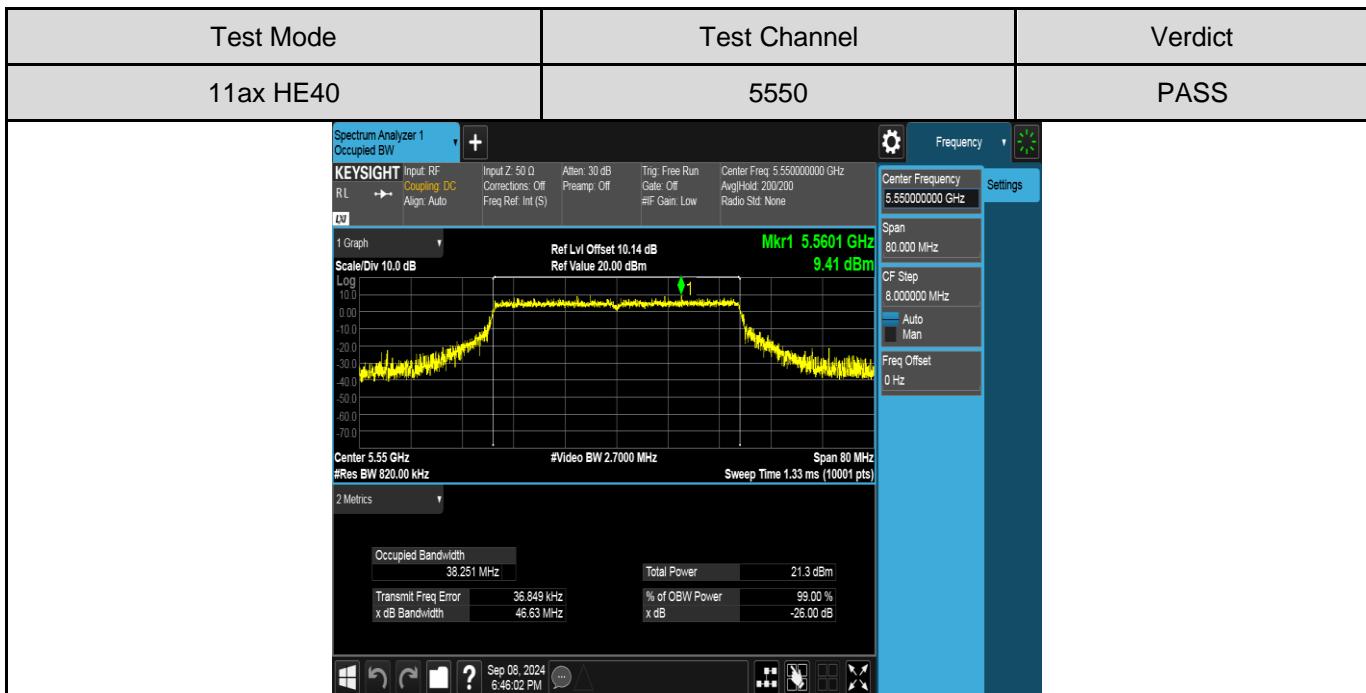


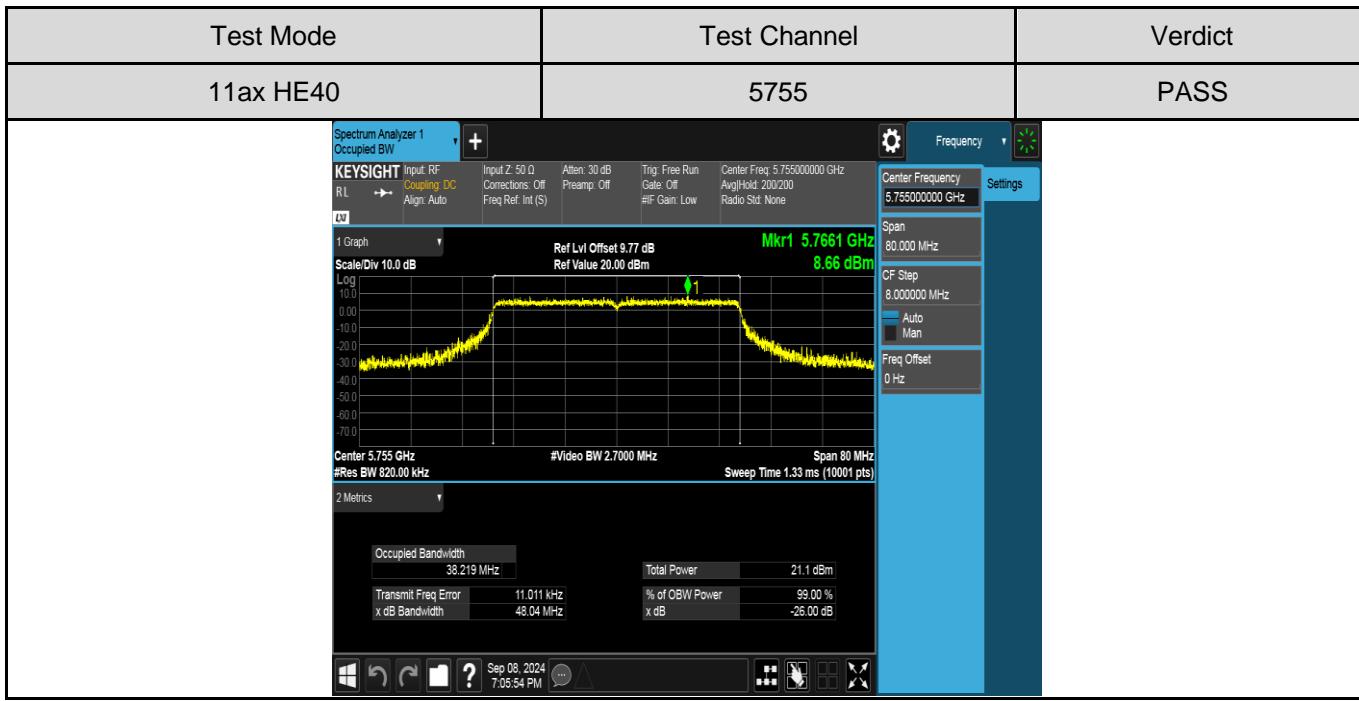
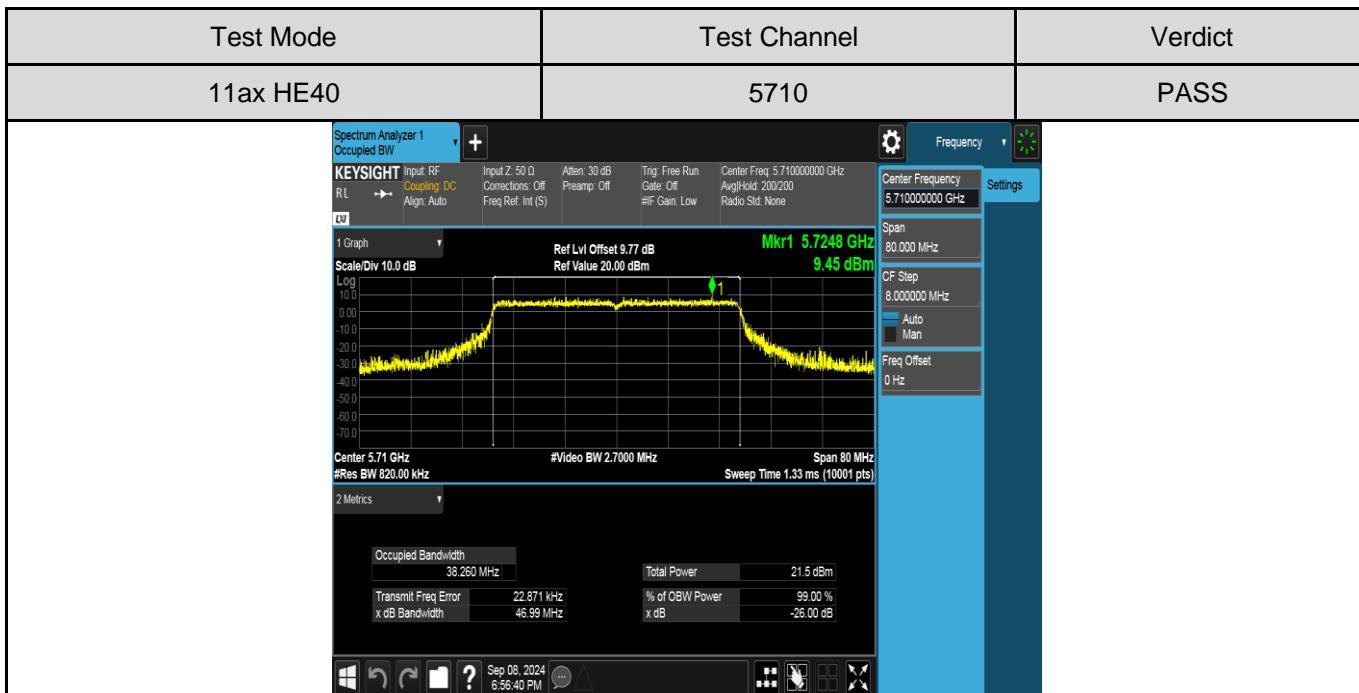


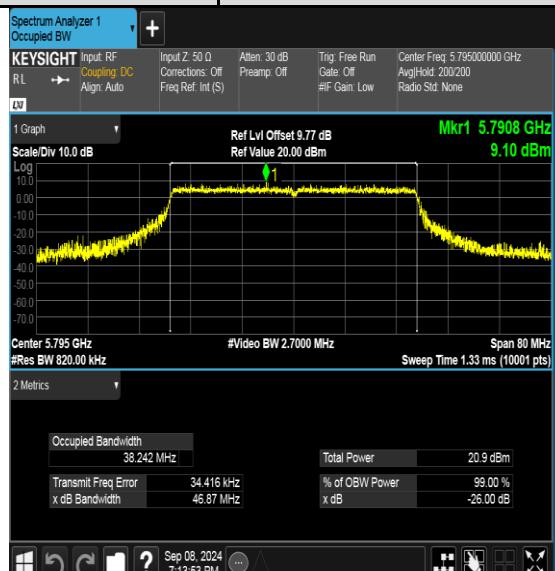


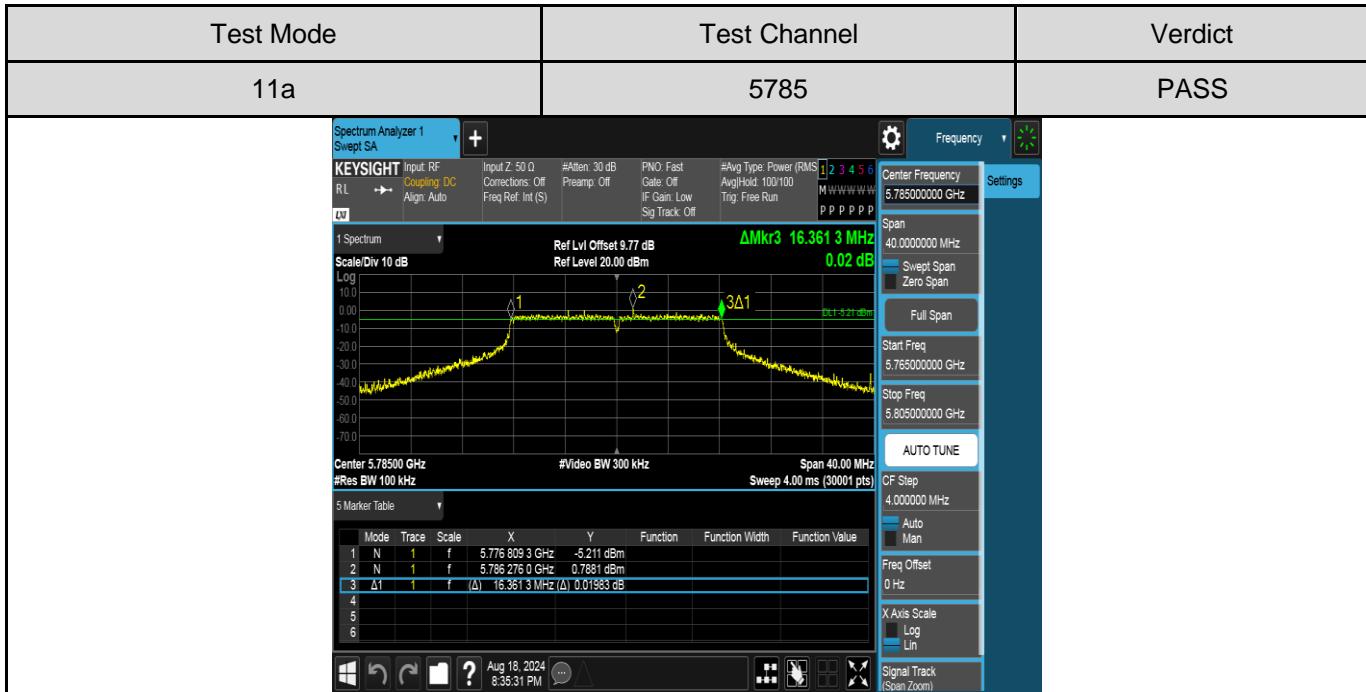
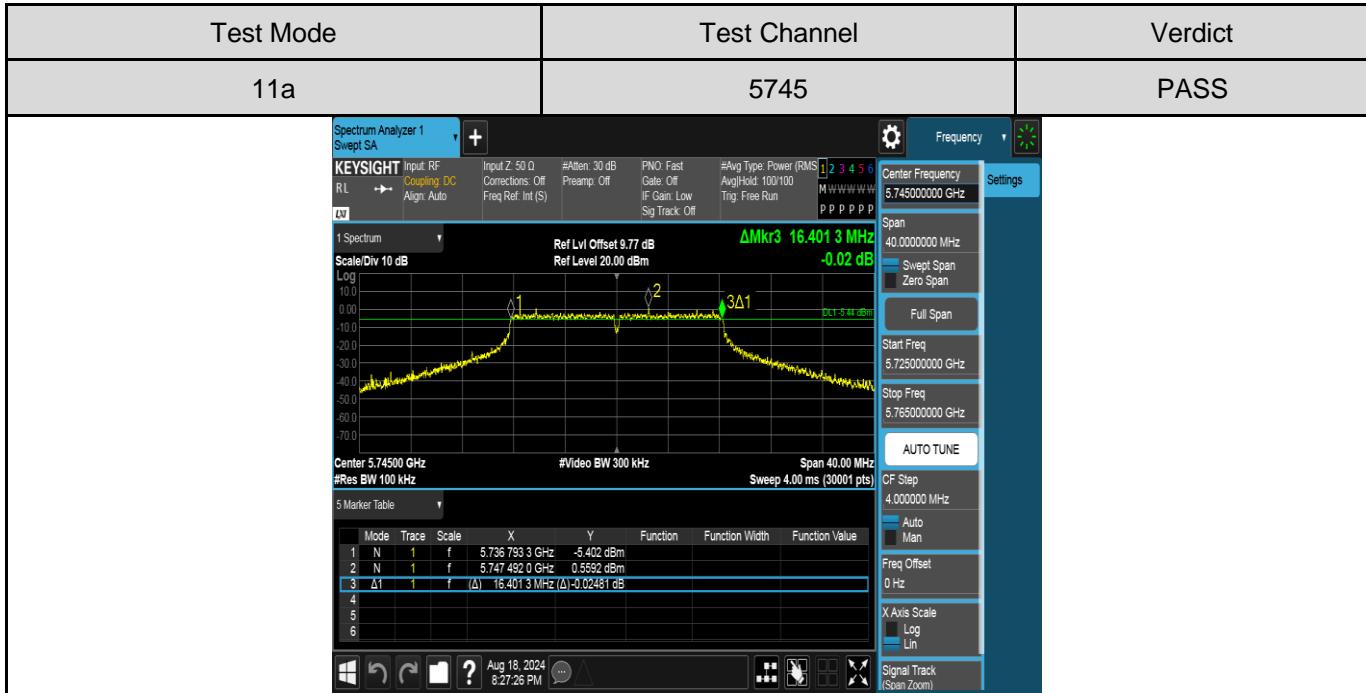


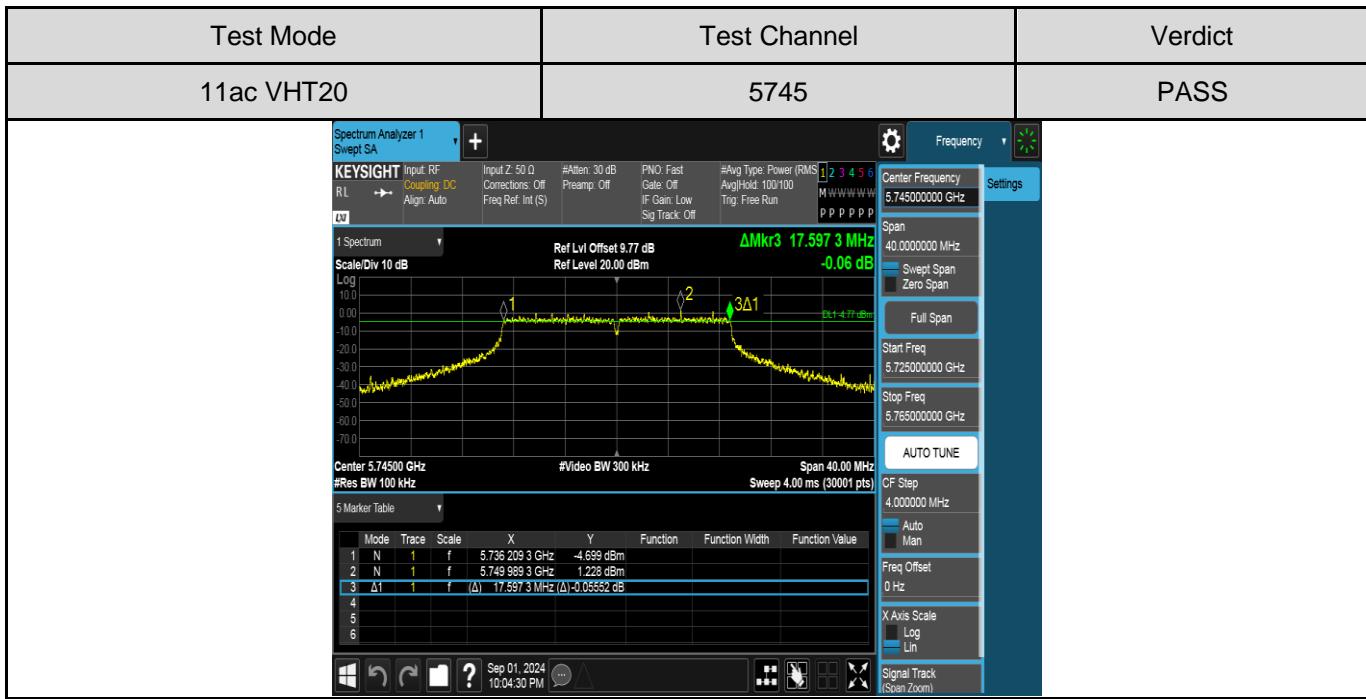
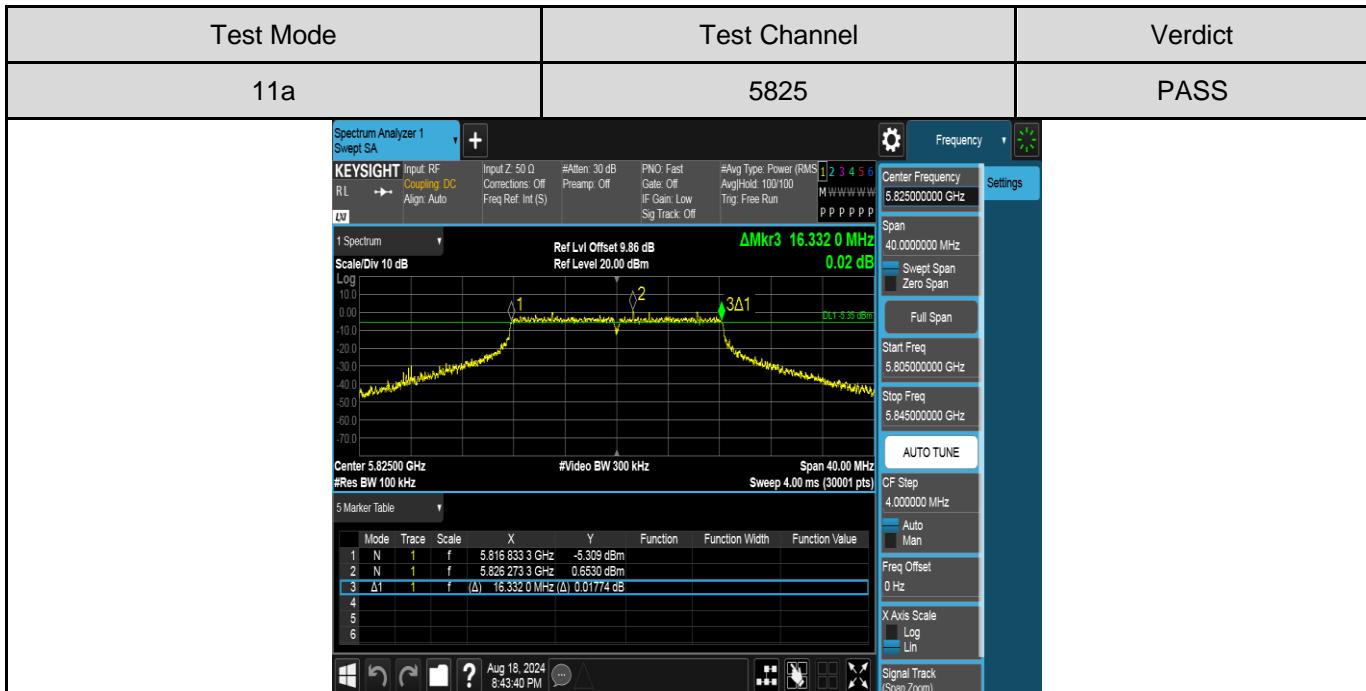


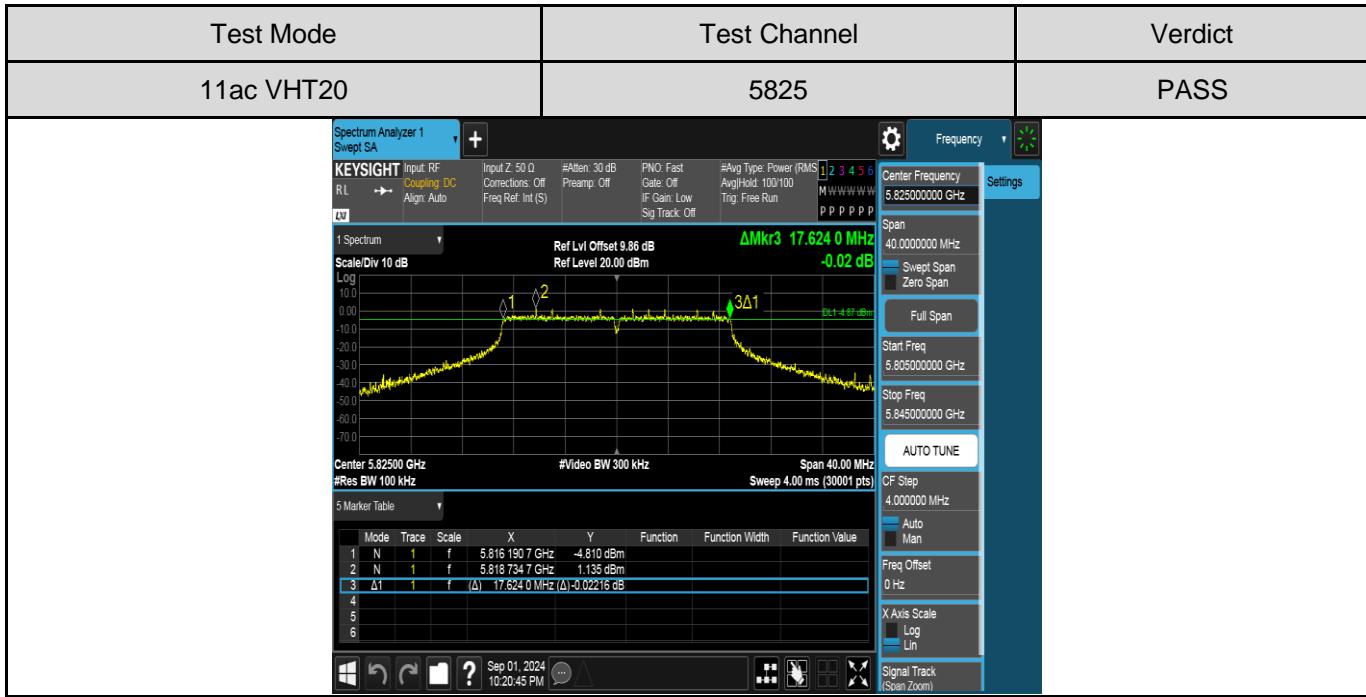
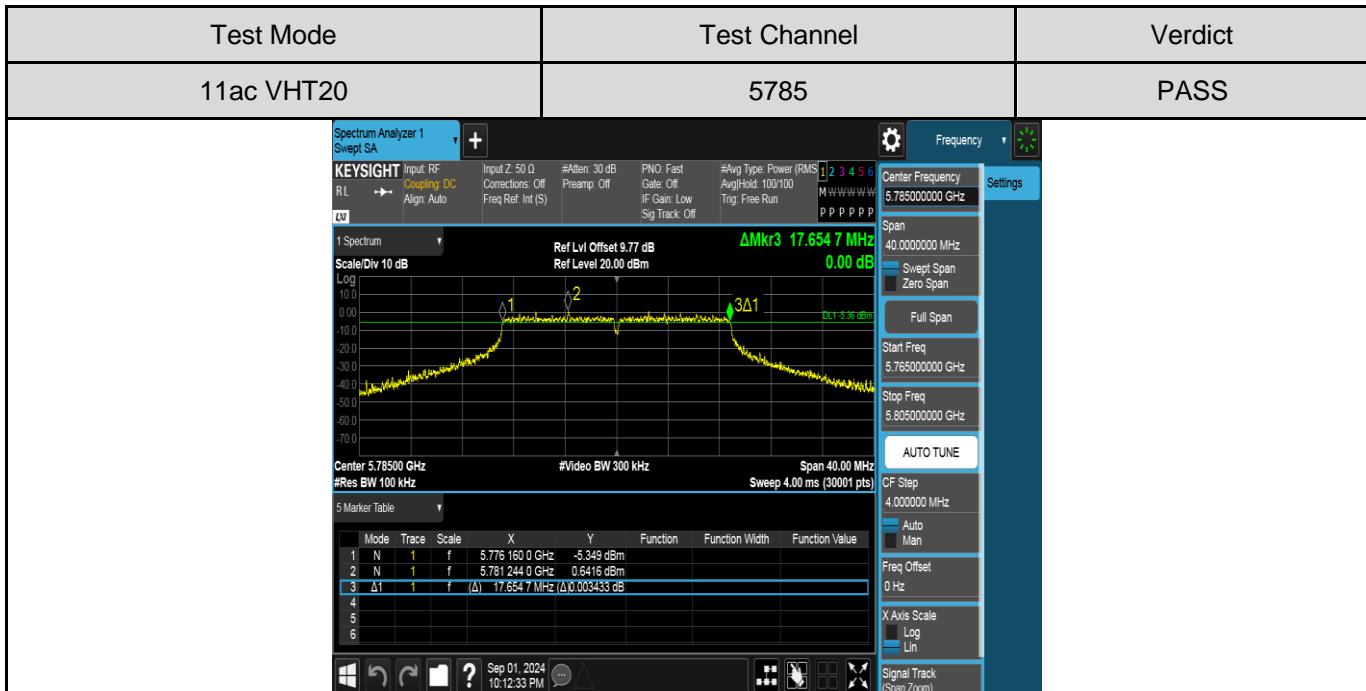


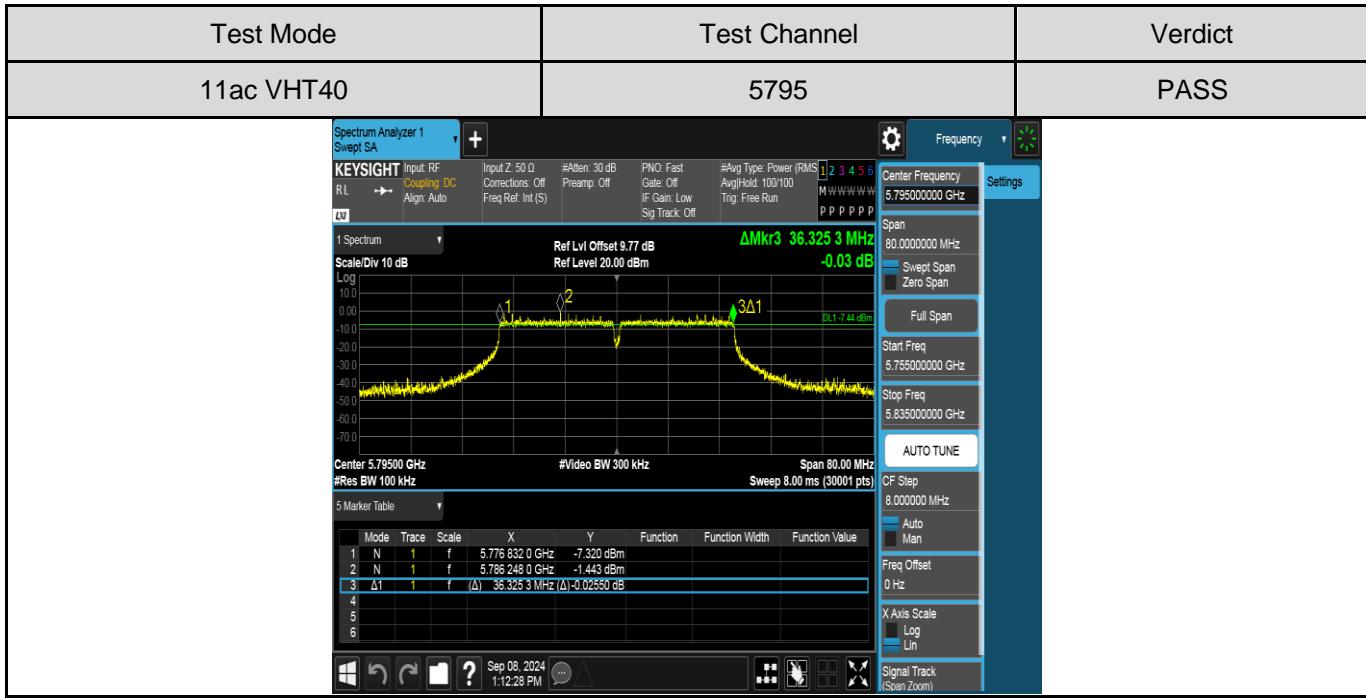
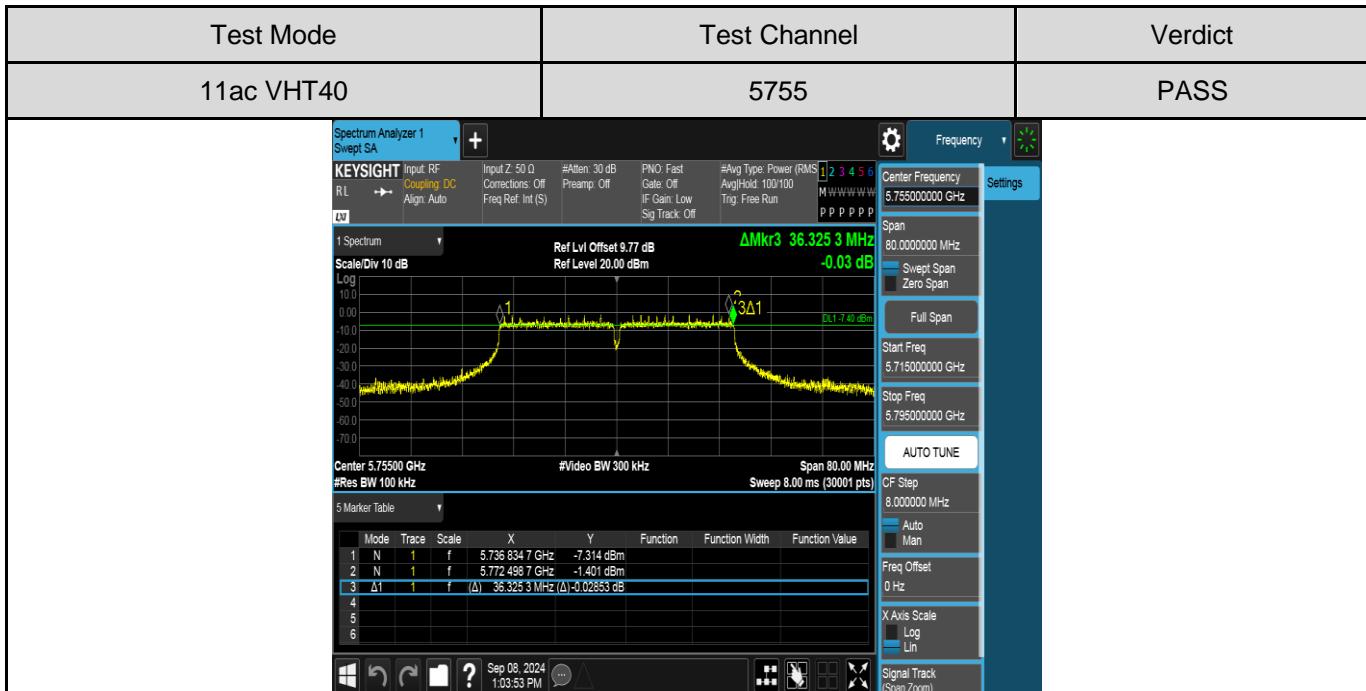


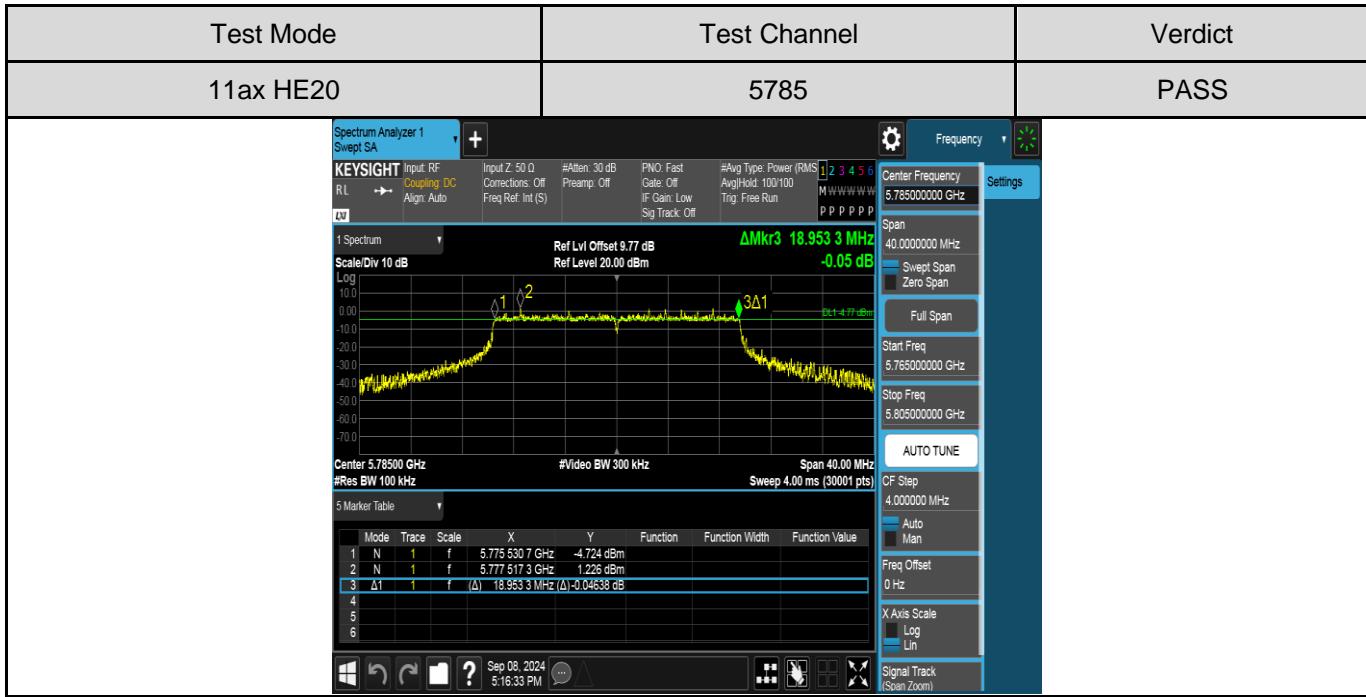
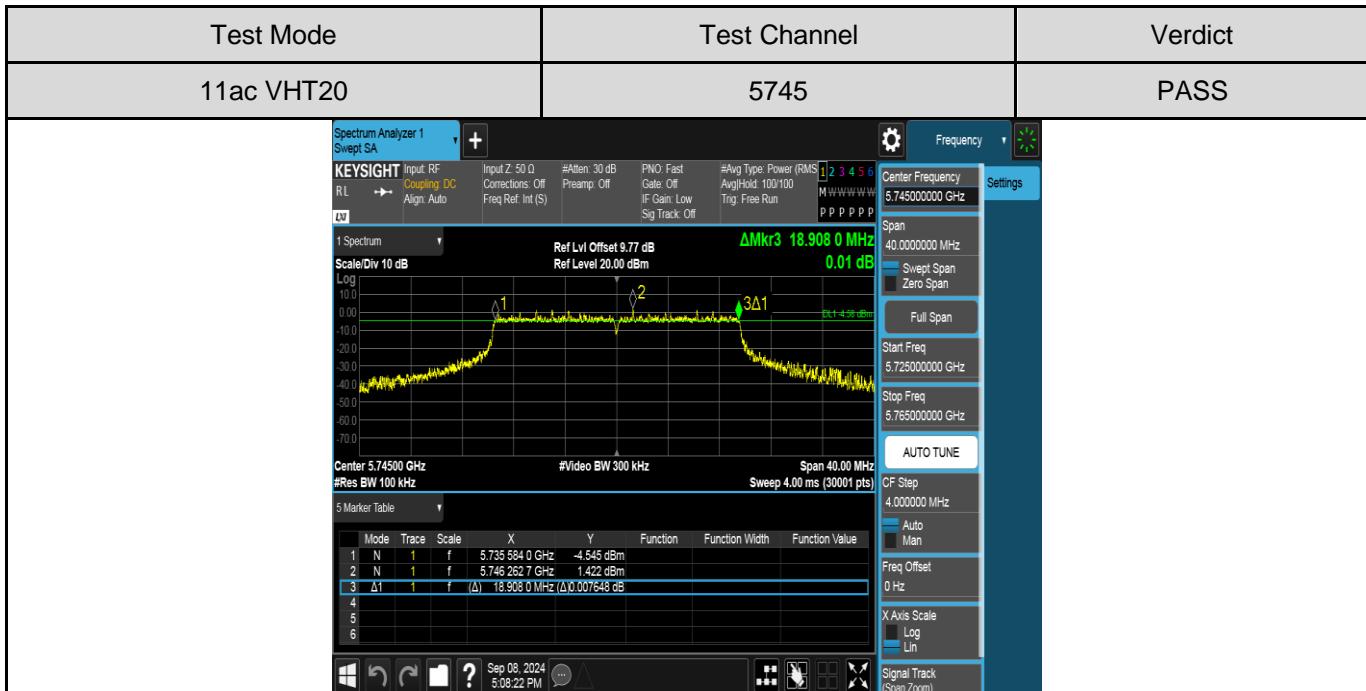
Test Mode	Test Channel	Verdict
11ax HE40	5795	PASS
		

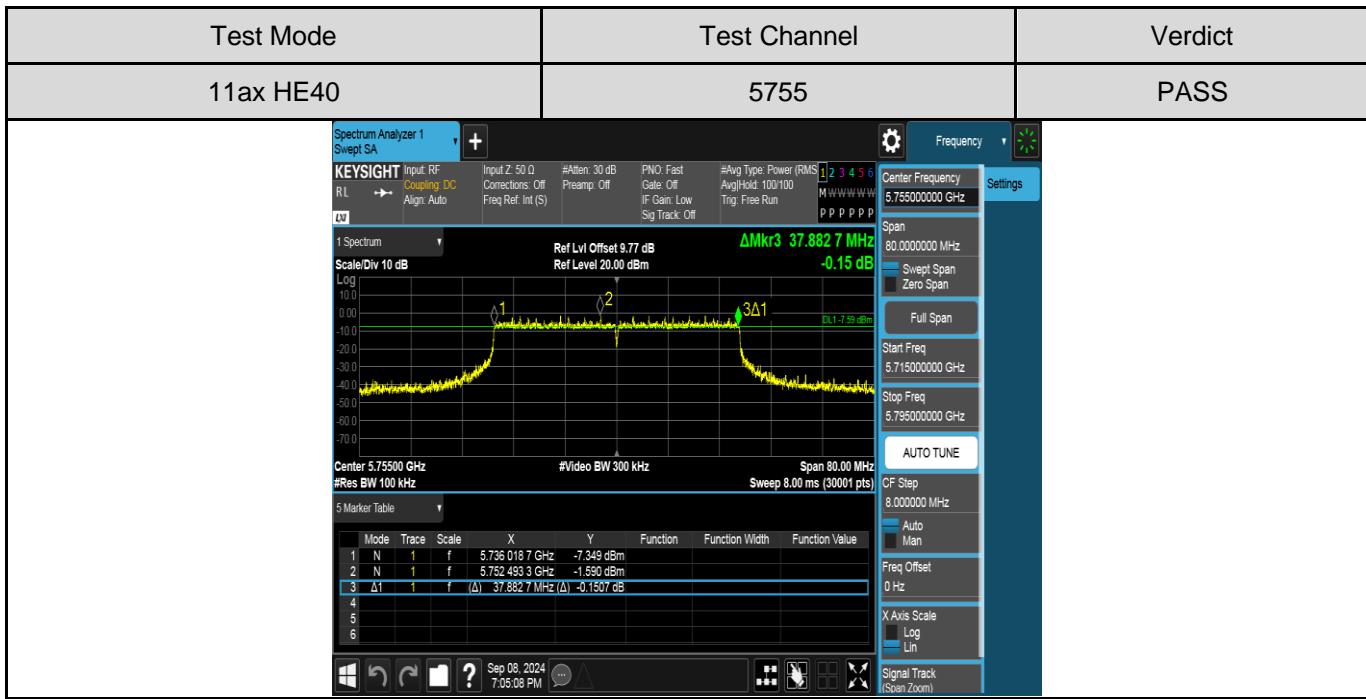
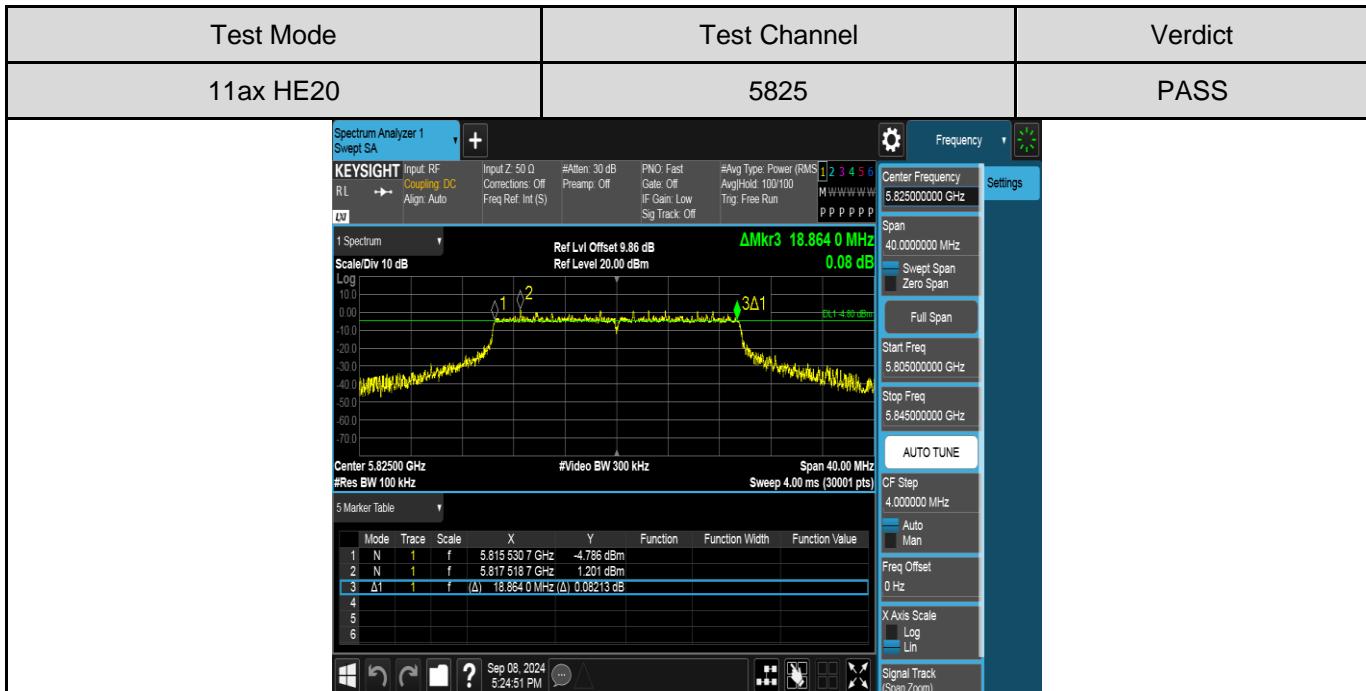
For 6 dB Emission Bandwidth Part:












Test Mode	Test Channel	Verdict																																																								
11ax HE40	5795	PASS																																																								
	 <p>Spectrum Analyzer 1 <input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/></p> <p>KEYSIGHT Input: RF Coupling: DC RL <input type="button" value="Align: Auto"/> Input Z: 50 Ω #Atten: 30 dB PNO: Fast Corrections: Off Preamp: Off Gate: Off #Avg Type: Power (RMS) File Ref. Int (S) IF Gain: Low Avg/Hold: 100/100 Tdg: Free Run Sig Track: Off</p> <p>I Spectrum Ref Lvl Offset: 9.77 dB ΔMkr3 37.864 0 MHz Scale/Div: 10 dB Ref Level: 20.00 dBm -0.01 dB</p> <p>Log 10.0 0.00 -10.00 -20.00 -30.00 -40.00 -50.00 -60.00 -70.00</p> <p>Center: 5.79500 GHz #Video BW: 300 kHz Span: 80.00 MHz #Res BW: 100 kHz Sweep: 8.00 ms (30001 pts)</p> <p>5 Marker Table</p> <table border="1"> <thead> <tr> <th>Mode</th> <th>Trace</th> <th>Scale</th> <th>X</th> <th>Y</th> <th>Function</th> <th>Function Width</th> <th>Function Value</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>5.776 010 7 GHz</td> <td>-7.452 dBm</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>5.806 058 7 GHz</td> <td>-1.520 dBm</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>Δ1</td> <td>1</td> <td>f</td> <td>(Δ) 37.864 0 MHz</td> <td>(Δ)-0.01251 dB</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Windows Sep 08, 2024 7:13:07 PM </p>	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value	1	N	1	f	5.776 010 7 GHz	-7.452 dBm			2	N	1	f	5.806 058 7 GHz	-1.520 dBm			3	Δ1	1	f	(Δ) 37.864 0 MHz	(Δ)-0.01251 dB			4								5								6								
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6.3. MAXIMUM CONDUCTED AVERAGE OUTPUT POWER

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	<input type="checkbox"/> Outdoor Access Point: 1 W (30 dBm) <input type="checkbox"/> Indoor Access Point: 1 W (30 dBm) <input type="checkbox"/> Fixed Point-To-Point Access Points: 1 W (30 dBm) <input checked="" type="checkbox"/> Client Devices: 250 mW (24 dBm)	5150 ~ 5250
	Shall not exceed the lesser of 250 mW (24dBm) or $11 + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.	5250 ~ 5350 5470 ~ 5725
	Shall not exceed 1 Watt (30 dBm).	5725 ~ 5850

ISED RSS-247 ISSUE 3		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power or e.i.r.p.	The maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or $10 + 10 \log_{10}B$ dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz.	5150 ~ 5250
	a. The maximum conducted output power shall not exceed 250 mW (24 dBm) or $11 + 10 \log_{10}B$ dBm, whichever is less.	5250 ~ 5350 5470 ~ 5600 5650 ~ 5725
	b. The maximum e.i.r.p. shall not exceed 1.0 W (30 dBm) or $17 + 10 \log_{10}B$ dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.	
	Shall not exceed 1 Watt (30 dBm). The e.i.r.p. shall not exceed 4 W	5725 ~ 5850

Note:

The above limits are based upon the maximum antenna gain does not exceed 6 dBi.

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

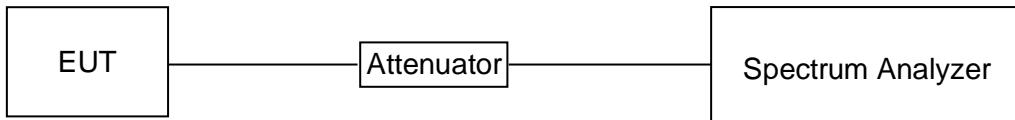
TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.E.

Method AVGSA-2 (trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction):

- a) Measure the duty cycle D of the transmitter output signal as described in 11.6.
- b) Set span to at least 1.5 times the OBW.
- c) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
- d) Set VBW $\geq [3 \times RBW]$.
- e) Number of points in sweep $\geq [2 \times \text{span} / RBW]$. (This gives bin-to-bin spacing $\leq RBW / 2$, so that narrowband signals are not lost between frequency bins.)
- f) Sweep time = auto.
- g) Detector = RMS (i.e., power averaging), if available. Otherwise, use the sample detector mode.
- h) Do not use sweep triggering. Allow the sweep to “free run.”
- i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
- j) Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
- k) Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power 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 $[10 \log (1/0.25)] = 6 \text{ dB}$ if the duty cycle is 25%.

TEST SETUP



TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests
Relative Humidity	60%
Atmospheric Pressure:	101kPa
Temperature	22.2°C
Test Voltage	AC 120V
Test Date	08/18/2024 - 09/08/2024

TEST RESULT TABLE

Mode	Frequency	Measurement Output Power	Duty Cycle Correction Factor	Average Conducted Output Power	FCC Power Limit	ISED Power Limit	Antenna Gain	EIRP	ISED EIRP Limit
	MHz	dBm	dB	dBm	dBm	dBm	dB	dBm	dBm
11a	5180	10.32	0.34	10.66	24.00	/	3.40	14.06	22.39
	5200	9.91	0.34	10.25	24.00	/	3.40	13.65	22.40
	5240	10.29	0.34	10.63	24.00	/	3.40	14.03	22.42
	5260	10.51	0.34	10.85	24.00	23.39	3.40	14.25	29.39
	5280	10.77	0.34	11.11	24.00	23.40	3.40	14.51	29.40
	5320	11.12	0.34	11.46	24.00	23.38	3.40	14.86	29.38
	5500	12.61	0.34	12.95	24.00	23.45	3.40	16.35	29.45
	5580	11.15	0.34	11.49	24.00	23.46	3.40	14.89	29.46
	5700	12.40	0.34	12.74	24.00	23.43	3.40	16.14	29.43
	5720_UNII-2C	10.92	0.34	11.26	23.62	22.40	3.40	14.66	28.40
	5720_UNII-3	4.84	0.34	5.18	30.00	/	3.40	8.58	36.00
	5745	11.92	0.34	12.26	30.00	/	3.40	15.66	36.00
	5785	11.60	0.34	11.94	30.00	/	3.40	15.34	36.00
	5825	11.51	0.34	11.85	30.00	/	3.40	15.25	36.00

Mode	Frequency	Measurement Output Power	Duty Cycle Correction Factor	Average Conducted Output Power	FCC Power Limit	ISED Power Limit	Antenna Gain	EIRP	ISED EIRP Limit
	MHz	dBm	dB	dBm	dBm	dBm	dBi	dBm	dBm
11ac VHT20	5180	10.02	0.23	10.25	24.00	/	3.40	13.65	22.67
	5200	9.78	0.23	10.01	24.00	/	3.40	13.41	22.66
	5240	10.36	0.23	10.59	24.00	/	3.40	13.99	22.67
	5260	10.72	0.23	10.95	24.00	23.66	3.40	14.35	29.66
	5280	10.97	0.23	11.20	24.00	23.66	3.40	14.60	29.66
	5320	10.67	0.23	10.90	24.00	23.67	3.40	14.30	29.67
	5500	12.02	0.23	12.25	24.00	23.72	3.40	15.65	29.72
	5580	11.79	0.23	12.02	24.00	23.70	3.40	15.42	29.70
	5700	12.93	0.23	13.16	24.00	23.71	3.40	16.56	29.71
	5720_UNII-2C	11.24	0.23	11.47	23.53	22.57	3.40	14.87	28.57
	5720_UNII-3	5.77	0.23	6.00	30.00	/	3.40	9.40	36.00
	5745	12.09	0.23	12.32	30.00	/	3.40	15.72	36.00
	5785	12.06	0.23	12.29	30.00	/	3.40	15.69	36.00
	5825	11.99	0.23	12.22	30.00	/	3.40	15.62	36.00

Mode	Frequency	Measurement Output Power	Duty Cycle Correction Factor	Average Conducted Output Power	FCC Power Limit	ISED Power Limit	Antenna Gain	EIRP	ISED EIRP Limit
	MHz	dBm	dB	dBm	dBm	dBm	dBi	dBm	dBm
11ac VHT40	5190	9.89	0.45	10.34	24.00	24.00	3.40	13.74	23.00
	5230	9.51	0.45	9.96	24.00	24.00	3.40	13.36	23.00
	5270	10.77	0.45	11.22	24.00	24.00	3.40	14.62	30.00
	5310	10.98	0.45	11.43	24.00	24.00	3.40	14.83	30.00
	5510	12.05	0.45	12.50	24.00	24.00	3.40	15.90	30.00
	5550	12.55	0.45	13.00	24.00	24.00	3.40	16.40	30.00
	5670	12.51	0.45	12.96	24.00	24.00	3.40	16.36	30.00
	5710_UNII-2C	11.89	0.45	12.34	24.00	24.00	3.40	15.74	30.00
	5710_UNII-3	1.62	0.45	2.07	30.00	/	3.40	5.47	36.00
	5755	11.91	0.45	12.36	30.00	/	3.40	15.76	36.00
	5795	11.14	0.45	11.59	30.00	/	3.40	14.99	36.00

Mode	Frequency	Measurement Output Power	Duty Cycle Correction Factor	Average Conducted Output Power	FCC Power Limit	ISED Power Limit	Antenna Gain	EIRP	ISED EIRP Limit
	MHz	dBm	dB	dBm	dBm	dBm	dBi	dBm	dBm
11ax HE20	5180	10.36	0.29	10.65	24.00	/	3.40	14.05	22.87
	5200	10.49	0.29	10.78	24.00	/	3.40	14.18	22.87
	5240	10.56	0.29	10.85	24.00	/	3.40	14.25	22.87
	5260	10.85	0.29	11.14	24.00	23.87	3.40	14.54	29.87
	5280	10.99	0.29	11.28	24.00	23.87	3.40	14.68	29.87
	5320	11.33	0.29	11.62	24.00	23.86	3.40	15.02	29.86
	5500	13.00	0.29	13.29	24.00	23.88	3.40	16.69	29.88
	5580	11.90	0.29	12.19	24.00	23.90	3.40	15.59	29.90
	5700	12.90	0.09	12.99	24.00	23.88	3.40	16.39	29.88
	5720_UNII-2C	11.17	0.29	11.46	23.44	22.67	3.40	14.86	28.67
	5720_UNII-3	6.28	0.29	6.57	30.00	/	3.40	9.97	36.00
	5745	12.10	0.29	12.39	30.00	/	3.40	15.79	36.00
	5785	12.00	0.29	12.29	30.00	/	3.40	15.69	36.00
	5825	12.01	0.29	12.30	30.00	/	3.40	15.70	36.00

Mode	Frequency	Measurement Output Power	Duty Cycle Correction Factor	Average Conducted Output Power	FCC Power Limit	ISED Power Limit	Antenna Gain	EIRP	ISED EIRP Limit
	MHz	dBm	dB	dBm	dBm	dBm	dBi	dBm	dBm
11ax HE40	5190	10.27	0.54	10.81	24.00	24.00	3.40	14.21	23.00
	5230	10.35	0.54	10.89	24.00	24.00	3.40	14.29	23.00
	5270	10.78	0.54	11.32	24.00	24.00	3.40	14.72	30.00
	5310	10.97	0.54	11.51	24.00	24.00	3.40	14.91	30.00
	5510	11.32	0.54	11.86	24.00	24.00	3.40	15.26	30.00
	5550	12.31	0.54	12.85	24.00	24.00	3.40	16.25	30.00
	5670	12.12	0.54	12.66	24.00	24.00	3.40	16.06	30.00
	5710_UNII-2C	10.42	0.54	10.96	24.00	24.00	3.40	14.36	30.00
	5710_UNII-3	2.27	0.54	2.81	30.00	/	3.40	6.21	36.00
	5755	11.64	0.54	12.18	30.00	/	3.40	15.58	36.00
	5795	11.01	0.54	11.55	30.00	/	3.40	14.95	36.00

TEST GRAPHS
