

Appendix A:Test Results of 2.4G WIFI

Conducted Output Power

Test Result

Conducted Output Power

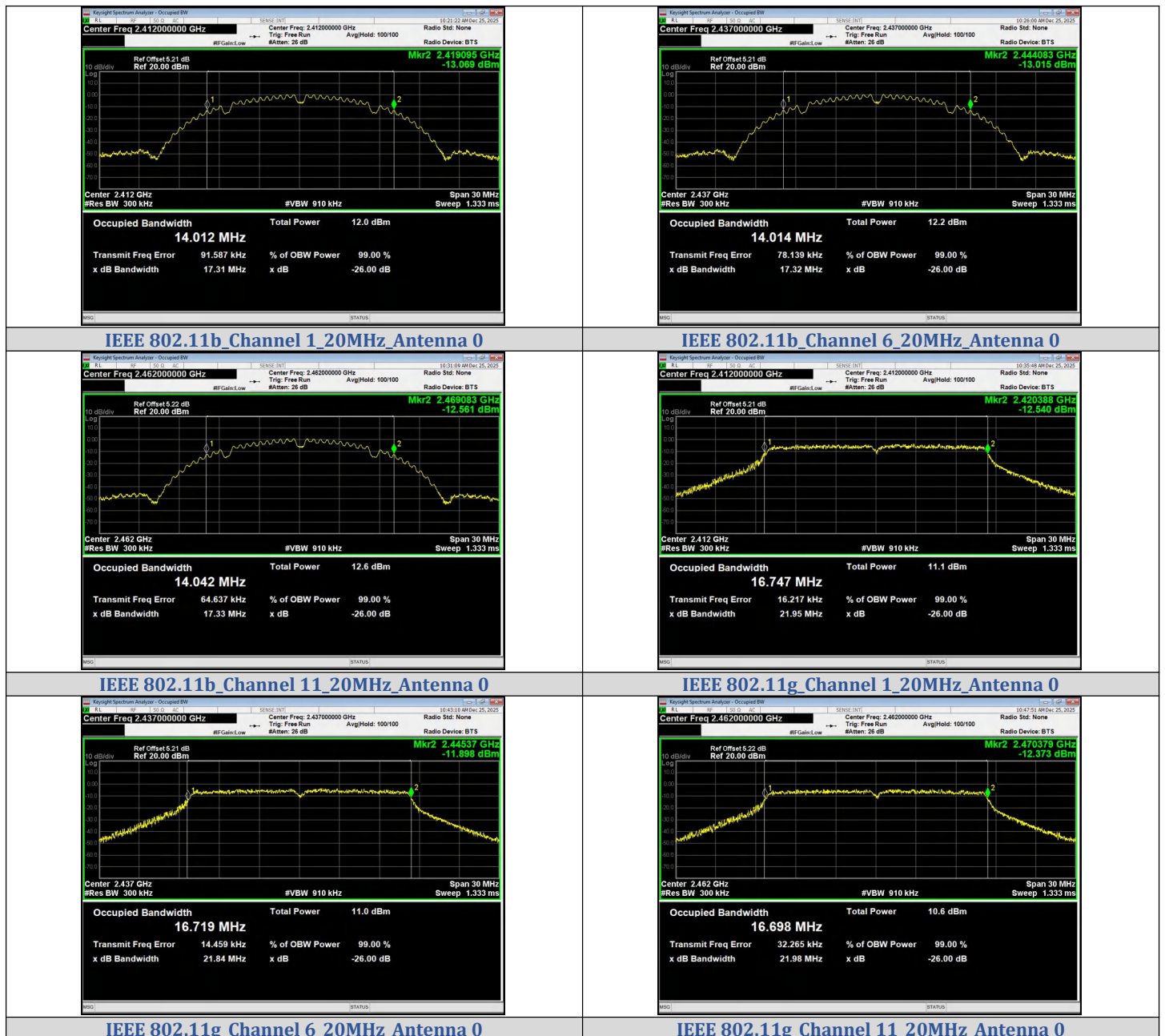
Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	10.91	≤30	PASS
	6	10.99	≤30	PASS
	11	11.52	≤30	PASS
IEEE 802.11g	1	12.21	≤30	PASS
	6	12.05	≤30	PASS
	11	12.00	≤30	PASS
IEEE 802.11n_20	1	11.19	≤30	PASS
	6	12.01	≤30	PASS
	11	11.97	≤30	PASS

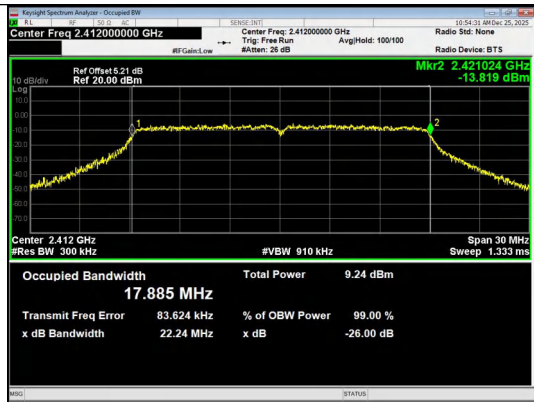
99% Bandwidth

Test Result

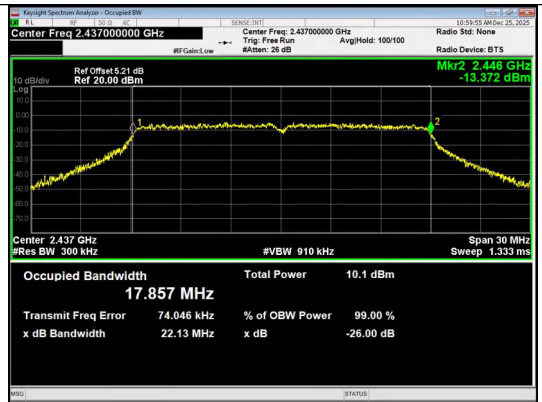
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	14.012
	6		2437	14.014
	11		2462	14.042
IEEE 802.11g	1		2412	16.747
	6		2437	16.719
	11		2462	16.698
IEEE 802.11n_20	1		2412	17.885
	6		2437	17.857
	11		2462	17.872

Test Graphs

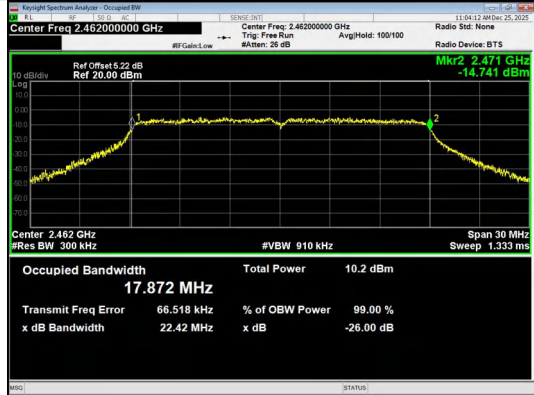




IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



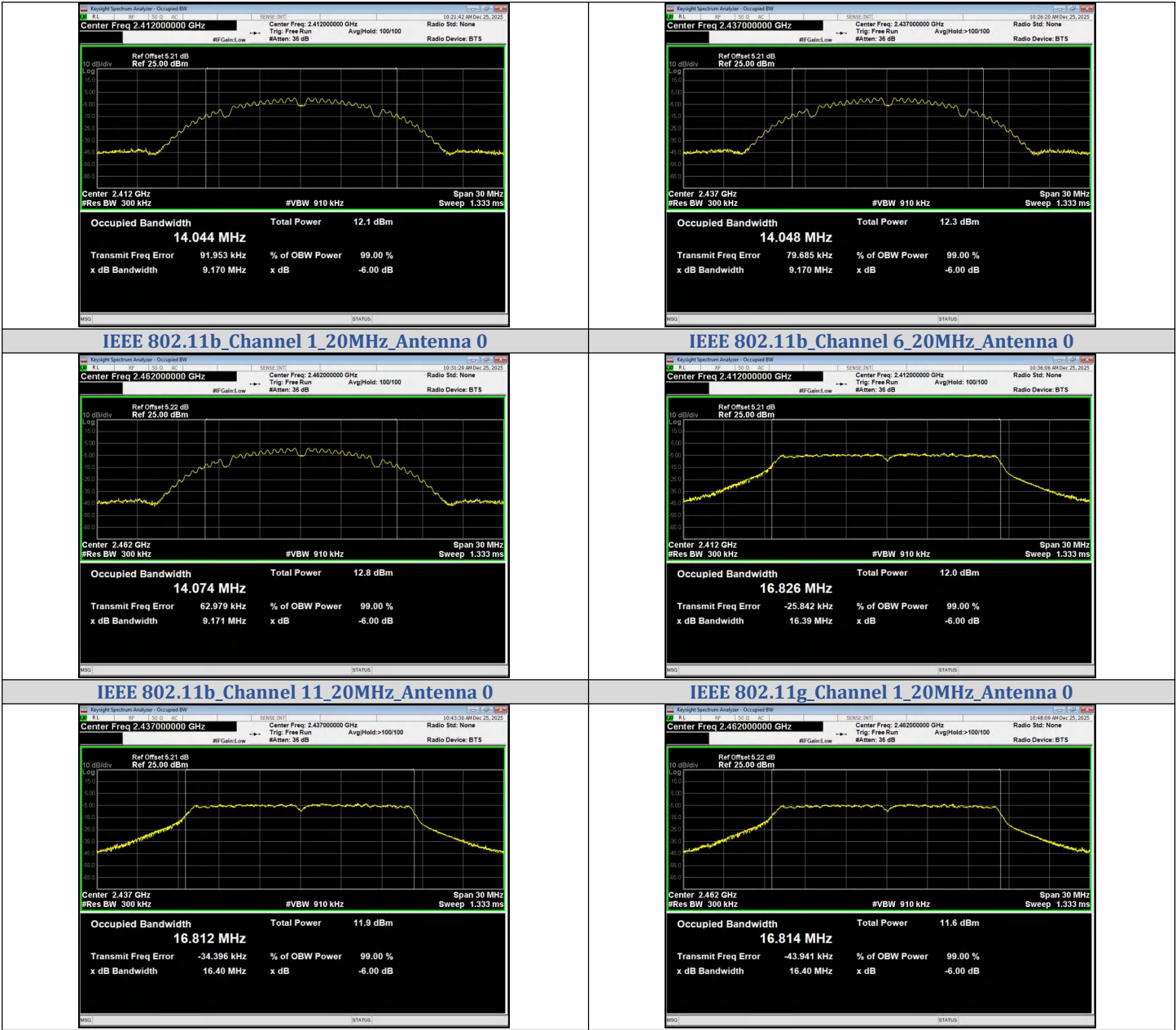
IEEE 802.11n_Channel 11_20MHz_Antenna 0

6dB Bandwidth

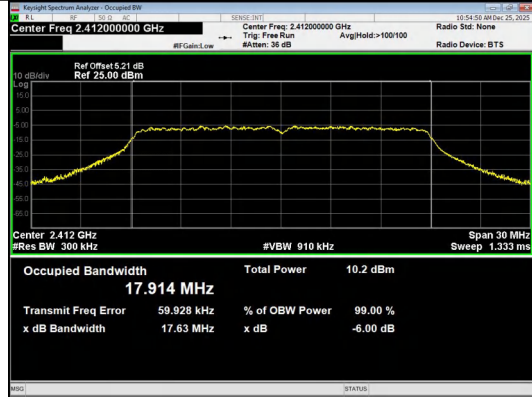
Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	9.170	≥0.5	PASS
	6		2437	9.170		PASS
	11		2462	9.171		PASS
IEEE 802.11g	1		2412	16.39		PASS
	6		2437	16.40		PASS
	11		2462	16.40		PASS
IEEE 802.11n_20	1		2412	17.63		PASS
	6		2437	17.62		PASS
	11		2462	17.60		PASS

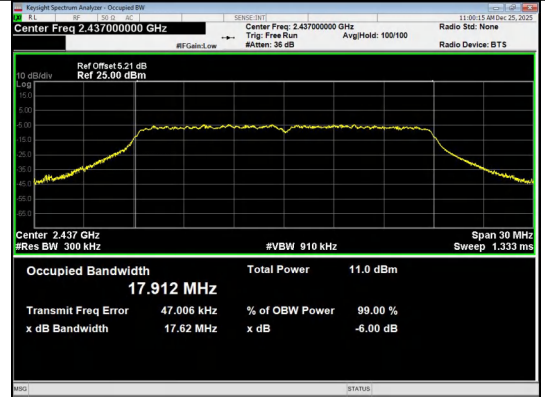
Test Graphs



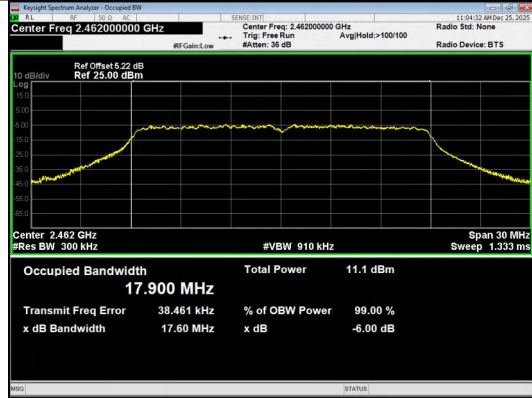
IEEE 802.11g_Channel 6_20MHz_Antenna 0



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

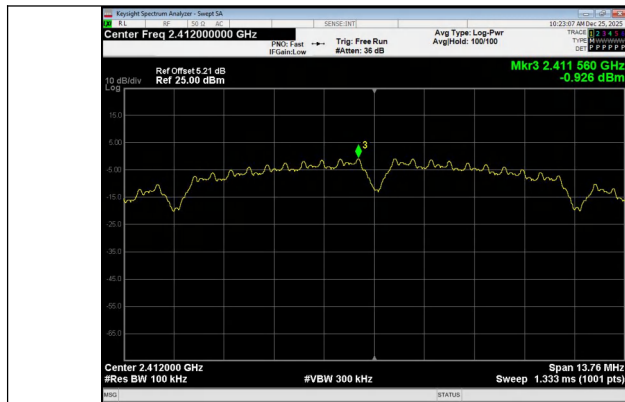
Conducted Spurious & Band Edge Emission

Test Result

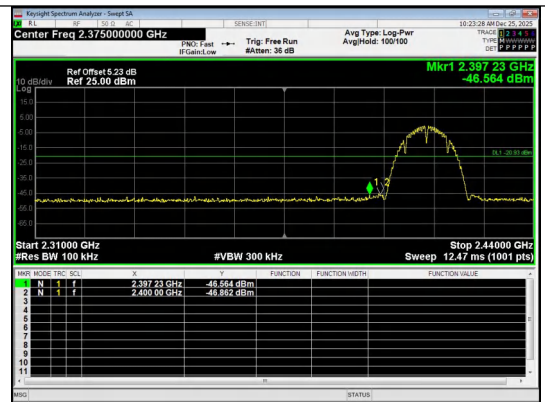
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2397.23	-46.564	-20.93	-25.634	PASS
			2400.00	-46.862	-20.93	-25.932	PASS
			24795.9	-44.762	-20.93	-23.832	PASS
	6		24887.6	-43.584	-20.78	-22.804	PASS
	11		2483.50	-50.116	-20.21	-29.906	PASS
			24982.5	-44.963	-20.21	-24.753	PASS
IEEE 802.11g	1		2400.00	-40.269	-28.84	-11.429	PASS
			25000.0	-44.632	-28.84	-15.792	PASS
			6	24980.0	-44.362	-28.54	-15.822
	11		2483.50	-47.999	-28.89	-19.109	PASS
			24977.5	-44.042	-28.89	-15.152	PASS
			2400.00	-41.482	-29.58	-11.902	PASS
IEEE 802.11n_20	1		24785.3	-44.429	-29.58	-14.849	PASS
			6	24330.2	-44.737	-28.81	-15.927
	11		2483.50	-48.888	-28.81	-20.078	PASS
			24939.4	-45.018	-28.81	-16.208	PASS

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

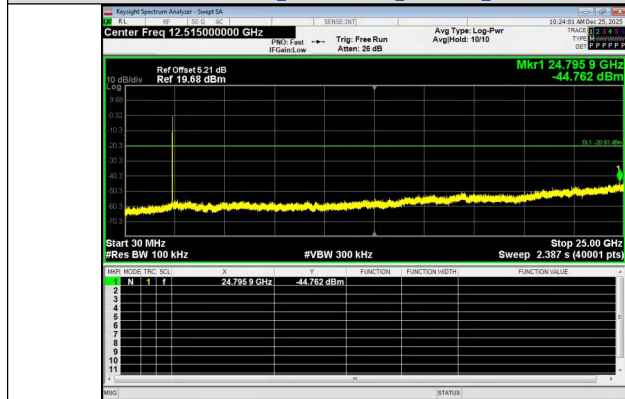
Test Graphs



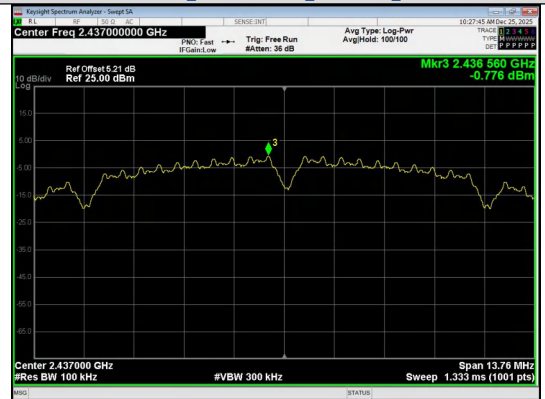
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



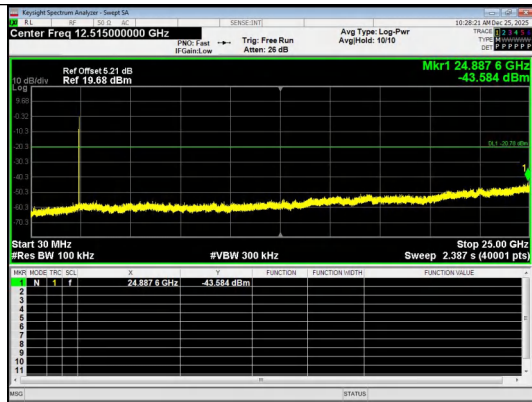
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



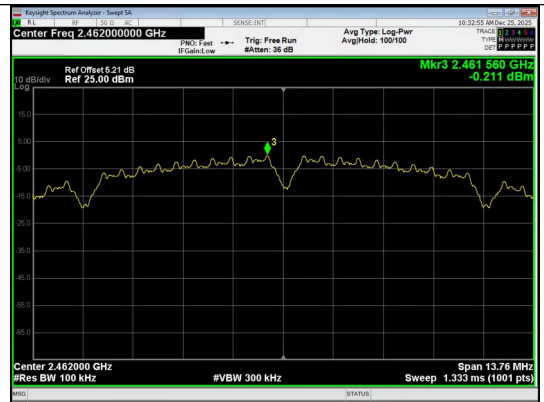
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



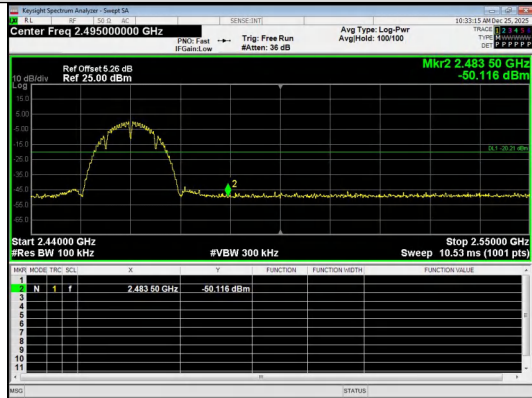
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



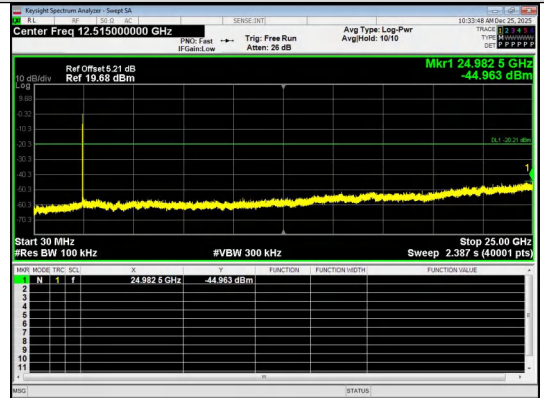
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



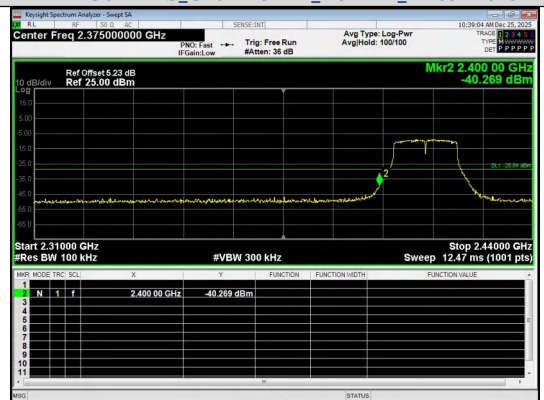
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



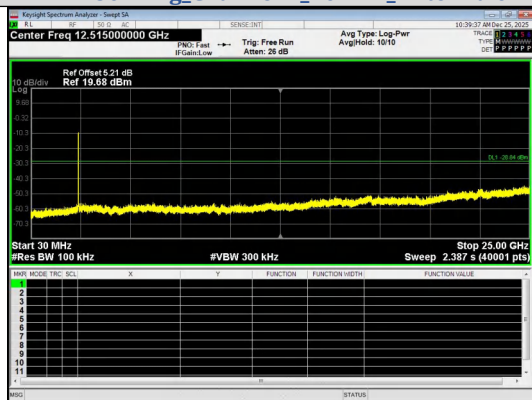
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



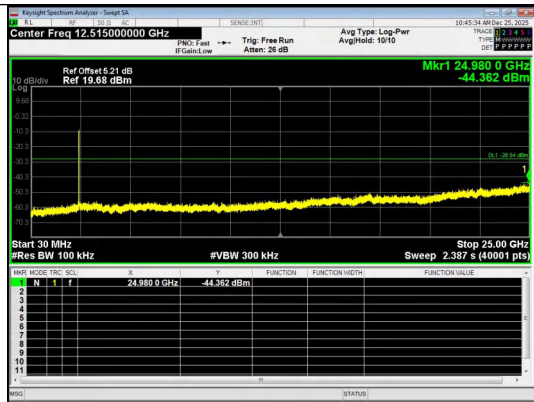
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



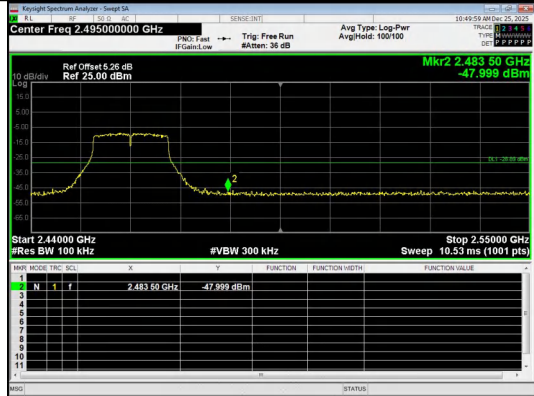
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



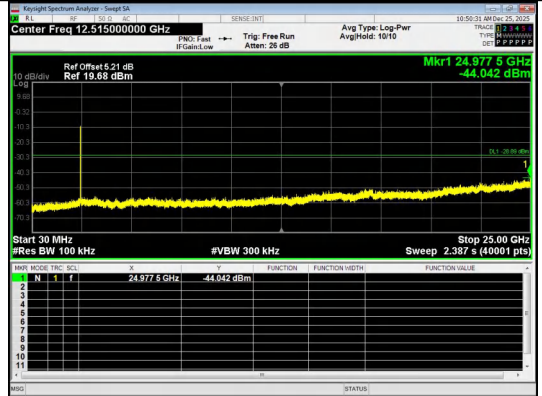
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



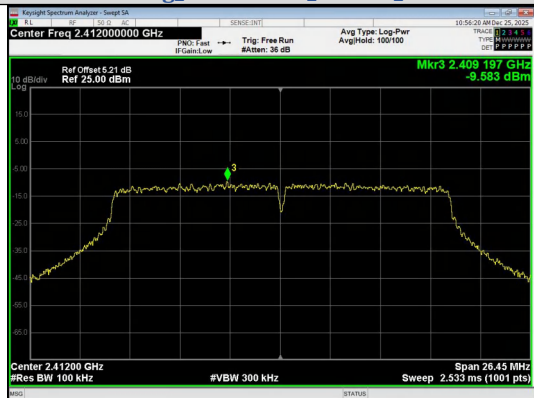
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



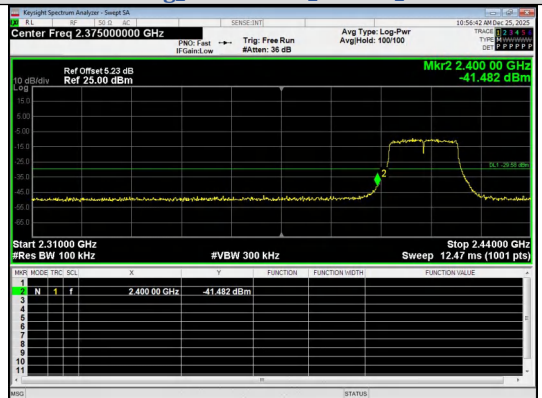
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



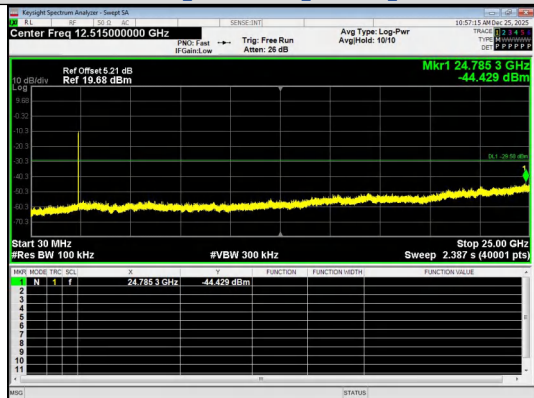
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



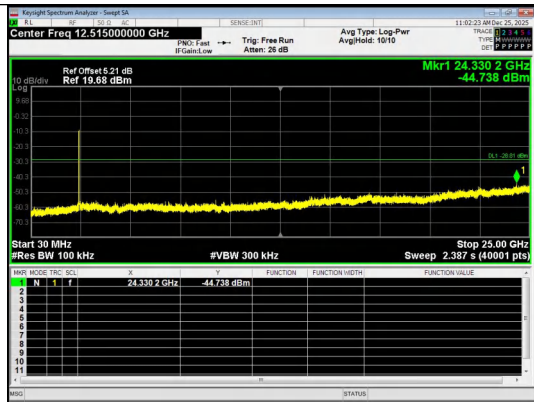
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



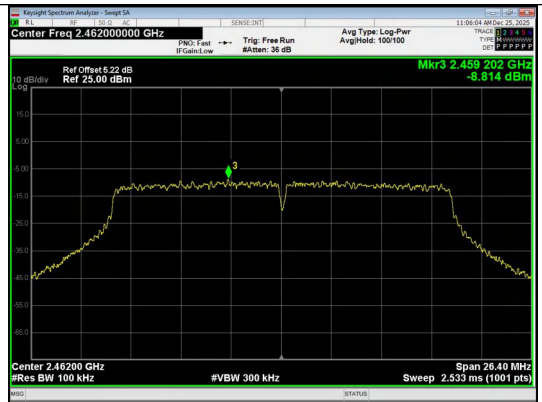
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



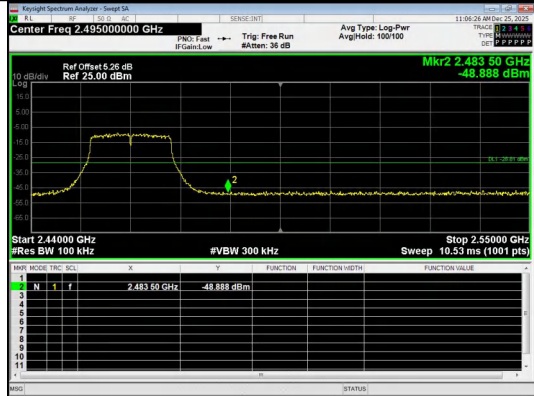
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



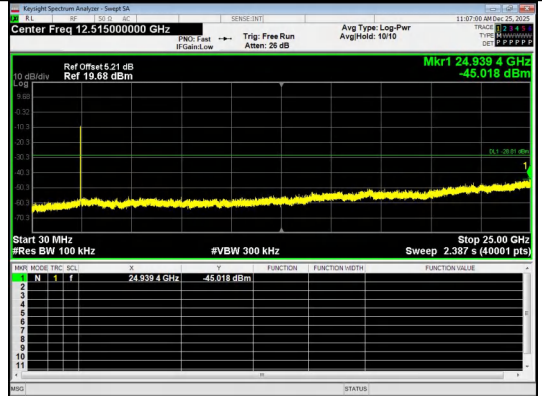
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



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

Duty Cycle

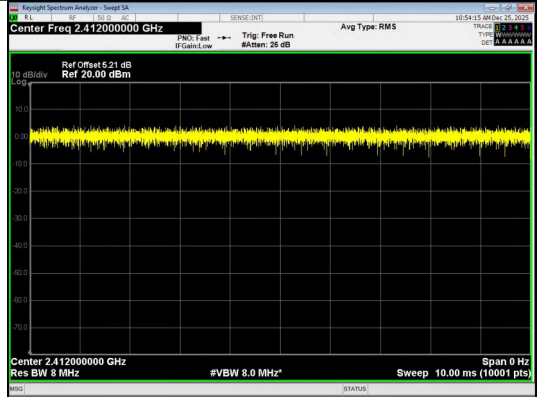
Test Result

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	32.000	32.000	100	1	0.0	0.0312
		6		32.000	32.000	100	1	0.0	0.0312
		11		32.000	32.000	100	1	0.0	0.0312
IEEE 802.11g		1		10.000	10.000	100	1	0.0	0.1000
		6		10.000	10.000	100	1	0.0	0.1000
		11		10.000	10.000	100	1	0.0	0.1000
IEEE 802.11n_20	MCS 0	1		10.000	10.000	100	1	0.0	0.1000
		6		10.000	10.000	100	1	0.0	0.1000
		11		10.000	10.000	100	1	0.0	0.1000

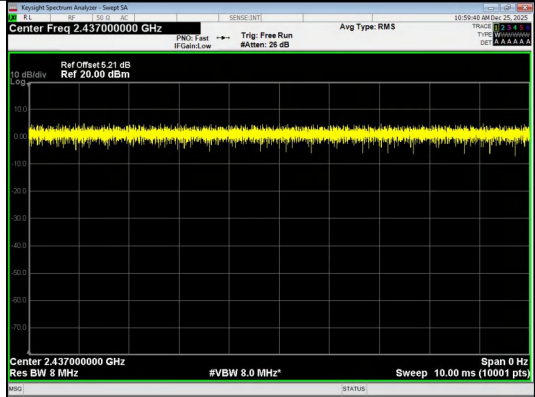
Test Graphs



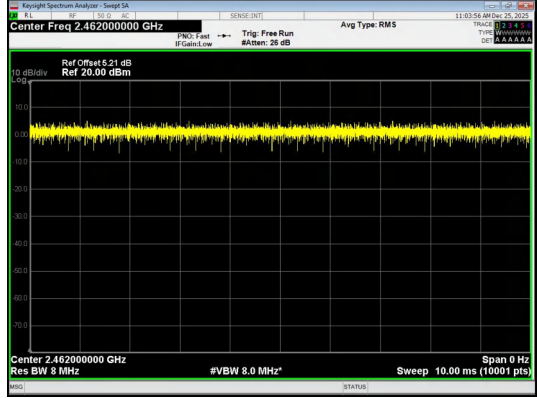
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1



IEEE 802.11n_20MHz_Channel 6

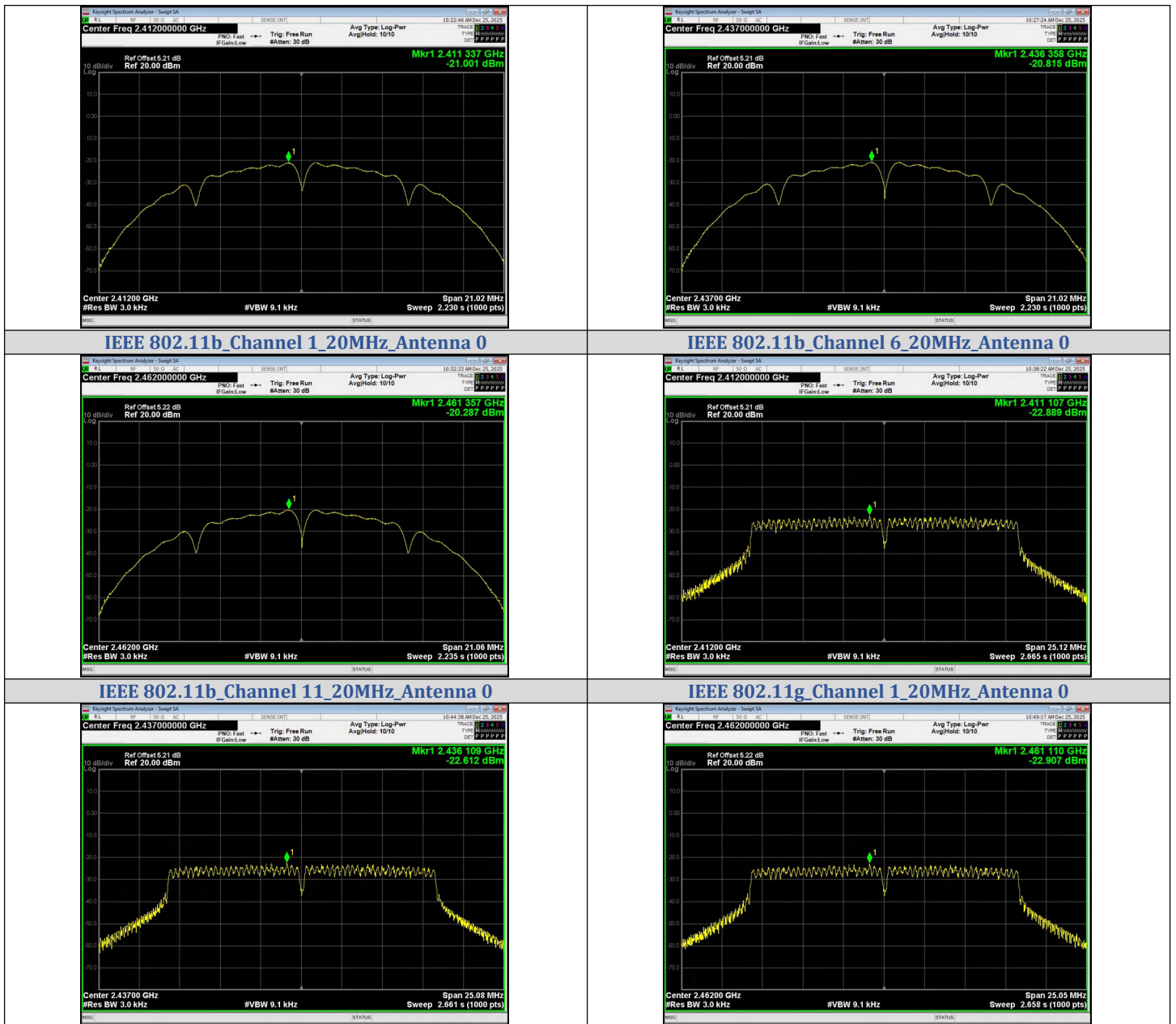
IEEE 802.11n_20MHz_Channel 11

Power Spectral Density

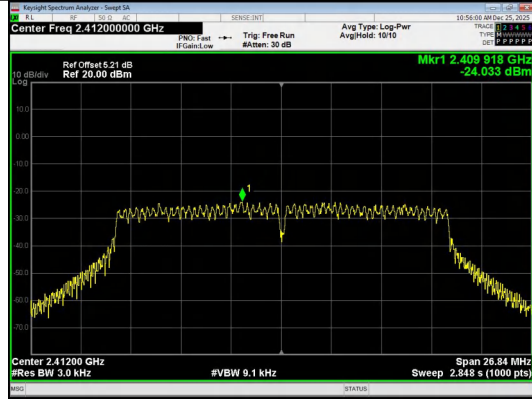
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-21.000	≤8	PASS
	6	-20.820		PASS
	11	-20.290		PASS
IEEE 802.11g	1	-22.890		PASS
	6	-22.610		PASS
	11	-22.910		PASS
IEEE 802.11n_20	1	-24.030		PASS
	6	-23.260		PASS
	11	-23.190		PASS

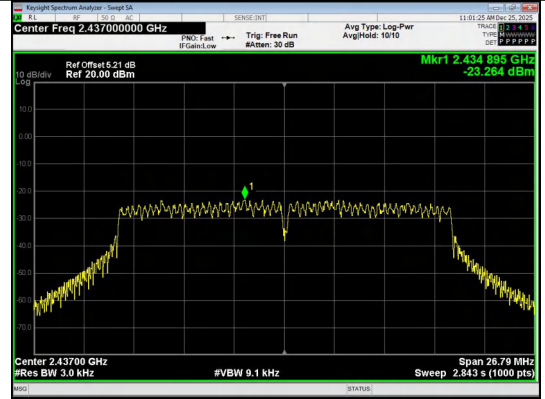
Test Graphs



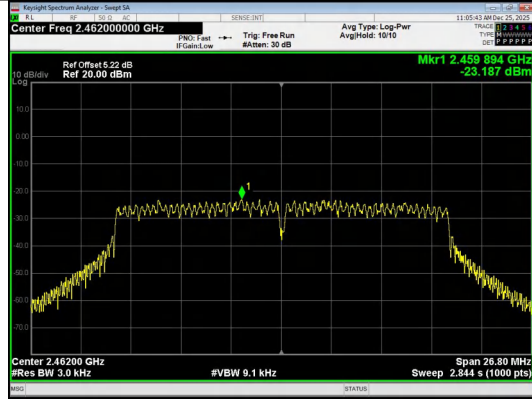
IEEE 802.11g_Channel 6_20MHz_Antenna 0



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