



Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: MCMP1021

Trade Mark: N/A

Test Model: MCMP1021

Environmental Conditions

Temperature:	23.6 ° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



C.1 DTS Bandwidth

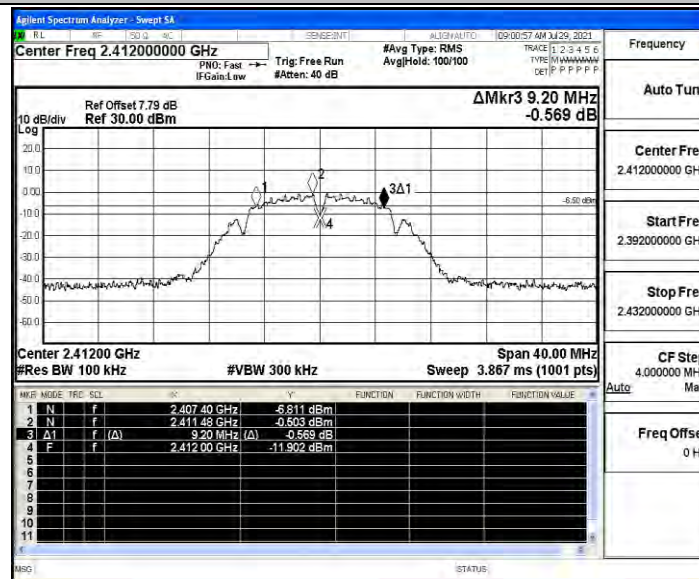
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.200	2407.400	2416.600	0.5	PASS
		2437	9.320	2432.400	2441.720	0.5	PASS
		2462	9.600	2456.960	2466.560	0.5	PASS
11G	Ant1	2412	15.280	2404.520	2419.800	0.5	PASS
		2437	12.800	2431.920	2444.720	0.5	PASS
		2462	14.520	2453.800	2468.320	0.5	PASS
11N20SISO	Ant1	2412	17.680	2403.160	2420.840	0.5	PASS
		2437	17.680	2428.200	2445.880	0.5	PASS
		2462	17.360	2453.080	2470.440	0.5	PASS

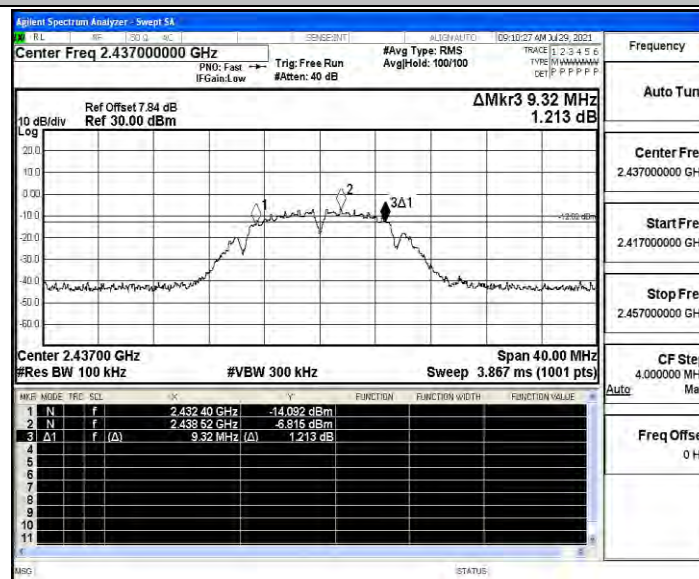


Test Graphs

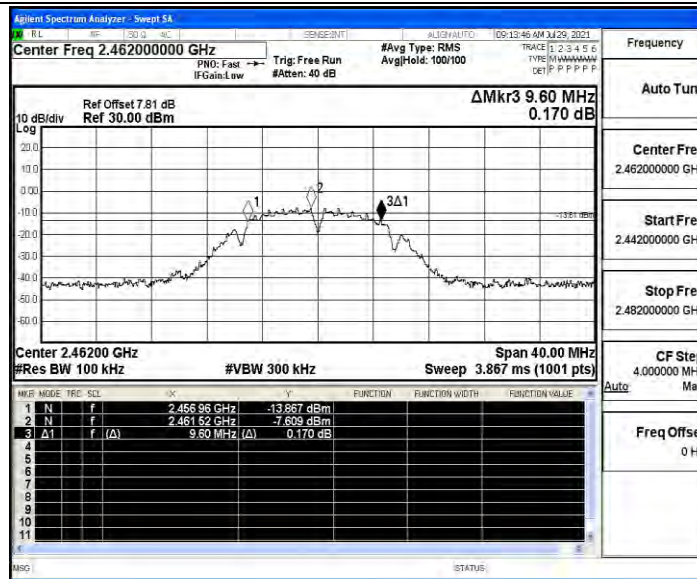
11B_Ant1_2412



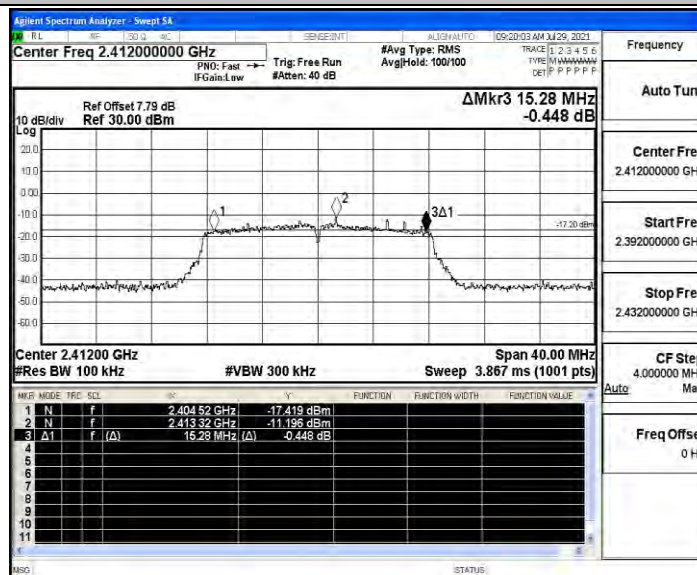
11B_Ant1_2437



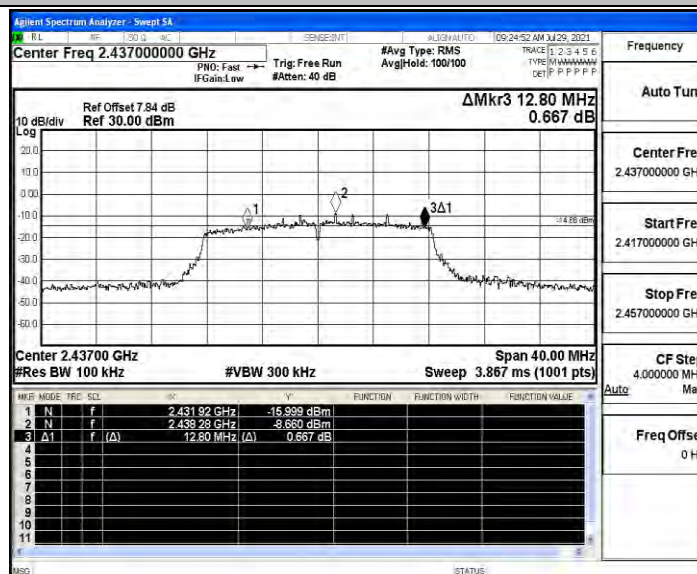
11B_Ant1_2462



11G_Ant1_2412

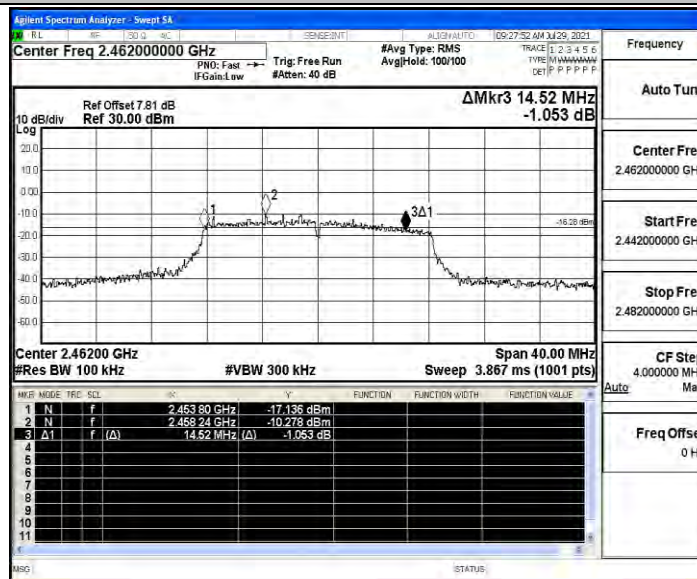


11G_Ant1_2437

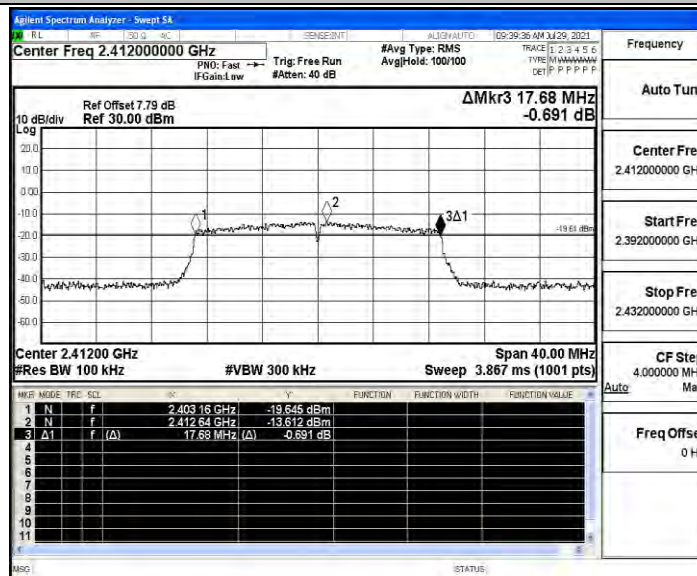




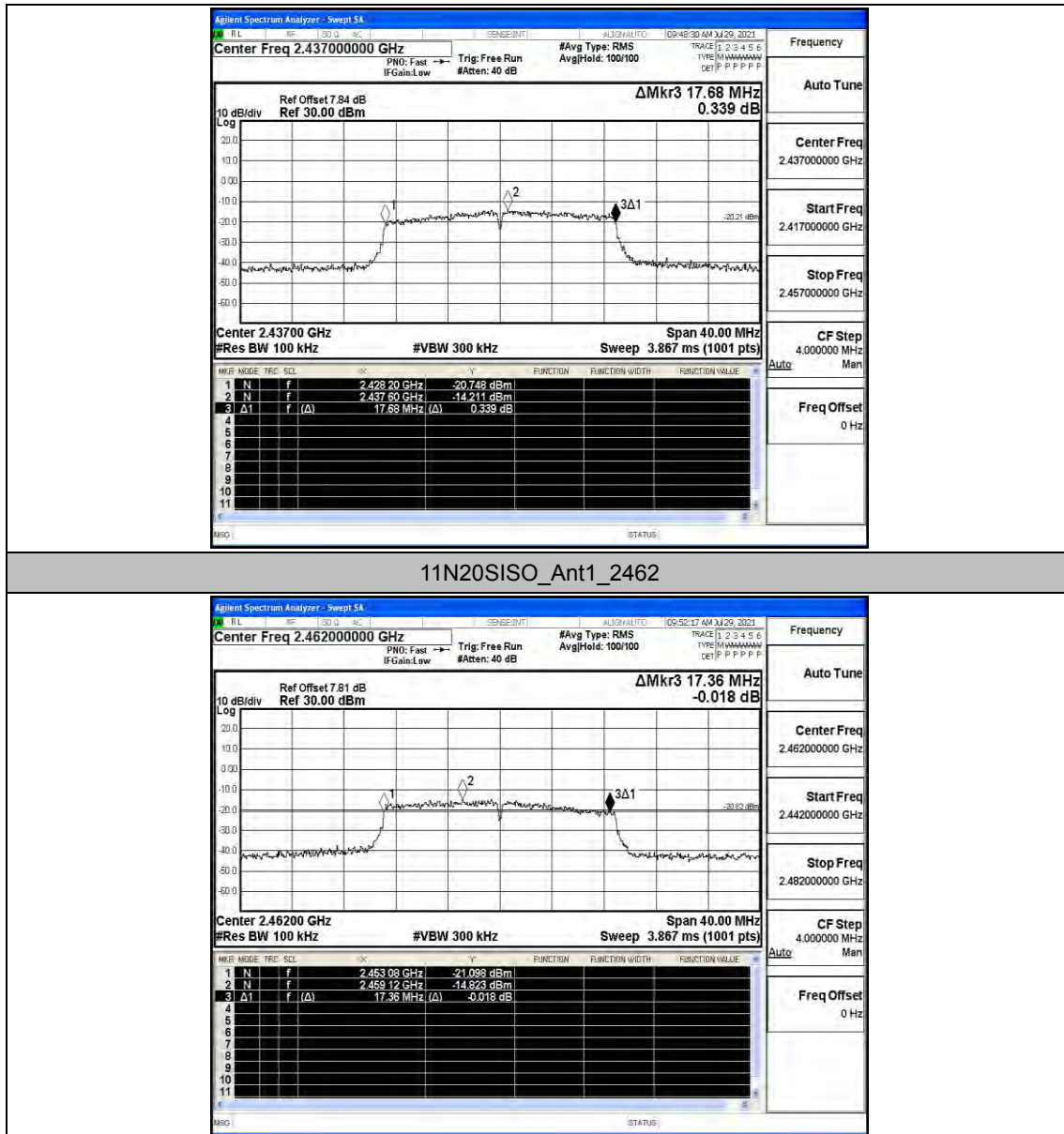
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437





C.2 Occupied Channel Bandwidth

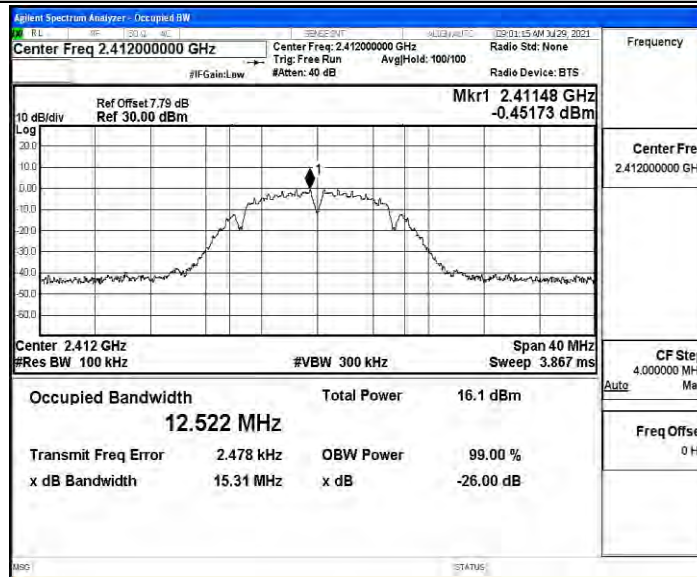
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.522	2405.741	2418.263	---	PASS
		2437	12.646	2430.822	2443.468	---	PASS
		2462	12.928	2455.343	2468.271	---	PASS
11G	Ant1	2412	16.507	2403.748	2420.255	---	PASS
		2437	16.468	2428.824	2445.292	---	PASS
		2462	16.673	2453.507	2470.180	---	PASS
11N20SISO	Ant1	2412	17.647	2403.184	2420.831	---	PASS
		2437	17.707	2428.206	2445.913	---	PASS
		2462	17.738	2453.070	2470.808	---	PASS

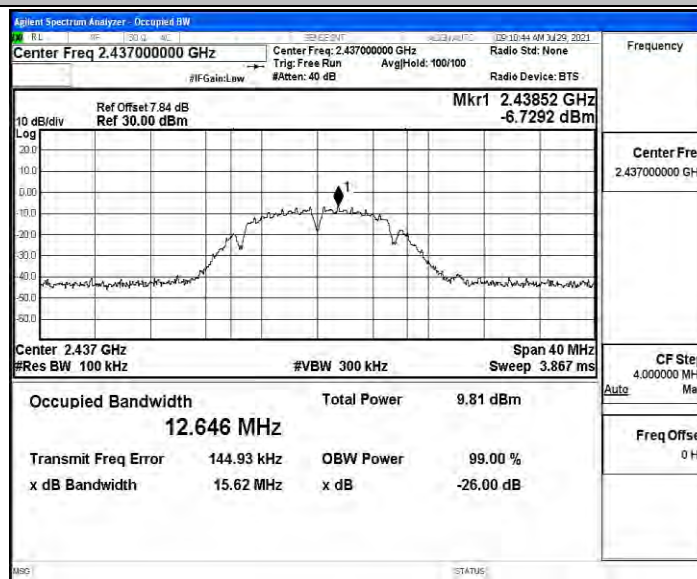


Test Graphs

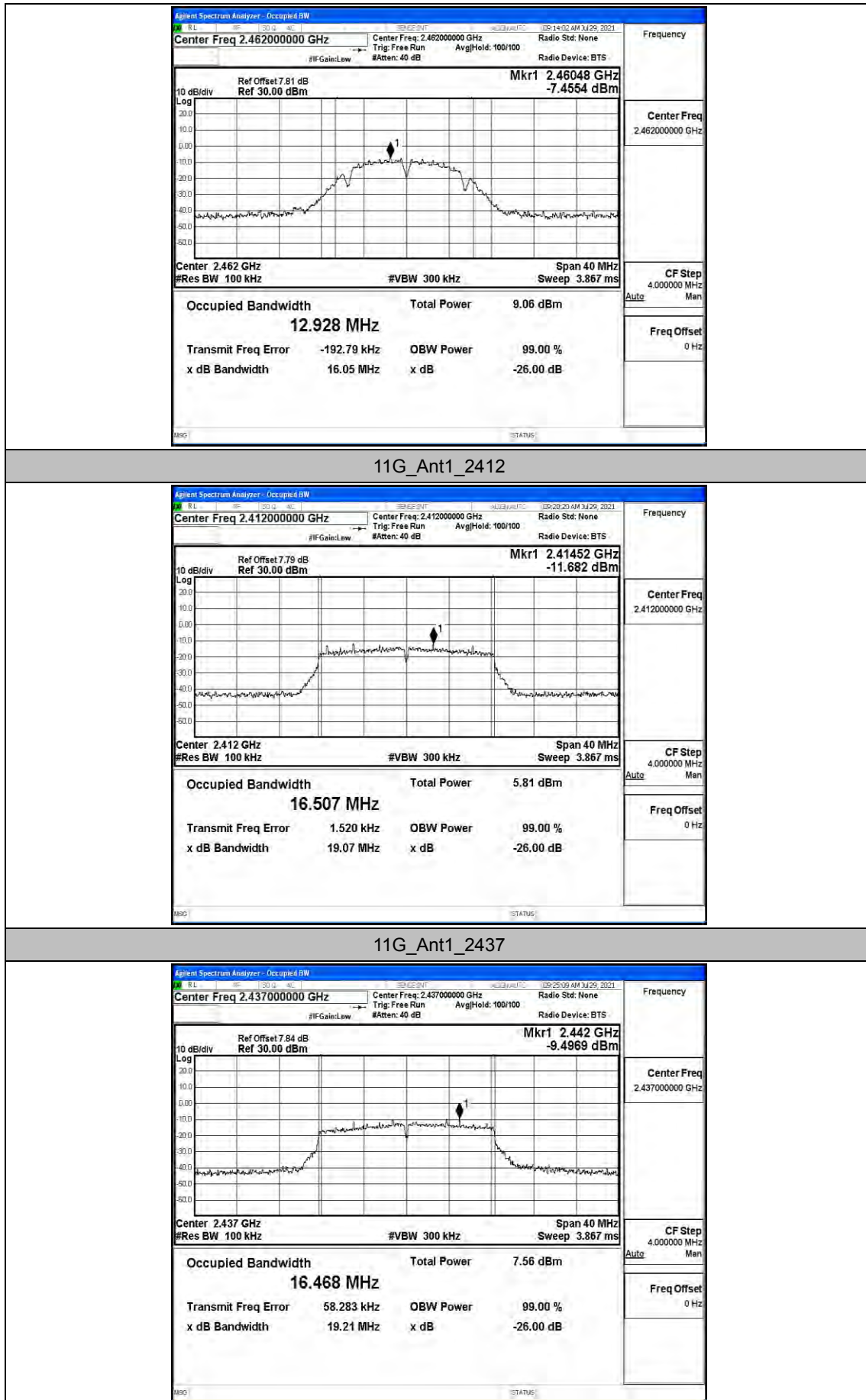
11B_Ant1_2412



11B_Ant1_2437

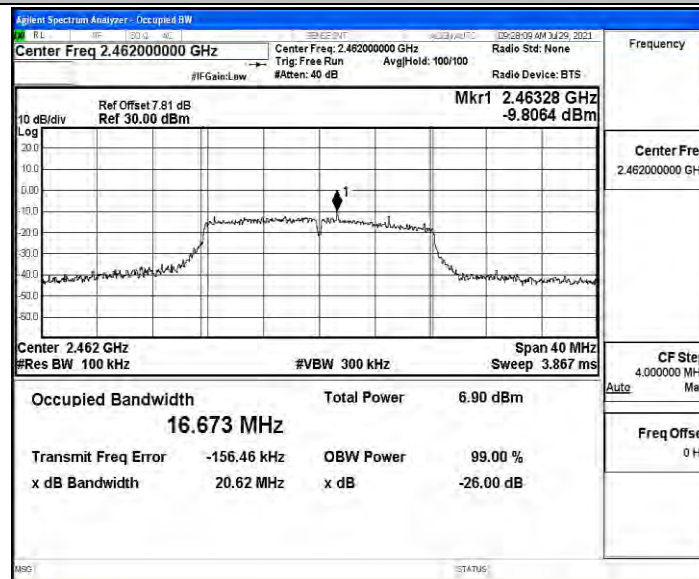


11B_Ant1_2462

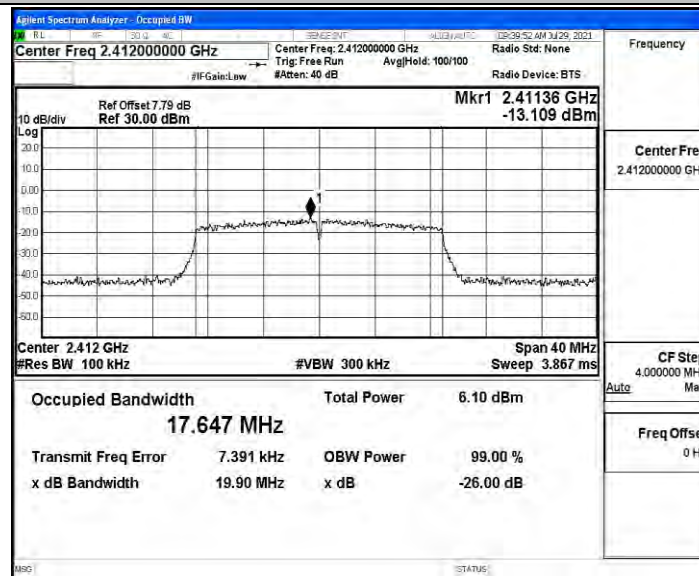




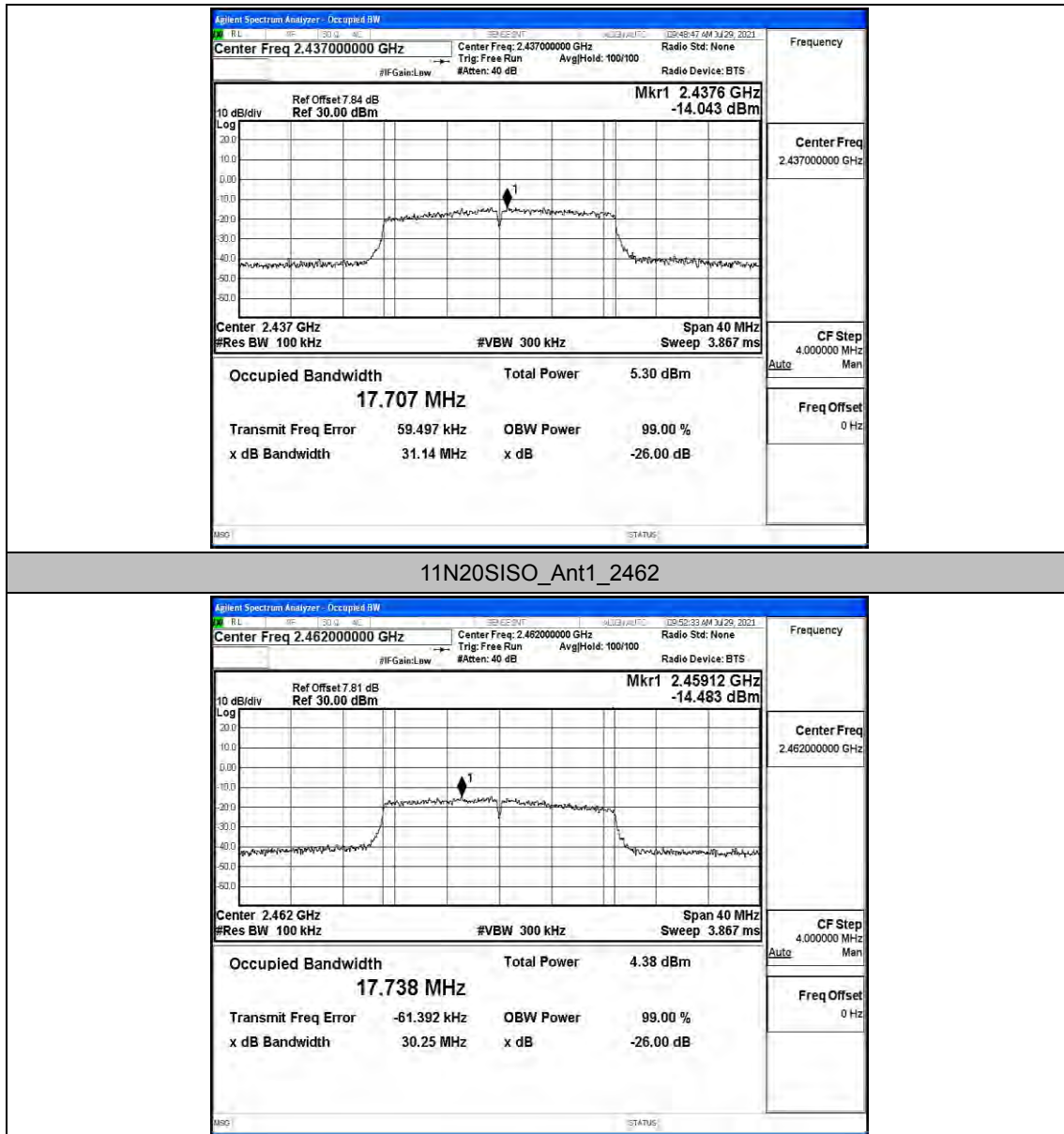
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437





C.3 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Meas. Level [dBm]	Report Conducted Power(dBm)	Limit [dBm]	Verdict
11B	Ant1	2412	13.22	13.22	30	PASS
		2437	13.28	13.28	30	PASS
		2462	14.11	14.11	30	PASS
11G	Ant1	2412	13.02	13.02	30	PASS
		2437	13.15	13.15	30	PASS
		2462	12.89	12.89	30	PASS
11N20SISO	Ant1	2412	12.76	12.76	30	PASS
		2437	12.86	12.86	30	PASS
		2462	13.07	13.07	30	PASS

Note: The Duty Cycle Factor is compensated in the graph.



C.4 Maximum power spectral density

Test Result

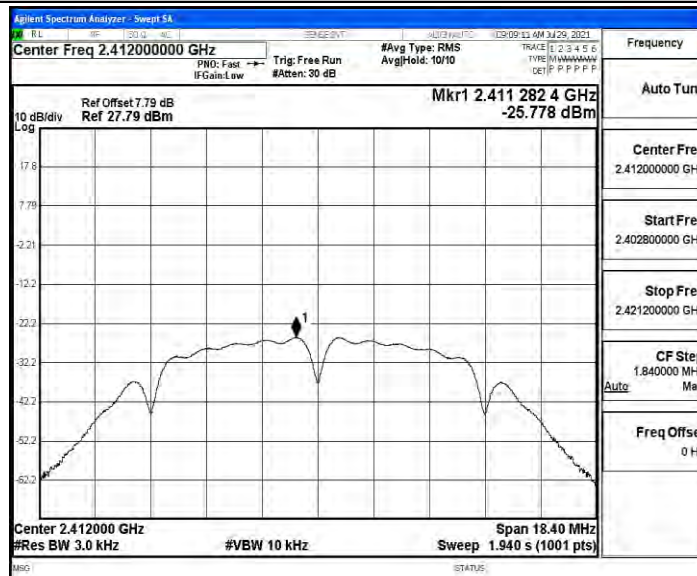
TestMode	Antenna	Channel	Meas. Level [dBm]	Result [dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-25.78	-25.78	≤8	PASS
		2437	-25.17	-25.17	≤8	PASS
		2462	-25.94	-25.94	≤8	PASS
11G	Ant1	2412	-30.48	-30.48	≤8	PASS
		2437	-28.63	-28.63	≤8	PASS
		2462	-28.54	-28.54	≤8	PASS
11N20SISO	Ant1	2412	-27.86	-27.86	≤8	PASS
		2437	-27.59	-27.59	≤8	PASS
		2462	-28.42	-28.42	≤8	PASS

Note: The Duty Cycle Factor is compensated in the graph.

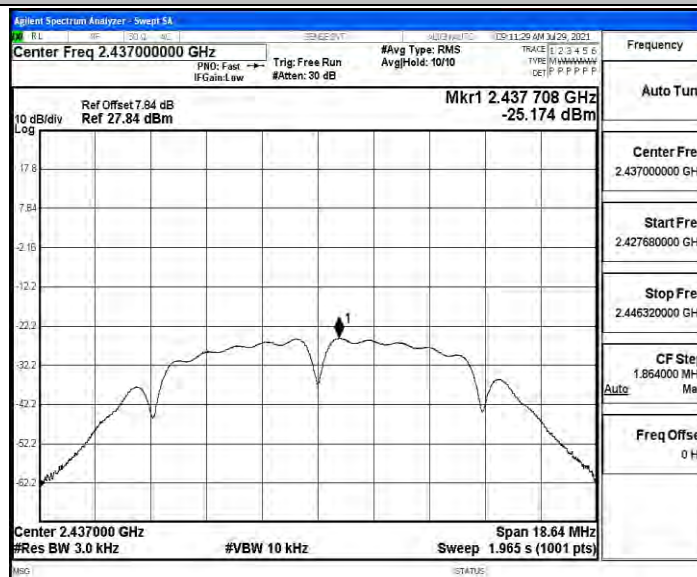


Test Graphs

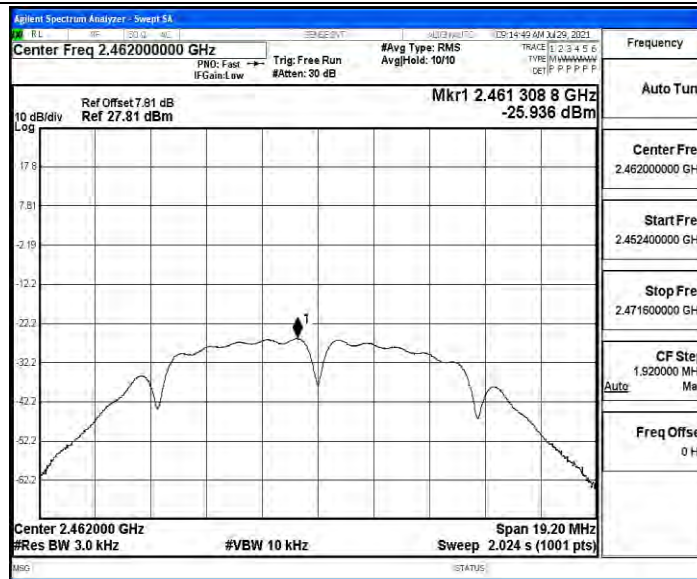
11B_Ant1_2412



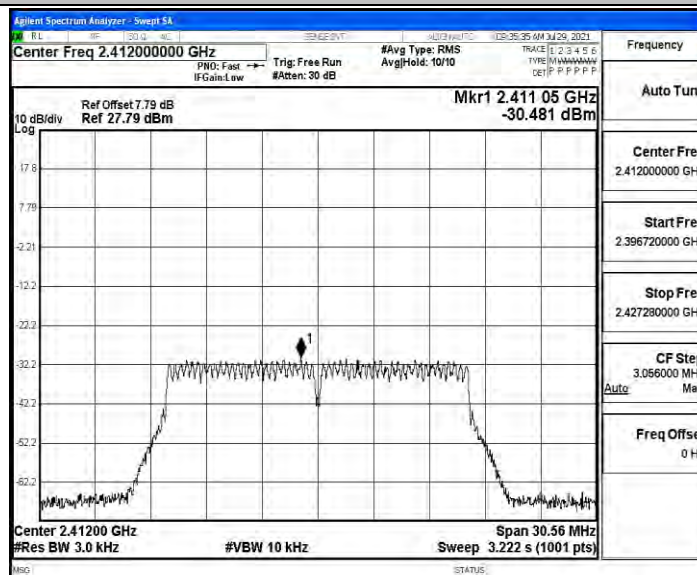
11B_Ant1_2437



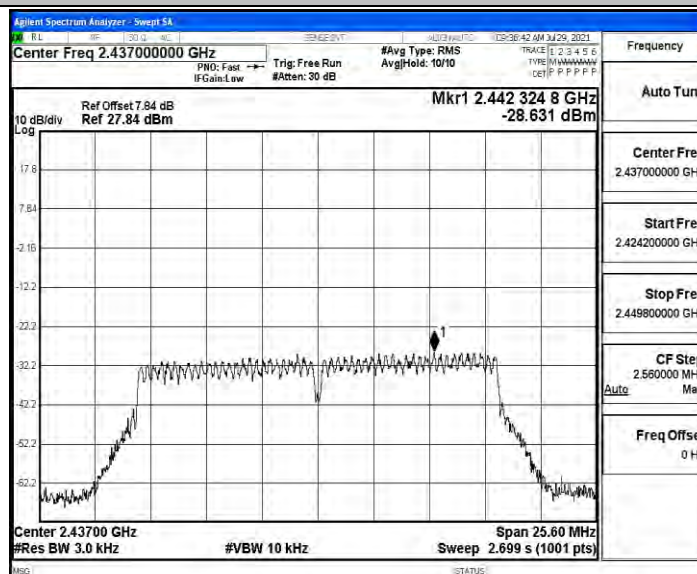
11B_Ant1_2462



11G_Ant1_2412

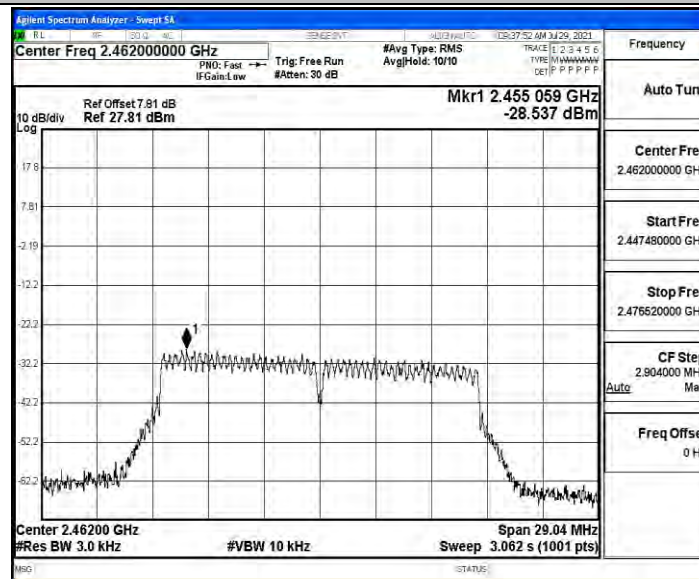


11G_Ant1_2437

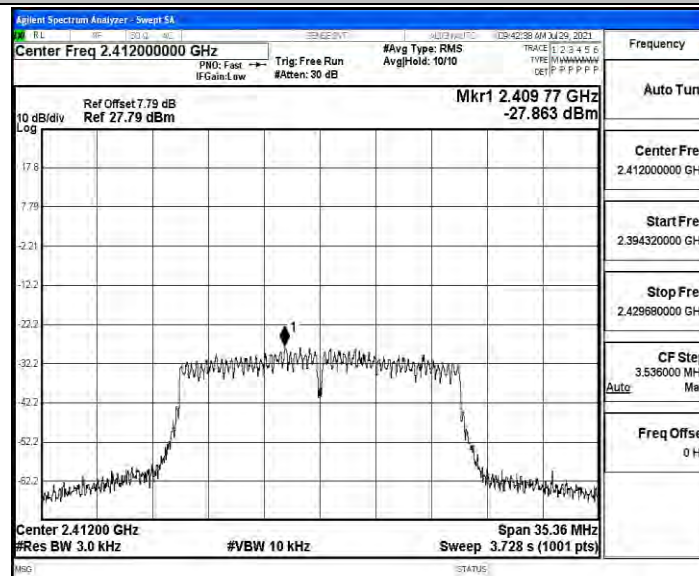




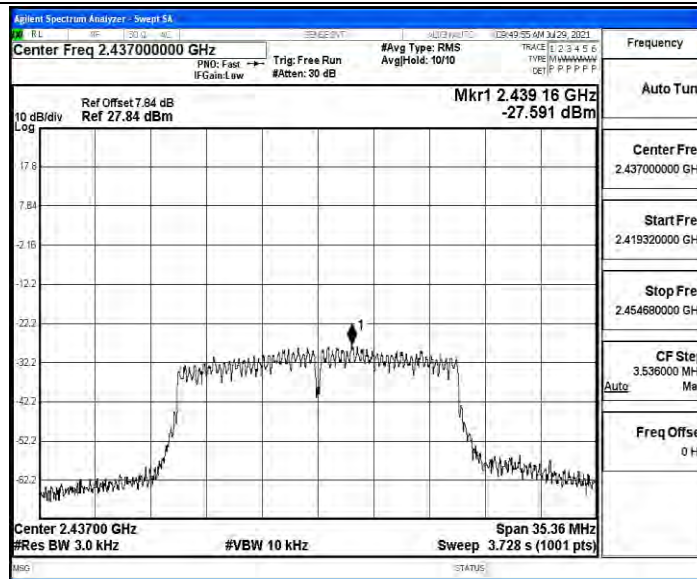
11G_Ant1_2462



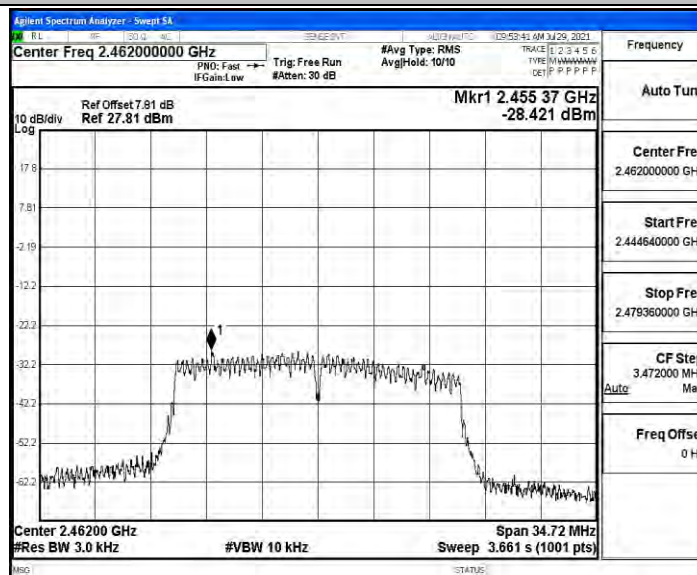
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462





C.5 Band edge measurements

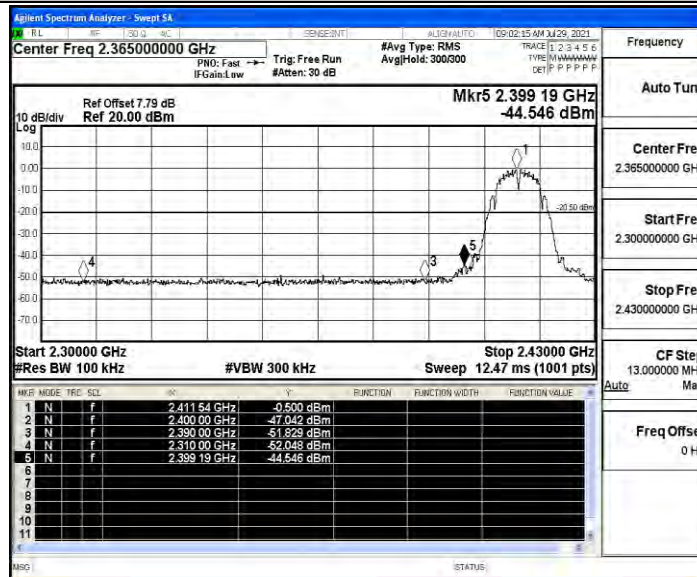
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-0.50	-44.55	≤ -20.5	PASS
		High	2462	-7.39	-49.13	≤ -27.39	PASS
11G	Ant1	Low	2412	-11.14	-46.59	≤ -31.14	PASS
		High	2462	-9.64	-49.17	≤ -29.64	PASS
11N20SISO	Ant1	Low	2412	-14.20	-43.32	≤ -34.2	PASS
		High	2462	-14.74	-48.56	≤ -34.74	PASS

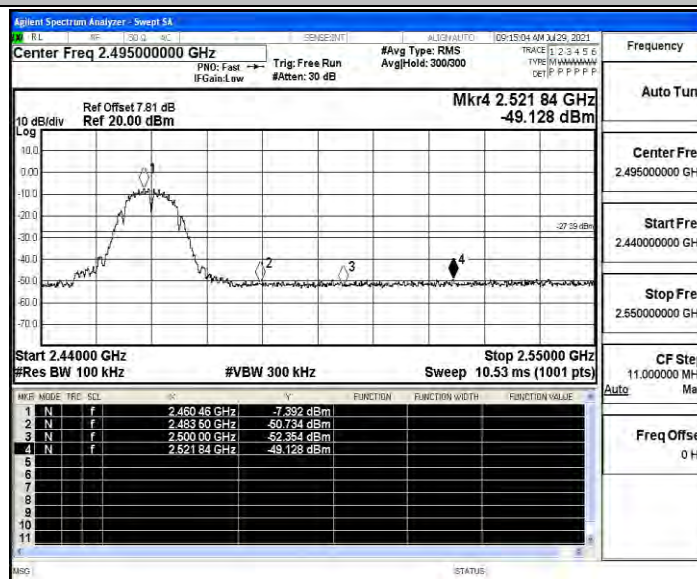


Test Graphs

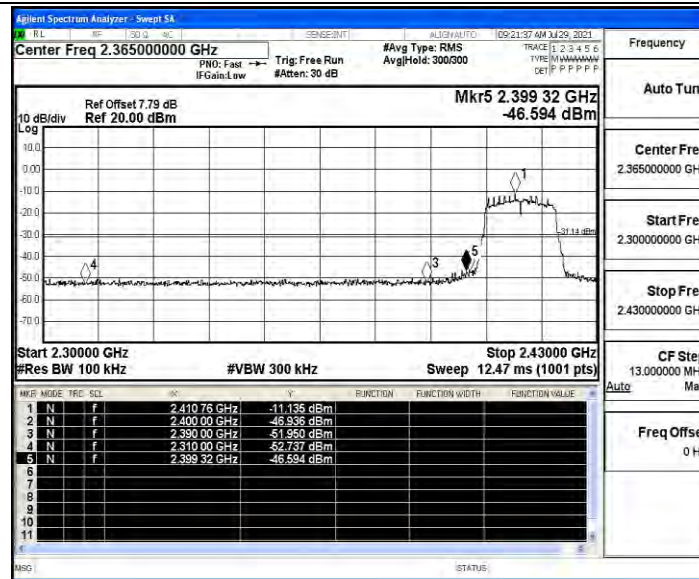
11B_Ant1_Low_2412



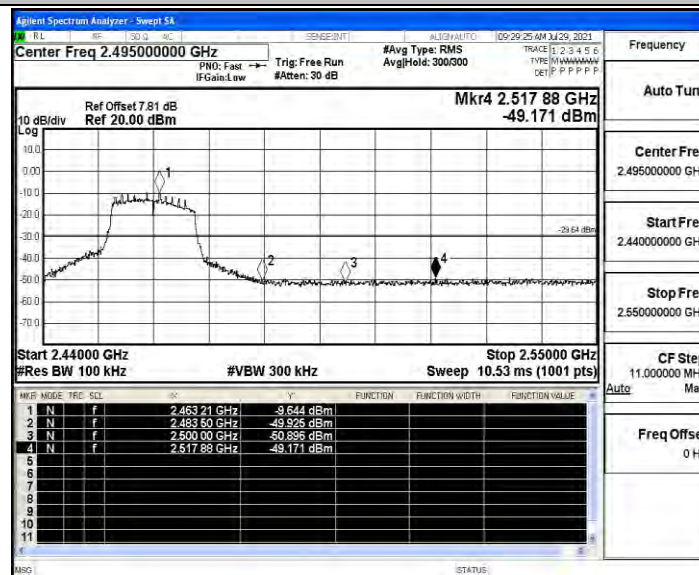
11B_Ant1_High_2462



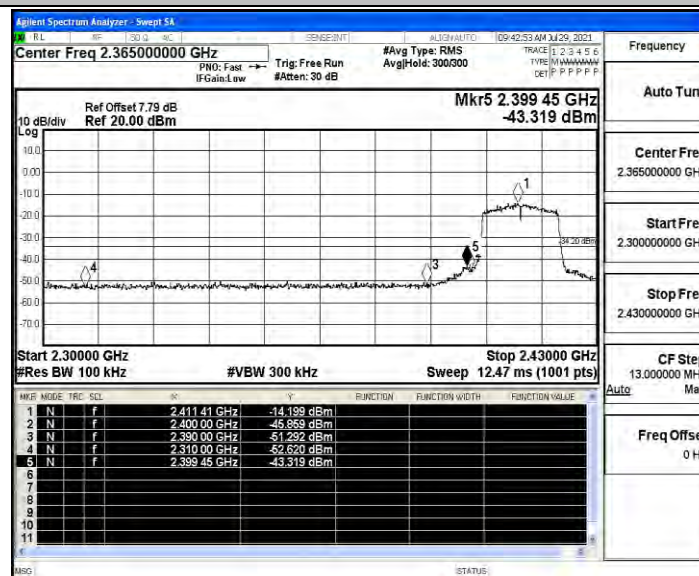
11G_Ant1_Low_2412

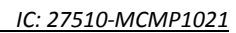


11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412







C.6 Conducted Spurious Emission

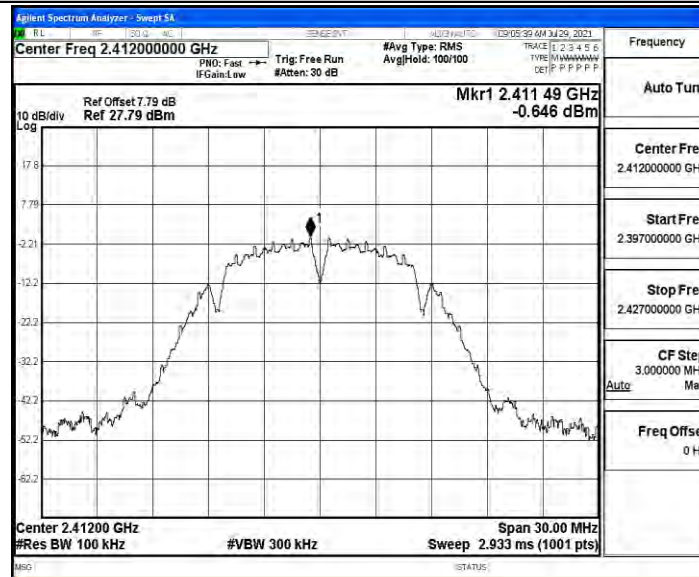
Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-0.65	-0.65	---	PASS
			30~1000	-0.65	-62.26	≤-20.65	PASS
			1000~26500	-0.65	-47.26	≤-20.65	PASS
		2437	Reference	-6.84	-6.84	---	PASS
			30~1000	-6.84	-58.8	≤-26.84	PASS
			1000~26500	-6.84	-46.55	≤-26.84	PASS
		2462	Reference	-7.41	-7.41	---	PASS
			30~1000	-7.41	-60.44	≤-27.41	PASS
			1000~26500	-7.41	-47.28	≤-27.41	PASS
11G	Ant1	2412	Reference	-11.10	-11.10	---	PASS
			30~1000	-11.10	-60.23	≤-31.1	PASS
			1000~26500	-11.10	-47.41	≤-31.1	PASS
		2437	Reference	-9.77	-9.77	---	PASS
			30~1000	-9.77	-59.35	≤-29.77	PASS
			1000~26500	-9.77	-47.37	≤-29.77	PASS
		2462	Reference	-9.87	-9.87	---	PASS
			30~1000	-9.87	-60.46	≤-29.87	PASS
			1000~26500	-9.87	-47.31	≤-29.87	PASS
11N20SISO	Ant1	2412	Reference	-14.43	-14.43	---	PASS
			30~1000	-14.43	-61.62	≤-34.43	PASS
			1000~26500	-14.43	-47.93	≤-34.43	PASS
		2437	Reference	-14.24	-14.24	---	PASS
			30~1000	-14.24	-61.72	≤-34.24	PASS
			1000~26500	-14.24	-47.83	≤-34.24	PASS
		2462	Reference	-15.17	-15.17	---	PASS
			30~1000	-15.17	-61.69	≤-35.17	PASS
			1000~26500	-15.17	-47.09	≤-35.17	PASS

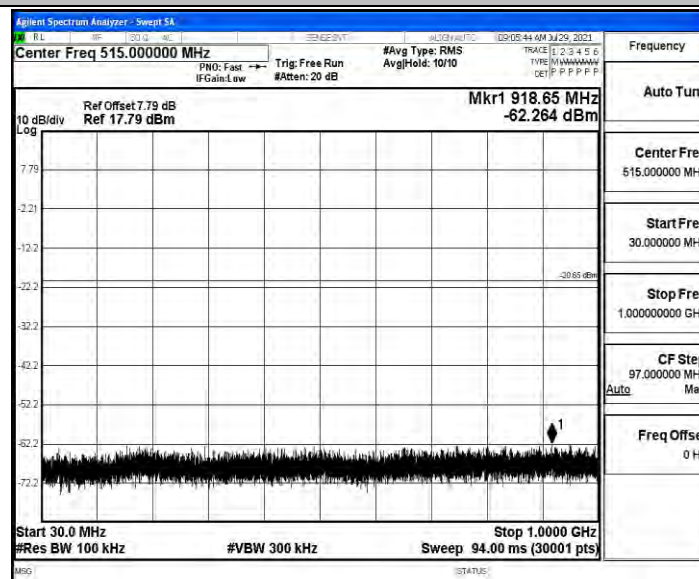


Test Graphs

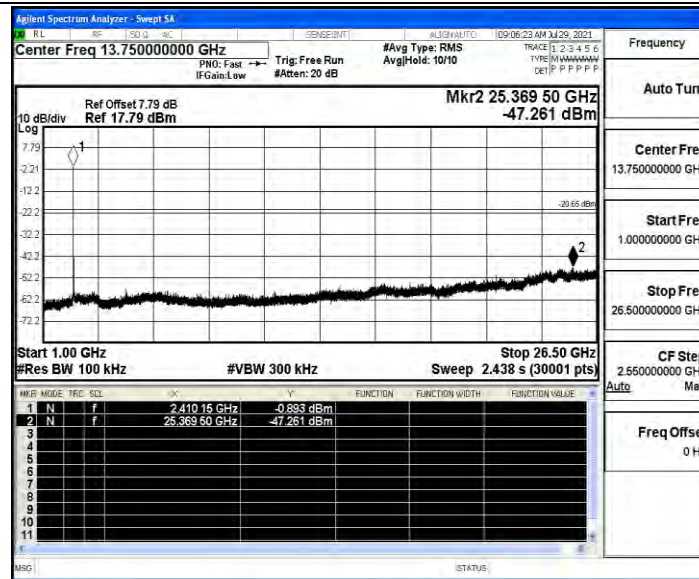
11B_Ant1_2412_0~Reference



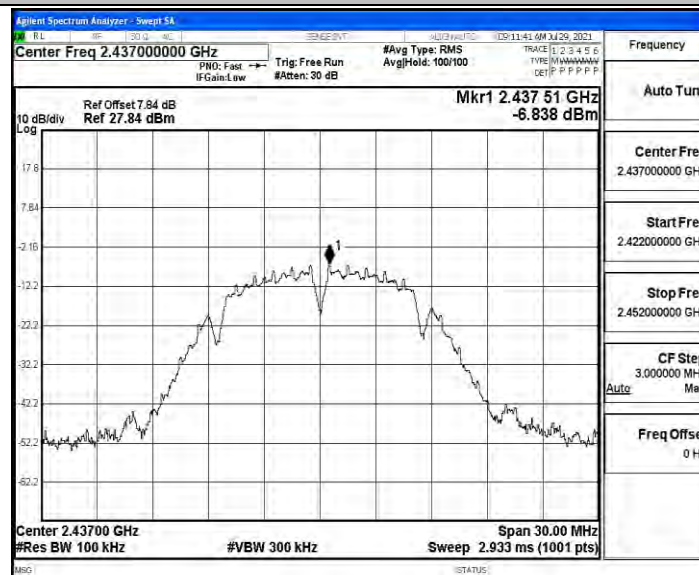
11B_Ant1_2412_30~1000



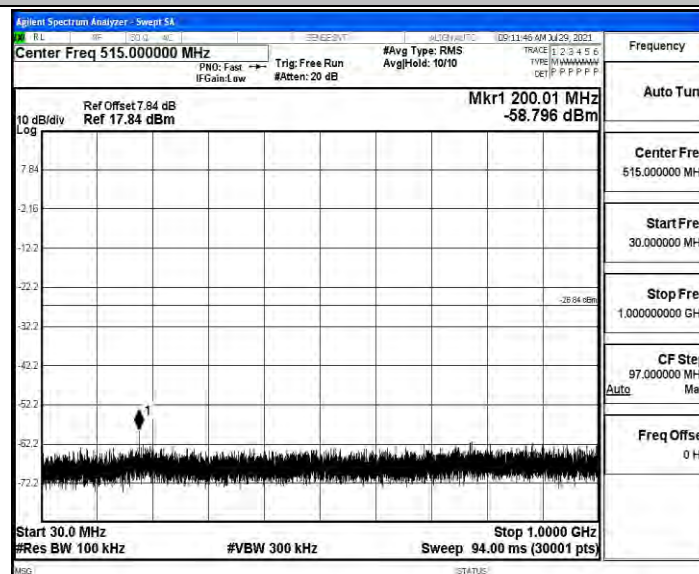
11B_Ant1_2412_1000~26500



11B_Ant1_2437_0~Reference

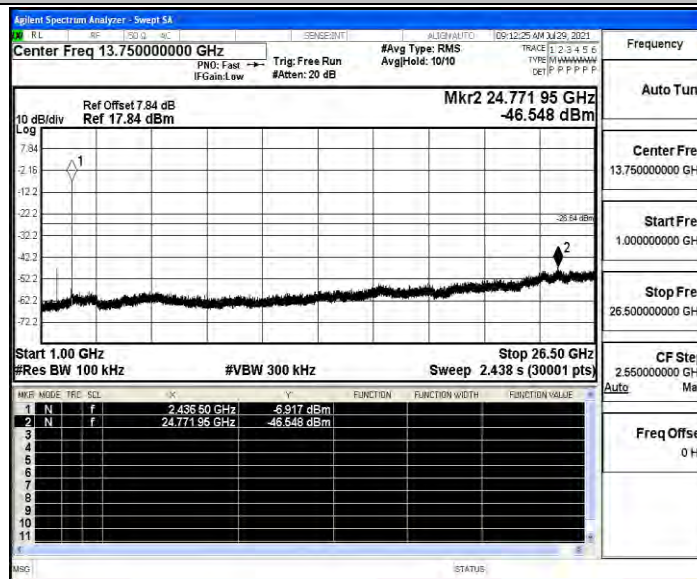


11B_Ant1_2437_30~1000

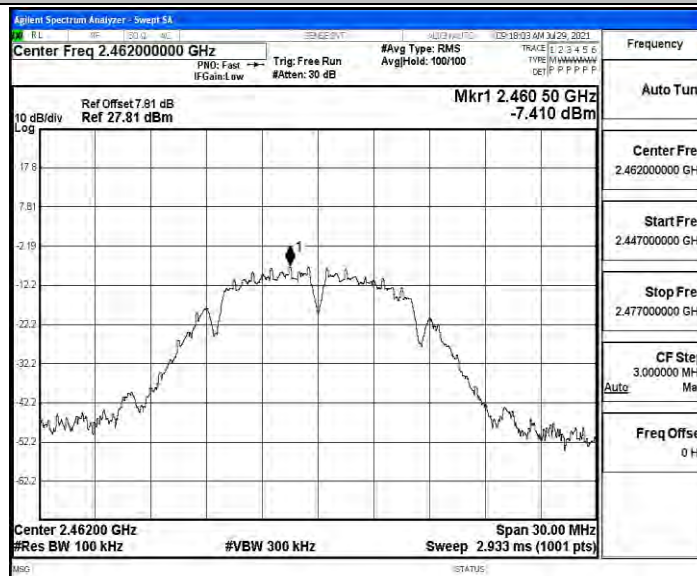




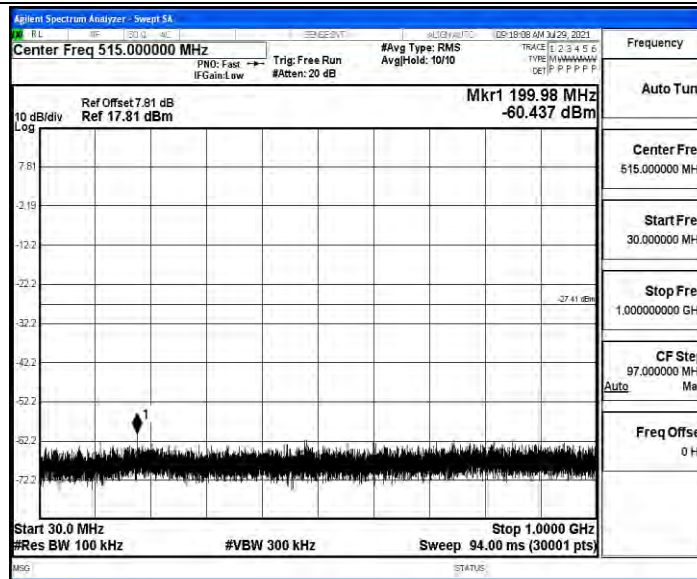
11B_Ant1_2437_1000~26500



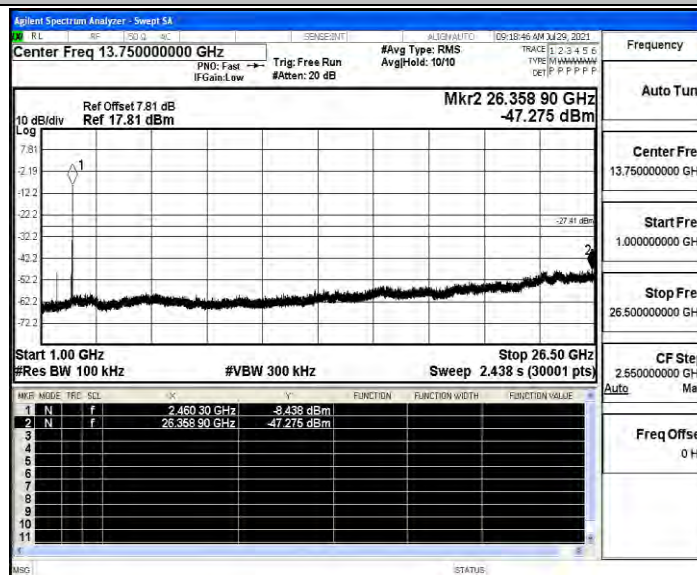
11B_Ant1_2462_0~Reference



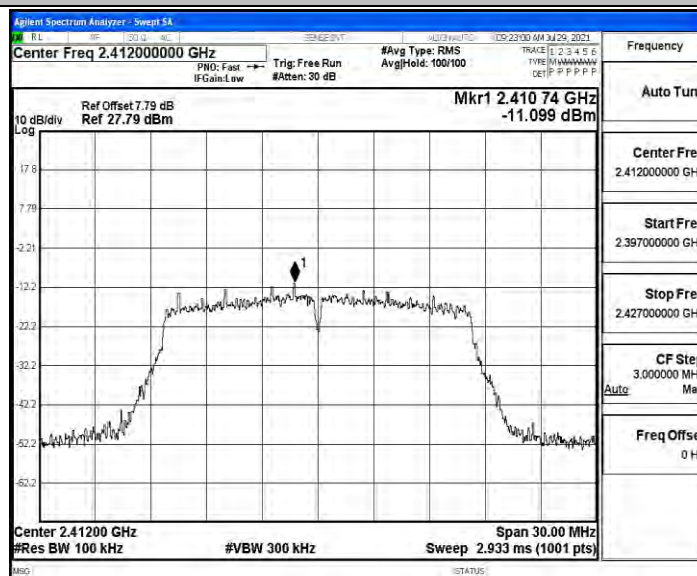
11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500

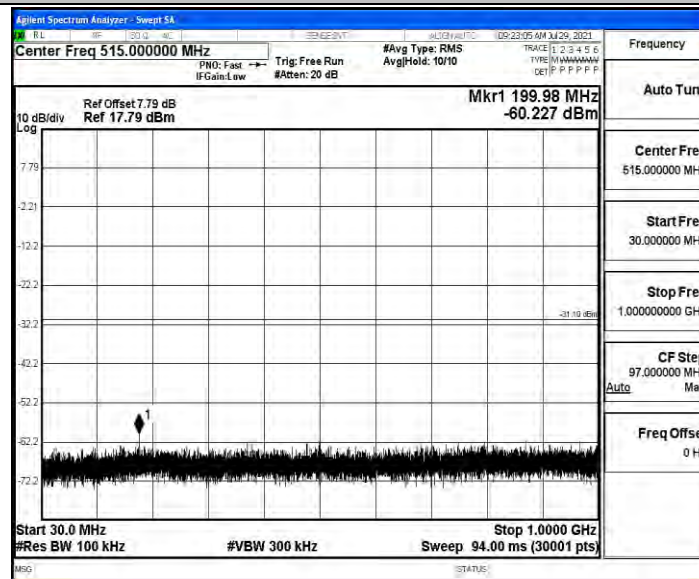


11G_Ant1_2412_0~Reference

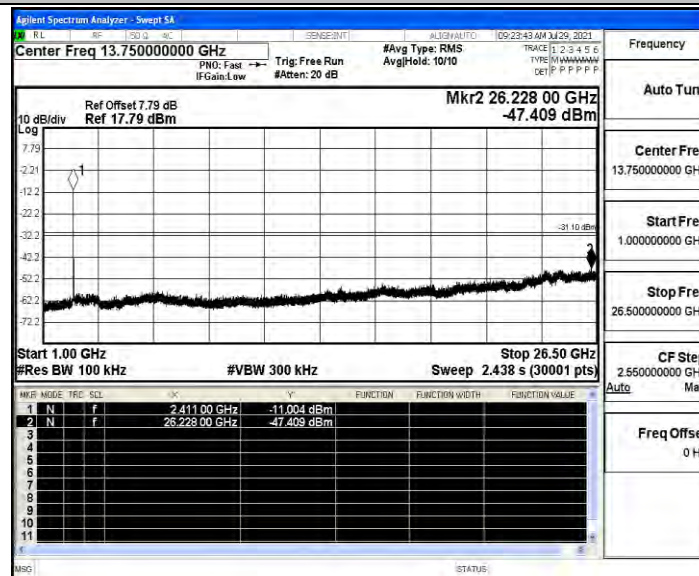




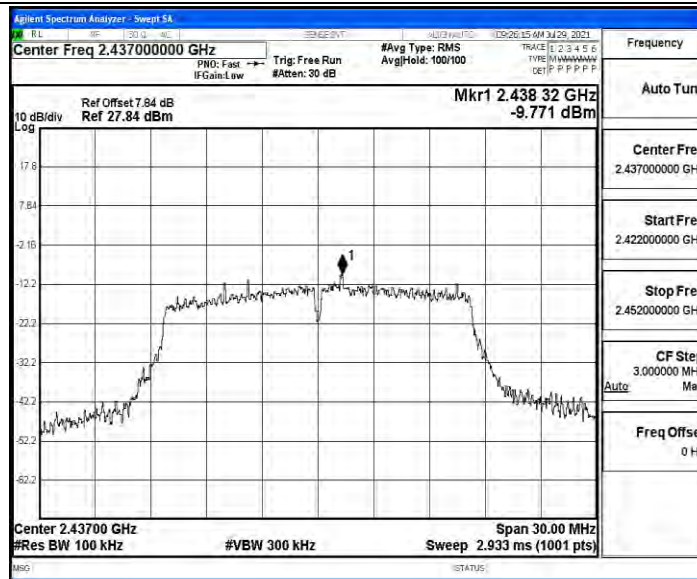
11G_Ant1_2412_30~1000



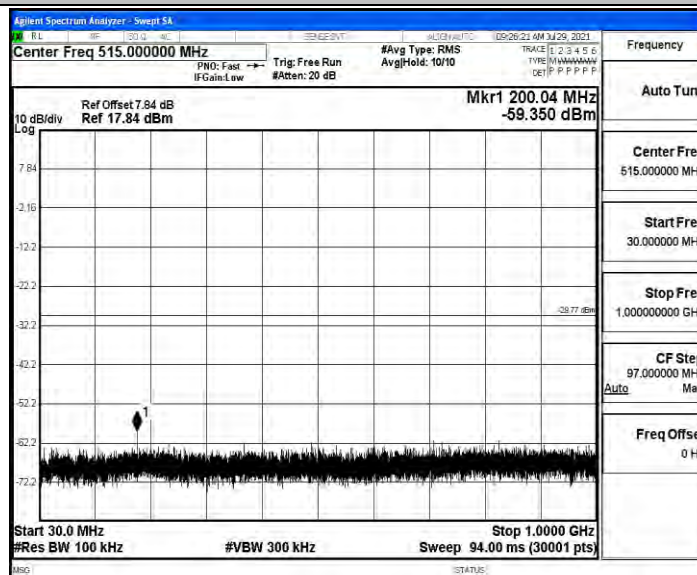
11G_Ant1_2412_1000~26500



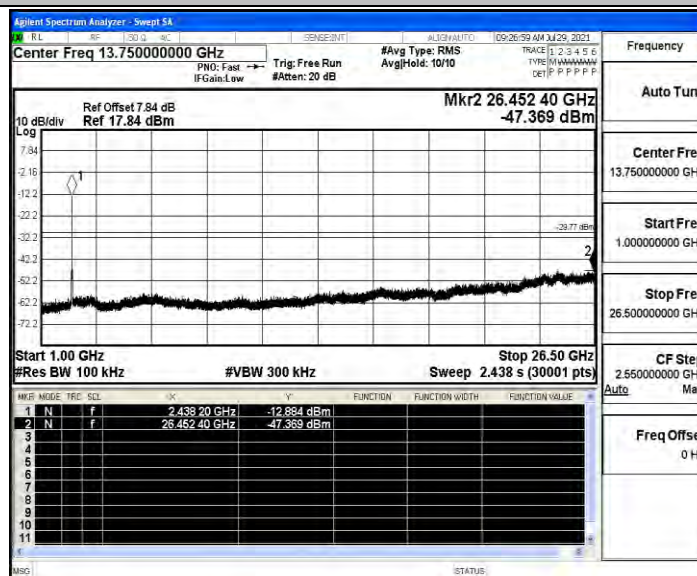
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000

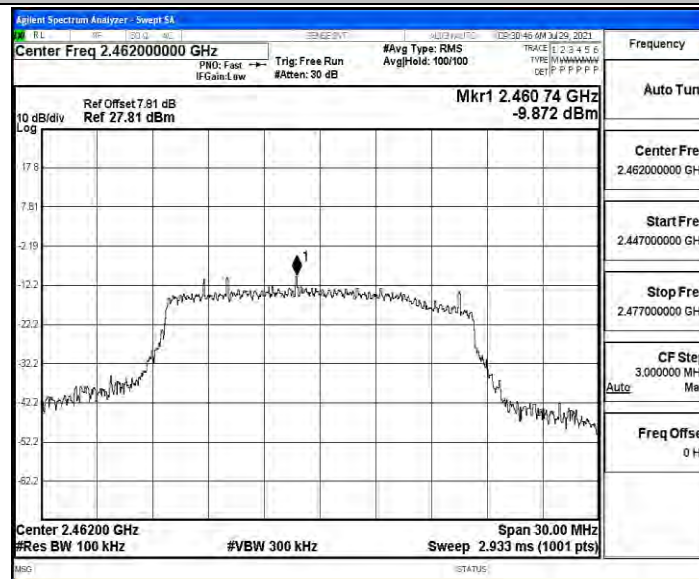


11G_Ant1_2437_1000~26500

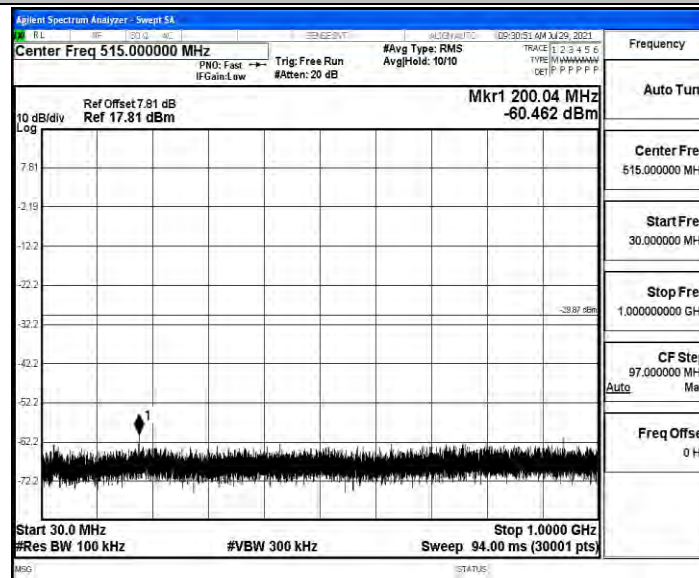




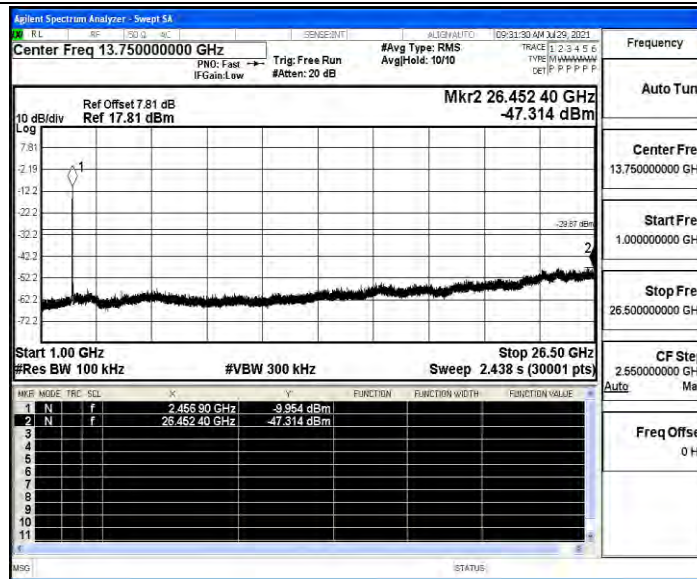
11G_Ant1_2462_0~Reference



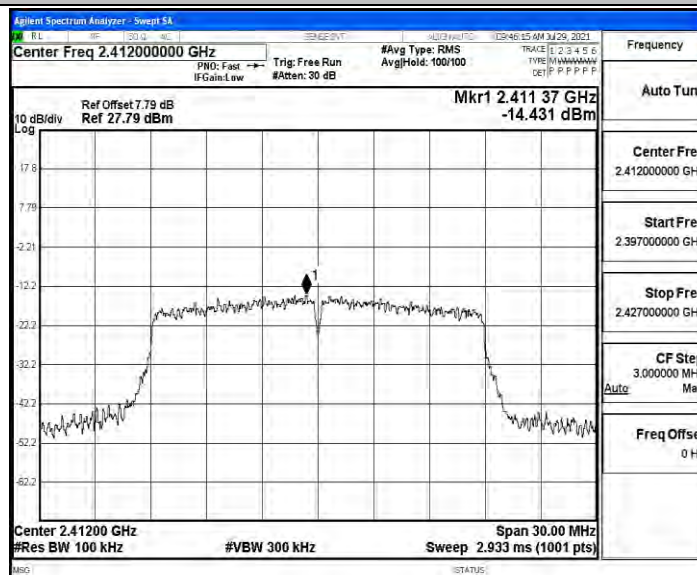
11G_Ant1_2462_30~1000



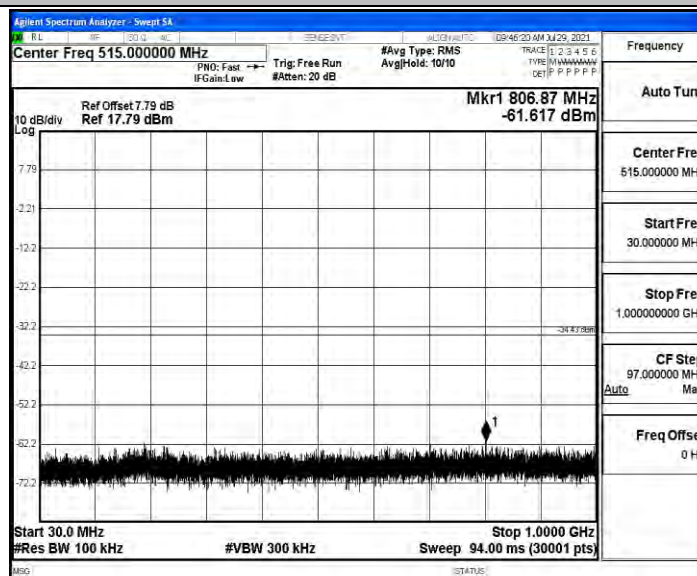
11G_Ant1_2462_1000~26500



11N20SISO_Ant1_2412_0~Reference

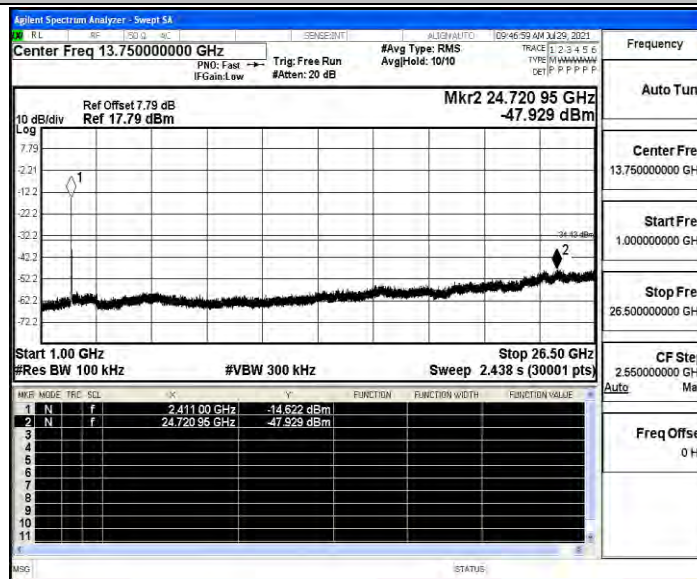


11N20SISO_Ant1_2412_30~1000

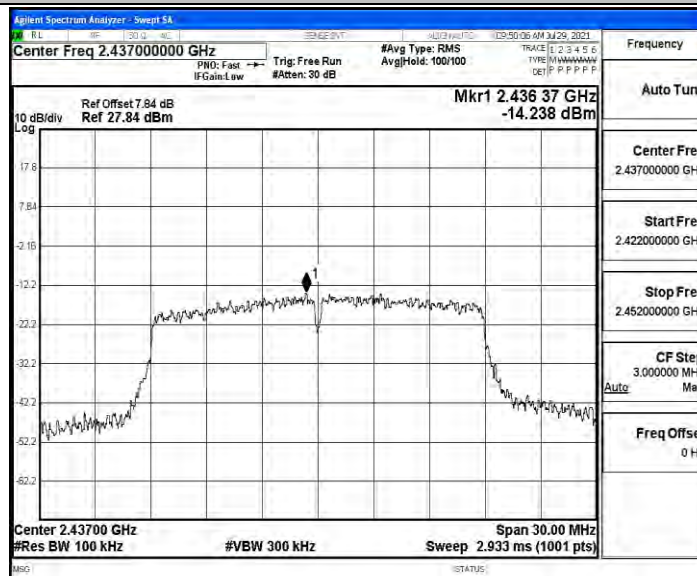




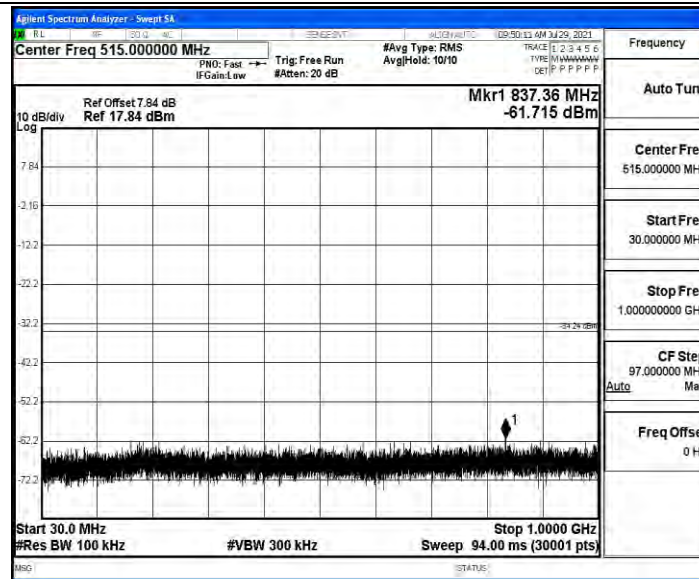
11N20SISO_Ant1_2412_1000~26500



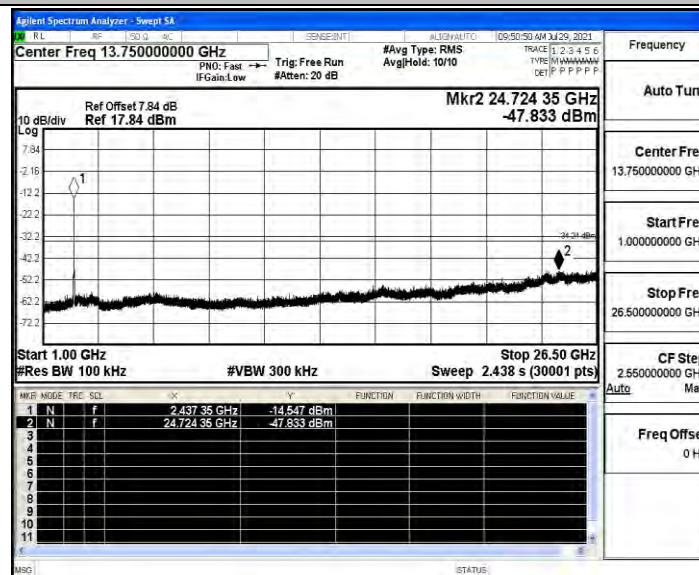
11N20SISO_Ant1_2437_0~Reference



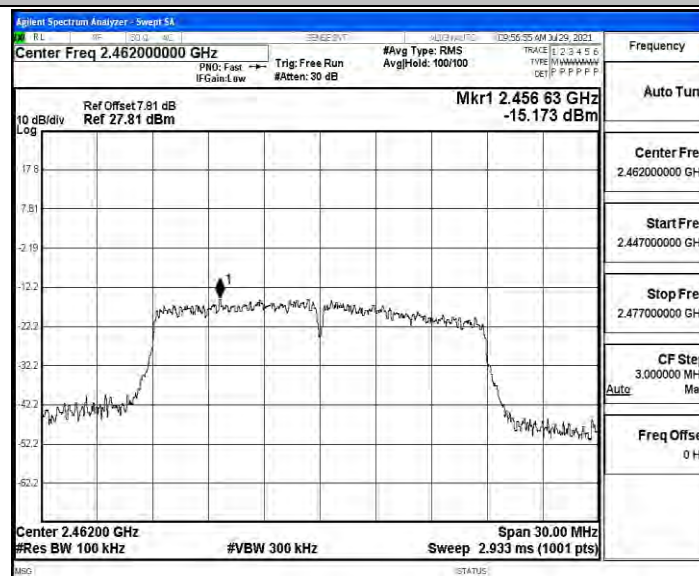
11N20SISO_Ant1_2437_30~1000



11N20SISO_Ant1_2437_1000~26500

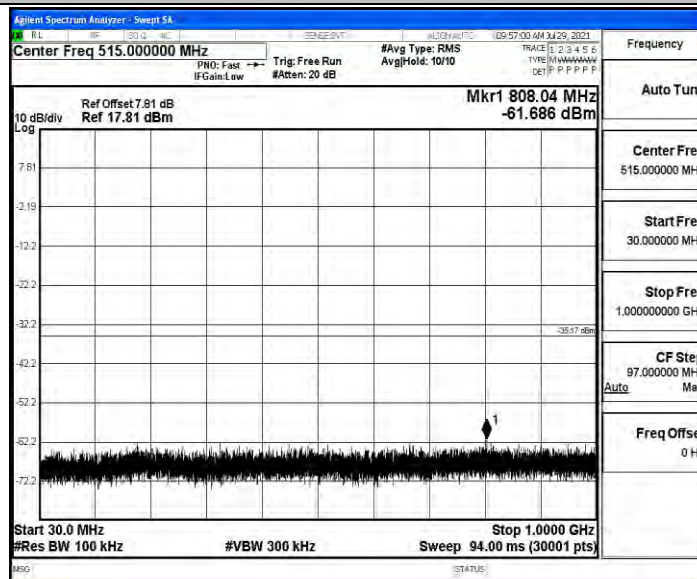


11N20SISO_Ant1_2462_0~Reference

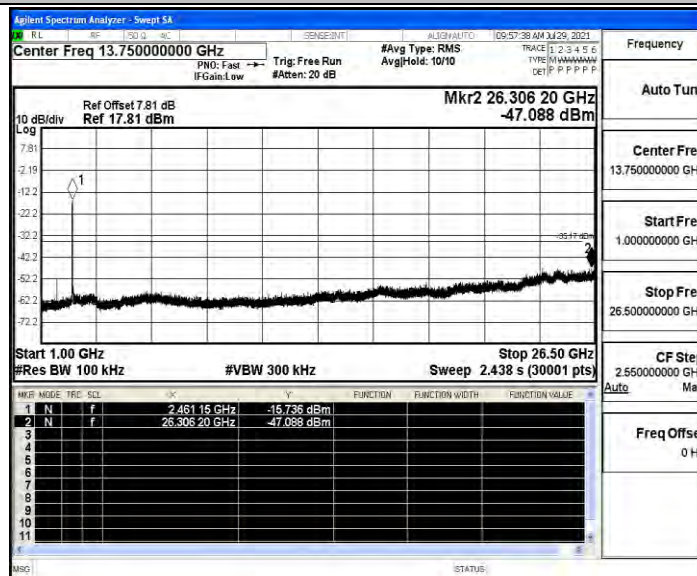




11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500





C.7 Duty Cycle

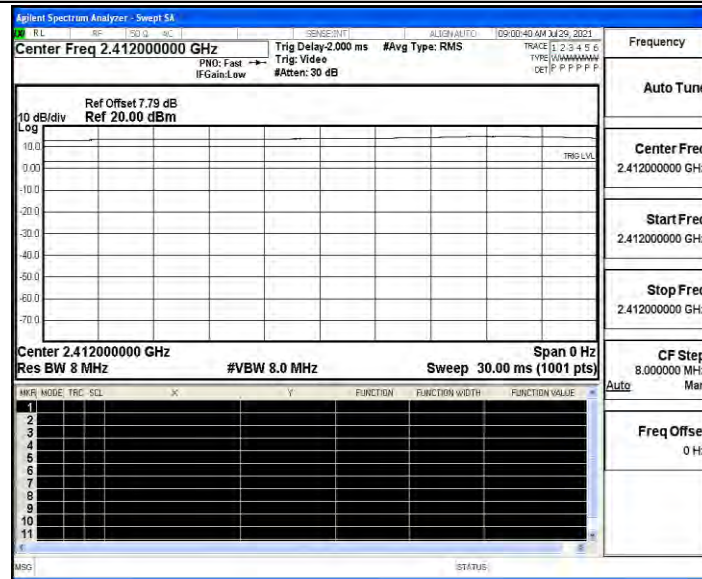
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
11B	Ant1	2412	30.00	30.00	1.0000	100.00	0.00	---	PASS
		2437	30.00	30.00	1.0000	100.00	0.00	---	PASS
		2462	30.00	30.00	1.0000	100.00	0.00	---	PASS
11G	Ant1	2412	1.39	1.43	0.9720	97.20	0.12	---	PASS
		2437	1.39	1.43	0.9720	97.20	0.12	---	PASS
		2462	1.39	1.43	0.9720	97.20	0.12	---	PASS
11N20SISO	Ant1	2412	30.00	30.00	1.0000	100.00	0.00	---	PASS
		2437	30.00	30.00	1.0000	100.00	0.00	---	PASS
		2462	30.00	30.00	1.0000	100.00	0.00	---	PASS

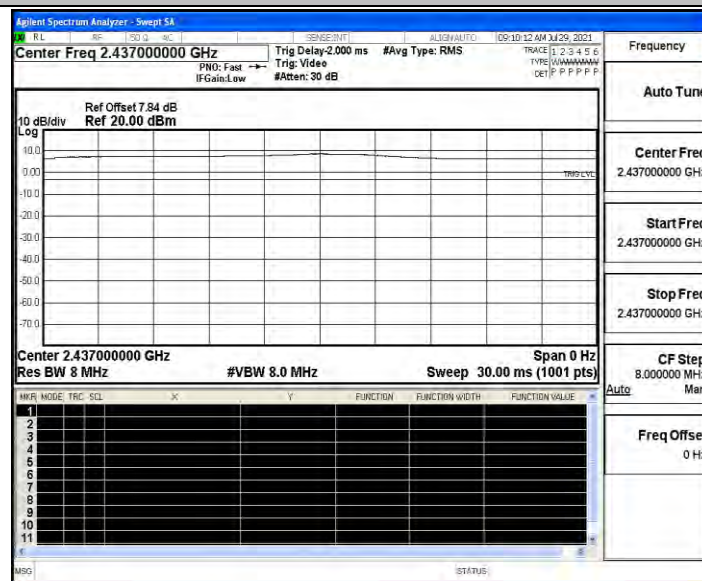


Test Graphs

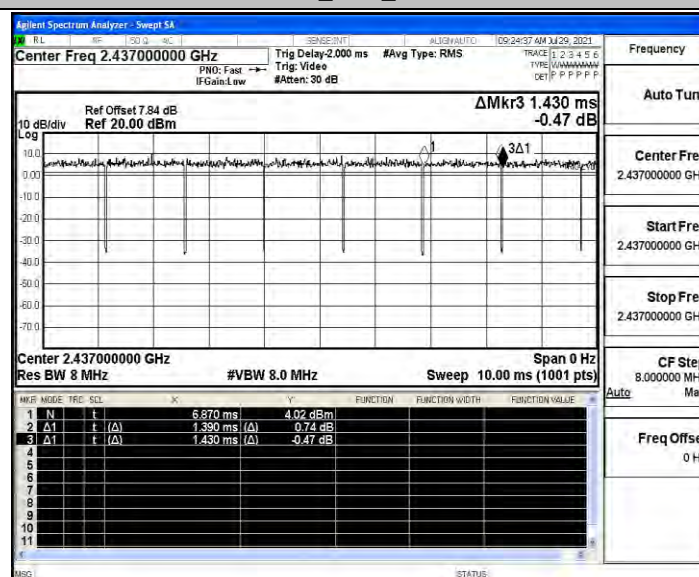
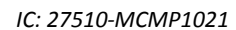
11B_Ant1_2412



11B_Ant1_2437

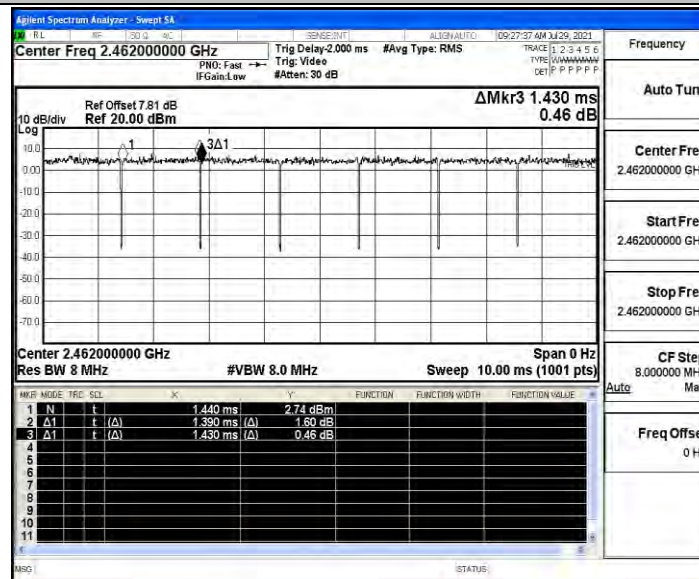


11B_Ant1_2462

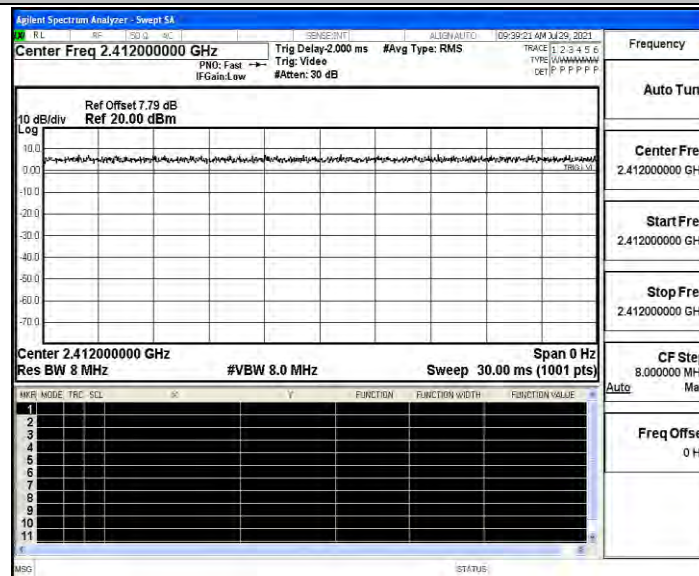




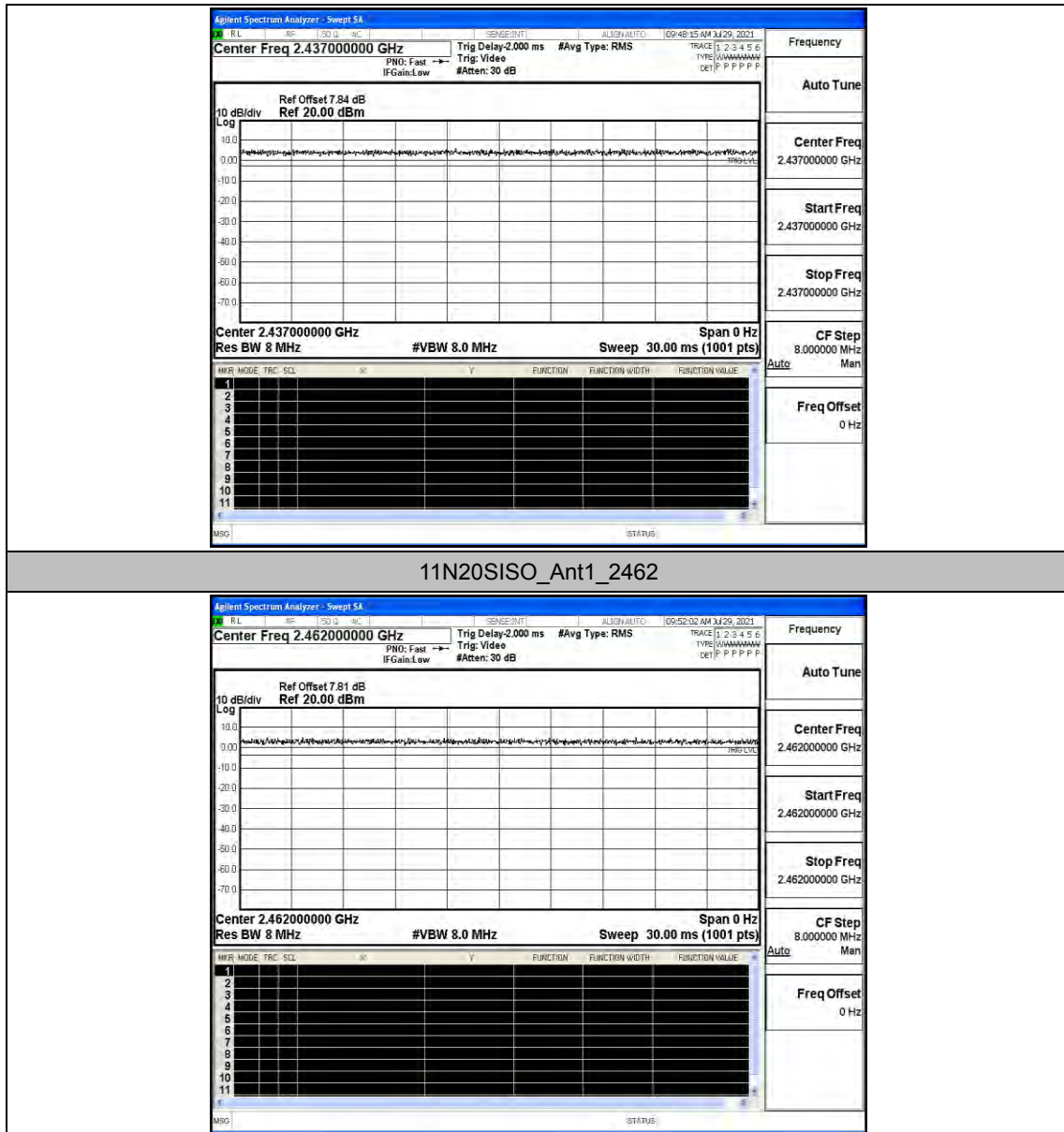
11G_Ant1_2462



11N20SISO_Ant1_2412



11N20SISO_Ant1_2437





C.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	Low	2412	AV	2310.000	-49.34	≤-41.20	PASS
				AV	2388.790	-48.93	≤-41.20	PASS
				AV	2390.000	-48.95	≤-41.20	PASS
				Peak	2310.000	-46.16	≤-21.20	PASS
				Peak	2350.830	-39.57	≤-21.20	PASS
				Peak	2390.000	-41.94	≤-21.20	PASS
		High	2462	AV	2483.500	-48.42	≤-41.20	PASS
				AV	2487.960	-48.32	≤-41.20	PASS
				AV	2500.000	-48.33	≤-41.20	PASS
				Peak	2483.500	-41.18	≤-21.20	PASS
				Peak	2496.980	-38.63	≤-21.20	PASS
				Peak	2500.000	-42.88	≤-21.20	PASS
11G	Ant1	Low	2412	AV	2310.000	-48.76	≤-41.20	PASS
				AV	2389.570	-48.16	≤-41.20	PASS
				AV	2390.000	-48.32	≤-41.20	PASS
				Peak	2310.000	-38.84	≤-21.20	PASS
				Peak	2389.050	-38.48	≤-21.20	PASS
				Peak	2390.000	-40.48	≤-21.20	PASS
		High	2462	AV	2483.500	-47.12	≤-41.20	PASS
				AV	2488.070	-46.94	≤-41.20	PASS
				AV	2500.000	-47.76	≤-41.20	PASS
				Peak	2483.500	-39.87	≤-21.20	PASS
				Peak	2488.620	-37.73	≤-21.20	PASS
				Peak	2500.000	-40.51	≤-21.20	PASS
11N20SIS O	Ant1	Low	2412	AV	2310.000	-49.43	≤-41.20	PASS
				AV	2389.960	-48.9	≤-41.20	PASS
				AV	2390.000	-48.9	≤-41.20	PASS
				Peak	2310.000	-43	≤-21.20	PASS
				Peak	2381.770	-40.25	≤-21.20	PASS
				Peak	2390.000	-41.55	≤-21.20	PASS
		High	2462	AV	2483.500	-47.77	≤-41.20	PASS
				AV	2483.560	-47.79	≤-41.20	PASS
				AV	2500.000	-48.41	≤-41.20	PASS
				Peak	2483.500	-43.39	≤-21.20	PASS
				Peak	2499.070	-39.05	≤-21.20	PASS
				Peak	2500.000	-43.72	≤-21.20	PASS



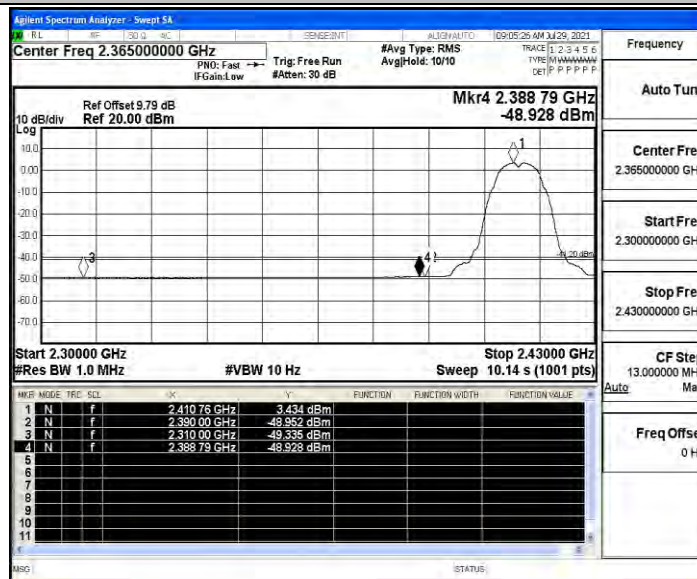
Note:

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.

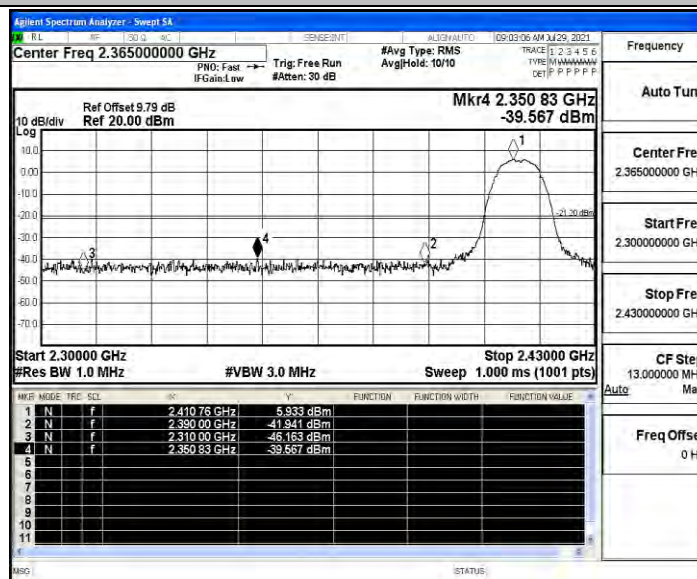


Test Graphs

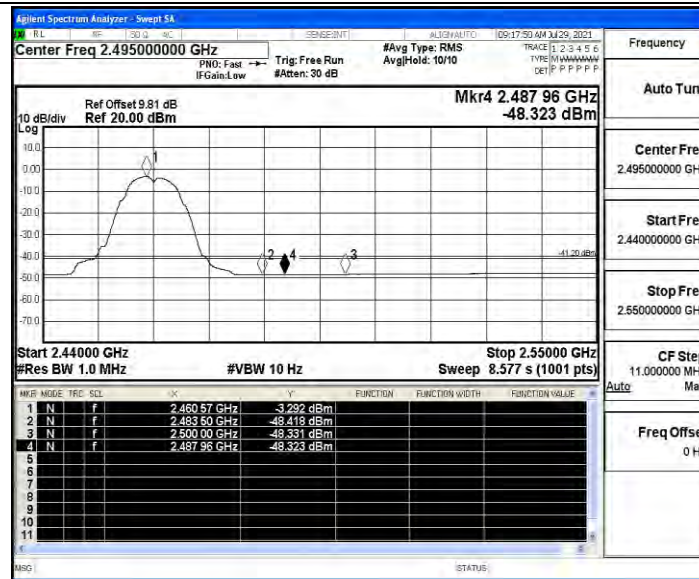
11B_Ant1_Low_2412_AV



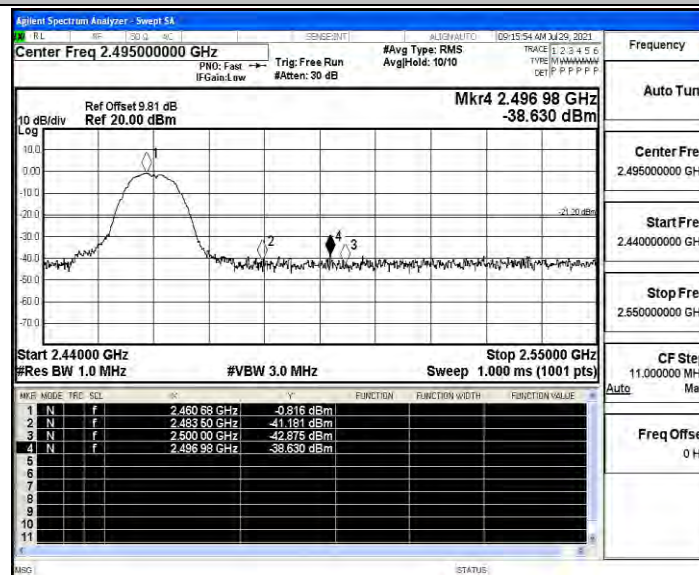
11B_Ant1_Low_2412_Peak



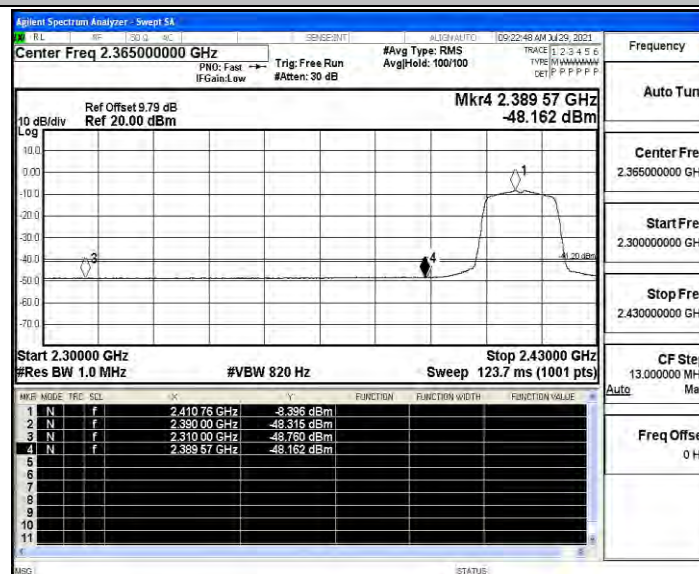
11B_Ant1_High_2462_AV



11B_Ant1_High_2462_Peak

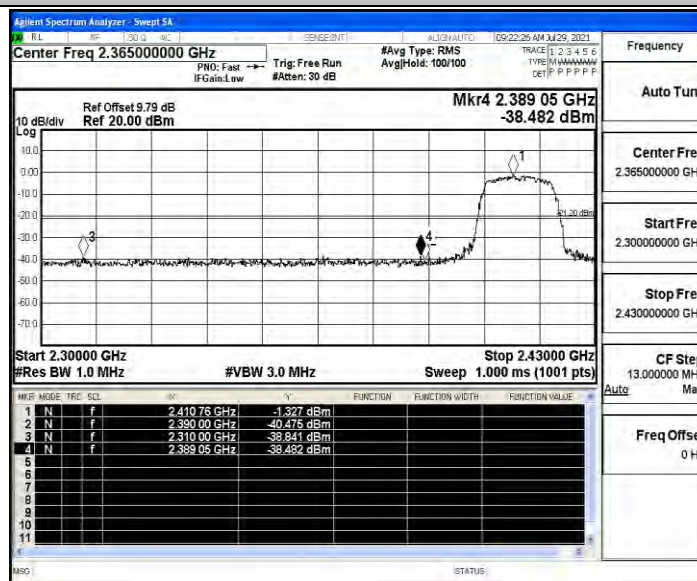


11G_Ant1_Low_2412_AV

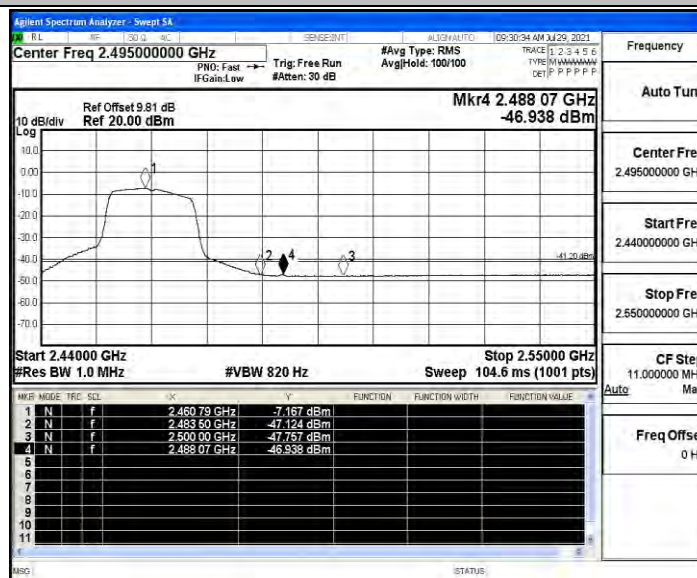




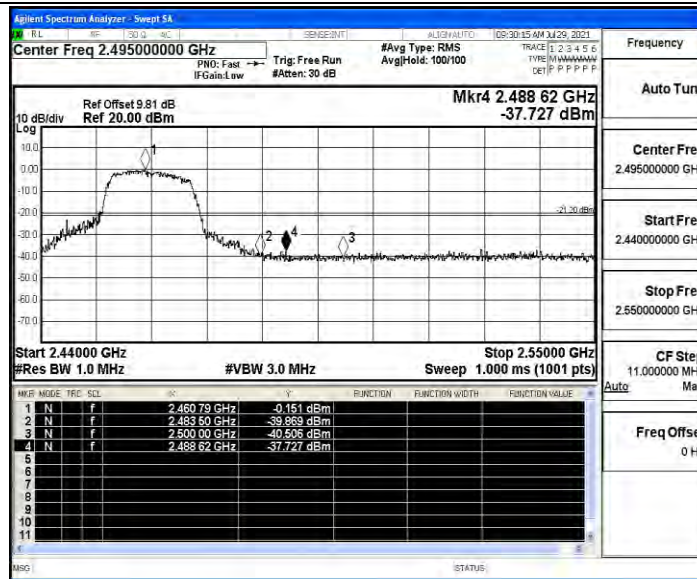
11G_Ant1_Low_2412_Peak



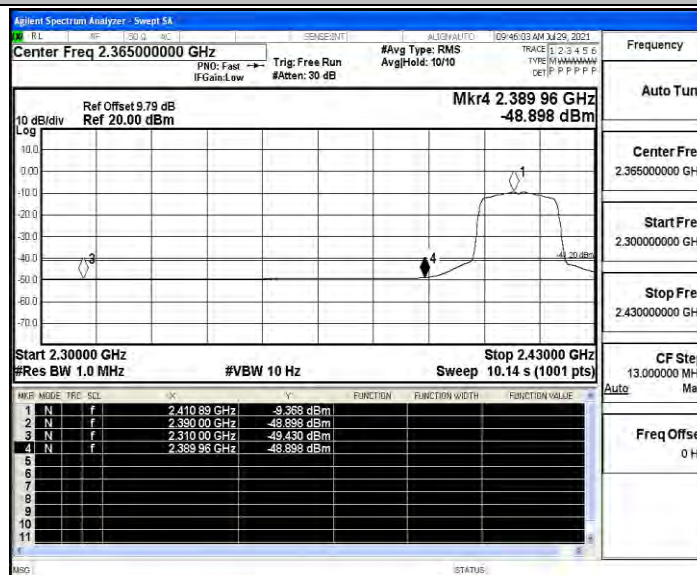
11G_Ant1_High_2462_AV



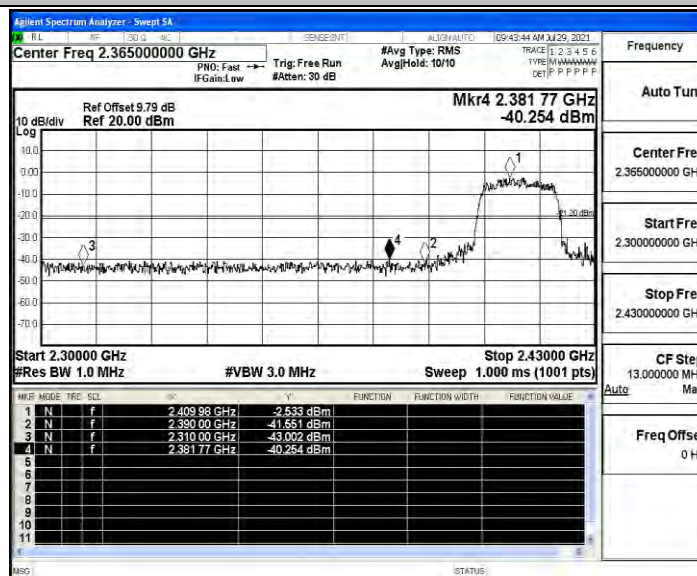
11G_Ant1_High_2462_Peak



11N20SISO_Ant1_Low_2412_AV

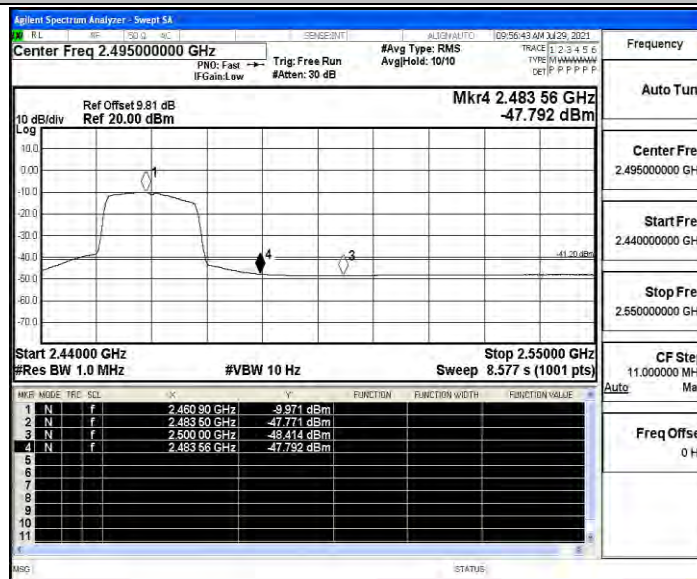


11N20SISO_Ant1_Low_2412_Peak





11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak

