

Appendix: 2.4G WIFI

Contents

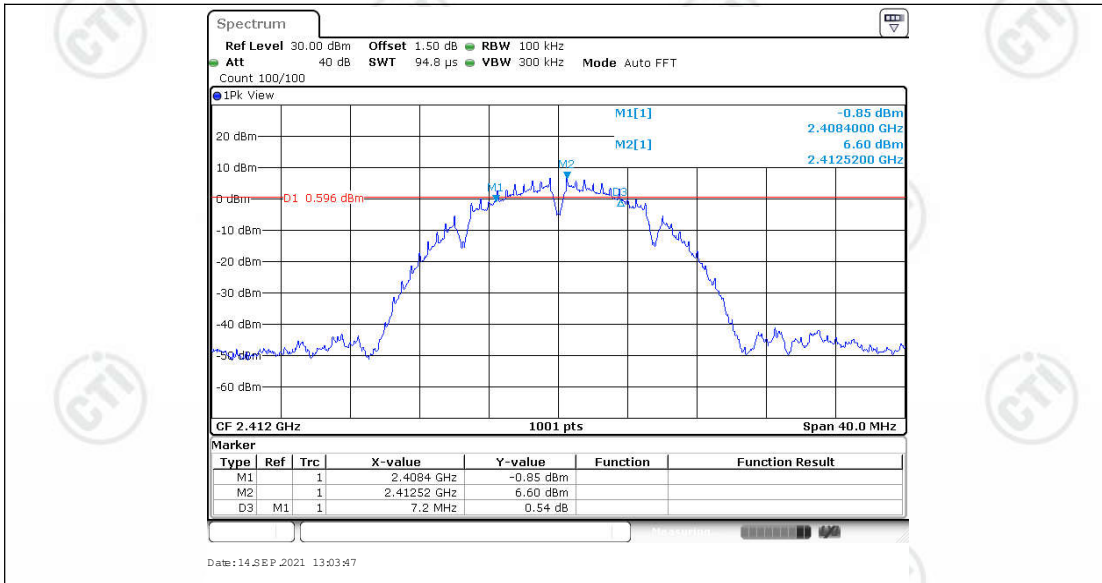
Appendix A: DTS Bandwidth.....	3
Test Result.....	3
Test Graphs.....	4
Appendix B: Occupied Channel Bandwidth.....	10
Test Result.....	10
Test Graphs.....	11
Appendix C: Maximum conducted output power.....	17
Test Result.....	17
Appendix D: Maximum power spectral density.....	18
Test Result.....	18
Test Graphs.....	19
Appendix E: Band edge measurements.....	25
Test Result.....	25
Test Graphs.....	26
Appendix F: Conducted Spurious Emission.....	30
Test Result.....	30
Test Graphs.....	32
Appendix G: Duty Cycle.....	50
Test Result.....	50
Test Graphs.....	51

Appendix A: DTS Bandwidth

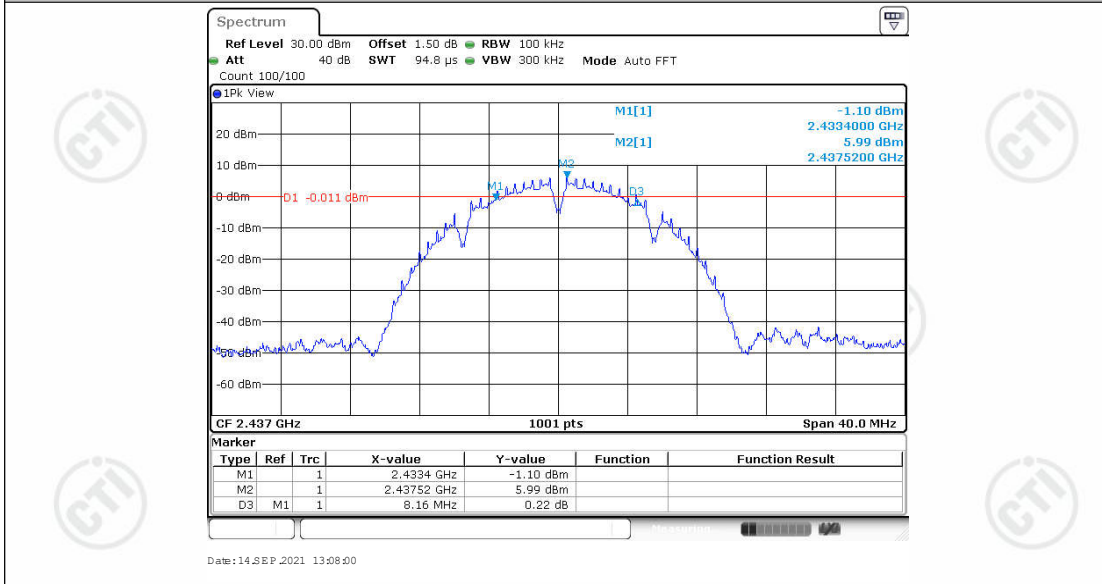
Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.200	2408.400	2415.600	0.5	PASS
		2437	8.160	2433.400	2441.560	0.5	PASS
		2462	7.160	2458.440	2465.600	0.5	PASS
11G	Ant1	2412	15.800	2404.400	2420.200	0.5	PASS
		2437	15.400	2429.400	2444.800	0.5	PASS
		2462	15.400	2454.400	2469.800	0.5	PASS
11N20SISO	Ant1	2412	15.200	2404.400	2419.600	0.5	PASS
		2437	16.160	2429.400	2445.560	0.5	PASS
		2462	15.200	2454.400	2469.600	0.5	PASS
11N40SISO	Ant1	2422	35.280	2404.400	2439.680	0.5	PASS
		2437	35.280	2419.400	2454.680	0.5	PASS
		2452	35.440	2434.480	2469.920	0.5	PASS

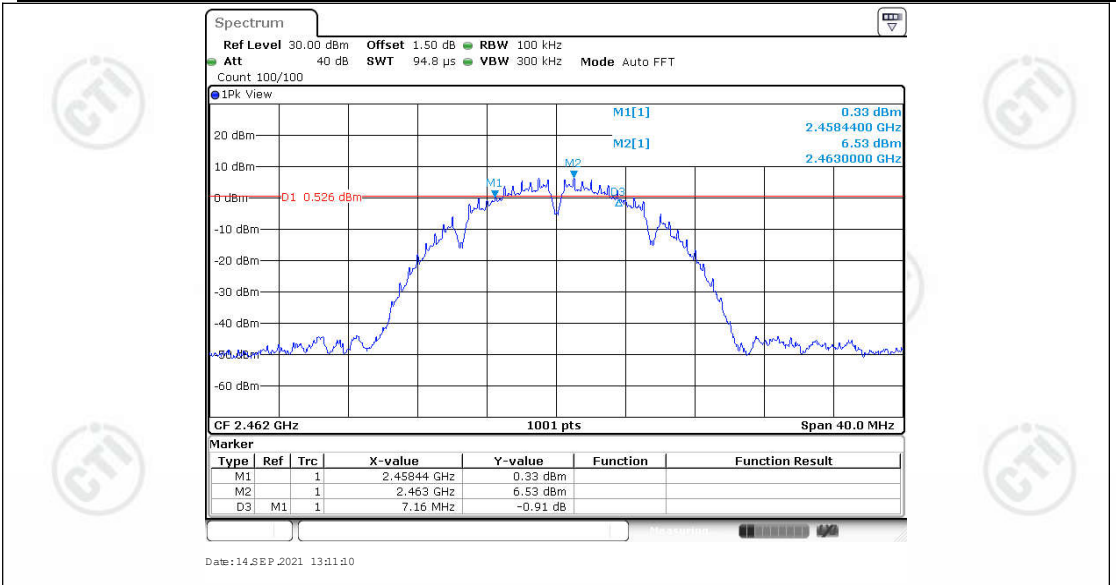
Test Graphs



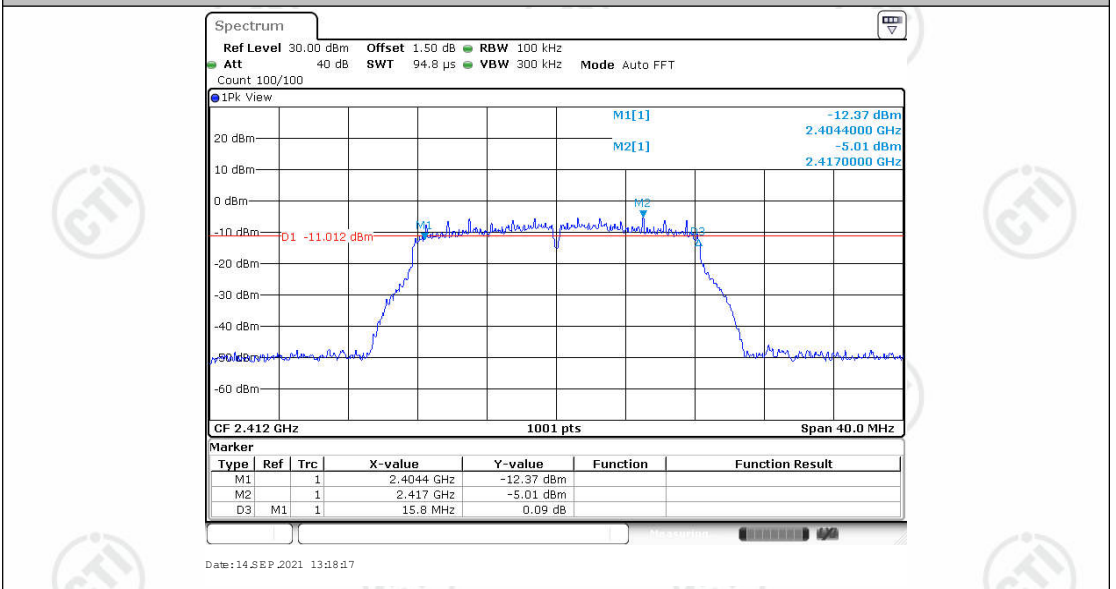
11B_Ant1_2412



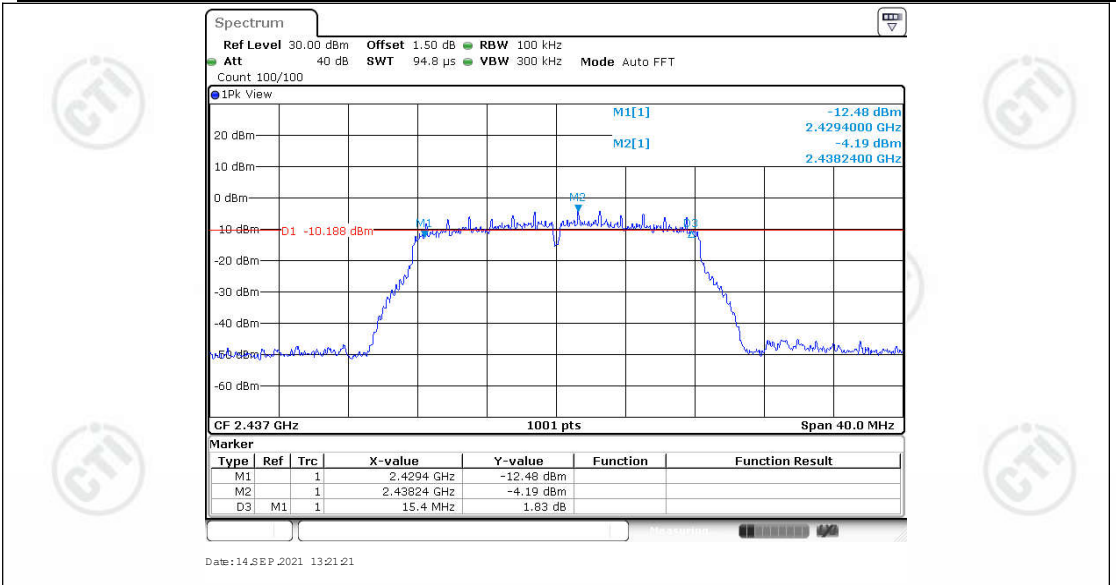
11B_Ant1_2437



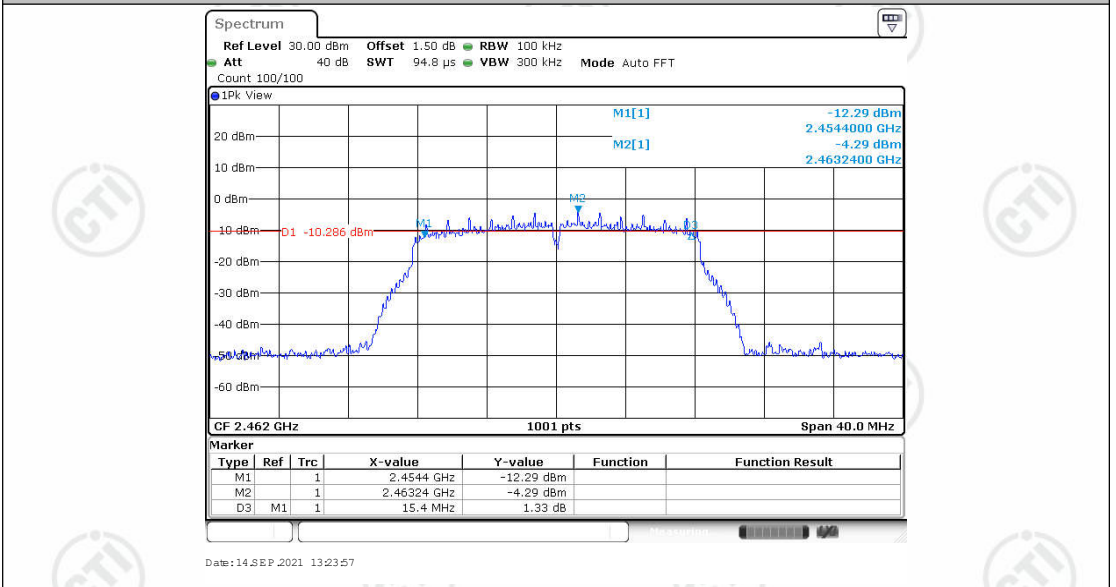
11B_Ant1_2462



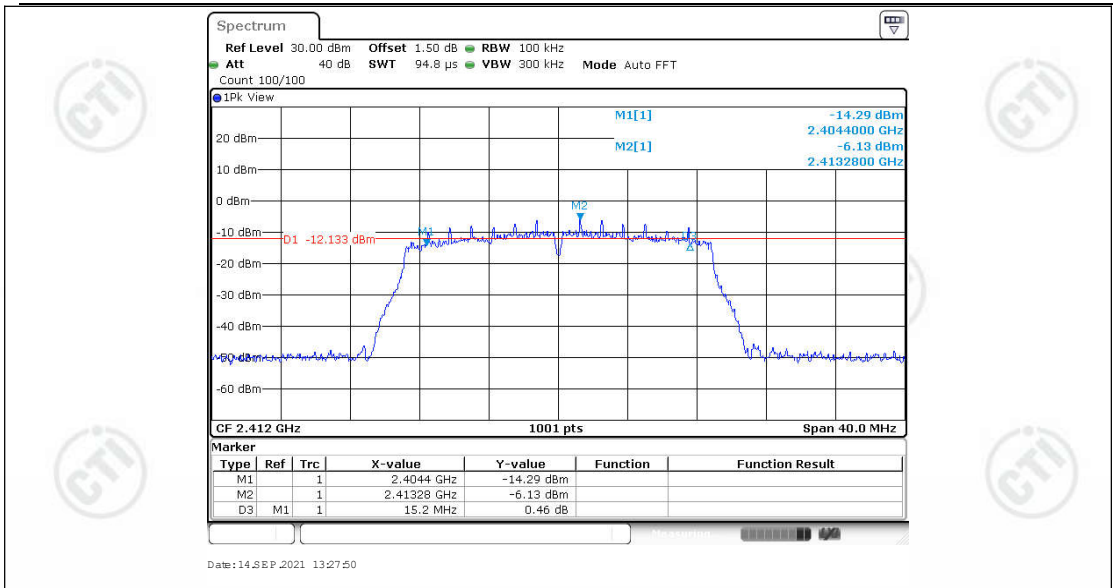
11G_Ant1_2412



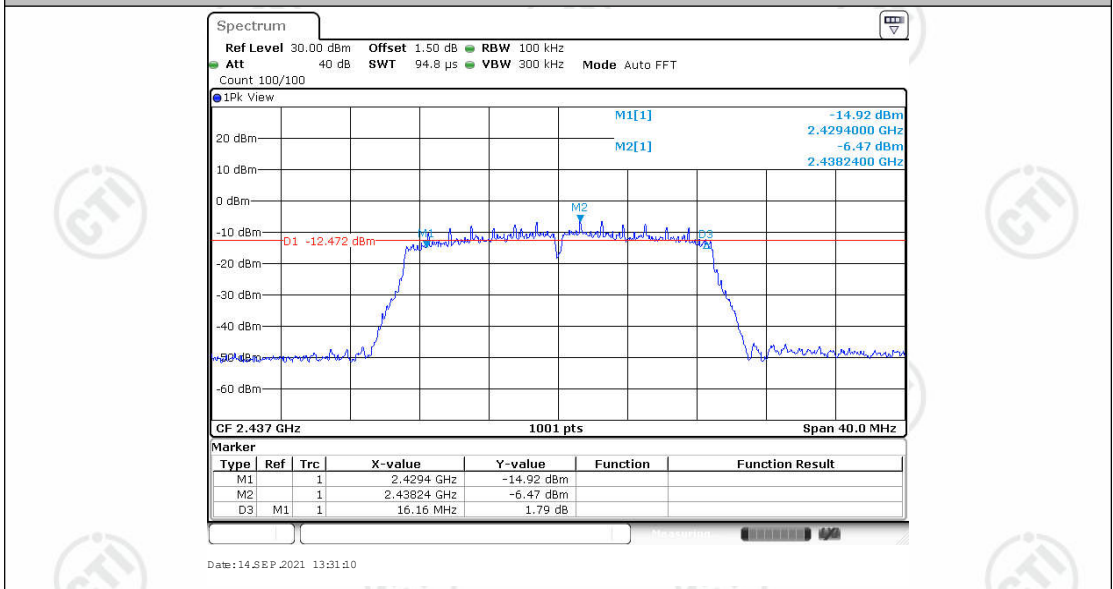
11G_Ant1_2437



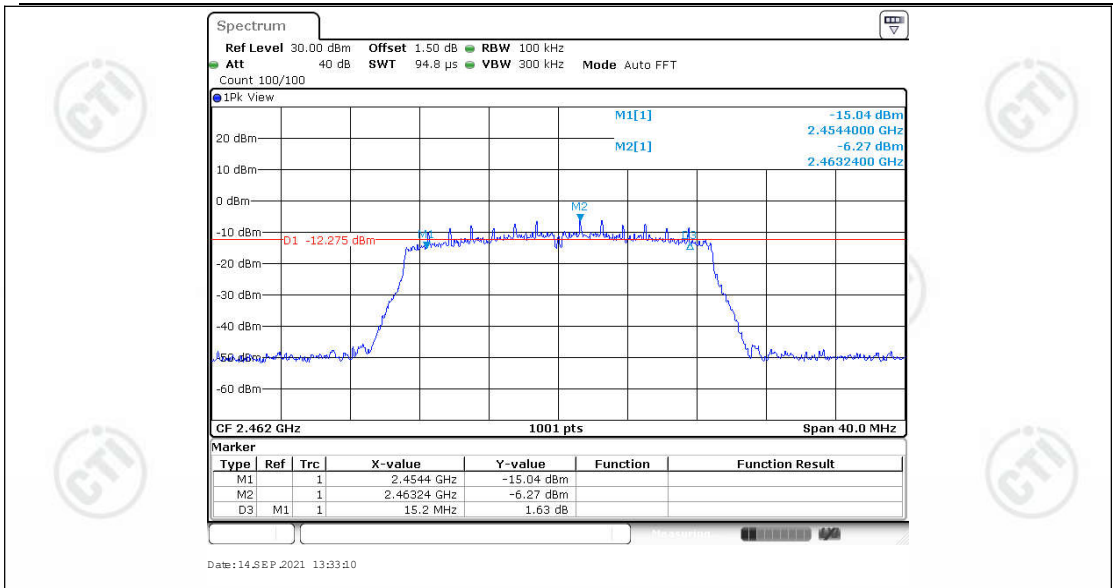
11G_Ant1_2462



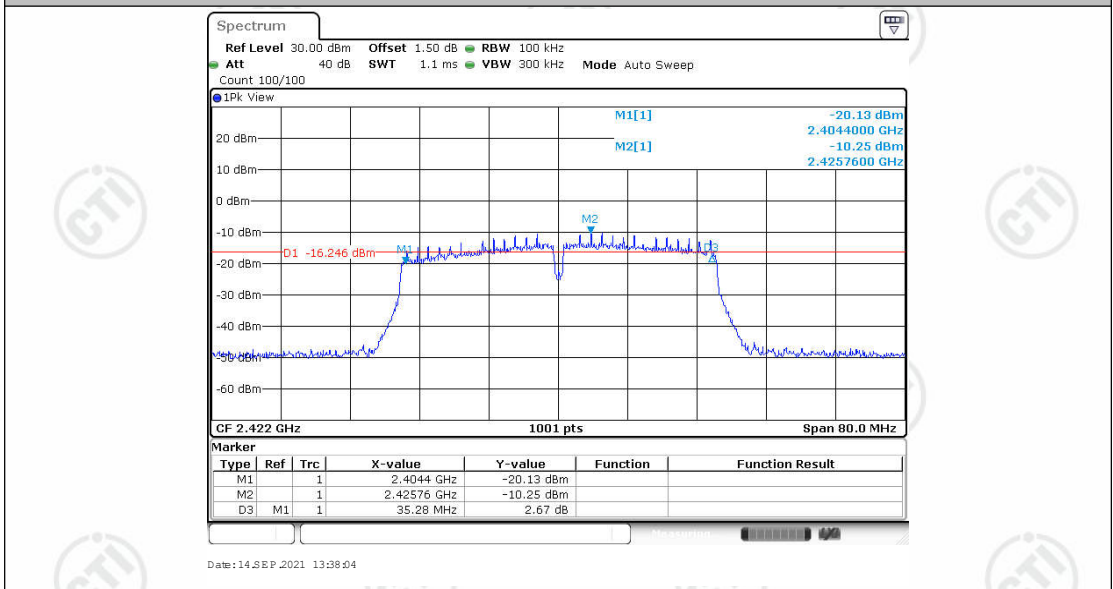
11N20SISO_Ant1_2412



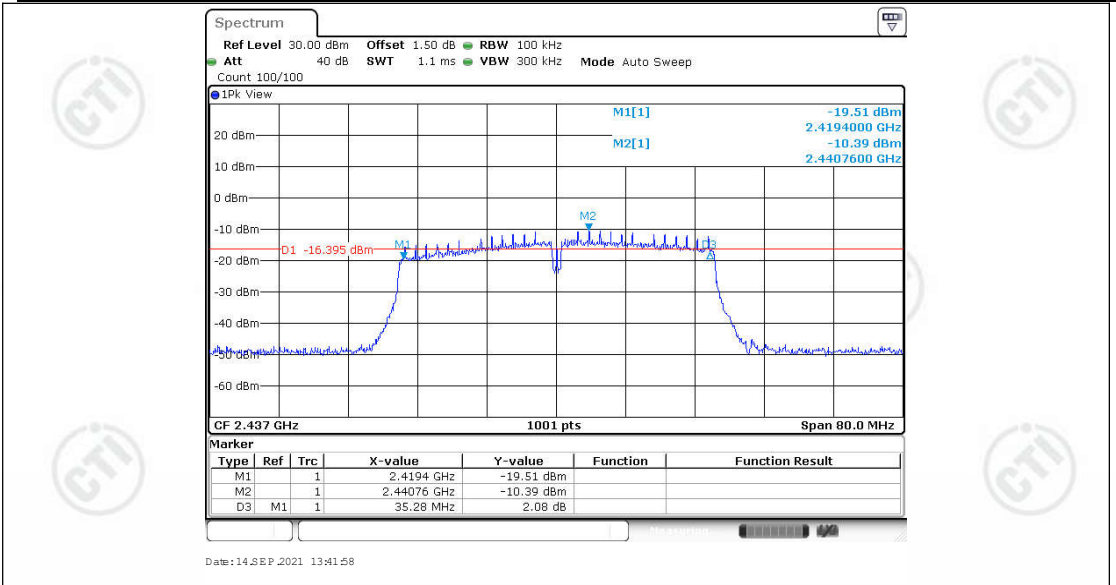
11N20SISO_Ant1_2437



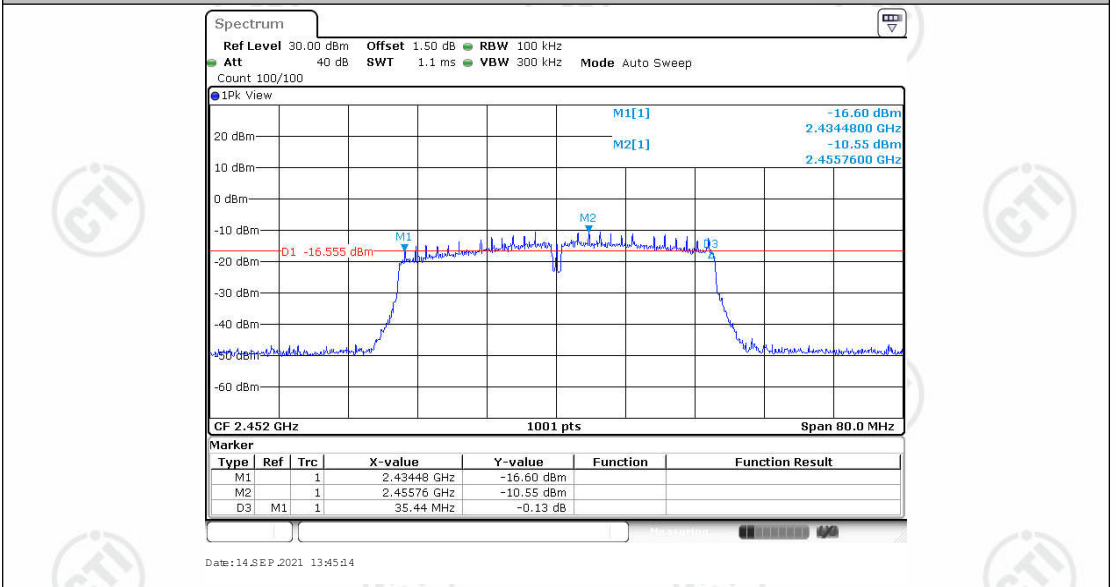
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



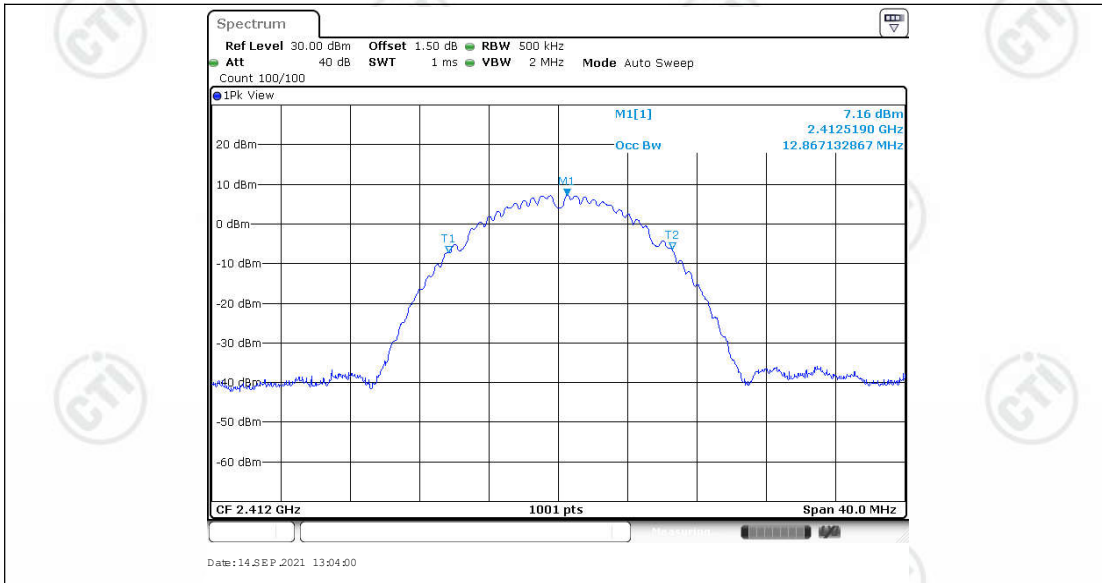
11N40SISO_Ant1_2452

Appendix B: Occupied Channel Bandwidth

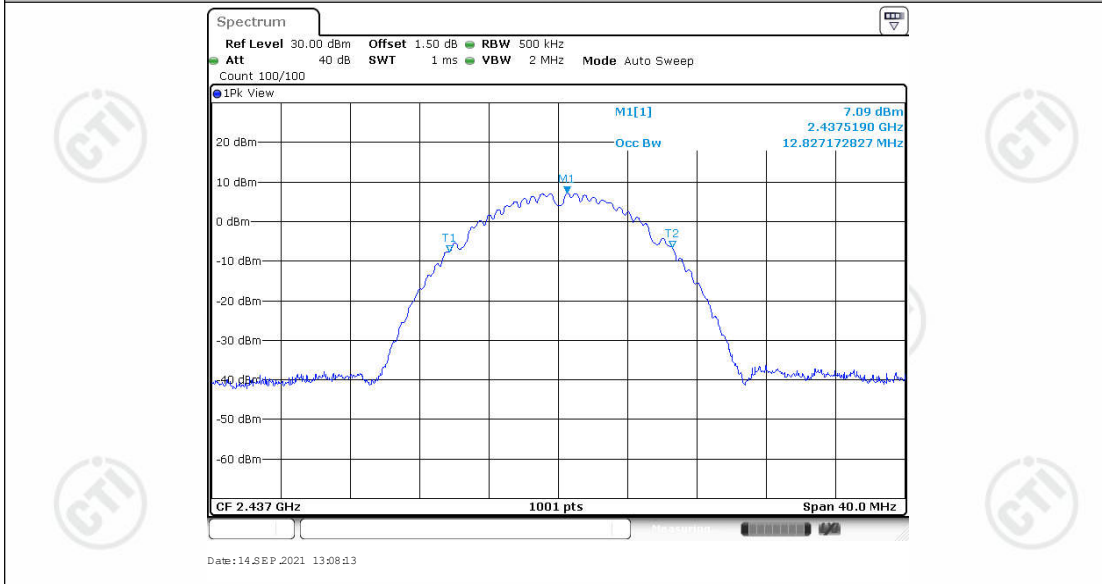
Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.867	2405.686	2418.553	---	PASS
		2437	12.827	2430.726	2443.553	---	PASS
		2462	12.787	2455.726	2468.513	---	PASS
11G	Ant1	2412	17.263	2403.449	2420.711	---	PASS
		2437	17.223	2428.489	2445.711	---	PASS
		2462	17.223	2453.489	2470.711	---	PASS
11N20SISO	Ant1	2412	18.102	2403.049	2421.151	---	PASS
		2437	18.102	2428.049	2446.151	---	PASS
		2462	18.062	2453.049	2471.111	---	PASS
11N40SISO	Ant1	2422	36.603	2404.018	2440.621	---	PASS
		2437	36.603	2419.018	2455.621	---	PASS
		2452	36.444	2434.098	2470.541	---	PASS

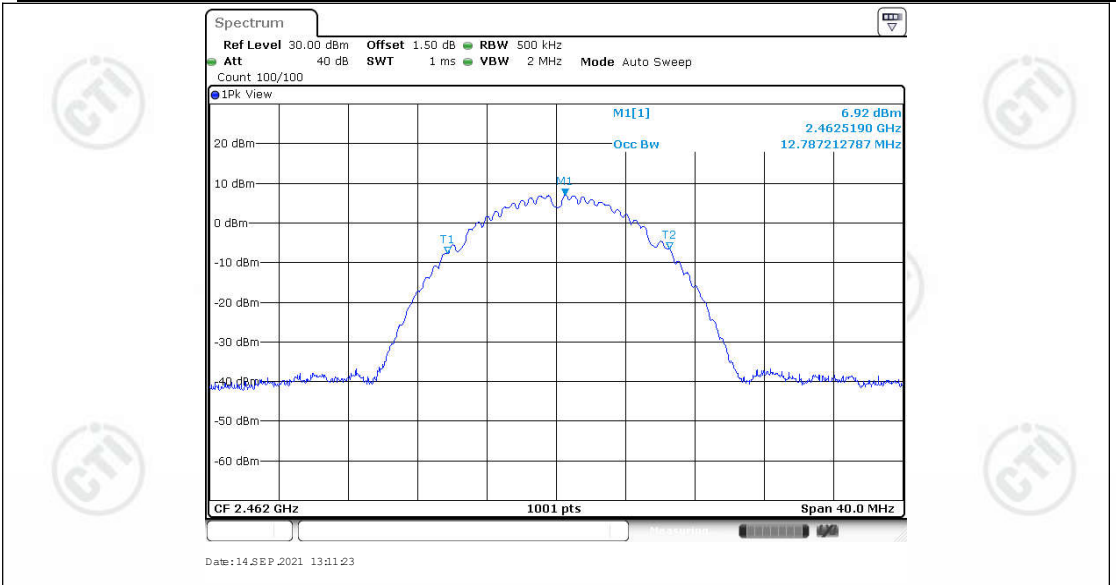
Test Graphs



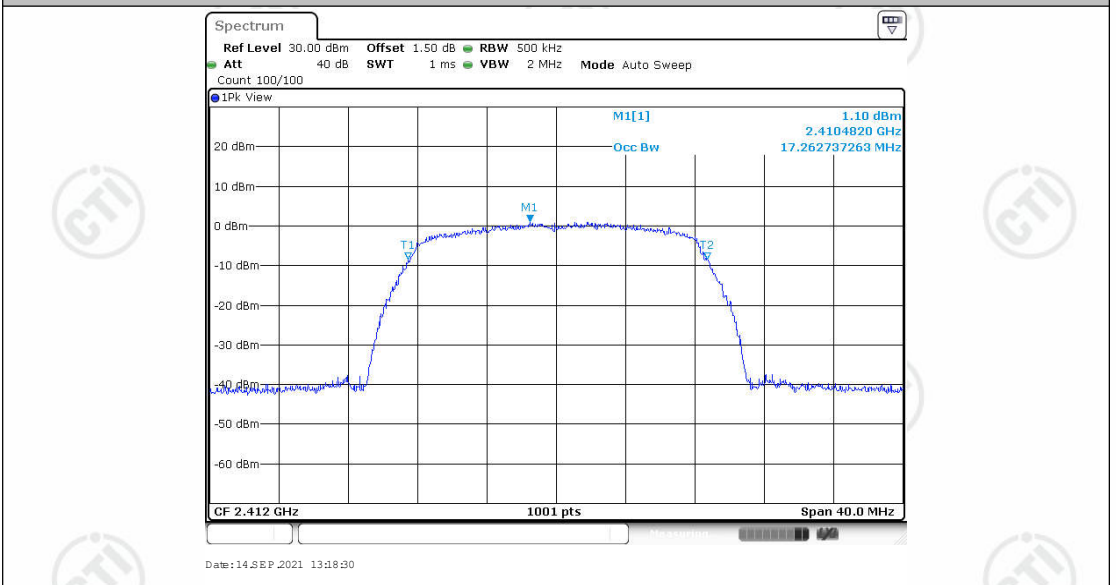
11B_Ant1_2412



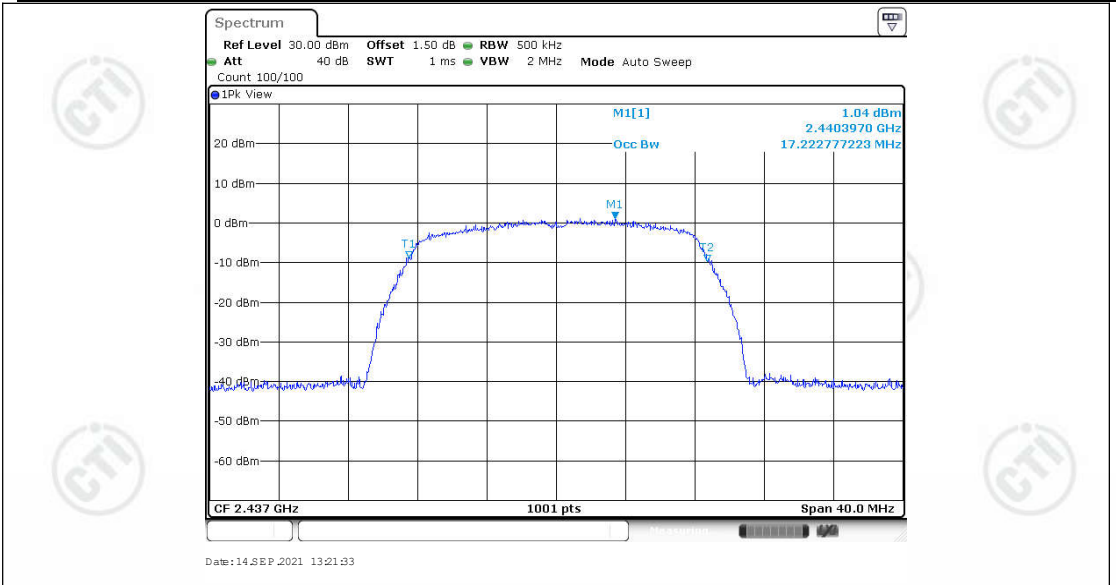
11B_Ant1_2437



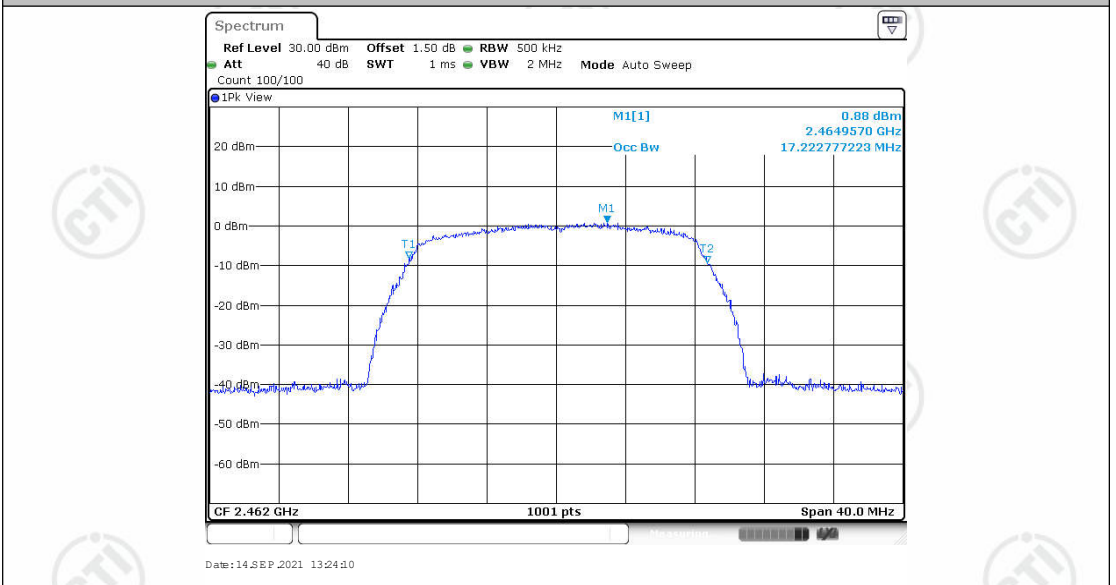
11B_Ant1_2462



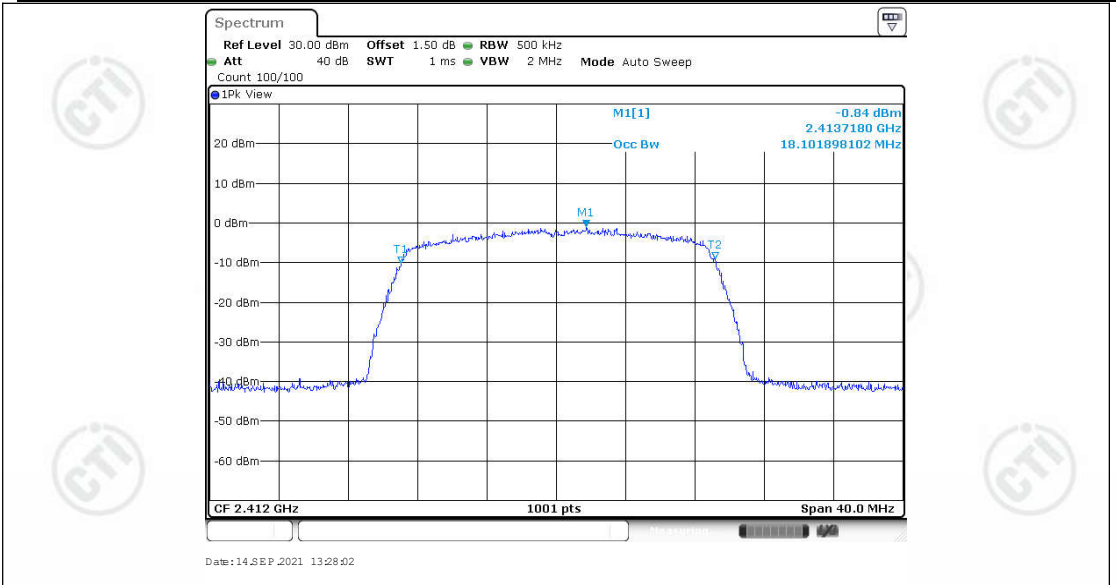
11G_Ant1_2412



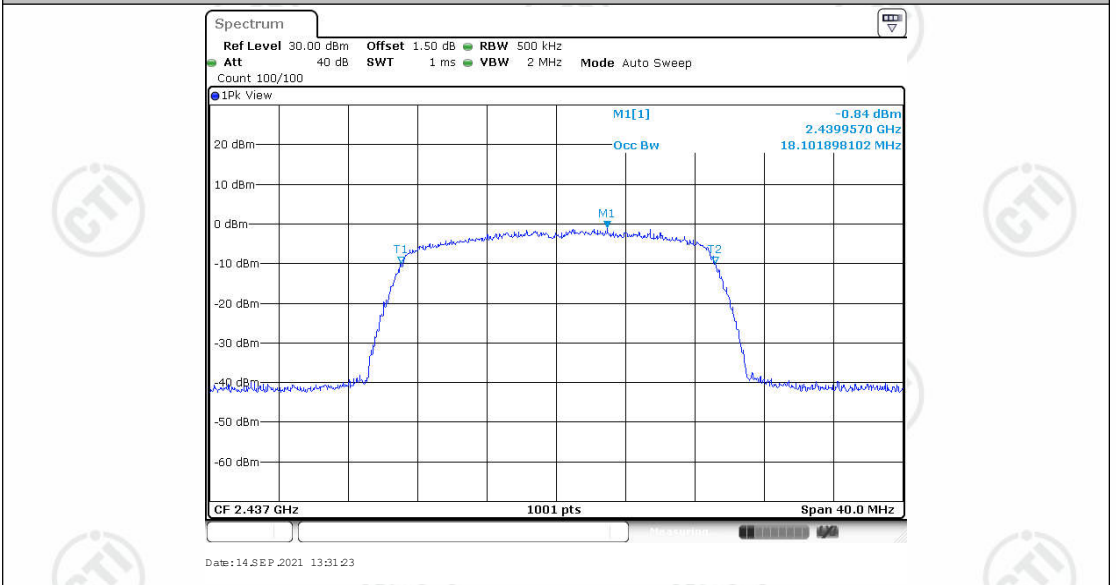
11G_Ant1_2437



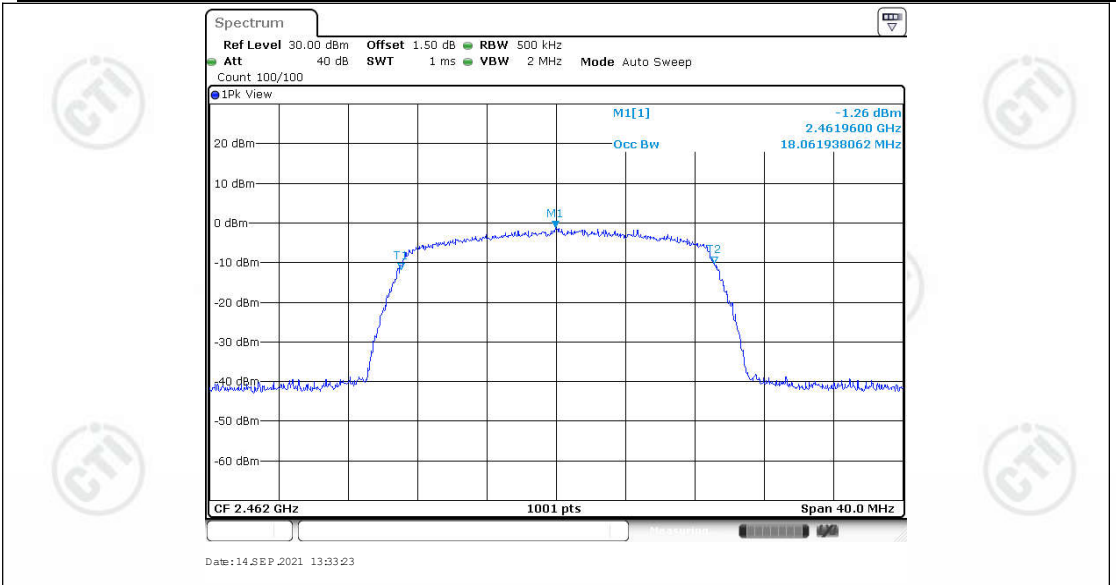
11G_Ant1_2462



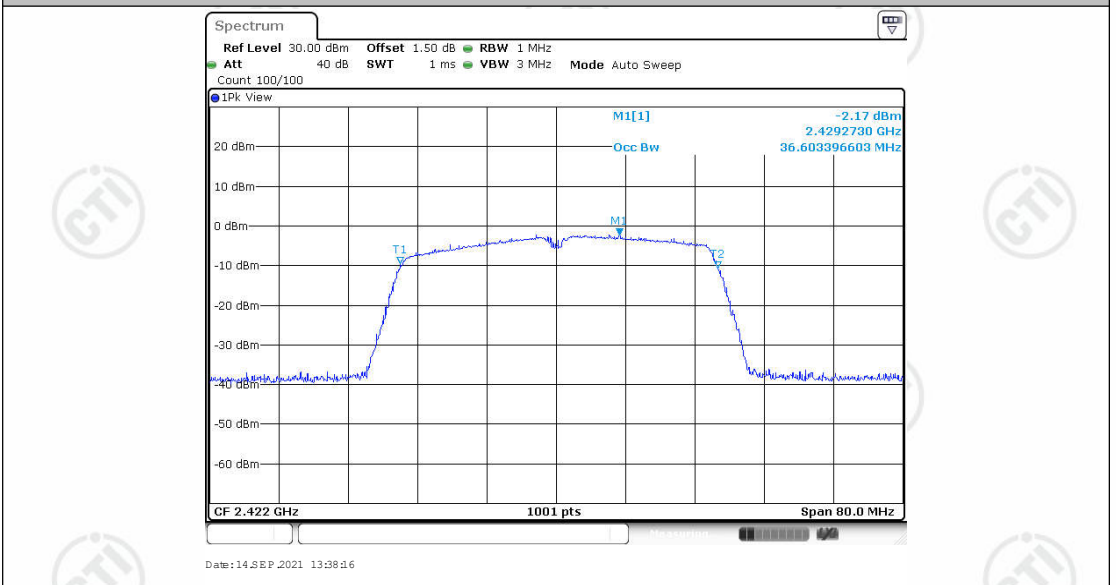
11N20SISO_Ant1_2412



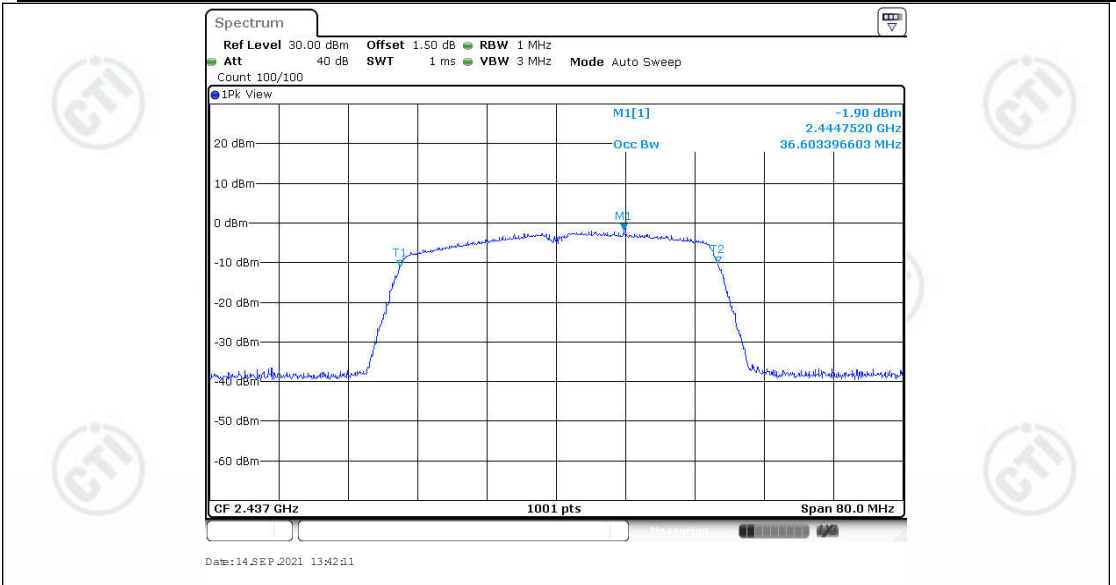
11N20SISO_Ant1_2437



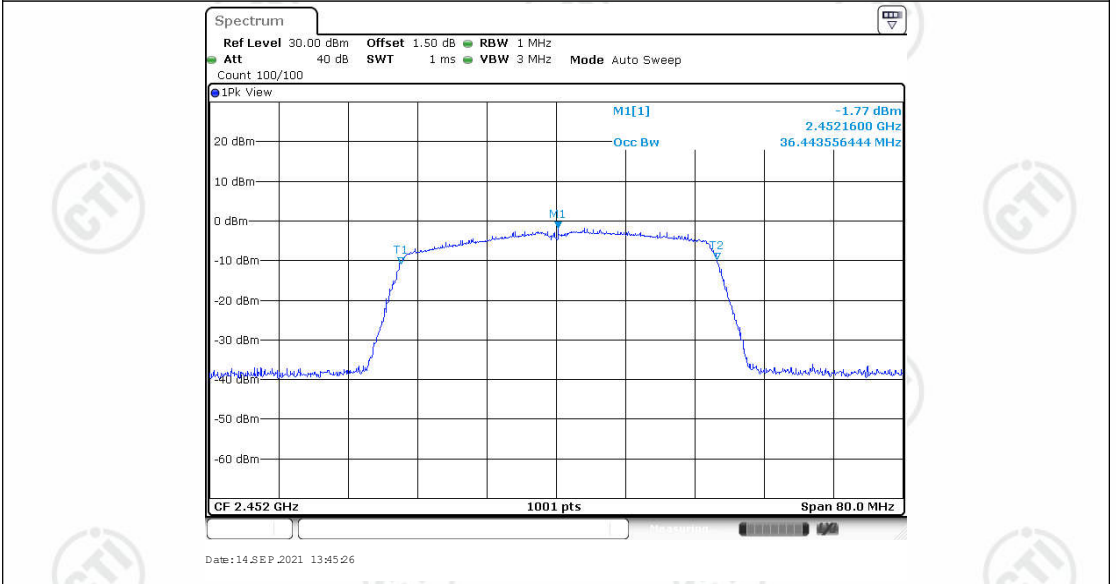
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Channel	Average conducted power[dBm]	Duty cycle [%]	Duty cycle factor[dB]	Peak conducted power[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	17.09	99.40	---	17.09	<=30	PASS
		2437	17.29	99.40	---	17.29	<=30	PASS
		2462	16.85	99.40	---	16.85	<=30	PASS
11G	Ant1	2412	14.06	96.50	0.15	14.21	<=30	PASS
		2437	13.95	96.50	0.15	14.10	<=30	PASS
		2462	13.87	96.50	0.15	14.02	<=30	PASS
11N20SIS O	Ant1	2412	11.62	96.27	0.17	11.79	<=30	PASS
		2437	11.72	96.27	0.17	11.89	<=30	PASS
		2462	11.38	96.27	0.17	11.55	<=30	PASS
11N40SIS O	Ant1	2422	10.42	92.75	0.33	10.75	<=30	PASS
		2437	10.39	92.75	0.33	10.72	<=30	PASS
		2452	10.33	92.75	0.33	10.66	<=30	PASS

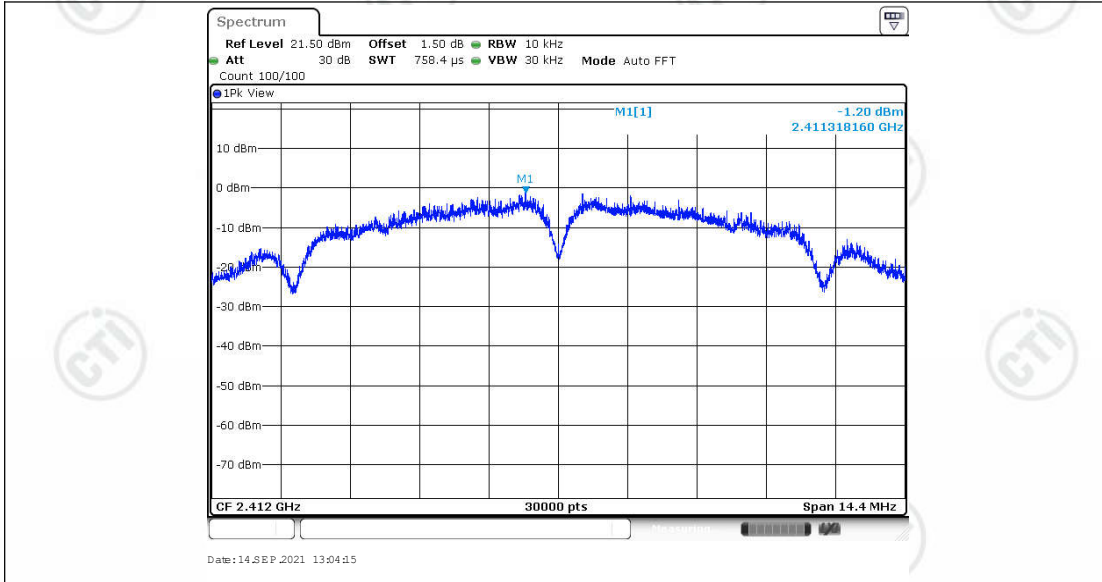
Note:

1. Duty cycle factor = $10 \cdot \lg(1/\text{Duty cycle})$
2. Peak conducted power[dBm]= Average conducted power[dBm]+Duty cycle factor[dB];

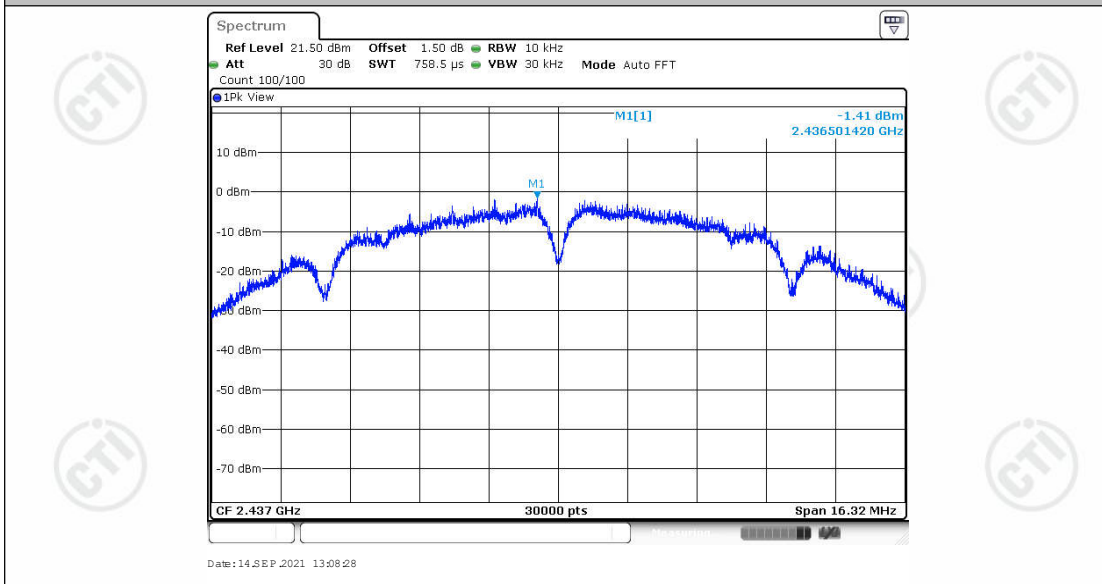
Appendix D: Maximum power spectral density**Test Result**

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-1.2	<=8	PASS
		2437	-1.41	<=8	PASS
		2462	-1.93	<=8	PASS
11G	Ant1	2412	-12.6	<=8	PASS
		2437	-13.19	<=8	PASS
		2462	-12.75	<=8	PASS
11N20SISO	Ant1	2412	-15.1	<=8	PASS
		2437	-15.48	<=8	PASS
		2462	-14.35	<=8	PASS
11N40SISO	Ant1	2422	-18.79	<=8	PASS
		2437	-17.76	<=8	PASS
		2452	-16.47	<=8	PASS

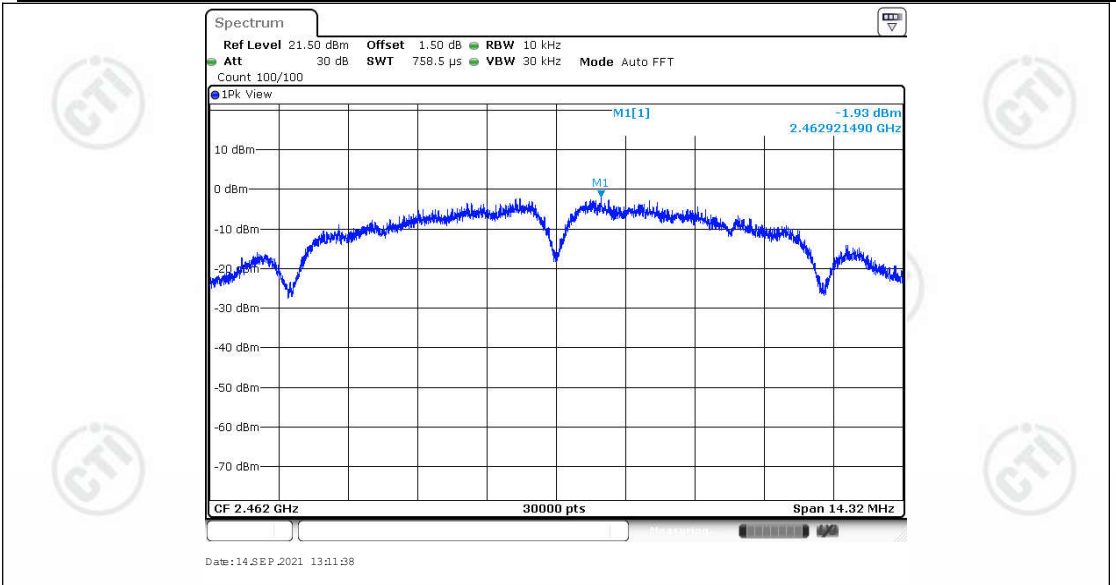
Test Graphs



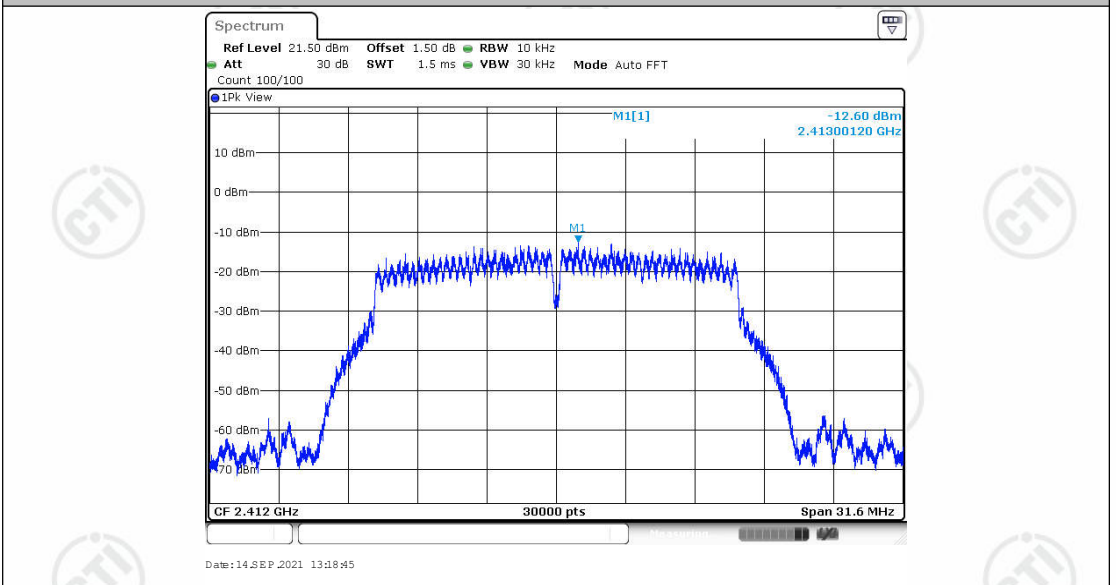
11B_Ant1_2412



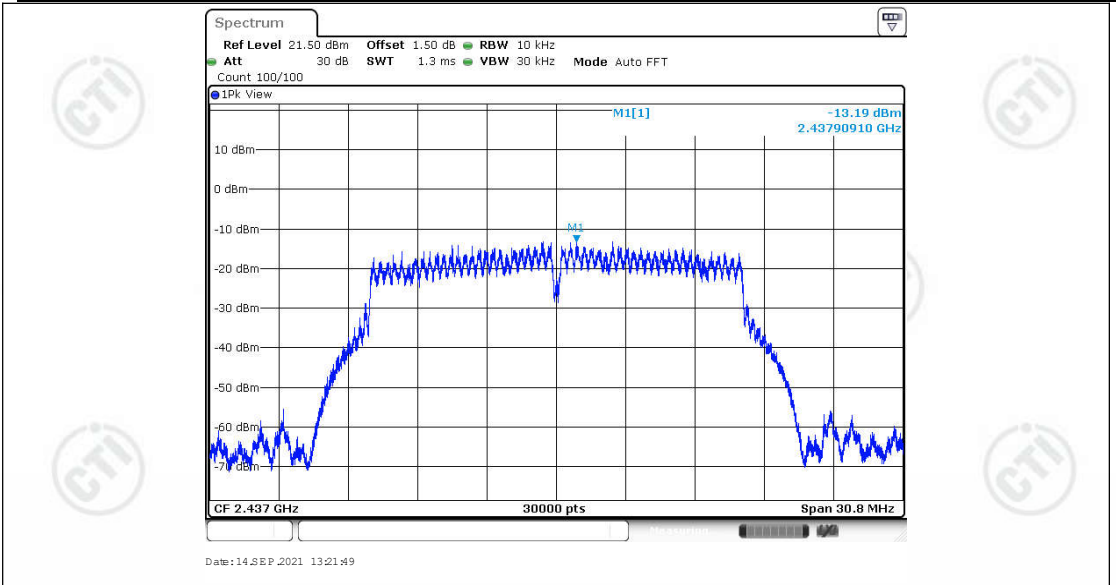
11B_Ant1_2437



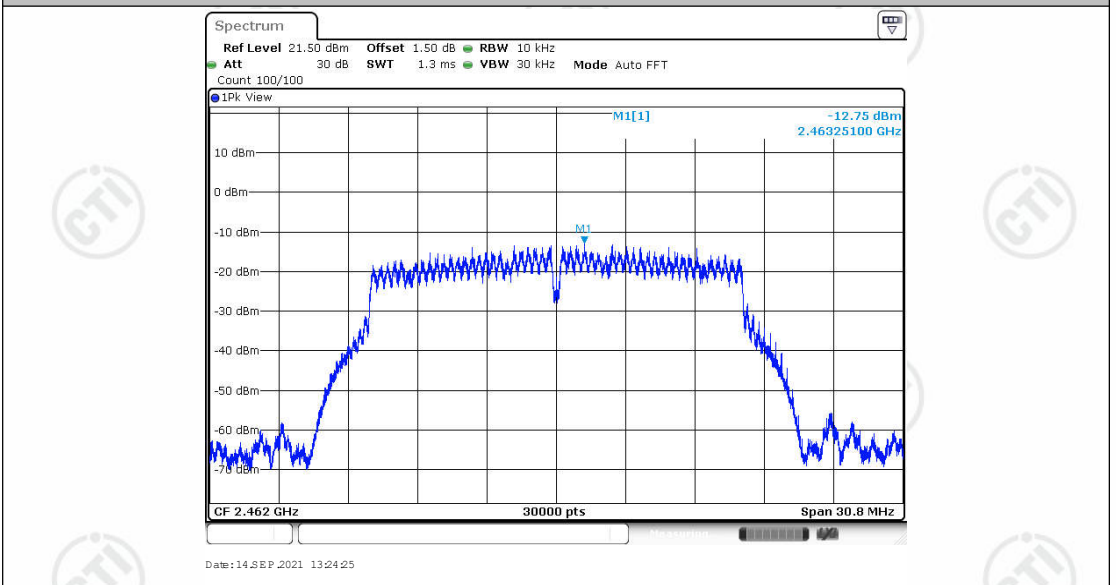
11B_Ant1_2462



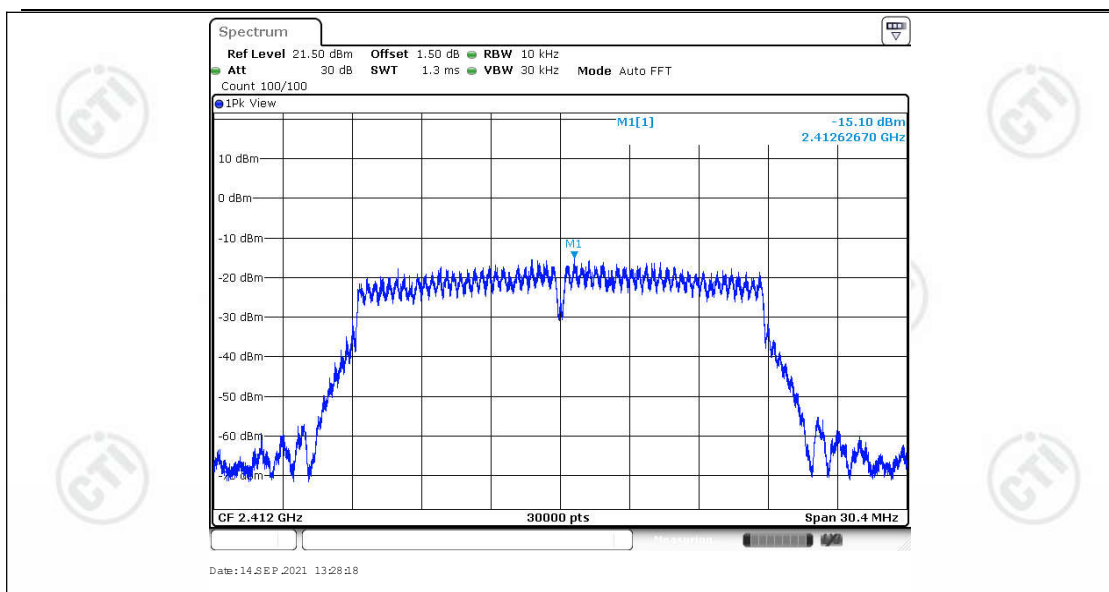
11G_Ant1_2412



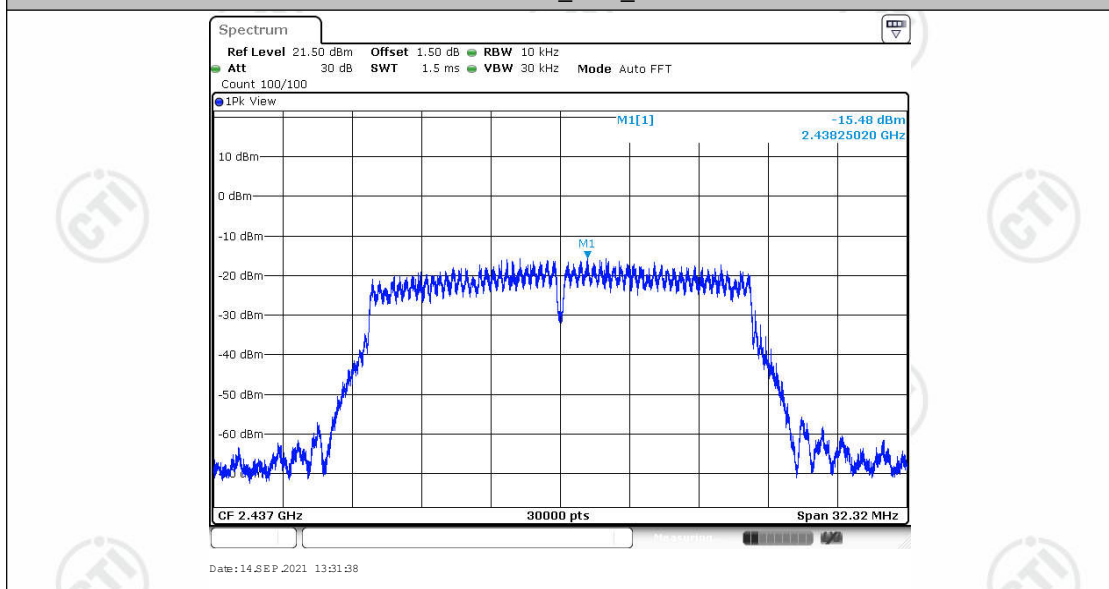
11G_Ant1_2437



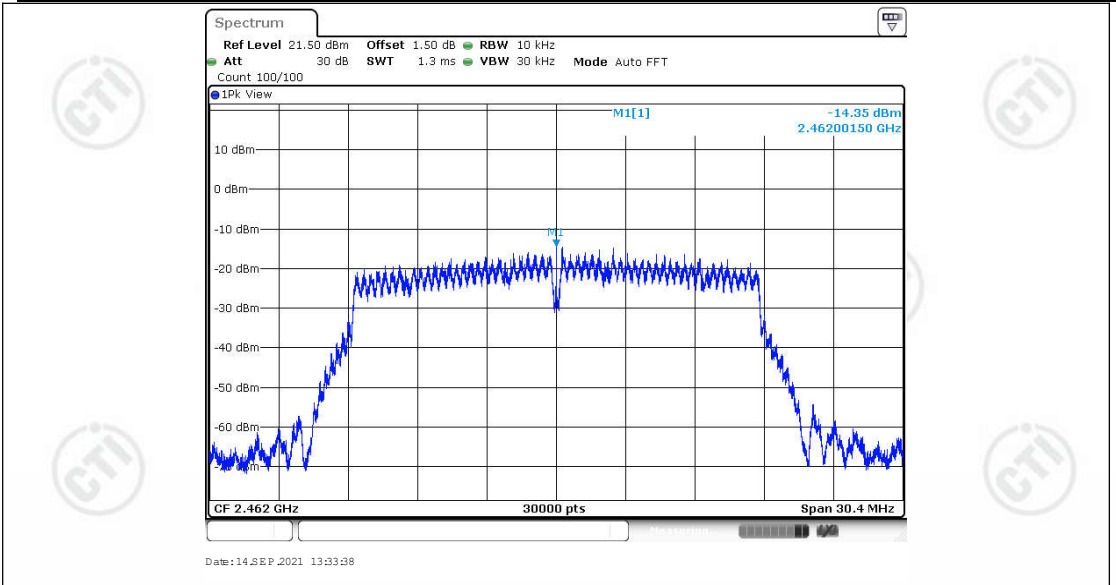
11G_Ant1_2462



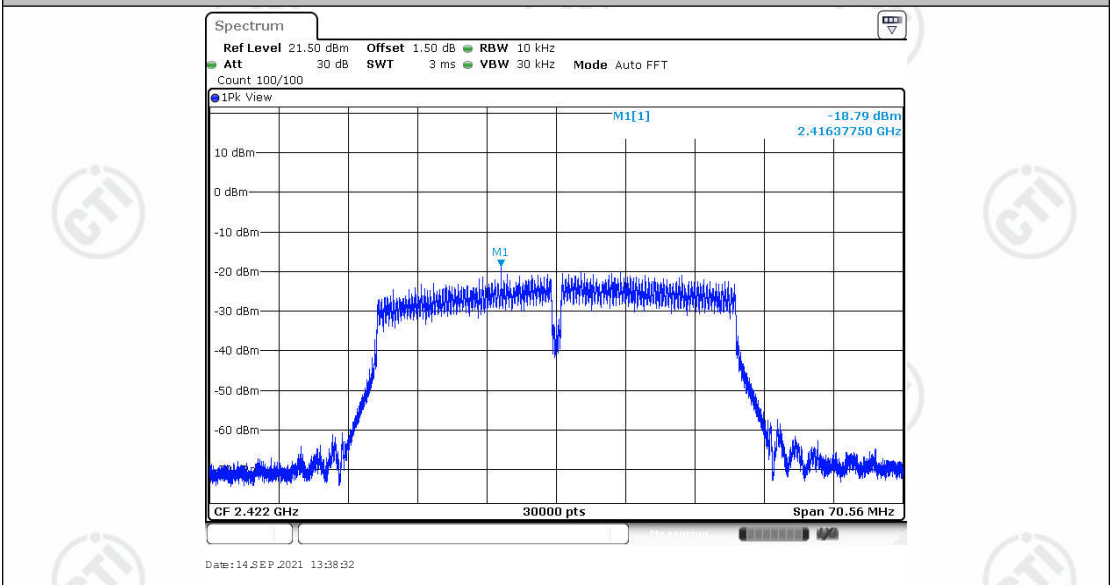
11N20SISO_Ant1_2412



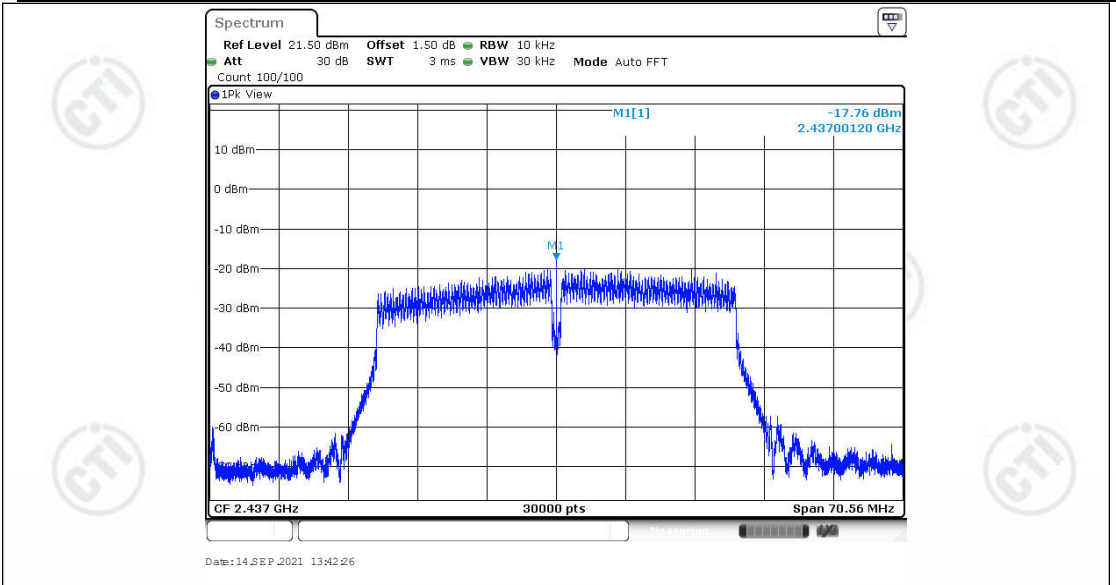
11N20SISO_Ant1_2437



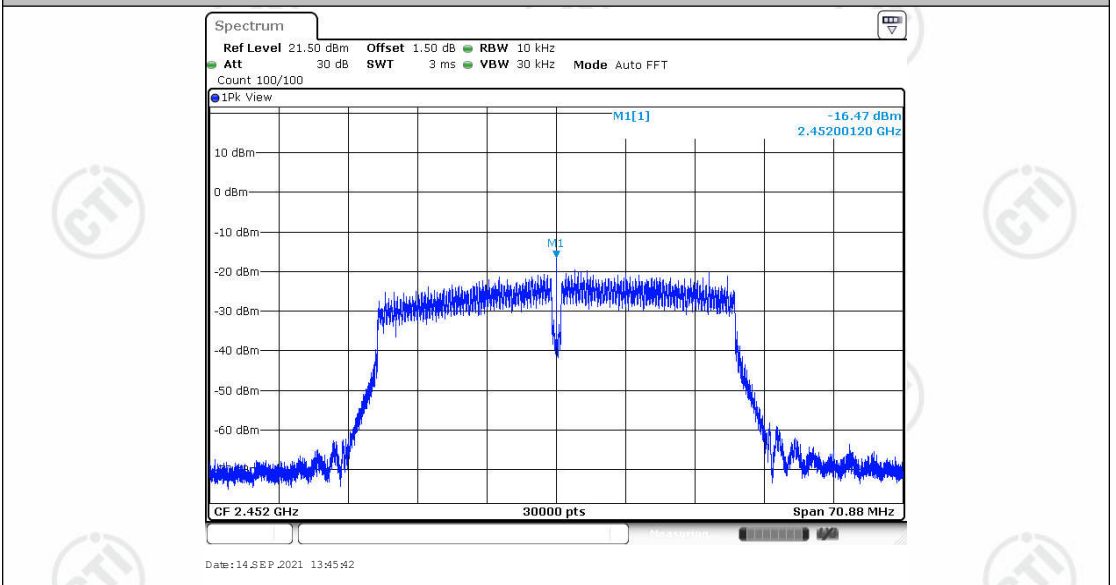
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

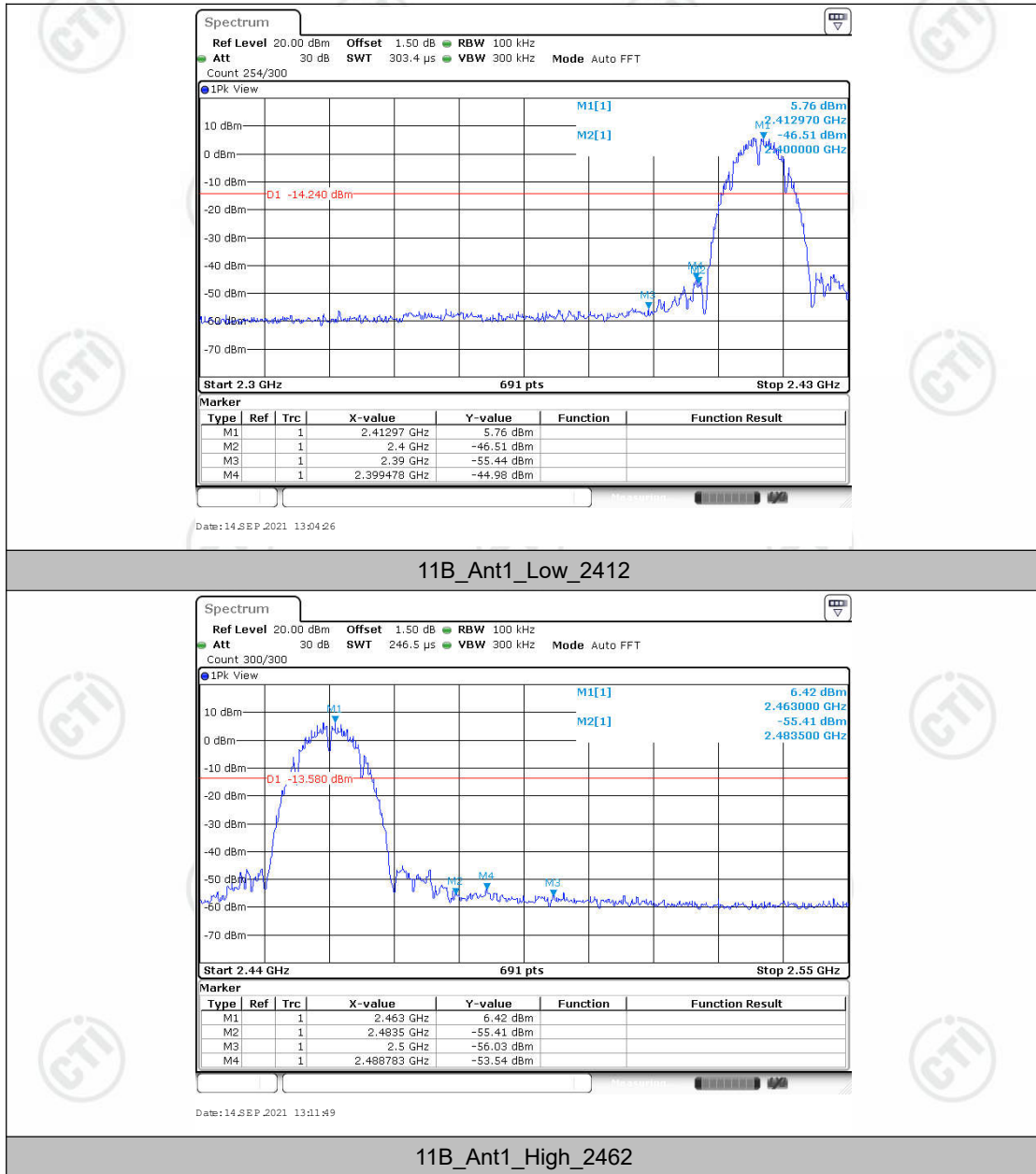


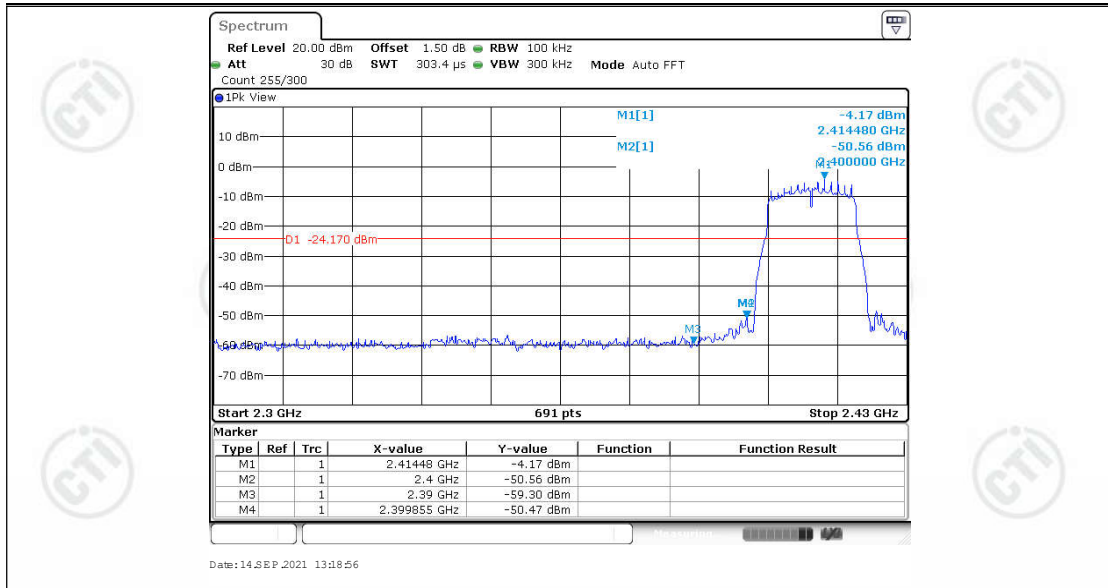
11N40SISO_Ant1_2452

Appendix E: Band edge measurements**Test Result**

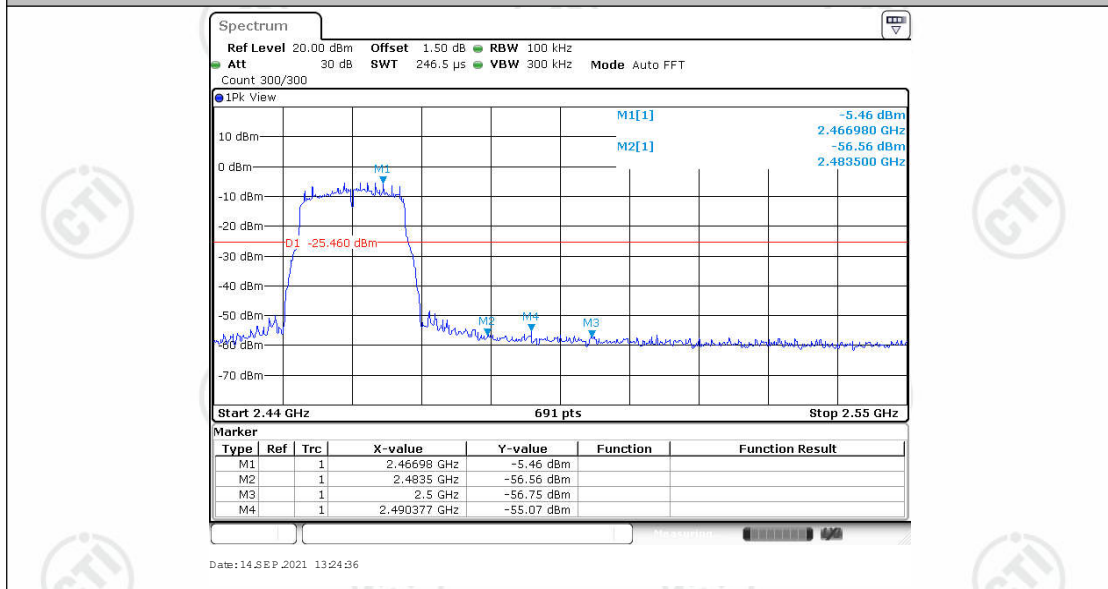
Test Mode	Antenna	Ch Name	Channel	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	5.76	-44.98	<=-14.24	PASS
		High	2462	6.42	-53.54	<=-13.58	PASS
11G	Ant1	Low	2412	-4.17	-50.47	<=-24.17	PASS
		High	2462	-5.46	-55.07	<=-25.46	PASS
11N20SISO	Ant1	Low	2412	-7.12	-53.08	<=-27.12	PASS
		High	2462	-8.56	-56.48	<=-28.56	PASS
11N40SISO	Ant1	Low	2422	-10.56	-50.64	<=-30.56	PASS
		High	2452	-10.99	-56.28	<=-30.99	PASS

Test Graphs

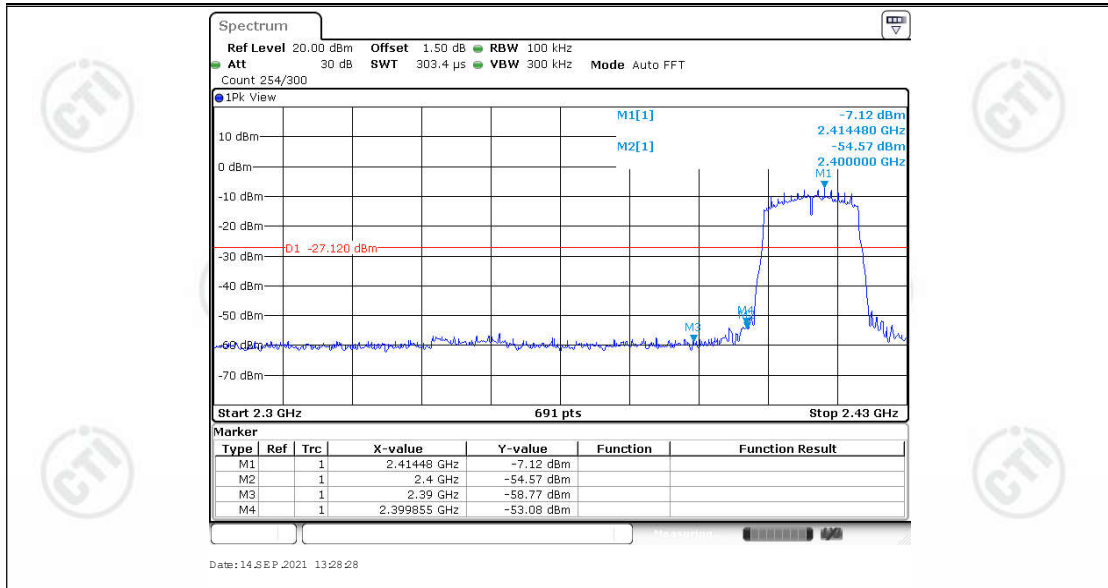




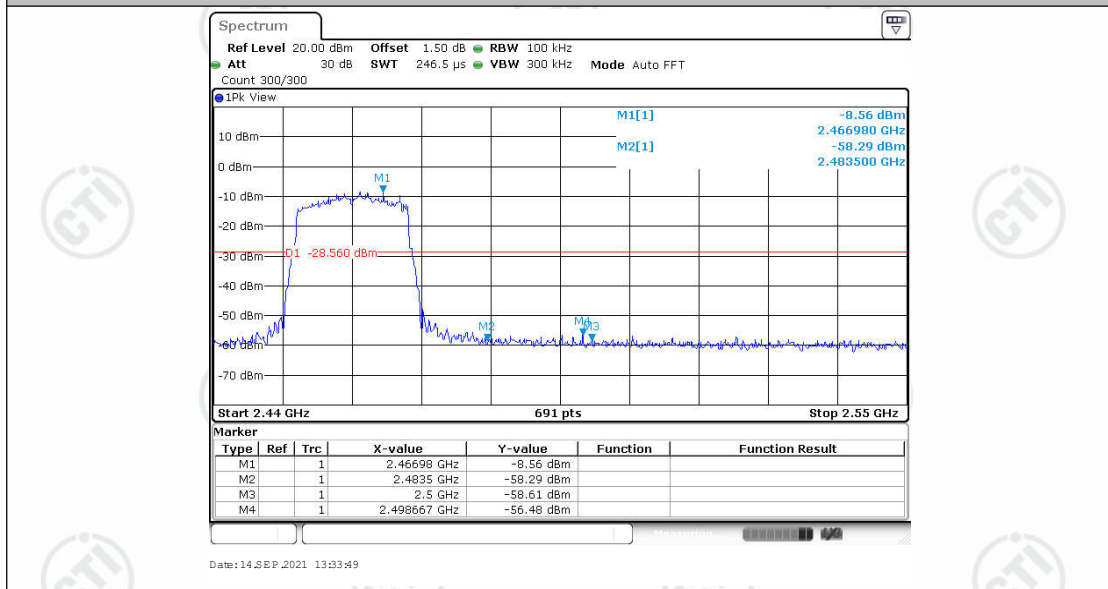
11G_Ant1_Low_2412



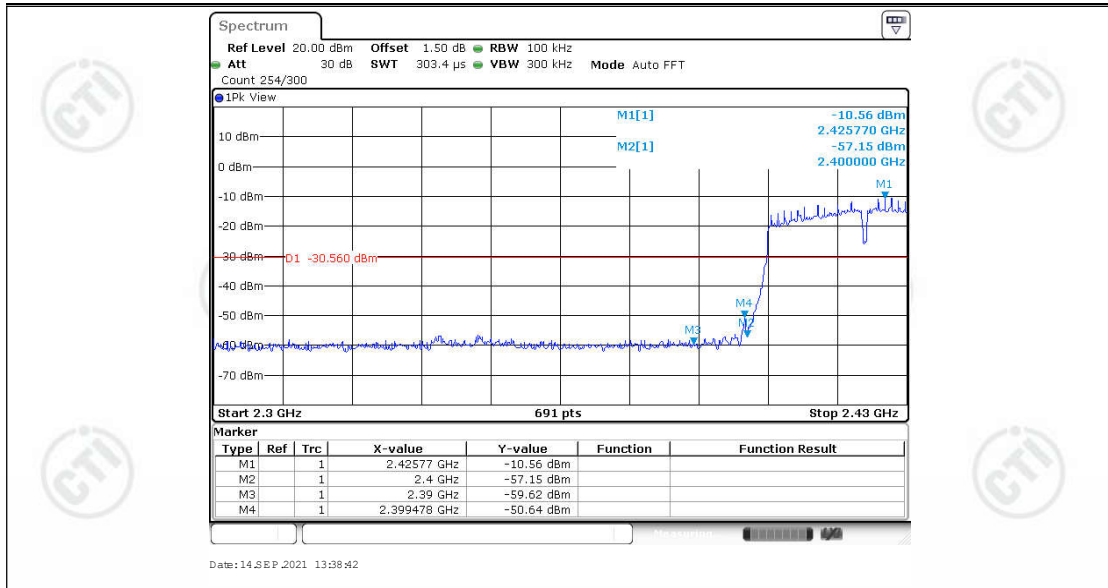
11G_Ant1_High_2462



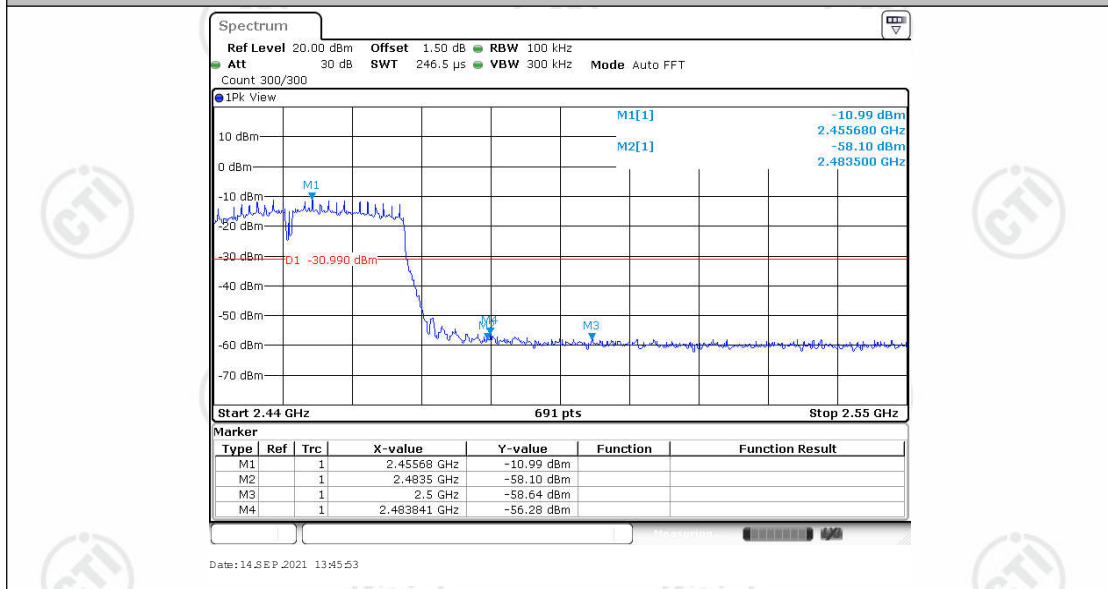
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

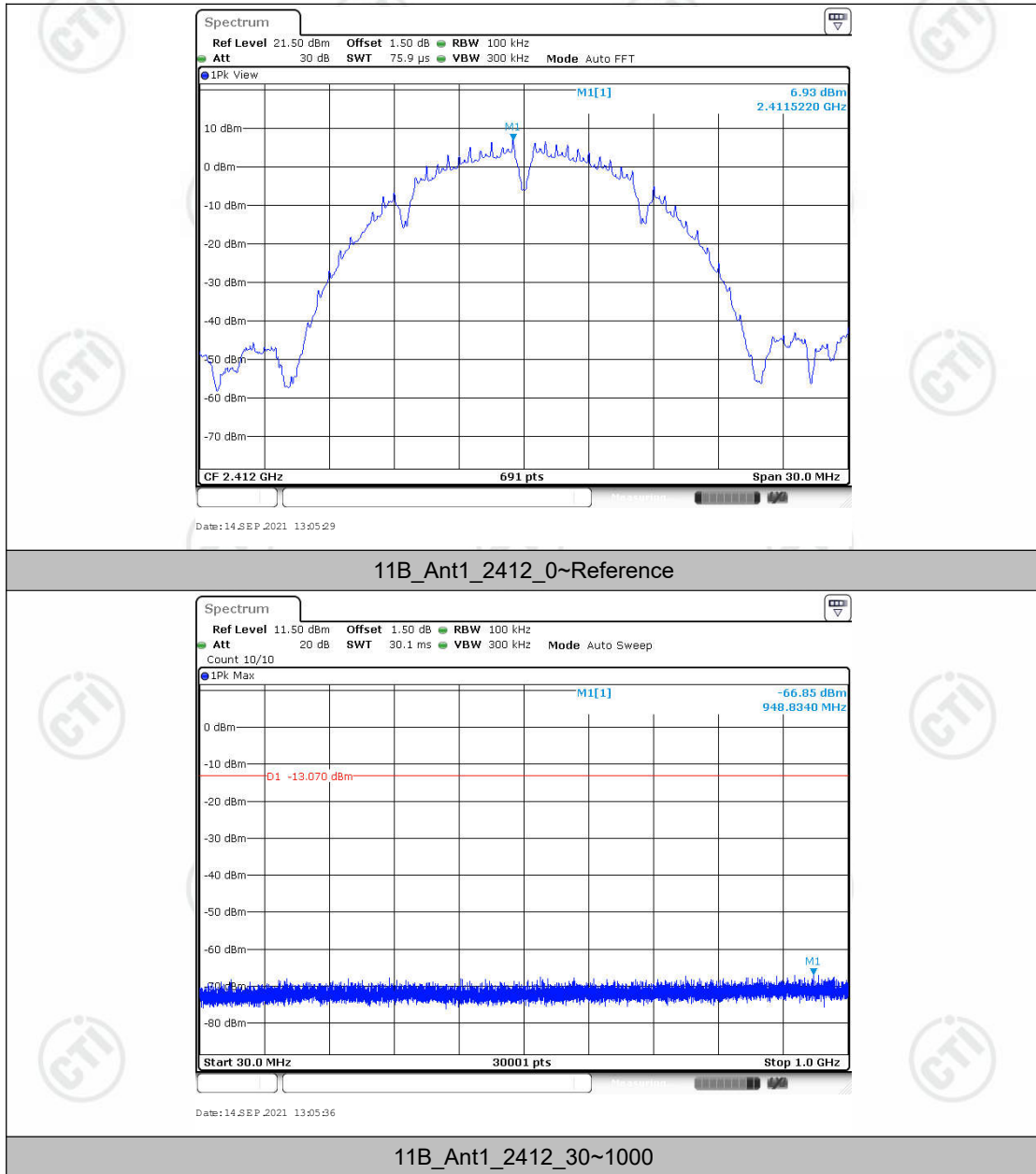
Appendix F: Conducted Spurious Emission

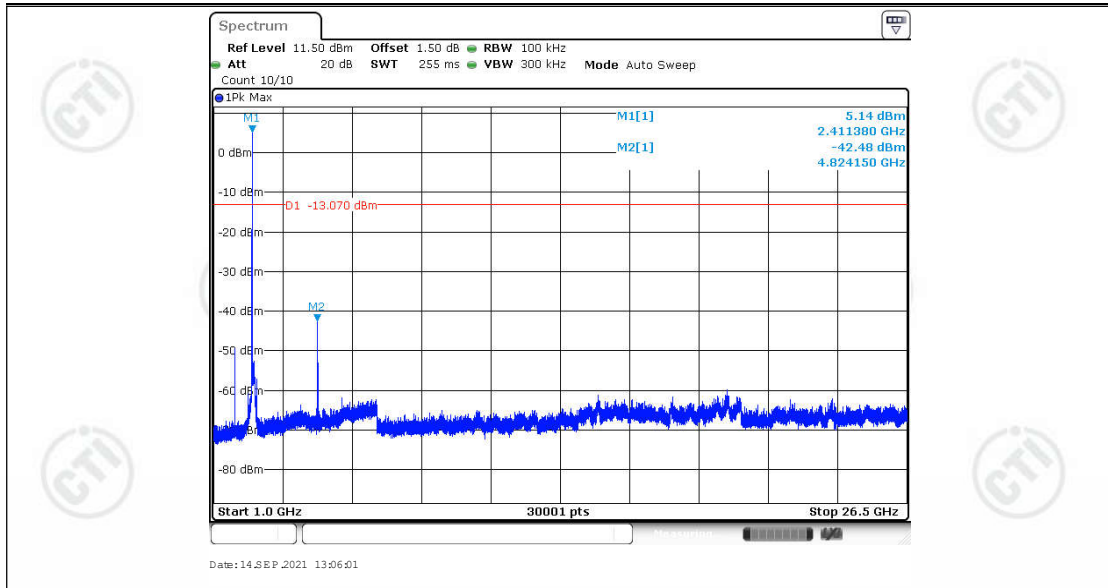
Test Result

Test Mode	Antenna	Channel	Freq Range [Mhz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.93	6.93	---	PASS
			30~1000	6.93	-66.85	<=-13.07	PASS
			1000~26500	6.93	-42.48	<=-13.07	PASS
		2437	Reference	6.44	6.44	---	PASS
			30~1000	6.44	-66.6	<=-13.56	PASS
			1000~26500	6.44	-44.42	<=-13.56	PASS
		2462	Reference	6.42	6.42	---	PASS
			30~1000	6.42	-67.17	<=-13.58	PASS
			1000~26500	6.42	-46.37	<=-13.58	PASS
11G	Ant1	2412	Reference	-4.16	-4.16	---	PASS
			30~1000	-4.16	-66.99	<=-24.16	PASS
			1000~26500	-4.16	-59.01	<=-24.16	PASS
		2437	Reference	-5.33	-5.33	---	PASS
			30~1000	-5.33	-66.43	<=-25.33	PASS
			1000~26500	-5.33	-59.38	<=-25.33	PASS
		2462	Reference	-4.38	-4.38	---	PASS
			30~1000	-4.38	-67.4	<=-24.38	PASS
			1000~26500	-4.38	-60.14	<=-24.38	PASS
11N20SISO	Ant1	2412	Reference	-6.42	-6.42	---	PASS
			30~1000	-6.42	-66.77	<=-26.42	PASS
			1000~26500	-6.42	-59.83	<=-26.42	PASS
		2437	Reference	-6.41	-6.41	---	PASS
			30~1000	-6.41	-66.91	<=-26.41	PASS
			1000~26500	-6.41	-59.91	<=-26.41	PASS
		2462	Reference	-6.74	-6.74	---	PASS
			30~1000	-6.74	-66.87	<=-26.74	PASS
			1000~26500	-6.74	-60.52	<=-26.74	PASS

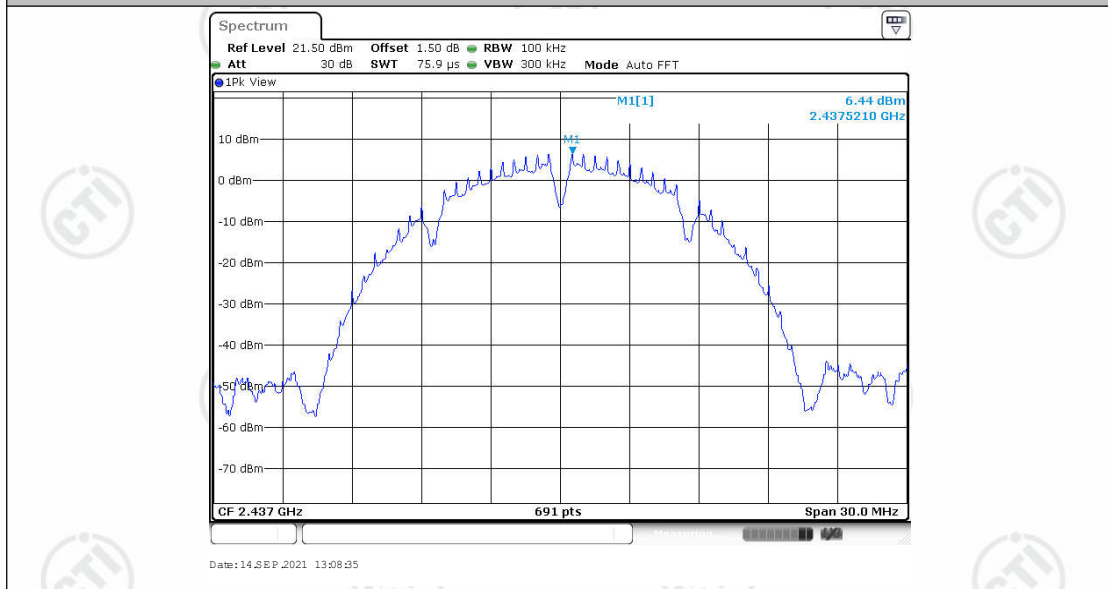
11N40SISO	Ant1	2422	Reference	-10.50	-10.50	---	PASS
			30~1000	-10.50	-66.79	<=-30.5	PASS
			1000~26500	-10.50	-57.06	<=-30.5	PASS
		2437	Reference	-10.83	-10.83	---	PASS
			30~1000	-10.83	-59.54	<=-30.83	PASS
			1000~26500	-10.83	-54.15	<=-30.83	PASS
		2452	Reference	-11.06	-11.06	---	PASS
			30~1000	-11.06	-56.93	<=-31.06	PASS
			1000~26500	-11.06	-60.82	<=-31.06	PASS

Test Graphs





11B_Ant1_2412_1000~26500



11B_Ant1_2437_0~Reference