RF Test Data for WLAN(2.4G) (Conducted Measurement)

Product Name: MAIrobotics Gatekeeper

Trade Mark: MAIrobotics

Test Model: Gatekeeper

FCC ID: 2AZYE-GATEKEEPER

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

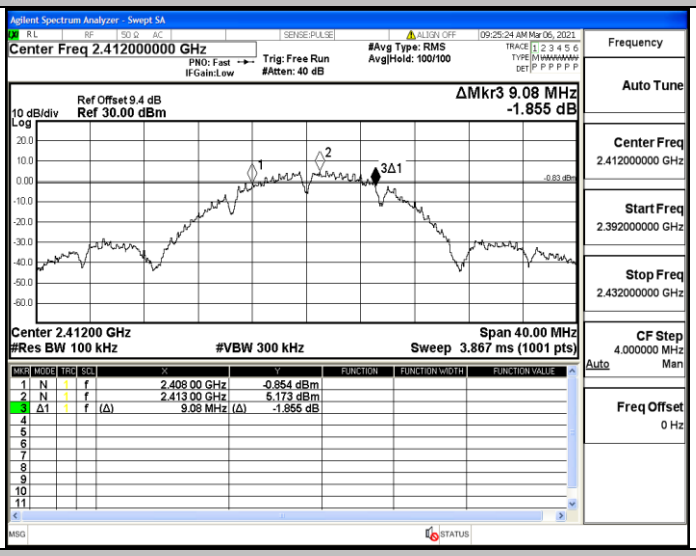
Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.080	2408.000	2417.080	0.5	PASS
		2437	8.640	2431.920	2440.560	0.5	PASS
		2462	8.640	2458.440	2467.080	0.5	PASS
11G	Ant1	2412	15.760	2404.480	2420.240	0.5	PASS
		2437	10.760	2428.800	2439.560	0.5	PASS
		2462	15.760	2454.440	2470.200	0.5	PASS
11N20SISO	Ant1	2412	12.680	2408.160	2420.840	0.5	PASS
		2437	15.160	2428.160	2443.320	0.5	PASS
		2462	15.160	2455.680	2470.840	0.5	PASS
11N40SISO	Ant1	2422	21.360	2413.200	2434.560	0.5	PASS
		2437	20.320	2420.600	2440.920	0.5	PASS
		2452	36.480	2433.760	2470.240	0.5	PASS

Test Graphs

11B_Ant1_2412



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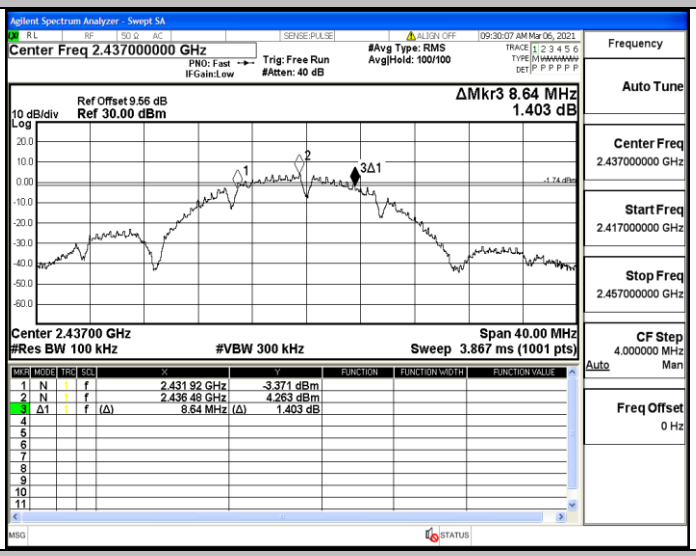
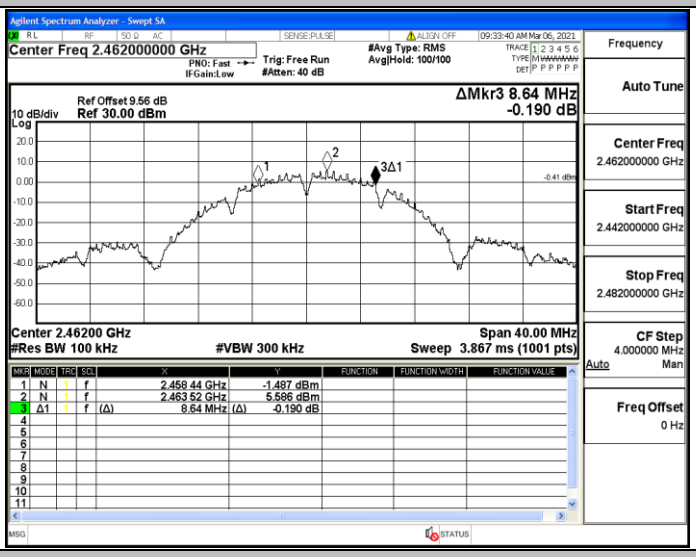


11B_Ant1_2462



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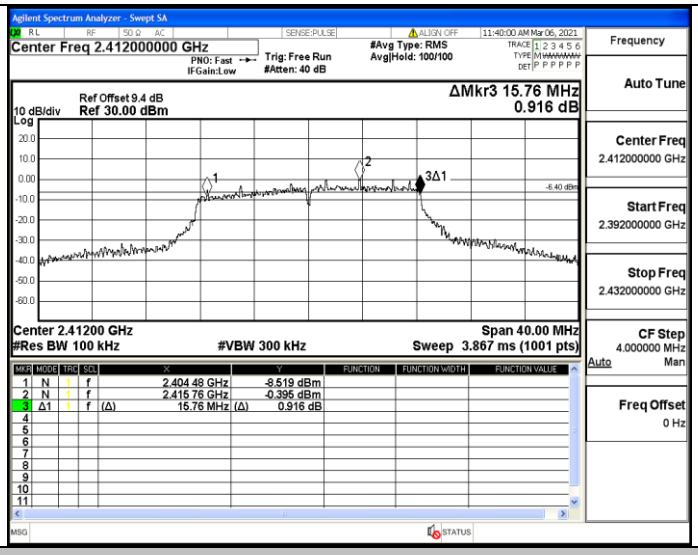
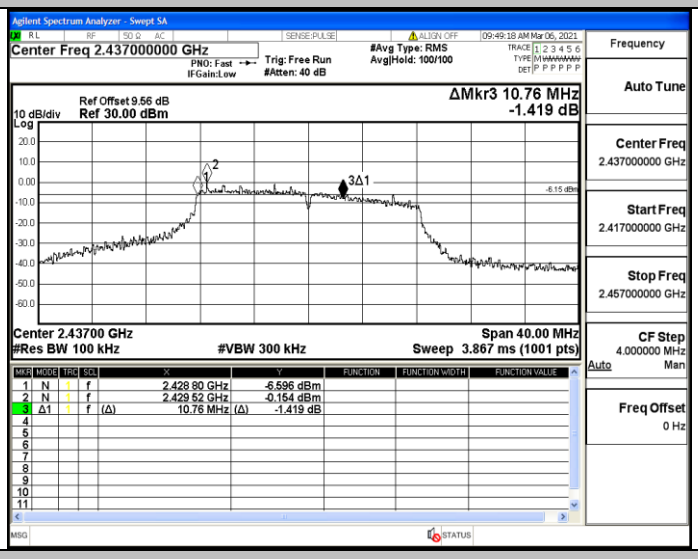


11G_Ant1_2437



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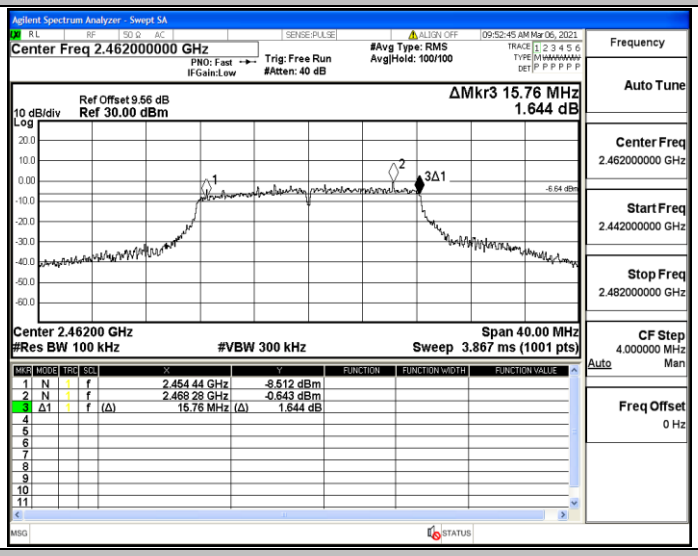
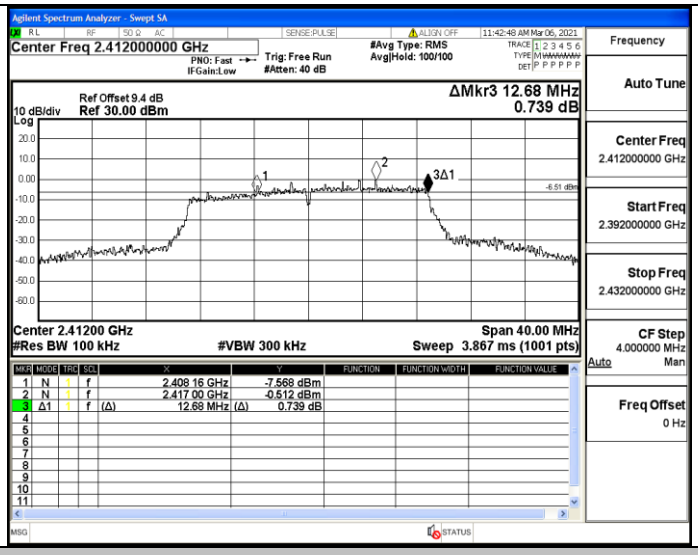
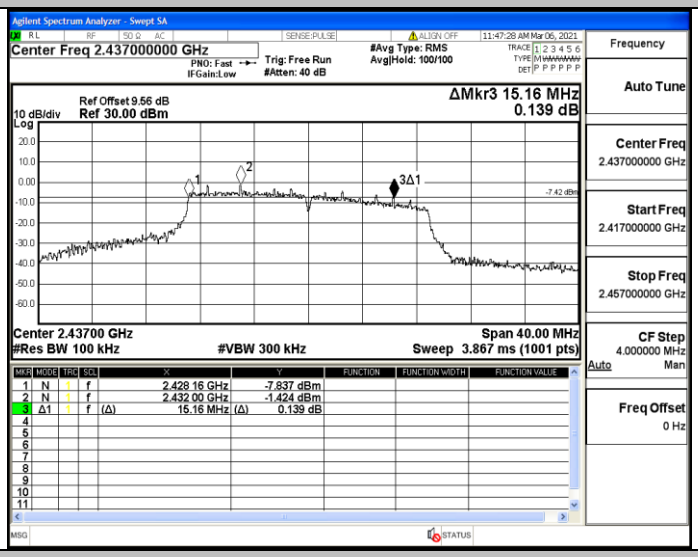


11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



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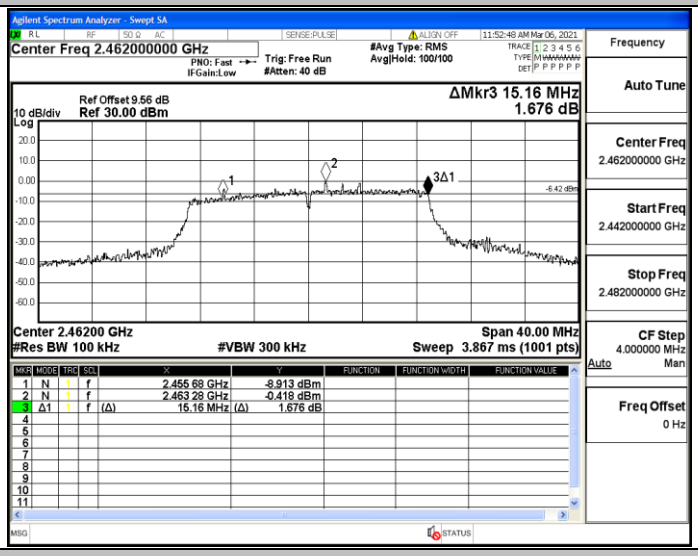
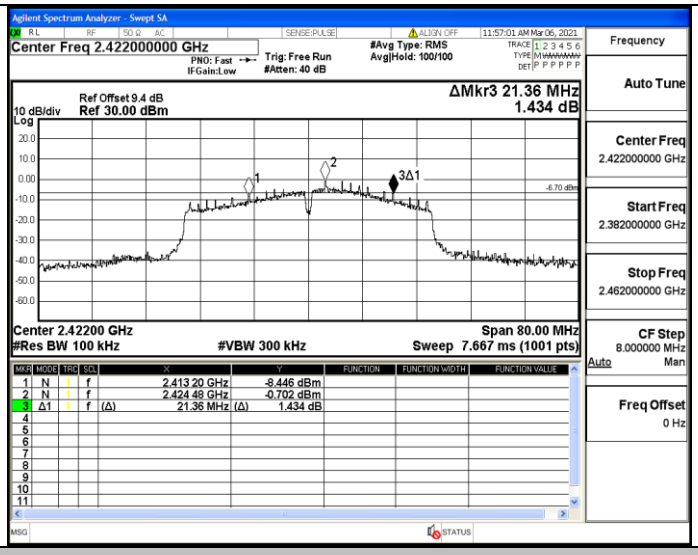


11N40SISO_Ant1_2422



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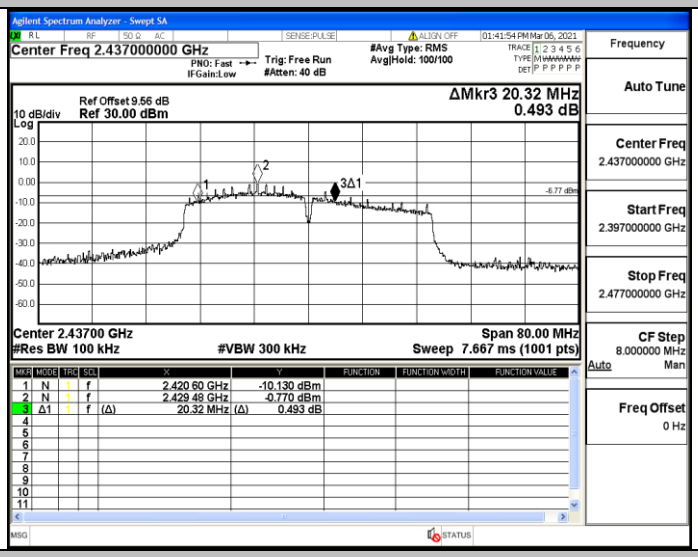
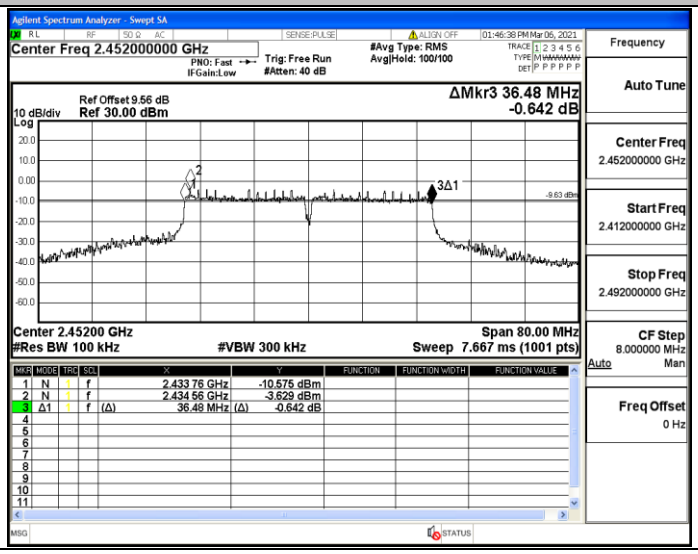


11N40SISO_Ant1_2452



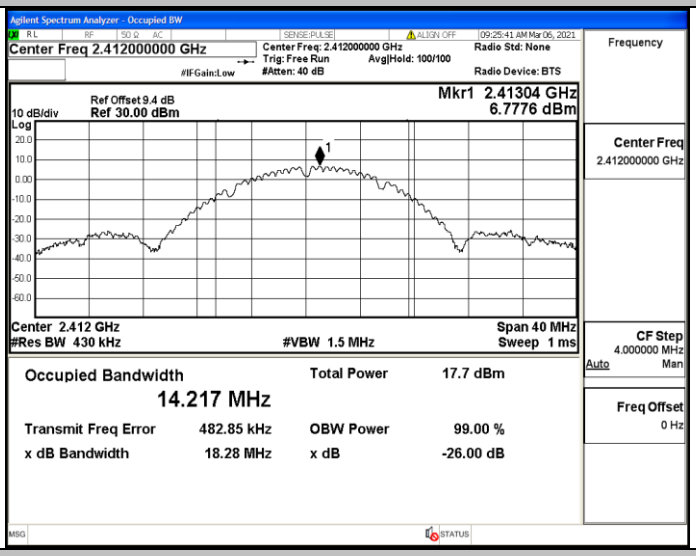
Appendix B: Occupied Channel Bandwidth

Test Result

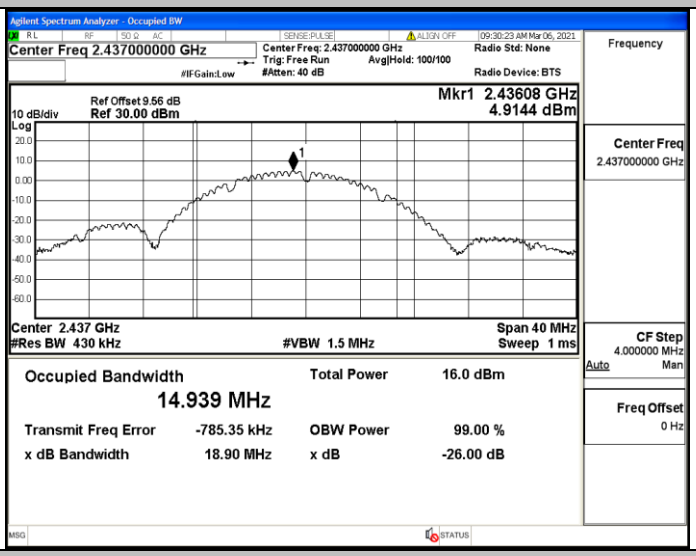
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.217	2405.374	2419.591	---	PASS
		2437	14.939	2428.745	2443.684	---	PASS
		2462	14.621	2455.132	2469.753	---	PASS
11G	Ant1	2412	17.338	2403.665	2421.003	---	PASS
		2437	17.231	2427.906	2445.137	---	PASS
		2462	17.246	2453.682	2470.928	---	PASS
11N20SISO	Ant1	2412	18.169	2403.225	2421.394	---	PASS
		2437	18.329	2427.314	2445.643	---	PASS
		2462	18.078	2453.236	2471.314	---	PASS
11N40SISO	Ant1	2422	35.159	2404.537	2439.696	---	PASS
		2437	35.761	2418.819	2454.580	---	PASS
		2452	37.739	2432.972	2470.711	---	PASS

Test Graphs

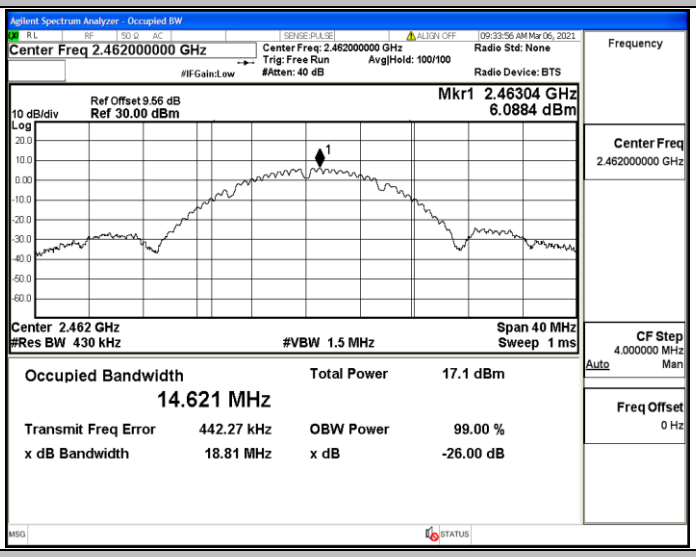
11B_Ant1_2412



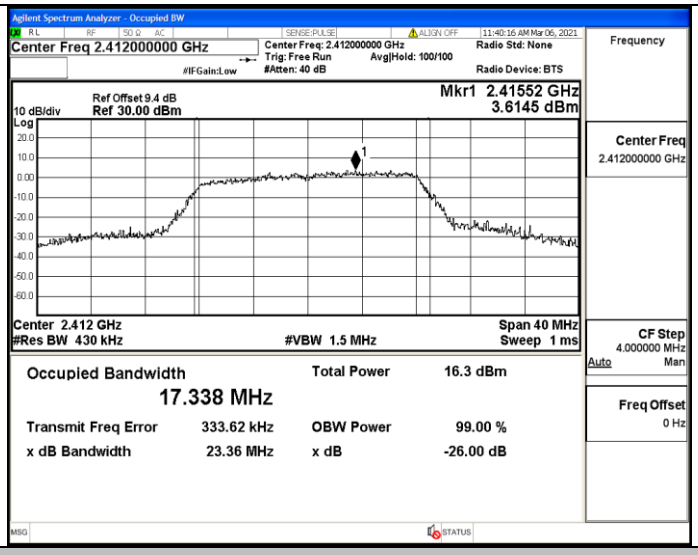
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



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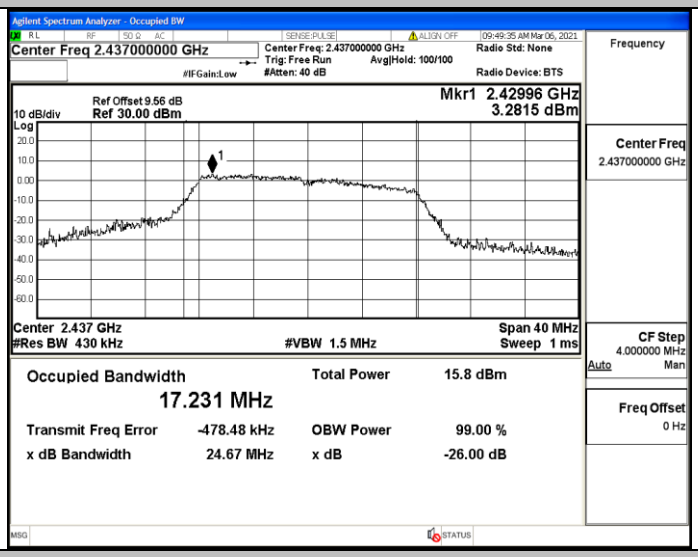

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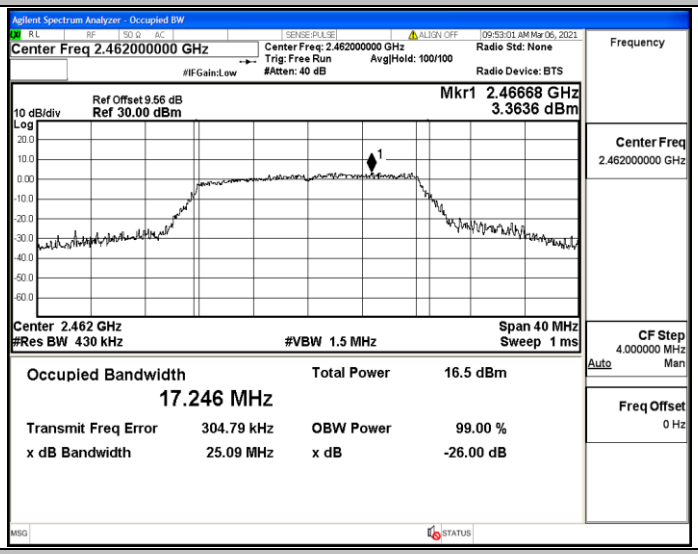
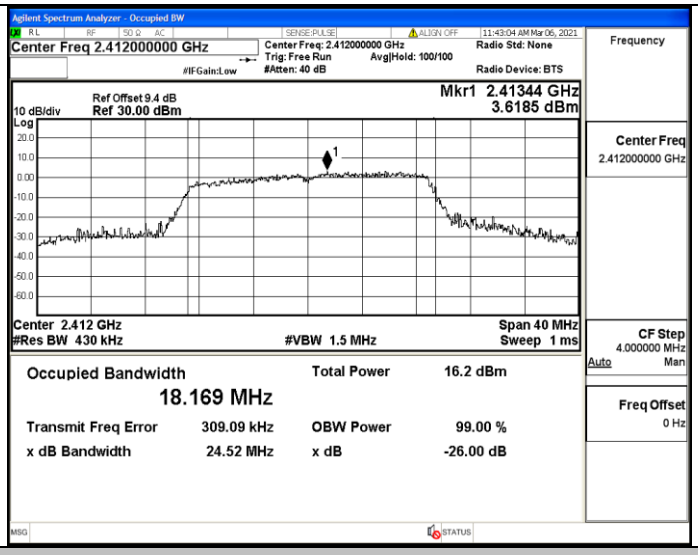


11N20SISO_Ant1_2412



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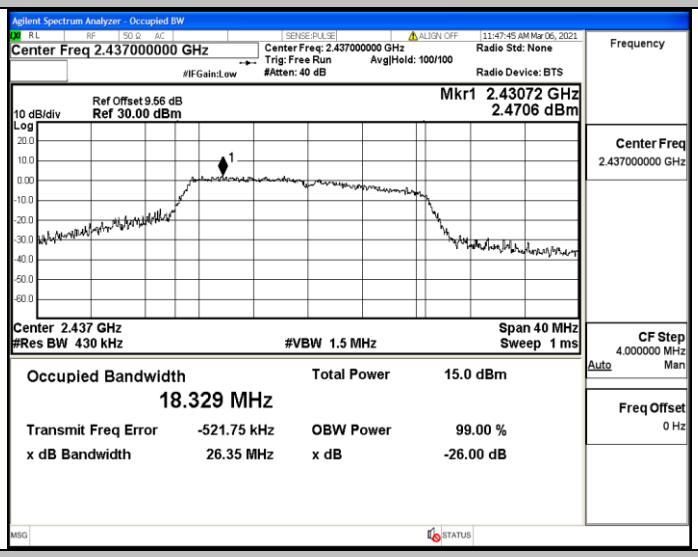

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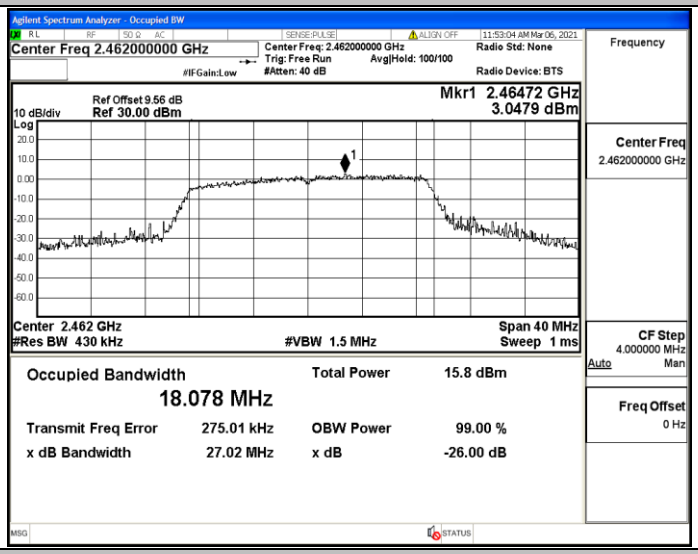
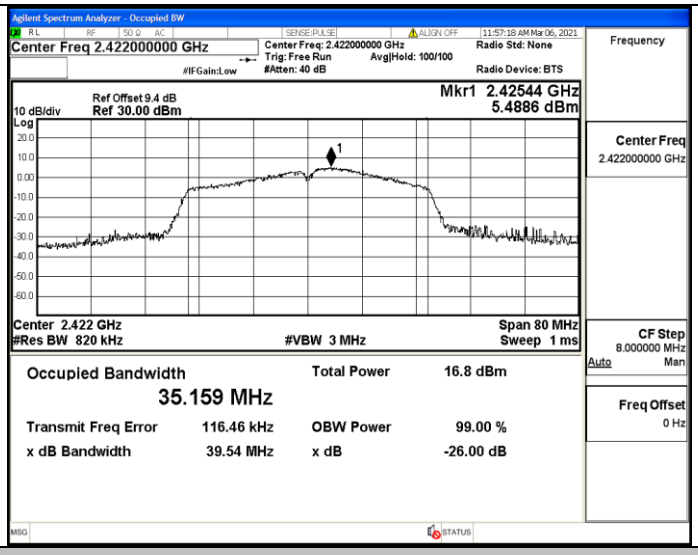


11N40SISO_Ant1_2422



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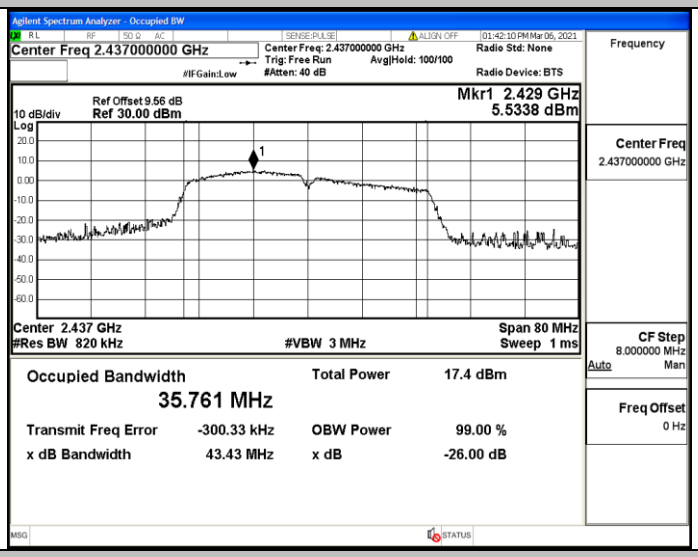
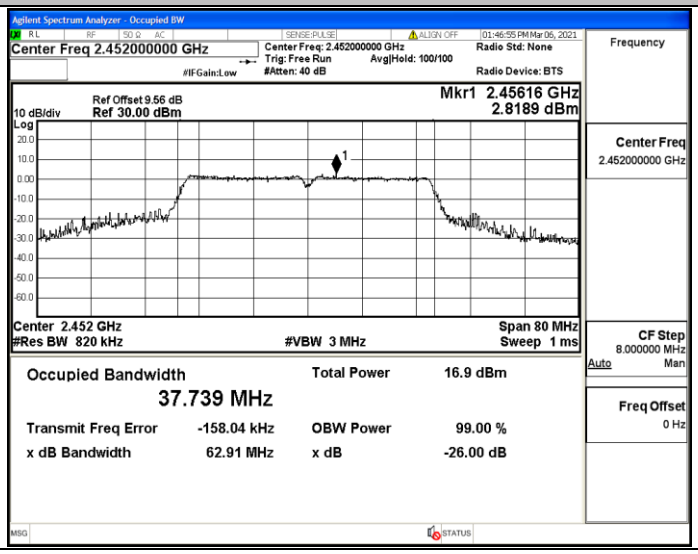


11N40SISO_Ant1_2452



Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	14.57	<=30	PASS
		2437	13.05	<=30	PASS
		2462	14.24	<=30	PASS
11G	Ant1	2412	10.19	<=30	PASS
		2437	9.65	<=30	PASS
		2462	10.44	<=30	PASS
11N20SISO	Ant1	2412	10.05	<=30	PASS
		2437	8.81	<=30	PASS
		2462	9.80	<=30	PASS
11N40SISO	Ant1	2422	9.93	<=30	PASS
		2437	10.58	<=30	PASS
		2452	9.94	<=30	PASS

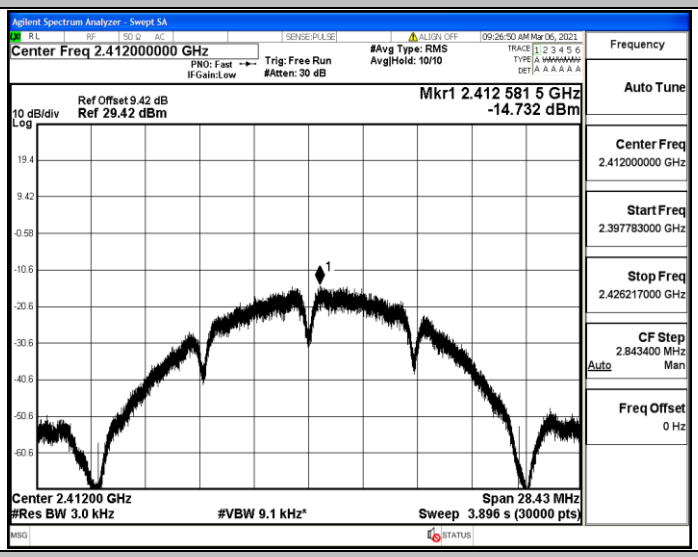
Appendix D: Maximum power spectral density

Test Result

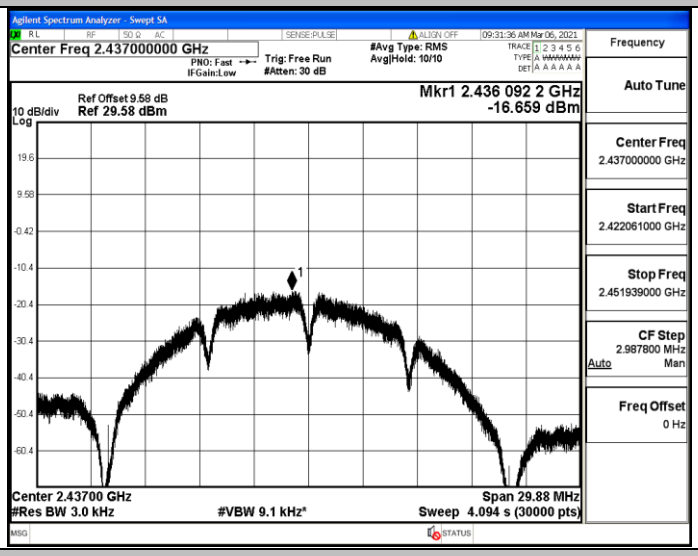
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-14.73	<=8	PASS
		2437	-16.66	<=8	PASS
		2462	-15.16	<=8	PASS
11G	Ant1	2412	-21.16	<=8	PASS
		2437	-20.05	<=8	PASS
		2462	-21.27	<=8	PASS
11N20SISO	Ant1	2412	-21.77	<=8	PASS
		2437	-22.5	<=8	PASS
		2462	-21.65	<=8	PASS
11N40SISO	Ant1	2422	-21.35	<=8	PASS
		2437	-22.47	<=8	PASS
		2452	-24.82	<=8	PASS

Test Graphs

11B_Ant1_2412



11B_Ant1_2437



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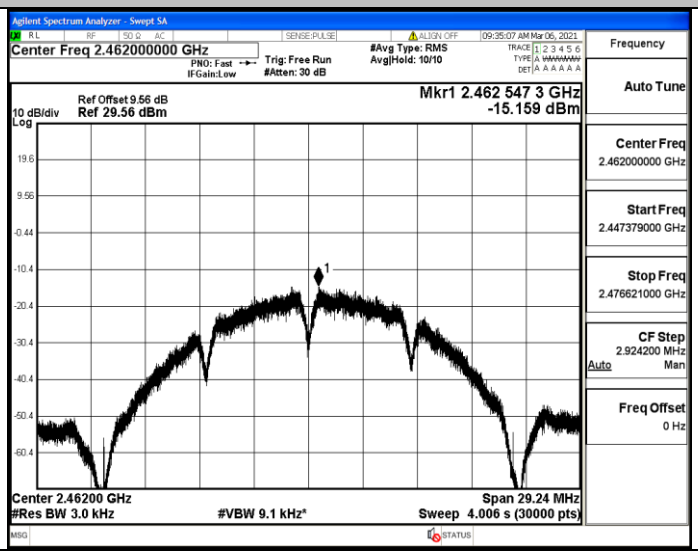
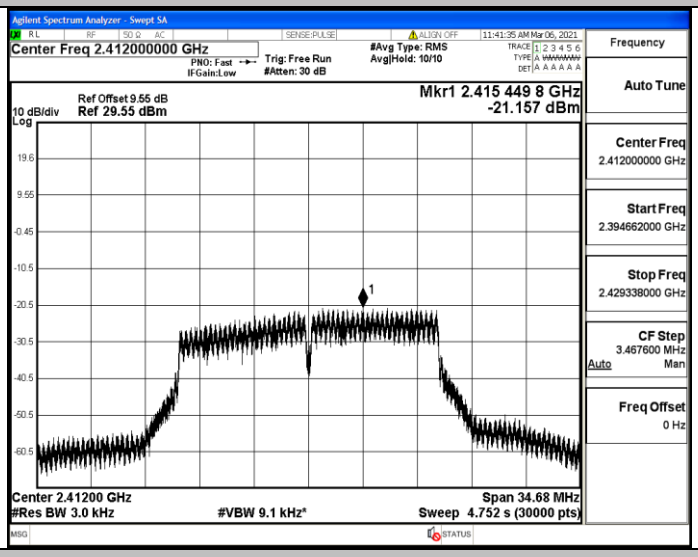


11G_Ant1_2412



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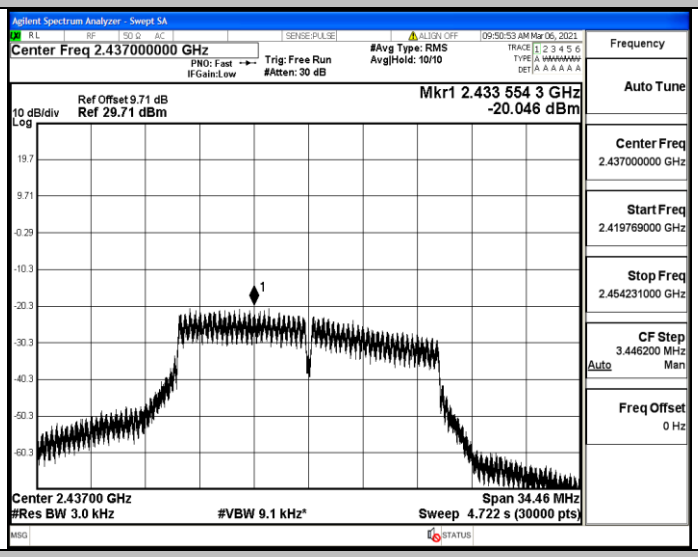

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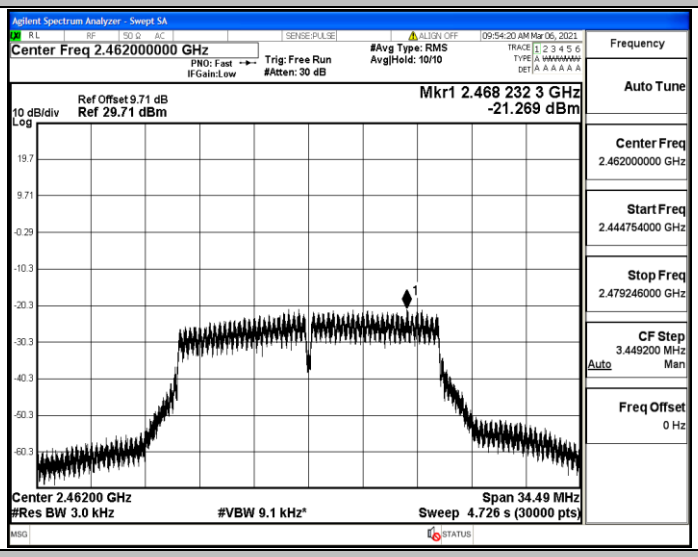

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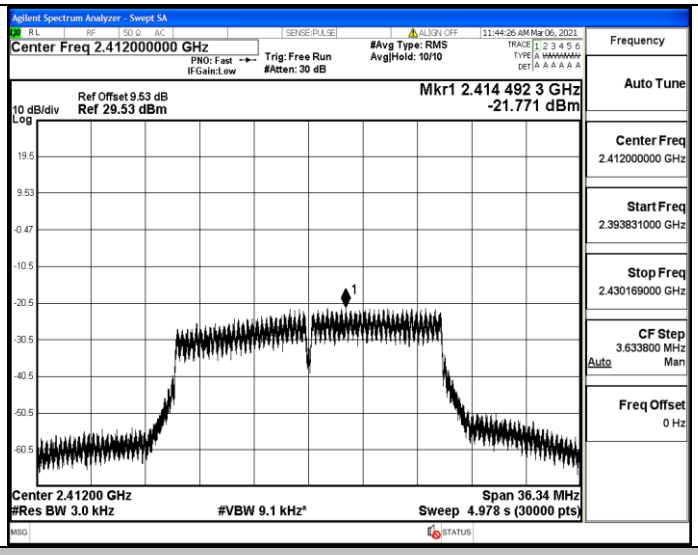

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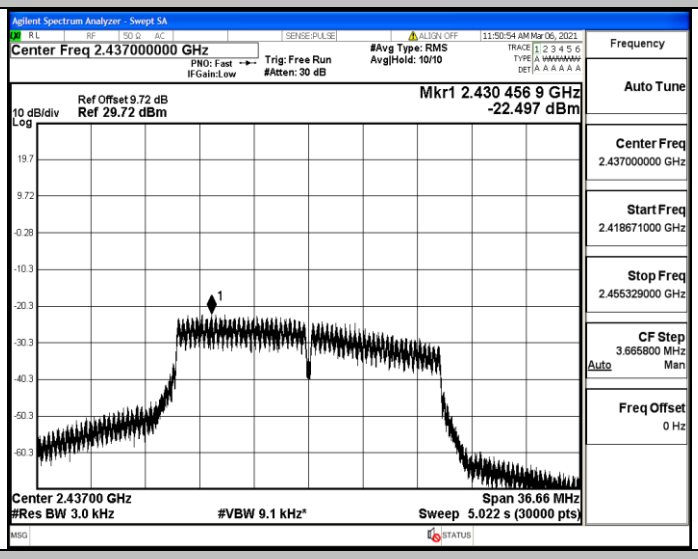

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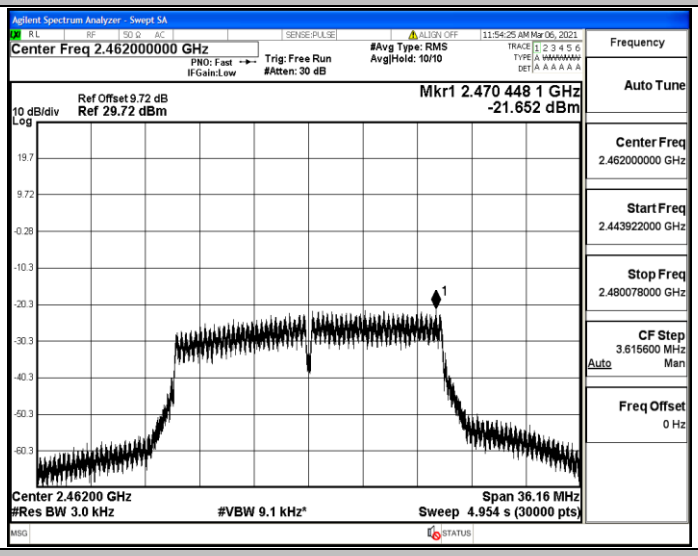

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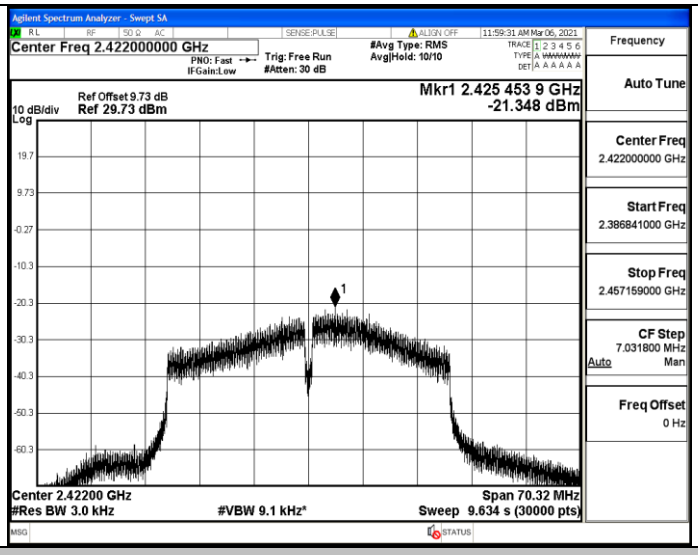

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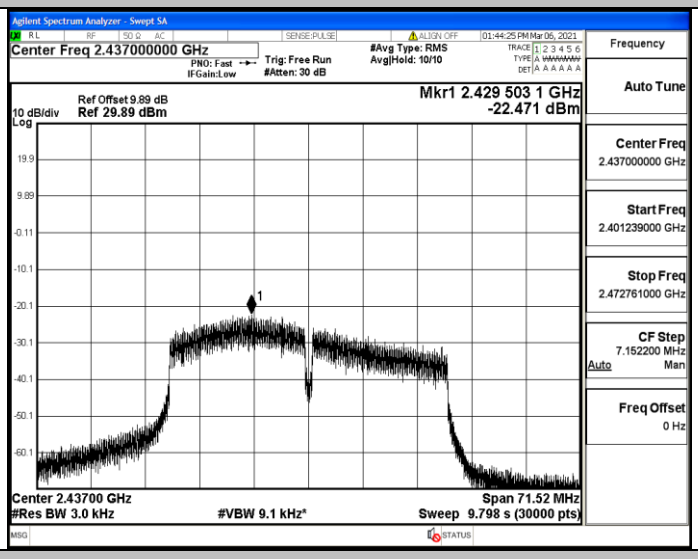

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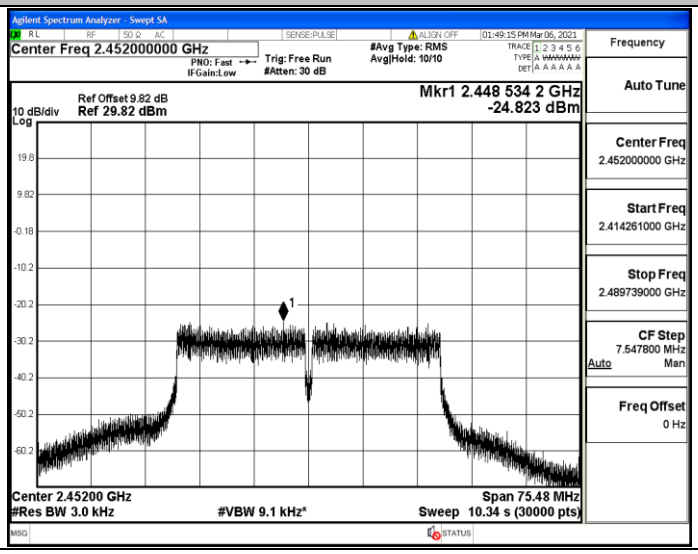


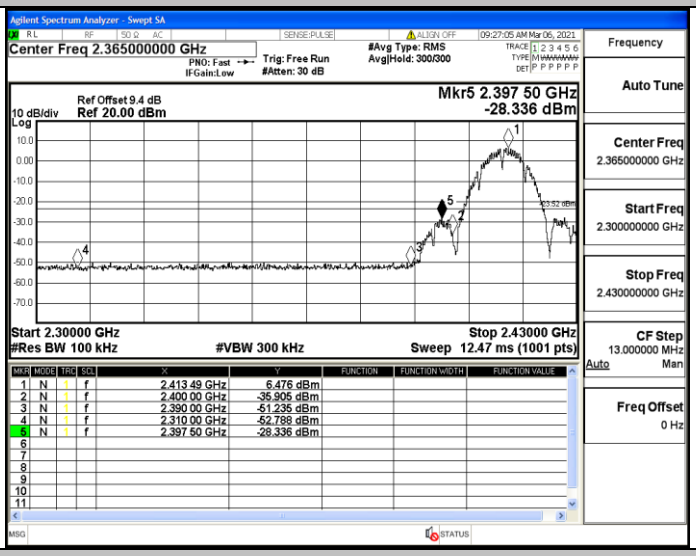
Appendix E: Band edge measurements

Test Result

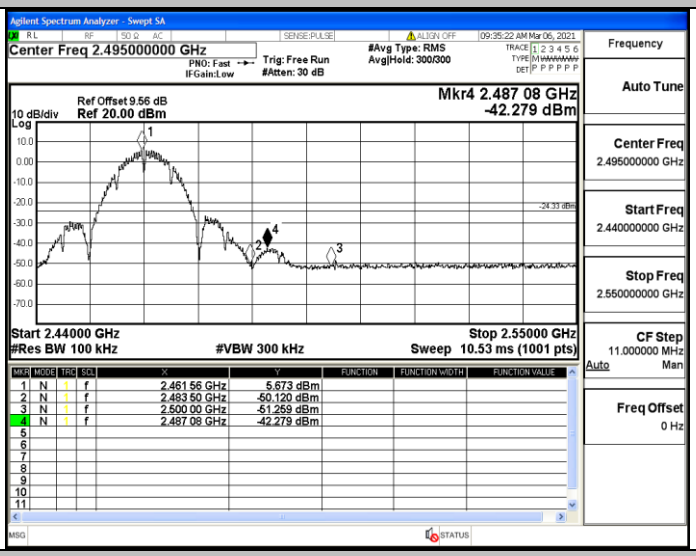
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	6.48	-28.34	<=-23.52	PASS
		High	2462	5.67	-42.28	<=-24.33	PASS
11G	Ant1	Low	2412	0.00	-31.55	<=-30	PASS
		High	2462	-0.19	-44.62	<=-30.19	PASS
11N20SISO	Ant1	Low	2412	-0.51	-31.84	<=-30.51	PASS
		High	2462	-0.48	-44.33	<=-30.48	PASS
11N40SISO	Ant1	Low	2422	-0.63	-34.71	<=-30.63	PASS
		High	2452	-4.32	-37.31	<=-34.32	PASS

Test Graphs

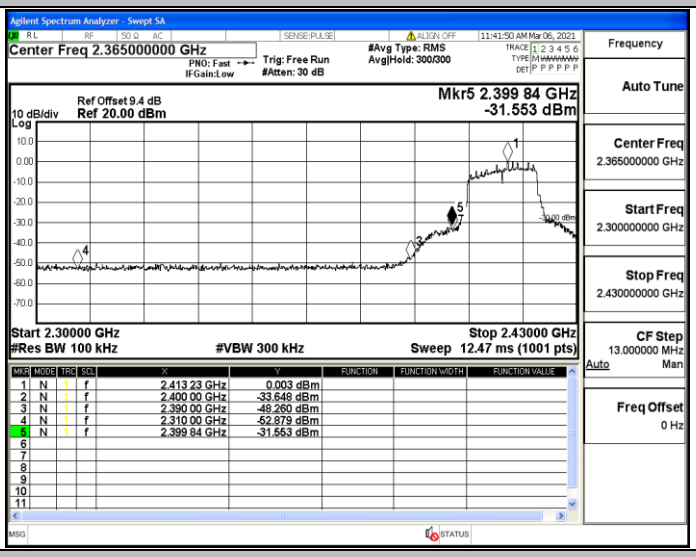
11B_Ant1_Low_2412



11B_Ant1_High_2462



11G_Ant1_Low_2412



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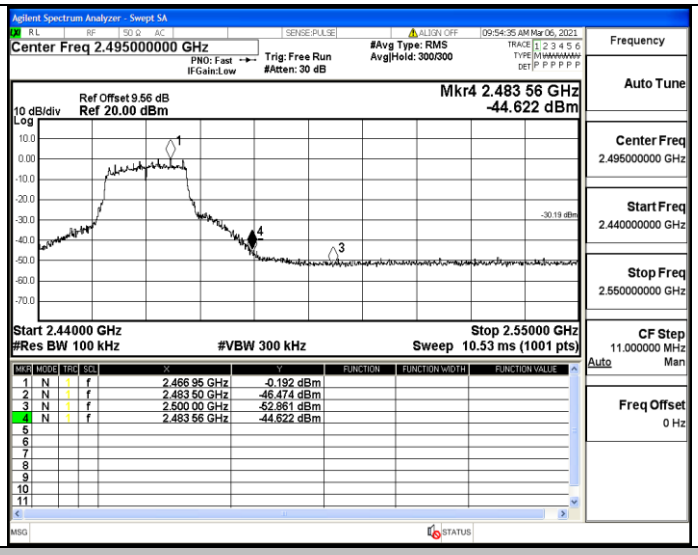

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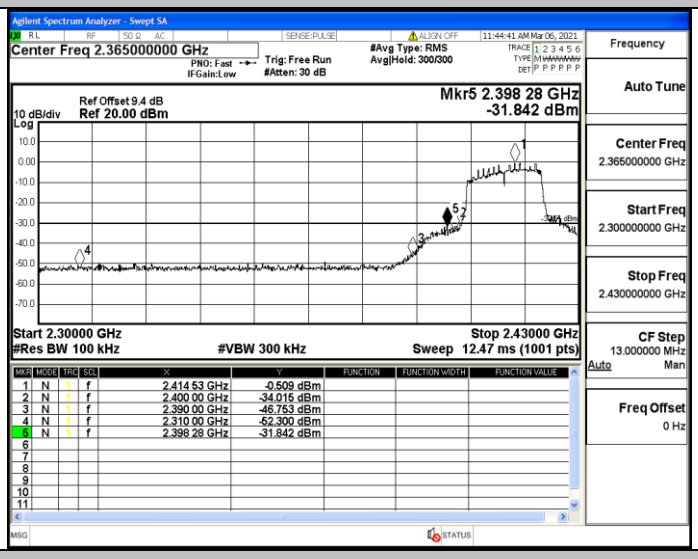
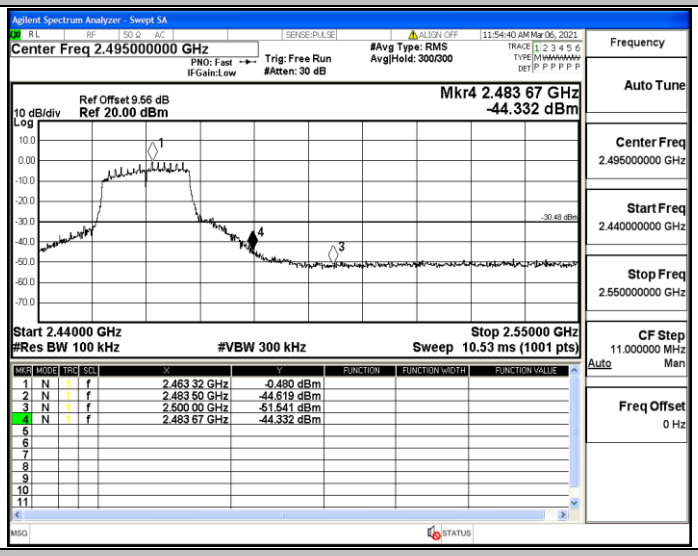
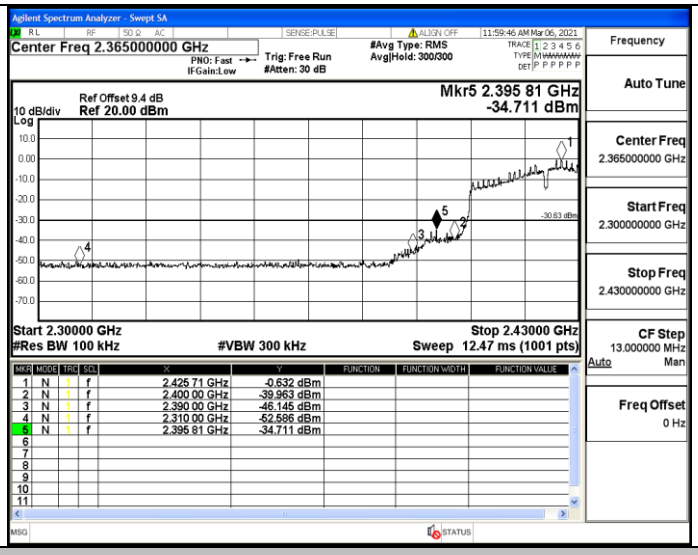


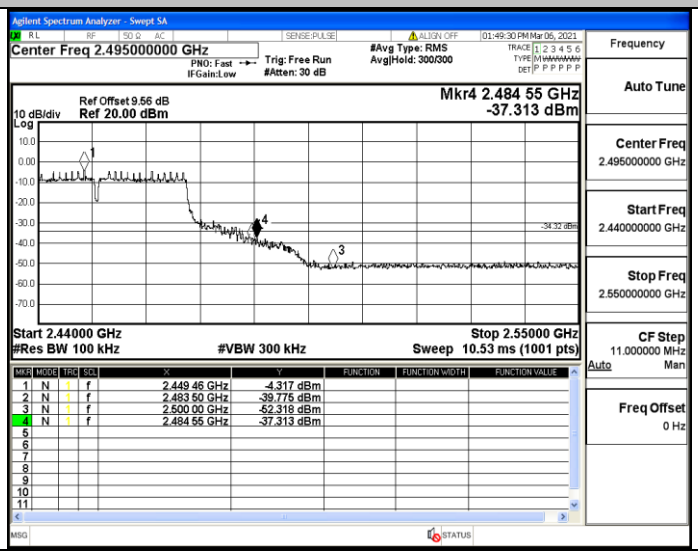
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452



Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.08	6.08	---	PASS
			30~1000	6.08	-62	<=-23.92	PASS
			1000~26500	6.08	-43.2	<=-23.92	PASS
		2437	Reference	4.64	4.64	---	PASS
			30~1000	4.64	-60.87	<=-25.36	PASS
			1000~26500	4.64	-48.18	<=-25.36	PASS
		2462	Reference	5.38	5.38	---	PASS
			30~1000	5.38	-43.4	<=-24.62	PASS
			1000~26500	5.38	-37.51	<=-24.62	PASS
11G	Ant1	2412	Reference	3.86	3.86	---	PASS
			30~1000	3.86	-62.02	<=-26.15	PASS
			1000~26500	3.86	-51.81	<=-26.15	PASS
		2437	Reference	0.06	0.06	---	PASS
			30~1000	0.06	-37.33	<=-29.94	PASS
			1000~26500	0.06	-52.83	<=-29.94	PASS
		2462	Reference	-0.76	-0.76	---	PASS
			30~1000	-0.76	-61.5	<=-30.76	PASS
			1000~26500	-0.76	-42.98	<=-30.76	PASS
11N20SISO	Ant1	2412	Reference	-0.53	-0.53	---	PASS
			30~1000	-0.53	-62.07	<=-30.53	PASS
			1000~26500	-0.53	-42.41	<=-30.53	PASS
		2437	Reference	-0.83	-0.83	---	PASS
			30~1000	-0.83	-60.43	<=-30.83	PASS
			1000~26500	-0.83	-50.55	<=-30.83	PASS
		2462	Reference	-0.78	-0.78	---	PASS
			30~1000	-0.78	-61.99	<=-30.78	PASS
			1000~26500	-0.78	-51.49	<=-30.78	PASS
11N40SISO	Ant1	2422	Reference	-0.79	-0.79	---	PASS
			30~1000	-0.79	-41.49	<=-30.79	PASS
			1000~26500	-0.79	-52.42	<=-30.79	PASS
		2437	Reference	-0.52	-0.52	---	PASS
			30~1000	-0.52	-54.39	<=-30.52	PASS
			1000~26500	-0.52	-34.41	<=-30.52	PASS
		2452	Reference	-3.95	-3.95	---	PASS
			30~1000	-3.95	-61.13	<=-33.95	PASS
			1000~26500	-3.95	-52.1	<=-33.95	PASS