Appendix Report

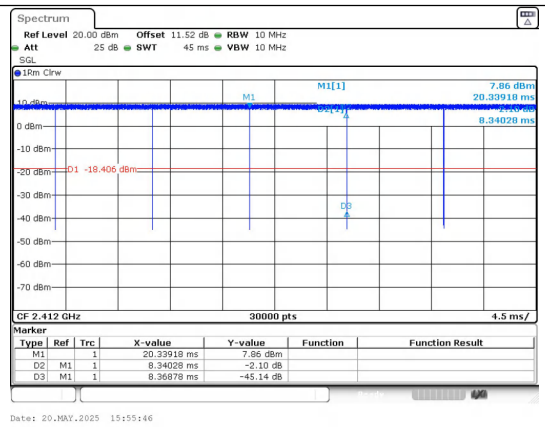
Project No.:	CISR250519099
Test Engineer:	James Wang
Supervised by:	Rory Huang

Duty Cycle

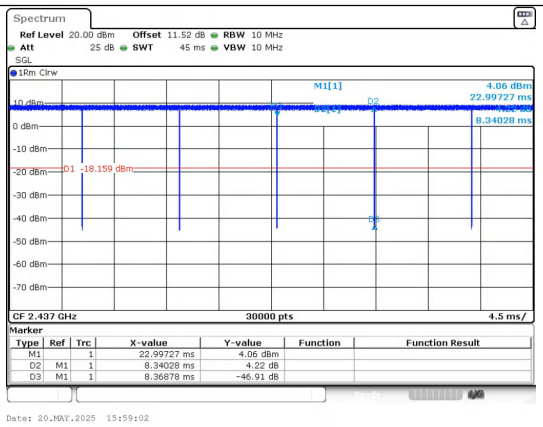
Test Result

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		8.340	8.369	99.66	0.9966	0.0148	0.1199
		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	1.429	97.69	0.9769	0.1015	0.7163
		11		1.396	1.429	97.69	0.9769	0.1015	0.7163
IEEE 802.11n_20	MCS 0	1		1.304	1.338	97.46	0.9746	0.1117	0.7669
		6		1.304	1.338	97.46	0.9746	0.1117	0.7669
		11		1.304	1.337	97.53	0.9753	0.1086	0.7669

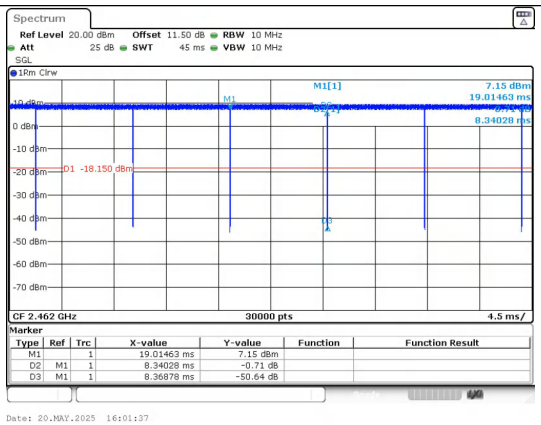
Test Graphs



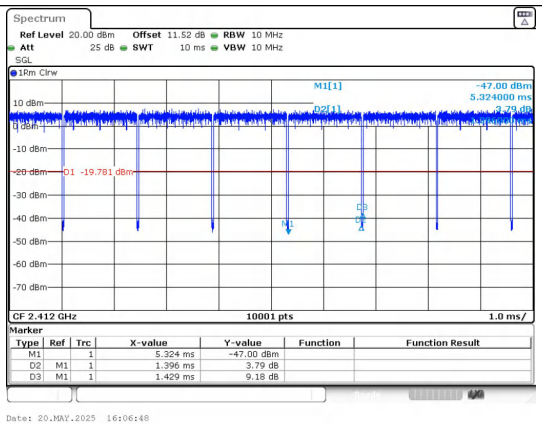
IEEE 802.11b_20MHz_Channel 1



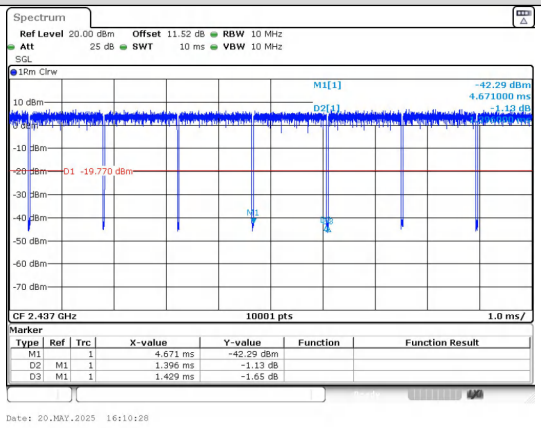
IEEE 802.11b_20MHz_Channel 6



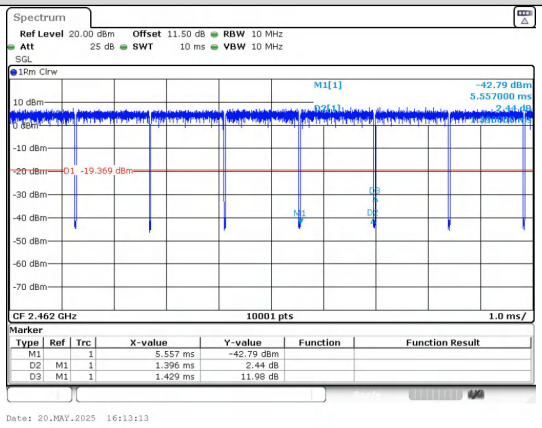
IEEE 802.11b_20MHz_Channel 11



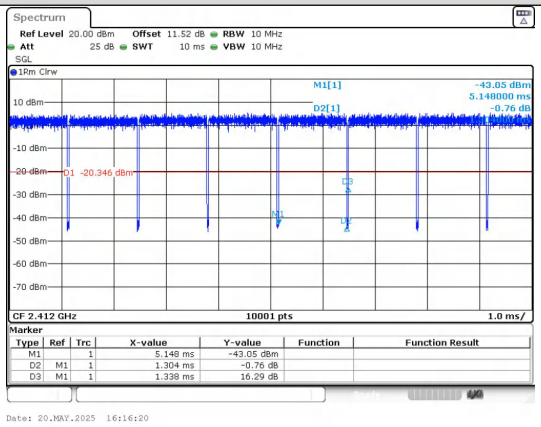
IEEE 802.11g_20MHz_Channel 1



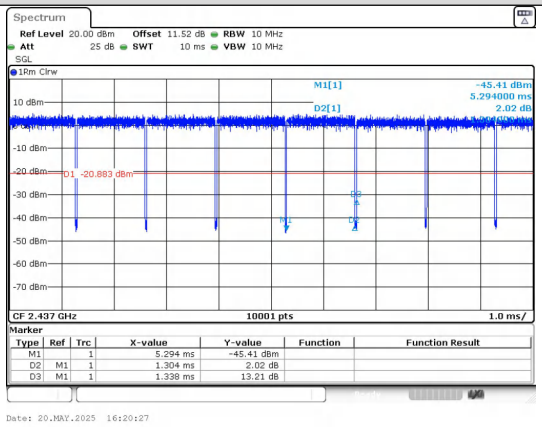
IEEE 802.11g_20MHz_Channel 6



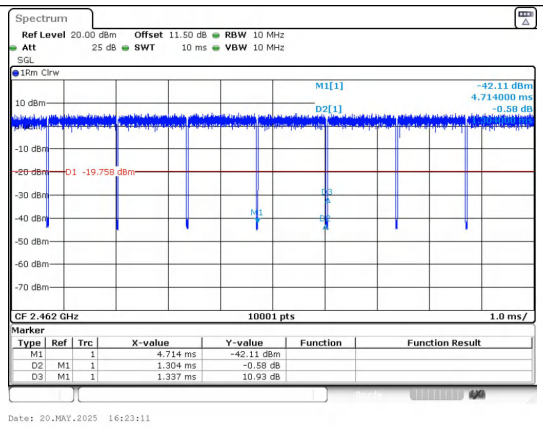
IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1



IEEE 802.11n_20MHz_Channel 6



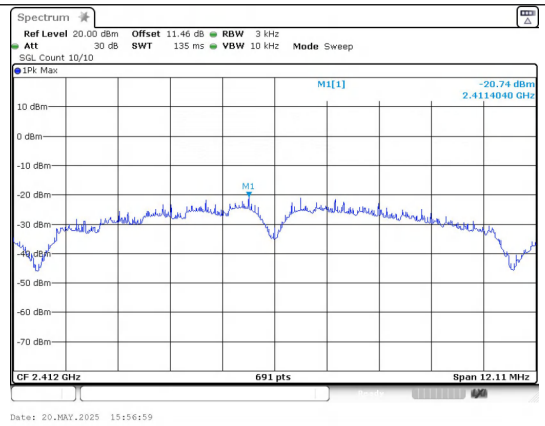
IEEE 802.11n_20MHz_Channel 11

Power Spectral Density

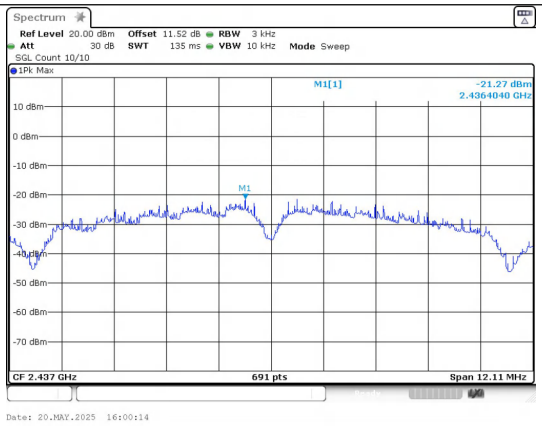
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-20.740	≤8	PASS
	6	-21.270		PASS
	11	-17.940		PASS
IEEE 802.11g	1	-26.290		PASS
	6	-25.560		PASS
	11	-24.200		PASS
IEEE 802.11n_20	1	-28.880		PASS
	6	-27.460		PASS
	11	-26.740		PASS

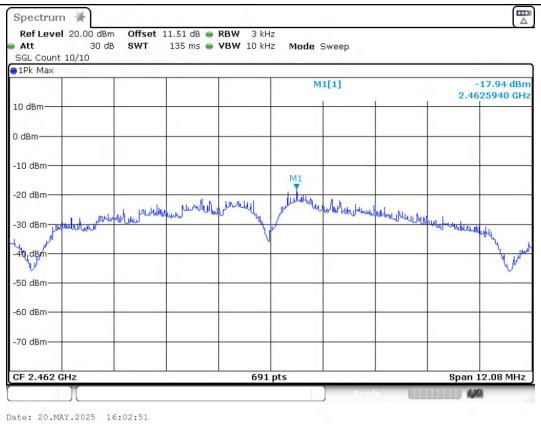
Test Graphs



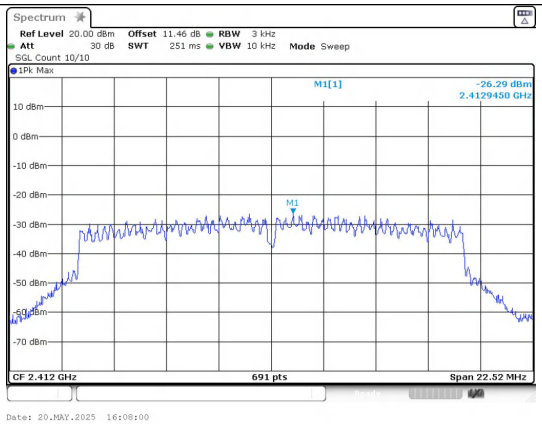
IEEE 802.11b_Channel 1_20MHz_Antenna 0



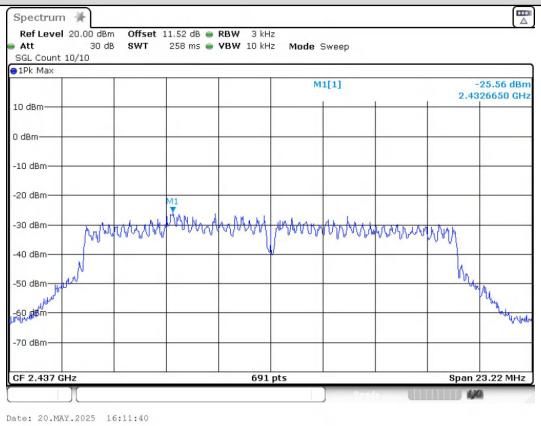
IEEE 802.11b_Channel 6_20MHz_Antenna 0



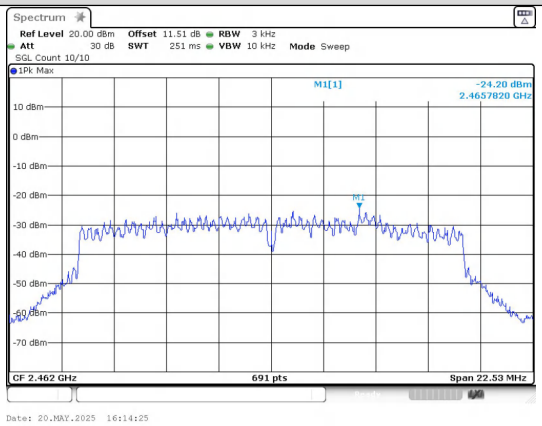
IEEE 802.11b_Channel 11_20MHz_Antenna 0



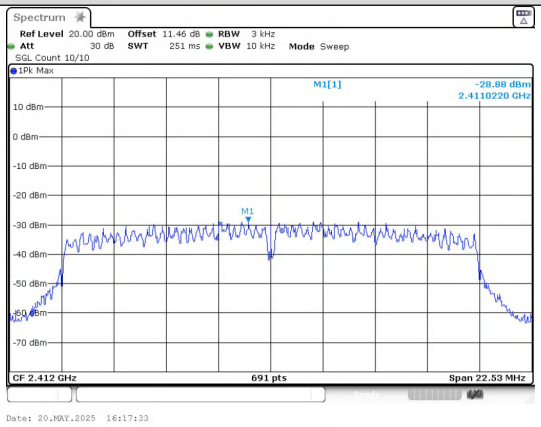
IEEE 802.11g_Channel 1_20MHz_Antenna 0



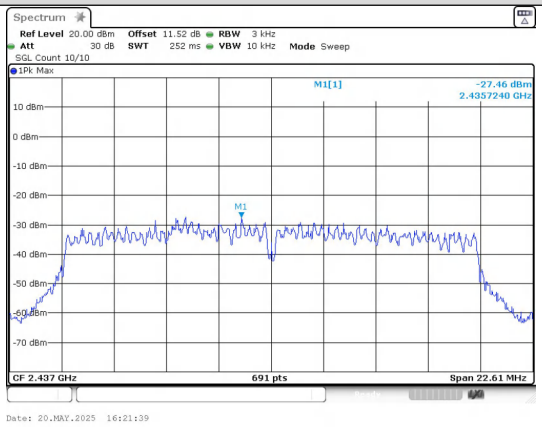
IEEE 802.11g_Channel 6_20MHz_Antenna 0



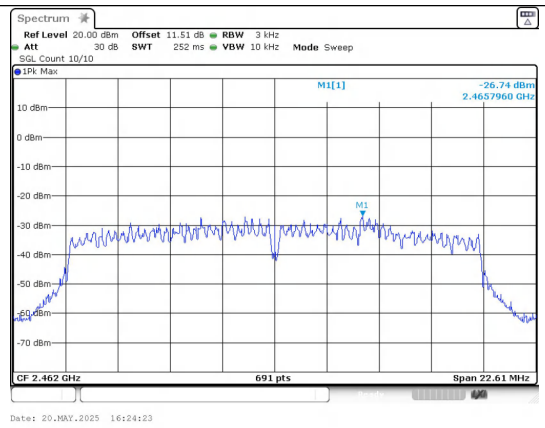
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 0

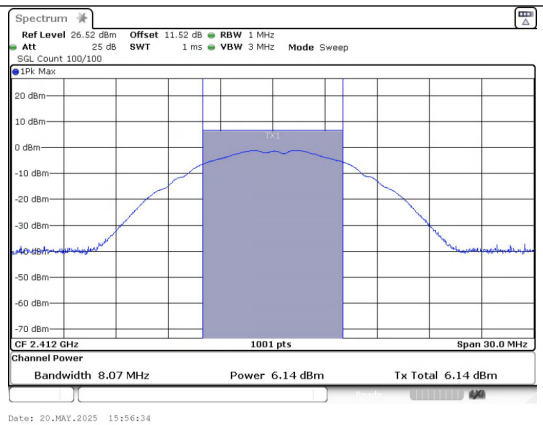
Conducted Output Power

Test Result

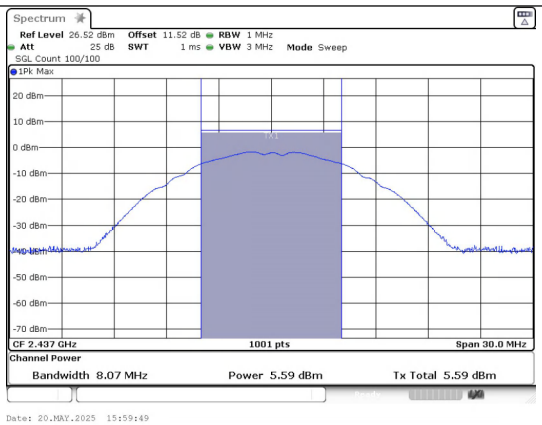
Conducted Output Power

Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	6.14	≤30	PASS
	6	5.59	≤30	PASS
	11	6.16	≤30	PASS
IEEE 802.11g	1	7.85	≤30	PASS
	6	7.54	≤30	PASS
	11	8.02	≤30	PASS
IEEE 802.11n_20	1	5.86	≤30	PASS
	6	5.54	≤30	PASS
	11	6.04	≤30	PASS

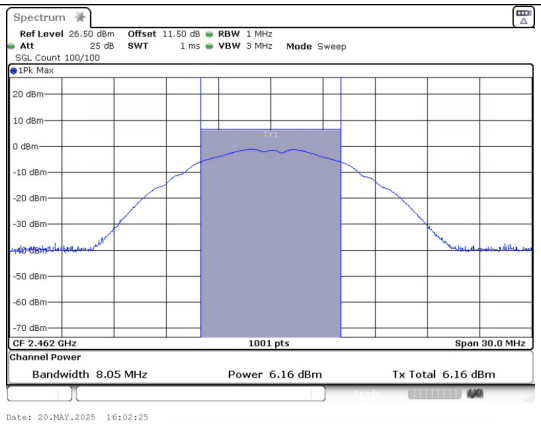
Test Graphs



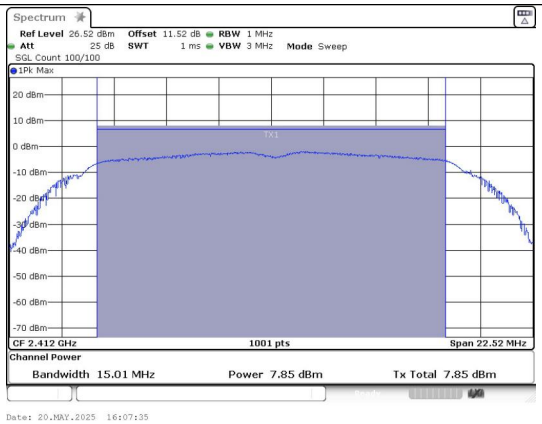
Conducted Output Power
IEEE 802.11b_Channel 1_Antenna 0



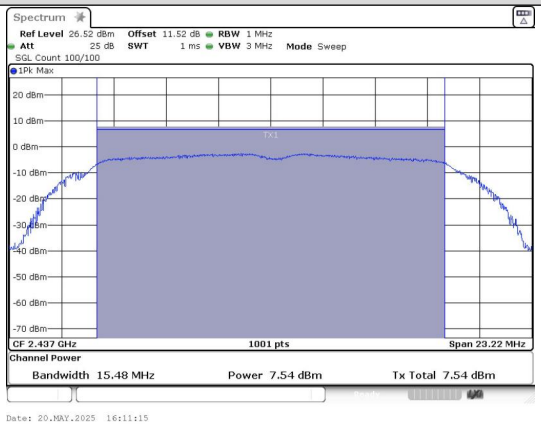
Conducted Output Power
IEEE 802.11b_Channel 6_Antenna 0



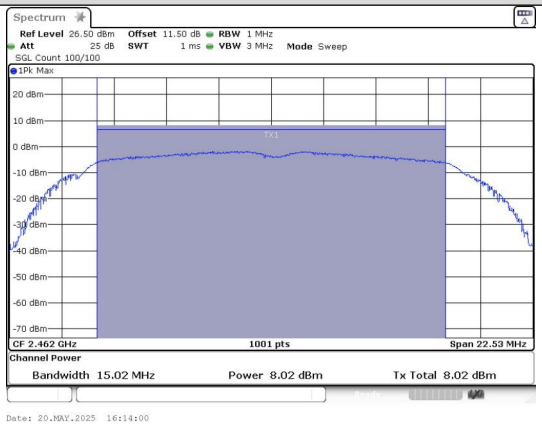
Conducted Output Power
IEEE 802.11b_Channel 11_Antenna 0



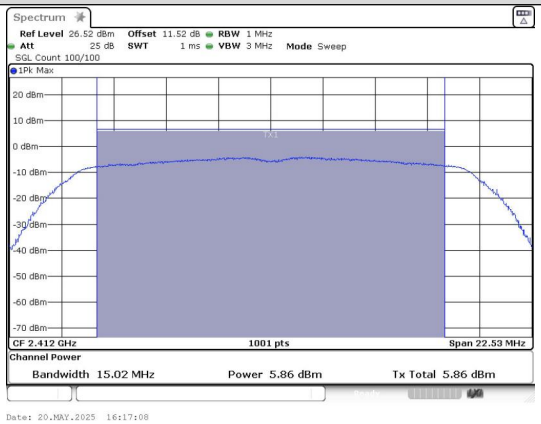
Conducted Output Power
IEEE 802.11g_Channel 1_Antenna 0



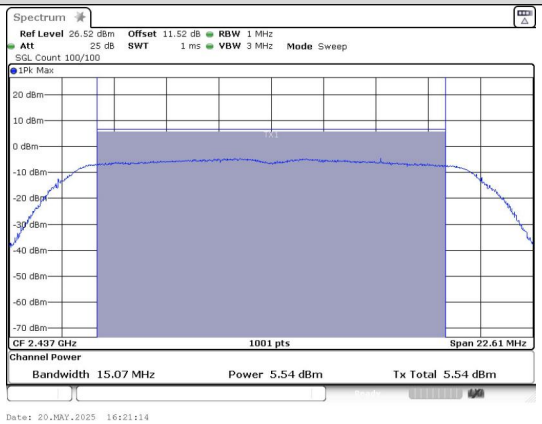
Conducted Output Power
IEEE 802.11g_Channel 6_Antenna 0



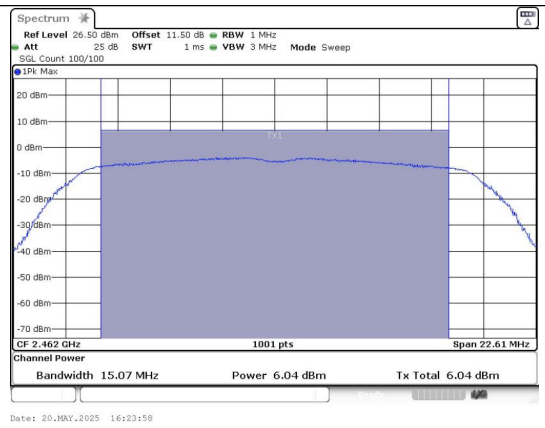
Conducted Output Power
IEEE 802.11g_Channel 11_Antenna 0



Conducted Output Power
IEEE 802.11n_20_Channel 1_Antenna 0



Conducted Output Power
IEEE 802.11n_20_Channel 6_Antenna 0



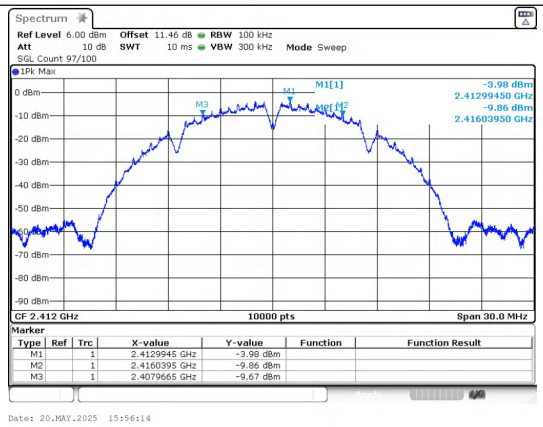
Conducted Output Power
IEEE 802.11n_20_Channel 11_Antenna 0

6dB Bandwidth

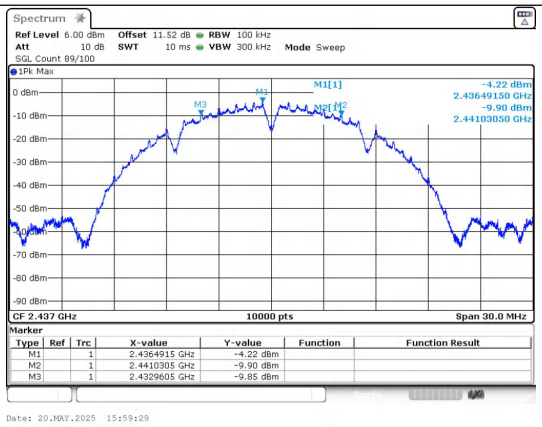
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.070	≥0.5	PASS
	6		2437	8.070		PASS
	11		2462	8.050		PASS
IEEE 802.11g	1		2412	15.01		PASS
	6		2437	15.48		PASS
	11		2462	15.02		PASS
IEEE 802.11n_20	1		2412	15.02		PASS
	6		2437	15.07		PASS
	11		2462	15.07		PASS

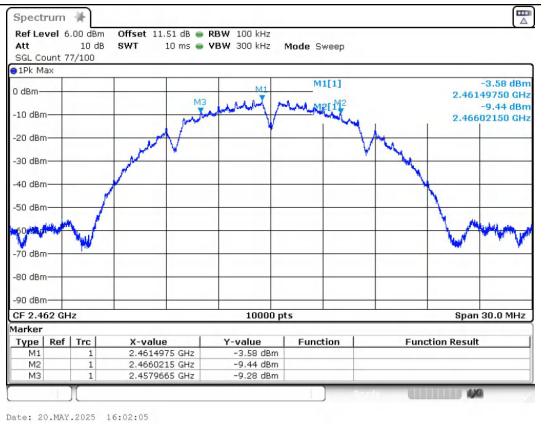
Test Graphs



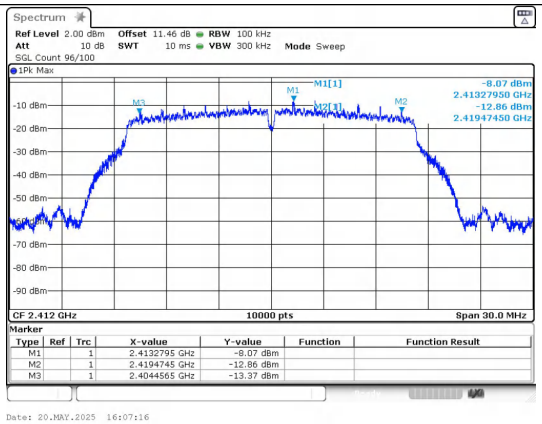
IEEE 802.11b_Channel 1_20MHz_Antenna 0



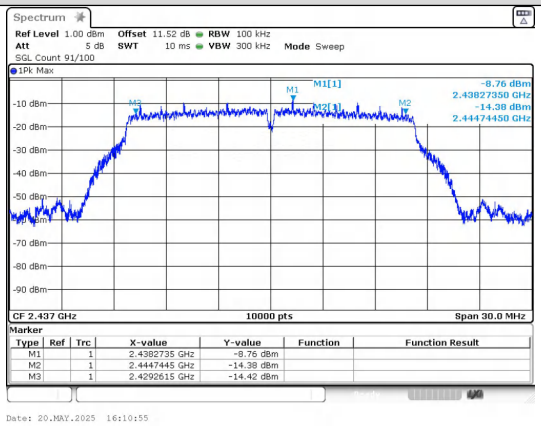
IEEE 802.11b_Channel 6_20MHz_Antenna 0



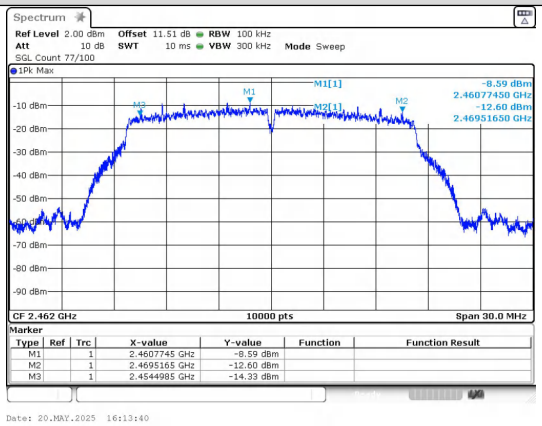
IEEE 802.11b_Channel 11_20MHz_Antenna 0



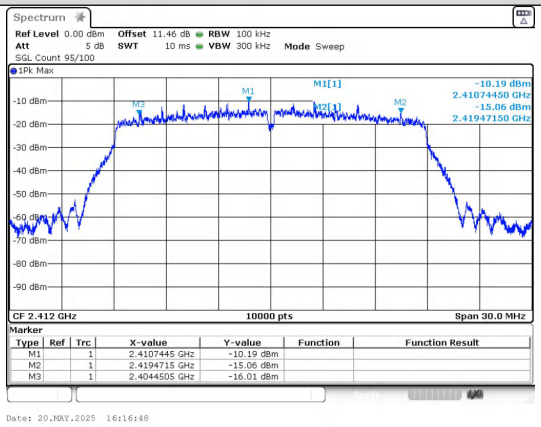
IEEE 802.11g_Channel 1_20MHz_Antenna 0



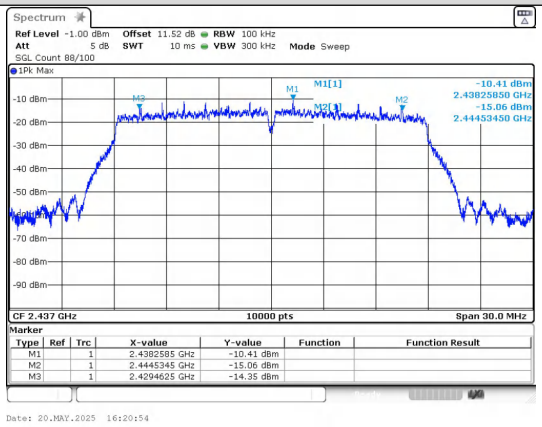
IEEE 802.11g_Channel 6_20MHz_Antenna 0



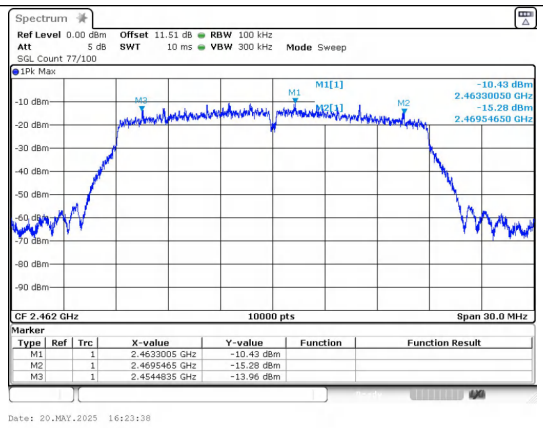
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



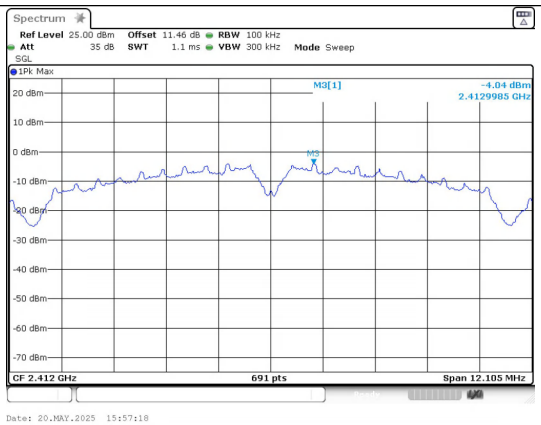
IEEE 802.11n_Channel 11_20MHz_Antenna 0

Conducted Out Of Band Emission

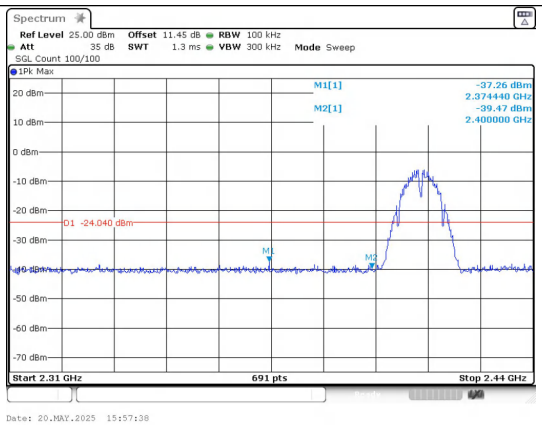
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2374.44	-37.261	-24.04	-13.221	PASS
			2400.00	-39.470	-24.04	-15.430	PASS
			22051.5	-43.531	-24.04	-19.491	PASS
	6		6909.65	-43.952	-24.34	-19.612	PASS
	11		2483.50	-40.330	-23.76	-16.570	PASS
			6925.47	-44.439	-23.76	-20.679	PASS
IEEE 802.11g	1		2352.42	-37.890	-28.04	-9.850	PASS
			2400.00	-39.040	-28.04	-11.000	PASS
			6917.10	-43.864	-28.04	-15.824	PASS
	6		22068.1	-44.302	-28.93	-15.372	PASS
	11		2483.50	-40.780	-28.22	-12.560	PASS
			22019.8	-44.230	-28.22	-16.010	PASS
IEEE 802.11n_20	1		2333.42	-38.457	-29.69	-8.767	PASS
			2400.00	-38.630	-29.69	-8.940	PASS
			6980.40	-43.852	-29.69	-14.162	PASS
	6		6912.98	-43.813	-30.43	-13.383	PASS
	11		2483.50	-39.430	-29.87	-9.560	PASS
			6995.38	-44.135	-29.87	-14.265	PASS

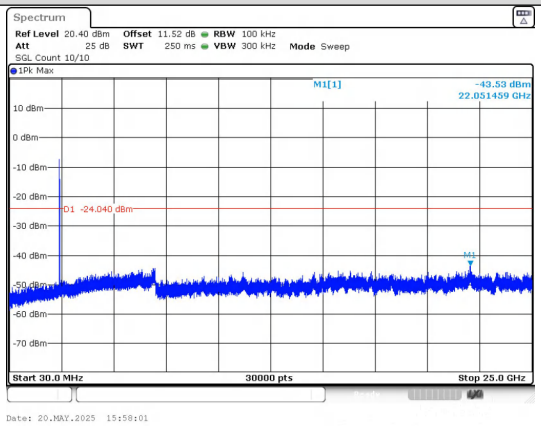
Test Graphs



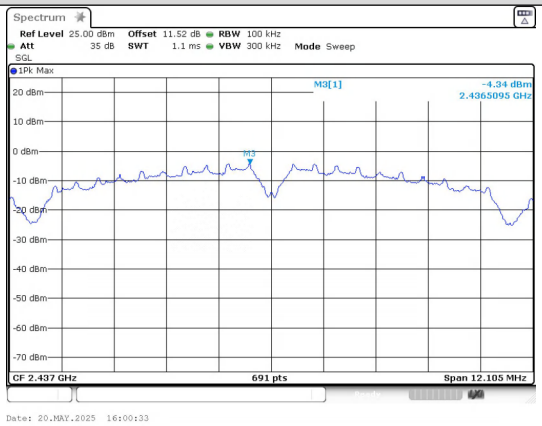
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



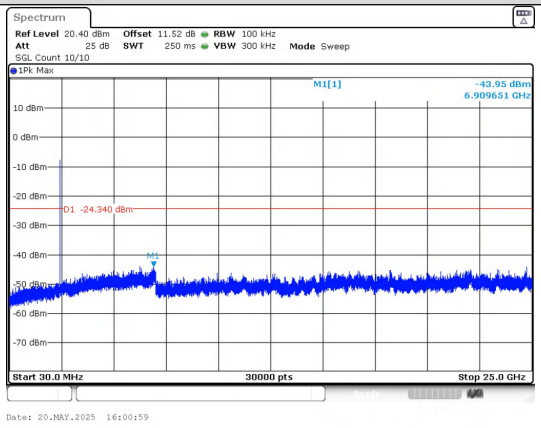
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



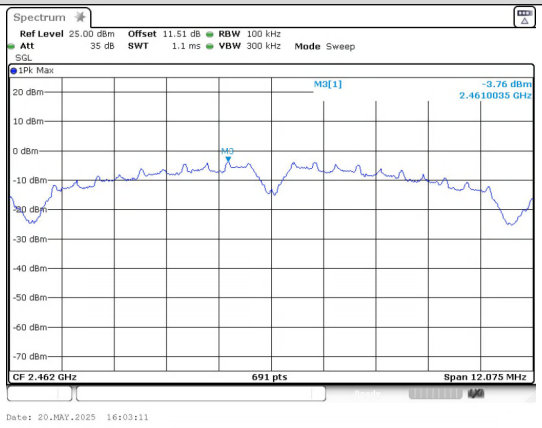
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



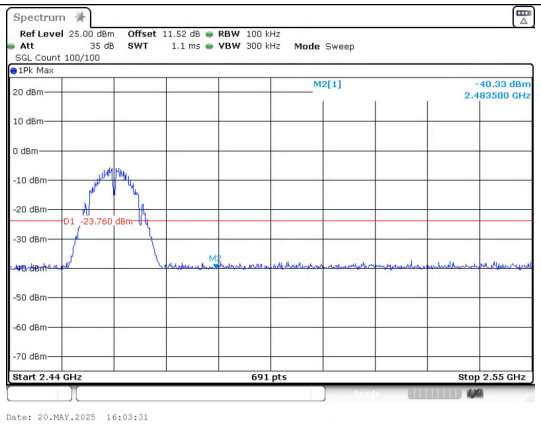
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



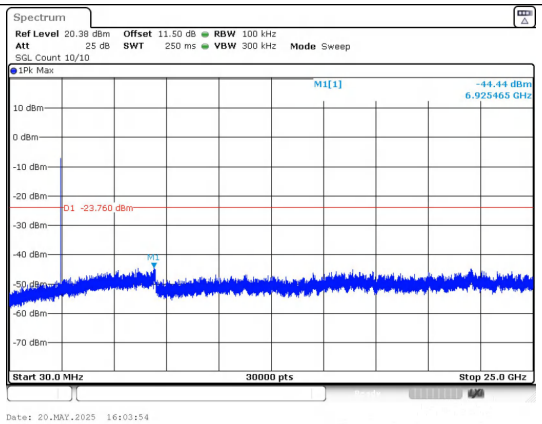
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



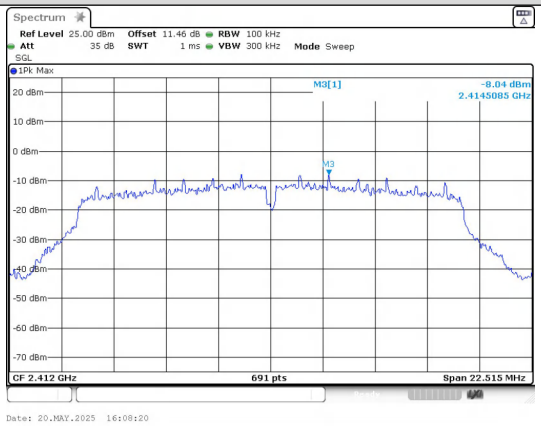
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



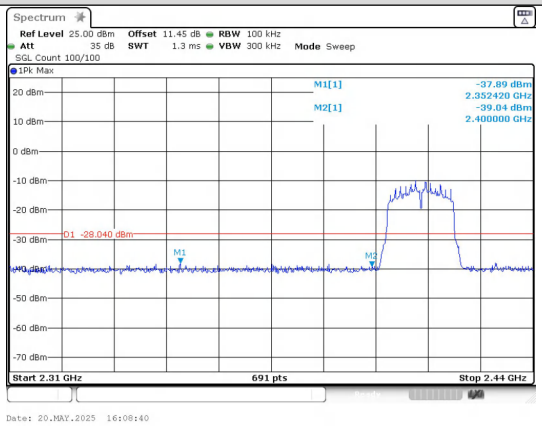
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



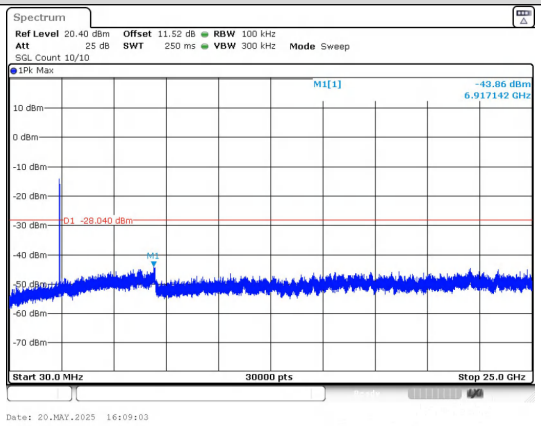
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



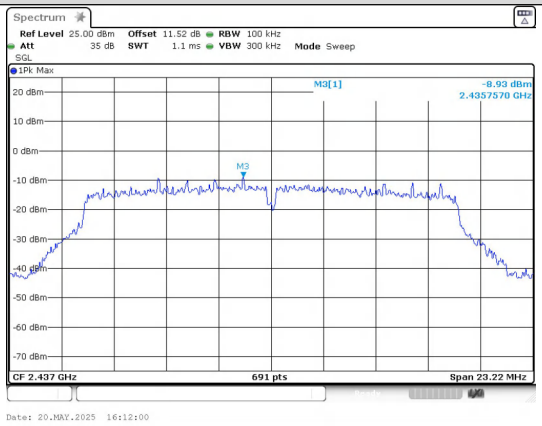
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



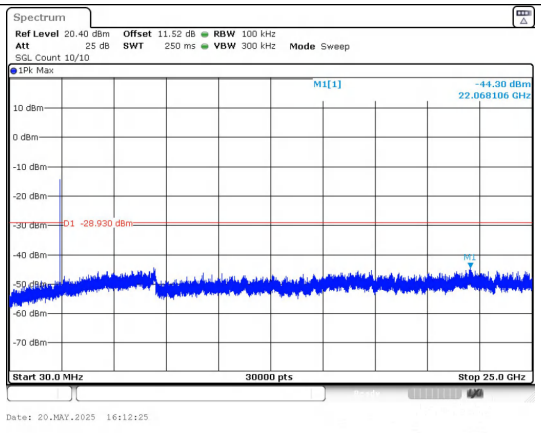
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



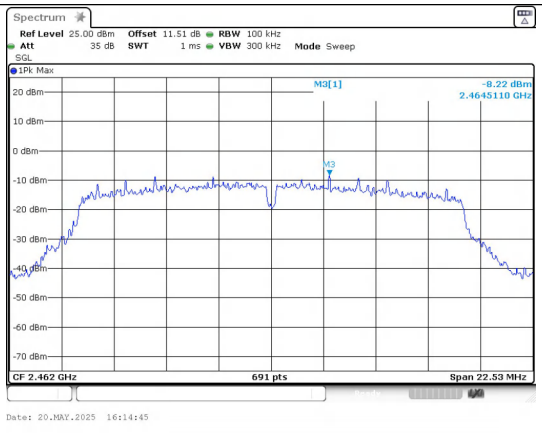
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



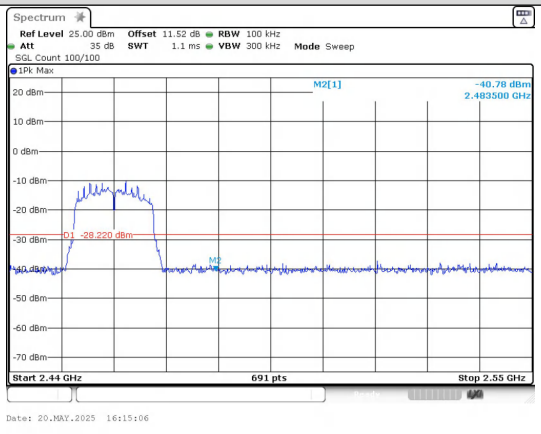
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



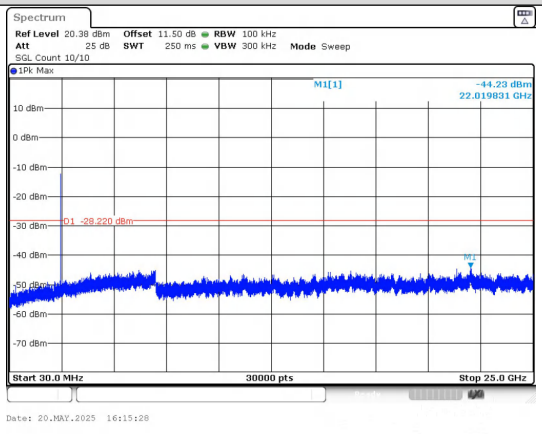
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



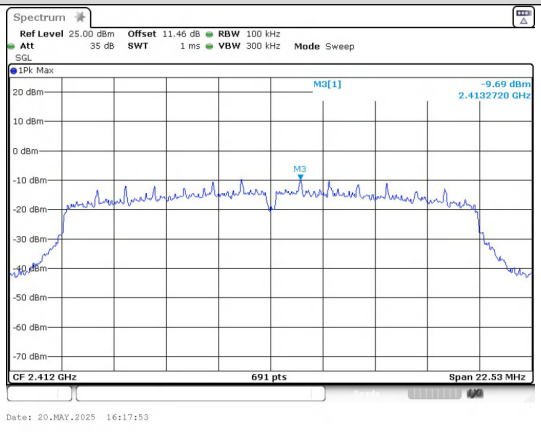
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



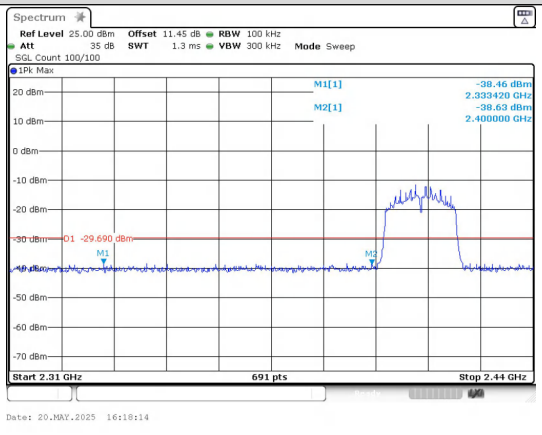
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



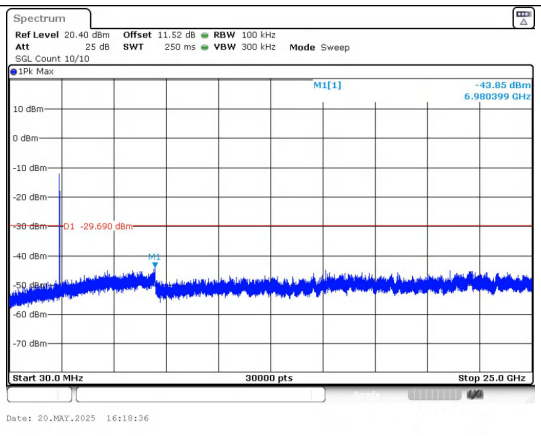
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



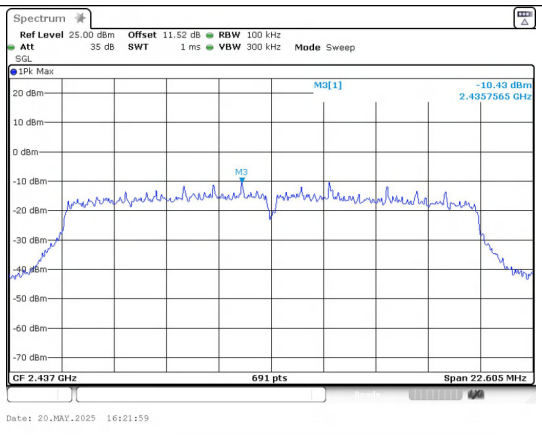
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



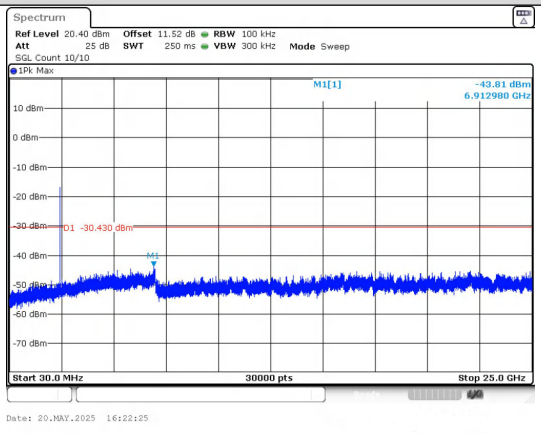
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



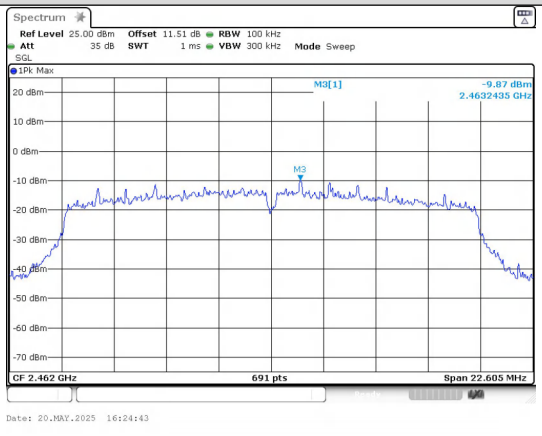
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



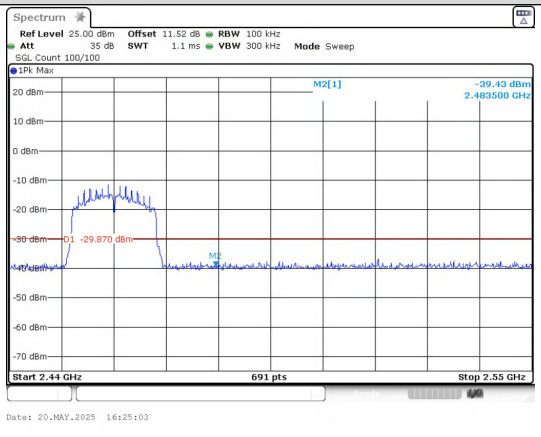
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



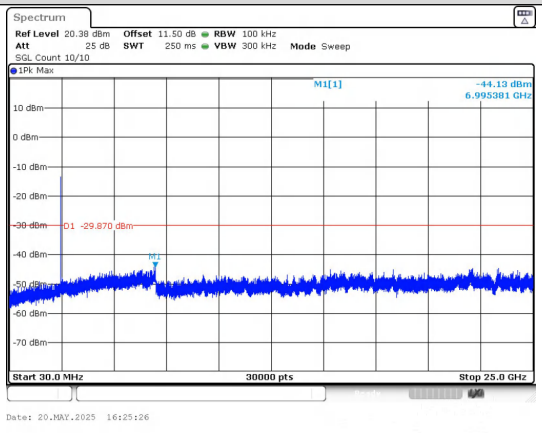
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



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-----