

FCC Appendix RF Test Data for 2.4GWIFI

Company: : Promaster Electronic LLC

EUT : Wireless CP&AA adaptor

FCC ID : 2A6P9-KPWCA01

Model Number : KPWCA-101

Report No. : CTA25052700503

Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.600	2407.440	2416.040	0.5	PASS
		2437	9.520	2432.000	2441.520	0.5	PASS
		2462	9.560	2456.960	2466.520	0.5	PASS
11G	Ant1	2412	15.720	2404.440	2420.160	0.5	PASS
		2437	15.440	2429.440	2444.880	0.5	PASS
		2462	16.040	2454.120	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.080	2404.440	2420.520	0.5	PASS
		2437	15.920	2429.440	2445.360	0.5	PASS
		2462	17.120	2453.520	2470.640	0.5	PASS
11N40SISO	Ant1	2422	35.520	2404.480	2440.000	0.5	PASS
		2437	35.120	2419.480	2454.600	0.5	PASS
		2452	35.360	2434.240	2469.600	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



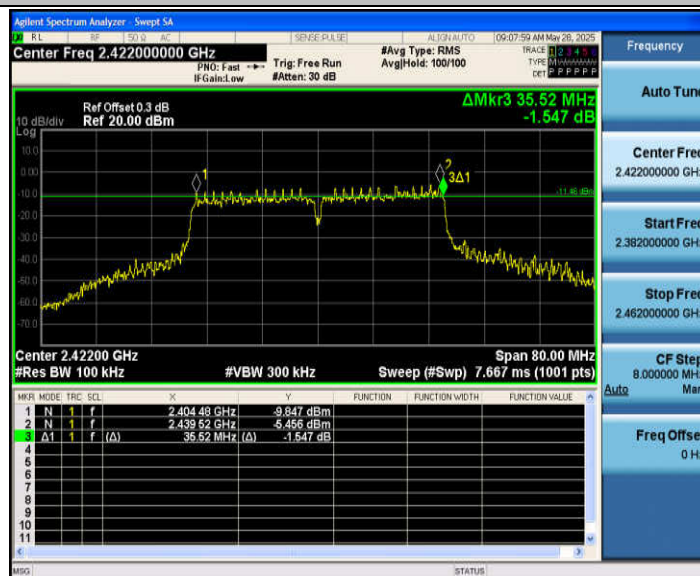
11N20SISO_Ant1_2437



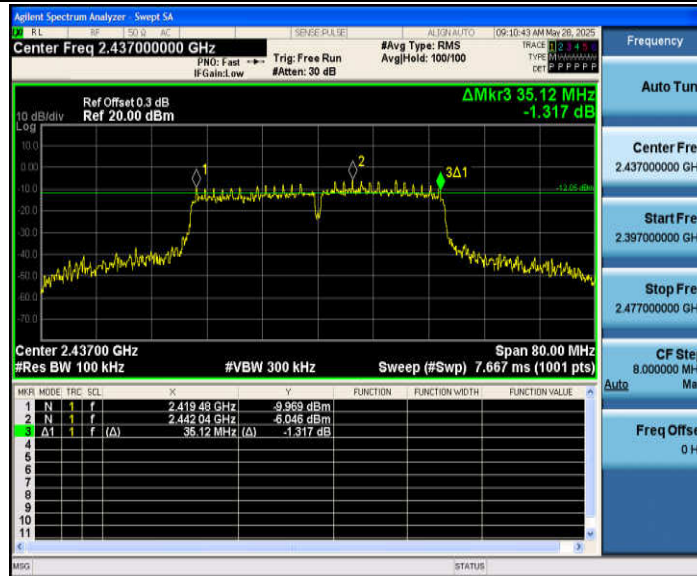
11N20SISO_Ant1_2462



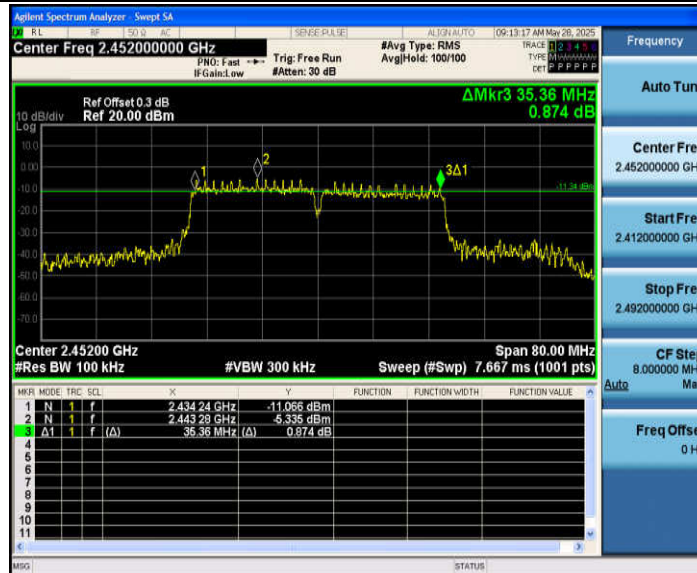
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.353	2405.7683	2418.1213	---	---
		2437	11.578	2430.9931	2442.5711	---	---
		2462	12.707	2455.4512	2468.1582	---	---
11G	Ant1	2412	16.820	2403.7614	2420.5814	---	---
		2437	16.639	2428.7981	2445.4371	---	---
		2462	16.872	2453.6666	2470.5386	---	---
11N20SISO	Ant1	2412	17.943	2403.2527	2421.1957	---	---
		2437	17.642	2428.3335	2445.9755	---	---
		2462	18.099	2453.0905	2471.1895	---	---
11N40SISO	Ant1	2422	36.301	2404.1670	2440.4680	---	---
		2437	35.969	2419.1429	2455.1119	---	---
		2452	36.399	2433.8619	2470.2609	---	---

Test Graphs

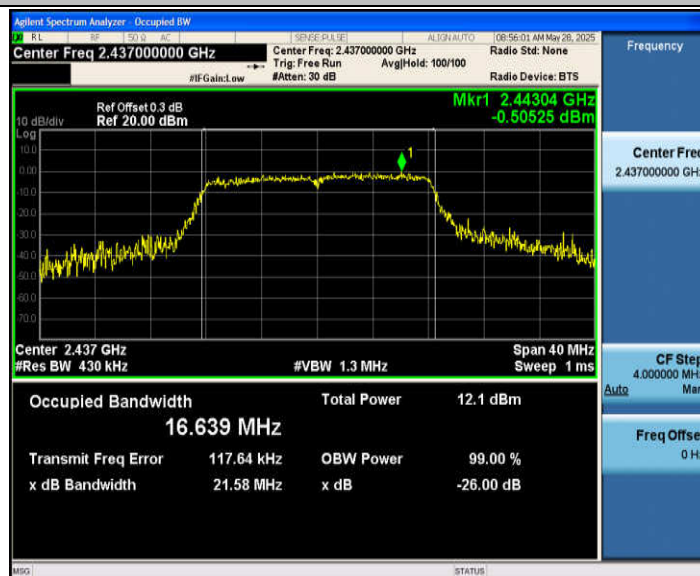
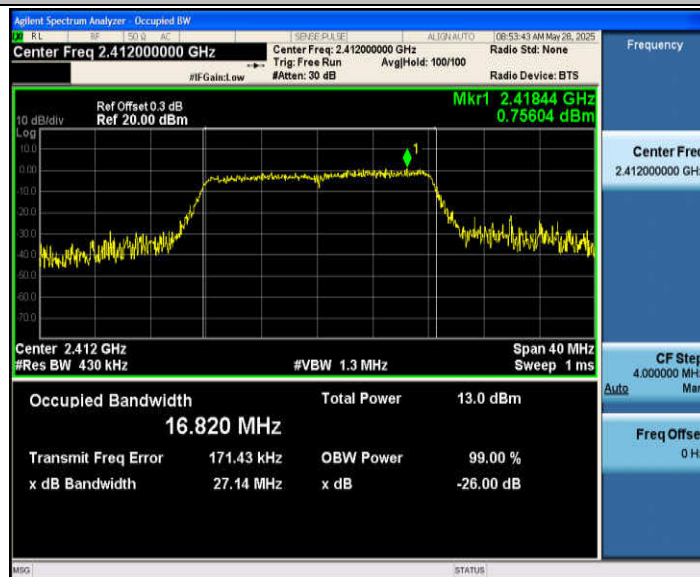
11B_Ant1_2412



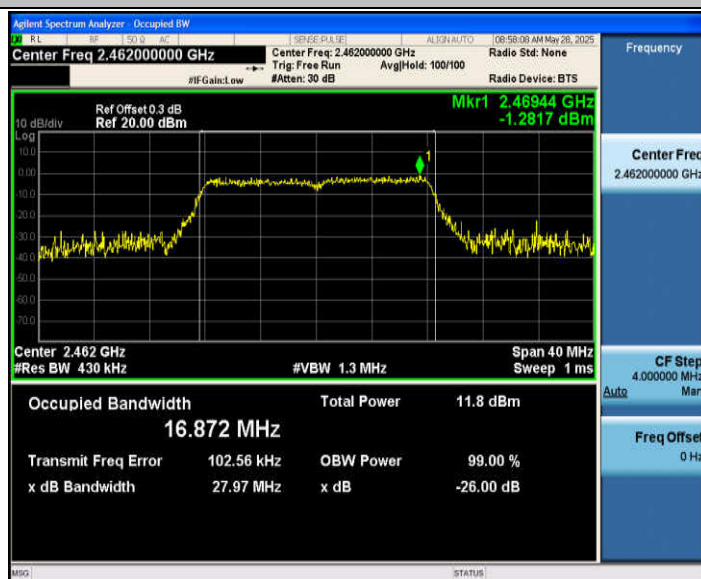
11B_Ant1_2437



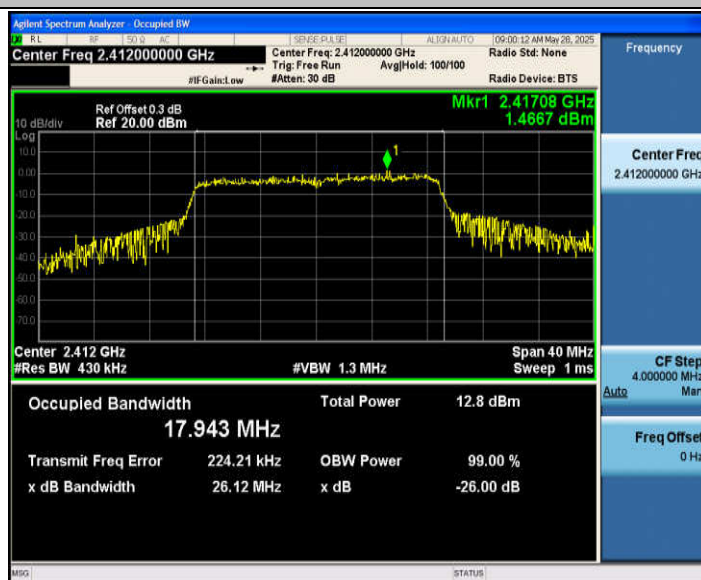
11B_Ant1_2462



11G_Ant1_2462



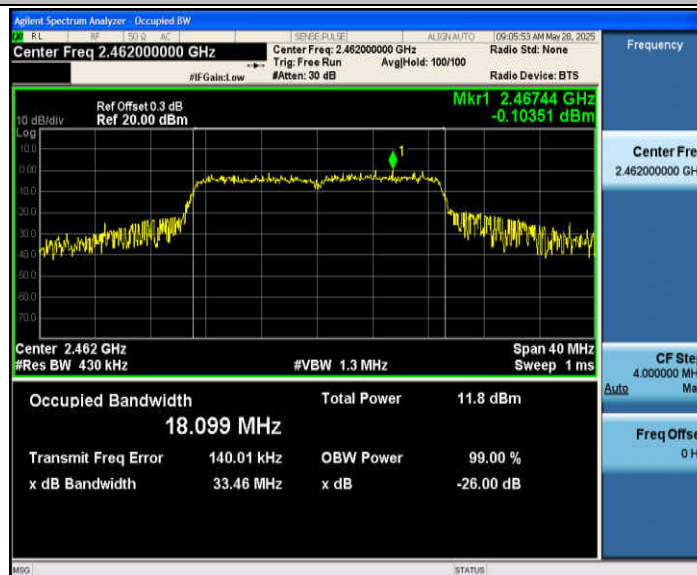
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



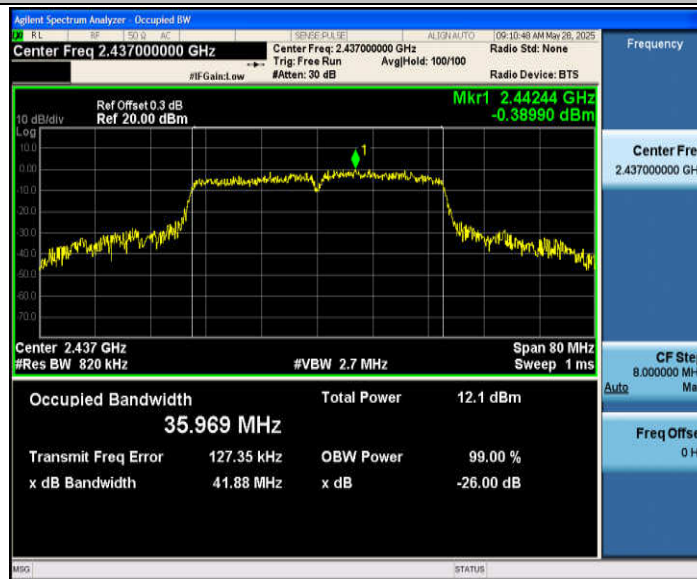
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency [MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.40	≤30.00	PASS
		2437	13.59	≤30.00	PASS
		2462	13.70	≤30.00	PASS
11G	Ant1	2412	13.49	≤30.00	PASS
		2437	12.74	≤30.00	PASS
		2462	12.35	≤30.00	PASS
11N20SISO	Ant1	2412	13.43	≤30.00	PASS
		2437	12.69	≤30.00	PASS
		2462	12.52	≤30.00	PASS
11N40SISO	Ant1	2422	12.84	≤30.00	PASS
		2437	12.12	≤30.00	PASS
		2452	13.25	≤30.00	PASS

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.60	≤8.00	PASS
		2437	-11.34	≤8.00	PASS
		2462	-12.06	≤8.00	PASS
11G	Ant1	2412	-17.55	≤8.00	PASS
		2437	-19.77	≤8.00	PASS
		2462	-18.92	≤8.00	PASS
11N20SISO	Ant1	2412	-19.06	≤8.00	PASS
		2437	-18.91	≤8.00	PASS
		2462	-18.59	≤8.00	PASS
11N40SISO	Ant1	2422	-21.36	≤8.00	PASS
		2437	-21.91	≤8.00	PASS
		2452	-21.27	≤8.00	PASS

Test Graphs

11B_Ant1_2412



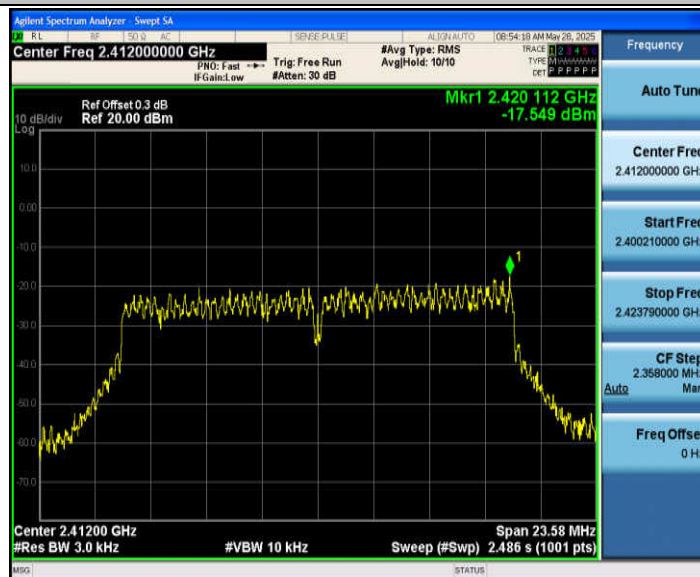
11B_Ant1_2437



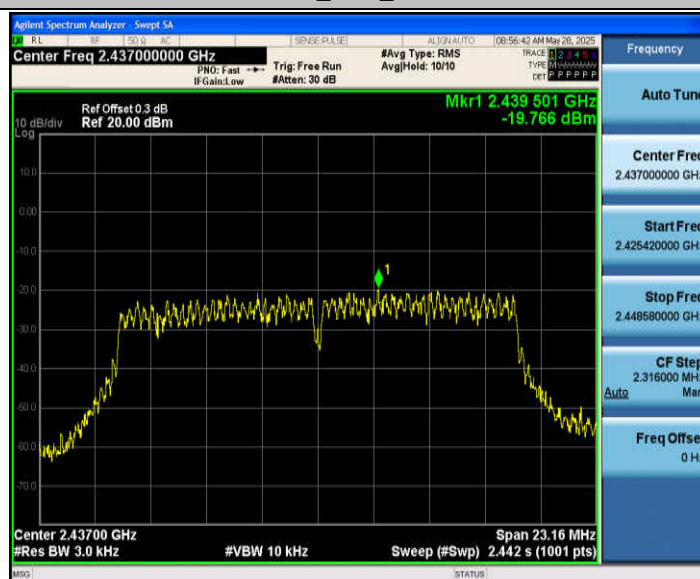
11B_Ant1_2462



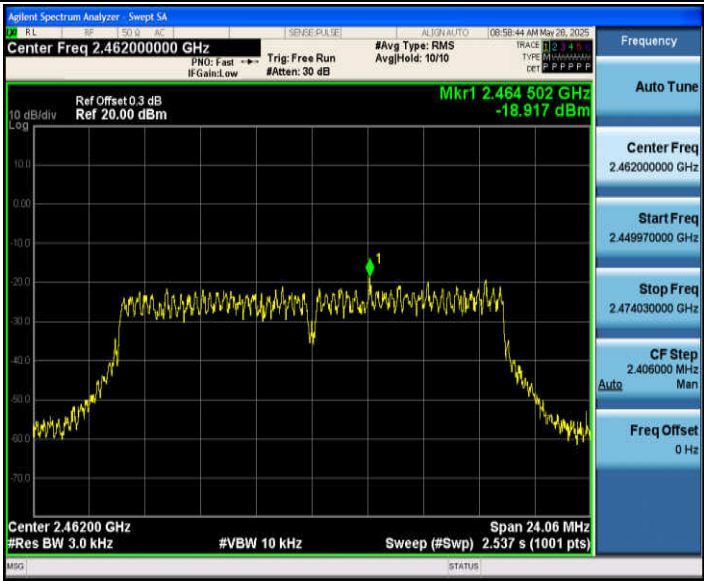
11G_Ant1_2412



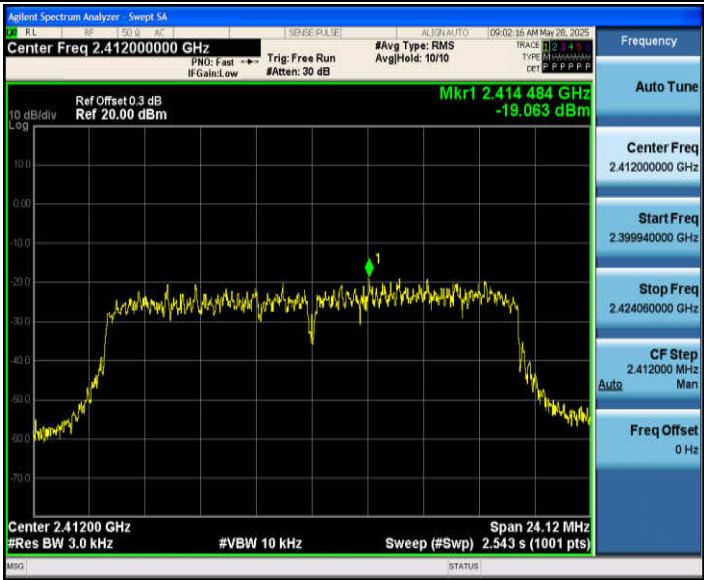
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



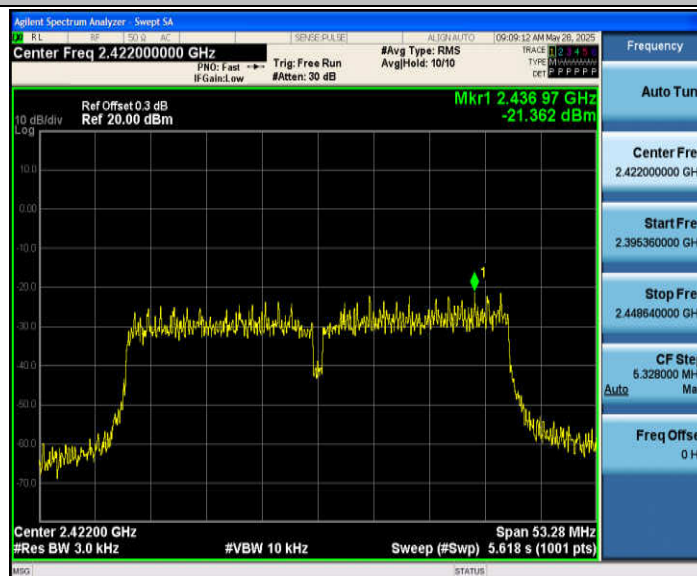
11N20SISO_Ant1_2437



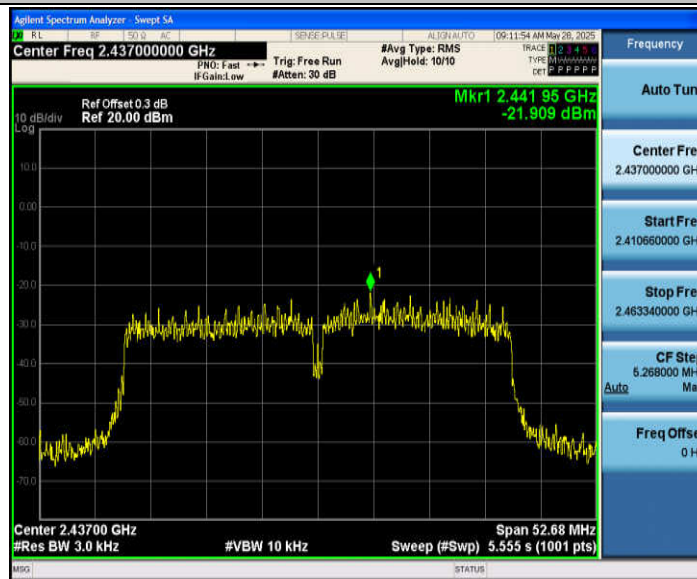
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



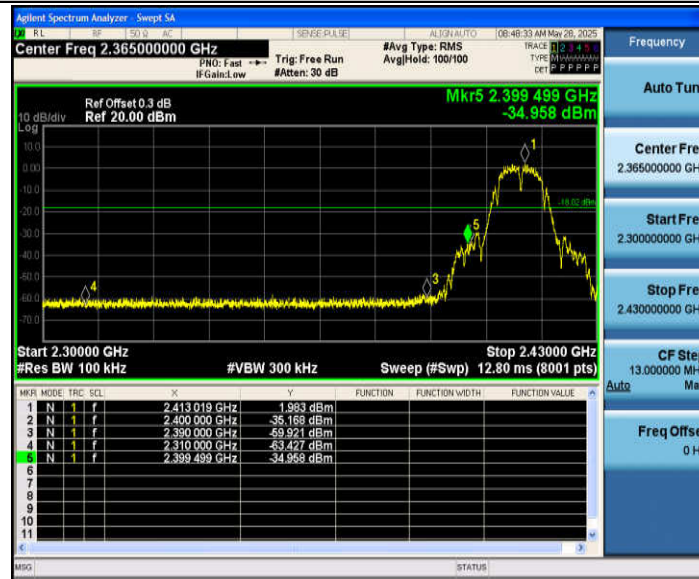
Appendix E: Band edge measurements

Test Result

TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.98	-34.96	≤-18.02	PASS
		High	2462	1.45	-52.74	≤-18.55	PASS
11G	Ant1	Low	2412	-2.24	-37.8	≤-22.24	PASS
		High	2462	-3.65	-39.16	≤-23.65	PASS
11N20SISO	Ant1	Low	2412	-2.03	-36.05	≤-22.03	PASS
		High	2462	-3.56	-40.72	≤-23.56	PASS
11N40SISO	Ant1	Low	2422	-5.59	-39.18	≤-25.59	PASS
		High	2452	-5.30	-35.03	≤-25.3	PASS

Test Graphs

11B_Ant1_Low_2412



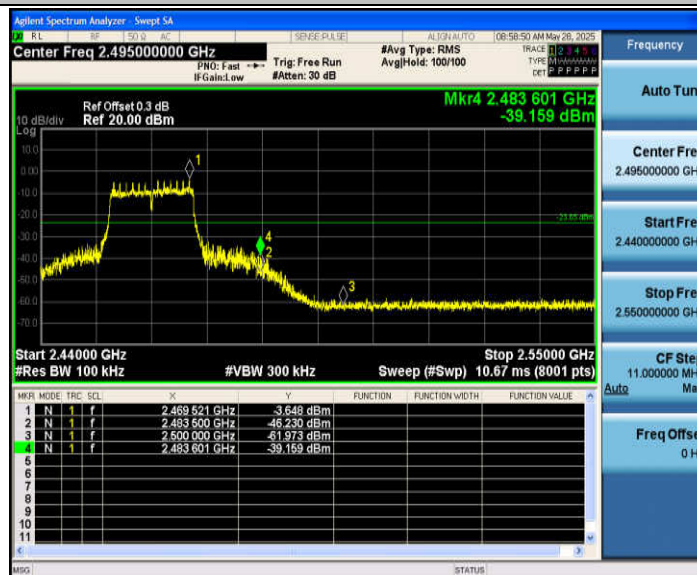
11B_Ant1_High_2462



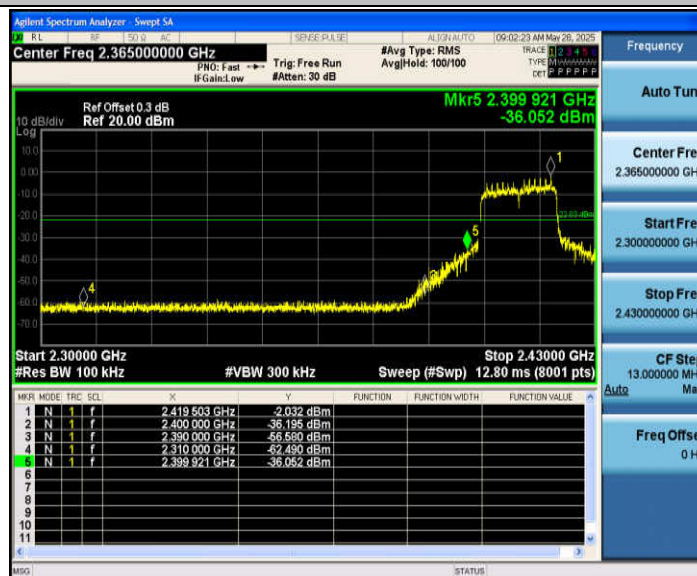
11G_Ant1_Low_2412



11G_Ant1_High_2462



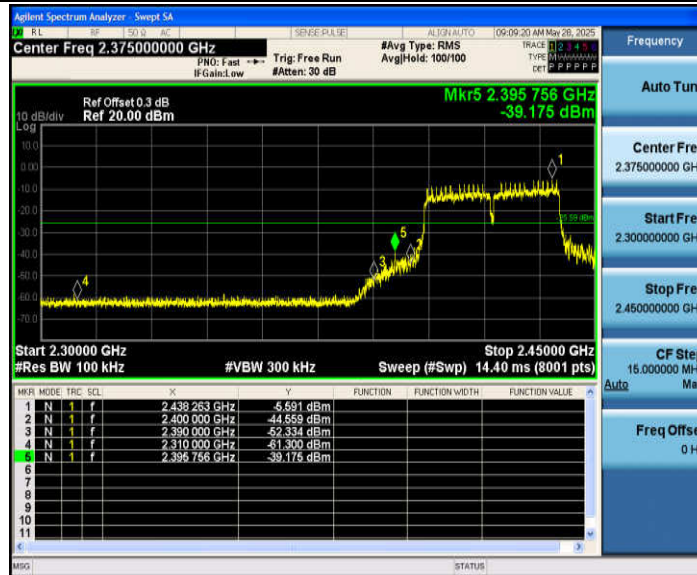
11N20SISO_Ant1_Low_2412



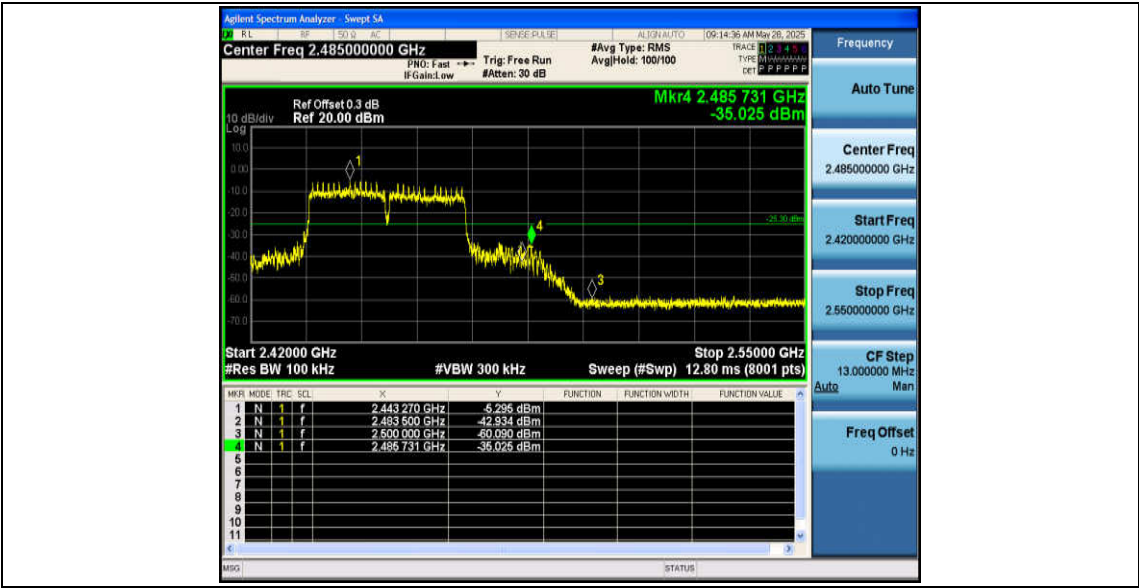
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

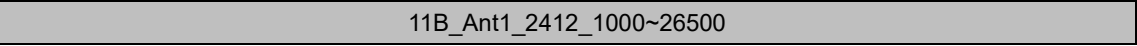
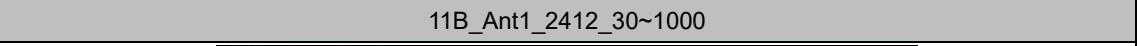


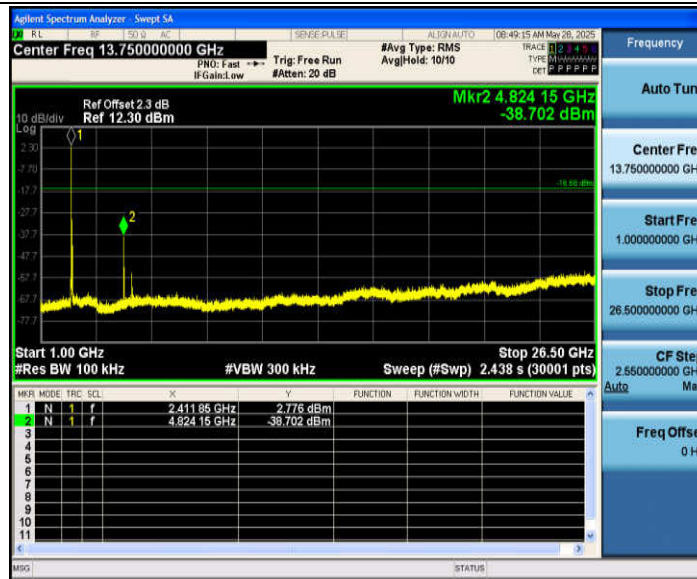
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.32	3.32	---	PASS
			30~1000	3.32	-68.61	≤-16.68	PASS
			1000~26500	3.32	-38.7	≤-16.68	PASS
		2437	Reference	0.61	0.61	---	PASS
			30~1000	0.61	-68.34	≤-19.39	PASS
			1000~26500	0.61	-37.07	≤-19.39	PASS
		2462	Reference	1.00	1.00	---	PASS
			30~1000	1.00	-67.59	≤-19	PASS
			1000~26500	1.00	-30.85	≤-19	PASS
11G	Ant1	2412	Reference	-3.00	-3.00	---	PASS
			30~1000	-3.00	-68.15	≤-23	PASS
			1000~26500	-3.00	-48.53	≤-23	PASS
		2437	Reference	-3.79	-3.79	---	PASS
			30~1000	-3.79	-67.58	≤-23.79	PASS
			1000~26500	-3.79	-49.63	≤-23.79	PASS
		2462	Reference	-4.46	-4.46	---	PASS
			30~1000	-4.46	-67.85	≤-24.46	PASS
			1000~26500	-4.46	-46.12	≤-24.46	PASS
11N20SISO	Ant1	2412	Reference	-2.75	-2.75	---	PASS
			30~1000	-2.75	-67.23	≤-22.75	PASS
			1000~26500	-2.75	-52.22	≤-22.75	PASS
		2437	Reference	-3.14	-3.14	---	PASS
			30~1000	-3.14	-67.87	≤-23.14	PASS
			1000~26500	-3.14	-51.82	≤-23.14	PASS
		2462	Reference	-4.54	-4.54	---	PASS
			30~1000	-4.54	-67.77	≤-24.54	PASS
			1000~26500	-4.54	-45.19	≤-24.54	PASS
11N40SISO	Ant1	2422	Reference	-6.47	-6.47	---	PASS
			30~1000	-6.47	-67.65	≤-26.47	PASS
			1000~26500	-6.47	-52.95	≤-26.47	PASS
		2437	Reference	-6.10	-6.10	---	PASS
			30~1000	-6.10	-67.99	≤-26.1	PASS
			1000~26500	-6.10	-51.77	≤-26.1	PASS
		2452	Reference	-5.60	-5.60	---	PASS
			30~1000	-5.60	-68.53	≤-25.6	PASS
			1000~26500	-5.60	-48.54	≤-25.6	PASS

11B_Ant1_2412_0~Reference

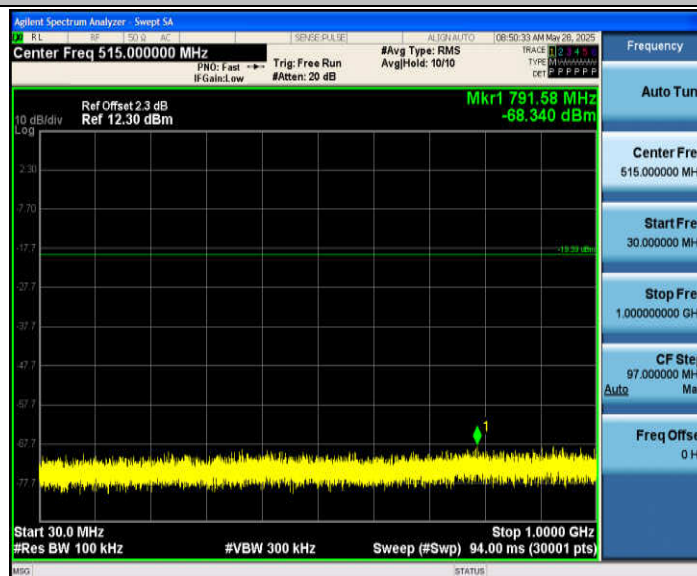




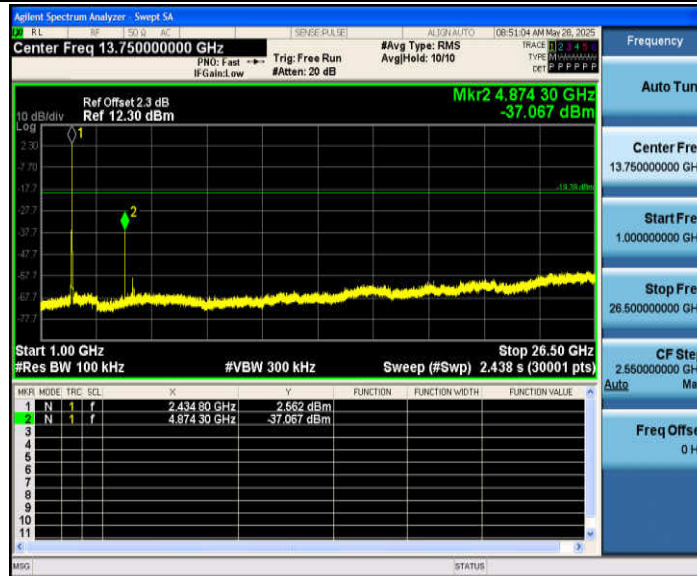
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



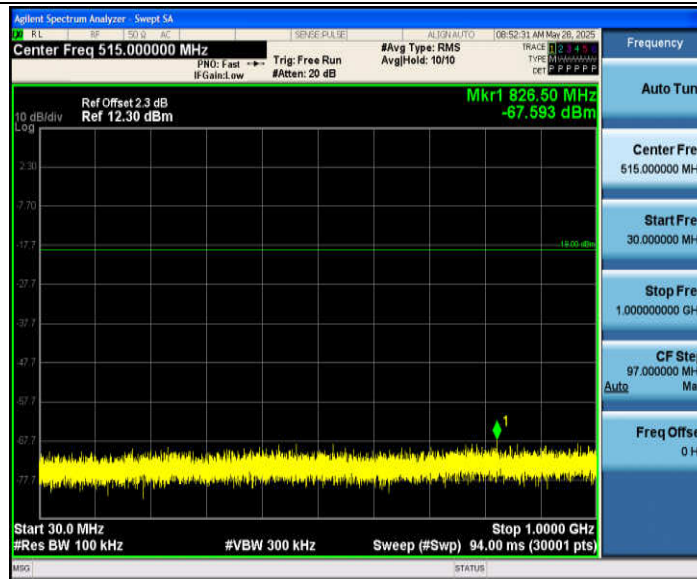
11B_Ant1_2437_1000~26500



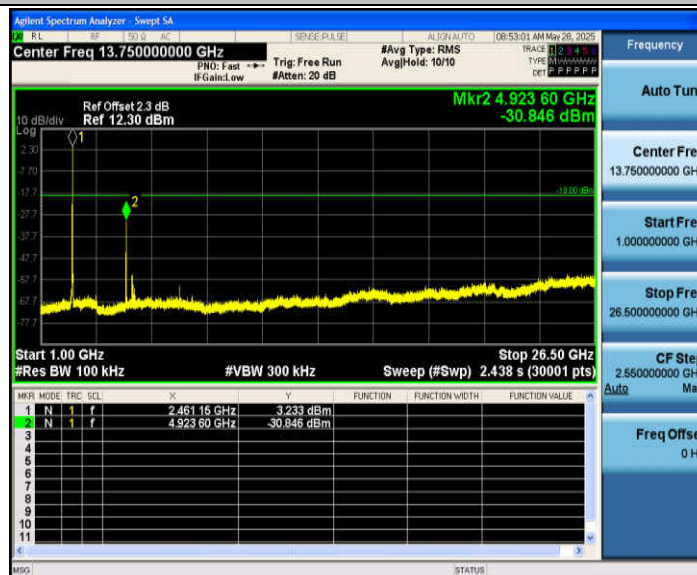
11B_Ant1_2462_0~Reference



11B_Ant1_2462_30~1000



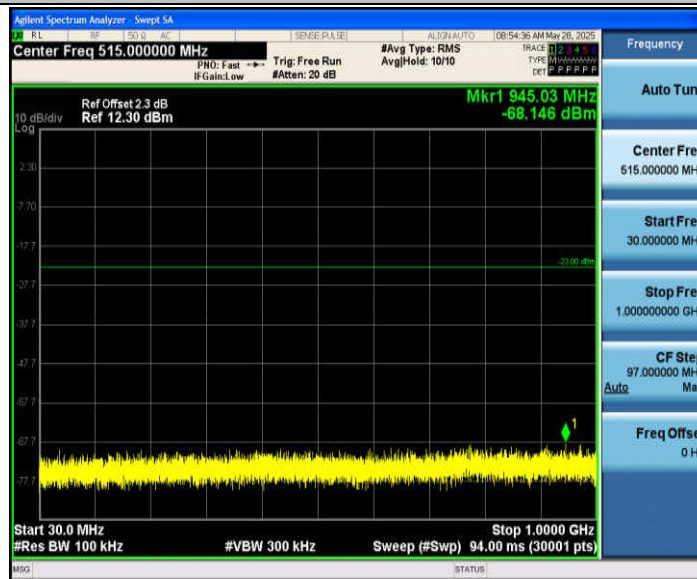
11B_Ant1_2462_1000~26500



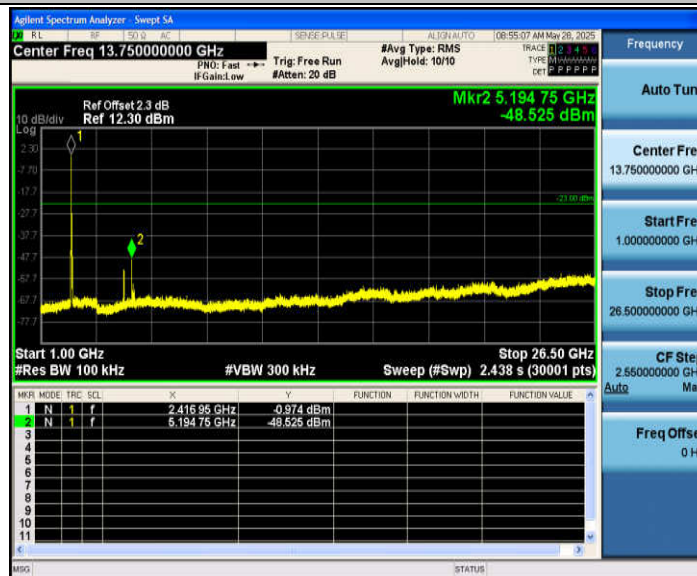
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



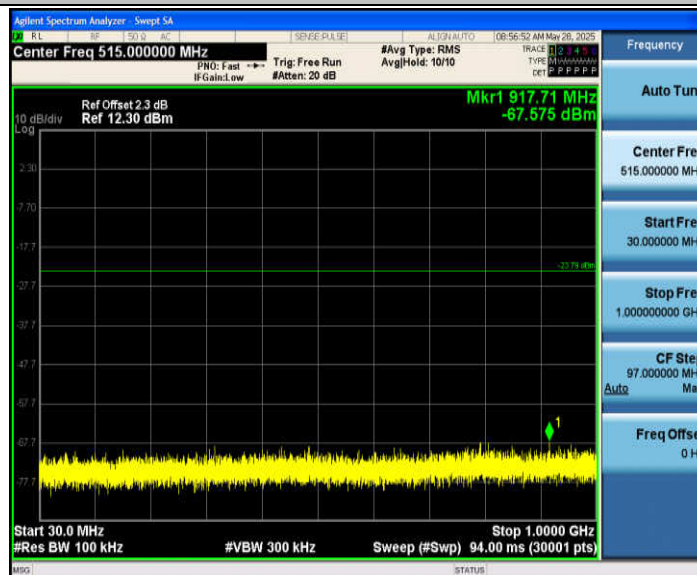
11G_Ant1_2412_1000~26500



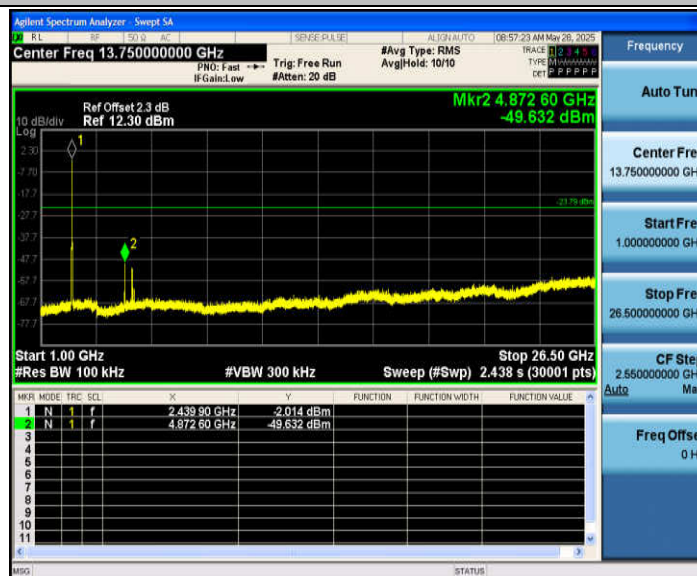
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



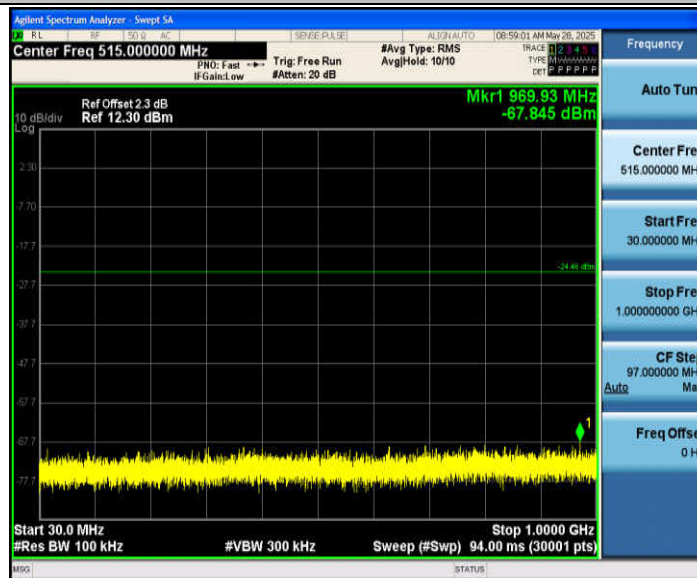
11G_Ant1_2437_1000~26500



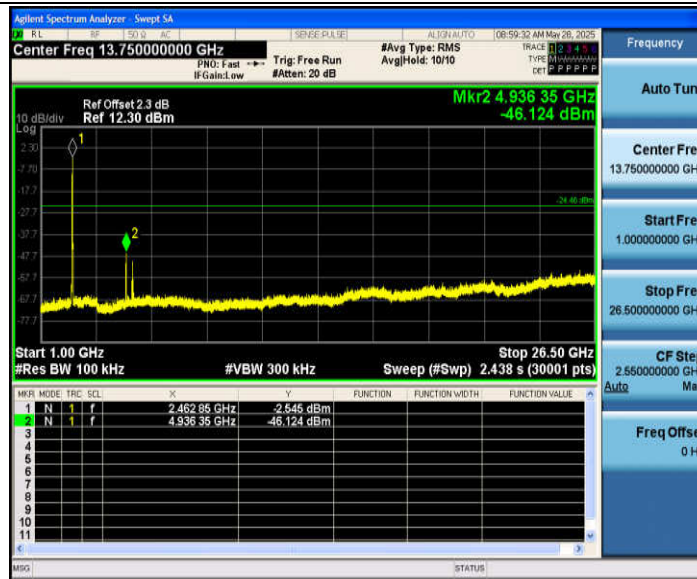
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



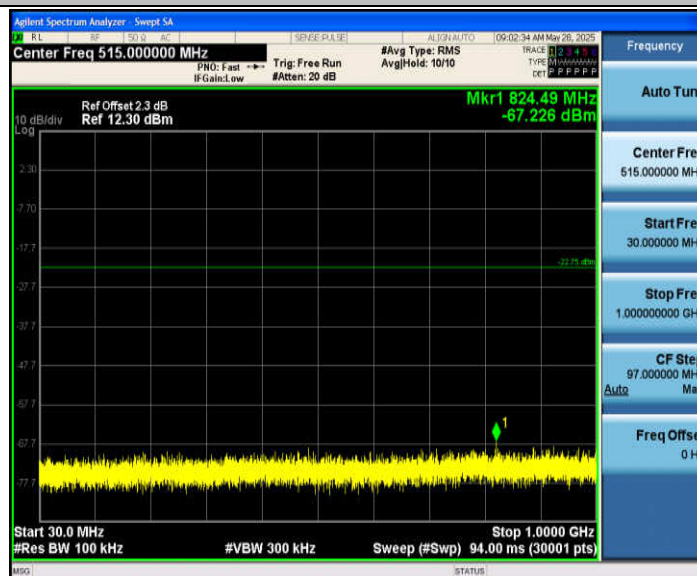
11G_Ant1_2462_1000~26500



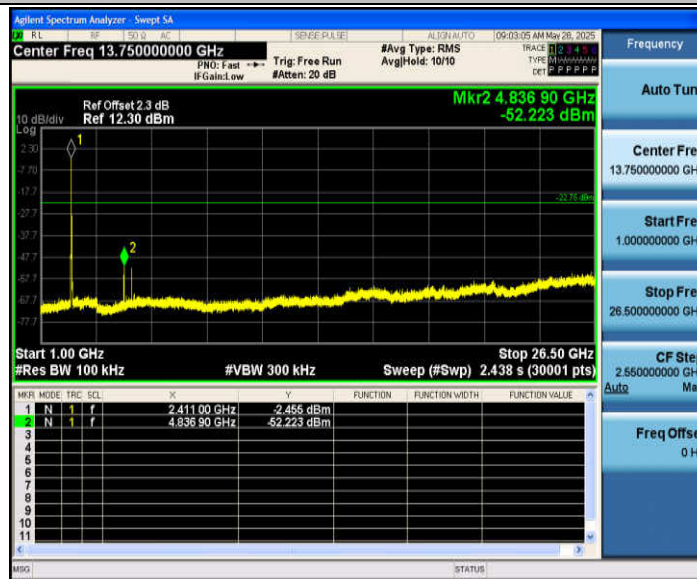
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



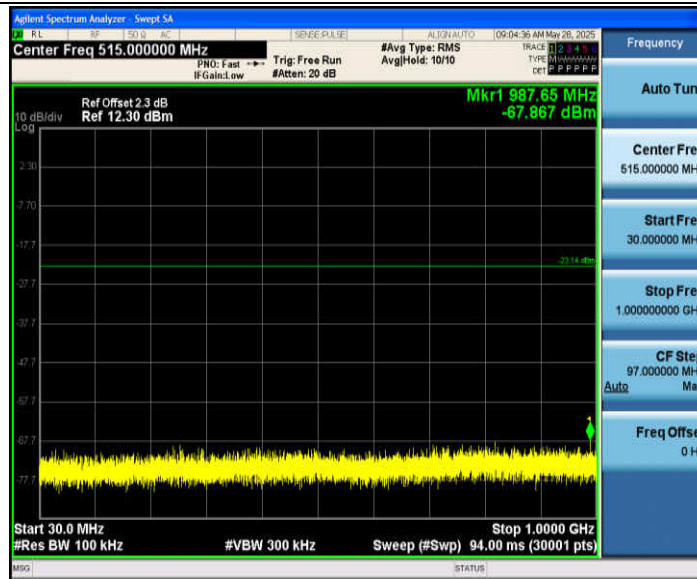
11N20SISO_Ant1_2412_1000~26500



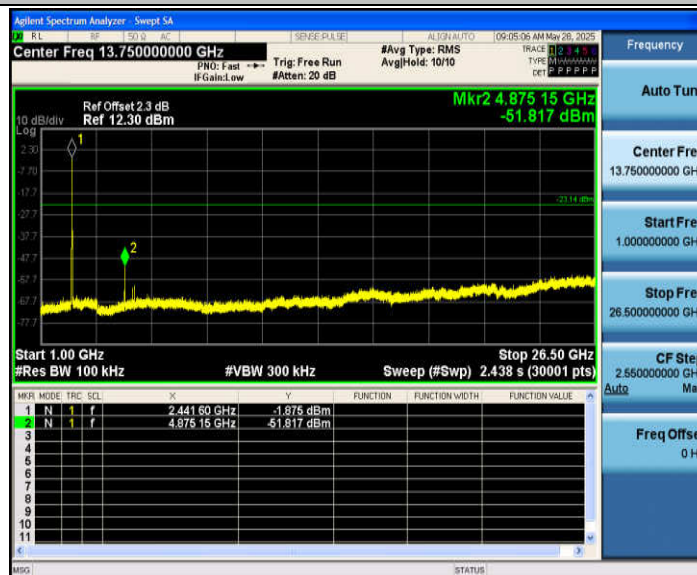
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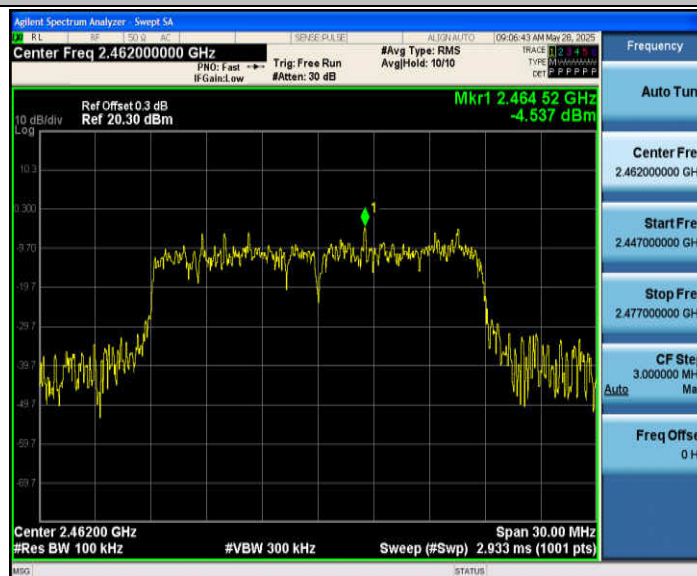
11N20SISO_Ant1_2437_30~1000



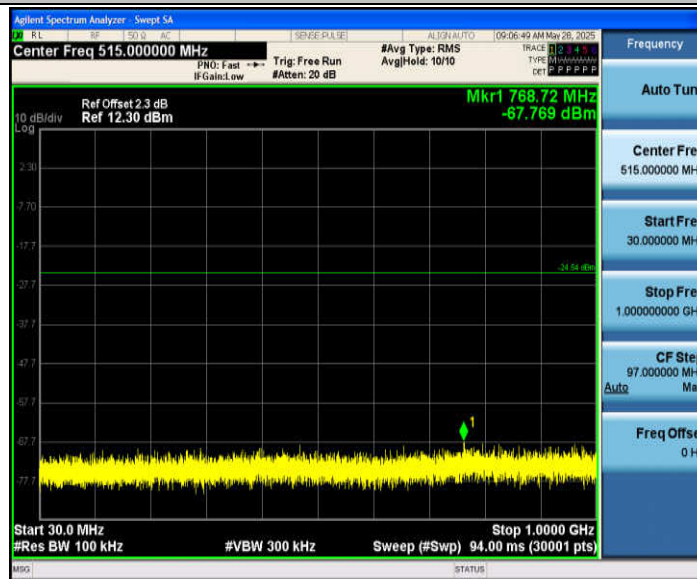
11N20SISO_Ant1_2437_1000~26500



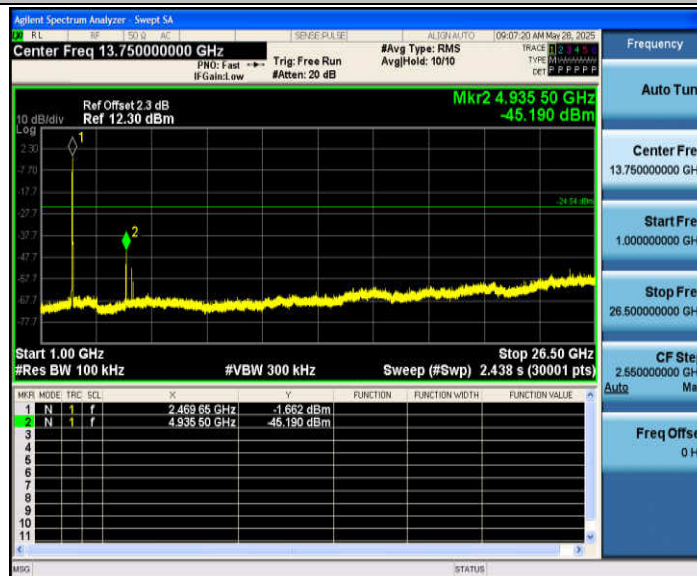
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



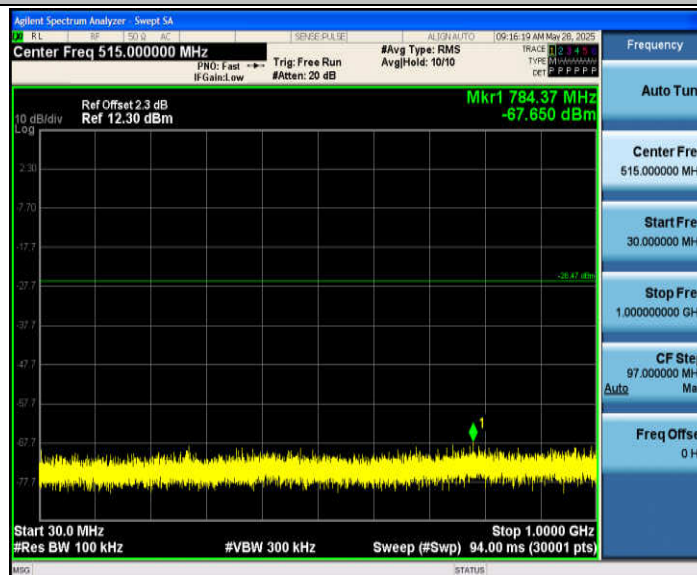
11N20SISO_Ant1_2462_1000~26500



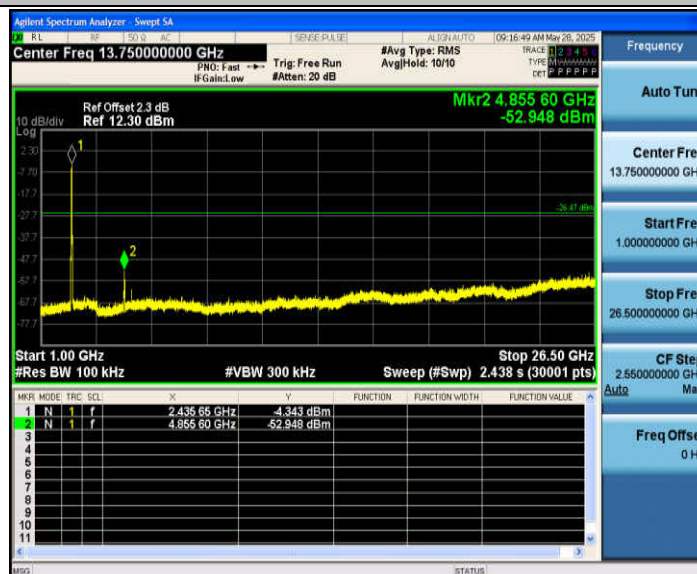
11N40SISO_Ant1_2422_0~Reference



11N40SISO_Ant1_2422_30~1000



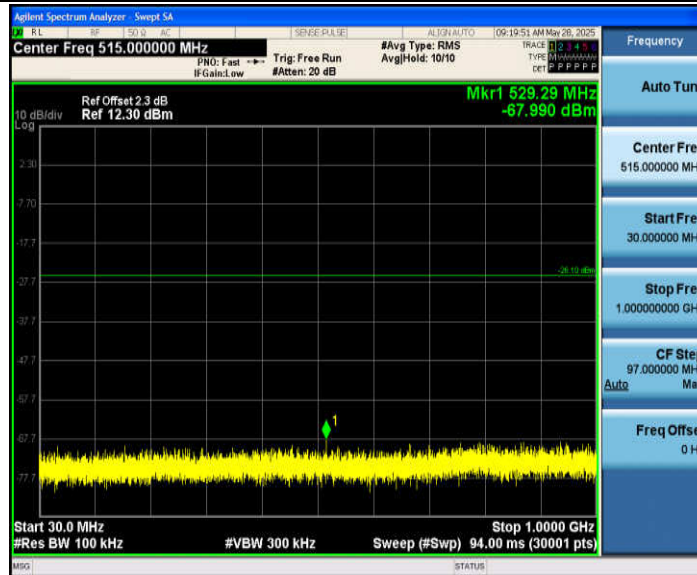
11N40SISO_Ant1_2422_1000~26500



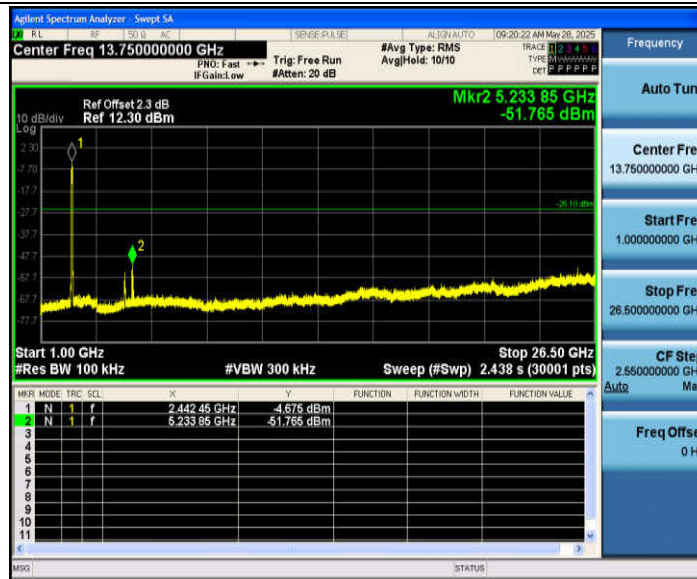
11N40SISO_Ant1_2437_0~Reference



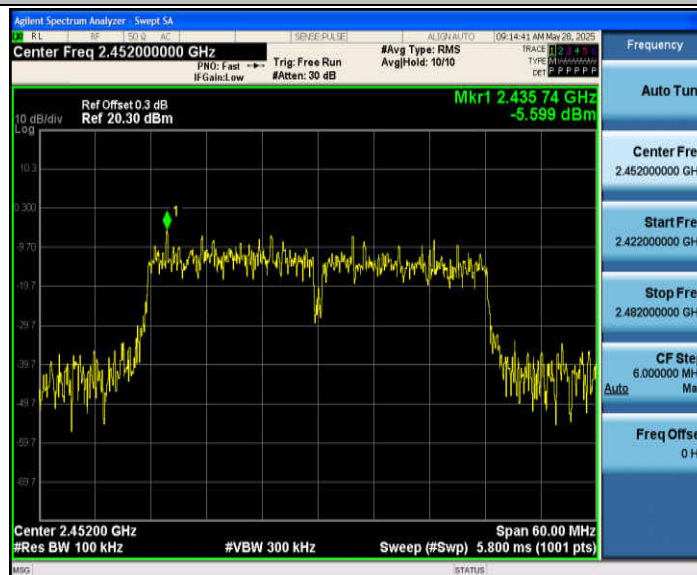
11N40SISO_Ant1_2437_30~1000



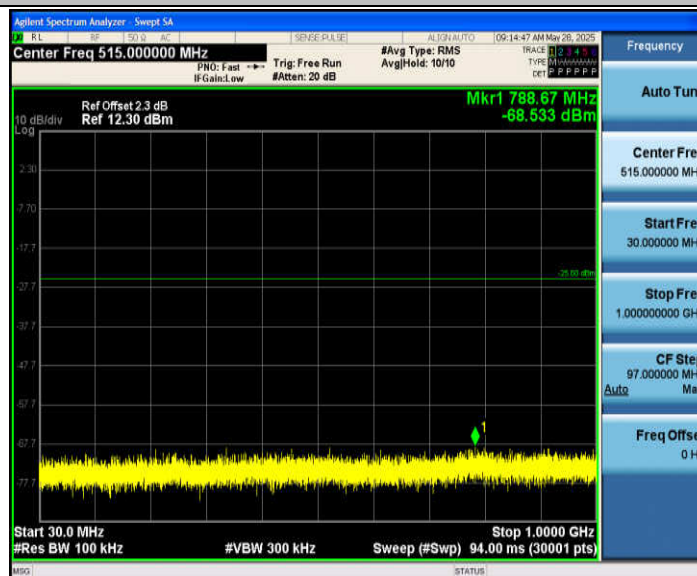
11N40SISO_Ant1_2437_1000~26500

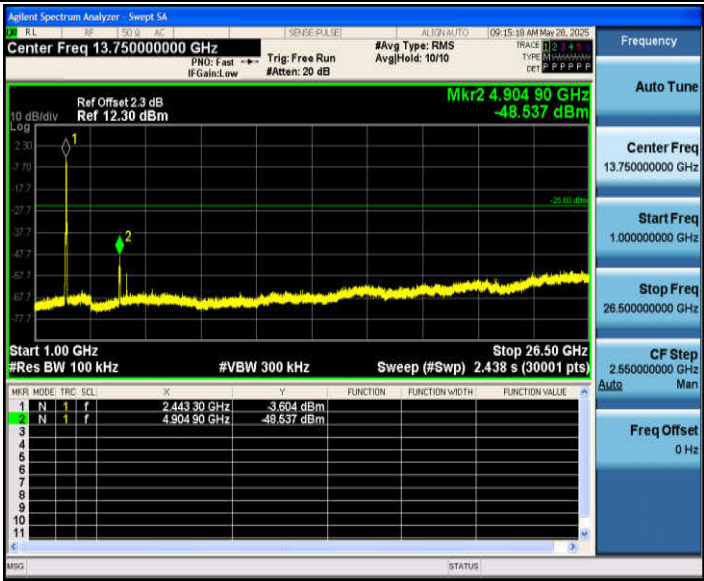


11N40ISO_Ant1_2452_0~Reference



11N40ISO_Ant1_2452_30~1000





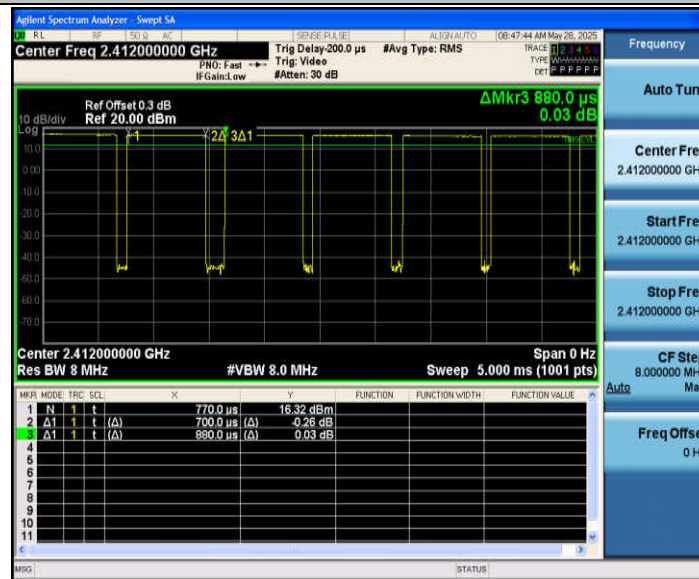
Appendix G: Duty Cycle

Test Result

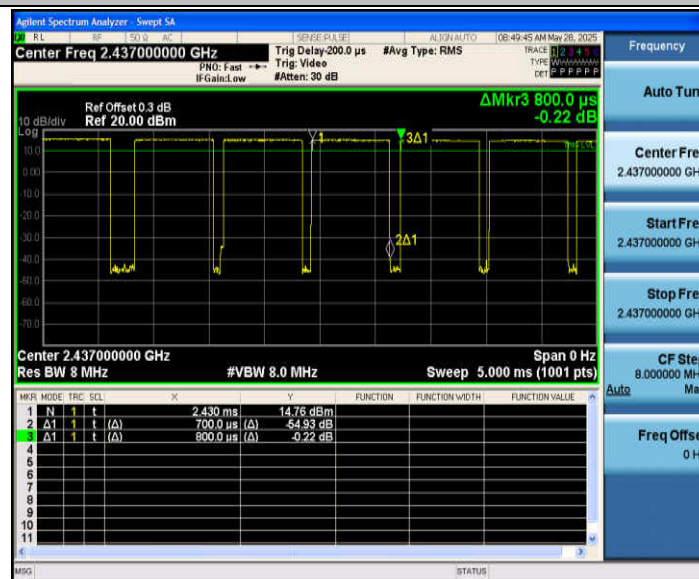
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	0.70	0.88	79.55
		2437	0.70	0.80	87.50
		2462	0.71	0.89	79.78
11G	Ant1	2412	0.11	0.33	33.33
		2437	0.11	0.31	35.48
		2462	0.11	0.31	35.48
11N20SISO	Ant1	2412	0.11	0.32	34.38
		2437	0.11	0.28	39.29
		2462	0.11	0.32	34.38
11N40SISO	Ant1	2422	0.07	0.26	26.92
		2437	0.07	0.26	26.92
		2452	0.07	0.26	26.92

Test Graphs

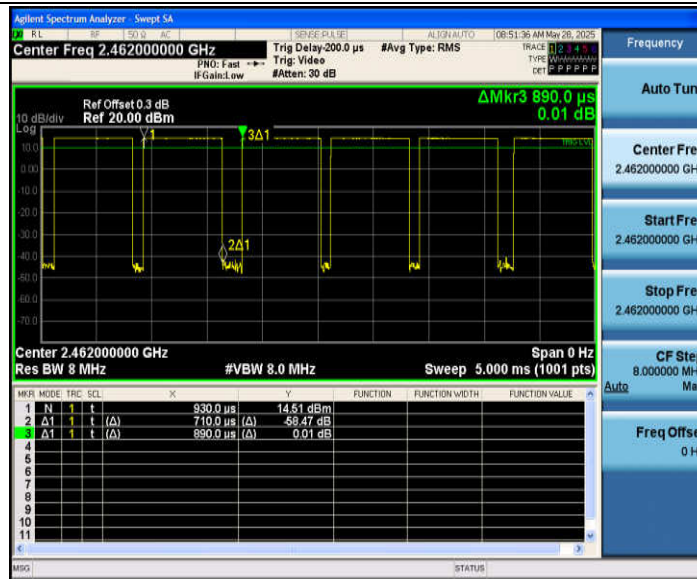
11B_Ant1_2412



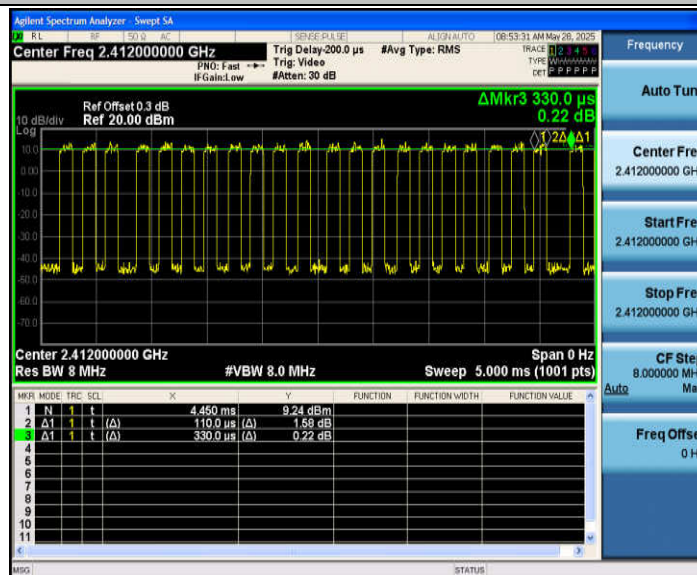
11B_Ant1_2437



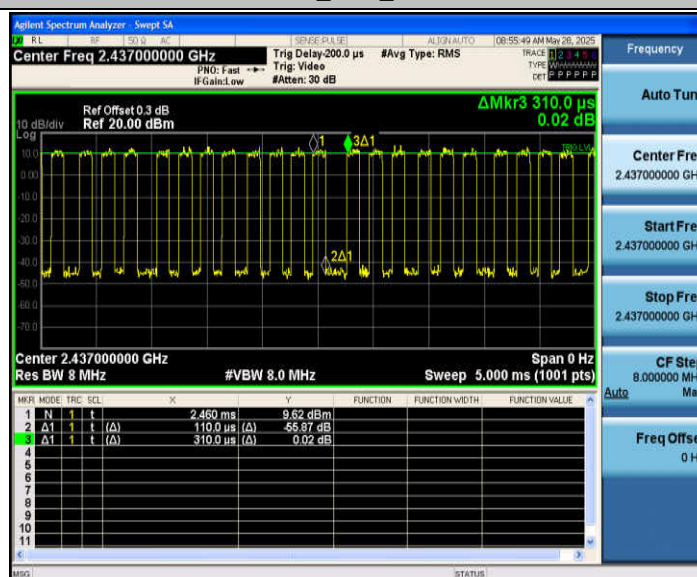
11B_Ant1_2462



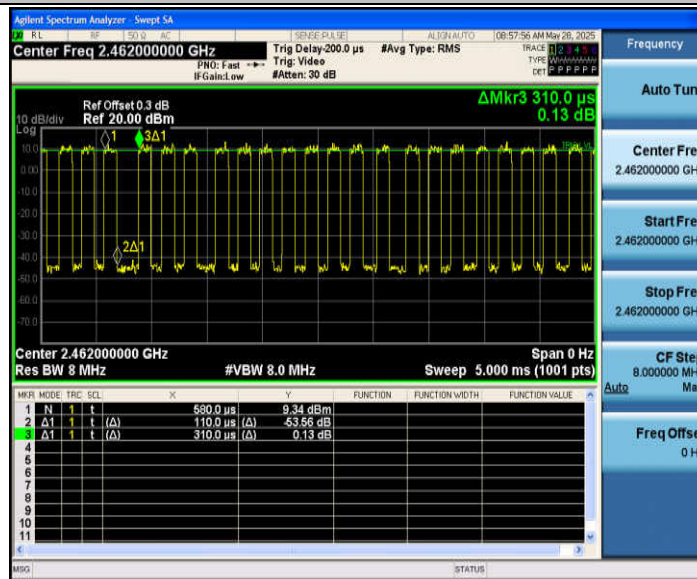
11G_Ant1_2412



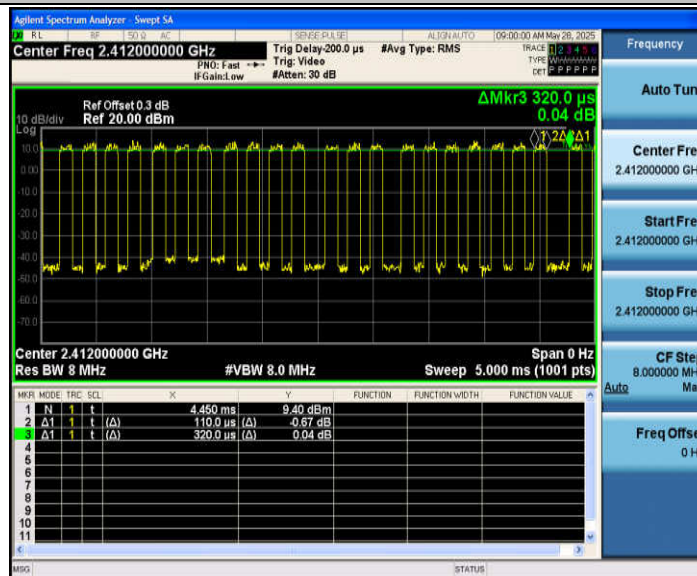
11G_Ant1_2437



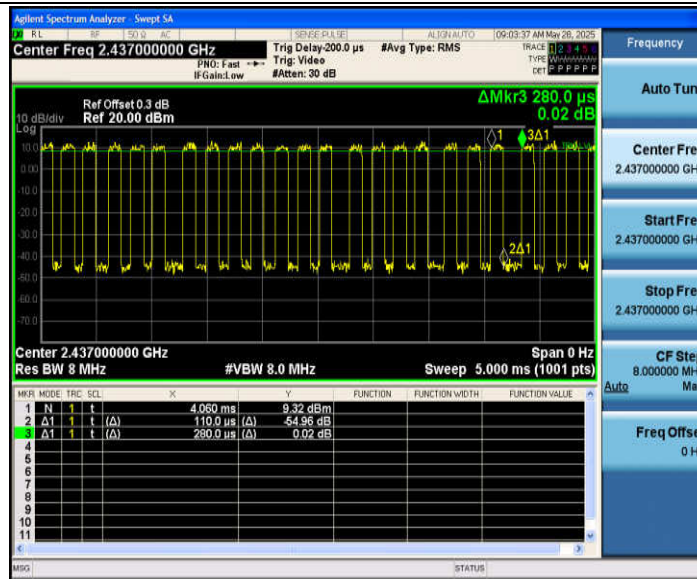
11G_Ant1_2462



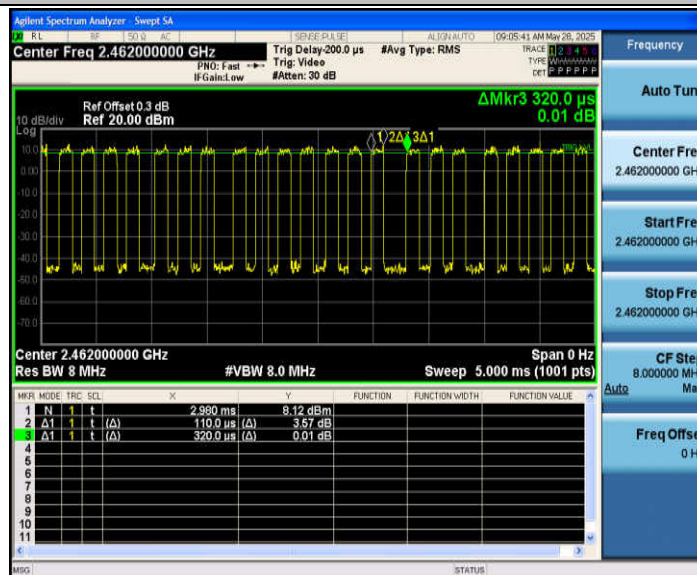
11N20SISO_Ant1_2412



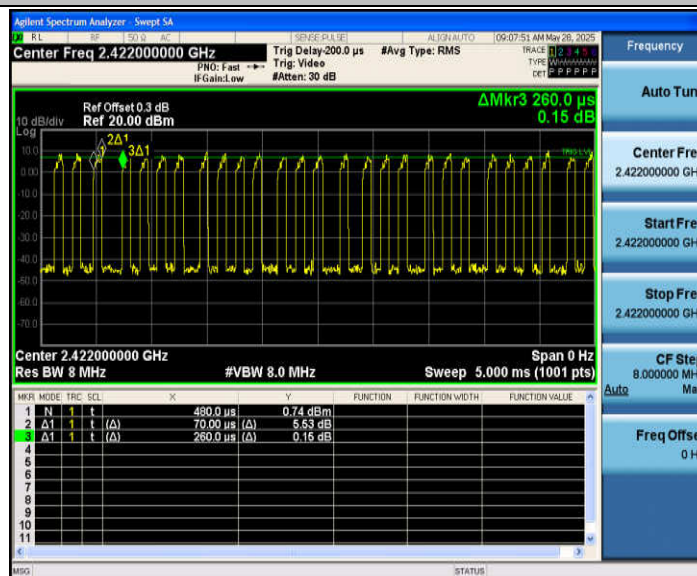
11N20SISO_Ant1_2437



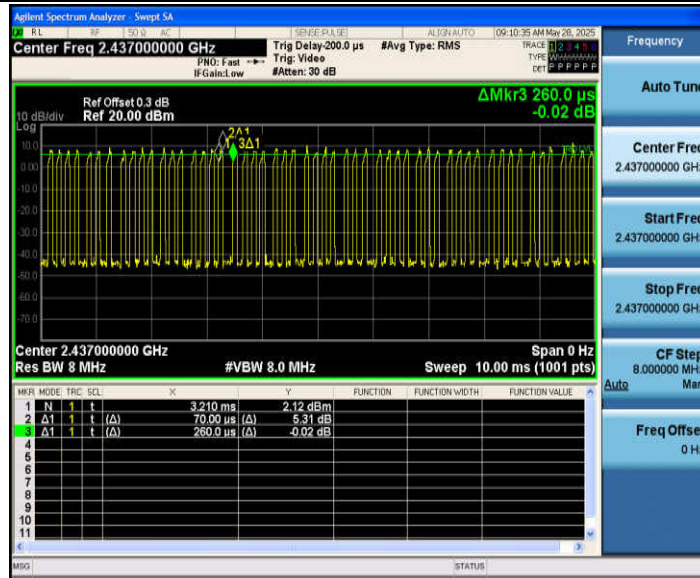
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

