

Appendix Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: NucBox7

Trade Mark: GMKtec

Test Model: KB7

FCC ID: 2AXUD-KB7

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

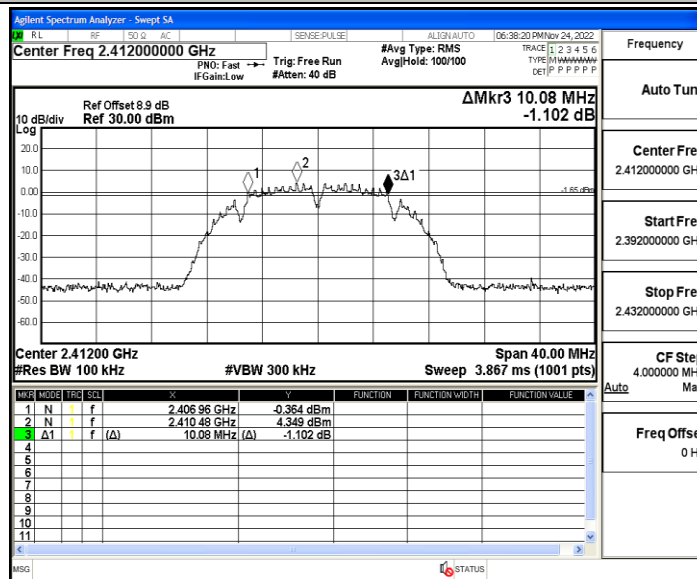
Appendix A: DTS Bandwidth

Test Result

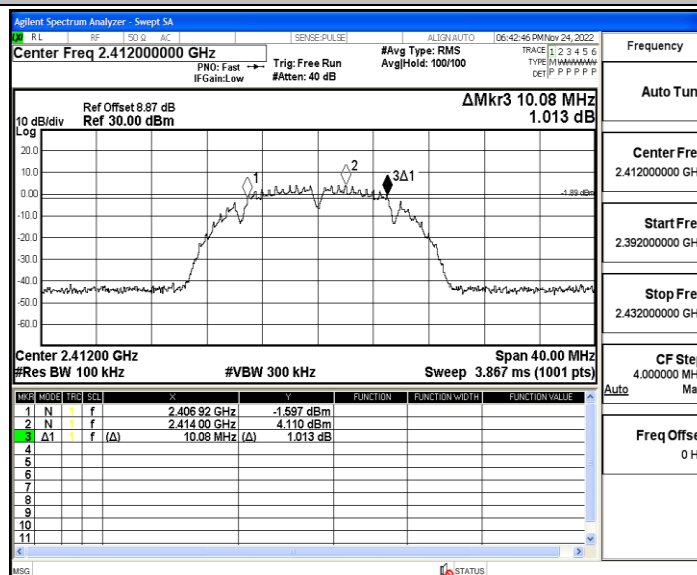
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
	Ant2	2412	10.080	2406.920	2417.000	0.5	PASS
	Ant1	2437	10.080	2431.920	2442.000	0.5	PASS
	Ant2	2437	10.080	2431.960	2442.040	0.5	PASS
	Ant1	2462	10.080	2456.960	2467.040	0.5	PASS
	Ant2	2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	15.080	2404.440	2419.520	0.5	PASS
	Ant2	2412	15.760	2404.440	2420.200	0.5	PASS
	Ant1	2437	15.720	2429.440	2445.160	0.5	PASS
	Ant2	2437	15.080	2429.440	2444.520	0.5	PASS
	Ant1	2462	16.280	2453.840	2470.120	0.5	PASS
	Ant2	2462	15.320	2454.200	2469.520	0.5	PASS
11N20MIMO	Ant1	2412	16.560	2403.520	2420.080	0.5	PASS
	Ant2	2412	16.000	2403.560	2419.560	0.5	PASS
	Ant1	2437	16.960	2428.480	2445.440	0.5	PASS
	Ant2	2437	15.160	2429.400	2444.560	0.5	PASS
	Ant1	2462	17.200	2453.520	2470.720	0.5	PASS
	Ant2	2462	16.320	2454.120	2470.440	0.5	PASS
11N40MIMO	Ant1	2422	35.040	2404.480	2439.520	0.5	PASS
	Ant2	2422	35.040	2404.480	2439.520	0.5	PASS
	Ant1	2437	35.040	2419.480	2454.520	0.5	PASS
	Ant2	2437	35.040	2419.480	2454.520	0.5	PASS
	Ant1	2452	35.360	2434.480	2469.840	0.5	PASS
	Ant2	2452	35.520	2434.560	2470.080	0.5	PASS

Test Graphs

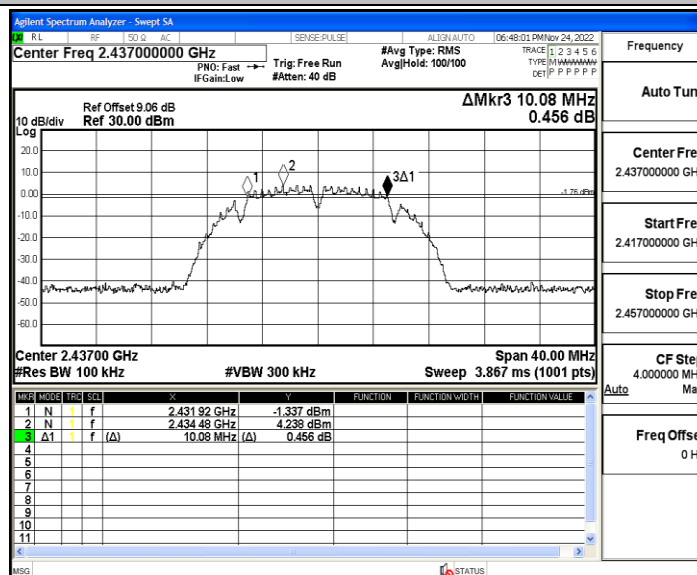
11B_Ant1_2412



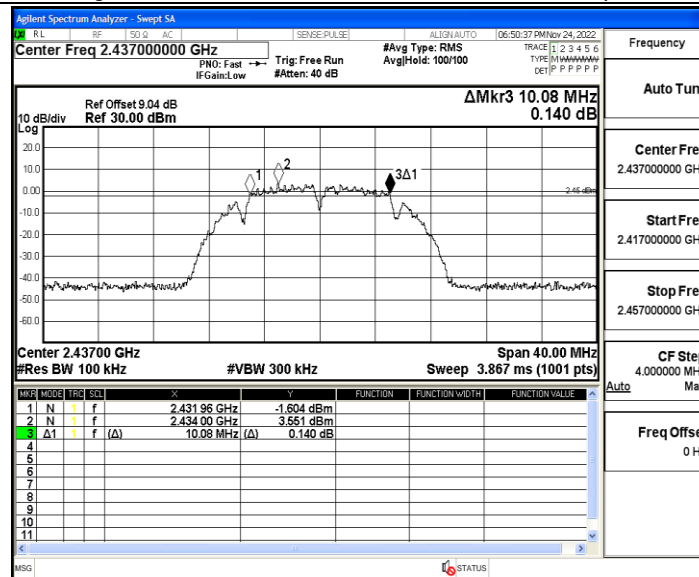
11B_Ant2_2412



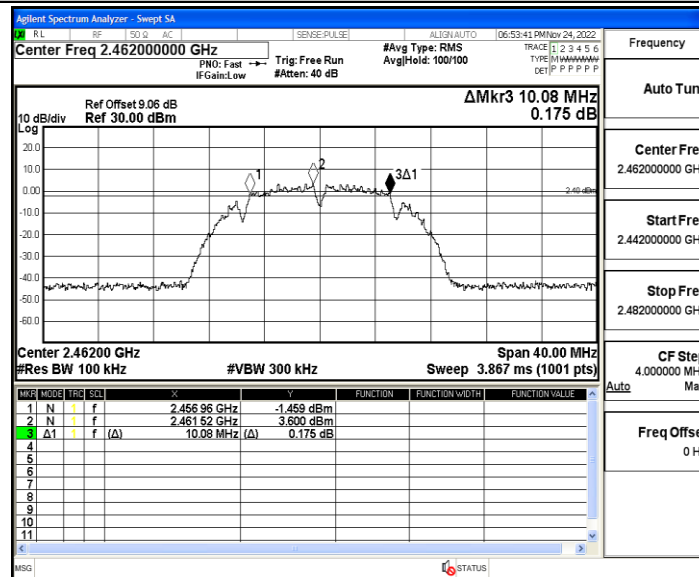
11B_Ant1_2437



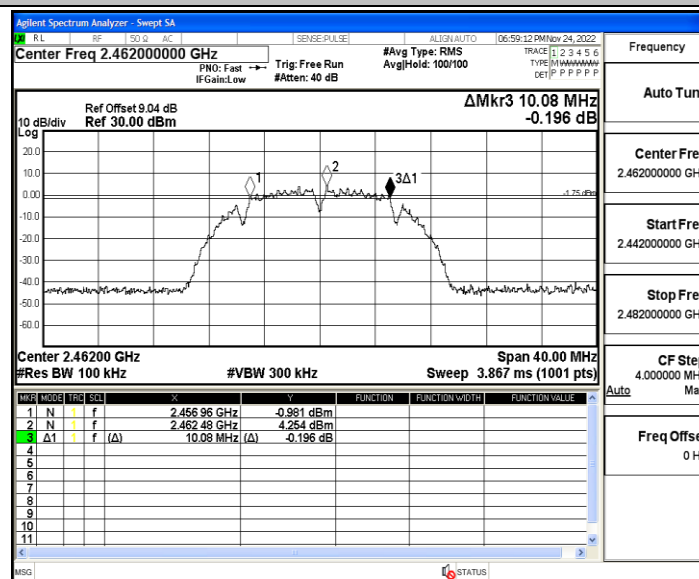
11B_Ant2_2437



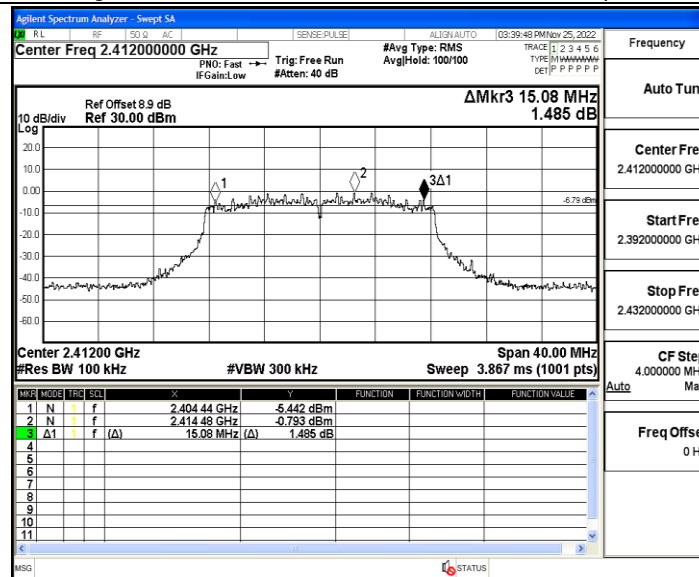
11B_Ant1_2462



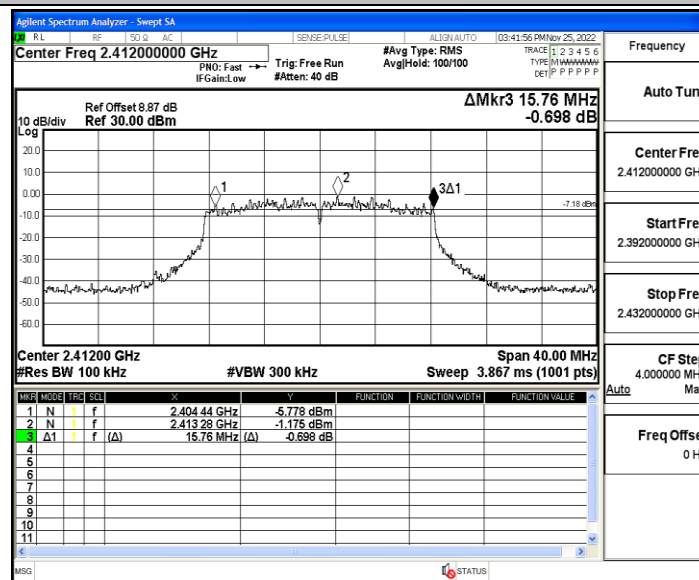
11B_Ant2_2462



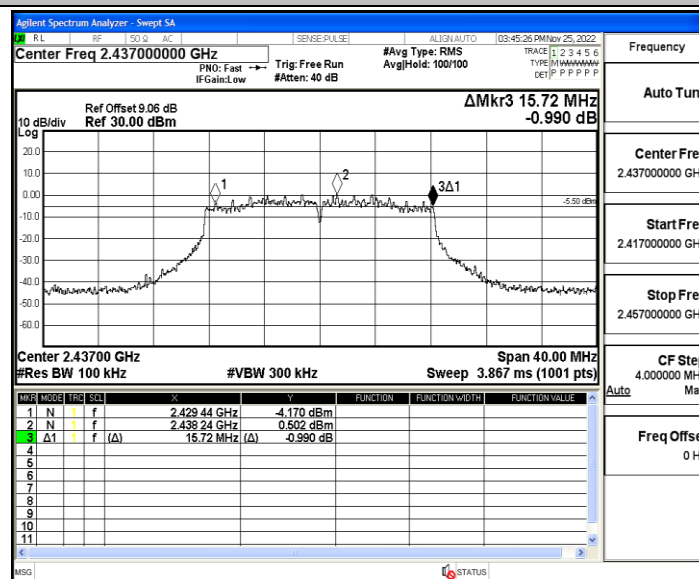
11G_Ant1_2412



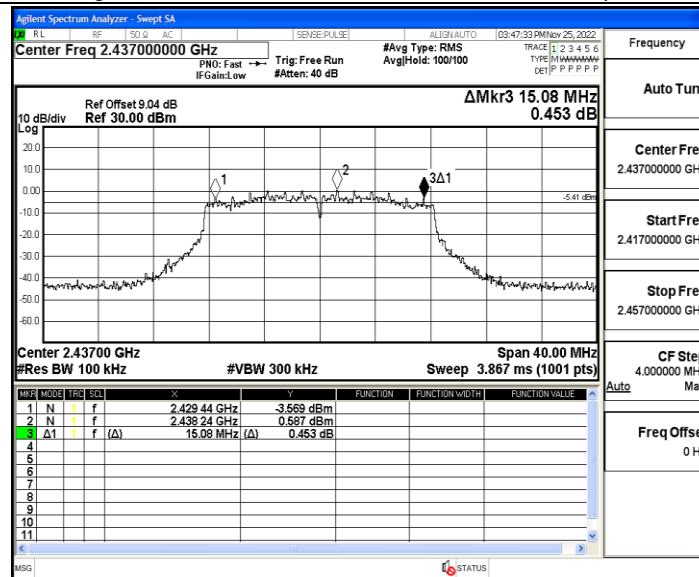
11G_Ant2_2412



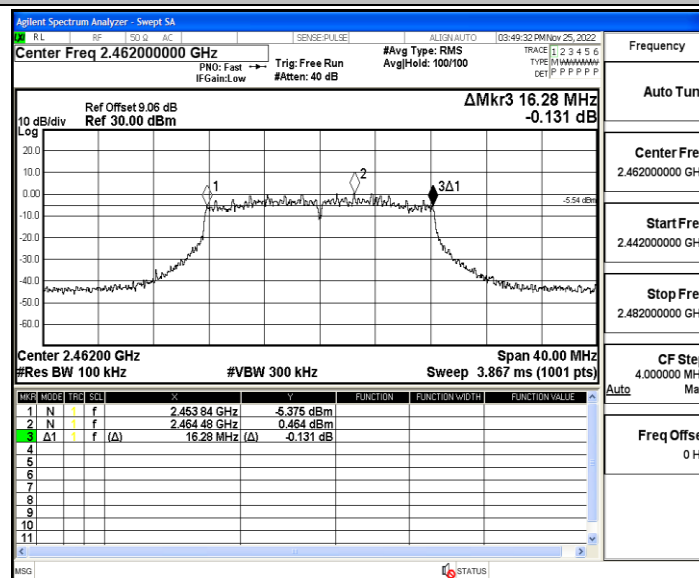
11G_Ant1_2437



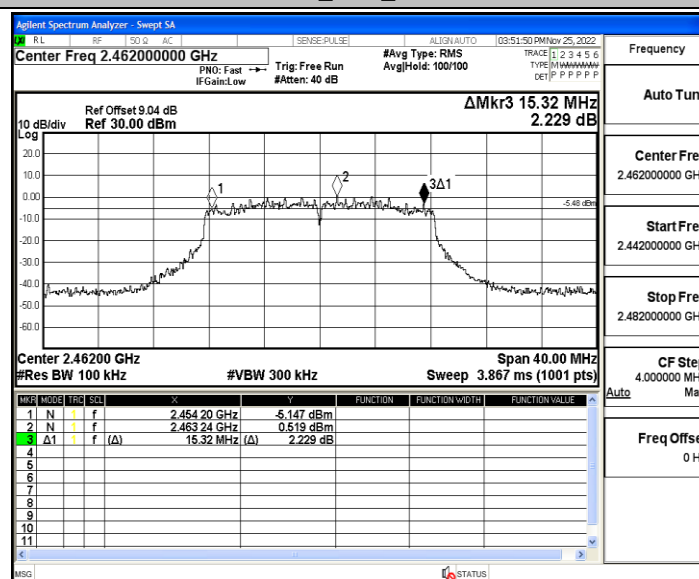
11G_Ant2_2437



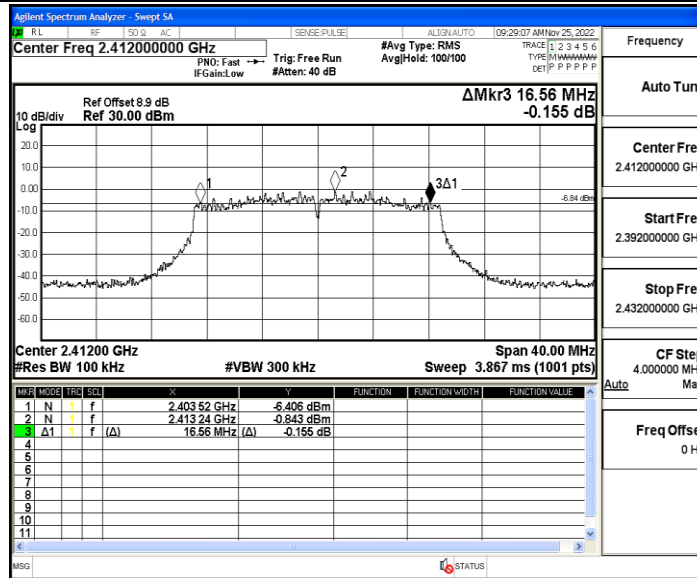
11G_Ant1_2462



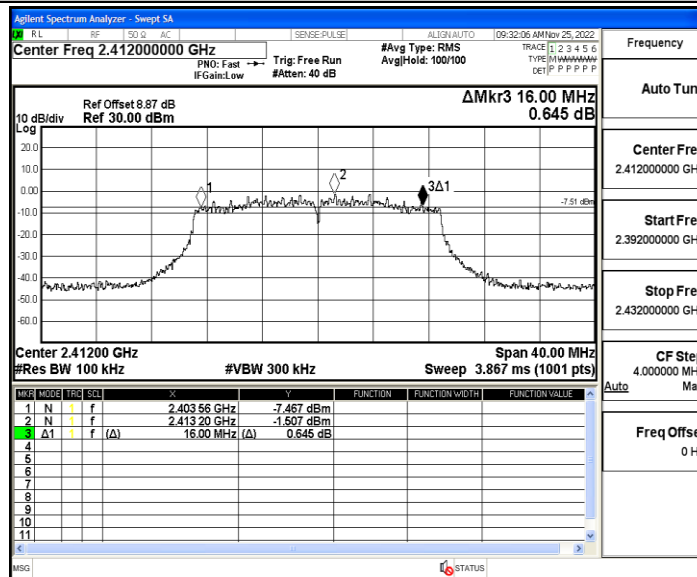
11G_Ant2_2462



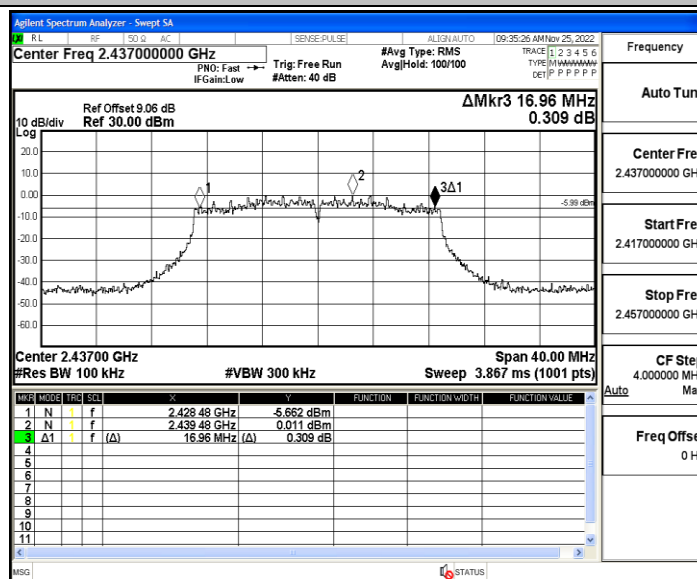
11N20MIMO_Ant1_2412



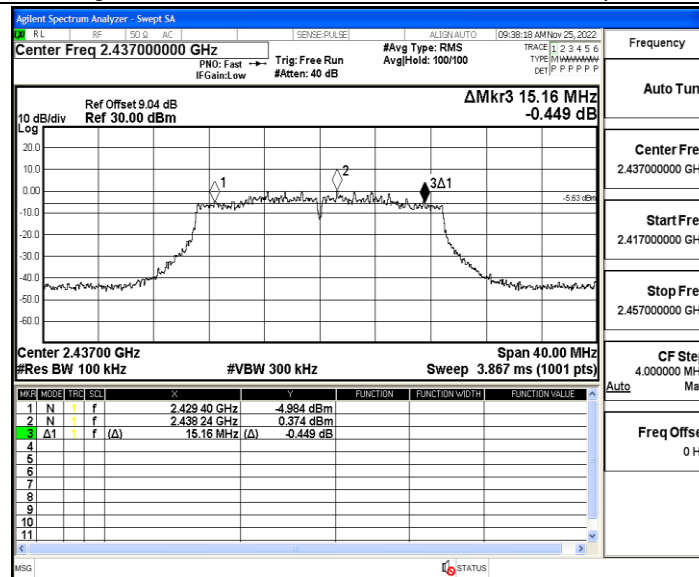
11N20MIMO_Ant2_2412



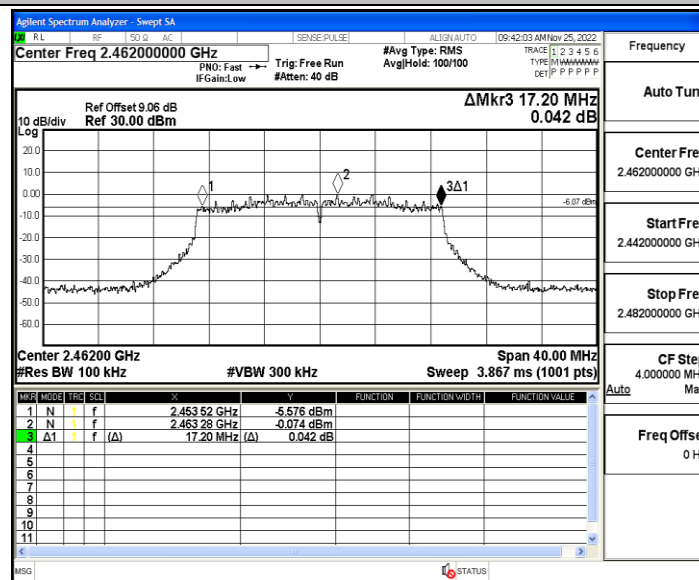
11N20MIMO_Ant1_2437



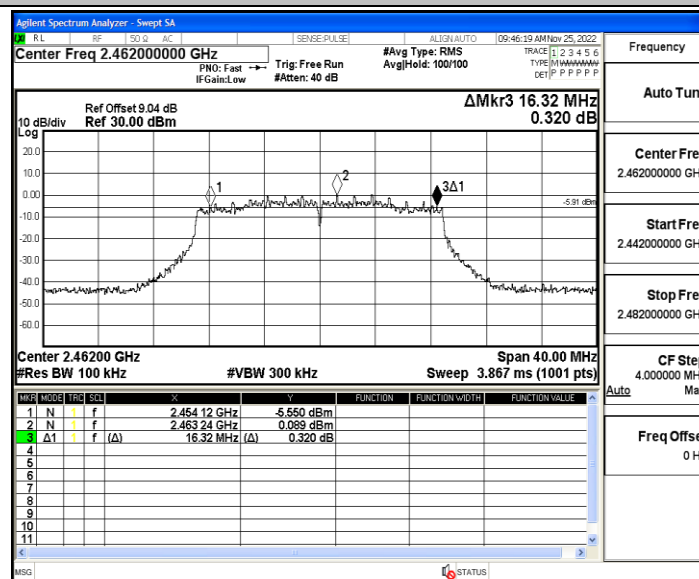
11N20MIMO_Ant2_2437



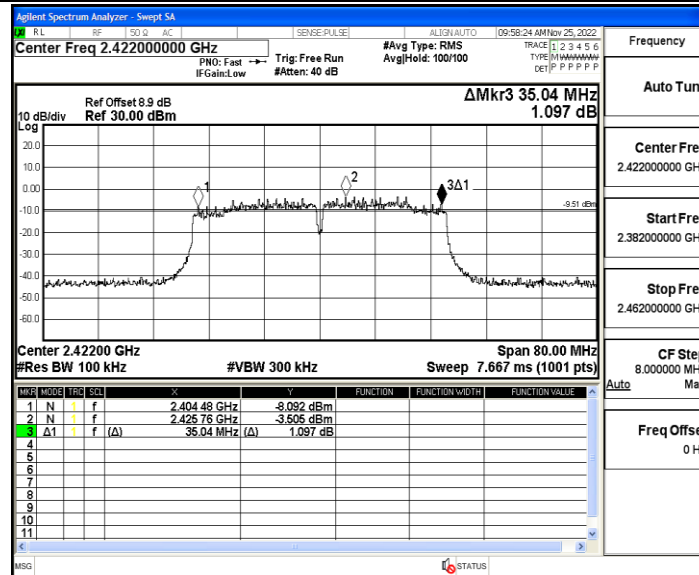
11N20MIMO_Ant1_2462



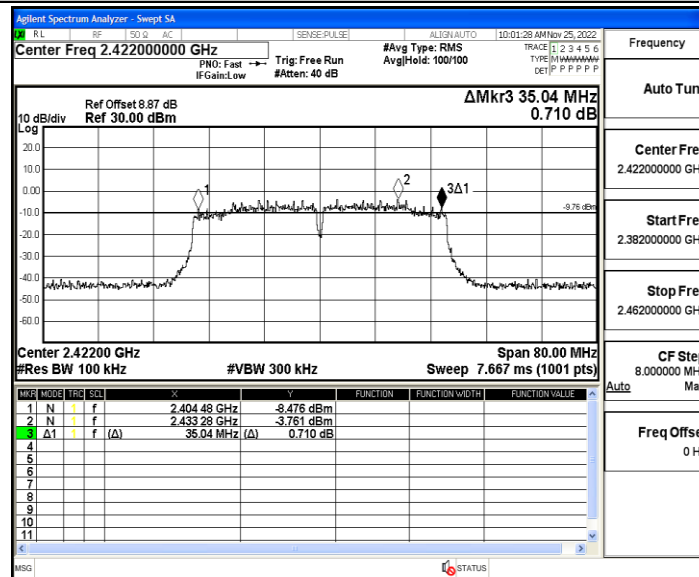
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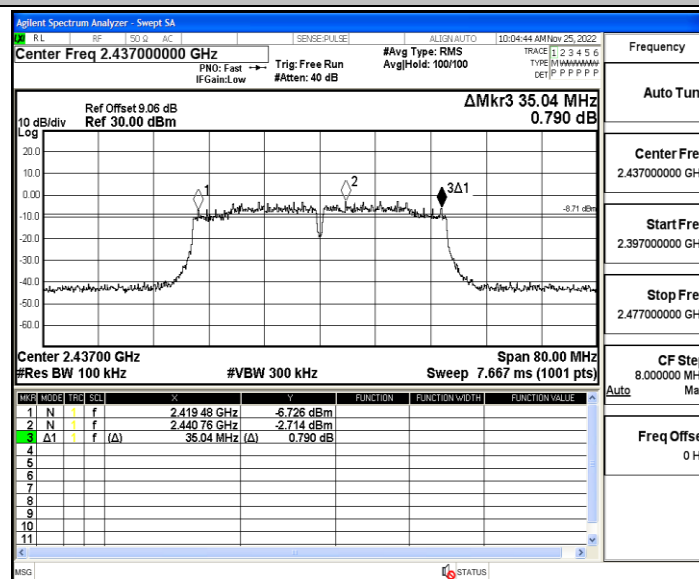
11N40MIMO_Ant1_2422



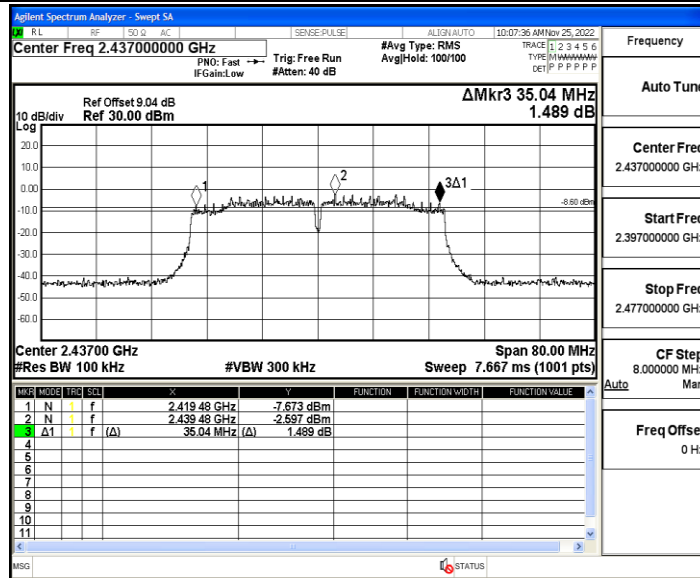
11N40MIMO_Ant2_2422



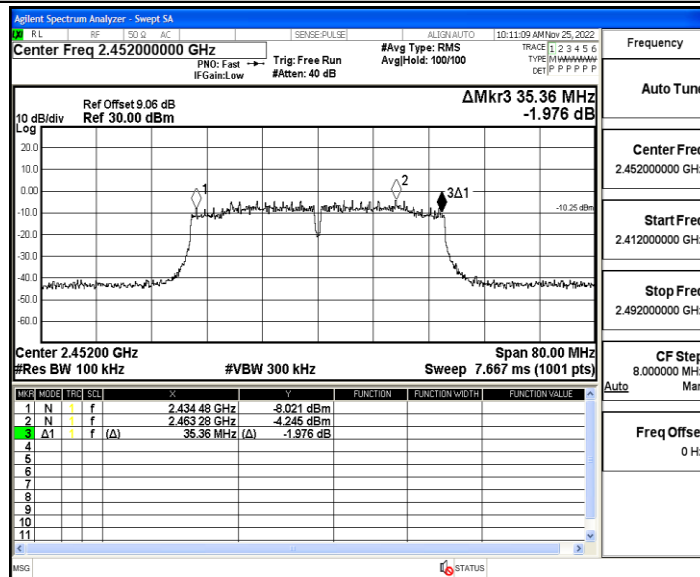
11N40MIMO_Ant1_2437



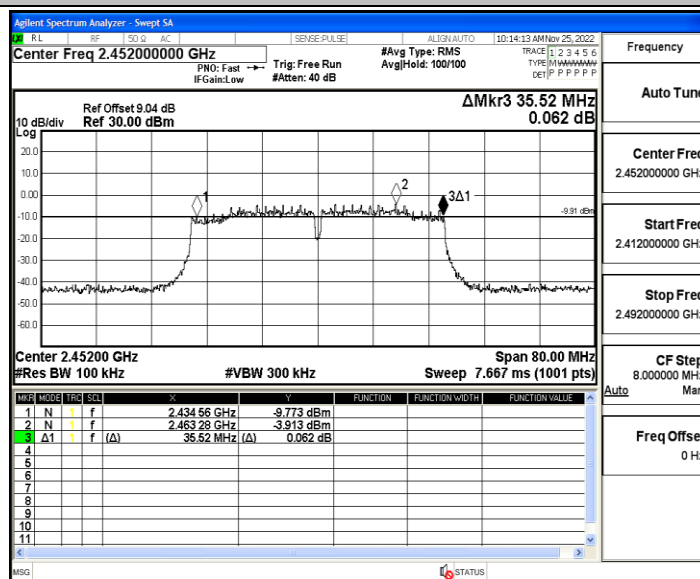
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



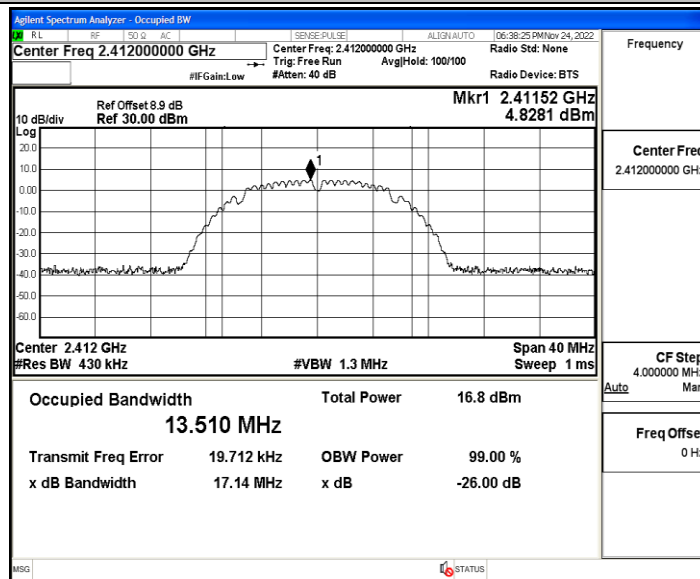
Appendix B: Occupied Channel Bandwidth

Test Result

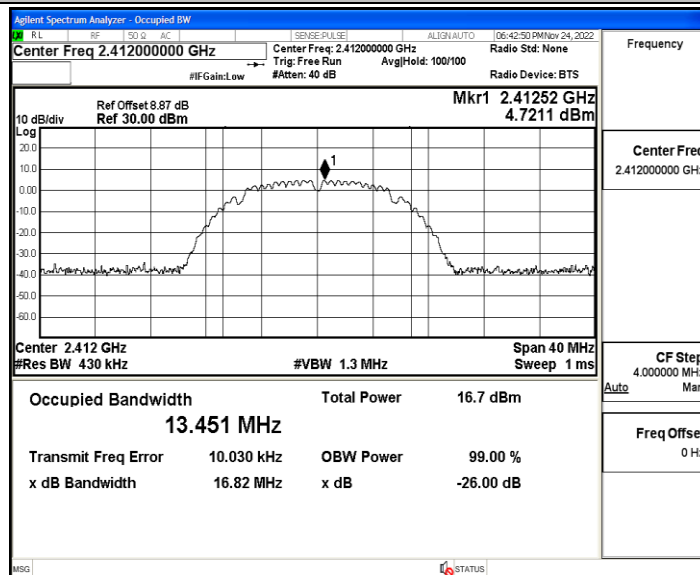
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.510	2405.2647	2418.7747	---	---
	Ant2	2412	13.451	2405.2845	2418.7355	---	---
	Ant1	2437	13.467	2430.2639	2443.7309	---	---
	Ant2	2437	13.428	2430.2607	2443.6887	---	---
	Ant1	2462	13.456	2455.3087	2468.7647	---	---
	Ant2	2462	13.451	2455.3002	2468.7512	---	---
11G	Ant1	2412	16.575	2403.7456	2420.3206	---	---
	Ant2	2412	16.537	2403.7848	2420.3218	---	---
	Ant1	2437	16.584	2428.7247	2445.3087	---	---
	Ant2	2437	16.600	2428.6961	2445.2961	---	---
	Ant1	2462	16.550	2453.7442	2470.2942	---	---
	Ant2	2462	16.526	2453.7699	2470.2959	---	---
11N20MIMO	Ant1	2412	17.806	2403.1194	2420.9254	---	---
	Ant2	2412	17.800	2403.1222	2420.9222	---	---
	Ant1	2437	17.778	2428.1298	2445.9078	---	---
	Ant2	2437	17.758	2428.1212	2445.8792	---	---
	Ant1	2462	17.734	2453.1411	2470.8751	---	---
	Ant2	2462	17.776	2453.1283	2470.9043	---	---
11N40MIMO	Ant1	2422	36.088	2404.1194	2440.2074	---	---
	Ant2	2422	36.036	2404.1328	2440.1688	---	---
	Ant1	2437	36.037	2419.1038	2455.1408	---	---
	Ant2	2437	36.066	2419.1010	2455.1670	---	---
	Ant1	2452	36.081	2434.0264	2470.1074	---	---
	Ant2	2452	36.099	2434.0604	2470.1594	---	---

Test Graphs

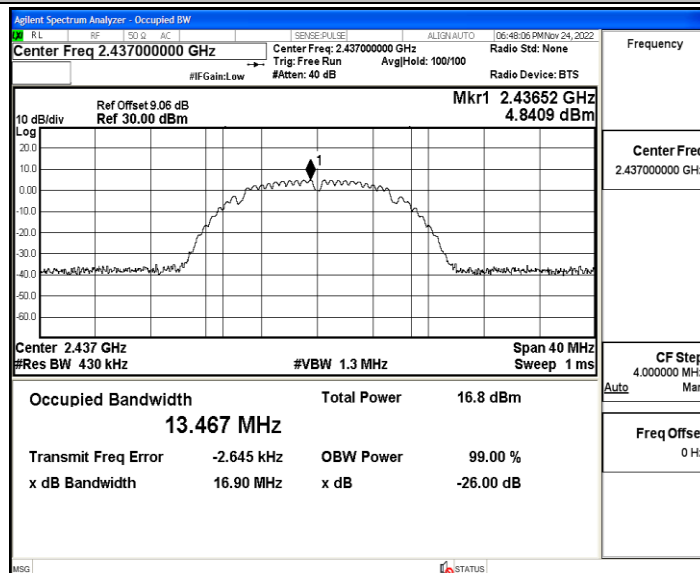
11B_Ant1_2412



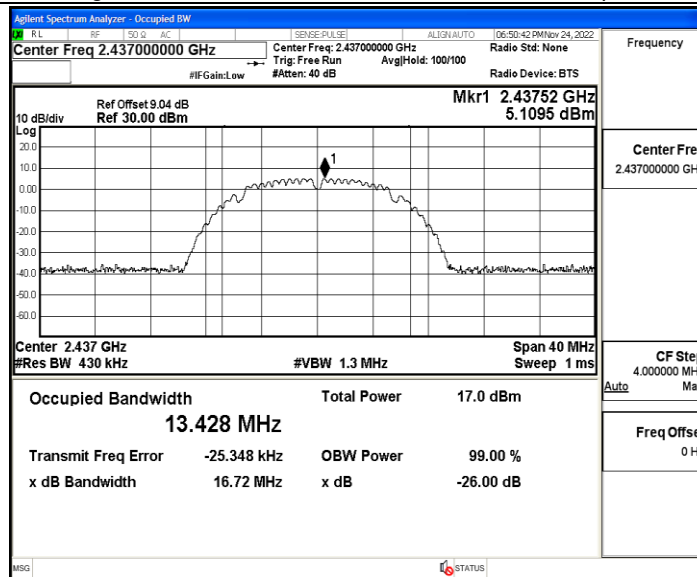
11B_Ant2_2412



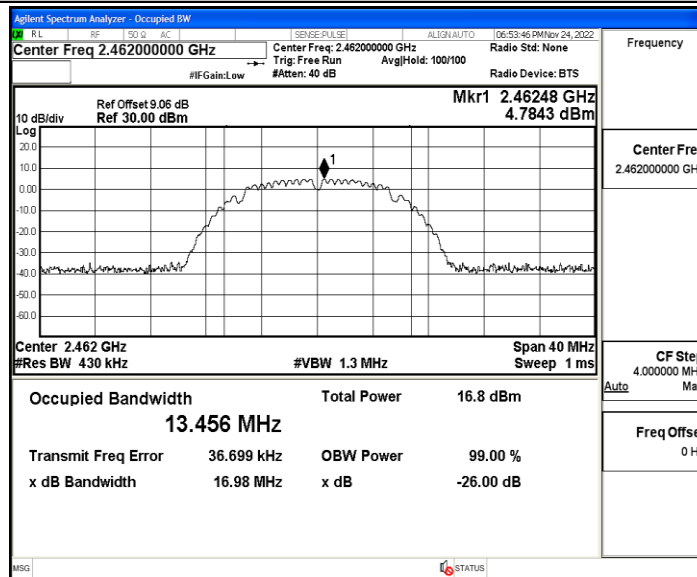
11B_Ant1_2437



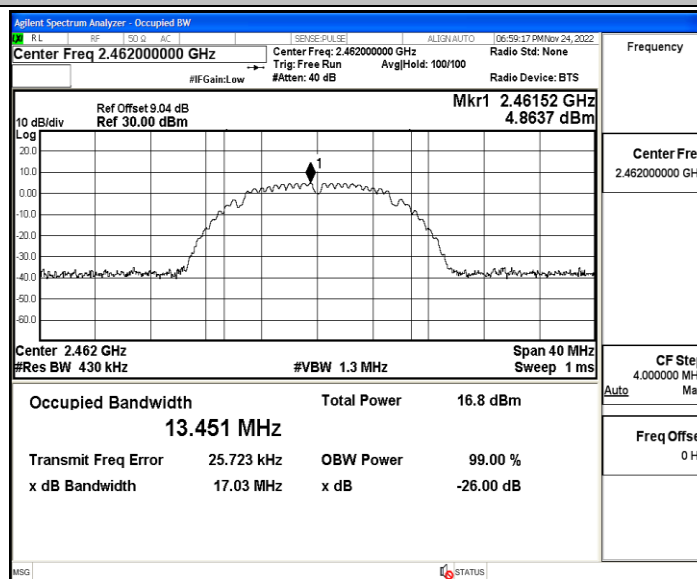
11B_Ant2_2437



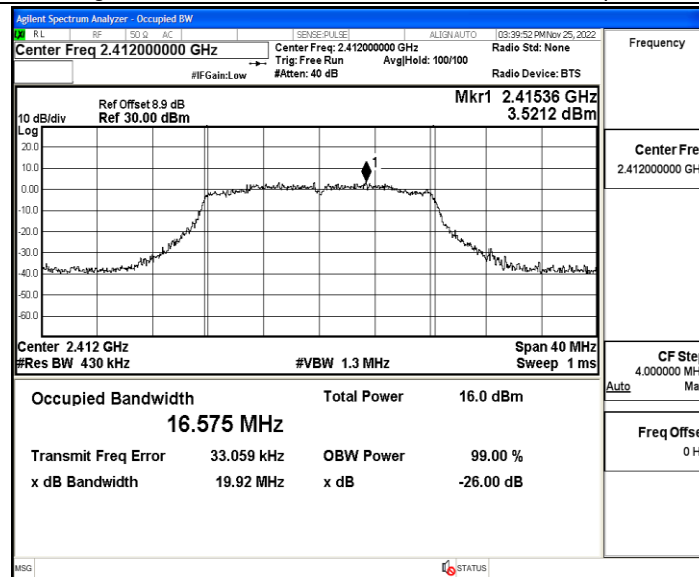
11B_Ant1_2462



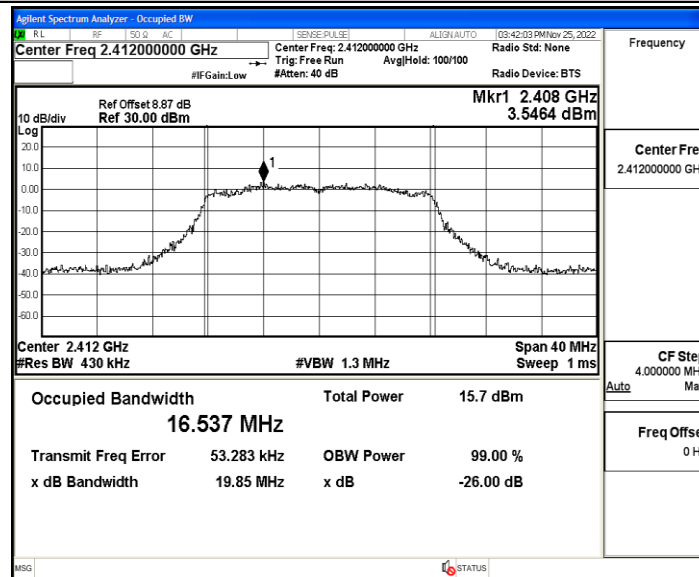
11B_Ant2_2462



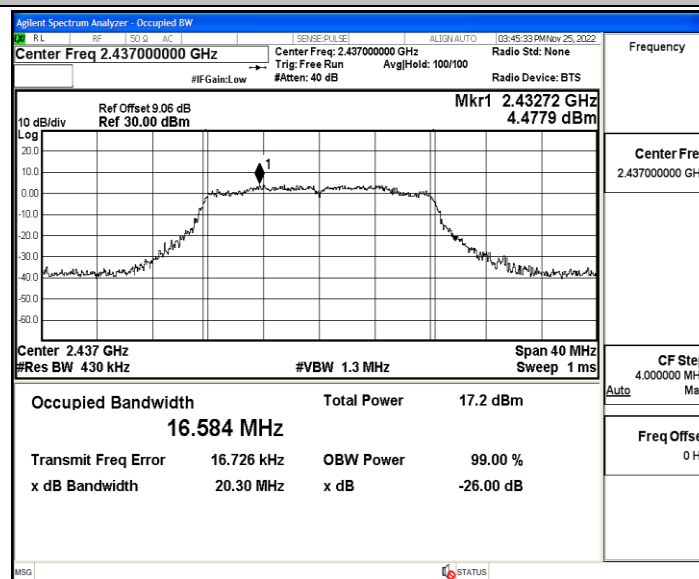
11G_Ant1_2412



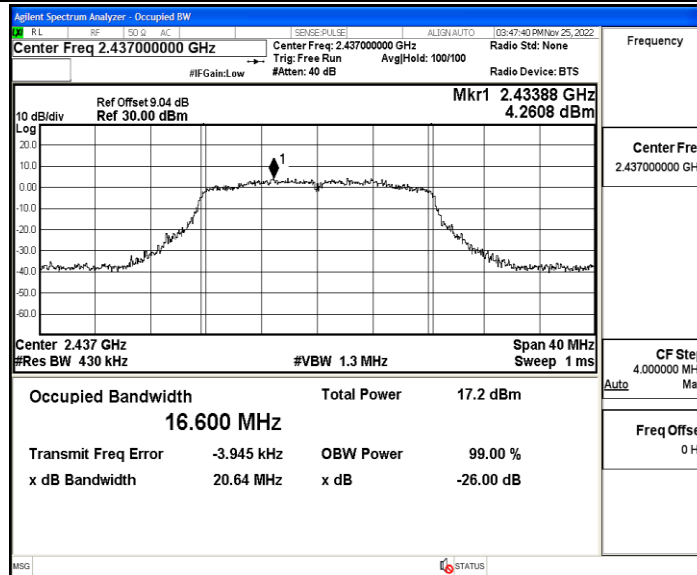
11G_Ant2_2412



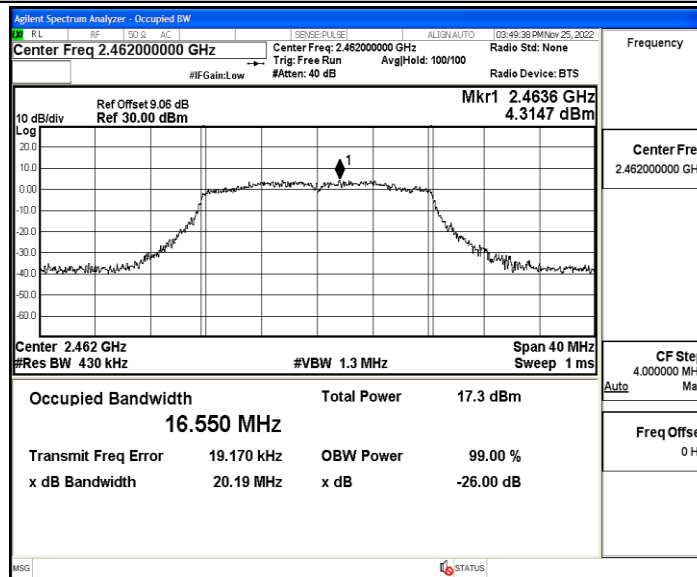
11G_Ant1_2437



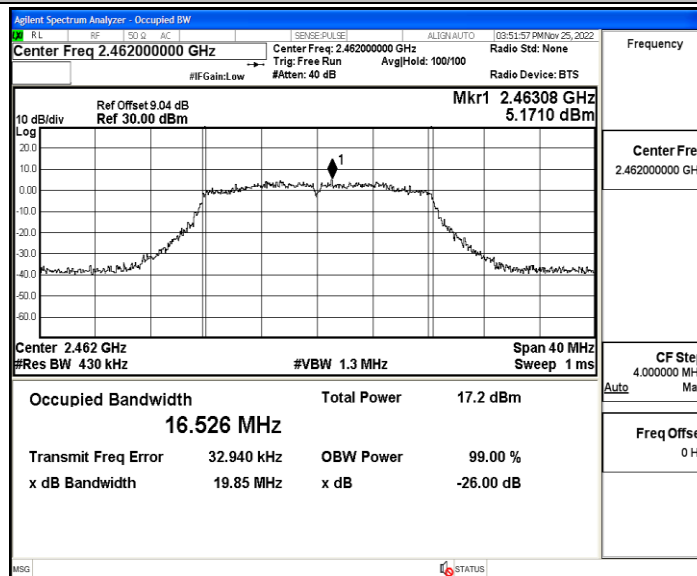
11G_Ant2_2437



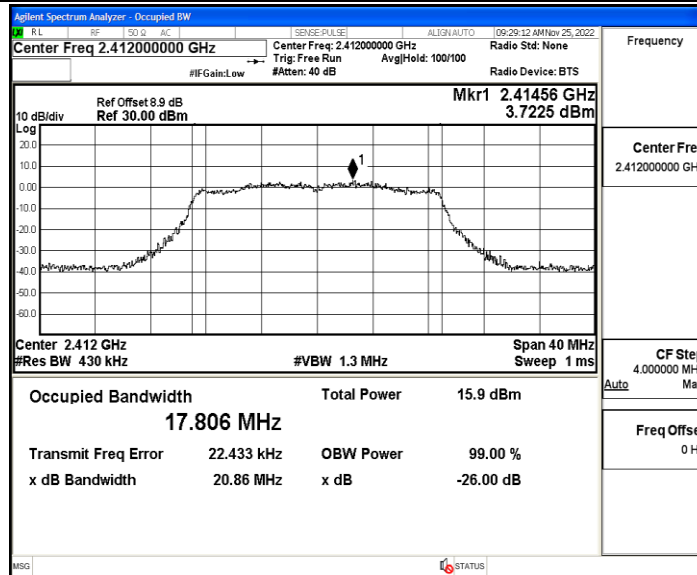
11G_Ant1_2462



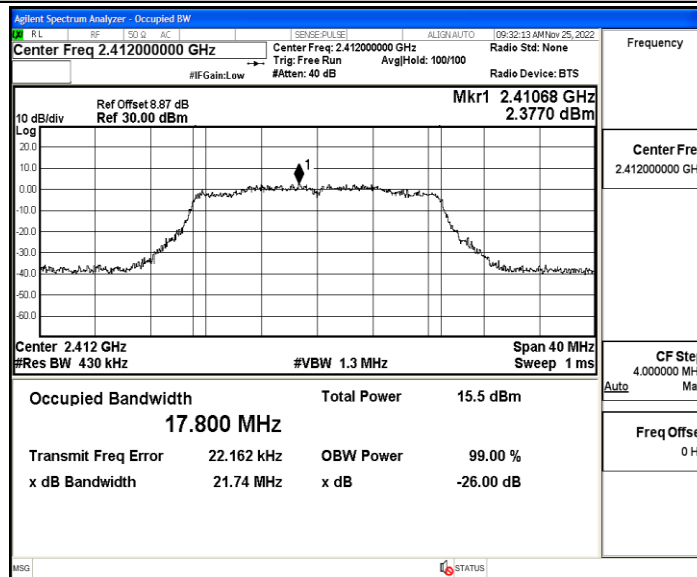
11G_Ant2_2462



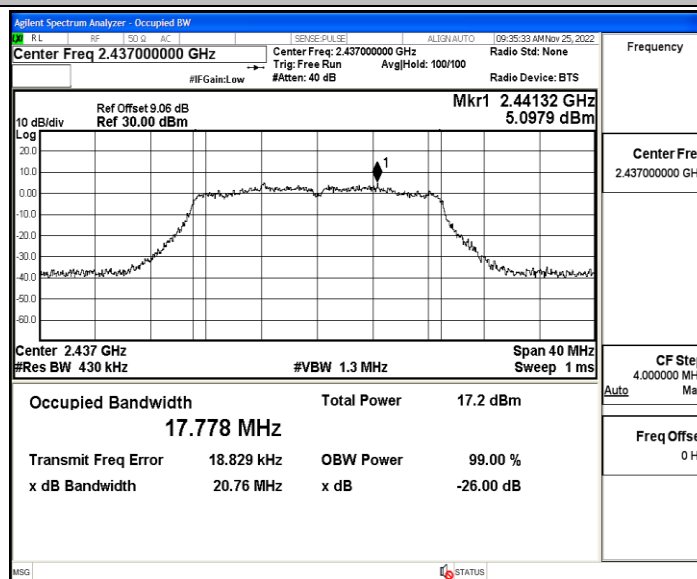
11N20MIMO_Ant1_2412



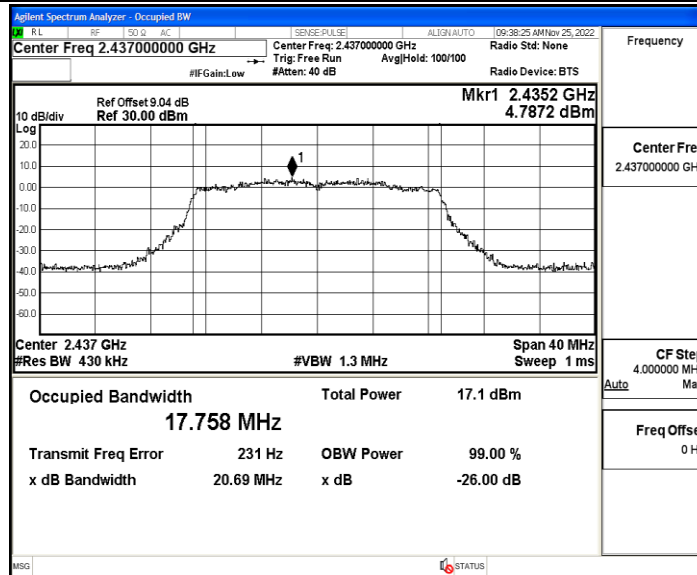
11N20MIMO_Ant2_2412



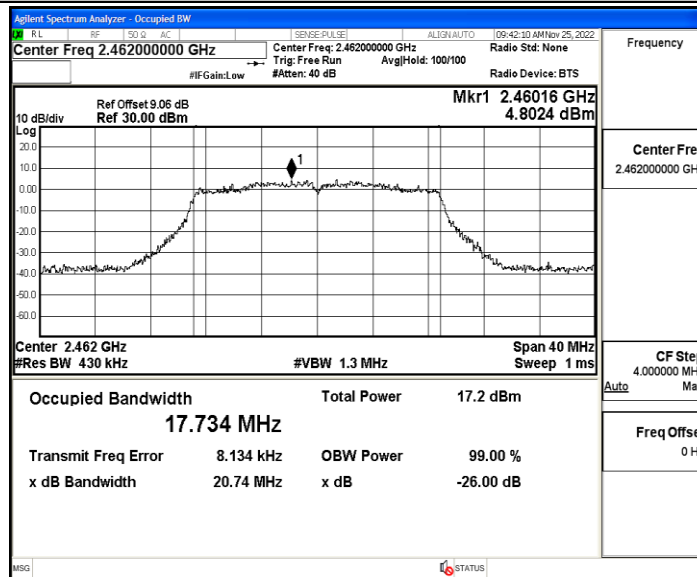
11N20MIMO_Ant1_2437



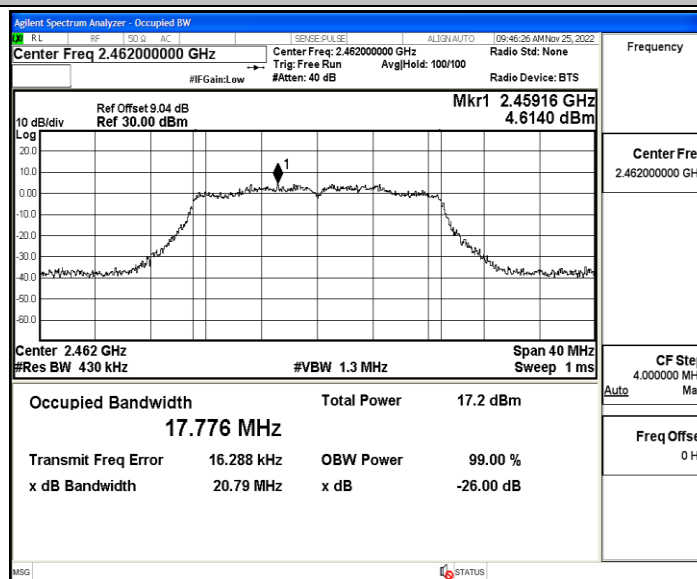
11N20MIMO_Ant2_2437



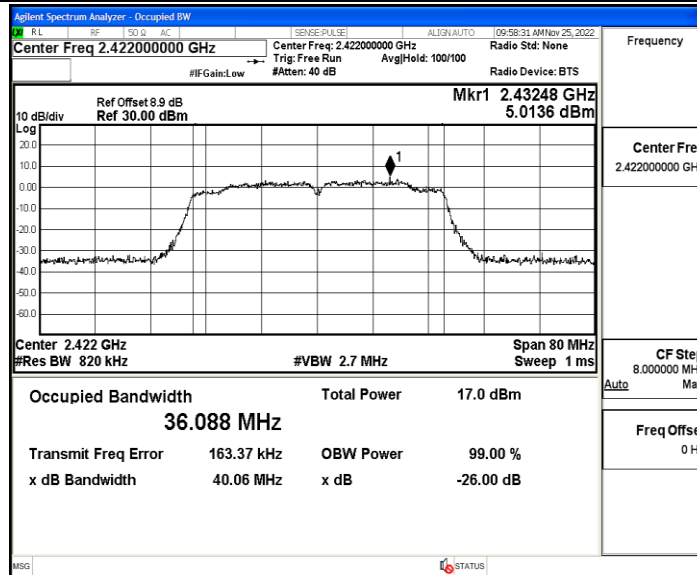
11N20MIMO_Ant1_2462



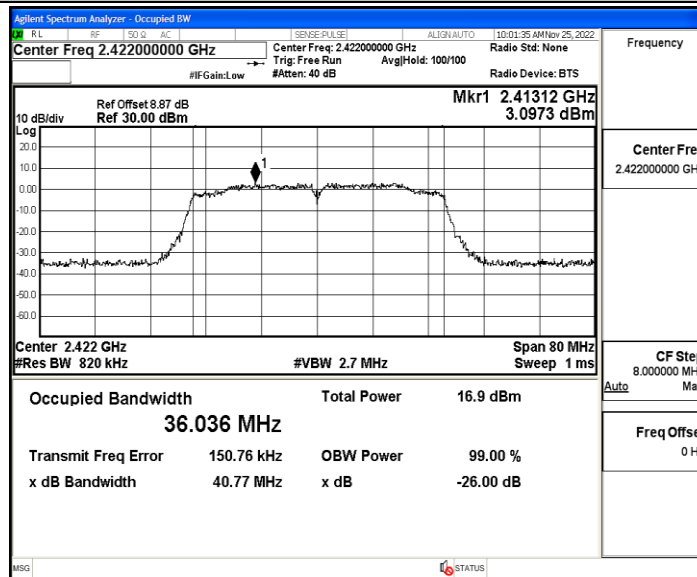
11N20MIMO_Ant2_2462



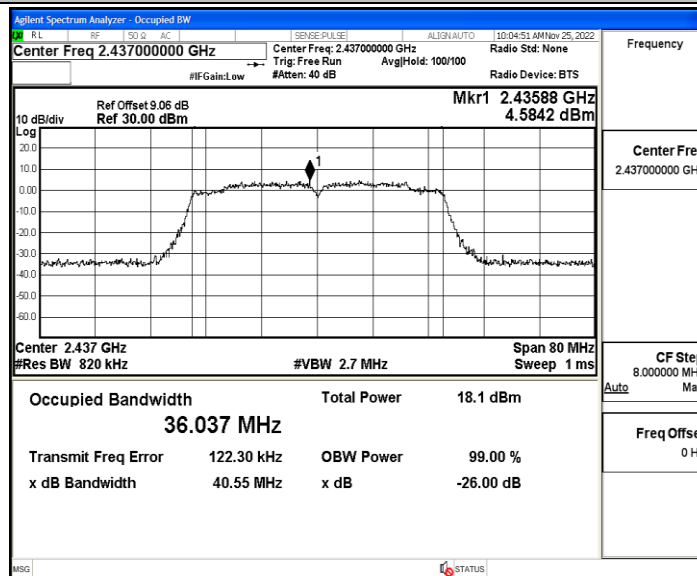
11N40MIMO_Ant1_2422



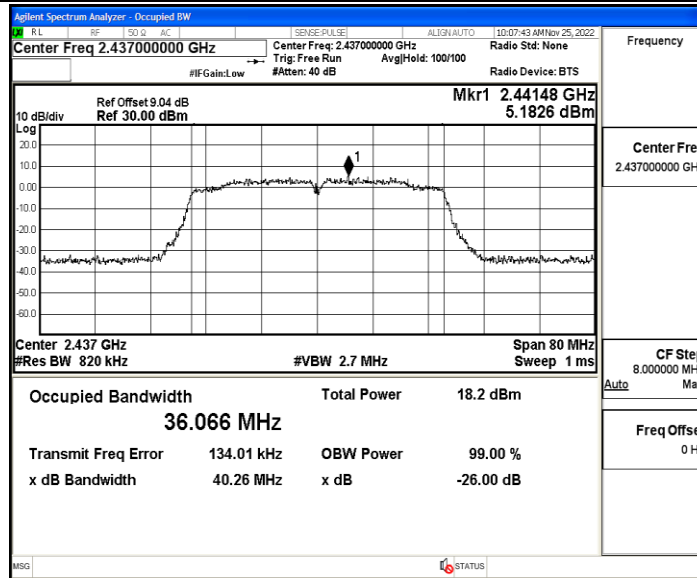
11N40MIMO_Ant2_2422



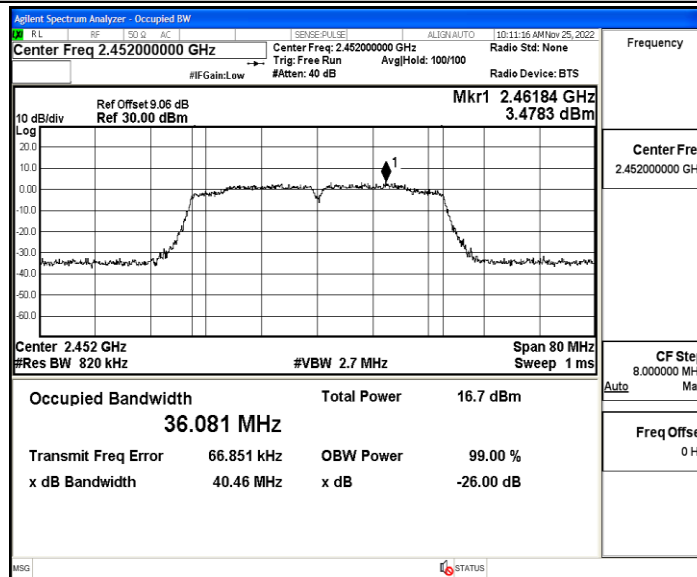
11N40MIMO_Ant1_2437



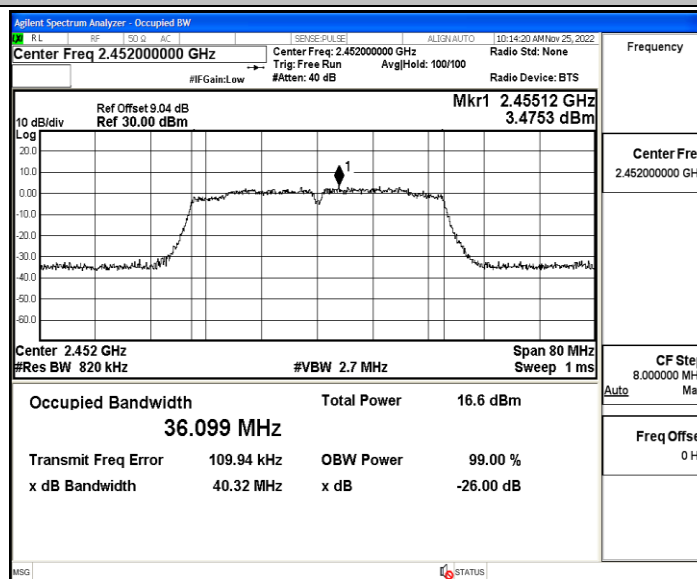
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	13.88	≤30.00	PASS
	Ant2	2412	13.73	≤30.00	PASS
	Ant1	2437	13.89	≤30.00	PASS
	Ant2	2437	12.58	≤30.00	PASS
	Ant1	2462	12.53	≤30.00	PASS
	Ant2	2462	12.91	≤30.00	PASS
11G	Ant1	2412	9.75	≤30.00	PASS
	Ant2	2412	9.34	≤30.00	PASS
	Ant1	2437	11.02	≤30.00	PASS
	Ant2	2437	10.91	≤30.00	PASS
	Ant1	2462	10.98	≤30.00	PASS
	Ant2	2462	10.81	≤30.00	PASS
11N20MIMO	Ant1	2412	9.39	≤30.00	PASS
	Ant2	2412	9.05	≤30.00	PASS
	total	2412	12.23	≤30.00	PASS
	Ant1	2437	10.64	≤30.00	PASS
	Ant2	2437	10.49	≤30.00	PASS
	total	2437	13.58	≤30.00	PASS
	Ant1	2462	10.55	≤30.00	PASS
	Ant2	2462	10.53	≤30.00	PASS
	total	2462	13.55	≤30.00	PASS
11N40MIMO	Ant1	2422	9.76	≤30.00	PASS
	Ant2	2422	9.53	≤30.00	PASS
	total	2422	12.66	≤30.00	PASS
	Ant1	2437	10.84	≤30.00	PASS
	Ant2	2437	10.90	≤30.00	PASS
	total	2437	13.88	≤30.00	PASS
	Ant1	2452	9.34	≤30.00	PASS
	Ant2	2452	9.38	≤30.00	PASS
	total	2452	12.37	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the test result.

Appendix D: Maximum power spectral density

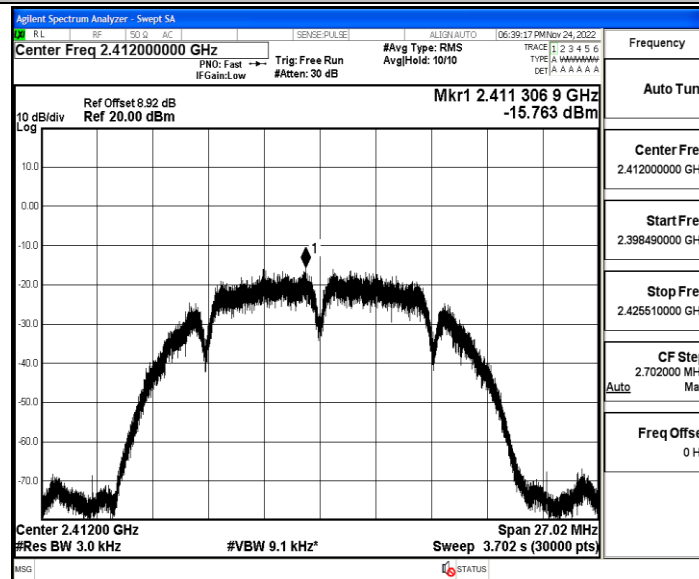
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-15.76	≤8.00	PASS
	Ant2	2412	-15.09	≤8.00	PASS
	Ant1	2437	-14.87	≤8.00	PASS
	Ant2	2437	-15.12	≤8.00	PASS
	Ant1	2462	-15.14	≤8.00	PASS
	Ant2	2462	-14.26	≤8.00	PASS
11G	Ant1	2412	-19.63	≤8.00	PASS
	Ant2	2412	-20.83	≤8.00	PASS
	Ant1	2437	-19.06	≤8.00	PASS
	Ant2	2437	-19.19	≤8.00	PASS
	Ant1	2462	-17.84	≤8.00	PASS
	Ant2	2462	-18.75	≤8.00	PASS
11N20MIMO	Ant1	2412	-20.65	≤8.00	PASS
	Ant2	2412	-21.38	≤8.00	PASS
	total	2412	-17.99	≤8.00	PASS
	Ant1	2437	-20.05	≤8.00	PASS
	Ant2	2437	-19.27	≤8.00	PASS
	total	2437	-16.63	≤8.00	PASS
	Ant1	2462	-19.88	≤8.00	PASS
	Ant2	2462	-19.11	≤8.00	PASS
	total	2462	-16.47	≤8.00	PASS
11N40MIMO	Ant1	2422	-24.33	≤8.00	PASS
	Ant2	2422	-23.62	≤8.00	PASS
	total	2422	-20.95	≤8.00	PASS
	Ant1	2437	-23.3	≤8.00	PASS
	Ant2	2437	-22.97	≤8.00	PASS
	total	2437	-20.12	≤8.00	PASS
	Ant1	2452	-24.62	≤8.00	PASS
	Ant2	2452	-23.98	≤8.00	PASS
	total	2452	-21.28	≤8.00	PASS

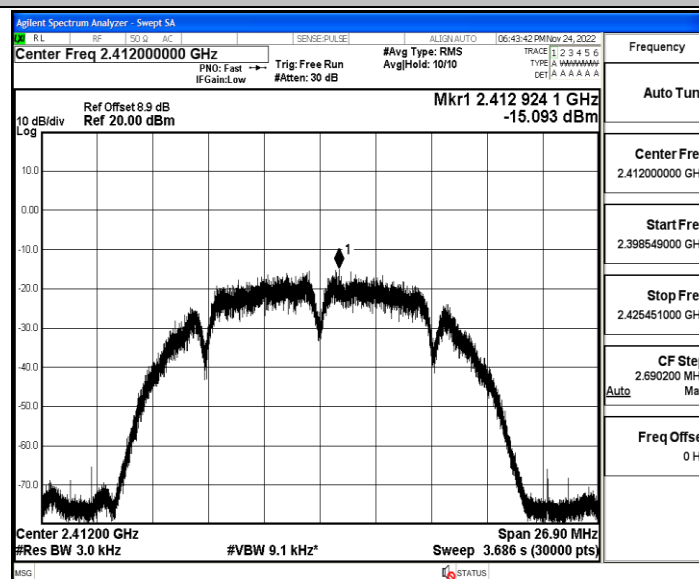
Note: The Duty Cycle Factor is compensated in the test result.

Test Graphs

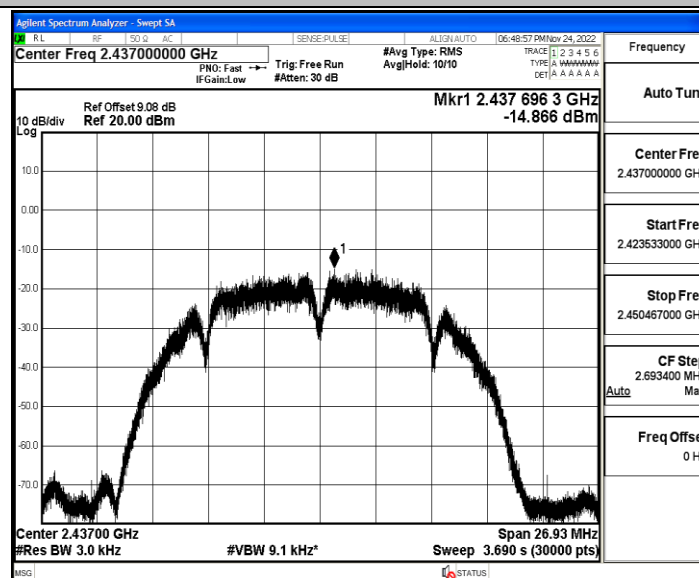
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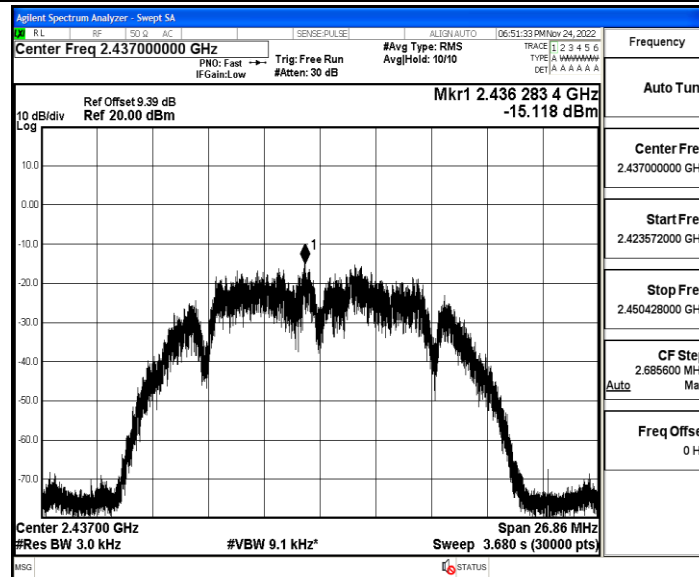
11B_Ant2_2412



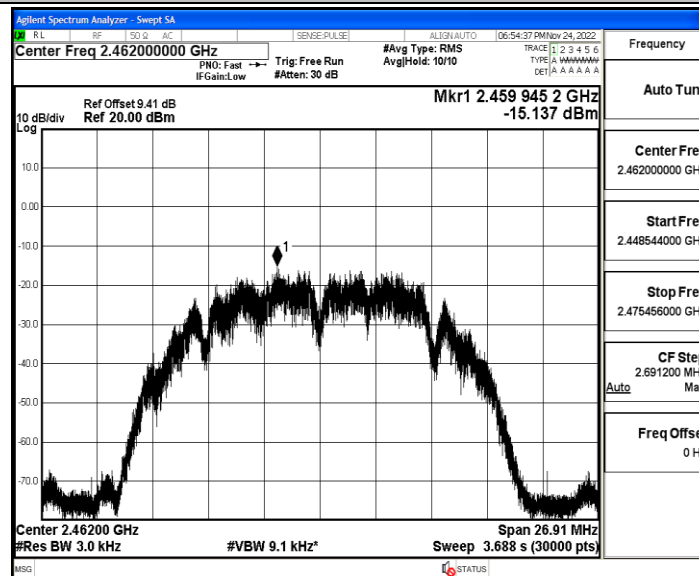
11B_Ant1_2437



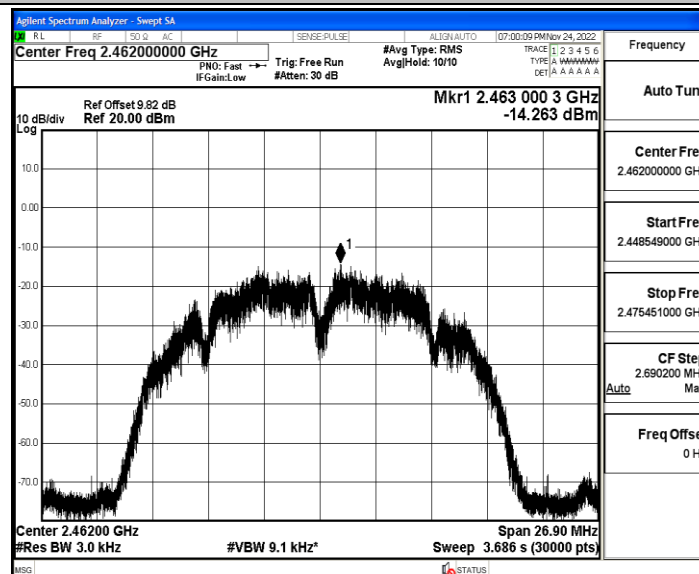
11B_Ant2_2437



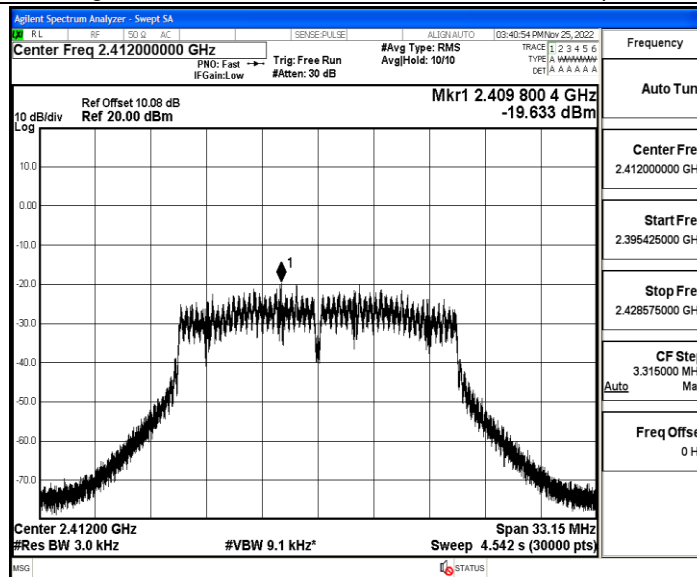
11B_Ant1_2462



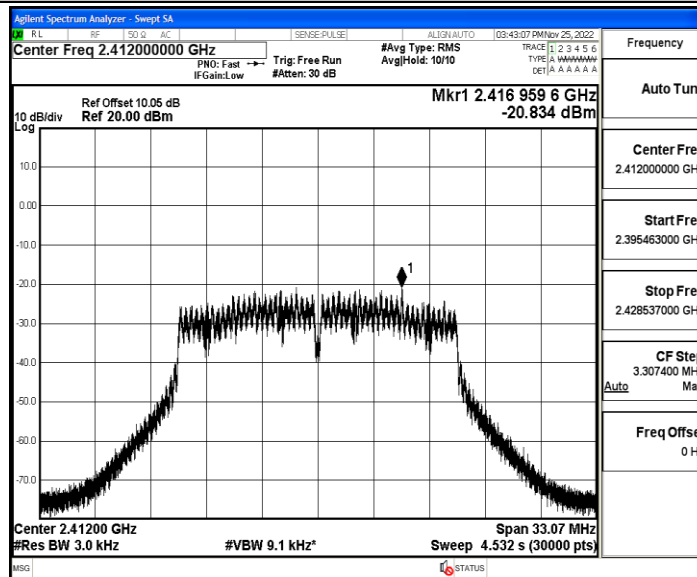
11B_Ant2_2462



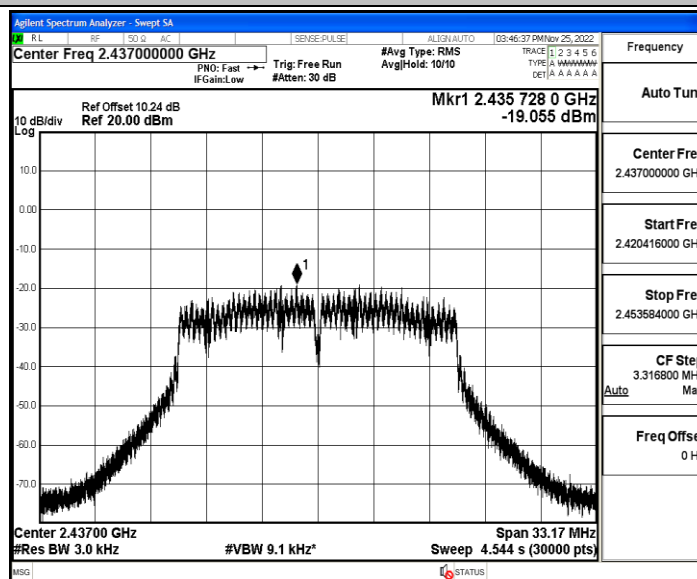
11G_Ant1_2412



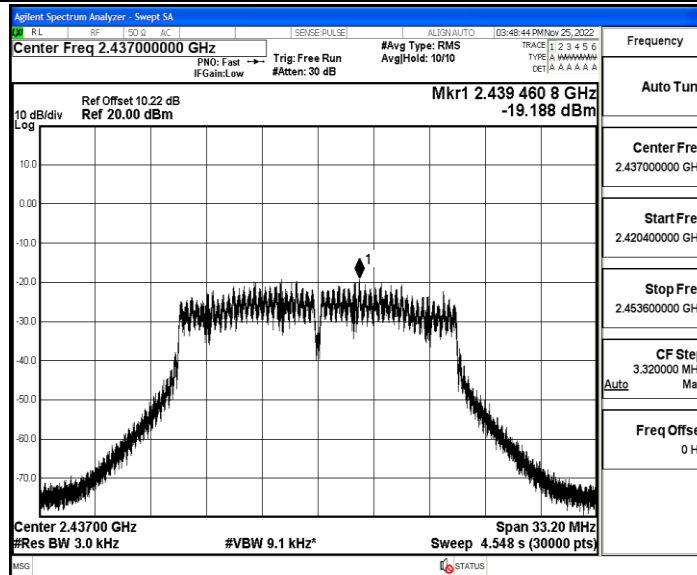
11G_Ant2_2412



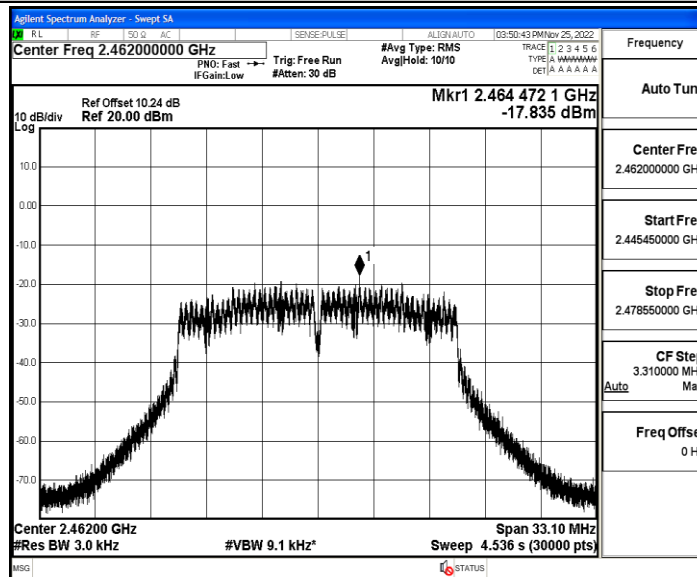
11G_Ant1_2437



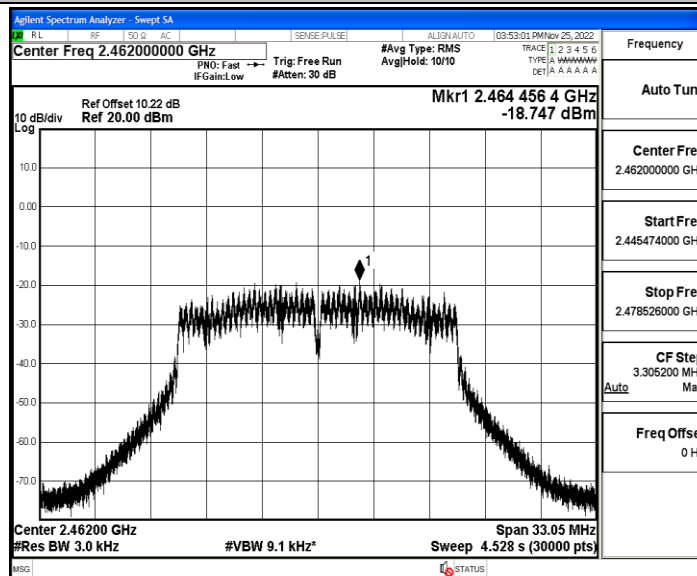
11G_Ant2_2437



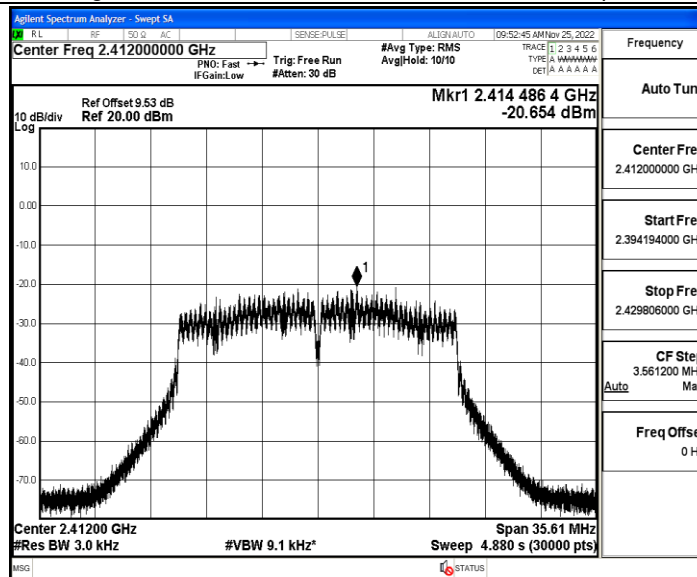
11G_Ant1_2462



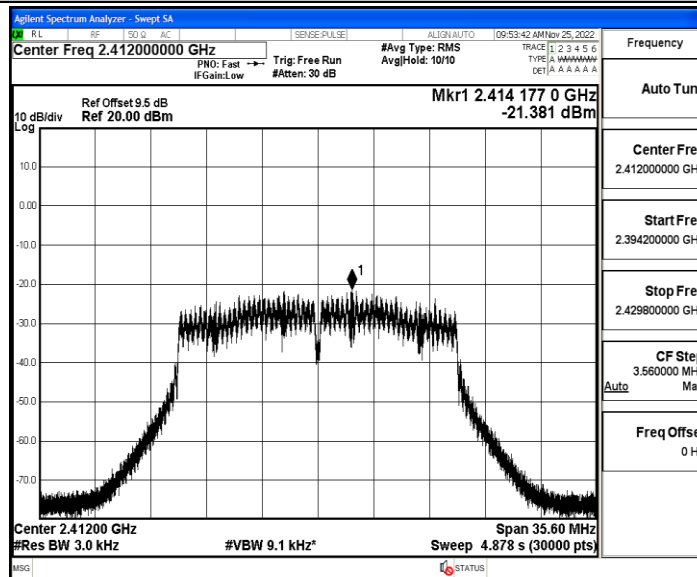
11G_Ant2_2462



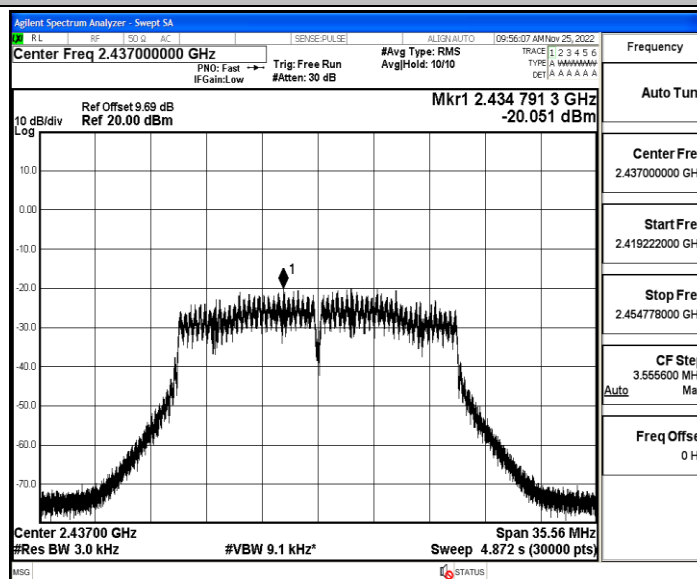
11N20MIMO_Ant1_2412



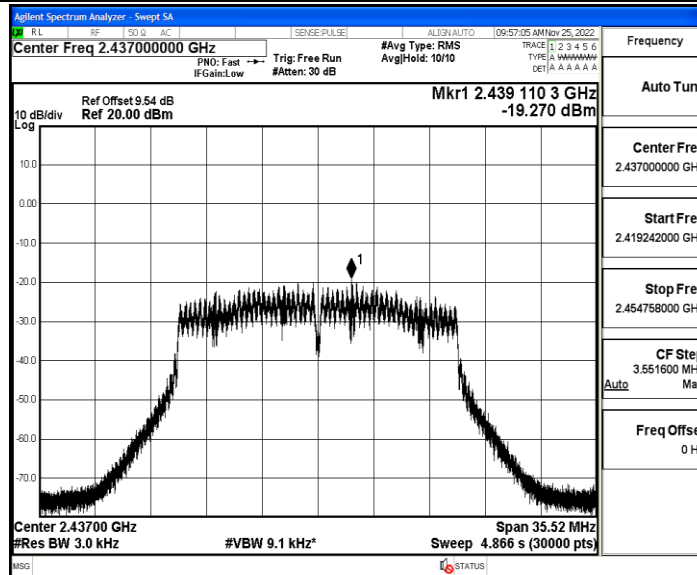
11N20MIMO_Ant2_2412



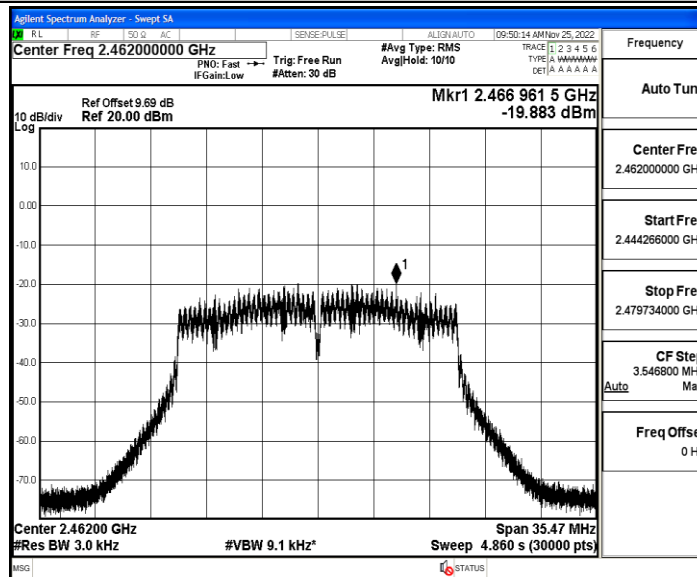
11N20MIMO_Ant1_2437



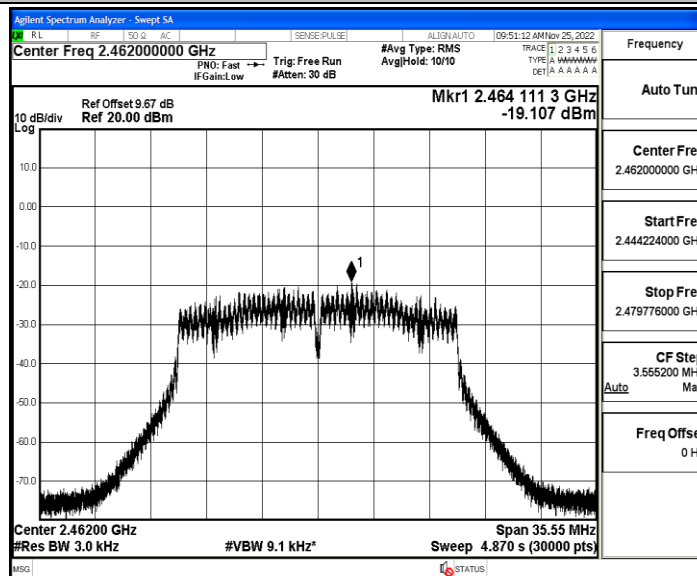
11N20MIMO_Ant2_2437



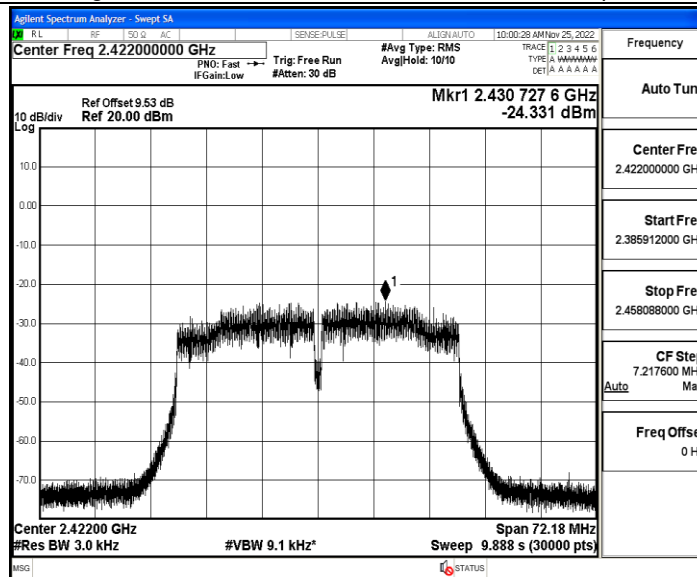
11N20MIMO_Ant1_2462



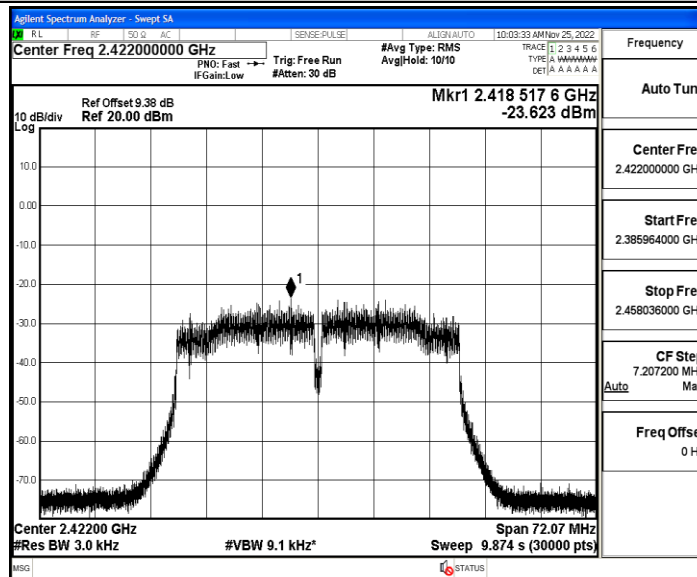
11N20MIMO_Ant2_2462



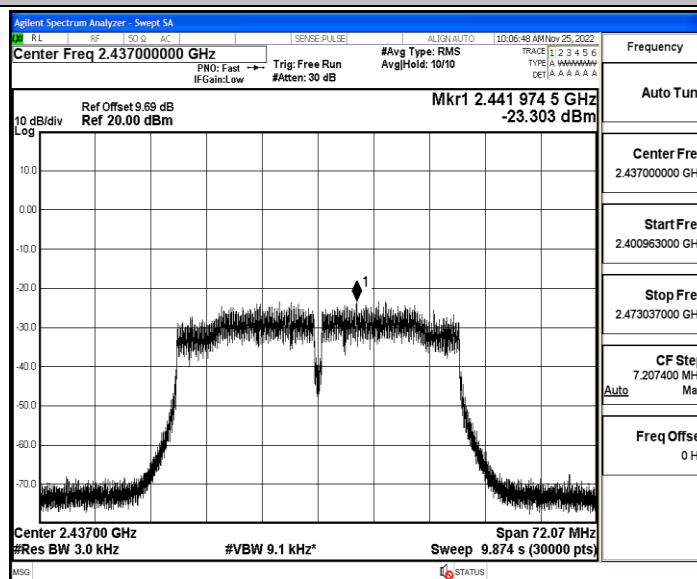
11N40MIMO_Ant1_2422



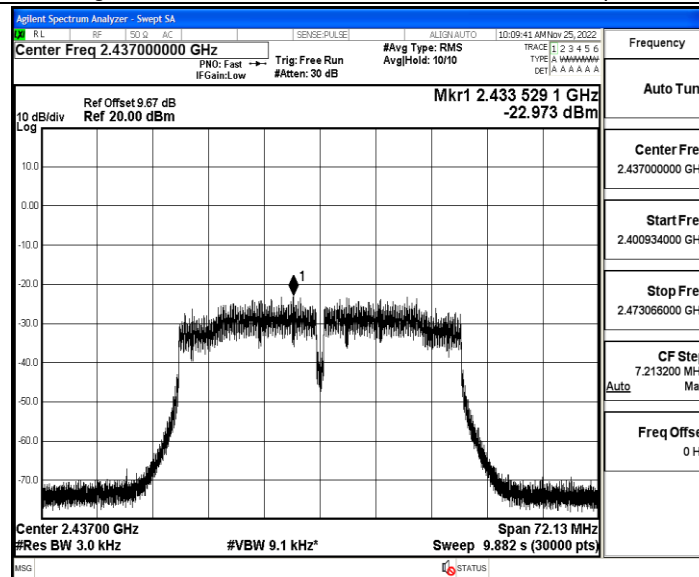
11N40MIMO_Ant2_2422



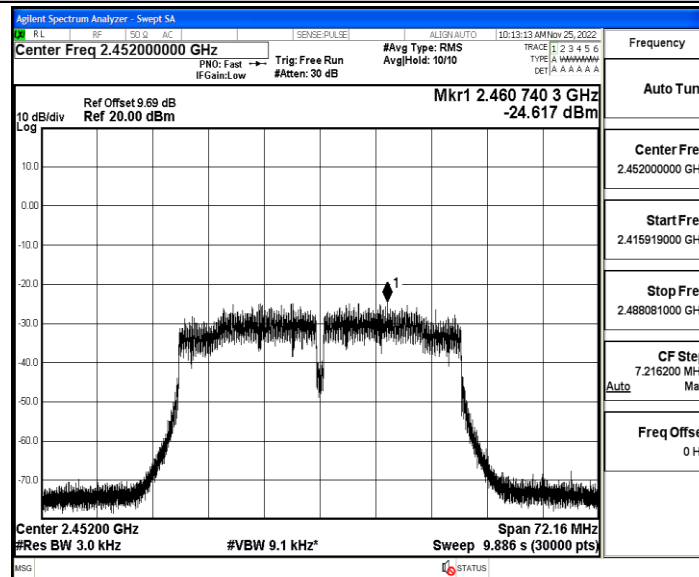
11N40MIMO_Ant1_2437



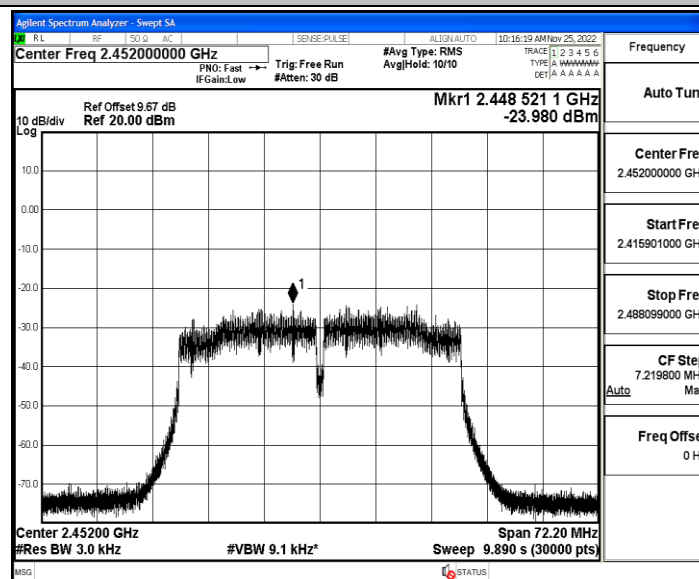
11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452



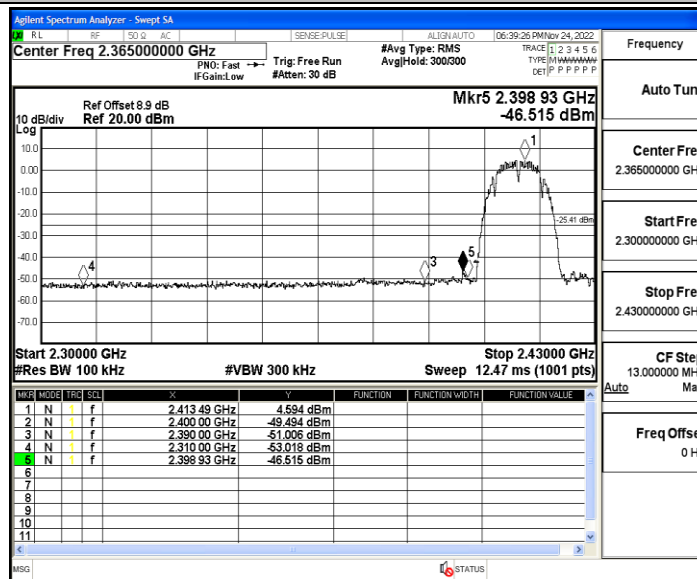
Appendix E: Band edge measurements

Test Result

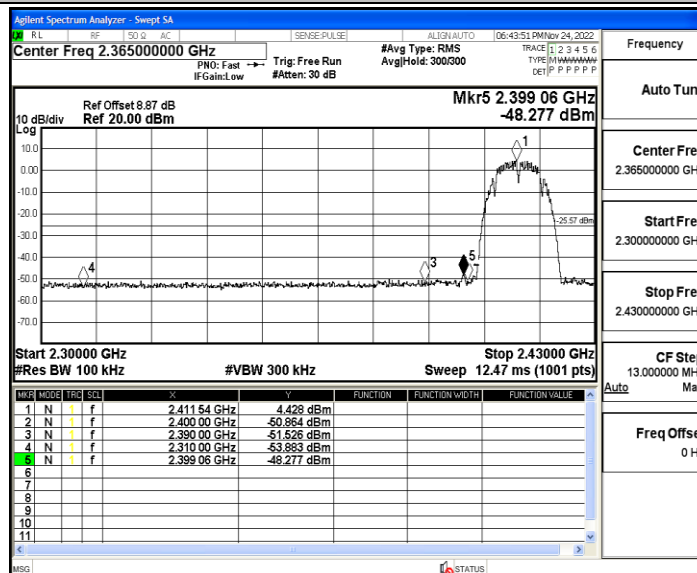
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.59	-46.52	≤-25.41	PASS
	Ant2	Low	2412	4.43	-48.28	≤-25.57	PASS
	Ant1	High	2462	4.08	-49.19	≤-25.92	PASS
	Ant2	High	2462	3.86	-49.54	≤-26.15	PASS
11G	Ant1	Low	2412	-0.80	-38.24	≤-30.8	PASS
	Ant2	Low	2412	-0.90	-38.58	≤-30.9	PASS
	Ant1	High	2462	0.53	-49.06	≤-29.47	PASS
	Ant2	High	2462	0.48	-49.26	≤-29.52	PASS
11N20MIMO	Ant1	Low	2412	-0.98	-41.29	≤-30.98	PASS
	Ant2	Low	2412	-1.21	-41.57	≤-31.21	PASS
	Ant1	High	2462	0.25	-48.33	≤-29.75	PASS
	Ant2	High	2462	0.38	-49.34	≤-29.62	PASS
11N40MIMO	Ant1	Low	2422	-3.58	-44	≤-33.58	PASS
	Ant2	Low	2422	-3.84	-45.43	≤-33.84	PASS
	Ant1	High	2452	-4.16	-44.67	≤-34.16	PASS
	Ant2	High	2452	-3.66	-48.67	≤-33.66	PASS

Test Graphs

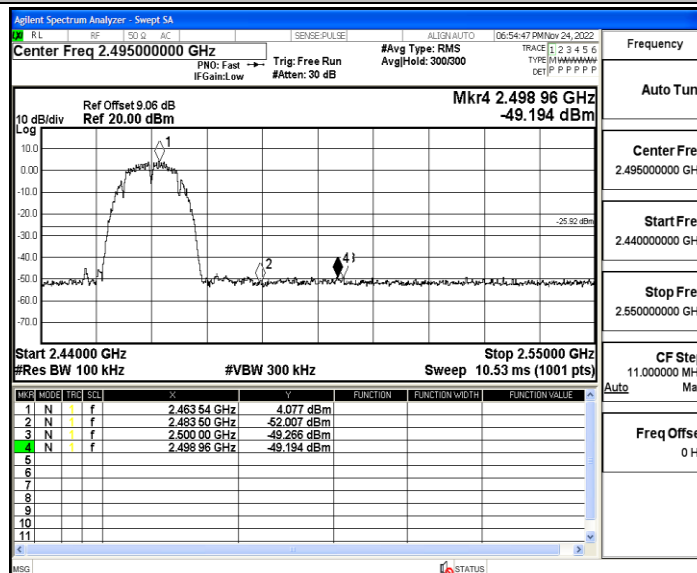
11B_Ant1_Low_2412



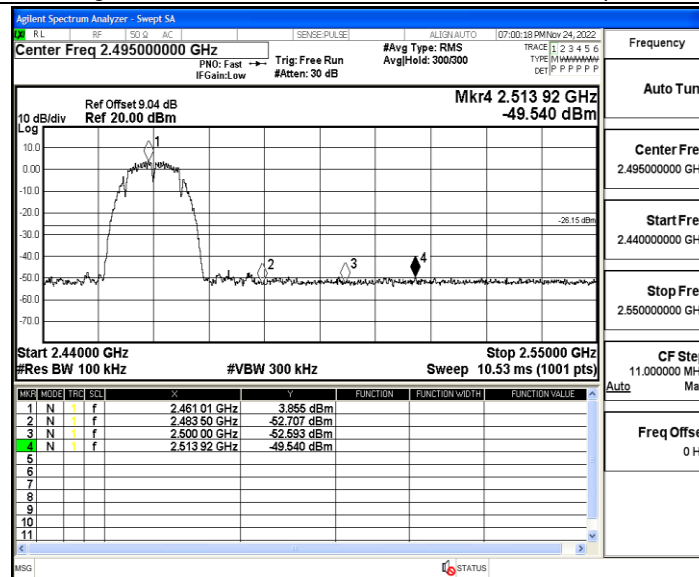
11B_Ant2_Low_2412



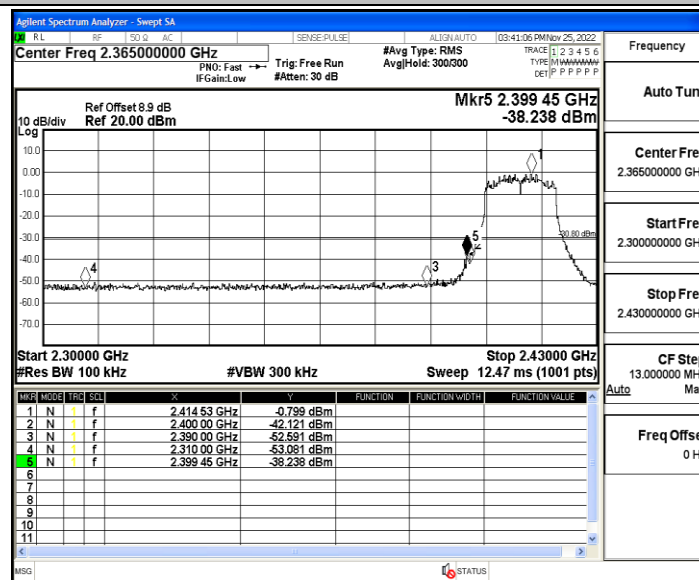
11B_Ant1_High_2462



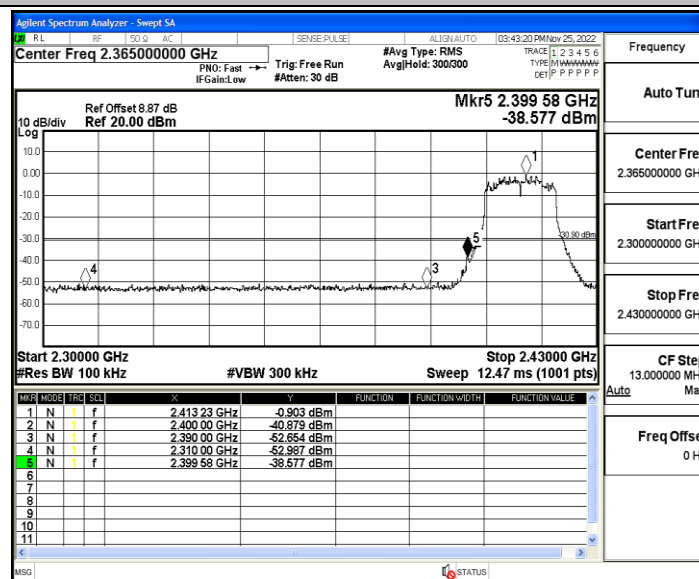
11B_Ant2_High_2462



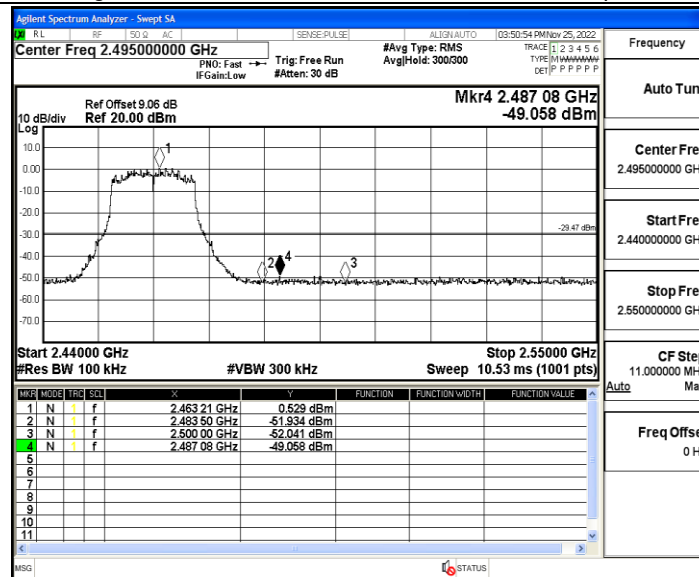
11G_Ant1_Low_2412



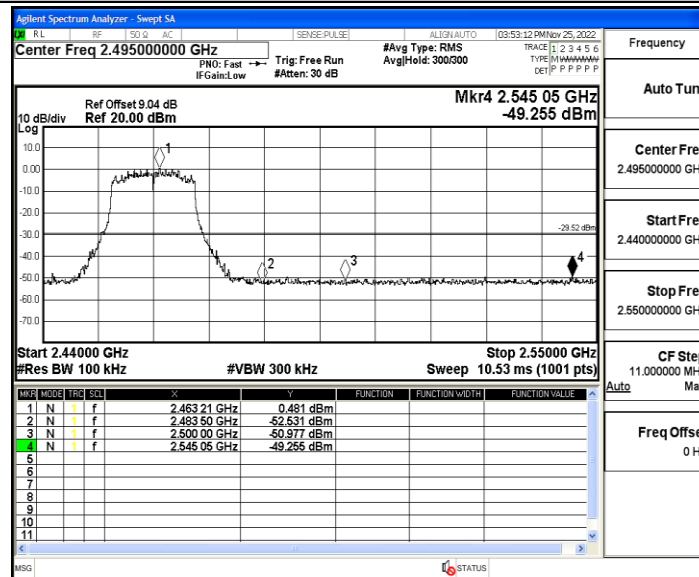
11G_Ant2_Low_2412



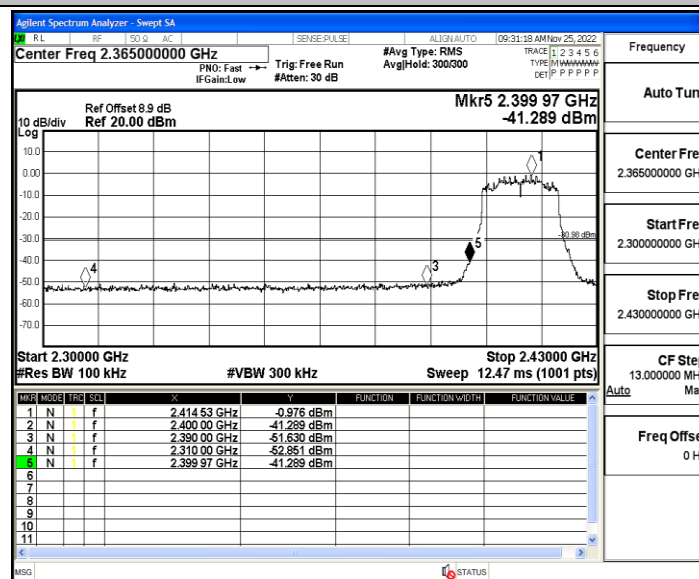
11G_Ant1_High_2462



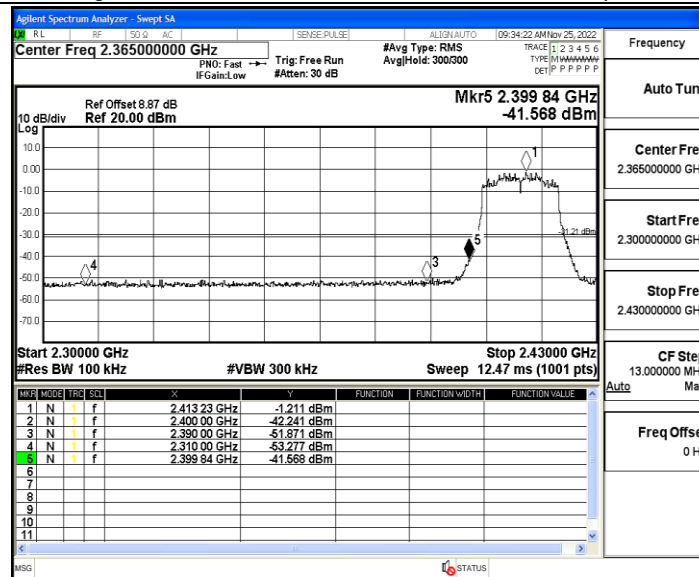
11G_Ant2_High_2462



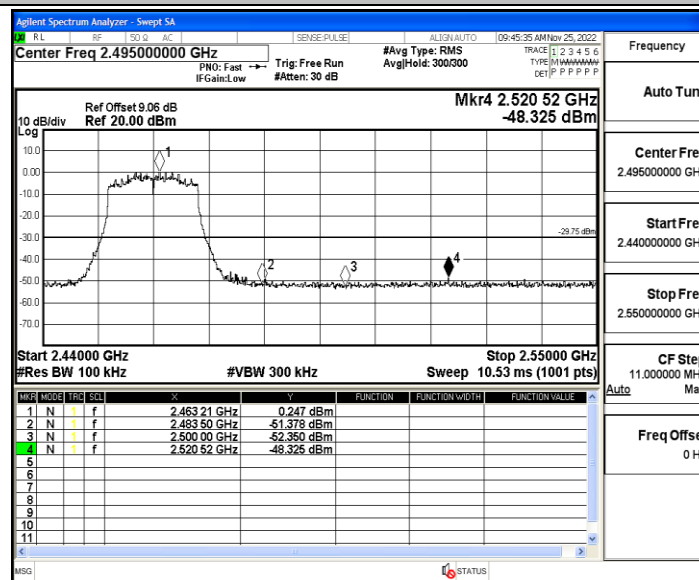
11N20MIMO_Ant1_Low_2412



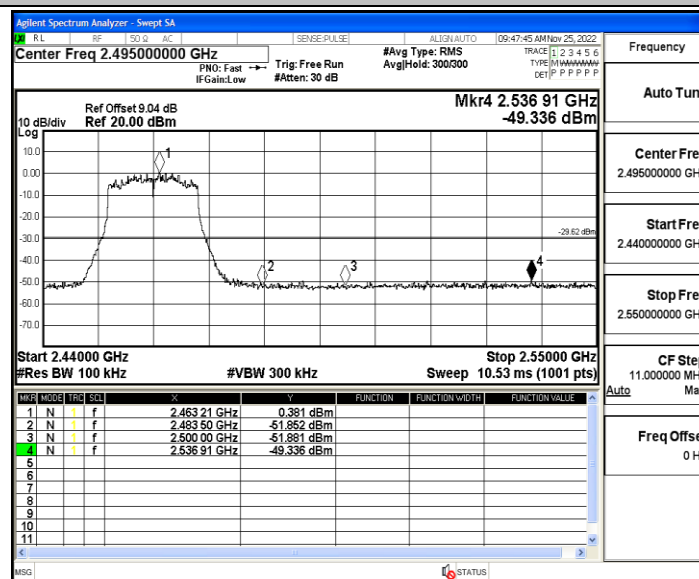
11N20MIMO_Ant2_Low_2412



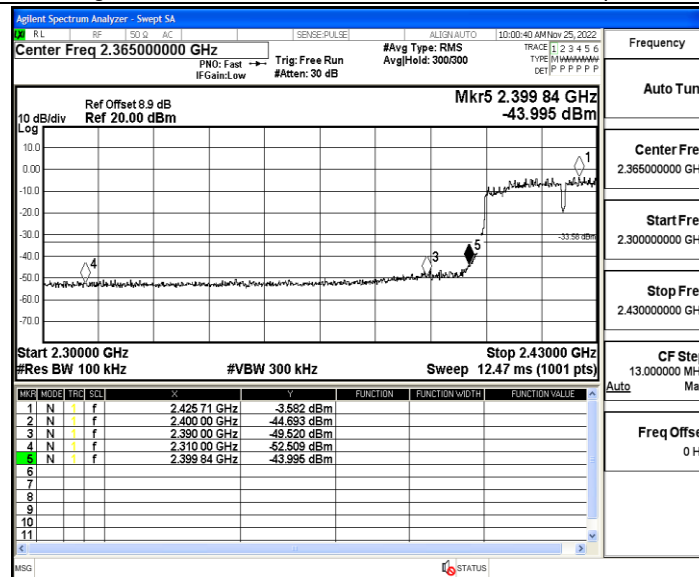
11N20MIMO_Ant1_High_2462



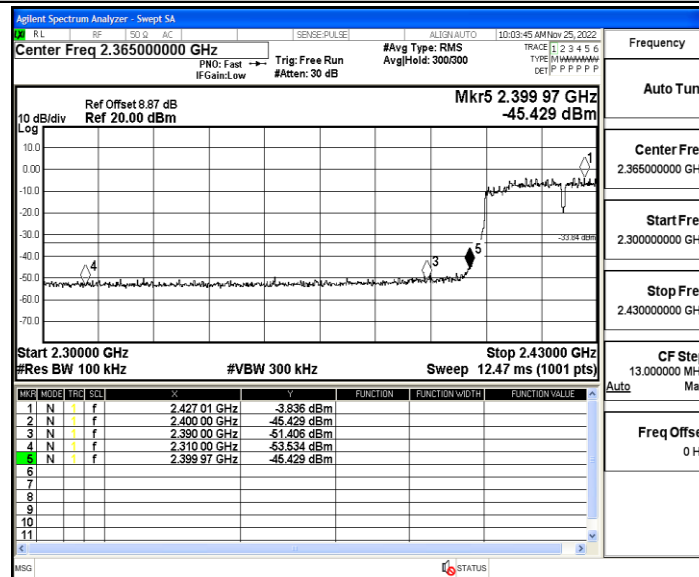
11N20MIMO_Ant2_High_2462



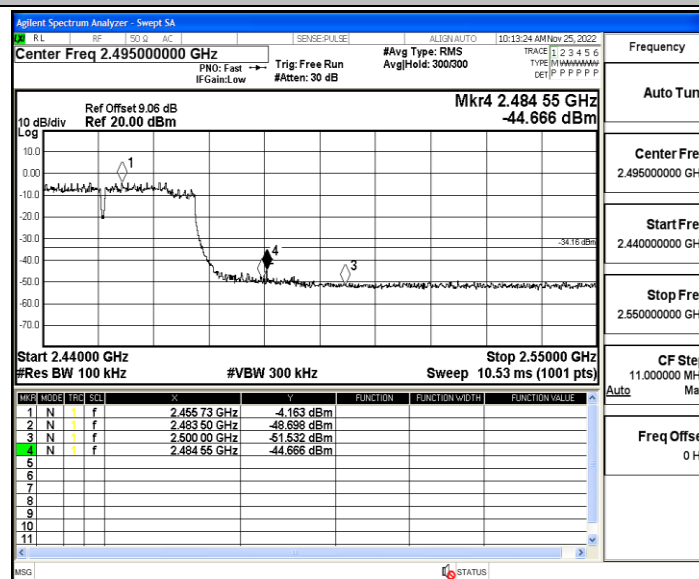
11N40MIMO_Ant1_Low_2422



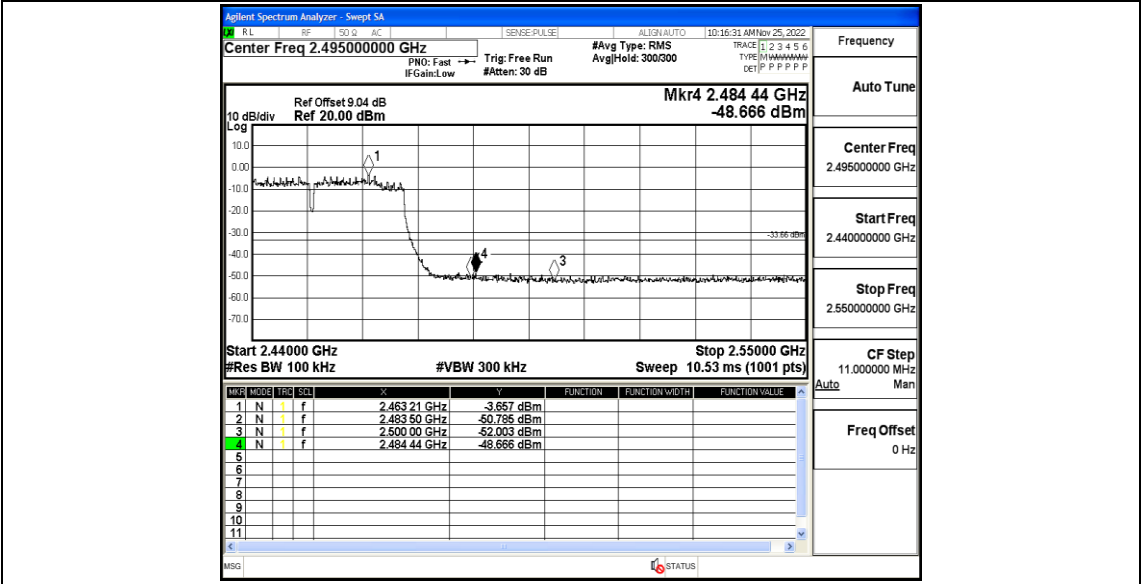
11N40MIMO_Ant2_Low_2422



11N40MIMO_Ant1_High_2452



11N40MIMO_Ant2_High_2452



Appendix F: Conducted Spurious Emission

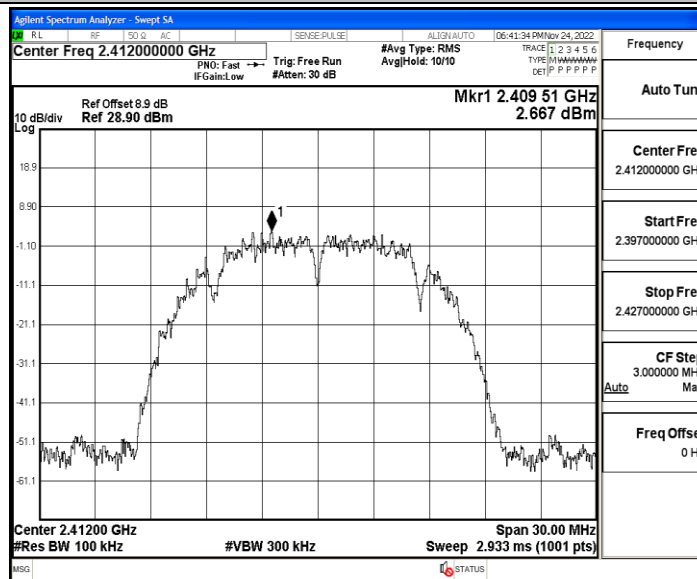
Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.67	2.67	---	PASS
			30~1000	2.67	-61.2	≤-27.33	PASS
			1000~26500	2.67	-51.45	≤-27.33	PASS
	Ant2	2412	Reference	3.37	3.37	---	PASS
			30~1000	3.37	-61.88	≤-26.63	PASS
			1000~26500	3.37	-51.94	≤-26.63	PASS
	Ant1	2437	Reference	2.55	2.55	---	PASS
			30~1000	2.55	-61.16	≤-27.45	PASS
			1000~26500	2.55	-51.7	≤-27.45	PASS
	Ant2	2437	Reference	2.83	2.83	---	PASS
			30~1000	2.83	-61.64	≤-27.17	PASS
			1000~26500	2.83	-51.69	≤-27.17	PASS
	Ant1	2462	Reference	2.67	2.67	---	PASS
			30~1000	2.67	-61.54	≤-27.33	PASS
			1000~26500	2.67	-51.12	≤-27.33	PASS
	Ant2	2462	Reference	3.11	3.11	---	PASS
			30~1000	3.11	-61.93	≤-26.89	PASS
			1000~26500	3.11	-52.01	≤-26.89	PASS
11G	Ant1	2412	Reference	3.12	3.12	---	PASS
			30~1000	3.12	-61.89	≤-26.88	PASS
			1000~26500	3.12	-51.38	≤-26.88	PASS
	Ant2	2412	Reference	3.01	3.01	---	PASS
			30~1000	3.01	-61.35	≤-26.99	PASS
			1000~26500	3.01	-52.2	≤-26.99	PASS
	Ant1	2437	Reference	-0.38	-0.38	---	PASS
			30~1000	-0.38	-61.82	≤-30.38	PASS
			1000~26500	-0.38	-51.36	≤-30.38	PASS
	Ant2	2437	Reference	-0.36	-0.36	---	PASS
			30~1000	-0.36	-61.62	≤-30.36	PASS
			1000~26500	-0.36	-50.38	≤-30.36	PASS
	Ant1	2462	Reference	0.13	0.13	---	PASS
			30~1000	0.13	-60.3	≤-29.87	PASS
			1000~26500	0.13	-51.58	≤-29.87	PASS
	Ant2	2462	Reference	-0.29	-0.29	---	PASS
			30~1000	-0.29	-61.61	≤-30.29	PASS
			1000~26500	-0.29	-51.49	≤-30.29	PASS
11N20MIMO	Ant1	2412	Reference	-1.23	-1.23	---	PASS
			30~1000	-1.23	-61.25	≤-31.23	PASS
			1000~26500	-1.23	-50.47	≤-31.23	PASS
	Ant2	2412	Reference	-1.66	-1.66	---	PASS
			30~1000	-1.66	-62.01	≤-31.66	PASS

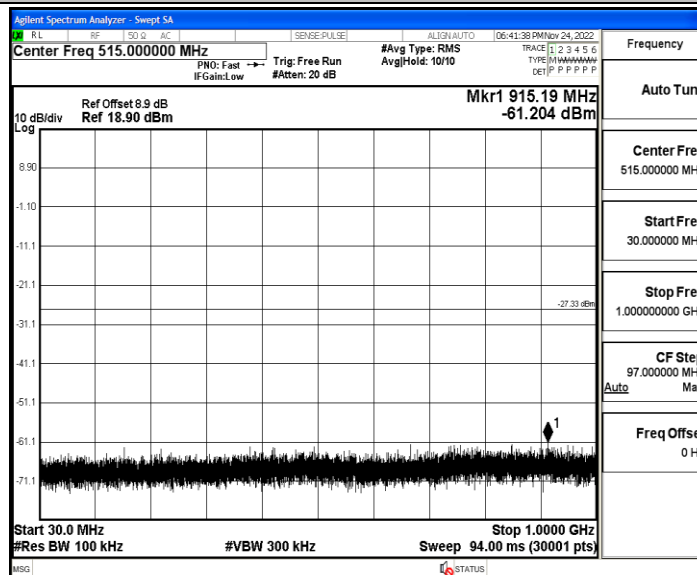
	Ant1	2437	1000~26500	-1.66	-50.58	≤ -31.66	PASS
			Reference	-1.84	-1.84	---	PASS
			30~1000	-1.84	-60.77	≤ -31.84	PASS
			1000~26500	-1.84	-49.79	≤ -31.84	PASS
	Ant2	2437	Reference	0.19	0.19	---	PASS
			30~1000	0.19	-61.05	≤ -29.81	PASS
			1000~26500	0.19	-50.74	≤ -29.81	PASS
	Ant1	2462	Reference	-0.34	-0.34	---	PASS
			30~1000	-0.34	-61.2	≤ -30.34	PASS
			1000~26500	-0.34	-51.07	≤ -30.34	PASS
	Ant2	2462	Reference	-1.72	-1.72	---	PASS
			30~1000	-1.72	-61.32	≤ -31.72	PASS
			1000~26500	-1.72	-51.63	≤ -31.72	PASS
11N40MIMO	Ant1	2422	Reference	-3.98	-3.98	---	PASS
			30~1000	-3.98	-61.66	≤ -33.98	PASS
			1000~26500	-3.98	-51.87	≤ -33.98	PASS
	Ant2	2422	Reference	-4.49	-4.49	---	PASS
			30~1000	-4.49	-60.73	≤ -34.49	PASS
			1000~26500	-4.49	-50.95	≤ -34.49	PASS
	Ant1	2437	Reference	-3.58	-3.58	---	PASS
			30~1000	-3.58	-61.18	≤ -33.58	PASS
			1000~26500	-3.58	-51.74	≤ -33.58	PASS
	Ant2	2437	Reference	-3.46	-3.46	---	PASS
			30~1000	-3.46	-60.19	≤ -33.46	PASS
			1000~26500	-3.46	-52.32	≤ -33.46	PASS
	Ant1	2452	Reference	-4.19	-4.19	---	PASS
			30~1000	-4.19	-61.86	≤ -34.19	PASS
			1000~26500	-4.19	-51.22	≤ -34.19	PASS
	Ant2	2452	Reference	-6.72	-6.72	---	PASS
			30~1000	-6.72	-61.86	≤ -36.72	PASS
			1000~26500	-6.72	-50.63	≤ -36.72	PASS

Test Graphs

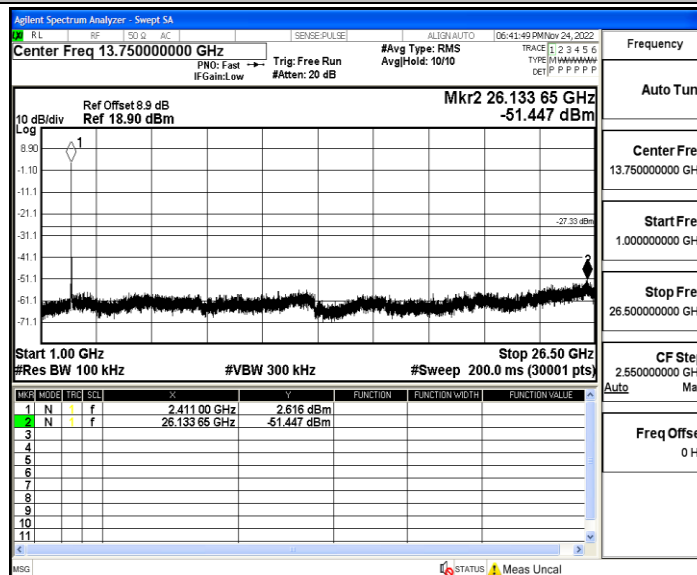
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500



11B_Ant2_2412_0~Reference