

FCC Appendix RF Test Data for 2.4GWIFI

FCC ID : 2BP5V-ZK501

Company : Dong Guan Zhen Ke Technology Co., LTD

EUT : Weather Station

Model Number : WS-SA8-PLUS

Report No. : CTA26082701102

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	15.800	2404.200	2420.000	0.5	PASS
		2437	15.920	2429.080	2445.000	0.5	PASS
		2462	15.960	2454.040	2470.000	0.5	PASS
11N20SISO	Ant1	2412	16.880	2403.680	2420.560	0.5	PASS
		2437	16.800	2428.520	2445.320	0.5	PASS
		2462	16.760	2453.840	2470.600	0.5	PASS
11N40SISO	Ant1	2422	35.200	2404.720	2439.920	0.5	PASS
		2437	35.280	2419.800	2455.080	0.5	PASS
		2452	35.360	2434.640	2470.000	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437





11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



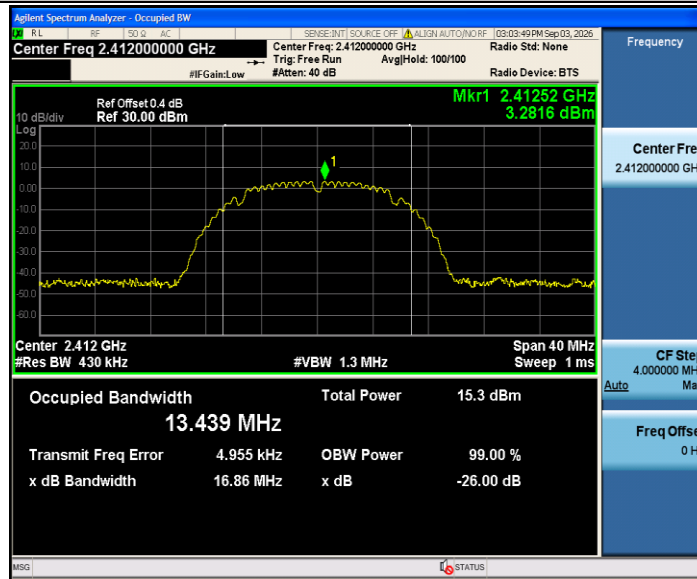
Appendix B: Occupied Channel Bandwidth

Test Result

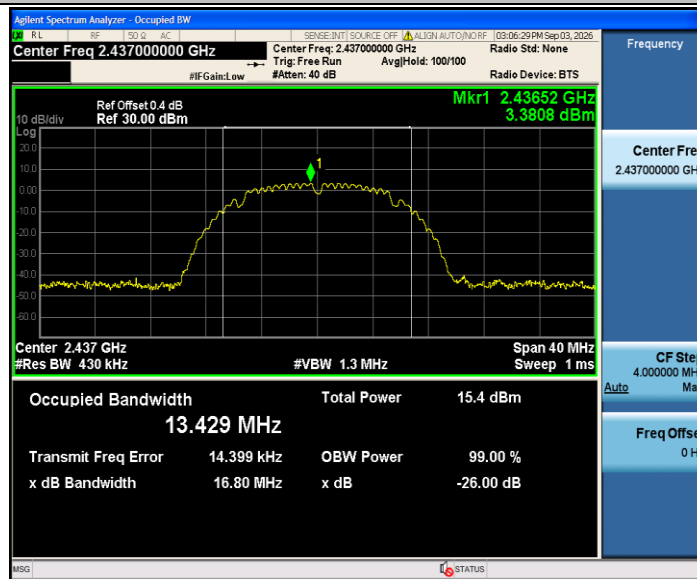
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.439	2405.2855	2418.7245	---	---
		2437	13.429	2430.2999	2443.7289	---	---
		2462	13.426	2455.3090	2468.7350	---	---
11G	Ant1	2412	16.776	2403.6491	2420.4251	---	---
		2437	16.799	2428.6452	2445.4442	---	---
		2462	16.868	2453.5860	2470.4540	---	---
11N20SISO	Ant1	2412	17.877	2403.1020	2420.9790	---	---
		2437	17.888	2428.0594	2445.9474	---	---
		2462	17.885	2453.0827	2470.9677	---	---
11N40SISO	Ant1	2422	36.085	2404.0686	2440.1536	---	---
		2437	36.035	2419.1496	2455.1846	---	---
		2452	36.021	2434.1204	2470.1414	---	---

Test Graphs

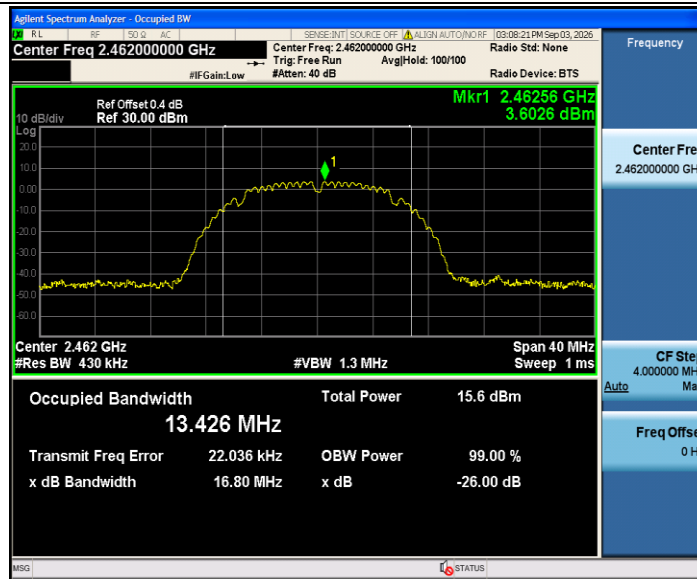
11B_Ant1_2412



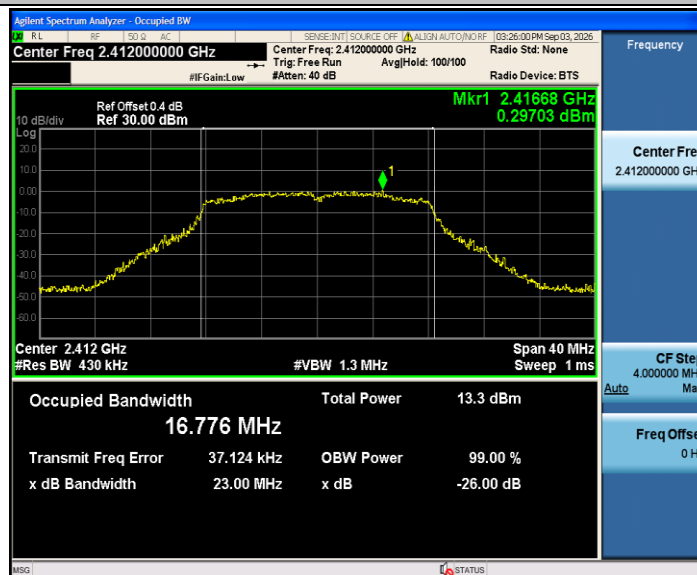
11B_Ant1_2437



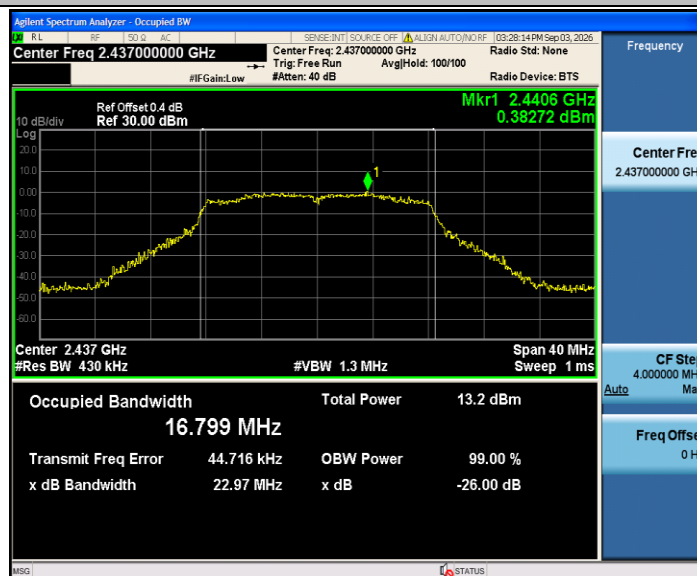
11B_Ant1_2462



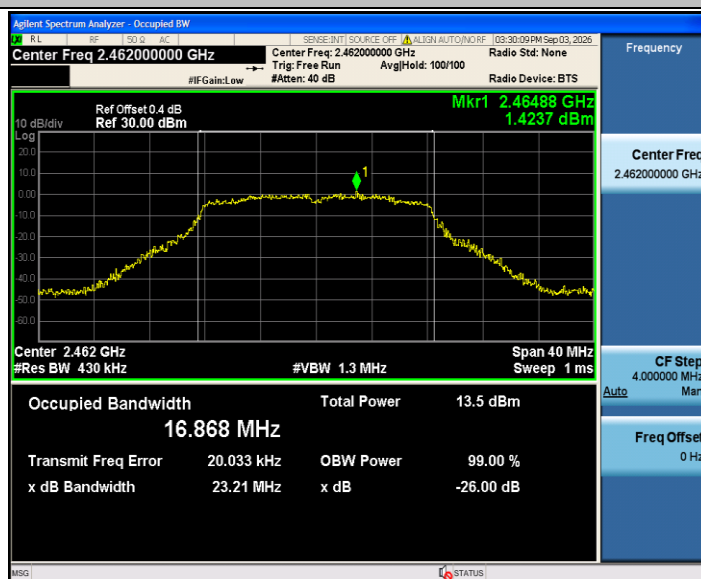
11G_Ant1_2412



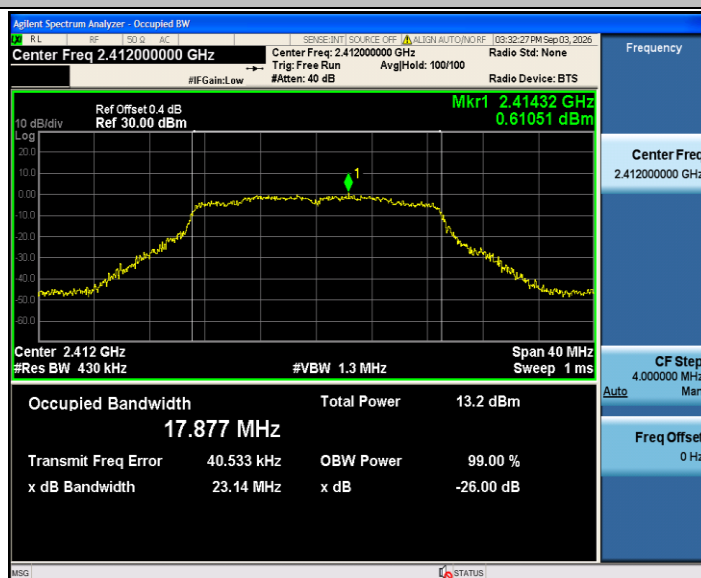
11G_Ant1_2437



11G_Ant1_2462



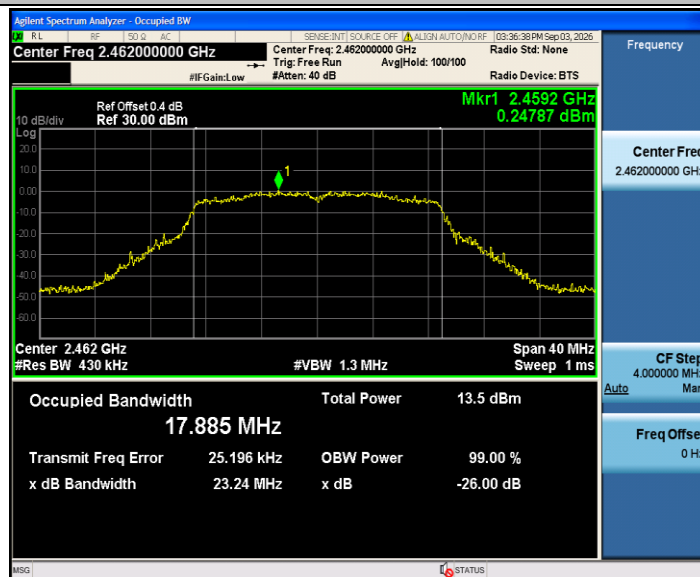
11N20SISO_Ant1_2412



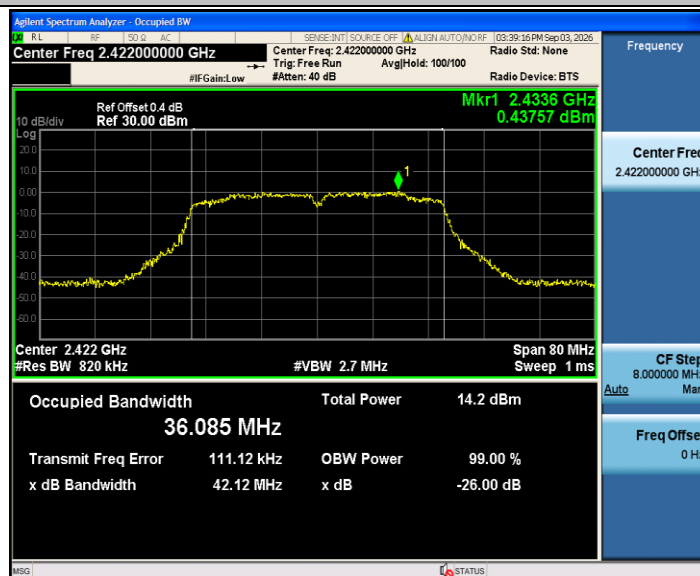
11N20SISO_Ant1_2437



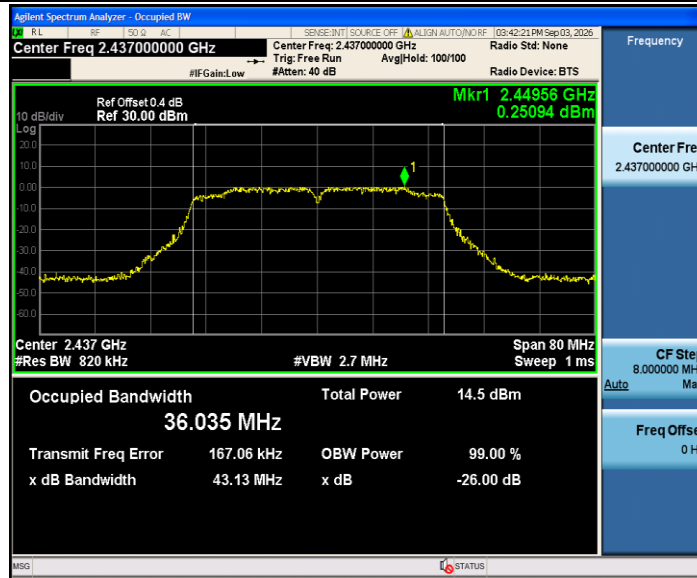
11N20SISO_Ant1_2462



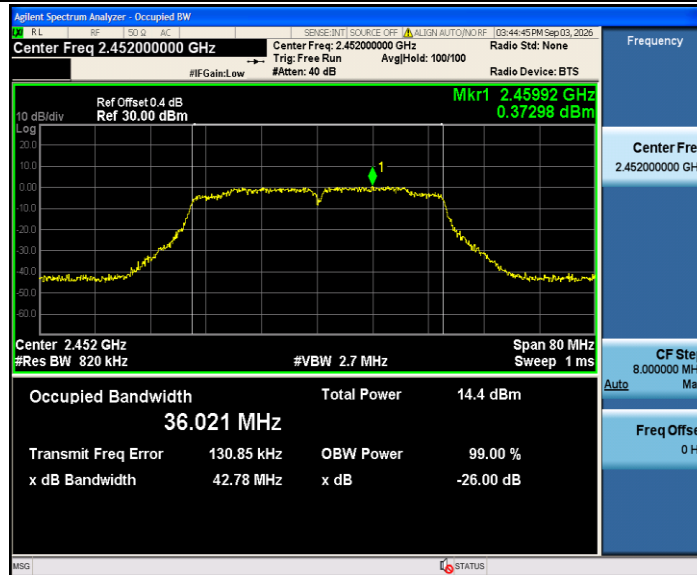
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.93	≤30.00	PASS
		2437	15.04	≤30.00	PASS
		2462	15.24	≤30.00	PASS
11G	Ant1	2412	14.21	≤30.00	PASS
		2437	14.29	≤30.00	PASS
		2462	14.49	≤30.00	PASS
11N20SISO	Ant1	2412	14.09	≤30.00	PASS
		2437	14.19	≤30.00	PASS
		2462	14.27	≤30.00	PASS
11N40SISO	Ant1	2422	14.36	≤30.00	PASS
		2437	14.58	≤30.00	PASS
		2452	14.50	≤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	-10.25	≤8.00	PASS
		2437	-10.74	≤8.00	PASS
		2462	-10.75	≤8.00	PASS
11G	Ant1	2412	-17.75	≤8.00	PASS
		2437	-17.86	≤8.00	PASS
		2462	-17.01	≤8.00	PASS
11N20SISO	Ant1	2412	-16.64	≤8.00	PASS
		2437	-16.23	≤8.00	PASS
		2462	-17.08	≤8.00	PASS
11N40SISO	Ant1	2422	-19.83	≤8.00	PASS
		2437	-19.78	≤8.00	PASS
		2452	-20.05	≤8.00	PASS

Test Graphs

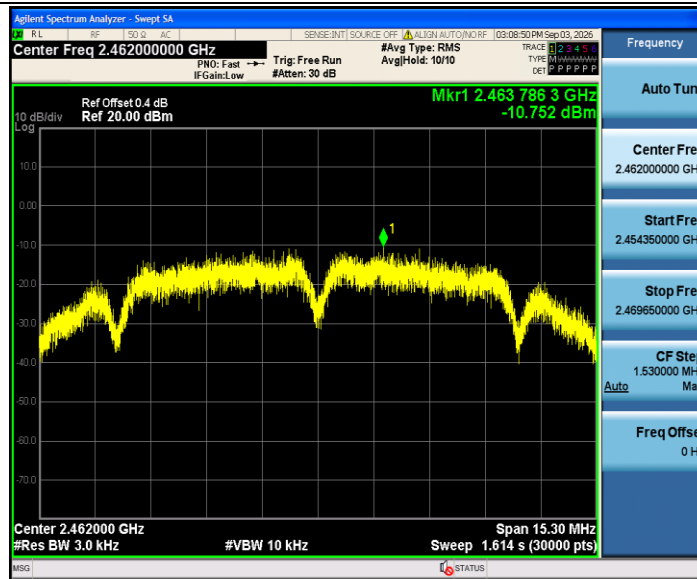
11B_Ant1_2412



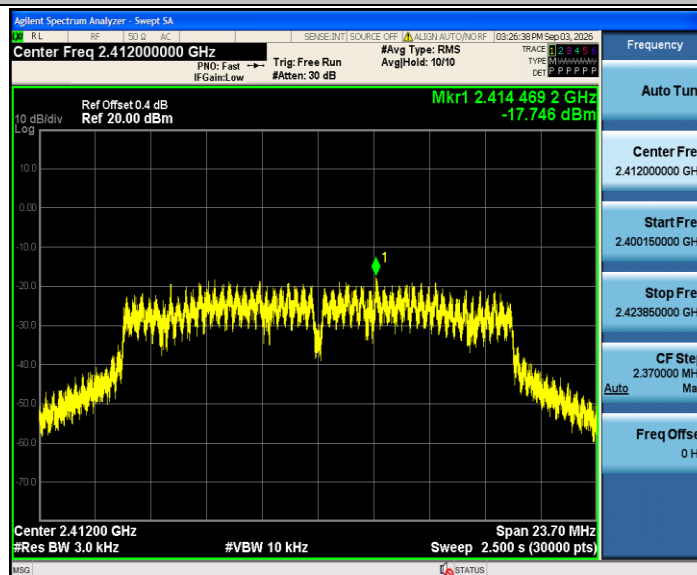
11B_Ant1_2437



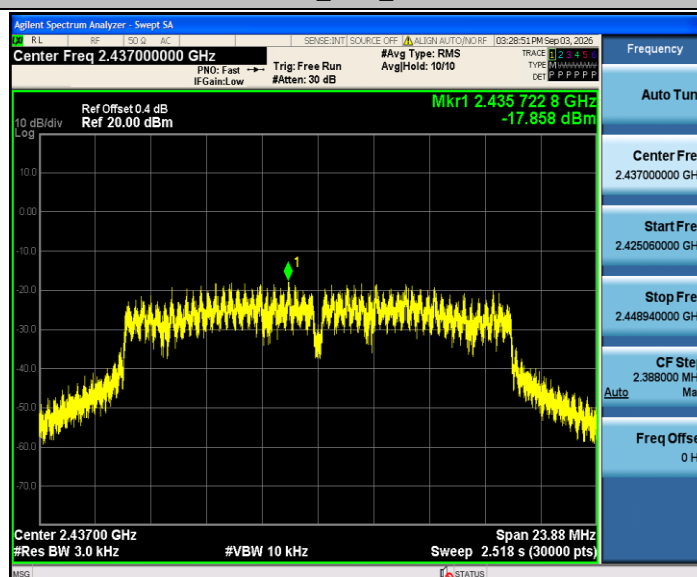
11B_Ant1_2462



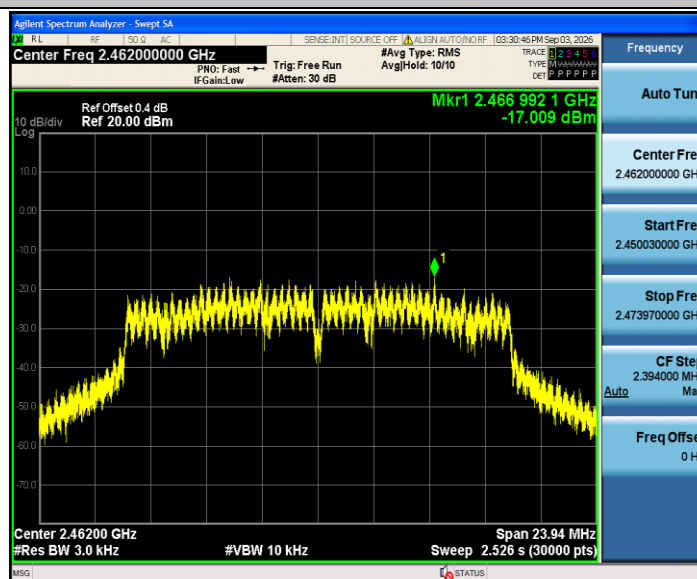
11G_Ant1_2412



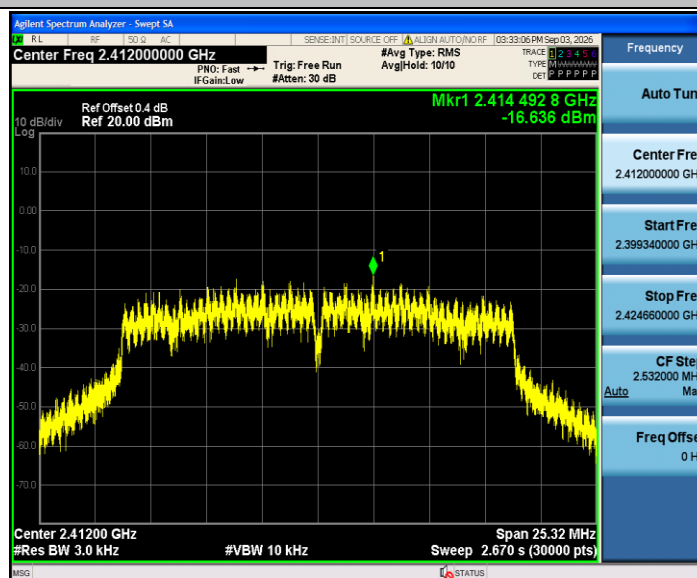
11G_Ant1_2437



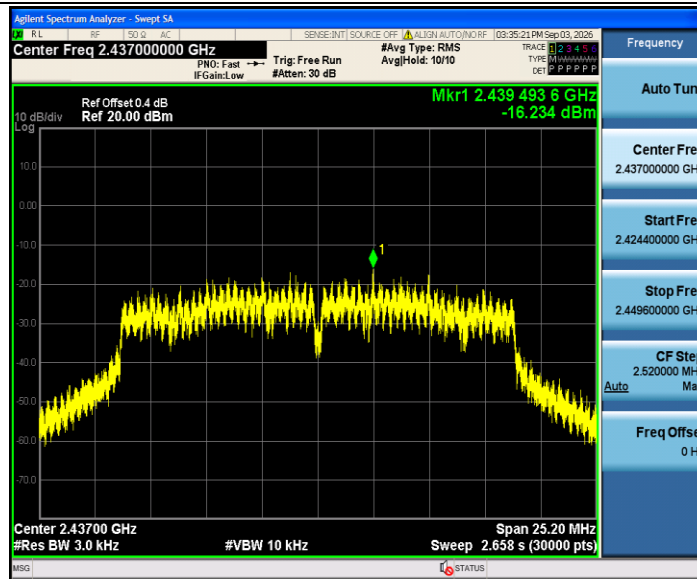
11G_Ant1_2462



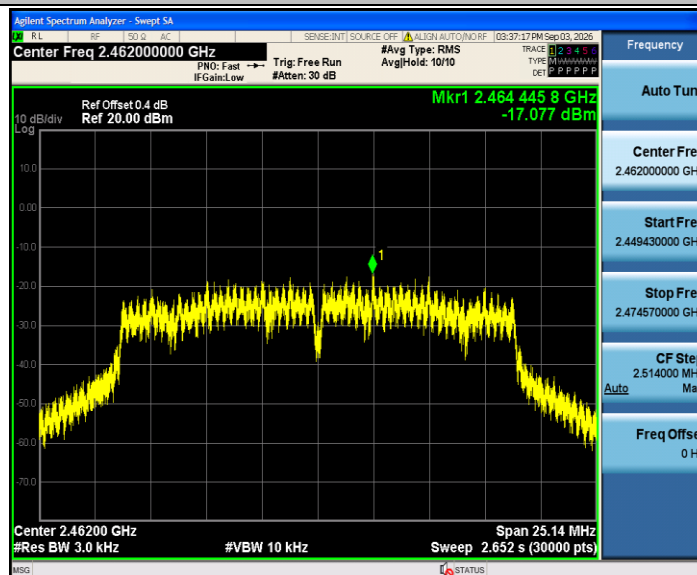
11N20SISO_Ant1_2412



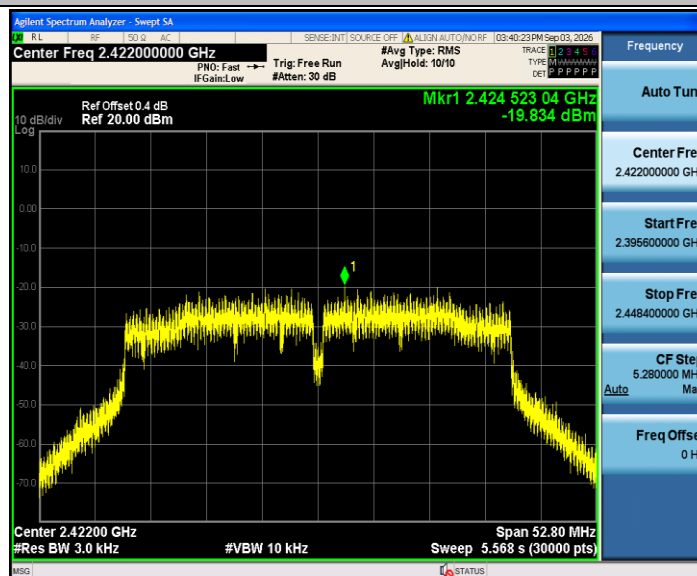
11N20SISO_Ant1_2437



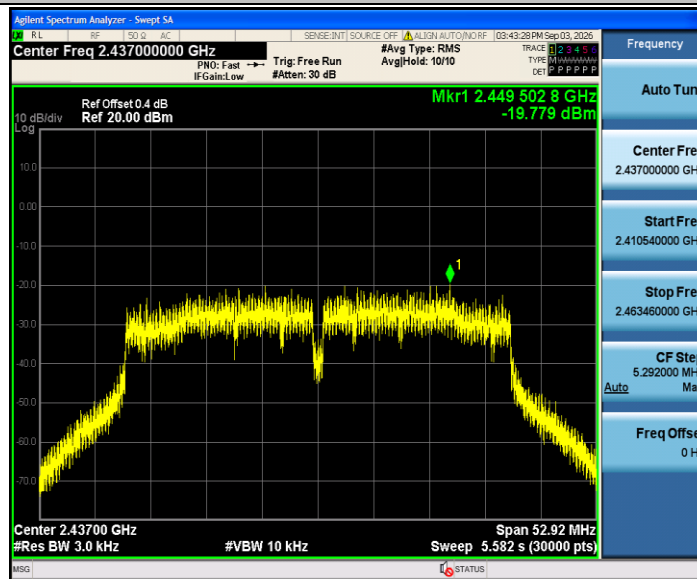
11N20SISO_Ant1_2462



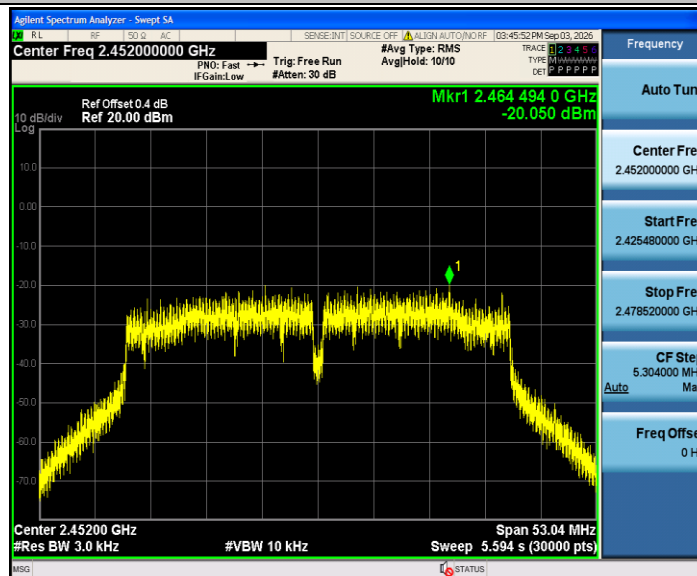
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



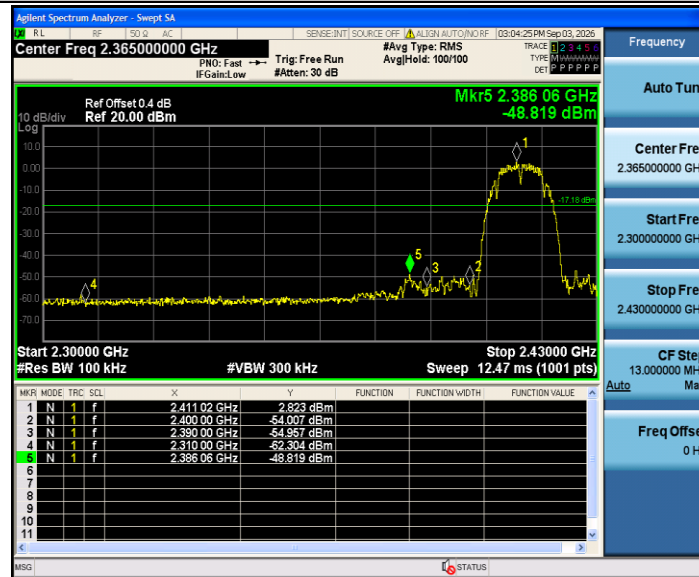
Appendix E: Band edge measurements

Test Result

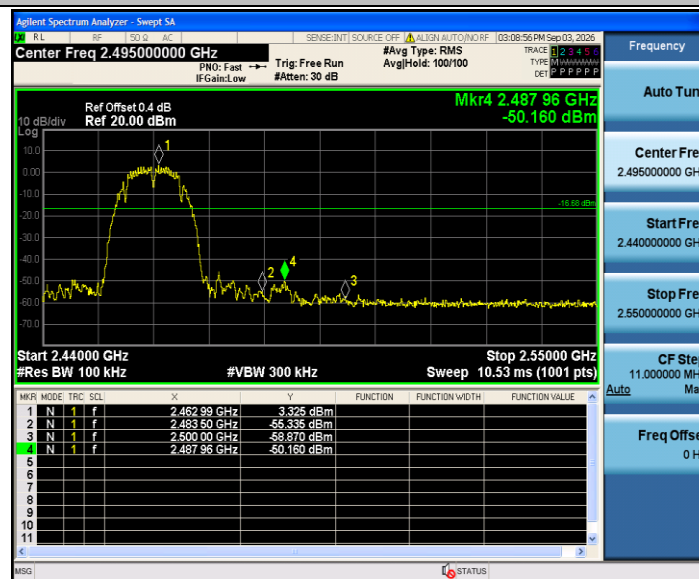
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.82	-48.82	≤-17.18	PASS
		High	2462	3.33	-50.16	≤-16.68	PASS
11G	Ant1	Low	2412	-2.21	-34.11	≤-22.21	PASS
		High	2462	-1.90	-58.22	≤-21.9	PASS
11N20SISO	Ant1	Low	2412	-2.31	-33.62	≤-22.31	PASS
		High	2462	-1.90	-58.83	≤-21.9	PASS
11N40SISO	Ant1	Low	2422	-5.50	-33.78	≤-25.5	PASS
		High	2452	-5.31	-57.53	≤-25.31	PASS

Test Graphs

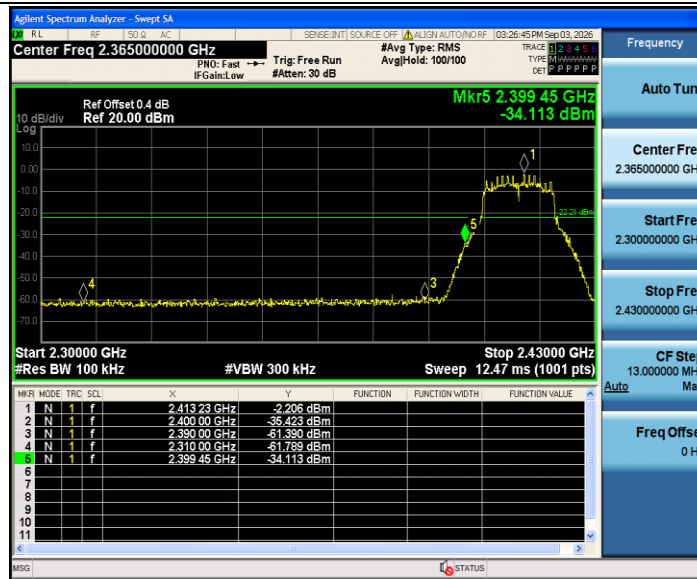
11B_Ant1_Low_2412



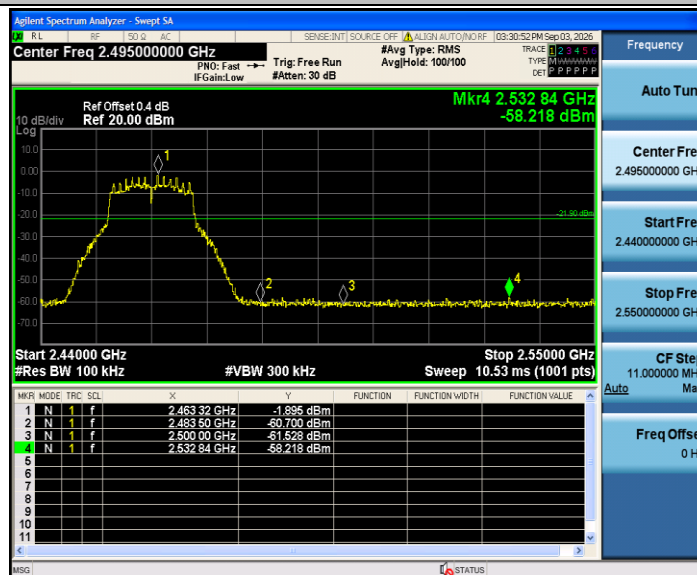
11B_Ant1_High_2462



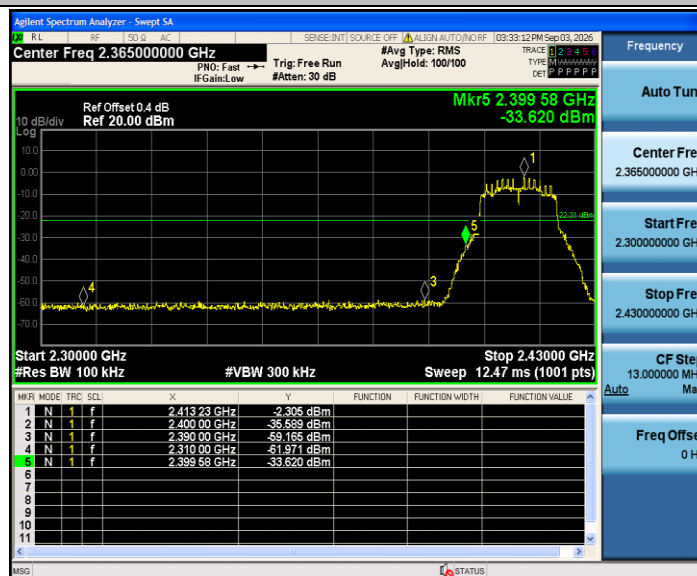
11G_Ant1_Low_2412



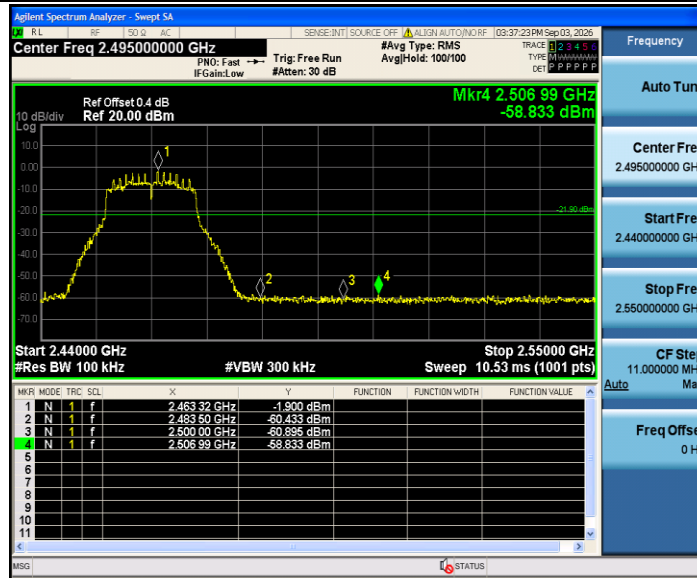
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



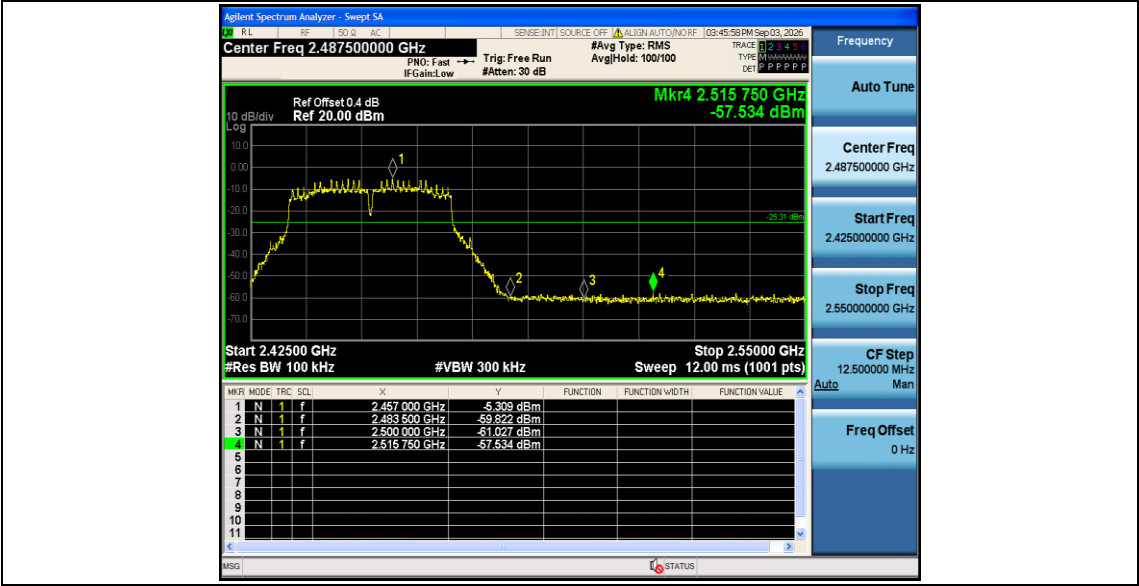
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

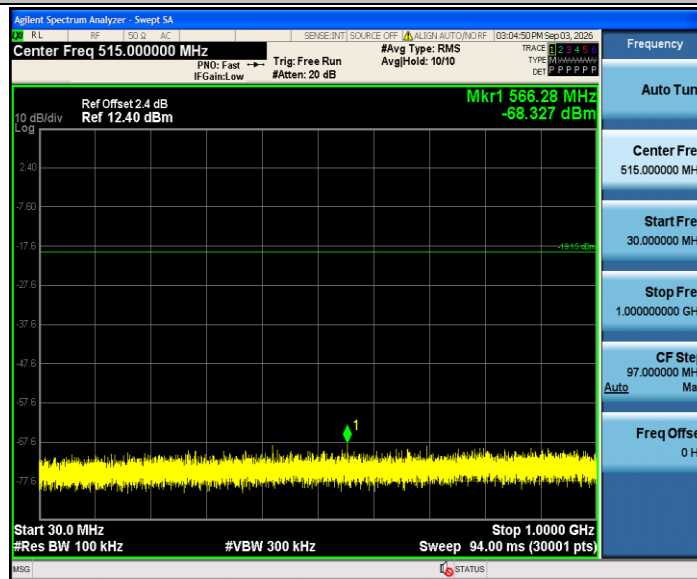
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-68.33	≤-19.15	PASS
			1000~26500	0.85	-46.88	≤-19.15	PASS
		2437	Reference	1.50	1.50	---	PASS
			30~1000	1.50	-68.81	≤-18.5	PASS
			1000~26500	1.50	-46.93	≤-18.5	PASS
		2462	Reference	2.89	2.89	---	PASS
			30~1000	2.89	-68.3	≤-17.11	PASS
			1000~26500	2.89	-47.19	≤-17.11	PASS
11G	Ant1	2412	Reference	-3.41	-3.41	---	PASS
			30~1000	-3.41	-68.46	≤-23.41	PASS
			1000~26500	-3.41	-46.07	≤-23.41	PASS
		2437	Reference	-3.40	-3.40	---	PASS
			30~1000	-3.40	-68.51	≤-23.4	PASS
			1000~26500	-3.40	-46.79	≤-23.4	PASS
		2462	Reference	-2.04	-2.04	---	PASS
			30~1000	-2.04	-68.68	≤-22.04	PASS
			1000~26500	-2.04	-45.56	≤-22.04	PASS
11N20SISO	Ant1	2412	Reference	-2.83	-2.83	---	PASS
			30~1000	-2.83	-68.64	≤-22.83	PASS
			1000~26500	-2.83	-47.05	≤-22.83	PASS
		2437	Reference	-2.47	-2.47	---	PASS
			30~1000	-2.47	-66.54	≤-22.47	PASS
			1000~26500	-2.47	-47.4	≤-22.47	PASS
		2462	Reference	-2.38	-2.38	---	PASS
			30~1000	-2.38	-69.01	≤-22.38	PASS
			1000~26500	-2.38	-46.32	≤-22.38	PASS
11N40SISO	Ant1	2422	Reference	-5.78	-5.78	---	PASS
			30~1000	-5.78	-68.91	≤-25.78	PASS
			1000~26500	-5.78	-47.32	≤-25.78	PASS
		2437	Reference	-5.84	-5.84	---	PASS
			30~1000	-5.84	-68.71	≤-25.84	PASS
			1000~26500	-5.84	-46.76	≤-25.84	PASS
		2452	Reference	-6.01	-6.01	---	PASS
			30~1000	-6.01	-68.27	≤-26.01	PASS
			1000~26500	-6.01	-46.27	≤-26.01	PASS

Test Graphs

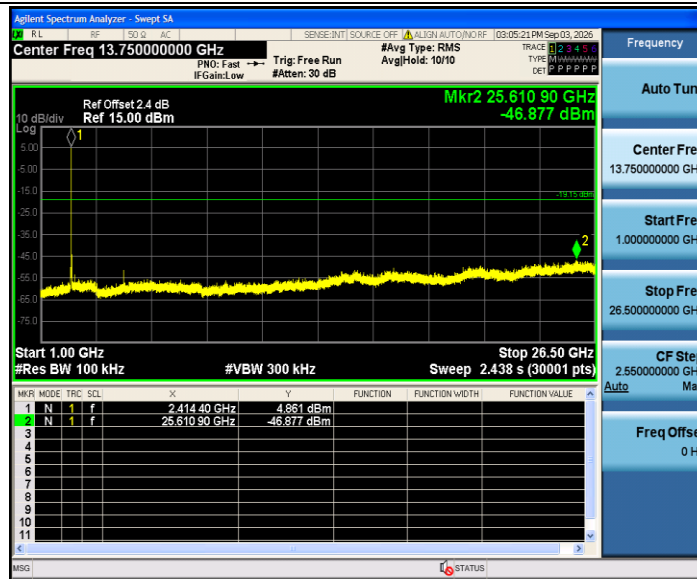
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



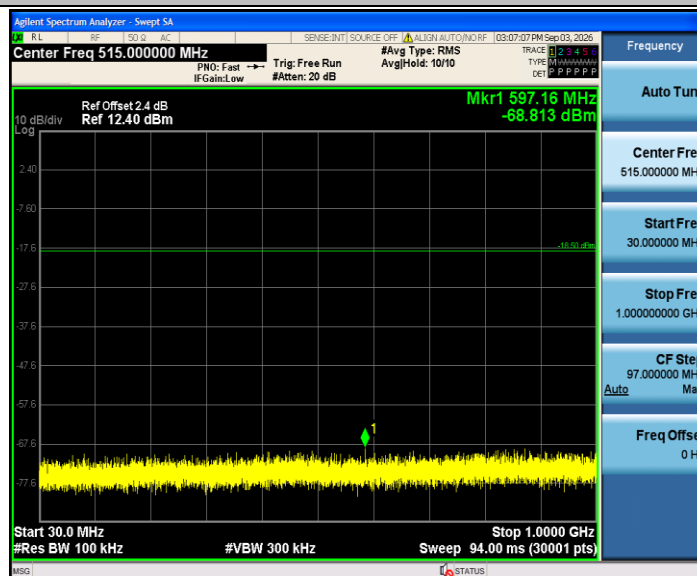
11B_Ant1_2412_1000~26500



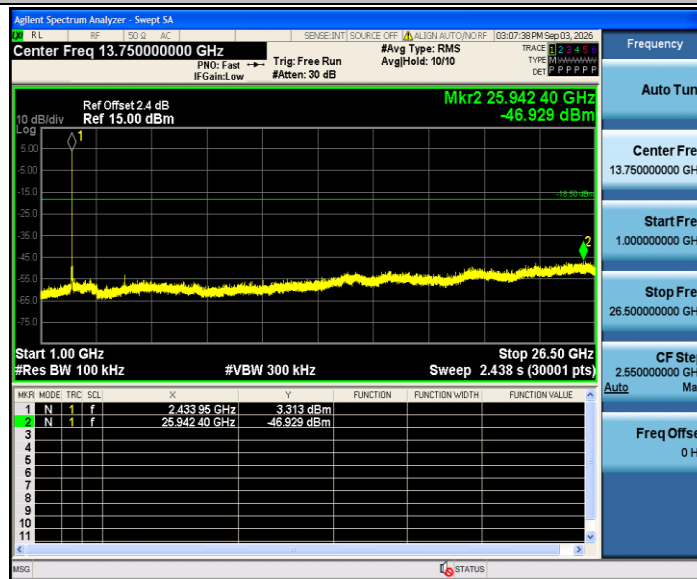
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



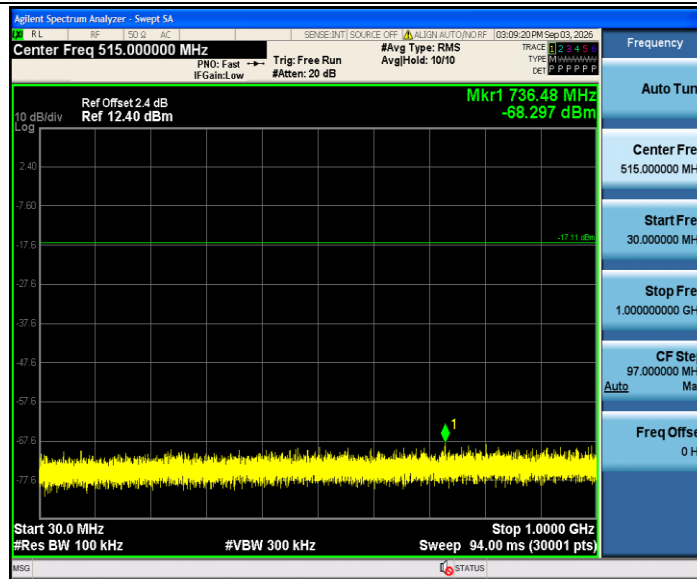
11B_Ant1_2437_1000~26500



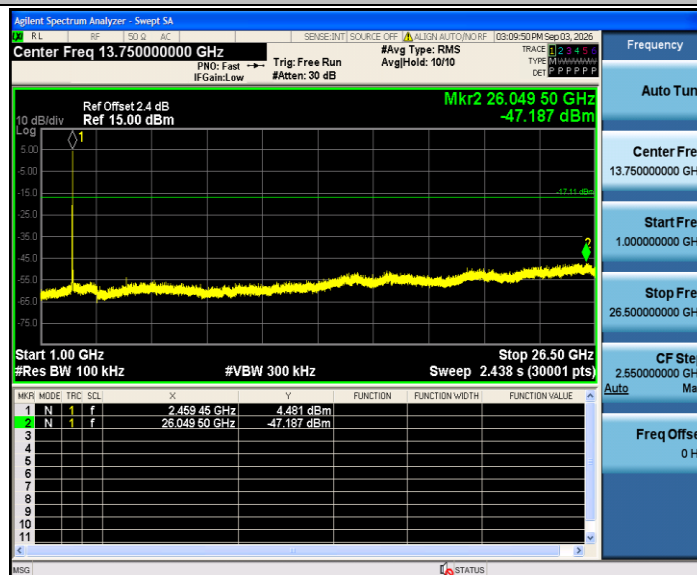
11B_Ant1_2462_0~Reference



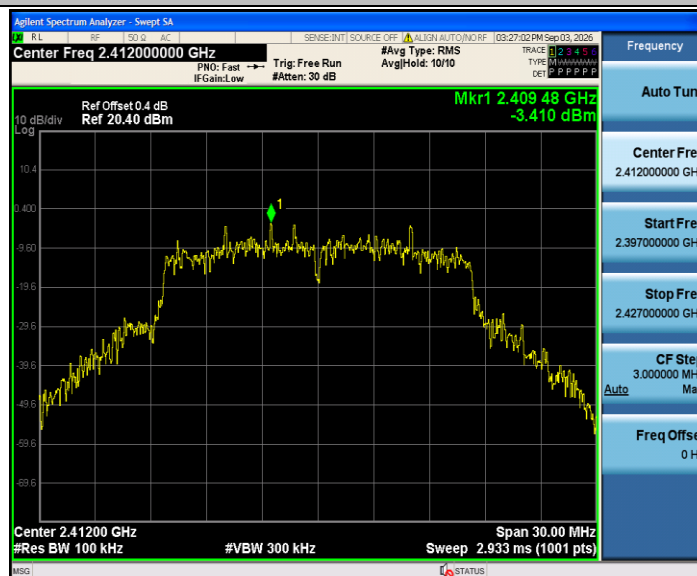
11B_Ant1_2462_30~1000



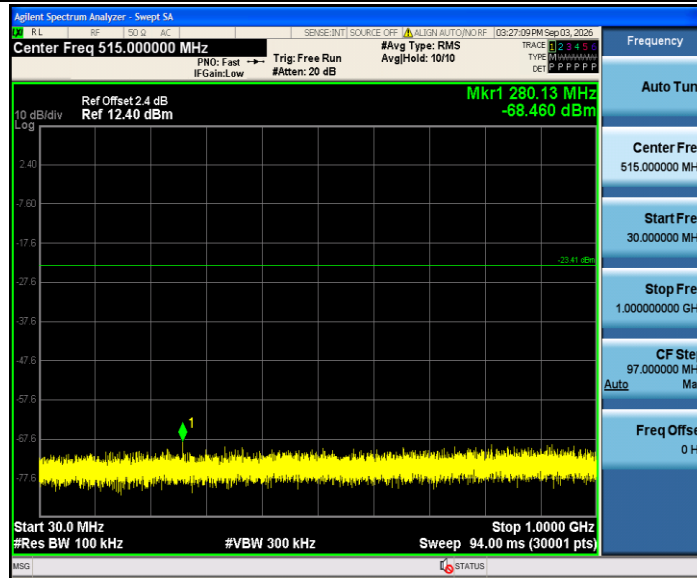
11B_Ant1_2462_1000~26500



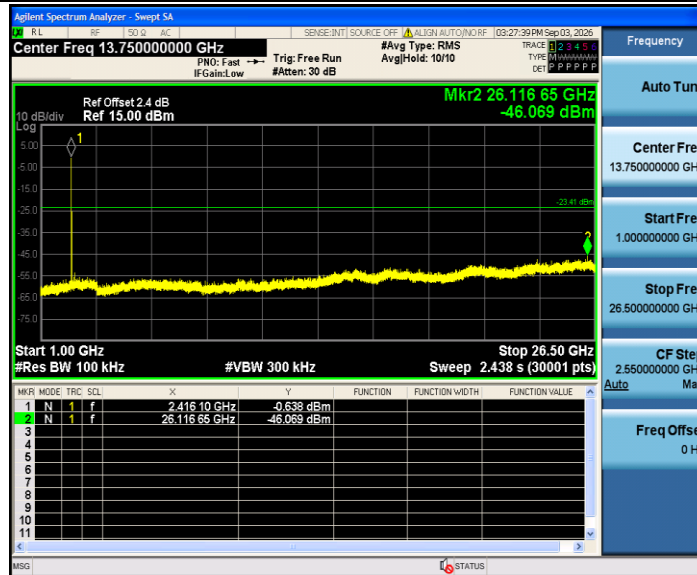
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



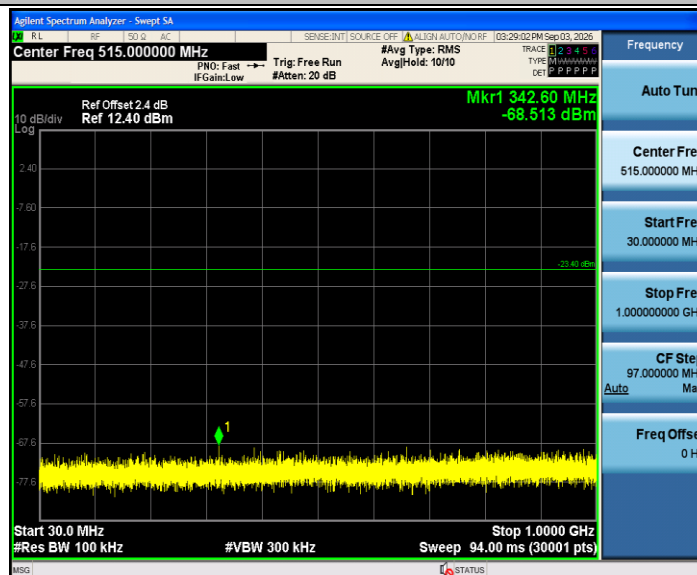
11G_Ant1_2412_1000~26500



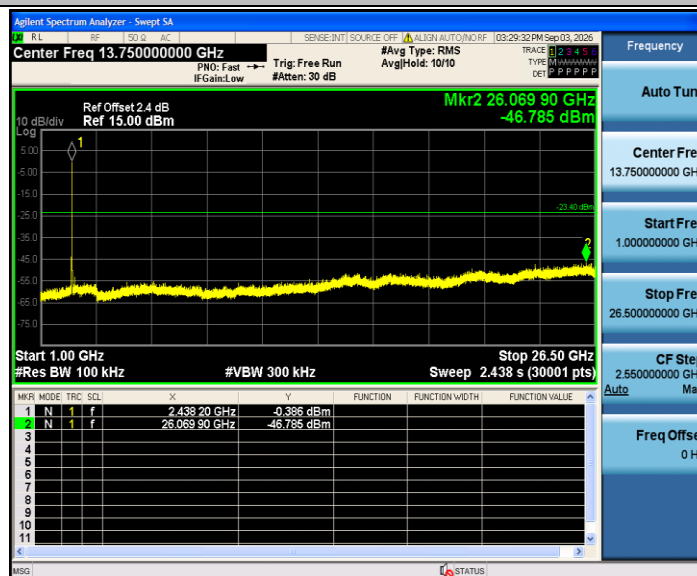
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



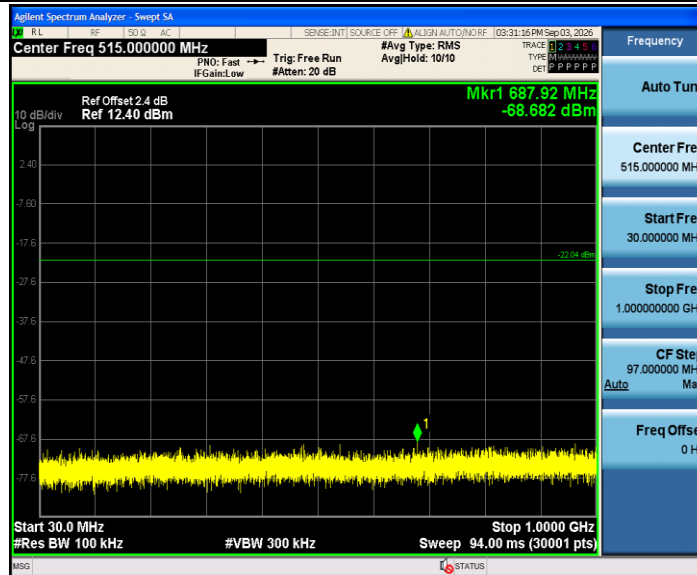
11G_Ant1_2437_1000~26500



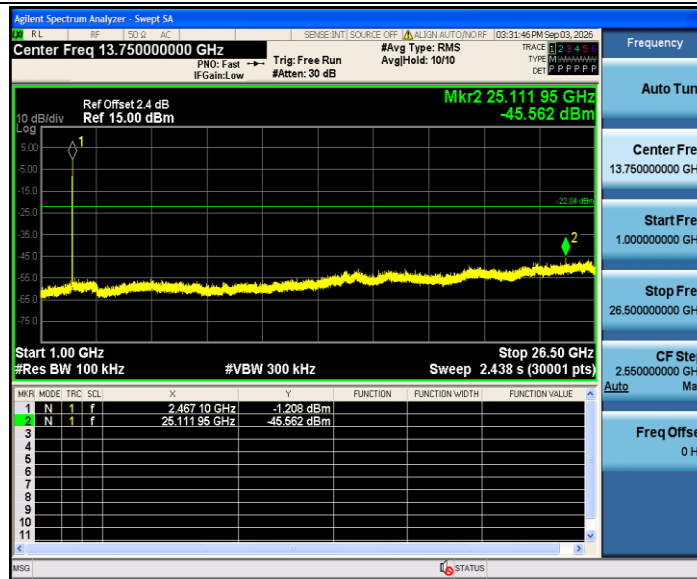
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

