

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BF69-ER-SG30

Company : Shenzhen Hanwei Security Technology Co., Ltd.

EUT : Water Sensor

Model Number : ER-SG30

Report No. : CTA26042300601

Reviewed By : Eric Wang

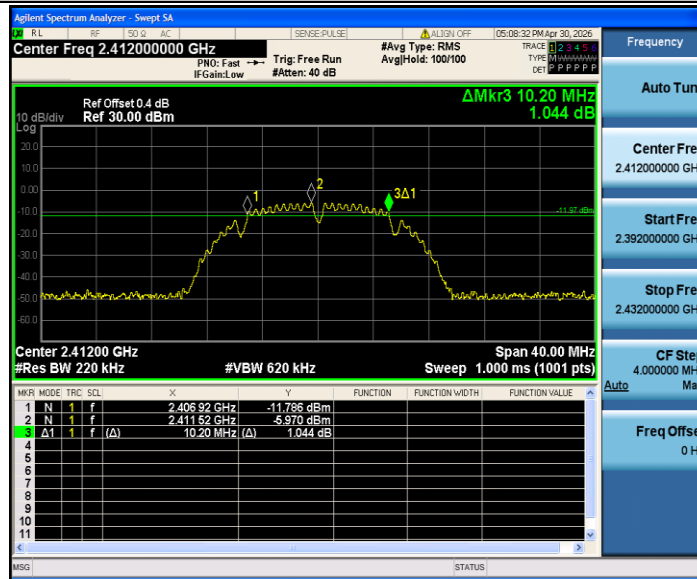
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.200	2406.920	2417.120	0.5	PASS
		2437	10.200	2431.920	2442.120	0.5	PASS
		2462	10.200	2456.920	2467.120	0.5	PASS
11G	Ant1	2412	15.720	2404.280	2420.000	0.5	PASS
		2437	15.800	2428.960	2444.760	0.5	PASS
		2462	15.600	2454.200	2469.800	0.5	PASS
11N20SISO	Ant1	2412	16.600	2403.520	2420.120	0.5	PASS
		2437	16.280	2429.040	2445.320	0.5	PASS
		2462	16.680	2453.720	2470.400	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



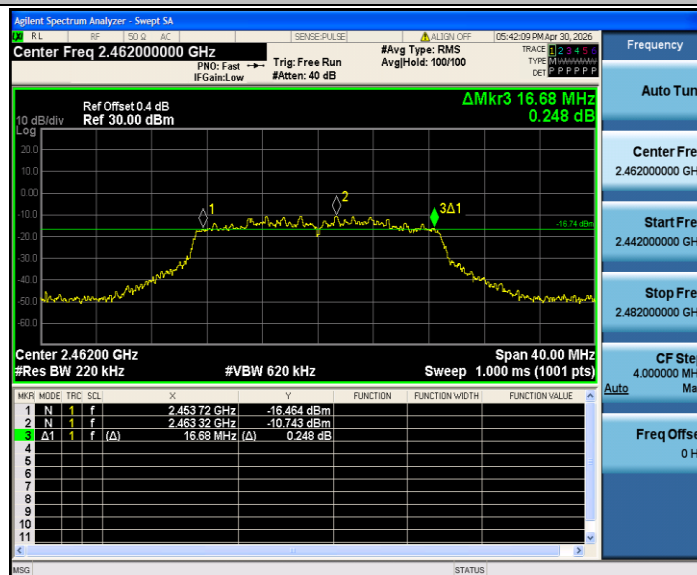
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



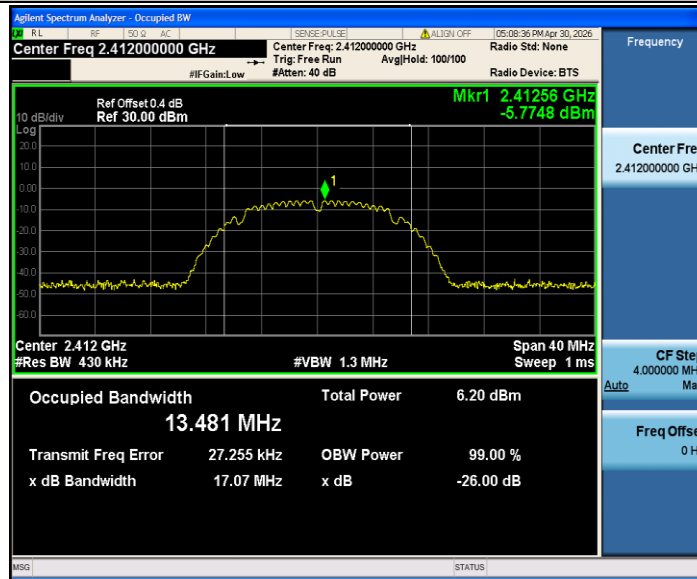
Appendix B: Occupied Channel Bandwidth

Test Result

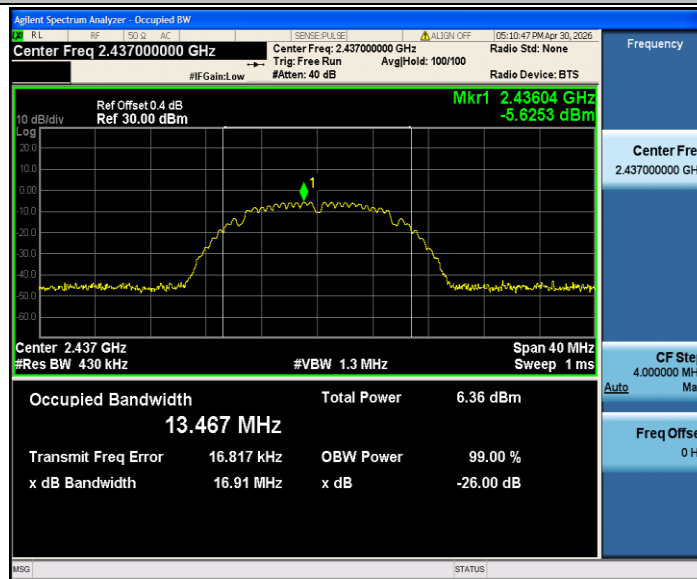
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.481	2405.2868	2418.7678	---	---
		2437	13.467	2430.2833	2443.7503	---	---
		2462	13.467	2455.2767	2468.7437	---	---
11G	Ant1	2412	16.805	2403.6802	2420.4852	---	---
		2437	16.840	2428.6154	2445.4554	---	---
		2462	16.928	2453.5561	2470.4841	---	---
11N20SISO	Ant1	2412	17.911	2403.0934	2421.0044	---	---
		2437	17.908	2428.0677	2445.9757	---	---
		2462	17.959	2452.9993	2470.9583	---	---

Test Graphs

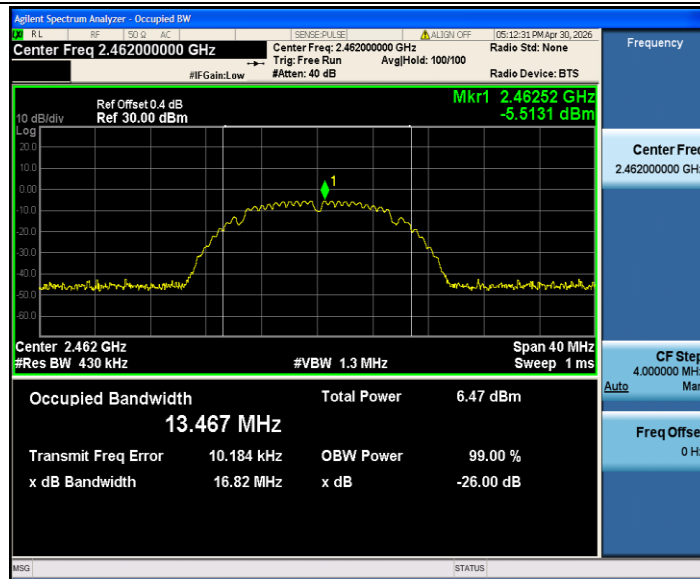
11B_Ant1_2412



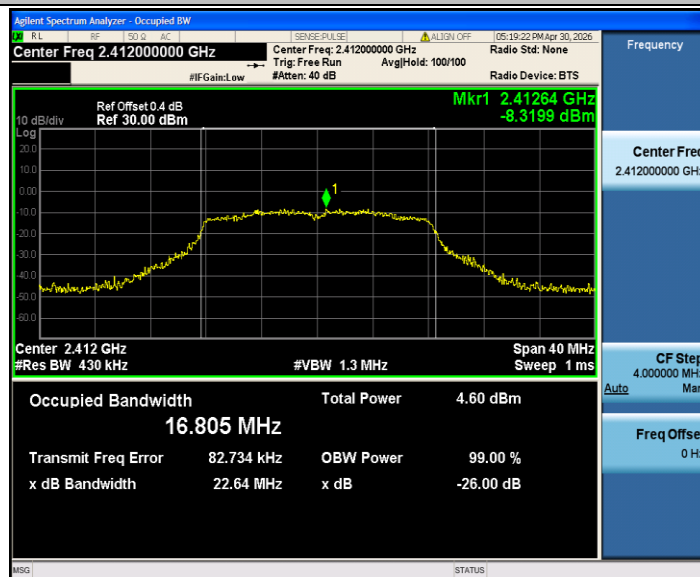
11B_Ant1_2437



11B_Ant1_2462



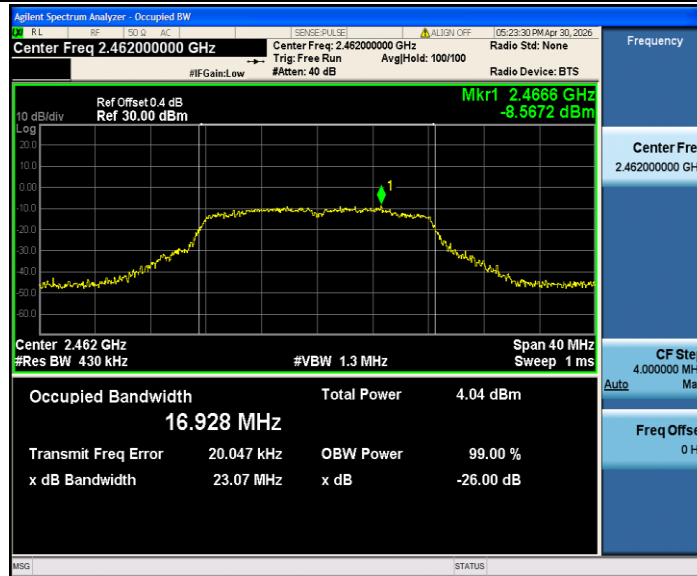
11G_Ant1_2412



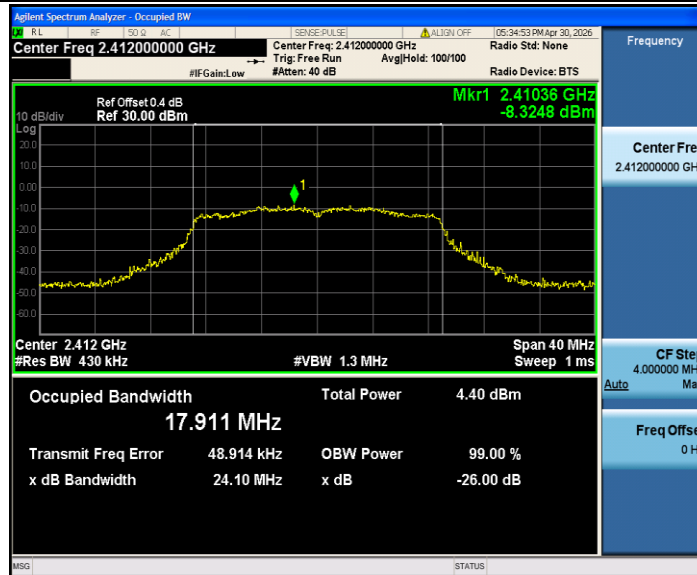
11G_Ant1_2437



11G_Ant1_2462



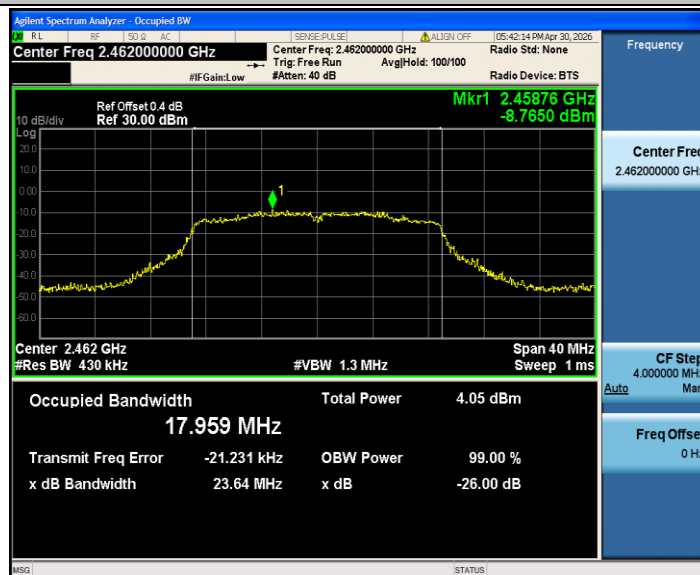
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	5.88	≤30.00	PASS
		2437	6.06	≤30.00	PASS
		2462	6.06	≤30.00	PASS
11G	Ant1	2412	5.46	≤30.00	PASS
		2437	5.39	≤30.00	PASS
		2462	5.04	≤30.00	PASS
11N20SISO	Ant1	2412	5.31	≤30.00	PASS
		2437	5.14	≤30.00	PASS
		2462	4.87	≤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	-20.02	≤8.00	PASS
		2437	-19.74	≤8.00	PASS
		2462	-19.53	≤8.00	PASS
11G	Ant1	2412	-26.74	≤8.00	PASS
		2437	-25.63	≤8.00	PASS
		2462	-26.61	≤8.00	PASS
11N20SISO	Ant1	2412	-26.50	≤8.00	PASS
		2437	-25.92	≤8.00	PASS
		2462	-26.29	≤8.00	PASS

Test Graphs

11B_Ant1_2412



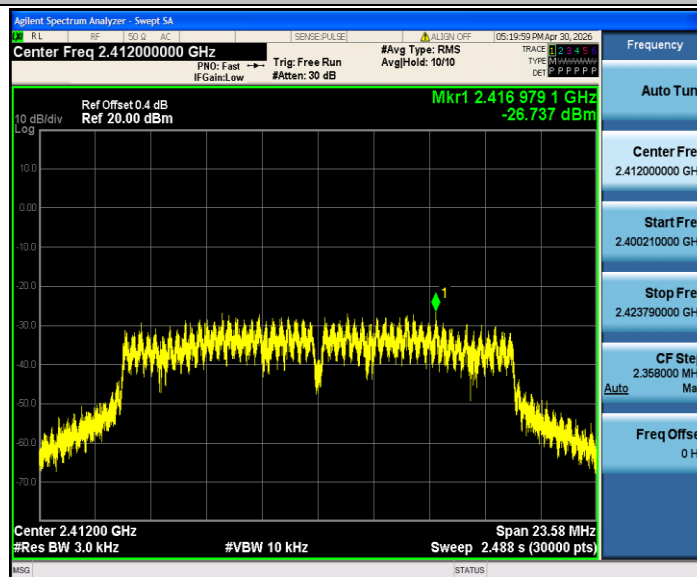
11B_Ant1_2437



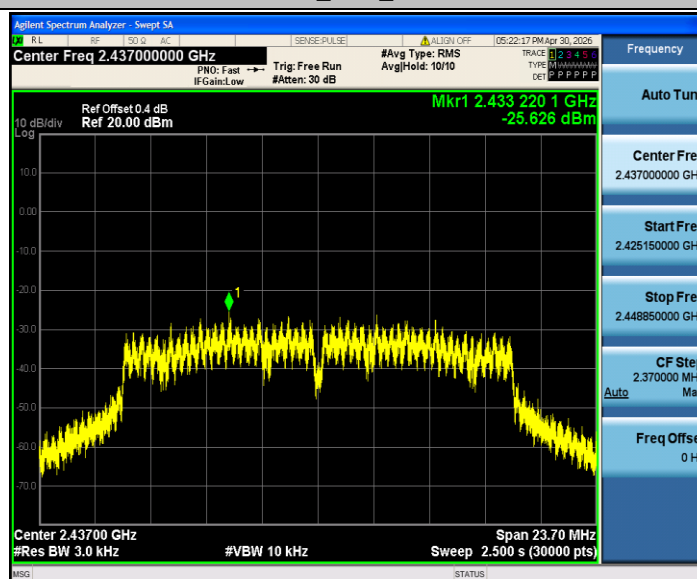
11B_Ant1_2462



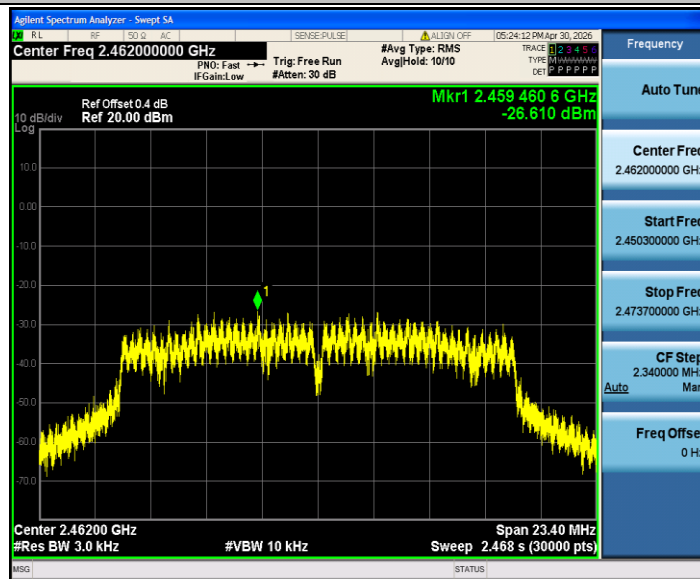
11G_Ant1_2412



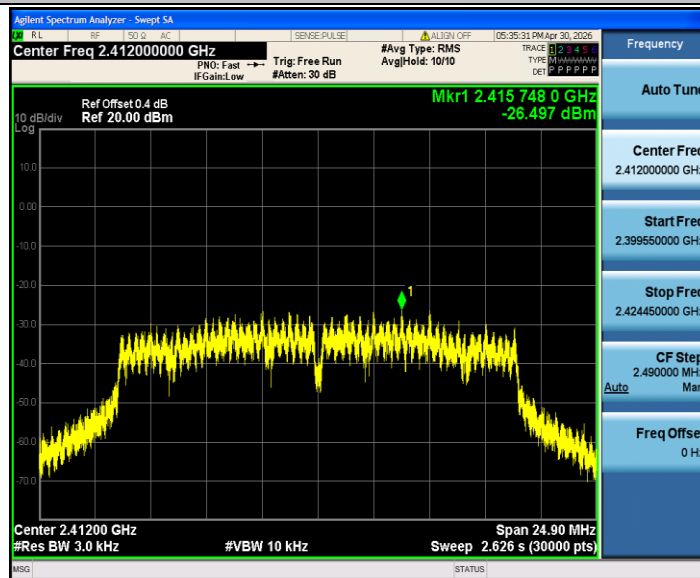
11G_Ant1_2437



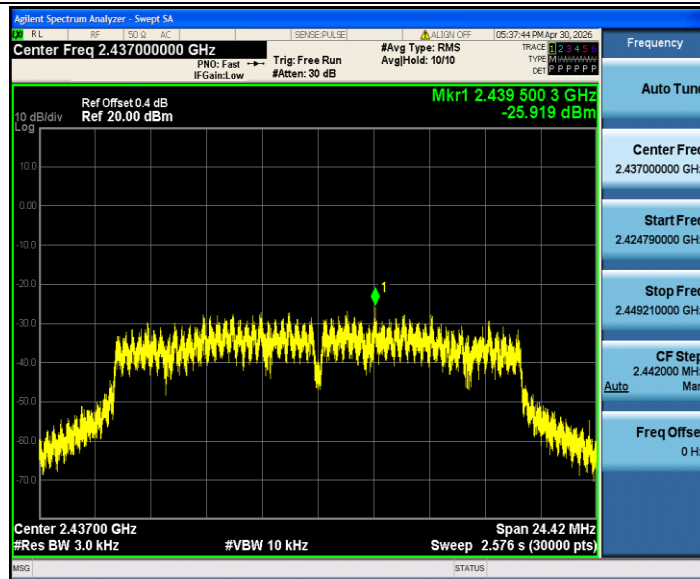
11G_Ant1_2462



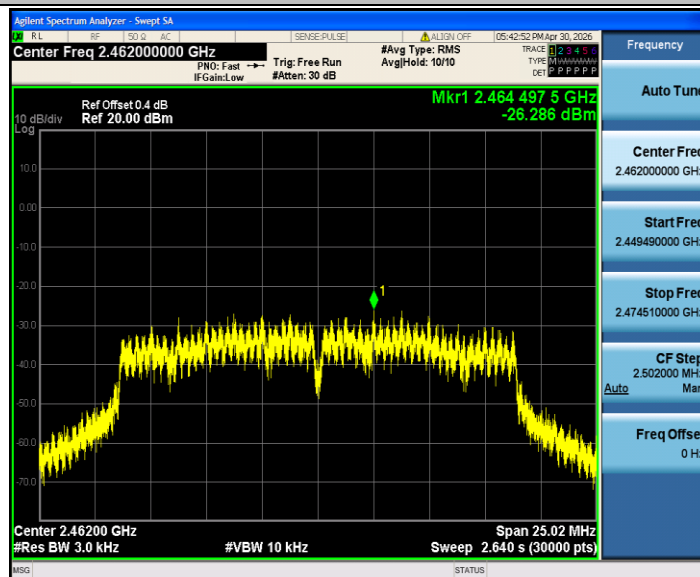
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



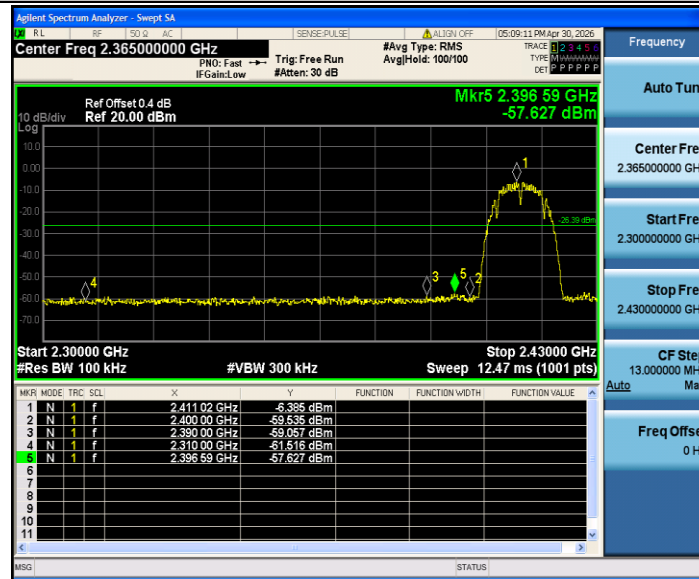
Appendix E: Band edge measurements

Test Result

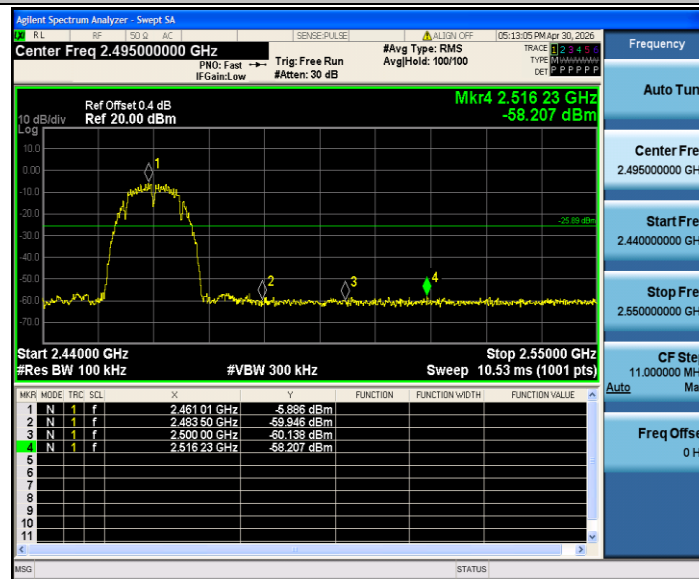
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-6.39	-57.63	≤-26.39	PASS
		High	2462	-5.89	-58.21	≤-25.89	PASS
11G	Ant1	Low	2412	-11.29	-43.55	≤-31.29	PASS
		High	2462	-11.41	-57.14	≤-31.41	PASS
11N20SISO	Ant1	Low	2412	-10.96	-41.85	≤-30.96	PASS
		High	2462	-11.37	-57.87	≤-31.37	PASS

Test Graphs

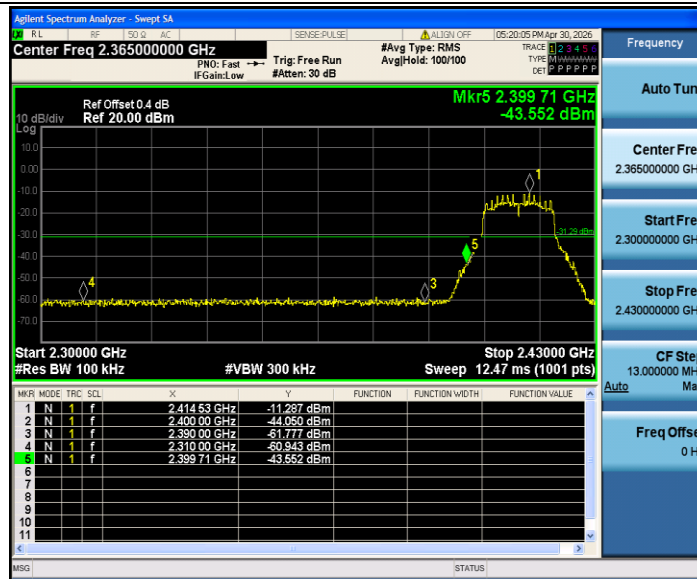
11B_Ant1_Low_2412



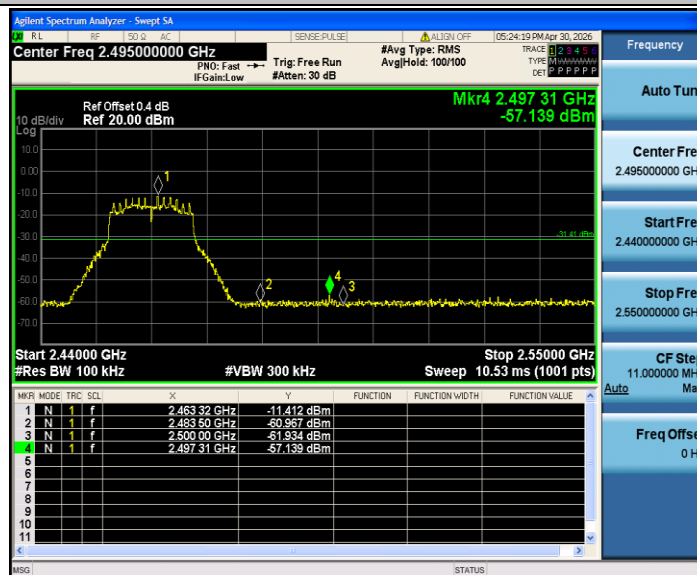
11B_Ant1_High_2462



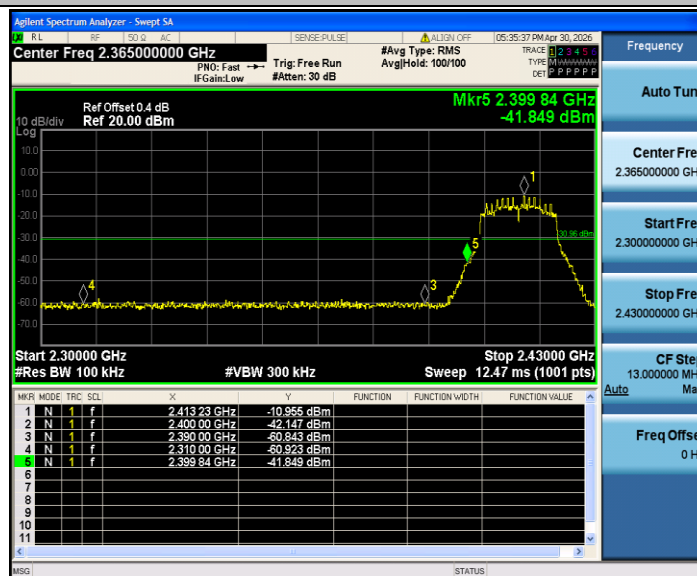
11G_Ant1_Low_2412



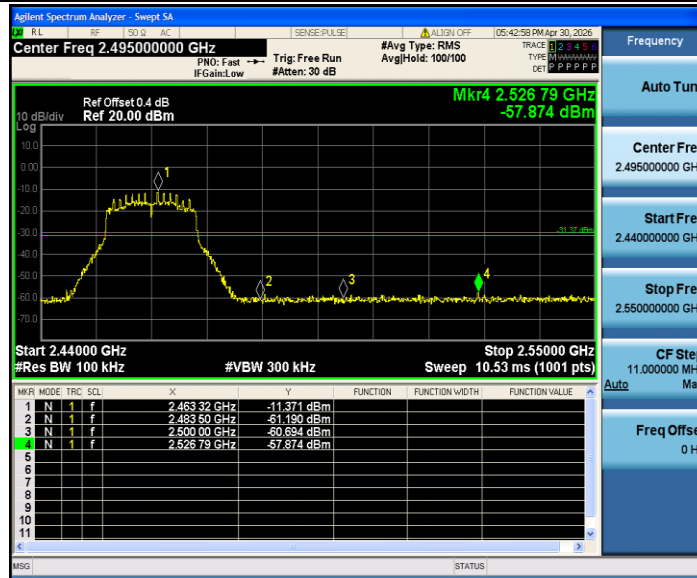
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



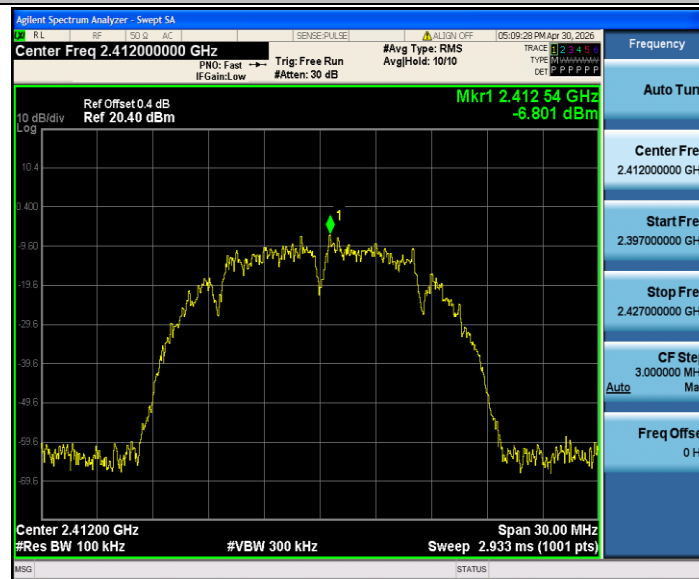
Appendix F: Conducted Spurious Emission

Test Result

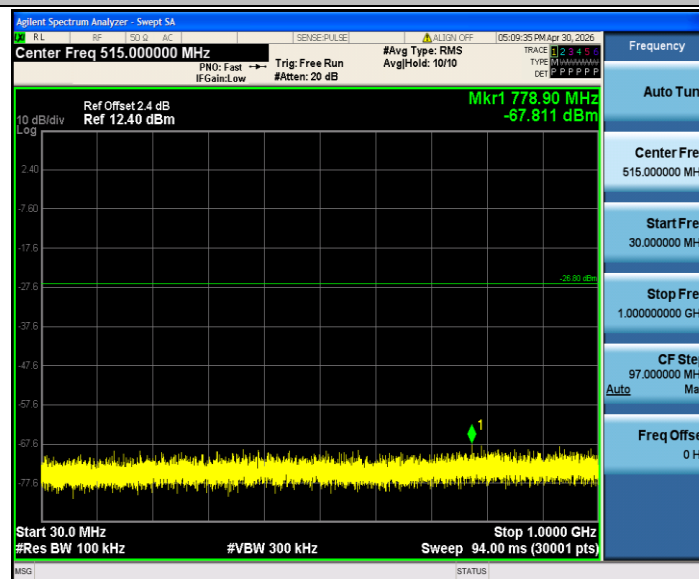
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-6.80	-6.80	---	PASS
			30~1000	-6.80	-67.81	≤-26.8	PASS
			1000~26500	-6.80	-56.02	≤-26.8	PASS
		2437	Reference	-6.44	-6.44	---	PASS
			30~1000	-6.44	-68.5	≤-26.44	PASS
			1000~26500	-6.44	-53.75	≤-26.44	PASS
		2462	Reference	-7.74	-7.74	---	PASS
			30~1000	-7.74	-68.44	≤-27.74	PASS
			1000~26500	-7.74	-55.14	≤-27.74	PASS
11G	Ant1	2412	Reference	-11.12	-11.12	---	PASS
			30~1000	-11.12	-65.86	≤-31.12	PASS
			1000~26500	-11.12	-55.71	≤-31.12	PASS
		2437	Reference	-11.60	-11.60	---	PASS
			30~1000	-11.60	-68.38	≤-31.6	PASS
			1000~26500	-11.60	-55.74	≤-31.6	PASS
		2462	Reference	-12.09	-12.09	---	PASS
			30~1000	-12.09	-55.49	≤-32.09	PASS
			1000~26500	-12.09	-54.89	≤-32.09	PASS
11N20SISO	Ant1	2412	Reference	-11.42	-11.42	---	PASS
			30~1000	-11.42	-67.06	≤-31.42	PASS
			1000~26500	-11.42	-56.12	≤-31.42	PASS
		2437	Reference	-12.54	-12.54	---	PASS
			30~1000	-12.54	-67.91	≤-32.54	PASS
			1000~26500	-12.54	-55.14	≤-32.54	PASS
		2462	Reference	-12.28	-12.28	---	PASS
			30~1000	-12.28	-68.56	≤-32.28	PASS
			1000~26500	-12.28	-54.62	≤-32.28	PASS

Test Graphs

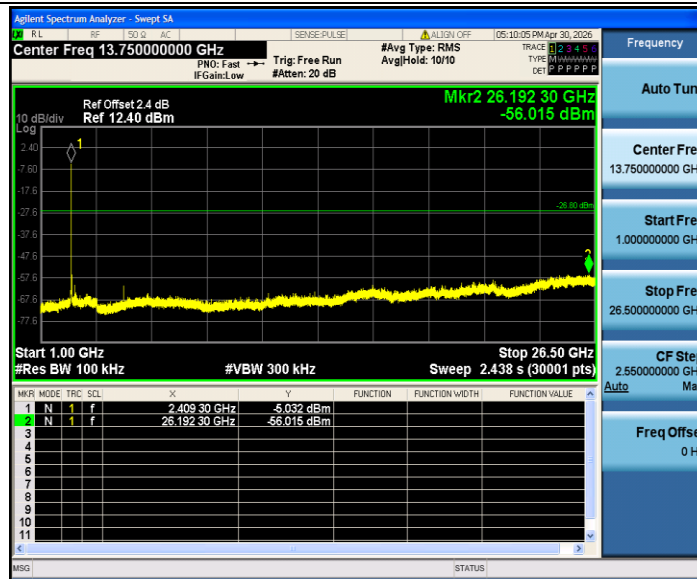
11B_Ant1_2412_0~Reference



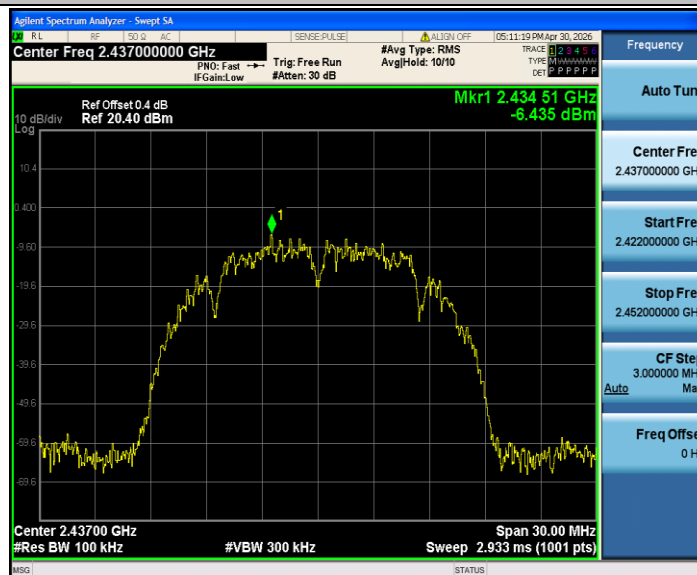
11B_Ant1_2412_30~1000



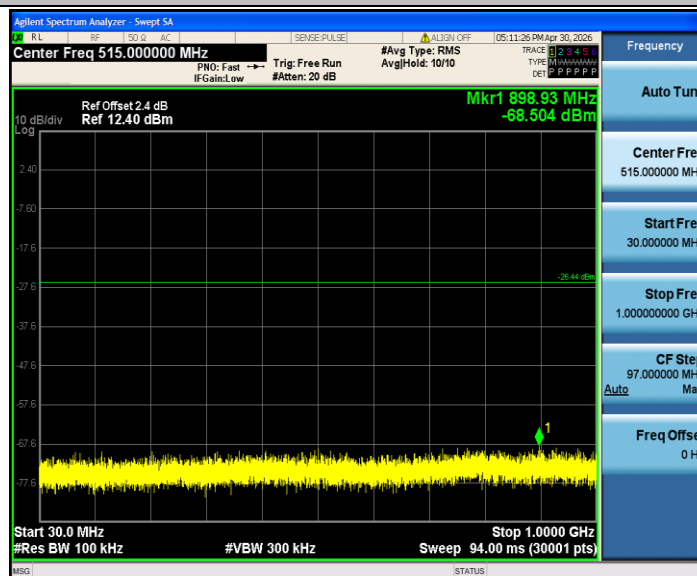
11B_Ant1_2412_1000~26500



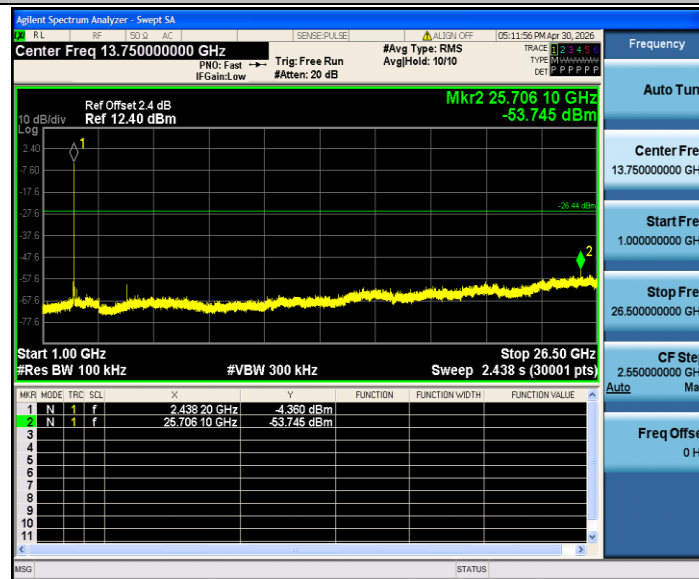
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



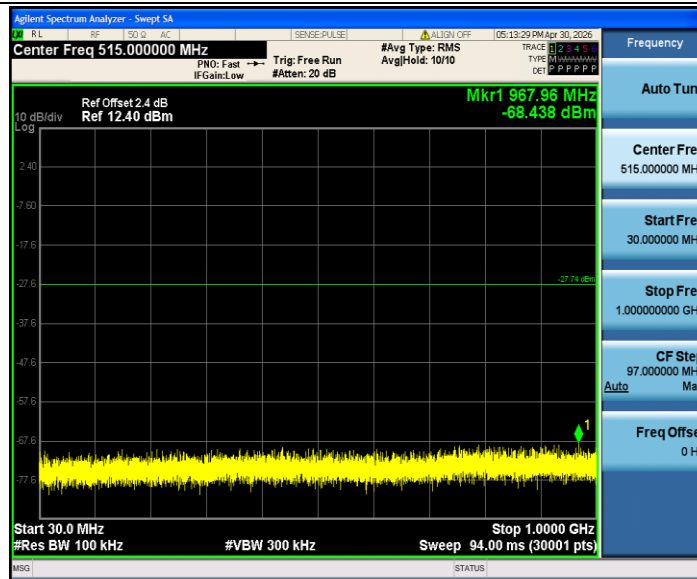
11B_Ant1_2437_1000~26500



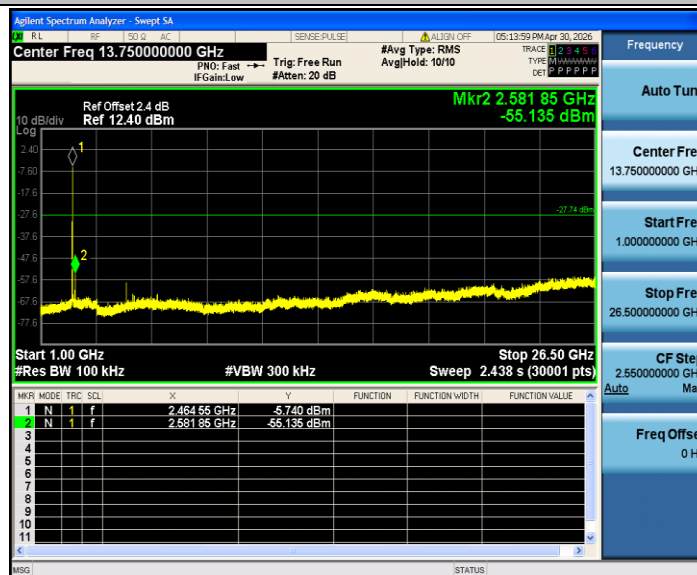
11B_Ant1_2462_0~Reference



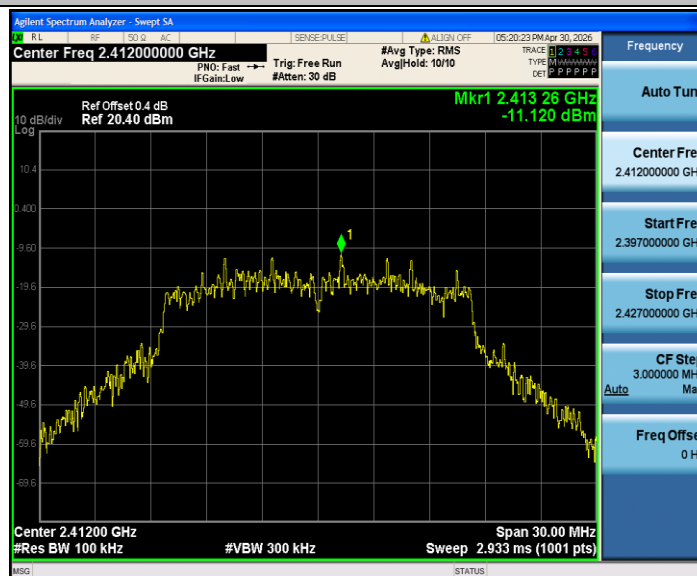
11B_Ant1_2462_30~1000



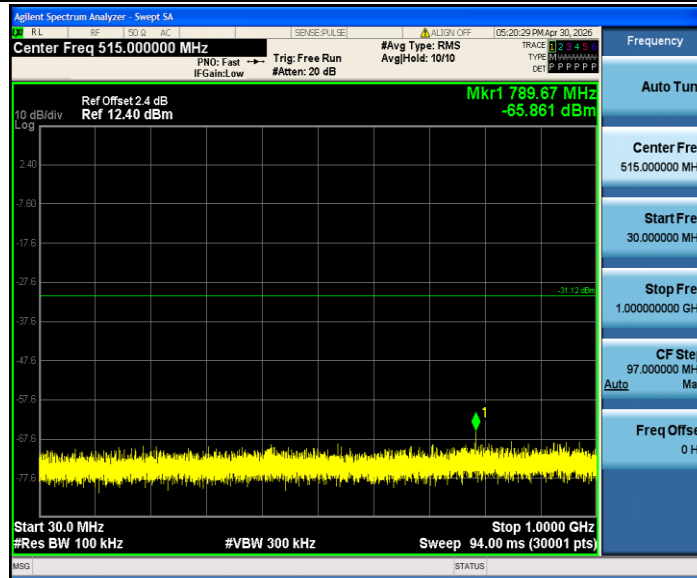
11B_Ant1_2462_1000~26500



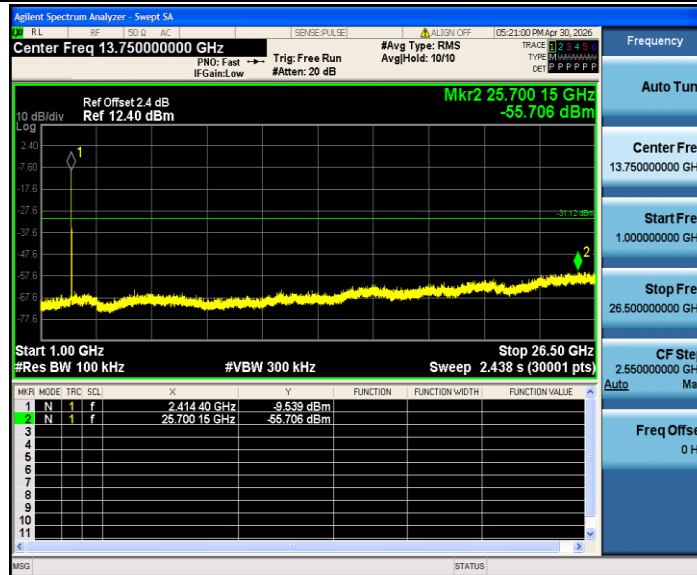
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



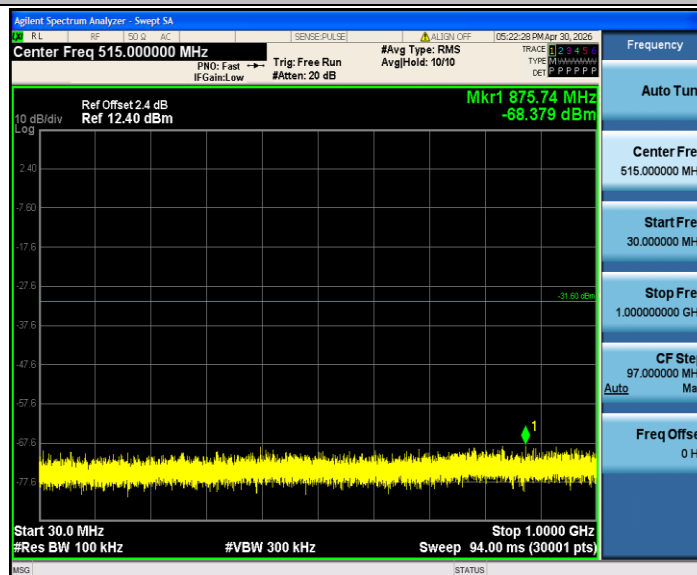
11G_Ant1_2412_1000~26500



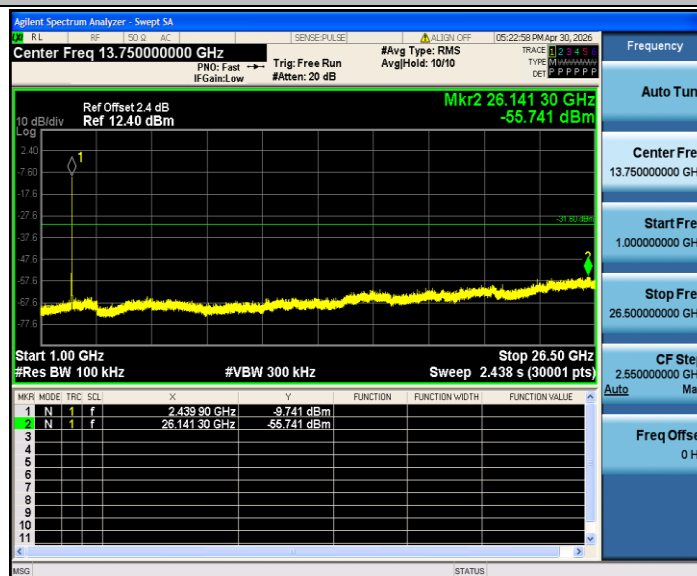
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



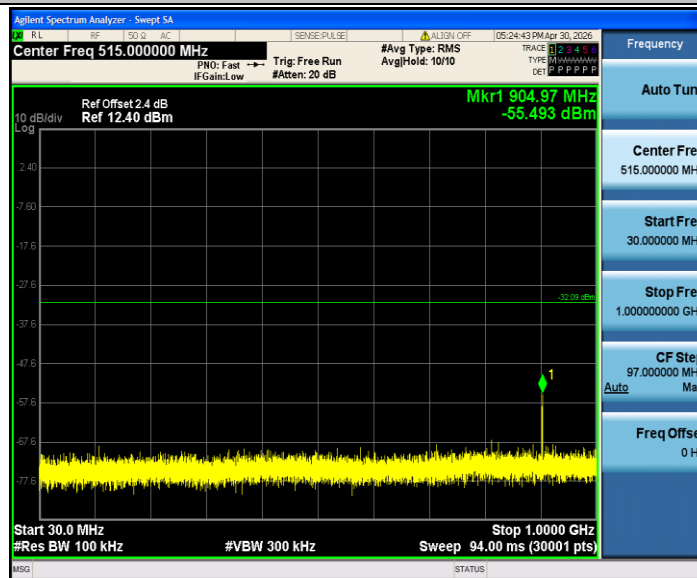
11G_Ant1_2437_1000~26500



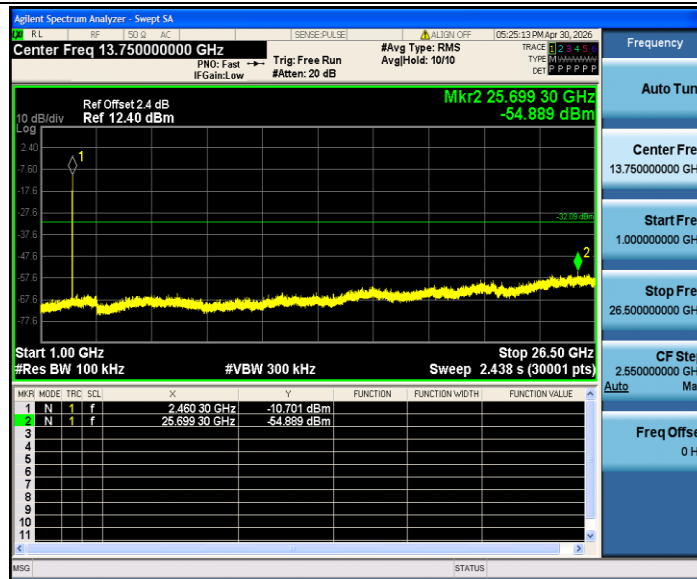
11G_Ant1_2462_0~Reference



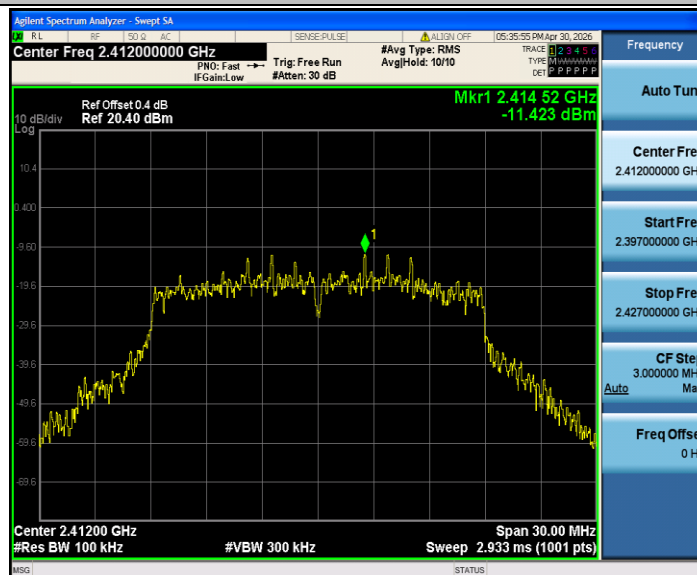
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

