Appendix Report

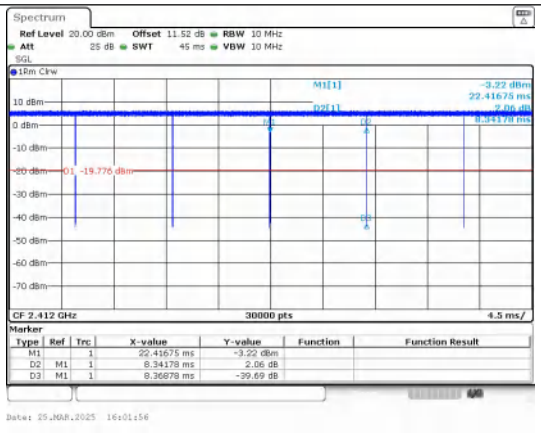
Project No.:	CISR250315120
Test Engineer:	James Wang
Supervised by:	Rory Huang

Duty Cycle

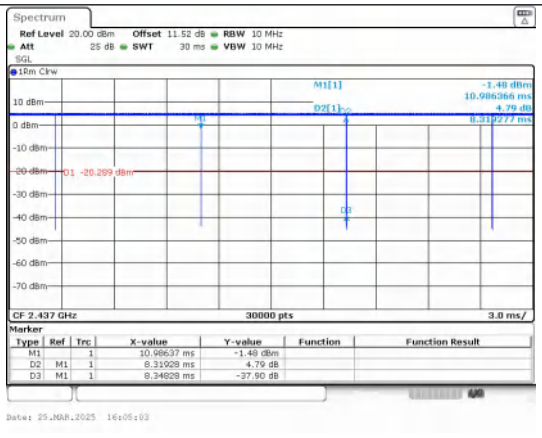
Test Result

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	8.342	8.369	99.68	0.9968	0.0139	0.1199
		6		8.319	8.348	99.65	0.9965	0.0152	0.1202
		11		8.319	8.347	99.66	0.9966	0.0148	0.1202
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	1.430	97.62	0.9762	0.1046	0.7163
IEEE 802.11n_20	MCS 0	1		1.293	1.327	97.44	0.9744	0.1126	0.7734
		6		1.293	1.327	97.44	0.9744	0.1126	0.7734
		11		1.304	1.337	97.53	0.9753	0.1086	0.7669

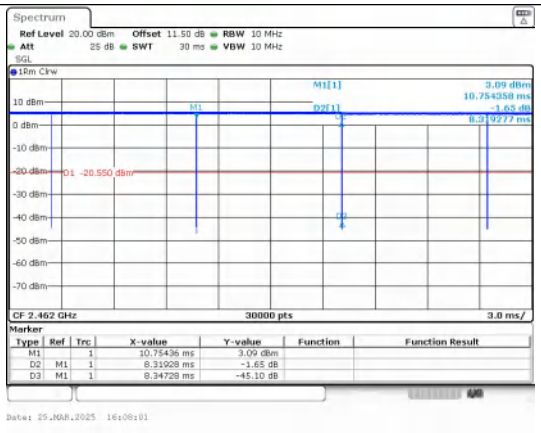
Test Graphs



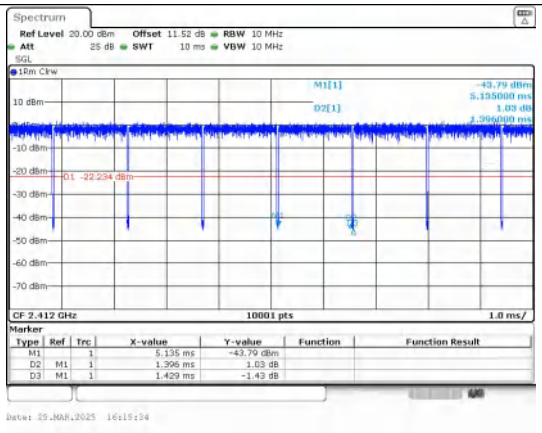
IEEE 802.11b_20MHz_Channel 1



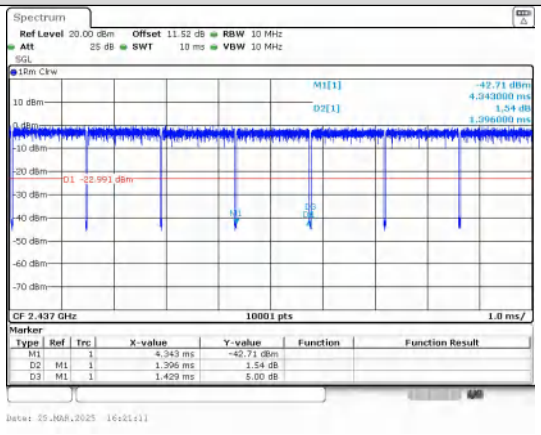
IEEE 802.11b_20MHz_Channel 6



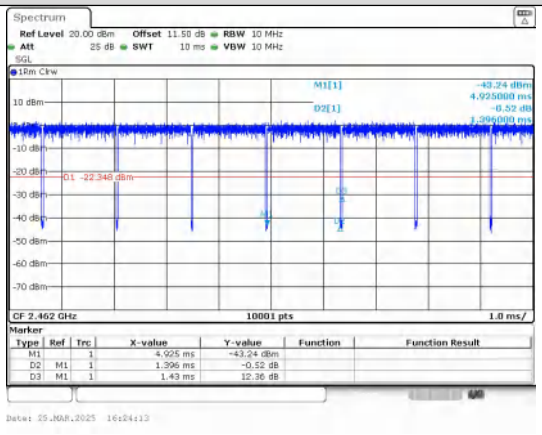
IEEE 802.11b_20MHz_Channel 11



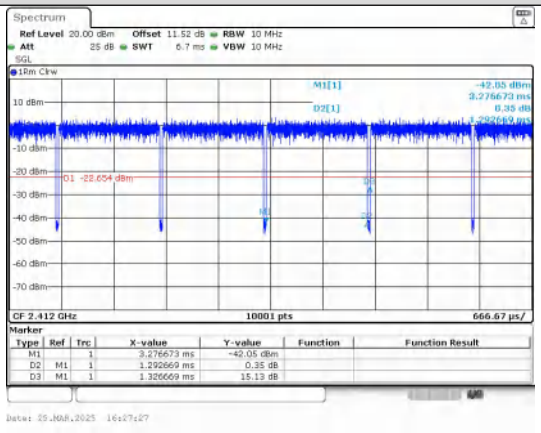
IEEE 802.11g_20MHz_Channel 1



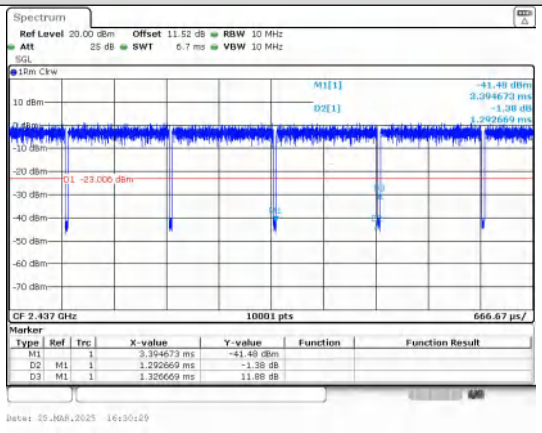
IEEE 802.11g_20MHz_Channel 6



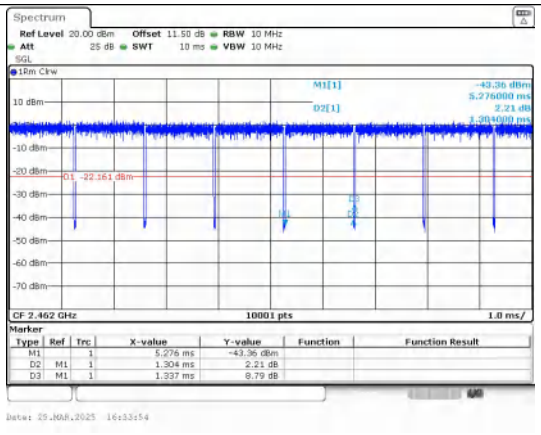
IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1



IEEE 802.11n_20MHz_Channel 6



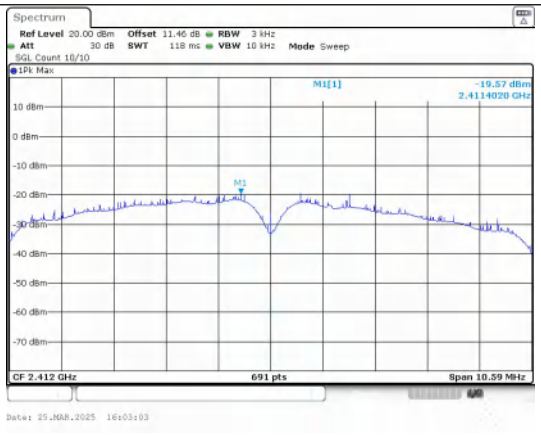
IEEE 802.11n_20MHz_Channel 11

Power Spectral Density

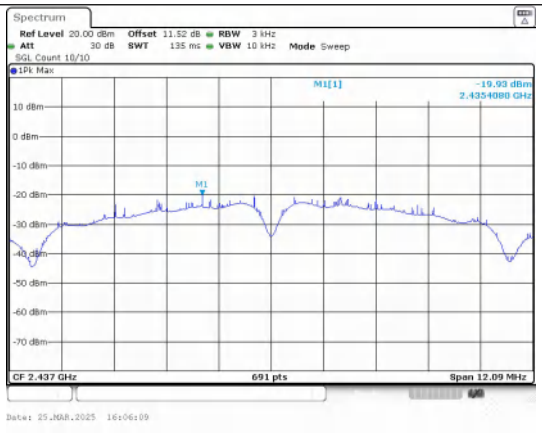
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-19.570	≤8	PASS
	6	-19.930		PASS
	11	-19.800		PASS
IEEE 802.11g	1	-25.640		PASS
	6	-27.650		PASS
	11	-25.420		PASS
IEEE 802.11n_20	1	-24.100		PASS
	6	-28.460		PASS
	11	-25.590		PASS

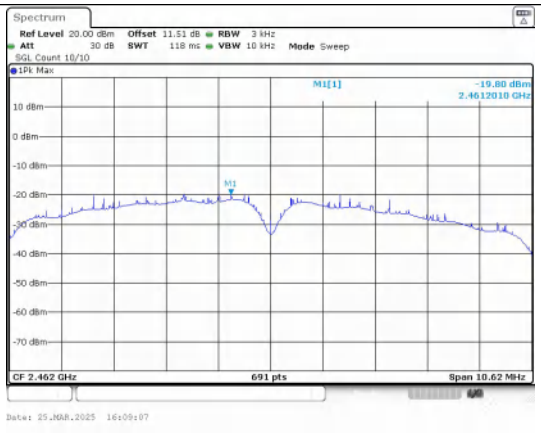
Test Graphs



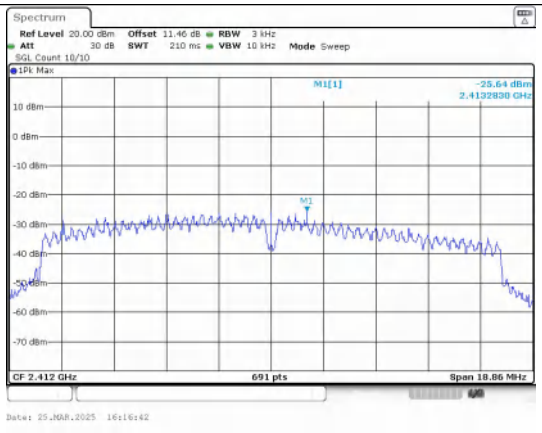
IEEE 802.11b_Channel 1_20MHz_Antenna 0



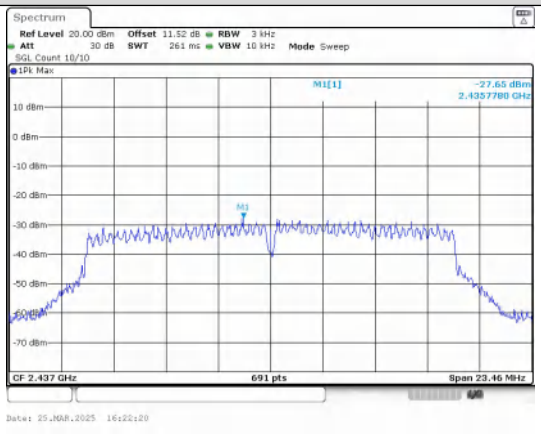
IEEE 802.11b_Channel 6_20MHz_Antenna 0



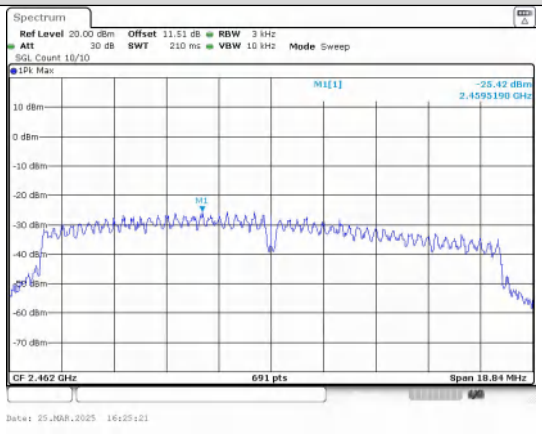
IEEE 802.11b_Channel 11_20MHz_Antenna 0



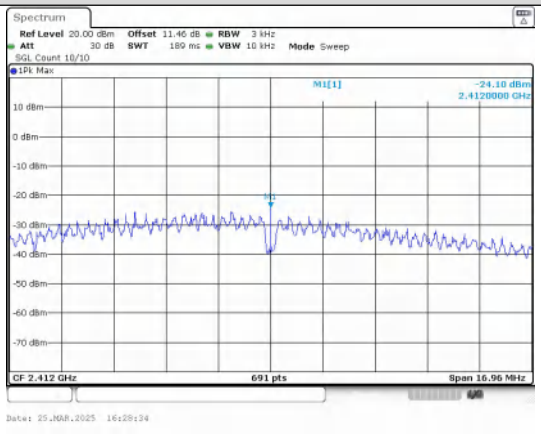
IEEE 802.11g_Channel 1_20MHz_Antenna 0



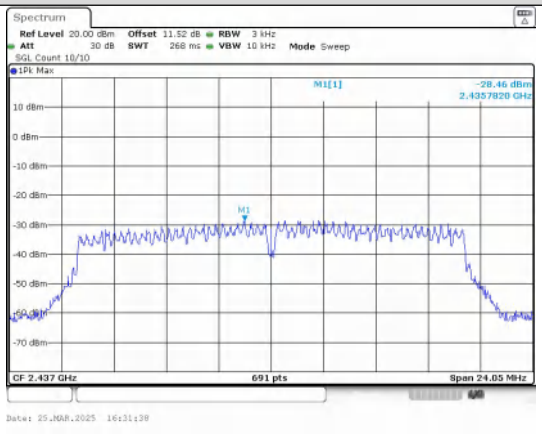
IEEE 802.11g_Channel 6_20MHz_Antenna 0



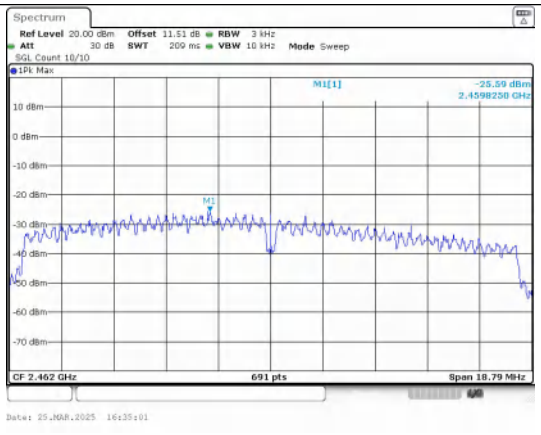
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 0

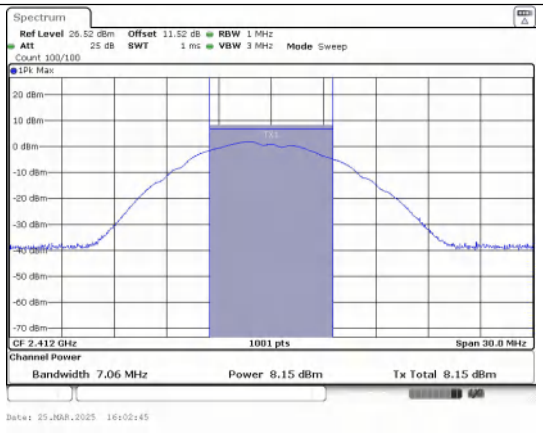
Conducted Output Power

Test Result

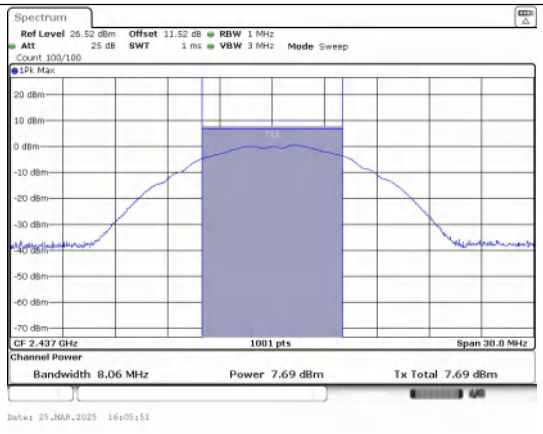
Conducted Output Power

Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	8.15	≤30	PASS
	6	7.69	≤30	PASS
	11	8.43	≤30	PASS
IEEE 802.11g	1	7.26	≤30	PASS
	6	6.75	≤30	PASS
	11	7.76	≤30	PASS
IEEE 802.11n_20	1	7.05	≤30	PASS
	6	6.74	≤30	PASS
	11	7.48	≤30	PASS

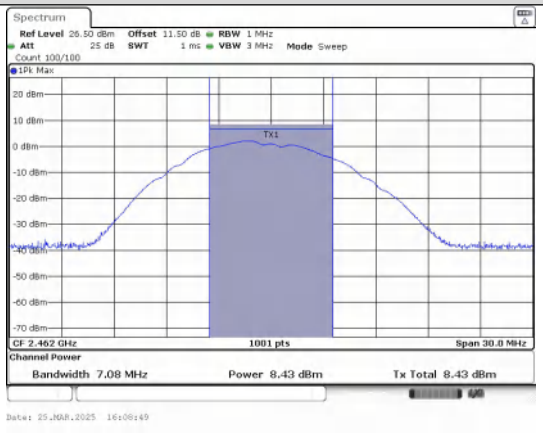
Test Graphs



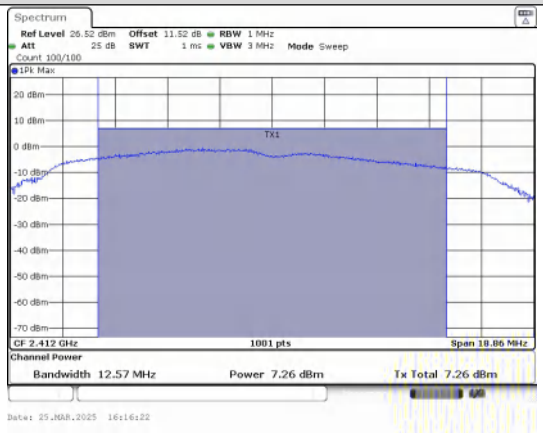
Conducted Output Power
IEEE 802.11b_Channel 1_Antenna 0



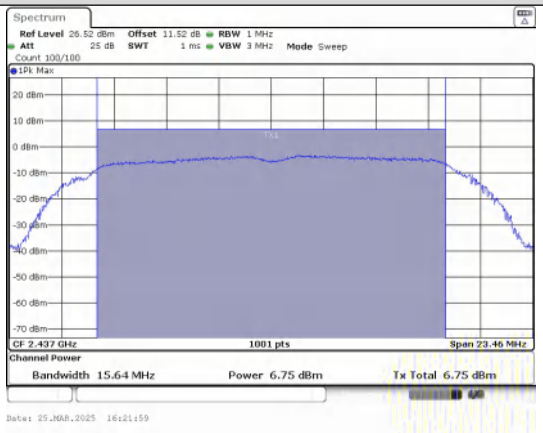
Conducted Output Power
IEEE 802.11b_Channel 6_Antenna 0



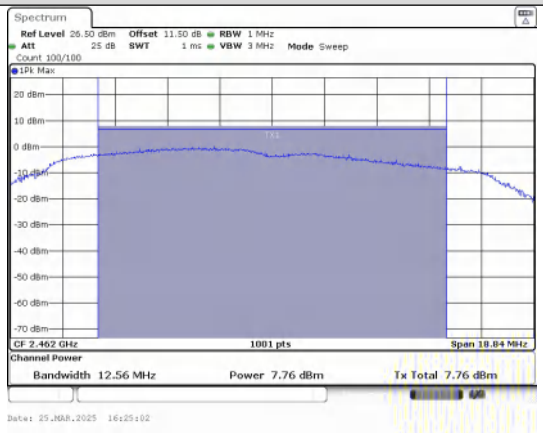
Conducted Output Power
IEEE 802.11b_Channel 11_Antenna 0



Conducted Output Power
IEEE 802.11g_Channel 1_Antenna 0

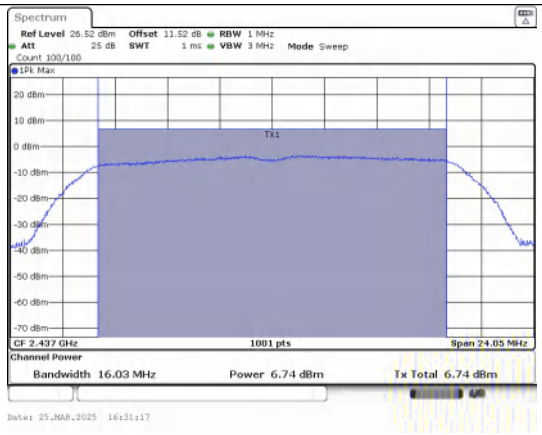


Conducted Output Power
IEEE 802.11g_Channel 6_Antenna 0



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

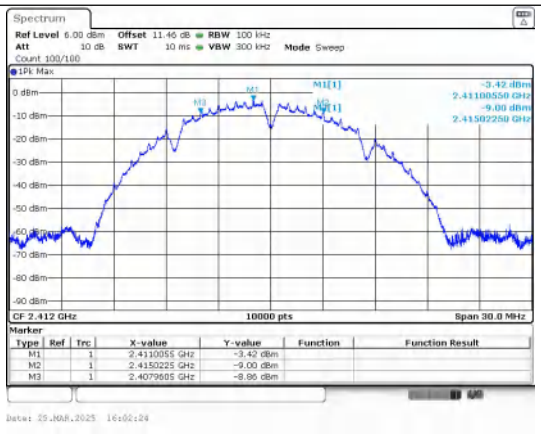
Conducted Output Power
IEEE 802.11n_20_Channel 11_Antenna 0

6dB Bandwidth

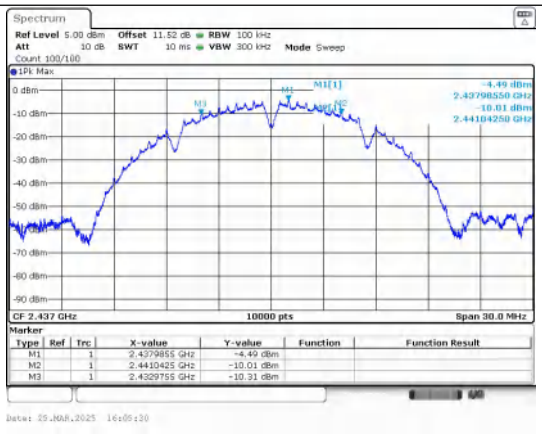
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	7.060	≥0.5	PASS
	6		2437	8.060		PASS
	11		2462	7.080		PASS
IEEE 802.11g	1		2412	12.57		PASS
	6		2437	15.64		PASS
	11		2462	12.56		PASS
IEEE 802.11n_20	1		2412	11.31		PASS
	6		2437	16.03		PASS
	11		2462	12.53		PASS

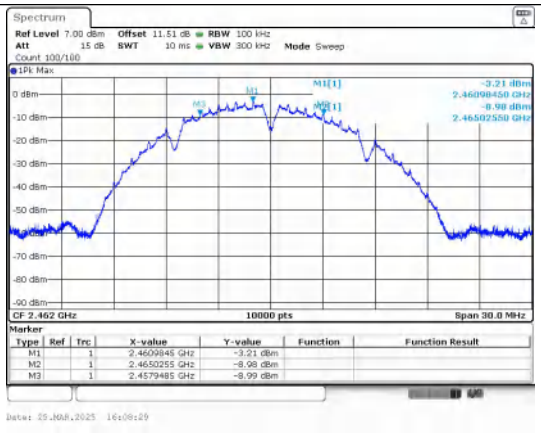
Test Graphs



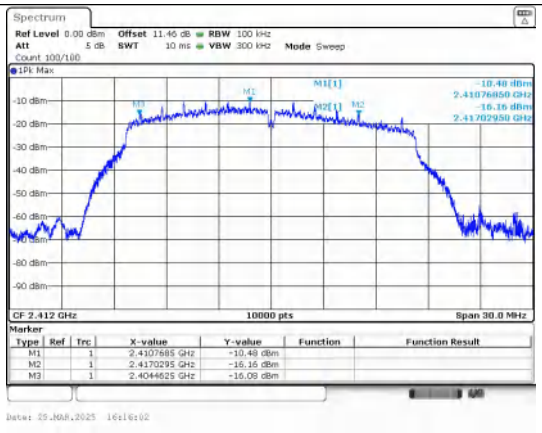
IEEE 802.11b_Channel 1_20MHz_Antenna 0



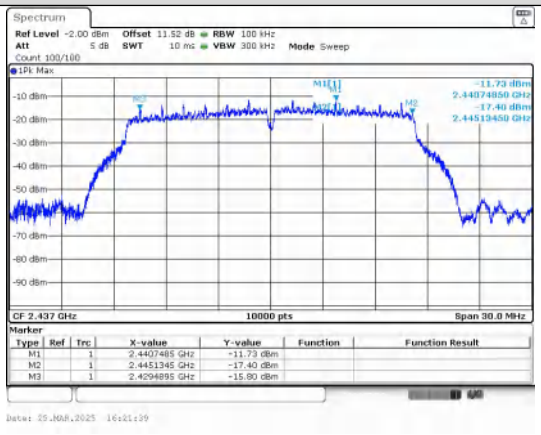
IEEE 802.11b_Channel 6_20MHz_Antenna 0



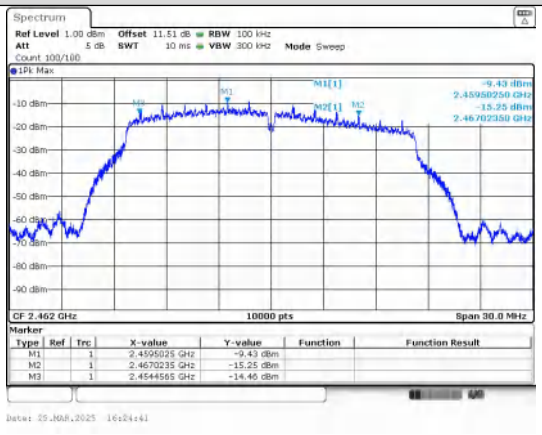
IEEE 802.11b_Channel 11_20MHz_Antenna 0



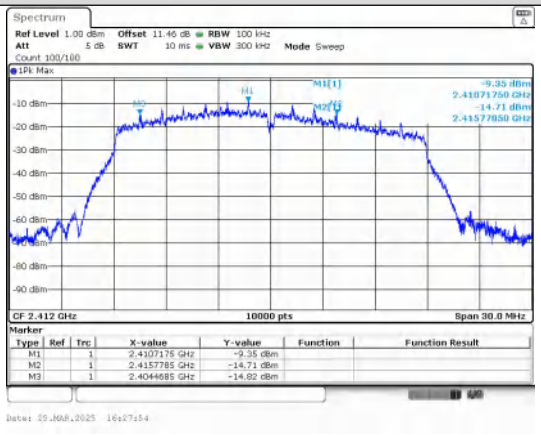
IEEE 802.11g_Channel 1_20MHz_Antenna 0



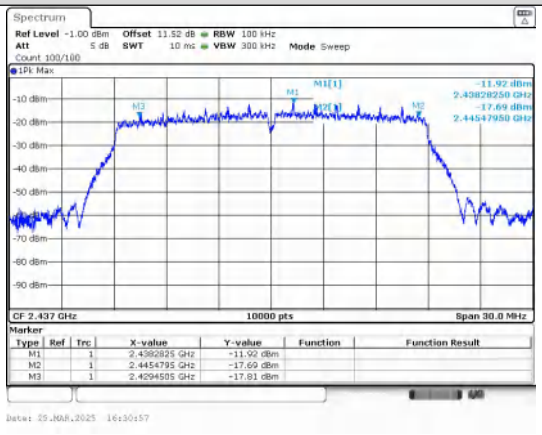
IEEE 802.11g_Channel 6_20MHz_Antenna 0



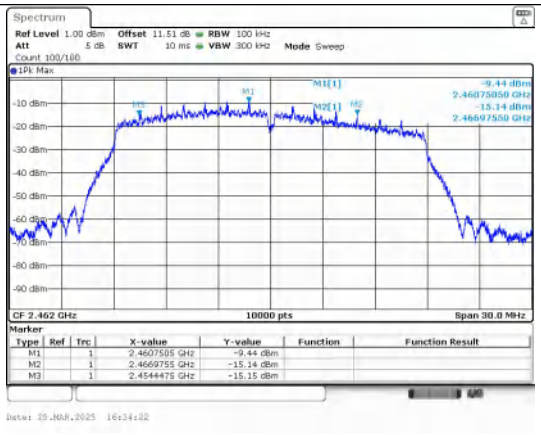
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



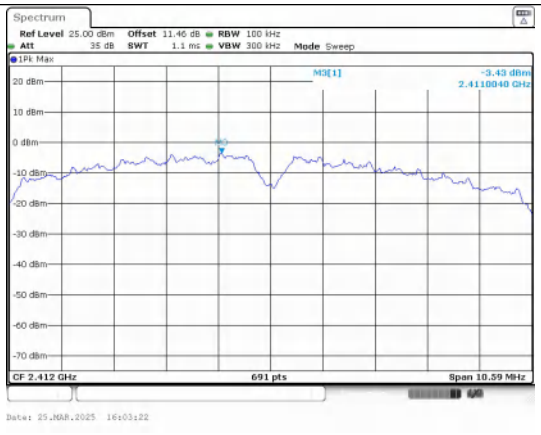
IEEE 802.11n_Channel 11_20MHz_Antenna 0

Conducted Out Of Band Emission

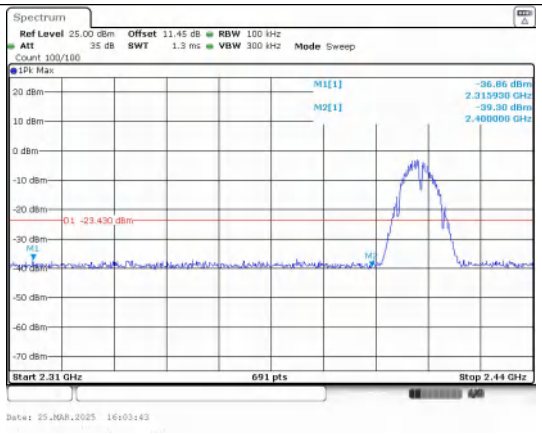
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2315.93	-36.857	-23.43	-13.427	PASS
			2400.00	-39.300	-23.43	-15.870	PASS
			22085.6	-43.355	-23.43	-19.925	PASS
	6		6904.66	-42.929	-24.59	-18.339	PASS
	11		2483.50	-38.710	-23.61	-15.100	PASS
			6930.46	-42.947	-23.61	-19.337	PASS
IEEE 802.11g	1		2378.95	-36.224	-29.38	-6.844	PASS
			2400.00	-39.390	-29.38	-10.010	PASS
			5921.70	-42.570	-29.38	-13.190	PASS
	6		6902.16	-42.820	-31.49	-11.330	PASS
	11		2483.50	-38.800	-29.1	-9.700	PASS
			6898.83	-42.935	-29.1	-13.835	PASS
IEEE 802.11n_20	1		2346.59	-36.774	-29.26	-7.514	PASS
			2400.00	-39.810	-29.26	-10.550	PASS
			6894.70	-42.264	-29.26	-13.004	PASS
	6		6914.65	-42.874	-32.09	-10.784	PASS
	11		2483.50	-38.450	-30.73	-7.720	PASS
			22000.7	-42.913	-30.73	-12.183	PASS

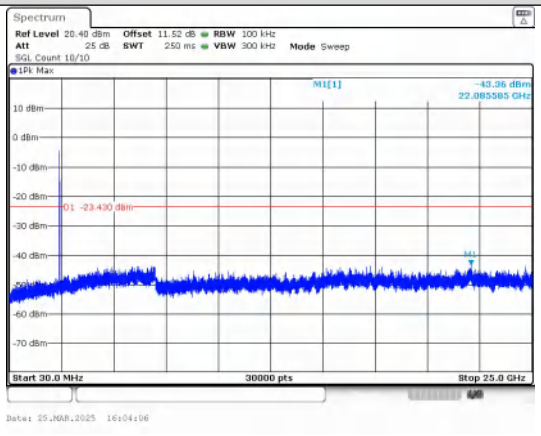
Test Graphs



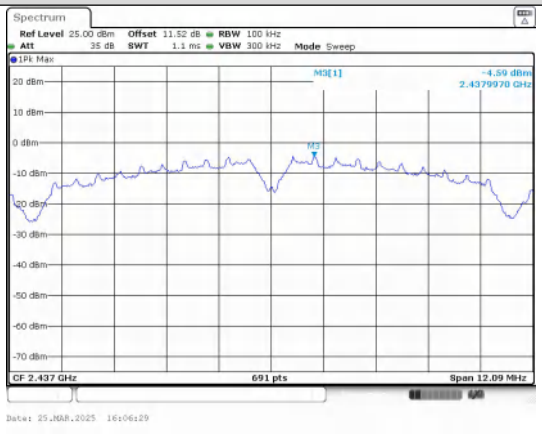
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



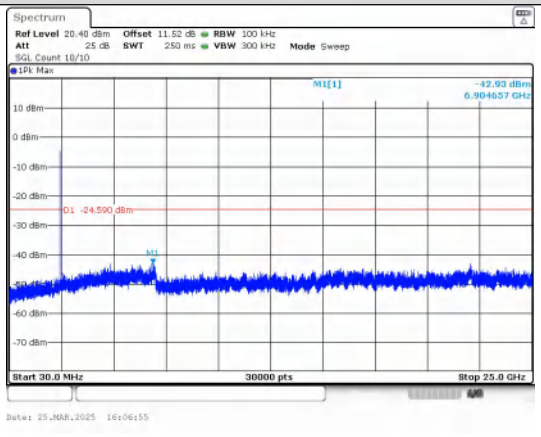
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



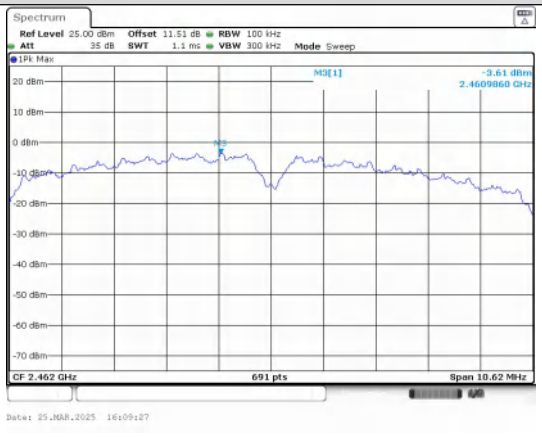
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



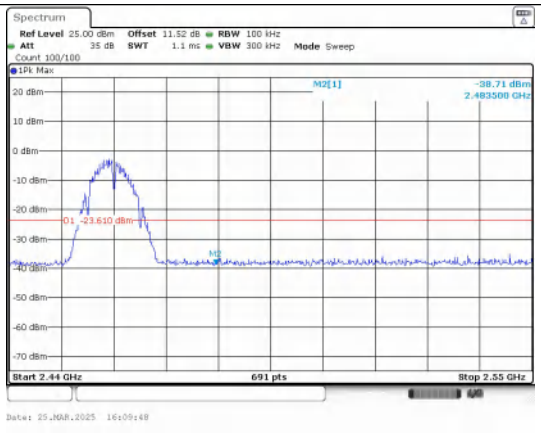
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



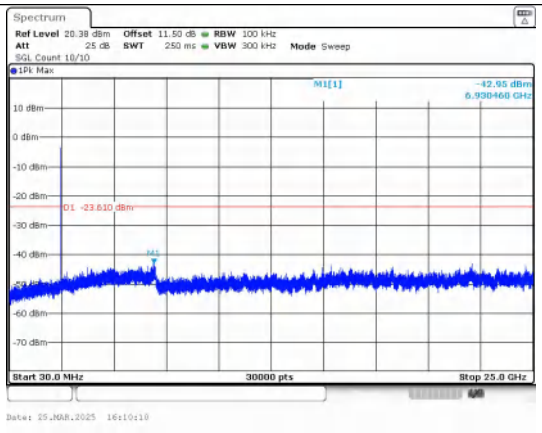
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



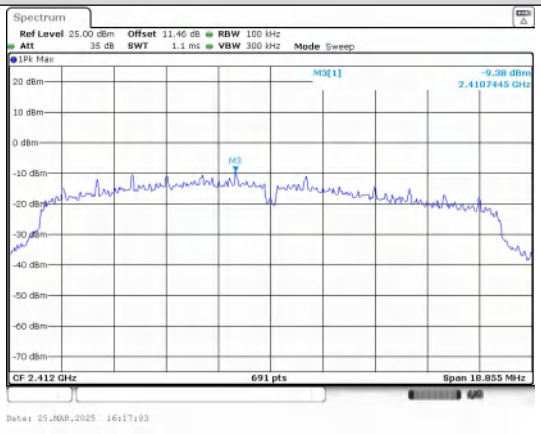
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



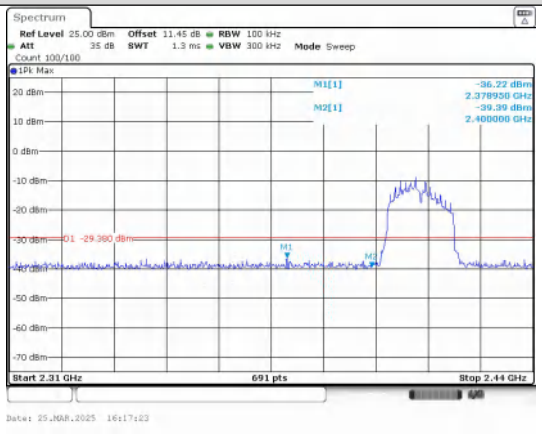
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



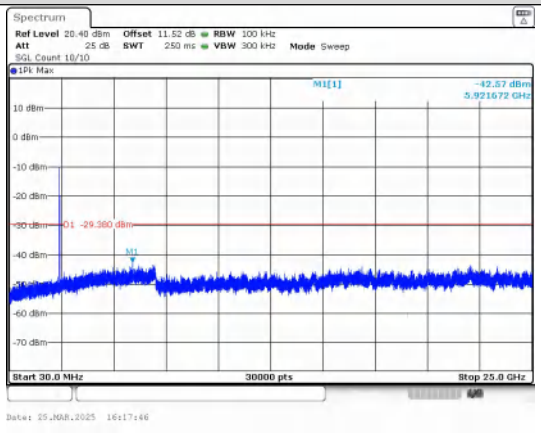
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



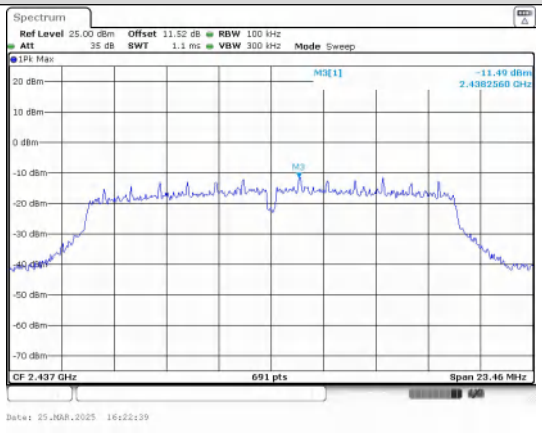
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



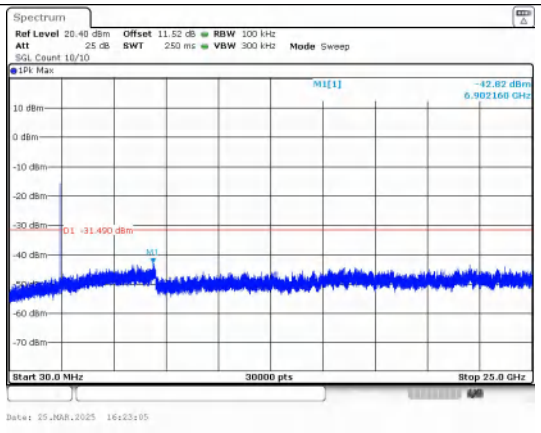
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



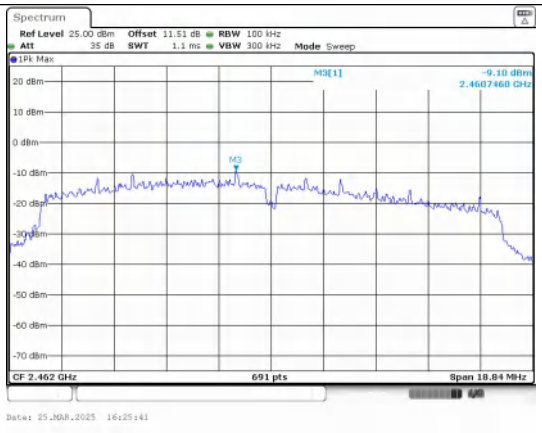
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



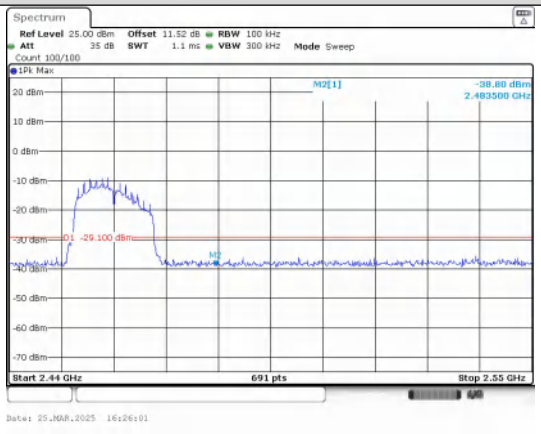
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



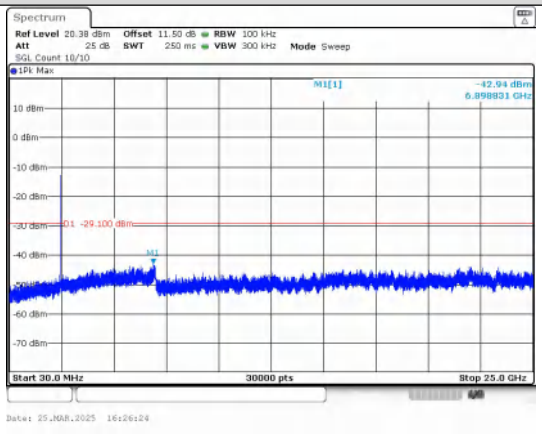
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



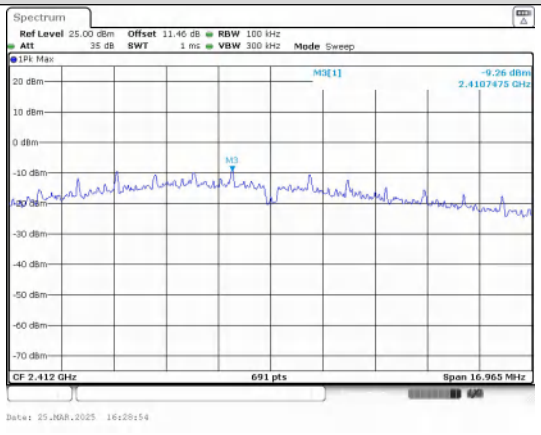
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



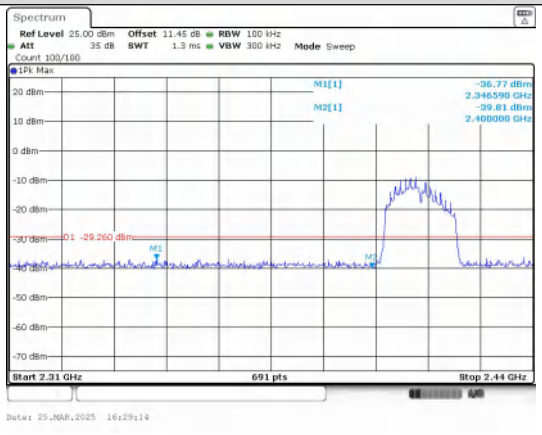
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



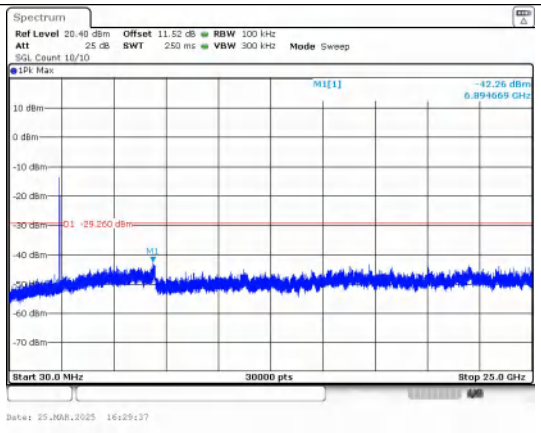
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



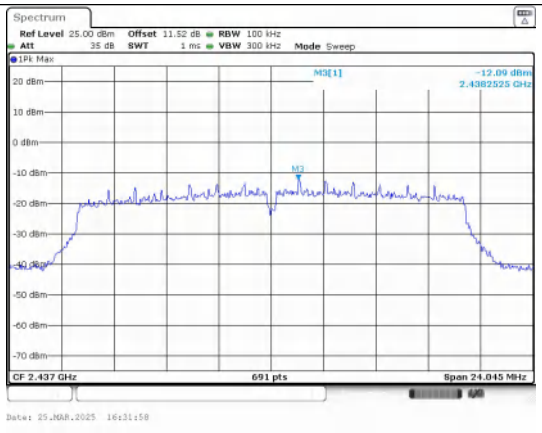
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



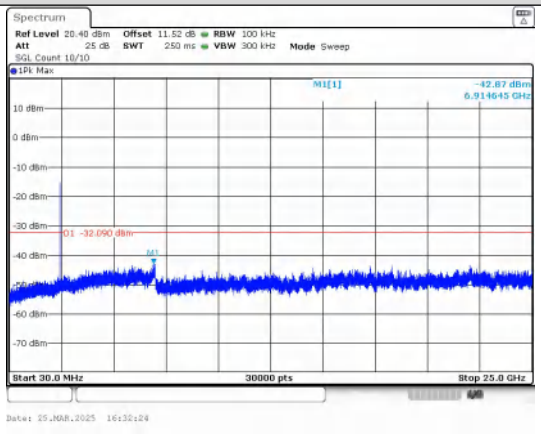
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



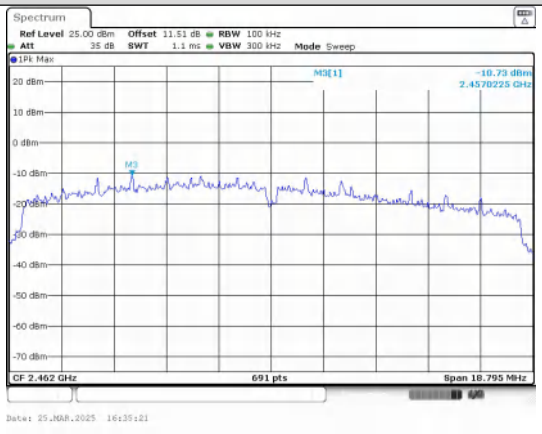
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



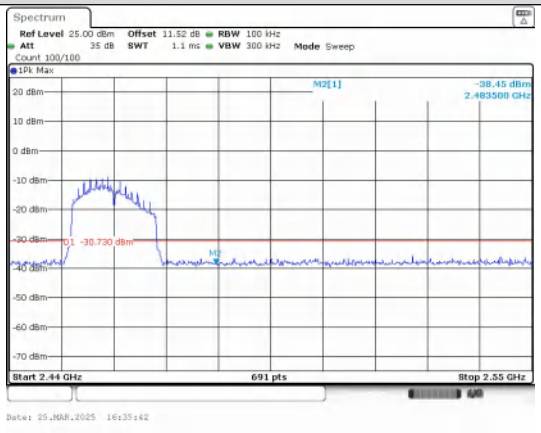
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



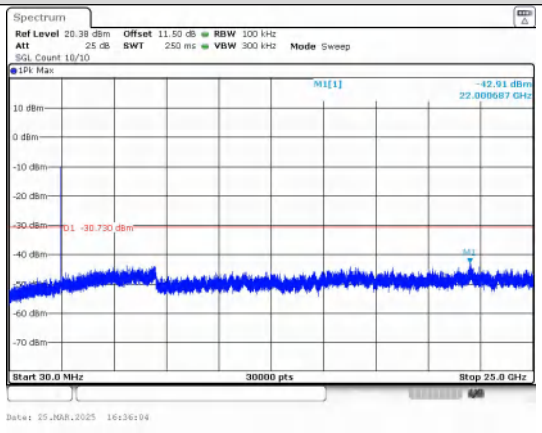
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



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-----