

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	15.39	N/A	≤30	PASS
	6	15.57	N/A	≤30	PASS
	11	13.80	N/A	≤30	PASS
IEEE 802.11g	1	14.36	N/A	≤30	PASS
	6	15.67	N/A	≤30	PASS
	11	12.95	N/A	≤30	PASS
IEEE 802.11n_20	1	14.41	N/A	≤30	PASS
	6	14.68	N/A	≤30	PASS
	11	11.99	N/A	≤30	PASS
IEEE 802.11n_40	3	14.20	N/A	≤30	PASS
	6	13.61	N/A	≤30	PASS
	9	11.24	N/A	≤30	PASS

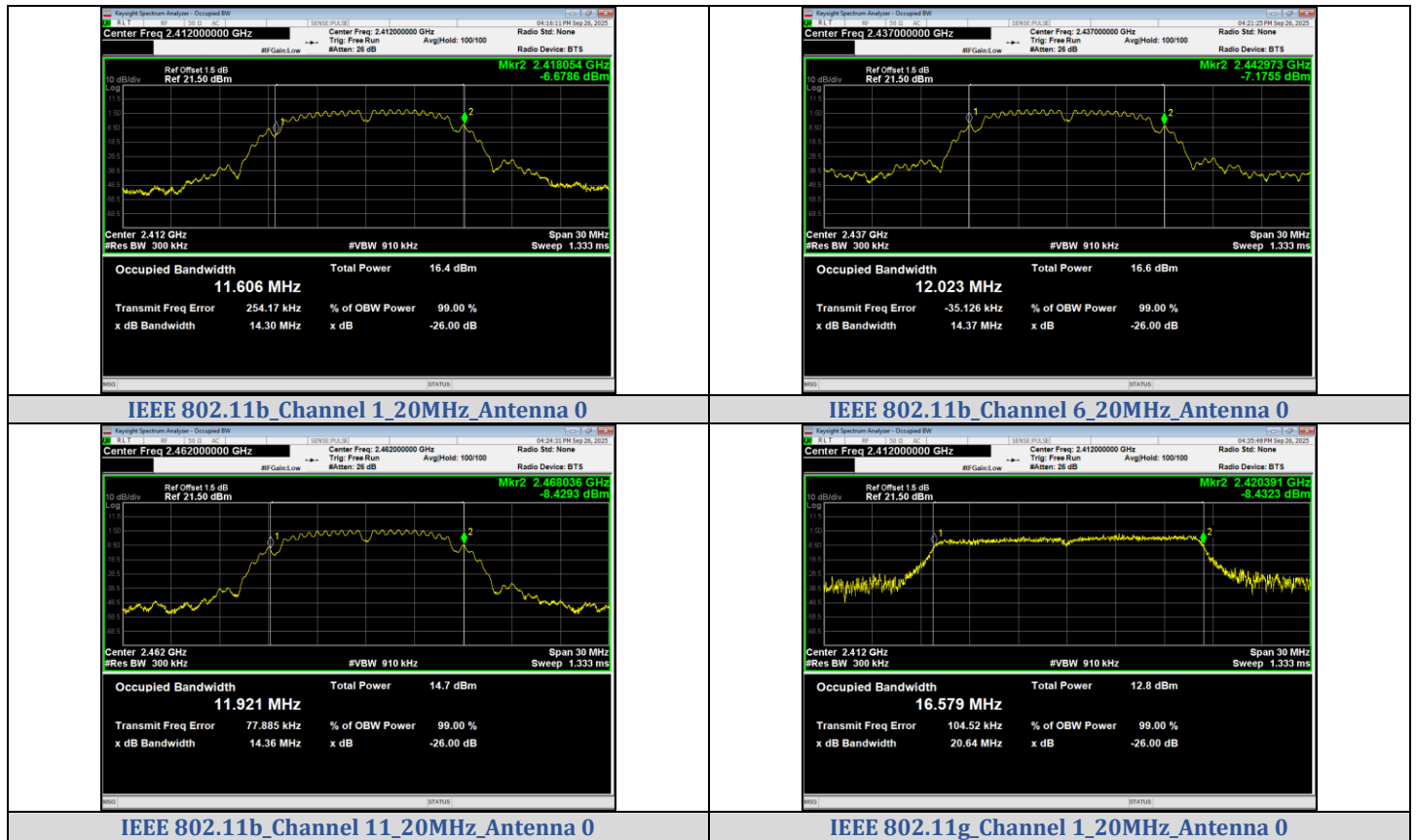


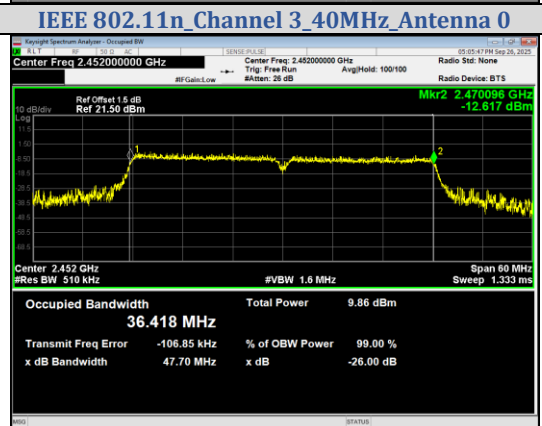
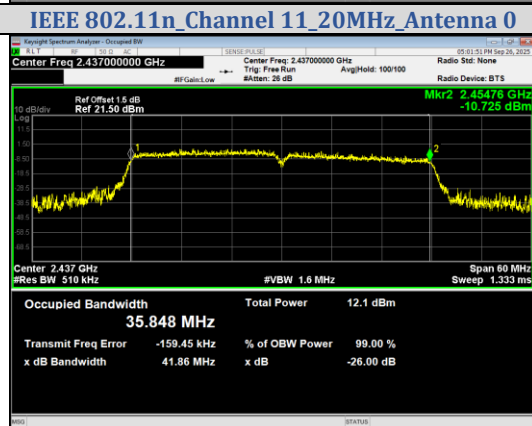
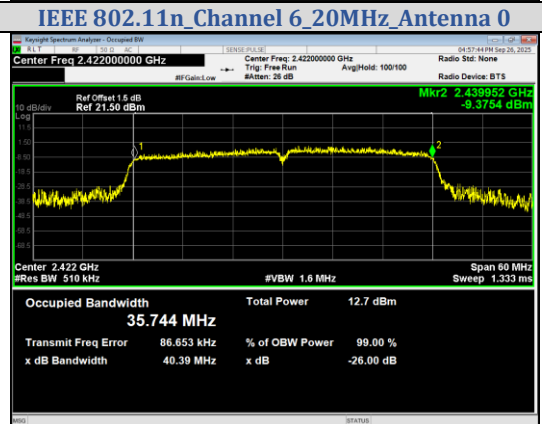
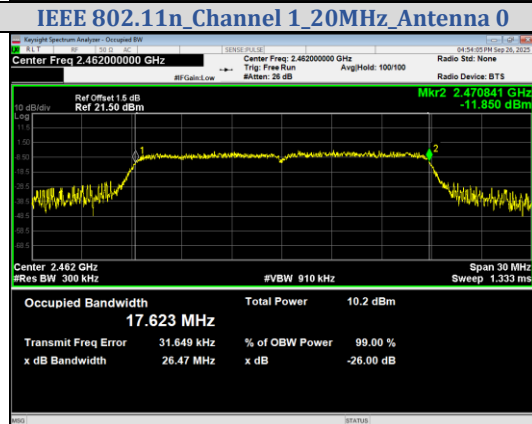
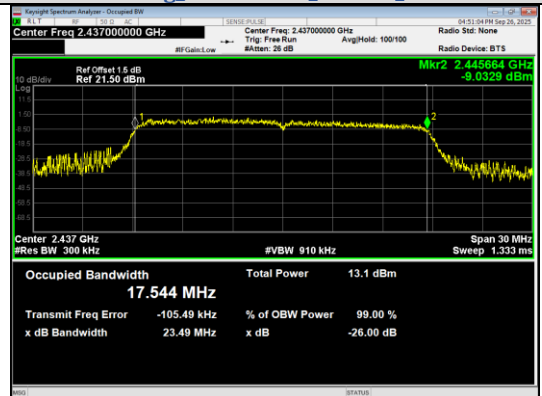
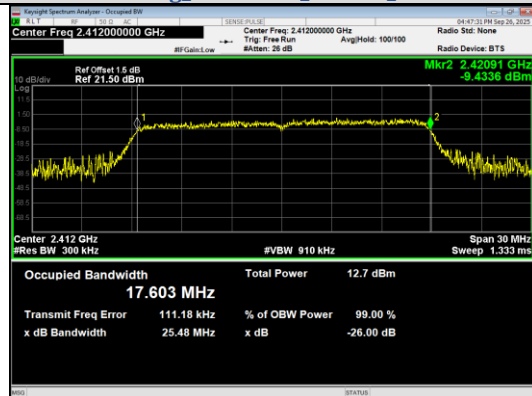
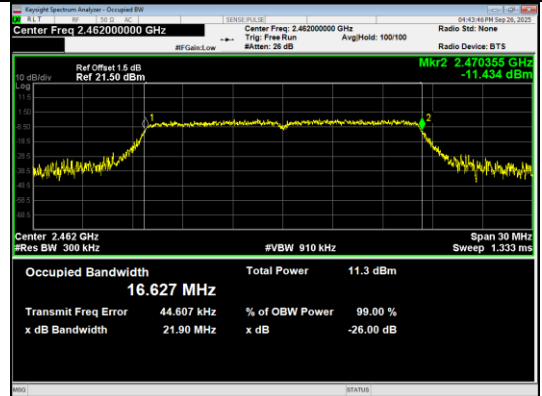
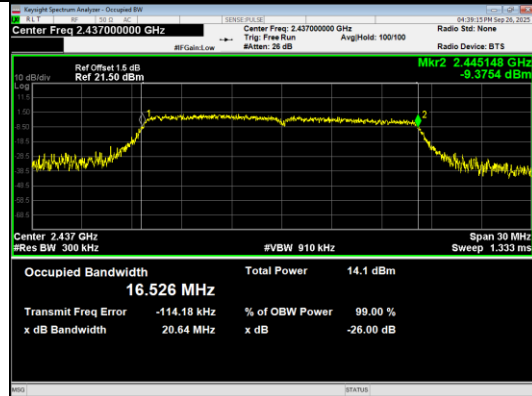
99% Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	11.606
	6		2437	12.023
	11		2462	11.921
IEEE 802.11g	1		2412	16.579
	6		2437	16.526
	11		2462	16.627
IEEE 802.11n_20	1		2412	17.603
	6		2437	17.544
	11		2462	17.623
IEEE 802.11n_40	3		2422	35.744
	6		2437	35.848
	9		2452	36.418

Test Graphs





IEEE 802.11n Channel 6 40MHz Antenna 0

IEEE 802.11n Channel 9 40MHz Antenna 0

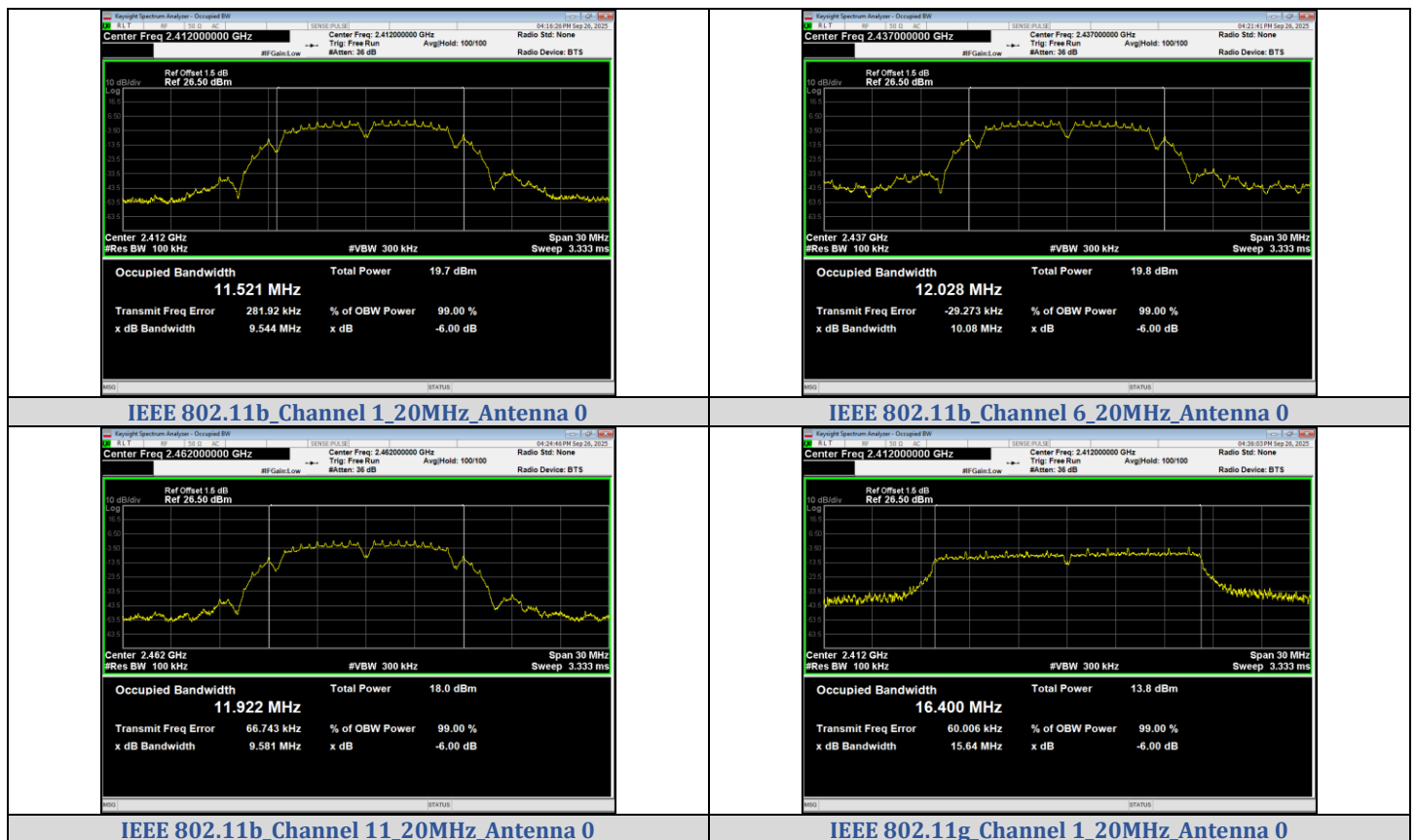


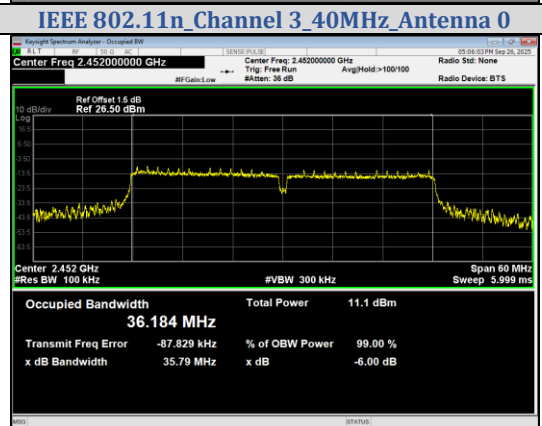
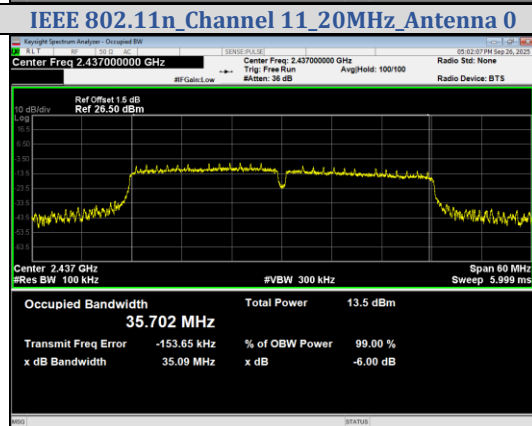
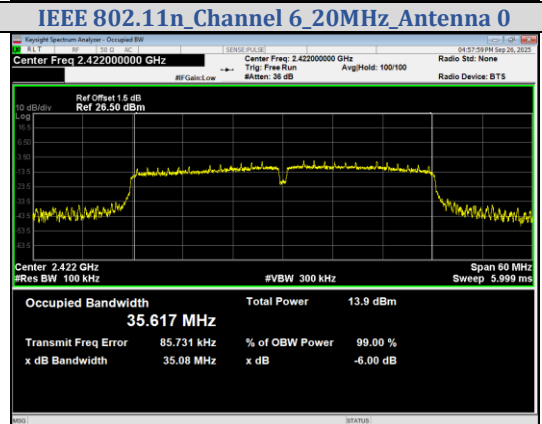
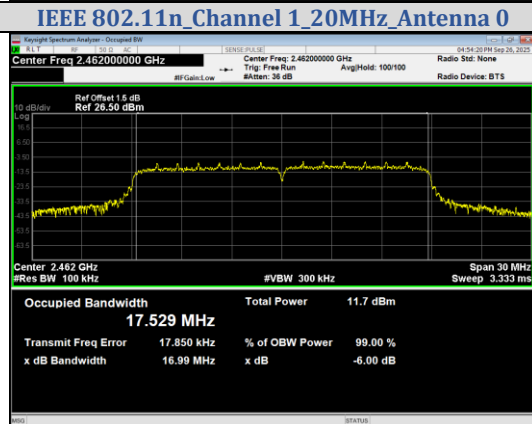
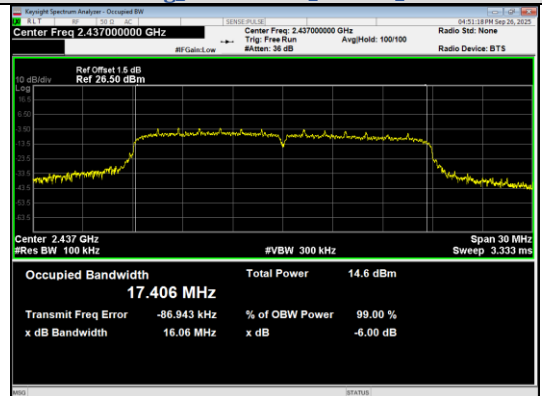
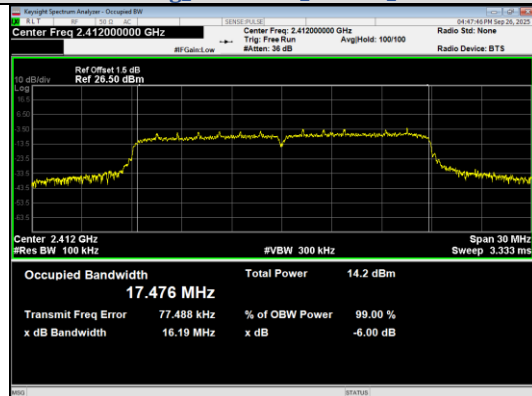
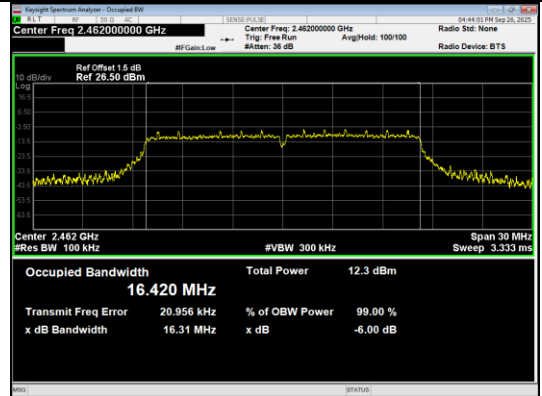
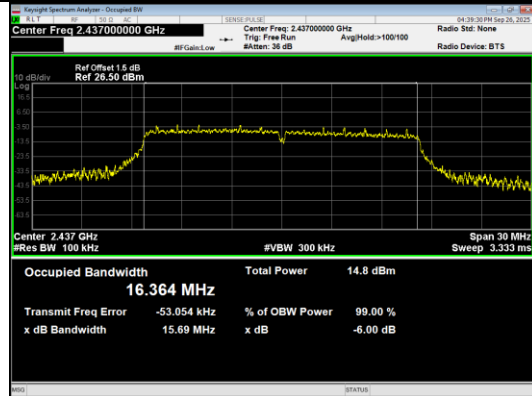
6dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	9.540	≥0.5	PASS
	6		2437	10.08		PASS
	11		2462	9.580		PASS
IEEE 802.11g	1		2412	15.64		PASS
	6		2437	15.69		PASS
	11		2462	16.31		PASS
IEEE 802.11n_20	1		2412	16.19		PASS
	6		2437	16.06		PASS
	11		2462	16.99		PASS
IEEE 802.11n_40	3		2422	35.08		PASS
	6		2437	35.09		PASS
	9		2452	35.79		PASS

Test Graphs





IEEE 802.11n Channel 6 40MHz Antenna 0

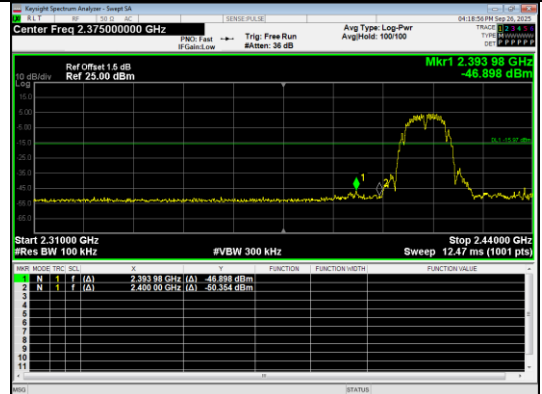
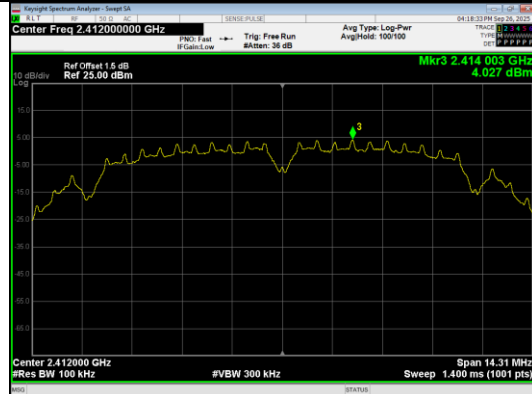
IEEE 802.11n Channel 9 40MHz Antenna 0

Conducted Out Of Band Emission

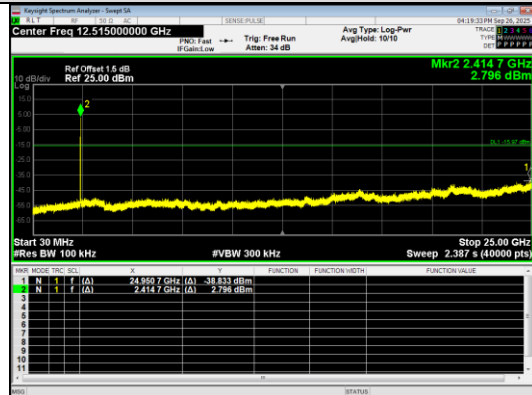
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2393.98	-46.898	-15.97	-30.928	PASS
			2400.00	-50.350	-15.97	-34.380	PASS
			24950.7	-38.833	-15.97	-22.863	PASS
	6		24409.4	-39.524	-16.16	-23.364	PASS
	11		1763.59	-30.395	-17.74	-12.655	PASS
			2483.50	-52.790	-17.74	-35.050	PASS
IEEE 802.11g	1		2398.92	-35.702	-22.8	-12.902	PASS
			2400.00	-37.300	-22.8	-14.500	PASS
			24414.4	-39.378	-22.8	-16.578	PASS
	6		24991.3	-39.716	-21.69	-18.026	PASS
	11		2483.50	-51.150	-25.02	-26.130	PASS
			24971.9	-38.339	-25.02	-13.319	PASS
IEEE 802.11n_20	1		2398.53	-34.973	-22.79	-12.183	PASS
			2400.00	-35.120	-22.79	-12.330	PASS
			24900.1	-39.775	-22.79	-16.985	PASS
	6		24710.3	-40.090	-22.68	-17.410	PASS
	11		2483.50	-51.810	-26.08	-25.730	PASS
			24989.4	-39.269	-26.08	-13.189	PASS
IEEE 802.11n_40	3		2397.49	-35.769	-25.89	-9.879	PASS
			2400.00	-40.550	-25.89	-14.660	PASS
			24413.2	-39.703	-25.89	-13.813	PASS
	6		24350.1	-38.594	-26.21	-12.384	PASS
	9		2483.50	-50.220	-28.24	-21.980	PASS
			24890.1	-38.954	-28.24	-10.714	PASS

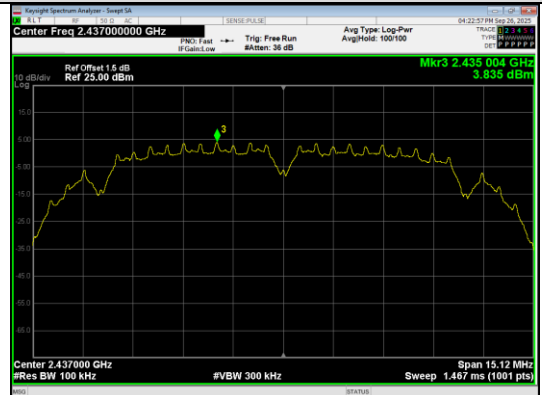
Test Graphs



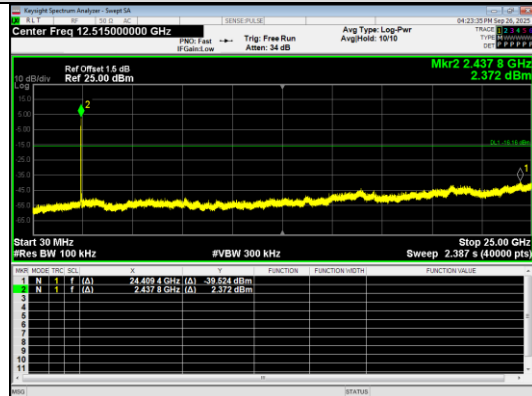
In-Band Reference Level IEEE 802.11b_Channel 1_20MHz_Antenna 0



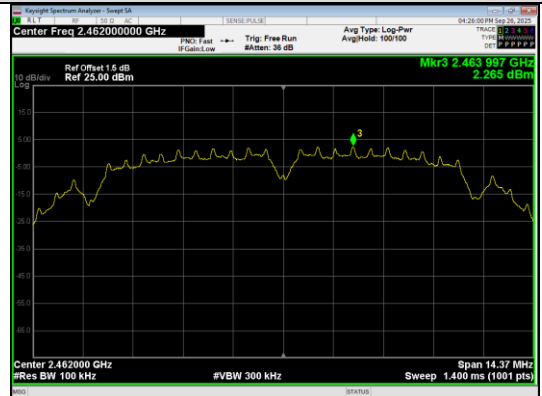
Out Of Band Emission IEEE 802.11b_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz IEEE 802.11b_Channel 1_20MHz_Antenna 0

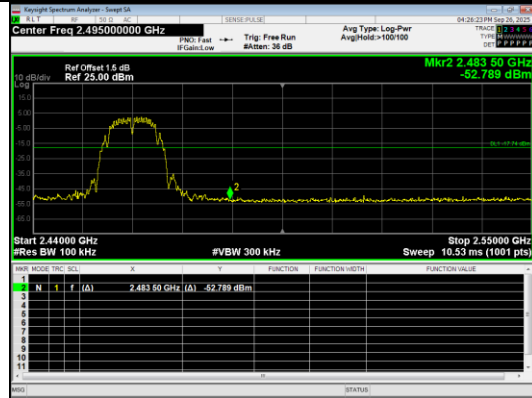


In-Band Reference Level IEEE 802.11b_Channel 6_20MHz_Antenna 0

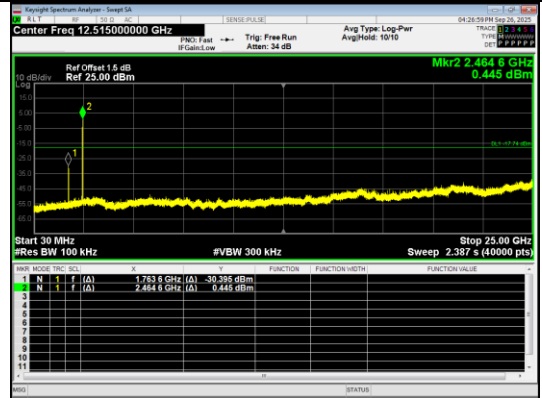


30.0 MHz - 25000.0 MHz IEEE 802.11b_Channel 6_20MHz_Antenna 0

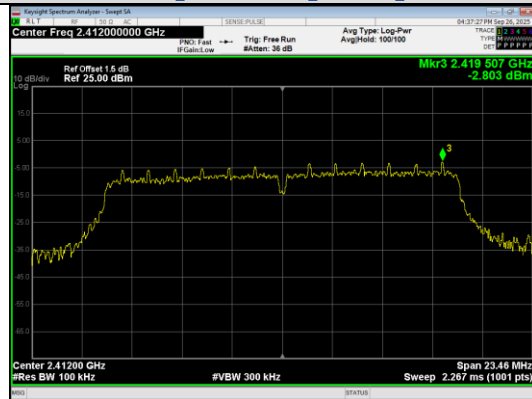
In-Band Reference Level IEEE 802.11b_Channel 11_20MHz_Antenna 0



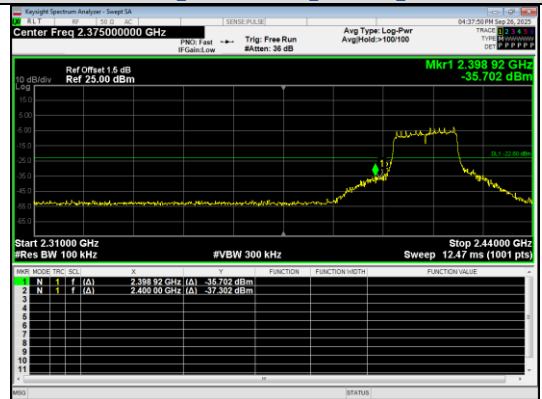
Out Of Band Emission
IEEE 802.11b Channel 11_20MHz_Antenna 0



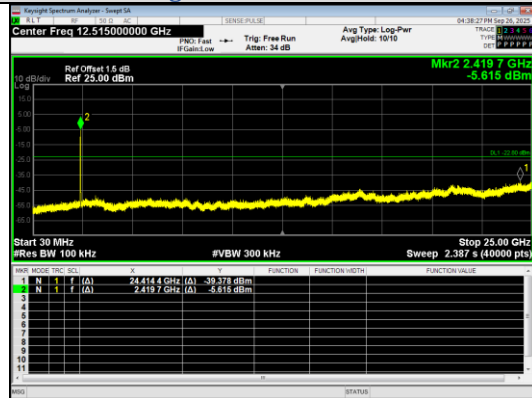
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IEEE 802.11b Channel 11_20MHz_Antenna 0



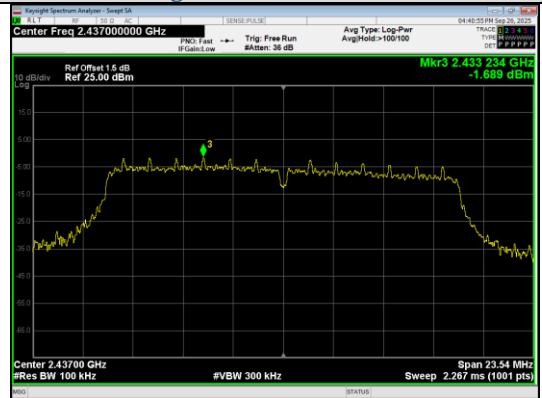
In-Band Reference Level
IEEE 802.11g Channel 1_20MHz_Antenna 0



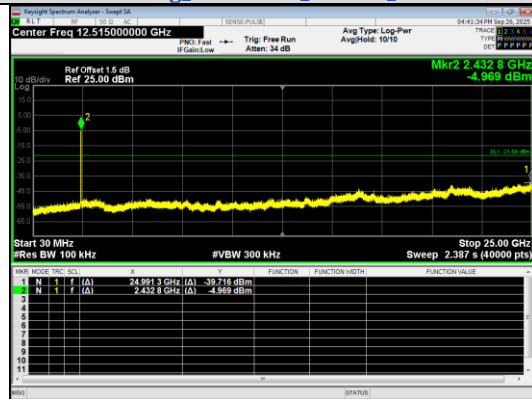
Out Of Band Emission
IEEE 802.11g Channel 1_20MHz_Antenna 0



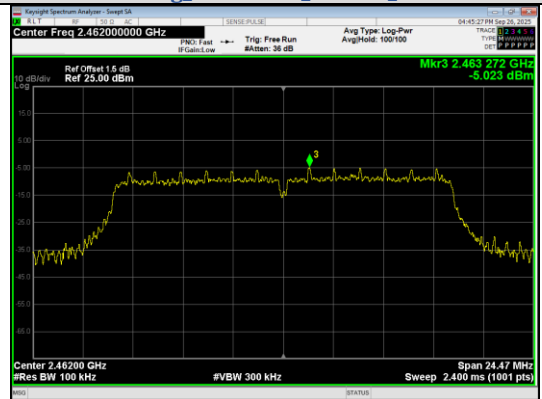
30.0 MHz - 25000.0 MHz
IEEE 802.11g Channel 1_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g Channel 6_20MHz_Antenna 0

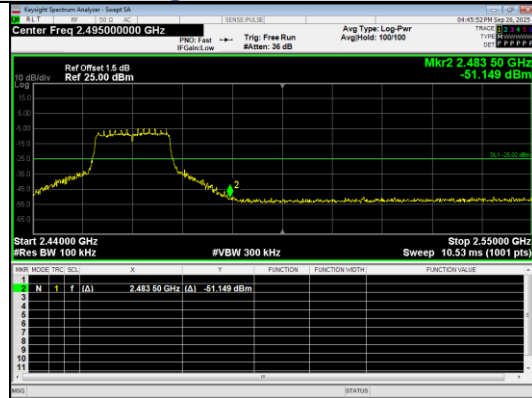


30.0 MHz - 25000.0 MHz

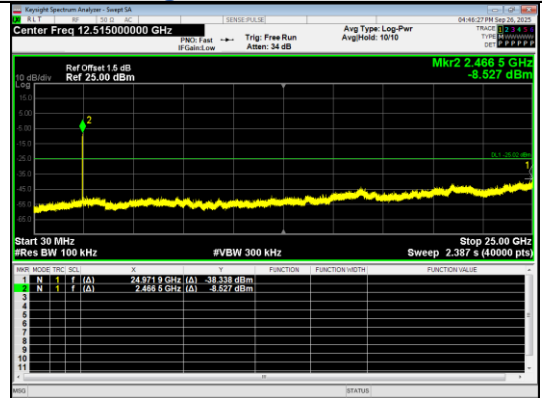


In-Band Reference Level

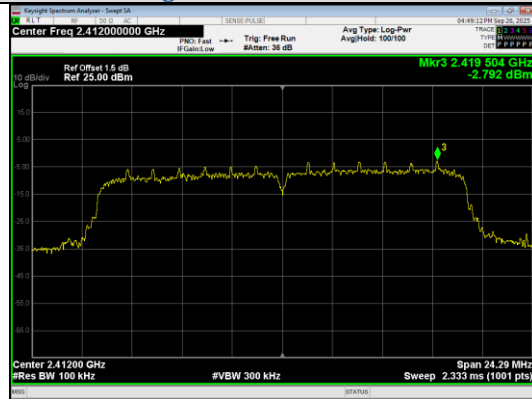
IEEE 802.11g_Channel 6_20MHz_Antenna 0



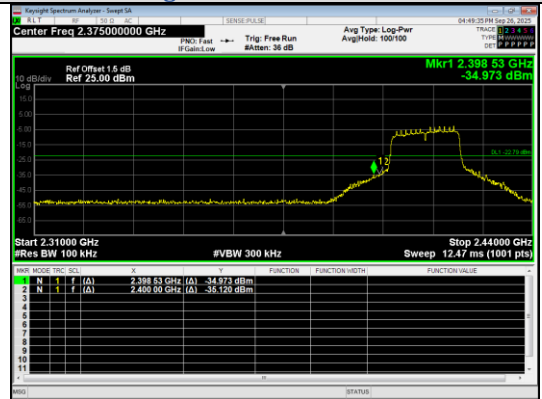
IEEE 802.11g_Channel 11_20MHz_Antenna 0



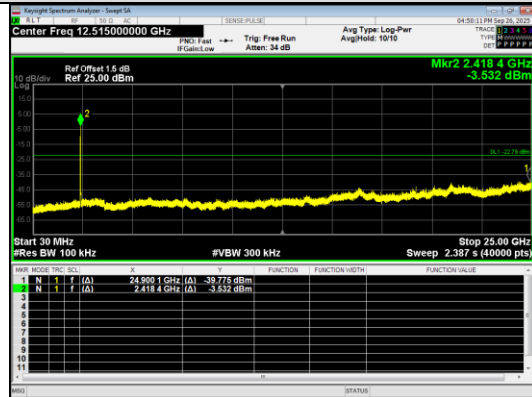
Out Of Band Emission IEEE 802.11g_Channel 11_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz IEEE 802.11g_Channel 11_20MHz_Antenna 0



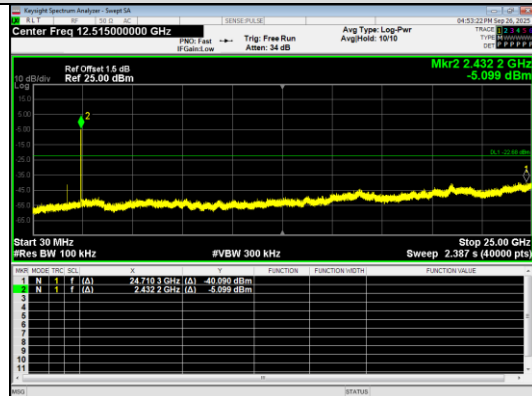
In-Band Reference Level IEEE 802.11n_Channel 1_20MHz_Antenna 0



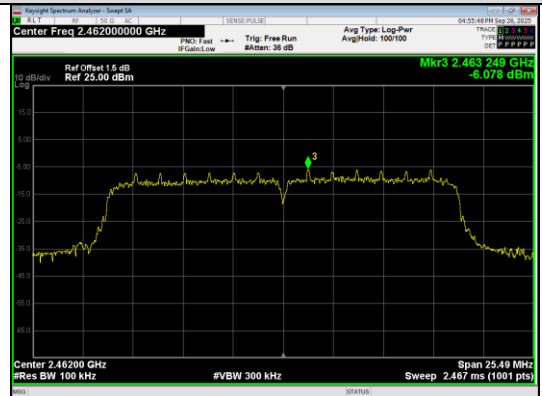
Out Of Band Emission IEEE 802.11n_Channel 1_20MHz_Antenna 0



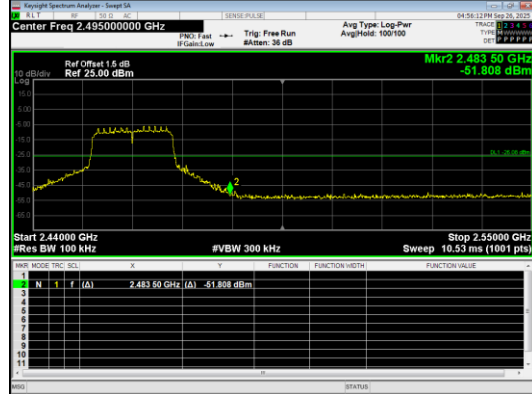
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 1_20MHz_Antenna 0



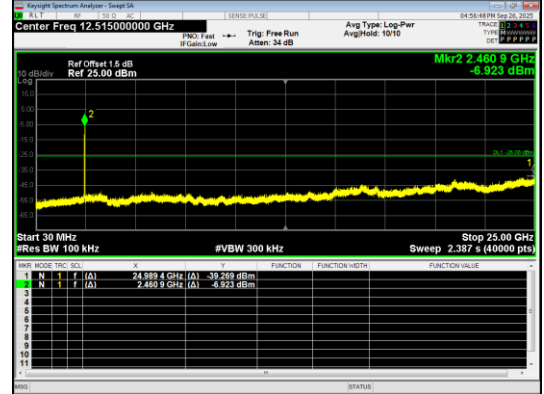
In-Band Reference Level IEEE 802.11n_Channel 6_20MHz_Antenna 0



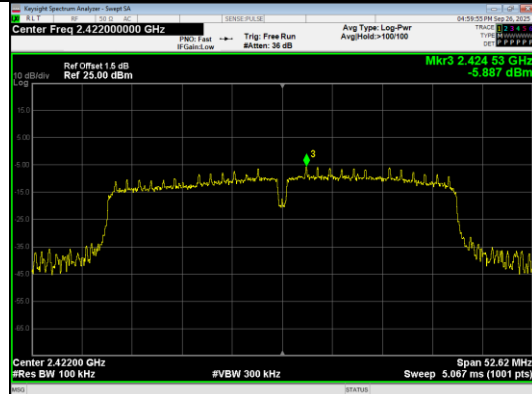
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 6_20MHz_Antenna 0



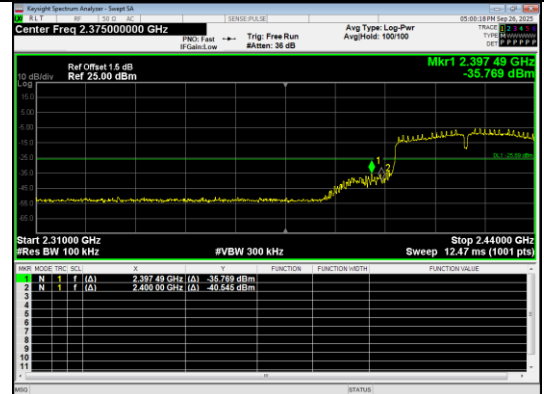
In-Band Reference Level IEEE 802.11n_Channel 11_20MHz_Antenna 0



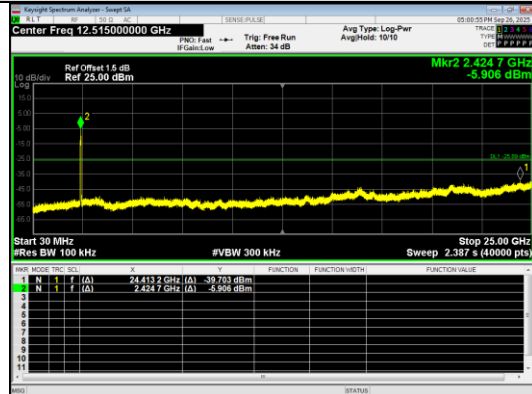
Out Of Band Emission IEEE 802.11n_Channel 11_20MHz_Antenna 0



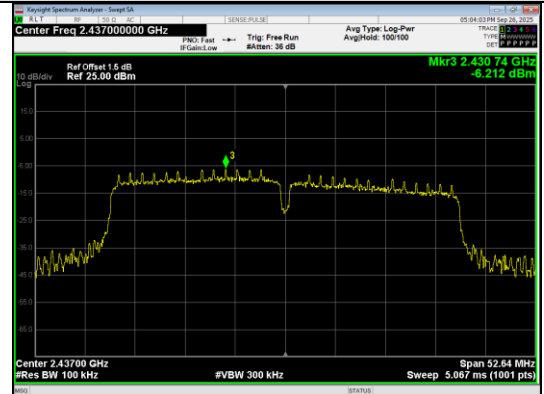
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 11_20MHz_Antenna 0



In-Band Reference Level IEEE 802.11n_Channel 3_40MHz_Antenna 0

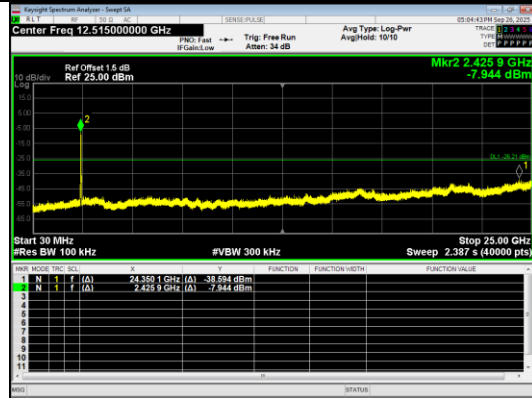


Out Of Band Emission IEEE 802.11n_Channel 3_40MHz_Antenna 0

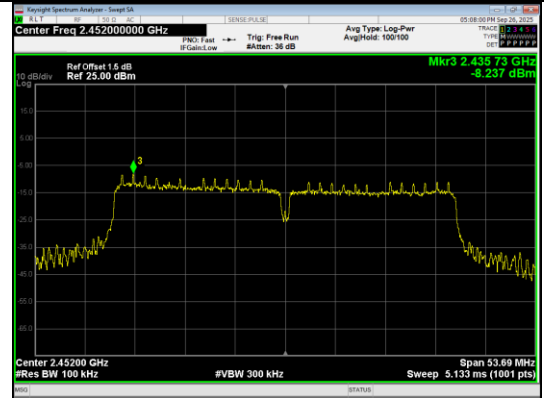


30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 3_40MHz_Antenna 0

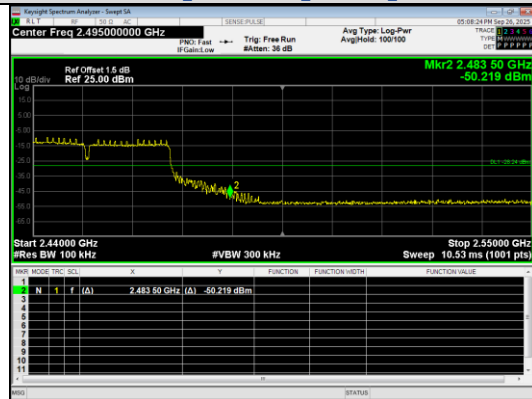
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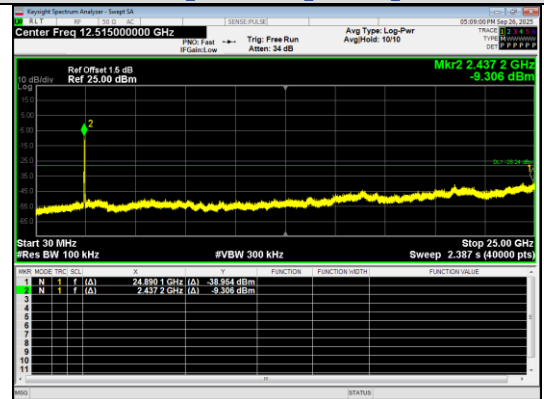
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0



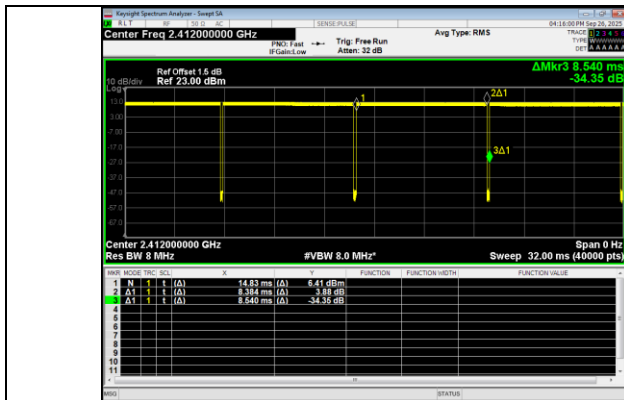
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Duty Cycle

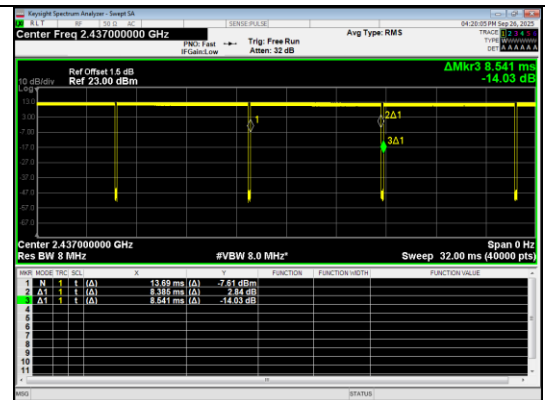
Test Result

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	8.384	8.540	98.17	0.9817	0.0802	0.1193
		6		8.385	8.541	98.17	0.9817	0.0802	0.1193
		11		8.383	8.540	98.17	0.9817	0.0802	0.1193
IEEE 802.11g		1		1.396	1.546	90.30	0.9030	0.4431	0.7163
		6		1.396	1.546	90.30	0.9030	0.4431	0.7163
		11		1.396	1.546	90.30	0.9030	0.4431	0.7163
IEEE 802.11n_20	MCS 0	1		1.176	1.346	87.41	0.8741	0.5844	0.8503
		6		1.178	1.328	88.70	0.8870	0.5208	0.8489
		11		1.177	1.328	88.63	0.8863	0.5242	0.8496
IEEE 802.11n_40		3		0.589	0.758	77.71	0.7771	1.0952	1.6978
		6		0.589	0.731	80.60	0.8060	0.9366	1.6978
		9		0.589	0.767	76.81	0.7681	1.1458	1.6978

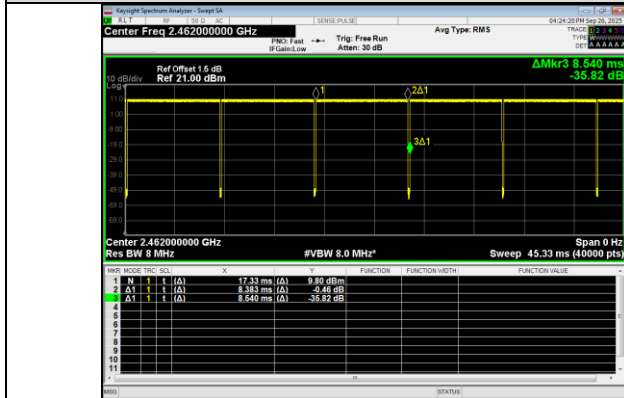
Test Graphs



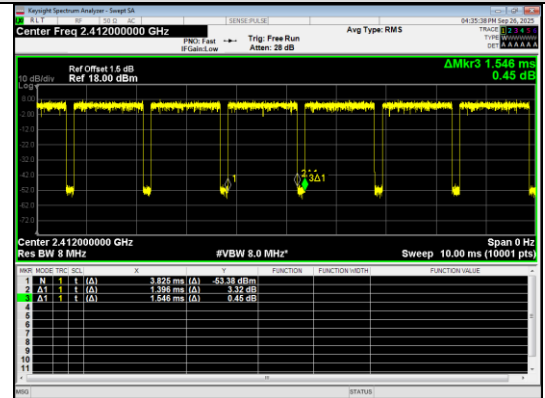
IEEE 802.11b_20MHz_Channel 1



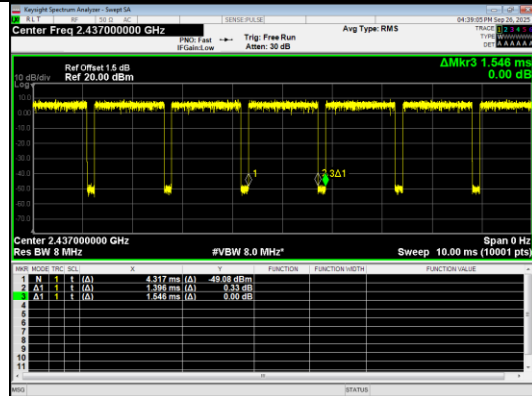
IEEE 802.11b_20MHz_Channel 6



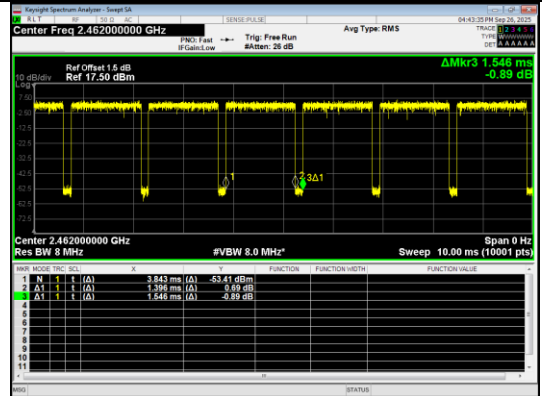
IEEE 802.11b_20MHz_Channel 11



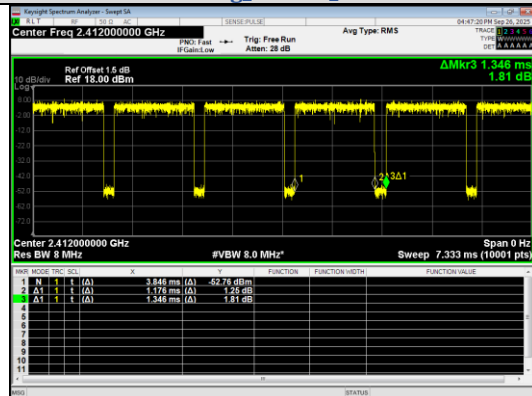
IEEE 802.11g 20MHz_Channel 1



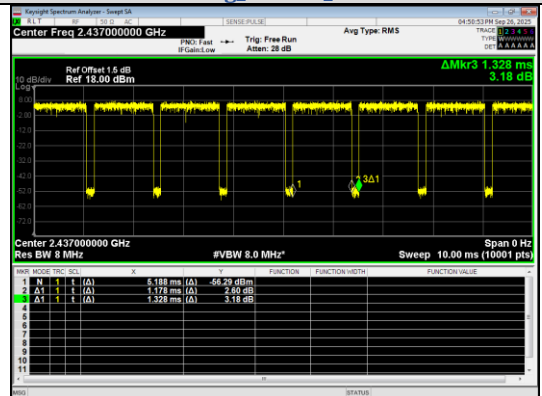
IEEE 802.11g_20MHz_Channel 6



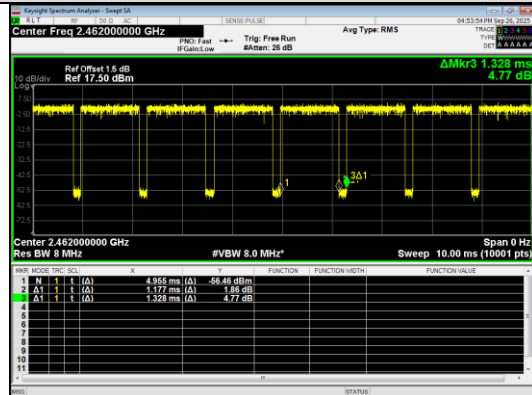
IEEE 802.11g_20MHz_Channel 11



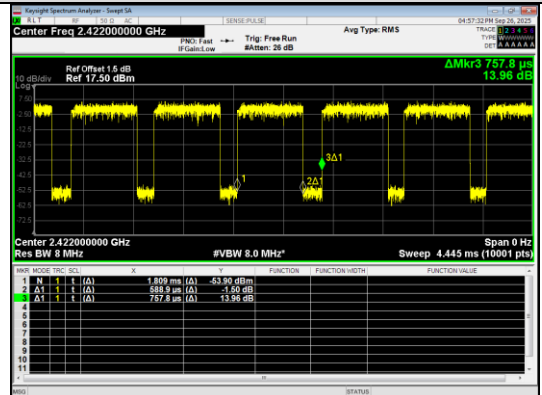
IEEE 802.11n_20MHz_Channel 1



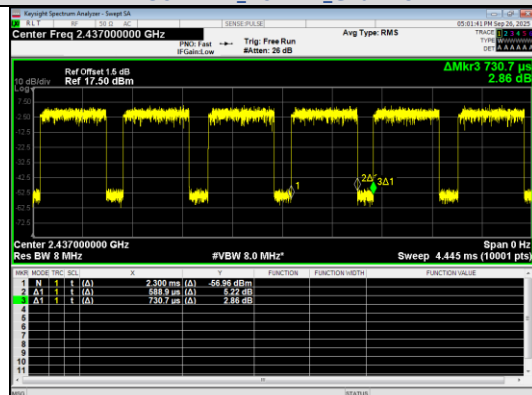
IEEE 802.11n_20MHz_Channel 6



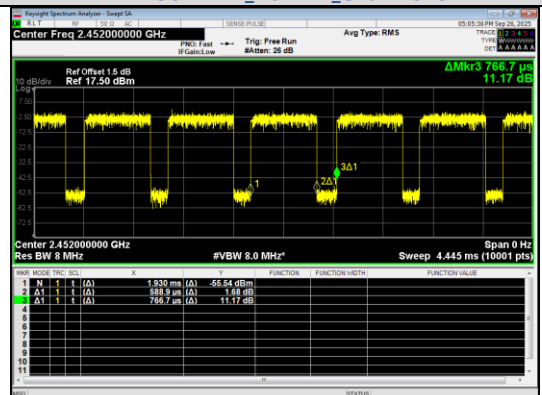
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



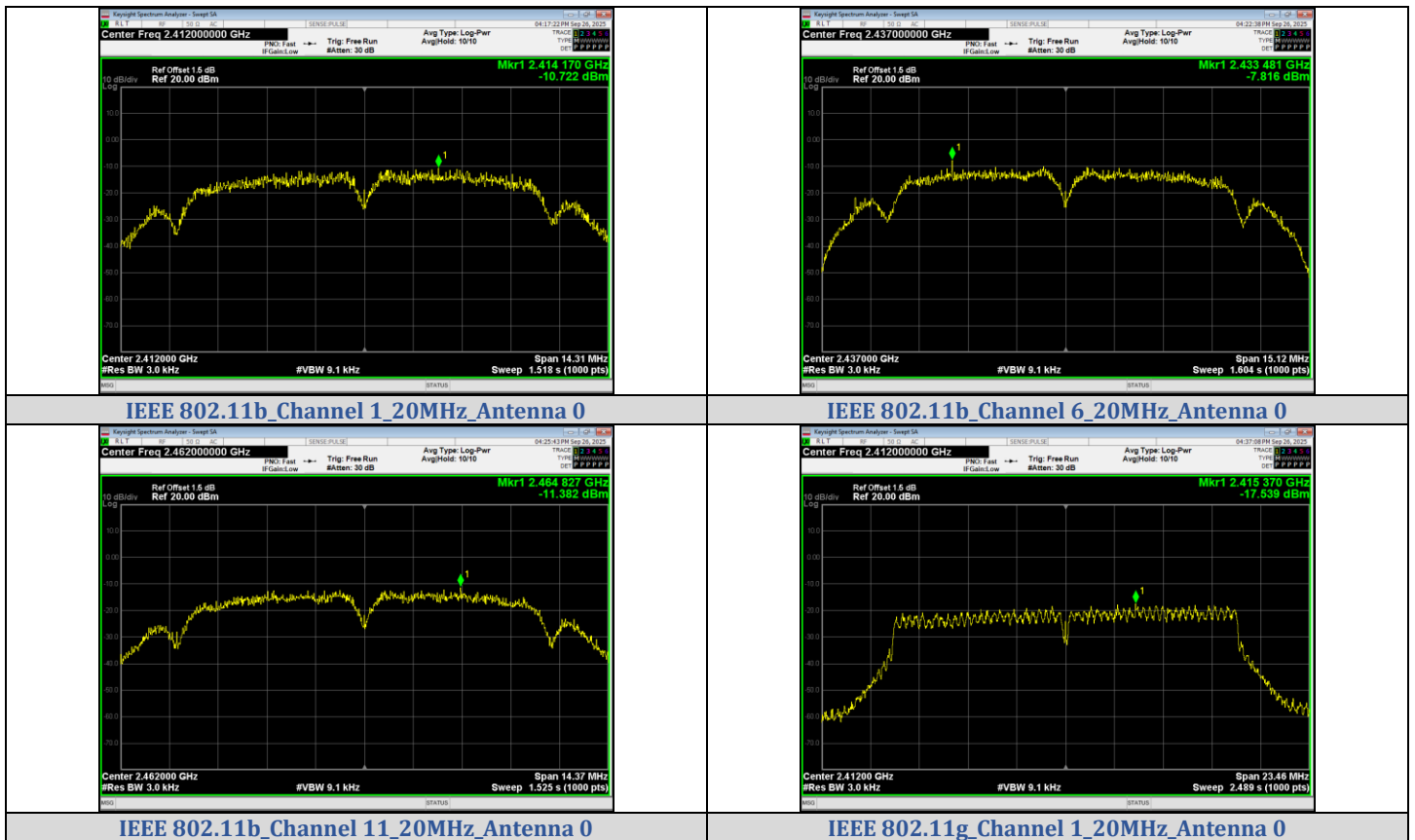
IEEE 802.11n_40MHz_Channel 9

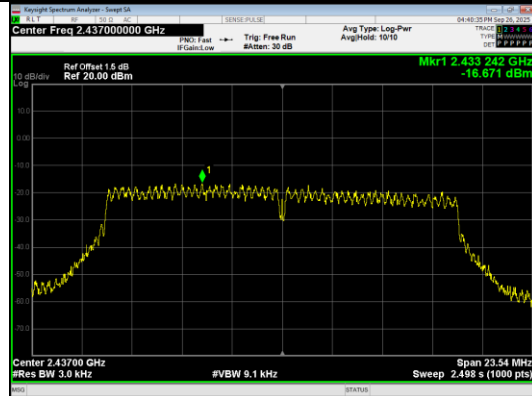
Power Spectral Density

Test Result

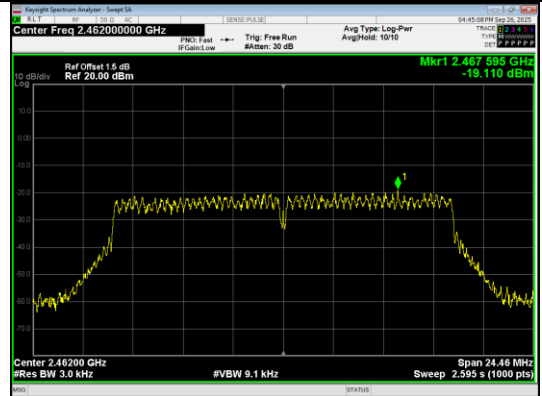
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-10.720	≤8	PASS
	6	-7.820		PASS
	11	-11.380		PASS
IEEE 802.11g	1	-17.540		PASS
	6	-16.670		PASS
	11	-19.110		PASS
IEEE 802.11n_20	1	-16.650		PASS
	6	-16.440		PASS
	11	-20.190		PASS
IEEE 802.11n_40	3	-20.680		PASS
	6	-20.750		PASS
	9	-22.630		PASS

Test Graphs

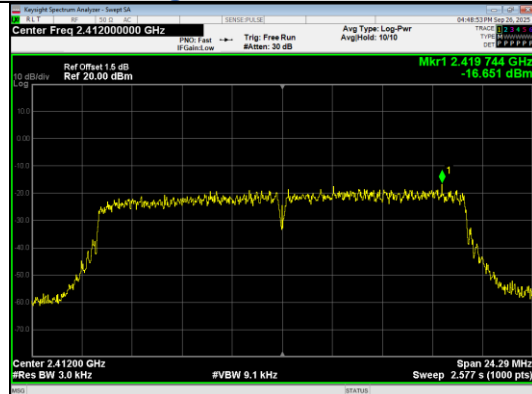




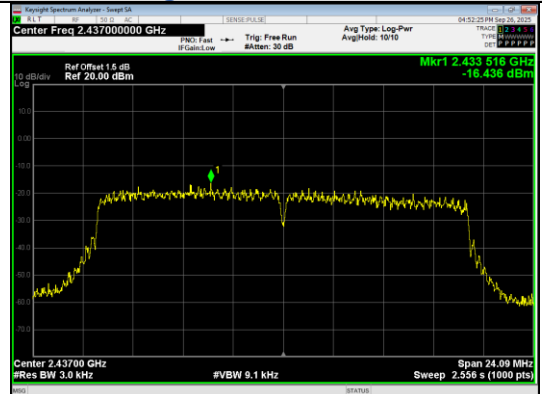
IEEE 802.11g_Channel 6_20MHz_Antenna 0



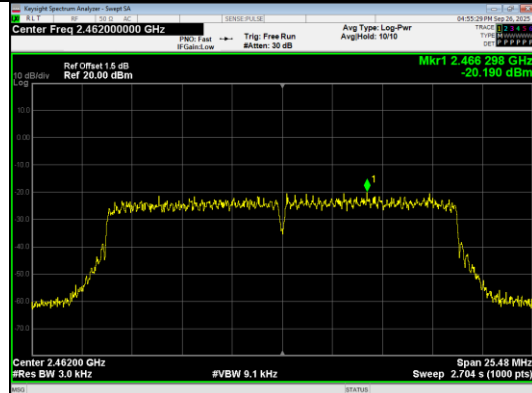
IEEE 802.11g_Channel 11_20MHz_Antenna 0



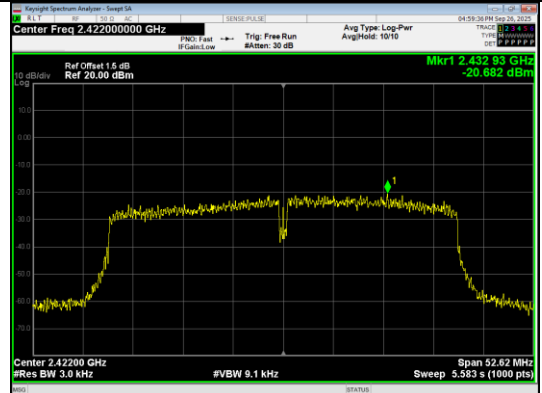
IEEE 802.11n_Channel 1_20MHz_Antenna 0



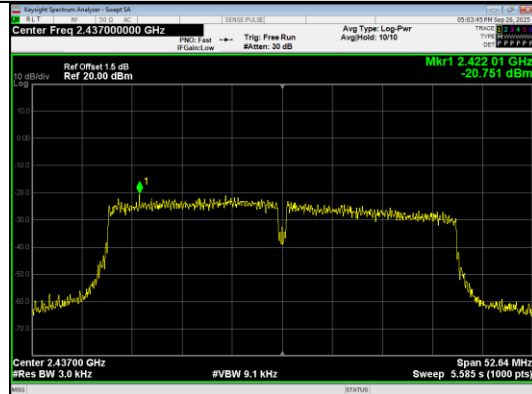
IEEE 802.11n_Channel 6_20MHz_Antenna 0



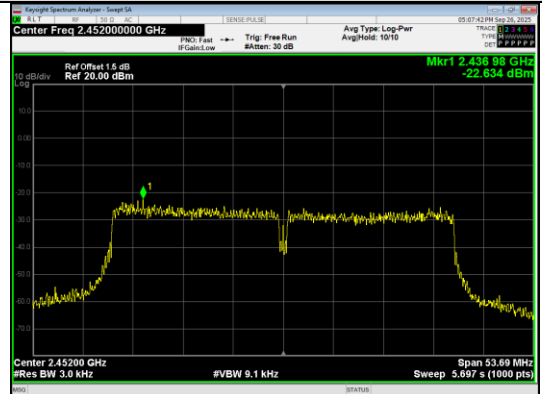
IEEE 802.11n_Channel 11_20MHz_Antenna 0



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 *****