Appendix Report

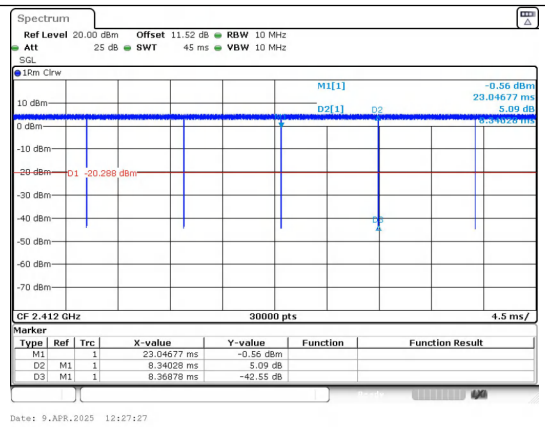
Project No.:	CISR250402050
Test Engineer:	James Wang
Supervised by:	Rory Huang

Duty Cycle

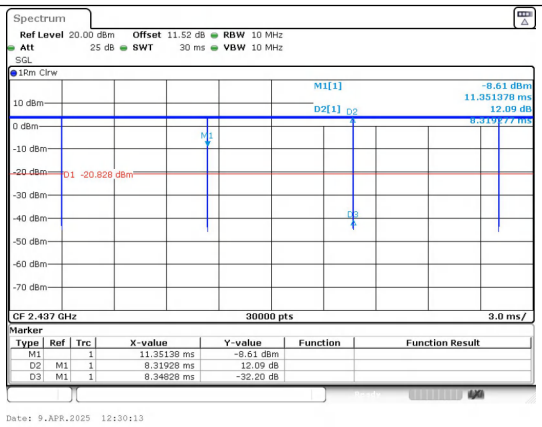
Test Result

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
		6		8.319	8.348	99.65	0.9965	0.0152	0.1202
		11		8.340	8.369	99.66	0.9966	0.0148	0.1199
IEEE 802.11g		1		1.396	1.429	97.69	0.9769	0.1015	0.7163
		6		1.396	1.430	97.62	0.9762	0.1046	0.7163
		11		1.396	1.429	97.69	0.9769	0.1015	0.7163
IEEE 802.11n_20	MCS 0	1		1.304	1.337	97.53	0.9753	0.1086	0.7669
		6		1.304	1.338	97.46	0.9746	0.1117	0.7669
		11		1.293	1.327	97.44	0.9744	0.1126	0.7734

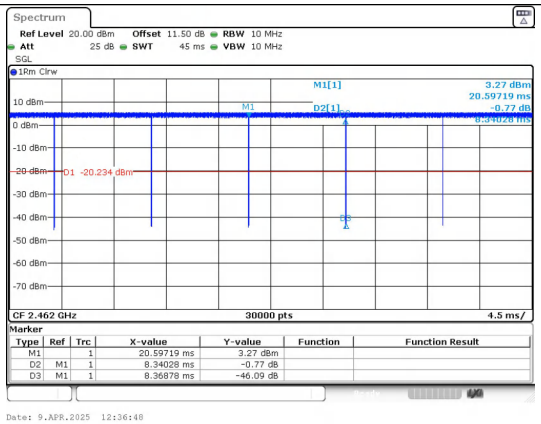
Test Graphs



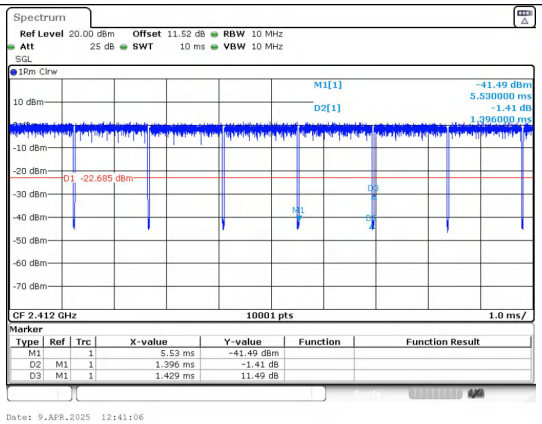
IEEE 802.11b_20MHz_Channel 1



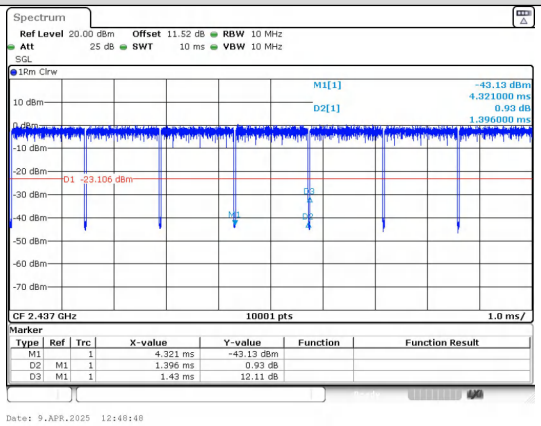
IEEE 802.11b_20MHz_Channel 6



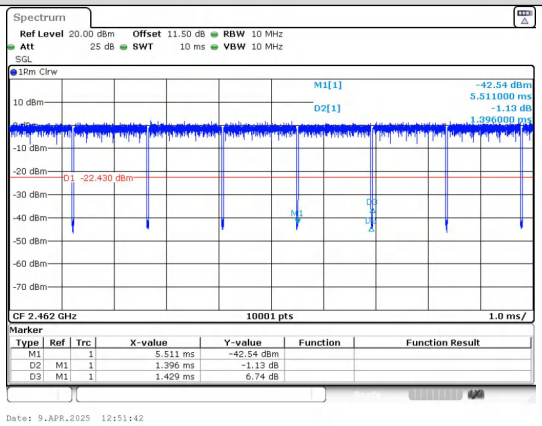
IEEE 802.11b_20MHz_Channel 11



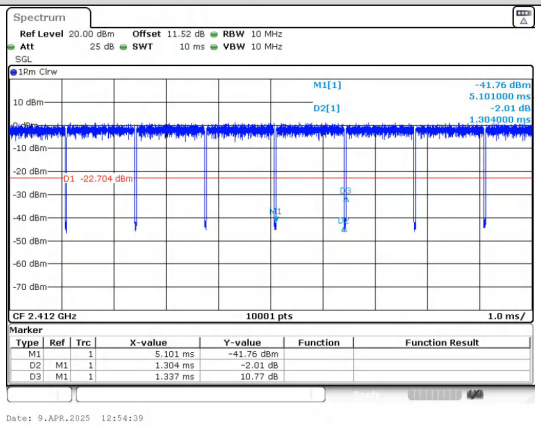
IEEE 802.11g_20MHz_Channel 1



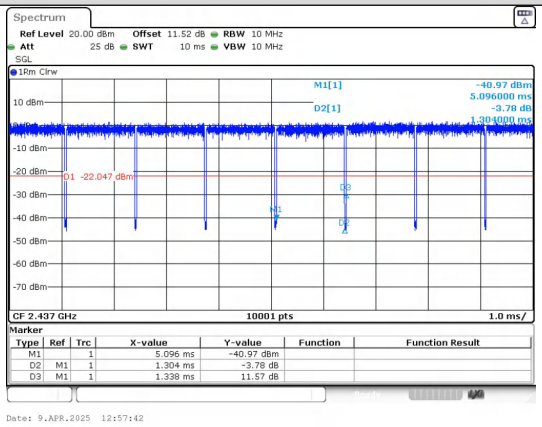
IEEE 802.11g_20MHz_Channel 6



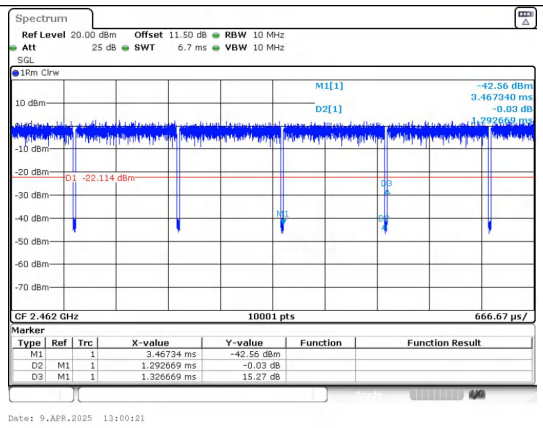
IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1



IEEE 802.11n_20MHz_Channel 6



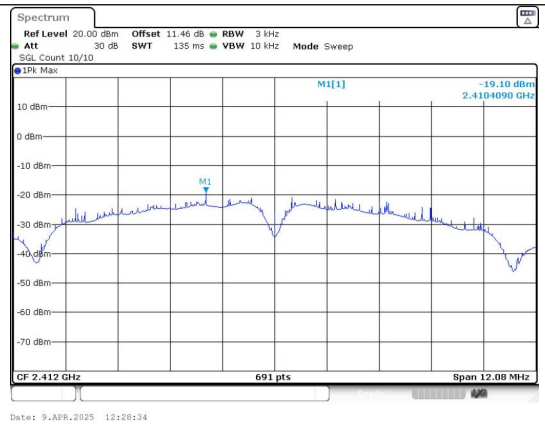
IEEE 802.11n_20MHz_Channel 11

Power Spectral Density

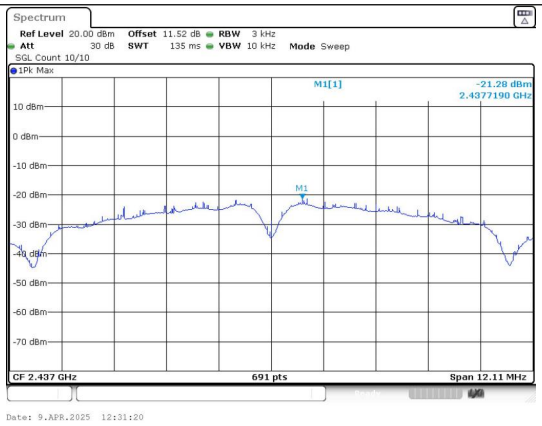
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-19.100	≤8	PASS
	6	-21.280		PASS
	11	-19.940		PASS
IEEE 802.11g	1	-24.900		PASS
	6	-26.770		PASS
	11	-26.340		PASS
IEEE 802.11n_20	1	-25.320		PASS
	6	-27.200		PASS
	11	-24.810		PASS

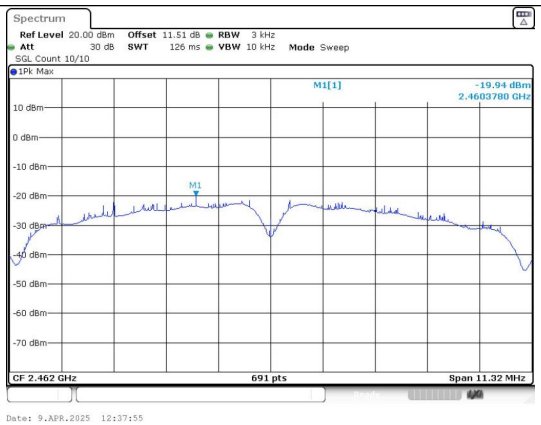
Test Graphs



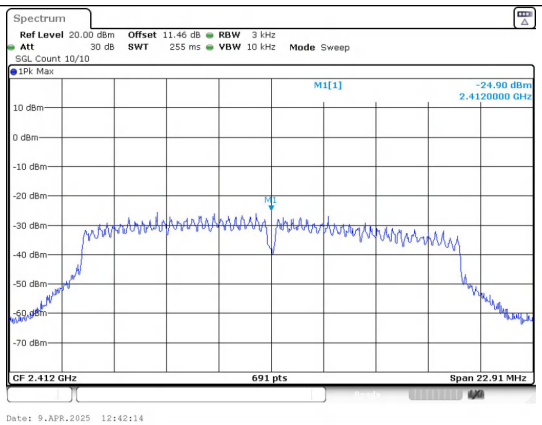
IEEE 802.11b_Channel 1_20MHz_Antenna 0



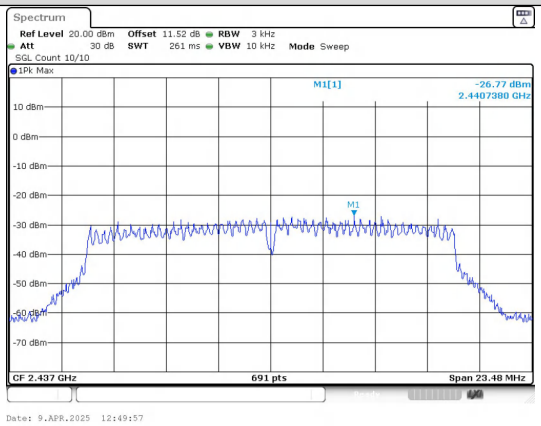
IEEE 802.11b_Channel 6_20MHz_Antenna 0



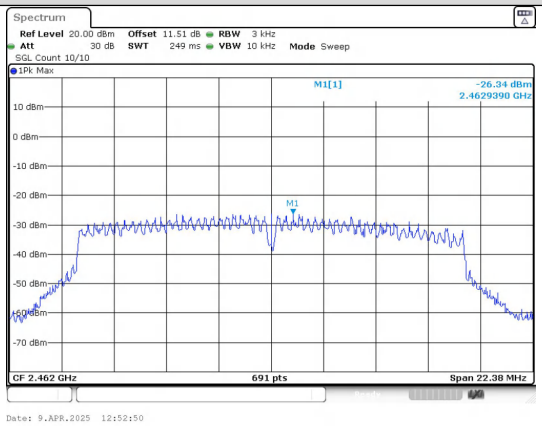
IEEE 802.11b_Channel 11_20MHz_Antenna 0



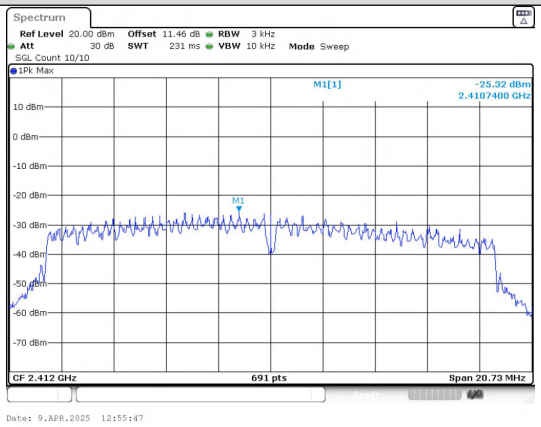
IEEE 802.11g_Channel 1_20MHz_Antenna 0



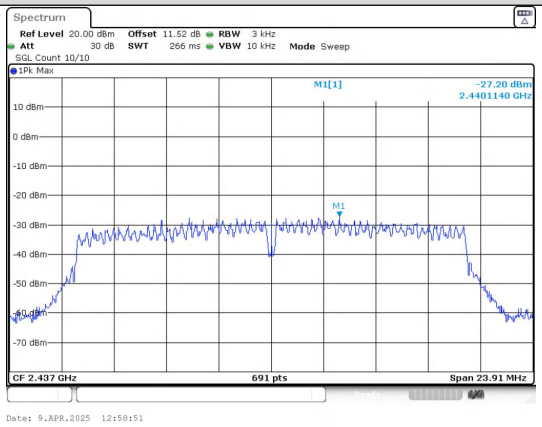
IEEE 802.11g_Channel 6_20MHz_Antenna 0



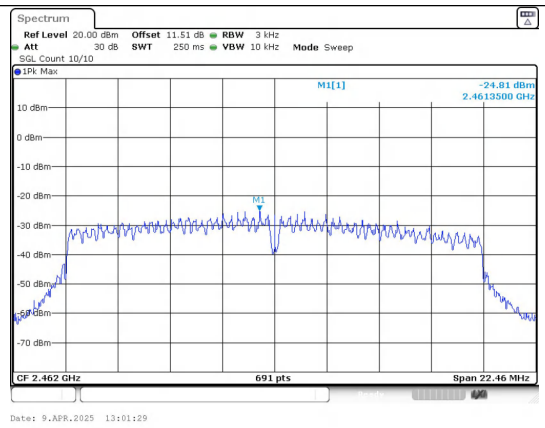
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 0

Conducted Output Power

Test Result

Conducted Output Power

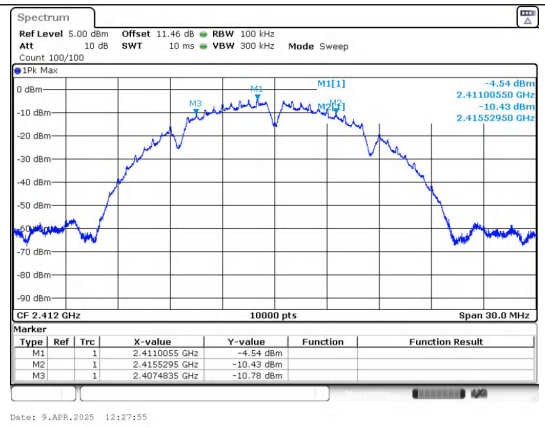
Mode	Channel	Ant. 0 (dBm)	Total (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	7.46	N/A	≤30	PASS
	6	6.98	N/A	≤30	PASS
	11	7.48	N/A	≤30	PASS
IEEE 802.11g	1	8.01	N/A	≤30	PASS
	6	7.55	N/A	≤30	PASS
	11	8.51	N/A	≤30	PASS
IEEE 802.11n_20	1	7.69	N/A	≤30	PASS
	6	7.68	N/A	≤30	PASS
	11	8.48	N/A	≤30	PASS

6dB Bandwidth

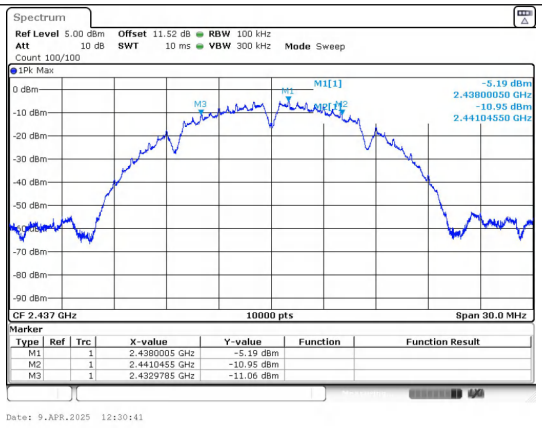
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.050	≥0.5	PASS
	6		2437	8.070		PASS
	11		2462	7.550		PASS
IEEE 802.11g	1		2412	15.27		PASS
	6		2437	15.65		PASS
	11		2462	14.92		PASS
IEEE 802.11n_20	1		2412	13.82		PASS
	6		2437	15.94		PASS
	11		2462	14.97		PASS

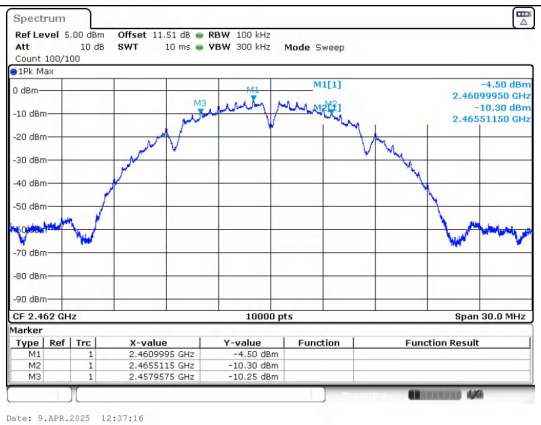
Test Graphs



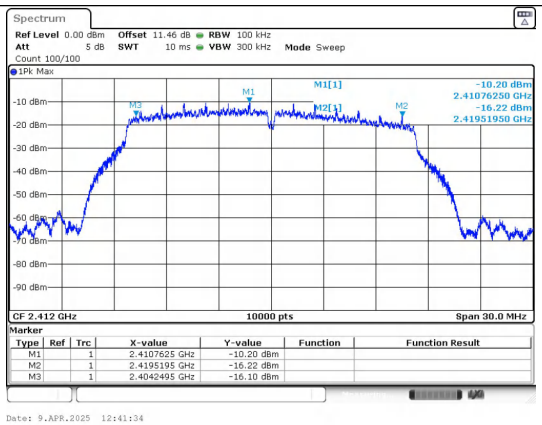
IEEE 802.11b_Channel 1_20MHz_Antenna 0



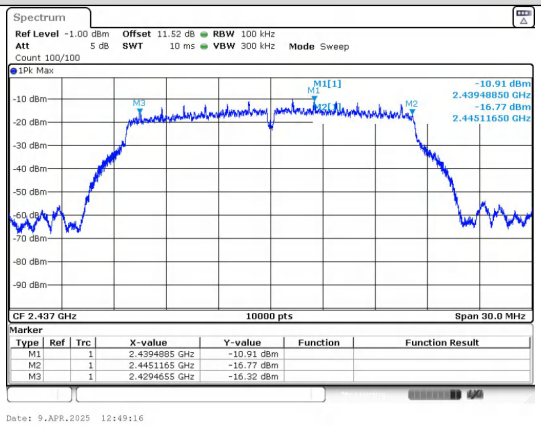
IEEE 802.11b_Channel 6_20MHz_Antenna 0



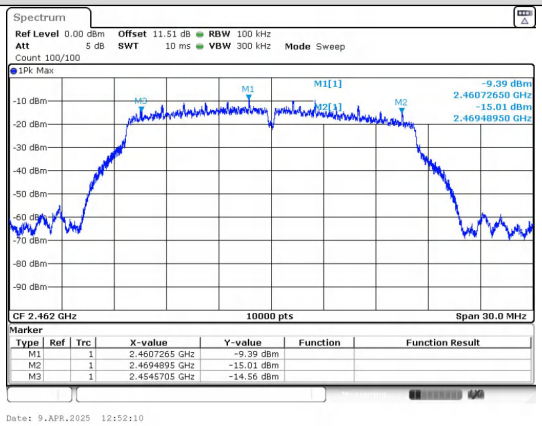
IEEE 802.11b_Channel 11_20MHz_Antenna 0



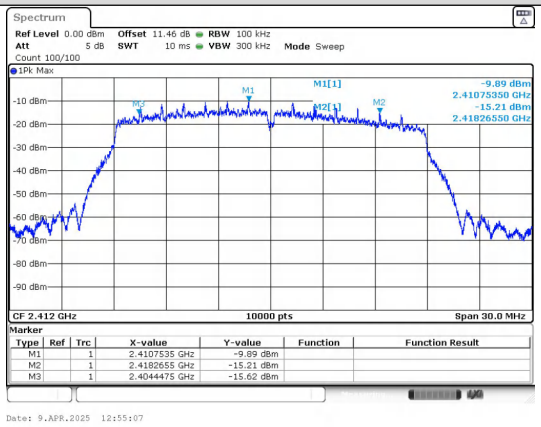
IEEE 802.11g_Channel 1_20MHz_Antenna 0



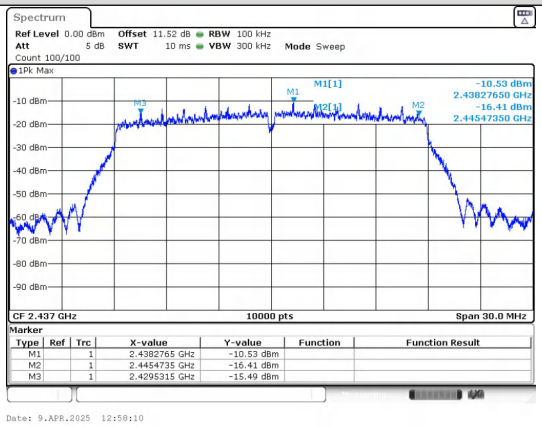
IEEE 802.11g_Channel 6_20MHz_Antenna 0



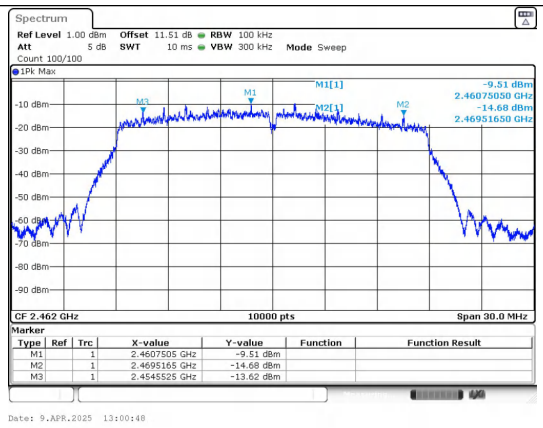
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



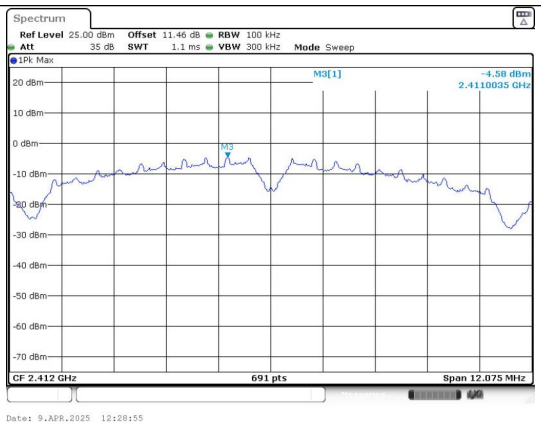
IEEE 802.11n_Channel 11_20MHz_Antenna 0

Conducted Out Of Band Emission

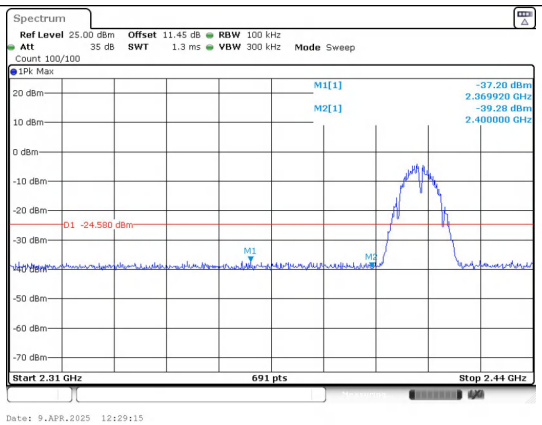
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2369.92	-37.200	-24.58	-12.620	PASS
			2400.00	-39.280	-24.58	-14.700	PASS
			6957.10	-43.408	-24.58	-18.828	PASS
	6		6915.48	-42.810	-25.05	-17.760	PASS
	11		2483.50	-39.040	-24.61	-14.430	PASS
			6188.85	-42.582	-24.61	-17.972	PASS
IEEE 802.11g	1		2330.98	-36.921	-29.61	-7.311	PASS
			2400.00	-39.350	-29.61	-9.740	PASS
			22063.1	-43.345	-29.61	-13.735	PASS
	6		6913.81	-43.125	-30.2	-12.925	PASS
	11		2483.50	-37.300	-30.02	-7.280	PASS
			6992.88	-42.264	-30.02	-12.244	PASS
IEEE 802.11n_20	1		2383.09	-36.627	-29.05	-7.577	PASS
			2400.00	-38.080	-29.05	-9.030	PASS
			6896.30	-43.234	-29.05	-14.184	PASS
	6		15254.6	-42.806	-31.23	-11.576	PASS
	11		2483.50	-38.870	-29.35	-9.520	PASS
			6926.30	-42.660	-29.35	-13.310	PASS

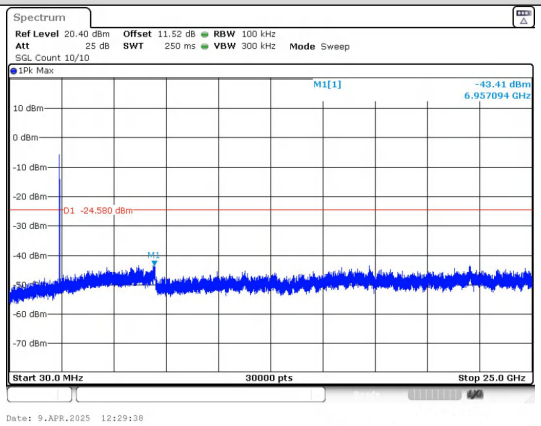
Test Graphs



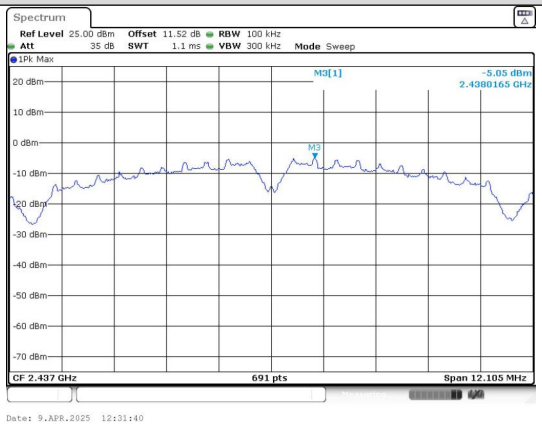
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



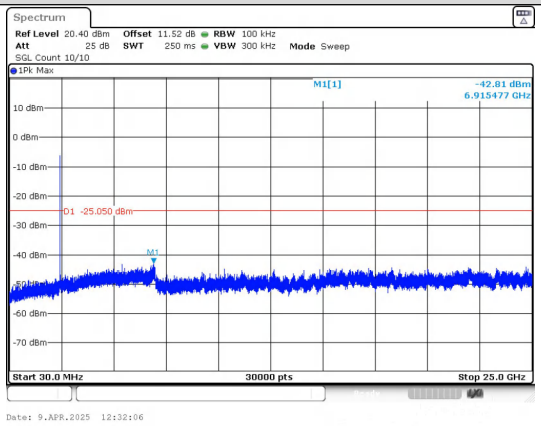
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



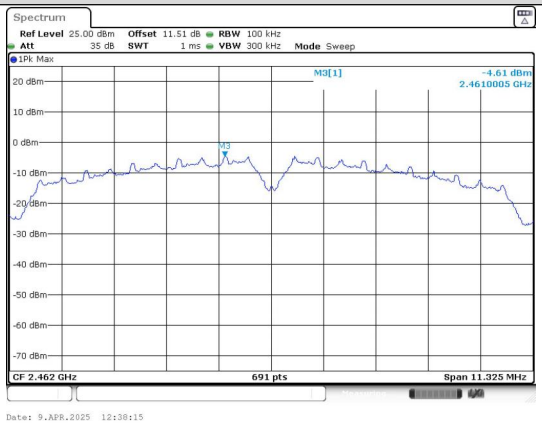
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



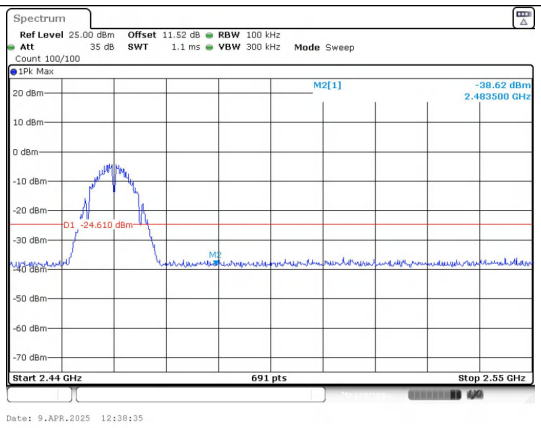
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



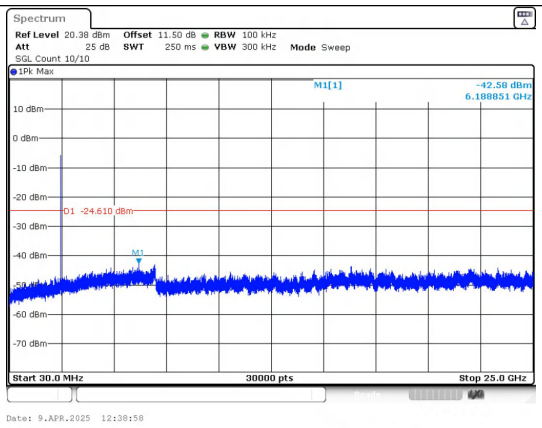
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



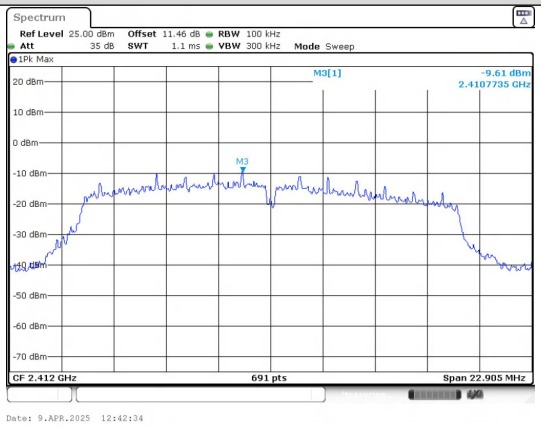
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



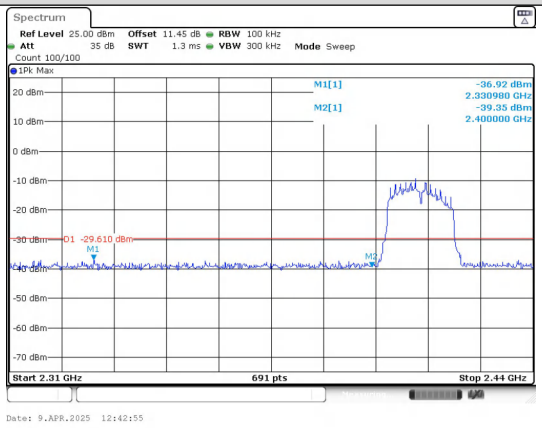
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



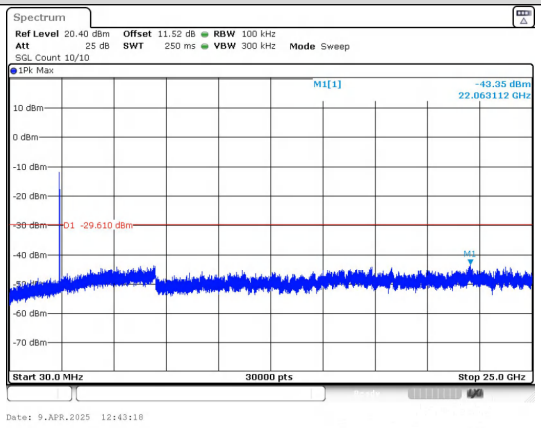
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



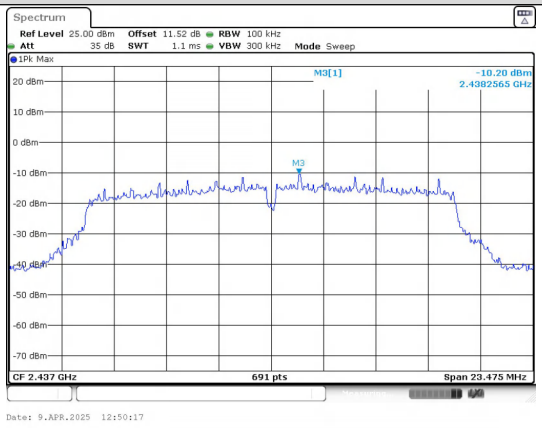
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



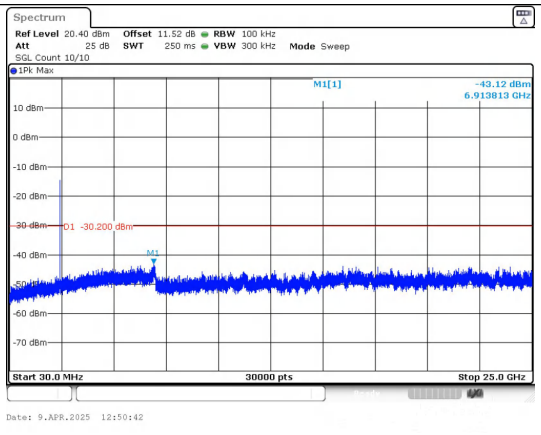
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



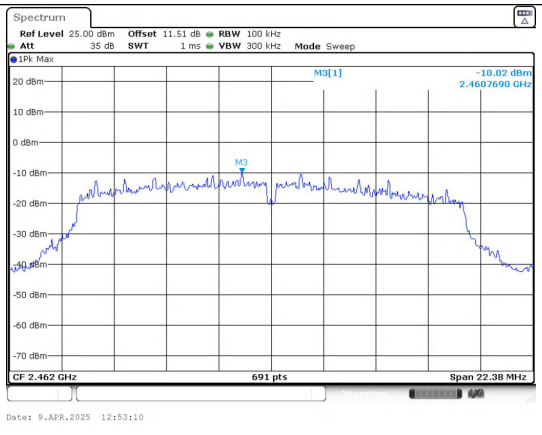
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



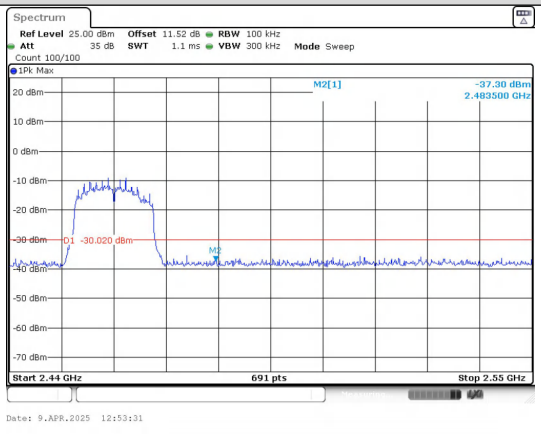
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



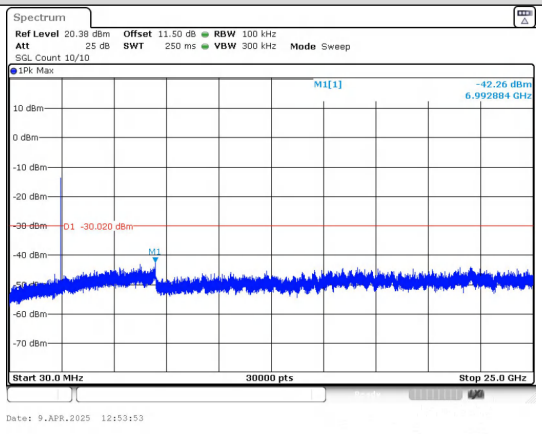
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



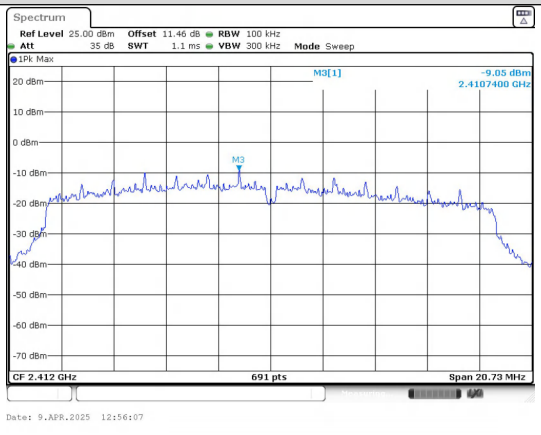
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



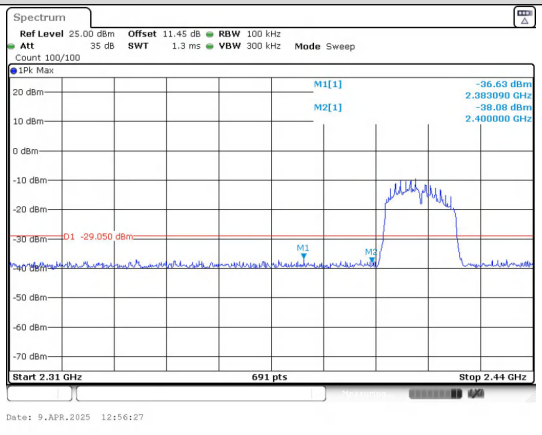
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



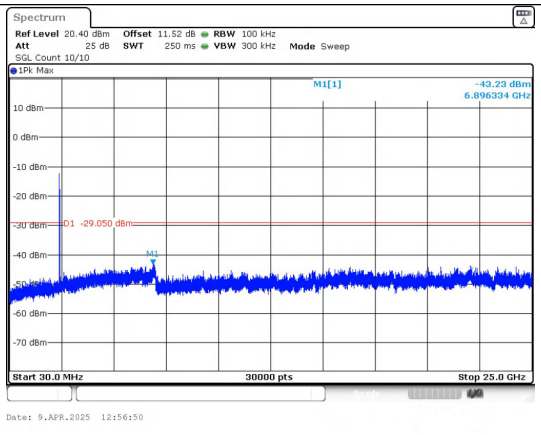
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



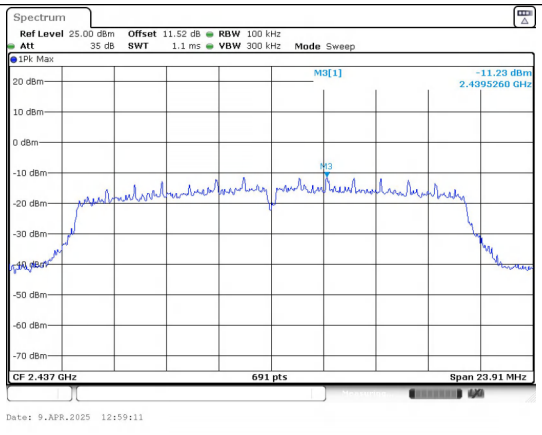
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



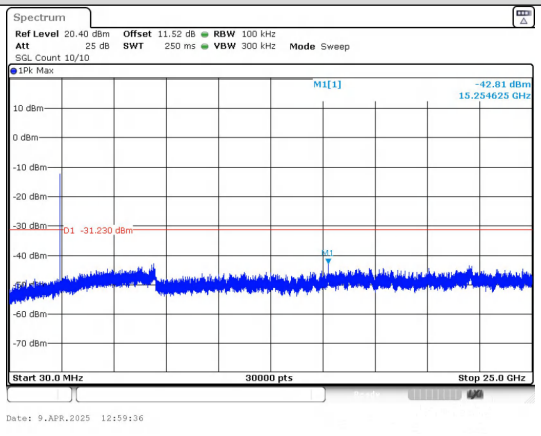
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



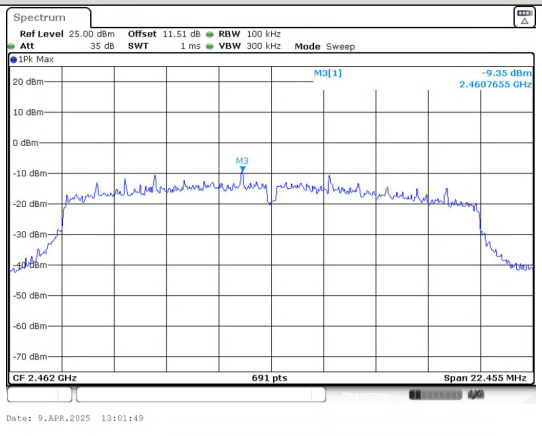
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



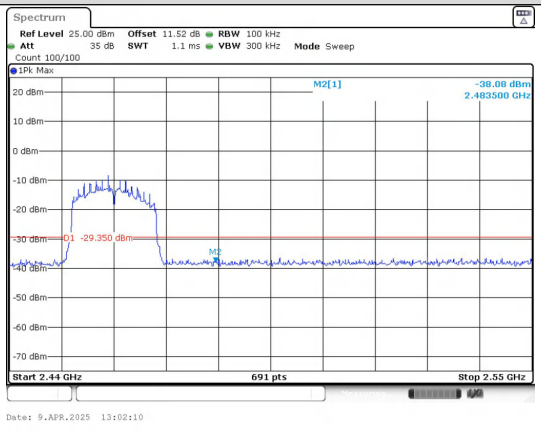
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



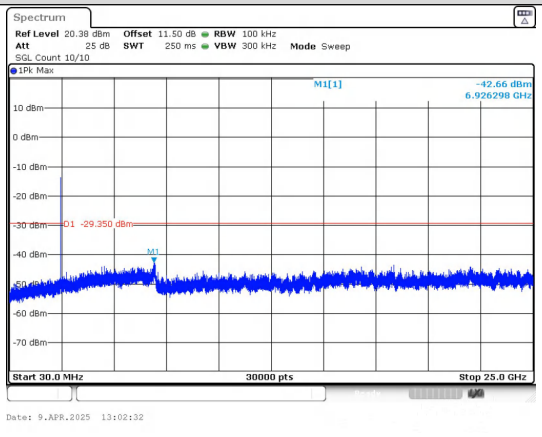
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0

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