

Case No. : <u>CTA24071501801</u>	
Ambient Condition: <u>24</u> °C, <u>49</u> %RH,	
Test Date: <u>2024.7.31</u>	Test Engineer: <u>Lushan Kong</u>

Appendix A.1: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.040	2407.960	2416.000	0.5	PASS
		2437	9.040	2432.480	2441.520	0.5	PASS
		2462	8.520	2458.000	2466.520	0.5	PASS
11G	Ant1	2412	15.000	2404.520	2419.520	0.5	PASS
		2437	14.400	2430.360	2444.760	0.5	PASS
		2462	15.240	2454.520	2469.760	0.5	PASS
11N20SISO	Ant1	2412	15.440	2405.080	2420.520	0.5	PASS
		2437	14.560	2430.800	2445.360	0.5	PASS
		2462	16.640	2454.120	2470.760	0.5	PASS
11N40SISO	Ant1	2422	35.120	2404.480	2439.600	0.5	PASS
		2437	33.920	2420.680	2454.600	0.5	PASS
		2452	35.040	2434.480	2469.520	0.5	PASS

Test Graphs

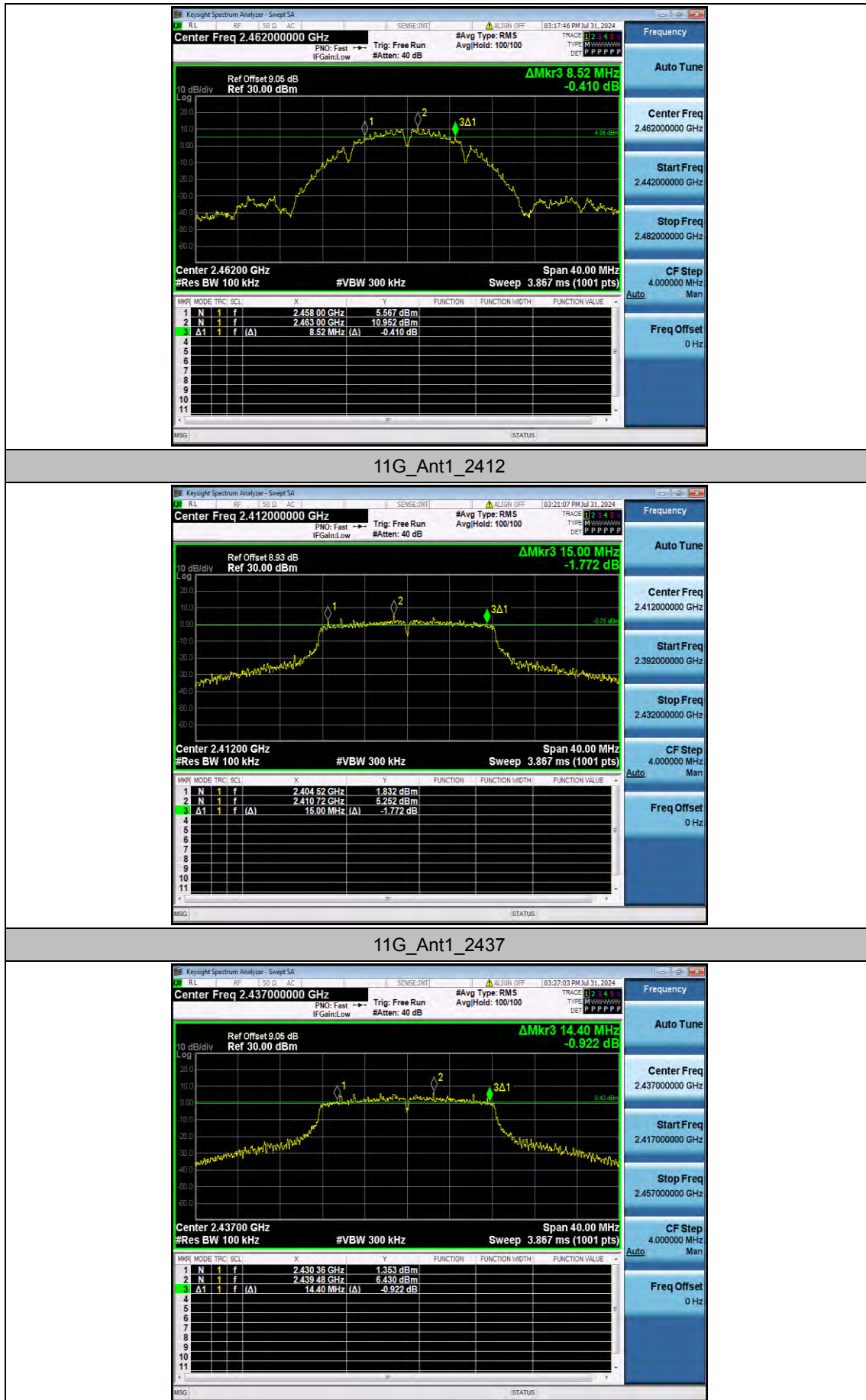
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2462



11N20SISO_Ant1_2412



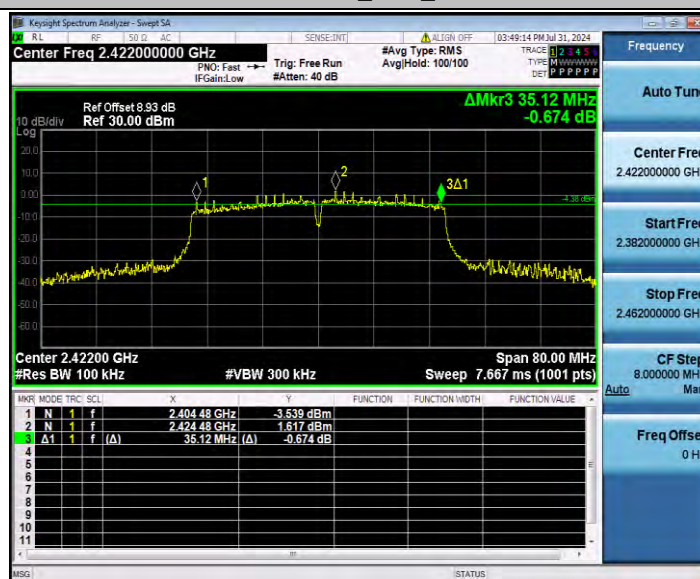
11N20SISO_Ant1_2437



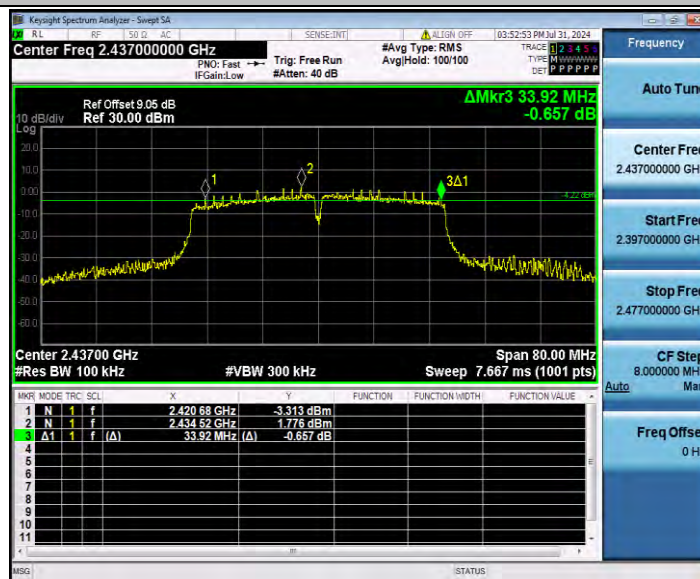
11N20SISO_Ant1_2462



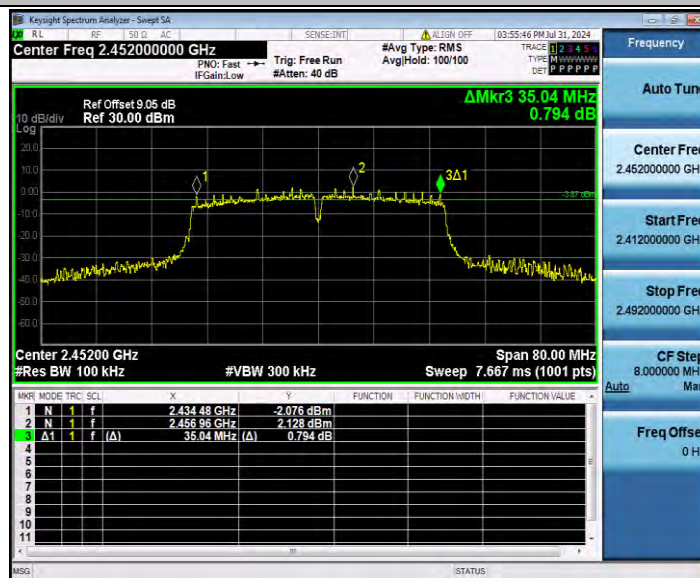
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



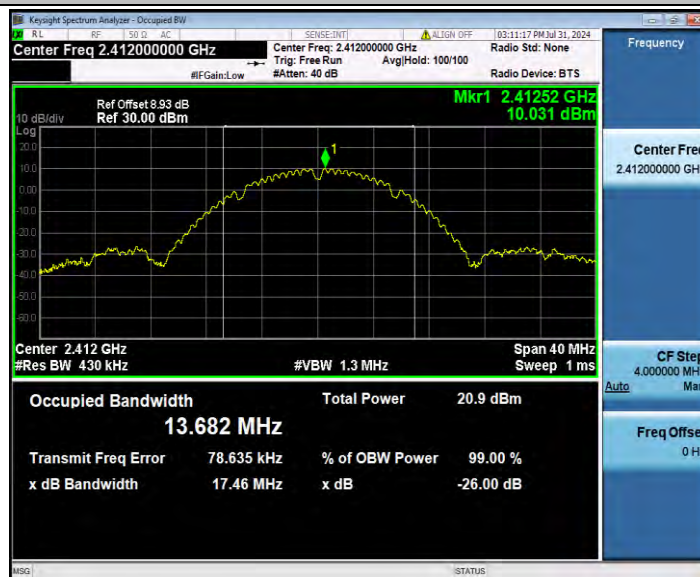
Appendix A.2: Occupied Channel Bandwidth

Test Result

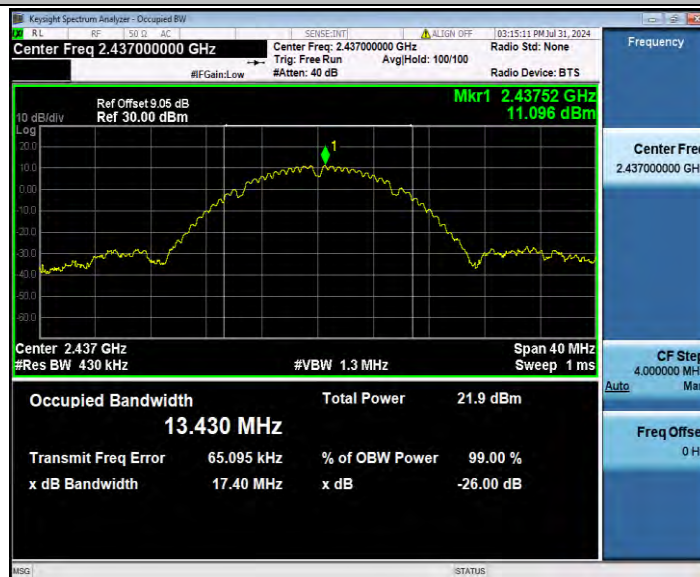
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.682	2405.2376	2418.9196	---	---
		2437	13.430	2430.3501	2443.7801	---	---
		2462	13.383	2455.3436	2468.7266	---	---
11G	Ant1	2412	17.229	2403.4503	2420.6793	---	---
		2437	16.936	2428.5932	2445.5292	---	---
		2462	17.024	2453.5316	2470.5556	---	---
11N20SISO	Ant1	2412	18.002	2403.0451	2421.0471	---	---
		2437	17.881	2428.0988	2445.9798	---	---
		2462	17.872	2453.0861	2470.9581	---	---
11N40SISO	Ant1	2422	36.216	2404.0640	2440.2800	---	---
		2437	36.281	2419.0244	2455.3054	---	---
		2452	36.146	2434.0059	2470.1519	---	---

Test Graphs

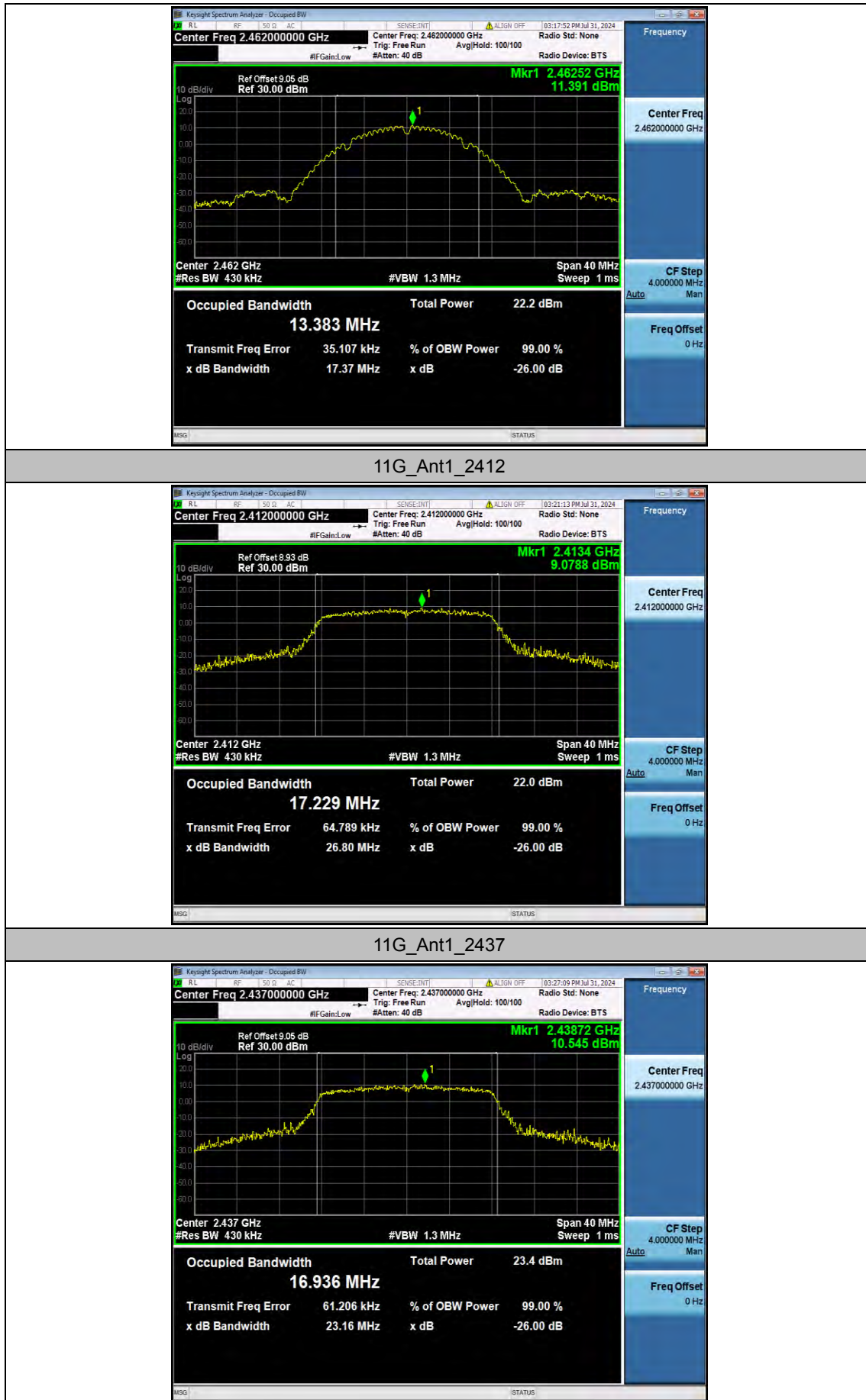
11B_Ant1_2412



11B_Ant1_2437



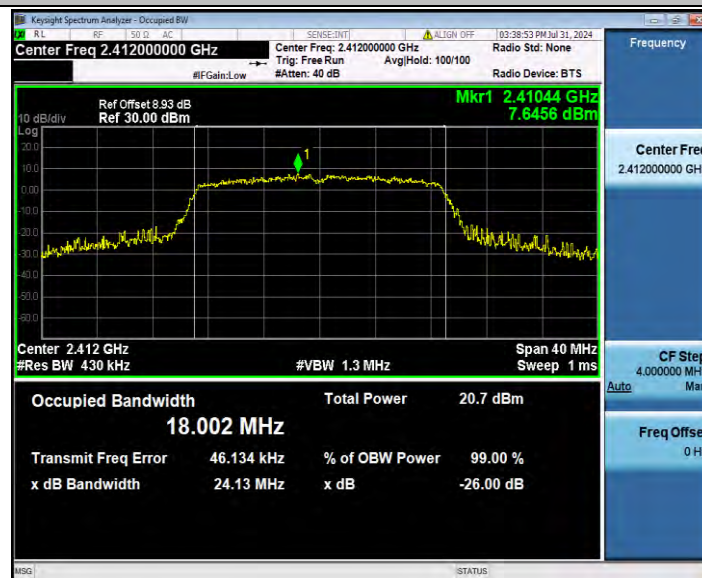
11B_Ant1_2462



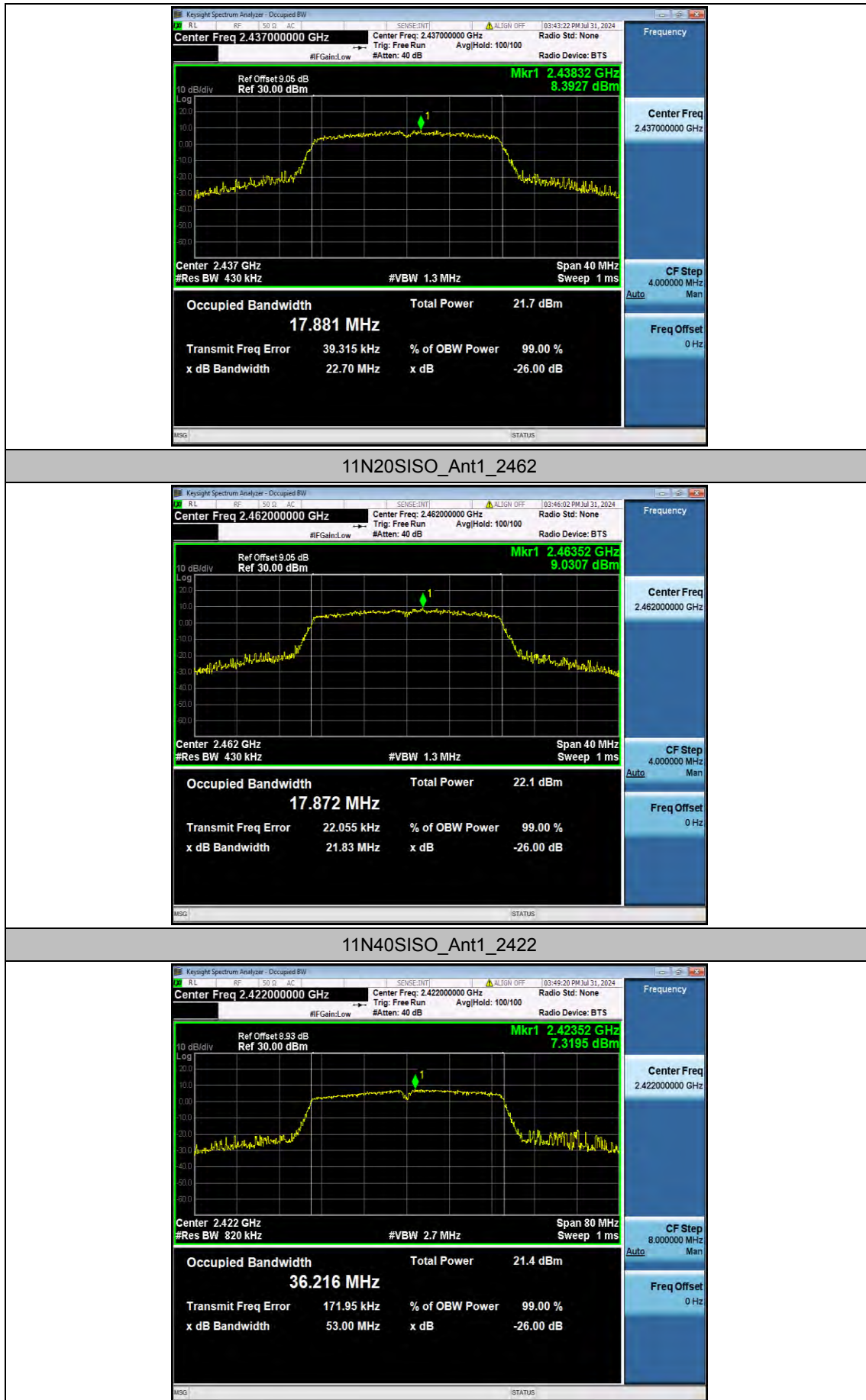
11G_Ant1_2462



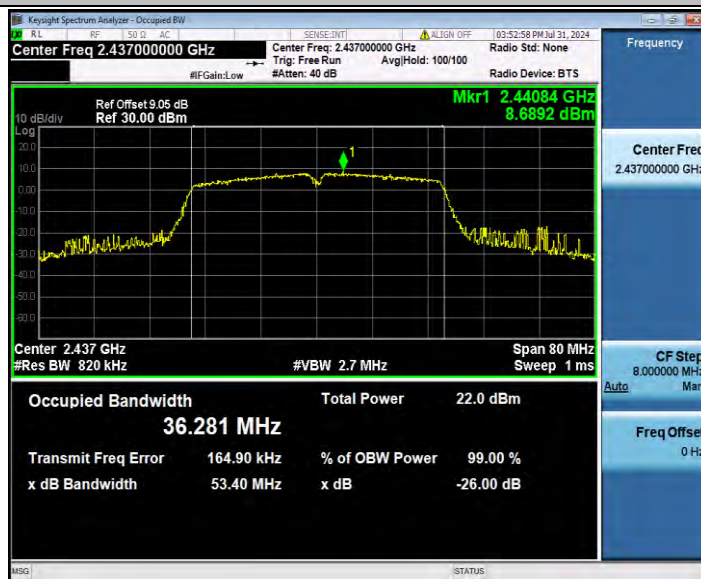
11N20SISO_Ant1_2412



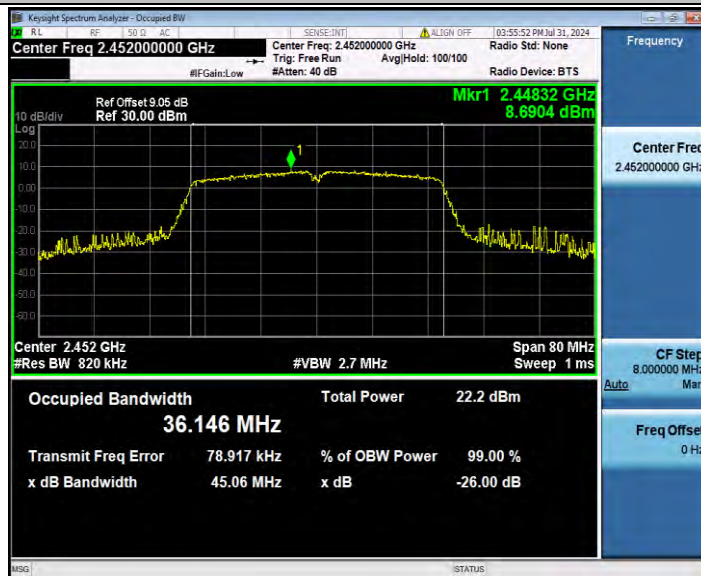
11N20SISO_Ant1_2437



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	20.93	≤30.00	PASS
		2437	21.96	≤30.00	PASS
		2462	22.24	≤30.00	PASS
11G	Ant1	2412	23.35	≤30.00	PASS
		2437	24.47	≤30.00	PASS
		2462	24.80	≤30.00	PASS
11N20SISO	Ant1	2412	21.86	≤30.00	PASS
		2437	22.84	≤30.00	PASS
		2462	23.17	≤30.00	PASS
11N40SISO	Ant1	2422	21.79	≤30.00	PASS
		2437	22.39	≤30.00	PASS
		2452	22.58	≤30.00	PASS

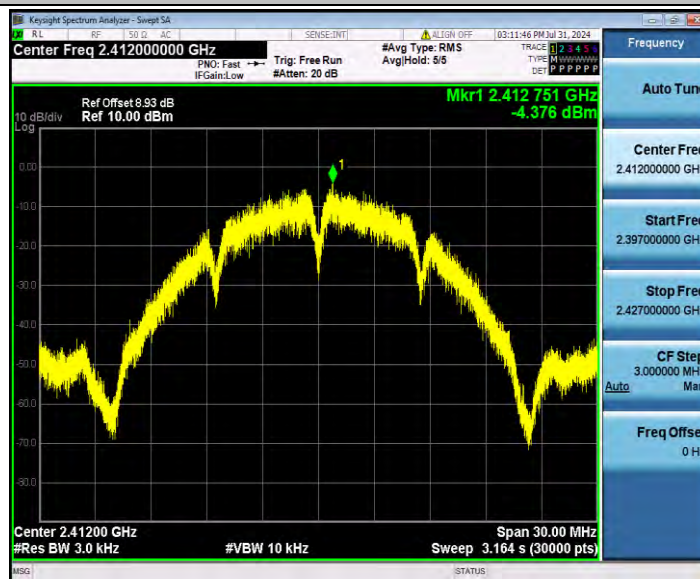
Appendix A.4: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-4.38	≤8.00	PASS
		2437	-3.47	≤8.00	PASS
		2462	-3.86	≤8.00	PASS
11G	Ant1	2412	-8.92	≤8.00	PASS
		2437	-7.12	≤8.00	PASS
		2462	-6.88	≤8.00	PASS
11N20SISO	Ant1	2412	-8.36	≤8.00	PASS
		2437	-8.76	≤8.00	PASS
		2462	-8.81	≤8.00	PASS
11N40SISO	Ant1	2422	-13.19	≤8.00	PASS
		2437	-12.43	≤8.00	PASS
		2452	-13.01	≤8.00	PASS

Test Graphs

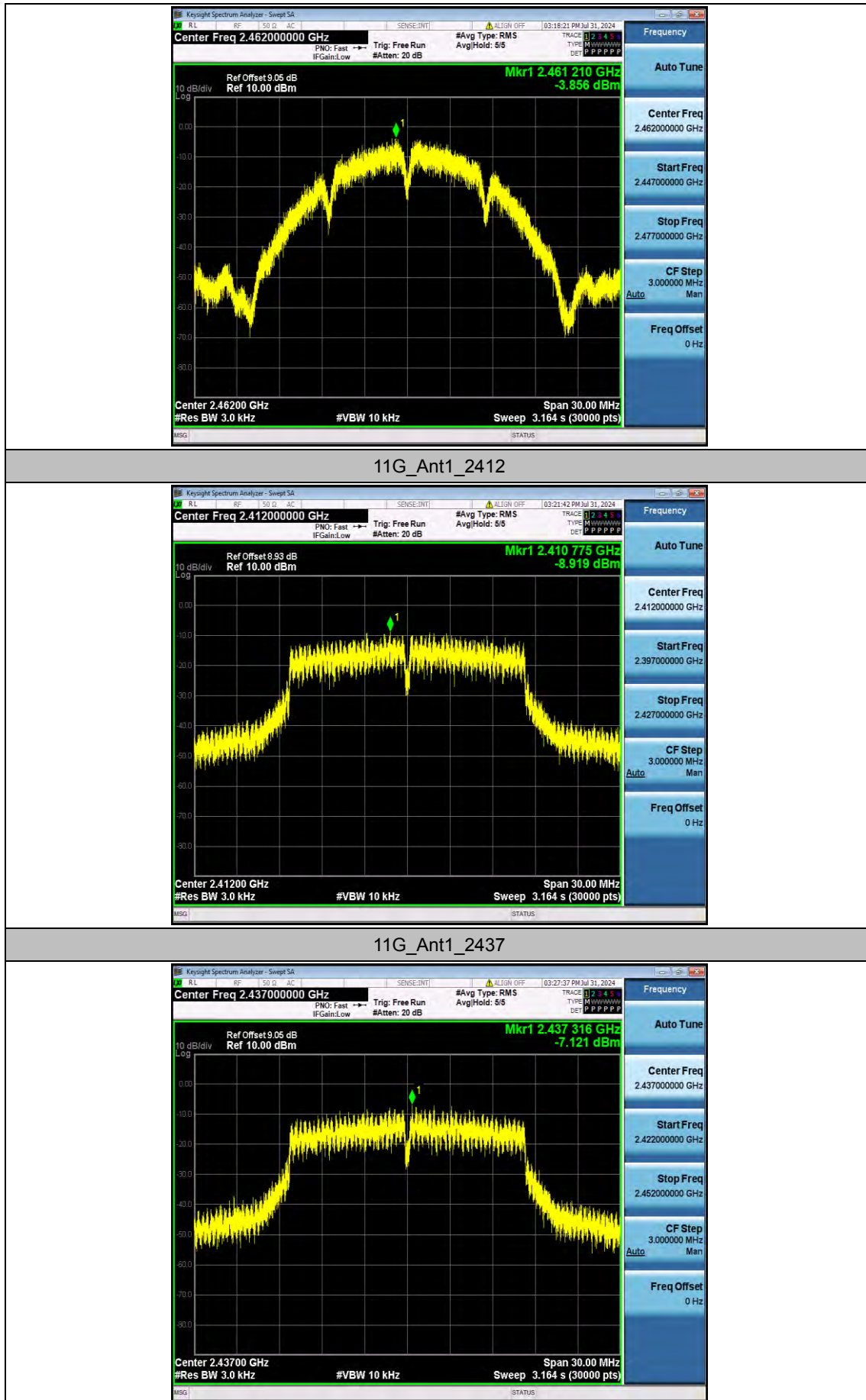
11B_Ant1_2412



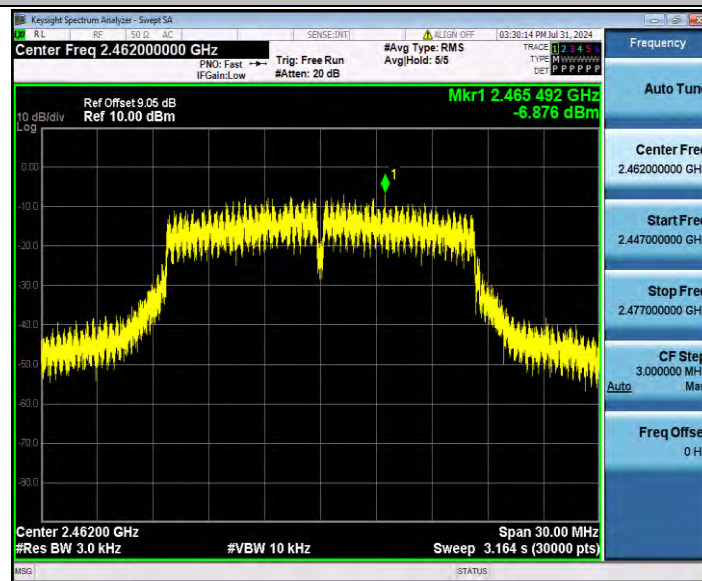
11B_Ant1_2437



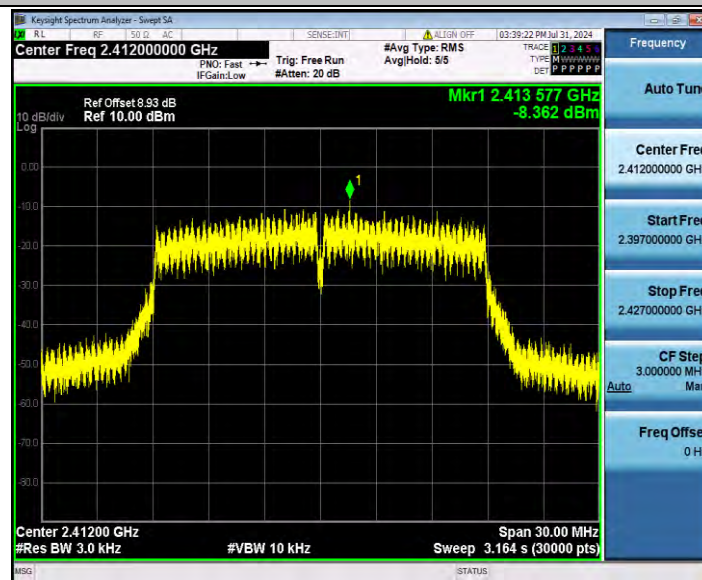
11B_Ant1_2462



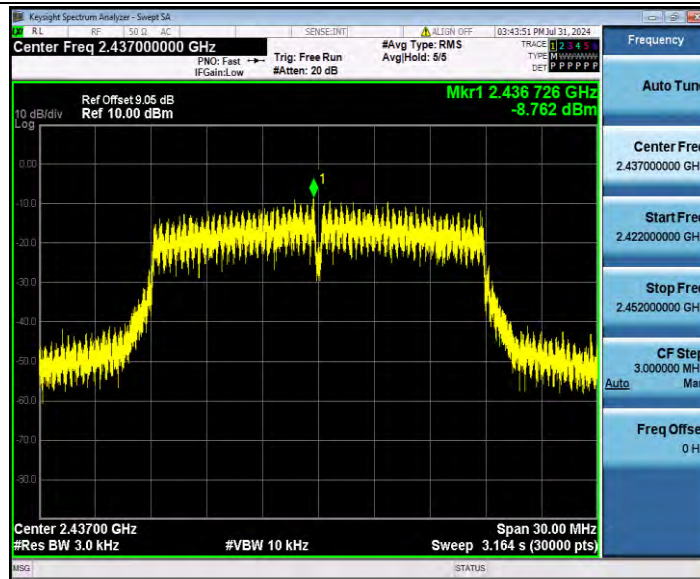
11G_Ant1_2462



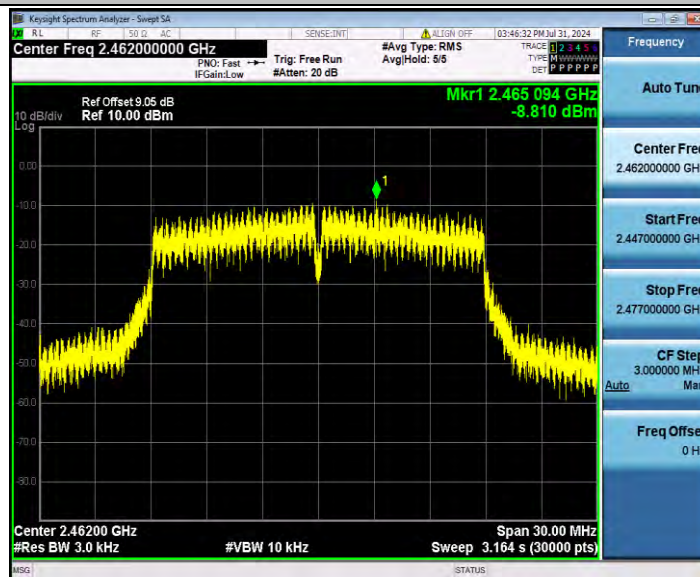
11N20SISO_Ant1_2412



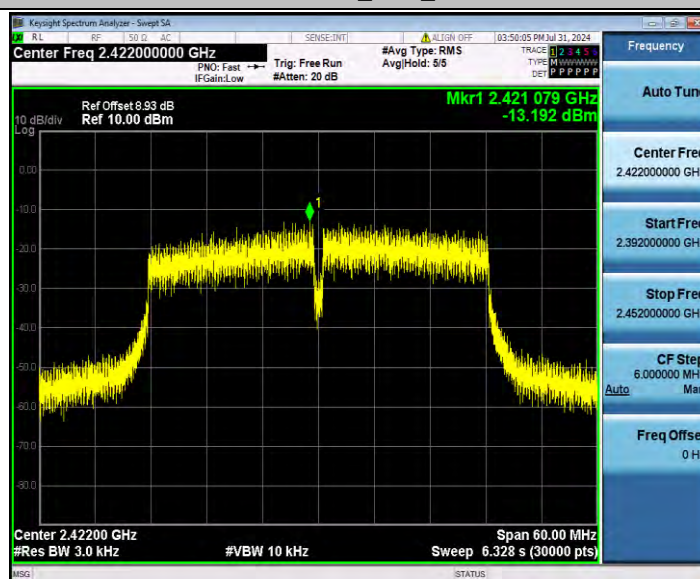
11N20SISO_Ant1_2437



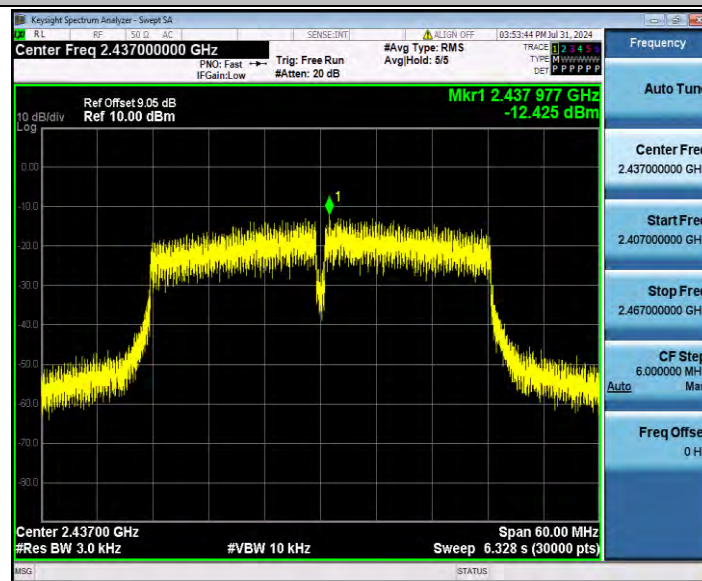
11N20SISO_Ant1_2462



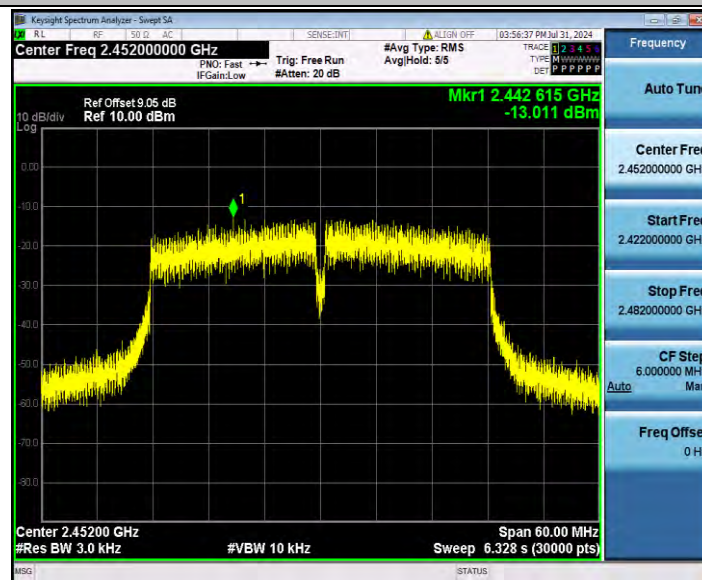
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

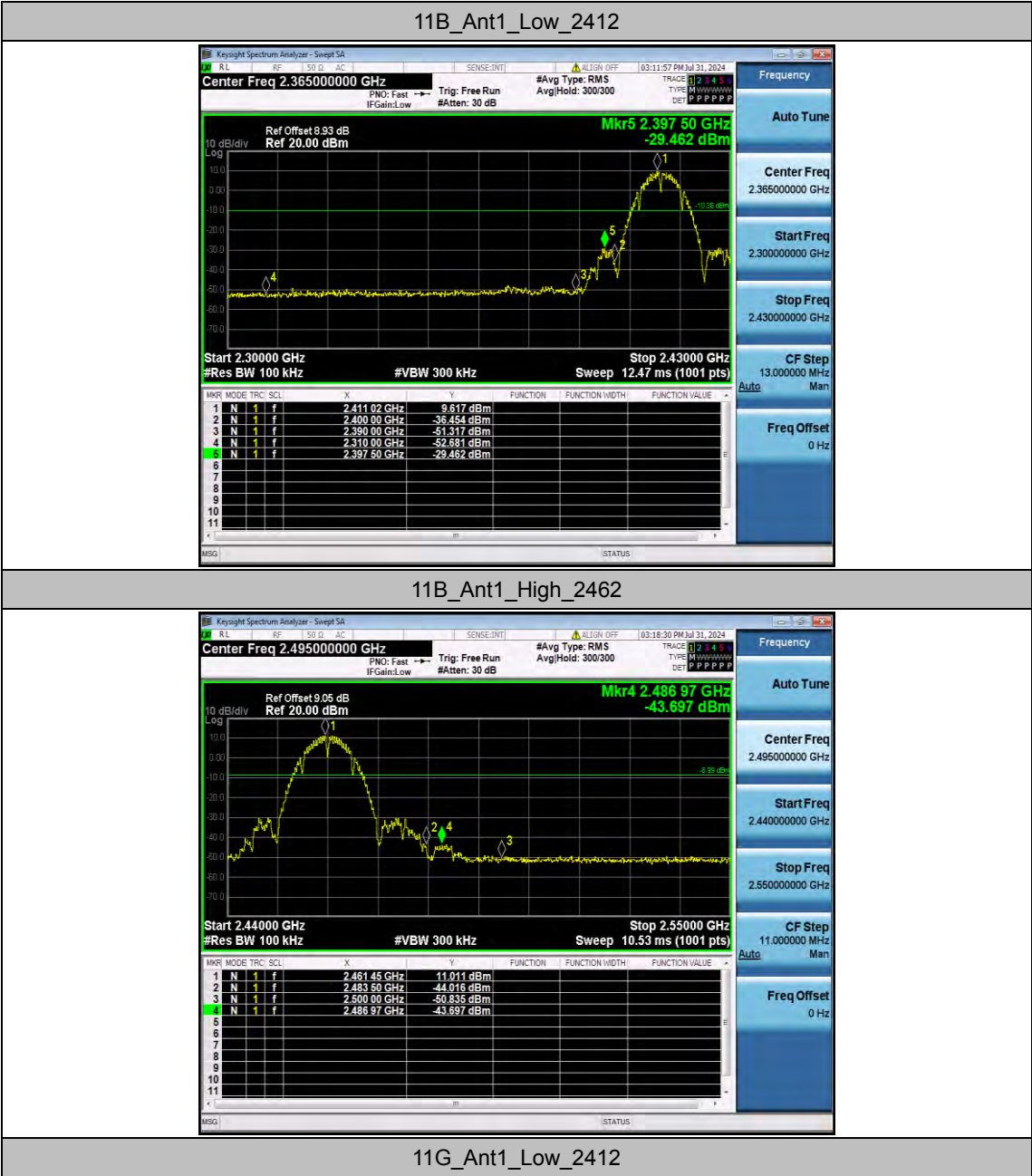


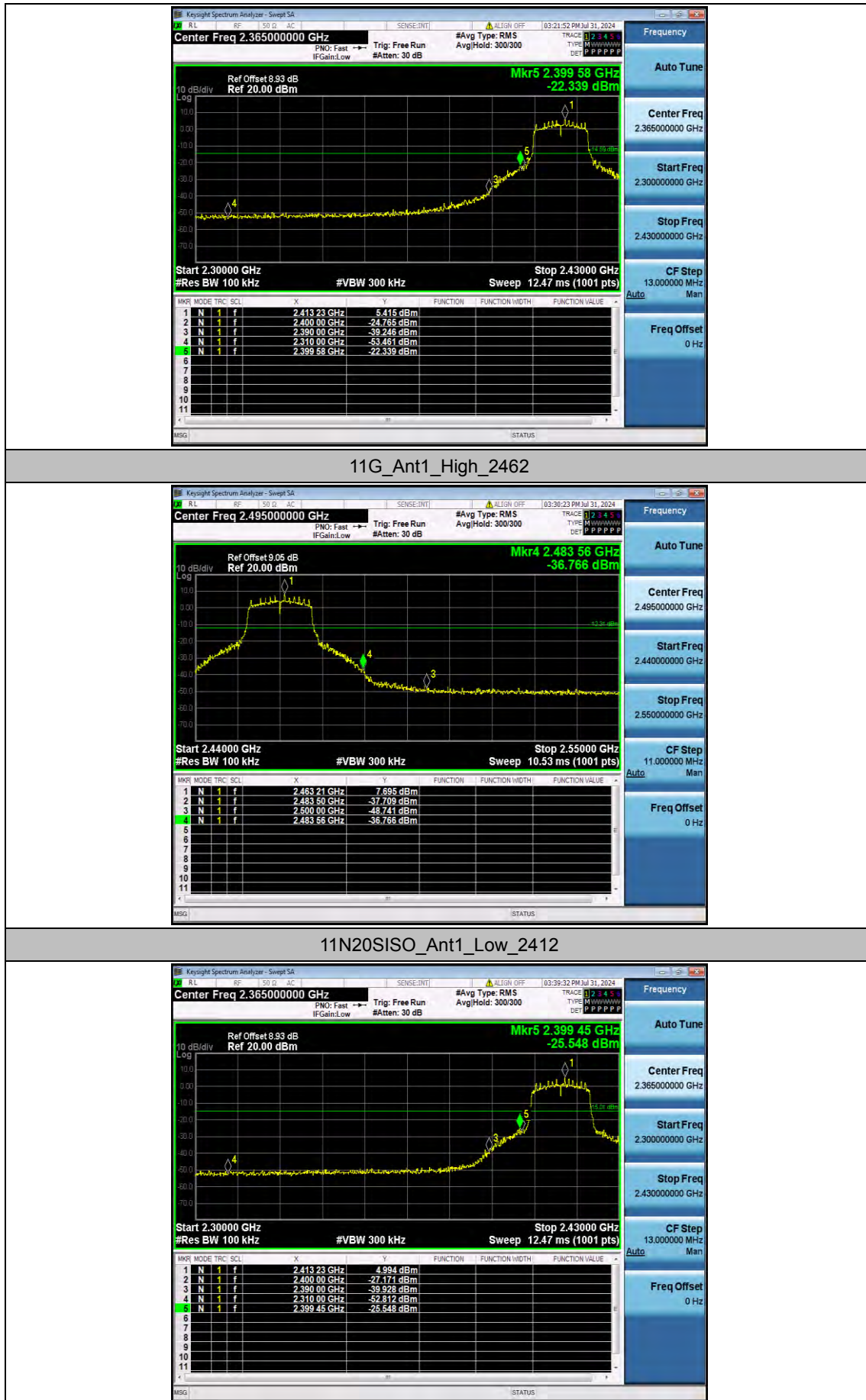
Appendix A.5: Band edge measurements

Test Result

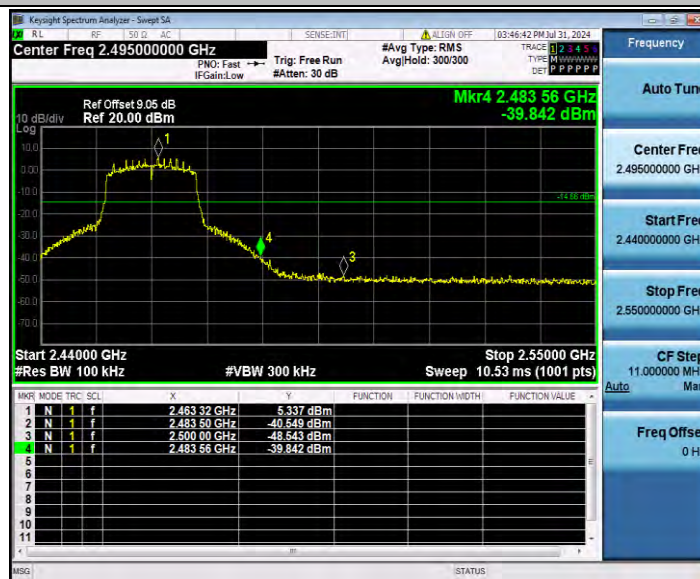
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	9.62	-29.46	≤ -10.38	PASS
		High	2462	11.01	-43.7	≤ -8.99	PASS
11G	Ant1	Low	2412	5.42	-22.34	≤ -14.59	PASS
		High	2462	7.70	-36.77	≤ -12.31	PASS
11N20SISO	Ant1	Low	2412	4.99	-25.55	≤ -15.01	PASS
		High	2462	5.34	-39.84	≤ -14.66	PASS
11N40SISO	Ant1	Low	2422	1.62	-31.01	≤ -18.38	PASS
		High	2452	2.26	-31.67	≤ -17.74	PASS

Test Graphs





11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

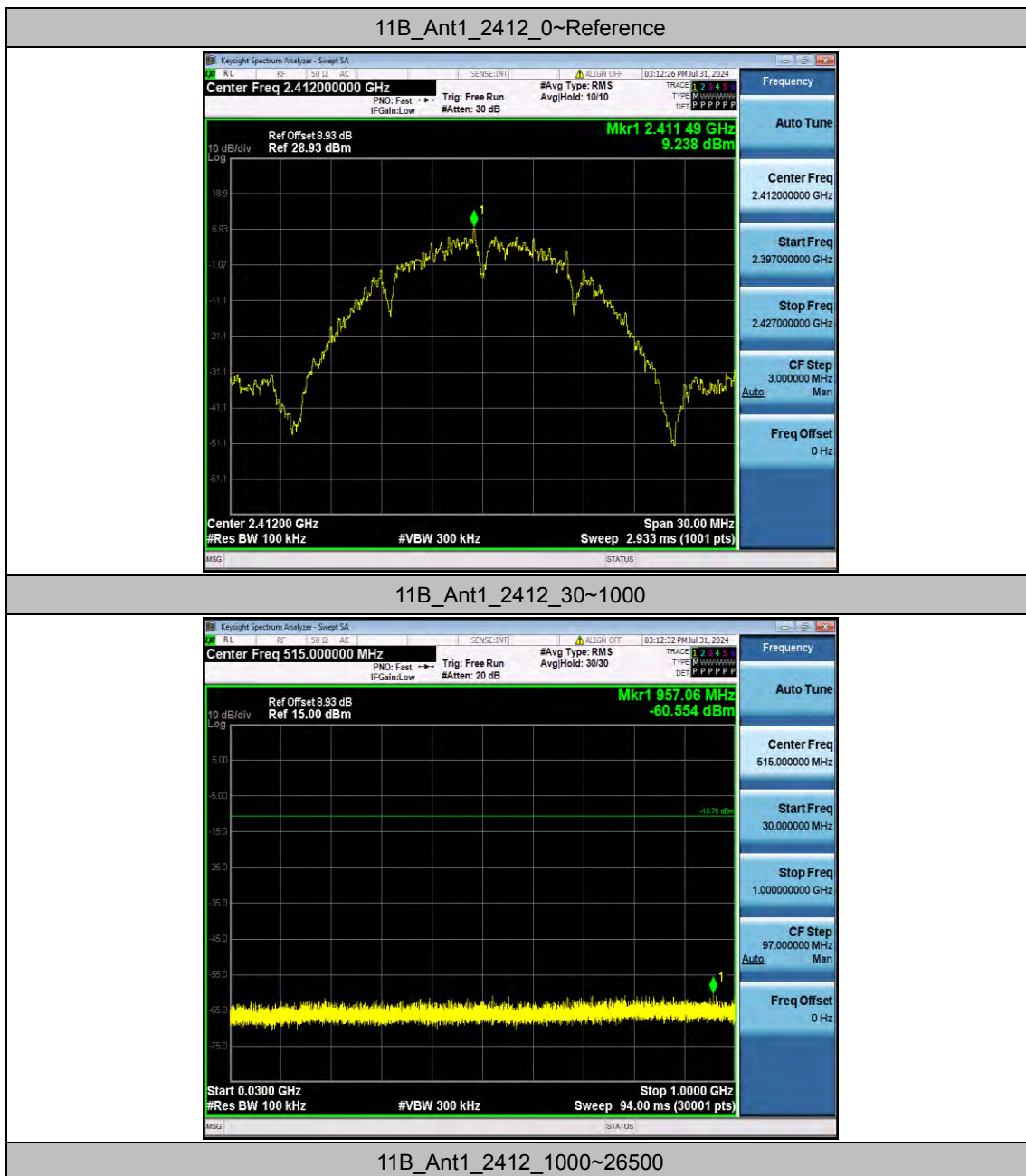


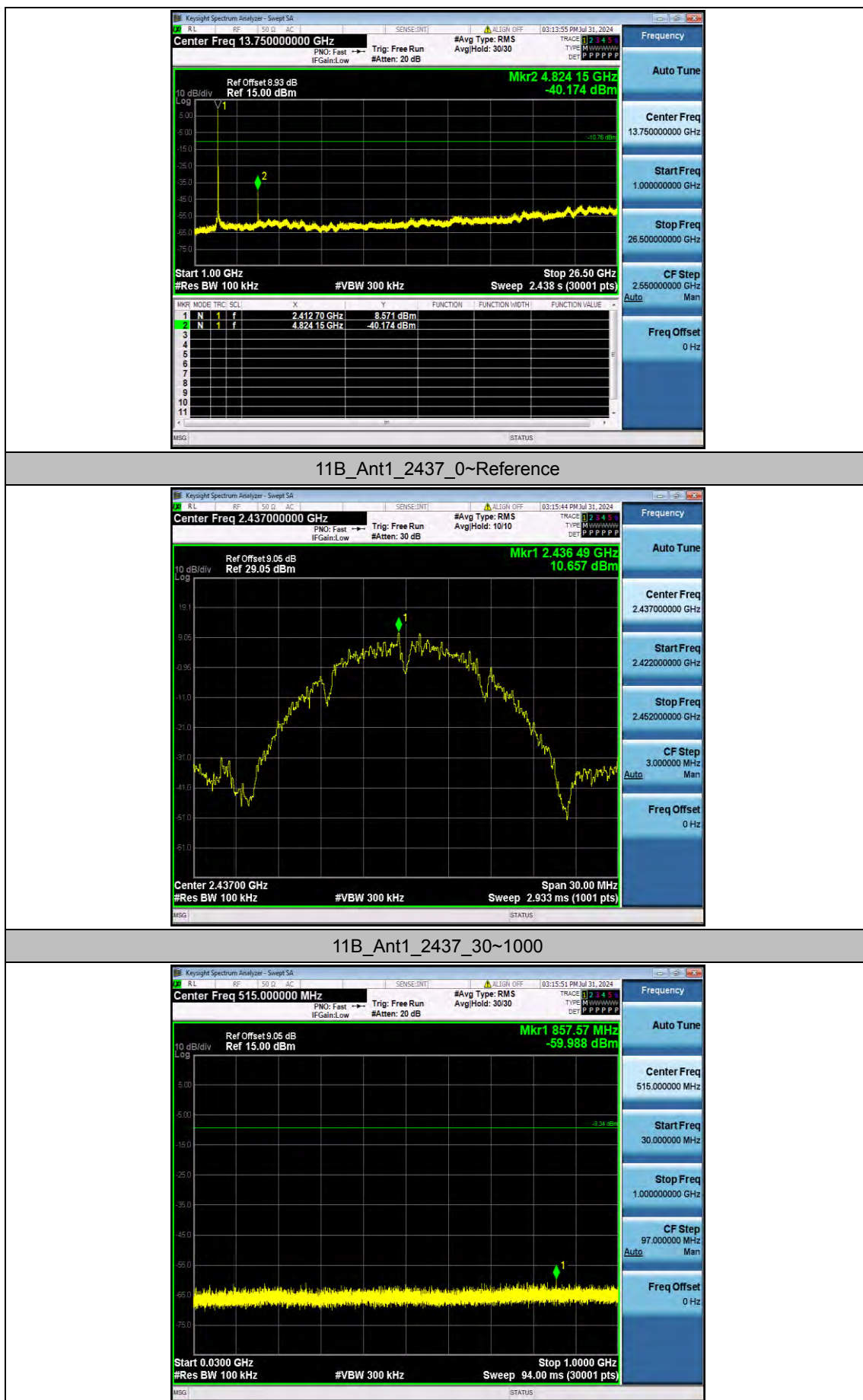
Appendix A.6: Conducted Spurious Emission

Test Result

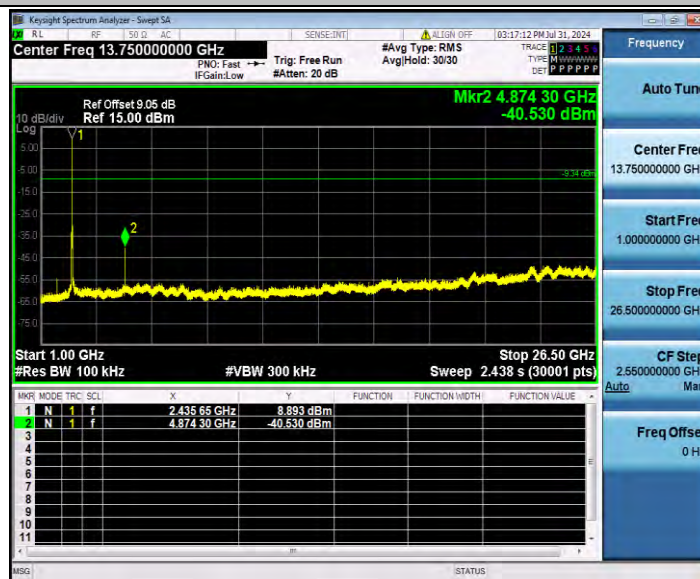
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	9.24	9.24	---	PASS
			30~1000	9.24	-60.55	≤ -10.76	PASS
			1000~26500	9.24	-40.17	≤ -10.76	PASS
		2437	Reference	10.66	10.66	---	PASS
			30~1000	10.66	-59.99	≤ -9.34	PASS
			1000~26500	10.66	-40.53	≤ -9.34	PASS
		2462	Reference	9.59	9.59	---	PASS
			30~1000	9.59	-60.1	≤ -10.41	PASS
			1000~26500	9.59	-41.59	≤ -10.41	PASS
11G	Ant1	2412	Reference	2.52	2.52	---	PASS
			30~1000	2.52	-59.98	≤ -17.48	PASS
			1000~26500	2.52	-47.87	≤ -17.48	PASS
		2437	Reference	3.40	3.40	---	PASS
			30~1000	3.40	-59.43	≤ -16.6	PASS
			1000~26500	3.40	-47.68	≤ -16.6	PASS
		2462	Reference	4.40	4.40	---	PASS
			30~1000	4.40	-60.88	≤ -15.6	PASS
			1000~26500	4.40	-47.93	≤ -15.6	PASS
11N20SISO	Ant1	2412	Reference	4.23	4.23	---	PASS
			30~1000	4.23	-60.51	≤ -15.77	PASS
			1000~26500	4.23	-46.62	≤ -15.77	PASS
		2437	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-59.93	≤ -17.94	PASS
			1000~26500	2.06	-47.79	≤ -17.94	PASS
		2462	Reference	4.32	4.32	---	PASS
			30~1000	4.32	-60.58	≤ -15.68	PASS
			1000~26500	4.32	-47.91	≤ -15.68	PASS
11N40SISO	Ant1	2422	Reference	-1.04	-1.04	---	PASS
			30~1000	-1.04	-60.07	≤ -21.04	PASS
			1000~26500	-1.04	-48.34	≤ -21.04	PASS
		2437	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-58.92	≤ -19.15	PASS
			1000~26500	0.85	-47.63	≤ -19.15	PASS
		2452	Reference	2.34	2.34	---	PASS
			30~1000	2.34	-60.23	≤ -17.66	PASS
			1000~26500	2.34	-47.77	≤ -17.66	PASS

Test Graphs





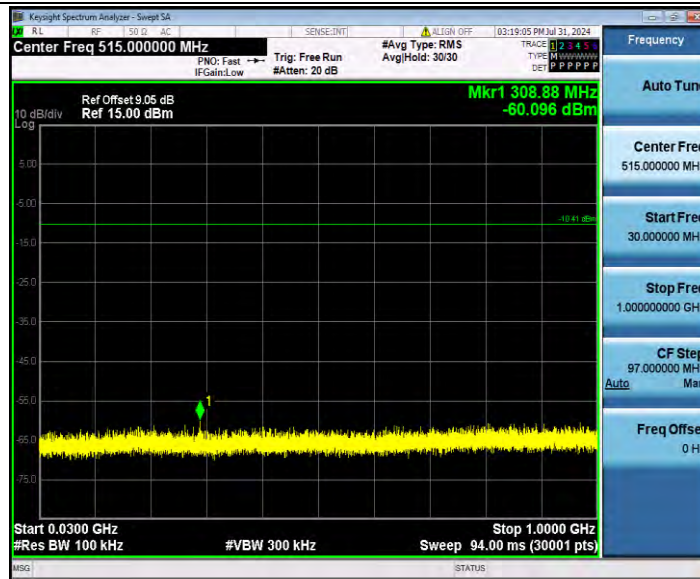
11B_Ant1_2437_1000~26500



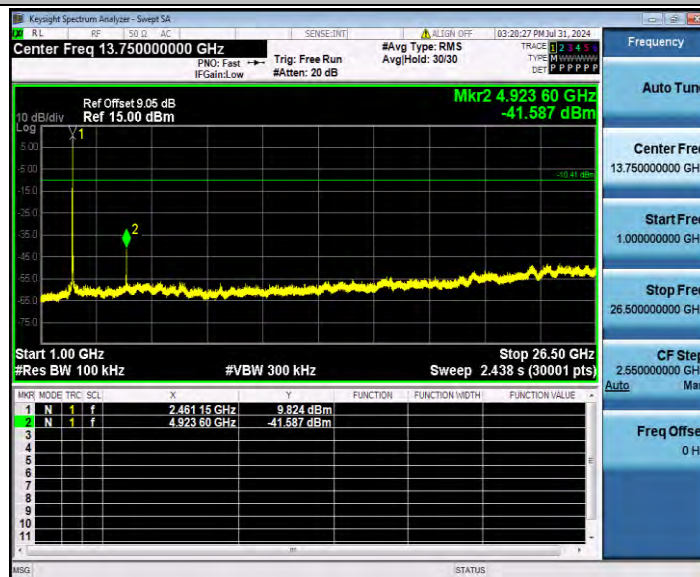
11B_Ant1_2462_0~Reference



11B_Ant1_2462_30~1000



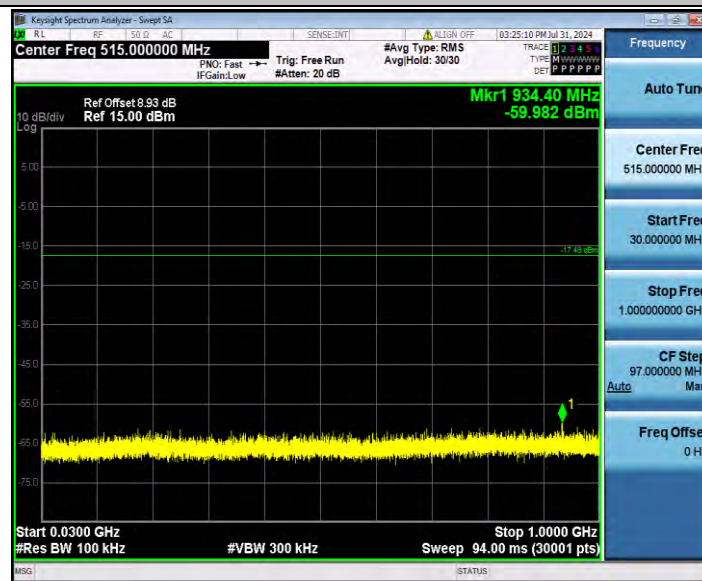
11B_Ant1_2462_1000~26500



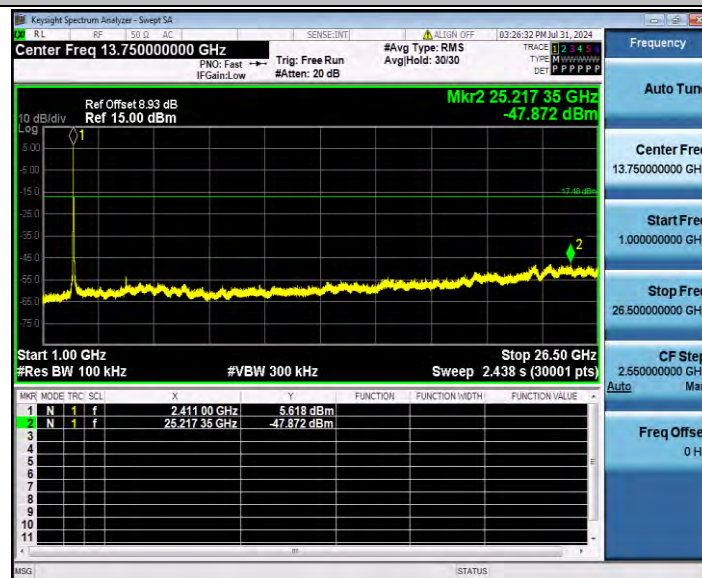
11G_Ant1_2412_0~Reference



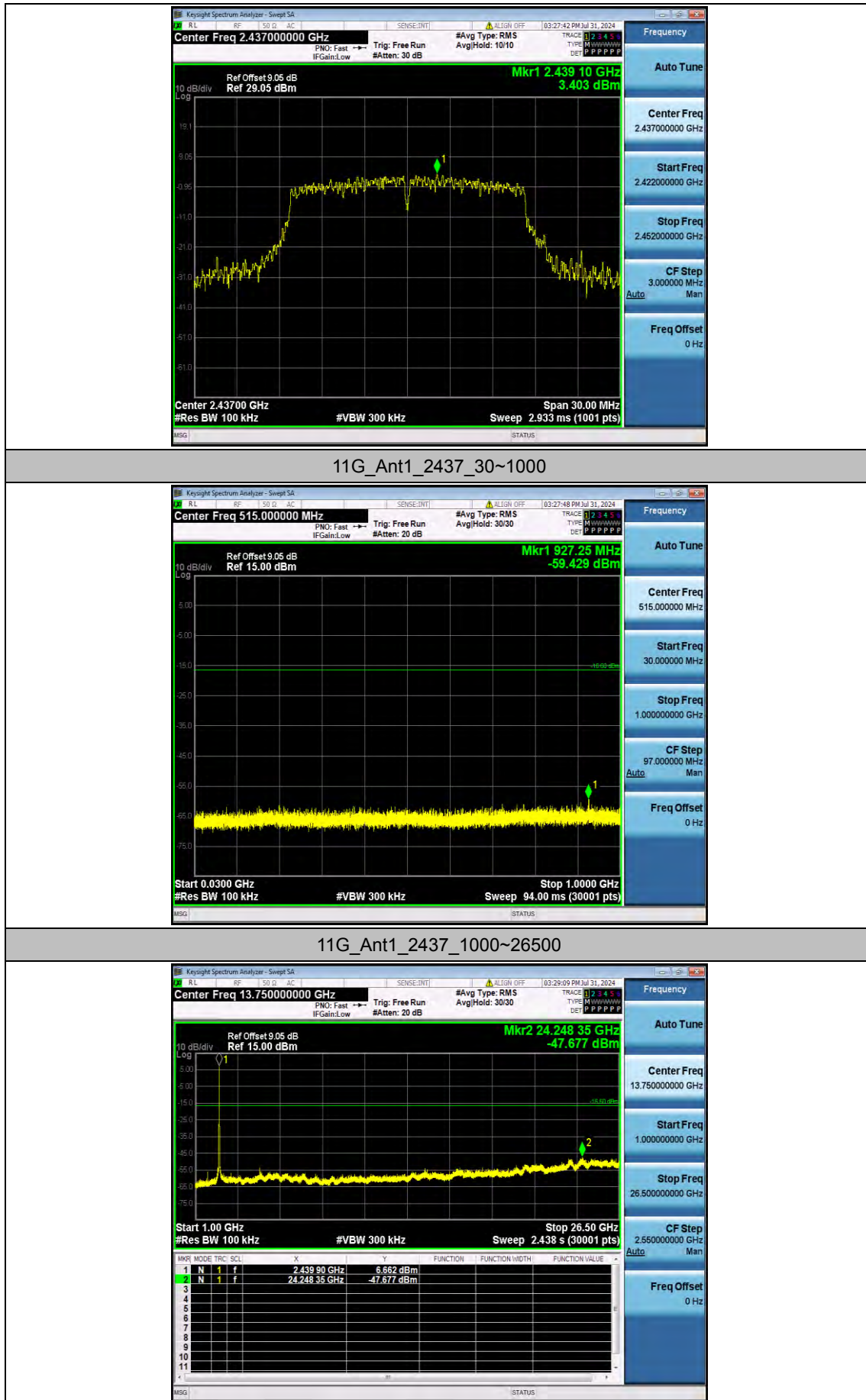
11G_Ant1_2412_30~1000



11G_Ant1_2412_1000~26500



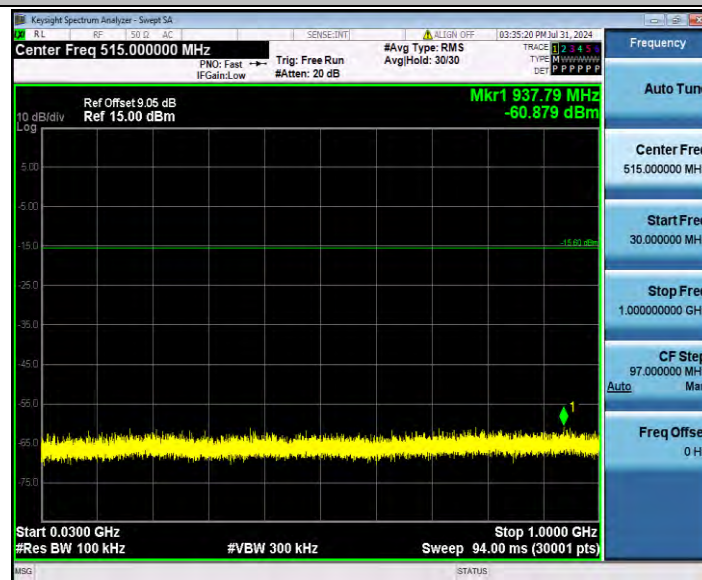
11G_Ant1_2437_0~Reference



11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



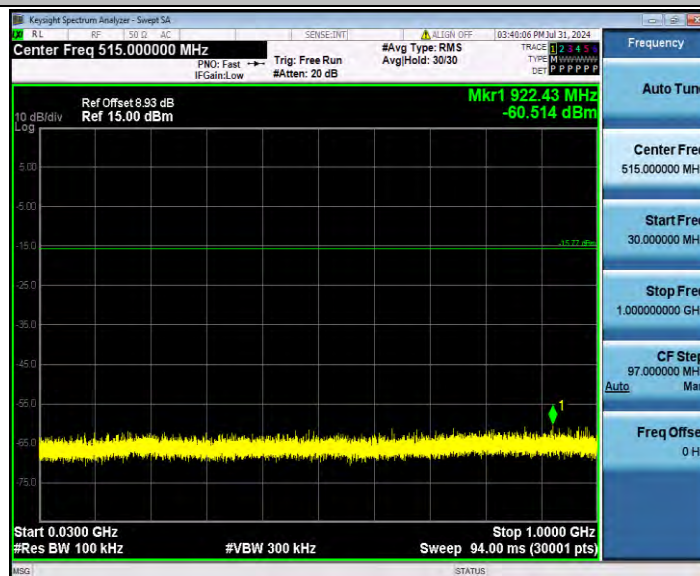
11G_Ant1_2462_1000~26500



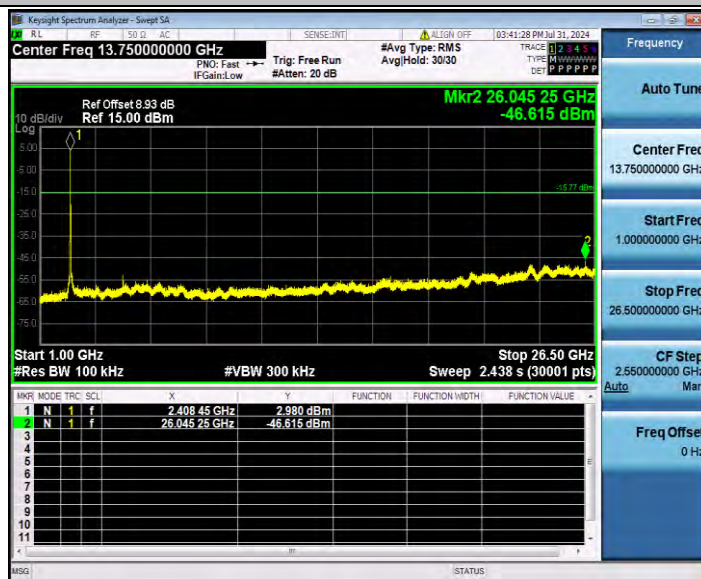
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



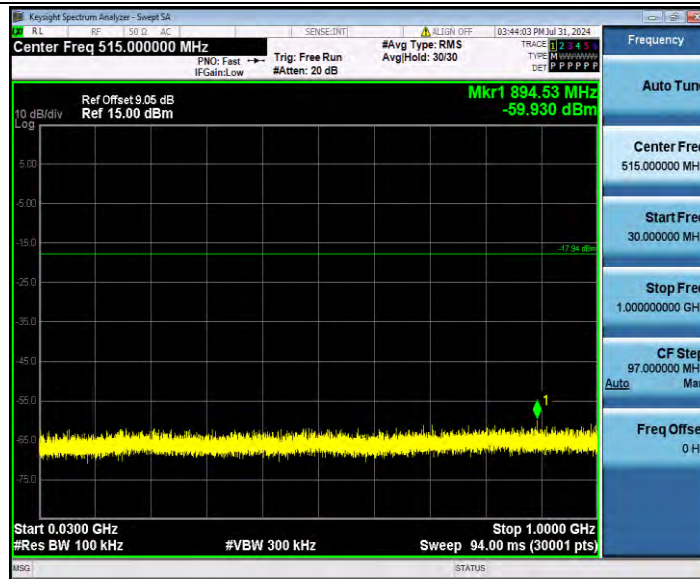
11N20SISO_Ant1_2412_1000~26500



11N20SISO_Ant1_2437_0~Reference



11N20SISO_Ant1_2437_30~1000



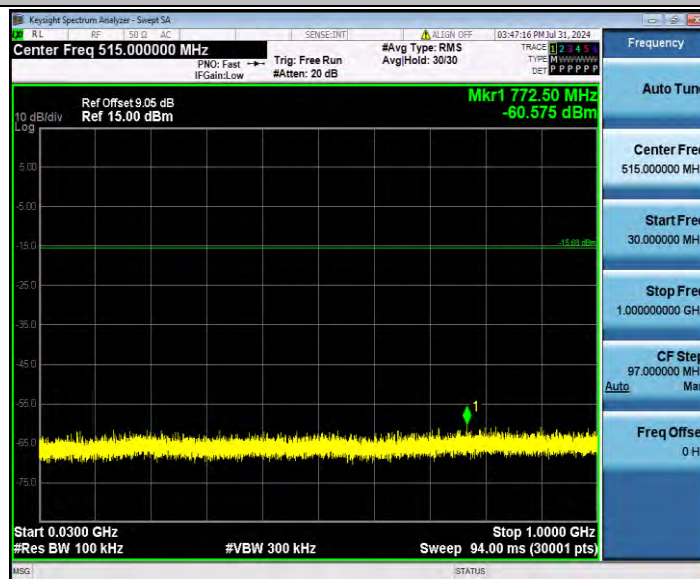
11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



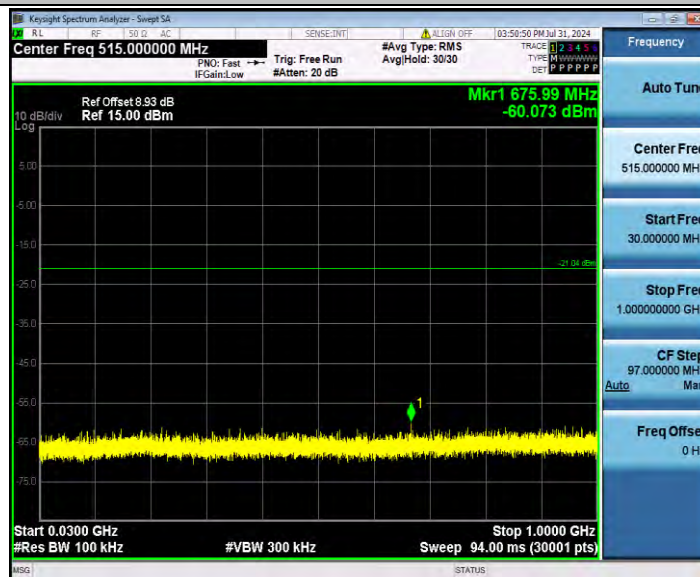
11N20SISO_Ant1_2462_1000~26500



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



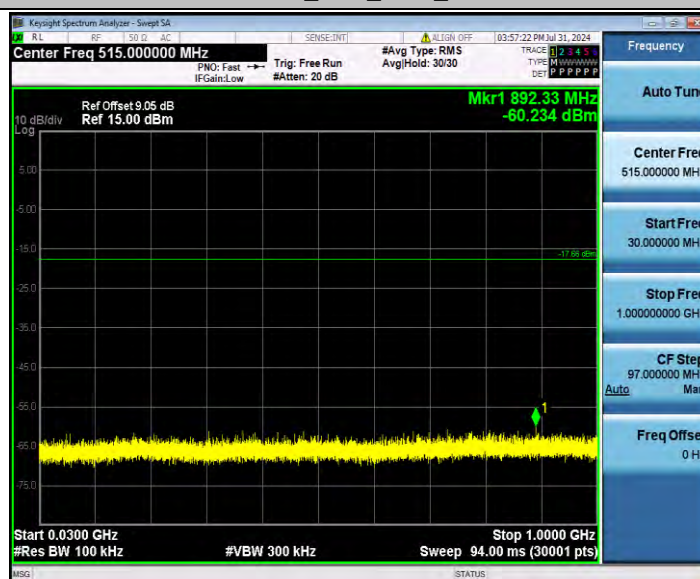
11N40SISO_Ant1_2437_1000~26500

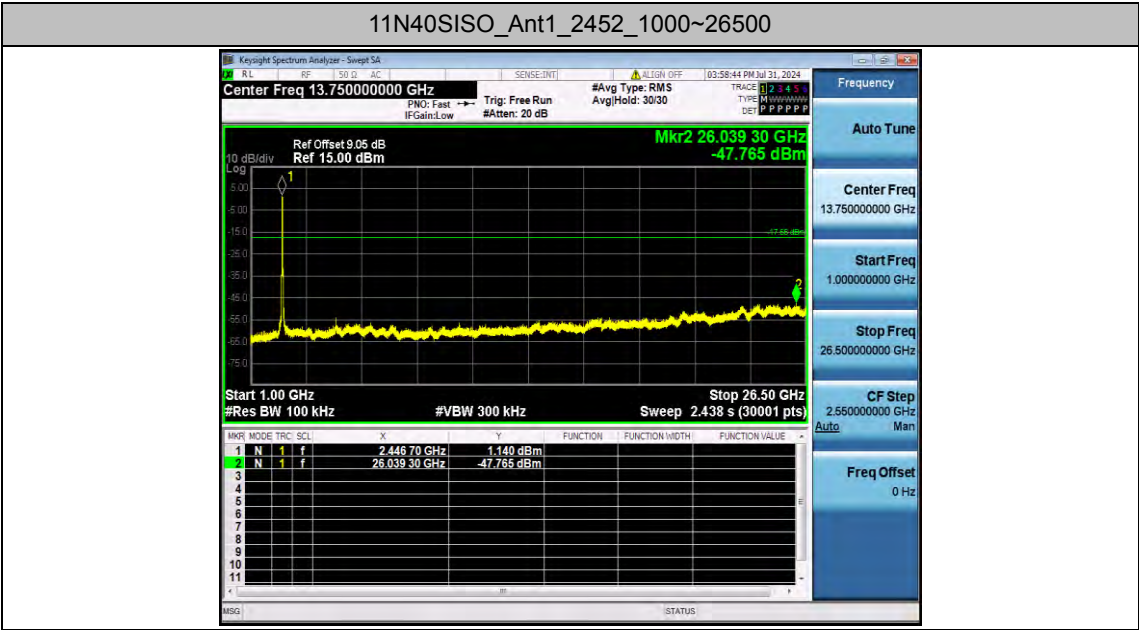


11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000





Appendix A.7: Emissions in Restricted Bands

Test Result

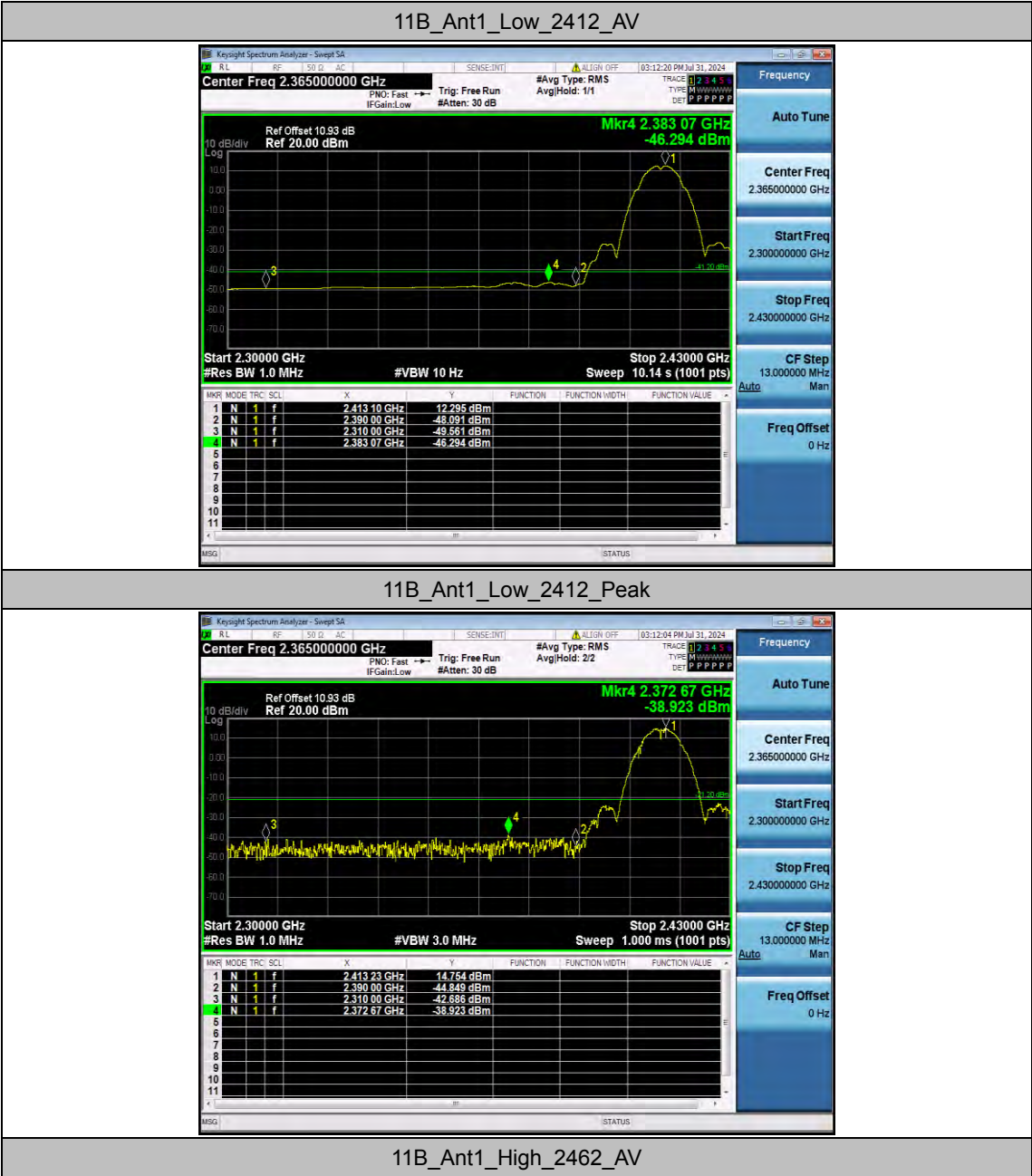
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.56	≤-41.20	45.64	≤54	PASS
				AV	2383.070	-46.29	≤-41.20	48.91	≤54	PASS
				AV	2390.000	-48.09	≤-41.20	47.11	≤54	PASS
				Peak	2310.000	-42.69	≤-21.20	52.51	≤74	PASS
				Peak	2372.670	-38.92	≤-21.20	56.28	≤74	PASS
				Peak	2390.000	-44.85	≤-21.20	50.35	≤74	PASS
		High	2462	AV	2483.500	-48.13	≤-41.20	47.07	≤54	PASS
				AV	2488.290	-47.76	≤-41.20	47.44	≤54	PASS
				AV	2500.000	-48.02	≤-41.20	47.18	≤54	PASS
				Peak	2483.500	-42.04	≤-21.20	53.16	≤74	PASS
				Peak	2487.740	-39.32	≤-21.20	55.88	≤74	PASS
				Peak	2500.000	-44.47	≤-21.20	50.73	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.29	≤-41.20	45.91	≤54	PASS
				AV	2389.960	-44.63	≤-41.20	50.57	≤54	PASS
				AV	2390.000	-44.63	≤-41.20	50.57	≤54	PASS
				Peak	2310.000	-50.98	≤-21.20	44.22	≤74	PASS
				Peak	2389.960	-37.17	≤-21.20	58.03	≤74	PASS
				Peak	2390.000	-37.17	≤-21.20	58.03	≤74	PASS
		High	2462	AV	2483.500	-44.33	≤-41.20	50.87	≤54	PASS
				AV	2483.560	-44.45	≤-41.20	50.75	≤54	PASS
				AV	2500.000	-47.32	≤-41.20	47.88	≤54	PASS
				Peak	2483.500	-43.17	≤-21.20	52.03	≤74	PASS
				Peak	2483.890	-37.15	≤-21.20	58.05	≤74	PASS
				Peak	2500.000	-47.41	≤-21.20	47.79	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.32	≤-41.20	45.88	≤54	PASS
				AV	2389.960	-43.06	≤-41.20	52.14	≤54	PASS
				AV	2390.000	-43.06	≤-41.20	52.14	≤54	PASS
				Peak	2310.000	-45	≤-21.20	50.20	≤74	PASS
				Peak	2389.440	-37.25	≤-21.20	57.95	≤74	PASS
				Peak	2390.000	-38.27	≤-21.20	56.93	≤74	PASS
		High	2462	AV	2483.500	-43.12	≤-41.20	52.08	≤54	PASS
				AV	2483.560	-43.24	≤-41.20	51.96	≤54	PASS
				AV	2500.000	-47.31	≤-41.20	47.89	≤54	PASS
				Peak	2483.500	-38.34	≤-21.20	56.86	≤74	PASS
				Peak	2492.030	-36.63	≤-21.20	58.57	≤74	PASS

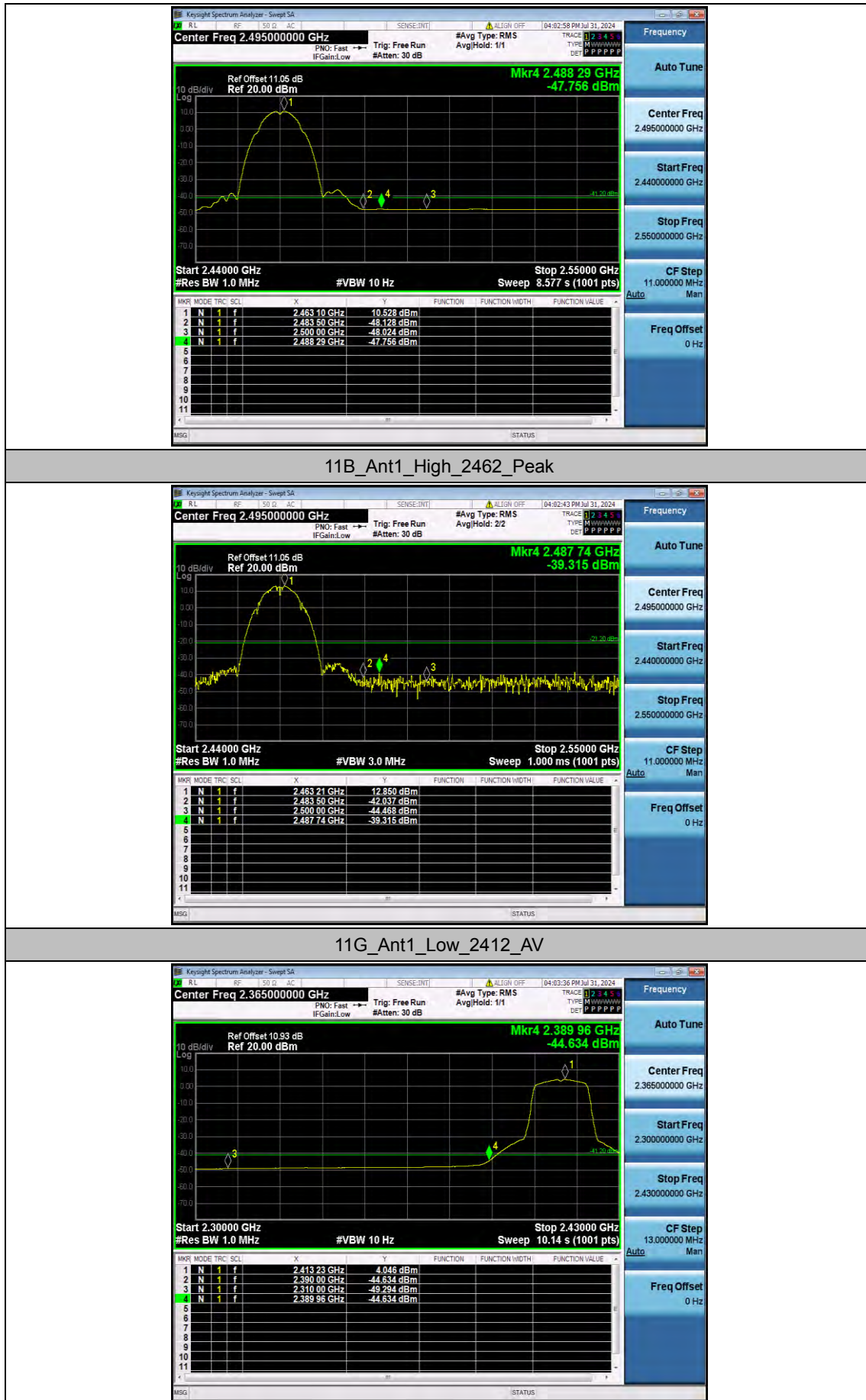
				Peak	2500.000	-48.01	≤ -21.20	47.19	≤ 74	PASS
11N40SIS O	Ant1	Low	2422	AV	2310.000	-49.29	≤ -41.20	45.91	≤ 54	PASS
				AV	2389.960	-42.11	≤ -41.20	53.09	≤ 54	PASS
				AV	2390.000	-42.11	≤ -41.20	53.09	≤ 54	PASS
				Peak	2310.000	-47	≤ -21.20	48.20	≤ 74	PASS
				Peak	2383.330	-35.45	≤ -21.20	59.75	≤ 74	PASS
				Peak	2390.000	-36.87	≤ -21.20	58.33	≤ 74	PASS
		High	2452	AV	2483.500	-43.36	≤ -41.20	51.84	≤ 54	PASS
				AV	2483.560	-43.38	≤ -41.20	51.82	≤ 54	PASS
				AV	2500.000	-47.16	≤ -41.20	48.04	≤ 54	PASS
				Peak	2483.500	-41.66	≤ -21.20	53.54	≤ 74	PASS
				Peak	2485.100	-35.45	≤ -21.20	59.75	≤ 74	PASS
				Peak	2500.000	-44.5	≤ -21.20	50.70	≤ 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

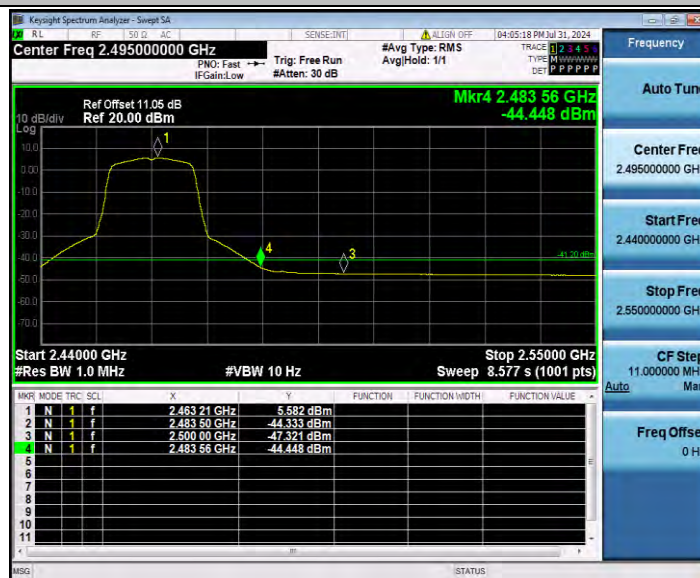




11G_Ant1_Low_2412_Peak



11G_Ant1_High_2462_AV



11G_Ant1_High_2462_Peak



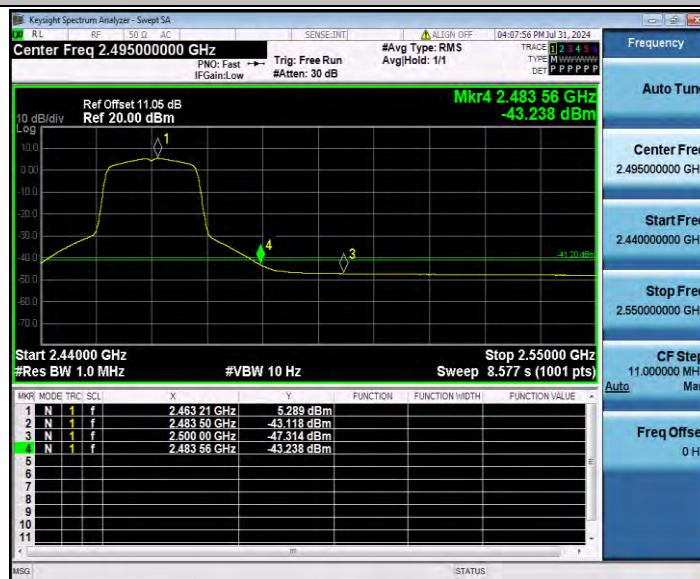
11N20SISO_Ant1_Low_2412_AV



11N20SISO_Ant1_Low_2412_Peak



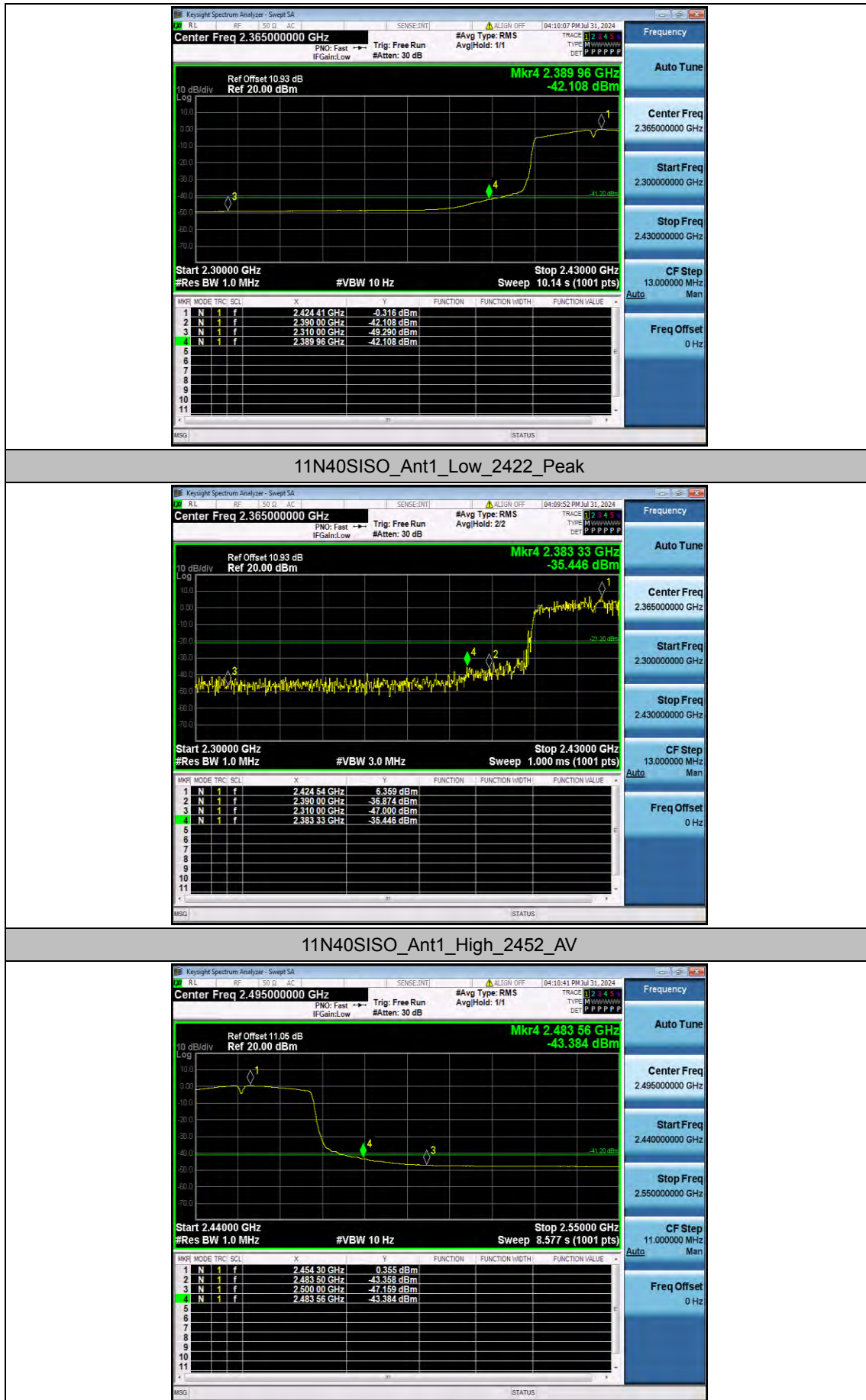
11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak



11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_High_2452_Peak

