



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Wireless Security Camera

Trade Mark: N/A

Test Model: SN-S3

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Li
Supervised by:	Li Huan

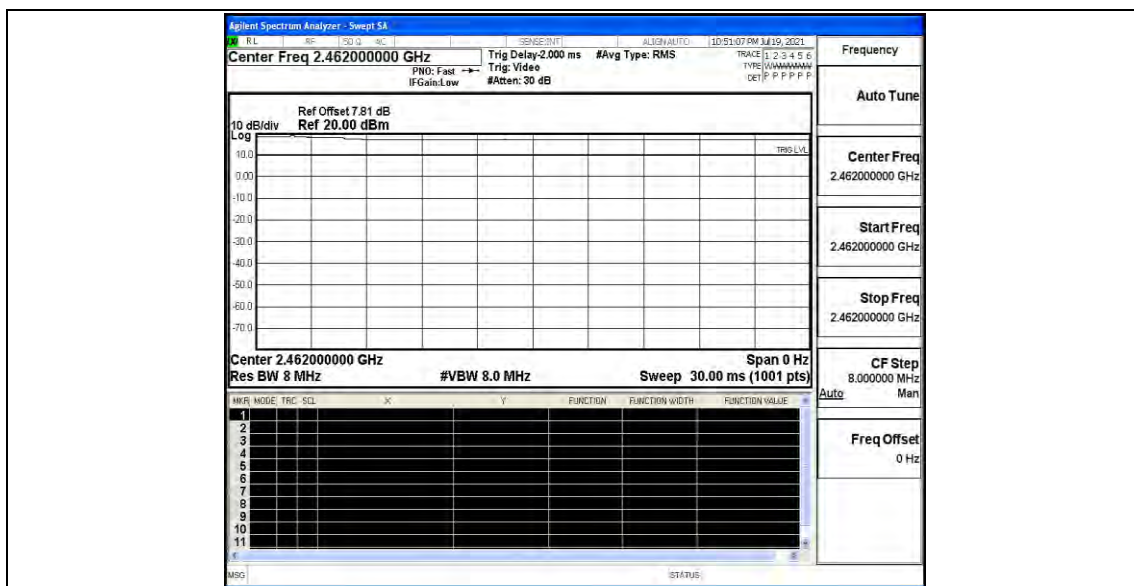


Appendix A.1: Duty Cycle

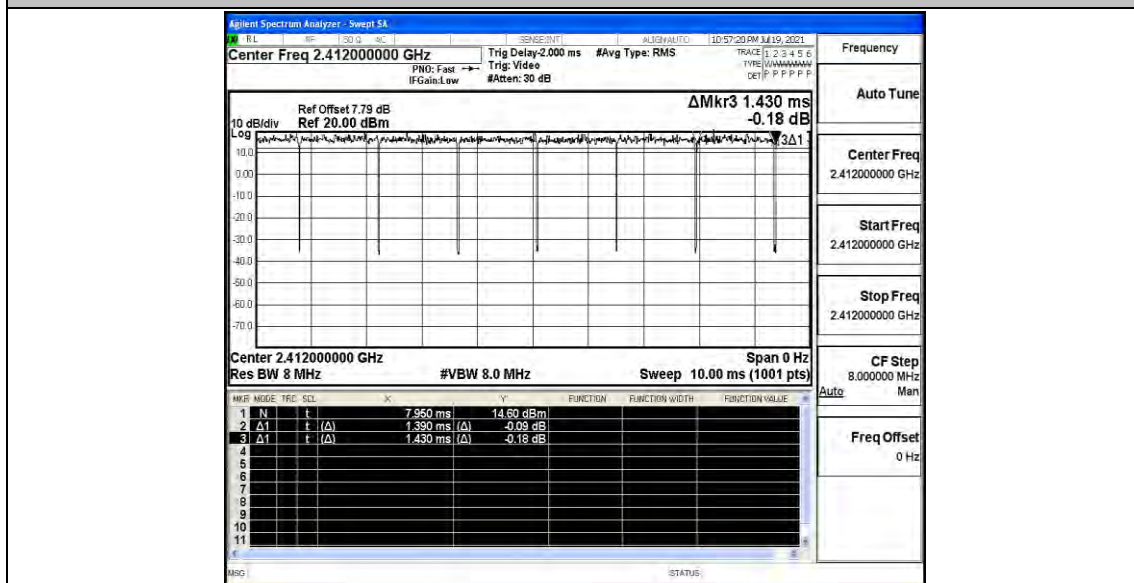
Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	8.38	8.42	99.52	---	PASS
		2437	30.00	30.00	100.00	---	PASS
		2462	30.00	30.00	100.00	---	PASS
11G	Ant1	2412	1.39	1.43	97.20	---	PASS
		2437	1.39	1.43	97.20	---	PASS
		2462	1.39	1.43	97.20	---	PASS
11N20SISO	Ant1	2412	1.30	1.34	97.01	---	PASS
		2437	1.30	1.34	97.01	---	PASS
		2462	1.30	1.34	97.01	---	PASS
11N40SISO	Ant1	2422	0.64	0.68	94.12	---	PASS
		2437	0.64	0.68	94.12	---	PASS
		2452	0.64	0.68	94.12	---	PASS

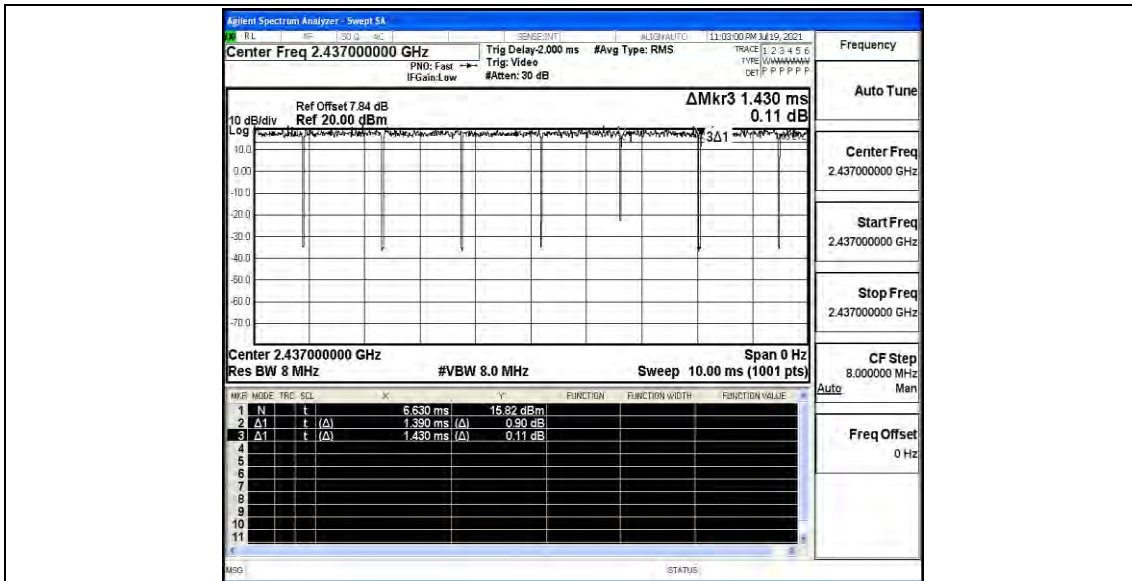
[illegible]



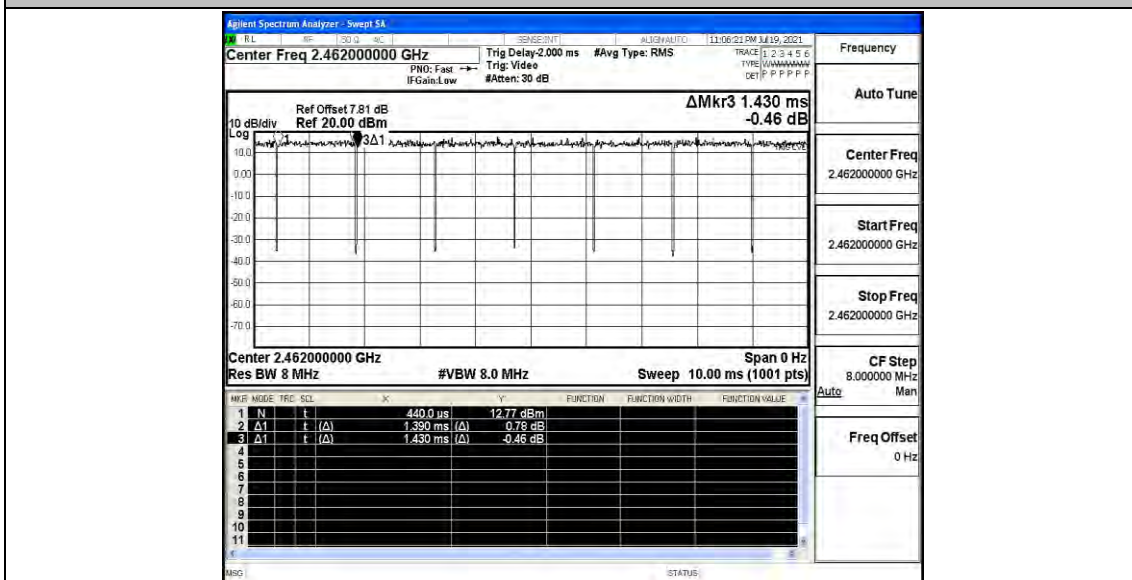
11B_Ant1_2462



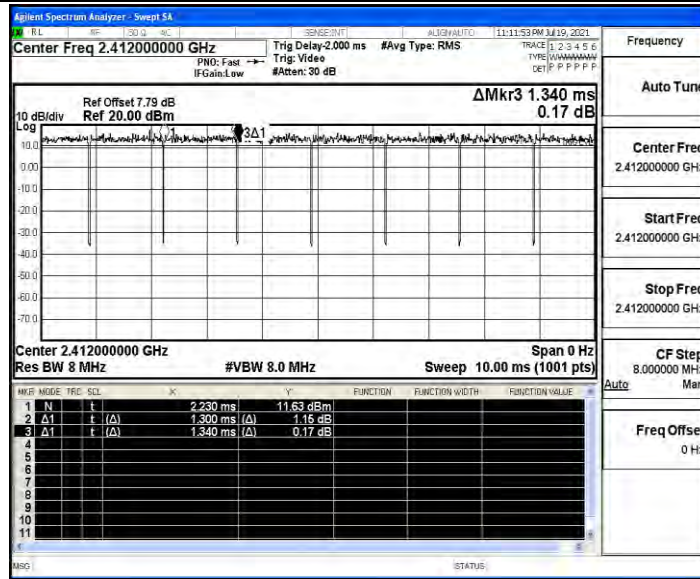
11G_Ant1_2412



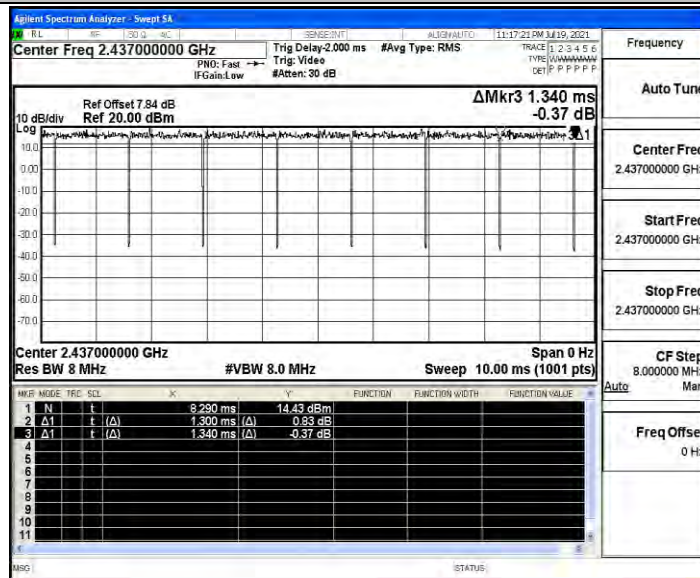
11G_Ant1_2437



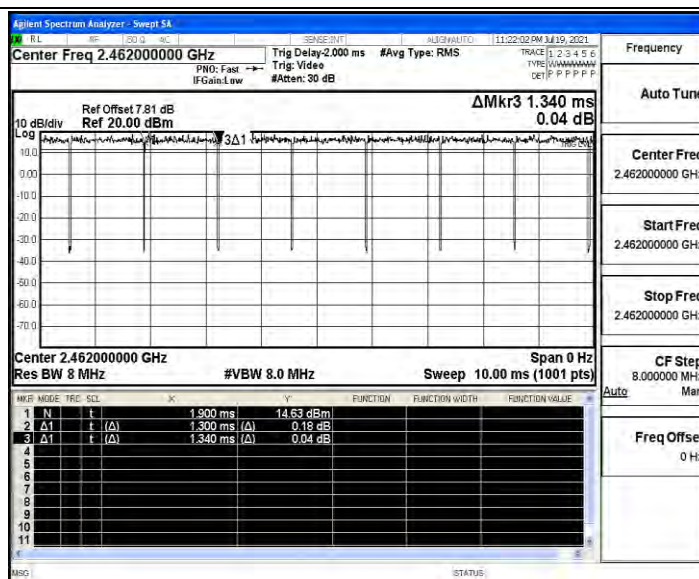
11G_Ant1_2462



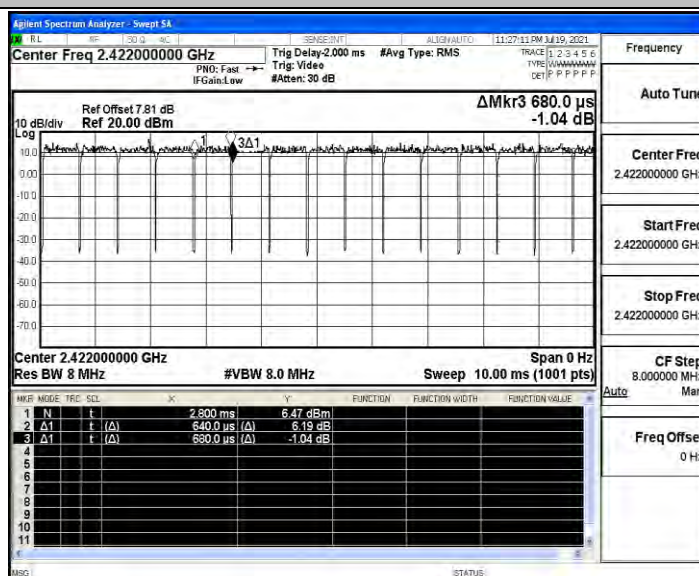
11N20SISO_Ant1_2412



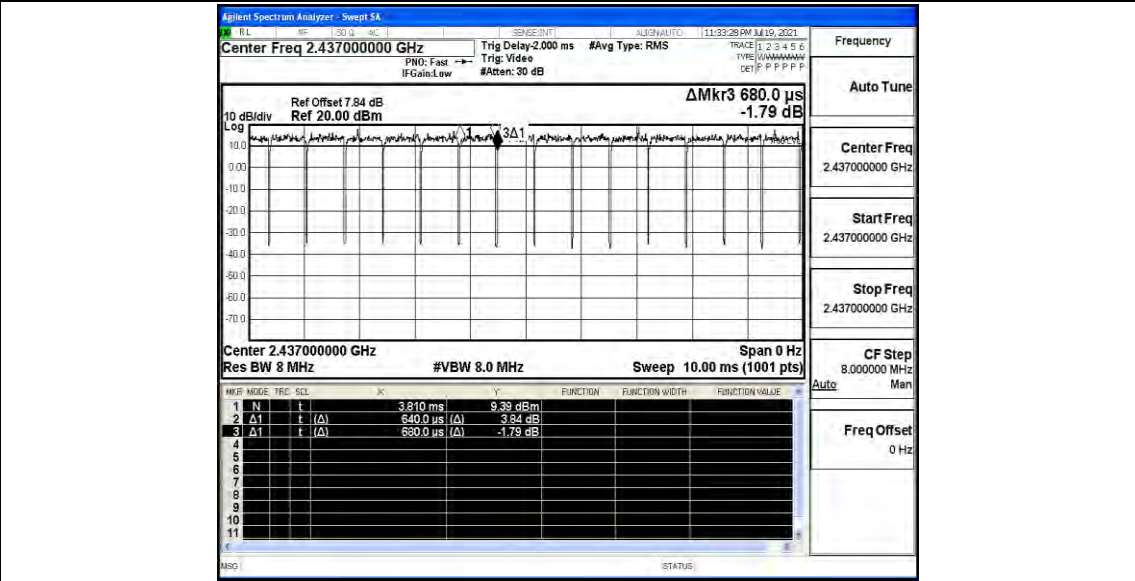
11N20SISO_Ant1_2437



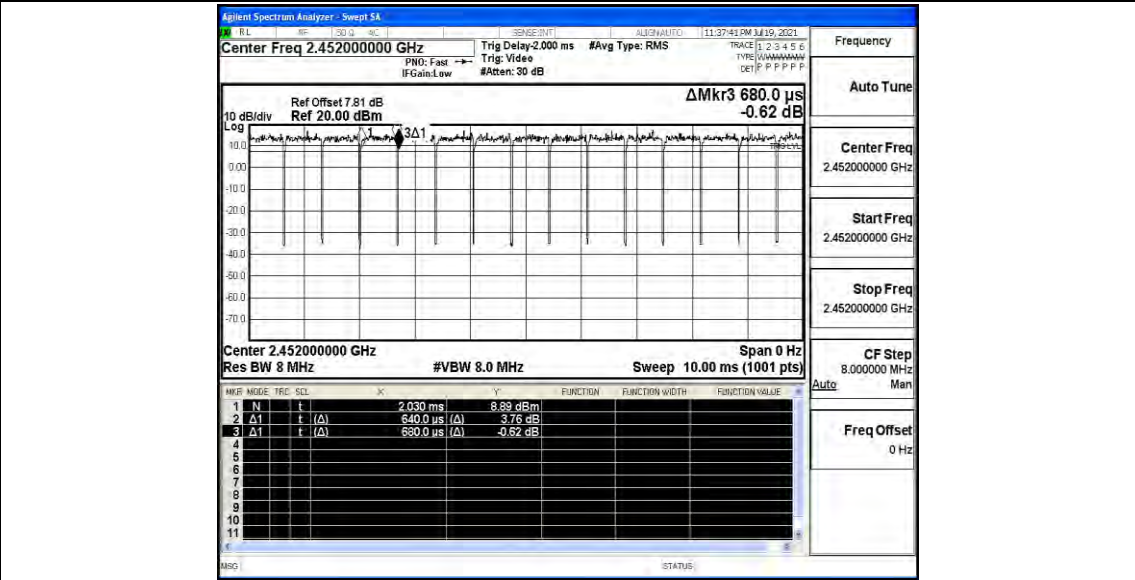
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



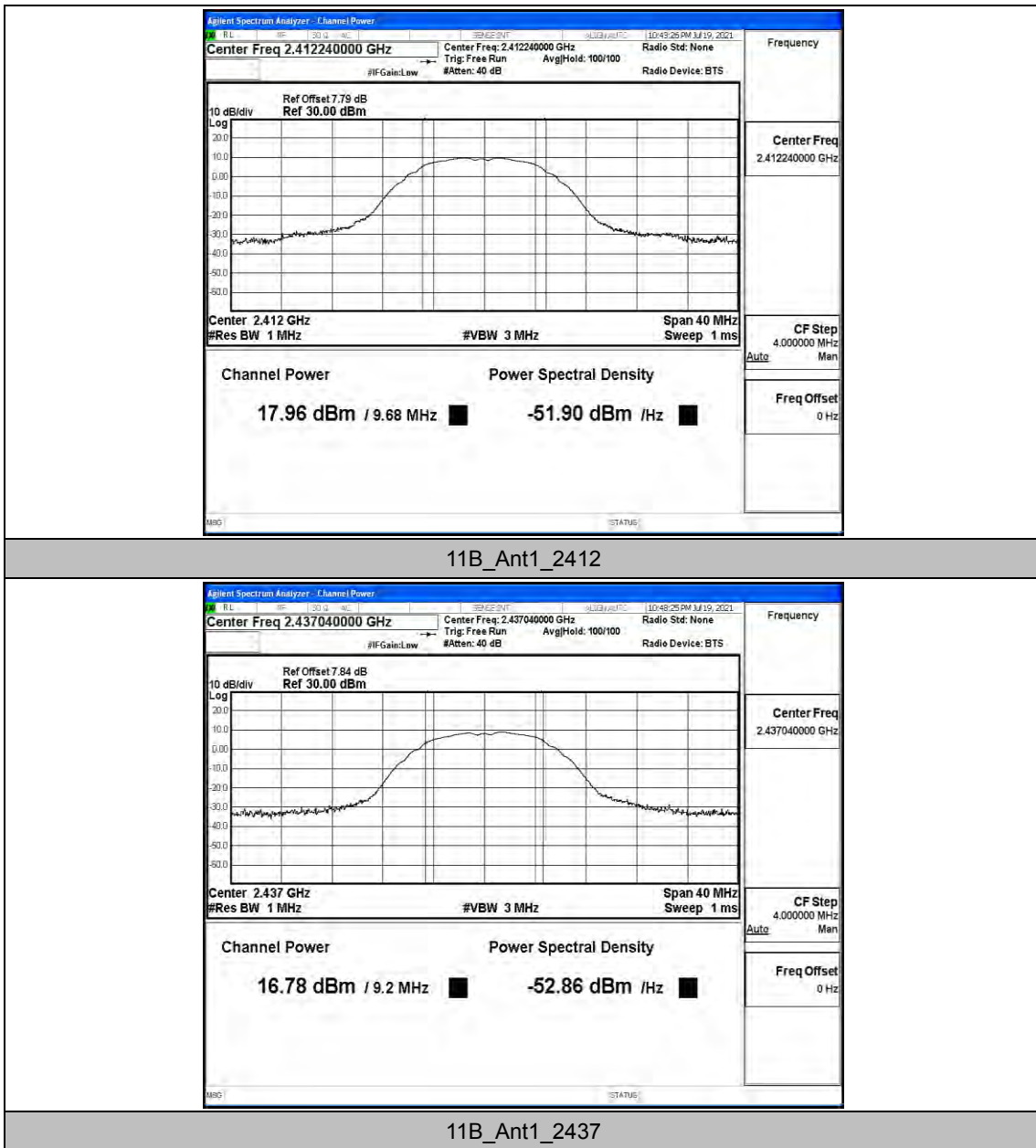
Appendix A.2: Maximum conducted output power

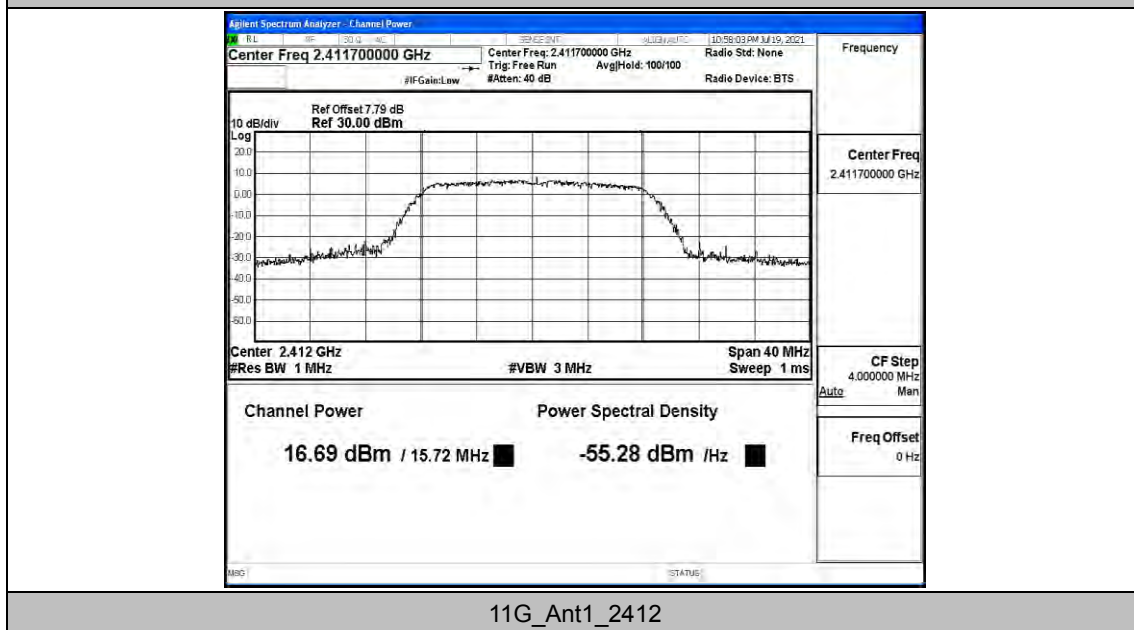
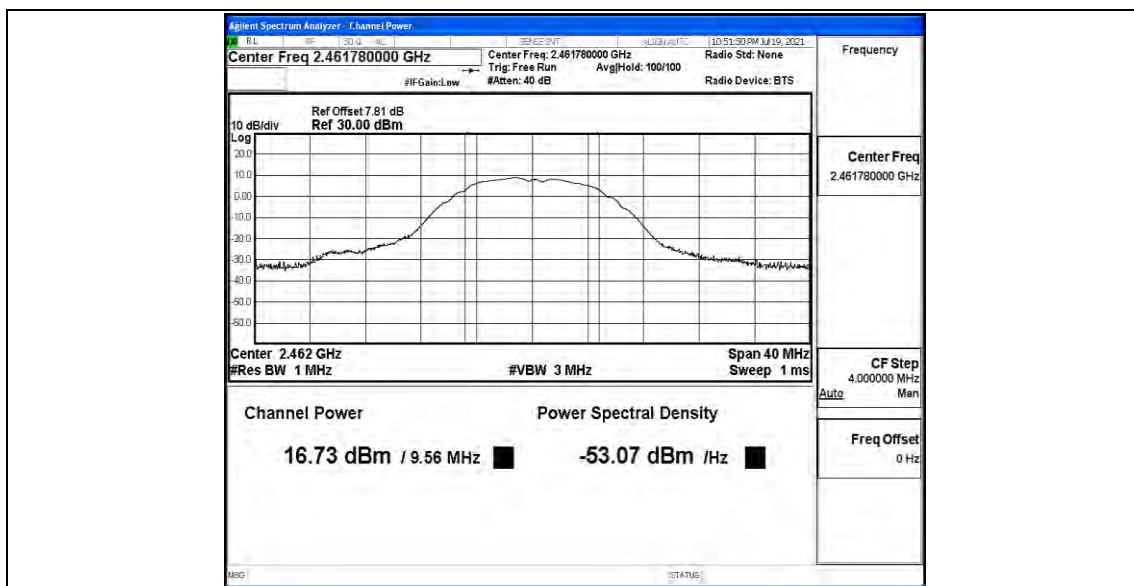
Test Result

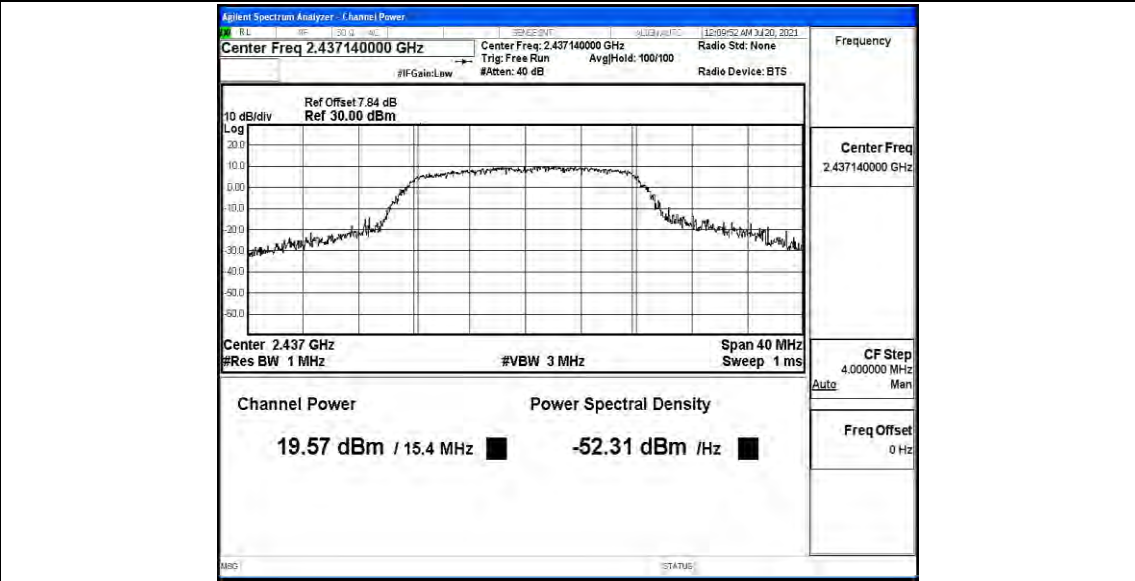
TestMode	Antenna	Channel	Result[dBm]	Duty Cycle Factor(dB)	Report Conducted Power(dBm)	Limit[dBm]	Verdict
11B	Ant1	2412	17.96	0	17.96	≤30	PASS
		2437	16.78	0	16.78	≤30	PASS
		2462	16.73	0	16.73	≤30	PASS
11G	Ant1	2412	16.69	0.12	16.81	≤30	PASS
		2437	19.57	0.12	19.69	≤30	PASS
		2462	19.26	0.12	19.38	≤30	PASS
11N20SISO	Ant1	2412	16.15	0.13	16.28	≤30	PASS
		2437	18.84	0.13	18.97	≤30	PASS
		2462	18.27	0.13	18.40	≤30	PASS
11N40SISO	Ant1	2422	18.59	0.26	18.85	≤30	PASS
		2437	19.59	0.26	19.85	≤30	PASS
		2452	19.36	0.26	19.62	≤30	PASS



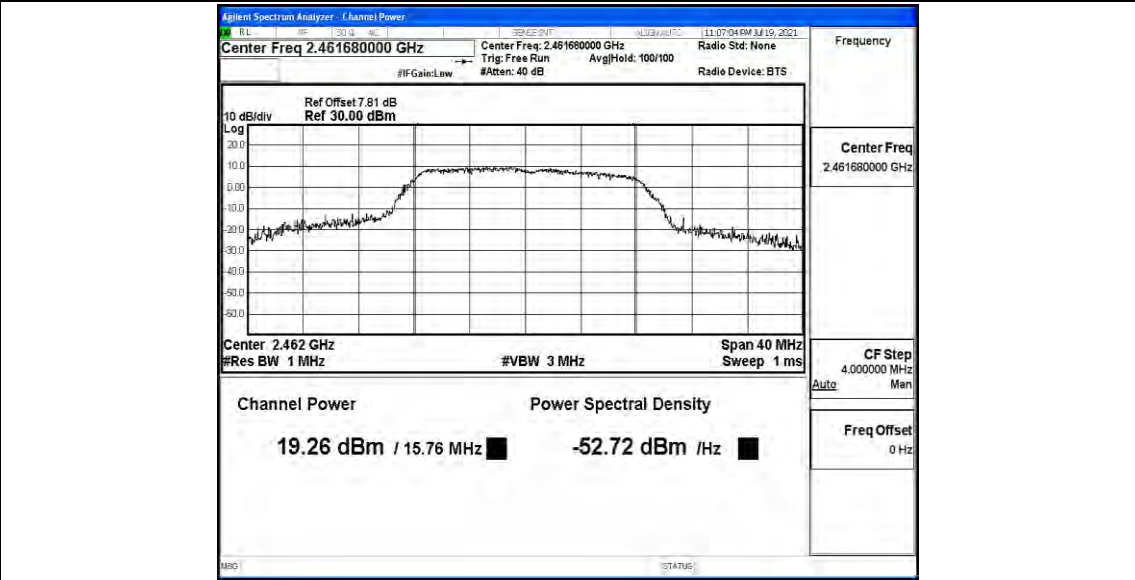
Test Graphs



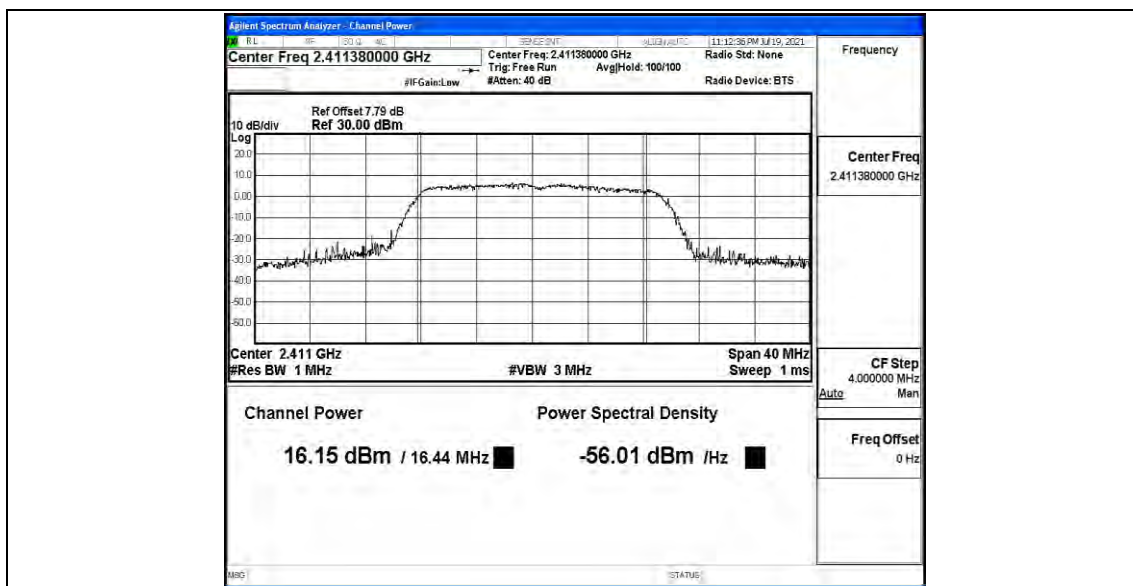




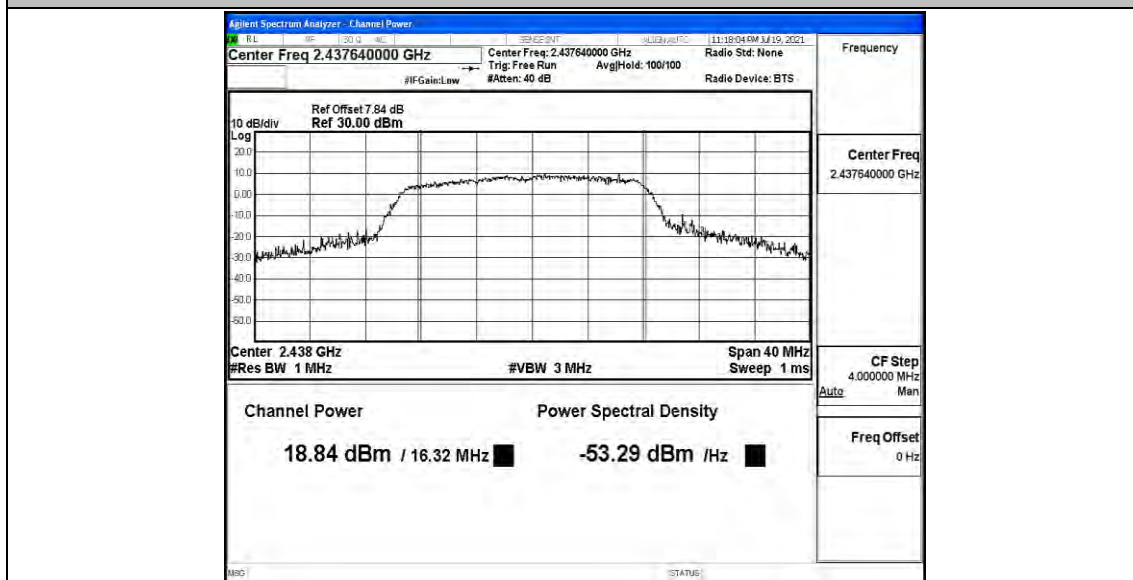
11G_Ant1_2437



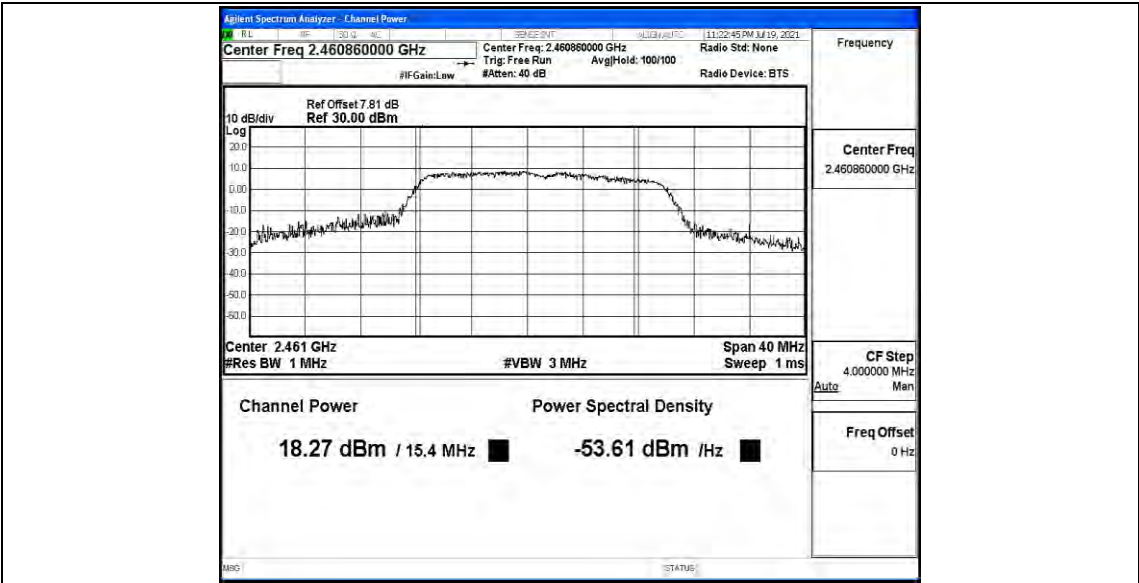
11G_Ant1_2462



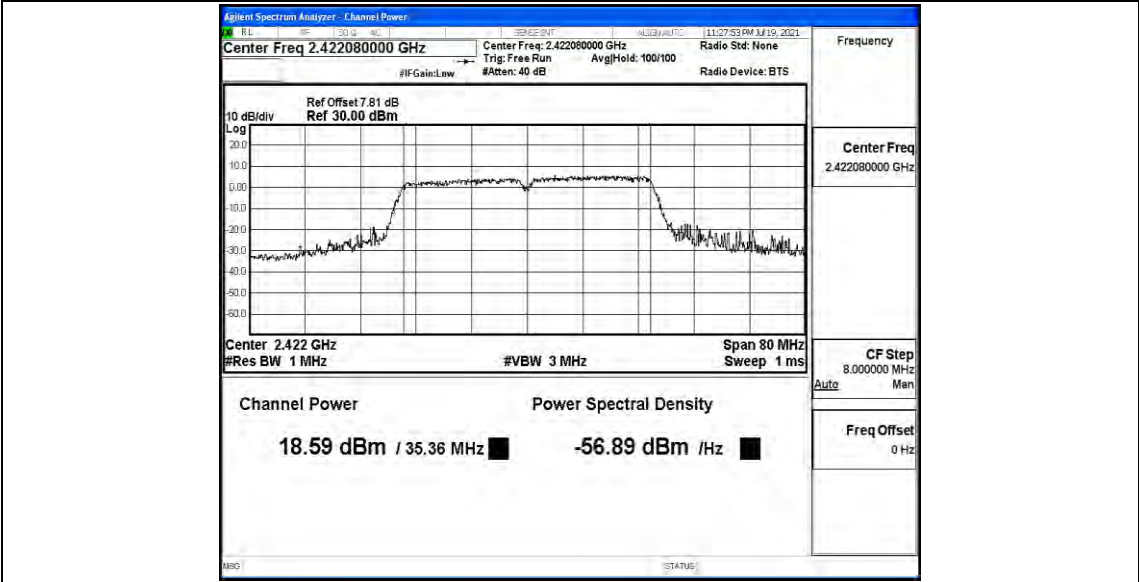
11N20SISO_Ant1_2412



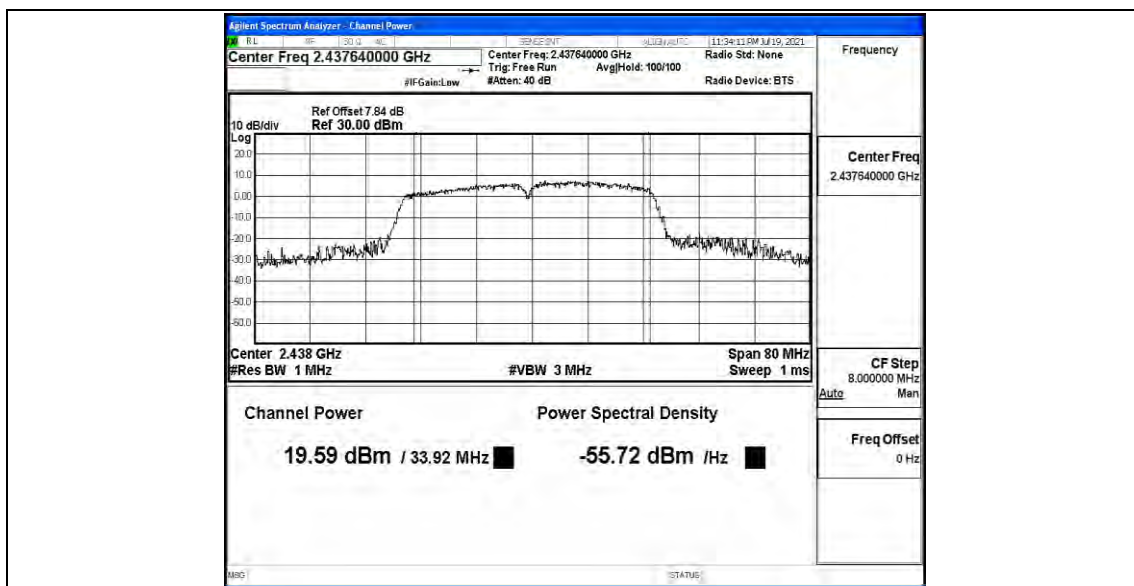
11N20SISO_Ant1_2437



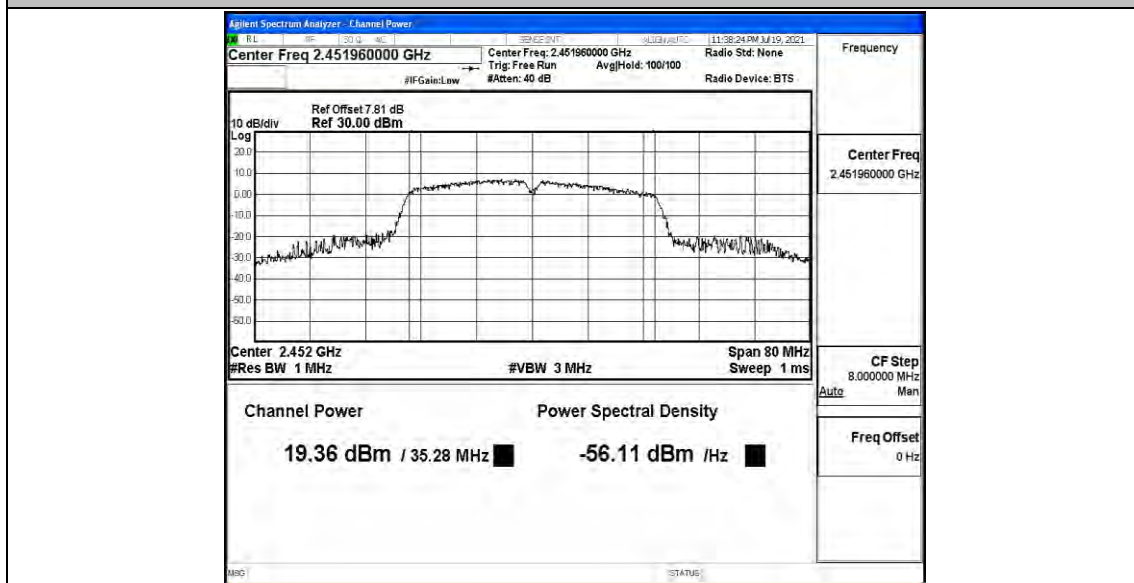
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



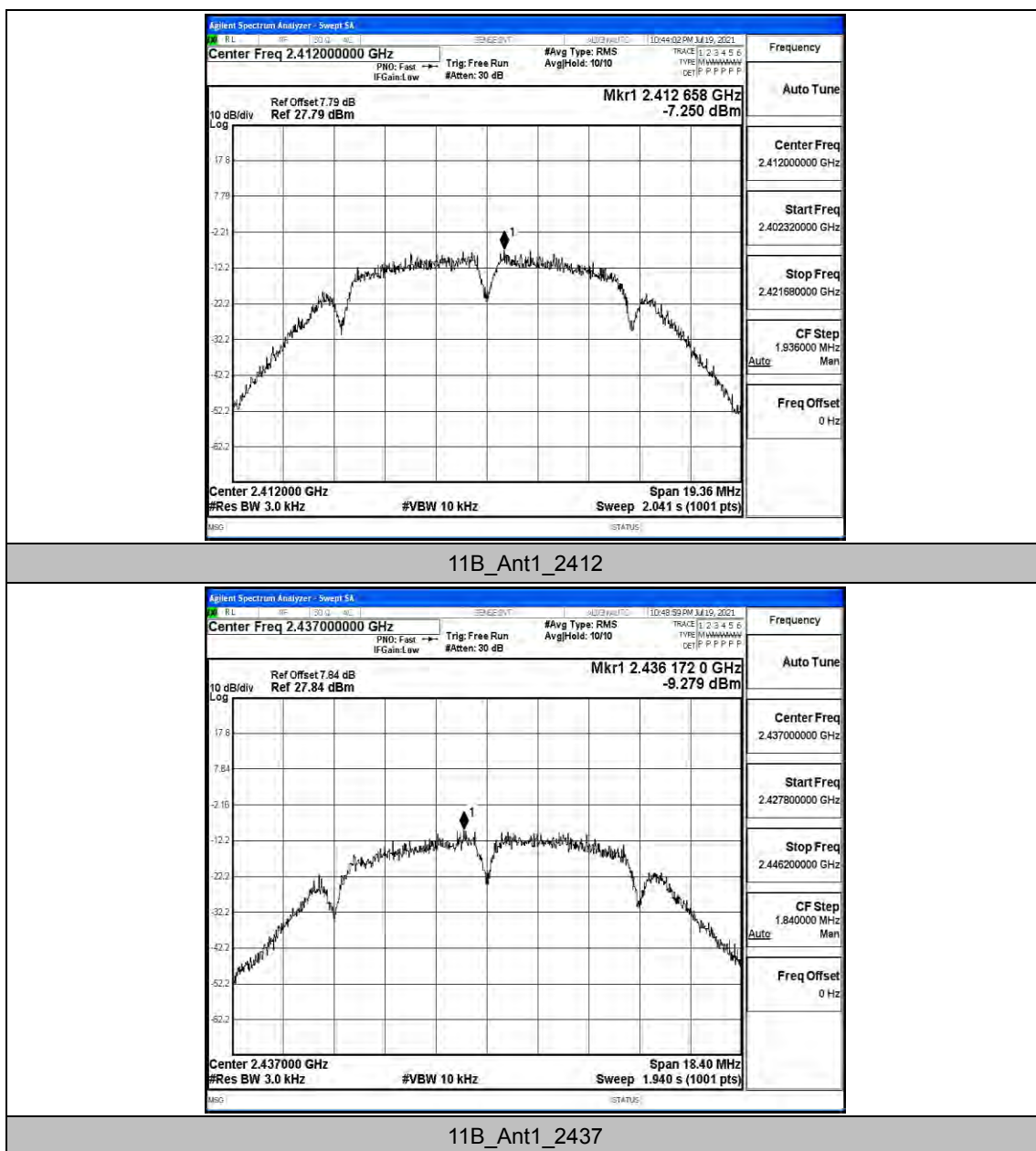
Appendix A.3: Maximum power spectral density

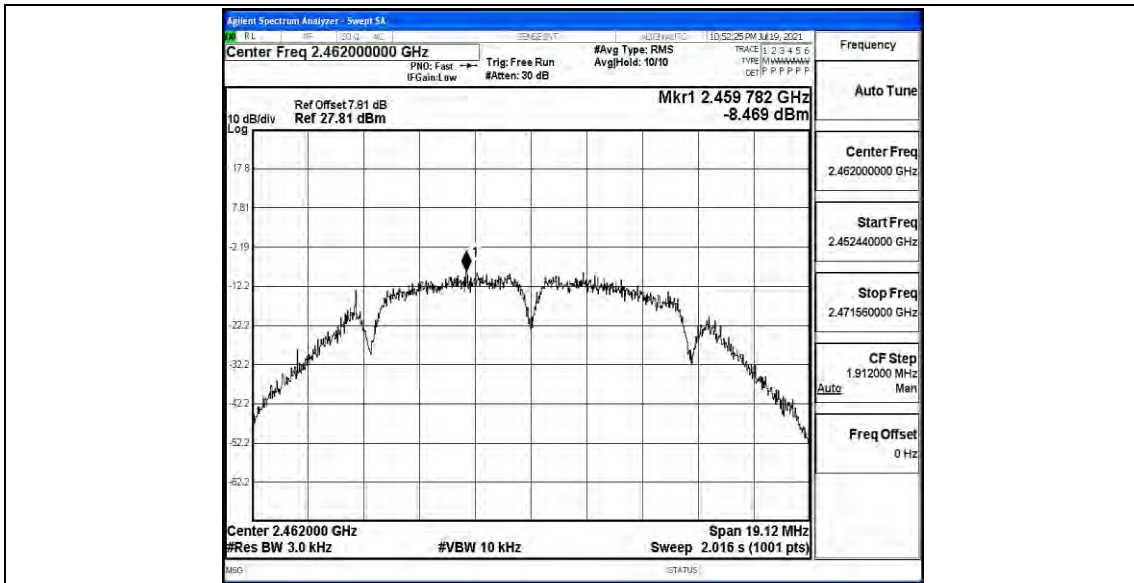
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100 kHz]	Duty Cycle Factor(dB)	Report Result [dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-7.25	0	-7.25	≤8	PASS
		2437	-9.28	0	-9.28	≤8	PASS
		2462	-8.47	0	-8.47	≤8	PASS
11G	Ant1	2412	-12.83	0.12	-12.71	≤8	PASS
		2437	-10.9	0.12	-10.78	≤8	PASS
		2462	-11.91	0.12	-11.79	≤8	PASS
11N20SI SO	Ant1	2412	-16.16	0.13	-16.03	≤8	PASS
		2437	-12.58	0.13	-12.45	≤8	PASS
		2462	-12.39	0.13	-12.26	≤8	PASS
11N40SI SO	Ant1	2422	-16.18	0.26	-15.92	≤8	PASS
		2437	-14.18	0.26	-13.92	≤8	PASS
		2452	-13.8	0.26	-13.54	≤8	PASS

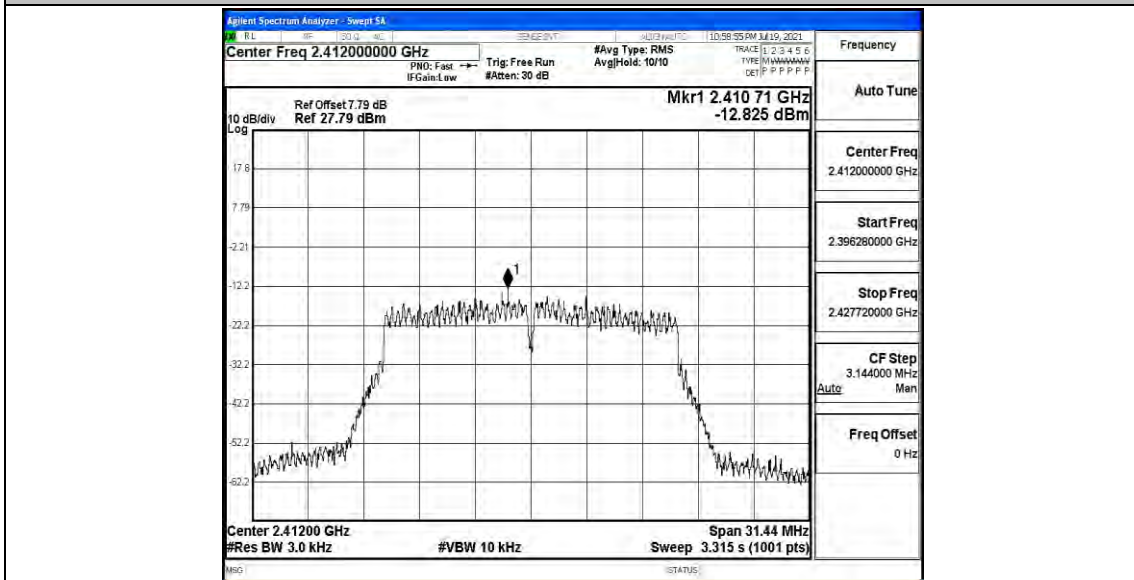


Test Graphs

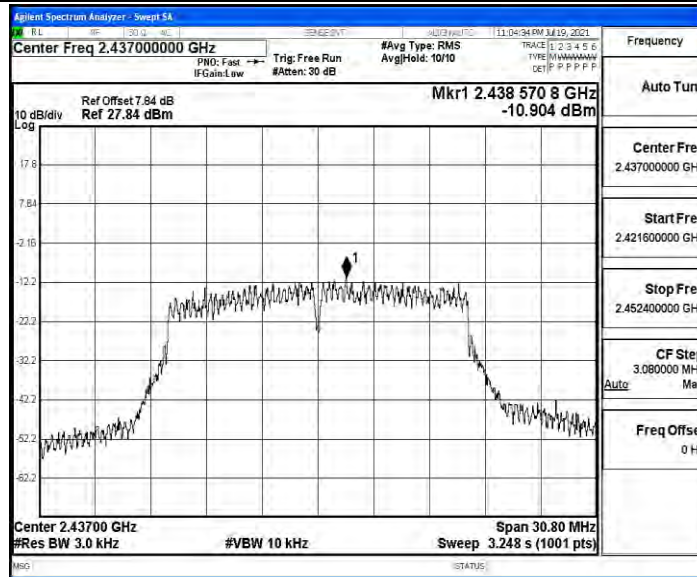




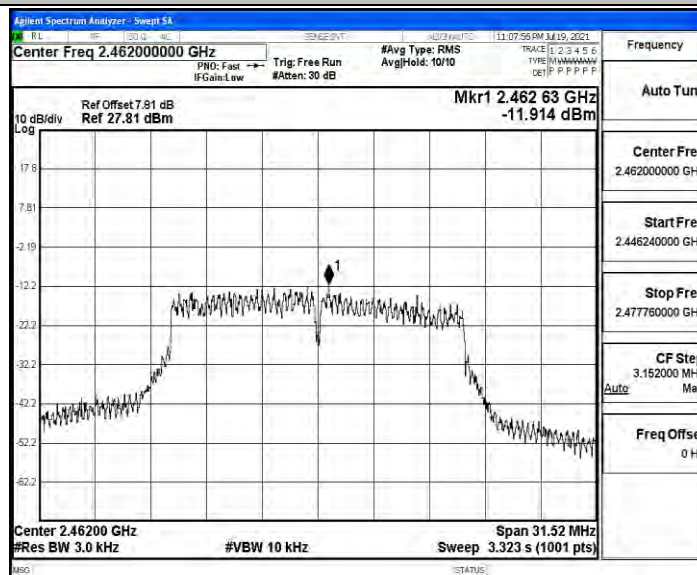
11B_Ant1_2462



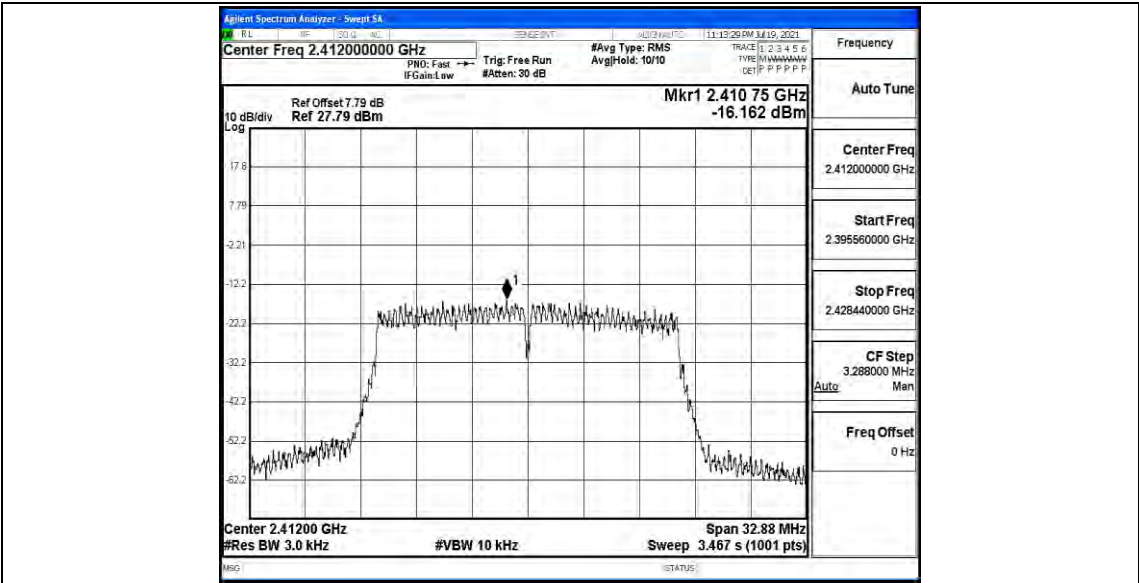
11G_Ant1_2412



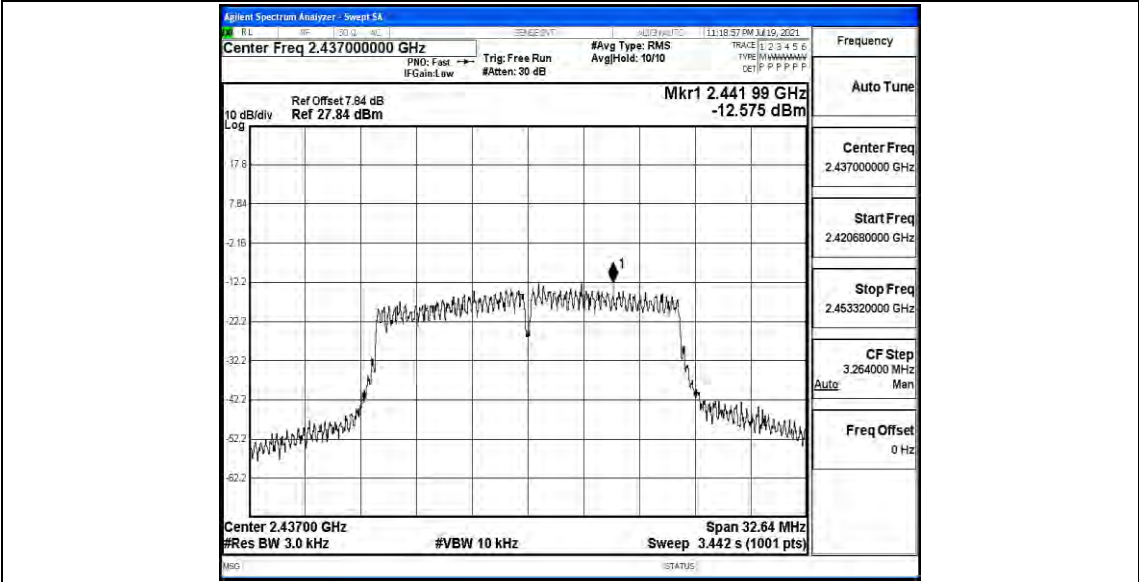
11G_Ant1_2437



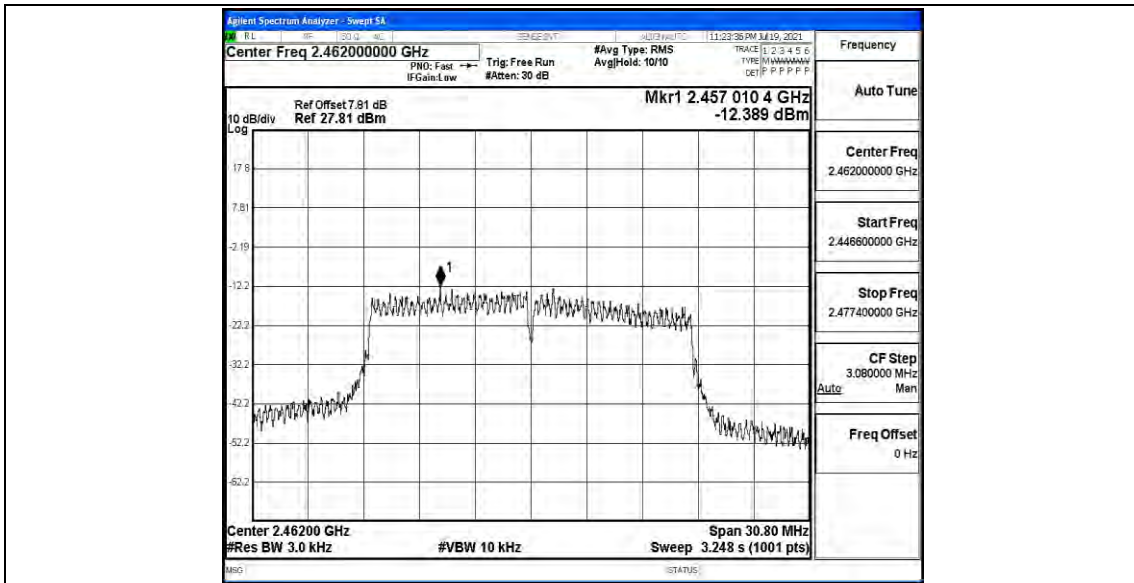
11G_Ant1_2462



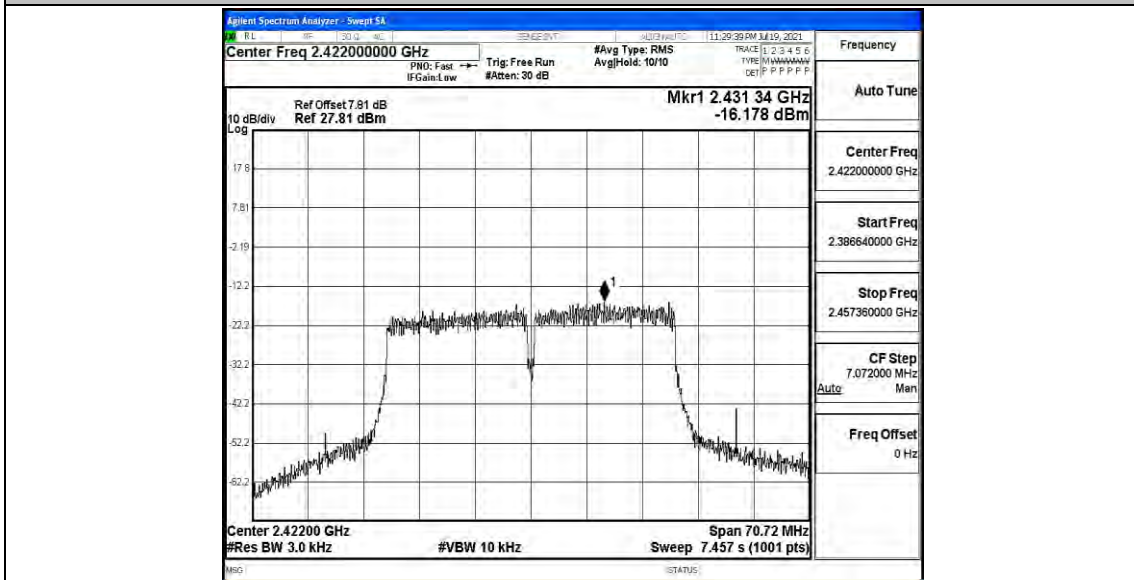
11N20SISO_Ant1_2412



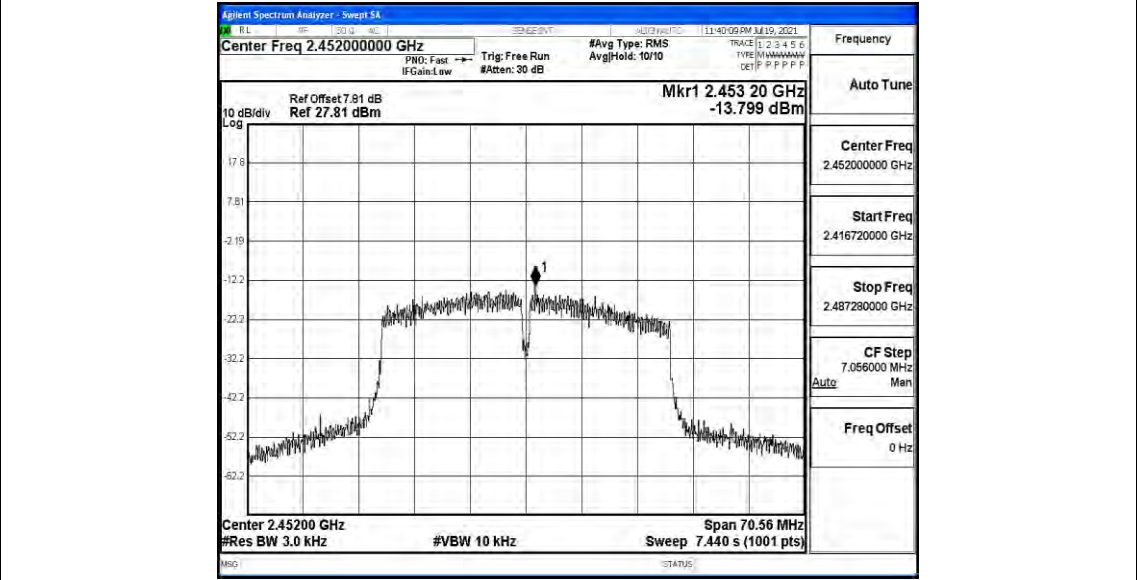
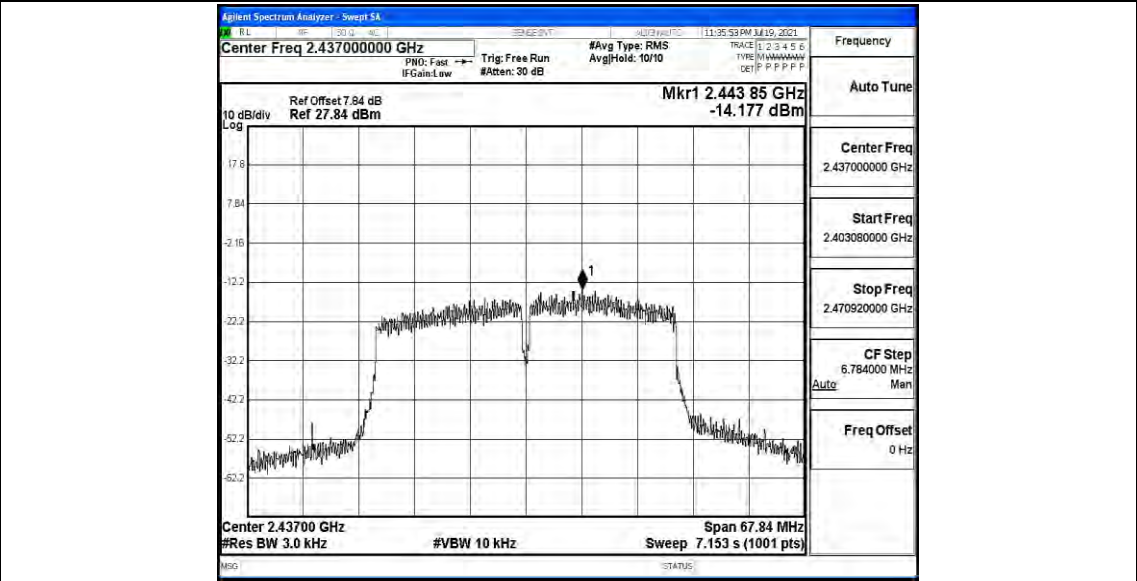
11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422





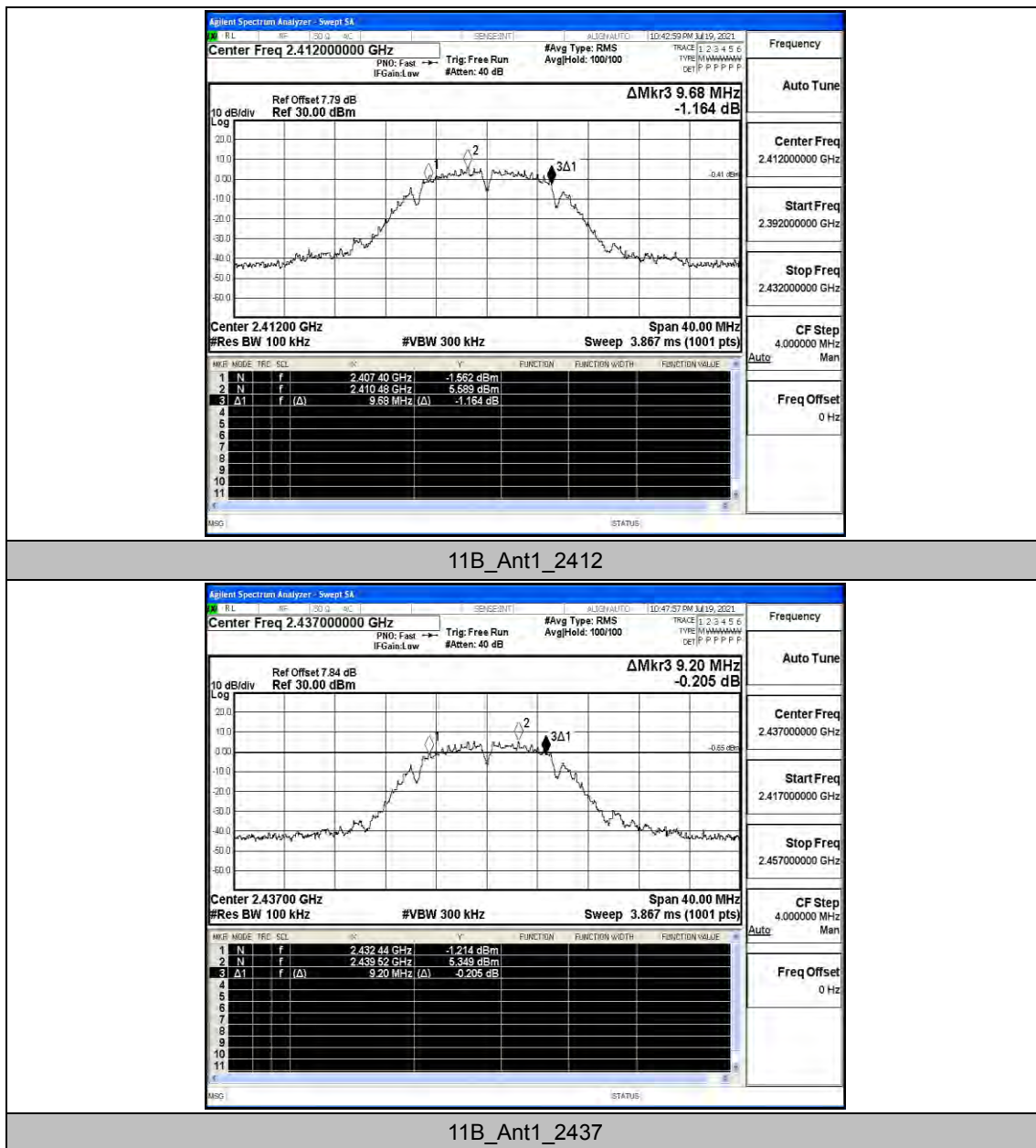
Appendix A.4.1: DTS Bandwidth

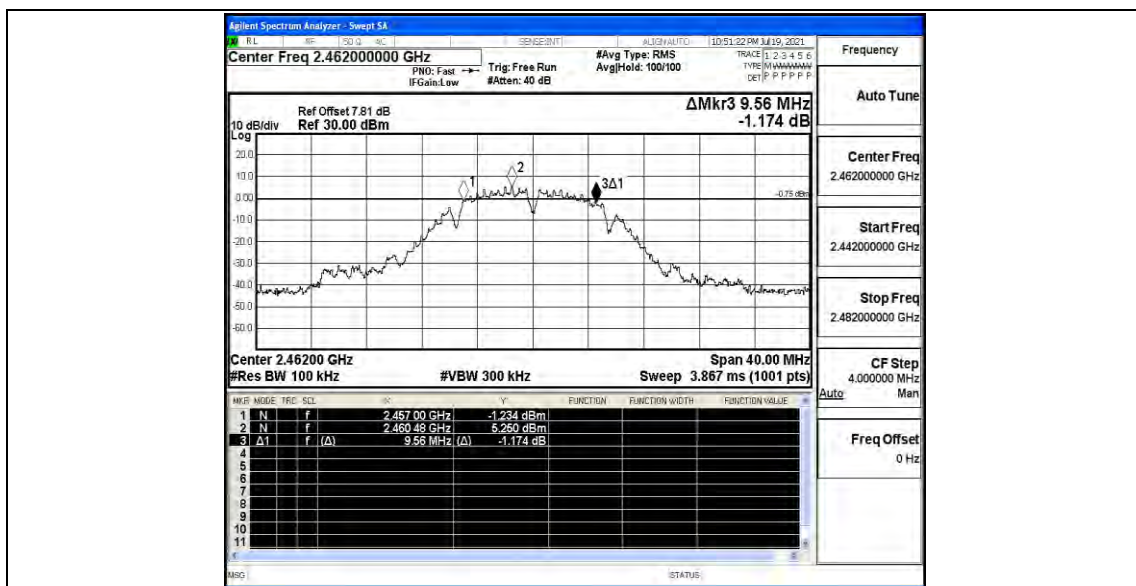
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.680	2407.400	2417.080	0.5	PASS
		2437	9.200	2432.440	2441.640	0.5	PASS
		2462	9.560	2457.000	2466.560	0.5	PASS
11G	Ant1	2412	15.720	2403.840	2419.560	0.5	PASS
		2437	15.400	2429.440	2444.840	0.5	PASS
		2462	15.760	2453.800	2469.560	0.5	PASS
11N20SISO	Ant1	2412	16.440	2403.160	2419.600	0.5	PASS
		2437	16.320	2429.480	2445.800	0.5	PASS
		2462	15.400	2453.160	2468.560	0.5	PASS
11N40SISO	Ant1	2422	35.360	2404.400	2439.760	0.5	PASS
		2437	33.920	2420.680	2454.600	0.5	PASS
		2452	35.280	2434.320	2469.600	0.5	PASS

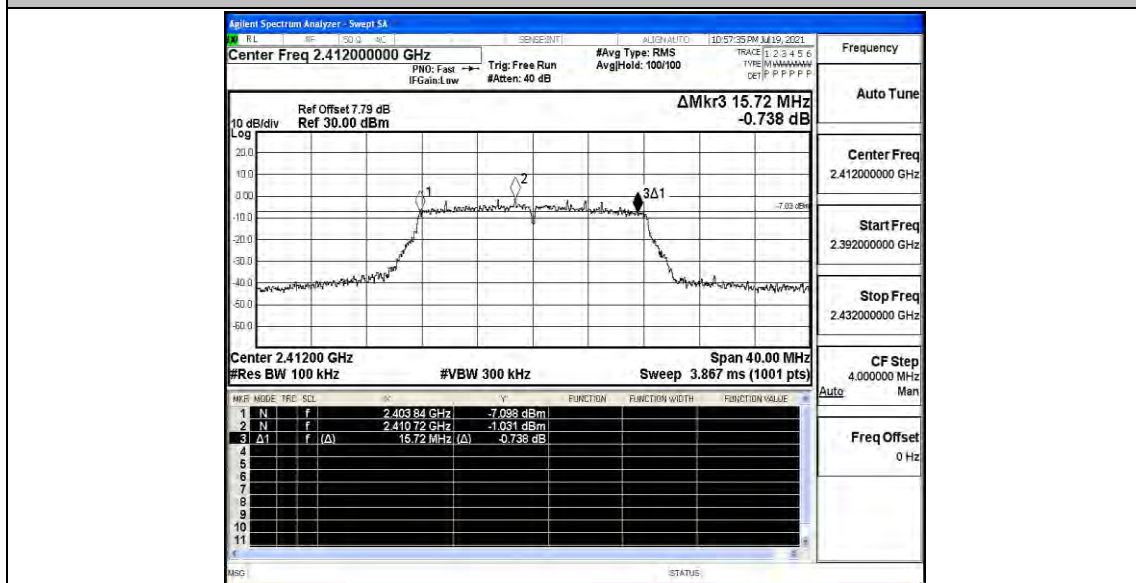


Test Graphs

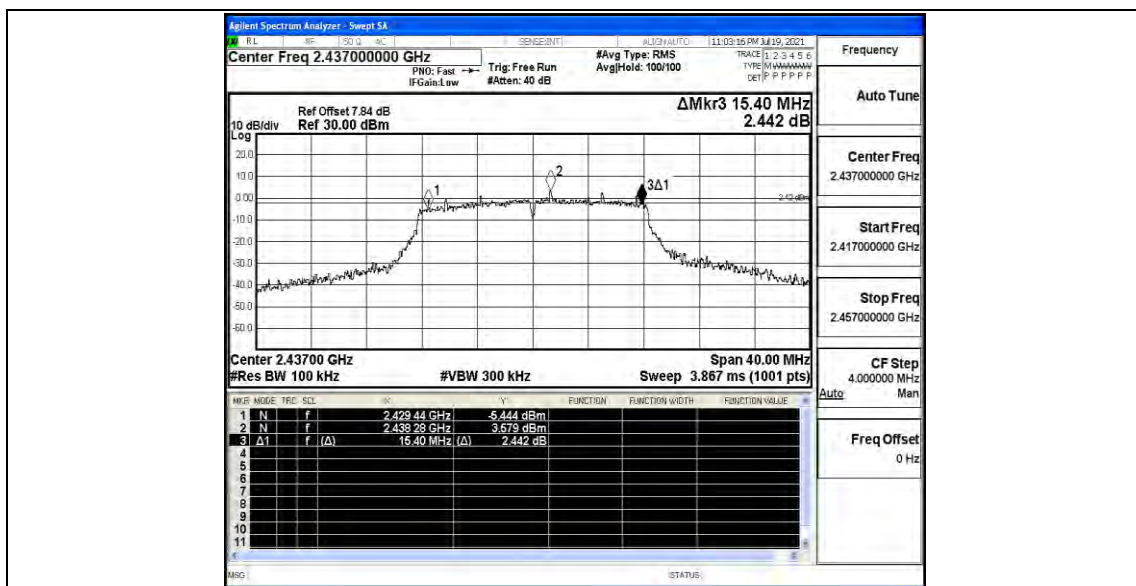




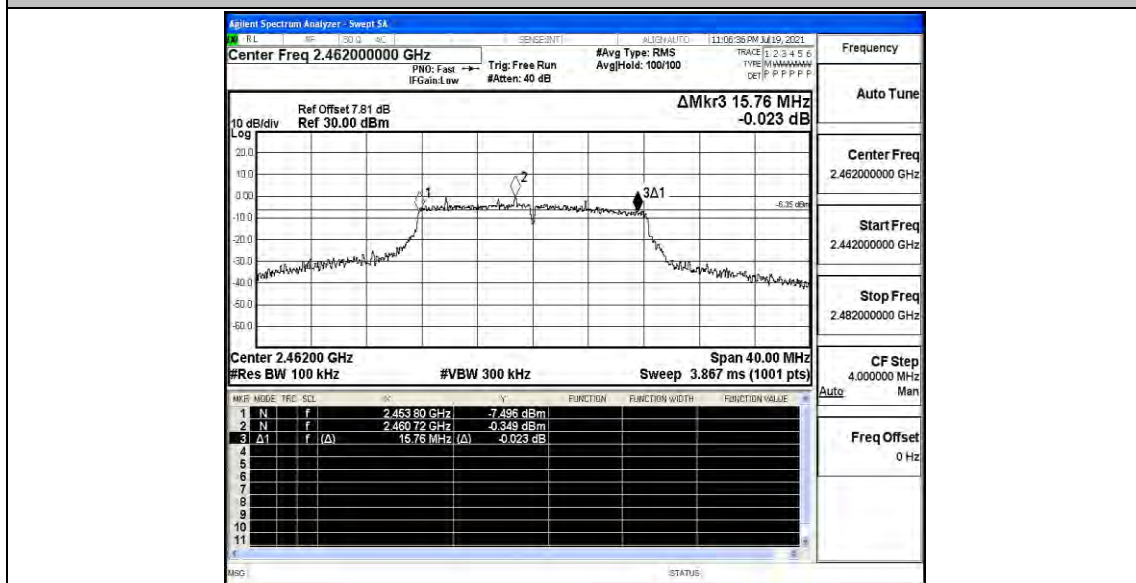
11B_Ant1_2462



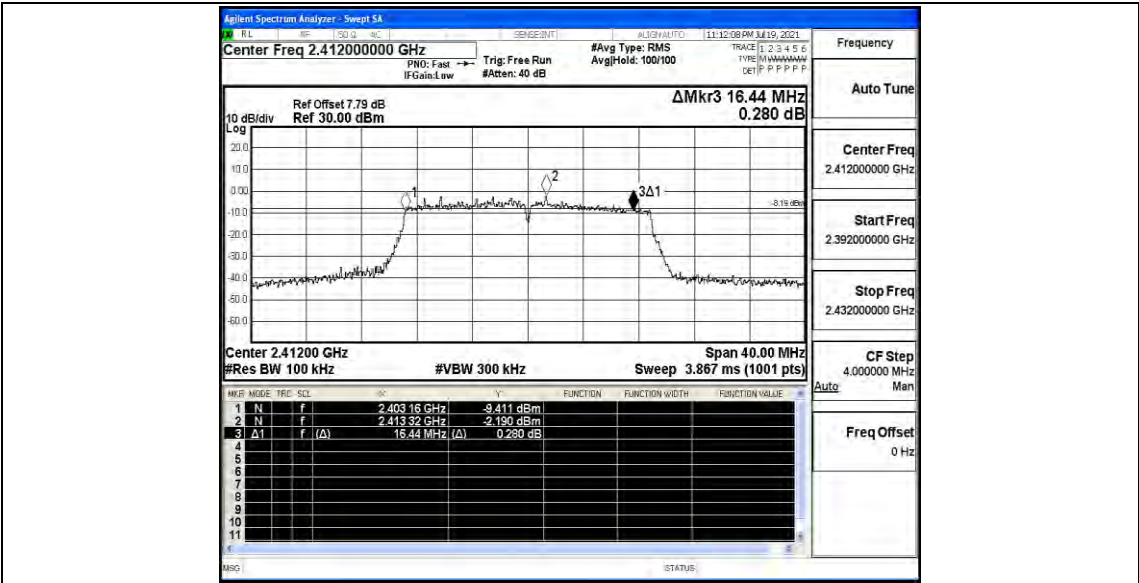
11G_Ant1_2412



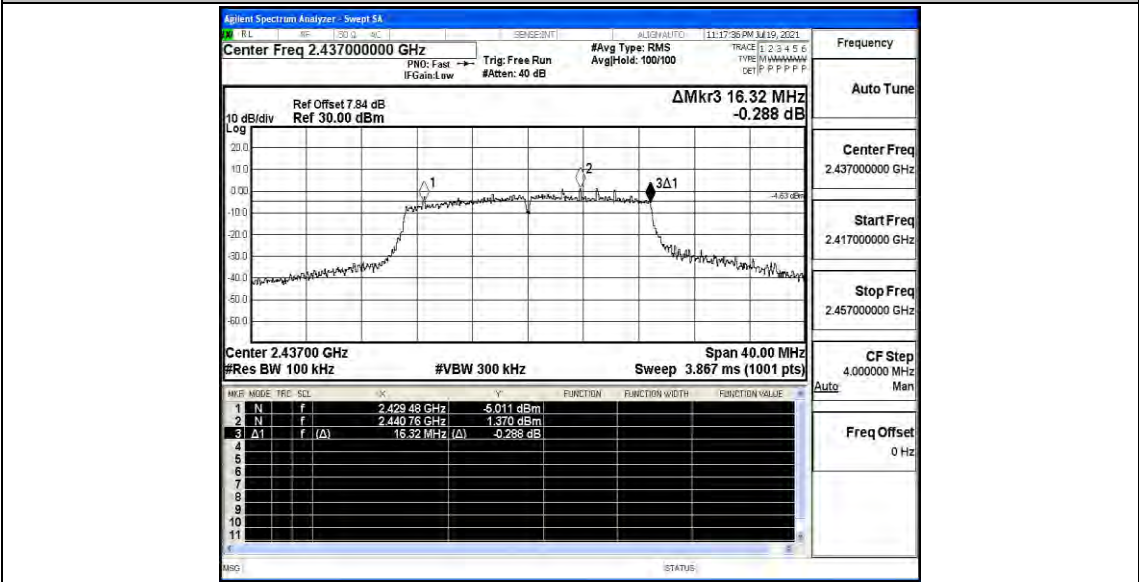
11G_Ant1_2437



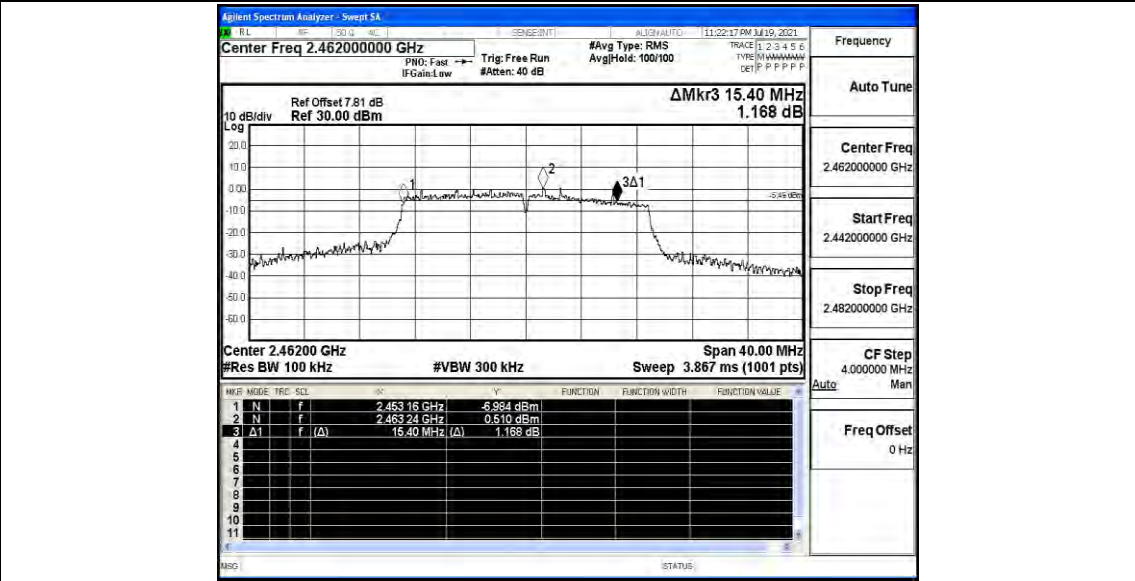
11G_Ant1_2462



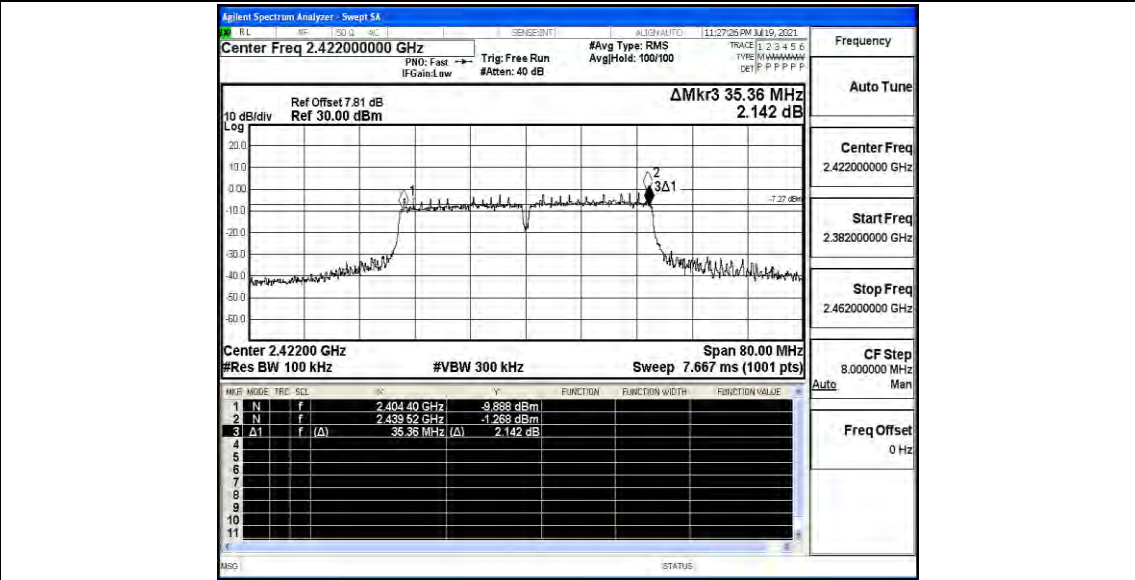
11N20SISO_Ant1_2412



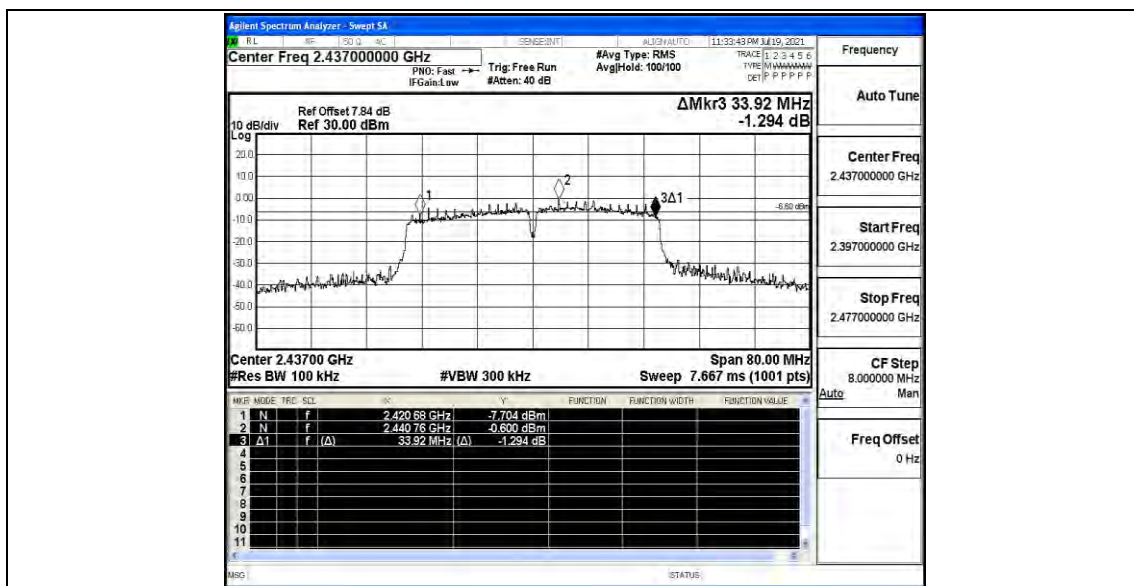
11N20SISO_Ant1_2437



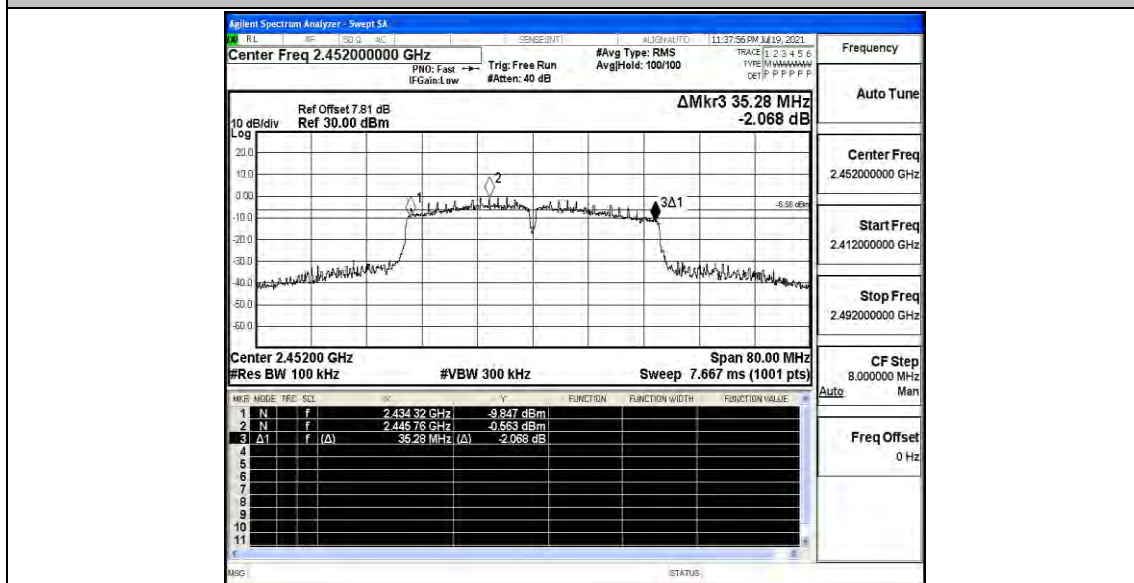
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



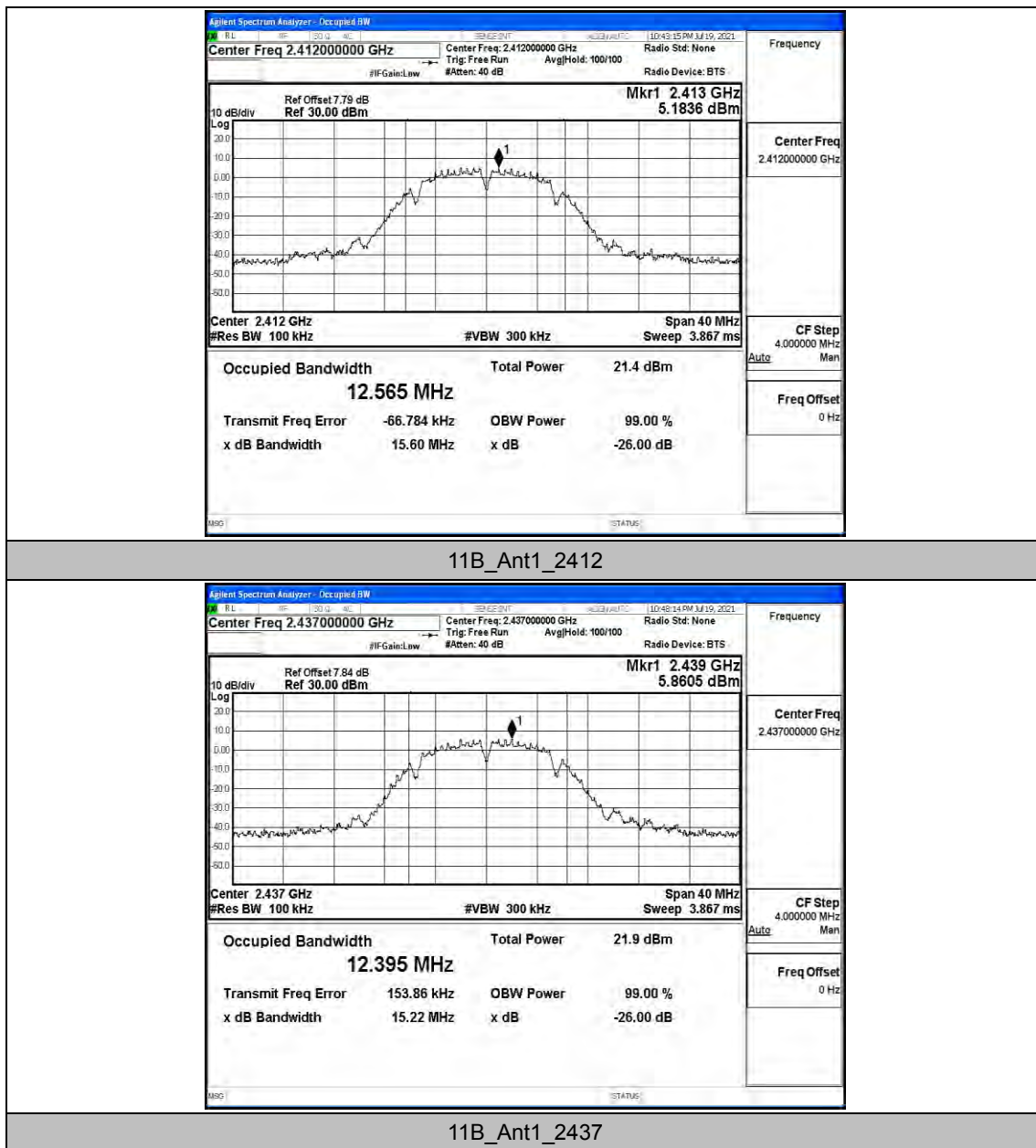
Appendix A.4.2: Occupied Channel Bandwidth

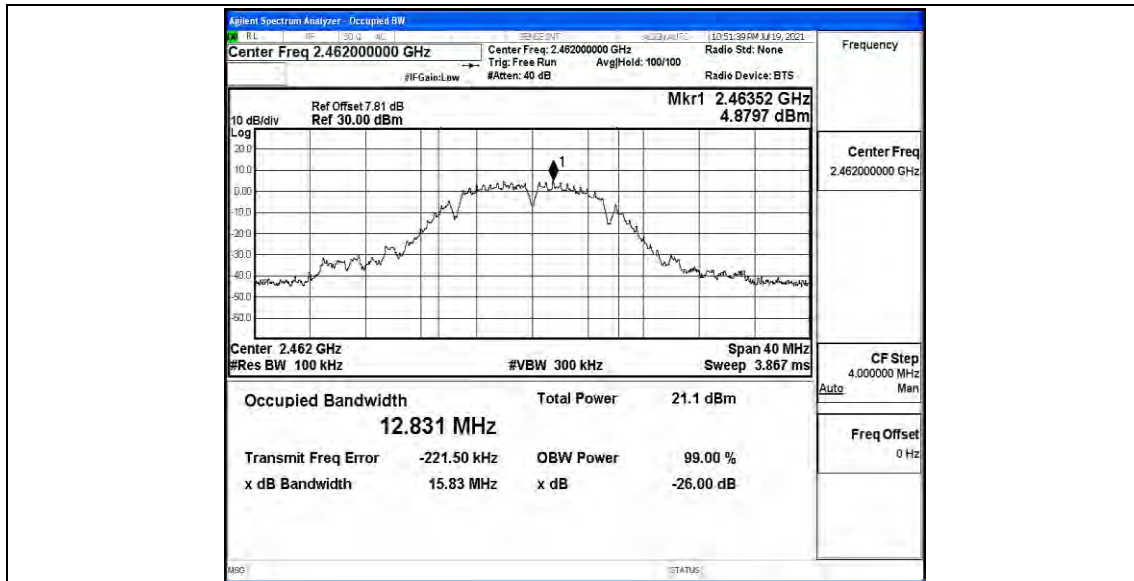
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.565	2405.651	2418.216	---	PASS
		2437	12.395	2430.956	2443.351	---	PASS
		2462	12.831	2455.363	2468.194	---	PASS
11G	Ant1	2412	16.423	2403.764	2420.187	---	PASS
		2437	16.402	2428.871	2445.273	---	PASS
		2462	16.508	2453.639	2470.147	---	PASS
11N20SISO	Ant1	2412	17.619	2403.166	2420.785	---	PASS
		2437	17.541	2428.299	2445.840	---	PASS
		2462	17.653	2453.093	2470.746	---	PASS
11N40SISO	Ant1	2422	36.063	2404.073	2440.136	---	PASS
		2437	35.681	2419.290	2454.971	---	PASS
		2452	35.560	2434.095	2469.655	---	PASS

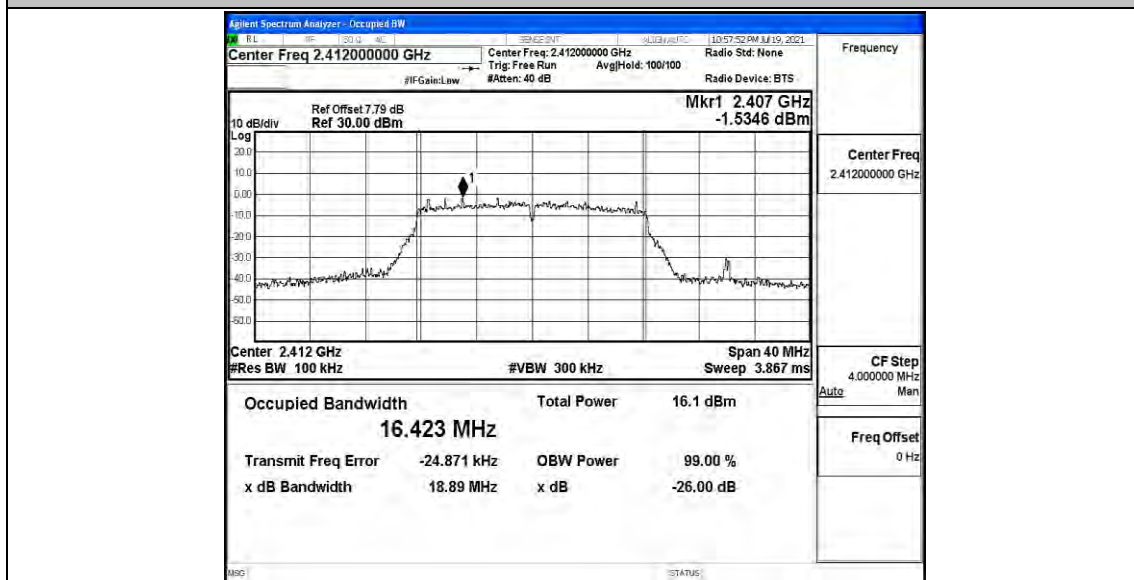


Test Graphs

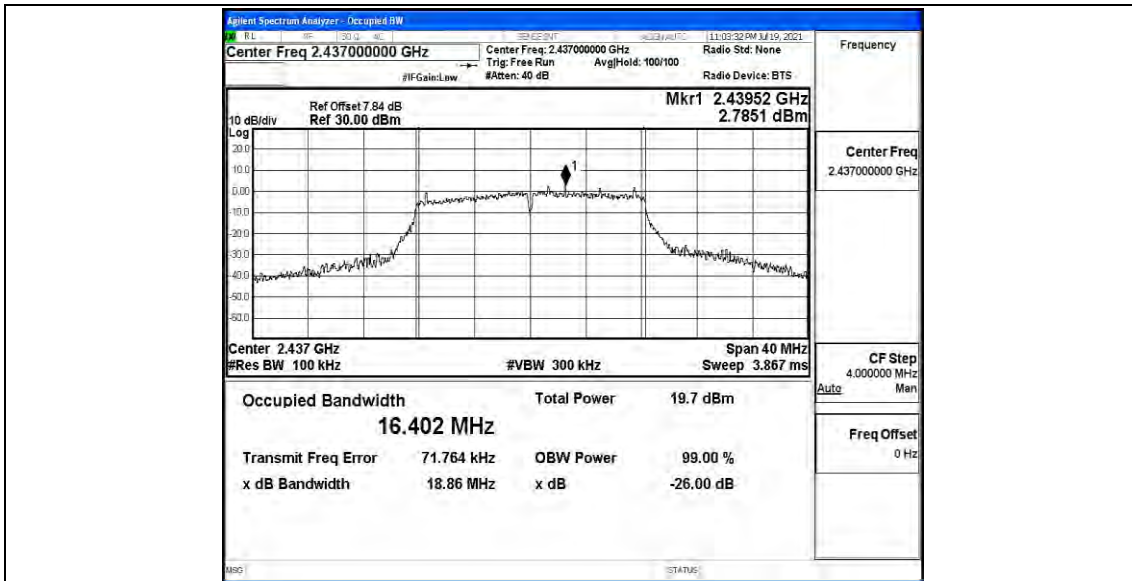




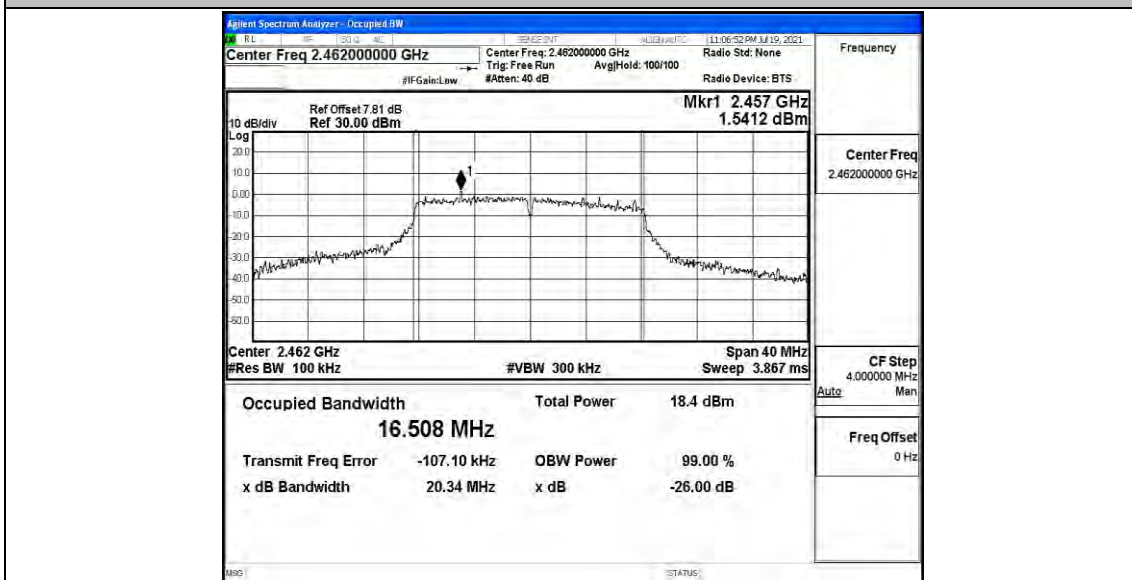
11B_Ant1_2462



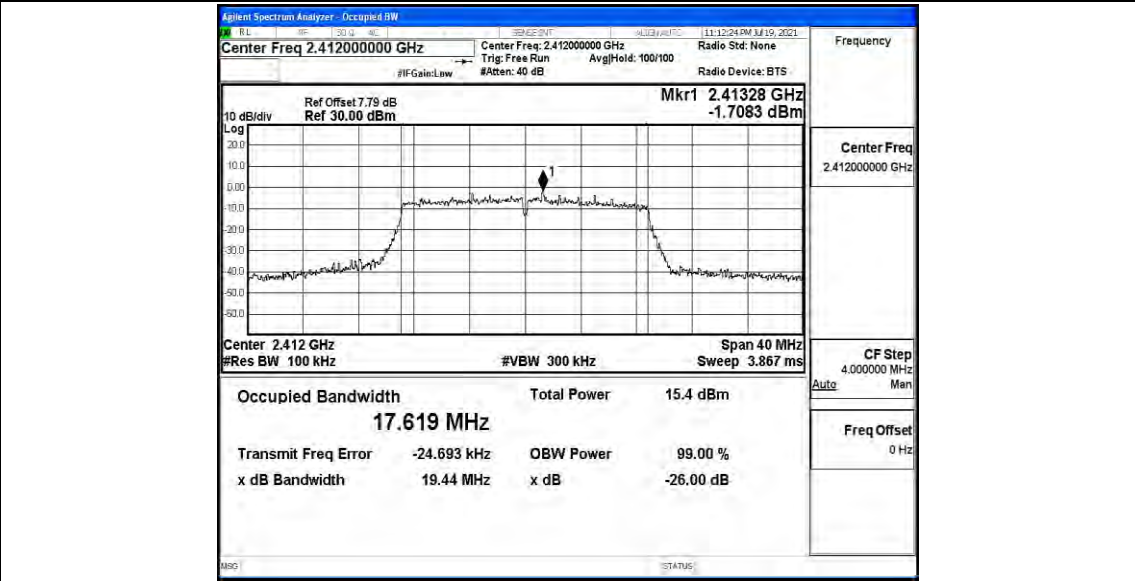
11G_Ant1_2412



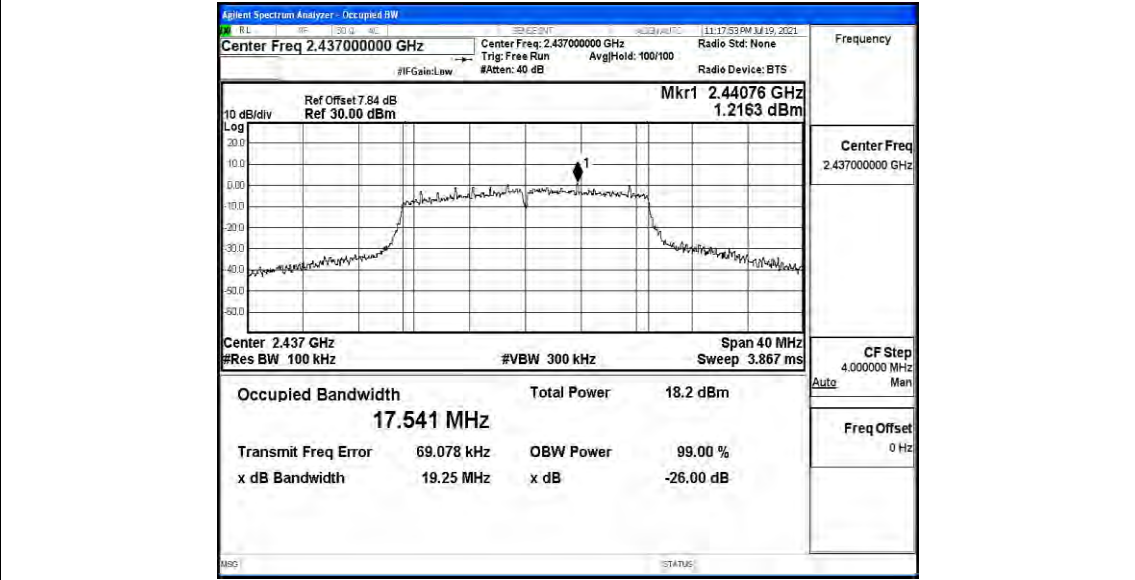
11G_Ant1_2437



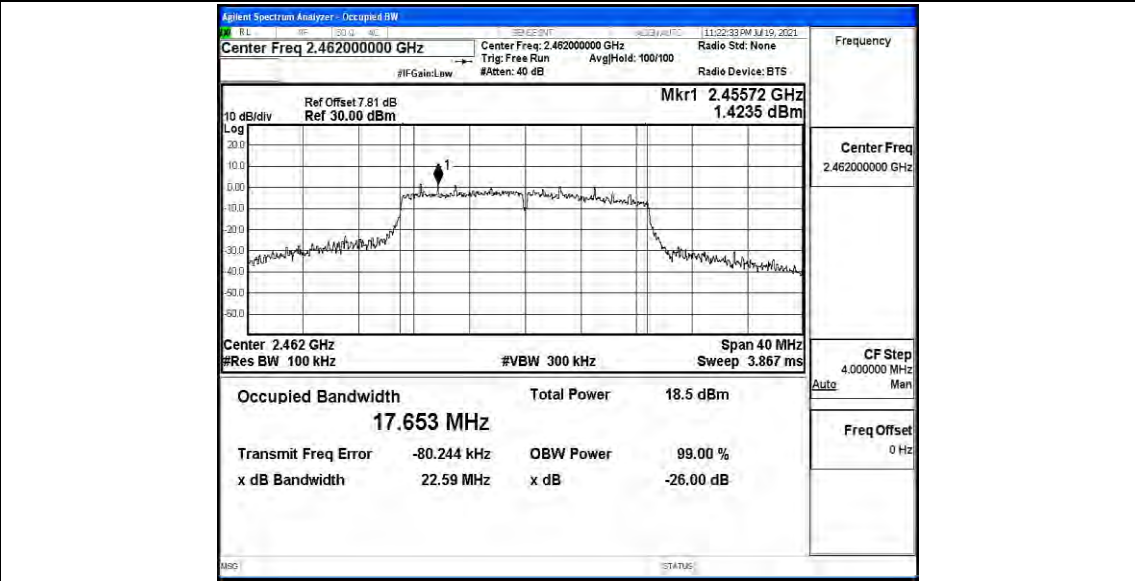
11G_Ant1_2462



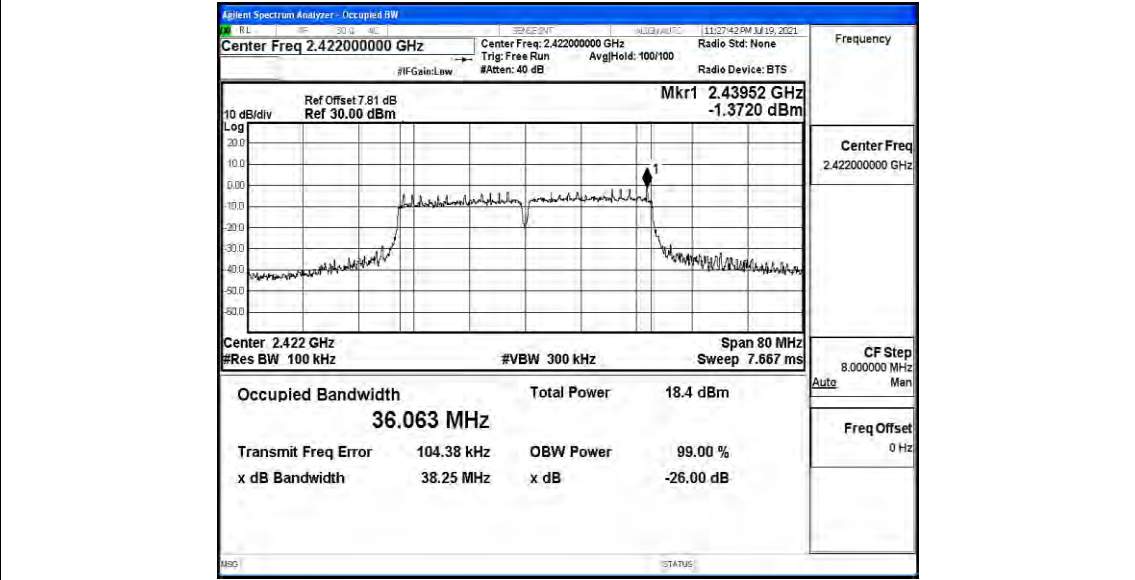
11N20SISO_Ant1_2412



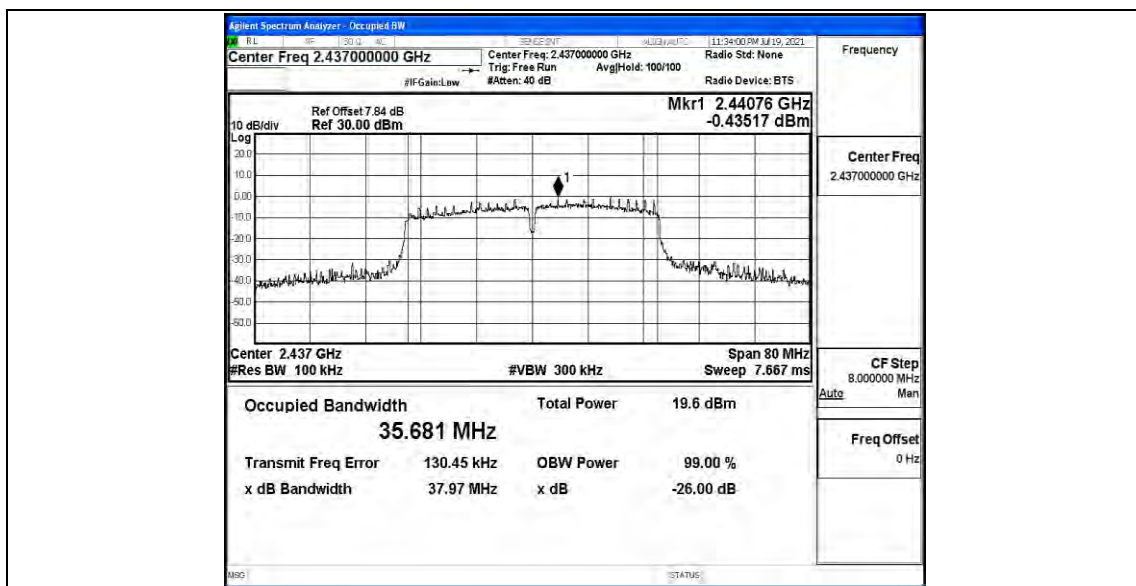
11N20SISO_Ant1_2437



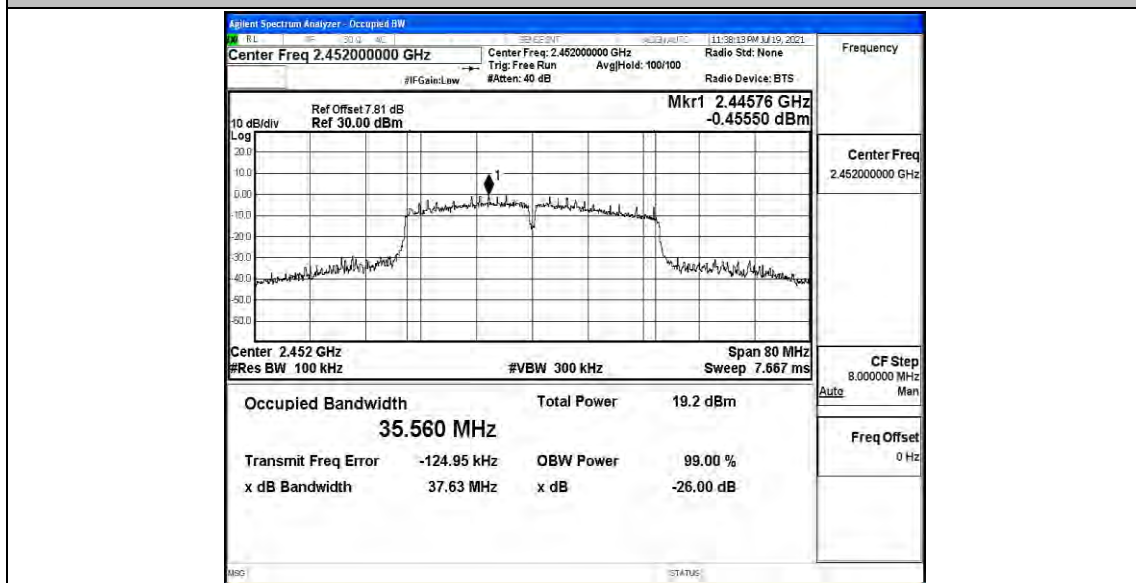
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



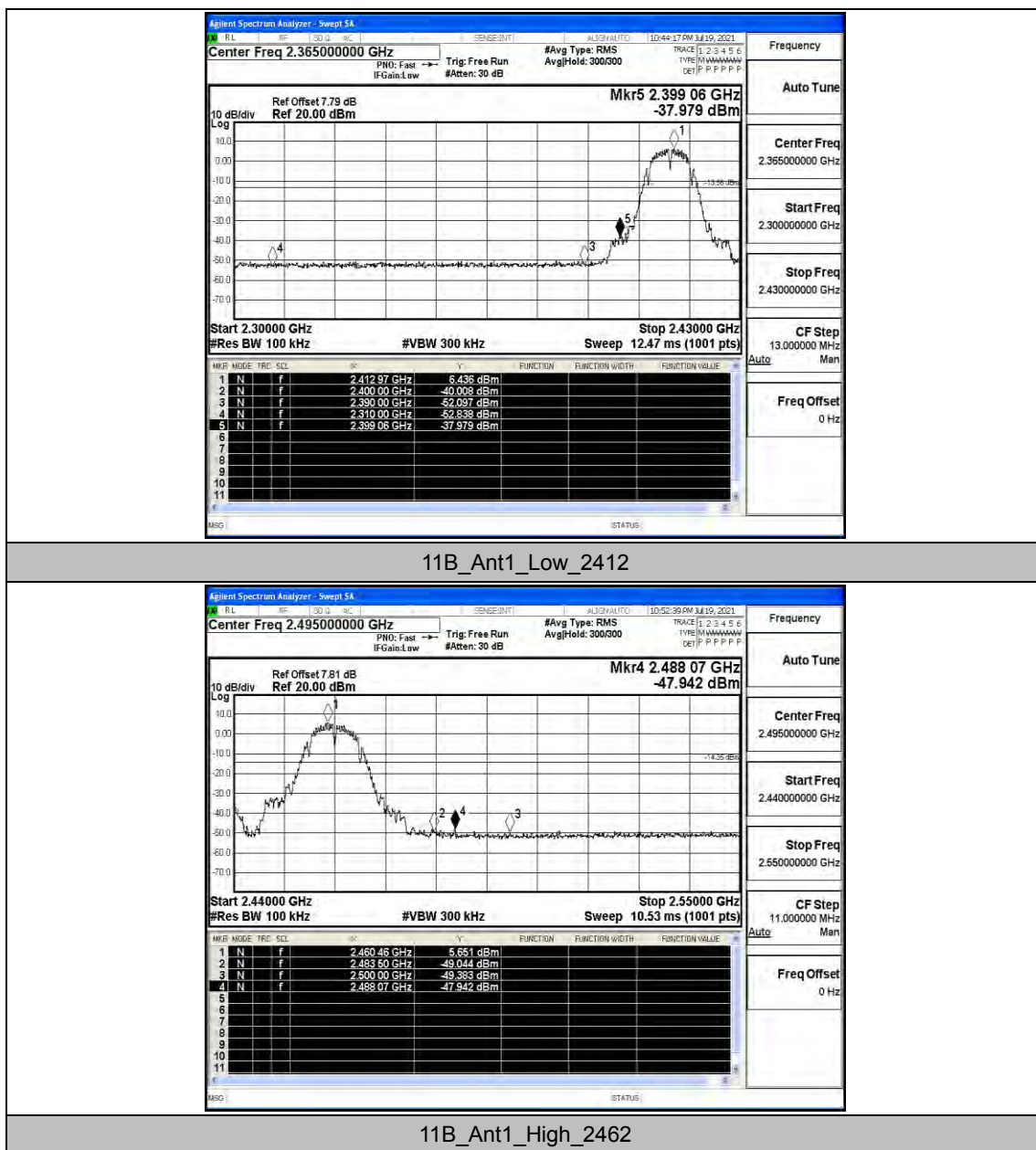
Appendix A.5: Band edge measurements

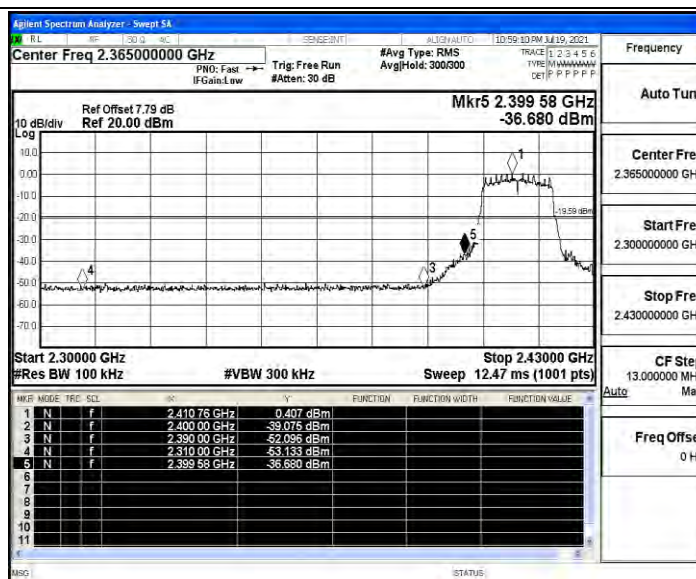
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.44	-37.98	≤ -13.56	PASS
		High	2462	5.65	-47.94	≤ -14.35	PASS
11G	Ant1	Low	2412	0.41	-36.68	≤ -19.59	PASS
		High	2462	2.50	-42.24	≤ -17.51	PASS
11N20SISO	Ant1	Low	2412	-1.44	-32.66	≤ -21.44	PASS
		High	2462	1.25	-40.05	≤ -18.75	PASS
11N40SISO	Ant1	Low	2422	-1.60	-32.41	≤ -21.6	PASS
		High	2452	0.05	-32.51	≤ -19.95	PASS

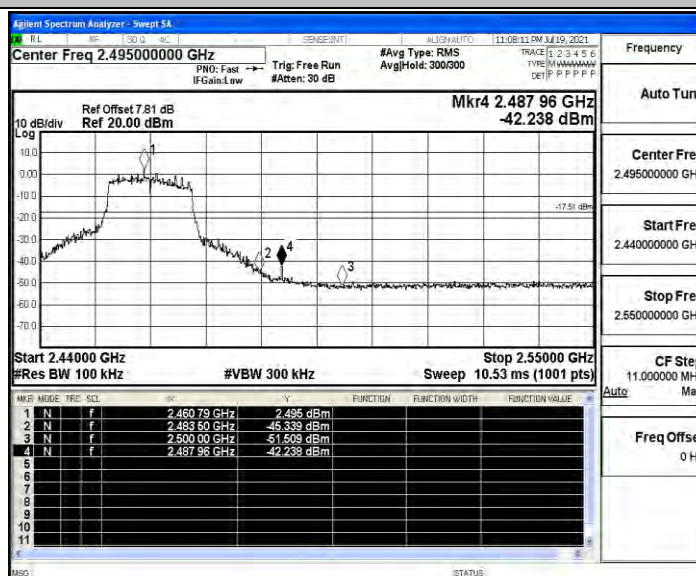


Test Graphs

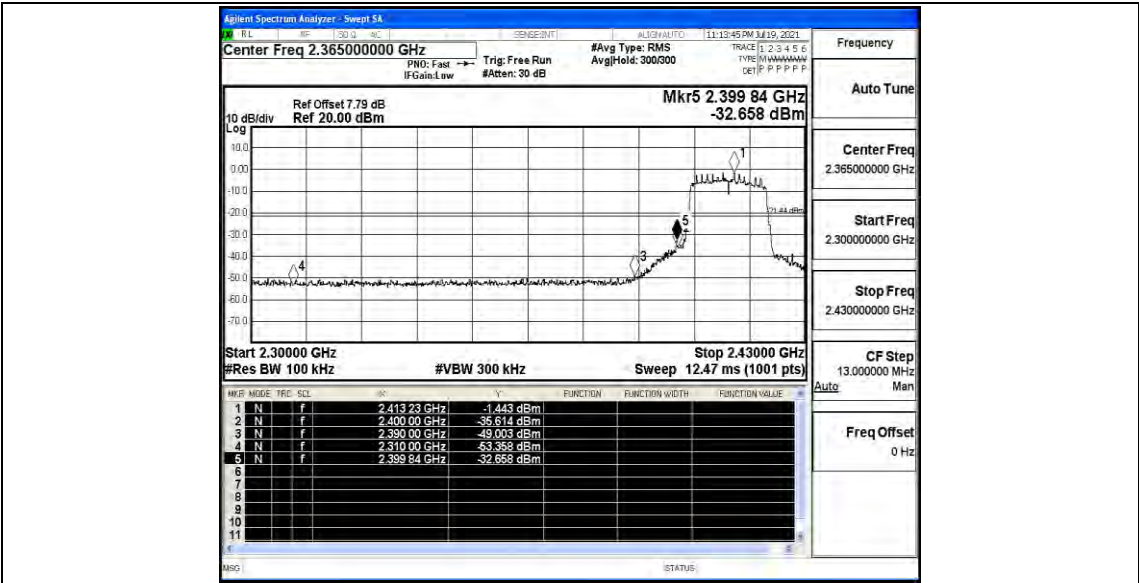




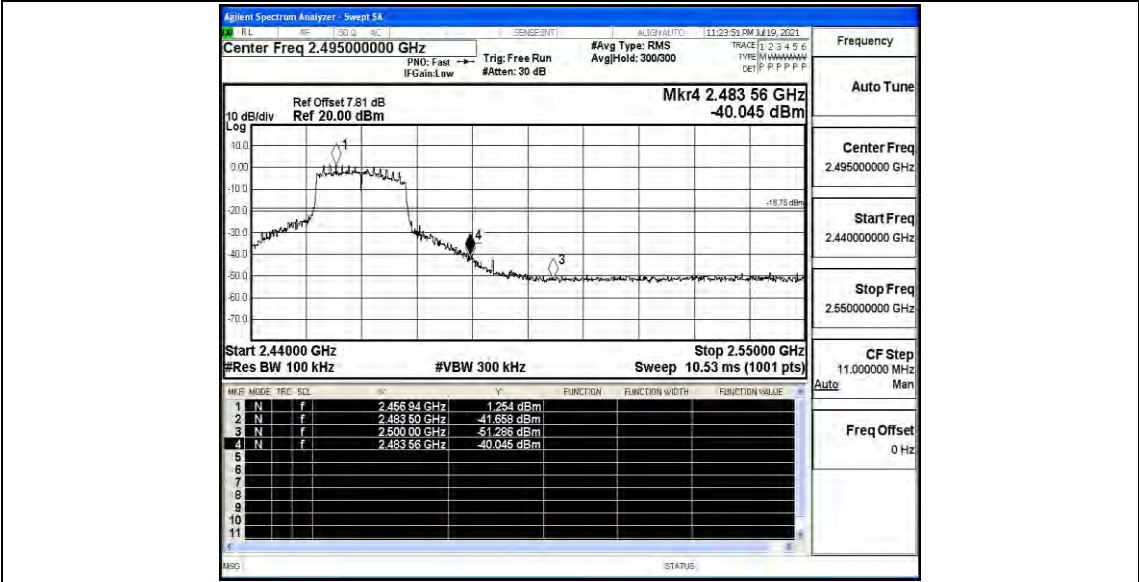
11G_Ant1_Low_2412



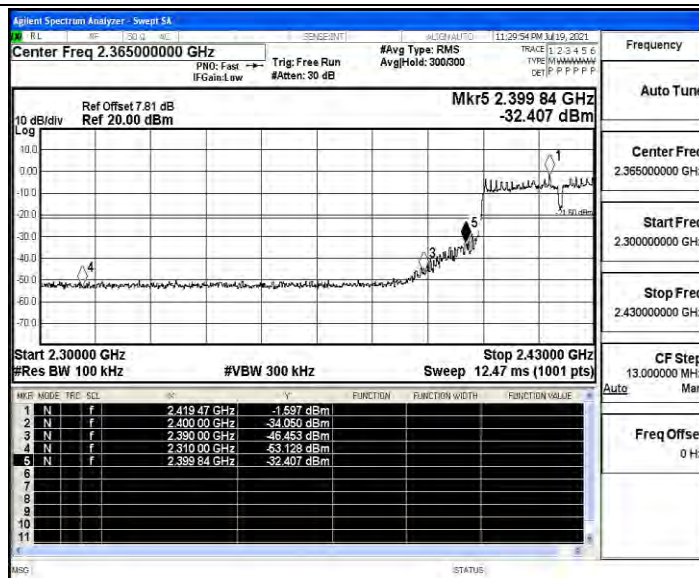
11G_Ant1_High_2462



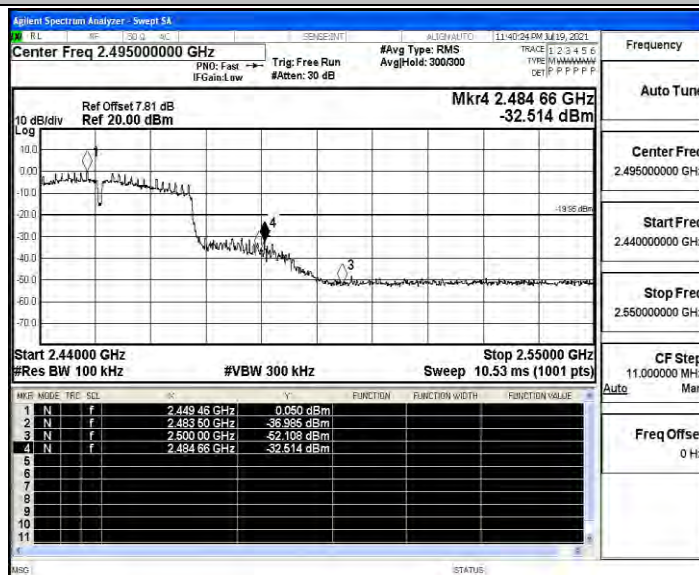
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



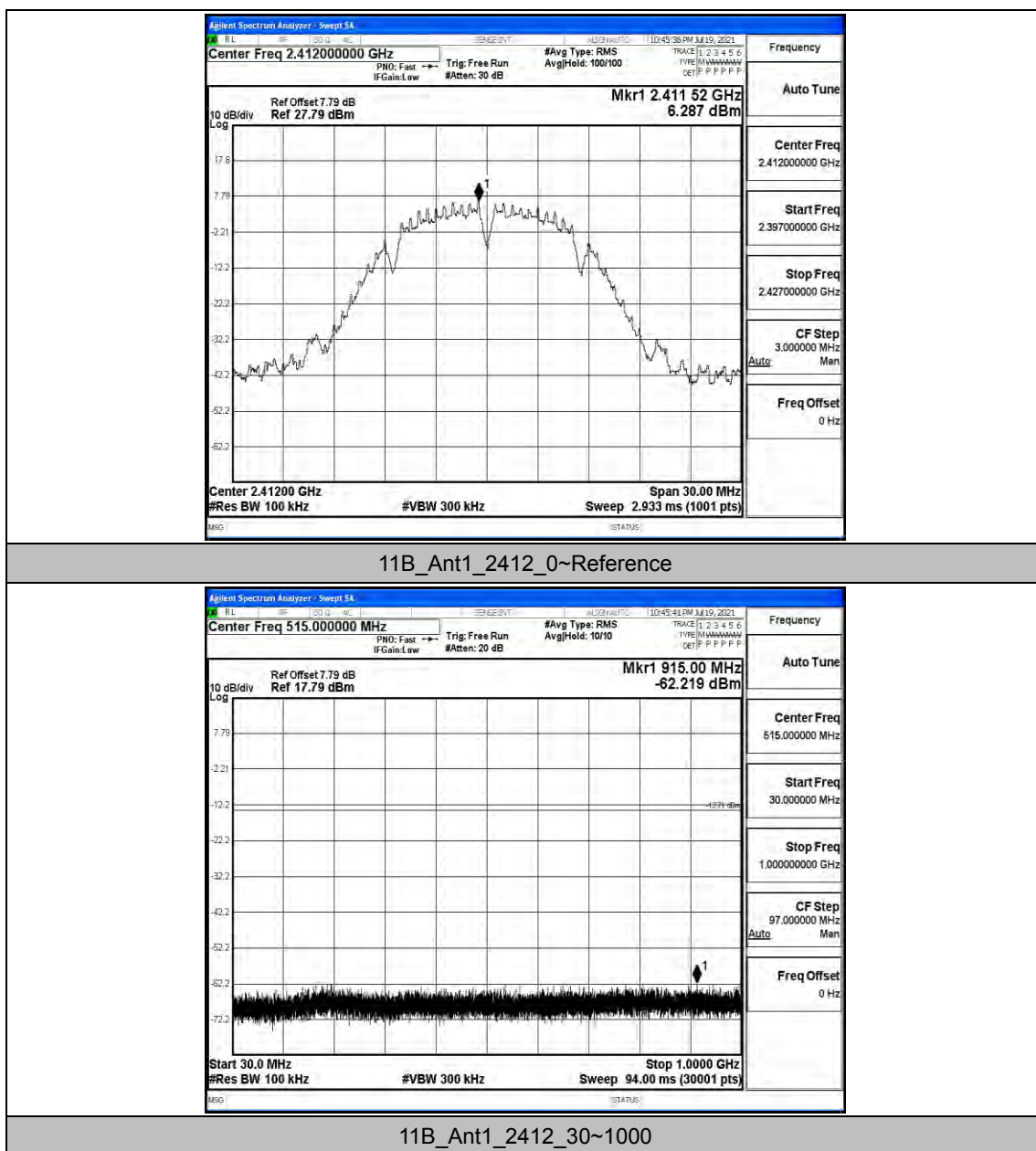
Appendix A.6: Conducted Spurious Emission

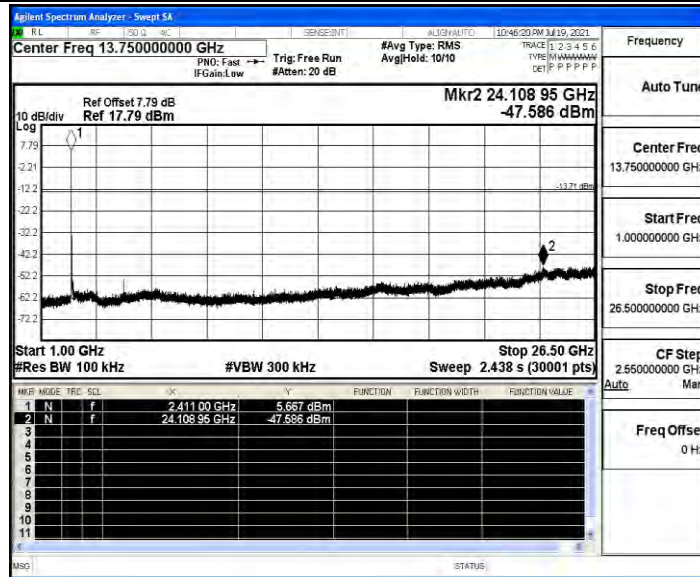
Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.29	6.29	---	PASS
			30~1000	6.29	-62.22	≤ -13.71	PASS
			1000~26500	6.29	-47.59	≤ -13.71	PASS
		2437	Reference	5.54	5.54	---	PASS
			30~1000	5.54	-61.2	≤ -14.46	PASS
			1000~26500	5.54	-46.15	≤ -14.46	PASS
		2462	Reference	5.36	5.36	---	PASS
			30~1000	5.36	-61.83	≤ -14.64	PASS
			1000~26500	5.36	-47.23	≤ -14.64	PASS
11G	Ant1	2412	Reference	-0.76	-0.76	---	PASS
			30~1000	-0.76	-60.91	≤ -20.76	PASS
			1000~26500	-0.76	-47.04	≤ -20.76	PASS
		2437	Reference	1.66	1.66	---	PASS
			30~1000	1.66	-62.09	≤ -18.34	PASS
			1000~26500	1.66	-47.37	≤ -18.34	PASS
		2462	Reference	0.33	0.33	---	PASS
			30~1000	0.33	-62.36	≤ -19.67	PASS
			1000~26500	0.33	-47.03	≤ -19.67	PASS
11N20SISO	Ant1	2412	Reference	-2.63	-2.63	---	PASS
			30~1000	-2.63	-61.73	≤ -22.63	PASS
			1000~26500	-2.63	-47.76	≤ -22.63	PASS
		2437	Reference	2.17	2.17	---	PASS
			30~1000	2.17	-61.91	≤ -17.84	PASS
			1000~26500	2.17	-47.61	≤ -17.84	PASS
		2462	Reference	1.80	1.80	---	PASS
			30~1000	1.80	-61.94	≤ -18.2	PASS
			1000~26500	1.80	-46.82	≤ -18.2	PASS
11N40SISO	Ant1	2422	Reference	-1.64	-1.64	---	PASS
			30~1000	-1.64	-61.12	≤ -21.64	PASS
			1000~26500	-1.64	-47.01	≤ -21.64	PASS
		2437	Reference	-0.78	-0.78	---	PASS
			30~1000	-0.78	-61.26	≤ -20.78	PASS
			1000~26500	-0.78	-46.38	≤ -20.78	PASS
		2452	Reference	-0.57	-0.57	---	PASS
			30~1000	-0.57	-61.23	≤ -20.57	PASS
			1000~26500	-0.57	-47.58	≤ -20.57	PASS

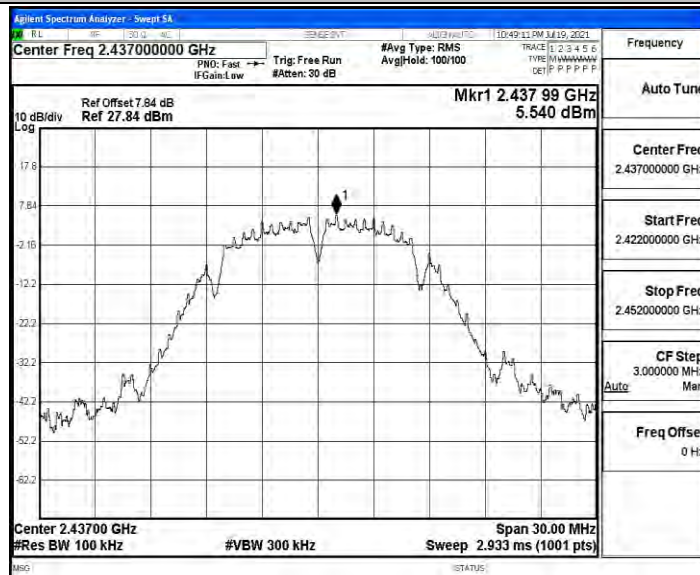


Test Graphs

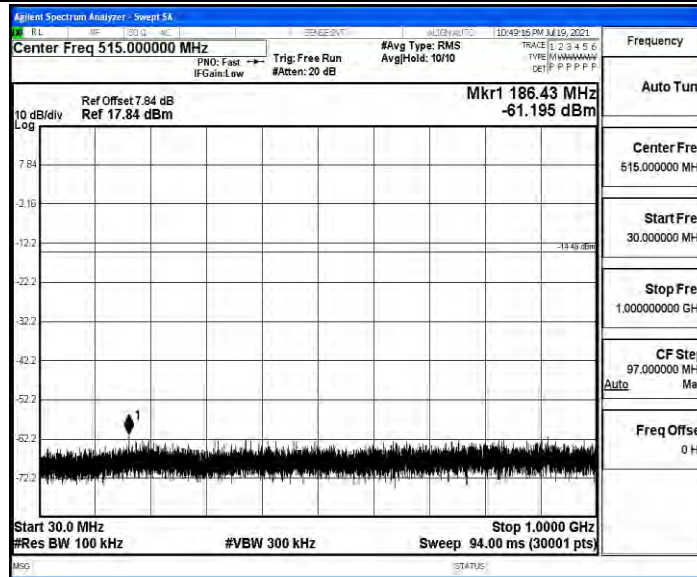




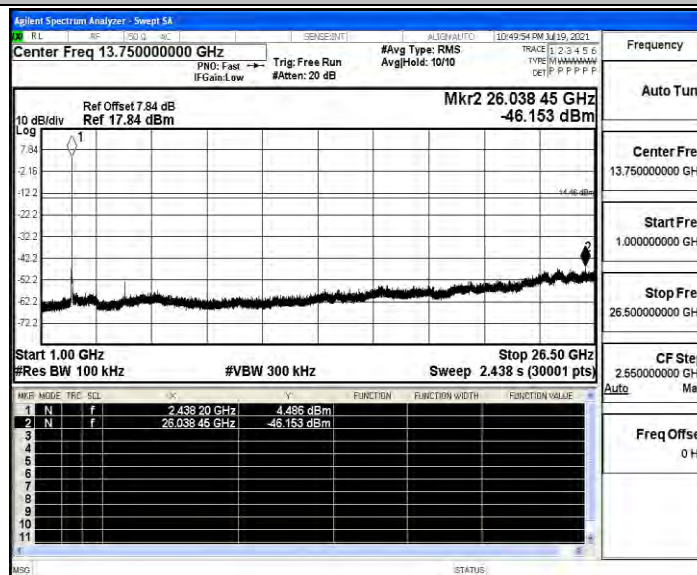
11B_Ant1_2412_1000~26500



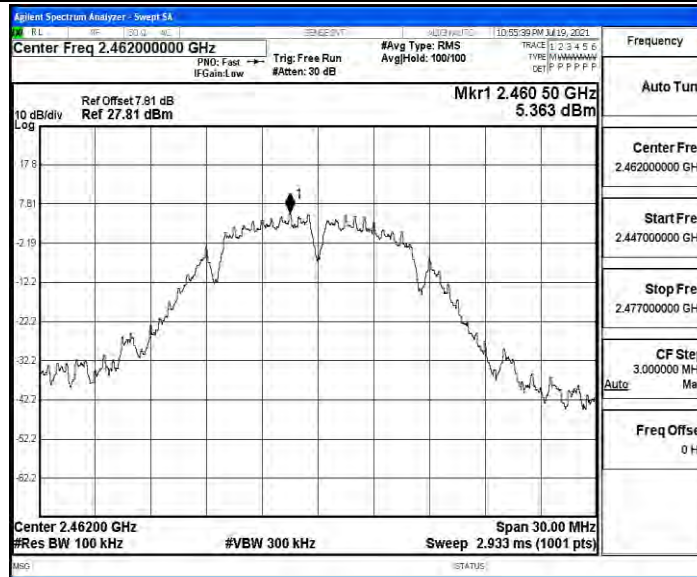
11B_Ant1_2437_0~Reference



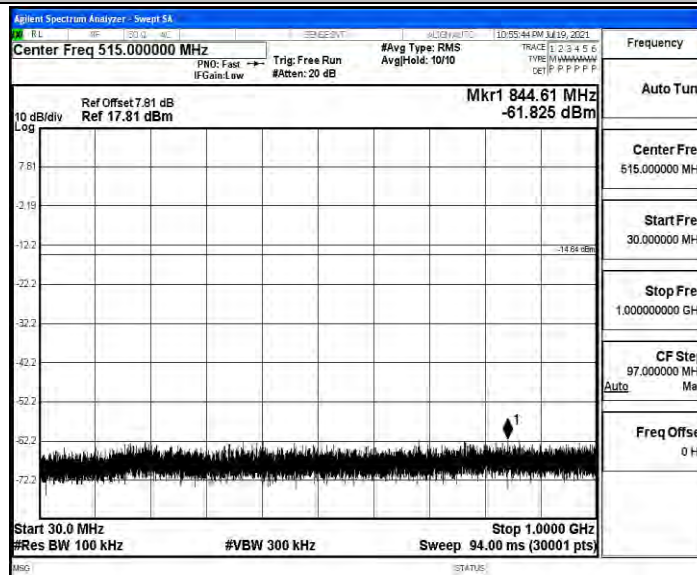
11B_Ant1_2437_30~1000



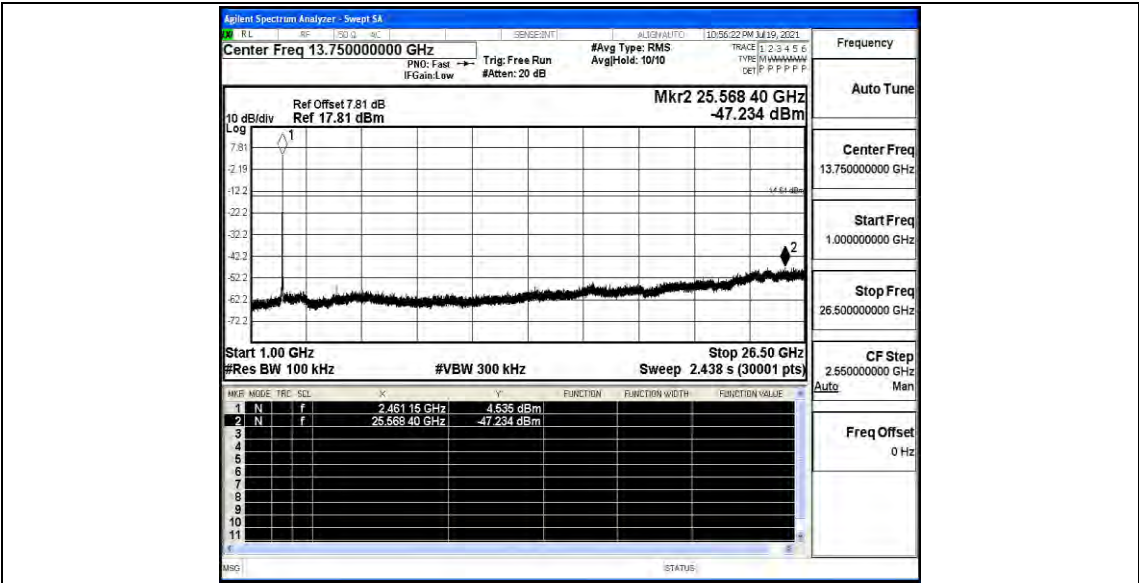
11B_Ant1_2437_1000~26500



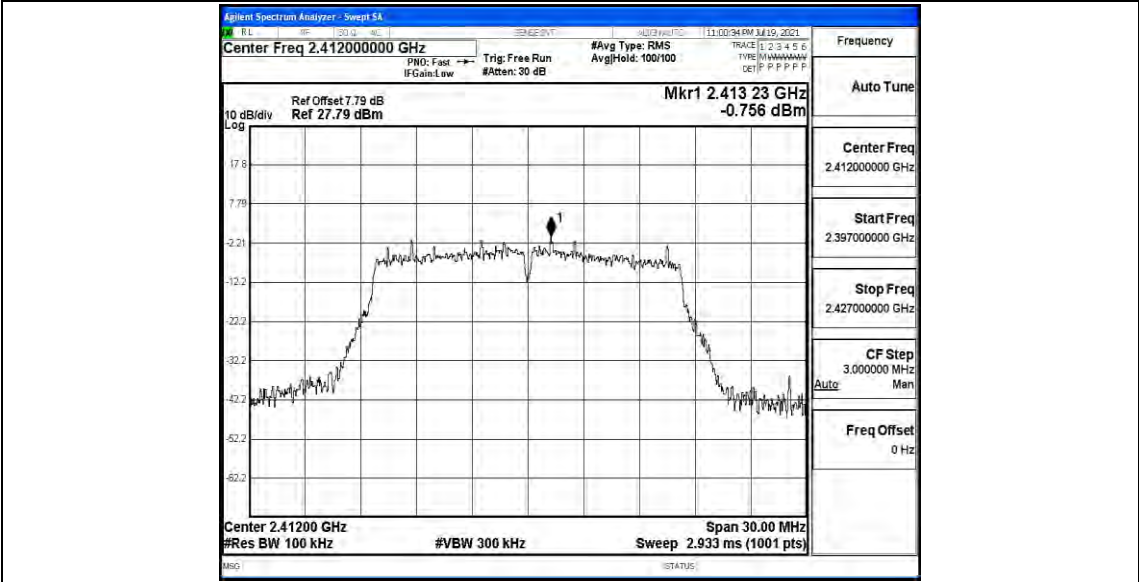
11B_Ant1_2462_0~Reference



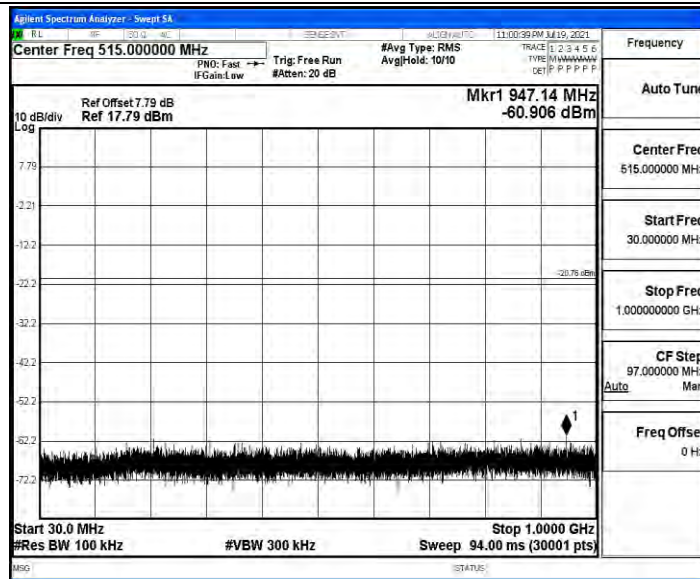
11B_Ant1_2462_30~1000



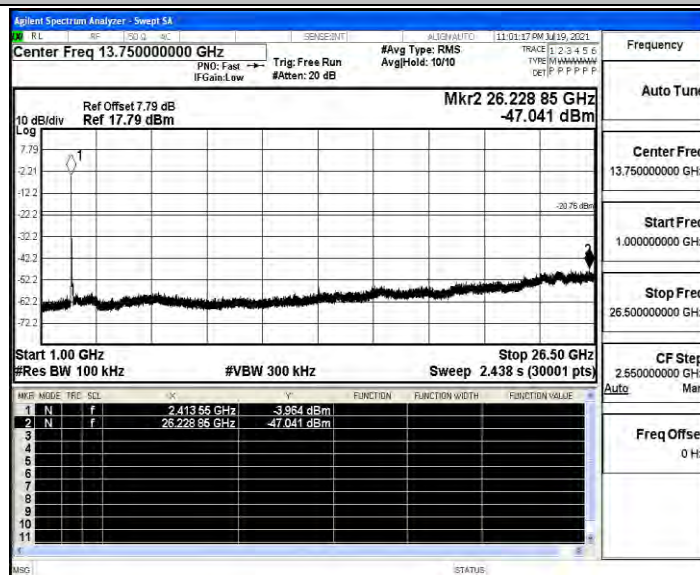
11B_Ant1_2462_1000~26500



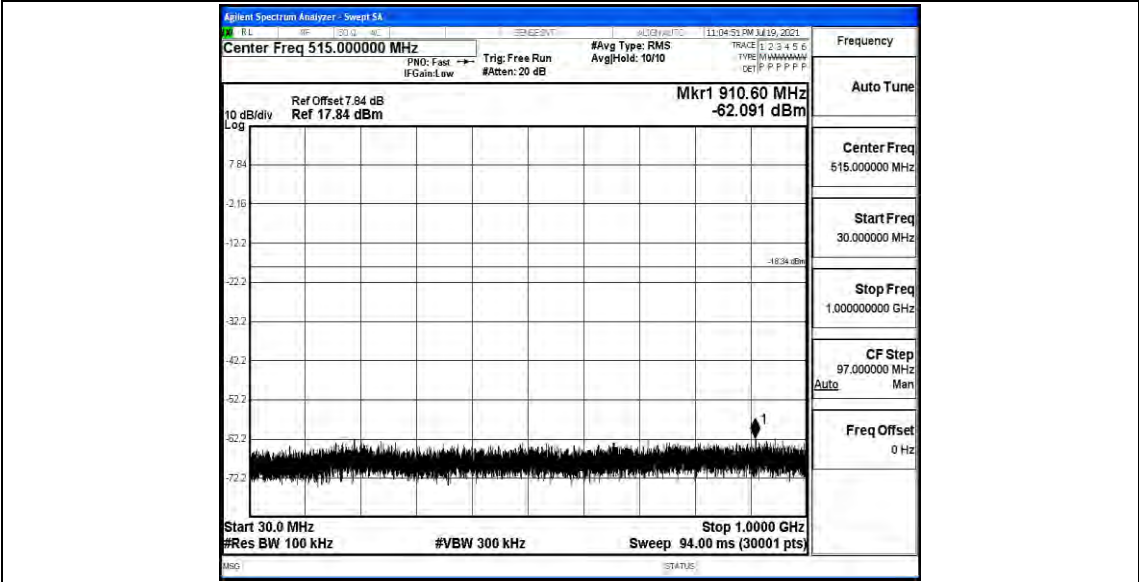
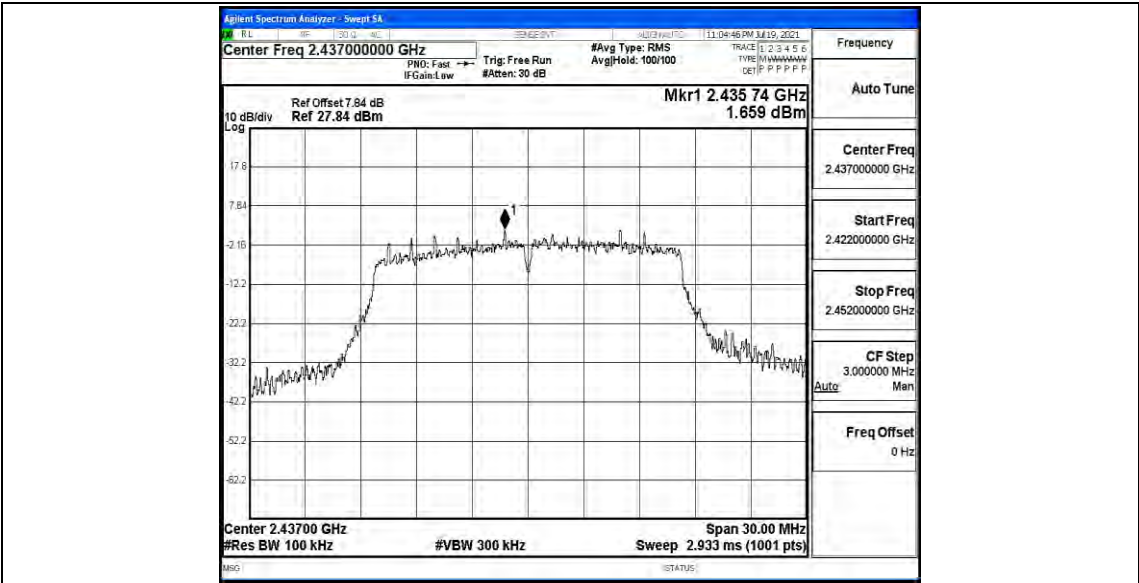
11G_Ant1_2412_0~Reference

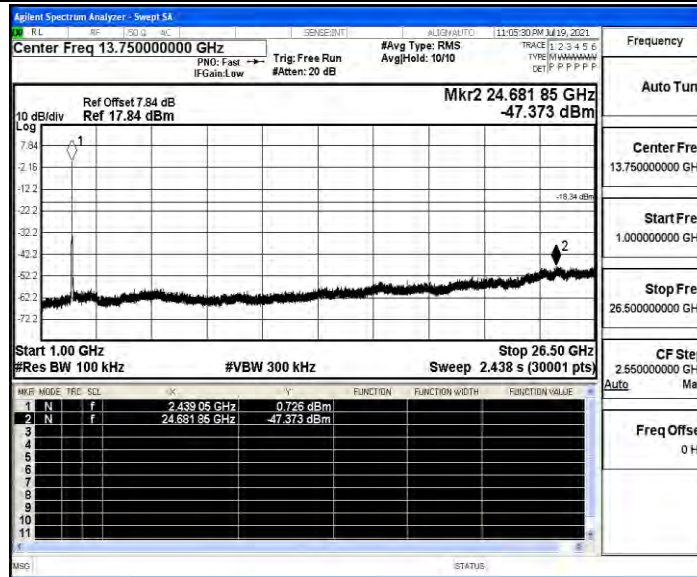


11G_Ant1_2412_30~1000

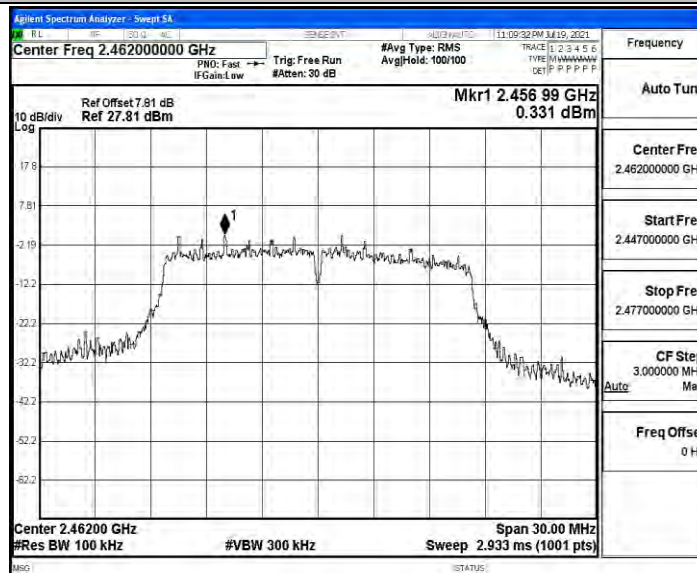


11G_Ant1_2412_1000~26500

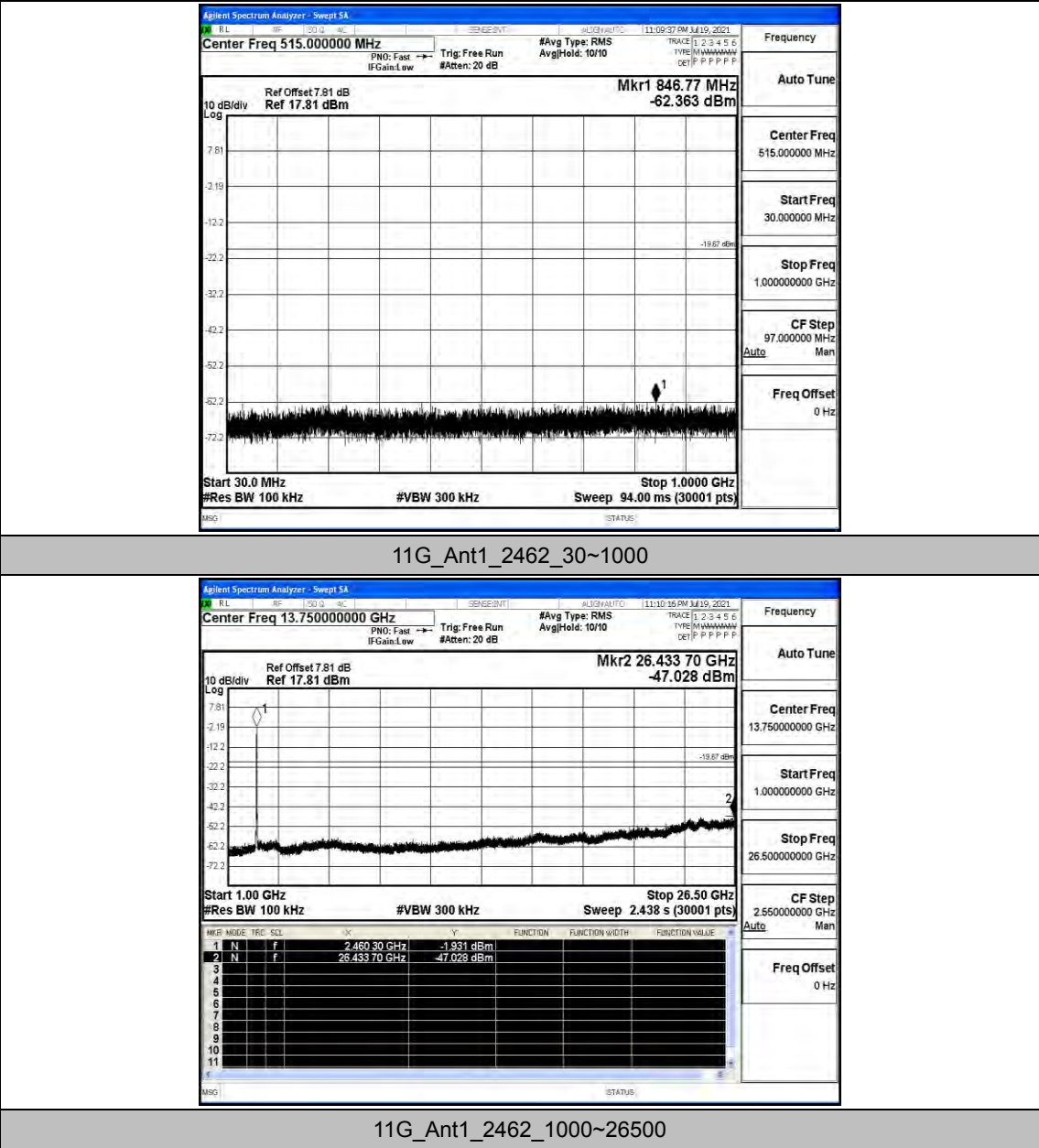


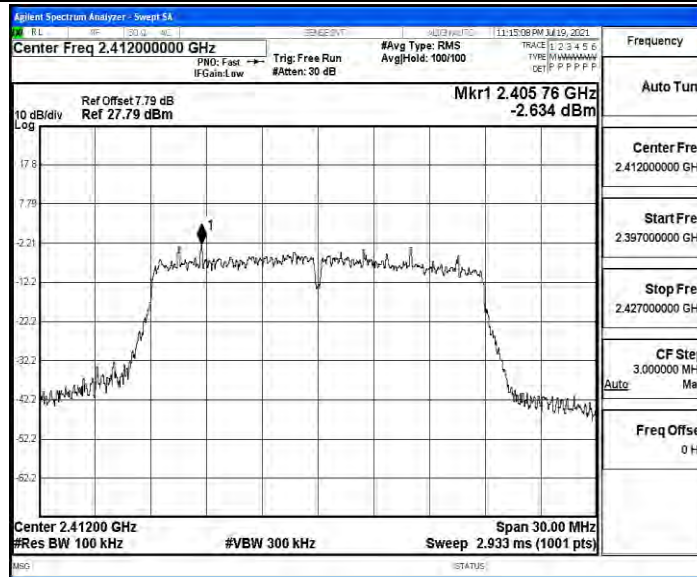


11G_Ant1_2437_1000~26500

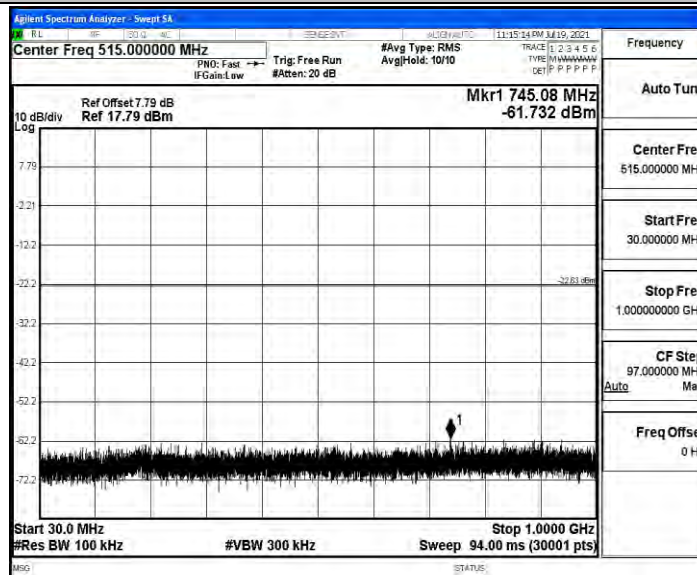


11G_Ant1_2462_0~Reference

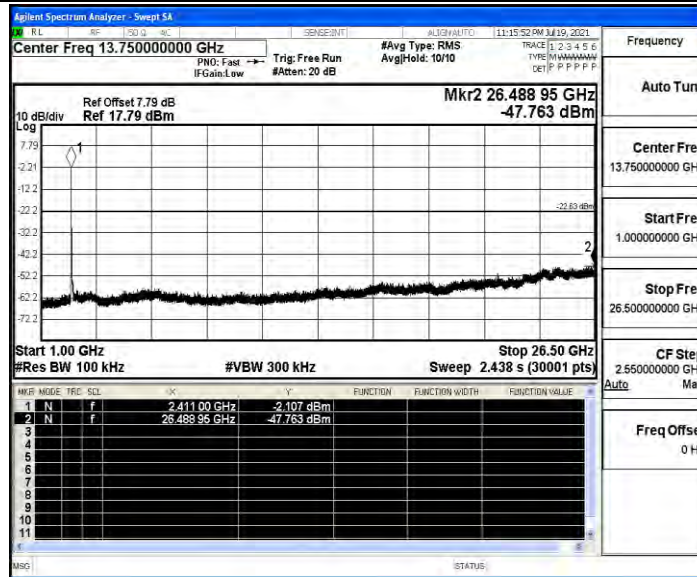




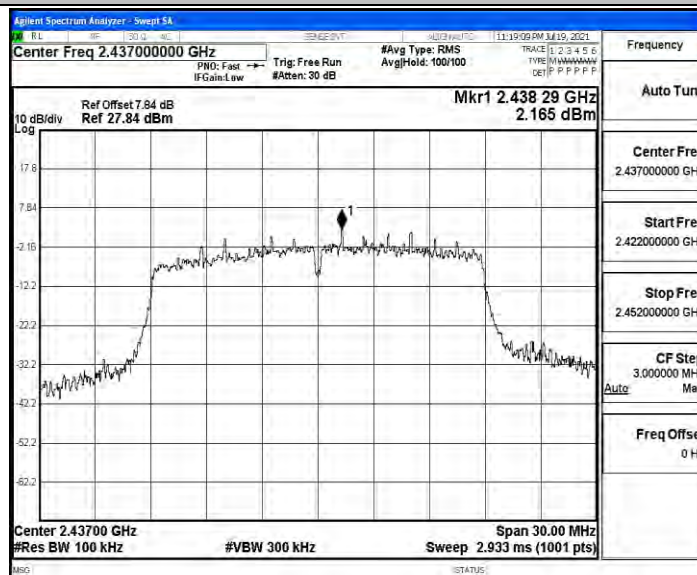
11N20SISO_Ant1_2412_0~Reference



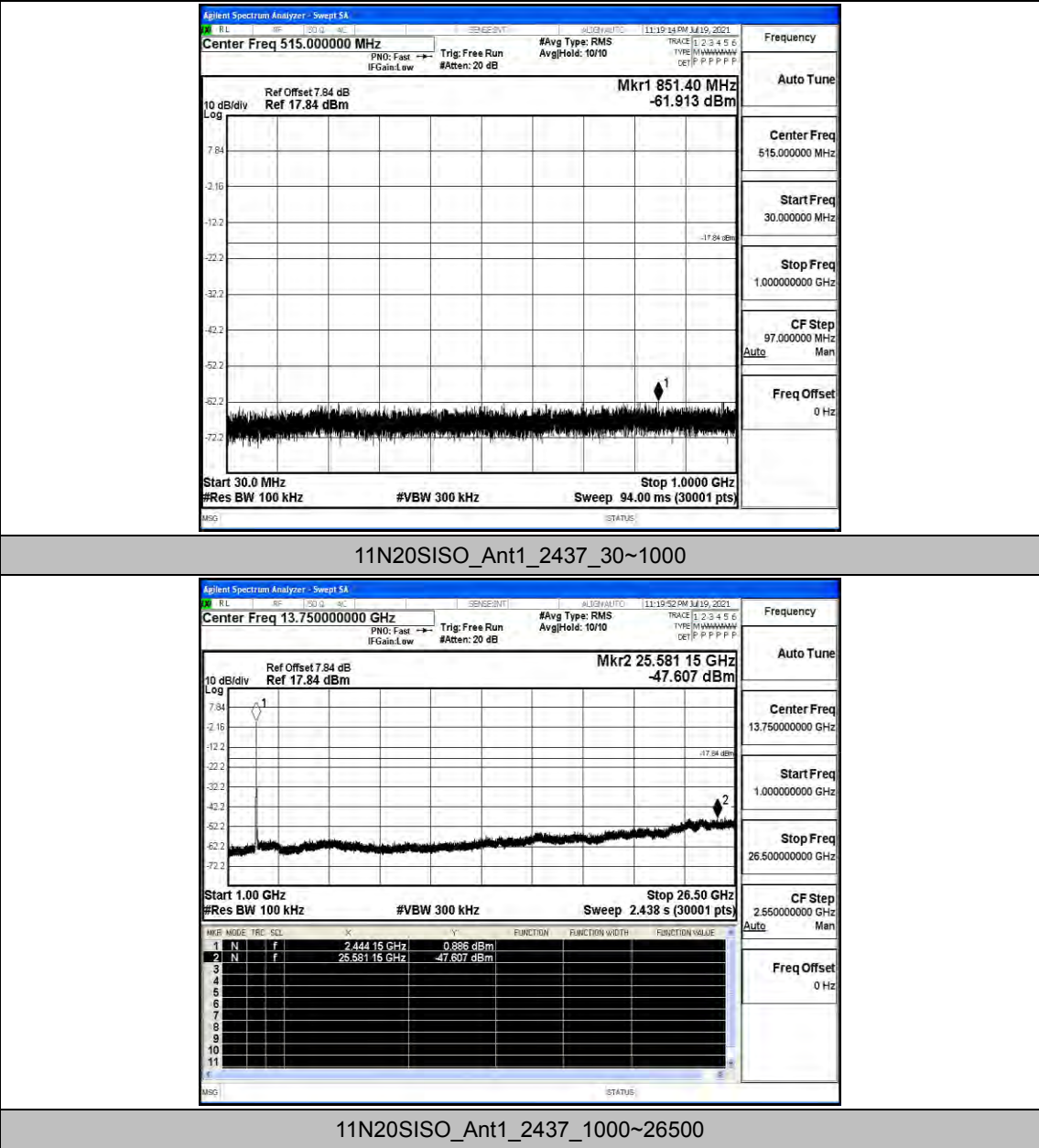
11N20SISO_Ant1_2412_30~1000

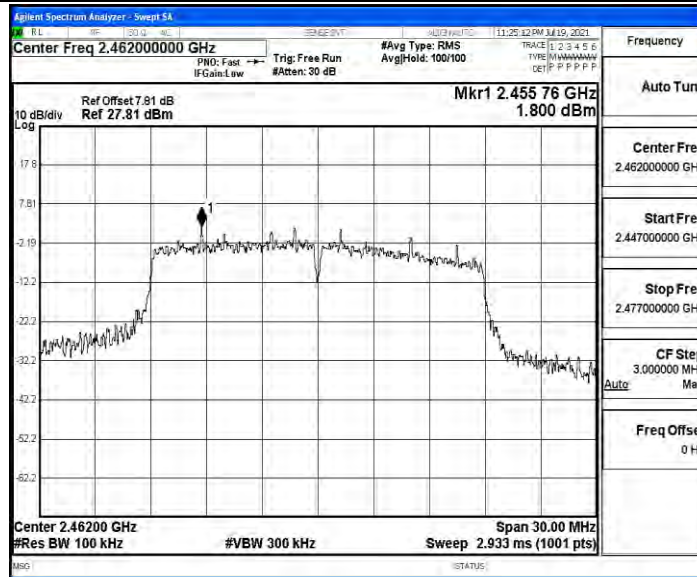


11N20SISO_Ant1_2412_1000~26500

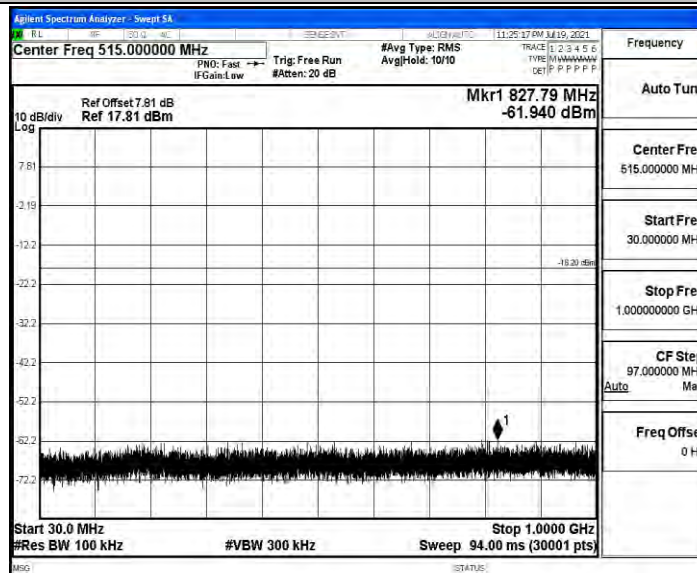


11N20SISO_Ant1_2437_0~Reference

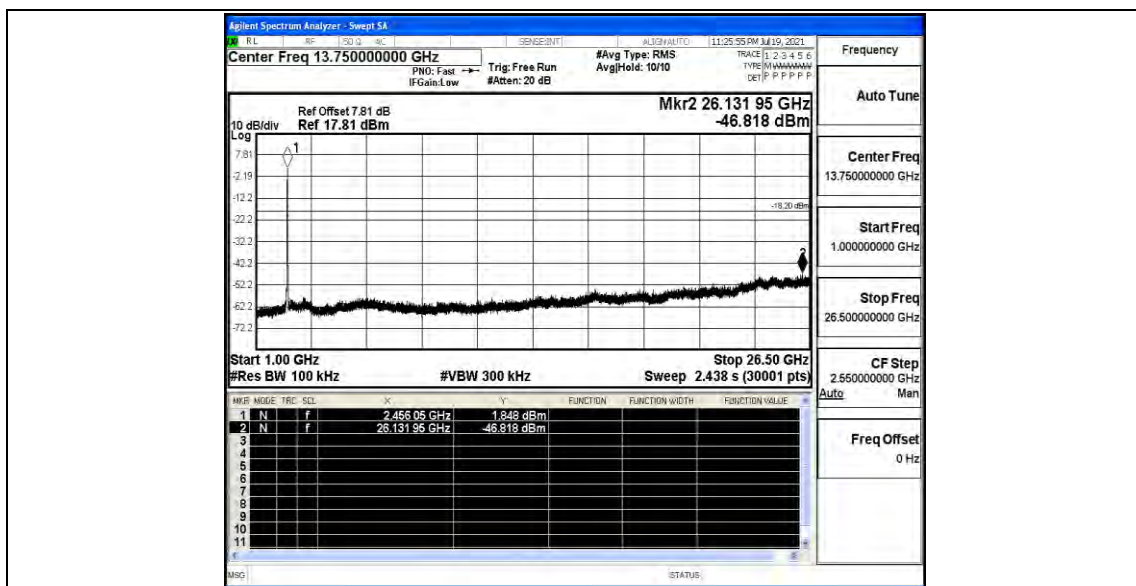




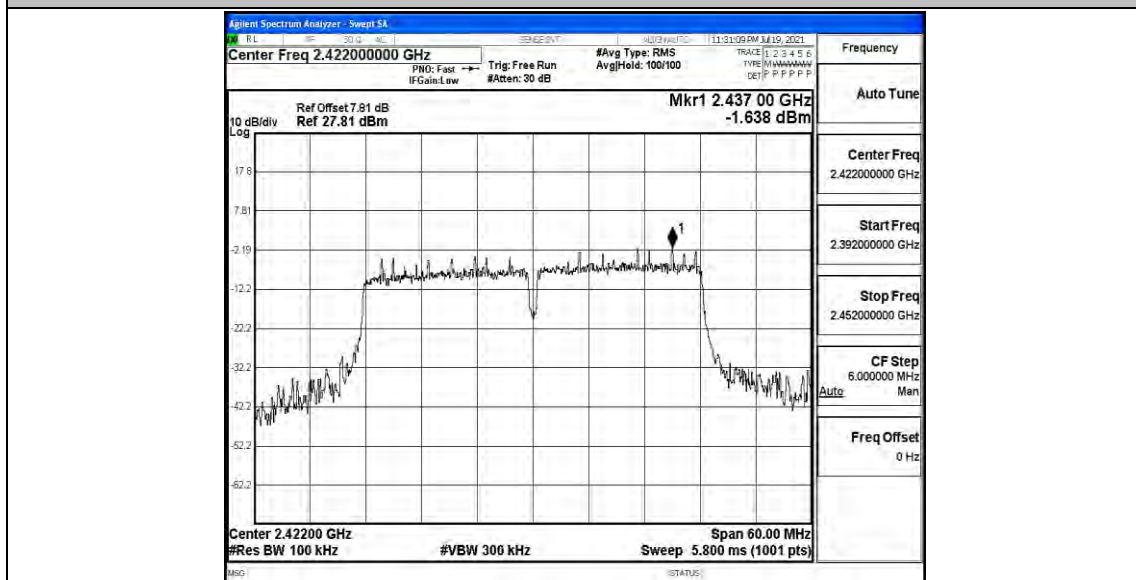
11N20SISO_Ant1_2462_0~Reference



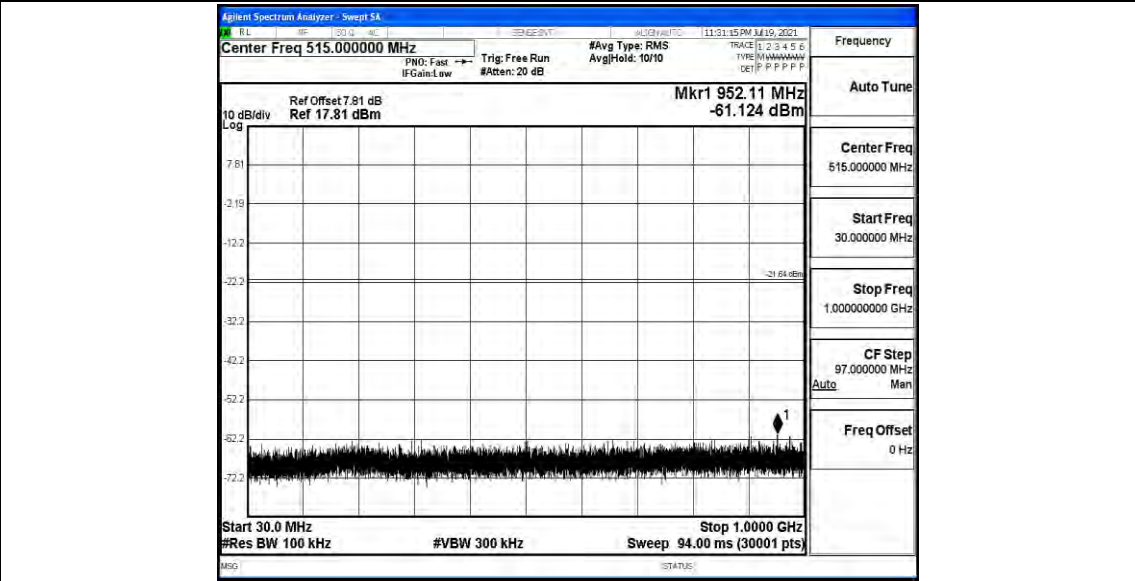
11N20SISO_Ant1_2462_30~1000



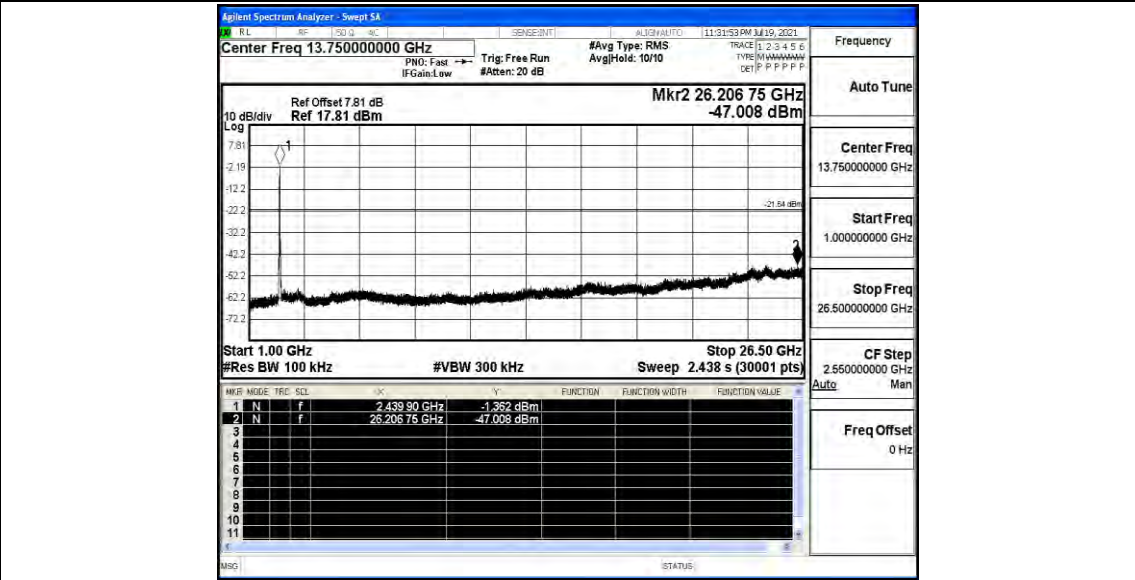
11N20ISO_Ant1_2462_1000~26500



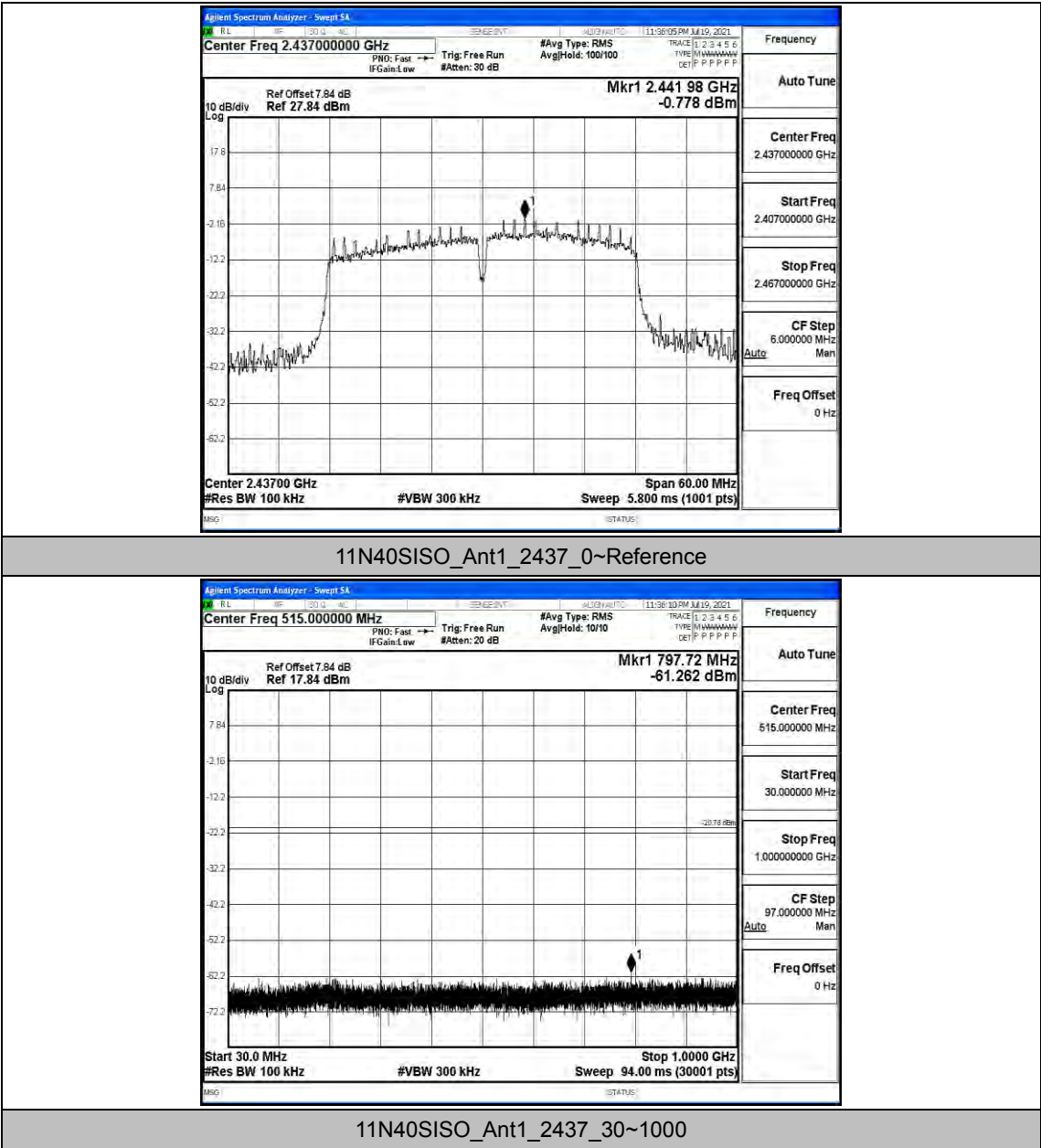
11N40ISO_Ant1_2422_0~Reference

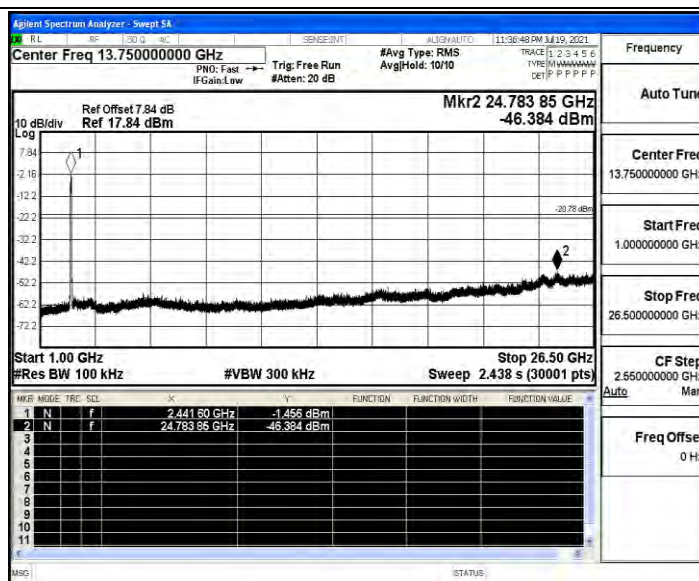


11N40SISO_Ant1_2422_30~1000

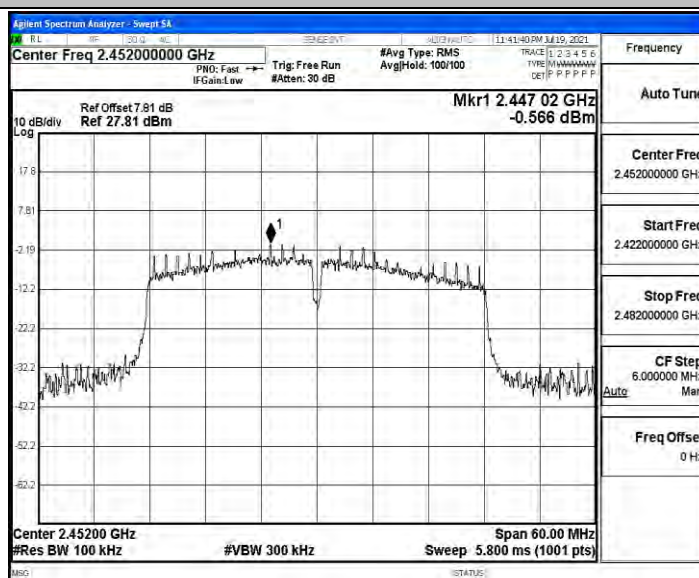


11N40SISO_Ant1_2422_1000~26500

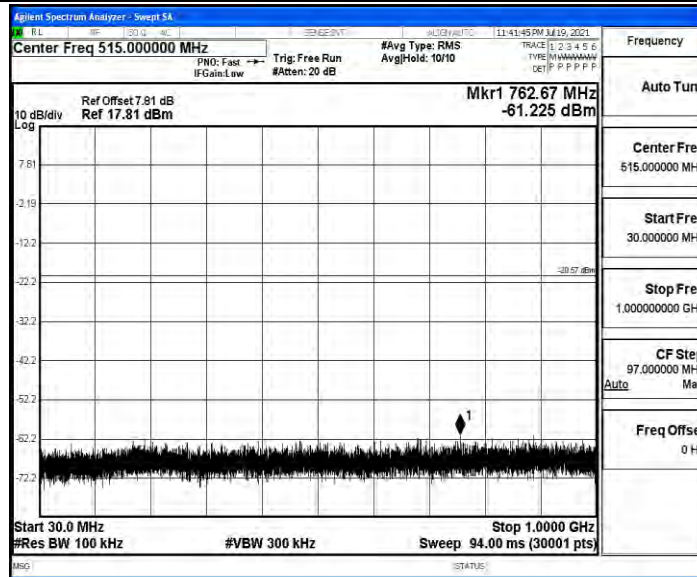




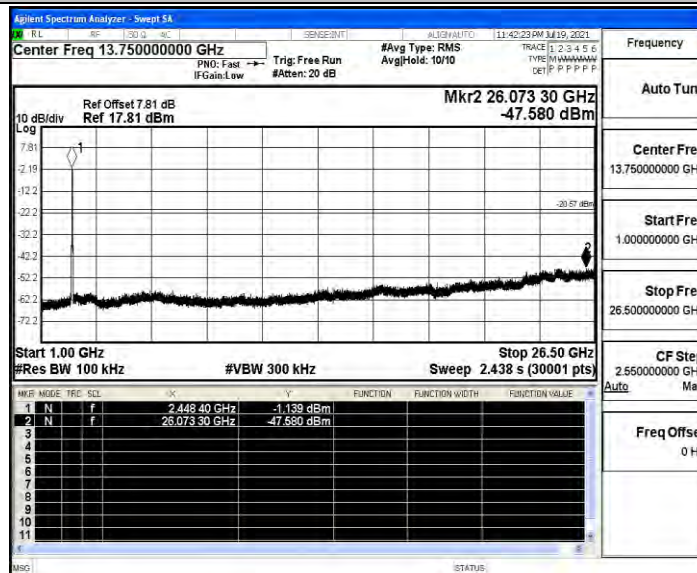
11N40SISO_Ant1_2437_1000~26500



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	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.2	≤-41.20	46.00	≤54	PASS
				AV	2389.960	-48.58	≤-41.20	46.62	≤54	PASS
				AV	2390.000	-48.58	≤-41.20	46.62	≤54	PASS
				Peak	2310.000	-43.15	≤-21.20	52.05	≤74	PASS
				Peak	2334.840	-40.04	≤-21.20	55.16	≤74	PASS
				Peak	2390.000	-44.17	≤-21.20	51.03	≤74	PASS
		High	2462	AV	2483.500	-46.29	≤-41.20	48.91	≤54	PASS
				AV	2487.960	-45.82	≤-41.20	49.38	≤54	PASS
				AV	2500.000	-48.37	≤-41.20	46.83	≤54	PASS
				Peak	2483.500	-39.84	≤-21.20	55.36	≤74	PASS
				Peak	2483.780	-38.54	≤-21.20	56.66	≤74	PASS
				Peak	2500.000	-43.1	≤-21.20	52.10	≤74	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.87	≤-41.20	46.33	≤54	PASS
				AV	2389.960	-47.38	≤-41.20	47.82	≤54	PASS
				AV	2390.000	-47.38	≤-41.20	47.82	≤54	PASS
				Peak	2310.000	-42.47	≤-21.20	52.73	≤74	PASS
				Peak	2357.720	-38.88	≤-21.20	56.32	≤74	PASS
				Peak	2390.000	-40.81	≤-21.20	54.39	≤74	PASS
		High	2462	AV	2483.500	-41.78	≤-41.20	53.42	≤54	PASS
				AV	2483.560	-41.99	≤-41.20	53.21	≤54	PASS
				AV	2500.000	-47.82	≤-41.20	47.38	≤54	PASS
				Peak	2483.500	-33.85	≤-21.20	61.35	≤74	PASS
				Peak	2484.770	-32.41	≤-21.20	62.79	≤74	PASS
				Peak	2500.000	-41.33	≤-21.20	53.87	≤74	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-48.71	≤-41.20	46.49	≤54	PASS
				AV	2389.960	-46.88	≤-41.20	48.32	≤54	PASS
				AV	2390.000	-46.88	≤-41.20	48.32	≤54	PASS
				Peak	2310.000	-40.94	≤-21.20	54.26	≤74	PASS
				Peak	2354.990	-38.37	≤-21.20	56.83	≤74	PASS
				Peak	2390.000	-38.41	≤-21.20	56.79	≤74	PASS
		High	2462	AV	2483.500	-43.66	≤-41.20	51.54	≤54	PASS
				AV	2487.960	-42.82	≤-41.20	52.38	≤54	PASS
				AV	2500.000	-47.75	≤-41.20	47.45	≤54	PASS
				Peak	2483.500	-33.19	≤-21.20	62.01	≤74	PASS
				Peak	2484.110	-32.06	≤-21.20	63.14	≤74	PASS
				Peak	2500.000	-41.16	≤-21.20	54.04	≤74	PASS
11N40SIS	Ant1	Low	2422	AV	2310.000	-48.54	≤-41.20	46.66	≤54	PASS



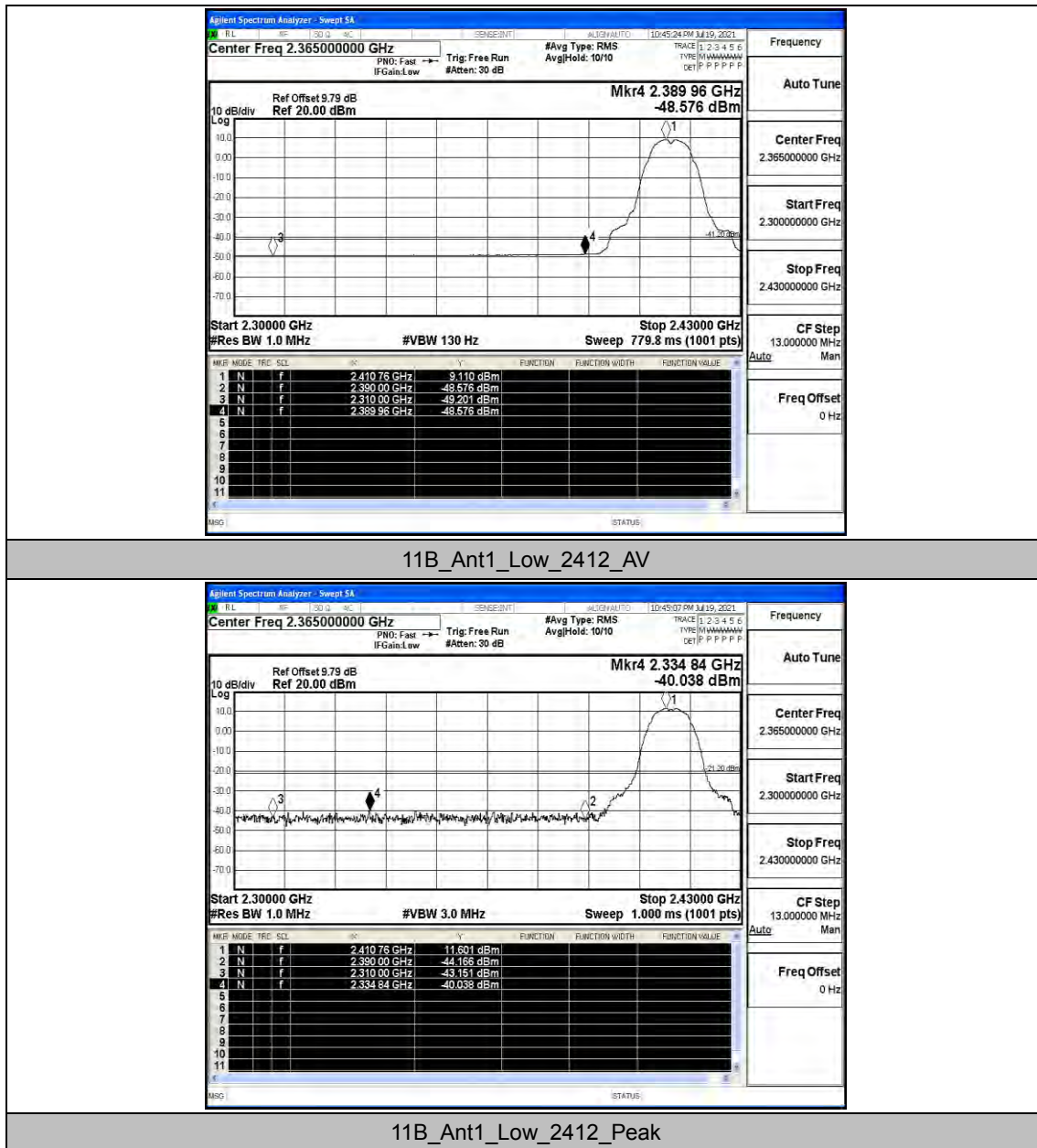
O				AV	2389.960	-42.94	≤-41.20	52.26	≤54	PASS
				AV	2390.000	-42.94	≤-41.20	52.26	≤54	PASS
				Peak	2310.000	-40.48	≤-21.20	54.72	≤74	PASS
				Peak	2387.750	-30.29	≤-21.20	64.91	≤74	PASS
				Peak	2390.000	-35.55	≤-21.20	59.65	≤74	PASS
		High	2452	AV	2483.500	-42.96	≤-41.20	52.24	≤54	PASS
				AV	2484.440	-42.42	≤-41.20	52.78	≤54	PASS
				AV	2500.000	-47.53	≤-41.20	47.67	≤54	PASS
				Peak	2483.500	-34.6	≤-21.20	60.60	≤74	PASS
				Peak	2484.110	-25.79	≤-21.20	69.41	≤74	PASS
				Peak	2500.000	-41.15	≤-21.20	54.05	≤74	PASS

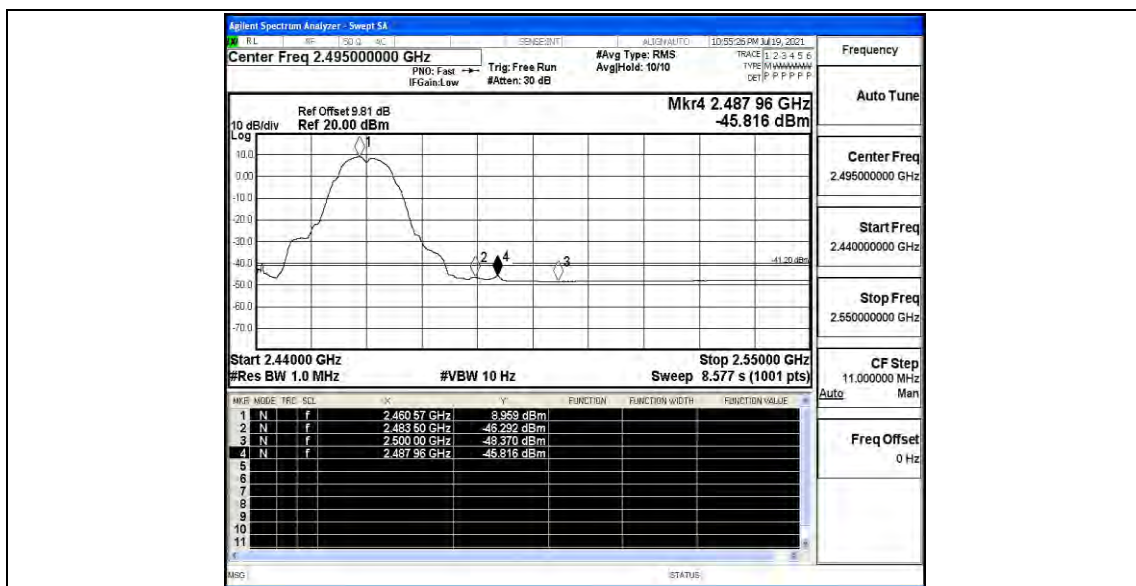
Note:

1. The Antenna Gain is compensated in the graph.
2. 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.

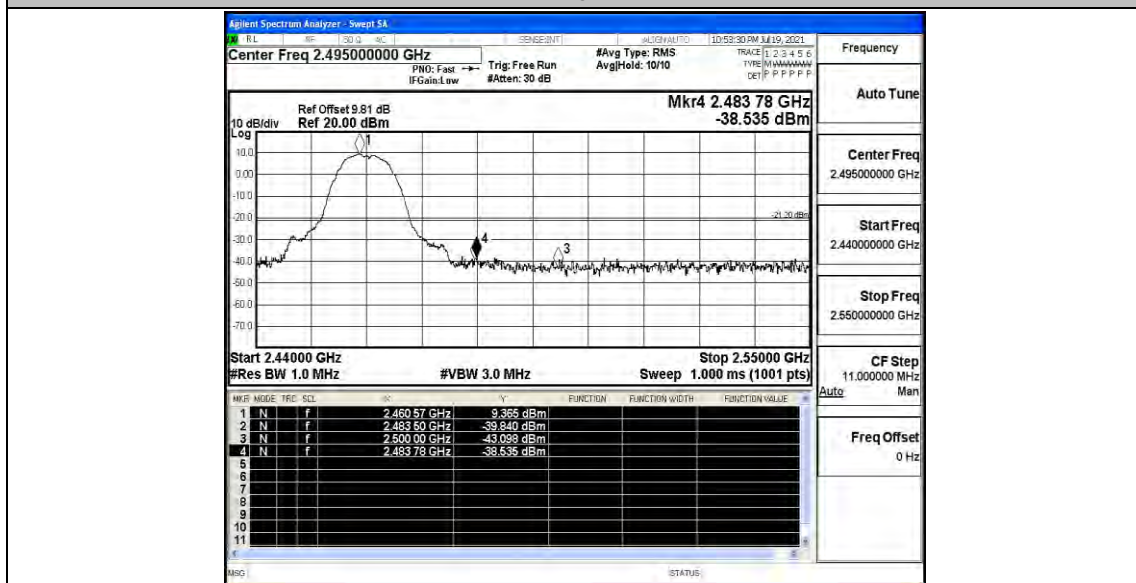


Test Graphs

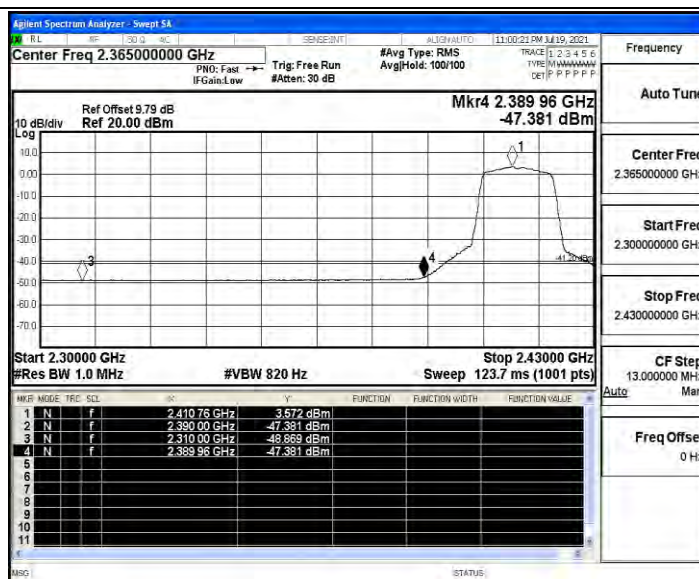




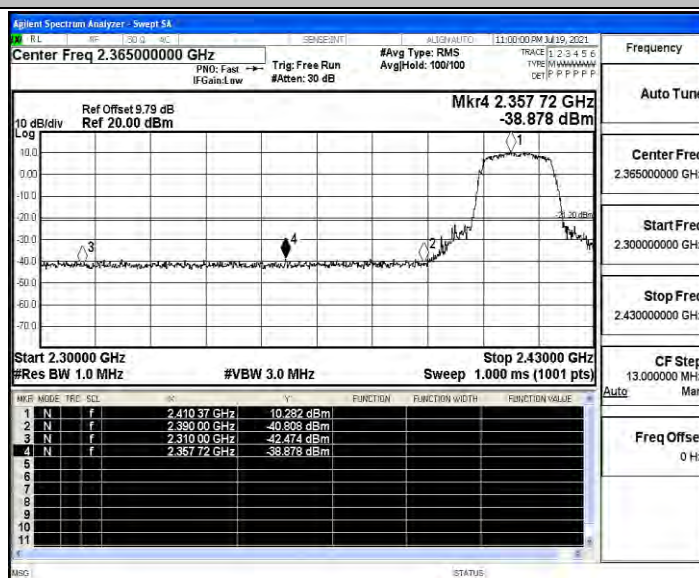
11B_Ant1_High_2462_AV



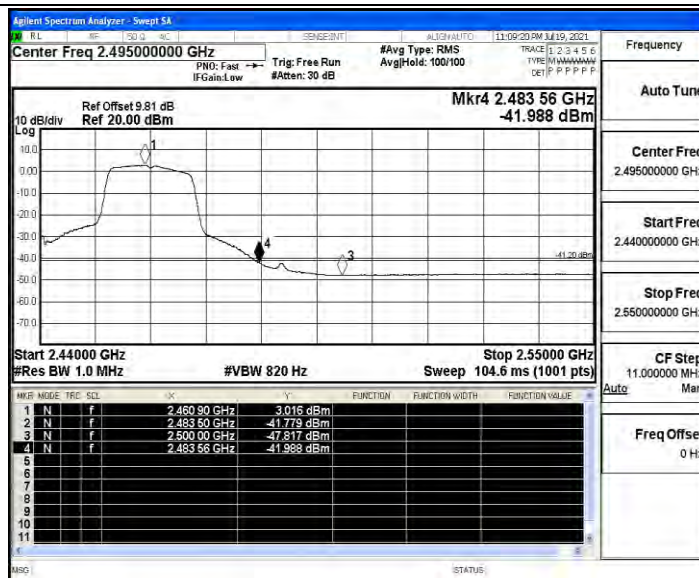
11B_Ant1_High_2462_Peak



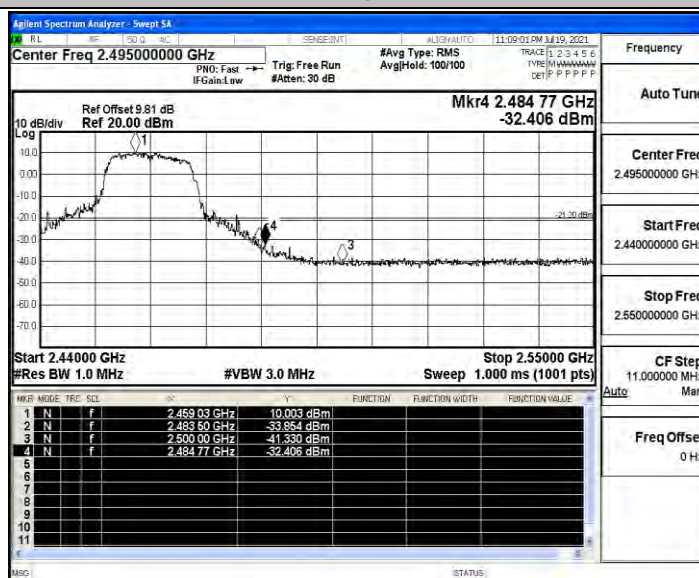
11G_Ant1_Low_2412_AV



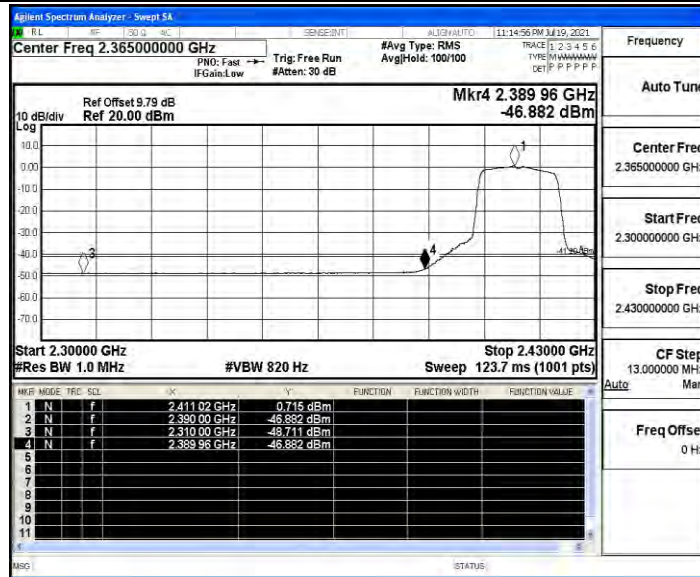
11G_Ant1_Low_2412_Peak



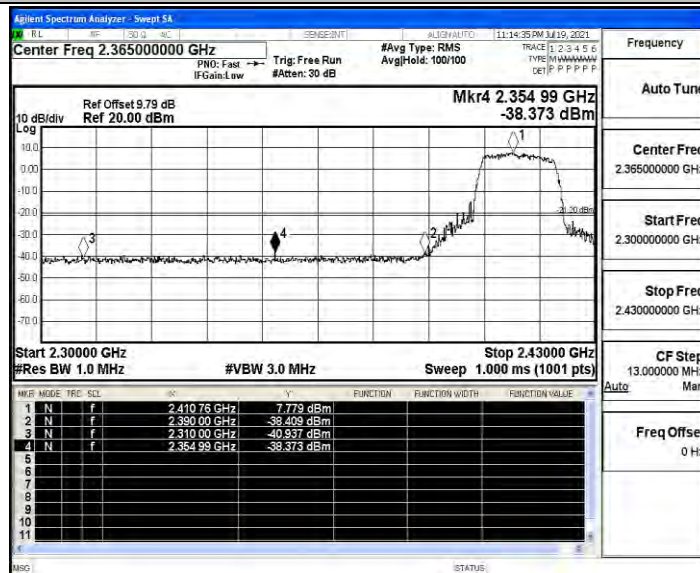
11G_Ant1_High_2462_AV



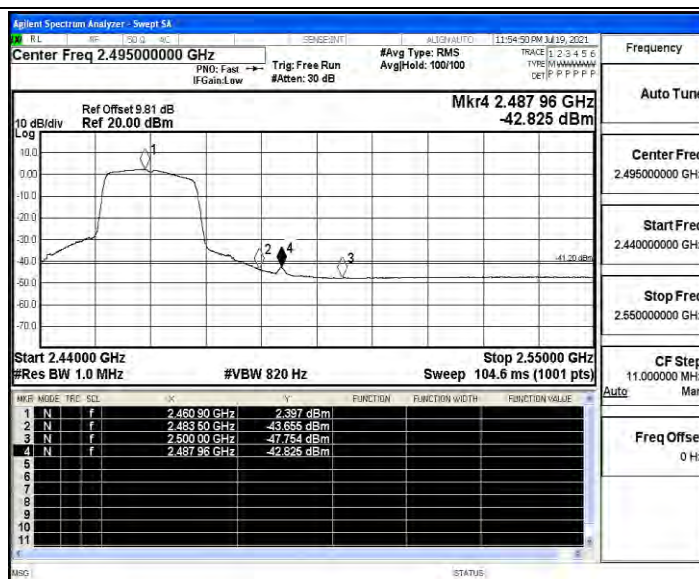
11G_Ant1_High_2462_Peak



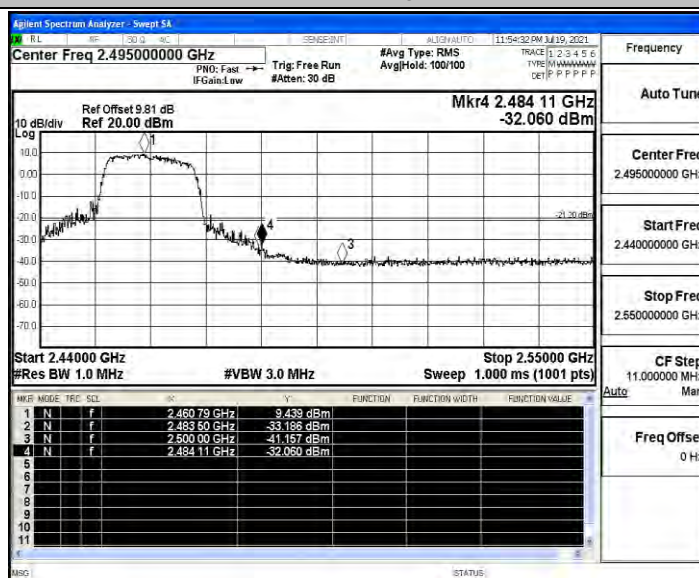
11N20SISO_Ant1_Low_2412_AV



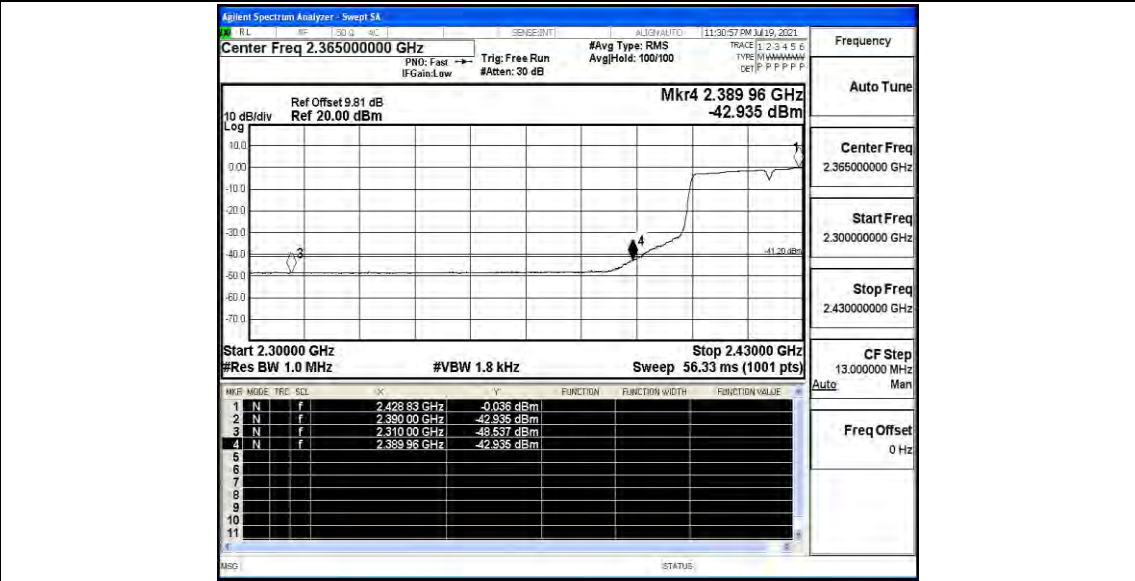
11N20SISO_Ant1_Low_2412_Peak



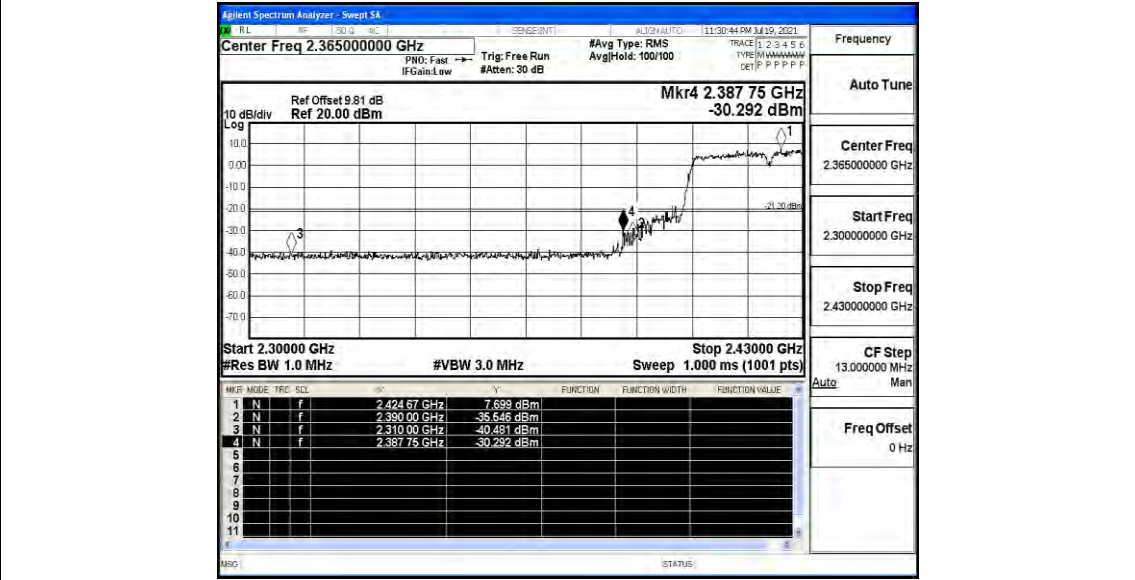
11N20SISO_Ant1_High_2462_AV



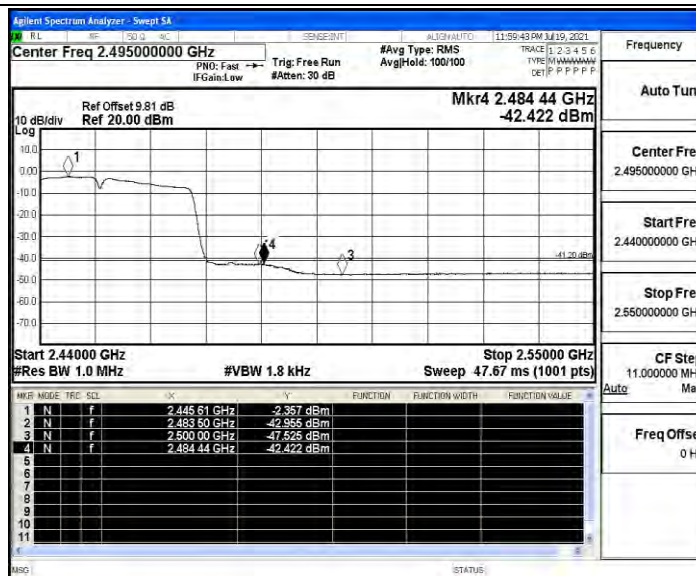
11N20SISO_Ant1_High_2462_Peak



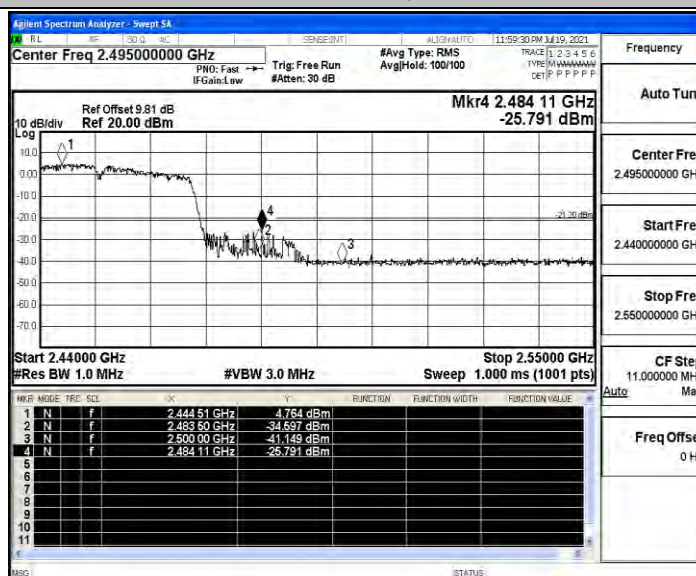
11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



11N40SISO_Ant1_High_2452_Peak