

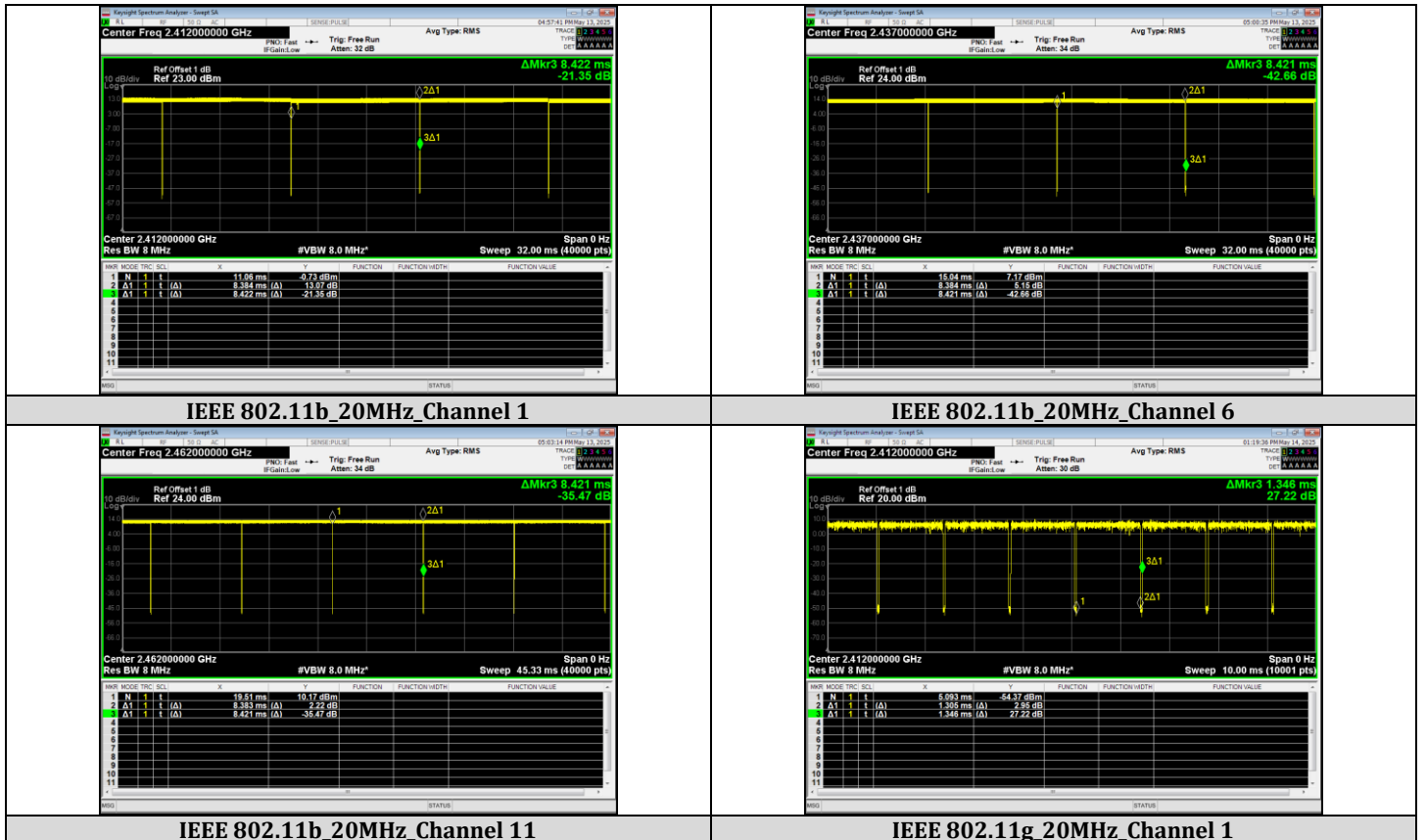
Appendix RF test data for WIFI2.4G

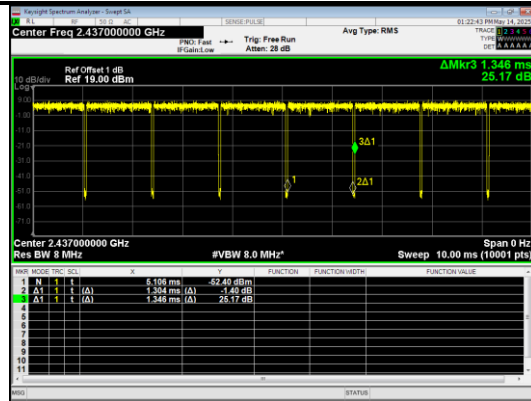
Duty Cycle

Test Result

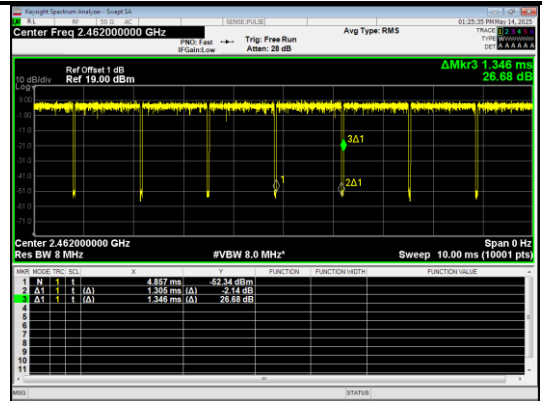
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	1	8.384	8.422	99.55	0.9955	0.0196	0.1193
		6		8.384	8.421	99.56	0.9956	0.0192	0.1193
		11		8.383	8.421	99.56	0.9956	0.0192	0.1193
IEEE 802.11g		1		1.305	1.346	96.95	0.9695	0.1345	0.7663
		6		1.304	1.346	96.88	0.9688	0.1377	0.7669
		11		1.305	1.346	96.95	0.9695	0.1345	0.7663
IEEE 802.11n_20	MCS 0	1		1.292	1.333	96.88	0.9688	0.1377	0.7740
		6		1.292	1.334	96.85	0.9685	0.139	0.7740
		11		1.291	1.333	96.82	0.9682	0.1403	0.7746
IEEE 802.11n_40		3		0.639	0.681	93.89	0.9389	0.2738	1.5649
		6		0.639	0.681	93.83	0.9383	0.2766	1.5649
		9		0.639	0.680	93.89	0.9389	0.2738	1.5649

Test Graphs

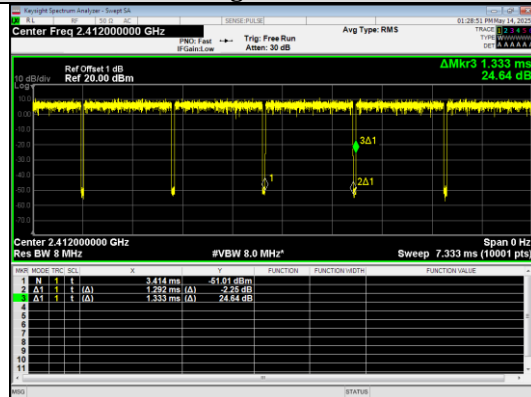




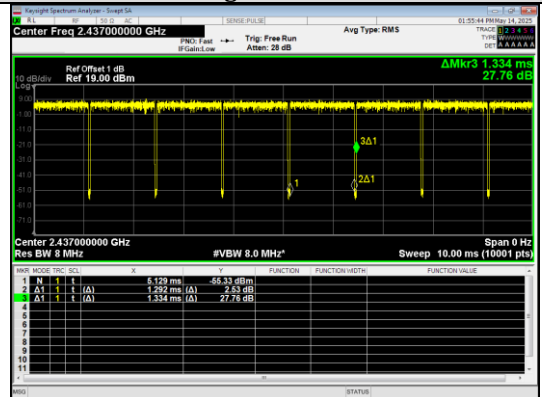
IEEE 802.11g 20MHz_Channel 6



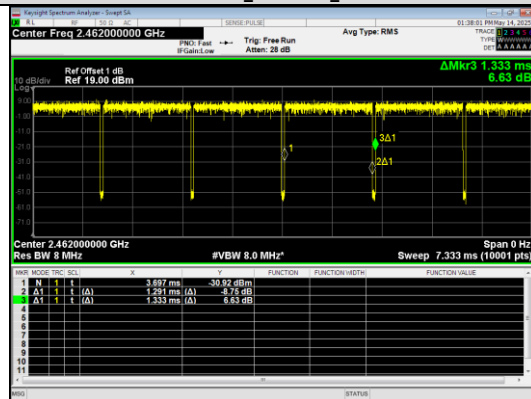
IEEE 802.11g 20MHz_Channel 11



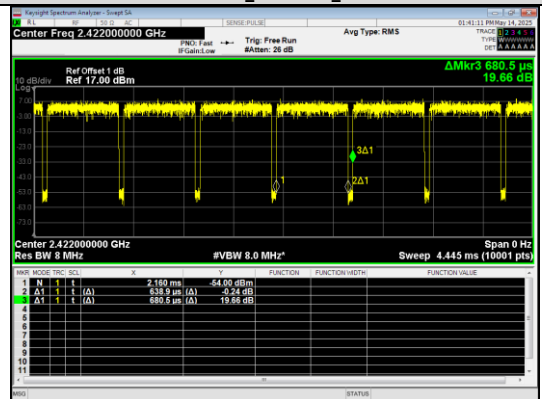
IEEE 802.11n 20MHz_Channel 1



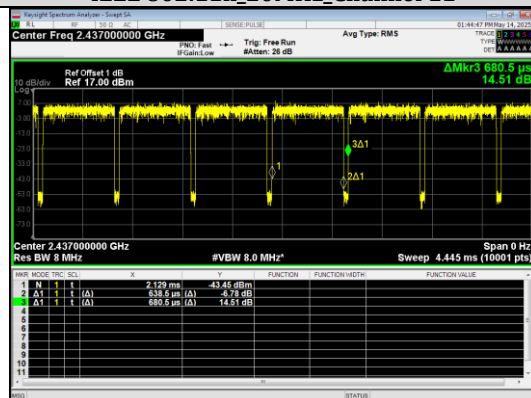
IEEE 802.11n 20MHz_Channel 6



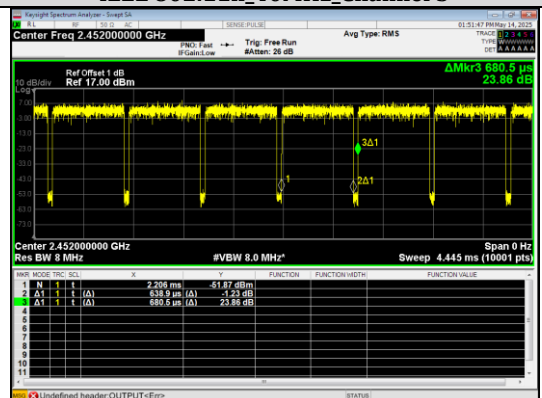
IEEE 802.11n 20MHz_Channel 11



IEEE 802.11n 40MHz_Channel 3



IEEE 802.11n 40MHz_Channel 6



IEEE 802.11n 40MHz_Channel 9

Conducted Output Power

Test Result

Conducted Output Power

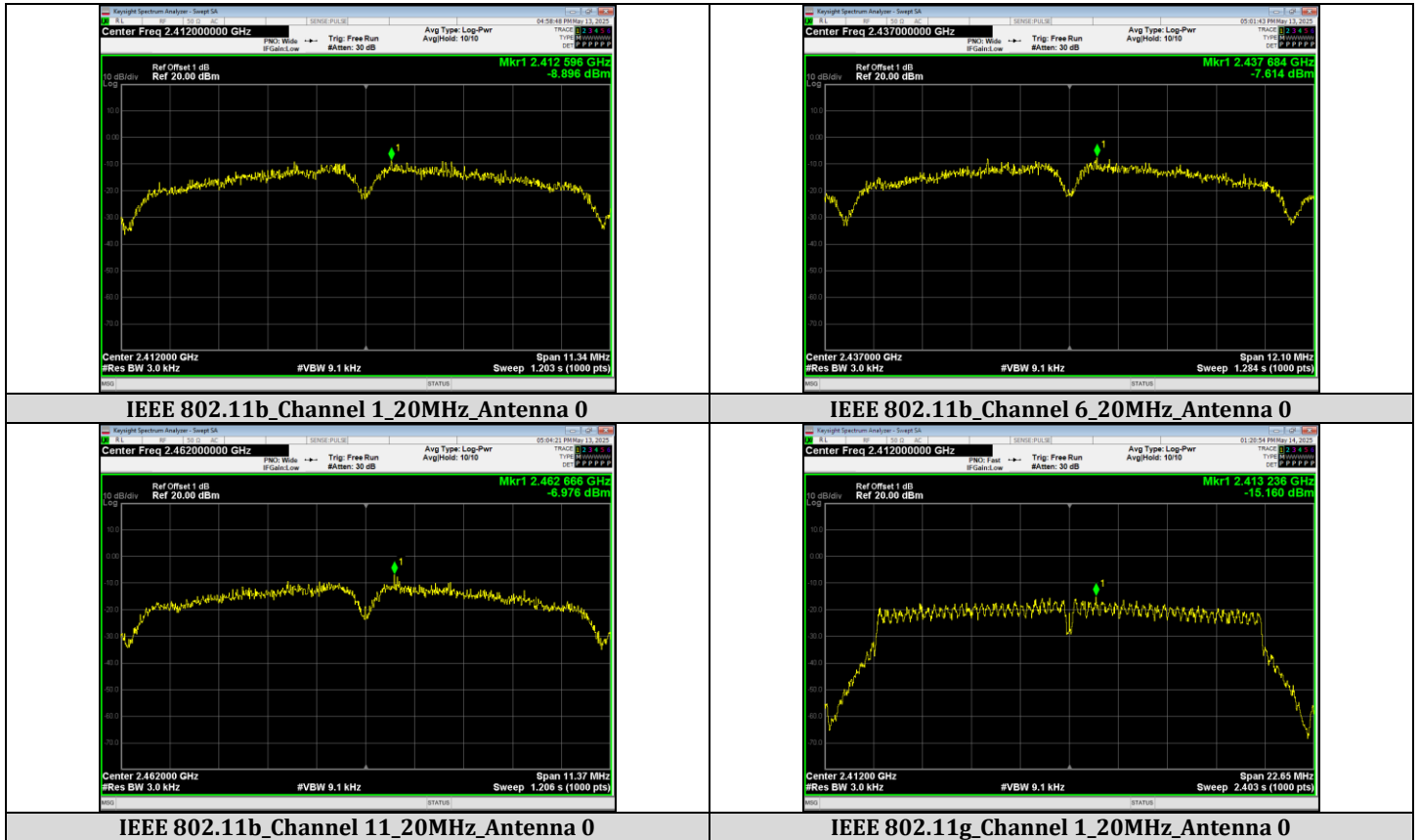
Mode	Channel	Ant. 0 (dBm)	Ant. 1 (dBm)	Ant. 2 (dBm)	Ant. 3 (dBm)	Total (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	15.25				N/A	≤30	PASS
	6	16.28				N/A	≤30	PASS
	11	15.37				N/A	≤30	PASS
IEEE 802.11g	1	15.89				N/A	≤30	PASS
	6	15.00				N/A	≤30	PASS
	11	15.11				N/A	≤30	PASS
IEEE 802.11n_20	1	15.88				N/A	≤30	PASS
	6	14.99				N/A	≤30	PASS
	11	14.94				N/A	≤30	PASS
IEEE 802.11n_40	3	16.06				N/A	≤30	PASS
	6	15.63				N/A	≤30	PASS
	9	15.51				N/A	≤30	PASS

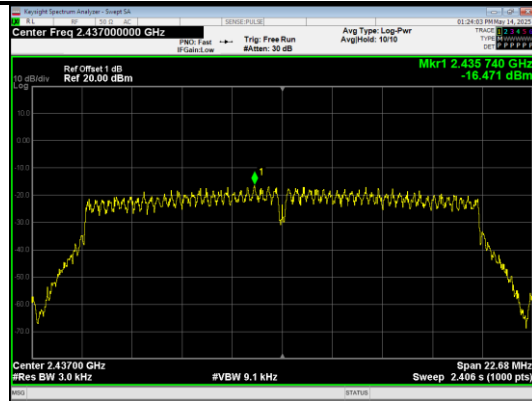
Power Spectral Density

Test Result

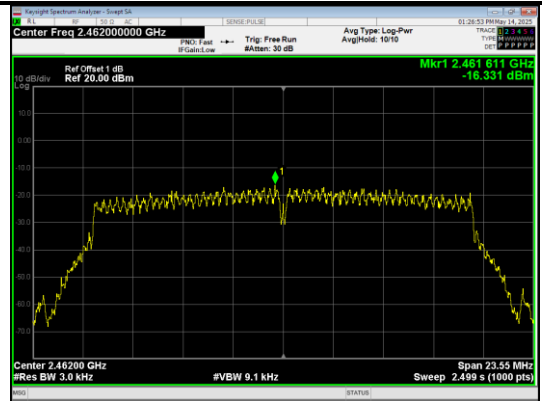
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-8.896	≤8	PASS
	6	-7.614		PASS
	11	-6.976		PASS
IEEE 802.11g	1	-15.160		PASS
	6	-16.471		PASS
	11	-16.331		PASS
IEEE 802.11n_20	1	-15.215		PASS
	6	-16.572		PASS
	11	-16.078		PASS
IEEE 802.11n_40	3	-17.745		PASS
	6	-17.734		PASS
	9	-19.159		PASS

Test Graphs

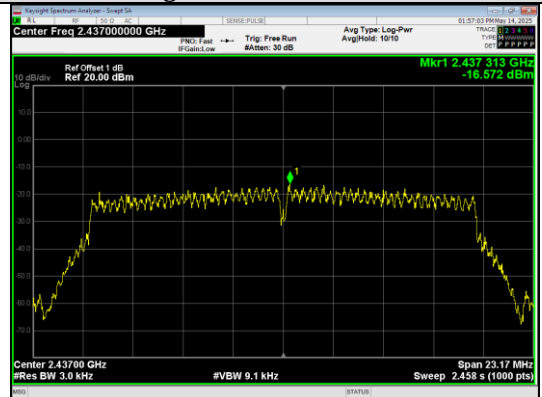
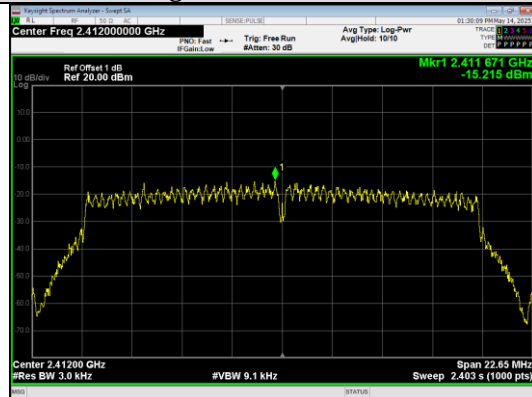




IEEE 802.11g_Channel 6_20MHz_Antenna 0

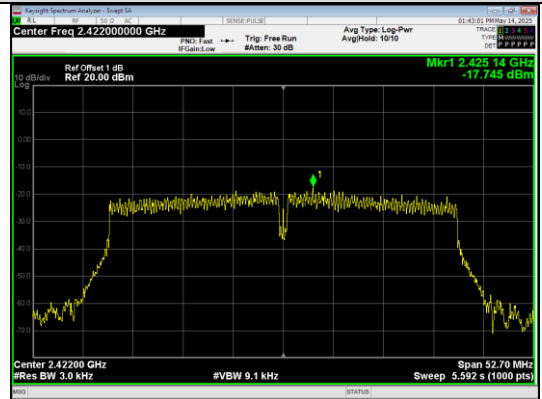
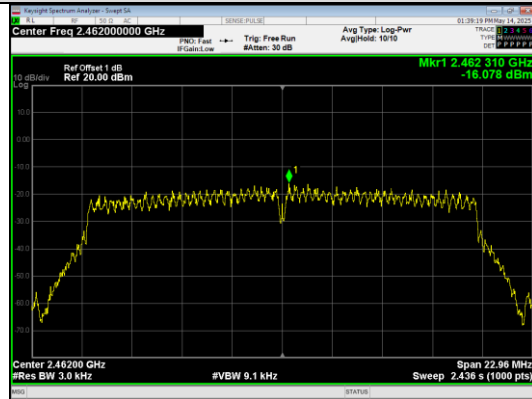


IEEE 802.11g_Channel 11_20MHz_Antenna 0



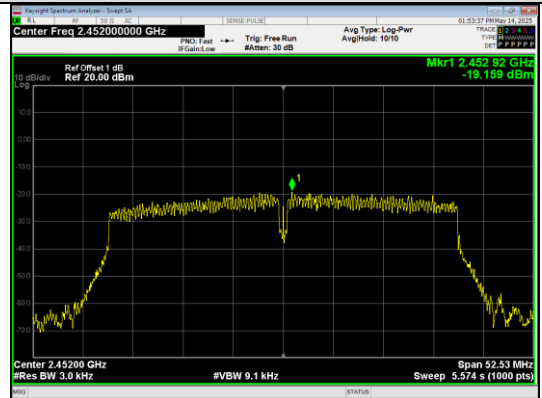
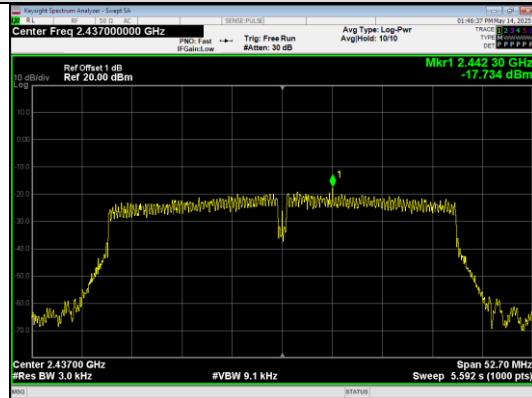
IEEE 802.11n_Channel 1_20MHz_Antenna 0

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

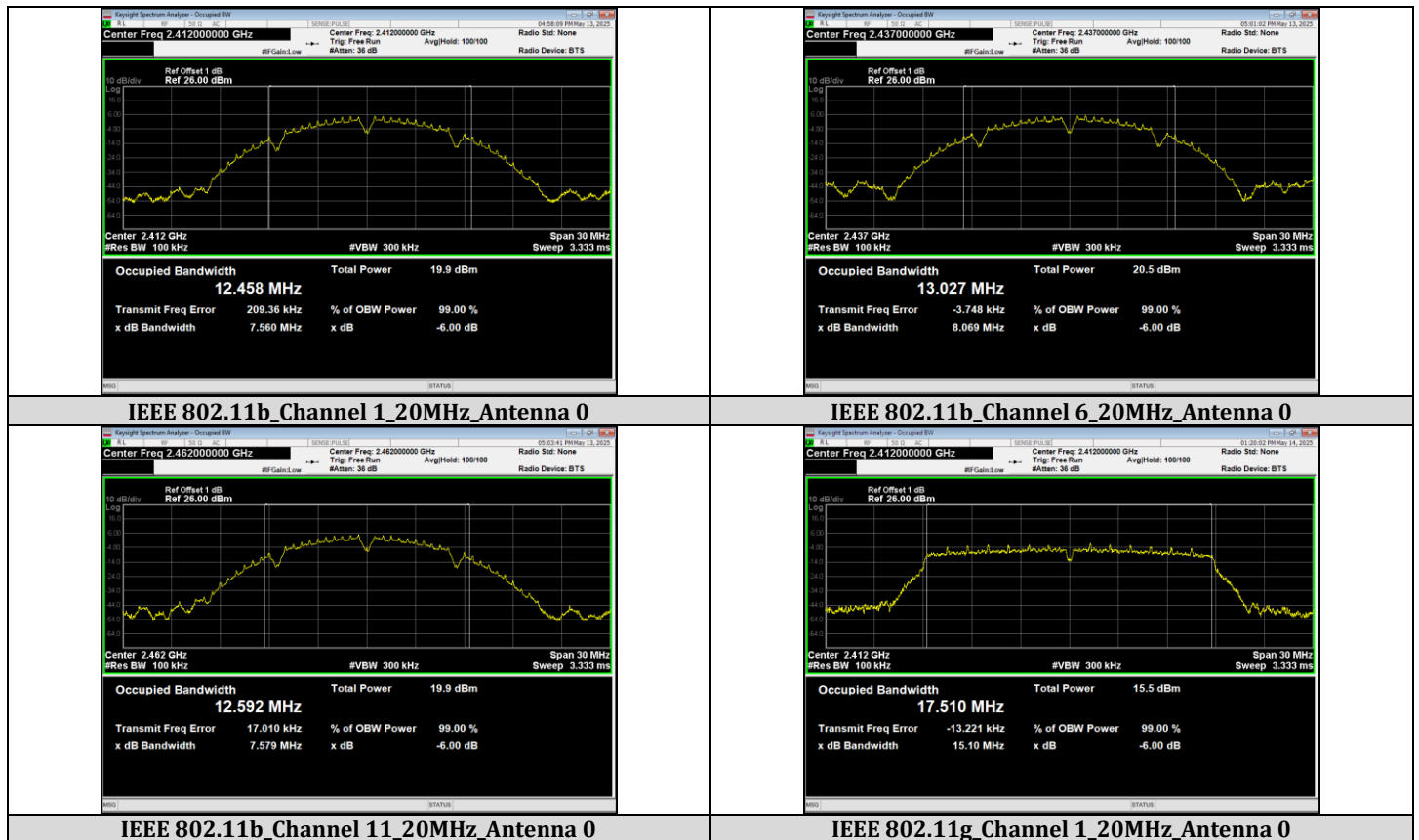
IEEE 802.11n_Channel 9_40MHz_Antenna 0

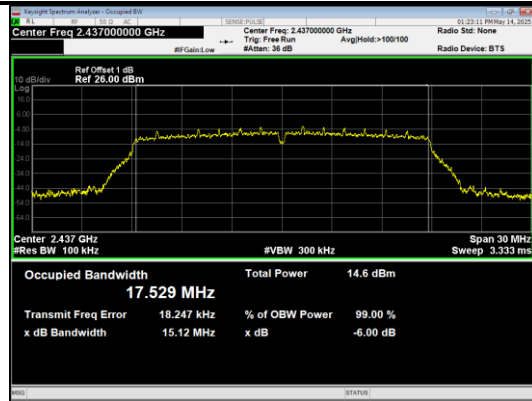
6dB Bandwidth

Test Result

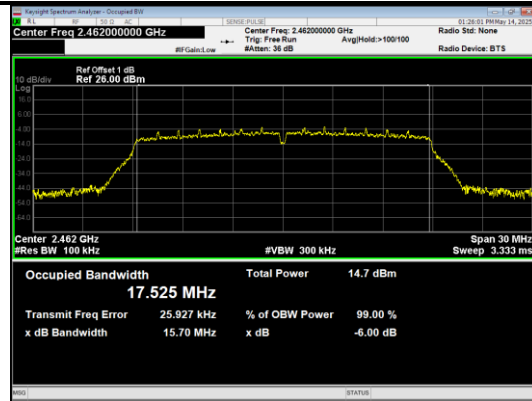
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	7.560	≥0.5	PASS
	6		2437	8.069		PASS
	11		2462	7.579		PASS
IEEE 802.11g	1		2412	15.10		PASS
	6		2437	15.12		PASS
	11		2462	15.70		PASS
IEEE 802.11n_20	1		2412	15.10		PASS
	6		2437	15.45		PASS
	11		2462	15.31		PASS
IEEE 802.11n_40	3		2422	35.13		PASS
	6		2437	35.13		PASS
	9		2452	35.02		PASS

Test Graphs

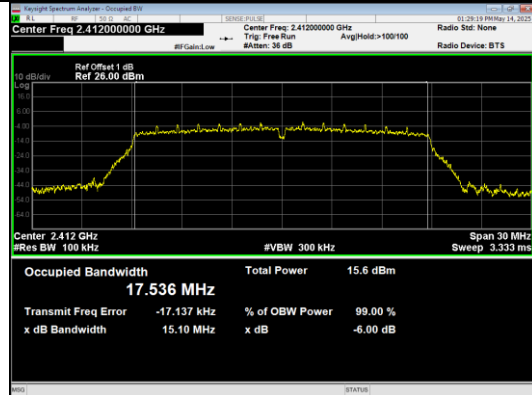




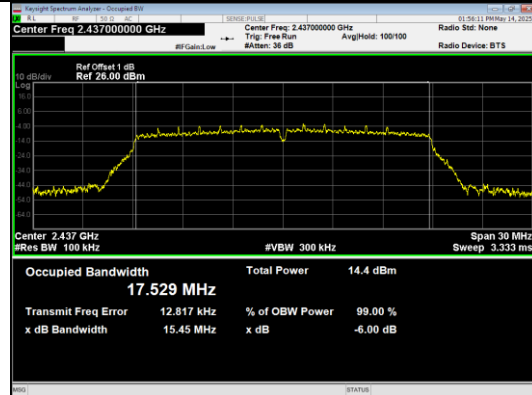
IEEE 802.11g_Channel 6_20MHz_Antenna 0



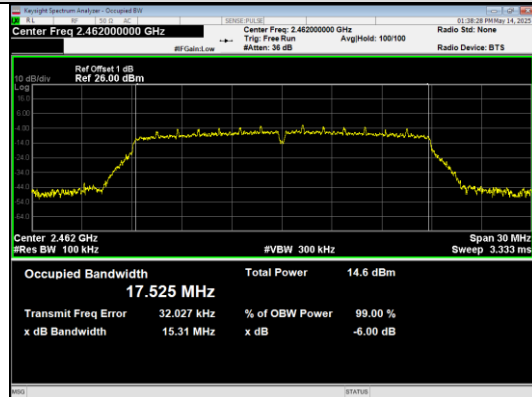
IEEE 802.11g_Channel 11_20MHz_Antenna 0



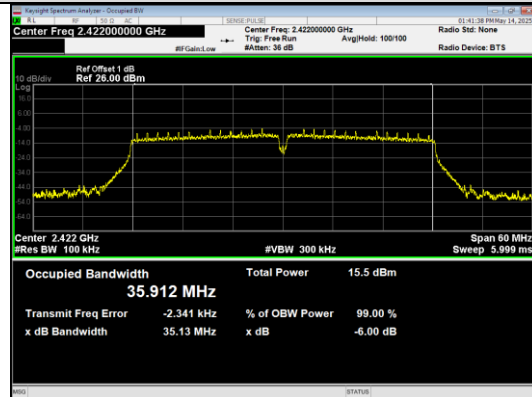
IEEE 802.11n_Channel 1_20MHz_Antenna 0



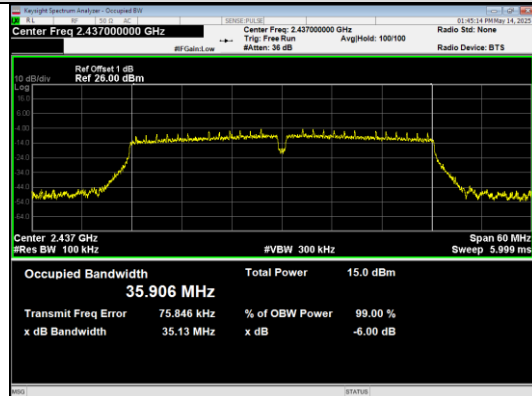
IEEE 802.11n_Channel 6_20MHz_Antenna 0



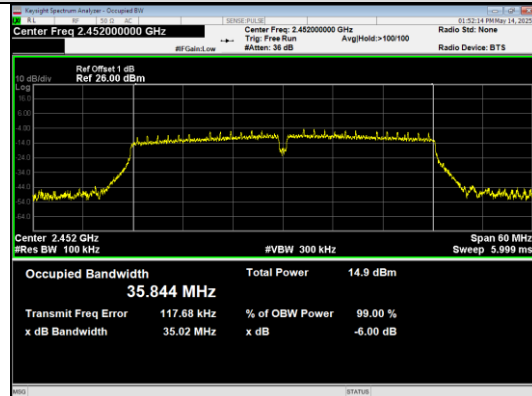
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



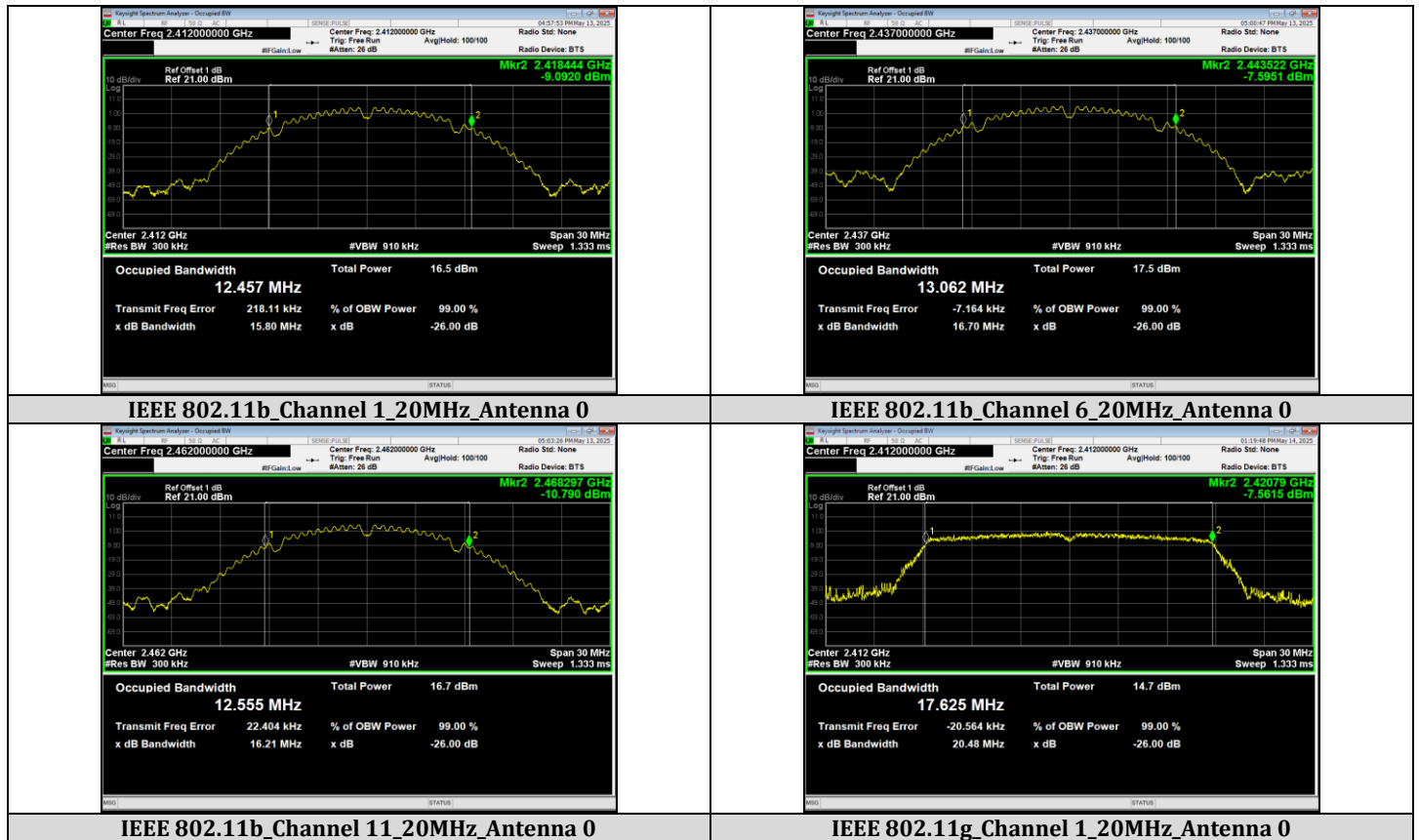
IEEE 802.11n_Channel 6_40MHz_Antenna 0

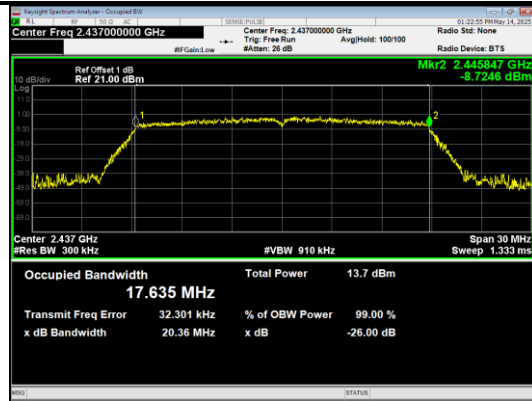


IEEE 802.11n_Channel 9_40MHz_Antenna 0

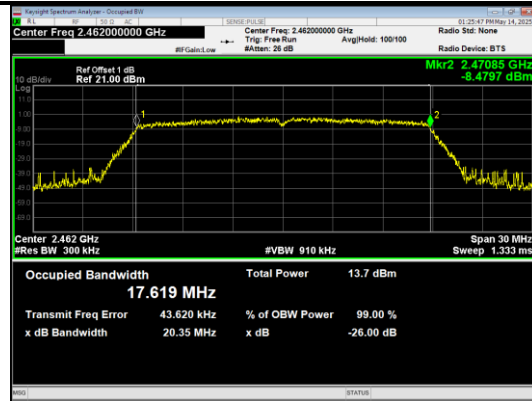
**99% Bandwidth****Test Result**

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.457
	6		2437	13.062
	11		2462	12.555
IEEE 802.11g	1		2412	17.625
	6		2437	17.635
	11		2462	17.619
IEEE 802.11n_20	1		2412	17.648
	6		2437	17.668
	11		2462	17.648
IEEE 802.11n_40	3		2422	36.070
	6		2437	36.058
	9		2452	36.019

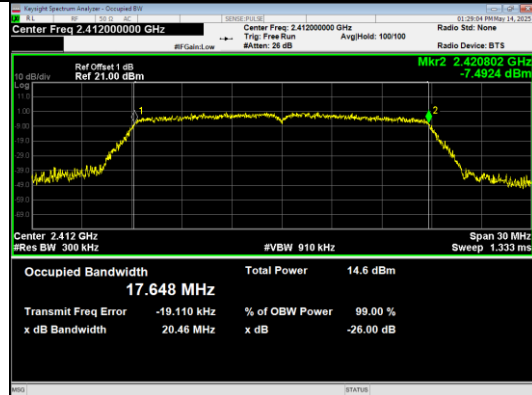
Test Graphs



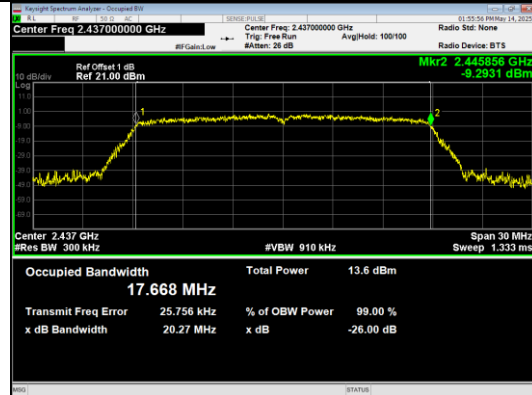
IEEE 802.11g_Channel 6_20MHz_Antenna 0



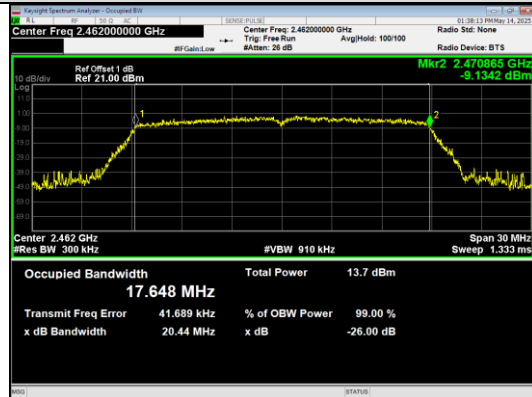
IEEE 802.11g_Channel 11_20MHz_Antenna 0



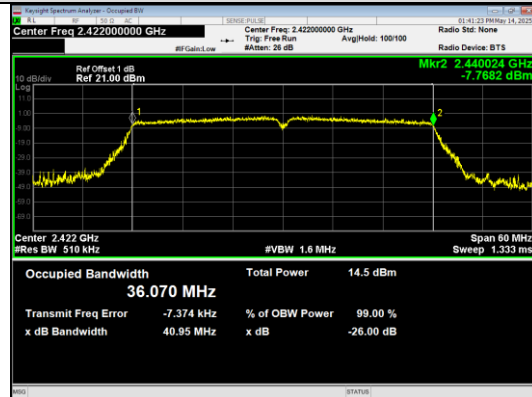
IEEE 802.11n_Channel 1_20MHz_Antenna 0



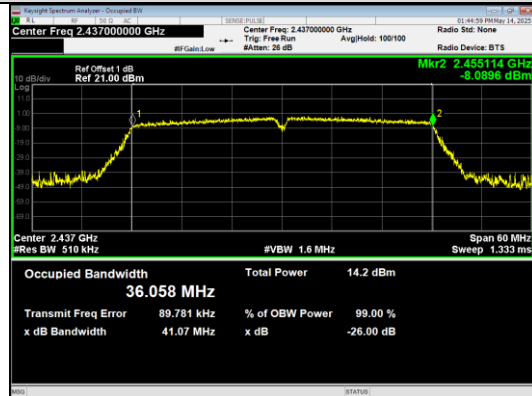
IEEE 802.11n_Channel 6_20MHz_Antenna 0



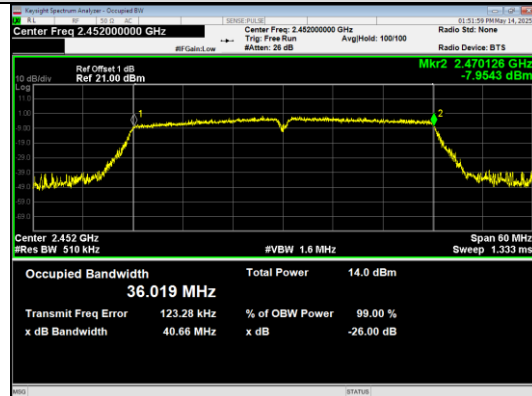
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



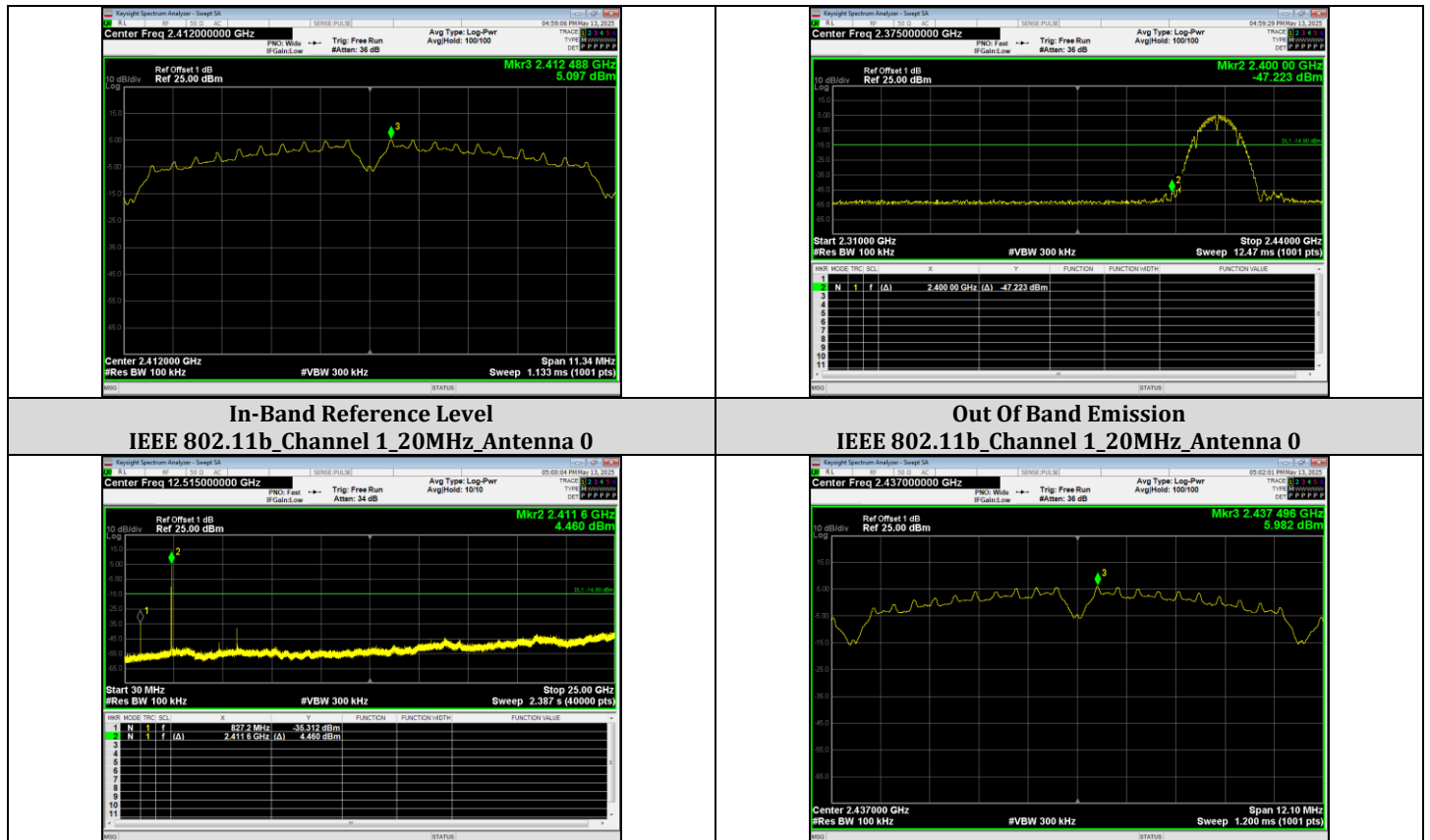
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Conducted Out Of Band Emission

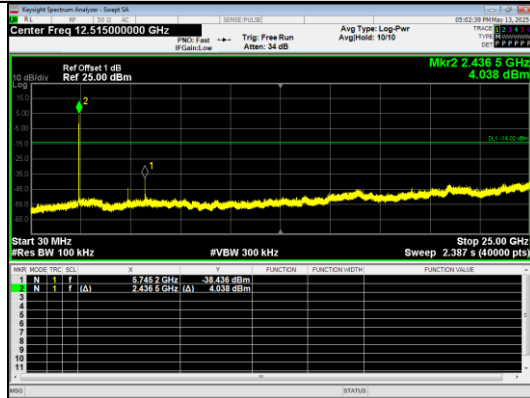
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	827.19	-35.312	-14.9	-20.412	PASS
			2400.00	-47.223	-14.9	-32.323	PASS
	6		5745.15	-38.436	-14.02	-24.416	PASS
	11		2483.50	-53.432	-14.74	-38.692	PASS
			5745.15	-38.361	-14.74	-23.621	PASS
IEEE 802.11g	1		2400.00	-43.238	-20.95	-22.288	PASS
			24954.4	-39.642	-20.95	-18.692	PASS
	6		24825.2	-39.405	-21.66	-17.745	PASS
	11		2483.50	-52.149	-21.72	-30.429	PASS
			24450.0	-39.988	-21.72	-18.268	PASS
IEEE 802.11n_20	1		2400.00	-42.686	-20.91	-21.776	PASS
			24850.8	-39.516	-20.91	-18.606	PASS
	6		24996.3	-39.495	-21.83	-17.665	PASS
	11		2483.50	-52.058	-21.76	-30.298	PASS
			24853.9	-39.912	-21.76	-18.152	PASS
IEEE 802.11n_40	3		2397.62	-43.700	-24.23	-19.470	PASS
			2400.00	-46.279	-24.23	-22.049	PASS
			24368.9	-39.539	-24.23	-15.309	PASS
	6		24908.9	-39.179	-24.63	-14.549	PASS
	9		2483.50	-48.703	-24.7	-24.003	PASS
		24336.4	-39.905	-24.7	-15.205	PASS	

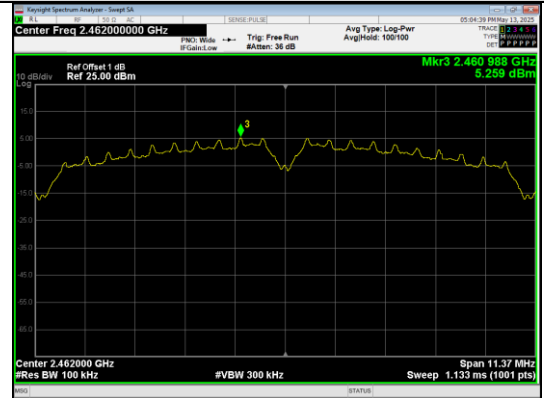
Test Graphs



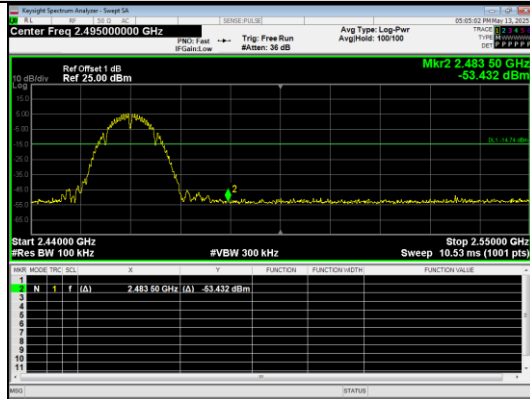
30.0 MHz - 25000.0 MHz IEEE 802.11b_Channel 1_20MHz_Antenna 0



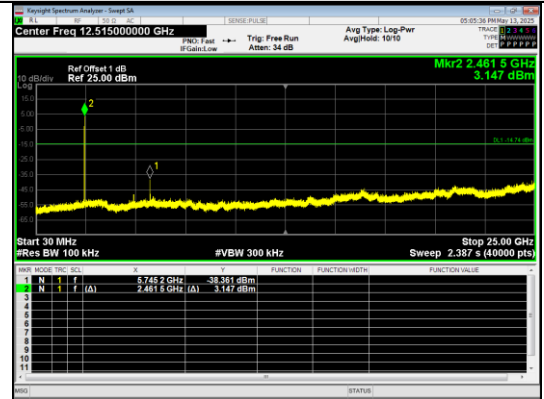
In-Band Reference Level IEEE 802.11b_Channel 6_20MHz_Antenna 0



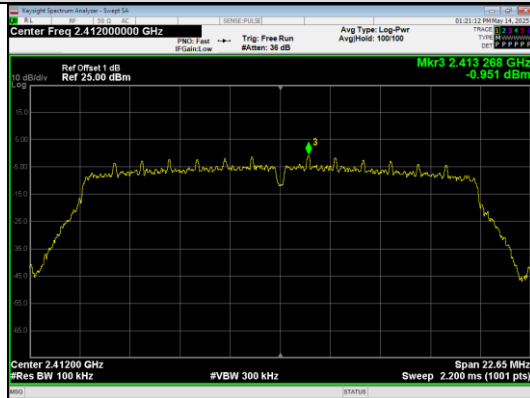
30.0 MHz - 25000.0 MHz IEEE 802.11b_Channel 6_20MHz_Antenna 0



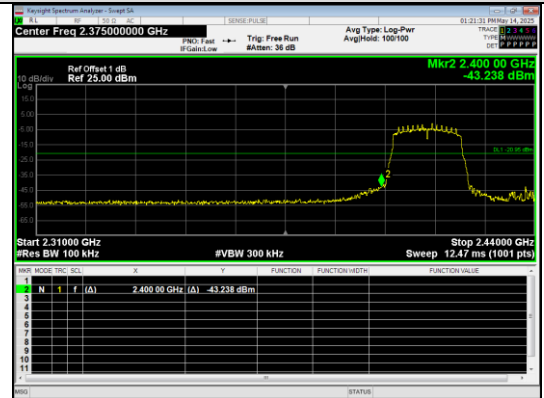
In-Band Reference Level IEEE 802.11b_Channel 11_20MHz_Antenna 0



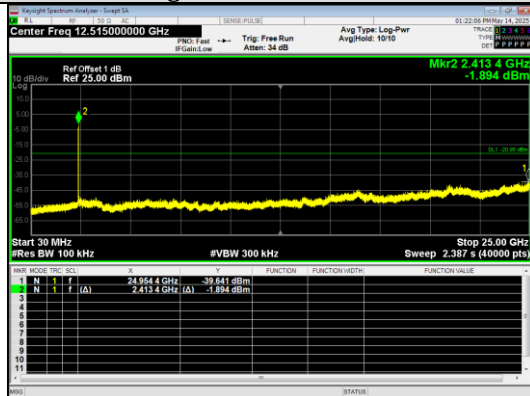
Out Of Band Emission IEEE 802.11b_Channel 11_20MHz_Antenna 0



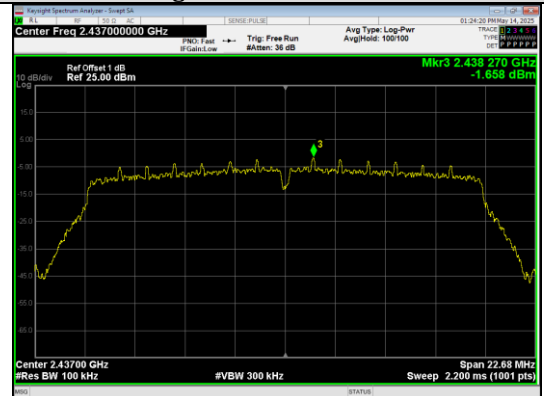
30.0 MHz - 25000.0 MHz IEEE 802.11b_Channel 11_20MHz_Antenna 0



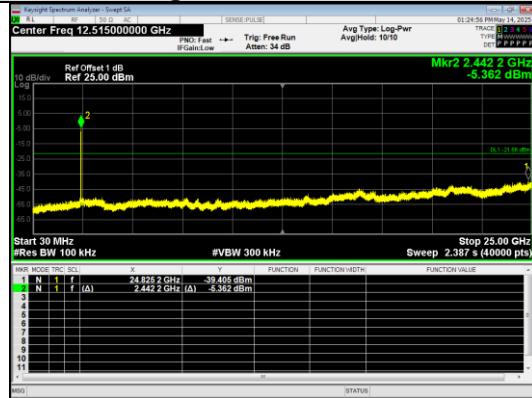
In-Band Reference Level IEEE 802.11g_Channel 1_20MHz_Antenna 0



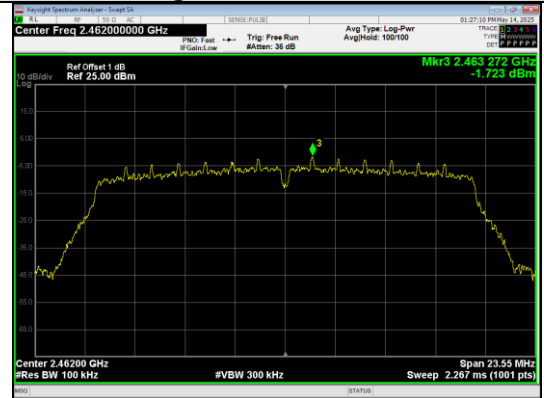
Out Of Band Emission IEEE 802.11g_Channel 1_20MHz_Antenna 0



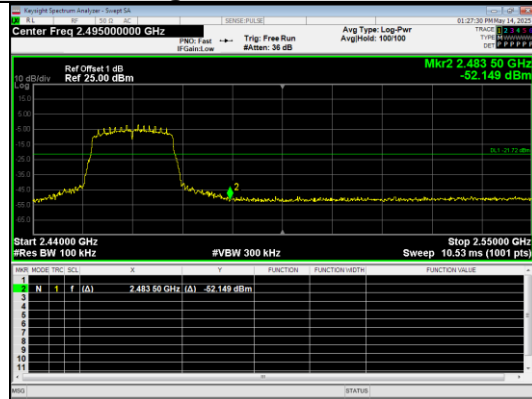
30.0 MHz - 25000.0 MHz IEEE 802.11g_Channel 1_20MHz_Antenna 0



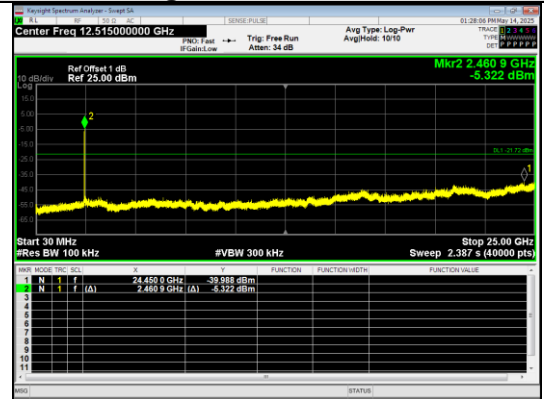
In-Band Reference Level IEEE 802.11g_Channel 6_20MHz_Antenna 0



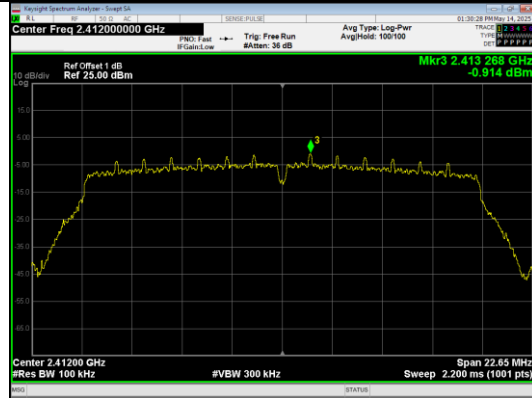
30.0 MHz - 25000.0 MHz IEEE 802.11g_Channel 6_20MHz_Antenna 0



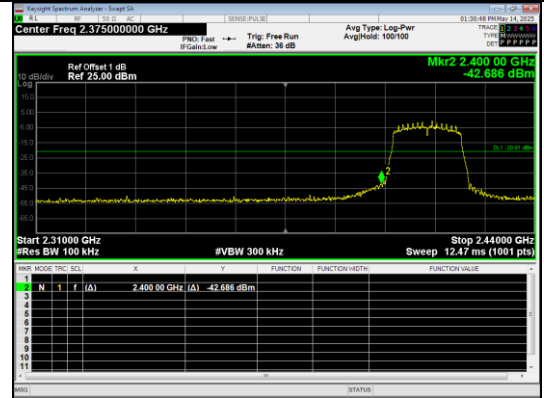
In-Band Reference Level IEEE 802.11g_Channel 11_20MHz_Antenna 0



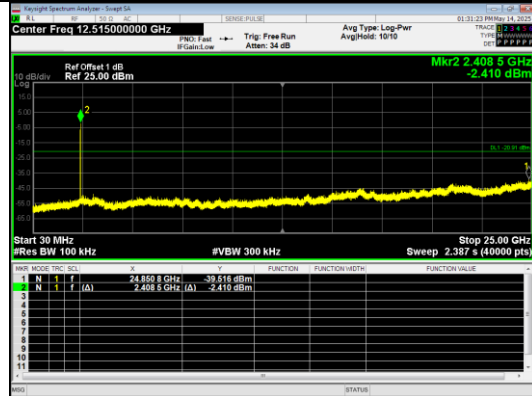
Out Of Band Emission IEEE 802.11g_Channel 11_20MHz_Antenna 0



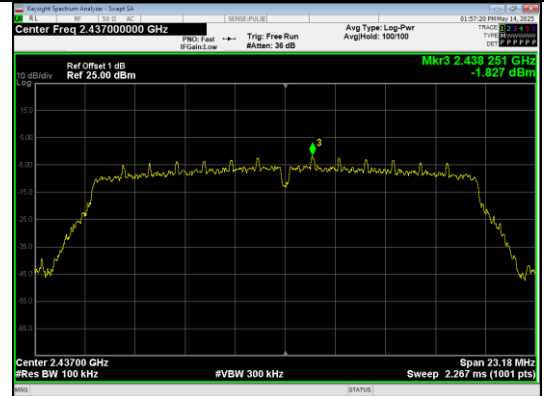
30.0 MHz - 25000.0 MHz IEEE 802.11g_Channel 11_20MHz_Antenna 0



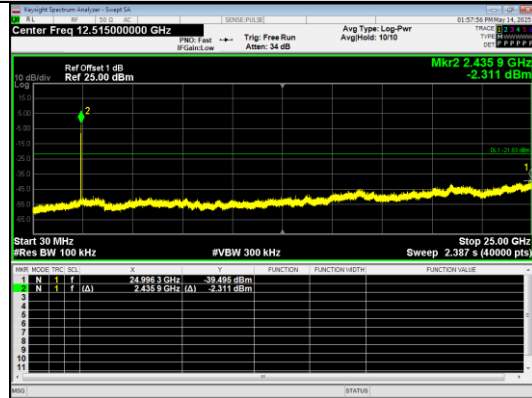
In-Band Reference Level IEEE 802.11n_Channel 1_20MHz_Antenna 0



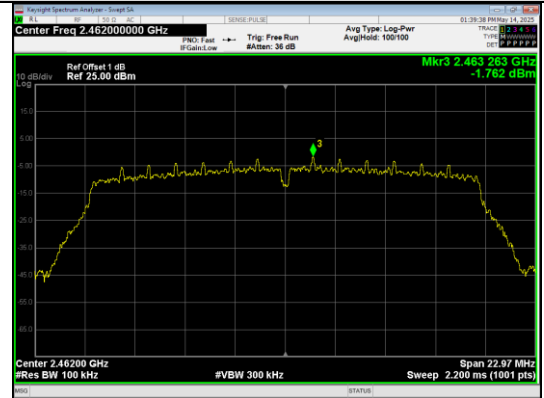
Out Of Band Emission IEEE 802.11n_Channel 1_20MHz_Antenna 0



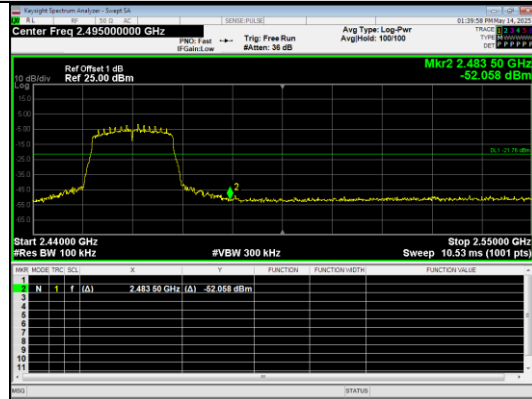
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 1_20MHz_Antenna 0



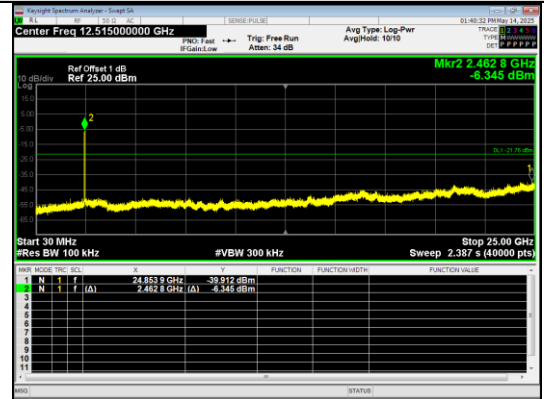
In-Band Reference Level IEEE 802.11n_Channel 6_20MHz_Antenna 0



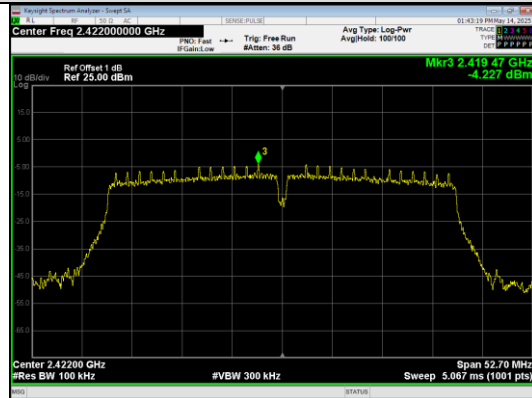
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 6_20MHz_Antenna 0



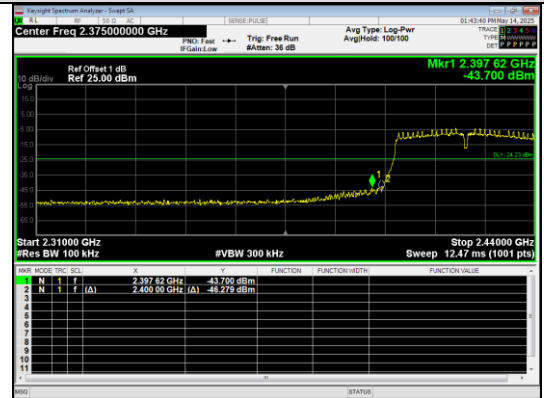
In-Band Reference Level IEEE 802.11n_Channel 11_20MHz_Antenna 0



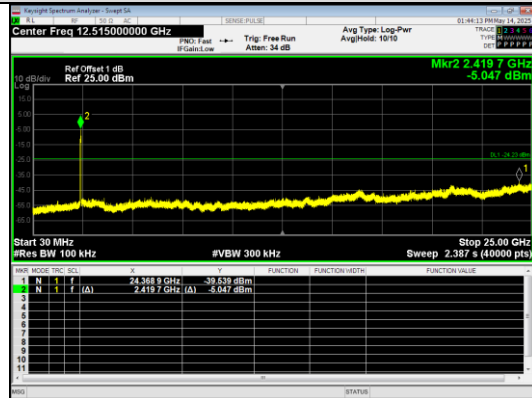
Out Of Band Emission IEEE 802.11n_Channel 11_20MHz_Antenna 0



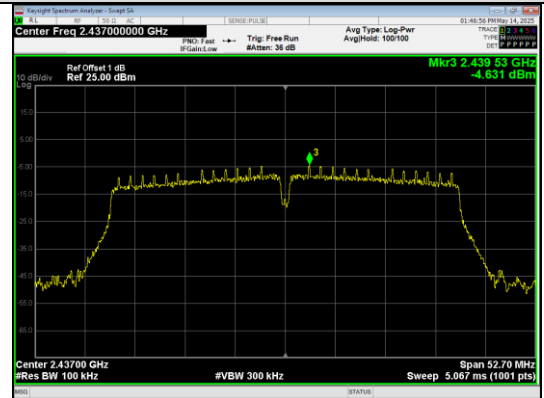
30.0 MHz - 25000.0 MHz IEEE 802.11n_Channel 11_20MHz_Antenna 0

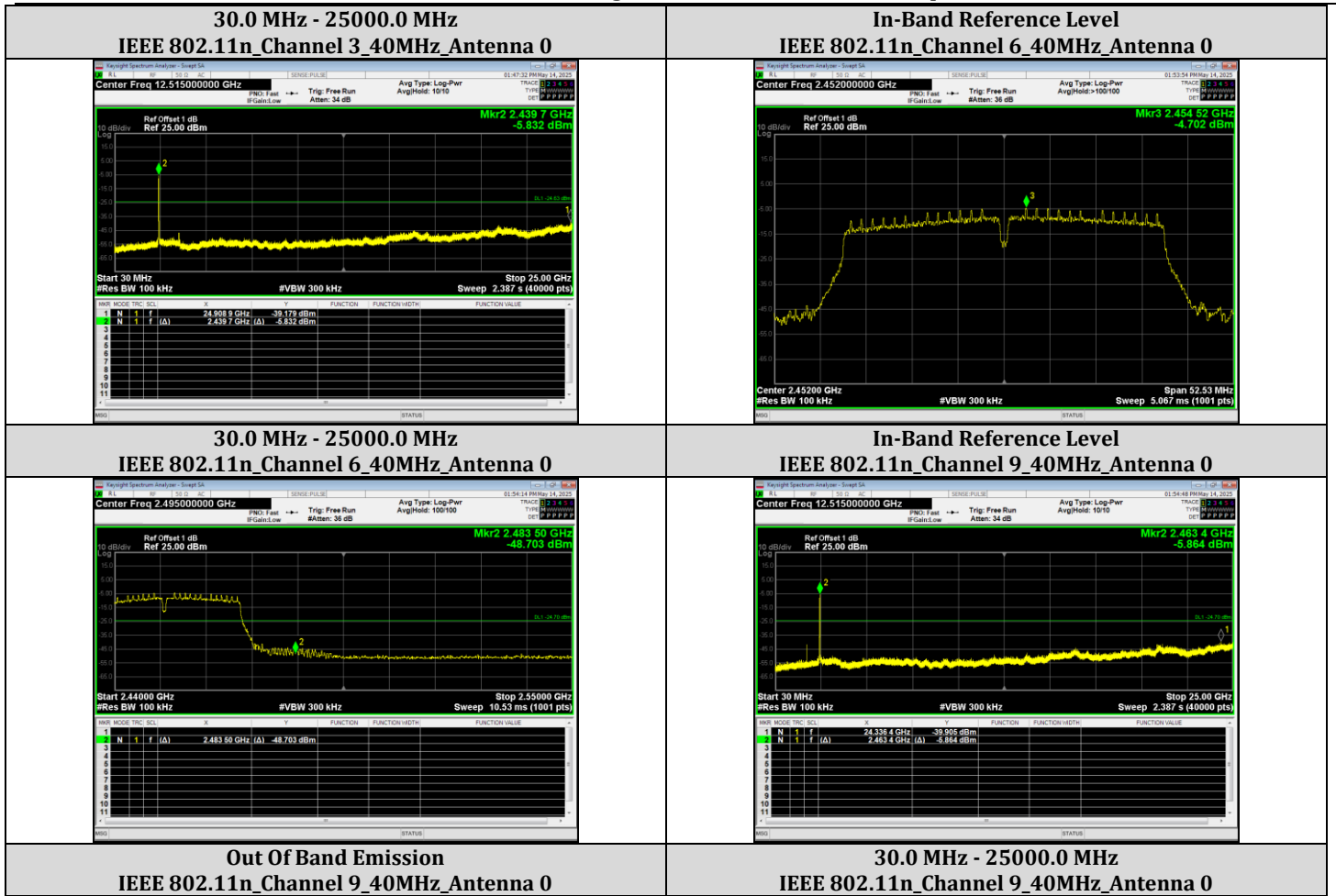


In-Band Reference Level IEEE 802.11n_Channel 3_40MHz_Antenna 0



Out Of Band Emission IEEE 802.11n_Channel 3_40MHz_Antenna 0





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