

Appendix Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: Granary Automatic Pet Feeder-WiFi Control

Trade Mark: PETLIBRO

Test Model: PLAF103

FCC ID: 2A3DEPLAF103S

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

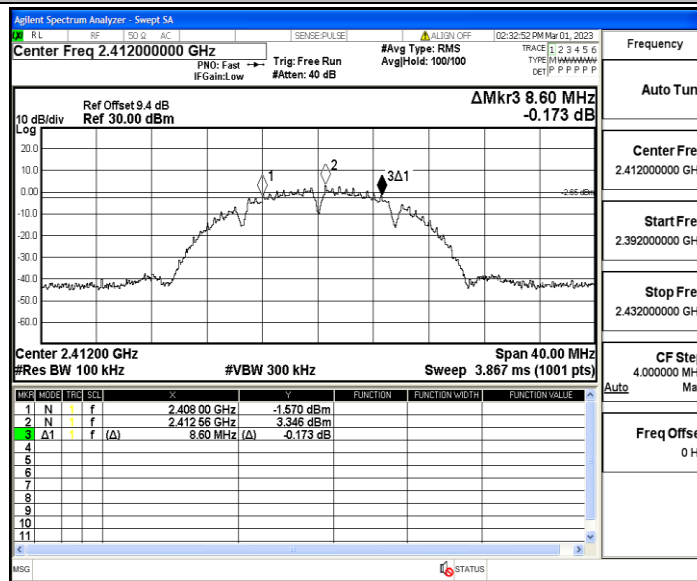
Appendix A: DTS Bandwidth

Test Result

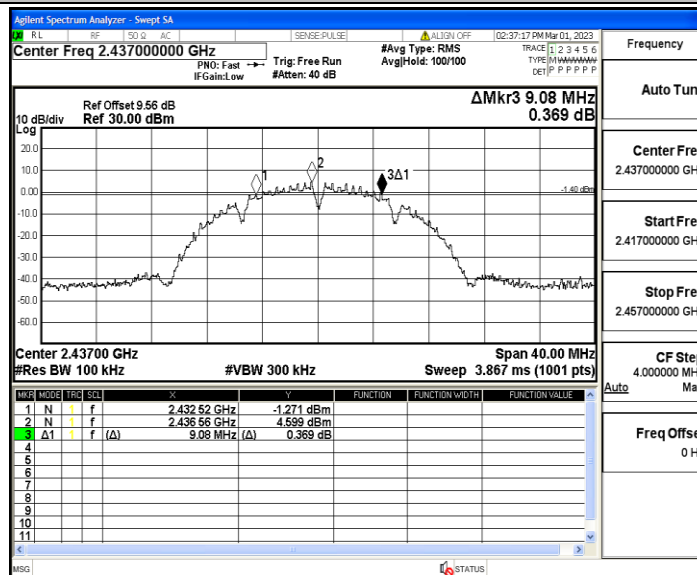
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.600	2408.000	2416.600	0.5	PASS
		2437	9.080	2432.520	2441.600	0.5	PASS
		2462	8.560	2458.040	2466.600	0.5	PASS
11G	Ant1	2412	16.320	2403.920	2420.240	0.5	PASS
		2437	16.080	2428.880	2444.960	0.5	PASS
		2462	16.360	2453.880	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.280	2403.520	2420.800	0.5	PASS
		2437	17.320	2428.280	2445.600	0.5	PASS
		2462	17.320	2453.520	2470.840	0.5	PASS
11N40SISO	Ant1	2422	35.200	2404.560	2439.760	0.5	PASS
		2437	35.040	2419.560	2454.600	0.5	PASS
		2452	35.600	2434.240	2469.840	0.5	PASS

Test Graphs

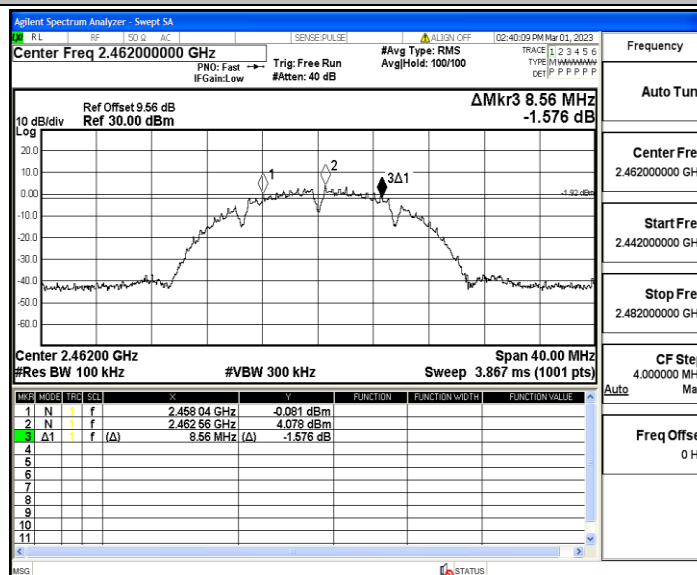
11B_Ant1_2412



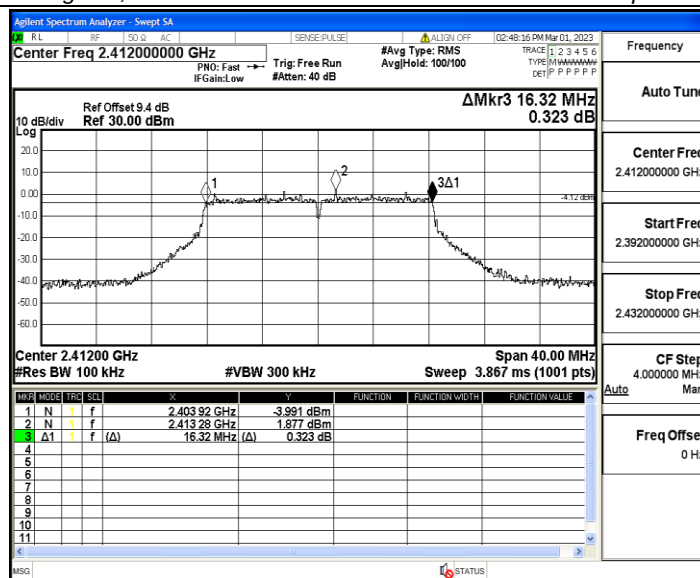
11B_Ant1_2437



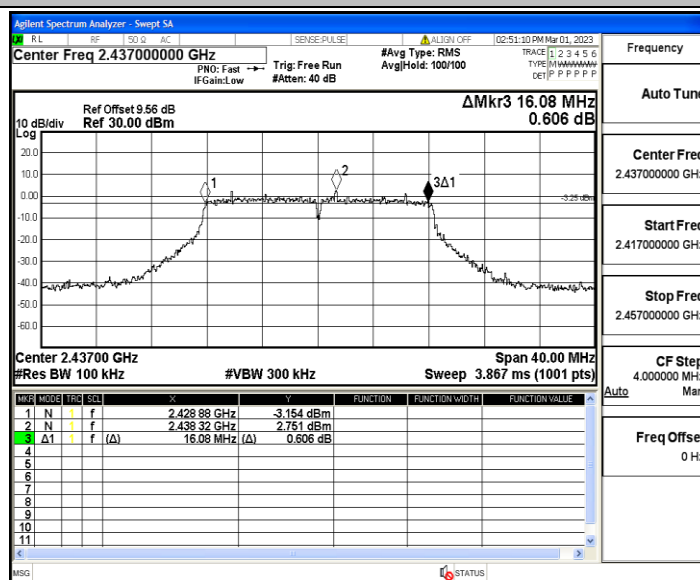
11B_Ant1_2462



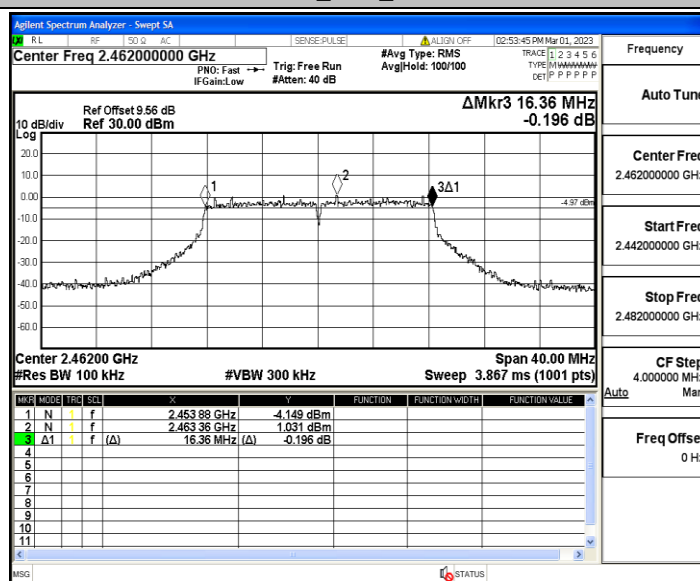
11G_Ant1_2412



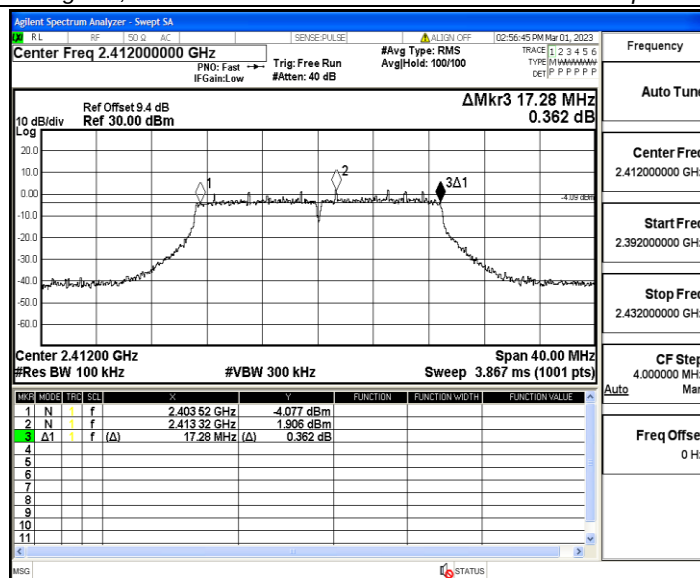
11G_Ant1_2437



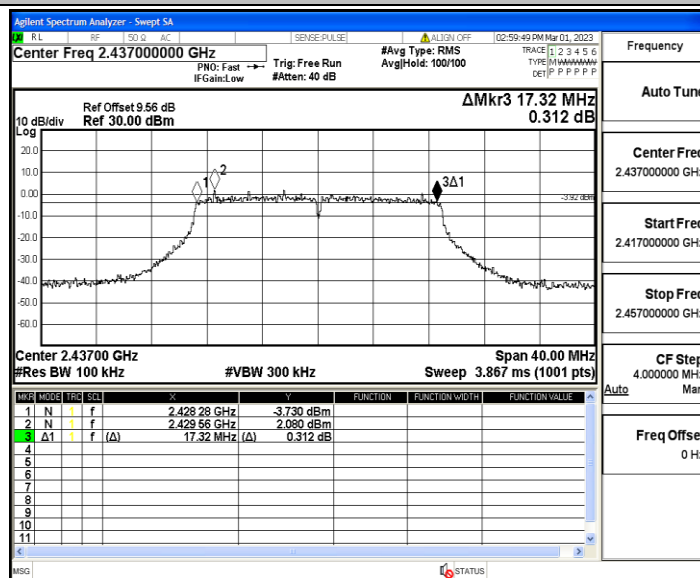
11G_Ant1_2462



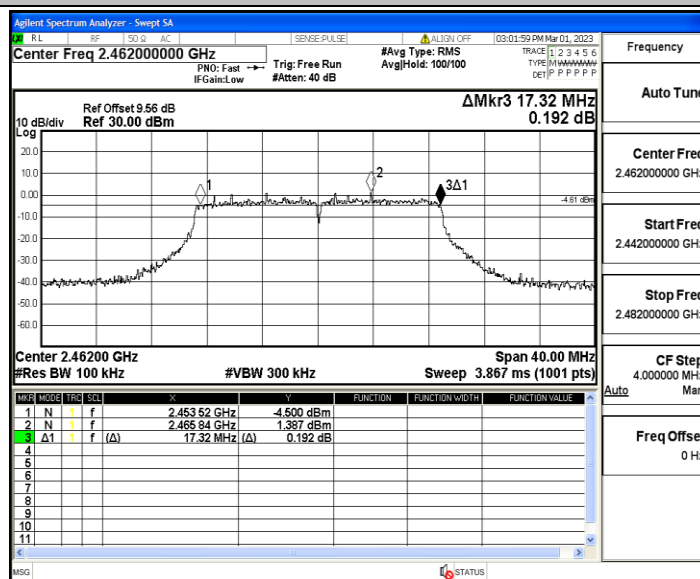
11N20SISO_Ant1_2412



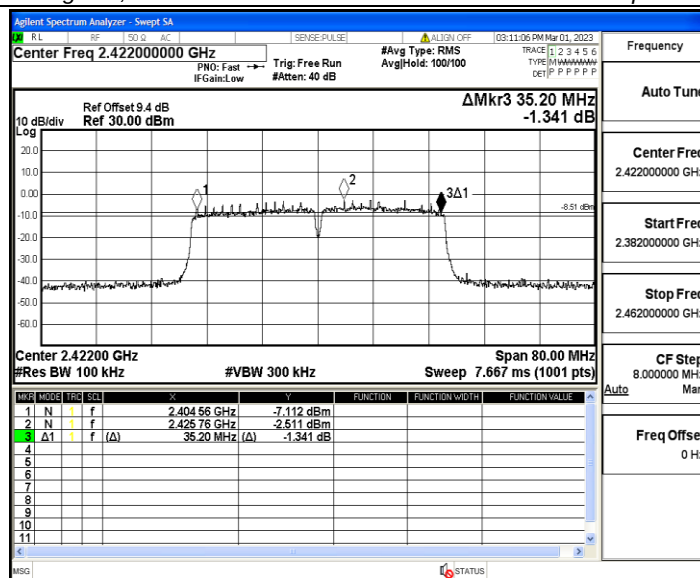
11N20SISO_Ant1_2437



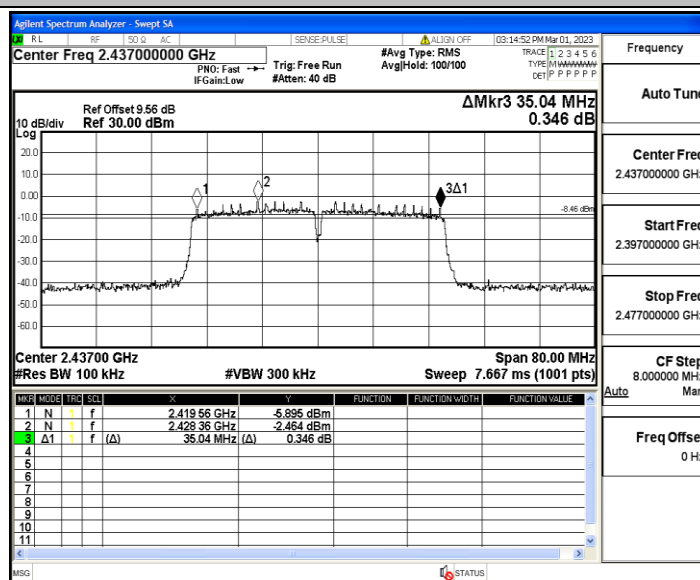
11N20SISO_Ant1_2462



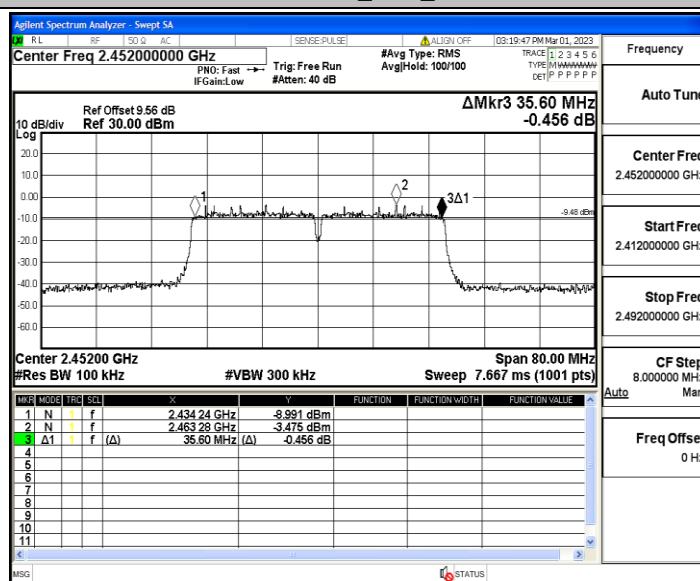
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



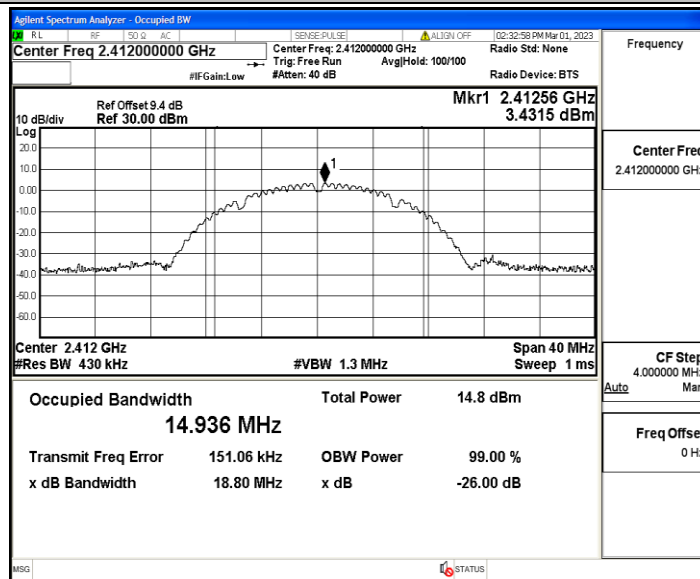
Appendix B: Occupied Channel Bandwidth

Test Result

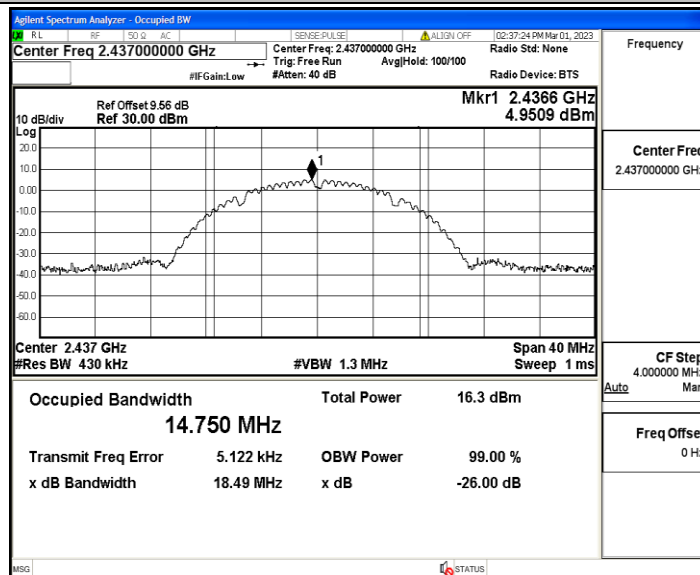
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.936	2404.6831	2419.6191	---	---
		2437	14.750	2429.6301	2444.3801	---	---
		2462	14.871	2454.7289	2469.5999	---	---
11G	Ant1	2412	17.151	2403.5601	2420.7111	---	---
		2437	16.998	2428.5386	2445.5366	---	---
		2462	17.054	2453.6321	2470.6861	---	---
11N20SISO	Ant1	2412	18.087	2403.0882	2421.1752	---	---
		2437	18.082	2427.9805	2446.0625	---	---
		2462	18.096	2453.0649	2471.1609	---	---
11N40SISO	Ant1	2422	35.903	2404.2372	2440.1402	---	---
		2437	35.847	2419.1867	2455.0337	---	---
		2452	36.084	2434.0656	2470.1496	---	---

Test Graphs

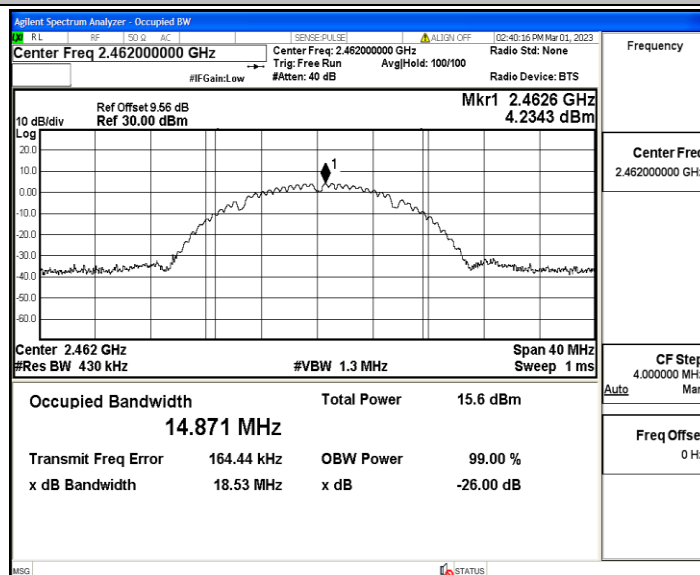
11B_Ant1_2412



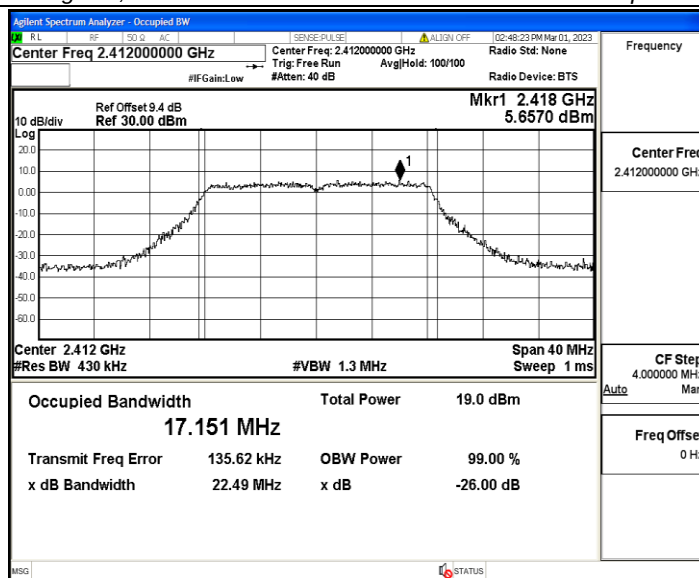
11B_Ant1_2437



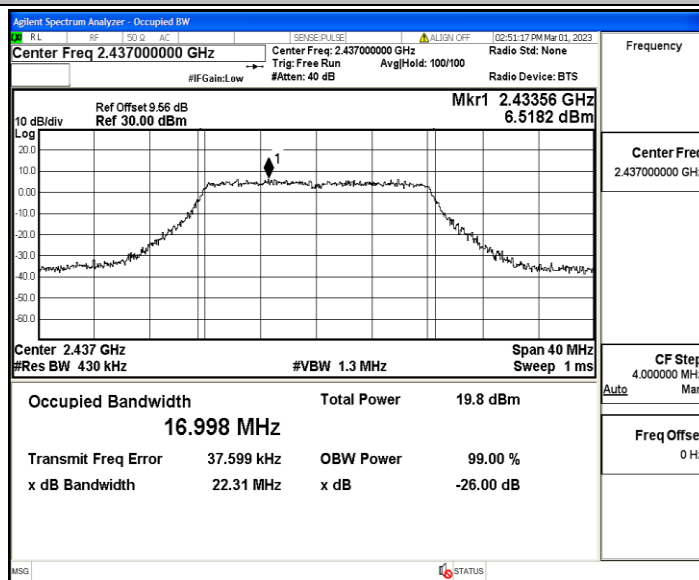
11B_Ant1_2462



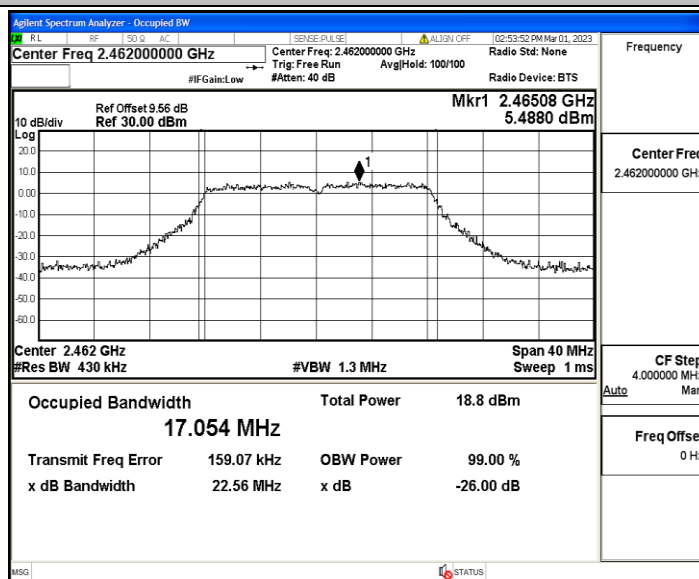
11G_Ant1_2412



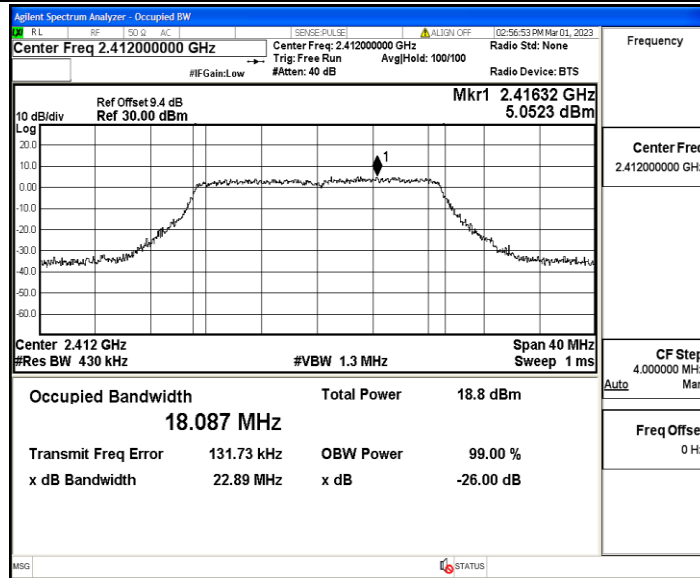
11G_Ant1_2437



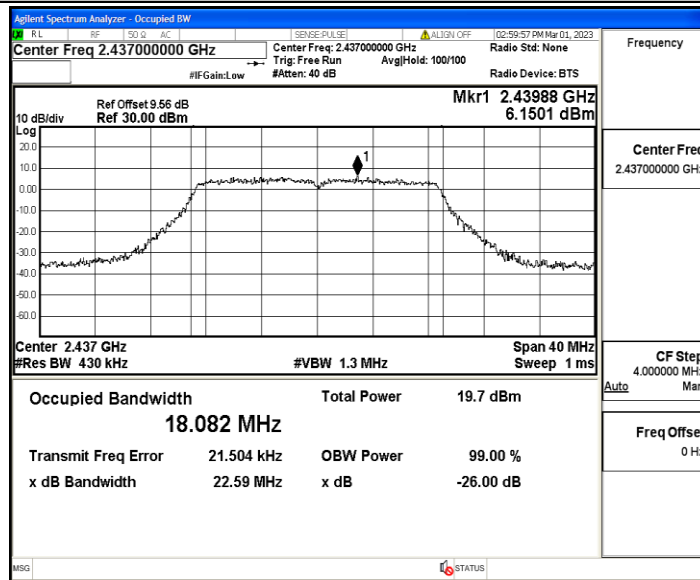
11G_Ant1_2462



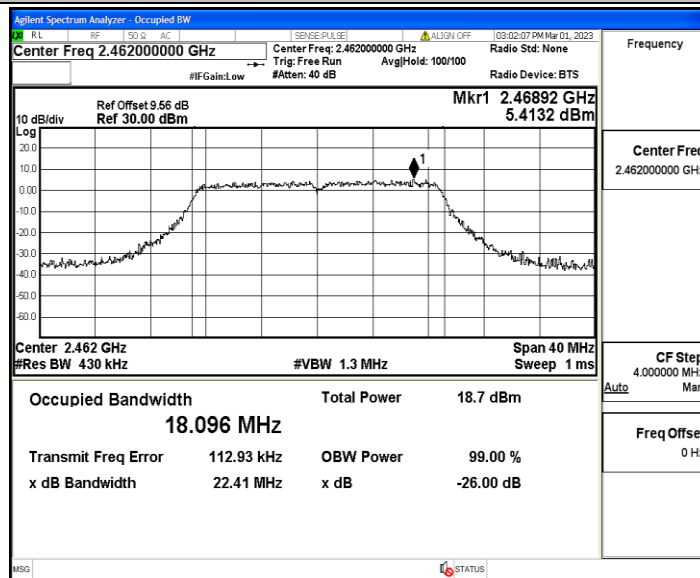
11N20SISO_Ant1_2412



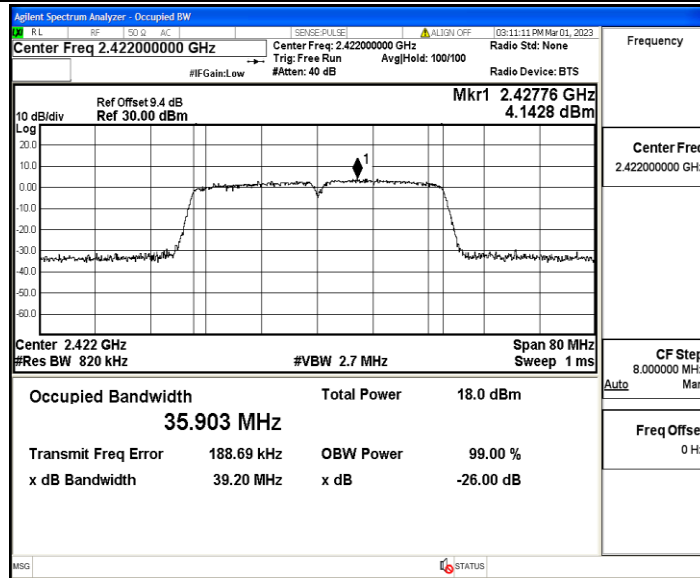
11N20SISO_Ant1_2437



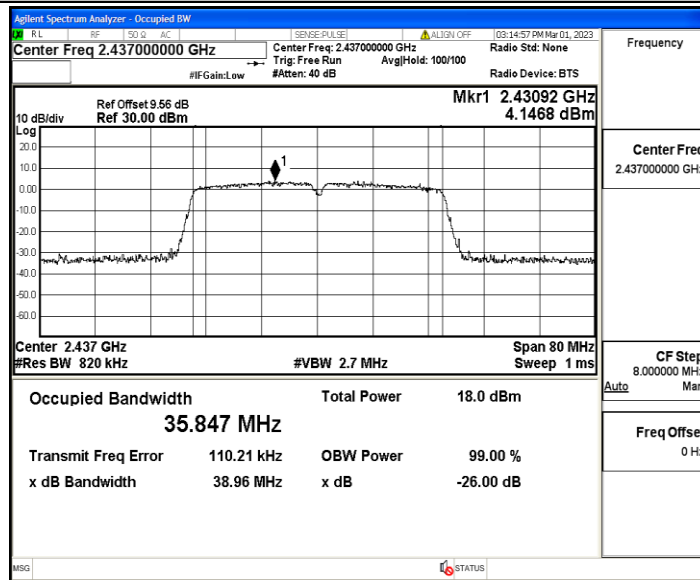
11N20SISO_Ant1_2462



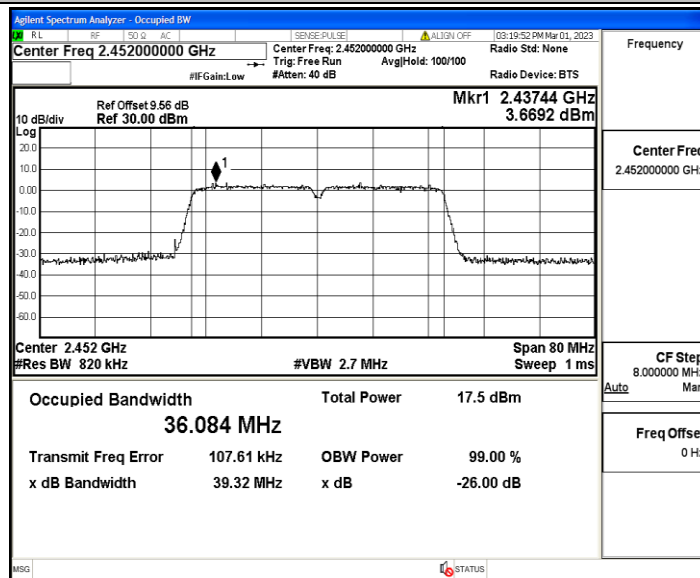
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	11.83	≤30.00	PASS
		2437	13.35	≤30.00	PASS
		2462	12.62	≤30.00	PASS
11G	Ant1	2412	13.09	≤30.00	PASS
		2437	13.75	≤30.00	PASS
		2462	12.82	≤30.00	PASS
11N20SISO	Ant1	2412	12.76	≤30.00	PASS
		2437	13.63	≤30.00	PASS
		2462	12.78	≤30.00	PASS
11N40SISO	Ant1	2422	10.94	≤30.00	PASS
		2437	11.09	≤30.00	PASS
		2452	10.58	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the test result.

Appendix D: Maximum power spectral density

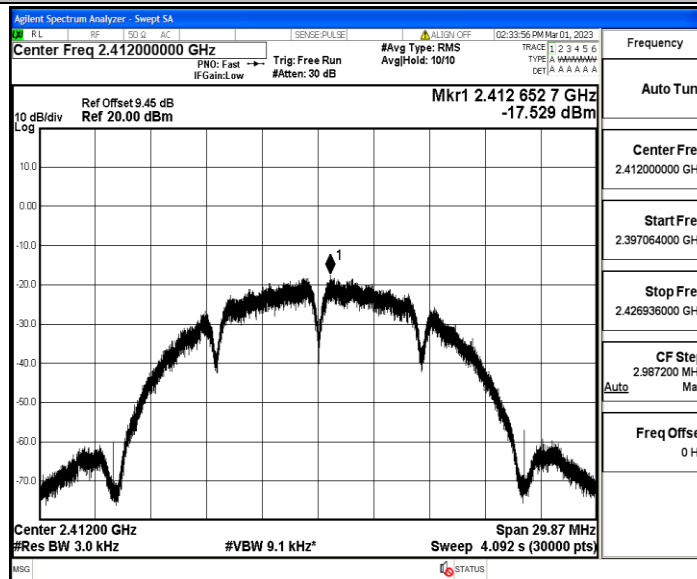
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-17.53	≤8.00	PASS
		2437	-16.41	≤8.00	PASS
		2462	-16.88	≤8.00	PASS
11G	Ant1	2412	-17.79	≤8.00	PASS
		2437	-17.68	≤8.00	PASS
		2462	-17.15	≤8.00	PASS
11N20SISO	Ant1	2412	-15.47	≤8.00	PASS
		2437	-16.2	≤8.00	PASS
		2462	-14.95	≤8.00	PASS
11N40SISO	Ant1	2422	-18.99	≤8.00	PASS
		2437	-21.2	≤8.00	PASS
		2452	-22.26	≤8.00	PASS

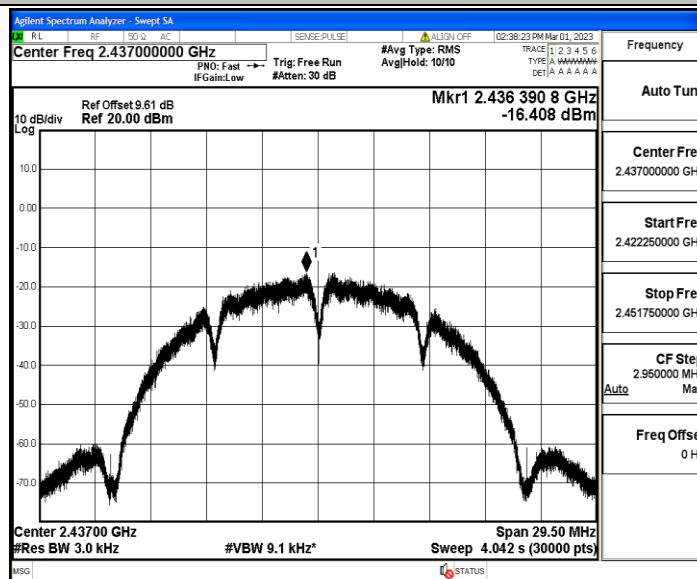
Note: The Duty Cycle Factor is compensated in the test result.

Test Graphs

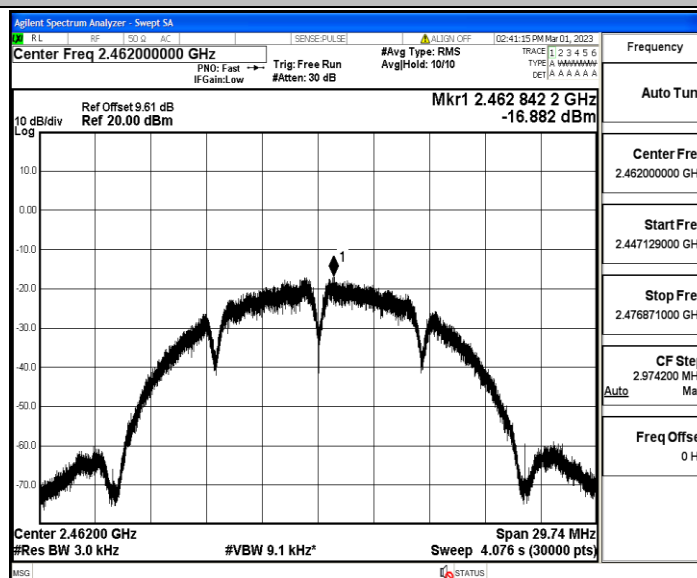
11B_Ant1_2412



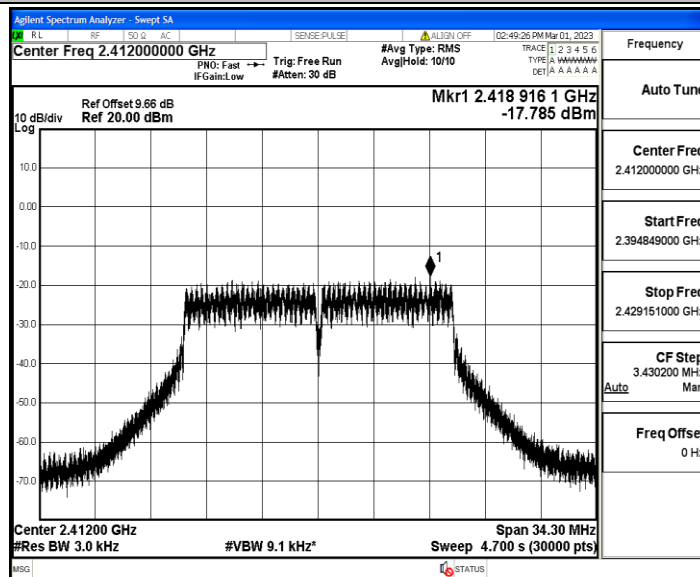
11B_Ant1_2437



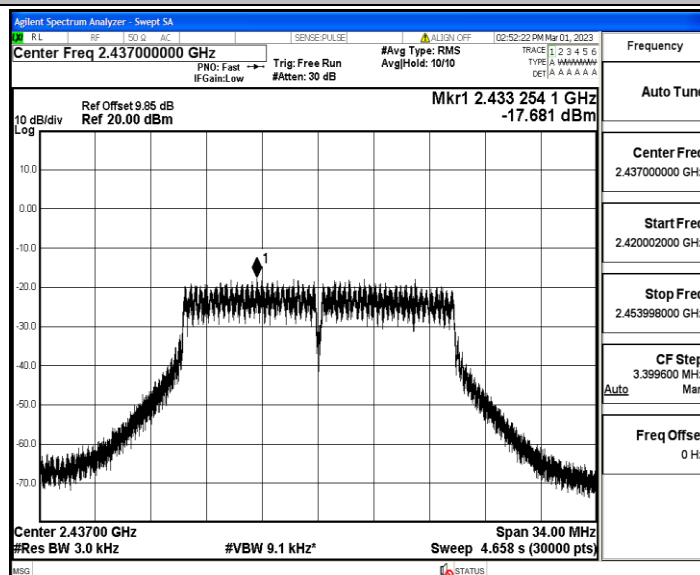
11B_Ant1_2462



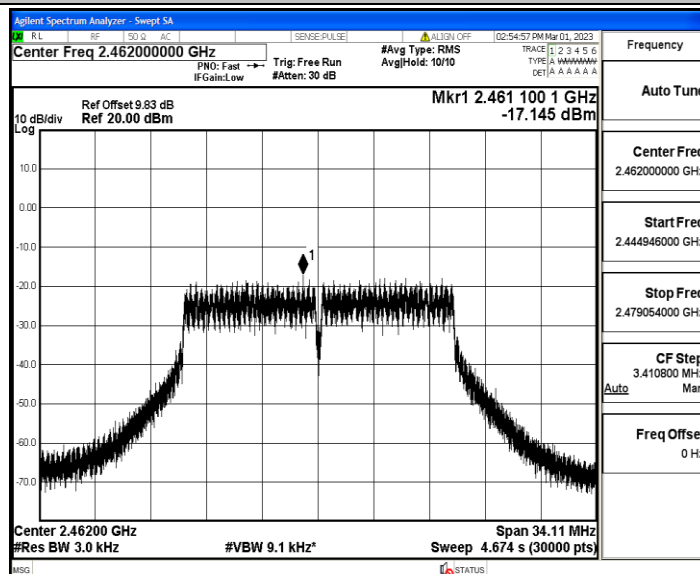
11G_Ant1_2412



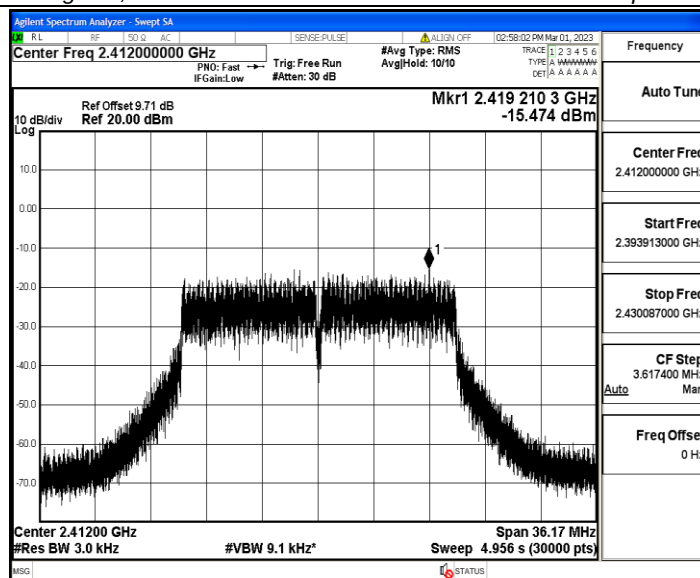
11G_Ant1_2437



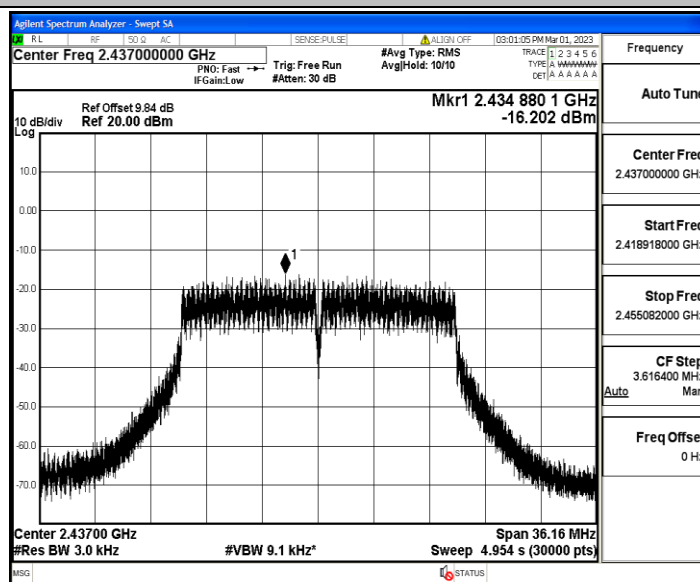
11G_Ant1_2462



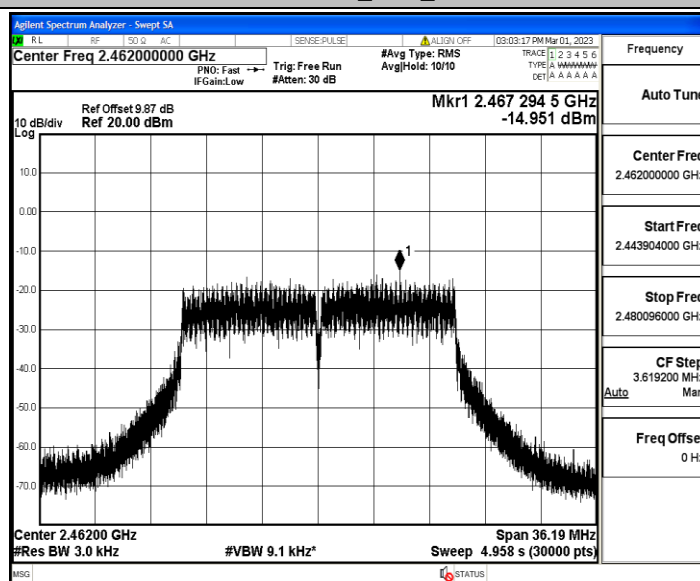
11N20SISO_Ant1_2412



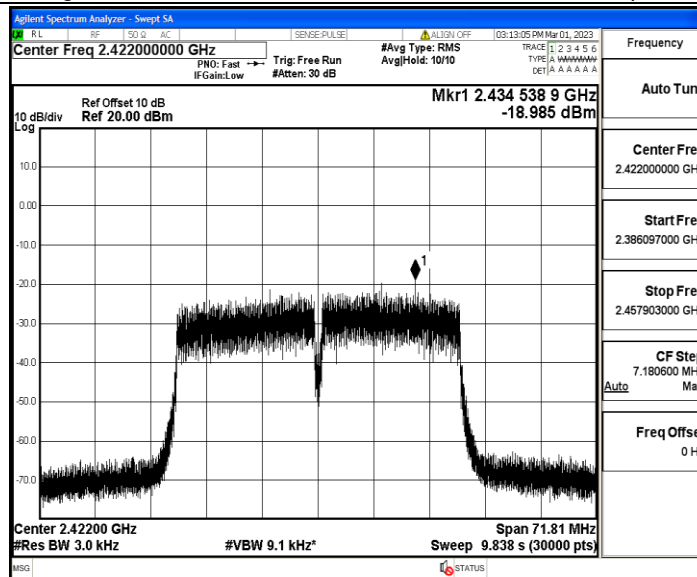
11N20SISO_Ant1_2437



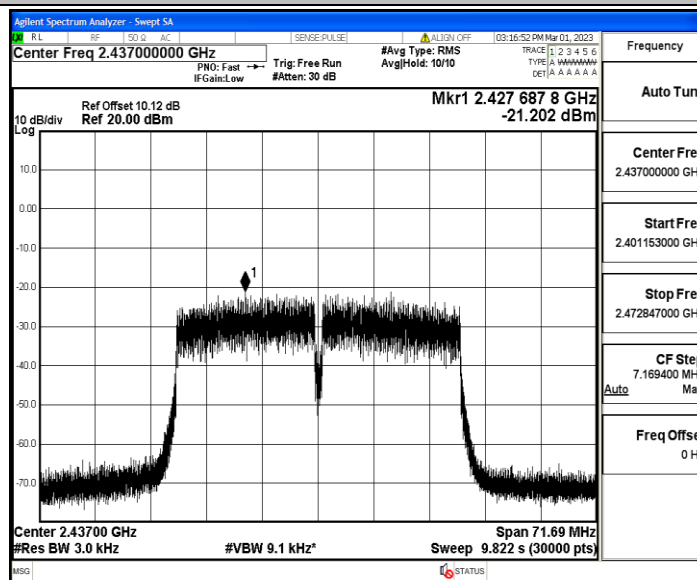
11N20SISO_Ant1_2462



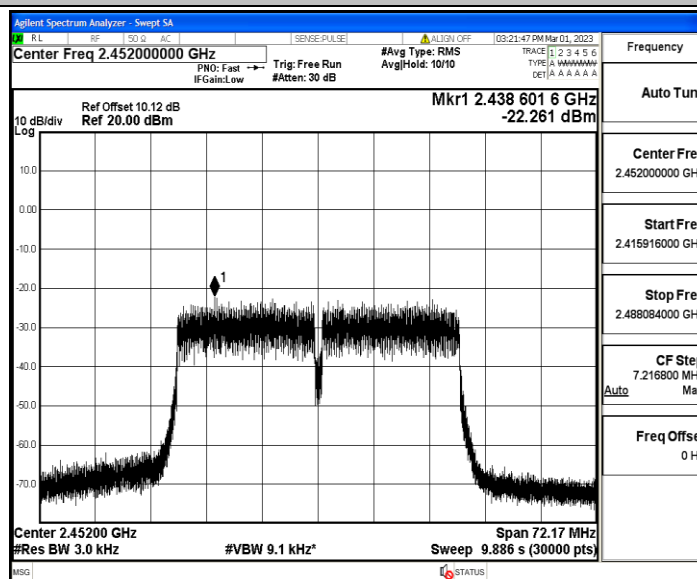
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



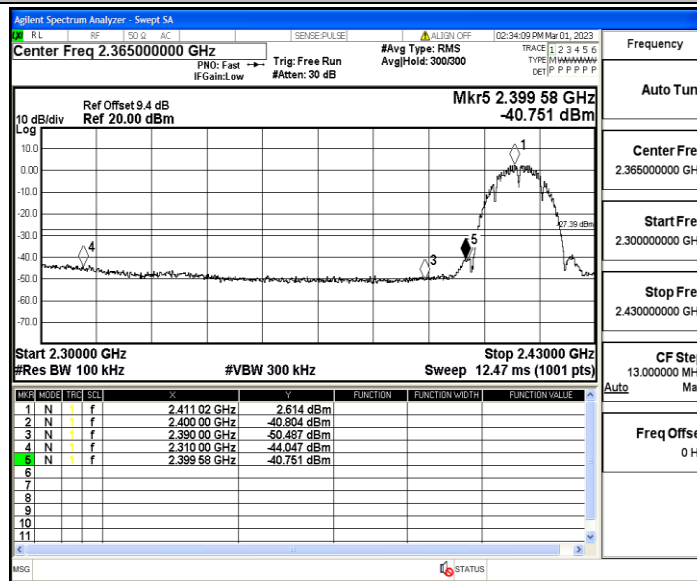
Appendix E: Band edge measurements

Test Result

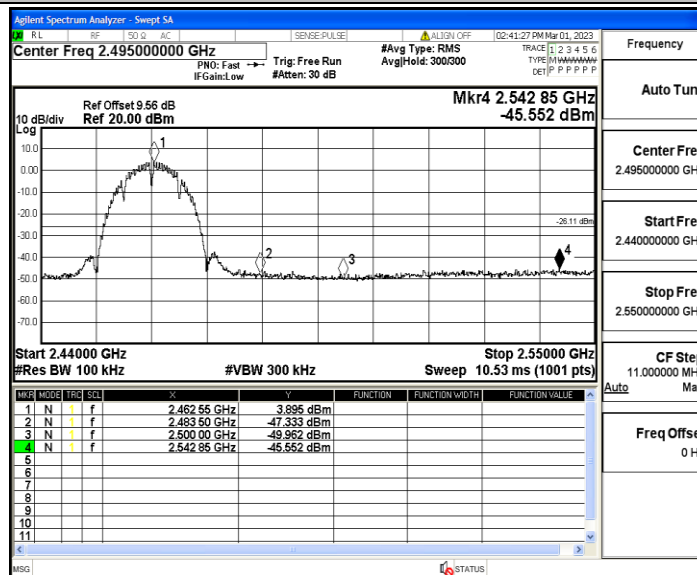
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.61	-40.75	≤ -27.39	PASS
		High	2462	3.90	-45.55	≤ -26.11	PASS
11G	Ant1	Low	2412	1.70	-35.61	≤ -28.3	PASS
		High	2462	1.95	-45.05	≤ -28.05	PASS
11N20SISO	Ant1	Low	2412	1.51	-33.44	≤ -28.49	PASS
		High	2462	1.91	-43.31	≤ -28.09	PASS
11N40SISO	Ant1	Low	2422	-2.46	-42.2	≤ -32.46	PASS
		High	2452	-3.49	-45.35	≤ -33.49	PASS

Test Graphs

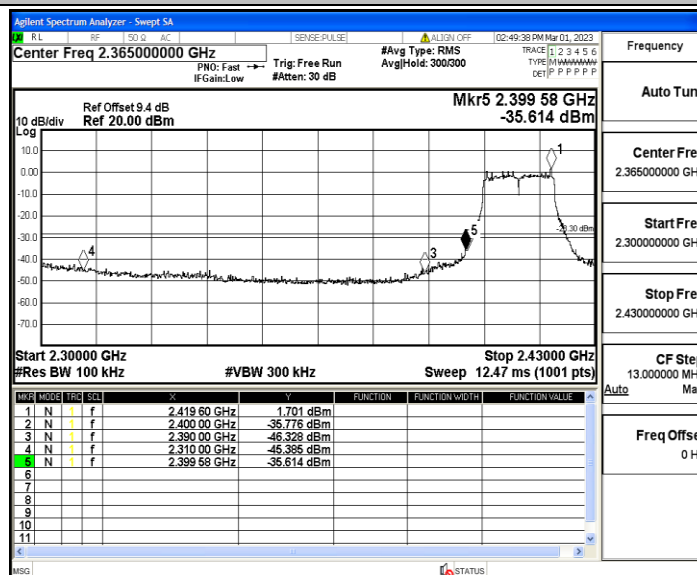
11B_Ant1_Low_2412



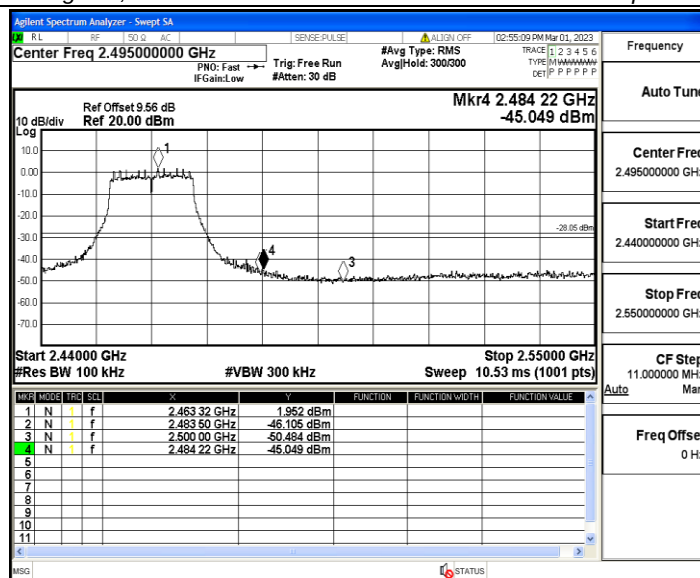
11B_Ant1_High_2462



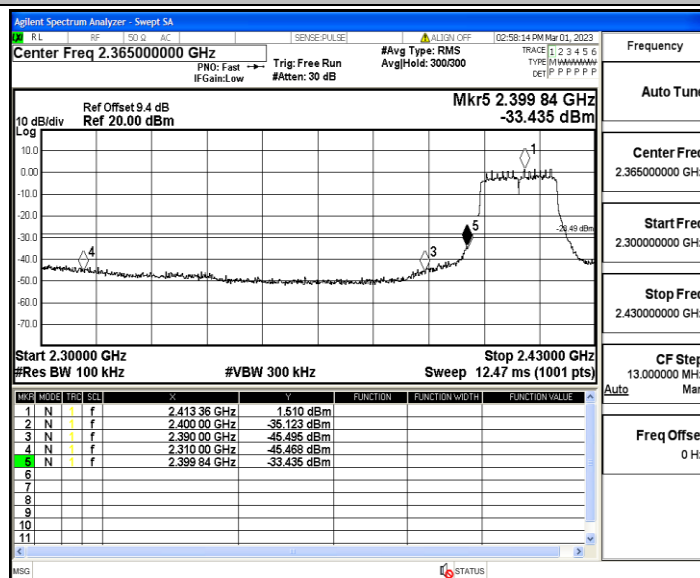
11G_Ant1_Low_2412



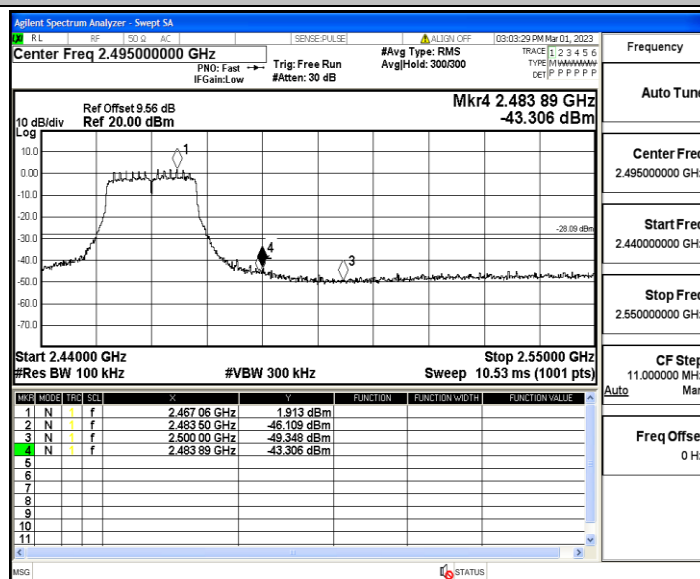
11G_Ant1_High_2462



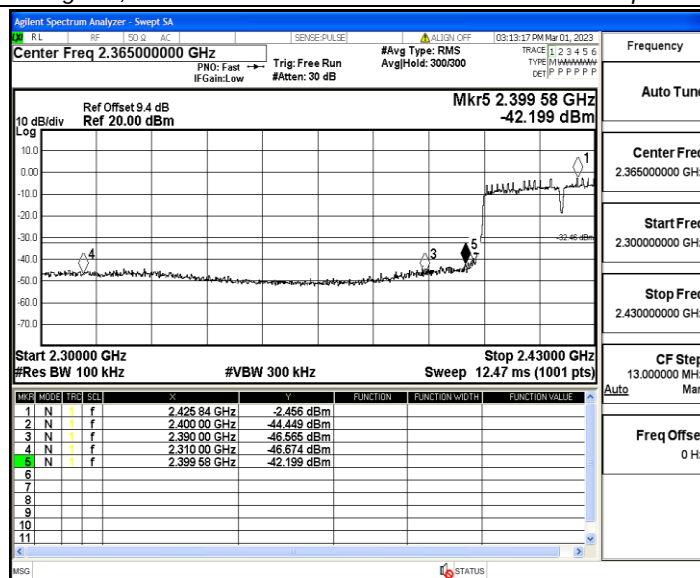
11N20SISO_Ant1_Low_2412



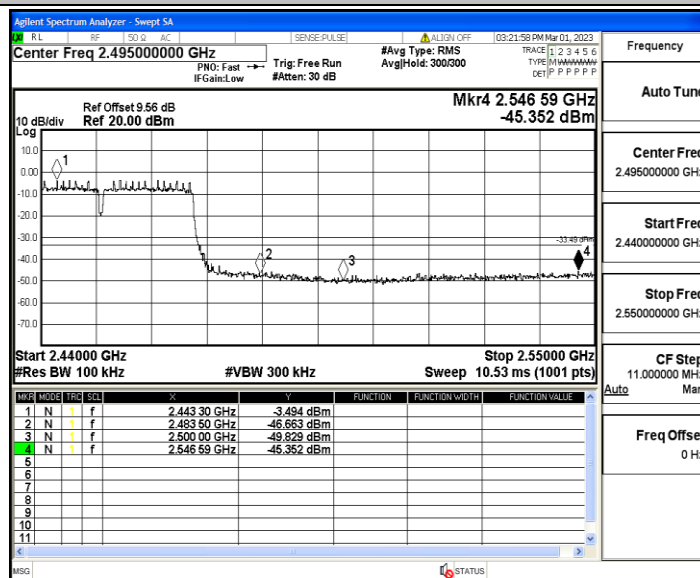
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

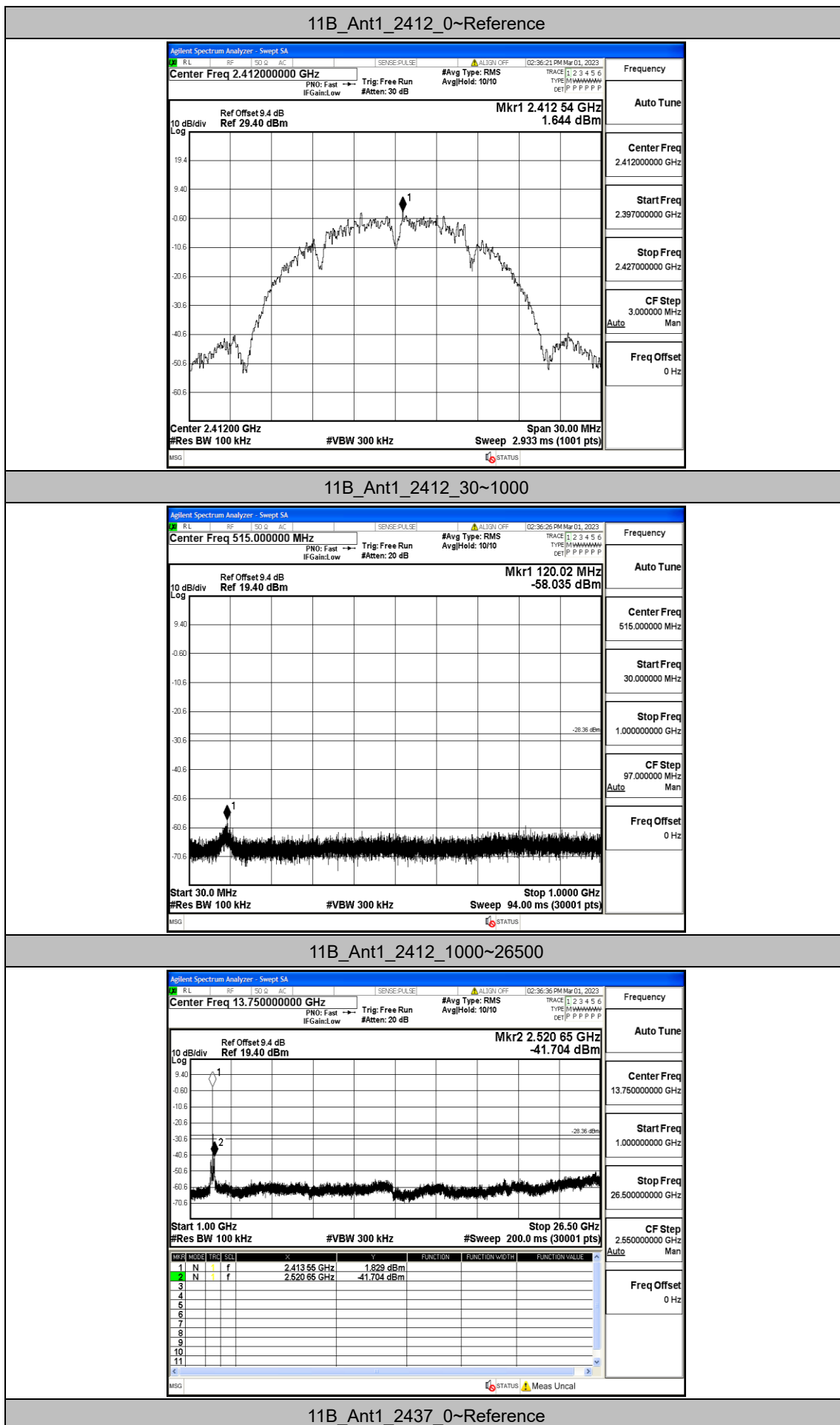


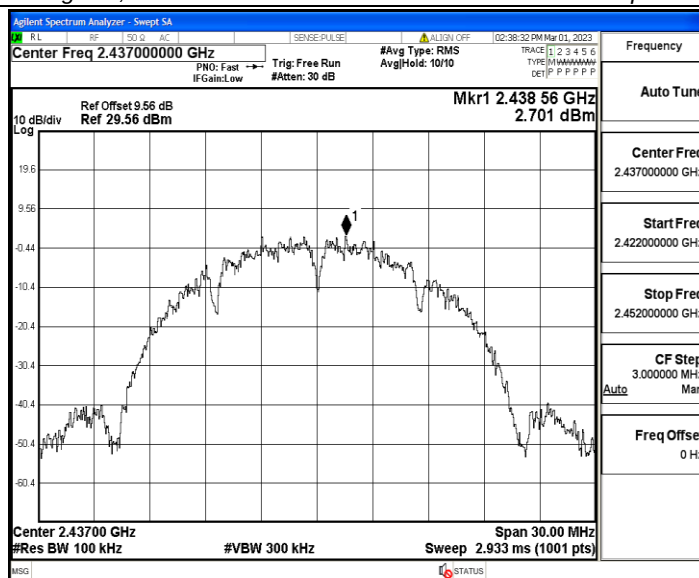
Appendix F: Conducted Spurious Emission

Test Result

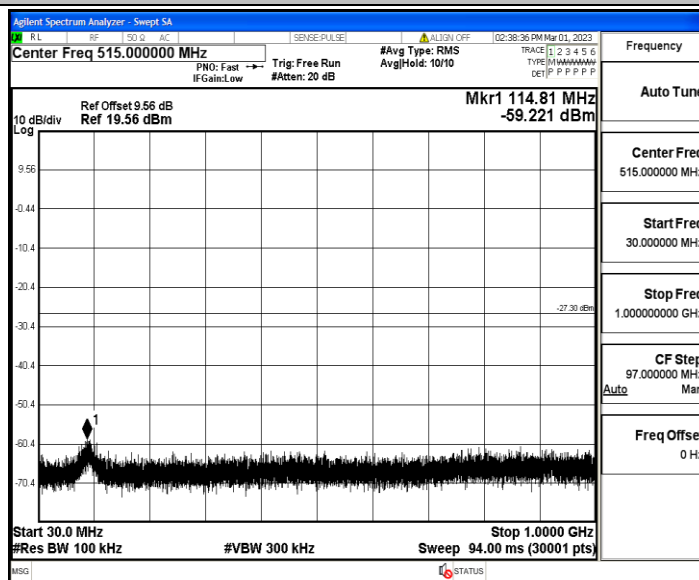
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.64	1.64	---	PASS
			30~1000	1.64	-58.04	≤-28.36	PASS
			1000~26500	1.64	-41.7	≤-28.36	PASS
		2437	Reference	2.70	2.70	---	PASS
			30~1000	2.70	-59.22	≤-27.3	PASS
			1000~26500	2.70	-42.31	≤-27.3	PASS
		2462	Reference	1.24	1.24	---	PASS
			30~1000	1.24	-59.33	≤-28.76	PASS
			1000~26500	1.24	-41.31	≤-28.76	PASS
11G	Ant1	2412	Reference	-1.42	-1.42	---	PASS
			30~1000	-1.42	-57.63	≤-31.42	PASS
			1000~26500	-1.42	-41.94	≤-31.42	PASS
		2437	Reference	-1.17	-1.17	---	PASS
			30~1000	-1.17	-58.15	≤-31.17	PASS
			1000~26500	-1.17	-43.29	≤-31.17	PASS
		2462	Reference	-0.21	-0.21	---	PASS
			30~1000	-0.21	-57.39	≤-30.21	PASS
			1000~26500	-0.21	-42.71	≤-30.21	PASS
11N20SISO	Ant1	2412	Reference	0.87	0.87	---	PASS
			30~1000	0.87	-57.22	≤-29.13	PASS
			1000~26500	0.87	-41.6	≤-29.13	PASS
		2437	Reference	-1.05	-1.05	---	PASS
			30~1000	-1.05	-57.07	≤-31.05	PASS
			1000~26500	-1.05	-41.09	≤-31.05	PASS
		2462	Reference	0.45	0.45	---	PASS
			30~1000	0.45	-58.36	≤-29.55	PASS
			1000~26500	0.45	-42.28	≤-29.55	PASS
11N40SISO	Ant1	2422	Reference	-4.42	-4.42	---	PASS
			30~1000	-4.42	-59.38	≤-34.42	PASS
			1000~26500	-4.42	-51.2	≤-34.42	PASS
		2437	Reference	-4.00	-4.00	---	PASS
			30~1000	-4.00	-59.63	≤-34	PASS
			1000~26500	-4.00	-51.42	≤-34	PASS
		2452	Reference	-5.66	-5.66	---	PASS
			30~1000	-5.66	-59.25	≤-35.66	PASS
			1000~26500	-5.66	-51.67	≤-35.66	PASS

Test Graphs

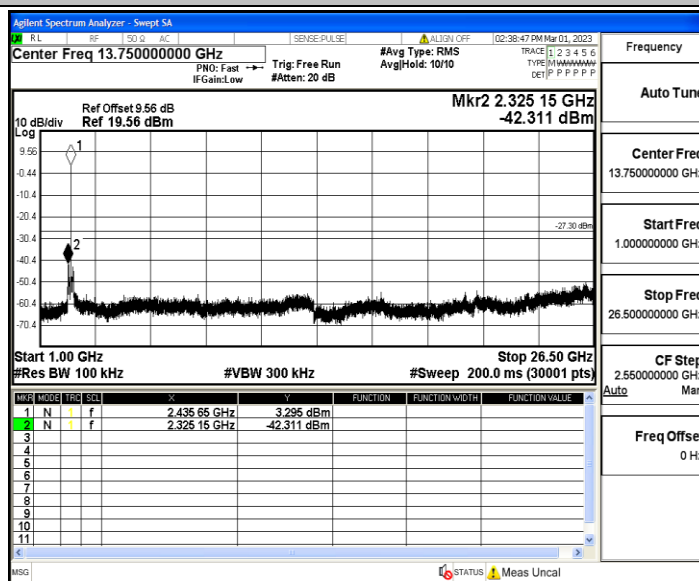




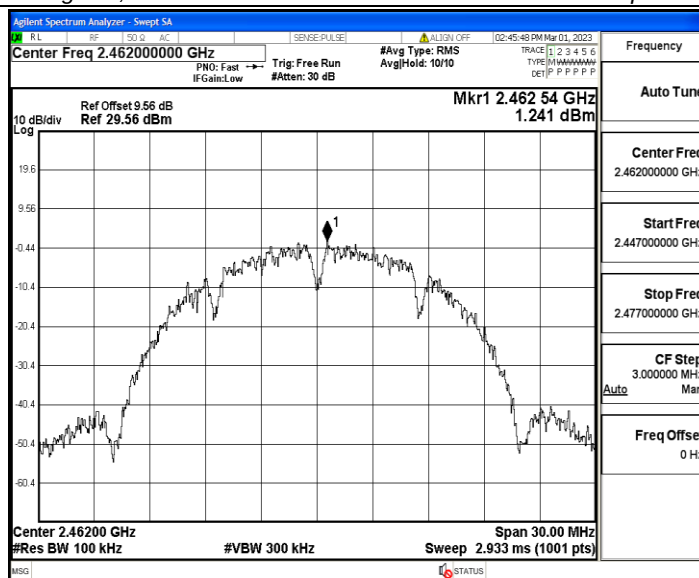
11B_Ant1_2437_30~1000



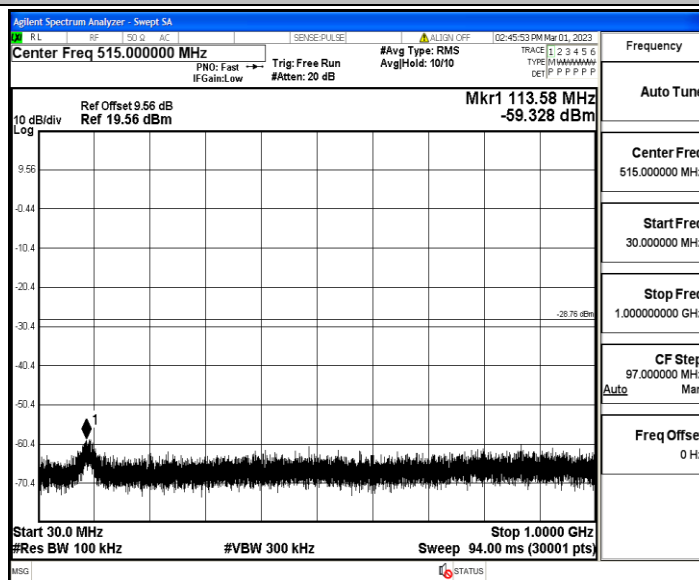
11B_Ant1_2437_1000~26500



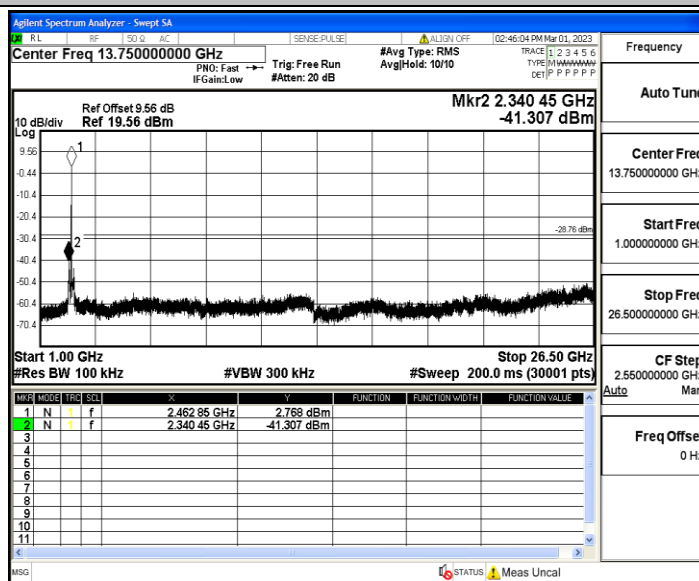
11B_Ant1_2462_0~Reference



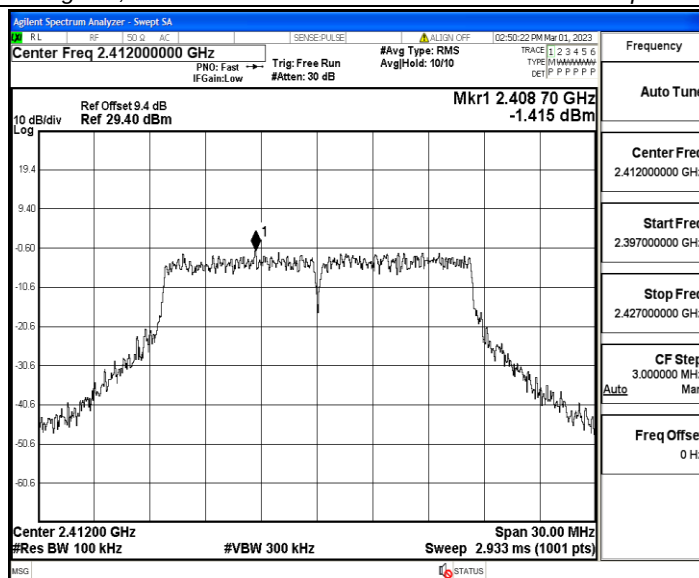
11B_Ant1_2462_30~1000



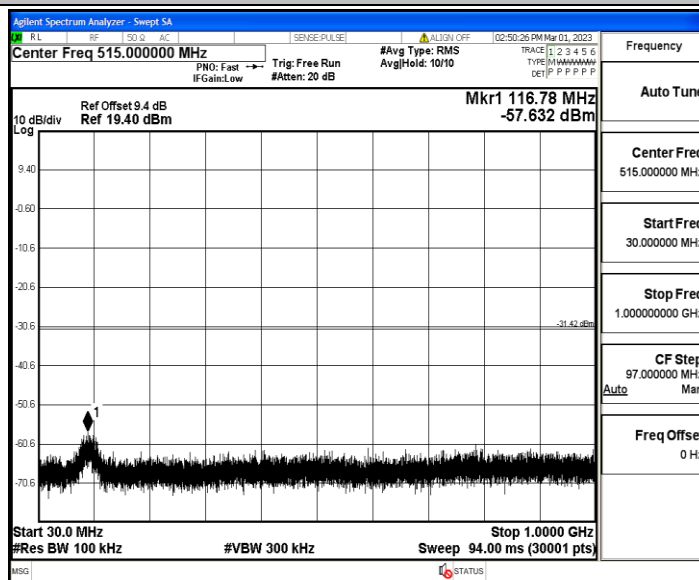
11B_Ant1_2462_1000~26500



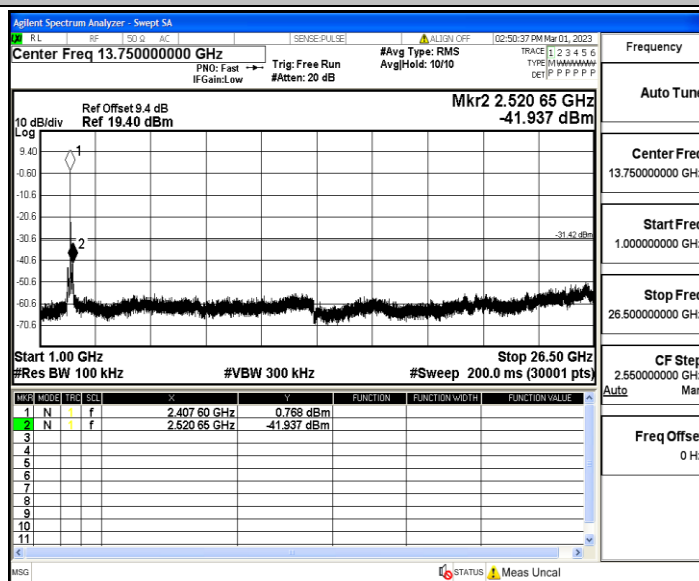
11G_Ant1_2412_0~Reference



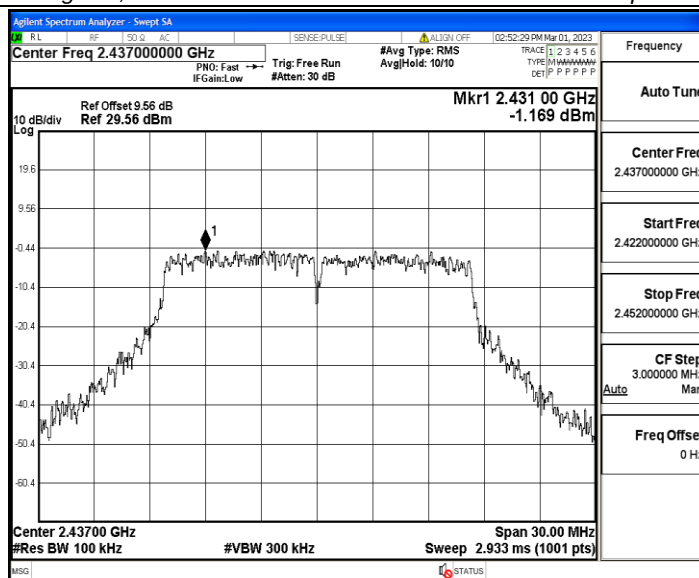
11G_Ant1_2412_30~1000



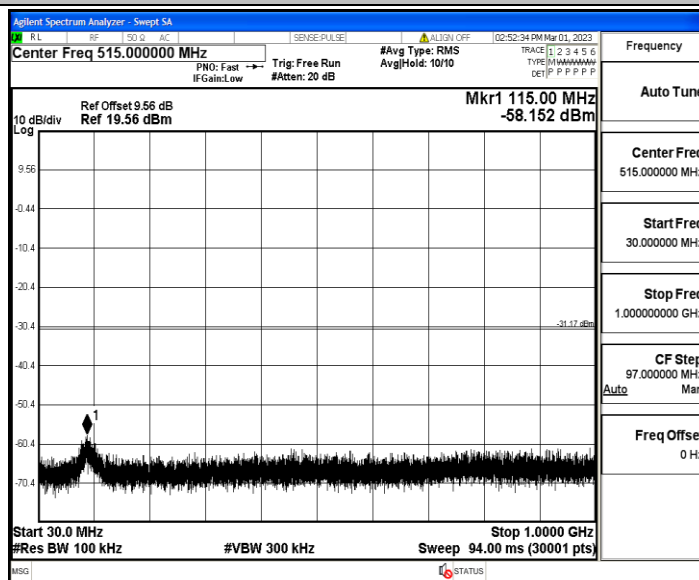
11G_Ant1_2412_1000~26500



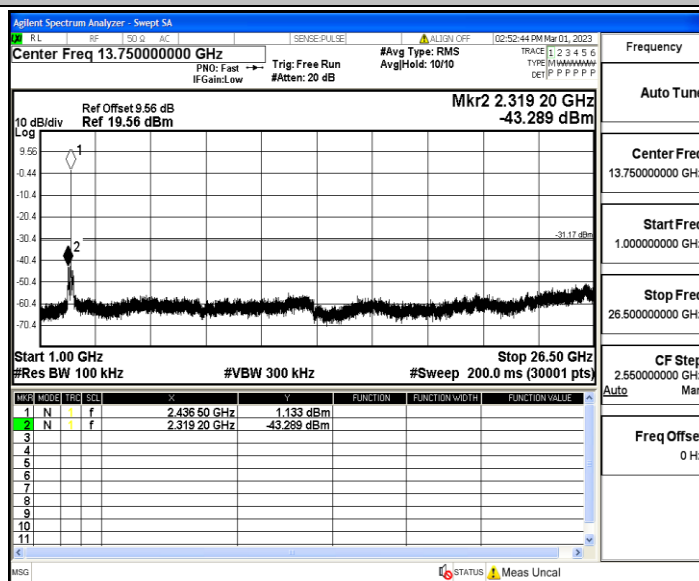
11G_Ant1_2437_0~Reference



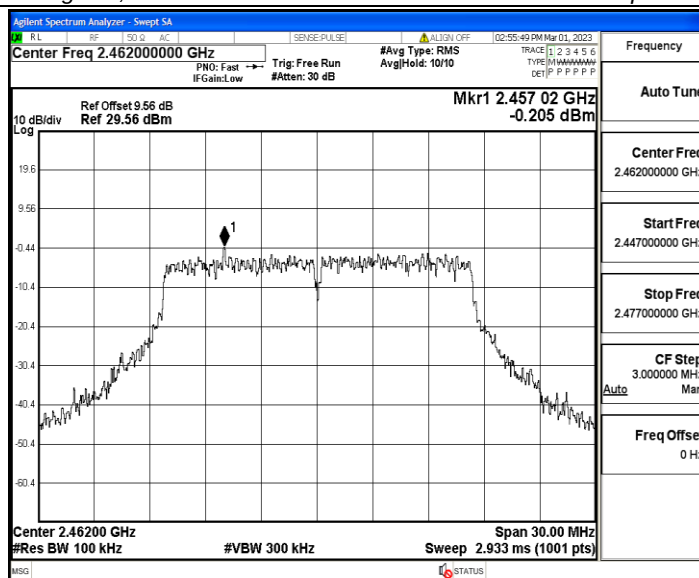
11G_Ant1_2437_30~1000



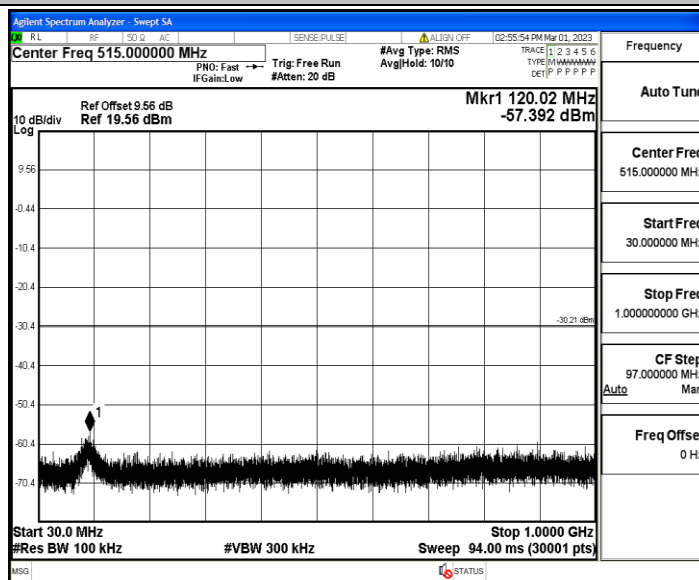
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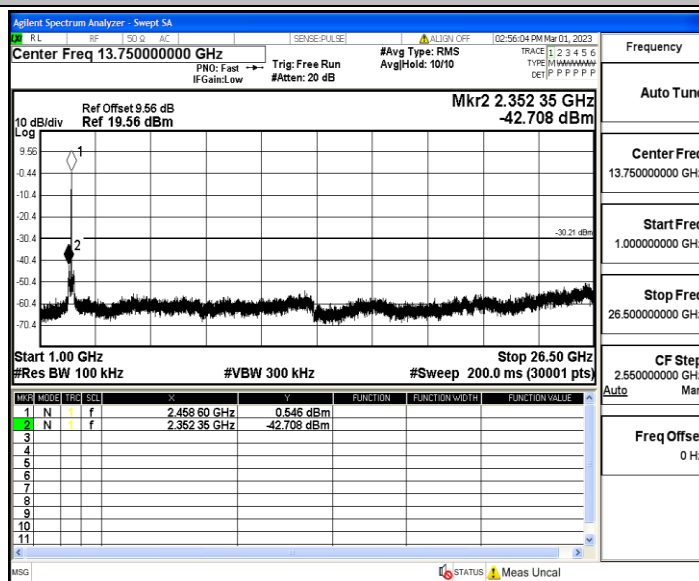
11G_Ant1_2462_0~Reference



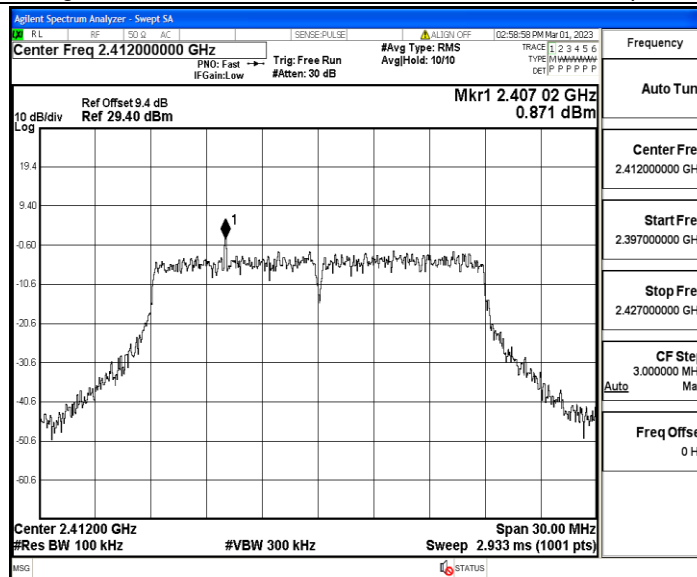
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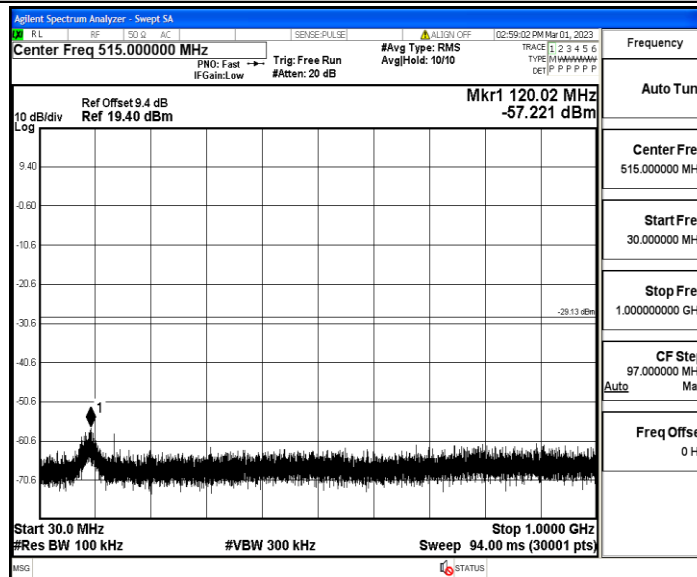
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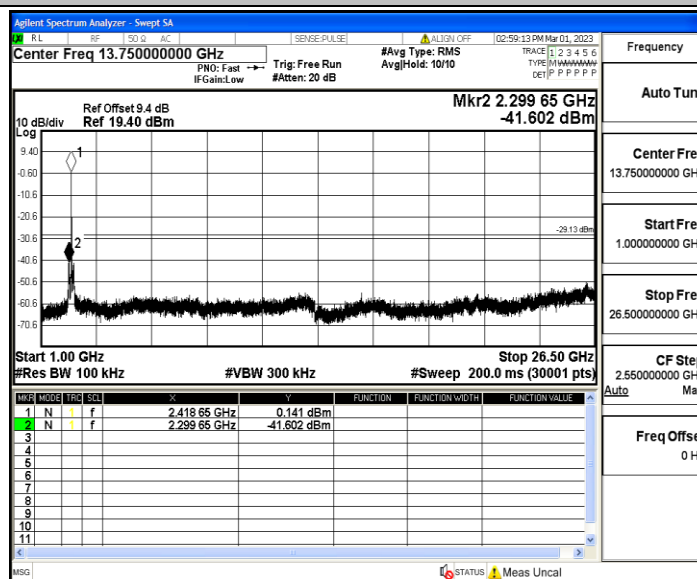
11N20SISO_Ant1_2412_0~Reference



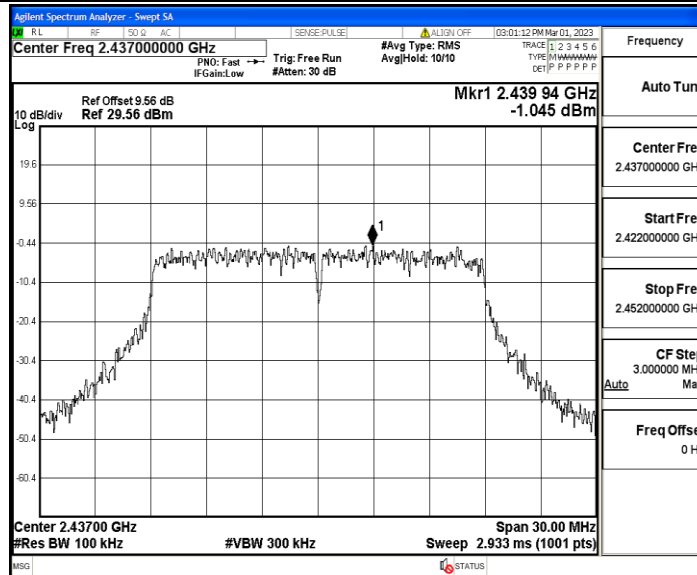
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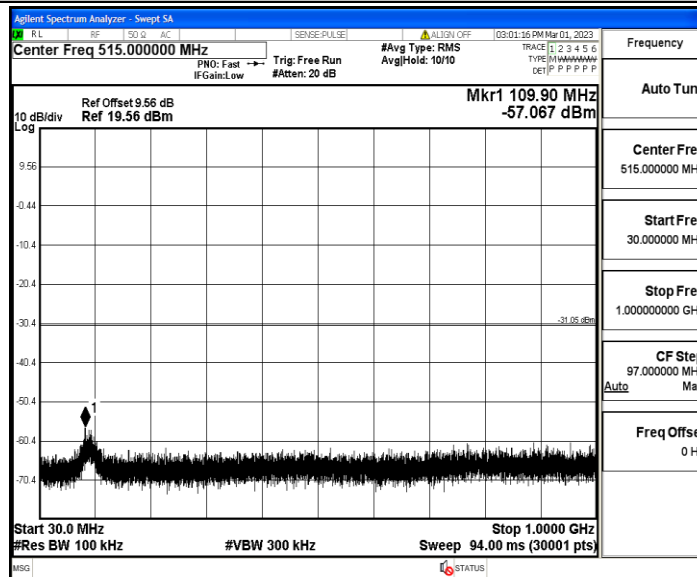
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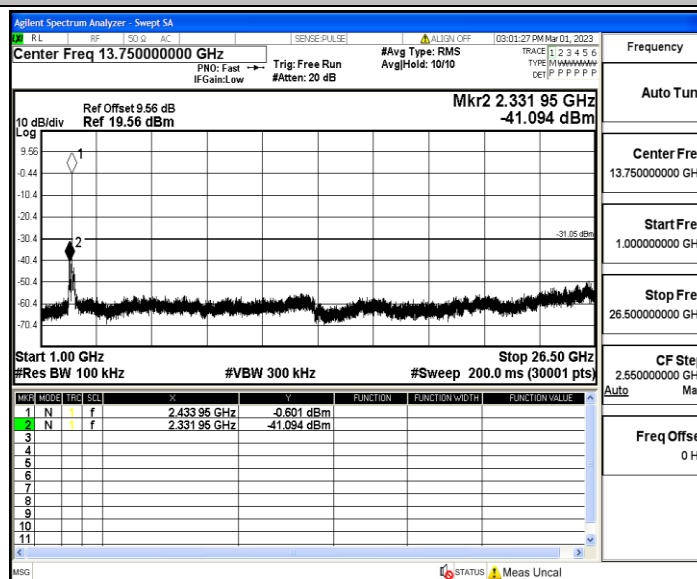
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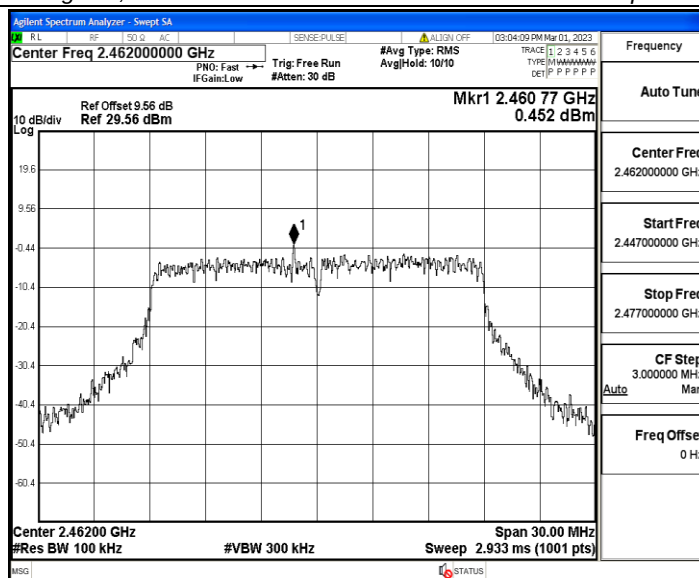
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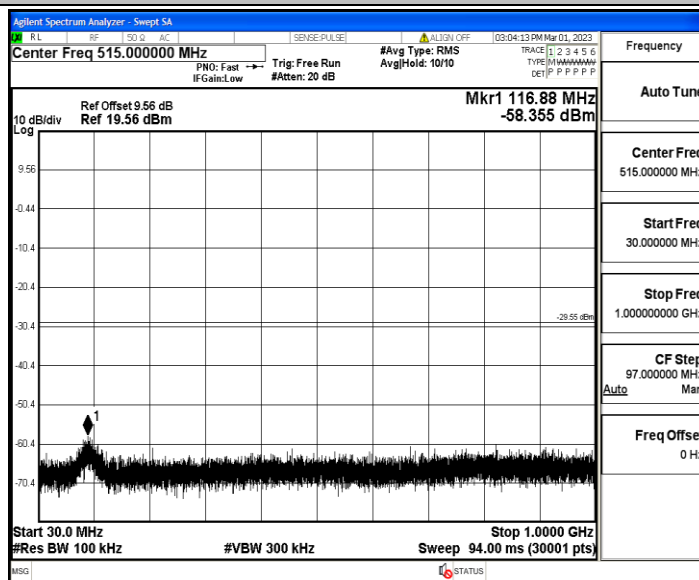
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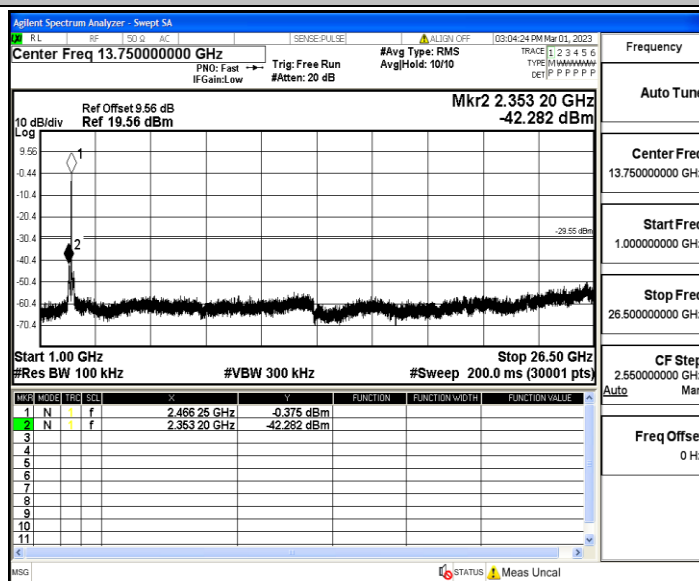
11N20SISO_Ant1_2462_0~Reference



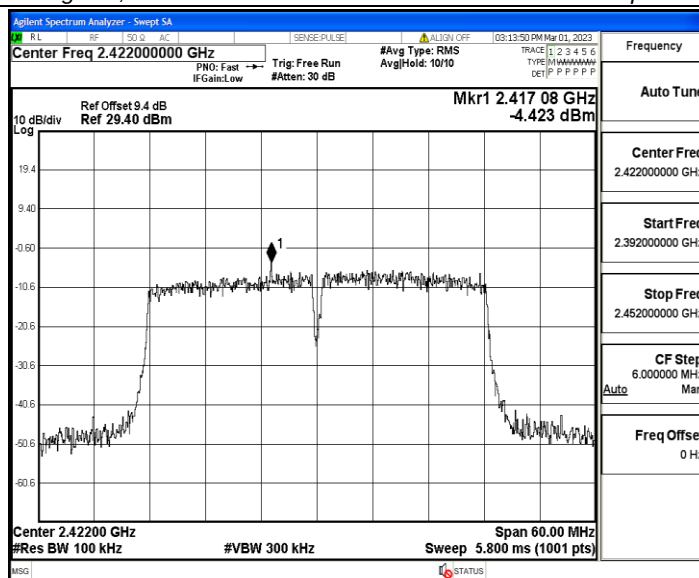
11N20SISO_Ant1_2462_30~1000



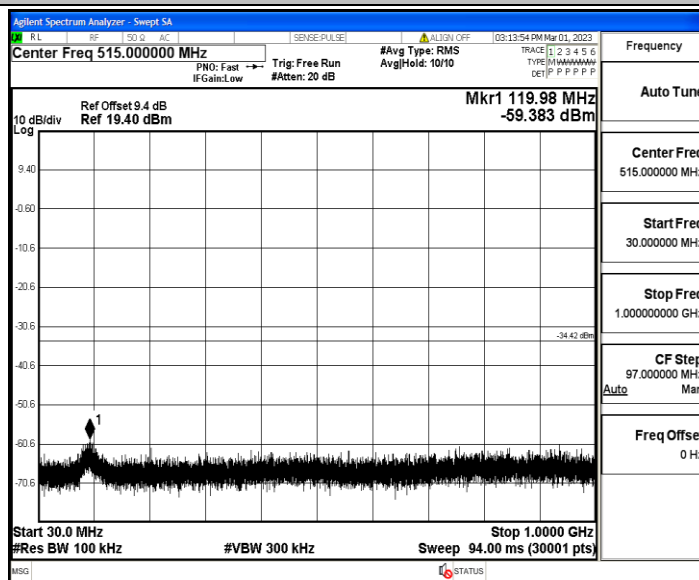
11N20SISO_Ant1_2462_1000~26500



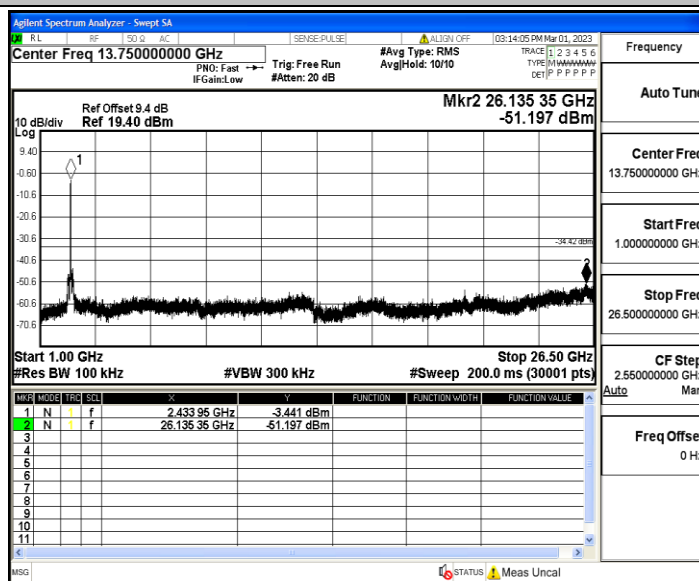
11N40SISO_Ant1_2422_0~Reference



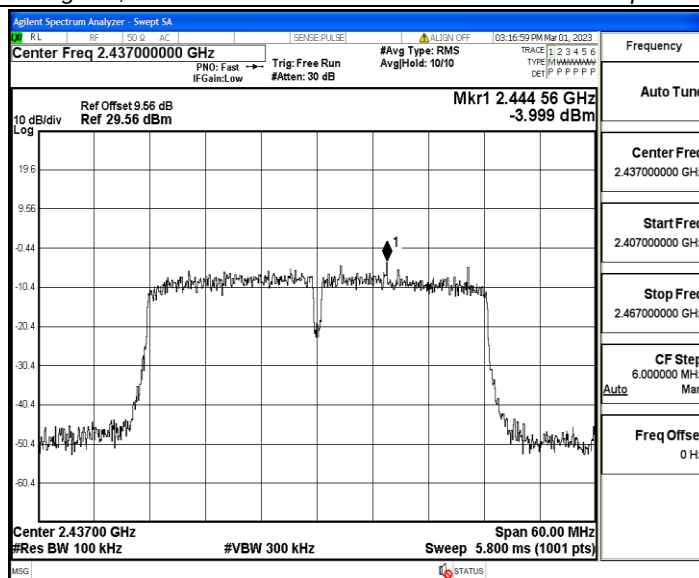
11N40SISO_Ant1_2422_30~1000



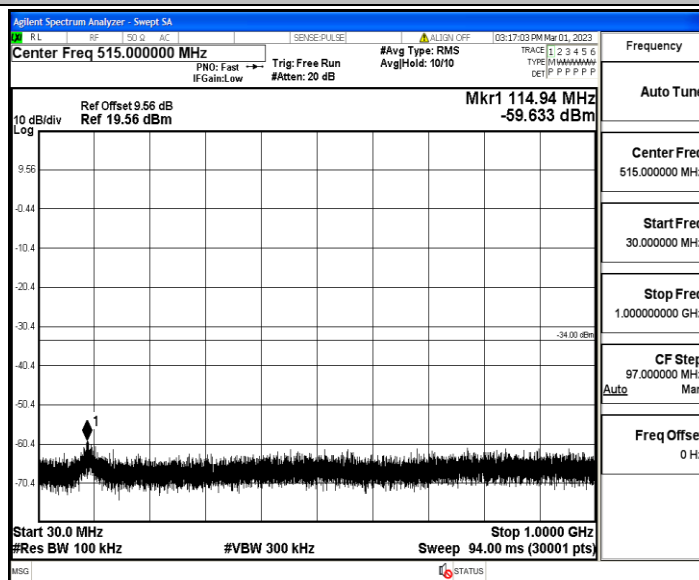
11N40SISO_Ant1_2422_1000~26500



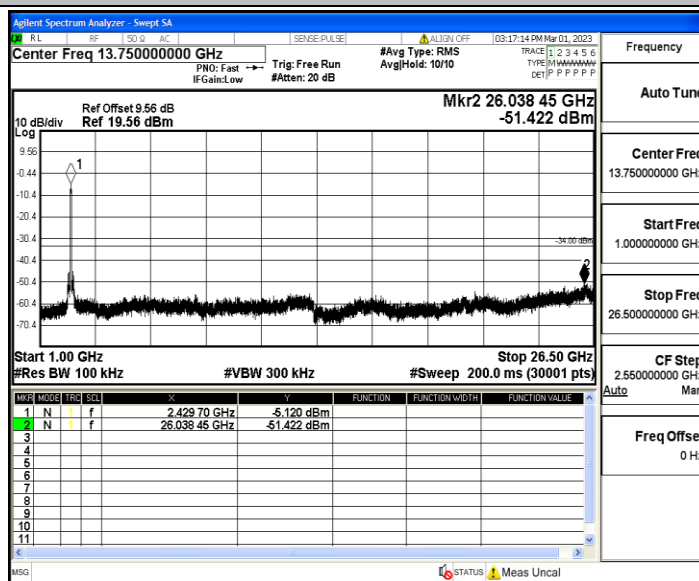
11N40SISO_Ant1_2437_0~Reference



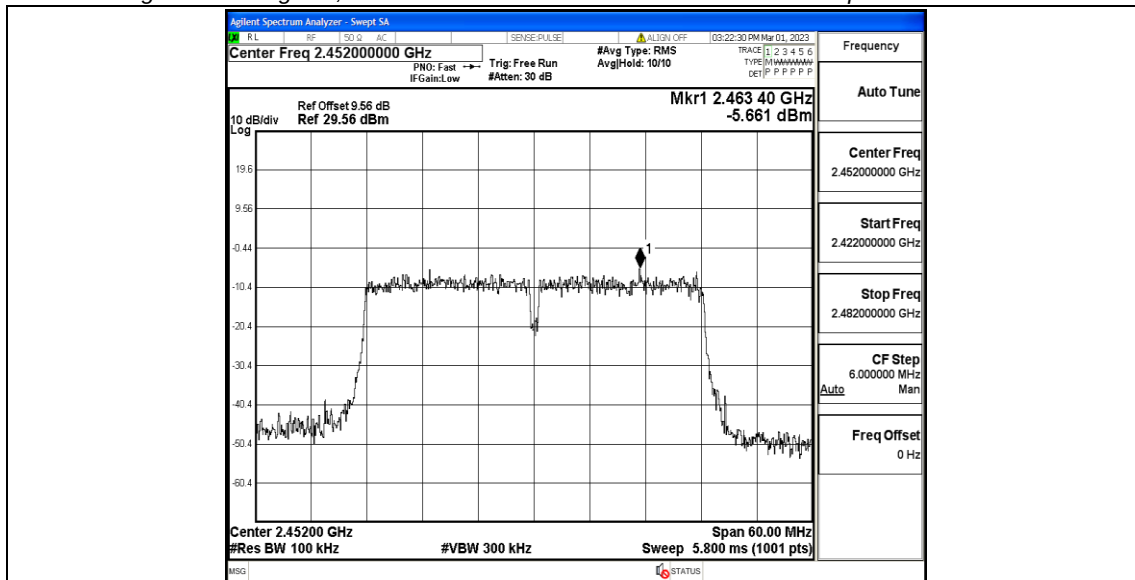
11N40SISO_Ant1_2437_30~1000



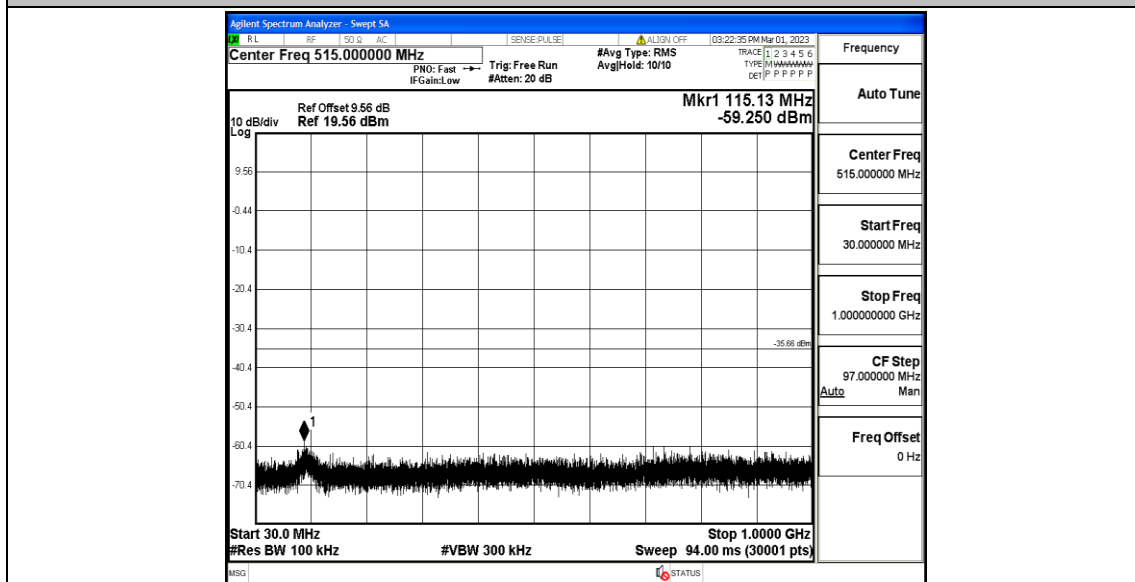
11N40SISO_Ant1_2437_1000~26500



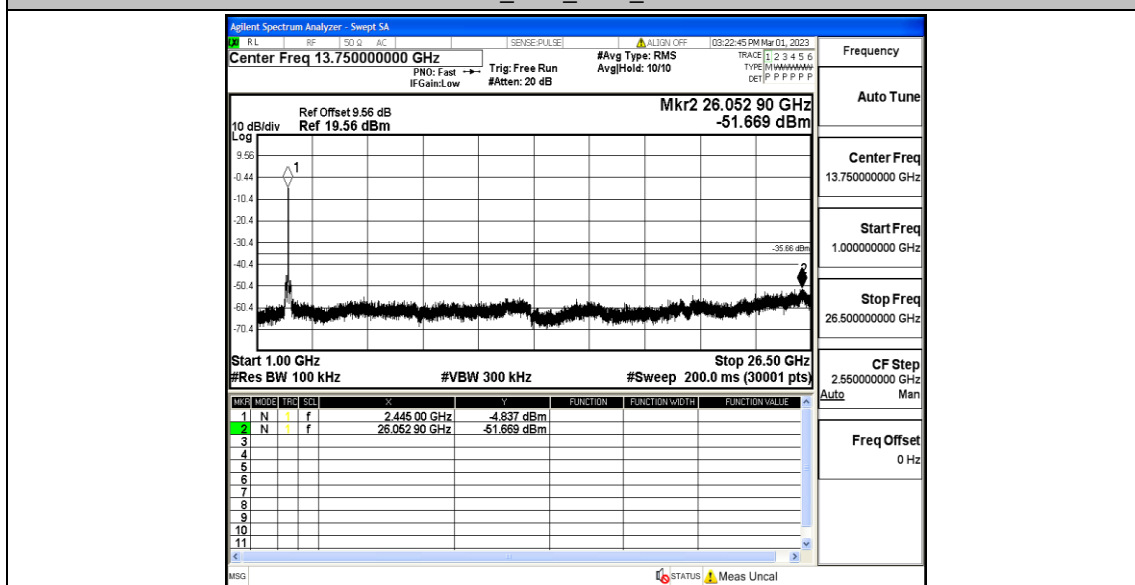
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



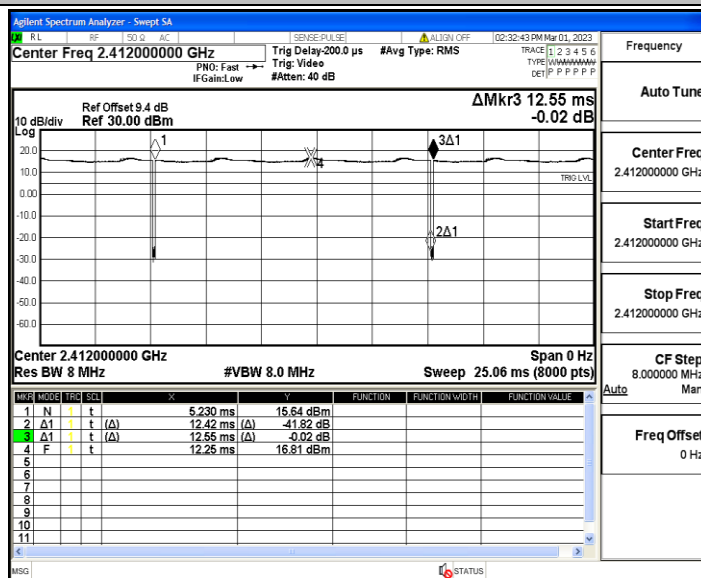
Appendix G: Duty Cycle

Test Result

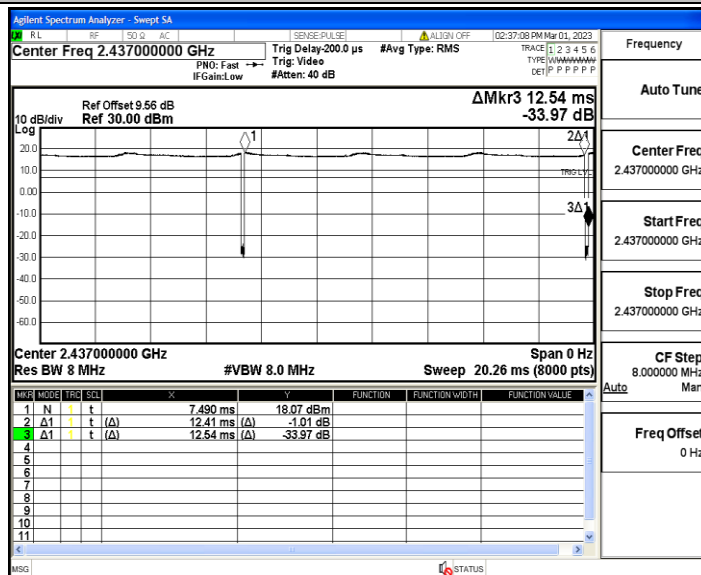
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
11B	Ant1	2412	12.42	12.55	98.96	0.08
		2437	12.41	12.54	98.96	0.08
		2462	12.42	12.55	98.96	0.08
11G	Ant1	2412	2.07	2.20	94.09	0.48
		2437	2.06	2.20	93.64	0.49
		2462	2.06	2.19	94.06	0.49
11N20SISO	Ant1	2412	1.91	2.05	93.17	0.52
		2437	1.92	2.05	93.66	0.52
		2462	1.91	2.05	93.17	0.52
11N40SISO	Ant1	2422	0.94	1.08	87.04	1.06
		2437	0.95	1.08	87.96	1.05
		2452	0.94	1.07	87.85	1.06

Test Graphs

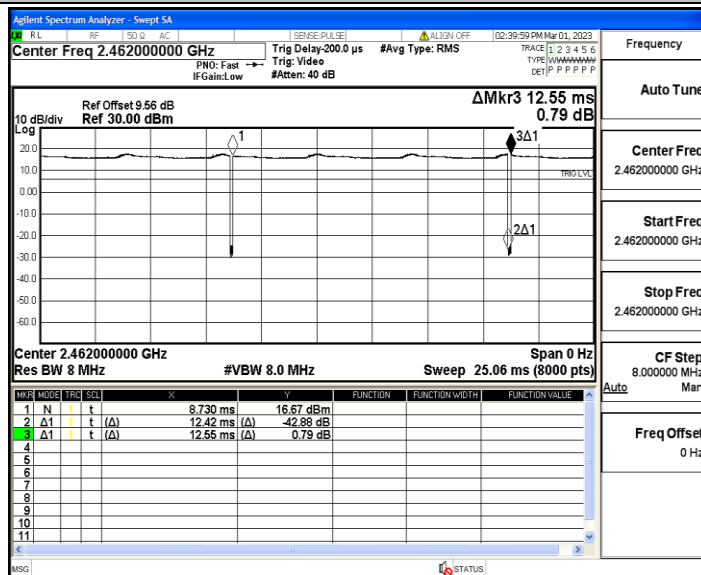
11B_Ant1_2412



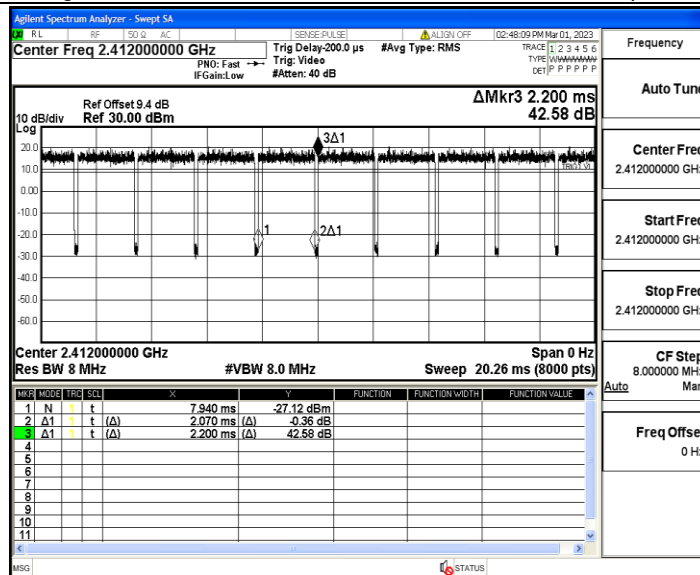
11B_Ant1_2437



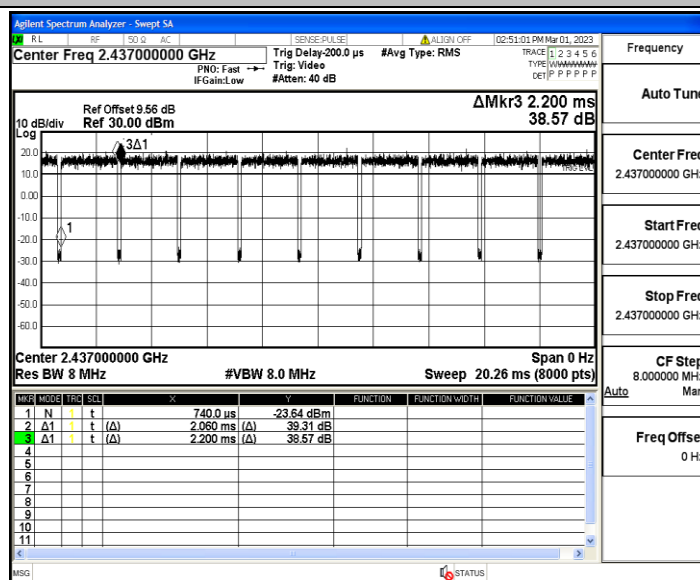
11B_Ant1_2462



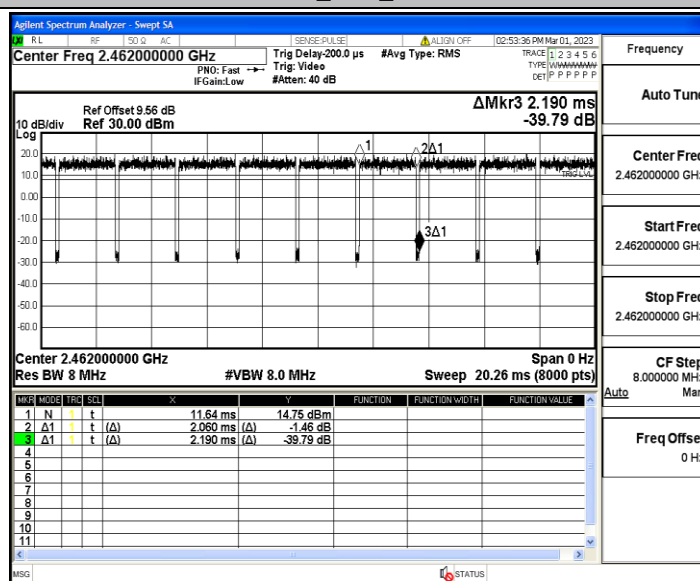
11G_Ant1_2412



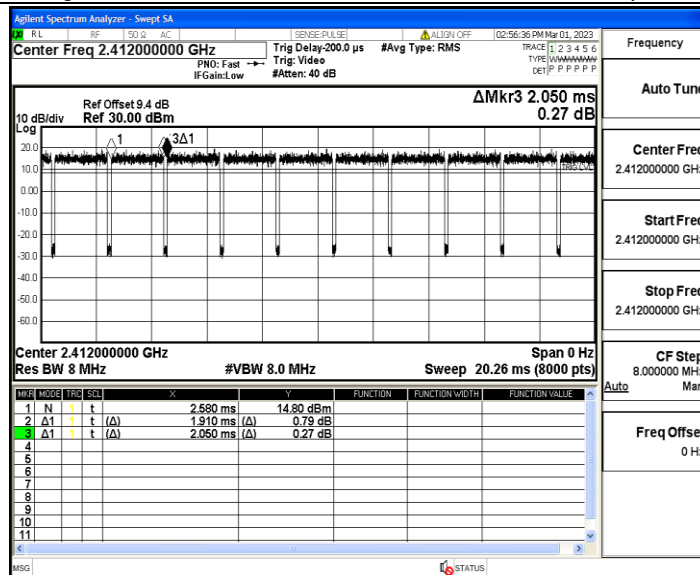
11G_Ant1_2437



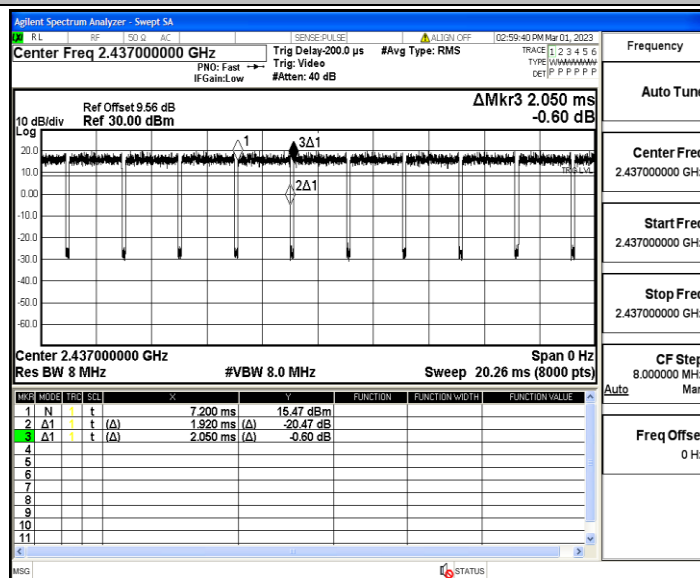
11G_Ant1_2462



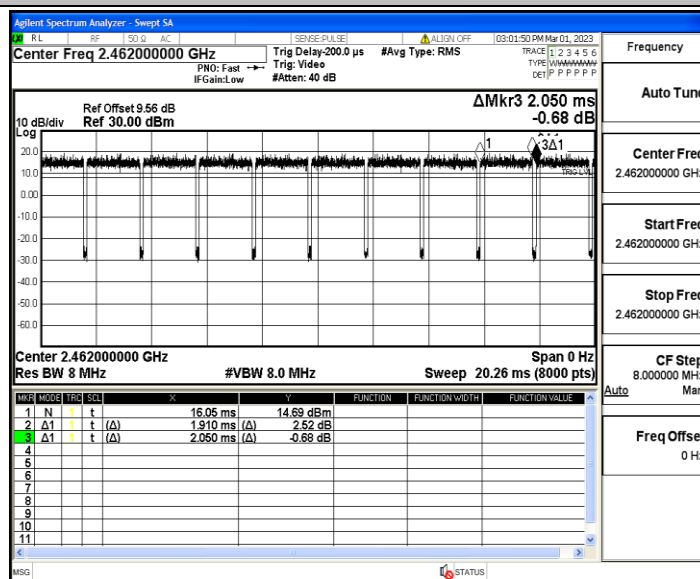
11N20SISO_Ant1_2412



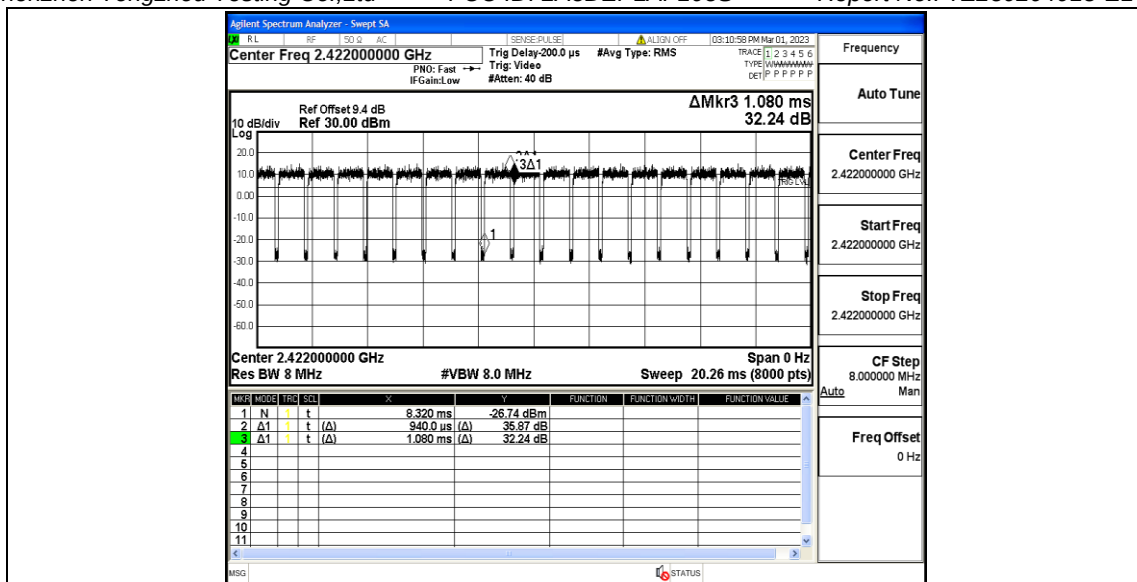
11N20SISO_Ant1_2437



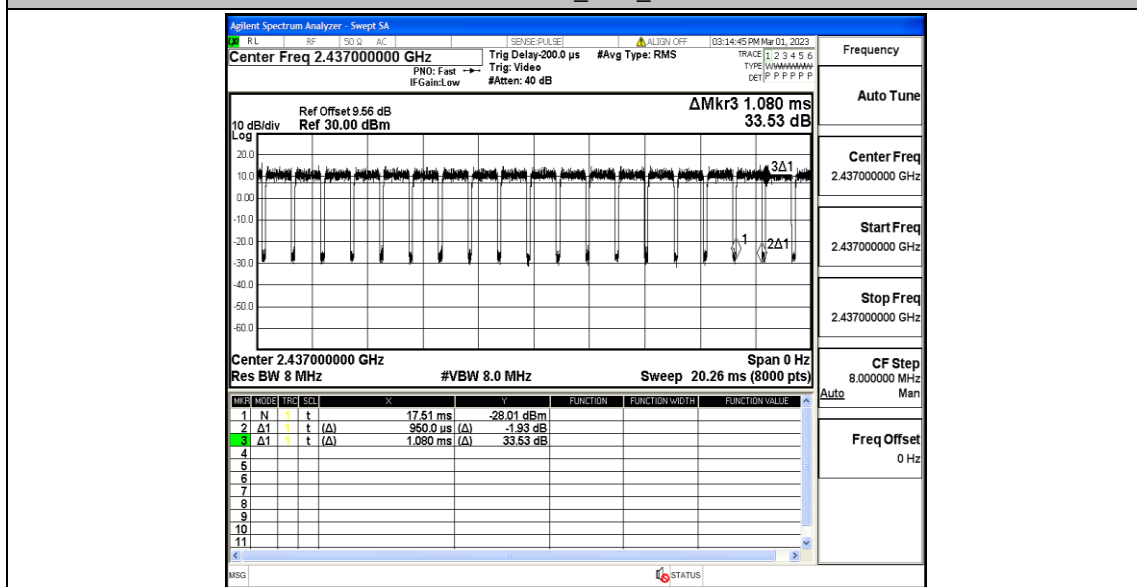
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

