

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BP5V-ZK301

Company : Dong Guan Zhen Ke Technology Co., LTD

EUT : Weather Station

Model Number : WS-SA9

Report No. : CTA26082700902

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	10.240	2406.920	2417.160	0.5	PASS
		2437	10.200	2431.920	2442.120	0.5	PASS
		2462	10.240	2456.920	2467.160	0.5	PASS
11G	Ant1	2412	15.520	2404.240	2419.760	0.5	PASS
		2437	15.840	2429.000	2444.840	0.5	PASS
		2462	15.840	2454.120	2469.960	0.5	PASS
11N20SISO	Ant1	2412	16.520	2403.560	2420.080	0.5	PASS
		2437	17.080	2428.480	2445.560	0.5	PASS
		2462	17.160	2453.480	2470.640	0.5	PASS
11N40SISO	Ant1	2422	35.520	2404.400	2439.920	0.5	PASS
		2437	35.200	2419.880	2455.080	0.5	PASS
		2452	35.440	2434.640	2470.080	0.5	PASS

Test Graphs

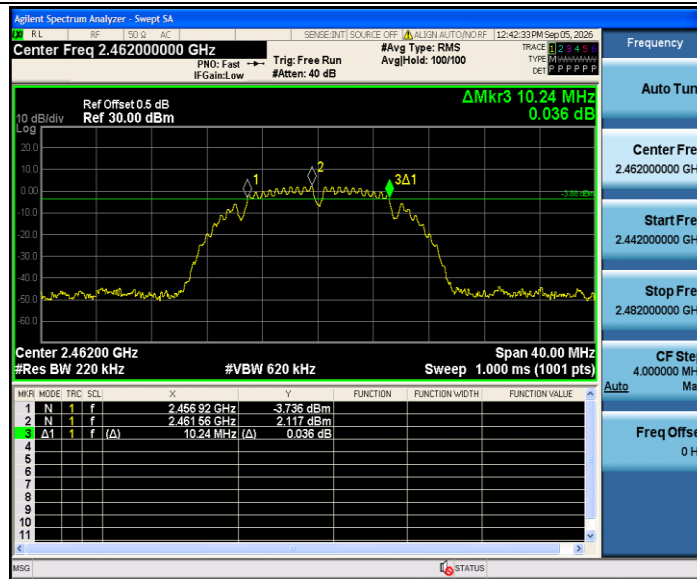
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



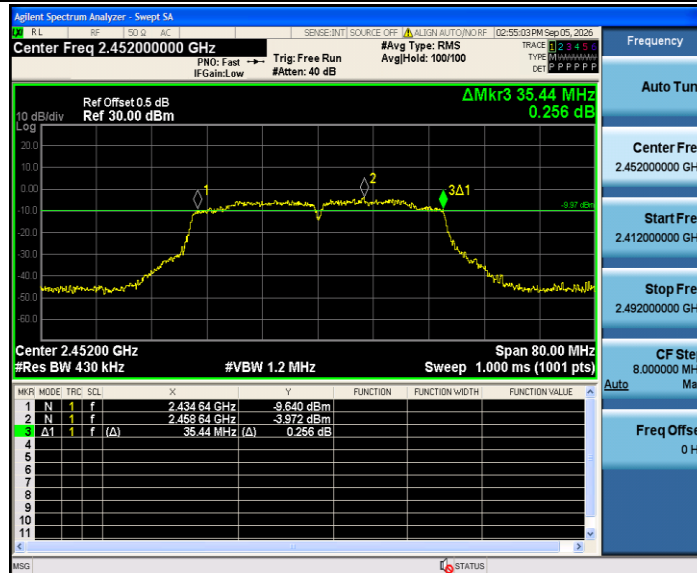
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



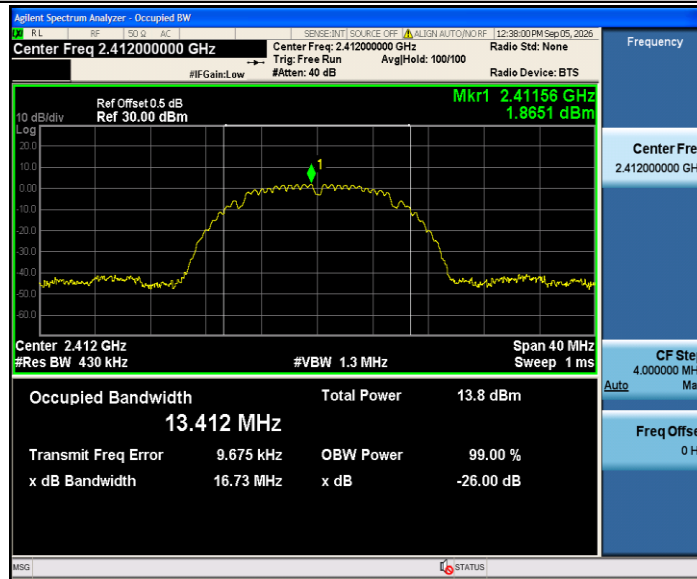
Appendix B: Occupied Channel Bandwidth

Test Result

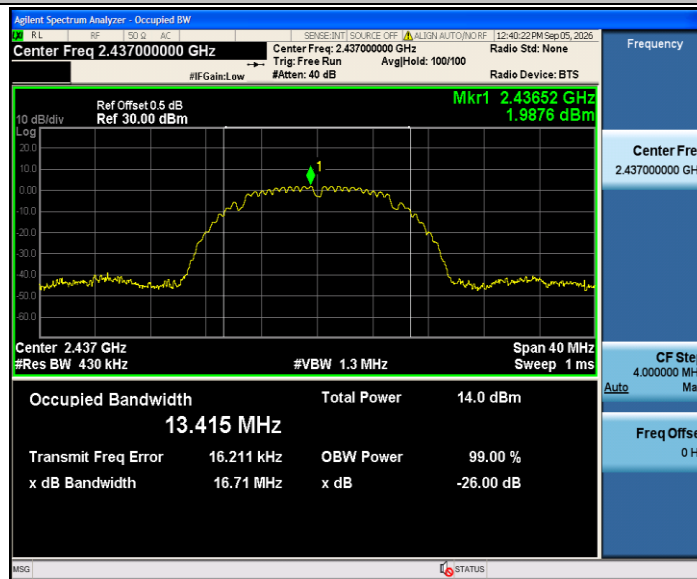
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.412	2405.3037	2418.7157	---	---
		2437	13.415	2430.3087	2443.7237	---	---
		2462	13.418	2455.3164	2468.7344	---	---
11G	Ant1	2412	16.833	2403.6176	2420.4506	---	---
		2437	16.787	2428.6613	2445.4483	---	---
		2462	16.819	2453.6162	2470.4352	---	---
11N20SISO	Ant1	2412	17.880	2403.0526	2420.9326	---	---
		2437	17.919	2428.0639	2445.9829	---	---
		2462	17.890	2453.1018	2470.9918	---	---
11N40SISO	Ant1	2422	36.165	2404.0782	2440.2432	---	---
		2437	36.038	2419.1391	2455.1771	---	---
		2452	36.022	2434.1142	2470.1362	---	---

Test Graphs

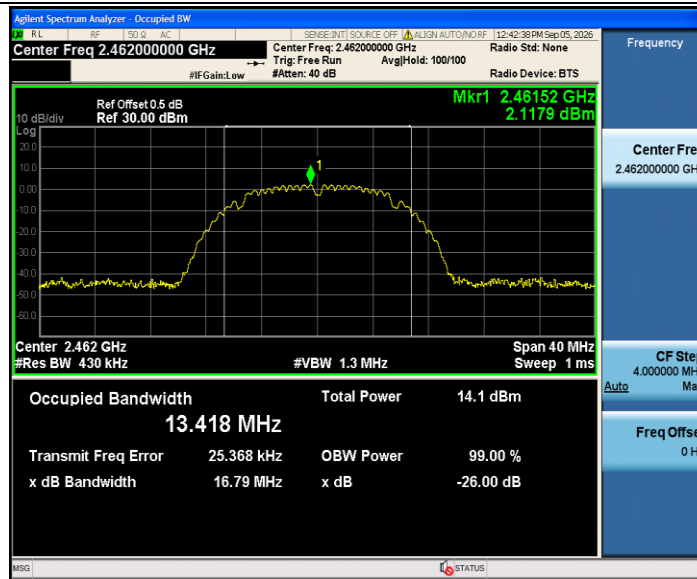
11B_Ant1_2412



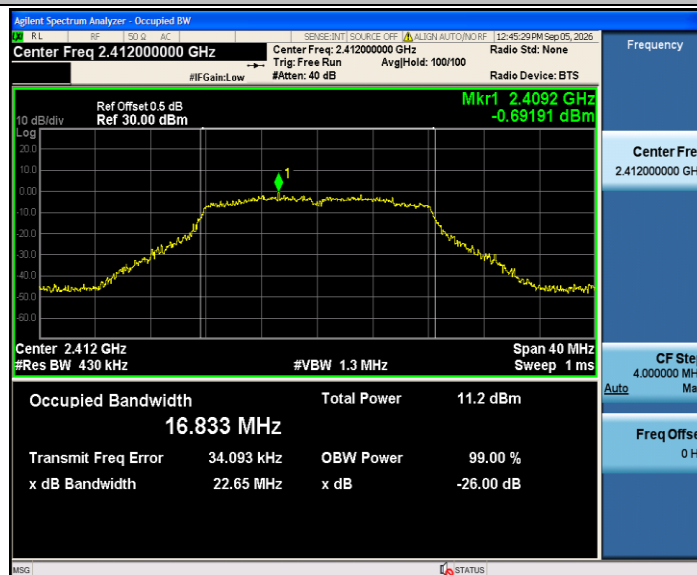
11B_Ant1_2437



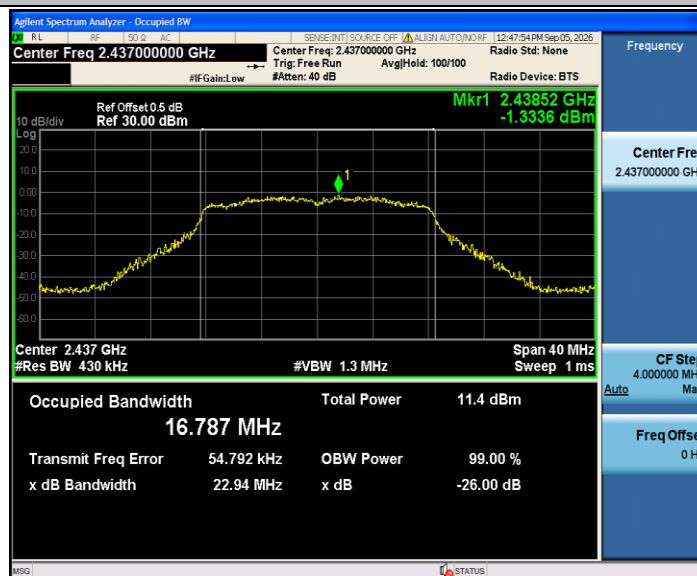
11B_Ant1_2462



11G_Ant1_2412



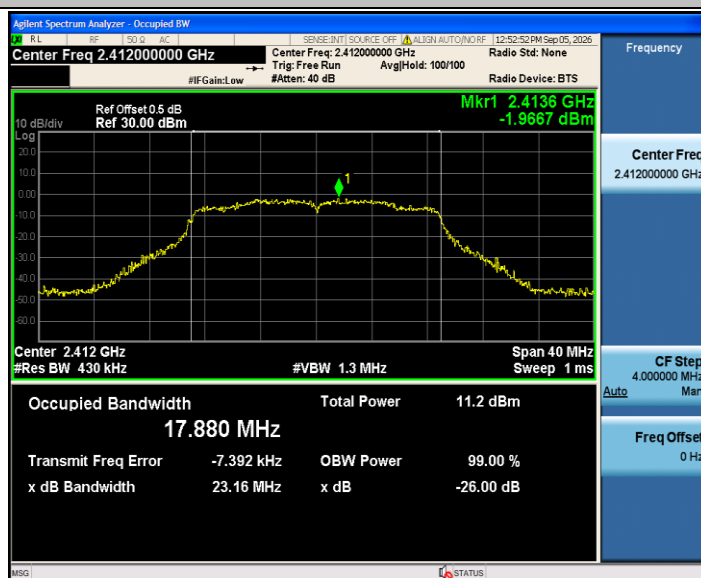
11G_Ant1_2437



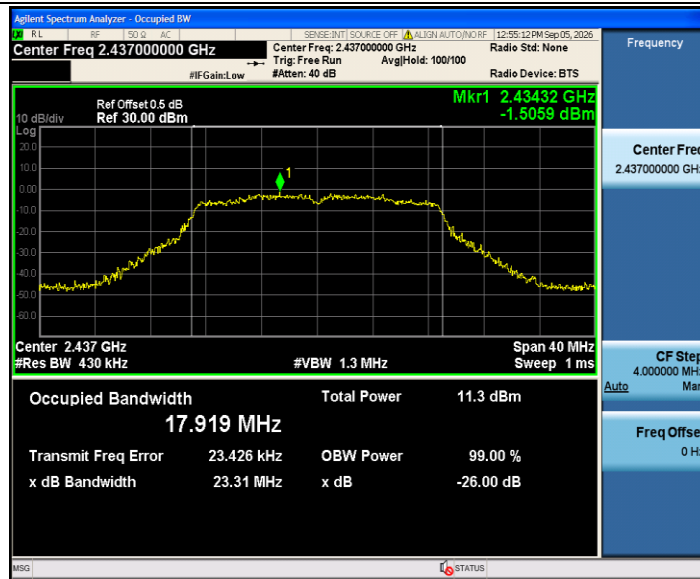
11G_Ant1_2462



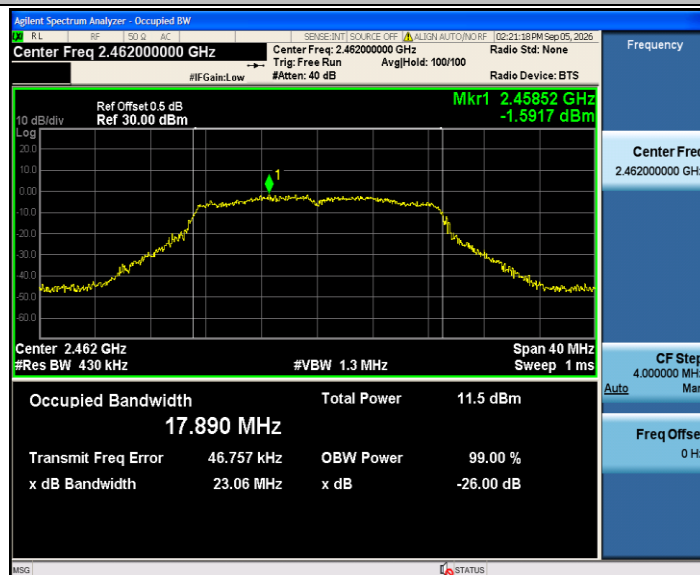
11N20SISO_Ant1_2412



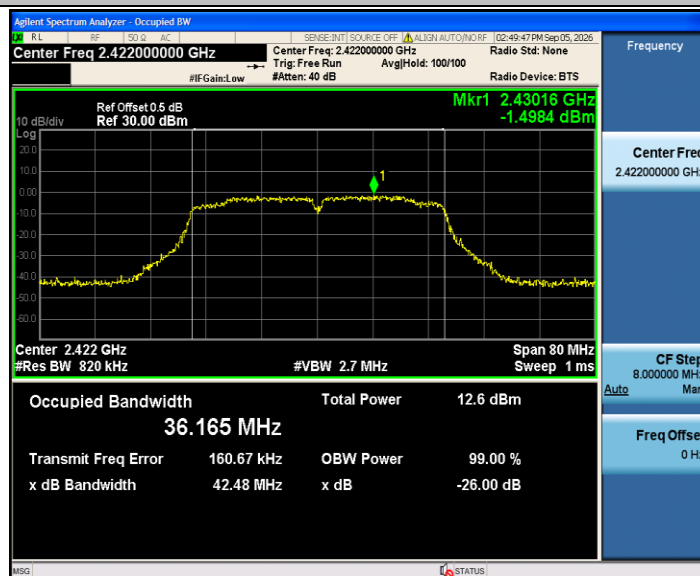
11N20SISO_Ant1_2437



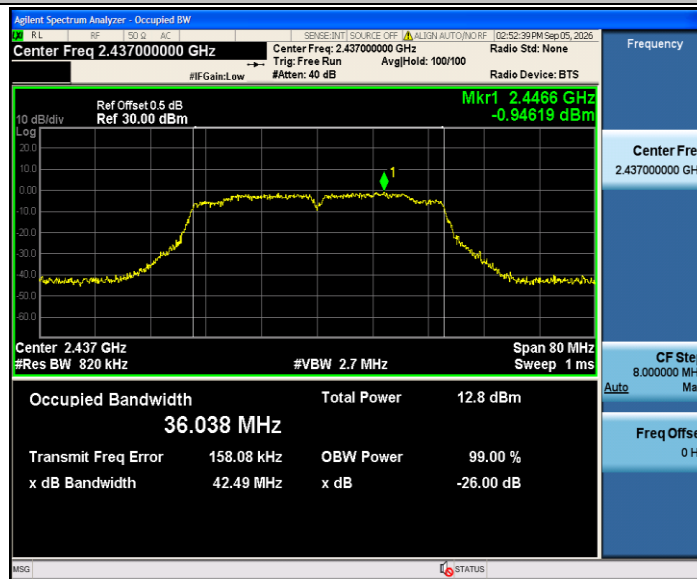
11N20SISO_Ant1_2462



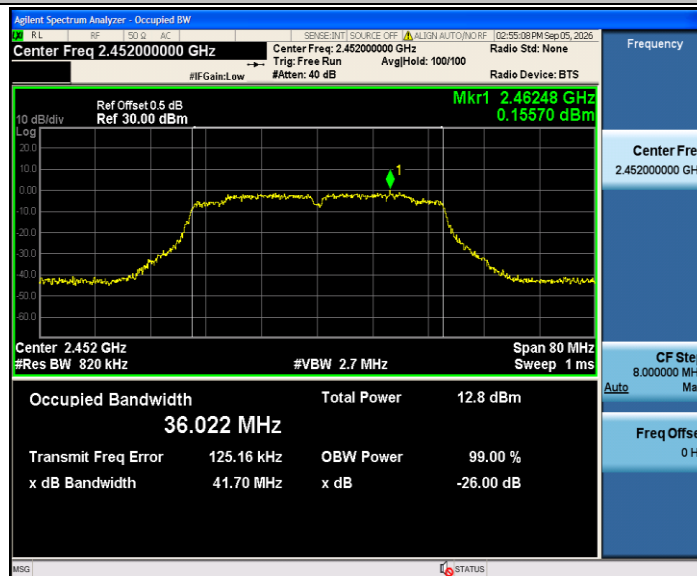
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency[M Hz]	Conducted Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.50	≤30.00	PASS
		2437	13.61	≤30.00	PASS
		2462	13.76	≤30.00	PASS
11G	Ant1	2412	12.13	≤30.00	PASS
		2437	12.21	≤30.00	PASS
		2462	12.44	≤30.00	PASS
11N20SISO	Ant1	2412	12.07	≤30.00	PASS
		2437	12.23	≤30.00	PASS
		2462	12.40	≤30.00	PASS
11N40SISO	Ant1	2422	12.63	≤30.00	PASS
		2437	12.97	≤30.00	PASS
		2452	12.82	≤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	-12.72	≤8.00	PASS
		2437	-12.38	≤8.00	PASS
		2462	-12.57	≤8.00	PASS
11G	Ant1	2412	-20.37	≤8.00	PASS
		2437	-19.91	≤8.00	PASS
		2462	-18.92	≤8.00	PASS
11N20SISO	Ant1	2412	-19.32	≤8.00	PASS
		2437	-18.62	≤8.00	PASS
		2462	-18.16	≤8.00	PASS
11N40SISO	Ant1	2422	-20.96	≤8.00	PASS
		2437	-20.93	≤8.00	PASS
		2452	-21.53	≤8.00	PASS

Test Graphs

11B_Ant1_2412



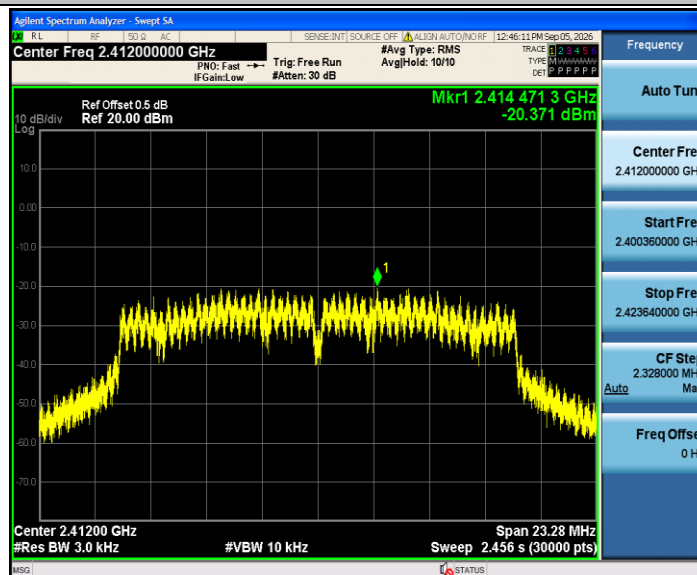
11B_Ant1_2437



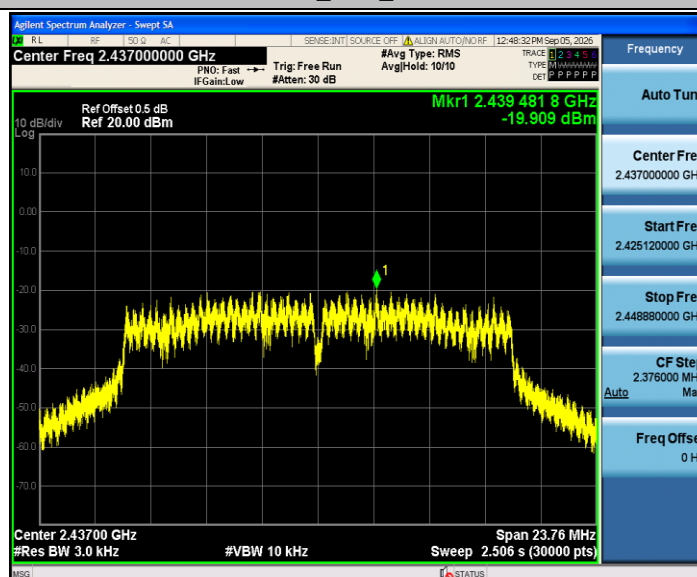
11B_Ant1_2462



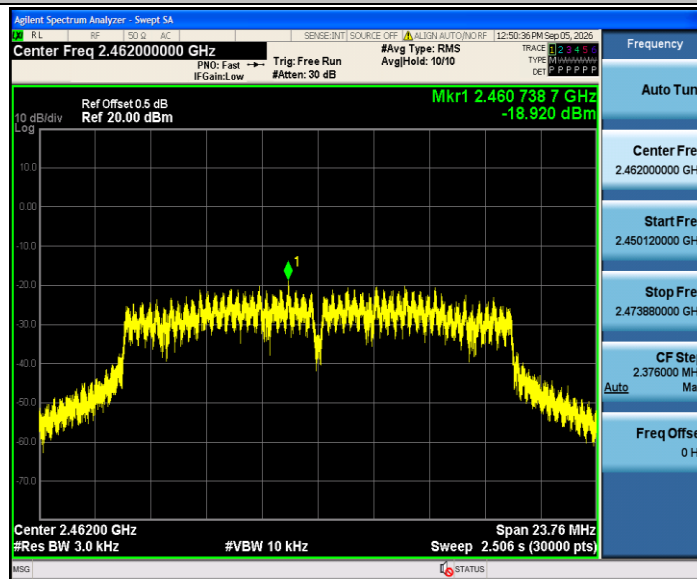
11G_Ant1_2412



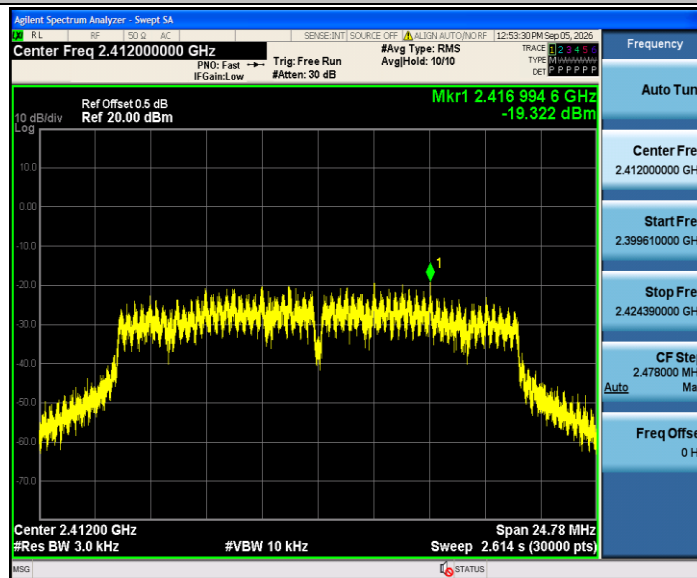
11G_Ant1_2437



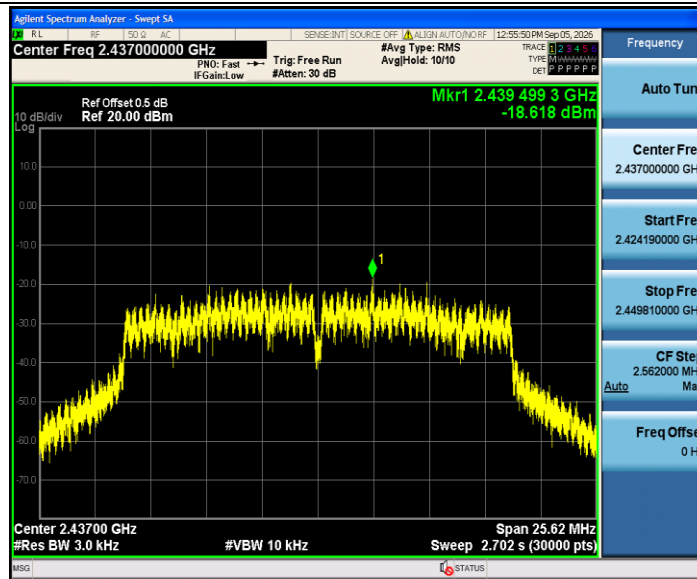
11G_Ant1_2462



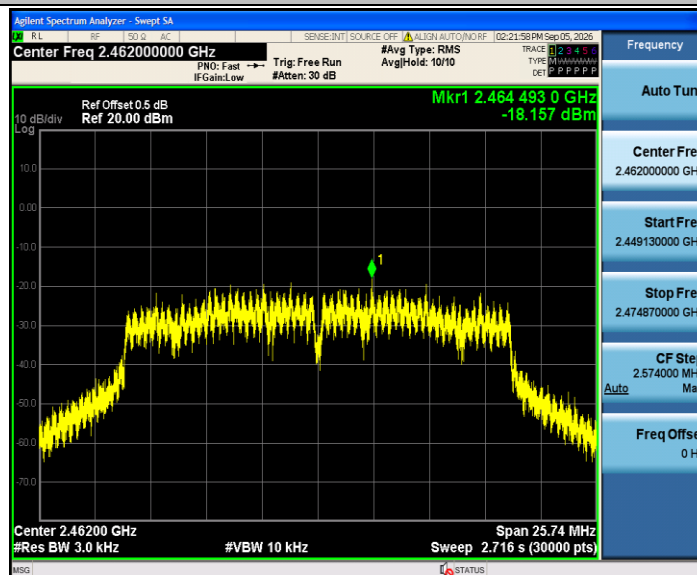
11N20SISO_Ant1_2412



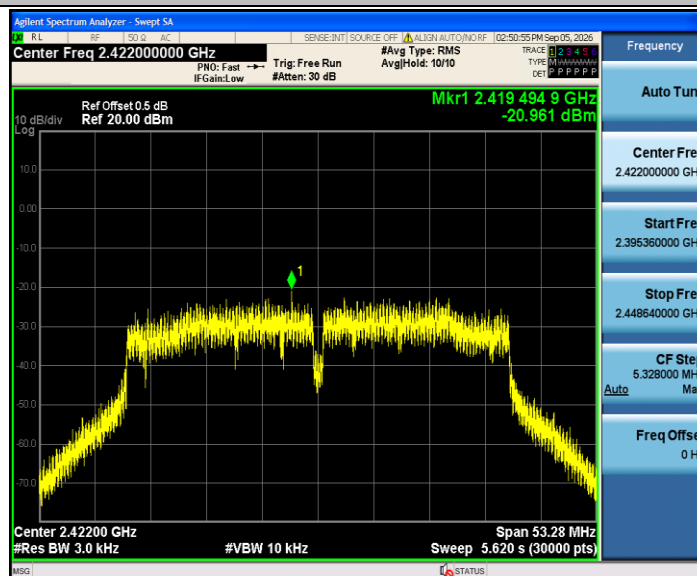
11N20SISO_Ant1_2437



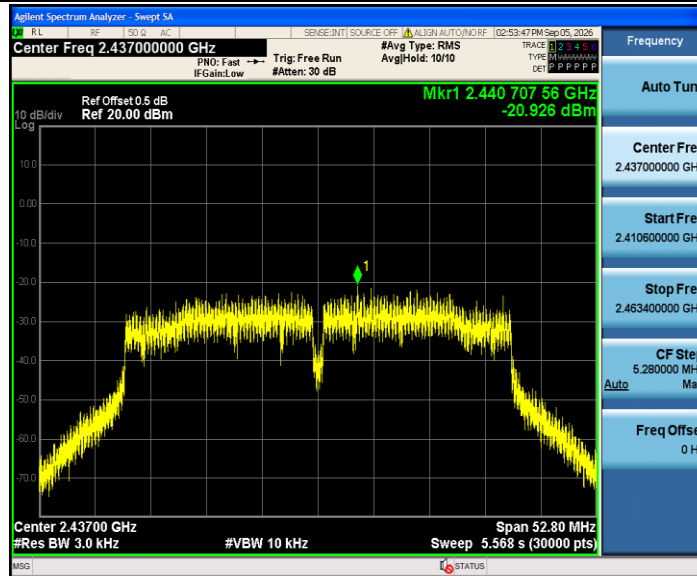
11N20SISO_Ant1_2462



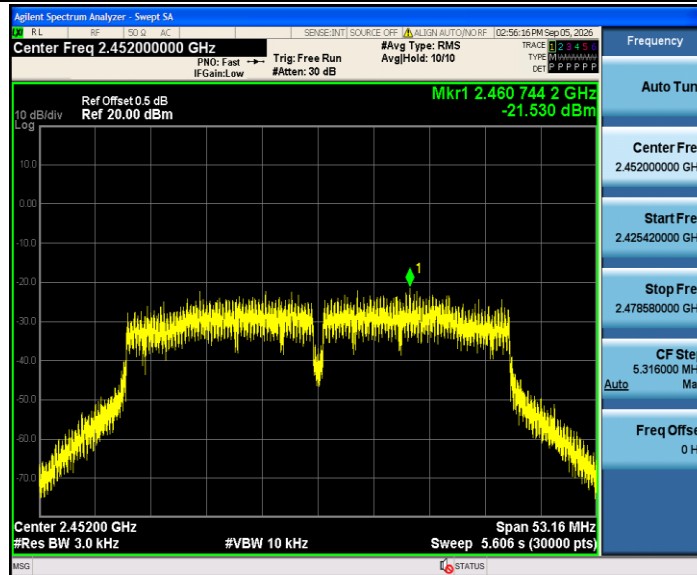
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



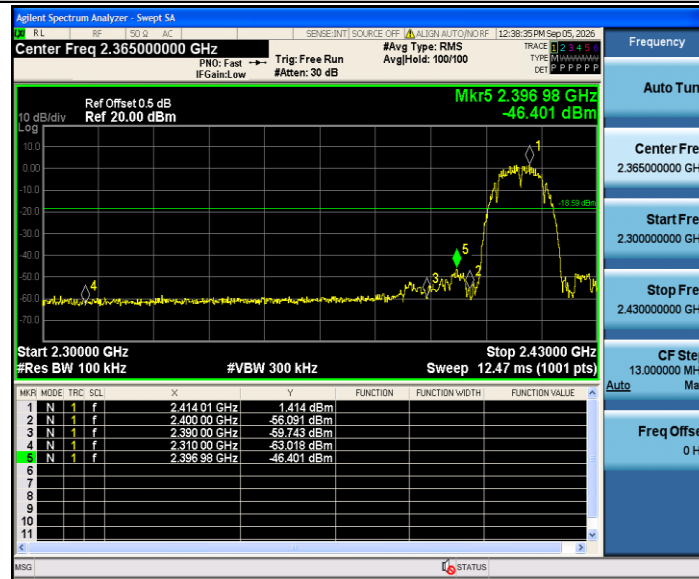
Appendix E: Band edge measurements

Test Result

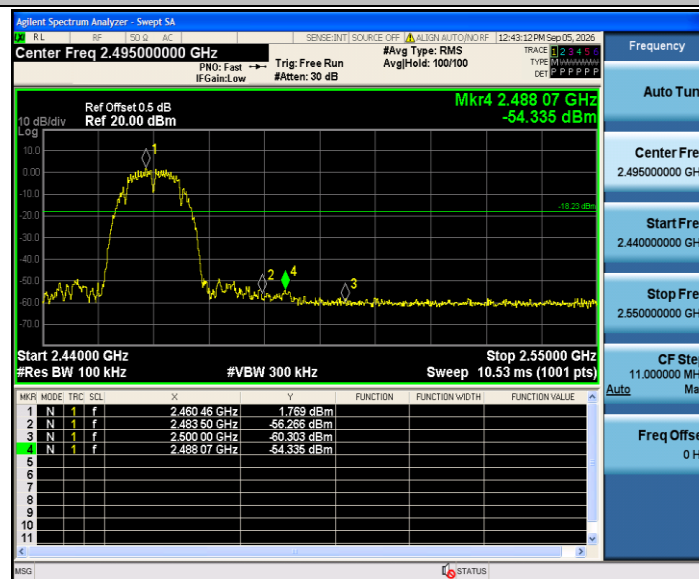
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	1.41	-46.4	≤-18.59	PASS
		High	2462	1.77	-54.34	≤-18.23	PASS
11G	Ant1	Low	2412	-4.18	-35.17	≤-24.18	PASS
		High	2462	-3.95	-57.47	≤-23.95	PASS
11N20SISO	Ant1	Low	2412	-4.34	-36.3	≤-24.34	PASS
		High	2462	-4.19	-58.09	≤-24.19	PASS
11N40SISO	Ant1	Low	2422	-7.15	-35.69	≤-27.15	PASS
		High	2452	-7.06	-56.92	≤-27.06	PASS

Test Graphs

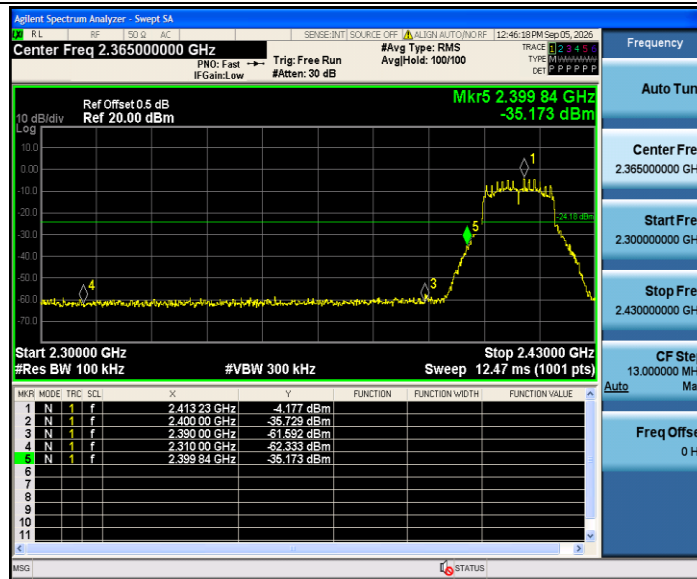
11B_Ant1_Low_2412



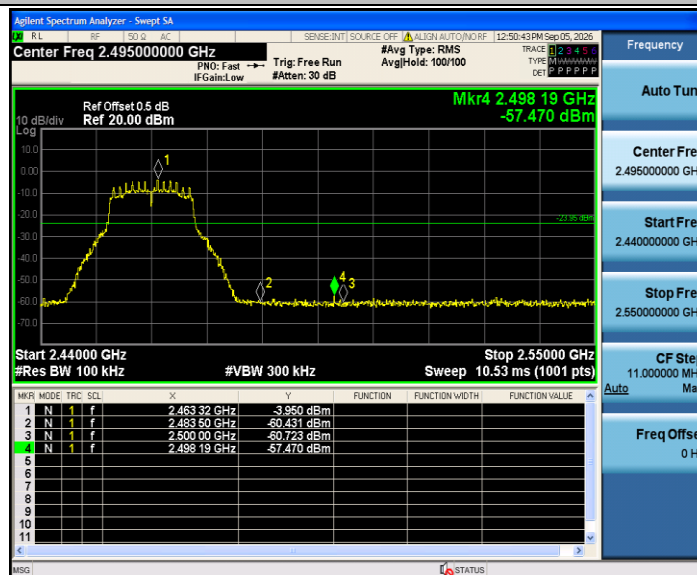
11B_Ant1_High_2462



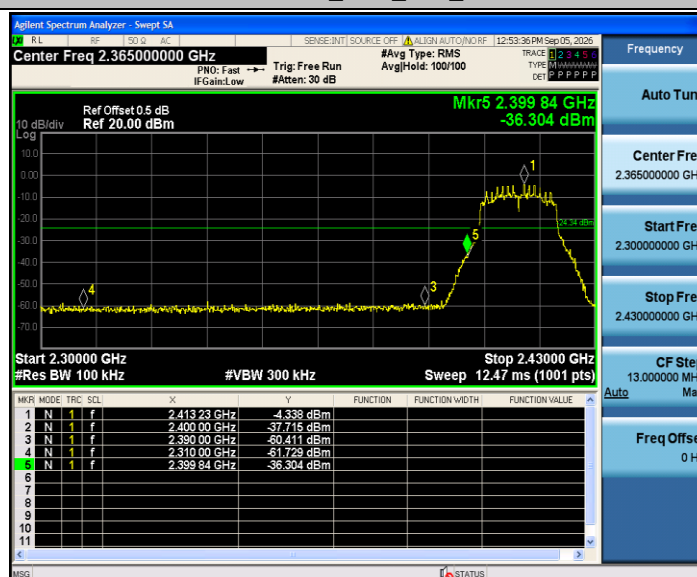
11G_Ant1_Low_2412



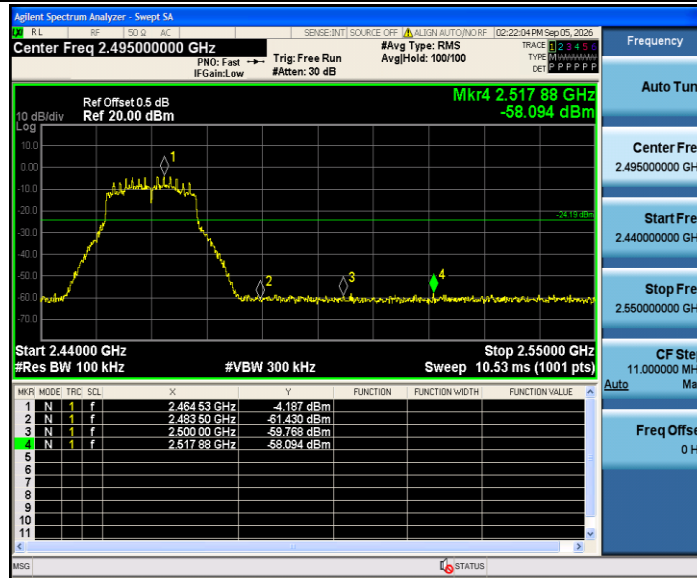
11G_Ant1_High_2462



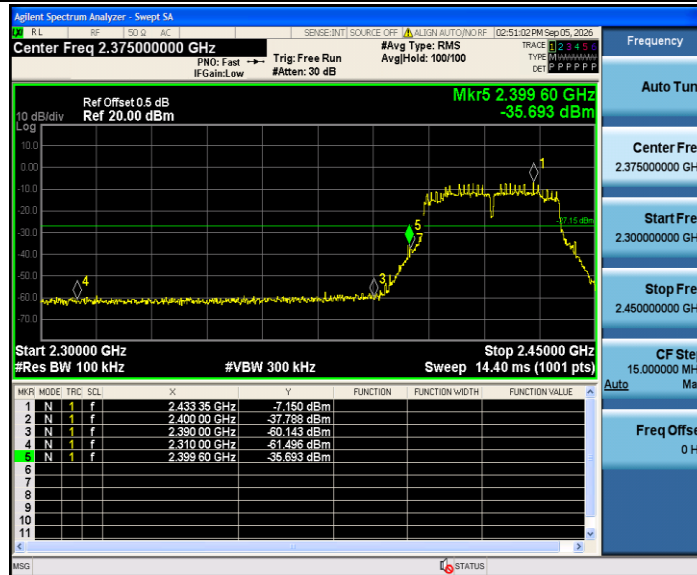
11N20SISO_Ant1_Low_2412



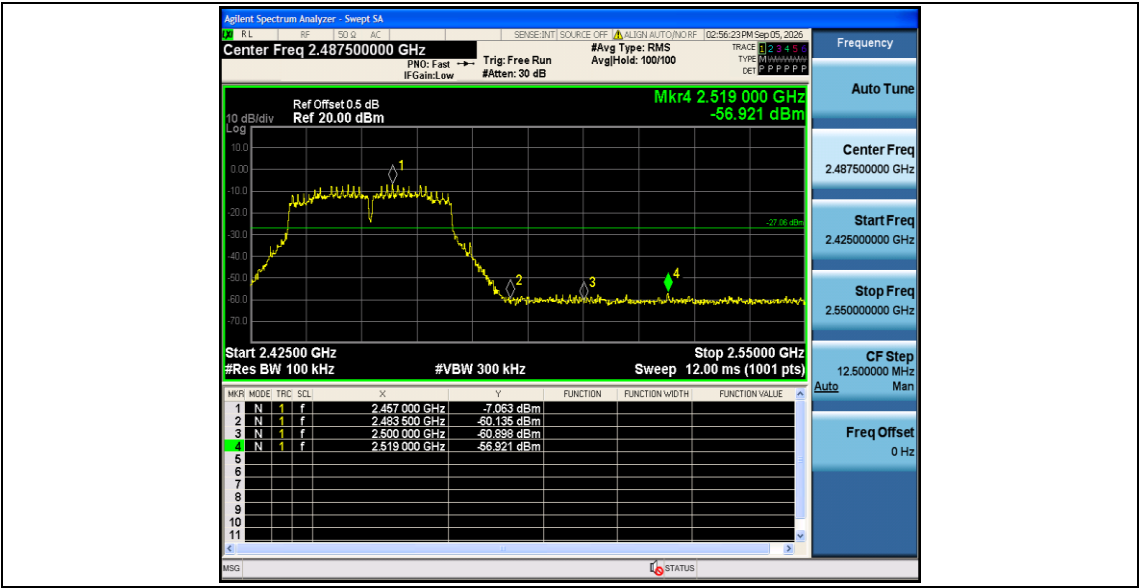
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

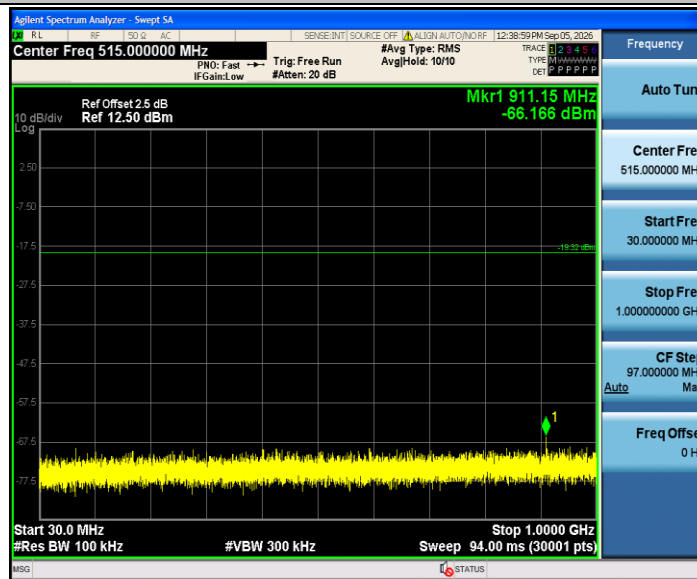
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	0.68	0.68	---	PASS
			30~1000	0.68	-66.17	≤-19.32	PASS
			1000~26500	0.68	-46.5	≤-19.32	PASS
		2437	Reference	1.23	1.23	---	PASS
			30~1000	1.23	-67.58	≤-18.77	PASS
			1000~26500	1.23	-46.26	≤-18.77	PASS
		2462	Reference	0.58	0.58	---	PASS
			30~1000	0.58	-68.64	≤-19.42	PASS
			1000~26500	0.58	-46.96	≤-19.42	PASS
11G	Ant1	2412	Reference	-5.08	-5.08	---	PASS
			30~1000	-5.08	-65	≤-25.08	PASS
			1000~26500	-5.08	-46.21	≤-25.08	PASS
		2437	Reference	-4.49	-4.49	---	PASS
			30~1000	-4.49	-64.94	≤-24.49	PASS
			1000~26500	-4.49	-46.86	≤-24.49	PASS
		2462	Reference	-4.36	-4.36	---	PASS
			30~1000	-4.36	-67.83	≤-24.36	PASS
			1000~26500	-4.36	-46.52	≤-24.36	PASS
11N20SISO	Ant1	2412	Reference	-4.89	-4.89	---	PASS
			30~1000	-4.89	-68.43	≤-24.89	PASS
			1000~26500	-4.89	-46.7	≤-24.89	PASS
		2437	Reference	-4.75	-4.75	---	PASS
			30~1000	-4.75	-67.92	≤-24.75	PASS
			1000~26500	-4.75	-46.63	≤-24.75	PASS
		2462	Reference	-4.33	-4.33	---	PASS
			30~1000	-4.33	-66.68	≤-24.33	PASS
			1000~26500	-4.33	-46.95	≤-24.33	PASS
11N40SISO	Ant1	2422	Reference	-7.62	-7.62	---	PASS
			30~1000	-7.62	-68.33	≤-27.62	PASS
			1000~26500	-7.62	-45.97	≤-27.62	PASS
		2437	Reference	-7.31	-7.31	---	PASS
			30~1000	-7.31	-68.53	≤-27.31	PASS
			1000~26500	-7.31	-45.6	≤-27.31	PASS
		2452	Reference	-7.34	-7.34	---	PASS
			30~1000	-7.34	-69.13	≤-27.34	PASS
			1000~26500	-7.34	-46.57	≤-27.34	PASS

Test Graphs

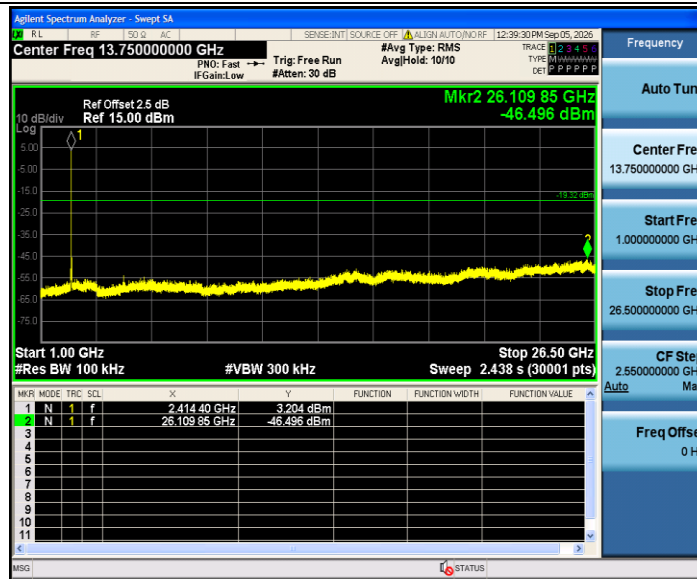
11B_Ant1_2412_0~Reference



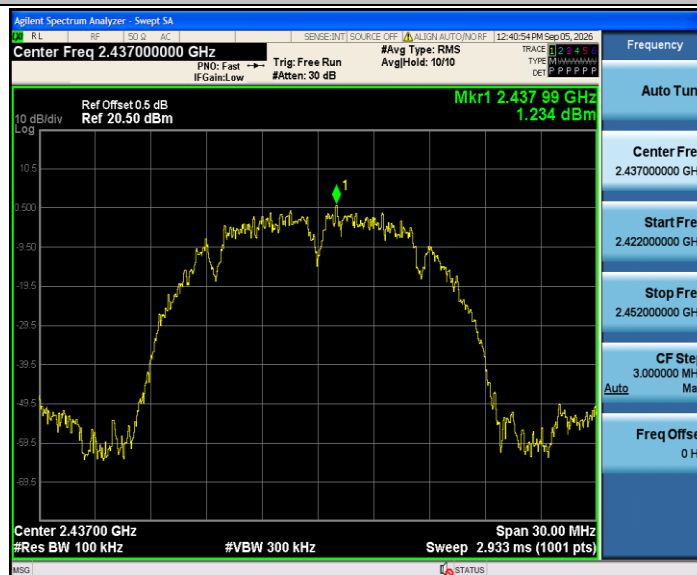
11B_Ant1_2412_30~1000



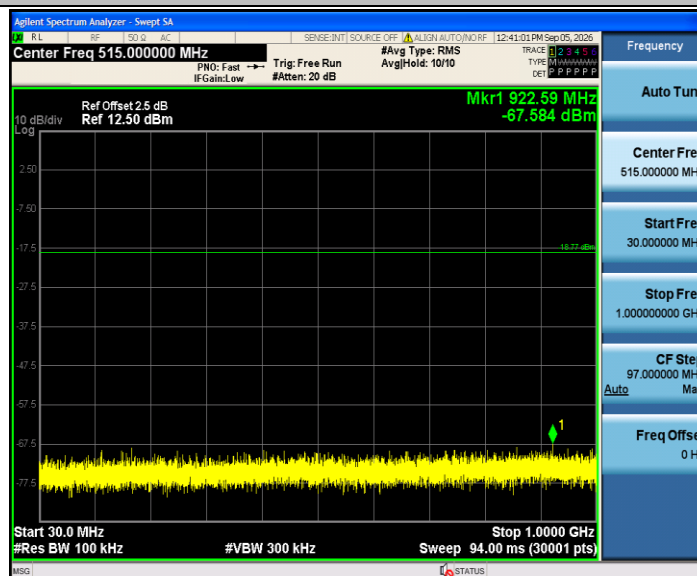
11B_Ant1_2412_1000~26500



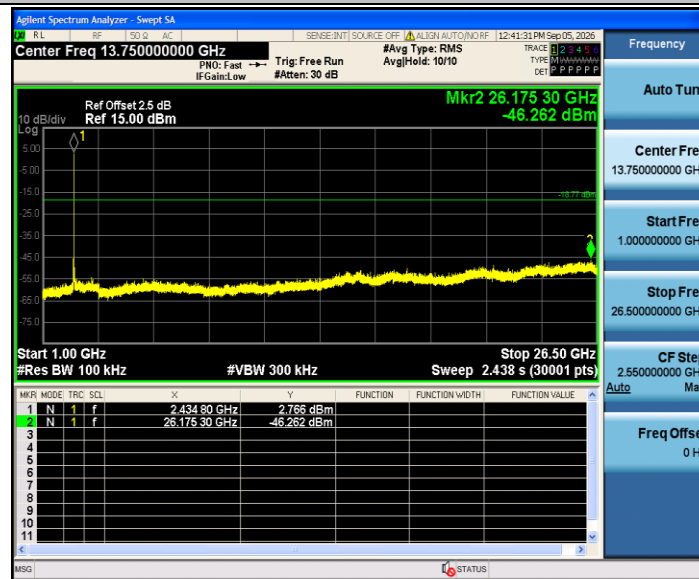
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



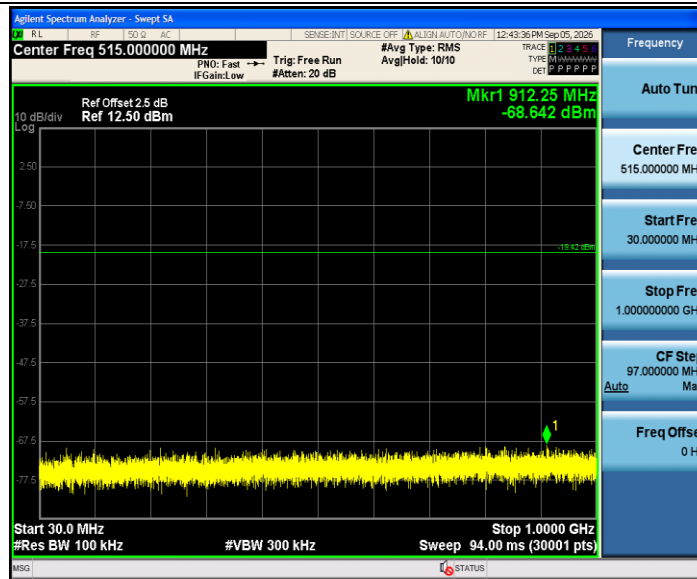
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference



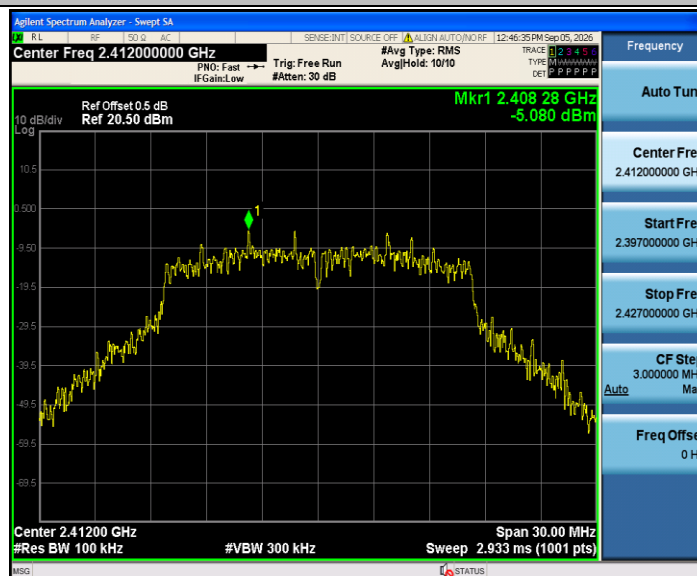
11B_Ant1_2462_30~1000



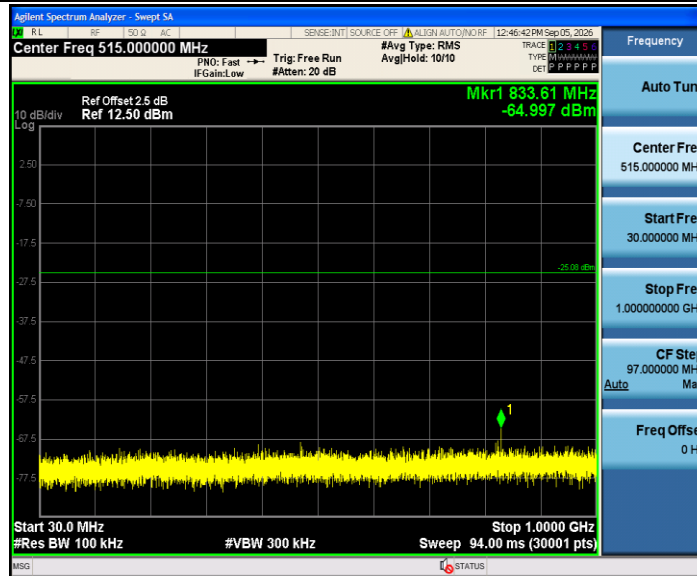
11B_Ant1_2462_1000~26500



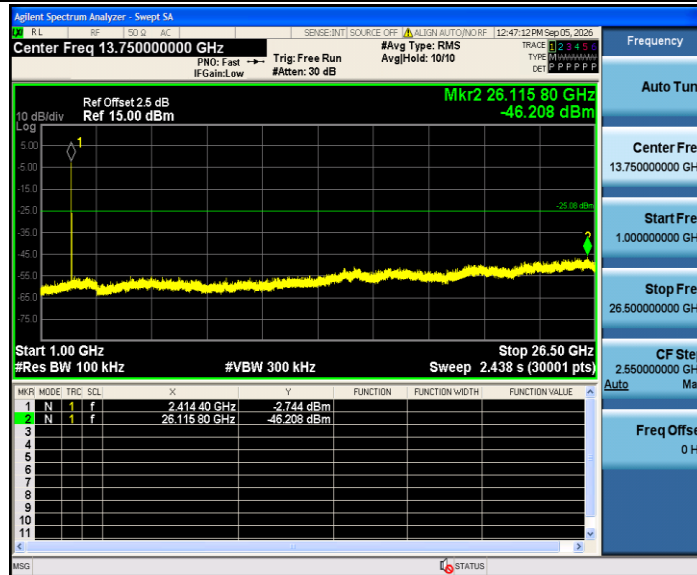
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



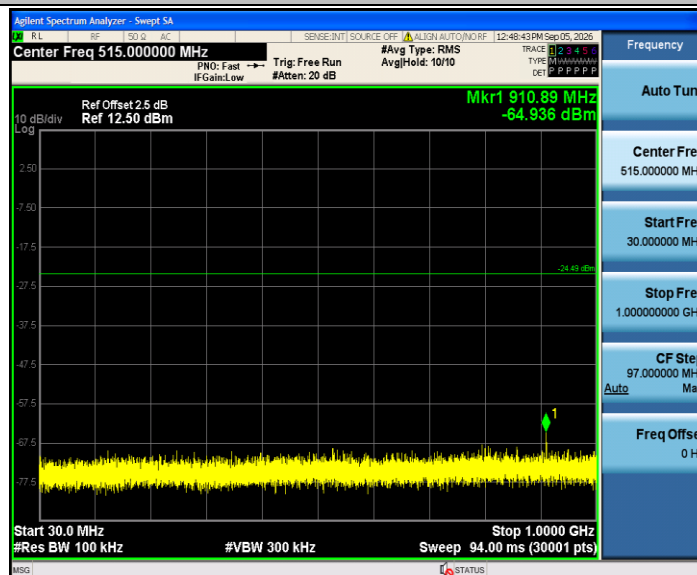
11G_Ant1_2412_1000~26500



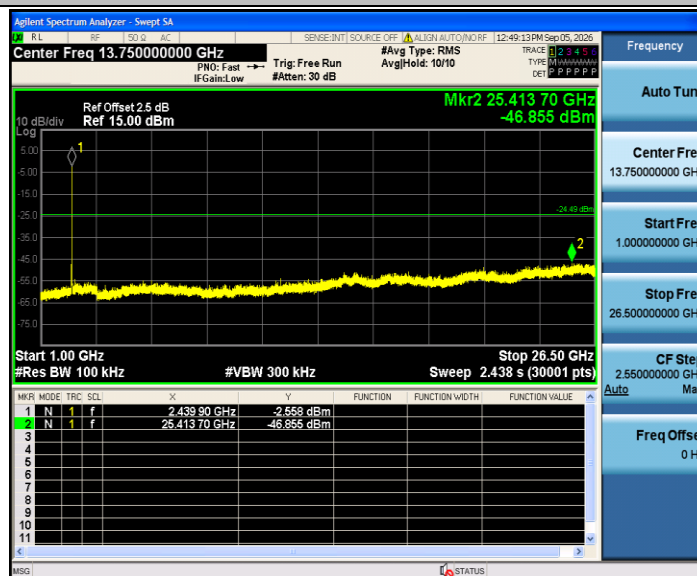
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



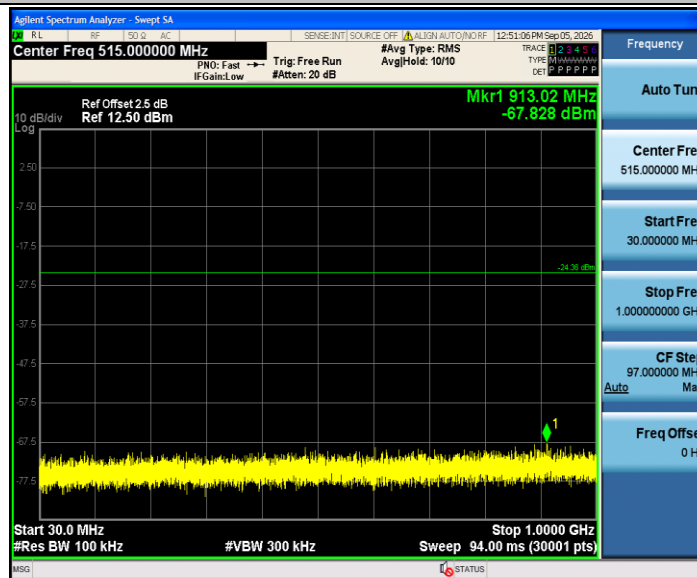
11G_Ant1_2437_1000~26500



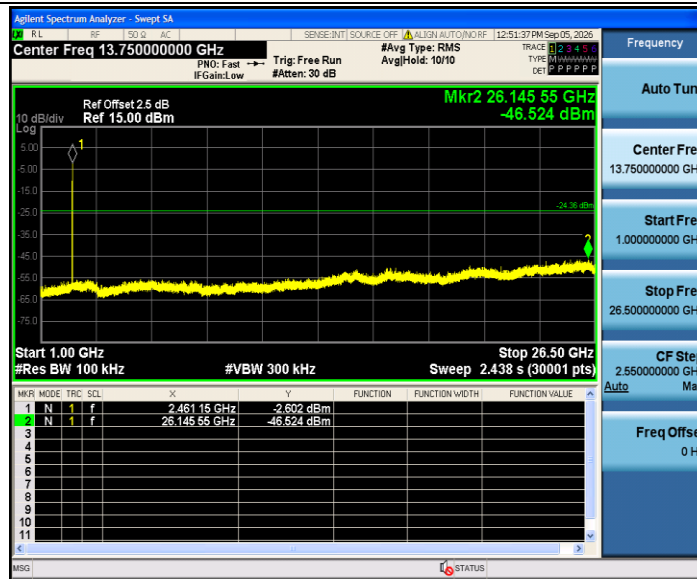
11G_Ant1_2462_0~Reference



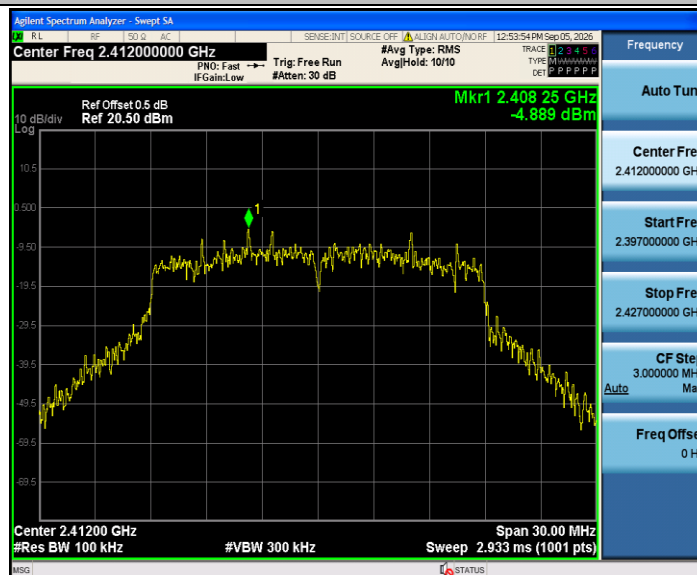
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

