

FCC Appendix RF Test Data for 2.4GWIFI

FCC : **2ATAN-P7**

Company : **3nStar, Inc.**

EUT : **P7 POS Terminal**

Model Number : **P7**

Report No. : **CTA26041702002**

Reviewed By : **Eric Wang**

FCC Appendix RF Test Data for 2.4GWIFI Antenna 1

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	10.200	2456.920	2467.120	0.5	PASS
11G	Ant1	2412	15.880	2404.080	2419.960	0.5	PASS
		2437	15.960	2429.080	2445.040	0.5	PASS
		2462	15.400	2454.440	2469.840	0.5	PASS
11N20SISO	Ant1	2412	16.720	2403.680	2420.400	0.5	PASS
		2437	16.800	2428.600	2445.400	0.5	PASS
		2462	16.720	2453.400	2470.120	0.5	PASS
11N40SISO	Ant1	2422	36.000	2404.080	2440.080	0.5	PASS
		2437	35.520	2419.560	2455.080	0.5	PASS
		2452	35.520	2434.480	2470.000	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



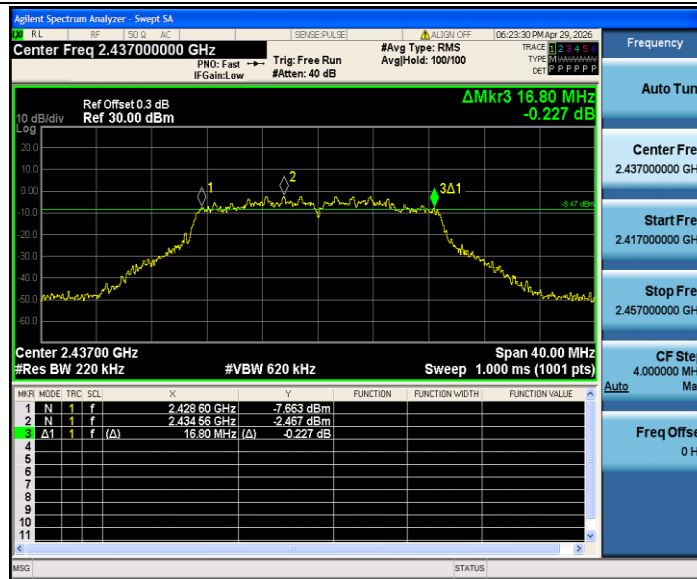
11G_Ant1_2462



11N20SISO_Ant1_2412



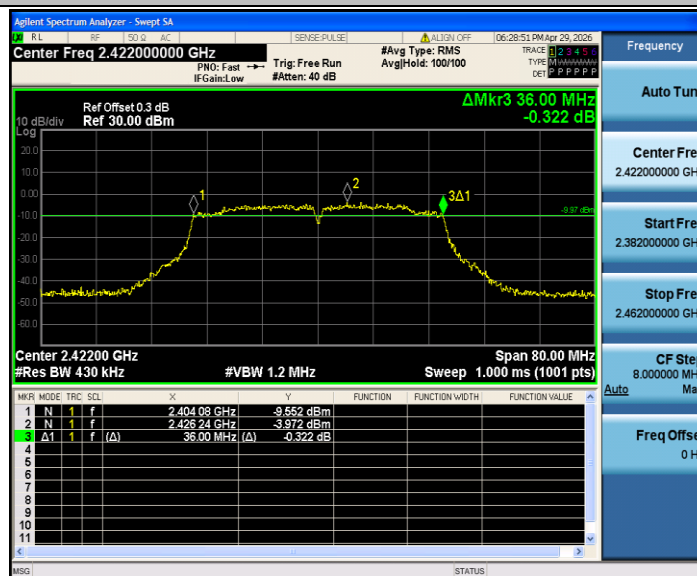
11N20SISO_Ant1_2437



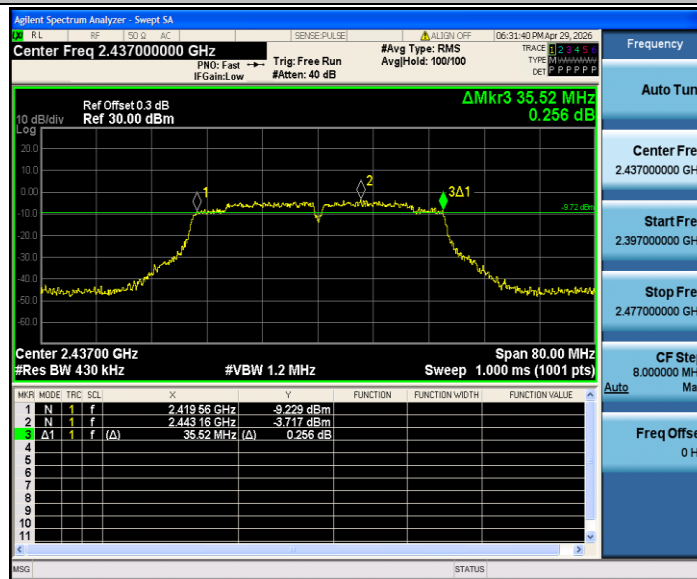
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



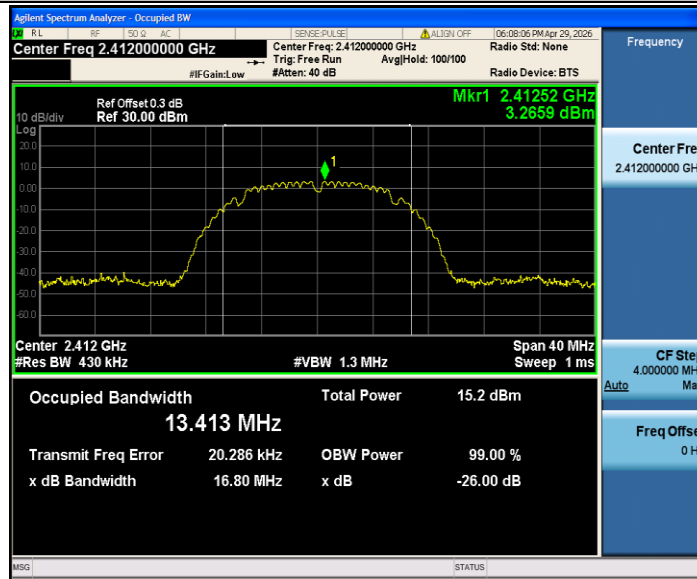
Appendix B: Occupied Channel Bandwidth

Test Result

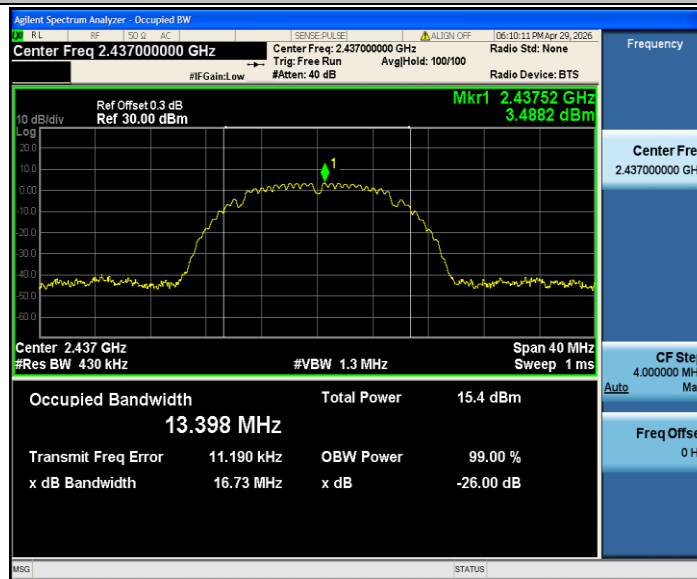
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.413	2405.3138	2418.7268	---	---
		2437	13.398	2430.3122	2443.7102	---	---
		2462	13.424	2455.2931	2468.7171	---	---
11G	Ant1	2412	16.834	2403.5754	2420.4094	---	---
		2437	16.760	2428.6593	2445.4193	---	---
		2462	16.914	2453.5761	2470.4901	---	---
11N20SISO	Ant1	2412	17.925	2403.0160	2420.9410	---	---
		2437	17.913	2428.0569	2445.9699	---	---
		2462	17.866	2453.0740	2470.9400	---	---
11N40SISO	Ant1	2422	36.100	2404.0724	2440.1724	---	---
		2437	36.058	2419.0832	2455.1412	---	---
		2452	36.068	2434.0690	2470.1370	---	---

Test Graphs

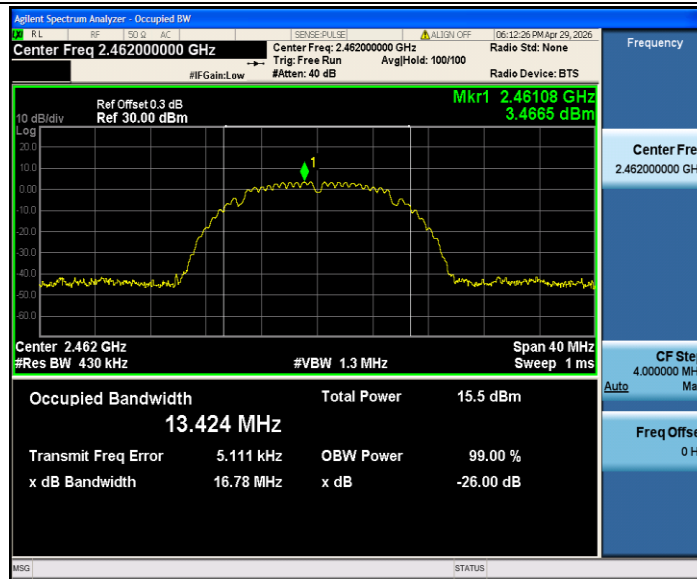
11B_Ant1_2412



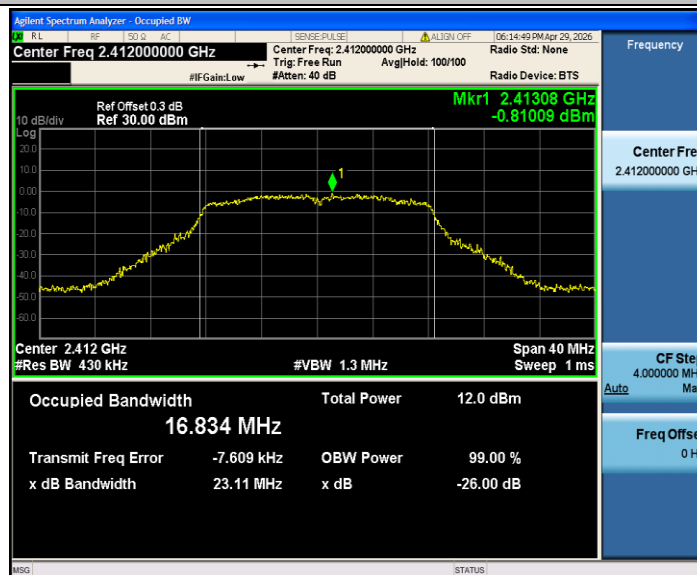
11B_Ant1_2437



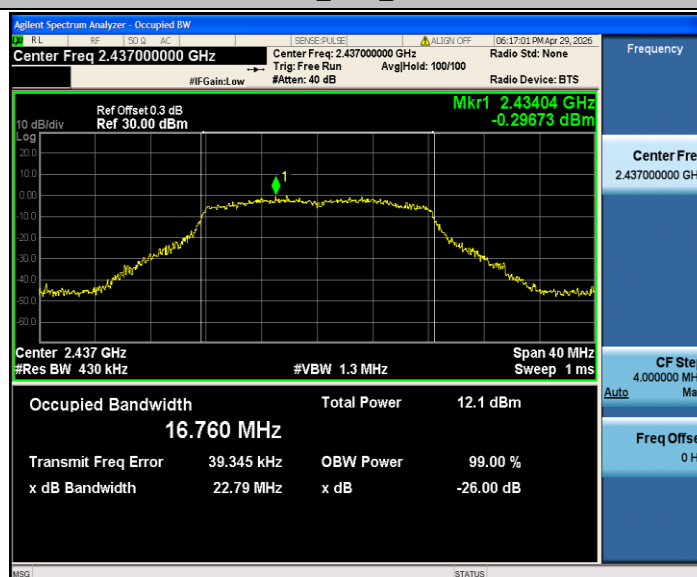
11B_Ant1_2462



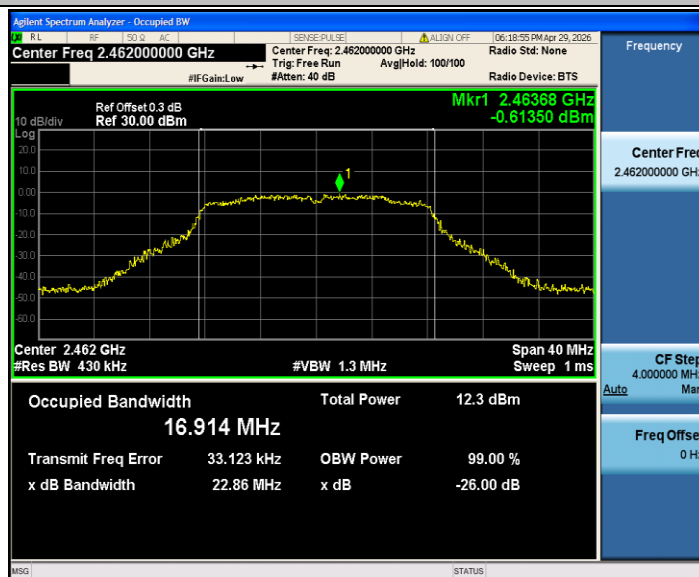
11G_Ant1_2412



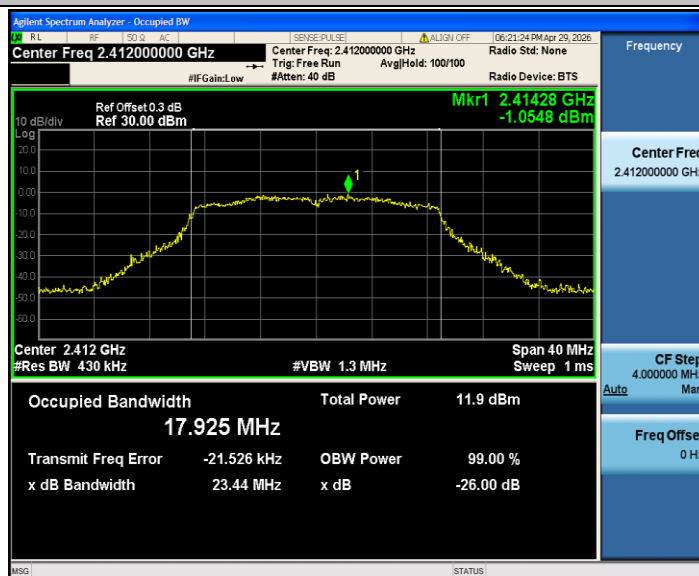
11G_Ant1_2437



11G_Ant1_2462



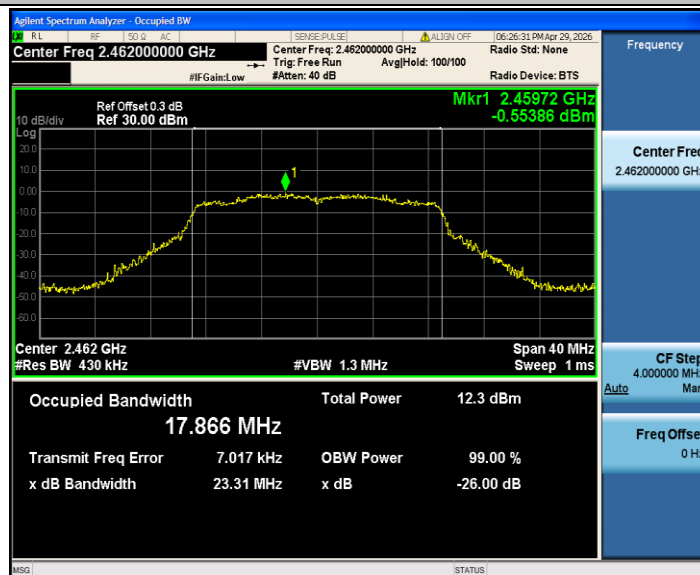
11N20SISO_Ant1_2412



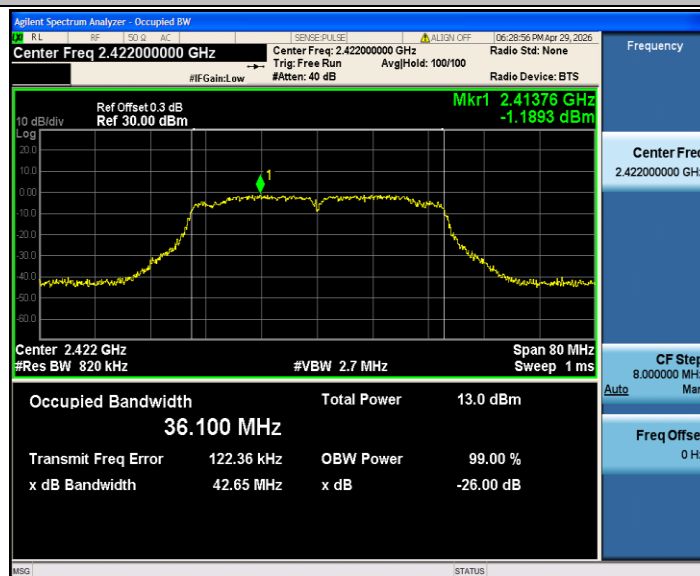
11N20SISO_Ant1_2437



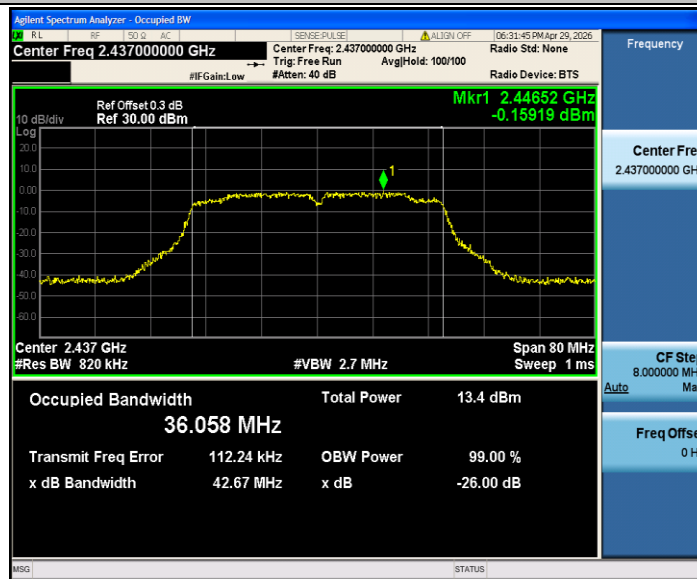
11N20SISO_Ant1_2462



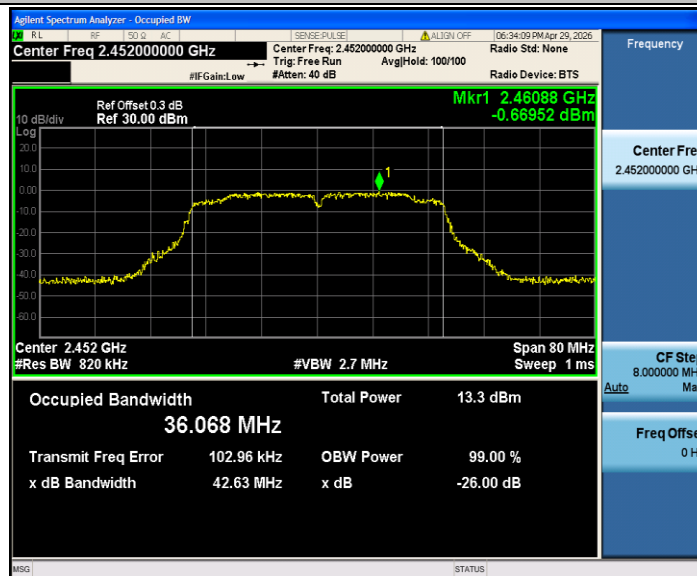
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	14.92	≤30.00	PASS
		2437	15.04	≤30.00	PASS
		2462	15.13	≤30.00	PASS
11G	Ant1	2412	12.92	≤30.00	PASS
		2437	13.18	≤30.00	PASS
		2462	13.13	≤30.00	PASS
11N20SISO	Ant1	2412	12.83	≤30.00	PASS
		2437	13.03	≤30.00	PASS
		2462	13.17	≤30.00	PASS
11N40SISO	Ant1	2422	13.17	≤30.00	PASS
		2437	13.36	≤30.00	PASS
		2452	13.40	≤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	-10.31	≤8.00	PASS
		2437	-11.07	≤8.00	PASS
		2462	-11.07	≤8.00	PASS
11G	Ant1	2412	-18.51	≤8.00	PASS
		2437	-18.82	≤8.00	PASS
		2462	-17.89	≤8.00	PASS
11N20SISO	Ant1	2412	-17.20	≤8.00	PASS
		2437	-16.57	≤8.00	PASS
		2462	-18.33	≤8.00	PASS
11N40SISO	Ant1	2422	-20.84	≤8.00	PASS
		2437	-20.06	≤8.00	PASS
		2452	-20.04	≤8.00	PASS

Test Graphs

11B_Ant1_2412



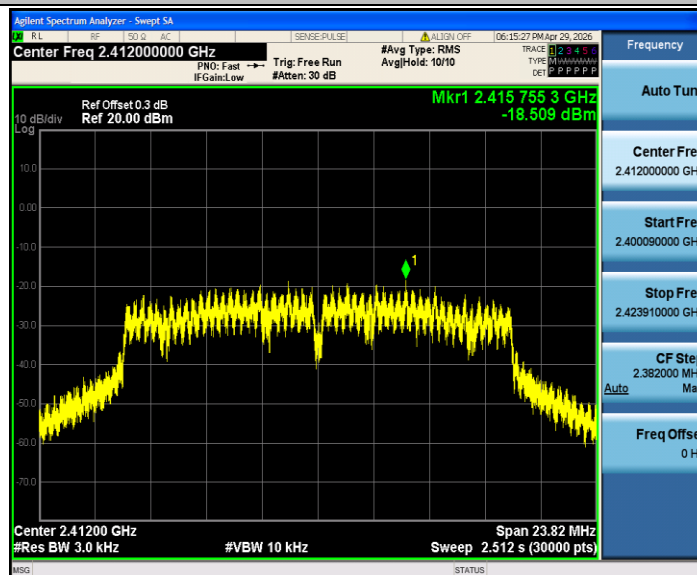
11B_Ant1_2437



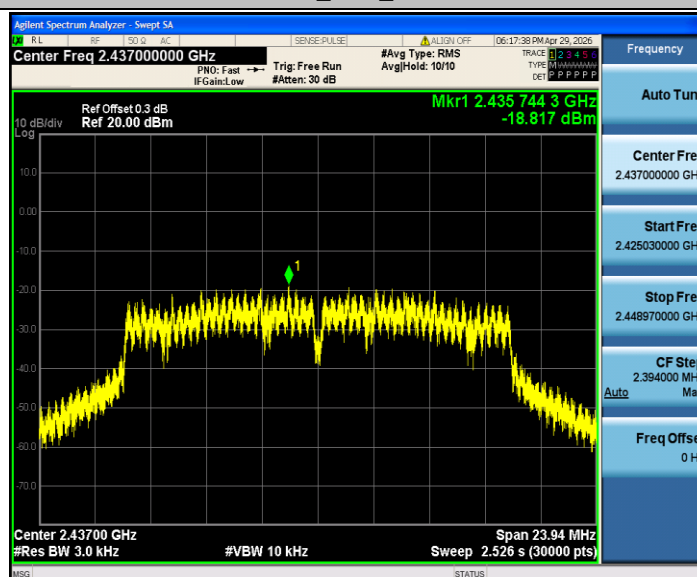
11B_Ant1_2462



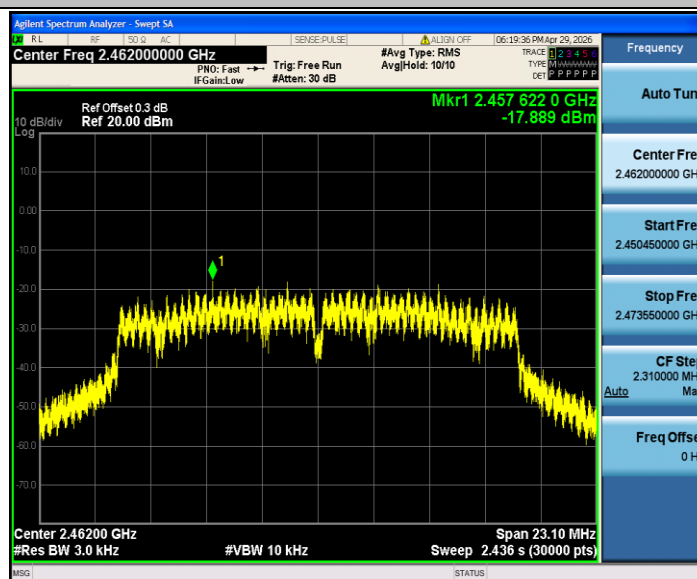
11G_Ant1_2412



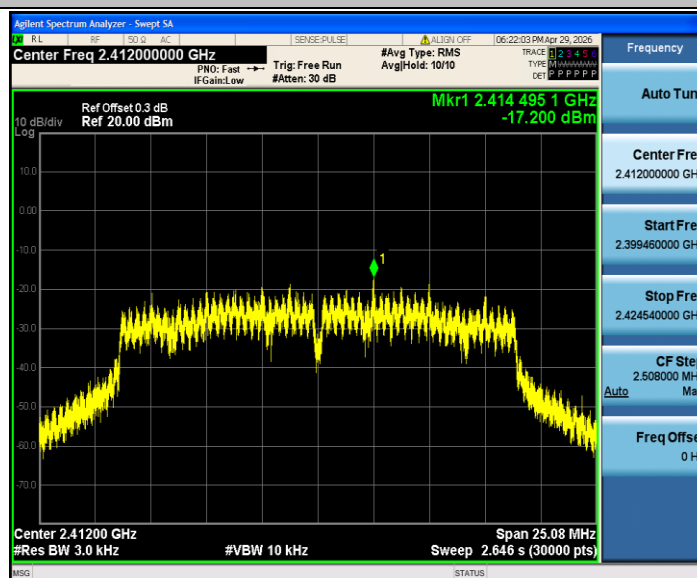
11G_Ant1_2437



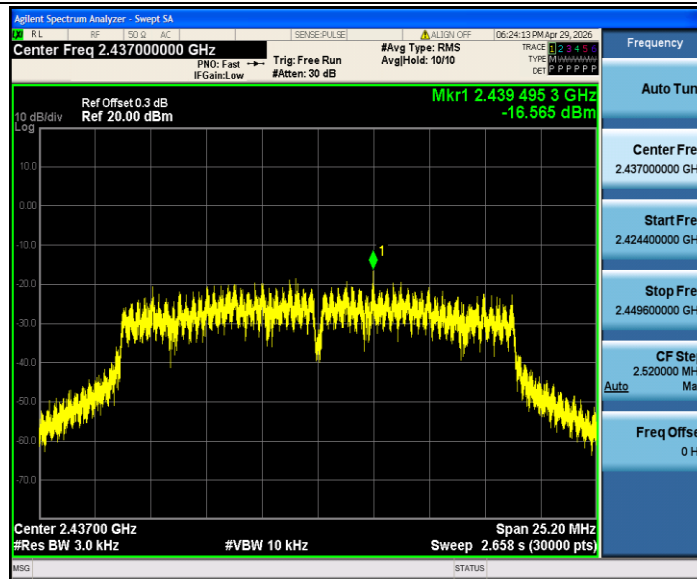
11G_Ant1_2462



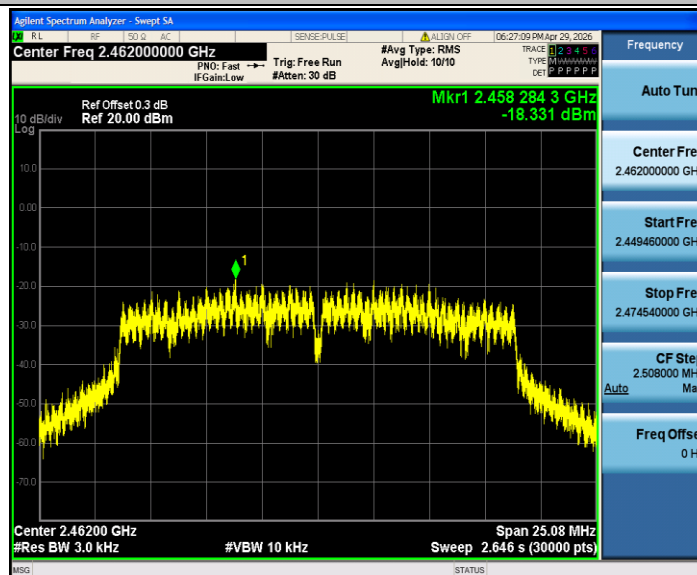
11N20SISO_Ant1_2412



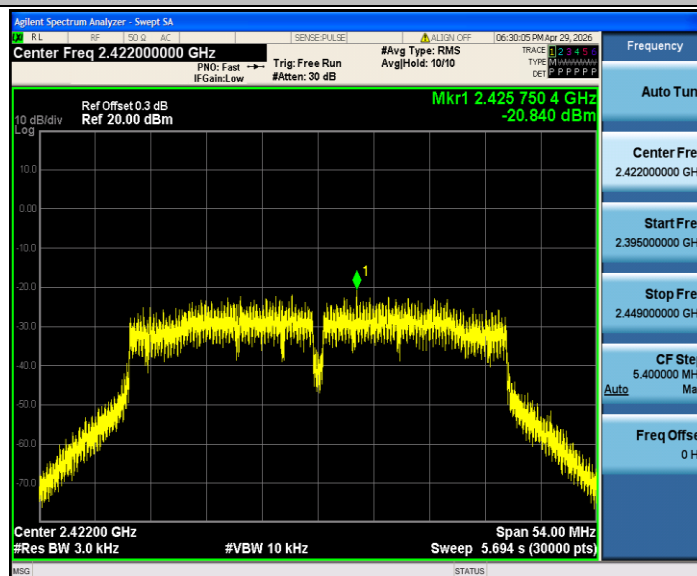
11N20SISO_Ant1_2437



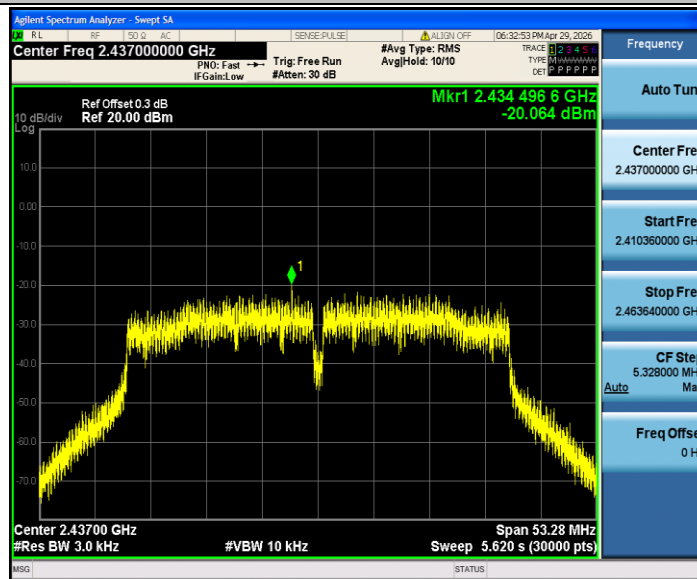
11N20SISO_Ant1_2462



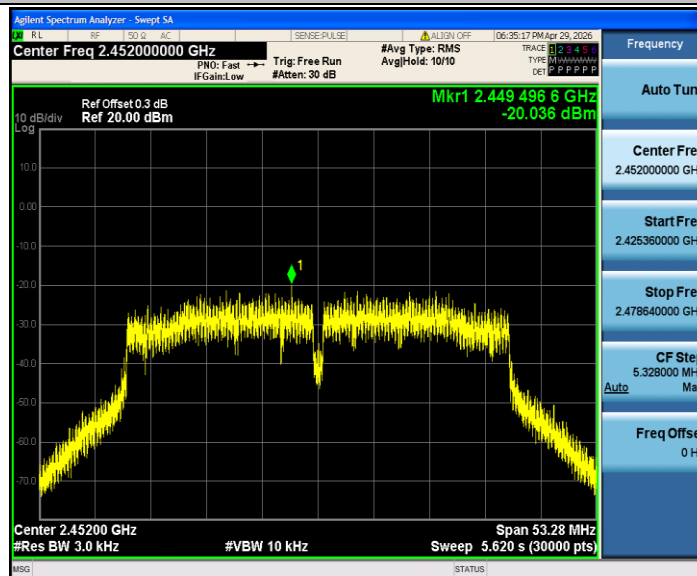
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



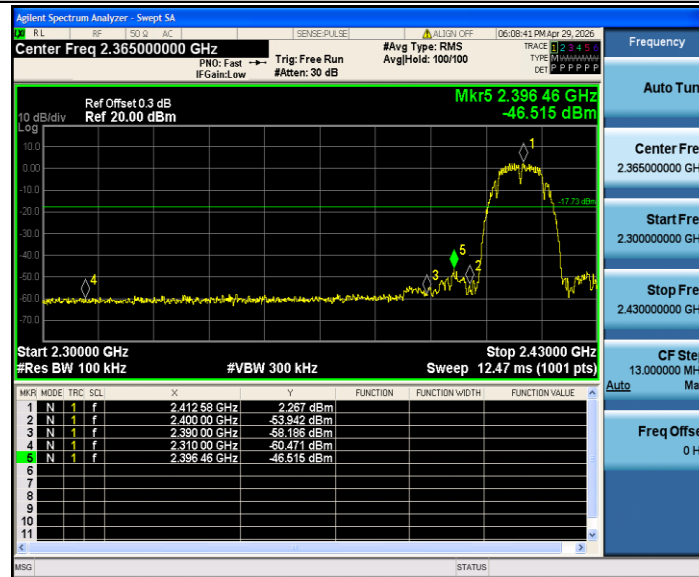
Appendix E: Band edge measurements

Test Result

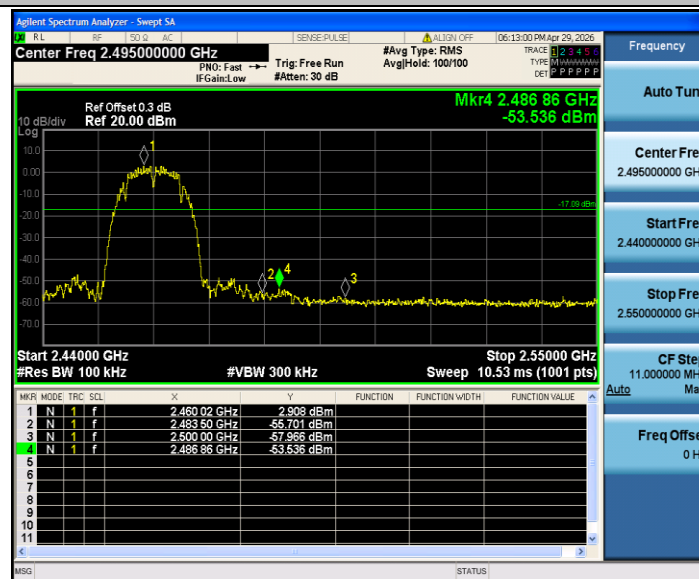
TestMode	Antenna	Channel Name	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.27	-46.52	≤-17.73	PASS
		High	2462	2.91	-53.54	≤-17.09	PASS
11G	Ant1	Low	2412	-3.72	-34.31	≤-23.72	PASS
		High	2462	-3.38	-57.21	≤-23.38	PASS
11N20SISO	Ant1	Low	2412	-3.59	-34.09	≤-23.59	PASS
		High	2462	-3.18	-58.16	≤-23.18	PASS
11N40SISO	Ant1	Low	2422	-6.80	-35.99	≤-26.8	PASS
		High	2452	-6.47	-57.2	≤-26.47	PASS

Test Graphs

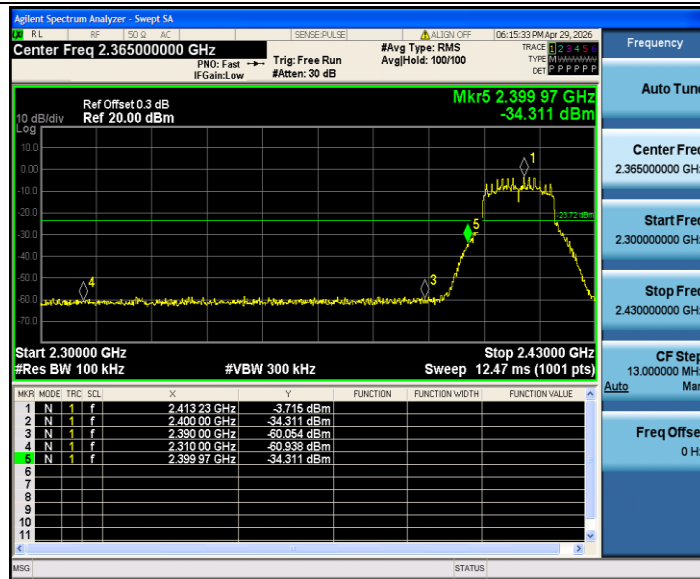
11B_Ant1_Low_2412



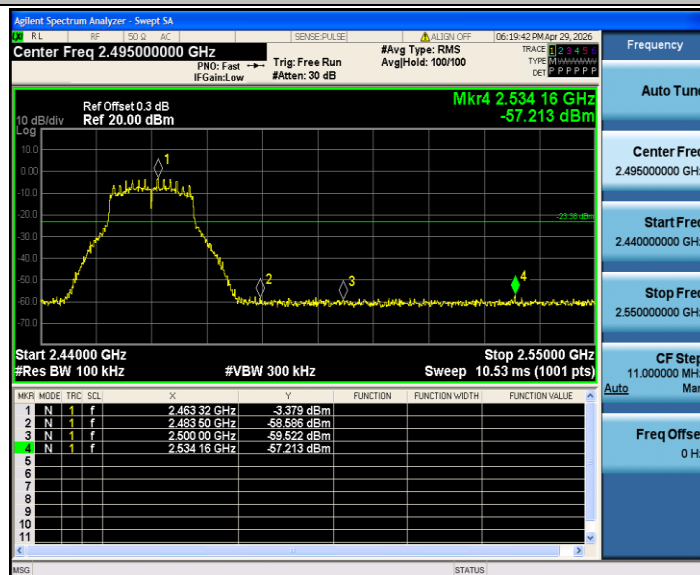
11B_Ant1_High_2462



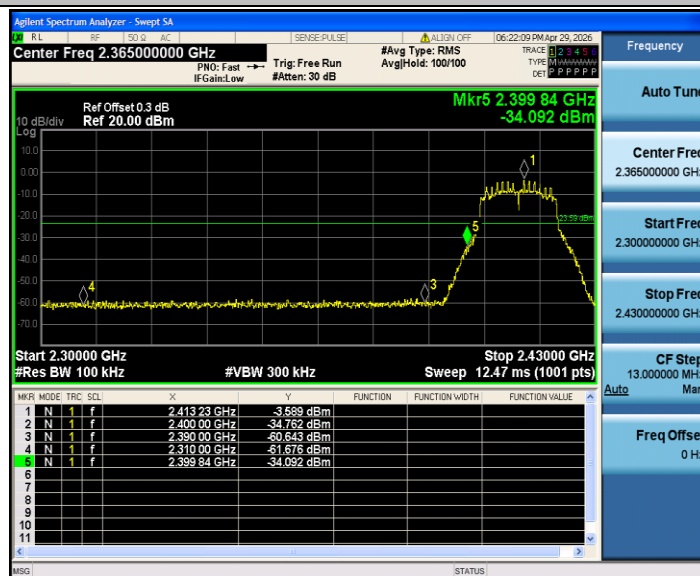
11G_Ant1_Low_2412



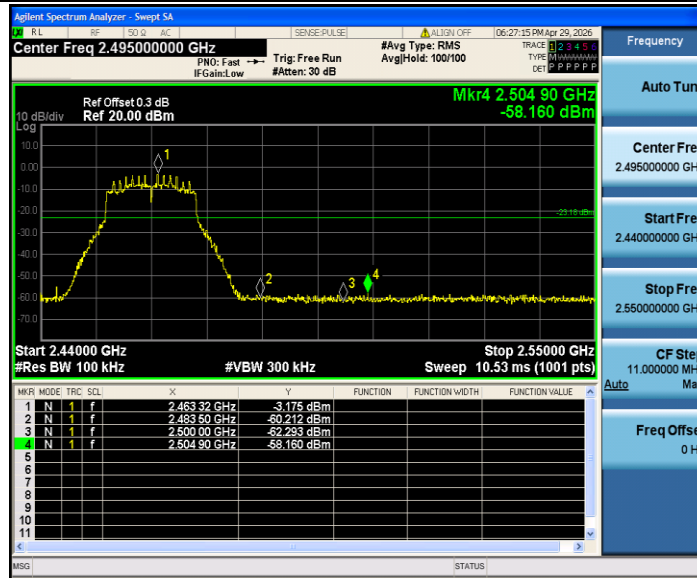
11G_Ant1_High_2462



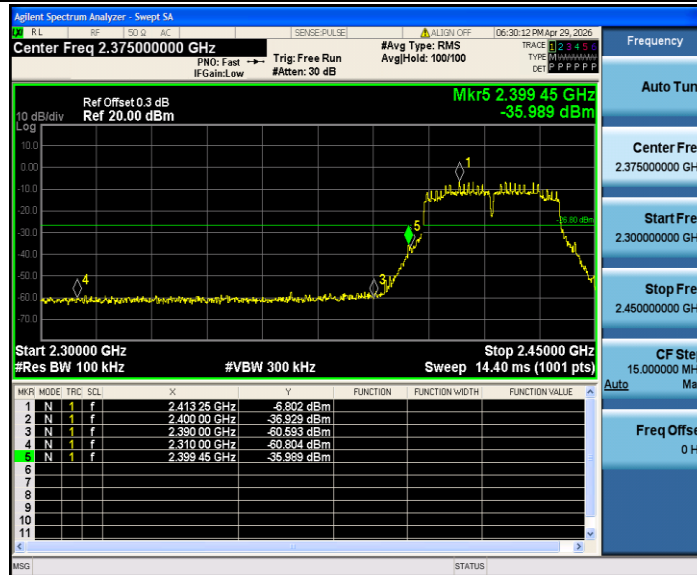
11N20SISO_Ant1_Low_2412



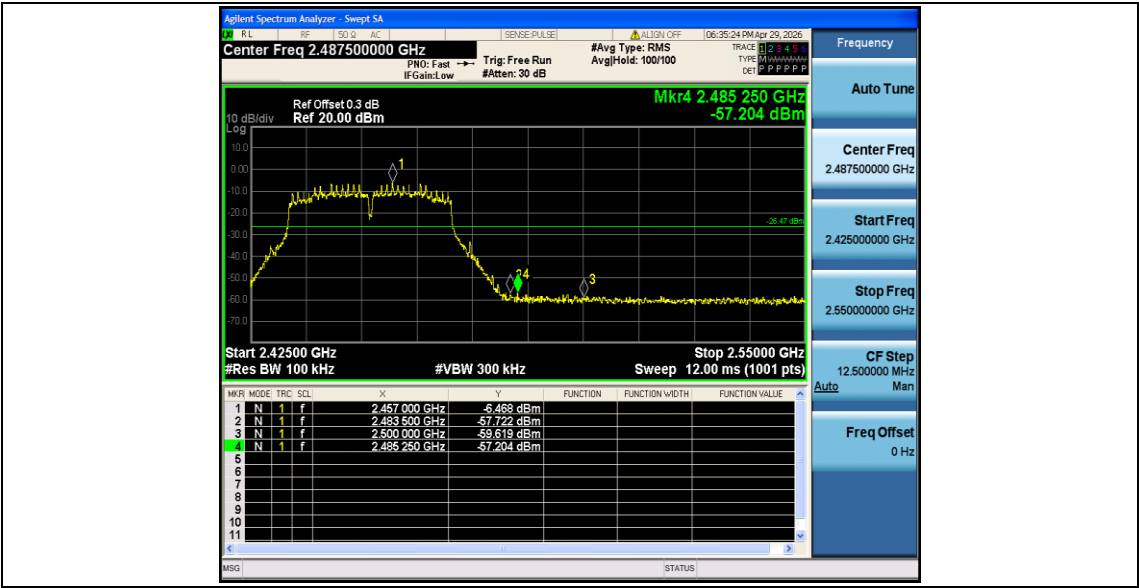
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

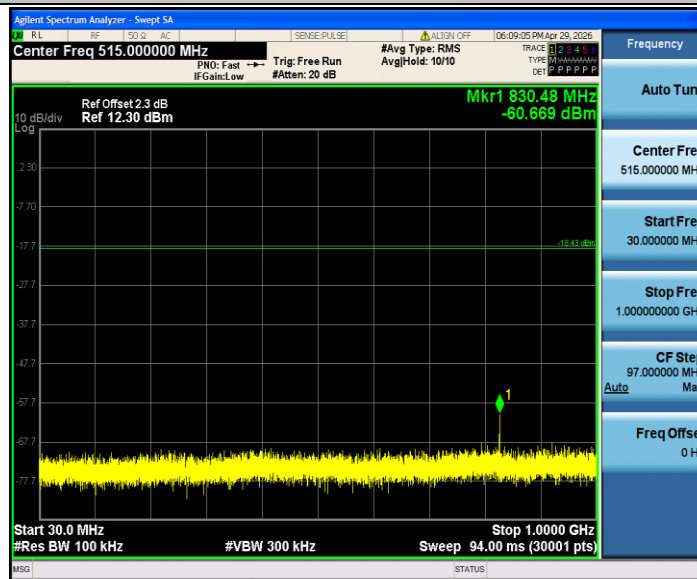
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.57	1.57	---	PASS
			30~1000	1.57	-60.67	≤-18.43	PASS
			1000~26500	1.57	-55.3	≤-18.43	PASS
		2437	Reference	1.99	1.99	---	PASS
			30~1000	1.99	-67.52	≤-18.01	PASS
			1000~26500	1.99	-54.2	≤-18.01	PASS
		2462	Reference	1.59	1.59	---	PASS
			30~1000	1.59	-68.26	≤-18.41	PASS
			1000~26500	1.59	-53.09	≤-18.41	PASS
11G	Ant1	2412	Reference	-3.57	-3.57	---	PASS
			30~1000	-3.57	-68.11	≤-23.57	PASS
			1000~26500	-3.57	-55.78	≤-23.57	PASS
		2437	Reference	-3.74	-3.74	---	PASS
			30~1000	-3.74	-66.81	≤-23.74	PASS
			1000~26500	-3.74	-55.73	≤-23.74	PASS
		2462	Reference	-5.05	-5.05	---	PASS
			30~1000	-5.05	-68.39	≤-25.05	PASS
			1000~26500	-5.05	-55.93	≤-25.05	PASS
11N20SISO	Ant1	2412	Reference	-3.81	-3.81	---	PASS
			30~1000	-3.81	-68.47	≤-23.81	PASS
			1000~26500	-3.81	-55.48	≤-23.81	PASS
		2437	Reference	-3.87	-3.87	---	PASS
			30~1000	-3.87	-68.09	≤-23.87	PASS
			1000~26500	-3.87	-55.83	≤-23.87	PASS
		2462	Reference	-3.22	-3.22	---	PASS
			30~1000	-3.22	-68.52	≤-23.22	PASS
			1000~26500	-3.22	-55.45	≤-23.22	PASS
11N40SISO	Ant1	2422	Reference	-6.85	-6.85	---	PASS
			30~1000	-6.85	-68.43	≤-26.85	PASS
			1000~26500	-6.85	-55.48	≤-26.85	PASS
		2437	Reference	-6.66	-6.66	---	PASS
			30~1000	-6.66	-68.06	≤-26.66	PASS
			1000~26500	-6.66	-55.53	≤-26.66	PASS
		2452	Reference	-7.12	-7.12	---	PASS
			30~1000	-7.12	-67.71	≤-27.12	PASS
			1000~26500	-7.12	-55.16	≤-27.12	PASS

Test Graphs

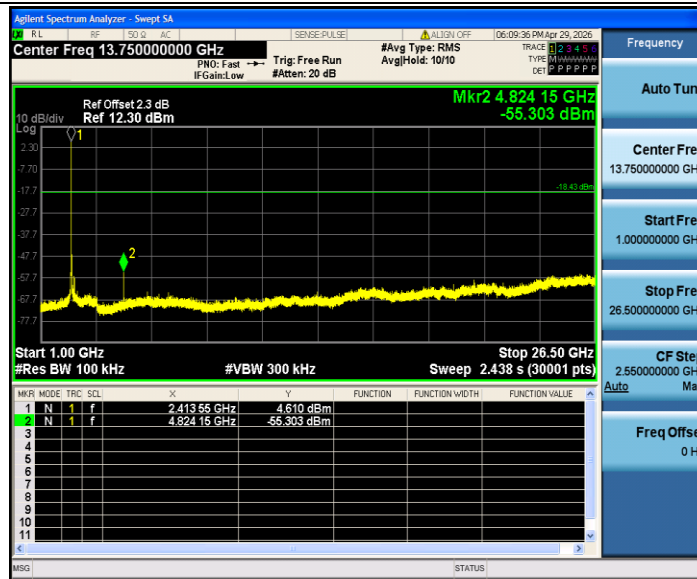
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



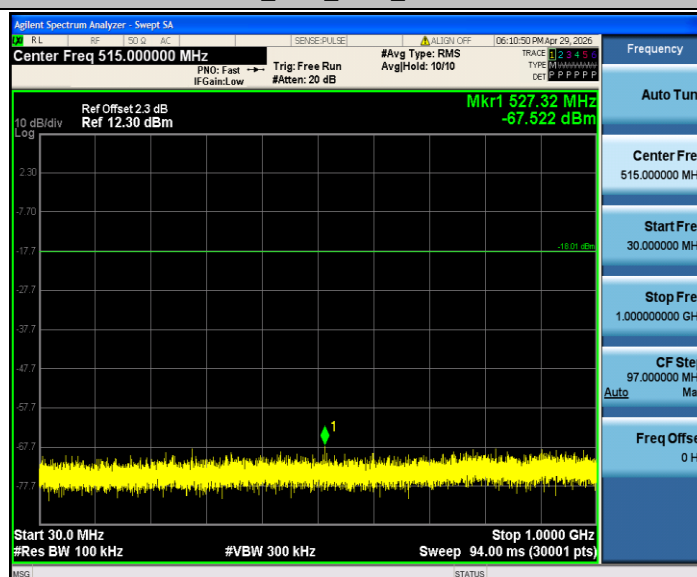
11B_Ant1_2412_1000~26500



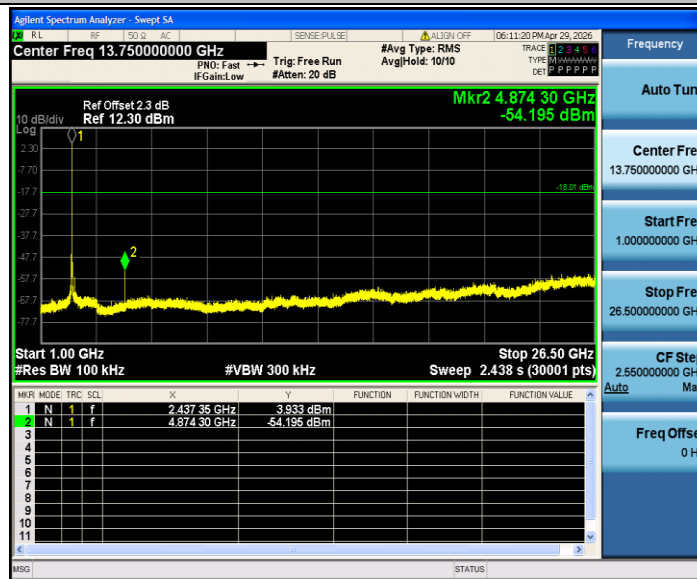
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



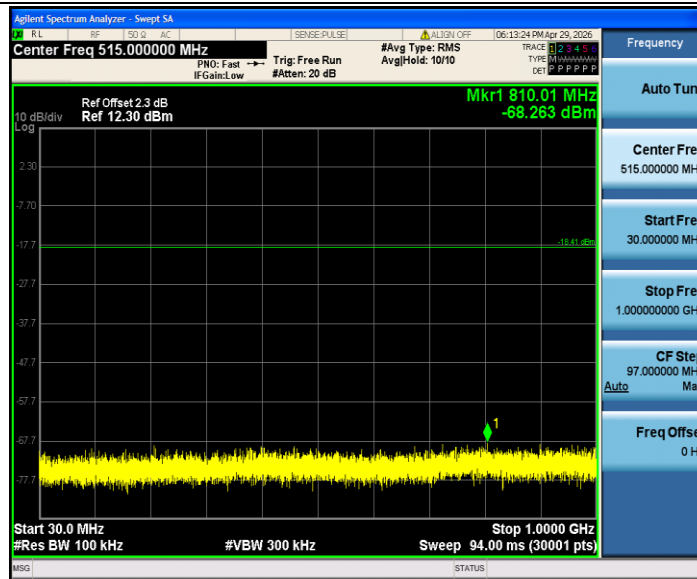
11B_Ant1_2437_1000~26500



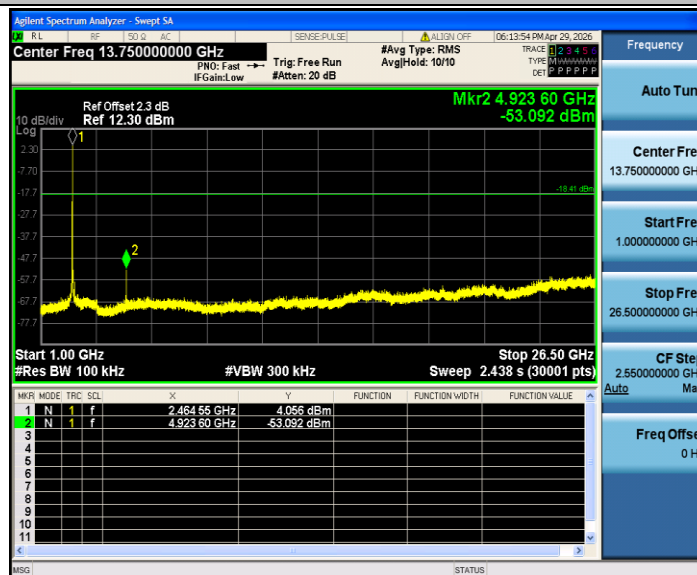
11B_Ant1_2462_0~Reference



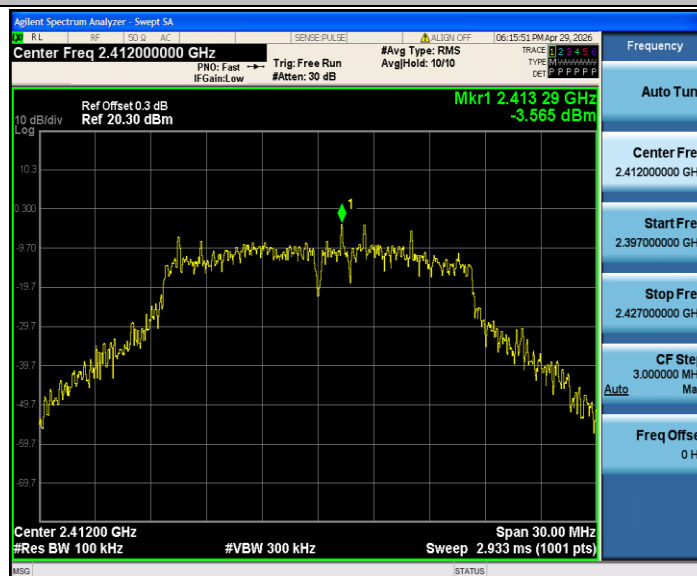
11B_Ant1_2462_30~1000



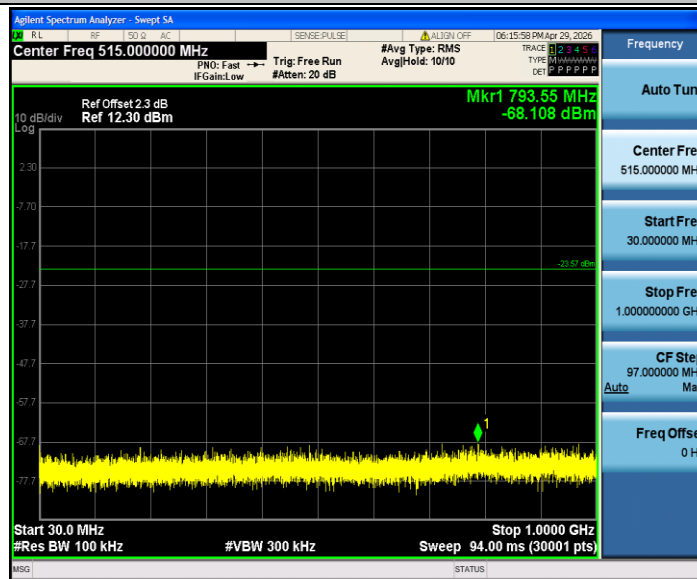
11B_Ant1_2462_1000~26500



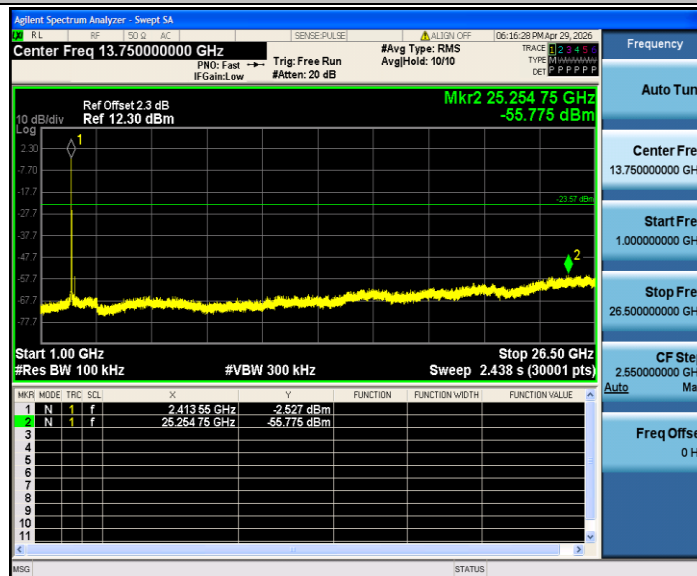
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



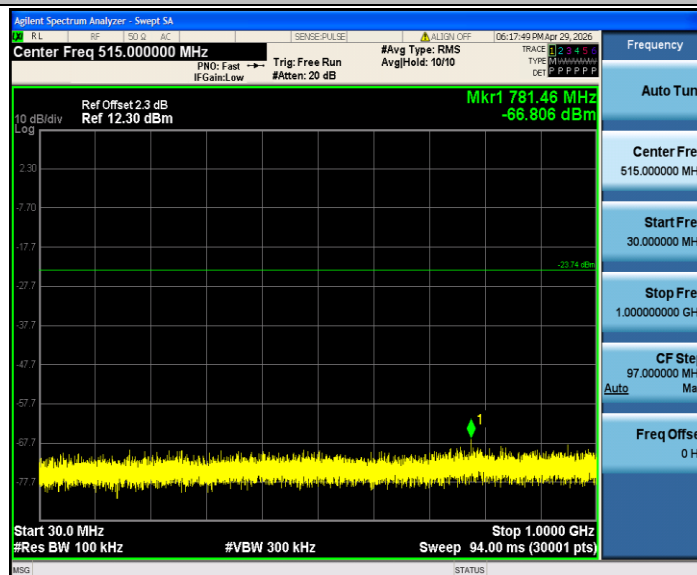
11G_Ant1_2412_1000~26500



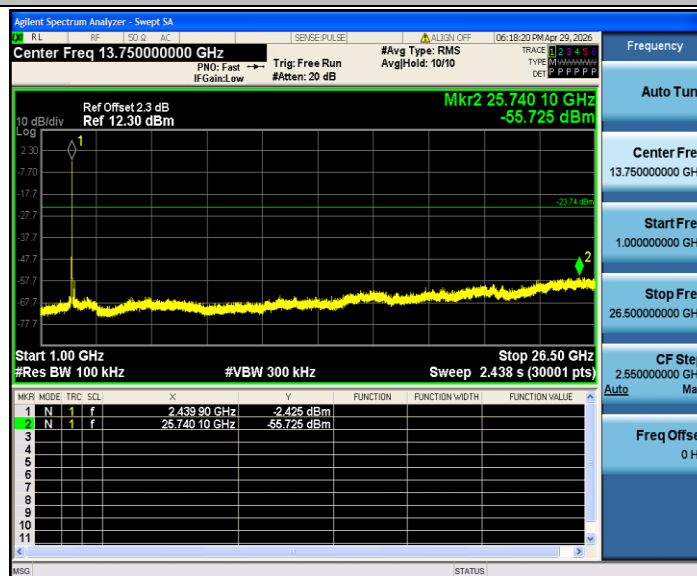
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



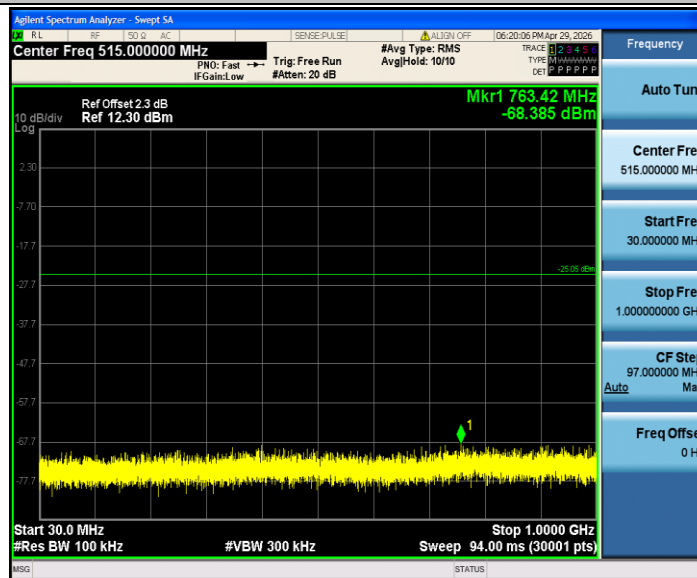
11G_Ant1_2437_1000~26500



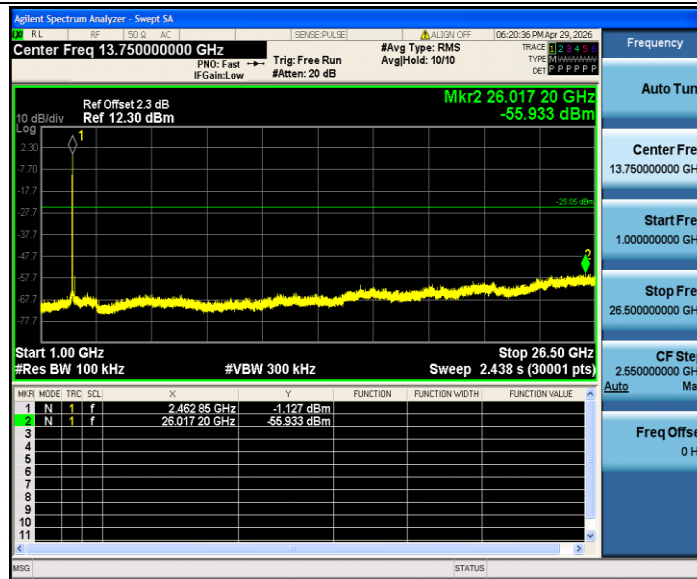
11G_Ant1_2462_0~Reference



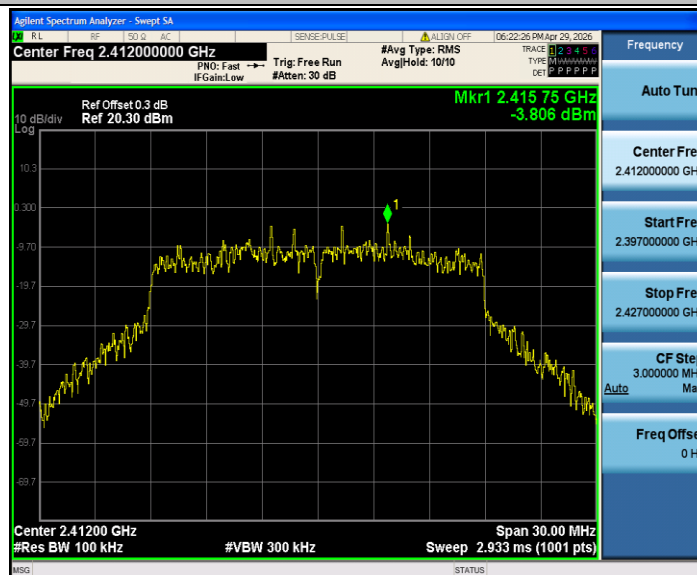
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000

