

Case No. : CTA24090600303	
Ambient Condition: 23 °C, 52 %RH,	
Test Date: 2024.9.2	Test Engineer: Evan ouyang

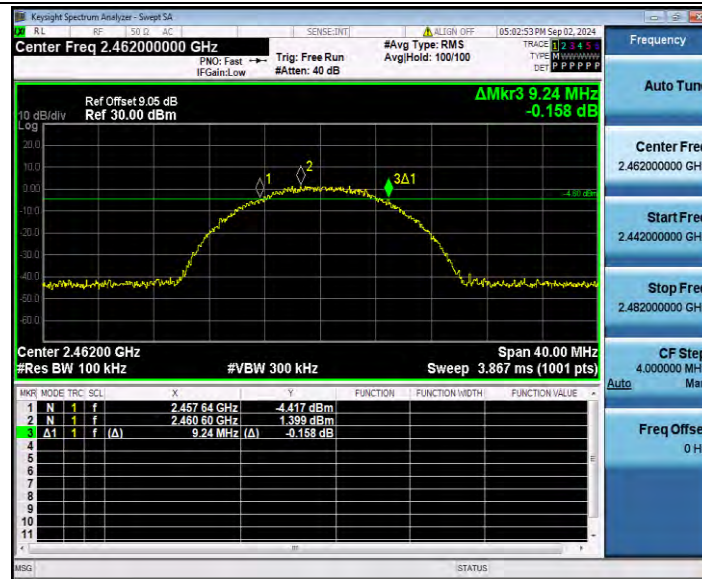
Appendix A.1: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.160	2407.880	2416.040	0.5	PASS
		2437	8.640	2432.600	2441.240	0.5	PASS
		2462	9.240	2457.640	2466.880	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.360	2428.800	2445.160	0.5	PASS
		2462	16.360	2453.800	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.560	2403.200	2420.760	0.5	PASS
		2437	17.320	2428.240	2445.560	0.5	PASS
		2462	17.160	2453.240	2470.400	0.5	PASS
11N40SISO	Ant1	2422	35.680	2403.840	2439.520	0.5	PASS
		2437	35.920	2418.840	2454.760	0.5	PASS
		2452	35.760	2433.840	2469.600	0.5	PASS

Test Graphs

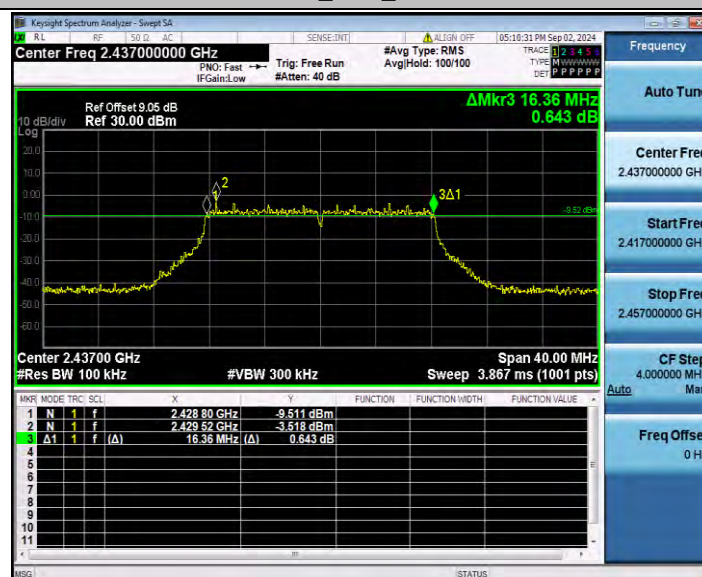


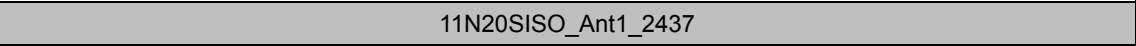
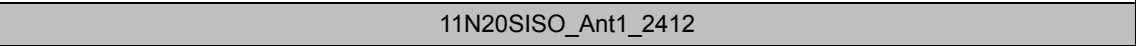


11G_Ant1_2412



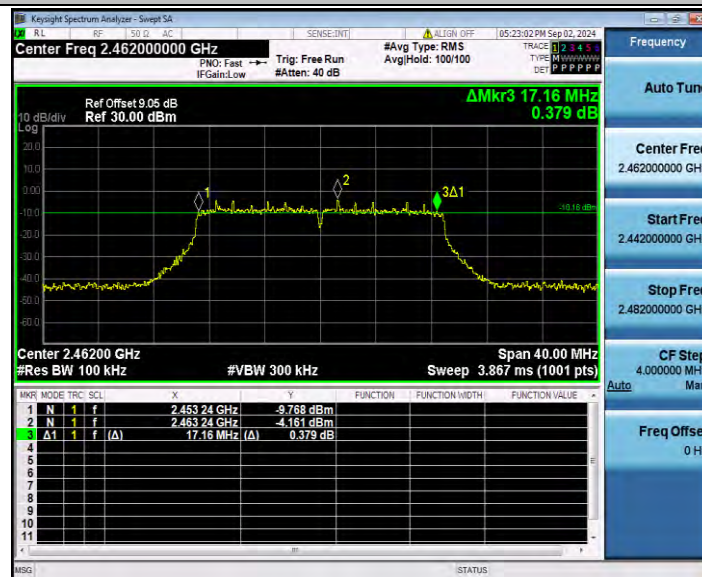
11G_Ant1_2437



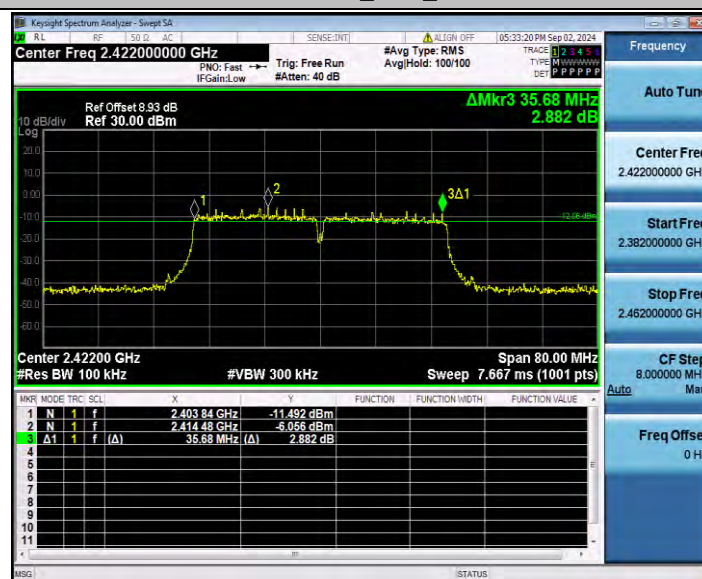




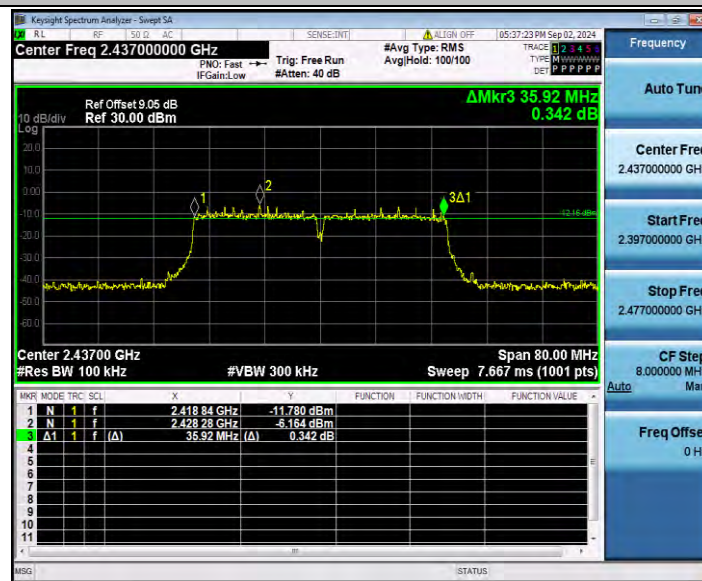
11N20SISO_Ant1_2462



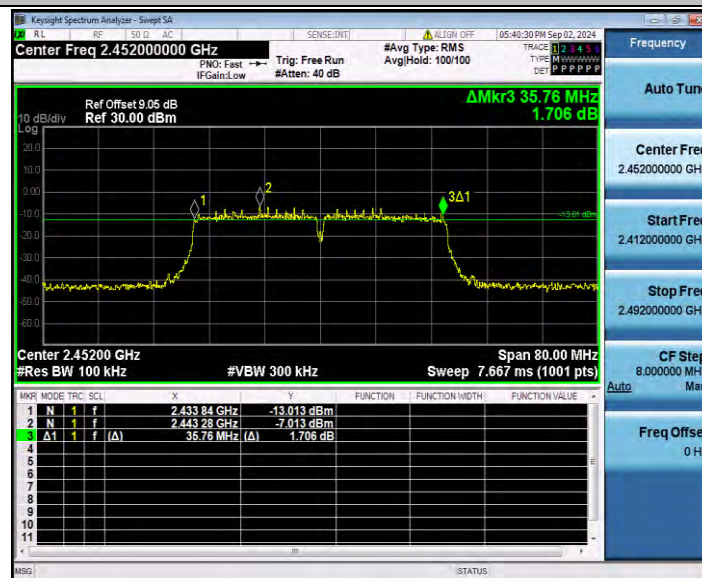
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



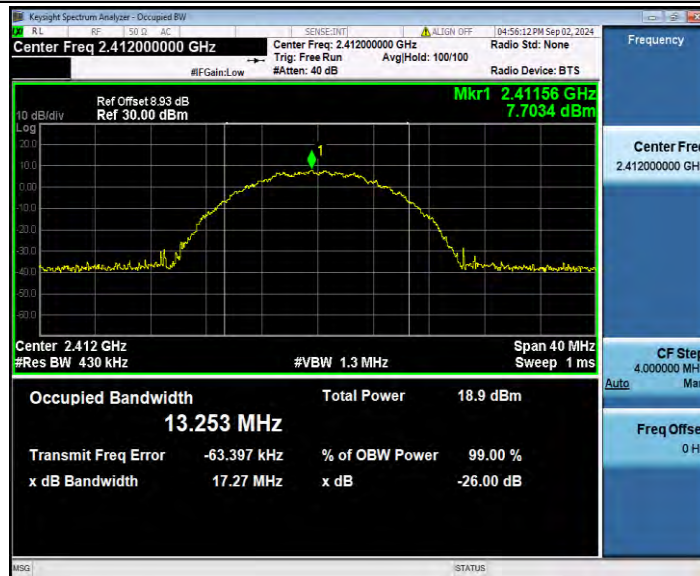
Appendix A.2: Occupied Channel Bandwidth

Test Result

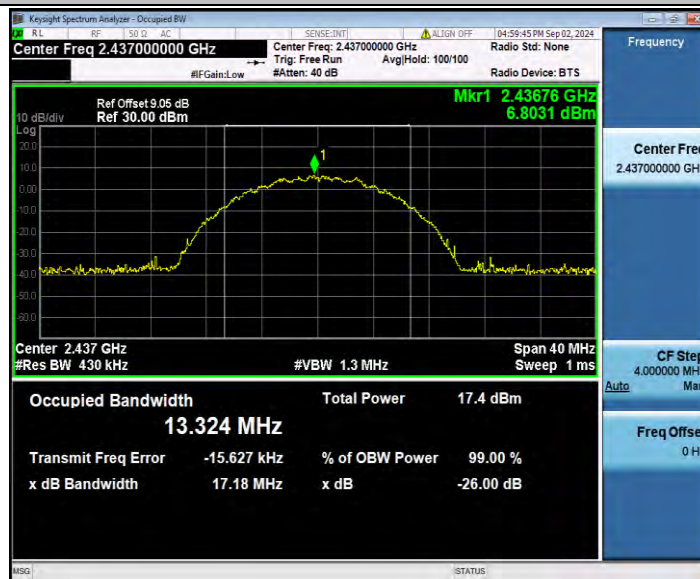
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.253	2405.3101	2418.5631	---	---
		2437	13.324	2430.3224	2443.6464	---	---
		2462	13.238	2455.3289	2468.5669	---	---
11G	Ant1	2412	17.010	2403.4469	2420.4569	---	---
		2437	17.120	2428.4129	2445.5329	---	---
		2462	17.038	2453.4463	2470.4843	---	---
11N20SISO	Ant1	2412	17.999	2402.9491	2420.9481	---	---
		2437	18.137	2427.8907	2446.0277	---	---
		2462	18.053	2452.9502	2471.0032	---	---
11N40SISO	Ant1	2422	36.439	2403.7268	2440.1658	---	---
		2437	36.433	2418.7388	2455.1718	---	---
		2452	36.334	2433.8239	2470.1579	---	---

Test Graphs

11B_Ant1_2412



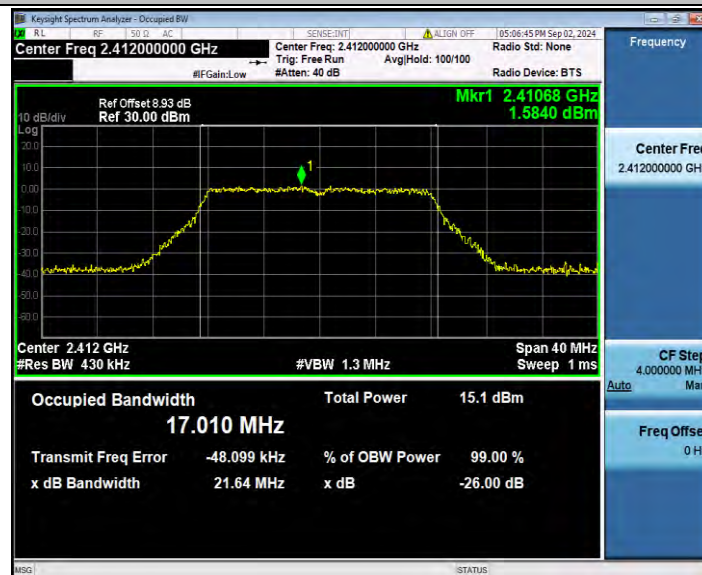
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



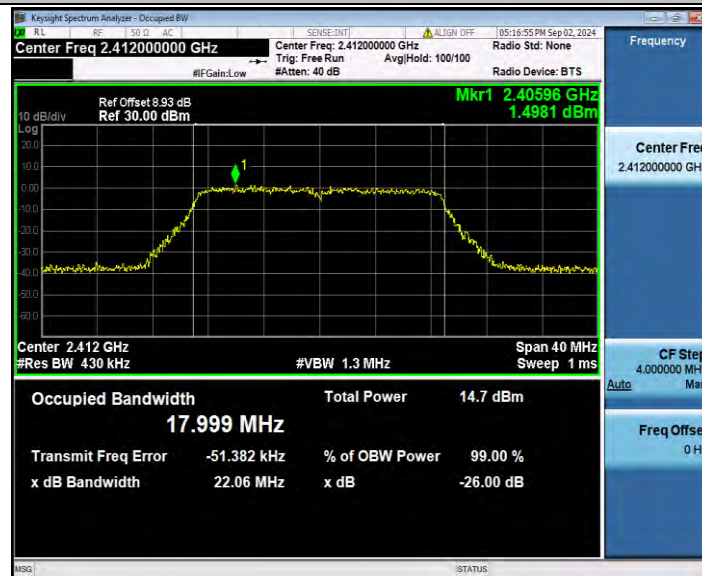
11G_Ant1_2437



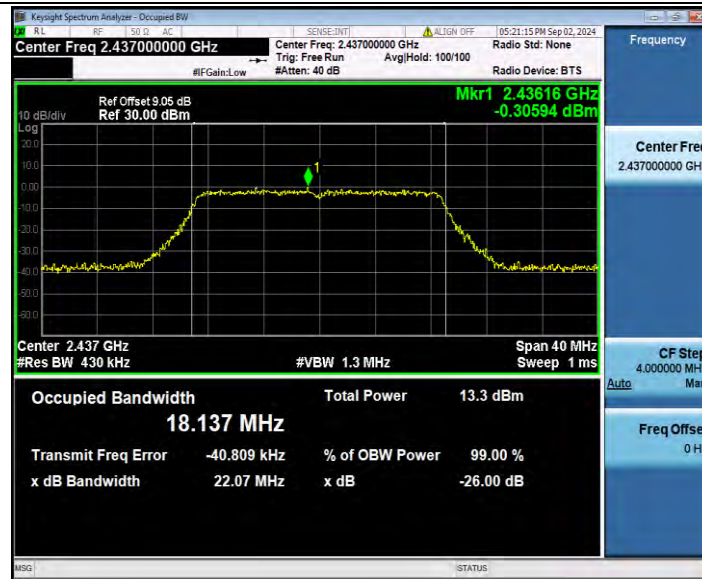
11G_Ant1_2462



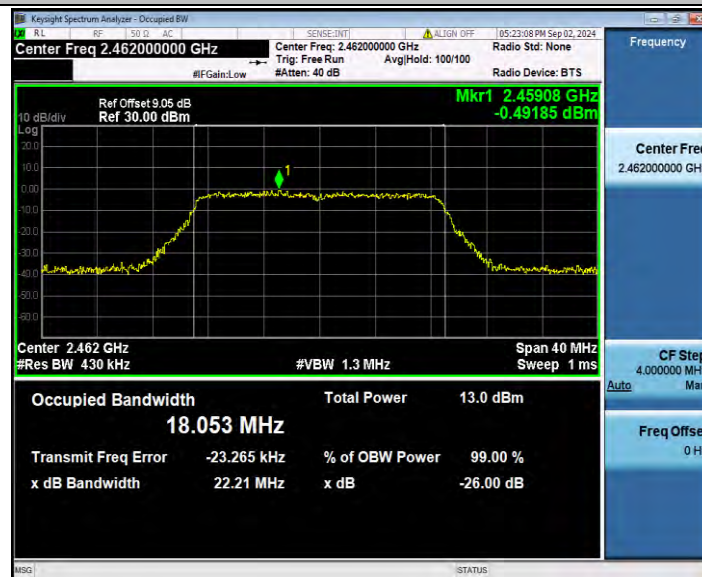
11N20SISO_Ant1_2412



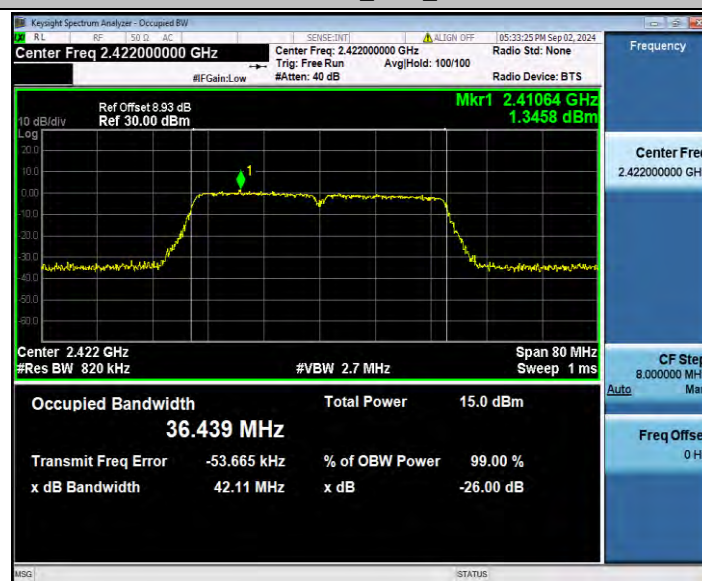
11N20SISO_Ant1_2437



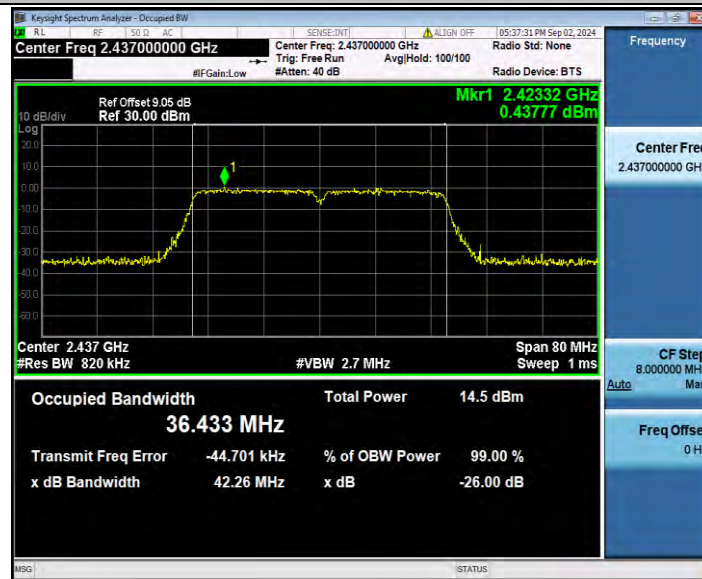
11N20SISO_Ant1_2462



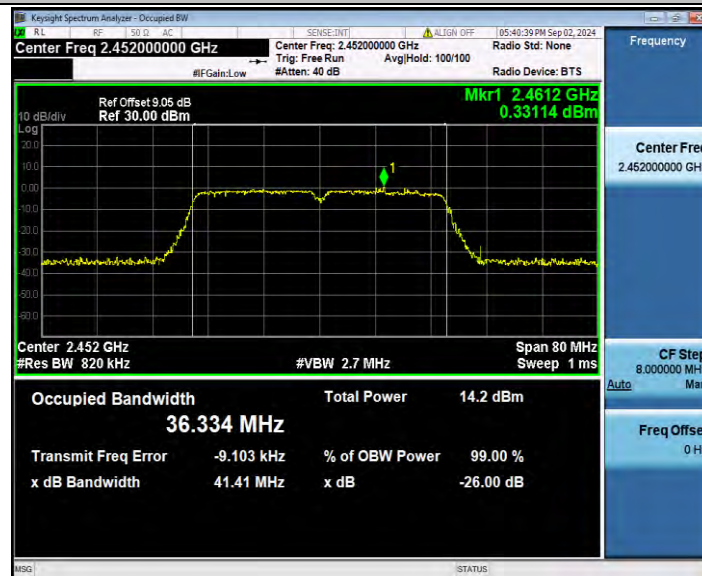
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix A.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	17.46	≤30.00	PASS
		2437	15.94	≤30.00	PASS
		2462	15.56	≤30.00	PASS
11G	Ant1	2412	16.36	≤30.00	PASS
		2437	15.22	≤30.00	PASS
		2462	14.69	≤30.00	PASS
11N20SISO	Ant1	2412	15.88	≤30.00	PASS
		2437	14.49	≤30.00	PASS
		2462	14.17	≤30.00	PASS
11N40SISO	Ant1	2422	15.31	≤30.00	PASS
		2437	14.87	≤30.00	PASS
		2452	14.42	≤30.00	PASS

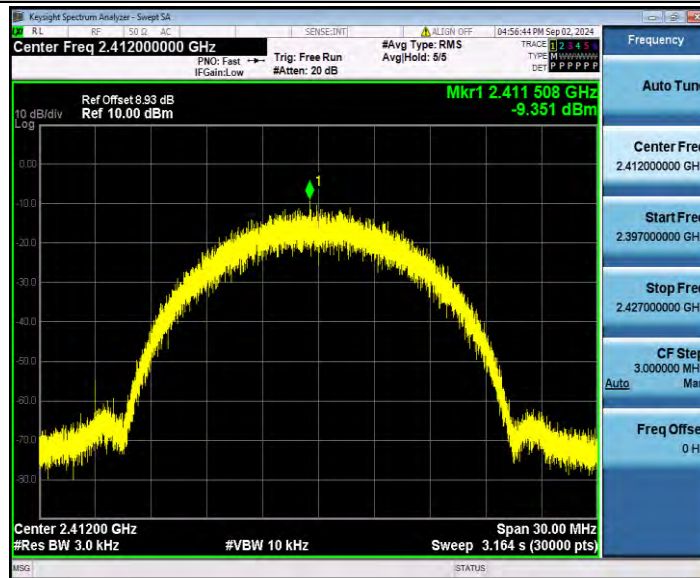
Appendix A.4: Maximum power spectral density

Test Result

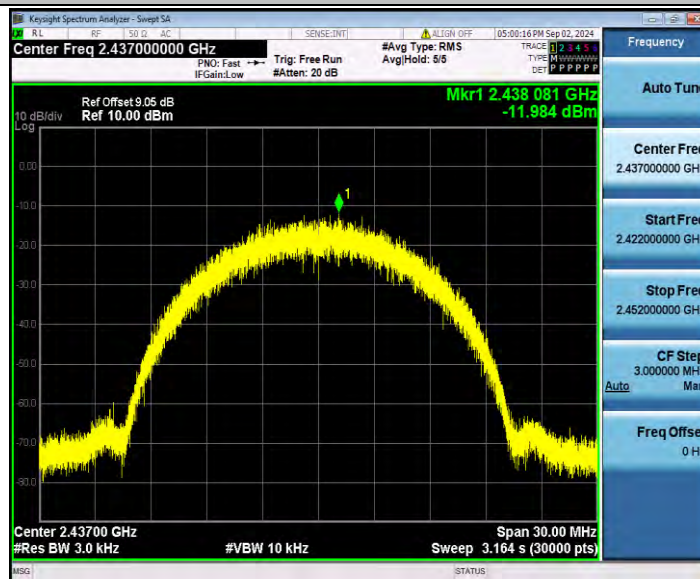
TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-9.35	≤8.00	PASS
		2437	-11.98	≤8.00	PASS
		2462	-12.66	≤8.00	PASS
11G	Ant1	2412	-16.67	≤8.00	PASS
		2437	-17.06	≤8.00	PASS
		2462	-18.18	≤8.00	PASS
11N20SISO	Ant1	2412	-17.63	≤8.00	PASS
		2437	-18.24	≤8.00	PASS
		2462	-18.86	≤8.00	PASS
11N40SISO	Ant1	2422	-20.16	≤8.00	PASS
		2437	-21.19	≤8.00	PASS
		2452	-20.90	≤8.00	PASS

Test Graphs

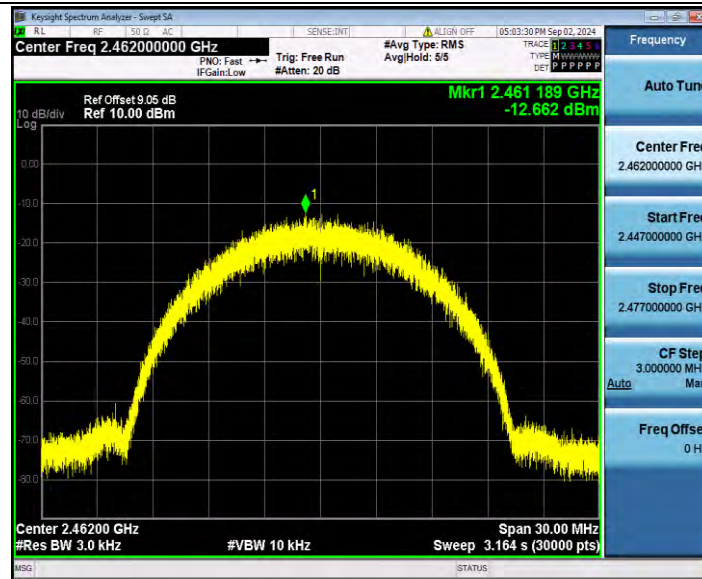
11B_Ant1_2412



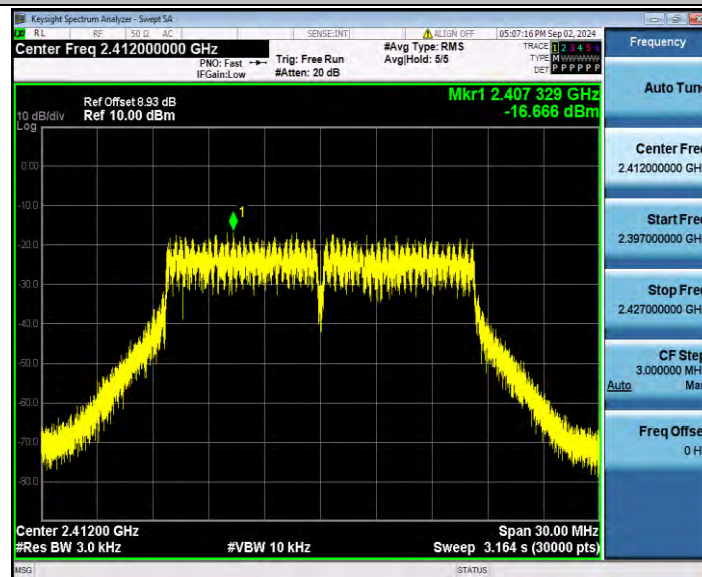
11B_Ant1_2437



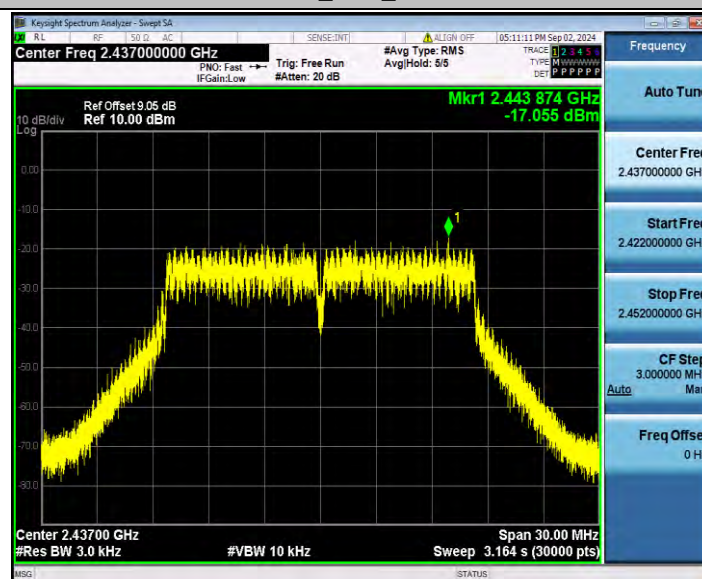
11B_Ant1_2462



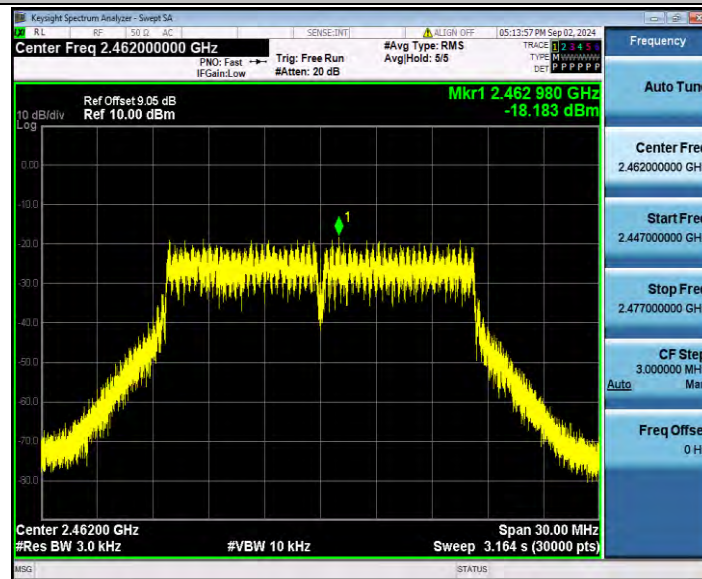
11G_Ant1_2412



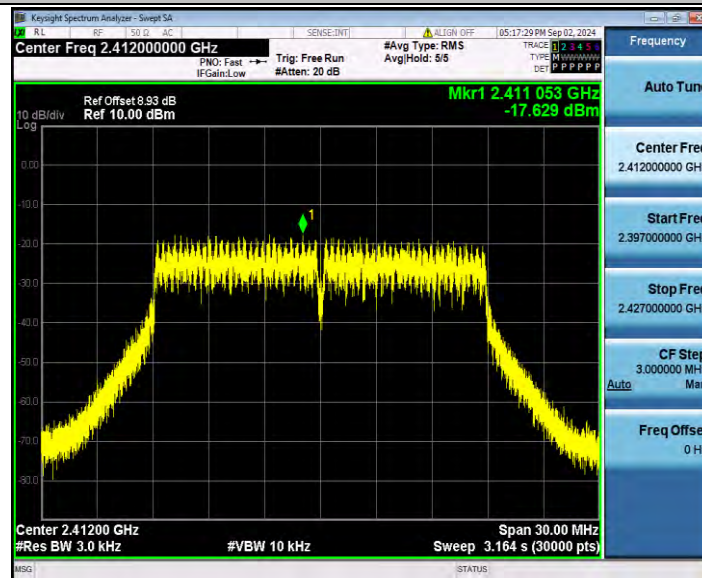
11G_Ant1_2437



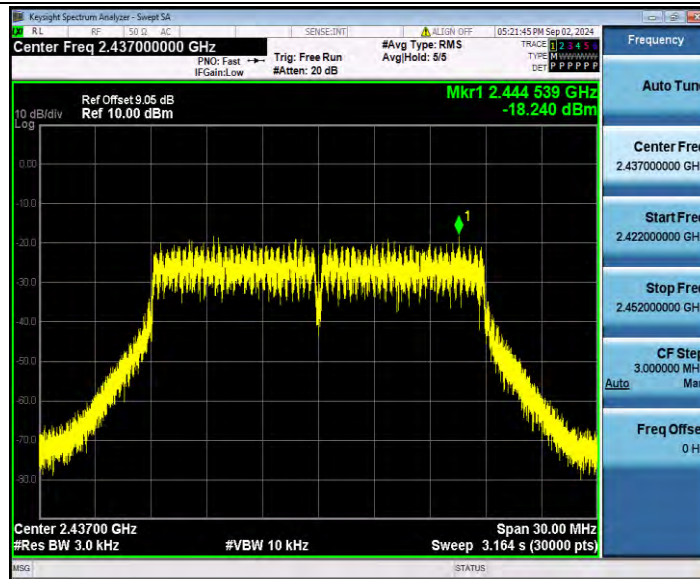
11G_Ant1_2462



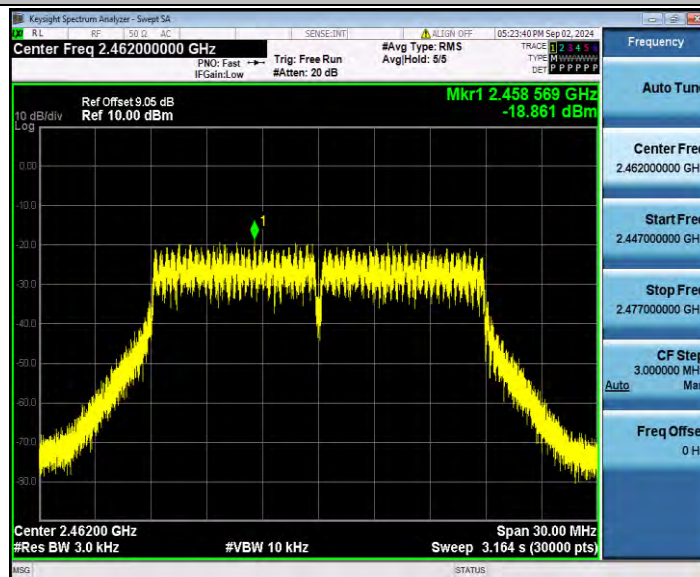
11N20SISO_Ant1_2412



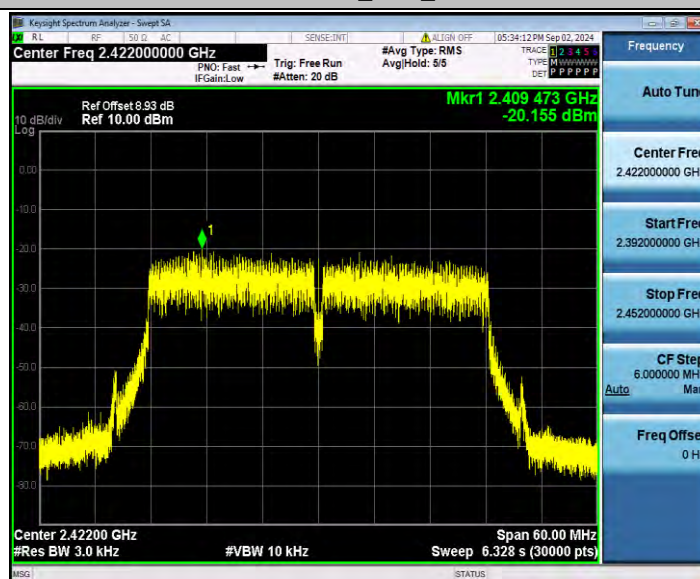
11N20SISO_Ant1_2437



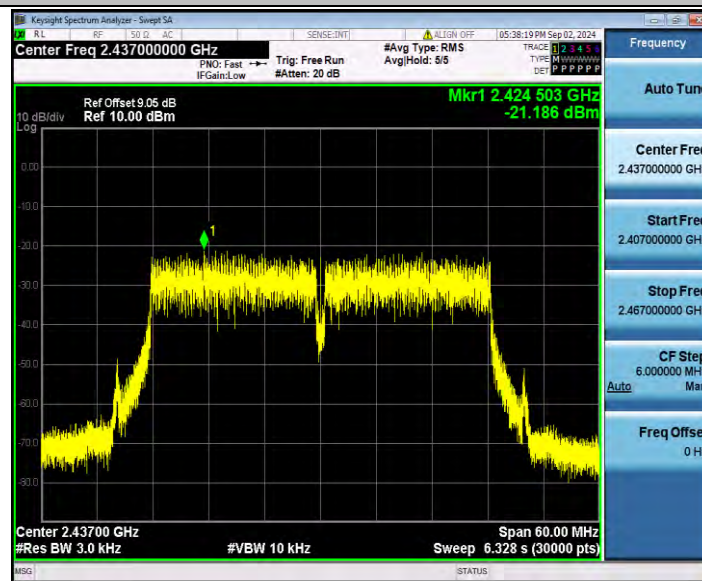
11N20SISO_Ant1_2462



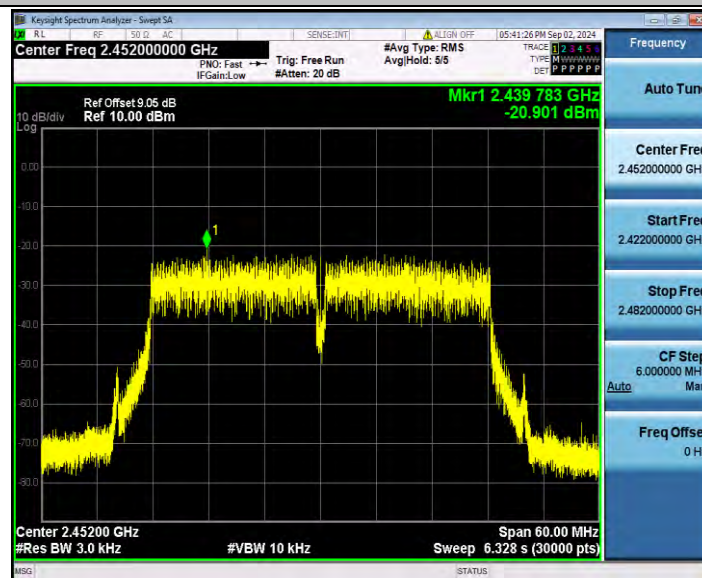
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

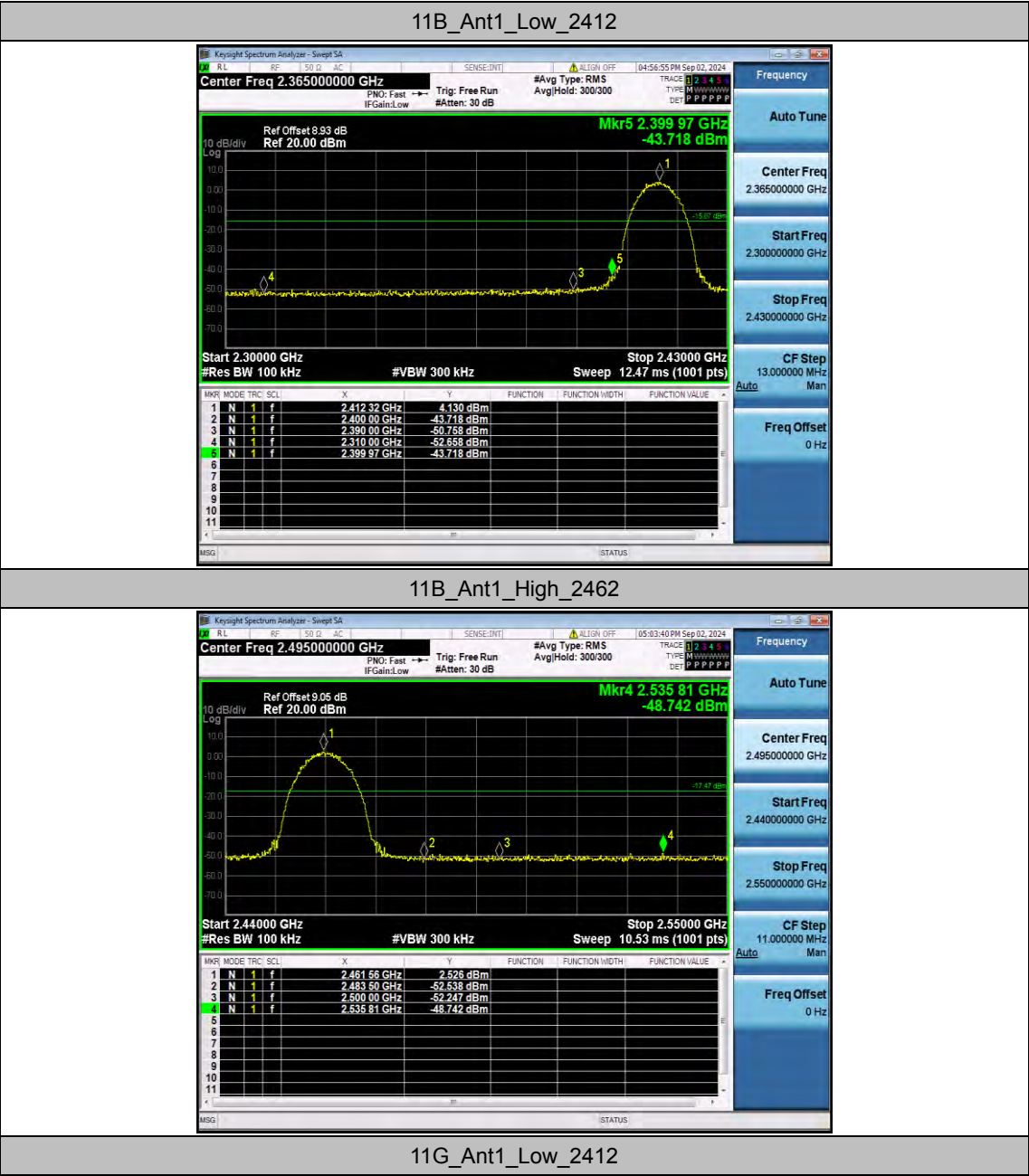


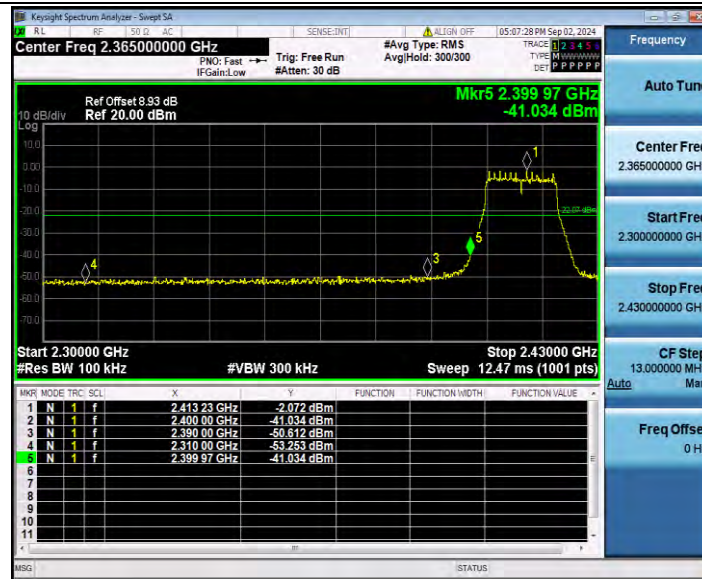
Appendix A.5: Band edge measurements

Test Result

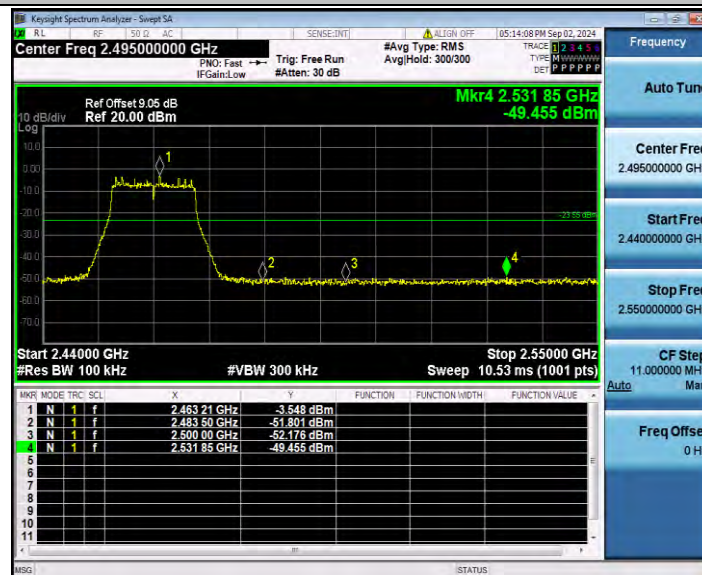
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.13	-43.72	≤ -15.87	PASS
		High	2462	2.53	-48.74	≤ -17.47	PASS
11G	Ant1	Low	2412	-2.07	-41.03	≤ -22.07	PASS
		High	2462	-3.55	-49.46	≤ -23.55	PASS
11N20SISO	Ant1	Low	2412	-2.31	-40.12	≤ -22.31	PASS
		High	2462	-3.99	-49.14	≤ -23.99	PASS
11N40SISO	Ant1	Low	2422	-5.50	-40.45	≤ -25.5	PASS
		High	2452	-6.95	-49.1	≤ -26.95	PASS

Test Graphs

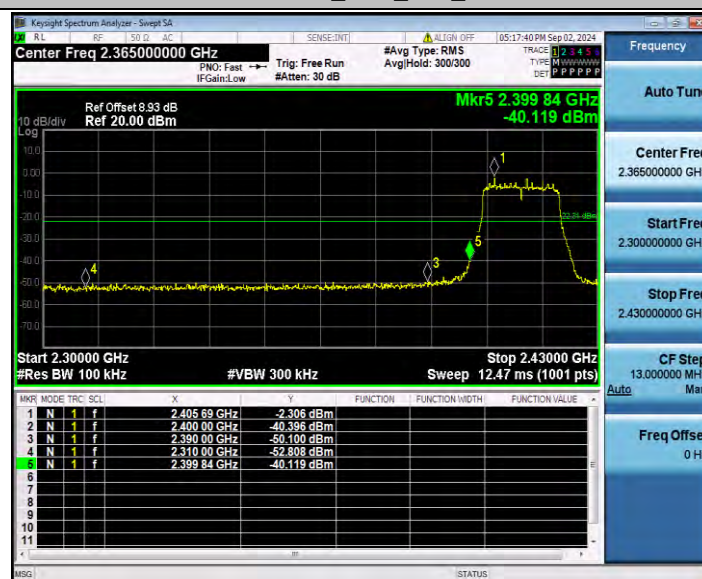




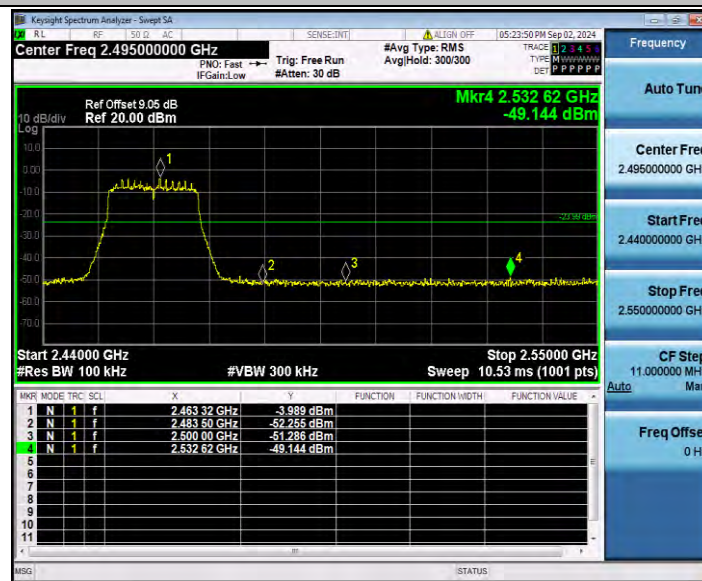
11G_Ant1_High_2462



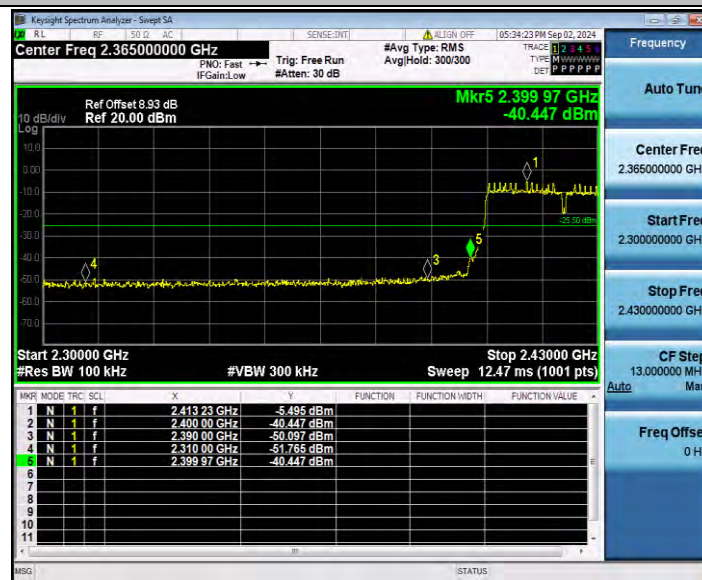
11N20SISO_Ant1_Low_2412



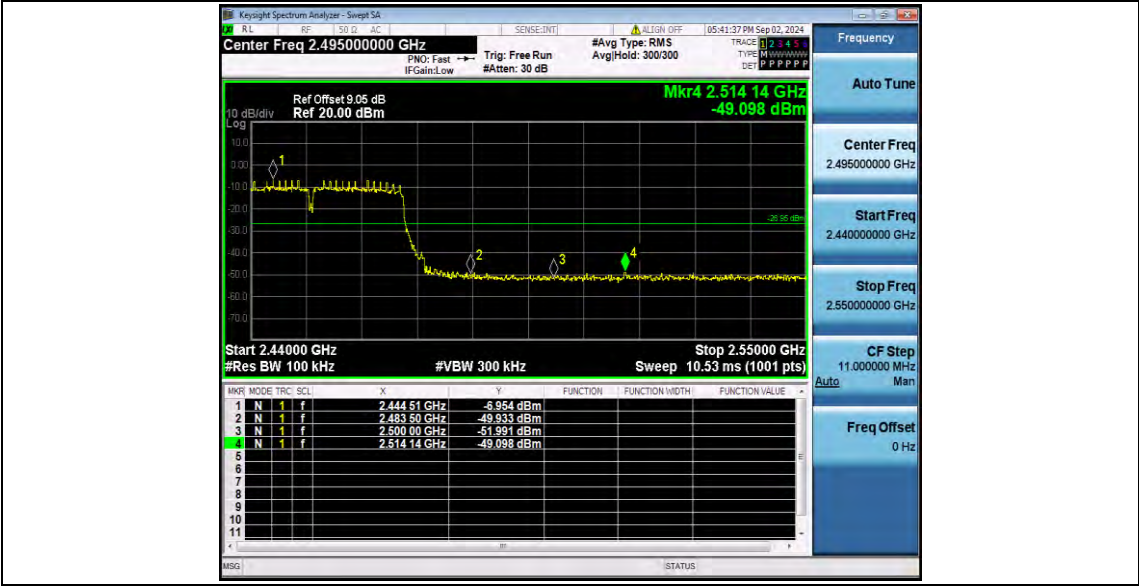
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

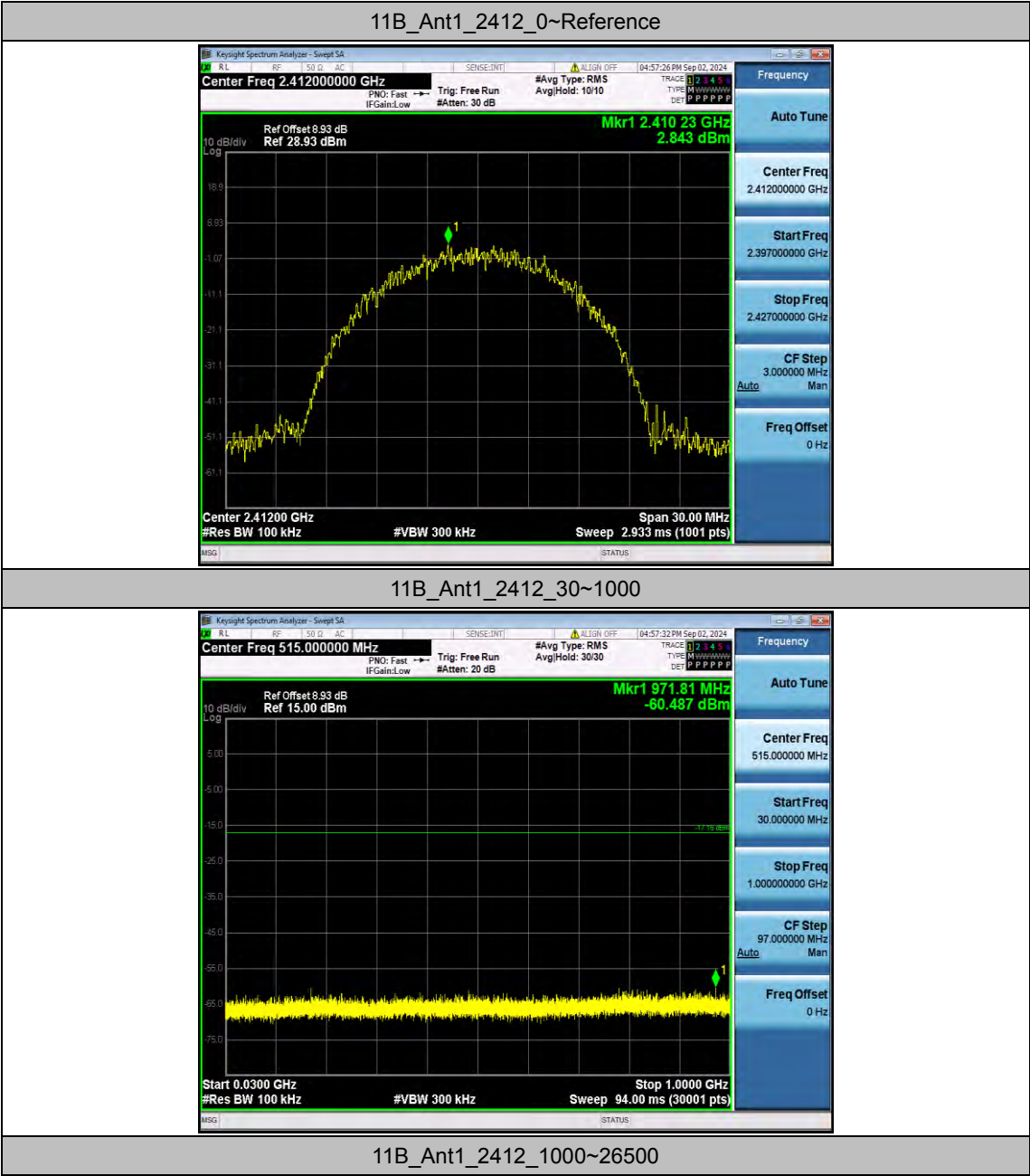


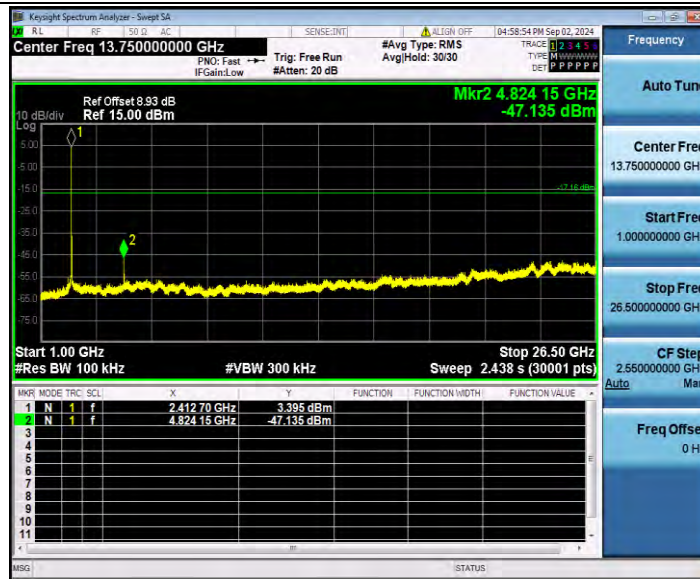
Appendix A.6: Conducted Spurious Emission

Test Result

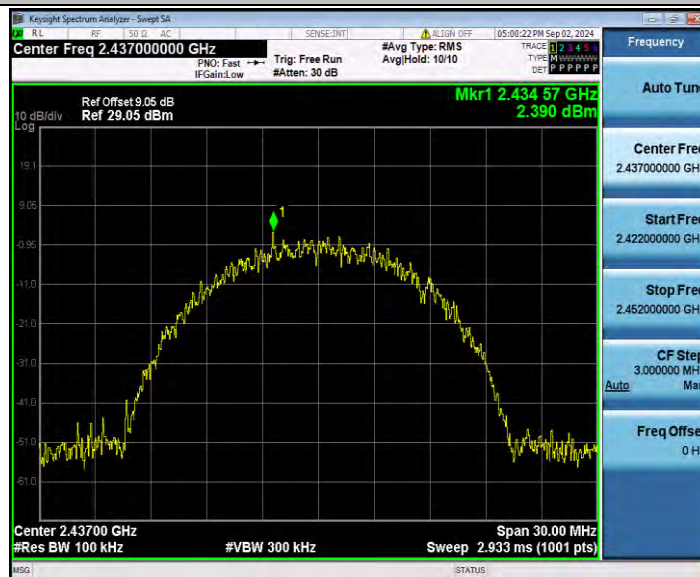
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	2.84	2.84	---	PASS
			30~1000	2.84	-60.49	≤ -17.16	PASS
			1000~26500	2.84	-47.14	≤ -17.16	PASS
		2437	Reference	2.39	2.39	---	PASS
			30~1000	2.39	-60.28	≤ -17.61	PASS
			1000~26500	2.39	-47.65	≤ -17.61	PASS
		2462	Reference	1.54	1.54	---	PASS
			30~1000	1.54	-59.87	≤ -18.46	PASS
			1000~26500	1.54	-47.62	≤ -18.46	PASS
11G	Ant1	2412	Reference	-5.31	-5.31	---	PASS
			30~1000	-5.31	-60.87	≤ -25.31	PASS
			1000~26500	-5.31	-45.3	≤ -25.31	PASS
		2437	Reference	-6.29	-6.29	---	PASS
			30~1000	-6.29	-59.64	≤ -26.29	PASS
			1000~26500	-6.29	-47.62	≤ -26.29	PASS
		2462	Reference	-6.57	-6.57	---	PASS
			30~1000	-6.57	-60.61	≤ -26.57	PASS
			1000~26500	-6.57	-46.72	≤ -26.57	PASS
11N20SISO	Ant1	2412	Reference	-6.54	-6.54	---	PASS
			30~1000	-6.54	-60.34	≤ -26.54	PASS
			1000~26500	-6.54	-44.08	≤ -26.54	PASS
		2437	Reference	-4.13	-4.13	---	PASS
			30~1000	-4.13	-60.86	≤ -24.13	PASS
			1000~26500	-4.13	-48.16	≤ -24.13	PASS
		2462	Reference	-7.13	-7.13	---	PASS
			30~1000	-7.13	-60.04	≤ -27.13	PASS
			1000~26500	-7.13	-47.53	≤ -27.13	PASS
11N40SISO	Ant1	2422	Reference	-6.02	-6.02	---	PASS
			30~1000	-6.02	-60.63	≤ -26.02	PASS
			1000~26500	-6.02	-47.18	≤ -26.02	PASS
		2437	Reference	-8.79	-8.79	---	PASS
			30~1000	-8.79	-44.23	≤ -28.79	PASS
			1000~26500	-8.79	-47.23	≤ -28.79	PASS
		2452	Reference	-9.18	-9.18	---	PASS
			30~1000	-9.18	-60.53	≤ -29.18	PASS
			1000~26500	-9.18	-47.83	≤ -29.18	PASS

Test Graphs

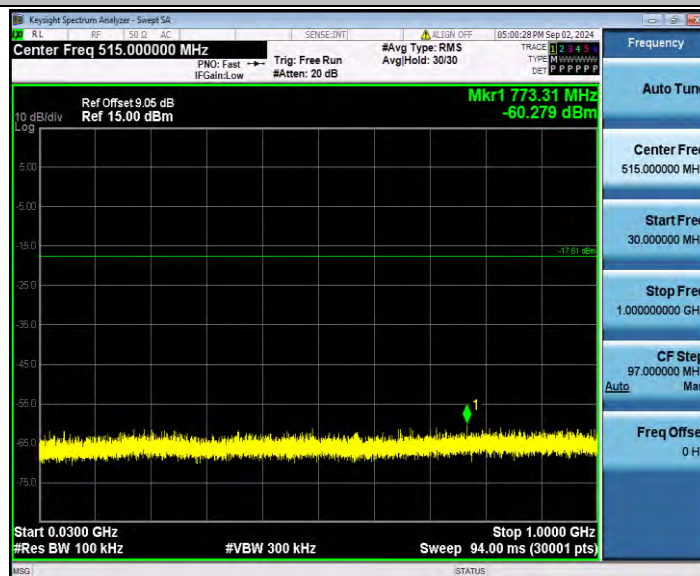




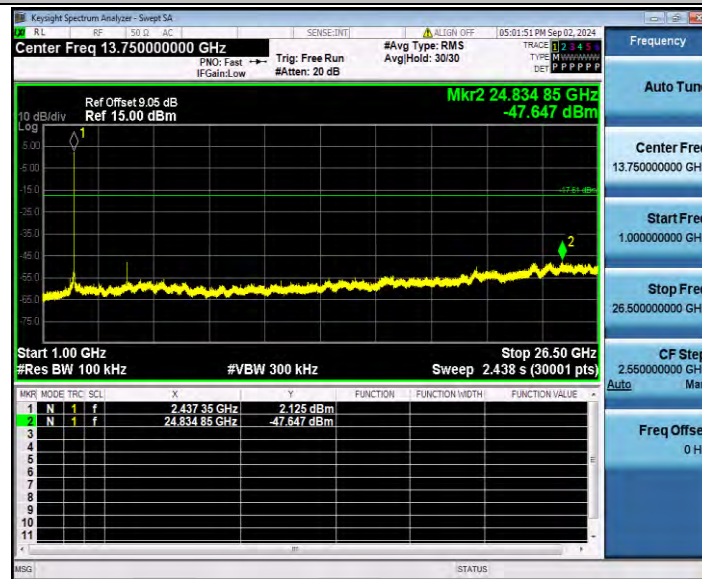
11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



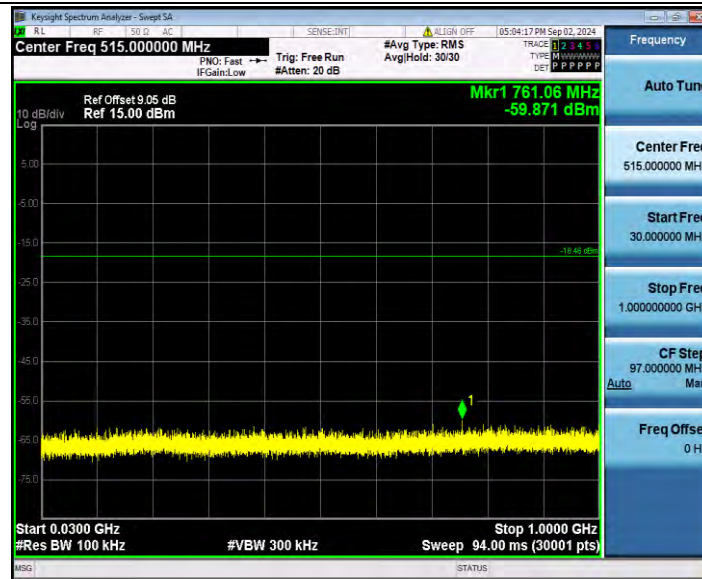
11B_Ant1_2437_1000~26500



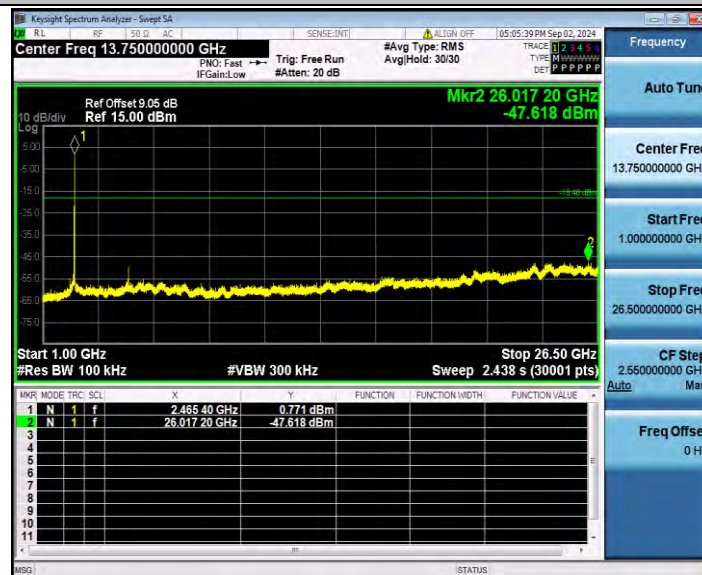
11B_Ant1_2462_0~Reference



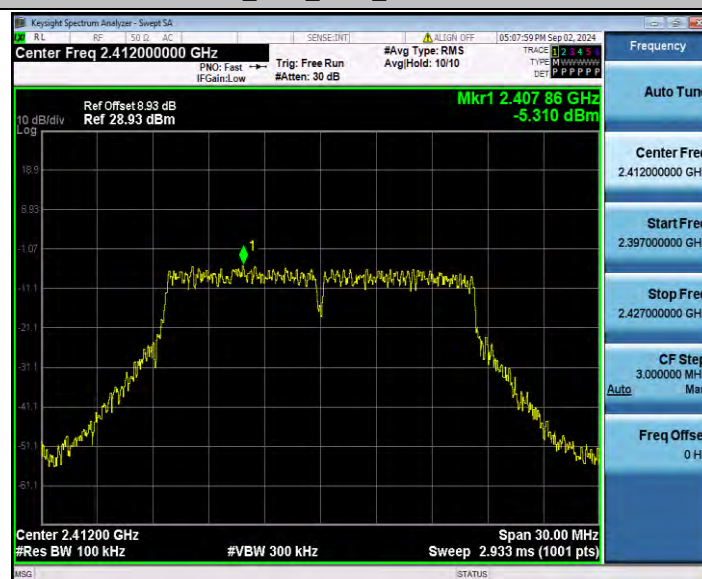
11B_Ant1_2462_30~1000



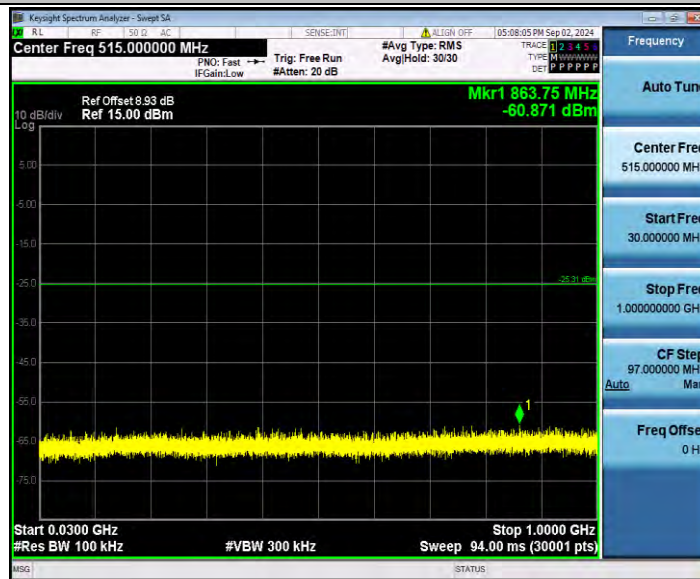
11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



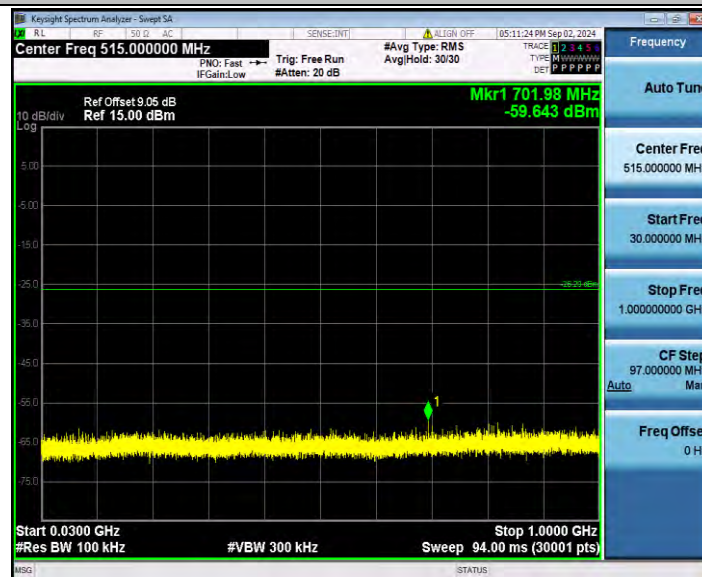
11G_Ant1_2412_1000~26500



11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



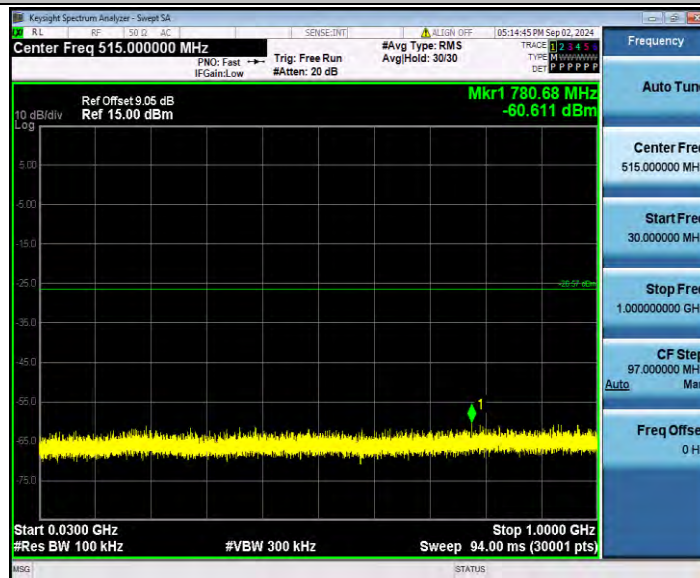
11G_Ant1_2437_1000~26500



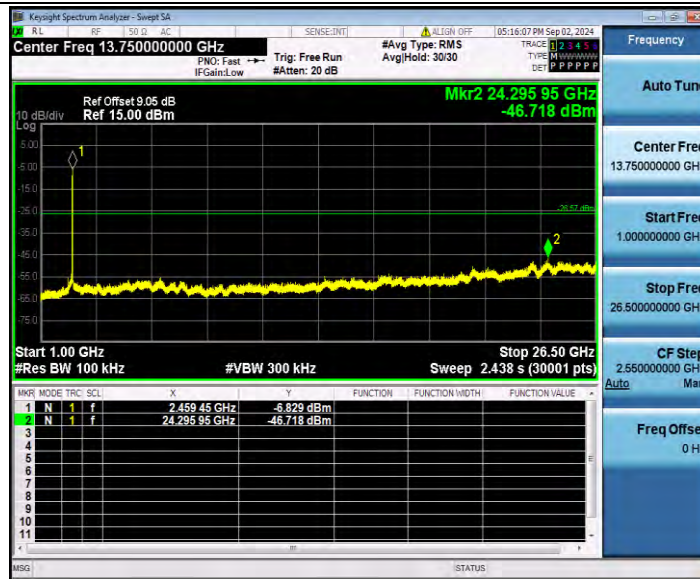
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



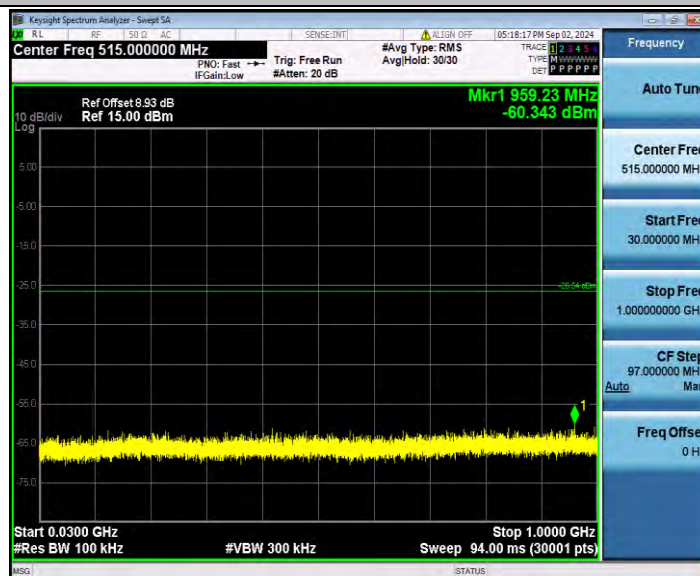
11G_Ant1_2462_1000~26500



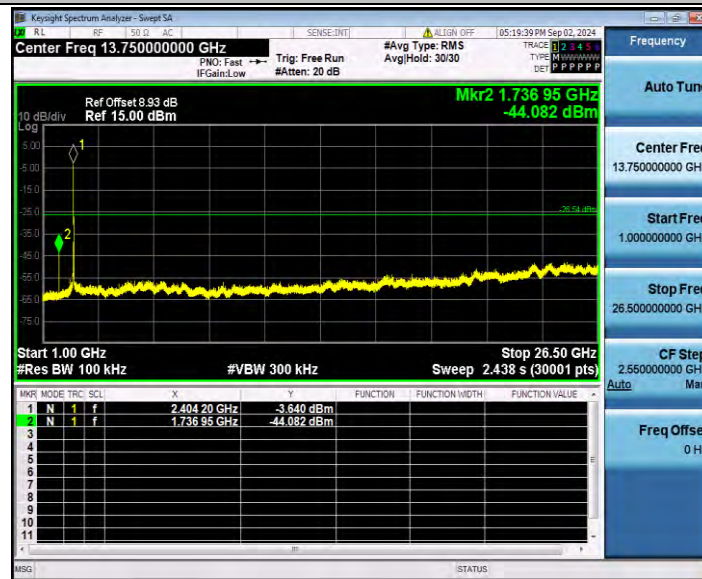
11N20ISO_Ant1_2412_0~Reference



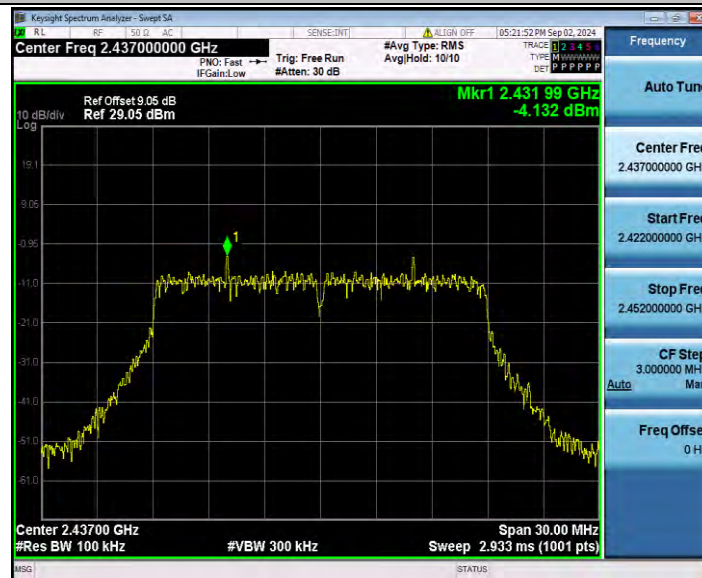
11N20ISO_Ant1_2412_30~1000



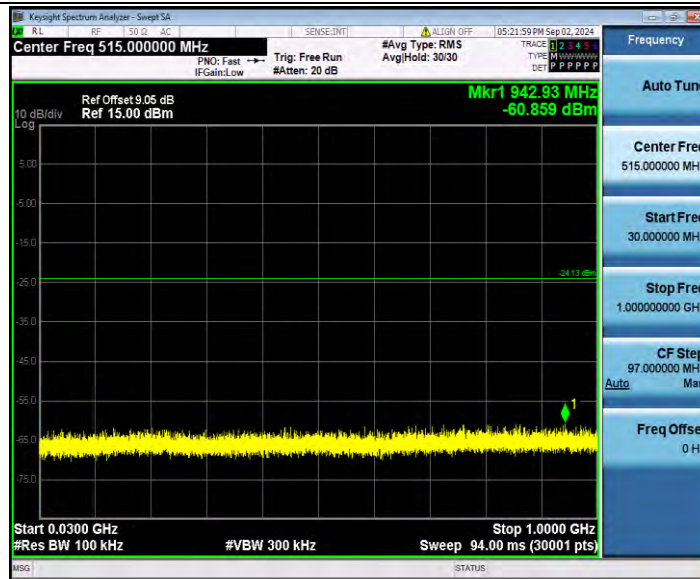
11N20SISO_Ant1_2412_1000~26500



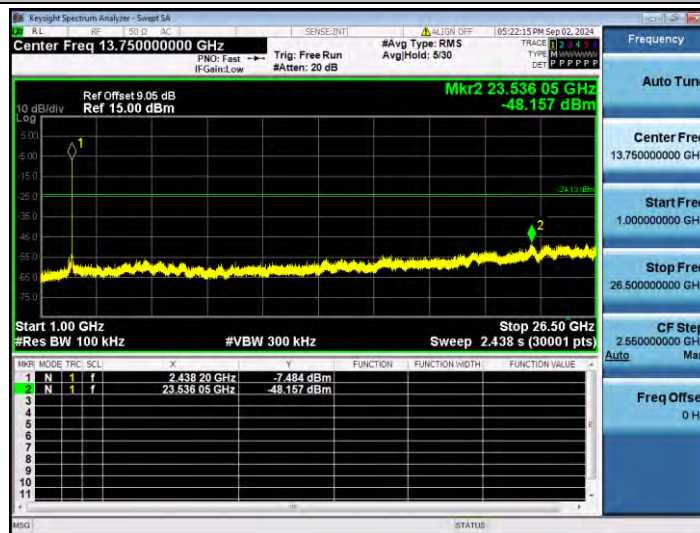
11N20SISO_Ant1_2437_0~Reference



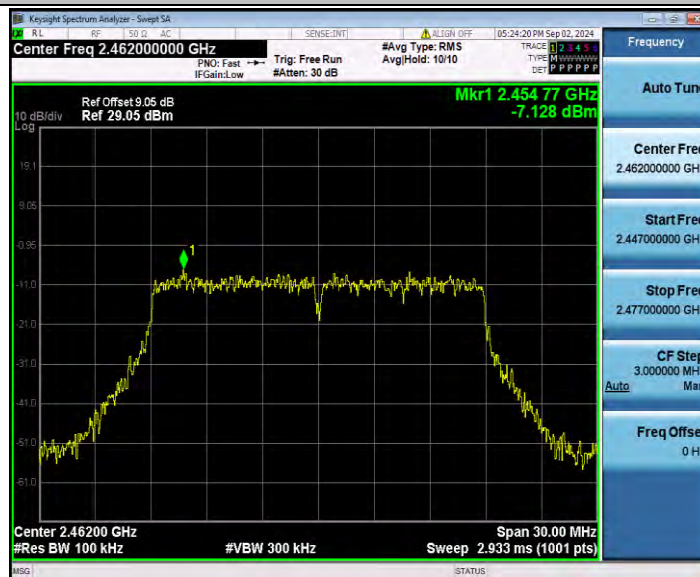
11N20SISO_Ant1_2437_30~1000



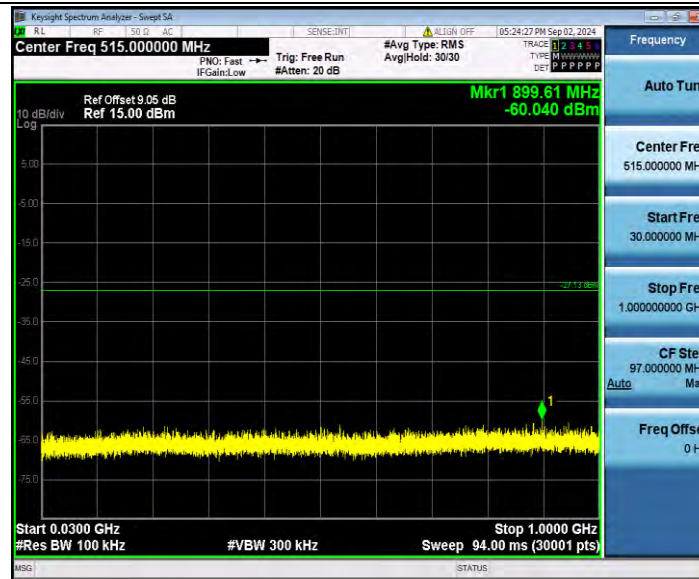
11N20SISO_Ant1_2437_1000~26500



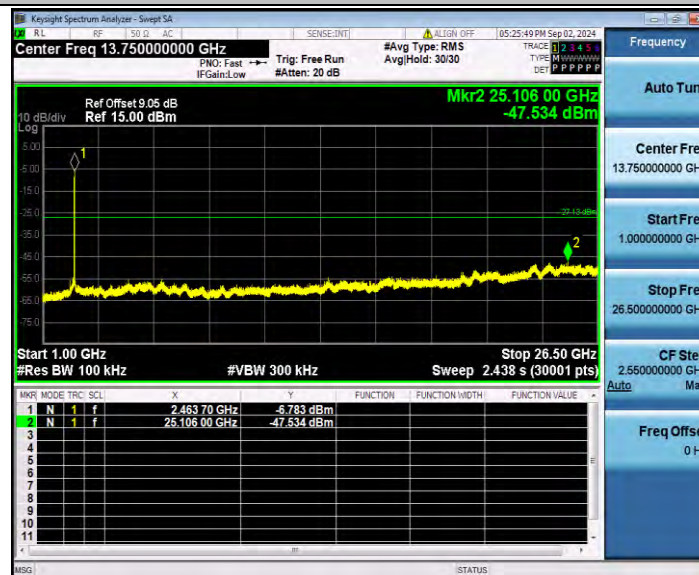
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



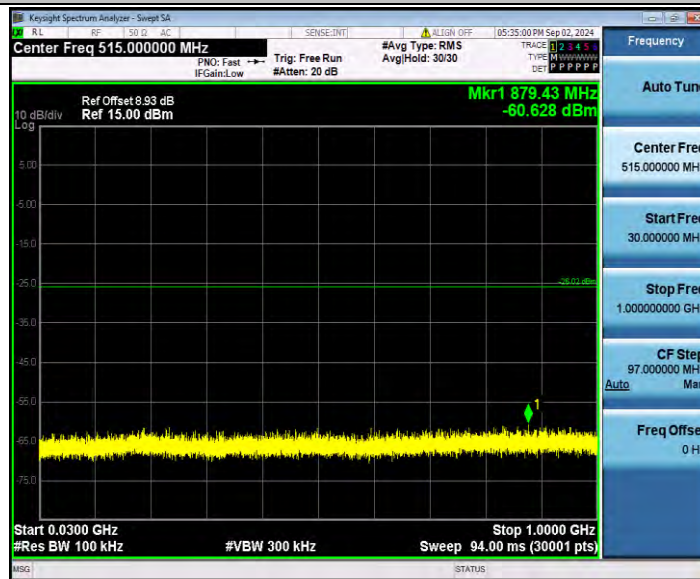
11N20SISO_Ant1_2462_1000~26500



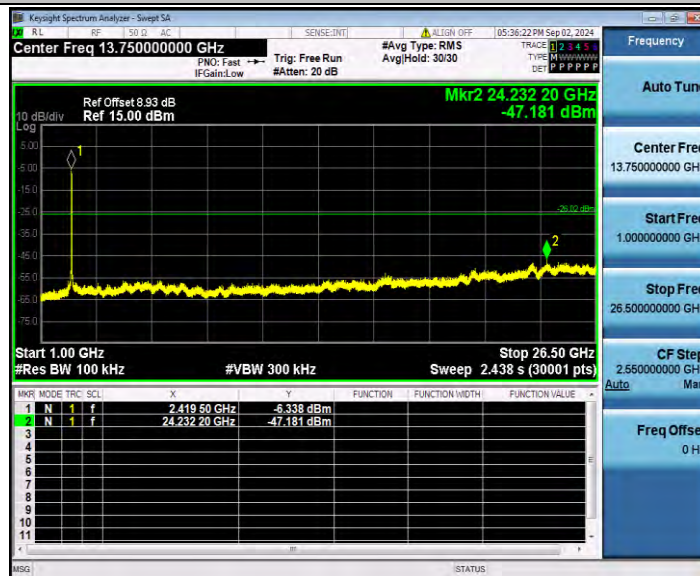
11N40SISO_Ant1_2422_0~Reference



11N40SISO_Ant1_2422_30~1000



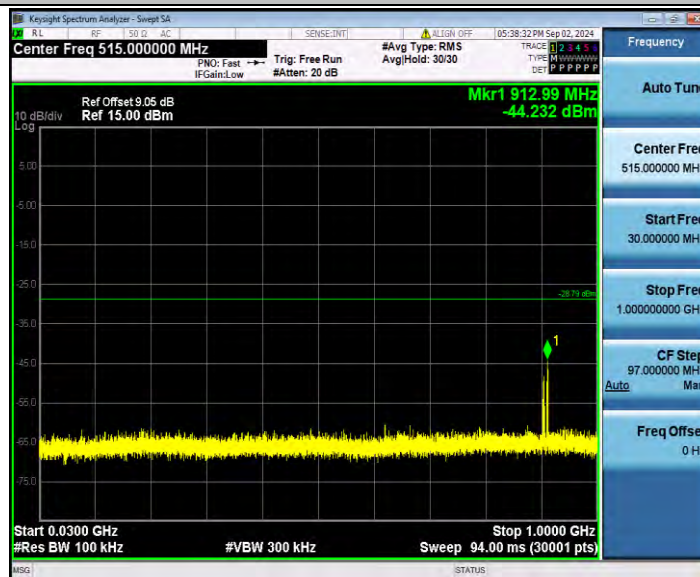
11N40SISO_Ant1_2422_1000~26500



11N40SISO_Ant1_2437_0~Reference



11N40SISO_Ant1_2437_30~1000



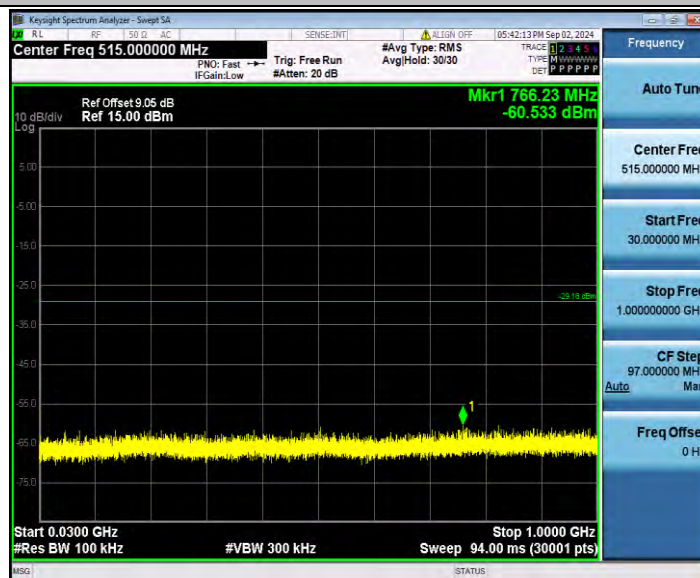
11N40SISO_Ant1_2437_1000~26500



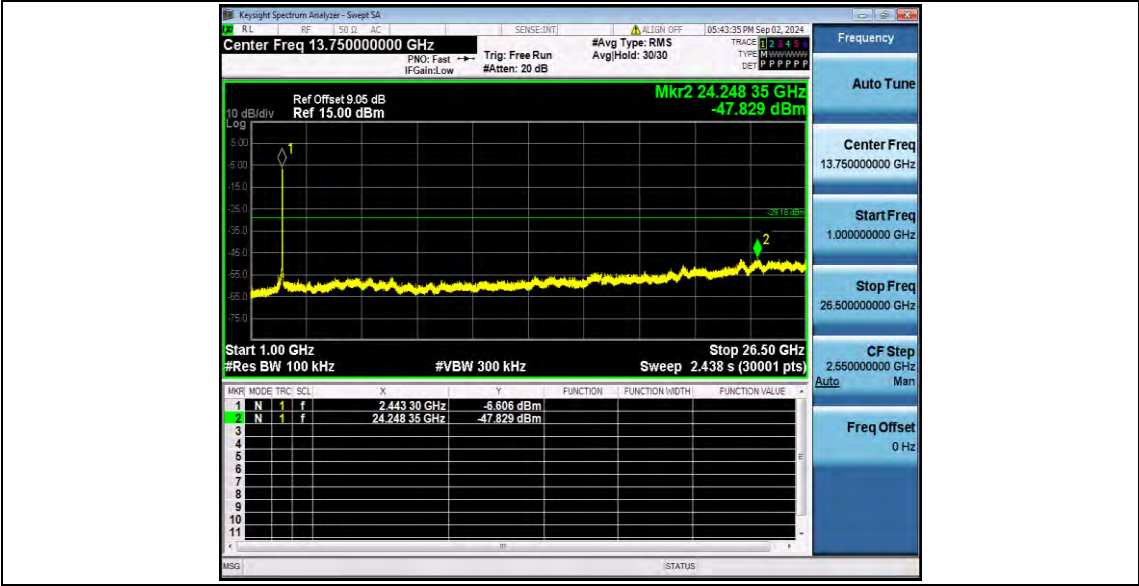
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



Appendix A.7: Emissions in Restricted Bands

Test Result

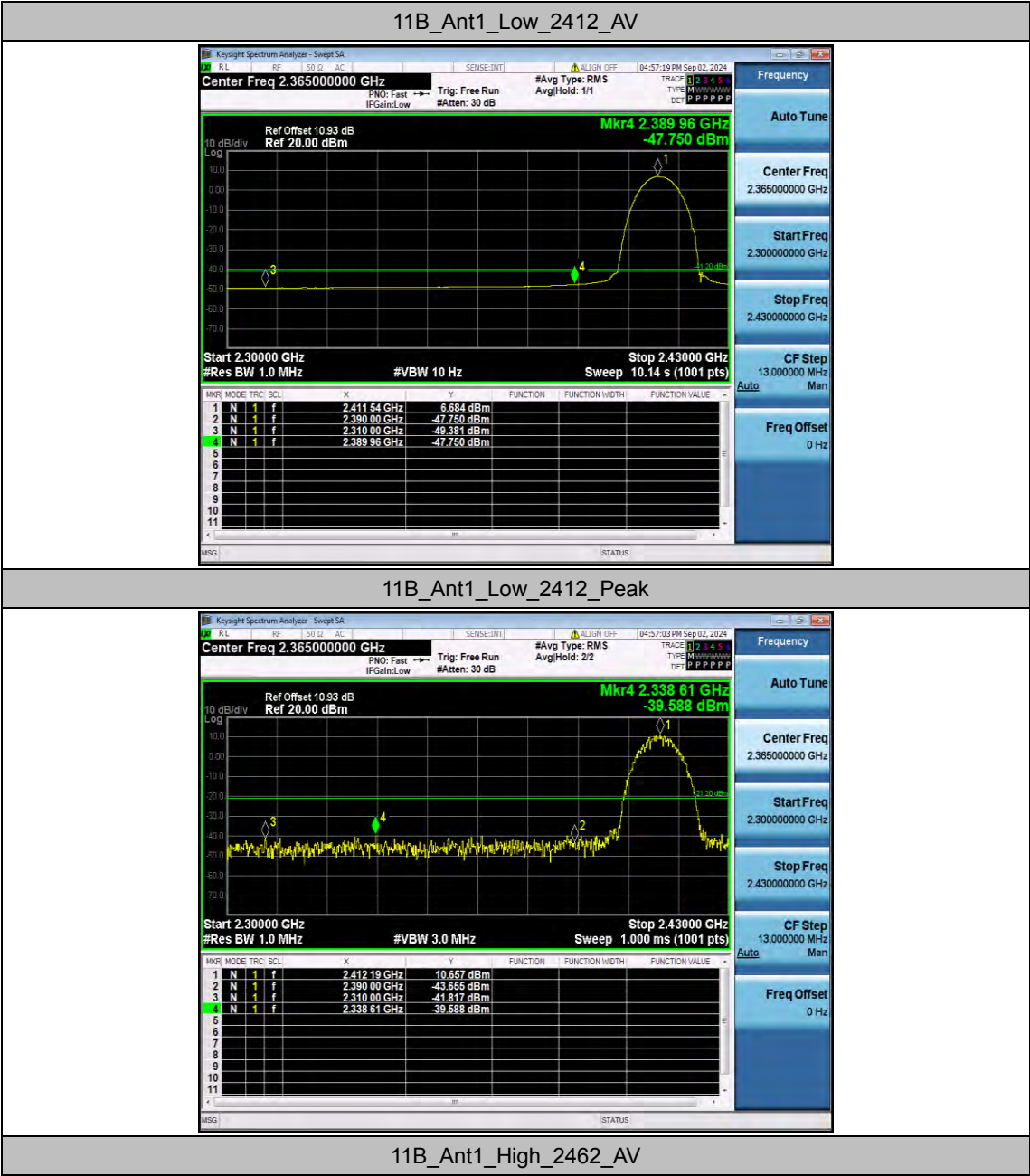
TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.38	≤-41.20	45.82	≤54	PASS
				AV	2389.960	-47.75	≤-41.20	47.45	≤54	PASS
				AV	2390.000	-47.75	≤-41.20	47.45	≤54	PASS
				Peak	2310.000	-41.82	≤-21.20	53.38	≤74	PASS
				Peak	2338.610	-39.59	≤-21.20	55.61	≤74	PASS
				Peak	2390.000	-43.66	≤-21.20	51.54	≤74	PASS
		High	2462	AV	2483.500	-48.17	≤-41.20	47.03	≤54	PASS
				AV	2483.890	-48.14	≤-41.20	47.06	≤54	PASS
				AV	2500.000	-48.44	≤-41.20	46.76	≤54	PASS
				Peak	2483.500	-44.38	≤-21.20	50.82	≤74	PASS
				Peak	2491.920	-39.84	≤-21.20	55.36	≤74	PASS
				Peak	2500.000	-48.03	≤-21.20	47.17	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.43	≤-41.20	45.77	≤54	PASS
				AV	2389.960	-47.82	≤-41.20	47.38	≤54	PASS
				AV	2390.000	-47.82	≤-41.20	47.38	≤54	PASS
				Peak	2310.000	-45.45	≤-21.20	49.75	≤74	PASS
				Peak	2383.720	-40.49	≤-21.20	54.71	≤74	PASS
				Peak	2390.000	-45.43	≤-21.20	49.77	≤74	PASS
		High	2462	AV	2483.500	-48.18	≤-41.20	47.02	≤54	PASS
				AV	2483.780	-48.17	≤-41.20	47.03	≤54	PASS
				AV	2500.000	-48.53	≤-41.20	46.67	≤54	PASS
				Peak	2483.500	-45.71	≤-21.20	49.49	≤74	PASS
				Peak	2491.260	-40.94	≤-21.20	54.26	≤74	PASS
				Peak	2500.000	-44.4	≤-21.20	50.80	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-49.45	≤-41.20	45.75	≤54	PASS
				AV	2389.960	-47.78	≤-41.20	47.42	≤54	PASS
				AV	2390.000	-47.78	≤-41.20	47.42	≤54	PASS
				Peak	2310.000	-45.12	≤-21.20	50.08	≤74	PASS
				Peak	2389.830	-39.8	≤-21.20	55.40	≤74	PASS
				Peak	2390.000	-40.38	≤-21.20	54.82	≤74	PASS
		High	2462	AV	2483.500	-48.2	≤-41.20	47.00	≤54	PASS
				AV	2483.780	-48.21	≤-41.20	46.99	≤54	PASS
				AV	2500.000	-48.5	≤-41.20	46.70	≤54	PASS
				Peak	2483.500	-41.44	≤-21.20	53.76	≤74	PASS
				Peak	2497.640	-40.73	≤-21.20	54.47	≤74	PASS

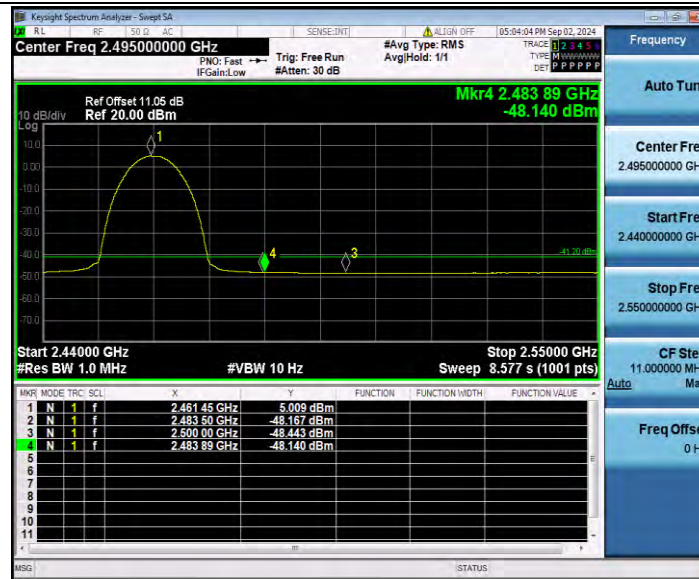
				Peak	2500.000	-47.44	≤ -21.20	47.76	≤ 74	PASS
11N40SIS O	Ant1	Low	2422	AV	2310.000	-49.17	≤ -41.20	46.03	≤ 54	PASS
				AV	2389.960	-47.04	≤ -41.20	48.16	≤ 54	PASS
				AV	2390.000	-47.04	≤ -41.20	48.16	≤ 54	PASS
				Peak	2310.000	-44.26	≤ -21.20	50.94	≤ 74	PASS
				Peak	2388.920	-40.03	≤ -21.20	55.17	≤ 74	PASS
				Peak	2390.000	-45.29	≤ -21.20	49.91	≤ 74	PASS
		High	2452	AV	2483.500	-47.88	≤ -41.20	47.32	≤ 54	PASS
				AV	2483.780	-47.89	≤ -41.20	47.31	≤ 54	PASS
				AV	2500.000	-48.4	≤ -41.20	46.80	≤ 54	PASS
				Peak	2483.500	-45.21	≤ -21.20	49.99	≤ 74	PASS
				Peak	2487.080	-39.77	≤ -21.20	55.43	≤ 74	PASS
				Peak	2500.000	-44.65	≤ -21.20	50.55	≤ 74	PASS

Note:

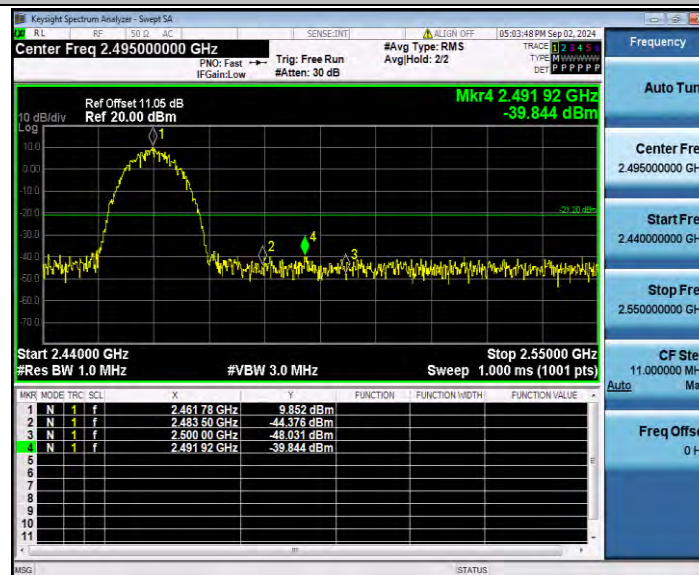
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs



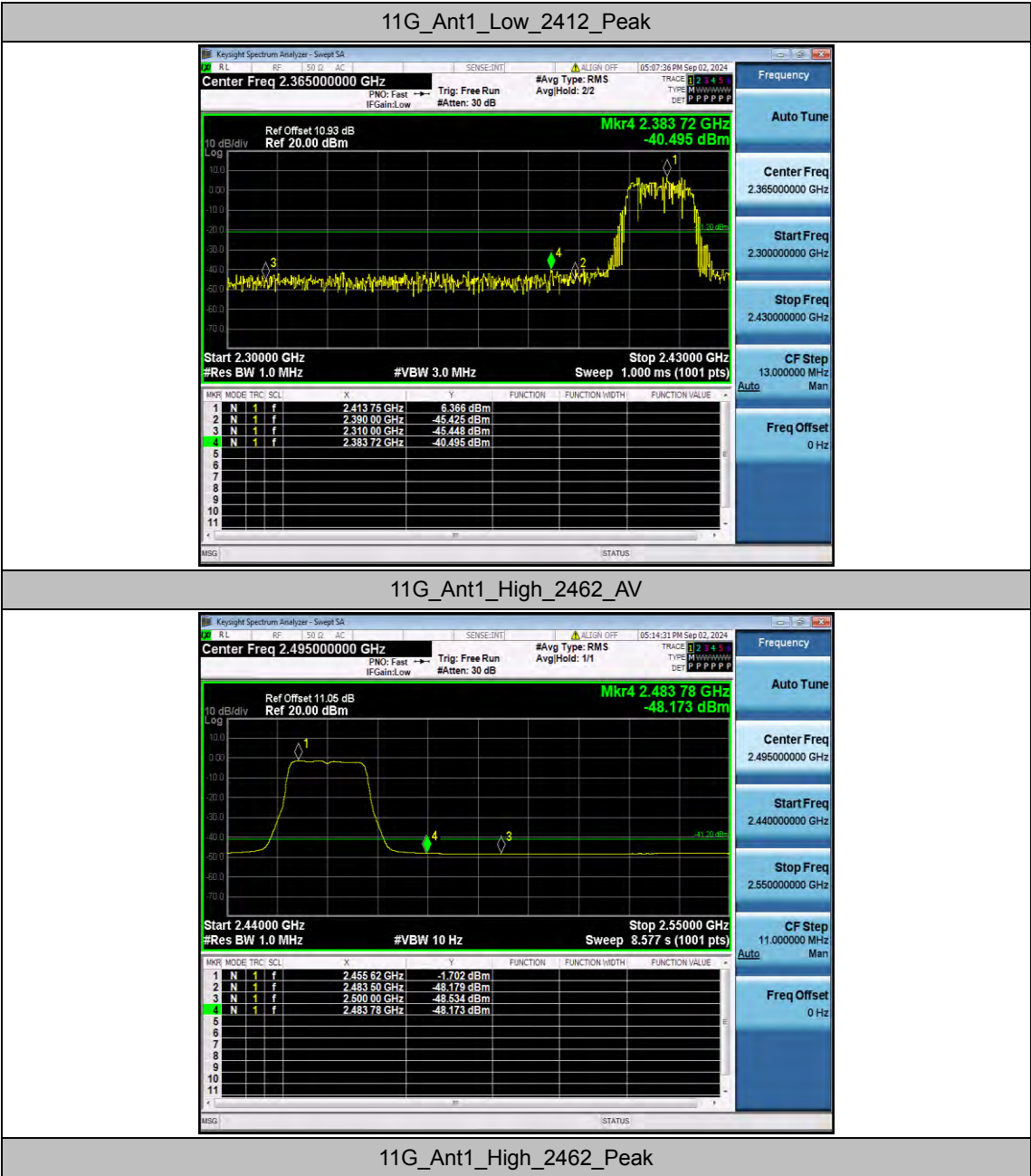


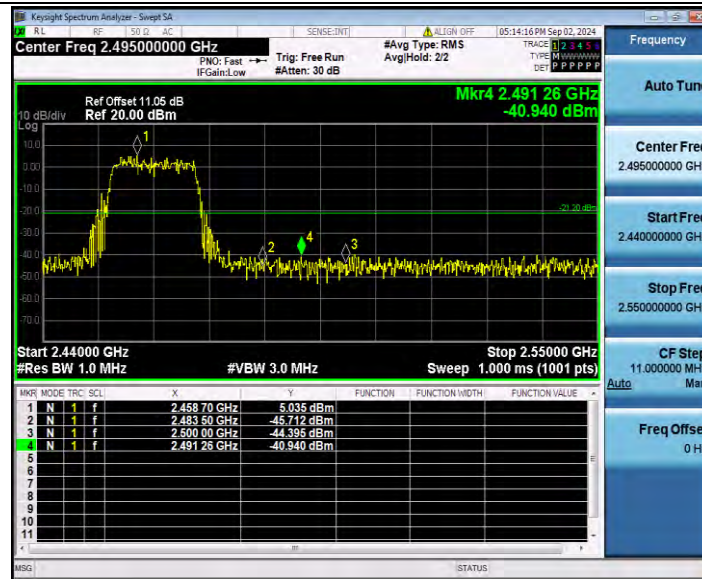
11B_Ant1_High_2462_Peak



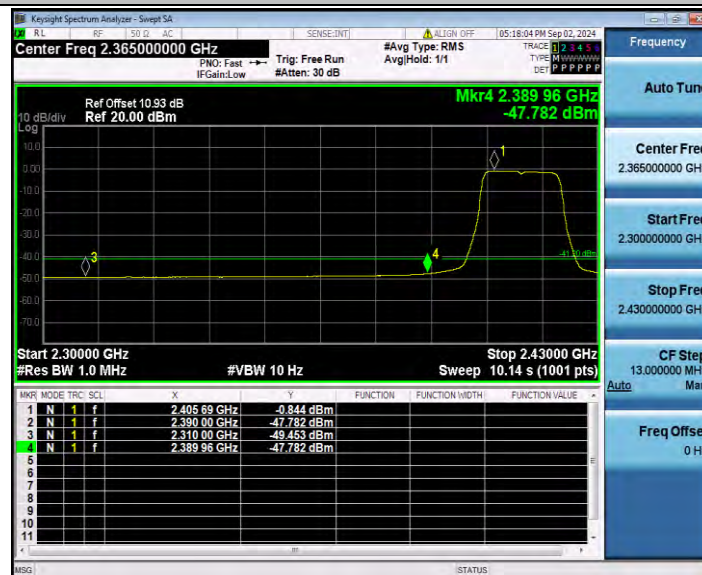
11G_Ant1_Low_2412_AV



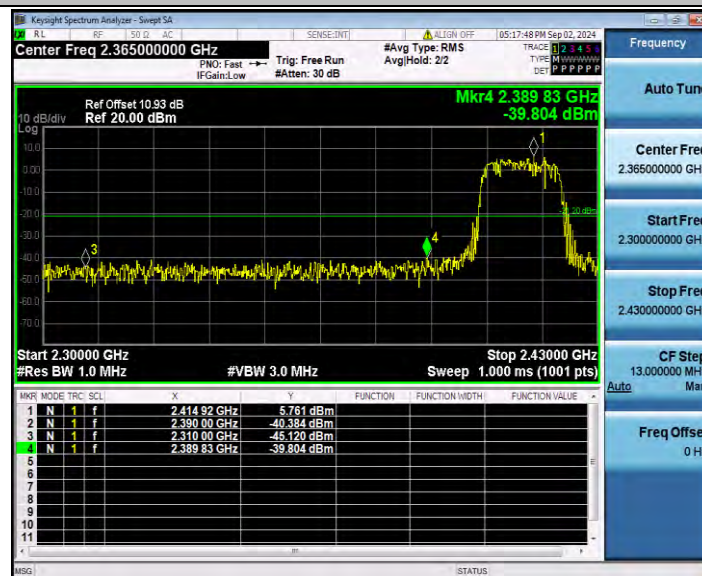




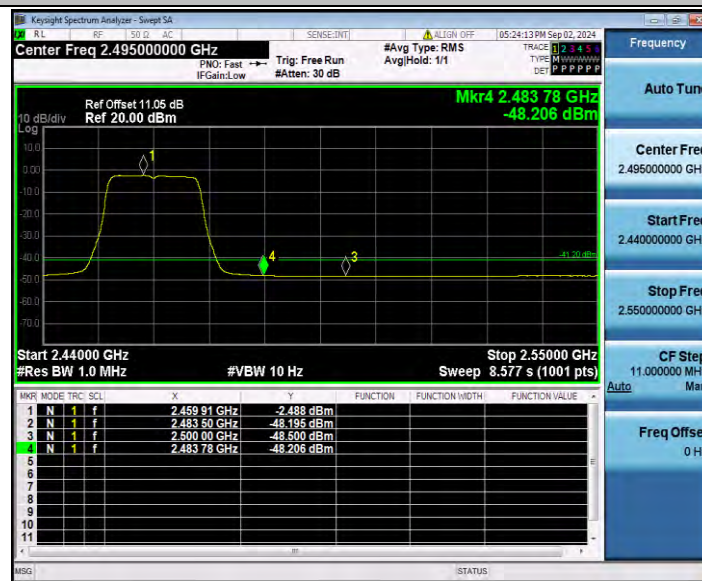
11N20SISO_Ant1_Low_2412_AV



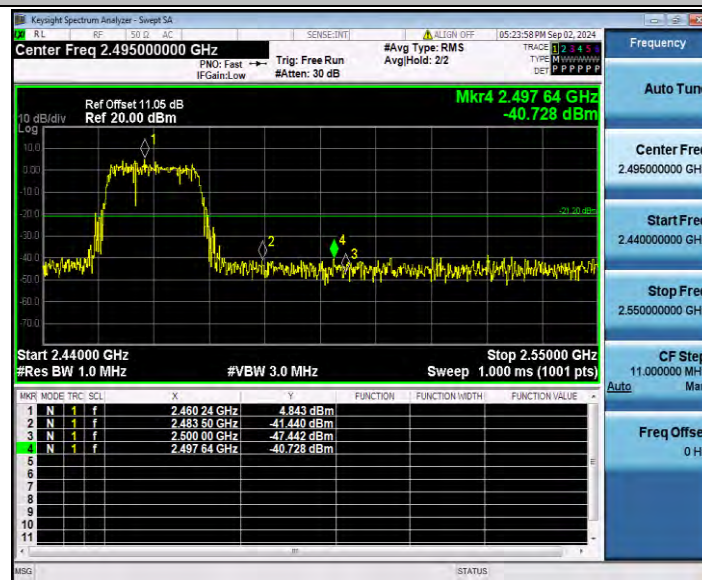
11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV



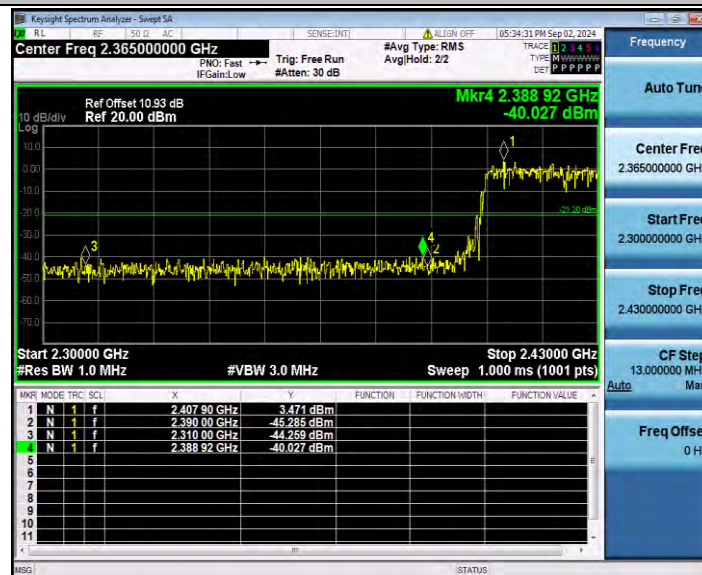
11N20SISO_Ant1_High_2462_Peak



11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



