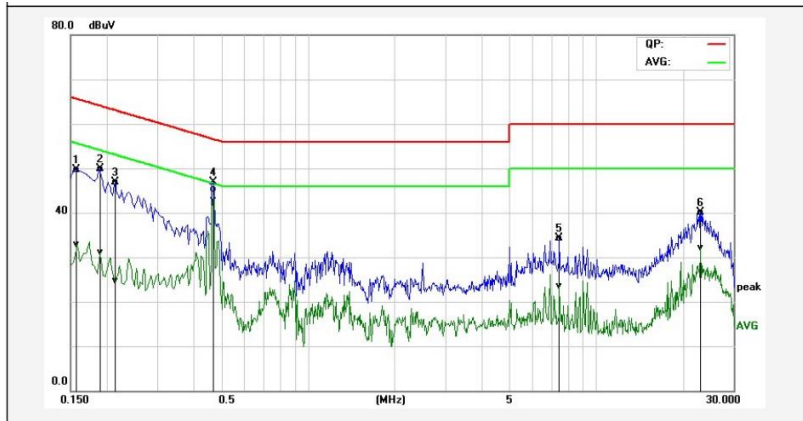
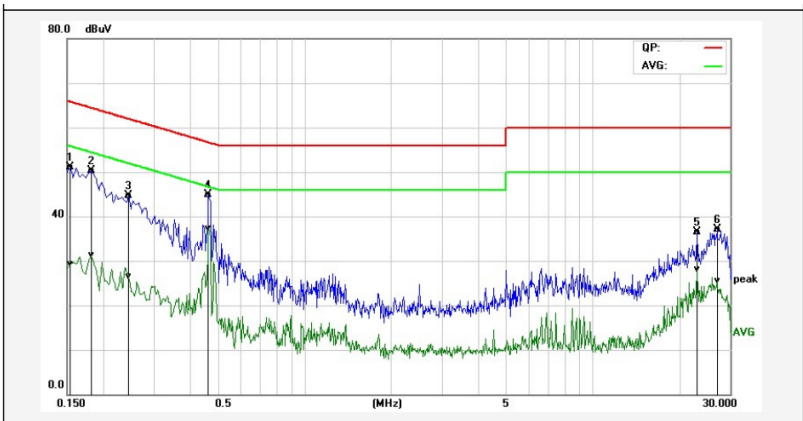


Appendix A: Test Results of DTS device

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Appendix A.1 Test Results of Conducted Emission on AC Mains

Note: All modes have been tested, and the report only reflects the worst mode.

Test Mode :	Working	Test Voltage :	AC 110V/60Hz																																																																																				
L																																																																																							
 <table><tr><th>No.</th><th>Frequency (MHz)</th><th>QuasiPeak reading (dBuV)</th><th>Average reading (dBuV)</th><th>Correction factor (dB)</th><th>QuasiPeak result (dBuV)</th><th>Average result (dBuV)</th><th>QuasiPeak limit (dBuV)</th><th>Average limit (dBuV)</th><th>QuasiPeak margin (dB)</th><th>Average margin (dB)</th><th>Remark</th></tr><tr><td>1P</td><td>0.1580</td><td>40.01</td><td>23.18</td><td>9.74</td><td>49.75</td><td>32.92</td><td>65.56</td><td>55.57</td><td>-15.81</td><td>-22.65</td><td>Pass</td></tr><tr><td>2P</td><td>0.1900</td><td>40.23</td><td>21.43</td><td>9.74</td><td>49.97</td><td>31.17</td><td>64.03</td><td>54.04</td><td>-14.06</td><td>-22.87</td><td>Pass</td></tr><tr><td>3P</td><td>0.2140</td><td>37.11</td><td>14.94</td><td>9.74</td><td>46.85</td><td>24.68</td><td>63.04</td><td>53.05</td><td>-16.19</td><td>-28.37</td><td>Pass</td></tr><tr><td>4*</td><td>0.4700</td><td>35.63</td><td>33.23</td><td>9.73</td><td>45.36</td><td>42.96</td><td>56.51</td><td>46.51</td><td>-11.15</td><td>-3.55</td><td>Pass</td></tr><tr><td>5P</td><td>7.4580</td><td>24.47</td><td>13.78</td><td>9.82</td><td>34.29</td><td>23.60</td><td>60.00</td><td>50.00</td><td>-25.71</td><td>-26.40</td><td>Pass</td></tr><tr><td>6P</td><td>23.1259</td><td>29.85</td><td>21.85</td><td>10.16</td><td>40.01</td><td>32.01</td><td>60.00</td><td>50.00</td><td>-19.99</td><td>-17.99</td><td>Pass</td></tr></table>				No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark	1P	0.1580	40.01	23.18	9.74	49.75	32.92	65.56	55.57	-15.81	-22.65	Pass	2P	0.1900	40.23	21.43	9.74	49.97	31.17	64.03	54.04	-14.06	-22.87	Pass	3P	0.2140	37.11	14.94	9.74	46.85	24.68	63.04	53.05	-16.19	-28.37	Pass	4*	0.4700	35.63	33.23	9.73	45.36	42.96	56.51	46.51	-11.15	-3.55	Pass	5P	7.4580	24.47	13.78	9.82	34.29	23.60	60.00	50.00	-25.71	-26.40	Pass	6P	23.1259	29.85	21.85	10.16	40.01	32.01	60.00	50.00	-19.99	-17.99	Pass
No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark																																																																												
1P	0.1580	40.01	23.18	9.74	49.75	32.92	65.56	55.57	-15.81	-22.65	Pass																																																																												
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3P	0.2140	37.11	14.94	9.74	46.85	24.68	63.04	53.05	-16.19	-28.37	Pass																																																																												
4*	0.4700	35.63	33.23	9.73	45.36	42.96	56.51	46.51	-11.15	-3.55	Pass																																																																												
5P	7.4580	24.47	13.78	9.82	34.29	23.60	60.00	50.00	-25.71	-26.40	Pass																																																																												
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No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark																																																																												
1P	0.1539	41.43	19.52	9.74	51.17	29.26	65.78	55.79	-14.61	-26.53	Pass																																																																												
2P	0.1819	40.52	21.57	9.74	50.26	31.31	64.39	54.40	-14.13	-23.09	Pass																																																																												
3P	0.2460	34.94	16.66	9.76	44.70	26.42	61.89	51.89	-17.19	-25.47	Pass																																																																												
4*	0.4660	35.01	27.54	9.82	44.83	37.36	56.58	46.58	-11.75	-9.22	Pass																																																																												
5P	23.1299	25.71	17.37	10.71	36.42	28.08	60.00	50.00	-23.58	-21.92	Pass																																																																												
6P	27.0020	26.33	14.78	10.75	37.08	25.53	60.00	50.00	-22.92	-24.47	Pass																																																																												

Correction Factor = insertion loss of LISN + cable loss;

Reading = Reading Amplitude in the instrument;

Result = Correction Factor + Reading;

Margin = Result – Limit

Appendix A.2 Test Results of Radiated Spurious Emission

Below 1G:

Note: All modes have been tested, and the report only reflects the worst mode.

Test Mode : Working Test Voltage : AC 110V/60Hz

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	257.6265	49.19	-12.35	36.84	46.00	-9.16			QP
2	294.4280	51.29	-11.57	39.72	46.00	-6.28			QP
3	363.5230	45.09	-9.36	35.73	46.00	-10.27			QP
4*	406.7820	47.58	-7.82	39.76	46.00	-6.24			QP
5	436.3956	43.78	-7.20	36.58	46.00	-9.42			QP
6	838.8870	39.64	-0.40	39.24	46.00	-6.76			QP

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1!	32.5947	47.08	-12.49	34.59	40.00	-5.41			QP
2*	66.3113	49.71	-13.15	36.56	40.00	-3.44			QP
3	102.6117	53.27	-15.93	37.34	43.50	-6.16			QP
4	143.7780	45.87	-11.86	34.01	43.50	-9.49			QP
5	245.2606	50.79	-12.59	38.20	46.00	-7.80			QP
6	458.3987	42.08	-8.82	33.26	46.00	-10.74			QP

Correction Factor = antenna factor + cable loss – amplifier gain;

Reading = Reading Amplitude in the instrument;

Result = Correction Factor + Reading;

Margin = Result – Limit.

Above 1GHz:

Note: All models were tested, and only the worst model(802.11b,ANT 1) were reported in the report.

802.11 b-Low (worst mode) Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6712	55.24	-10.28	44.96	78.58	-33.62	peak
2	7460	53.82	-8.8	45.02	74	-28.98	peak
3	9160	54.66	-6.46	48.2	74	-25.8	peak
4	9636	55.13	-5.78	49.35	78.58	-29.23	peak
5	11404	53.24	-3.12	50.12	74	-23.88	peak
6	12424	53.2	-2.02	51.18	74	-22.82	peak

802.11 b-Low (worst mode) Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6780	55.22	-10.17	45.05	78.58	-33.53	peak
2	8106	55.58	-9.03	46.55	74	-27.45	peak
3	8854	54.79	-6.88	47.91	78.58	-30.67	peak
4	11064	53.12	-3.22	49.9	74	-24.1	peak
5	12356	53.11	-2.14	50.97	74	-23.03	peak
6	13376	54.2	-0.5	53.7	74	-20.3	peak

802.11 b-Middle (worst mode) Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7188	56.65	-9.25	47.4	78.58	-31.18	peak
2	8990	54.36	-6.5	47.86	78.58	-30.72	peak
3	10146	54.02	-4.4	49.62	78.58	-28.96	peak
4	11370	53.33	-3.14	50.19	74	-23.81	peak
5	12390	53.02	-2.08	50.94	74	-23.06	peak
6	12832	52.98	-1.23	51.75	78.58	-26.83	peak

802.11 b-Middle (worst mode) Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6950	54.9	-9.82	45.08	78.58	-33.5	peak
2	7732	55.02	-8.97	46.05	74	-27.95	peak
3	9024	55.45	-6.46	48.99	74	-25.01	peak
4	9772	54.09	-5.26	48.83	78.58	-29.75	peak
5	11404	53.47	-3.12	50.35	74	-23.65	peak
6	12458	53.43	-1.95	51.48	74	-22.52	peak

802.11 b-High (worst mode) Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	6916	54.53	-9.9	44.63	78.58	-33.95	peak
2	8650	54.43	-7.43	47	78.58	-31.58	peak
3	9024	54.22	-6.46	47.76	74	-26.24	peak
4	9772	54.04	-5.26	48.78	78.58	-29.8	peak
5	11404	53.48	-3.12	50.36	74	-23.64	peak
6	12458	53.56	-1.95	51.61	74	-22.39	peak

802.11 b-High (worst mode) Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7052	54.16	-9.6	44.56	78.58	-34.02	peak
2	8480	54.53	-7.9	46.63	74	-27.37	peak
3	9058	53.91	-6.45	47.46	74	-26.54	peak
4	9908	53.75	-4.87	48.88	78.58	-29.7	peak
5	11404	53.06	-3.12	49.94	74	-24.06	peak
6	12458	52.66	-1.95	50.71	74	-23.29	peak

Node:

- 1、Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported..
- 2、Radiated emissions measured in frequency above 1GHz were made with an instrument using peak/average detector mode.
- 3、Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4、Margin (dB), result in dBuV/m – limit in dBuV/m.
- 5、According to section part 15.247(d), frequencies other than those required by part 15.205(a) are limited to the level of the intended emission (min. 98.58) minus 20dB.

Restricted band Requirements

Note: All models were tested, and only the worst model(802.11b, SISO) were reported in the report.

802.11 b-Low (worst mode)

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2352.48	70.45	-21.95	48.5	74	-25.5	peak
2	2352.48	60.41	-21.95	38.46	54	-15.54	AVG
3	2390	69.21	-21.89	47.32	74	-26.68	peak
4	2390	60.58	-21.89	38.69	54	-15.31	AVG
5	2411.28	126.74	-21.83	104.91	125.2	-20.29	peak

Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2353.44	69.41	-21.94	47.47	74	-26.53	peak
2	2353.44	60.89	-21.94	38.95	54	-15.05	AVG
3	2390	67.85	-21.89	45.96	74	-28.04	peak
4	2390	58.78	-21.89	36.89	54	-17.11	AVG
5	2409.6	120.41	-21.83	98.58	125.2	-26.62	peak

802.11 b-High (worst mode)

Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2471.12	126.42	-21.56	104.86	125.2	-20.34	peak
2	2483.5	70.03	-21.52	48.51	74	-25.49	peak
3	2483.5	59.54	-21.52	38.02	54	-15.98	AVG
4	2486.24	71.17	-21.51	49.66	74	-24.34	peak
5	2486.24	59.42	-21.51	37.91	54	-16.09	AVG

Vertical

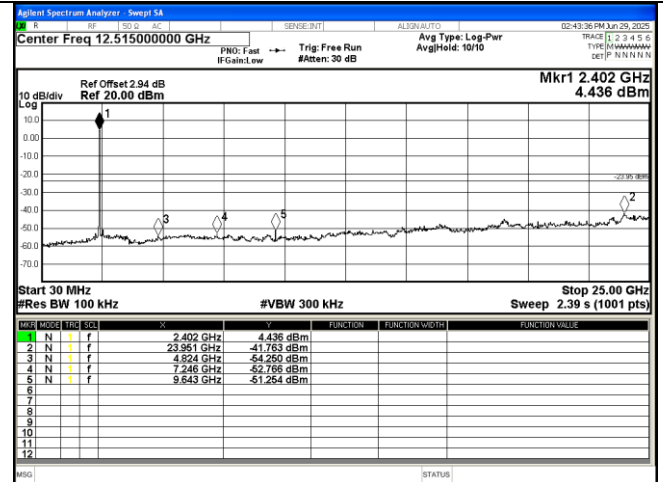
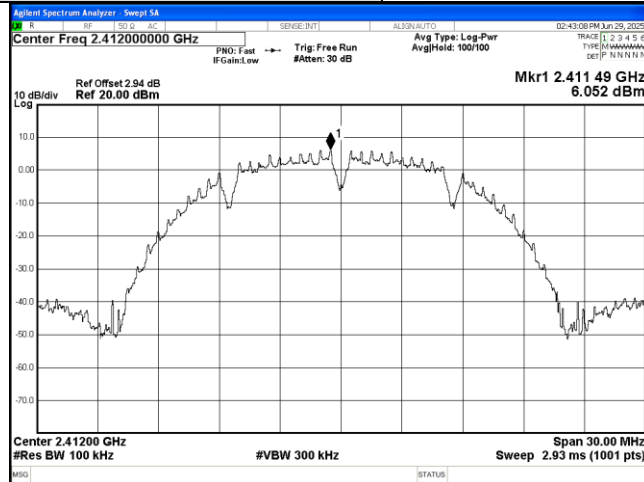
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2474.8	121.28	-21.55	99.73	125.2	-25.47	peak
2	2483.5	67.67	-21.52	46.15	74	-27.85	peak
3	2483.5	59.11	-21.52	37.59	54	-16.41	AVG
4	2486.4	67.85	-21.51	46.34	74	-27.66	peak
5	2486.4	59.54	-21.51	38.03	54	-15.97	AVG

Appendix A.3 Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

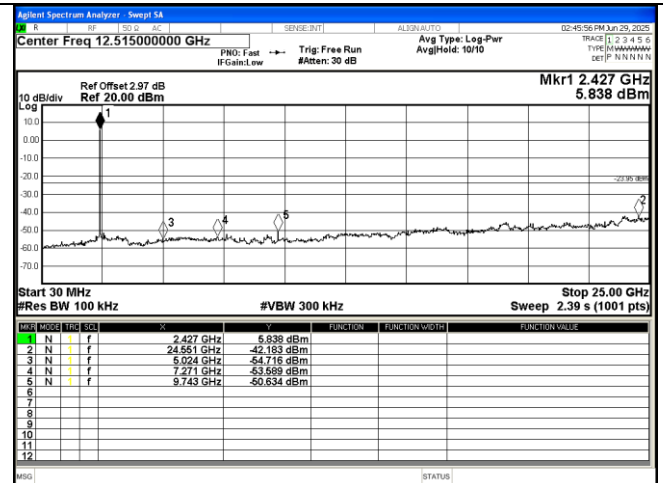
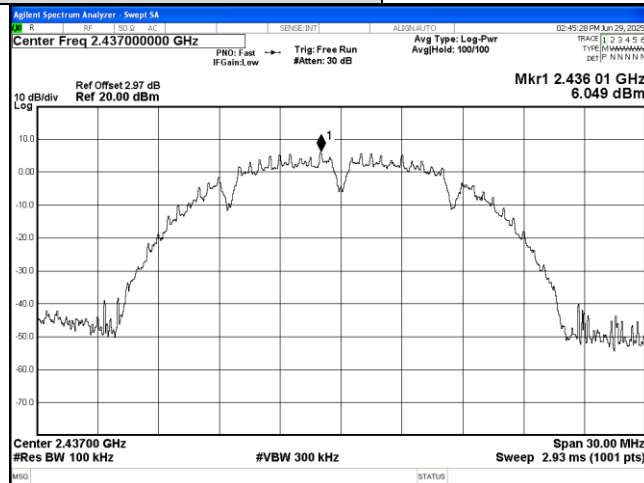
Note: All models were tested, and only the worst model(ANT 1) were reported in the report.

Conducted spurious emission

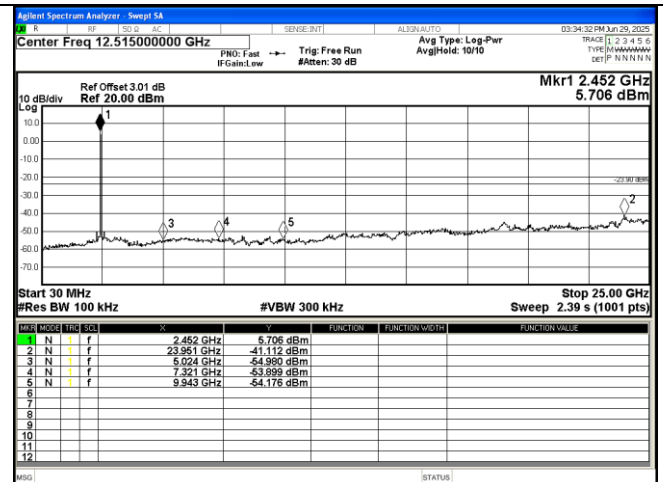
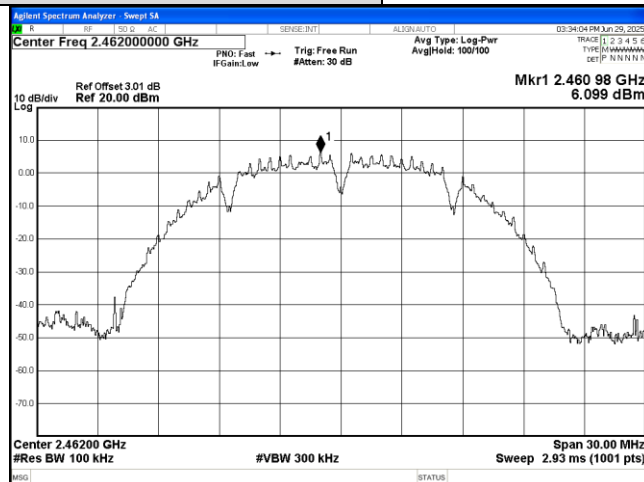
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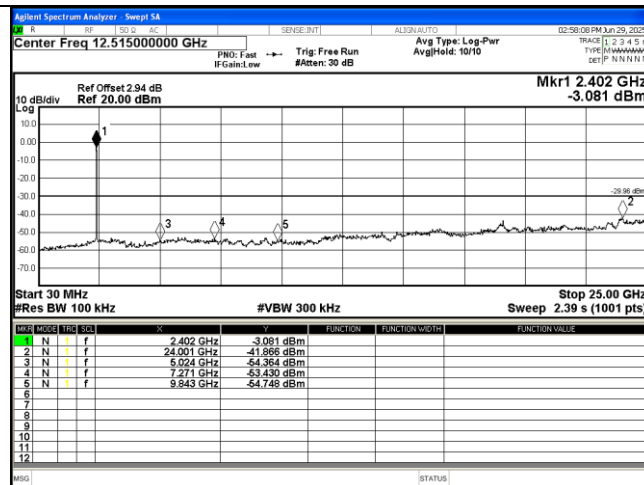
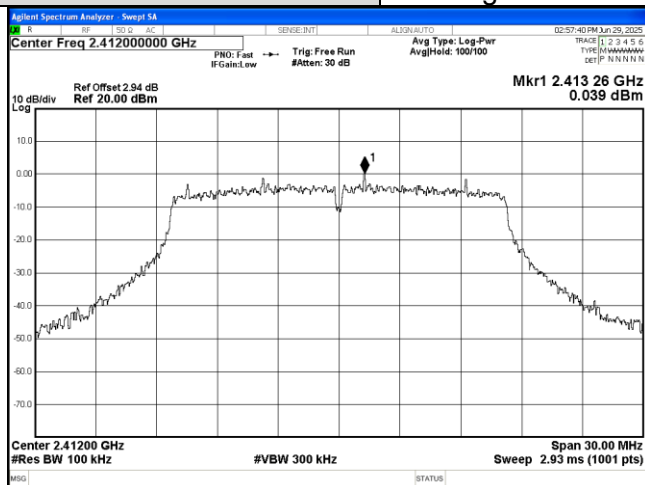
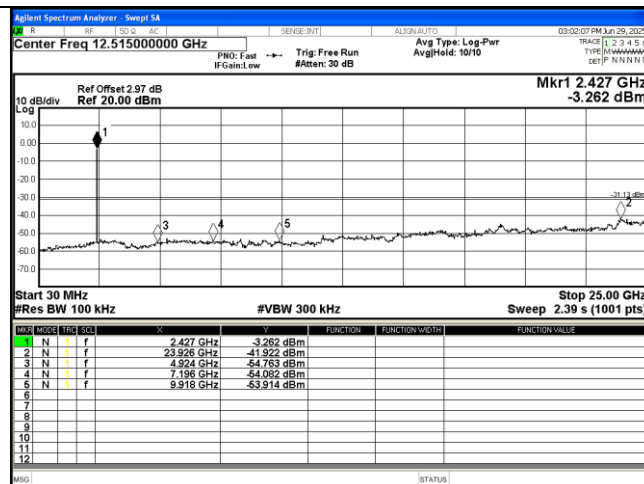
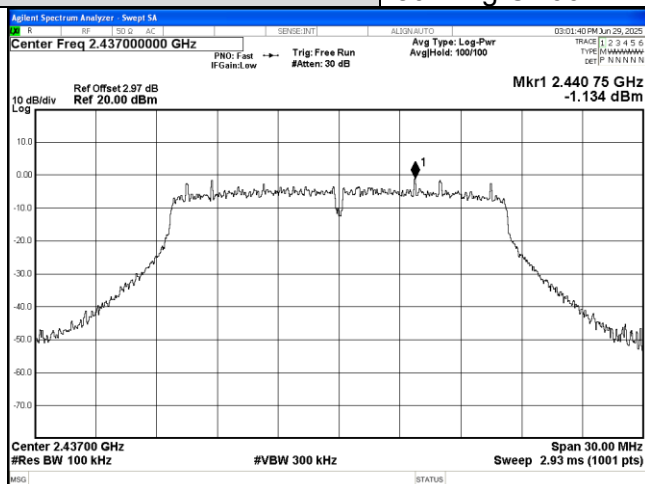
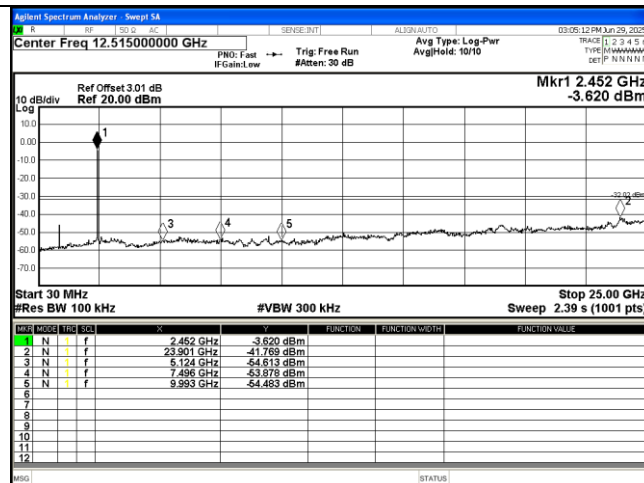
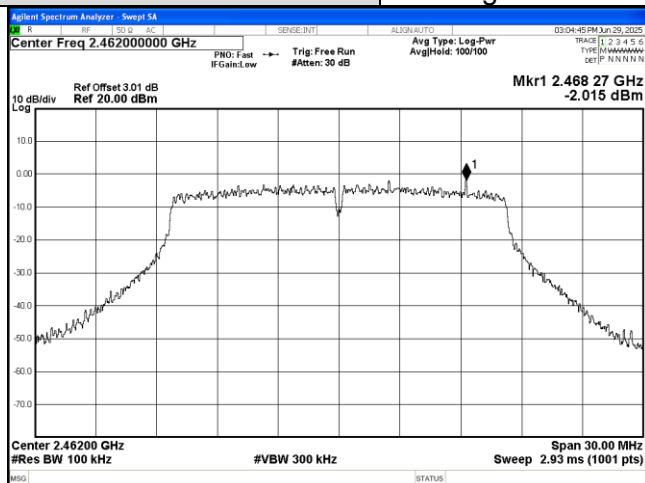


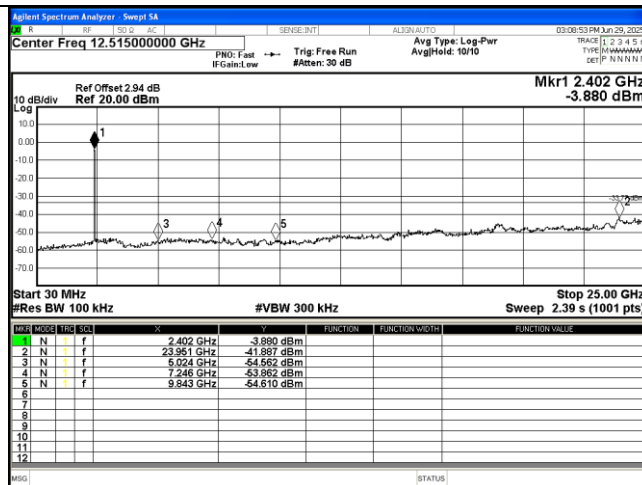
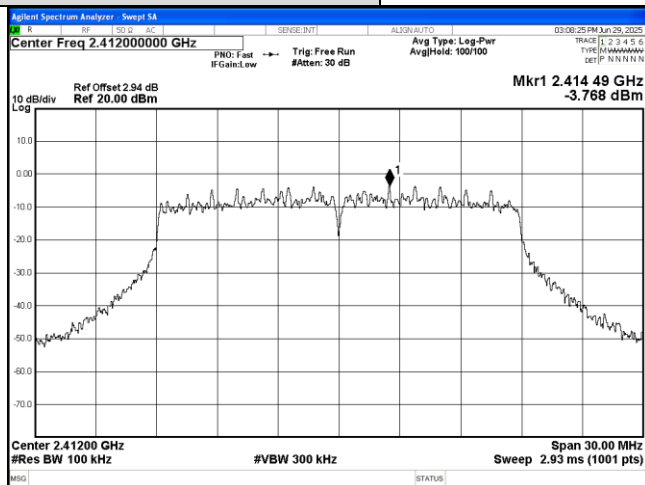
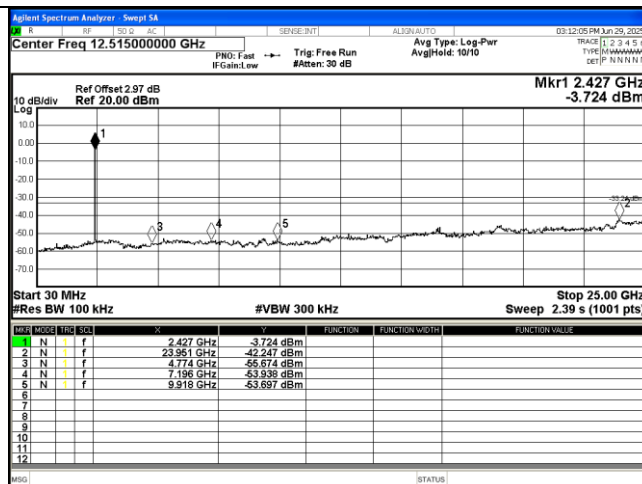
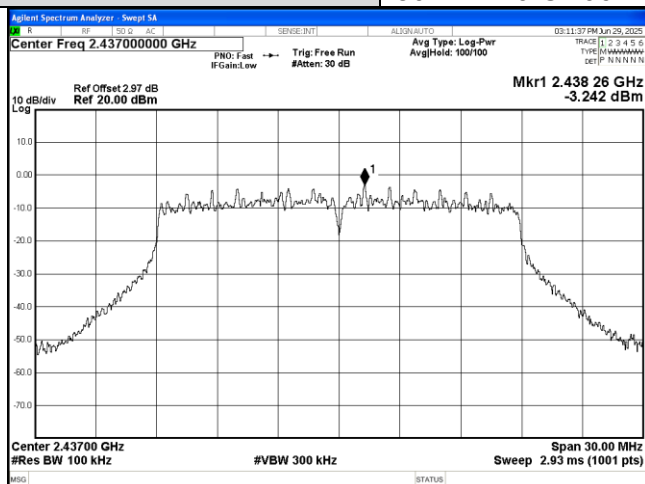
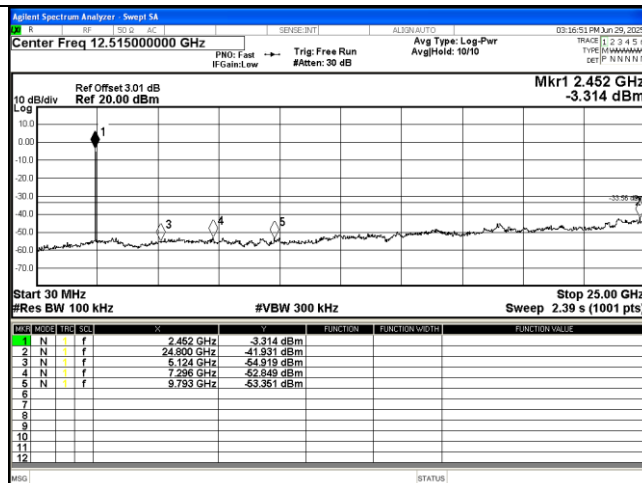
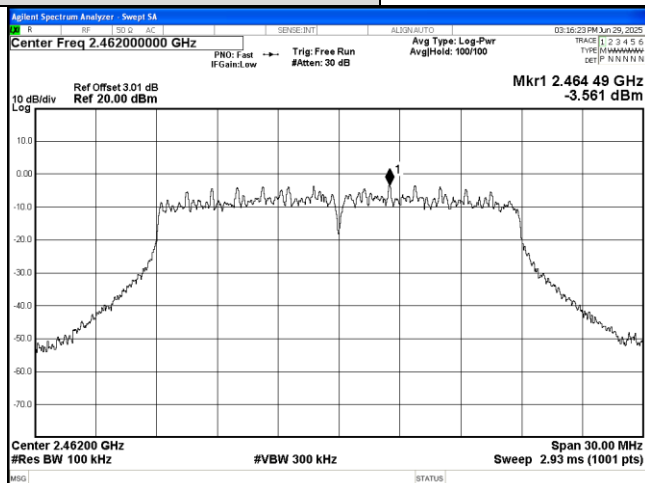
Test Mode: 802.11b CH06

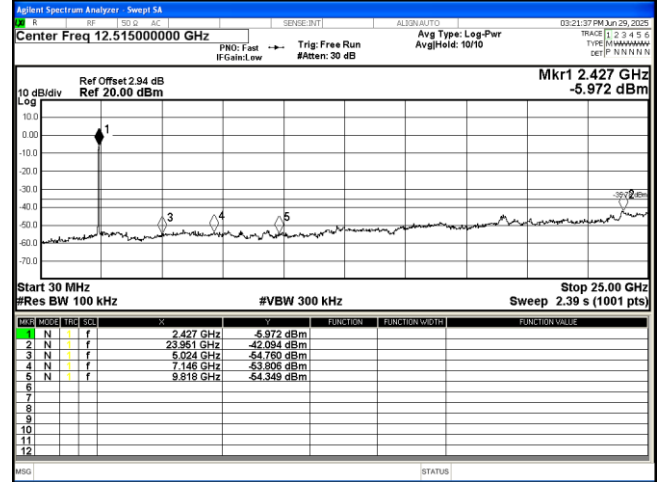
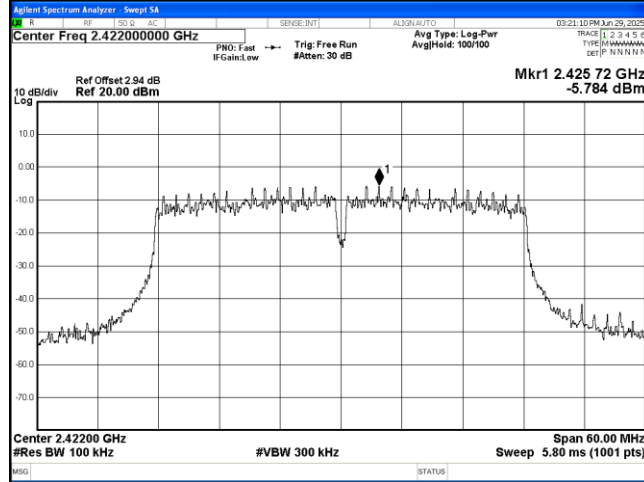
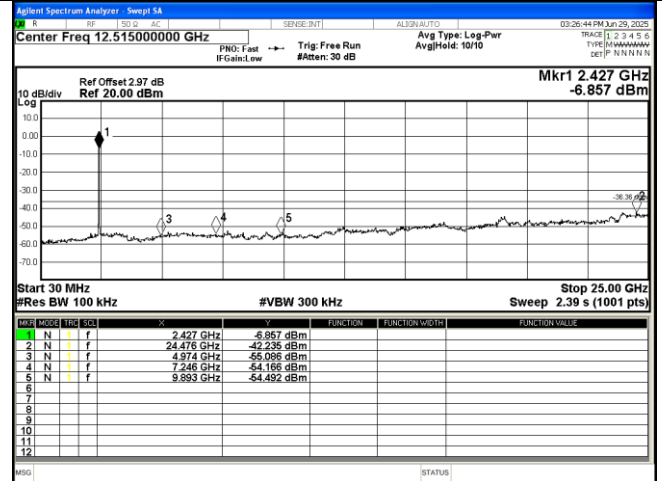
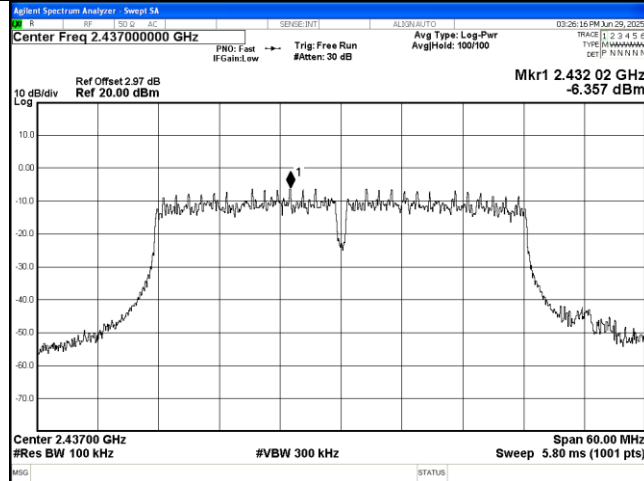
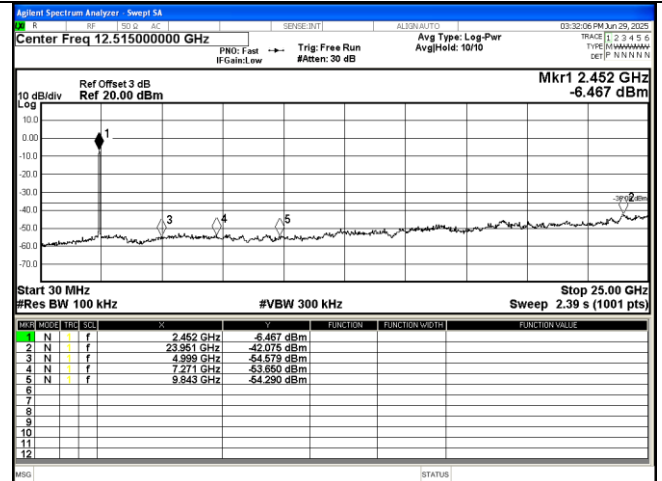
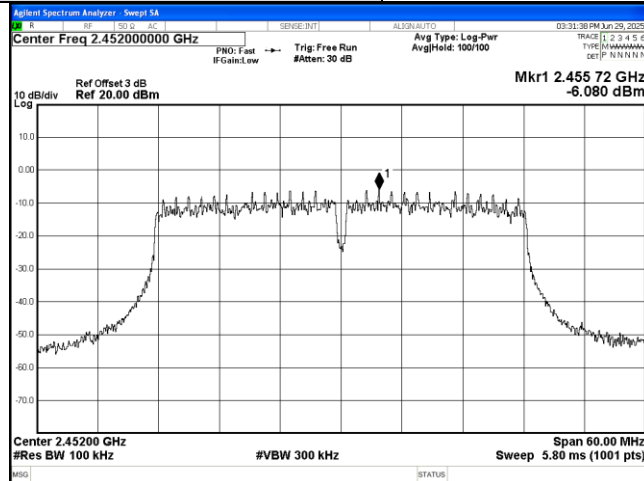


Test Mode: 802.11b CH11



Test Mode: 802.11g CH01

Test Mode: 802.11g CH06

Test Mode: 802.11g CH11


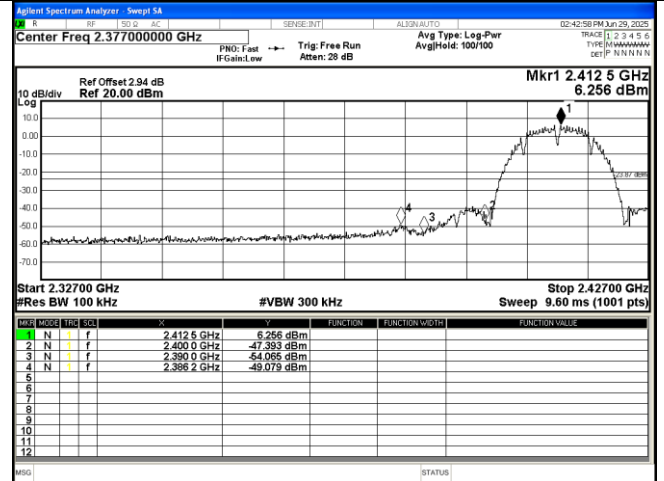
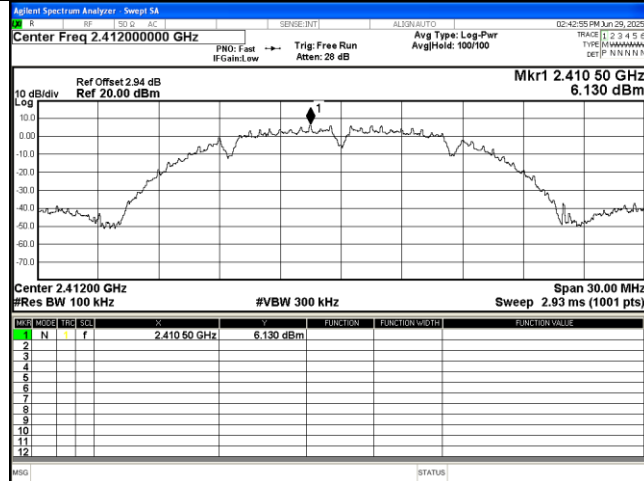
Test Mode: 802.11n20 CH01

Test Mode: 802.11n20 CH06

Test Mode: 802.11n20 CH11


Test Mode: 802.11n40 CH03

Test Mode: 802.11n40 CH06

Test Mode: 802.11n40 CH09


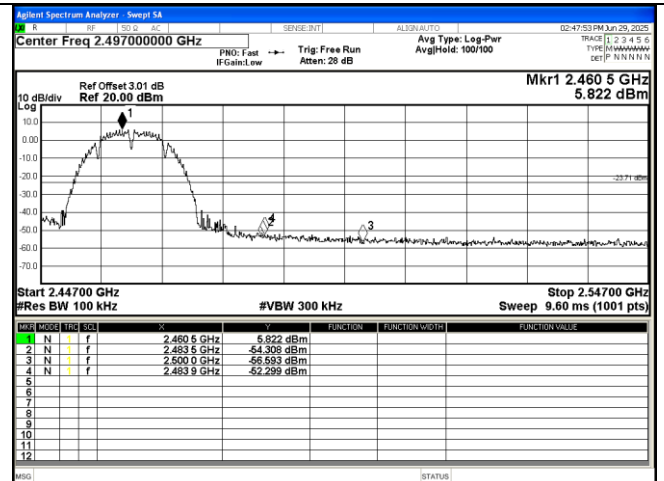
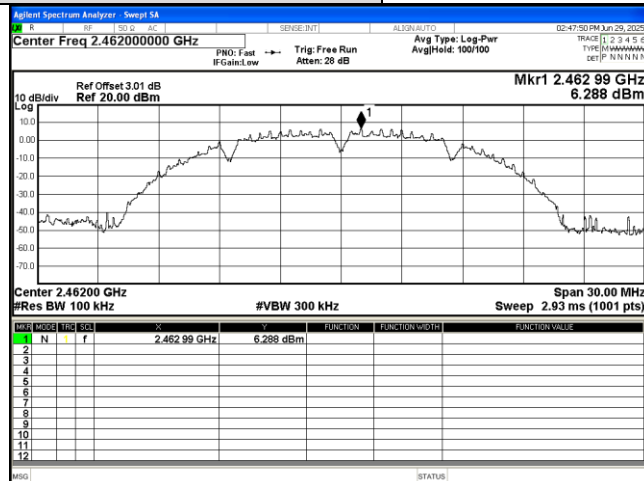
Note: All models were tested, and only the worst model(ANT 1) were reported in the report.

For Band edge(it's also the reference level for conducted spurious emission)

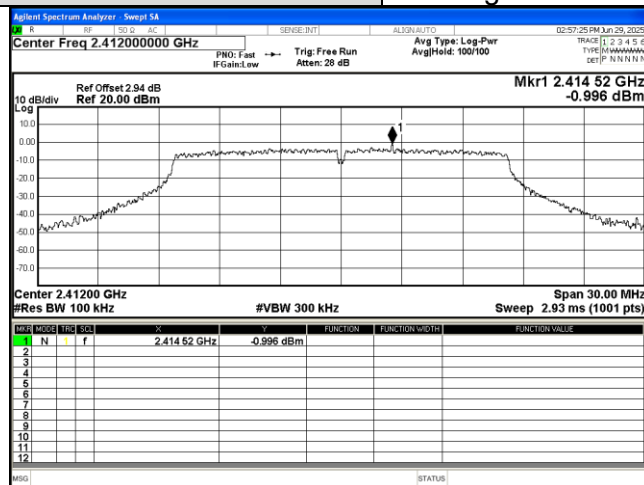
Test Mode: 802.11b CH01



Test Mode: 802.11b CH01

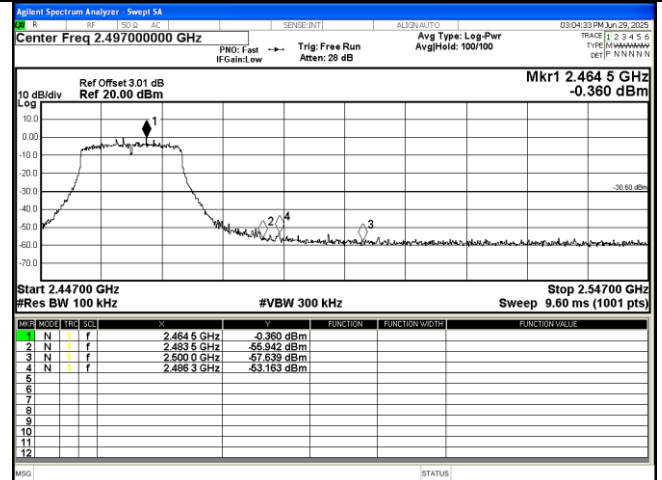
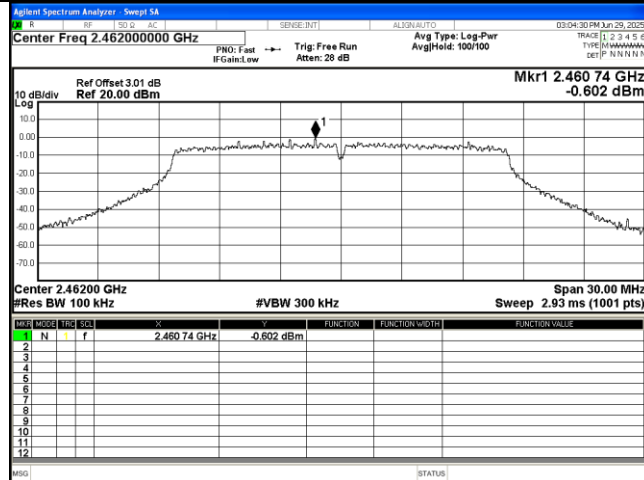


Test Mode: 802.11g CH01

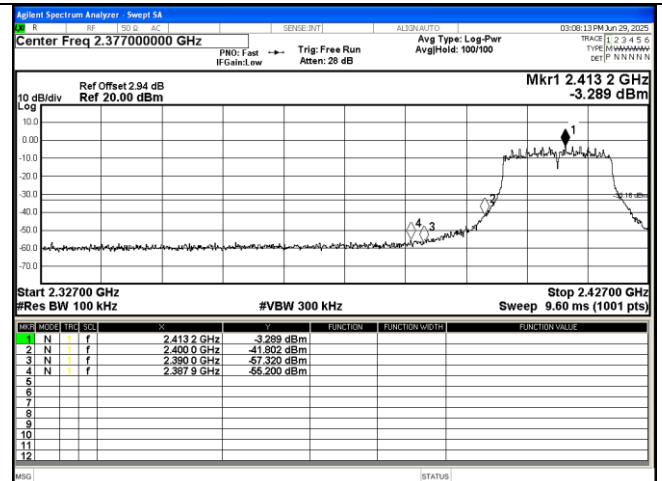
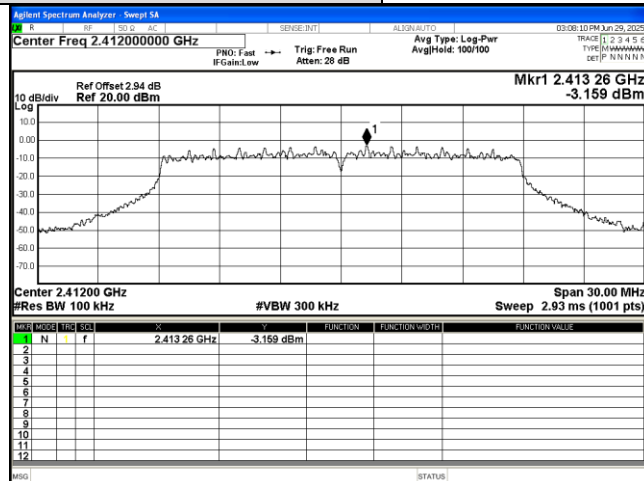




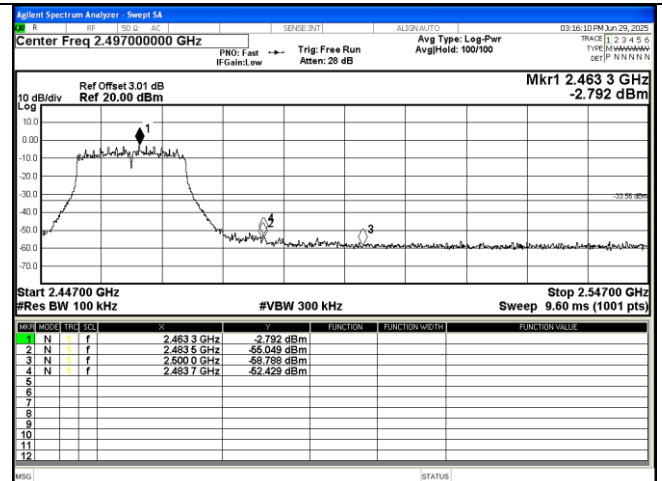
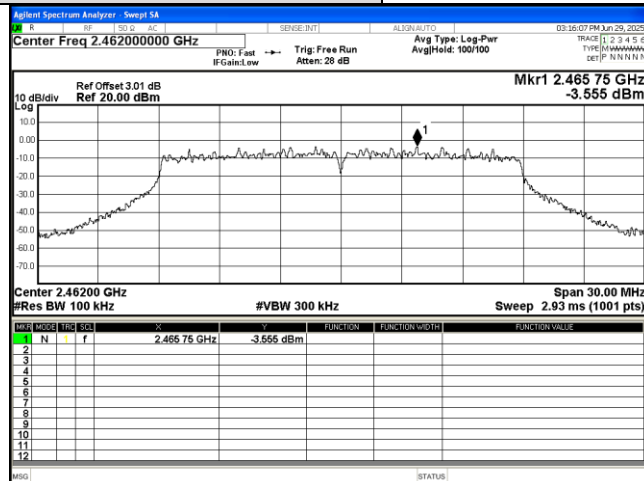
Test Mode: 802.11g CH11

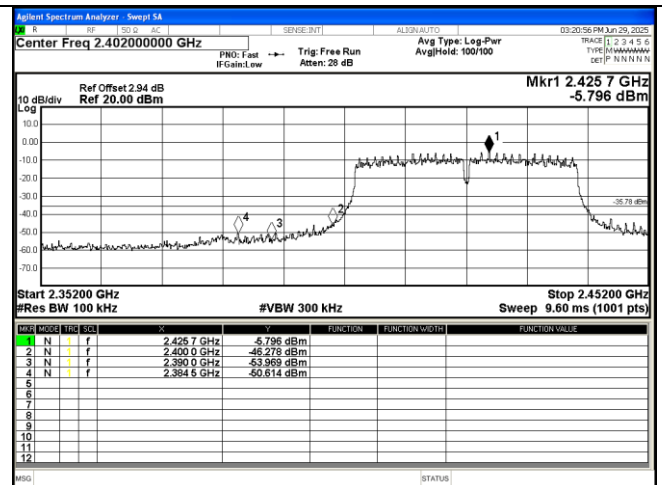
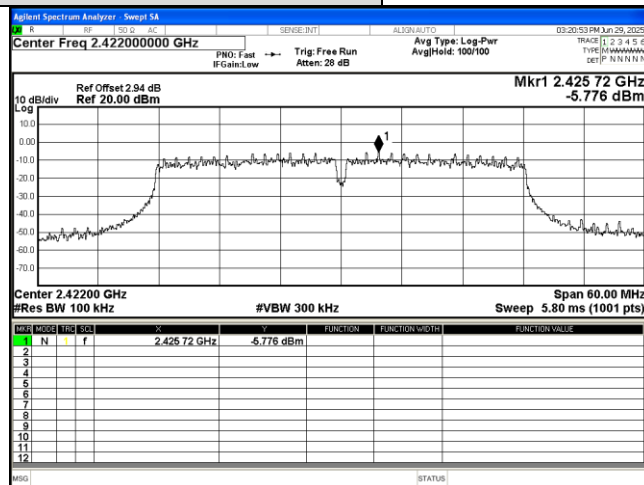
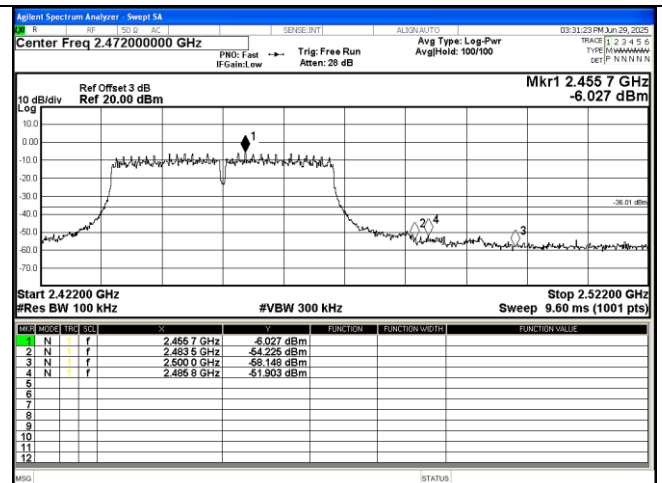
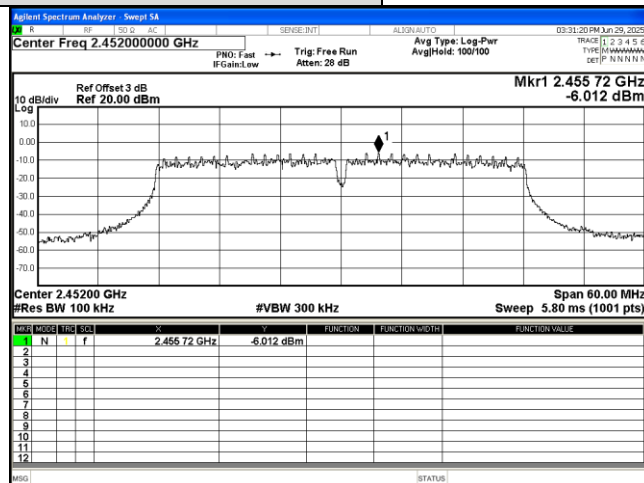


Test Mode: 802.11n20 CH01



Test Mode: 802.11n20 CH11



Test Mode: 802.11n40 CH03

Test Mode: 802.11n40 CH09


Appendix A.4 Test Results of Conducted Power Spectral Density

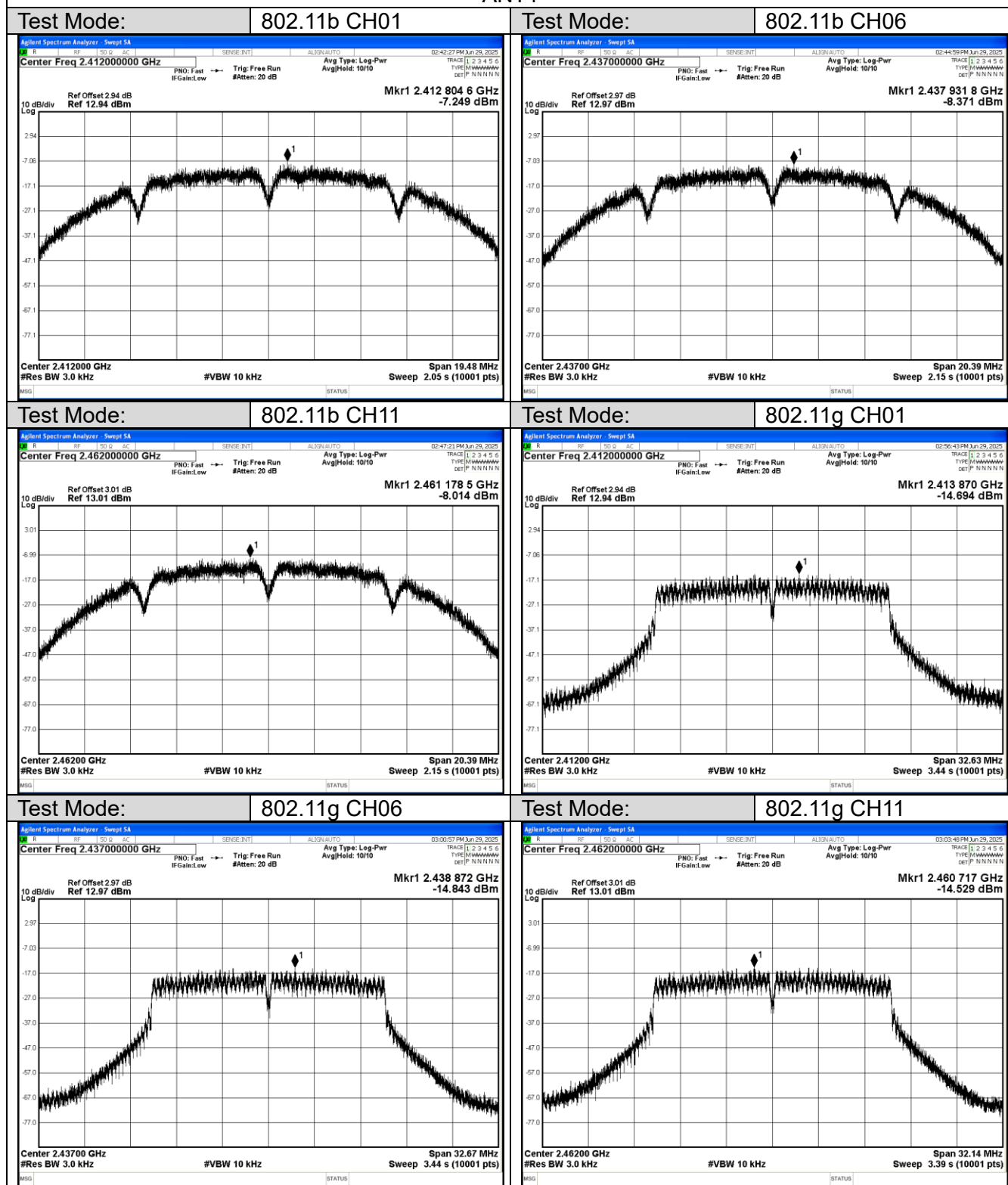
802.11b					
Frequency	Power Density			Limit (dBm/3KHz)	Result
	(dBm/3kHz)				
	Ant1	Ant2	Total		
CH01	-7.249	-8.884	---	8	Pass
CH06	-8.371	-8.983	---	8	Pass
CH11	-8.014	-8.016	---	8	Pass

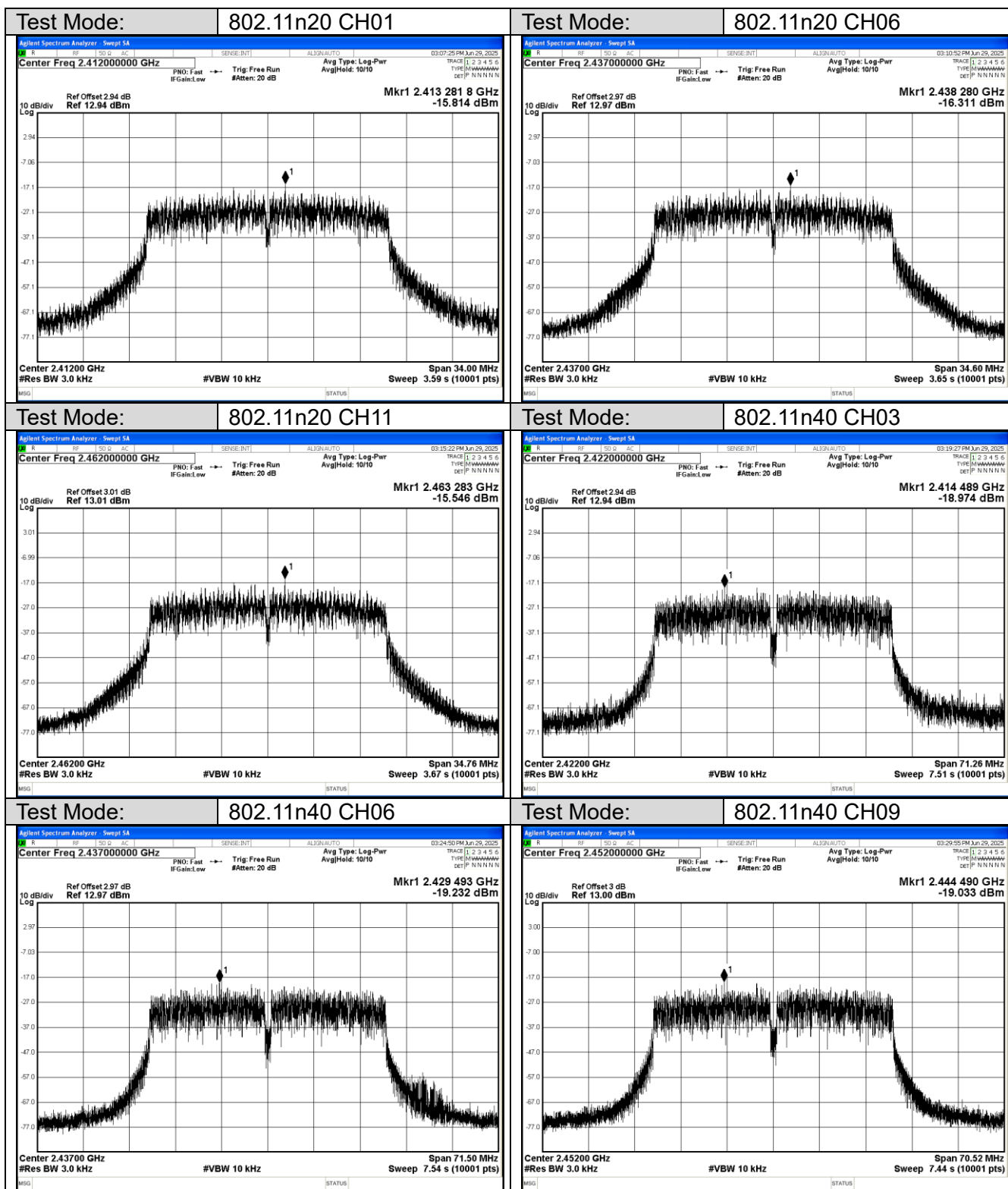
802.11g					
Frequency	Power Density			Limit (dBm/3KHz)	Result
	(dBm/3kHz)				
	Ant1	Ant2	Total		
CH01	-14.694	-13.634	---	8	Pass
CH06	-14.843	-14.011	---	8	Pass
CH11	-14.529	-13.858	---	8	Pass

802.11n20					
Frequency	Power Density			Limit (dBm/3KHz)	Result
	(dBm/3kHz)				
	Ant1	Ant2	Total		
CH01	-15.814	-16.293	-13.037	8	Pass
CH06	-16.311	-16.93	-13.599	8	Pass
CH11	-15.546	-16.547	-13.007	8	Pass

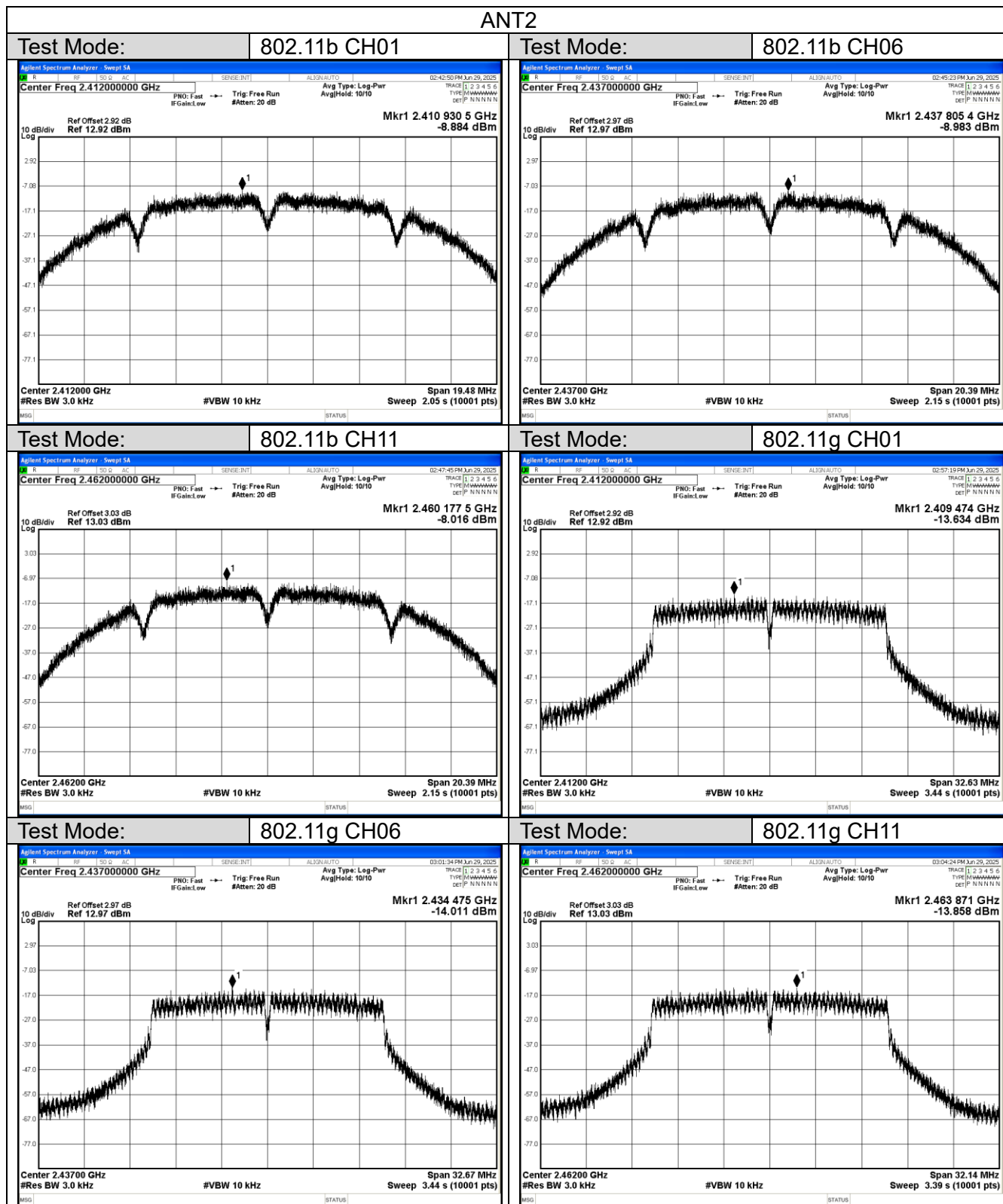
802.11n40					
Frequency	Power Density			Limit (dBm/3KHz)	Result
	(dBm/3kHz)				
	Ant1	Ant2	Total		
CH03	-18.974	-20.105	-16.492	8	Pass
CH06	-19.232	-20.533	-16.824	8	Pass
CH09	-19.033	-20.18	-16.558	8	Pass

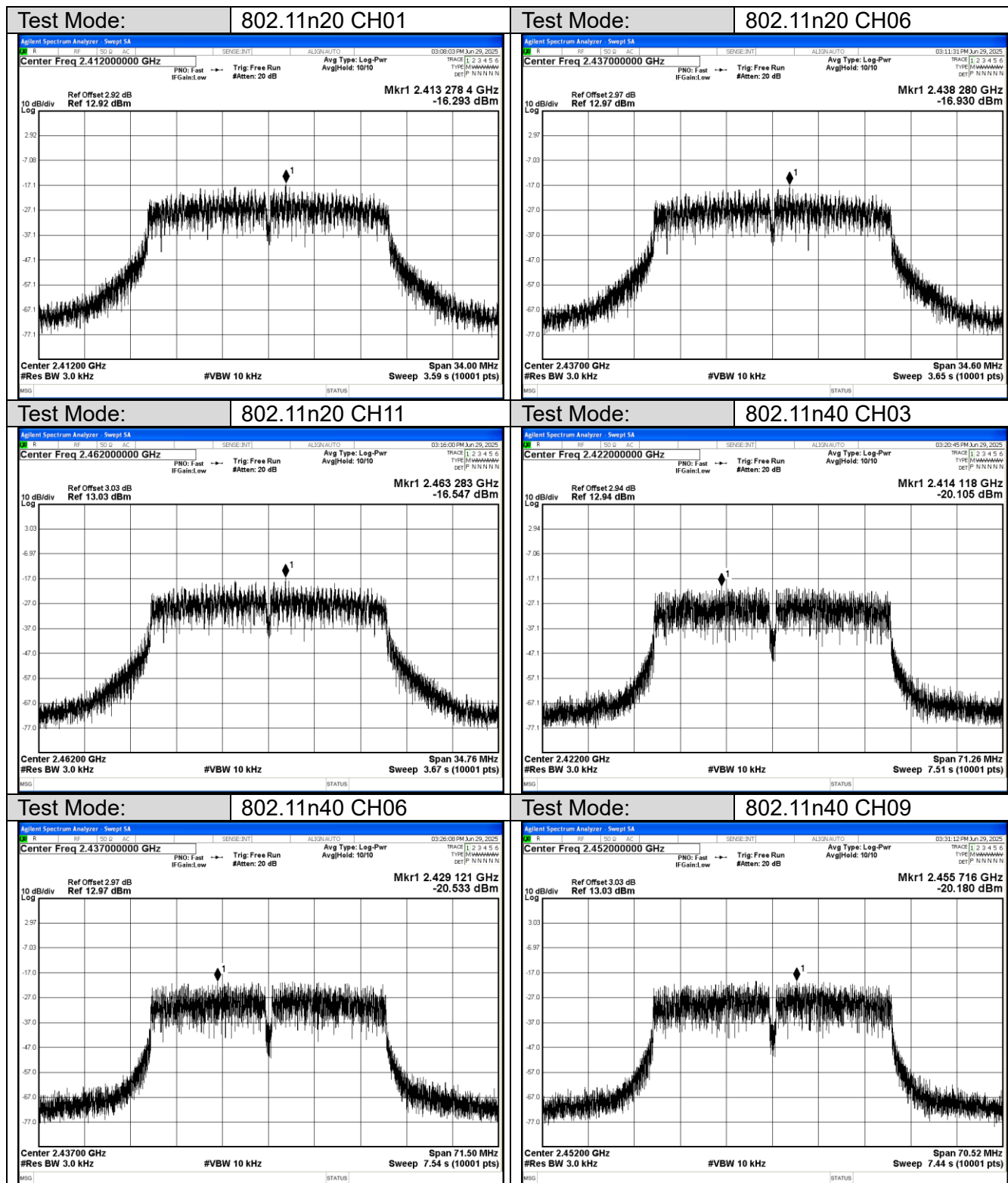
ANT1





ANT2





Appendix A.5 Test Results of 6dB and 99% BANDWIDTH

802.11b						
Frequency	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB limit (KHz)	Result
	Ant 1	Ant 2	Ant 1	Ant 2		
CH01	/	/	9.952	9.591	0.5	Pass
CH06	/	/	11.000	9.355	0.5	Pass
CH11	/	/	9.796	9.391	0.5	Pass

802.11g						
Frequency	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB limit (KHz)	Result
	Ant 1	Ant 2	Ant 1	Ant 2		
CH01	/	/	15.660	14.80	0.5	Pass
CH06	/	/	16.130	15.41	0.5	Pass
CH11	/	/	16.250	14.55	0.5	Pass

802.11n20						
Frequency	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB limit (KHz)	Result
	Ant 1	Ant 2	Ant 1	Ant 2		
CH01	/	/	15.130	16.02	0.5	Pass
CH06	/	/	16.290	16.32	0.5	Pass
CH11	/	/	16.520	16.12	0.5	Pass

802.11n40						
Frequency	99% Bandwidth (MHz)		6dB Bandwidth (MHz)		6dB limit (KHz)	Result
	Ant 1	Ant 2	Ant 1	Ant 2		
CH03	/	/	34.43	35.03	0.5	Pass
CH06	/	/	35.02	35.10	0.5	Pass
CH09	/	/	35.80	35.14	0.5	Pass

