

Appendix A: Test Results of 2.4G WIFI.

Conducted Output Power

Test Result

Conducted Output Power

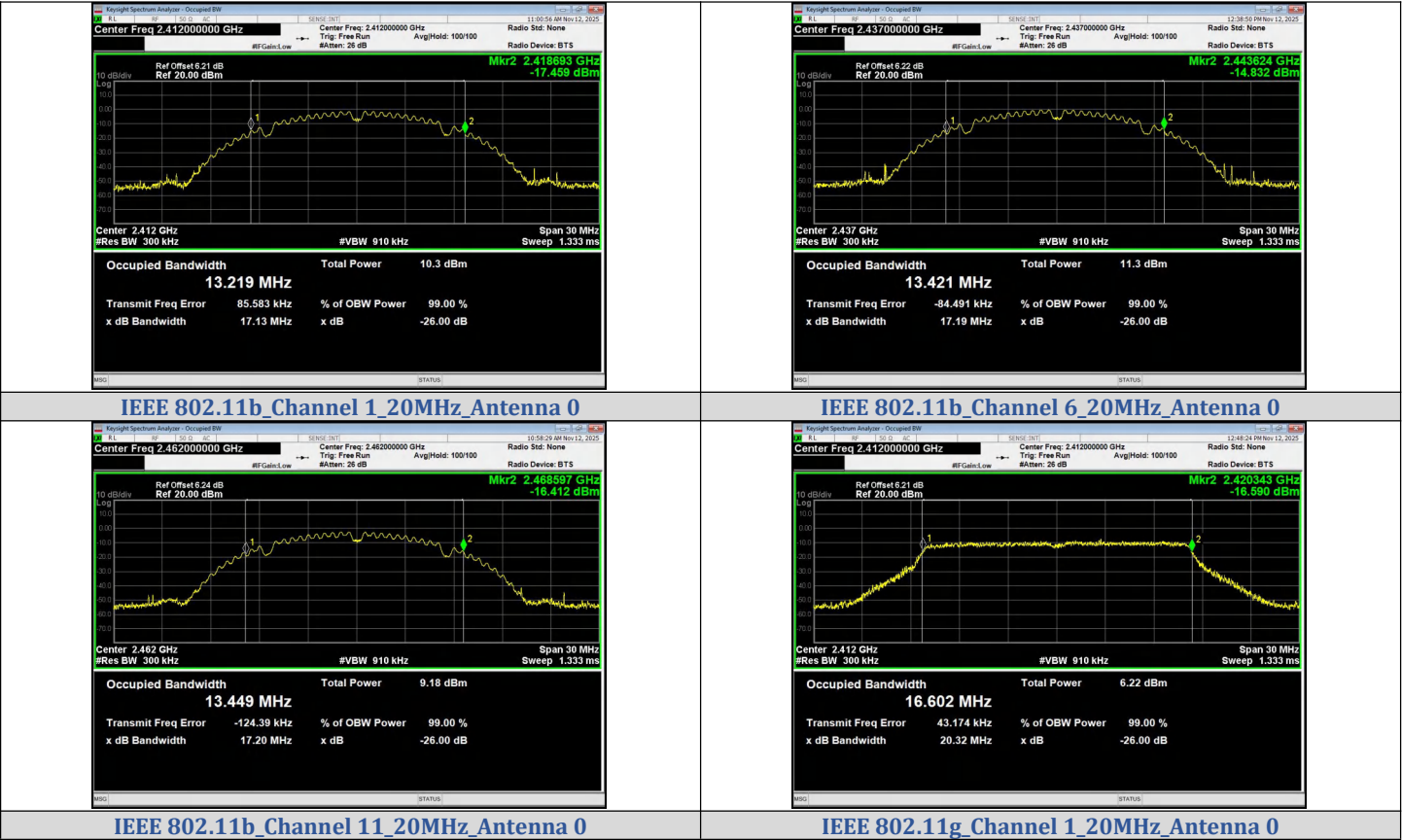
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	9.24	≤30	PASS
	6	9.93	≤30	PASS
	11	8.23	≤30	PASS
IEEE 802.11g	1	7.74	≤30	PASS
	6	7.48	≤30	PASS
	11	7.10	≤30	PASS
IEEE 802.11n_20	1	7.97	≤30	PASS
	6	7.48	≤30	PASS
	11	7.00	≤30	PASS
IEEE 802.11n_40	3	8.14	≤30	PASS
	6	8.04	≤30	PASS
	9	7.45	≤30	PASS

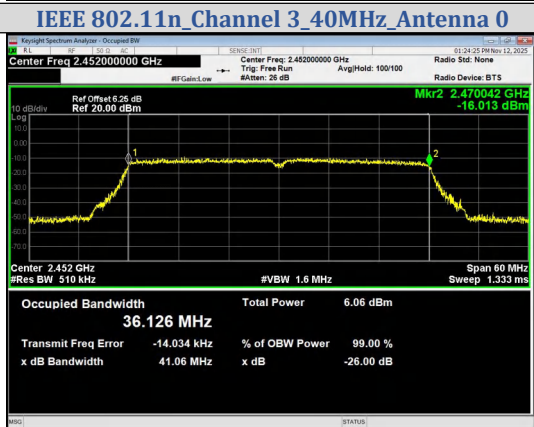
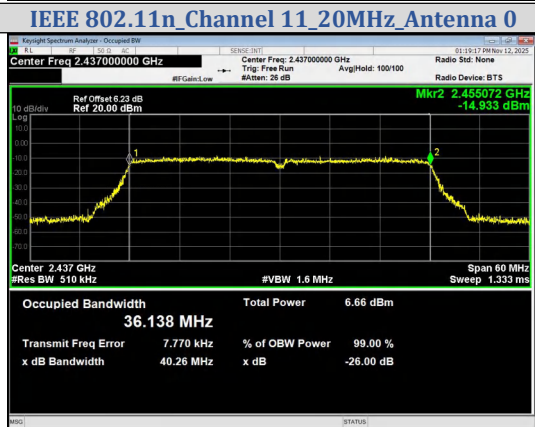
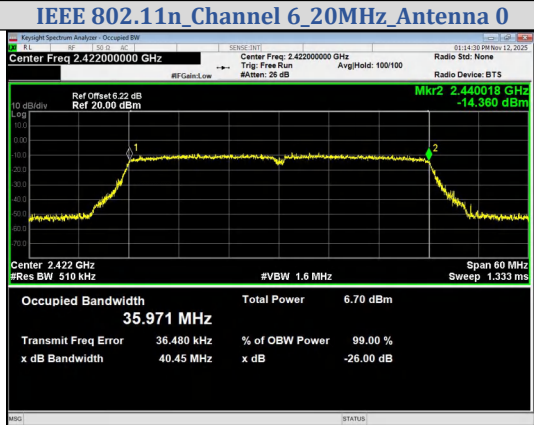
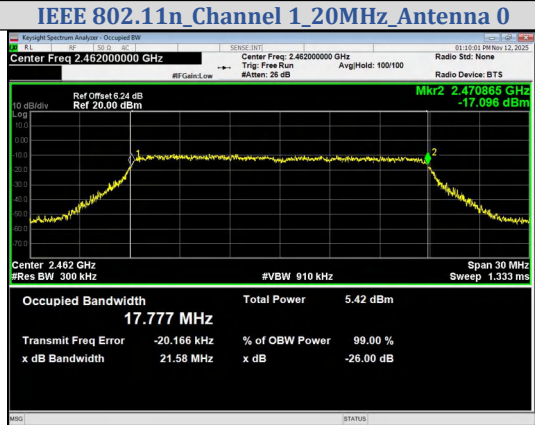
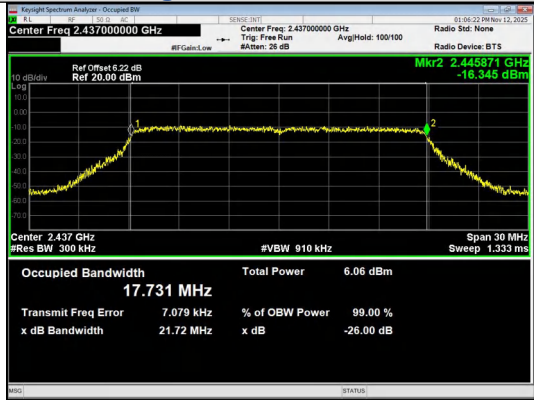
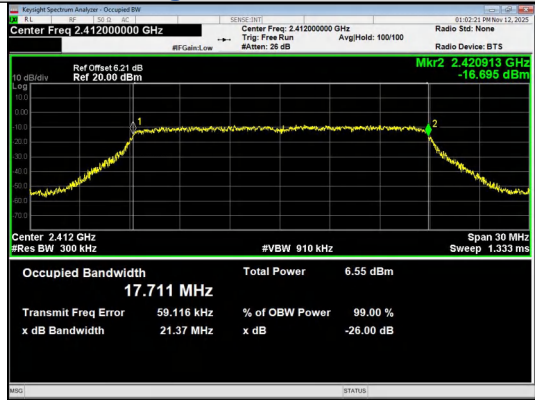
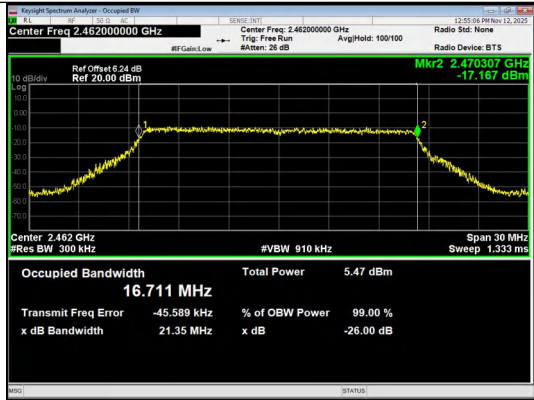
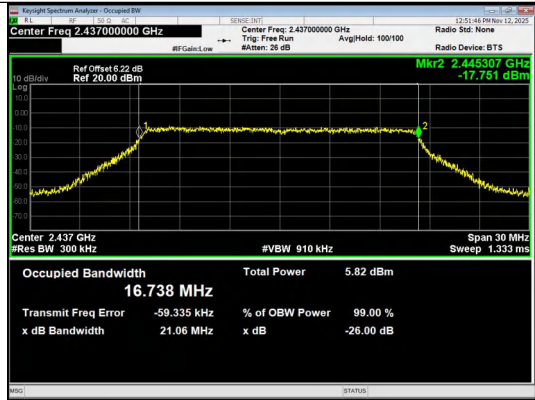
99% Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	13.219
	6		2437	13.421
	11		2462	13.449
IEEE 802.11g	1		2412	16.602
	6		2437	16.738
	11		2462	16.711
IEEE 802.11n_20	1		2412	17.711
	6		2437	17.731
	11		2462	17.777
IEEE 802.11n_40	3		2422	35.971
	6		2437	36.138
	9		2452	36.126

Test Graphs





IEEE 802.11n_Channel 6_40MHz_Antenna 0

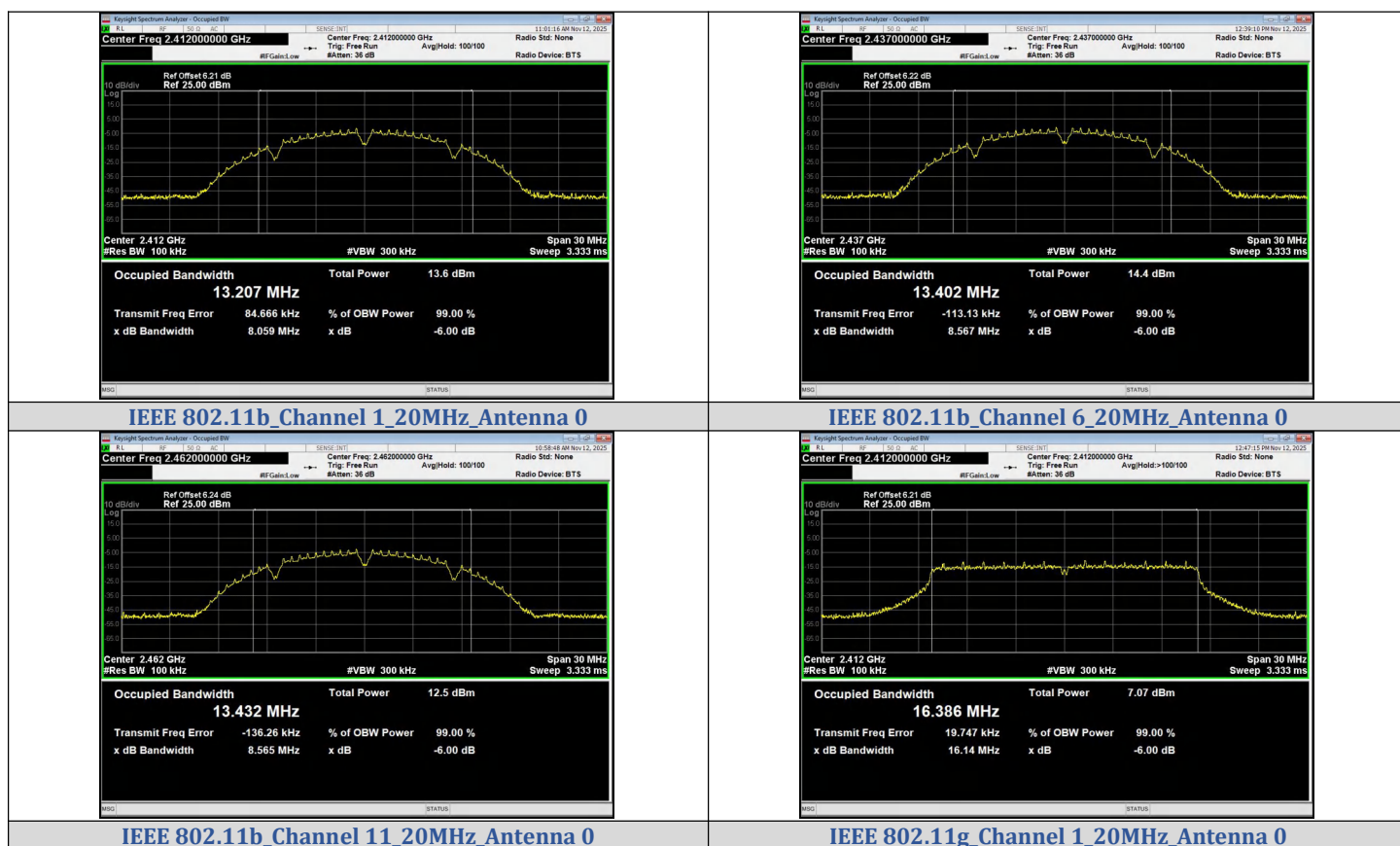
IEEE 802.11n_Channel 9_40MHz_Antenna 0

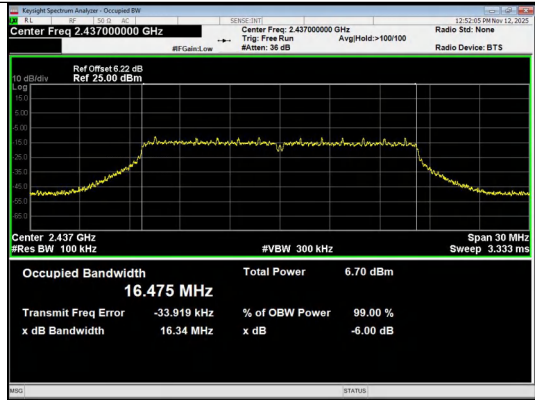
6dB Bandwidth

Test Result

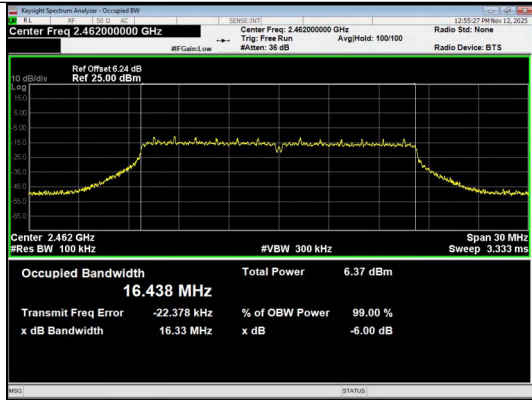
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.059	≥0.5	PASS
	6		2437	8.567		PASS
	11		2462	8.565		PASS
IEEE 802.11g	1		2412	16.14		PASS
	6		2437	16.34		PASS
	11		2462	16.33		PASS
IEEE 802.11n_20	1		2412	17.28		PASS
	6		2437	17.29		PASS
	11		2462	17.17		PASS
IEEE 802.11n_40	3		2422	35.15		PASS
	6		2437	35.47		PASS
	9		2452	35.49		PASS

Test Graphs

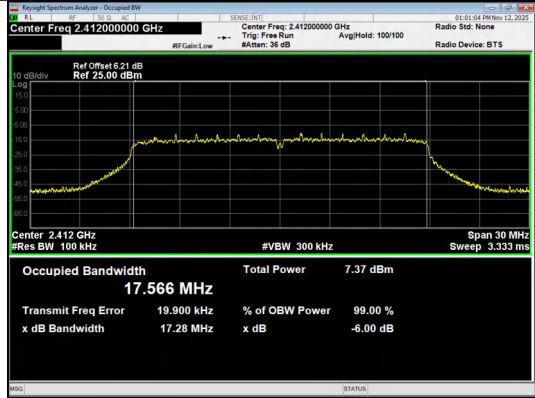




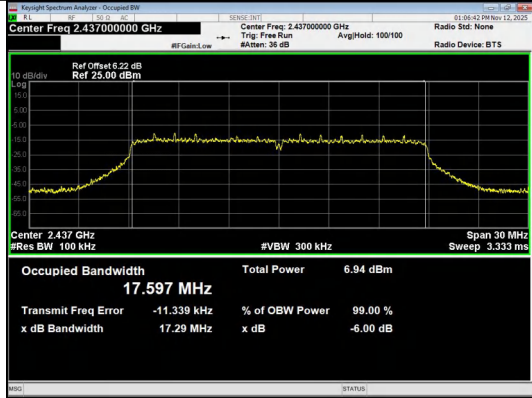
IEEE 802.11g_Channel 6_20MHz_Antenna 0



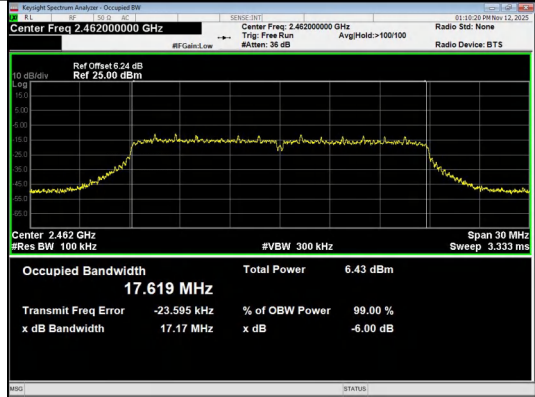
IEEE 802.11g_Channel 11_20MHz_Antenna 0



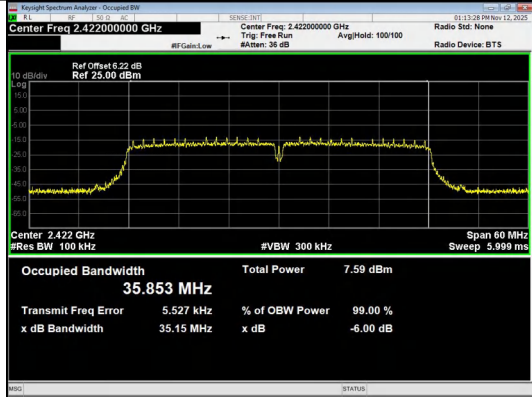
IEEE 802.11n_Channel 1_20MHz_Antenna 0



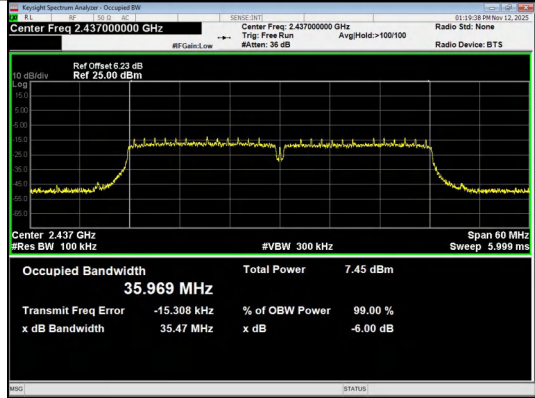
IEEE 802.11n_Channel 6_20MHz_Antenna 0



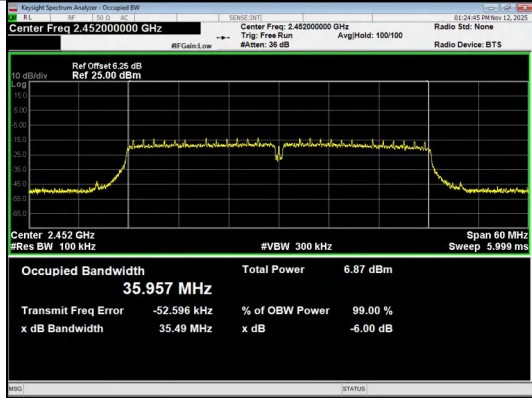
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

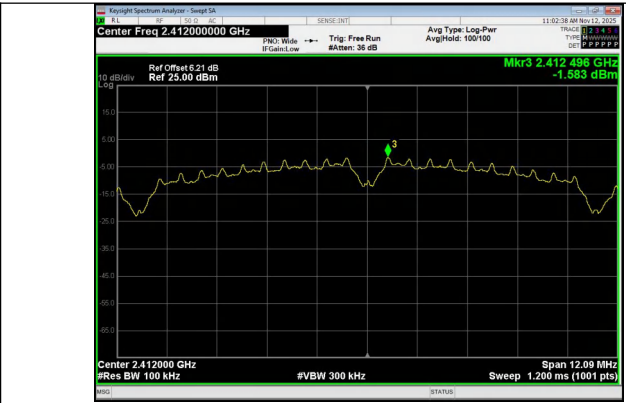
Conducted Spurious & Band Edge Emission

Test Result

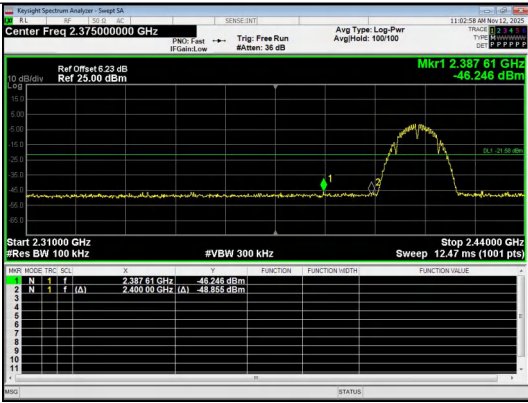
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2387.61	-46.246	-21.58	-24.666	PASS
			2400.00	-48.855	-21.58	-27.275	PASS
			24687.3	-45.028	-21.58	-23.448	PASS
	6		24830.2	-44.970	-21.49	-23.480	PASS
			11	2483.50	-47.194	-22.74	-24.454
	24751.5			-45.043	-22.74	-22.303	PASS
IEEE 802.11g	1		2391.77	-45.582	-30.25	-15.332	PASS
			2400.00	-47.378	-30.25	-17.128	PASS
			24714.1	-45.678	-30.25	-15.428	PASS
	6		24737.8	-45.631	-30.55	-15.081	PASS
			11	2483.50	-48.184	-30.82	-17.364
	24684.8			-45.916	-30.82	-15.096	PASS
IEEE 802.11n_20	1	2400.00	-44.442	-29.93	-14.512	PASS	
		24883.3	-46.123	-29.93	-16.193	PASS	
	6	24988.8	-45.963	-30.34	-15.623	PASS	
		11	2483.50	-47.381	-30.63	-16.751	PASS
	24945.1		-46.176	-30.63	-15.546	PASS	
	IEEE 802.11n_40	3	2315.07	-46.448	-32.87	-13.578	PASS
2400.00			-46.552	-32.87	-13.682	PASS	
24907.6			-45.724	-32.87	-12.854	PASS	
6		24993.8	-43.974	-33.03	-10.944	PASS	
		9	2483.50	-48.023	-33.68	-14.343	PASS
24745.9			-45.353	-33.68	-11.673	PASS	

Note: input compensation coefficient (dB)= Cable Loss (dB)

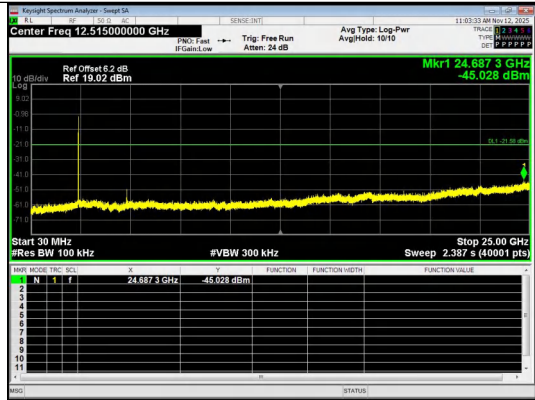
Test Graphs



In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0

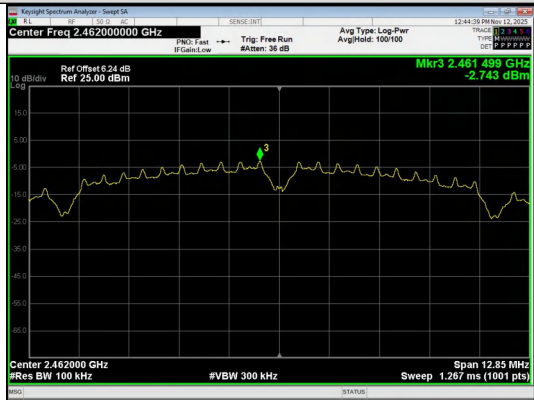
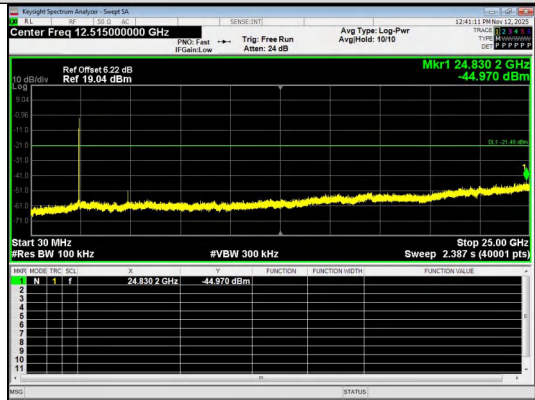


Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



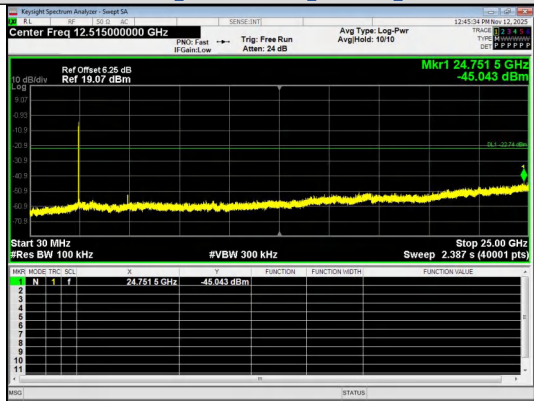
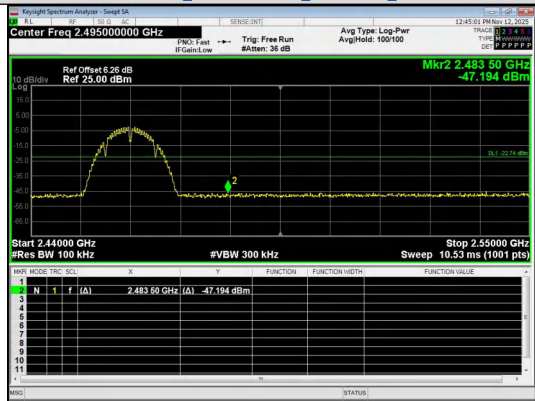
**30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0**

**In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0**



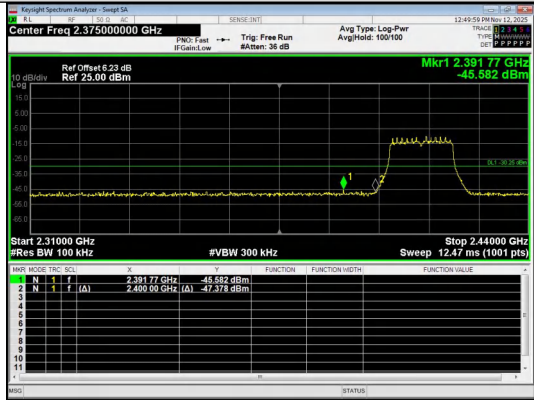
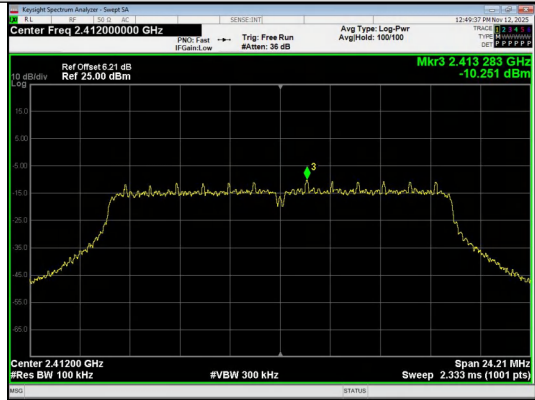
**30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0**

**In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0**



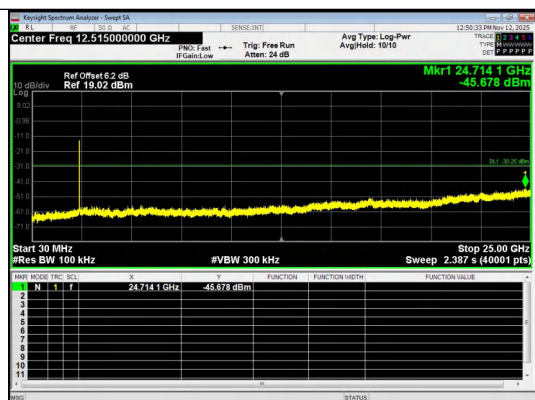
**Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0**

**30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0**

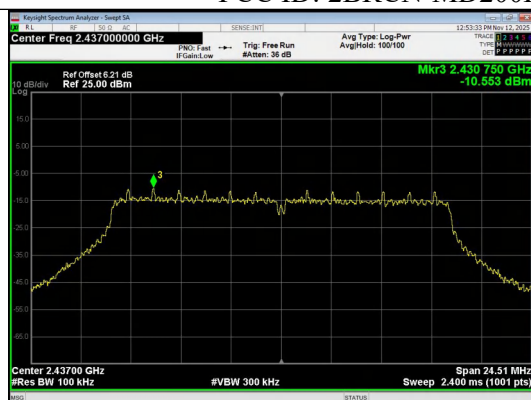


**In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0**

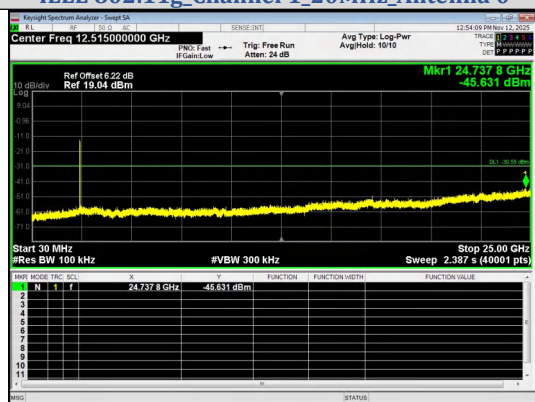
**Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0**



30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



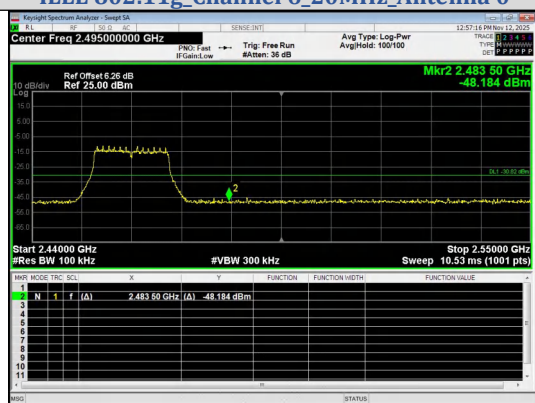
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



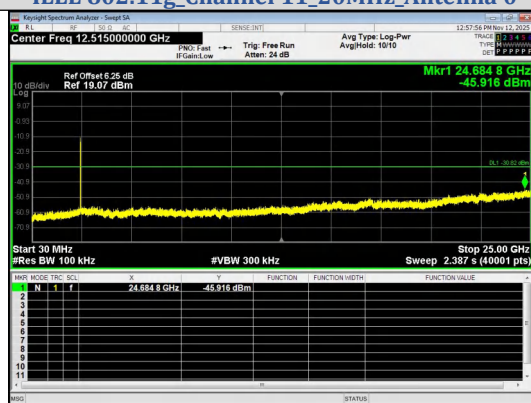
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



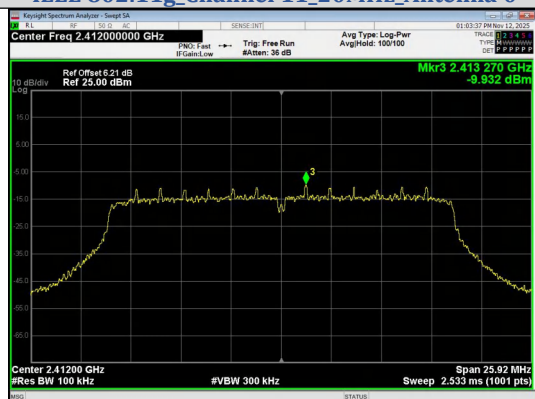
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



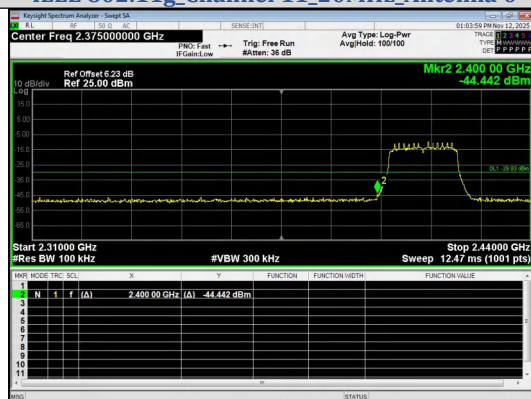
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



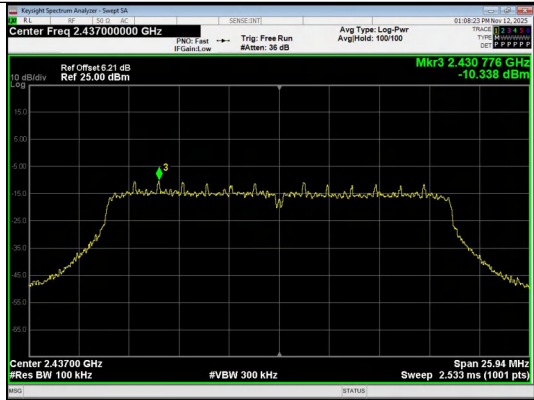
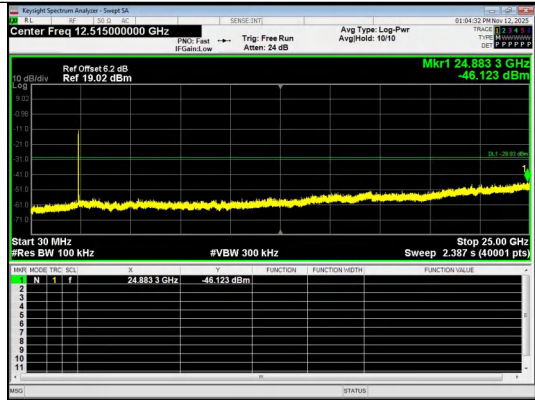
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0

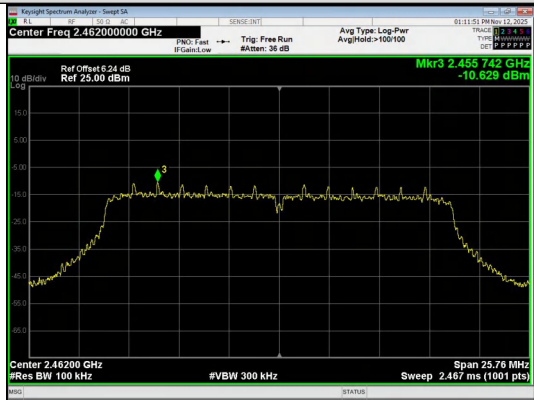
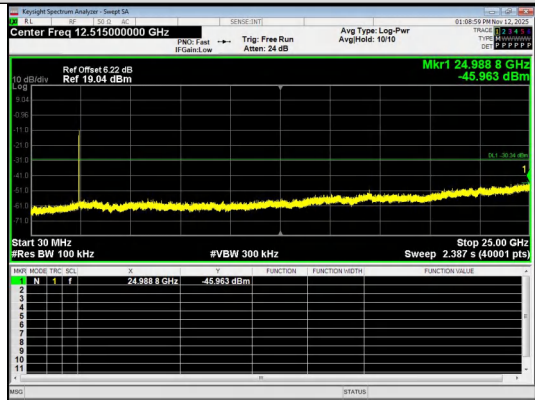


Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



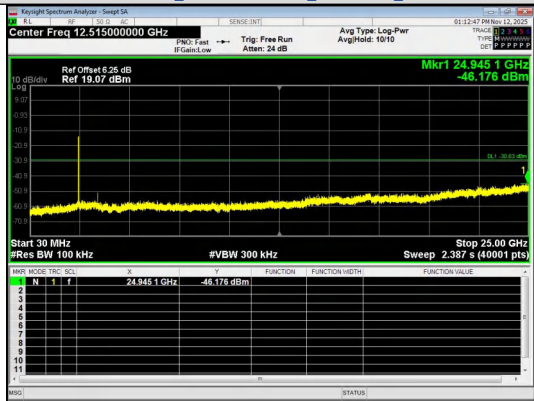
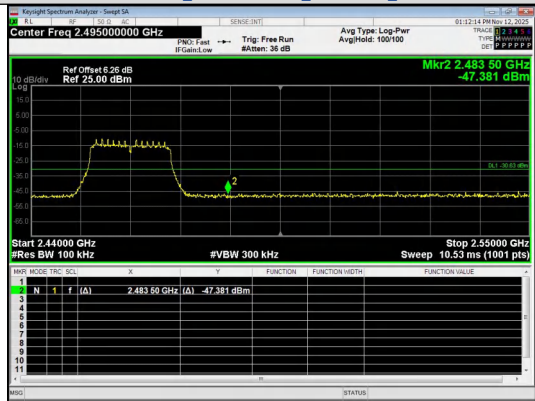
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0

In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



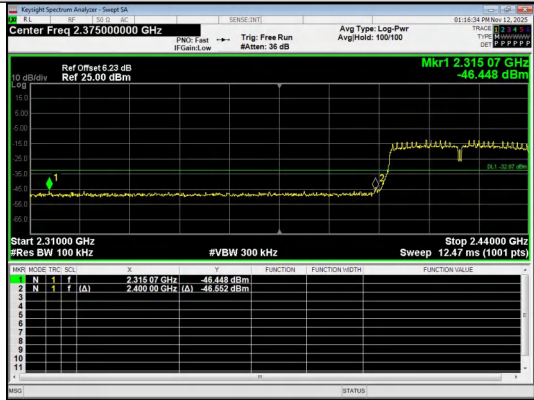
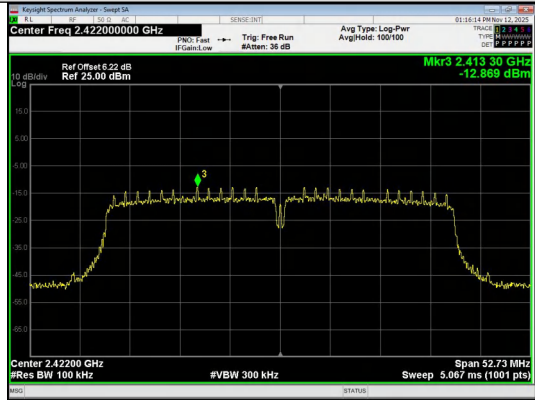
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0

In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



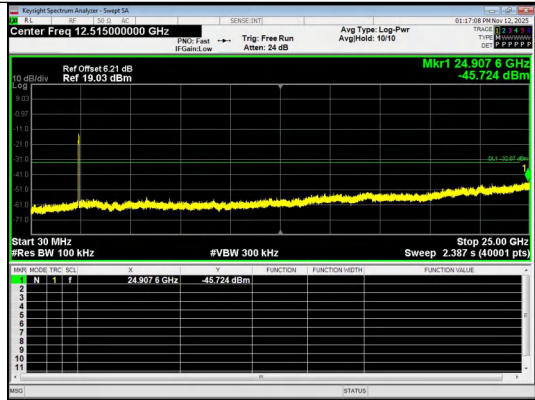
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0

30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0

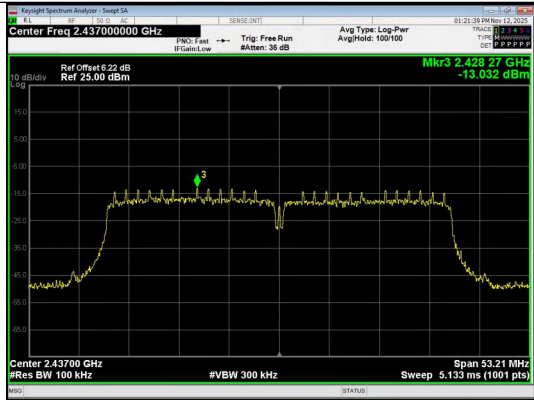


In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0

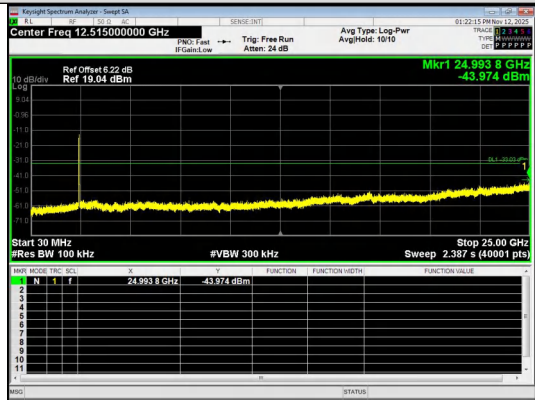
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



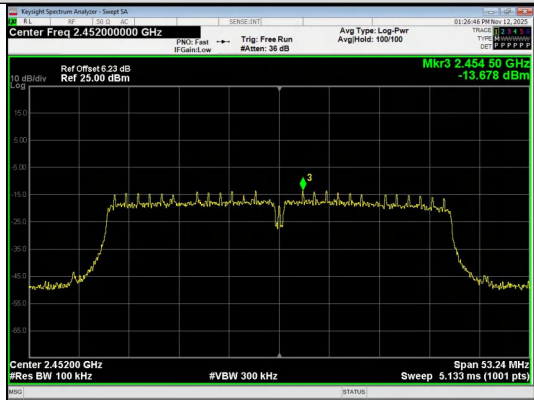
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



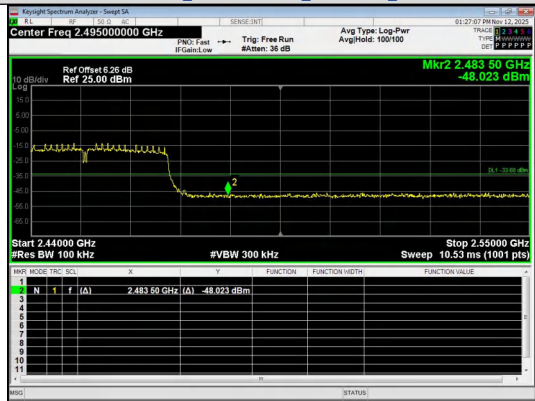
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



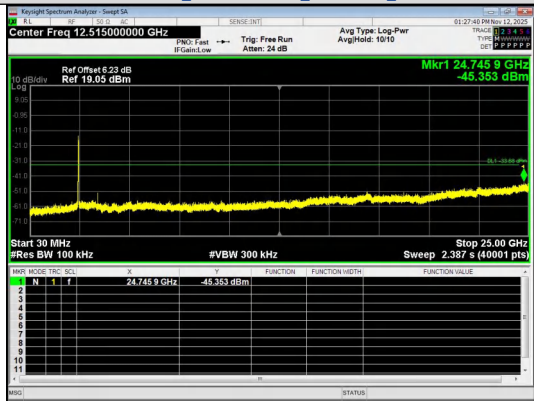
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0



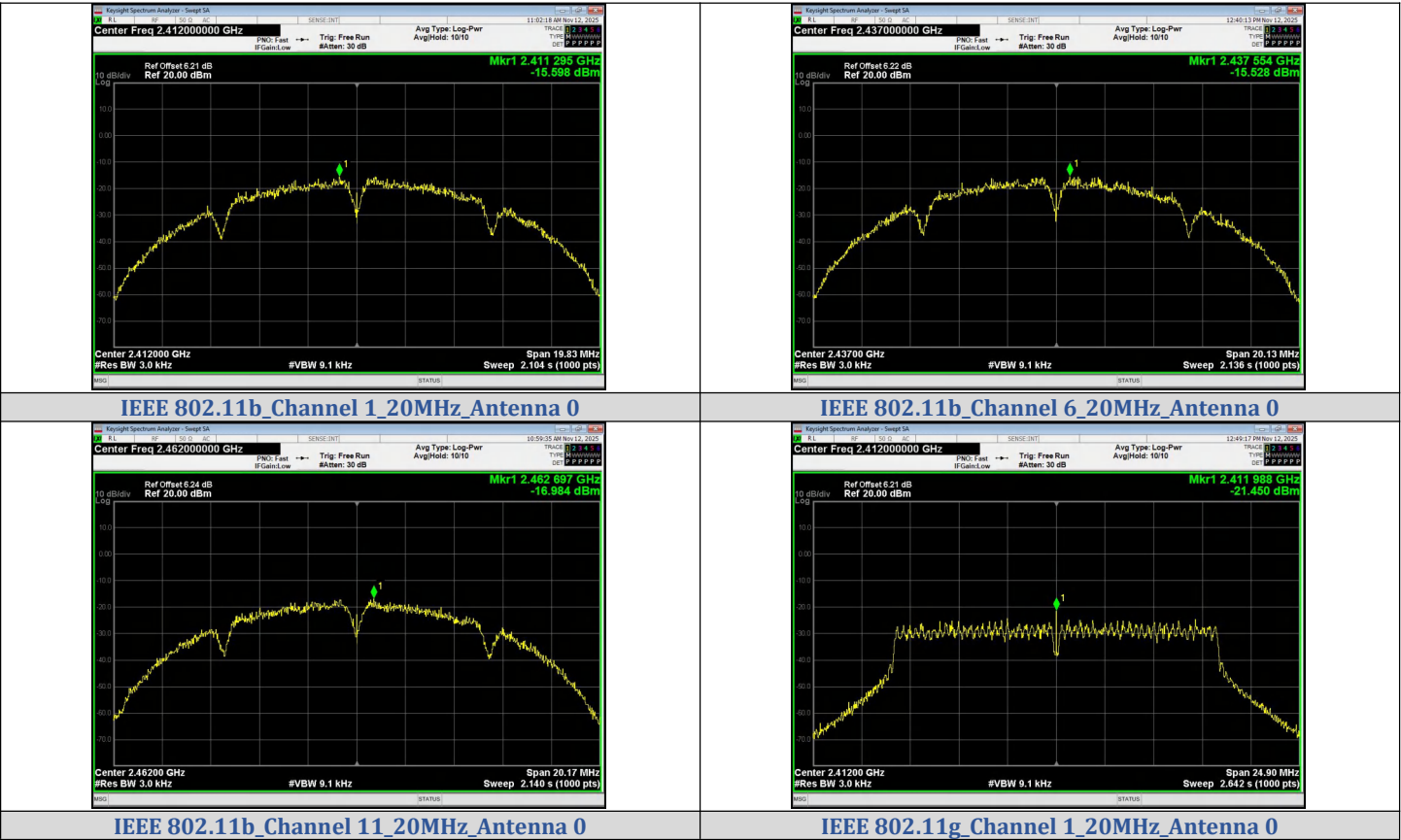
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0

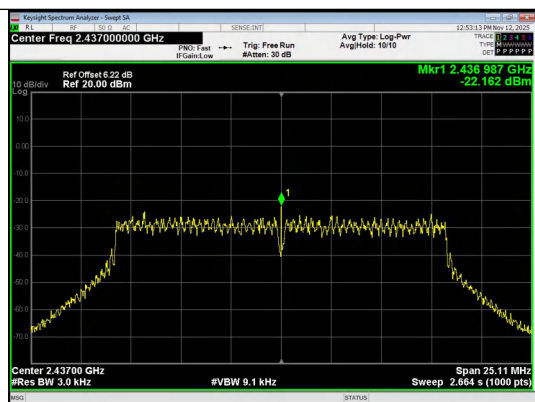
Power Spectral Density

Test Result

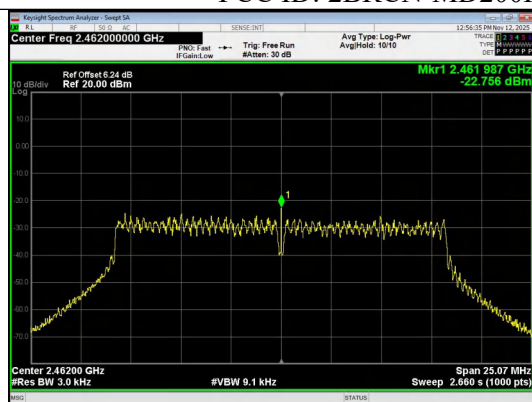
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-15.600	≤8	PASS
	6	-15.530		PASS
	11	-16.980		PASS
IEEE 802.11g	1	-21.450		PASS
	6	-22.160		PASS
	11	-22.760		PASS
IEEE 802.11n_20	1	-21.280		PASS
	6	-22.160		PASS
	11	-22.620		PASS
IEEE 802.11n_40	3	-21.200		PASS
	6	-22.160		PASS
	9	-21.730		PASS

Test Graphs

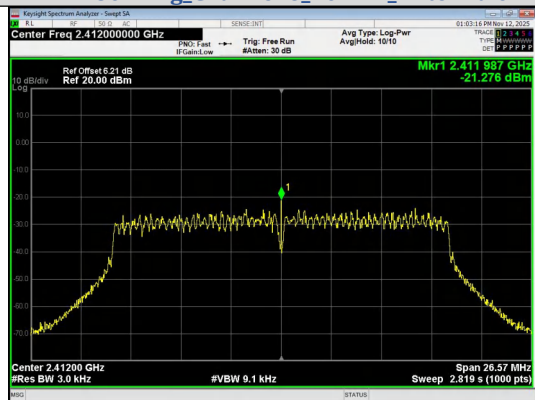




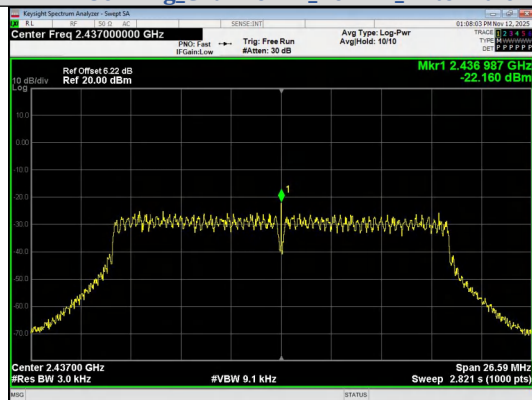
IEEE 802.11g_Channel 6_20MHz_Antenna 0



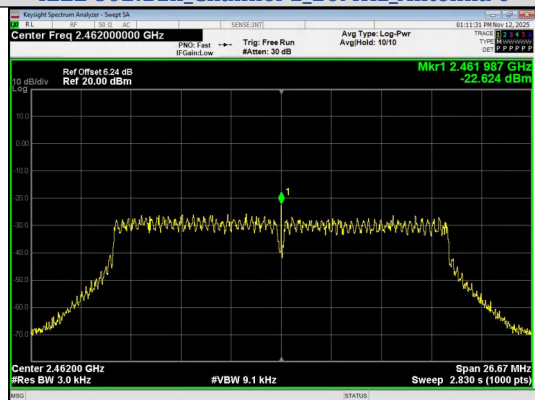
IEEE 802.11g_Channel 11_20MHz_Antenna 0



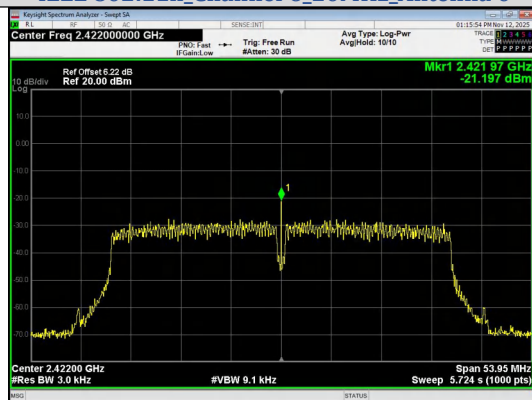
IEEE 802.11n_Channel 1_20MHz_Antenna 0



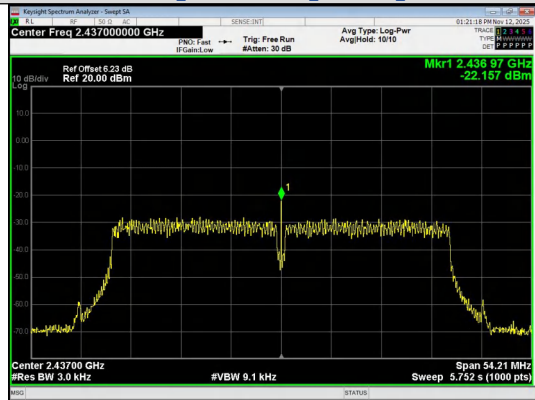
IEEE 802.11n_Channel 6_20MHz_Antenna 0



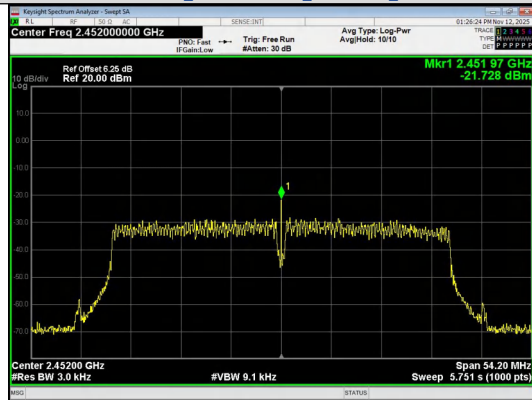
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0