

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2A4VG-SDRGBIC

Company : Changsha Henglei Imp. & Exp. Co. Ltd

EUT : RGBIC CONTROLLER

Model Number : HL-CONTROLLER-RGBIC

Report No. : CTA26081000102

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	10.240	2431.920	2442.160	0.5	PASS
		2462	10.200	2456.920	2467.120	0.5	PASS
11G	Ant1	2412	15.840	2404.080	2419.920	0.5	PASS
		2437	15.800	2429.200	2445.000	0.5	PASS
		2462	15.960	2454.080	2470.040	0.5	PASS
11N20SISO	Ant1	2412	16.320	2403.480	2419.800	0.5	PASS
		2437	16.880	2428.480	2445.360	0.5	PASS
		2462	16.360	2454.080	2470.440	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



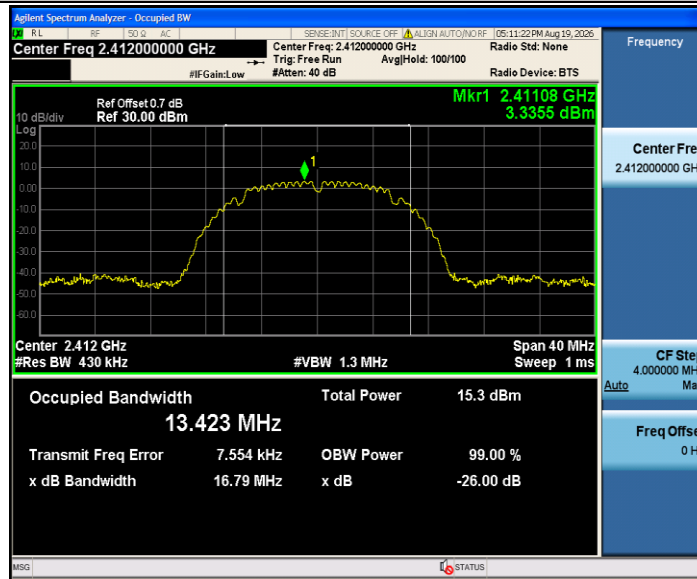
Appendix B: Occupied Channel Bandwidth

Test Result

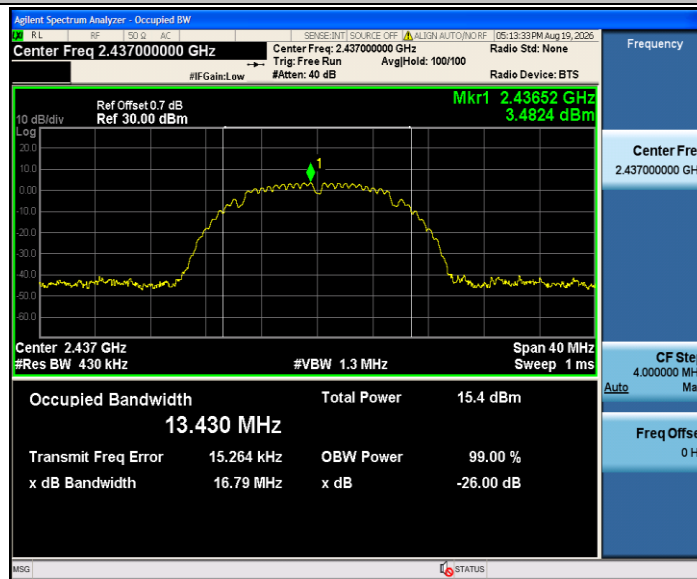
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.423	2405.2961	2418.7191	---	---
		2437	13.430	2430.3003	2443.7303	---	---
		2462	13.420	2455.3166	2468.7366	---	---
11G	Ant1	2412	16.867	2403.5874	2420.4544	---	---
		2437	16.884	2428.6093	2445.4933	---	---
		2462	16.811	2453.6428	2470.4538	---	---
11N20SISO	Ant1	2412	17.904	2403.0424	2420.9464	---	---
		2437	17.819	2428.1065	2445.9255	---	---
		2462	17.852	2453.1133	2470.9653	---	---

Test Graphs

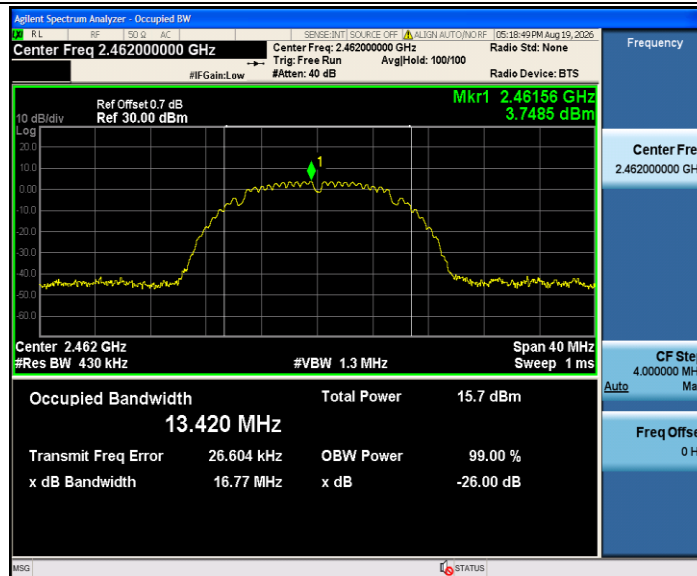
11B_Ant1_2412



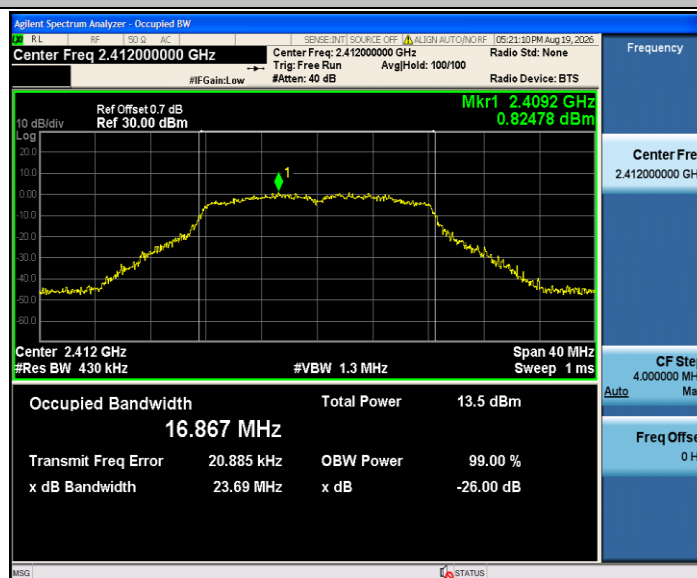
11B_Ant1_2437



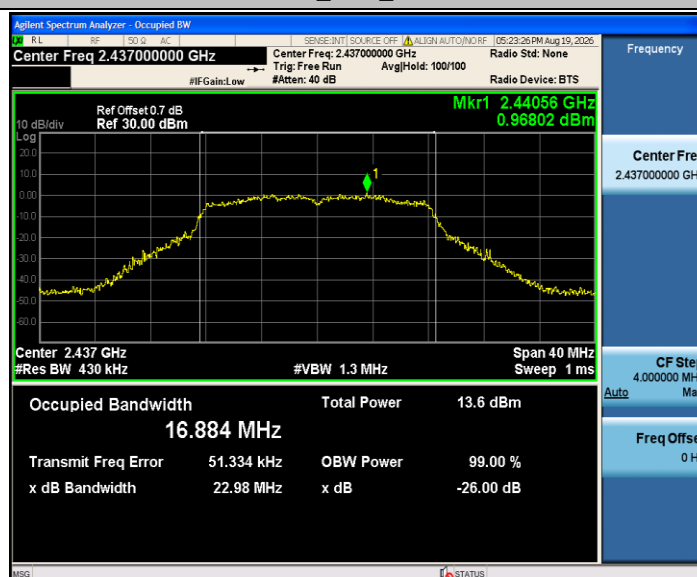
11B_Ant1_2462



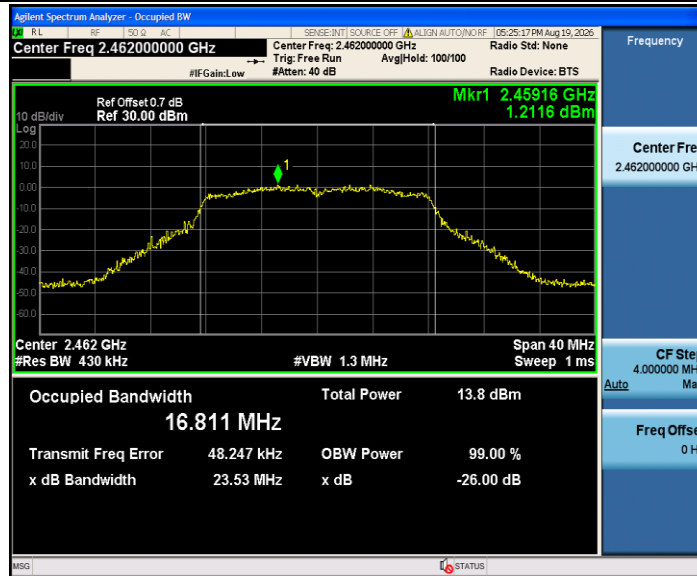
11G_Ant1_2412



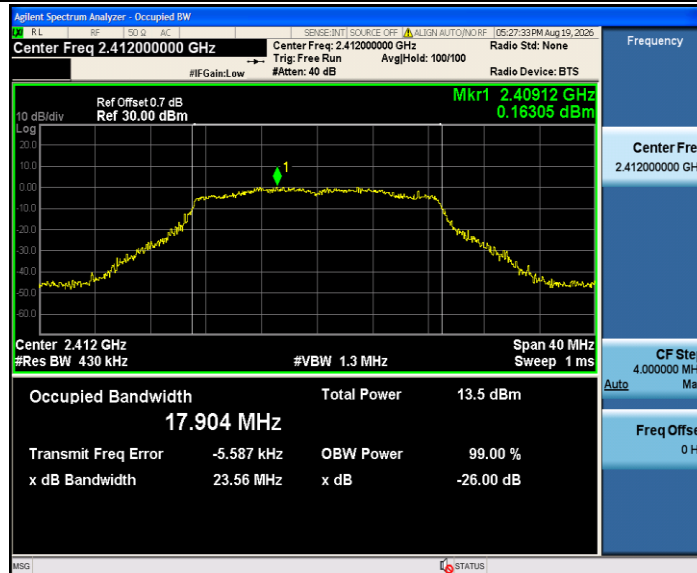
11G_Ant1_2437



11G_Ant1_2462



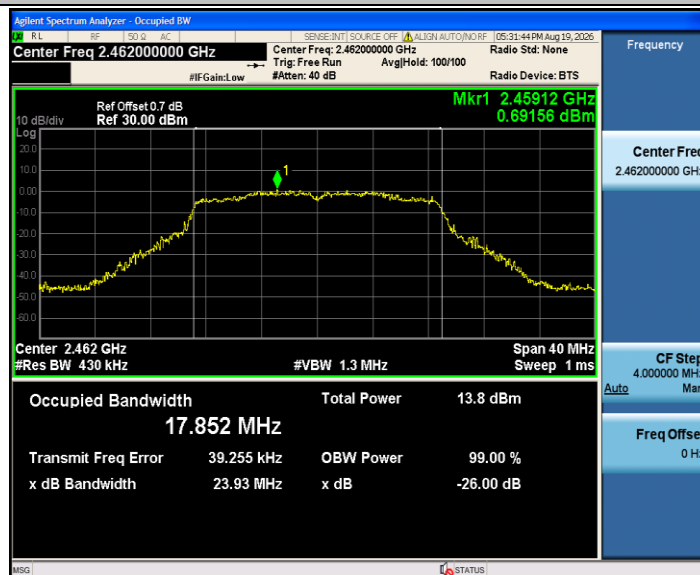
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.92	≤30.00	PASS
		2437	15.11	≤30.00	PASS
		2462	15.25	≤30.00	PASS
11G	Ant1	2412	14.48	≤30.00	PASS
		2437	14.60	≤30.00	PASS
		2462	14.74	≤30.00	PASS
11N20SISO	Ant1	2412	14.30	≤30.00	PASS
		2437	14.40	≤30.00	PASS
		2462	14.55	≤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	-11.12	≤8.00	PASS
		2437	-10.84	≤8.00	PASS
		2462	-10.41	≤8.00	PASS
11G	Ant1	2412	-16.97	≤8.00	PASS
		2437	-16.42	≤8.00	PASS
		2462	-17.15	≤8.00	PASS
11N20SISO	Ant1	2412	-15.26	≤8.00	PASS
		2437	-17.09	≤8.00	PASS
		2462	-17.45	≤8.00	PASS

Test Graphs

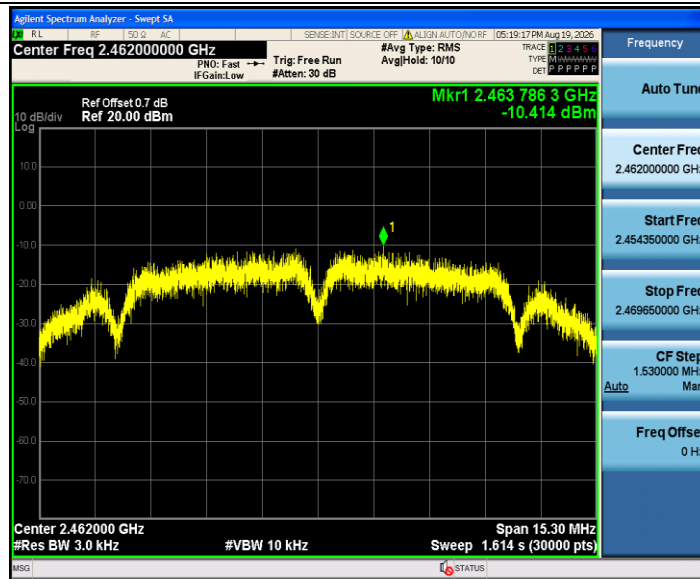
11B_Ant1_2412



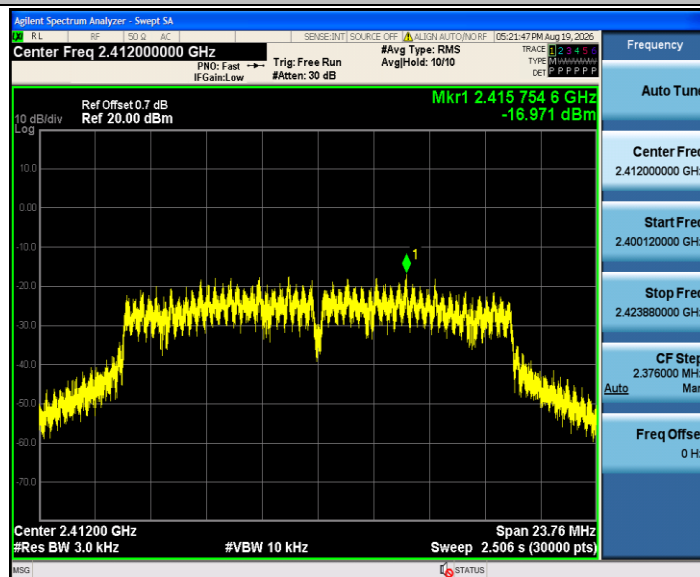
11B_Ant1_2437



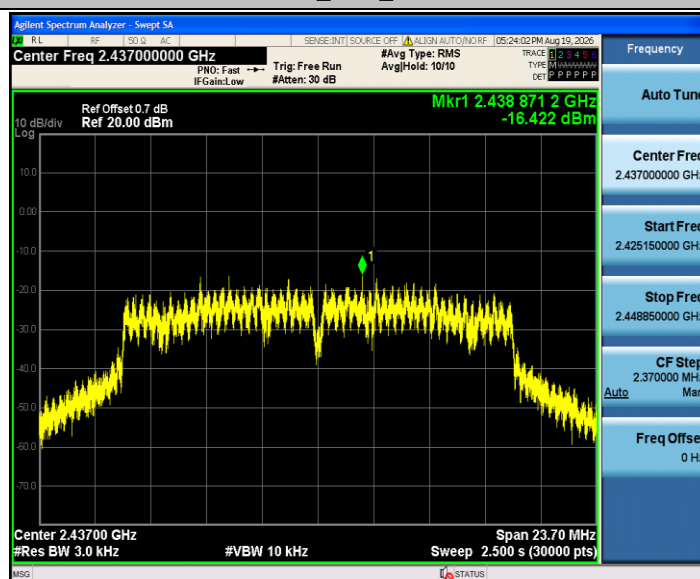
11B_Ant1_2462



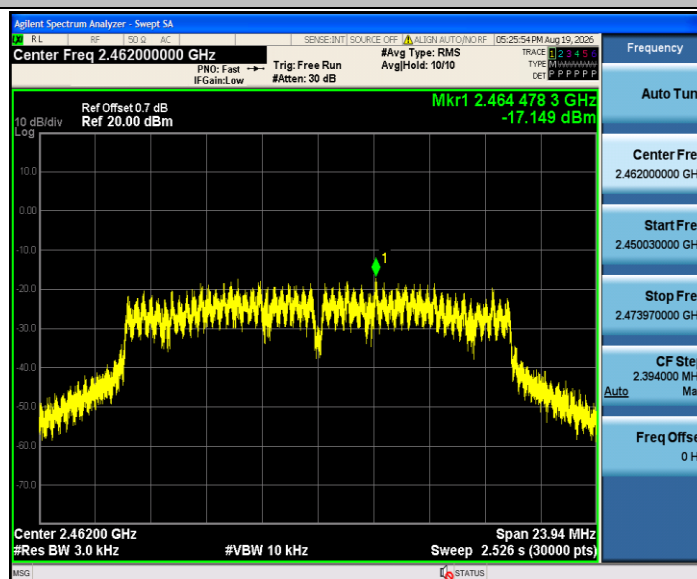
11G_Ant1_2412



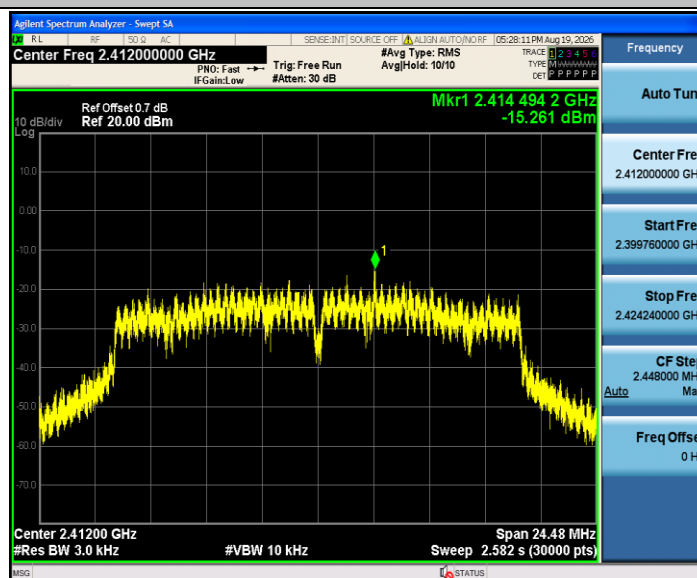
11G_Ant1_2437



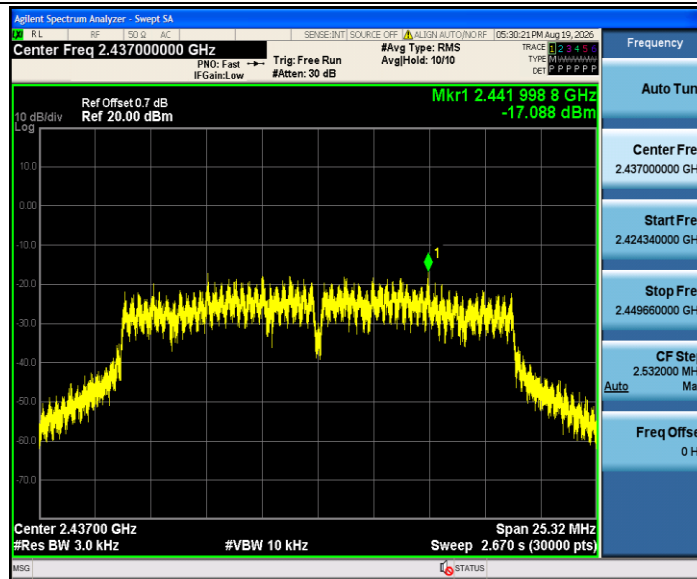
11G_Ant1_2462



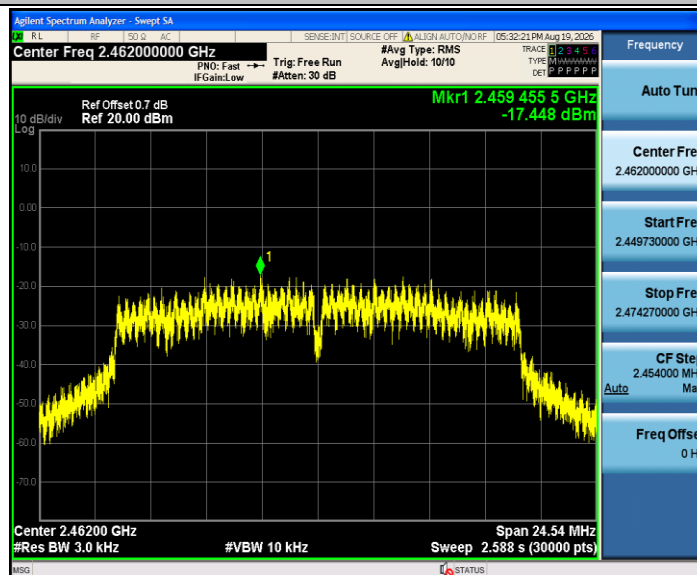
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



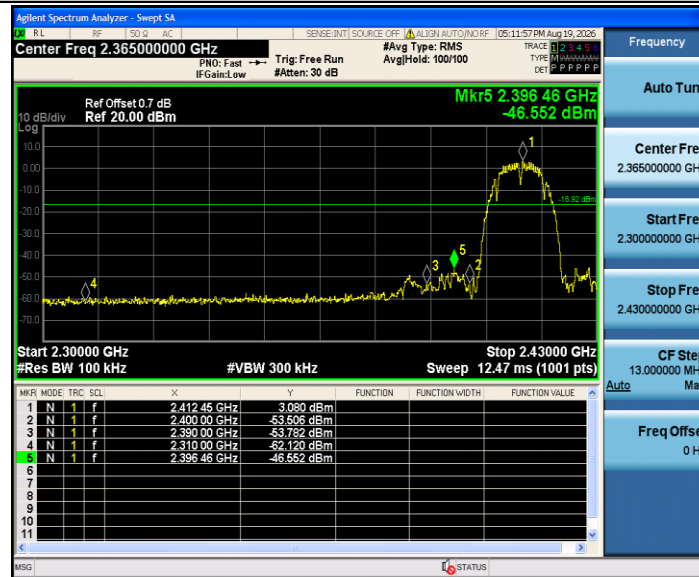
Appendix E: Band edge measurements

Test Result

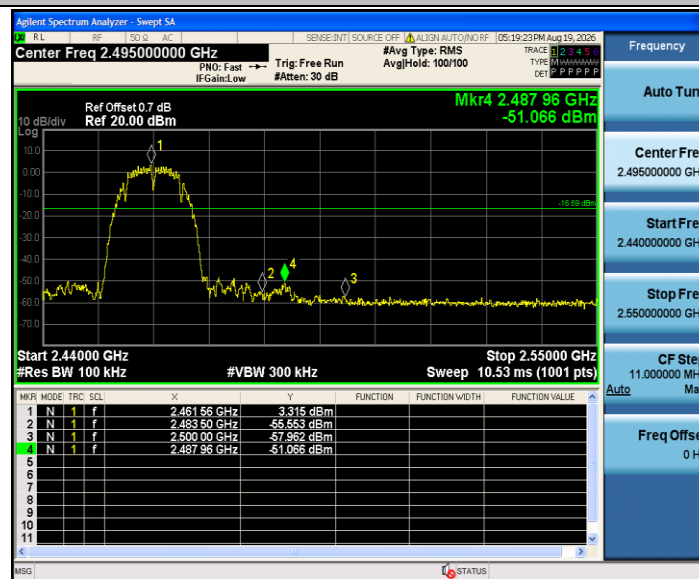
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	3.08	-46.55	≤-16.92	PASS
		High	2462	3.32	-51.07	≤-16.69	PASS
11G	Ant1	Low	2412	-1.89	-32.17	≤-21.89	PASS
		High	2462	-1.69	-58.16	≤-21.69	PASS
11N20SISO	Ant1	Low	2412	-2.23	-34.49	≤-22.23	PASS
		High	2462	-1.86	-57.43	≤-21.86	PASS

Test Graphs

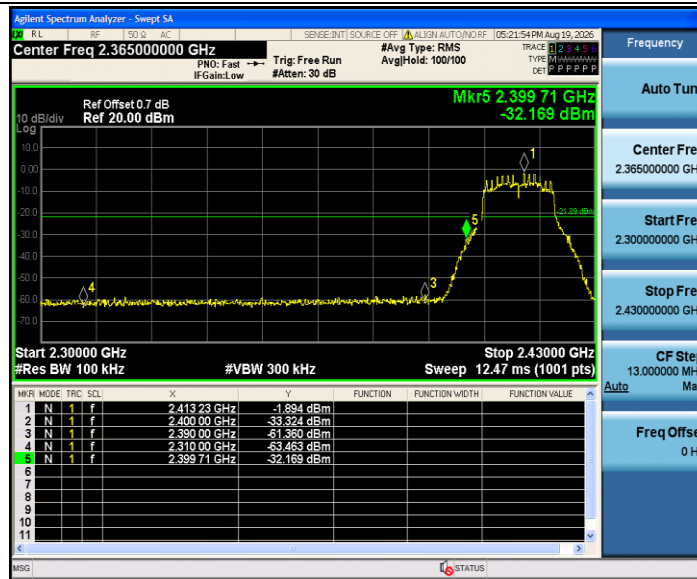
11B_Ant1_Low_2412



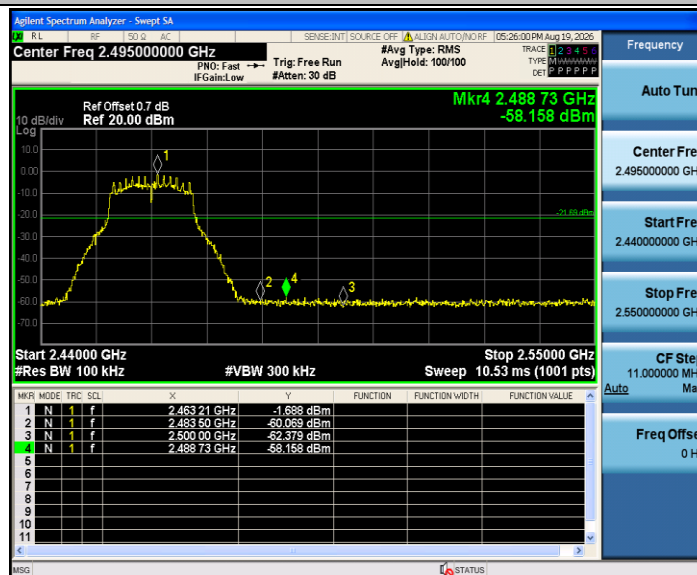
11B_Ant1_High_2462



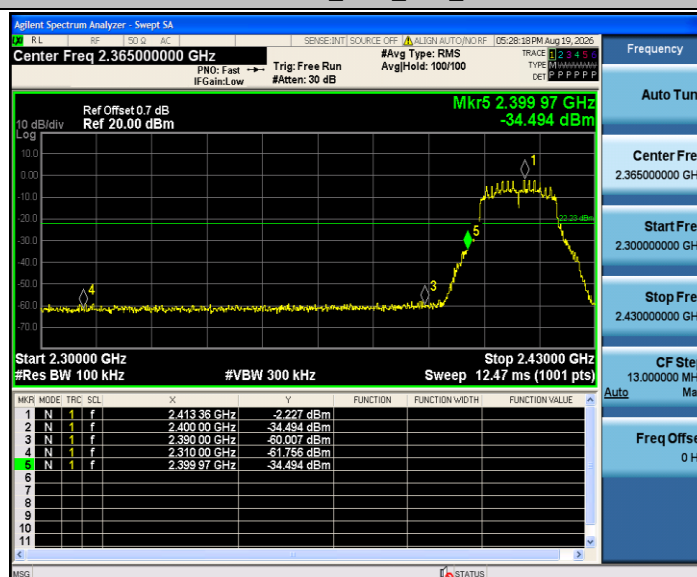
11G_Ant1_Low_2412



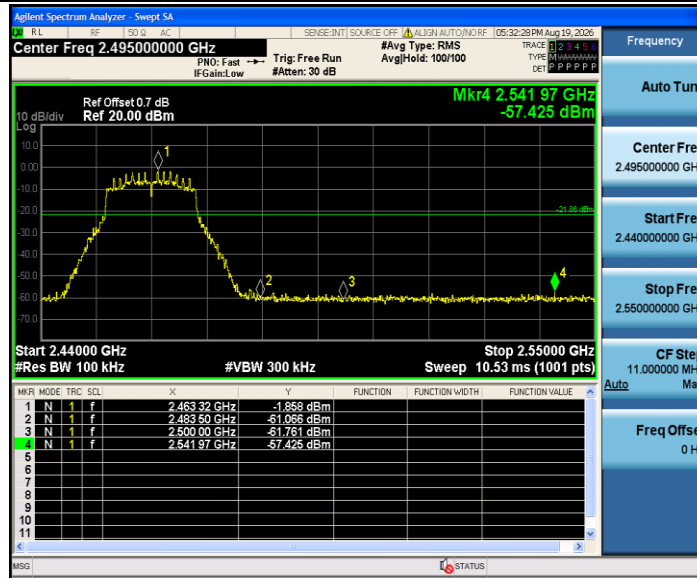
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



Appendix F: Conducted Spurious Emission

Test Result

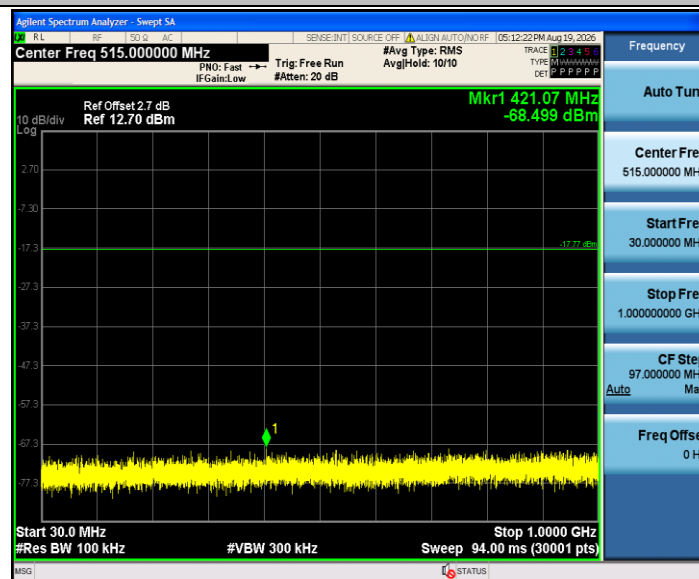
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.23	2.23	---	PASS
			30~1000	2.23	-68.5	≤-17.77	PASS
			1000~26500	2.23	-46.59	≤-17.77	PASS
		2437	Reference	2.15	2.15	---	PASS
			30~1000	2.15	-68.03	≤-17.85	PASS
			1000~26500	2.15	-46.17	≤-17.85	PASS
		2462	Reference	2.10	2.10	---	PASS
			30~1000	2.10	-67.88	≤-17.9	PASS
			1000~26500	2.10	-46.34	≤-17.9	PASS
11G	Ant1	2412	Reference	-1.95	-1.95	---	PASS
			30~1000	-1.95	-68.45	≤-21.95	PASS
			1000~26500	-1.95	-46.54	≤-21.95	PASS
		2437	Reference	-2.18	-2.18	---	PASS
			30~1000	-2.18	-68.36	≤-22.18	PASS
			1000~26500	-2.18	-46.14	≤-22.18	PASS
		2462	Reference	-2.21	-2.21	---	PASS
			30~1000	-2.21	-68.24	≤-22.21	PASS
			1000~26500	-2.21	-46.01	≤-22.21	PASS
11N20SISO	Ant1	2412	Reference	-2.57	-2.57	---	PASS
			30~1000	-2.57	-68.24	≤-22.57	PASS
			1000~26500	-2.57	-46.47	≤-22.57	PASS
		2437	Reference	-1.84	-1.84	---	PASS
			30~1000	-1.84	-66.71	≤-21.84	PASS
			1000~26500	-1.84	-45.9	≤-21.84	PASS
		2462	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-68.32	≤-22.5	PASS
			1000~26500	-2.50	-46.23	≤-22.5	PASS

Test Graphs

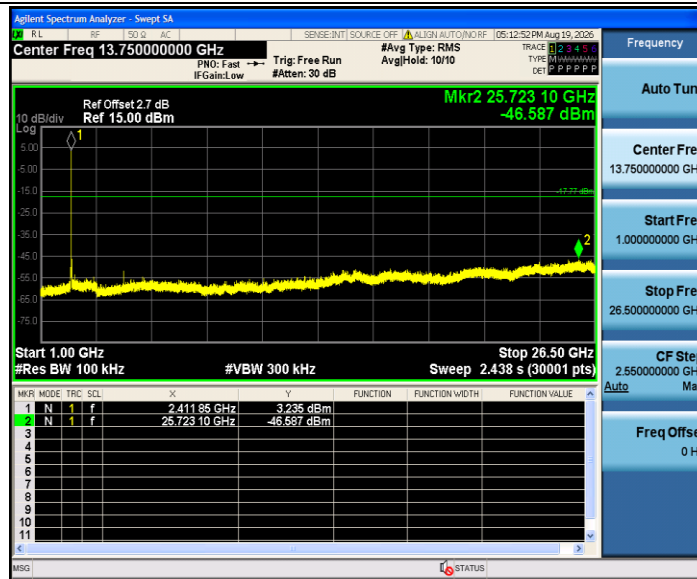
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



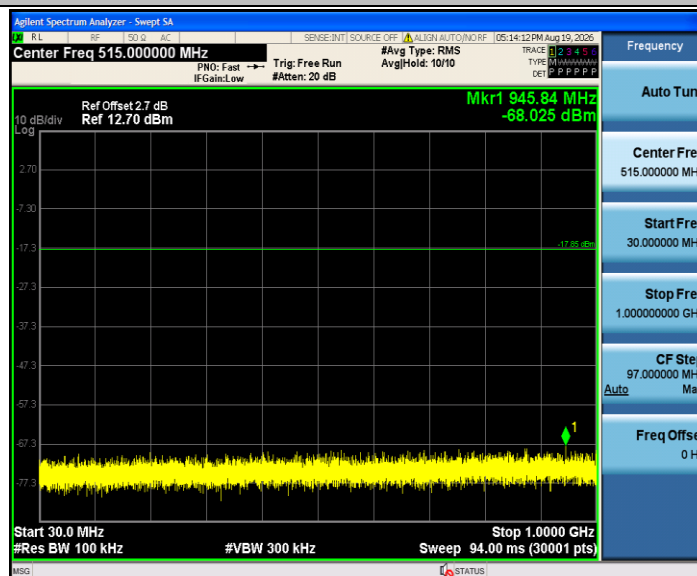
11B_Ant1_2412_1000~26500



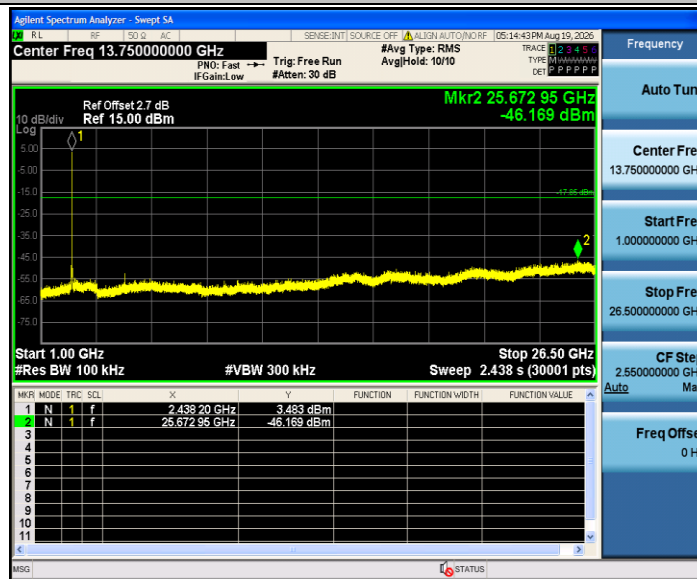
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



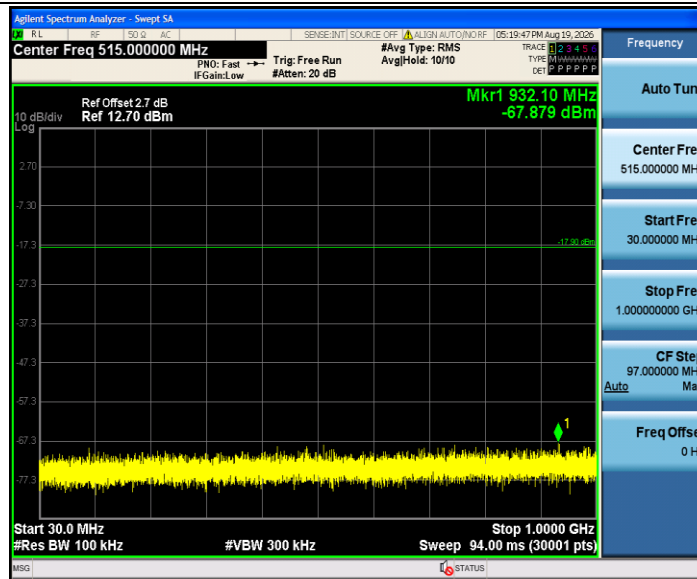
11B_Ant1_2437_1000~26500



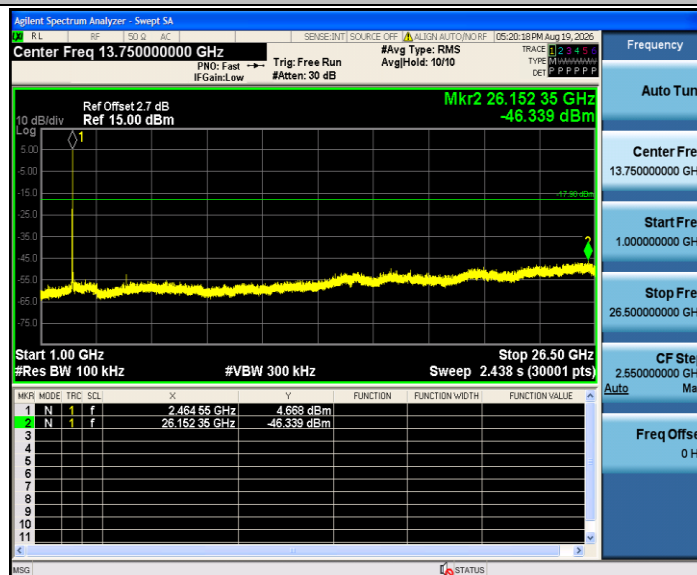
11B_Ant1_2462_0~Reference



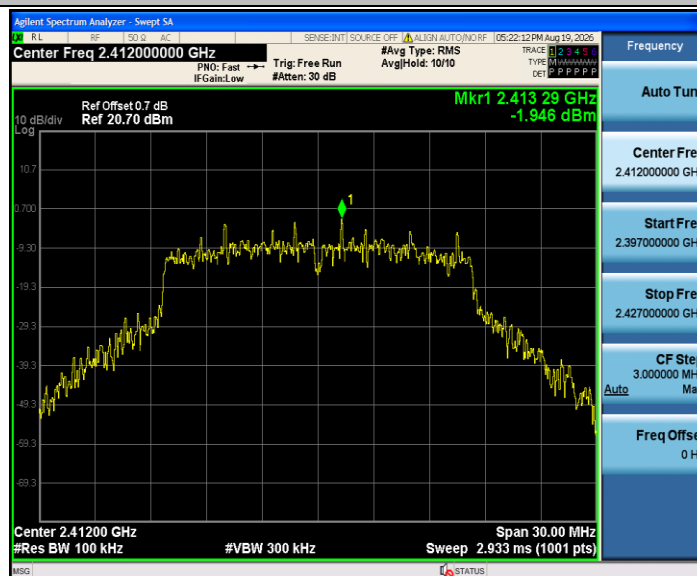
11B_Ant1_2462_30~1000



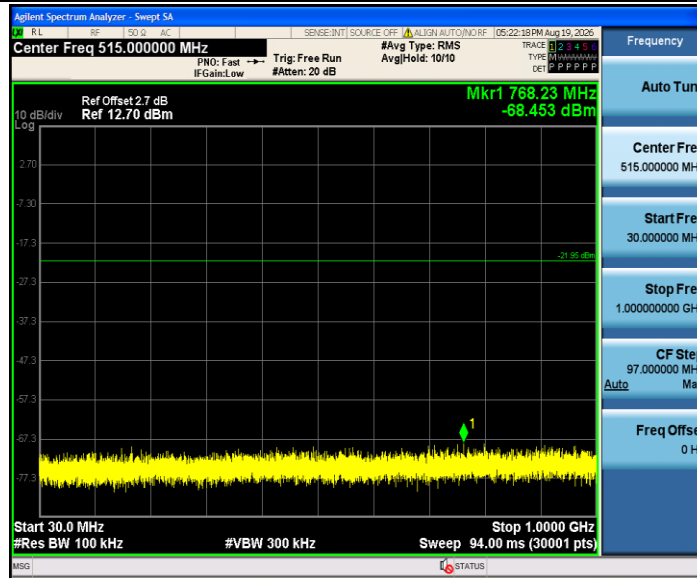
11B_Ant1_2462_1000~26500



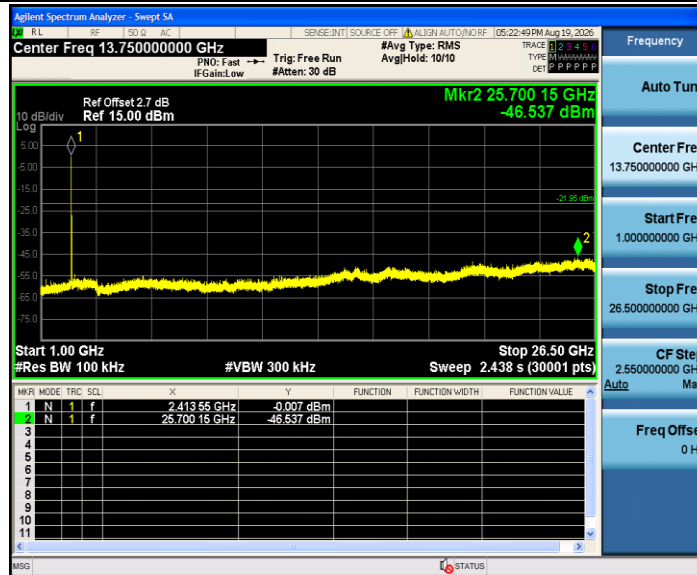
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



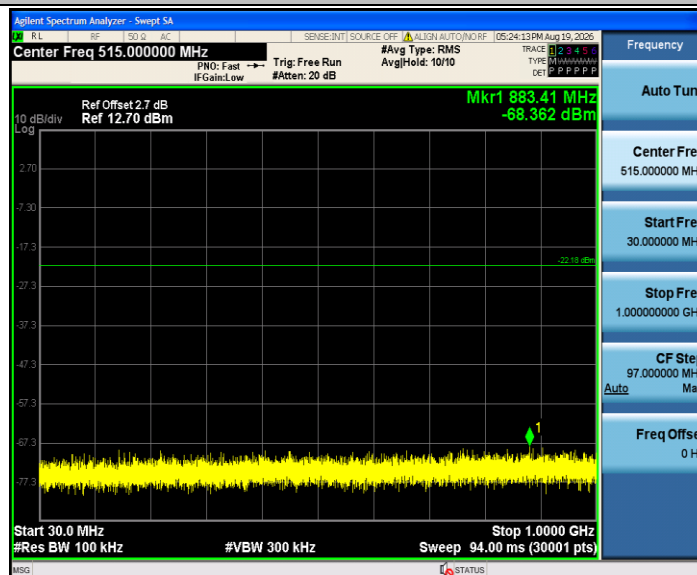
11G_Ant1_2412_1000~26500



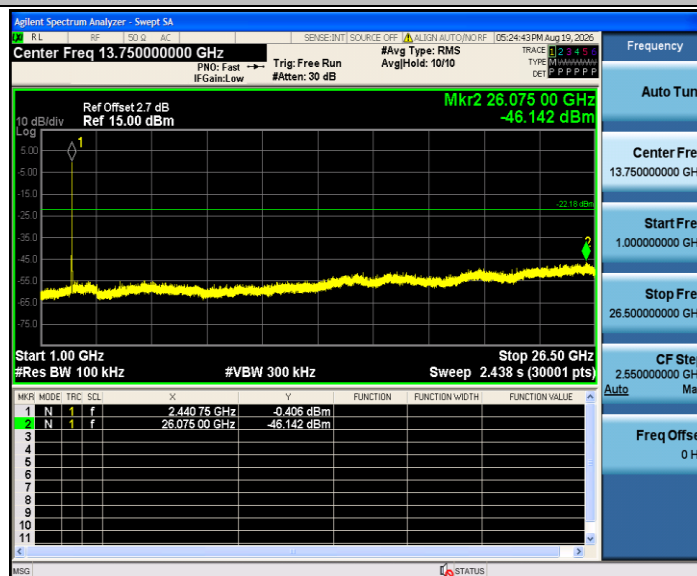
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



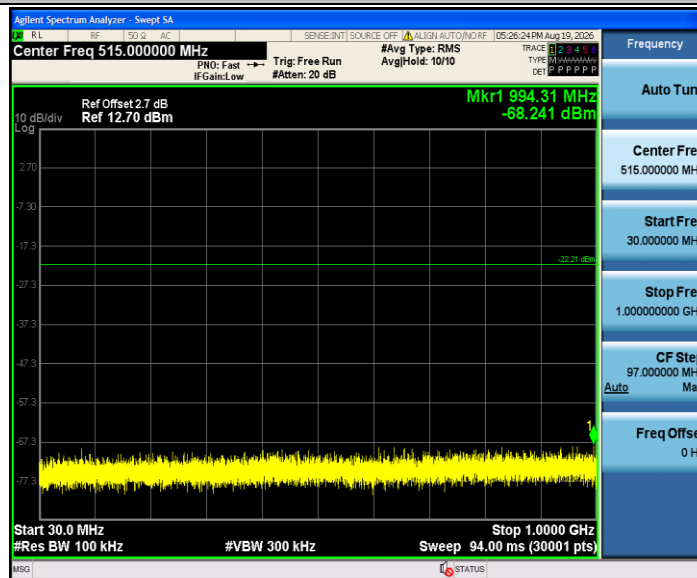
11G_Ant1_2437_1000~26500



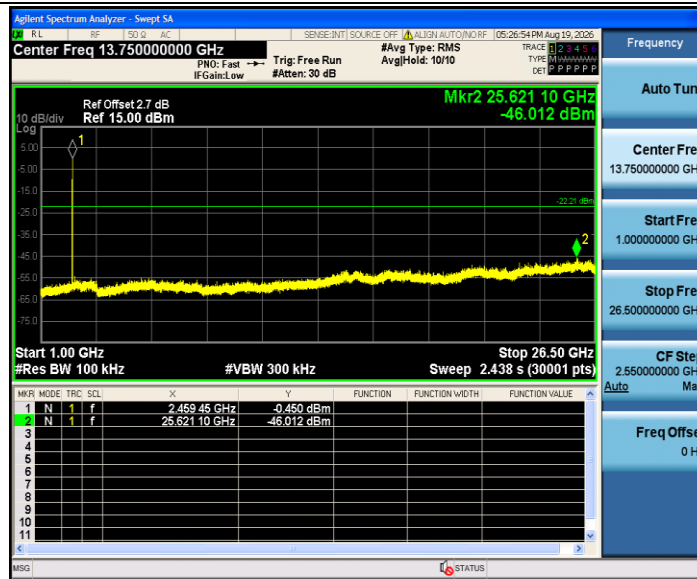
11G_Ant1_2462_0~Reference



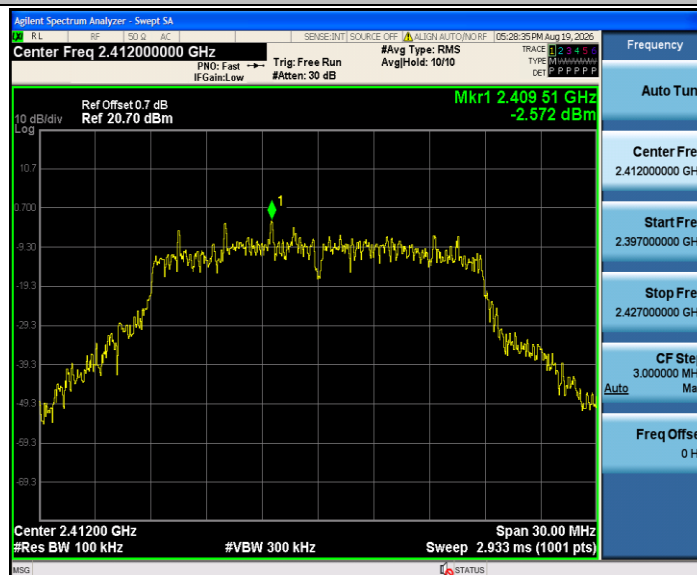
11G_Ant1_2462_30~1000



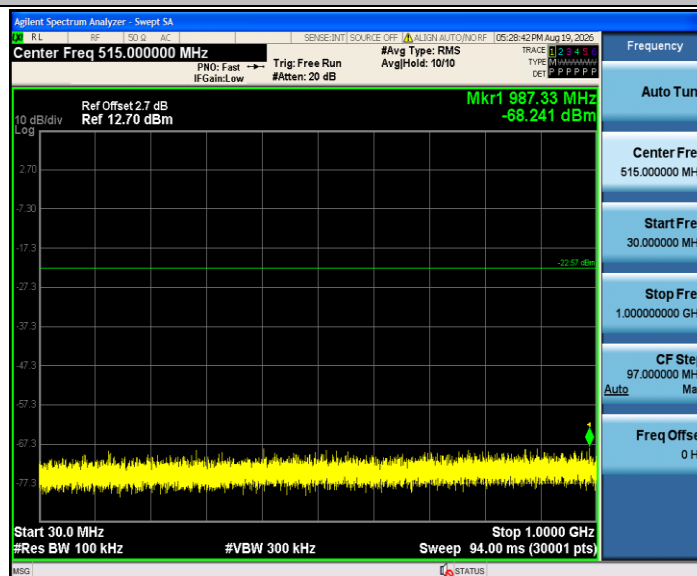
11G_Ant1_2462_1000~26500



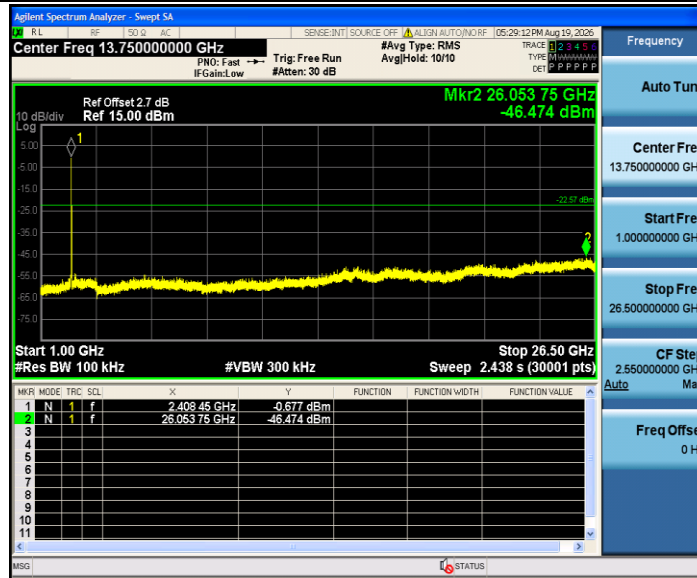
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



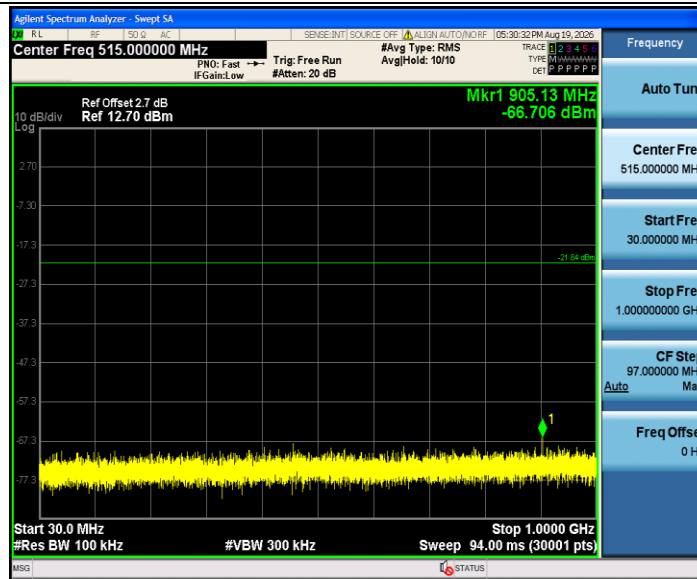
11N20SISO_Ant1_2412_1000~26500



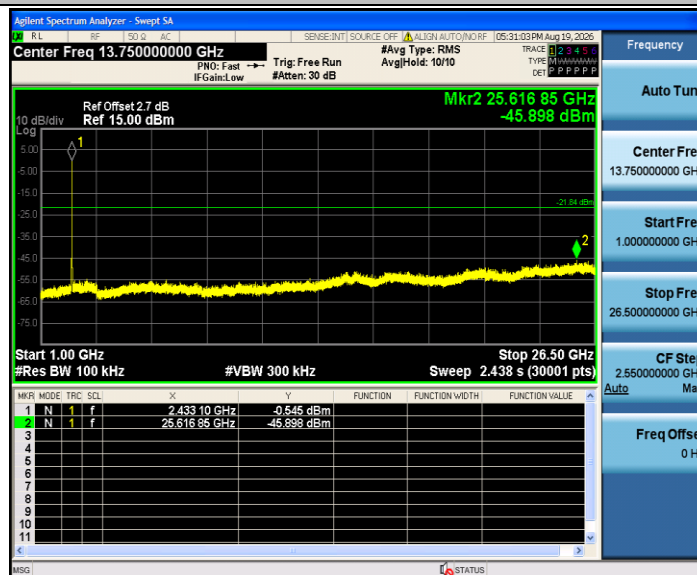
11N20SISO_Ant1_2437_0~Reference



11N20SISO_Ant1_2437_30~1000



11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference

