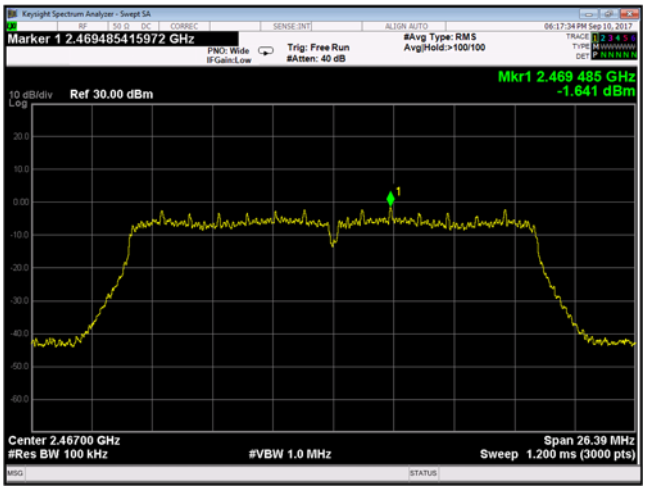
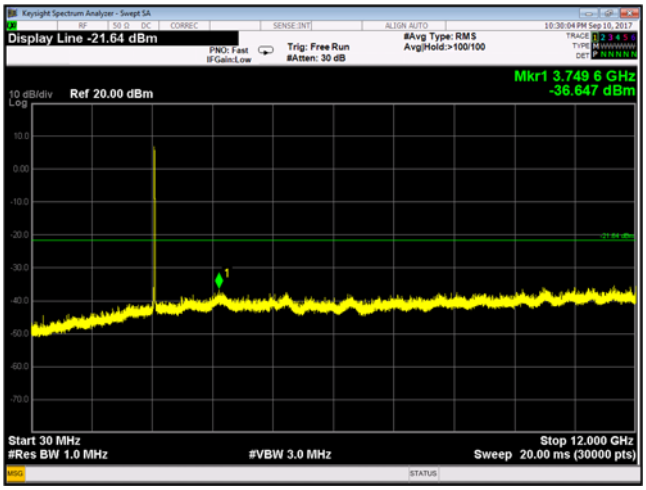
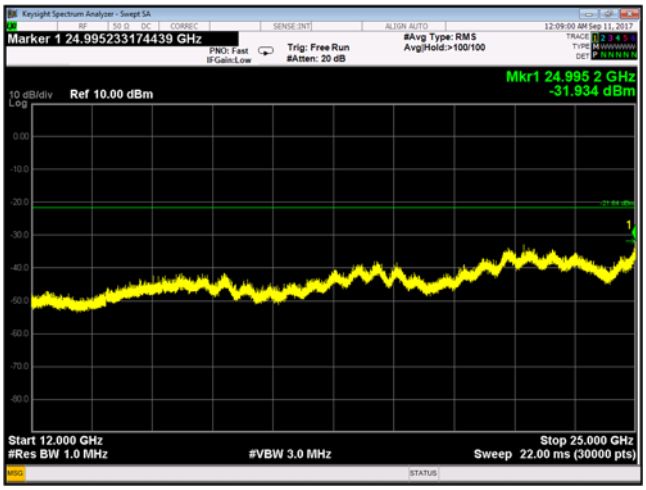


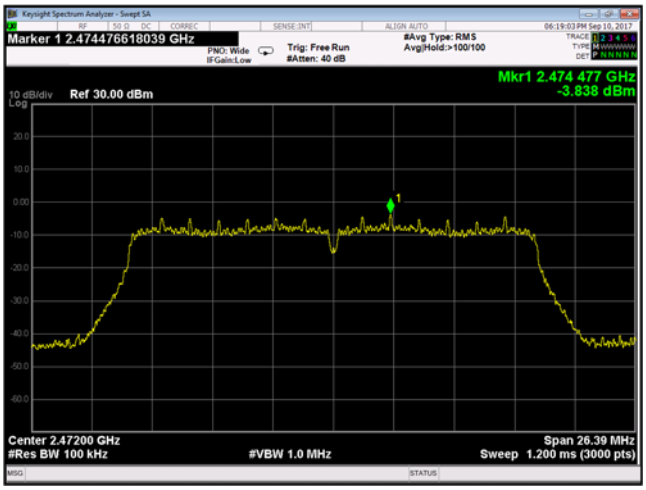
Plot 9-154 Chain A Reference Level 802.11n - Ch.12 (2467 MHz)



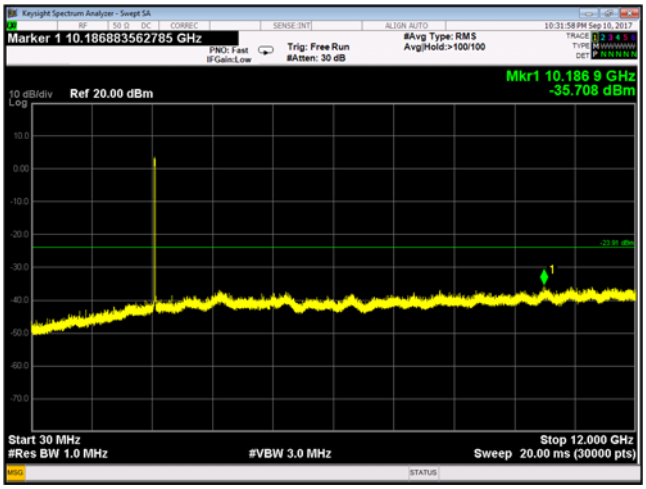
Plot 9-155 Chain A Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.12 (2467 MHz)



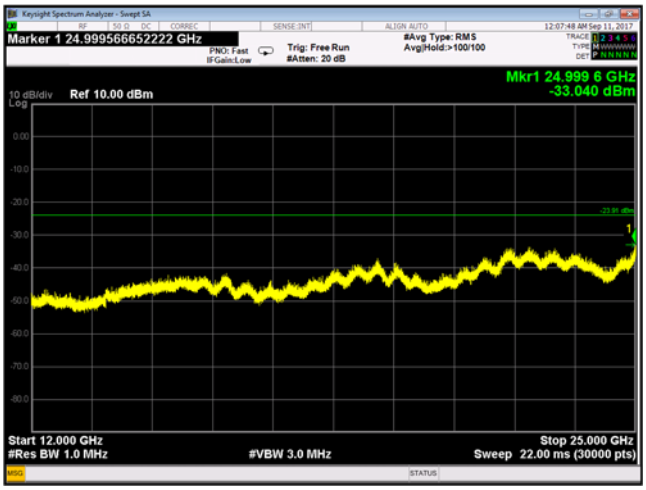
Plot 9-156 Chain A Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.12 (2467 MHz)



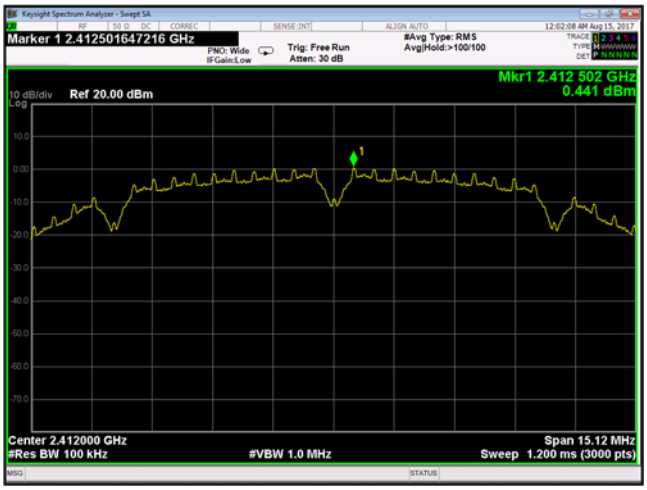
Plot 9-157 Chain A Reference Level 802.11n - Ch.13 (2472 MHz)



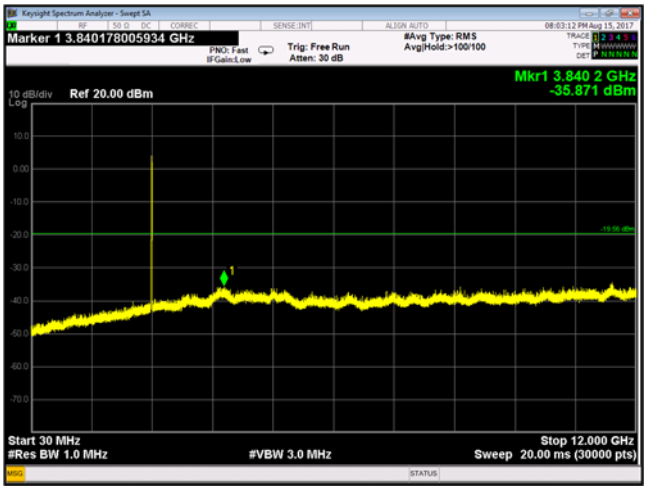
Plot 9-158 Chain A Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.13 (2472 MHz)



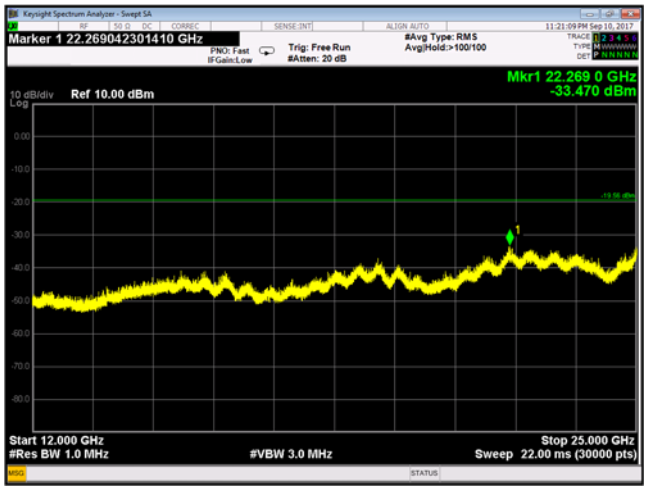
Plot 9-159 Chain A Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.13 (2472 MHz)



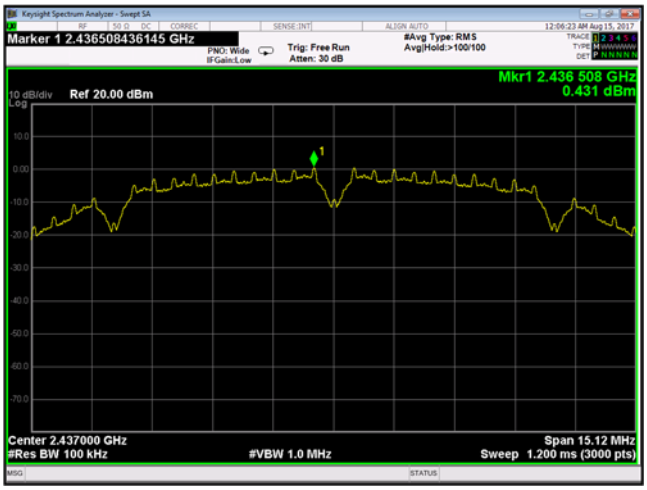
Plot 9-160 Chain B Reference Level 802.11b - Ch.1 (2412 MHz)



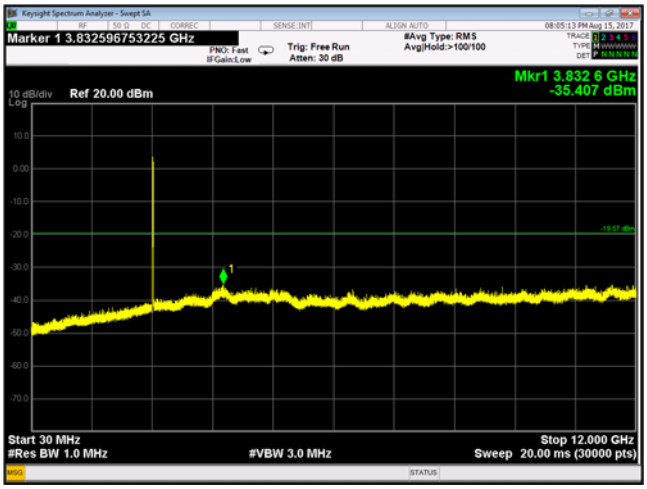
Plot 9-161 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11b - Ch.1 (2412 MHz)



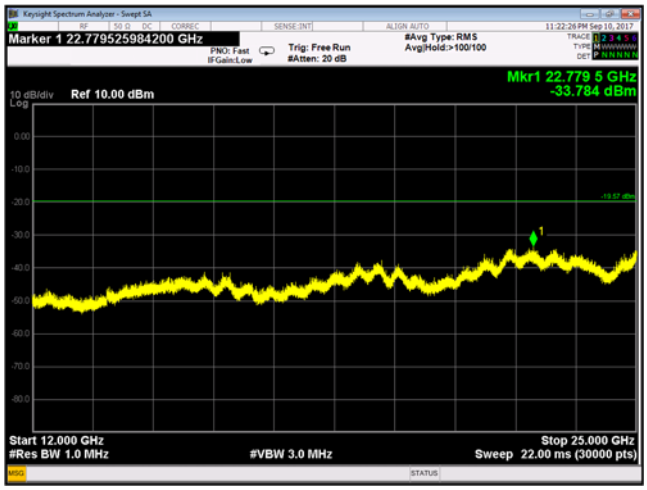
Plot 9-162 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11b - Ch.1 (2412 MHz)



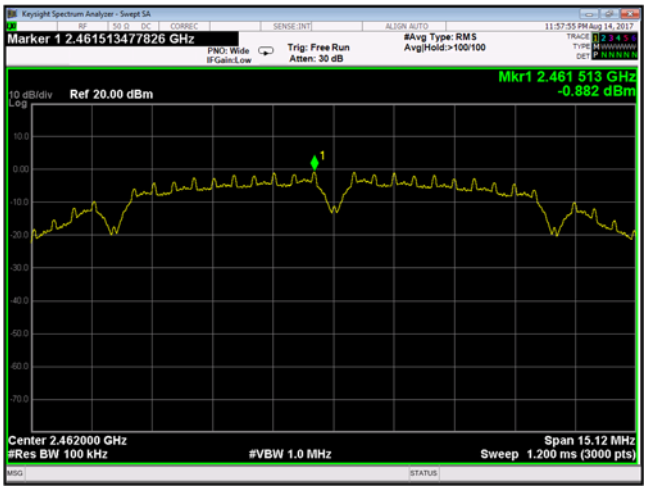
Plot 9-163 Chain B Reference Level 802.11b - Ch.6 (2437 MHz)



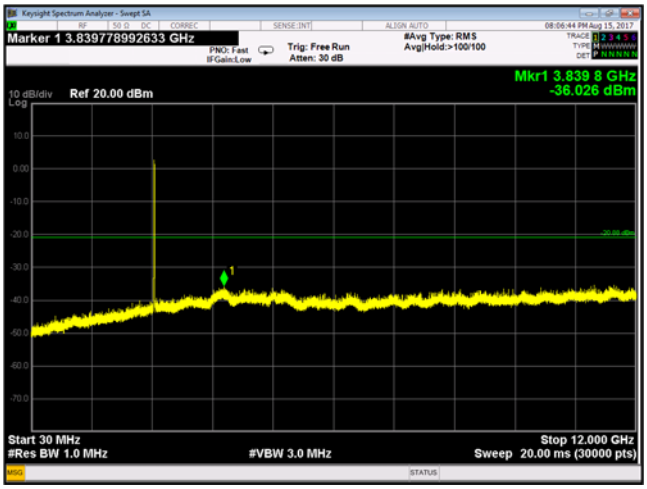
Plot 9-164 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11b - Ch.6 (2437 MHz)



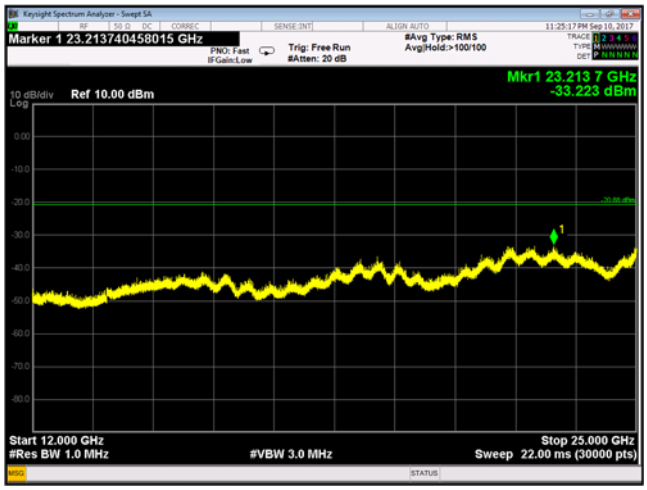
Plot 9-165 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11b - Ch.6 (2437 MHz)



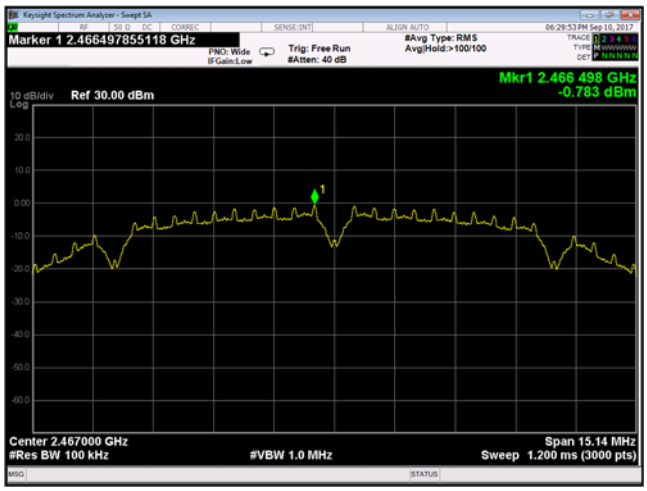
Plot 9-166 Chain B Reference Level 802.11b - Ch.11 (2462 MHz)



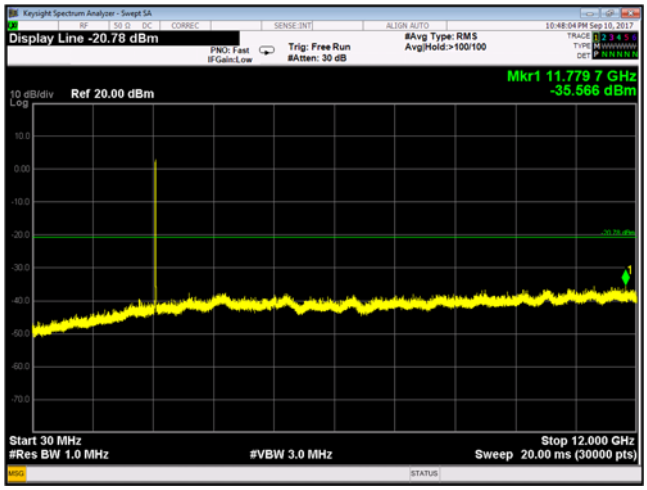
Plot 9-167 Chain B Conducted Spurious Emissions 3 0MHz - 12 GHz 802.11b - Ch.11 (2462 MHz)



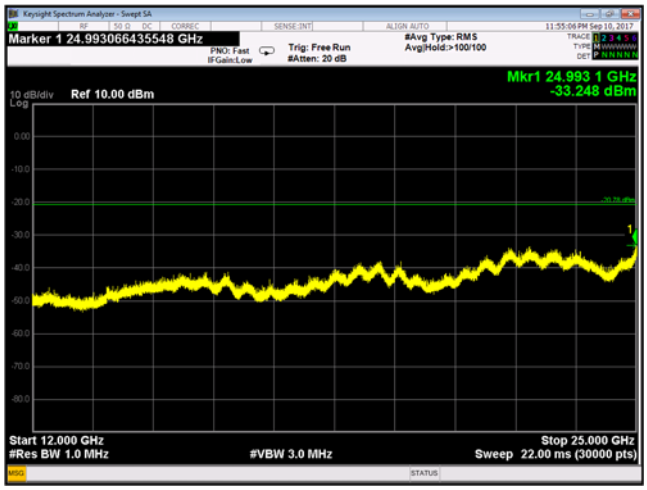
Plot 9-168 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11b - Ch.11 (2462 MHz)



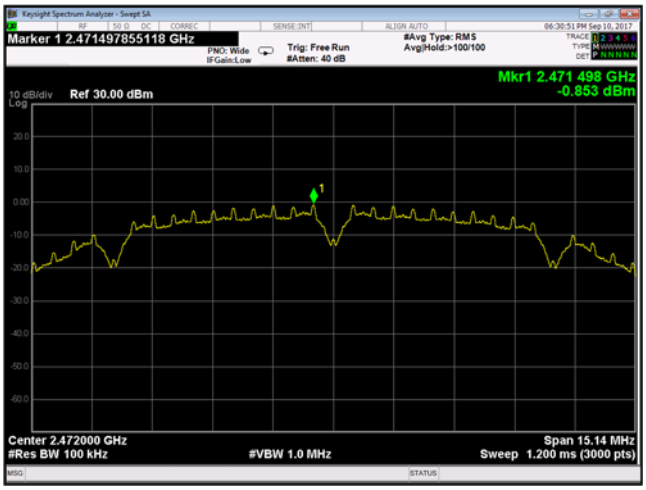
Plot 9-169 Chain B Reference Level 802.11b - Ch.12 (2467 MHz)



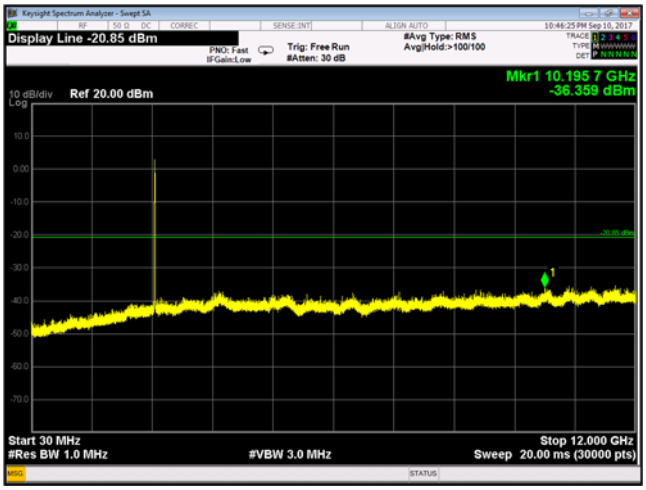
Plot 9-170 Chain B Conducted Spurious Emissions 3 0MHz - 12 GHz 802.11b - Ch.12 (2467 MHz)



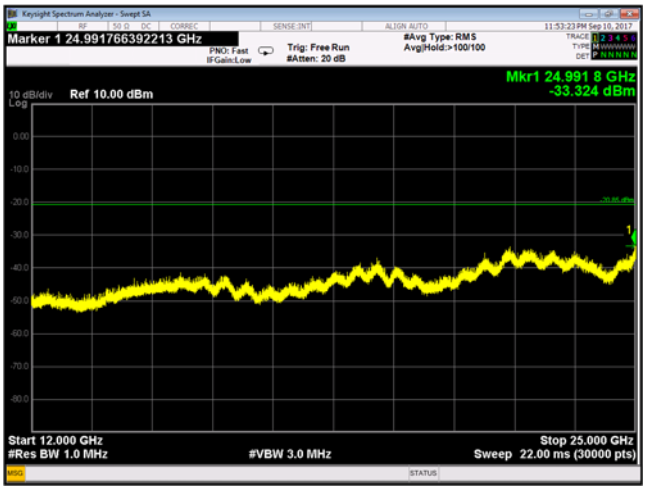
Plot 9-171 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11b - Ch.12 (2467 MHz)



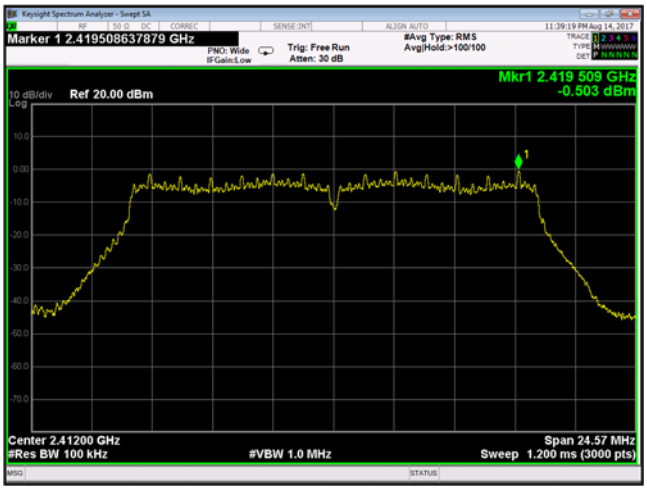
Plot 9-172 Chain B Reference Level 802.11b - Ch.13 (2472 MHz)



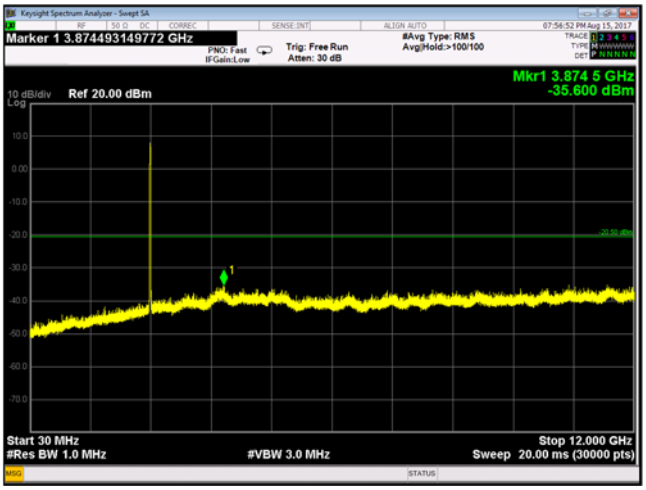
Plot 9-173 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11b - Ch.13 (2472 MHz)



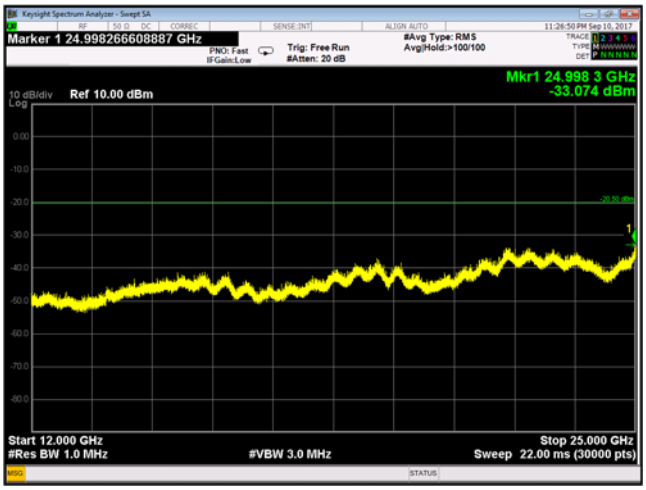
Plot 9-174 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11b - Ch.13 (2472 MHz)



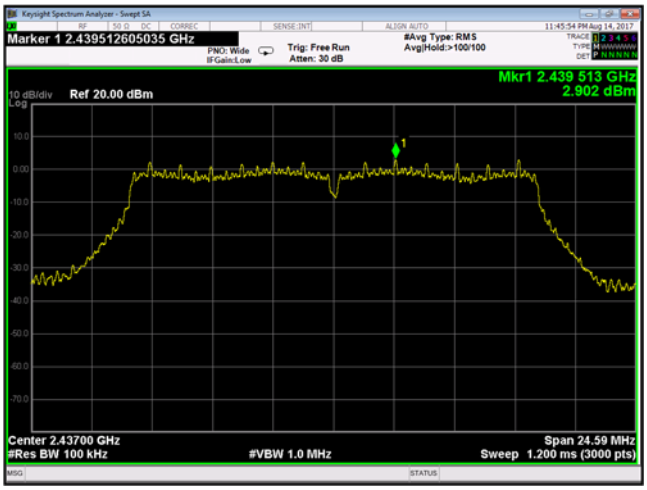
Plot 9-175 Chain B Reference Level 802.11g - Ch.1 (2412 MHz)



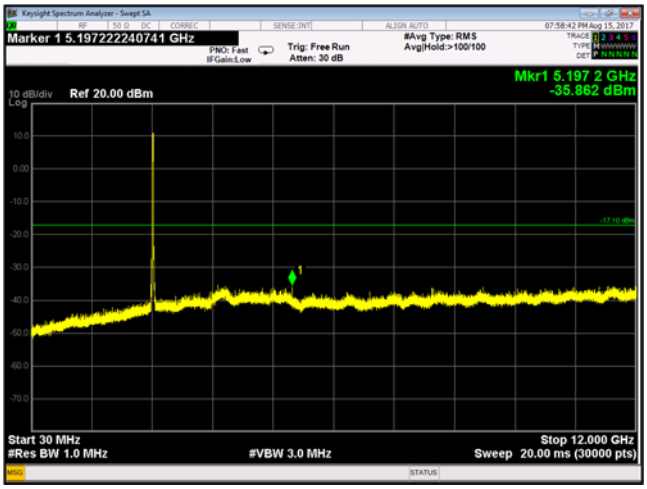
Plot 9-176 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11g - Ch.1 (2412 MHz)



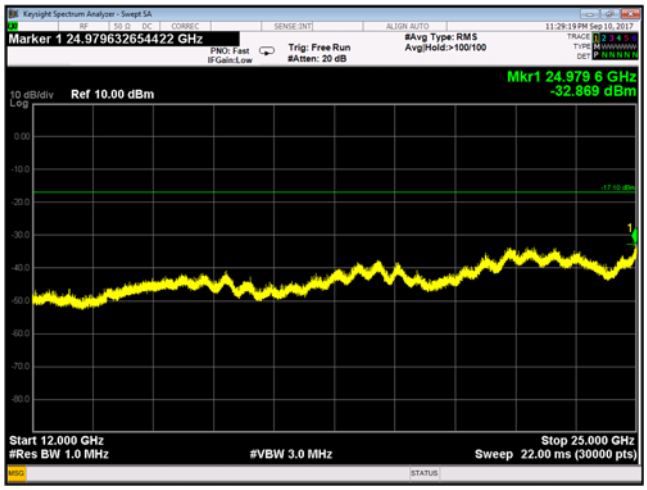
Plot 9-177 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11g - Ch.1 (2412 MHz)



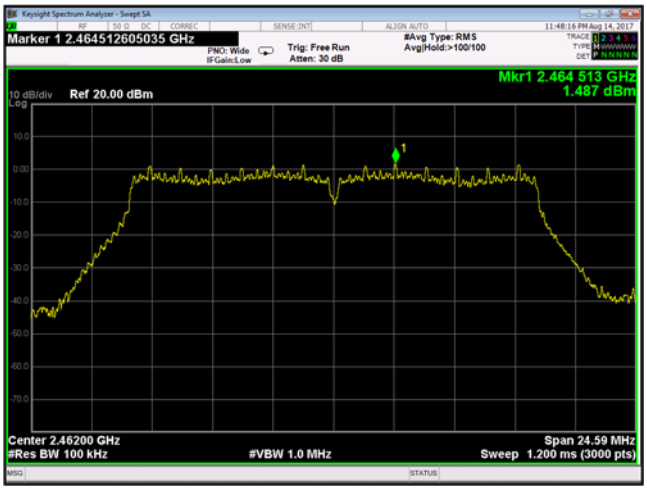
Plot 9-178 Chain B Reference Level 802.11g - Ch.6 (2437 MHz)



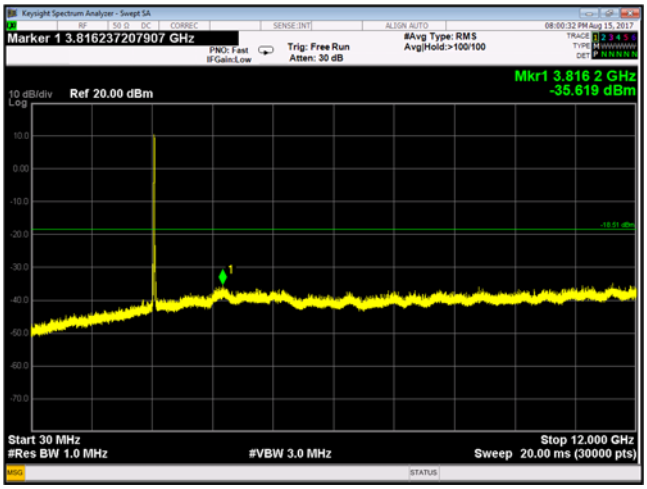
Plot 9-179 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11g - Ch.6 (2437 MHz)



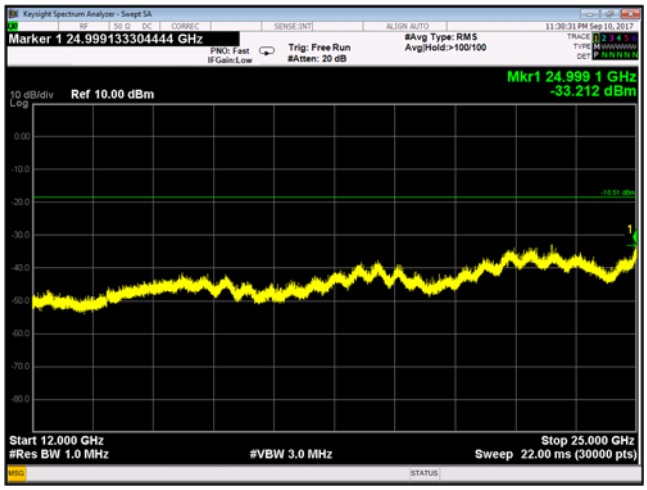
Plot 9-180 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11g - Ch.6 (2437 MHz)



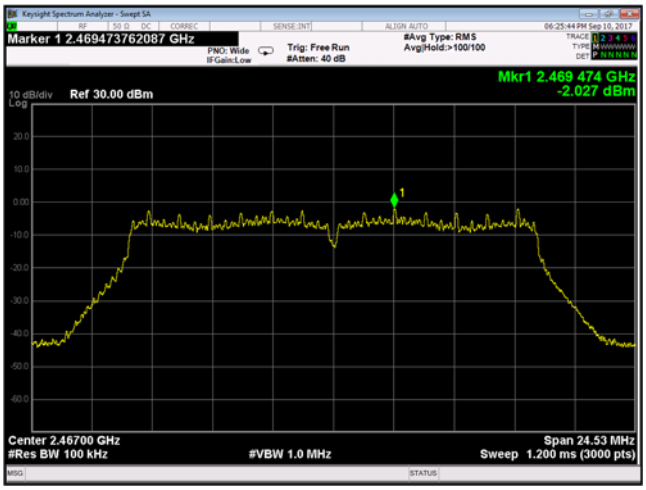
Plot 9-181 Chain B Reference Level 802.11g - Ch.11 (2462 MHz)



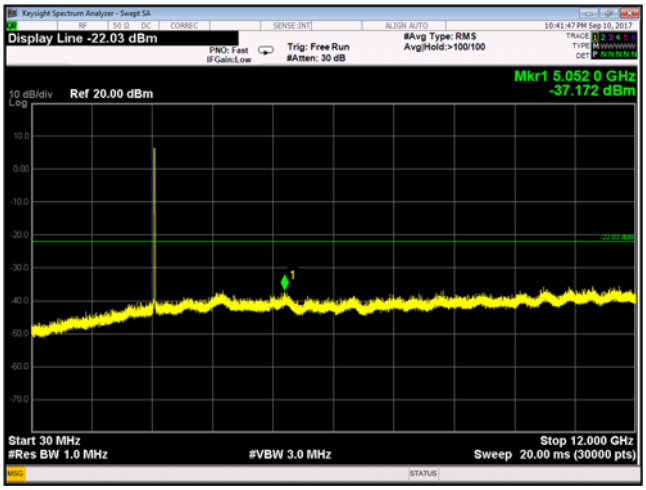
Plot 9-182 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11g - Ch.11 (2462 MHz)



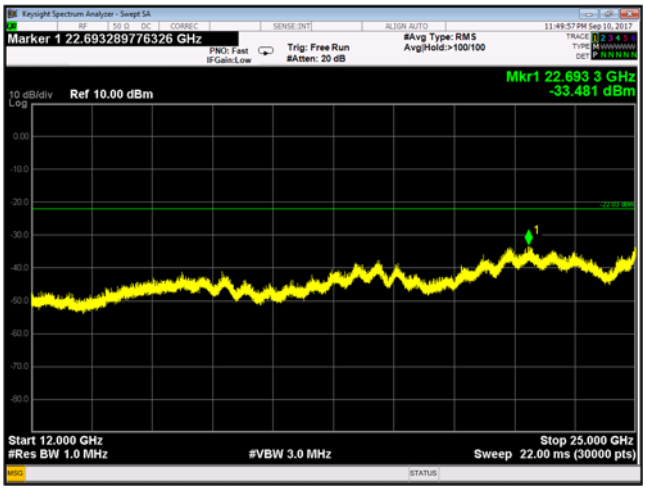
Plot 9-183 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11g - Ch.11 (2462 MHz)



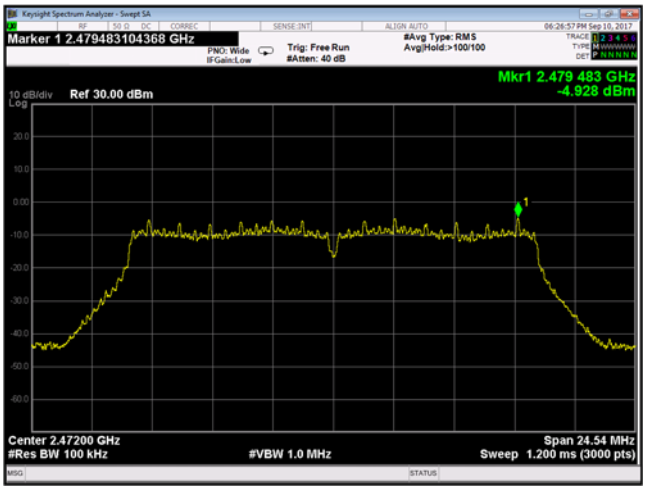
Plot 9-184 Chain B Reference Level 802.11g - Ch.12 (2467 MHz)



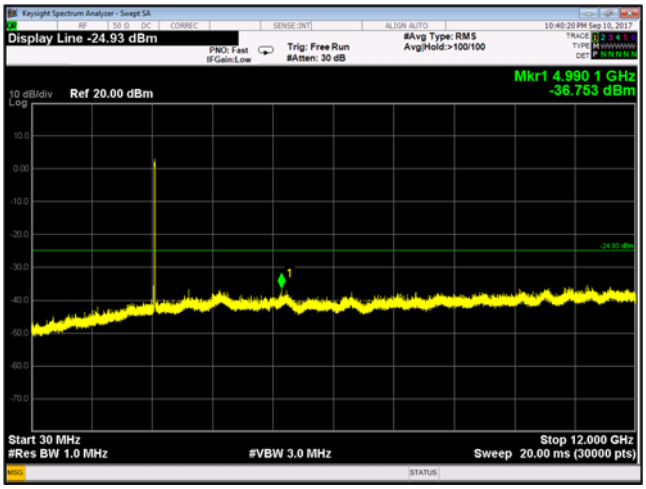
Plot 9-185 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11g - Ch.12 (2467 MHz)



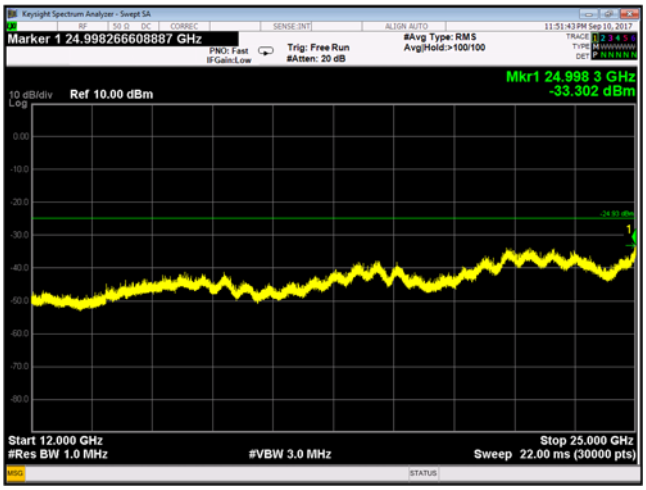
Plot 9-186 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11g - Ch.12 (2467 MHz)



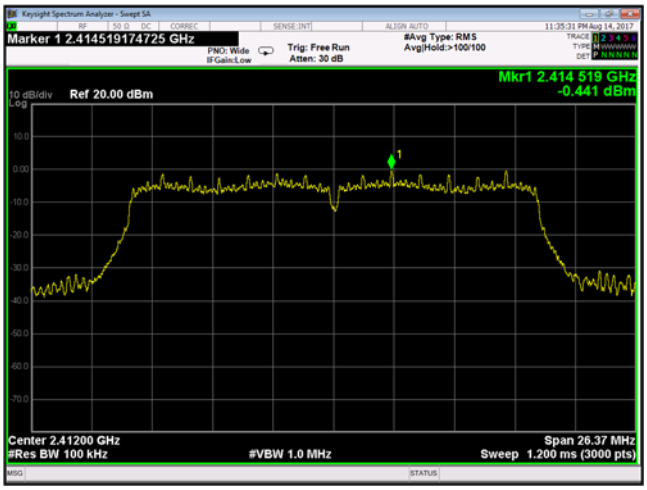
Plot 9-187 Chain B Reference Level 802.11g - Ch.13 (2472 MHz)



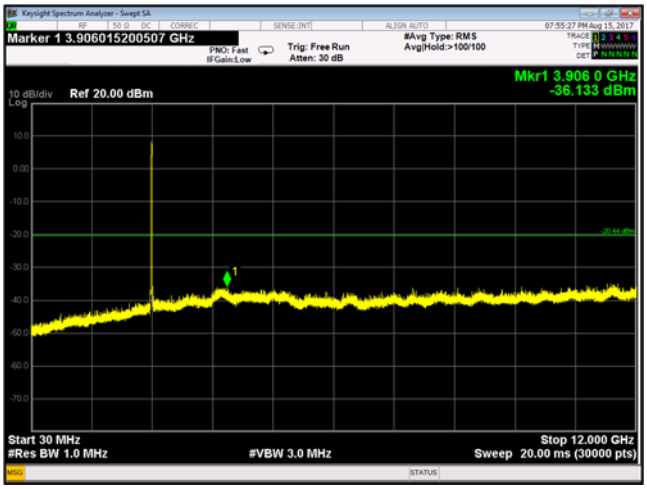
Plot 9-188 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11g - Ch.13 (2472 MHz)



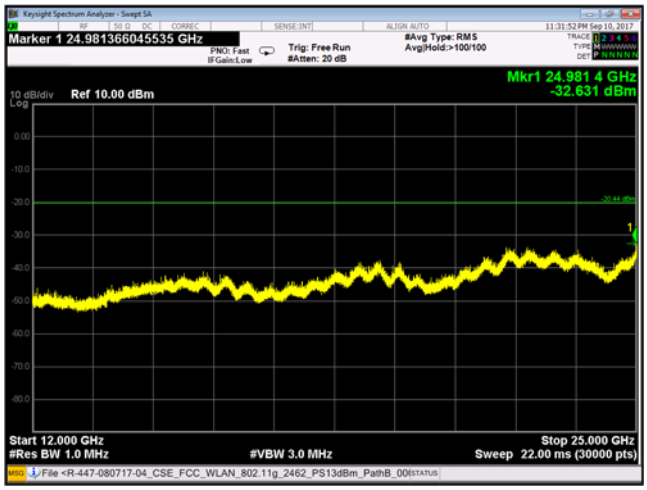
Plot 9-189 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11g - Ch.13 (2472 MHz)



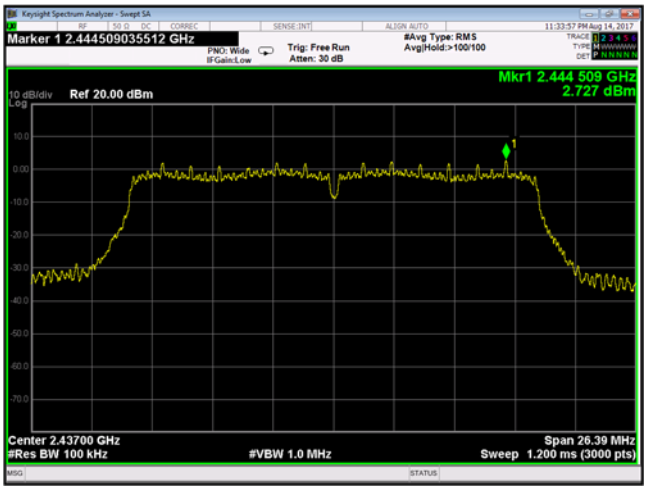
Plot 9-190 Chain B Reference Level 802.11n - Ch.1 (2412 MHz)



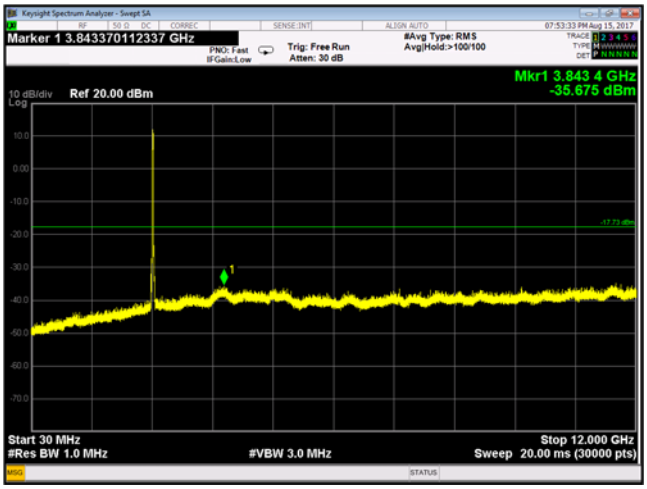
Plot 9-191 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.1 (2412 MHz)



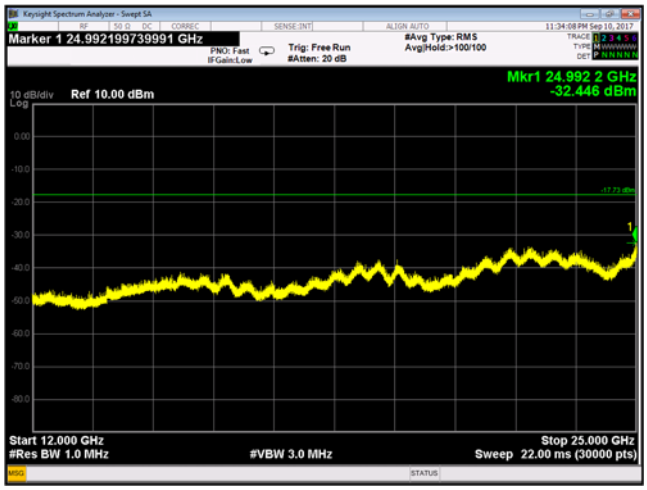
Plot 9-192 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.1 (2412 MHz)



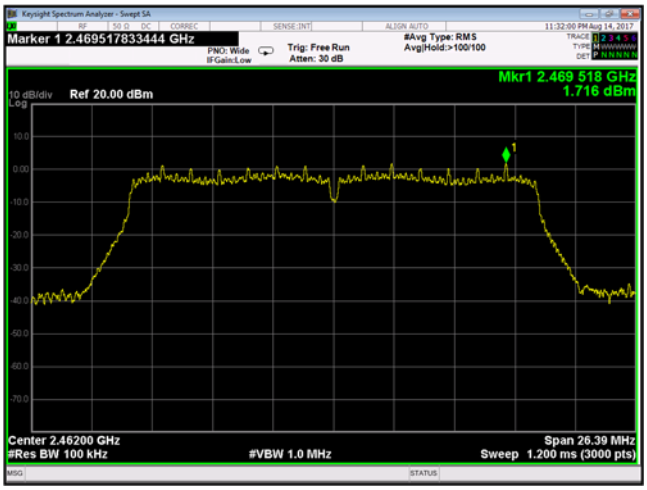
Plot 9-193 Chain B Reference Level 802.11n - Ch.6 (2437 MHz)



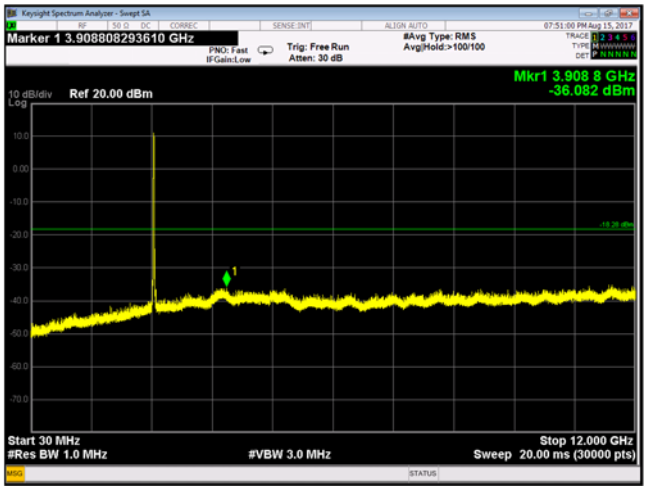
Plot 9-194 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.6 (2437 MHz)



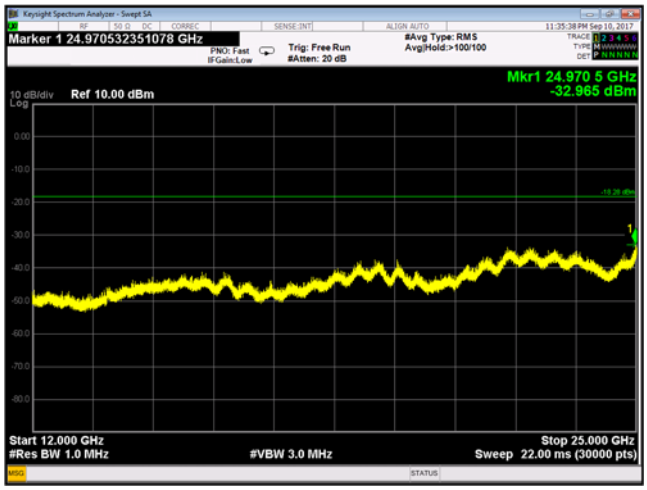
Plot 9-195 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.6 (2437 MHz)



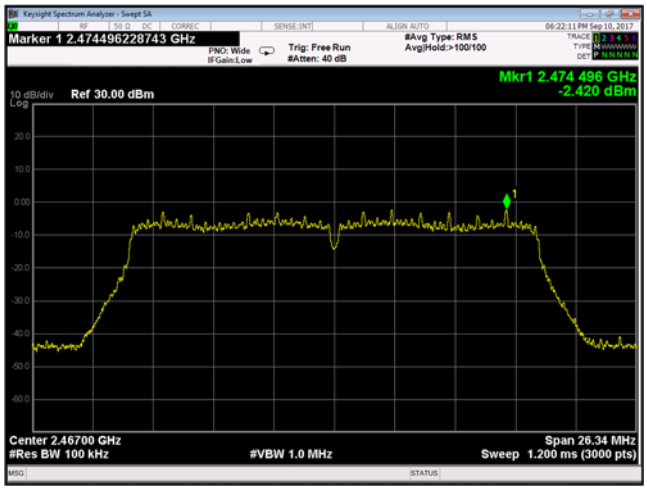
Plot 9-196 Chain B Reference Level 802.11n - Ch.11 (2462 MHz)



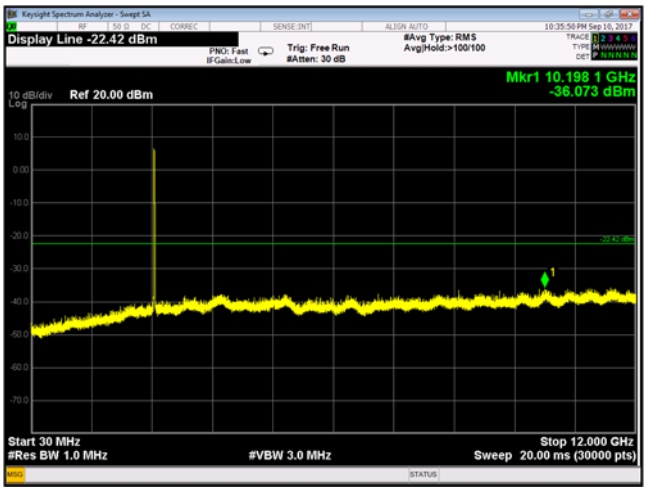
Plot 9-197 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.11 (2462 MHz)



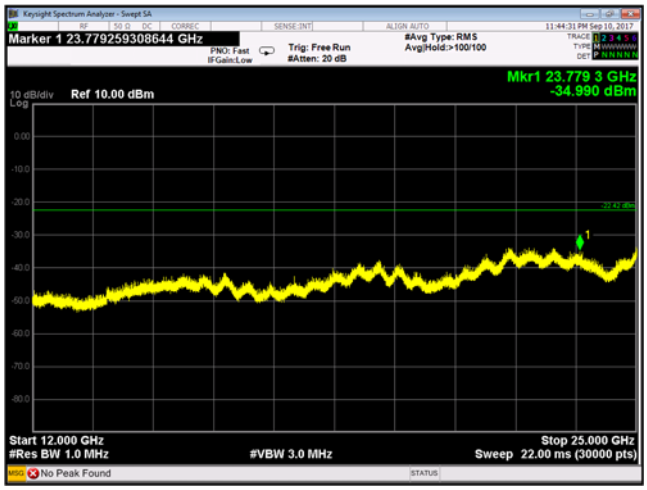
Plot 9-198 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.11 (2462 MHz)



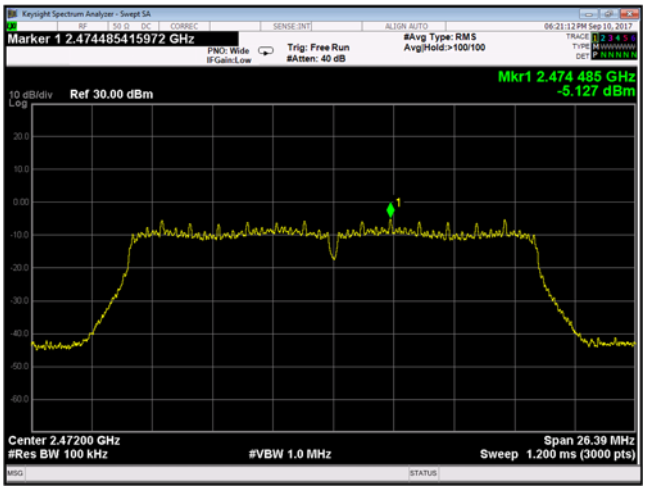
Plot 9-199 Chain B Reference Level 802.11n - Ch.12 (2467 MHz)



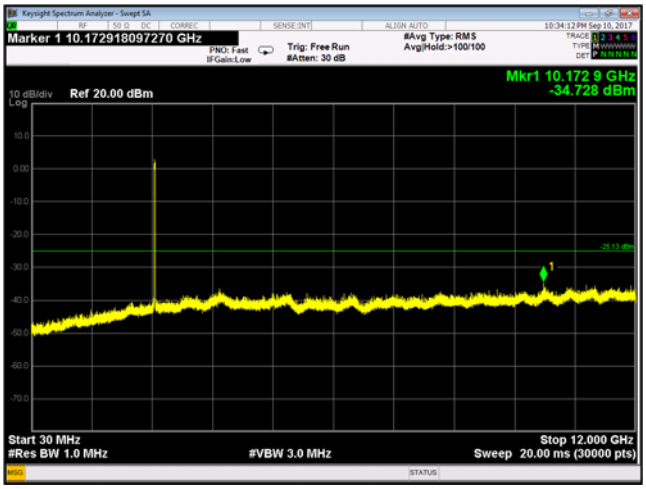
Plot 9-200 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.12 (2467 MHz)



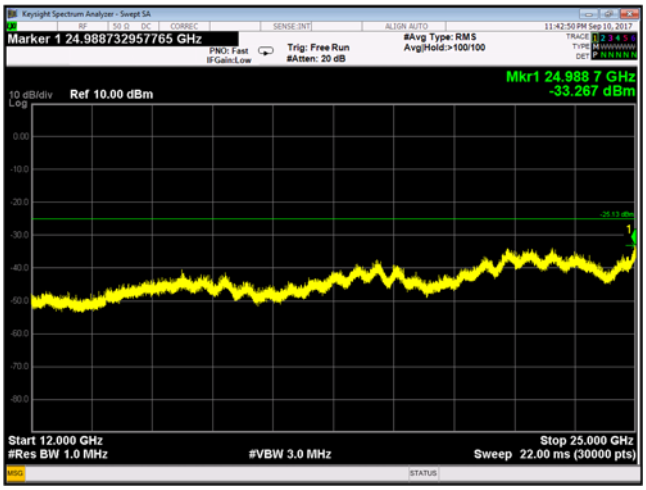
Plot 9-201 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.12 (2467 MHz)



Plot 9-202 Chain B Reference Level 802.11n - Ch.13 (2472 MHz)



Plot 9-203 Chain B Conducted Spurious Emissions 30 MHz - 12 GHz 802.11n - Ch.13 (2472 MHz)



Plot 9-204 Chain B Conducted Spurious Emissions 12 - 25 GHz 802.11n - Ch.13 (2472 MHz)

9.7 Conducted Band Edge Emissions

9.7.1 Test Requirement:

FCC CFR 47 Rule Part 15.247 (d)

ISED RSS-247 [5.5]

9.7.2 Test Method:

Measurements were performed according to the procedure defined in KDB 558074 - Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 V04 and ANSI C63.10 2013.

Spectrum analyzer settings:

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation
RBW = 100 kHz
VBW = 300 kHz
Sweep = auto couple
Detector function = Peak
Trace = Max Hold
The trace was allowed to stabilize. The marker was set on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. The delta marker function was set and the marker-to-peak function moved to the peak of the in-band emission.

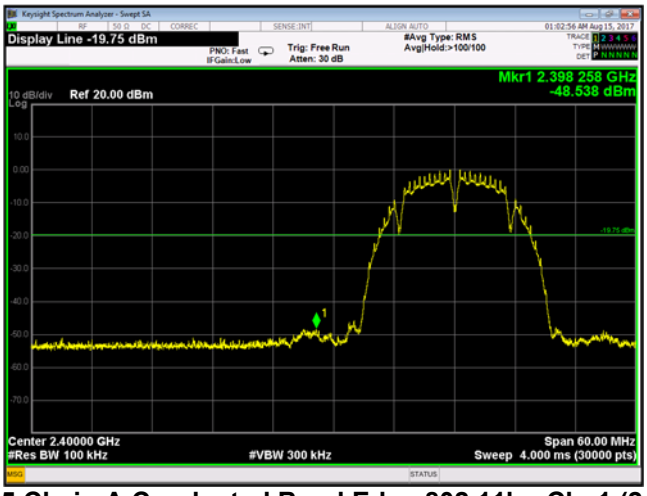
9.7.3 Limits:

All spurious emissions at least 20 dBc.

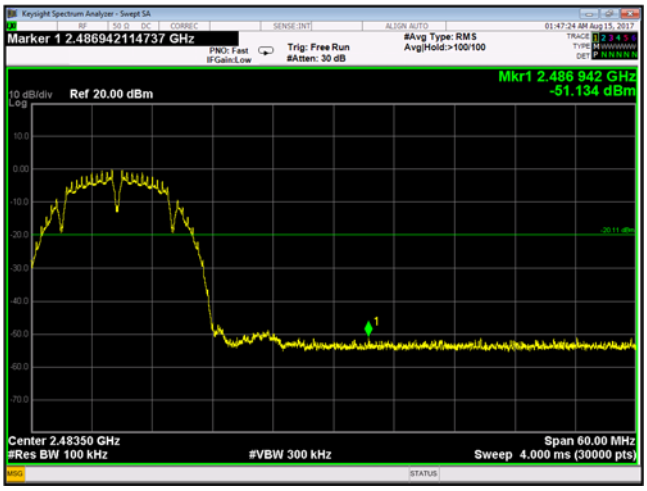
9.7.4 Test Result:

Pass.

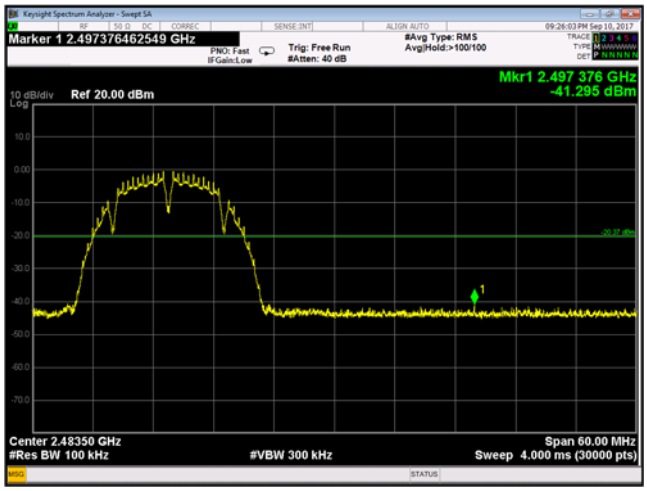
9.7.5 Test Data:



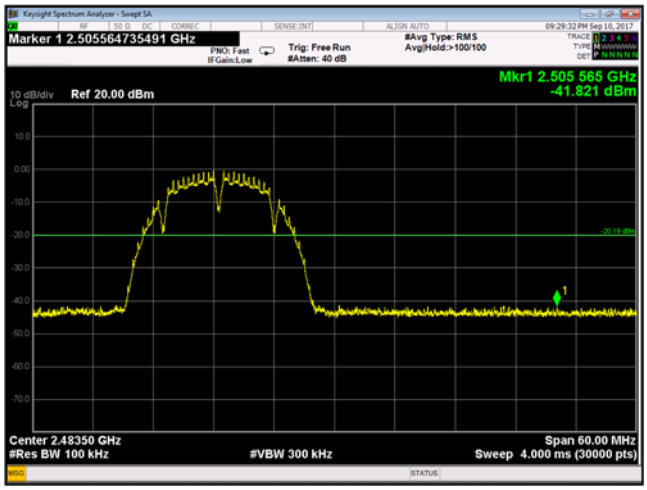
Plot 9-205 Chain A Conducted Band Edge 802.11b - Ch. 1 (2412 MHz)



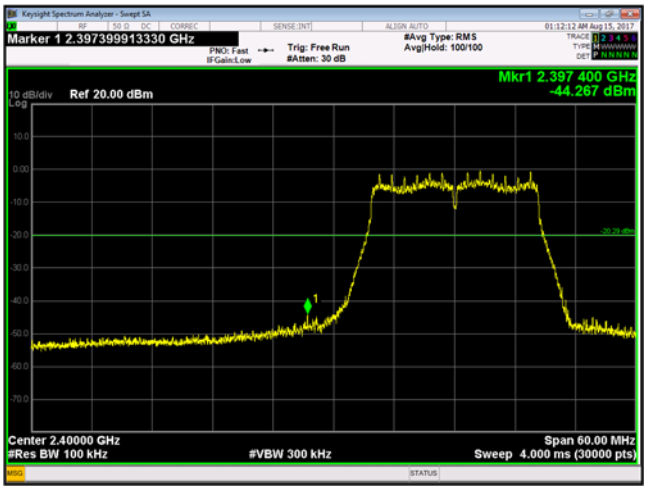
Plot 9-206 Chain A Conducted Band Edge 802.11b - Ch. 11 (2462 MHz)



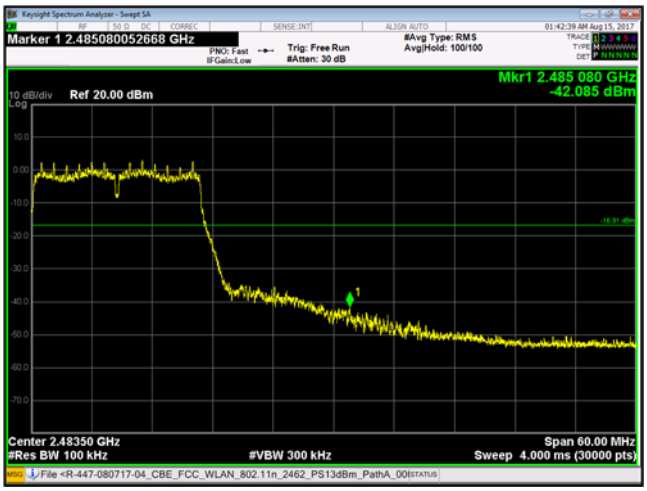
Plot 9-207 Chain A Conducted Band Edge 802.11b - Ch. 12 (2467 MHz)



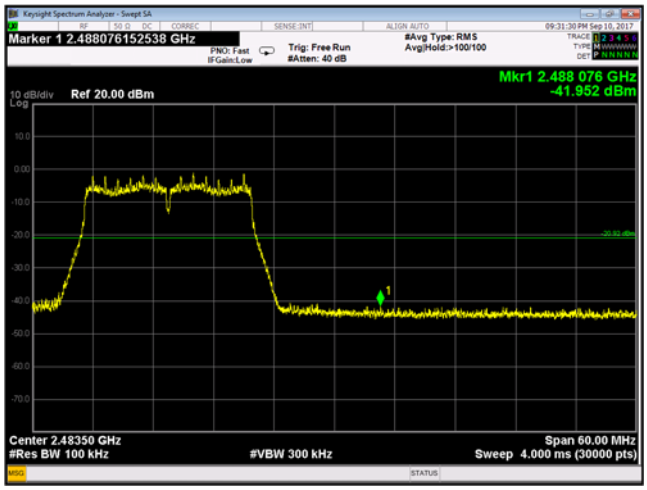
Plot 9-208 Chain A Conducted Band Edge 802.11b - Ch. 13 (2472 MHz)



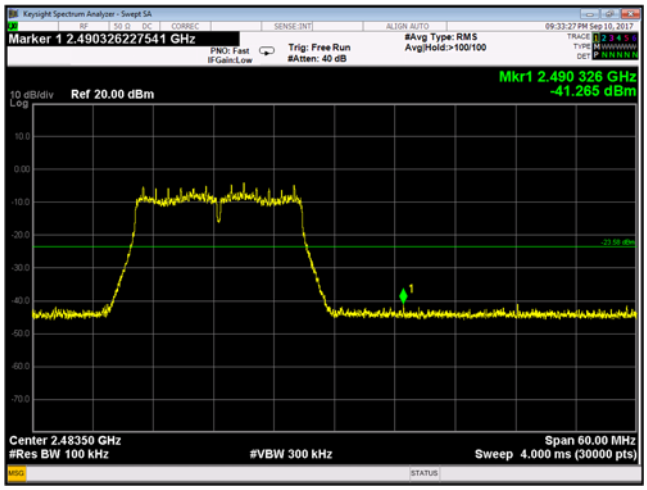
Plot 9-209 Chain A Conducted Band Edge 802.11g - Ch. 1 (2412 MHz)



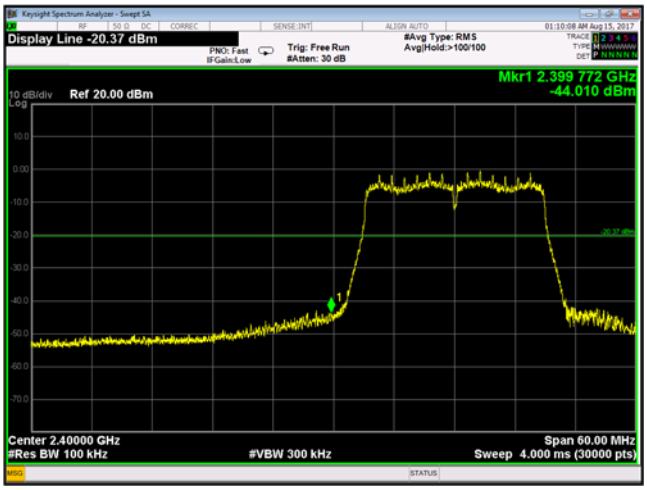
Plot 9-210 Chain A Conducted Band Edge 802.11g - Ch. 11 (2462 MHz)



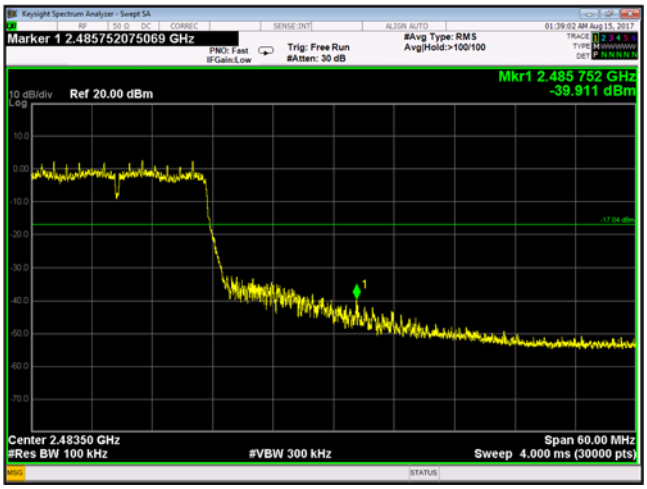
Plot 9-211 Chain A Conducted Band Edge 802.11g - Ch. 12 (2467 MHz)



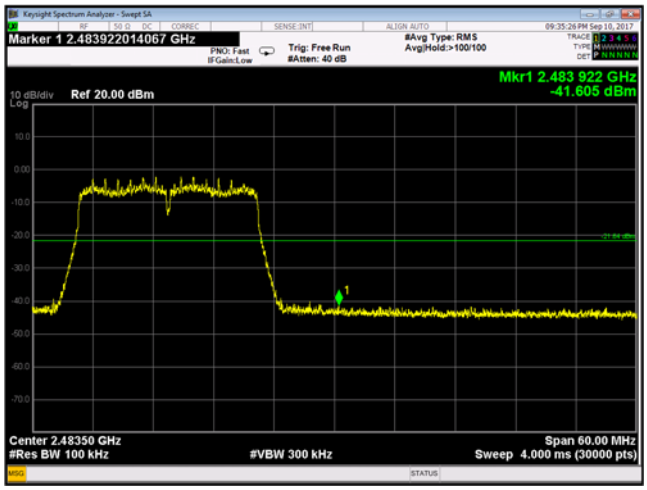
Plot 9-212 Chain A Conducted Band Edge 802.11g - Ch. 13 (2472 MHz)



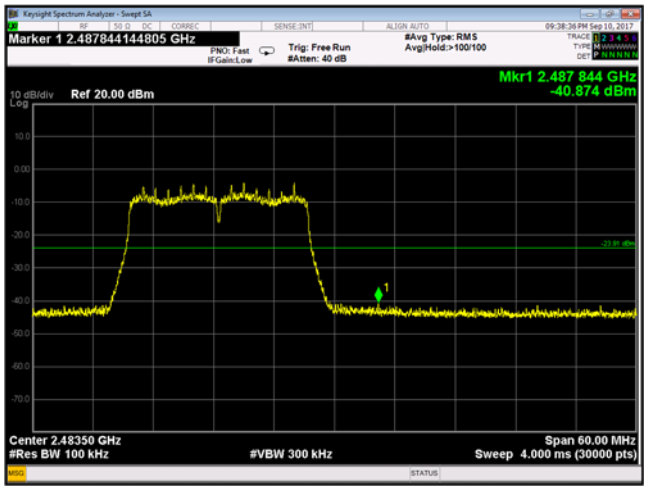
Plot 9-213 Chain A Conducted Band Edge 802.11n - Ch. 1 (2412 MHz)



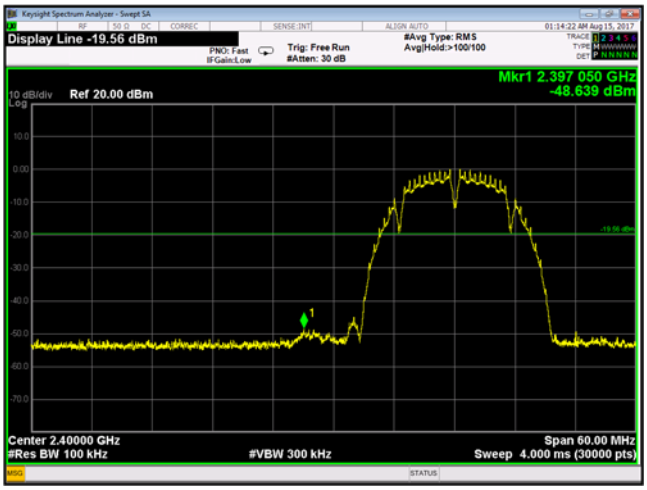
Plot 9-214 Chain A Conducted Band Edge 802.11n - Ch. 11 (2462 MHz)



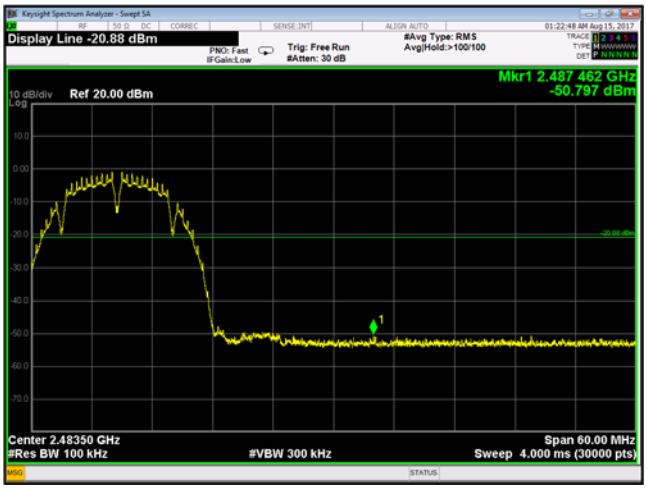
Plot 9-215 Chain A Conducted Band Edge 802.11n - Ch. 12 (2467 MHz)



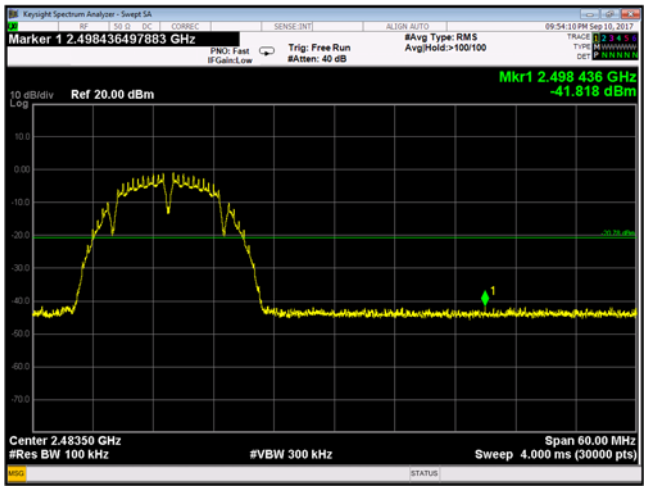
Plot 9-216 Chain A Conducted Band Edge 802.11n - Ch. 13 (2472 MHz)



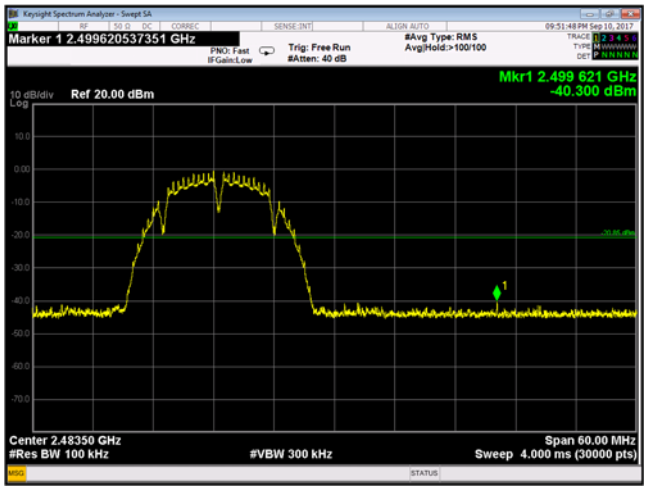
Plot 9-217 Chain B Conducted Band Edge 802.11b - Ch. 1 (2412 MHz)



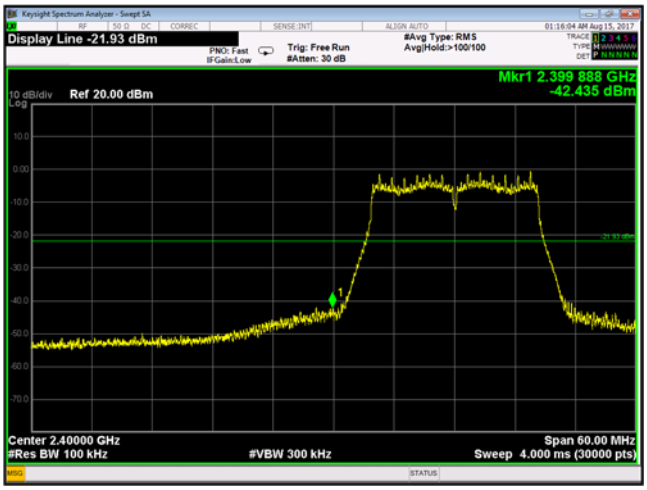
Plot 9-218 Chain B Conducted Band Edge 802.11b - Ch. 11 (2462 MHz)



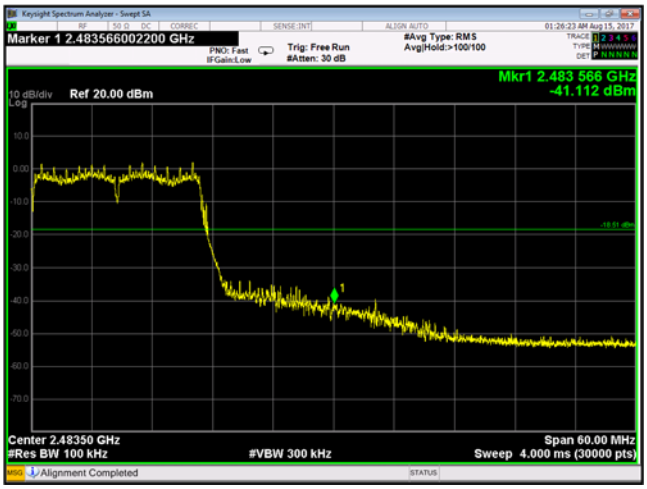
Plot 9-219 Chain B Conducted Band Edge 802.11b - Ch. 12 (2467 MHz)



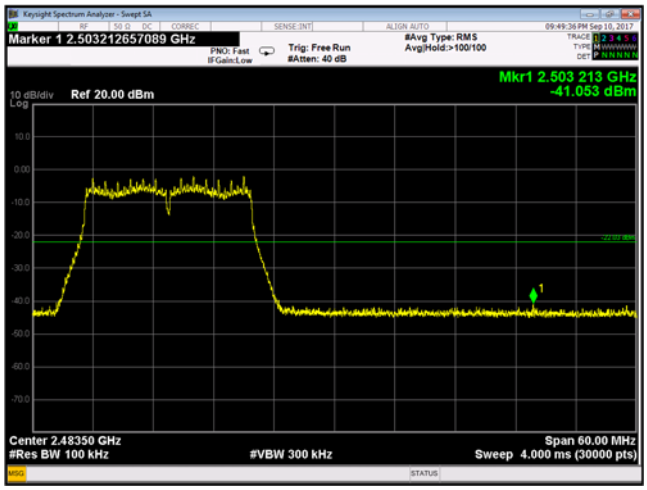
Plot 9-220 Chain B Conducted Band Edge 802.11b - Ch. 13 (2472 MHz)



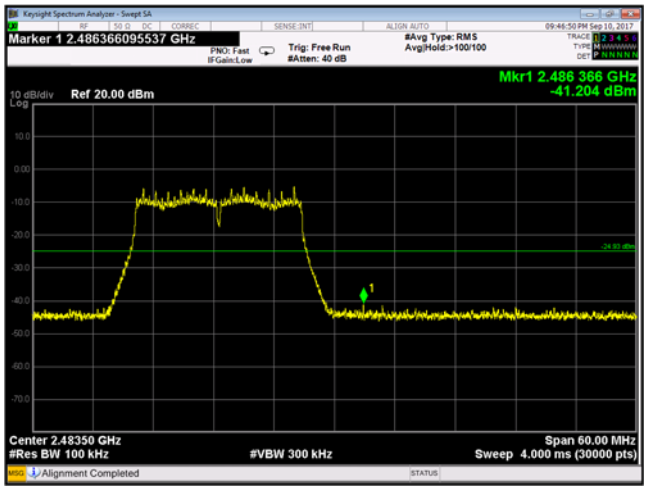
Plot 9-221 Chain B Conducted Band Edge 802.11g - Ch. 1 (2412 MHz)



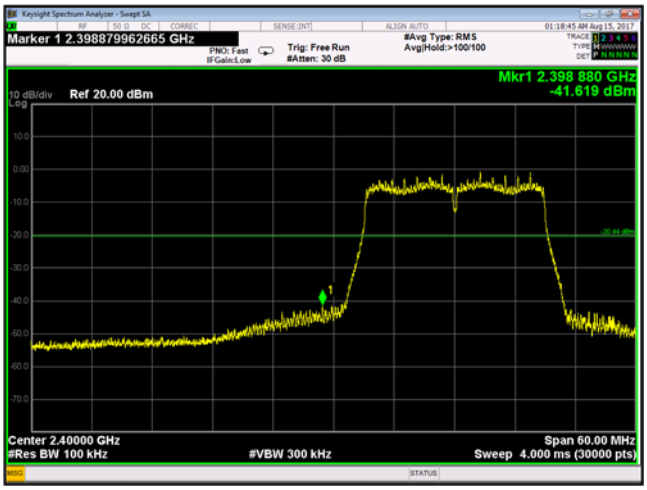
Plot 9-222 Chain B Conducted Band Edge 802.11g - Ch. 11 (2462 MHz)



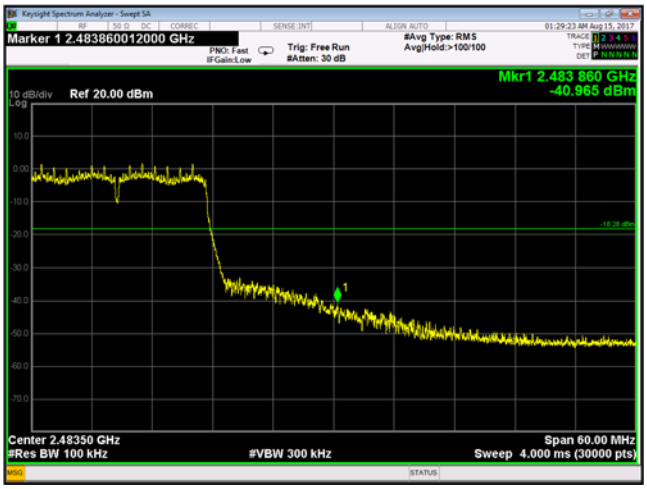
Plot 9-223 Chain B Conducted Band Edge 802.11g - Ch. 12 (2467 MHz)



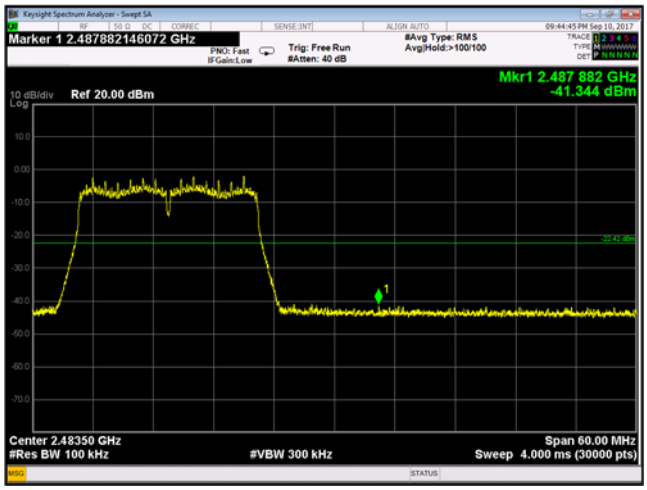
Plot 9-224 Chain B Conducted Band Edge 802.11g - Ch. 13 (2472 MHz)



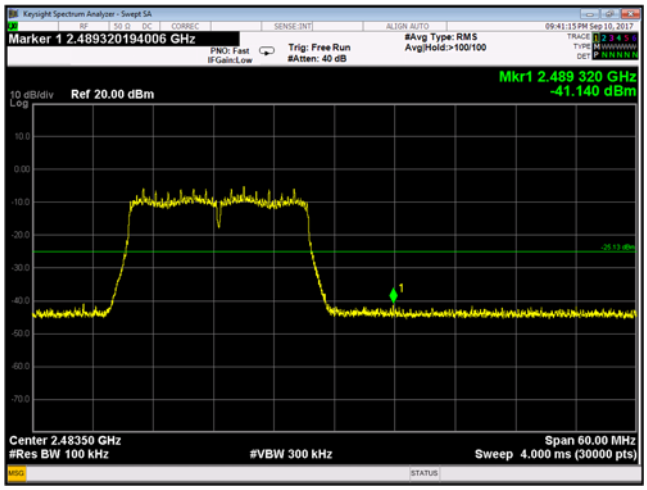
Plot 9-225 Chain B Conducted Band Edge 802.11n - Ch. 1 (2412 MHz)



Plot 9-226 Chain B Conducted Band Edge 802.11n - Ch. 11 (2462 MHz)



Plot 9-227 Chain B Conducted Band Edge 802.11n - Ch. 12 (2467 MHz)



Plot 9-228 Chain B Conducted Band Edge 802.11n - Ch. 13 (2472 MHz)

9.8 Radiated Spurious and Band Edge Emissions

9.8.1 Test Requirement:

FCC CFR 47 Rule Part 15.247 (d)
ISED RSS-247 [5.5] and RSS GEN [8.9]

9.8.2 Test Method:

Measurements were performed according to the procedure defined in KDB 558074 - Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 V04 and ANSI C63.10: 2013.

Radiated spurious measurements are made from 30MHz to the 10th harmonic of the fundamental frequency of the transmitter. Measurements below 30MHz were not performed since the radio circuitry of the EUT does not contain clocks below 30MHz.The limit for radiated spurious emissions is per 15.209 and RSS-247 [5.5]. Additionally, emissions found in the restricted bands as listed in 15.205 were tested for compliance per limits in 15.209 and RSS-Gen.

The EUT was tested near the low, middle and high channels of operation in each sub band. Guidelines in ANSI C63.10:2013 were followed with respect to maximizing the emissions.

A pre-amp and a high pass filter were required for this test to provide the measuring system with sufficient sensitivity. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength.

Both horizontal and vertical antenna polarizations were investigated. Worst-case maximized data for both polarizations is shown in this test report.

All tests were performed in MIMO transmission mode to measure the worst case for both antennas

Radiated Spurious Emissions

Spectrum Analyzer Settings:

30 MHz- 1 GHz:

RBW= 120 kHz
VBW ≥ 3 X RBW
Trace Mode: Peak Detector (Max Hold). Final measurements performed using QP Detector.
Span= 30 MHz- 1 GHz
Sweep time= Auto
Sweep points ≥ 2 x Span/RBW

Above 1 GHz:

RBW= 1 MHz
VBW= 3 MHz
Trace Mode: Peak Detector (Max Hold) and RMS Average Detector (Max Hold)
Span= 1- 18 GHz and 18- 26.5 GHz.
Sweep time= Auto
Sweep points ≥ 2 x Span/RBW

Final Measurements above 1 GHz

Peak Measurements

Spectrum Analyzer Settings:

RBW= 1 MHz
VBW= 3 MHz
Trace Mode: Peak Detector (Max Hold)
Span= wide enough to encompass the emission
Sweep Points ≥ 2 × Span/RBW
Sweep Time = Auto

RMS Average Measurements

Spectrum Analyzer Settings:

RBW= 1 MHz
VBW≥ 3 × RBW
Detector= RMS
Span= wide enough to encompass the emission
Sweep points≥ 2 × Span/RBW
Sweep time = auto
Trace= Average at least 100 traces
Trace Averaging Type= power (RMS)
The duty cycle correction factor is added to the emission level.

Restricted Band-Edge Emissions
Peak Measurements
Spectrum Analyzer Settings:
RBW= 1 MHz
VBW= 3 MHz
Trace Mode: Peak Detector (Max Hold)
Span= 2310 – 2500 MHz
Sweep Points = 401
Sweep Time = Auto
Average Measurements (Reduced Video Bandwidth Method)
Spectrum Analyzer Settings:
RBW= 1 MHz
VBW= 2 kHz
VBW Mode = Linear
Trace Mode: Peak Detector (Max Hold)
Span= 2310 – 2500 MHz
Sweep Points = 401
Sweep Time = Auto
Sweep Count = 200

Sample Calculation:

Field Strength Level: Amplitude (Analyzer level) + AFCL (Antenna Factor and Cable losses) – Amplifier Gain = 50 dBuV + 33 dB – 25 dB = 58dBuV/m

9.8.3 Limits:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (meters)	Corrected Field Strength for 3m measurement distance (dBµV/m)
0.009-0.490	2400/F (kHz)	300	48.5- 13.8
0.490-1.705	24000/F (kHz)	30	33.8- 23.0
1.705-30	30	30	29.5
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
960-1000	500	3	54
Above 1000 (Restricted Frequency Bands)	500	3	54 (Average) 74 (Peak)

9.8.4 Test Result:

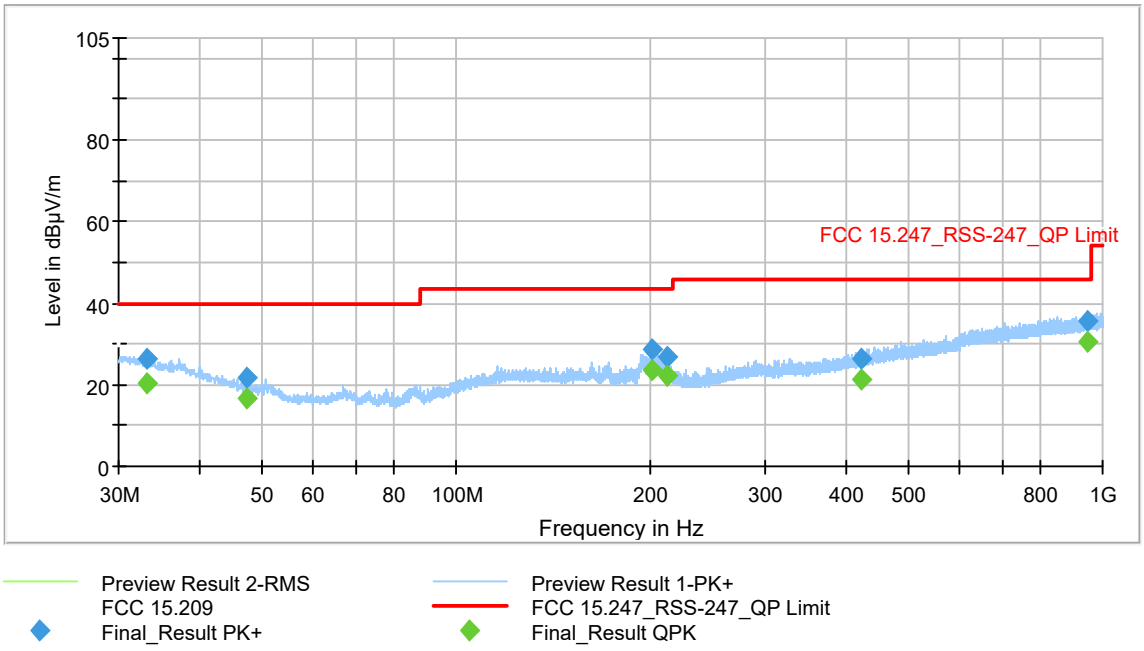
Pass.

9.8.5 Test Data:

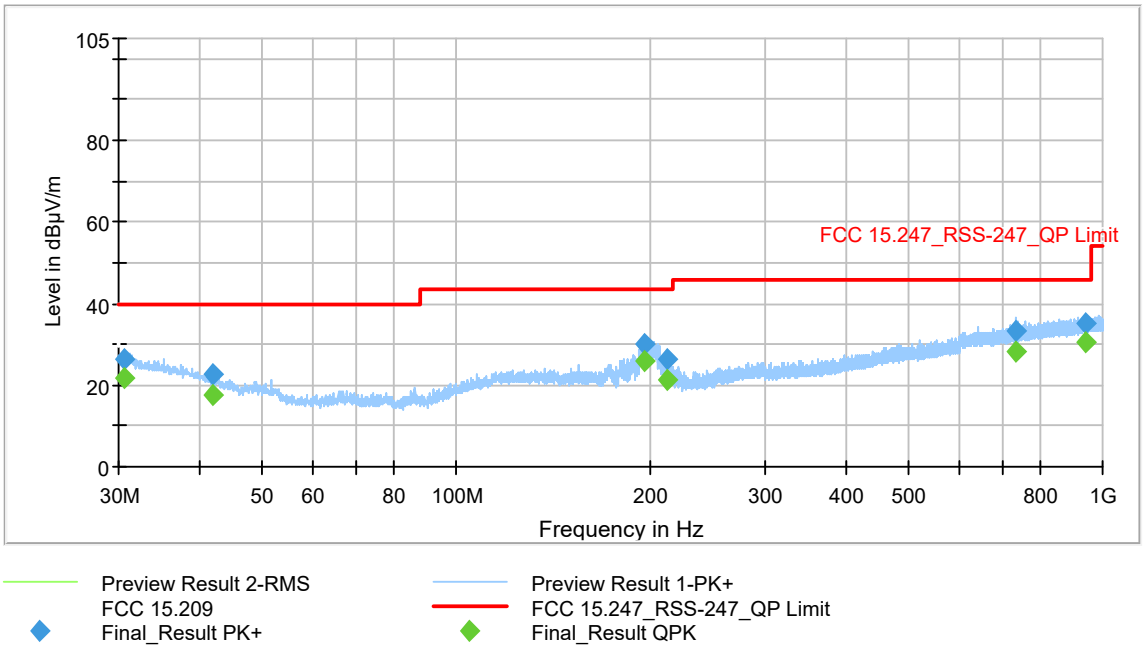
9.8.5.1 Emissions in 30 MHz- 1 GHz range

All channels and modes were tested and worst case results shown here.

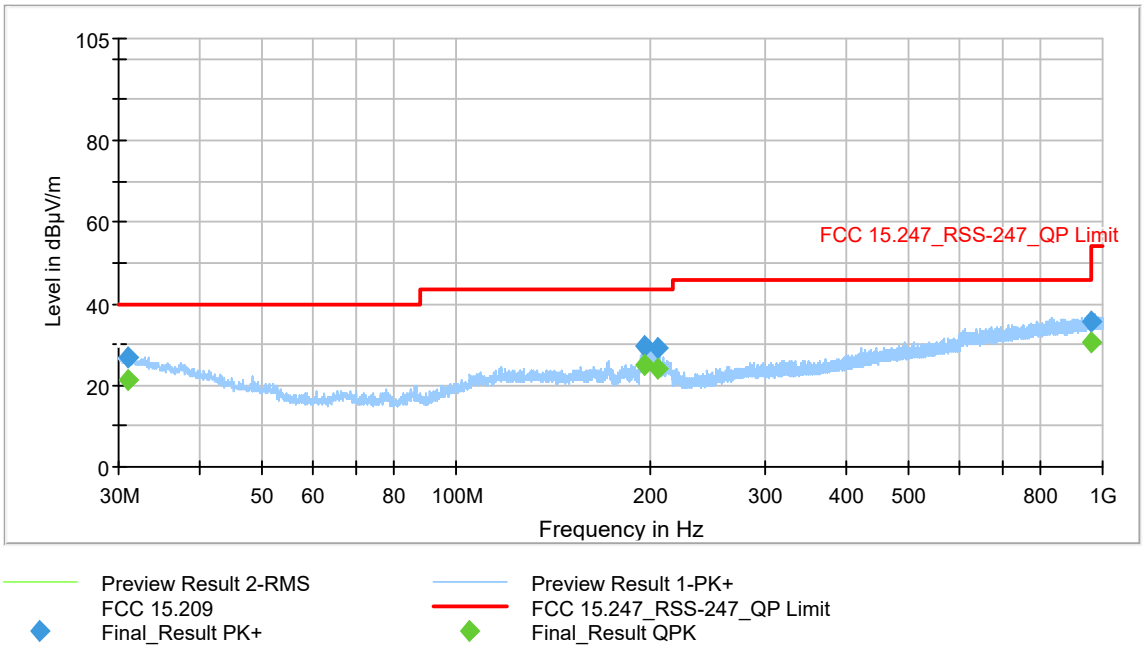
RSE 30-1000 MHz							
Mode	**Tx Freq (MHz)**	**Spurious Frequency (MHz)**	**Raw Quasi-Peak Amplitude (dBµV/m)**	**System Correction Factor (dB)**	**Corrected Quasi-Peak Field Strength (dBµV/m)**	**Quasi-Peak Limit (dBµV/m)**	**Quasi-Peak Margin (dB)**
802.11b	2437	33.14	-2.43	22.9	20.47	40.00	-19.53
802.11b	2437	47.42	0.22	16.4	16.62	40.00	-23.38
802.11b	2437	200.65	4.35	19.4	23.75	43.52	-19.77
802.11b	2437	211.32	3.20	18.9	22.10	43.52	-21.42
802.11b	2437	422.53	-2.51	24.0	21.49	46.02	-24.53
802.11b	2437	945.66	-0.96	31.5	30.54	46.02	-15.48
802.11n	2417	30.68	-2.20	23.9	21.70	40.00	-18.30
802.11n	2417	41.91	-1.78	19.3	17.52	40.00	-22.48
802.11n	2417	195.81	6.62	19.1	25.72	43.52	-17.80
802.11n	2417	212.38	2.43	18.8	21.23	43.52	-22.29
802.11n	2417	736.15	-0.98	29.2	28.22	46.02	-17.80
802.11n	2417	940.02	-1.09	31.5	30.41	46.02	-15.61
802.11n	2457	31.09	-2.37	23.7	21.33	40.00	-18.67
802.11n	2457	195.85	6.06	19.1	25.16	43.52	-18.36
802.11n	2457	205.56	5.16	19.1	24.26	43.52	-19.26
802.11n	2457	959.09	-0.96	31.7	30.74	46.02	-15.28



Plot 9-229 Radiated Spurious Emissions 30 – 1000 MHz 802.11b - Ch. 6 (2437 MHz)



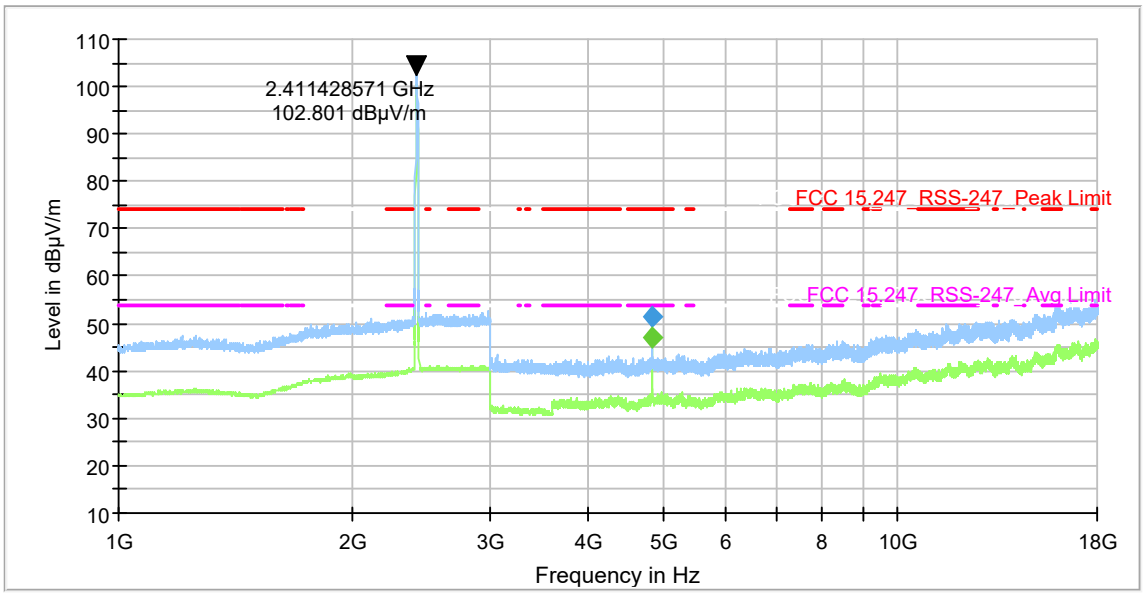
Plot 9-230 Radiated Spurious Emissions 30 – 1000 MHz 802.11n - Ch. 2 (2417 MHz)



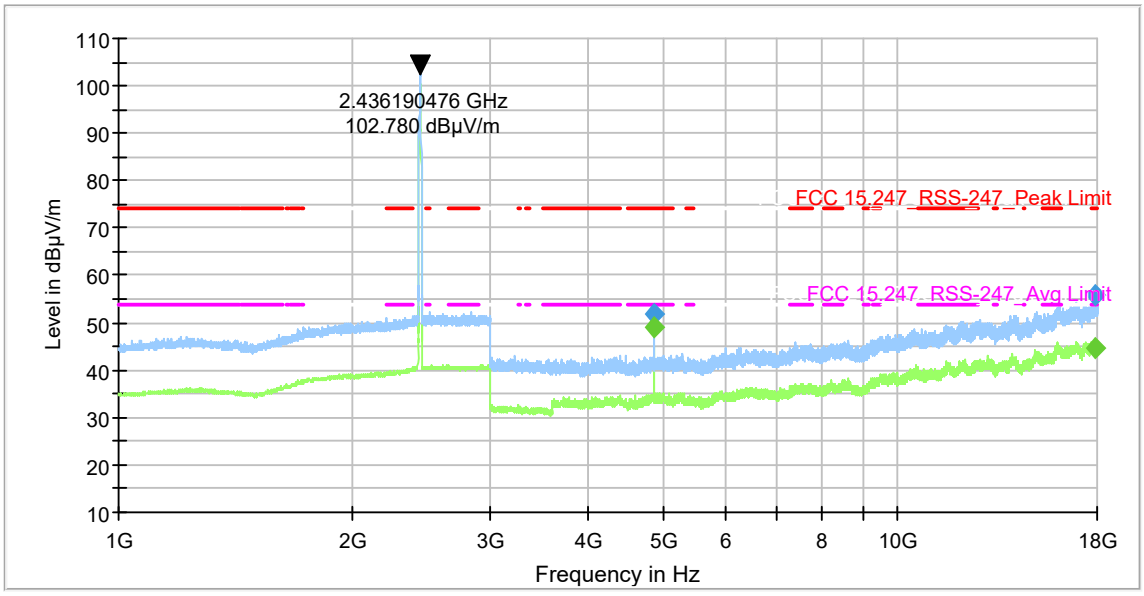
Plot 9-231 Radiated Spurious Emissions 30 – 1000 MHz 802.11n - Ch. 10 (2457 MHz)

9.8.5.2 Emissions in 1-18 GHz range

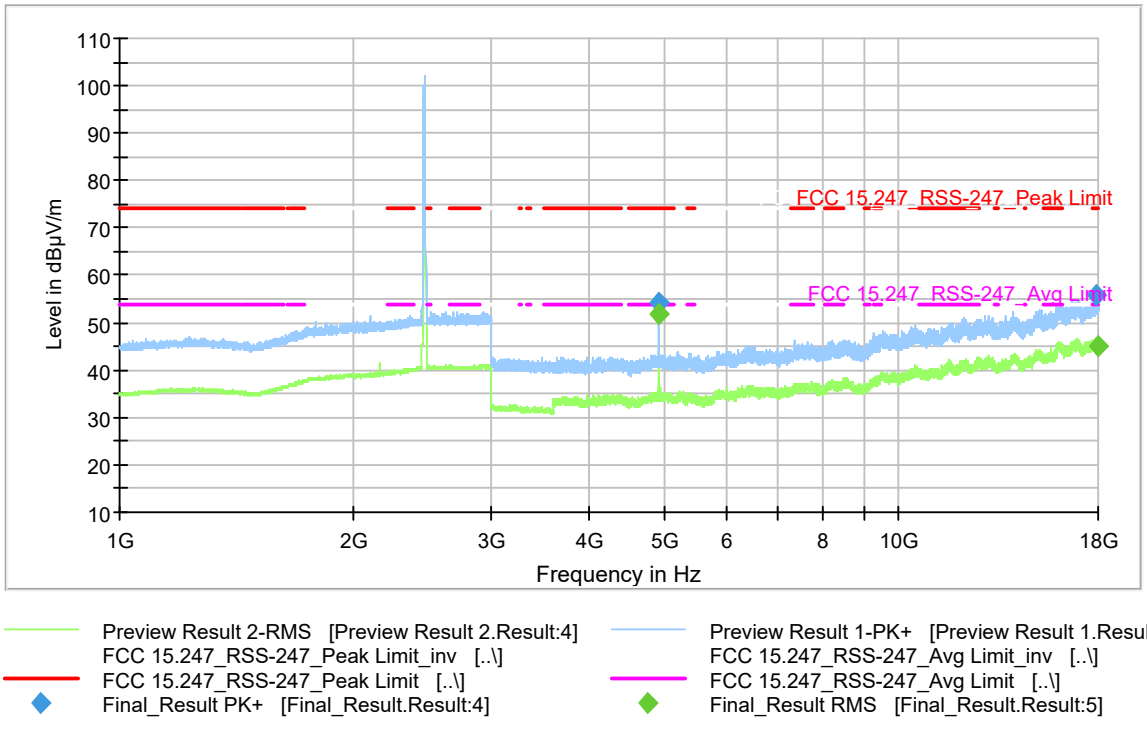
802.11b RSE 1 - 18GHz Average Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Avg. Amplitude (dBµV)**	**Correction Factor (incl DCF=0dB) (dB)**	**Corrected Avg. Field Strength (dBµV/m)**	**Average Limit (dBµV/m)**	**Margin (dB)**
2412	4824.0	37.28	9.7	46.98	54	-7.02
2437	4874.0	39.65	9.5	49.15	54	-5.67
2437	17928.0	19.94	24.6	44.54	54	-9.46
2462	4924.0	42.53	9.5	52.03	54	-1.97
2462	18000.0	19.41	25.8	45.21	54	-8.79
2472	4944.0	43.37	9.4	52.77	54	-1.23
2472	17859.0	19.7	24.6	44.30	54	-9.70
802.11b RSE 1 – 18GHz Peak Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Peak Amplitude (dBµV)**	**Correction Factor (dB)**	**Corrected Peak Field Strength (dBµV/m)**	**Peak Limit (dBµV/m)**	**Margin (dB)**
2412	4824.0	41.78	9.7	51.48	74	-22.52
2437	4873.9	42.46	9.5	51.96	74	-22.04
2437	17907.9	31.29	24.6	55.89	74	-18.11
2462	4924.0	44.63	9.5	54.13	74	-19.87
2462	17944.4	31.3	24.6	55.90	74	-18.10
2472	4944.0	45.4	9.4	54.80	74	-19.20
2472	17855.8	31.53	24.6	56.13	74	-17.87



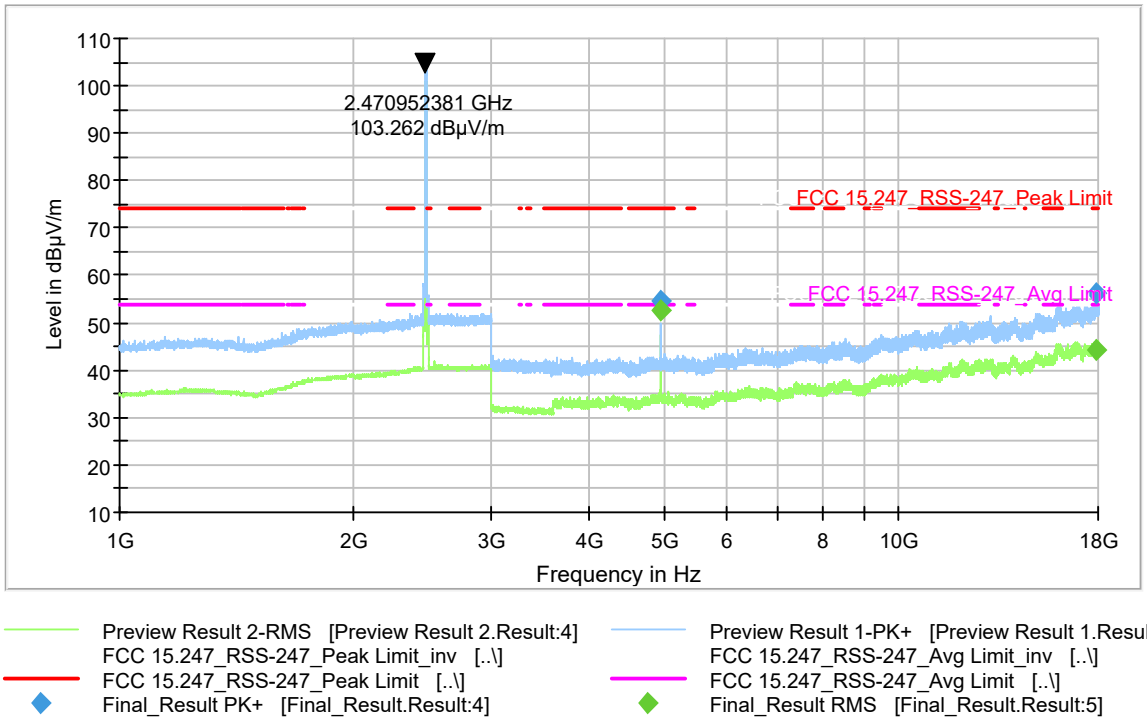
Plot 9-232 Radiated Spurious Emission 1-18GHz 802.11b - Ch.1 (2412 MHz)



Plot 9-233 Radiated Spurious Emission 1-18GHz 802.11b - Ch.6 (2437 MHz)

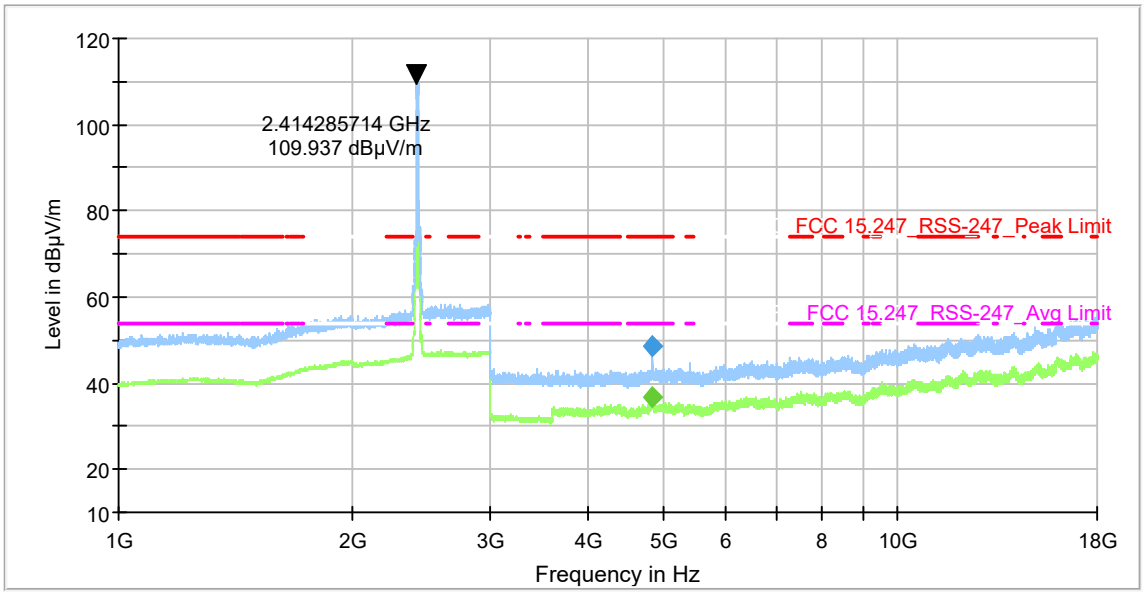


Plot 9-234 Radiated Spurious Emission 1-18GHz 802.11b - Ch.11 (2462 MHz)

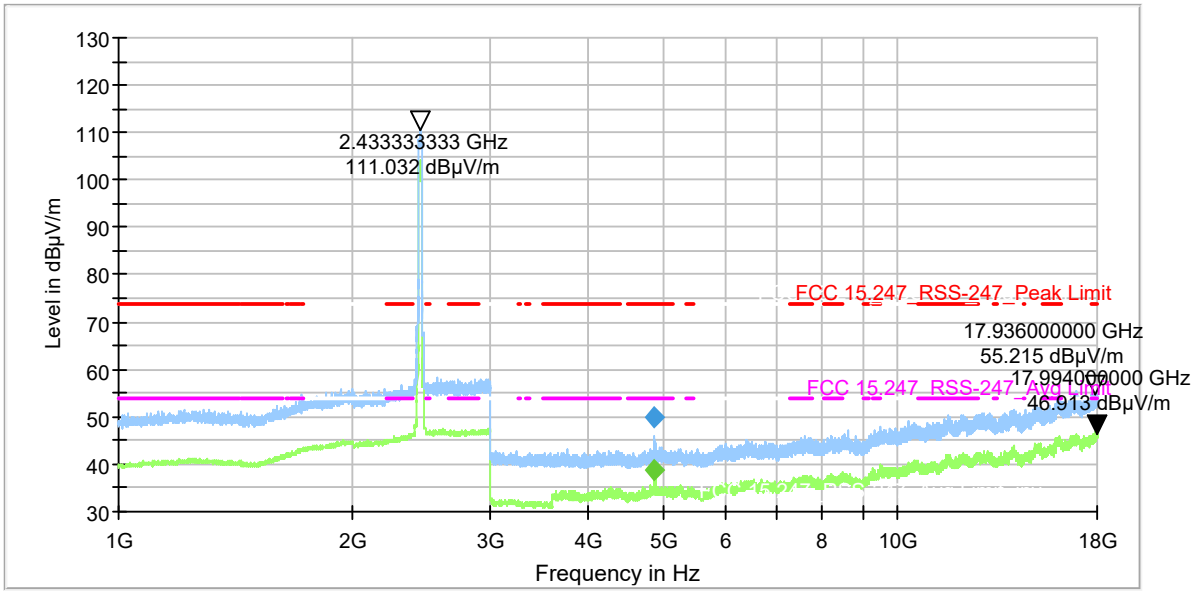


Plot 9-235 Radiated Spurious Emission 1-18GHz 802.11b - Ch.13 (2472 MHz)

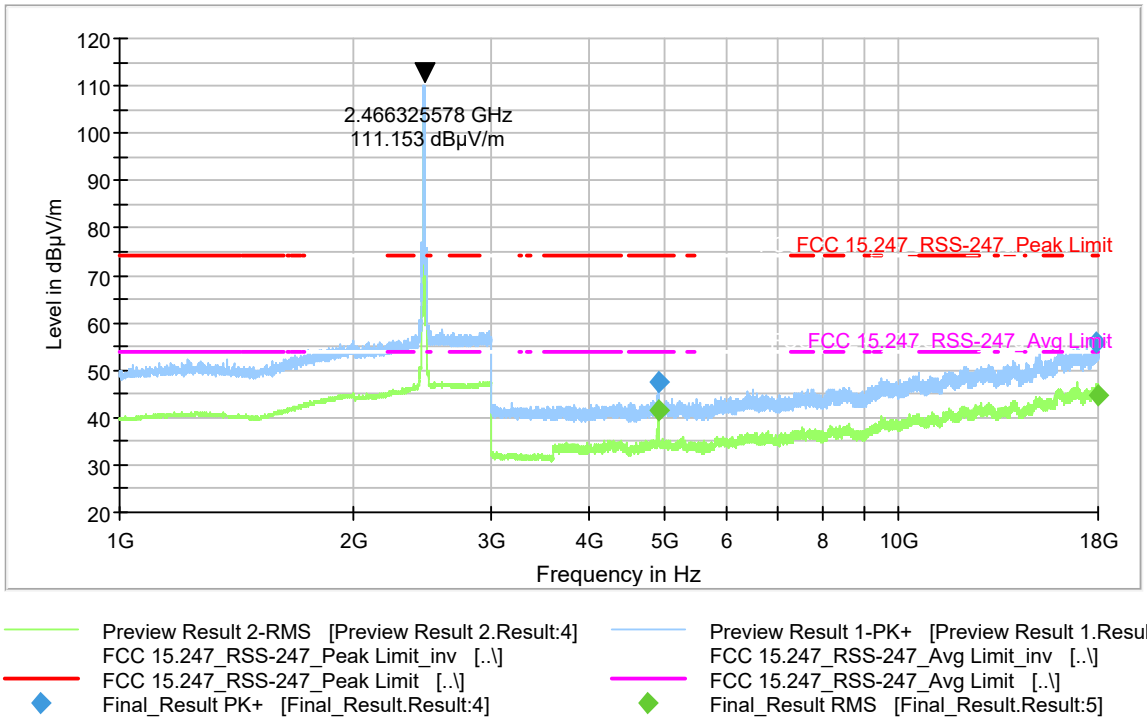
802.11g RSE 1 - 18GHz Average Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Avg. Amplitude (dBµV)**	**Correction Factor (incl DCF=0dB) (dB)**	**Corrected Avg. Field Strength (dBµV/m)**	**Average Limit (dBµV/m)**	**Margin (dB)**
2417	4833.9	27.14	9.7	36.84	54	-17.16
2437	4873.9	29.3	9.5	38.80	54	-15.20
2457	4914.0	32.21	9.5	41.71	54	-12.29
2457	17963.6	19.83	24.8	44.63	54	-9.37
2462	4924.2	32.64	9.5	42.14	54	-11.86
2462	17848.2	19.63	24.7	44.33	54	-9.67
2467	2390.0	31.18	14.1	45.28	54	-8.72
2467	4922.7	27.78	9.5	37.28	54	-16.72
2467	17932.0	19.99	24.6	44.59	54	-9.41
802.11g RSE 1 - 18GHz Peak Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Peak Amplitude (dBµV)**	**Correction Factor (dB)**	**Corrected Peak Field Strength (dBµV/m)**	**Peak Limit (dBµV/m)**	**Margin (dB)**
2417	4833.8	38.79	9.7	48.49	74	-25.51
2437	4873.6	40.32	9.5	49.82	74	-24.18
2457	4916.1	37.97	9.5	47.47	74	-26.53
2457	17917.7	31.34	24.6	55.94	74	-18.06
2462	4927.6	41.55	9.5	51.05	74	-22.95
2462	17846.0	31.12	24.7	55.82	74	-18.18
2467	2389.6	41.91	14.1	56.01	74	-17.99
2467	4928.3	39.26	9.4	48.66	74	-15.34
2467	17843.8	30.51	24.7	55.21	74	-18.79



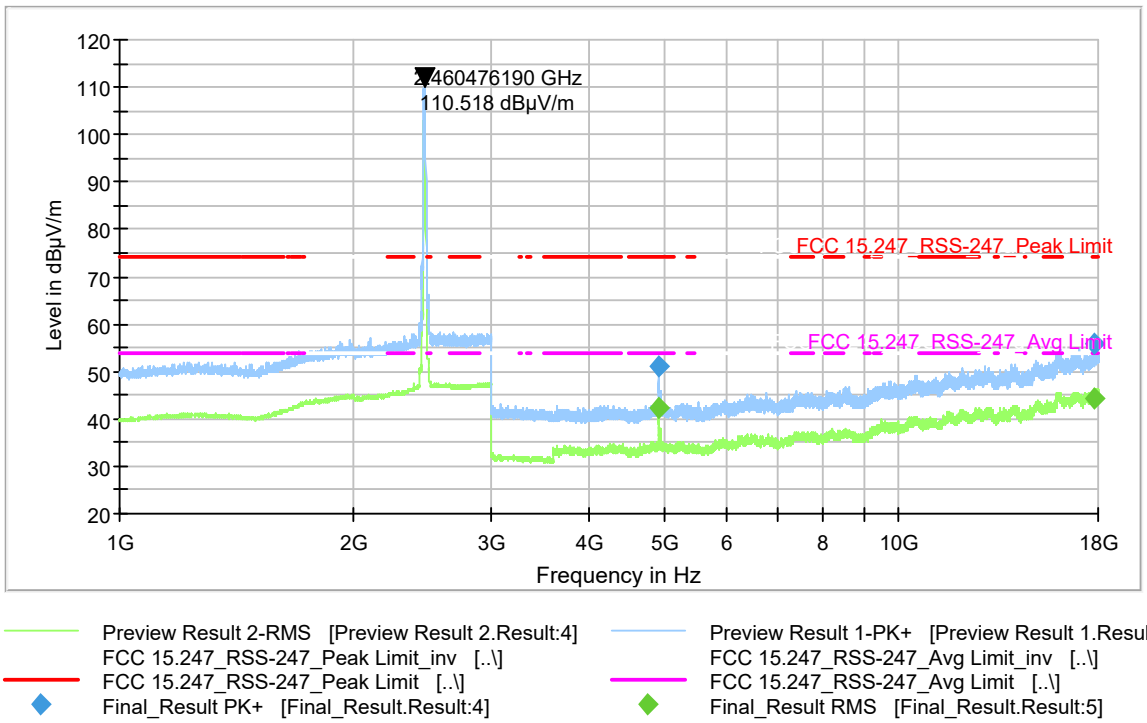
Plot 9-236 Radiated Spurious Emission 1-18GHz 802.11g - Ch.2 (2417 MHz)



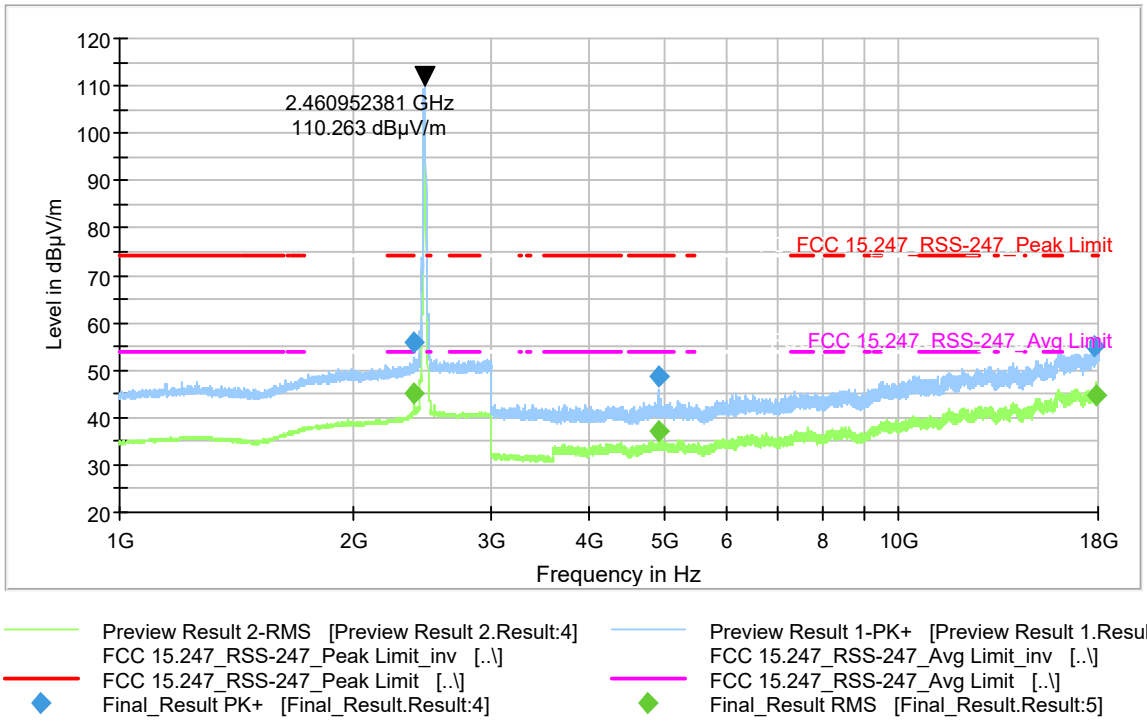
Plot 9-237 Radiated Spurious Emission 1-18GHz 802.11g - Ch.6 (2437 MHz)



Plot 9-238 Radiated Spurious Emission 1-18GHz 802.11g - Ch.10 (2457 MHz)

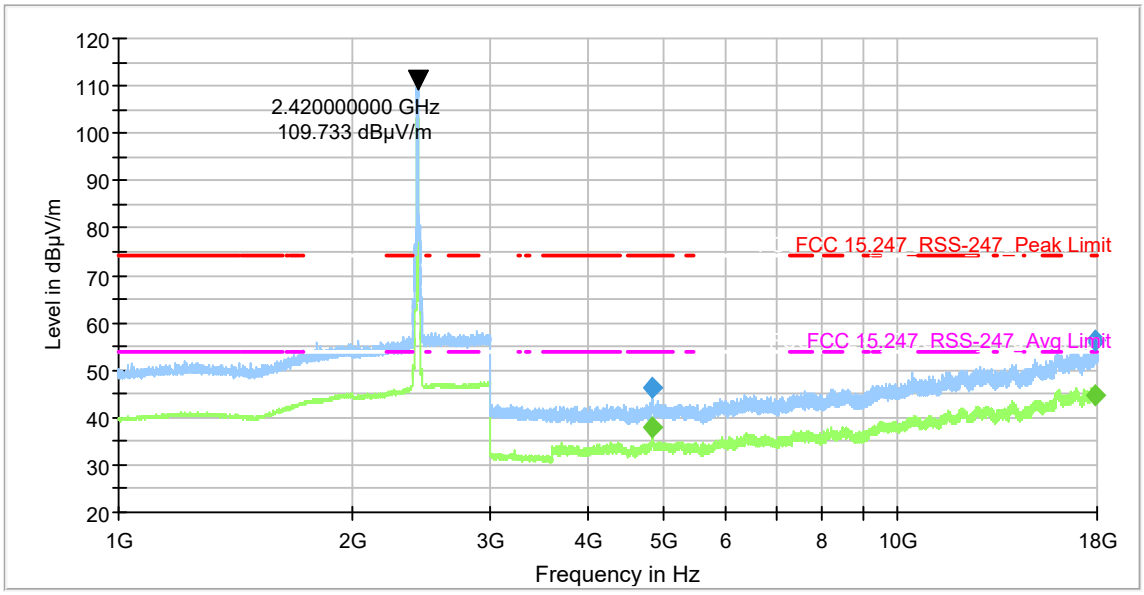


Plot 9-239 Radiated Spurious Emission 1-18GHz 802.11g - Ch.11 (2462 MHz)



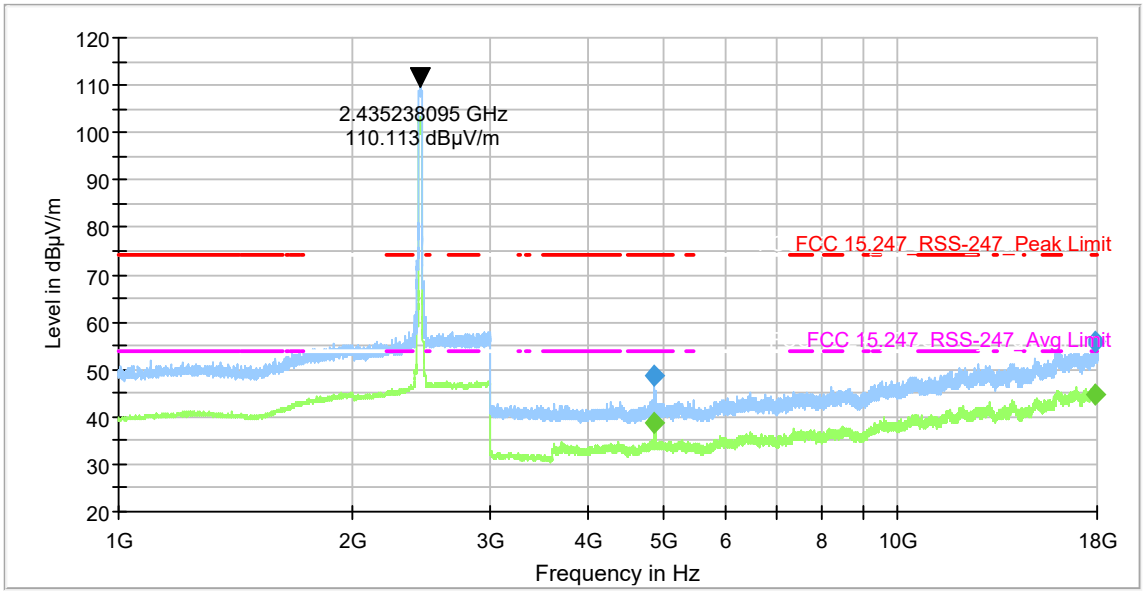
Plot 9-240 Radiated Spurious Emission 1-18GHz 802.11g - Ch.12 (2467 MHz)

802.11n RSE 1 - 18GHz Average Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Avg. Amplitude (dBµV)**	**Correction Factor (incl DCF=0dB) (dB)**	**Corrected Avg. Field Strength (dBµV/m)**	**Average Limit (dBµV/m)**	**Margin (dB)**
2417	4833.9	28.24	9.7	37.94	54	-16.06
2417	17935.6	19.98	24.6	44.58	54	-9.42
2437	4873.9	29.12	9.5	38.62	54	-15.38
2437	17931.8	19.94	24.6	44.54	54	-9.46
2457	4913.2	28.07	9.5	37.57	54	-16.43
2457	17934.3	19.89	24.6	44.49	54	-9.51
2467	2390.0	30.56	14.1	44.66	54	-9.34
2467	4924.5	29.93	9.5	39.43	54	-14.57
2467	17902.6	19.63	24.6	44.23	54	-9.77
802.11n RSE 1 - 18GHz Peak Data						
Carrier Frequency (MHz)	**Frequency (MHz)**	**Raw Peak Amplitude (dBµV)**	**Correction Factor (dB)**	**Corrected Peak Field Strength (dBµV/m)**	**Peak Limit (dBµV/m)**	**Margin (dB)**
2417	4833.6	36.58	9.7	46.28	74	-27.72
2417	17949.7	31.57	24.6	56.17	74	-17.83
2437	4870.7	39.14	9.5	48.64	74	-25.36
2437	17944.4	31.3	24.6	55.90	74	-18.10
2457	4910.6	41.23	9.5	50.73	74	-23.27
2457	17944.3	31.06	24.6	55.66	74	-18.34
2467	2390.0	41.05	14.1	55.15	74	-18.85
2467	4928.0	39.21	9.5	48.71	74	-25.29
2467	17946.6	31.12	24.6	55.72	74	-18.28



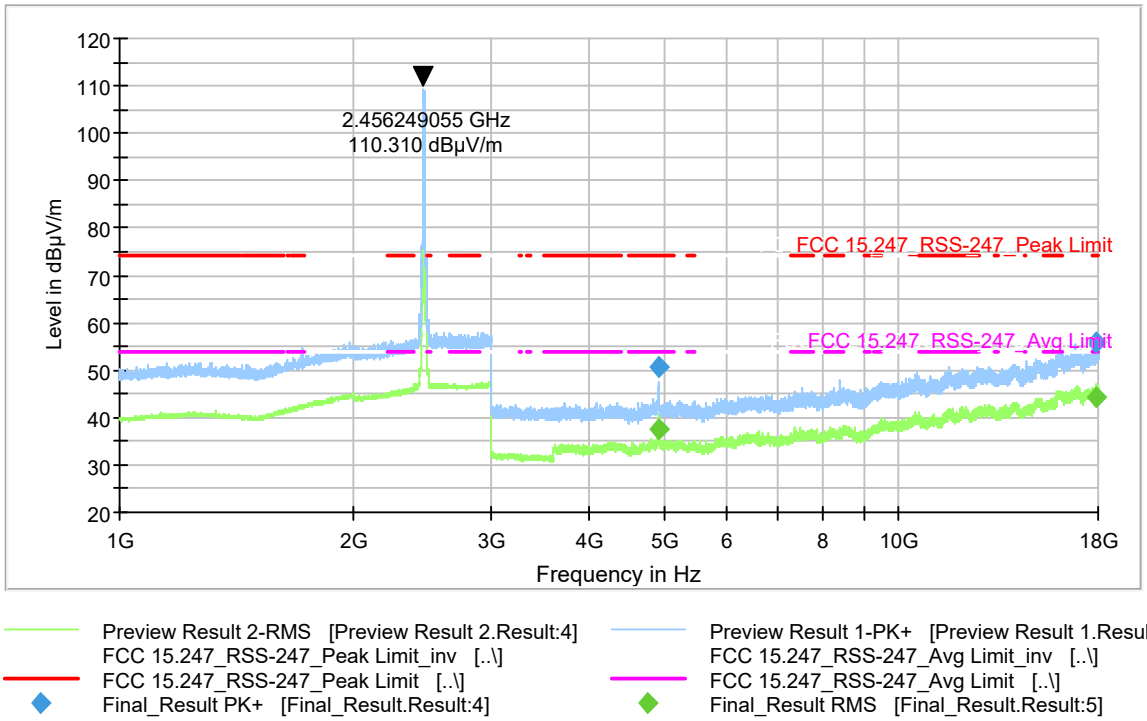
Preview Result 2-RMS [Preview Result 2.Result:4]
FCC 15.247_RSS-247_Peak Limit_inv [..\]
FCC 15.247_RSS-247_Peak Limit [..\]
Final_Result PK+ [Final_Result.Result:4]
Preview Result 1-PK+ [Preview Result 1.Result:2]
FCC 15.247_RSS-247_Avg Limit_inv [..\]
FCC 15.247_RSS-247_Avg Limit [..\]
Final_Result RMS [Final_Result.Result:5]

Plot 9-241 Radiated Spurious Emission 1-18GHz 802.11n - Ch.2 (2417 MHz)

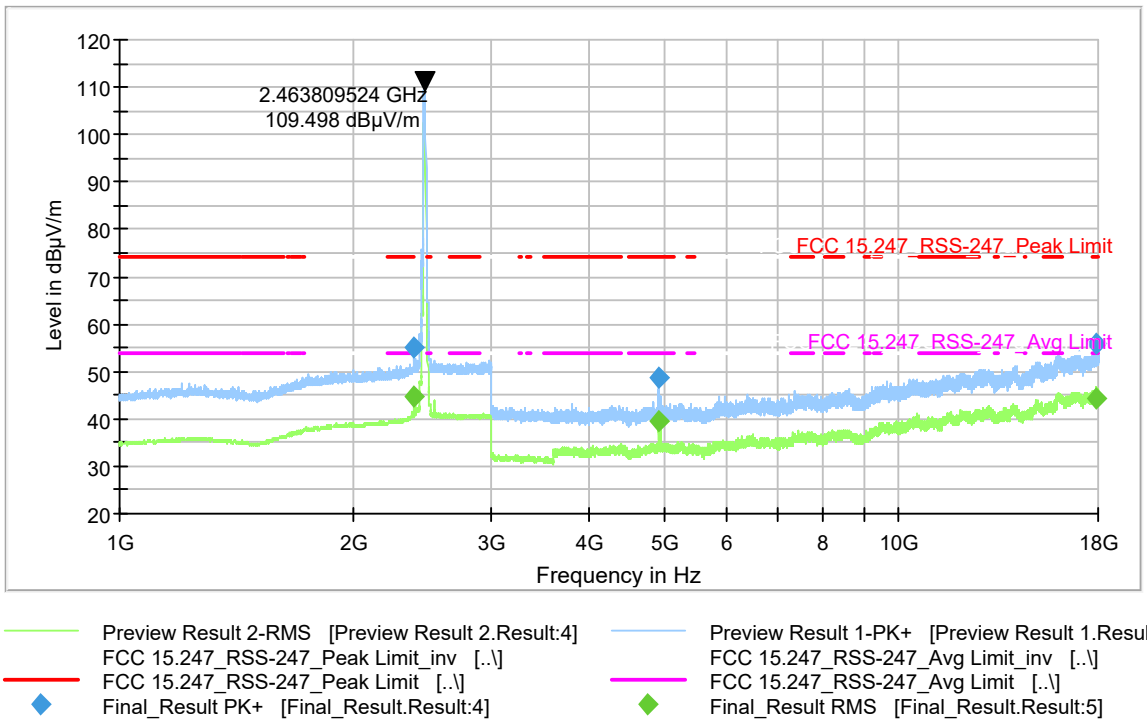


Preview Result 2-RMS [Preview Result 2.Result:4]
FCC 15.247_RSS-247_Peak Limit_inv [..\]
FCC 15.247_RSS-247_Peak Limit [..\]
Final_Result PK+ [Final_Result.Result:4]
Preview Result 1-PK+ [Preview Result 1.Result:2]
FCC 15.247_RSS-247_Avg Limit_inv [..\]
FCC 15.247_RSS-247_Avg Limit [..\]
Final_Result RMS [Final_Result.Result:5]

Plot 9-242 Radiated Spurious Emission 1-18GHz 802.11n - Ch.6 (2437 MHz)



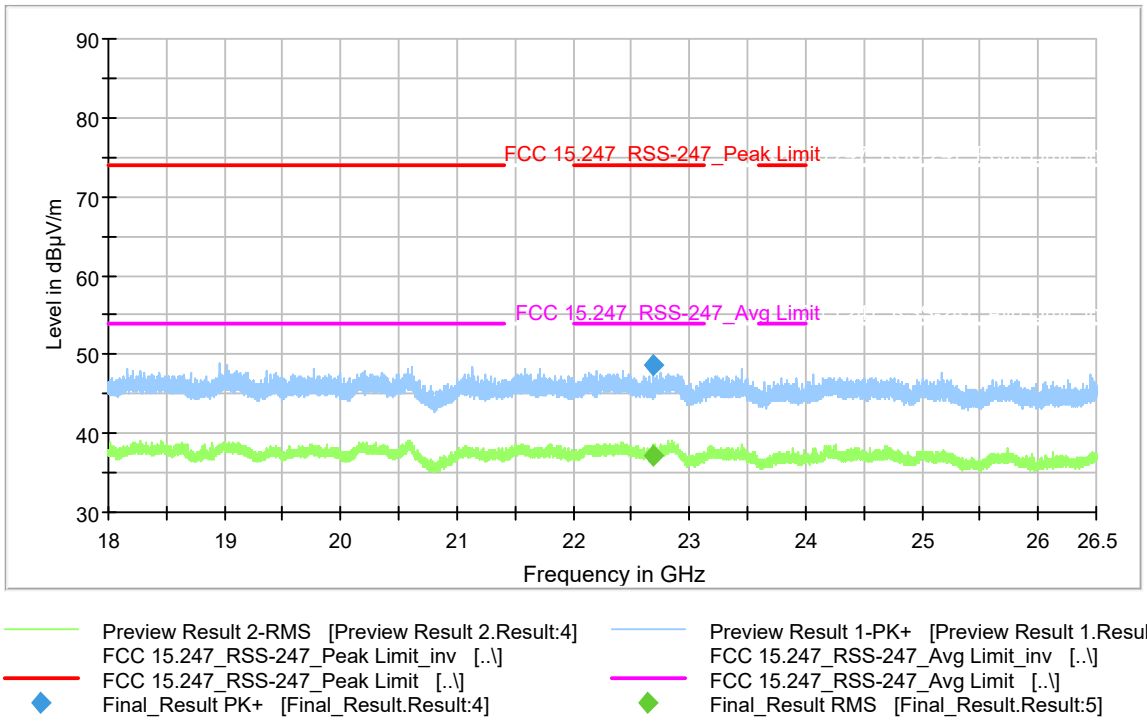
Plot 9-243 Radiated Spurious Emission 1-18GHz 802.11n - Ch.10 (2457 MHz)



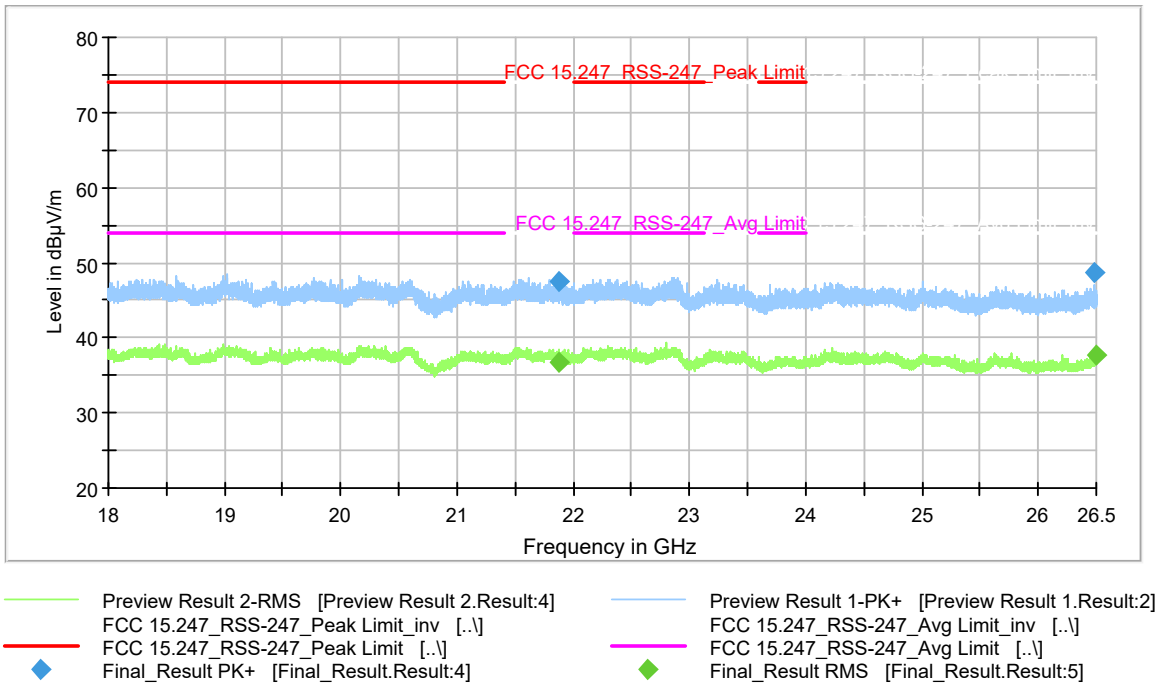
Plot 9-244 Radiated Spurious Emission 1-18GHz 802.11n - Ch.12 (2467 MHz)

9.8.5.3 Emissions in 18-26.5 GHz range

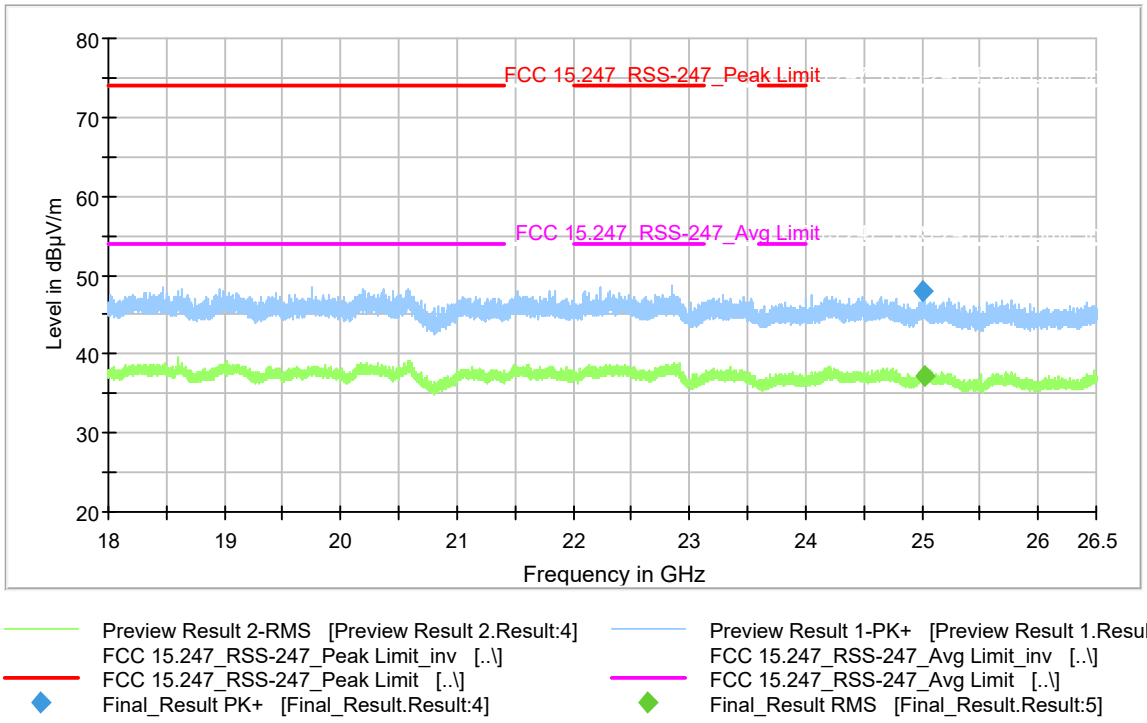
All modes and channels were tested and worst case data from mid channel of operation shown here. No significant emissions to report above noise floor.



Plot 9-245 Radiated Spurious Emissions 18-26.5GHz 802.11b - Ch.10 (2457 MHz)

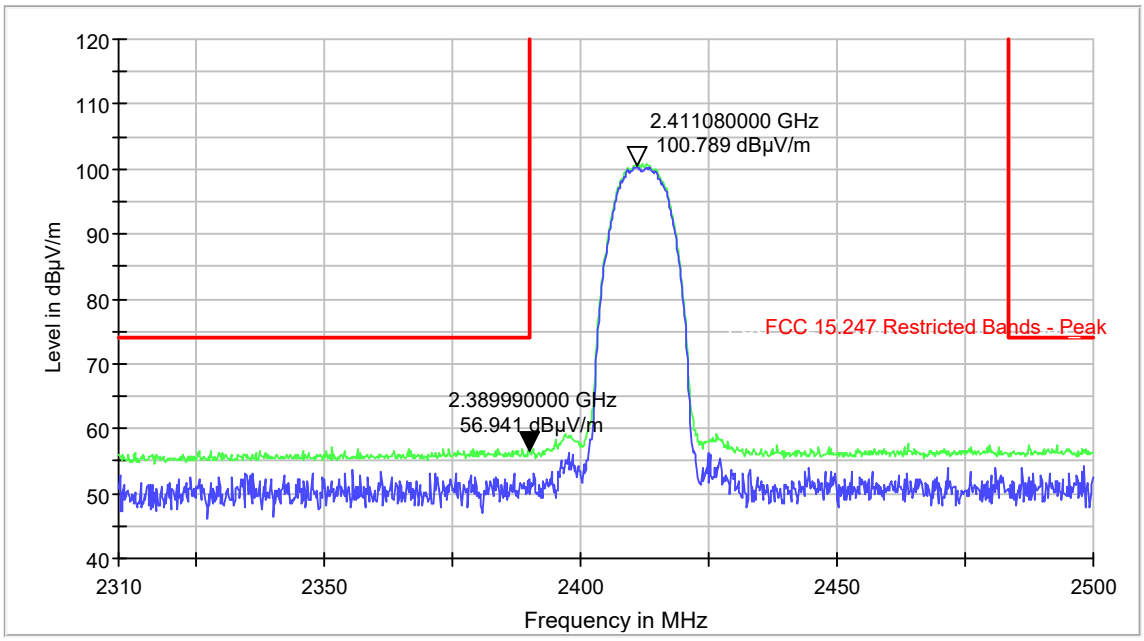


Plot 9-246 Radiated Spurious Emissions 18-26.5GHz 802.11g - Ch.2 (2417 MHz)

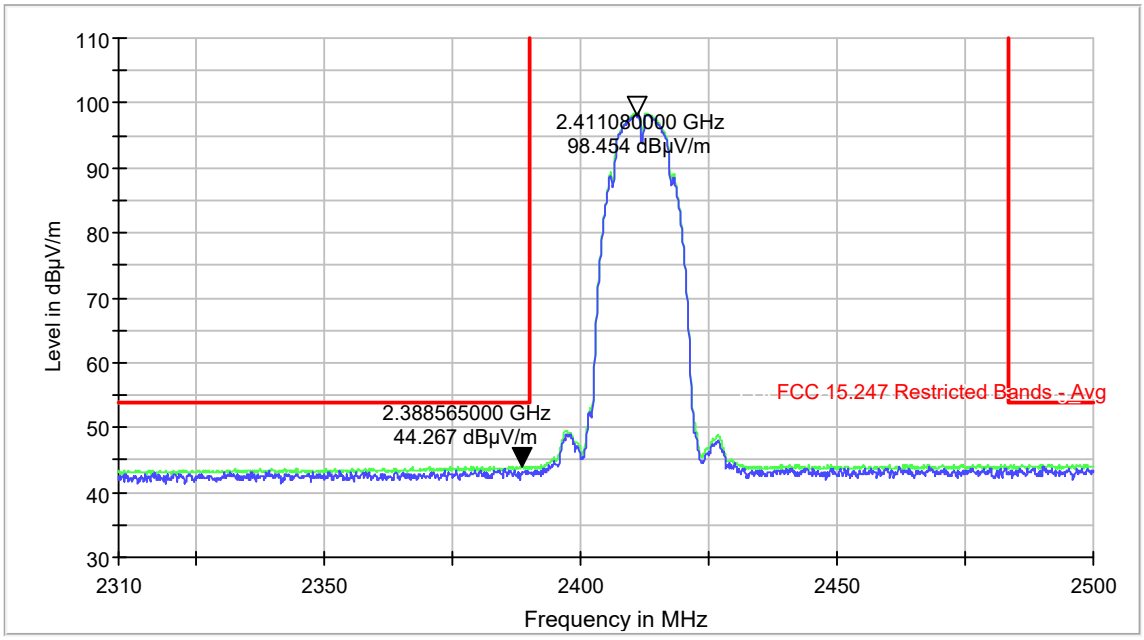


Plot 9-247 Radiated Spurious Emissions 18-26.5GHz 802.11g - Ch.10 (2457 MHz)

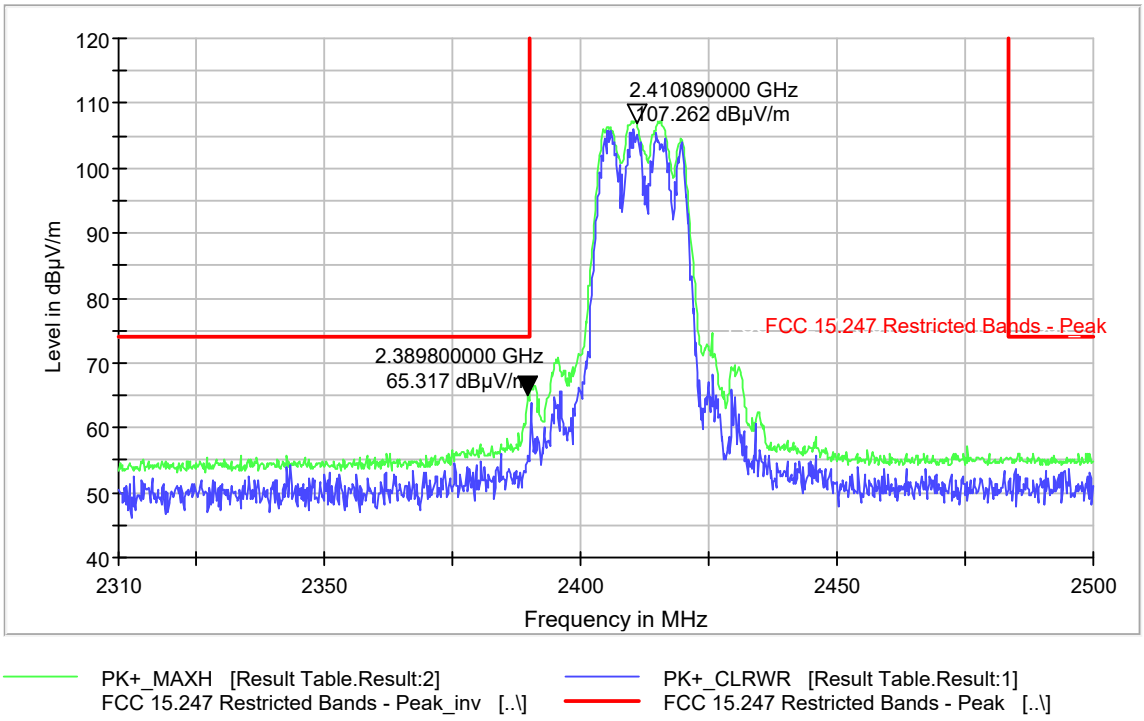
9.8.5.4 Radiated restricted Band-edge emissions



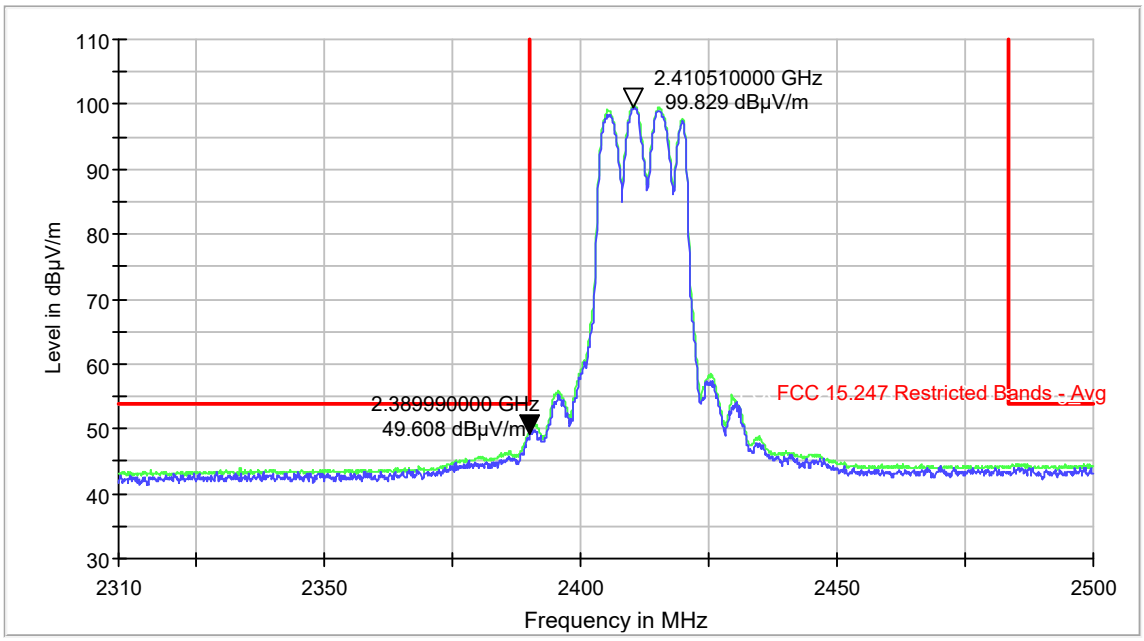
Plot 9-248 Radiated Band Edge Peak 802.11b - Ch.1 (2412 MHz)



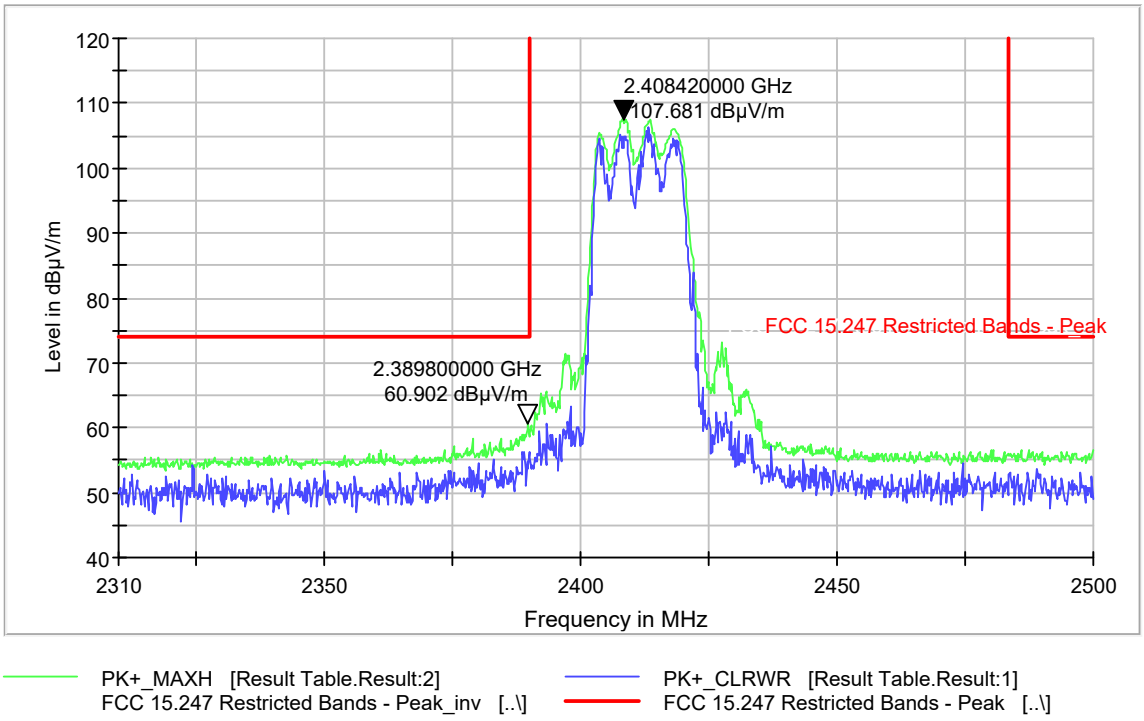
Plot 9-249 Radiated Band Edge Average 802.11b - Ch.1 (2412 MHz)



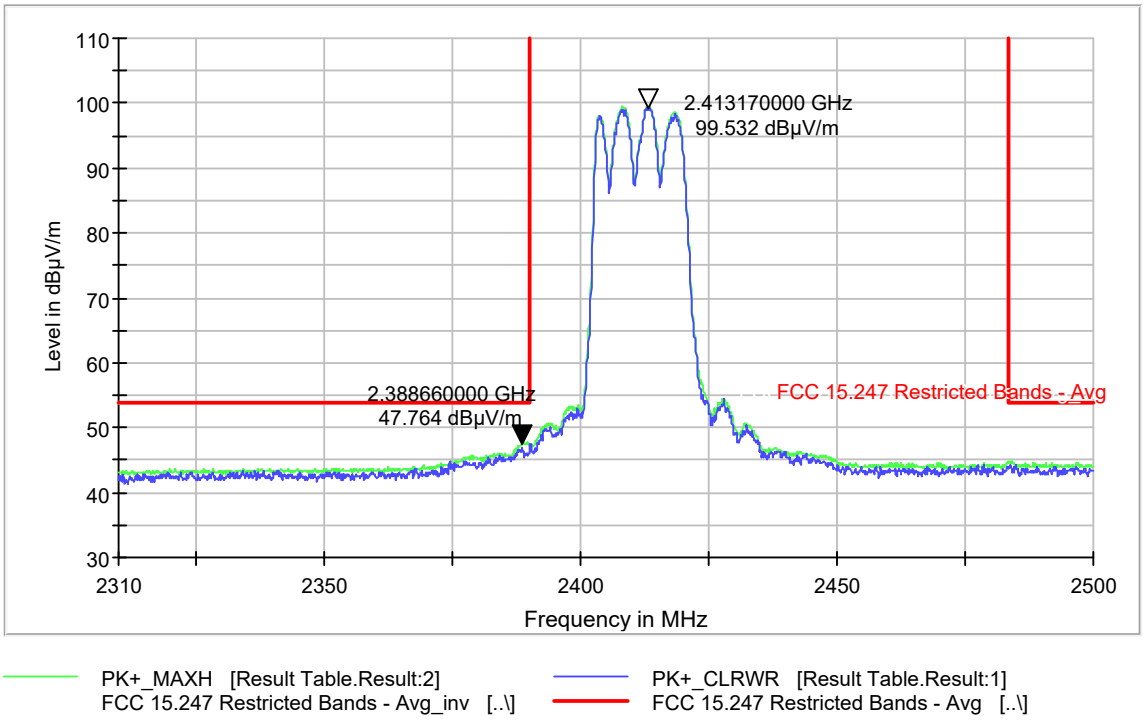
Plot 9-250 Radiated Band Edge Peak 802.11g - Ch.1 (2412 MHz)



Plot 9-251 Radiated Band Edge Average 802.11g - Ch.1 (2412 MHz)



Plot 9-252 Radiated Band Edge Peak 802.11n - Ch.1 (2412 MHz)



Plot 9-253 Radiated Band Edge Average 802.11n - Ch.1 (2412 MHz)

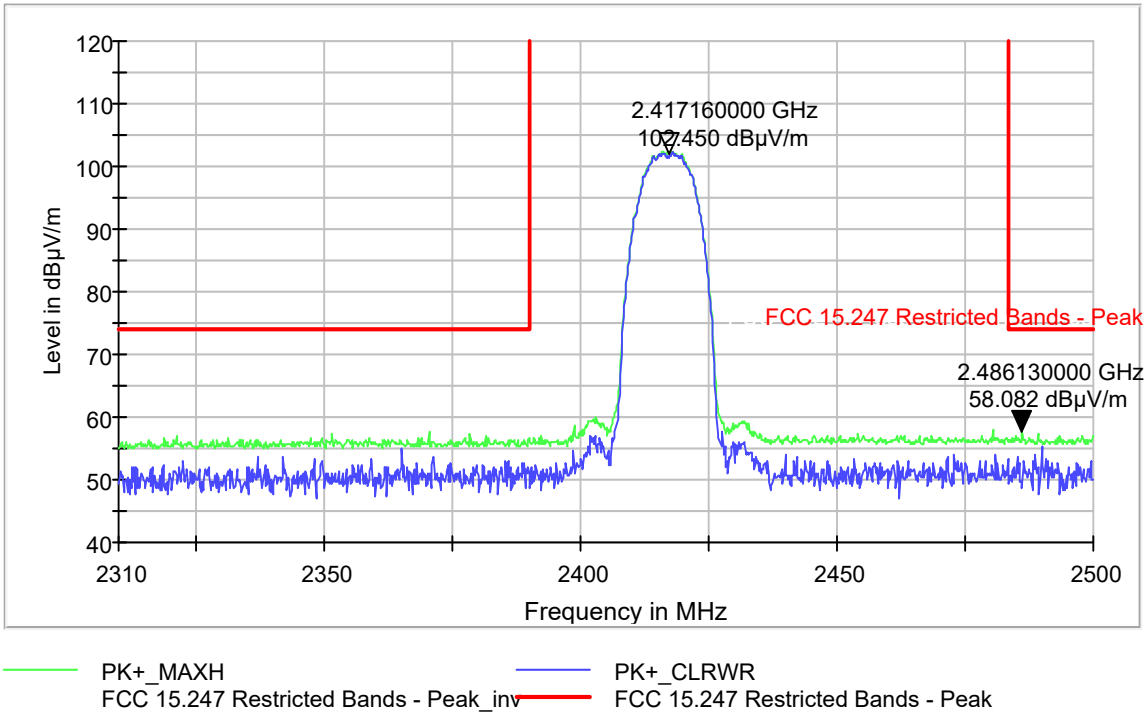


Figure 9-254 Radiated Band Edge Peak 802.11b - Ch.2 (2417 MHz)

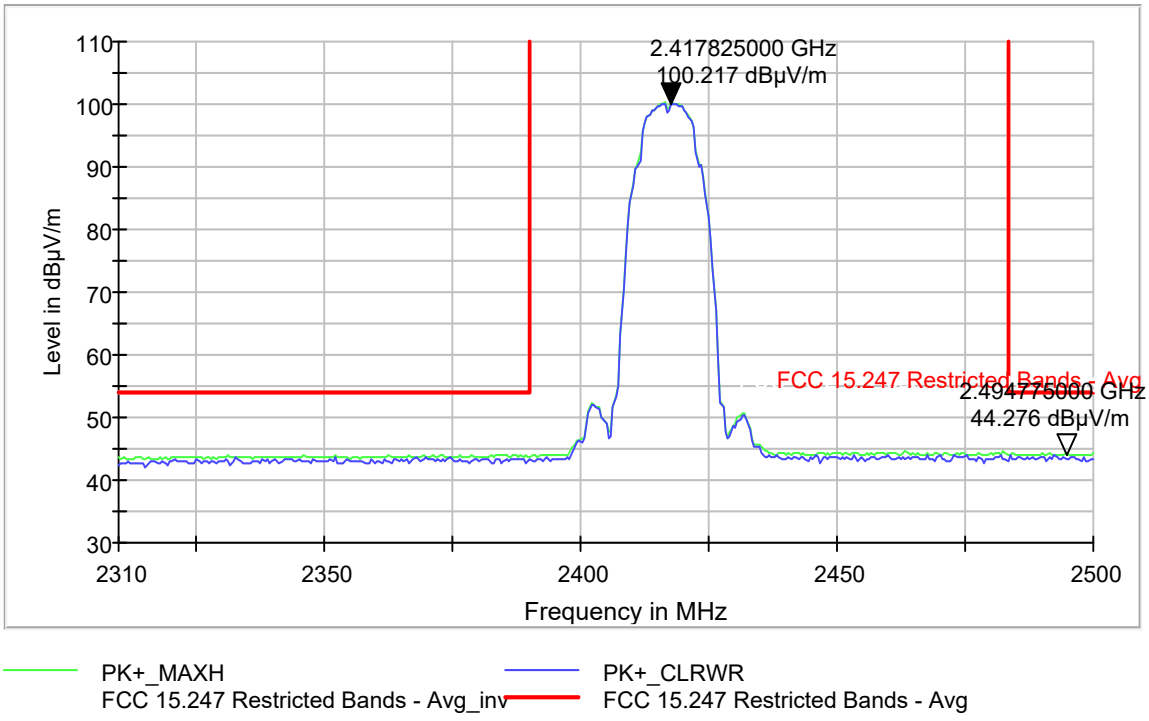


Figure 9-255 Radiated Band Edge Average 802.11b - Ch.2 (2417 MHz)

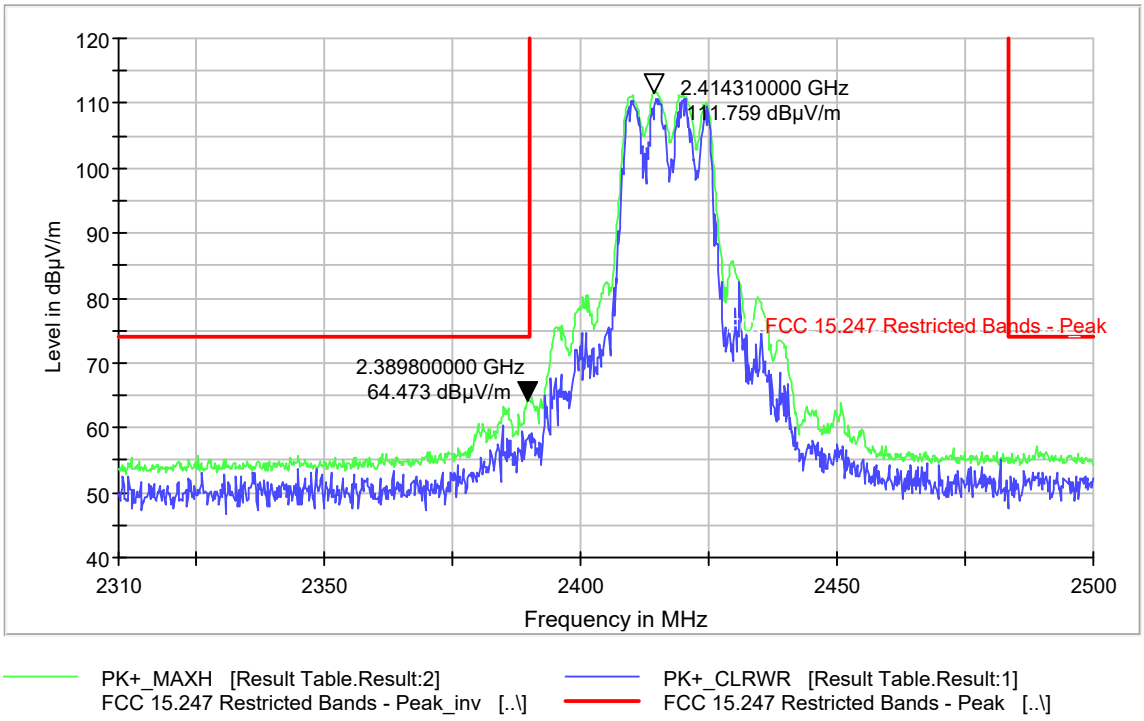


Figure 9-256 Radiated Band Edge Peak 802.11g - Ch.2 (2417 MHz)

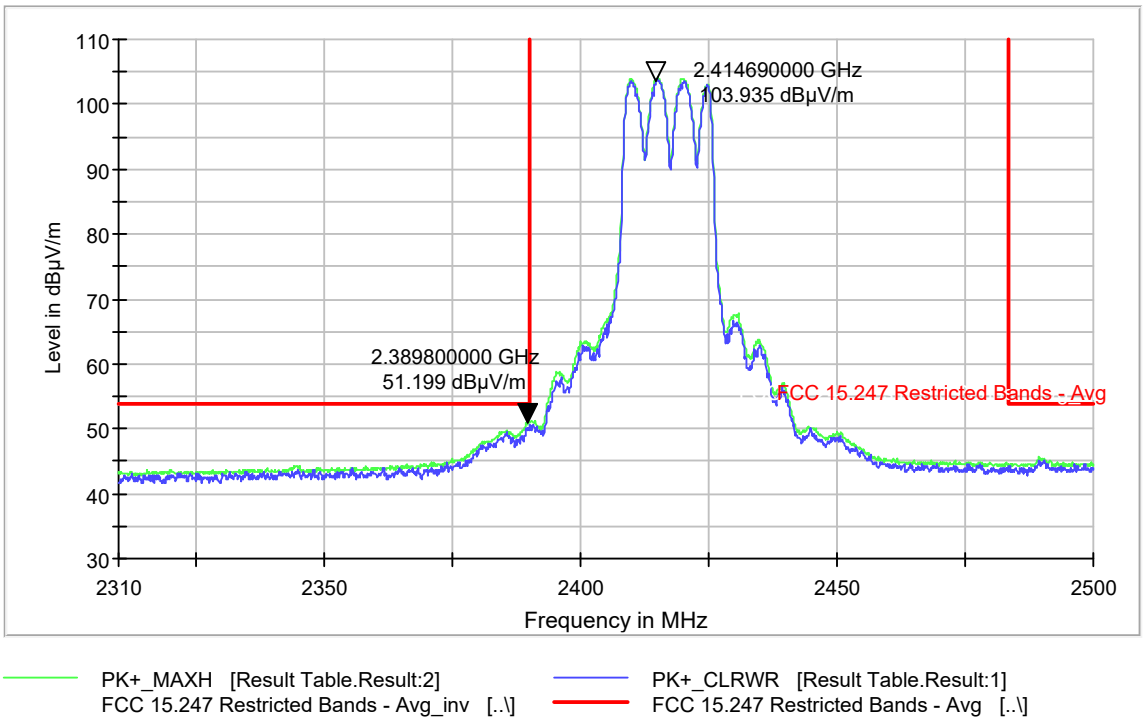


Figure 9-257 Radiated Band Edge Average 802.11g - Ch.2 (2417 MHz)

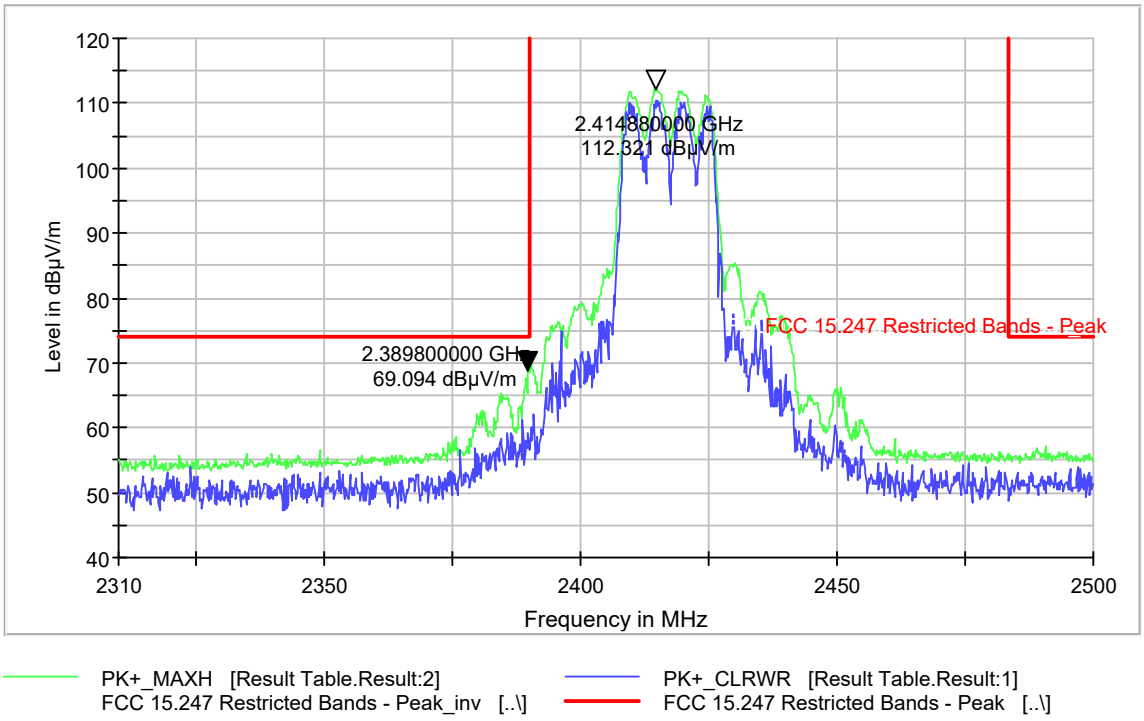


Figure 9-258 Radiated Band Edge Peak 802.11n - Ch.2 (2417 MHz)

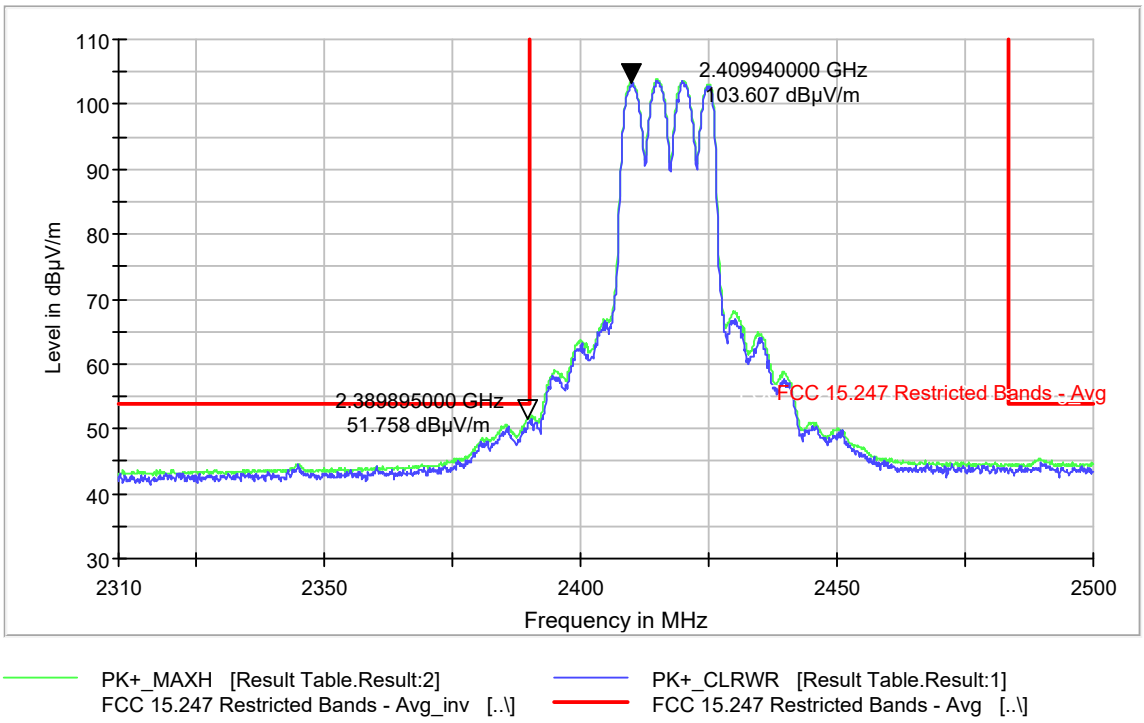


Figure 9-259 Radiated Band Edge Average 802.11n - Ch.2 (2417 MHz)

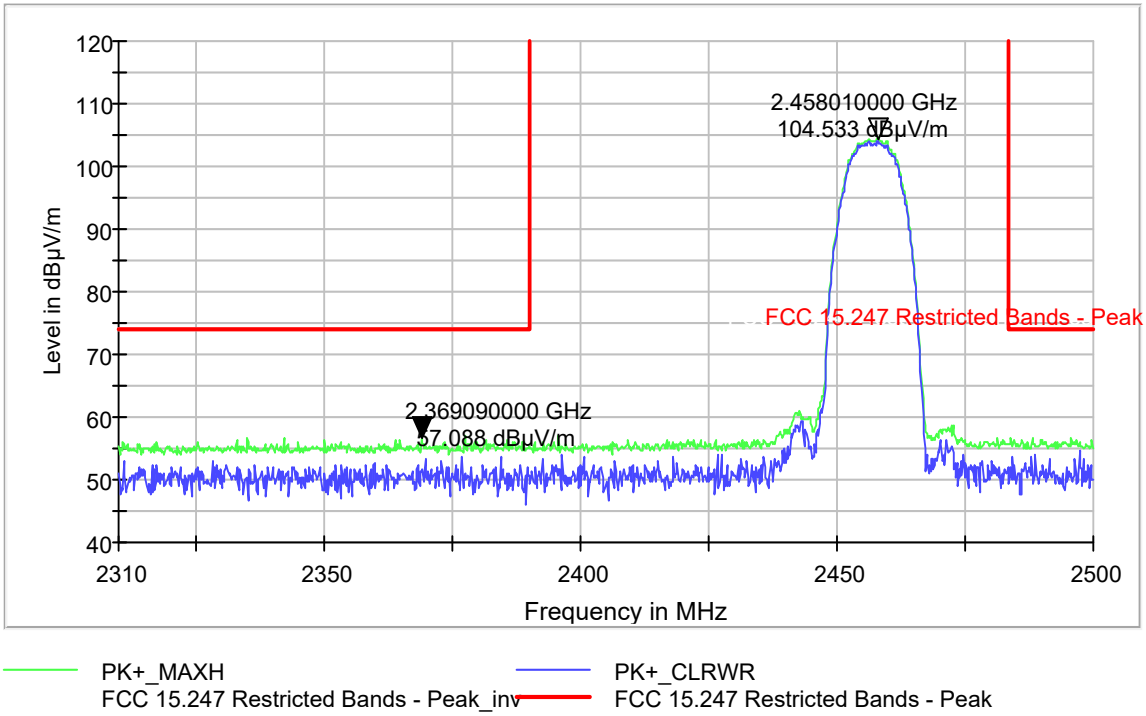


Figure 9-260 Radiated Band Edge Peak 802.11b - Ch.10 (2457 MHz)

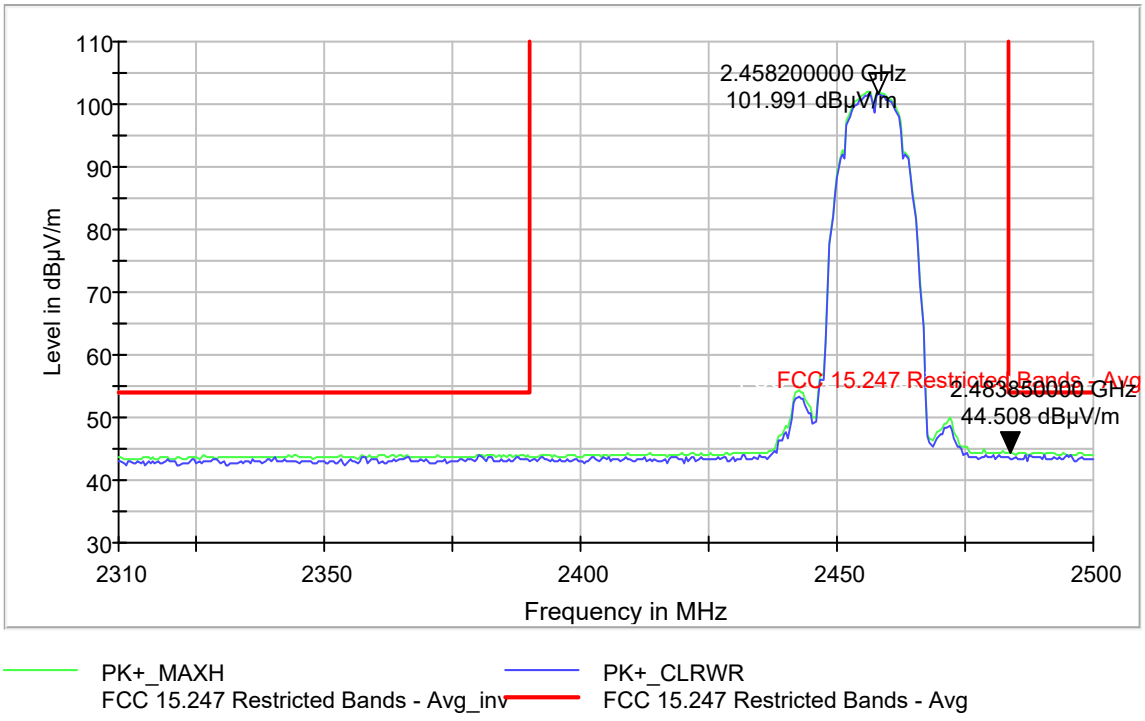


Figure 9-261 Radiated Band Edge Average 802.11b - Ch.10 (2457 MHz)

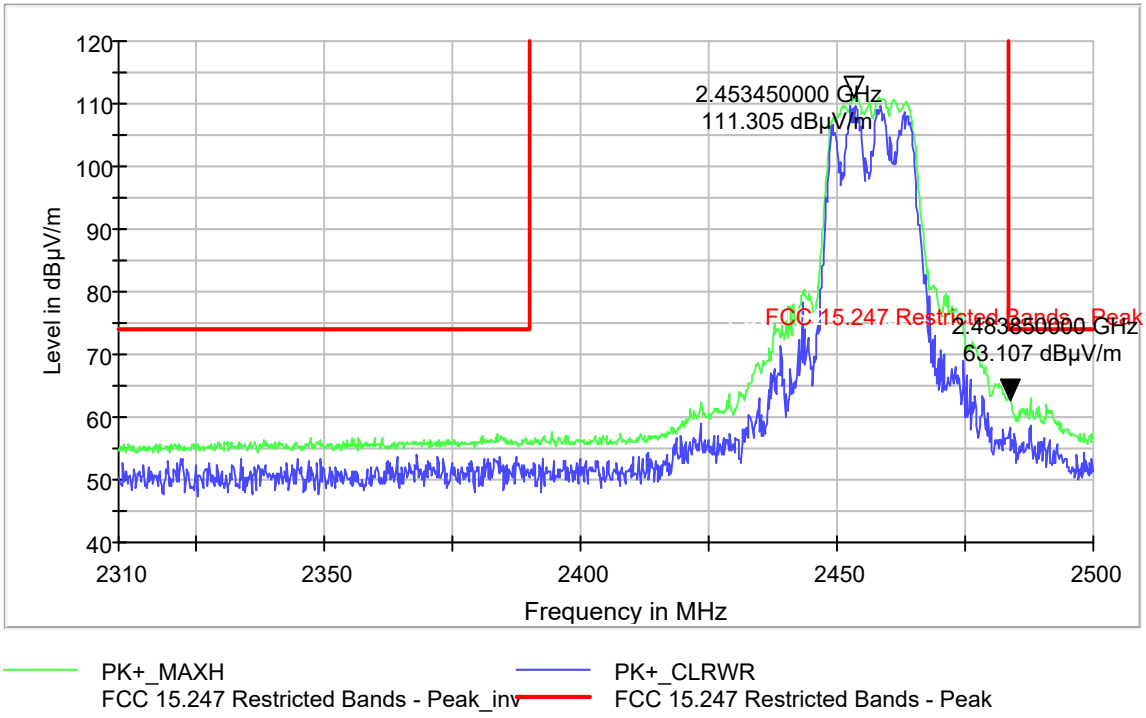


Figure 9-262 Radiated Band Edge Peak 802.11g - Ch.10 (2457 MHz)

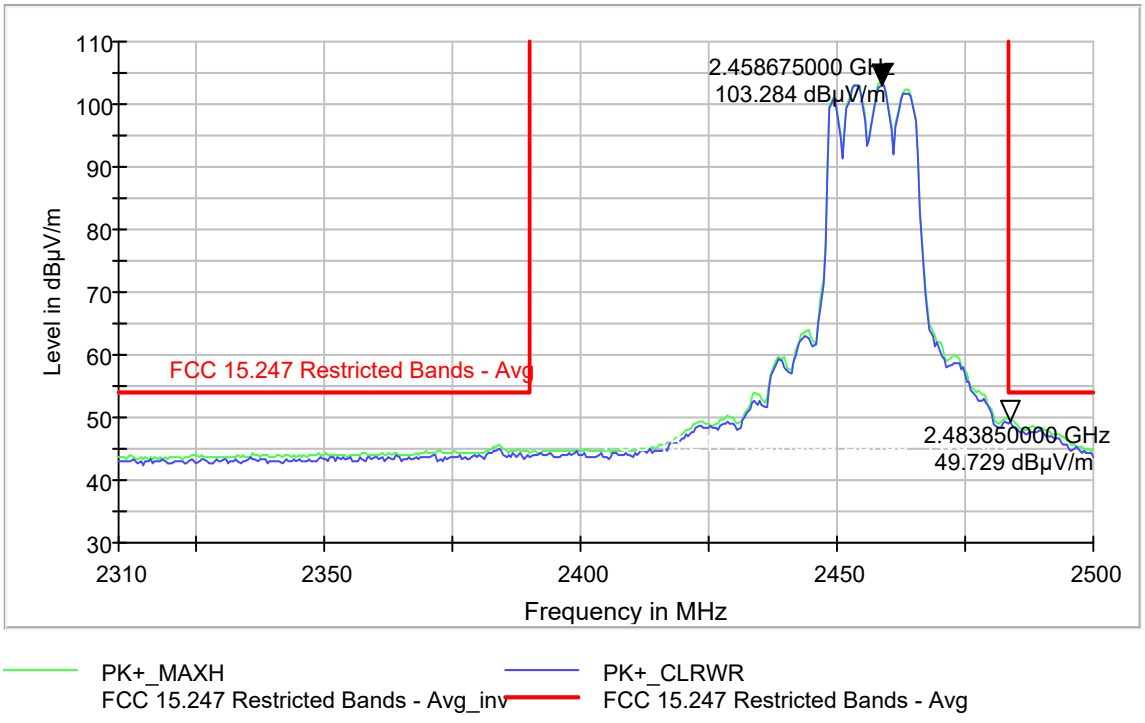


Figure 9-263 Radiated Band Edge Average 802.11g - Ch.10 (2457 MHz)

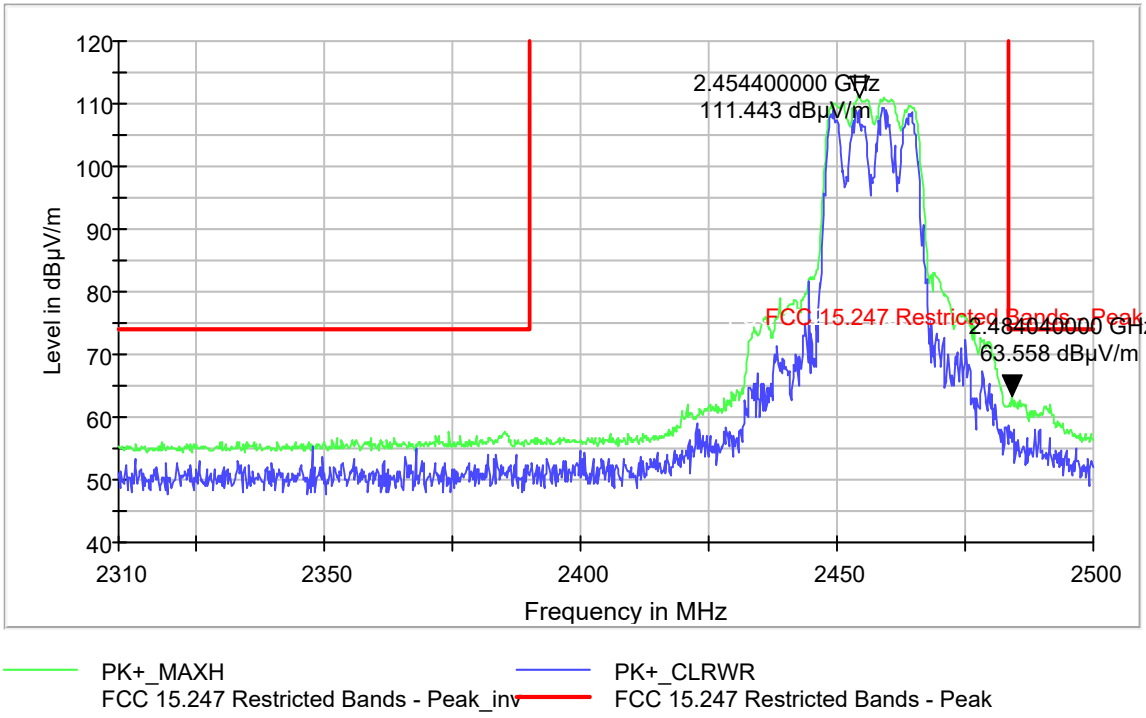


Figure 9-264 Radiated Band Edge Peak 802.11n - Ch.10 (2457 MHz)

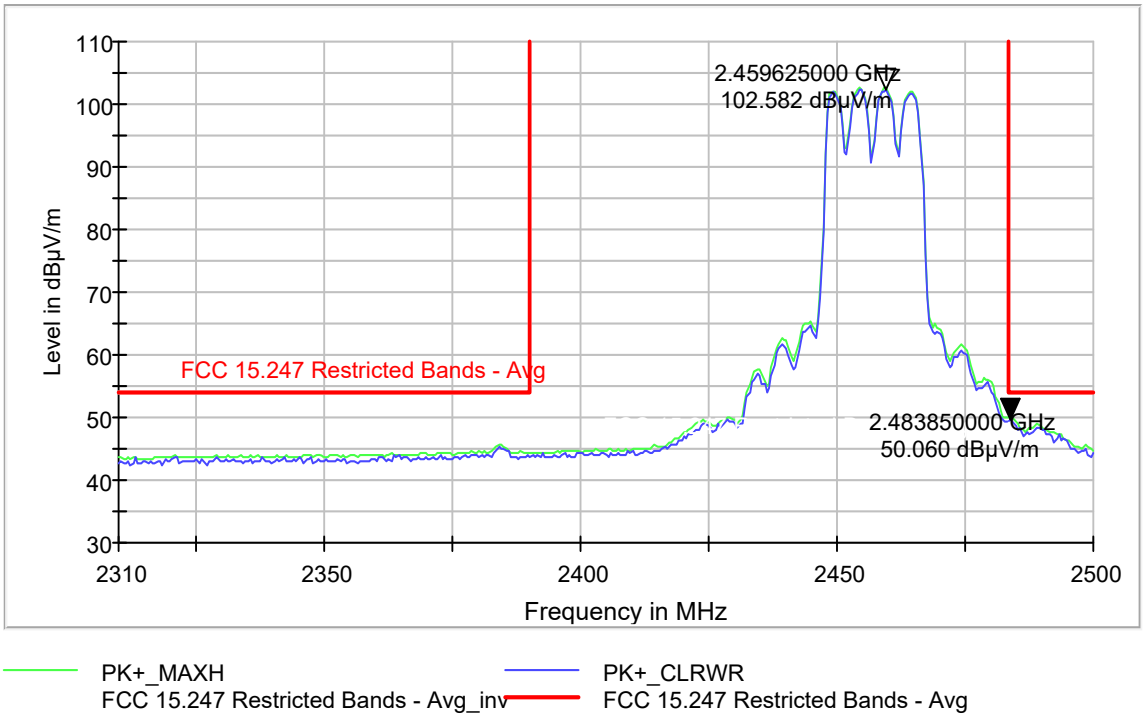
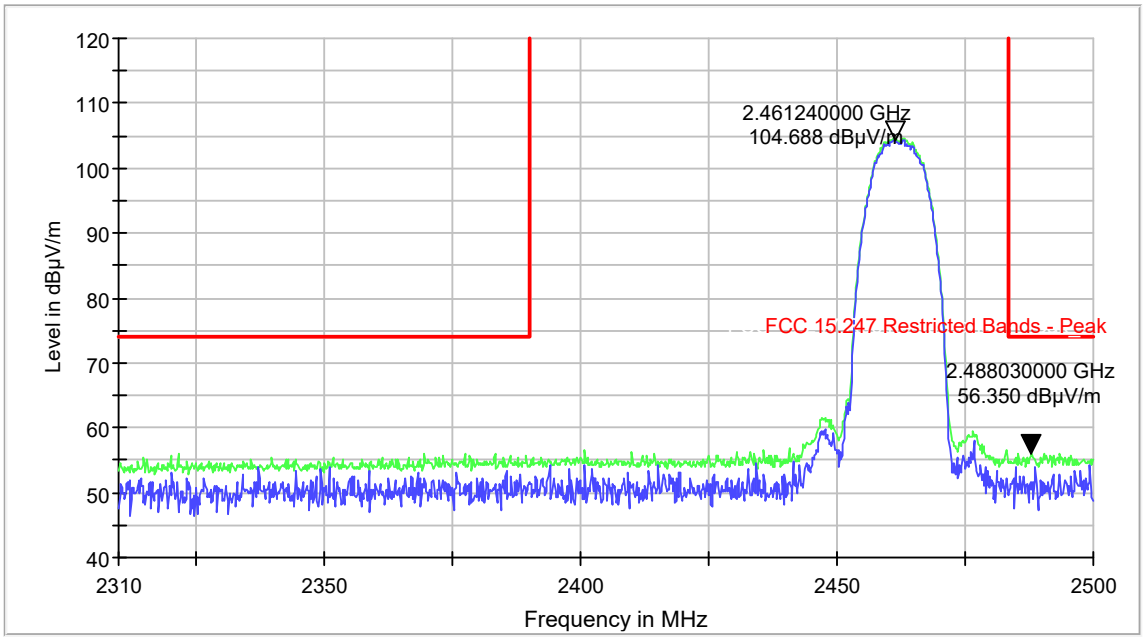
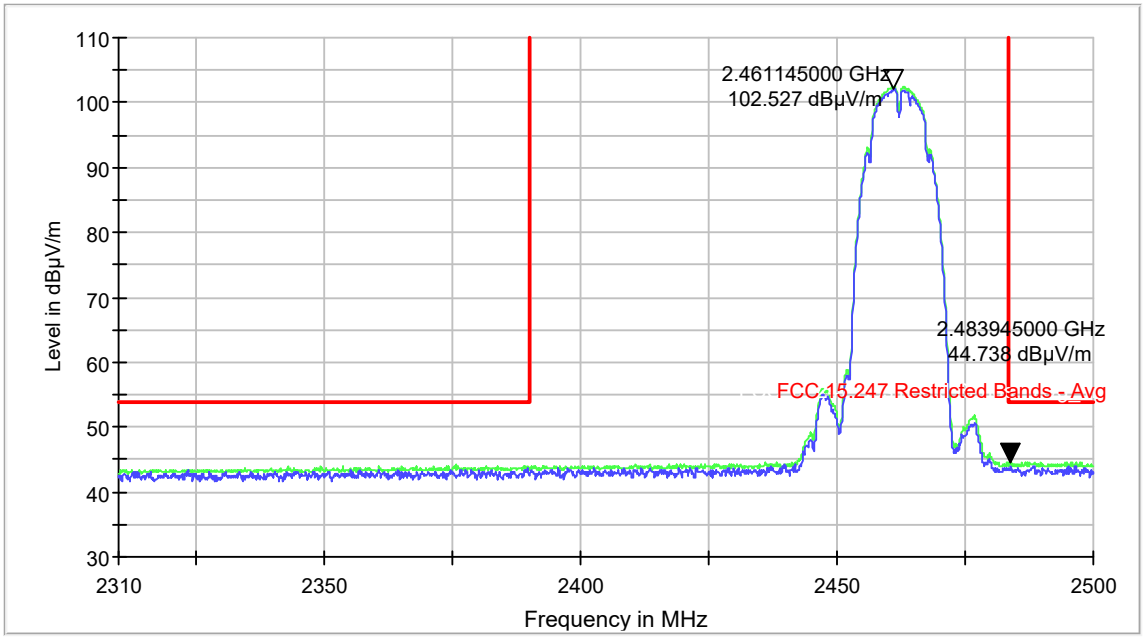


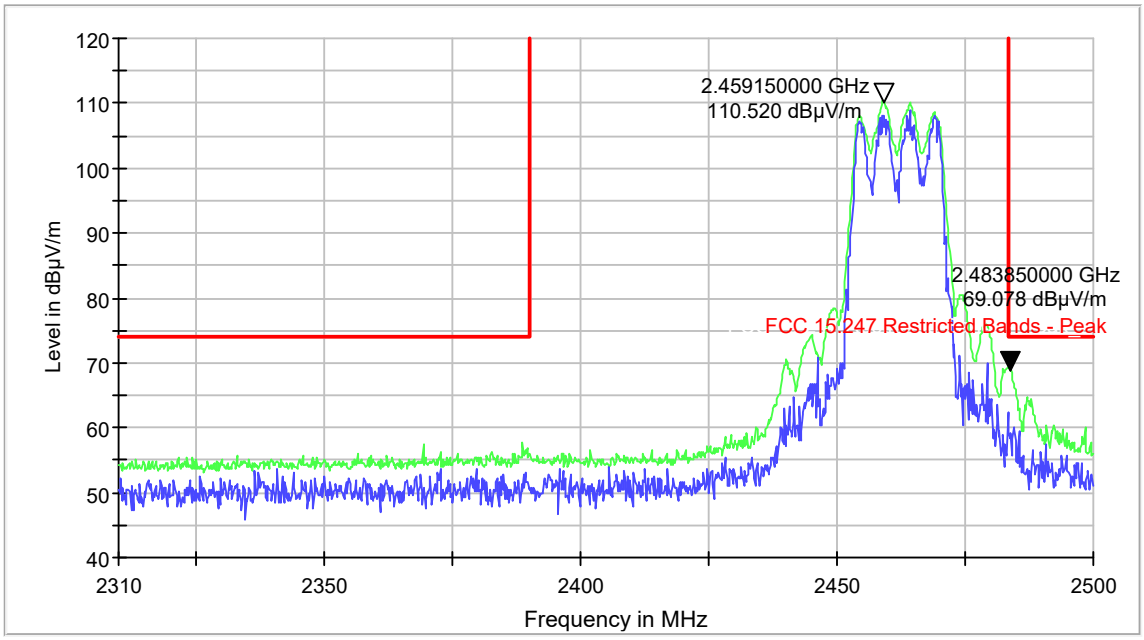
Figure 9-265 Radiated Band Edge Average 802.11n - Ch.10 (2457 MHz)



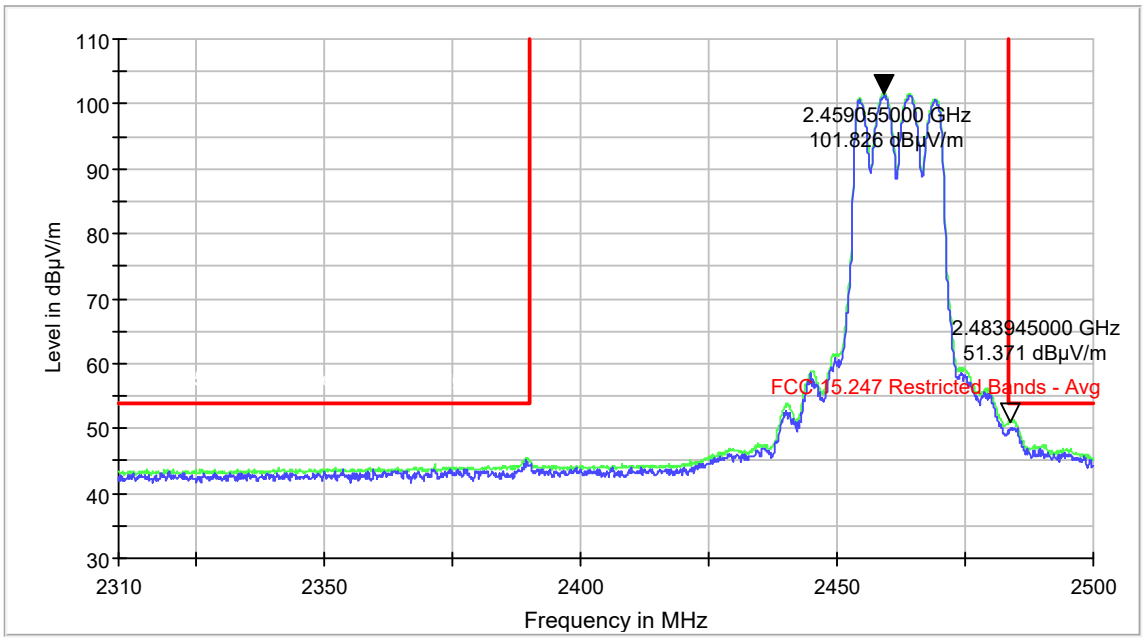
Plot 9-266 Radiated Band Edge Peak 802.11b - Ch.11 (2462 MHz)



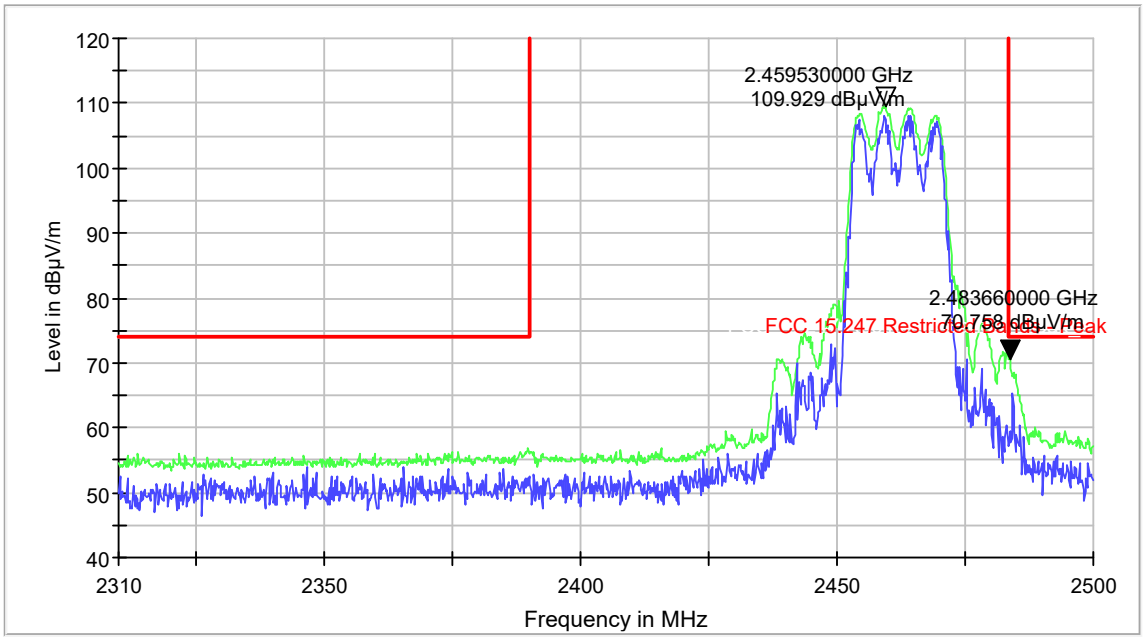
Plot 9-267 Radiated Band Edge Average 802.11b - Ch.11 (2462 MHz)



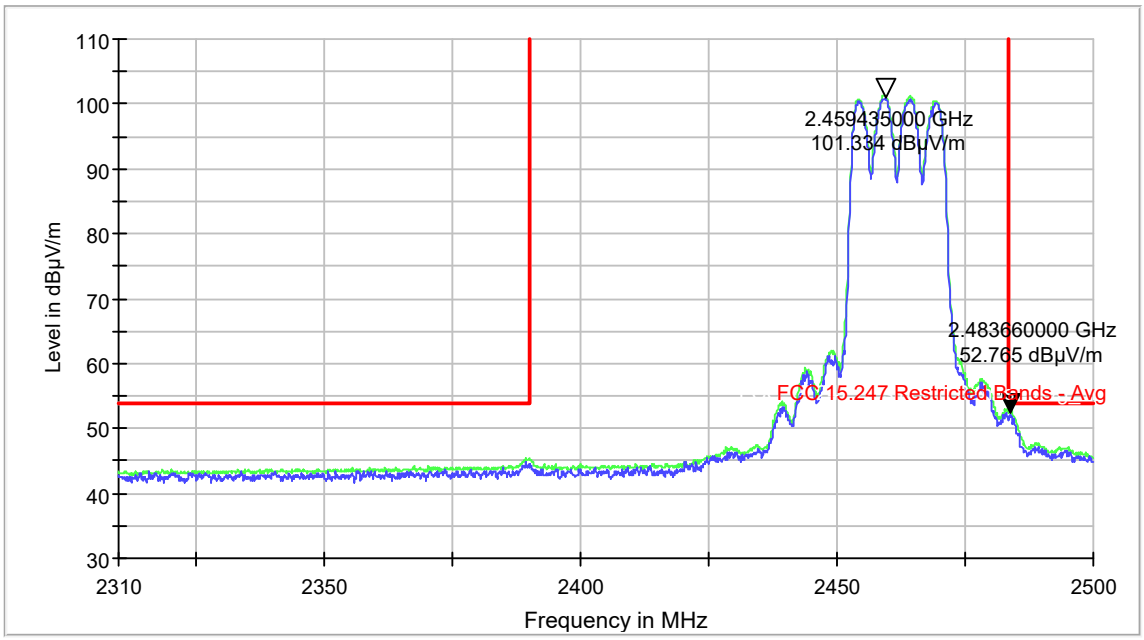
Plot 9-268 Radiated Band Edge Peak 802.11g - Ch.11 (2462 MHz)



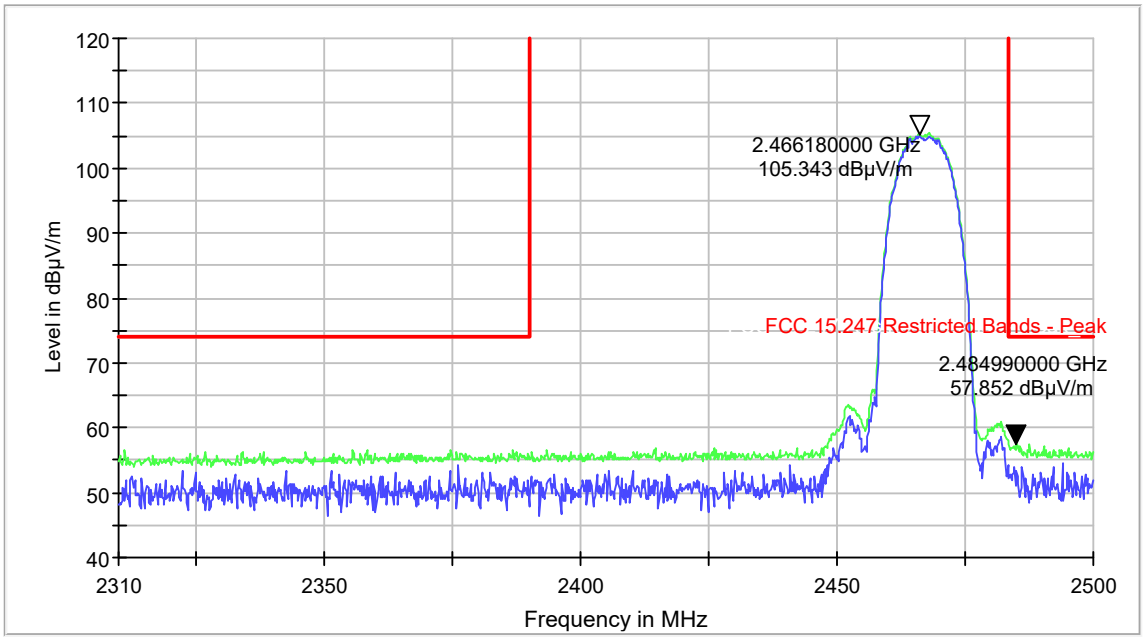
Plot 9-269 Radiated Band Edge Average 802.11g - Ch.11 (2462 MHz)



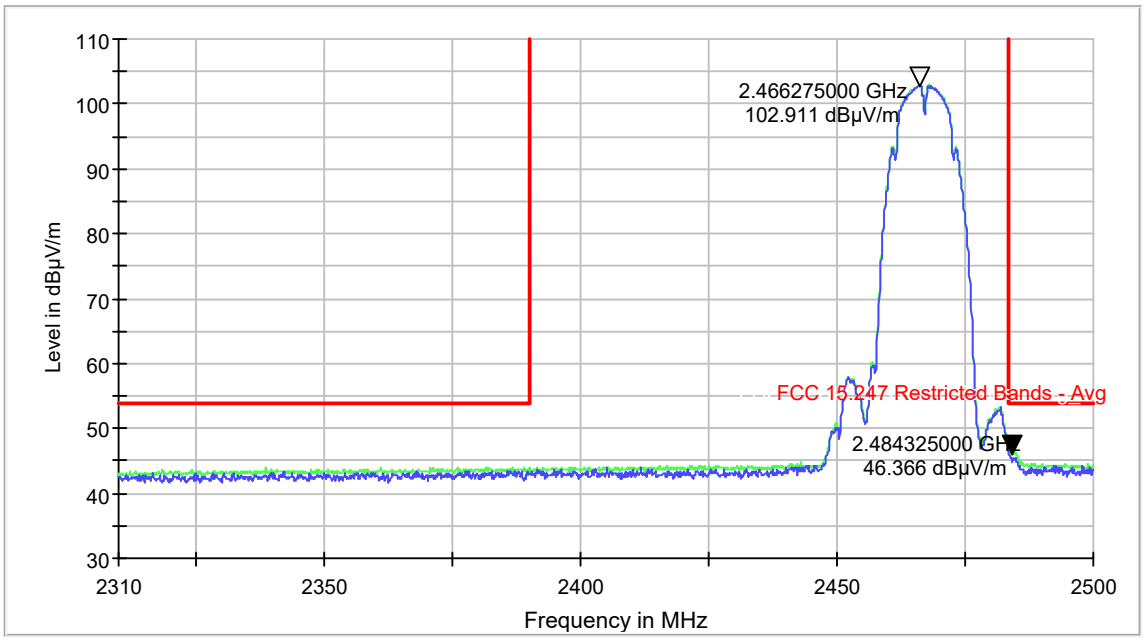
Plot 9-270 Radiated Band Edge Peak 802.11n - Ch.11 (2462 MHz)



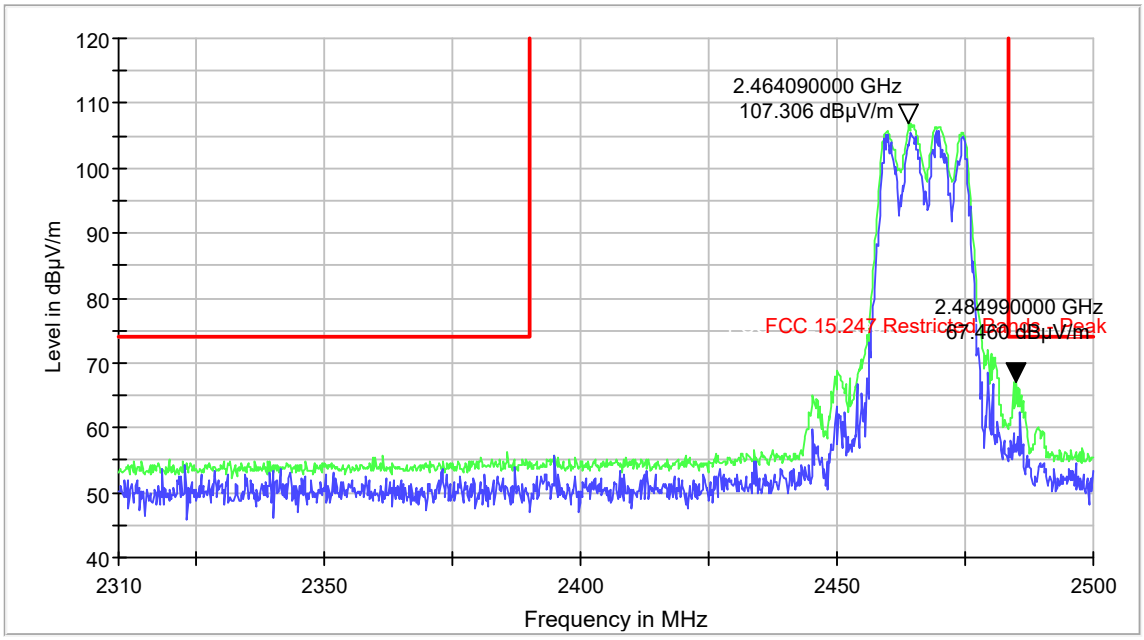
Plot 9-271 Radiated Band Edge Average 802.11n - Ch.11 (2462 MHz)



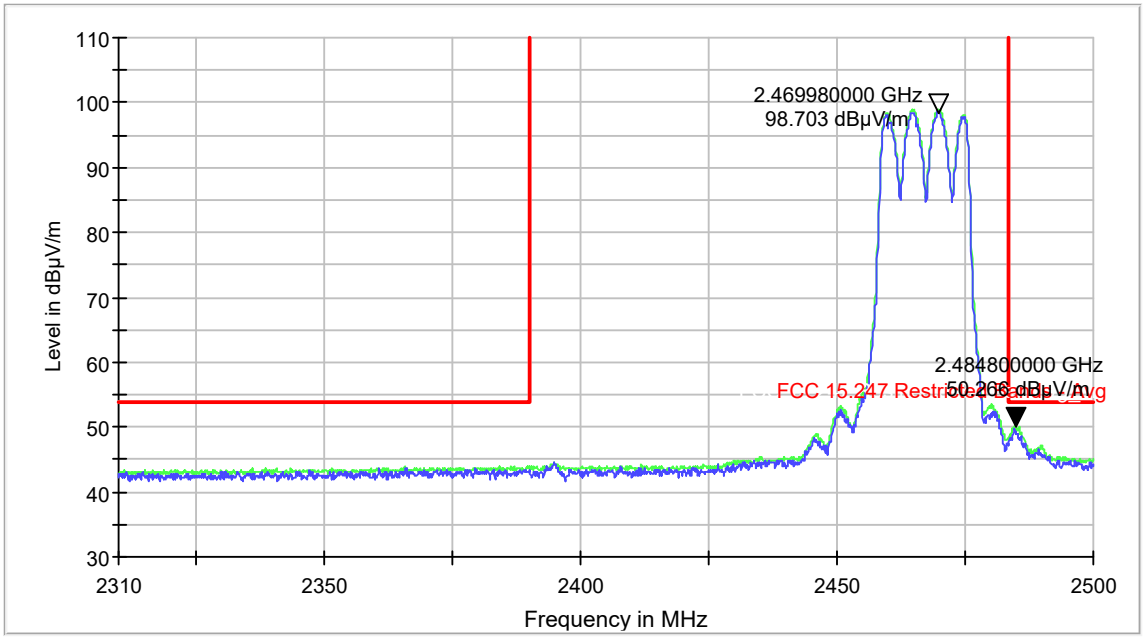
Plot 9-272 Radiated Band Edge Peak 802.11b - Ch.12 (2467 MHz)



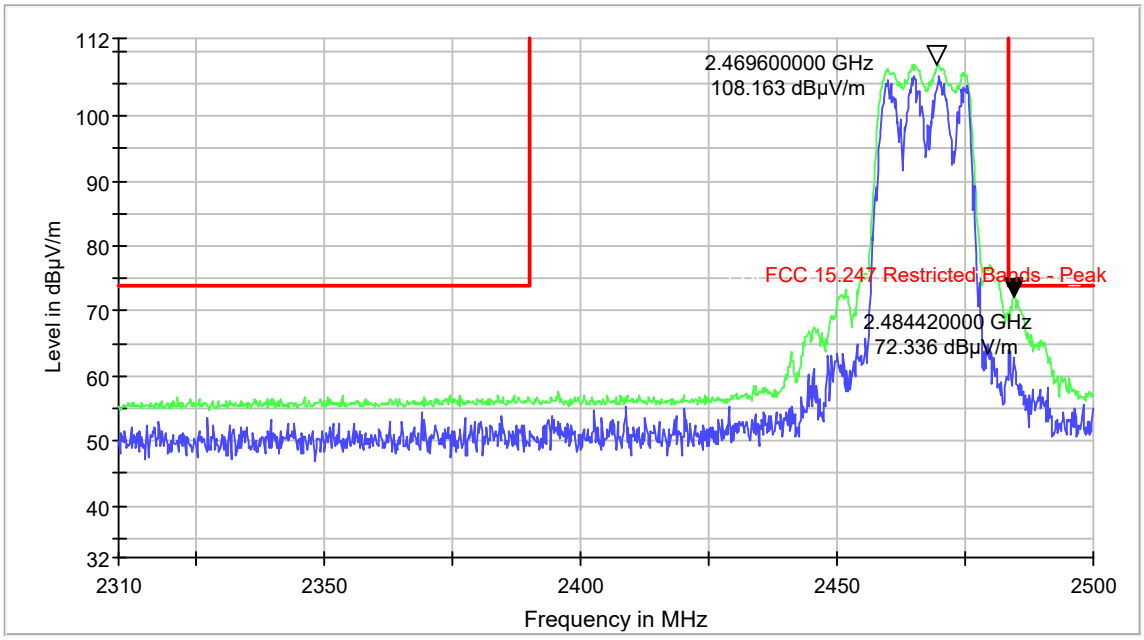
Plot 9-273 Radiated Band Edge Average 802.11b - Ch.12 (2467 MHz)



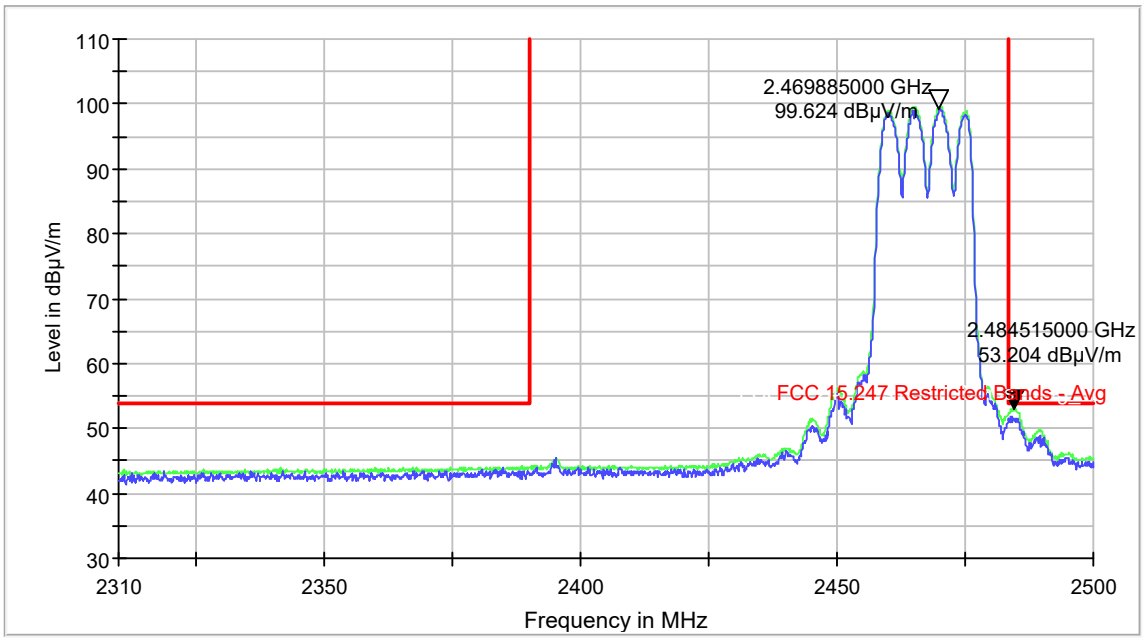
Plot 9-274 Radiated Band Edge Peak 802.11g - Ch.12 (2467 MHz)



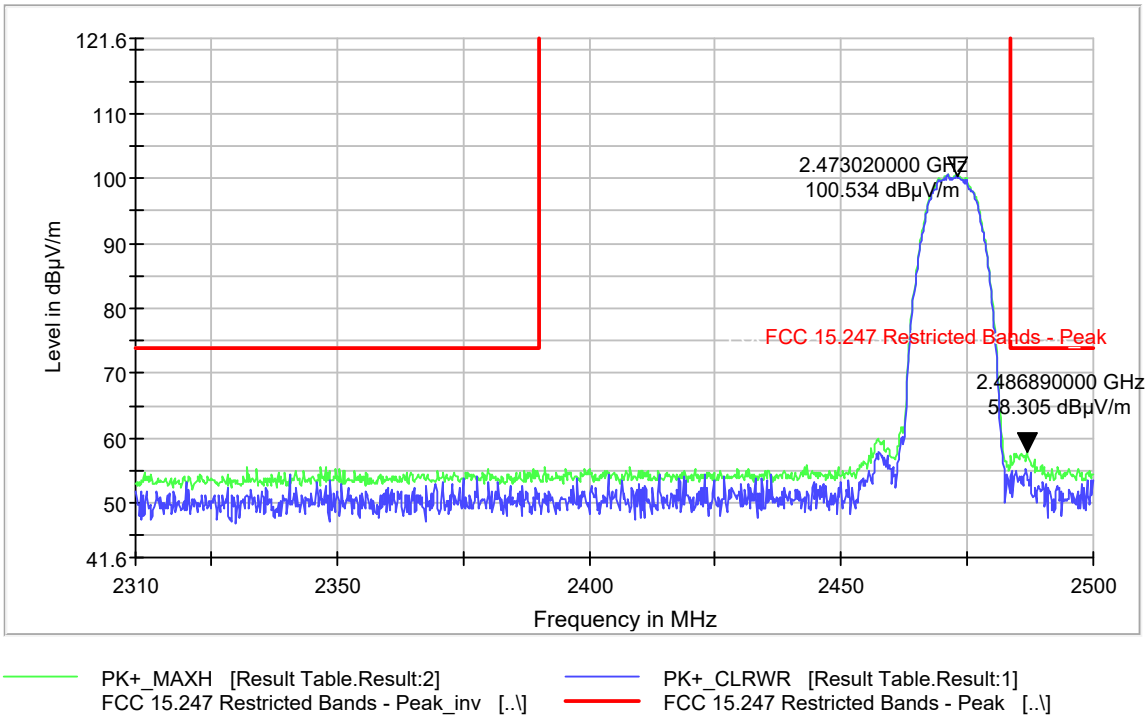
Plot 9-275 Radiated Band Edge Average 802.11g - Ch.12 (2467 MHz)



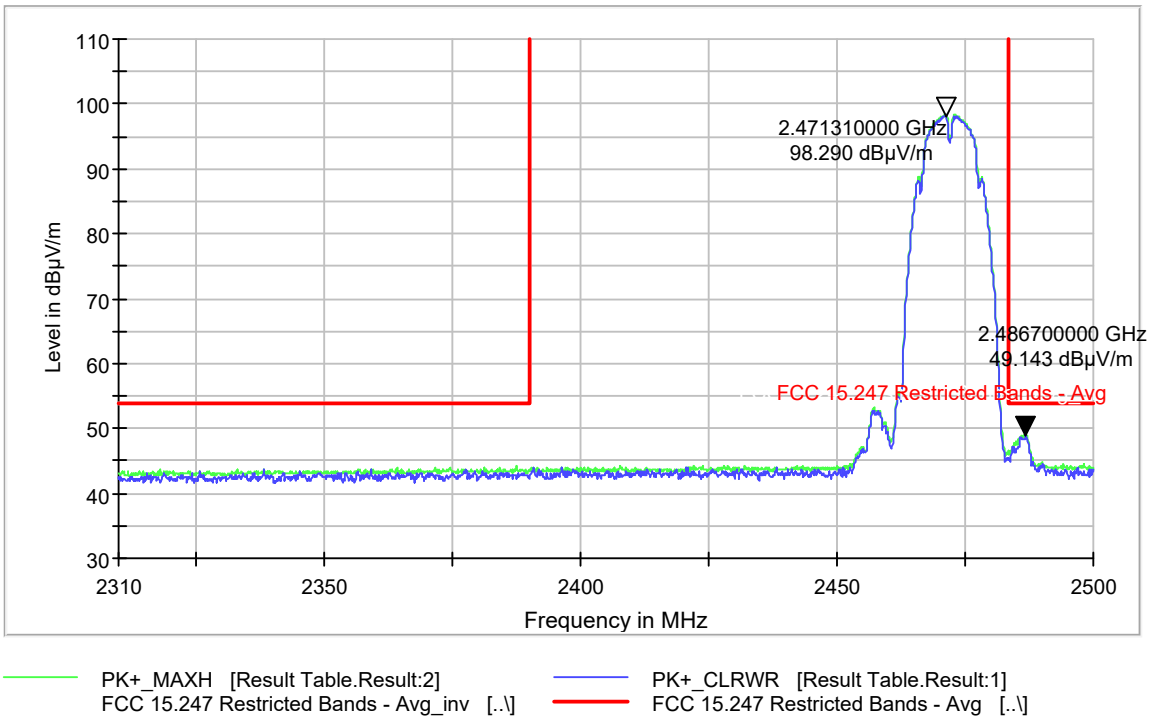
Plot 9-276 Radiated Band Edge Peak 802.11n - Ch.12 (2467 MHz)



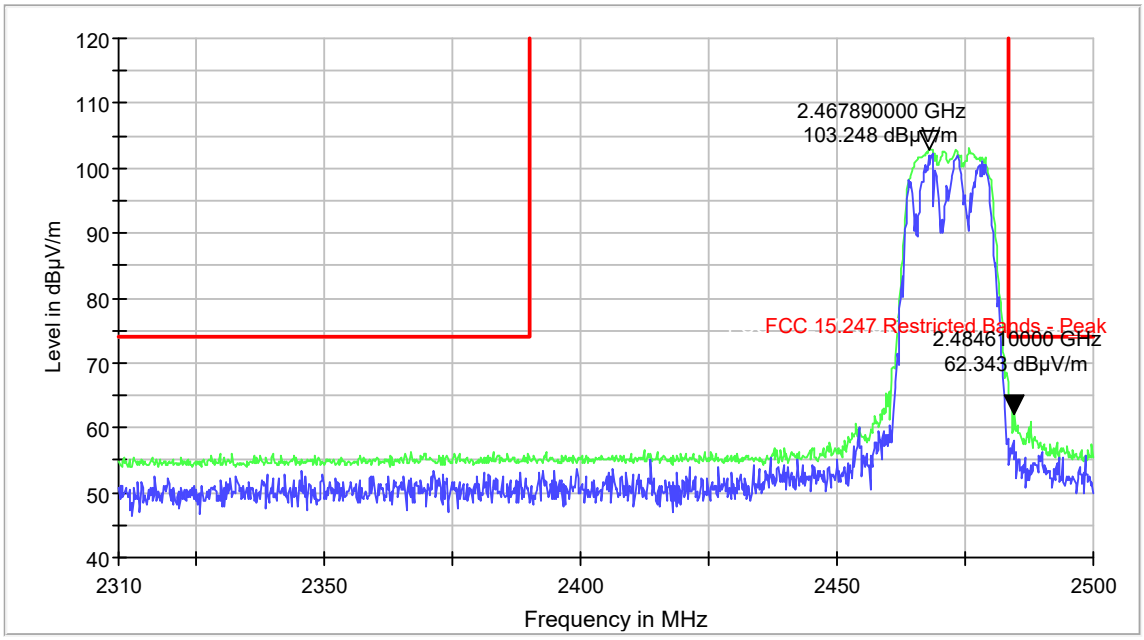
Plot 9-277 Radiated Band Edge Average 802.11n - Ch.12 (2467 MHz)



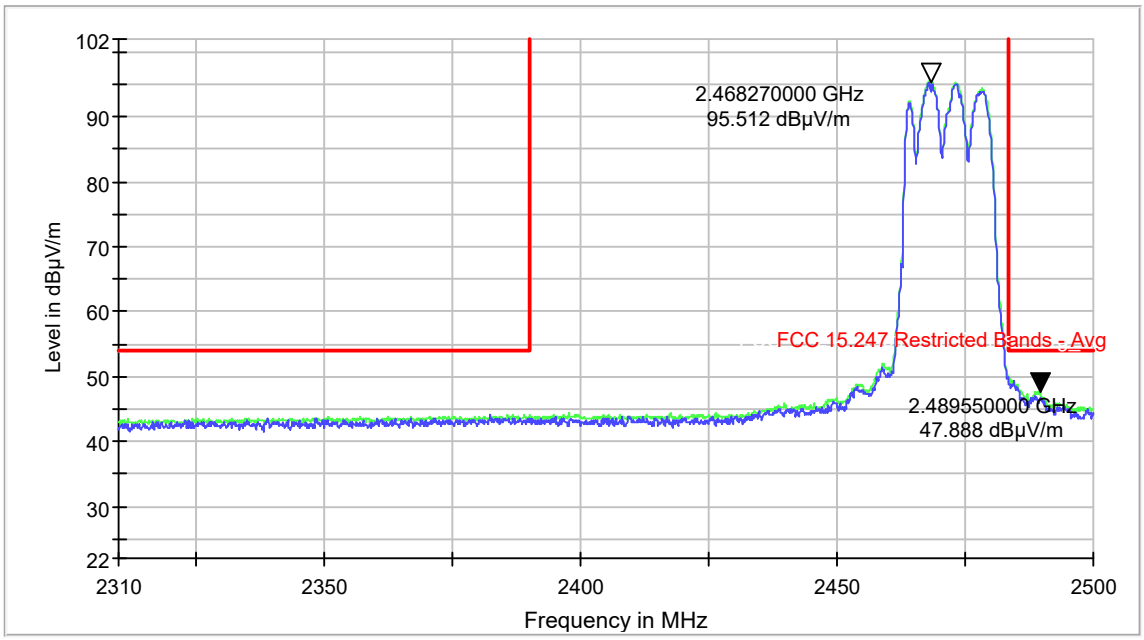
Plot 9-278 Radiated Band Edge Peak 802.11b - Ch.13 (2472 MHz)



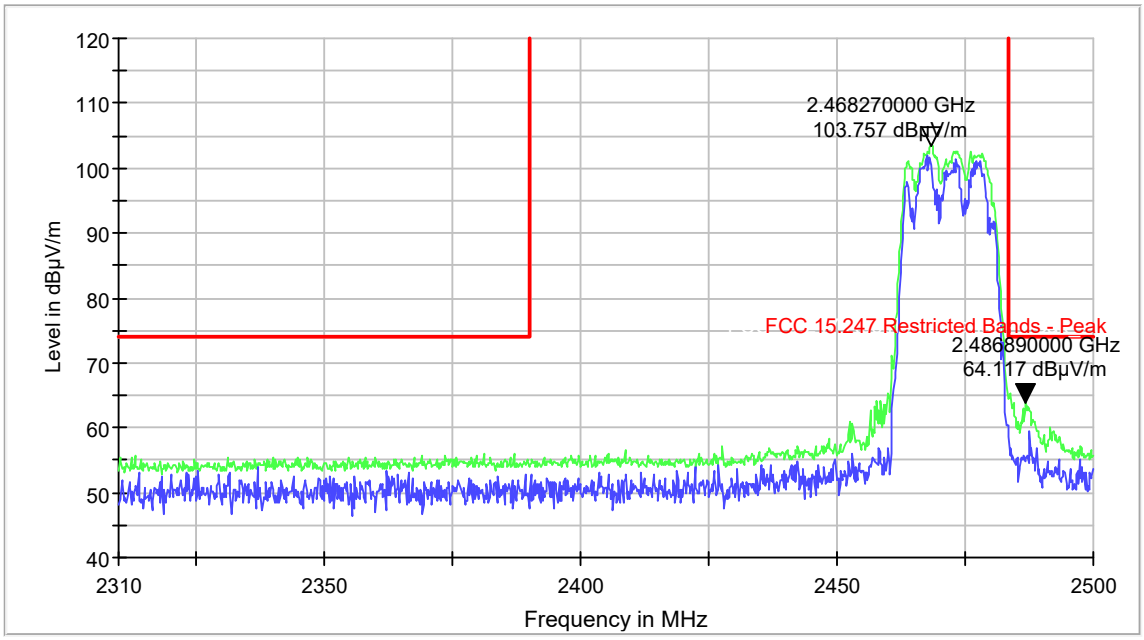
Plot 9-279 Radiated Band Edge Average 802.11b - Ch.13 (2472 MHz)



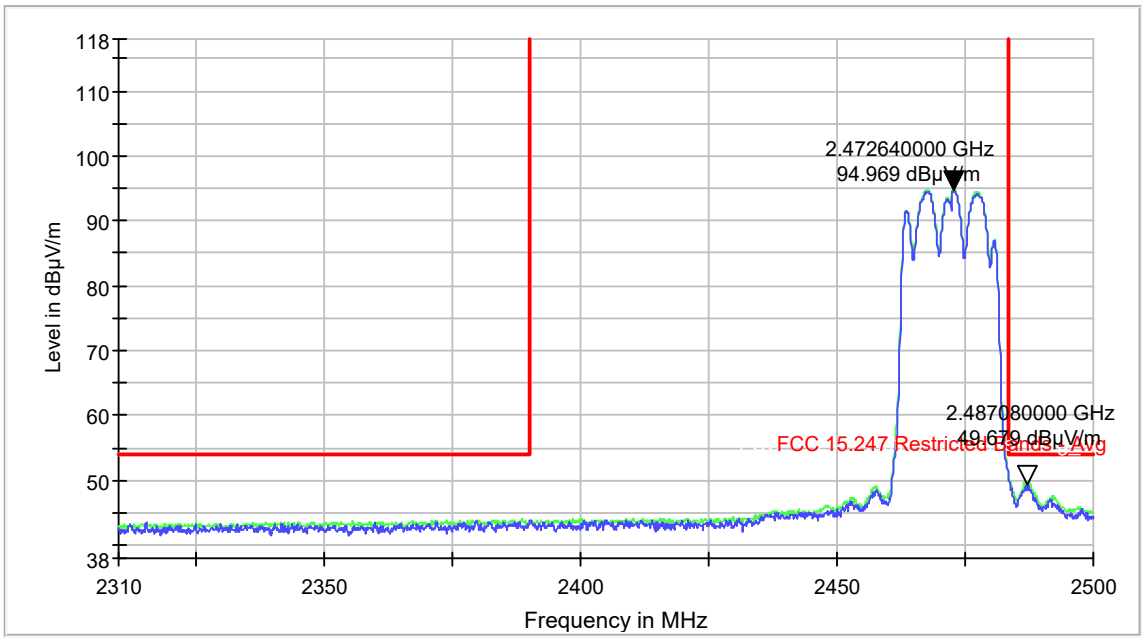
Plot 9-280 Radiated Band Edge Peak 802.11g - Ch.13 (2472 MHz)



Plot 9-281 Radiated Band Edge Average 802.11g - Ch.13 (2472 MHz)



Plot 9-282 Radiated Band Edge Peak 802.11n - Ch.13 (2472 MHz)



Plot 9-283 Radiated Band Edge Average 802.11n - Ch.13 (2472 MHz)

9.9 AC Line Conducted Emissions

9.9.1 Test Requirements

FCC CFR 47 Rule Part 15.207 (a)
Innovation Science and Economic Development Canada RSS-Gen [8.8]

9.9.2 Test Method

Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the unsymmetric radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with the power cords that are used under normal operating conditions. These measurements are made using a LISN (Line Impedance Stabilization Network). AC powered peripherals are attached to a second LISN with the 50 ohm measuring port terminated by a 50 ohm resistive load.

The EUT is set to continuously transmit on Ch.6, 802.11n MIMO mode at 14dBm power setting.

EMI Receiver Settings:
150 kHz – 30 MHz:
RBW= 9 kHz
VBW ≥ 3 X RBW
Trace Mode: Peak Detector (Max Hold).
Final measurements performed using Quasi-Peak and Average Detectors.
Span= 150 kHz – 30 MHz
Sweep time= Auto

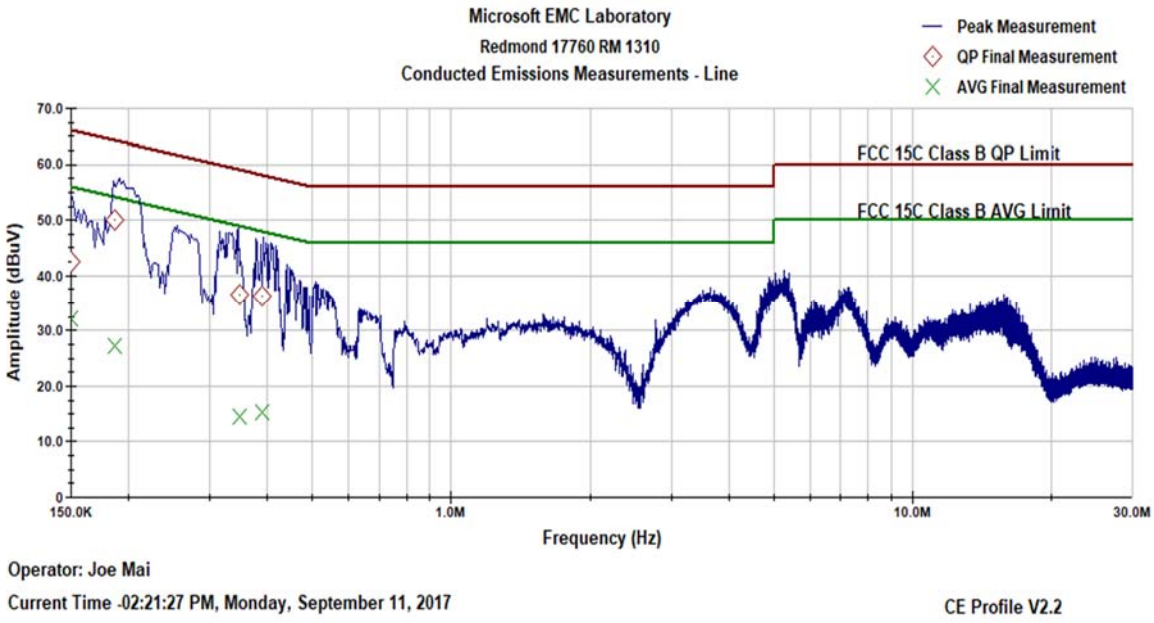
9.9.3 Limit

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

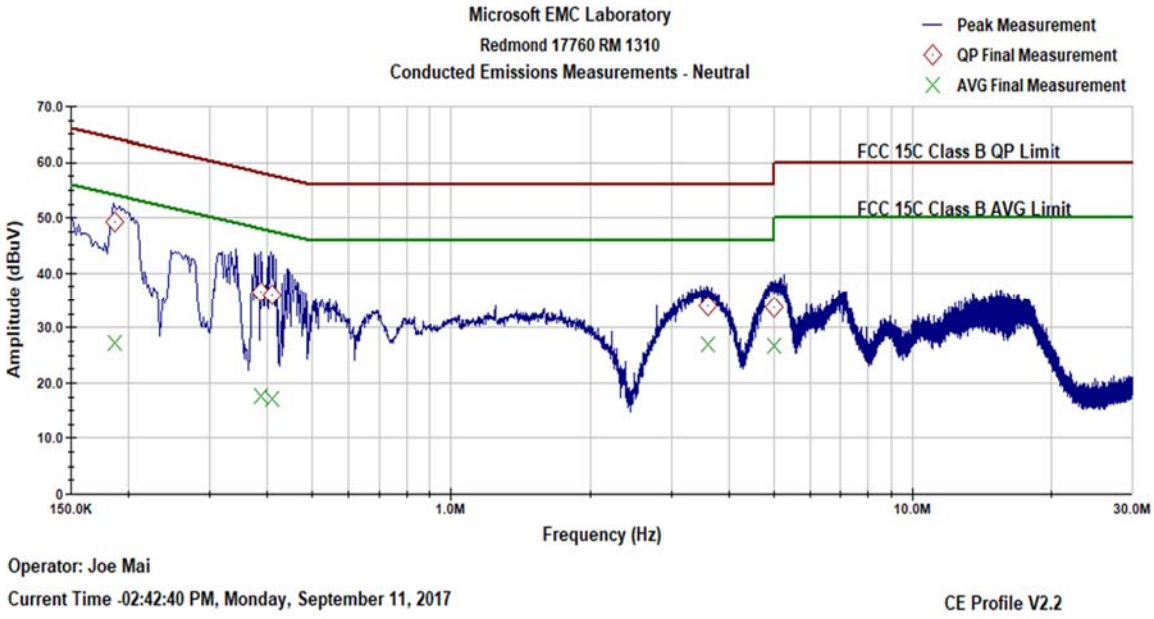
9.9.4 Test Result:

Pass

9.9.5 Test Data:



Plot 9-284 Conducted Emissions Measurements-Line



Plot 9-285 Conducted Emissions Measurements- Neutral

Frequency (MHz)	Line Tested (L or N)	AVG Amplitude (dBµV)	QP Amplitude (dBµV)	AVG Limit (dBµV)	QP Limit (dBµV)	AVG Margin (dB)	QP Margin (dB)
0.187	L	27.10	49.94	54.94	64.94	-27.85	-15.00
0.187	N	27.21	49.22	54.95	64.95	-27.74	-15.74
3.603	N	26.87	33.84	46.00	56.00	-19.13	-22.16
0.408	N	17.06	36.00	48.62	58.62	-31.56	-22.62
0.387	N	17.74	36.54	49.24	59.24	-31.50	-22.70
0.39	L	15.16	36.23	49.13	59.13	-33.97	-22.91
0.15	L	32.16	42.61	56.00	66.00	-23.84	-23.39
0.347	L	14.49	36.67	50.36	60.36	-35.88	-23.69
5.024	N	26.70	33.78	50.00	60.00	-23.30	-26.22

End of Report