

Appendix Report

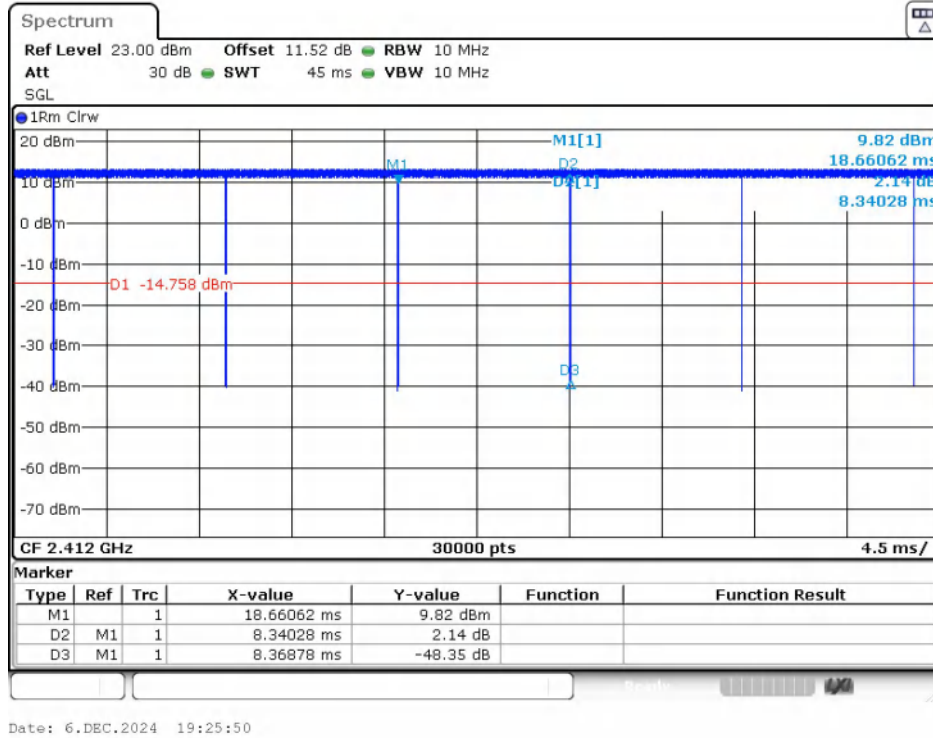
Report No.:	CISRR241202006
Test Engineer:	Mark Fu
Supervised by:	Rory Huang

Duty Cycle

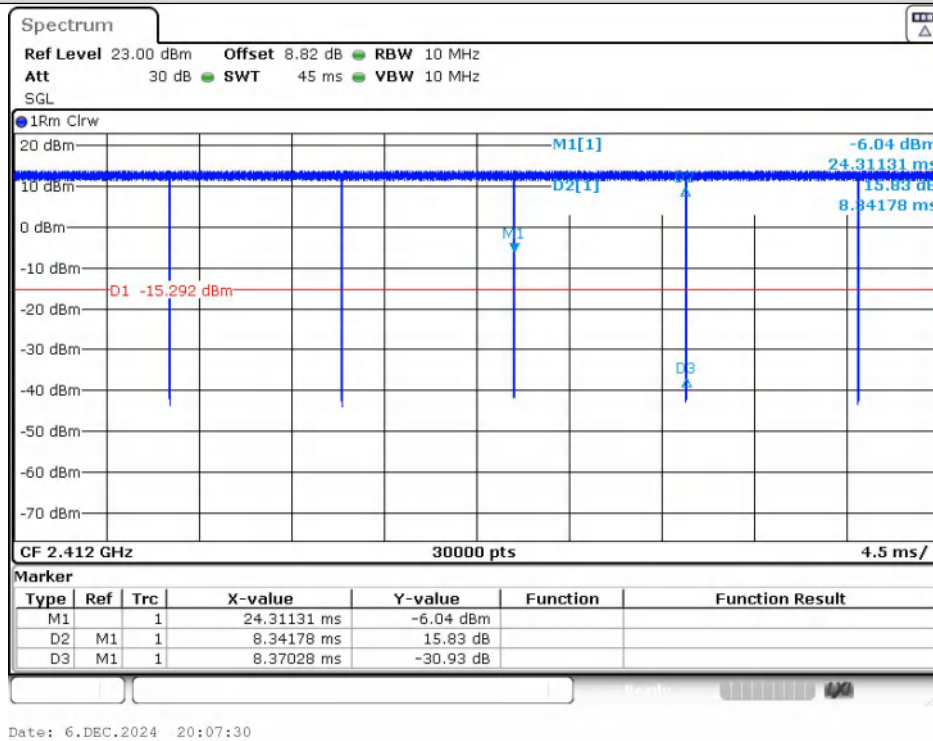
Test Result

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	8.340	8.369	99.66	0.9966	0.0148	0.1199
			2	8.342	8.370	99.66	0.9966	0.0148	0.1199
		6	1	8.319	8.347	99.66	0.9966	0.0148	0.1202
			2	8.319	8.348	99.65	0.9965	0.0152	0.1202
		11	1	8.340	8.369	99.66	0.9966	0.0148	0.1199
			2	8.319	8.347	99.66	0.9966	0.0148	0.1202
IEEE 802.11g	1	1	1	1.396	1.429	97.69	0.9769	0.1015	0.7163
			2	1.396	1.430	97.62	0.9762	0.1046	0.7163
		6	1	1.396	1.429	97.69	0.9769	0.1015	0.7163
			2	1.396	1.429	97.69	0.9769	0.1015	0.7163
		11	1	1.396	1.430	97.62	0.9762	0.1046	0.7163
			2	1.396	1.429	97.69	0.9769	0.1015	0.7163
IEEE 802.11n_20	MCS 0	1	1	1.304	1.337	97.53	0.9753	0.1086	0.7669
			2	1.293	1.327	97.44	0.9744	0.1126	0.7734
		6	1	1.304	1.337	97.53	0.9753	0.1086	0.7669
			2	1.293	1.327	97.44	0.9744	0.1126	0.7734
		11	1	1.304	1.337	97.53	0.9753	0.1086	0.7669
			2	1.304	1.337	97.53	0.9753	0.1086	0.7669

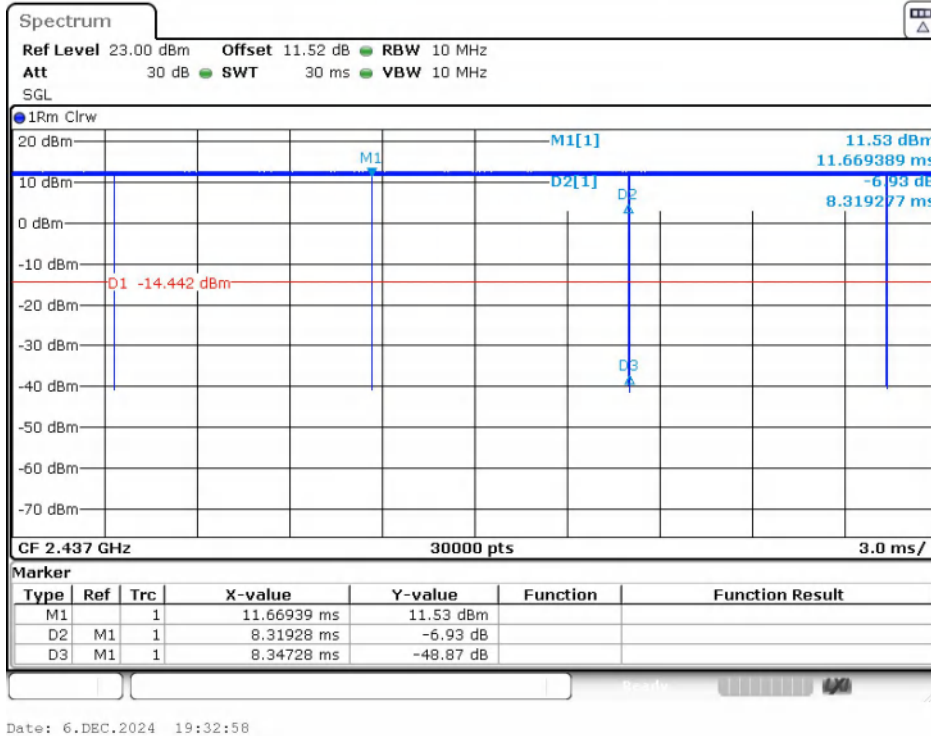
Test Graphs



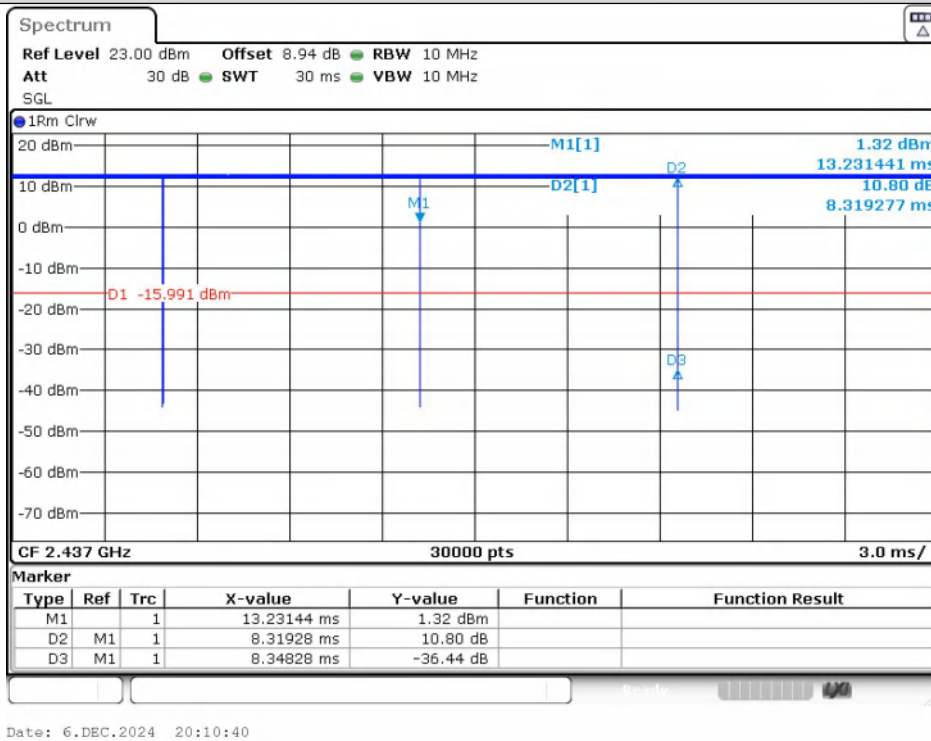
IEEE 802.11b_20MHz_Channel 1



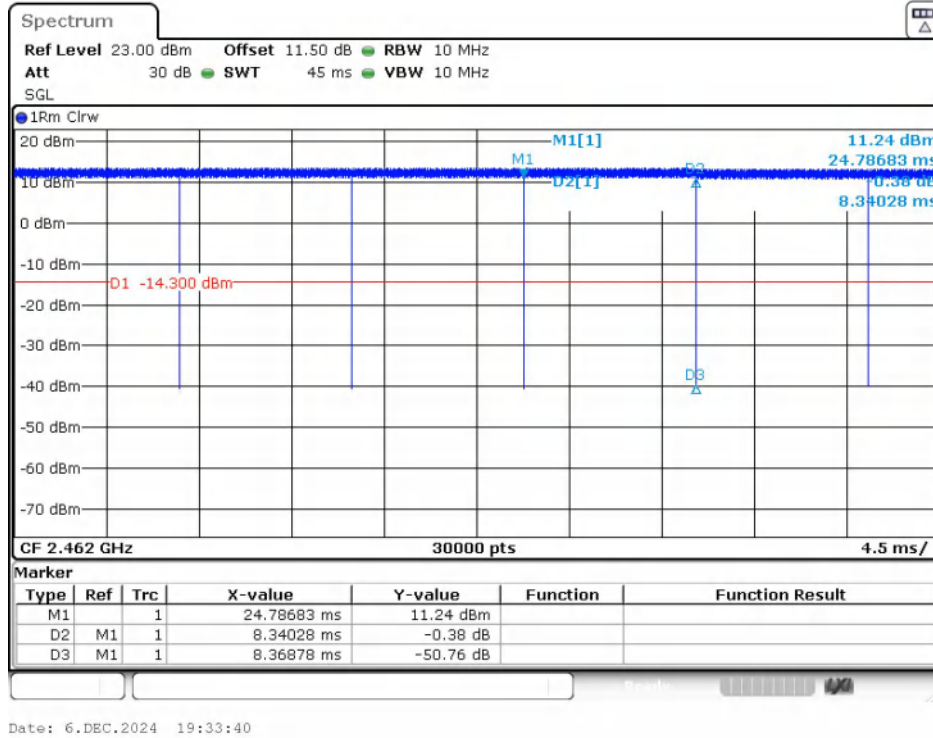
IEEE 802.11b_20MHz_Channel 1



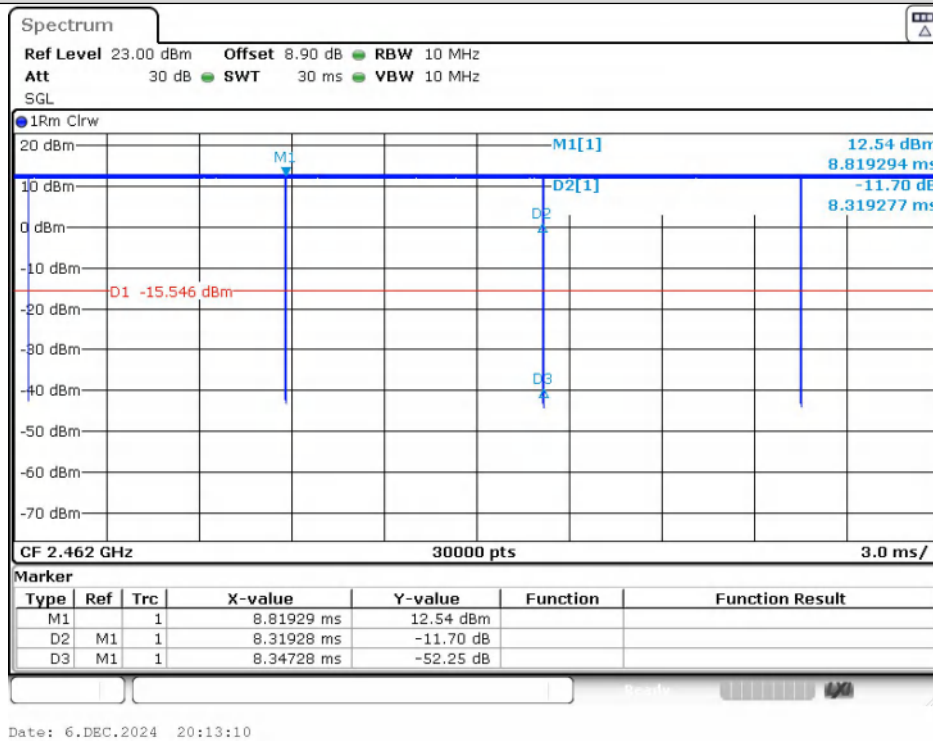
IEEE 802.11b_20MHz_Channel 6



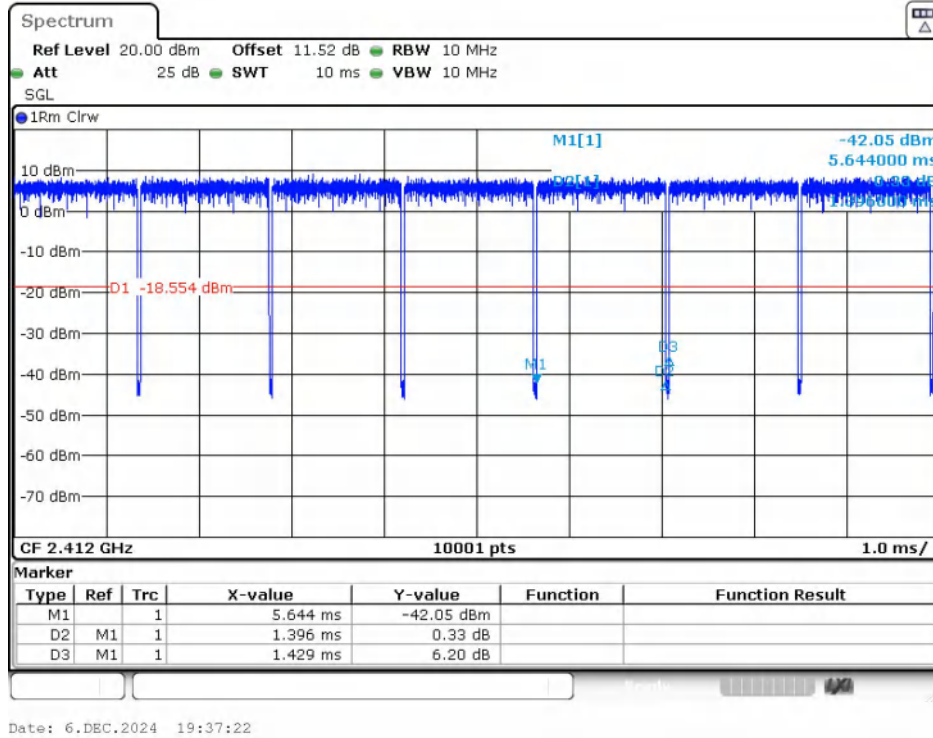
IEEE 802.11b_20MHz_Channel 6



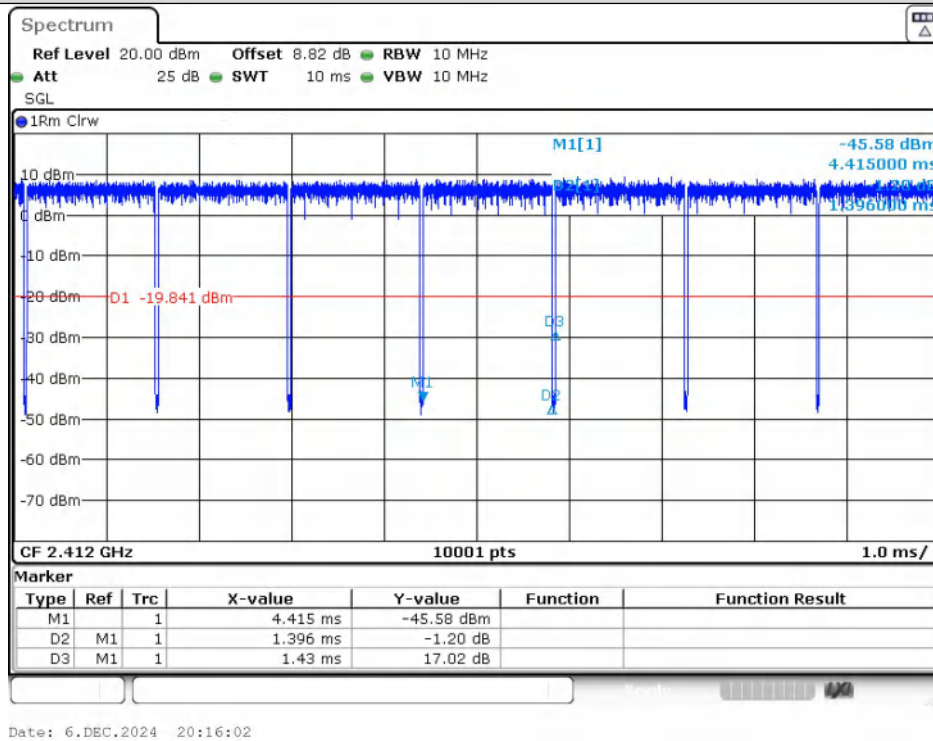
IEEE 802.11b_20MHz_Channel 11



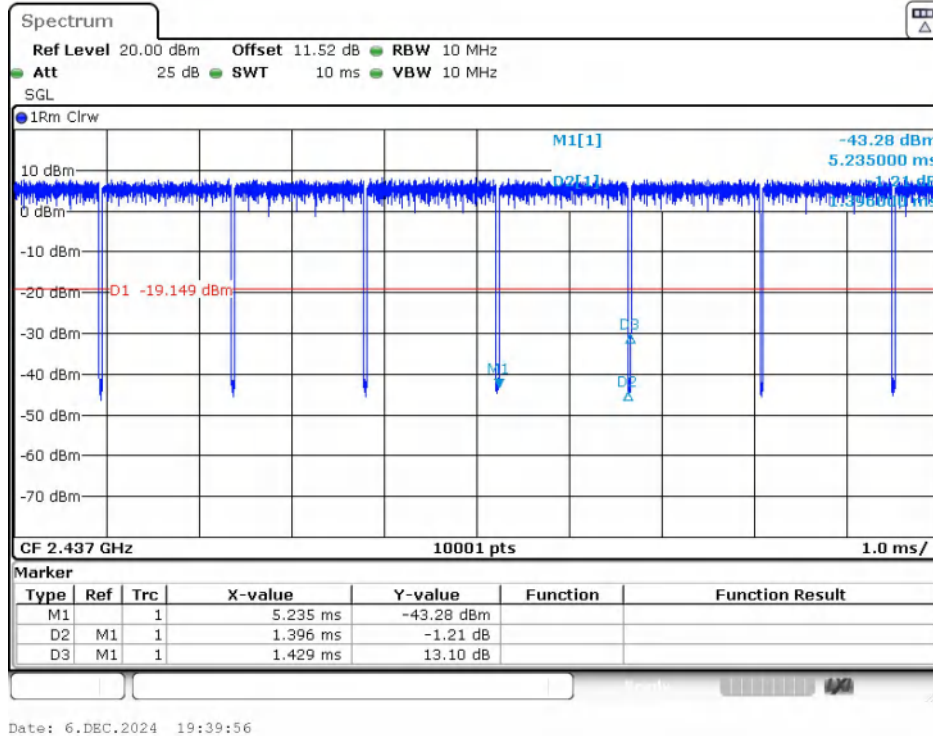
IEEE 802.11b_20MHz_Channel 11



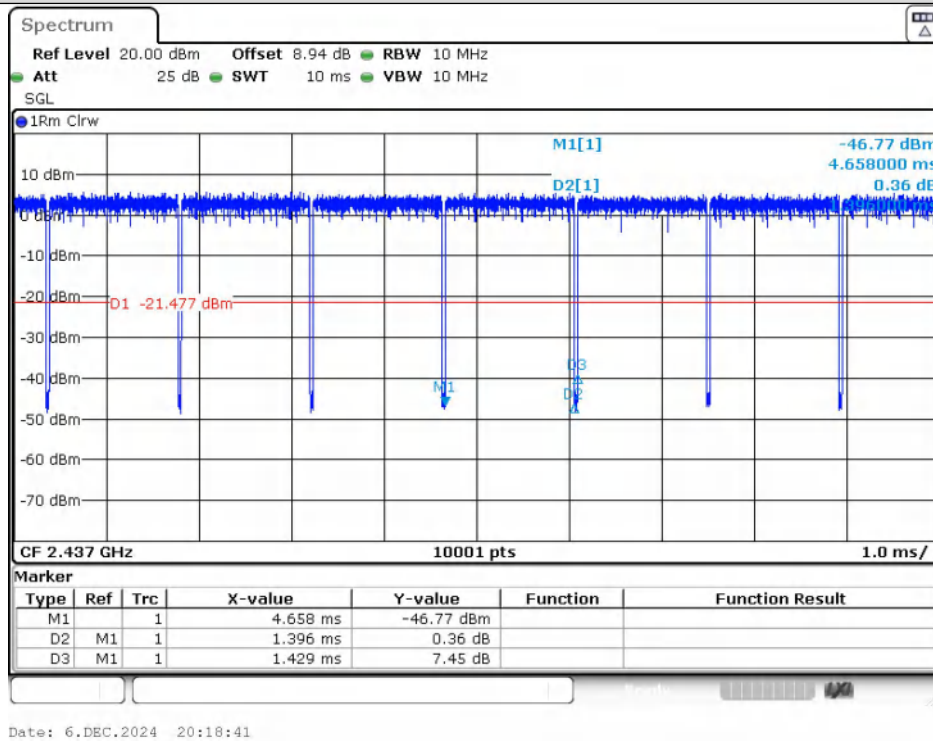
IEEE 802.11g_20MHz_Channel 1



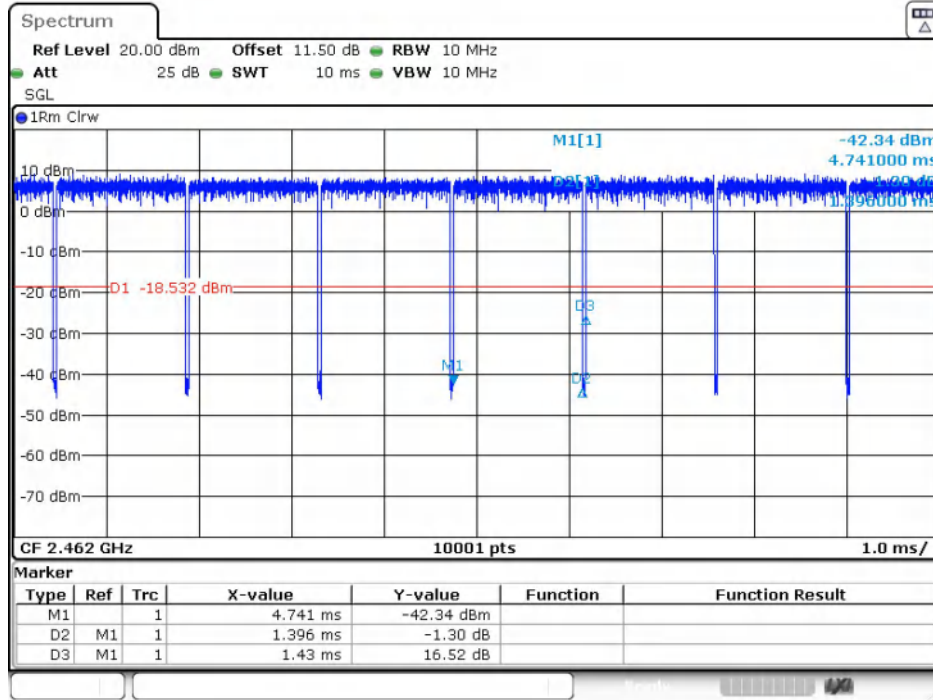
IEEE 802.11g_20MHz_Channel 1



IEEE 802.11g_20MHz_Channel 6

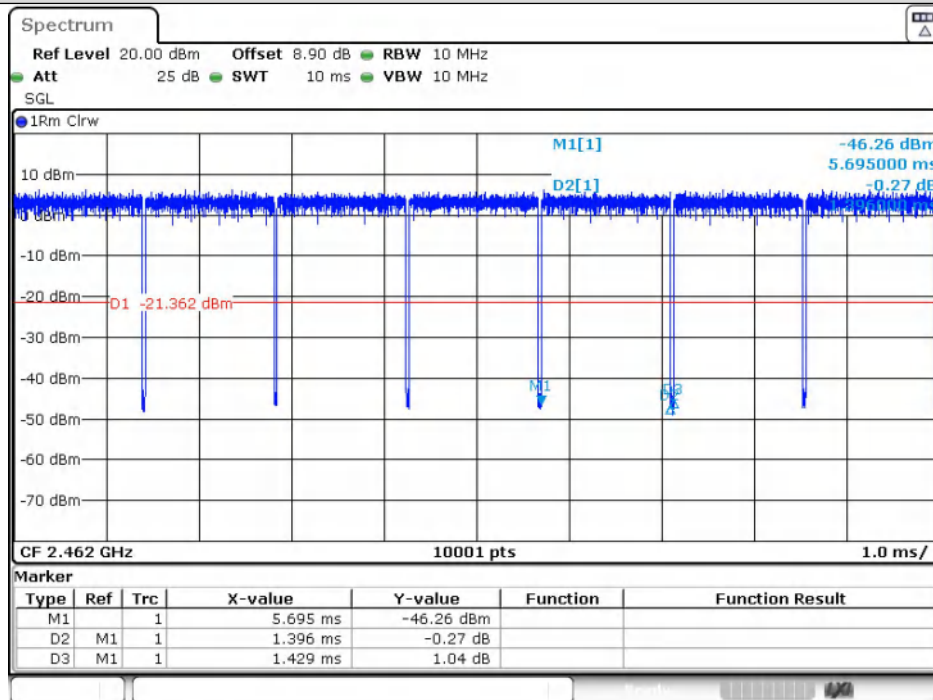


IEEE 802.11g_20MHz_Channel 6



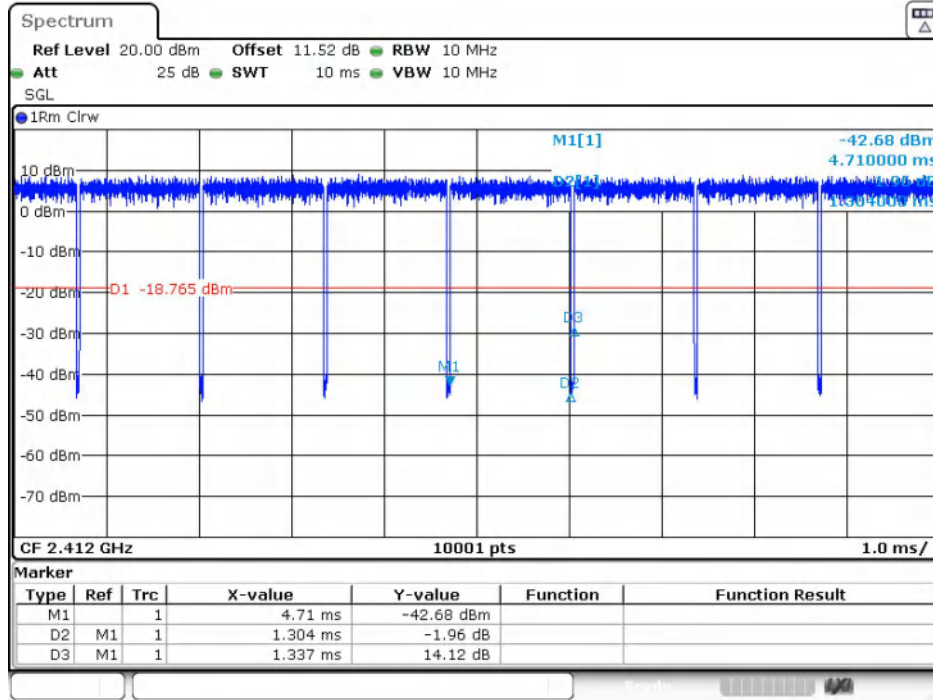
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IEEE 802.11g_20MHz_Channel 11



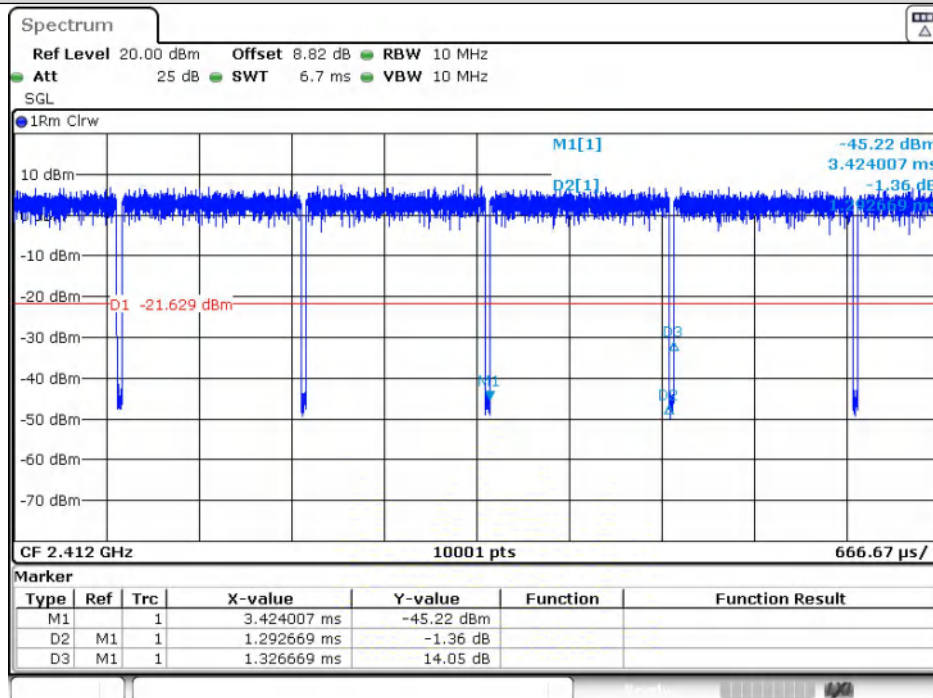
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IEEE 802.11g_20MHz_Channel 11



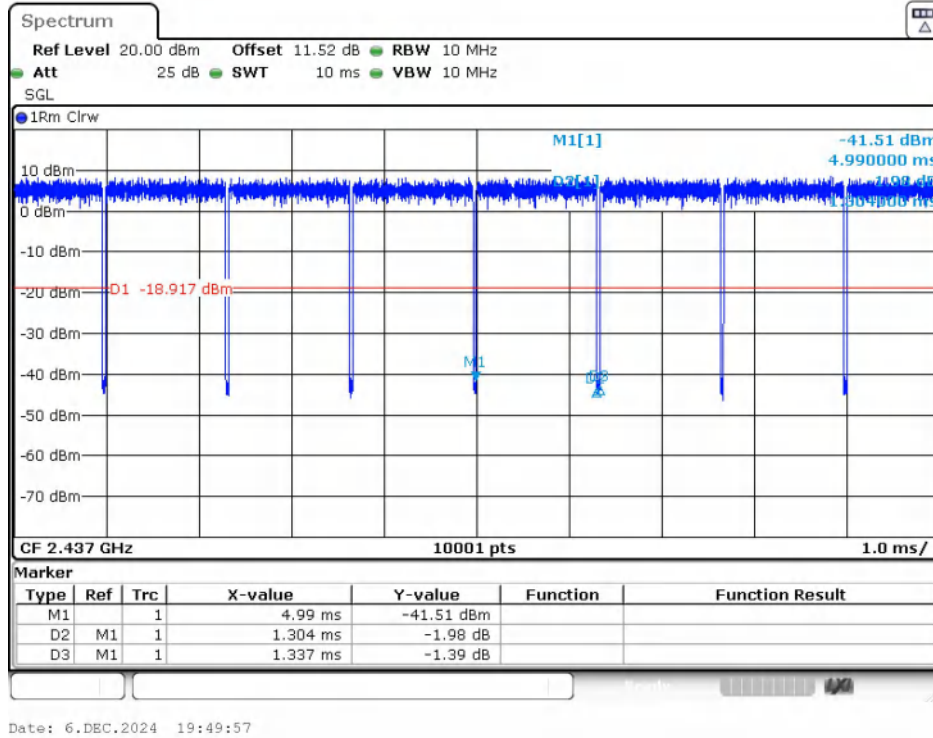
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IEEE 802.11n_20MHz_Channel 1

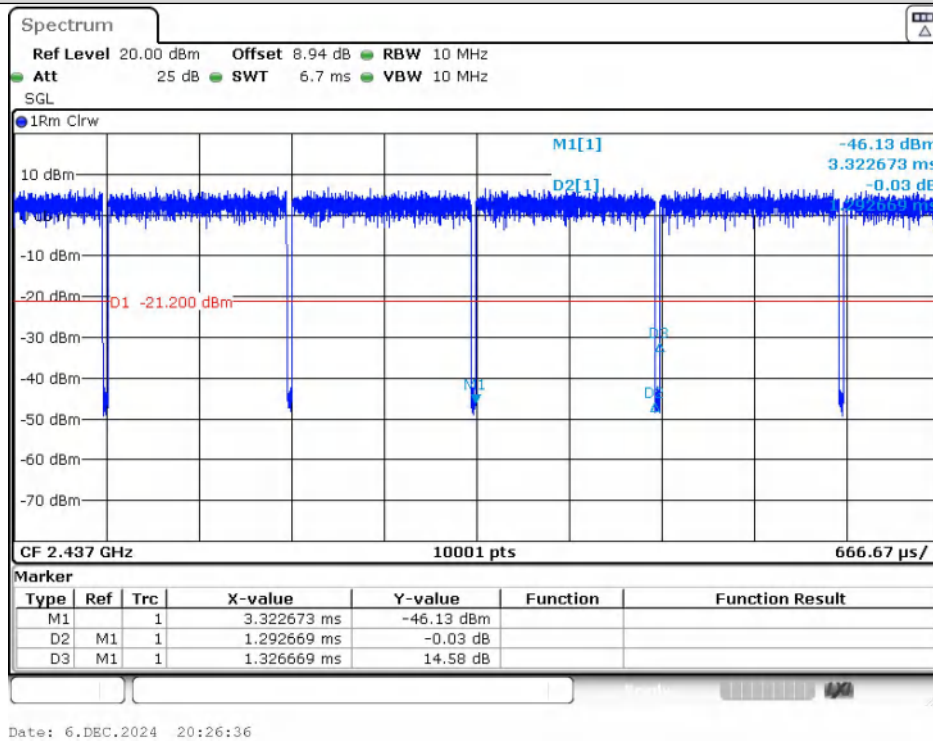


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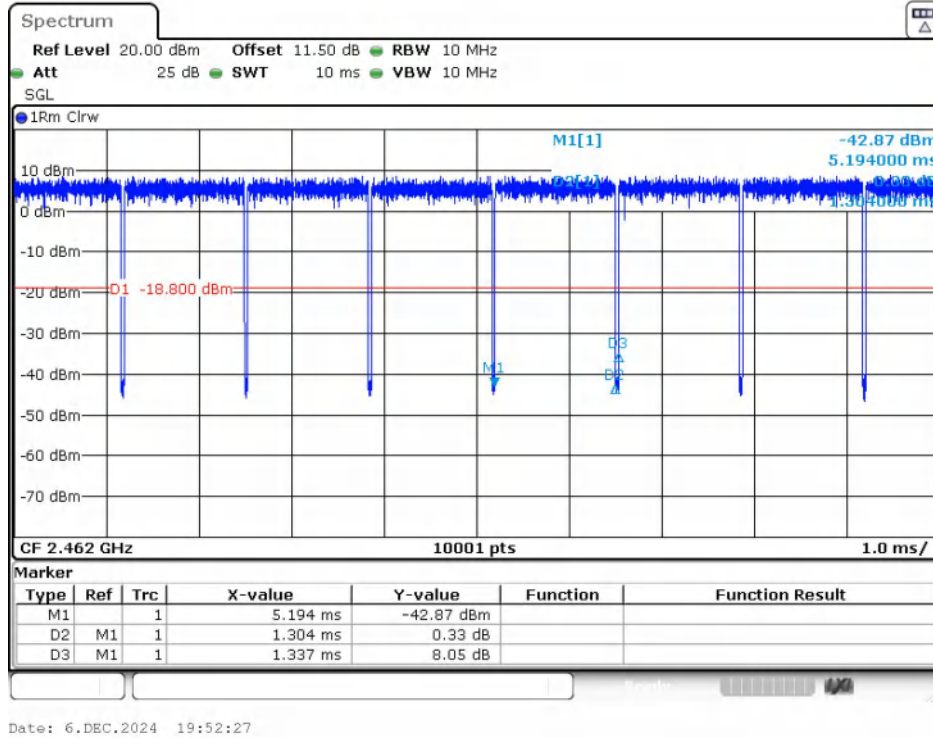
IEEE 802.11n_20MHz_Channel 1



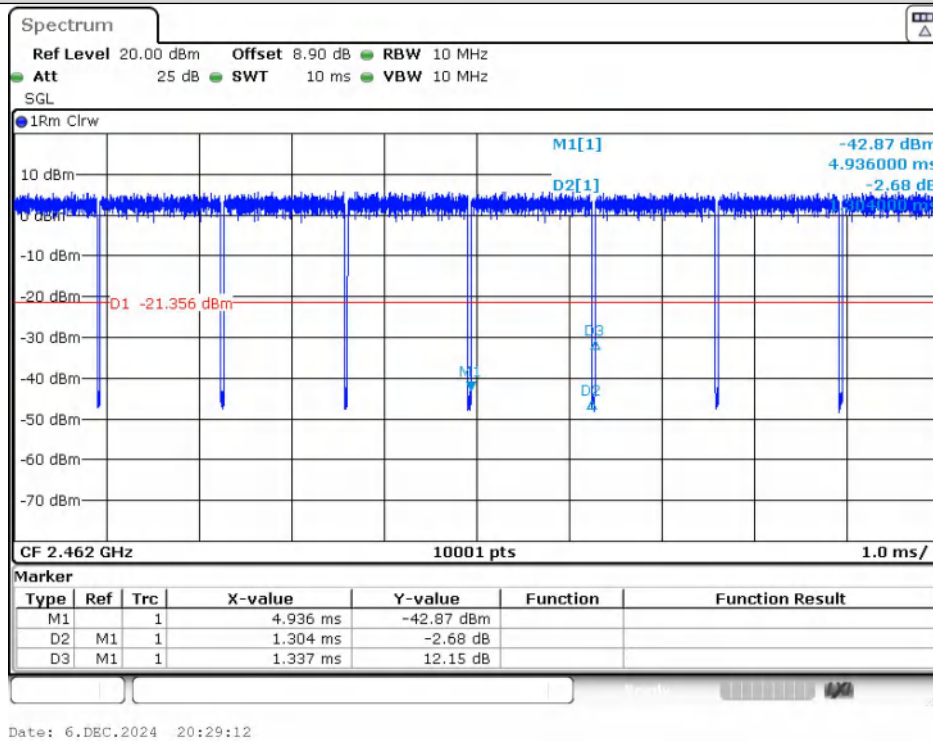
IEEE 802.11n_20MHz_Channel 6



IEEE 802.11n_20MHz_Channel 6



IEEE 802.11n_20MHz_Channel 11



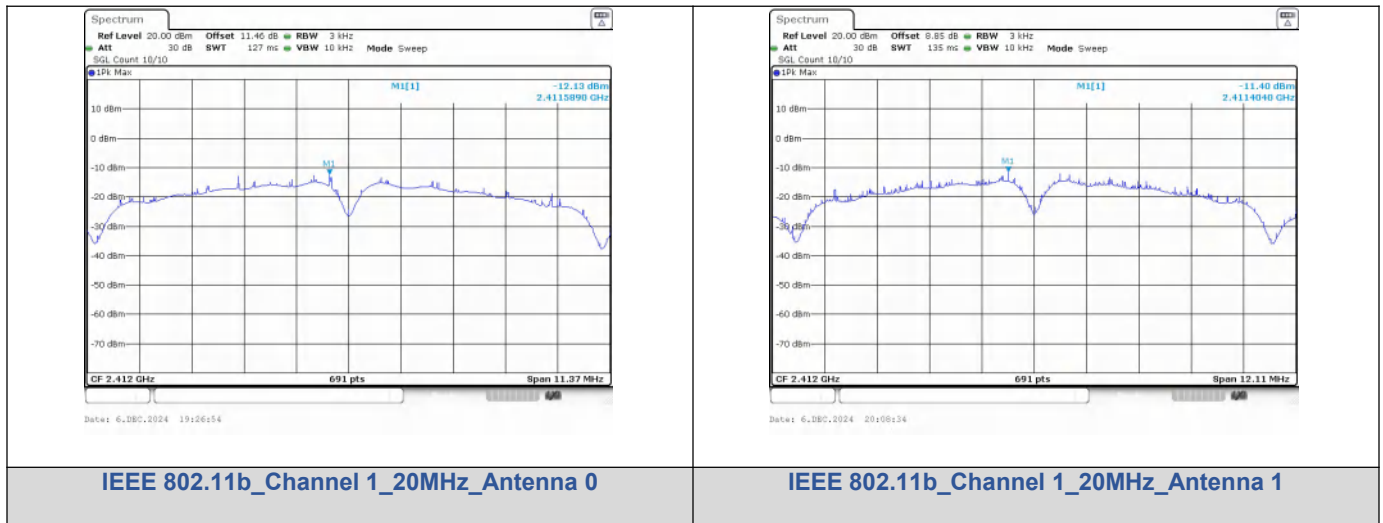
IEEE 802.11n_20MHz_Channel 11

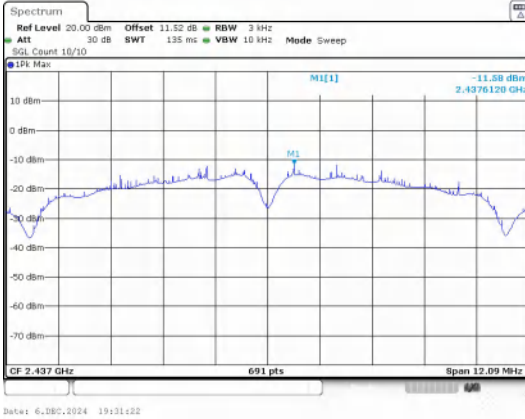
Power Spectral Density

Test Result

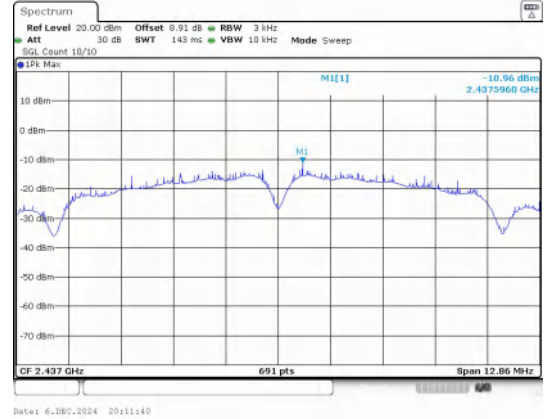
Mode	Channel	PSD (dBm/3kHz) Ant. 0	PSD (dBm/3kHz) Ant. 1	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-12.130	-11.400	≤8	PASS
	6	-11.580	-10.960		PASS
	11	-11.450	-11.340		PASS
IEEE 802.11g	1	-18.670	-18.390		PASS
	6	-19.410	-21.500		PASS
	11	-17.650	-21.830		PASS
IEEE 802.11n_20	1	-18.810	-21.780		PASS
	6	-20.070	-20.120		PASS
	11	-18.400	-20.490		PASS

Test Graphs

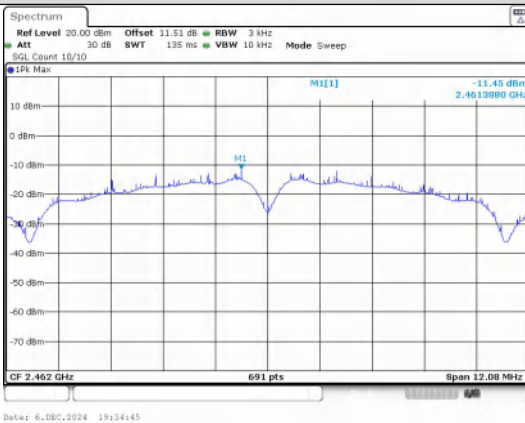




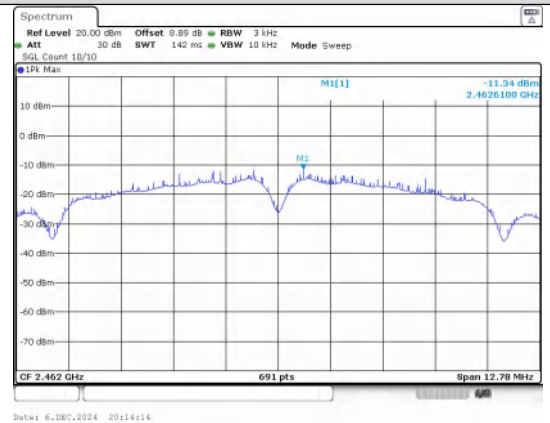
IEEE 802.11b_Channel 6_20MHz_Antenna 0



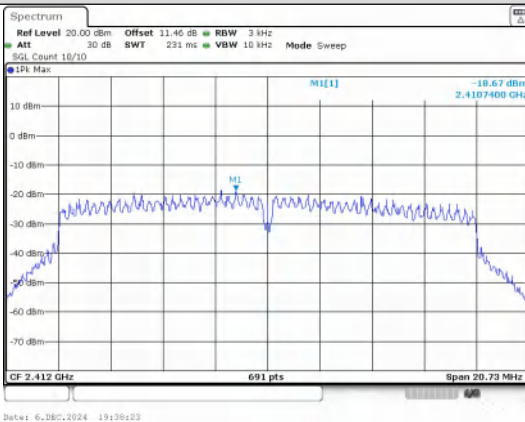
IEEE 802.11b_Channel 6_20MHz_Antenna 1



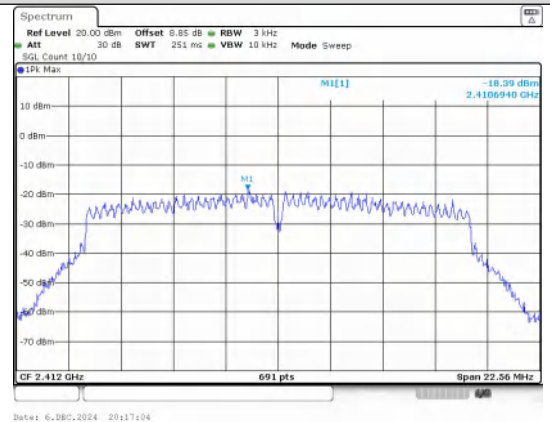
IEEE 802.11b_Channel 11_20MHz_Antenna 0



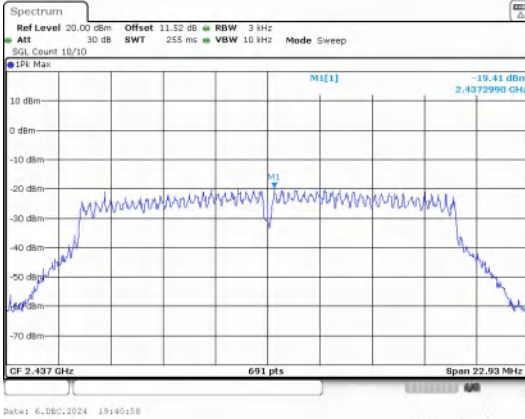
IEEE 802.11b_Channel 11_20MHz_Antenna 1



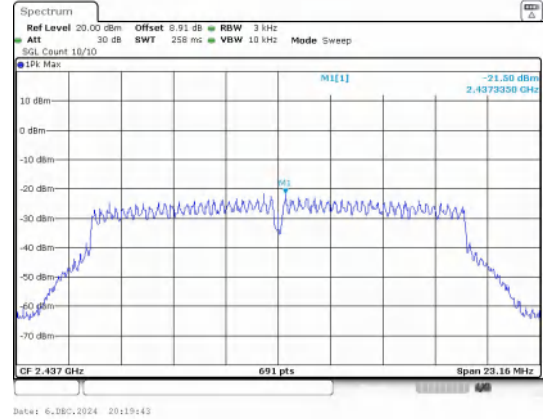
IEEE 802.11g_Channel 1_20MHz_Antenna 0



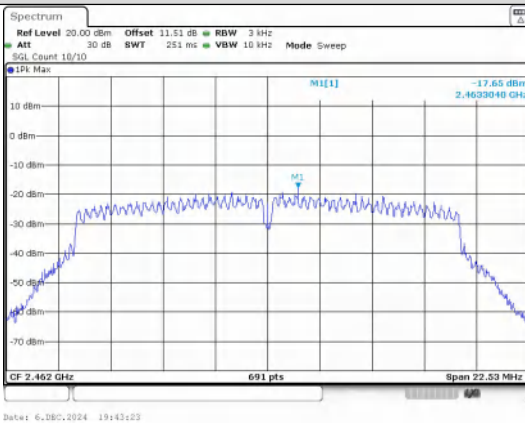
IEEE 802.11g_Channel 1_20MHz_Antenna 1



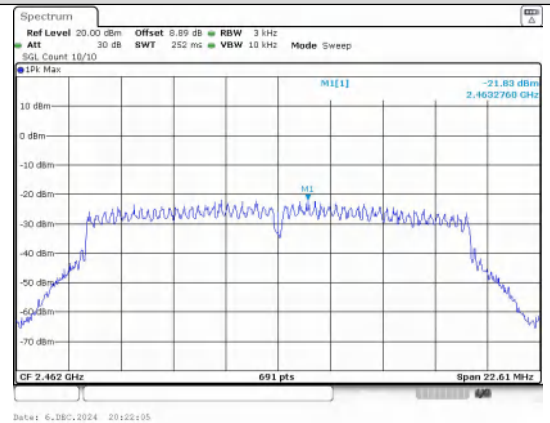
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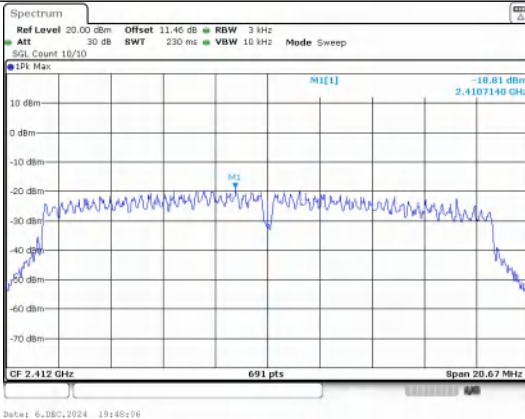
IEEE 802.11g_Channel 6_20MHz_Antenna 1



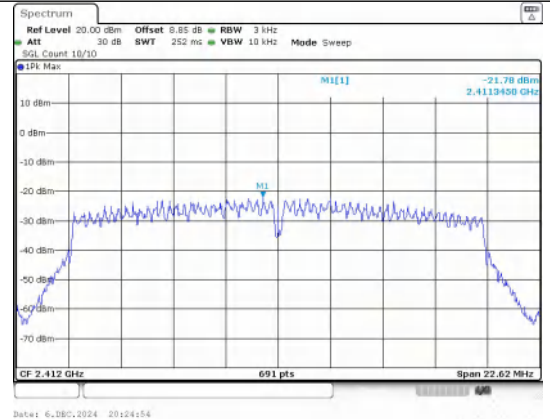
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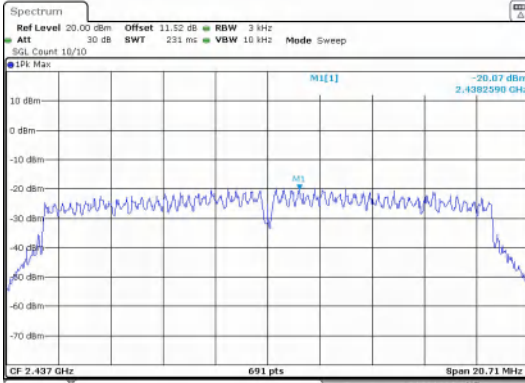
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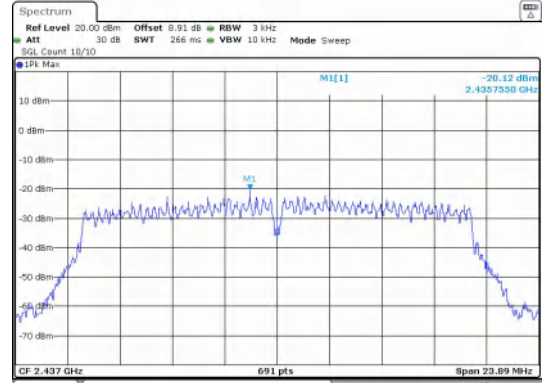
IEEE 802.11n_Channel 1_20MHz_Antenna 0



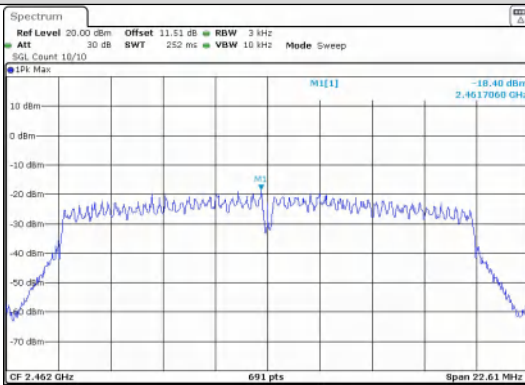
IEEE 802.11n_Channel 1_20MHz_Antenna 1



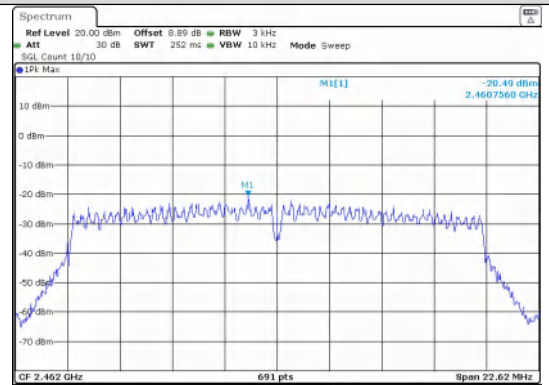
IEEE 802.11n_Channel 6_20MHz_Antenna 0



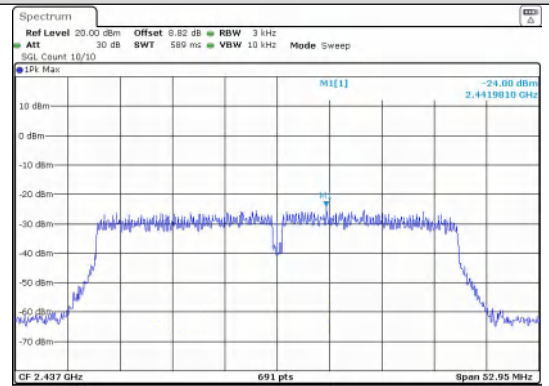
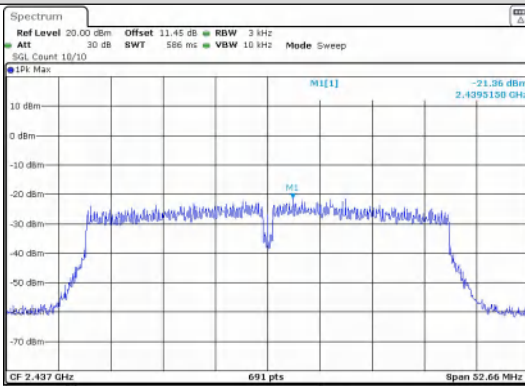
IEEE 802.11n_Channel 6_20MHz_Antenna 1



IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 1



MIMO

Mode	Channel	PSD (dBm/3kHz) Ant. 1	PSD (dBm/3kHz) Ant. 2	PSD (dBm/3kHz) MIMO	Limit (dBm/3kHz)	Result
IEEE 802.11n_20	1	-18.810	-21.780	-17.04	≤8	PASS
	6	-20.070	-20.120	-17.08		PASS
	11	-18.400	-20.490	-16.31		PASS

Conducted Output Power

Test Result

Conducted Output Power

Mode	Channel	Ant. 0 (dBm)	Ant. 1 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	15.16	15.74	≤30	PASS
	6	15.19	15.57	≤30	PASS
	11	15.51	15.72	≤30	PASS
IEEE 802.11g	1	15.77	15.27	≤30	PASS
	6	15.87	15.22	≤30	PASS
	11	15.13	15.33	≤30	PASS
IEEE 802.11n_20	1	15.66	15.15	≤30	PASS
	6	15.46	15.19	≤30	PASS
	11	15.95	15.24	≤30	PASS

MIMO

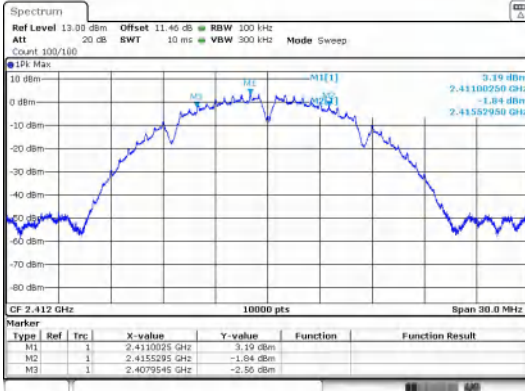
Mode	Channel	Ant. 1 (dBm)	Ant. 2 (dBm)	MOMO(dBm)	Limit (dBm)	Result
IEEE 802.11n_20	1	15.66	15.15	18.42	≤30	PASS
	6	15.46	15.19	18.34	≤30	PASS
	11	15.95	15.24	18.62	≤30	PASS

6dB Bandwidth

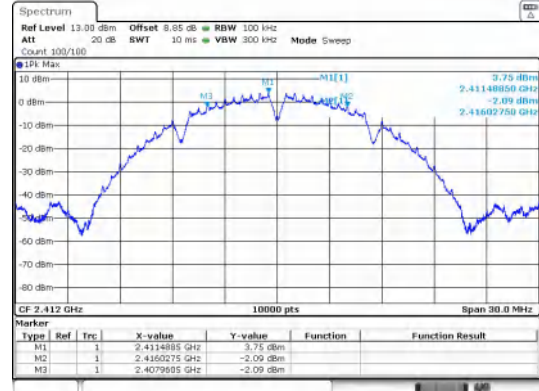
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	7.580	≥0.5	PASS
		1	2412	8.070		PASS
	6	0	2437	8.060		PASS
		1	2437	8.570		PASS
	11	0	2462	8.050		PASS
		1	2462	8.520		PASS
IEEE 802.11g	1	0	2412	13.82		PASS
		1	2412	15.04		PASS
	6	0	2437	15.29		PASS
		1	2437	15.44		PASS
	11	0	2462	15.02		PASS
		1	2462	15.07		PASS
IEEE 802.11n_20	1	0	2412	13.78		PASS
		1	2412	15.08		PASS
	6	0	2437	13.81		PASS
		1	2437	15.93		PASS
	11	0	2462	15.07		PASS
		1	2462	15.08		PASS

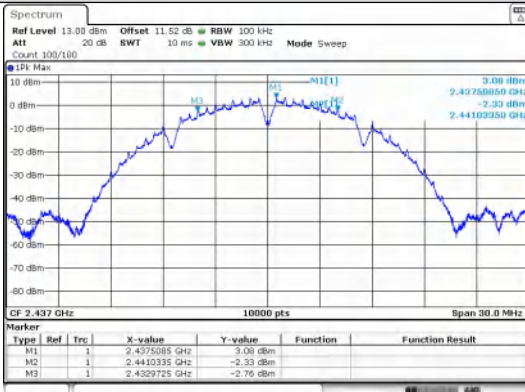
Test Graphs



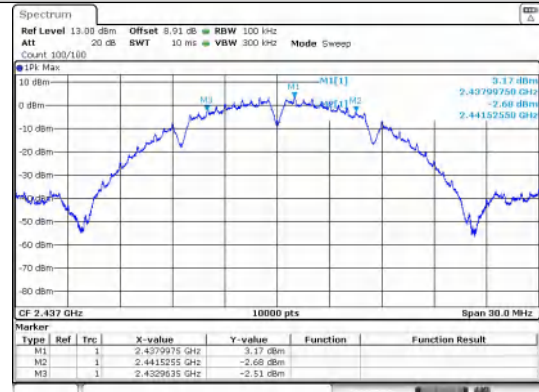
IEEE 802.11b_Channel 1_20MHz_Antenna 0



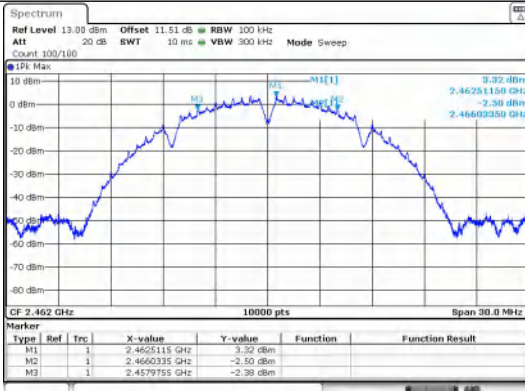
IEEE 802.11b_Channel 1_20MHz_Antenna 1



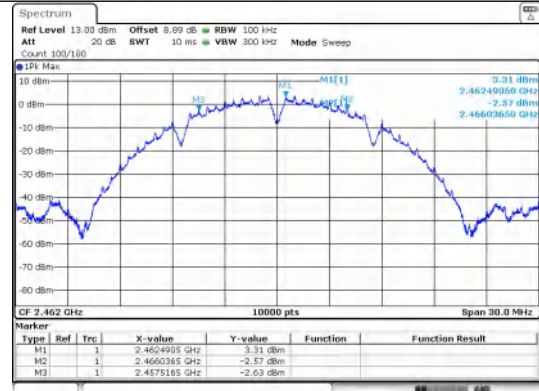
IEEE 802.11b_Channel 6_20MHz_Antenna 0



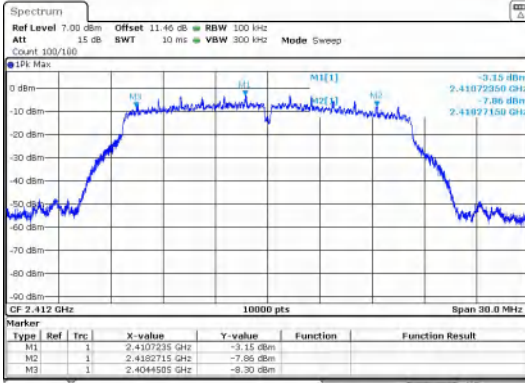
IEEE 802.11b_Channel 6_20MHz_Antenna 1



IEEE 802.11b_Channel 11_20MHz_Antenna 0

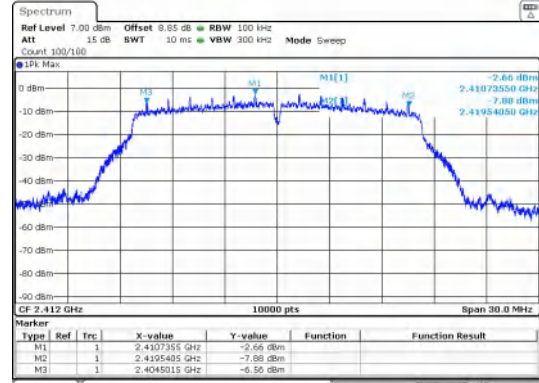


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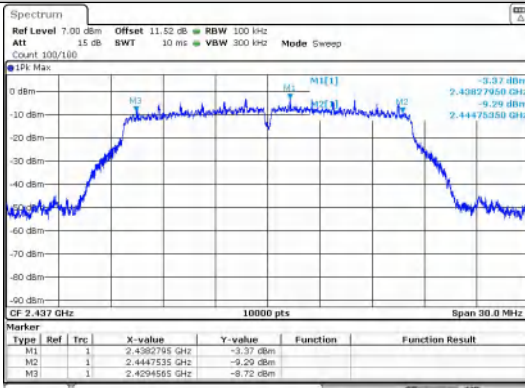
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IEEE 802.11g_Channel 1_20MHz_Antenna 0



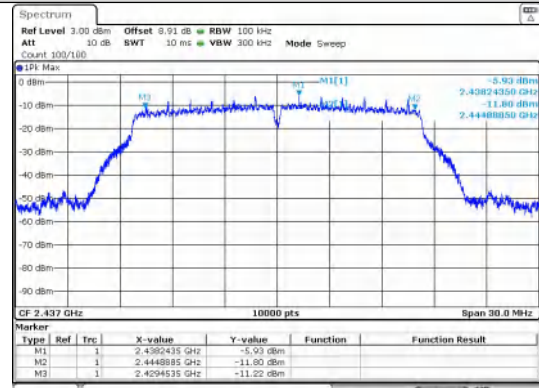
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IEEE 802.11g_Channel 1_20MHz_Antenna 1



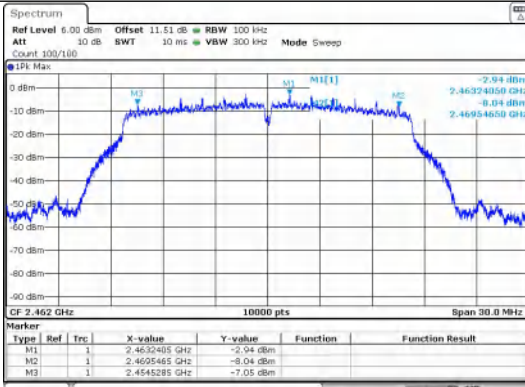
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IEEE 802.11g_Channel 6_20MHz_Antenna 0



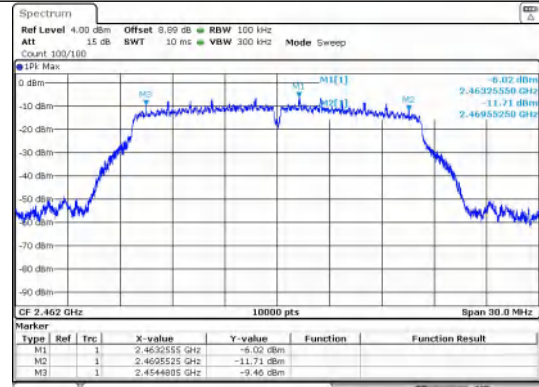
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IEEE 802.11g_Channel 6_20MHz_Antenna 1



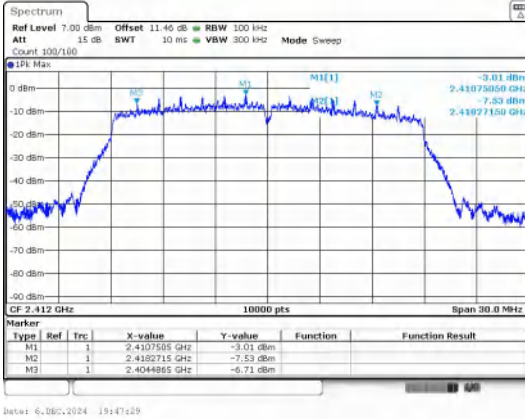
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IEEE 802.11g_Channel 11_20MHz_Antenna 0

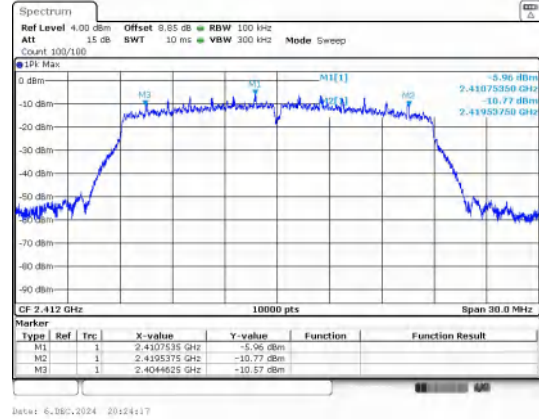


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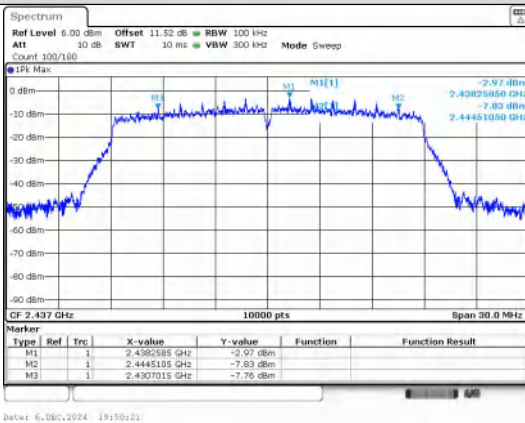
IEEE 802.11g_Channel 11_20MHz_Antenna 1



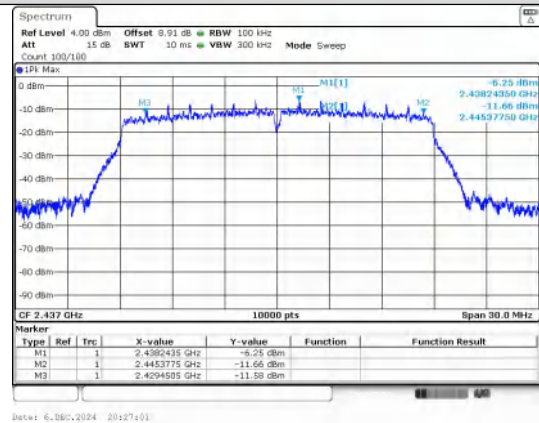
IEEE 802.11n_Channel 1_20MHz_Antenna 0



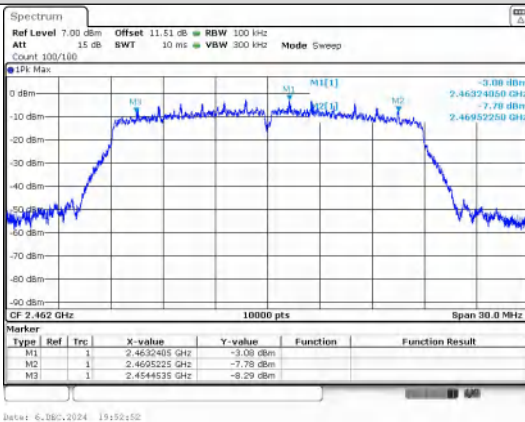
IEEE 802.11n_Channel 1_20MHz_Antenna 1



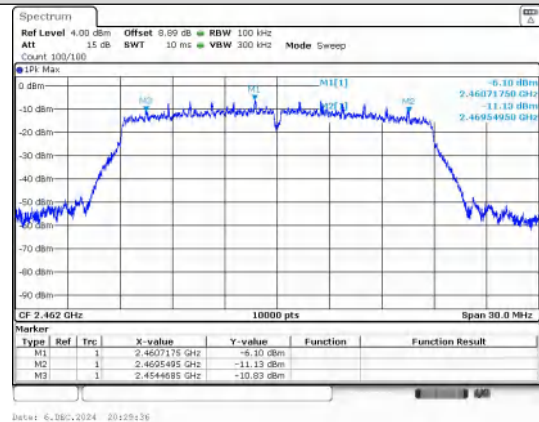
IEEE 802.11n_Channel 6_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 1



IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 1

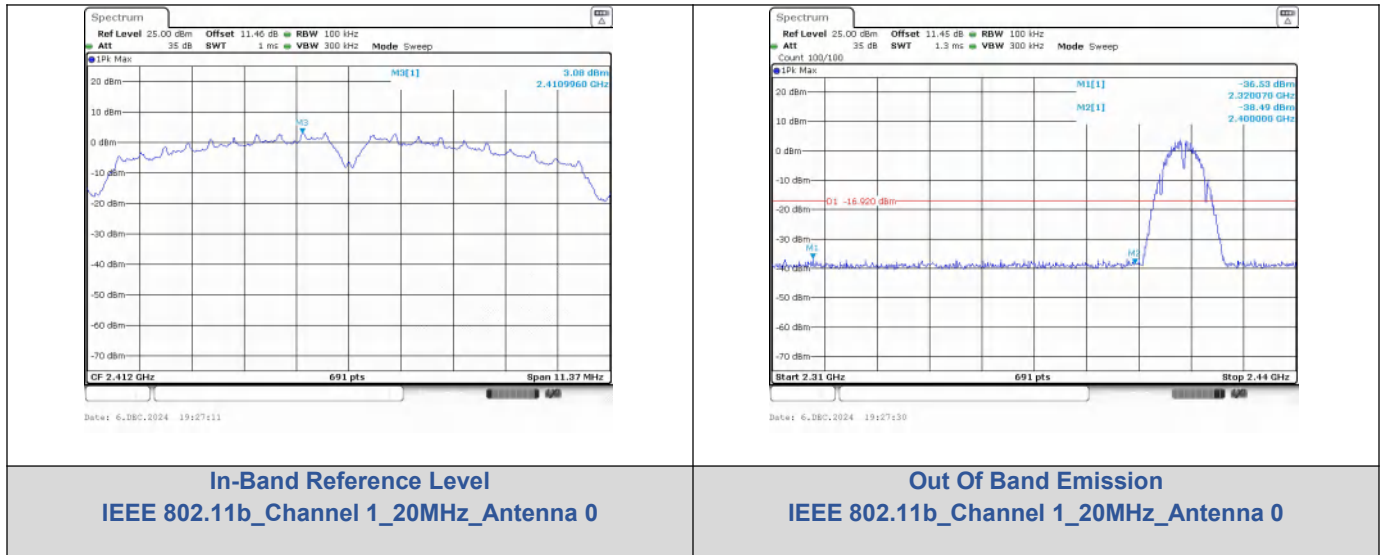
Conducted Out Of Band Emission

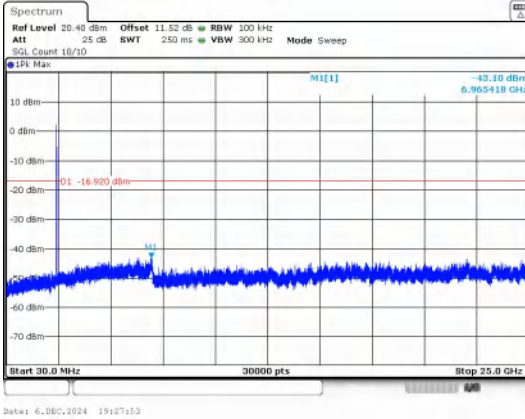
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2320.07	-36.526	-16.92	-19.606	PASS
			2400.00	-38.490	-16.92	-21.570	PASS
			6965.40	-43.100	-16.92	-26.180	PASS
		1	2397.20	-38.961	-16.44	-22.521	PASS
			2400.00	-40.700	-16.44	-24.260	PASS
			16573.0	-39.470	-16.44	-23.030	PASS
	6	0	6880.52	-43.016	-17.06	-25.956	PASS
		1	16223.5	-40.479	-17.27	-23.209	PASS
	11	0	2483.50	-38.150	-16.8	-21.350	PASS
			6922.97	-43.508	-16.8	-26.708	PASS
		1	2483.50	-41.540	-16.64	-24.900	PASS
			16610.5	-40.564	-16.64	-23.924	PASS
IEEE 802.11g	1	0	2327.40	-36.758	-23.46	-13.298	PASS
			2400.00	-38.040	-23.46	-14.580	PASS
			22027.3	-42.987	-23.46	-19.527	PASS
		1	2397.58	-39.287	-22.65	-16.637	PASS
			2400.00	-40.430	-22.65	-17.780	PASS
			16615.5	-40.933	-22.65	-18.283	PASS
	6	0	6953.76	-42.874	-23.39	-19.484	PASS
		1	16559.7	-39.898	-26.3	-13.598	PASS
	11	0	2483.50	-38.300	-22.87	-15.430	PASS
			22078.9	-42.778	-22.87	-19.908	PASS
		1	2483.50	-41.500	-25.75	-15.750	PASS
			22044.0	-40.431	-25.75	-14.681	PASS

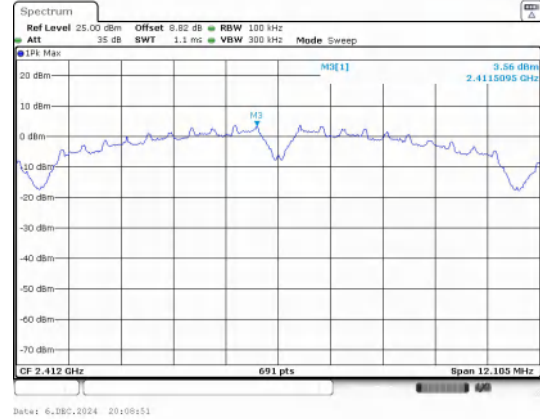
IEEE 802.11n_20	1	0	2337.75	-36.248	-23.37	-12.878	PASS
			2400.00	-38.300	-23.37	-14.930	PASS
			6853.90	-42.553	-23.37	-19.183	PASS
		1	2378.57	-39.769	-25.67	-14.099	PASS
			2400.00	-41.520	-25.67	-15.850	PASS
			21522.1	-40.001	-25.67	-14.331	PASS
	6	0	6911.32	-42.959	-23.37	-19.589	PASS
		1	17628.4	-40.023	-26.22	-13.803	PASS
	11	0	2483.50	-38.490	-22.85	-15.640	PASS
			6910.48	-43.280	-22.85	-20.430	PASS
		1	2483.50	-40.120	-26.21	-13.910	PASS
			22032.3	-40.321	-26.21	-14.111	PASS
			16588.0	-40.472	-28.01	-12.462	PASS

Test Graphs

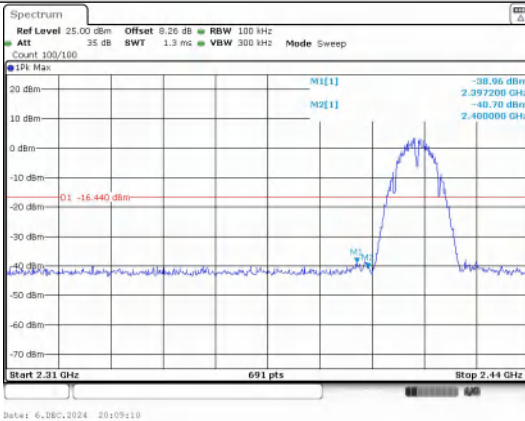




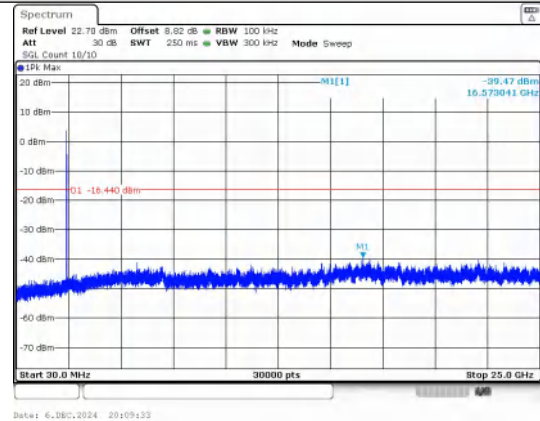
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



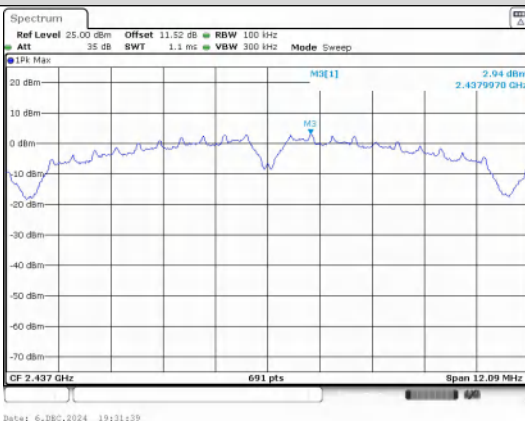
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 1



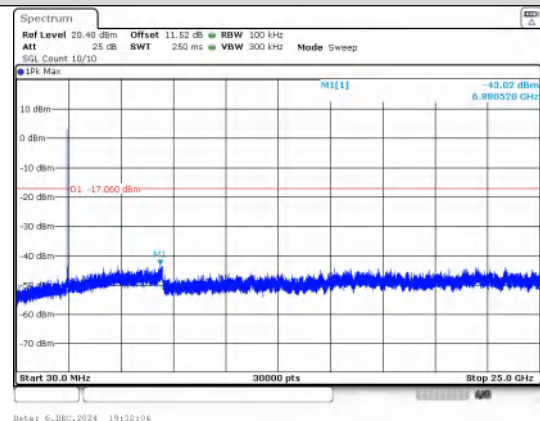
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 1



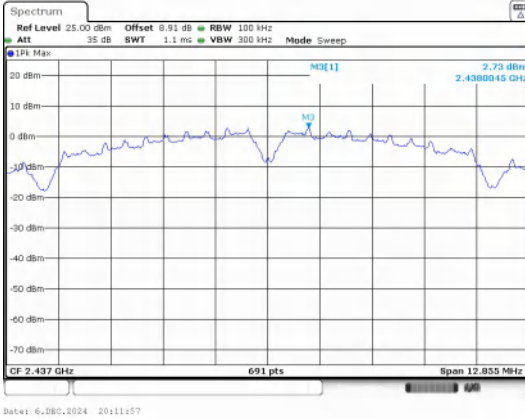
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IEEE 802.11b_Channel 1_20MHz_Antenna 1



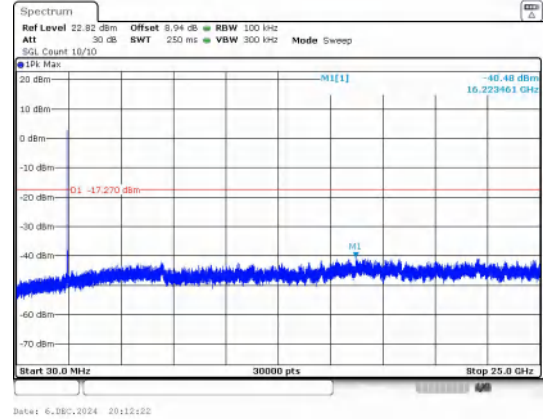
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



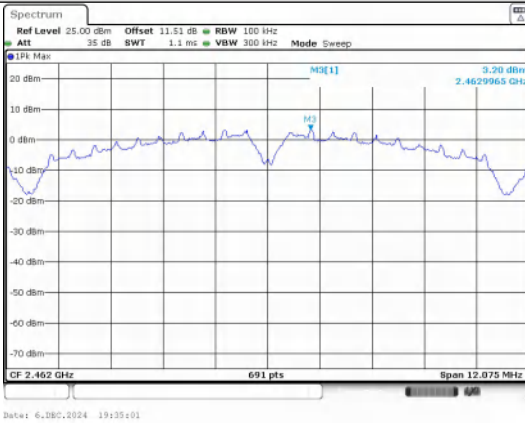
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IEEE 802.11b_Channel 6_20MHz_Antenna 0



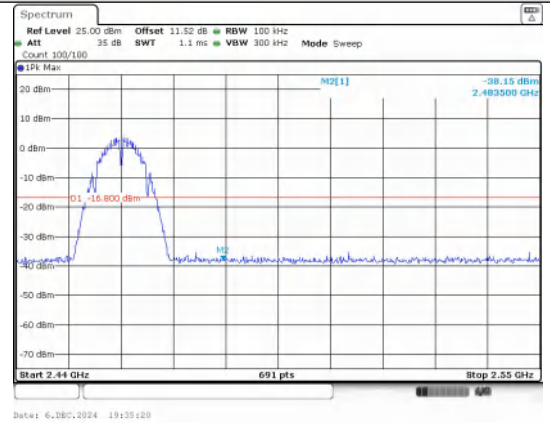
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IEEE 802.11b_Channel 6_20MHz_Antenna 1



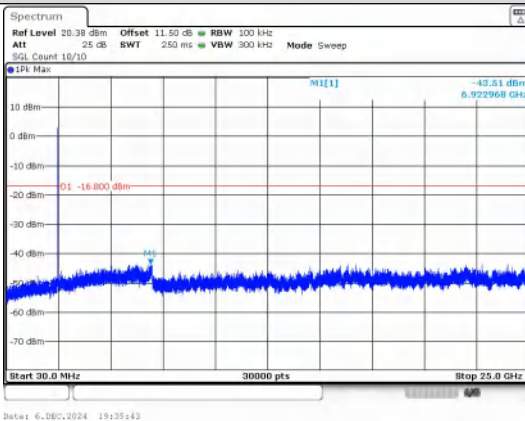
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IEEE 802.11b_Channel 6_20MHz_Antenna 1



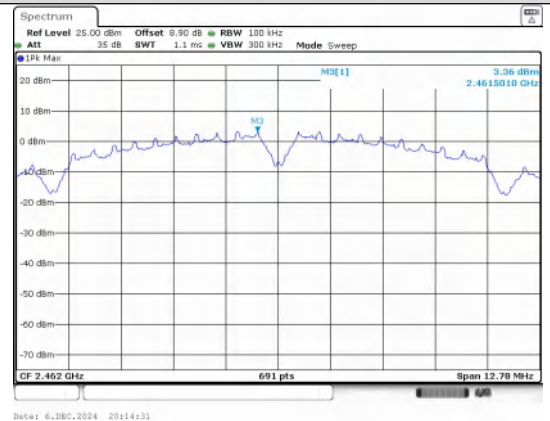
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



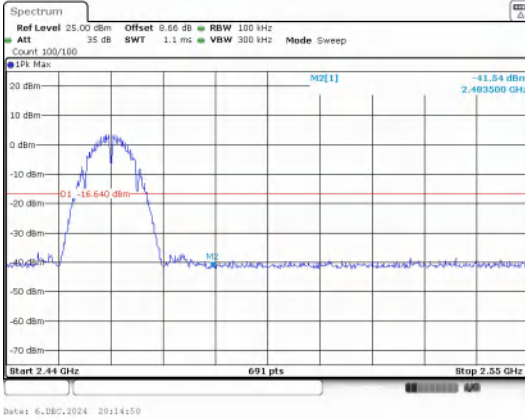
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



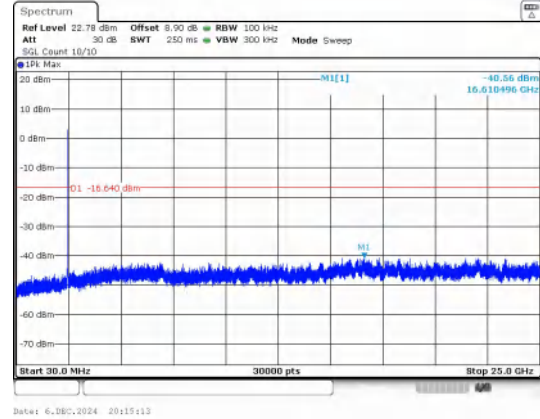
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IEEE 802.11b_Channel 11_20MHz_Antenna 0



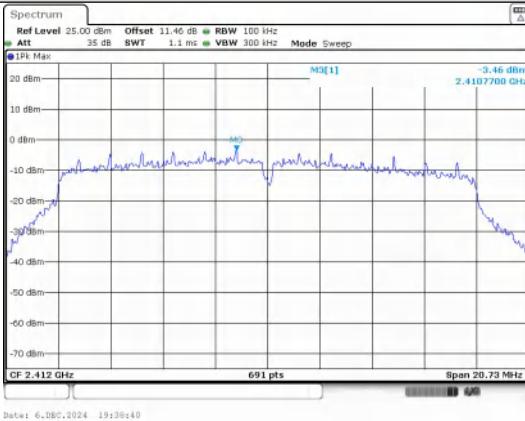
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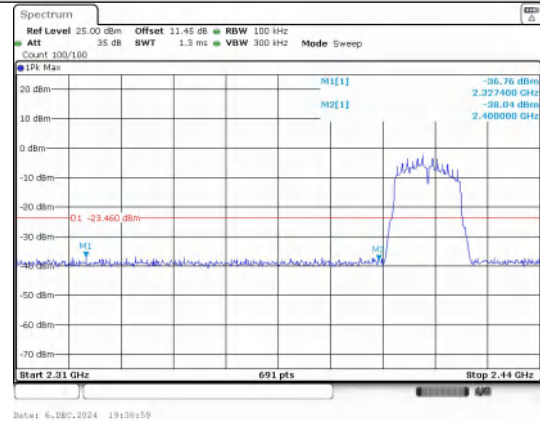
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 1



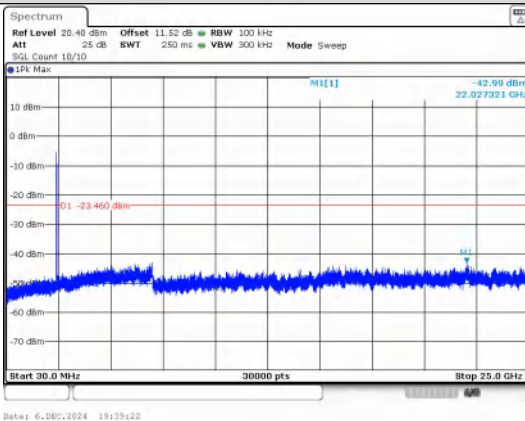
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IEEE 802.11b_Channel 11_20MHz_Antenna 1



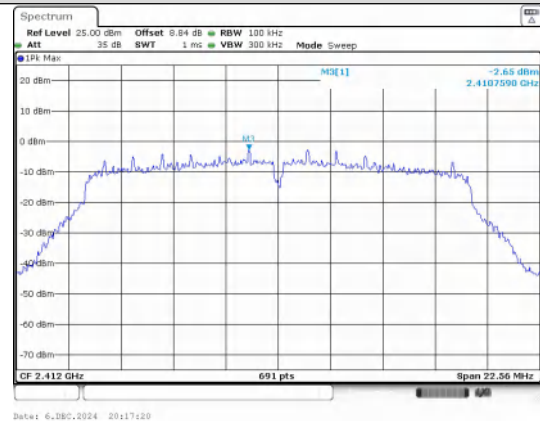
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



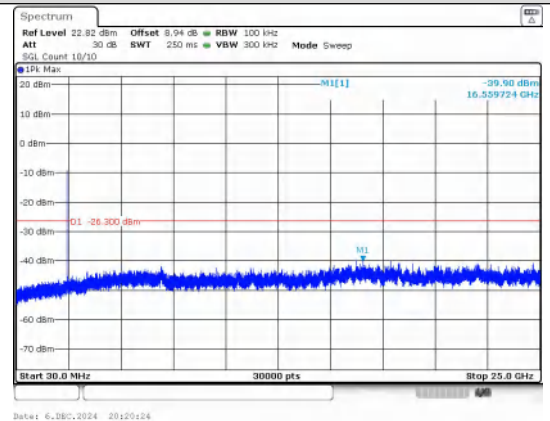
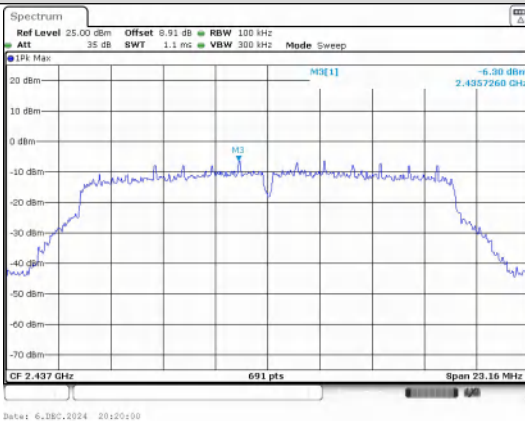
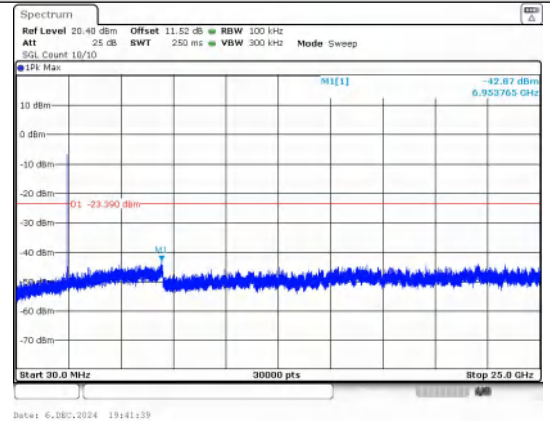
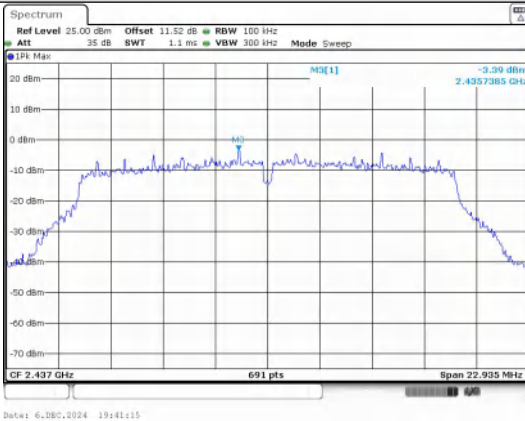
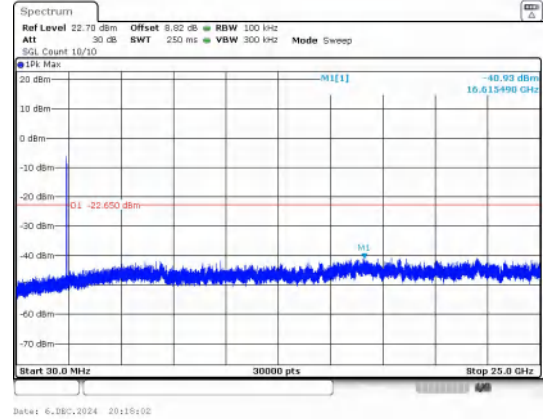
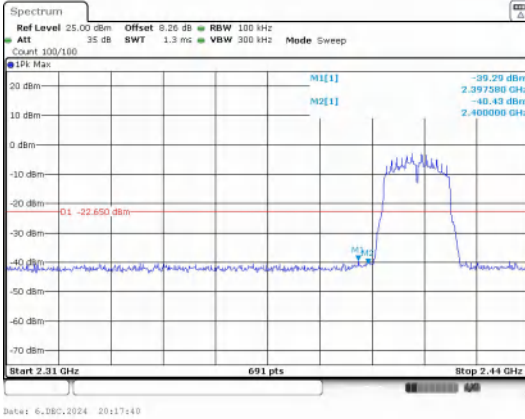
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0

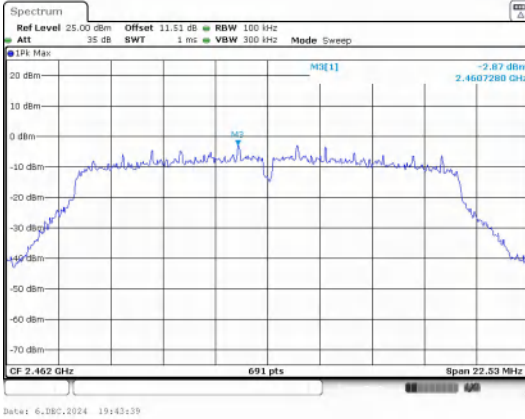


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IEEE 802.11g_Channel 1_20MHz_Antenna 0

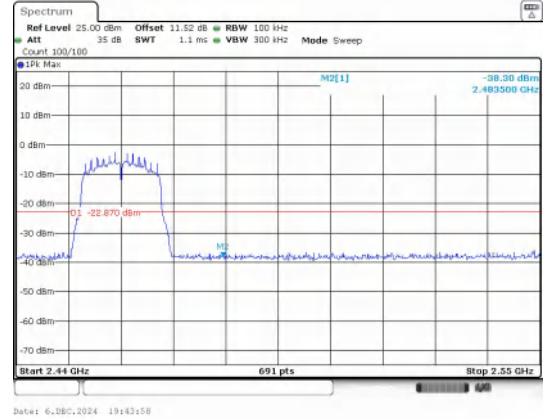


In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 1

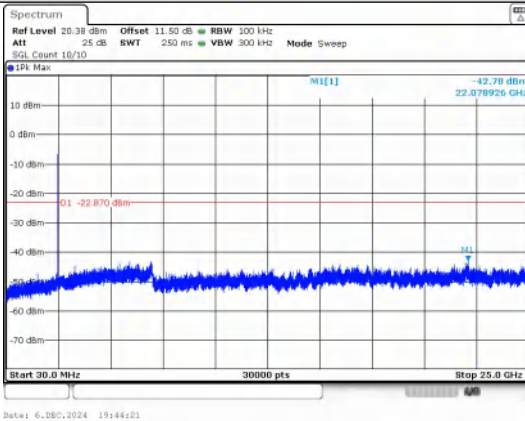




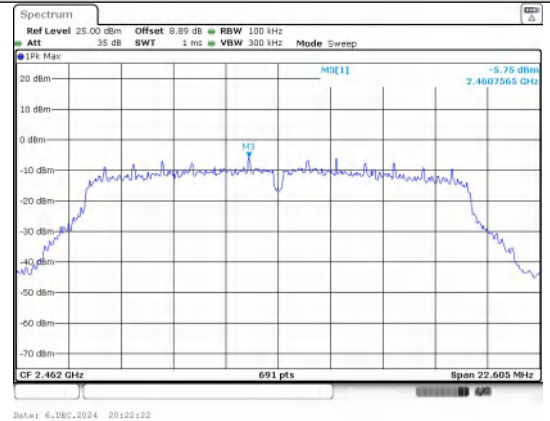
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



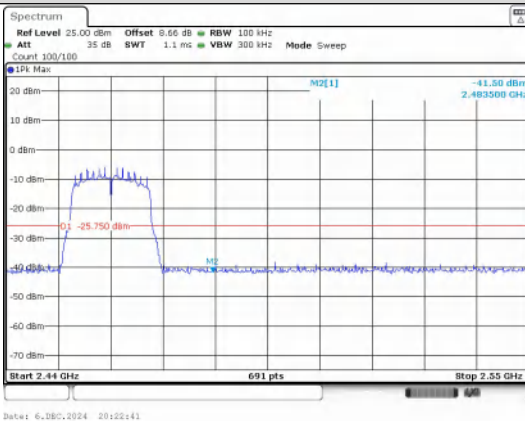
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



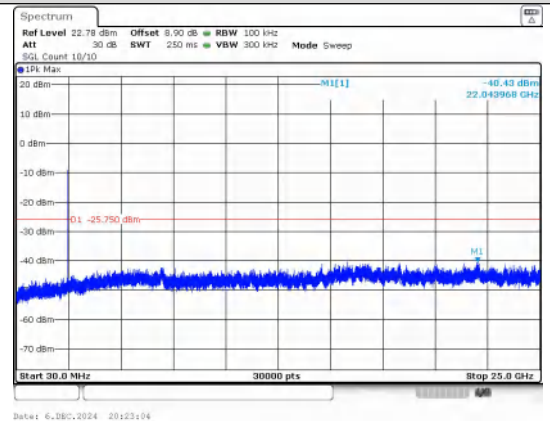
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IEEE 802.11g_Channel 11_20MHz_Antenna 0



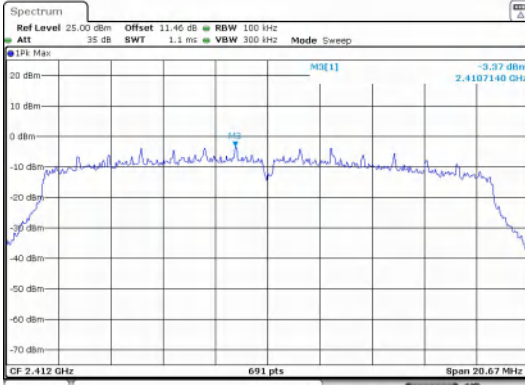
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IEEE 802.11g_Channel 11_20MHz_Antenna 1



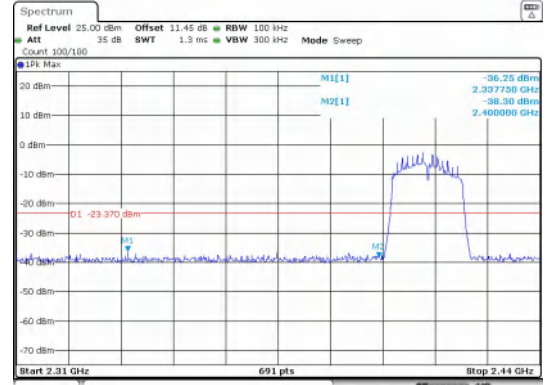
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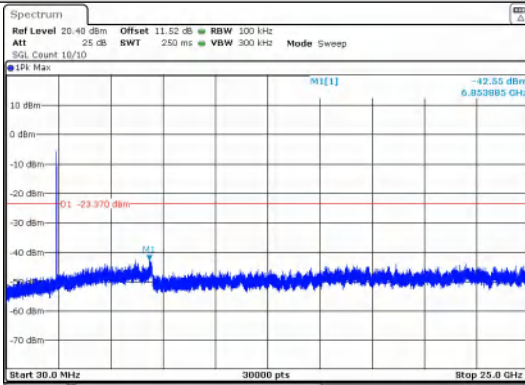
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IEEE 802.11g_Channel 11_20MHz_Antenna 1



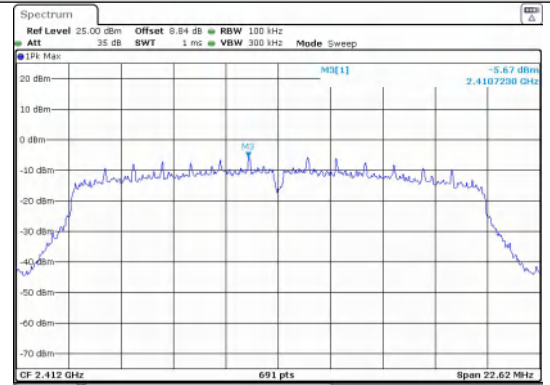
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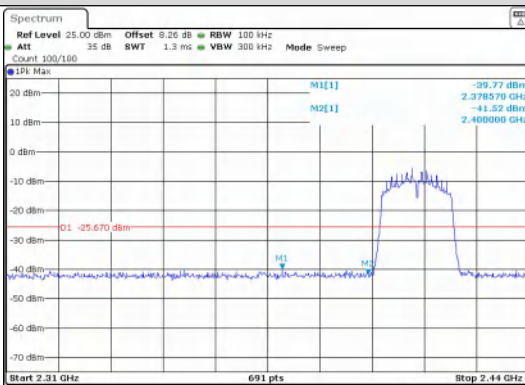
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IEEE 802.11n_Channel 1_20MHz_Antenna 0



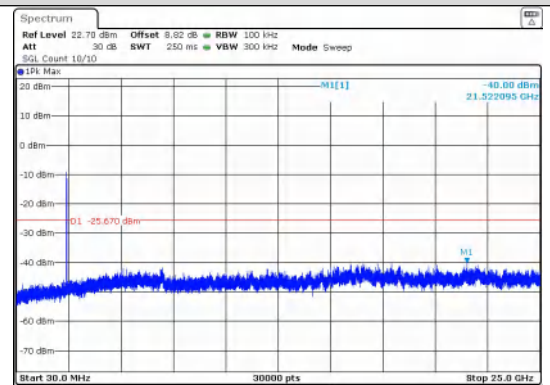
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IEEE 802.11n_Channel 1_20MHz_Antenna 0



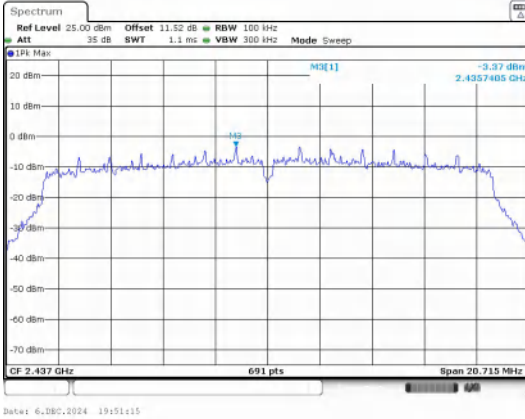
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IEEE 802.11n_Channel 1_20MHz_Antenna 1



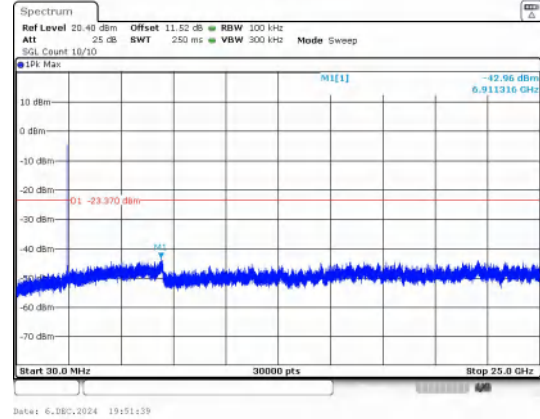
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 1



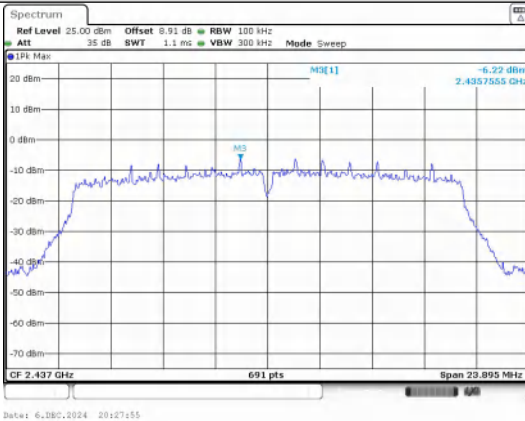
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IEEE 802.11n_Channel 1_20MHz_Antenna 1



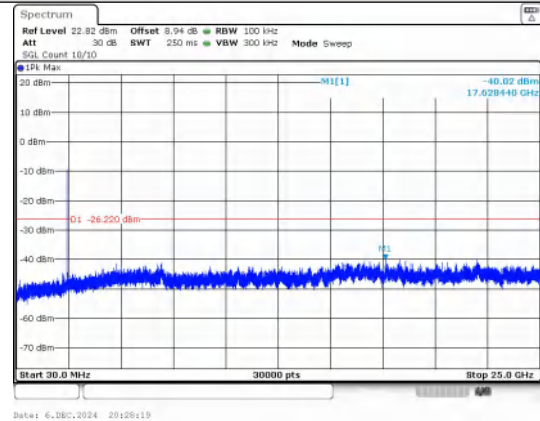
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



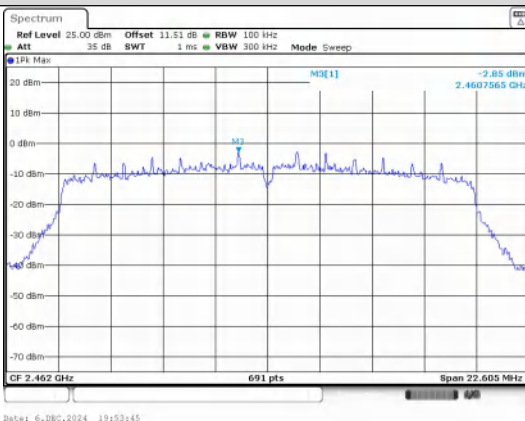
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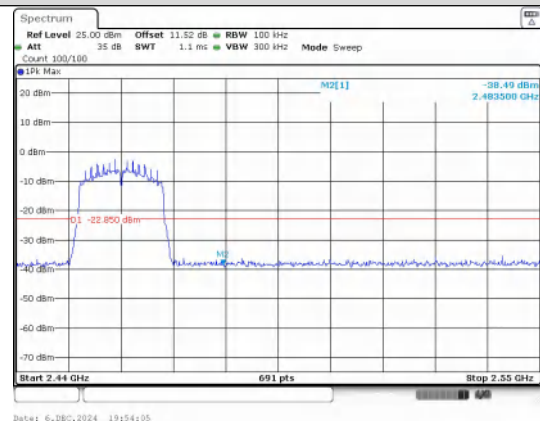
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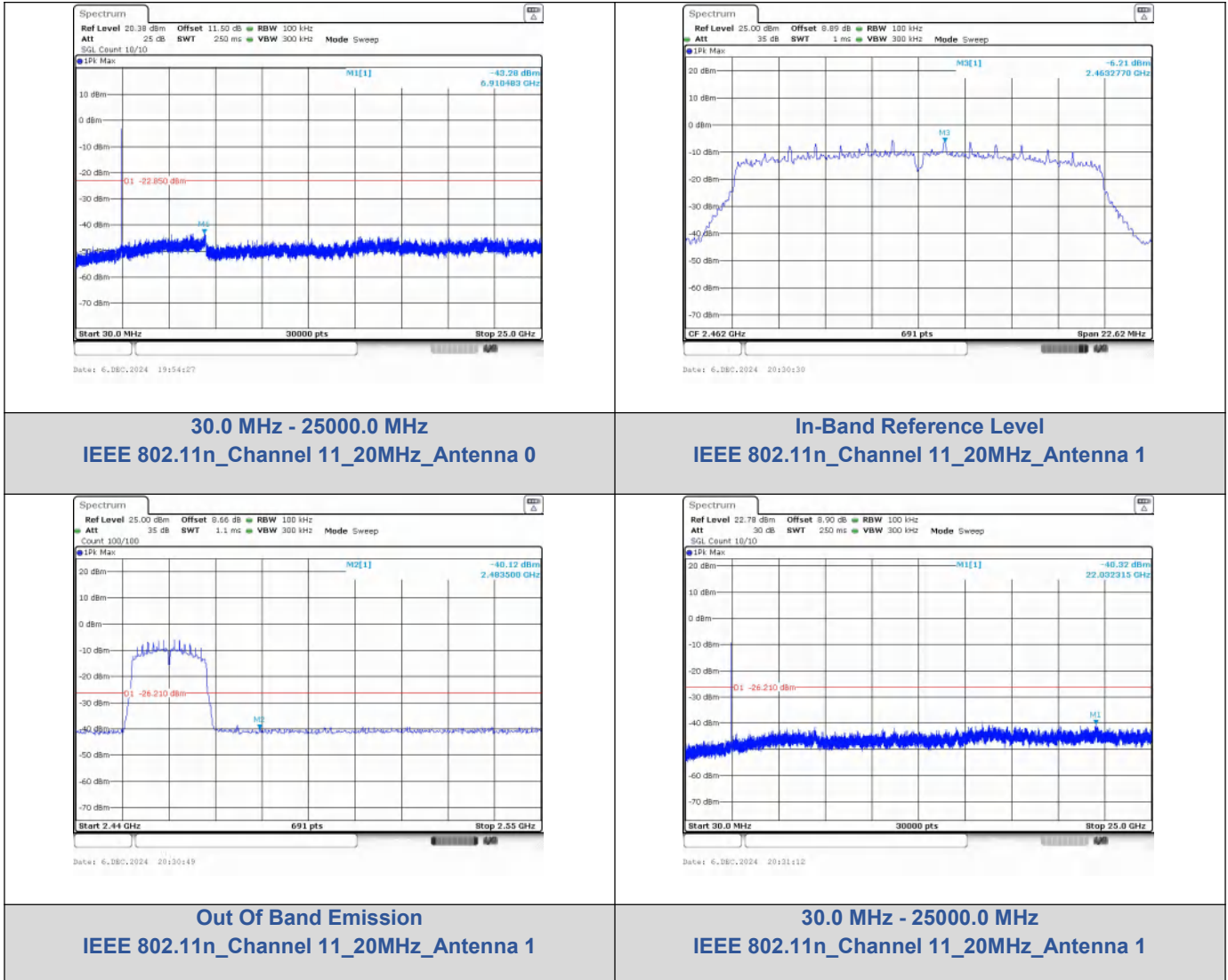
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IEEE 802.11n_Channel 6_20MHz_Antenna 1



In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



-----End of the report-----