

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

Product Name: Wanbo Projector

Trade Mark: wanbo

Test Model: T4

FCC ID:2A7PIT4

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

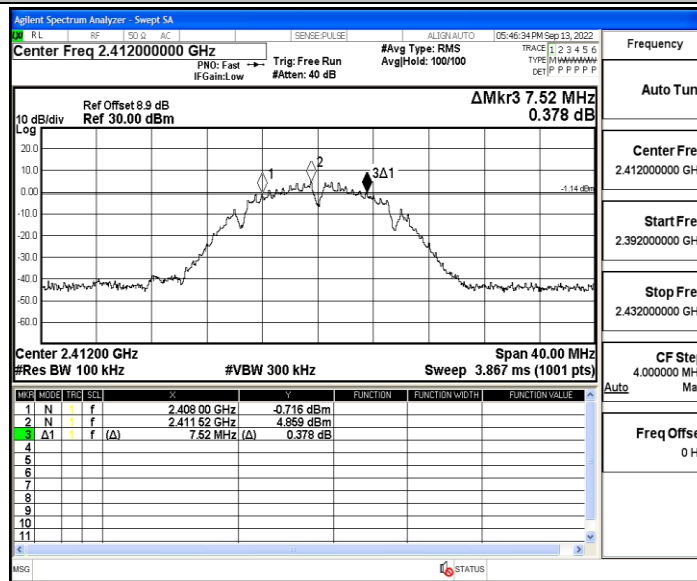
Appendix A: DTS Bandwidth

Test Result

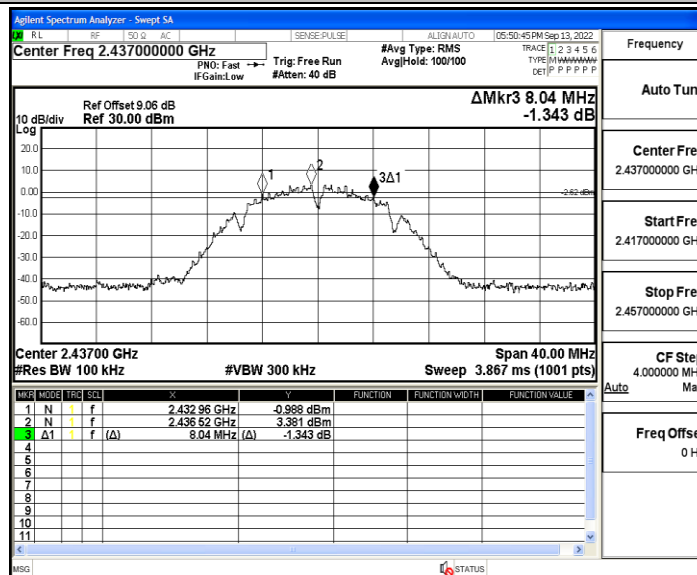
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.520	2408.000	2415.520	0.5	PASS
		2437	8.040	2432.960	2441.000	0.5	PASS
		2462	8.080	2457.960	2466.040	0.5	PASS
11G	Ant1	2412	13.520	2405.120	2418.640	0.5	PASS
		2437	14.480	2429.440	2443.920	0.5	PASS
		2462	15.040	2454.440	2469.480	0.5	PASS
11N20SISO	Ant1	2412	15.080	2404.440	2419.520	0.5	PASS
		2437	15.080	2429.440	2444.520	0.5	PASS
		2462	15.120	2454.440	2469.560	0.5	PASS
11N40SISO	Ant1	2422	35.120	2404.400	2439.520	0.5	PASS
		2437	36.080	2418.760	2454.840	0.5	PASS
		2452	35.040	2434.480	2469.520	0.5	PASS

Test Graphs

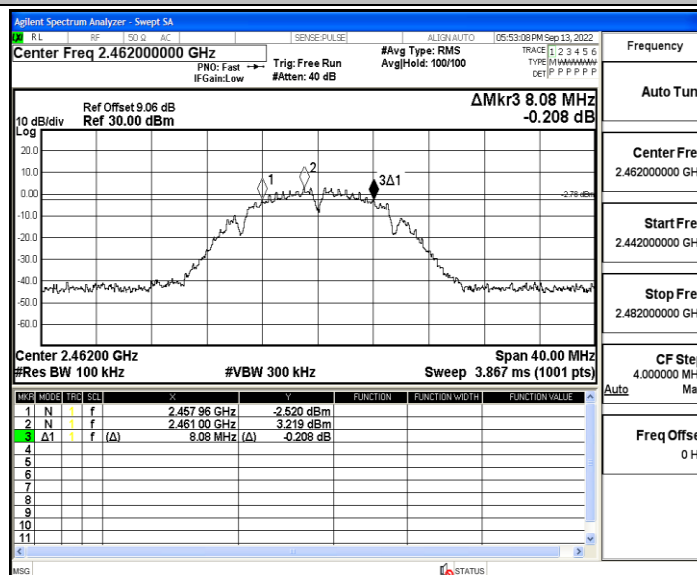
11B_Ant1_2412



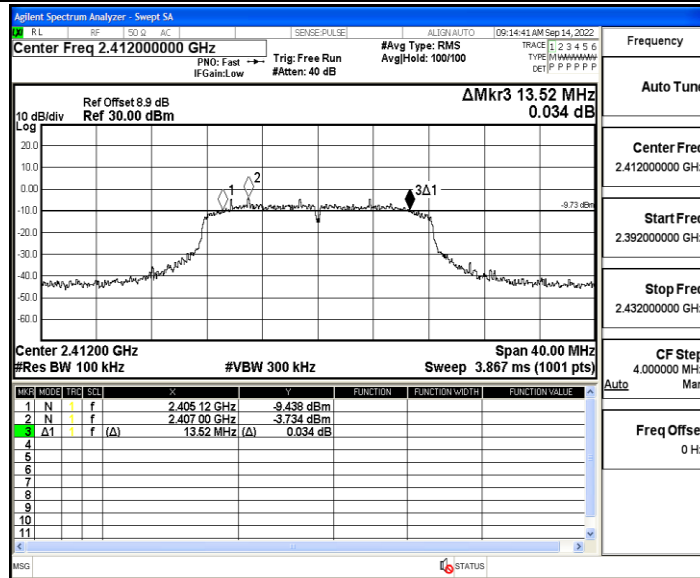
11B_Ant1_2437



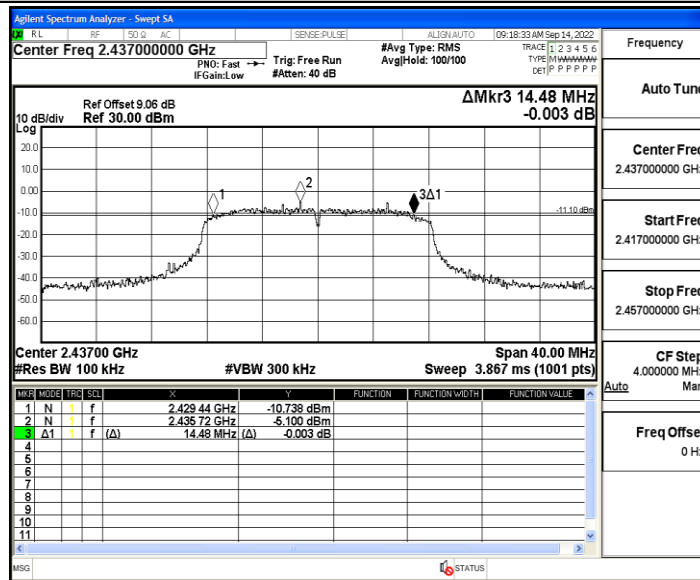
11B_Ant1_2462



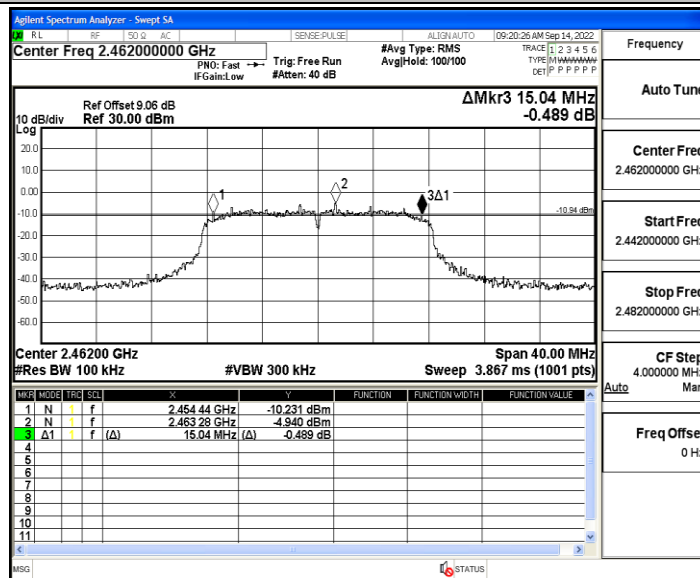
11G_Ant1_2412



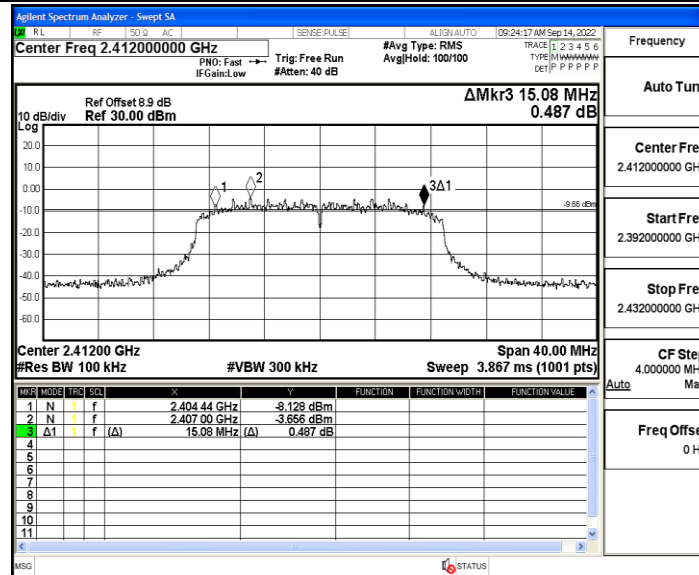
11G_Ant1_2437



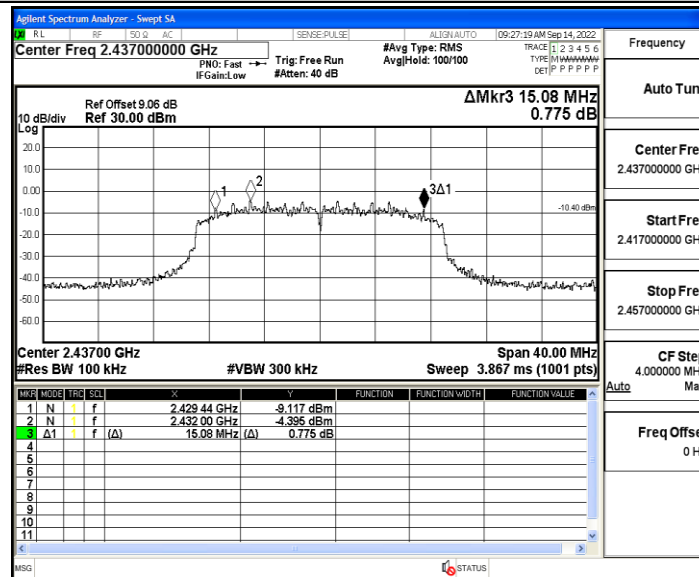
11G_Ant1_2462



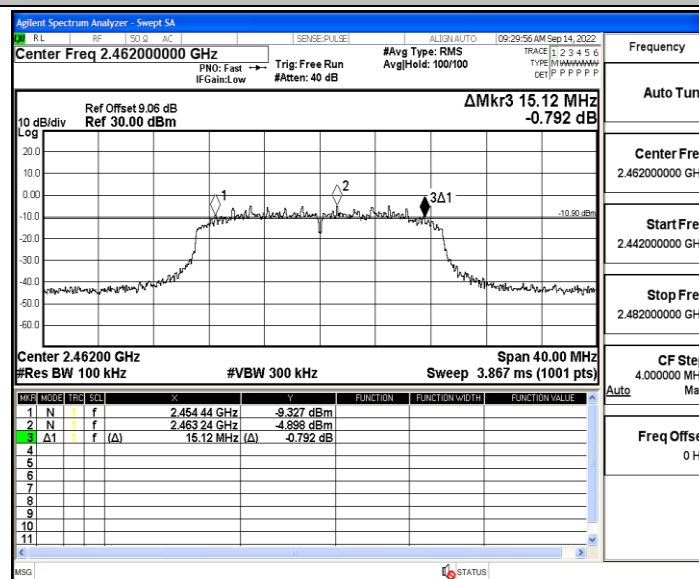
11N20SISO_Ant1_2412



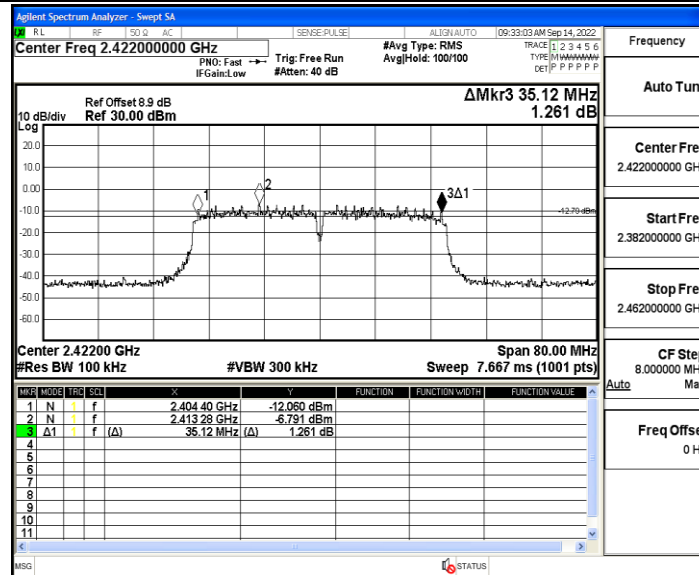
11N20SISO_Ant1_2437



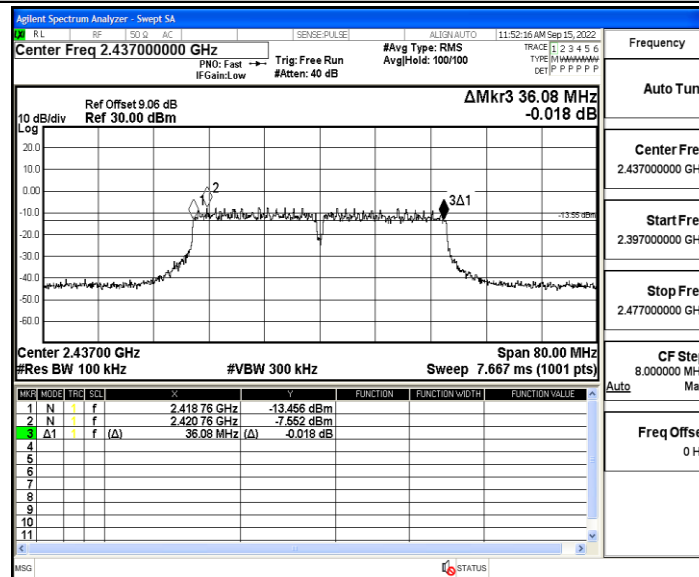
11N20SISO_Ant1_2462



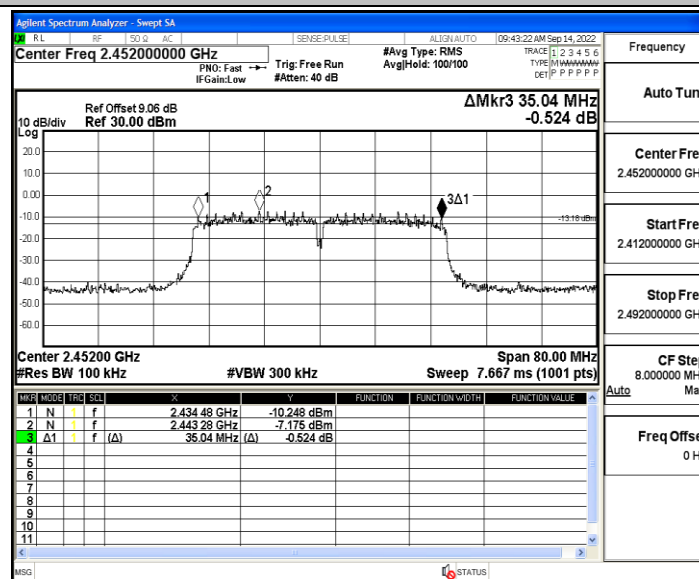
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



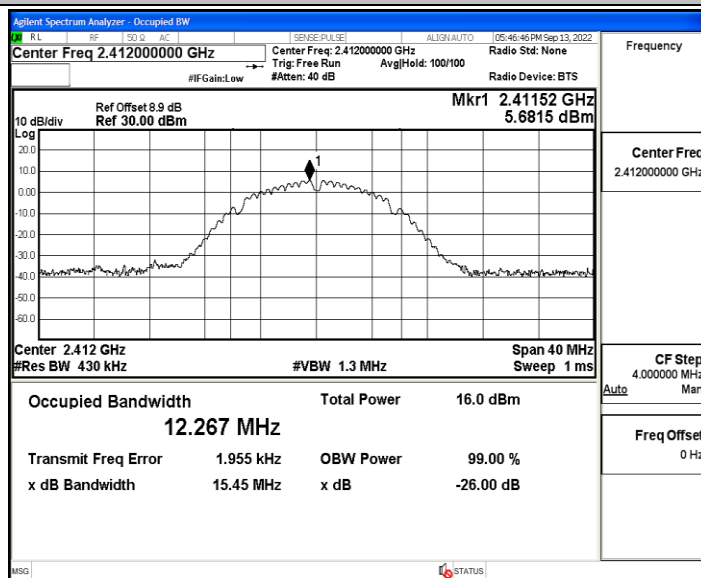
Appendix B: Occupied Channel Bandwidth

Test Result

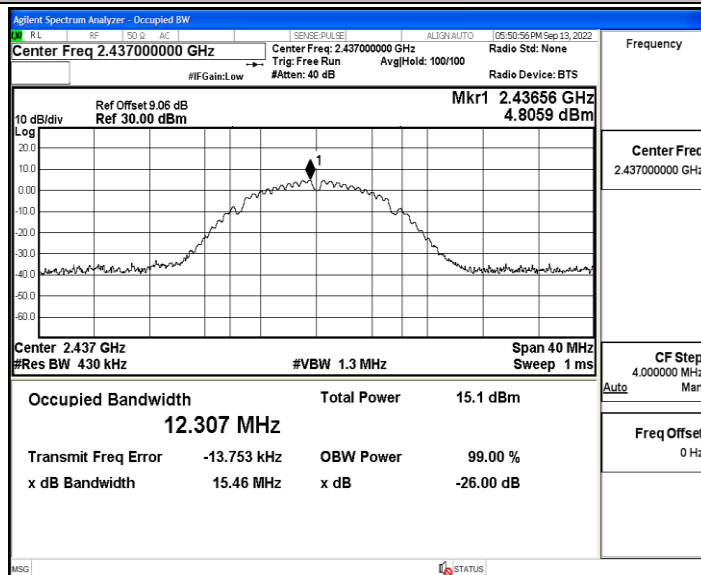
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.267	2405.868	2418.135	---	---
		2437	12.307	2430.833	2443.140	---	---
		2462	12.306	2455.869	2468.175	---	---
11G	Ant1	2412	16.361	2403.811	2420.172	---	---
		2437	16.361	2428.803	2445.164	---	---
		2462	16.352	2453.835	2470.187	---	---
11N20SISO	Ant1	2412	17.346	2403.327	2420.673	---	---
		2437	17.386	2428.324	2445.710	---	---
		2462	17.398	2453.321	2470.719	---	---
11N40SISO	Ant1	2422	35.947	2404.040	2439.987	---	---
		2437	36.741	2418.606	2455.347	---	---
		2452	36.168	2433.912	2470.080	---	---

Test Graphs

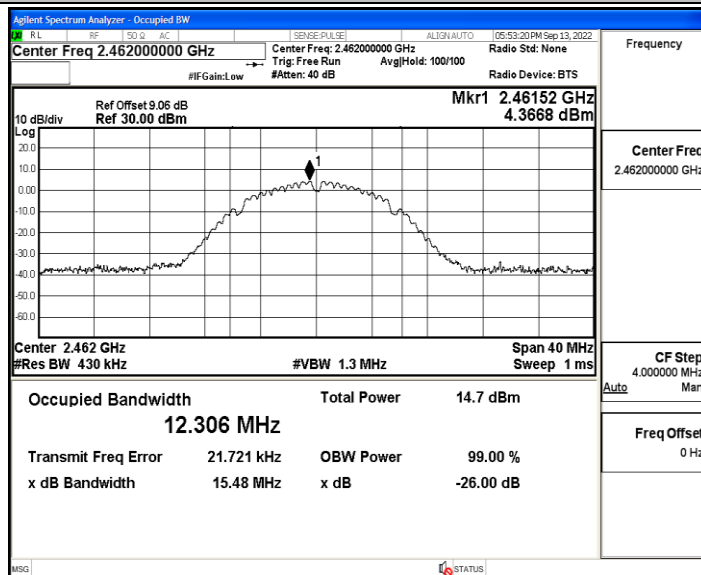
11B_Ant1_2412



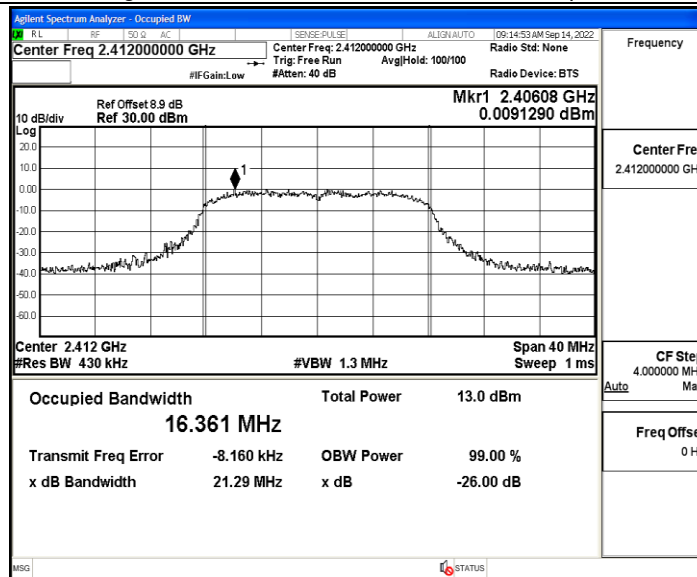
11B_Ant1_2437



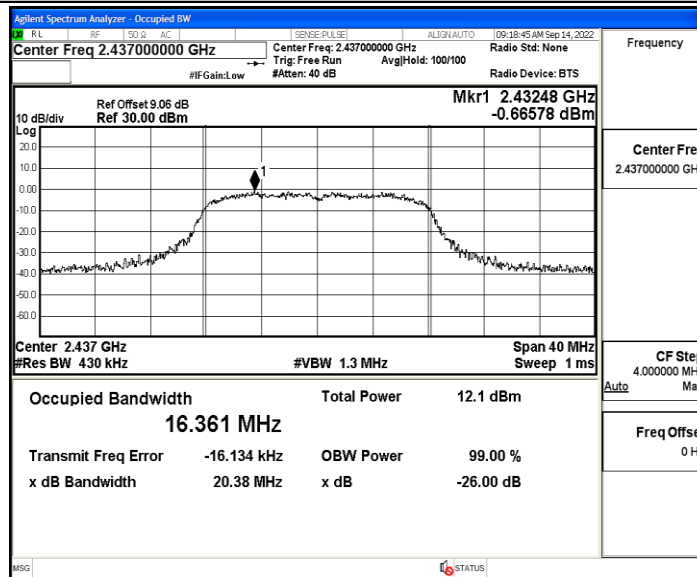
11B_Ant1_2462



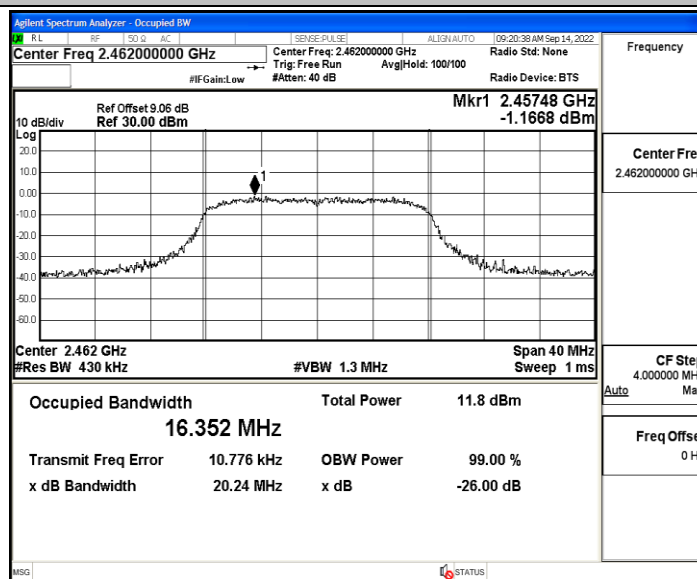
11G_Ant1_2412



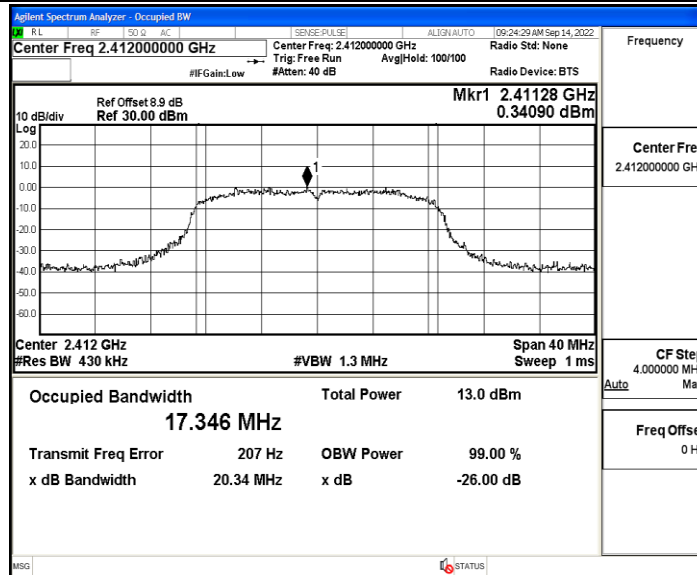
11G_Ant1_2437



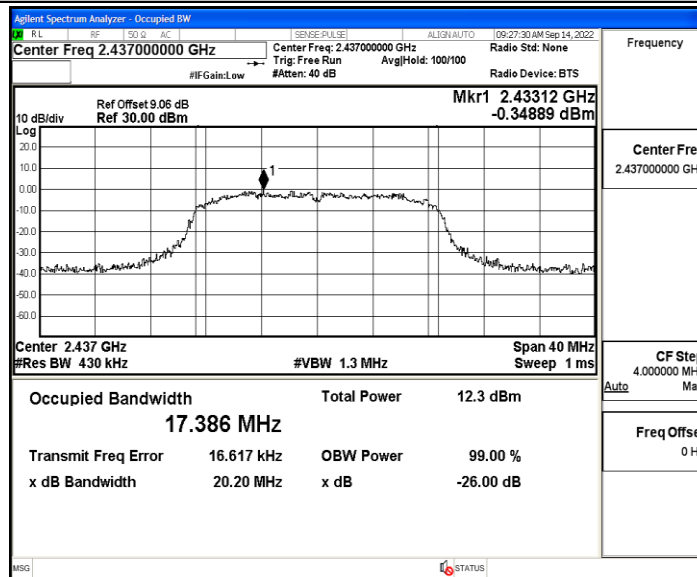
11G_Ant1_2462



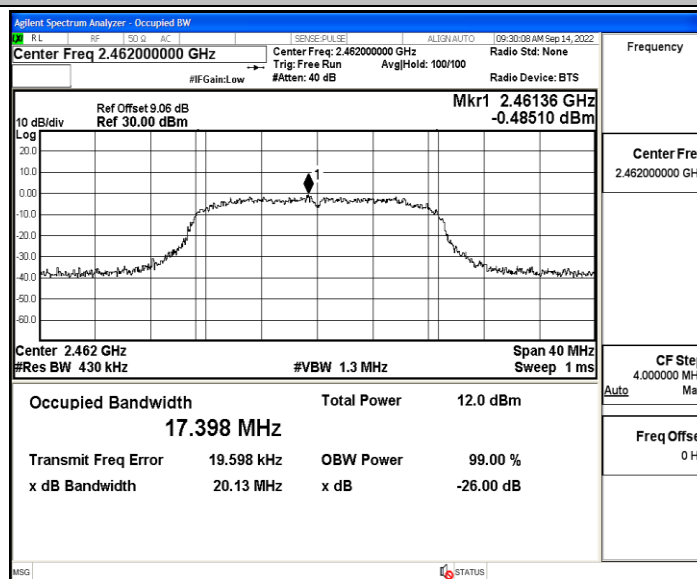
11N20SISO_Ant1_2412



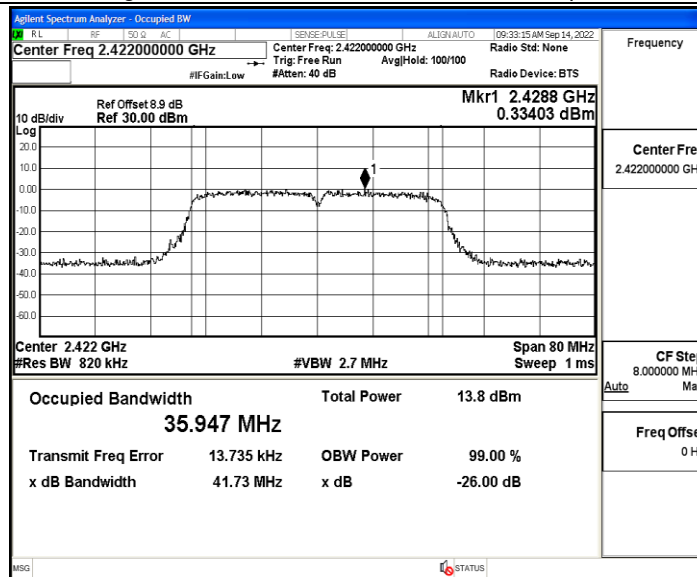
11N20SISO_Ant1_2437



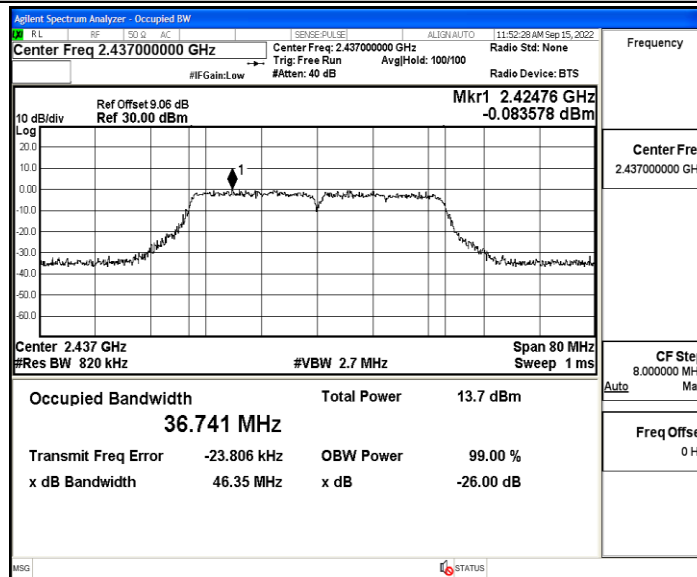
11N20SISO_Ant1_2462



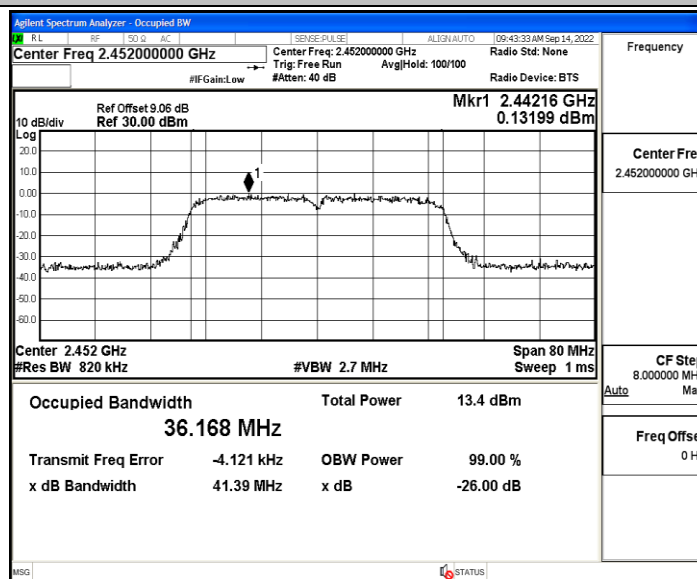
11N40SISO_Ant1_2422



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	15.40	≤30.00	PASS
		2437	14.64	≤30.00	PASS
		2462	14.24	≤30.00	PASS
11G	Ant1	2412	13.57	≤30.00	PASS
		2437	12.96	≤30.00	PASS
		2462	12.70	≤30.00	PASS
11N20SISO	Ant1	2412	13.50	≤30.00	PASS
		2437	12.91	≤30.00	PASS
		2462	12.58	≤30.00	PASS
11N40SISO	Ant1	2422	13.88	≤30.00	PASS
		2437	13.63	≤30.00	PASS
		2452	13.50	≤30.00	PASS

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

Appendix D: Maximum power spectral density

Test Result

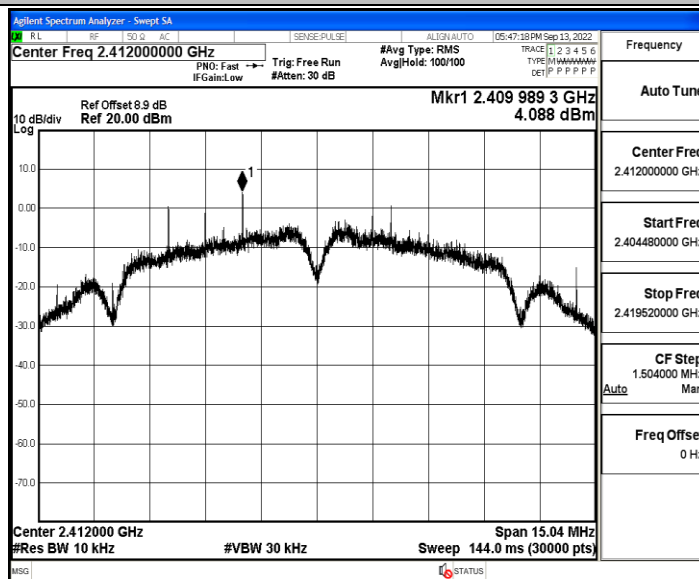
TestMode	Antenna	Channel	Result[dBm/10kHz]	Convert factor[dB]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	4.09	-5.23	-1.14	≤8.00	PASS
		2437	1.48	-5.23	-3.75	≤8.00	PASS
		2462	2.69	-5.23	-2.54	≤8.00	PASS
11G	Ant1	2412	-11.89	-5.23	-17.12	≤8.00	PASS
		2437	-12.64	-5.23	-17.87	≤8.00	PASS
		2462	-13.31	-5.23	-18.54	≤8.00	PASS
11N20SISO	Ant1	2412	-12.46	-5.23	-17.69	≤8.00	PASS
		2437	-13.31	-5.23	-18.54	≤8.00	PASS
		2462	-13.44	-5.23	-18.67	≤8.00	PASS
11N40SISO	Ant1	2422	-15.83	-5.23	-21.06	≤8.00	PASS
		2437	-16.2	-5.23	-21.43	≤8.00	PASS
		2452	-15.53	-5.23	-20.76	≤8.00	PASS

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

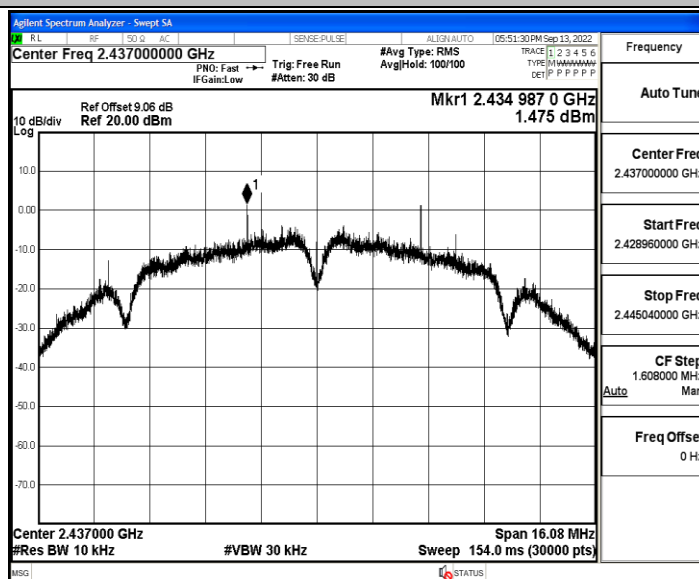
Convert factor[dB] = $10 \cdot \log(3/10) = -5.23$ dB

Test Graphs

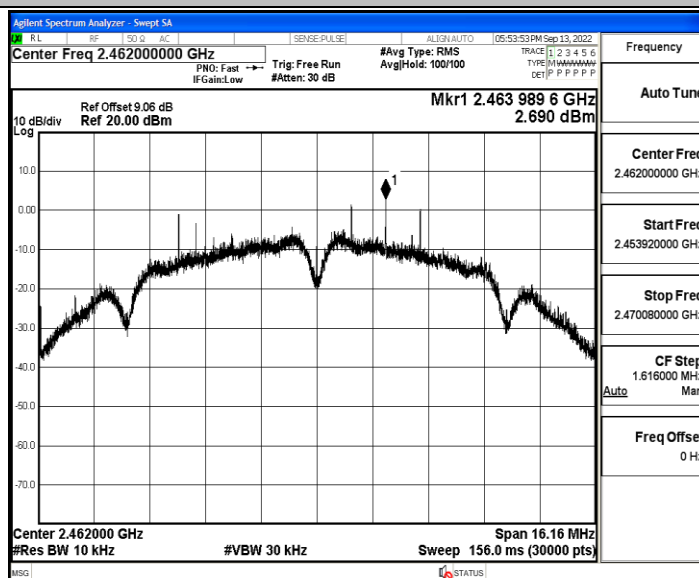
11B_Ant1_2412



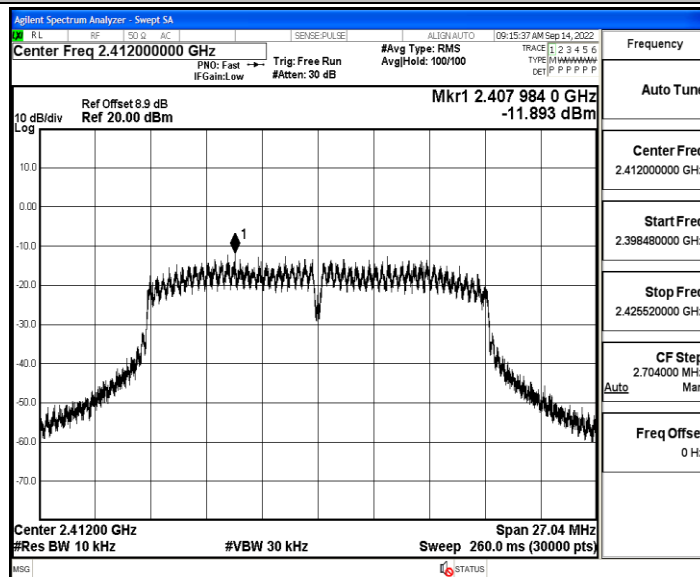
11B_Ant1_2437



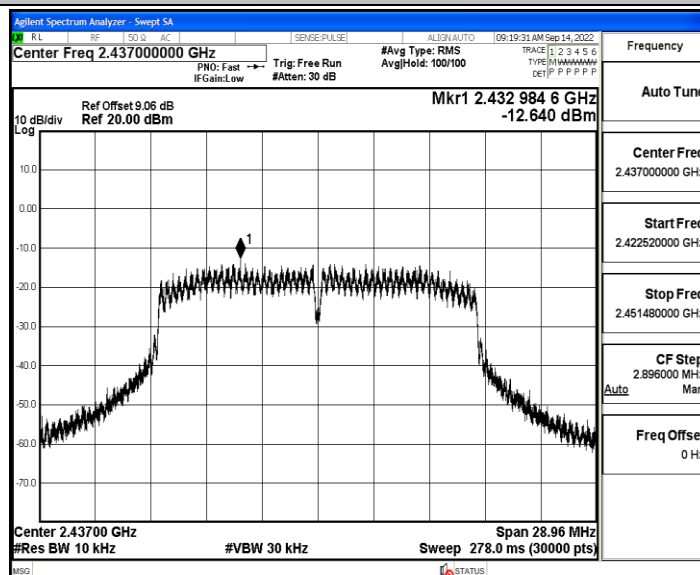
11B_Ant1_2462



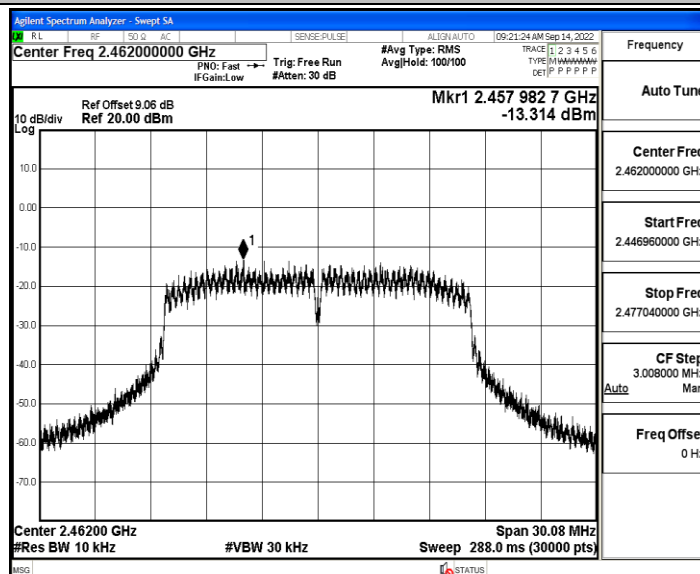
11G_Ant1_2412



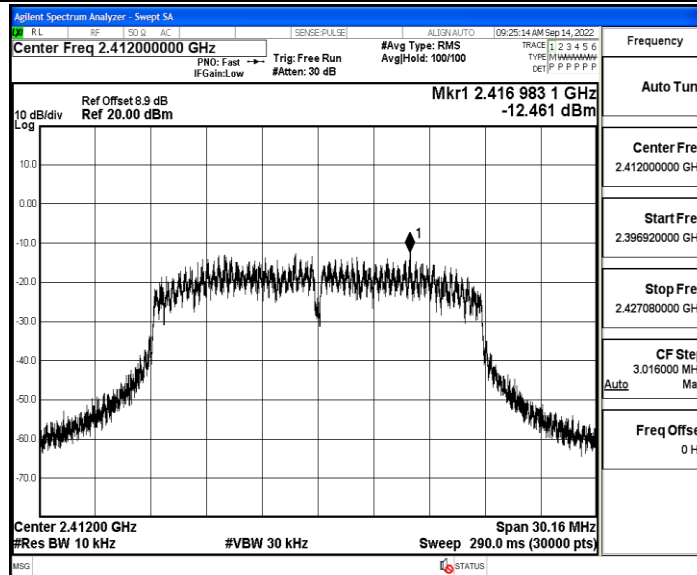
11G_Ant1_2437



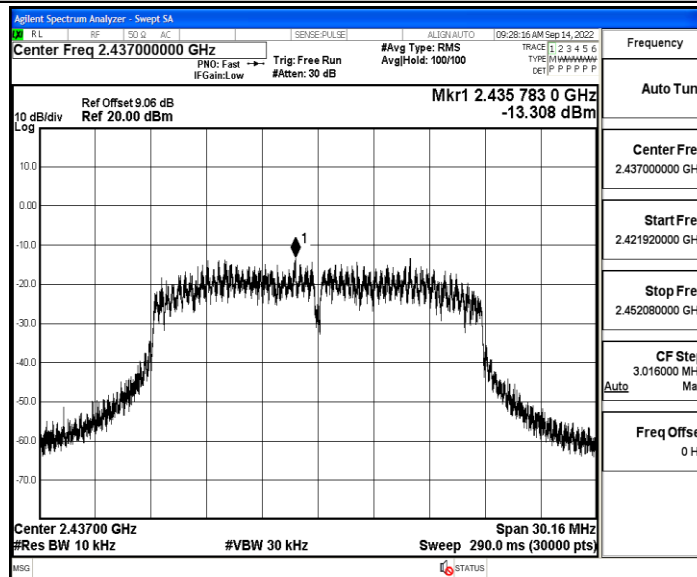
11G_Ant1_2462



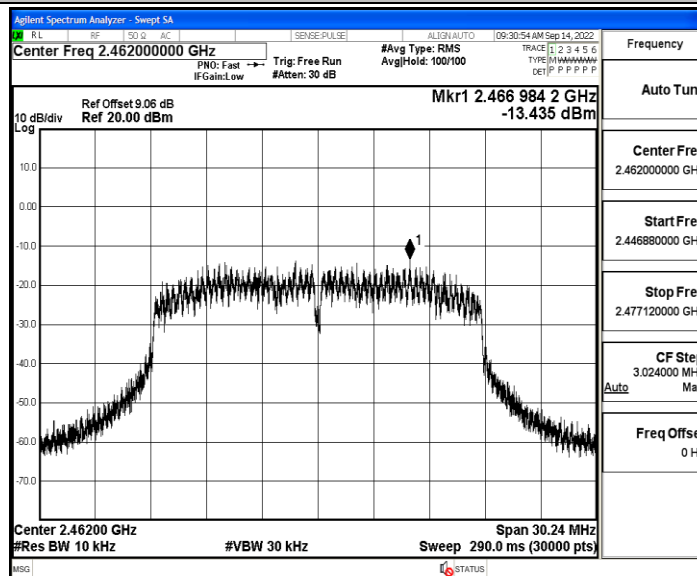
11N20SISO_Ant1_2412



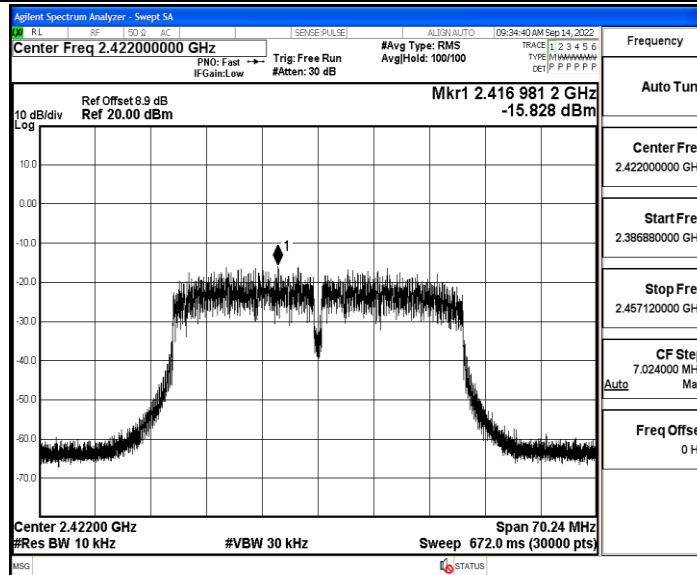
11N20SISO_Ant1_2437



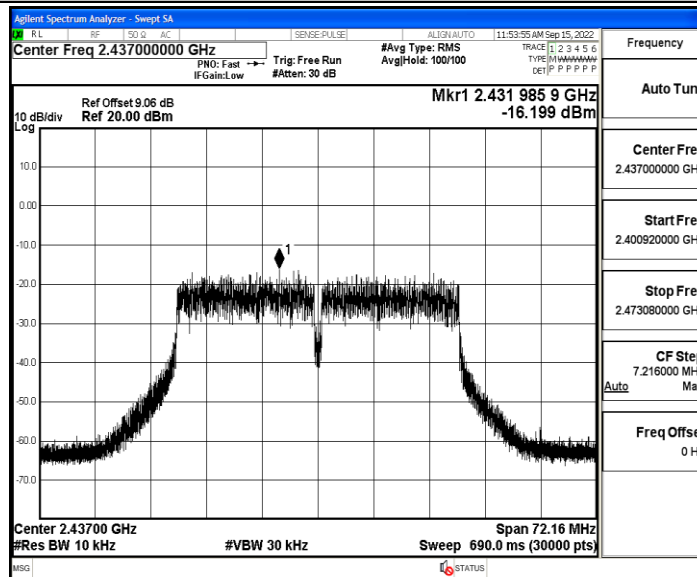
11N20SISO_Ant1_2462



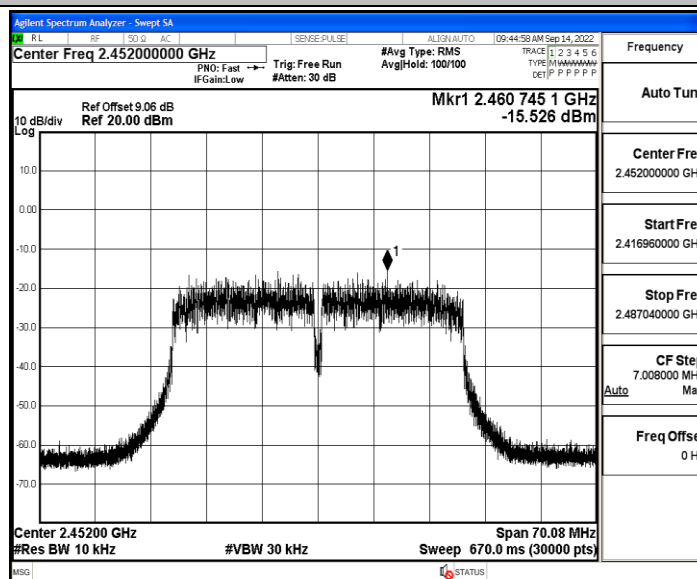
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



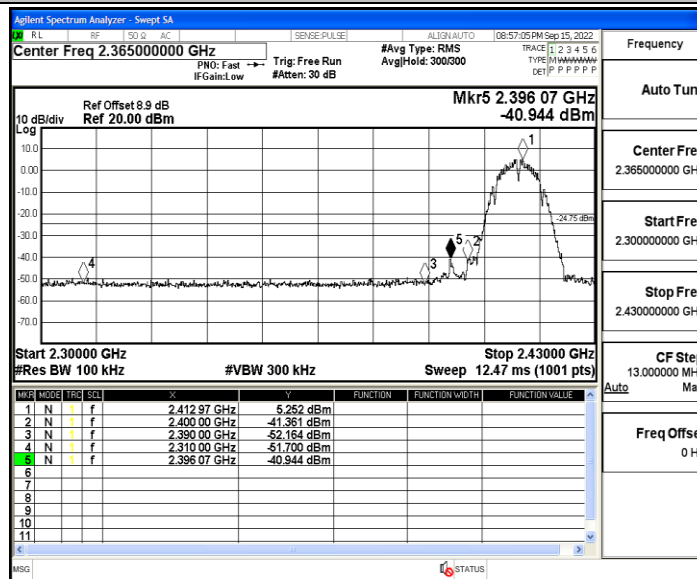
Appendix E: Band edge measurements

Test Result

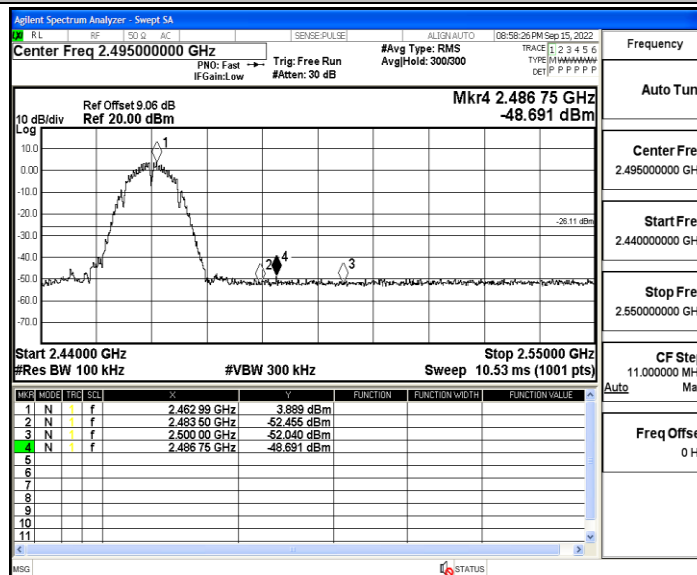
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.25	-40.94	≤ -24.75	PASS
		High	2462	3.89	-48.69	≤ -26.11	PASS
11G	Ant1	Low	2412	-3.39	-38.68	≤ -33.39	PASS
		High	2462	-4.84	-49.28	≤ -34.84	PASS
11N20SISO	Ant1	Low	2412	-3.26	-39.55	≤ -33.26	PASS
		High	2462	-4.28	-48.84	≤ -34.28	PASS
11N40SISO	Ant1	Low	2422	-6.51	-43.74	≤ -36.51	PASS
		High	2452	-7.18	-48.65	≤ -37.18	PASS

Test Graphs

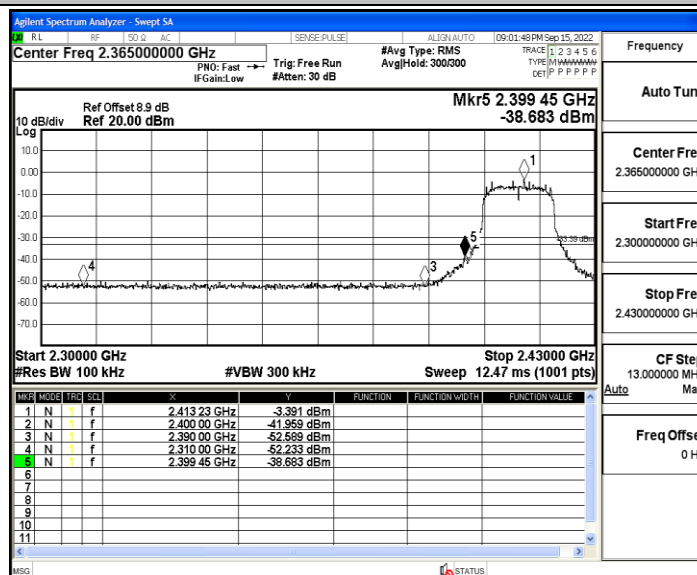
11B_Ant1_Low_2412



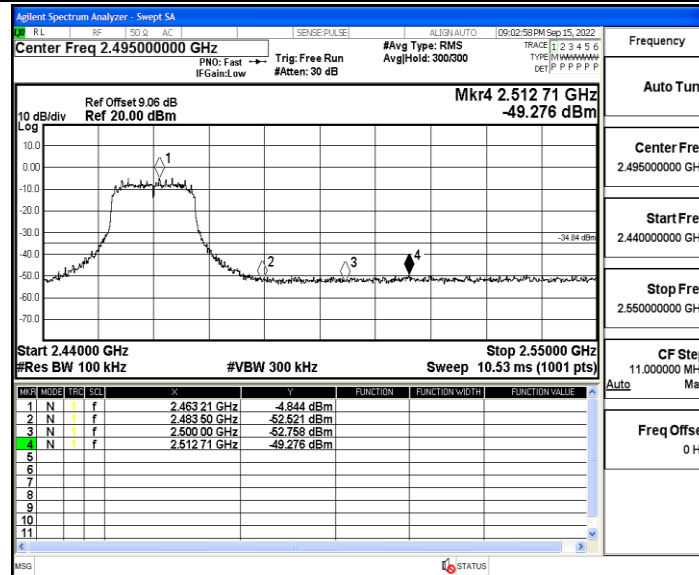
11B_Ant1_High_2462



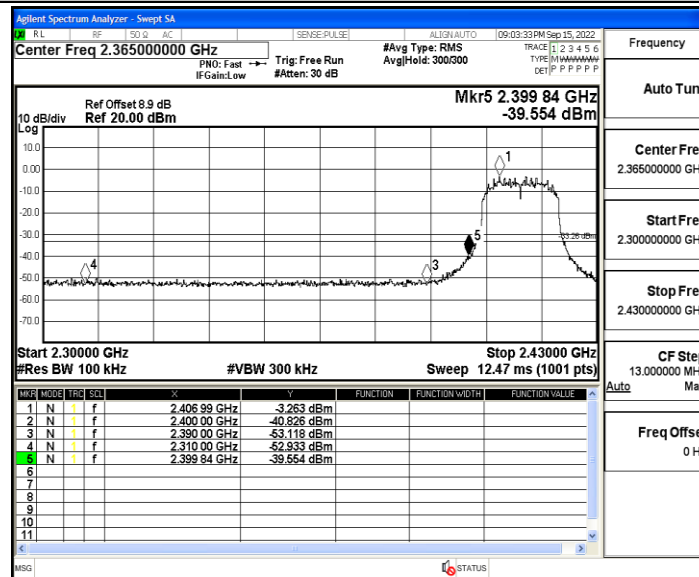
11G_Ant1_Low_2412



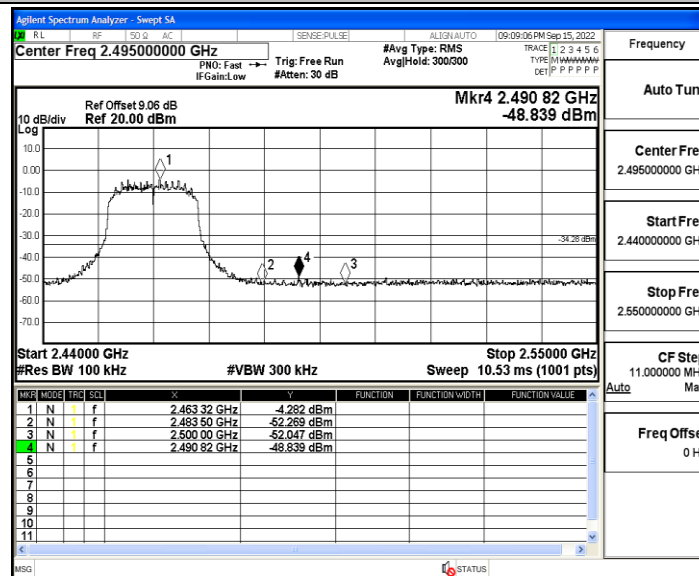
11G_Ant1_High_2462



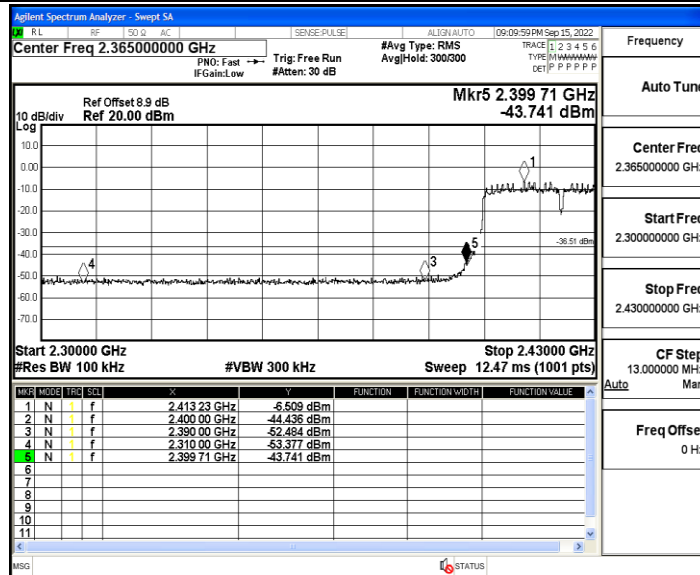
11N20SISO_Ant1_Low_2412



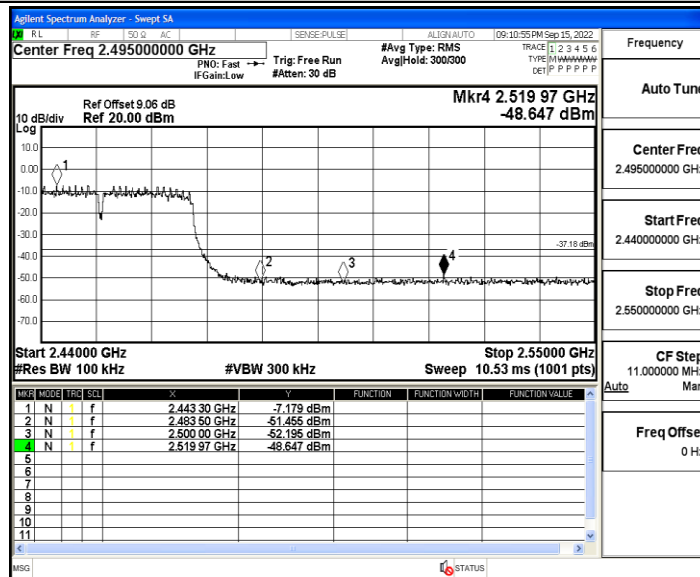
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



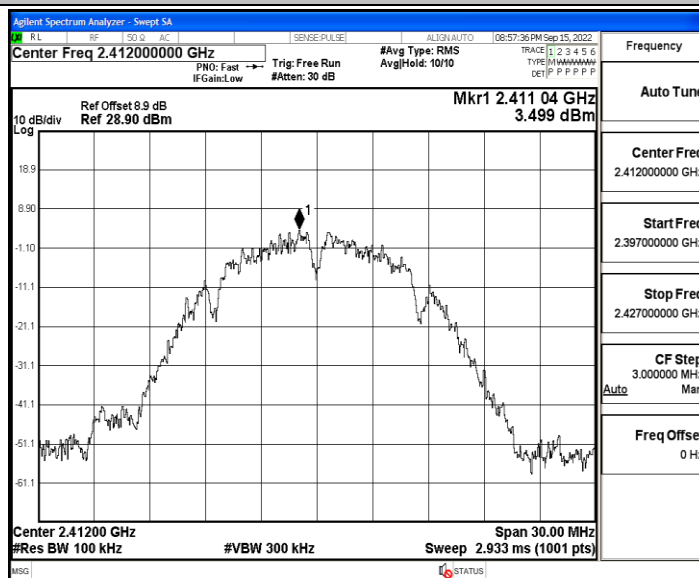
Appendix F: Conducted Spurious Emission

Test Result

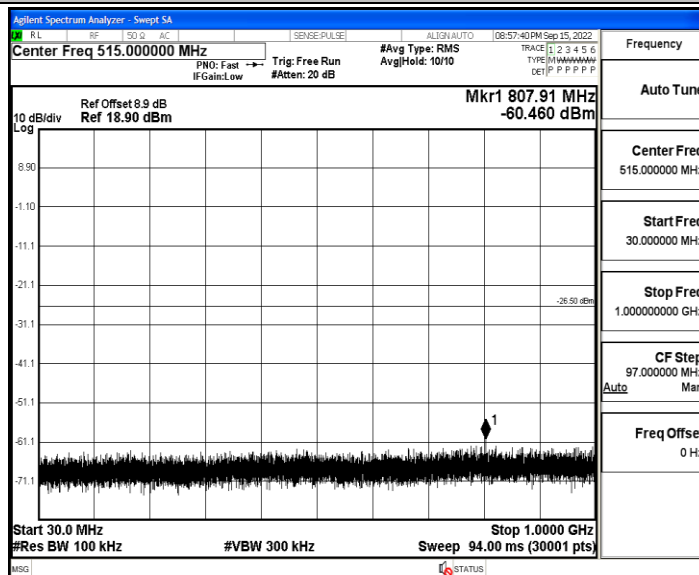
TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	3.50	3.50	---	PASS
			30~1000	3.50	-60.46	≤-26.5	PASS
			1000~26500	3.50	-51.27	≤-26.5	PASS
		2437	Reference	4.09	4.09	---	PASS
			30~1000	4.09	-61.05	≤-25.91	PASS
			1000~26500	4.09	-49.63	≤-25.91	PASS
		2462	Reference	2.54	2.54	---	PASS
			30~1000	2.54	-60.87	≤-27.46	PASS
			1000~26500	2.54	-50.57	≤-27.46	PASS
11G	Ant1	2412	Reference	-6.57	-6.57	---	PASS
			30~1000	-6.57	-61.48	≤-36.57	PASS
			1000~26500	-6.57	-50.72	≤-36.57	PASS
		2437	Reference	-4.50	-4.50	---	PASS
			30~1000	-4.50	-61.19	≤-34.5	PASS
			1000~26500	-4.50	-51.6	≤-34.5	PASS
		2462	Reference	-7.80	-7.80	---	PASS
			30~1000	-7.80	-61.06	≤-37.8	PASS
			1000~26500	-7.80	-50.52	≤-37.8	PASS
11N20SISO	Ant1	2412	Reference	-3.92	-3.92	---	PASS
			30~1000	-3.92	-61.89	≤-33.92	PASS
			1000~26500	-3.92	-51.39	≤-33.92	PASS
		2437	Reference	-3.24	-3.24	---	PASS
			30~1000	-3.24	-61.63	≤-33.24	PASS
			1000~26500	-3.24	-51.08	≤-33.24	PASS
		2462	Reference	-4.42	-4.42	---	PASS
			30~1000	-4.42	-61.34	≤-34.42	PASS
			1000~26500	-4.42	-51.14	≤-34.42	PASS
11N40SISO	Ant1	2422	Reference	-6.87	-6.87	---	PASS
			30~1000	-6.87	-61.46	≤-36.87	PASS
			1000~26500	-6.87	-50.61	≤-36.87	PASS
		2437	Reference	-7.58	-7.58	---	PASS
			30~1000	-7.58	-61.53	≤-37.58	PASS
			1000~26500	-7.58	-50.48	≤-37.58	PASS
		2452	Reference	-7.52	-7.52	---	PASS
			30~1000	-7.52	-61.59	≤-37.52	PASS
			1000~26500	-7.52	-49.63	≤-37.52	PASS

Test Graphs

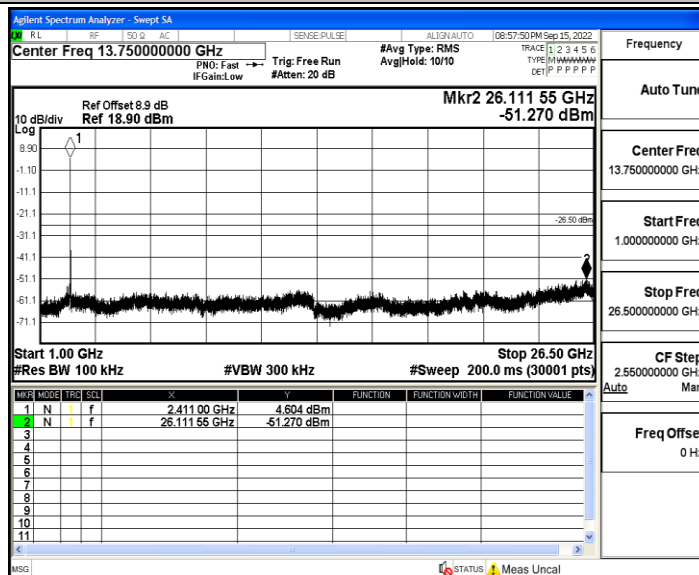
11B_Ant1_2412_0~Reference



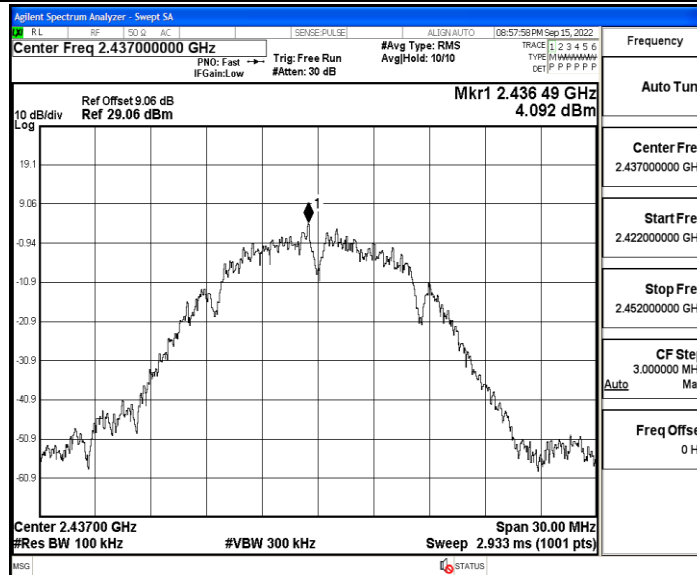
11B_Ant1_2412_30~1000



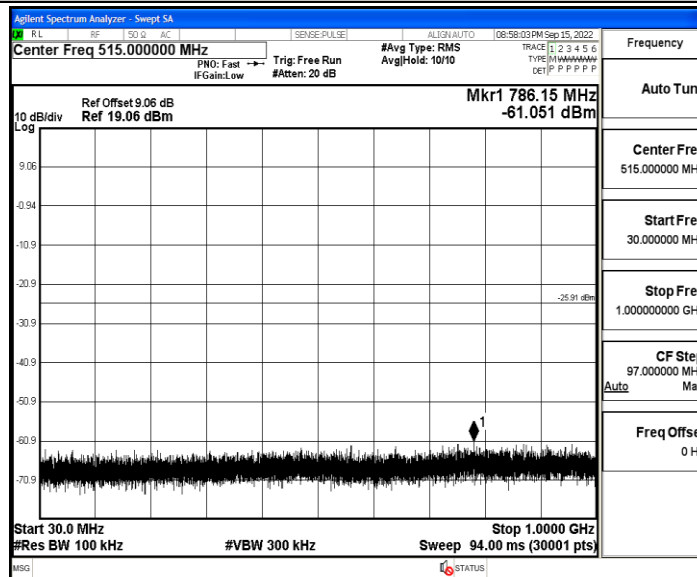
11B_Ant1_2412_1000~26500



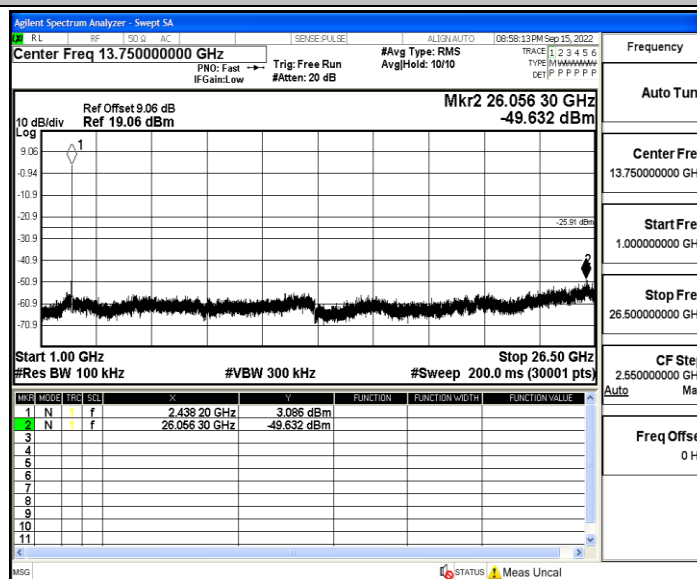
11B_Ant1_2437_0~Reference



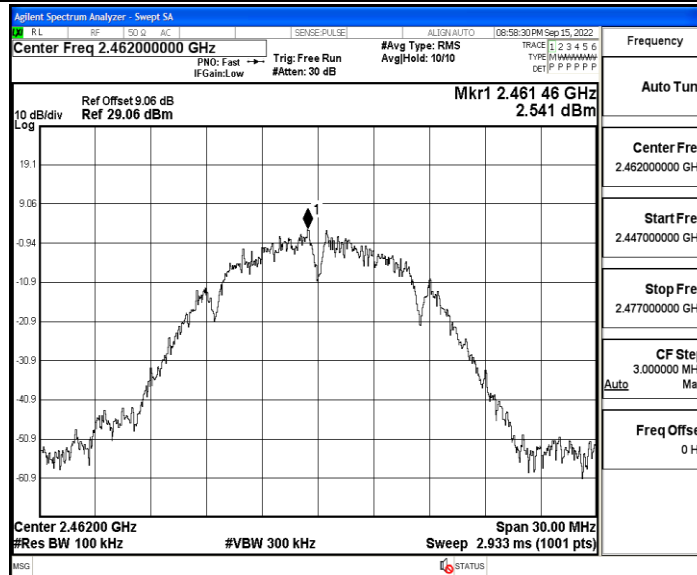
11B_Ant1_2437_30~1000



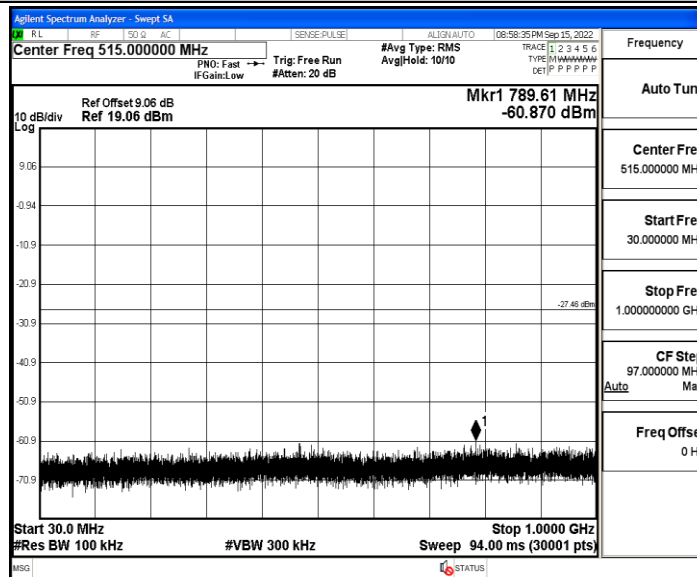
11B_Ant1_2437_1000~26500



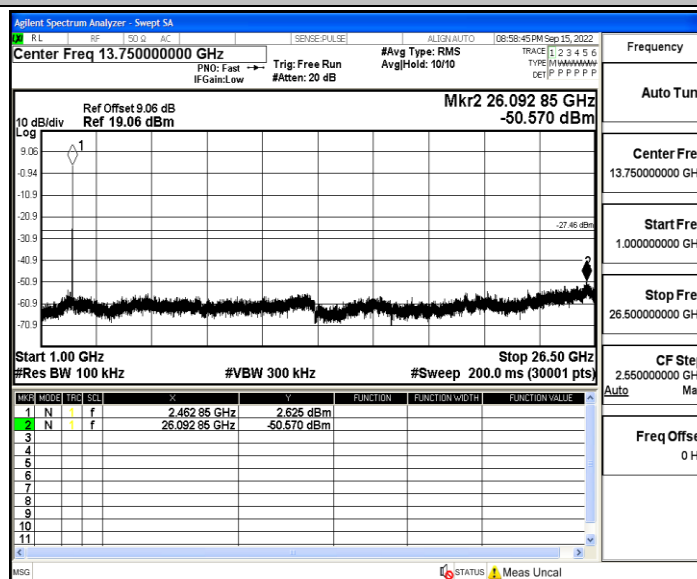
11B_Ant1_2462_0~Reference



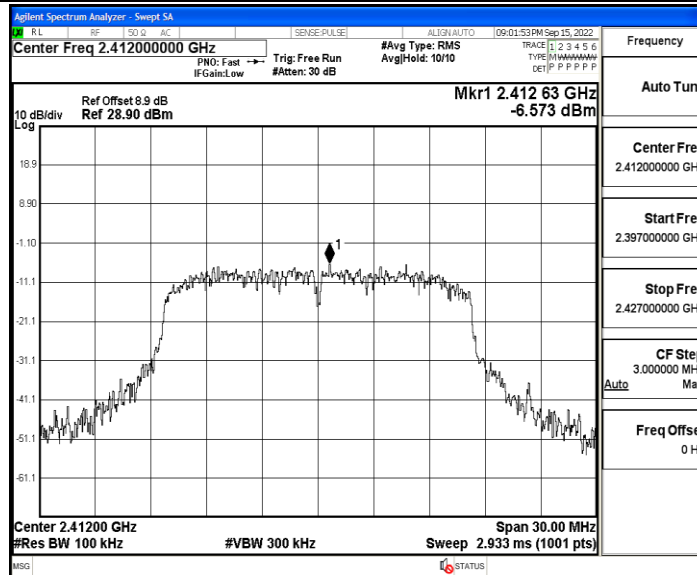
11B_Ant1_2462_30~1000



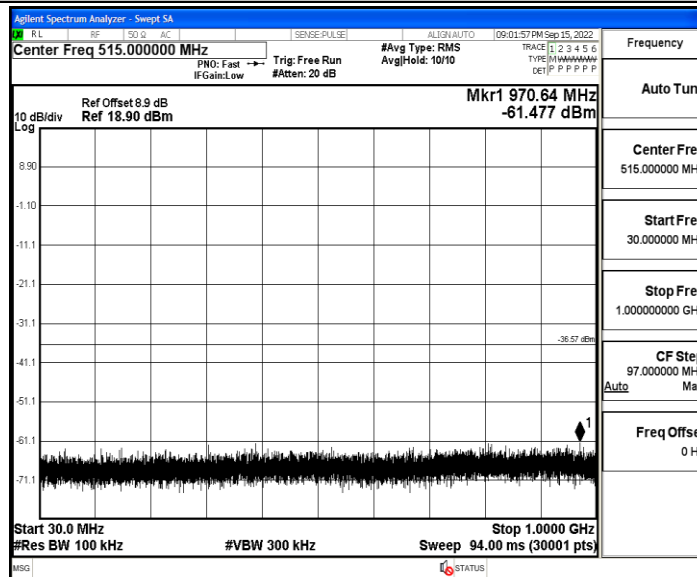
11B_Ant1_2462_1000~26500



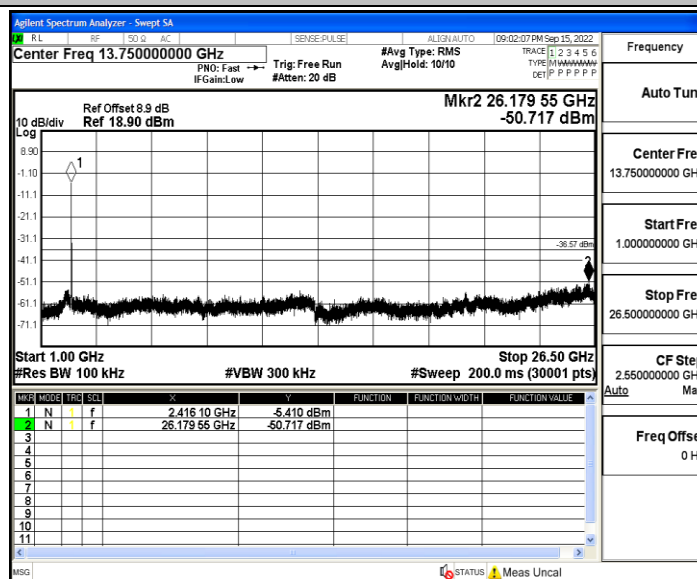
11G_Ant1_2412_0~Reference



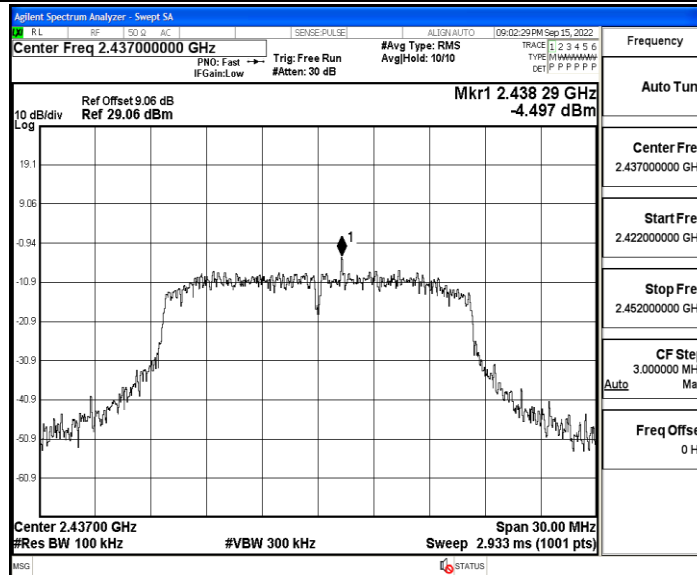
11G_Ant1_2412_30~1000



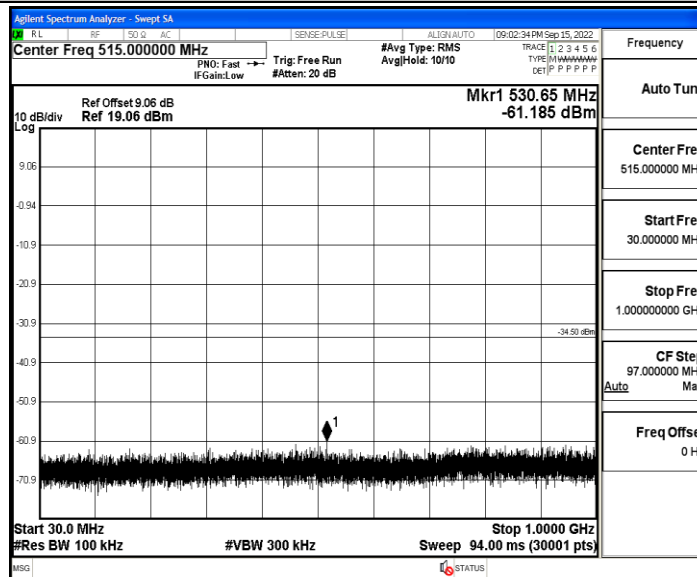
11G_Ant1_2412_1000~26500



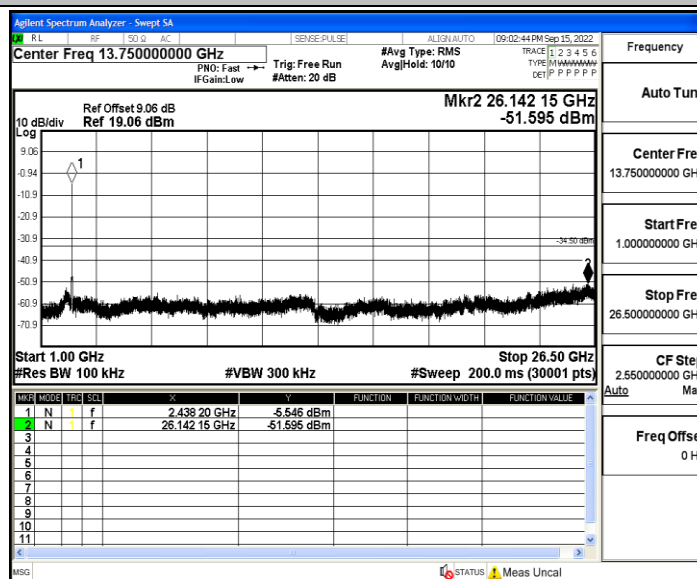
11G_Ant1_2437_0~Reference



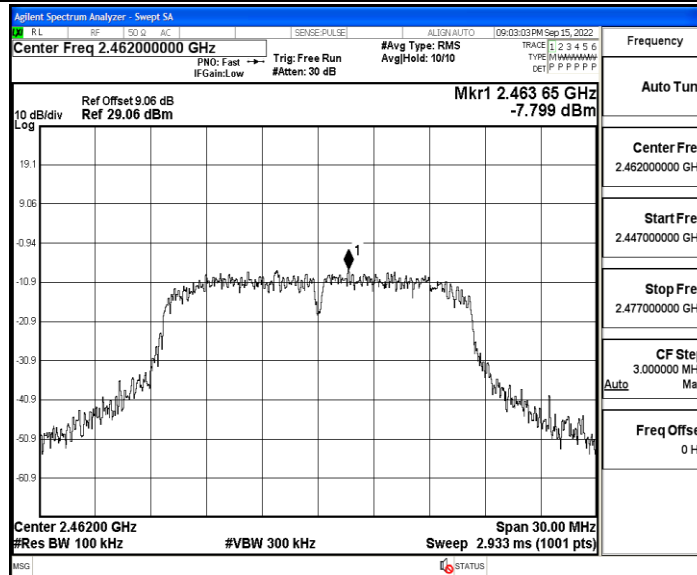
11G_Ant1_2437_30~1000



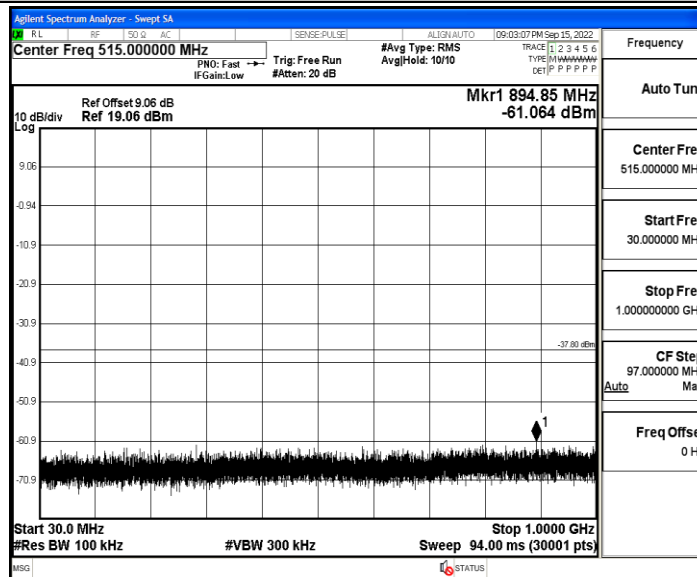
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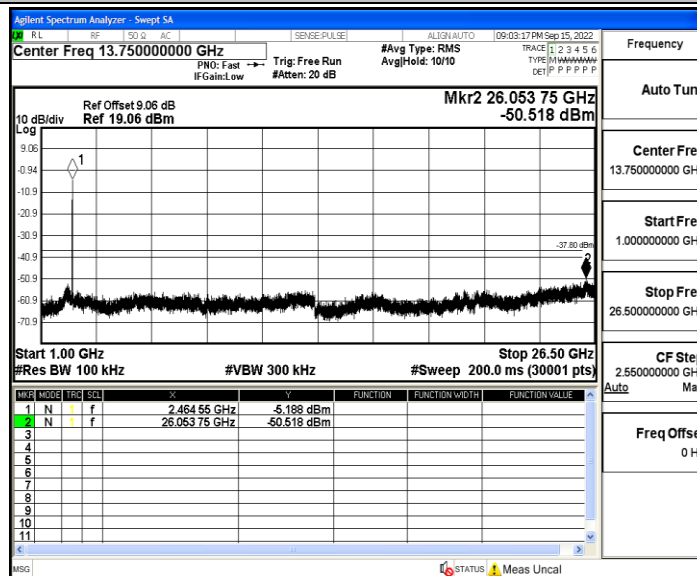
11G_Ant1_2462_0~Reference



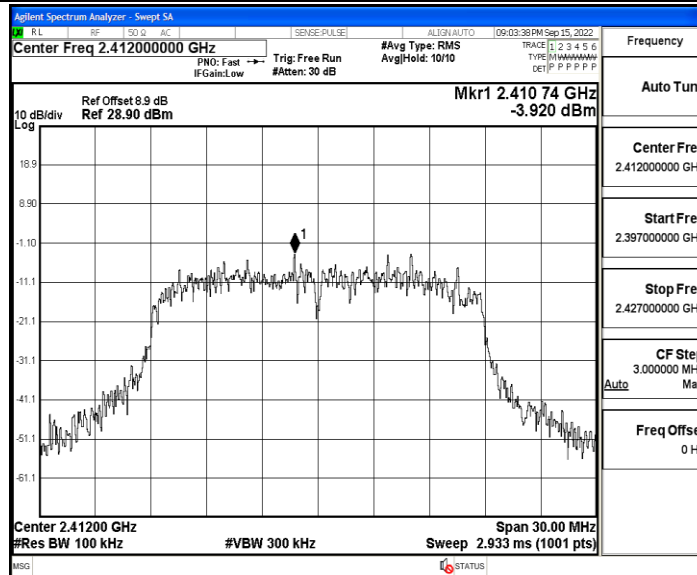
11G_Ant1_2462_30~1000



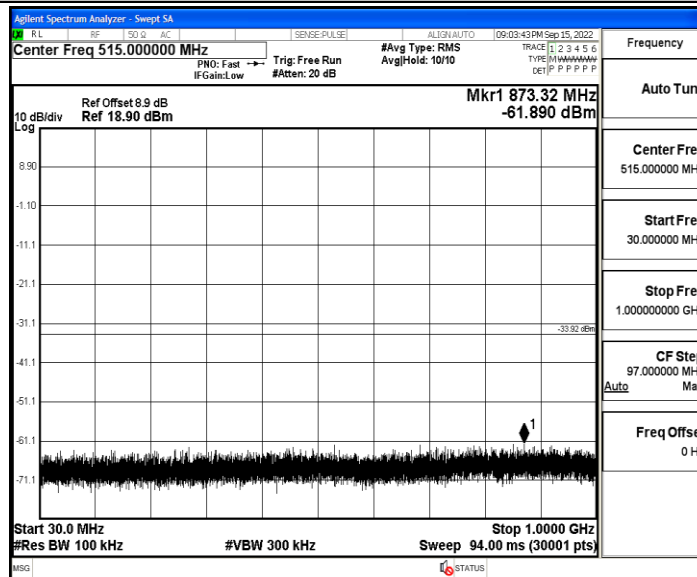
11G_Ant1_2462_1000~26500



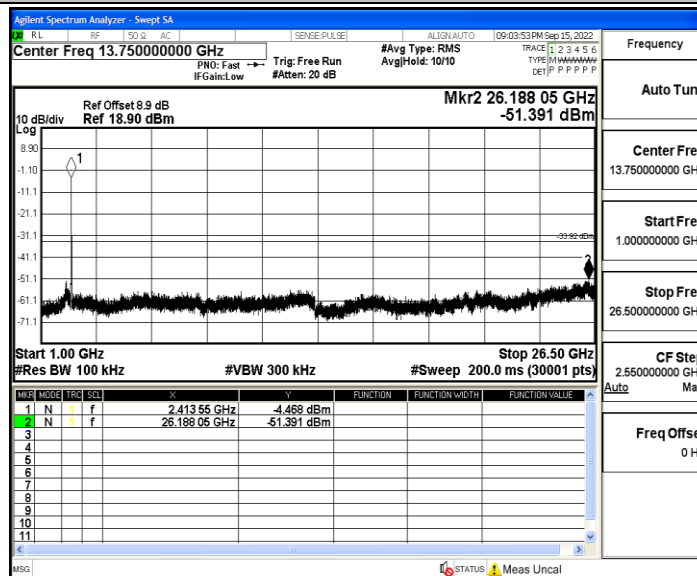
11N20SISO_Ant1_2412_0~Reference



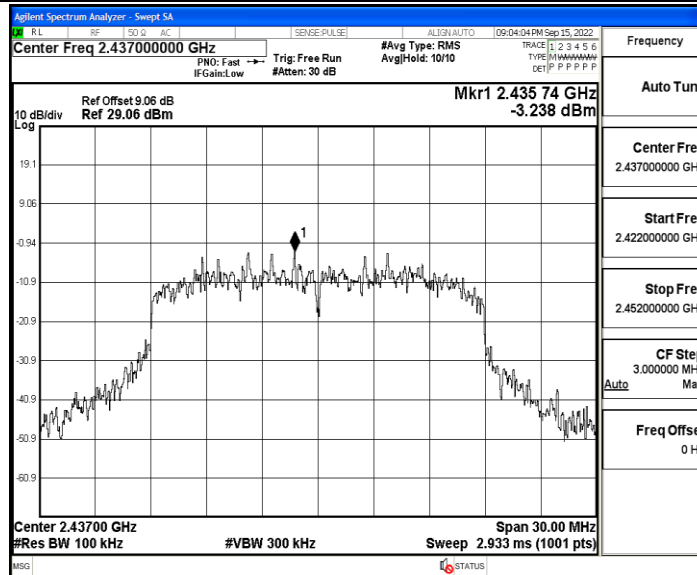
11N20SISO_Ant1_2412_30~1000



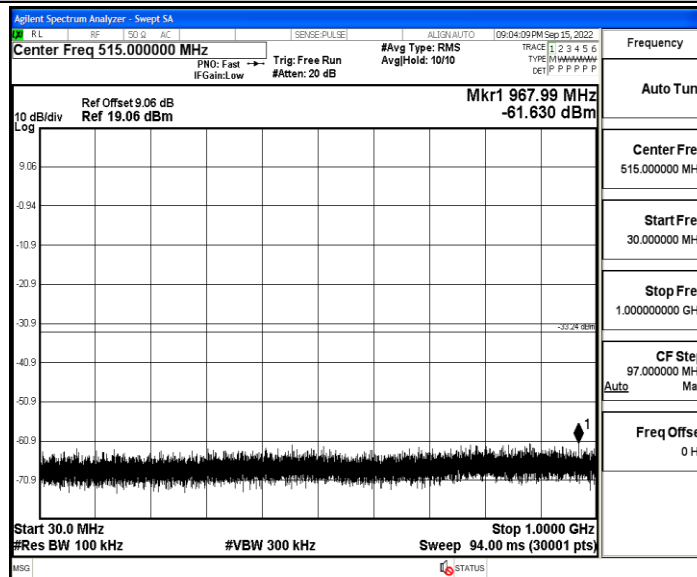
11N20SISO_Ant1_2412_1000~26500



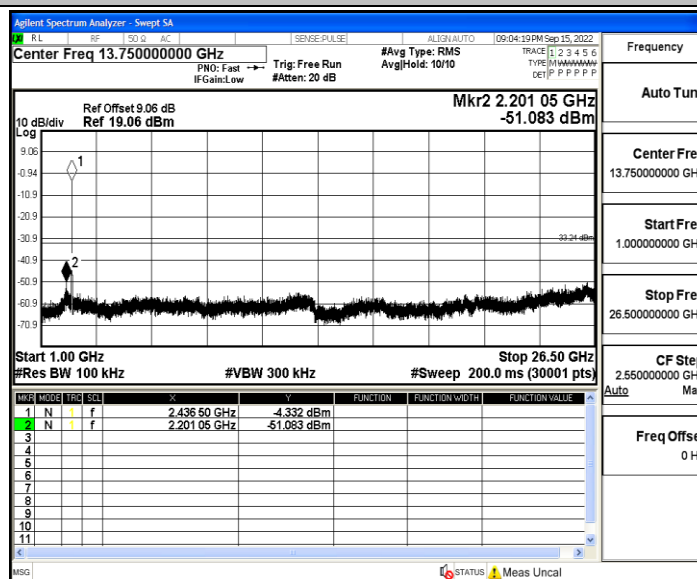
11N20SISO_Ant1_2437_0~Reference



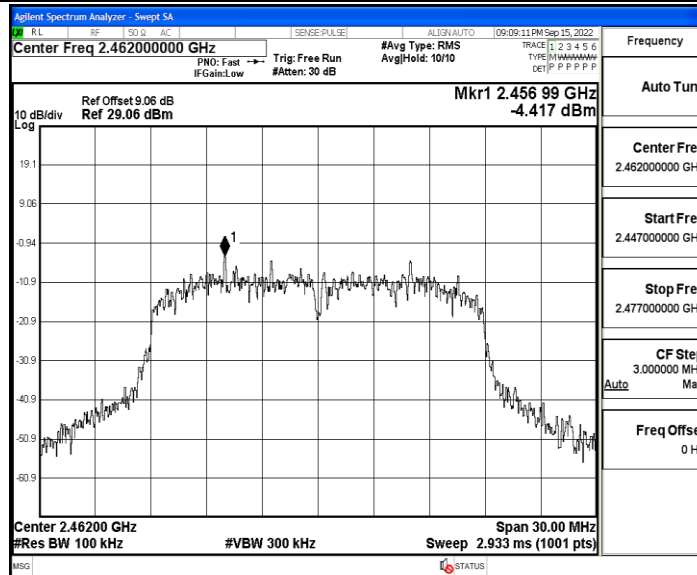
11N20SISO_Ant1_2437_30~1000



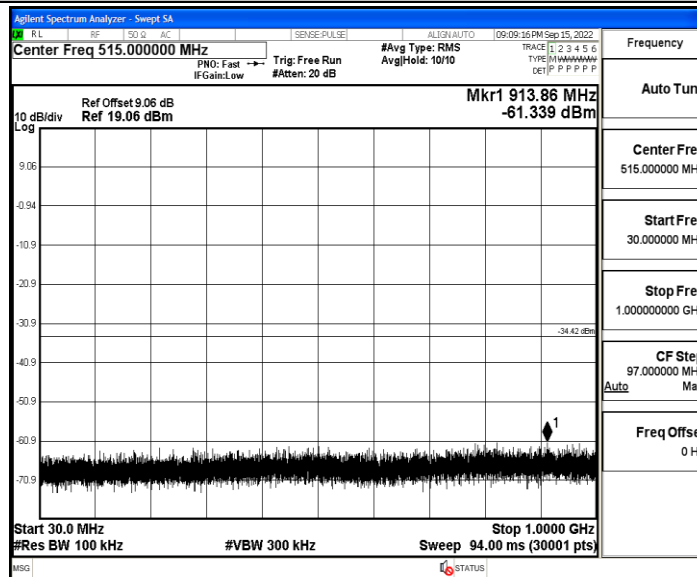
11N20SISO_Ant1_2437_1000~26500



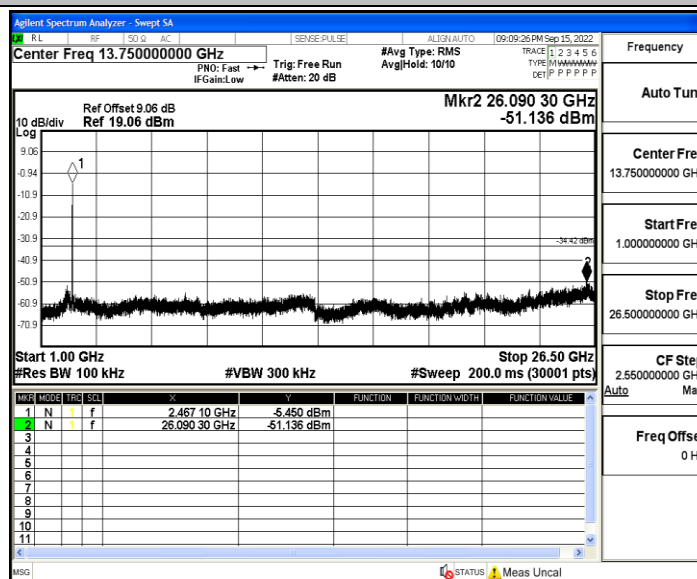
11N20SISO_Ant1_2462_0~Reference



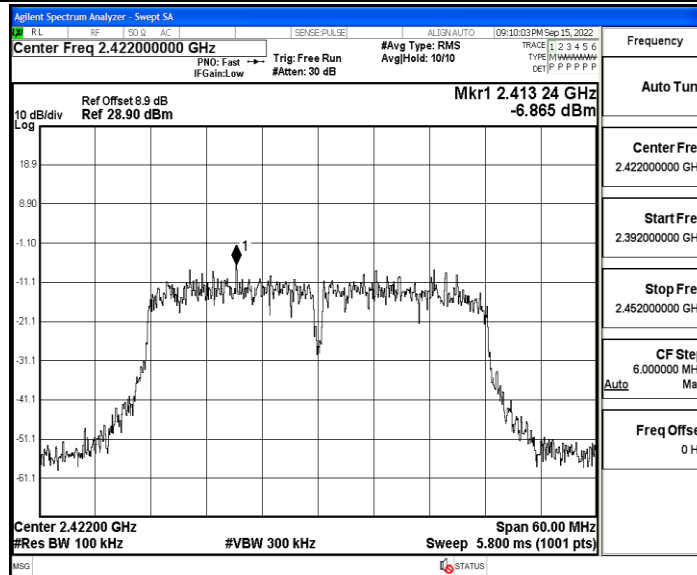
11N20SISO_Ant1_2462_30~1000



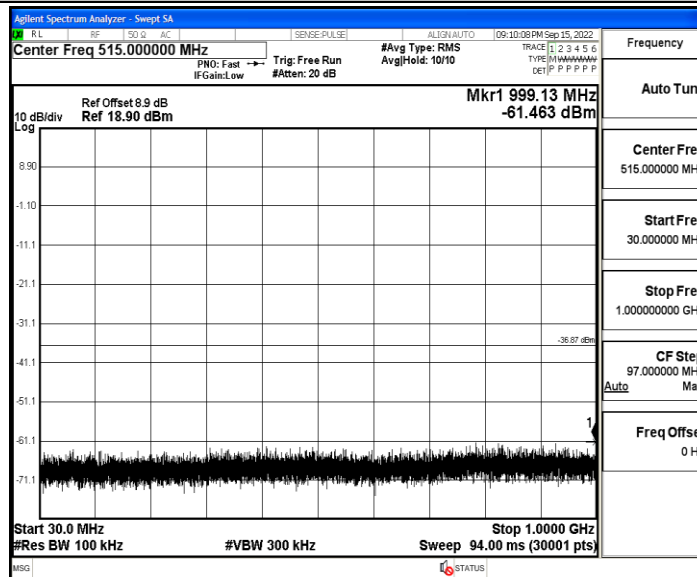
11N20SISO_Ant1_2462_1000~26500



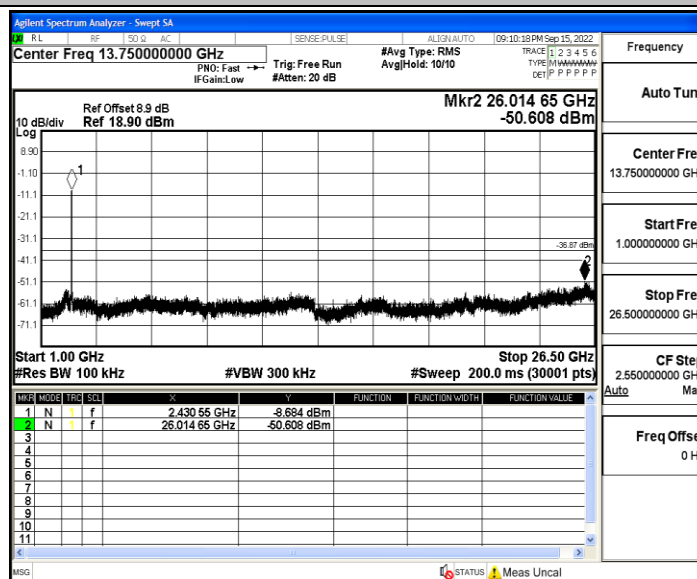
11N40SISO_Ant1_2422_0~Reference



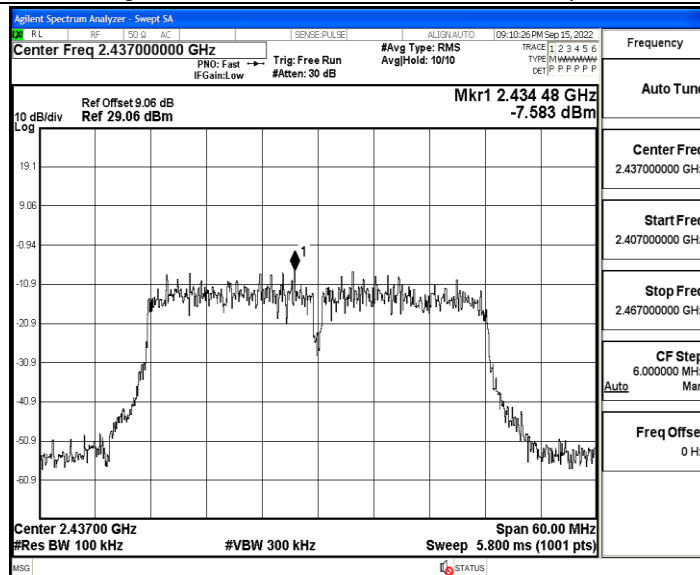
11N40SISO_Ant1_2422_30~1000



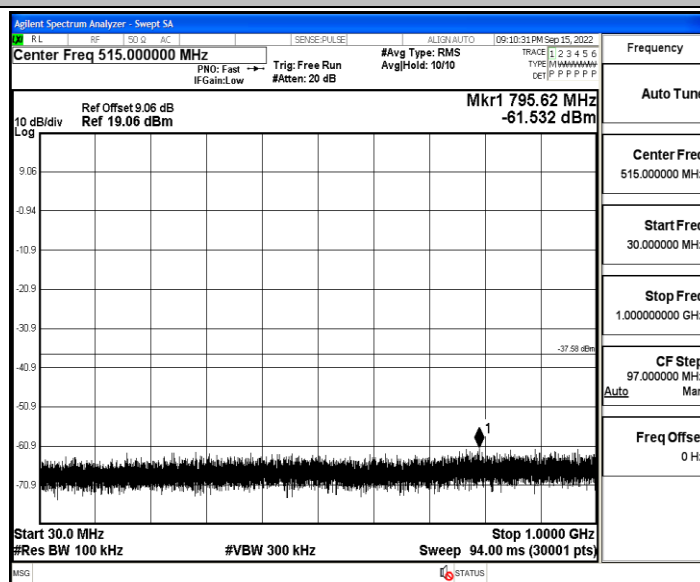
11N40SISO_Ant1_2422_1000~26500



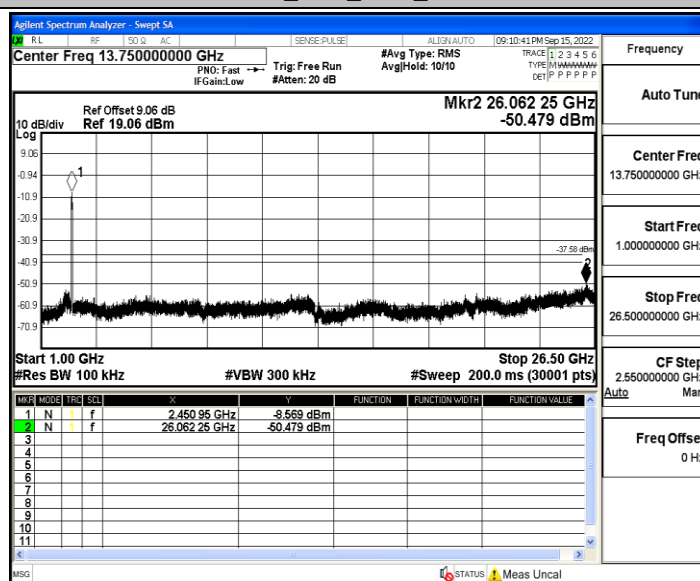
11N40SISO_Ant1_2437_0~Reference



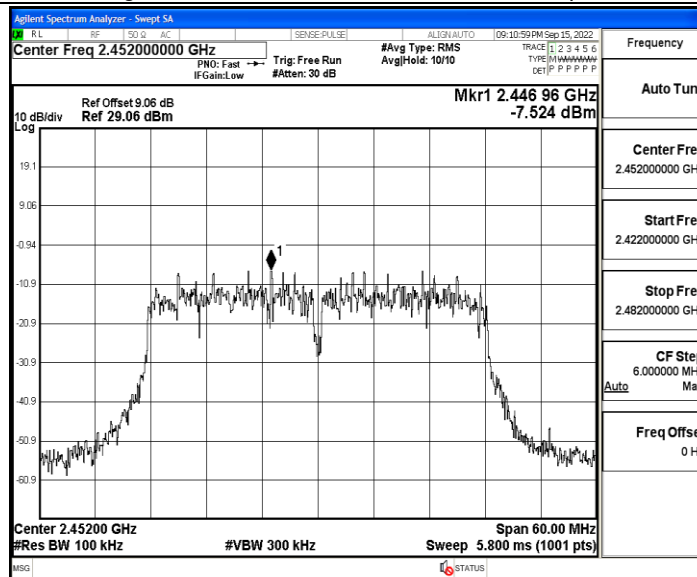
11N40SISO_Ant1_2437_30~1000



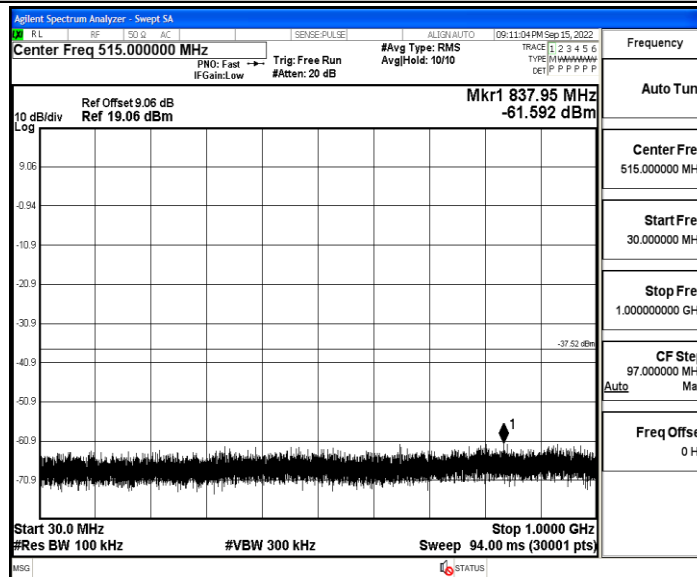
11N40SISO_Ant1_2437_1000~26500



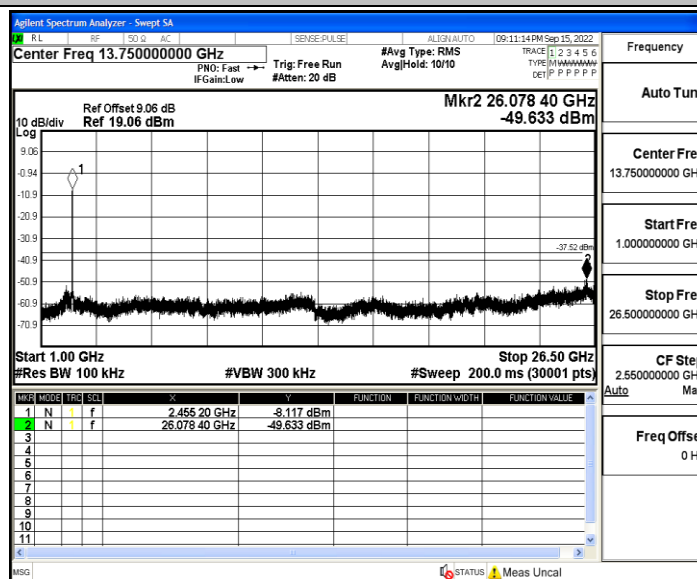
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



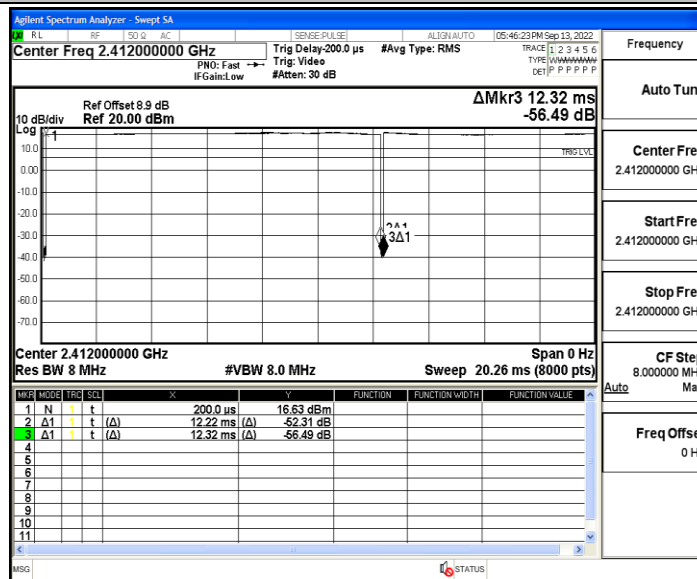
Appendix G: Duty Cycle

Test Result

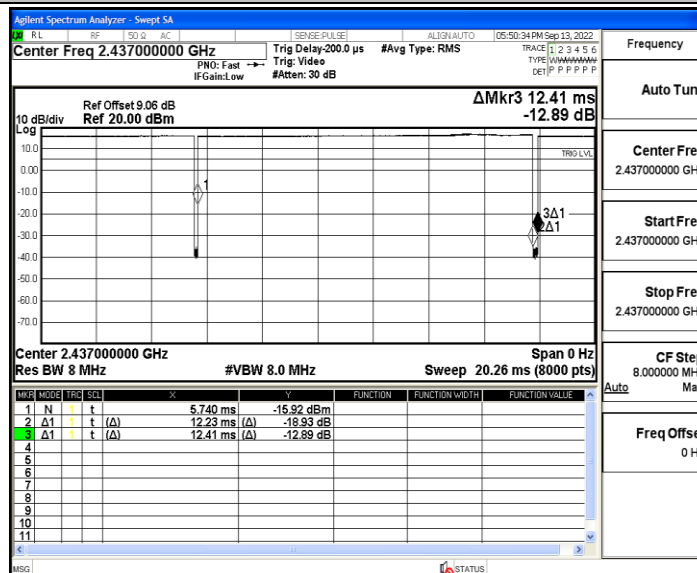
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
11B	Ant1	2412	12.22	12.32	99.19	0.08
		2437	12.23	12.41	98.55	0.08
		2462	12.22	12.37	98.79	0.08
11G	Ant1	2412	2.03	2.16	93.98	0.49
		2437	2.04	2.17	94.01	0.49
		2462	2.03	2.10	96.67	0.49
11N20SISO	Ant1	2412	0.22	0.40	55.00	4.55
		2437	0.22	0.38	57.89	4.55
		2462	0.23	0.40	57.50	4.35
11N40SISO	Ant1	2422	0.13	0.31	41.94	7.69
		2437	0.13	0.30	43.33	7.69
		2452	0.13	0.37	35.14	7.69

Test Graphs

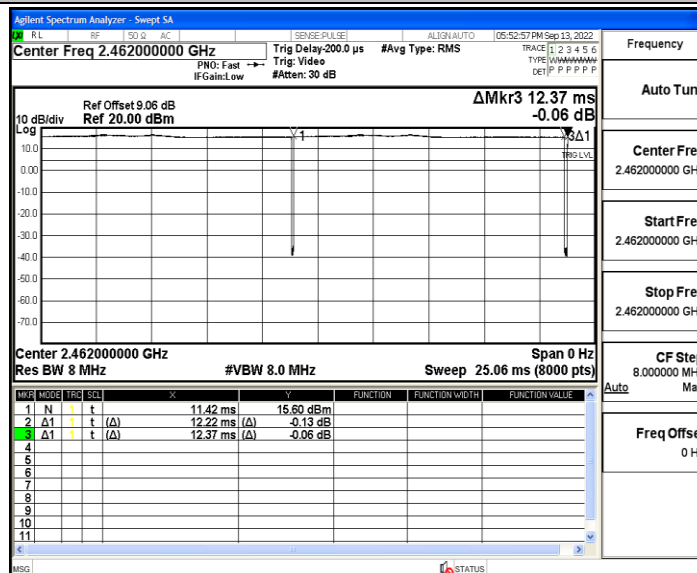
11B_Ant1_2412



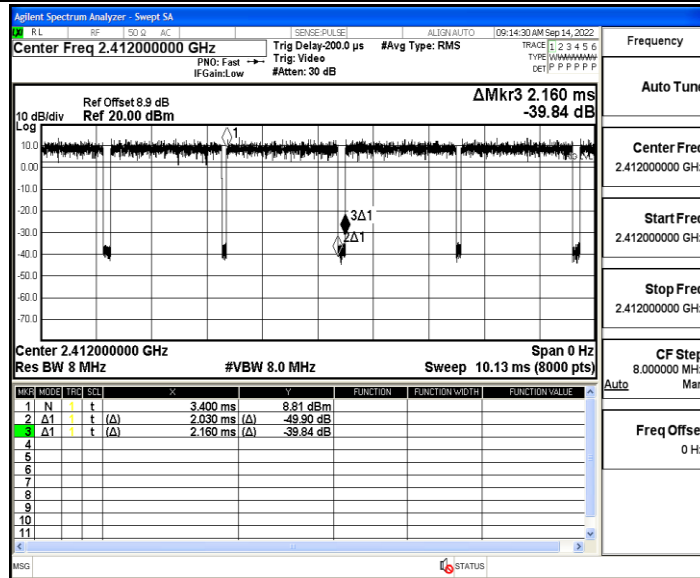
11B_Ant1_2437



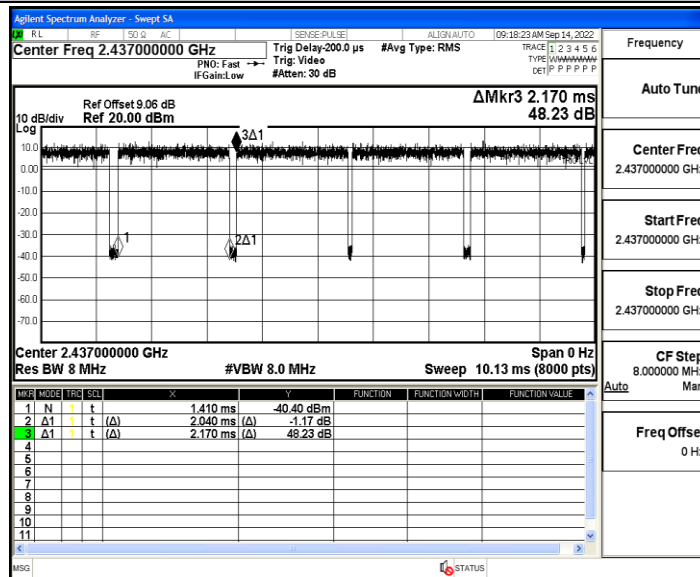
11B_Ant1_2462



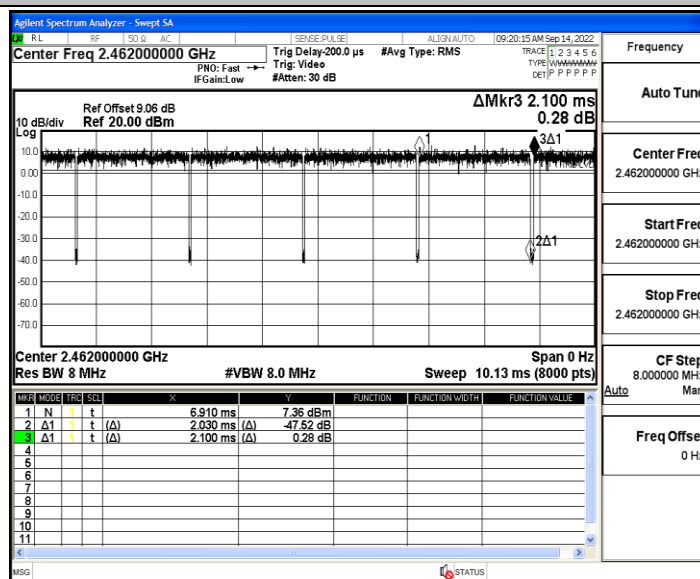
11G_Ant1_2412



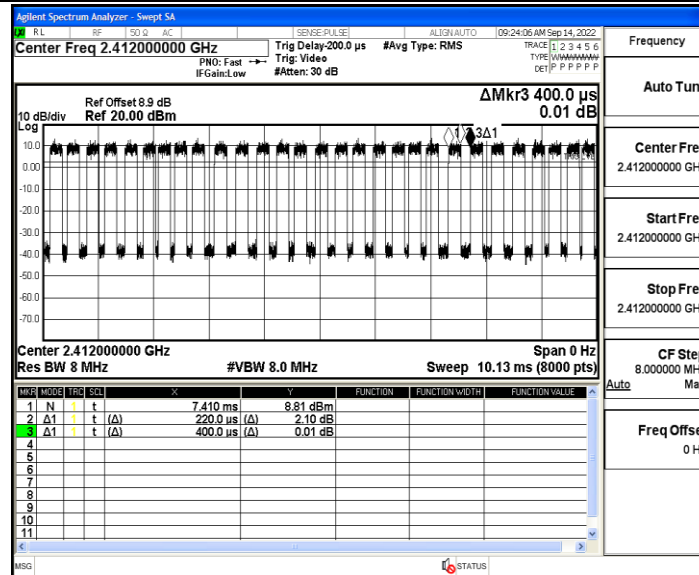
11G_Ant1_2437



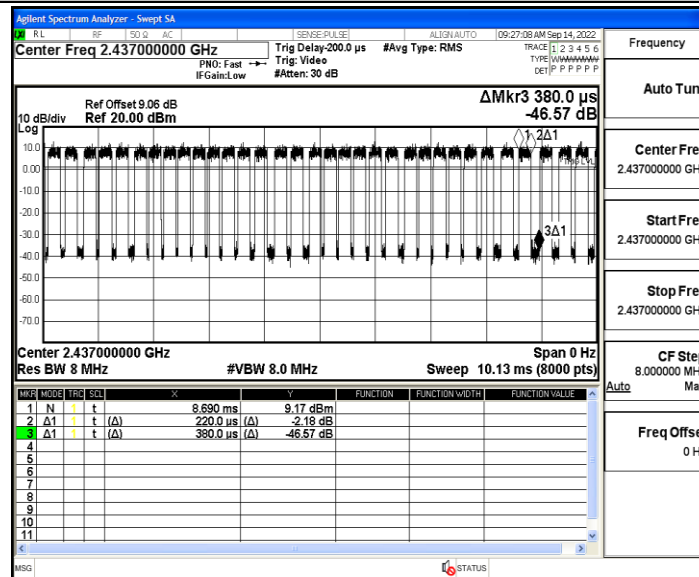
11G_Ant1_2462



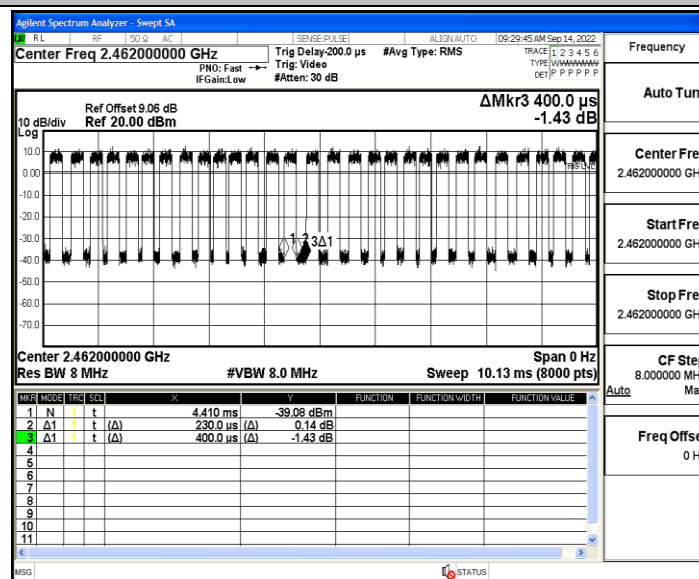
11N20SISO_Ant1_2412



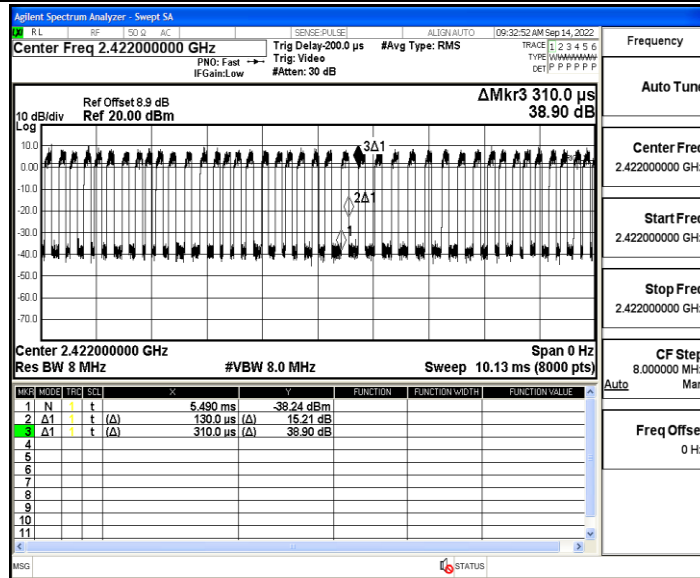
11N20SISO_Ant1_2437



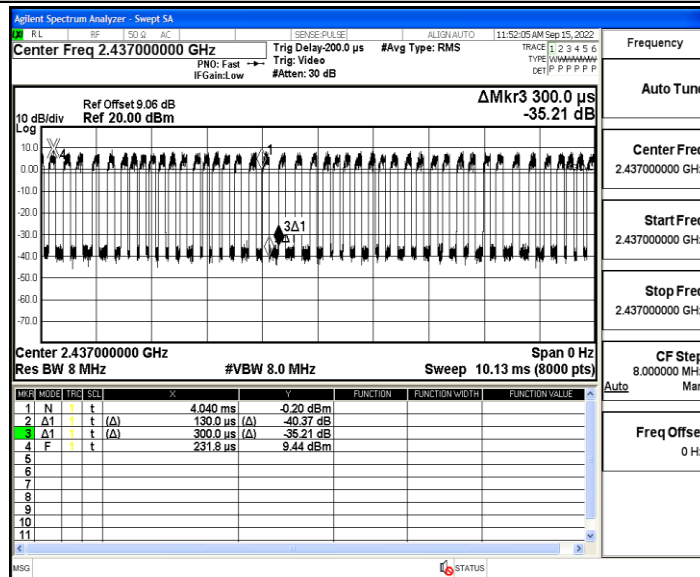
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

