

Appendix RF test data for WIFI2.4G

Conducted Output Power

Test Result

Conducted Output Power

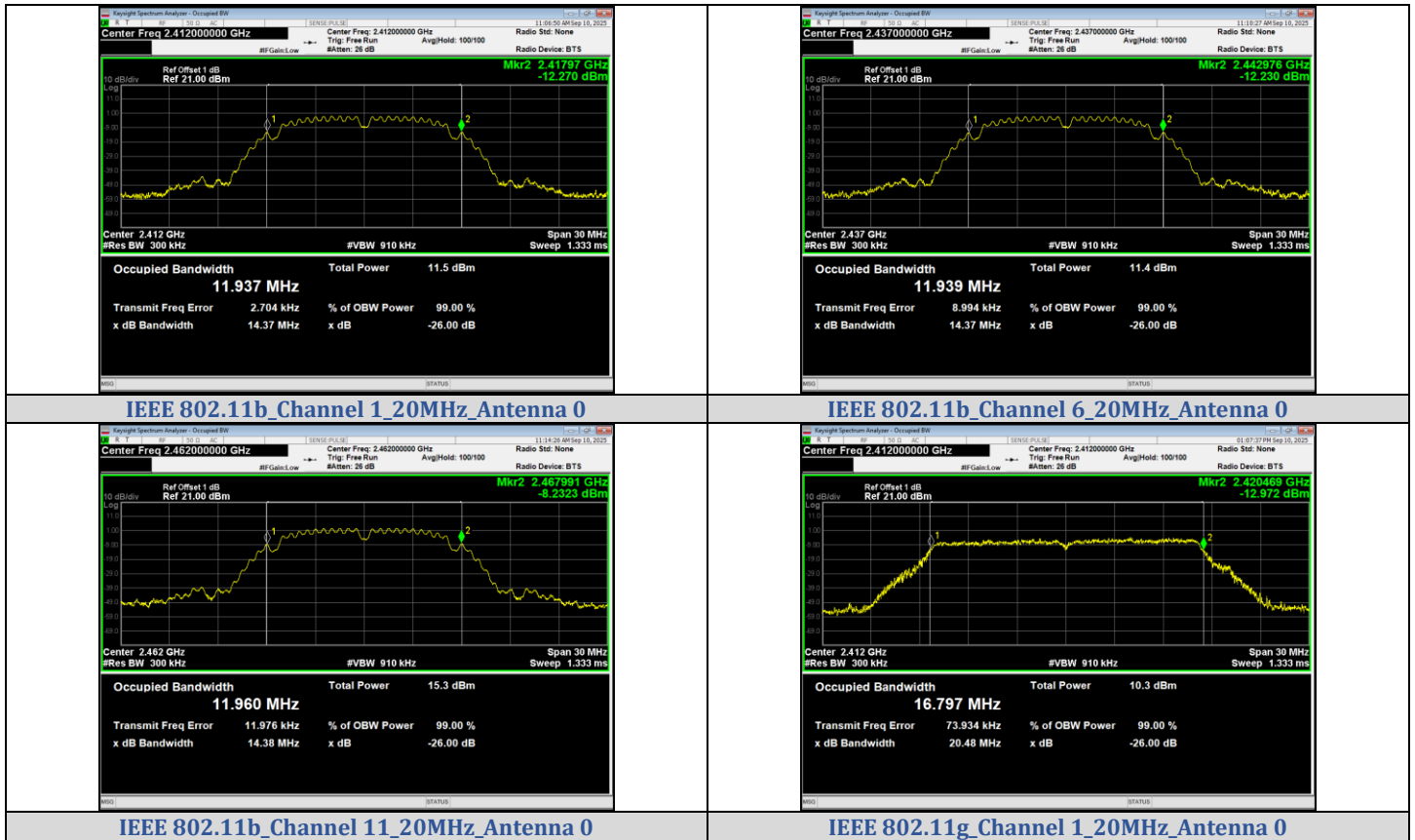
Mode	Channel	Ant. 0 (dBm)	Total (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	14.68	N/A	≤30	PASS
	6	14.75	N/A	≤30	PASS
	11	14.35	N/A	≤30	PASS
IEEE 802.11g	1	11.97	N/A	≤30	PASS
	6	13.27	N/A	≤30	PASS
	11	13.32	N/A	≤30	PASS
IEEE 802.11n_20	1	12.65	N/A	≤30	PASS
	6	13.26	N/A	≤30	PASS
	11	13.40	N/A	≤30	PASS
IEEE 802.11n_40	3	11.98	N/A	≤30	PASS
	6	11.66	N/A	≤30	PASS
	9	12.11	N/A	≤30	PASS

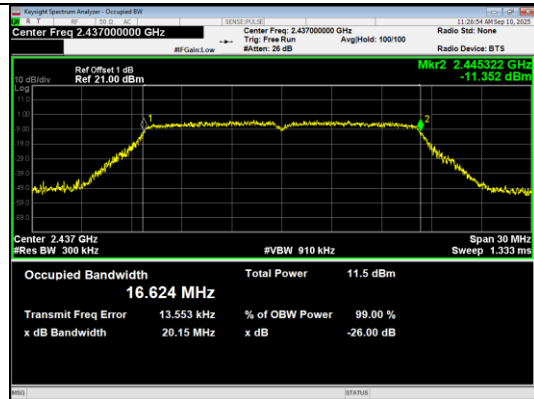
99% Bandwidth

Test Result

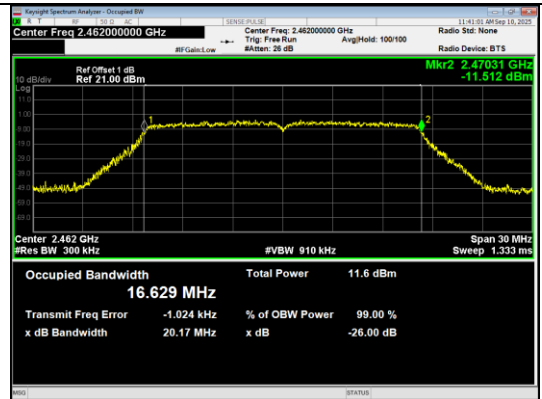
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	11.937
	6		2437	11.939
	11		2462	11.960
IEEE 802.11g	1		2412	16.797
	6		2437	16.624
	11		2462	16.629
IEEE 802.11n_20	1		2412	17.592
	6		2437	17.593
	11		2462	17.604
IEEE 802.11n_40	3		2422	36.001
	6		2437	36.025
	9		2452	36.048

Test Graphs

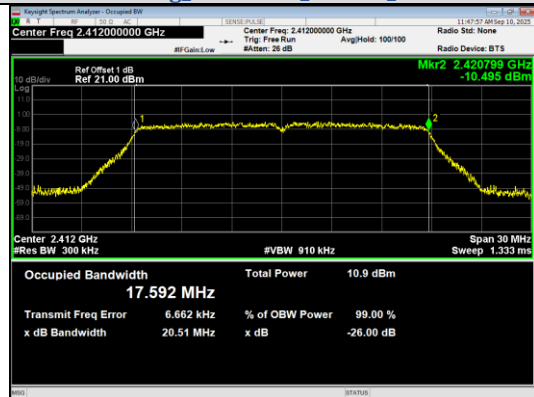




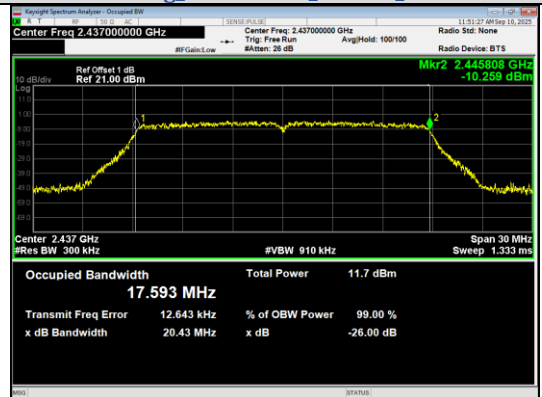
IEEE 802.11g_Channel 6_20MHz_Antenna 0



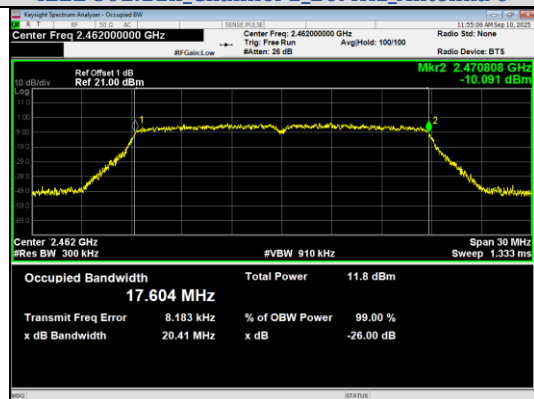
IEEE 802.11g_Channel 11_20MHz_Antenna 0



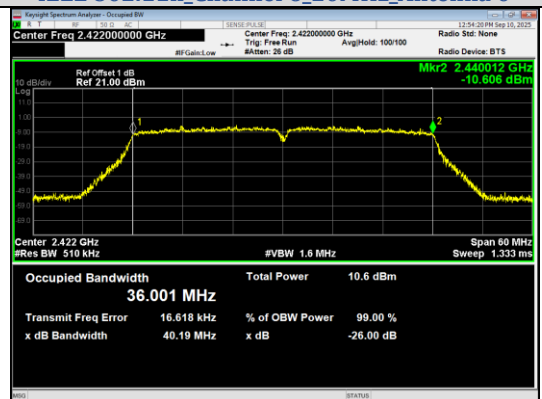
IEEE 802.11n_Channel 1_20MHz_Antenna 0



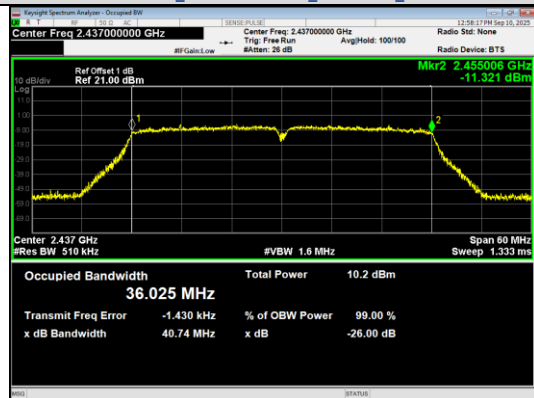
IEEE 802.11n_Channel 6_20MHz_Antenna 0



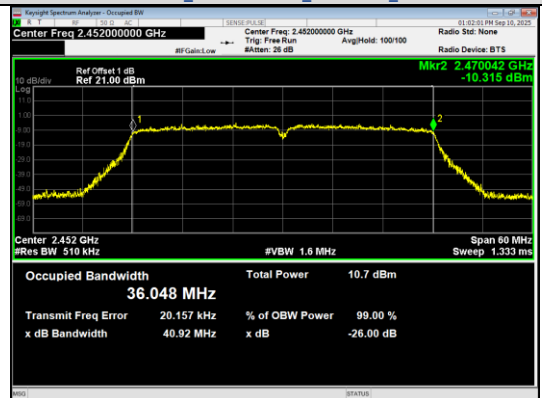
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



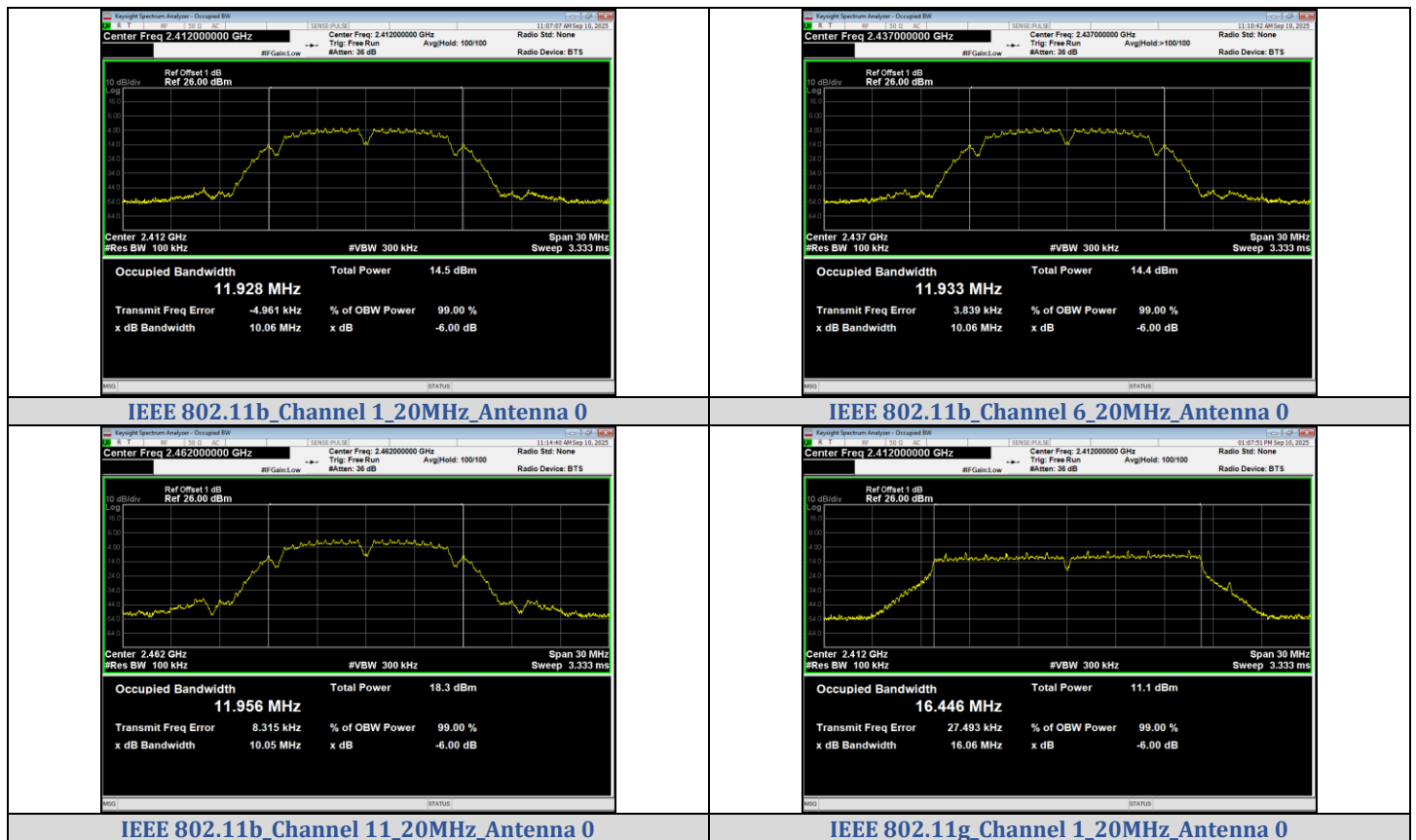
IEEE 802.11n_Channel 9_40MHz_Antenna 0

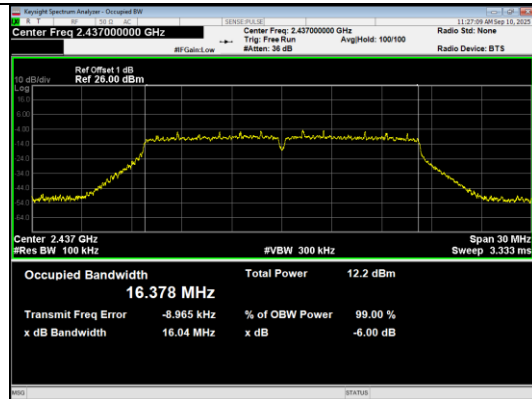
6dB Bandwidth

Test Result

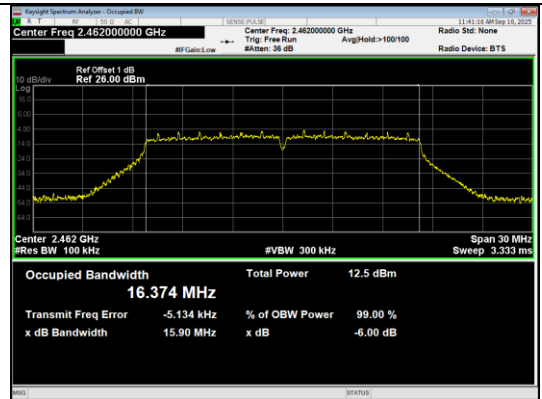
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	10.06	≥0.5	PASS
	6		2437	10.06		PASS
	11		2462	10.05		PASS
IEEE 802.11g	1		2412	16.06		PASS
	6		2437	16.04		PASS
	11		2462	15.90		PASS
IEEE 802.11n_20	1		2412	16.94		PASS
	6		2437	16.28		PASS
	11		2462	16.33		PASS
IEEE 802.11n_40	3		2422	35.04		PASS
	6		2437	35.09		PASS
	9		2452	35.10		PASS

Test Graphs

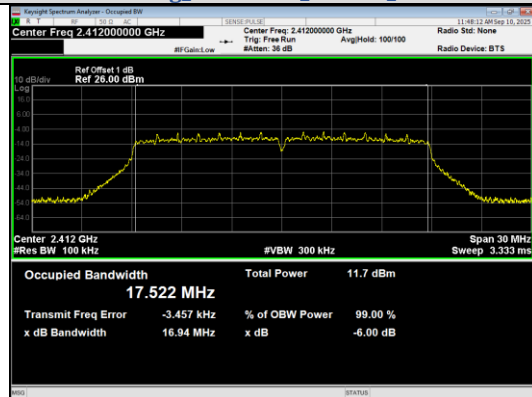




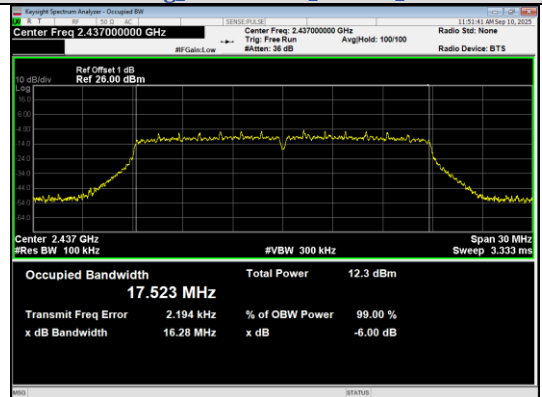
IEEE 802.11g_Channel 6_20MHz_Antenna 0



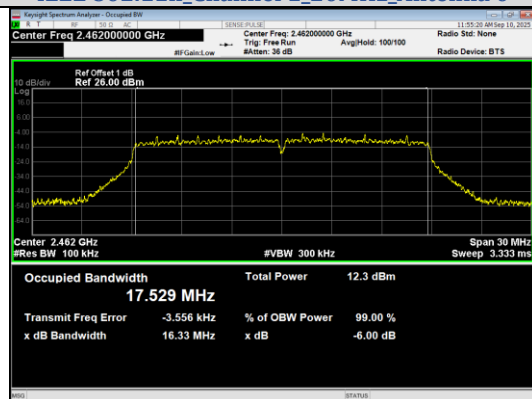
IEEE 802.11g_Channel 11_20MHz_Antenna 0



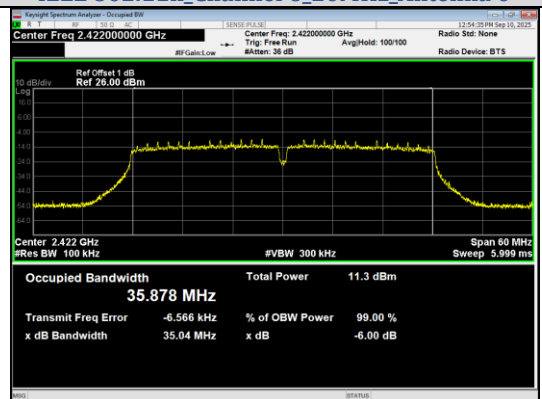
IEEE 802.11g_Channel 11_20MHz_Antenna 0



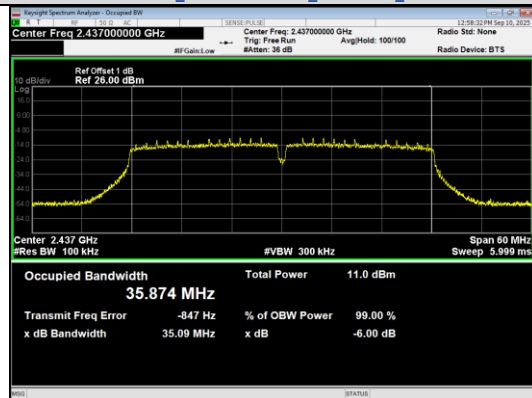
IEEE 802.11g_Channel 6_20MHz_Antenna 0



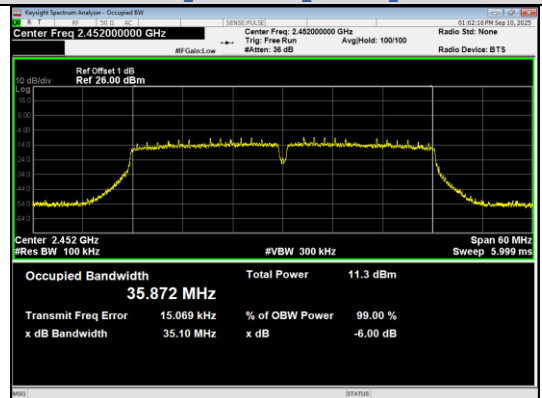
IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 11_40MHz_Antenna 0



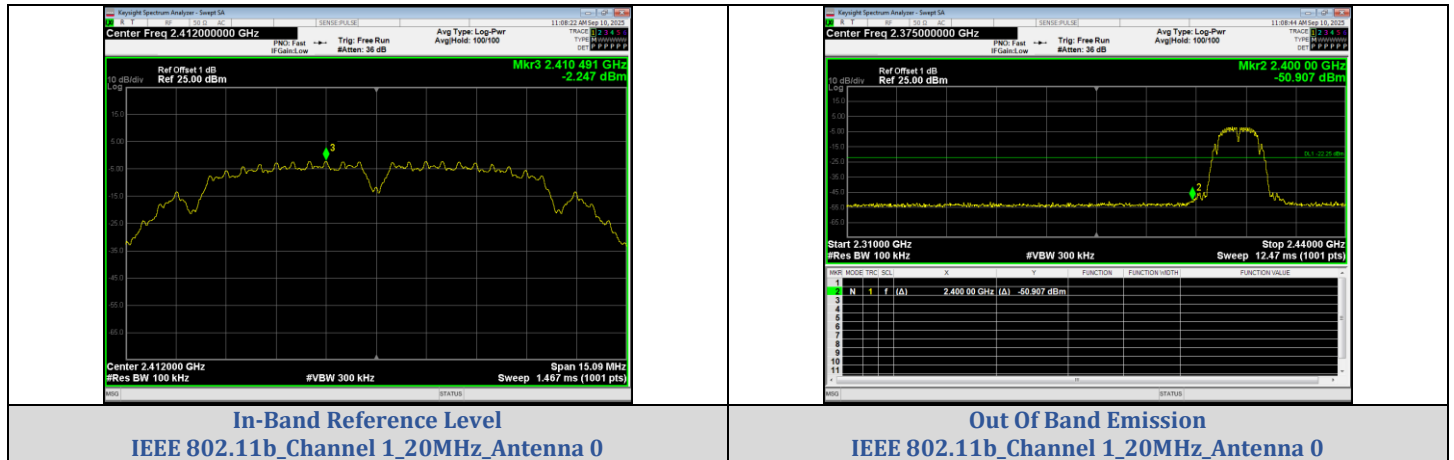
IEEE 802.11n_Channel 3_40MHz_Antenna 0

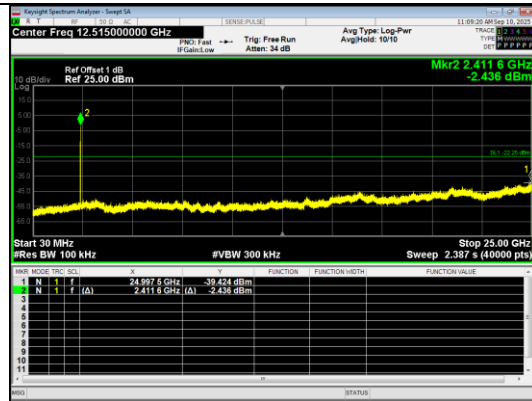
Conducted Out Of Band Emission

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	-50.910	-22.25	-28.660	PASS	
			24997.5	-39.424	-22.25	-17.174	PASS	
	6		24948.2	-39.578	-22.5	-17.078	PASS	
	11		2483.50	-54.210	-18.57	-35.640	PASS	
			24860.8	-39.891	-18.57	-21.321	PASS	
IEEE 802.11g	1		2398.53	-50.991	-26.08	-24.911	PASS	
			2400.00	-51.630	-26.08	-25.550	PASS	
	6		24996.3	-39.899	-26.08	-13.819	PASS	
			24949.4	-39.797	-24.53	-15.267	PASS	
			11	2483.50	-52.970	-24.44	-28.530	PASS
	24998.8			-39.002	-24.44	-14.562	PASS	
	IEEE 802.11n_20		1	2395.67	-49.798	-25.25	-24.548	PASS
2400.00				-50.520	-25.25	-25.270	PASS	
6			24948.8	-39.778	-25.25	-14.528	PASS	
			24899.5	-39.808	-24.89	-14.918	PASS	
			11	2483.50	-53.980	-24.56	-29.420	PASS
				24900.1	-39.853	-24.56	-15.293	PASS
IEEE 802.11n_40	3		2400.00	-47.960	-28.84	-19.120	PASS	
			24464.4	-40.167	-28.84	-11.327	PASS	
	6		24913.2	-40.105	-29.14	-10.965	PASS	
			9	2483.50	-52.580	-28.61	-23.970	PASS
	24971.3			-39.913	-28.61	-11.303	PASS	

Test Graphs

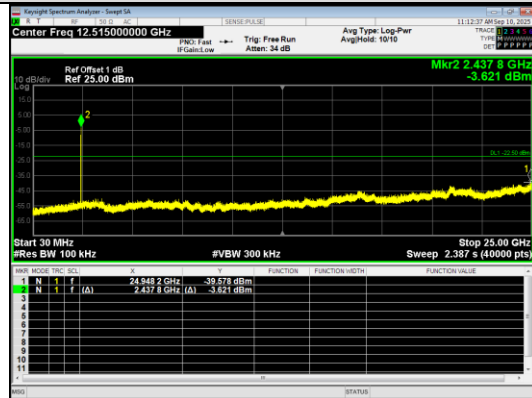




30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



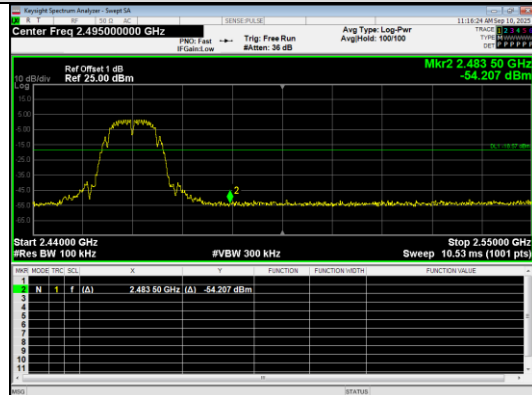
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



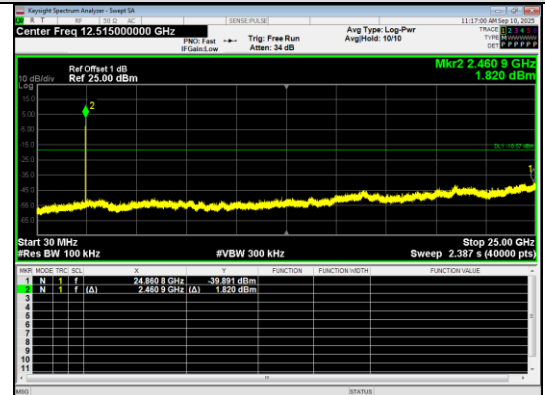
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



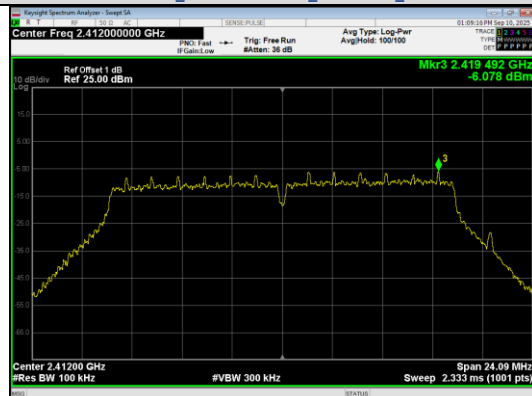
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



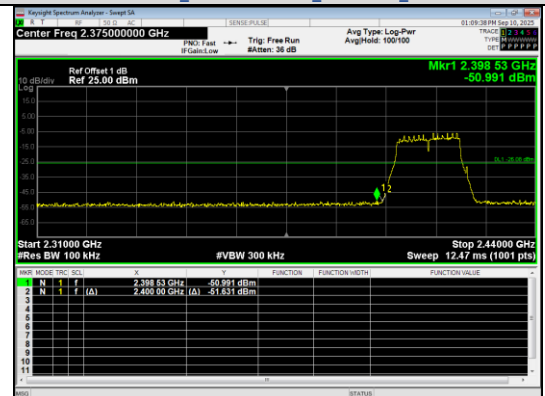
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



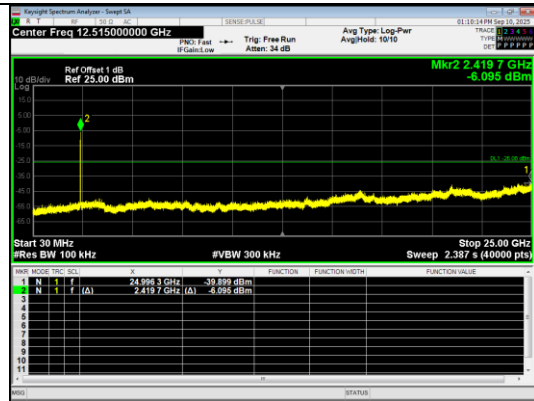
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



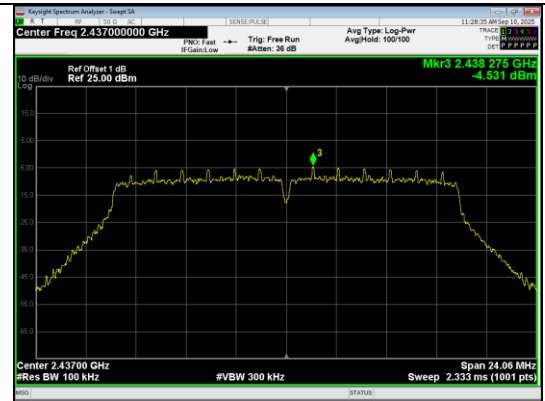
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



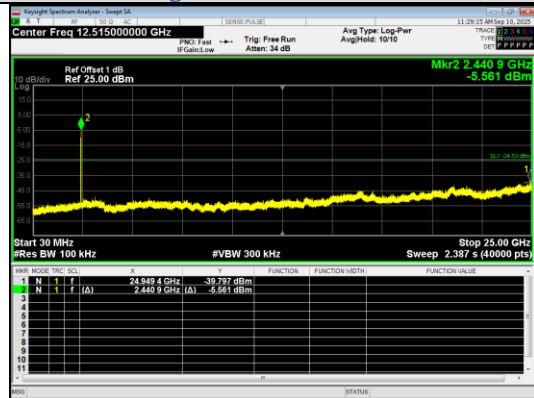
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



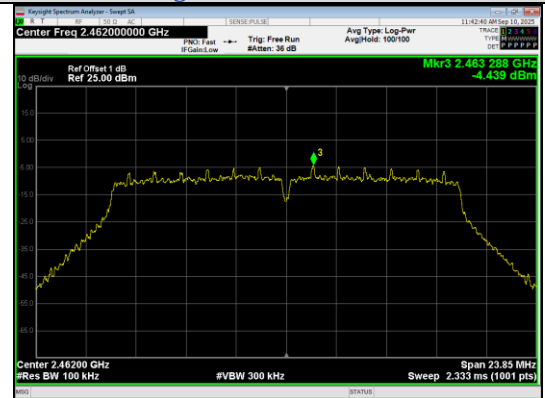
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



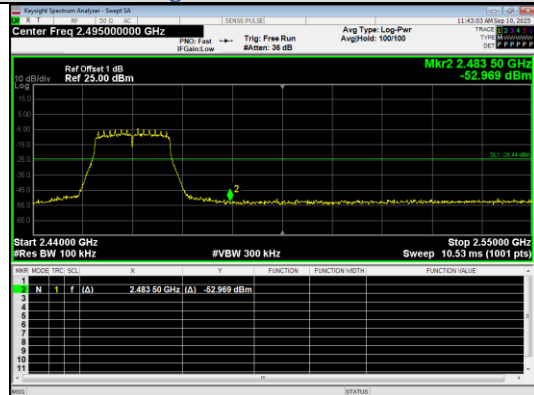
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



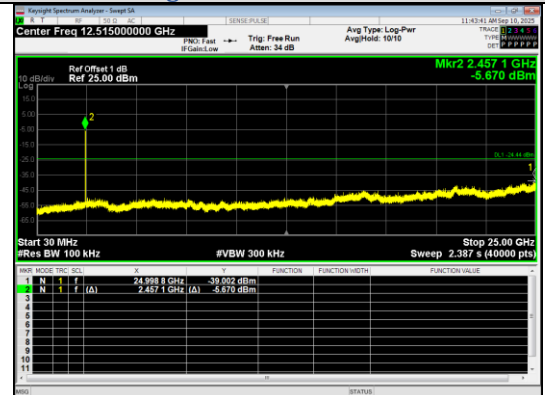
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



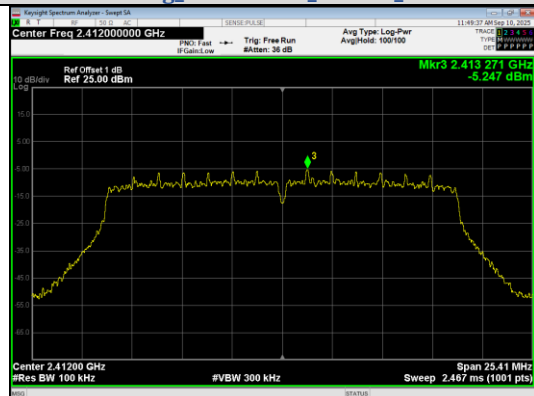
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



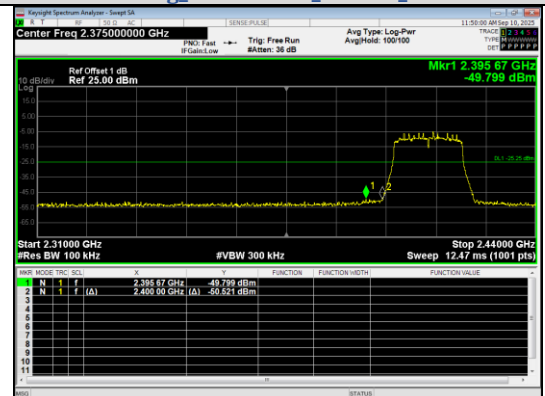
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



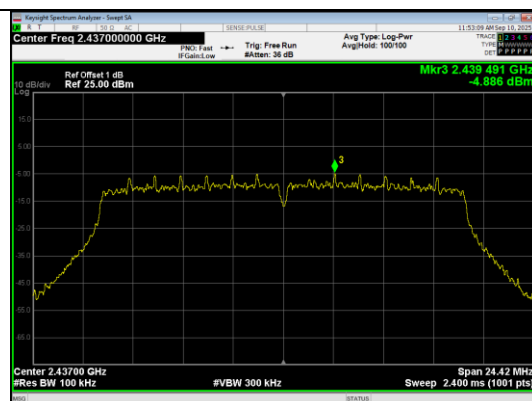
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



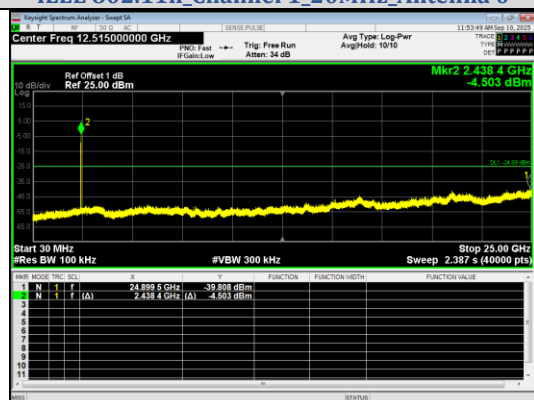
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



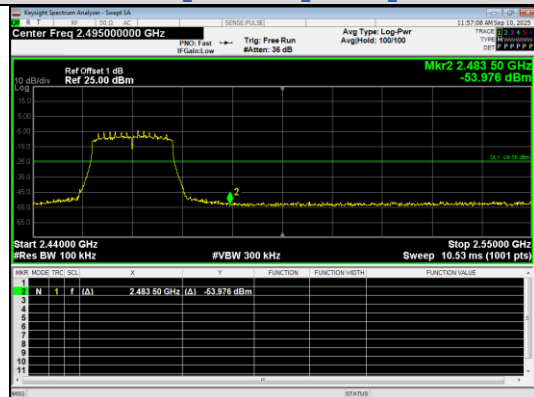
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



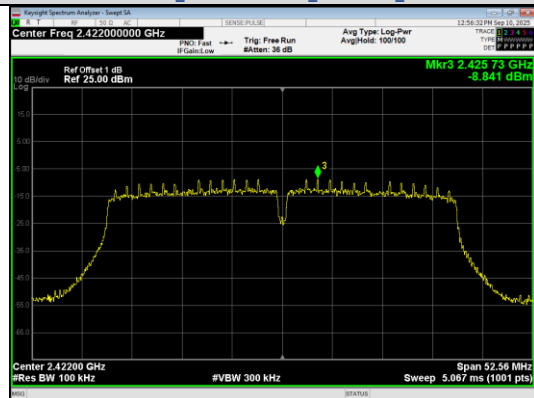
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



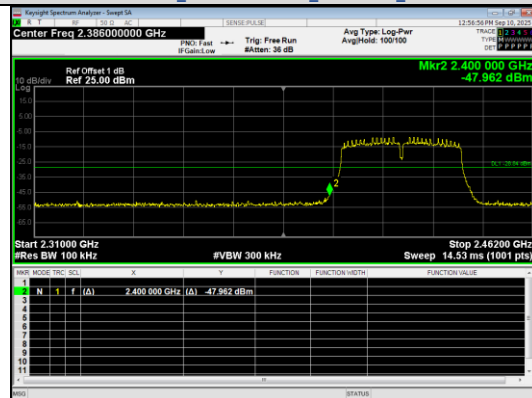
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



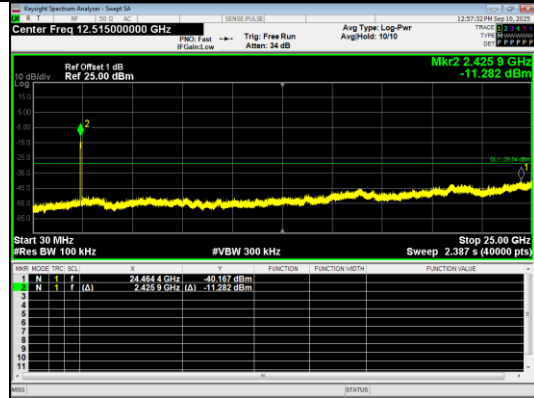
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0



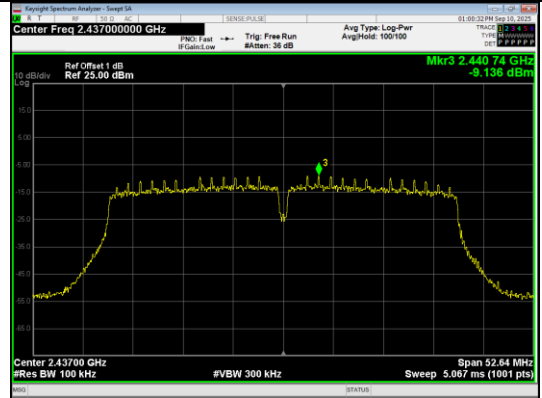
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



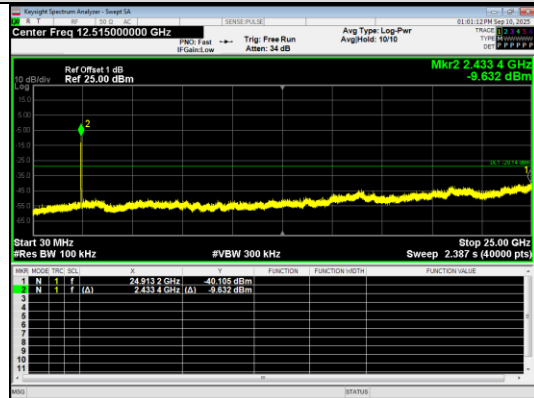
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



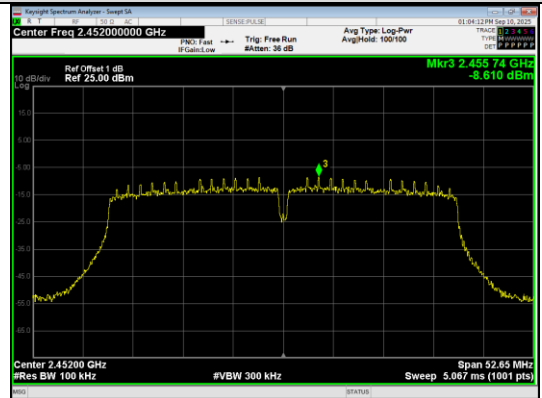
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



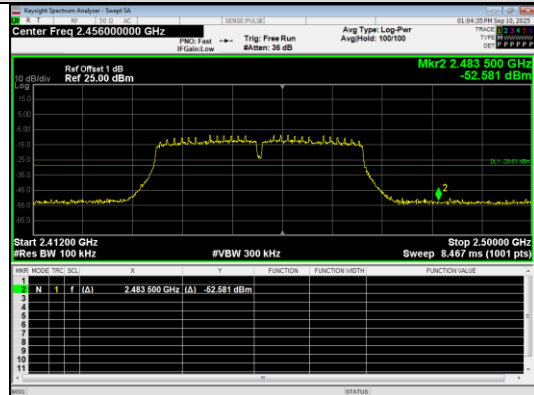
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



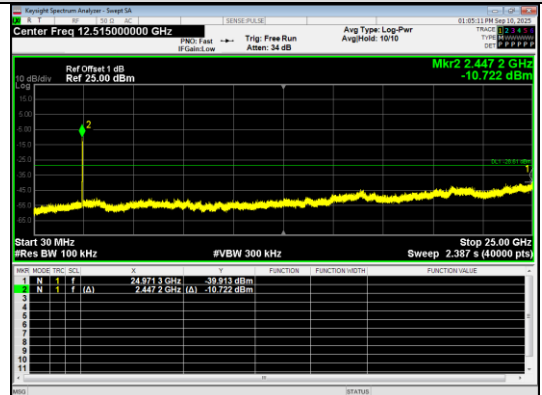
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0



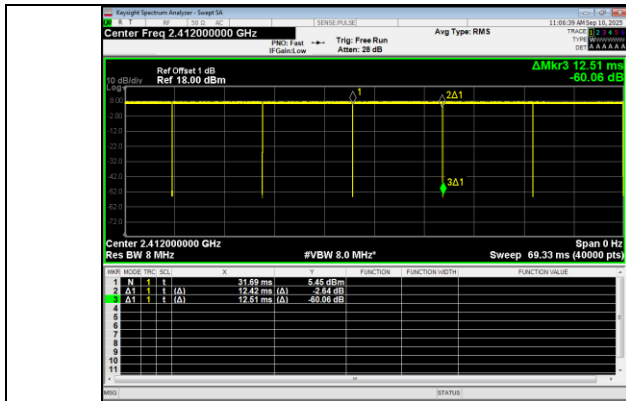
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Duty Cycle

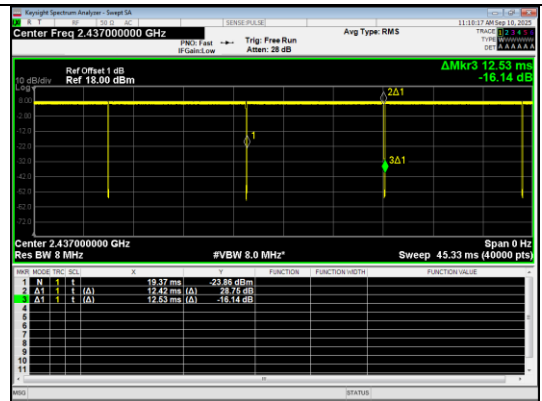
Test Result

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	12.416	12.506	99.28	0.9928	0.0314	0.0805
		6		12.417	12.528	99.11	0.9911	0.0388	0.0805
		11		12.416	12.532	99.07	0.9907	0.0406	0.0805
IEEE 802.11g		1		2.068	2.160	95.74	0.9574	0.1891	0.4836
		6		2.068	2.162	95.65	0.9565	0.1932	0.4836
		11		2.069	2.190	94.47	0.9447	0.2471	0.4833
IEEE 802.11n_20	MCS 0	1		1.924	2.026	94.97	0.9497	0.2241	0.5198
		6		1.924	2.007	95.86	0.9586	0.1836	0.5198
		11		1.924	2.050	93.85	0.9385	0.2757	0.5198
IEEE 802.11n_40		3	0.947	1.033	91.70	0.9170	0.3763	1.0560	
		6	0.947	1.043	90.86	0.9086	0.4163	1.0560	
		9	0.947	1.044	90.73	0.9073	0.4225	1.0560	

Test Graphs



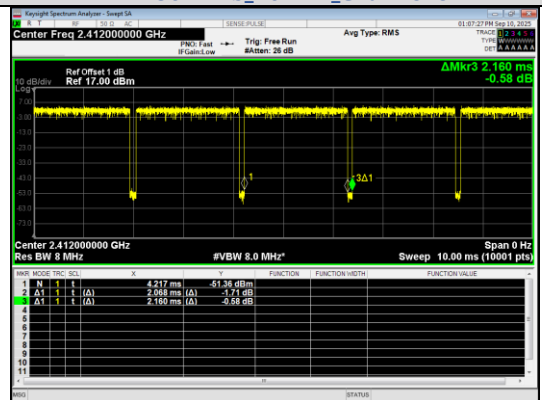
IEEE 802.11b_20MHz_Channel 1



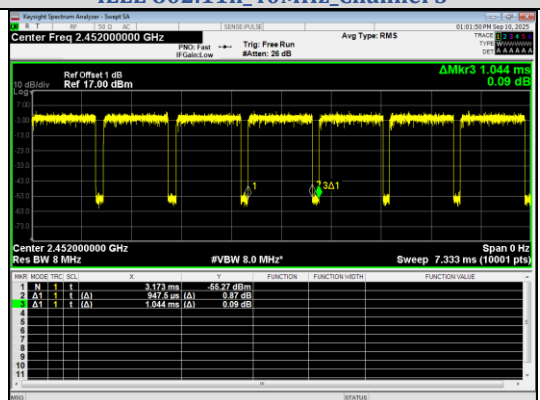
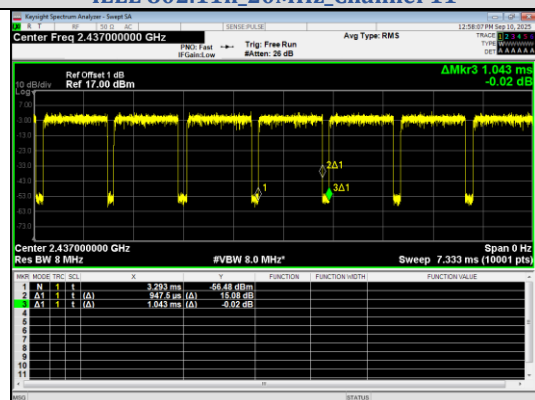
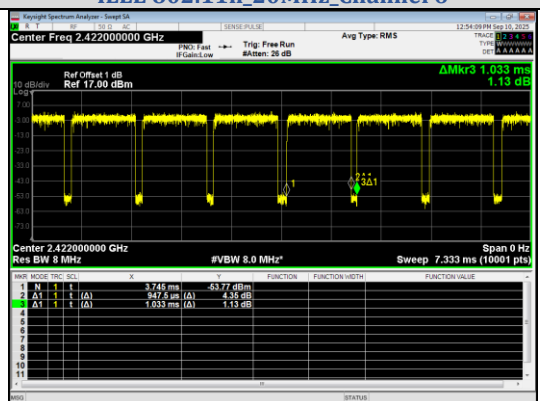
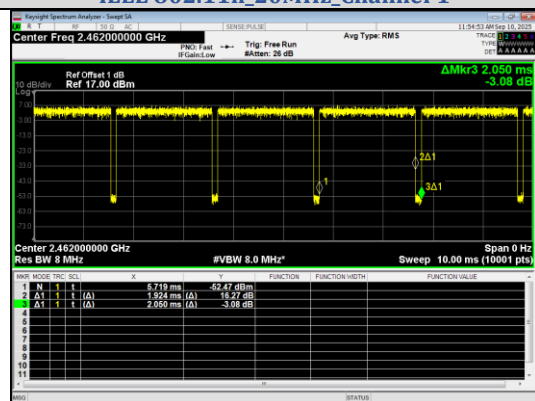
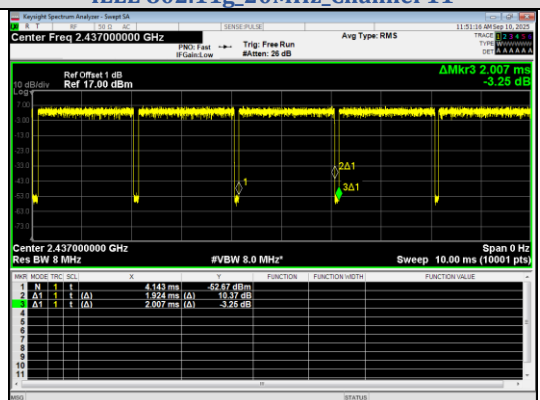
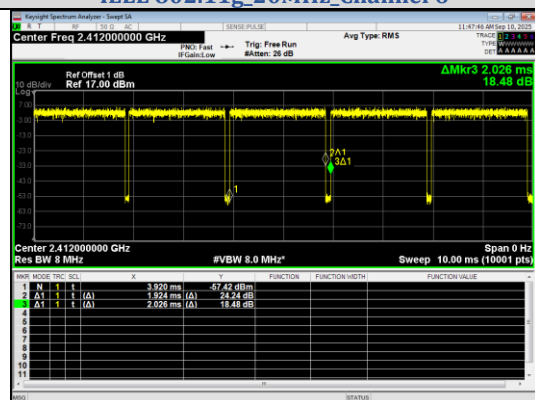
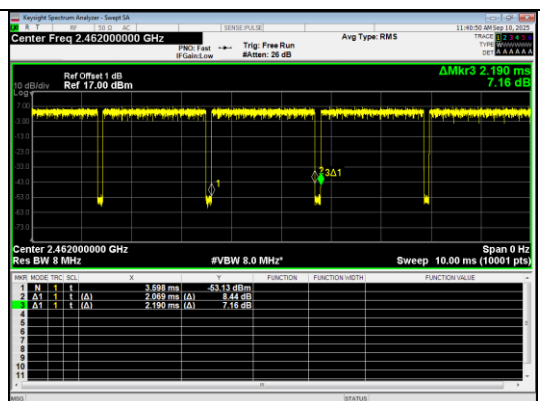
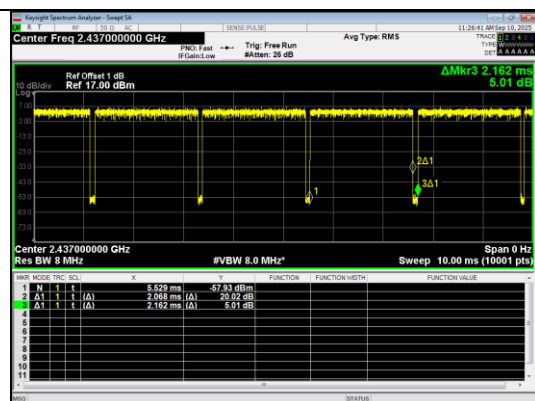
IEEE 802.11b_20MHz_Channel 6



IEEE 802.11b_20MHz_Channel 11



IEEE 802.11g_20MHz_Channel 1

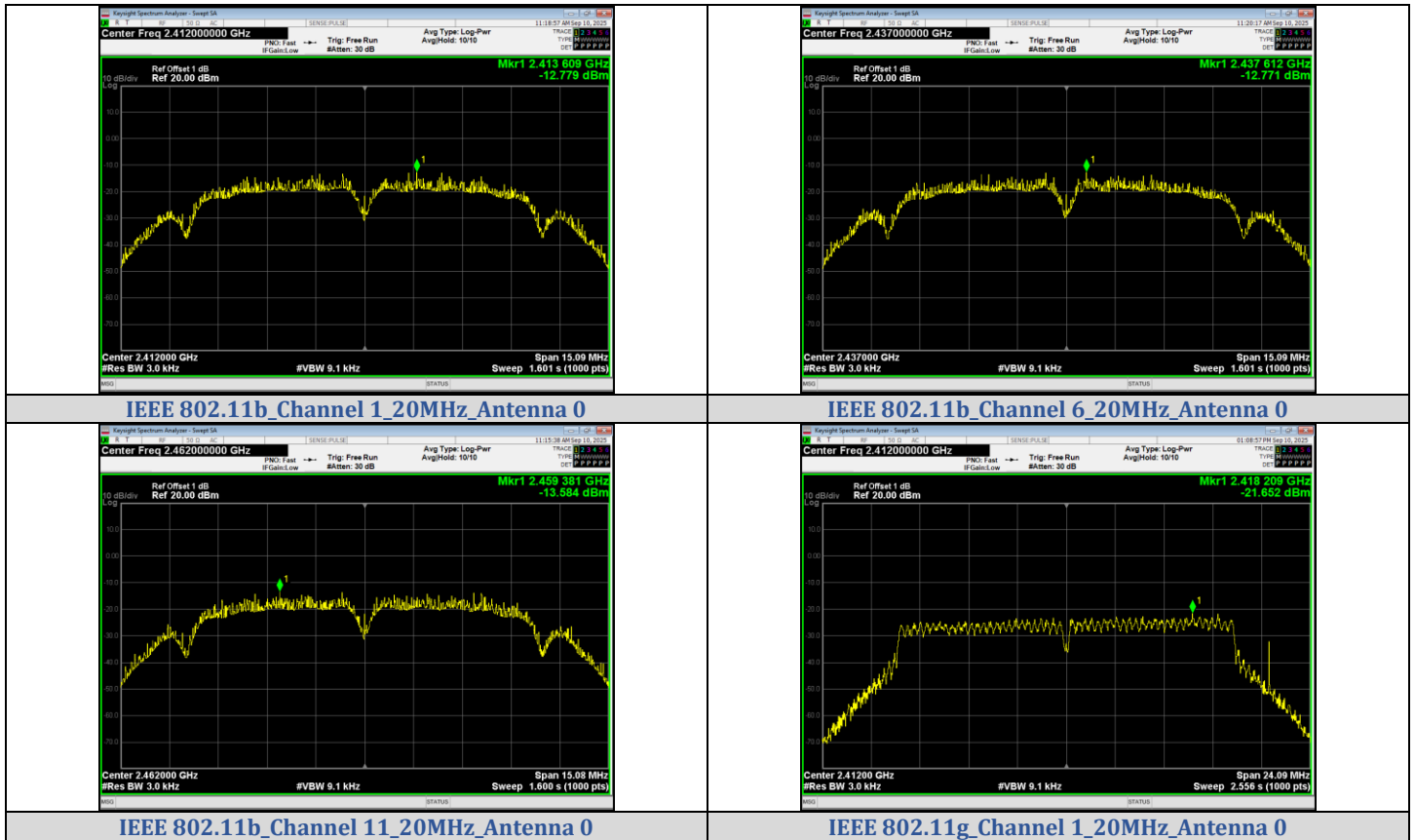


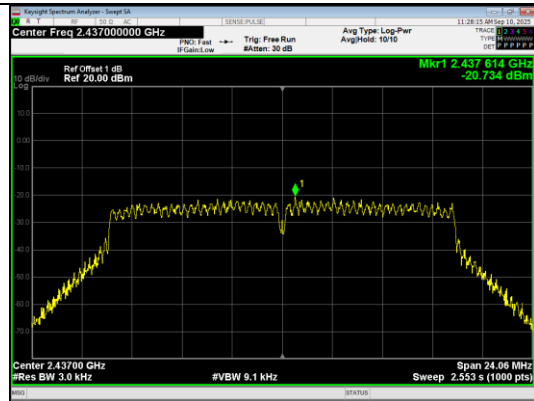
Power Spectral Density

Test Result

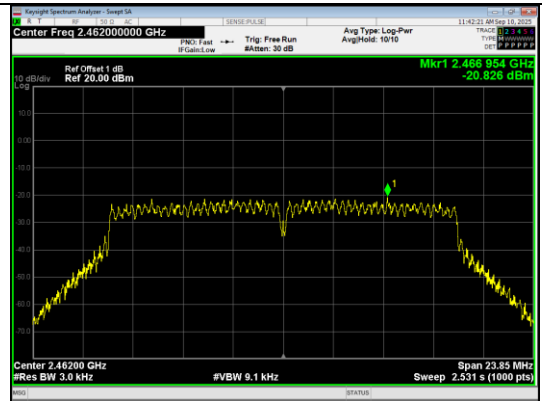
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-12.780	≤8	PASS
	6	-12.770		PASS
	11	-13.580		PASS
IEEE 802.11g	1	-21.650		PASS
	6	-20.730		PASS
	11	-20.830		PASS
IEEE 802.11n_20	1	-21.500		PASS
	6	-20.450		PASS
	11	-20.180		PASS
IEEE 802.11n_40	3	-23.780		PASS
	6	-24.350		PASS
	9	-23.890		PASS

Test Graphs

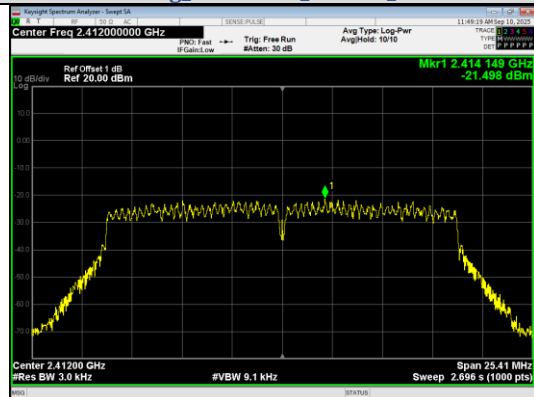




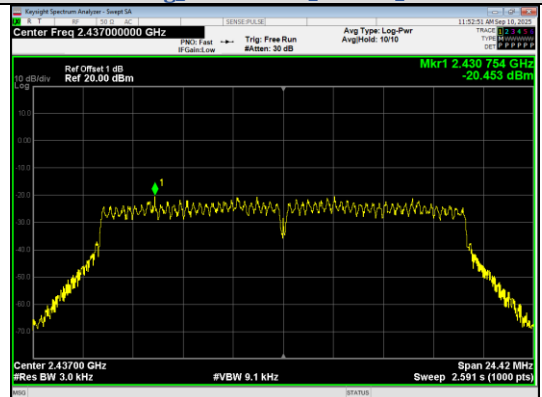
IEEE 802.11g_Channel 6_20MHz_Antenna 0



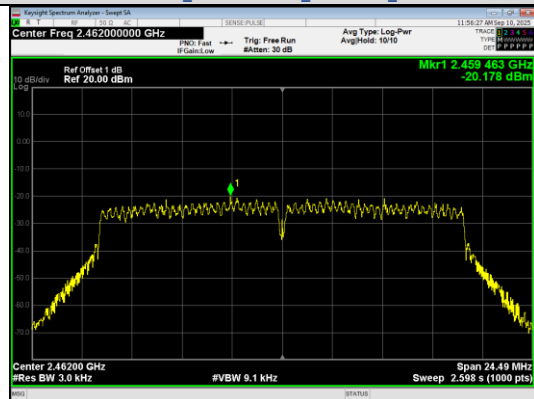
IEEE 802.11g_Channel 11_20MHz_Antenna 0



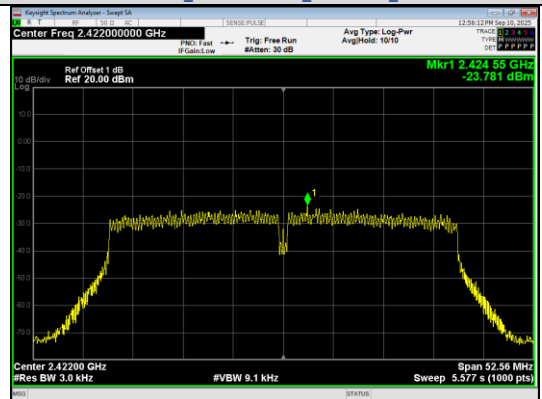
IEEE 802.11n_Channel 1_20MHz_Antenna 0



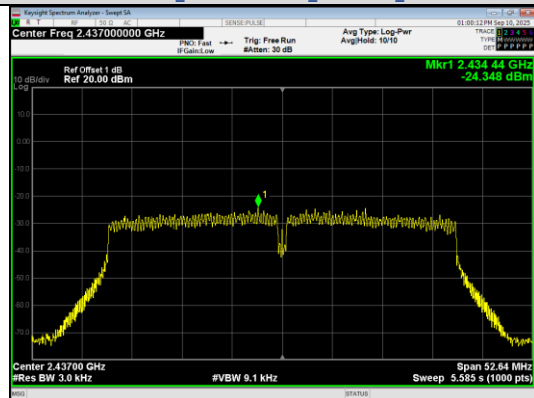
IEEE 802.11n_Channel 6_20MHz_Antenna 0



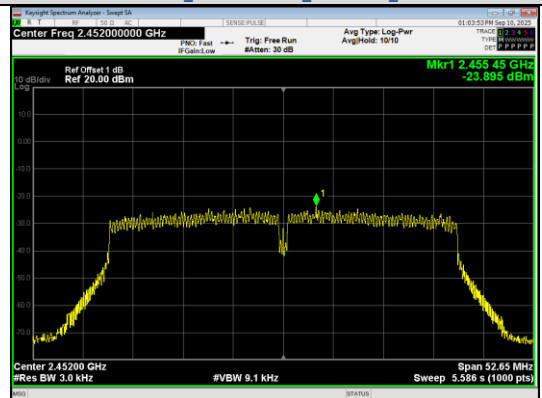
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

***** End of Report *****