Appendix A

Report No.:	CISRR240403035
FCC ID:	2BDSG-YW16
Product Name:	Smart earpick
Model No.:	YW16
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

Conducted Peak Output Power

Test Result

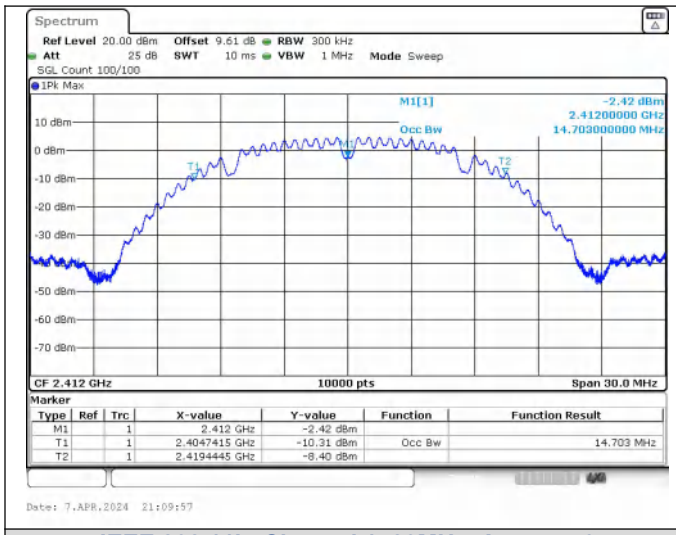
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	8.85	30	PASS
	6	8.67	30	PASS
	11	8.79	30	PASS
IEEE 802.11g	1	7.69	30	PASS
	6	8.46	30	PASS
	11	8.82	30	PASS
IEEE 802.11n_20	1	8.57	30	PASS
	6	8.42	30	PASS
	11	8.57	30	PASS
IEEE 802.11n_40	3	8.81	30	PASS
	6	8.05	30	PASS
	9	8.78	30	PASS

99% Bandwidth

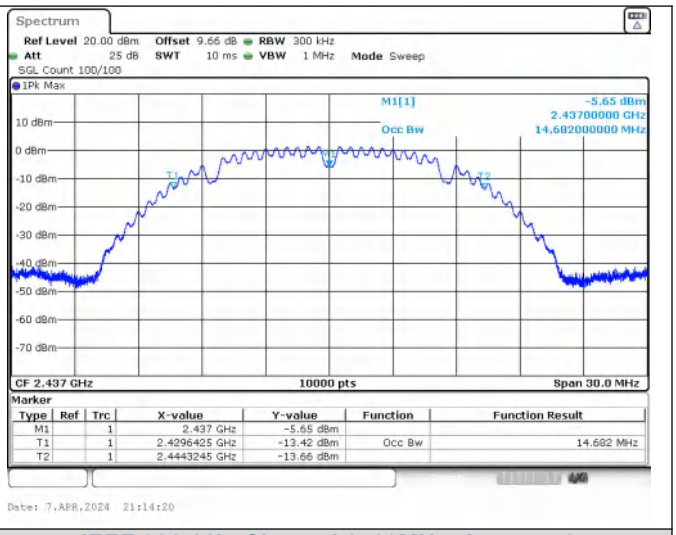
Test Result

Mode	Channel	Ant.	99% BW (MHz)
IEEE 802.11b	1	0	14.700
	6		14.680
	11		14.670
IEEE 802.11g	1		16.520
	6		16.530
	11		16.540
IEEE 802.11n_20	1		17.710
	6		17.700
	11		17.710
IEEE 802.11n_40	3		36.040
	6		36.090
	9		36.080

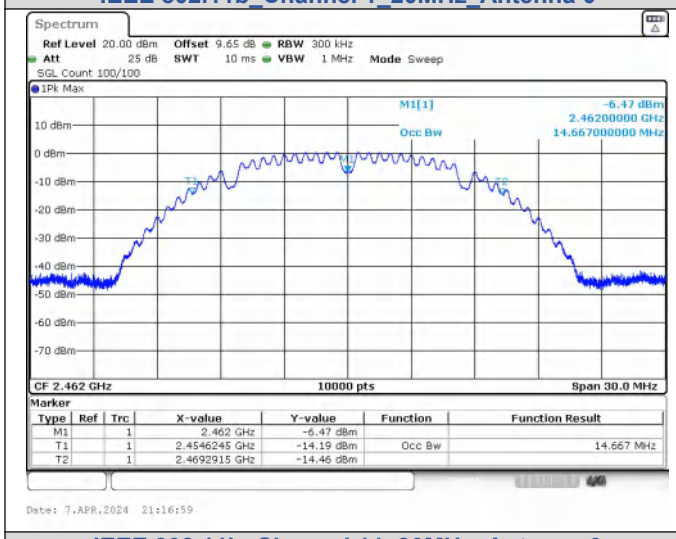
Test Graphs



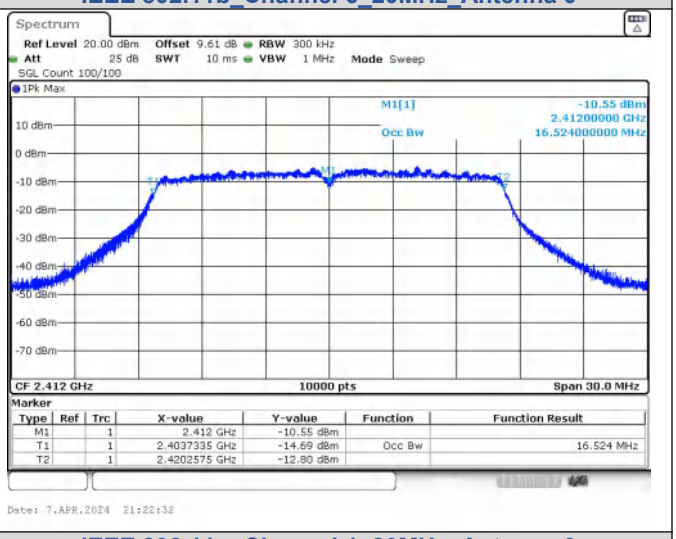
IEEE 802.11b_Channel 1_20MHz_Antenna 0



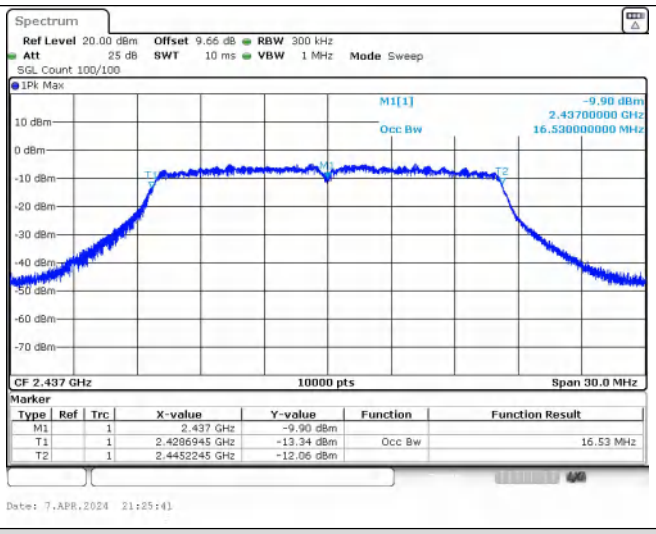
IEEE 802.11b_Channel 6_20MHz_Antenna 0



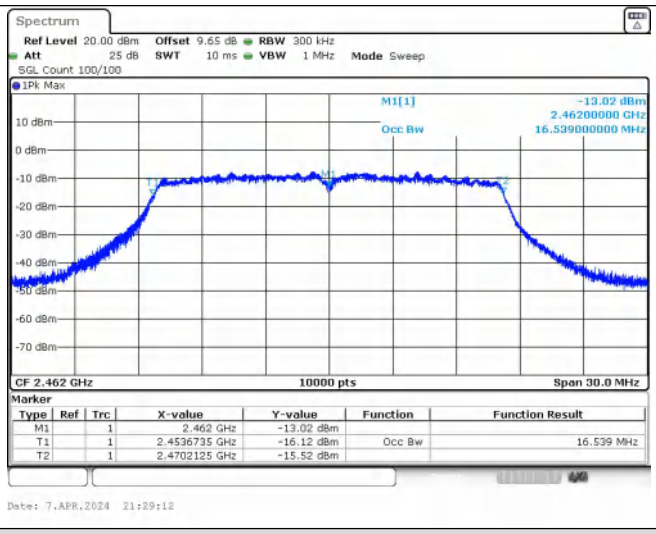
IEEE 802.11b_Channel 11_20MHz_Antenna 0



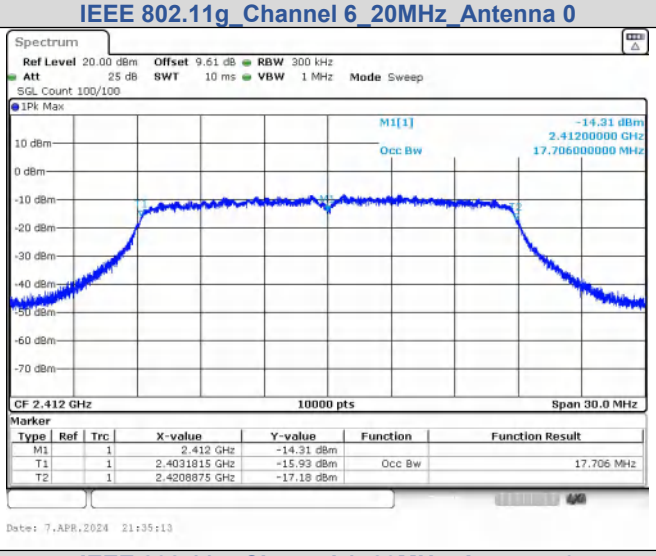
IEEE 802.11g_Channel 1_20MHz_Antenna 0



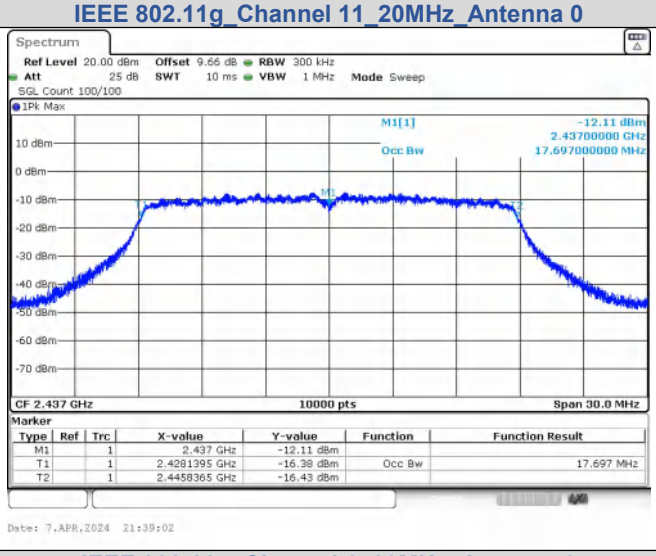
IEEE 802.11g_Channel 6_20MHz_Antenna 0



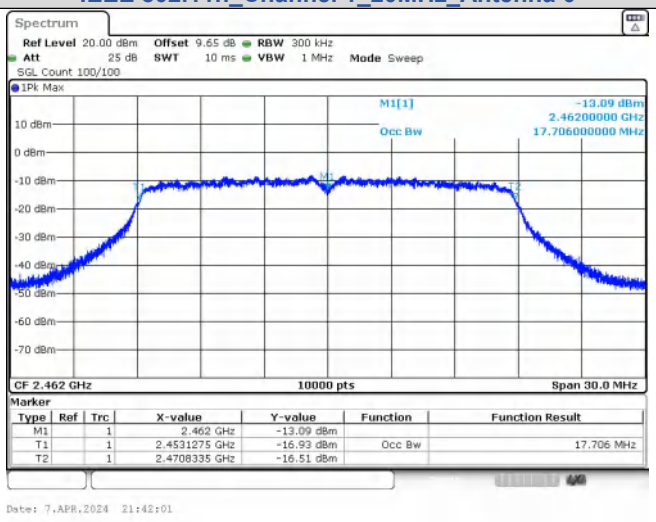
IEEE 802.11g_Channel 11_20MHz_Antenna 0



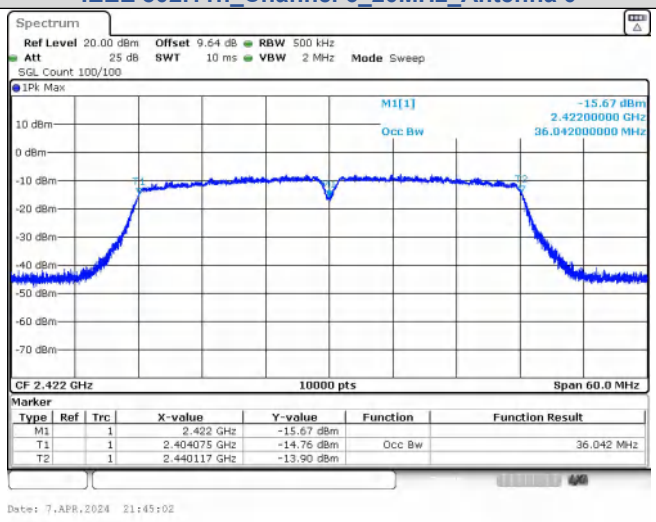
IEEE 802.11n_Channel 1_20MHz_Antenna 0



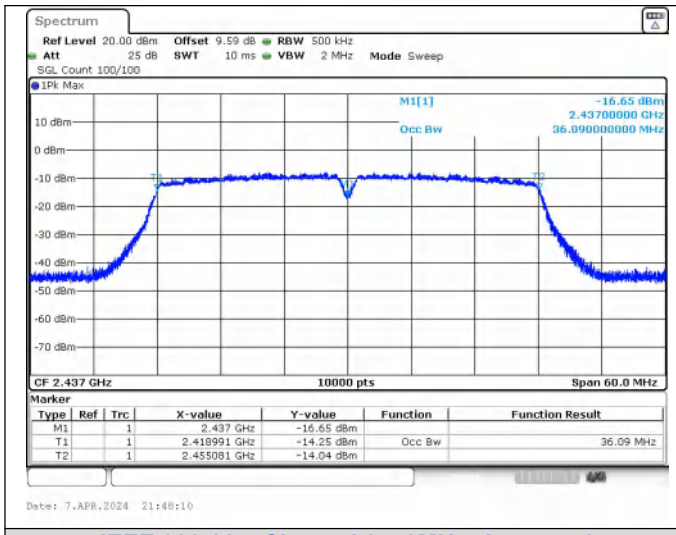
IEEE 802.11n_Channel 6_20MHz_Antenna 0



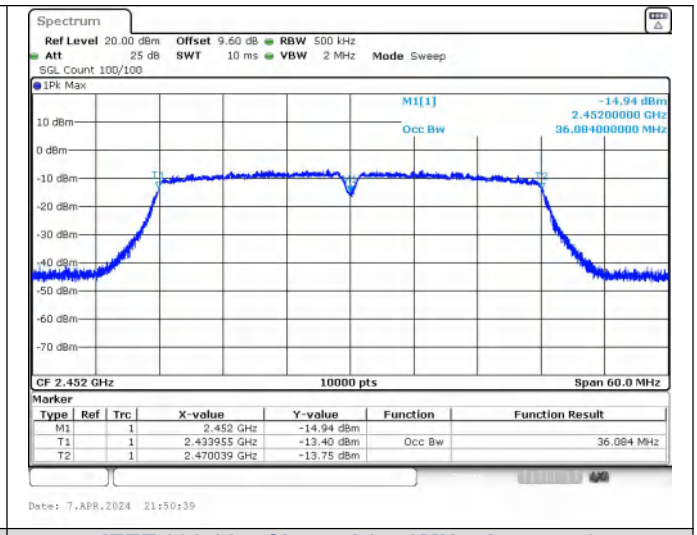
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



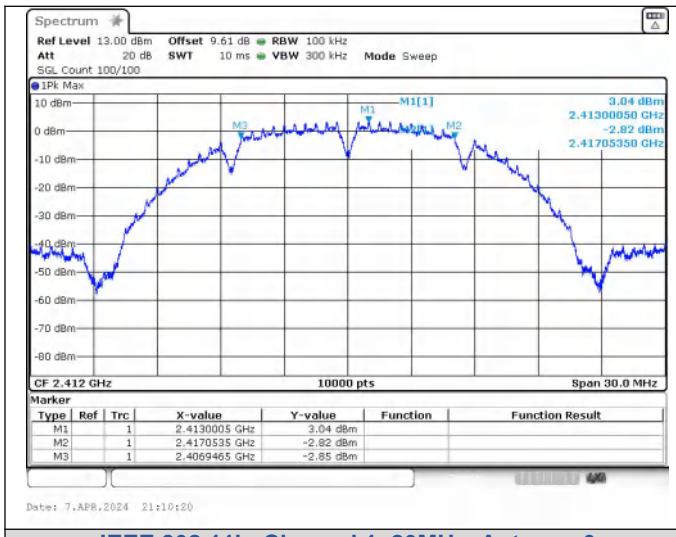
IEEE 802.11n_Channel 9_40MHz_Antenna 0

6dB Bandwidth

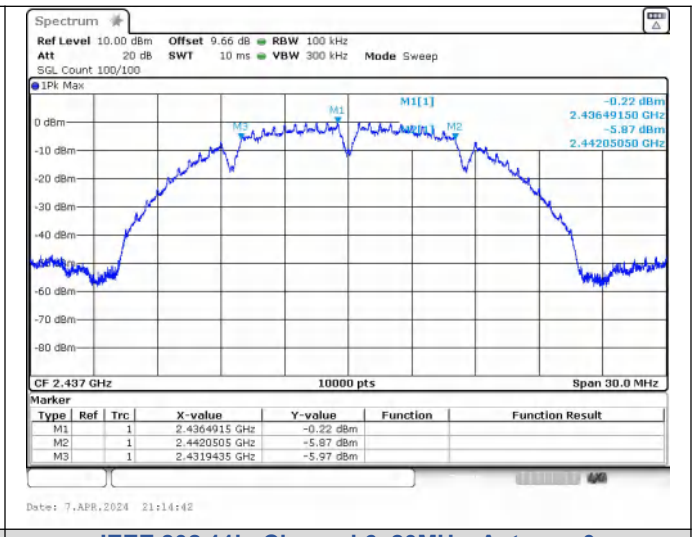
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	10.10	0.5	PASS
	6		2437	10.11		PASS
	11		2462	10.09		PASS
IEEE 802.11g	1		2412	16.36		PASS
	6		2437	16.37		PASS
	11		2462	16.36		PASS
IEEE 802.11n_20	1		2412	17.58		PASS
	6		2437	17.59		PASS
	11		2462	17.57		PASS
IEEE 802.11n_40	3		2422	36.30		PASS
	6		2437	36.33		PASS
	9		2452	36.33		PASS

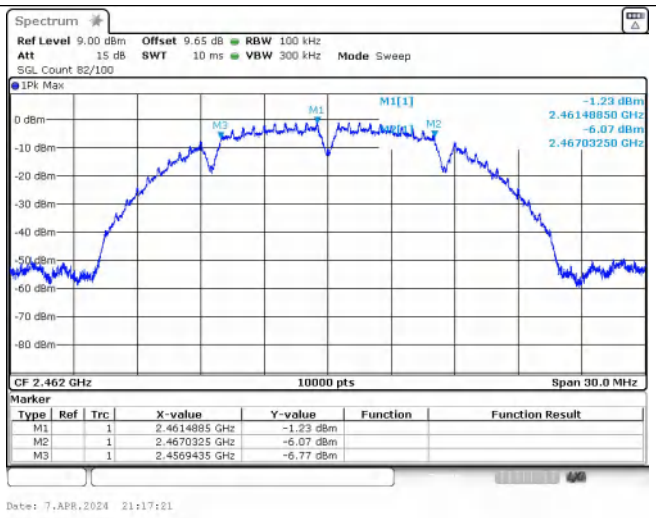
Test Graphs



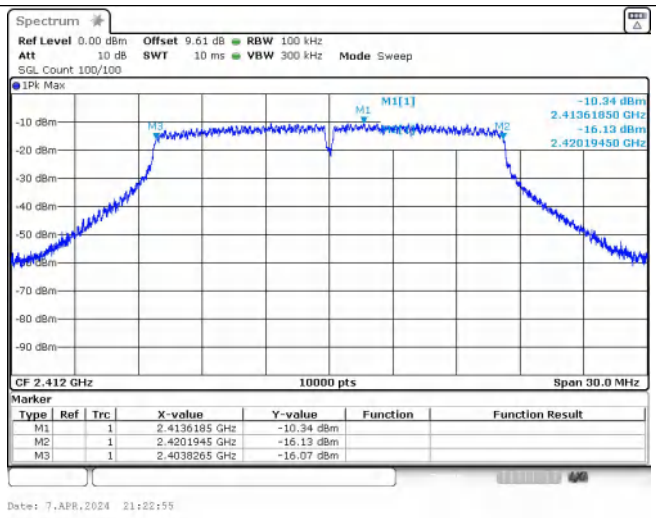
IEEE 802.11b_Channel 1_20MHz_Antenna 0



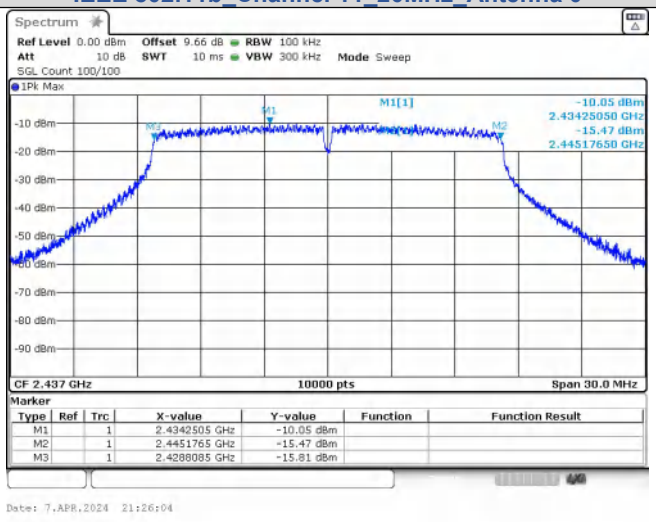
IEEE 802.11b_Channel 6_20MHz_Antenna 0



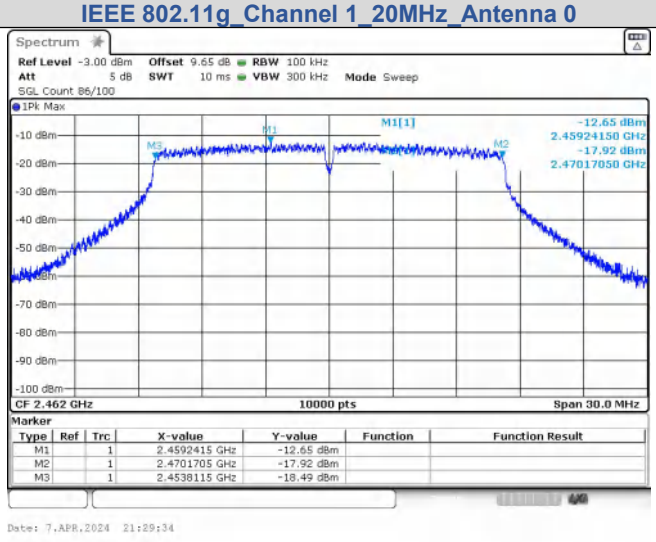
IEEE 802.11b_Channel 11_20MHz_Antenna 0



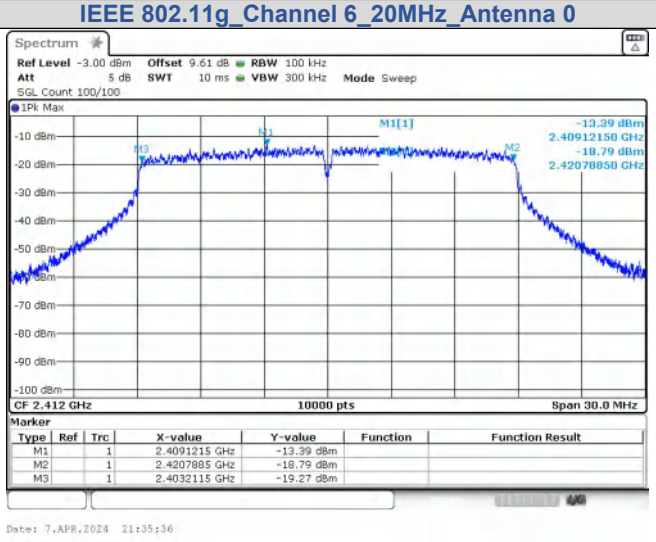
IEEE 802.11g_Channel 1_20MHz_Antenna 0



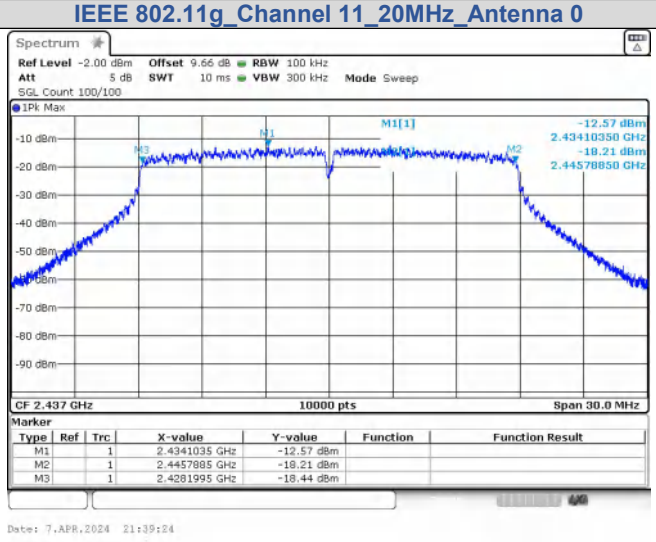
IEEE 802.11g_Channel 6_20MHz_Antenna 0



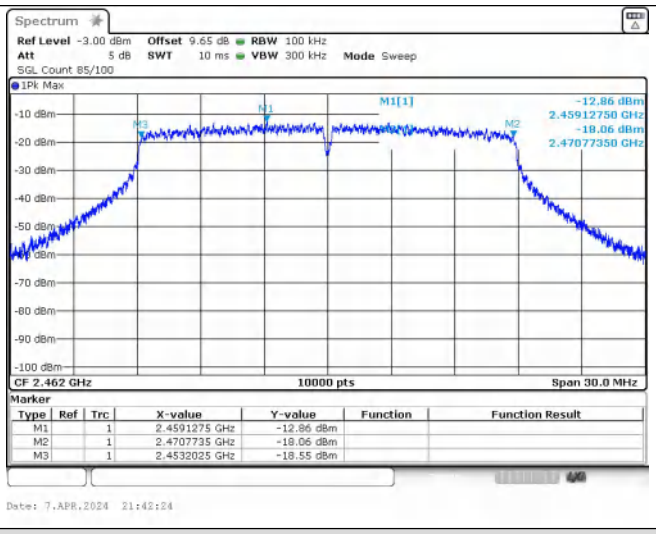
IEEE 802.11g_Channel 11_20MHz_Antenna 0



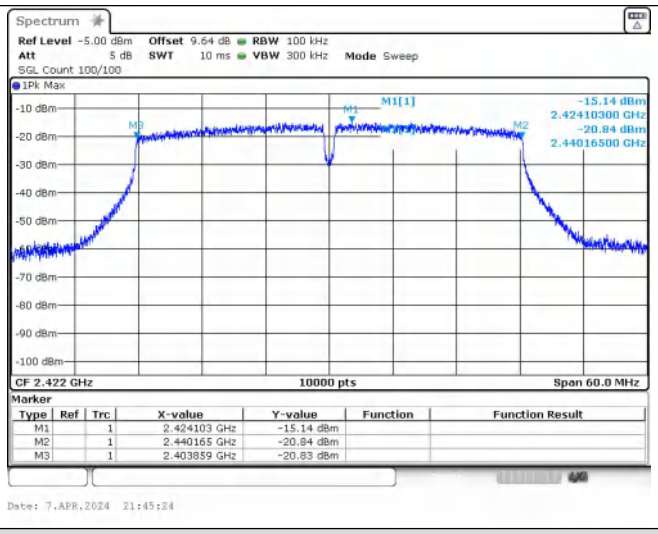
IEEE 802.11n_Channel 1_20MHz_Antenna 0



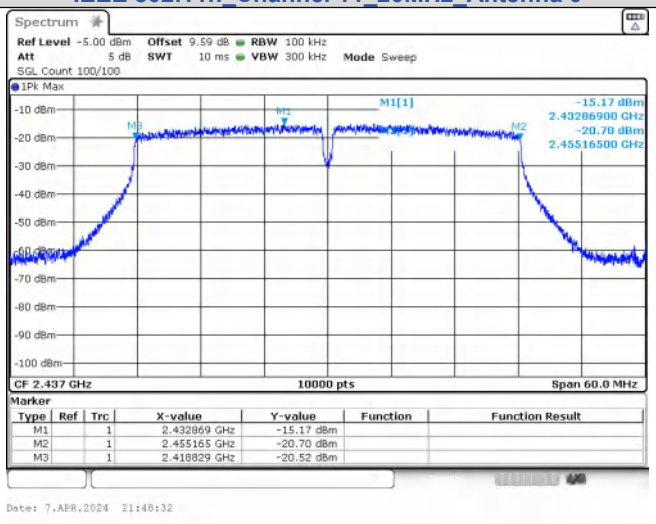
IEEE 802.11n_Channel 6_20MHz_Antenna 0



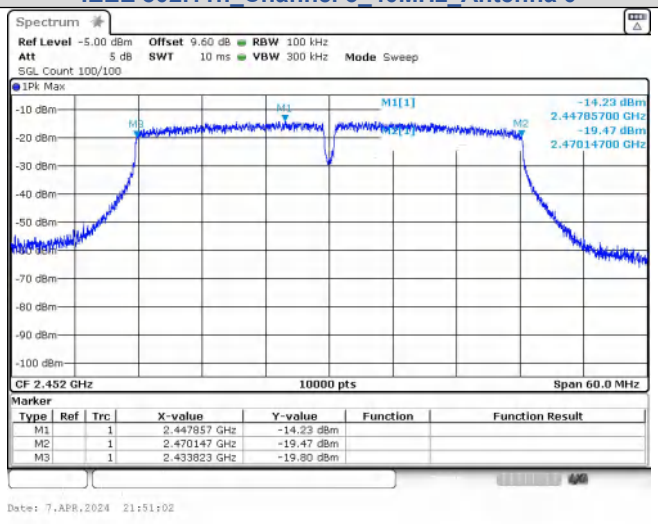
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



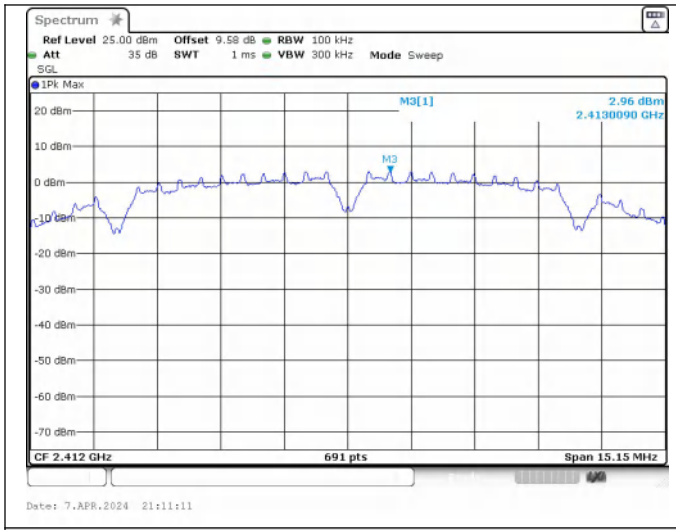
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Conducted Out Of Band Emission

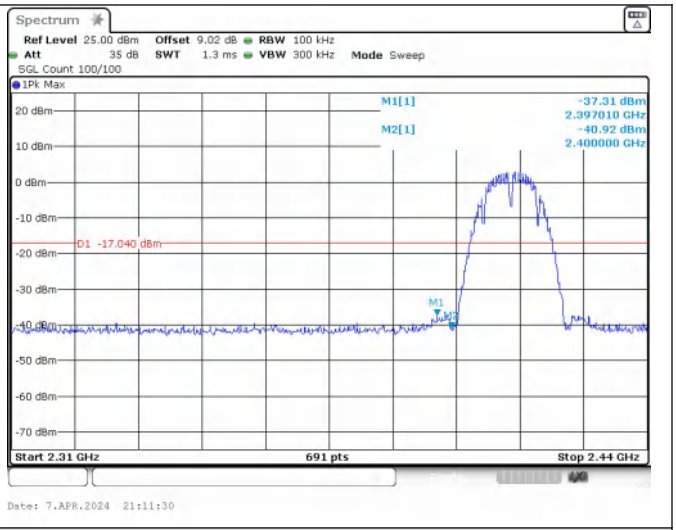
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2400.00	-40.918	-17.04	-23.878	PASS
			2397.01	-37.308	-17.04	-20.268	PASS
			22086.4	-39.476	-17.04	-22.436	PASS
	6		16301.7	-39.536	-20.25	-19.286	PASS
	11		2483.50	-39.773	-21.22	-18.553	PASS
			16308.4	-38.897	-21.22	-17.677	PASS
IEEE 802.11g	1		2400.00	-39.735	-30.4	-9.335	PASS
			2324.39	-39.471	-30.4	-9.071	PASS
			18057.1	-40.244	-30.4	-9.844	PASS
	6		17318.8	-39.568	-30.27	-9.298	PASS
	11		2483.50	-41.045	-32.94	-8.105	PASS
			22078.1	-39.319	-32.94	-6.379	PASS
IEEE 802.11n_20	1		2400.00	-40.609	-33.33	-7.279	PASS
			2396.45	-38.474	-33.33	-5.144	PASS
			16601.3	-39.020	-33.33	-5.690	PASS
	6		15833.1	-39.701	-32.43	-7.271	PASS
	11		2483.50	-39.868	-33.66	-6.208	PASS
			22024.8	-39.322	-33.66	-5.662	PASS
IEEE 802.11n_40	3		2400.00	-41.146	-35.13	-6.016	PASS
			2372.37	-38.795	-35.13	-3.665	PASS
			22025.7	-39.577	-35.13	-4.447	PASS
	6		16553.1	-38.698	-35.25	-3.448	PASS
	9		2483.50	-40.747	-34.26	-6.487	PASS
			16918.5	-39.209	-34.26	-4.949	PASS

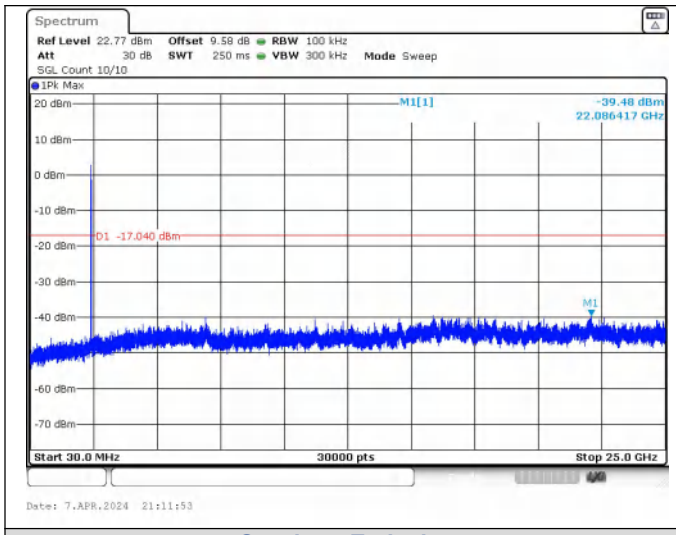
Test Graphs



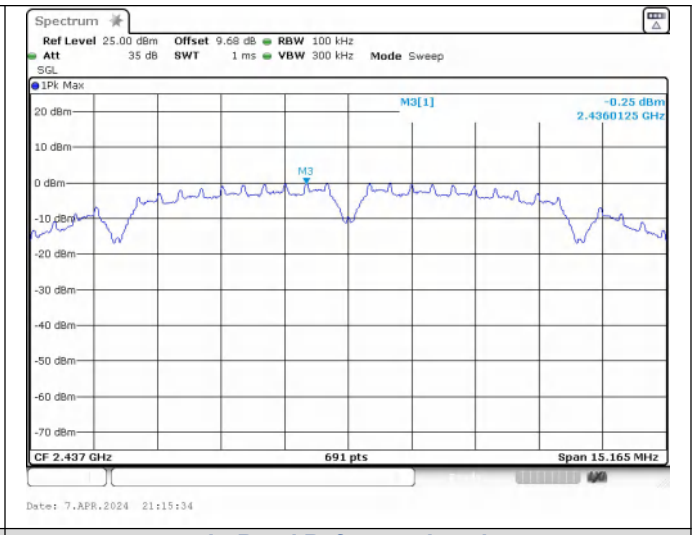
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



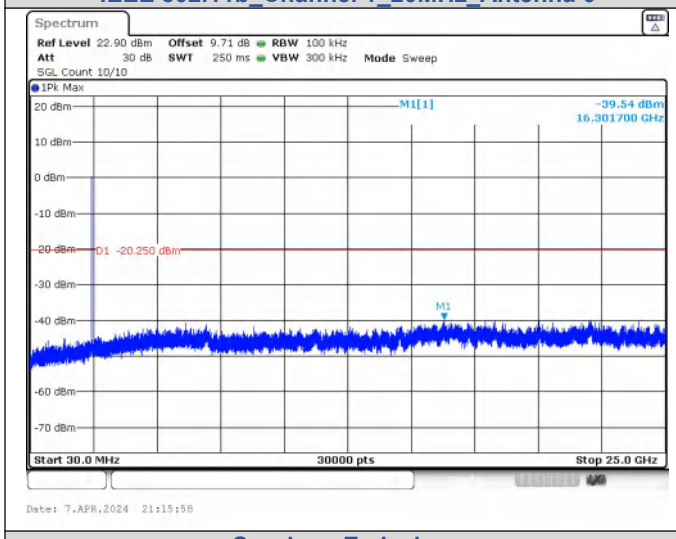
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



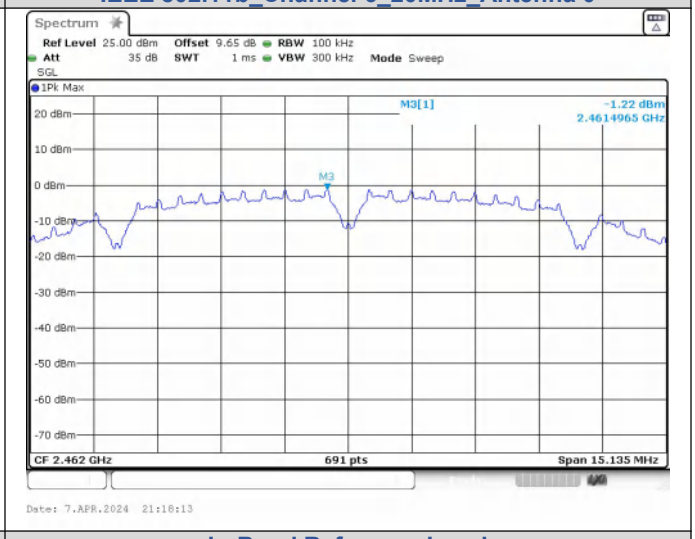
Spurious Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



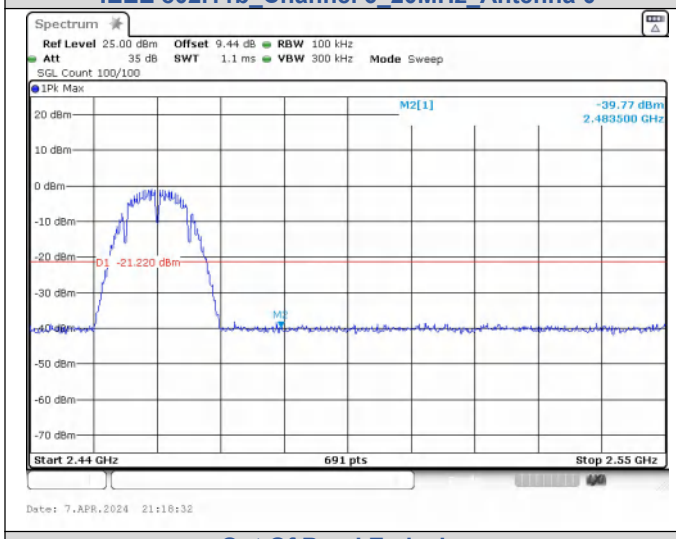
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



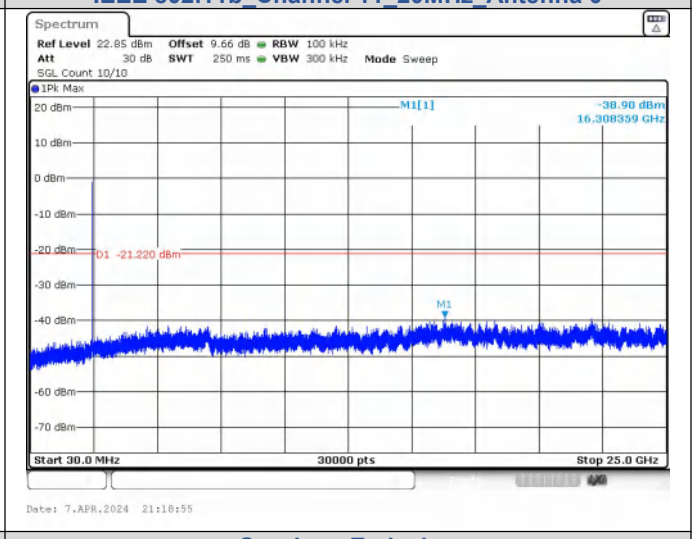
Spurious Emissions
IEEE 802.11b_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0

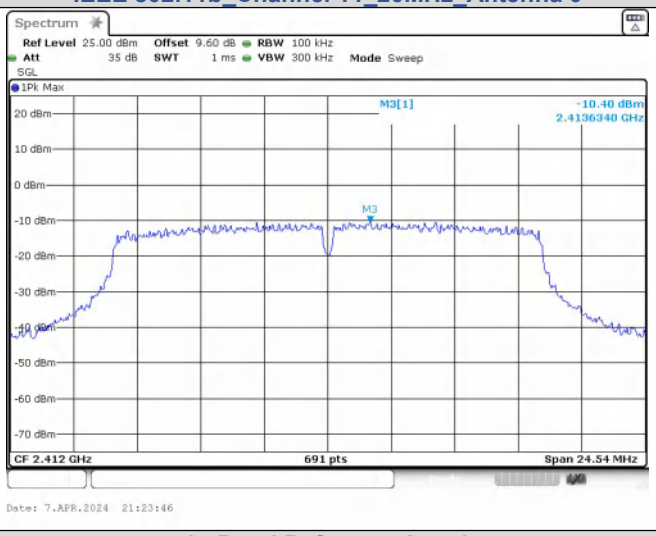


Out Of Band Emission

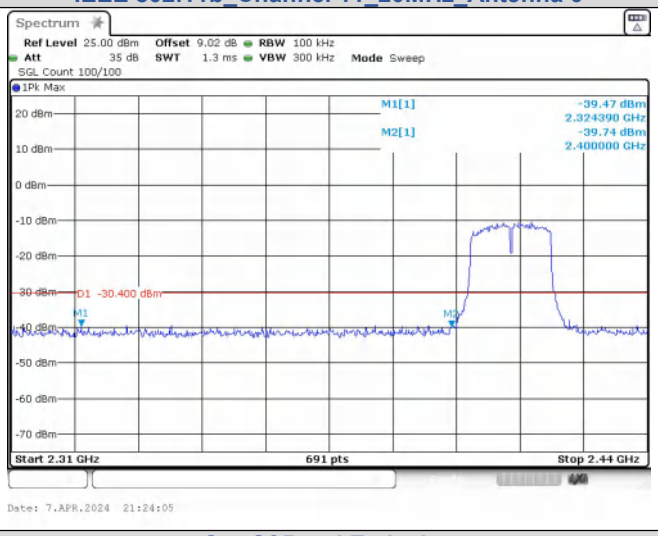


Spurious Emission

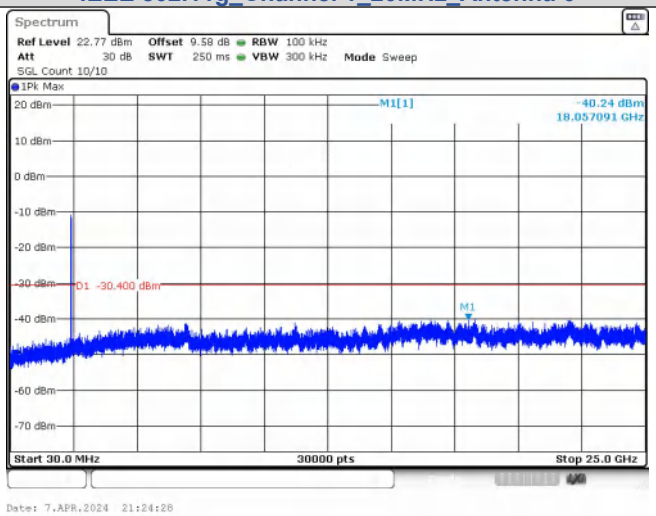
IEEE 802.11b_Channel 11_20MHz_Antenna 0



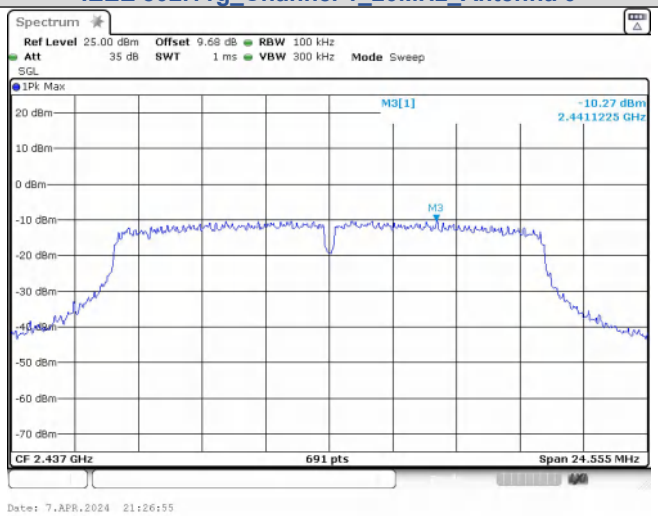
IEEE 802.11b_Channel 11_20MHz_Antenna 0



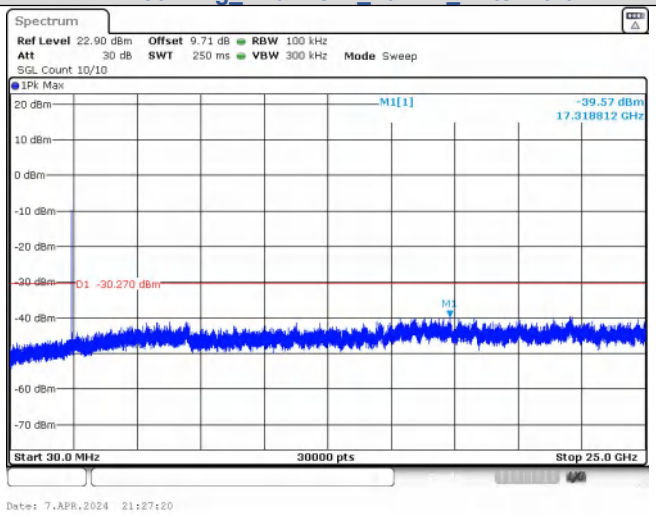
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



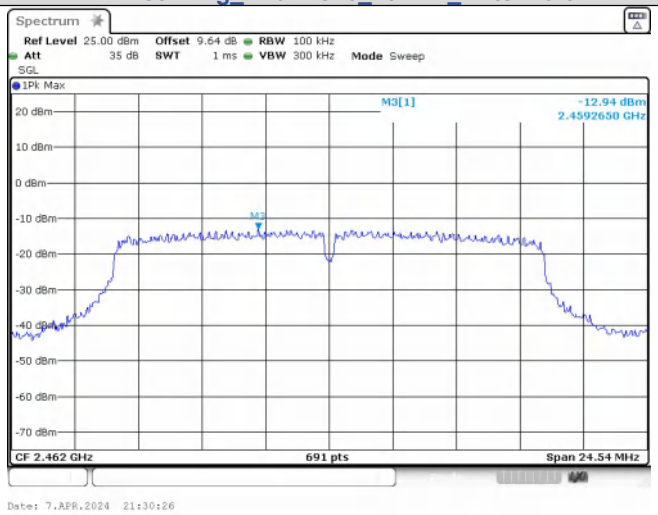
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



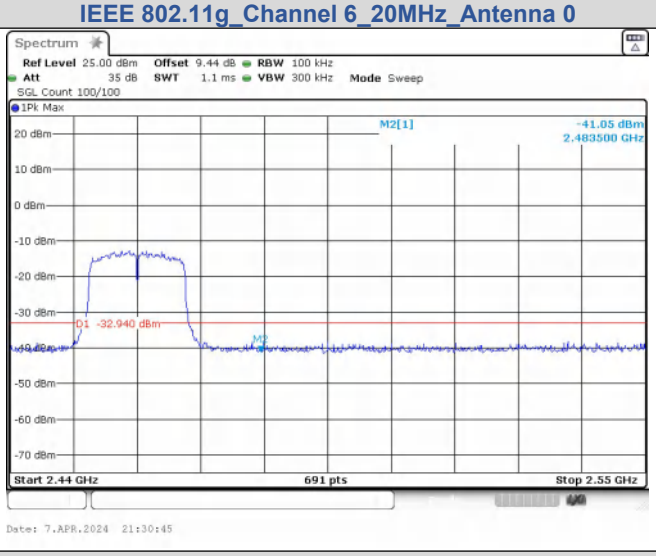
Spurious Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



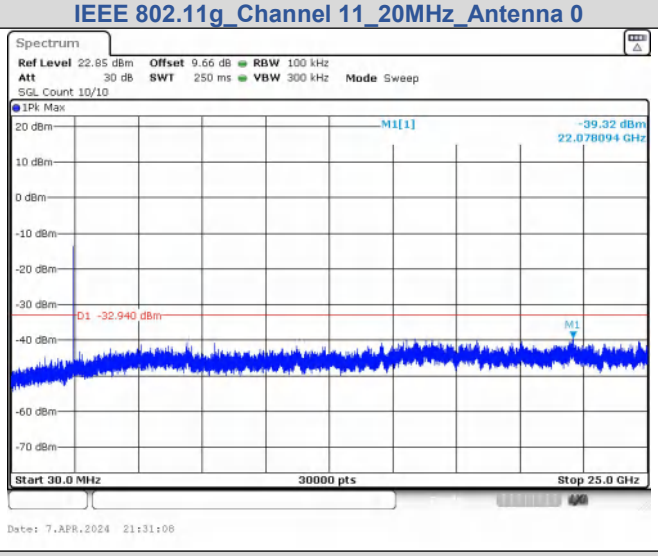
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



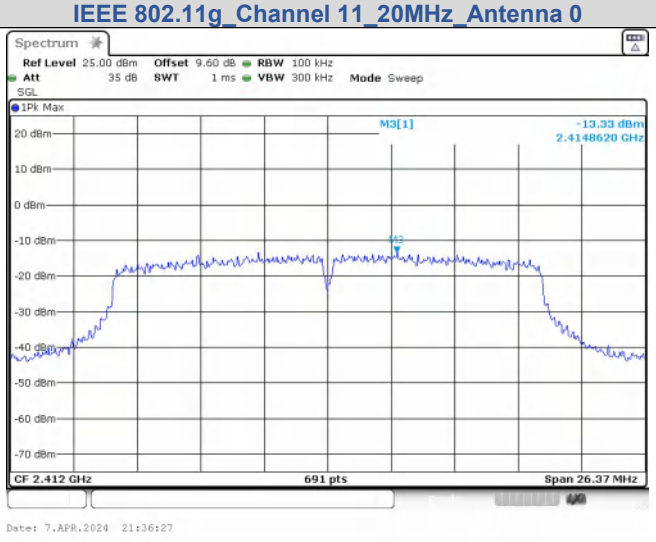
Spurious Emissions
IEEE 802.11g_Channel 6_20MHz_Antenna 0



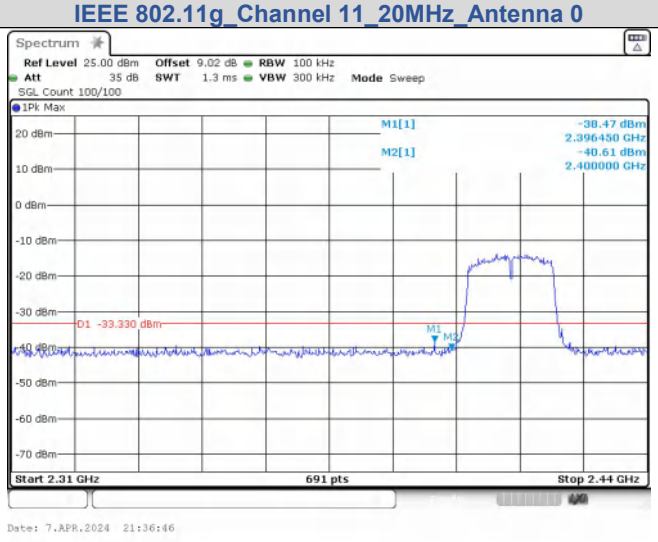
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0

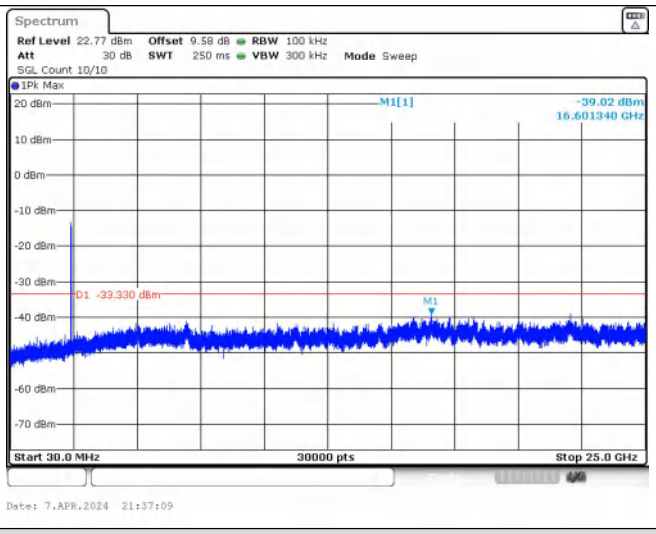


Spurious Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0

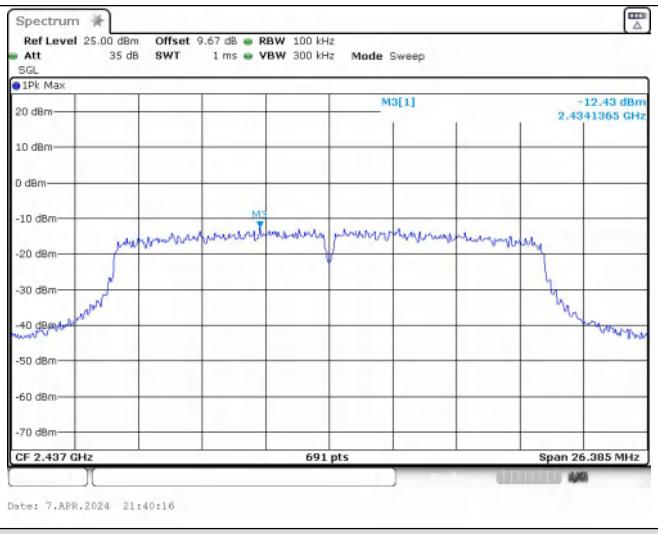


In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0

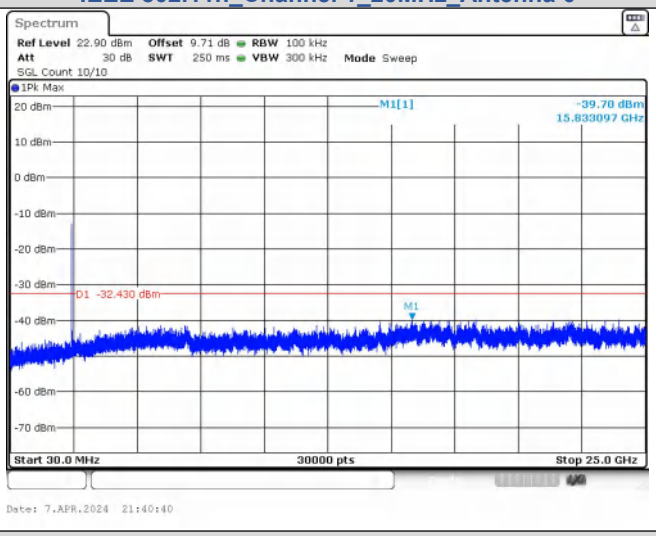
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



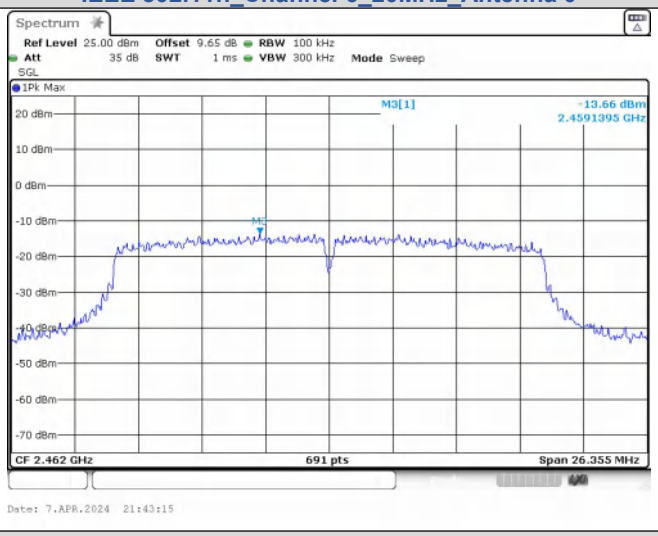
Spurious Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



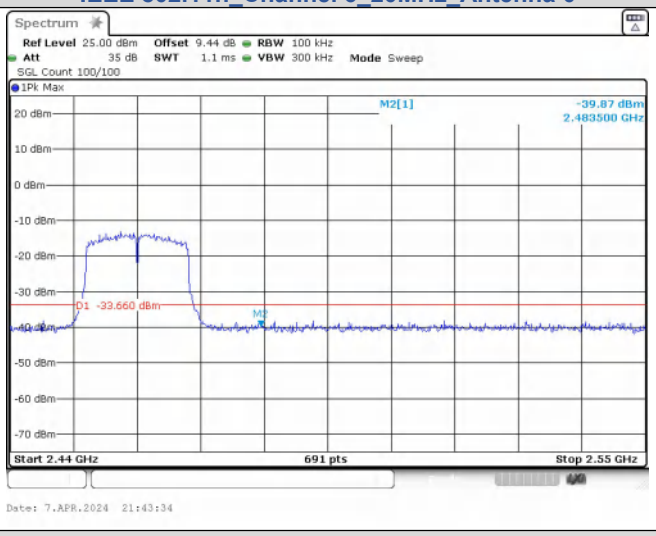
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



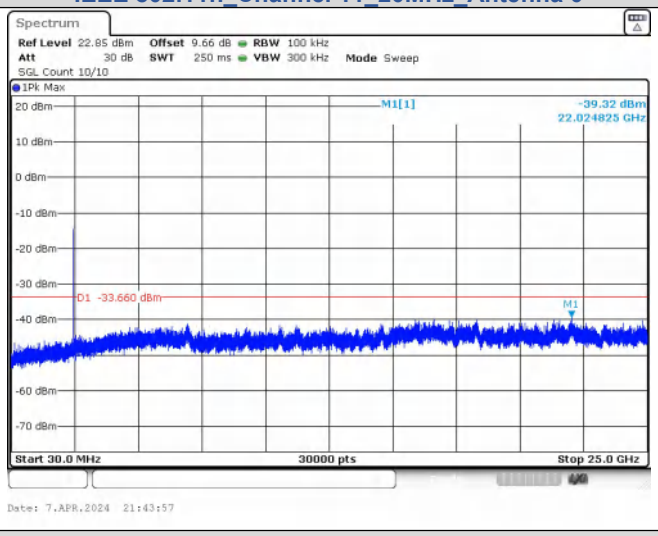
Spurious Emissions
IEEE 802.11n_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0

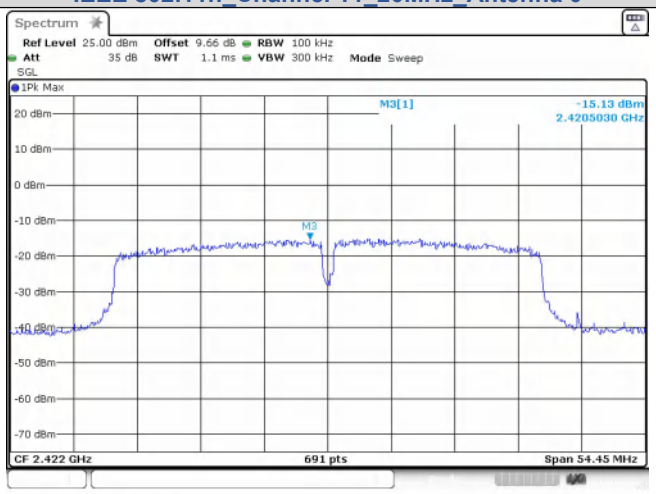


Out Of Band Emission

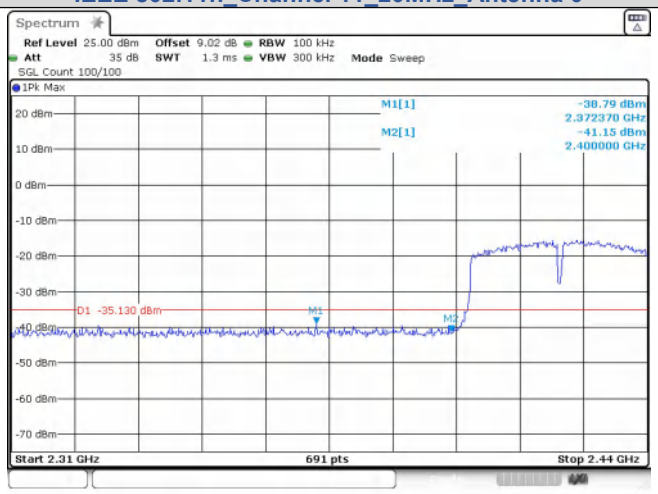


Spurious Emission

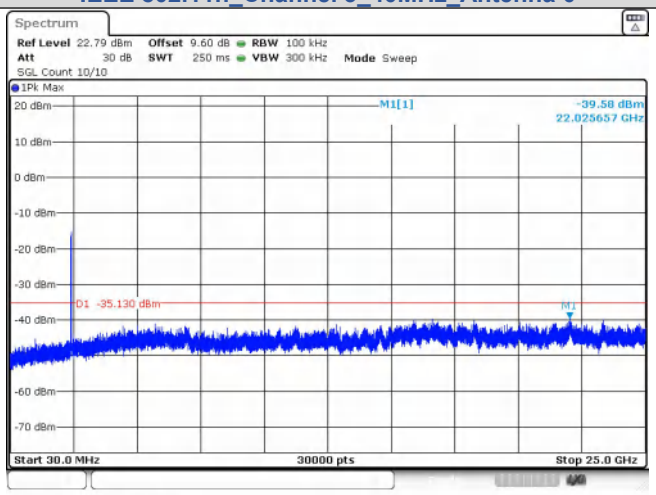
IEEE 802.11n_Channel 11_20MHz_Antenna 0



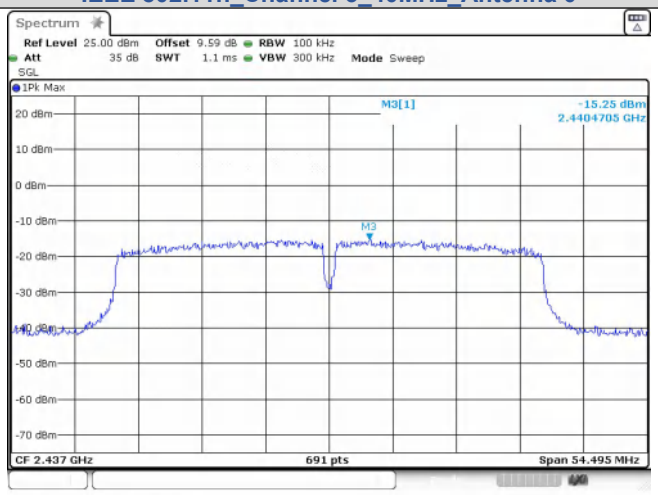
IEEE 802.11n_Channel 11_20MHz_Antenna 0



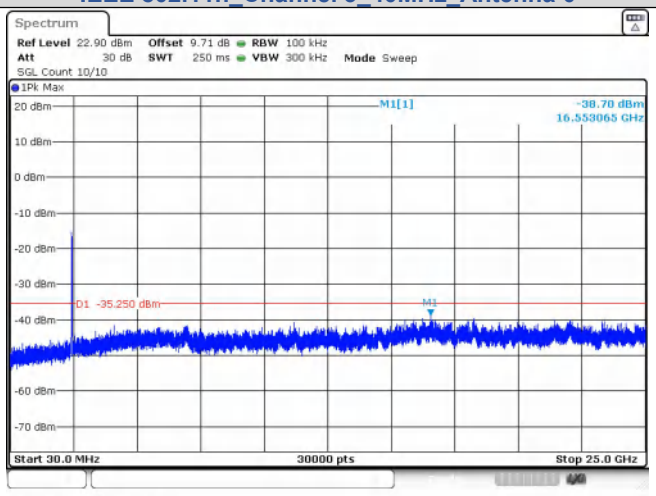
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



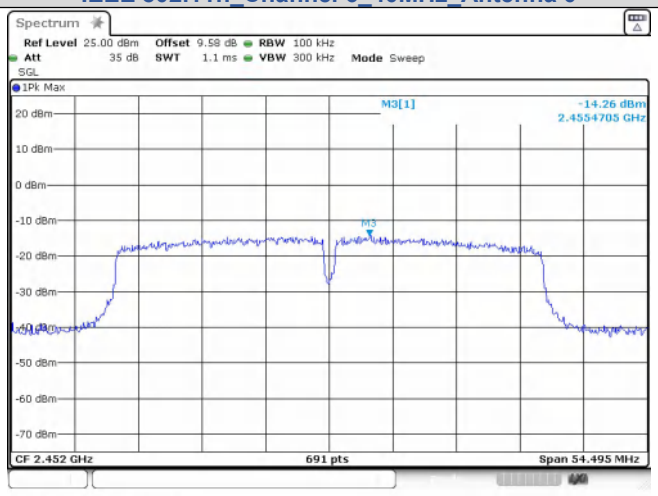
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0

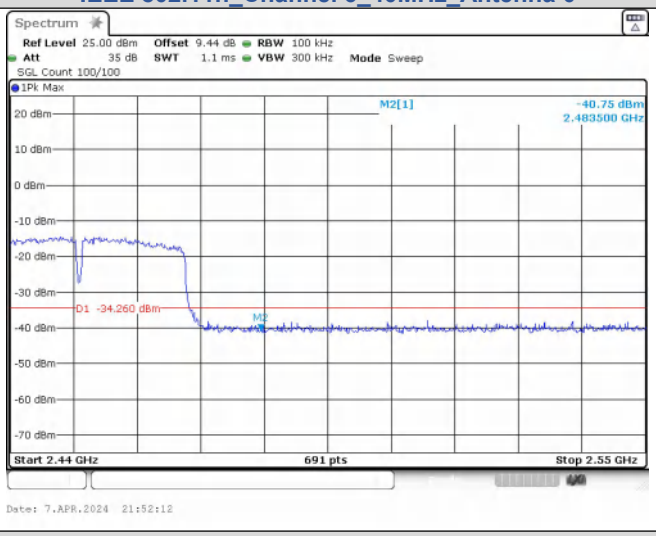
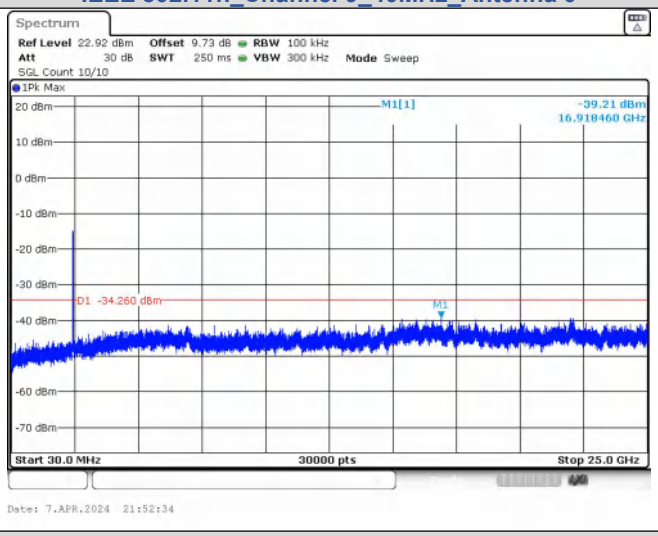


Spurious Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



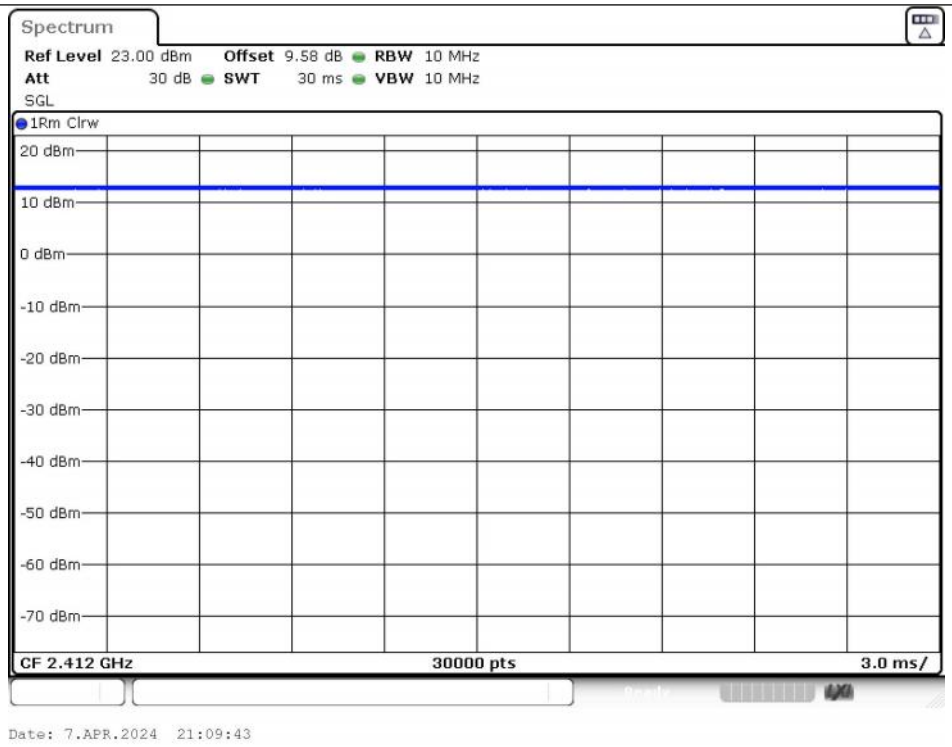
Spurious Emissions IEEE 802.11n_Channel 6_40MHz_Antenna 0	In-Band Reference Level IEEE 802.11n_Channel 9_40MHz_Antenna 0
	
Out Of Band Emission **IEEE 802.11n_Channel 9_40MHz_Antenna 0**	**Spurious Emission** **IEEE 802.11n_Channel 9_40MHz_Antenna 0**

Duty Cycle

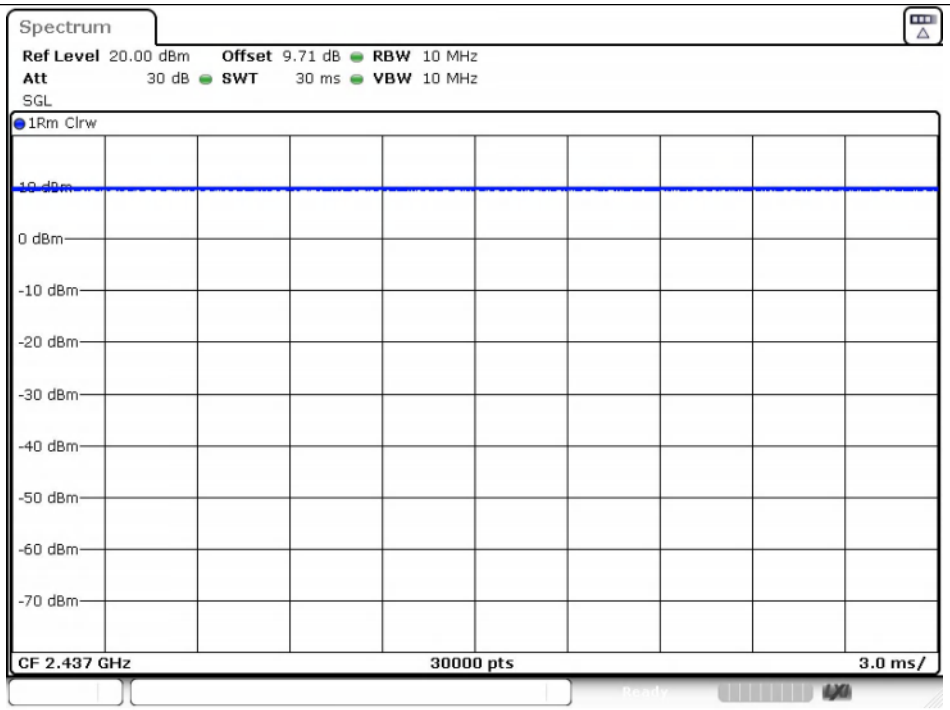
Test Result

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	30.000	30.000	100	1	0.0	0.01
		6		30.000	30.000	100	1	0.0	0.01
		11		30.000	30.000	100	1	0.0	0.01
IEEE 802.11g		1		10.000	10.000	100	1	0.0	0.01
		6		10.000	10.000	100	1	0.0	0.01
		11		10.000	10.000	100	1	0.0	0.01
IEEE 802.11n_20	MCS 0	1		10.000	10.000	100	1	0.0	0.01
		6		10.000	10.000	100	1	0.0	0.01
		11		10.000	10.000	100	1	0.0	0.01
IEEE 802.11n_40		3		10.000	10.000	100	1	0.0	0.01
		6		10.000	10.000	100	1	0.0	0.01
		9		10.000	10.000	100	1	0.0	0.01

Test Graphs

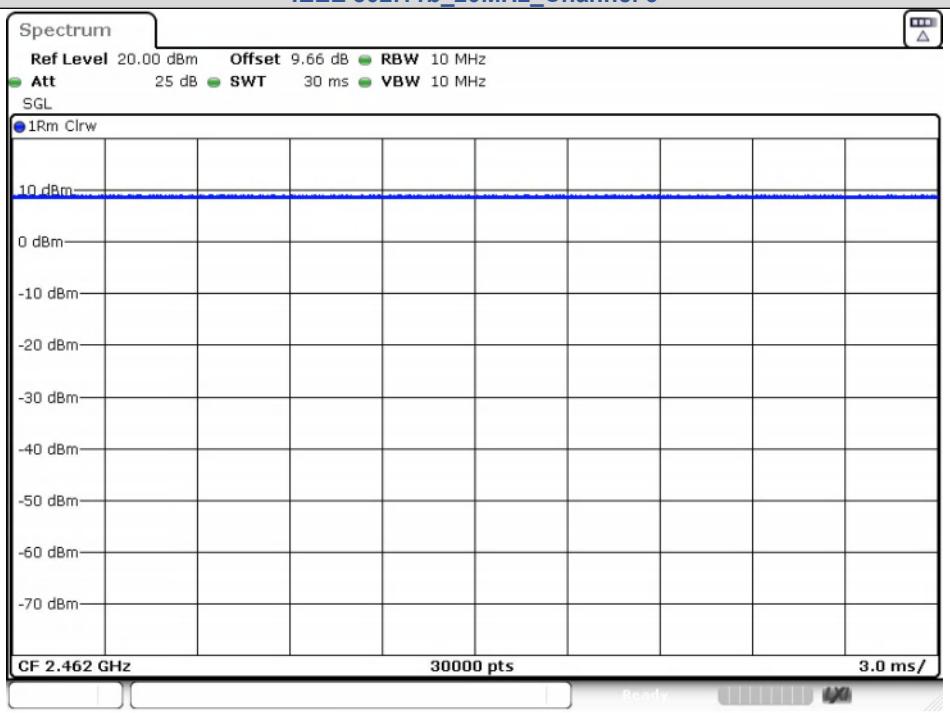


IEEE 802.11b_20MHz_Channel 1



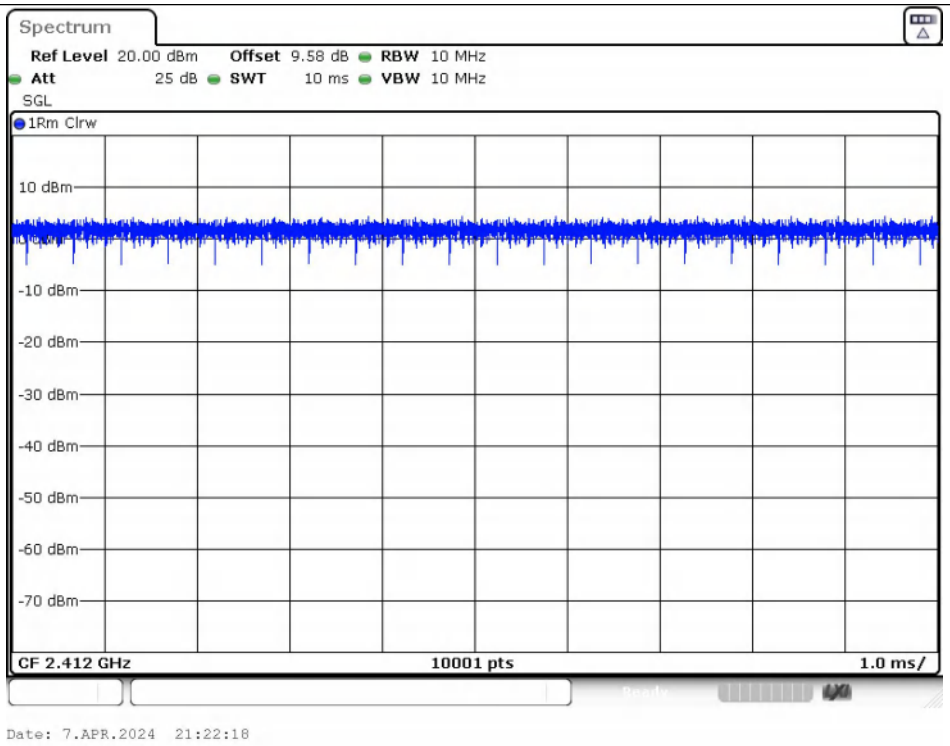
Date: 7.APR.2024 21:14:06

IEEE 802.11b_20MHz_Channel 6

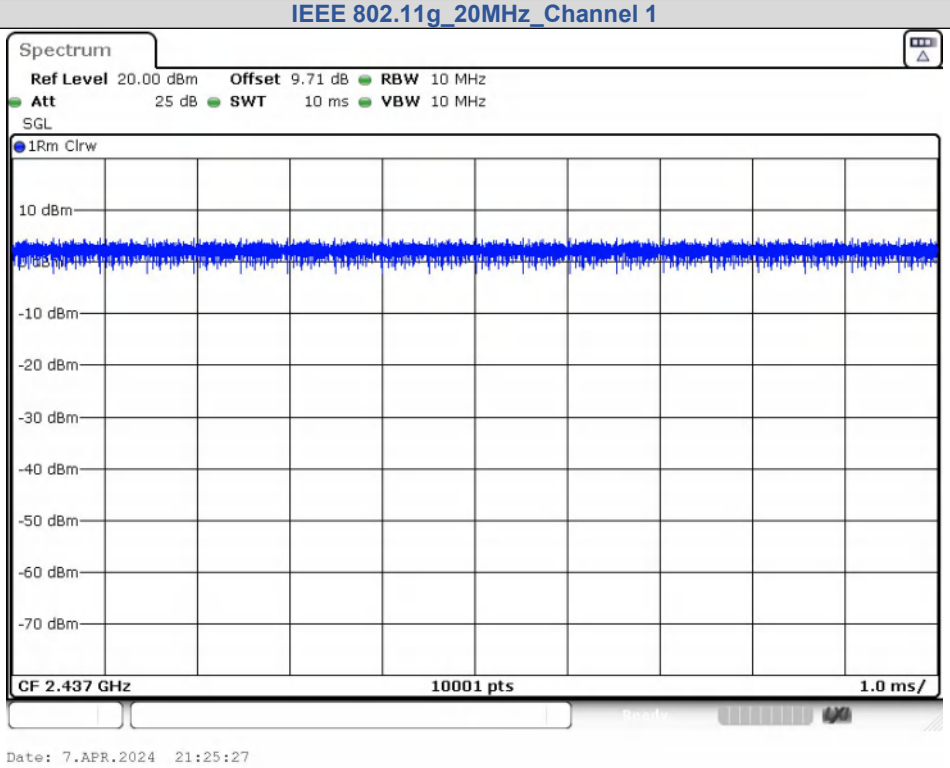


Date: 7.APR.2024 21:16:45

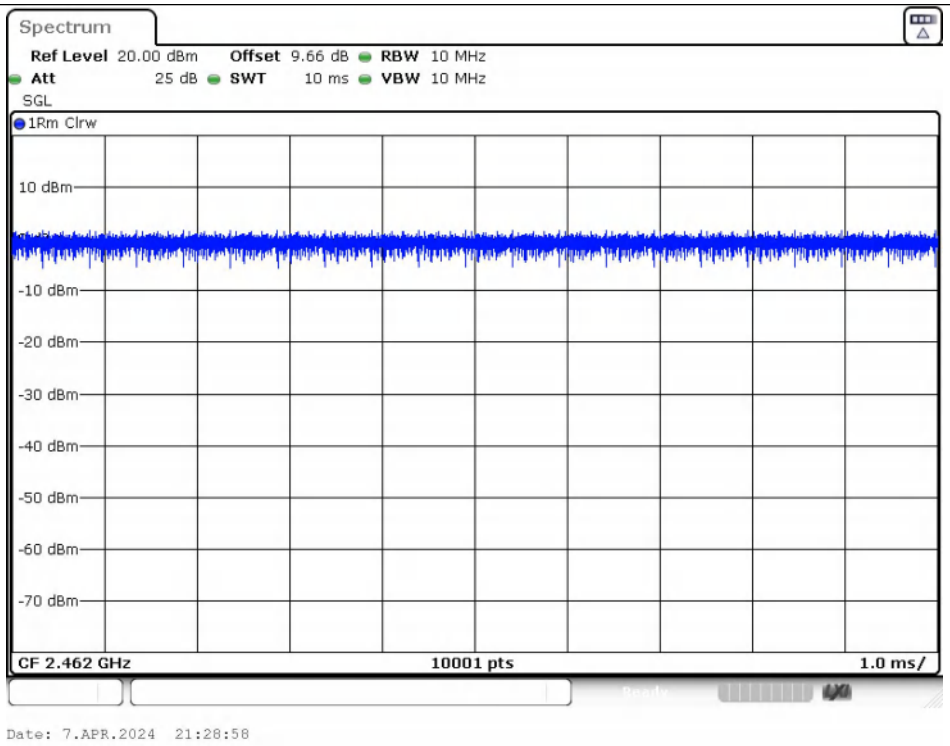
IEEE 802.11b_20MHz_Channel 11



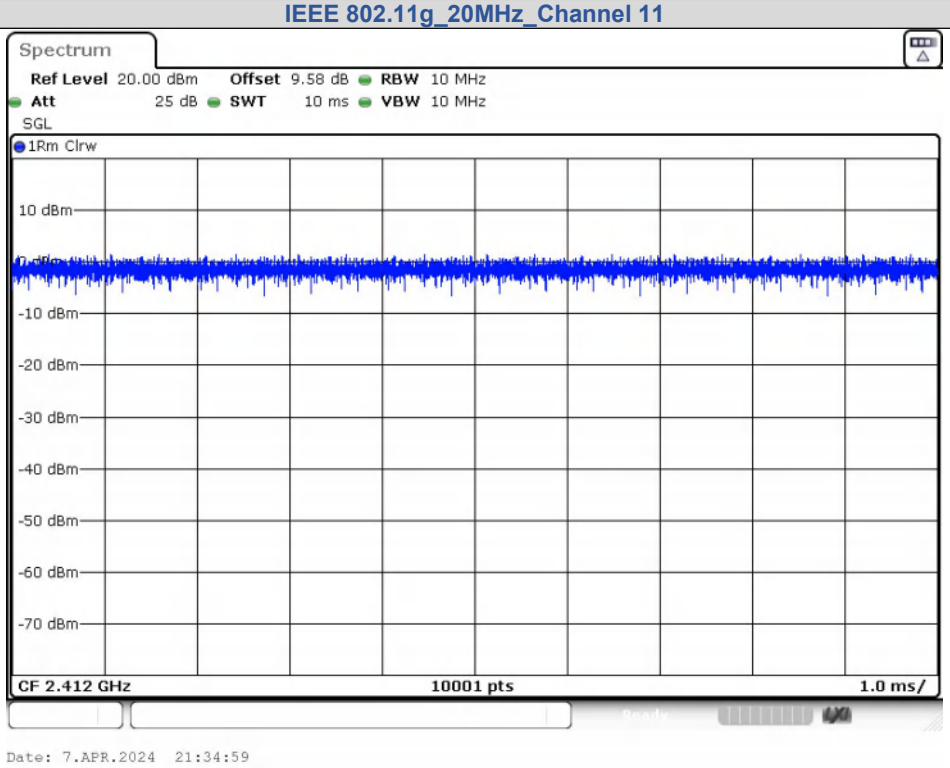
IEEE 802.11g_20MHz_Channel 1



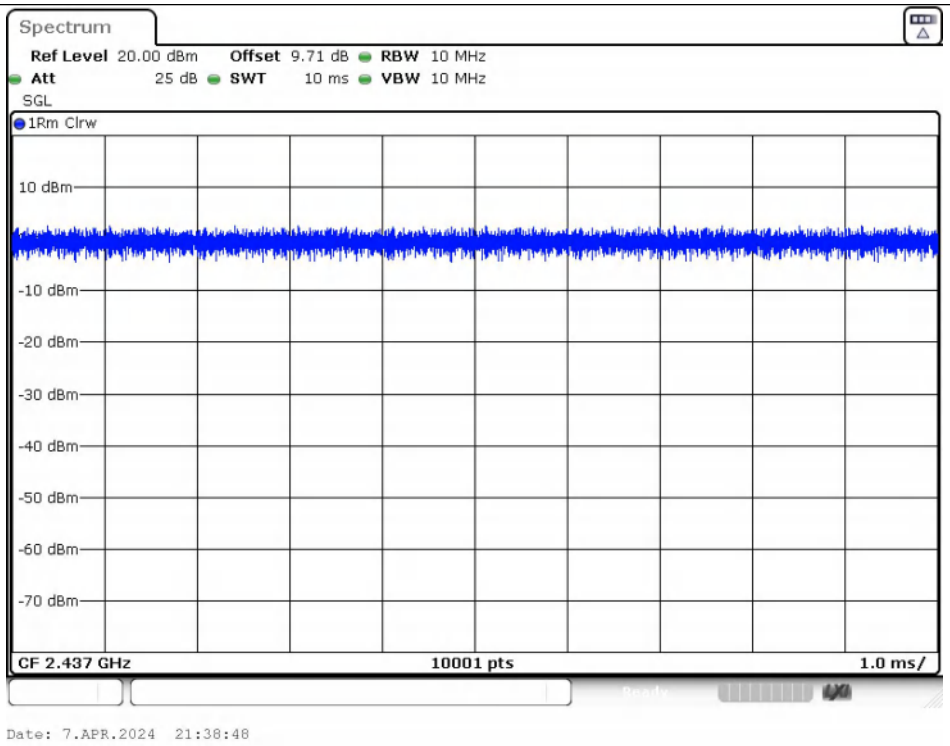
IEEE 802.11g_20MHz_Channel 6



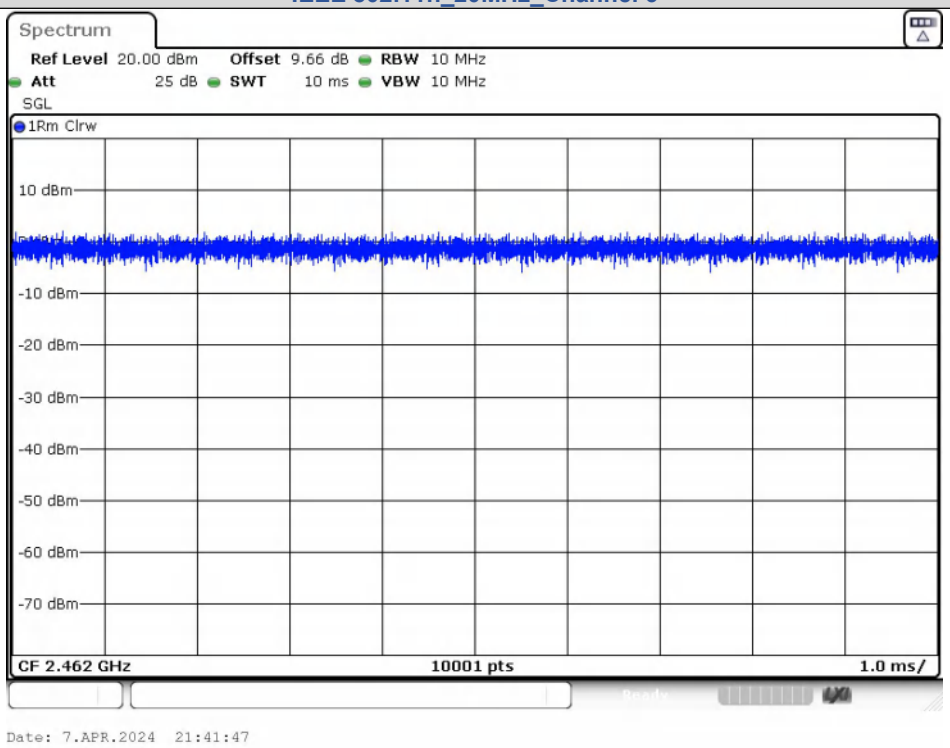
IEEE 802.11g_20MHz_Channel 11



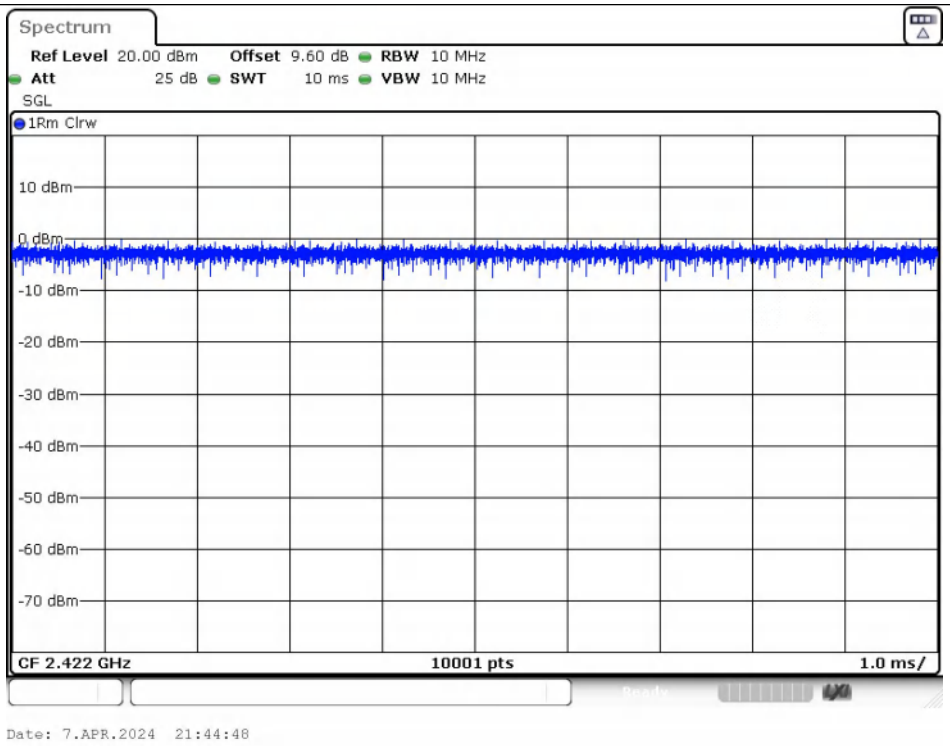
IEEE 802.11n_20MHz_Channel 1



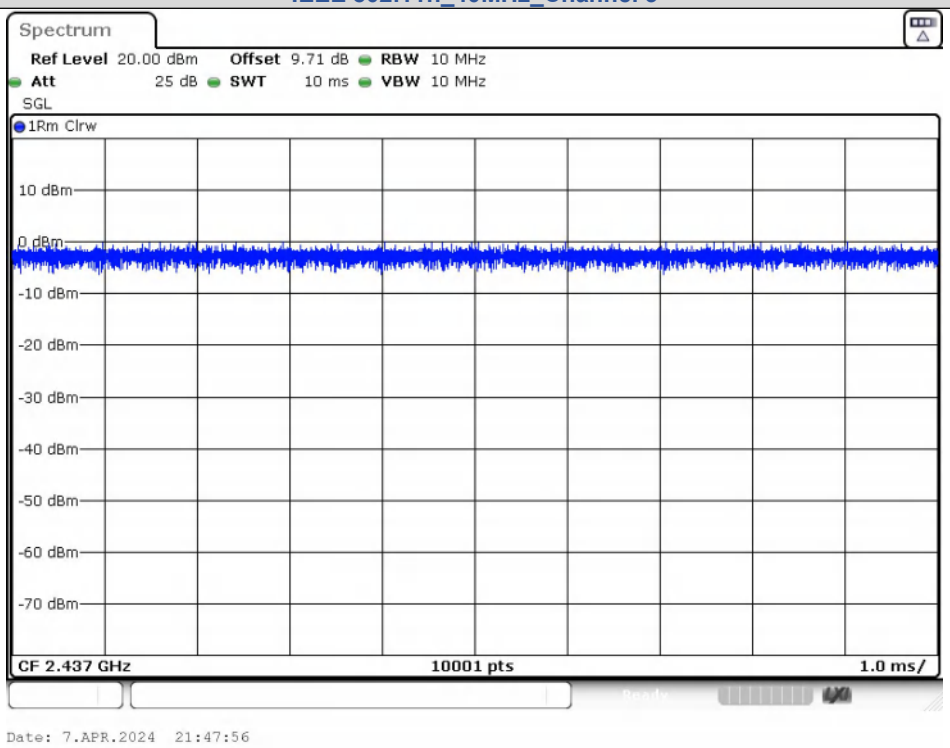
IEEE 802.11n_20MHz_Channel 6



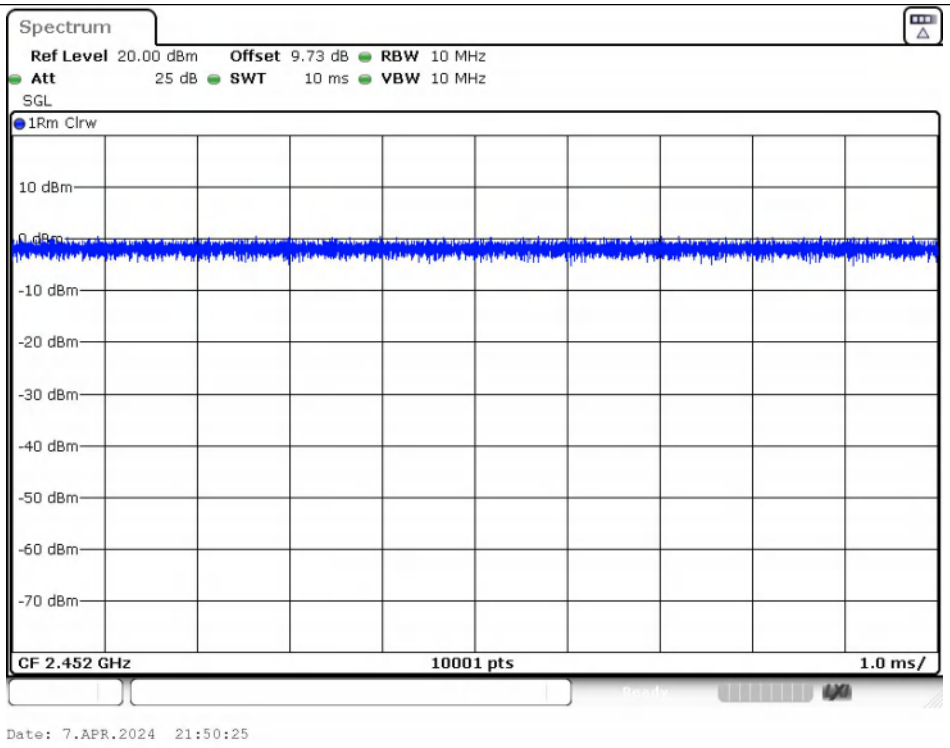
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



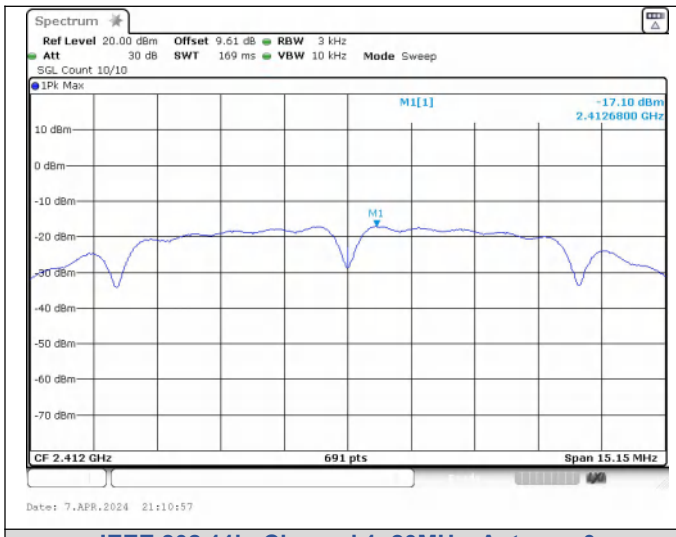
IEEE 802.11n_40MHz_Channel 9

Power Spectral Density

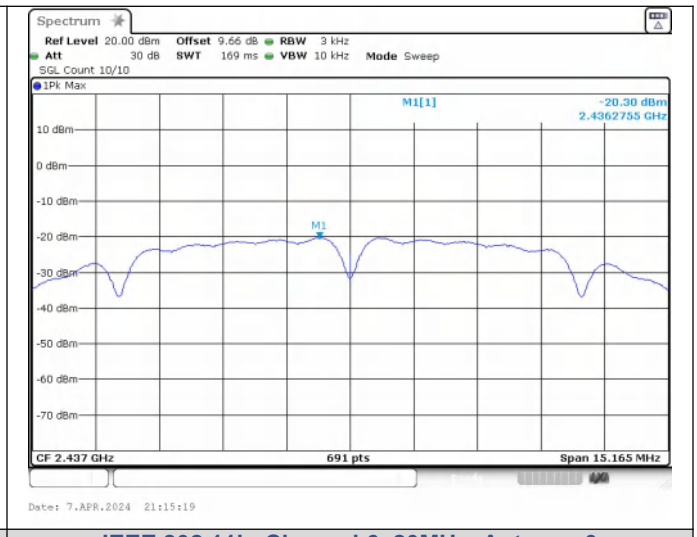
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-17.097	8	PASS
	6	-20.305		PASS
	11	-21.312		PASS
IEEE 802.11g	1	-24.785		PASS
	6	-24.243		PASS
	11	-27.209		PASS
IEEE 802.11n_20	1	-27.047		PASS
	6	-26.407		PASS
	11	-27.242		PASS
IEEE 802.11n_40	3	-26.997		PASS
	6	-26.582		PASS
	9	-26.813		PASS

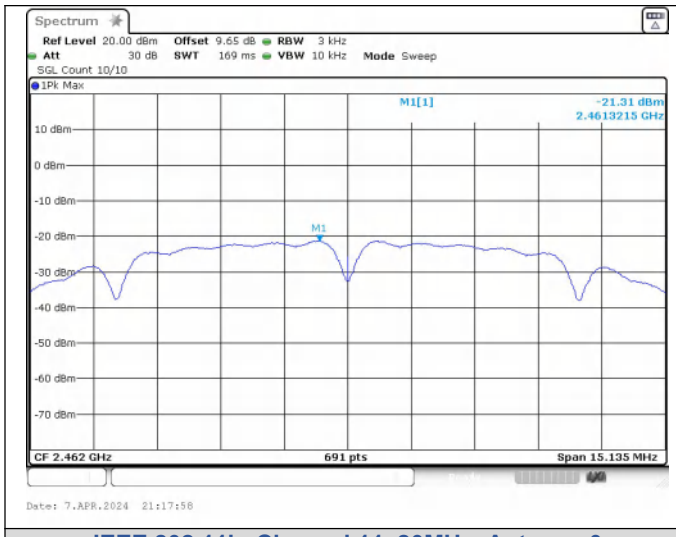
Test Graphs



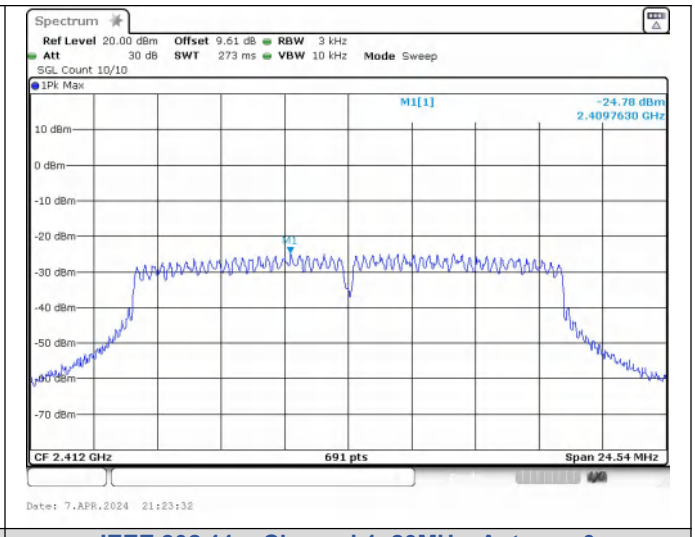
IEEE 802.11b_Channel 1_20MHz_Antenna 0



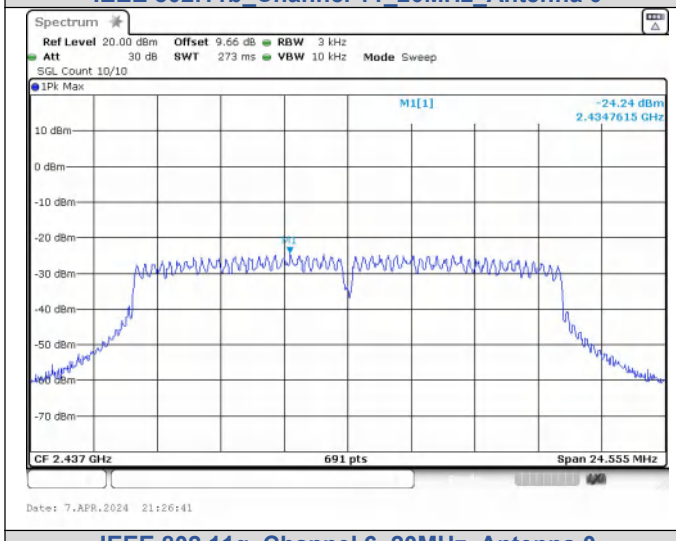
IEEE 802.11b_Channel 6_20MHz_Antenna 0



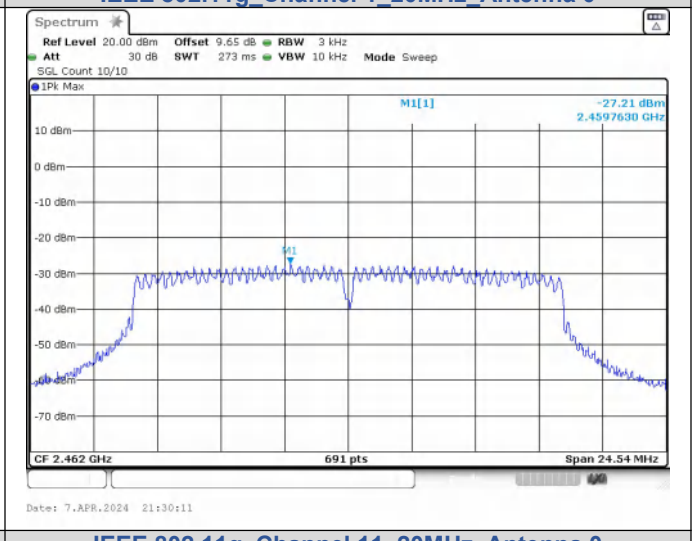
IEEE 802.11b_Channel 11_20MHz_Antenna 0



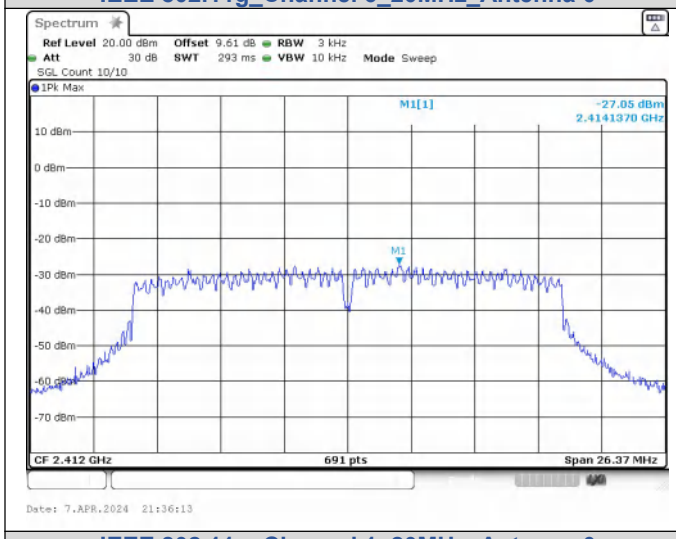
IEEE 802.11g_Channel 1_20MHz_Antenna 0



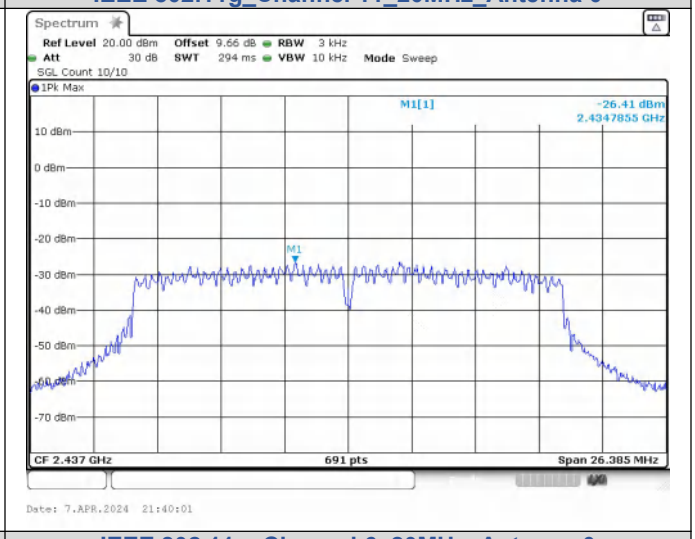
IEEE 802.11g_Channel 6_20MHz_Antenna 0



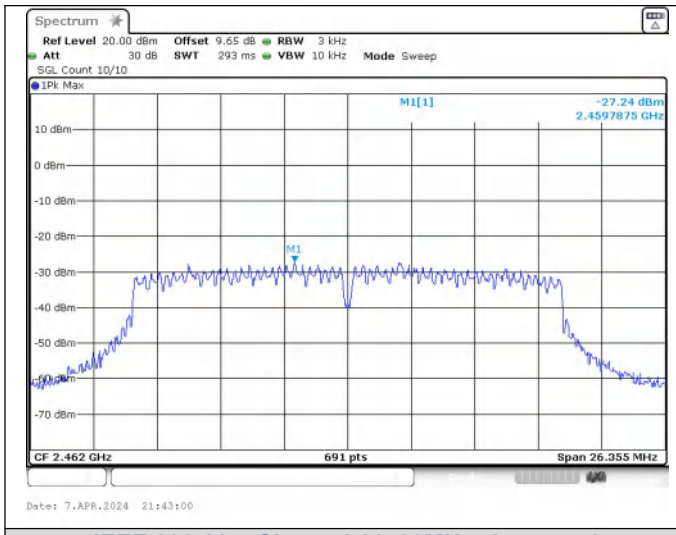
IEEE 802.11g_Channel 11_20MHz_Antenna 0



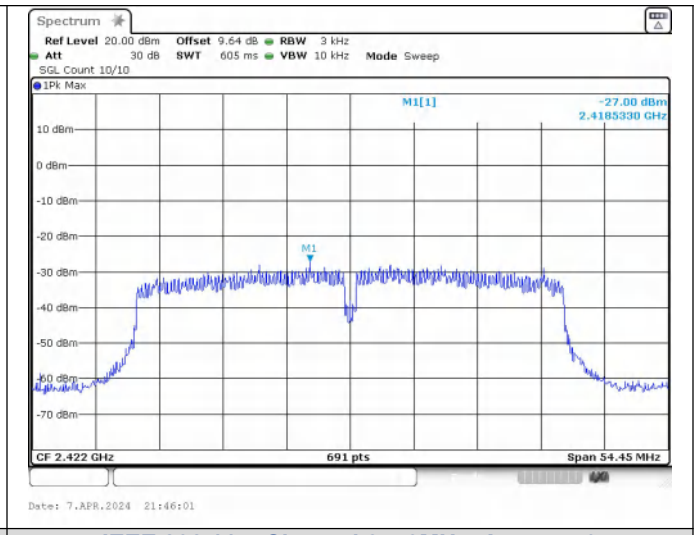
IEEE 802.11n_Channel 1_20MHz_Antenna 0



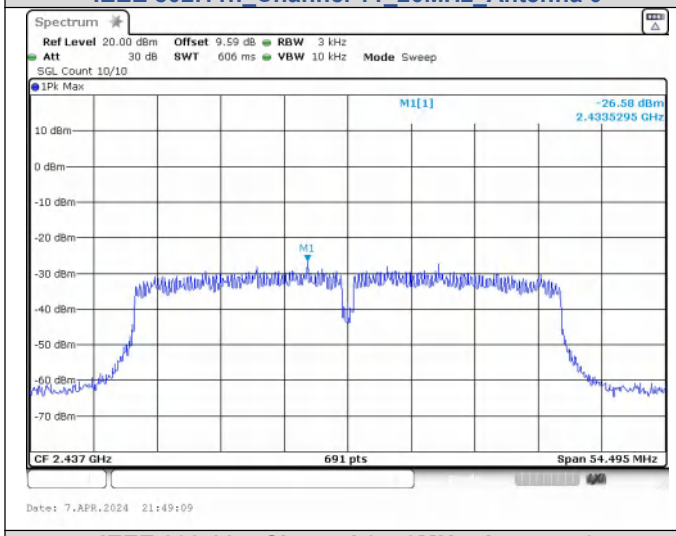
IEEE 802.11n_Channel 6_20MHz_Antenna 0



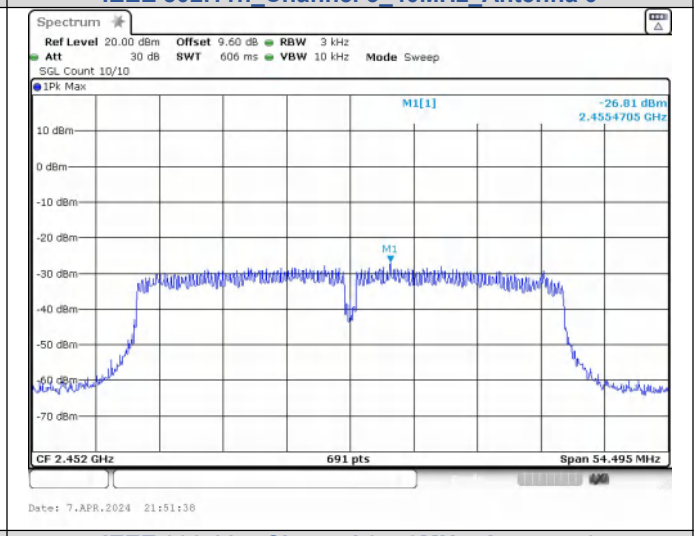
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0