

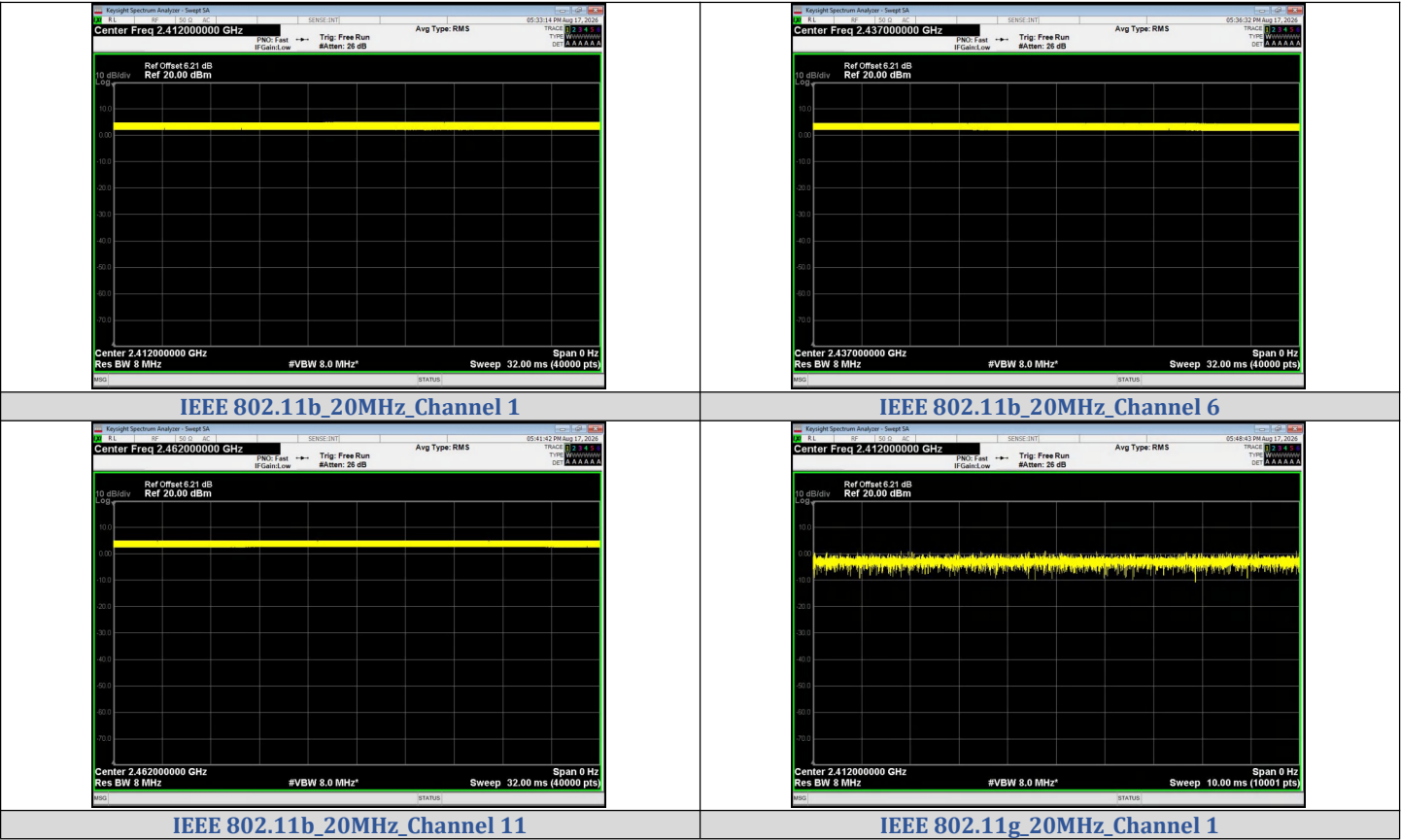
Appendix A:Test Results of 2.4G WIFI

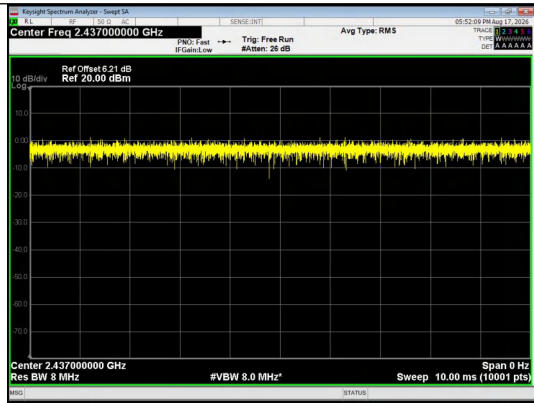
Duty Cycle

Test Result

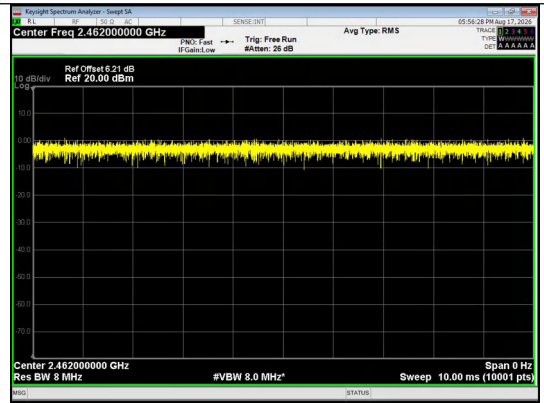
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	1	32.0000	32.000	100	1	0.0000	0.0312
		6		32.0000	32.000	100	1	0.0000	0.0312
		11		32.0000	32.000	100	1	0.0000	0.0312
IEEE 802.11g		1		10.0000	10.000	100	1	0.0000	0.1000
		6		10.0000	10.000	100	1	0.0000	0.1000
		11		10.0000	10.000	100	1	0.0000	0.1000
IEEE 802.11n_20	MCS 0	1		10.0000	10.000	100	1	0.0000	0.1000
		6		10.0000	10.000	100	1	0.0000	0.1000
		11		10.0000	10.000	100	1	0.0000	0.1000
IEEE 802.11n_40		3		10.0000	10.000	100	1	0.0000	0.1000
		6		10.0000	10.000	100	1	0.0000	0.1000
		9		10.0000	10.000	100	1	0.0000	0.1000

Test Graphs

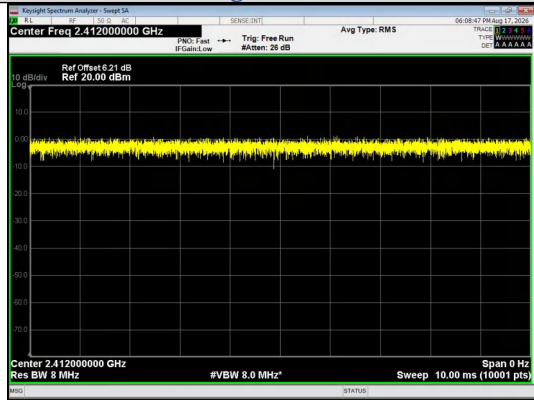




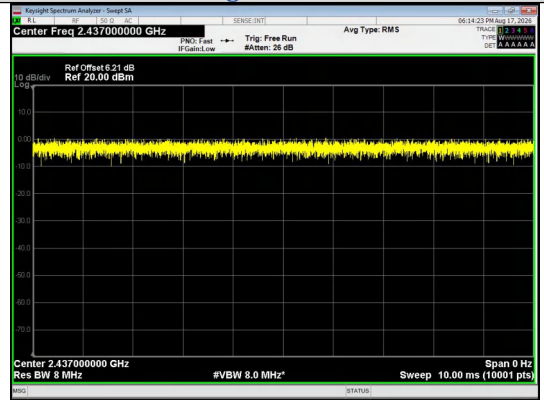
IEEE 802.11g_20MHz_Channel 6



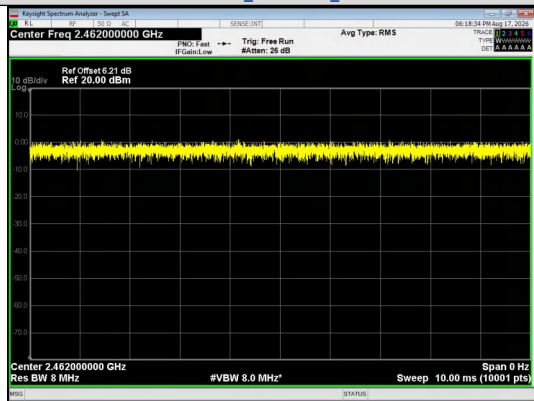
IEEE 802.11g_20MHz_Channel 11



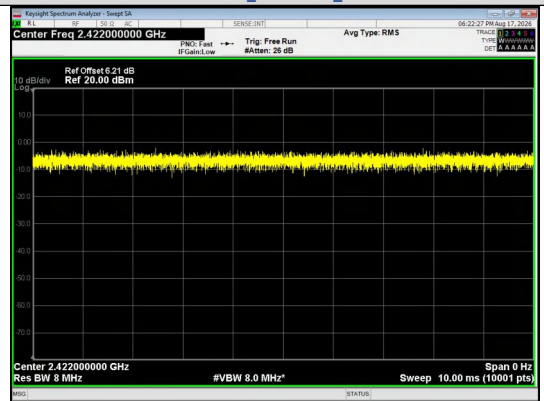
IEEE 802.11n_20MHz_Channel 1



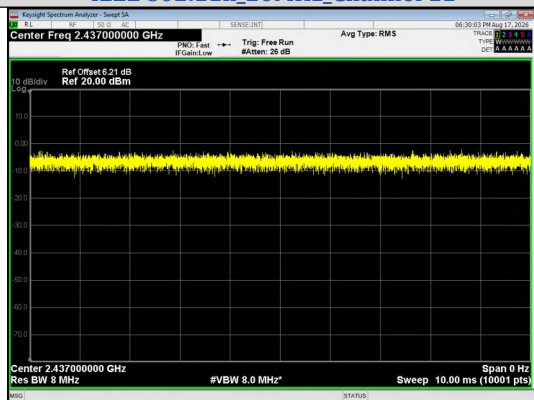
IEEE 802.11n_20MHz_Channel 6



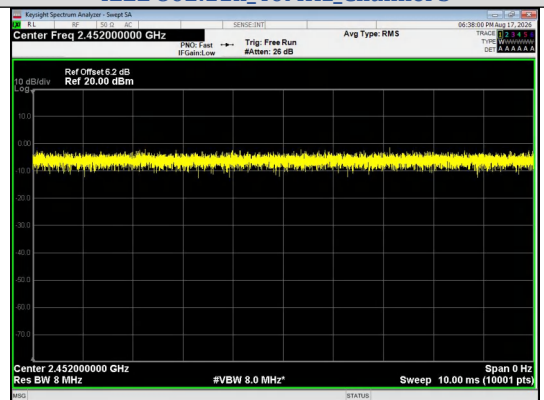
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



IEEE 802.11n_40MHz_Channel 9

Appendix A:Test Results of 2.4G WIFI

Conducted Output Power
Test Result

Conducted Output Power

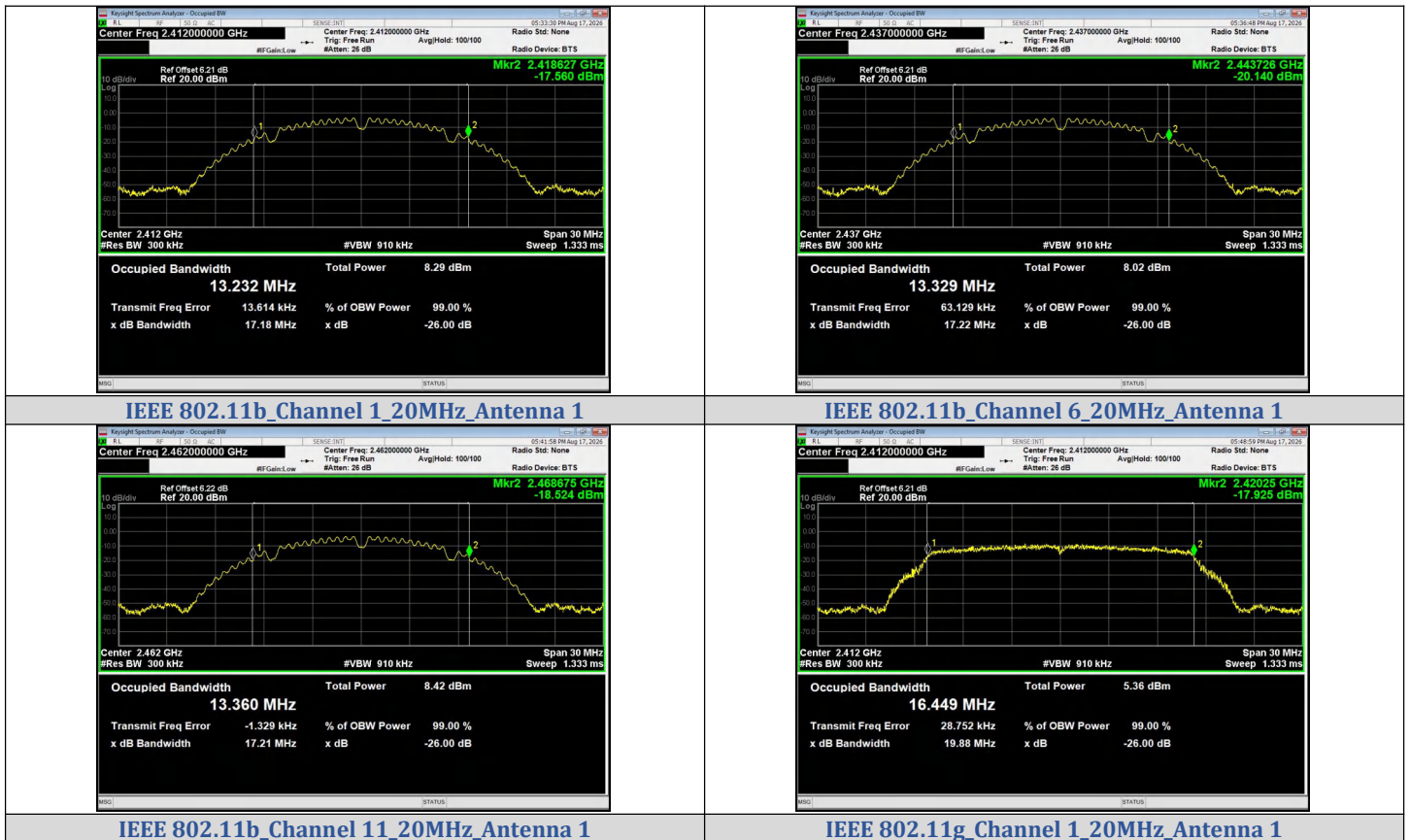
Mode	Channel	Ant. 1 (dBm)	Limit (dBm)	Verdict
IEEE 802.11b	1	7.25	≤30	PASS
	6	6.97	≤30	PASS
	11	7.35	≤30	PASS
IEEE 802.11g	1	6.97	≤30	PASS
	6	6.86	≤30	PASS
	11	7.00	≤30	PASS
IEEE 802.11n_20	1	7.67	≤30	PASS
	6	7.39	≤30	PASS
	11	7.58	≤30	PASS
IEEE 802.11n_40	3	7.16	≤30	PASS
	6	7.22	≤30	PASS
	9	7.30	≤30	PASS

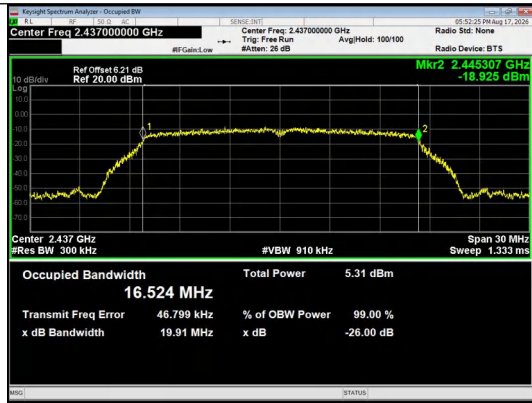
99% Bandwidth

Test Result

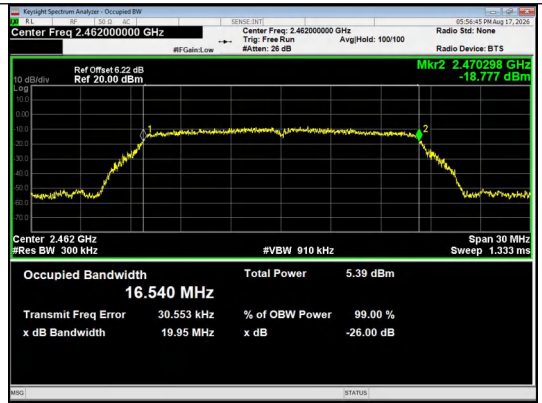
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	1	2412	13.23
	6		2437	13.33
	11		2462	13.36
IEEE 802.11g	1		2412	16.45
	6		2437	16.52
	11		2462	16.54
IEEE 802.11n_20	1		2412	17.58
	6		2437	17.58
	11		2462	17.65
IEEE 802.11n_40	3		2422	35.99
	6		2437	35.98
	9		2452	35.99

Test Graphs

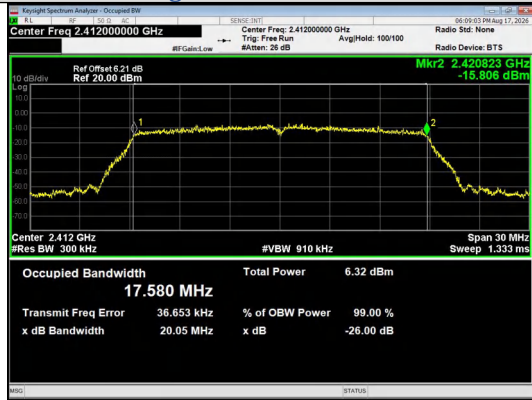




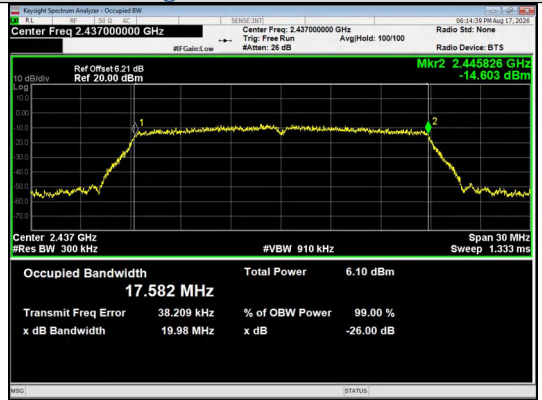
IEEE 802.11g_Channel 6_20MHz_Antenna 1



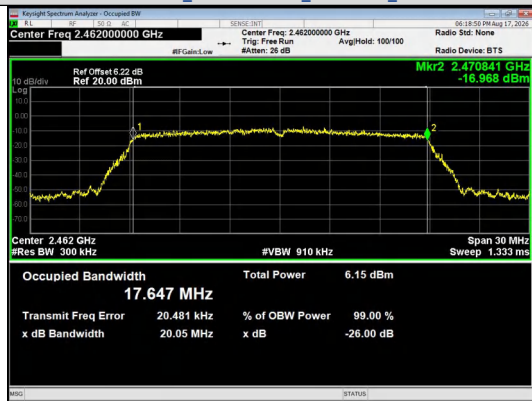
IEEE 802.11g_Channel 11_20MHz_Antenna 1



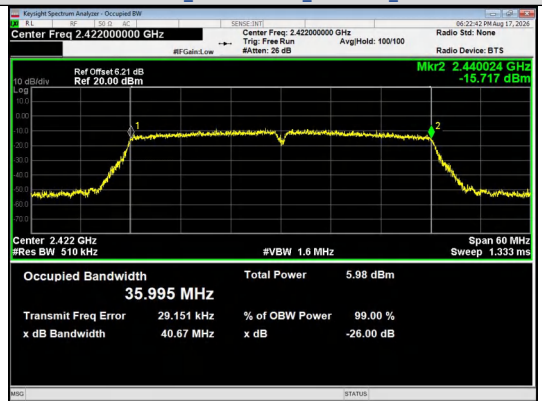
IEEE 802.11g_Channel 11_20MHz_Antenna 1



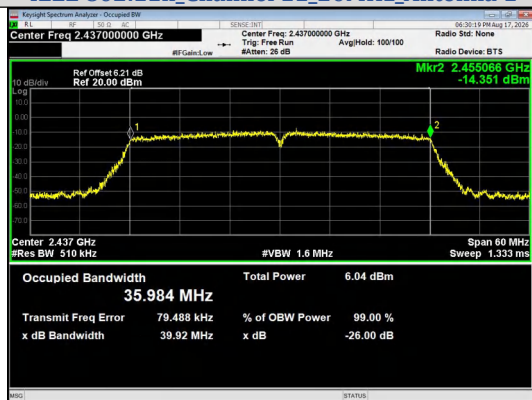
IEEE 802.11n_Channel 1_20MHz_Antenna 1



IEEE 802.11n_Channel 6_20MHz_Antenna 1



IEEE 802.11n_Channel 3_40MHz_Antenna 1



IEEE 802.11n_Channel 11_20MHz_Antenna 1



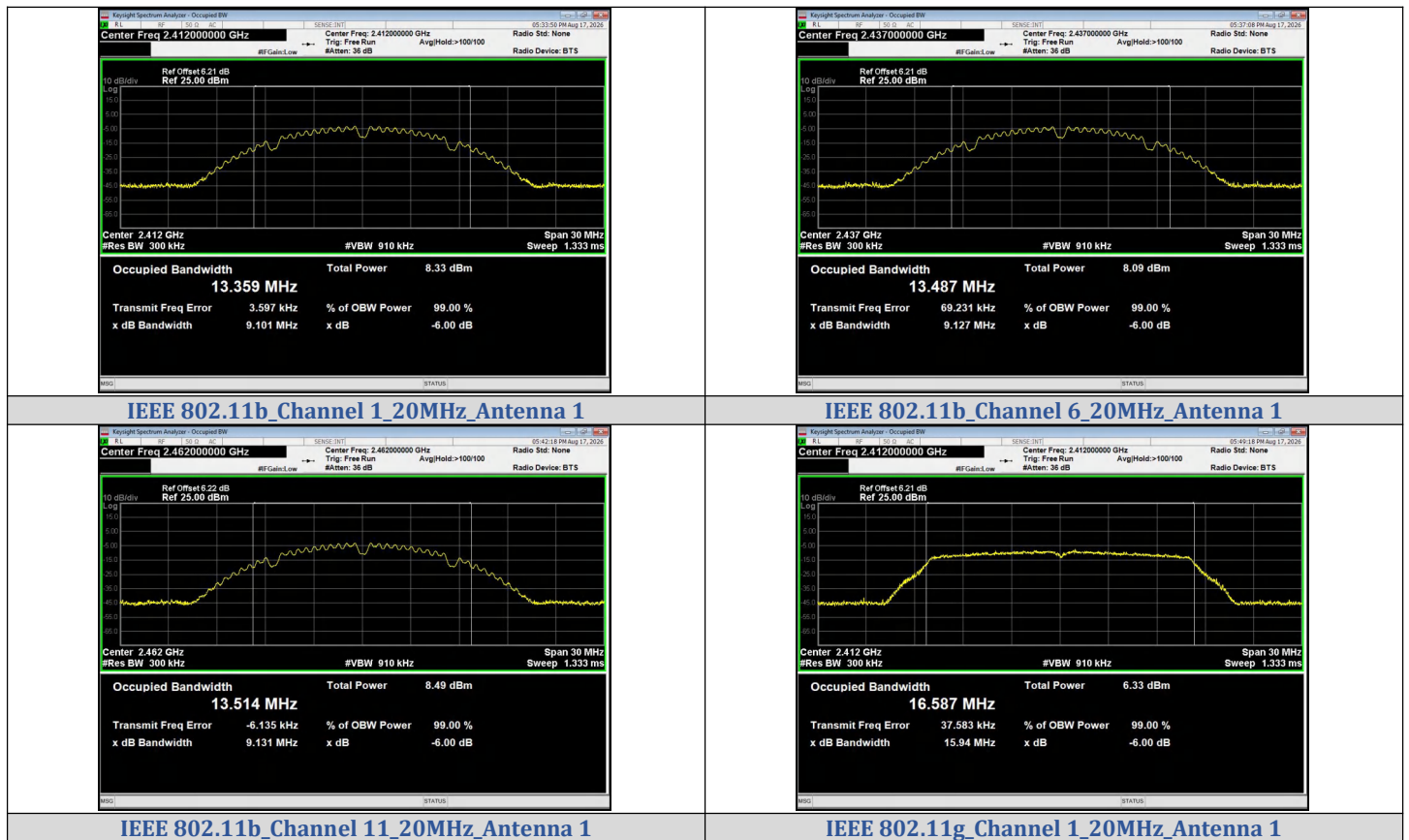
IEEE 802.11n_Channel 9_40MHz_Antenna 1

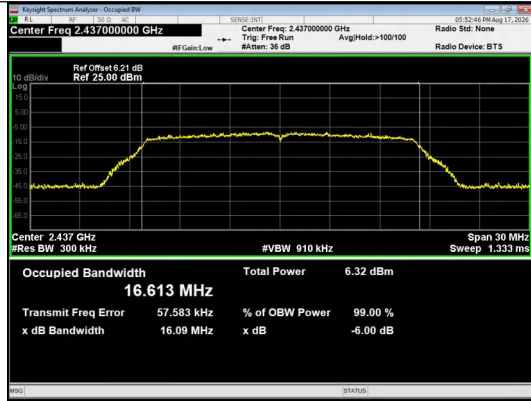
6dB Bandwidth

Test Result

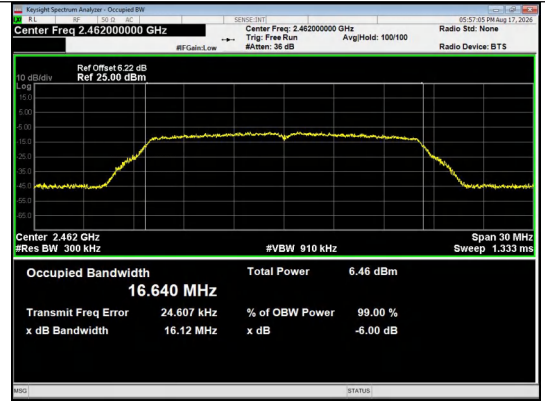
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Verdict
IEEE 802.11b	1	1	2412	9.101	≥0.5	PASS
	6		2437	9.127		PASS
	11		2462	9.131		PASS
IEEE 802.11g	1		2412	15.94		PASS
	6		2437	16.09		PASS
	11		2462	16.12		PASS
IEEE 802.11n_20	1		2412	17.33		PASS
	6		2437	17.21		PASS
	11		2462	17.27		PASS
IEEE 802.11n_40	3		2422	35.81		PASS
	6		2437	35.97		PASS
	9		2452	35.86		PASS

Test Graphs

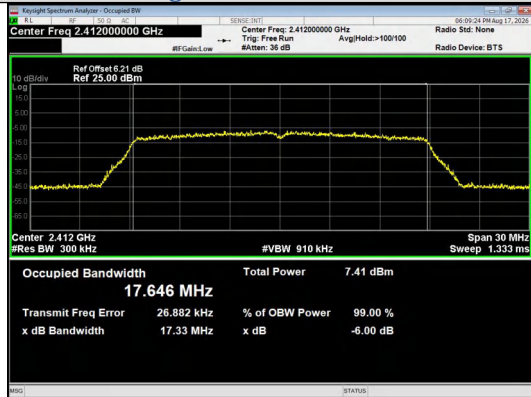




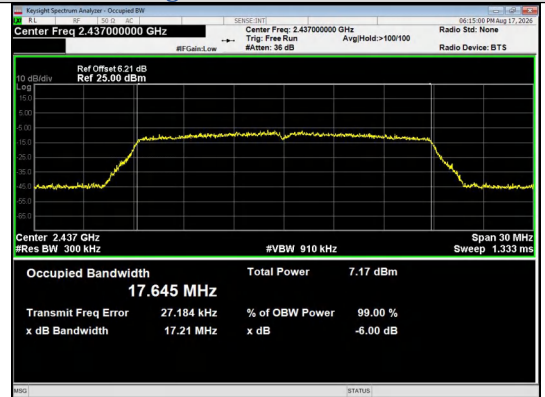
IEEE 802.11g_Channel 6 20MHz_Antenna 1



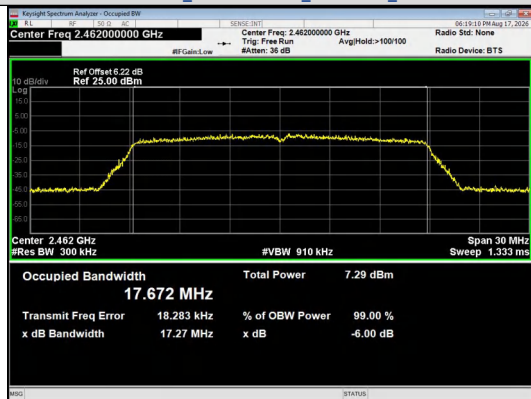
IEEE 802.11g_Channel 11 20MHz_Antenna 1



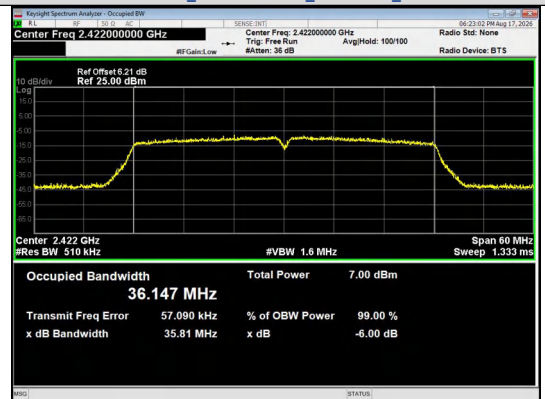
IEEE 802.11n_Channel 1 20MHz_Antenna 1



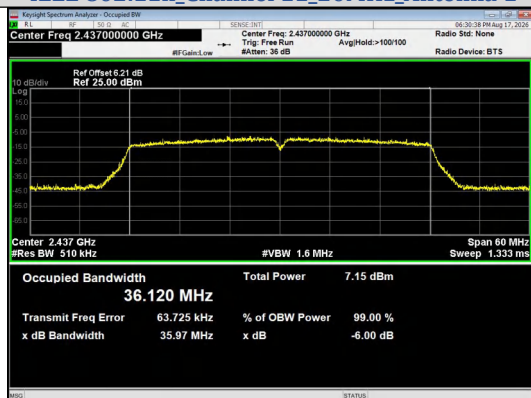
IEEE 802.11n_Channel 6 20MHz_Antenna 1



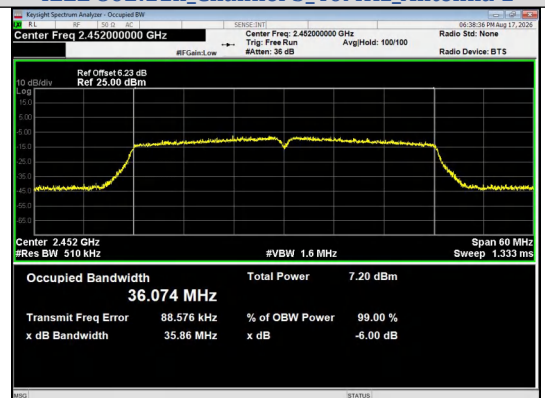
IEEE 802.11n_Channel 11 20MHz_Antenna 1



IEEE 802.11n_Channel 3 40MHz_Antenna 1



IEEE 802.11n_Channel 6 40MHz_Antenna 1



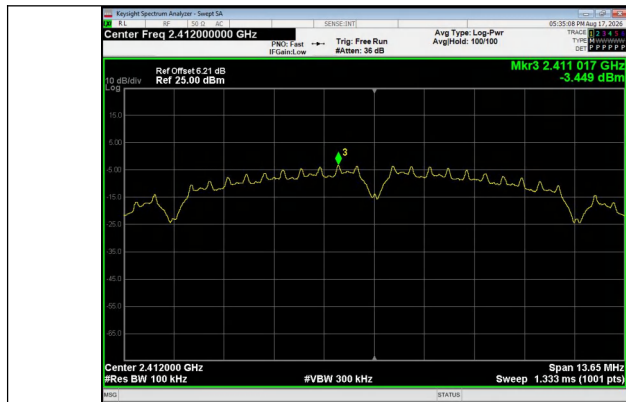
IEEE 802.11n_Channel 9 40MHz_Antenna 1

Conducted Spurious & Band Edge Emission

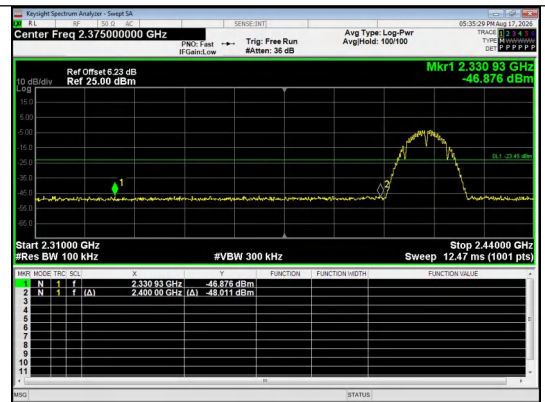
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Verdict	
IEEE 802.11b	1	1	2330.93	-46.876	-23.45	-23.426	PASS	
			2400.00	-48.011	-23.45	-24.561	PASS	
			24692.2	-40.463	-23.45	-17.013	PASS	
	6		24530.6	-40.661	-23.65	-17.011	PASS	
			11	2483.50	-47.713	-23.30	-24.413	PASS
				24535.6	-40.429	-23.30	-17.129	PASS
IEEE 802.11g	1			2332.75	-46.461	-32.91	-13.551	PASS
			2400.00	-48.778	-32.91	-15.868	PASS	
			24973.8	-40.694	-32.91	-7.784	PASS	
	6		24559.9	-40.667	-32.97	-7.697	PASS	
			11	2483.50	-48.416	-32.79	-15.626	PASS
				24754.7	-40.917	-32.79	-8.127	PASS
IEEE 802.11n_20	1			2311.95	-46.365	-30.44	-15.925	PASS
			2400.00	-48.622	-30.44	-18.182	PASS	
			24749.1	-40.217	-30.44	-9.777	PASS	
	6		24837.7	-40.492	-30.42	-10.072	PASS	
			11	2483.50	-47.853	-30.62	-17.233	PASS
				24987.5	-40.669	-30.62	-10.049	PASS
IEEE 802.11n_40	3			2387.09	-46.665	-34.97	-11.695	PASS
			2400.00	-47.682	-34.97	-12.712	PASS	
			24983.1	-41.267	-34.97	-6.297	PASS	
	6		24993.1	-41.020	-35.05	-5.970	PASS	
			9	2483.50	-48.197	-34.24	-13.957	PASS
				24831.5	-40.504	-34.24	-6.264	PASS
Note: input compensation coefficient (dB)= Cable Loss (dB)								

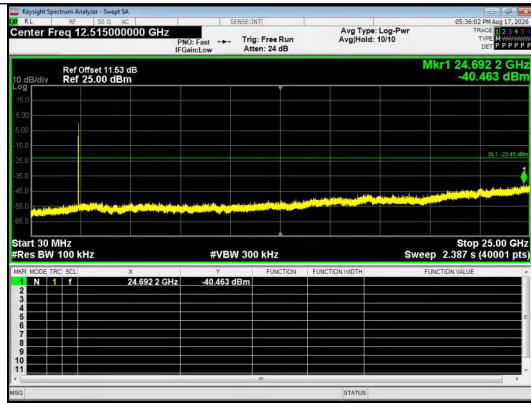
Test Graphs



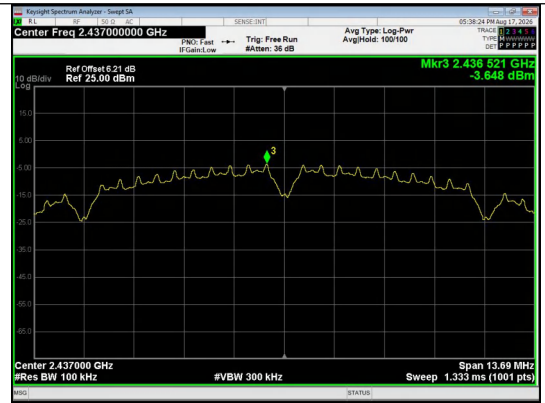
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 1



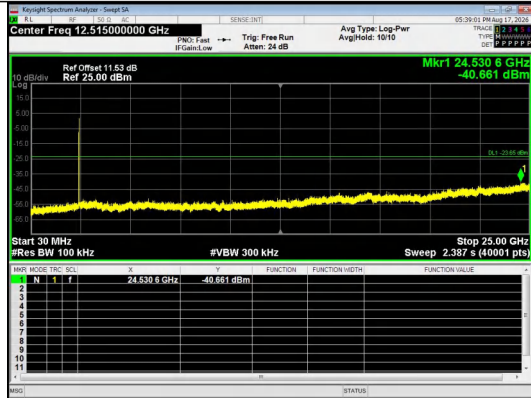
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 1



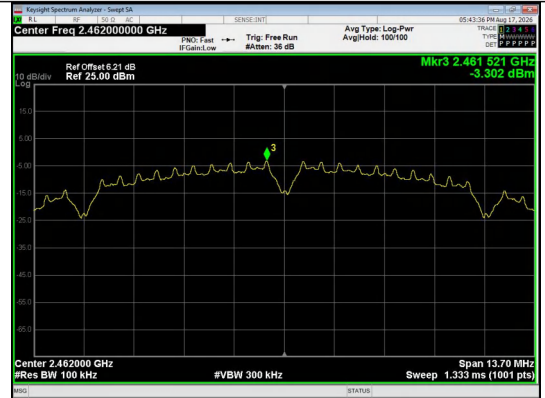
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 1



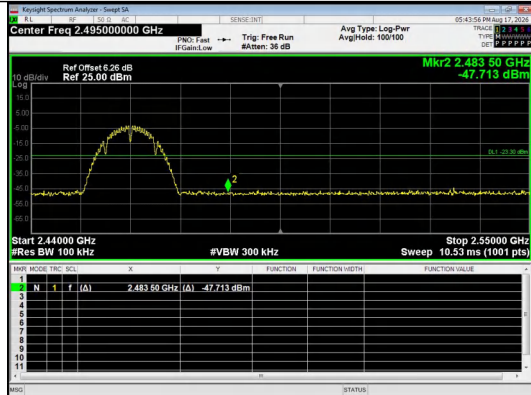
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 1



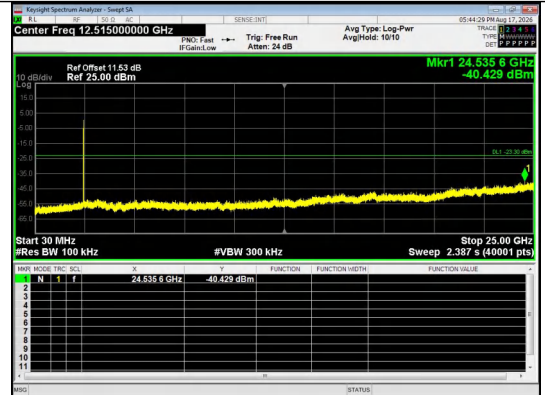
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 1



In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 1



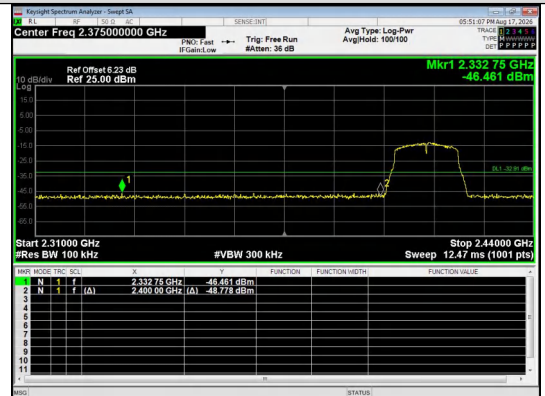
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 1



30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 1

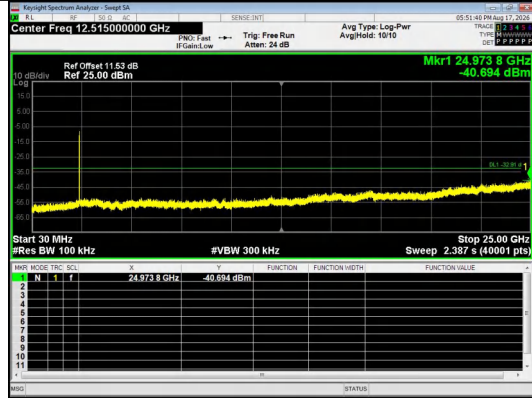


In-Band Reference Level

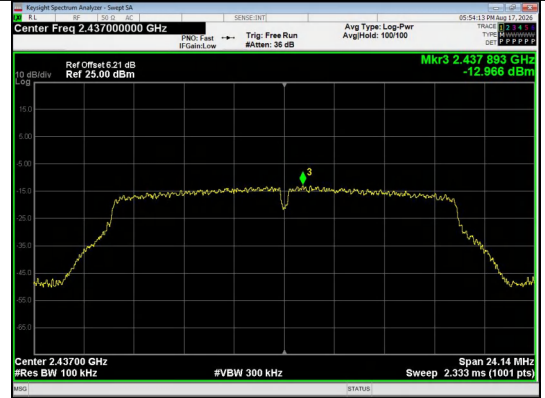
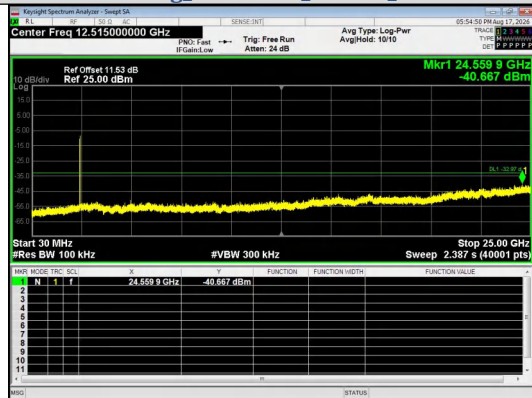
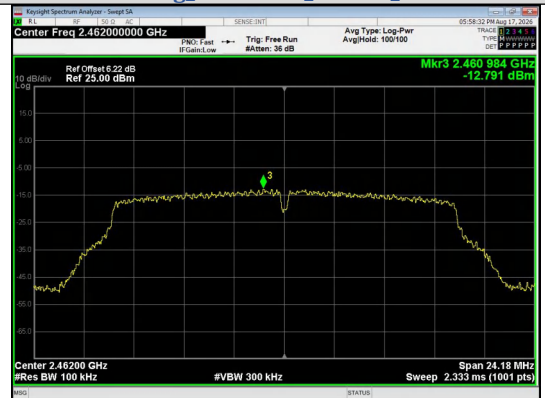
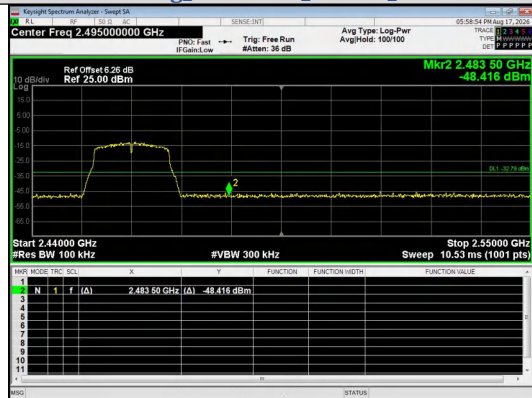
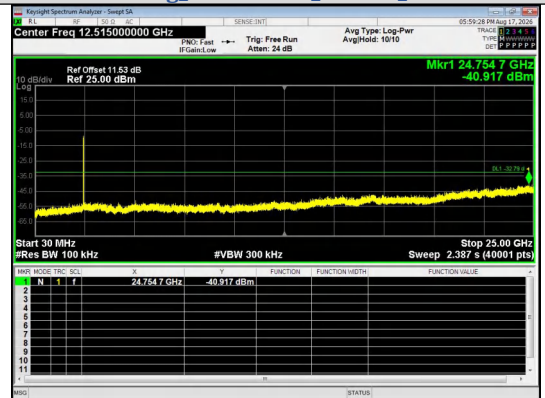
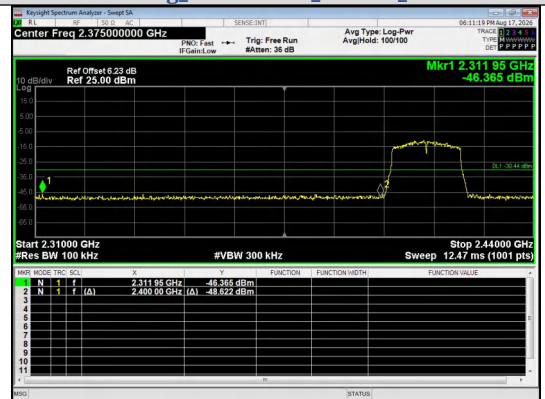


Out Of Band Emission

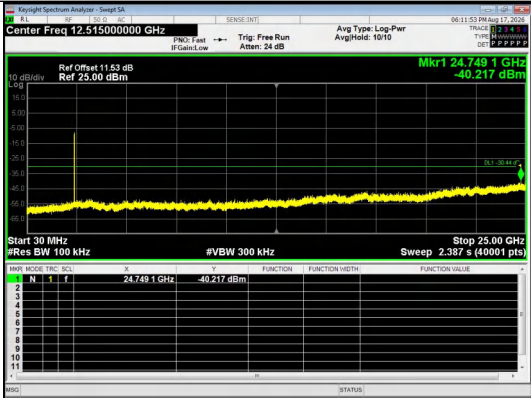
IEEE 802.11g Channel 1_20MHz_Antenna 1



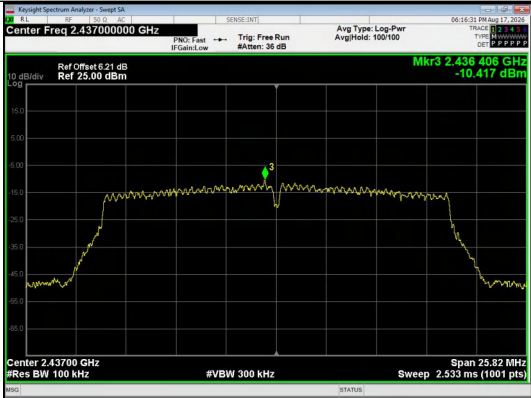
IEEE 802.11g Channel 1_20MHz_Antenna 1

30.0 MHz - 25000.0 MHz
IEEE 802.11g Channel 1_20MHz_Antenna 1In-Band Reference Level
IEEE 802.11g Channel 6_20MHz_Antenna 130.0 MHz - 25000.0 MHz
IEEE 802.11g Channel 6_20MHz_Antenna 1In-Band Reference Level
IEEE 802.11g Channel 11_20MHz_Antenna 1Out Of Band Emission
IEEE 802.11g Channel 11_20MHz_Antenna 130.0 MHz - 25000.0 MHz
IEEE 802.11g Channel 11_20MHz_Antenna 1

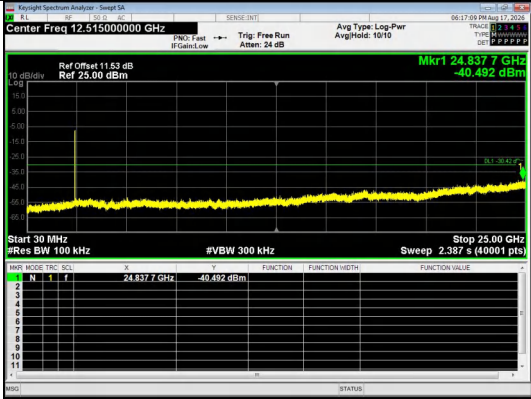
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 1



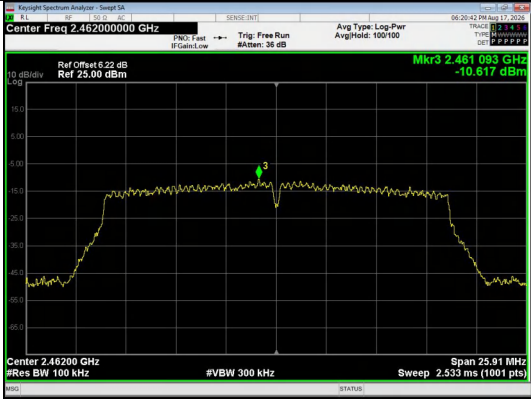
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 1



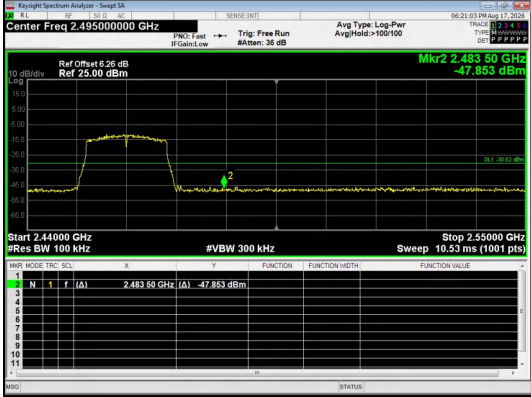
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 1



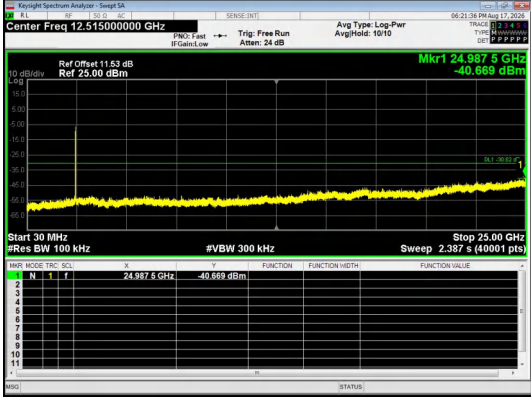
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 1



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 1

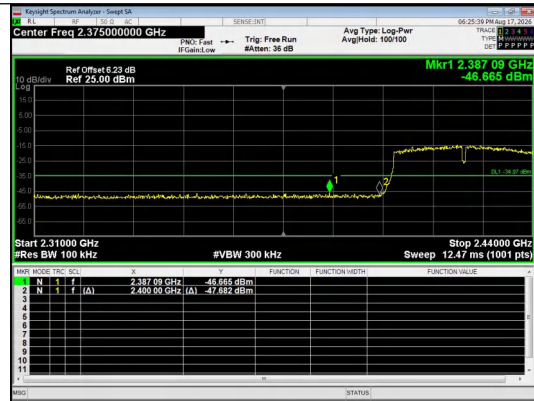
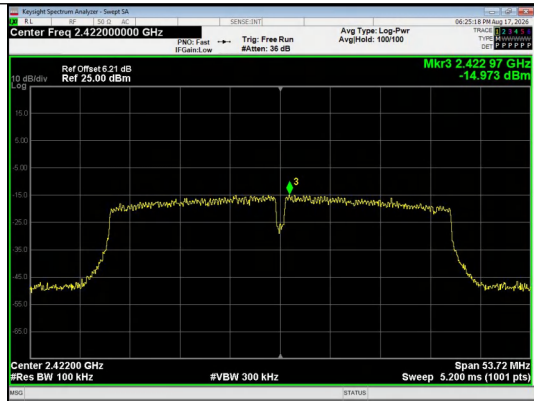


In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 1

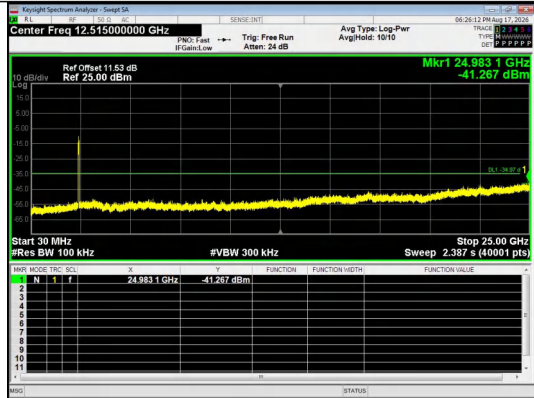


Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 1

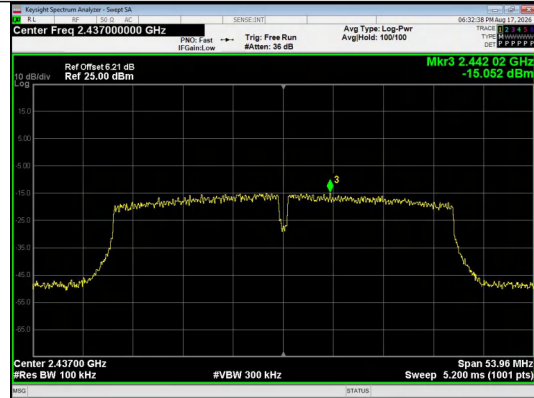
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 1



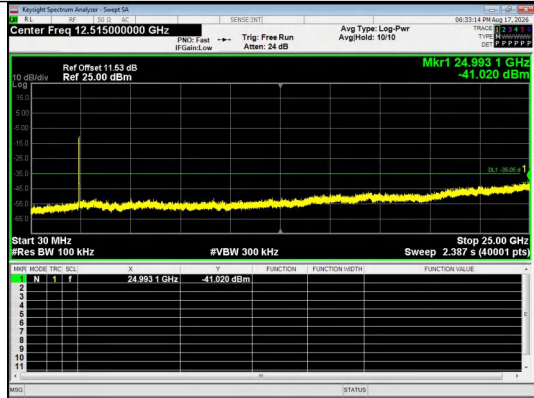
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 1



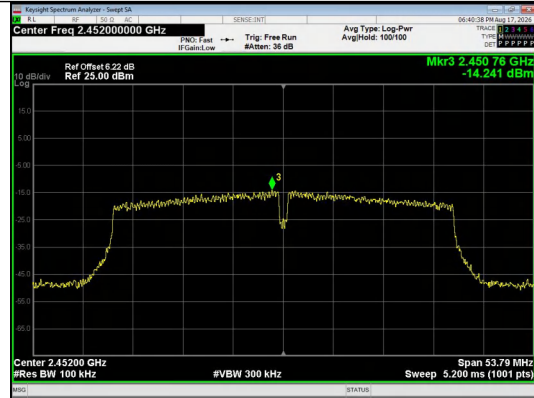
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 1



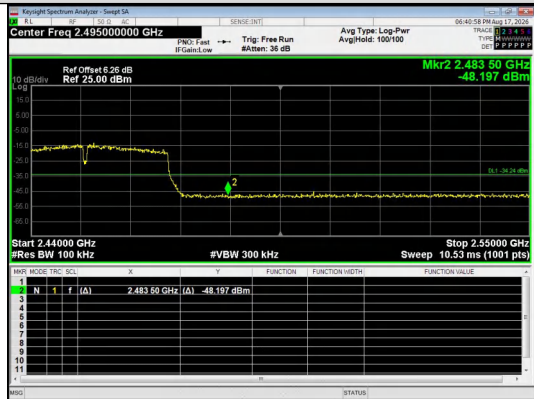
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 1



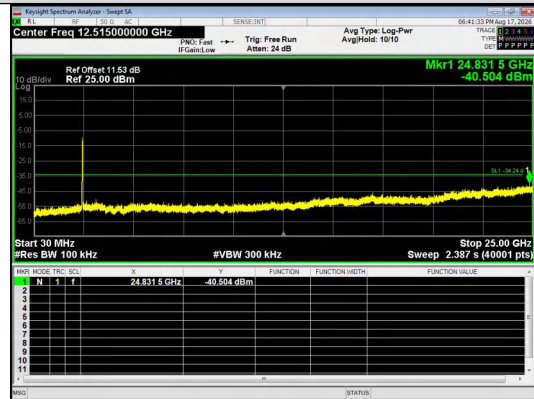
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 1



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 1



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 1



Out Of Band Emission

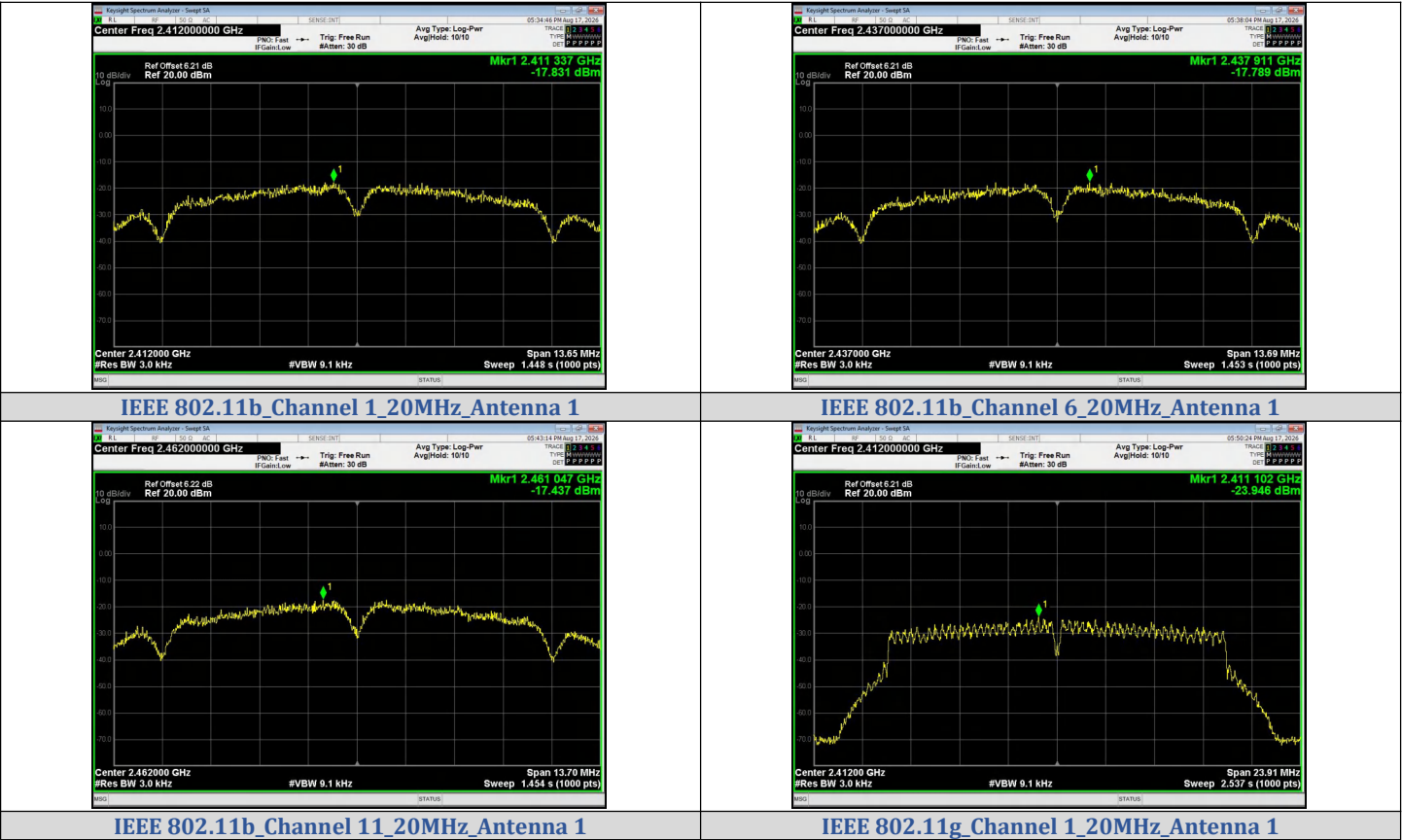
30.0 MHz - 25000.0 MHz

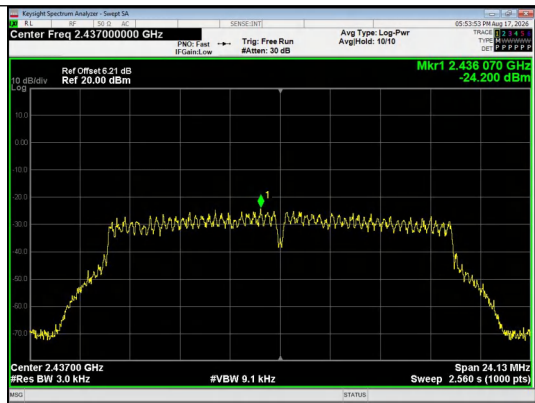
IEEE 802.11n_Channel 9_40MHz_Antenna 1	IEEE 802.11n_Channel 9_40MHz_Antenna 1
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Power Spectral Density
Test Result

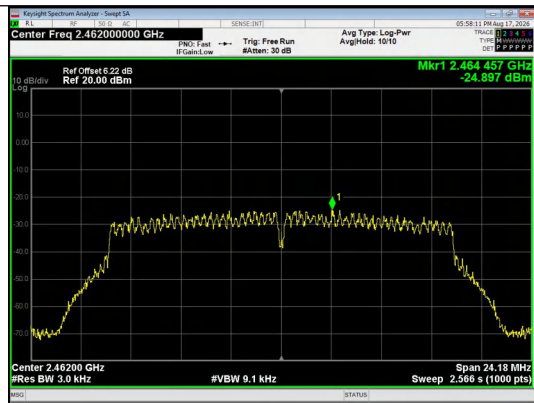
Mode	Channel	PSD (dBm/3kHz) Ant. 1	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
IEEE 802.11b	1	-17.83	-17.83	≤8	PASS
	6	-17.79	-17.79		PASS
	11	-17.44	-17.44		PASS
IEEE 802.11g	1	-23.95	-23.95		PASS
	6	-24.20	-24.2		PASS
	11	-24.90	-24.9		PASS
IEEE 802.11n_20	1	-24.17	-24.17		PASS
	6	-24.29	-24.29		PASS
	11	-24.25	-24.25		PASS
IEEE 802.11n_40	3	-27.32	-27.32		PASS
	6	-26.94	-26.94		PASS
	9	-27.29	-27.29		PASS

Test Graphs

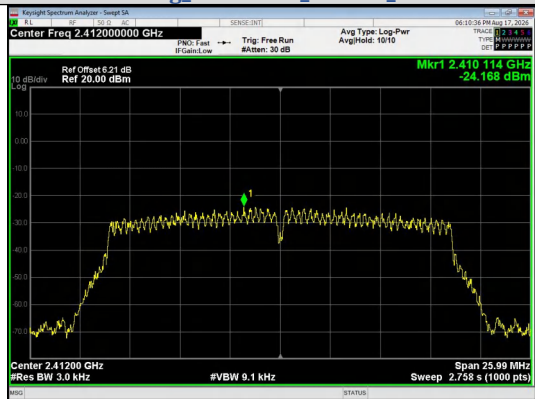




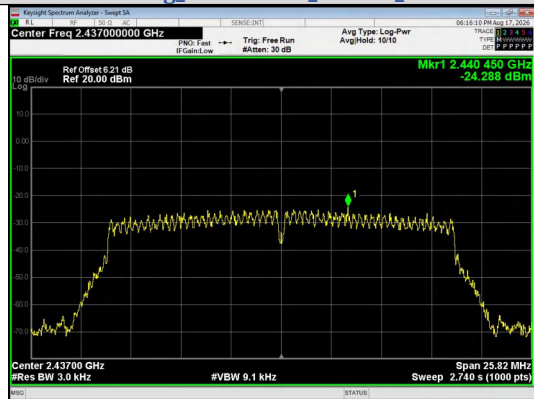
IEEE 802.11g_Channel 6_20MHz_Antenna 1



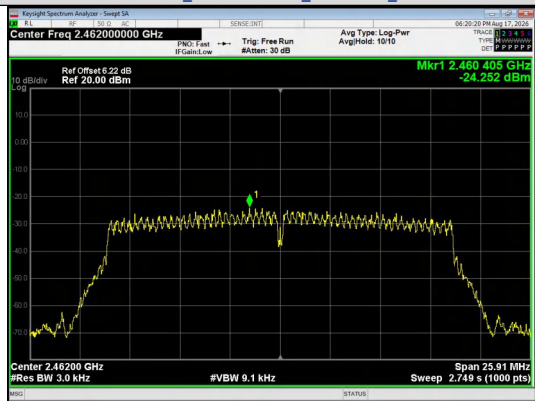
IEEE 802.11g_Channel 11_20MHz_Antenna 1



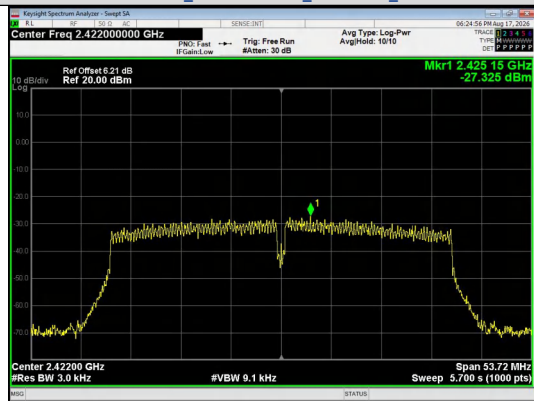
IEEE 802.11n_Channel 1_20MHz_Antenna 1



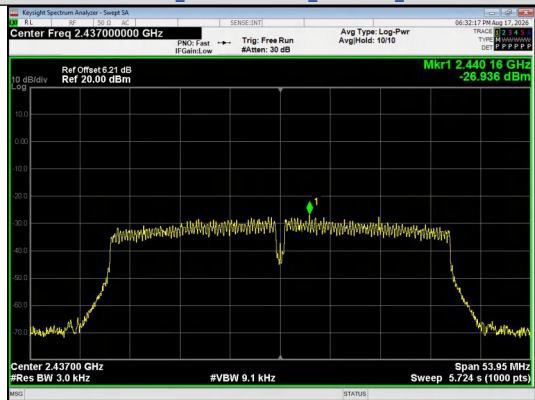
IEEE 802.11n_Channel 6_20MHz_Antenna 1



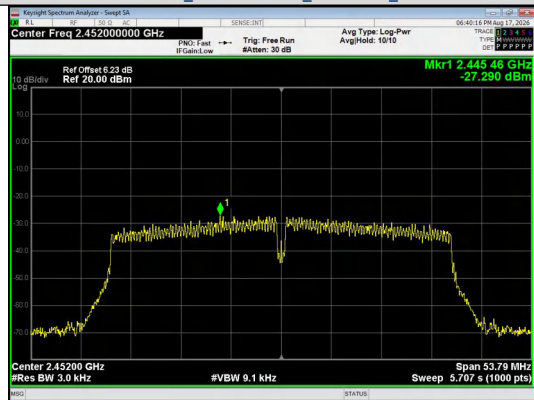
IEEE 802.11n_Channel 11_20MHz_Antenna 1



IEEE 802.11n_Channel 3_40MHz_Antenna 1



IEEE 802.11n_Channel 6_40MHz_Antenna 1



IEEE 802.11n_Channel 9_40MHz_Antenna 1