

Case No. : <u>CTA24053000302</u>
Ambient Condition: <u>23 °C, 51 %RH,</u>
Test Date: <u>2024.5.21</u> Test Engineer: <u>Evan ouyang</u>

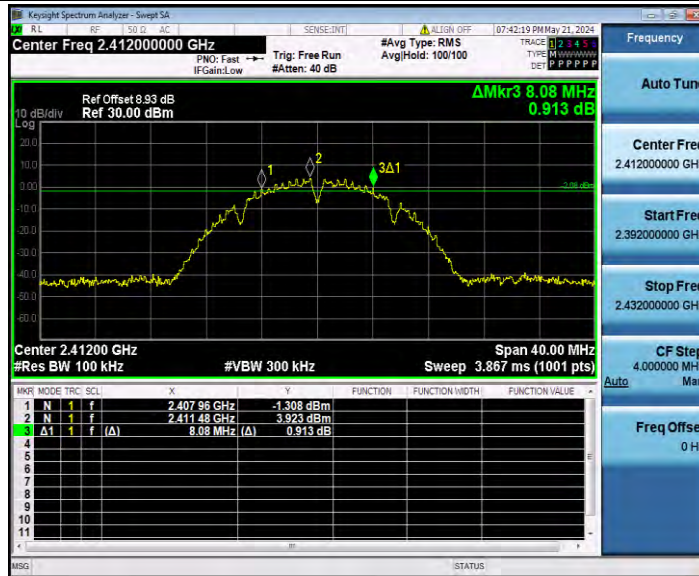
Appendix B.1: DTS Bandwidth

Test Result

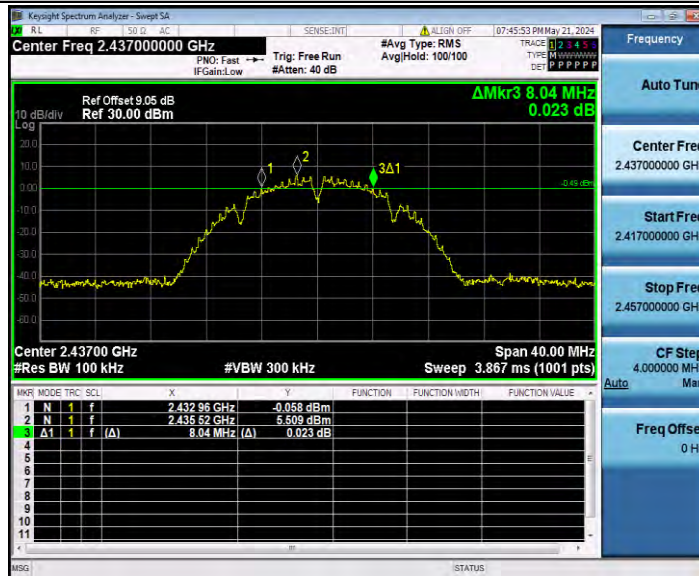
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.080	2407.960	2416.040	0.5	PASS
		2437	8.040	2432.960	2441.000	0.5	PASS
		2462	7.560	2458.000	2465.560	0.5	PASS
11G	Ant1	2412	15.240	2404.520	2419.760	0.5	PASS
		2437	13.200	2430.680	2443.880	0.5	PASS
		2462	15.040	2454.440	2469.480	0.5	PASS
11N20SISO	Ant1	2412	15.040	2404.480	2419.520	0.5	PASS
		2437	15.000	2429.520	2444.520	0.5	PASS
		2462	13.280	2455.360	2468.640	0.5	PASS
11N40SISO	Ant1	2422	31.280	2408.240	2439.520	0.5	PASS
		2437	33.840	2420.760	2454.600	0.5	PASS
		2452	35.120	2434.480	2469.600	0.5	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



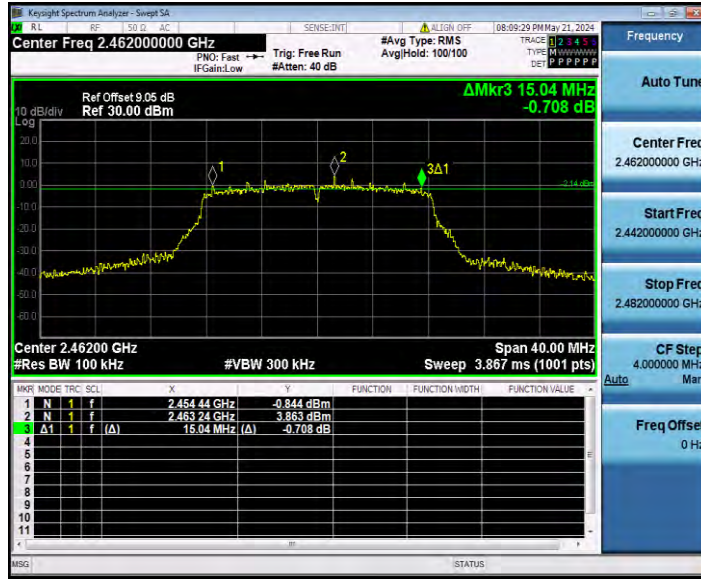
11G_Ant1_2412



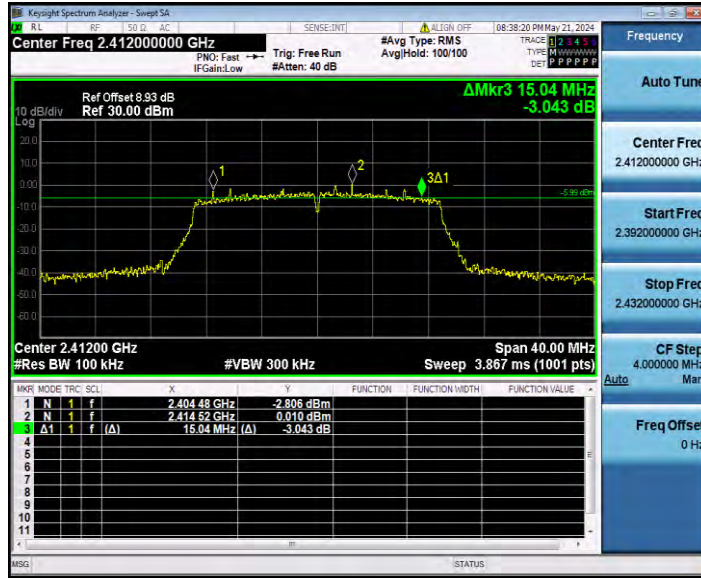
11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



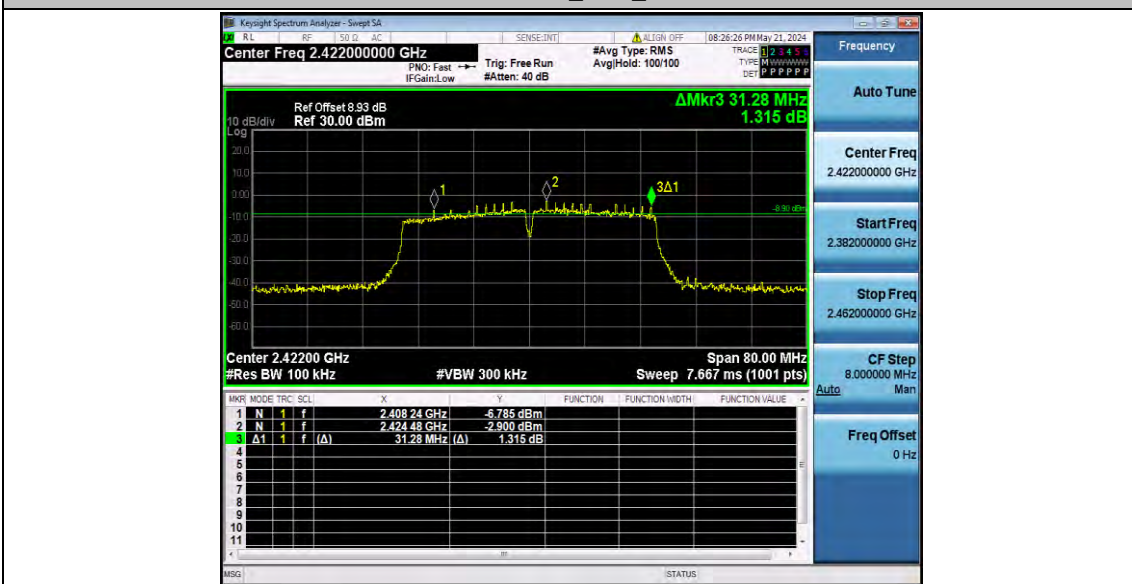
11N20SISO_Ant1_2437



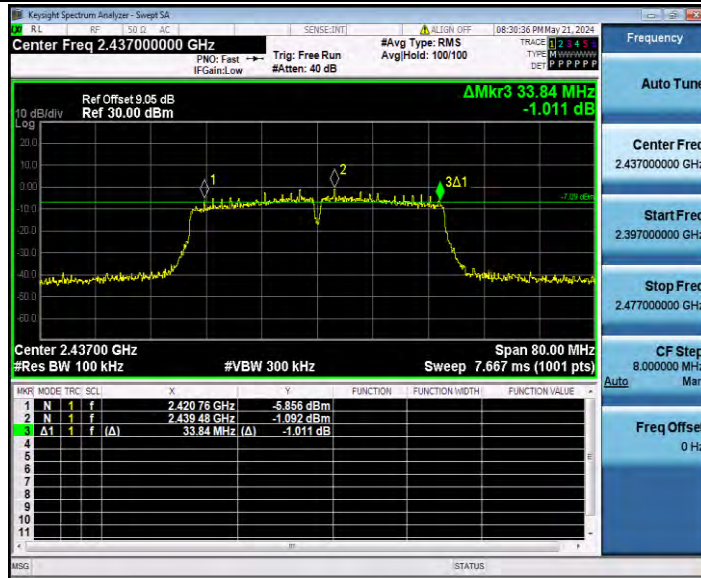
11N20SISO_Ant1_2462



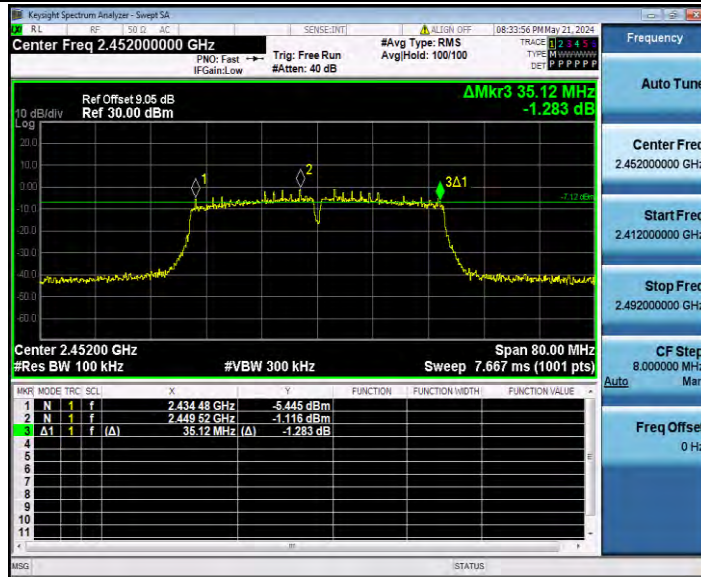
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

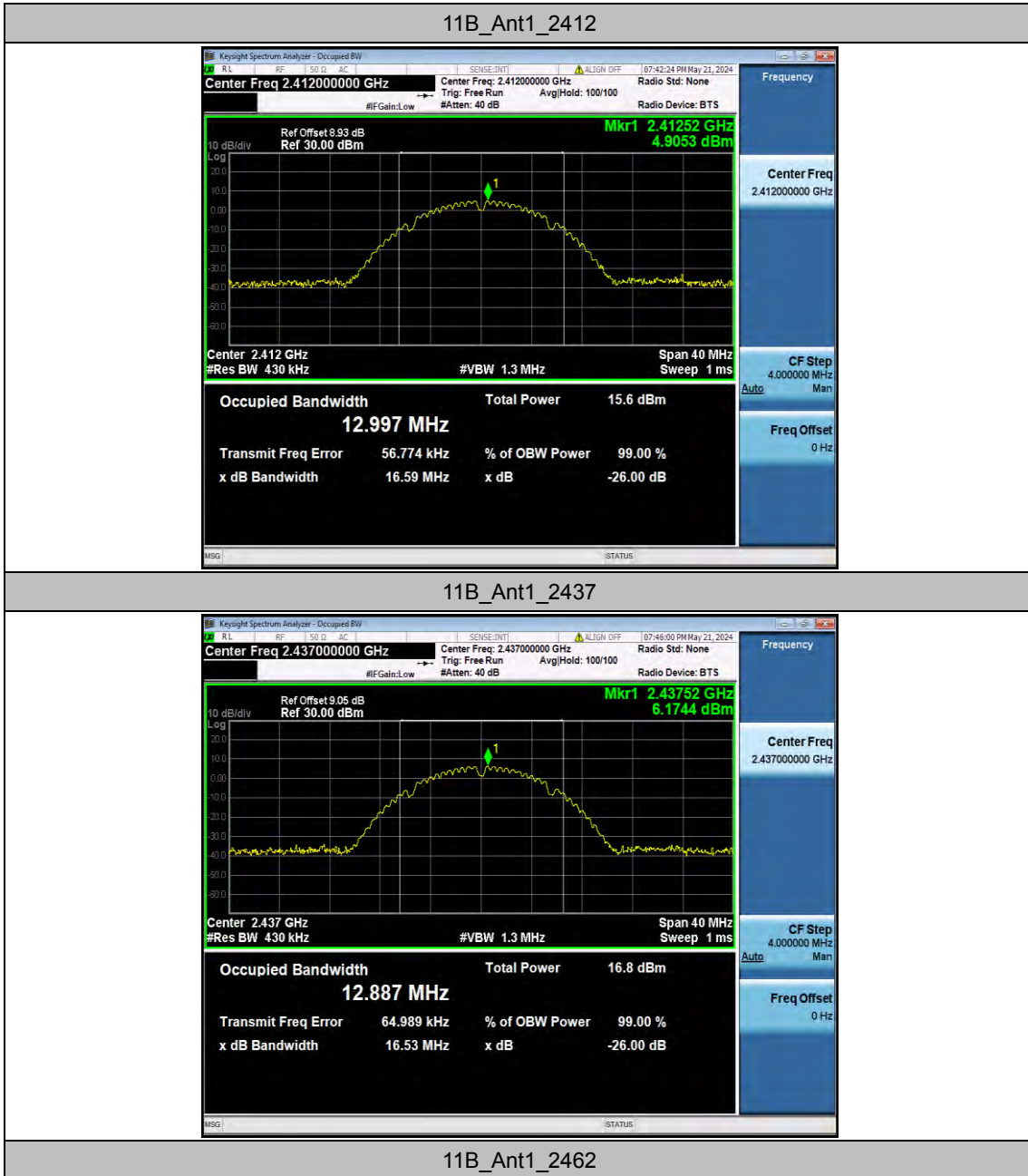


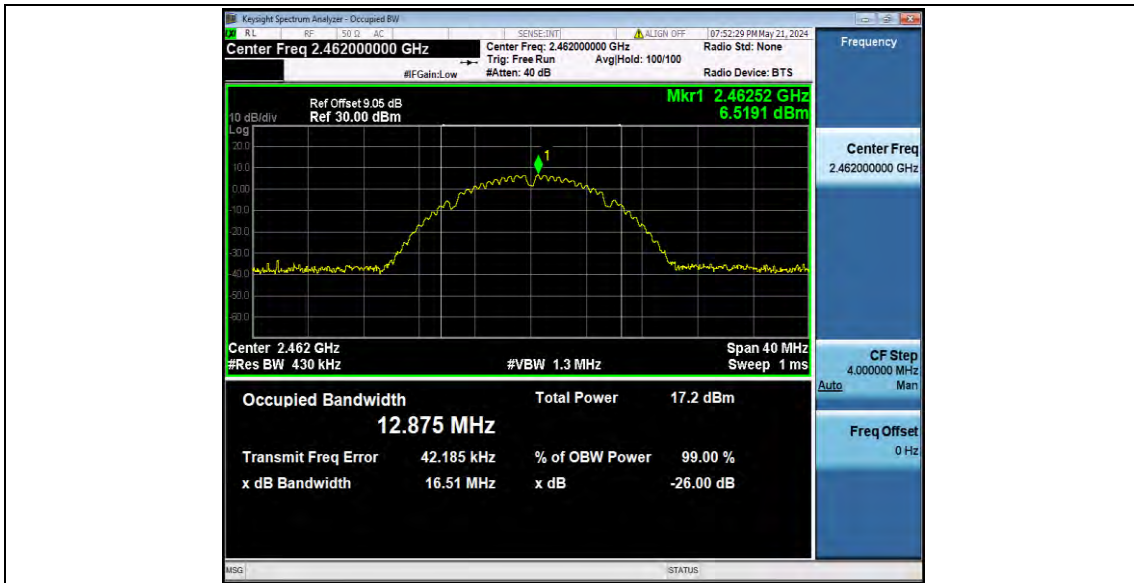
Appendix B.2: Occupied Channel Bandwidth

Test Result

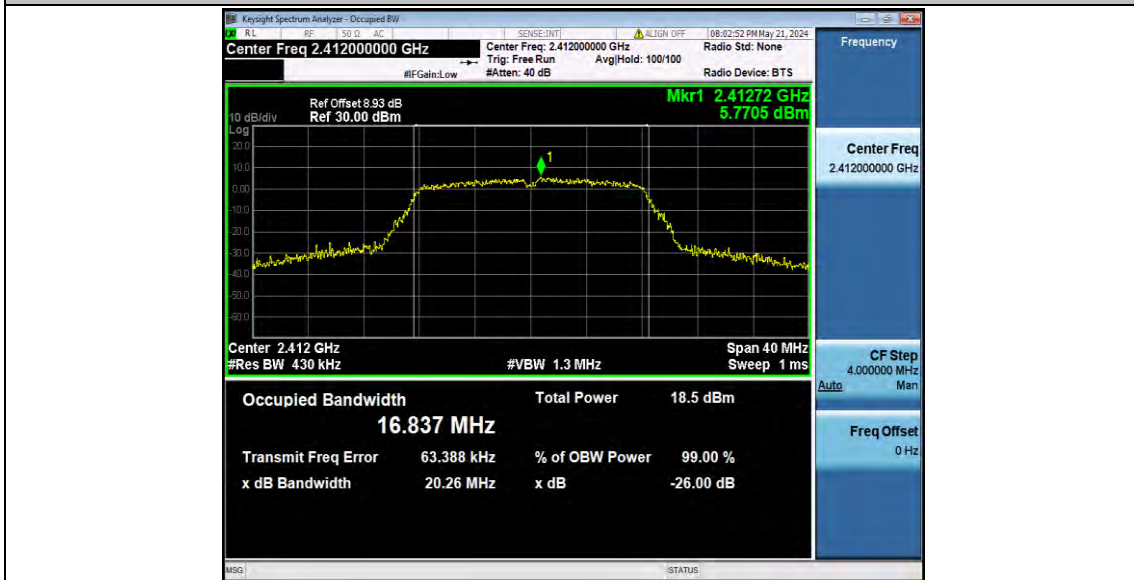
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
11B	Ant1	2412	12.997	2405.5583	2418.5553
		2437	12.887	2430.6215	2443.5085
		2462	12.875	2455.6047	2468.4797
11G	Ant1	2412	16.837	2403.6449	2420.4819
		2437	16.825	2428.5900	2445.4150
		2462	16.862	2453.6067	2470.4687
11N20SISO	Ant1	2412	17.887	2403.0846	2420.9716
		2437	17.816	2428.1492	2445.9652
		2462	17.797	2453.1087	2470.9057
11N40SISO	Ant1	2422	36.218	2404.0559	2440.2739
		2437	36.052	2419.1217	2455.1737
		2452	36.109	2434.0642	2470.1732

Test Graphs





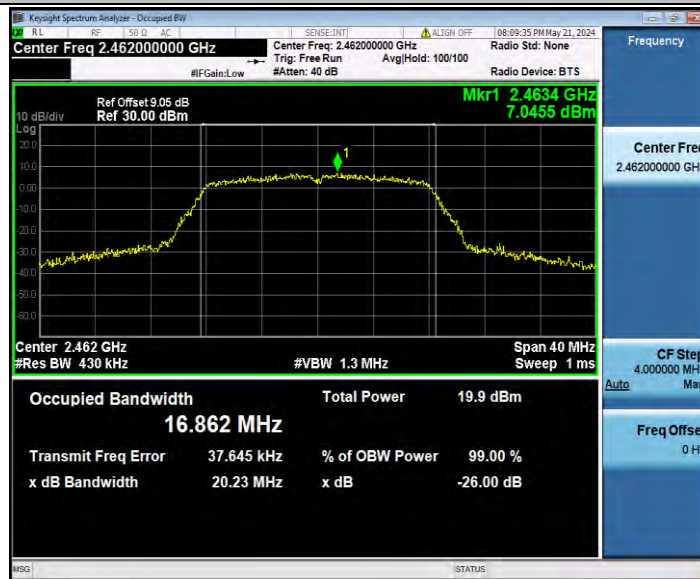
11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



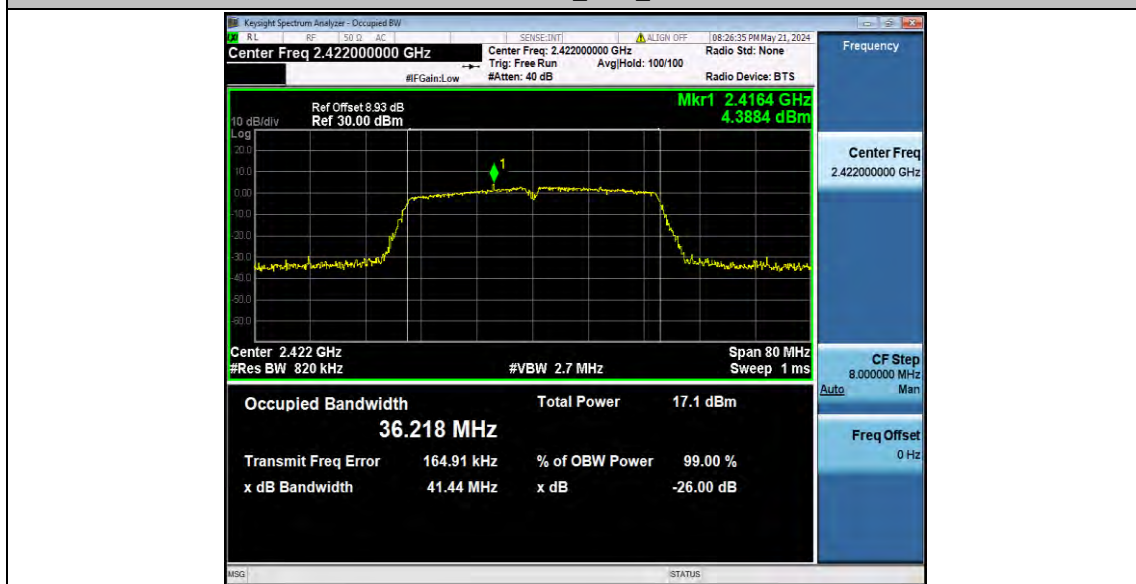
11N20SISO_Ant1_2437



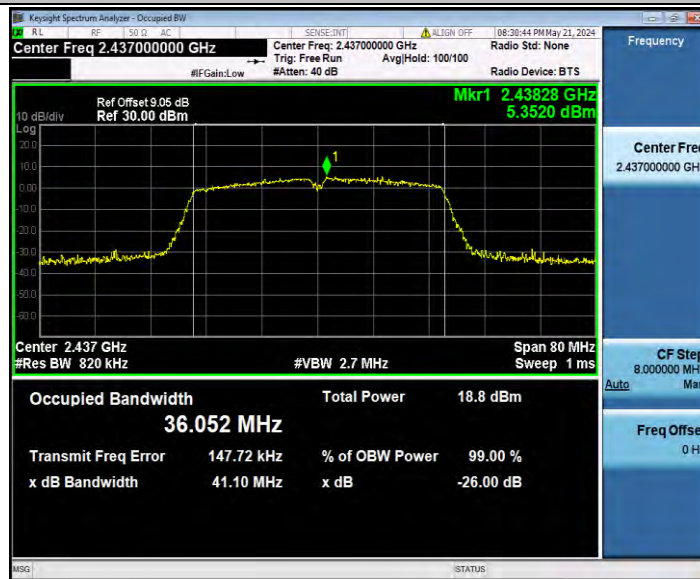
11N20SISO_Ant1_2462



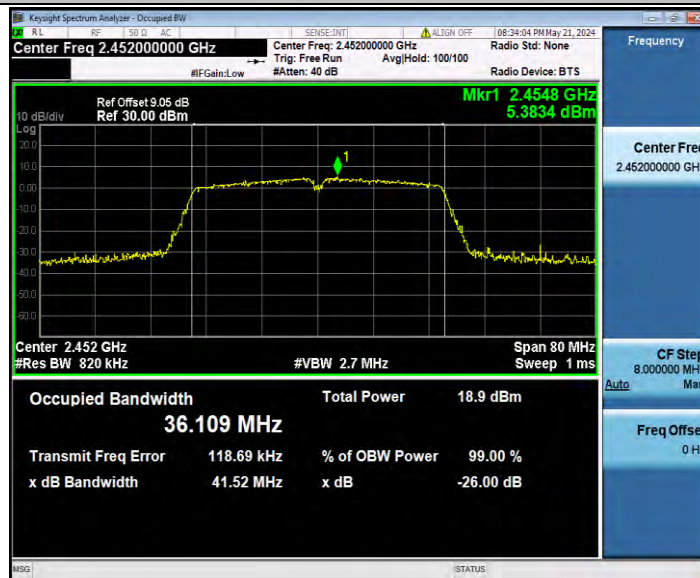
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix B.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	18.77	≤30.00	PASS
		2437	18.84	≤30.00	PASS
		2462	18.26	≤30.00	PASS
11G	Ant1	2412	18.17	≤30.00	PASS
		2437	18.36	≤30.00	PASS
		2462	18.11	≤30.00	PASS
11N20SISO	Ant1	2412	17.70	≤30.00	PASS
		2437	17.32	≤30.00	PASS
		2462	17.25	≤30.00	PASS
11N40SISO	Ant1	2422	16.58	≤30.00	PASS
		2437	16.39	≤30.00	PASS
		2452	16.79	≤30.00	PASS

Note:

1.The Duty Cycle Factor and RBW Factor is compensated in the datC.

Appendix B.4: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-9.65	≤8.00	PASS
		2437	-8.84	≤8.00	PASS
		2462	-8.81	≤8.00	PASS
11G	Ant1	2412	-11.43	≤8.00	PASS
		2437	-11.15	≤8.00	PASS
		2462	-8.99	≤8.00	PASS
11N20SISO	Ant1	2412	-14.05	≤8.00	PASS
		2437	-12.79	≤8.00	PASS
		2462	-12.01	≤8.00	PASS
11N40SISO	Ant1	2422	-16.74	≤8.00	PASS
		2437	-15.95	≤8.00	PASS
		2452	-15.74	≤8.00	PASS

Note:

1. The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

11B_Ant1_2412



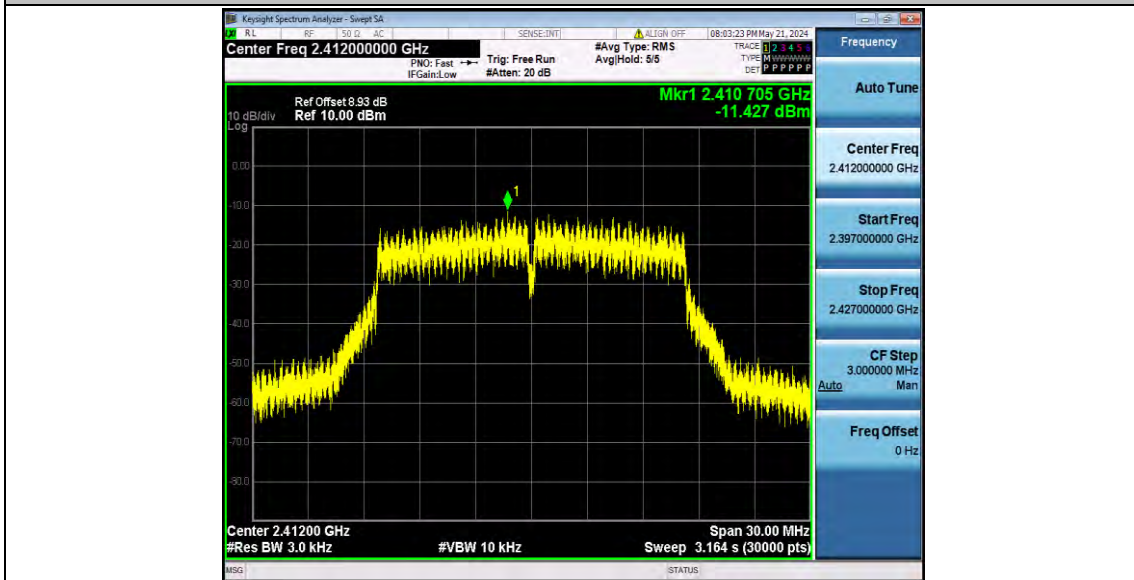
11B_Ant1_2437



11B_Ant1_2462



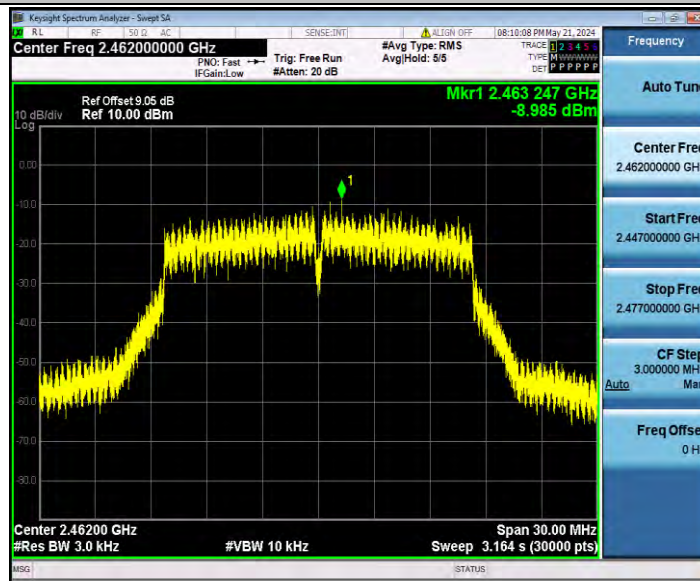
11G_Ant1_2412



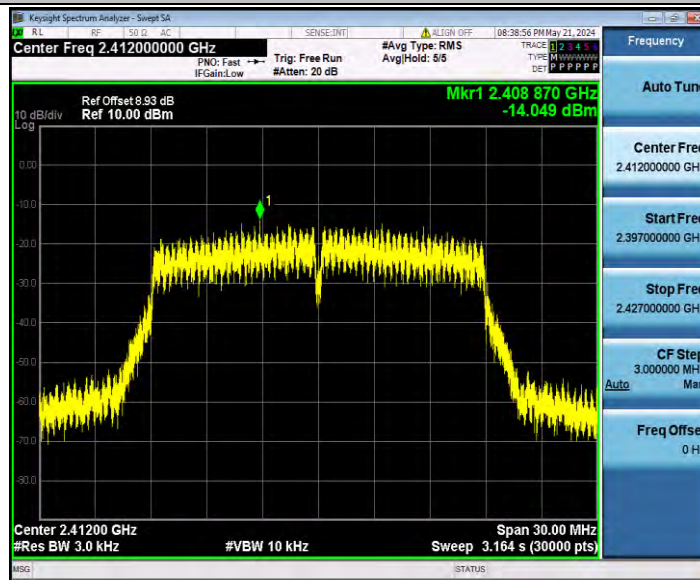
11G_Ant1_2437



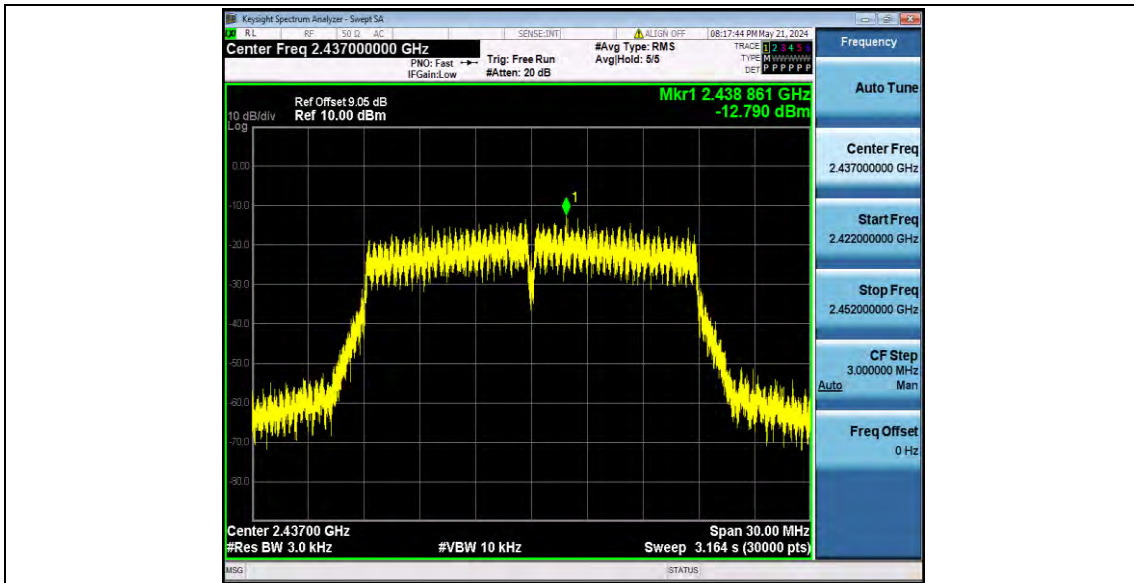
11G_Ant1_2462



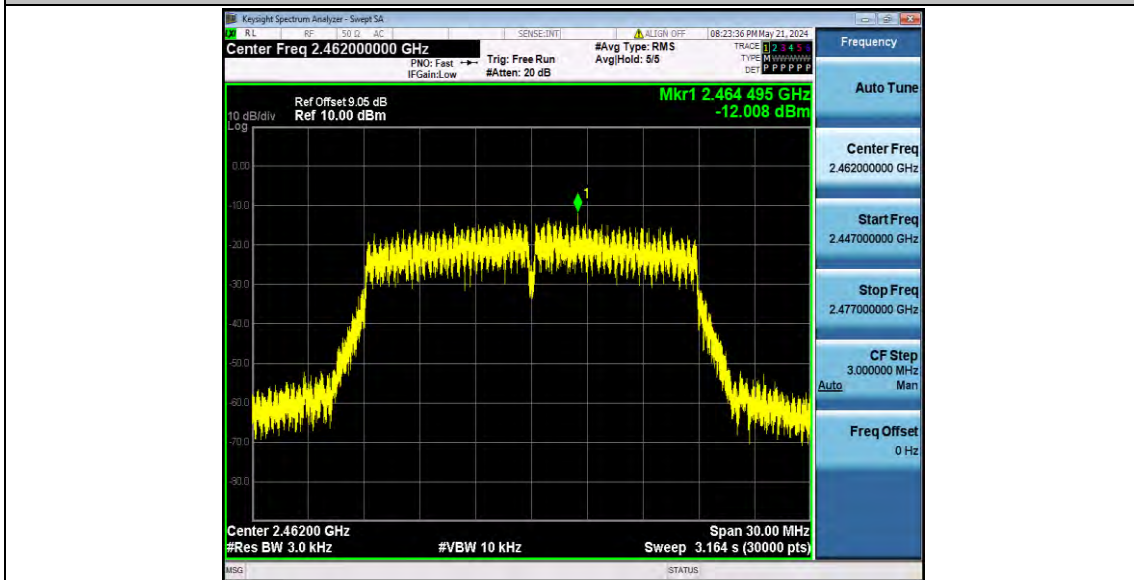
11N20SISO_Ant1_2412



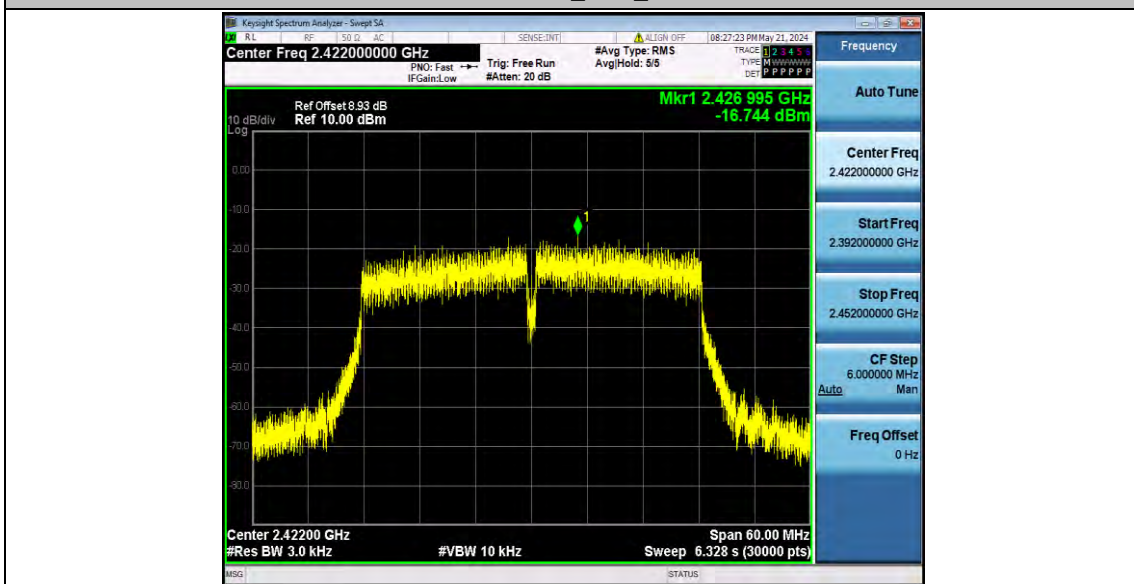
11N20SISO_Ant1_2437



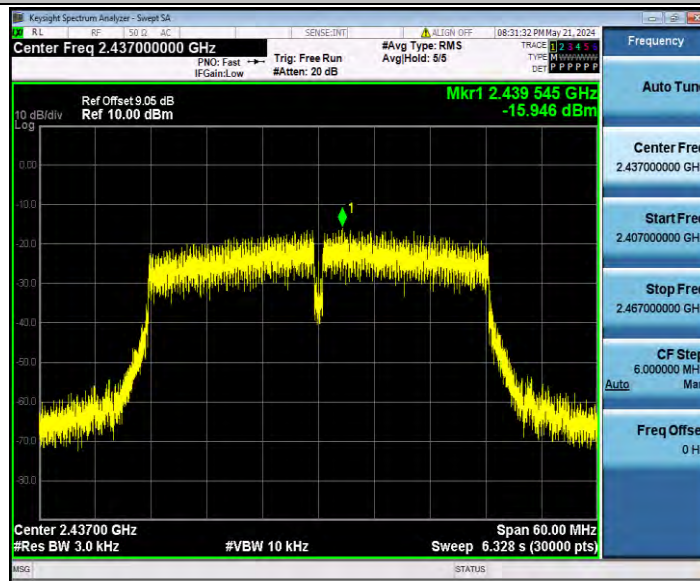
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



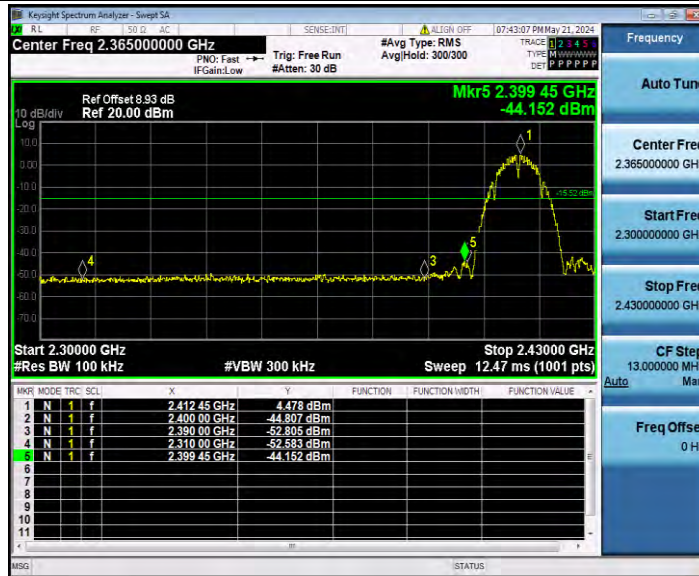
Appendix B.5: Band edge measurements

Test Result

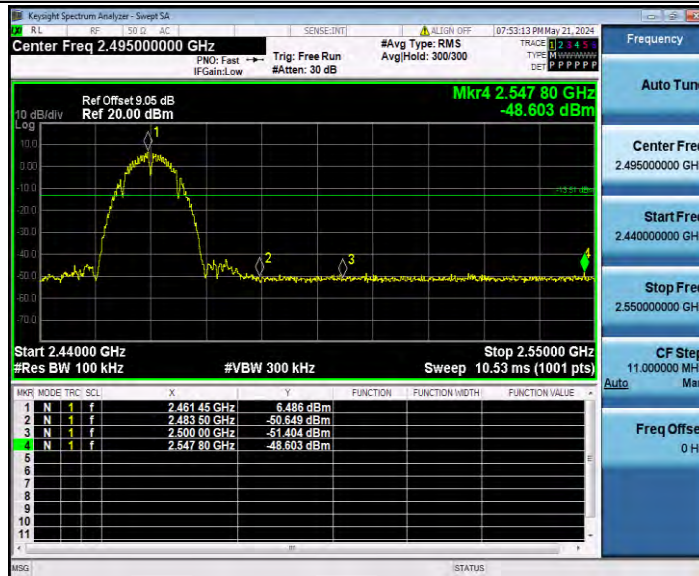
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.48	-44.15	≤-15.52	PASS
		High	2462	6.49	-48.6	≤-13.51	PASS
11G	Ant1	Low	2412	1.58	-32.01	≤-18.42	PASS
		High	2462	3.80	-46.84	≤-16.2	PASS
11N20SISO	Ant1	Low	2412	-0.05	-37.43	≤-20.05	PASS
		High	2462	2.01	-48.59	≤-17.99	PASS
11N40SISO	Ant1	Low	2422	-2.74	-41.04	≤-22.74	PASS
		High	2452	-1.13	-42.75	≤-21.13	PASS

Test Graphs

11B_Ant1_Low_2412



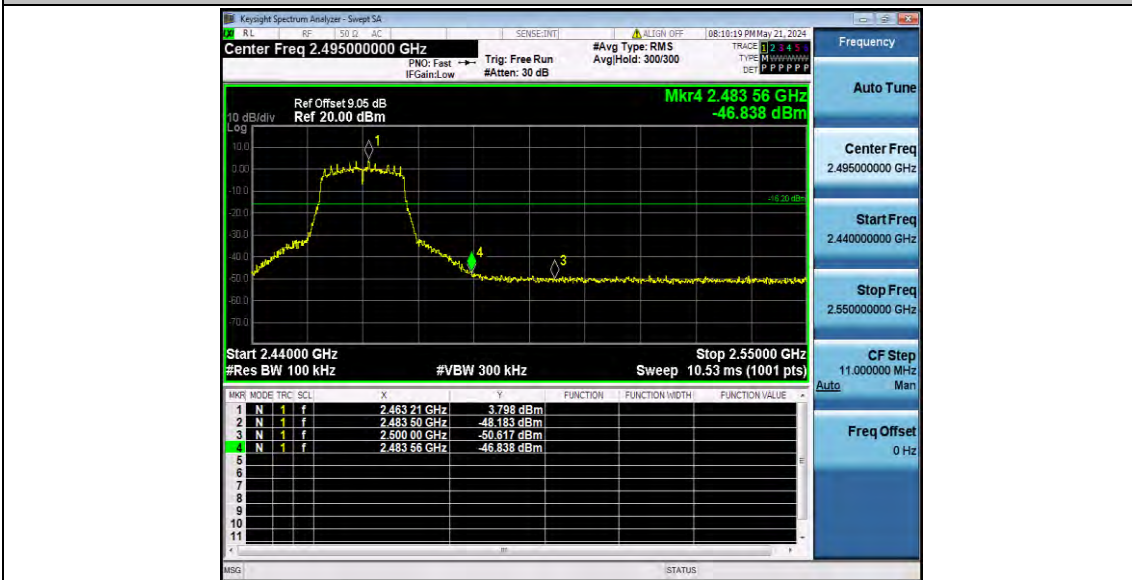
11B_Ant1_High_2462



11G_Ant1_Low_2412



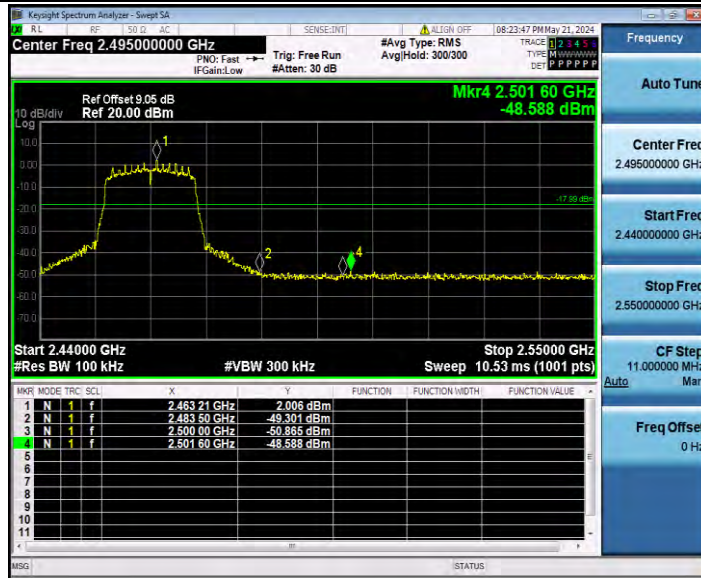
11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

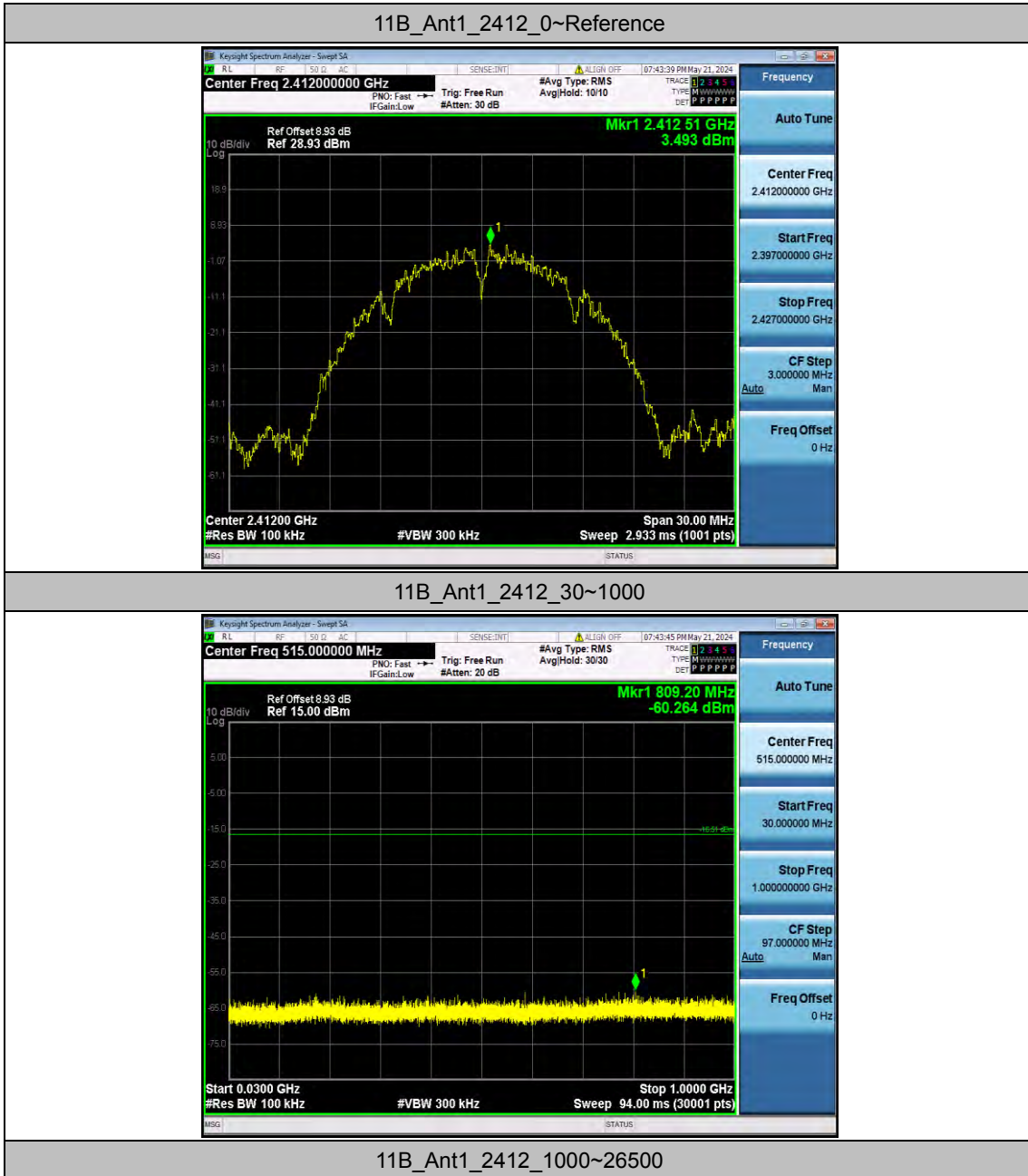


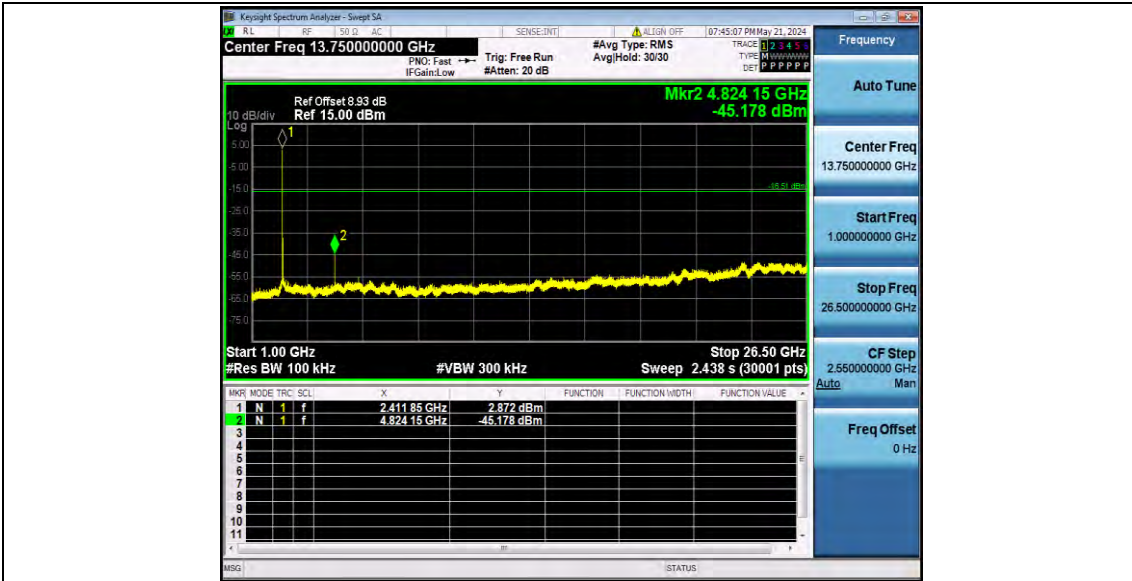
Appendix B.6: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.49	3.49	---	PASS
			30~1000	3.49	-60.26	≤ -16.51	PASS
			1000~26500	3.49	-45.18	≤ -16.51	PASS
		2437	Reference	4.10	4.10	---	PASS
			30~1000	4.10	-60.43	≤ -15.9	PASS
			1000~26500	4.10	-44.89	≤ -15.9	PASS
		2462	Reference	4.38	4.38	---	PASS
			30~1000	4.38	-60.67	≤ -15.62	PASS
			1000~26500	4.38	-46.63	≤ -15.62	PASS
11G	Ant1	2412	Reference	-1.18	-1.18	---	PASS
			30~1000	-1.18	-60.78	≤ -21.18	PASS
			1000~26500	-1.18	-48.07	≤ -21.18	PASS
		2437	Reference	1.89	1.89	---	PASS
			30~1000	1.89	-60.85	≤ -18.11	PASS
			1000~26500	1.89	-47.54	≤ -18.11	PASS
		2462	Reference	-0.37	-0.37	---	PASS
			30~1000	-0.37	-60.75	≤ -20.37	PASS
			1000~26500	-0.37	-46.82	≤ -20.37	PASS
11N20SISO	Ant1	2412	Reference	0.82	0.82	---	PASS
			30~1000	0.82	-60.25	≤ -19.18	PASS
			1000~26500	0.82	-47.49	≤ -19.18	PASS
		2437	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-59.92	≤ -22.5	PASS
			1000~26500	-2.50	-48.08	≤ -22.5	PASS
		2462	Reference	-0.83	-0.83	---	PASS
			30~1000	-0.83	-61.02	≤ -20.83	PASS
			1000~26500	-0.83	-47.75	≤ -20.83	PASS
11N40SISO	Ant1	2422	Reference	-5.03	-5.03	---	PASS
			30~1000	-5.03	-60.33	≤ -25.03	PASS
			1000~26500	-5.03	-47.76	≤ -25.03	PASS
		2437	Reference	-4.38	-4.38	---	PASS
			30~1000	-4.38	-60.39	≤ -24.38	PASS
			1000~26500	-4.38	-48.07	≤ -24.38	PASS
		2452	Reference	-1.68	-1.68	---	PASS
			30~1000	-1.68	-60.46	≤ -21.68	PASS
			1000~26500	-1.68	-47.19	≤ -21.68	PASS

Test Graphs

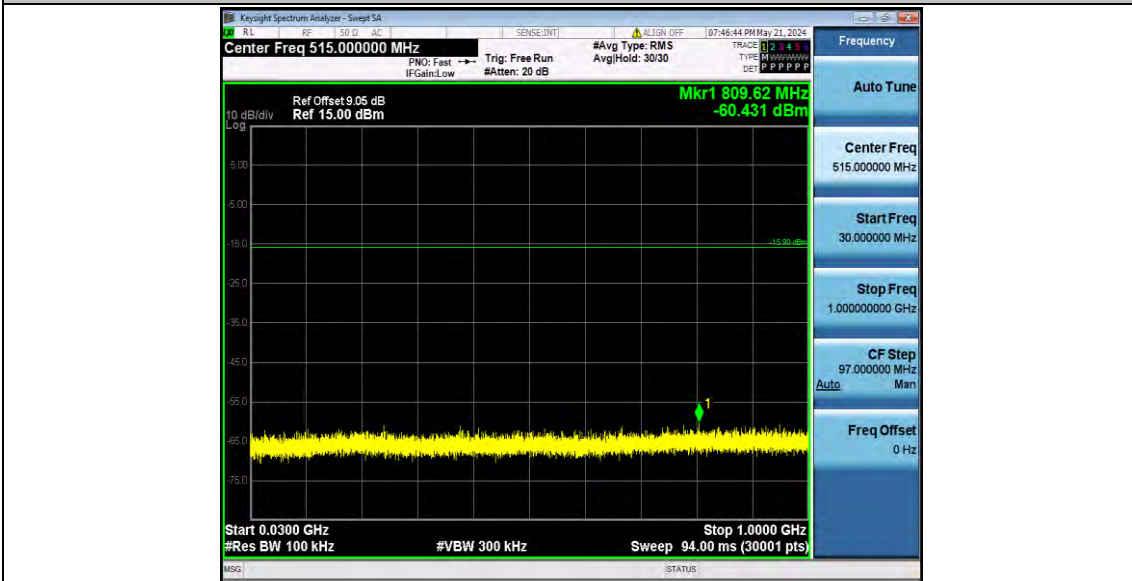




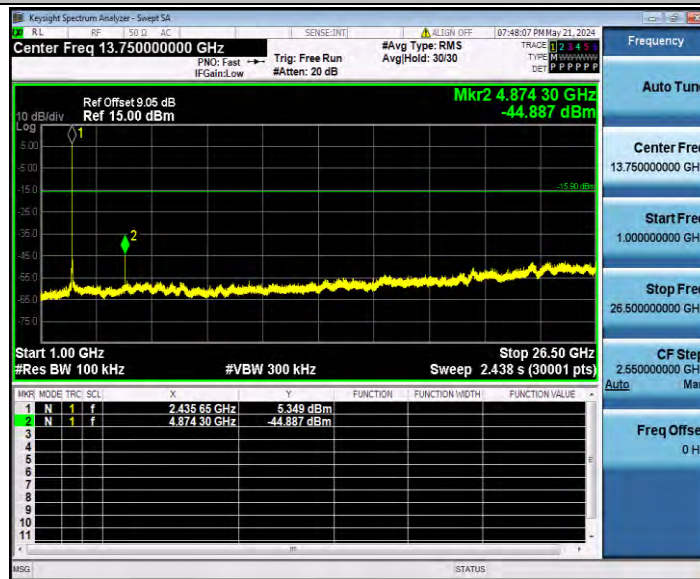
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



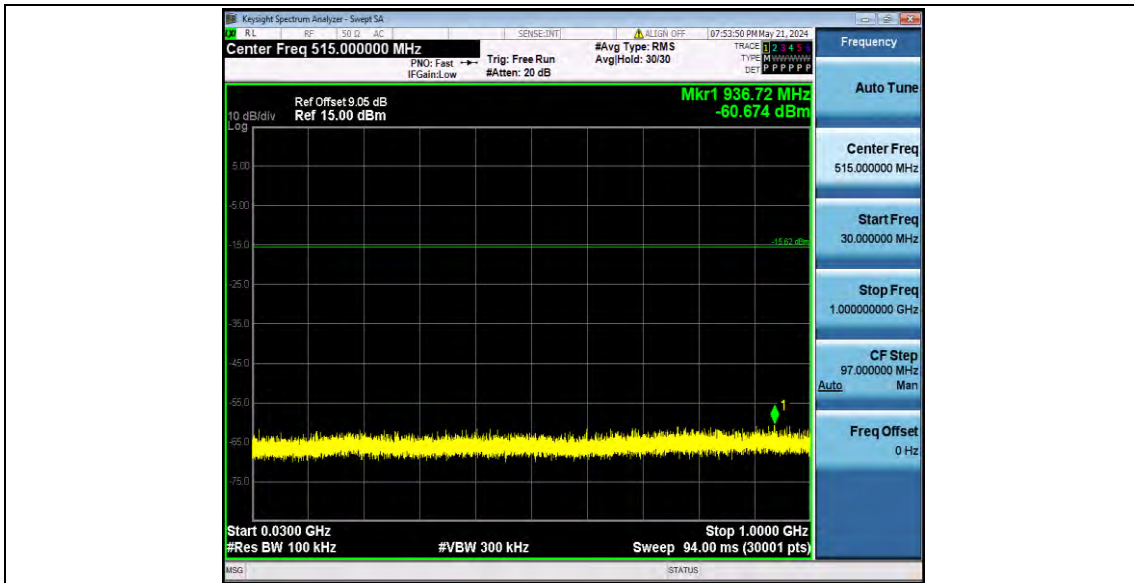
11B_Ant1_2437_1000~26500



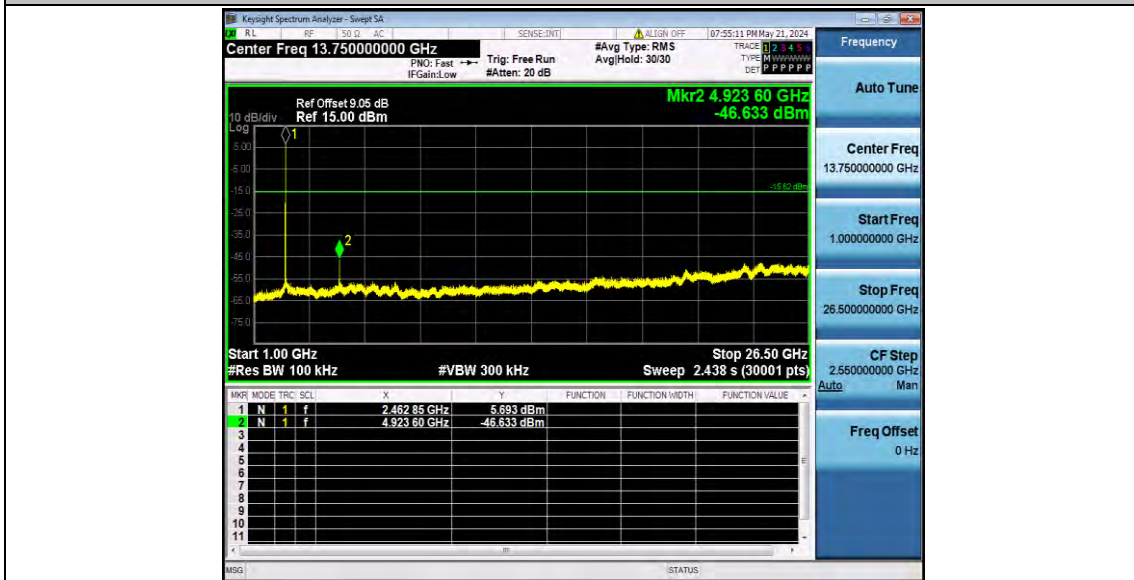
11B_Ant1_2462_0~Reference



11B_Ant1_2462_30~1000



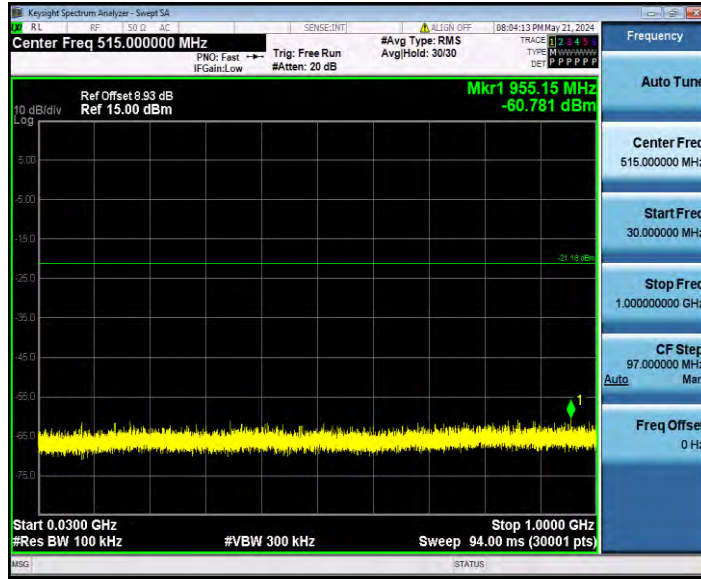
11B_Ant1_2462_1000~26500



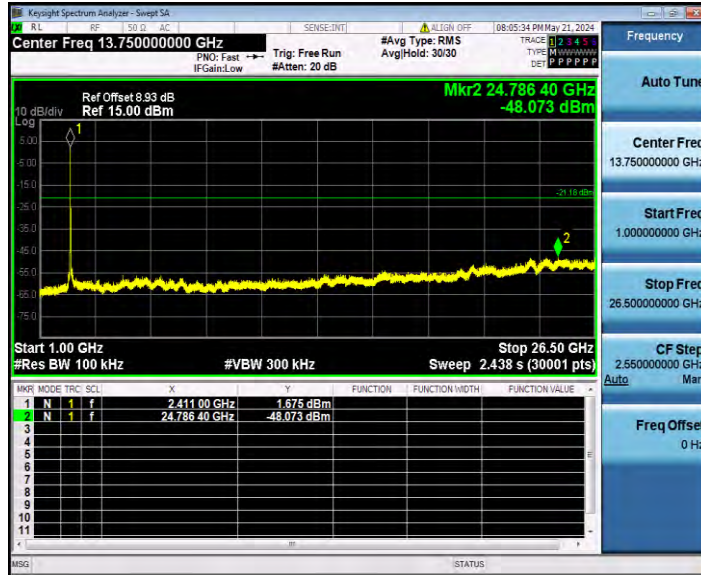
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



11G_Ant1_2412_1000~26500



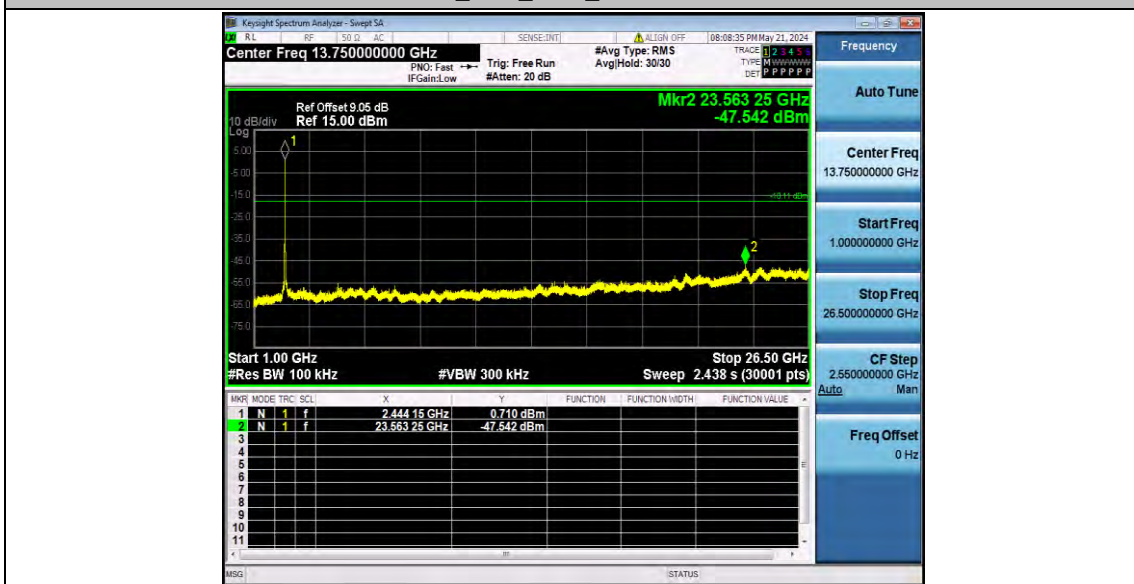
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



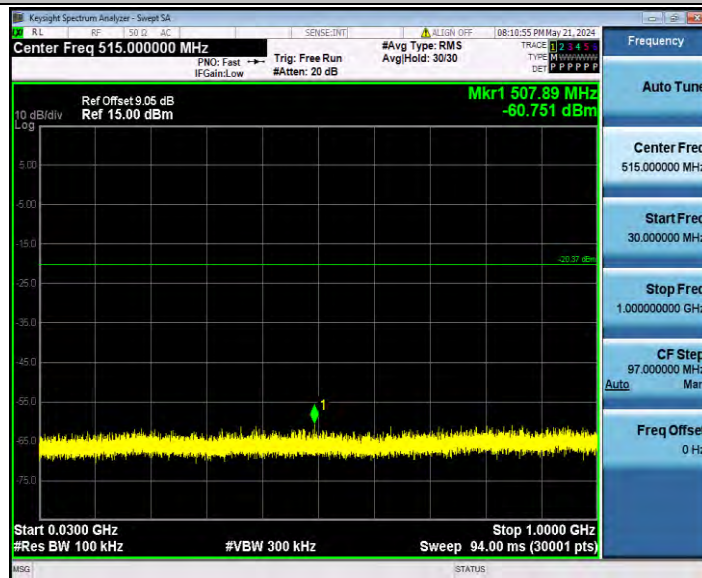
11G_Ant1_2437_1000~26500



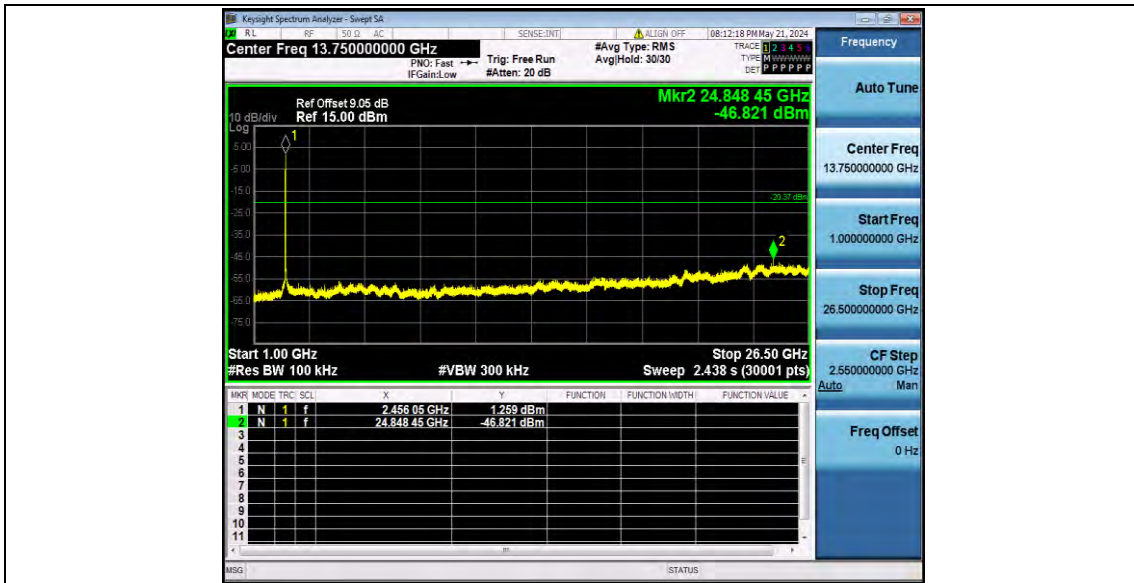
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



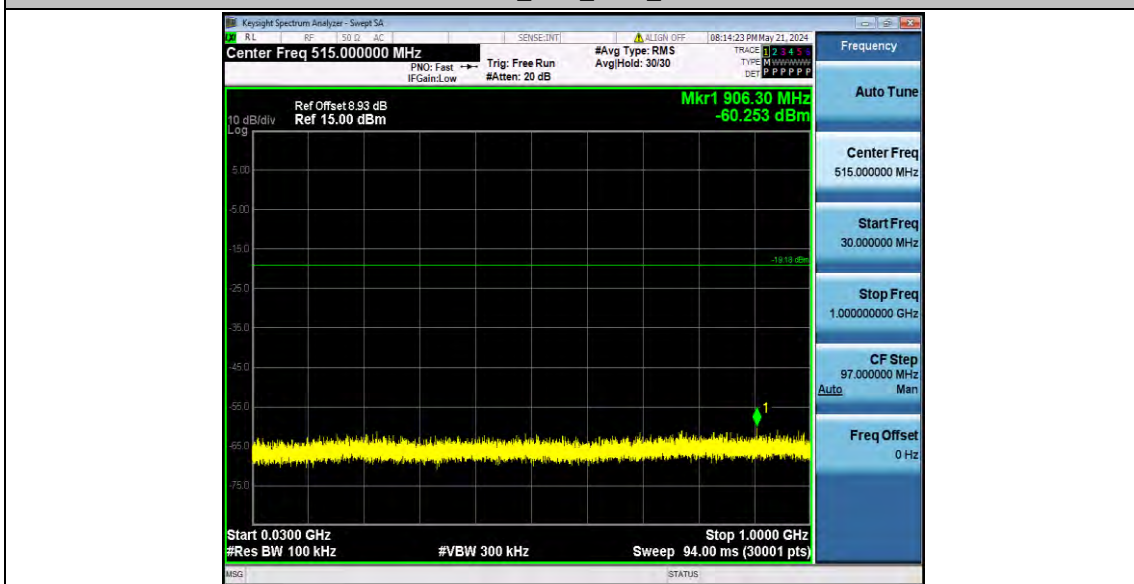
11G_Ant1_2462_1000~26500



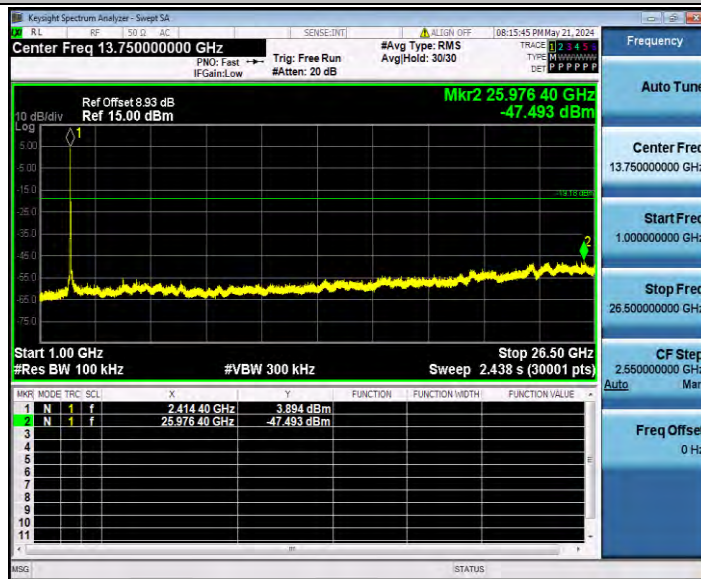
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



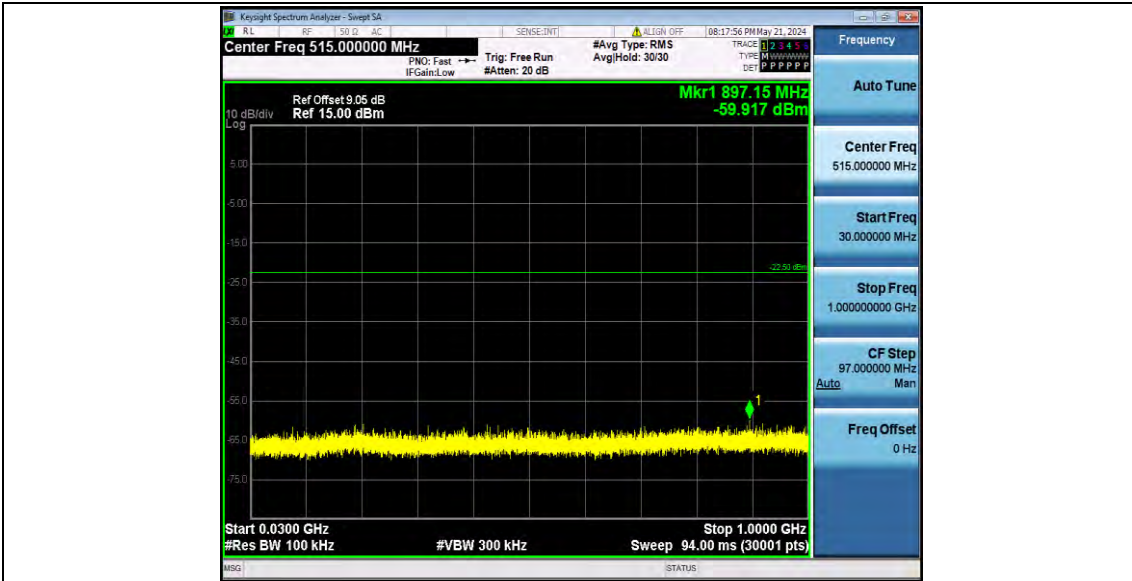
11N20SISO_Ant1_2412_1000~26500



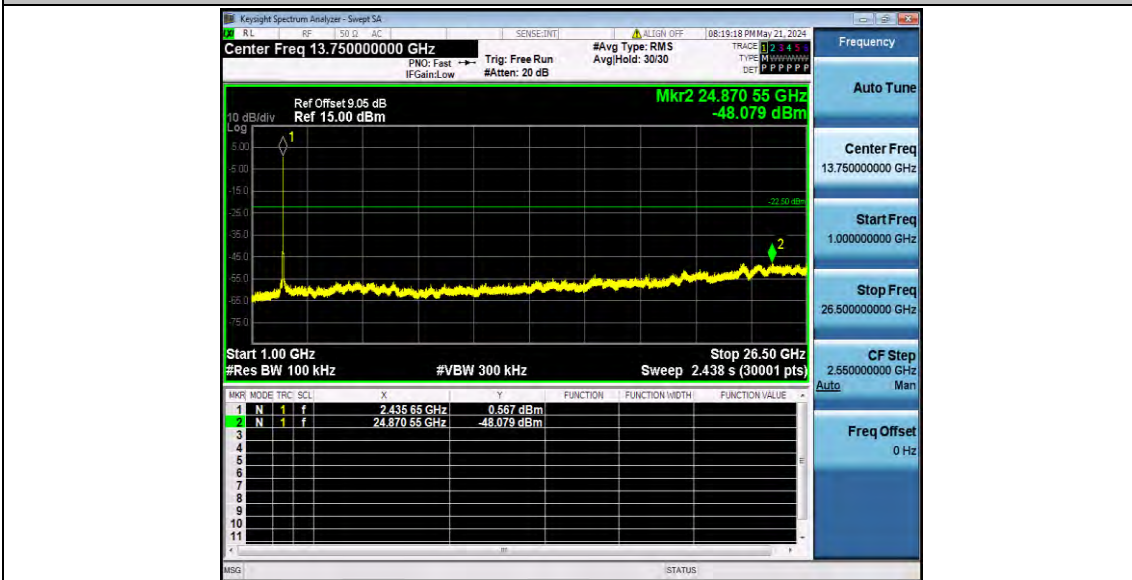
11N20SISO_Ant1_2437_0~Reference



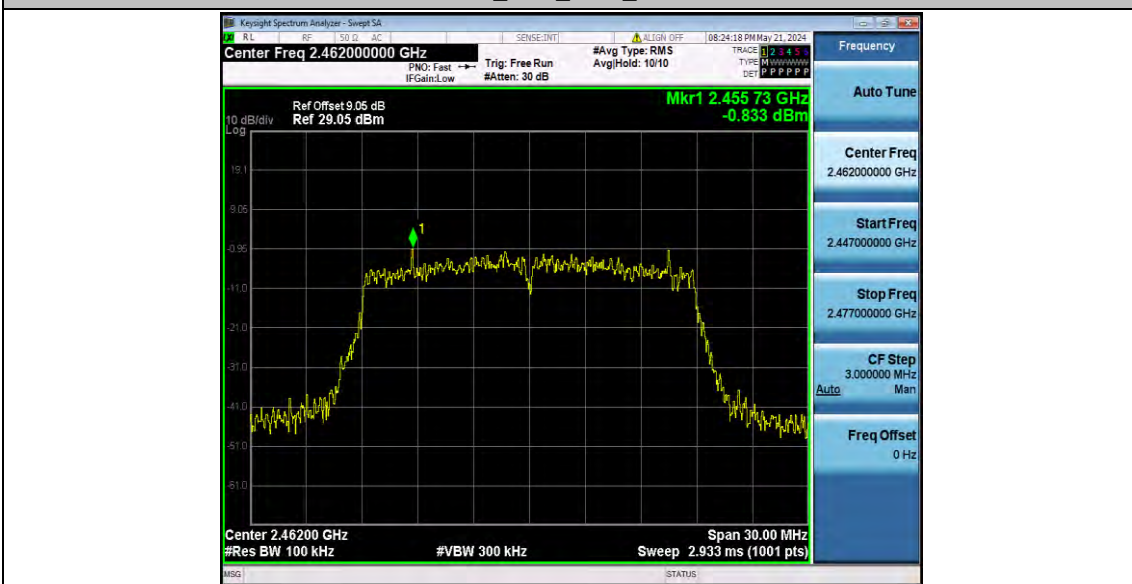
11N20SISO_Ant1_2437_30~1000



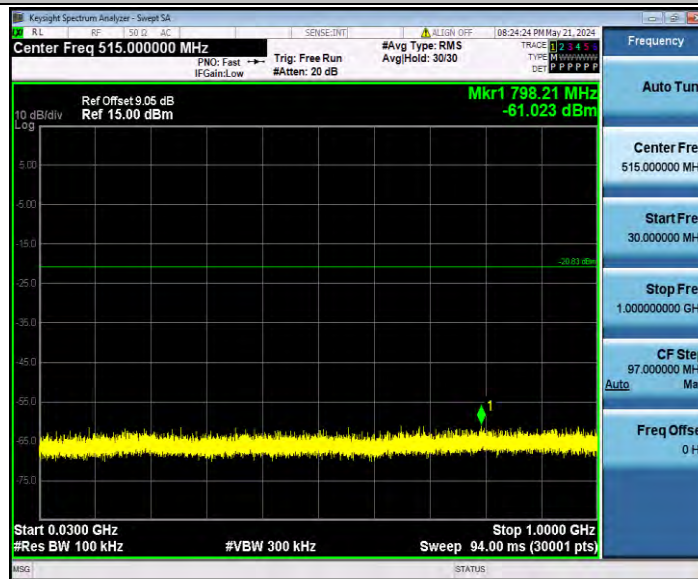
11N20SISO_Ant1_2437_1000~26500



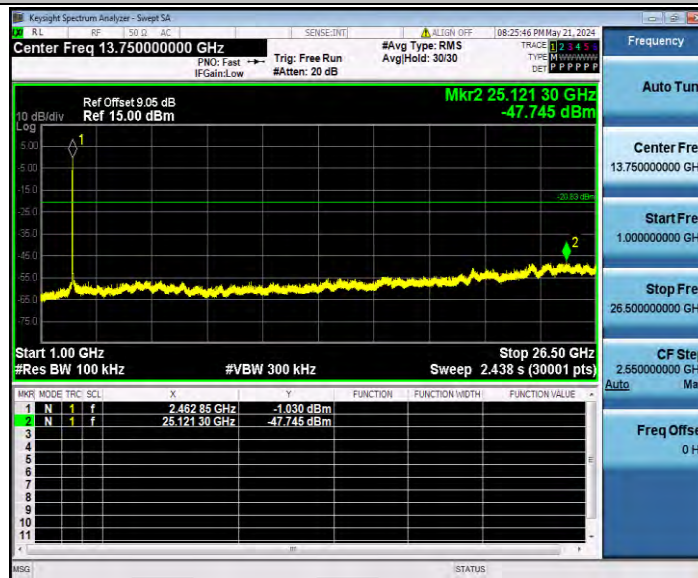
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



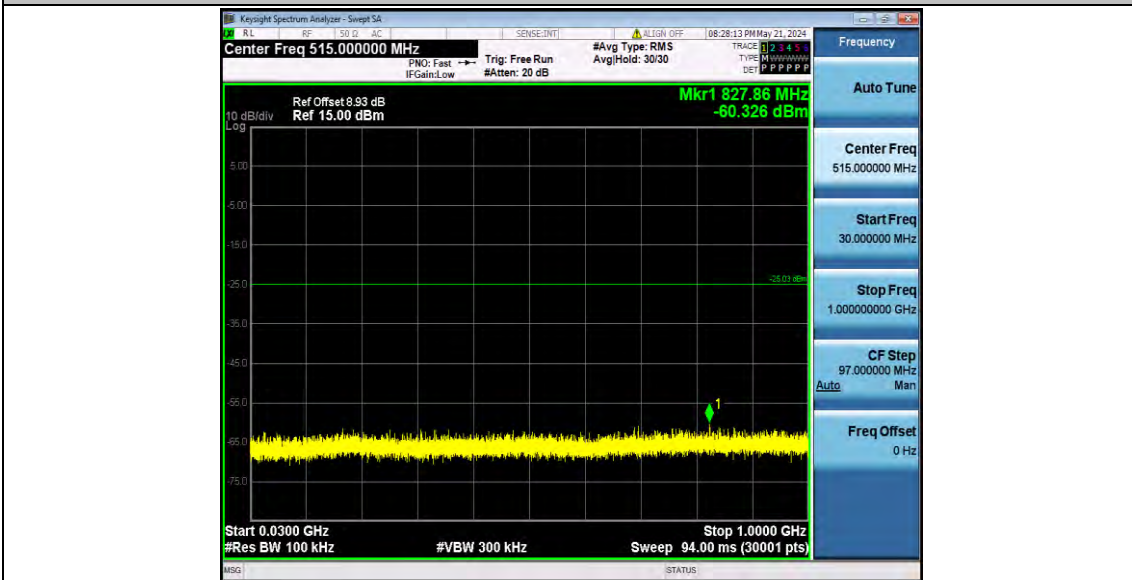
11N20SISO_Ant1_2462_1000~26500



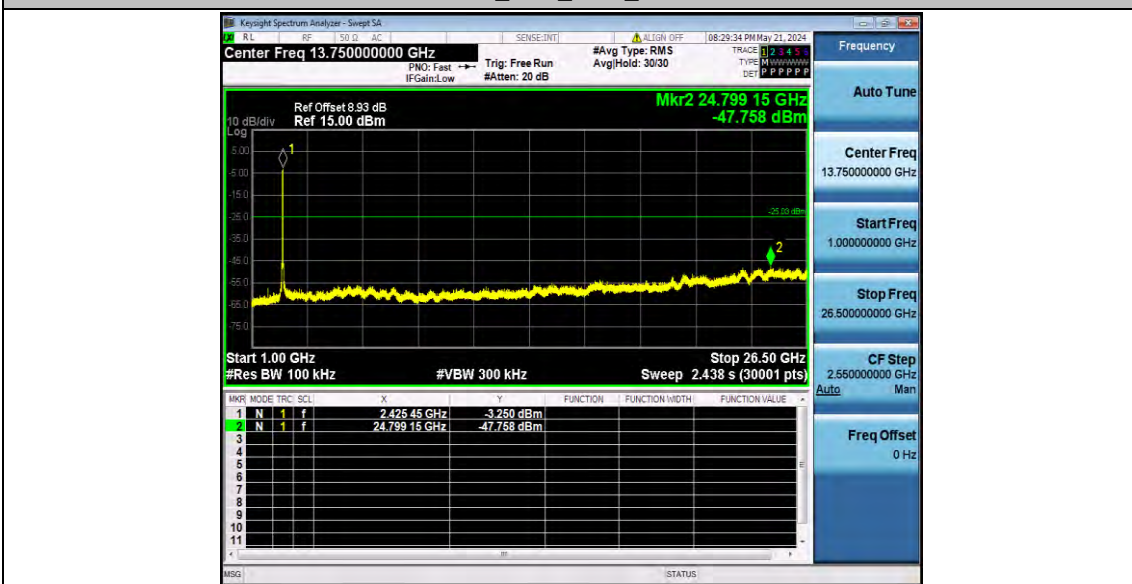
11N40SISO_Ant1_2422_0~Reference



11N40SISO_Ant1_2422_30~1000



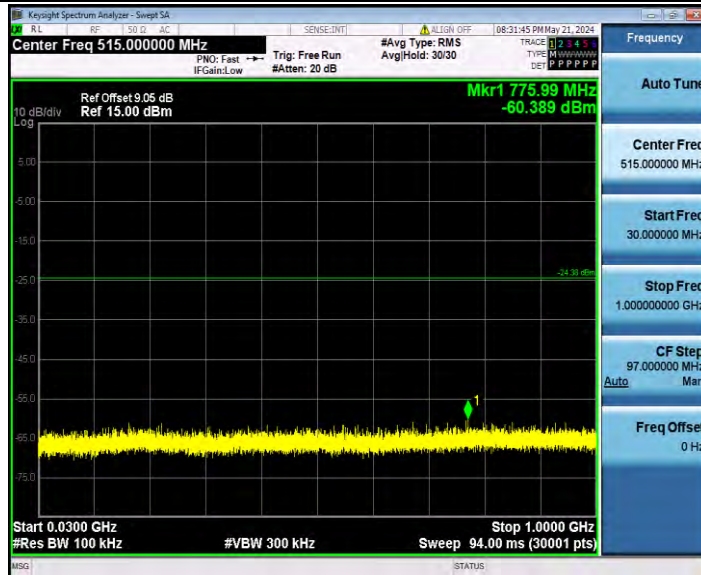
11N40SISO_Ant1_2422_1000~26500



11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000



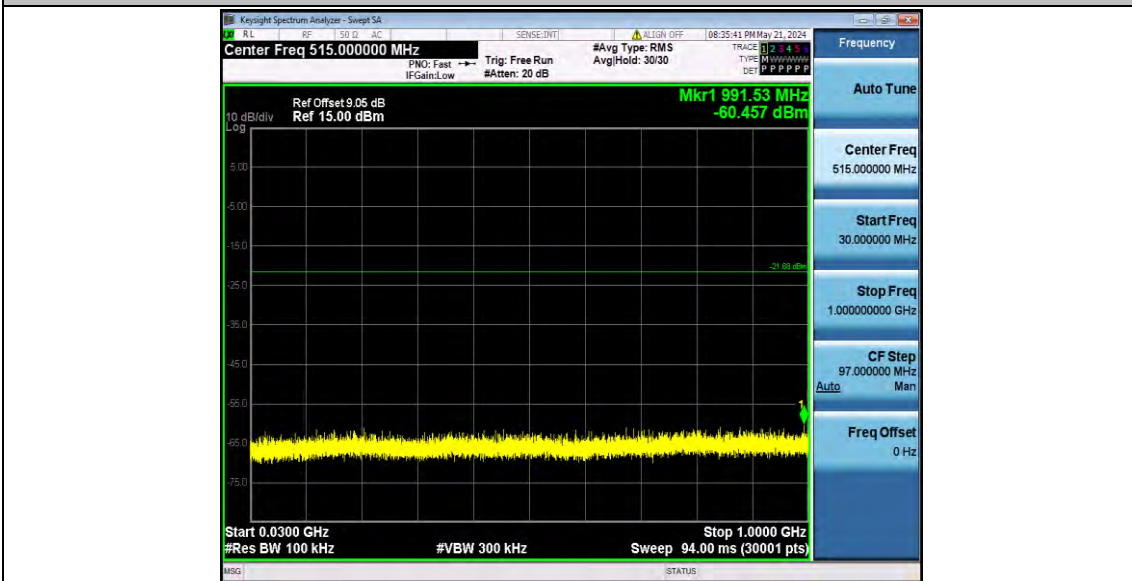
11N40SISO_Ant1_2437_1000~26500

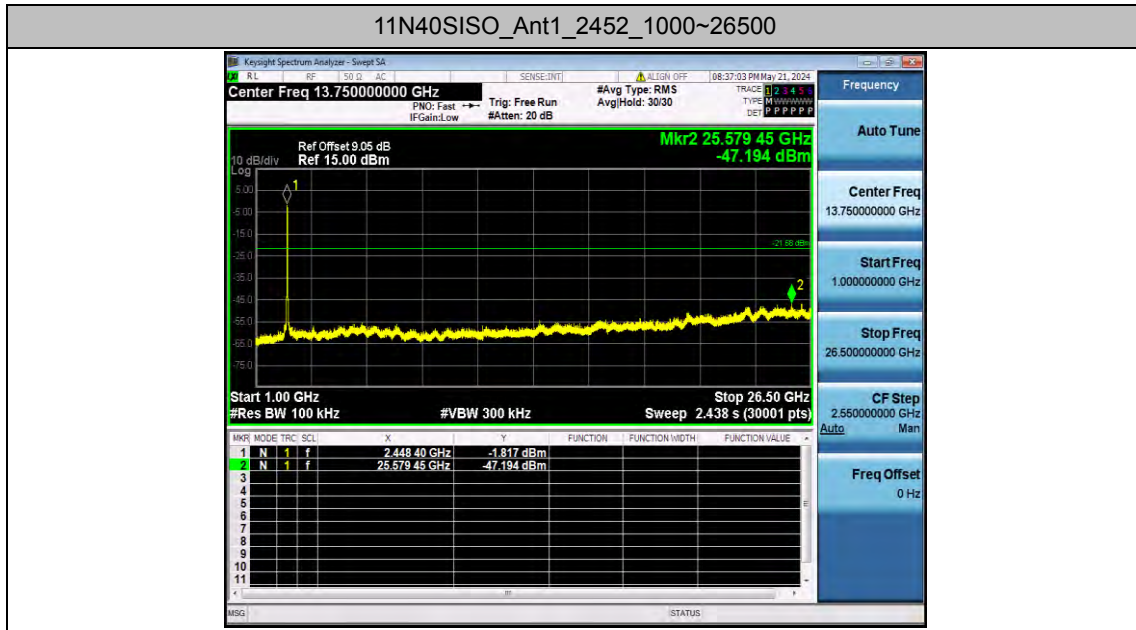


11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000





Appendix B.7: Emissions in Restricted Bands

Test Result

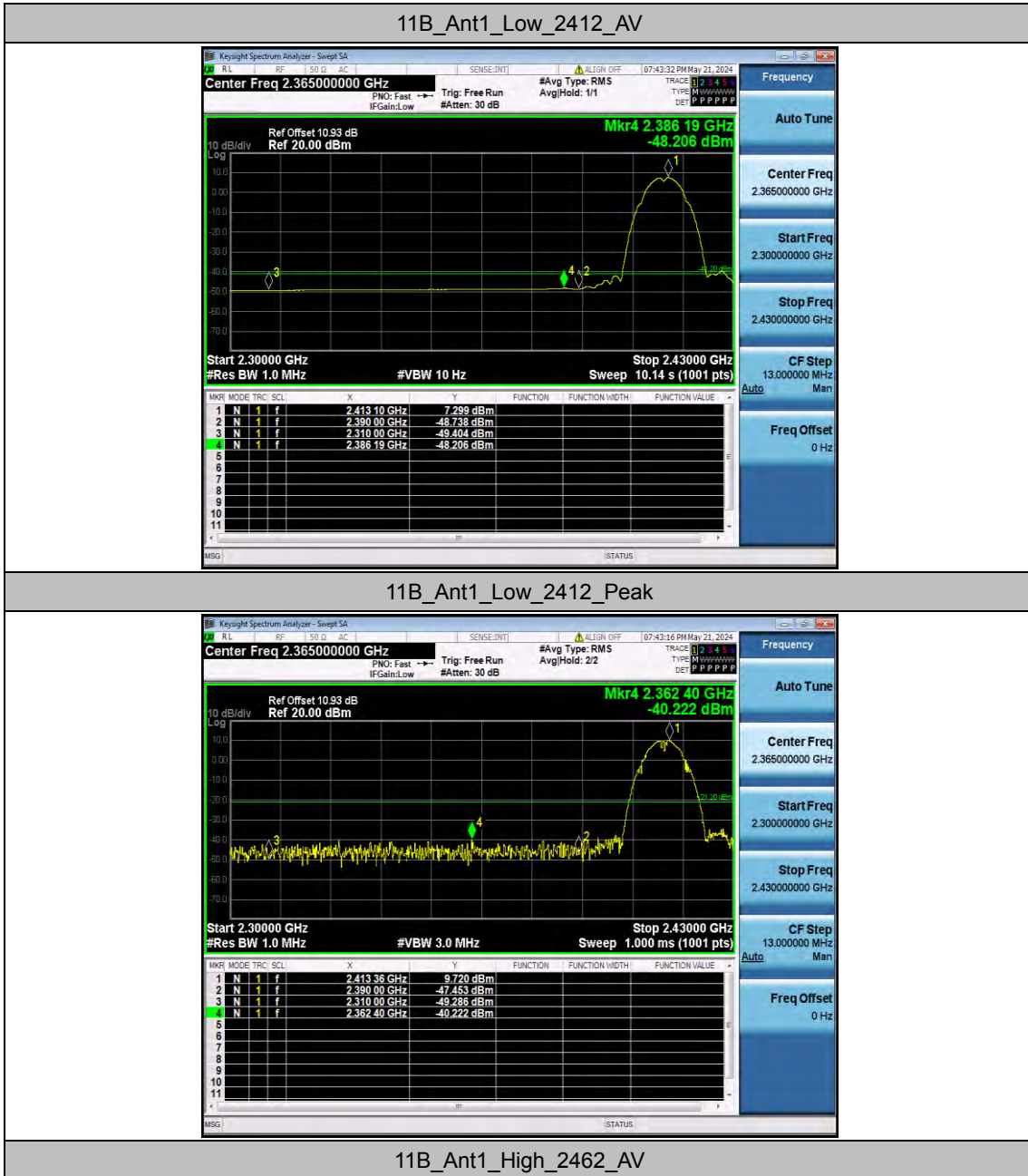
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.4	≤-41.20	45.80	≤54	PASS
				AV	2386.190	-48.21	≤-41.20	46.99	≤54	PASS
				AV	2390.000	-48.74	≤-41.20	46.46	≤54	PASS
				Peak	2310.000	-49.29	≤-21.20	45.91	≤74	PASS
				Peak	2362.400	-40.22	≤-21.20	54.98	≤74	PASS
				Peak	2390.000	-47.45	≤-21.20	47.75	≤74	PASS
		High	2462	AV	2483.500	-48.32	≤-41.20	46.88	≤54	PASS
				AV	2486.640	-48.08	≤-41.20	47.12	≤54	PASS
				AV	2500.000	-48.19	≤-41.20	47.01	≤54	PASS
				Peak	2483.500	-41.71	≤-21.20	53.49	≤74	PASS
				Peak	2487.520	-40.71	≤-21.20	54.49	≤74	PASS
				Peak	2500.000	-48.34	≤-21.20	46.86	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.25	≤-41.20	45.95	≤54	PASS
				AV	2389.960	-44.57	≤-41.20	50.63	≤54	PASS
				AV	2390.000	-44.57	≤-41.20	50.63	≤54	PASS
				Peak	2310.000	-46.42	≤-21.20	48.78	≤74	PASS
				Peak	2387.100	-39.07	≤-21.20	56.13	≤74	PASS
				Peak	2390.000	-42.65	≤-21.20	52.55	≤74	PASS
		High	2462	AV	2483.500	-44.73	≤-41.20	50.47	≤54	PASS
				AV	2483.560	-44.82	≤-41.20	50.38	≤54	PASS
				AV	2500.000	-47.39	≤-41.20	47.81	≤54	PASS
				Peak	2483.500	-46.95	≤-21.20	48.25	≤74	PASS
				Peak	2484.440	-37.6	≤-21.20	57.60	≤74	PASS
				Peak	2500.000	-43.96	≤-21.20	51.24	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-49.2	≤-41.20	46.00	≤54	PASS
				AV	2389.960	-46.14	≤-41.20	49.06	≤54	PASS
				AV	2390.000	-46.14	≤-41.20	49.06	≤54	PASS
				Peak	2310.000	-46.18	≤-21.20	49.02	≤74	PASS
				Peak	2388.920	-39.06	≤-21.20	56.14	≤74	PASS
				Peak	2390.000	-48.95	≤-21.20	46.25	≤74	PASS
		High	2462	AV	2483.500	-46.23	≤-41.20	48.97	≤54	PASS
				AV	2483.560	-46.27	≤-41.20	48.93	≤54	PASS
				AV	2500.000	-47.85	≤-41.20	47.35	≤54	PASS
				Peak	2483.500	-44.65	≤-21.20	50.55	≤74	PASS
				Peak	2485.430	-39.55	≤-21.20	55.65	≤74	PASS
				Peak	2485.430	-39.55	≤-21.20	55.65	≤74	PASS

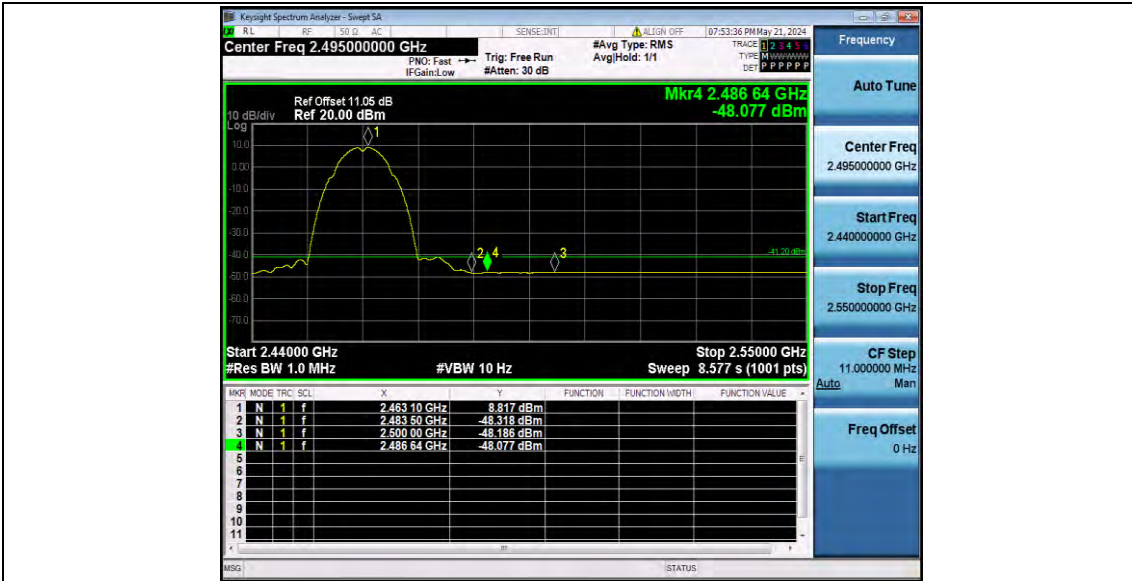
				Peak	2500.000	-45.27	≤-21.20	49.93	≤74	PASS
11N40SIS O	Ant1	Low	2422	AV	2310.000	-49.27	≤-41.20	45.93	≤54	PASS
				AV	2389.830	-44.56	≤-41.20	50.64	≤54	PASS
				AV	2390.000	-44.58	≤-41.20	50.62	≤54	PASS
				Peak	2310.000	-49.13	≤-21.20	46.07	≤74	PASS
				Peak	2388.530	-36.36	≤-21.20	58.84	≤74	PASS
				Peak	2390.000	-43.77	≤-21.20	51.43	≤74	PASS
		High	2452	AV	2483.500	-43.89	≤-41.20	51.31	≤54	PASS
				AV	2484.110	-43.88	≤-41.20	51.32	≤54	PASS
				AV	2500.000	-47.05	≤-41.20	48.15	≤54	PASS
				Peak	2483.500	-39.01	≤-21.20	56.19	≤74	PASS
				Peak	2486.310	-37.6	≤-21.20	57.60	≤74	PASS
				Peak	2500.000	-37.7	≤-21.20	57.50	≤74	PASS

Note:

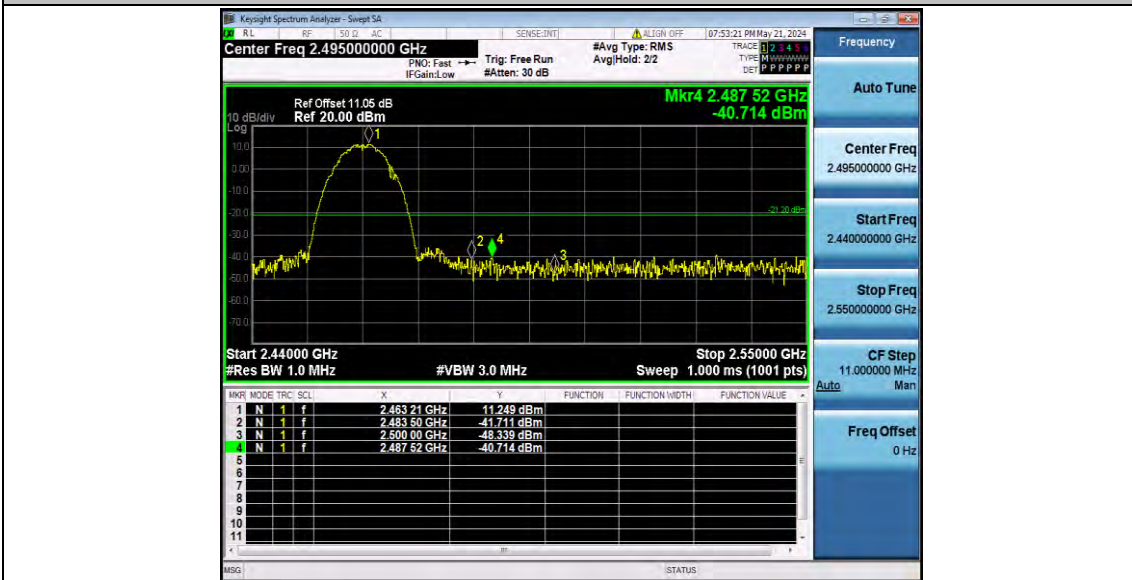
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

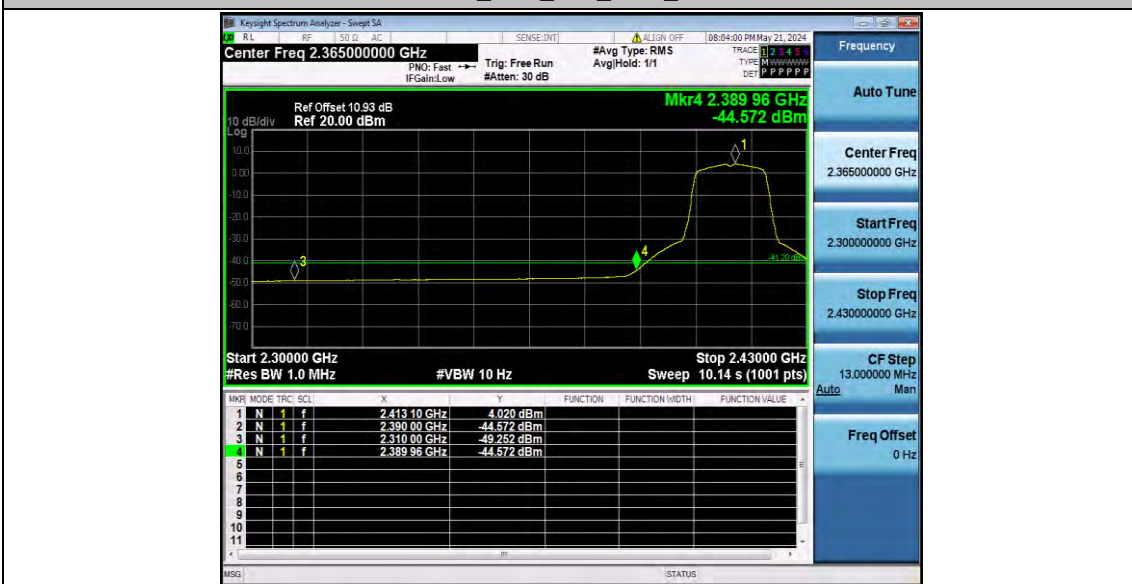




11B_Ant1_High_2462_Peak



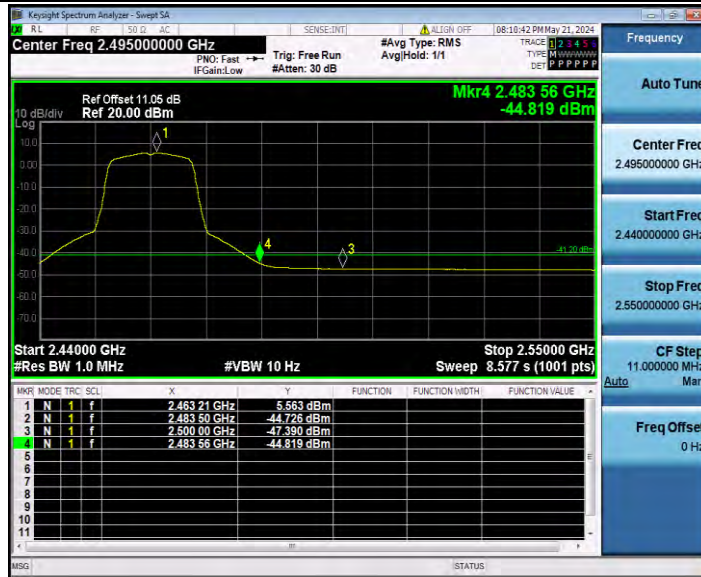
11G_Ant1_Low_2412_AV



11G_Ant1_Low_2412_Peak



11G_Ant1_High_2462_AV



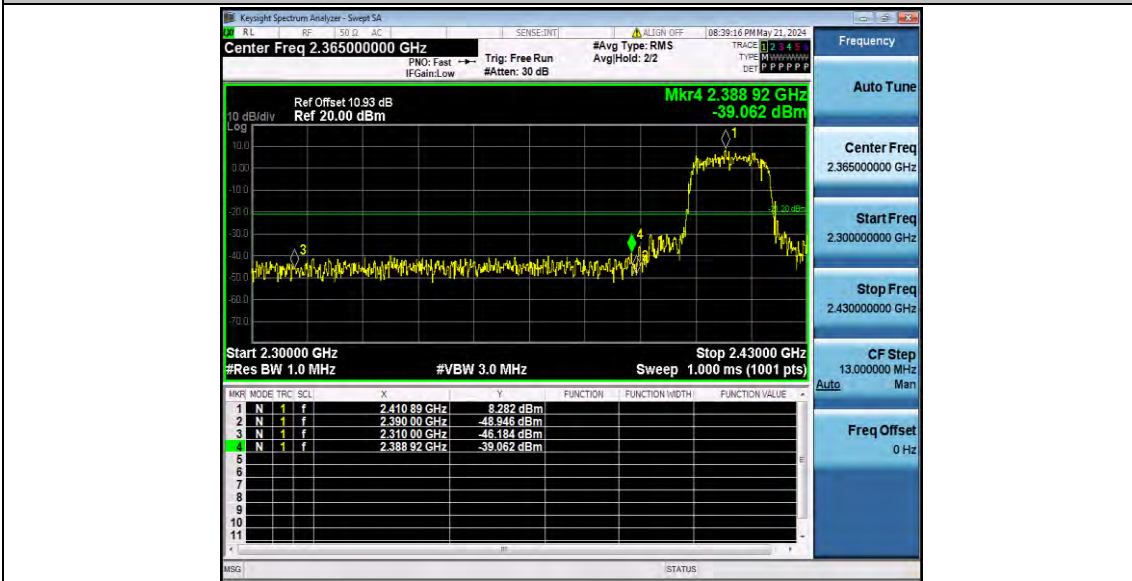
11G_Ant1_High_2462_Peak



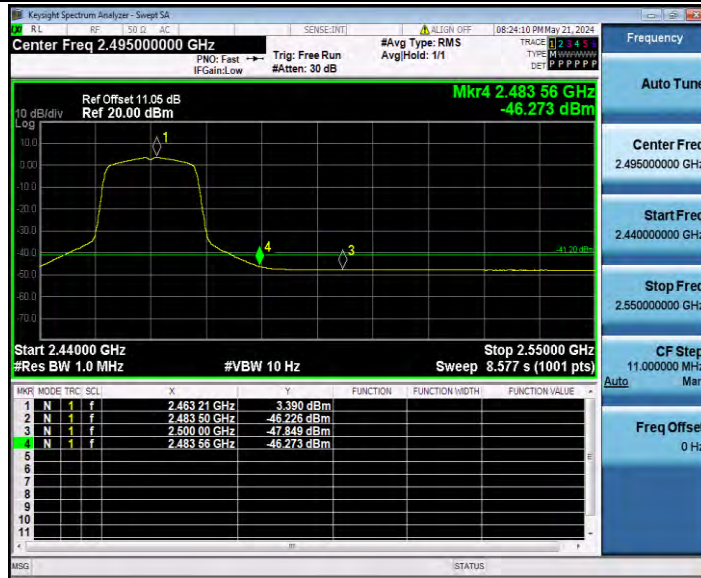
11N20SISO_Ant1_Low_2412_AV



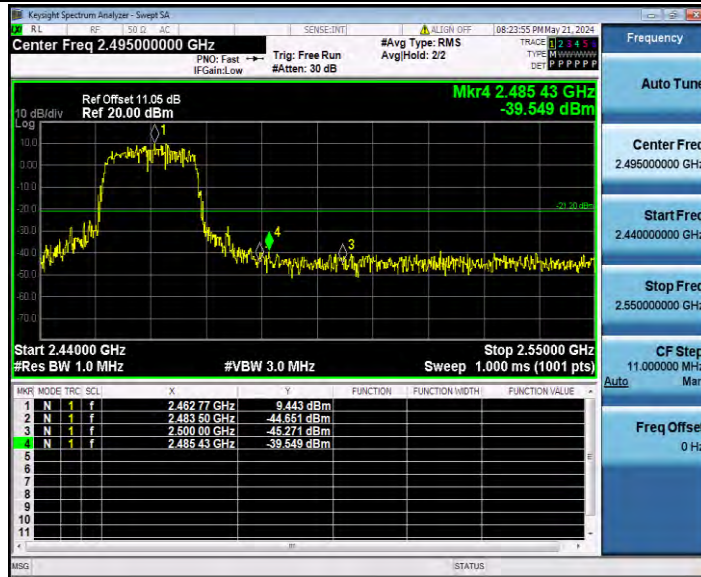
11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV



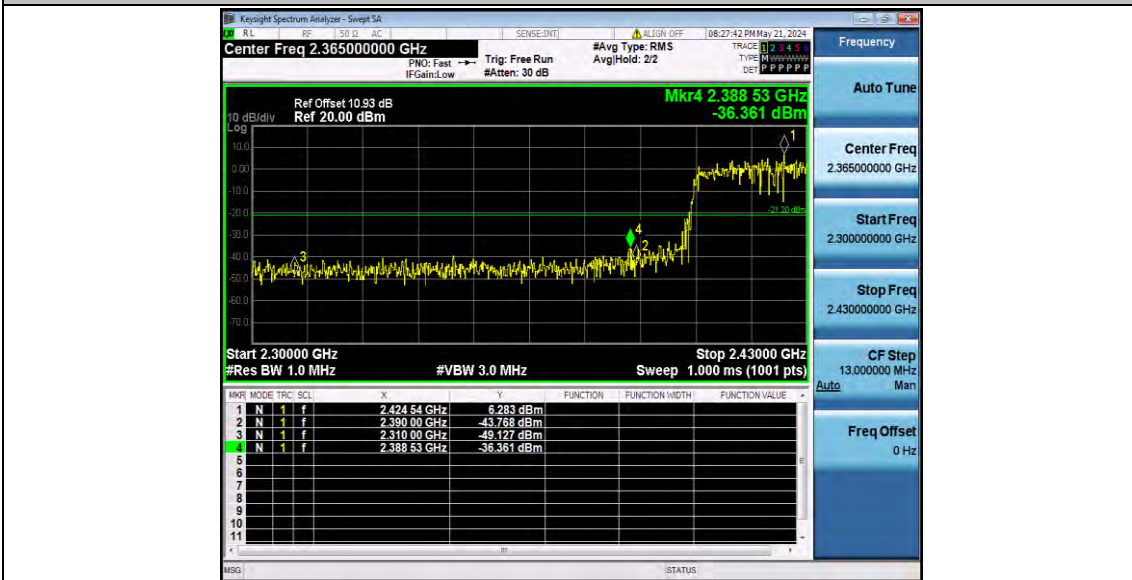
11N20SISO_Ant1_High_2462_Peak



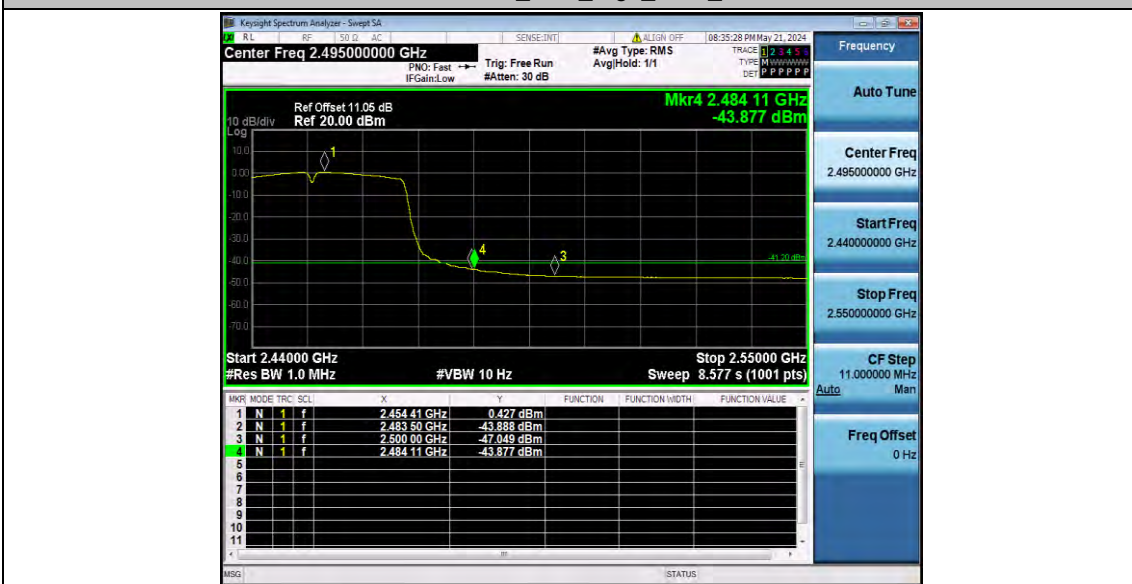
11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



11N40SISO_Ant1_High_2452_Peak

