

Appendix: 2.4G WIFI

Contents

Appendix A: DTS Bandwidth 3

 Test Result 3

 Test Graphs 4

Appendix B: Occupied Channel Bandwidth 9

 Test Result 9

 Test Graphs 10

Appendix C: Maximum conducted output power 15

 Test Result Peak 15

Appendix D: Maximum power spectral density 16

 Test Result 16

 Test Graphs 17

Appendix E: Band edge measurements 22

 Test Result 22

 Test Graphs 23

Appendix F: Conducted Spurious Emission 26

 Test Result 26

 Test Graphs 27

Appendix G: Duty Cycle 41

 Test Result 41

 Test Graphs 42

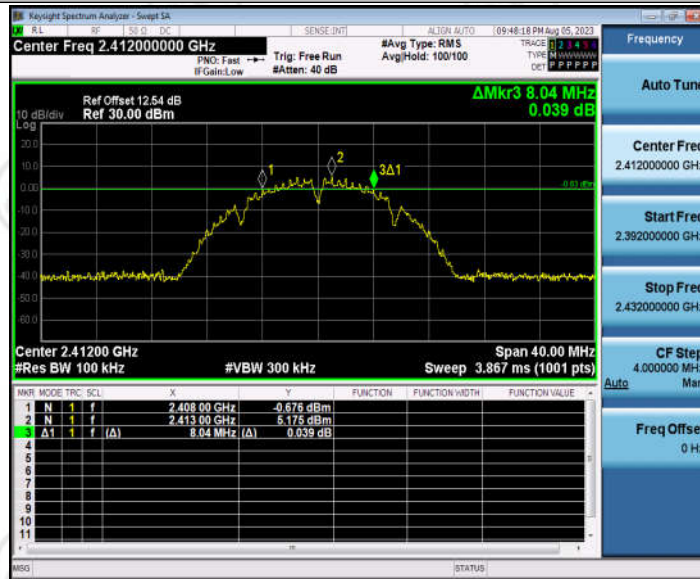
Appendix A: DTS Bandwidth

Test Result

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	8.040	2408.000	2416.040	0.5	PASS
		2437	8.080	2432.960	2441.040	0.5	PASS
		2462	8.040	2458.000	2466.040	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	15.440	2429.440	2444.880	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.320	2403.480	2419.800	0.5	PASS
		2437	13.800	2430.760	2444.560	0.5	PASS
		2462	16.520	2453.240	2469.760	0.5	PASS

Test Graphs

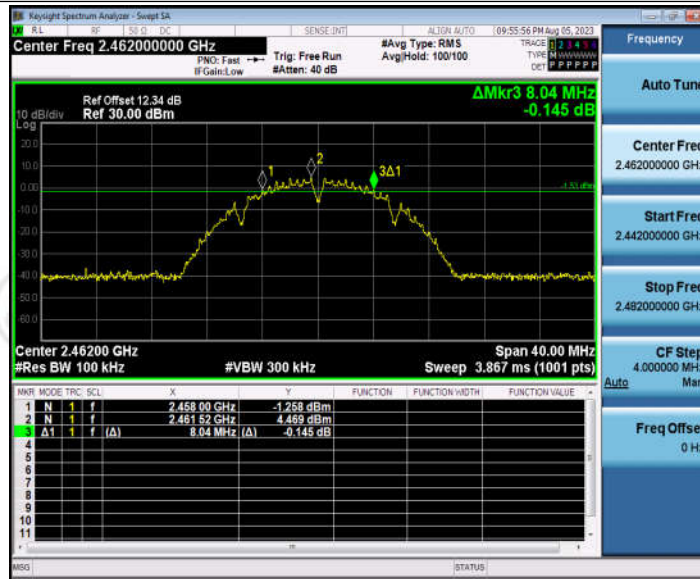
11B_Ant1_2412



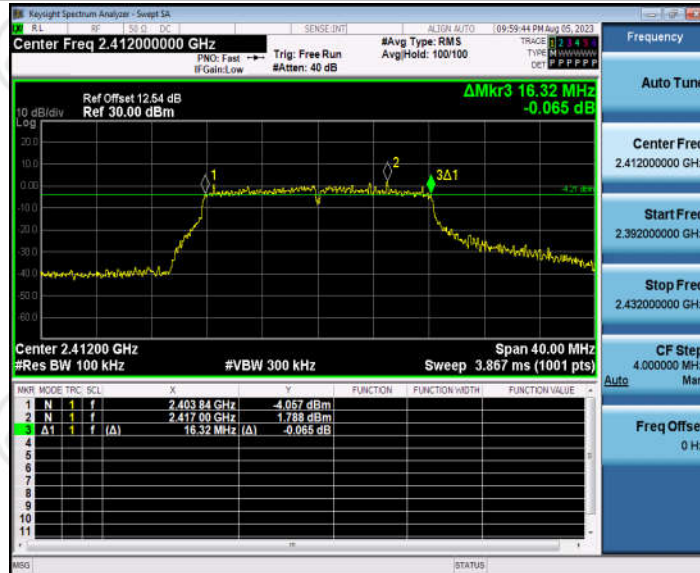
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

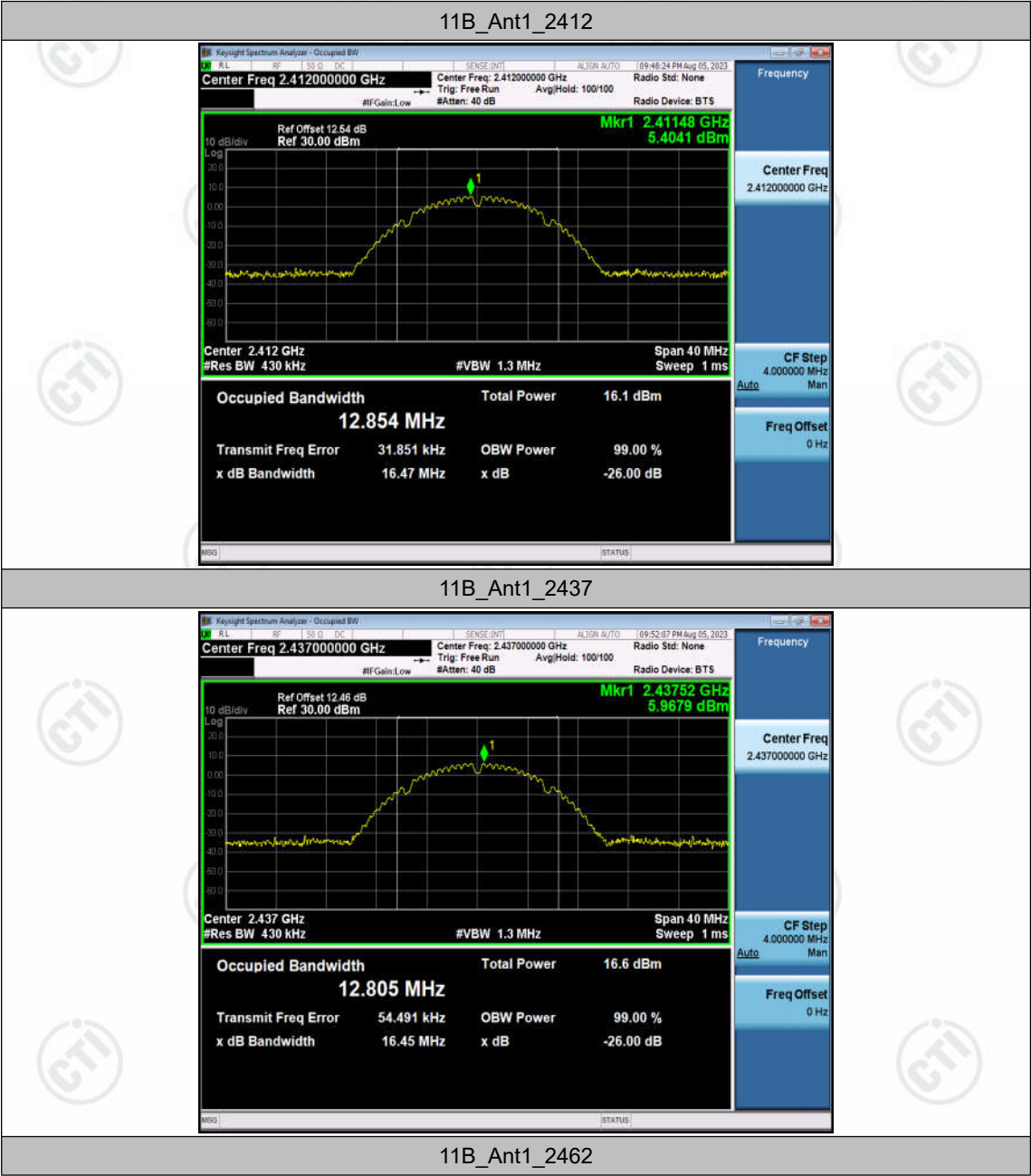


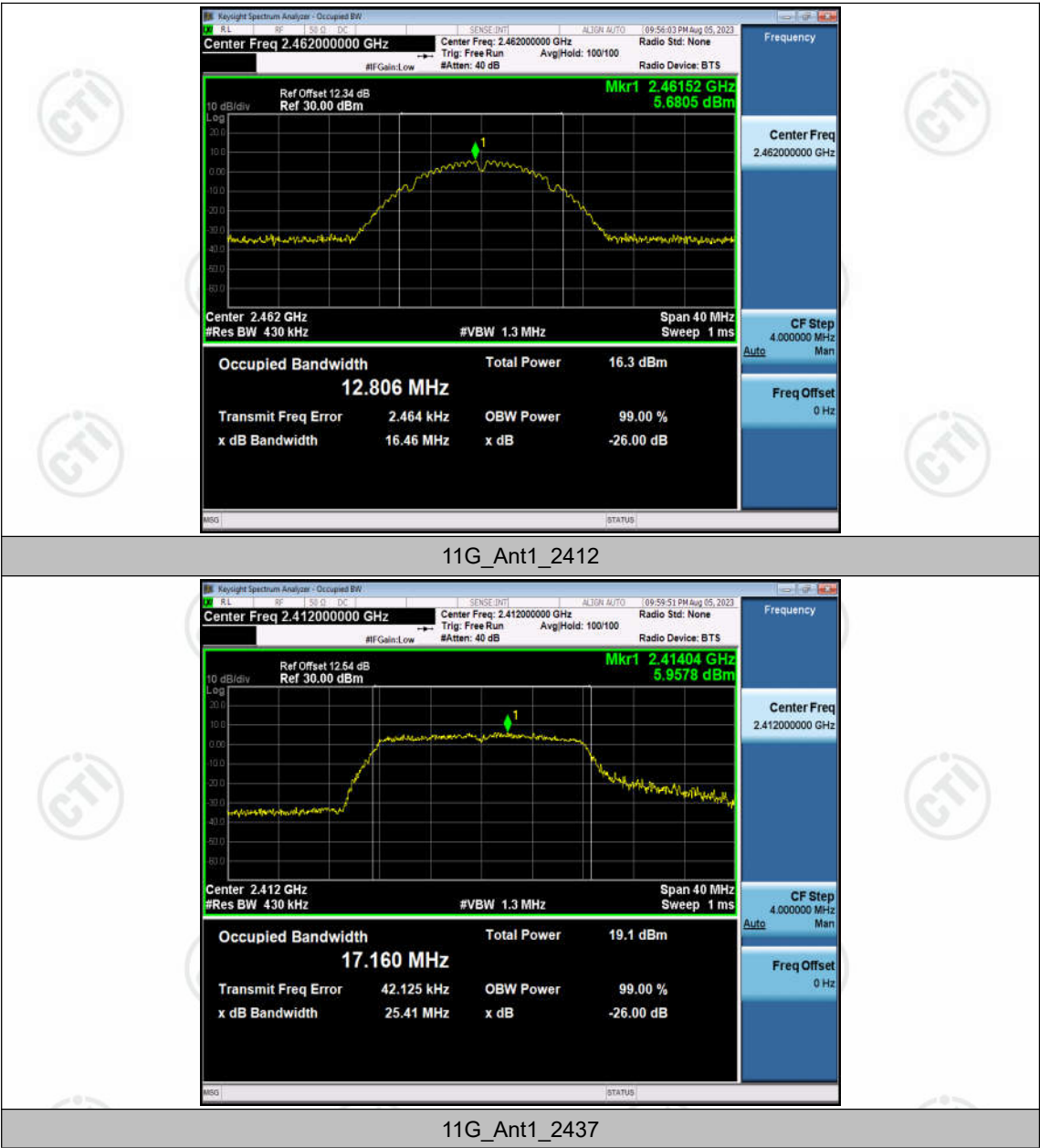
Appendix B: Occupied Channel Bandwidth

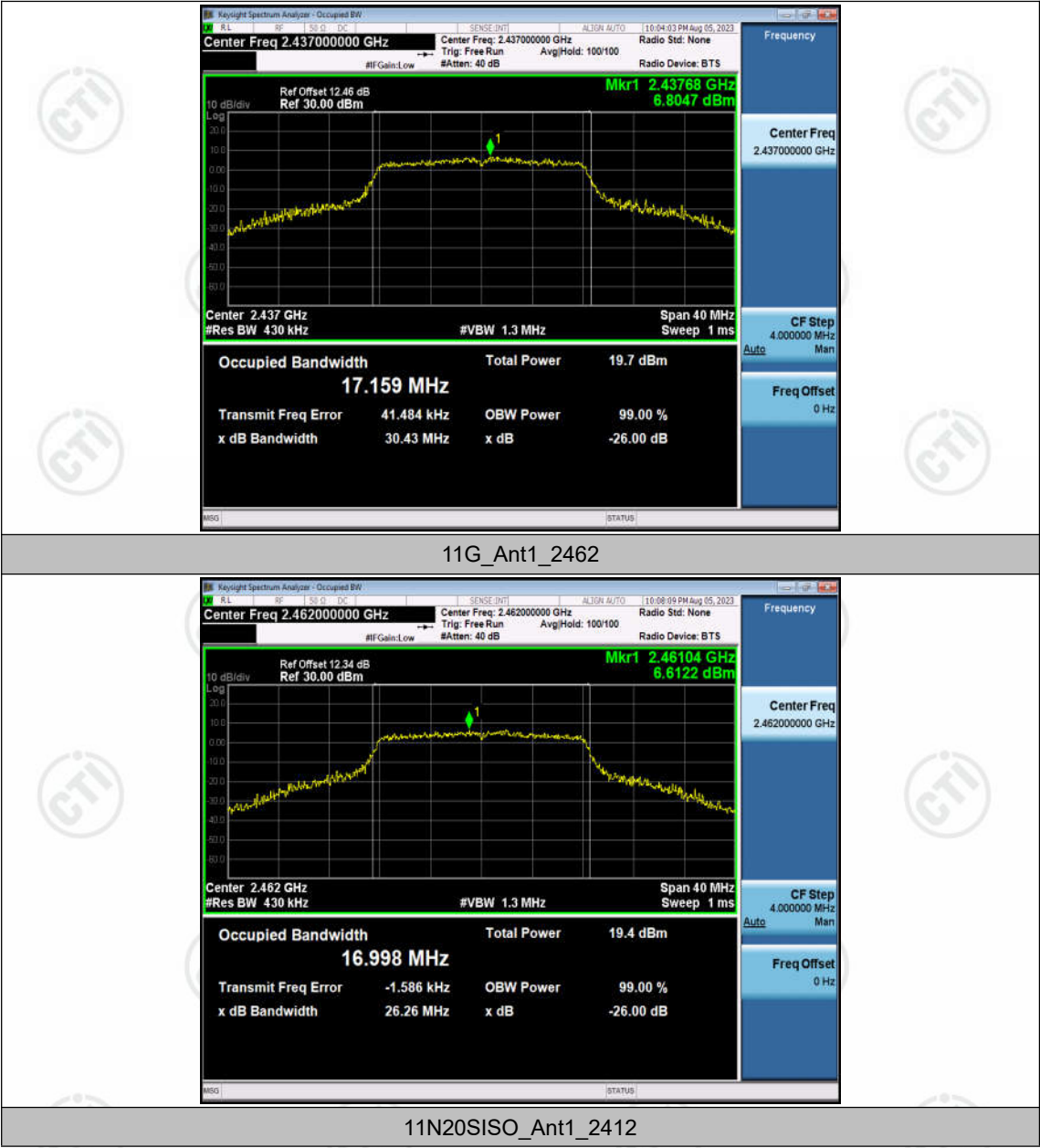
Test Result

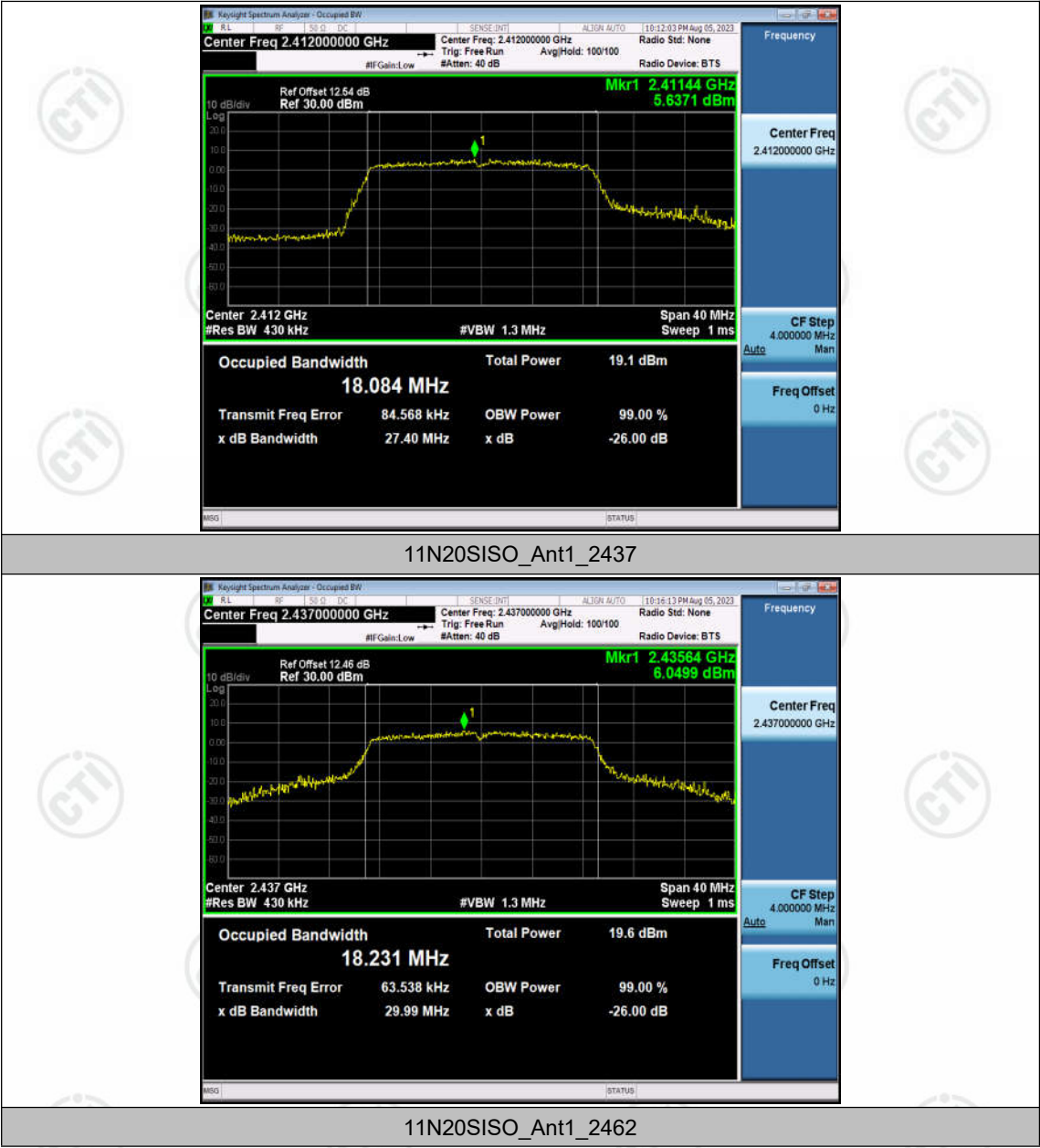
Test Mode	Antenna	Channel Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	12.854	2405.6049	2418.4589	---	---
		2437	12.805	2430.6520	2443.4570	---	---
		2462	12.806	2455.5995	2468.4055	---	---
11G	Ant1	2412	17.160	2403.4621	2420.6221	---	---
		2437	17.159	2428.4620	2445.6210	---	---
		2462	16.998	2453.4994	2470.4974	---	---
11N20SISO	Ant1	2412	18.084	2403.0426	2421.1266	---	---
		2437	18.231	2427.9480	2446.1790	---	---
		2462	18.193	2452.8930	2471.0860	---	---

Test Graphs











Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency [MHz]	Set Power	Peak Power [dBm]	Conducted Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	---	13.19	≤30.00	12.82	≤36.00	PASS
		2437	---	13.72	≤30.00	13.35	≤36.00	PASS
		2462	---	13.56	≤30.00	13.19	≤36.00	PASS
11G	Ant1	2412	---	12.97	≤30.00	12.60	≤36.00	PASS
		2437	---	13.50	≤30.00	13.13	≤36.00	PASS
		2462	---	13.38	≤30.00	13.01	≤36.00	PASS
11N20SISO	Ant1	2412	---	13.00	≤30.00	12.63	≤36.00	PASS
		2437	---	13.44	≤30.00	13.07	≤36.00	PASS
		2462	---	13.39	≤30.00	13.02	≤36.00	PASS

Note: EIRP=Peak Power+Antenna Gain

Appendix D: Maximum power spectral density

Test Result

Test Mode	Antenna	Frequency [MHz]	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-16.9	≤8.00	PASS
		2437	-16.36	≤8.00	PASS
		2462	-16.36	≤8.00	PASS
11G	Ant1	2412	-19.33	≤8.00	PASS
		2437	-19.29	≤8.00	PASS
		2462	-18.76	≤8.00	PASS
11N20SISO	Ant1	2412	-19.49	≤8.00	PASS
		2437	-18.8	≤8.00	PASS
		2462	-18.93	≤8.00	PASS

Test Graphs

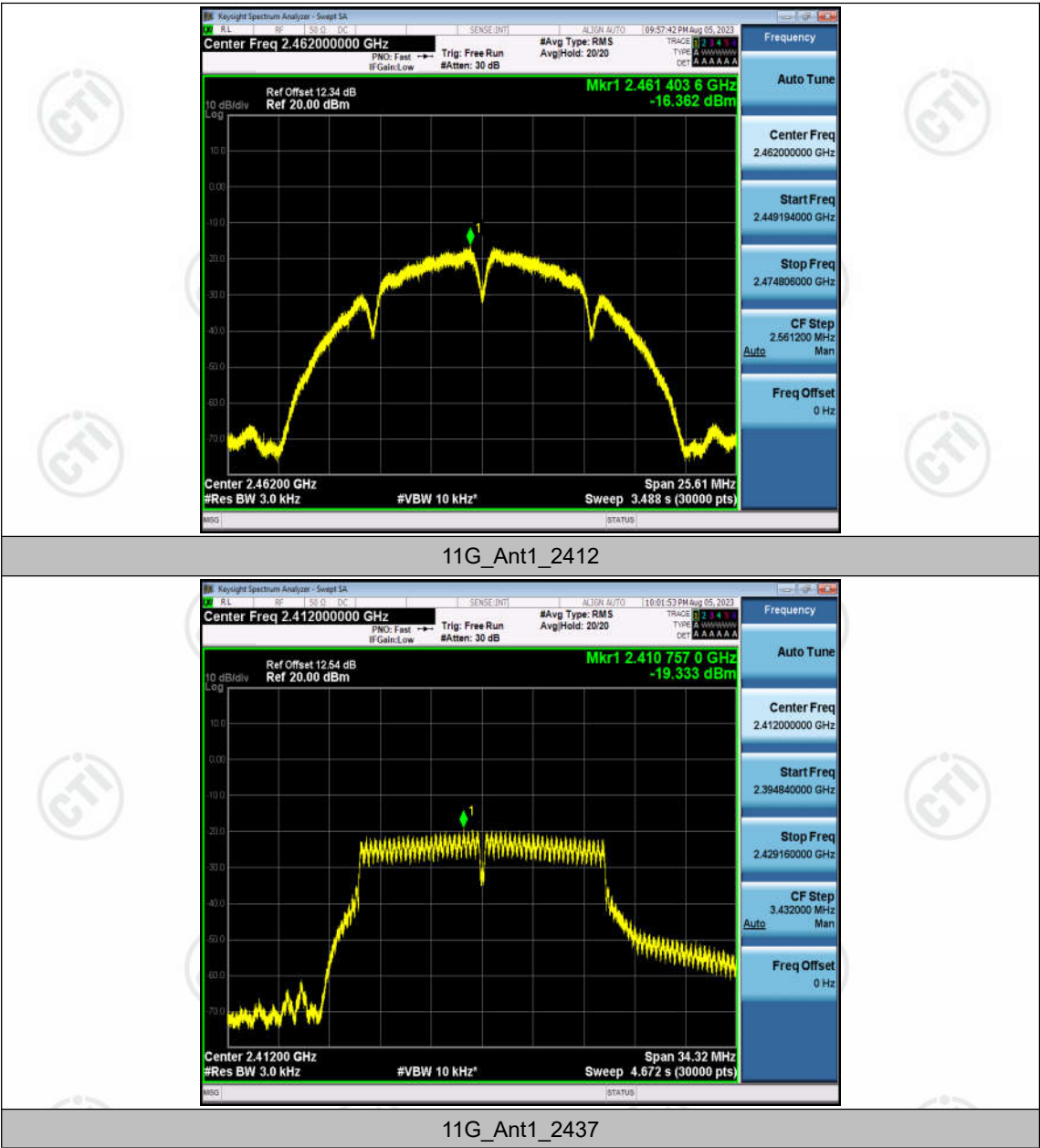
11B_Ant1_2412

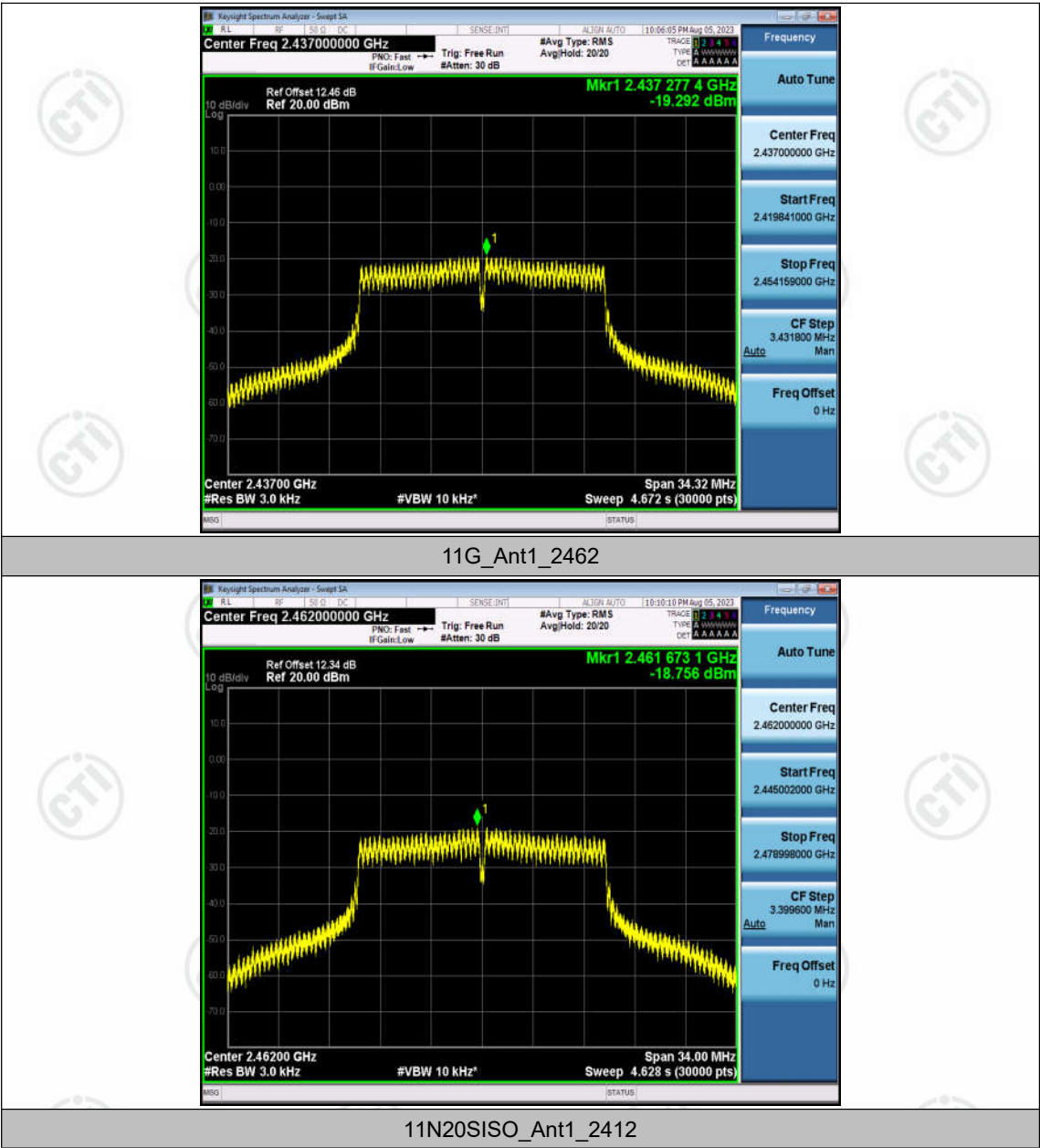


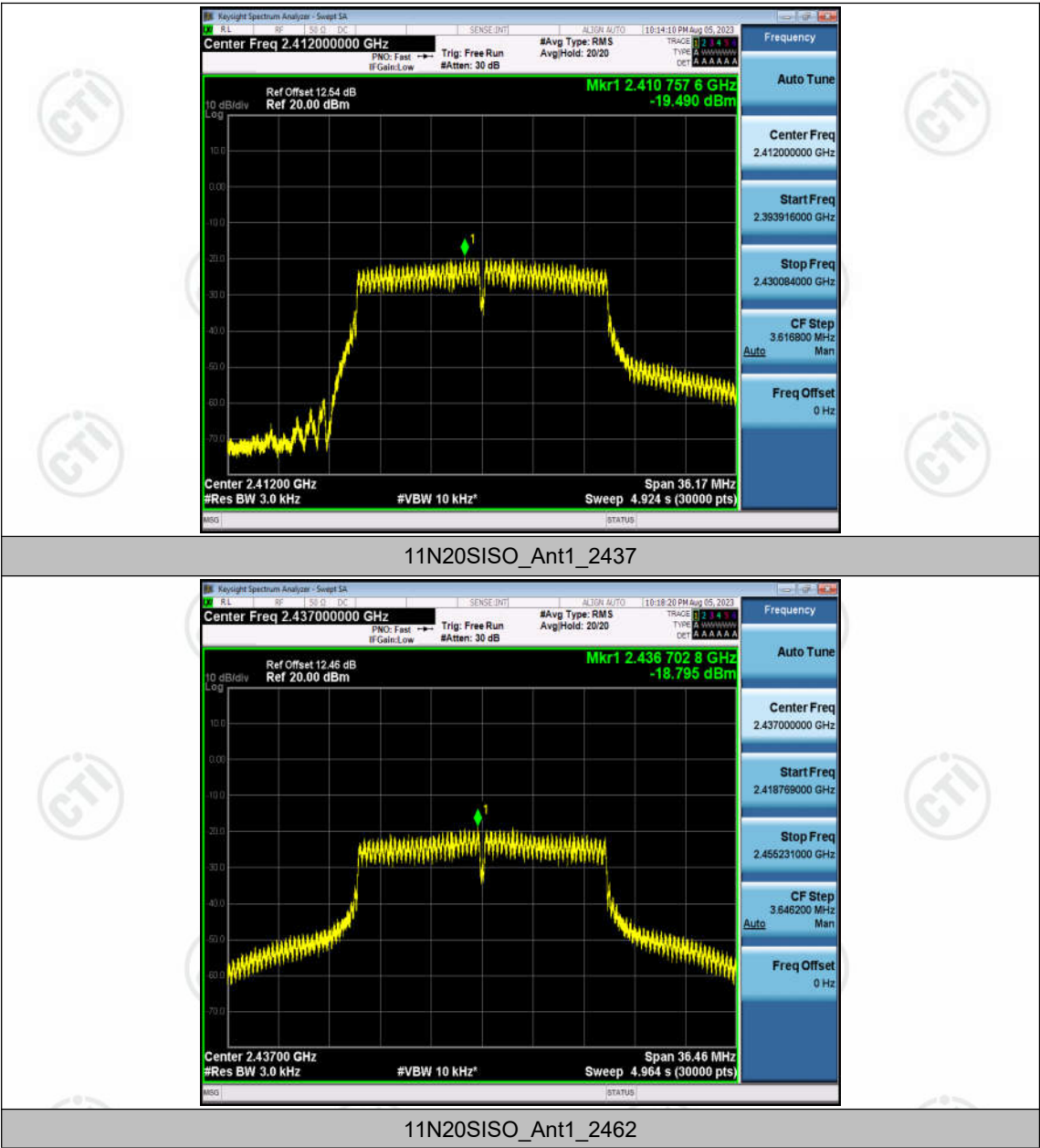
11B_Ant1_2437

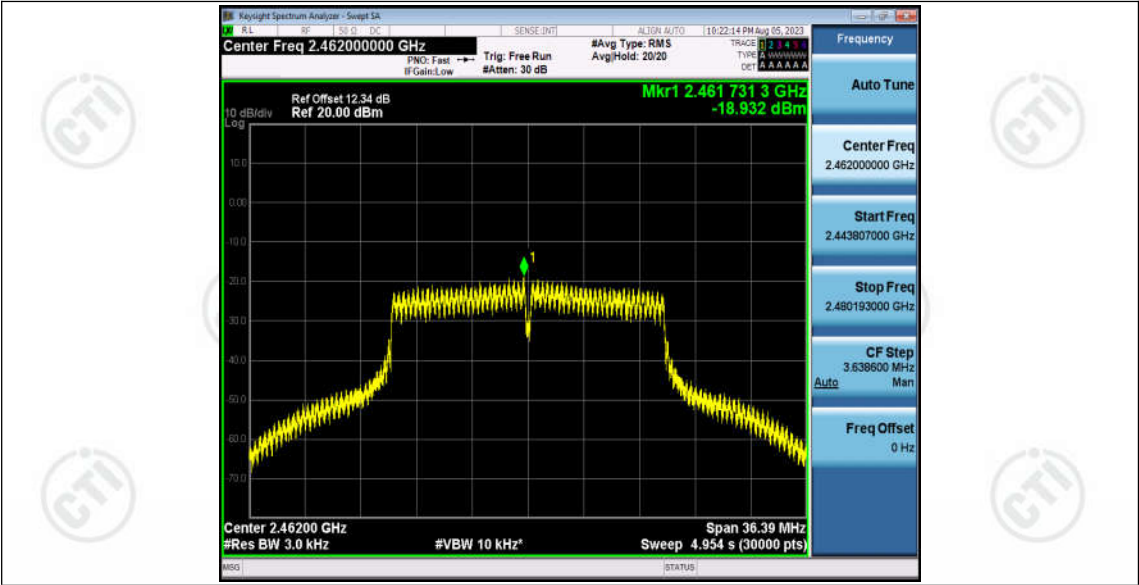


11B_Ant1_2462







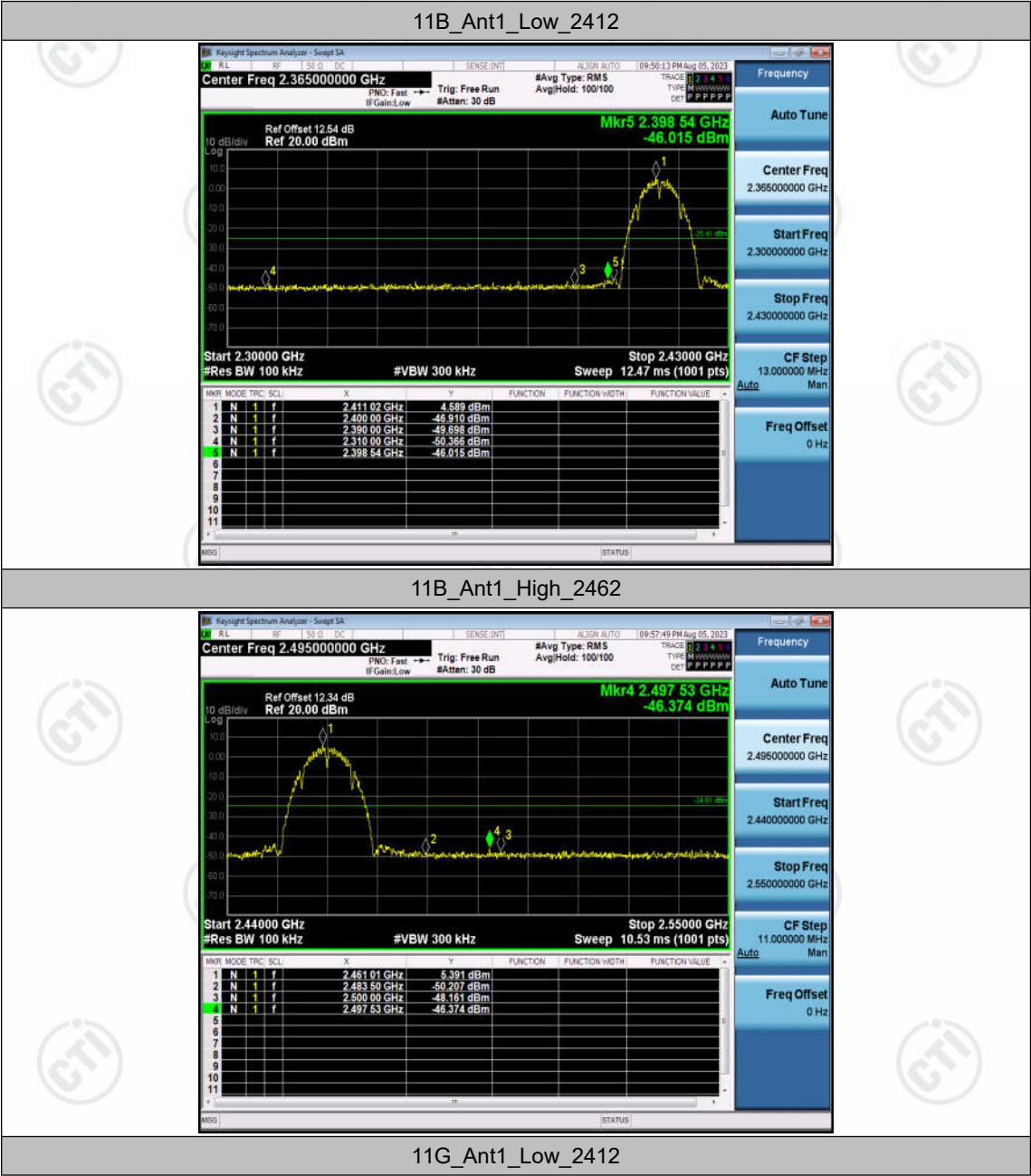


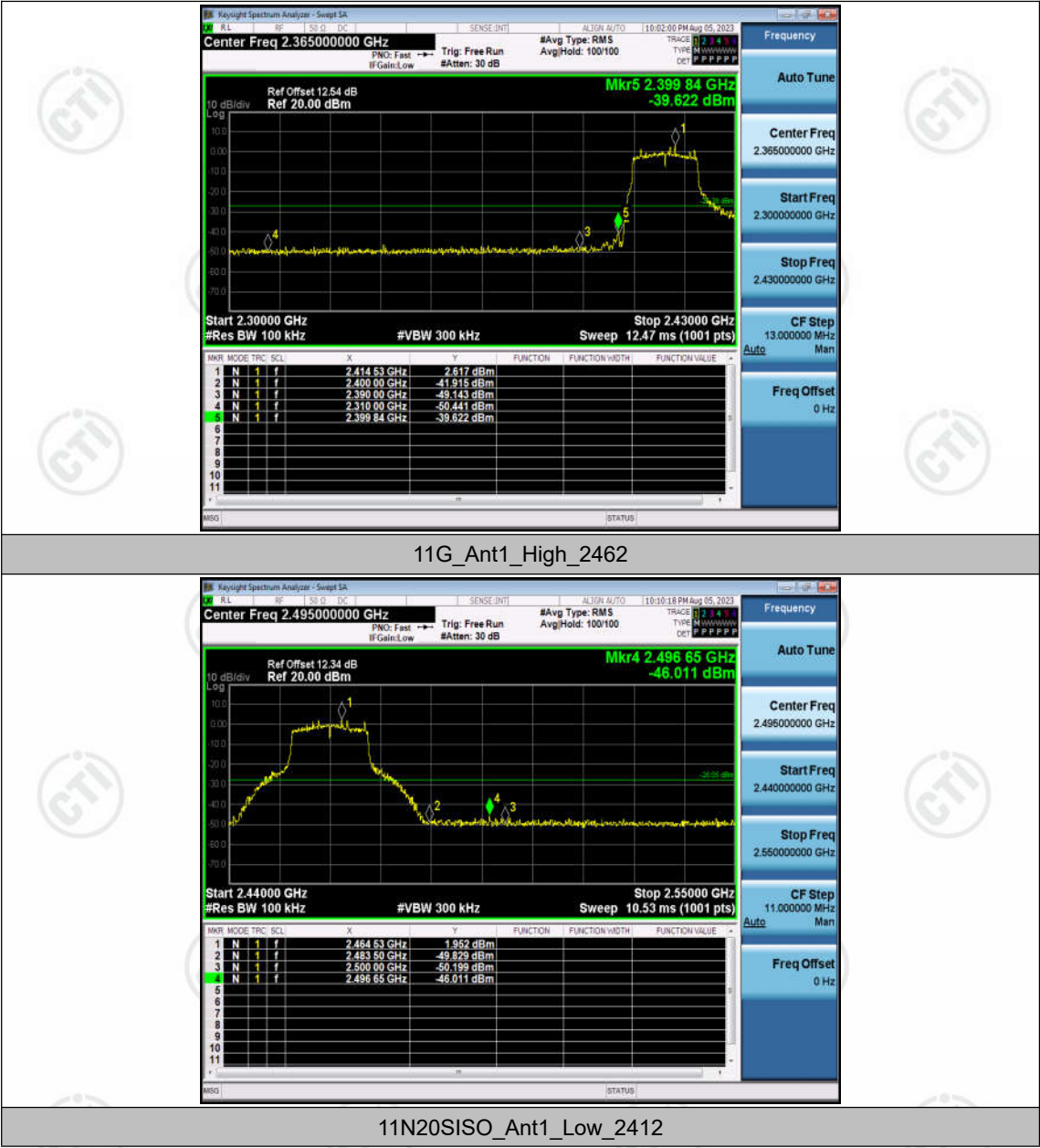
Appendix E: Band edge measurements

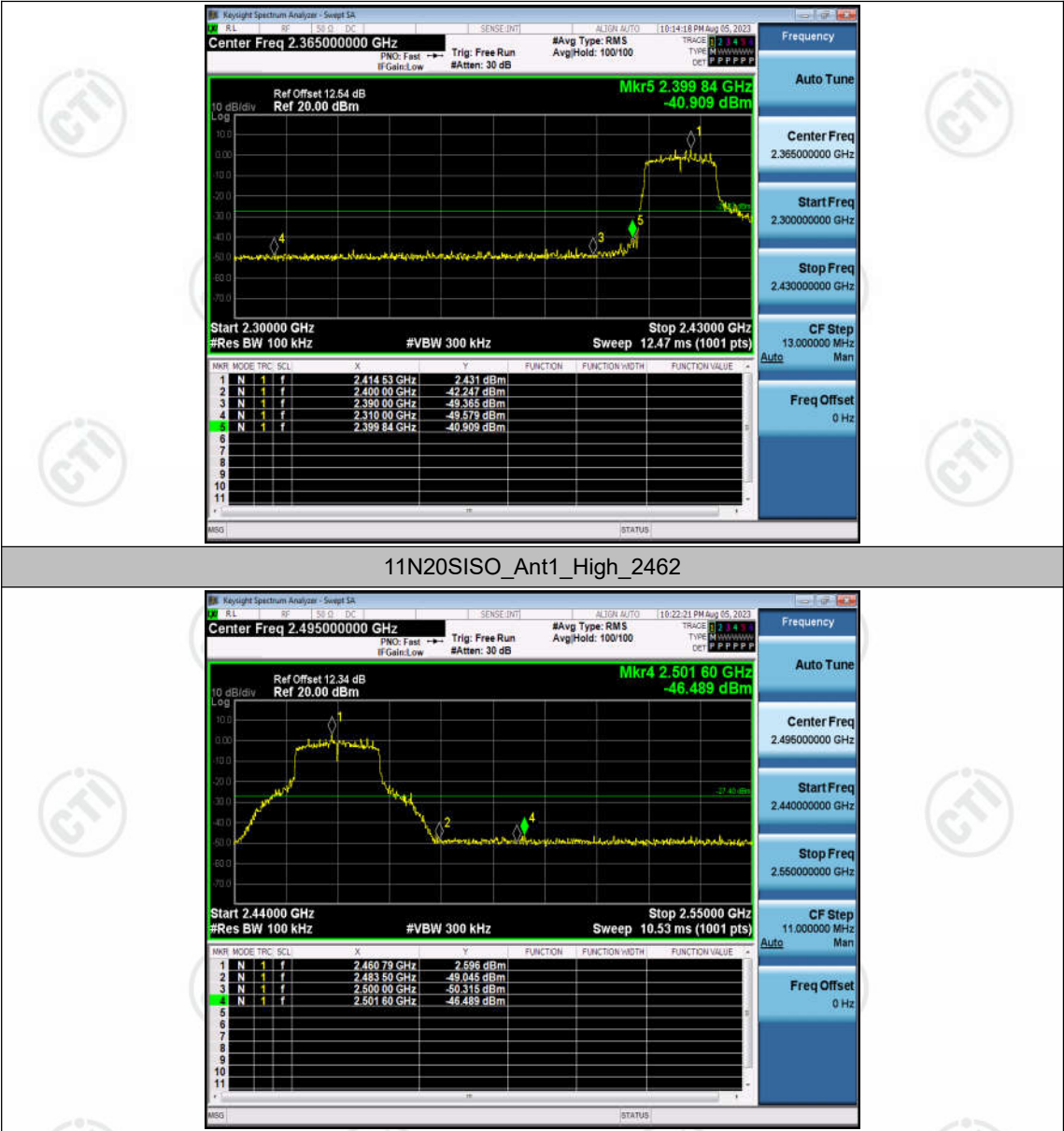
Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	4.59	-46.02	≤-25.41	PASS
		High	2462	5.39	-46.37	≤-24.61	PASS
11G	Ant1	Low	2412	2.62	-39.62	≤-27.38	PASS
		High	2462	1.95	-46.01	≤-28.05	PASS
11N20SISO	Ant1	Low	2412	2.43	-40.91	≤-27.57	PASS
		High	2462	2.60	-46.49	≤-27.4	PASS

Test Graphs





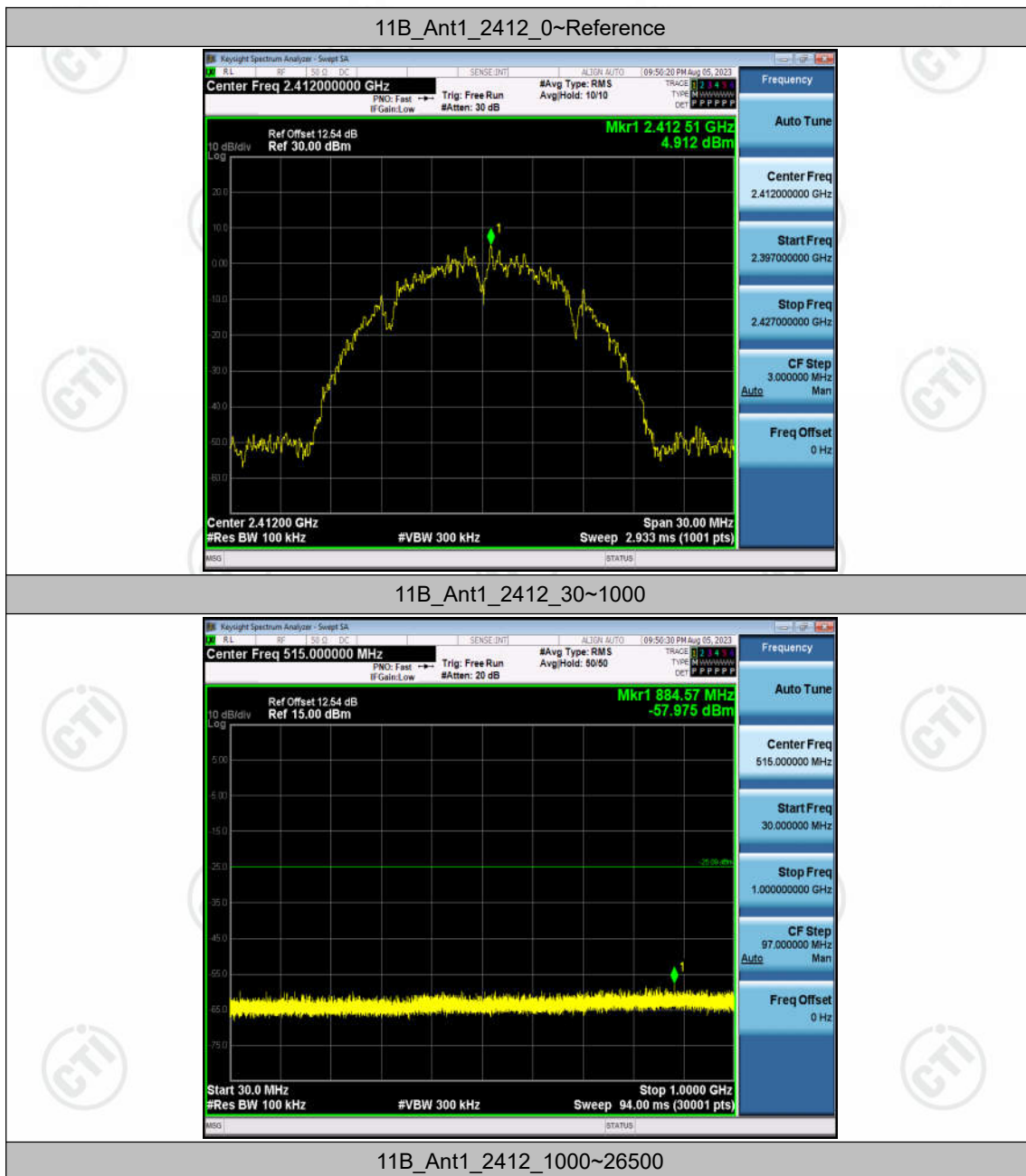


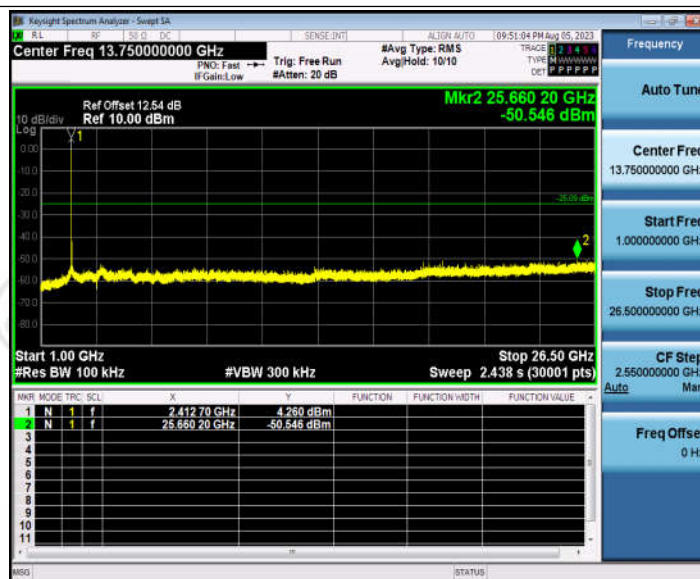
Appendix F: Conducted Spurious Emission

Test Result

Test Mode	Antenna	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.91	4.91	---	PASS
			30~1000	4.91	-57.98	≤-25.09	PASS
			1000~26500	4.91	-50.55	≤-25.09	PASS
		2437	Reference	5.13	5.13	---	PASS
			30~1000	5.13	-59.08	≤-24.87	PASS
			1000~26500	5.13	-51.05	≤-24.87	PASS
		2462	Reference	3.58	3.58	---	PASS
			30~1000	3.58	-58.56	≤-26.42	PASS
			1000~26500	3.58	-50.9	≤-26.42	PASS
11G	Ant1	2412	Reference	-1.03	-1.03	---	PASS
			30~1000	-1.03	-58.21	≤-31.03	PASS
			1000~26500	-1.03	-49.94	≤-31.03	PASS
		2437	Reference	0.01	0.01	---	PASS
			30~1000	0.01	-58.08	≤-29.99	PASS
			1000~26500	0.01	-50.53	≤-29.99	PASS
		2462	Reference	0.17	0.17	---	PASS
			30~1000	0.17	-58.91	≤-29.83	PASS
			1000~26500	0.17	-51.05	≤-29.83	PASS
11N20SISO	Ant1	2412	Reference	1.60	1.60	---	PASS
			30~1000	1.60	-58.12	≤-28.4	PASS
			1000~26500	1.60	-50.82	≤-28.4	PASS
		2437	Reference	3.91	3.91	---	PASS
			30~1000	3.91	-58.28	≤-26.09	PASS
			1000~26500	3.91	-50.65	≤-26.09	PASS
		2462	Reference	-0.79	-0.79	---	PASS
			30~1000	-0.79	-58.6	≤-30.79	PASS
			1000~26500	-0.79	-50.69	≤-30.79	PASS

Test Graphs

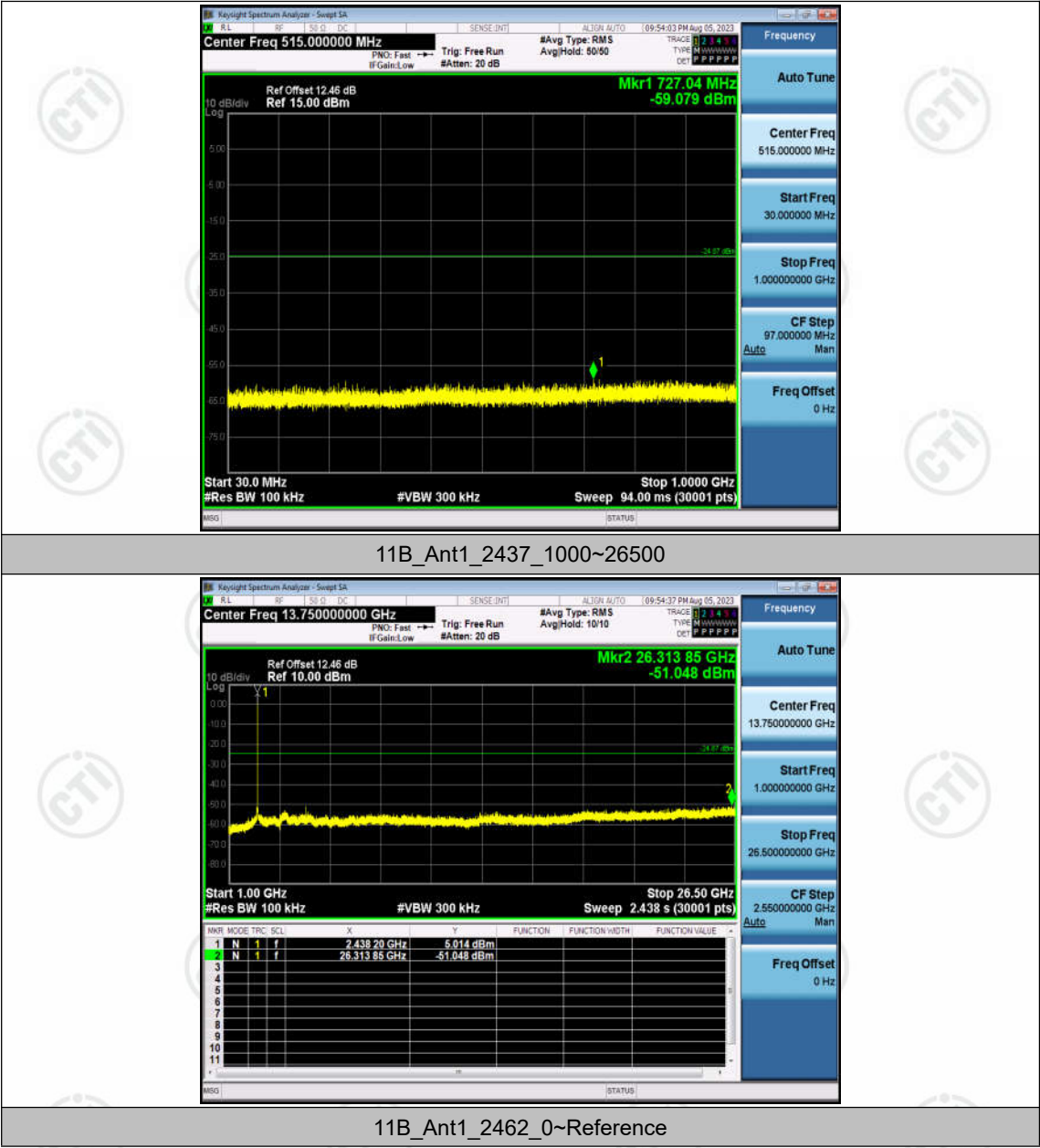


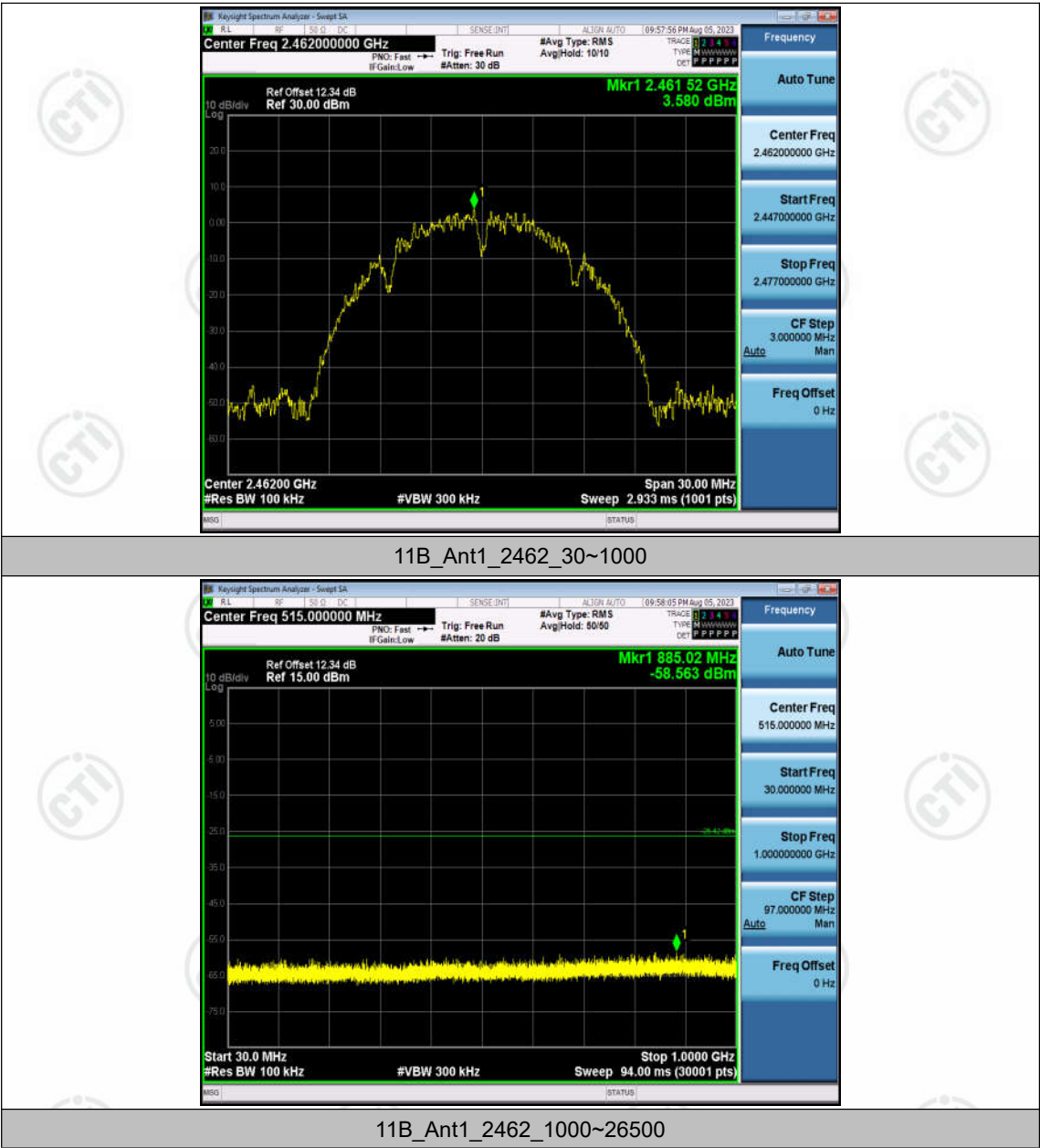


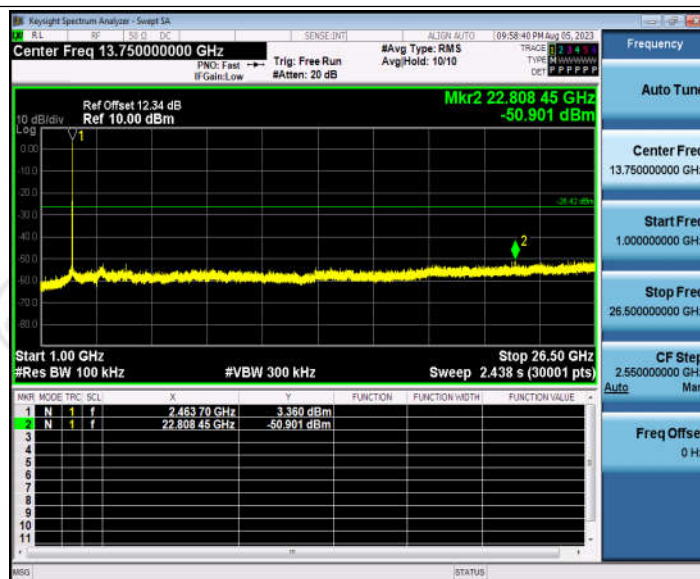
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



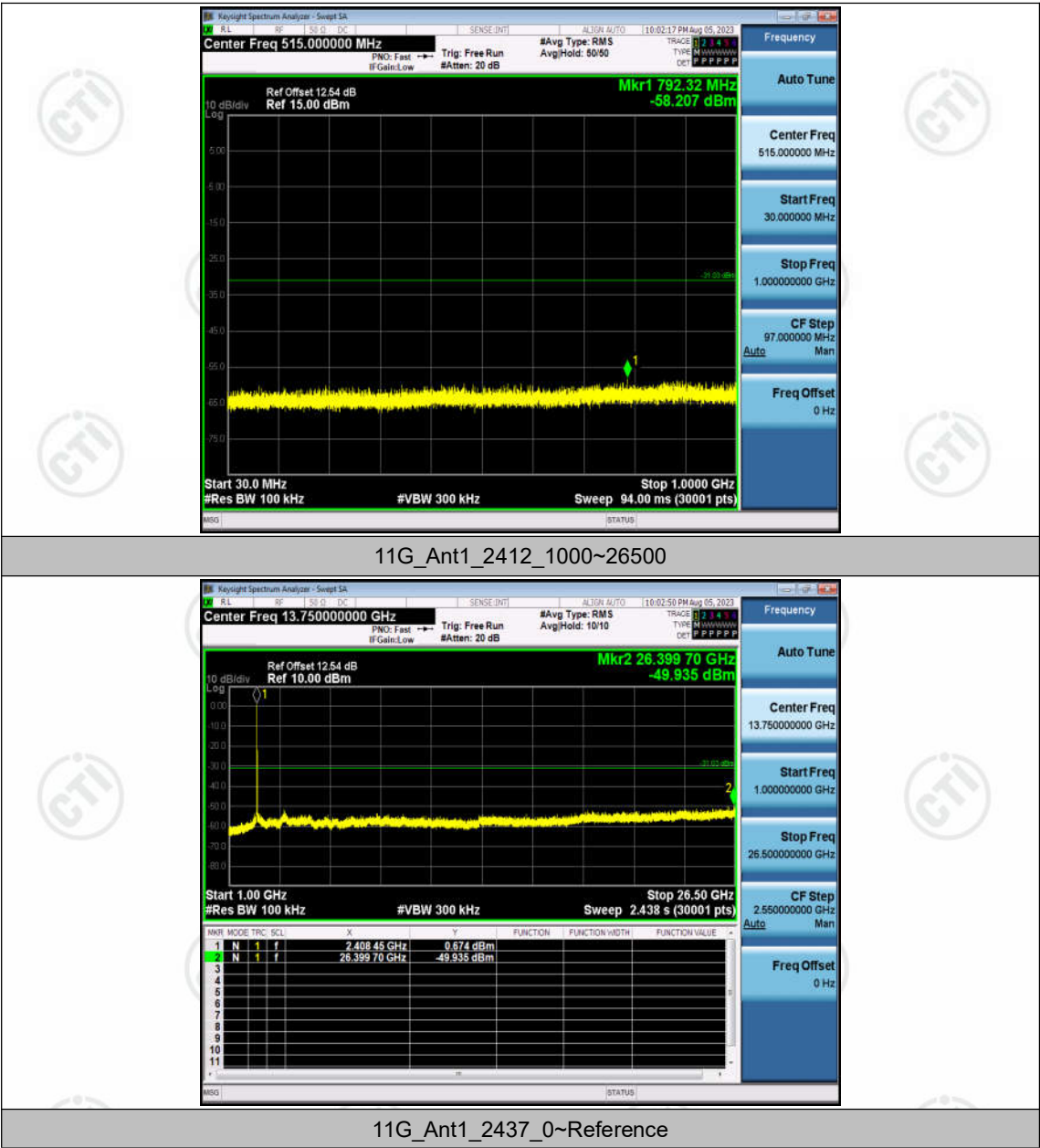


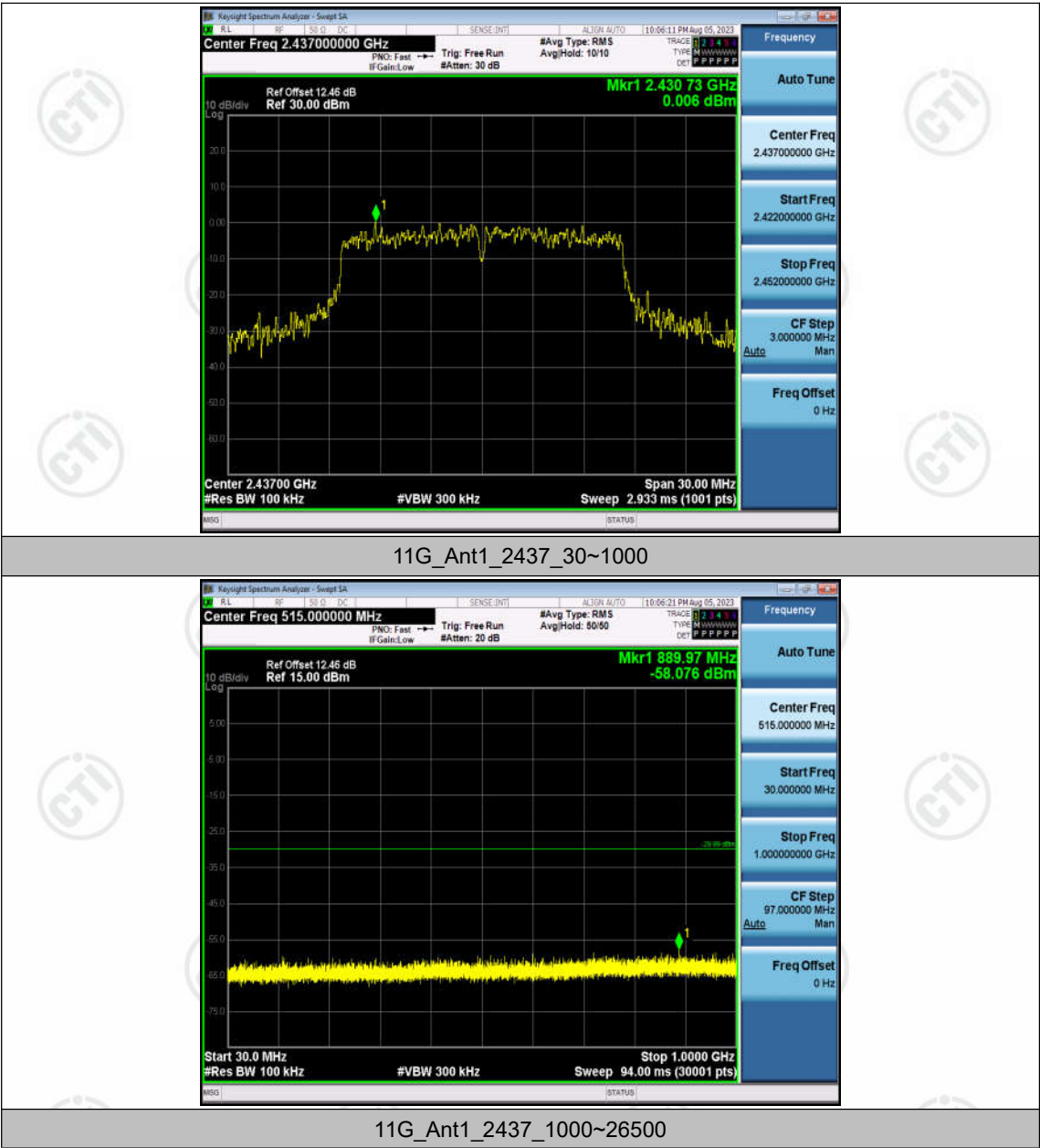


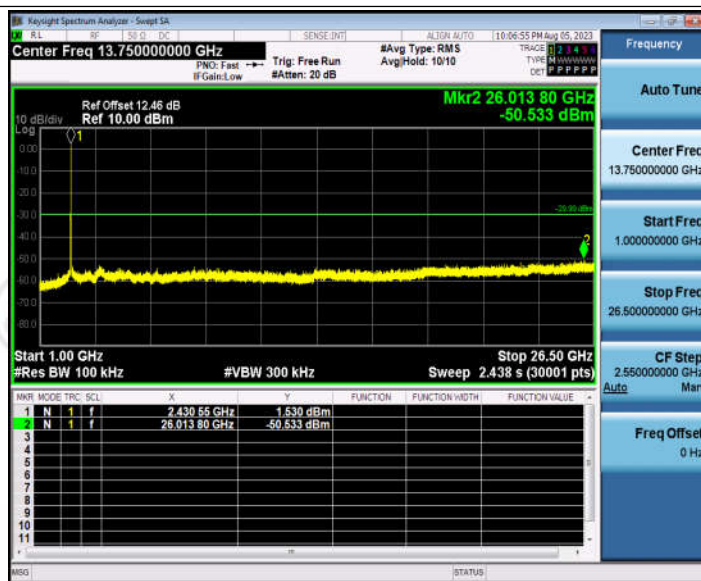
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



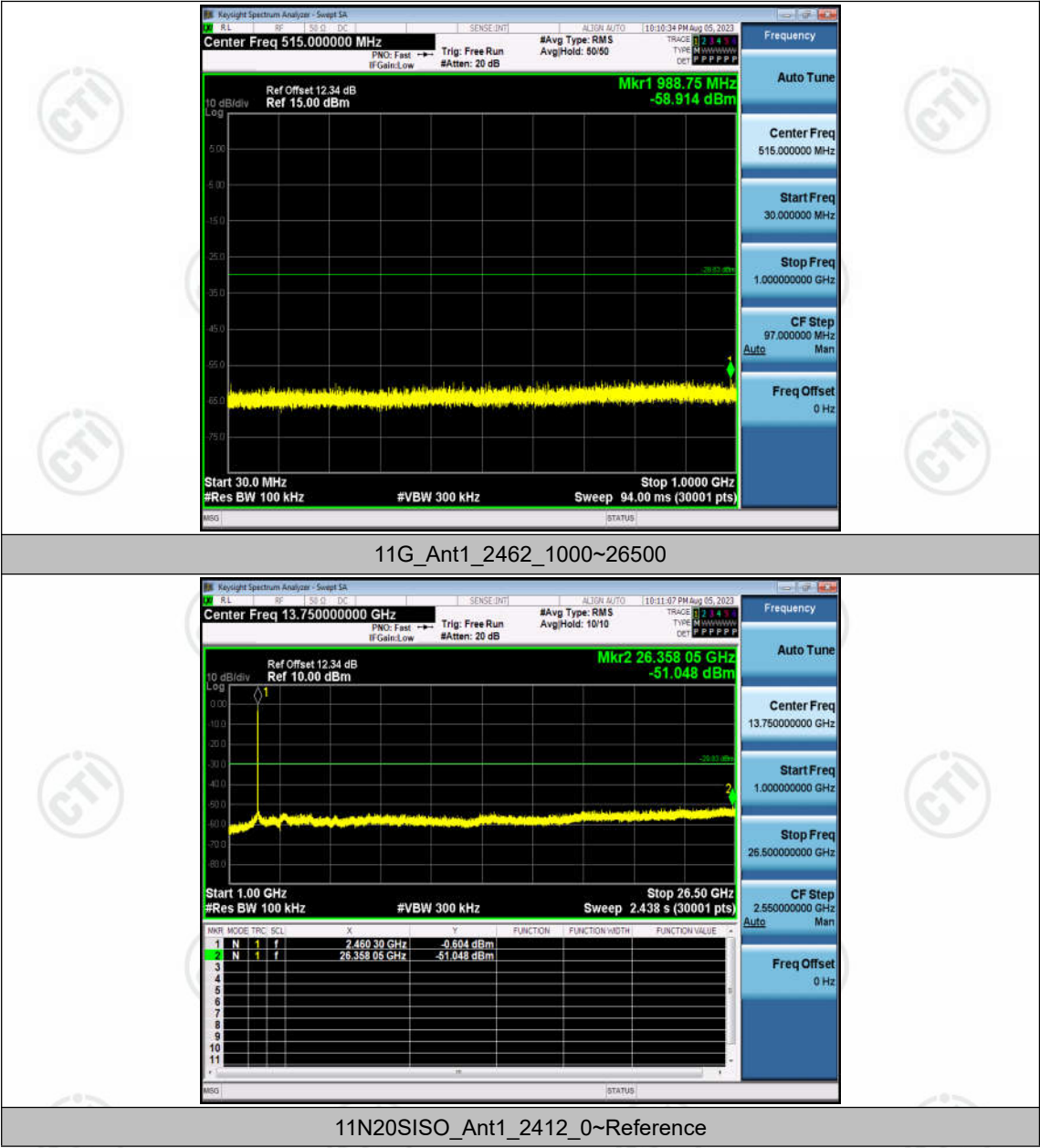




11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000

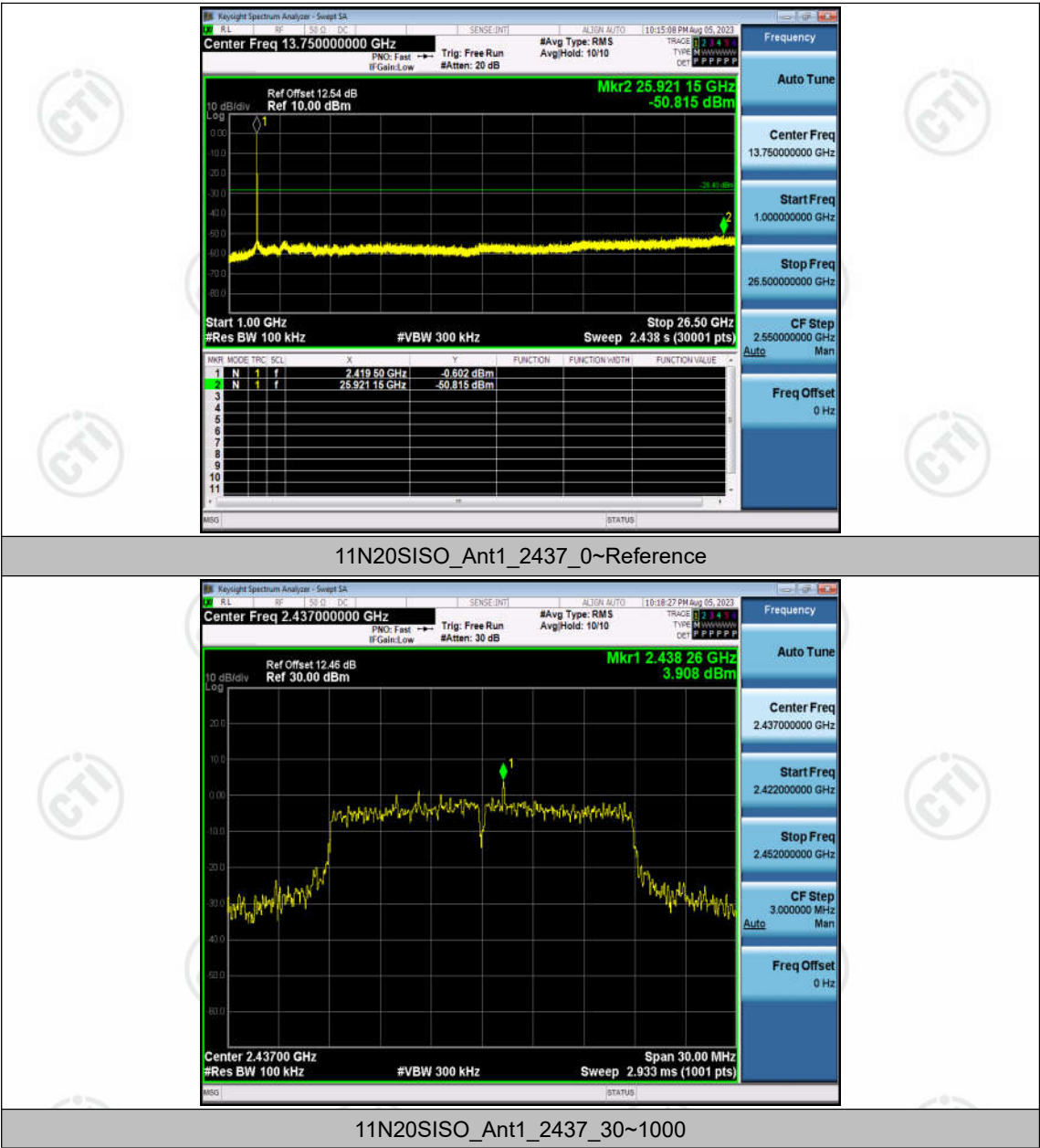


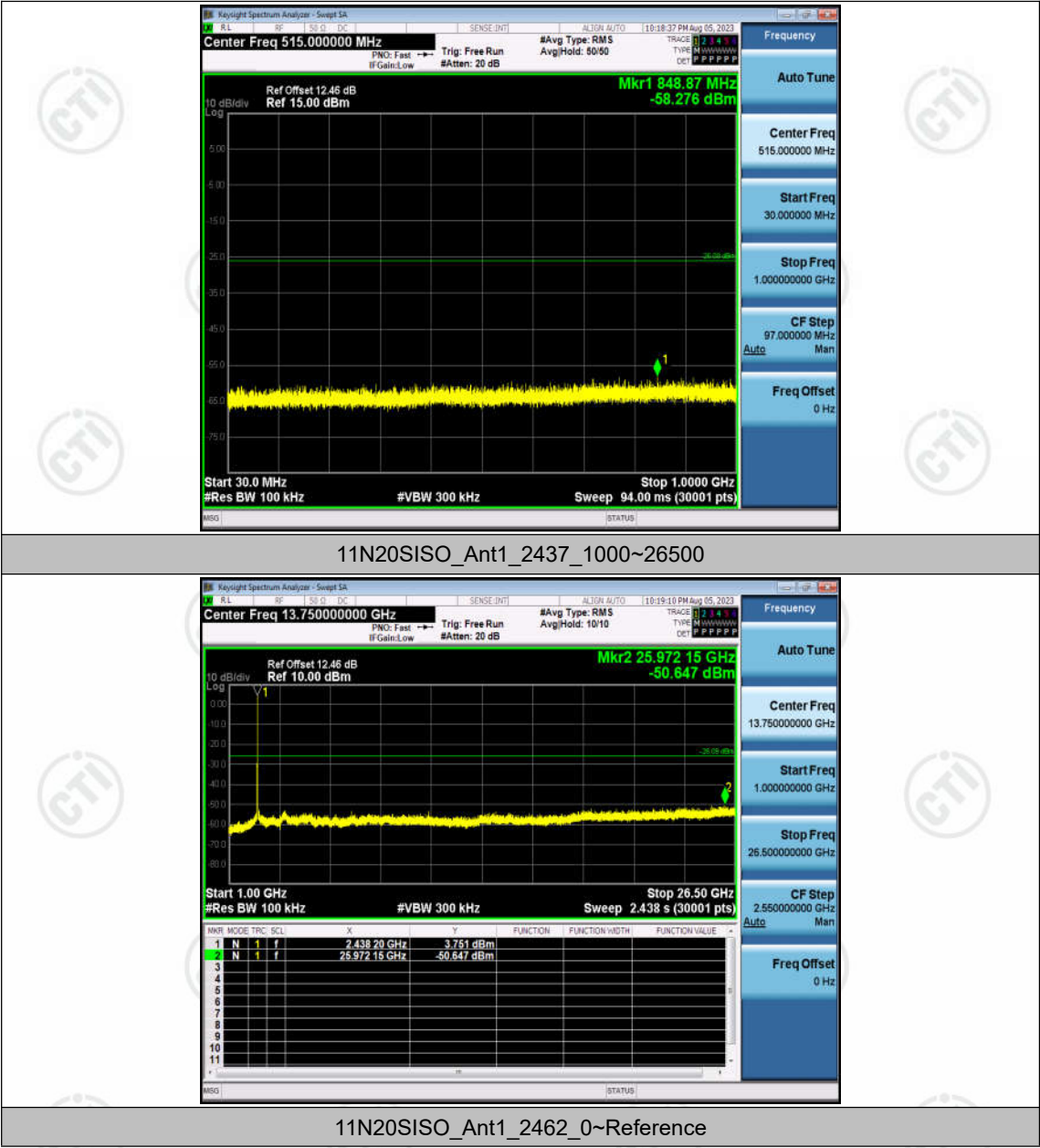


11N20SISO_Ant1_2412_30~1000



11N20SISO_Ant1_2412_1000~26500



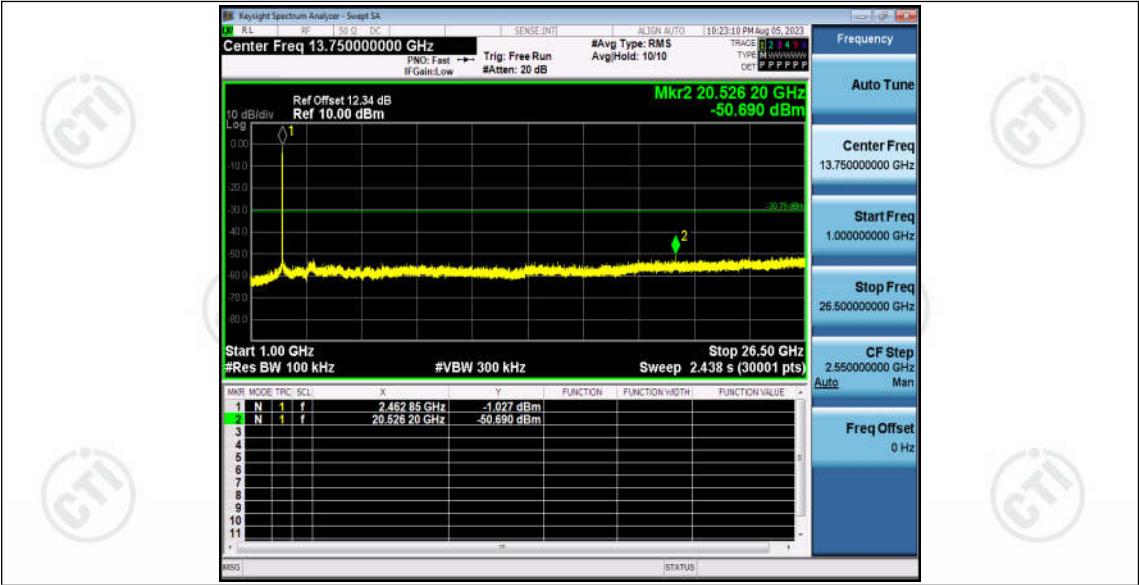




11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500

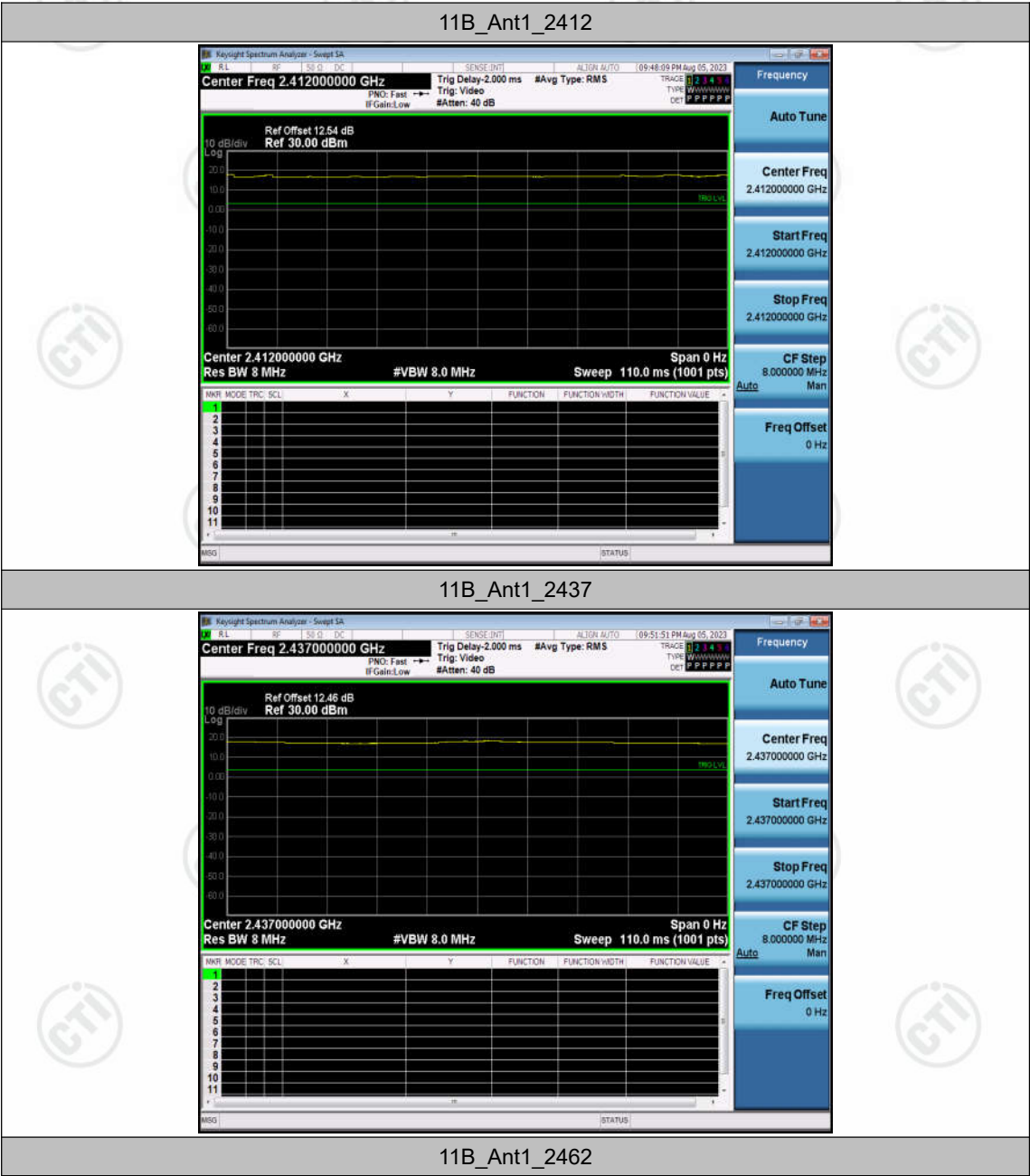


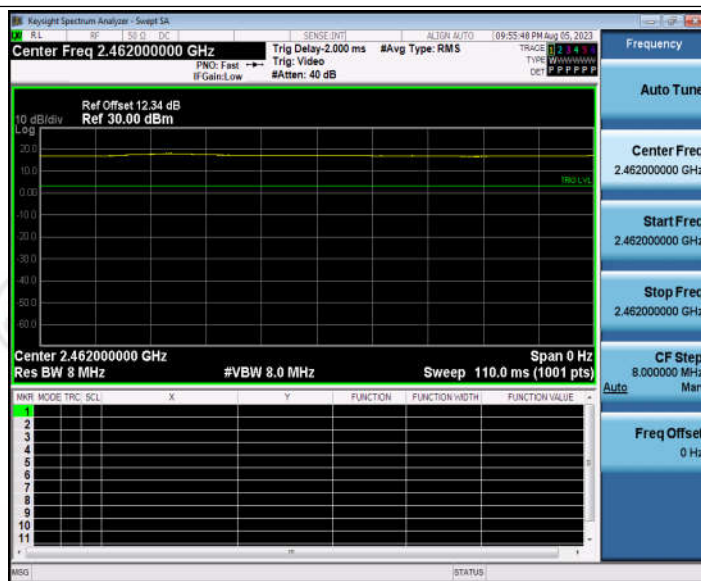
Appendix G: Duty Cycle

Test Result

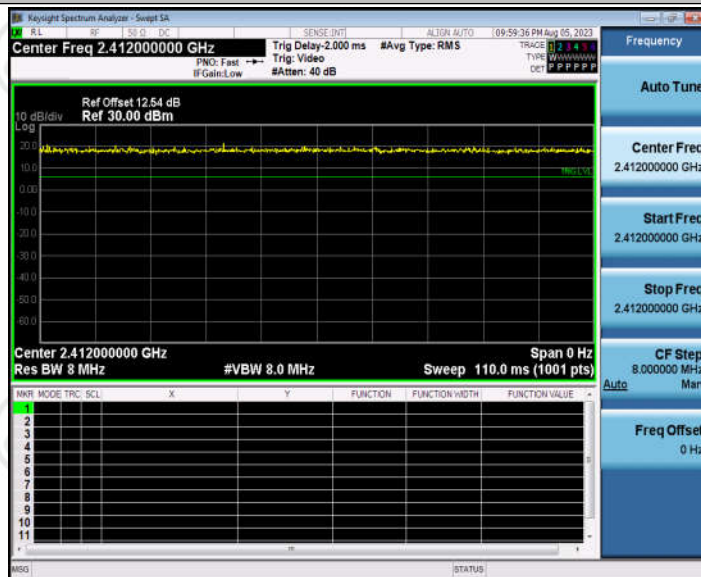
Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	110.00	110.00	100.00	0.00
		2437	110.00	110.00	100.00	0.00
		2462	110.00	110.00	100.00	0.00
11G	Ant1	2412	110.00	110.00	100.00	0.00
		2437	110.00	110.00	100.00	0.00
		2462	110.00	110.00	100.00	0.00
11N20SISO	Ant1	2412	110.00	110.00	100.00	0.00
		2437	110.00	110.00	100.00	0.00
		2462	110.00	110.00	100.00	0.00

Test Graphs





11G_Ant1_2412



11G_Ant1_2437

