Appendix A

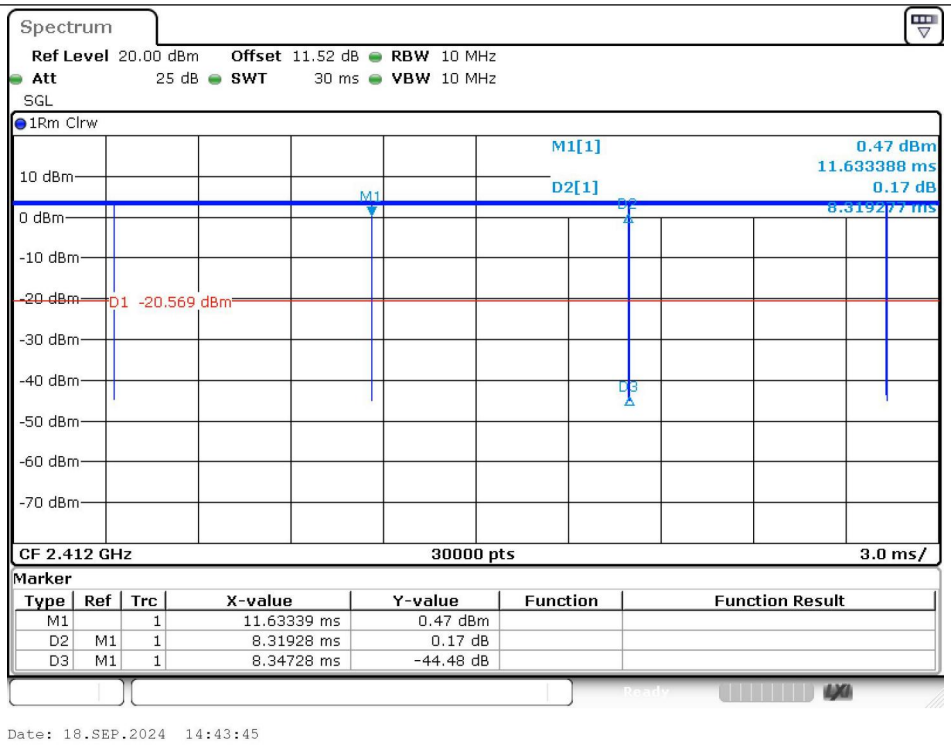
Report No.:	CISRR240911095
FCC ID:	2BFT7-Z16
Product Name:	Intelligent monitor
Model No.:	Z16
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

Duty Cycle

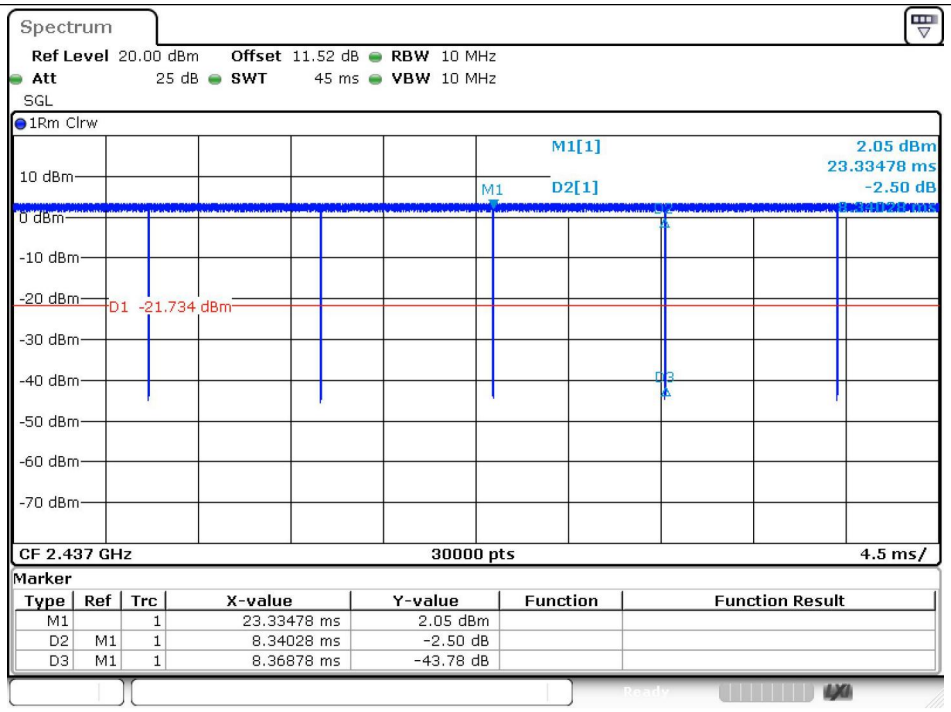
Test Result

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	8.319	8.347	99.66	0.9966	0.0148	0.12
		6		8.340	8.369	99.66	0.9966	0.0148	0.12
		11		8.319	8.348	99.65	0.9965	0.0152	0.12
IEEE 802.11g		1		1.396	1.429	97.69	0.9769	0.1015	0.72
		6		1.396	1.429	97.69	0.9769	0.1015	0.72
		11		1.396	1.430	97.62	0.9762	0.1046	0.72
IEEE 802.11n_20	MCS 0	1		1.304	1.338	97.46	0.9746	0.1117	0.77
		6		1.293	1.327	97.44	0.9744	0.1126	0.77
		11		1.293	1.327	97.44	0.9744	0.1126	0.77
IEEE 802.11n_40		3		0.650	0.684	95.00	0.9500	0.2228	1.54
		6		0.650	0.684	94.94	0.9494	0.2255	1.54
		9		0.650	0.684	95.00	0.9500	0.2228	1.54

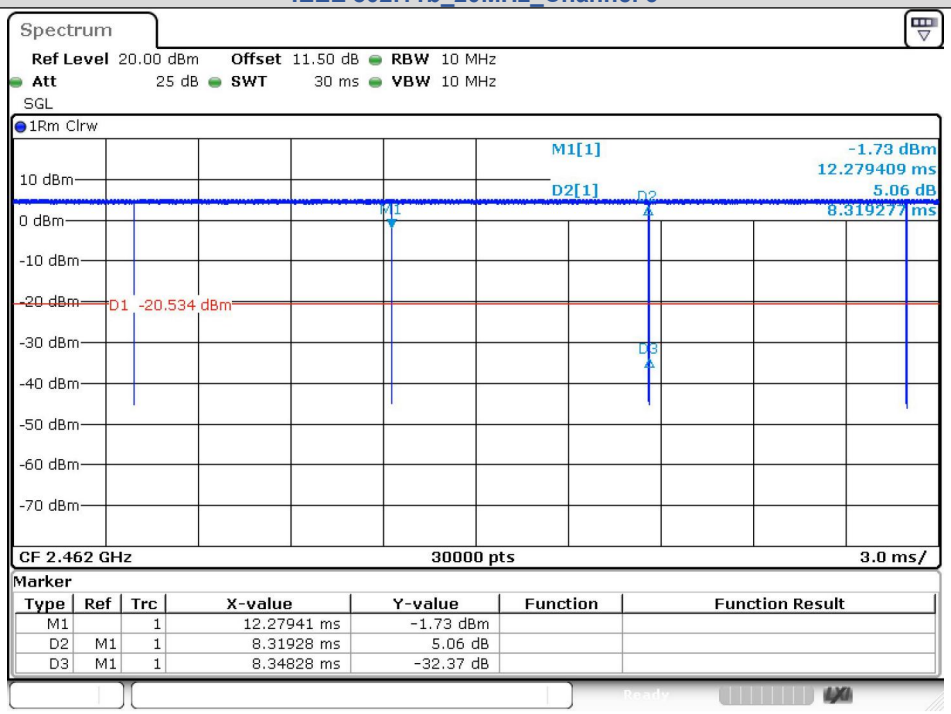
Test Graphs



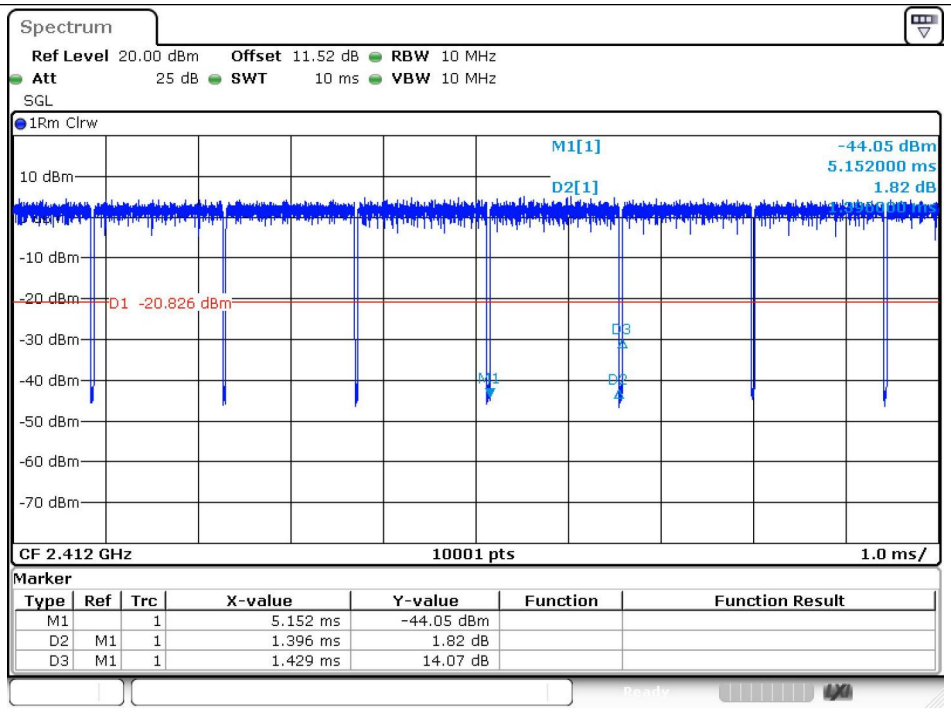
IEEE 802.11b_20MHz_Channel 1



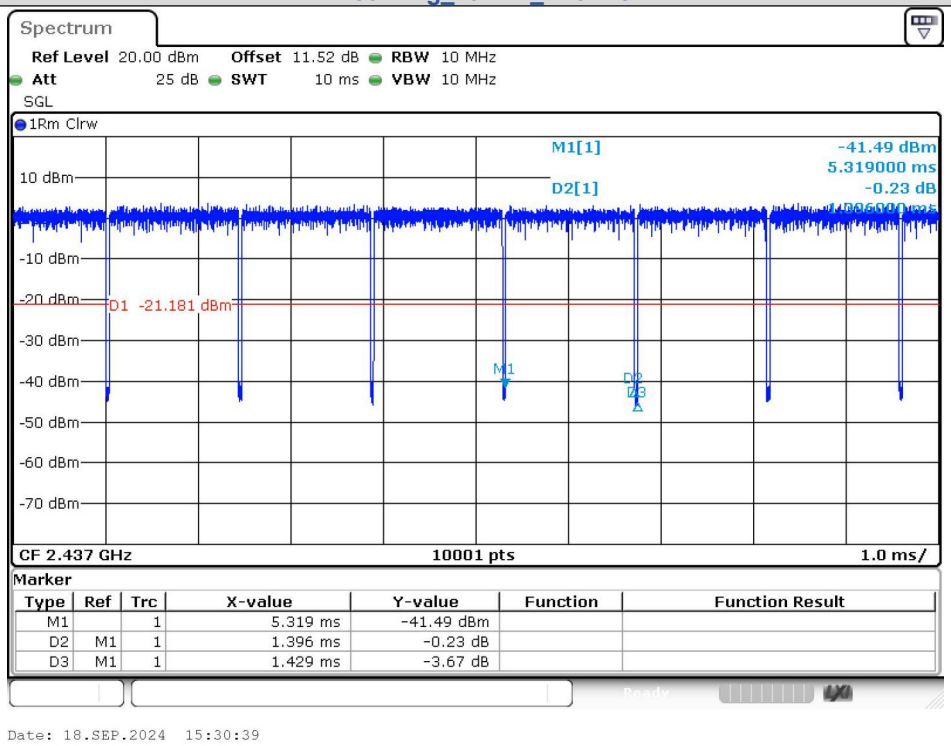
IEEE 802.11b_20MHz_Channel 6



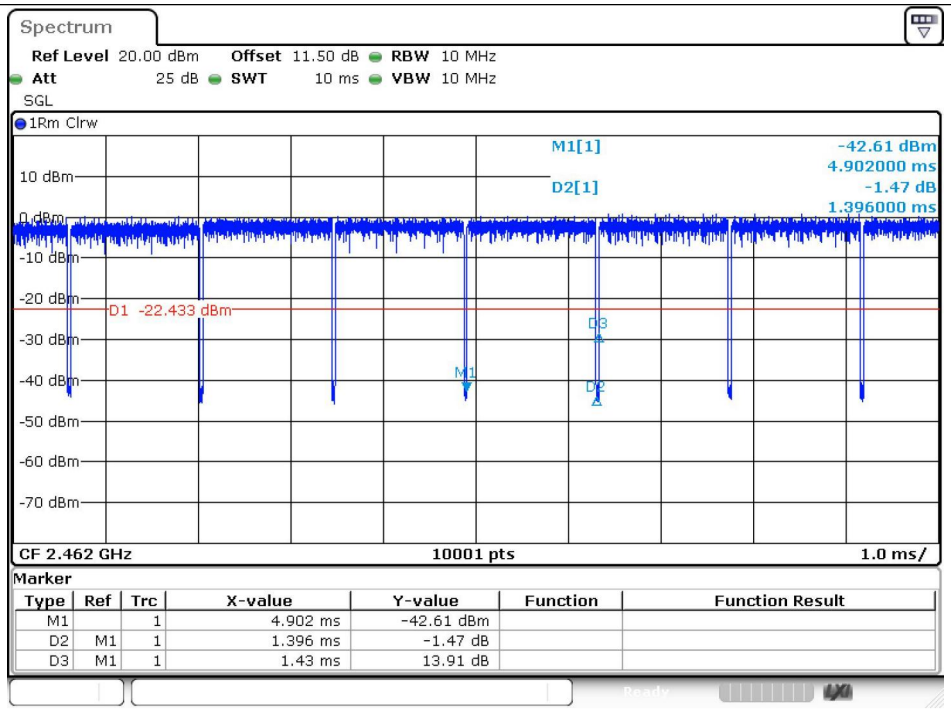
IEEE 802.11b_20MHz_Channel 11



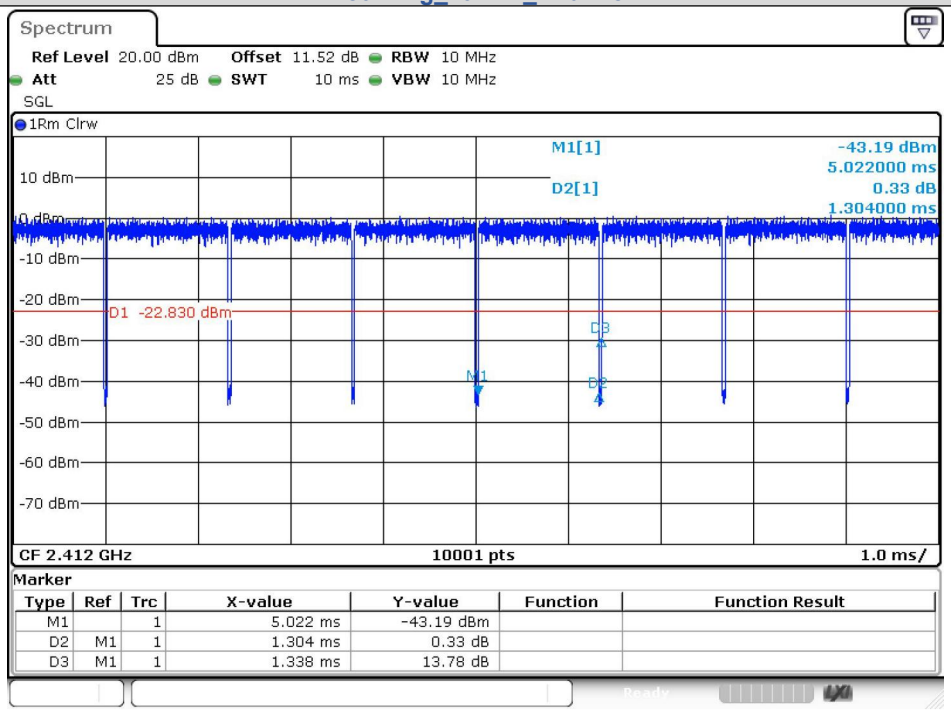
IEEE 802.11g_20MHz_Channel 1



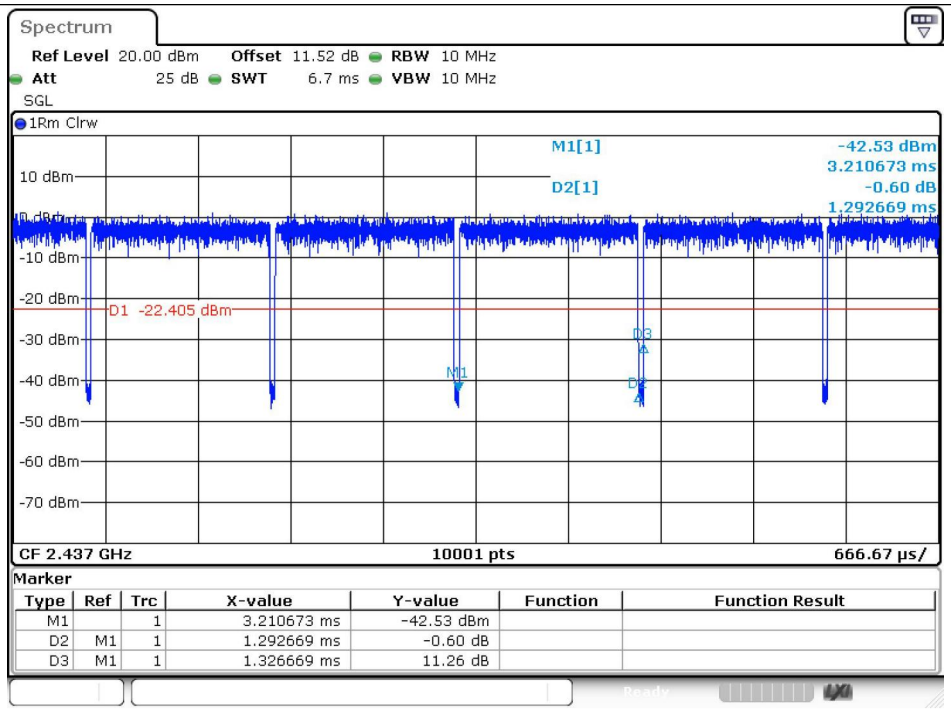
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1

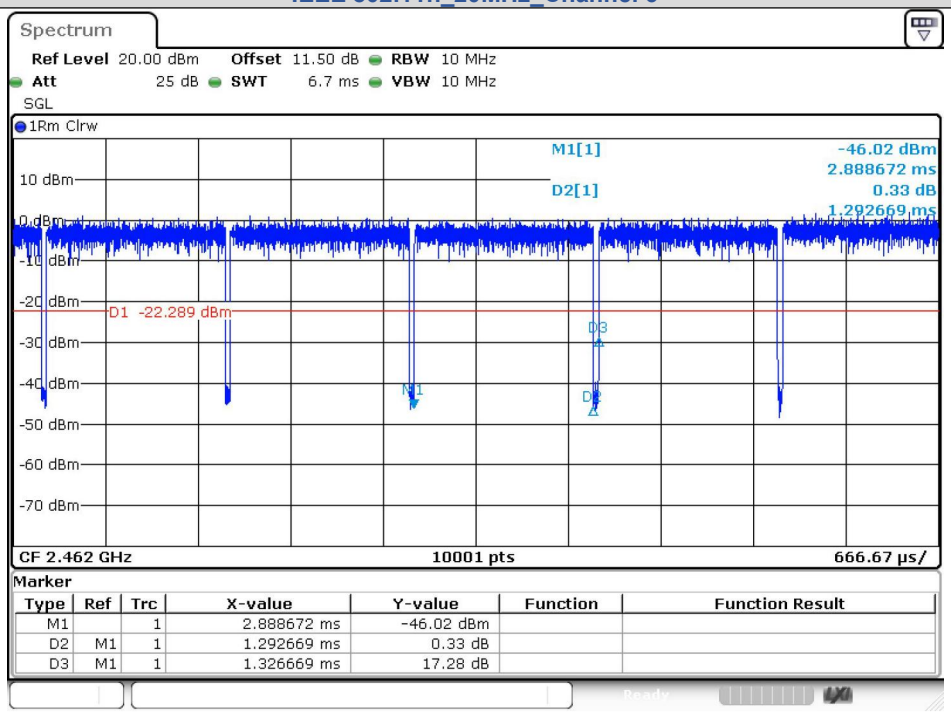


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	3.210673 ms	-42.53 dBm		
D2	M1	1	1.292669 ms	-0.60 dB		
D3	M1	1	1.326669 ms	11.26 dB		

Date: 18.SEP.2024 15:44:39

IEEE 802.11n_20MHz_Channel 6

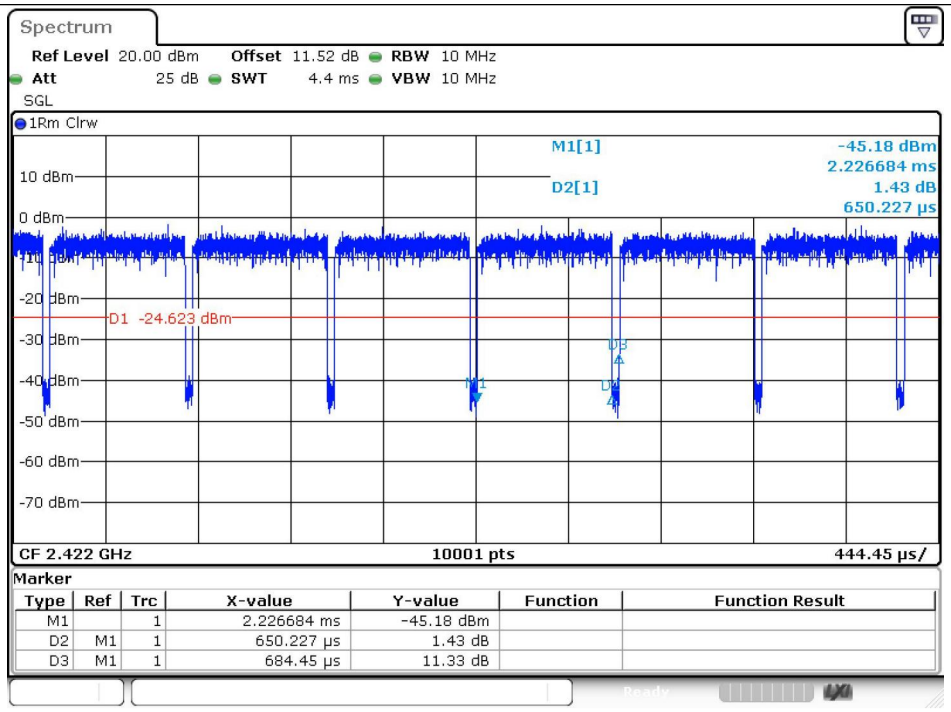


Marker

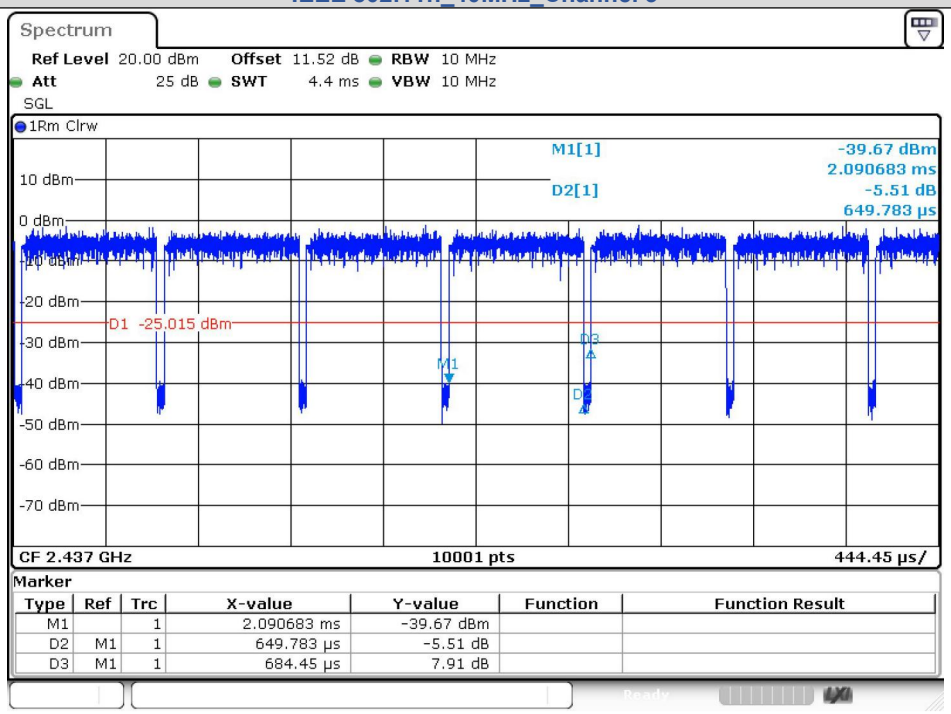
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.888672 ms	-46.02 dBm		
D2	M1	1	1.292669 ms	0.33 dB		
D3	M1	1	1.326669 ms	17.28 dB		

Date: 18.SEP.2024 15:48:03

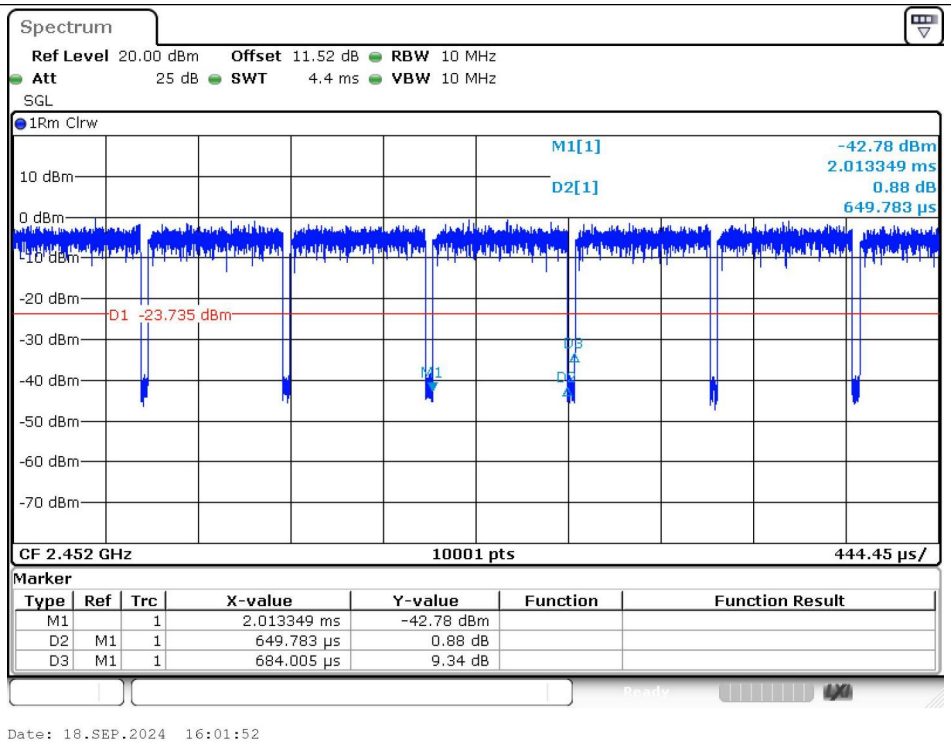
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



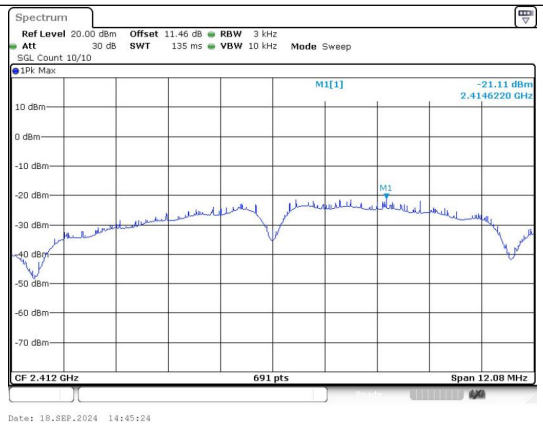
IEEE 802.11n_40MHz_Channel 9

Power Spectral Density

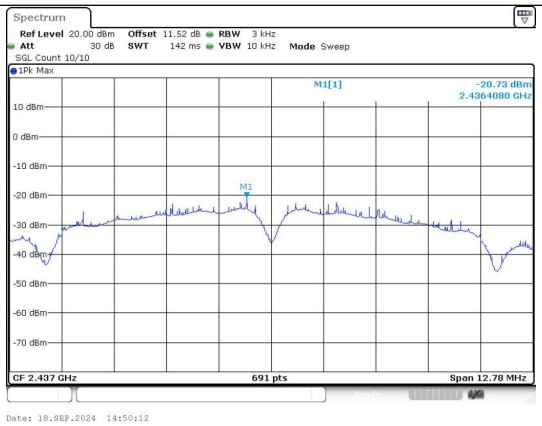
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-21.110	≤8	PASS
	6	-20.726		PASS
	11	-19.018		PASS
IEEE 802.11g	1	-21.968		PASS
	6	-24.995		PASS
	11	-26.875		PASS
IEEE 802.11n_20	1	-25.626		PASS
	6	-27.119		PASS
	11	-26.200		PASS
IEEE 802.11n_40	3	-28.756		PASS
	6	-30.001		PASS
	9	-27.945		PASS

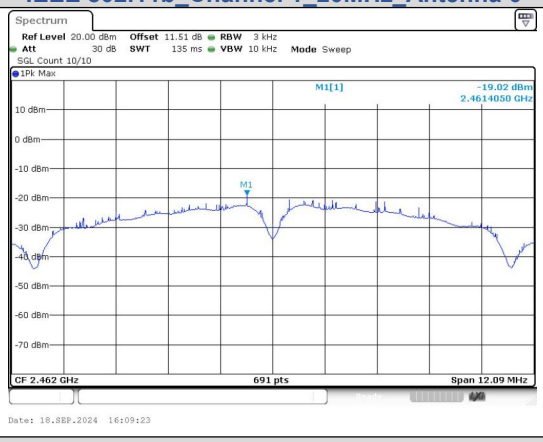
Test Graphs



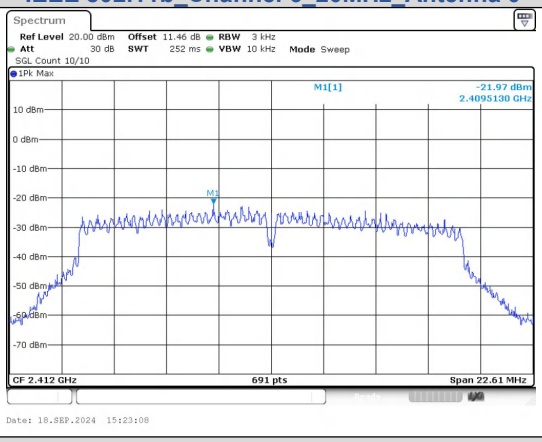
IEEE 802.11b_Channel 1_20MHz_Antenna 0



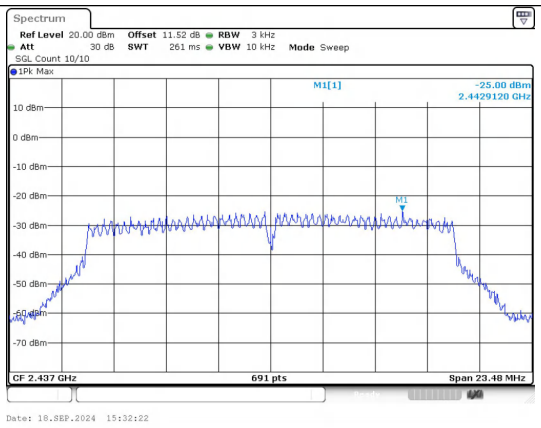
IEEE 802.11b_Channel 6_20MHz_Antenna 0



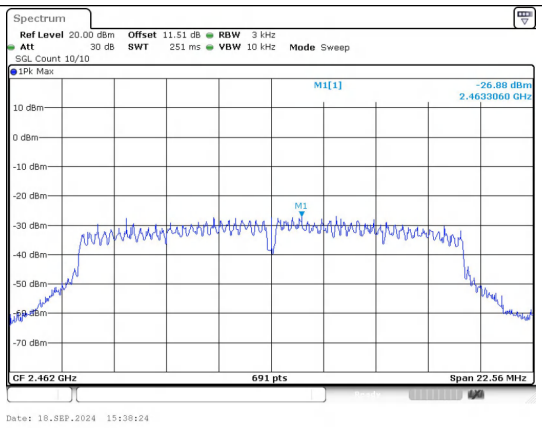
IEEE 802.11b_Channel 11_20MHz_Antenna 0



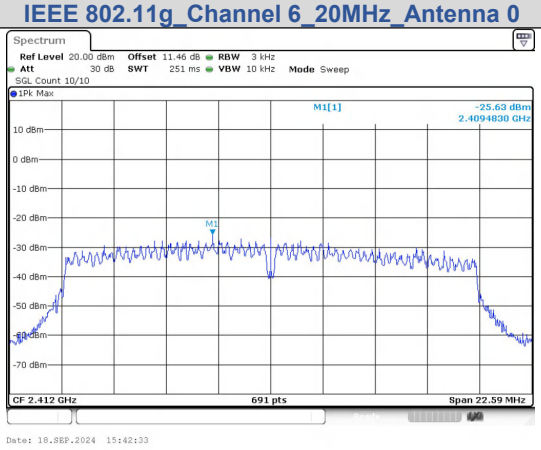
IEEE 802.11g_Channel 1_20MHz_Antenna 0



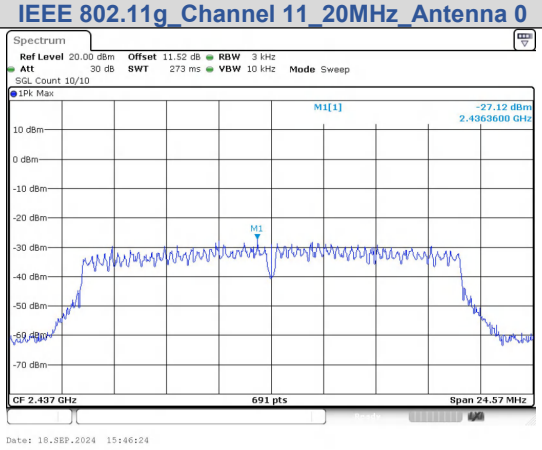
IEEE 802.11g_Channel 6_20MHz_Antenna 0



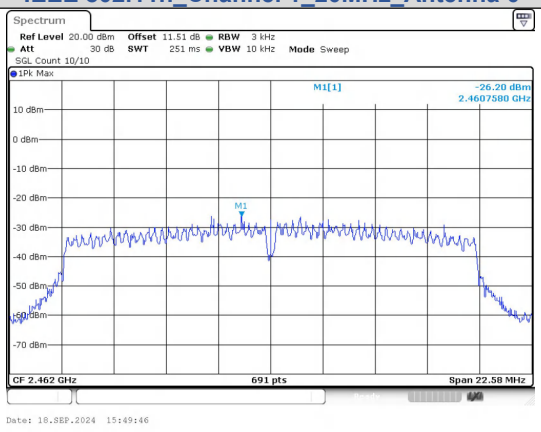
IEEE 802.11g_Channel 11_20MHz_Antenna 0



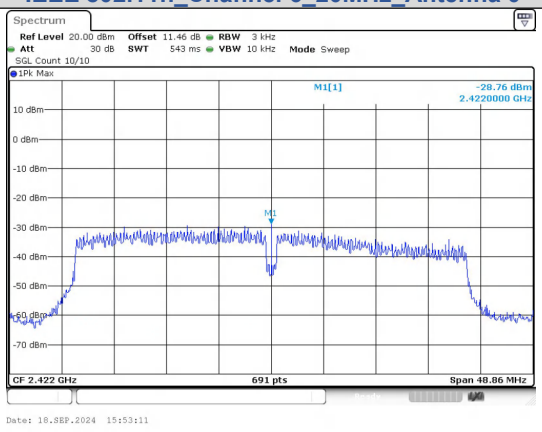
IEEE 802.11n_Channel 1_20MHz_Antenna 0



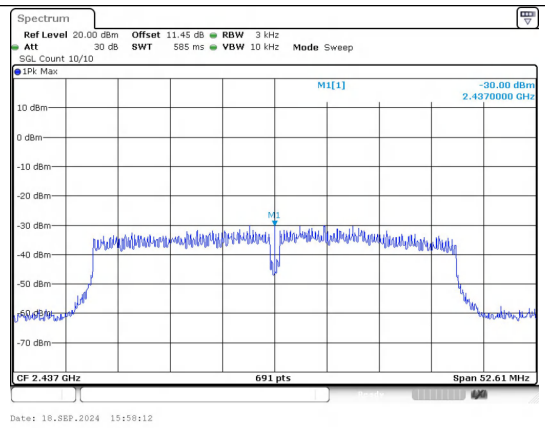
IEEE 802.11n_Channel 6_20MHz_Antenna 0



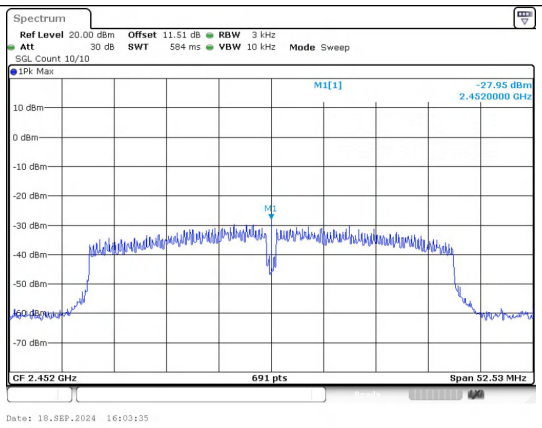
IEEE 802.11n_Channel 11_20MHz_Antenna 0



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 Peak Output Power

Test Result

Conducted Output Power

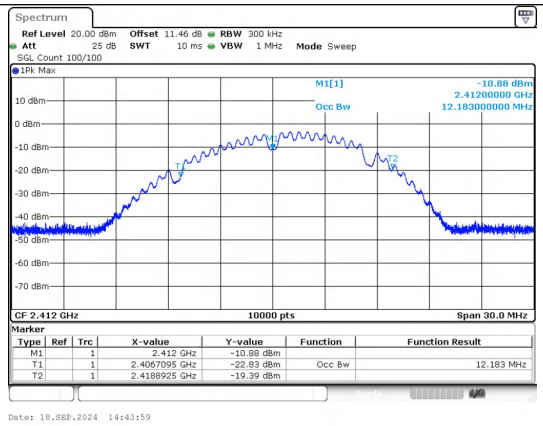
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	6.76	≤30	PASS
	6	6.10	≤30	PASS
	11	8.00	≤30	PASS
IEEE 802.11g	1	7.18	≤30	PASS
	6	6.74	≤30	PASS
	11	7.21	≤30	PASS
IEEE 802.11n_20	1	7.31	≤30	PASS
	6	6.93	≤30	PASS
	11	7.20	≤30	PASS
IEEE 802.11n_40	3	6.93	≤30	PASS
	6	6.83	≤30	PASS
	9	6.95	≤30	PASS

99% Bandwidth

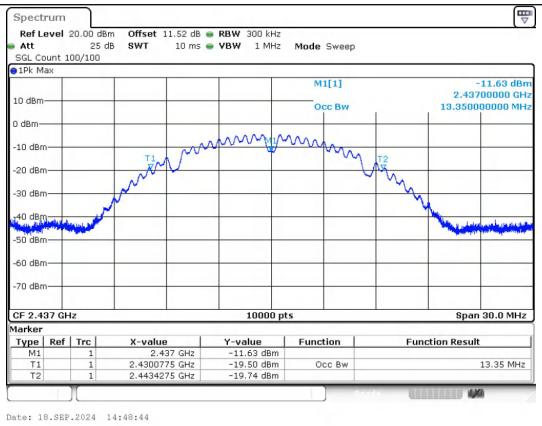
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.183
	6		2437	13.350
	11		2462	12.606
IEEE 802.11g	1		2412	16.506
	6		2437	16.761
	11		2462	16.515
IEEE 802.11n_20	1		2412	17.547
	6		2437	17.736
	11		2462	17.571
IEEE 802.11n_40	3		2422	36.078
	6		2437	36.234
	9		2452	35.862

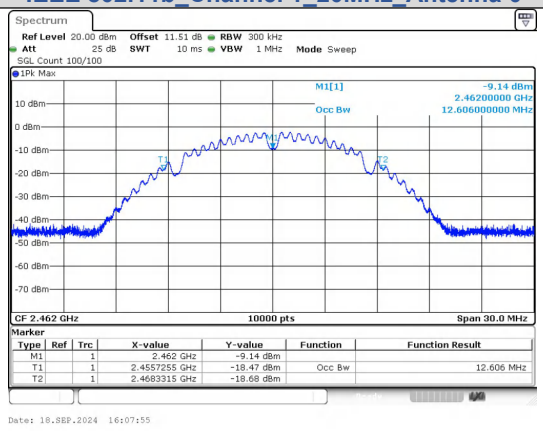
Test Graphs



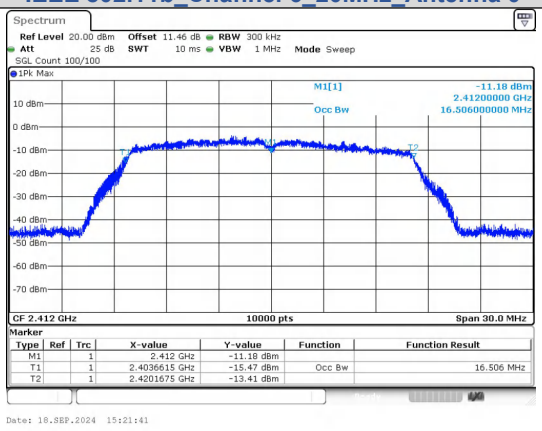
IEEE 802.11b_Channel 1_20MHz_Antenna 0



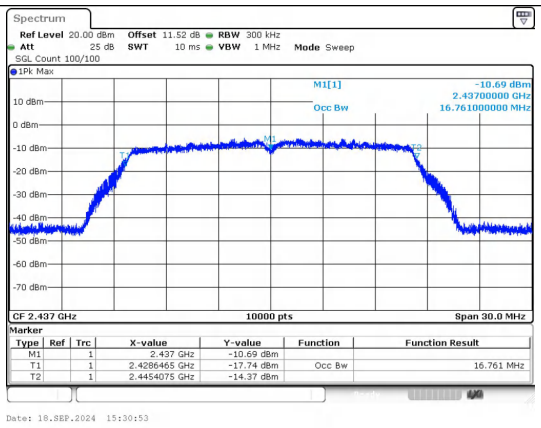
IEEE 802.11b_Channel 6_20MHz_Antenna 0



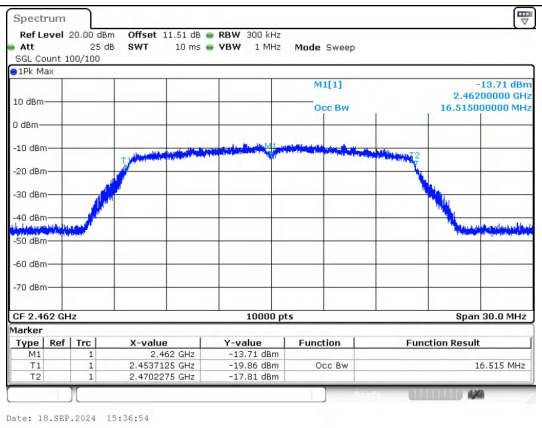
IEEE 802.11b_Channel 11_20MHz_Antenna 0



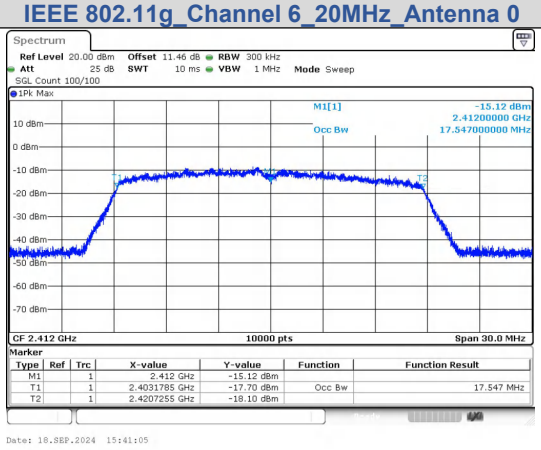
IEEE 802.11g_Channel 1_20MHz_Antenna 0



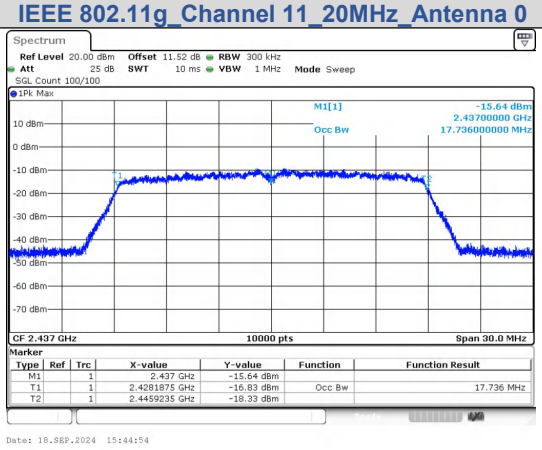
IEEE 802.11g_Channel 6_20MHz_Antenna 0



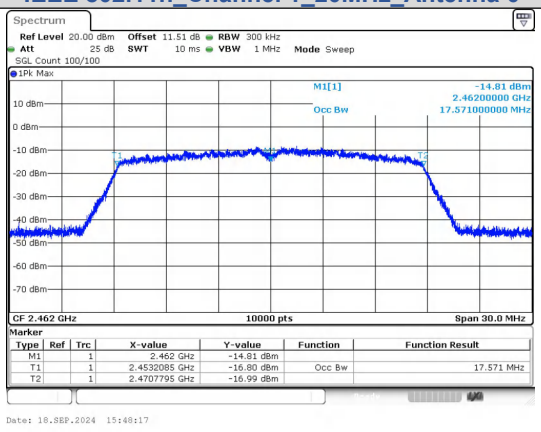
IEEE 802.11g_Channel 11_20MHz_Antenna 0



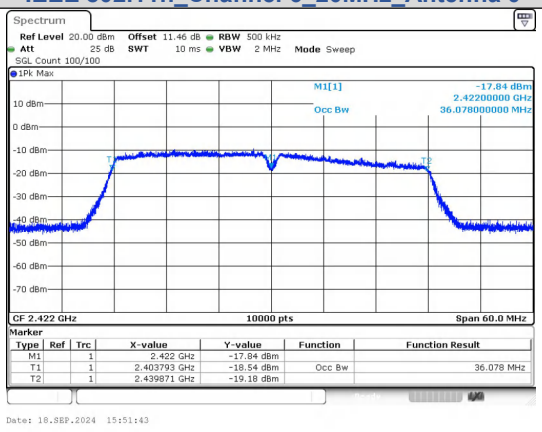
IEEE 802.11n_Channel 1_20MHz_Antenna 0



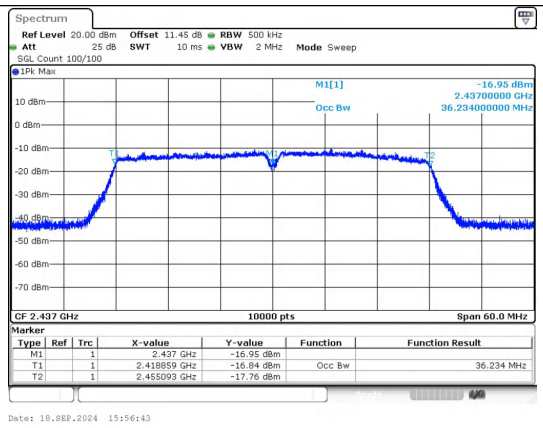
IEEE 802.11n_Channel 6_20MHz_Antenna 0



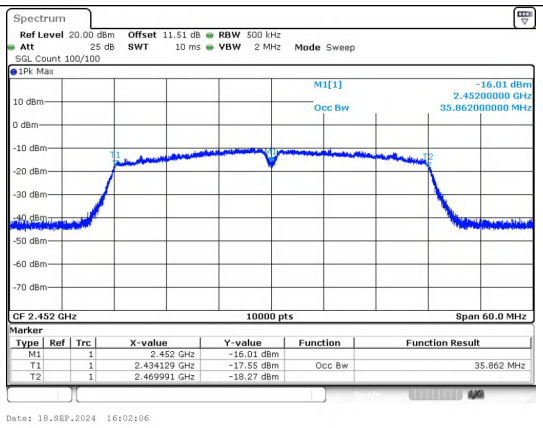
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



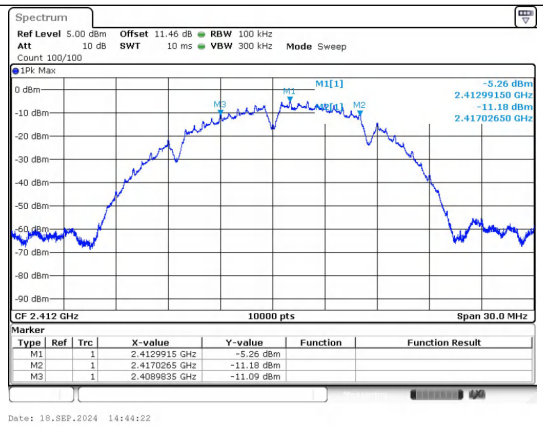
IEEE 802.11n_Channel 9_40MHz_Antenna 0

6dB Bandwidth

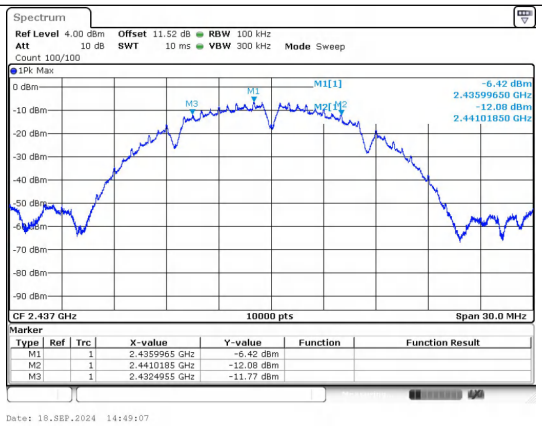
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.050	≥0.5	PASS
	6		2437	8.520		PASS
	11		2462	8.060		PASS
IEEE 802.11g	1		2412	15.07		PASS
	6		2437	15.65		PASS
	11		2462	15.04		PASS
IEEE 802.11n_20	1		2412	15.06		PASS
	6		2437	16.38		PASS
	11		2462	15.05		PASS
IEEE 802.11n_40	3		2422	32.57		PASS
	6		2437	35.07		PASS
	9		2452	35.02		PASS

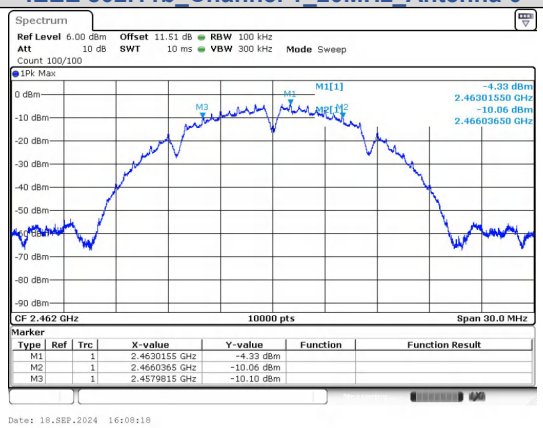
Test Graphs



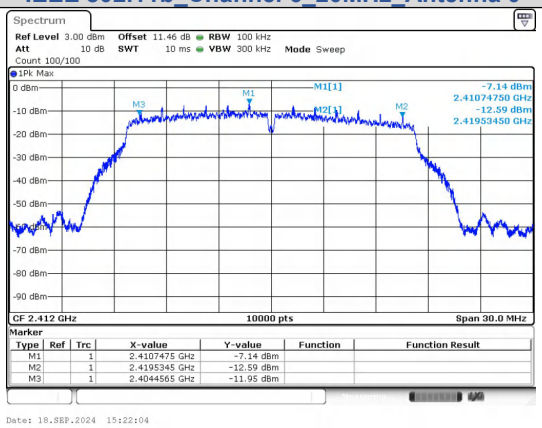
IEEE 802.11b_Channel 1_20MHz_Antenna 0



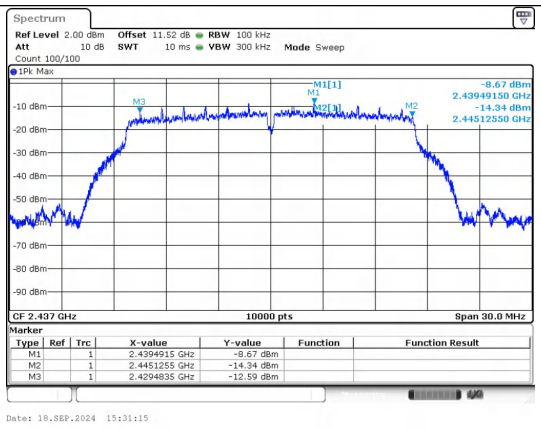
IEEE 802.11b_Channel 6_20MHz_Antenna 0



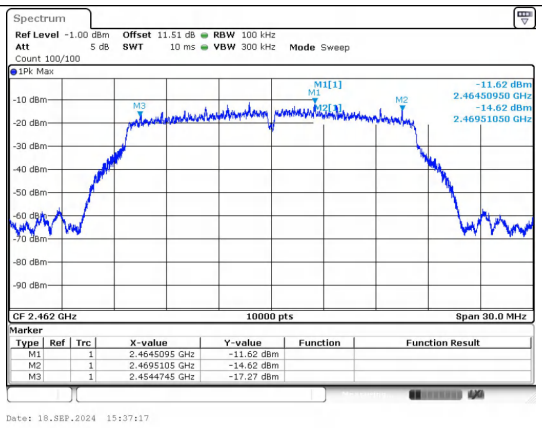
IEEE 802.11b_Channel 11_20MHz_Antenna 0



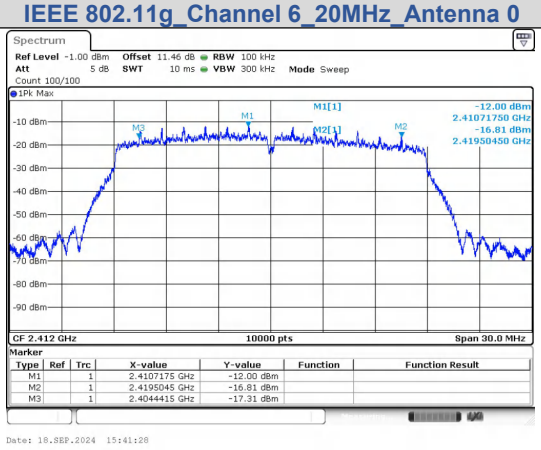
IEEE 802.11g_Channel 1_20MHz_Antenna 0



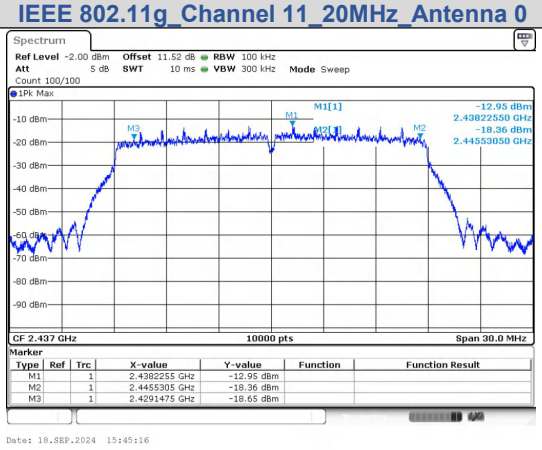
IEEE 802.11g_Channel 6_20MHz_Antenna 0



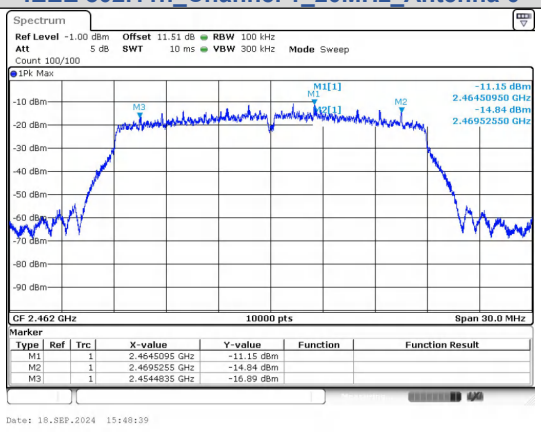
IEEE 802.11g_Channel 11_20MHz_Antenna 0



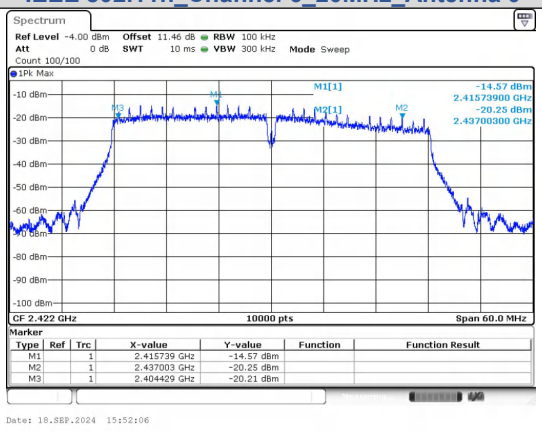
IEEE 802.11n_Channel 1_20MHz_Antenna 0



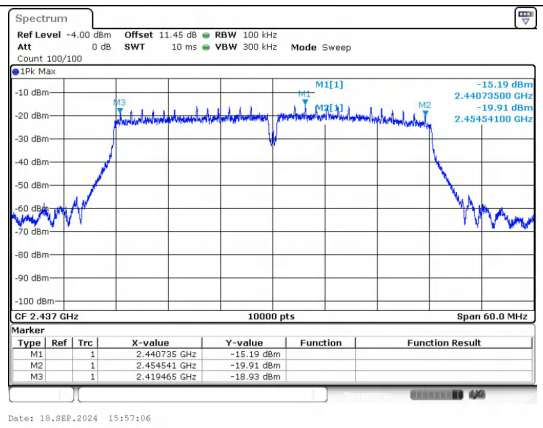
IEEE 802.11n_Channel 6_20MHz_Antenna 0



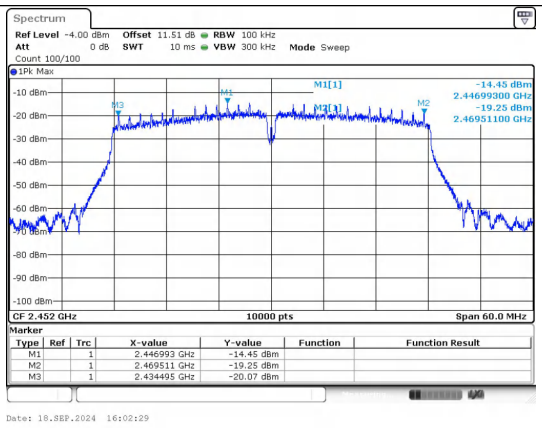
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



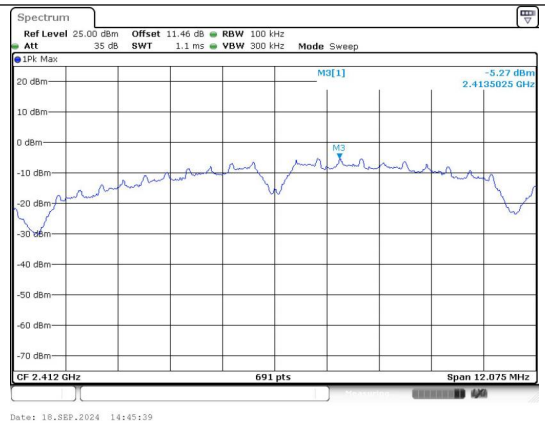
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Conducted Out Of Band Emission

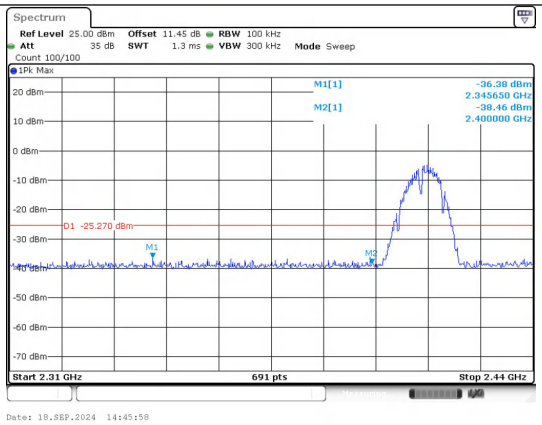
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2345.65	-36.384	-25.27	-11.114	PASS
			2400.00	-38.461	-25.27	-13.191	PASS
			21856.7	-43.671	-25.27	-18.401	PASS
	6		15607.5	-43.313	-26.46	-16.853	PASS
	11		2483.50	-37.739	-24.3	-13.439	PASS
			6917.97	-42.580	-24.3	-18.280	PASS
IEEE 802.11g	1		2398.70	-36.573	-27.69	-8.883	PASS
			2400.00	-38.231	-27.69	-10.541	PASS
			6915.50	-43.066	-27.69	-15.376	PASS
	6		6948.77	-42.933	-32.32	-10.613	PASS
	11		2483.50	-38.644	-30.51	-8.134	PASS
			6991.22	-43.665	-30.51	-13.155	PASS
IEEE 802.11n_20	1		2358.82	-37.101	-30.88	-6.221	PASS
			2400.00	-38.697	-30.88	-7.817	PASS
			22033.1	-43.386	-30.88	-12.506	PASS
	6		5868.40	-43.211	-32.03	-11.181	PASS
	11		2483.50	-37.843	-30.98	-6.863	PASS
			6898.00	-43.556	-30.98	-12.576	PASS
IEEE 802.11n_40	3		2396.45	-36.602	-33.71	-2.892	PASS
			2400.00	-39.395	-33.71	-5.685	PASS
			6938.80	-43.497	-33.71	-9.787	PASS
	6		6908.82	-42.848	-33.95	-8.898	PASS
	9		2483.50	-38.396	-33.42	-4.976	PASS
			6402.76	-43.011	-33.42	-9.591	PASS

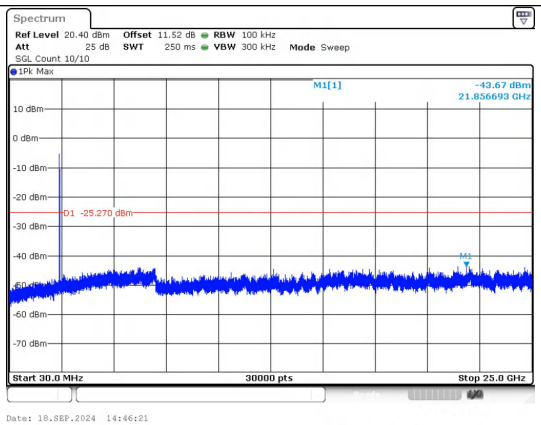
Test Graphs



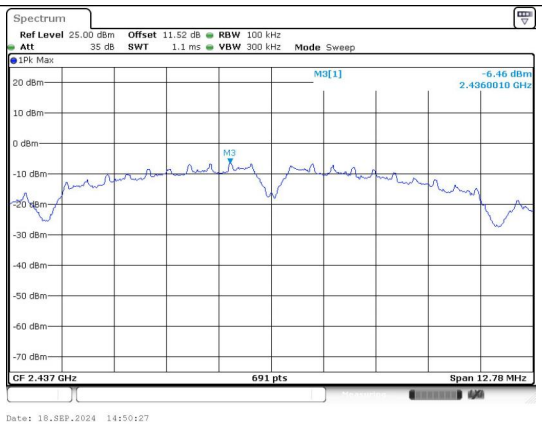
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



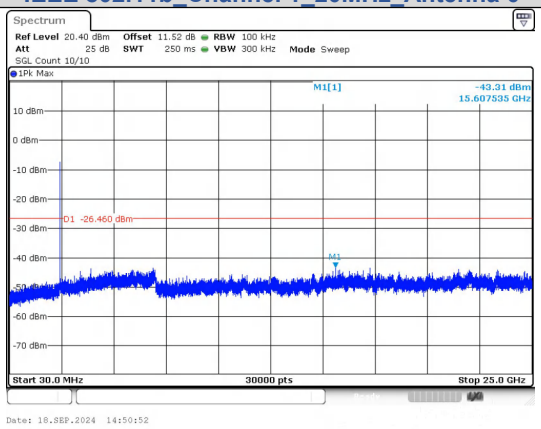
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



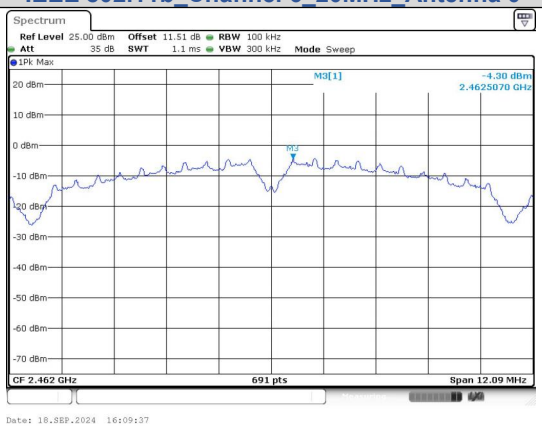
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



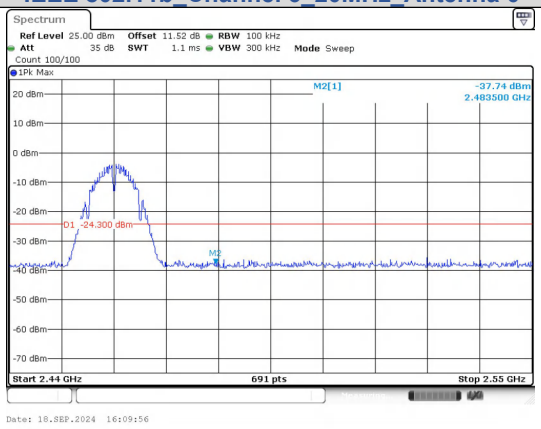
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



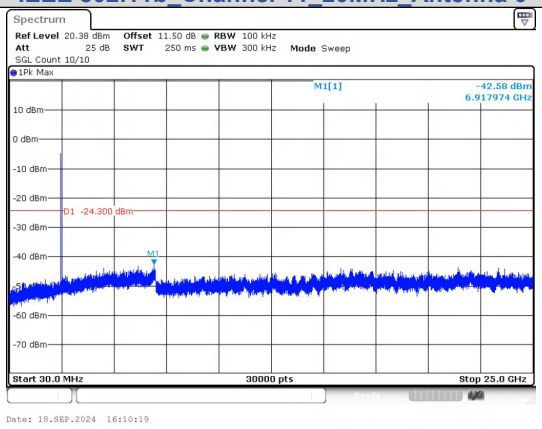
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



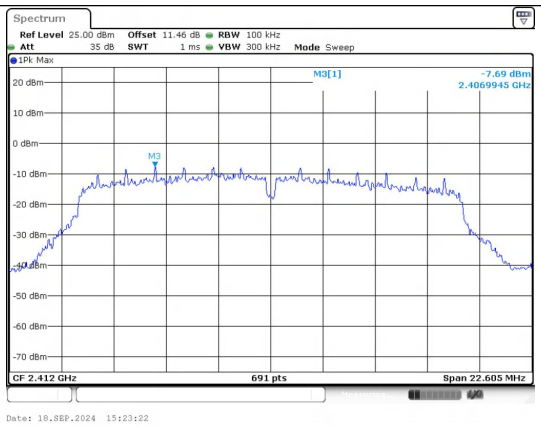
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



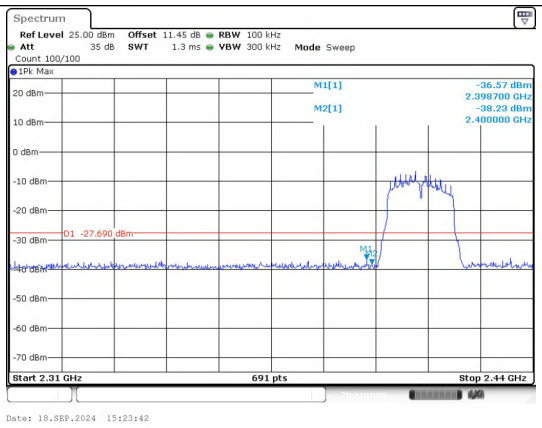
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



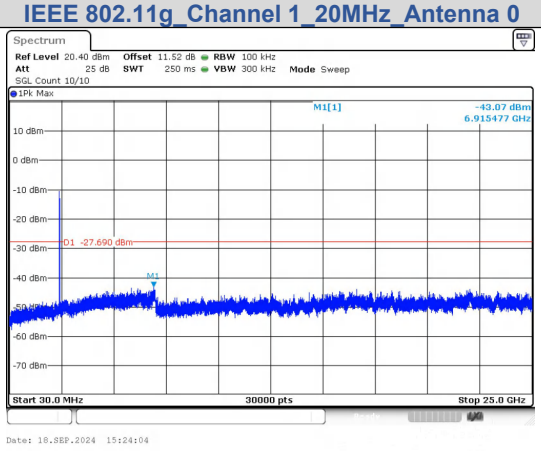
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



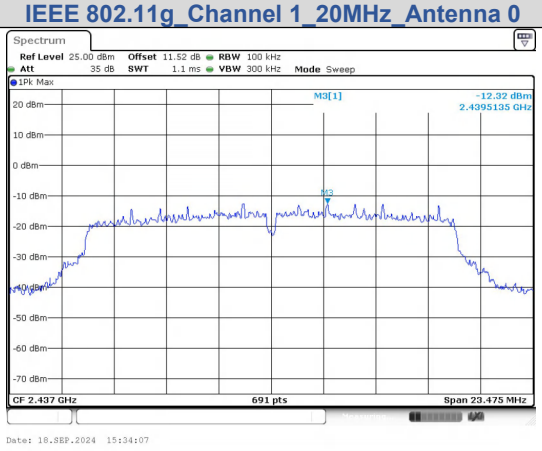
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



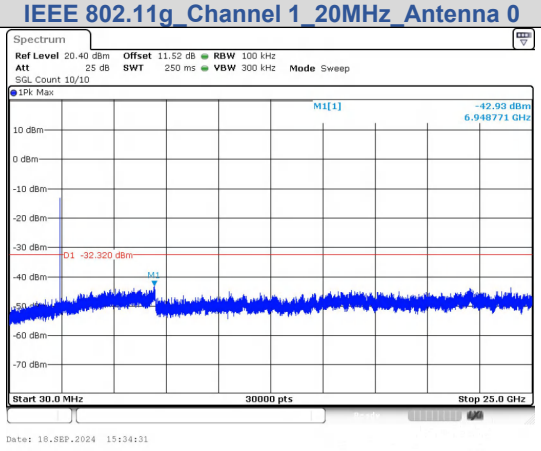
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



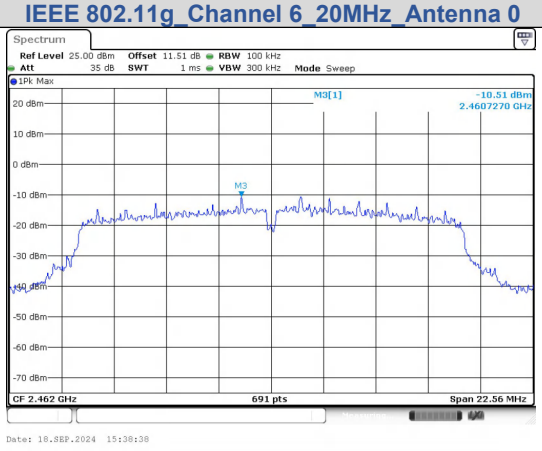
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



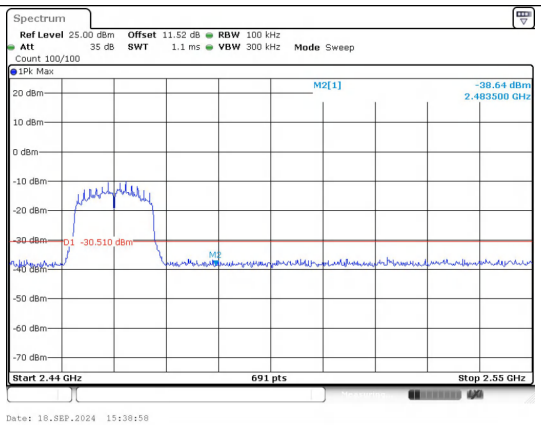
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



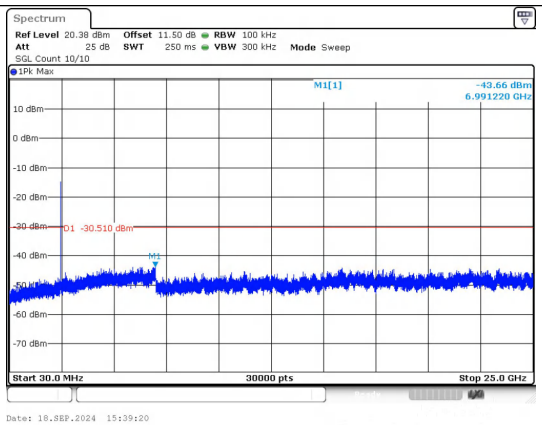
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



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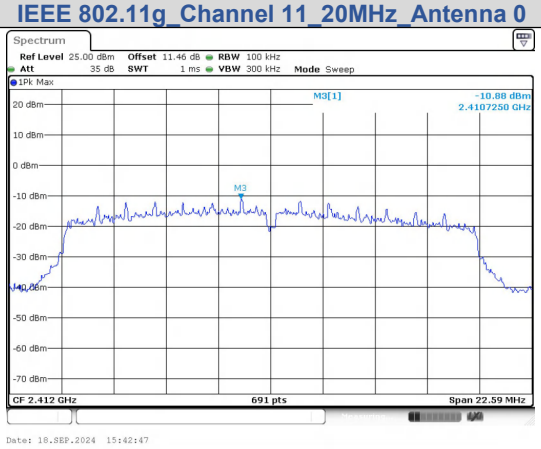
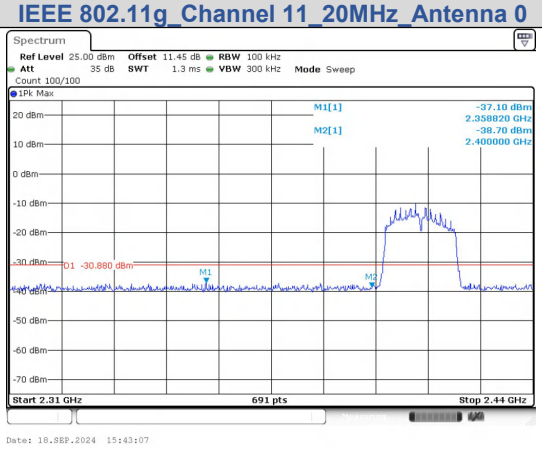
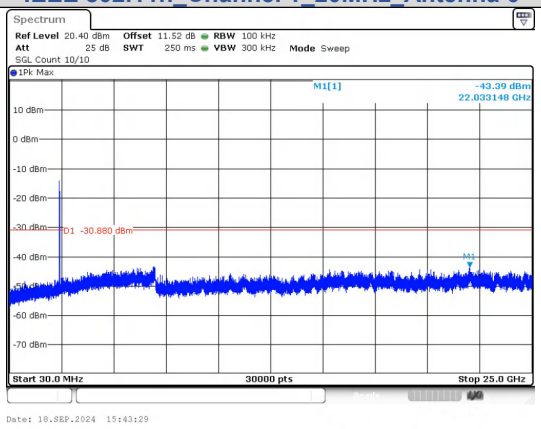
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



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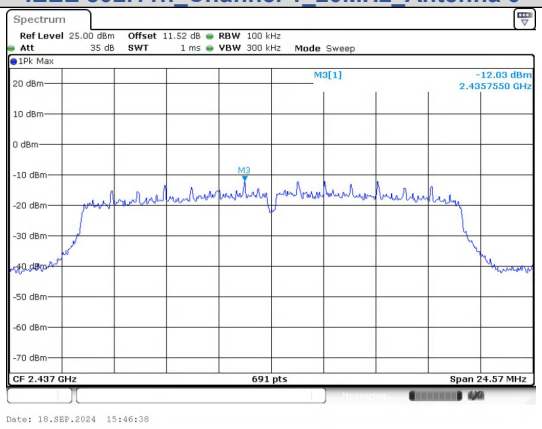
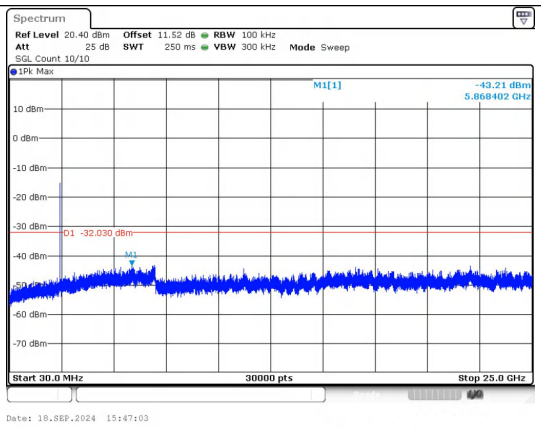
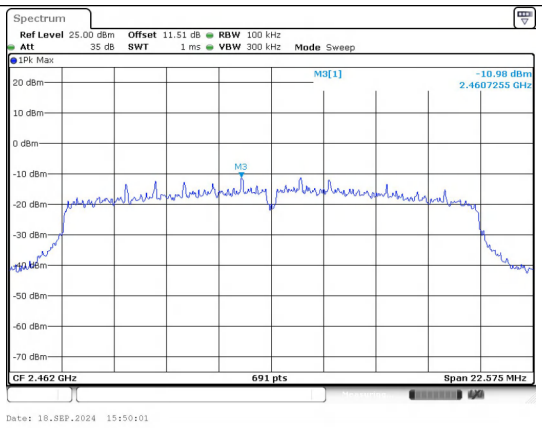
IEEE 802.11n_Channel 1_20MHz_Antenna 0



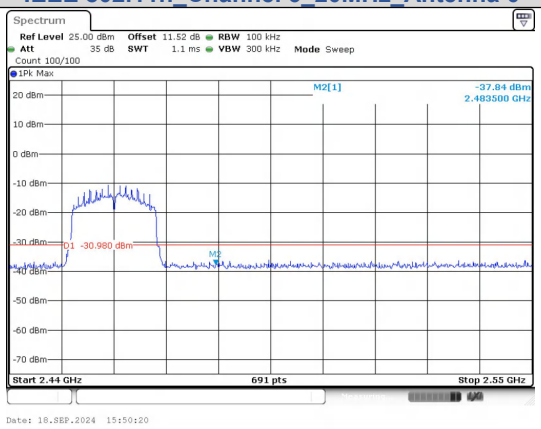
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



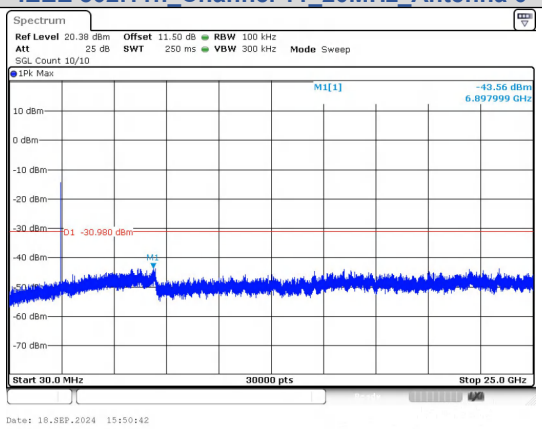
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



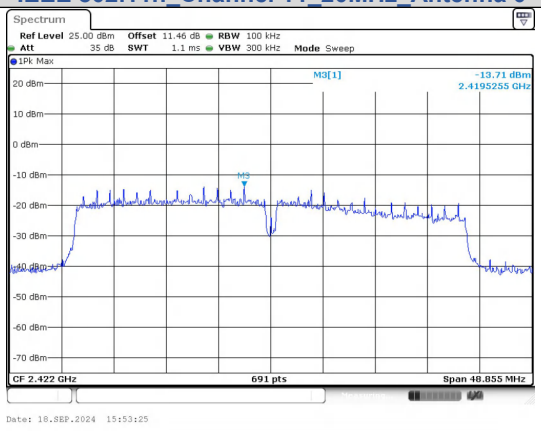
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



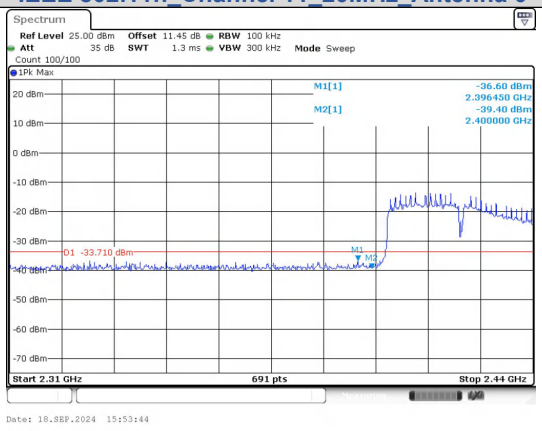
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



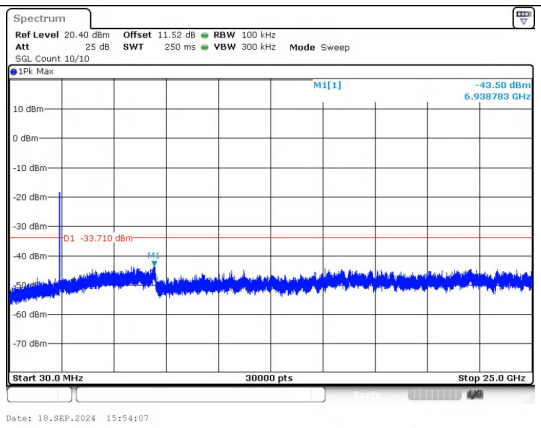
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0



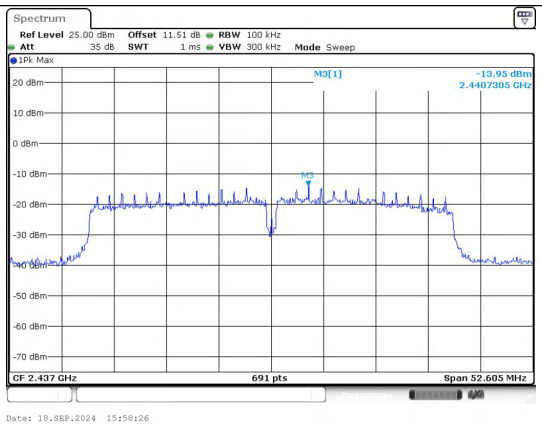
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



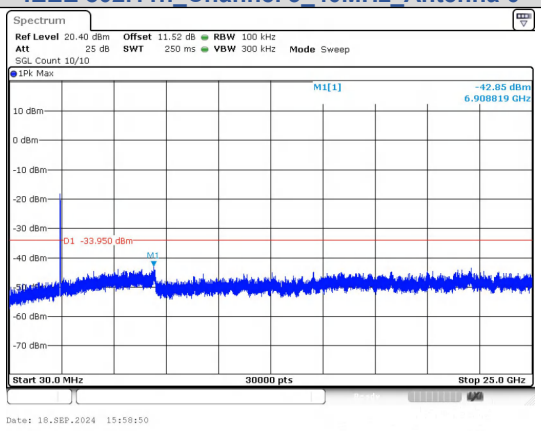
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



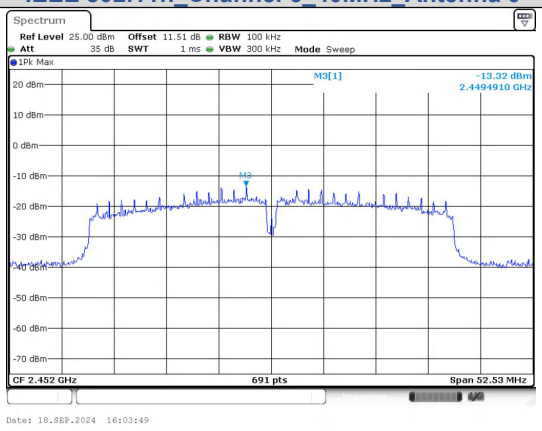
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



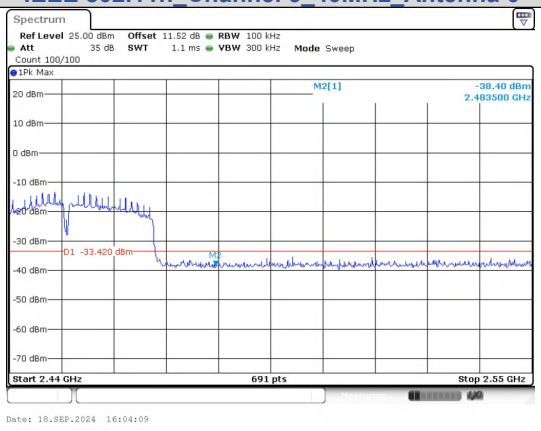
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



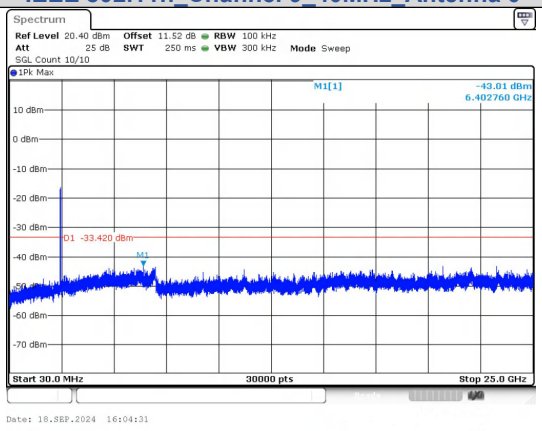
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0