

Appendix B: Wi-Fi 802.11 b/g/n and Conducted Emission on AC Mains

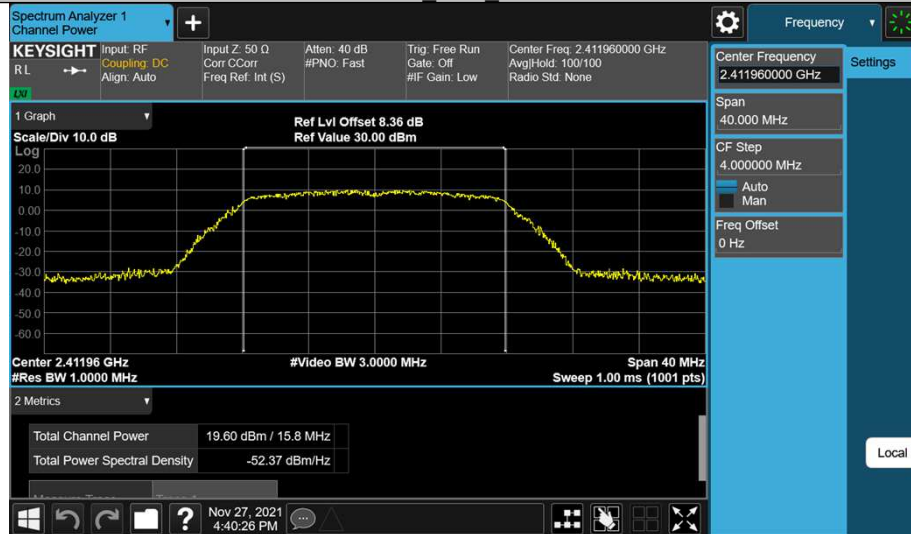
APPENDIX B: WI-FI 802.11 B/G/N AND CONDUCTED EMISSION ON AC MAINS.....	1
APPENDIX B.1: TEST RESULTS OF MAXIMUM PEAK CONDUCTED OUTPUT POWER	2
APPENDIX B.2: TEST RESULTS OF CONDUCTED POWER SPECTRAL DENSITY.....	6
APPENDIX B.3: TEST RESULTS OF 6DB BANDWIDTH	10
APPENDIX B.4: TEST RESULTS OF 99% BANDWIDTH	14
APPENDIX B.5: TEST RESULTS OF CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH	18
<i>Conducted Spurious Emission</i>	18
<i>Band Edge</i>	28
APPENDIX B.6: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS	31
30MHz - 1GHz (Worst case).....	31
1GHz - 18GHz	35
APPENDIX B.7: TEST RESULTS OF RADIATED EMISSIONS IN RESTRICTED BANDS.....	47
Wi-Fi 802.11 b mode, 1 Mbps.....	47
Wi-Fi 802.11 g mode, 6 Mbps.....	51
Wi-Fi 802.11 n(HT20) mode, MCS0	55
APPENDIX B.8: TEST RESULTS OF CONDUCTED EMISSION ON AC MAINS	59

Appendix B.1: Test Results of Maximum Peak Conducted Output Power

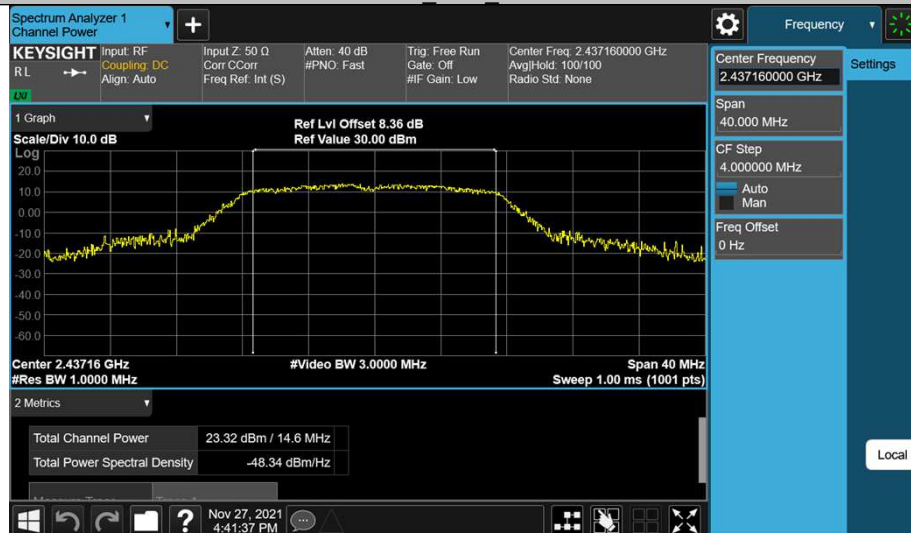
TestMode	Antenna	Channel	Power [dBm]	Limit [dBm]	Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.71	≤30	≤30	16.71	≤36	PASS
		2437	17.63	≤30	≤30	20.63	≤36	PASS
		2462	14.55	≤30	≤30	17.55	≤36	PASS
11G	Ant1	2412	19.60	≤30	≤30	22.60	≤36	PASS
		2437	23.32	≤30	≤30	26.32	≤36	PASS
		2462	20.39	≤30	≤30	23.39	≤36	PASS
11N20SISO	Ant1	2412	19.87	≤30	≤30	22.87	≤36	PASS
		2437	23.73	≤30	≤30	26.73	≤36	PASS
		2462	20.60	≤30	≤30	23.60	≤36	PASS



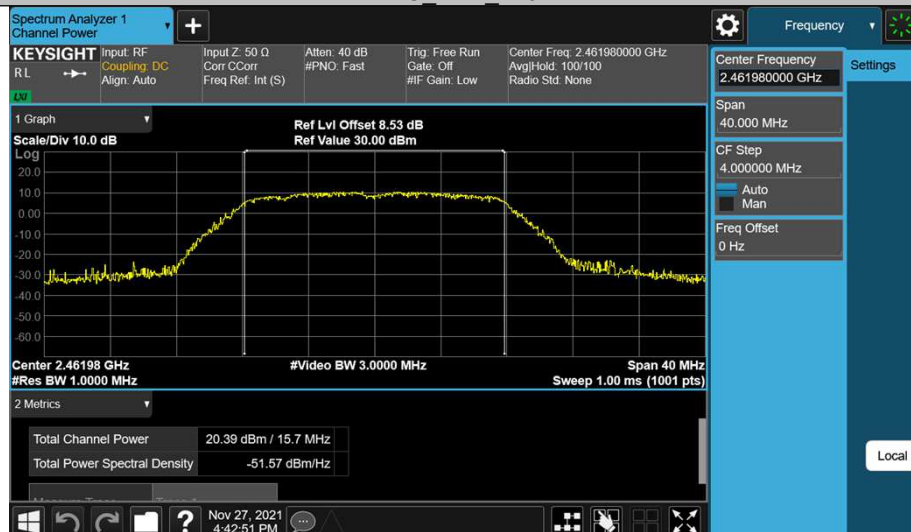
11G_Ant1_2412



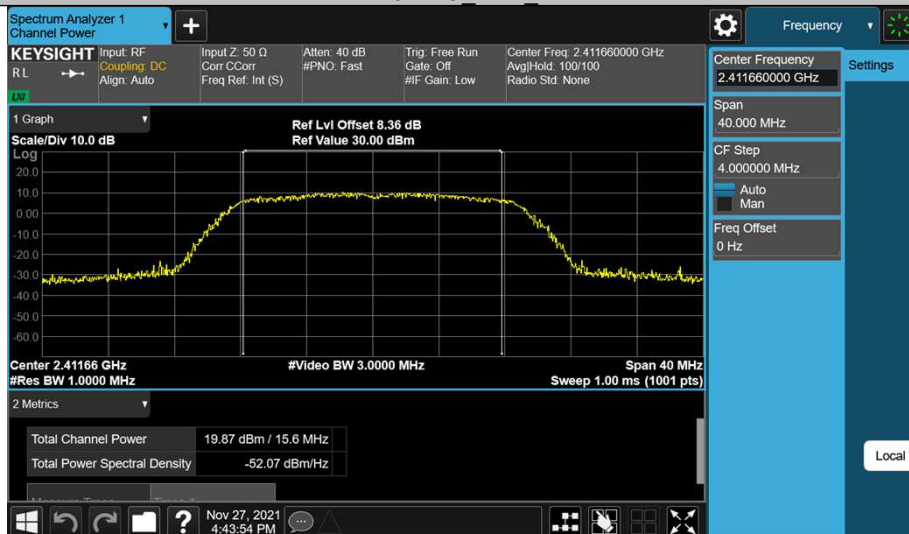
11G_Ant1_2437



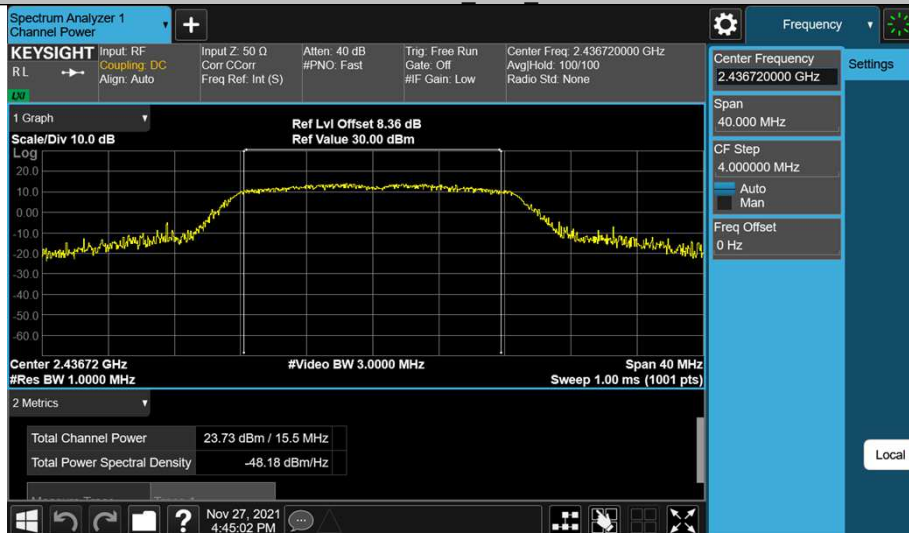
11G_Ant1_2462



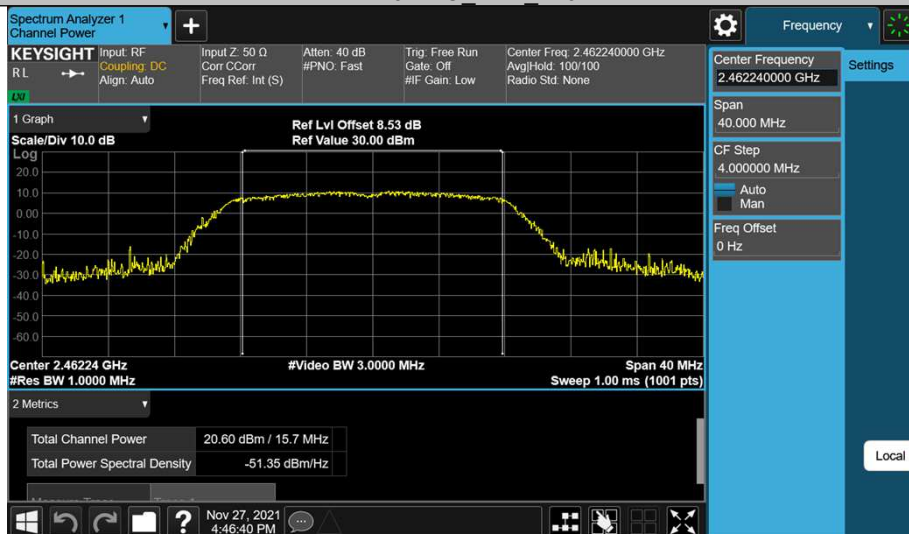
11N20SISO Ant1 2412



11N20SISO Ant1 2437

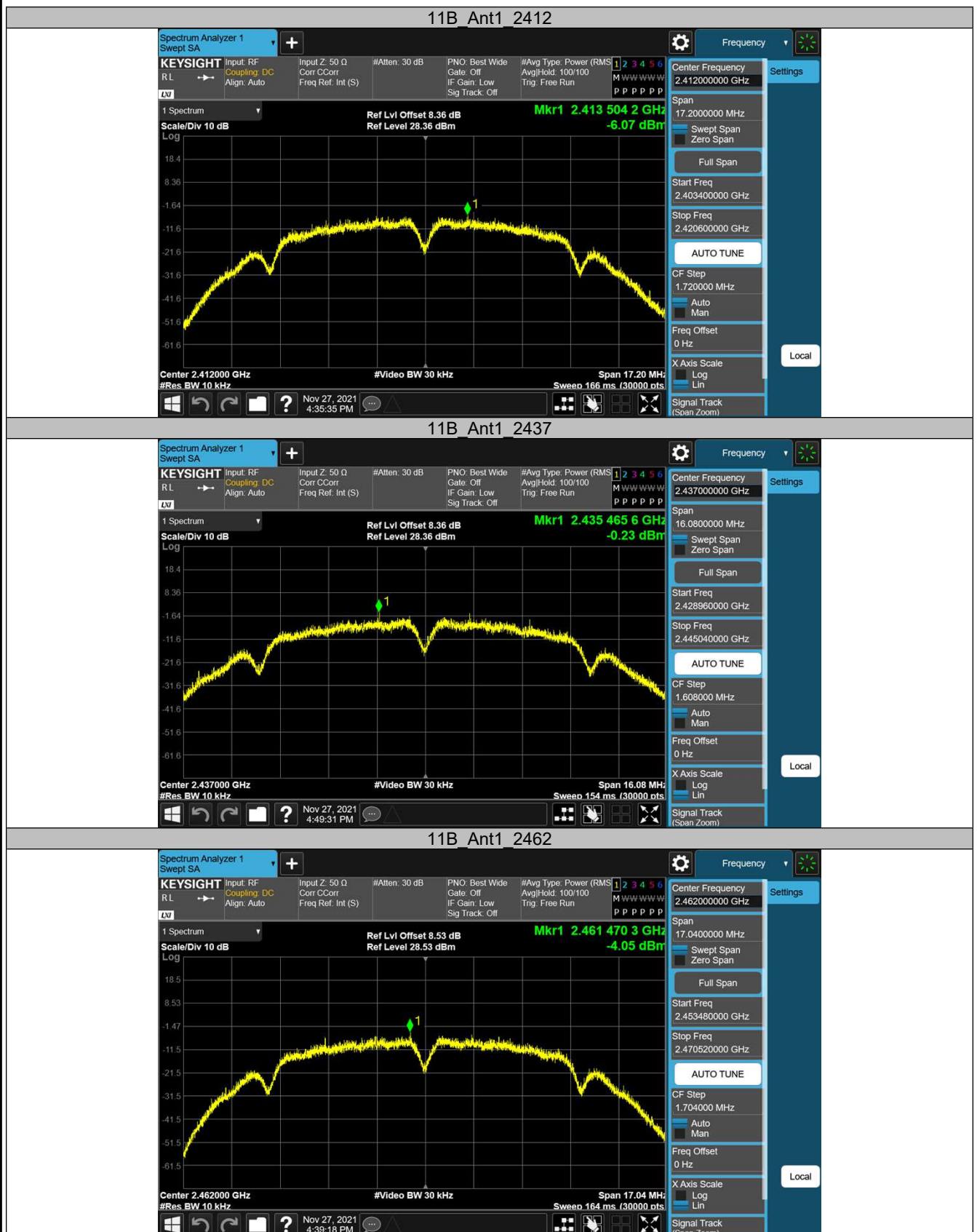


11N20SISO Ant1 2462

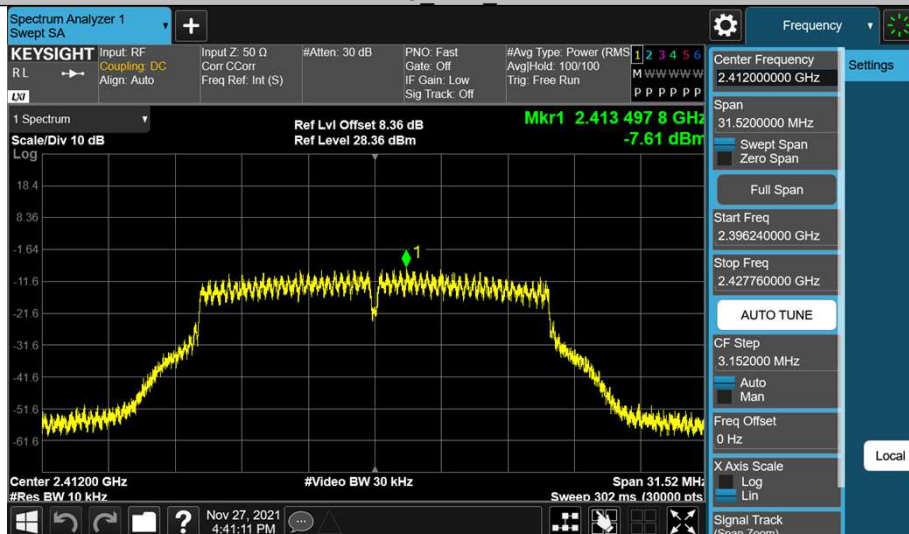


Appendix B.2: Test Results of Conducted Power Spectral Density

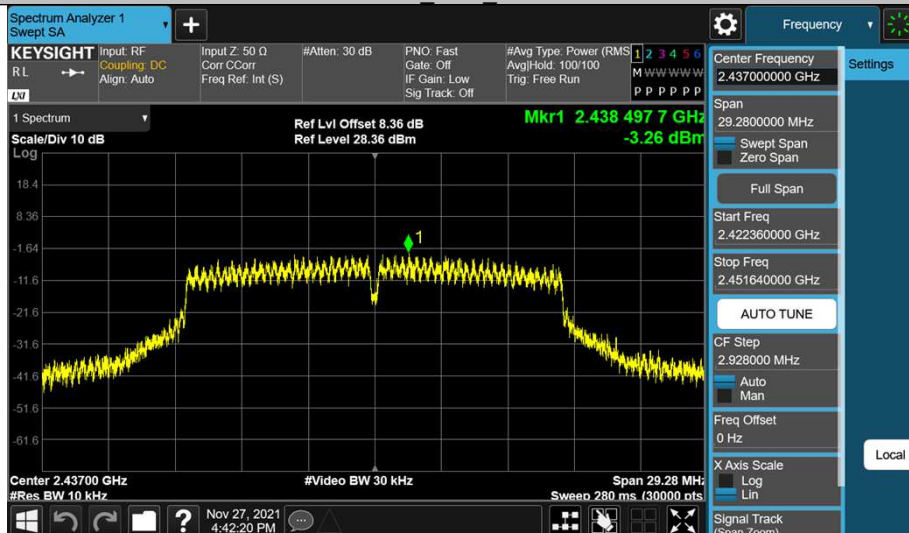
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-6.08	≤8	PASS
		2437	-0.23	≤8	PASS
		2462	-4.05	≤8	PASS
11G	Ant1	2412	-7.61	≤8	PASS
		2437	-3.26	≤8	PASS
		2462	-6.7	≤8	PASS
11N20SISO	Ant1	2412	-5.92	≤8	PASS
		2437	-2.29	≤8	PASS
		2462	-4.78	≤8	PASS



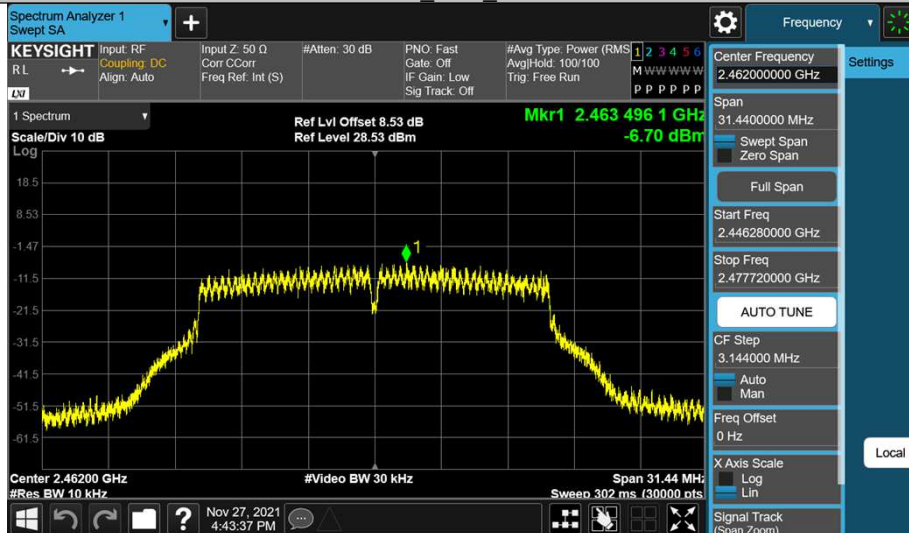
11G_Ant1_2412



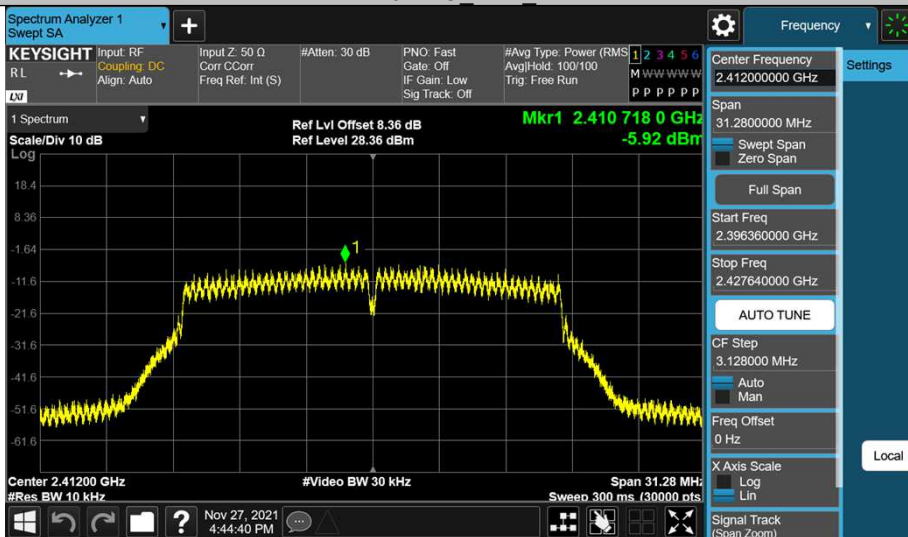
11G_Ant1_2437



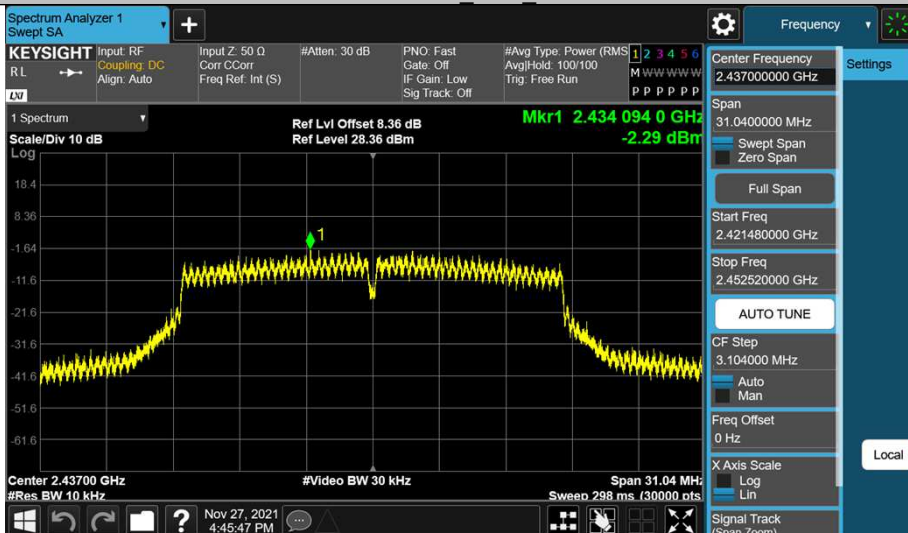
11G_Ant1_2462



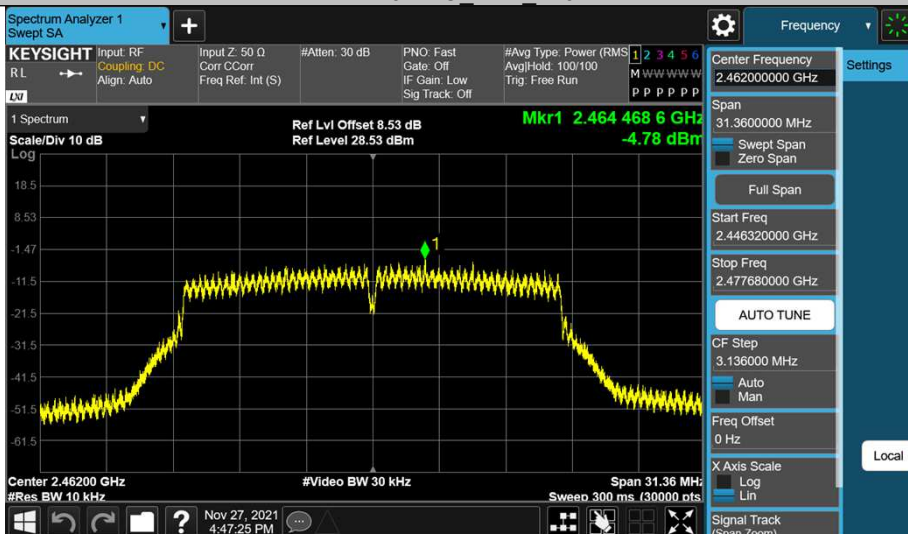
11N20SISO Ant1 2412



11N20SISO Ant1 2437



11N20SISO Ant1 2462



Appendix B.3: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.600	2407.440	2416.040	0.5	PASS
		2437	8.040	2432.960	2441.000	0.5	PASS
		2462	8.520	2457.920	2466.440	0.5	PASS
11G	Ant1	2412	15.760	2404.080	2419.840	0.5	PASS
		2437	14.640	2429.840	2444.480	0.5	PASS
		2462	15.720	2454.120	2469.840	0.5	PASS
11N20SISO	Ant1	2412	15.640	2403.840	2419.480	0.5	PASS
		2437	15.520	2428.960	2444.480	0.5	PASS
		2462	15.680	2454.400	2470.080	0.5	PASS

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



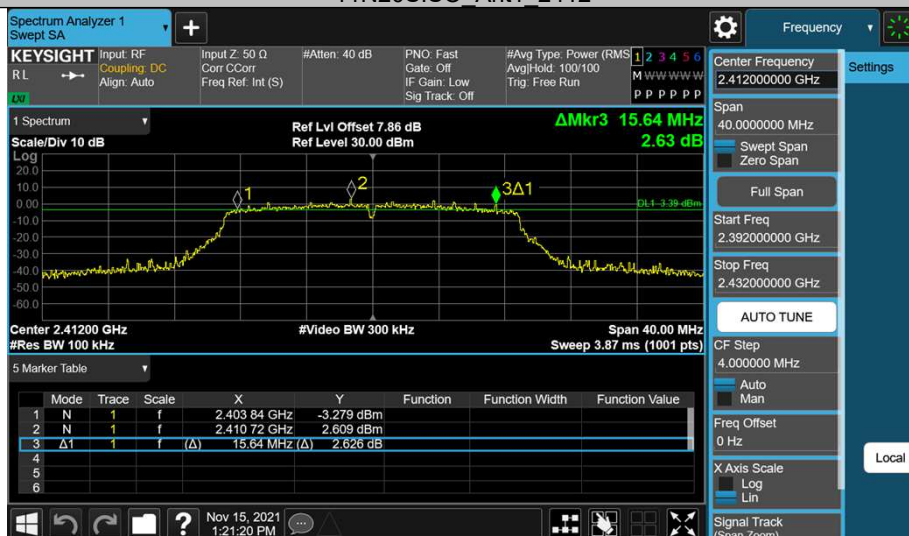
11G_Ant1_2437



11G_Ant1_2462



11N20SISO Ant1 2412



11N20SISO Ant1 2437

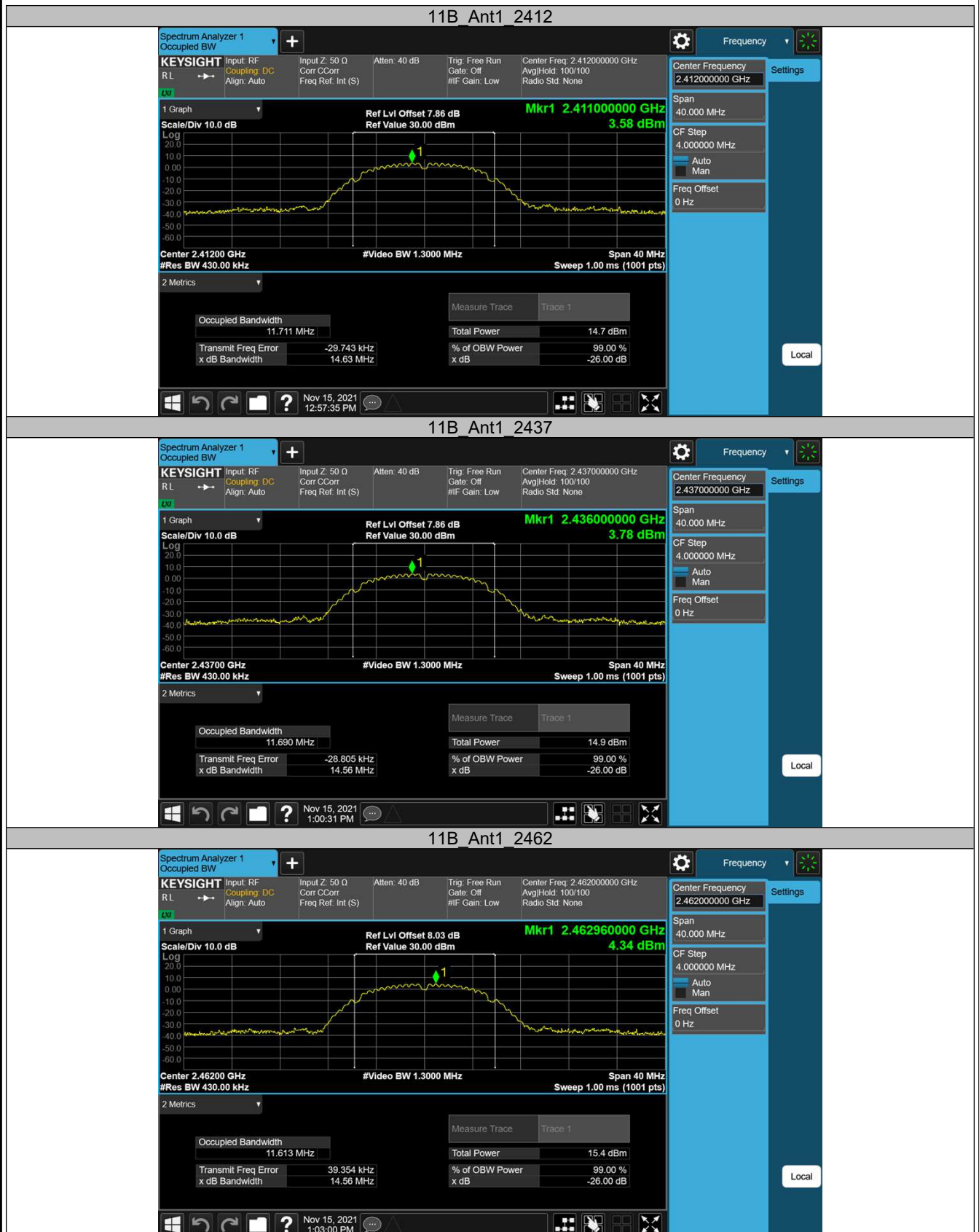


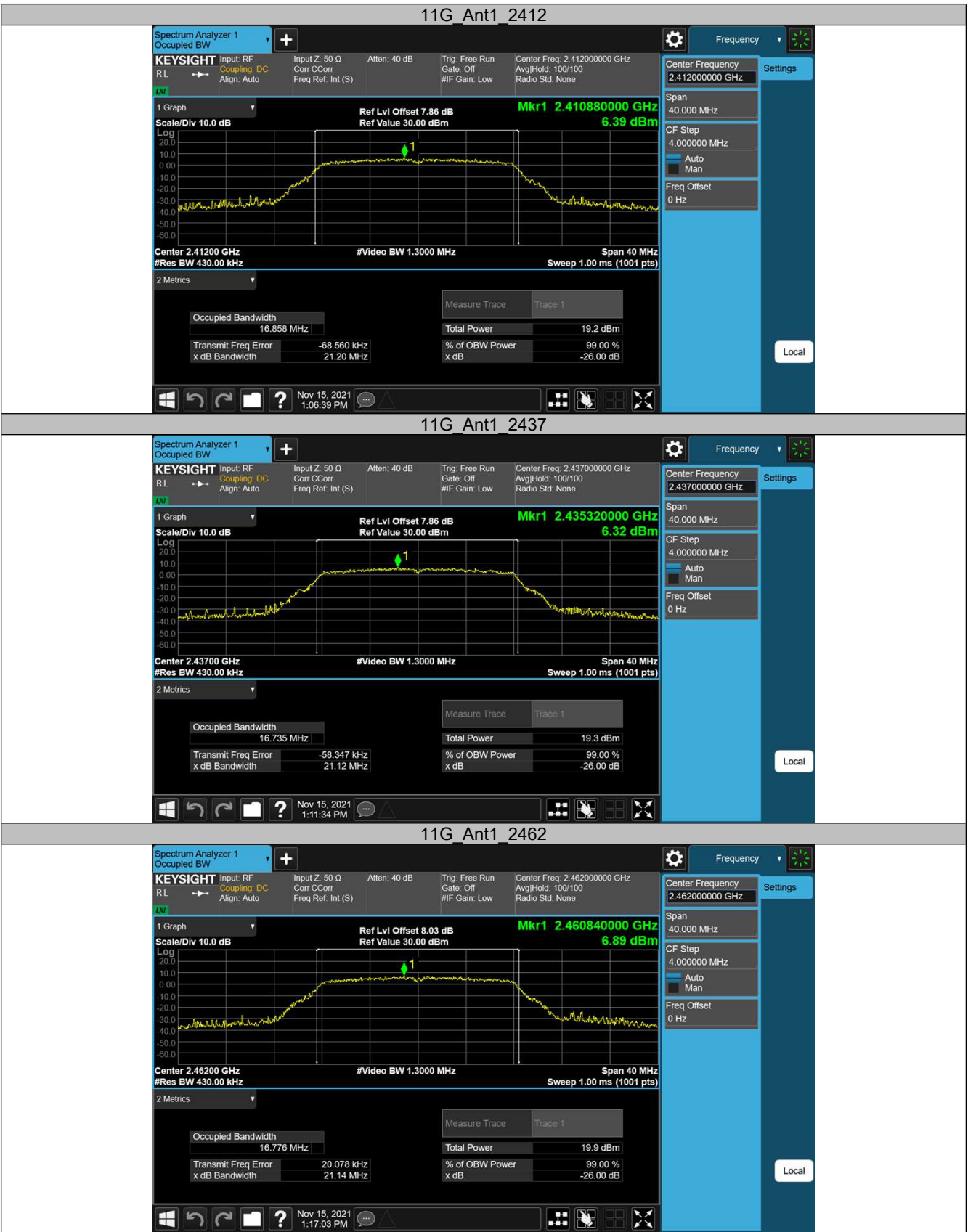
11N20SISO Ant1 2462



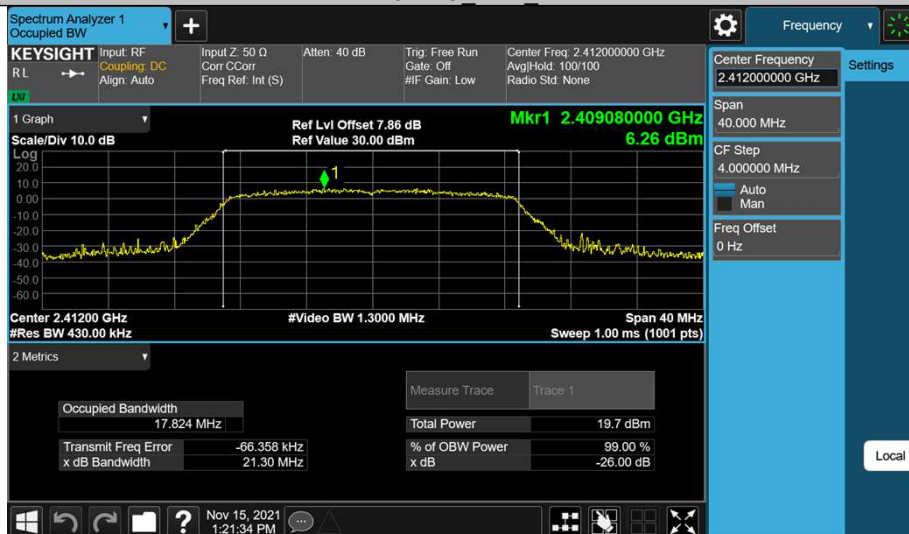
Appendix B.4: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	11.711	2406.115	2417.826	---	PASS
		2437	11.690	2431.126	2442.816	---	PASS
		2462	11.613	2456.233	2467.846	---	PASS
11G	Ant1	2412	16.858	2403.502	2420.360	---	PASS
		2437	16.735	2428.574	2445.309	---	PASS
		2462	16.776	2453.632	2470.408	---	PASS
11N20SISO	Ant1	2412	17.824	2403.022	2420.846	---	PASS
		2437	17.836	2428.040	2445.876	---	PASS
		2462	17.849	2453.063	2470.912	---	PASS

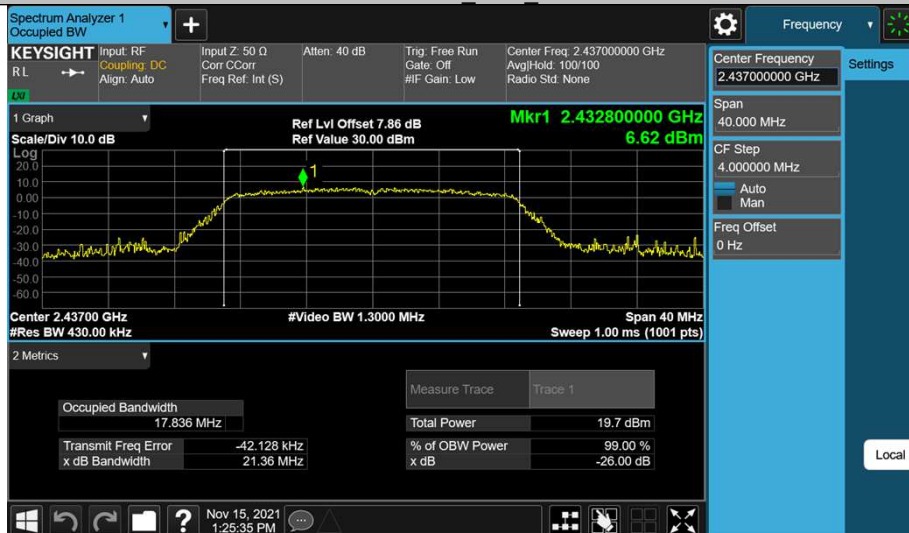




11N20SISO Ant1 2412



11N20SISO Ant1 2437



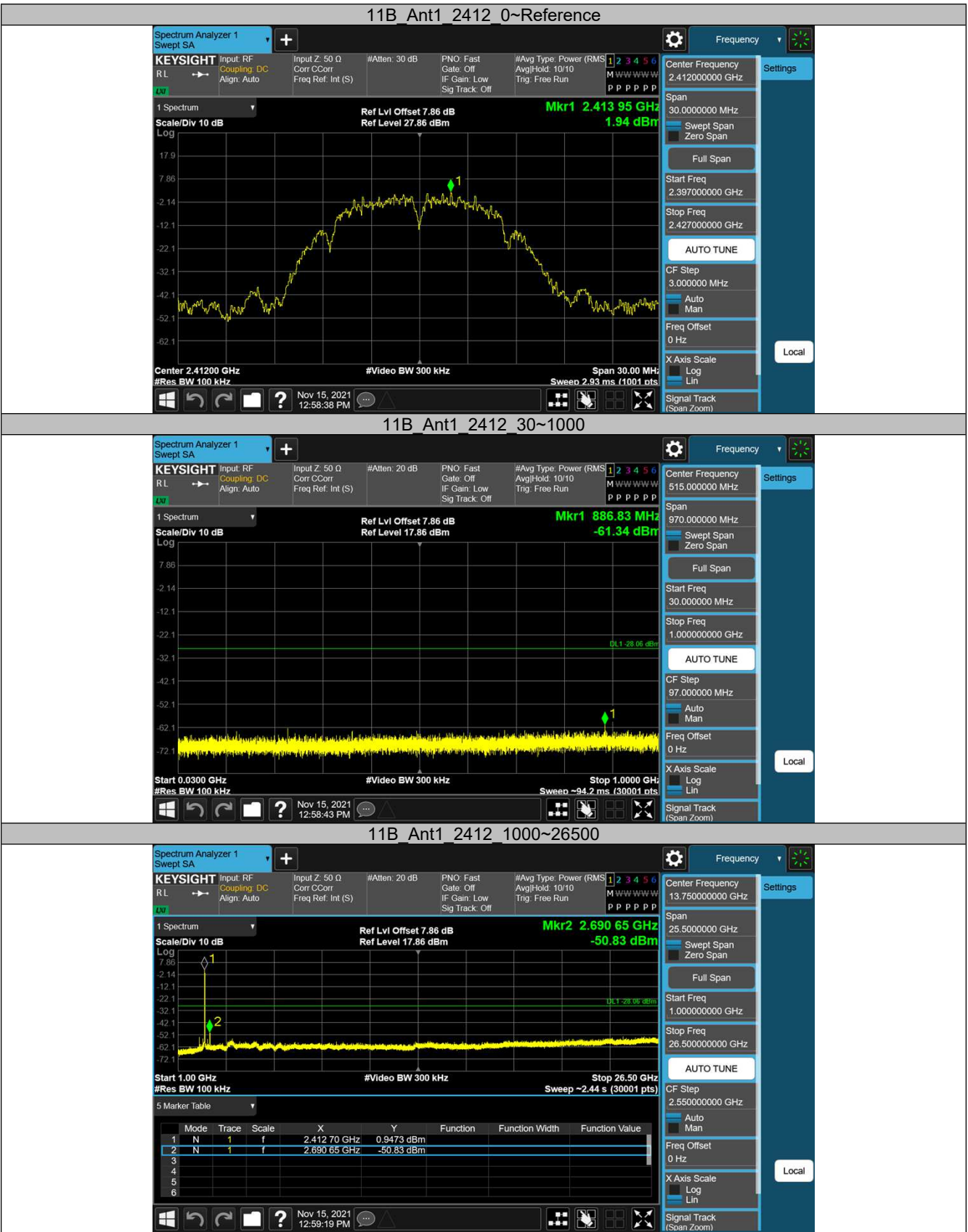
11N20SISO Ant1 2462



Appendix B.5: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	1.94	1.94	---	PASS
			30~1000	1.94	-61.34	≤-28.06	PASS
			1000~26500	1.94	-50.83	≤-28.06	PASS
		2437	Reference	2.18	2.18	---	PASS
			30~1000	2.18	-62.71	≤-27.82	PASS
			1000~26500	2.18	-52.97	≤-27.82	PASS
		2462	Reference	2.45	2.45	---	PASS
			30~1000	2.45	-62.56	≤-27.55	PASS
			1000~26500	2.45	-53.29	≤-27.55	PASS
11G	Ant1	2412	Reference	1.62	1.62	---	PASS
			30~1000	1.62	-62.73	≤-28.39	PASS
			1000~26500	1.62	-51.13	≤-28.39	PASS
		2437	Reference	0.23	0.23	---	PASS
			30~1000	0.23	-62.33	≤-29.77	PASS
			1000~26500	0.23	-51.27	≤-29.77	PASS
		2462	Reference	0.00	0.00	---	PASS
			30~1000	0.00	-63	≤-30	PASS
			1000~26500	0.00	-51.35	≤-30	PASS
11N20SISO	Ant1	2412	Reference	-0.15	-0.15	---	PASS
			30~1000	-0.15	-61.62	≤-30.15	PASS
			1000~26500	-0.15	-50.54	≤-30.15	PASS
		2437	Reference	-0.17	-0.17	---	PASS
			30~1000	-0.17	-62.28	≤-30.17	PASS
			1000~26500	-0.17	-51.54	≤-30.17	PASS
		2462	Reference	1.44	1.44	---	PASS
			30~1000	1.44	-62.27	≤-28.56	PASS
			1000~26500	1.44	-49.8	≤-28.56	PASS



11B_Ant1_2437_0~Reference



11B_Ant1_2437_30~1000



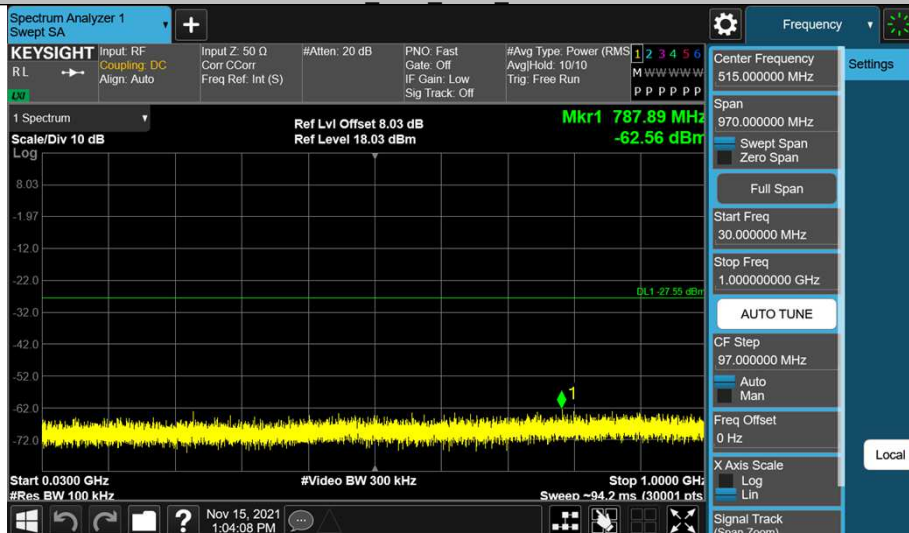
11B_Ant1_2437_1000~26500



11B_Ant1_2462_0~Reference

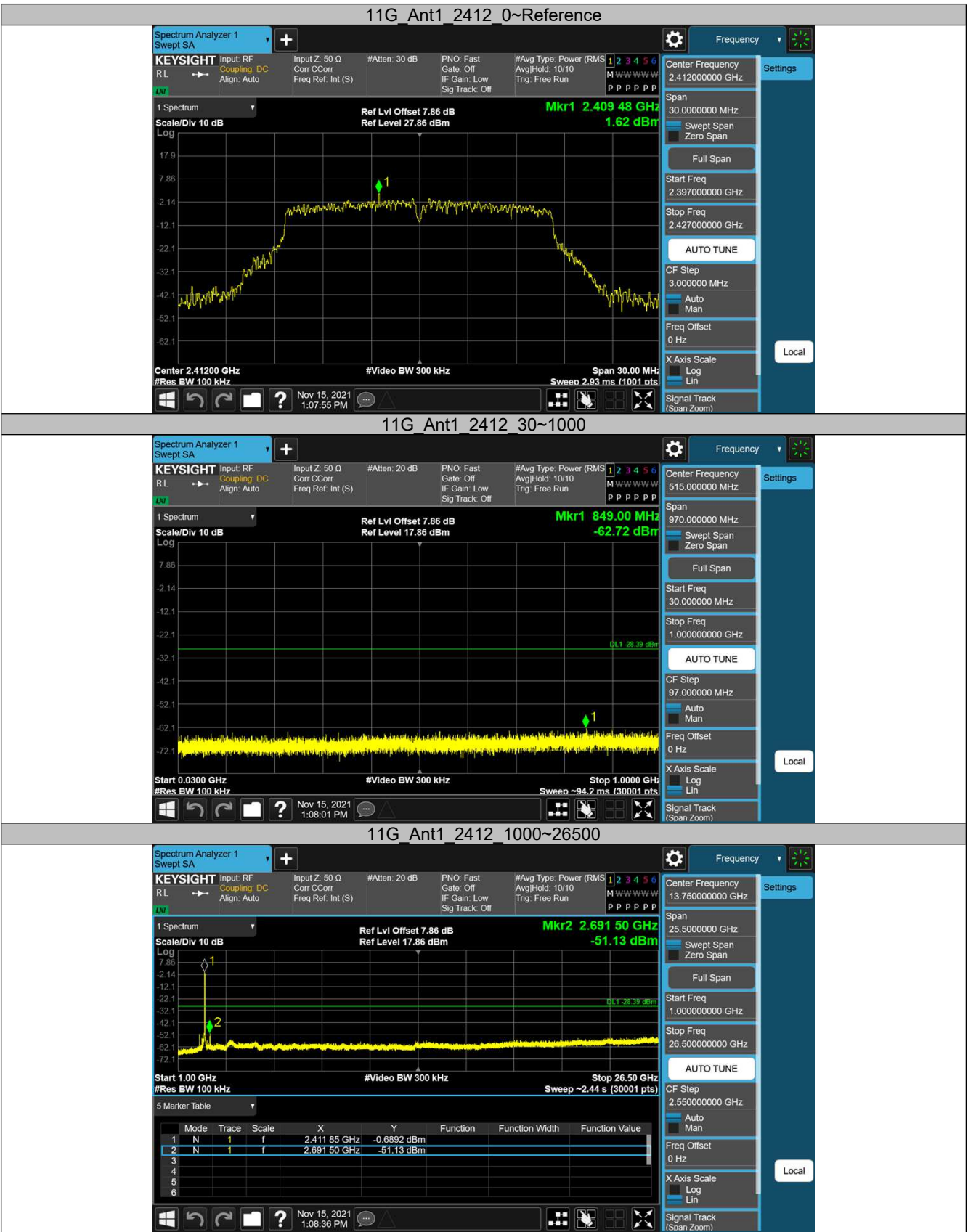


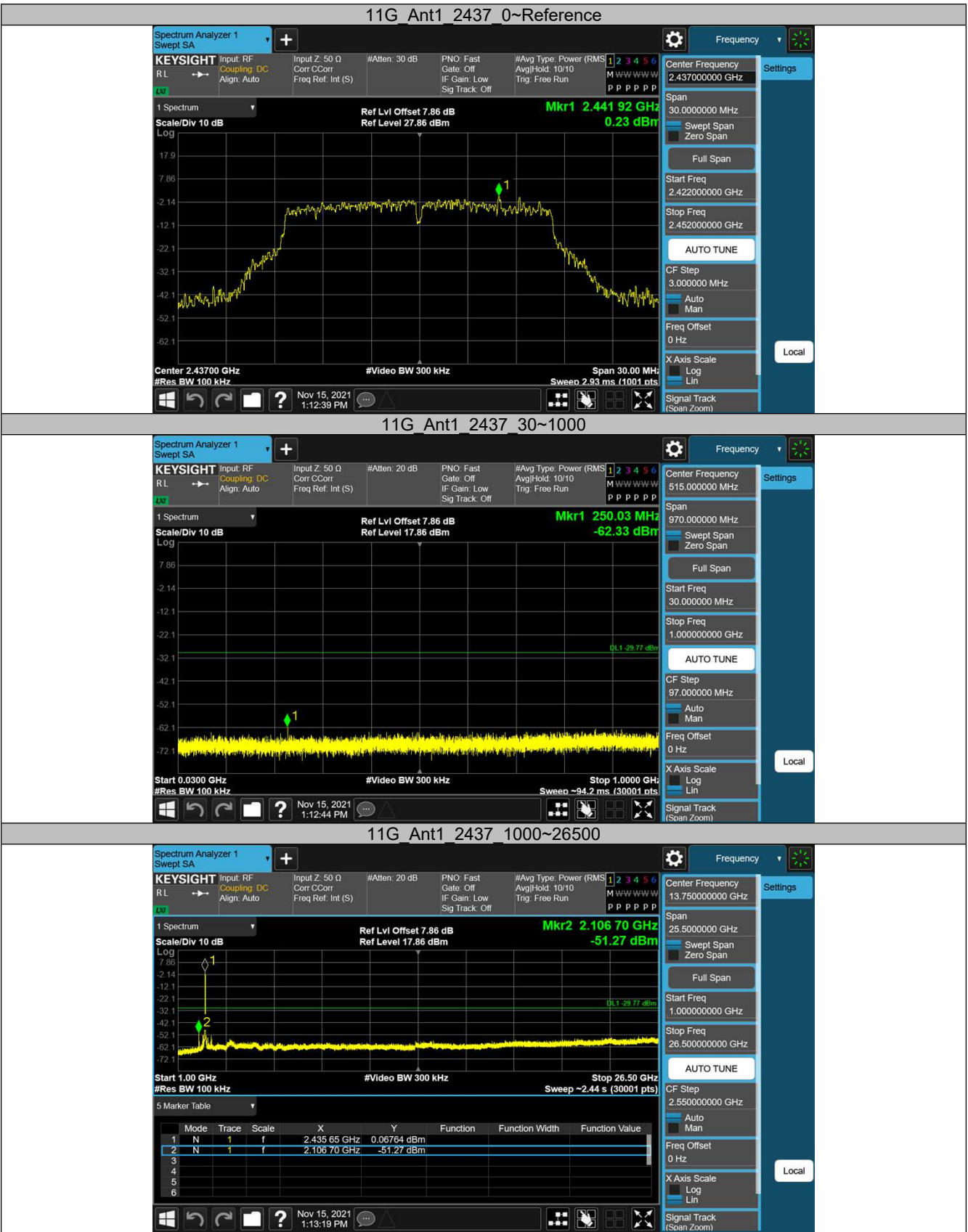
11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500



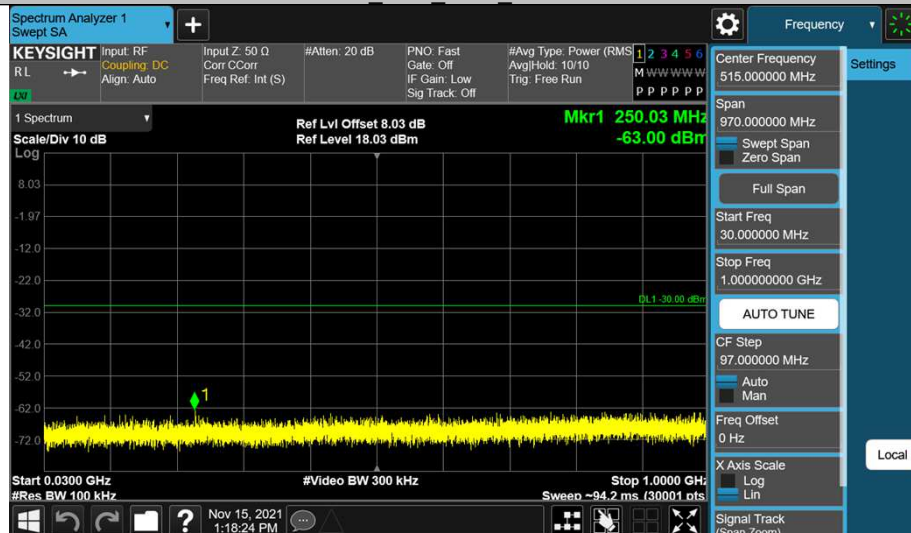




11G_Ant1_2462_0~Reference

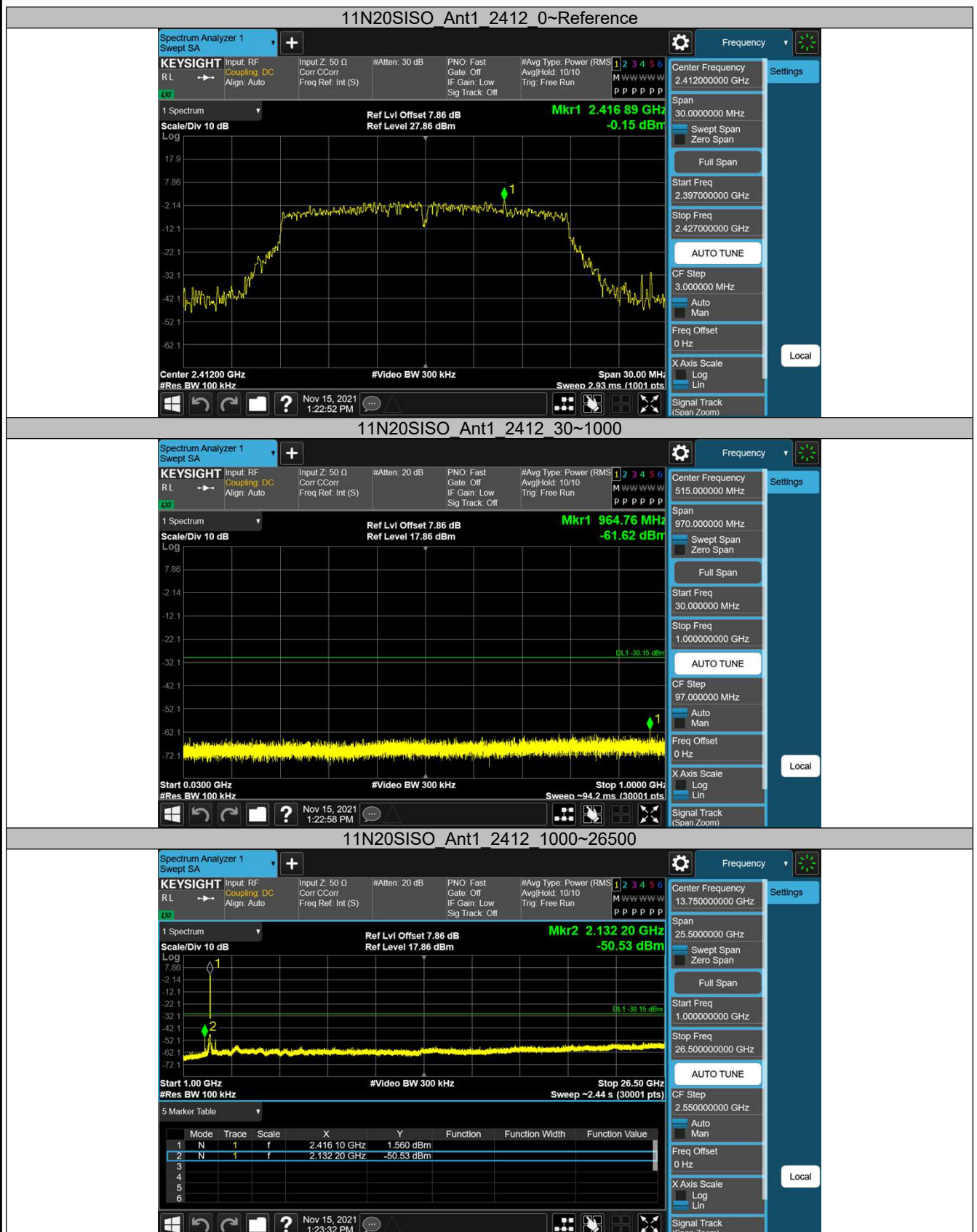


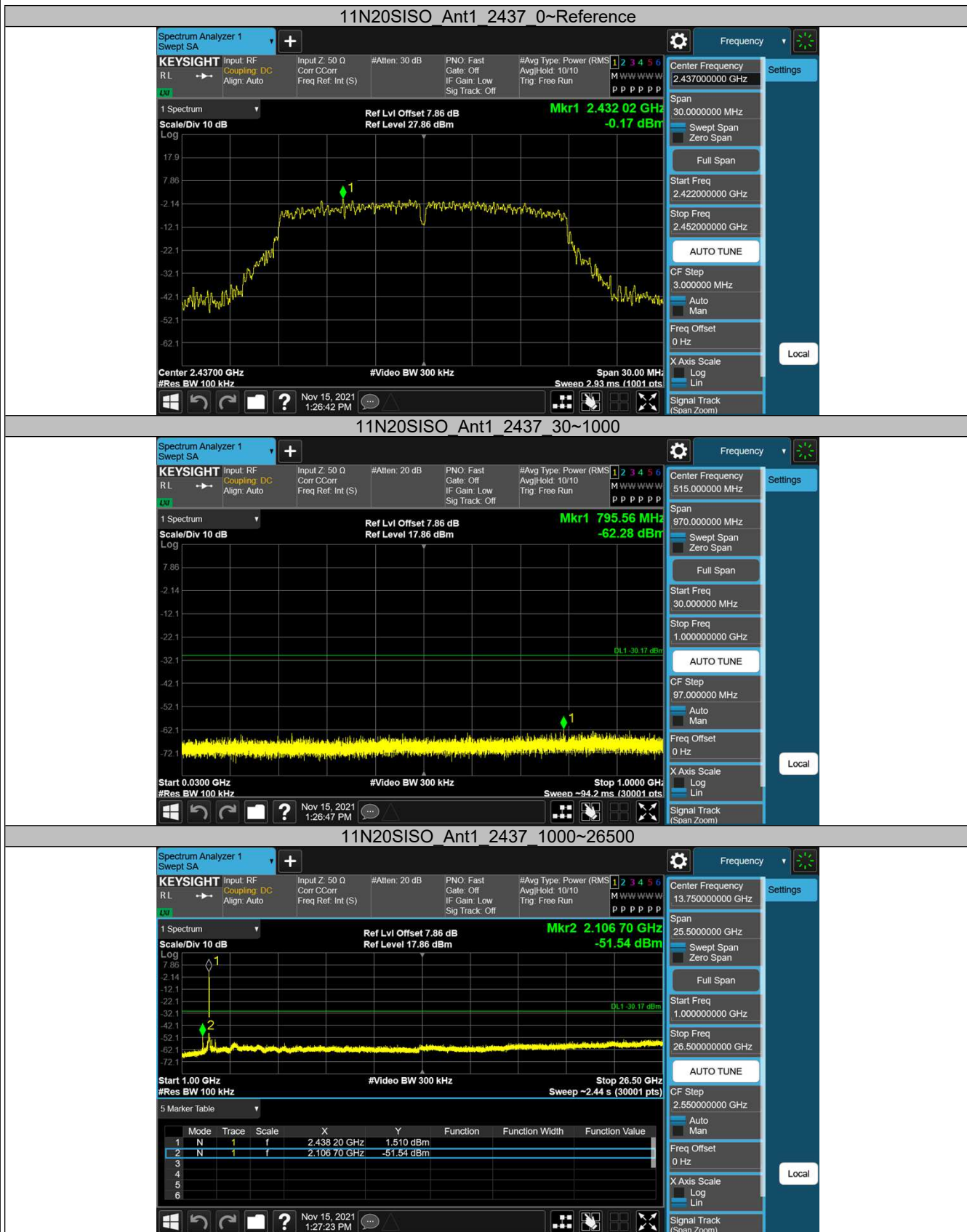
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500









Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	3.31	-42.79	≤-26.69	PASS
		High	2462	4.01	-49.22	≤-25.99	PASS
11G	Ant1	Low	2412	2.79	-36.16	≤-27.21	PASS
		High	2462	3.45	-45.02	≤-26.55	PASS
11N20SISO	Ant1	Low	2412	3.08	-31.5	≤-26.92	PASS
		High	2462	3.58	-41.27	≤-26.42	PASS

11B Ant1 Low 2412



11B Ant1 High 2462



11G Ant1 Low 2412



11G Ant1 High 2462



11N20SISO Ant1 Low 2412



11N20SISO Ant1 High 2462

