

Appendix

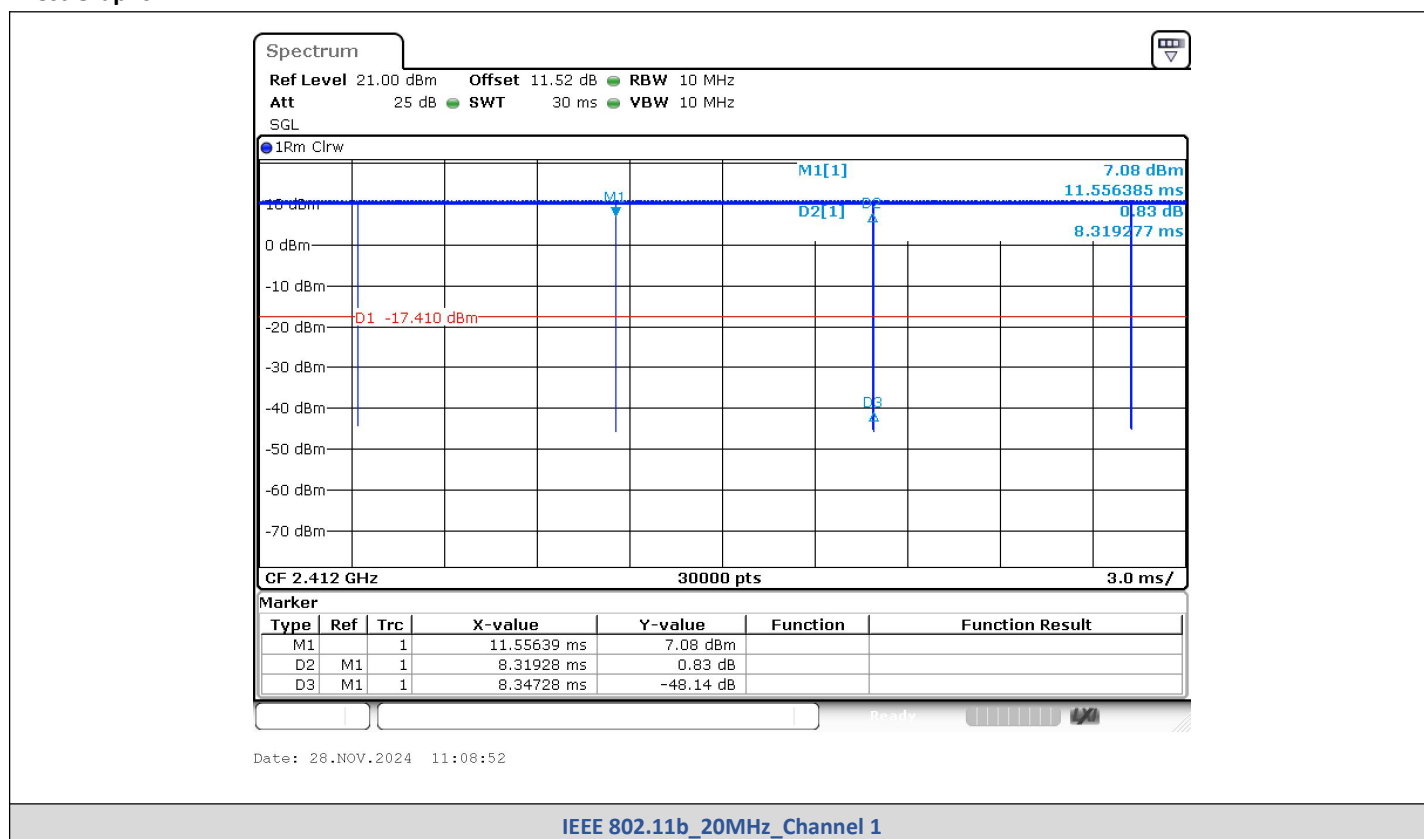
Report No.:	CISRR24112214904
FCC ID:	2AIT9-PA-437
Product Name:	Smoke Alarm
Model No.:	PA-437
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

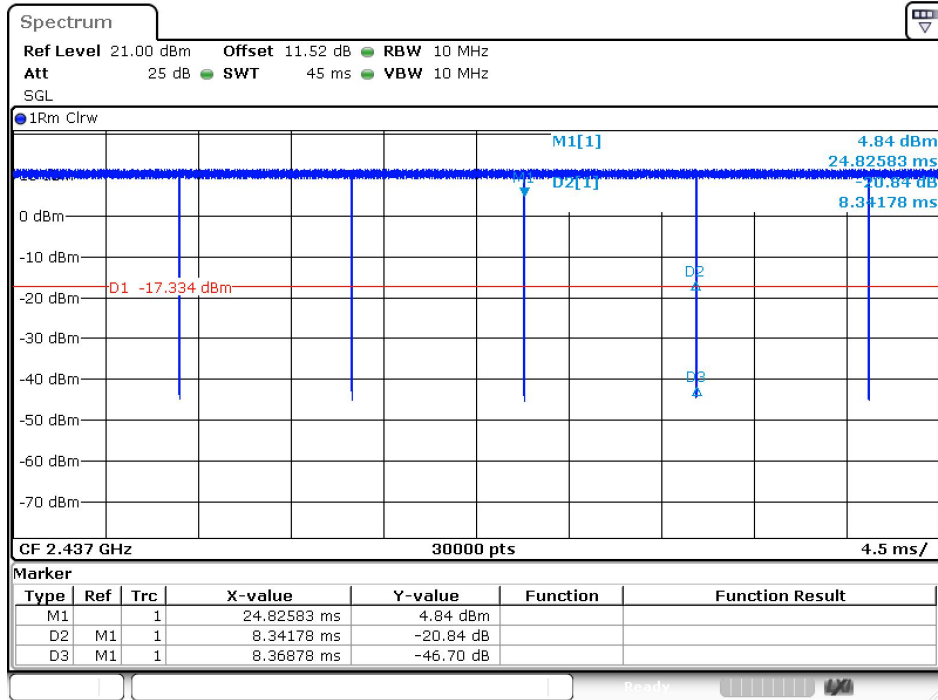
1) Duty Cycle

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	8.319	8.347	99.66	0.9966	0.0148	0.1202
		6		8.342	8.369	99.68	0.9968	0.0139	0.1199
		11		8.319	8.348	99.65	0.9965	0.0152	0.1202
IEEE 802.11g	1	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		1.292	1.326	97.44	0.9744	0.1126	0.7740
		11		1.304	1.338	97.46	0.9746	0.1117	0.7669
IEEE 802.11n_40	MCS 0	3		0.650	0.684	94.94	0.9494	0.2255	1.5385
		6		0.650	0.684	94.94	0.9494	0.2255	1.5385
		9		0.650	0.684	94.94	0.9494	0.2255	1.5385

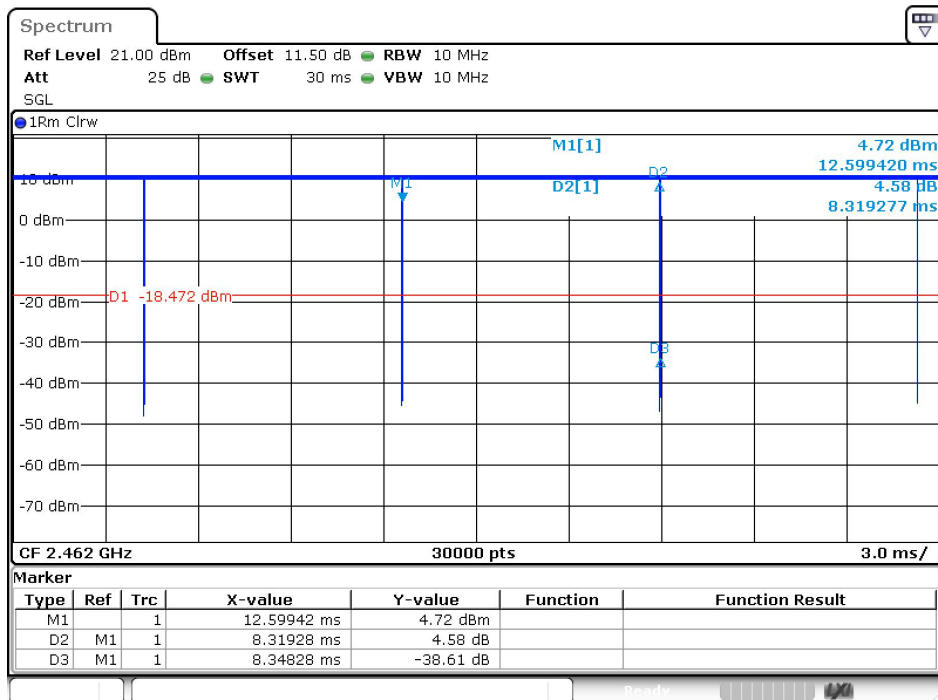
Test Graphs





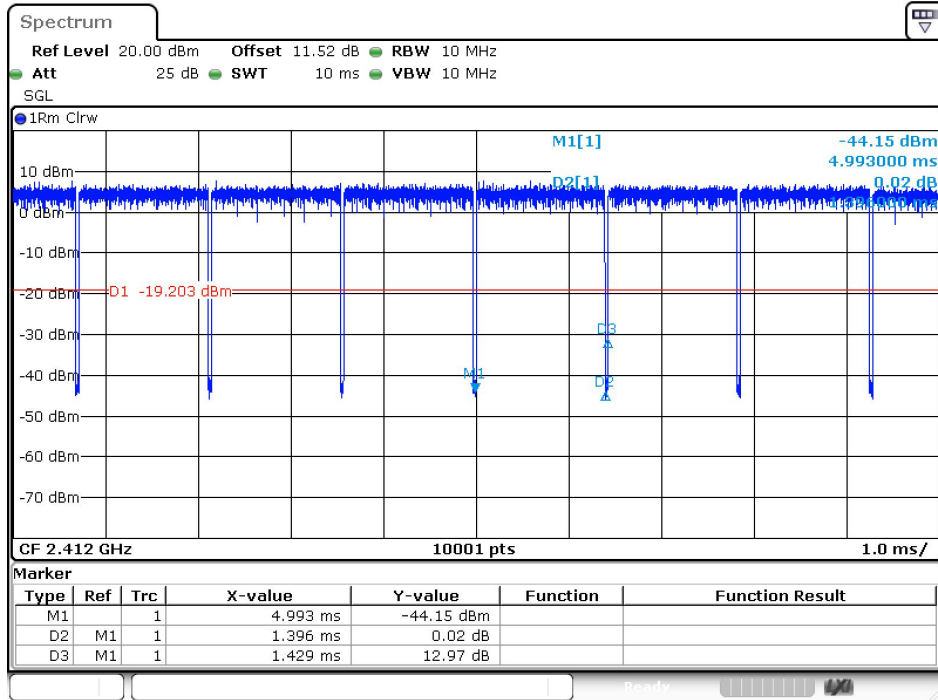
Date: 28.NOV.2024 11:11:48

IEEE 802.11b_20MHz_Channel 6



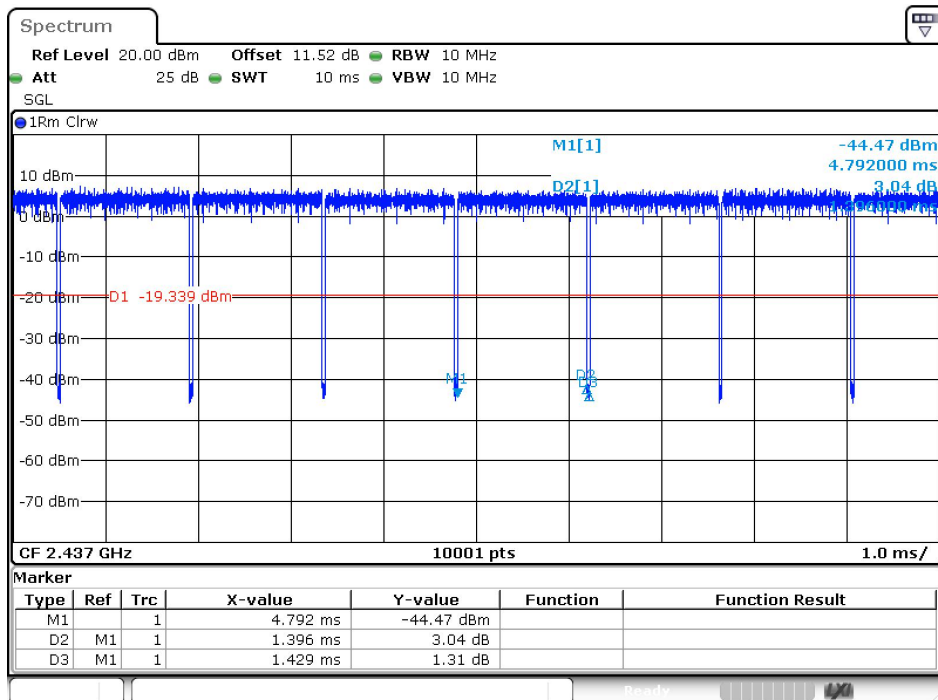
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IEEE 802.11b_20MHz_Channel 11



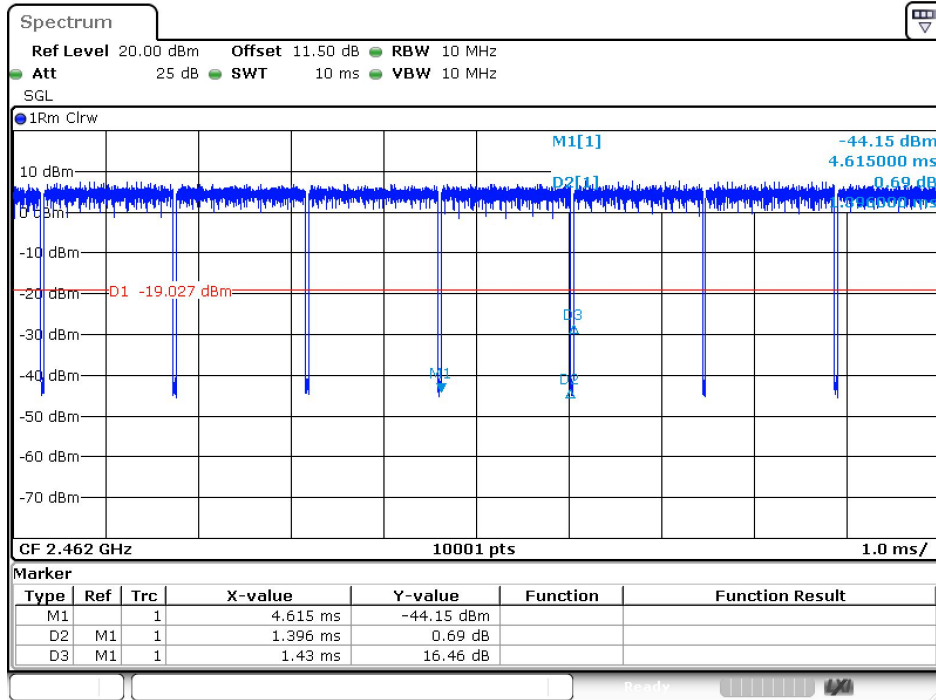
Date: 28.NOV.2024 11:24:29

IEEE 802.11g_20MHz_Channel 1



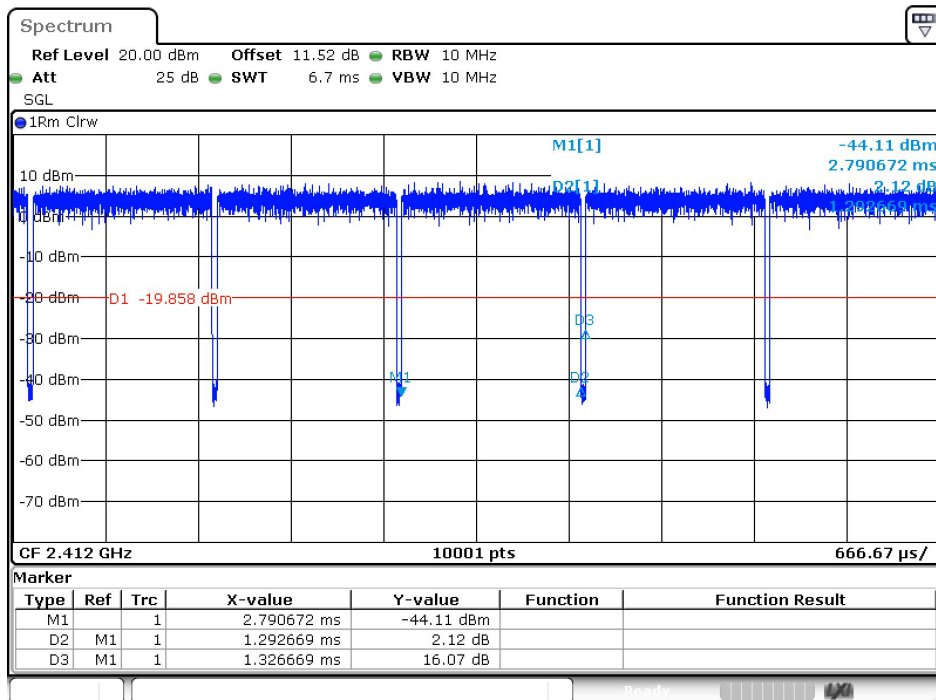
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IEEE 802.11g_20MHz_Channel 6



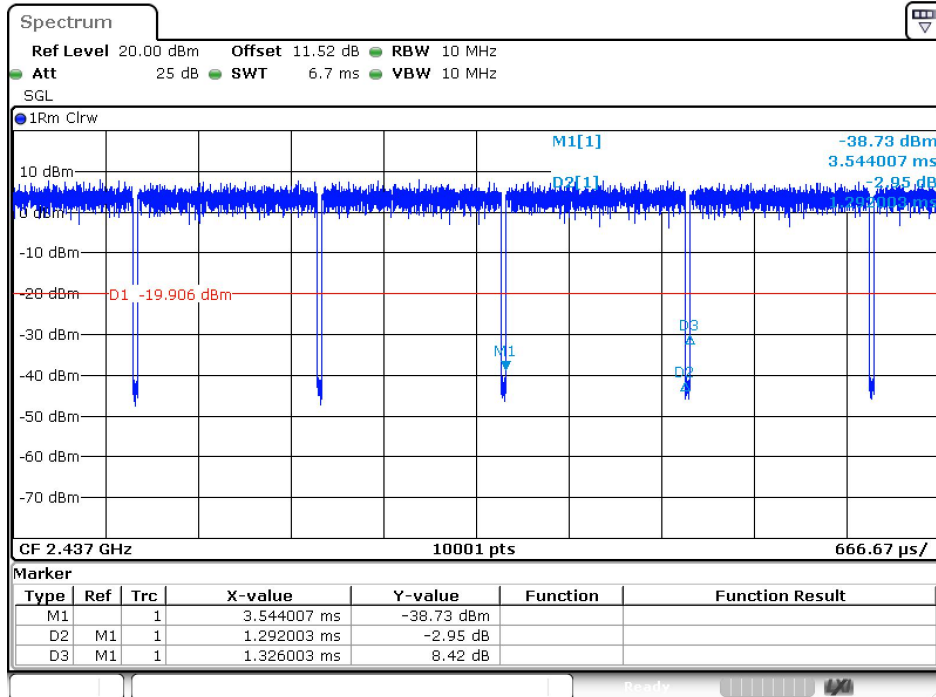
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IEEE 802.11g_20MHz_Channel 11



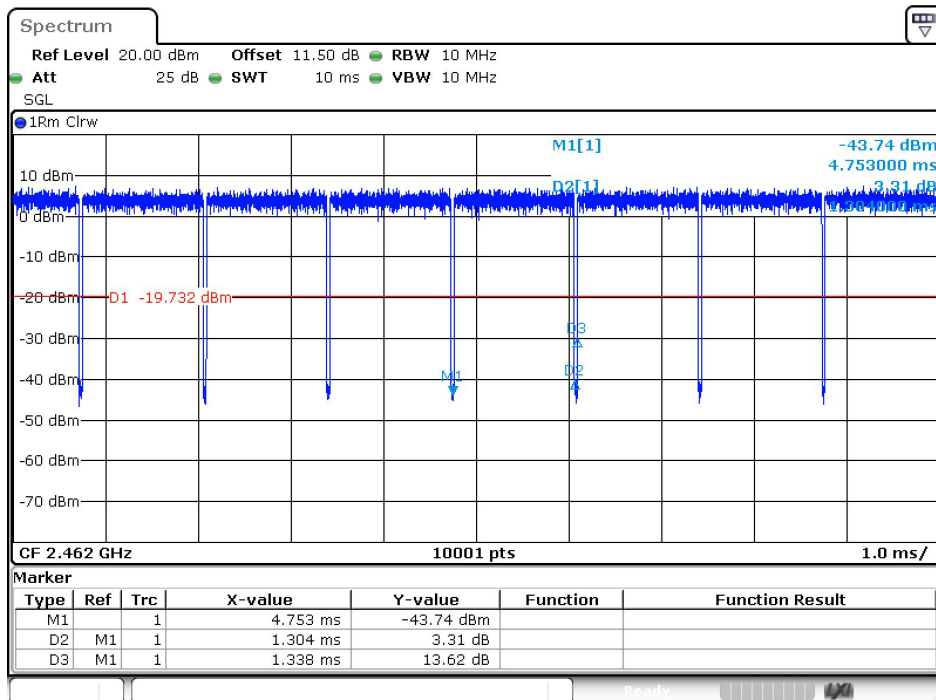
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IEEE 802.11n_20MHz_Channel 1



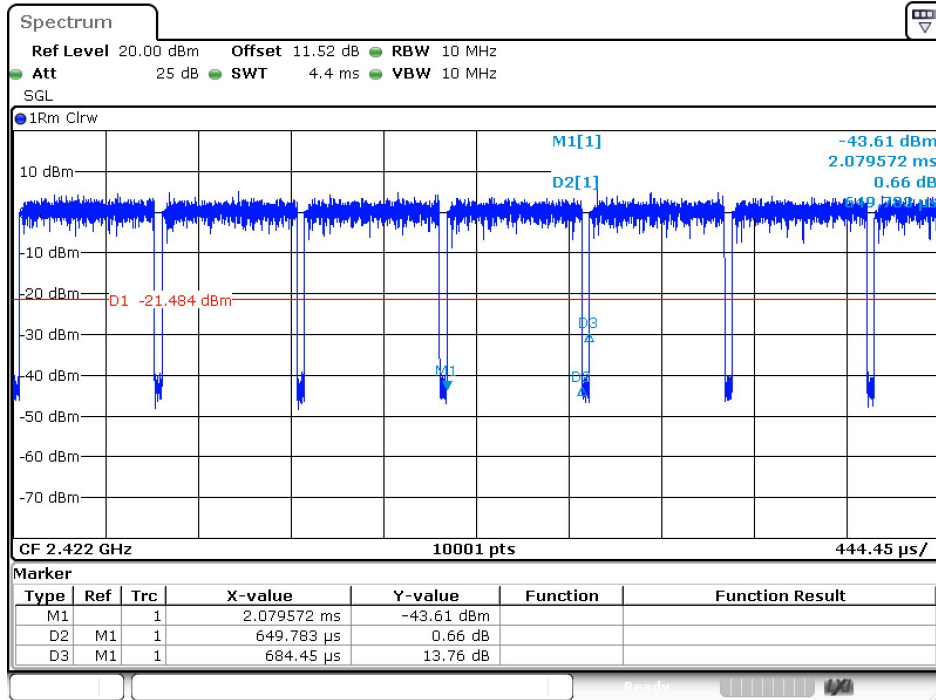
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IEEE 802.11n_20MHz_Channel 6



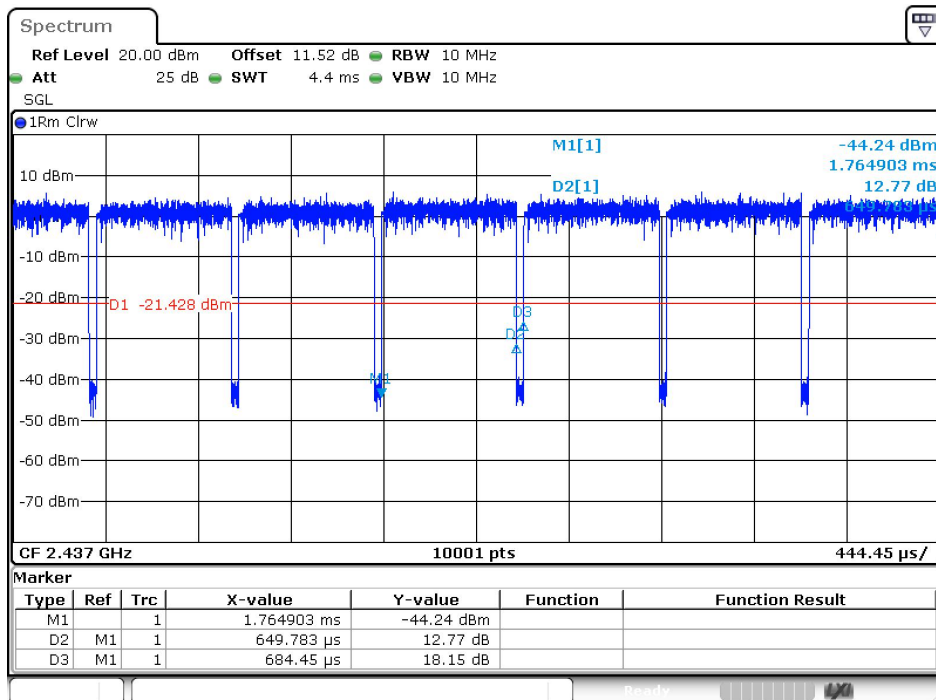
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IEEE 802.11n_20MHz_Channel 11



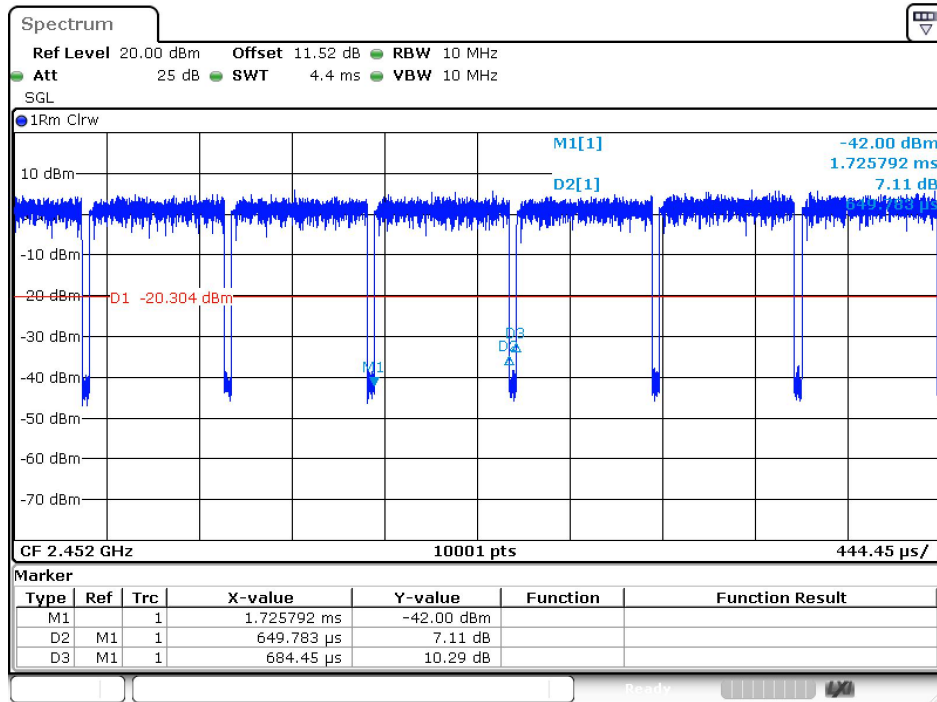
Date: 28.NOV.2024 11:51:48

IEEE 802.11n_40MHz_Channel 3



Date: 28.NOV.2024 11:54:53

IEEE 802.11n_40MHz_Channel 6



Date: 28.NOV.2024 11:57:40

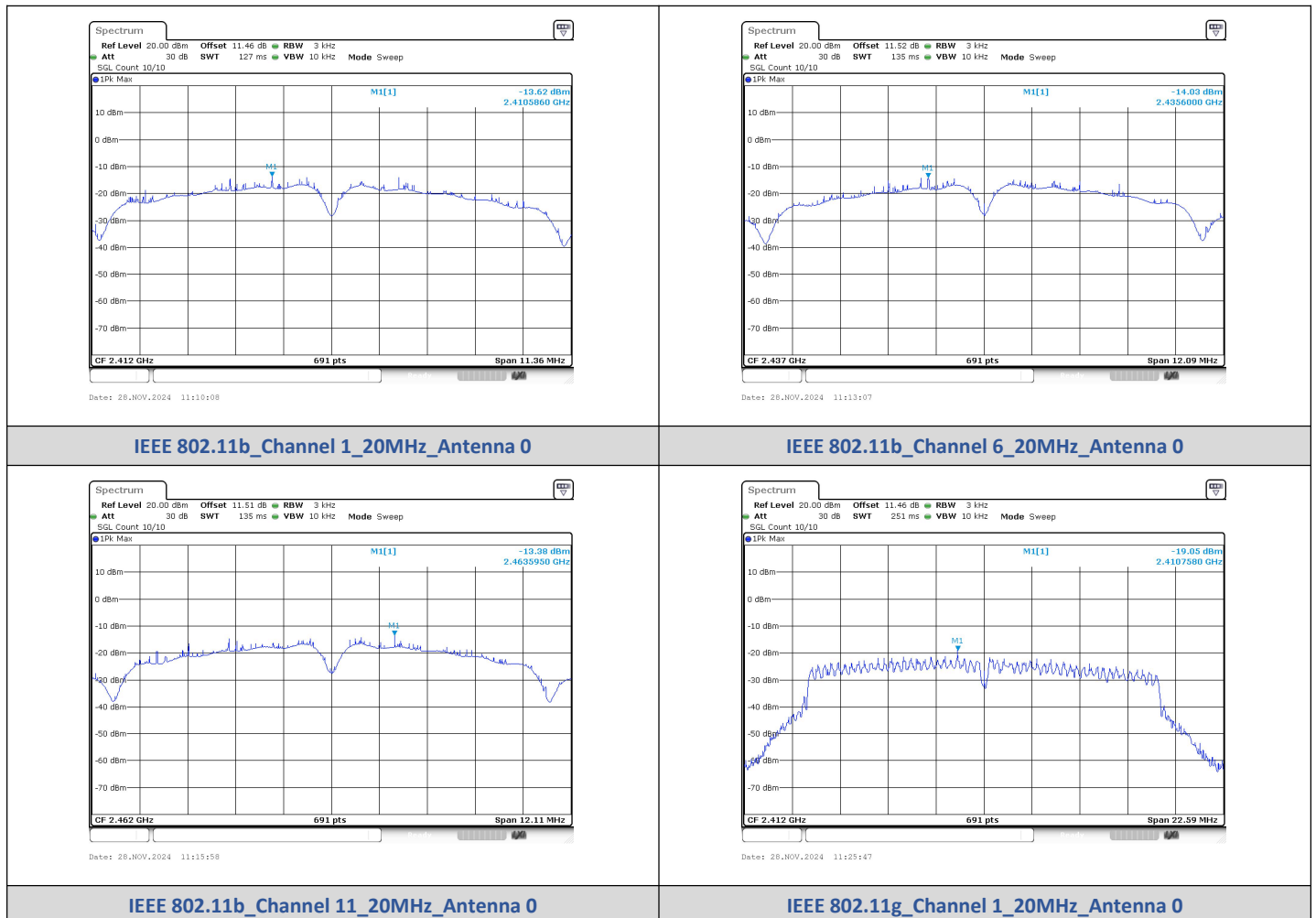
IEEE 802.11n_40MHz_Channel 9

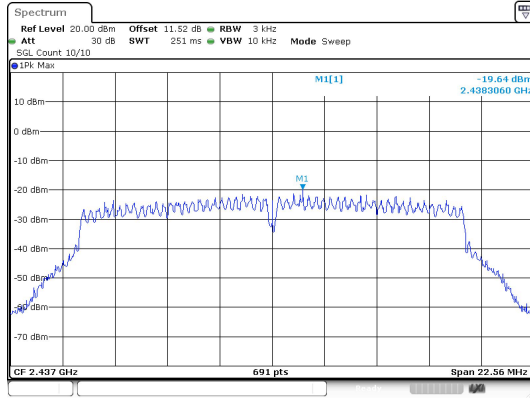
2) Power Spectral Density

Test Result

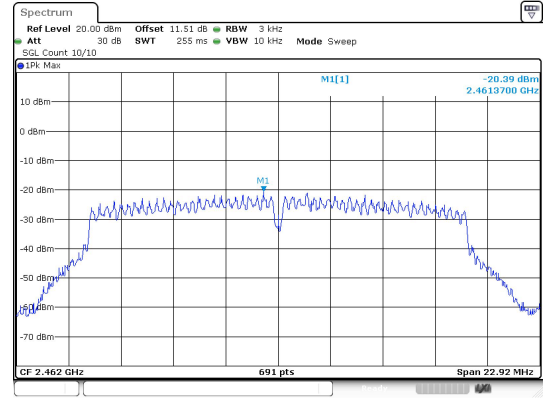
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-13.620	≤8	PASS
	6	-14.030		PASS
	11	-13.380		PASS
IEEE 802.11g	1	-19.050		PASS
	6	-19.640		PASS
	11	-20.390		PASS
IEEE 802.11n_20	1	-20.920		PASS
	6	-20.730		PASS
	11	-20.310		PASS
IEEE 802.11n_40	3	-22.700		PASS
	6	-23.640		PASS
	9	-23.340		PASS

Test Graphs

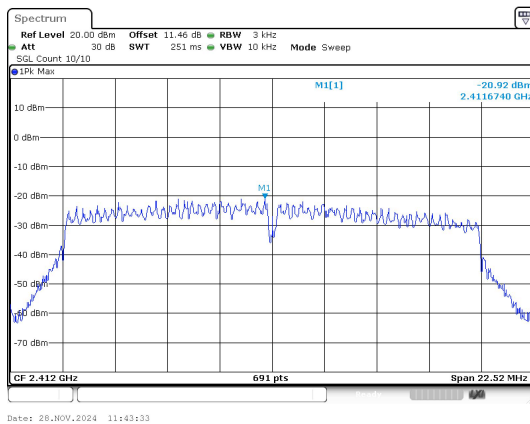




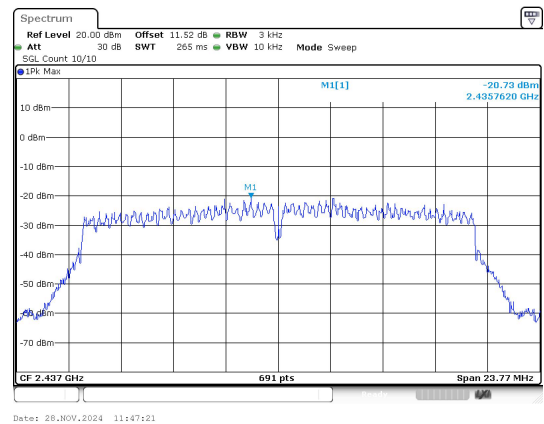
IEEE 802.11g_Channel 6_20MHz_Antenna 0



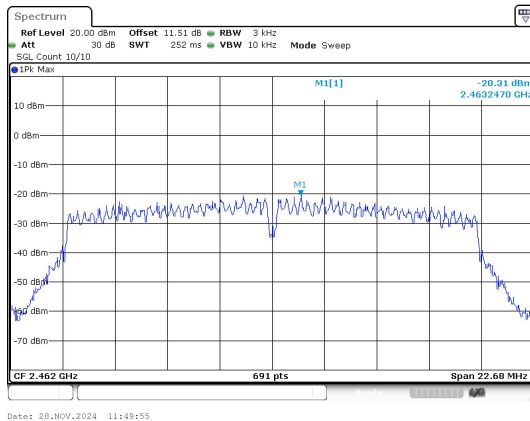
IEEE 802.11g_Channel 11_20MHz_Antenna 0



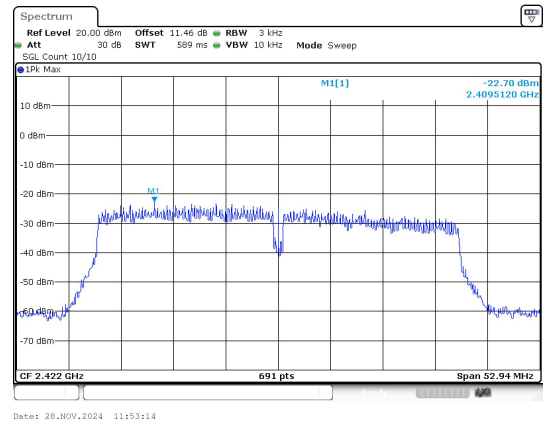
IEEE 802.11n_Channel 1_20MHz_Antenna 0



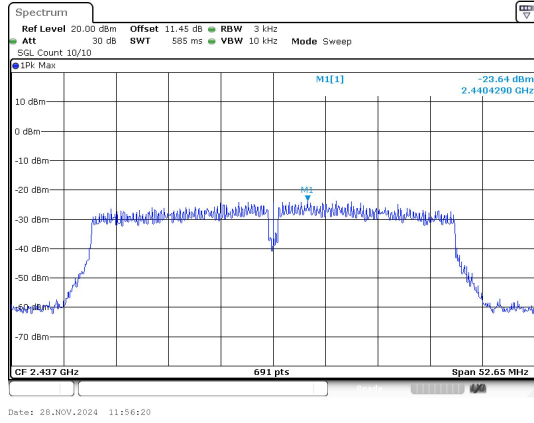
IEEE 802.11n_Channel 6_20MHz_Antenna 0



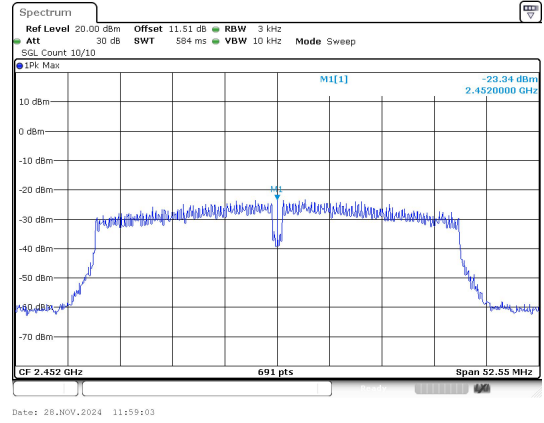
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

3) Conducted Peak Output Power

Test Result

Conducted Output Power

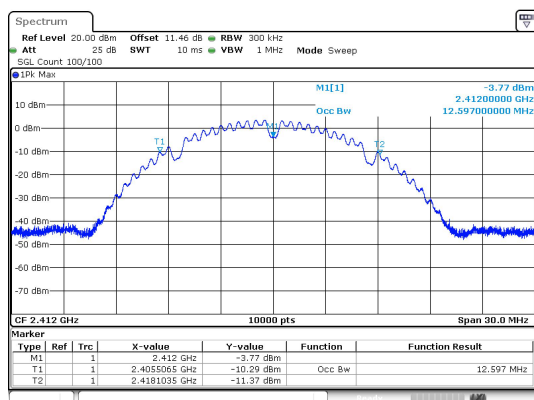
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	13.40	≤30	PASS
	6	13.57	≤30	PASS
	11	13.68	≤30	PASS
IEEE 802.11g	1	13.46	≤30	PASS
	6	13.44	≤30	PASS
	11	13.56	≤30	PASS
IEEE 802.11n_20	1	13.16	≤30	PASS
	6	13.26	≤30	PASS
	11	13.37	≤30	PASS
IEEE 802.11n_40	3	13.36	≤30	PASS
	6	13.51	≤30	PASS
	9	13.71	≤30	PASS

4) 99% Bandwidth

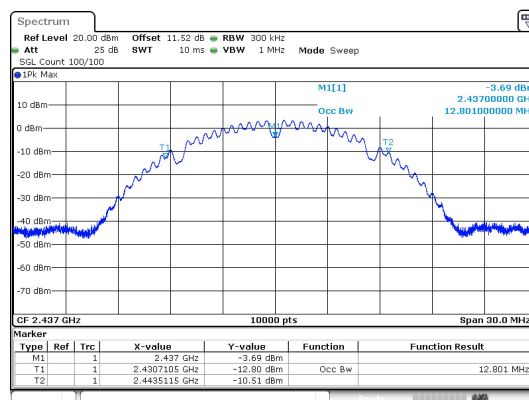
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.597
	6		2437	12.801
	11		2462	12.699
IEEE 802.11g	1		2412	16.503
	6		2437	16.641
	11		2462	16.542
IEEE 802.11n_20	1		2412	17.532
	6		2437	17.652
	11		2462	17.562
IEEE 802.11n_40	3		2422	36.120
	6		2437	36.168
	9		2452	35.820

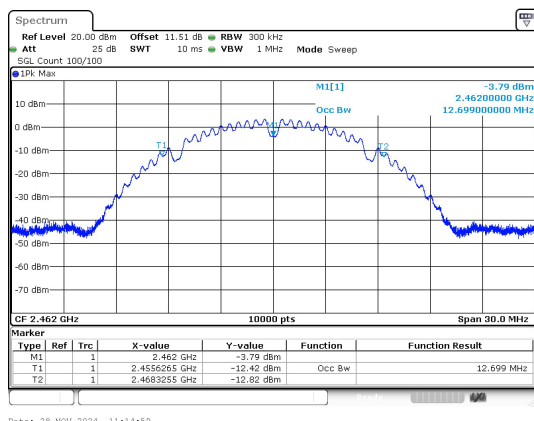
Test Graphs



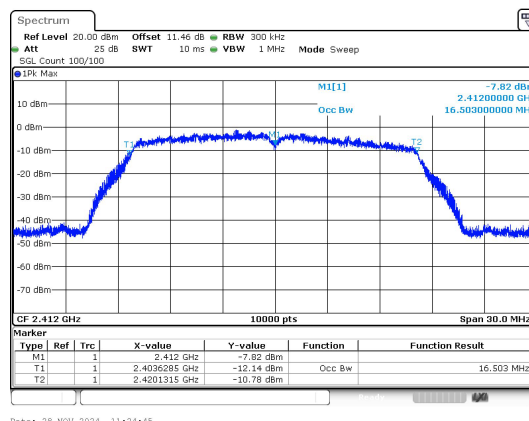
IEEE 802.11b_Channel 1_20MHz_Antenna 0



IEEE 802.11b_Channel 6_20MHz_Antenna 0



IEEE 802.11b_Channel 11_20MHz_Antenna 0



IEEE 802.11g_Channel 1_20MHz_Antenna 0