

Appendix A

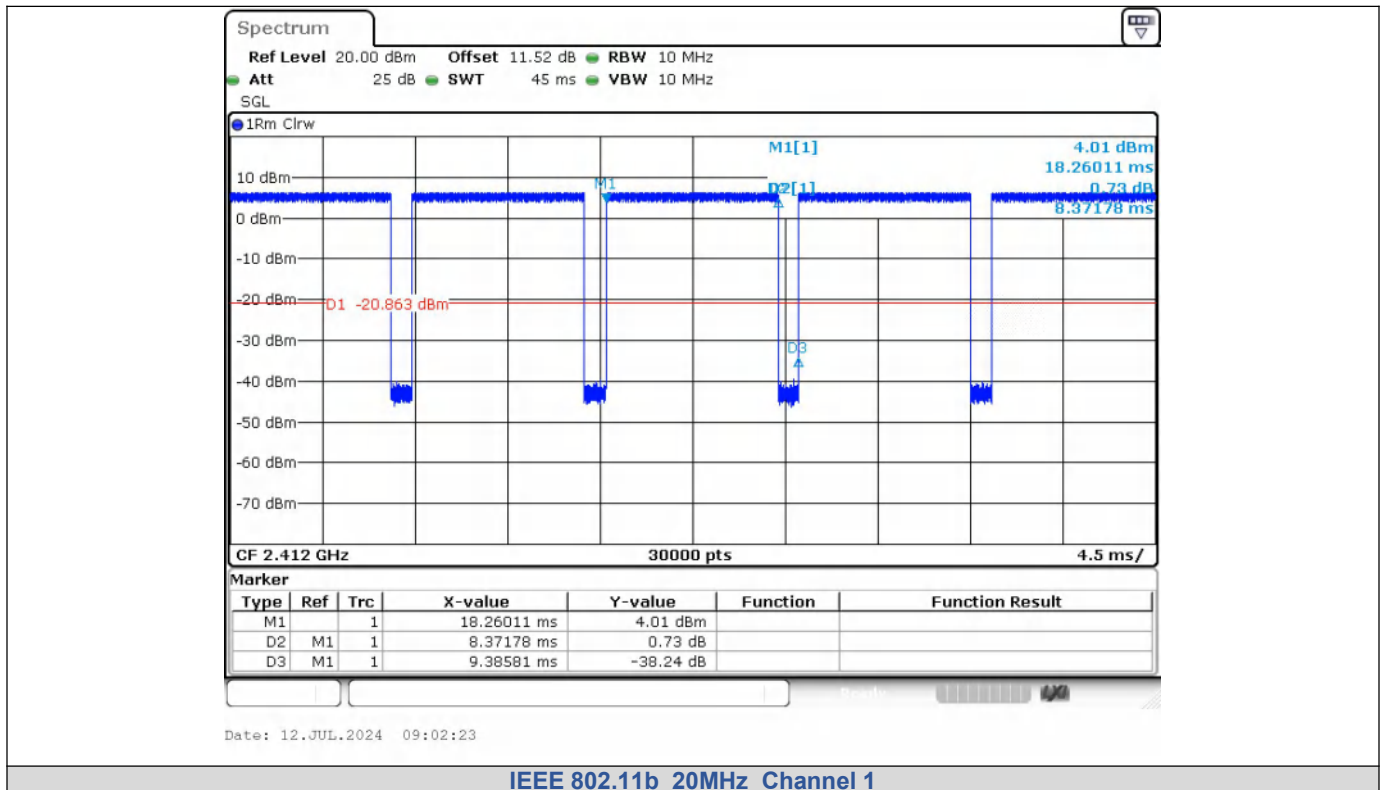
Report No.:	CISRR240704034
FCC ID:	2BFI9-X3
Product Name:	Security Camera
Model No.:	X3
Test Engineer:	Lucas Huang
Supervised by:	Rory Huang

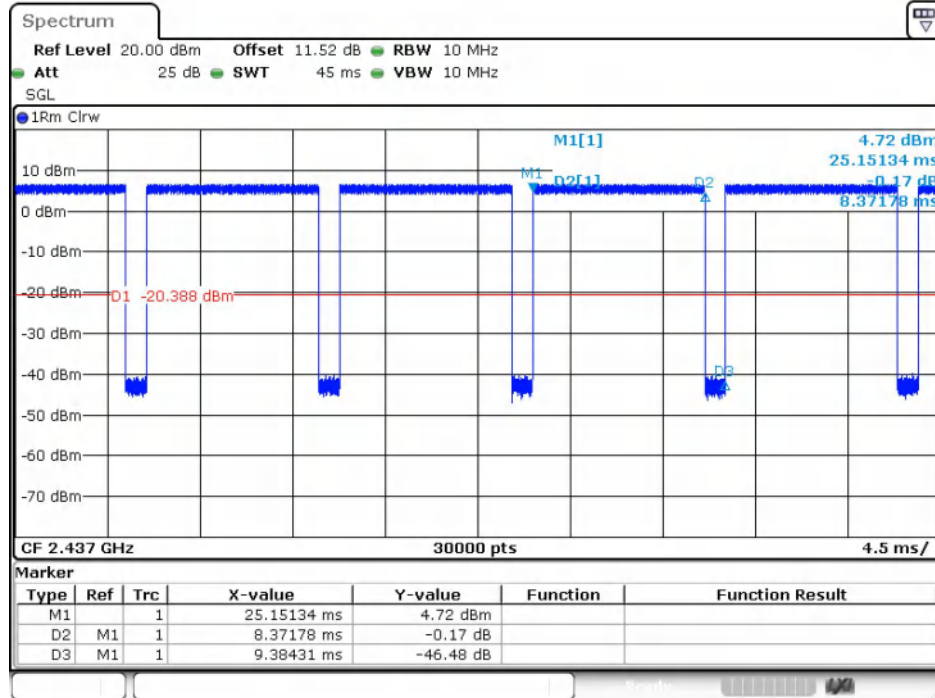
Duty Cycle

Test Result

Mode	Data rates	Channel	RU & Index	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	N/A	1	8.372	9.386	89.20	0.8920	0.4964	0.12
		6			8.372	9.384	89.21	0.8921	0.4959	0.12
		11			8.372	9.389	89.17	0.8917	0.4978	0.12
IEEE 802.11g		1			1.400	2.427	57.68	0.5768	2.3897	0.71
		6			1.400	2.423	57.78	0.5778	2.3822	0.71
		11			1.400	2.427	57.68	0.5768	2.3897	0.71
IEEE 802.11n_20	1	5.103			6.122	83.35	0.8335	0.7909	0.20	
	6	5.096			6.120	83.27	0.8327	0.7951	0.20	
	11	5.103			6.119	83.40	0.8340	0.7883	0.20	
IEEE 802.11n_40	MCS 0	3			4.905	5.924	82.80	0.8280	0.8197	0.20
		6			4.905	5.924	82.80	0.8280	0.8197	0.20
		9			4.905	5.929	82.73	0.8273	0.8234	0.20
IEEE 802.11ax_20		1	3.881		4.896	79.27	0.7927	1.0089	0.26	
		6	3.883		4.903	79.21	0.7921	1.0122	0.26	
		11	3.881		4.905	79.13	0.7913	1.0166	0.26	
IEEE 802.11ax_40	SU	3	3.879		4.901	79.16	0.7916	1.0149	0.26	
		6	3.879		4.898	79.19	0.7919	1.0133	0.26	
		9	3.877		4.894	79.22	0.7922	1.0117	0.26	

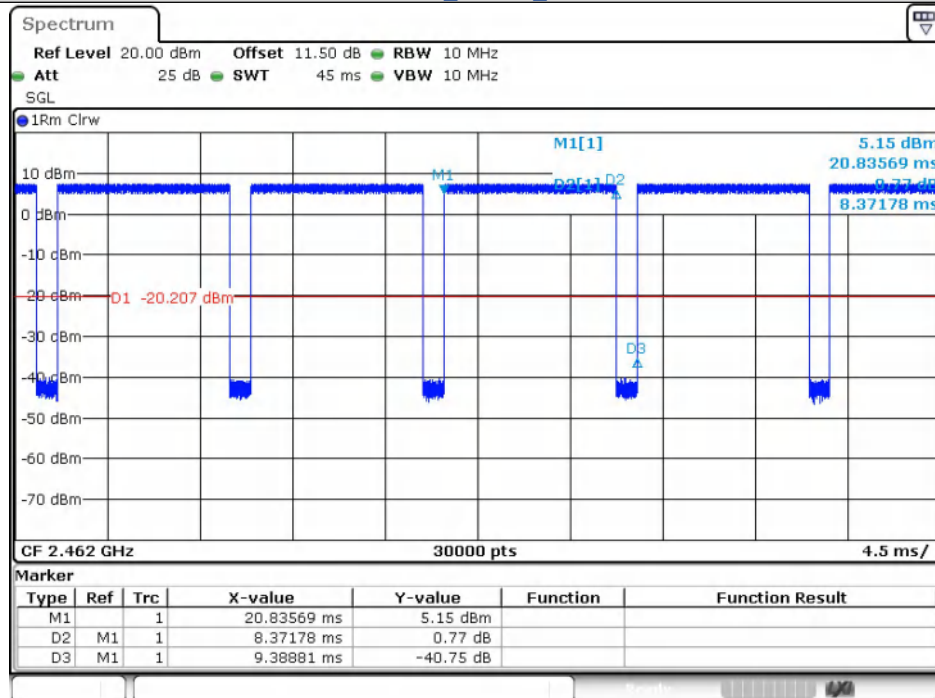
Test Graphs





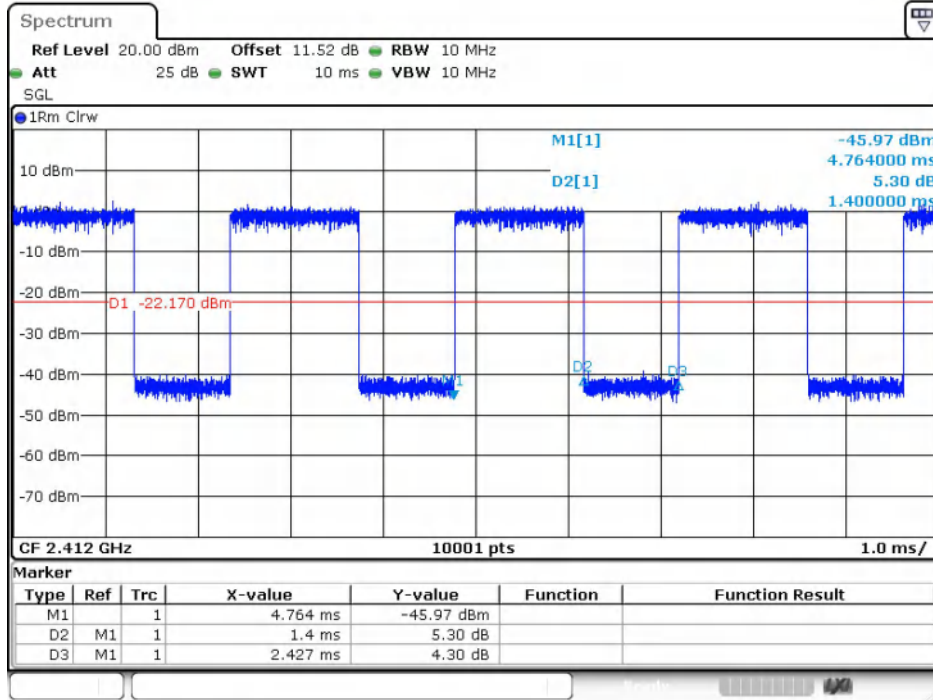
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IEEE 802.11b_20MHz_Channel 6

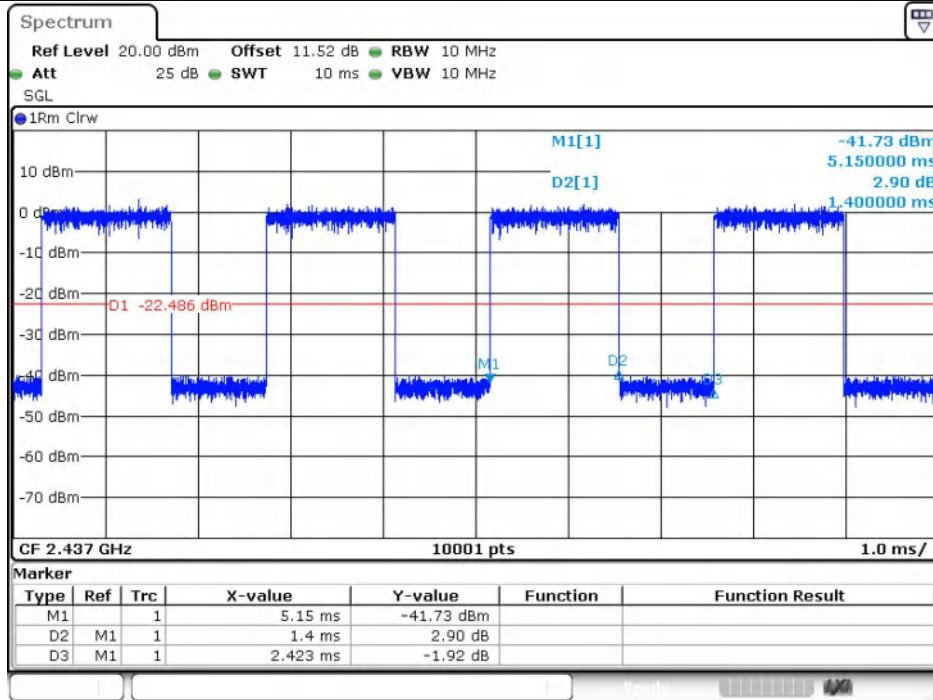


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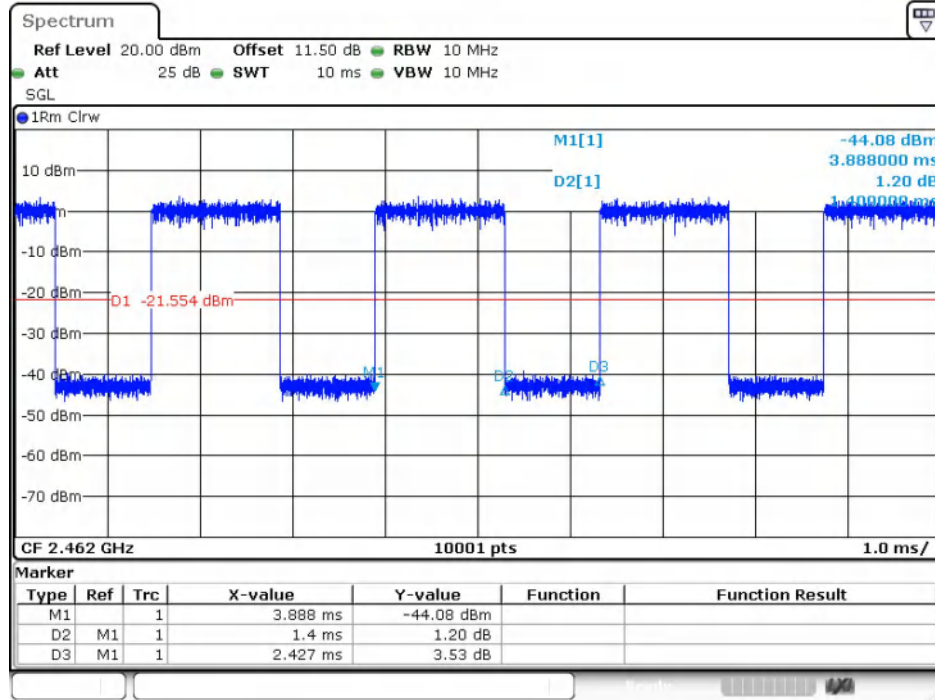
IEEE 802.11b_20MHz_Channel 11



IEEE 802.11g_20MHz_Channel 1

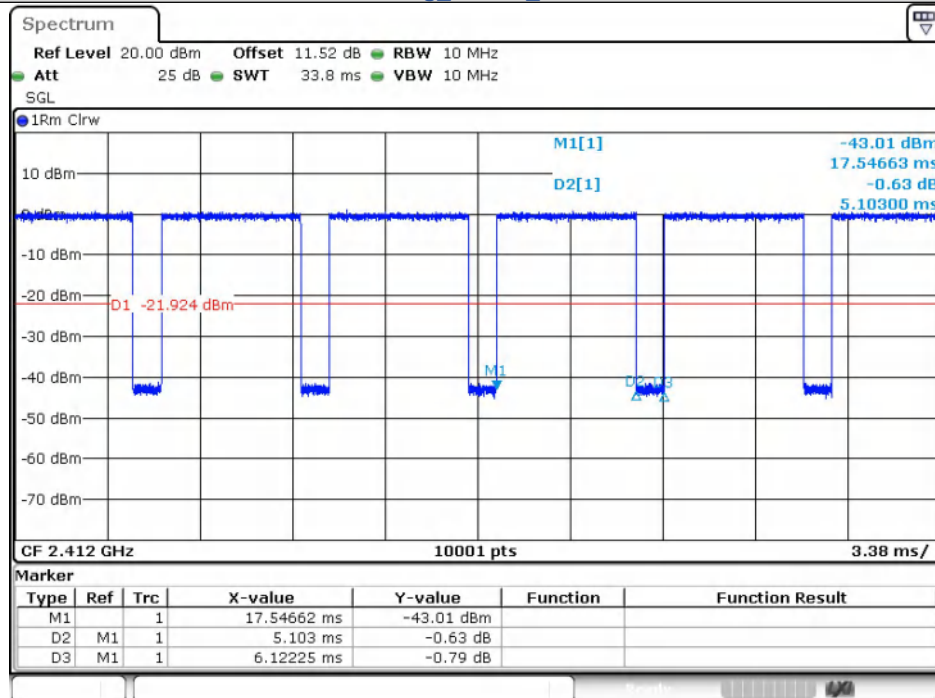


IEEE 802.11g_20MHz_Channel 6



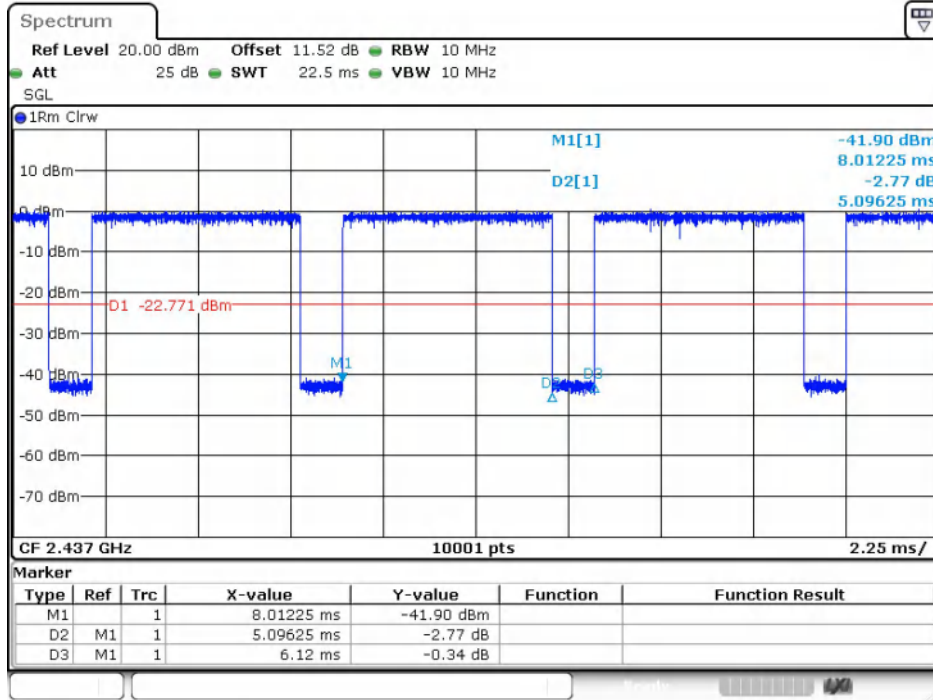
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IEEE 802.11g_20MHz_Channel 11



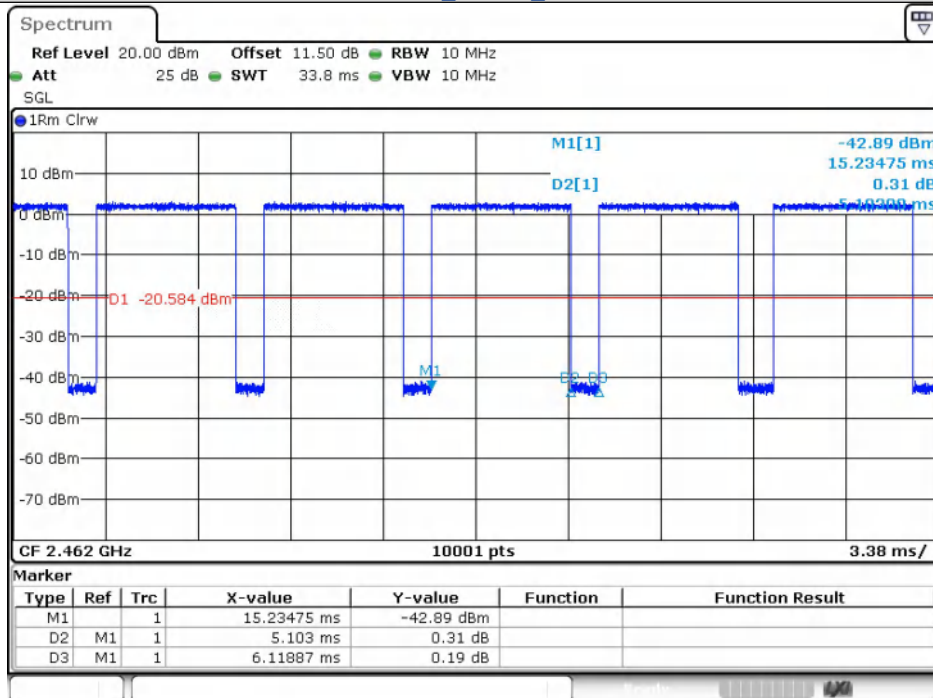
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IEEE 802.11n_20MHz_Channel 1



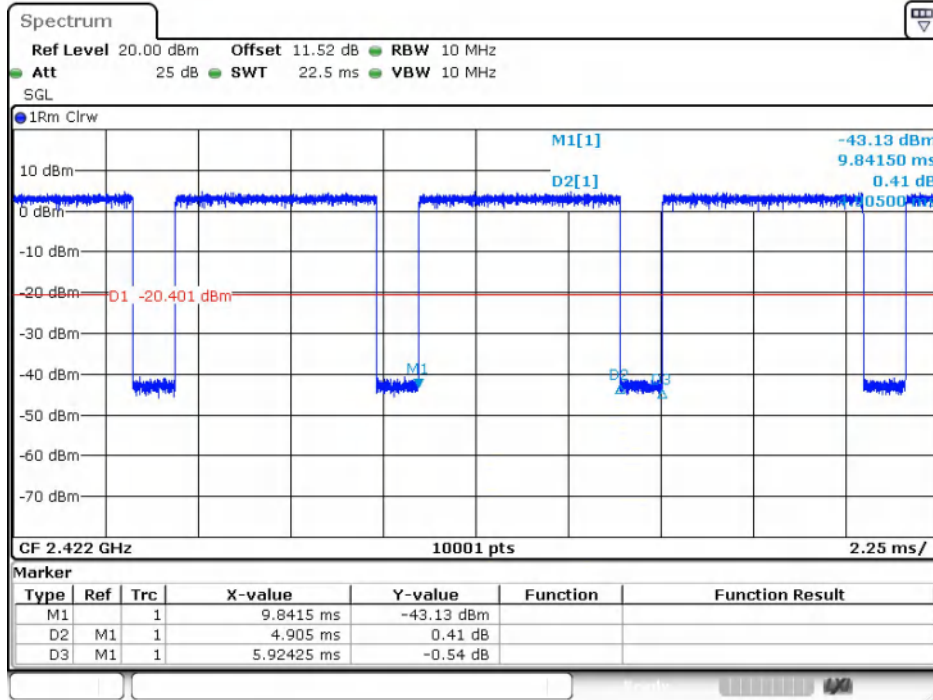
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IEEE 802.11n_20MHz_Channel 6



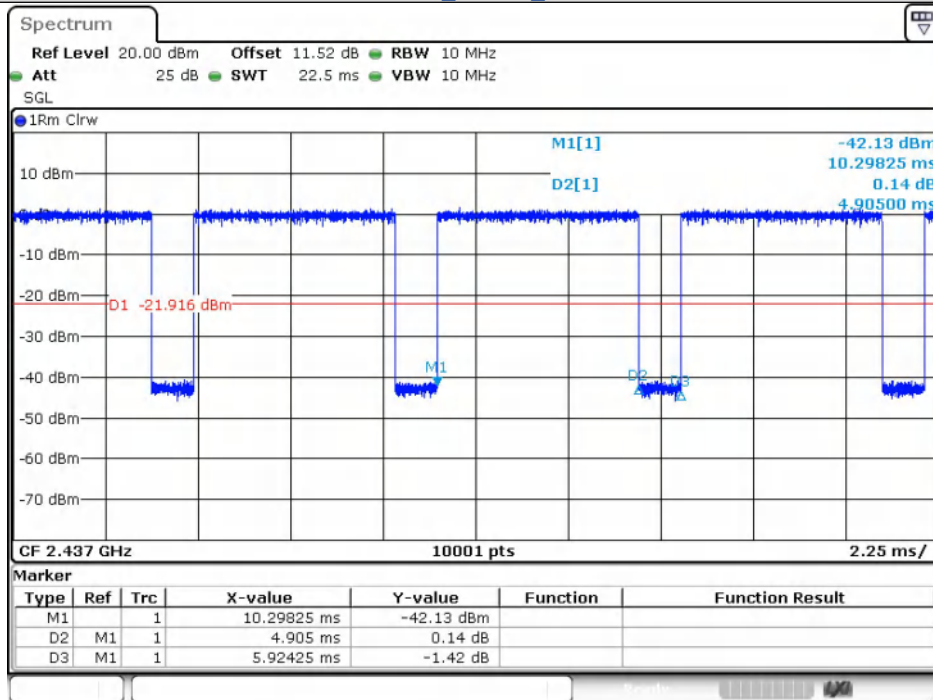
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IEEE 802.11n_20MHz_Channel 11



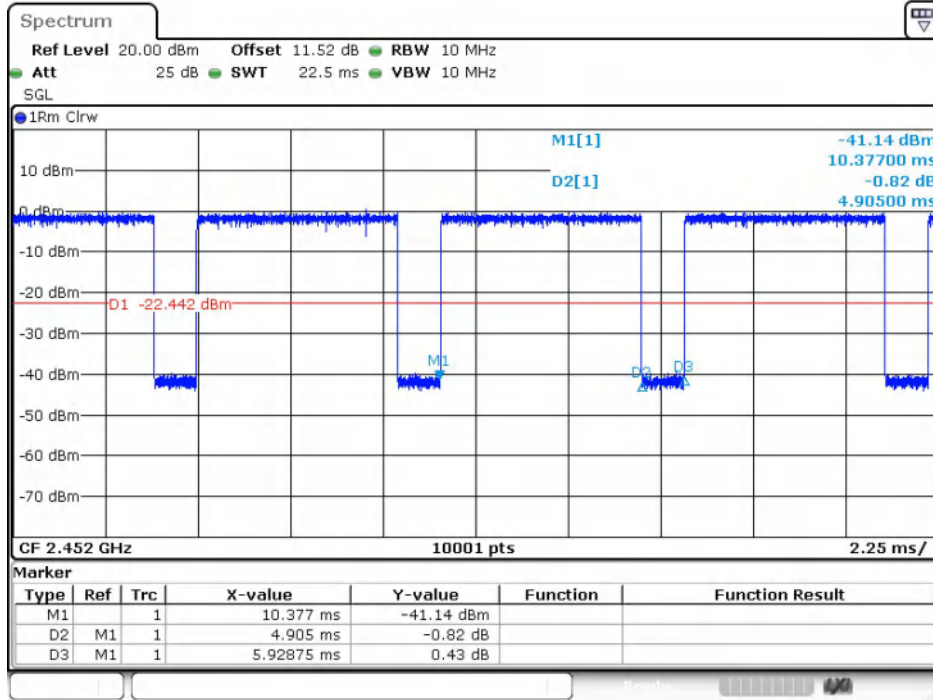
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IEEE 802.11n_40MHz_Channel 3



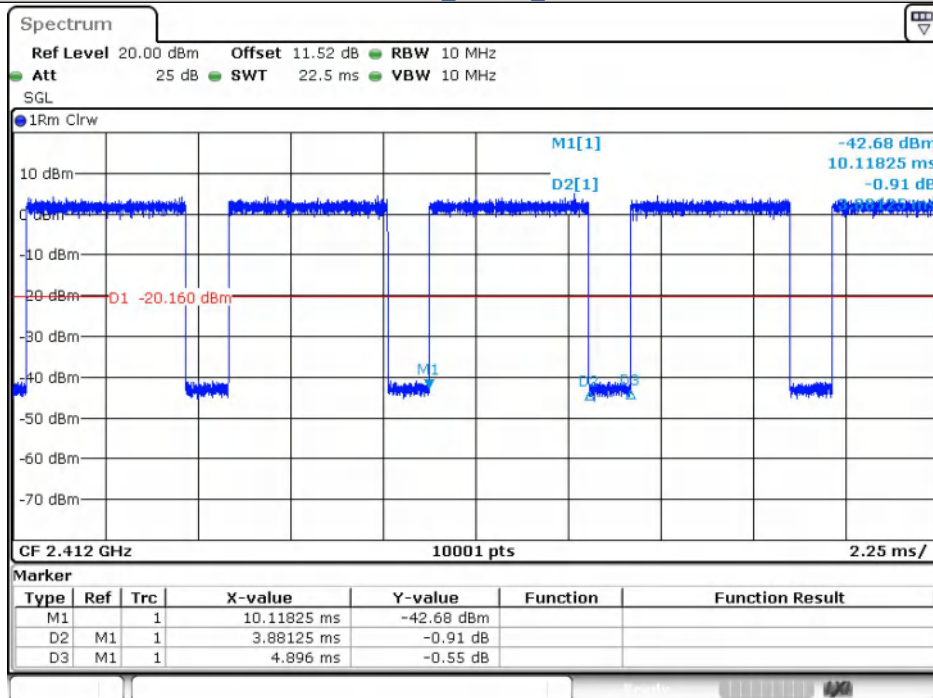
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IEEE 802.11n_40MHz_Channel 6



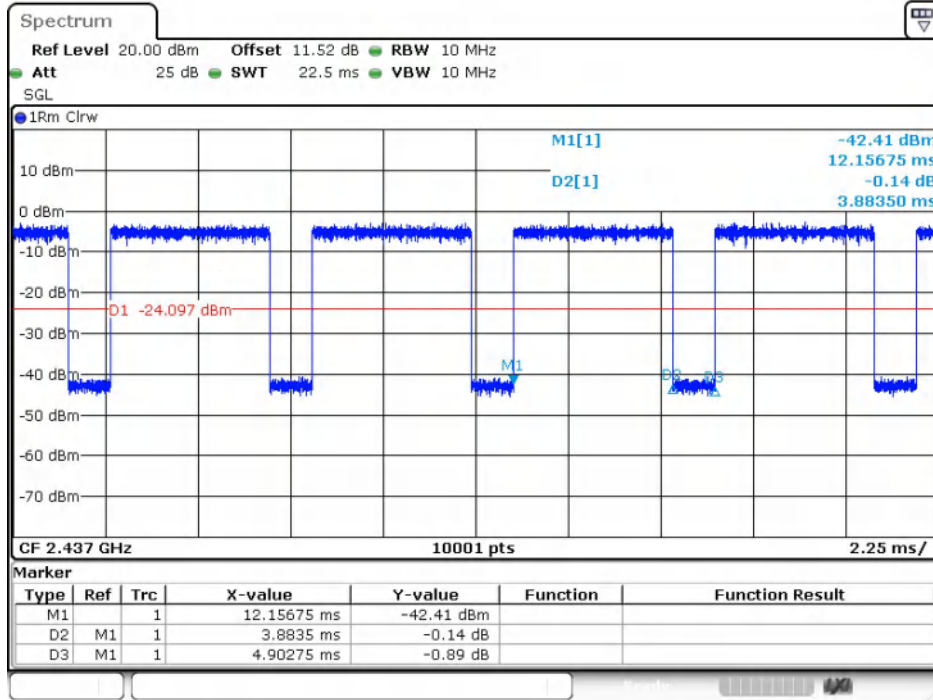
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IEEE 802.11n_40MHz_Channel 9



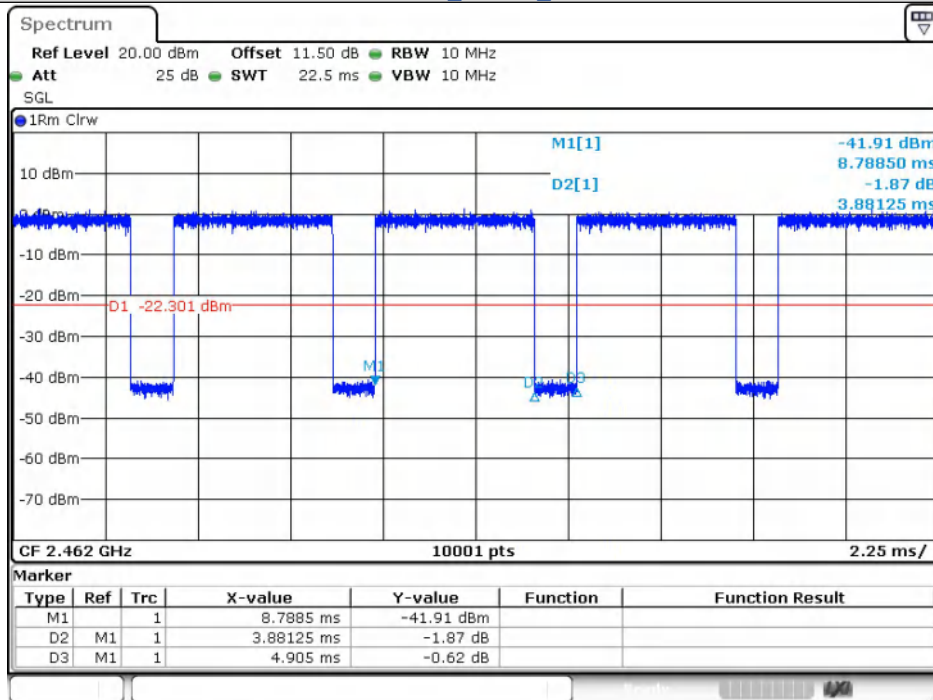
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IEEE 802.11ax_20MHz_Channel 1



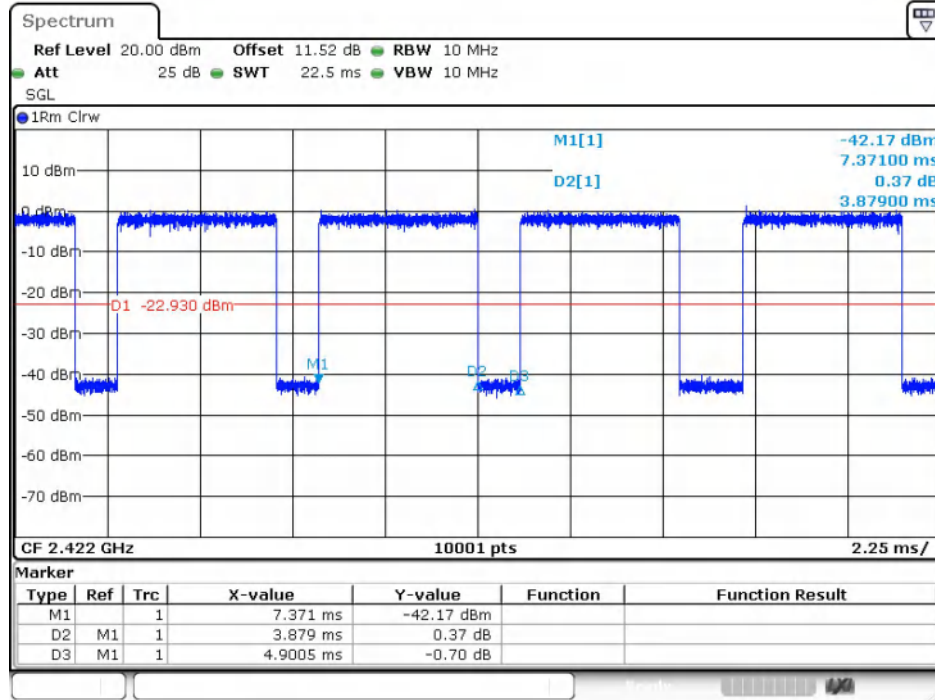
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IEEE 802.11ax_20MHz_Channel 6



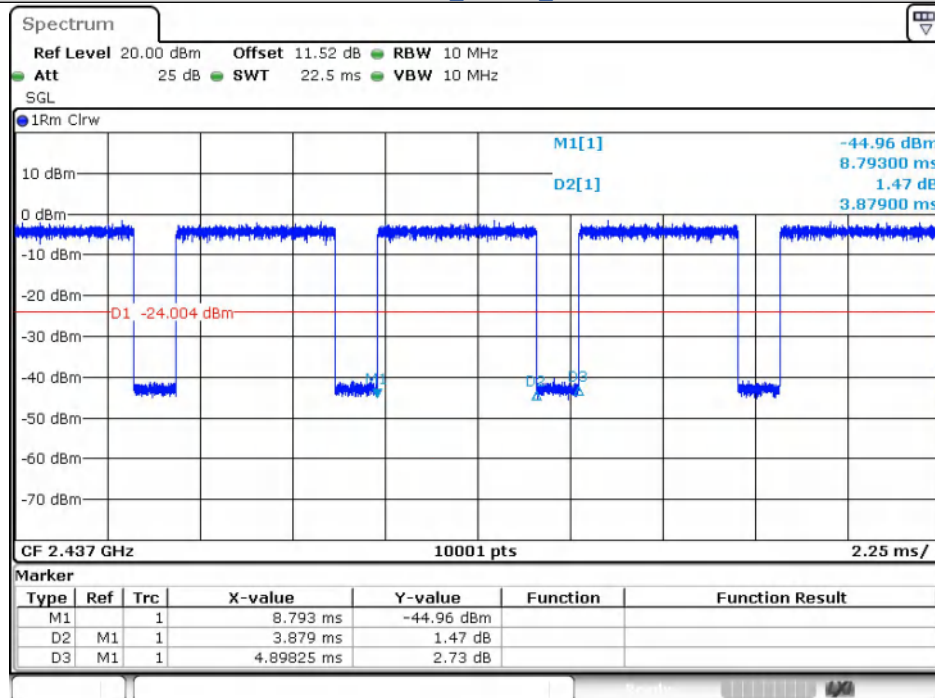
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IEEE 802.11ax_20MHz_Channel 11



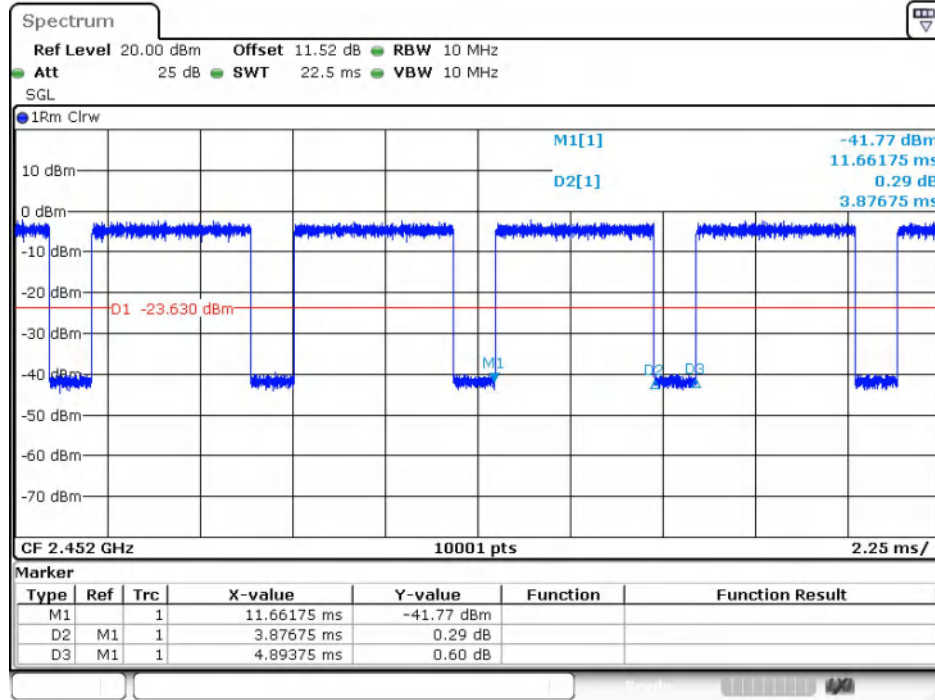
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IEEE 802.11ax_40MHz_Channel 3



Date: 12.JUL.2024 15:40:11

IEEE 802.11ax_40MHz_Channel 6



Date: 12.JUL.2024 15:44:03

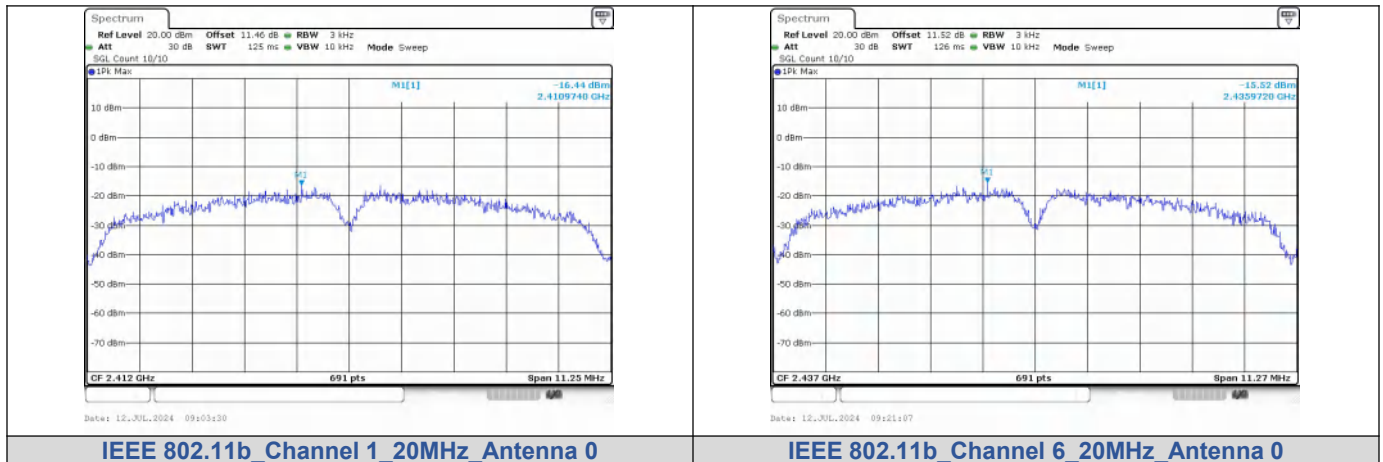
IEEE 802.11ax_40MHz_Channel 9

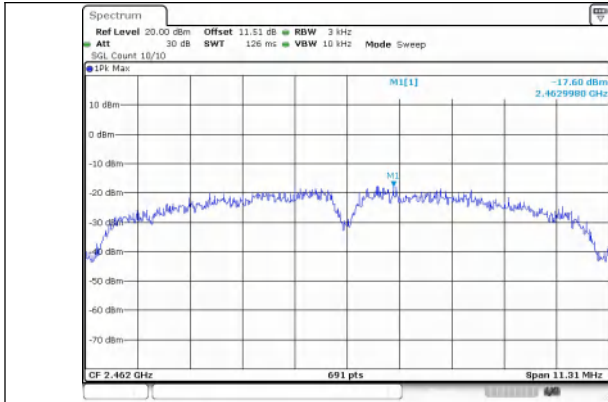
Power Spectral Density

Test Result

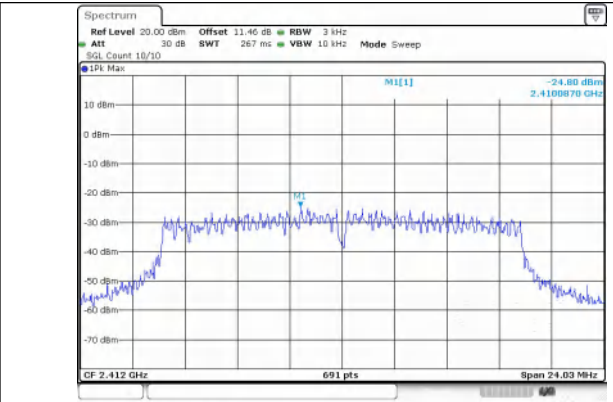
Mode	Channel	RU & Index	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	N/A	-16.436	≤8	PASS
	6		-15.521		PASS
	11		-17.600		PASS
IEEE 802.11g	1		-24.800		PASS
	6		-24.899		PASS
	11		-24.072		PASS
IEEE 802.11n_20	1		-25.181		PASS
	6		-24.258		PASS
	11		-24.032		PASS
IEEE 802.11n_40	3		-27.348		PASS
	6		-26.838		PASS
	9		-26.476		PASS
IEEE 802.11ax_20	1	SU	-26.044		PASS
	6		-26.972		PASS
	11		-26.231		PASS
IEEE 802.11ax_40	3		-28.726		PASS
	6		-28.458		PASS
	9		-29.600		PASS

Test Graphs

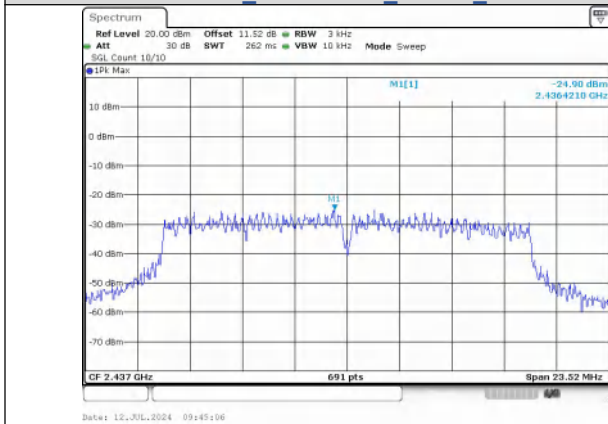




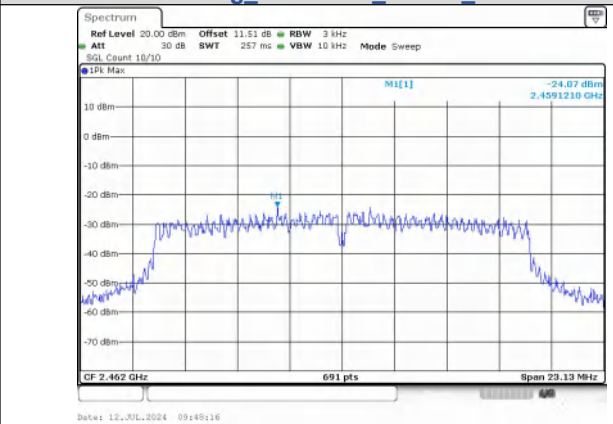
IEEE 802.11b_Channel 11_20MHz_Antenna 0



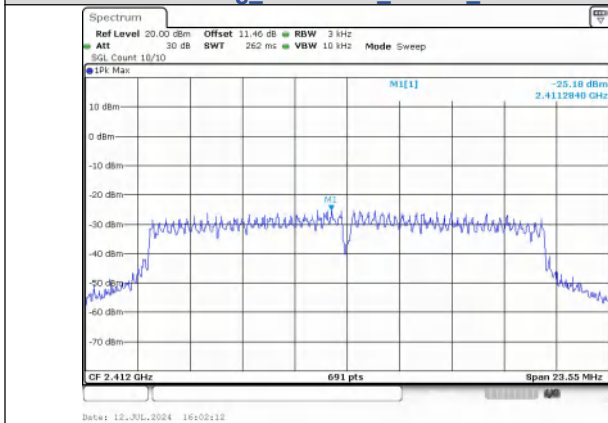
IEEE 802.11g_Channel 1_20MHz_Antenna 0



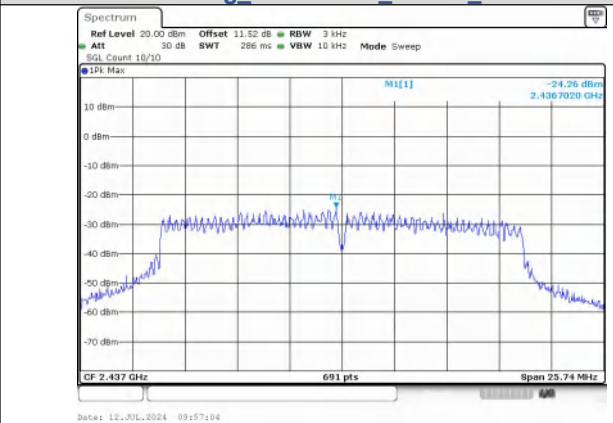
IEEE 802.11g_Channel 6_20MHz_Antenna 0



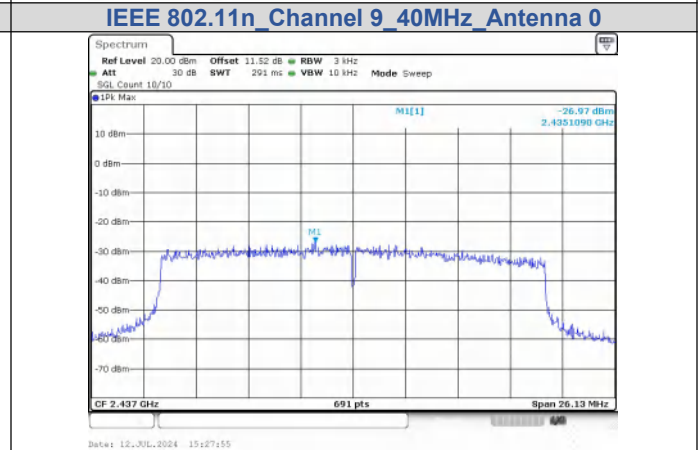
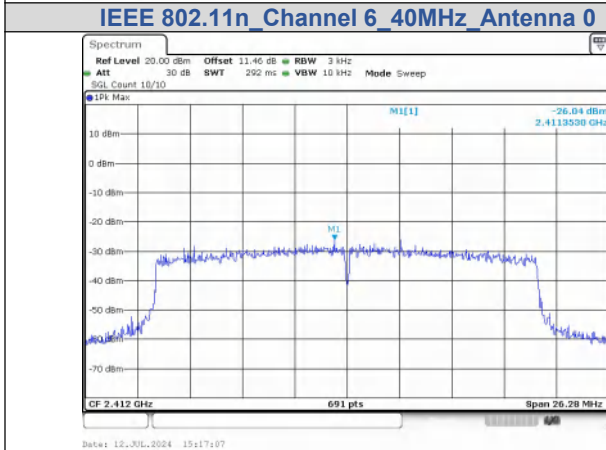
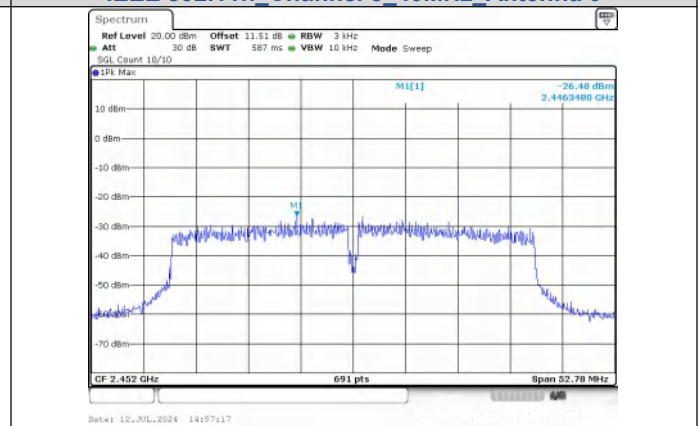
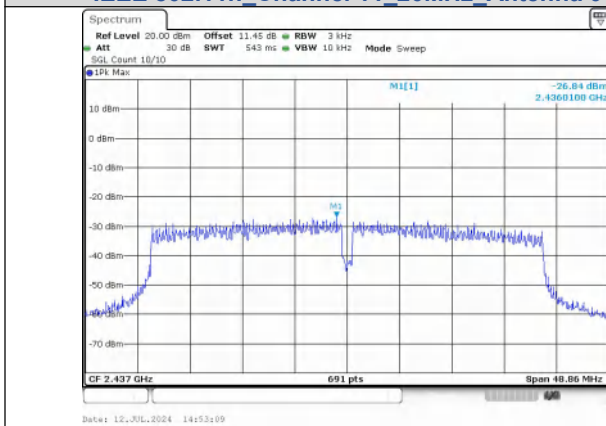
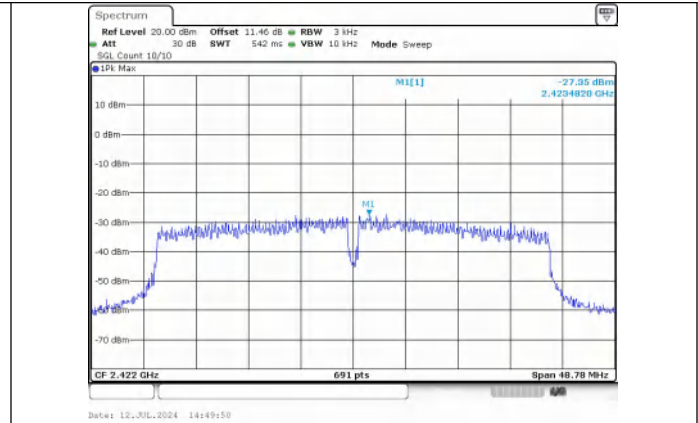
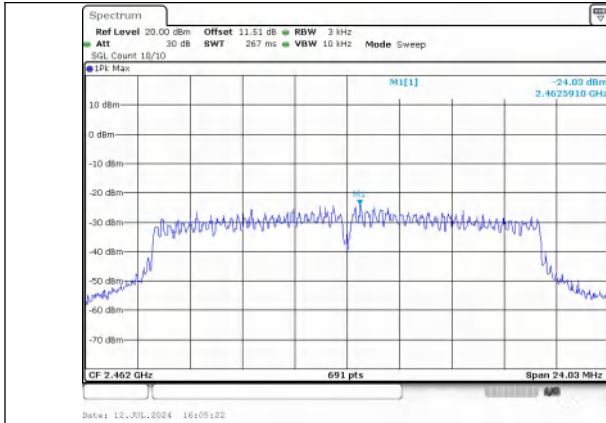
IEEE 802.11g_Channel 11_20MHz_Antenna 0

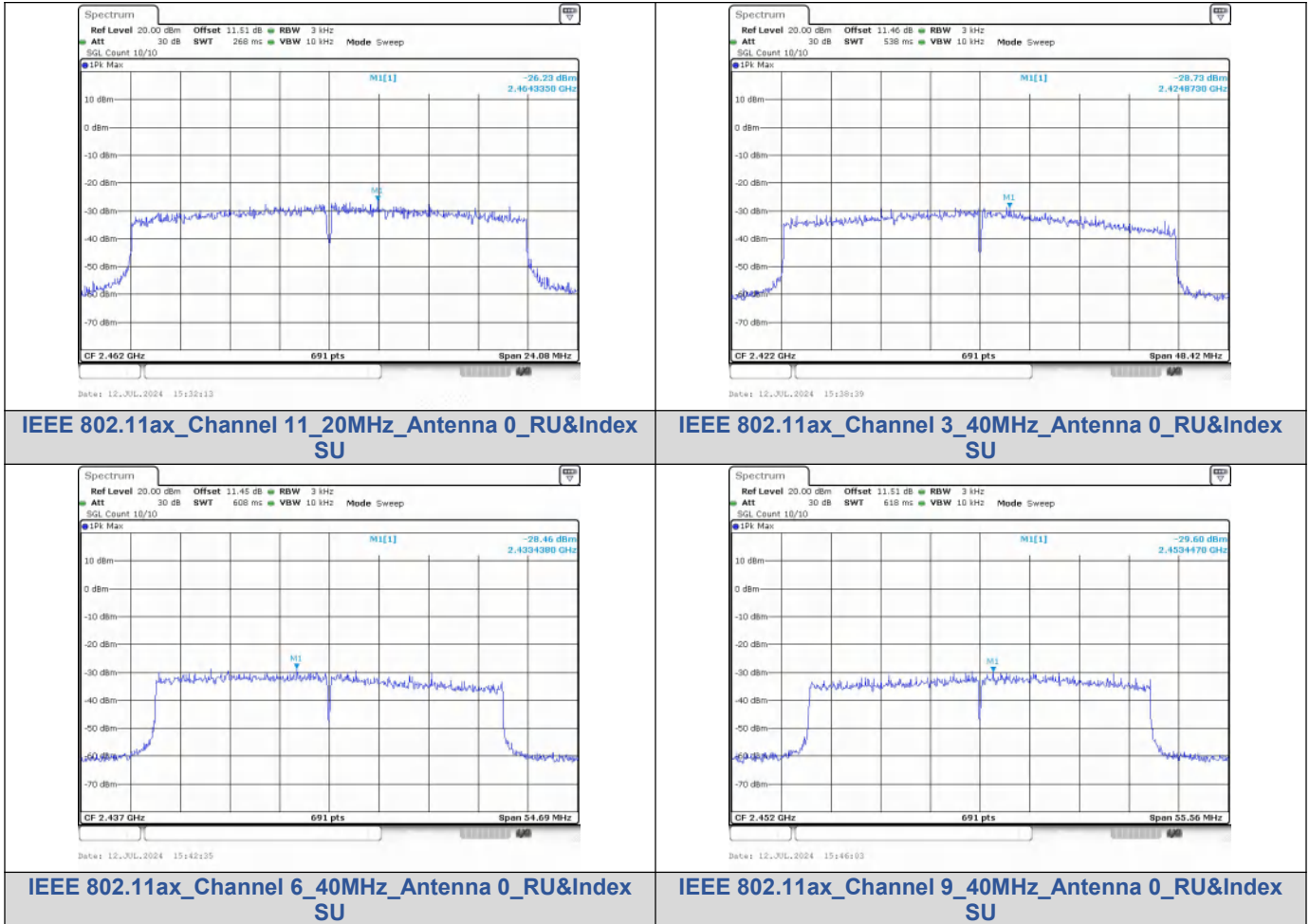


IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0





Conducted Output Power

Test Result

Conducted Output Power

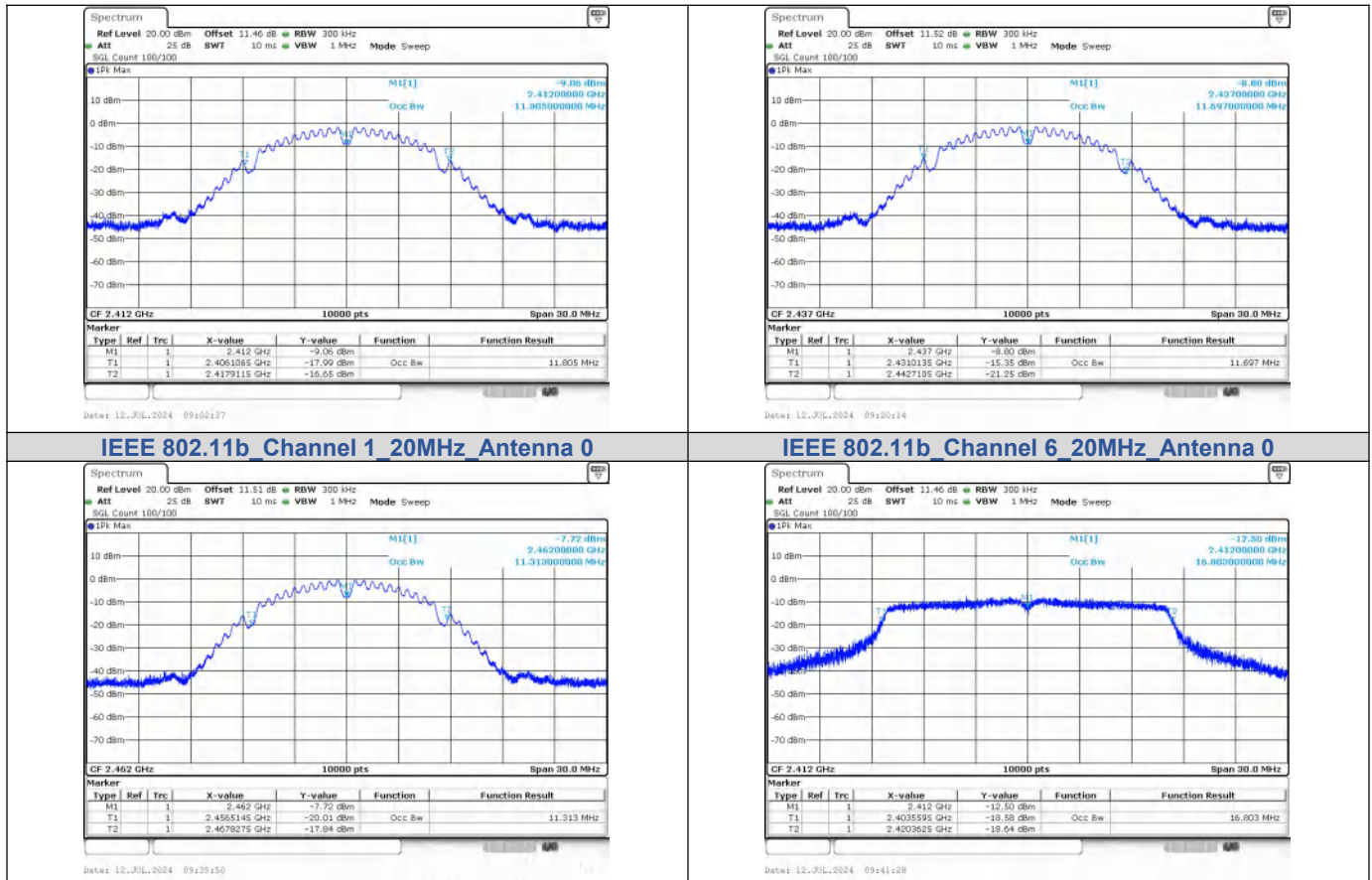
Mode	Channel	RU & Index	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	N/A	8.45	≤30	PASS
	6		8.71	≤30	PASS
	11		7.67	≤30	PASS
IEEE 802.11g	1		8.44	≤30	PASS
	6		8.39	≤30	PASS
	11		8.64	≤30	PASS
IEEE 802.11n_20	1		8.32	≤30	PASS
	6		8.49	≤30	PASS
	11		8.41	≤30	PASS
IEEE 802.11n_40	3		8.23	≤30	PASS
	6		8.75	≤30	PASS
	9		8.52	≤30	PASS
IEEE 802.11ax_20	1	SU	8.44	≤30	PASS
	6		8.36	≤30	PASS
	11		8.25	≤30	PASS
IEEE 802.11ax_40	3		8.73	≤30	PASS
	6		8.89	≤30	PASS
	9		8.22	≤30	PASS

99% Bandwidth

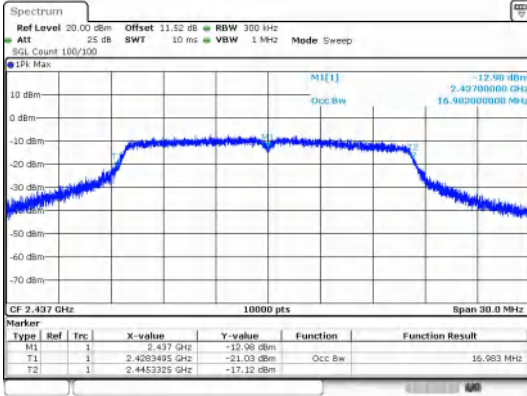
Test Result

Mode	Channel	RU & Index	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	N/A	0	2412	11.800
	6			2437	11.700
	11			2462	11.310
IEEE 802.11g	1			2412	16.800
	6			2437	16.980
	11			2462	16.740
IEEE 802.11n_20	1			2412	18.010
	6			2437	18.100
	11			2462	17.980
IEEE 802.11n_40	3			2422	36.240
	6			2437	36.360
	9			2452	36.430
IEEE 802.11ax_20	1	SU		2412	19.030
	6			2437	19.080
	11			2462	18.960
IEEE 802.11ax_40	3			2422	37.450
	6			2437	37.850
	9			2452	37.820

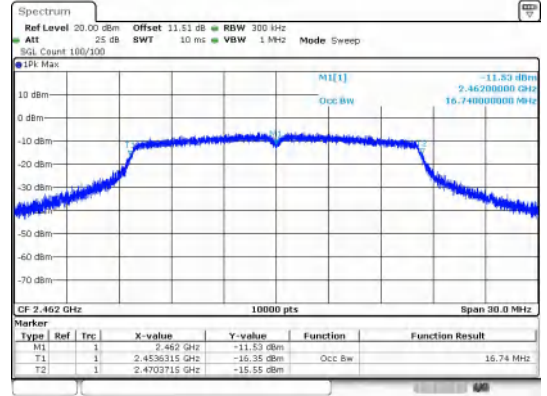
Test Graphs



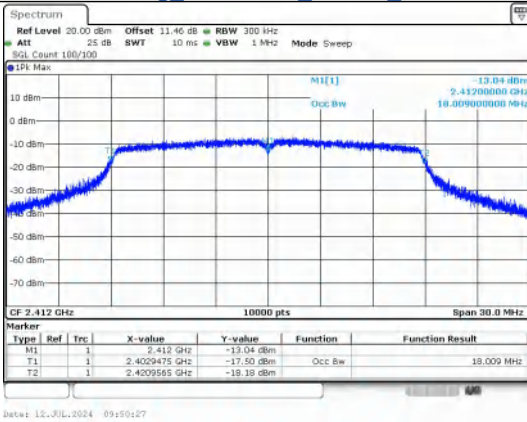
IEEE 802.11b Channel 11_20MHz_Antenna 0



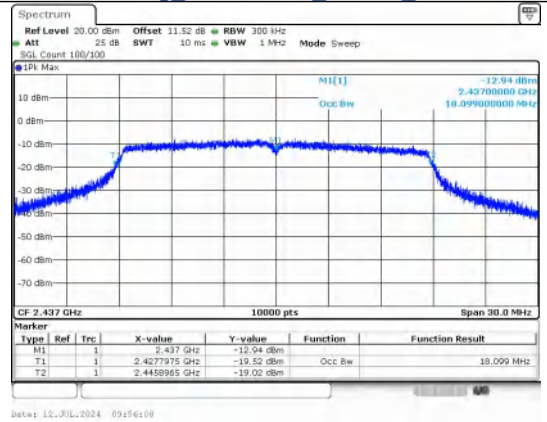
IEEE 802.11g Channel 1_20MHz_Antenna 0



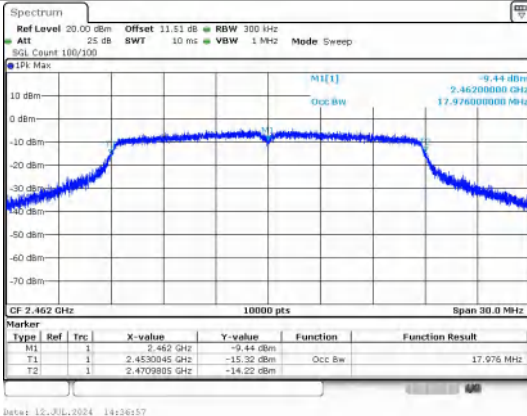
IEEE 802.11g Channel 6_20MHz_Antenna 0



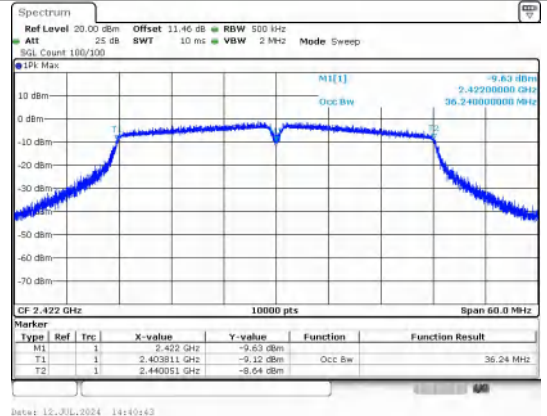
IEEE 802.11g Channel 11_20MHz_Antenna 0



IEEE 802.11n Channel 1_20MHz_Antenna 0

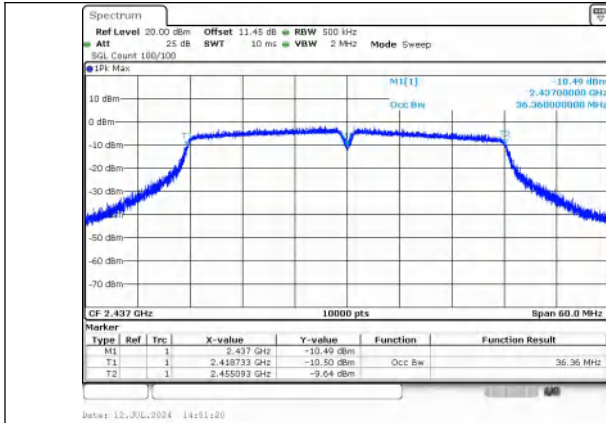


IEEE 802.11n Channel 6_20MHz_Antenna 0

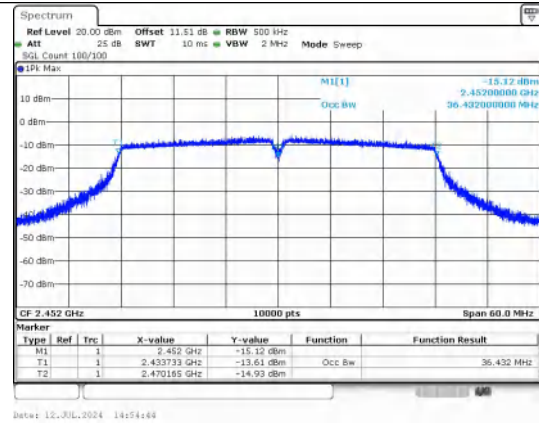


IEEE 802.11n Channel 11_20MHz_Antenna 0

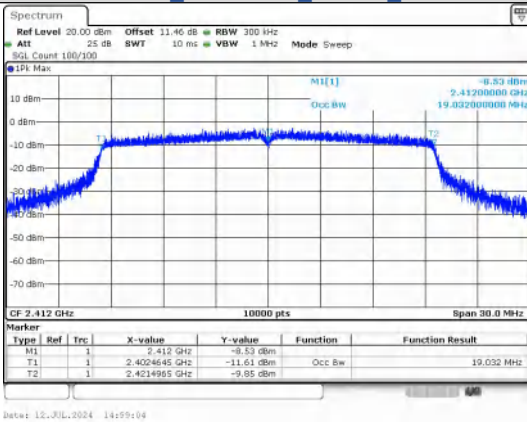
IEEE 802.11n Channel 3_40MHz_Antenna 0



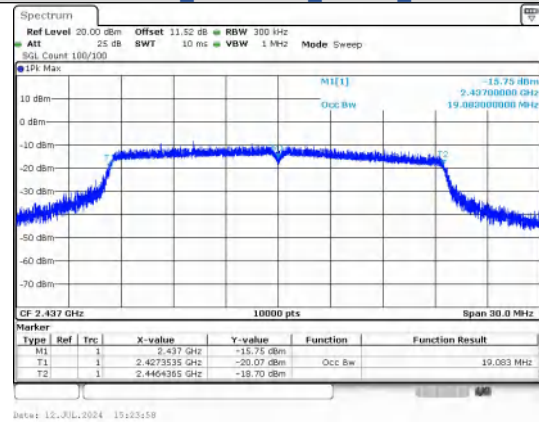
IEEE 802.11n_Channel 6_40MHz_Antenna 0



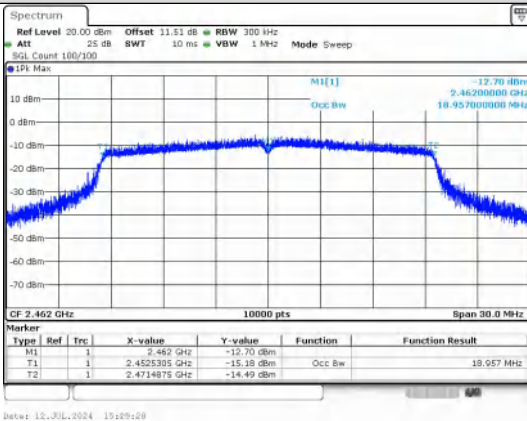
IEEE 802.11n_Channel 9_40MHz_Antenna 0



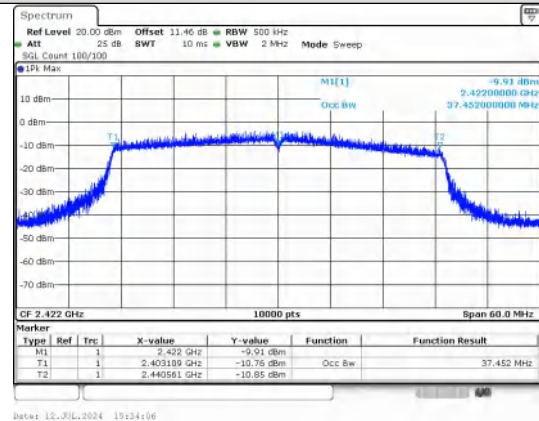
IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



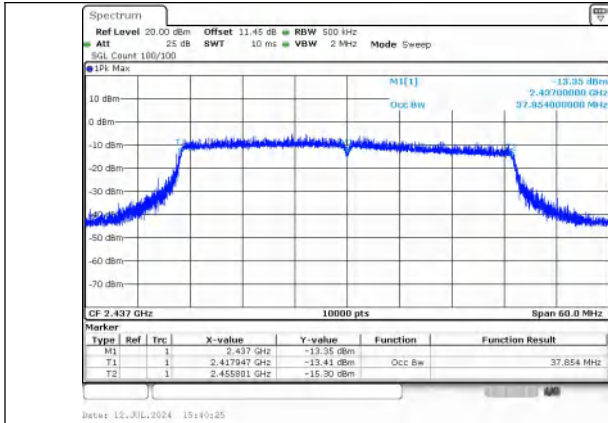
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



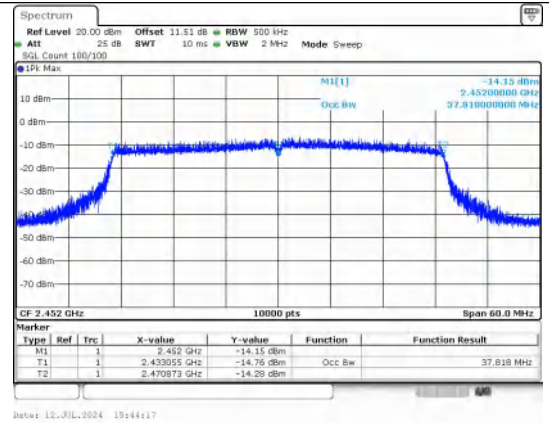
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index
SU



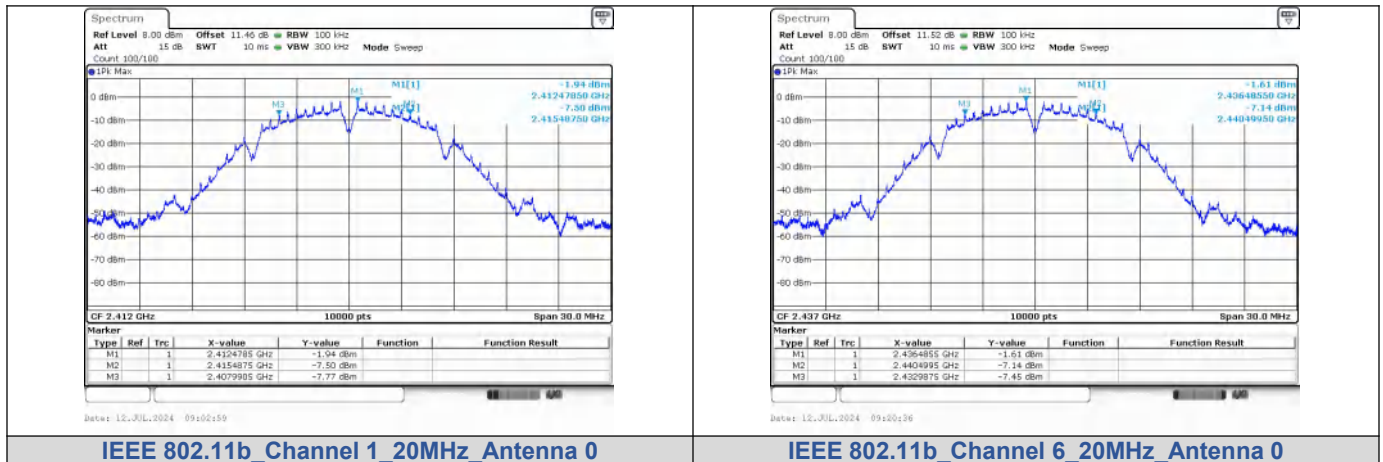
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index
SU

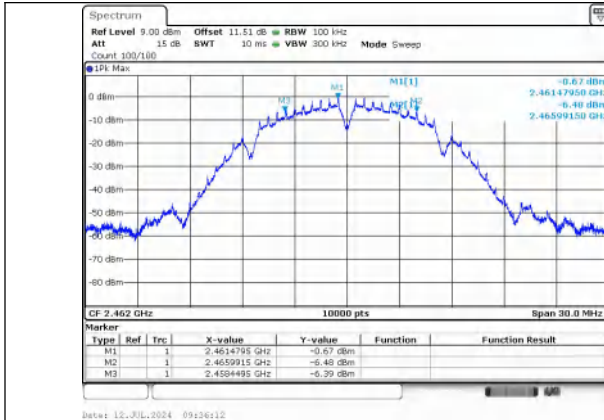
6dB Bandwidth

Test Result

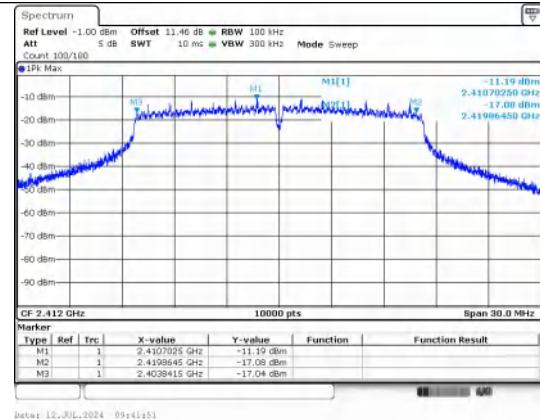
Mode	Channel	RU & Index	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result	
IEEE 802.11b	1	N/A	0	2412	7.500	≥0.5	PASS	
	6			2437	7.510		PASS	
	11			2462	7.540		PASS	
IEEE 802.11g	1			2412	16.02		PASS	
	6			2437	15.68		PASS	
	11			2462	15.42		PASS	
IEEE 802.11n_20	1			2412	15.70		PASS	
	6			2437	17.16		PASS	
	11			2462	16.02		PASS	
IEEE 802.11n_40	3			SU	2422		32.52	PASS
	6				2437		32.57	PASS
	9				2452		35.19	PASS
IEEE 802.11ax_20	1	2412	17.52		PASS			
	6	2437	17.42		PASS			
	11	2462	16.05		PASS			
IEEE 802.11ax_40	3	2422	32.28		PASS			
	6	2437	36.46		PASS			
	9	2452	37.04		PASS			

Test Graphs

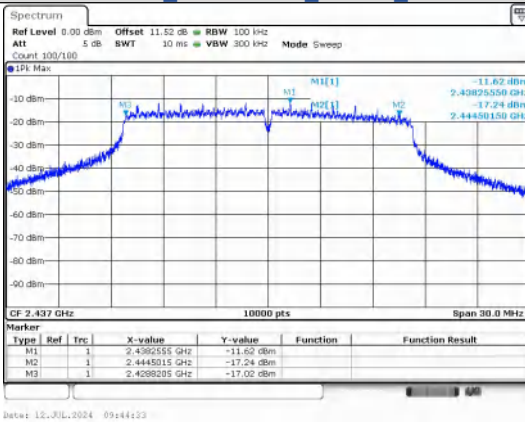




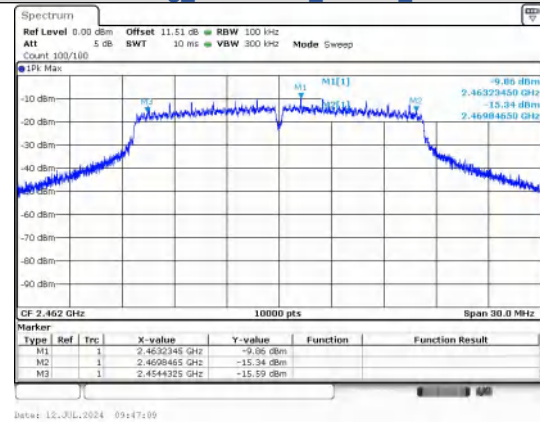
IEEE 802.11b Channel 11 20MHz Antenna 0



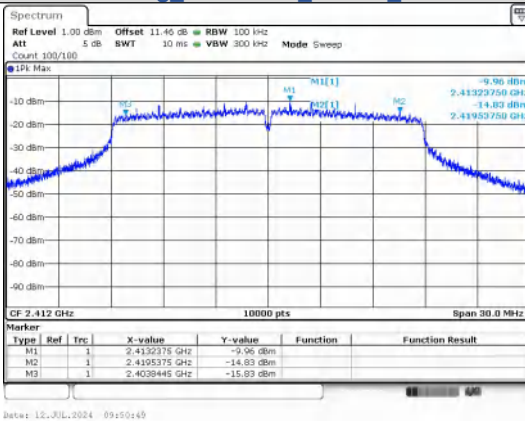
IEEE 802.11g Channel 1 20MHz Antenna 0



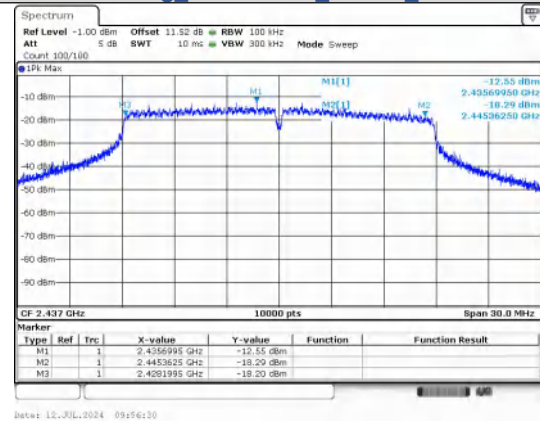
IEEE 802.11g Channel 6 20MHz Antenna 0



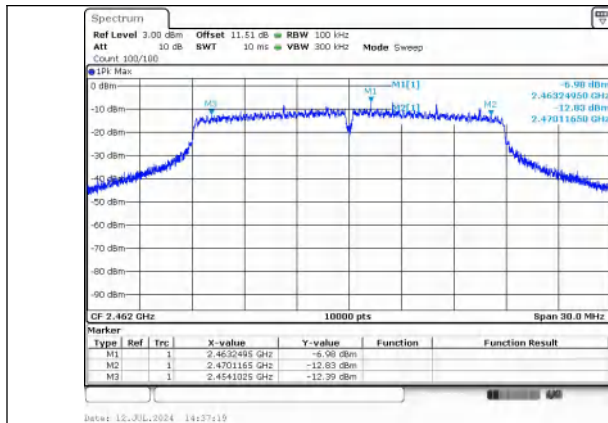
IEEE 802.11g Channel 11 20MHz Antenna 0



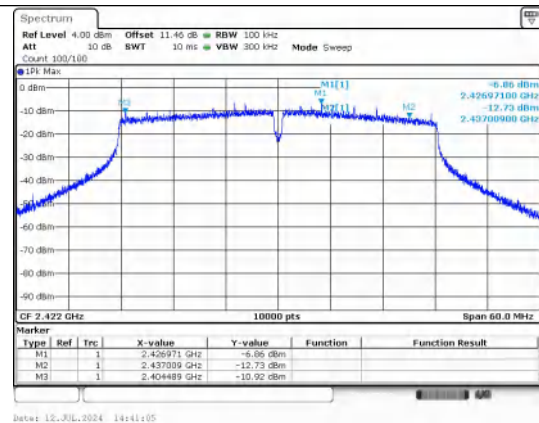
IEEE 802.11n Channel 1 20MHz Antenna 0



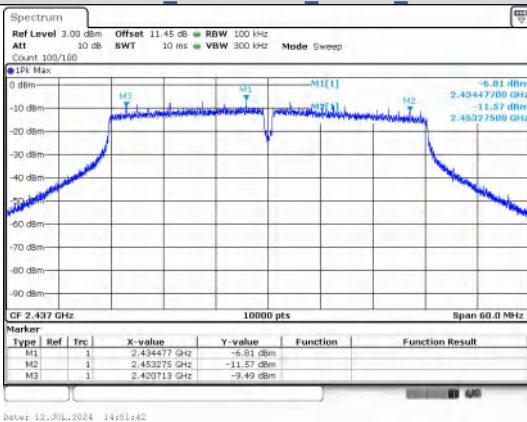
IEEE 802.11n Channel 6 20MHz Antenna 0



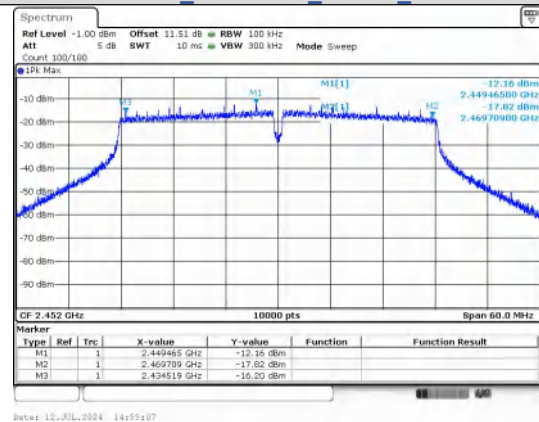
IEEE 802.11n_Channel 11_20MHz_Antenna 0



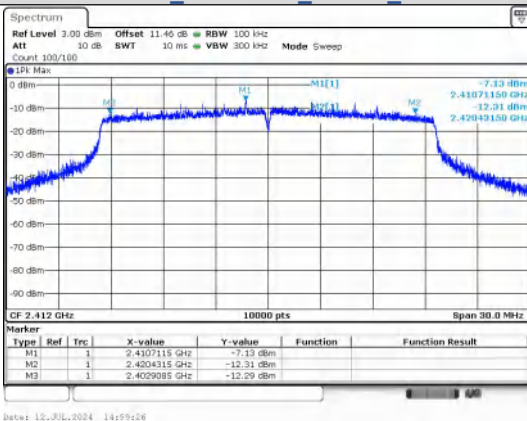
IEEE 802.11n_Channel 3_40MHz_Antenna 0



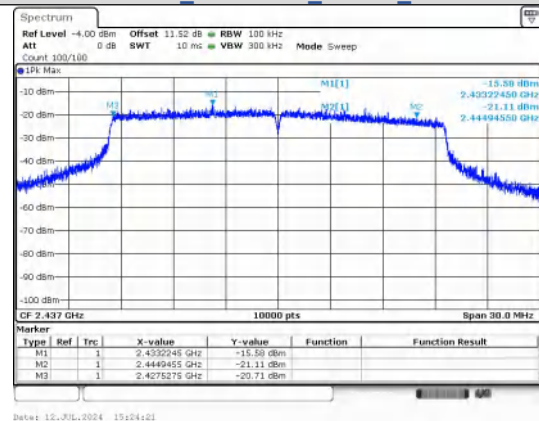
IEEE 802.11n_Channel 6_40MHz_Antenna 0



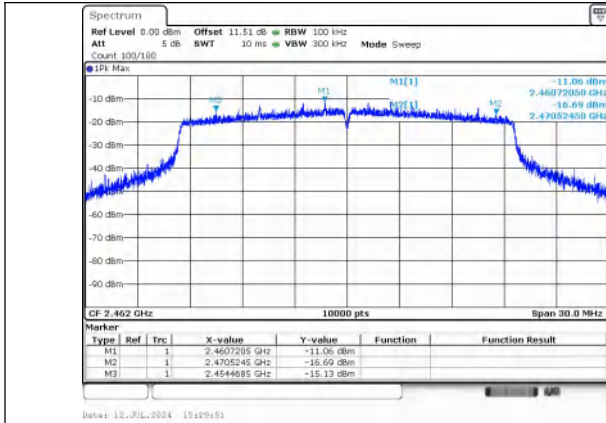
IEEE 802.11n_Channel 9_40MHz_Antenna 0



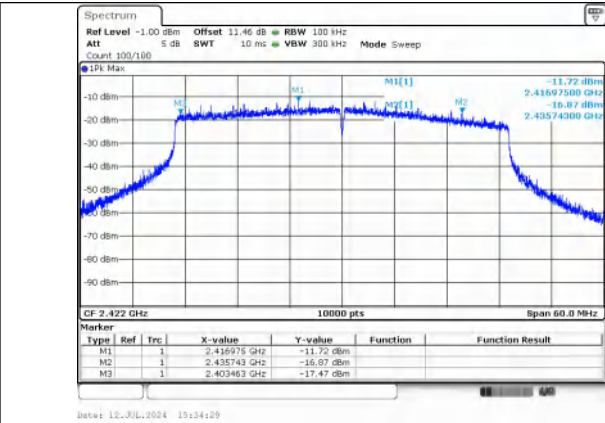
IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU



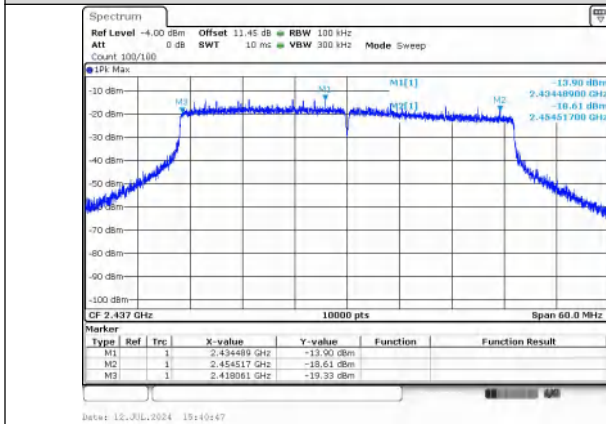
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



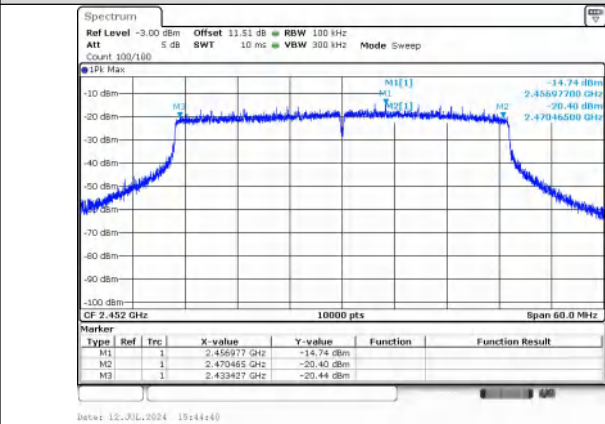
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



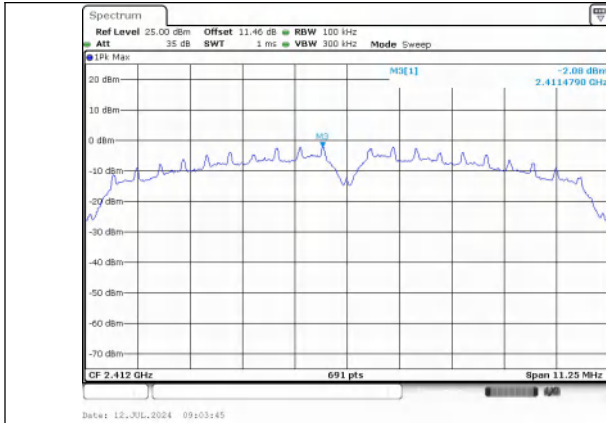
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU

Conducted Out Of Band Emission

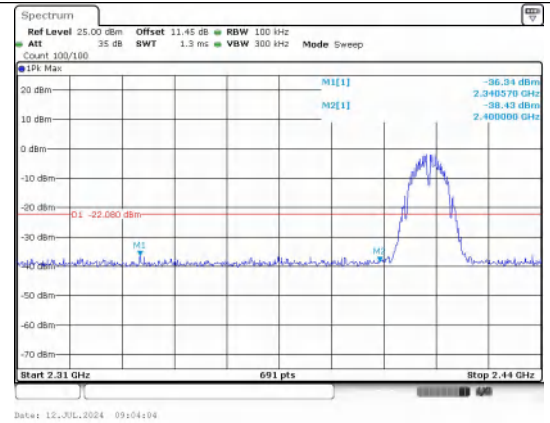
Test Result

Mode	Channel	RU & Index	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	N/A	0	2340.57	-36.338	-22.08	-14.258	PASS
				2400.00	-38.434	-22.08	-16.354	PASS
	6894.70			-42.556	-22.08	-20.476	PASS	
	6324.52			-42.649	-21.53	-21.119	PASS	
	11			2483.50	-38.491	-22.9	-15.591	PASS
22061.4	-43.139			-22.9	-20.239	PASS		
IEEE 802.11g	1			2389.49	-36.506	-30.63	-5.876	PASS
				2400.00	-37.395	-30.63	-6.765	PASS
	6			16680.4	-43.621	-30.63	-12.991	PASS
	21972.4			-42.643	-30.91	-11.733	PASS	
	11			2483.50	-38.596	-29.98	-8.616	PASS
6175.53	-42.962			-29.98	-12.982	PASS		
IEEE 802.11n_20	1			2400.00	-36.033	-31.36	-4.673	PASS
	6			5868.40	-43.411	-31.36	-12.051	PASS
	11			6295.39	-43.306	-33.22	-10.086	PASS
				2483.50	-38.690	-30.14	-8.550	PASS
				6123.93	-43.241	-30.14	-13.101	PASS
IEEE 802.11n_40	3			2383.28	-36.116	-32.82	-3.296	PASS
				2400.00	-37.676	-32.82	-4.856	PASS
	6			16291.7	-42.598	-32.82	-9.778	PASS
	9			4809.67	-43.334	-34.55	-8.784	PASS
				2483.50	-38.329	-32.77	-5.559	PASS
IEEE 802.11ax_20	1			6164.71	-43.351	-32.77	-10.581	PASS
	6			2400.00	-35.318	-32.82	-2.498	PASS
	11	6938.78	-43.053	-32.82	-10.233	PASS		
		6905.49	-42.946	-32.99	-9.956	PASS		
		2483.50	-38.017	-32.2	-5.817	PASS		
IEEE 802.11ax_40	3	6914.65	-42.917	-32.2	-10.717	PASS		
		2370.11	-36.316	-34.11	-2.206	PASS		
	6	2400.00	-38.656	-34.11	-4.546	PASS		
	9	6133.10	-43.787	-34.11	-9.677	PASS		
		22024.8	-43.026	-33.94	-9.086	PASS		
2483.50		-38.258	-34.19	-4.068	PASS			
			6938.78	-43.516	-34.19	-9.326	PASS	

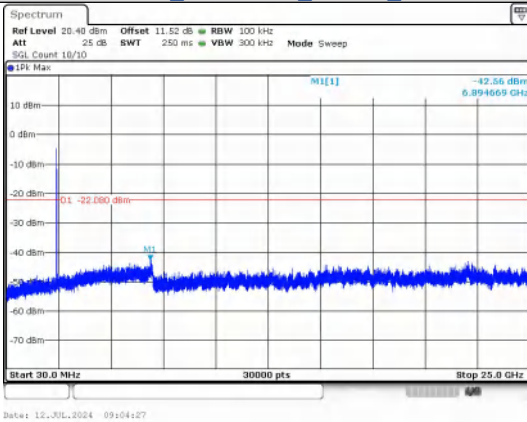
Test Graphs



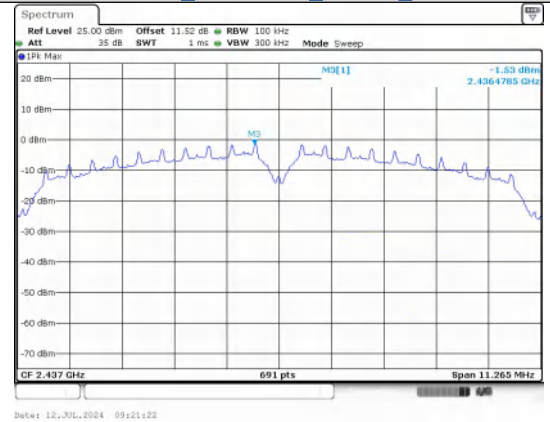
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



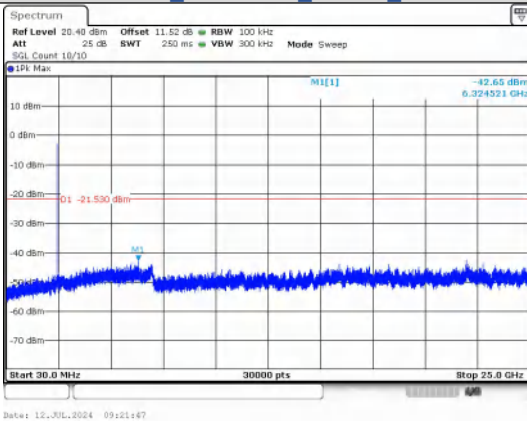
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



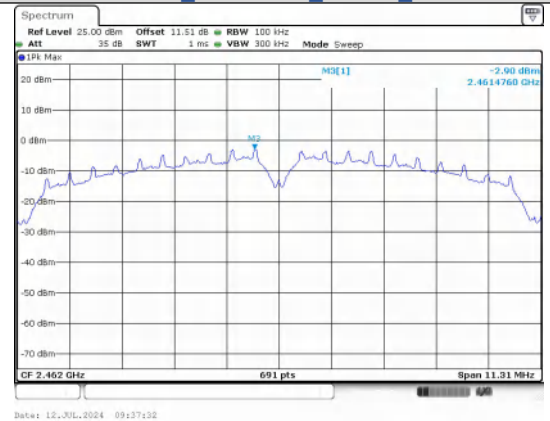
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



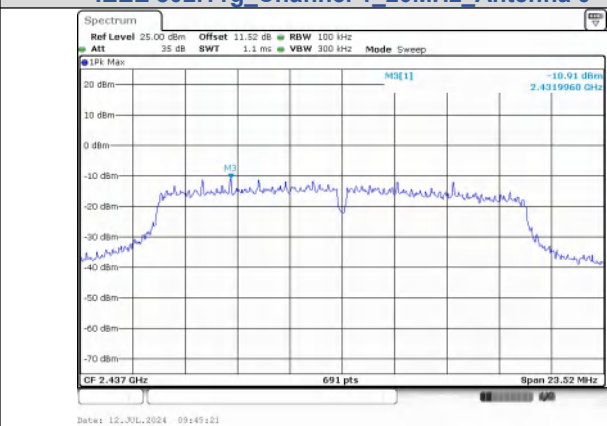
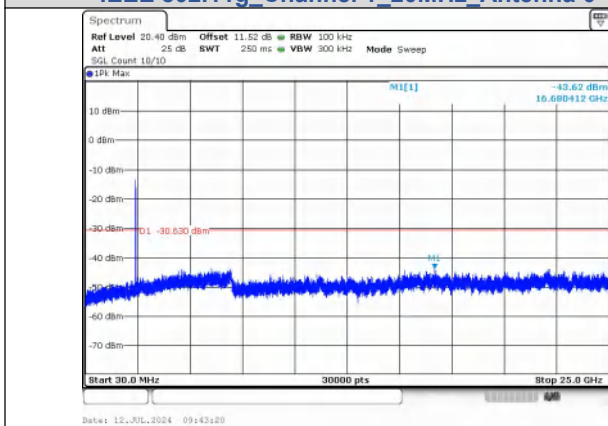
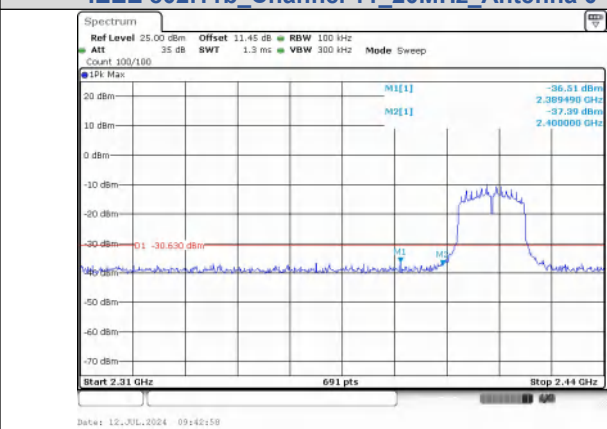
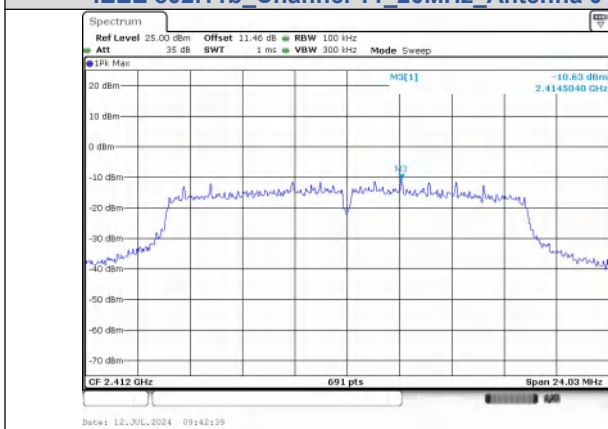
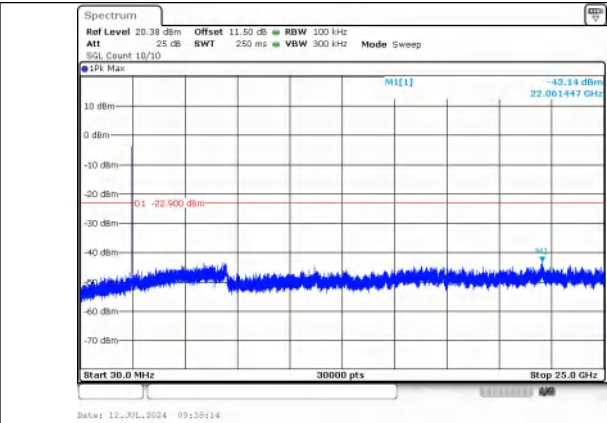
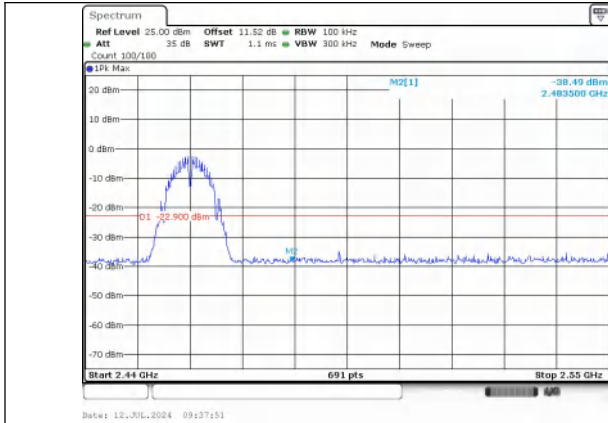
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0

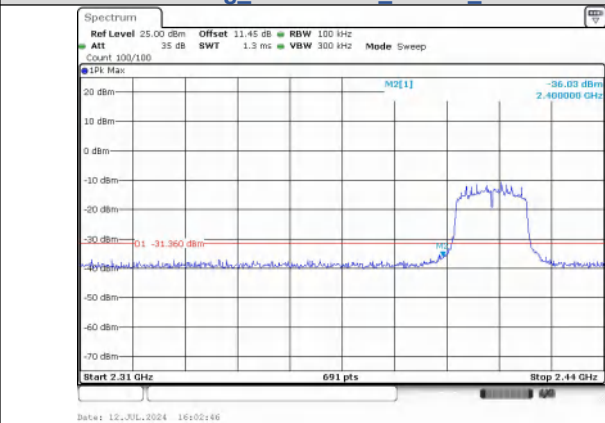
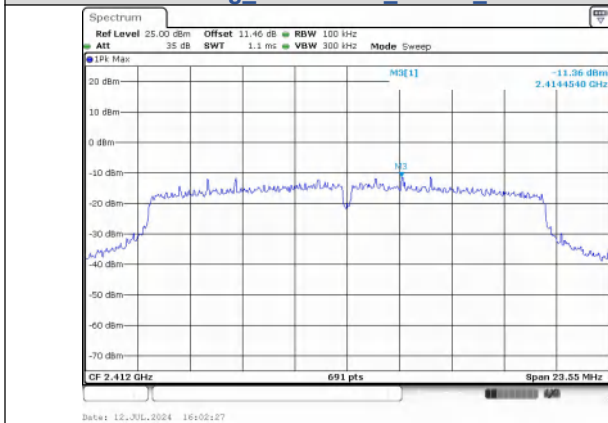
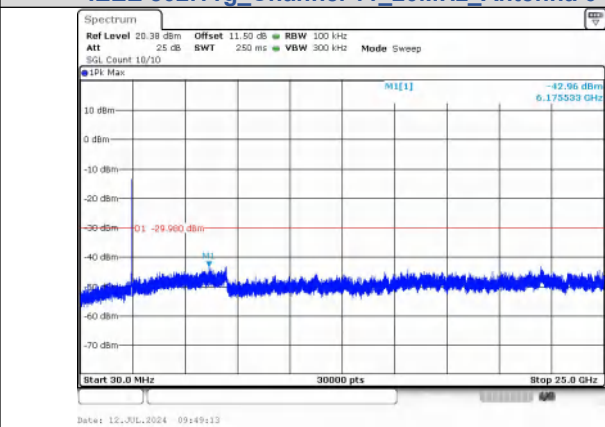
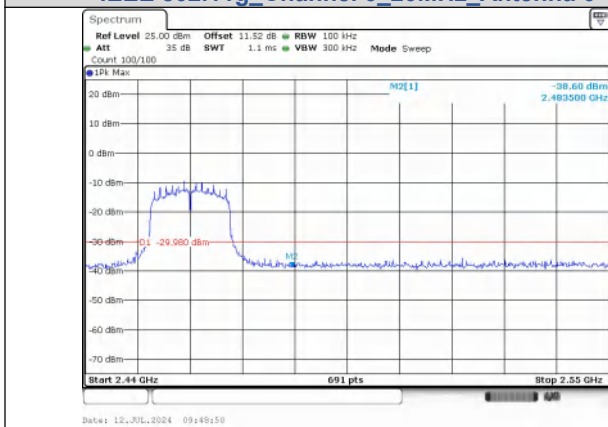
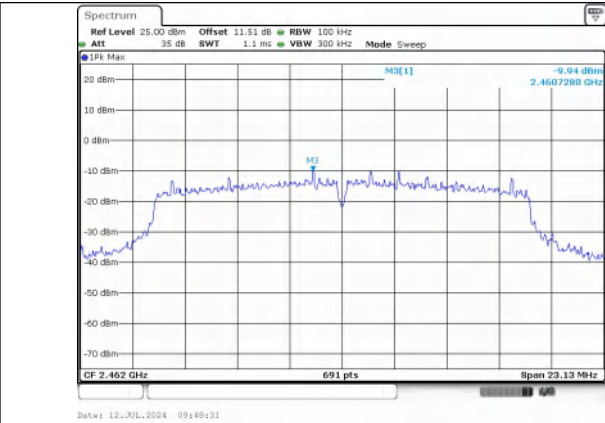
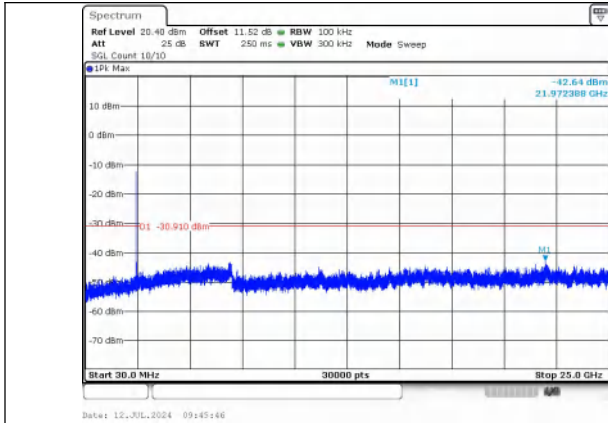


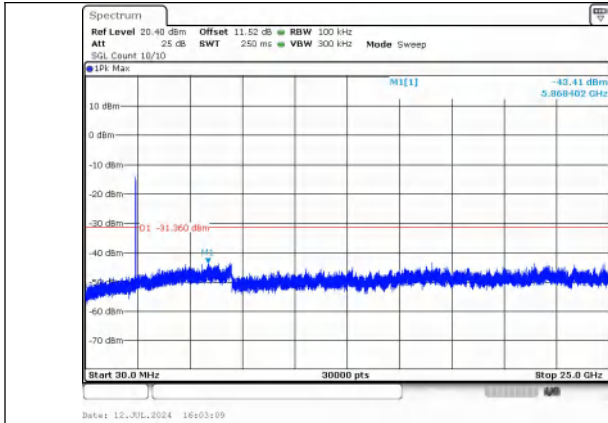
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



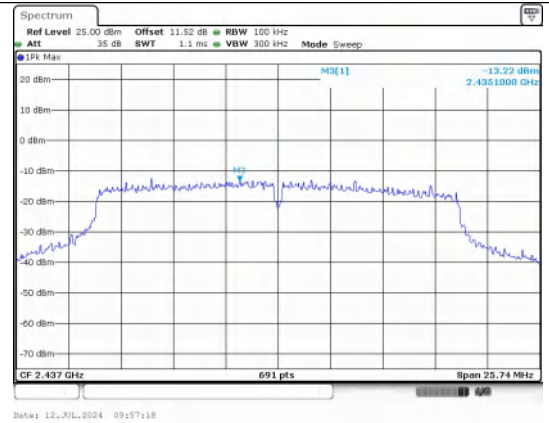
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



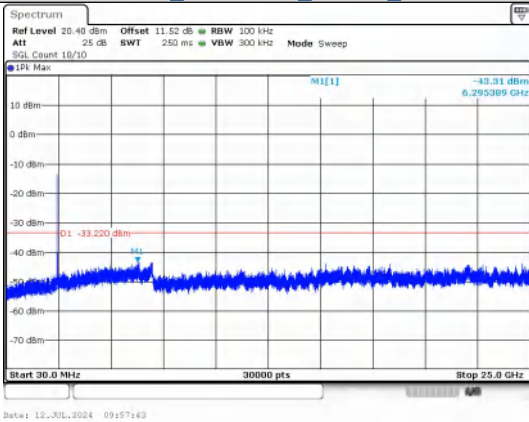




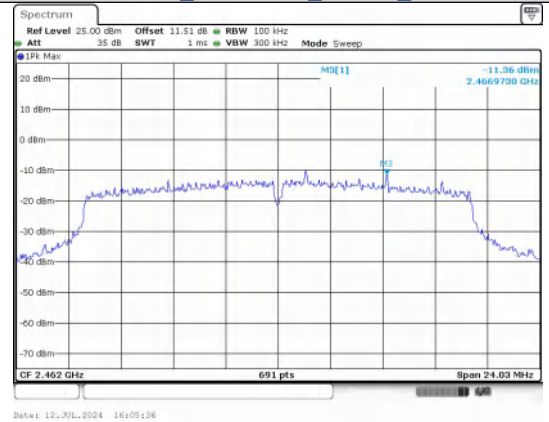
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



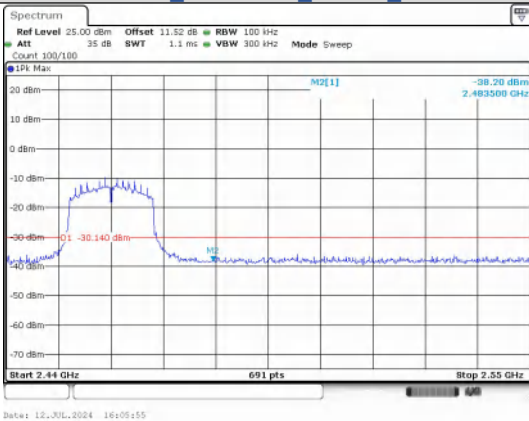
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



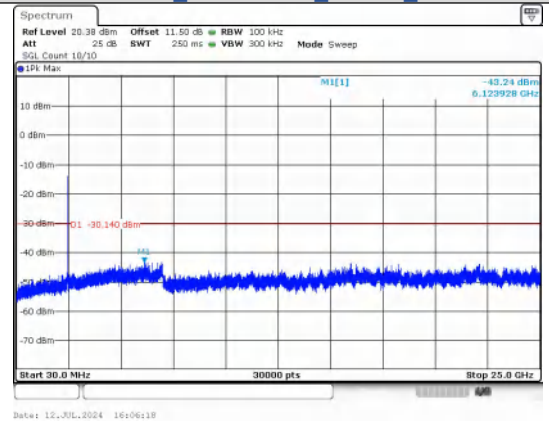
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



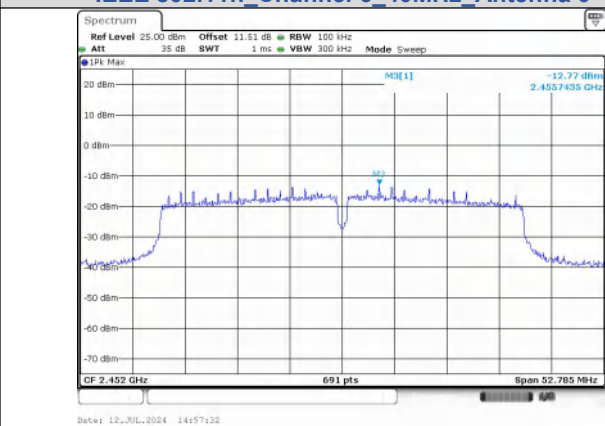
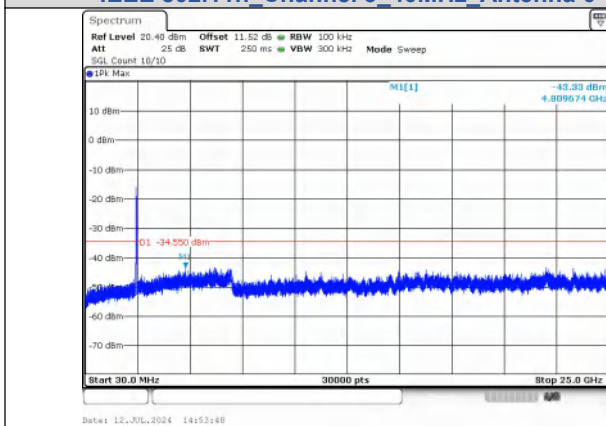
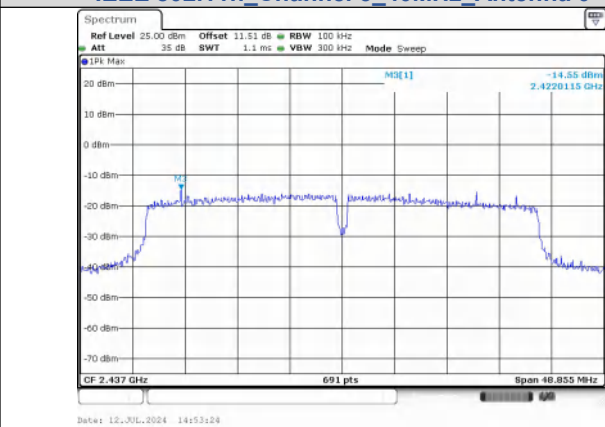
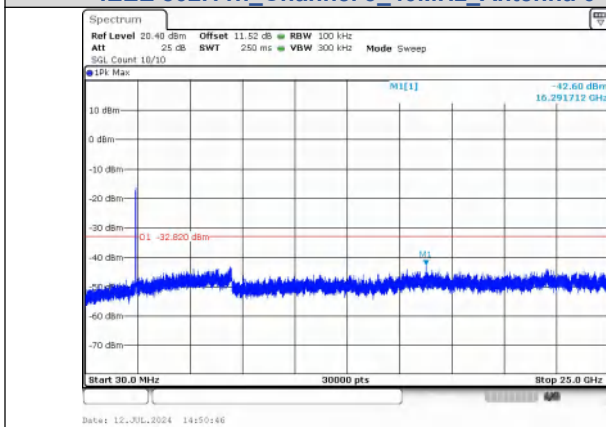
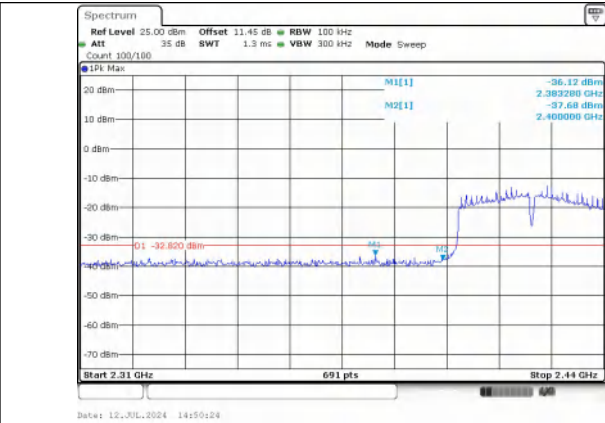
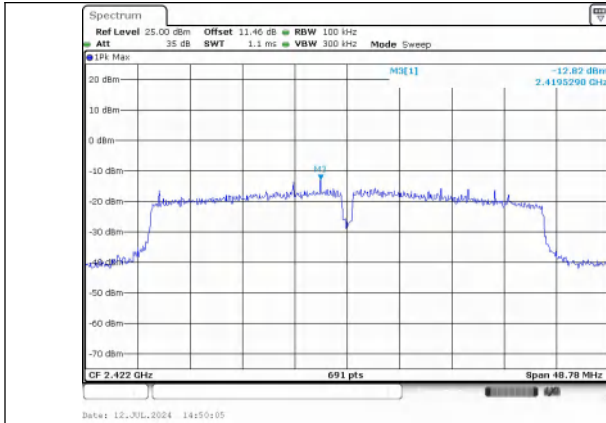
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0

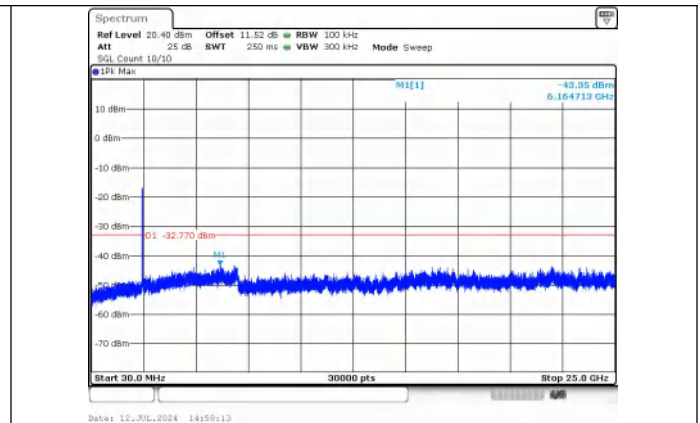
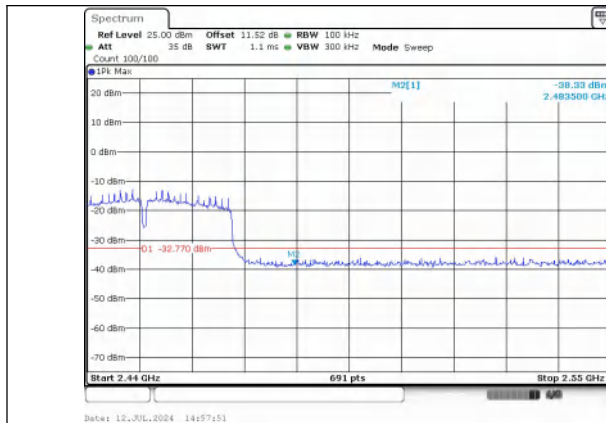


Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



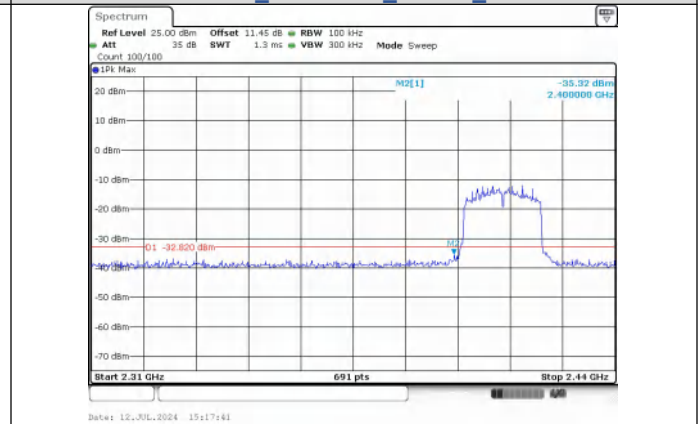
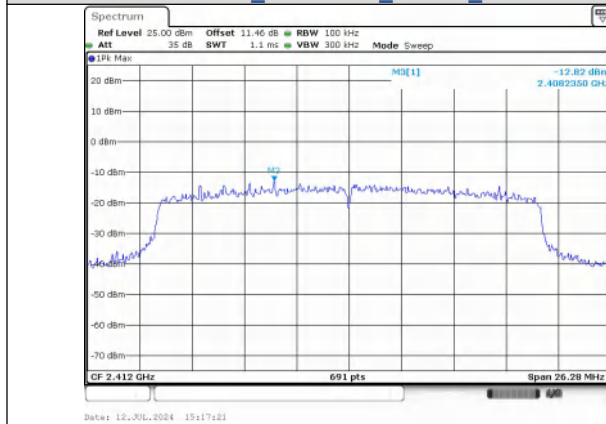
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0





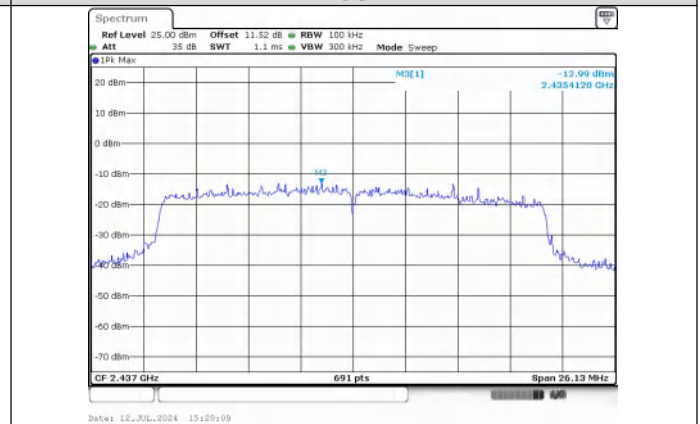
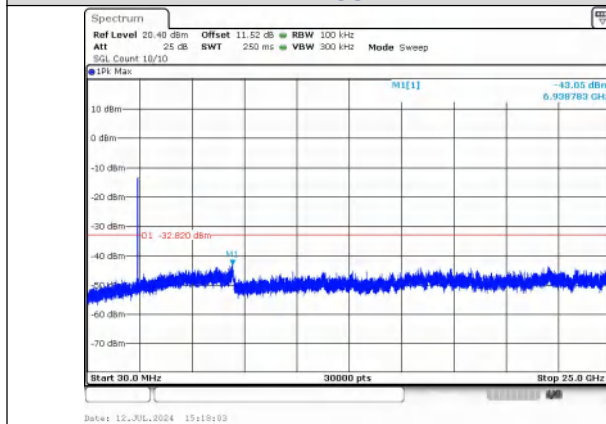
Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0

30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0



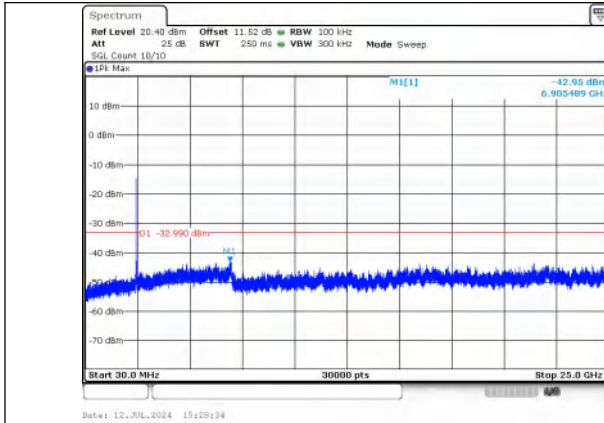
In-Band Reference Level
IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU

Out Of Band Emission
IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU

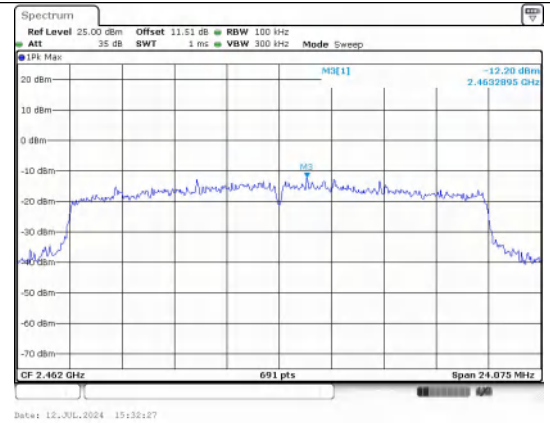


30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 1_20MHz_Antenna 0_RU&Index SU

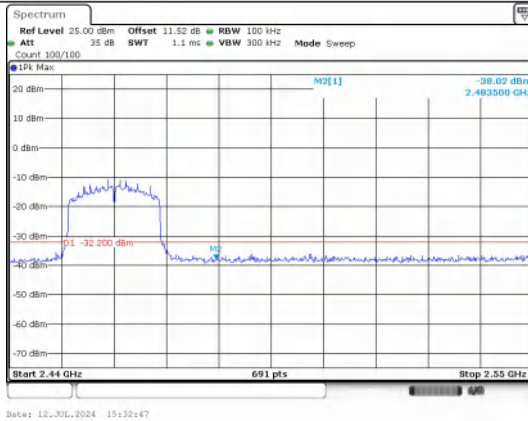
In-Band Reference Level
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



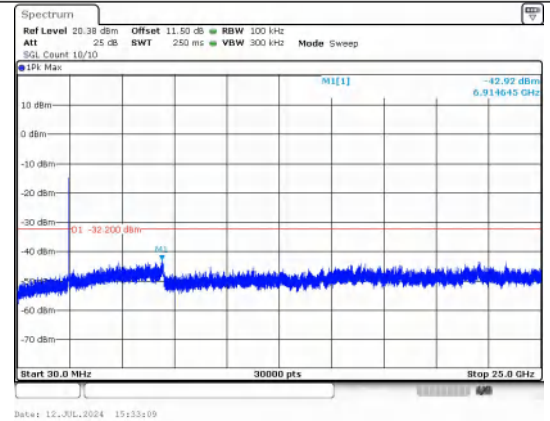
30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 6_20MHz_Antenna 0_RU&Index SU



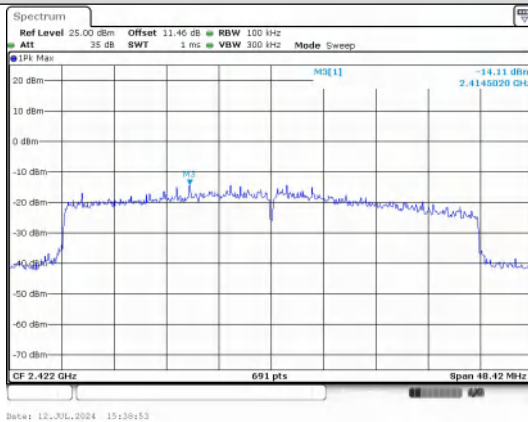
In-Band Reference Level
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



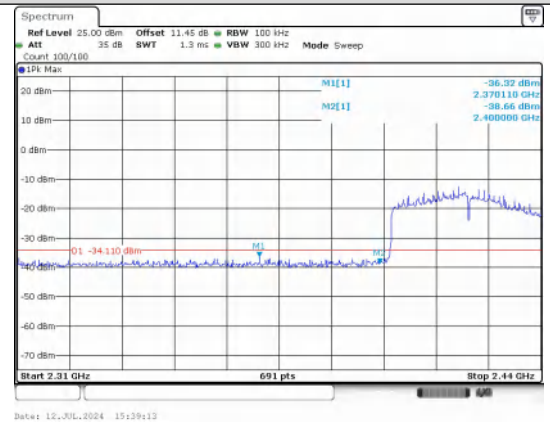
Out Of Band Emission
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



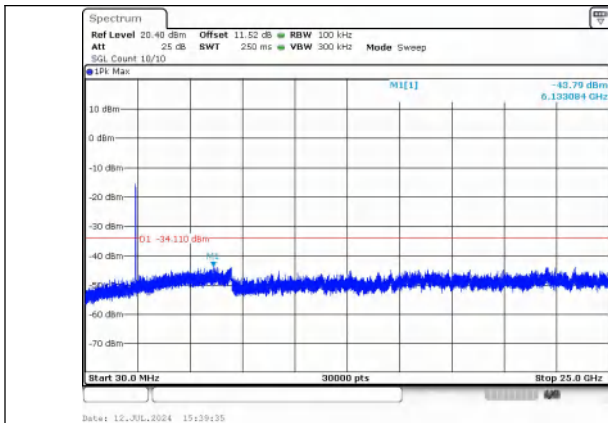
30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 11_20MHz_Antenna 0_RU&Index SU



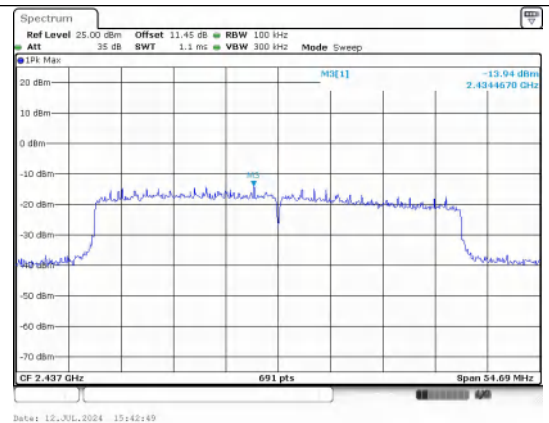
In-Band Reference Level
IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



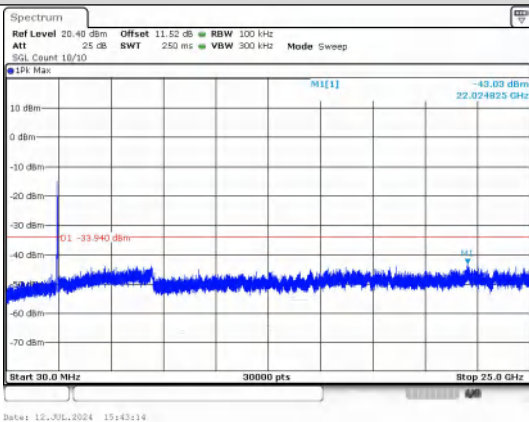
Out Of Band Emission
IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



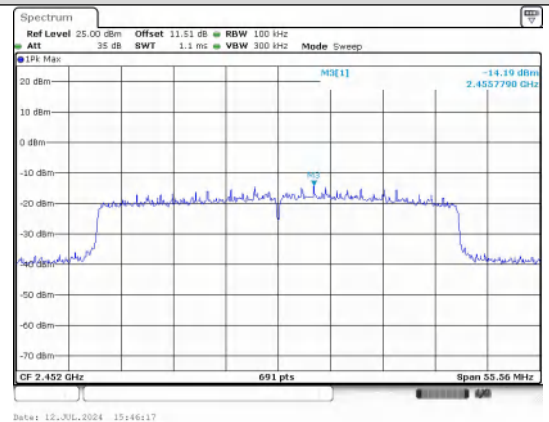
30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 3_40MHz_Antenna 0_RU&Index SU



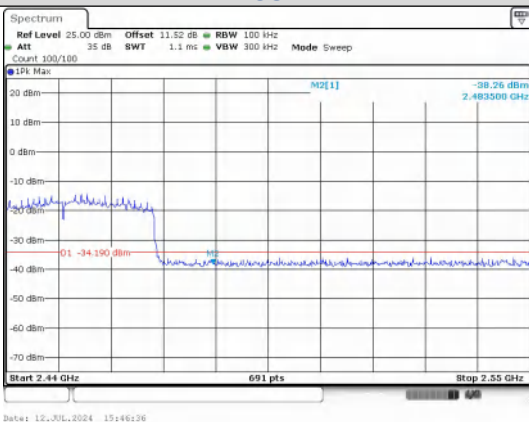
In-Band Reference Level
IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



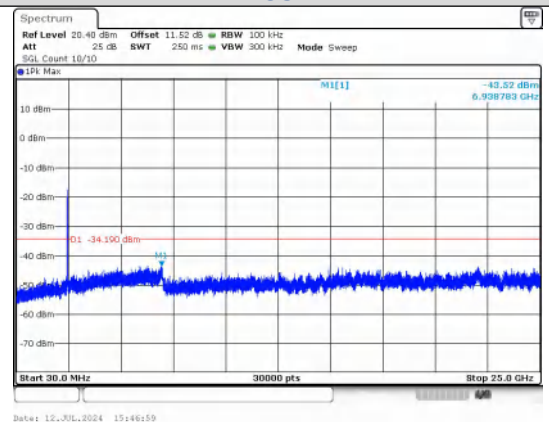
30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 6_40MHz_Antenna 0_RU&Index SU



In-Band Reference Level
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU



Out Of Band Emission
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU



30.0 MHz - 25000.0 MHz
IEEE 802.11ax_Channel 9_40MHz_Antenna 0_RU&Index SU