

Appendix A

Report No.:	CISRR240321100
FCC ID:	2BFJN-LK100W
Product Name:	Print Server
Model No.:	LK100W
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

1) Conducted Peak Output Power

Test Result

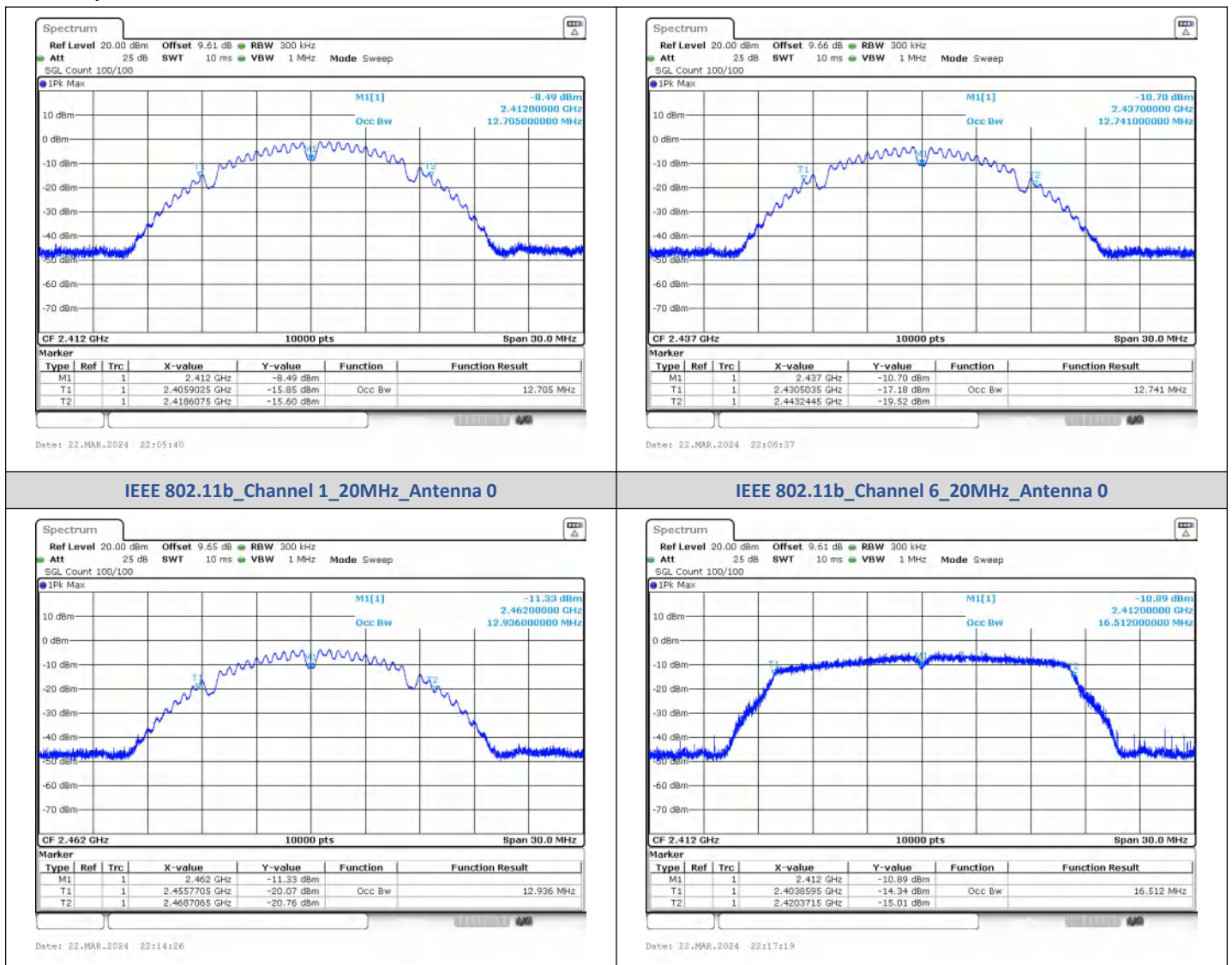
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	14.09	30	PASS
	6	13.13	30	PASS
	11	13.66	30	PASS
IEEE 802.11g	1	12.54	30	PASS
	6	13.12	30	PASS
	11	12.15	30	PASS
IEEE 802.11n_20	1	11.89	30	PASS
	6	11.52	30	PASS
	11	11.91	30	PASS
IEEE 802.11n_40	3	10.40	30	PASS
	6	10.17	30	PASS
	9	10.58	30	PASS

2) 99% Bandwidth

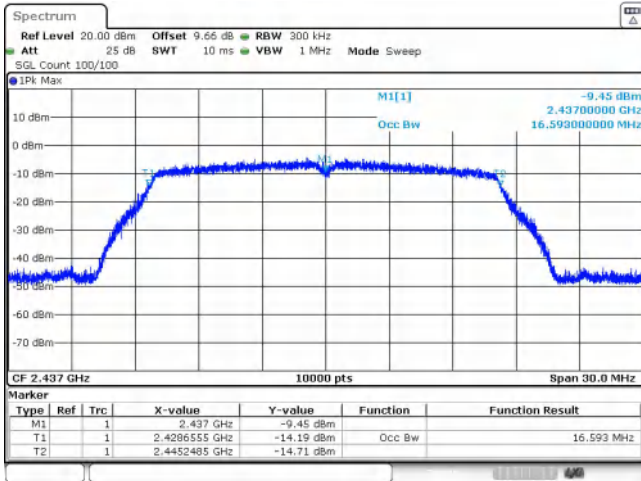
Test Result

Mode	Channel	Ant.	99% BW (MHz)
IEEE 802.11b	1	0	12.710
	6		12.740
	11		12.940
IEEE 802.11g	1		16.510
	6		16.590
	11		16.760
IEEE 802.11n_20	1		17.620
	6		17.650
	11		17.800
IEEE 802.11n_40	3		35.700
	6		35.720
	9		36.580

Test Graphs

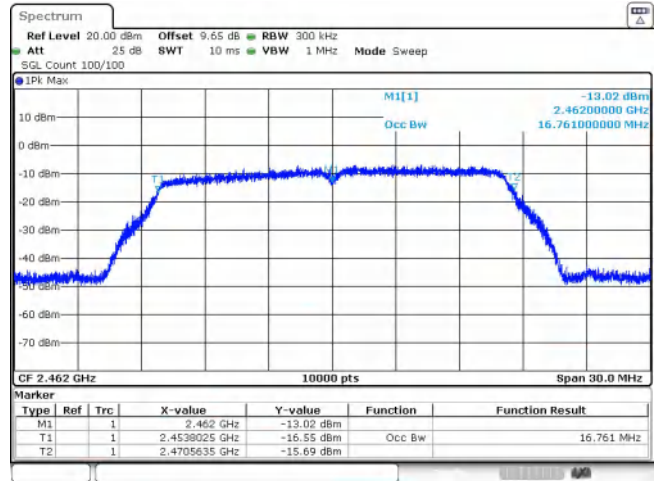


IEEE 802.11b_Channel 11_20MHz_Antenna 0



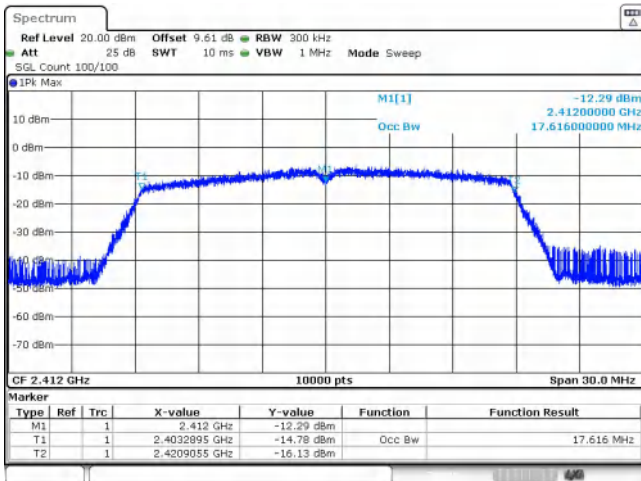
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IEEE 802.11g_Channel 1_20MHz_Antenna 0



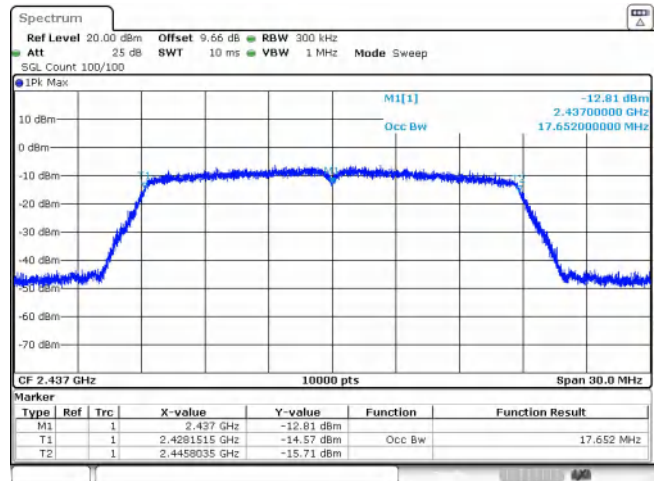
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IEEE 802.11g_Channel 6_20MHz_Antenna 0



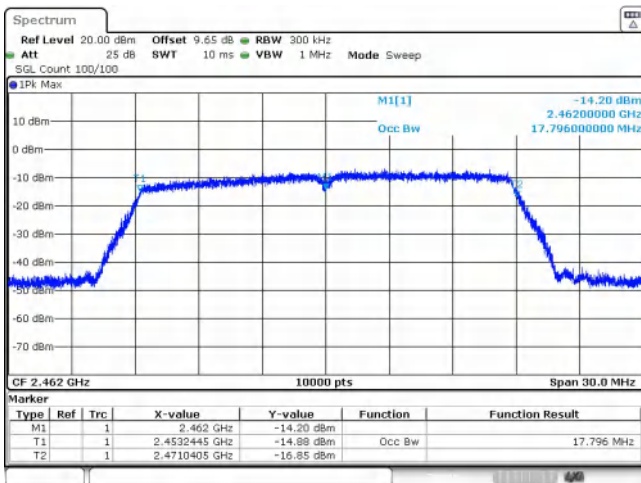
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IEEE 802.11g_Channel 11_20MHz_Antenna 0



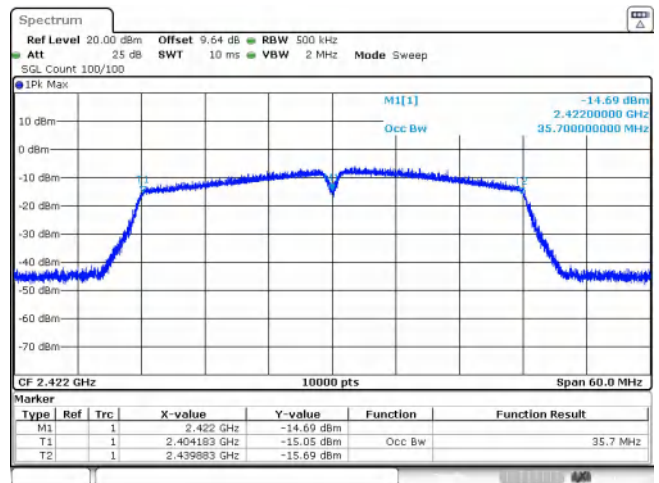
Date: 22.MAR.2024 22:28:00

IEEE 802.11n_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:30:52

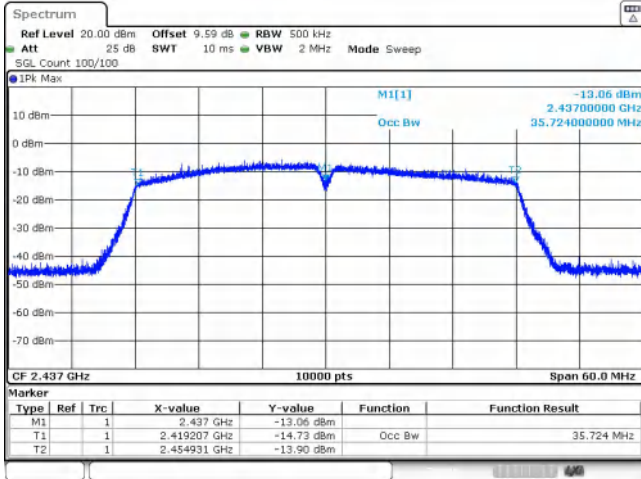
IEEE 802.11n_Channel 6_20MHz_Antenna 0



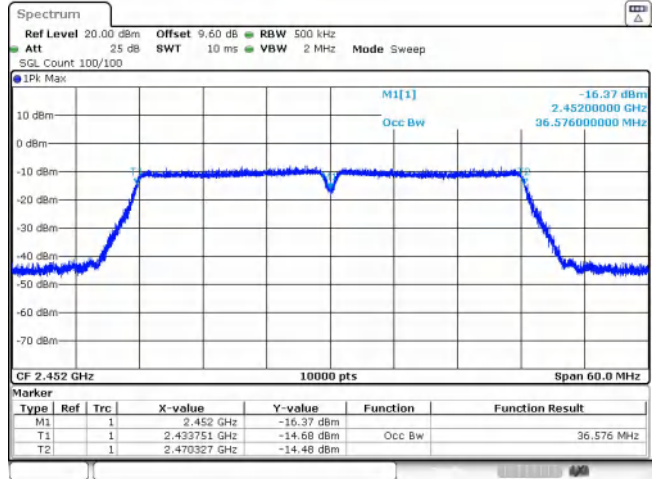
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IEEE 802.11n_Channel 11_20MHz_Antenna 0

IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



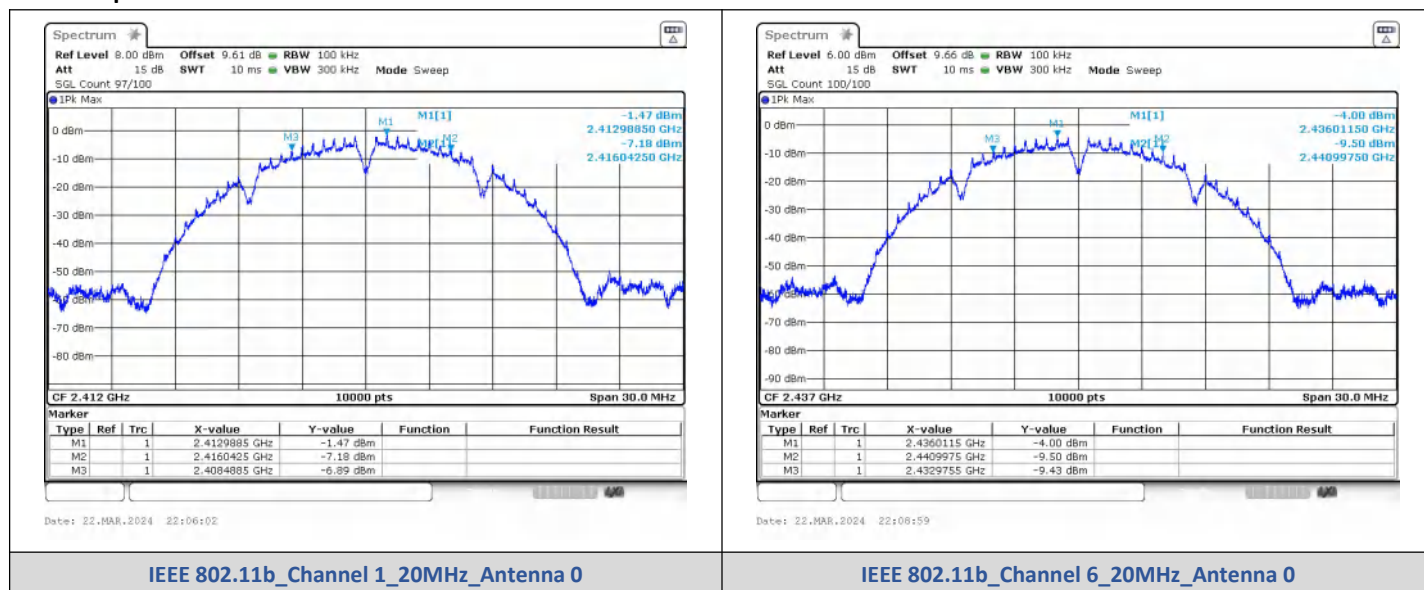
IEEE 802.11n_Channel 9_40MHz_Antenna 0

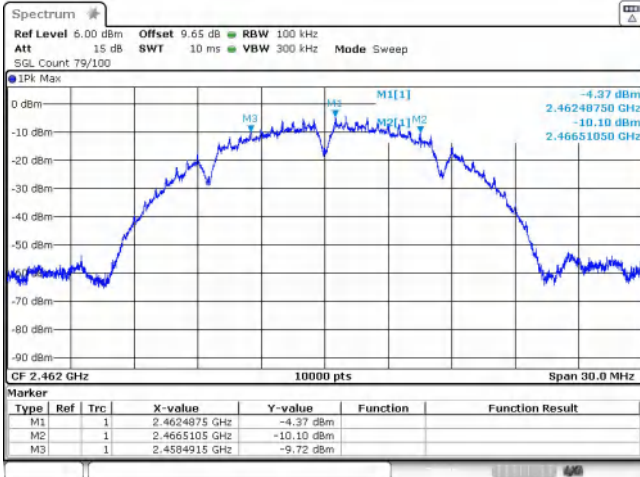
3) 6dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	7.550	0.5	PASS
	6		2437	8.020		PASS
	11		2462	8.020		PASS
IEEE 802.11g	1		2412	15.64		PASS
	6		2437	14.99		PASS
	11		2462	15.70		PASS
IEEE 802.11n_20	1		2412	15.07		PASS
	6		2437	15.11		PASS
	11		2462	16.34		PASS
IEEE 802.11n_40	3		2422	28.81		PASS
	6		2437	33.74		PASS
	9		2452	36.28		PASS

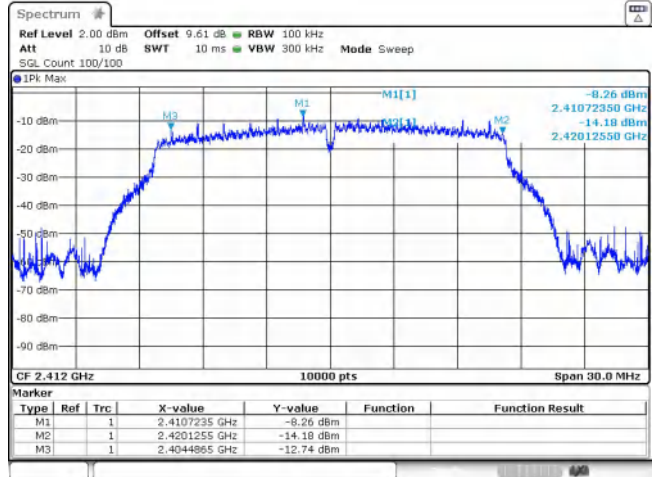
Test Graphs





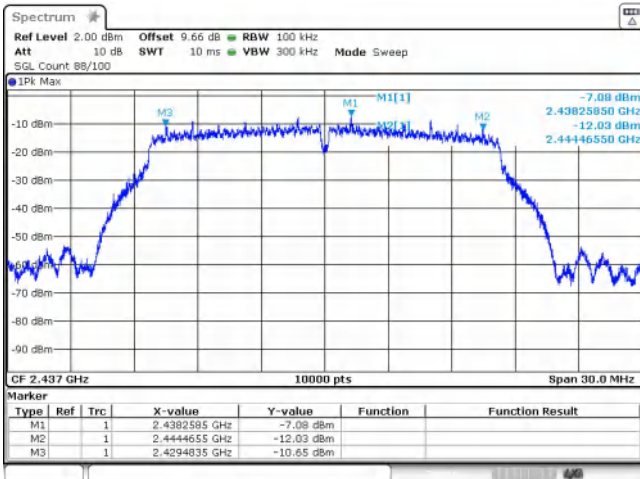
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IEEE 802.11b_Channel 11_20MHz_Antenna 0



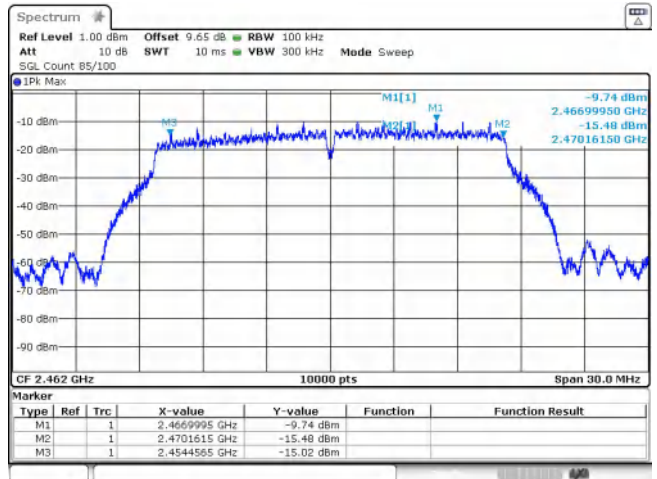
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IEEE 802.11g_Channel 1_20MHz_Antenna 0



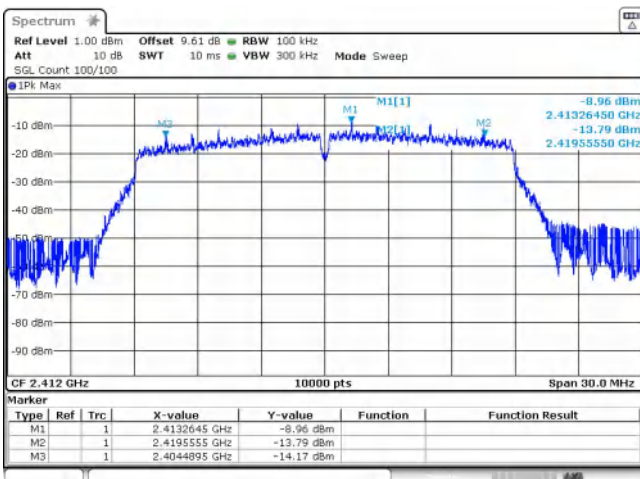
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IEEE 802.11g_Channel 6_20MHz_Antenna 0



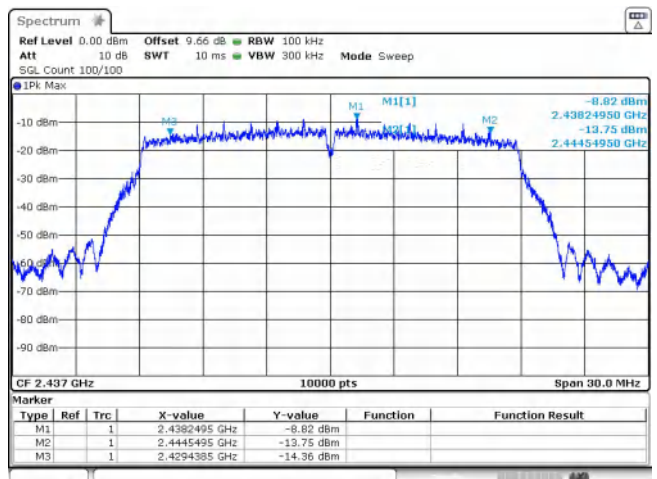
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IEEE 802.11g_Channel 11_20MHz_Antenna 0



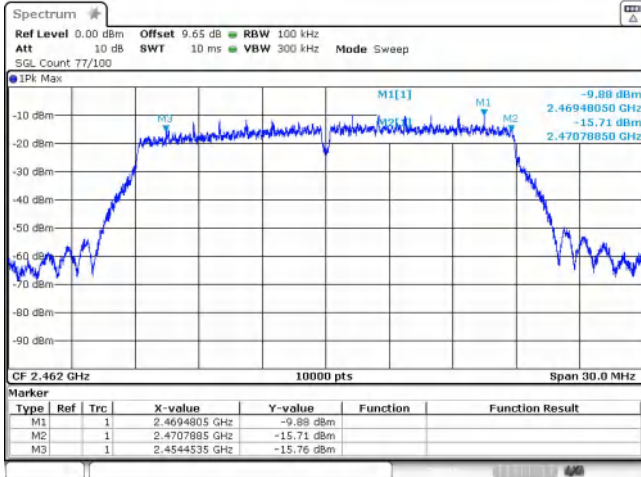
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IEEE 802.11n_Channel 1_20MHz_Antenna 0



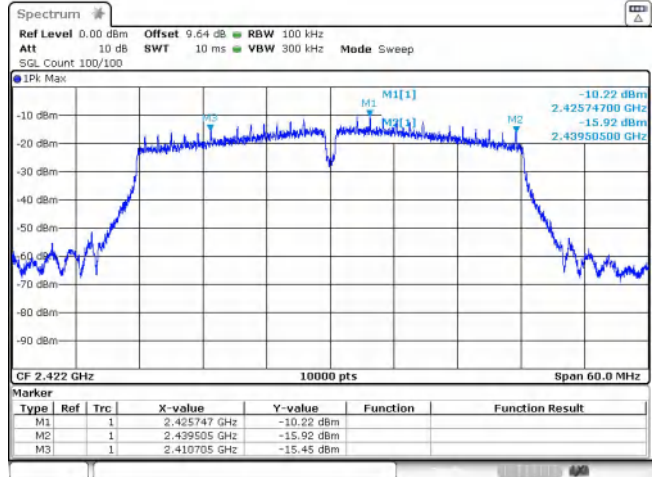
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IEEE 802.11n_Channel 6_20MHz_Antenna 0



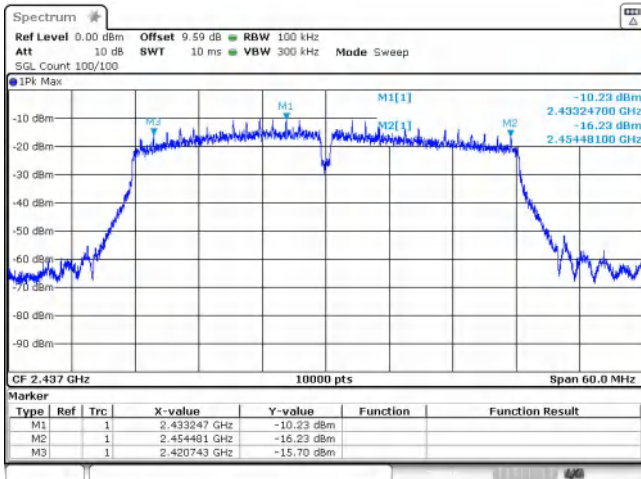
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IEEE 802.11n_Channel 11_20MHz_Antenna 0



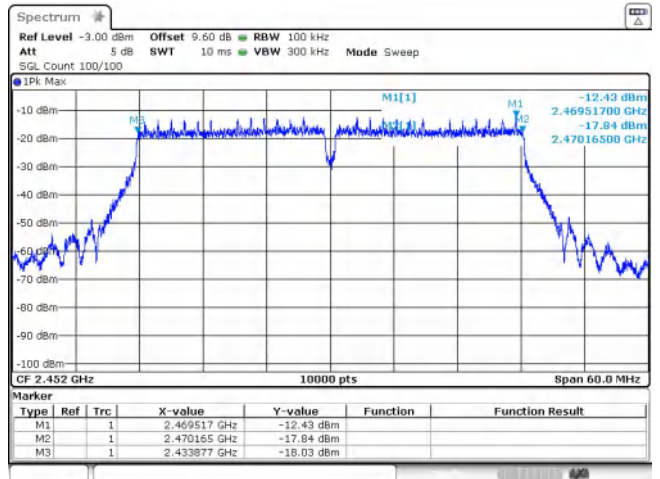
Date: 22.MAR.2024 22:34:26

IEEE 802.11n_Channel 3_40MHz_Antenna 0



Date: 22.MAR.2024 22:37:37

IEEE 802.11n_Channel 6_40MHz_Antenna 0



Date: 22.MAR.2024 22:40:33

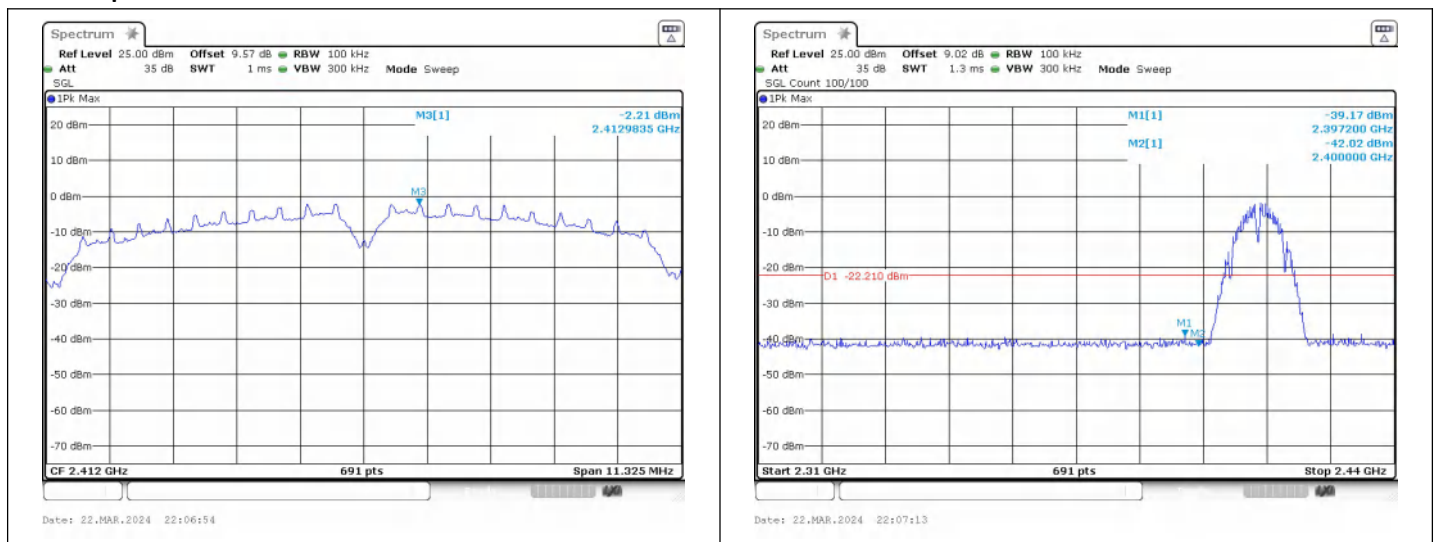
IEEE 802.11n_Channel 9_40MHz_Antenna 0

4) Conducted Out Of Band Emission

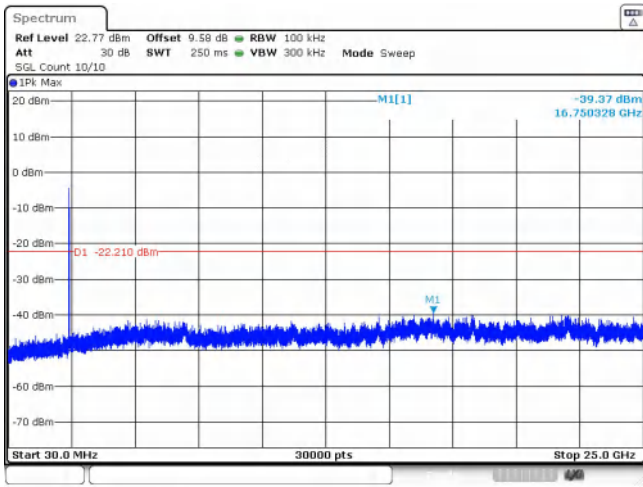
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	
IEEE 802.11b	1	0	2400.00	-42.018	-22.21	-19.808	PASS	
			2397.20	-39.171	-22.21	-16.961	PASS	
			16750.3	-39.368	-22.21	-17.158	PASS	
	6		16573.0	-38.564	-23.97	-14.594	PASS	
			11	2483.50	-40.332	-24.94	-15.392	PASS
				16336.7	-38.747	-24.94	-13.807	PASS
IEEE 802.11g	1			2400.00	-41.736	-27.24	-14.496	PASS
			2354.31	-39.037	-27.24	-11.797	PASS	
			14607.1	-40.128	-27.24	-12.888	PASS	
	6		21965.7	-39.500	-27.35	-12.150	PASS	
			11	2483.50	-40.788	-29.89	-10.898	PASS
				16770.3	-39.614	-29.89	-9.724	PASS
IEEE 802.11n_20	1			2400.00	-41.449	-28.92	-12.529	PASS
			2394.94	-39.229	-28.92	-10.309	PASS	
			18258.5	-39.328	-28.92	-10.408	PASS	
	6		15957.9	-39.119	-28.69	-10.429	PASS	
			11	2483.50	-39.403	-29.71	-9.693	PASS
				18297.6	-38.658	-29.71	-8.948	PASS
IEEE 802.11n_40	3			2400.00	-40.633	-30.5	-10.133	PASS
			2329.28	-39.132	-30.5	-8.632	PASS	
			20085.5	-39.928	-30.5	-9.428	PASS	
	6		16757.0	-39.066	-29.62	-9.446	PASS	
			9	2483.50	-40.811	-32.06	-8.751	PASS
				18628.9	-39.443	-32.06	-7.383	PASS

Test Graphs

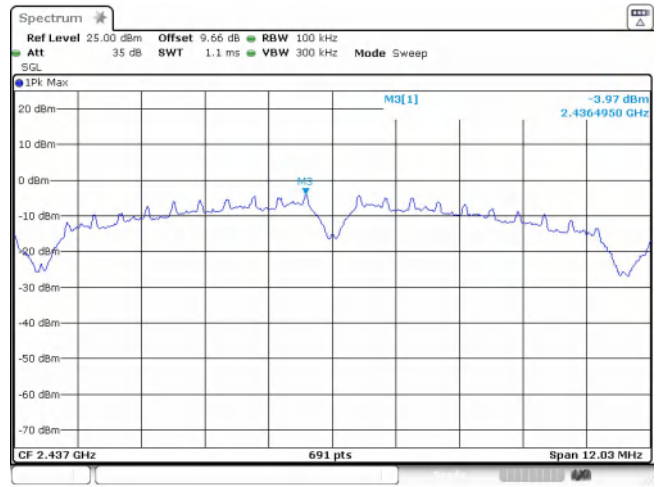


In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



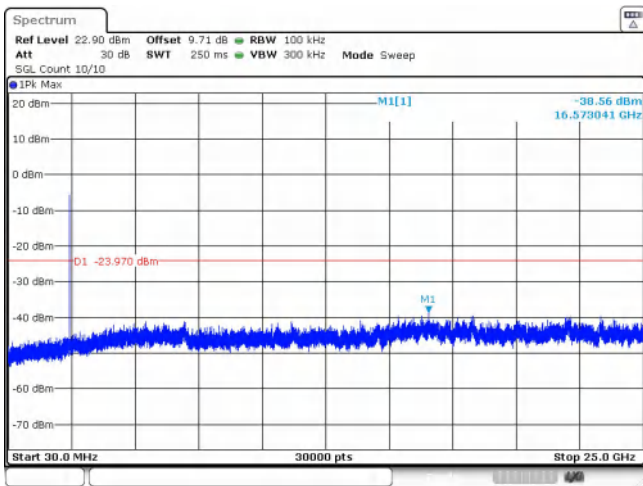
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Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



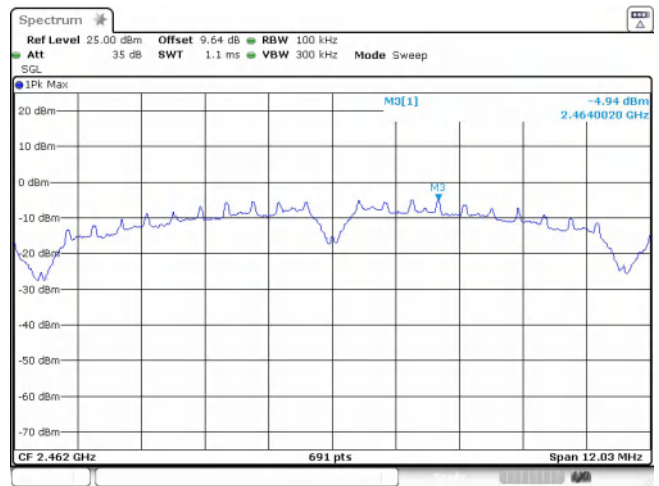
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Spurious Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



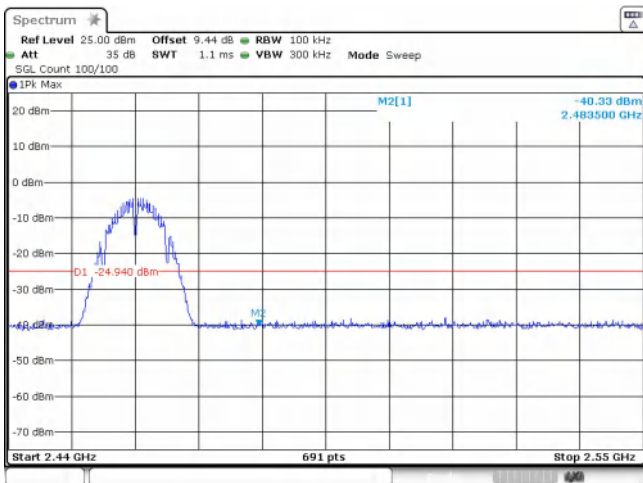
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In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



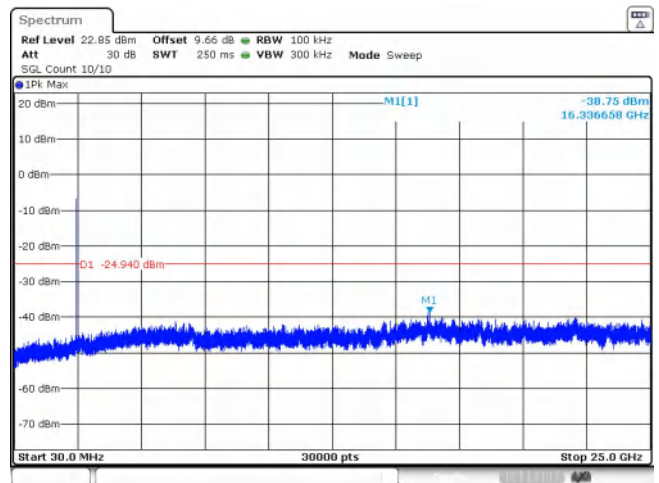
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Spurious Emissions
IEEE 802.11b_Channel 6_20MHz_Antenna 0



Date: 22.MAR.2024 22:15:59

In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0

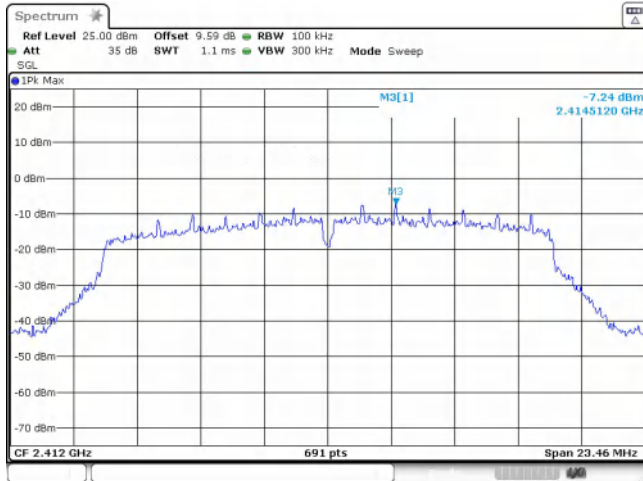


Date: 22.MAR.2024 22:16:21

Out Of Band Emission

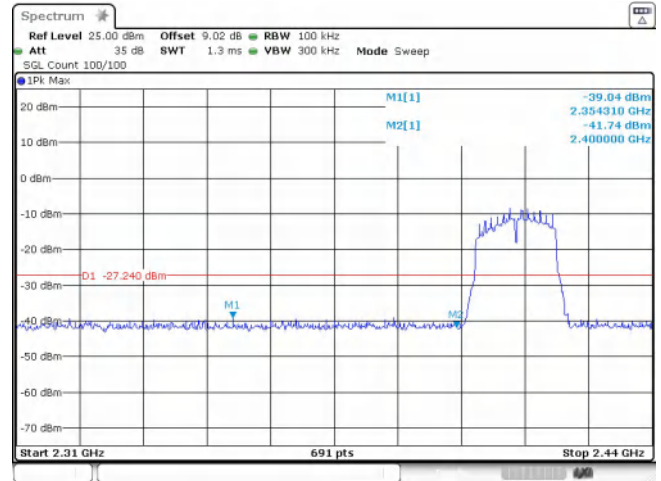
Spurious Emission

IEEE 802.11b_Channel 11_20MHz_Antenna 0



Date: 22.MAR.2024 22:18:33

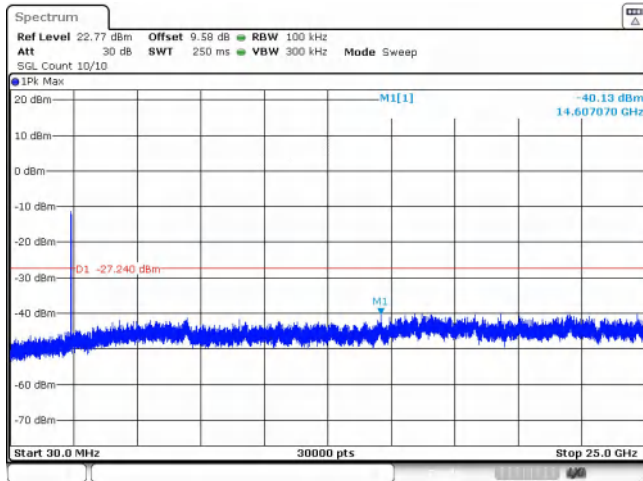
IEEE 802.11b_Channel 11_20MHz_Antenna 0



Date: 22.MAR.2024 22:18:52

In-Band Reference Level

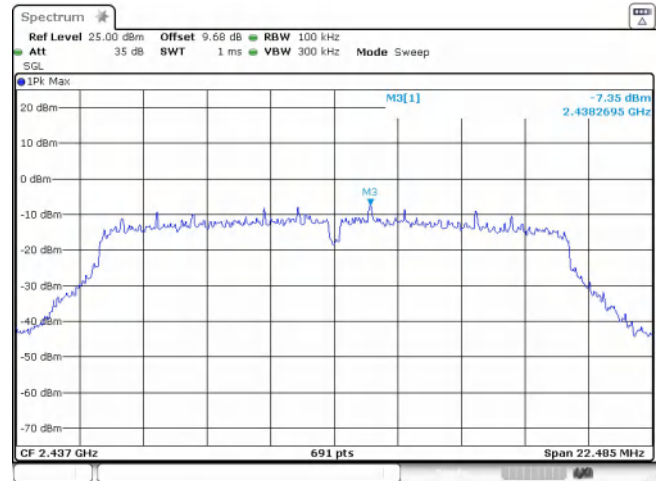
IEEE 802.11g_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:19:15

Out Of Band Emission

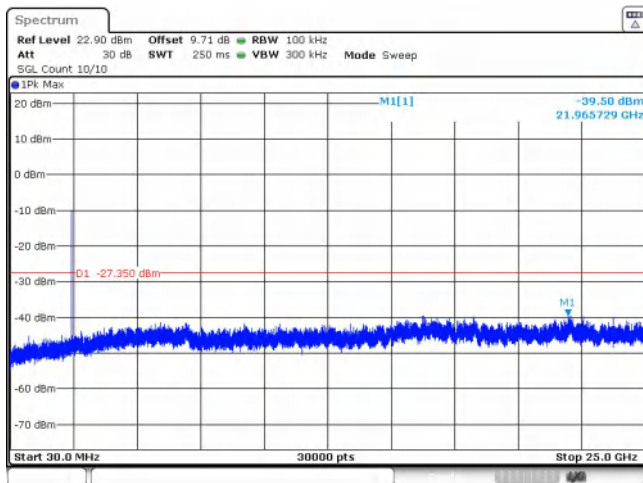
IEEE 802.11g_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:21:17

Spurious Emission

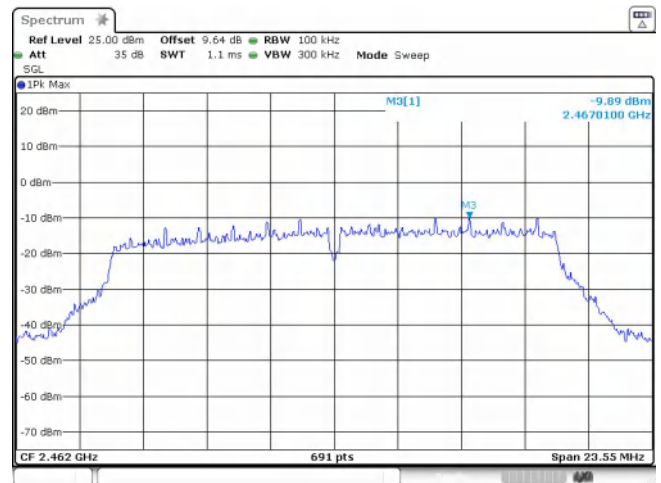
IEEE 802.11g_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:21:42

In-Band Reference Level

IEEE 802.11g_Channel 6_20MHz_Antenna 0



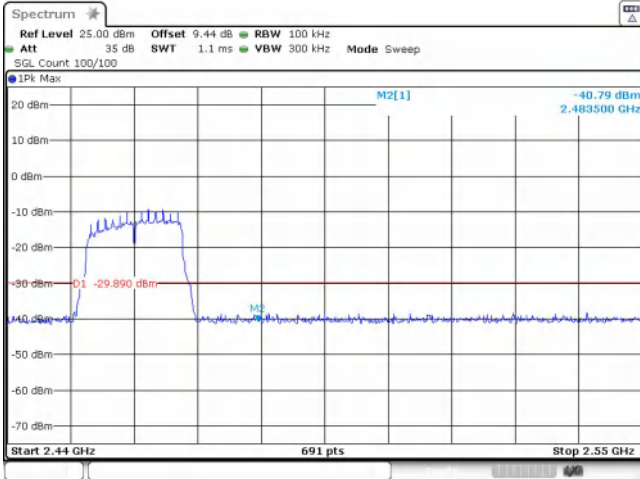
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Spurious Emissions

IEEE 802.11g_Channel 6_20MHz_Antenna 0

In-Band Reference Level

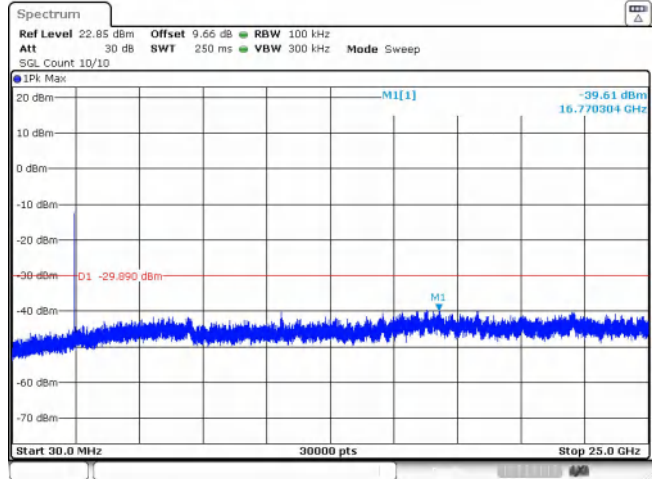
IEEE 802.11g_Channel 11_20MHz_Antenna 0



Date: 22.MAR.2024 22:24:13

Out Of Band Emission

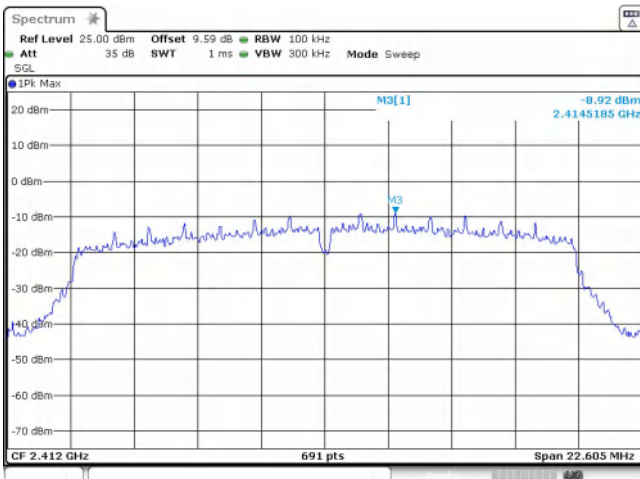
IEEE 802.11g_Channel 11_20MHz_Antenna 0



Date: 22.MAR.2024 22:24:35

Spurious Emission

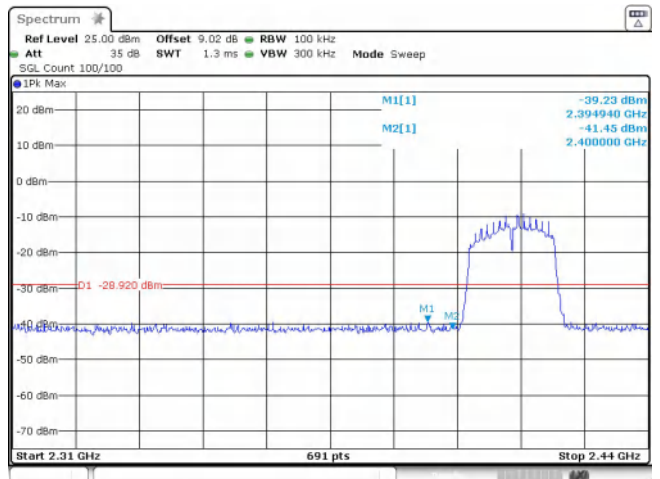
IEEE 802.11g_Channel 11_20MHz_Antenna 0



Date: 22.MAR.2024 22:26:36

In-Band Reference Level

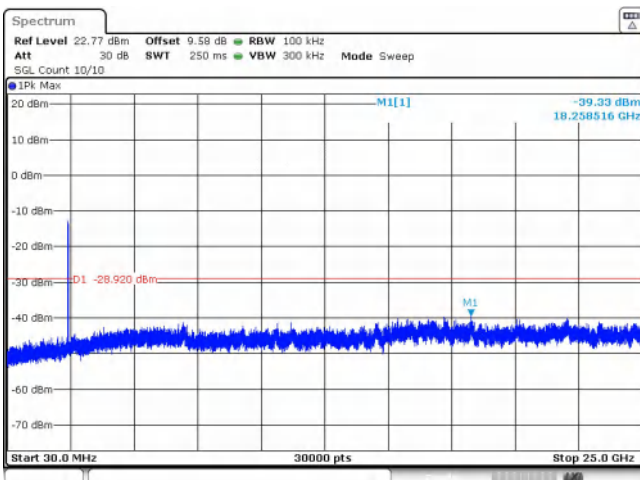
IEEE 802.11n_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:26:55

Out Of Band Emission

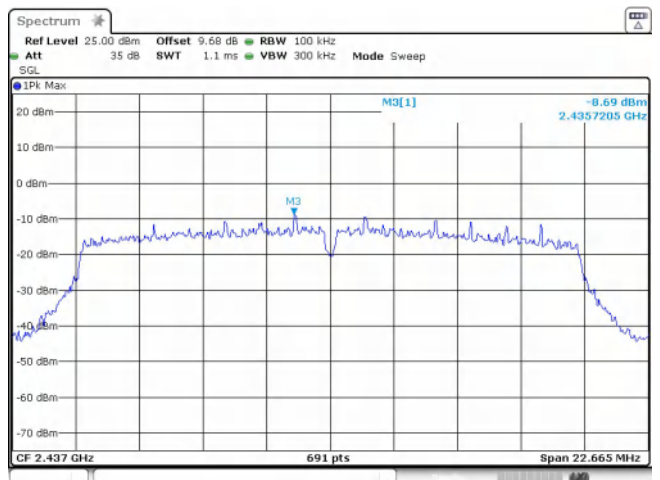
IEEE 802.11n_Channel 1_20MHz_Antenna 0



Date: 22.MAR.2024 22:27:17

Spurious Emission

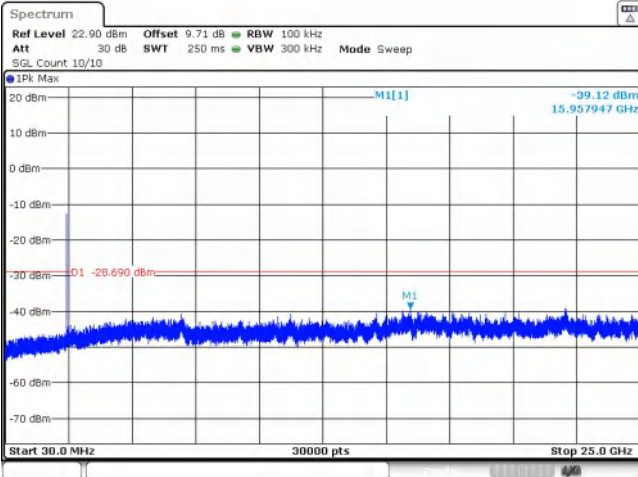
IEEE 802.11n_Channel 1_20MHz_Antenna 0



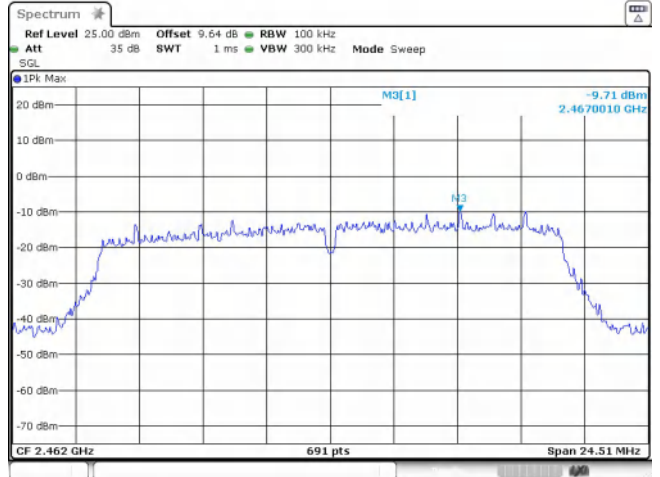
Date: 22.MAR.2024 22:29:14

In-Band Reference Level

IEEE 802.11n_Channel 6_20MHz_Antenna 0



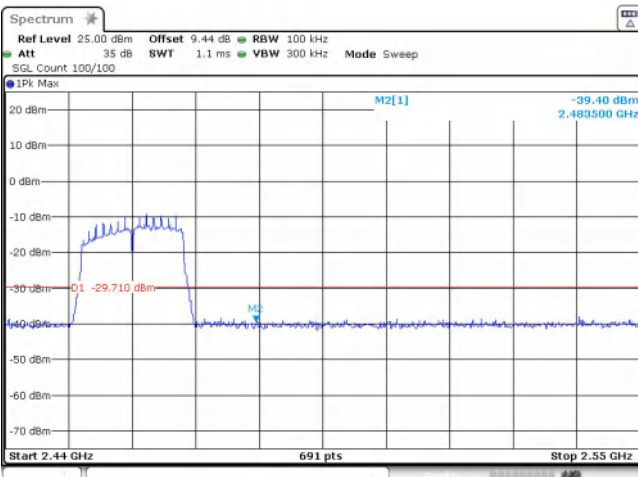
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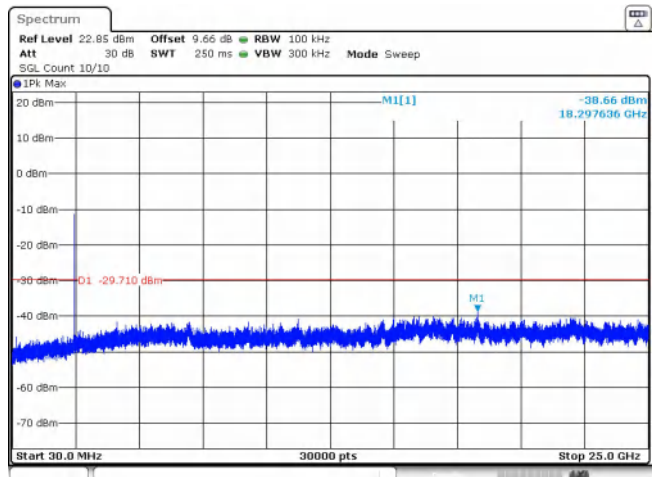
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Spurious Emissions
IEEE 802.11n_Channel 6_20MHz_Antenna 0

In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



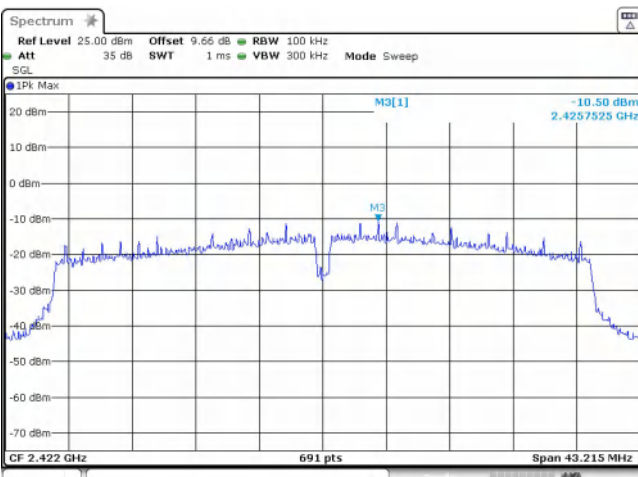
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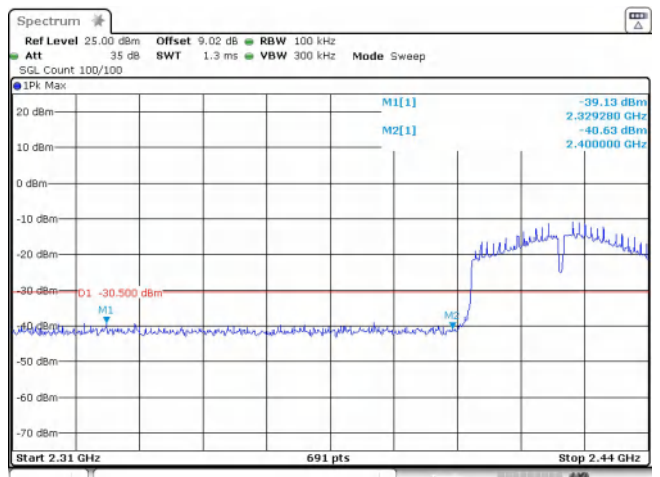
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Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0

Spurious Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



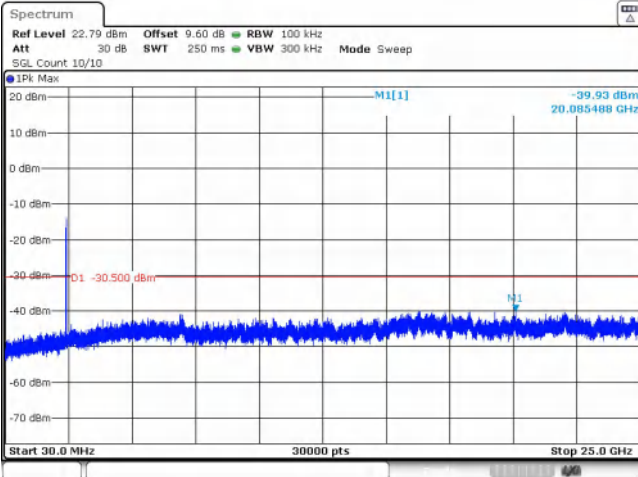
Date: 22.MAR.2024 22:35:17



Date: 22.MAR.2024 22:35:37

In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0

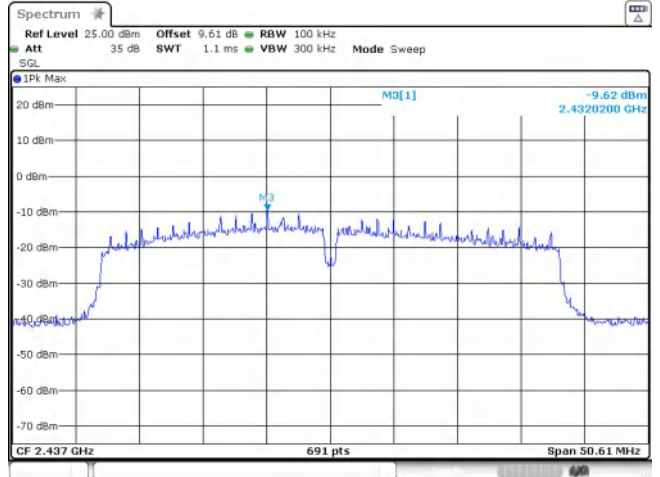
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



Date: 22.MAR.2024 22:35:59

Spurious Emission

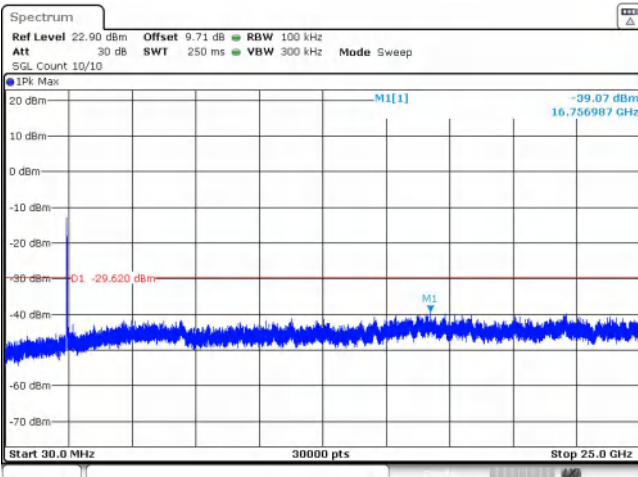
IEEE 802.11n_Channel 3_40MHz_Antenna 0



Date: 22.MAR.2024 22:38:29

In-Band Reference Level

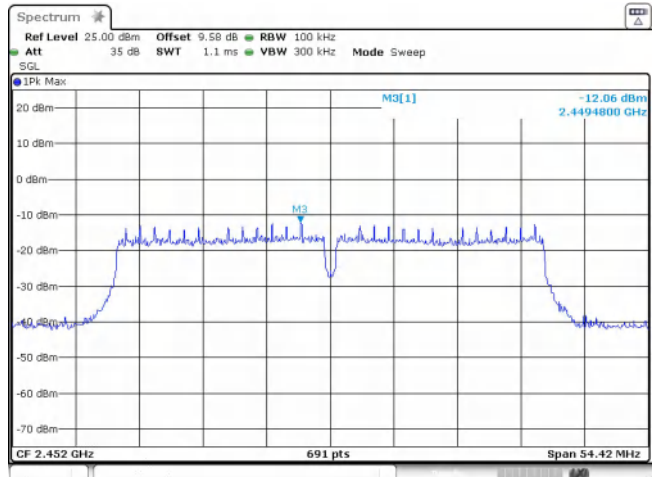
IEEE 802.11n_Channel 6_40MHz_Antenna 0



Date: 22.MAR.2024 22:38:53

Spurious Emissions

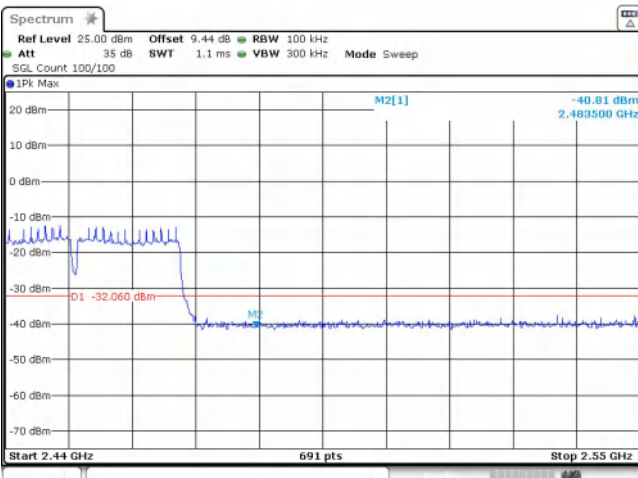
IEEE 802.11n_Channel 6_40MHz_Antenna 0



Date: 22.MAR.2024 22:41:25

In-Band Reference Level

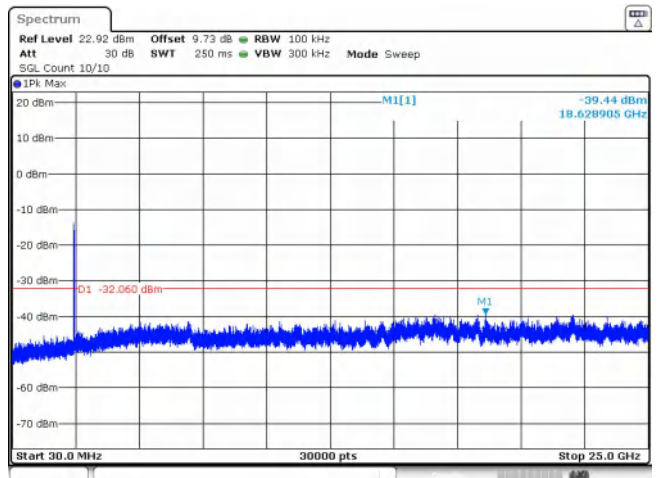
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Date: 22.MAR.2024 22:41:44

Out Of Band Emission

IEEE 802.11n_Channel 9_40MHz_Antenna 0



Date: 22.MAR.2024 22:42:06

Spurious Emission

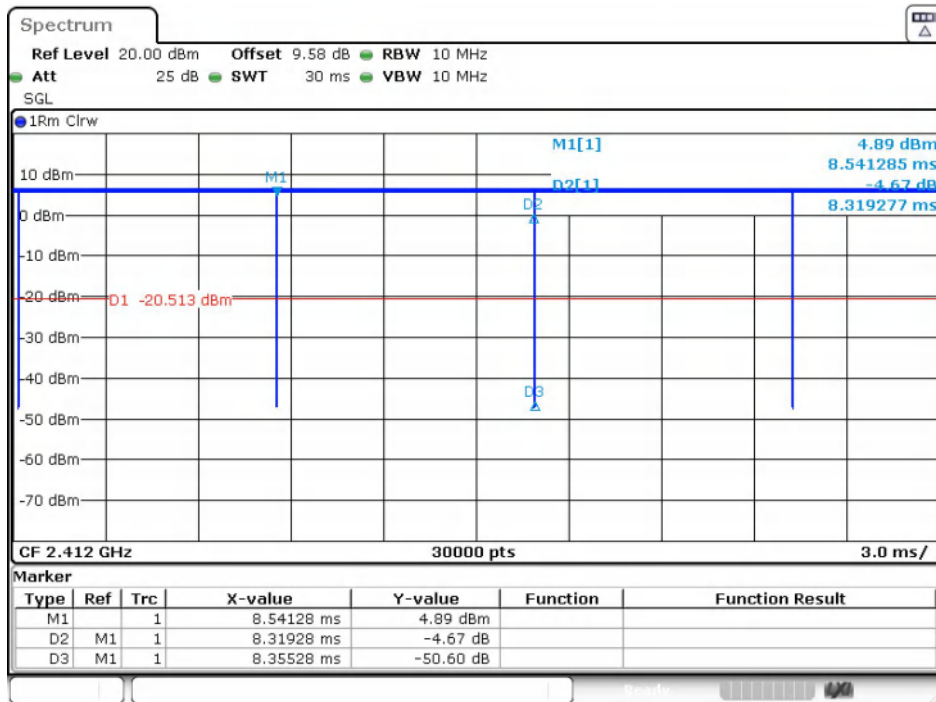
IEEE 802.11n_Channel 9_40MHz_Antenna 0

5) Duty Cycle

Test Result

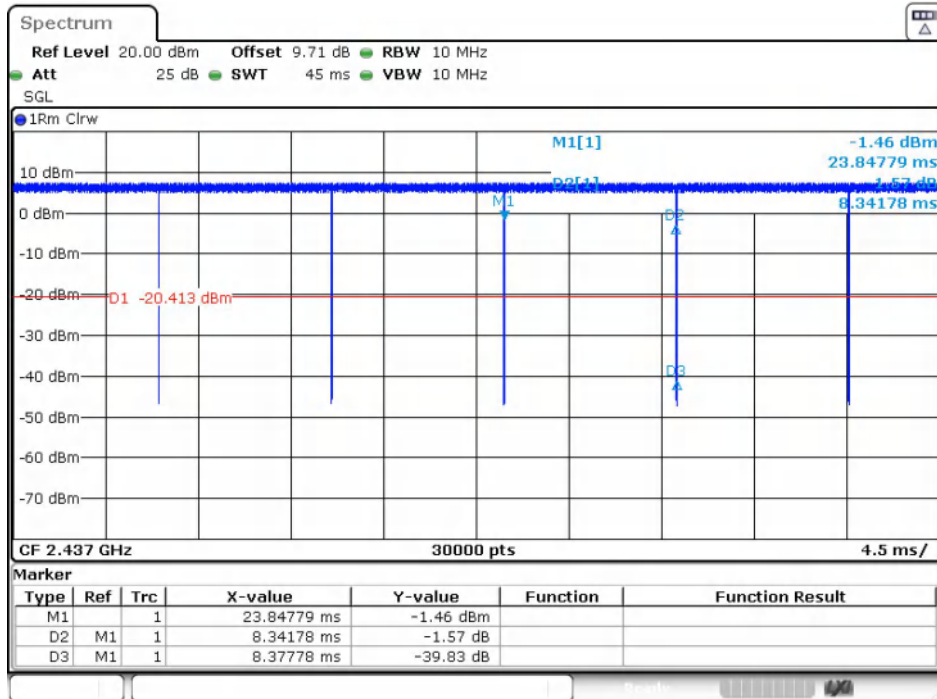
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	1	8.319	8.355	99.57	0.9957	0.0187	0.12
		6		8.342	8.378	99.57	0.9957	0.0187	0.12
		11		8.340	8.376	99.57	0.9957	0.0187	0.12
IEEE 802.11g	1	1		1.396	1.438	97.08	0.9708	0.1287	0.72
		6		1.396	1.438	97.08	0.9708	0.1287	0.72
		11		1.396	1.438	97.08	0.9708	0.1287	0.72
IEEE 802.11n_20	MCS 0	1		1.293	1.335	96.85	0.9685	0.139	0.77
		6		1.293	1.335	96.85	0.9685	0.139	0.77
		11		1.293	1.335	96.85	0.9685	0.139	0.77
IEEE 802.11n_40	MCS 0	3		0.650	0.692	93.84	0.9384	0.2761	1.54
		6		0.650	0.692	93.84	0.9384	0.2761	1.54
		9		0.650	0.702	92.59	0.9259	0.3344	1.54

Test Graphs



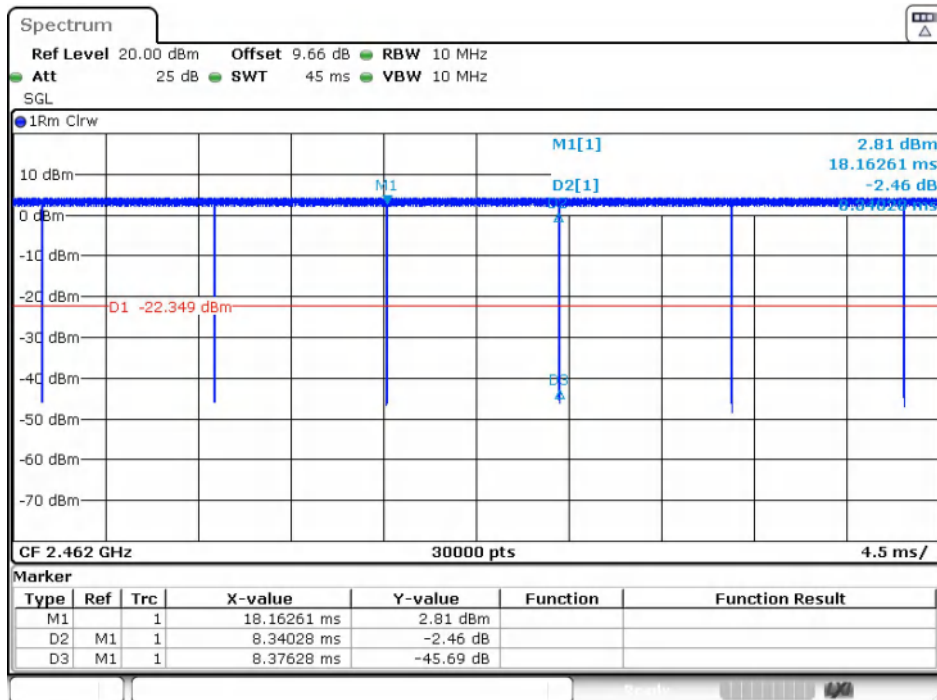
Date: 22.MAR.2024 22:05:26

IEEE 802.11b_20MHz_Channel 1



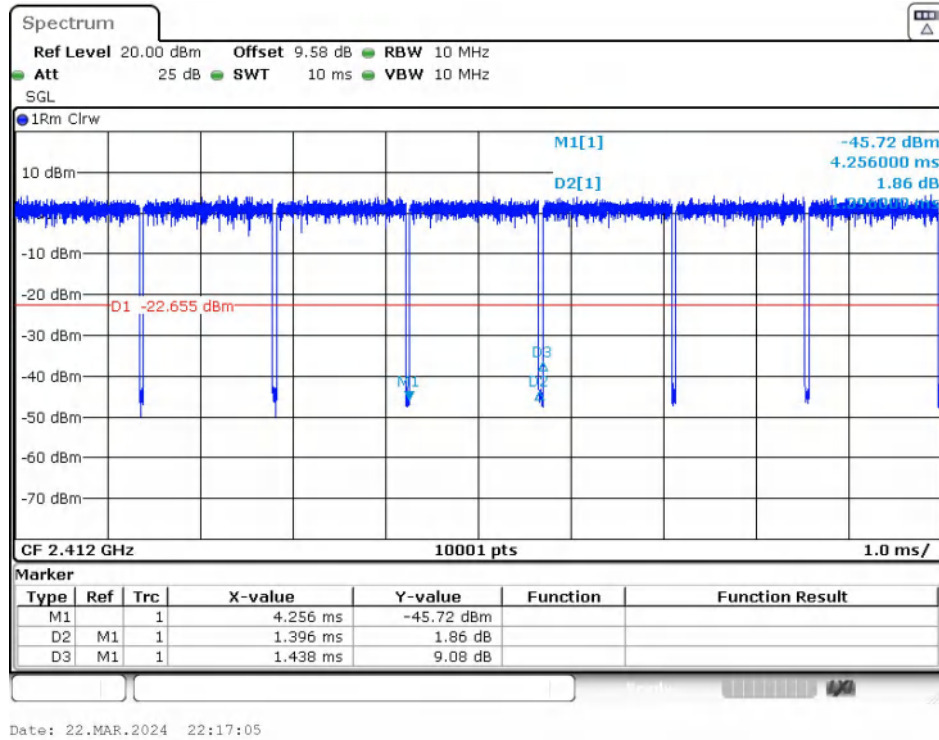
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IEEE 802.11b_20MHz_Channel 6

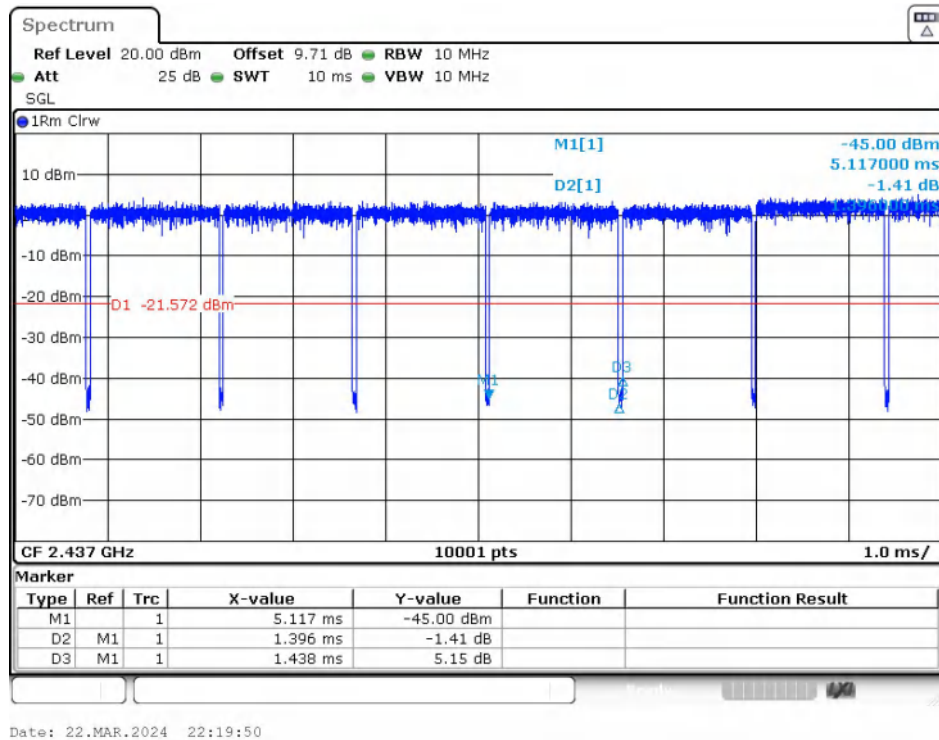


Date: 22.MAR.2024 22:14:12

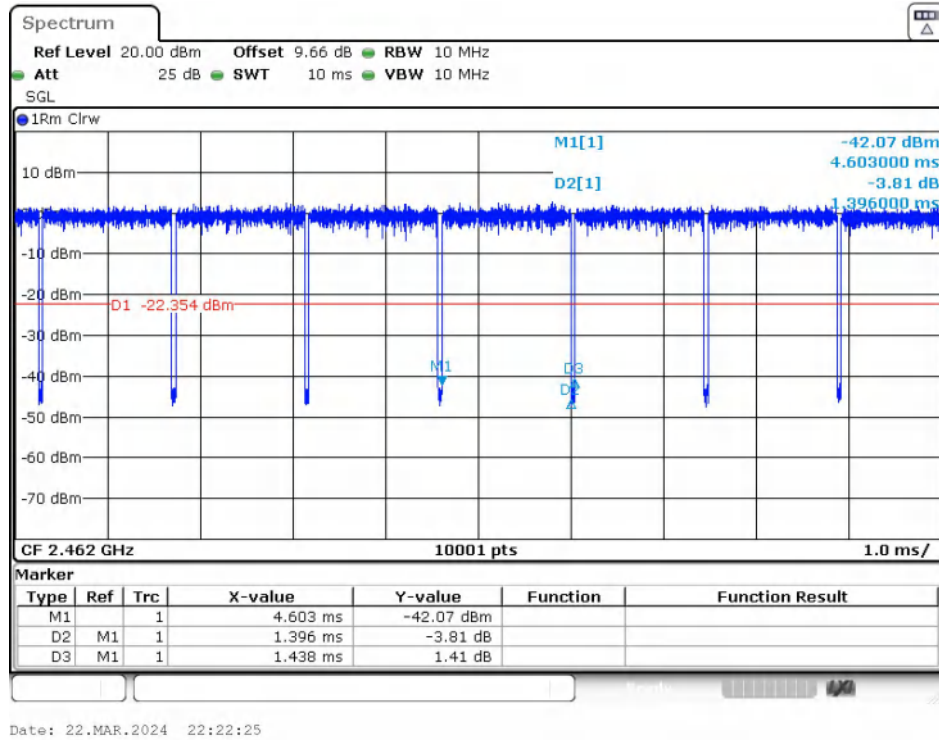
IEEE 802.11b_20MHz_Channel 11



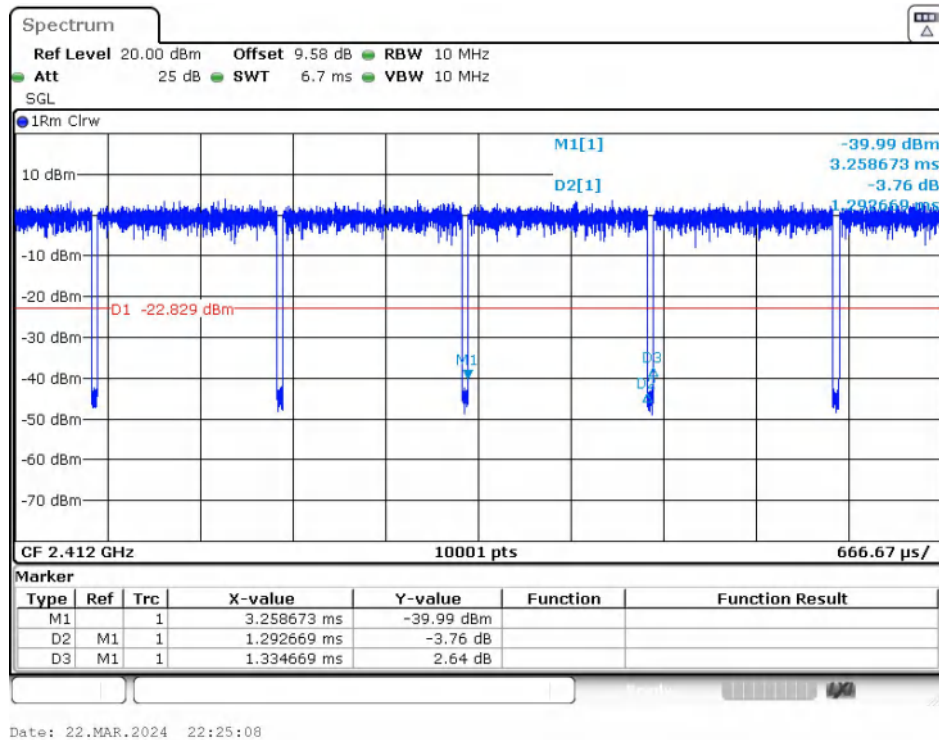
IEEE 802.11g_20MHz_Channel 1



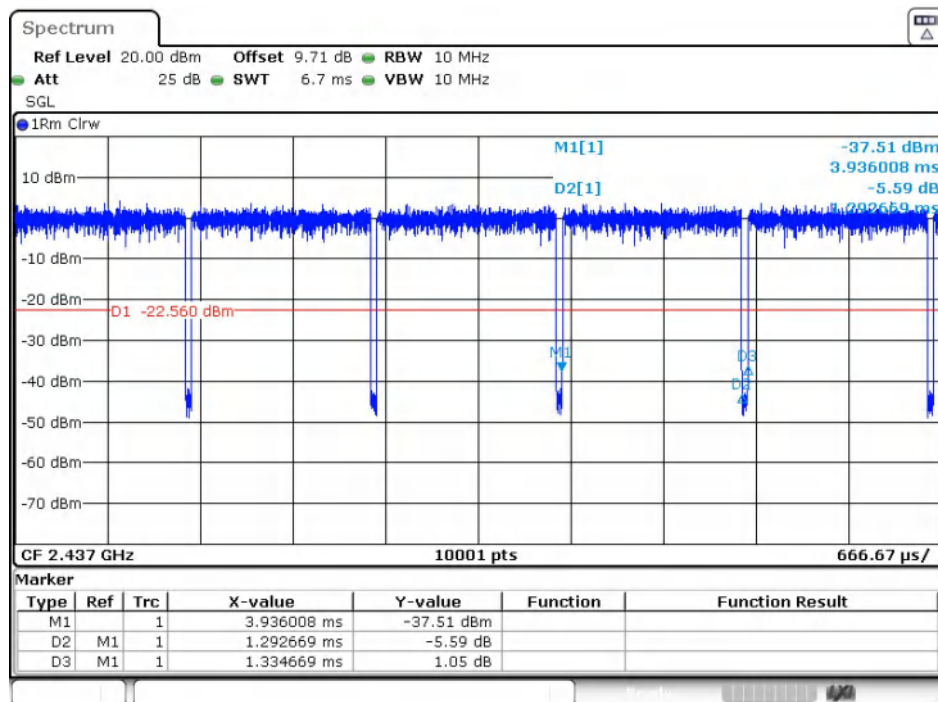
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11

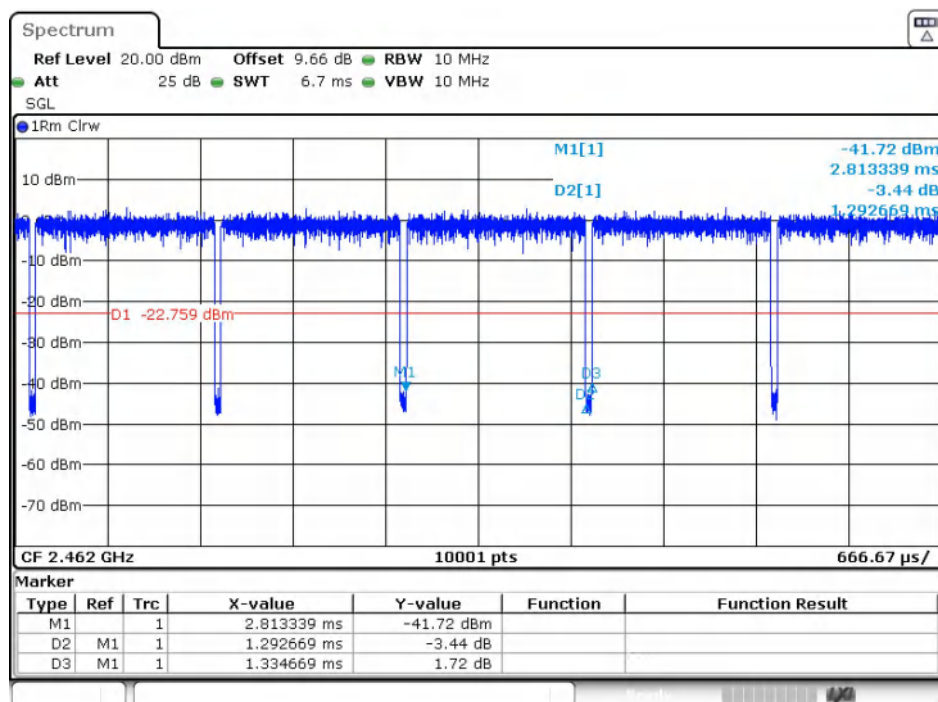


IEEE 802.11n_20MHz_Channel 1



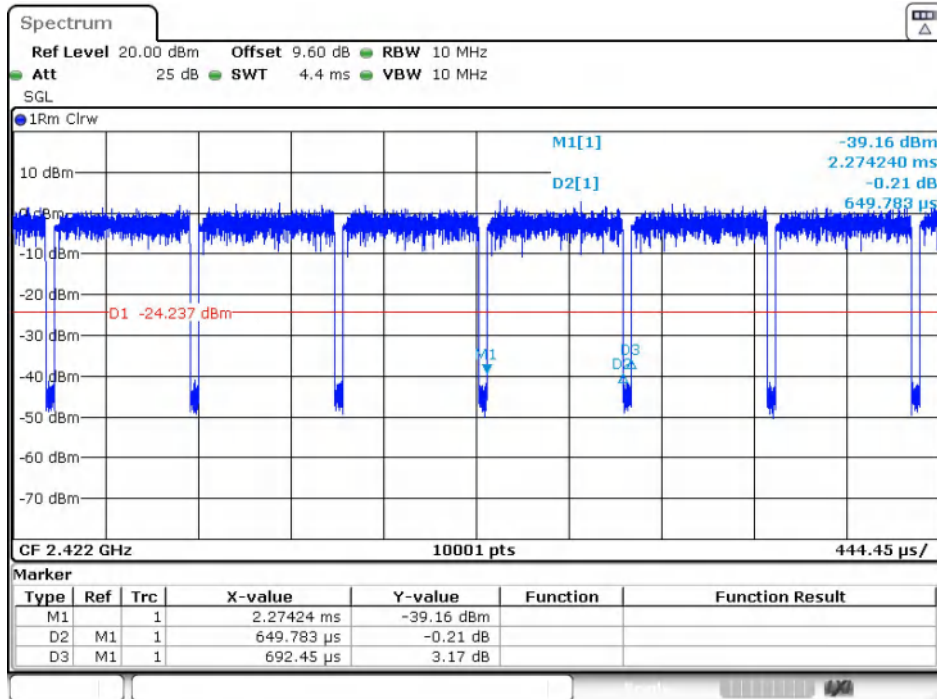
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IEEE 802.11n_20MHz_Channel 6



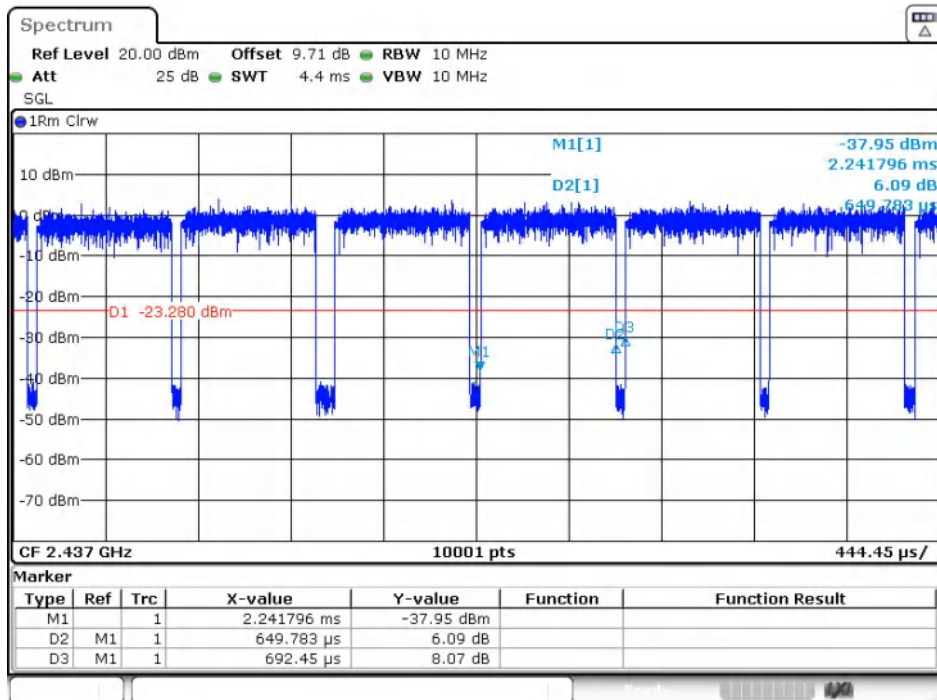
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IEEE 802.11n_20MHz_Channel 11



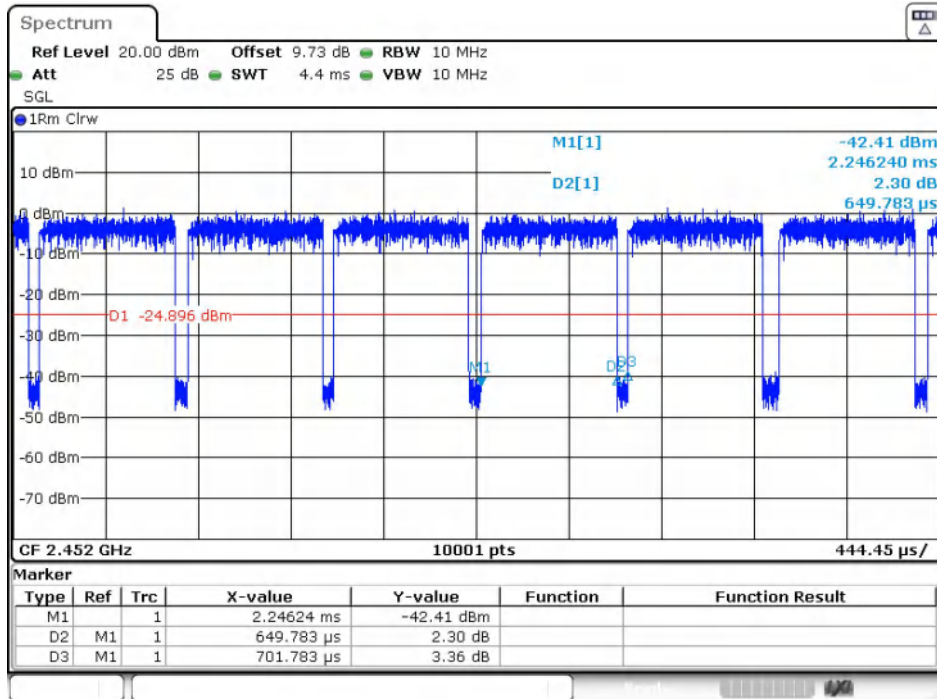
Date: 22.MAR.2024 22:45:06

IEEE 802.11n_40MHz_Channel 3



Date: 22.MAR.2024 22:37:01

IEEE 802.11n_40MHz_Channel 6



Date: 22.MAR.2024 22:43:37

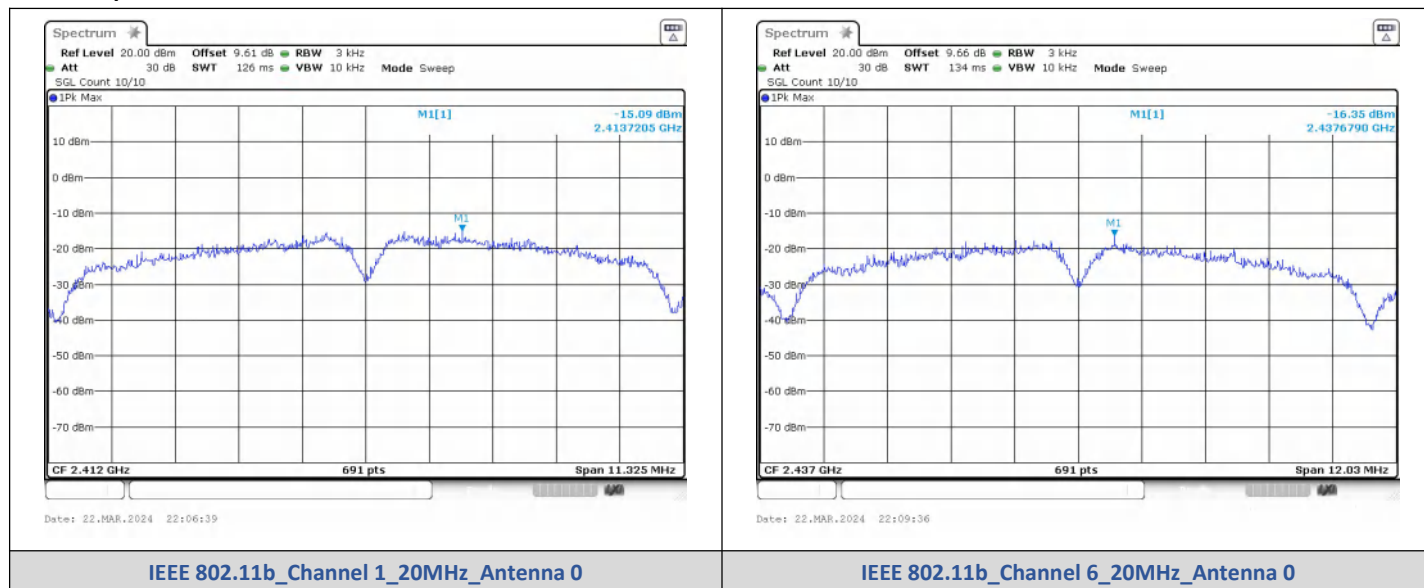
IEEE 802.11n_40MHz_Channel 9

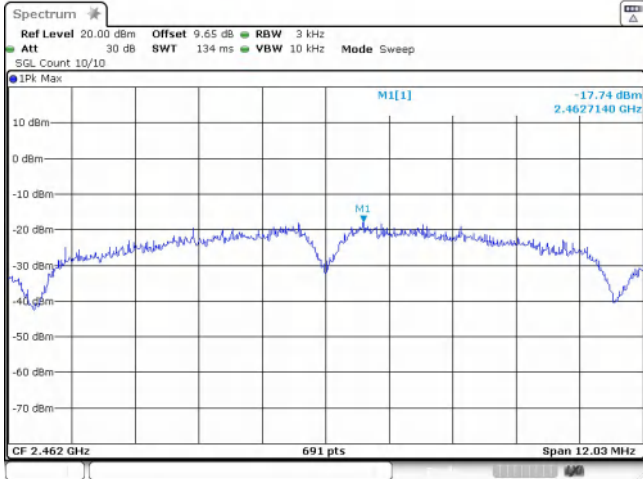
6) Power Spectral Density

Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-15.086	8	PASS
	6	-16.350		PASS
	11	-17.741		PASS
IEEE 802.11g	1	-21.352		PASS
	6	-20.795		PASS
	11	-23.276		PASS
IEEE 802.11n_20	1	-21.940		PASS
	6	-22.865		PASS
	11	-22.984		PASS
IEEE 802.11n_40	3	-25.784		PASS
	6	-25.214		PASS
	9	-26.845		PASS

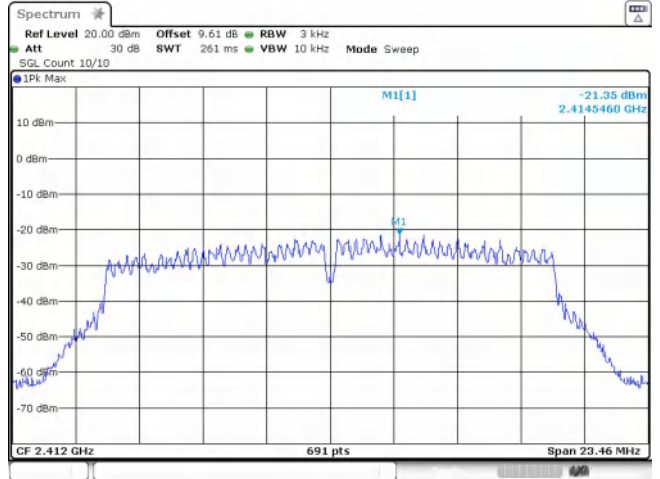
Test Graphs





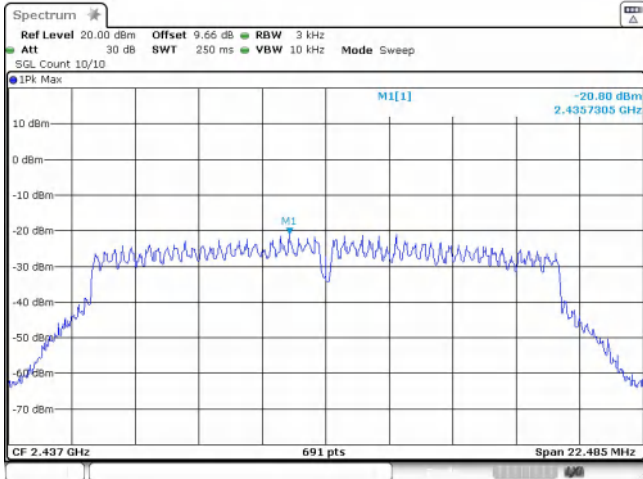
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IEEE 802.11b_Channel 11_20MHz_Antenna 0



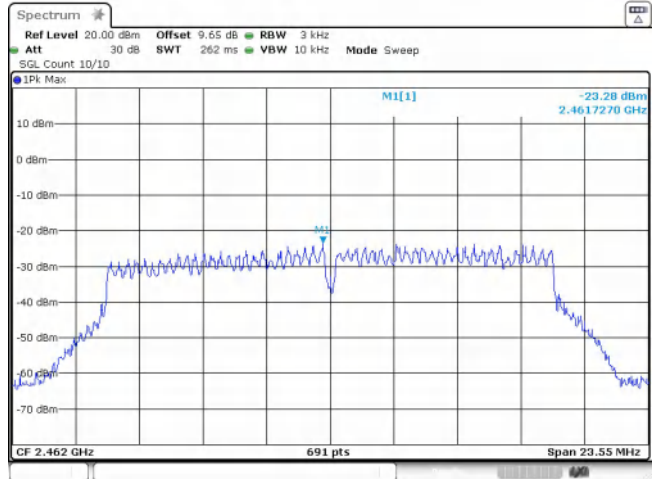
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IEEE 802.11g_Channel 1_20MHz_Antenna 0



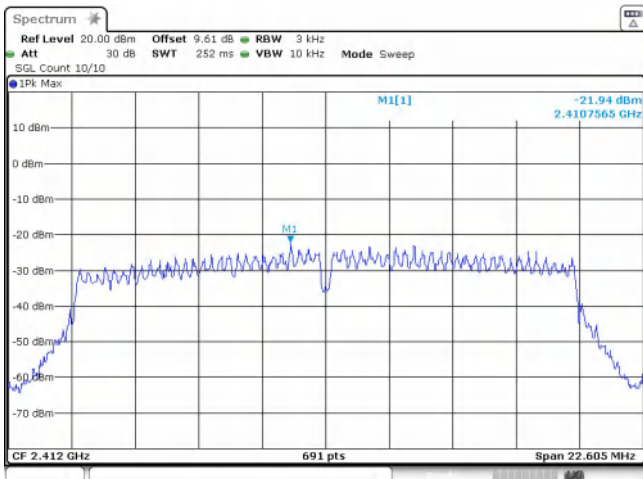
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IEEE 802.11g_Channel 6_20MHz_Antenna 0



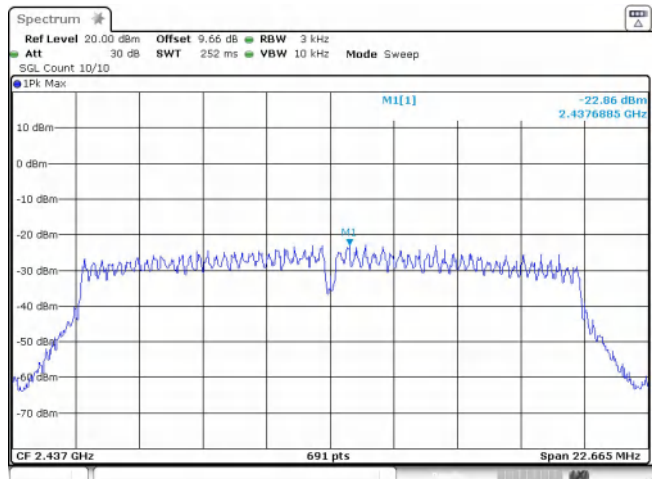
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IEEE 802.11g_Channel 11_20MHz_Antenna 0



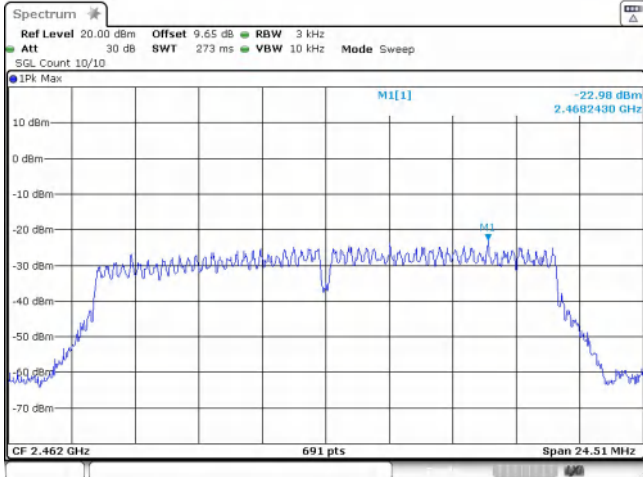
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IEEE 802.11n_Channel 1_20MHz_Antenna 0



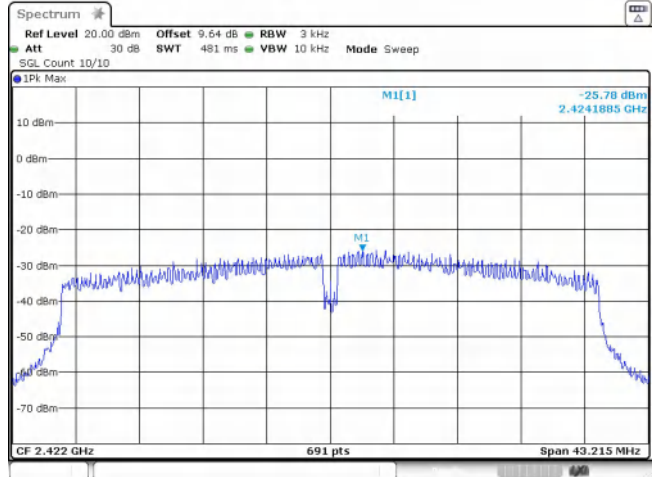
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IEEE 802.11n_Channel 6_20MHz_Antenna 0



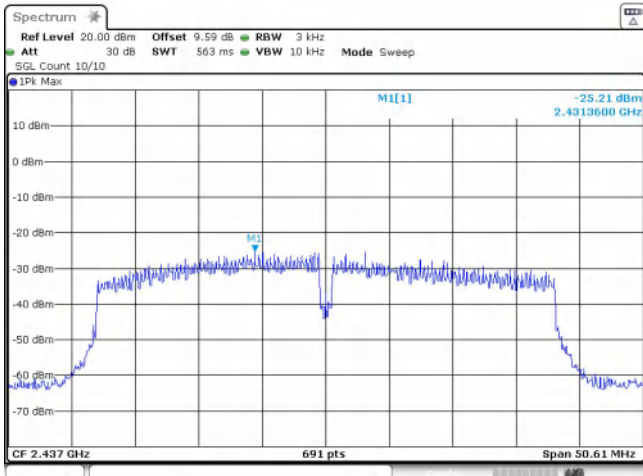
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IEEE 802.11n_Channel 11_20MHz_Antenna 0



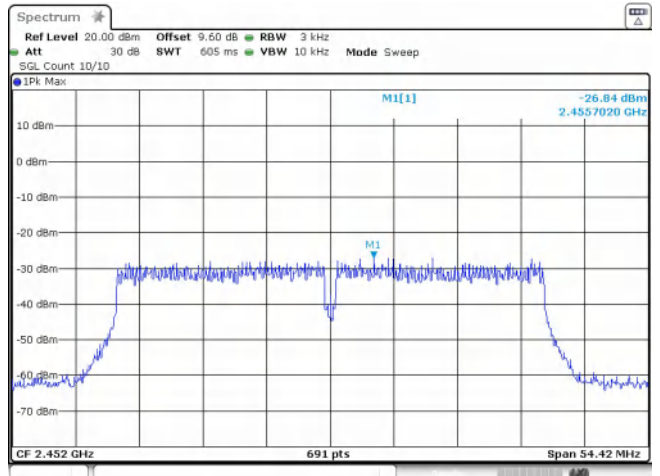
Date: 22.MAR.2024 22:35:03

IEEE 802.11n_Channel 3_40MHz_Antenna 0



Date: 22.MAR.2024 22:36:14

IEEE 802.11n_Channel 6_40MHz_Antenna 0



Date: 22.MAR.2024 22:41:10

IEEE 802.11n_Channel 9_40MHz_Antenna 0