

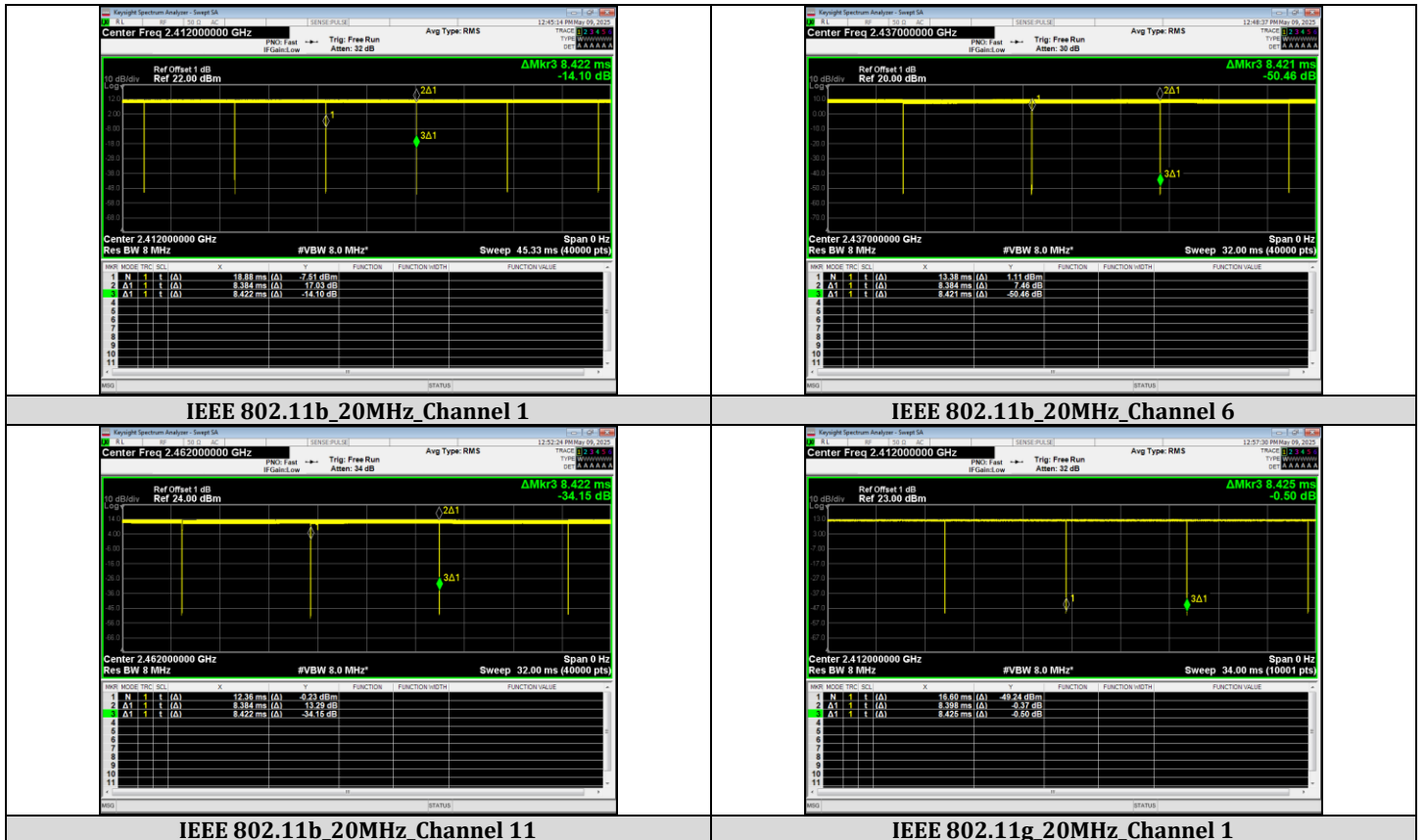
Appendix RF test data for WIFI 2.4G

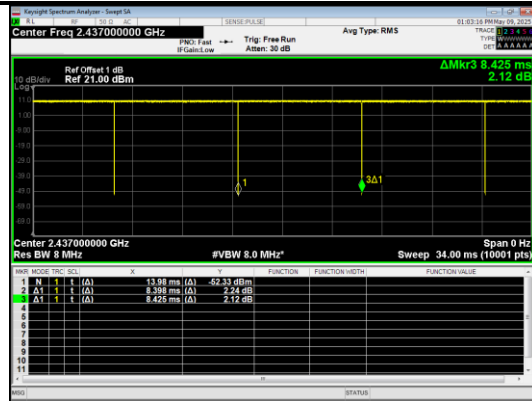
Duty Cycle

Test Result

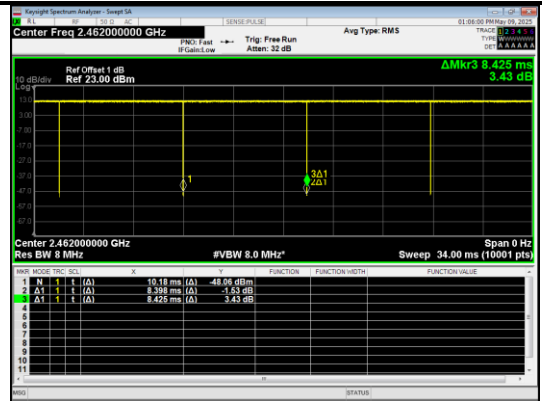
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	1	8.384	8.422	99.56	0.9956	0.0192	0.1193
		6		8.384	8.421	99.56	0.9956	0.0192	0.1193
		11		8.384	8.422	99.55	0.9955	0.0196	0.1193
IEEE 802.11g		1		8.398	8.425	99.68	0.9968	0.0139	0.1191
		6		8.398	8.425	99.68	0.9968	0.0139	0.1191
		11		8.398	8.425	99.68	0.9968	0.0139	0.1191
IEEE 802.11n_20	MCS 0	1		1.304	1.346	96.88	0.9688	0.1377	0.7669
		6		1.303	1.346	96.86	0.9686	0.1386	0.7675
		11		1.303	1.345	96.91	0.9691	0.1363	0.7675
IEEE 802.11n_40		3		0.650	0.692	93.94	0.9394	0.2715	1.5385
		6		0.650	0.693	93.87	0.9387	0.2747	1.5385
		9		0.651	0.693	93.92	0.9392	0.2724	1.5361

Test Graphs

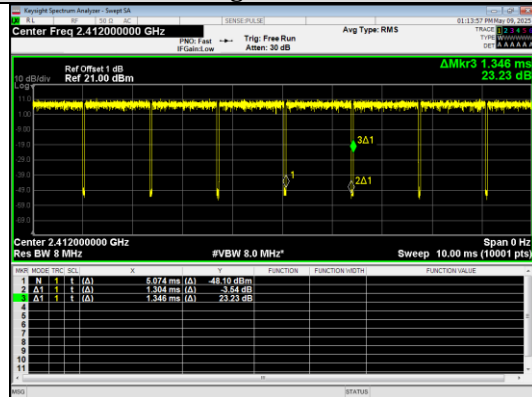




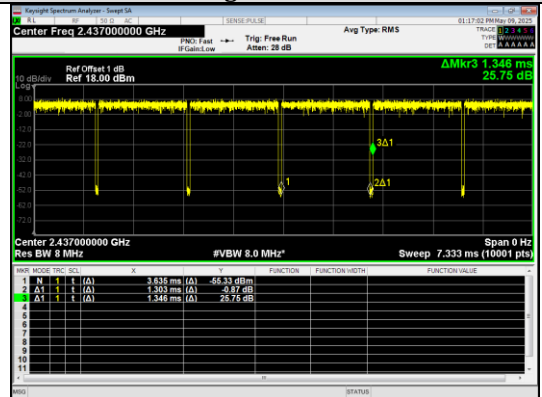
IEEE 802.11g 20MHz_Channel 6



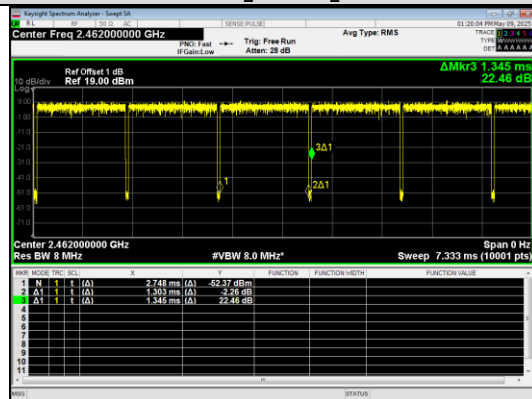
IEEE 802.11g 20MHz_Channel 11



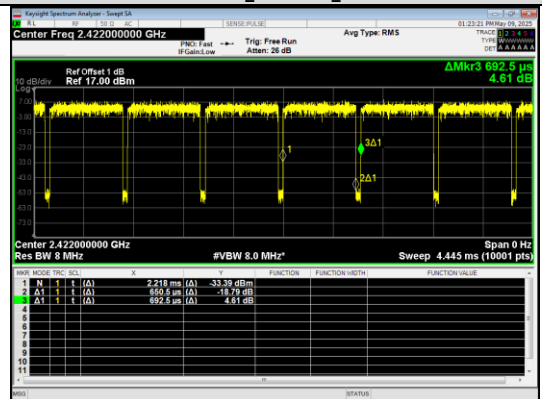
IEEE 802.11n 20MHz_Channel 1



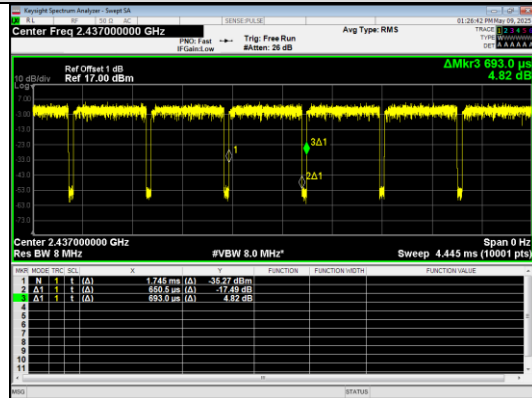
IEEE 802.11n 20MHz_Channel 6



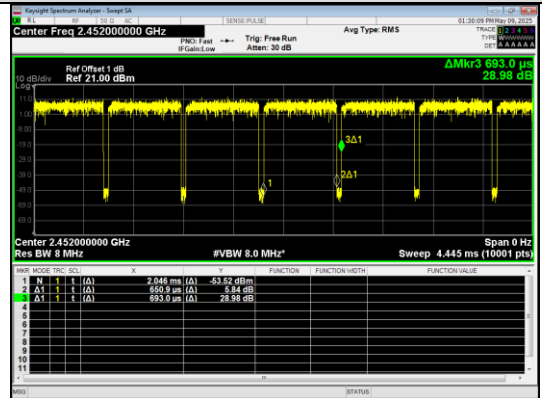
IEEE 802.11n 20MHz_Channel 11



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	13.24				N/A	≤30	PASS
	6	11.99				N/A	≤30	PASS
	11	15.76				N/A	≤30	PASS
IEEE 802.11g	1	15.33				N/A	≤30	PASS
	6	13.55				N/A	≤30	PASS
	11	15.57				N/A	≤30	PASS
IEEE 802.11n_20	1	16.15				N/A	≤30	PASS
	6	14.66				N/A	≤30	PASS
	11	16.27				N/A	≤30	PASS
IEEE 802.11n_40	3	15.29				N/A	≤30	PASS
	6	16.08				N/A	≤30	PASS
	9	15.72				N/A	≤30	PASS

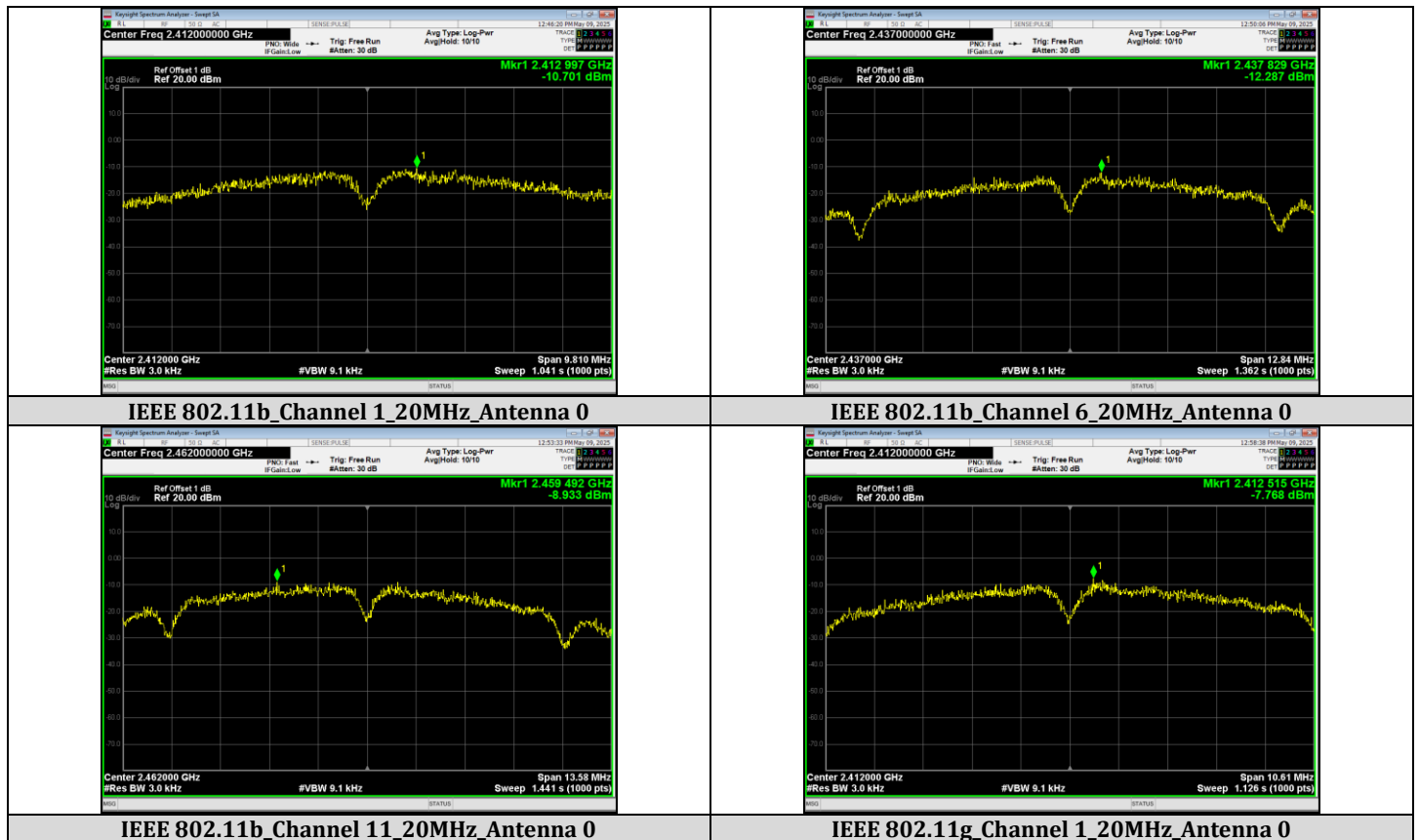


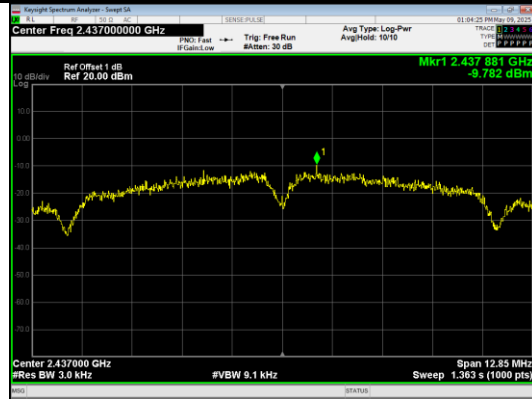
Power Spectral Density

Test Result

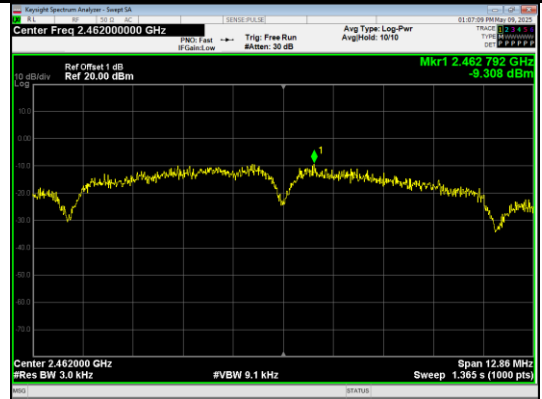
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-10.701	≤8	PASS
	6	-12.287		PASS
	11	-8.933		PASS
IEEE 802.11g	1	-7.768		PASS
	6	-9.782		PASS
	11	-9.308		PASS
IEEE 802.11n_20	1	-14.434		PASS
	6	-17.153		PASS
	11	-14.287		PASS
IEEE 802.11n_40	3	-16.270		PASS
	6	-15.848		PASS
	9	-14.992		PASS

Test Graphs

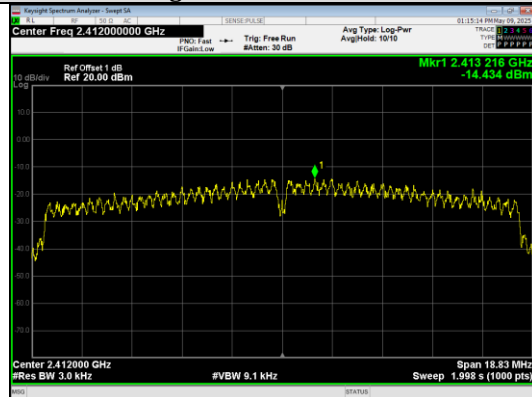




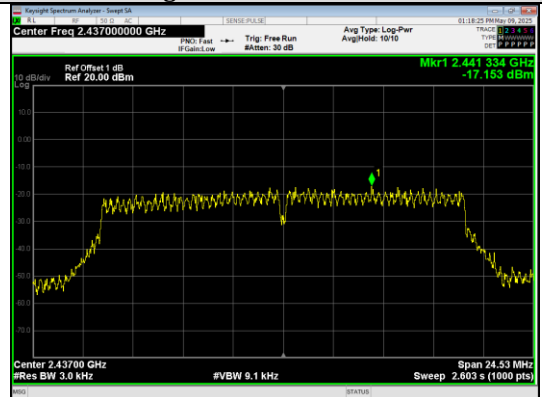
IEEE 802.11g_Channel 6_20MHz_Antenna 0



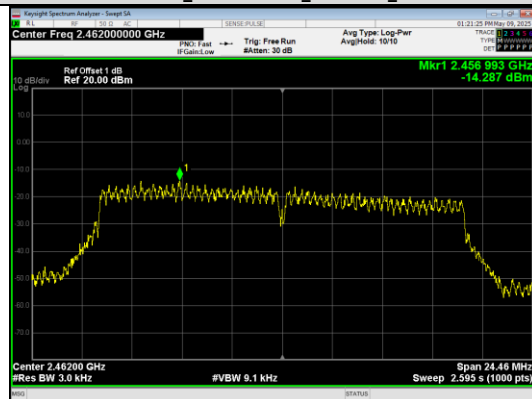
IEEE 802.11g_Channel 11_20MHz_Antenna 0



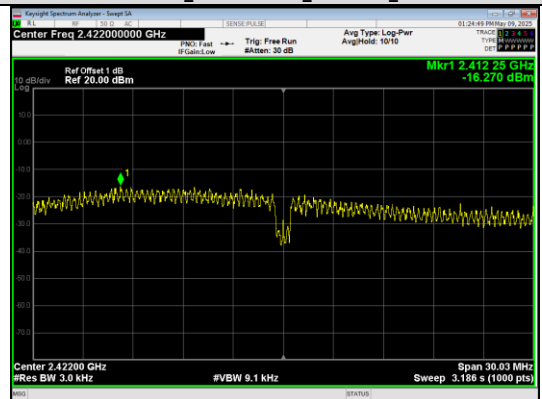
IEEE 802.11n_Channel 1_20MHz_Antenna 0



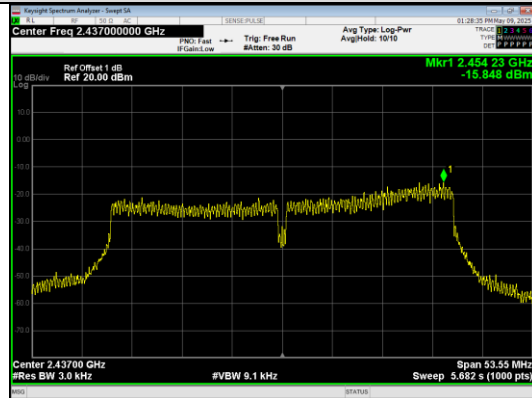
IEEE 802.11n_Channel 6_20MHz_Antenna 0



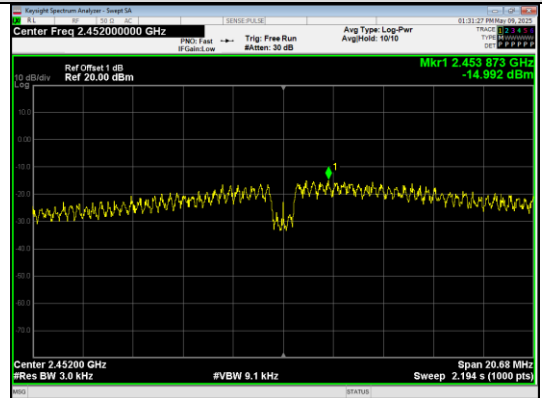
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



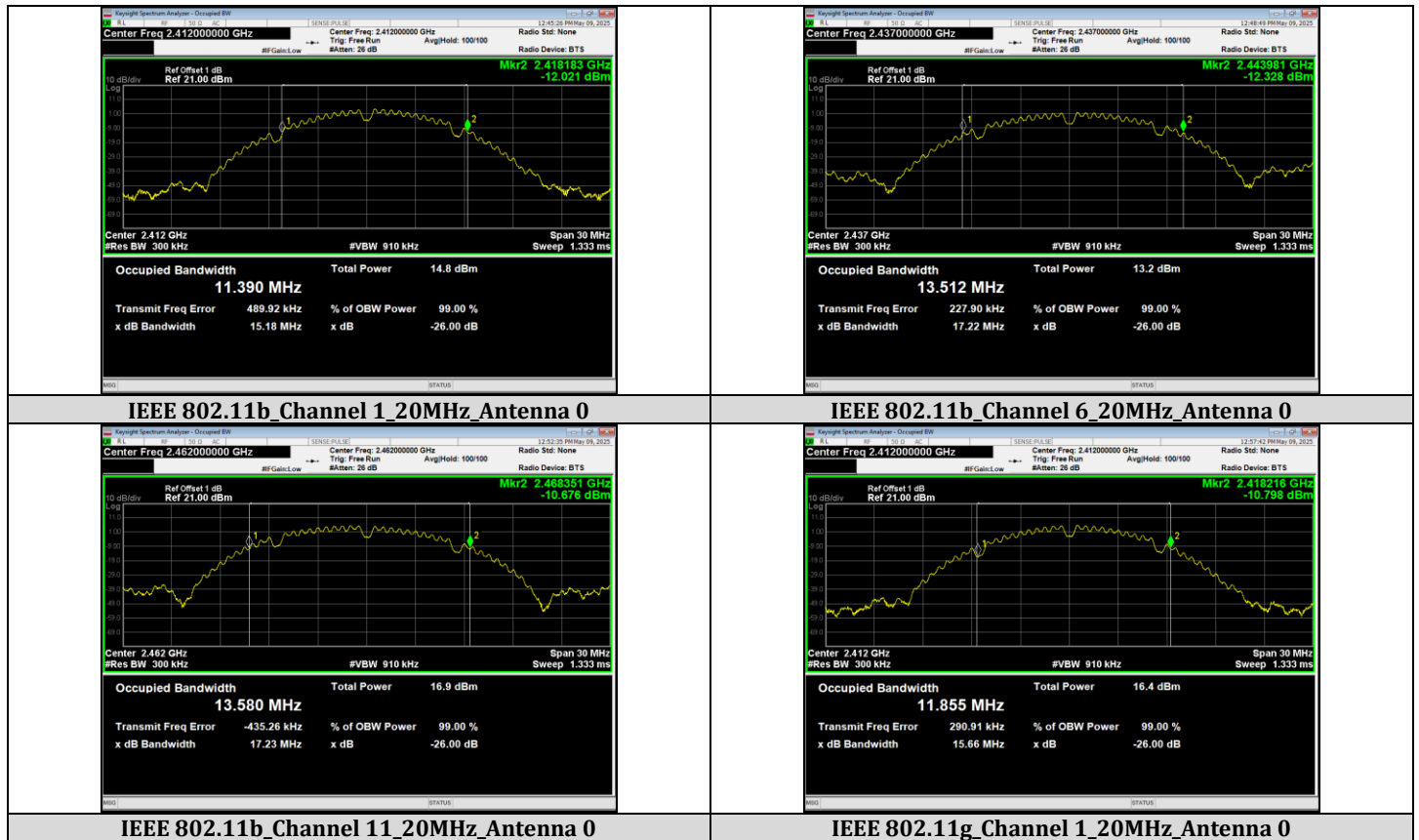
IEEE 802.11n_Channel 6_40MHz_Antenna 0

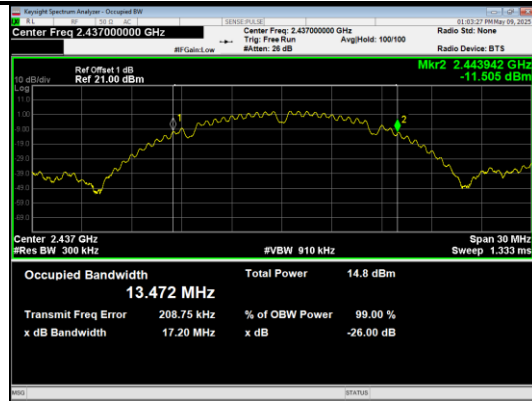


IEEE 802.11n_Channel 9_40MHz_Antenna 0

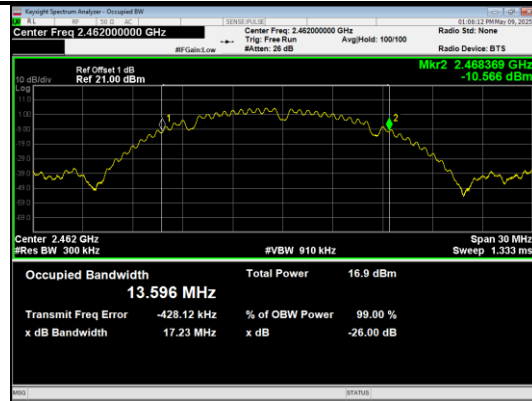
**99% Bandwidth****Test Result**

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	11.390
	6		2437	13.512
	11		2462	13.580
IEEE 802.11g	1		2412	11.855
	6		2437	13.472
	11		2462	13.596
IEEE 802.11n_20	1		2412	17.265
	6		2437	17.905
	11		2462	17.796
IEEE 802.11n_40	3		2422	35.561
	6		2437	36.803
	9		2452	35.133

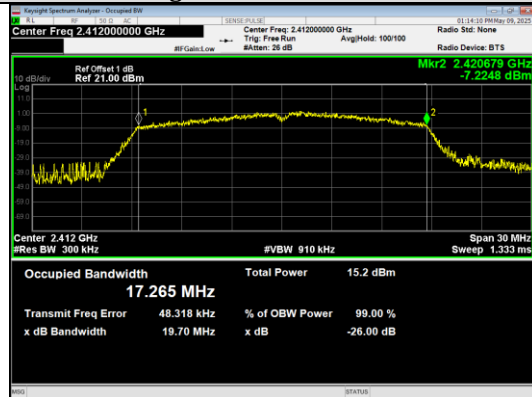
Test Graphs



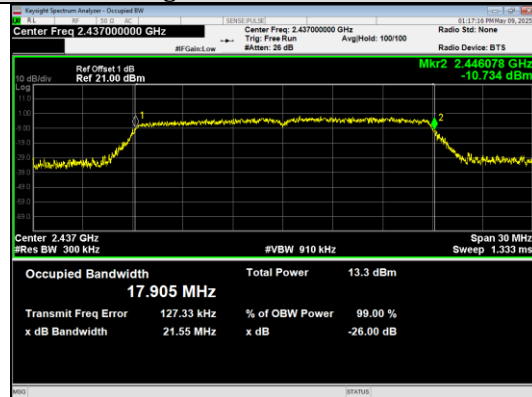
IEEE 802.11g_Channel 6_20MHz_Antenna 0



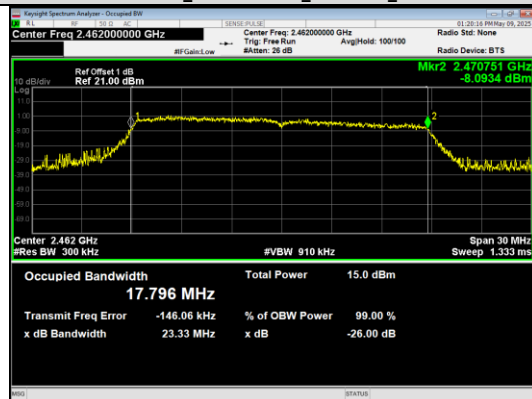
IEEE 802.11g_Channel 11_20MHz_Antenna 0



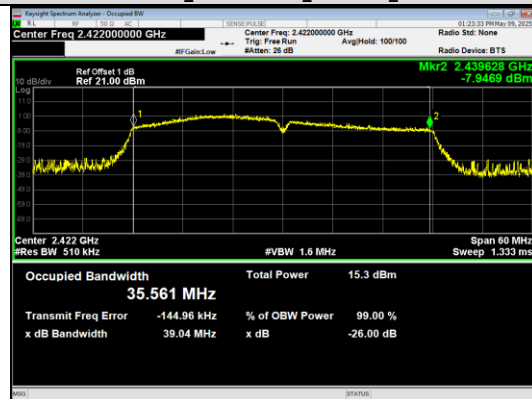
IEEE 802.11g_Channel 6_20MHz_Antenna 0



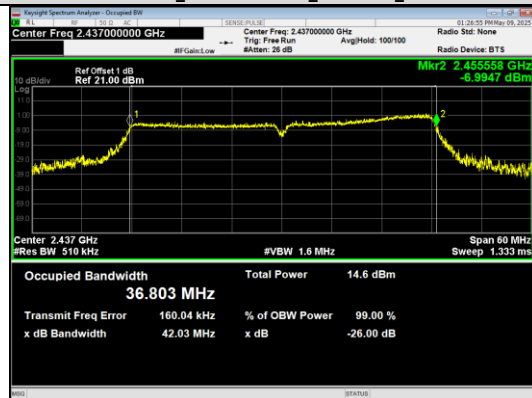
IEEE 802.11g_Channel 11_20MHz_Antenna 0



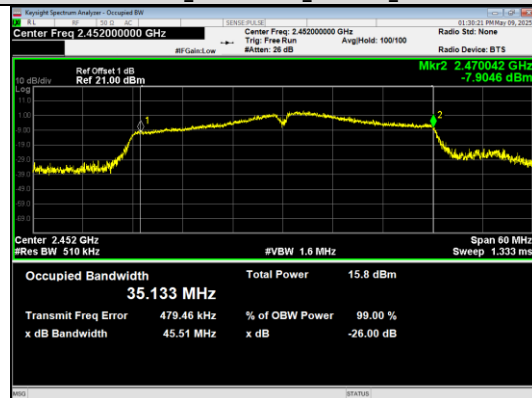
IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



IEEE 802.11n_Channel 11_20MHz_Antenna 0



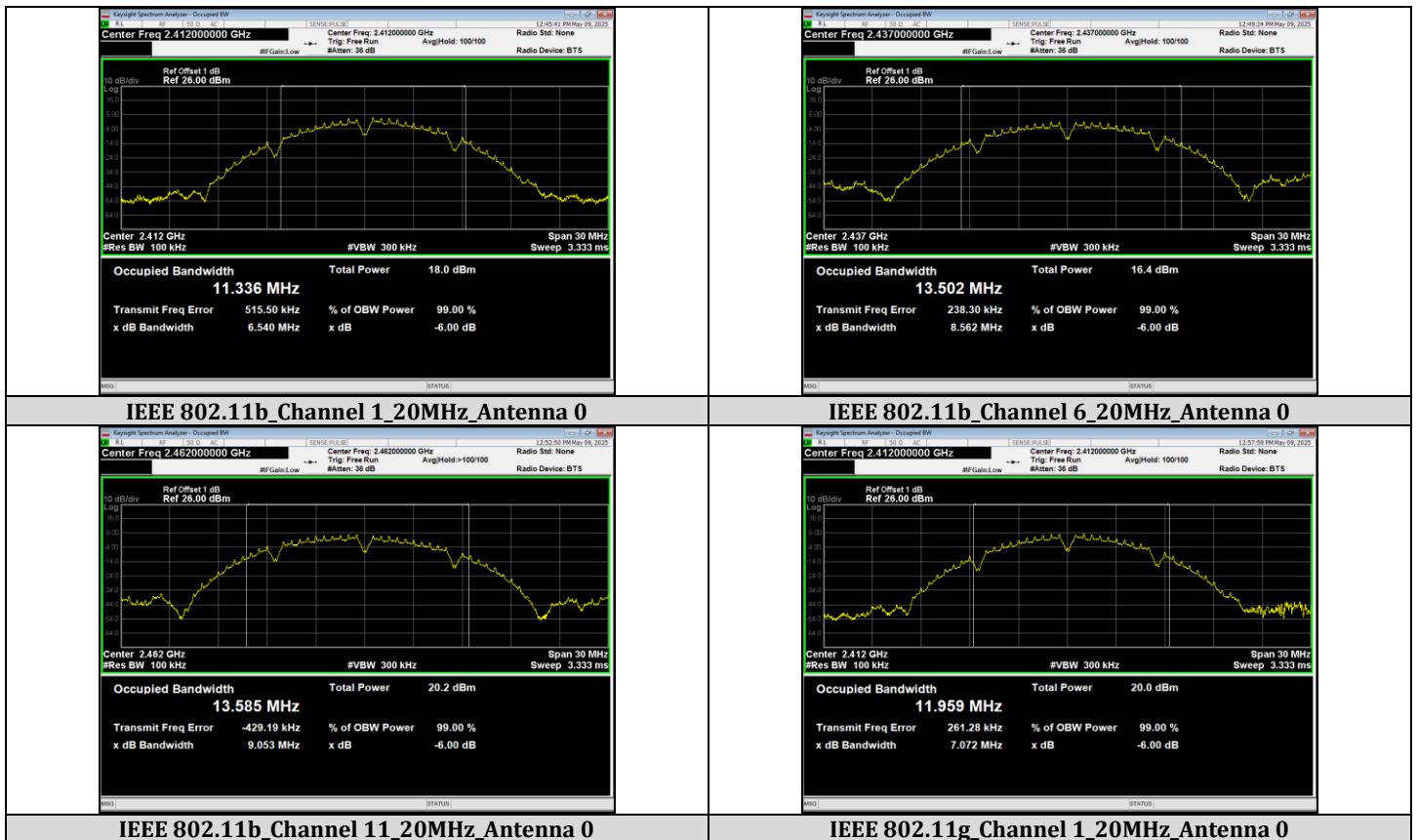
IEEE 802.11n_Channel 3_40MHz_Antenna 0

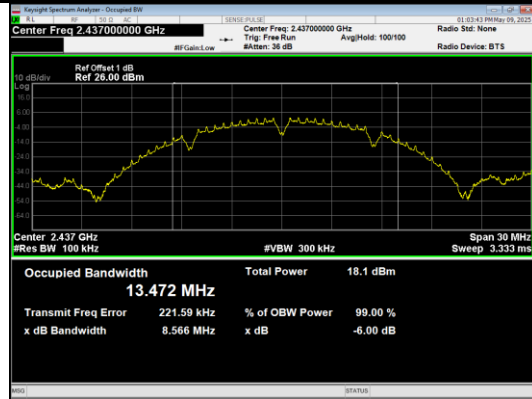
6dB Bandwidth

Test Result

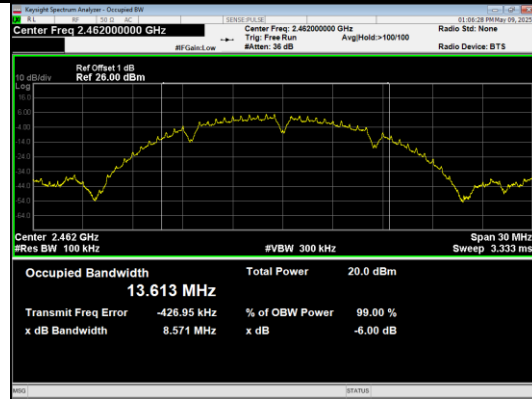
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	6.540	≥0.5	PASS
	6		2437	8.562		PASS
	11		2462	9.053		PASS
IEEE 802.11g	1		2412	7.072		PASS
	6		2437	8.566		PASS
	11		2462	8.571		PASS
IEEE 802.11n_20	1		2412	12.55		PASS
	6		2437	16.35		PASS
	11		2462	16.31		PASS
IEEE 802.11n_40	3		2422	20.02		PASS
	6		2437	35.70		PASS
	9		2452	13.79		PASS

Test Graphs

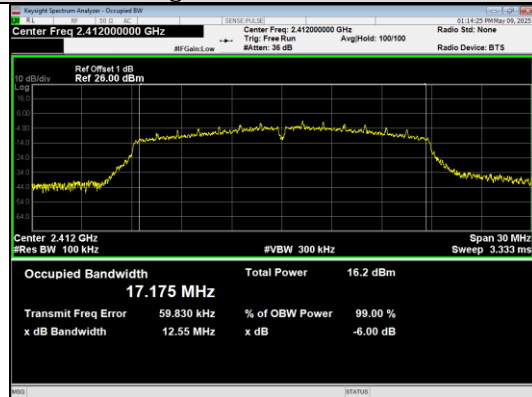




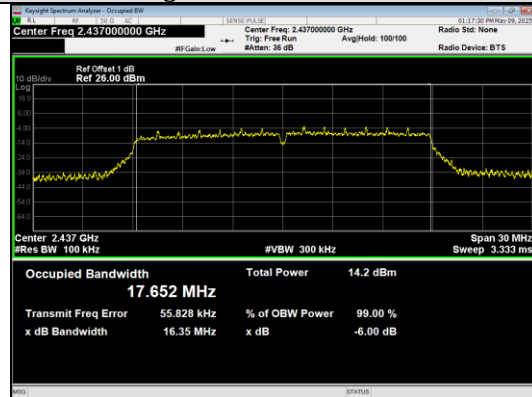
IEEE 802.11g_Channel 6_20MHz_Antenna 0



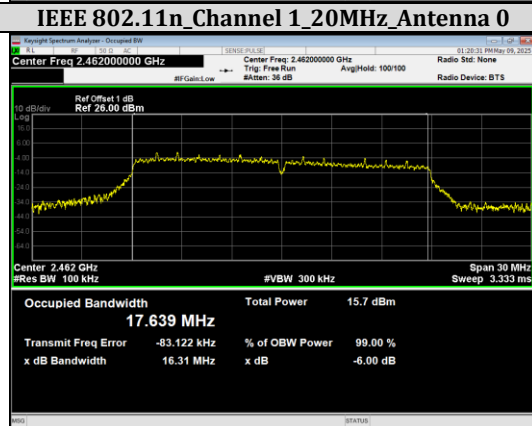
IEEE 802.11g_Channel 11_20MHz_Antenna 0



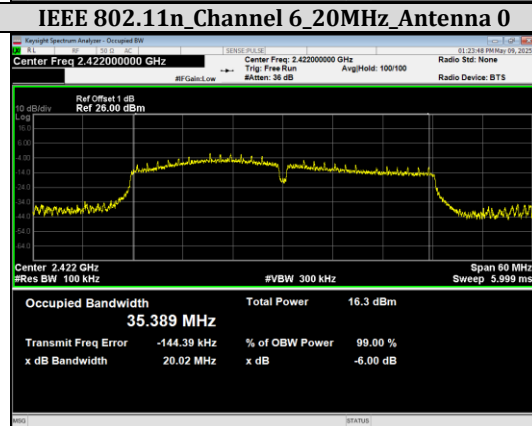
IEEE 802.11g_Channel 11_20MHz_Antenna 0



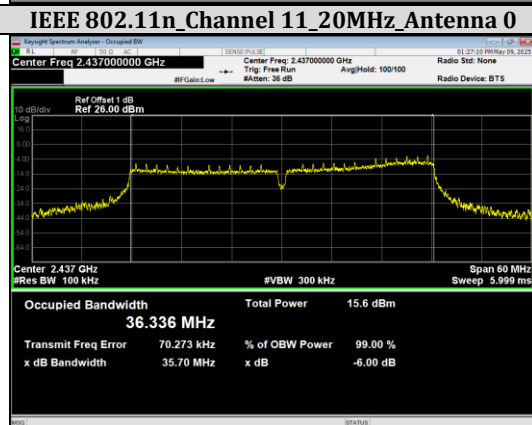
IEEE 802.11n_Channel 6_20MHz_Antenna 0



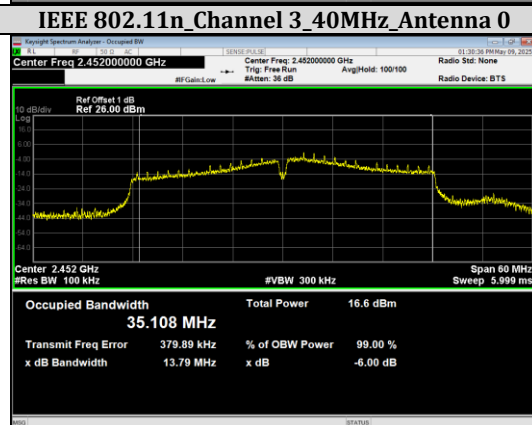
IEEE 802.11n_Channel 1_20MHz_Antenna 0



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

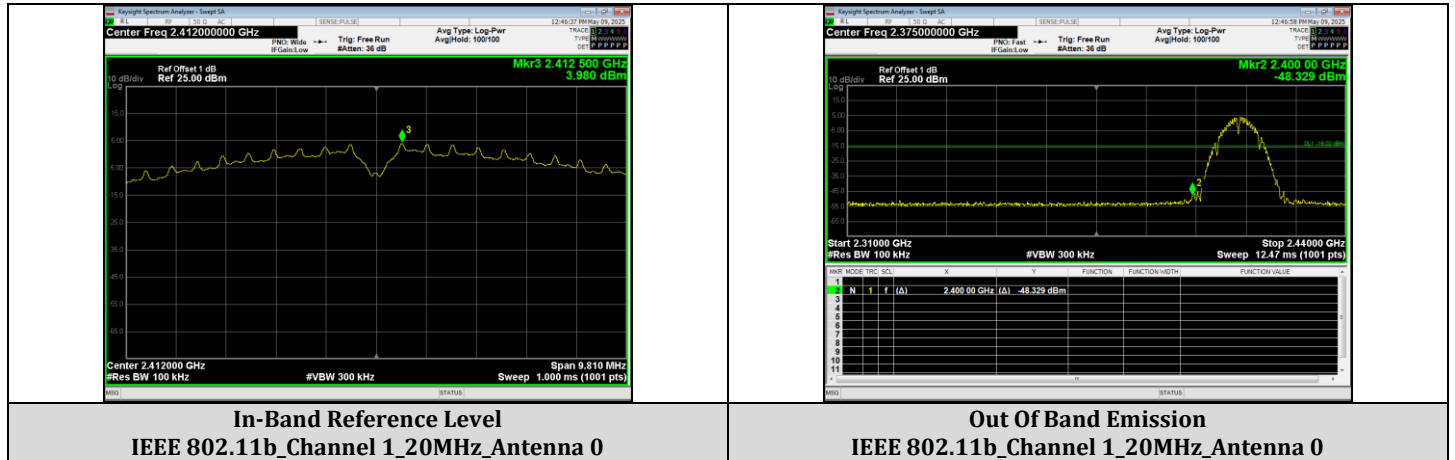
IEEE 802.11n_Channel 9_40MHz_Antenna 0

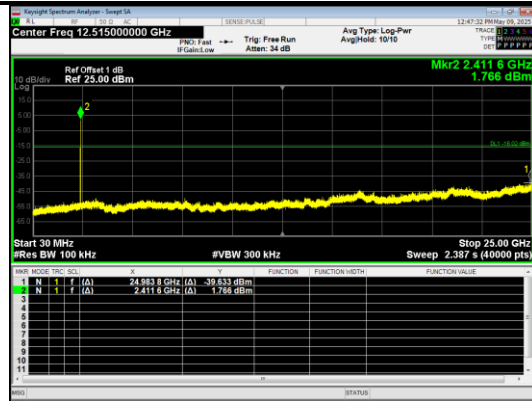
Conducted Out Of Band Emission

Test Result

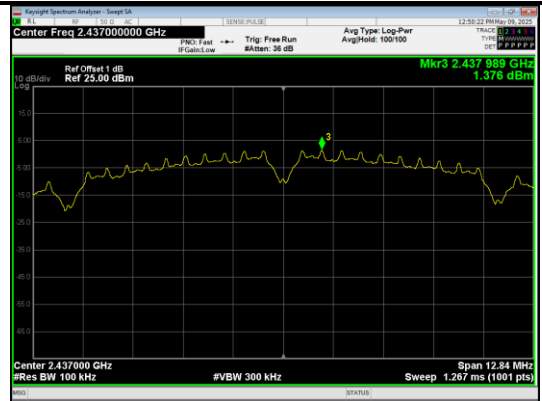
Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	
IEEE 802.11b	1	0	2400.00	-48.329	-16.02	-32.309	PASS	
			24983.8	-39.633	-16.02	-23.613	PASS	
	6			24982.5	-38.084	-18.62	-19.464	PASS
	11			2483.50	-52.595	-14.77	-37.825	PASS
				24975.0	-40.510	-14.77	-25.740	PASS
IEEE 802.11g	1			2400.00	-46.017	-14.51	-31.507	PASS
			24981.9	-38.254	-14.51	-23.744	PASS	
	6			24992.5	-39.784	-16.87	-22.914	PASS
	11			2483.50	-51.388	-15.06	-36.328	PASS
				24993.8	-39.020	-15.06	-23.960	PASS
IEEE 802.11n_20	1			2398.27	-39.853	-18.74	-21.113	PASS
			2400.00	-41.655	-18.74	-22.915	PASS	
	6			2672.50	-27.930	-18.74	-9.190	PASS
	11			24964.4	-39.674	-22.51	-17.164	PASS
				2483.50	-45.582	-19.92	-25.662	PASS
IEEE 802.11n_40	3			3536.50	-26.944	-19.92	-7.024	PASS
			2398.40	-35.461	-21.08	-14.381	PASS	
			2400.00	-36.051	-21.08	-14.971	PASS	
	6			24400.7	-39.659	-21.08	-18.579	PASS
	9			24905.7	-40.088	-21.54	-18.548	PASS
			2483.50	-39.559	-19.45	-20.109	PASS	
			24940.1	-38.946	-19.45	-19.496	PASS	

Test Graphs

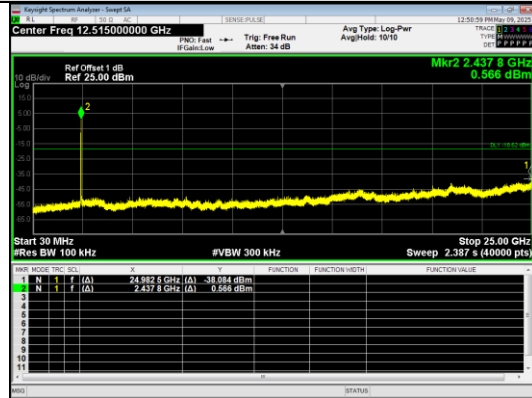




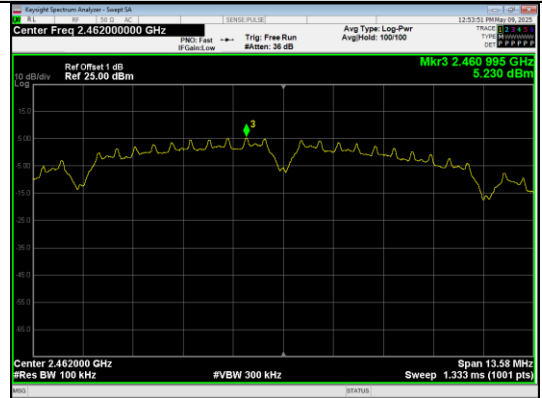
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



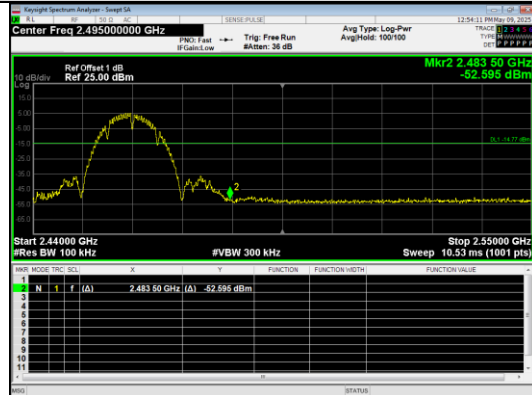
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



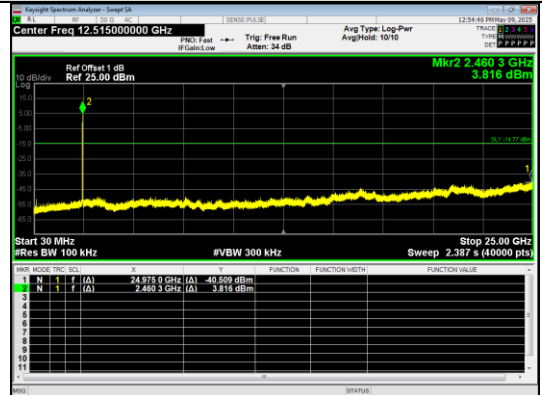
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



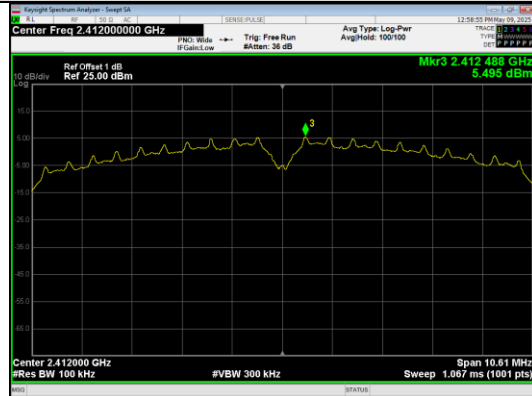
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



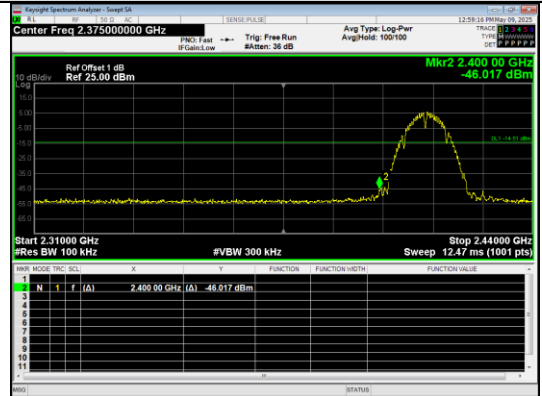
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



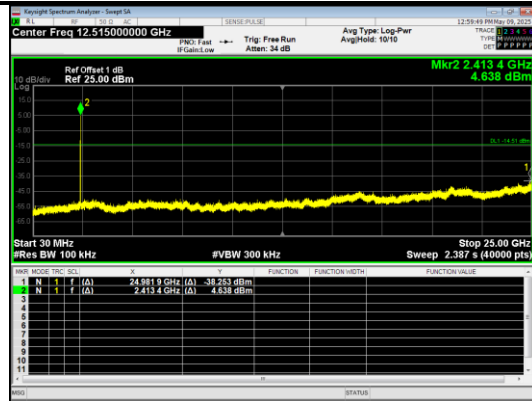
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



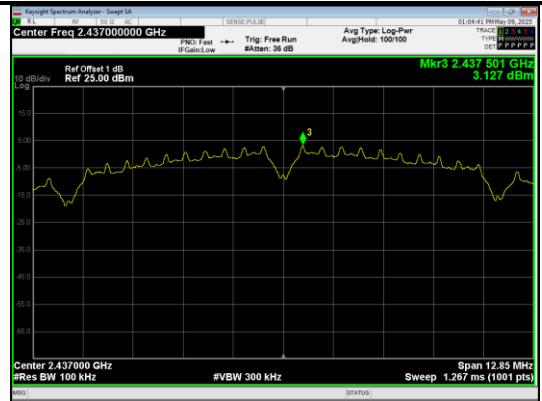
In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



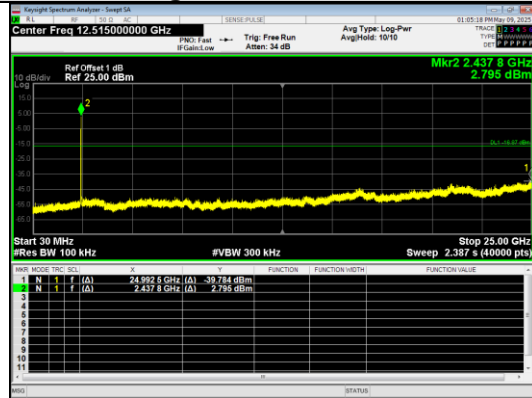
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



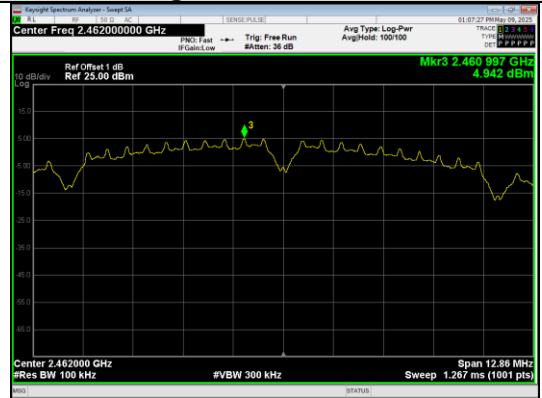
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



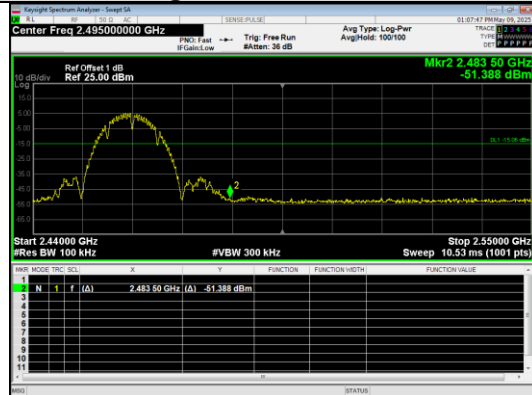
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



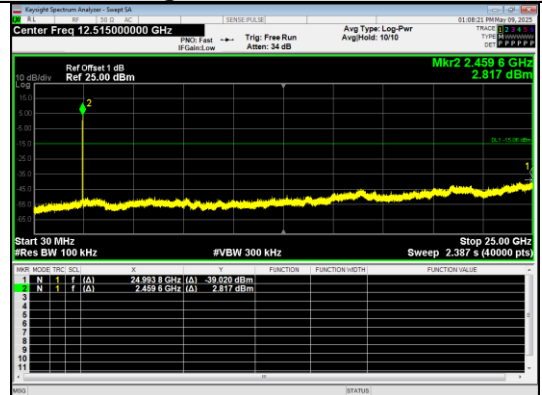
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



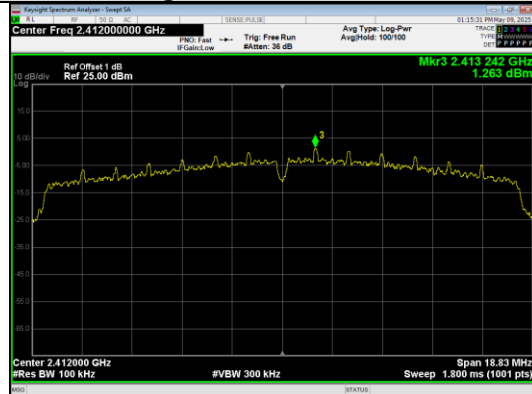
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



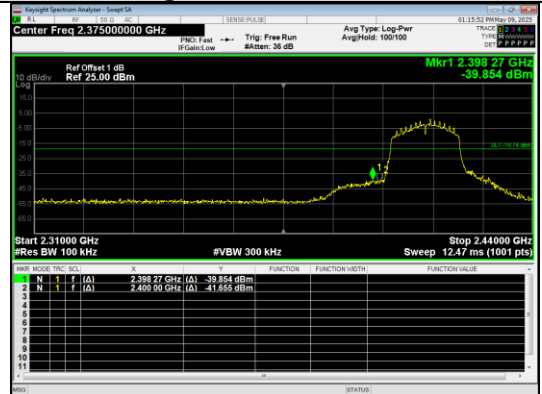
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



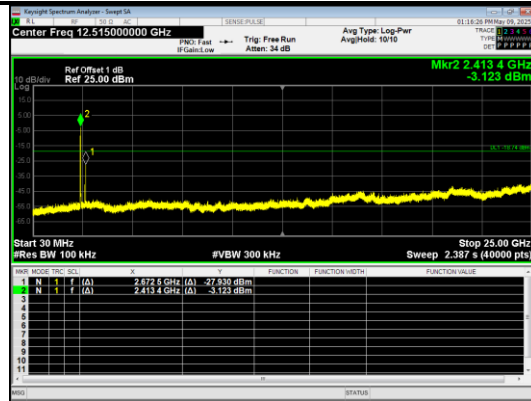
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



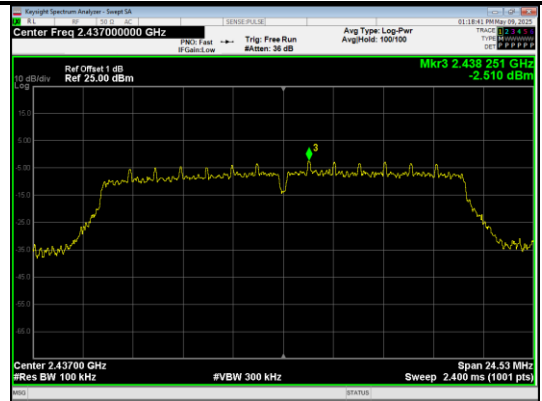
In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



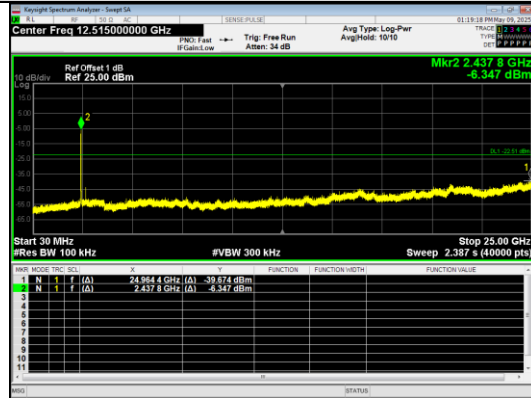
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



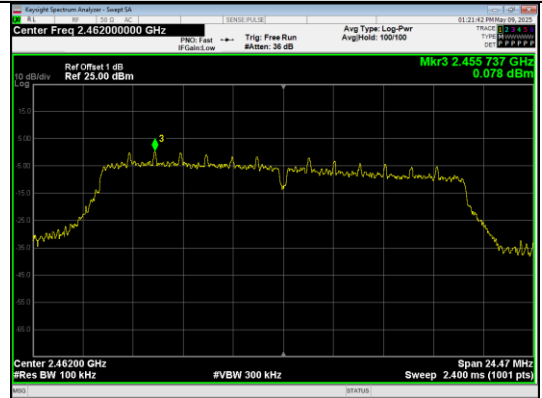
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



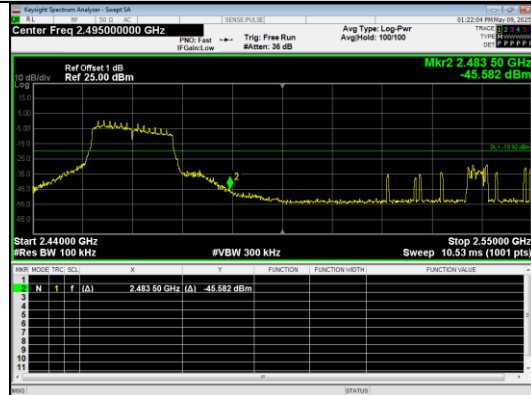
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



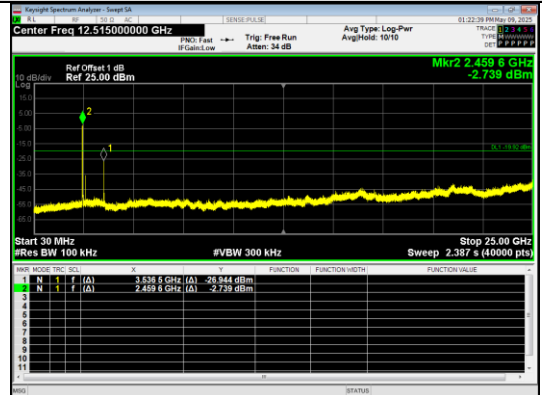
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



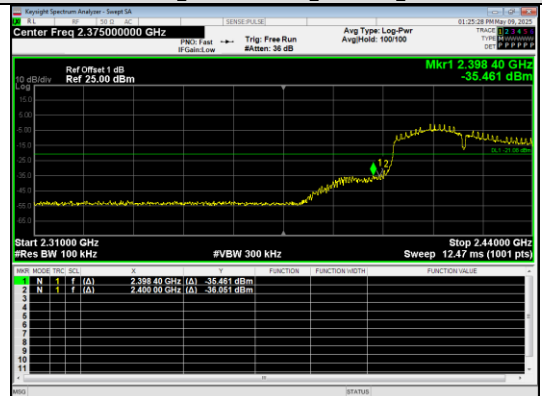
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



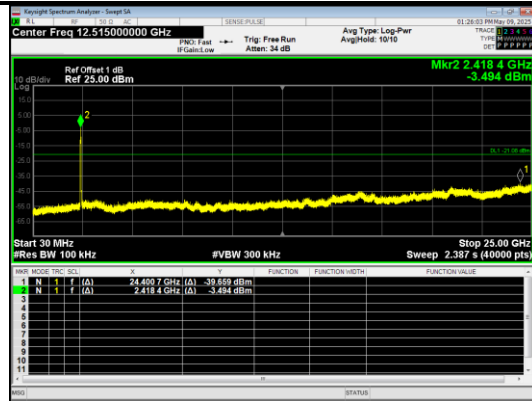
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IEEE 802.11n_Channel 11_20MHz_Antenna 0



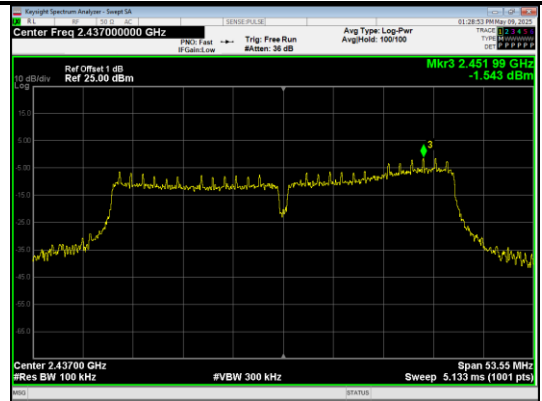
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



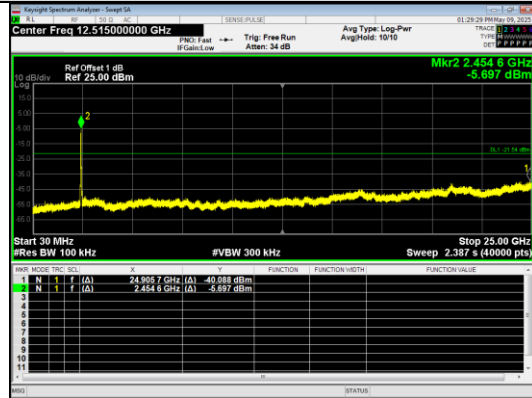
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



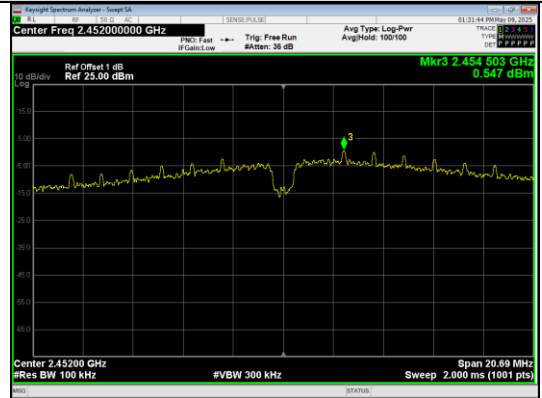
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



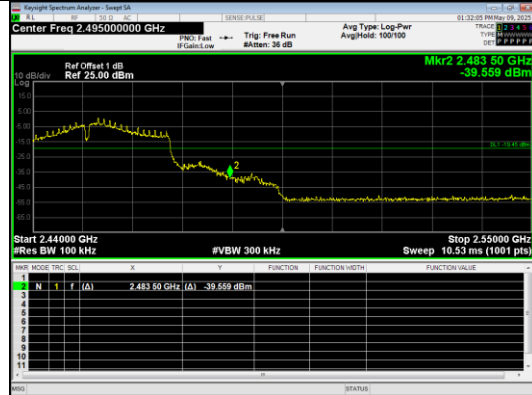
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



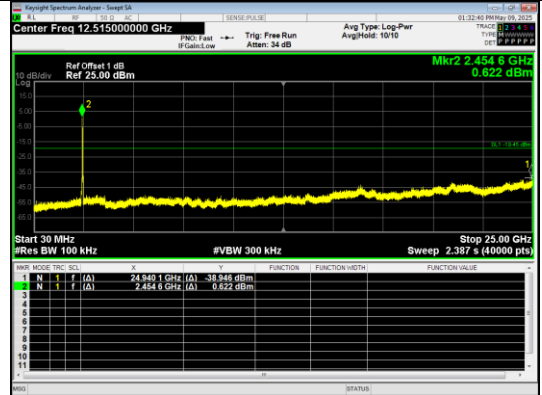
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 6_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

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