

Case No. : <u>CTA24080500201</u>	
Ambient Condition: <u>23</u> °C, <u>51</u> %RH, According Standard: ■Part15C	
Test Date: <u>2024.8.9</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	9.040	2407.440	2416.480	0.5	PASS
		2437	8.000	2433.040	2441.040	0.5	PASS
		2462	8.560	2457.480	2466.040	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.400	2428.840	2445.240	0.5	PASS
		2462	16.400	2453.800	2470.200	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.200	2420.800	0.5	PASS
		2437	17.560	2428.240	2445.800	0.5	PASS
		2462	17.520	2453.240	2470.760	0.5	PASS
11N40SISO	Ant1	2422	35.680	2404.080	2439.760	0.5	PASS
		2437	35.680	2419.080	2454.760	0.5	PASS
		2452	35.840	2434.080	2469.920	0.5	PASS

Test Graphs

11B_Ant1_2412



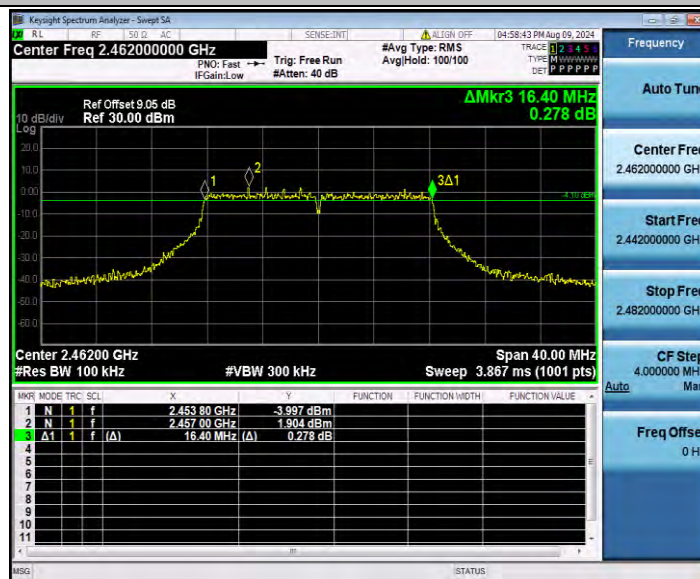
11B_Ant1_2437



11B_Ant1_2462



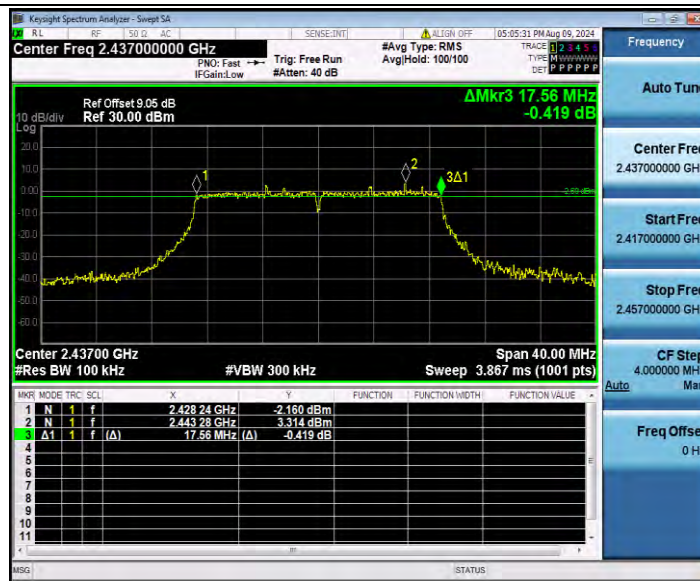
11G_Ant1_2462



11N20SISO_Ant1_2412



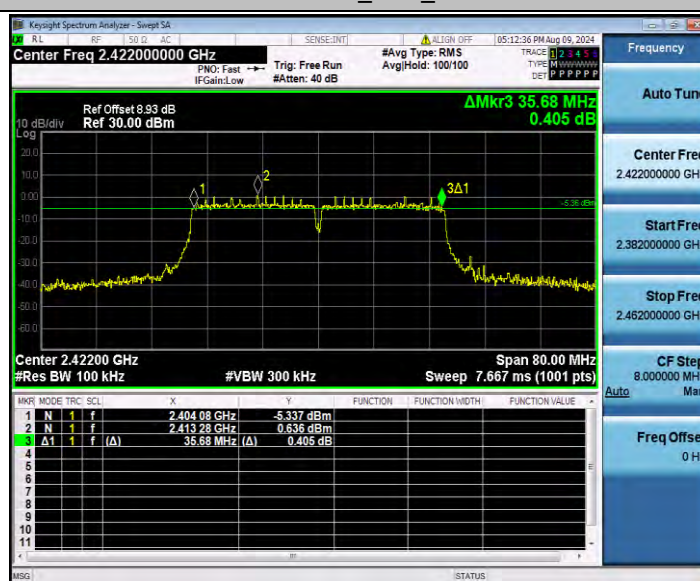
11N20SISO_Ant1_2437



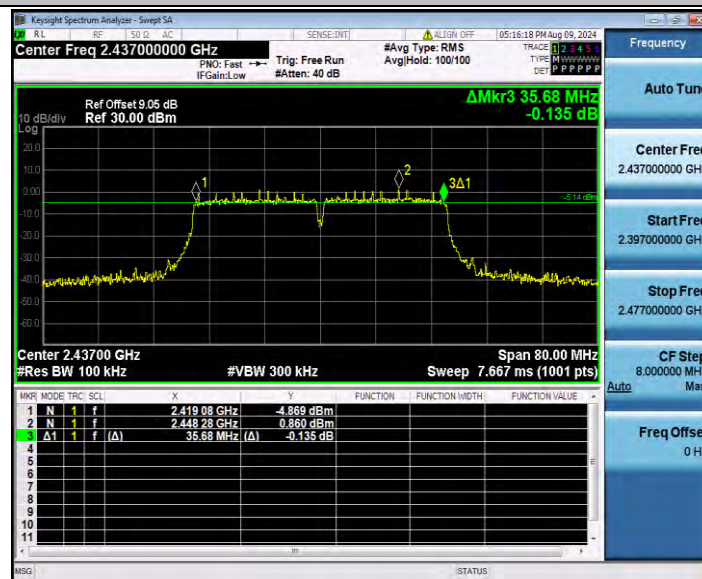
11N20SISO_Ant1_2462



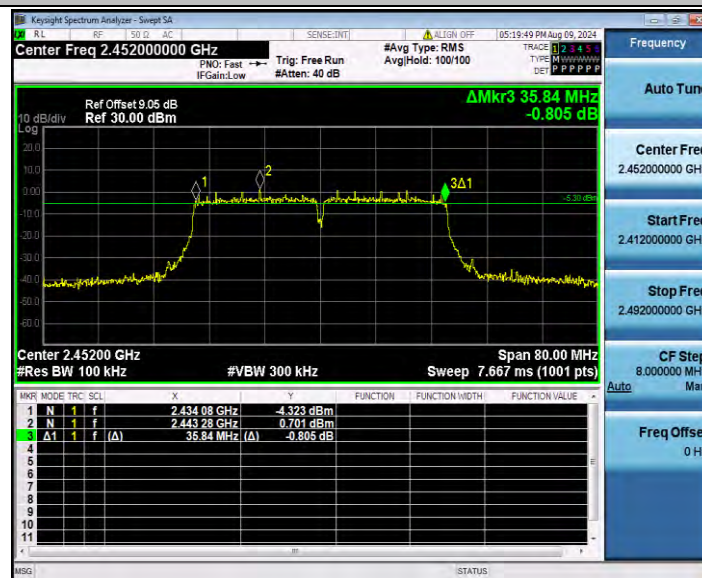
11N40SISO_Ant1_2422



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	13.551	2405.1385	2418.6895	---	---
		2437	13.566	2430.2411	2443.8071	---	---
		2462	13.501	2455.2306	2468.7316	---	---
11G	Ant1	2412	17.146	2403.4047	2420.5507	---	---
		2437	17.059	2428.5061	2445.5651	---	---
		2462	17.048	2453.4187	2470.4667	---	---
11N20SISO	Ant1	2412	17.990	2402.9824	2420.9724	---	---
		2437	18.041	2428.0027	2446.0437	---	---
		2462	18.051	2452.9535	2471.0045	---	---
11N40SISO	Ant1	2422	36.445	2403.7884	2440.2334	---	---
		2437	36.415	2418.8446	2455.2596	---	---
		2452	36.348	2433.9101	2470.2581	---	---

Test Graphs

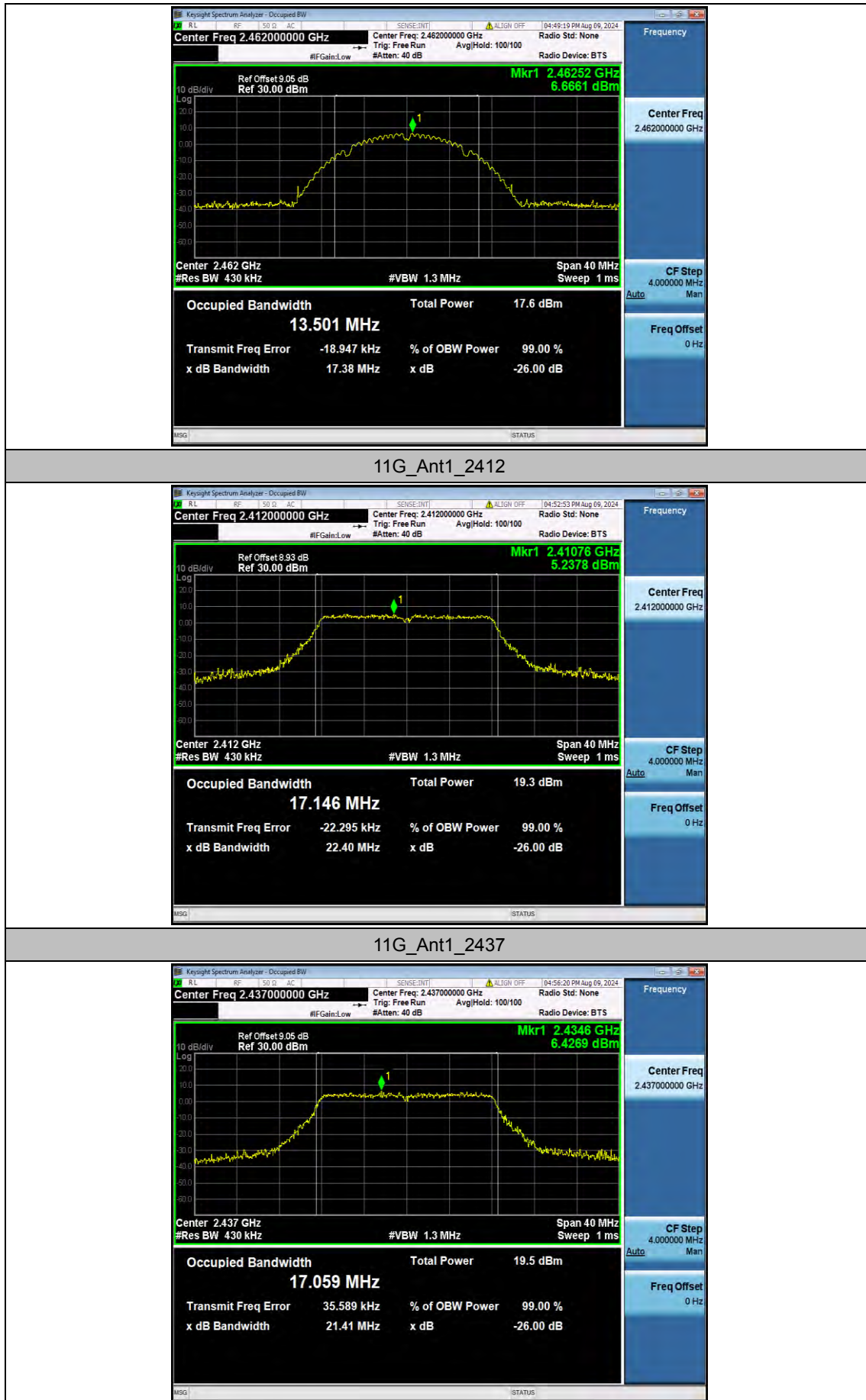
11B_Ant1_2412



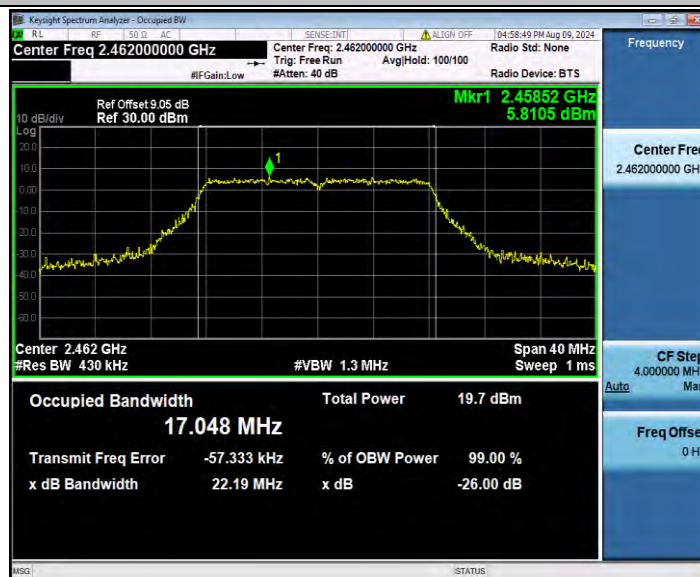
11B_Ant1_2437



11B_Ant1_2462



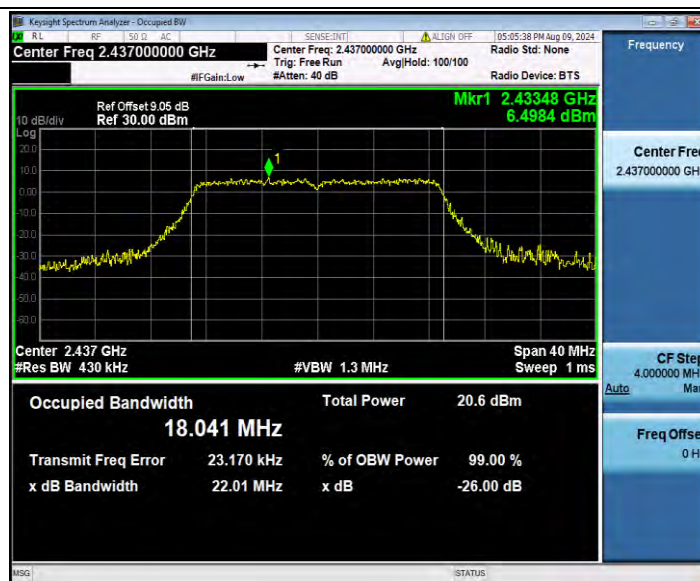
11G_Ant1_2462



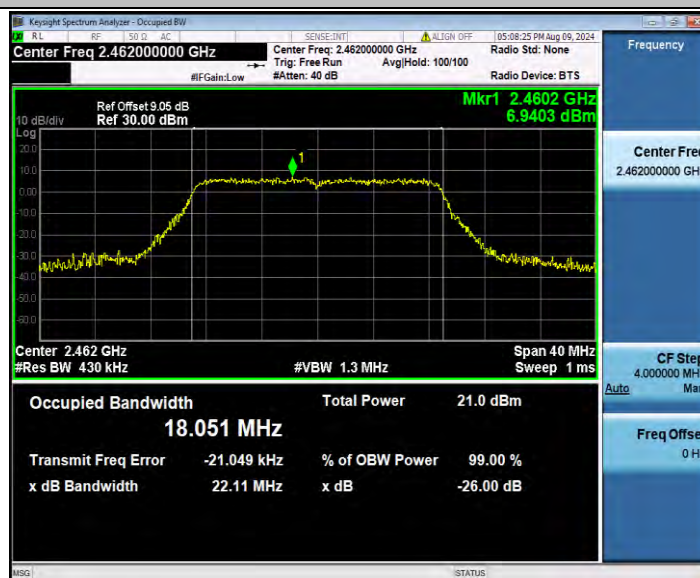
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



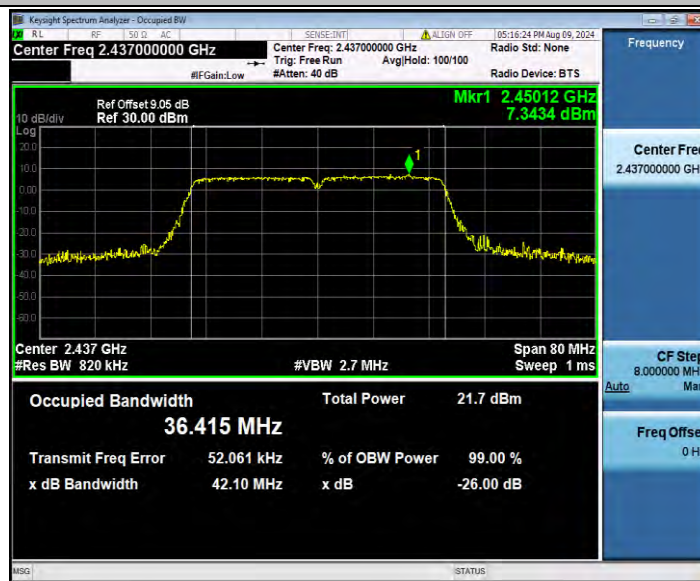
11N20SISO_Ant1_2462



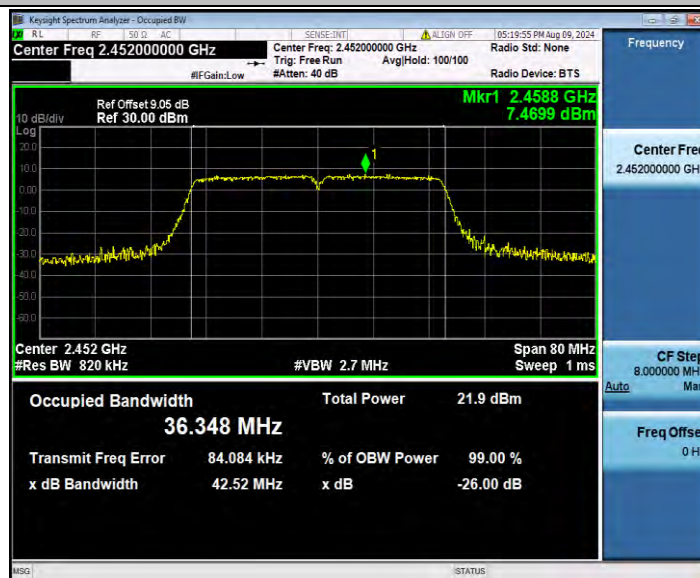
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



Appendix A.3: Maximum conducted output power

Test Mode	Antenna	Frequency[MHz]	Peak power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	18.43	≤30.00	PASS
		2437	17.42	≤30.00	PASS
		2462	17.73	≤30.00	PASS
11G	Ant1	2412	20.64	≤30.00	PASS
		2437	20.70	≤30.00	PASS
		2462	20.93	≤30.00	PASS
11N20SISO	Ant1	2412	22.00	≤30.00	PASS
		2437	21.79	≤30.00	PASS
		2462	22.14	≤30.00	PASS
11N40SISO	Ant1	2422	21.92	≤30.00	PASS
		2437	22.03	≤30.00	PASS
		2452	22.25	≤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	-8.17	≤8.00	PASS
		2437	-8.20	≤8.00	PASS
		2462	-8.44	≤8.00	PASS
11G	Ant1	2412	-12.04	≤8.00	PASS
		2437	-11.94	≤8.00	PASS
		2462	-12.17	≤8.00	PASS
11N20SISO	Ant1	2412	-10.38	≤8.00	PASS
		2437	-10.68	≤8.00	PASS
		2462	-10.25	≤8.00	PASS
11N40SISO	Ant1	2422	-14.00	≤8.00	PASS
		2437	-13.59	≤8.00	PASS
		2452	-14.08	≤8.00	PASS

Test Graphs

11B_Ant1_2412



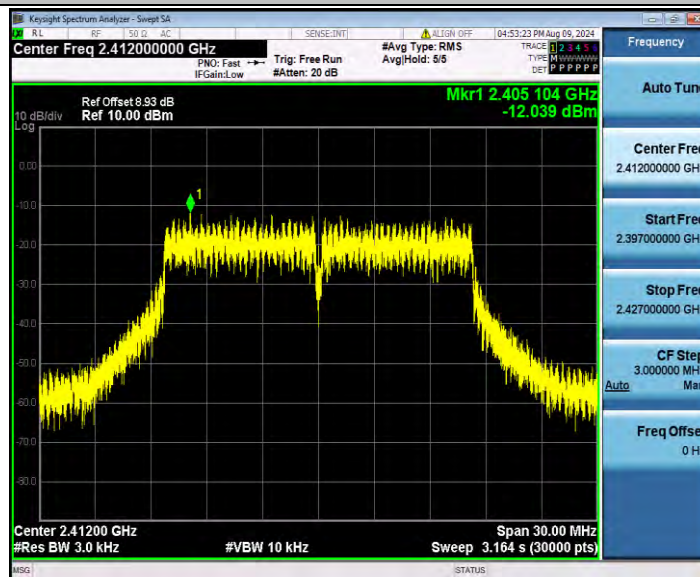
11B_Ant1_2437



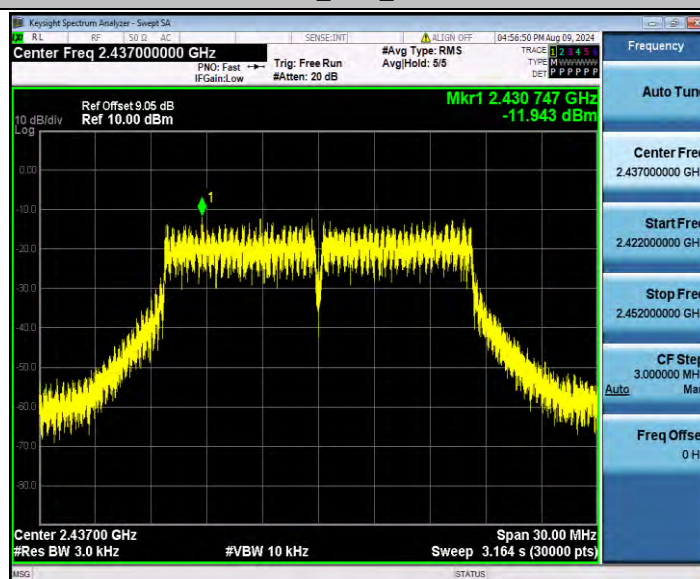
11B_Ant1_2462



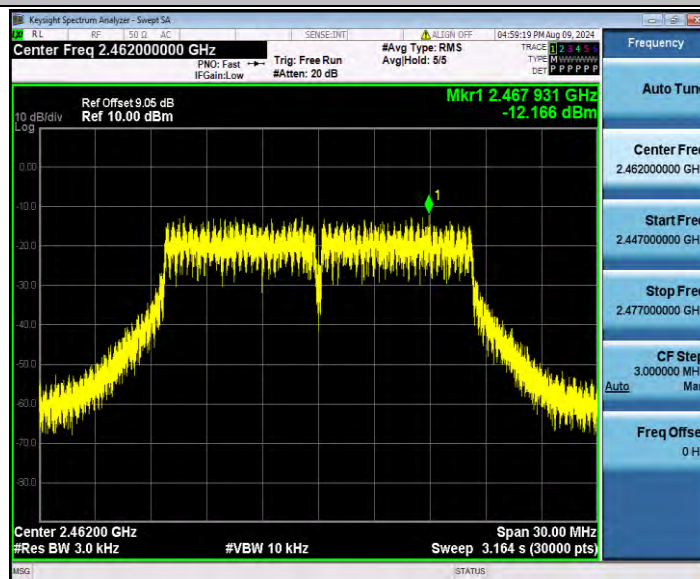
11G_Ant1_2412



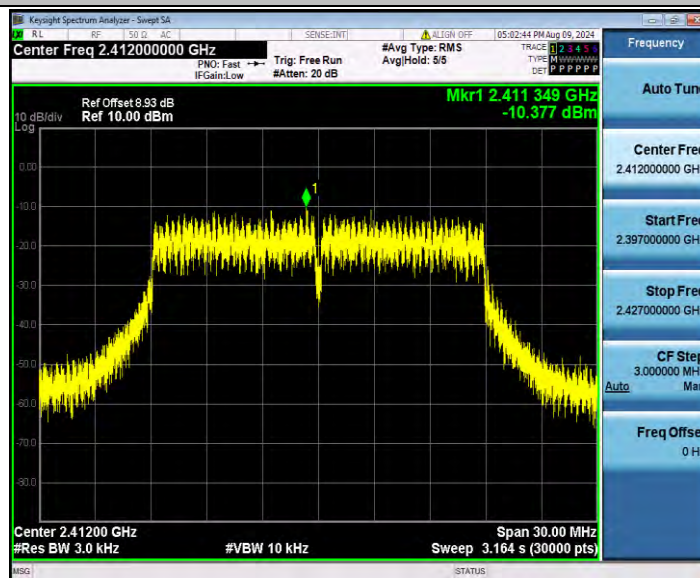
11G_Ant1_2437



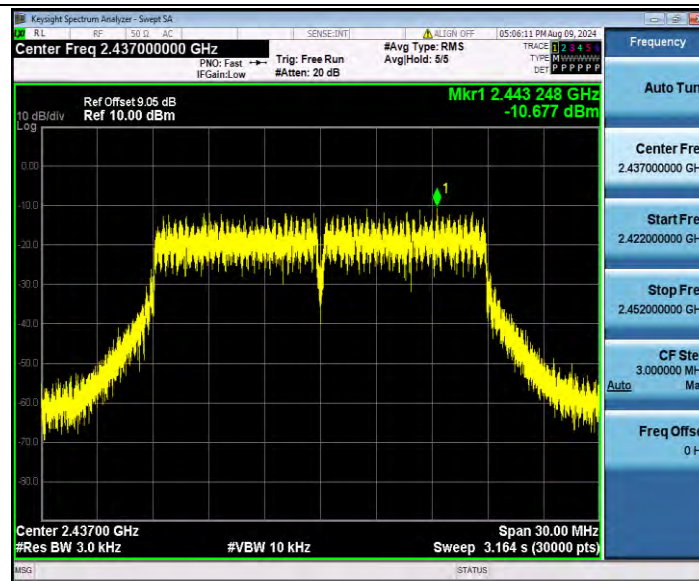
11G_Ant1_2462



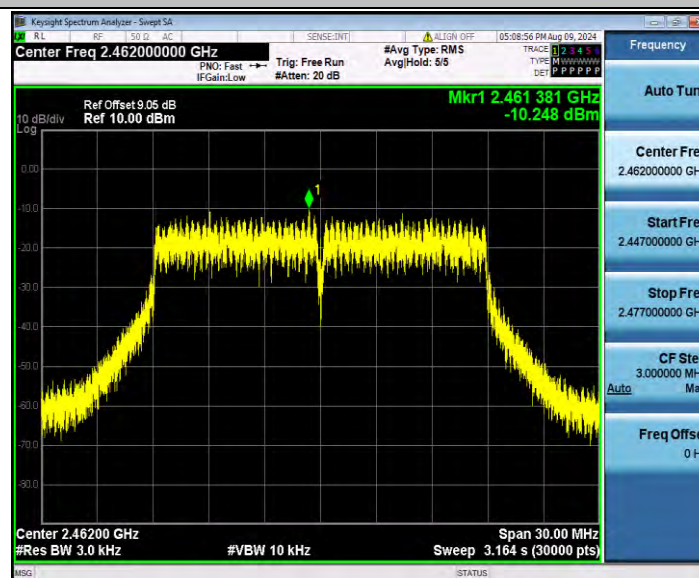
11N20SISO_Ant1_2412



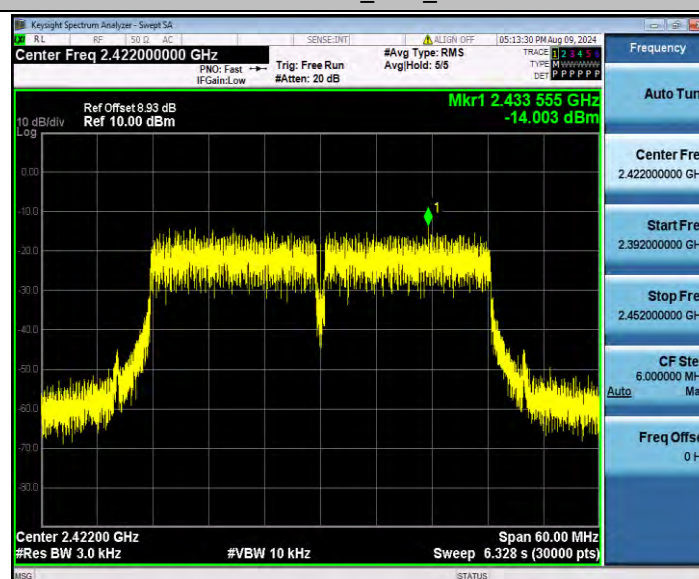
11N20SISO_Ant1_2437



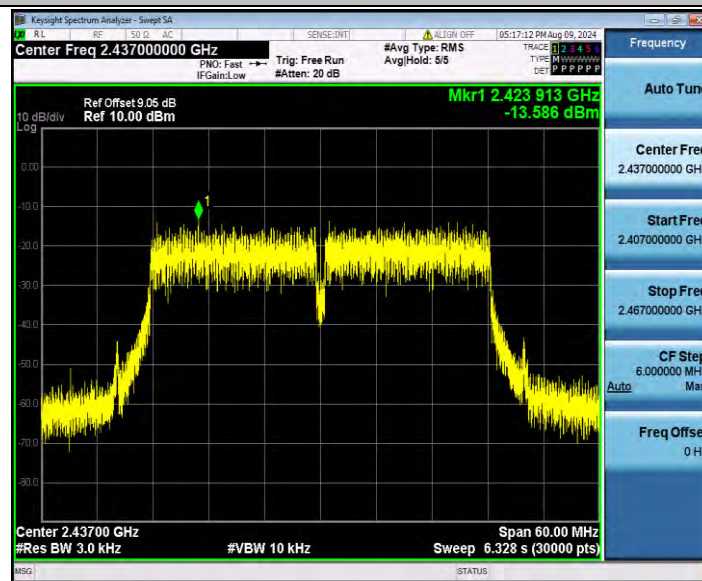
11N20SISO_Ant1_2462



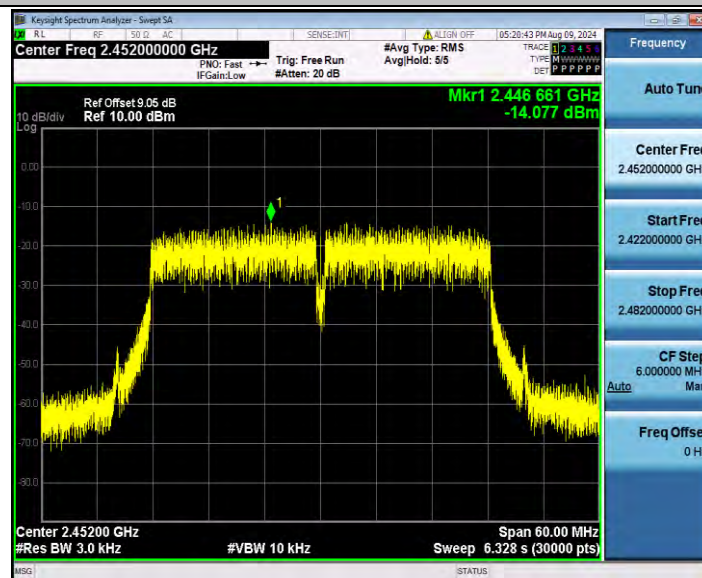
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



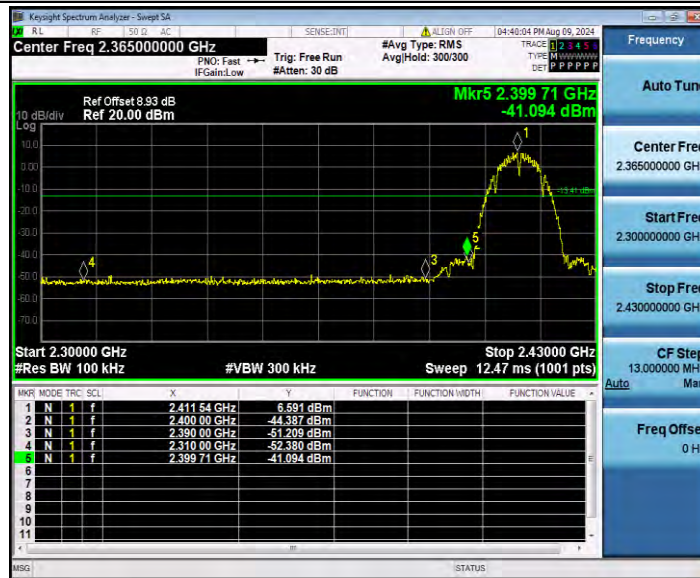
Appendix A.5: Band edge measurements

Test Result

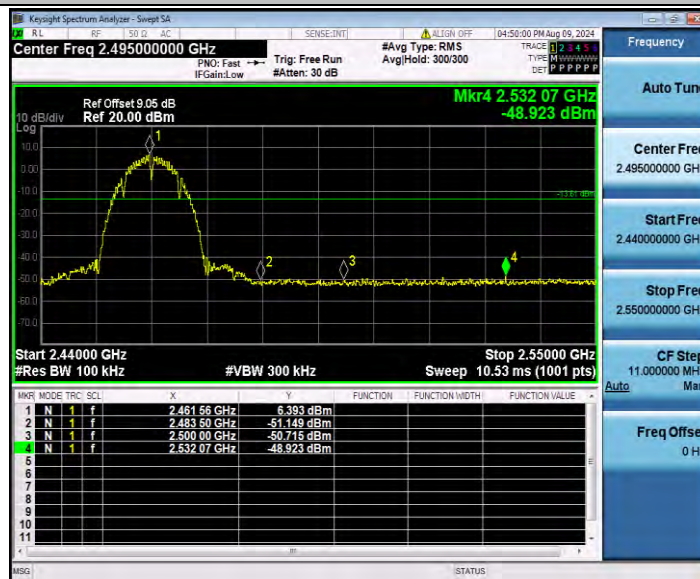
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.59	-41.09	≤ -13.41	PASS
		High	2462	6.39	-48.92	≤ -13.61	PASS
11G	Ant1	Low	2412	2.34	-32.82	≤ -17.66	PASS
		High	2462	2.25	-45.98	≤ -17.75	PASS
11N20SISO	Ant1	Low	2412	3.31	-30.59	≤ -16.69	PASS
		High	2462	3.62	-41.39	≤ -16.38	PASS
11N40SISO	Ant1	Low	2422	0.96	-31.44	≤ -19.04	PASS
		High	2452	0.92	-37.68	≤ -19.08	PASS

Test Graphs

11B_Ant1_Low_2412



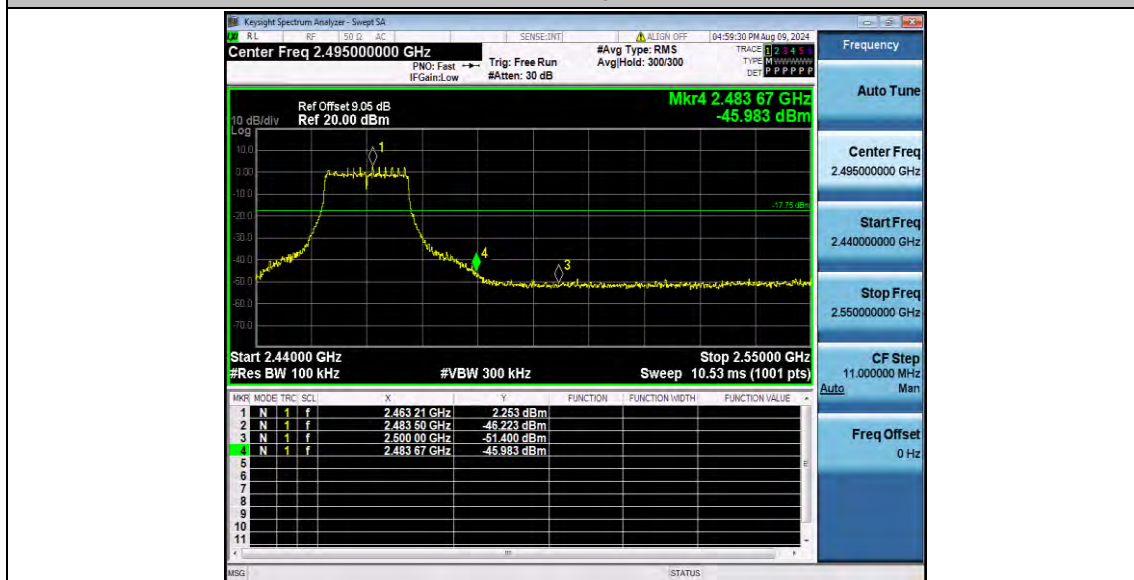
11B_Ant1_High_2462



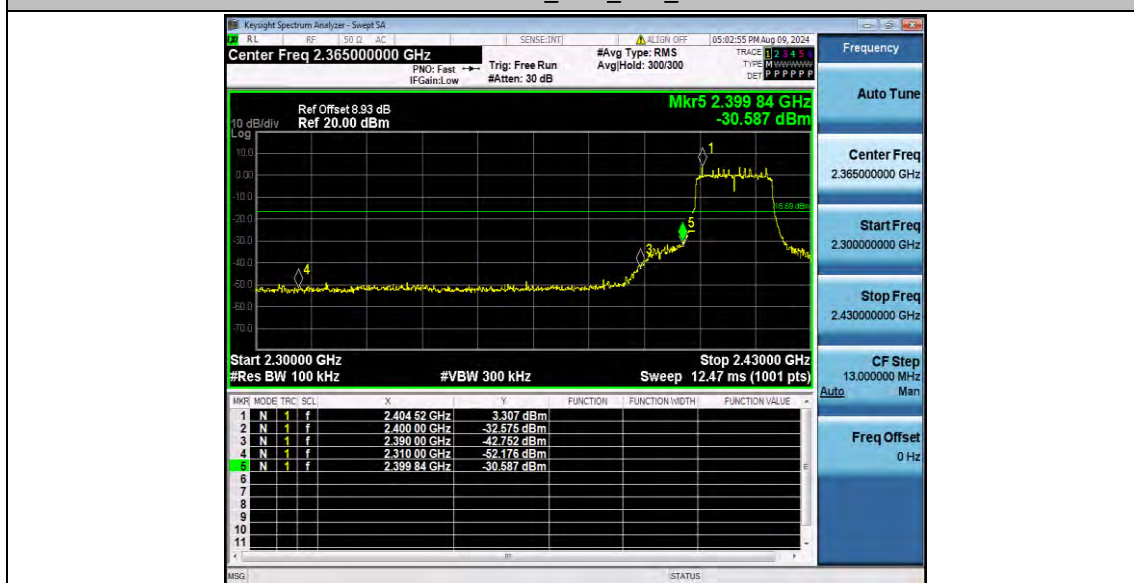
11G_Ant1_Low_2412



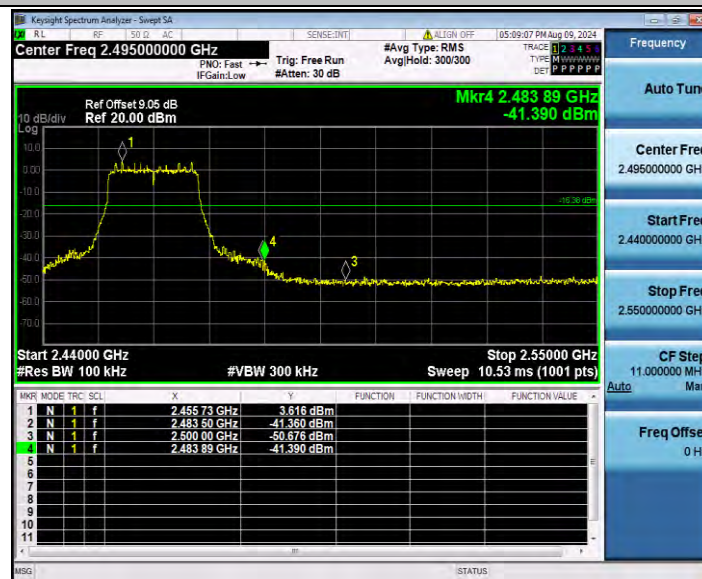
11G_Ant1_High_2462



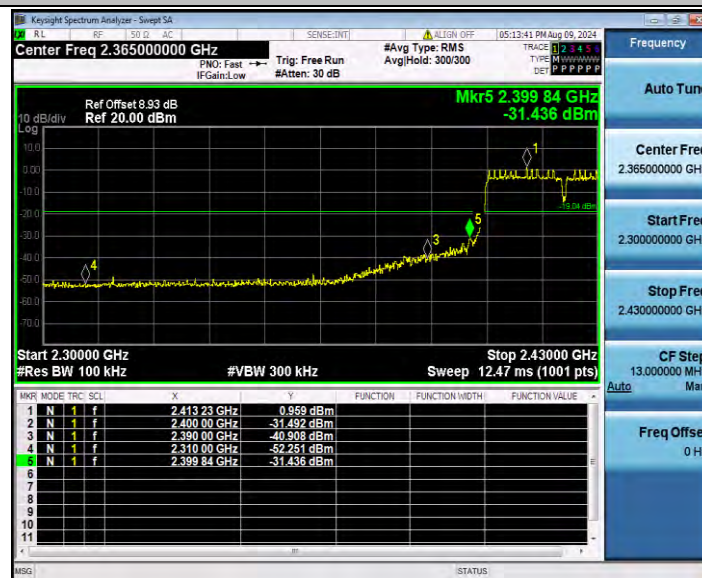
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



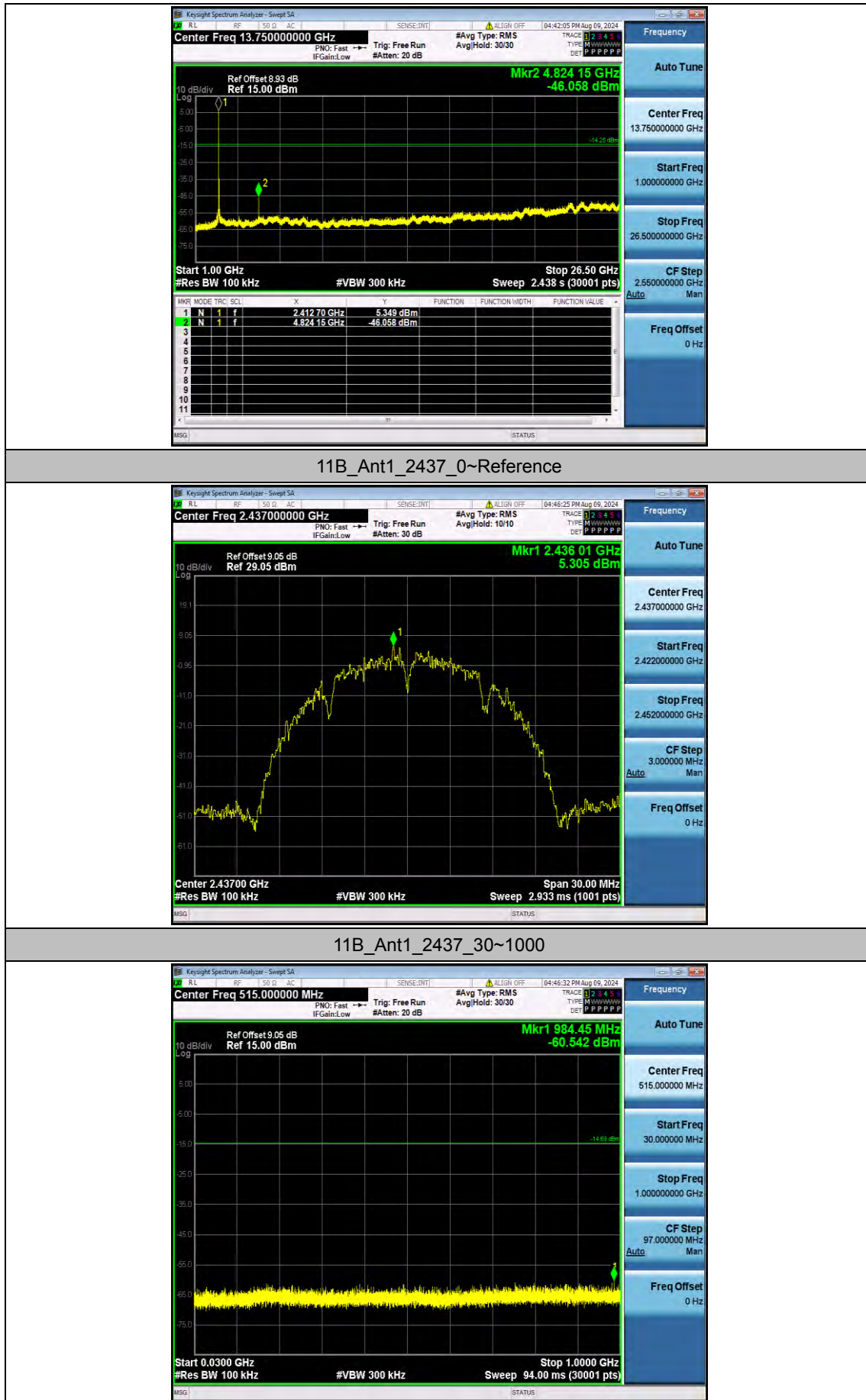
11N40SISO_Ant1_High_2452



Appendix A.6: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	5.75	5.75	---	PASS
			30~1000	5.75	-60.9	≤ -14.25	PASS
			1000~26500	5.75	-46.06	≤ -14.25	PASS
		2437	Reference	5.31	5.31	---	PASS
			30~1000	5.31	-60.54	≤ -14.69	PASS
			1000~26500	5.31	-46.11	≤ -14.69	PASS
		2462	Reference	4.72	4.72	---	PASS
			30~1000	4.72	-60.19	≤ -15.28	PASS
			1000~26500	4.72	-47.18	≤ -15.28	PASS
11G	Ant1	2412	Reference	-1.20	-1.20	---	PASS
			30~1000	-1.20	-60.71	≤ -21.2	PASS
			1000~26500	-1.20	-47.93	≤ -21.2	PASS
		2437	Reference	-1.10	-1.10	---	PASS
			30~1000	-1.10	-60.56	≤ -21.1	PASS
			1000~26500	-1.10	-48.59	≤ -21.1	PASS
		2462	Reference	2.06	2.06	---	PASS
			30~1000	2.06	-60.62	≤ -17.94	PASS
			1000~26500	2.06	-47.29	≤ -17.94	PASS
11N20SISO	Ant1	2412	Reference	3.44	3.44	---	PASS
			30~1000	3.44	-60.66	≤ -16.56	PASS
			1000~26500	3.44	-47.31	≤ -16.56	PASS
		2437	Reference	-0.27	-0.27	---	PASS
			30~1000	-0.27	-59.8	≤ -20.27	PASS
			1000~26500	-0.27	-47.95	≤ -20.27	PASS
		2462	Reference	0.84	0.84	---	PASS
			30~1000	0.84	-60.23	≤ -19.16	PASS
			1000~26500	0.84	-47.73	≤ -19.16	PASS
11N40SISO	Ant1	2422	Reference	-0.34	-0.34	---	PASS
			30~1000	-0.34	-60.8	≤ -20.34	PASS
			1000~26500	-0.34	-47.74	≤ -20.34	PASS
		2437	Reference	0.52	0.52	---	PASS
			30~1000	0.52	-60.74	≤ -19.48	PASS
			1000~26500	0.52	-47.28	≤ -19.48	PASS
		2452	Reference	0.11	0.11	---	PASS
			30~1000	0.11	-60.72	≤ -19.89	PASS
			1000~26500	0.11	-47.63	≤ -19.89	PASS



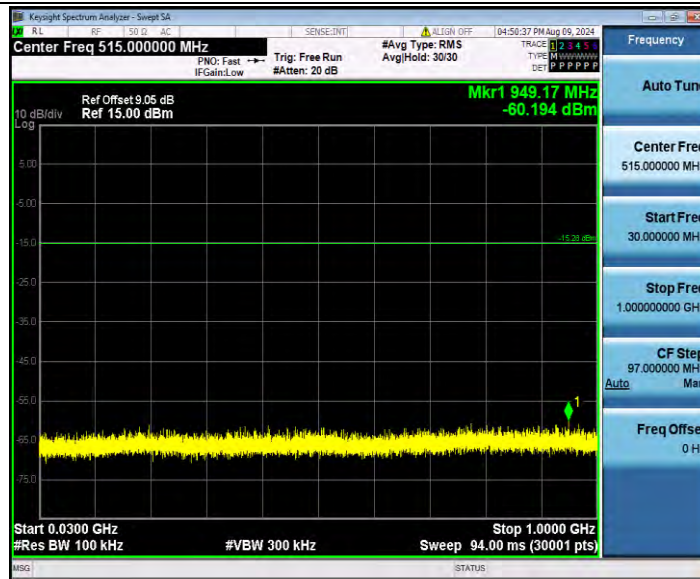
11B_Ant1_2437_1000~26500



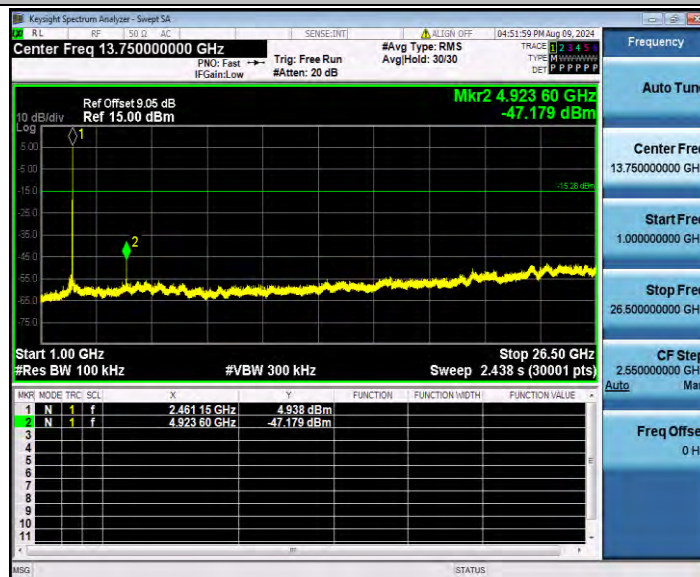
11B_Ant1_2462_0~Reference



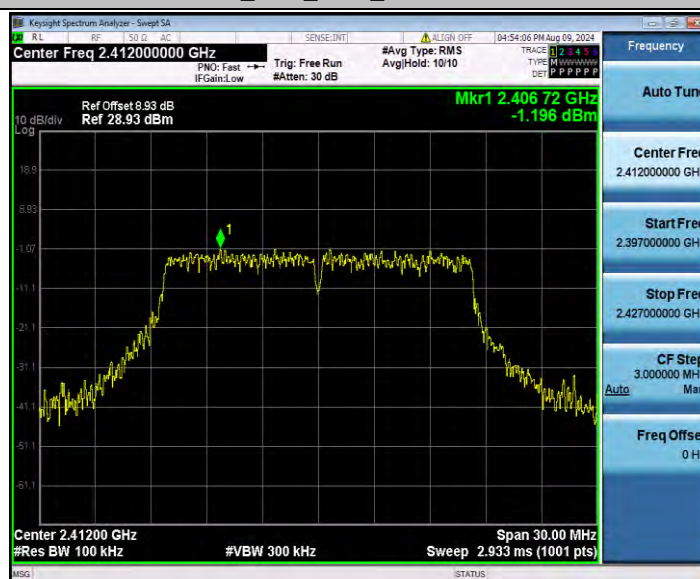
11B_Ant1_2462_30~1000



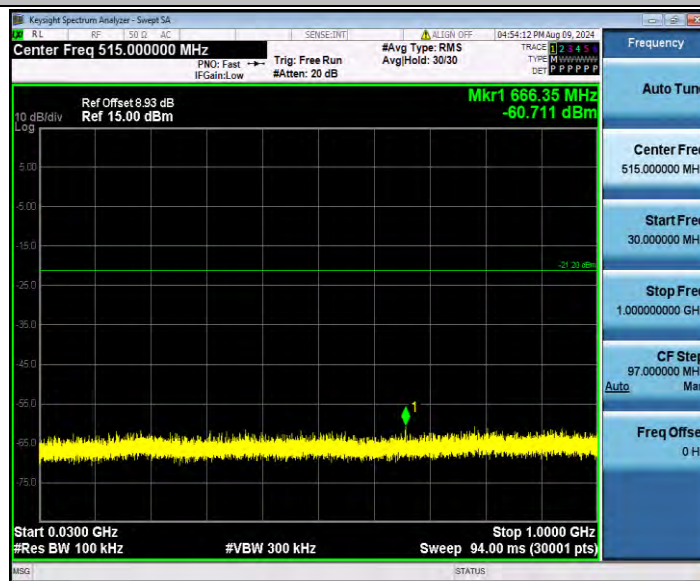
11B_Ant1_2462_1000~26500



11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000



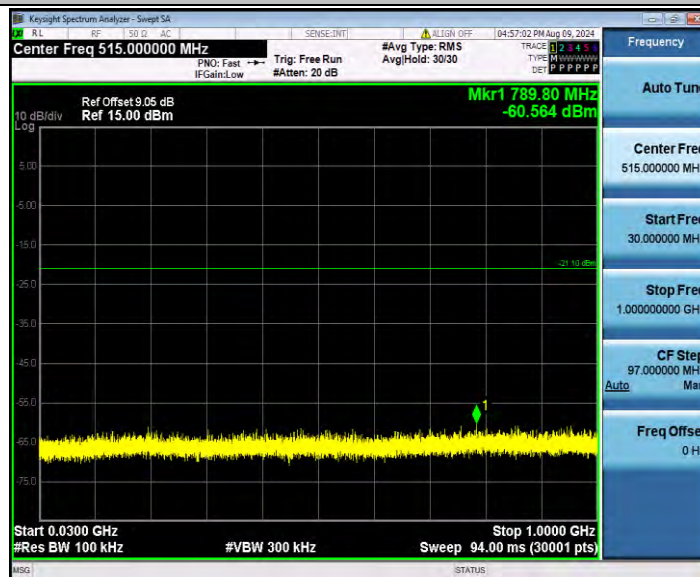
11G_Ant1_2412_1000~26500



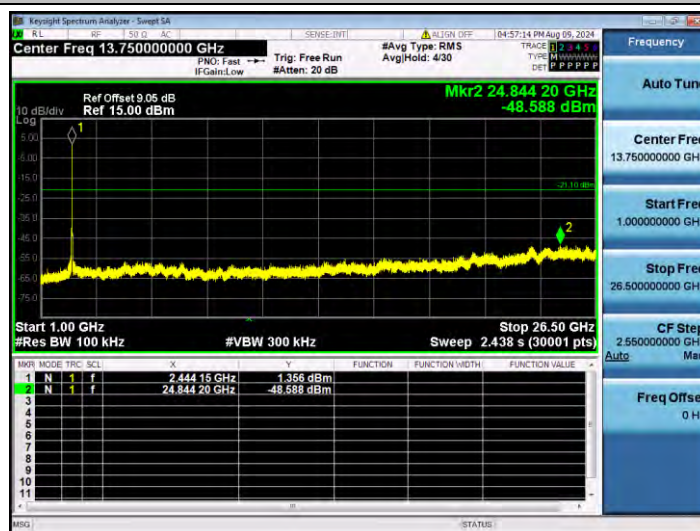
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000



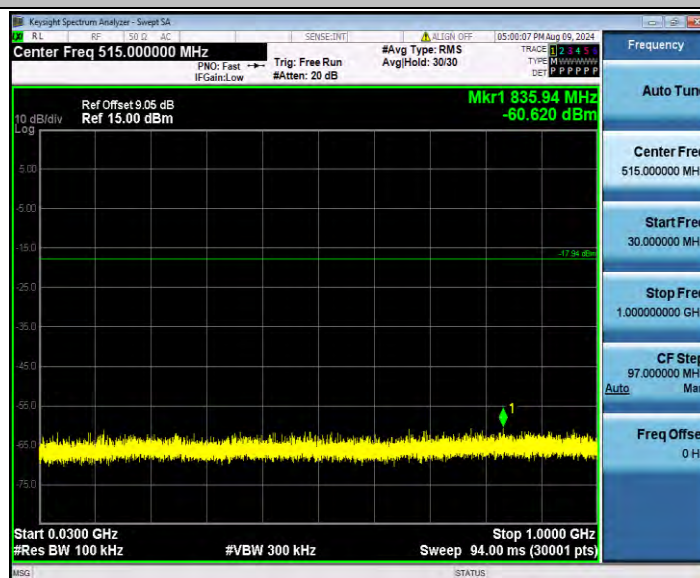
11G_Ant1_2437_1000~26500



11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



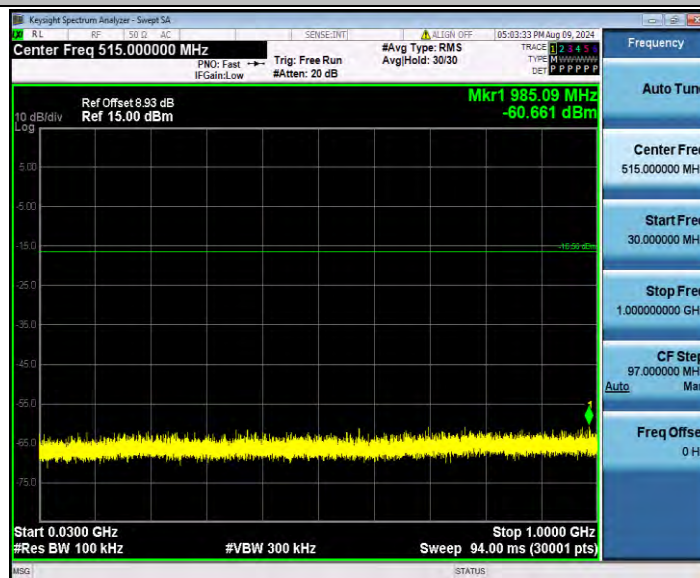
11G_Ant1_2462_1000~26500



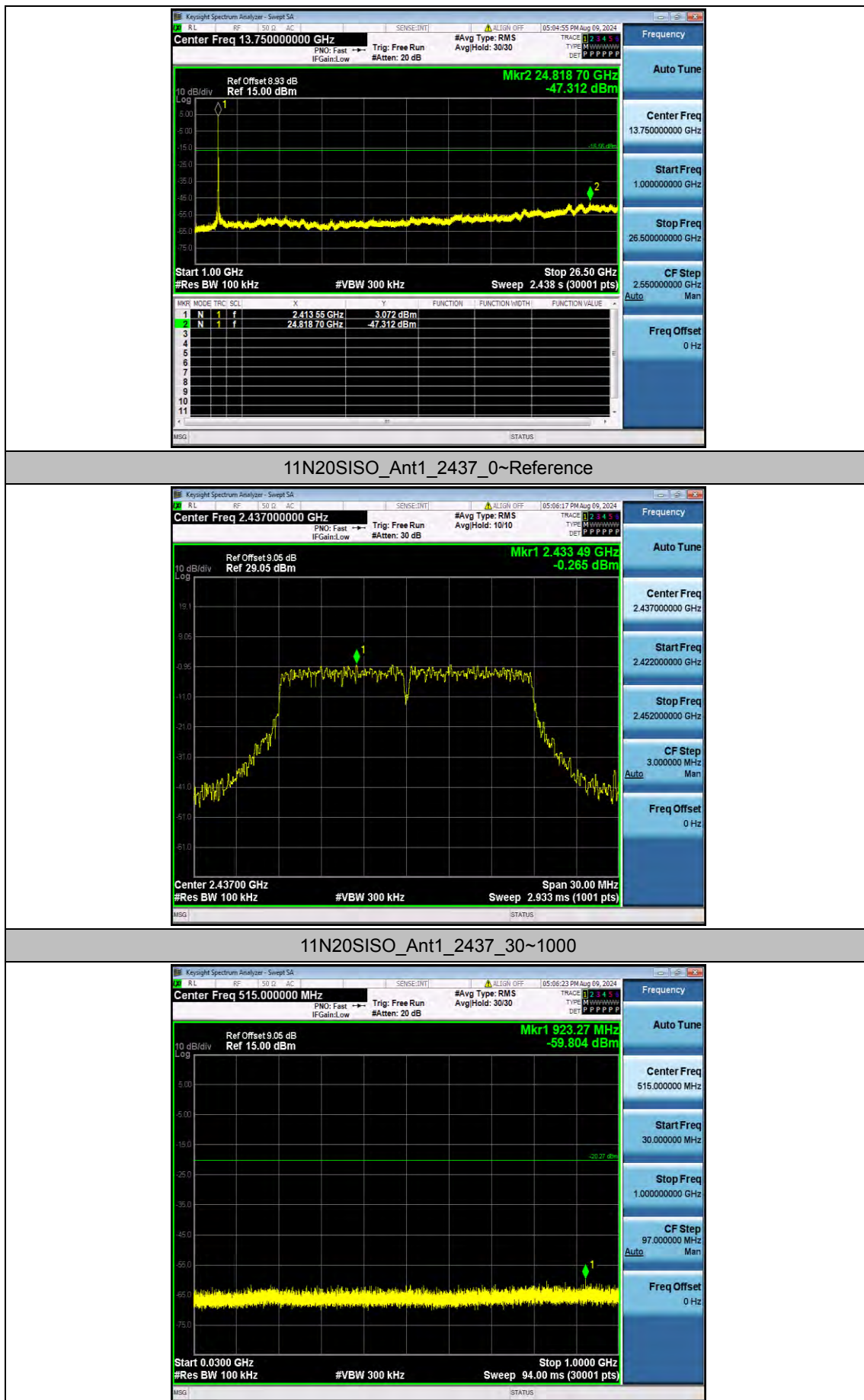
11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



11N20SISO_Ant1_2412_1000~26500



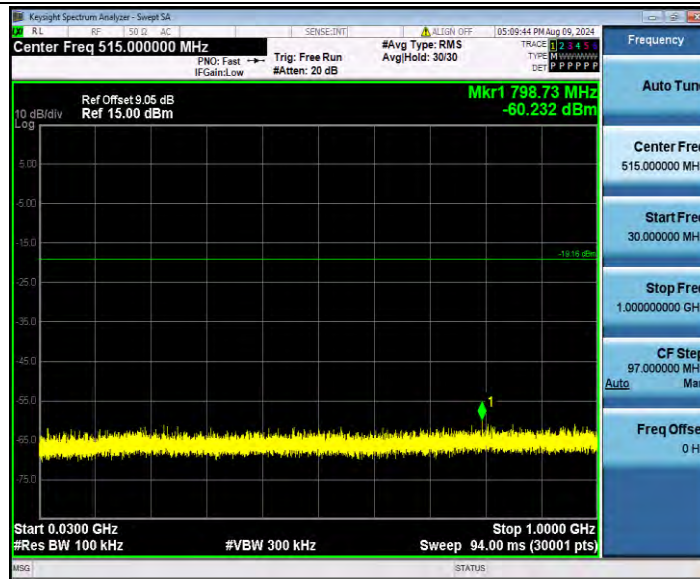
11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference



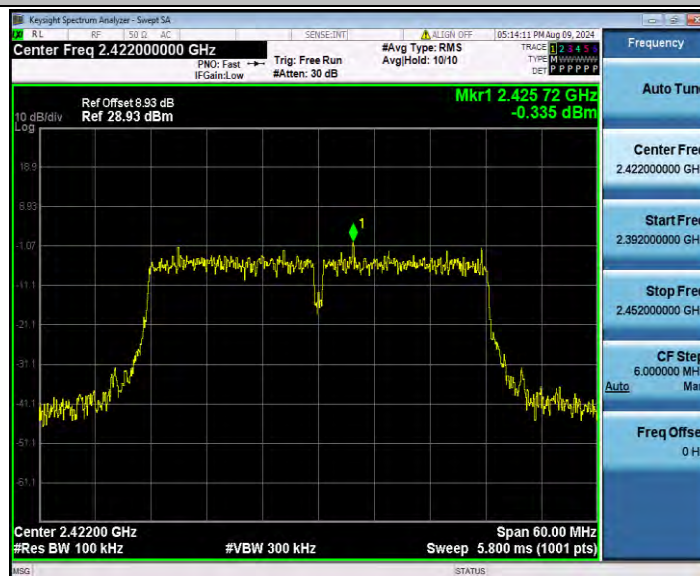
11N20SISO_Ant1_2462_30~1000



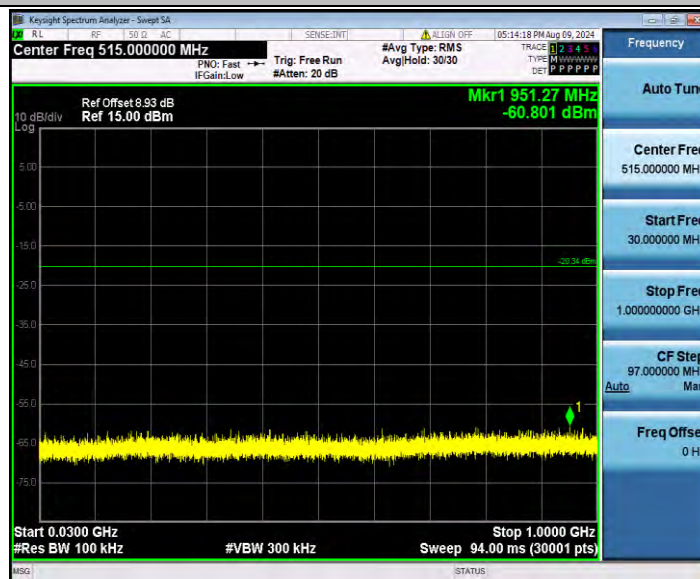
11N20SISO_Ant1_2462_1000~26500



11N40SISO_Ant1_2422_0~Reference



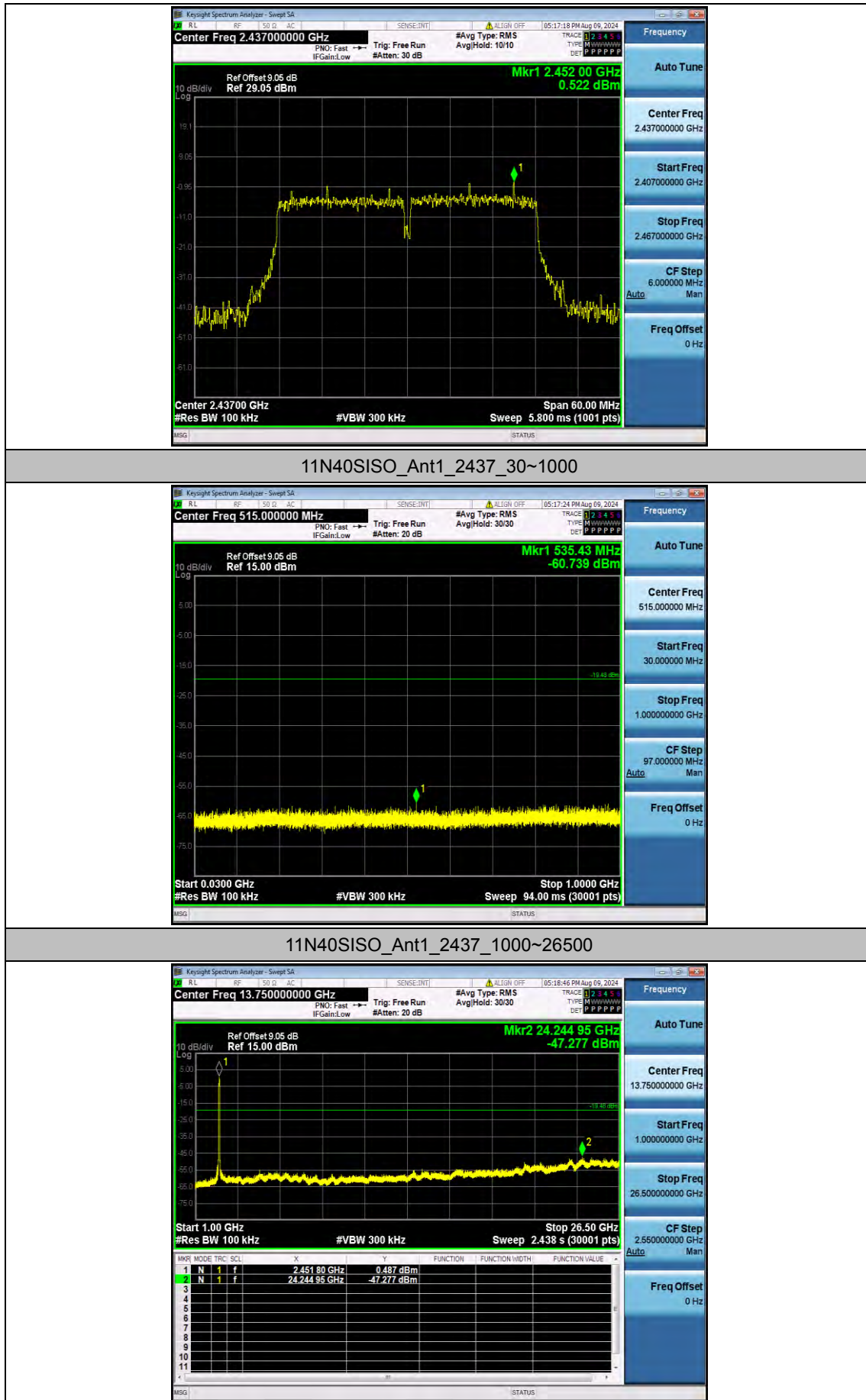
11N40SISO_Ant1_2422_30~1000



11N40SISO_Ant1_2422_1000~26500



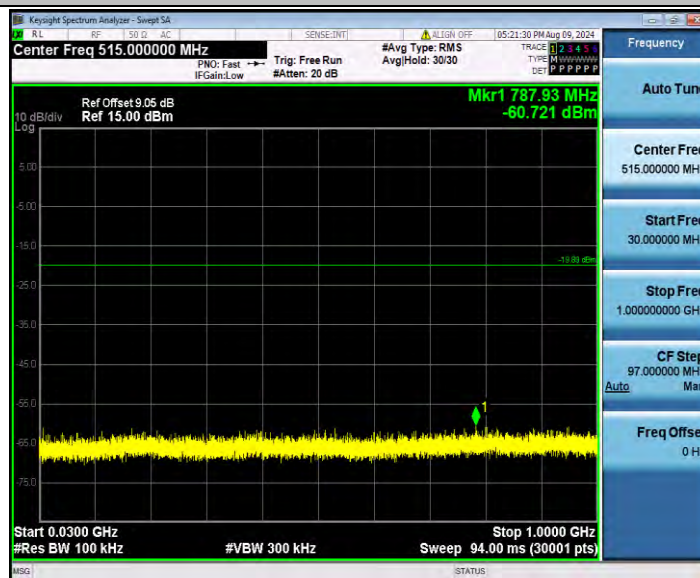
11N40SISO_Ant1_2437_0~Reference



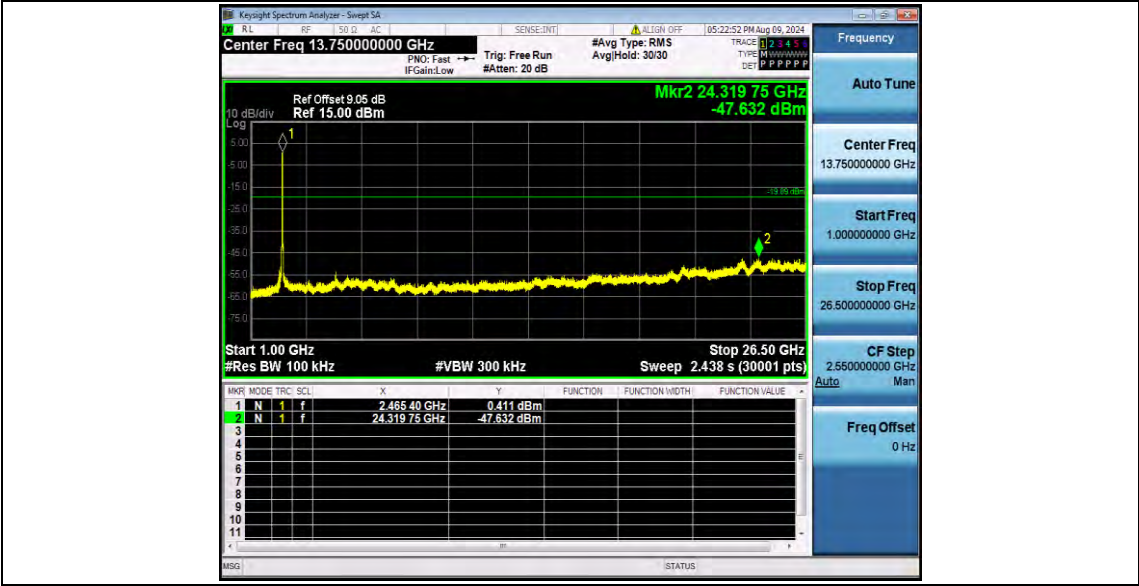
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



Appendix A.7: Emissions in Restricted Bands

Test Result

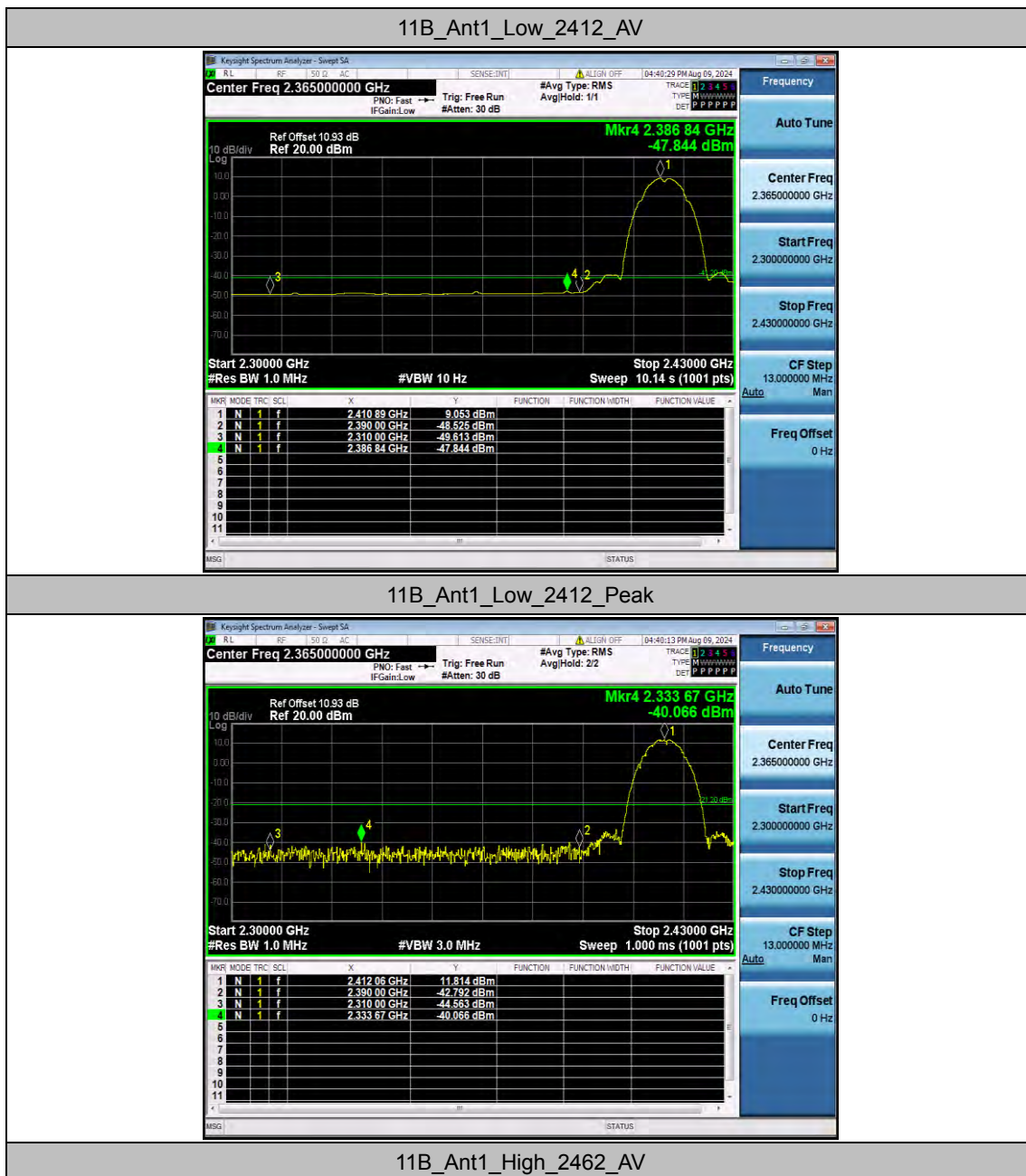
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.61	≤-41.20	45.59	≤54	PASS
				AV	2386.840	-47.84	≤-41.20	47.36	≤54	PASS
				AV	2390.000	-48.53	≤-41.20	46.67	≤54	PASS
				Peak	2310.000	-44.56	≤-21.20	50.64	≤74	PASS
				Peak	2333.670	-40.07	≤-21.20	55.13	≤74	PASS
				Peak	2390.000	-42.79	≤-21.20	52.41	≤74	PASS
		High	2462	AV	2483.500	-48.35	≤-41.20	46.85	≤54	PASS
				AV	2487.740	-48.05	≤-41.20	47.15	≤54	PASS
				AV	2500.000	-48.52	≤-41.20	46.68	≤54	PASS
				Peak	2483.500	-47.38	≤-21.20	47.82	≤74	PASS
				Peak	2497.090	-40.3	≤-21.20	54.90	≤74	PASS
				Peak	2500.000	-46.25	≤-21.20	48.95	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-49.51	≤-41.20	45.69	≤54	PASS
				AV	2389.960	-44.58	≤-41.20	50.62	≤54	PASS
				AV	2390.000	-44.58	≤-41.20	50.62	≤54	PASS
				Peak	2310.000	-48.47	≤-21.20	46.73	≤74	PASS
				Peak	2389.180	-38.42	≤-21.20	56.78	≤74	PASS
				Peak	2390.000	-45.55	≤-21.20	49.65	≤74	PASS
		High	2462	AV	2483.500	-43.4	≤-41.20	51.80	≤54	PASS
				AV	2483.560	-43.6	≤-41.20	51.60	≤54	PASS
				AV	2500.000	-48.42	≤-41.20	46.78	≤54	PASS
				Peak	2483.500	-39.8	≤-21.20	55.40	≤74	PASS
				Peak	2483.560	-36.36	≤-21.20	58.84	≤74	PASS
				Peak	2500.000	-45.2	≤-21.20	50.00	≤74	PASS
11N20SISO	Ant1	Low	2412	AV	2310.000	-49.57	≤-41.20	45.63	≤54	PASS
				AV	2386.840	-48.17	≤-41.20	47.03	≤54	PASS
				AV	2390.000	-48.39	≤-41.20	46.81	≤54	PASS
				Peak	2310.000	-51.87	≤-21.20	43.33	≤74	PASS
				Peak	2346.280	-40.14	≤-21.20	55.06	≤74	PASS
				Peak	2390.000	-44.94	≤-21.20	50.26	≤74	PASS
		High	2462	AV	2483.500	-42.72	≤-41.20	52.48	≤54	PASS
				AV	2483.560	-42.82	≤-41.20	52.38	≤54	PASS
				AV	2500.000	-48.07	≤-41.20	47.13	≤54	PASS
				Peak	2483.500	-43.43	≤-21.20	51.77	≤74	PASS
				Peak	2484.550	-37.16	≤-21.20	58.04	≤74	PASS

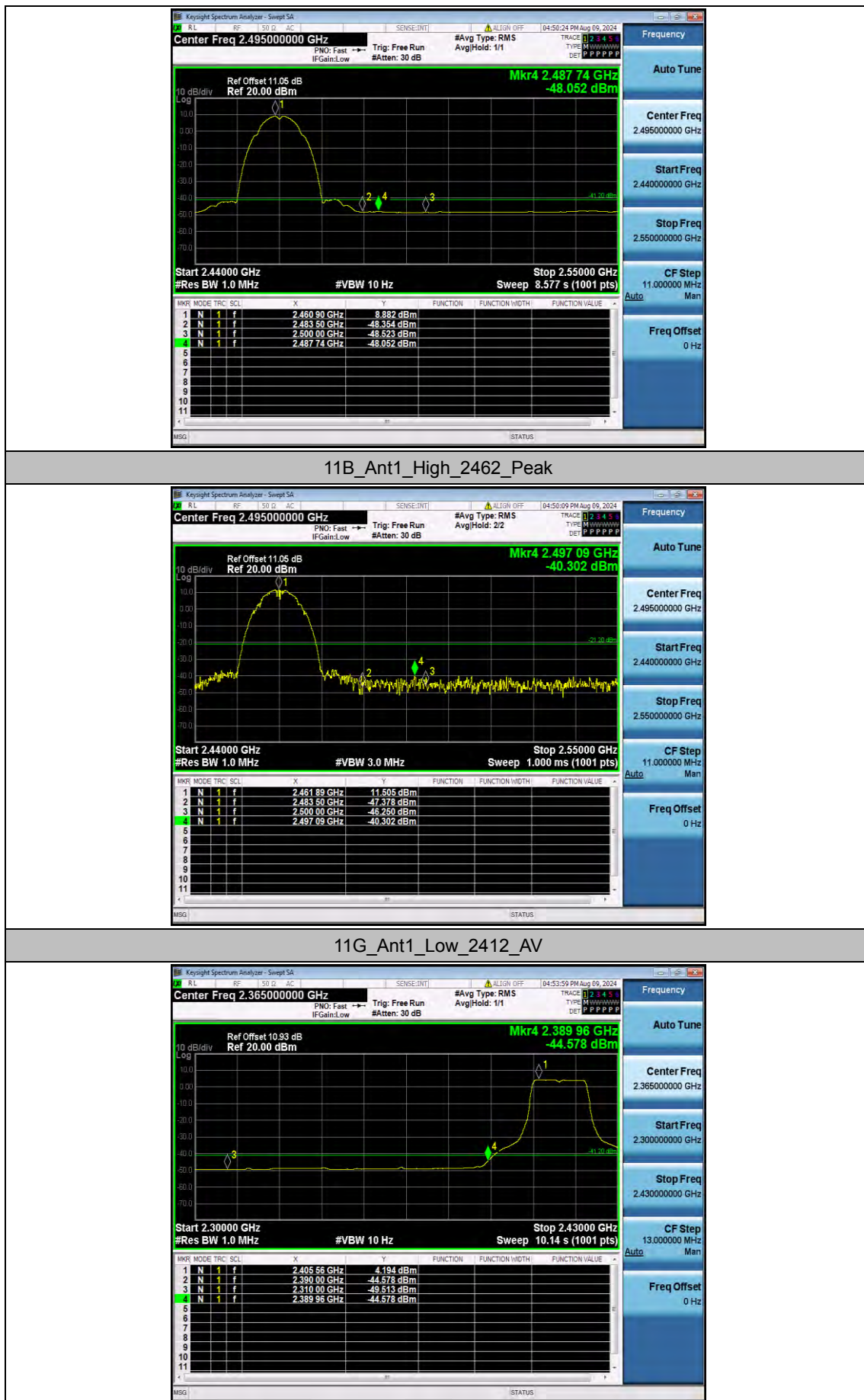
				Peak	2500.000	-44.73	≤ -21.20	50.47	≤ 74	PASS
11N40SIS O	Ant1	Low	2422	AV	2310.000	-49.56	≤ -41.20	45.64	≤ 54	PASS
				AV	2389.960	-46.88	≤ -41.20	48.32	≤ 54	PASS
				AV	2390.000	-46.89	≤ -41.20	48.31	≤ 54	PASS
				Peak	2310.000	-46.25	≤ -21.20	48.95	≤ 74	PASS
				Peak	2388.920	-39.83	≤ -21.20	55.37	≤ 74	PASS
				Peak	2390.000	-42.83	≤ -21.20	52.37	≤ 74	PASS
		High	2452	AV	2483.500	-46.18	≤ -41.20	49.02	≤ 54	PASS
				AV	2483.560	-46.2	≤ -41.20	49.00	≤ 54	PASS
				AV	2500.000	-48.38	≤ -41.20	46.82	≤ 54	PASS
				Peak	2483.500	-40.73	≤ -21.20	54.47	≤ 74	PASS
				Peak	2485.210	-38.55	≤ -21.20	56.65	≤ 74	PASS
				Peak	2500.000	-44.51	≤ -21.20	50.69	≤ 74	PASS

Note:

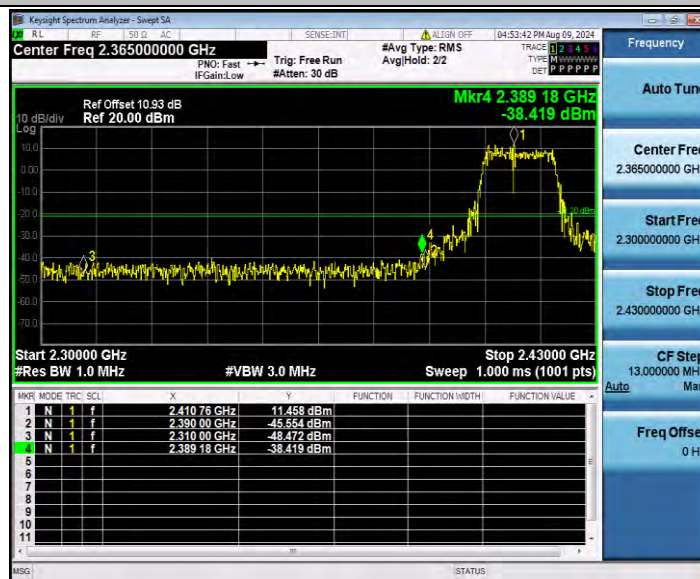
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

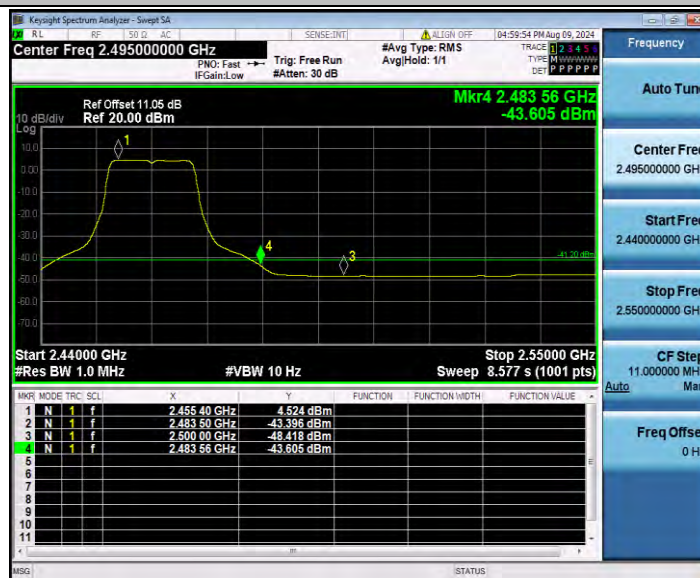




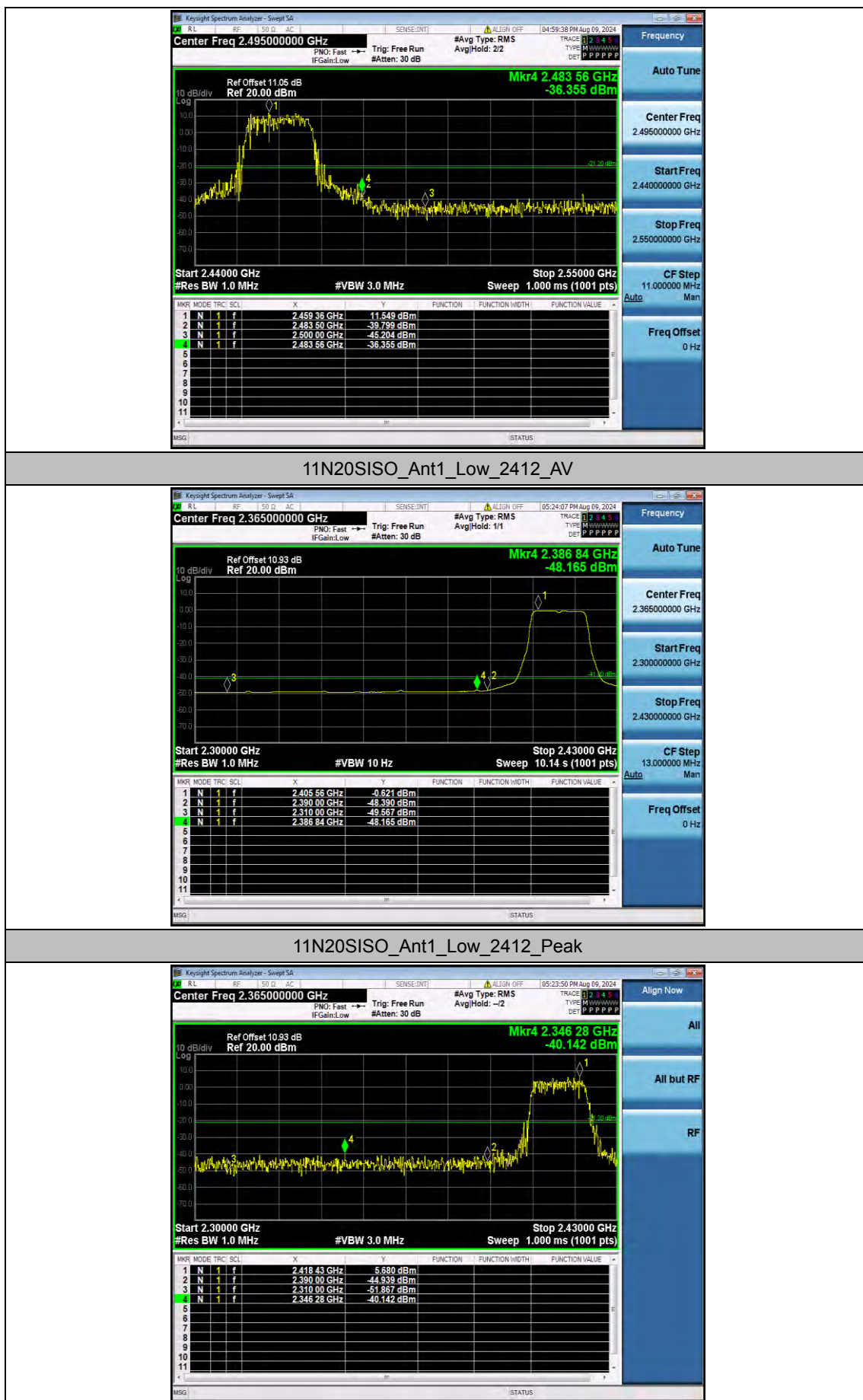
11G_Ant1_Low_2412_Peak



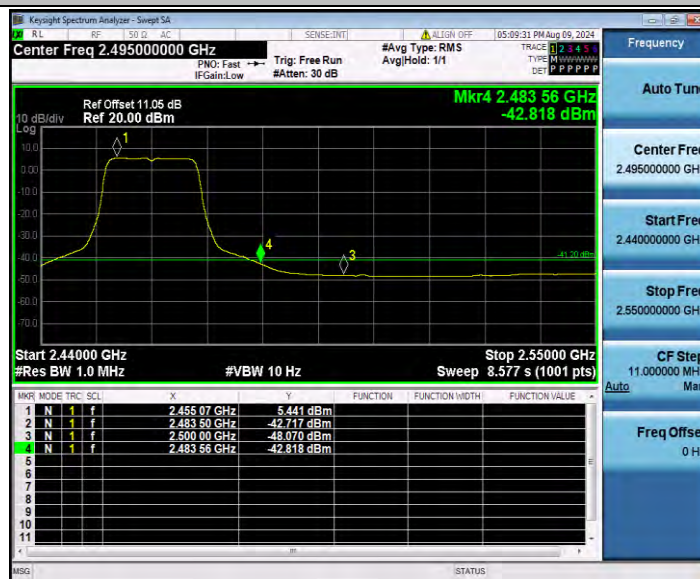
11G_Ant1_High_2462_AV



11G_Ant1_High_2462_Peak



11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak



11N40SISO_Ant1_Low_2422_AV

