

Appendix: 2.4G WIFI

Contents

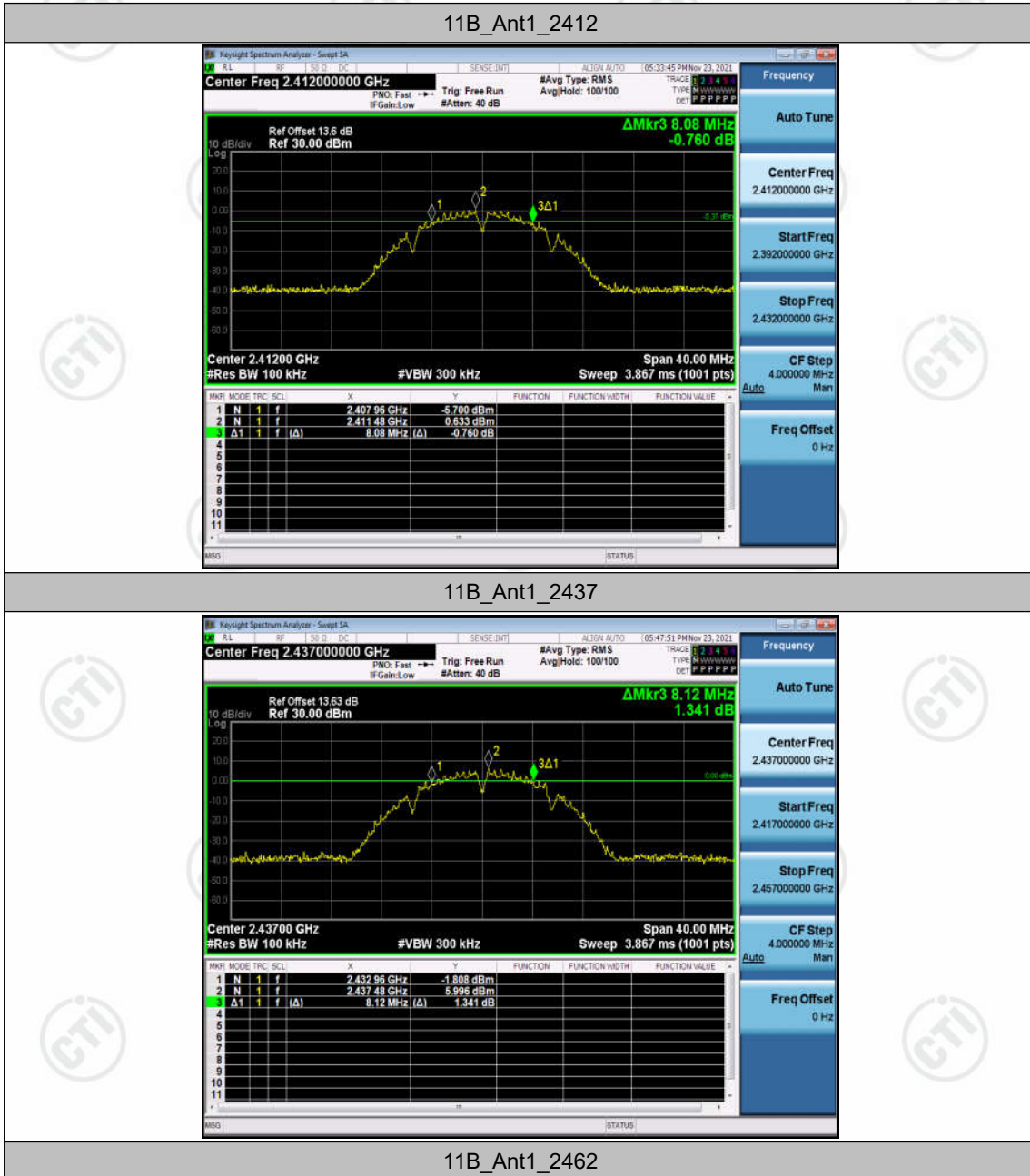
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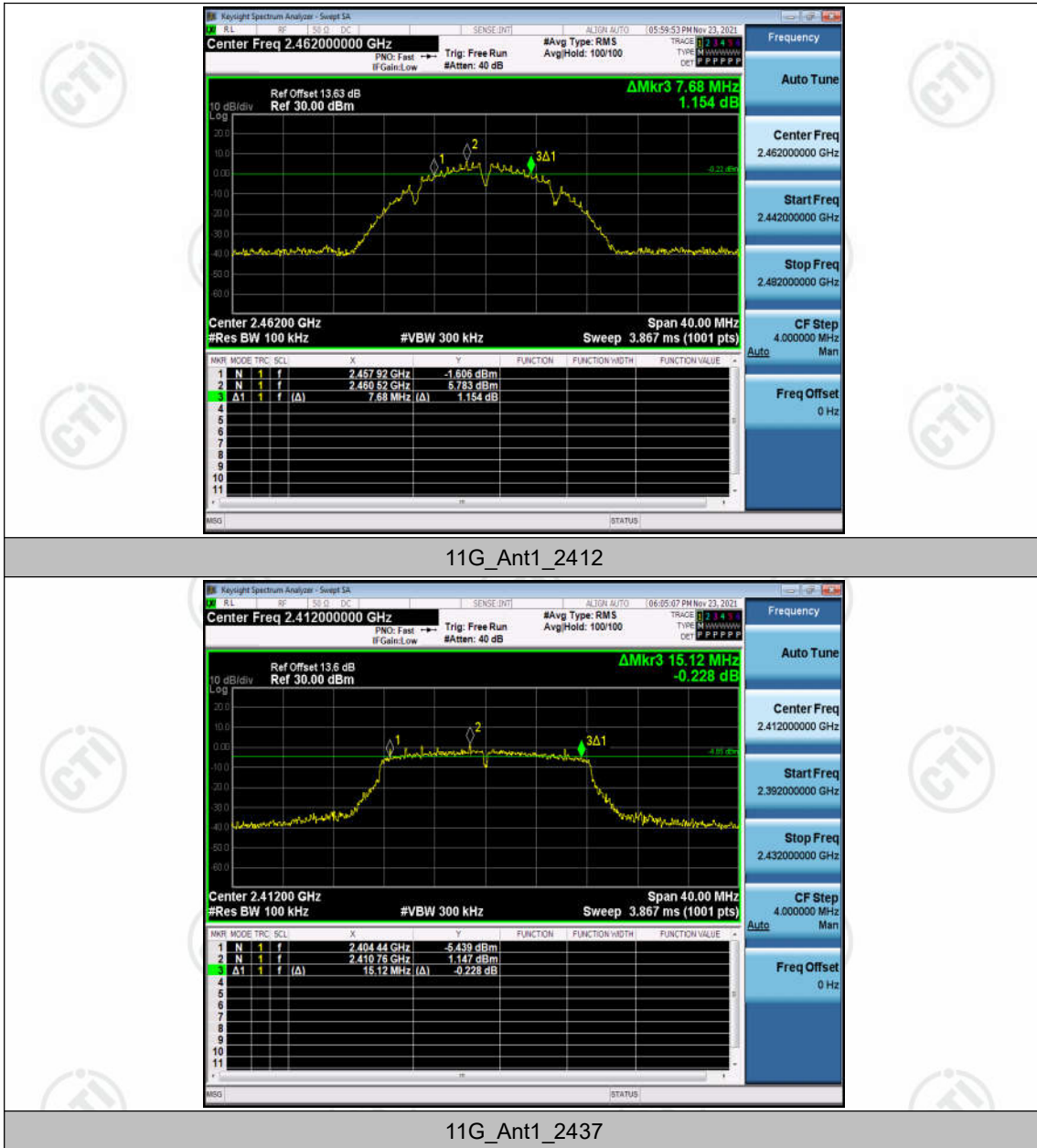
Appendix A: DTS Bandwidth

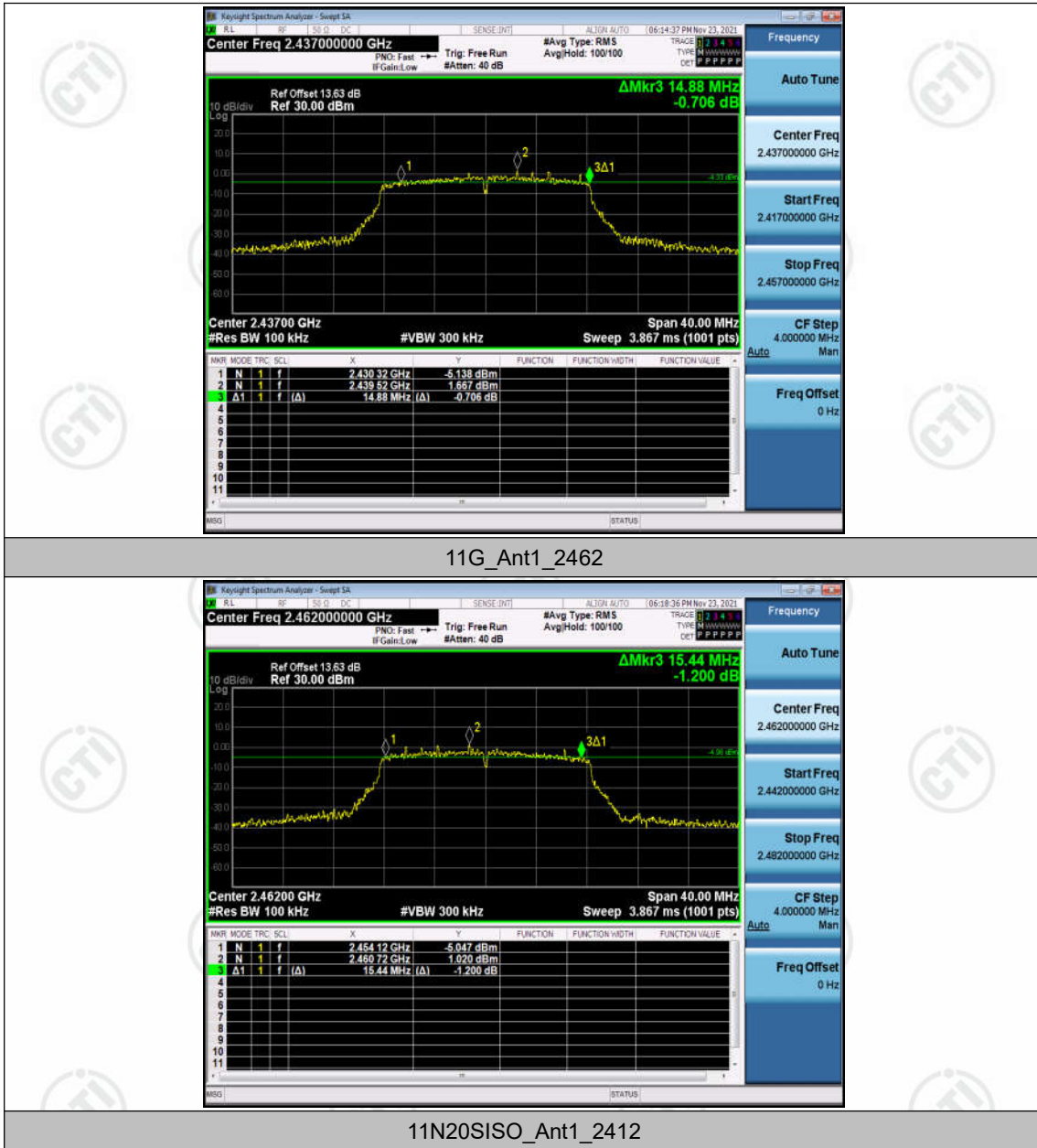
Test Result

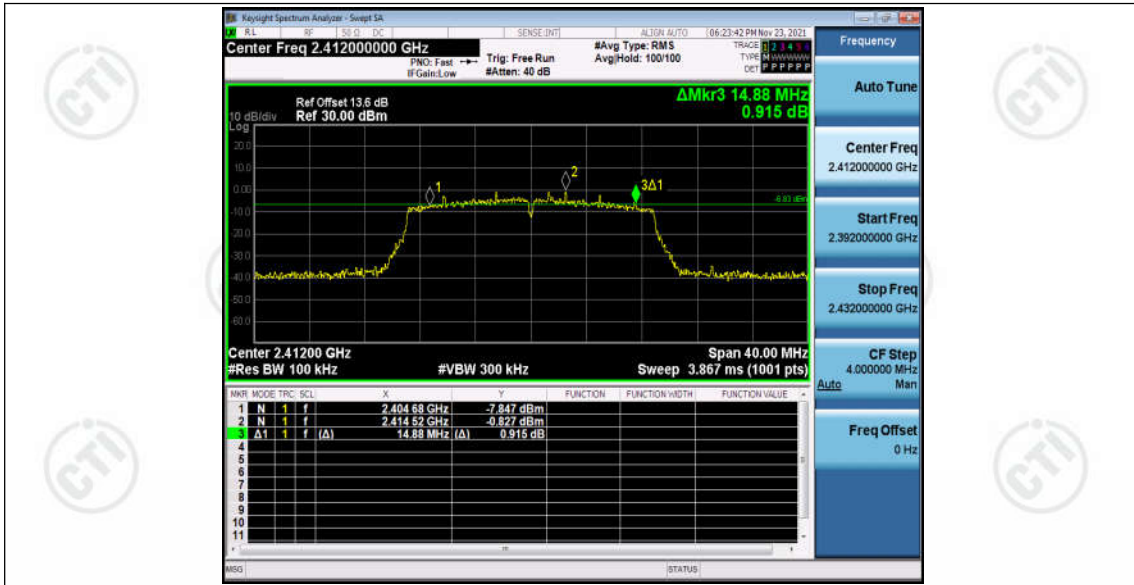
Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.080	2407.960	2416.040	0.5	PASS
		2437	8.120	2432.960	2441.080	0.5	PASS
		2462	7.680	2457.920	2465.600	0.5	PASS
11G	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
		2437	14.880	2430.320	2445.200	0.5	PASS
		2462	15.440	2454.120	2469.560	0.5	PASS
11N20SIS O	Ant1	2412	14.880	2404.680	2419.560	0.5	PASS
		2437	15.520	2429.400	2444.920	0.5	PASS
		2462	14.920	2453.600	2468.520	0.5	PASS
11N40SIS O	Ant1	2422	35.200	2404.480	2439.680	0.5	PASS
		2437	35.280	2419.400	2454.680	0.5	PASS
		2452	32.640	2435.680	2468.320	0.5	PASS

Test Graphs





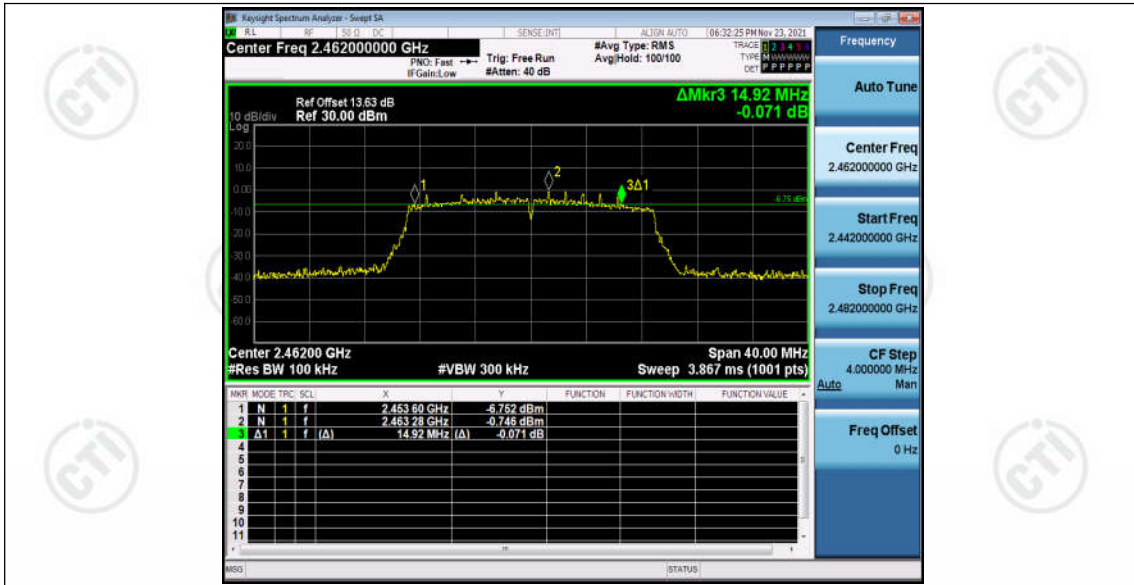




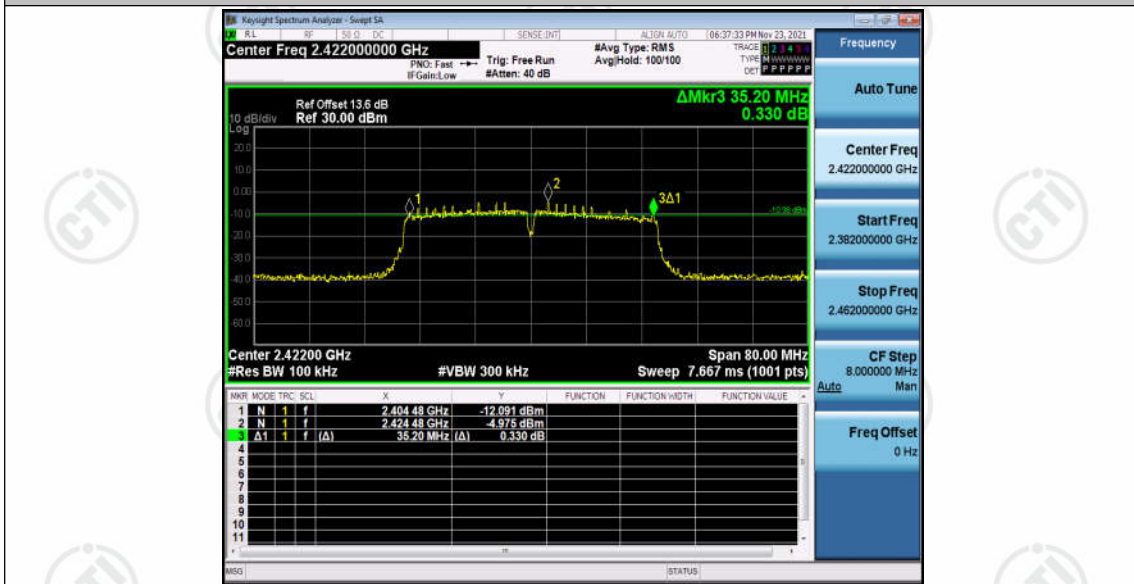
11N20SISO_Ant1_2437



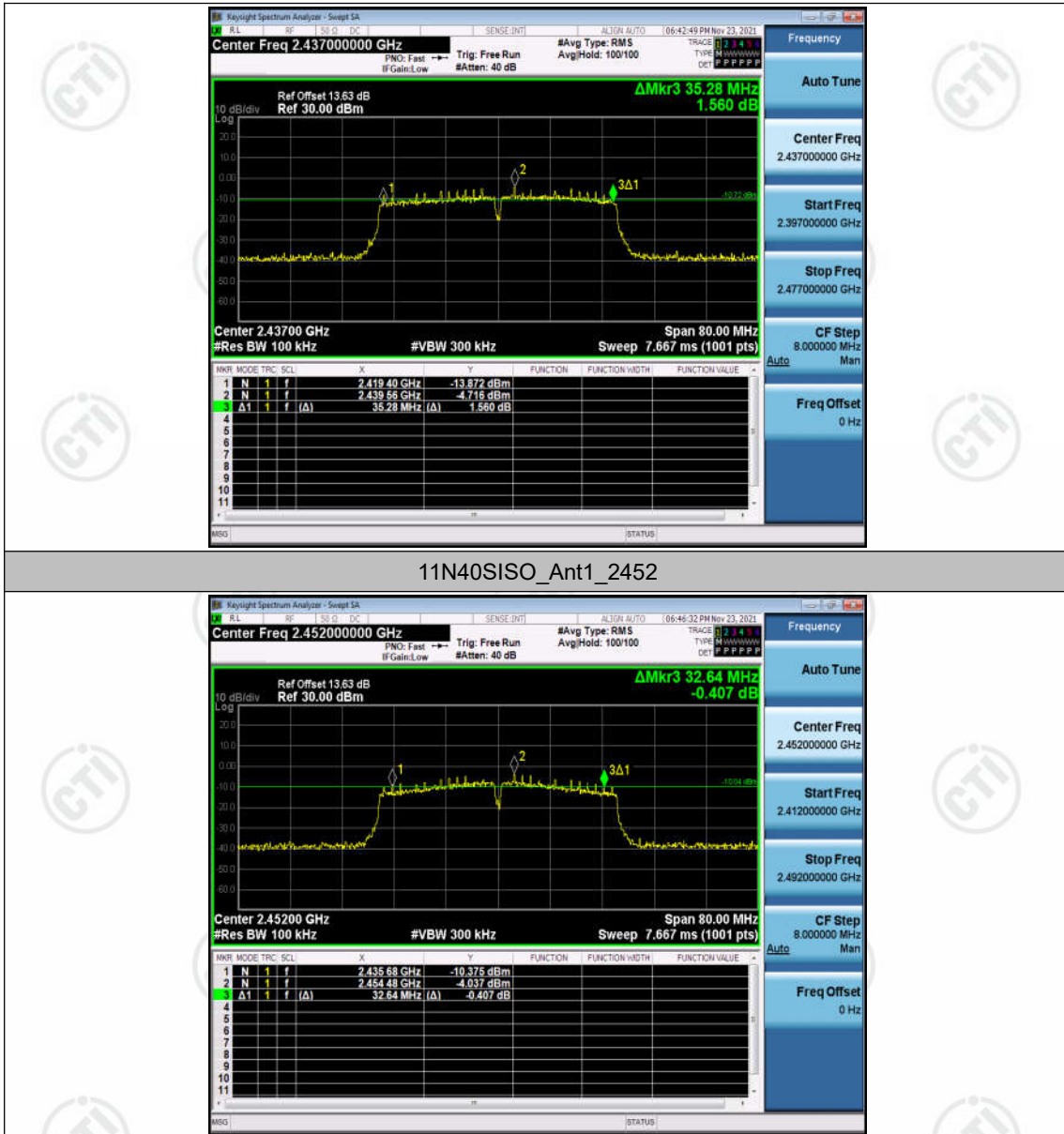
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

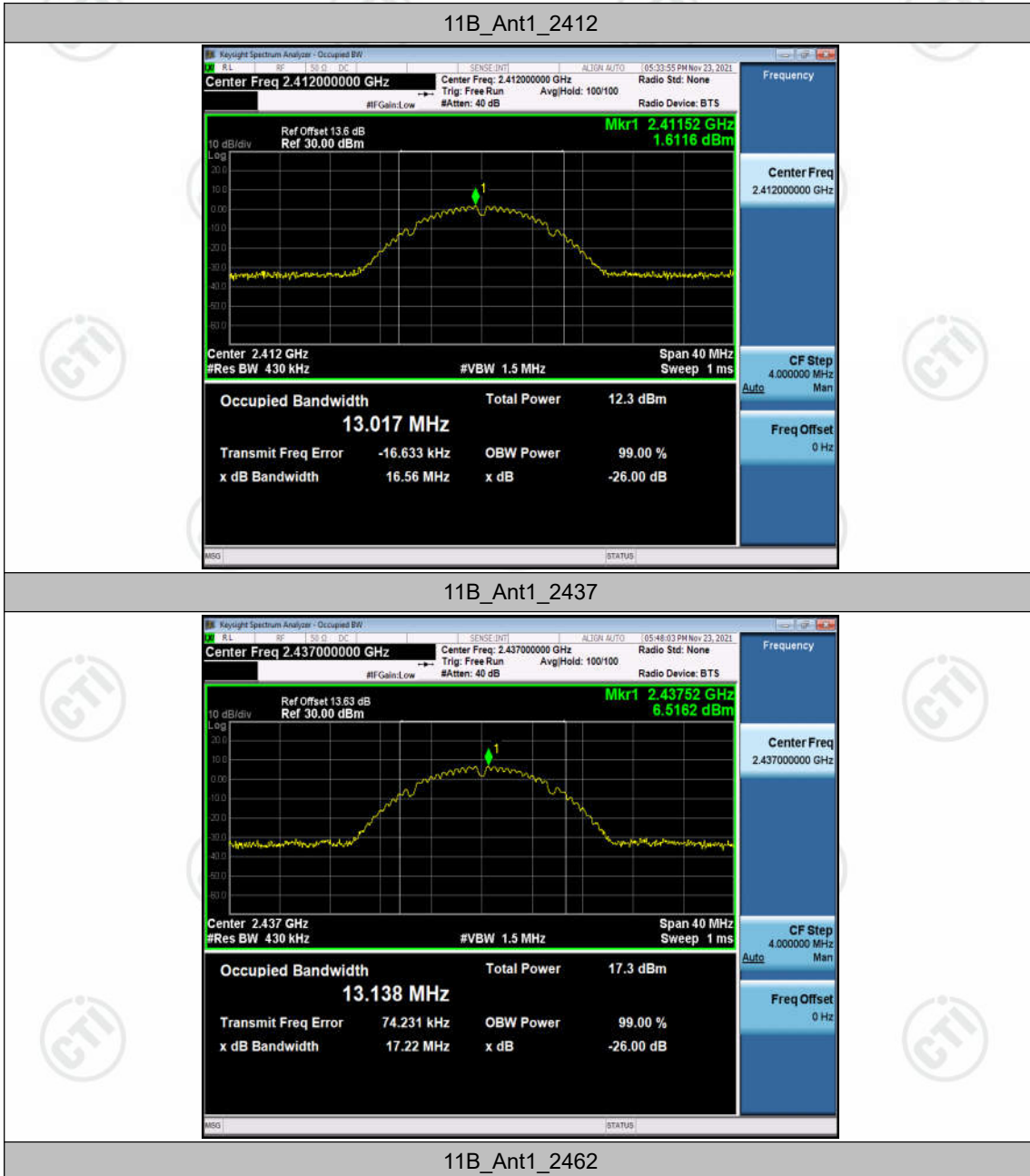


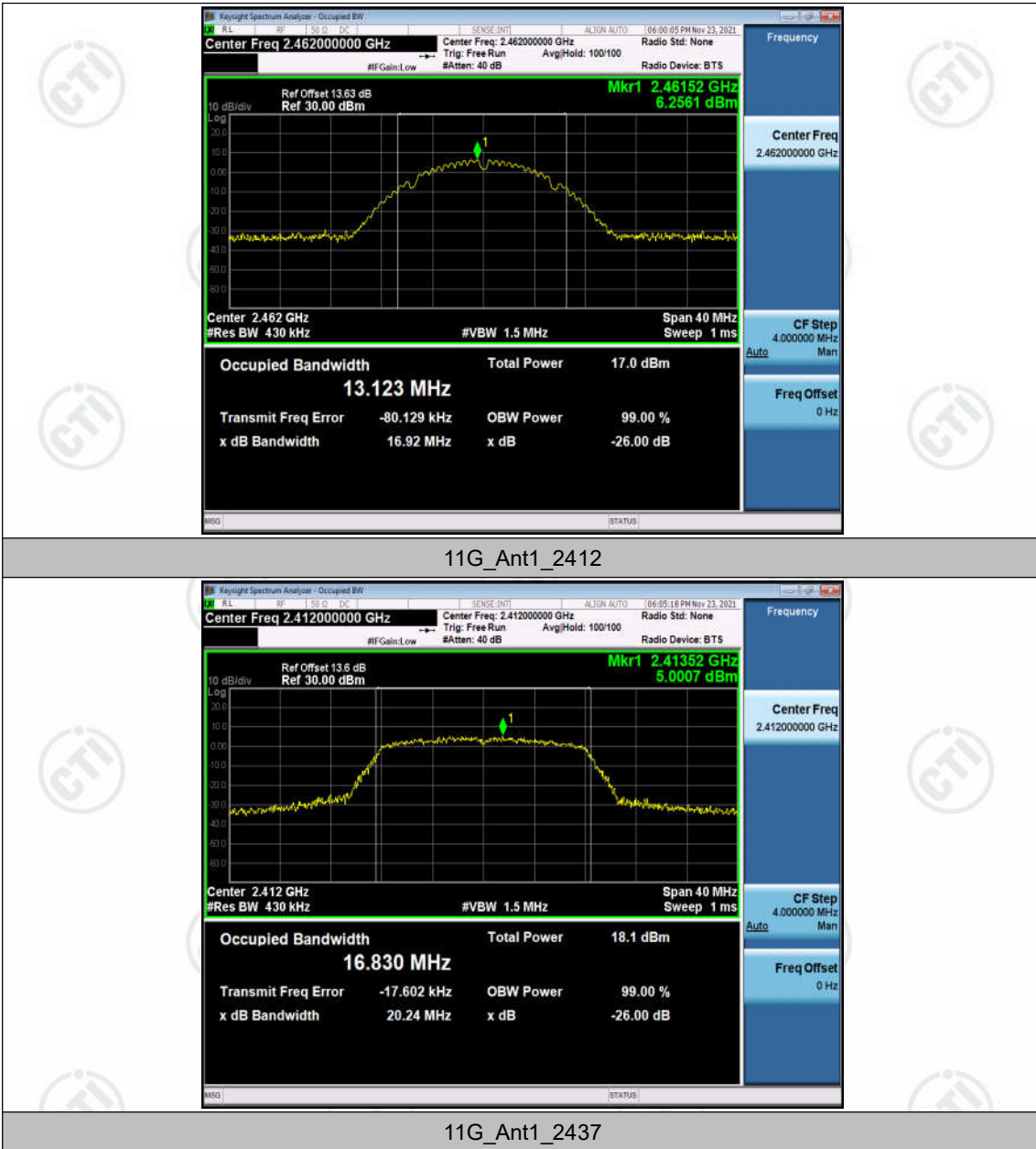
Appendix B: Occupied Channel Bandwidth

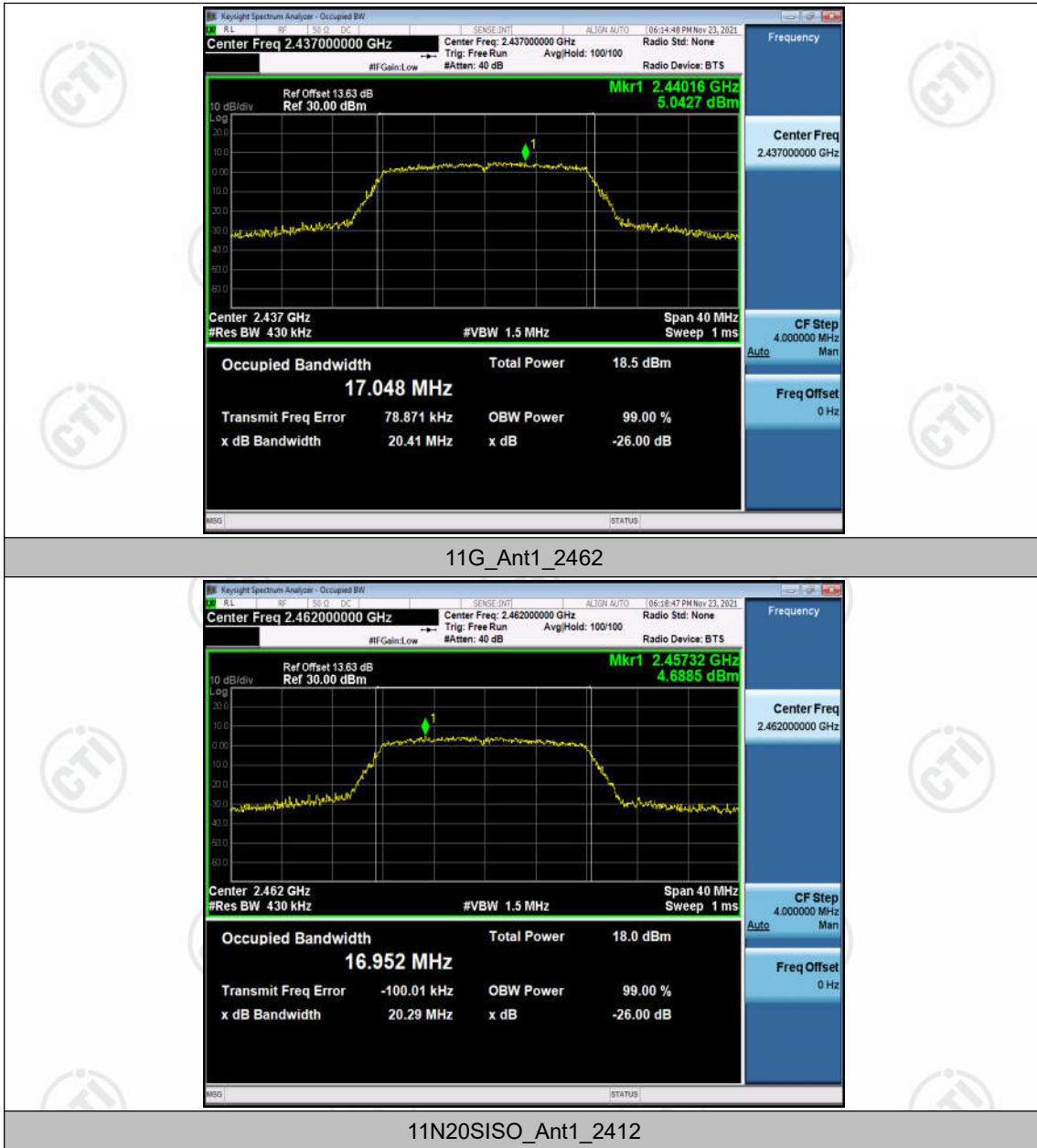
Test Result

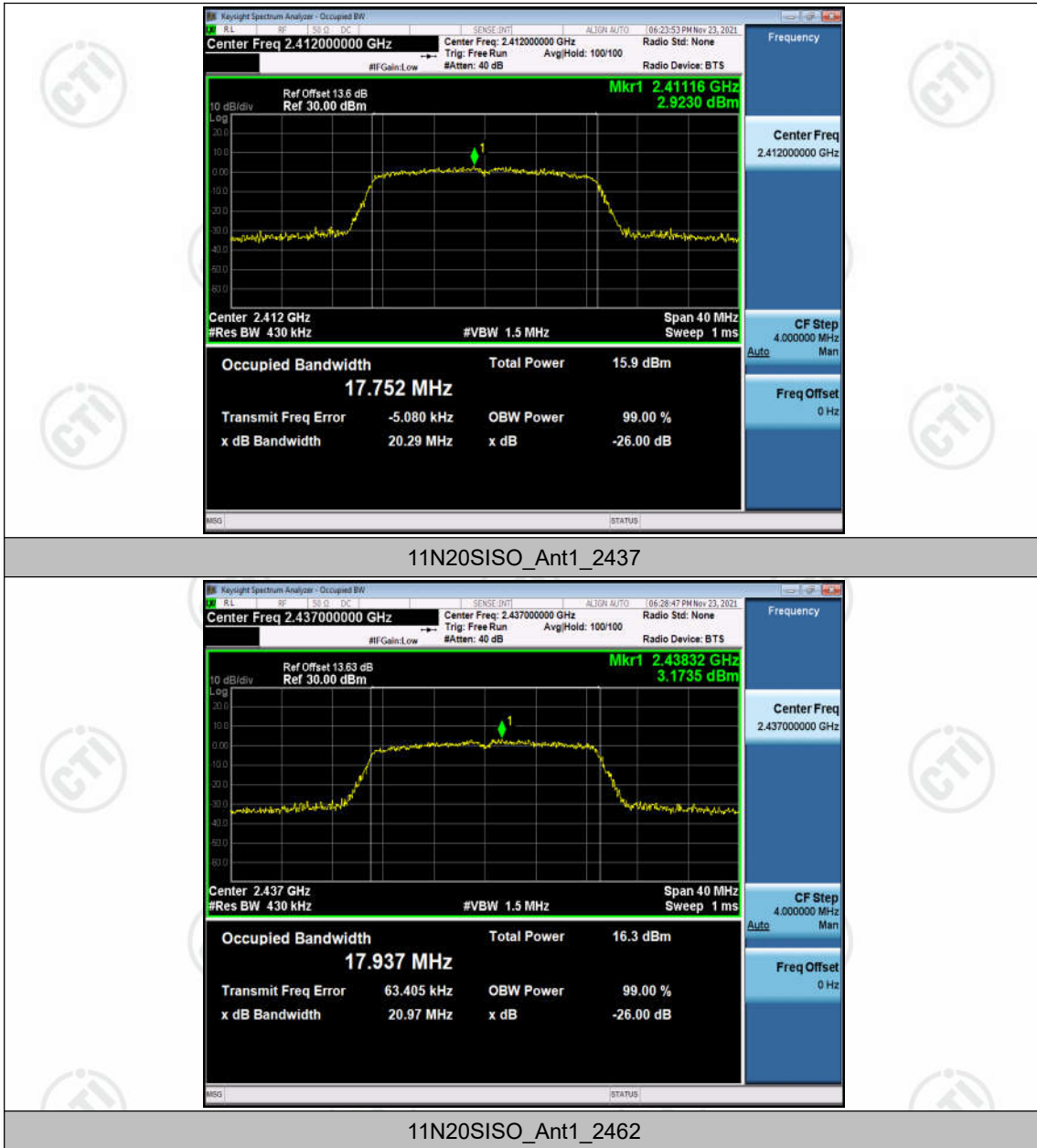
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.017	2405.475	2418.492	---	PASS
		2437	13.138	2430.505	2443.643	---	PASS
		2462	13.123	2455.358	2468.481	---	PASS
11G	Ant1	2412	16.830	2403.567	2420.397	---	PASS
		2437	17.048	2428.555	2445.603	---	PASS
		2462	16.952	2453.424	2470.376	---	PASS
11N20SIS O	Ant1	2412	17.752	2403.119	2420.871	---	PASS
		2437	17.937	2428.095	2446.032	---	PASS
		2462	17.831	2453.061	2470.892	---	PASS
11N40SIS O	Ant1	2422	36.256	2403.858	2440.114	---	PASS
		2437	36.366	2418.916	2455.282	---	PASS
		2452	35.976	2434.063	2470.039	---	PASS

Test Graphs







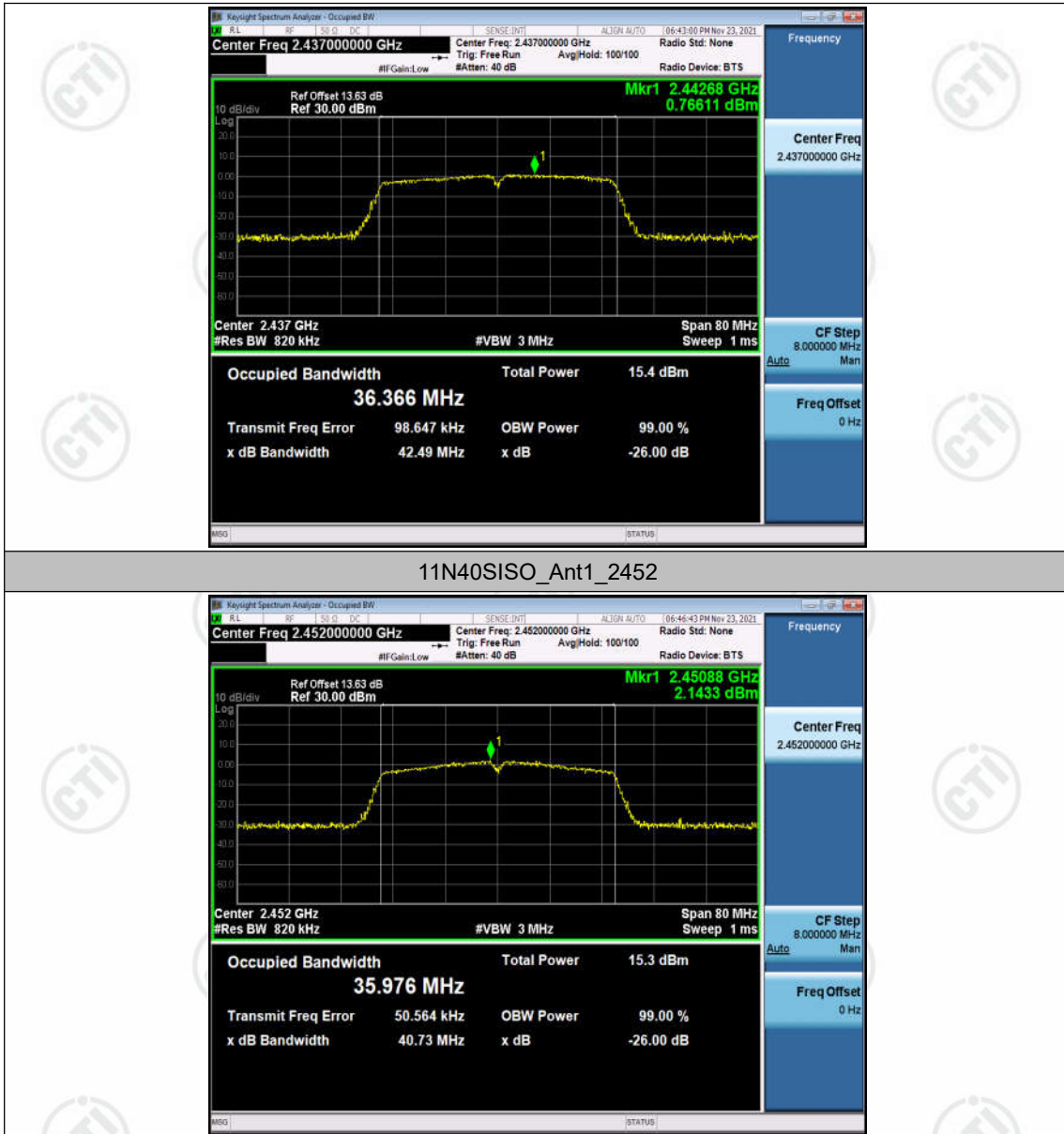




11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Channel	Average Power(dBm)	Duty cycle factor[dB]	Peak Power(dBm)	Limit[dBm]	Verdict
11B	Ant1	2412	14.16	---	14.16	<=30	PASS
		2437	14.32	---	14.32	<=30	PASS
		2462	14.05	---	14.05	<=30	PASS
11G	Ant1	2412	11.99	0.14	12.13	<=30	PASS
		2437	12.45	0.14	12.59	<=30	PASS
		2462	12.01	0.14	12.15	<=30	PASS
11N20SIS O	Ant1	2412	9.88	0.16	10.04	<=30	PASS
		2437	10.27	0.16	10.43	<=30	PASS
		2462	9.99	0.16	10.15	<=30	PASS
11N40SIS O	Ant1	2422	8.44	0.31	8.75	<=30	PASS
		2437	8.47	0.30	8.77	<=30	PASS
		2452	8.43	0.31	8.74	<=30	PASS

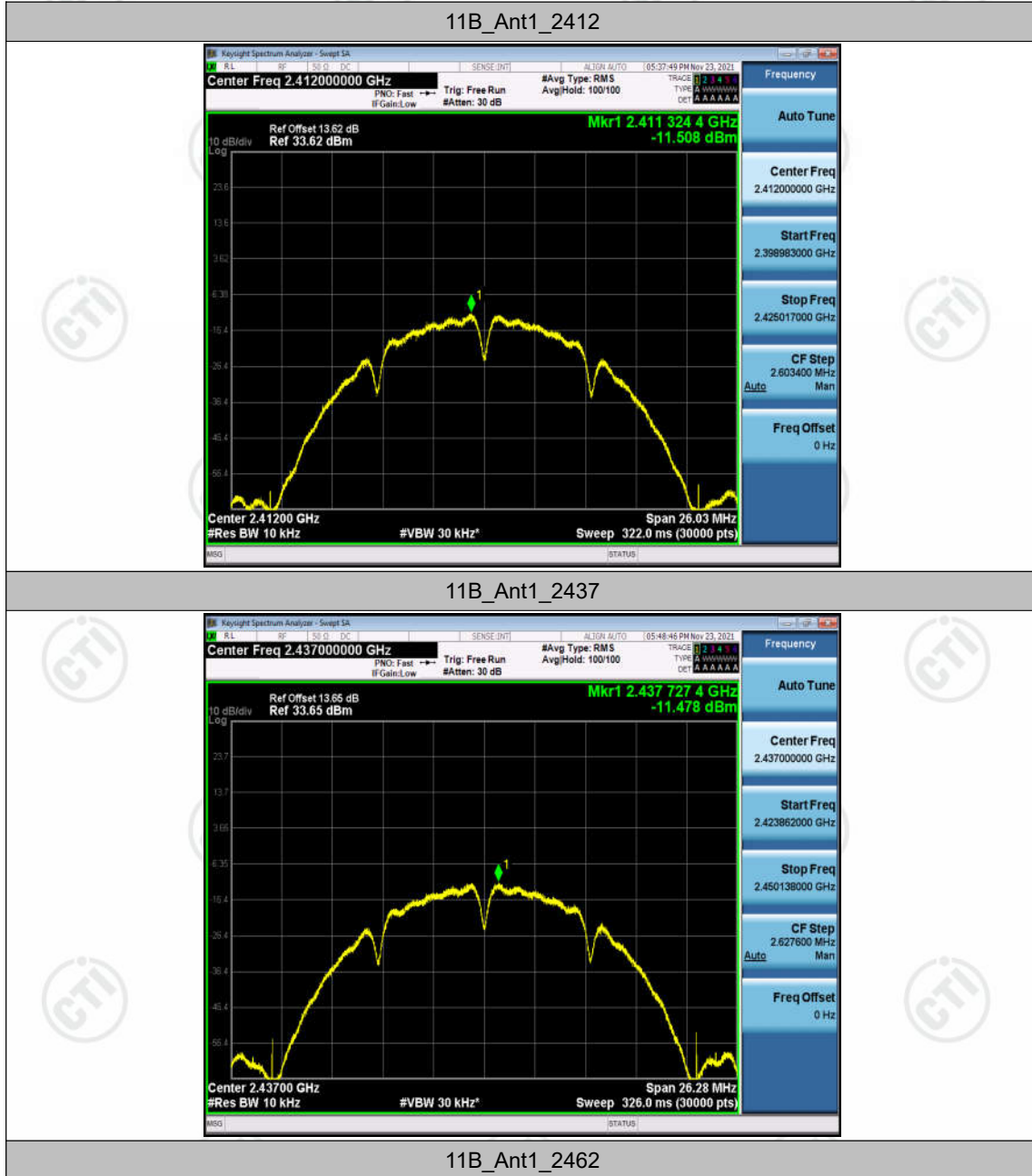
Note:

1. Duty cycle factor[dB] = $10 \cdot \lg(1/\text{Duty cycle})$
2. Peak Power(dBm) = Average Power(dBm) + Duty cycle factor[dB];

Appendix D: Maximum power spectral density**Test Result**

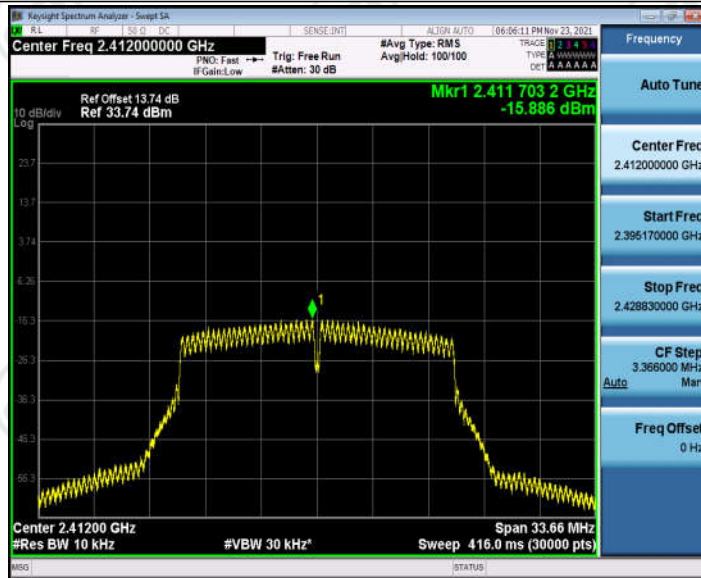
Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-11.51	<=8	PASS
		2437	-11.48	<=8	PASS
		2462	-11.95	<=8	PASS
11G	Ant1	2412	-15.89	<=8	PASS
		2437	-15.51	<=8	PASS
		2462	-16.07	<=8	PASS
11N20SISO	Ant1	2412	-18.28	<=8	PASS
		2437	-17.96	<=8	PASS
		2462	-17.85	<=8	PASS
11N40SISO	Ant1	2422	-21.96	<=8	PASS
		2437	-22.13	<=8	PASS
		2452	-21.85	<=8	PASS

Test Graphs

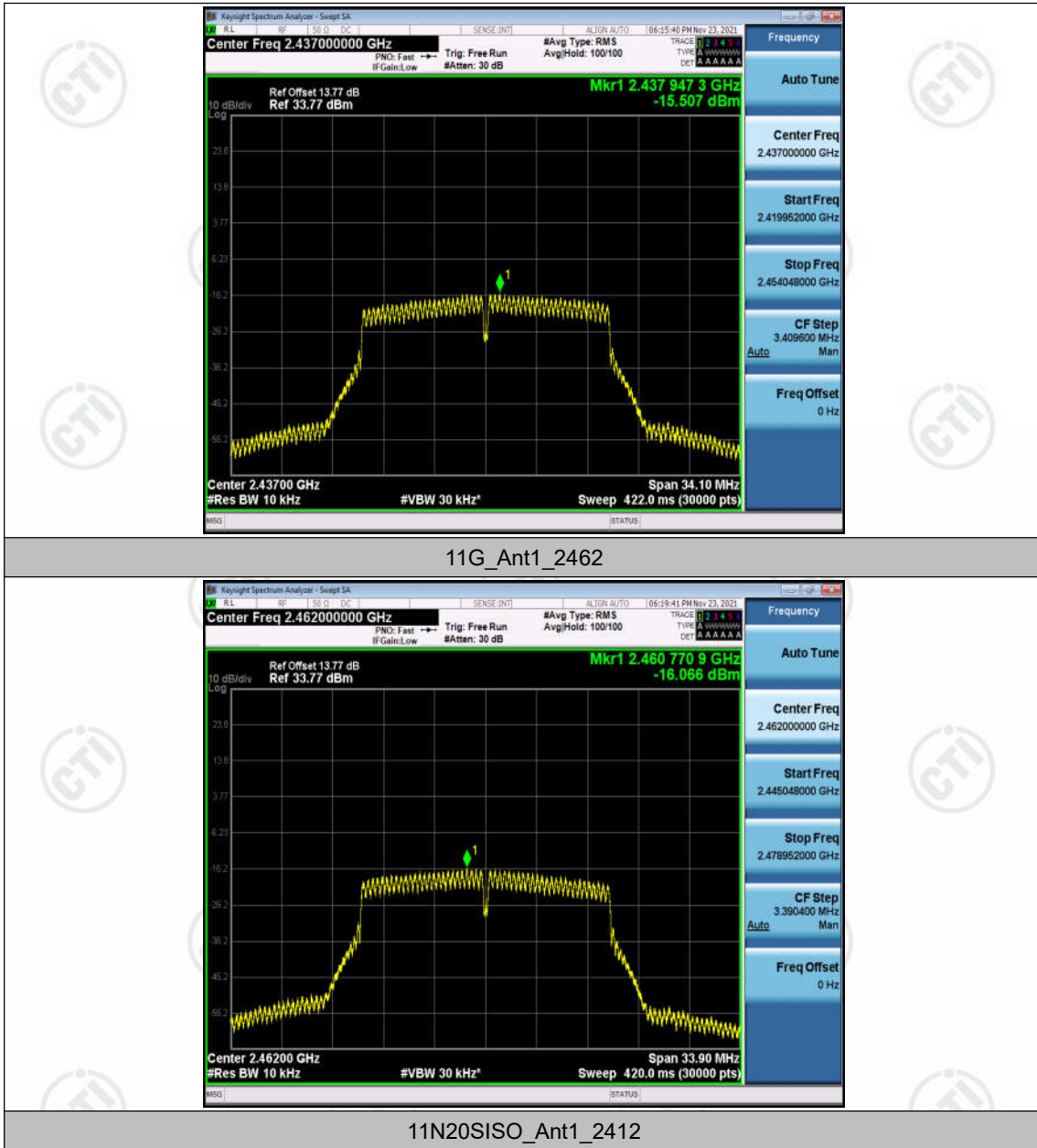


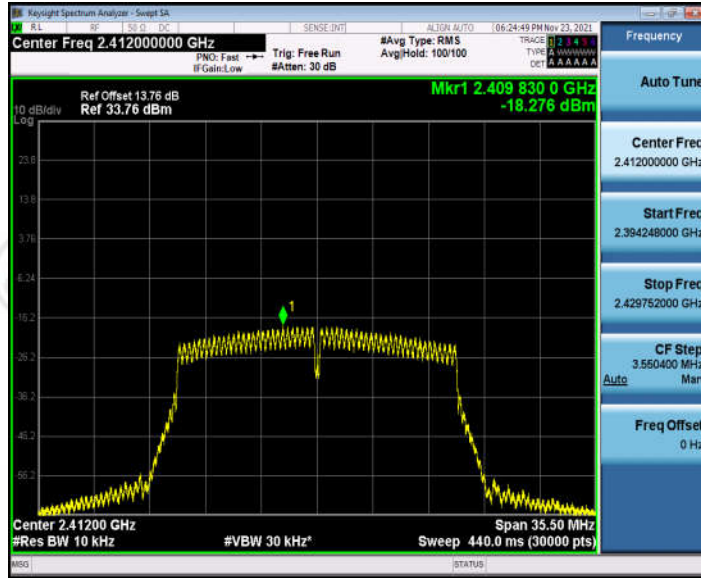


11G_Ant1_2412

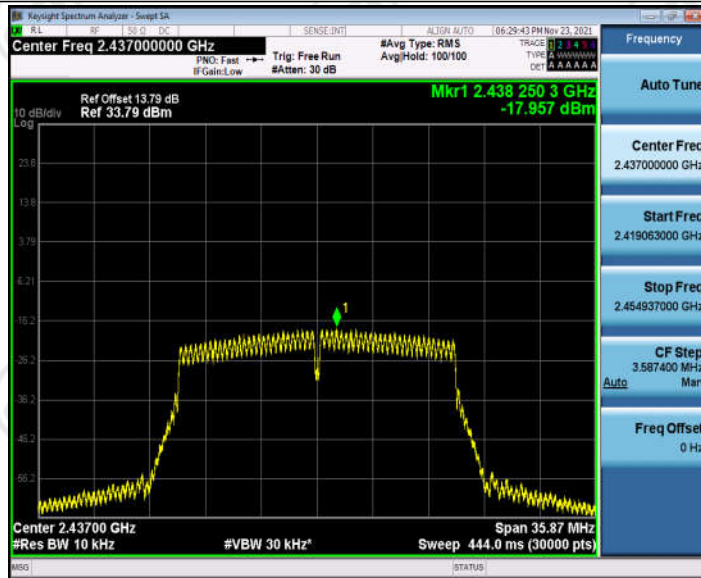


11G_Ant1_2437

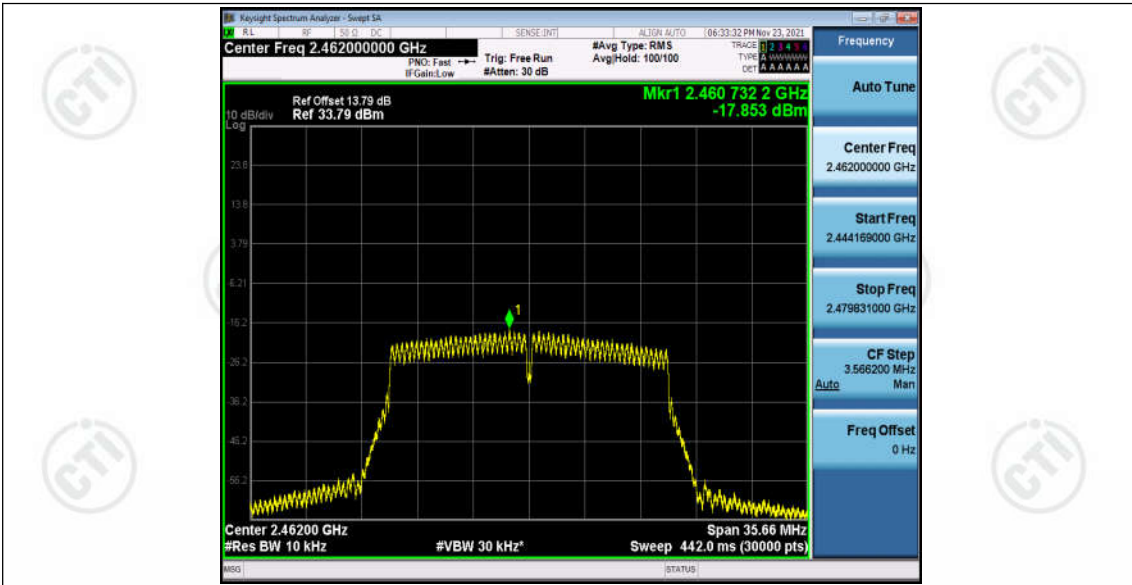




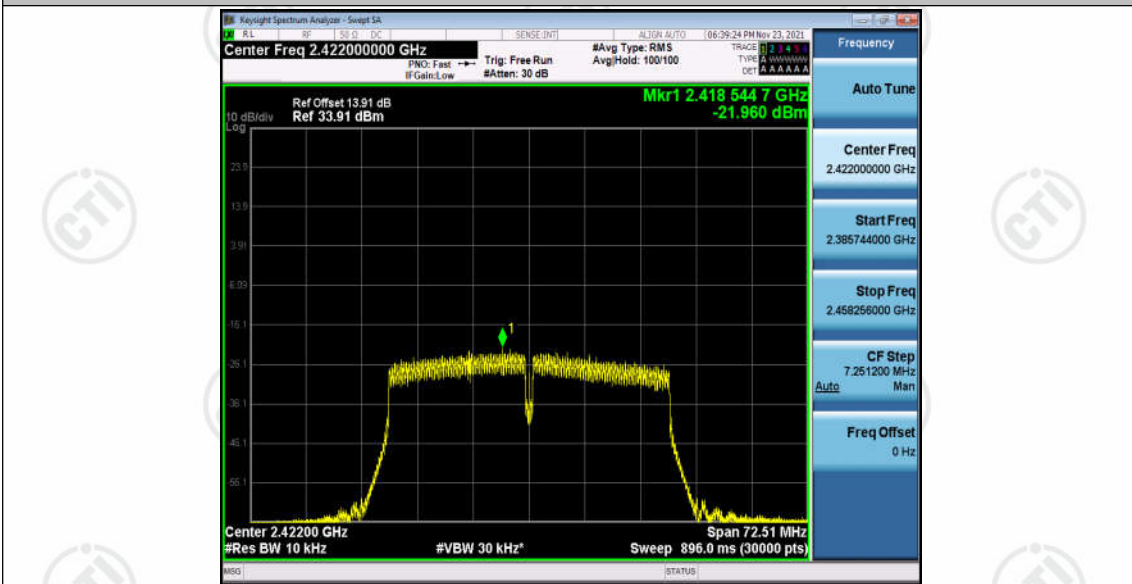
11N20SISO_Ant1_2437



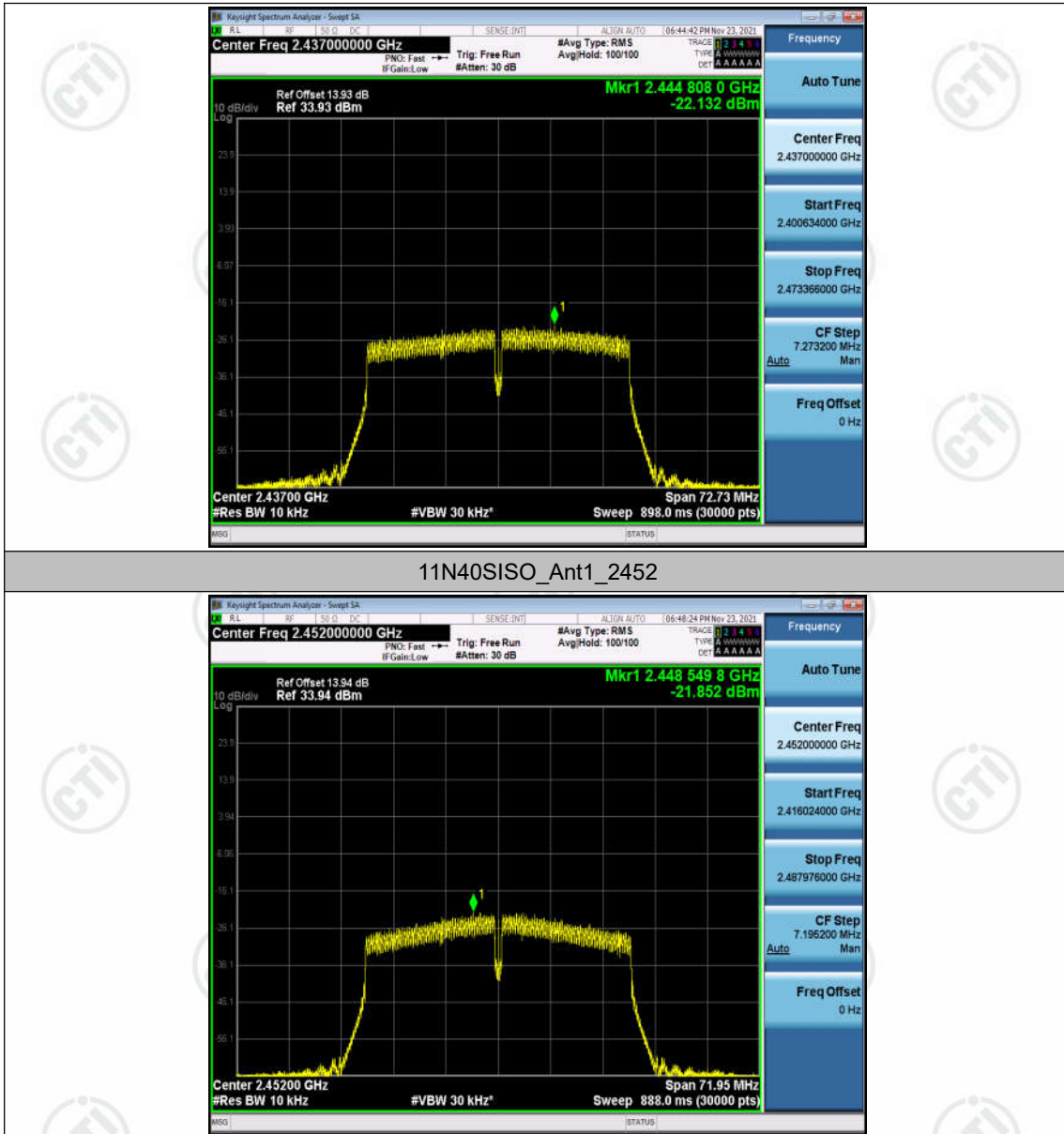
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



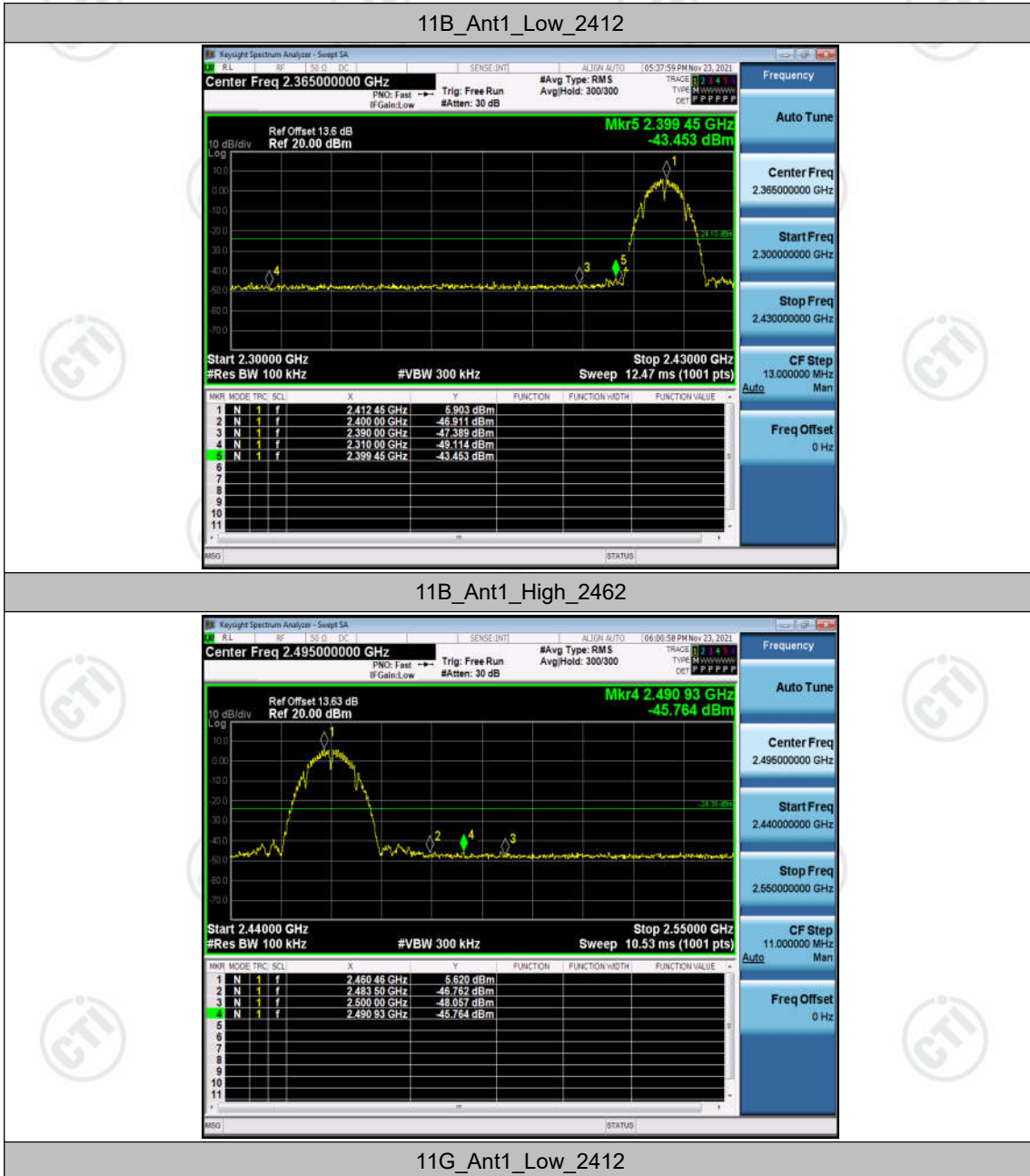
Appendix E: Band edge measurements

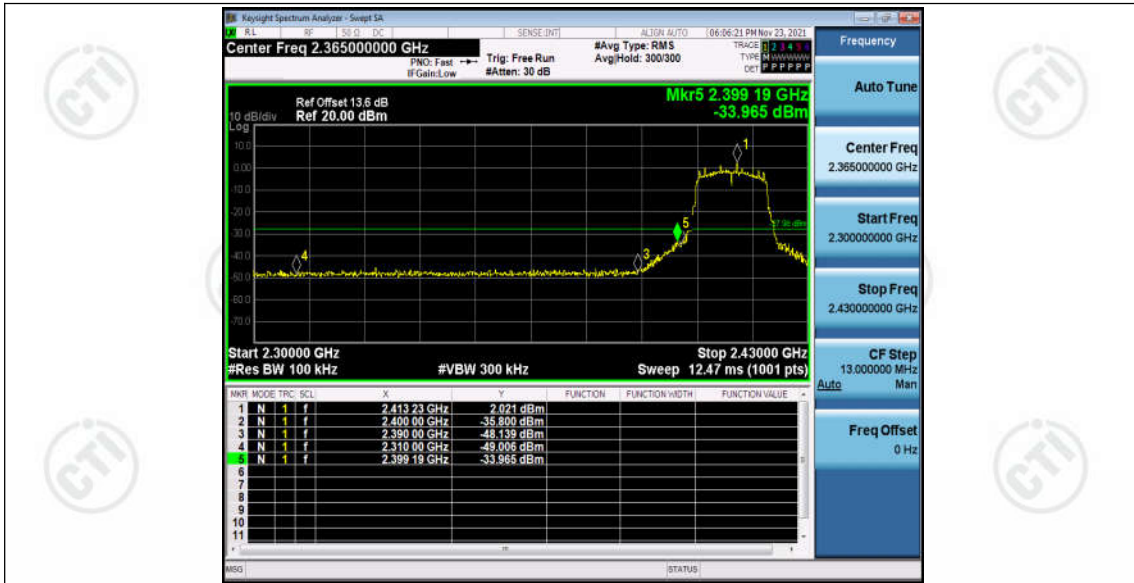
Test Result

Test Mode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.90	-43.45	<=-24.1	PASS
		High	2462	5.62	-45.76	<=-24.38	PASS
11G	Ant1	Low	2412	2.02	-33.97	<=-27.98	PASS
		High	2462	1.62	-45.31	<=-28.38	PASS
11N20SI SO	Ant1	Low	2412	-0.05	-36.63	<=-30.05	PASS
		High	2462	-0.13	-45.21	<=-30.13	PASS
11N40SI SO	Ant1	Low	2422	-4.44	-42.06	<=-34.44	PASS
		High	2452	-4.37	-45.47	<=-34.37	PASS

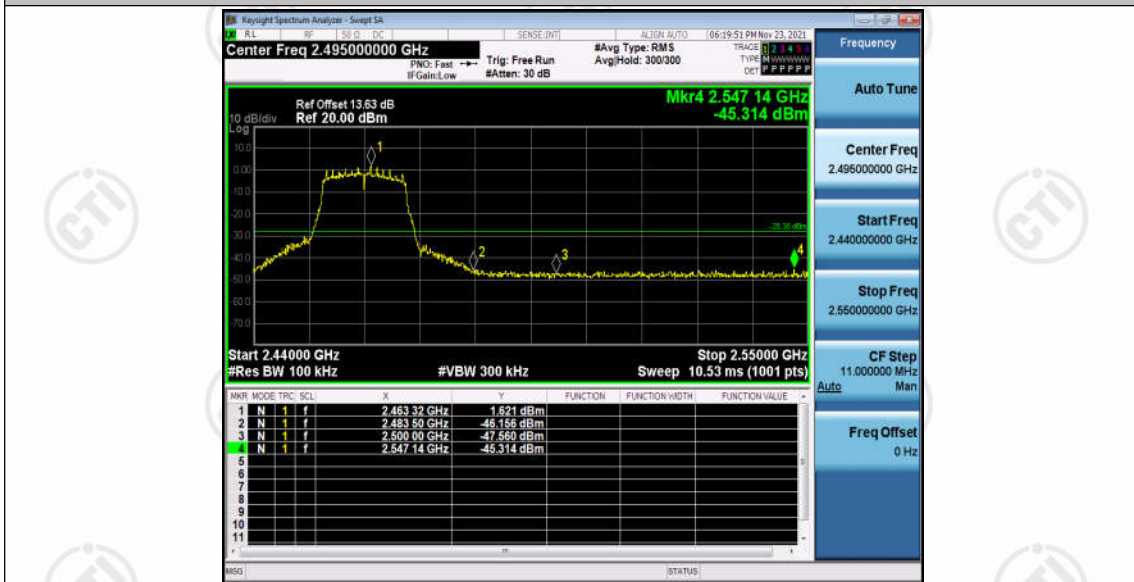
Note: Limit[dBm]=RefLevel[dBm]-30dB

Test Graphs

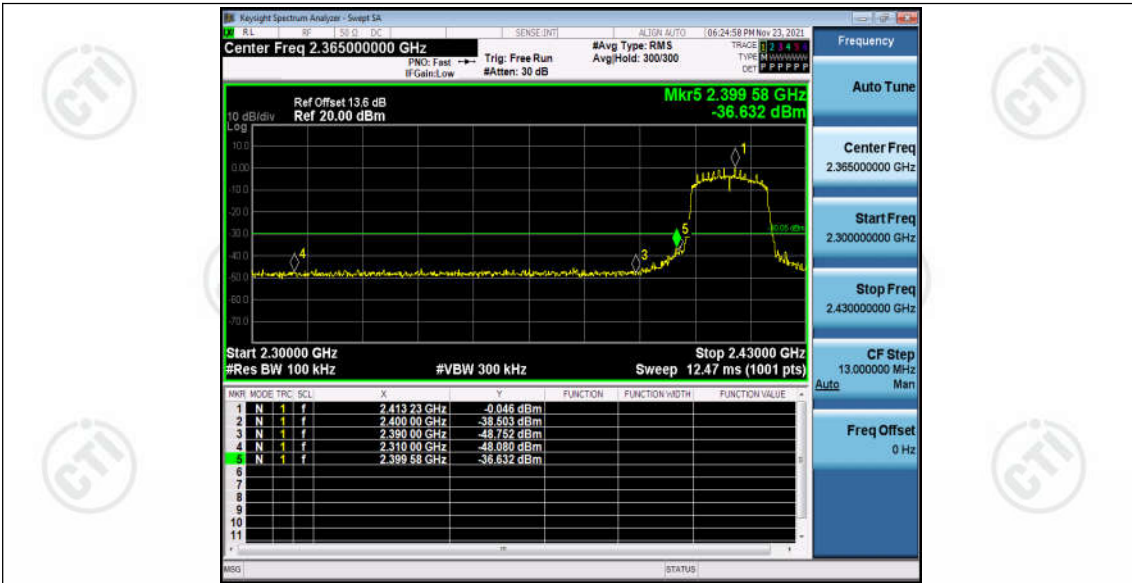




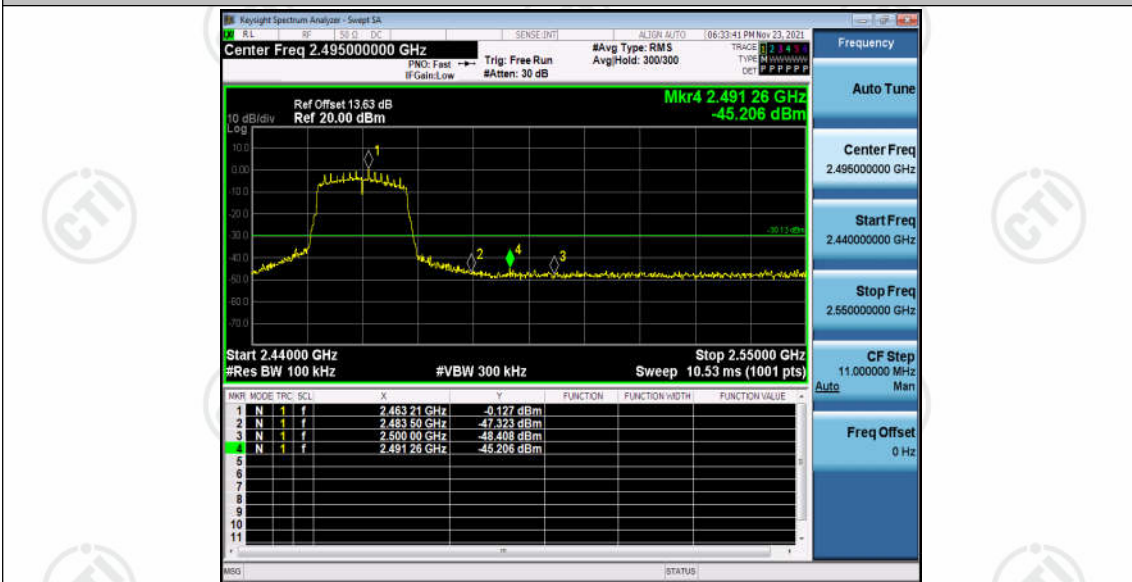
11G_Ant1_High_2462



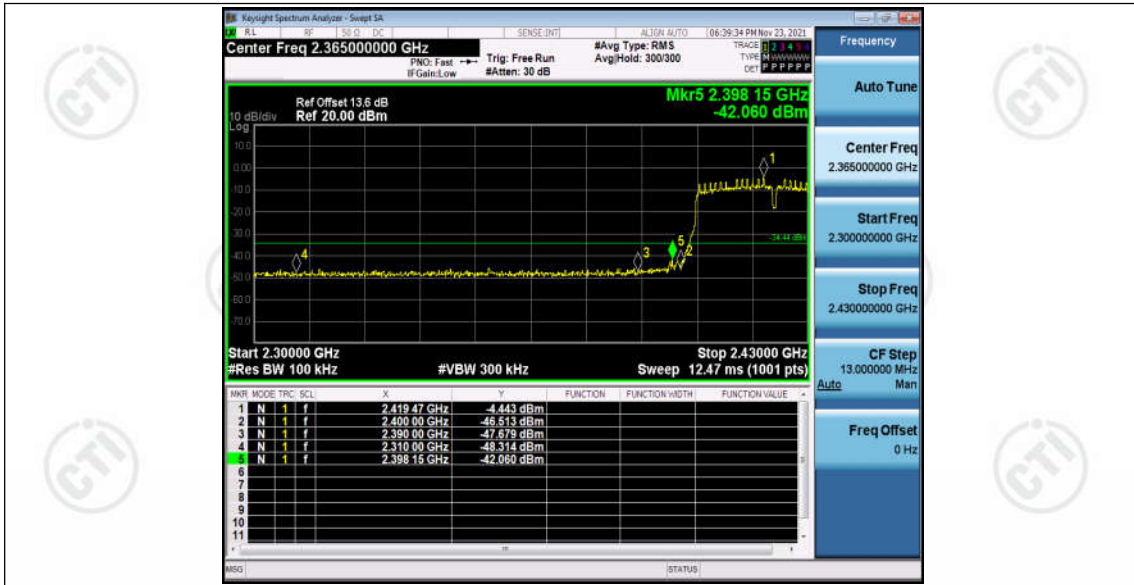
11N20SISO_Ant1_Low_2412



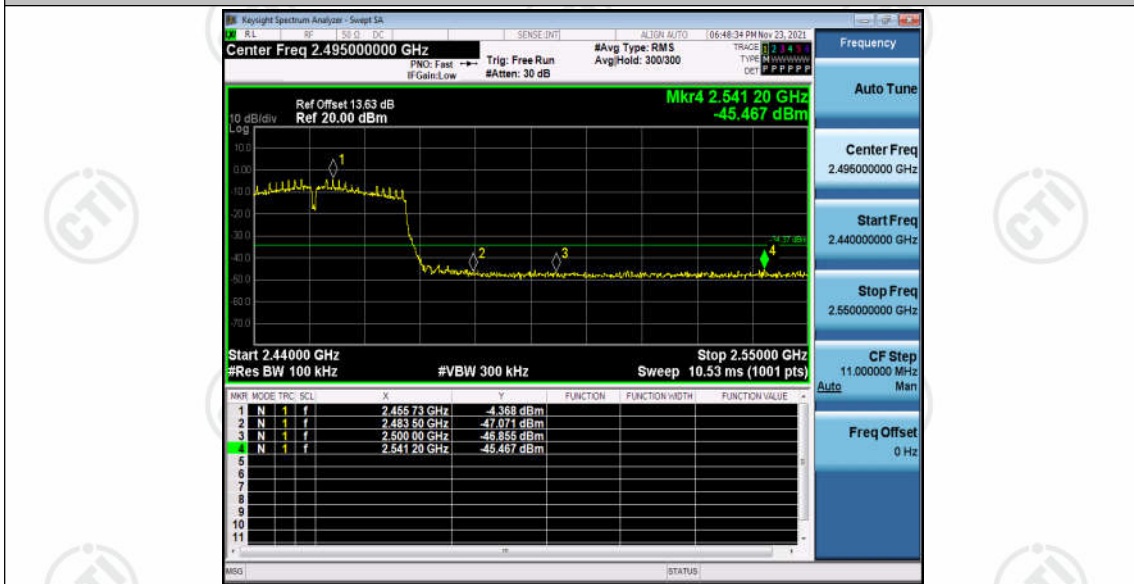
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



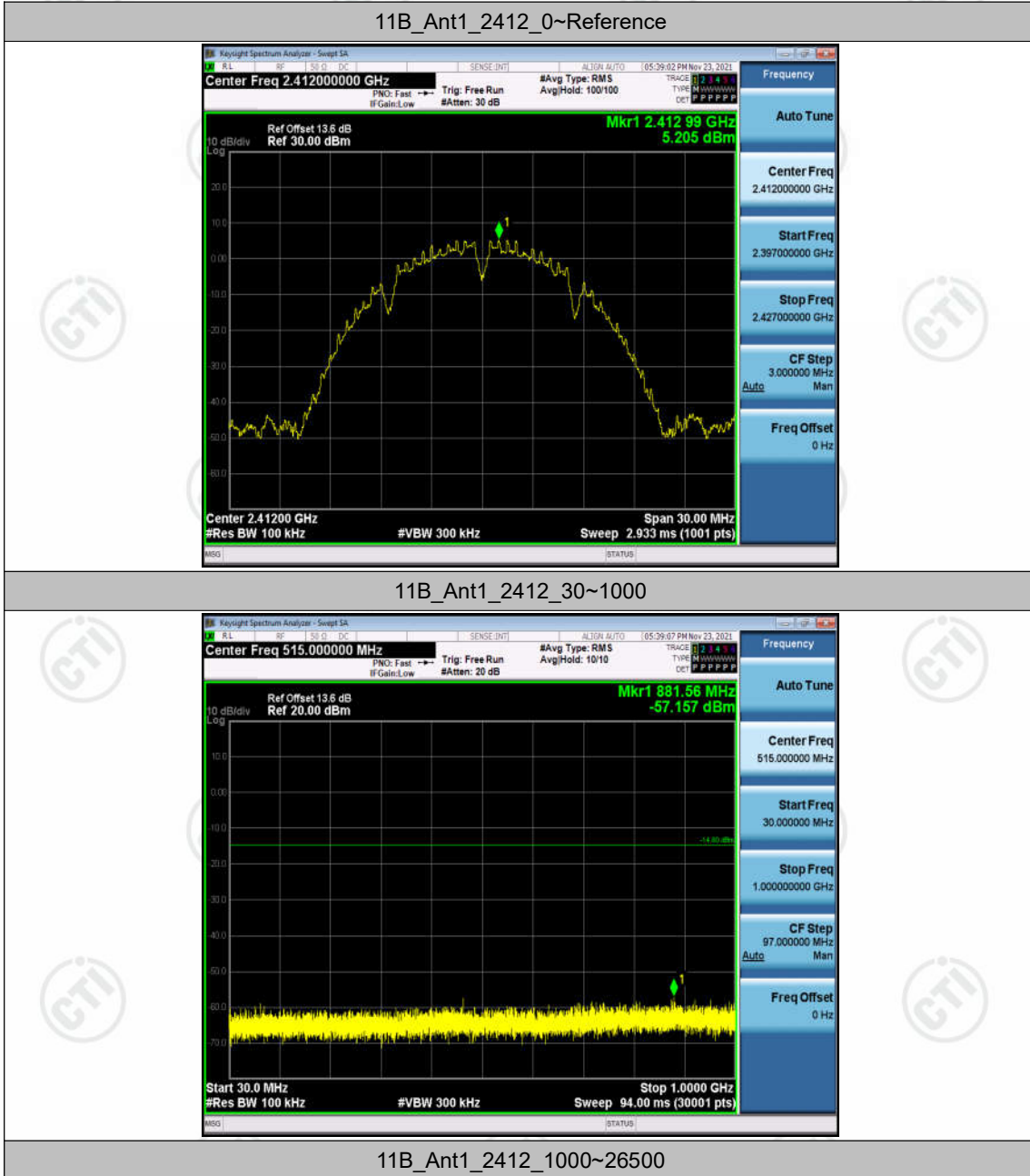
Appendix F: Conducted Spurious Emission

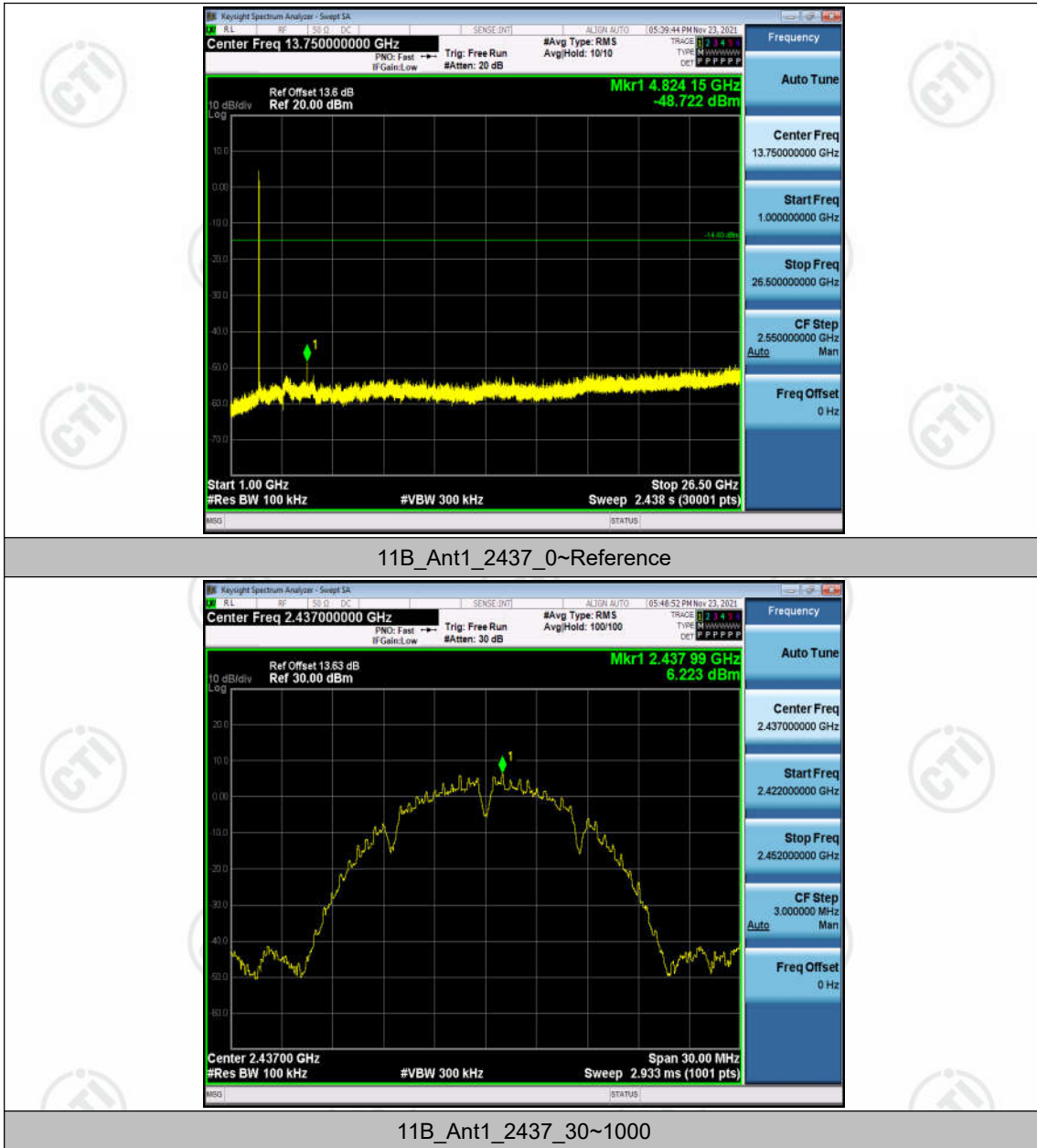
Test Result

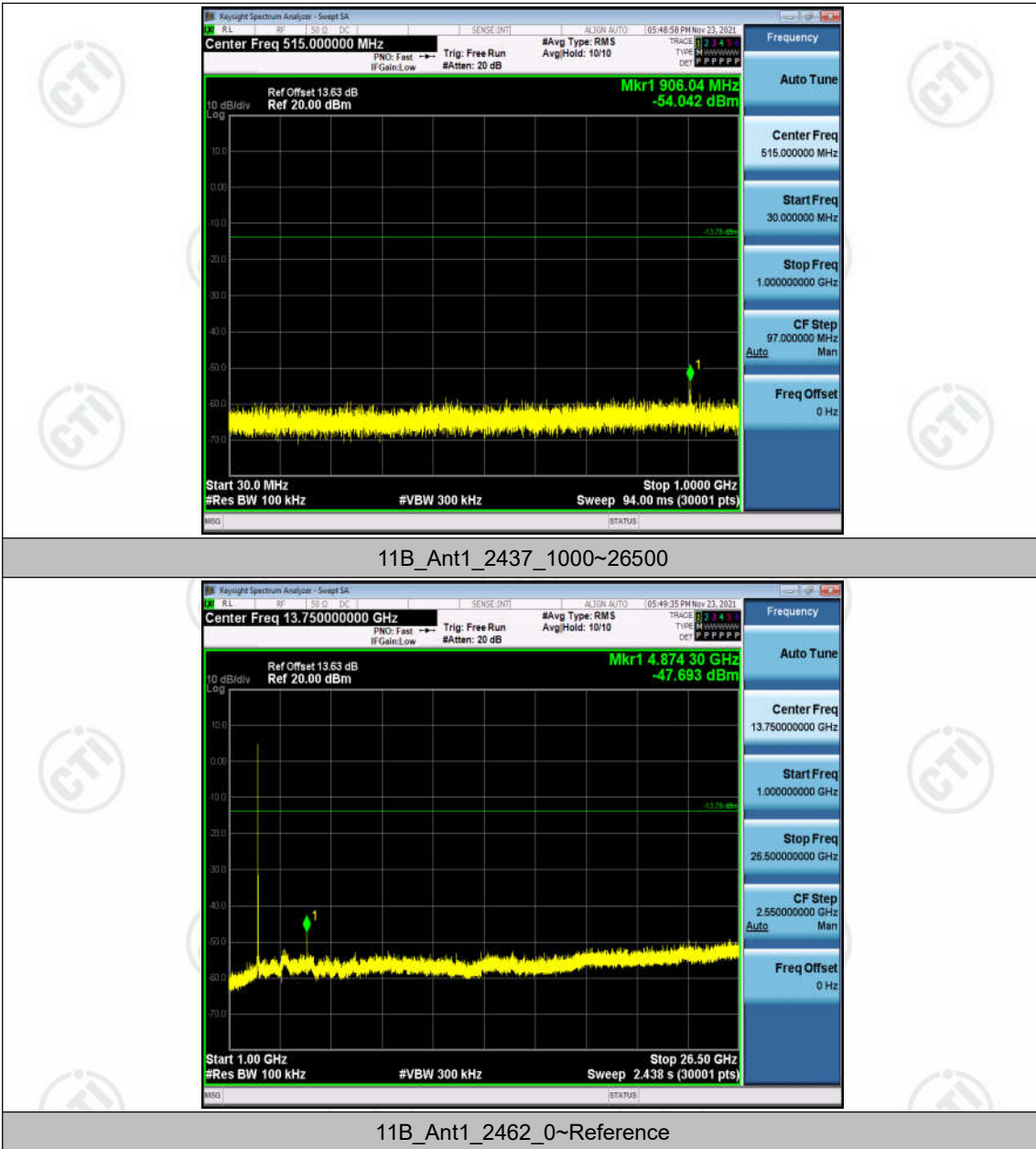
Test Mode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.21	5.21	---	PASS
			30~1000	5.21	-57.157	<=-24.795	PASS
			1000~26500	5.21	-48.722	<=-24.795	PASS
		2437	Reference	6.22	6.22	---	PASS
			30~1000	6.22	-54.042	<=-23.777	PASS
			1000~26500	6.22	-47.693	<=-23.777	PASS
		2462	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-57.43	<=-24.617	PASS
			1000~26500	5.38	-48.871	<=-24.617	PASS
11G	Ant1	2412	Reference	0.38	0.38	---	PASS
			30~1000	0.38	-56.9	<=-29.622	PASS
			1000~26500	0.38	-48.663	<=-29.622	PASS
		2437	Reference	1.71	1.71	---	PASS
			30~1000	1.71	-57.644	<=-28.292	PASS
			1000~26500	1.71	-49.521	<=-28.292	PASS
		2462	Reference	0.15	0.15	---	PASS
			30~1000	0.15	-53.947	<=-29.849	PASS
			1000~26500	0.15	-49.655	<=-29.849	PASS
11N20SIS O	Ant1	2412	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-56.729	<=-31.032	PASS
			1000~26500	-1.03	-49.279	<=-31.032	PASS
		2437	Reference	-0.52	-0.52	---	PASS
			30~1000	-0.52	-40.579	<=-30.52	PASS
			1000~26500	-0.52	-49.313	<=-30.52	PASS
		2462	Reference	-0.35	-0.35	---	PASS
			30~1000	-0.35	-57.602	<=-30.353	PASS
			1000~26500	-0.35	-49.568	<=-30.353	PASS
11N40SIS O	Ant1	2422	Reference	-4.51	-4.51	---	PASS
			30~1000	-4.51	-45.605	<=-34.507	PASS
			1000~26500	-4.51	-49.536	<=-34.507	PASS
		2437	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-57.341	<=-34.797	PASS
			1000~26500	-4.80	-49.871	<=-34.797	PASS
		2452	Reference	-4.32	-4.32	---	PASS
			30~1000	-4.32	-57.788	<=-34.323	PASS
			1000~26500	-4.32	-48.67	<=-34.323	PASS

Note: Limit[dBm]=RefLevel[dBm]-30dB

Test Graphs

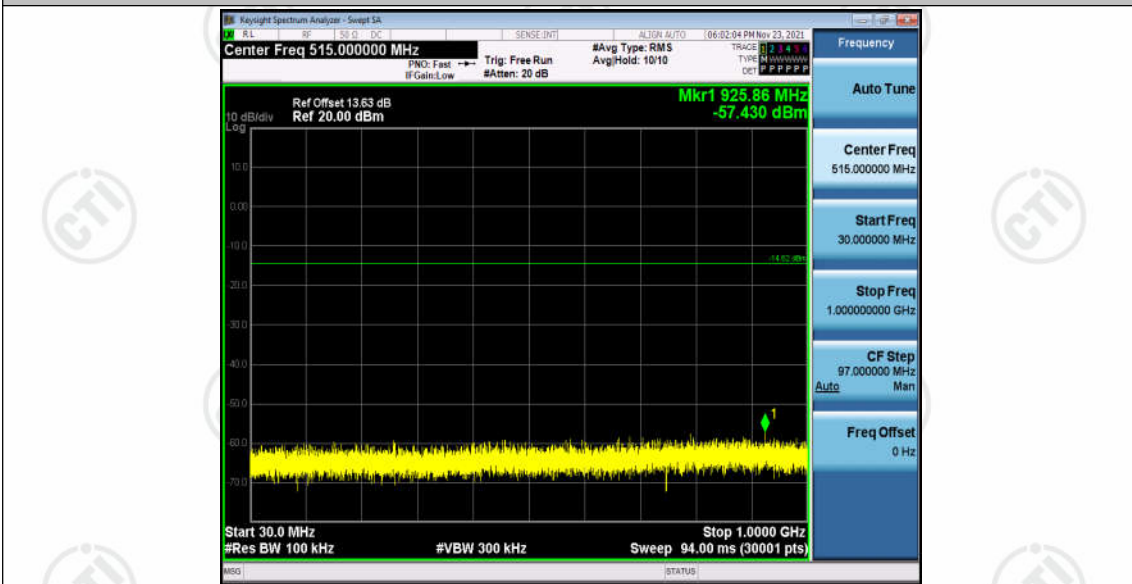




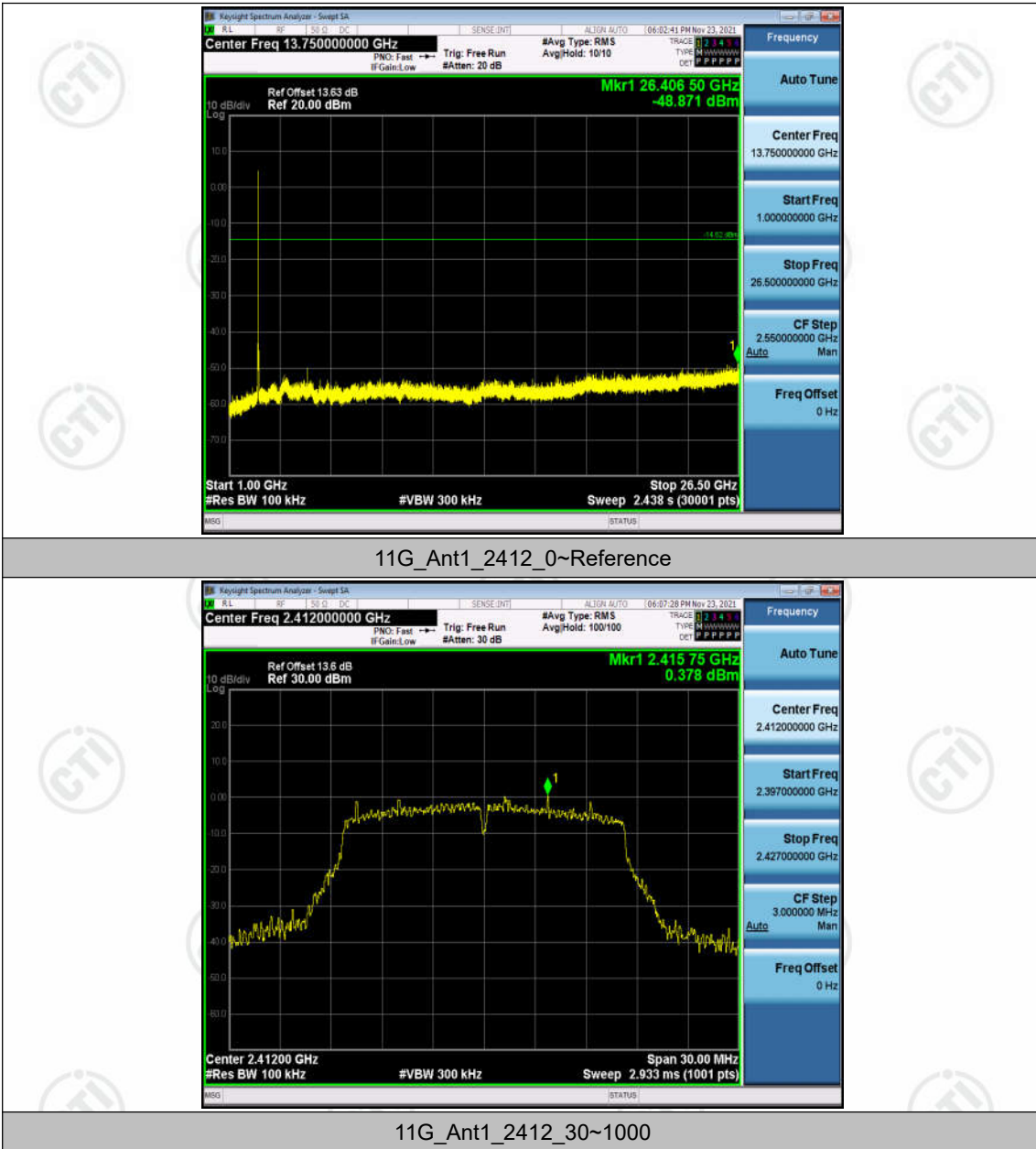


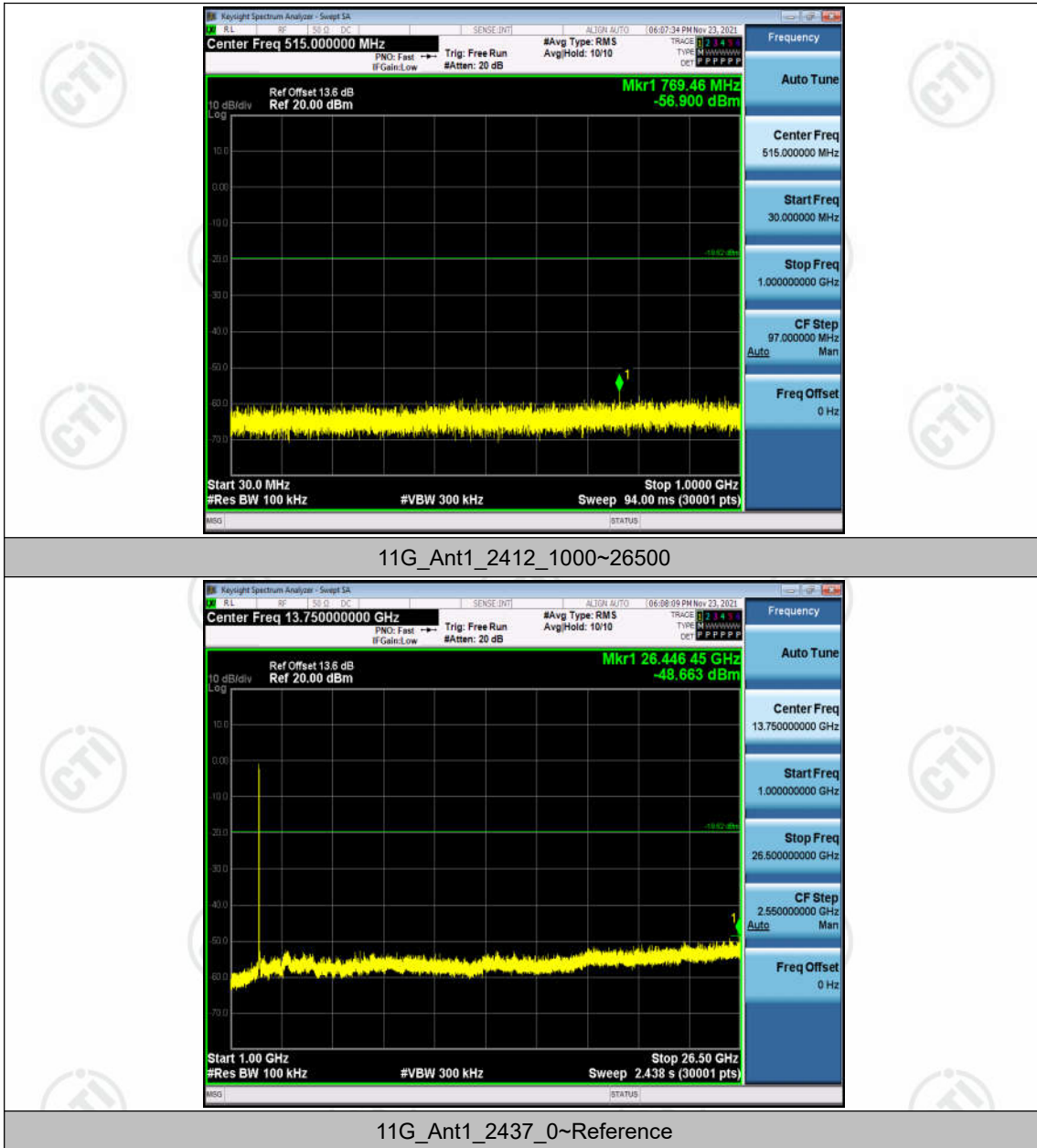


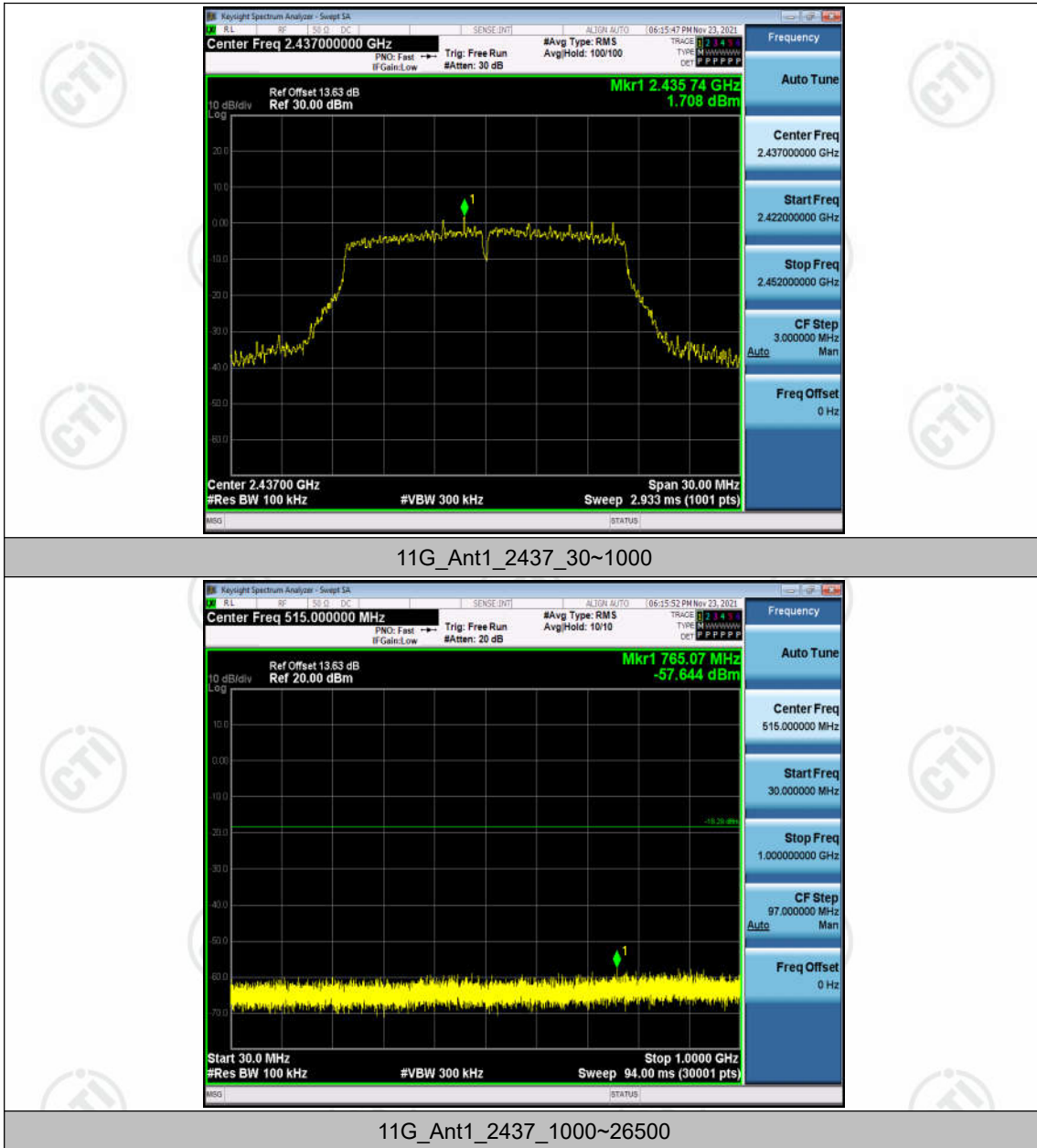
11B_Ant1_2462_30~1000

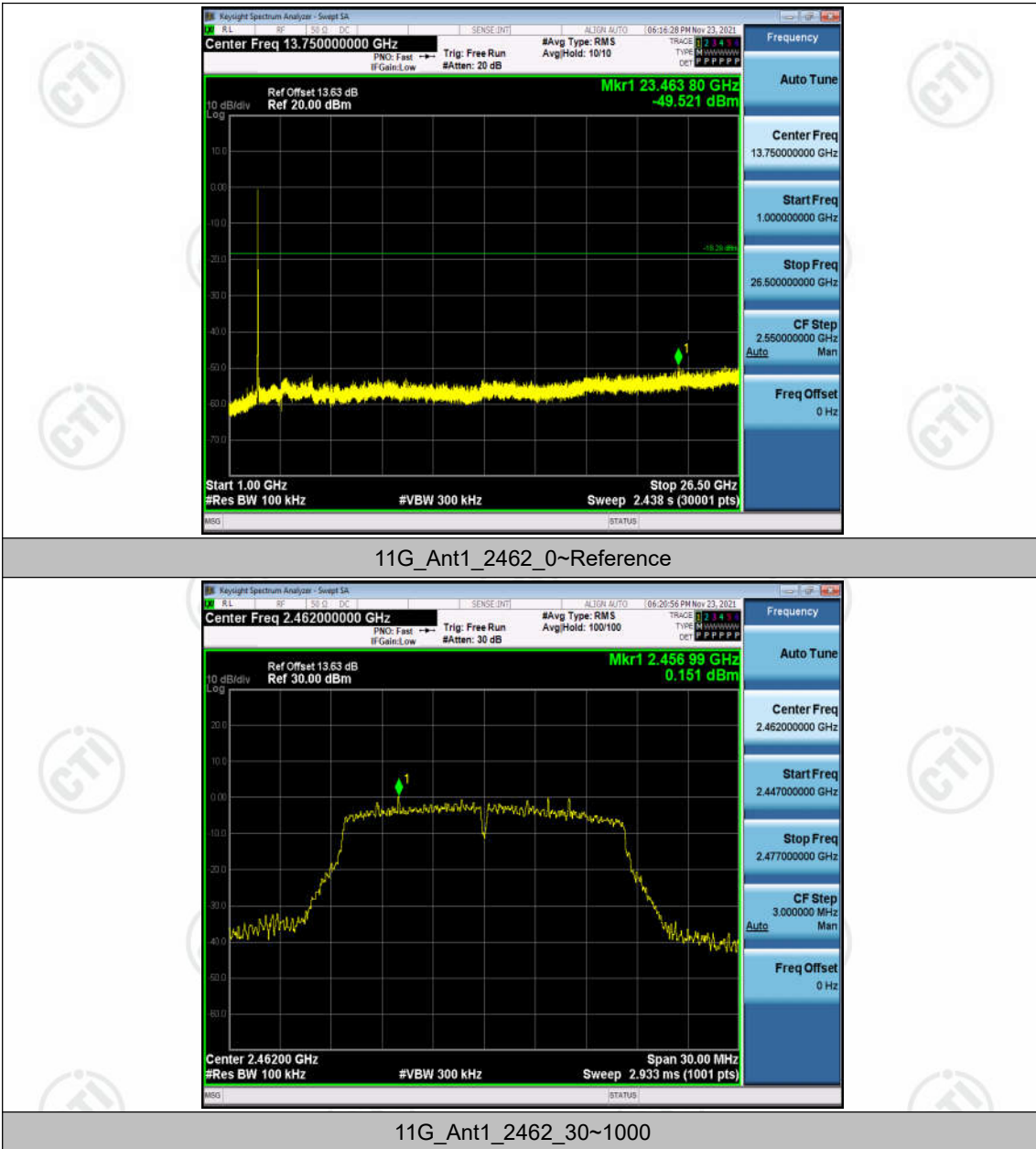


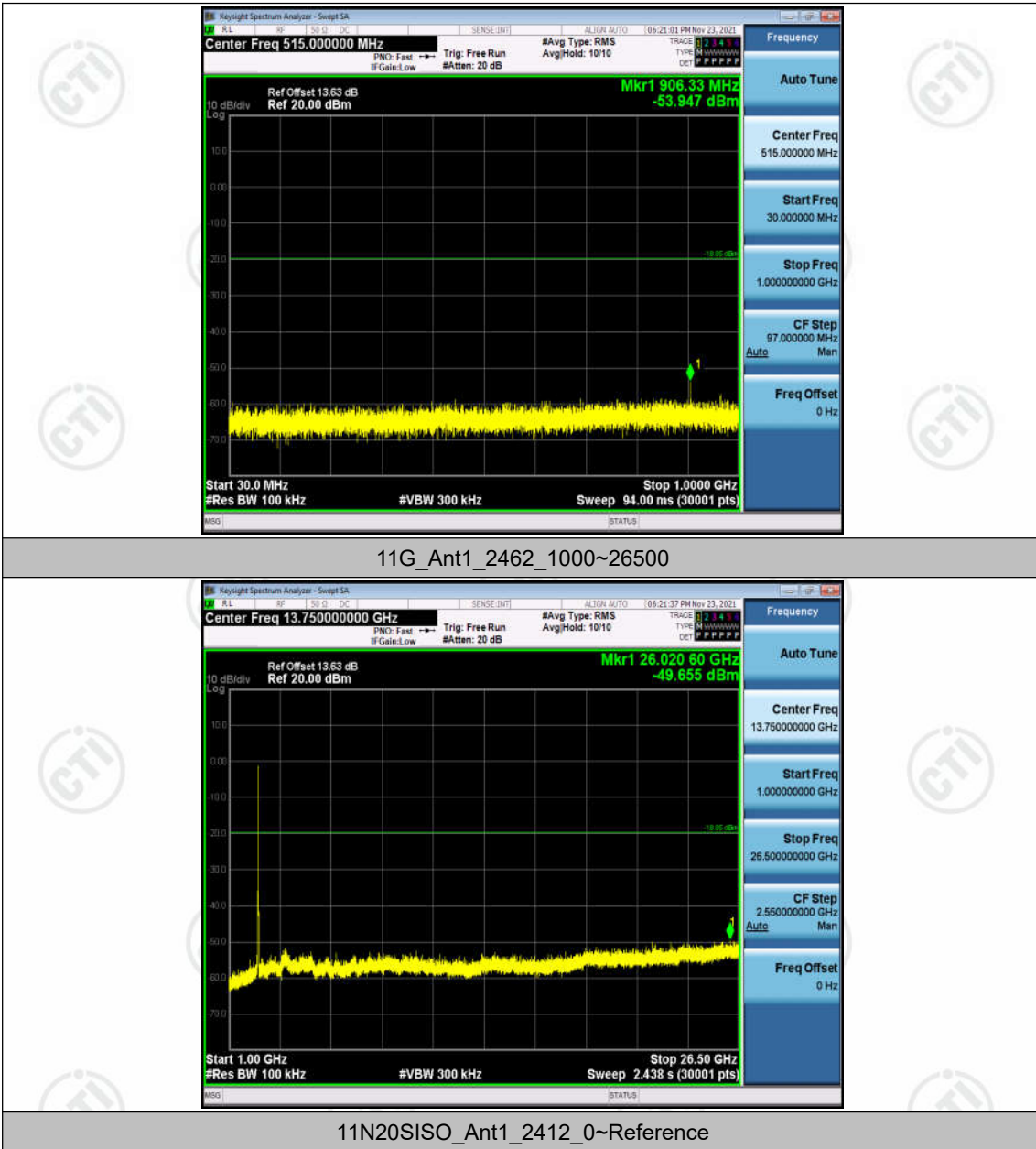
11B_Ant1_2462_1000~26500





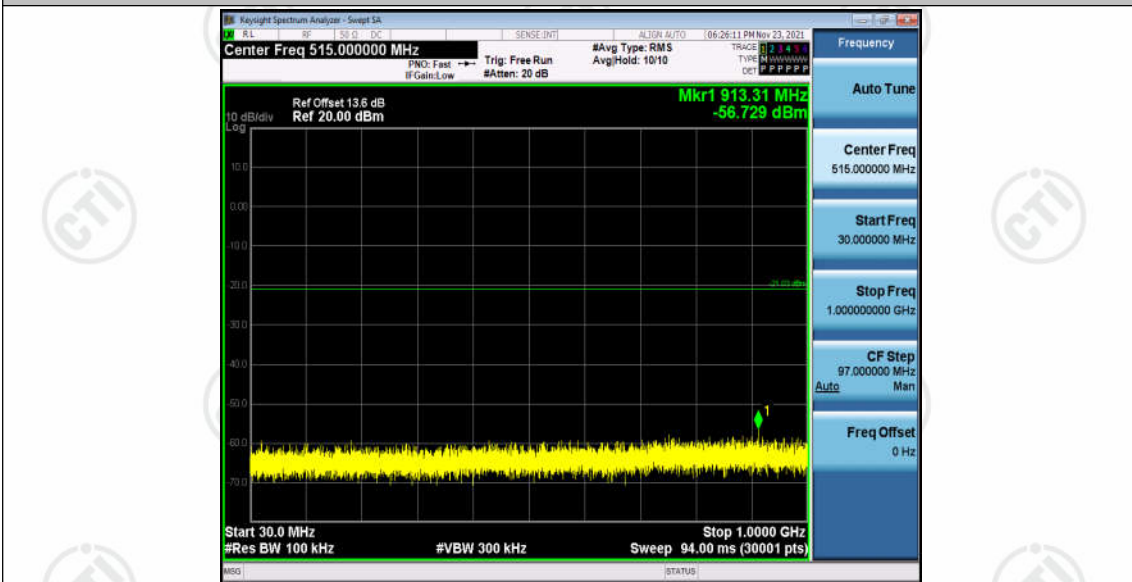








11N20SISO_Ant1_2412_30~1000



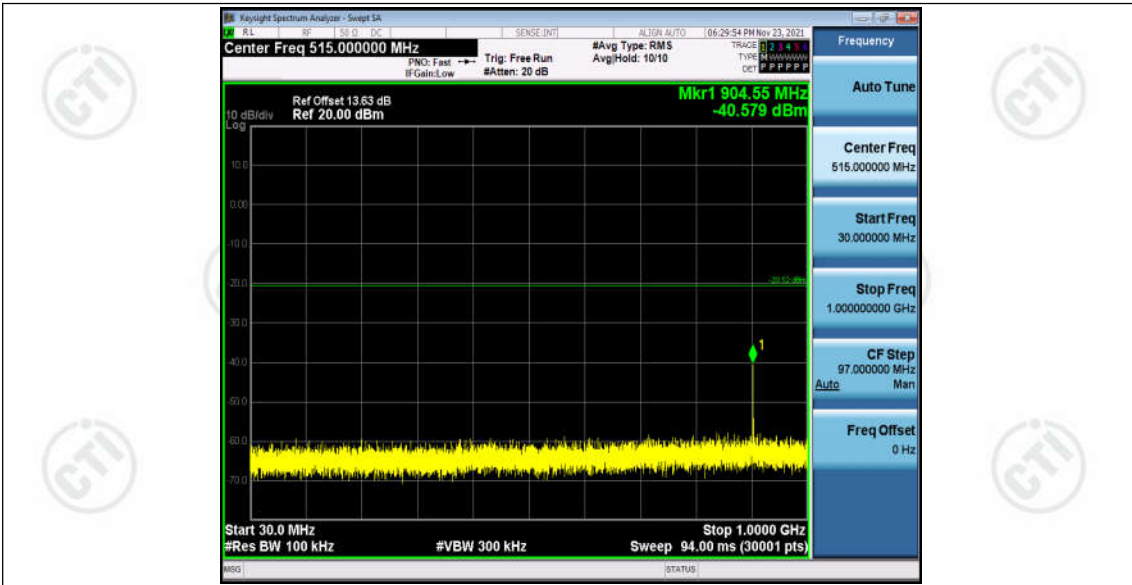
11N20SISO_Ant1_2412_1000~26500



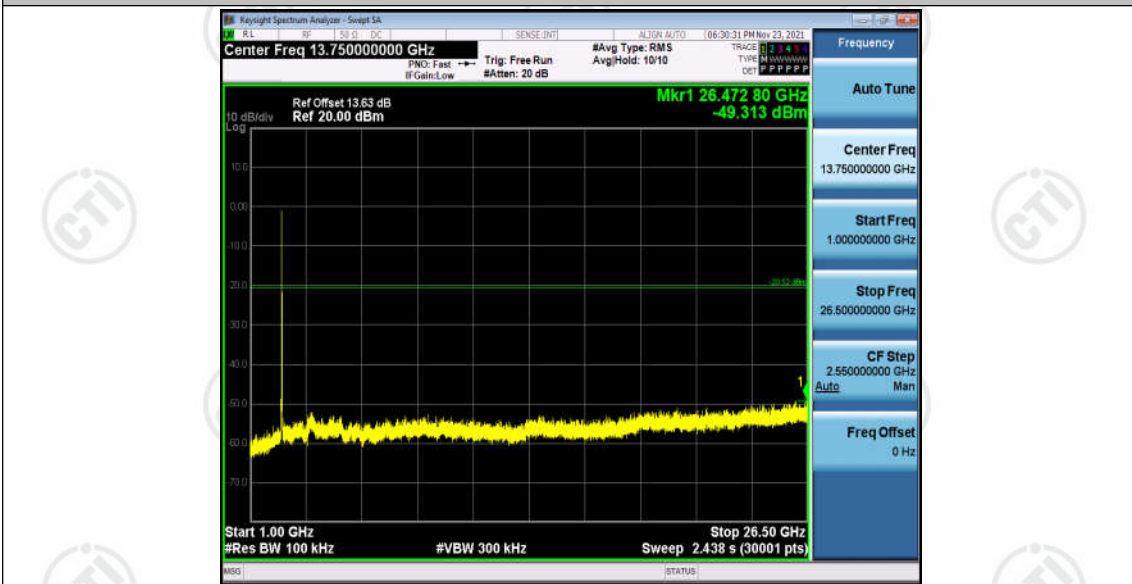
11N20SISO_Ant1_2437_0~Reference



11N20SISO_Ant1_2437_30~1000



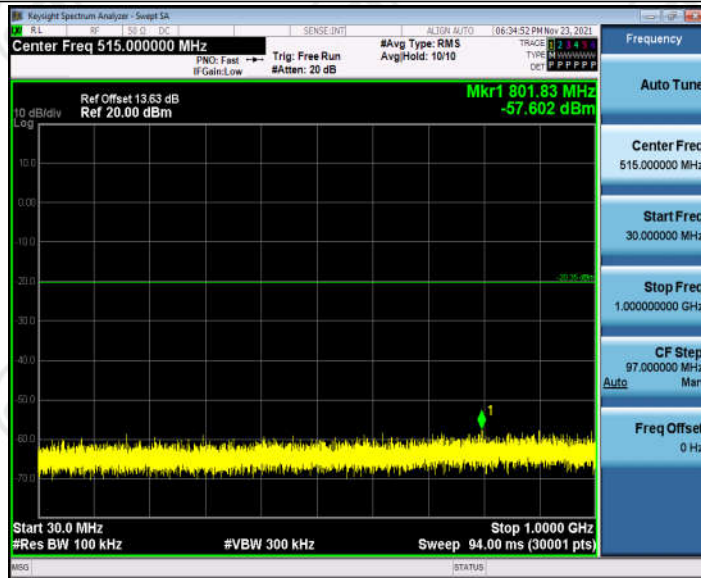
11N20SISO_Ant1_2437_1000~26500



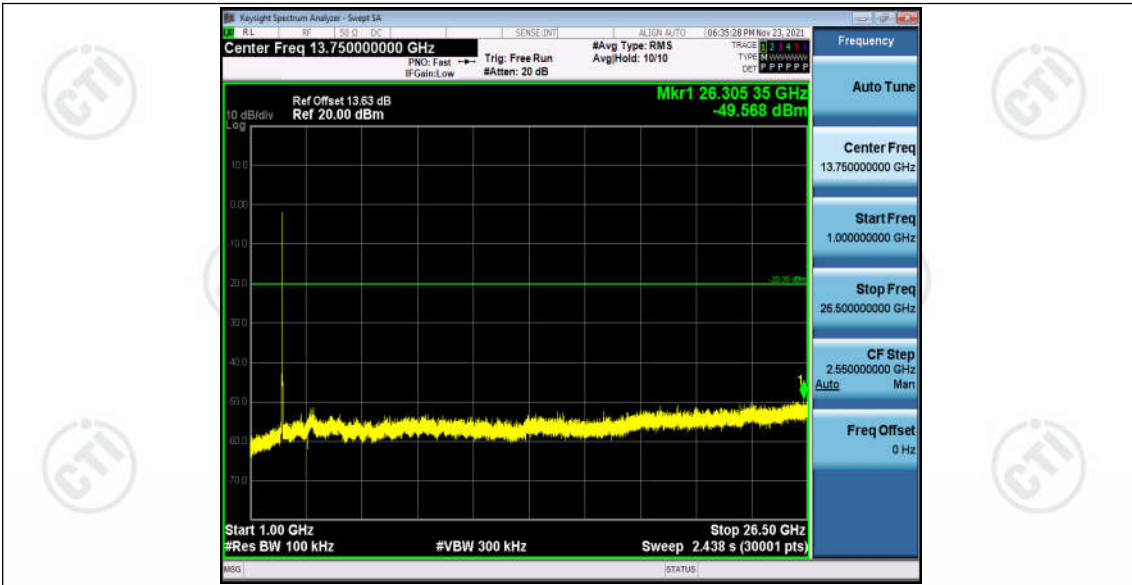
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



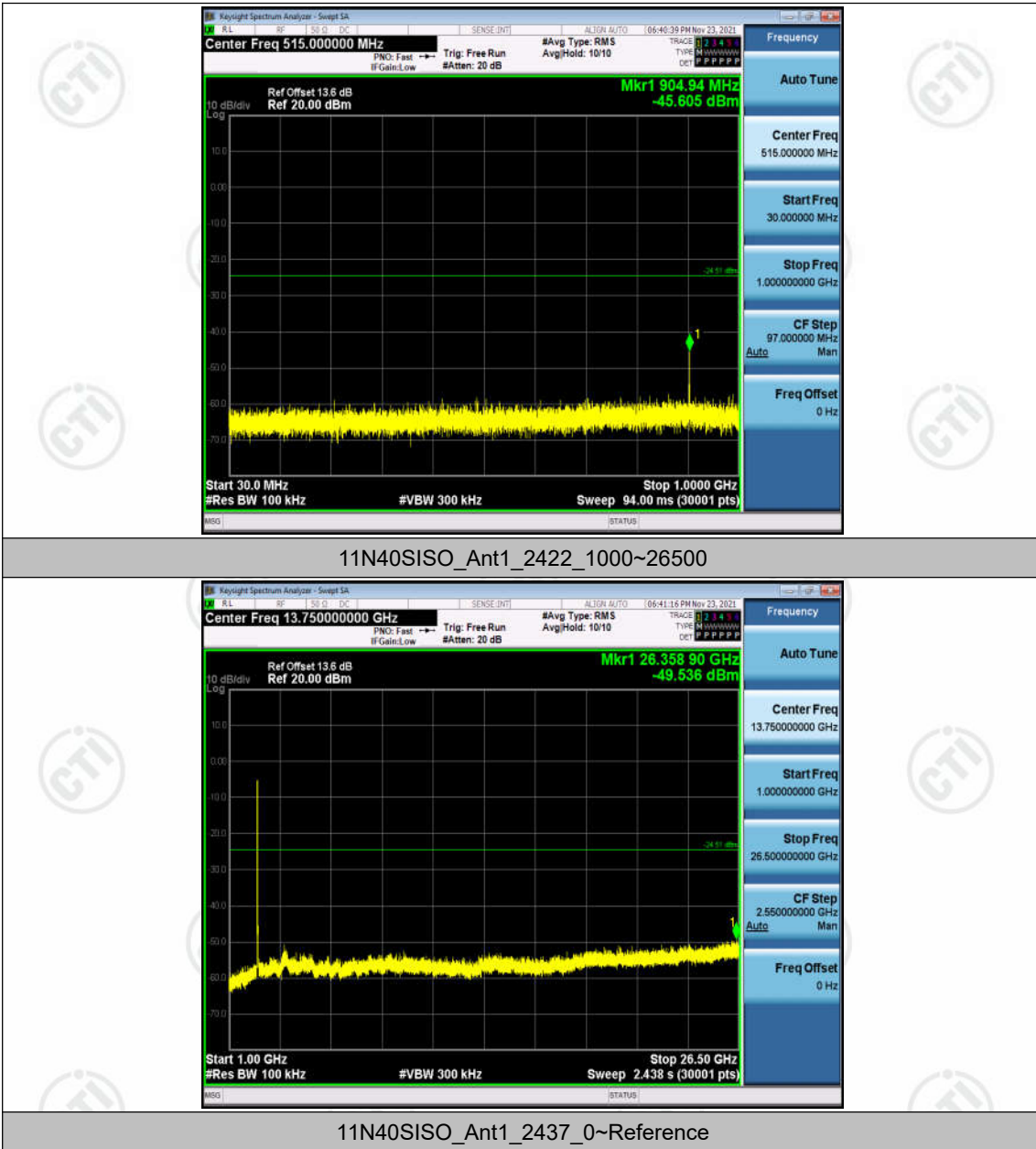
11N20SISO_Ant1_2462_1000~26500



11N40SISO_Ant1_2422_0~Reference

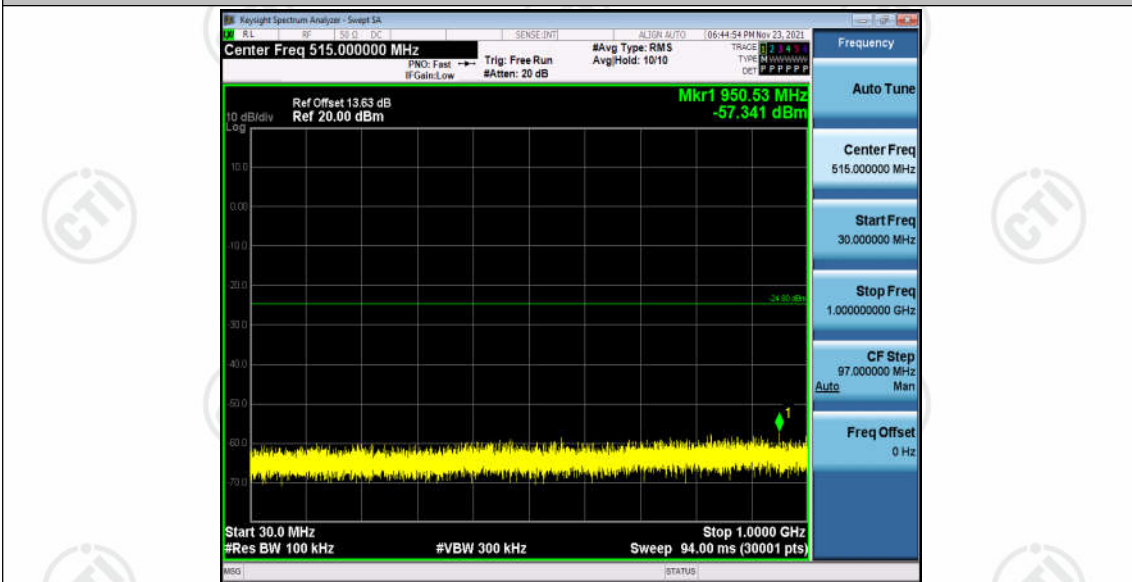


11N40SISO_Ant1_2422_30~1000





11N40SISO_Ant1_2437_30~1000



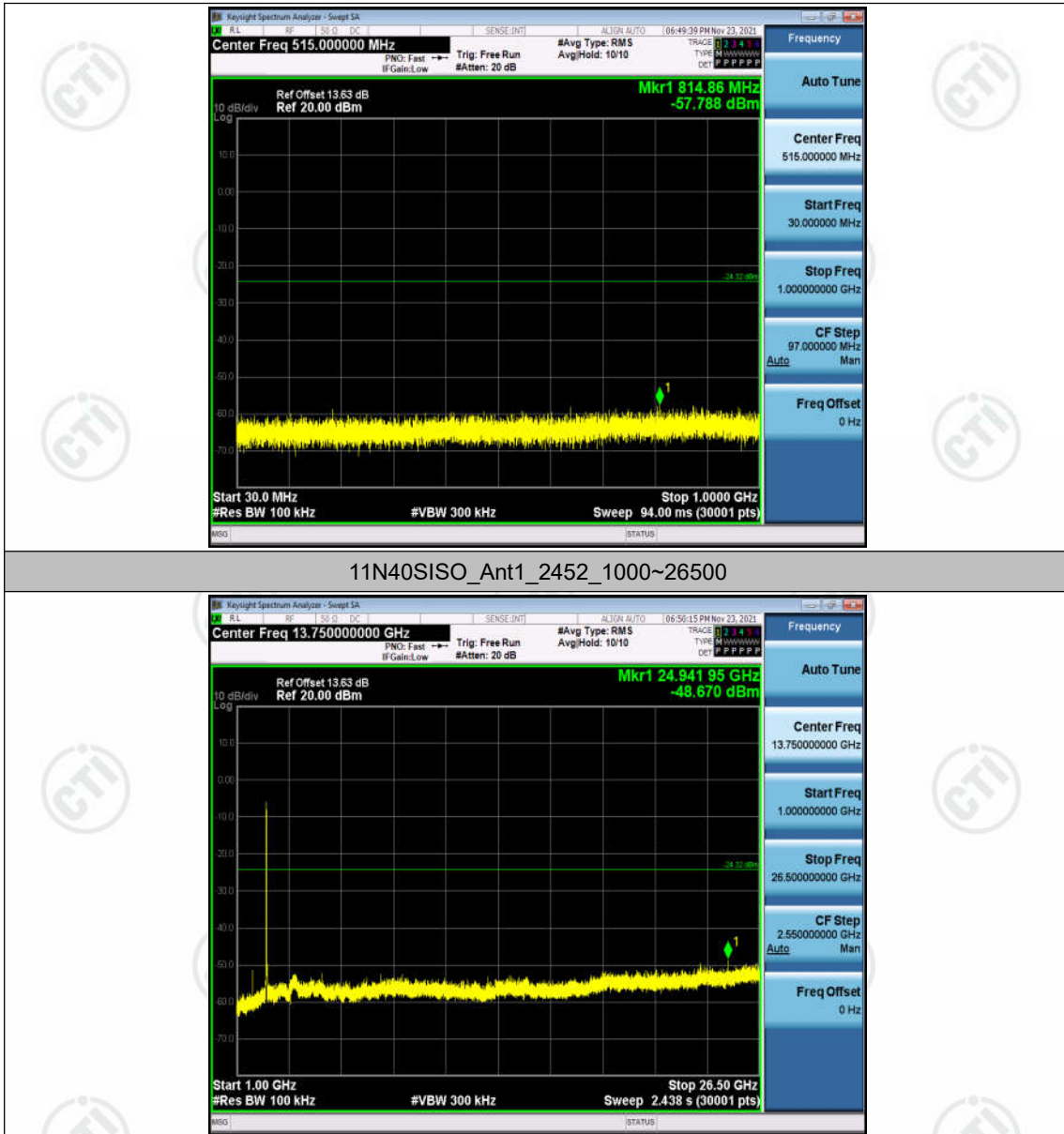
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000

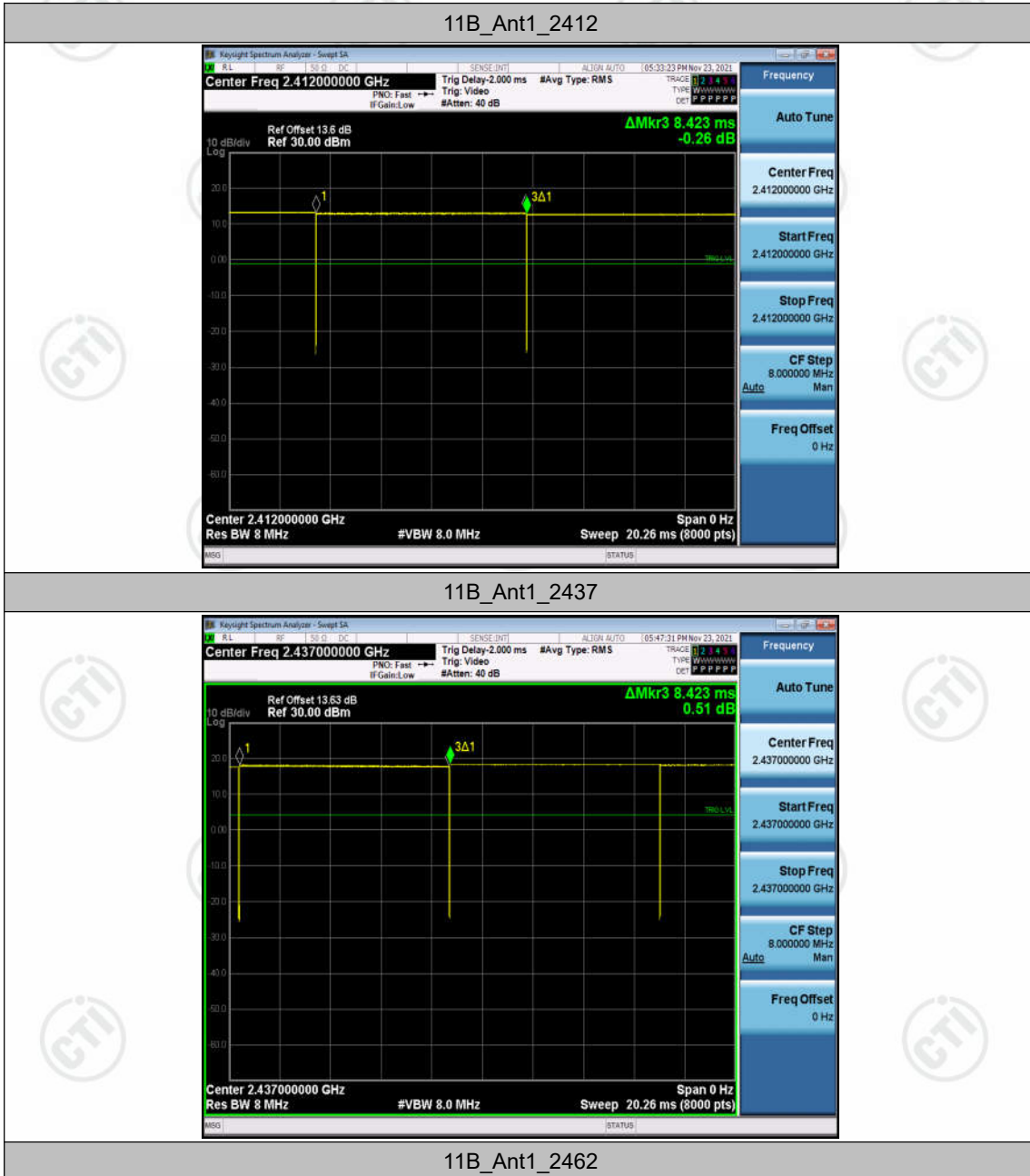


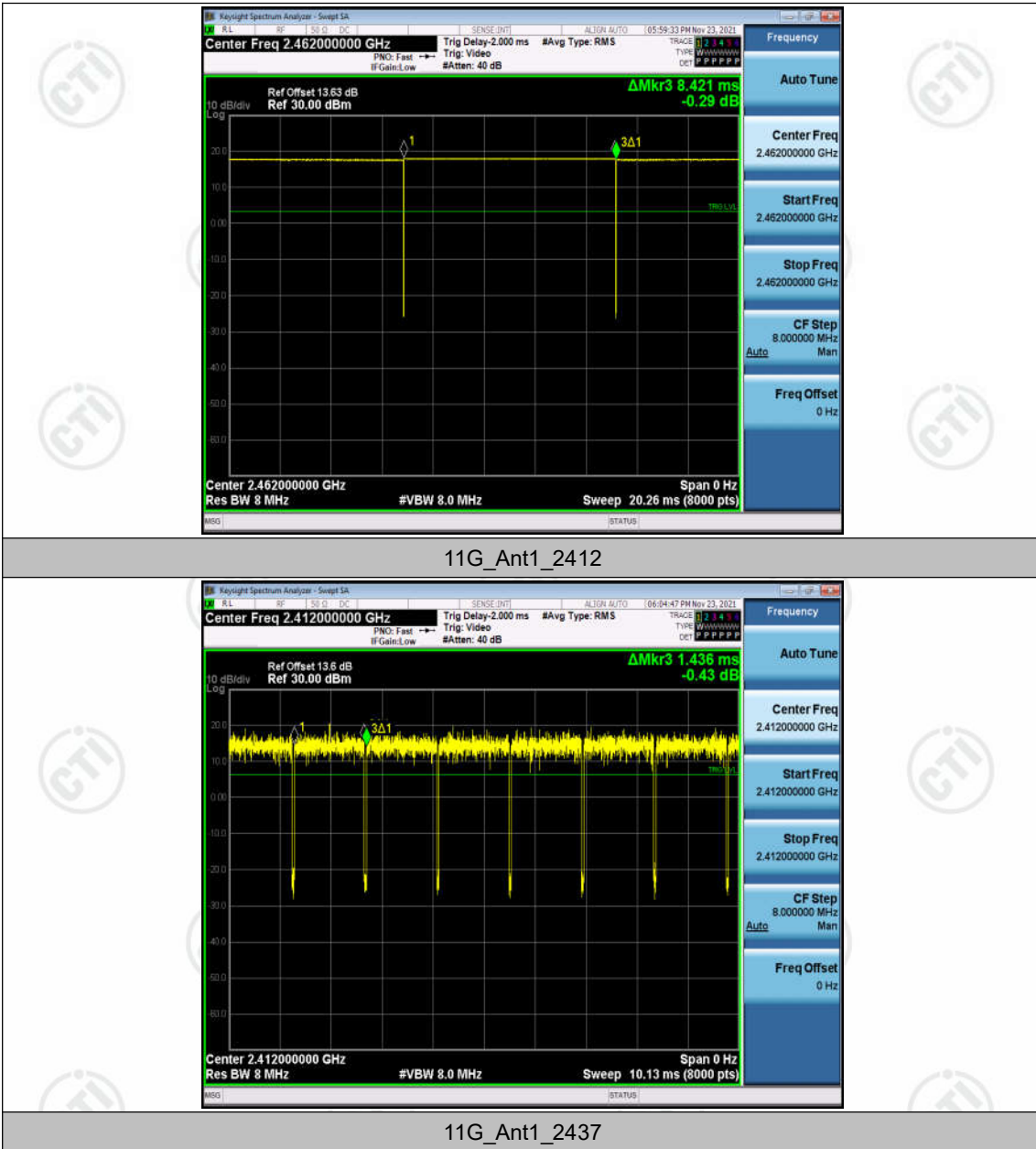
Appendix G: Duty Cycle

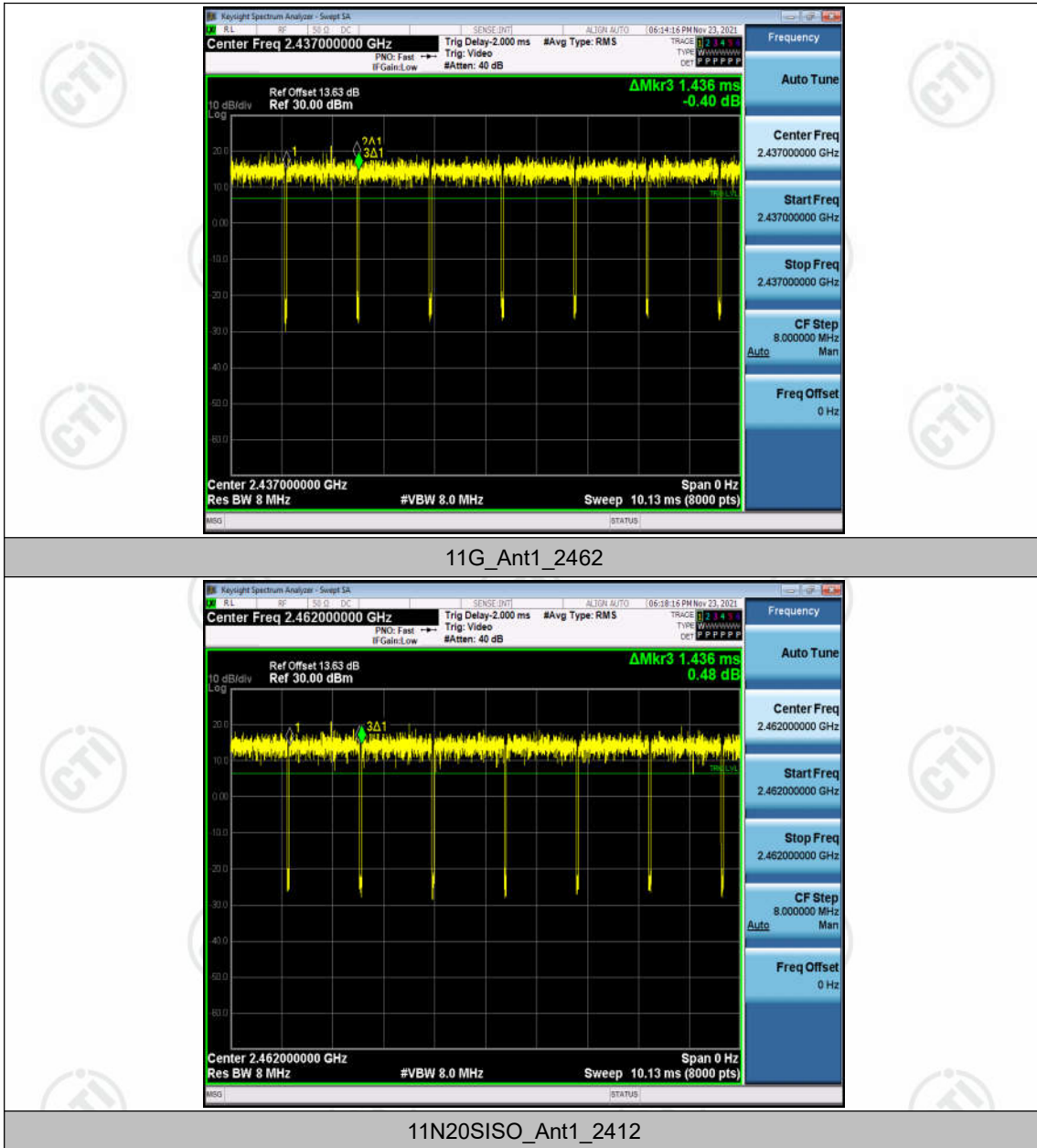
Test Result

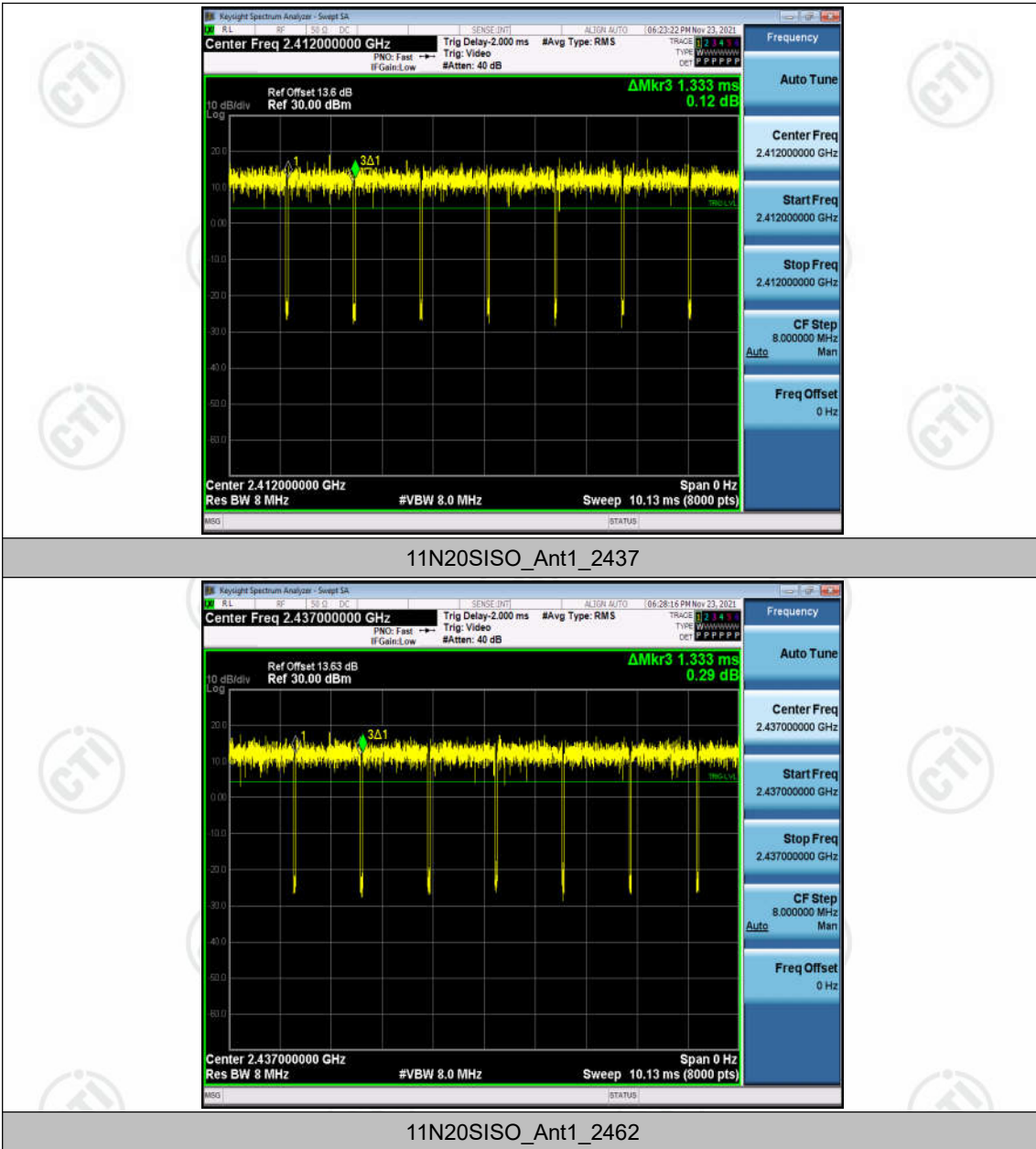
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	8.38	8.42	99.49	---	PASS
		2437	8.38	8.42	99.49	---	PASS
		2462	8.38	8.42	99.49	---	PASS
11G	Ant1	2412	1.39	1.44	96.74	---	PASS
		2437	1.39	1.44	96.74	---	PASS
		2462	1.39	1.44	96.74	---	PASS
11N20SIS O	Ant1	2412	1.29	1.33	96.48	---	PASS
		2437	1.29	1.33	96.48	---	PASS
		2462	1.29	1.33	96.48	---	PASS
11N40SIS O	Ant1	2422	0.63	0.68	93.11	---	PASS
		2437	0.63	0.68	93.30	---	PASS
		2452	0.63	0.68	93.11	---	PASS

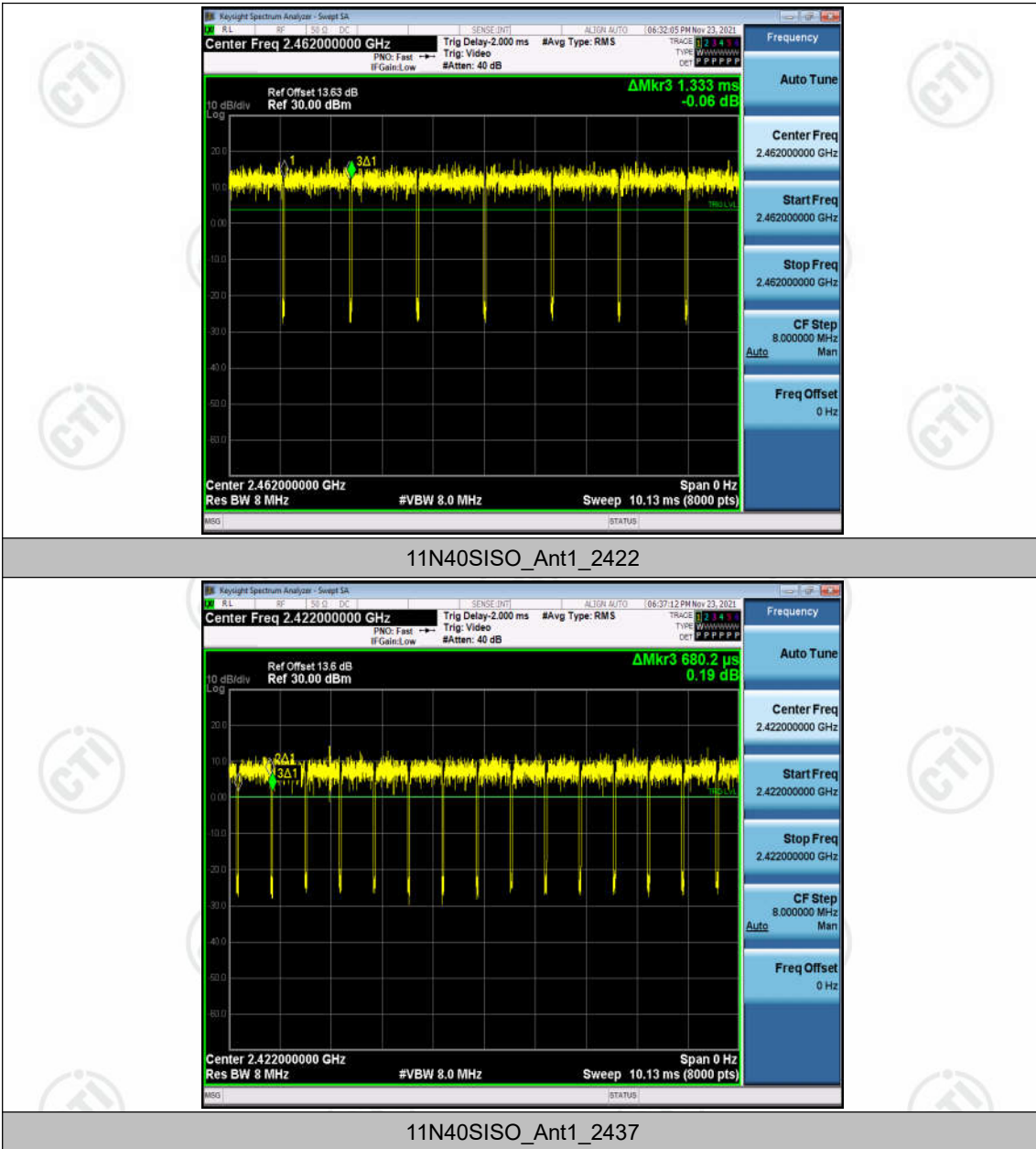
Test Graphs

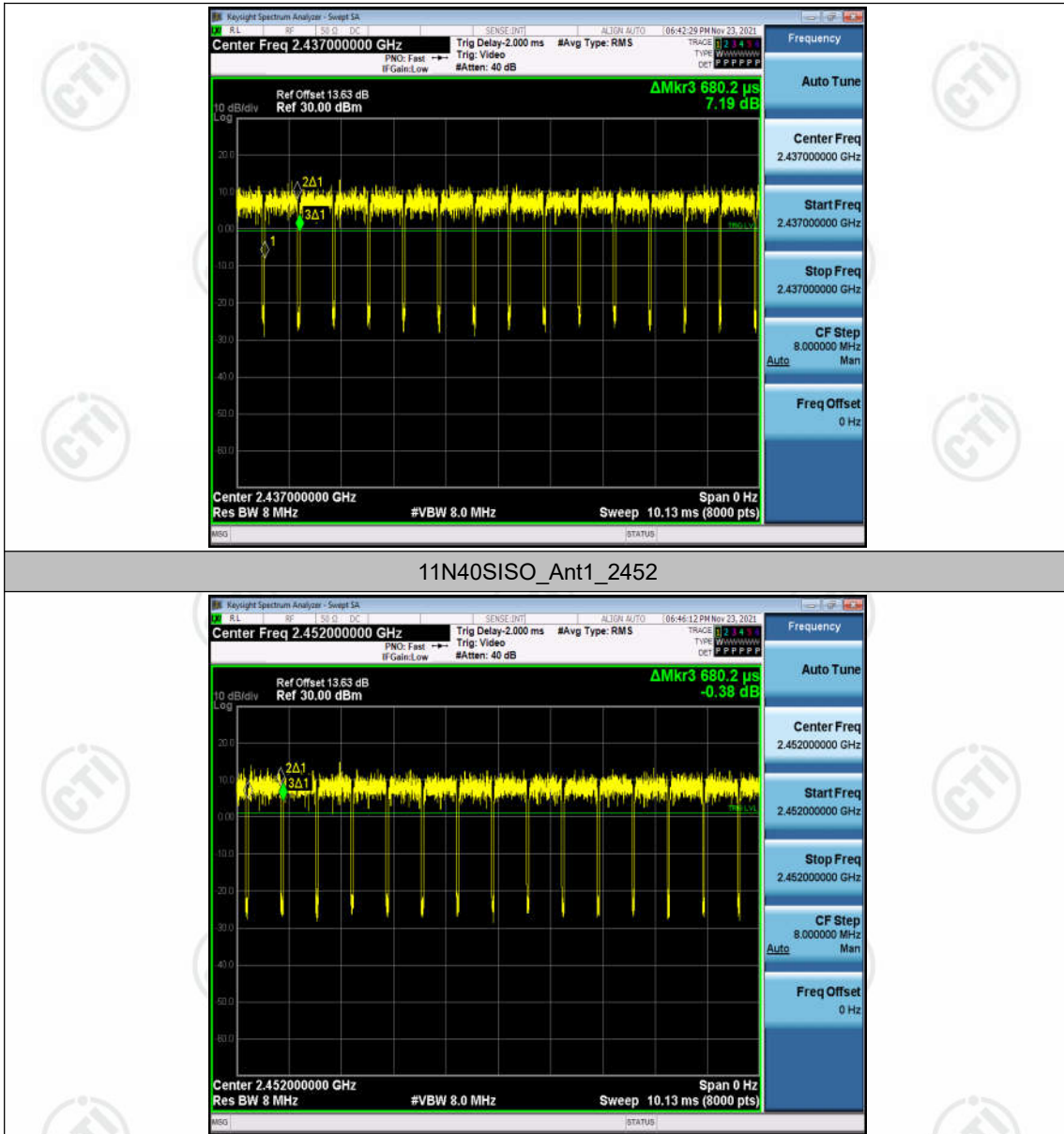












*** End of Report ***