RSS-247 5.5 / FCC 15.247 (d) [RSE] Emission limitations radiated (Transmitter)

Limits

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c) / RSS-Gen):

Frequency Range (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	-	300
0.490 – 1.705	24000/F(kHz)	-	30
1.705 – 30	30	-	30
30 – 88	100	40	3
88 – 216	150	43.5	3
216 – 960	200	46	3
Above 960	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.

RSS-247:

Attenuation below the general field strength limits specified in RSS-Gen is not required.

Results

Frequency range 30 MHz – 1 GHz:

The spurious frequencies detected do not depend either on the operating channel or the modulation.

Spurious frequencies detected at less than 20 dB below the limit:

Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
47.702500	21.75	V	Quasi-Peak
196.718750	23.55	V	Quasi-Peak
304.873750	26.05	H	Quasi-Peak

Verdict

Pass

Modulation: 802.11b (DSSS 1 Mbit/s)

Frequency range 1 GHz – 26 GHz:

No spurious frequencies found.

Verdict

Pass

Modulation: 802.11g (OFDM 6 Mbit/s)

Frequency range 1 GHz – 26 GHz:

No spurious frequencies found.

Verdict

Pass

Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s)

Frequency range 1 GHz – 26 GHz:

No spurious frequencies found.

Verdict

Pass

Modulation: 802.11n HT40 (OFDM MCS0 13.5 Mbit/s)

Frequency range 1 GHz – 26 GHz:

No spurious frequencies found.

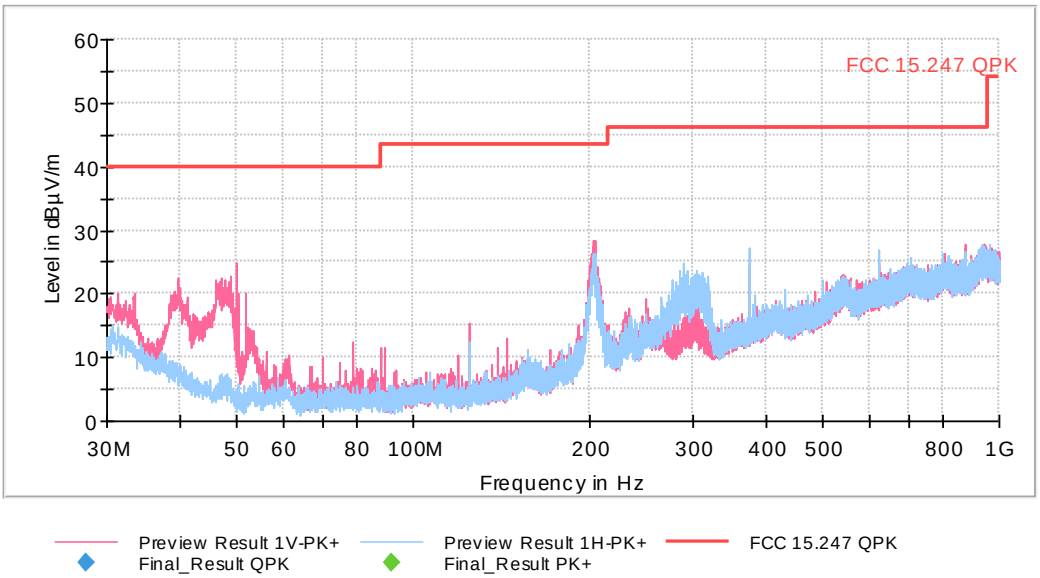
Verdict

Pass

Attachments

Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [0.03, 1]

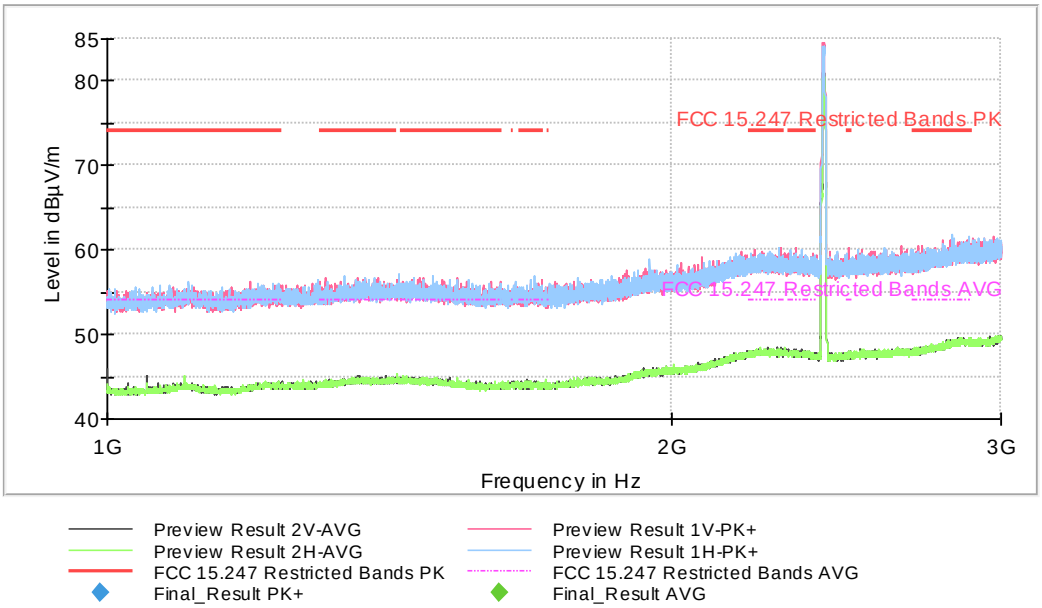
Plots:



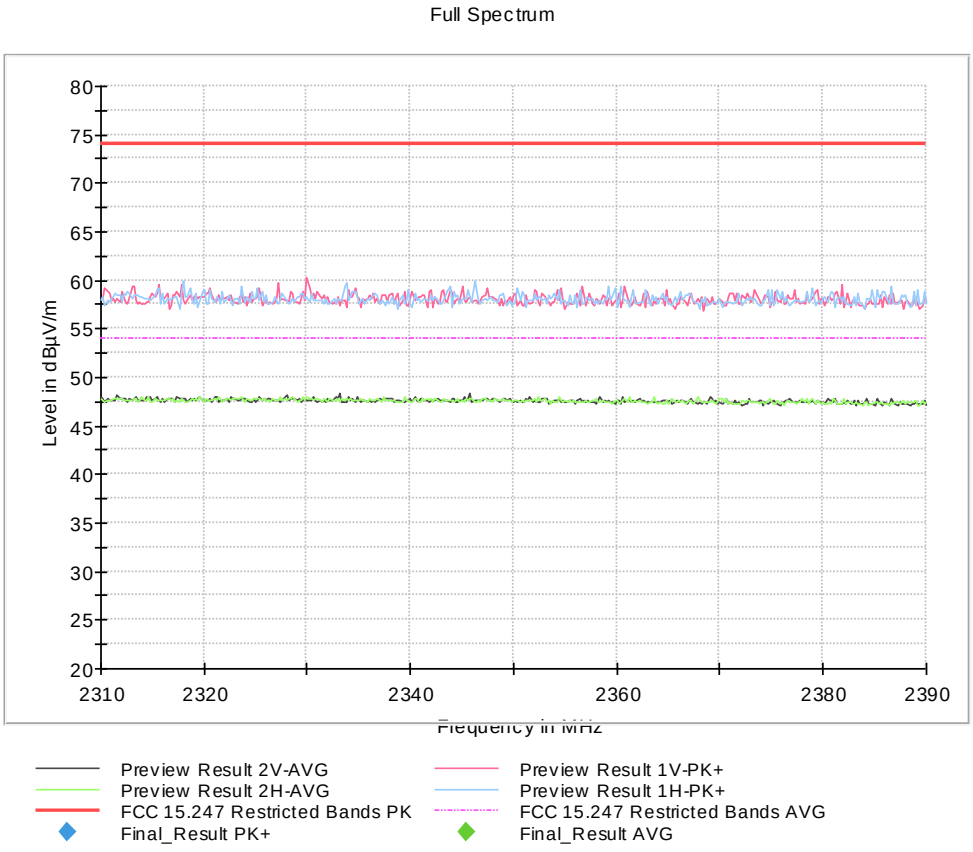
This plot is valid for Low, Middle and High Channels.
Settings: RBW = 100 kHz / VBW = 300 kHz / Sweep Time = 1s / Sweep points = 32001

Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [1, 3]

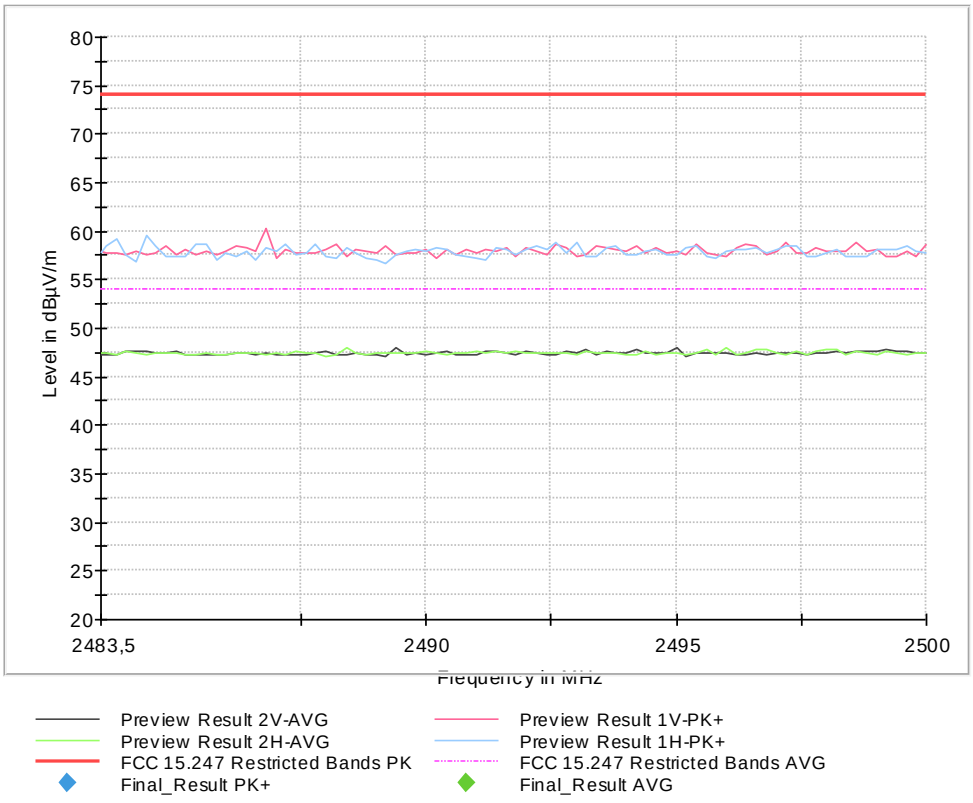
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

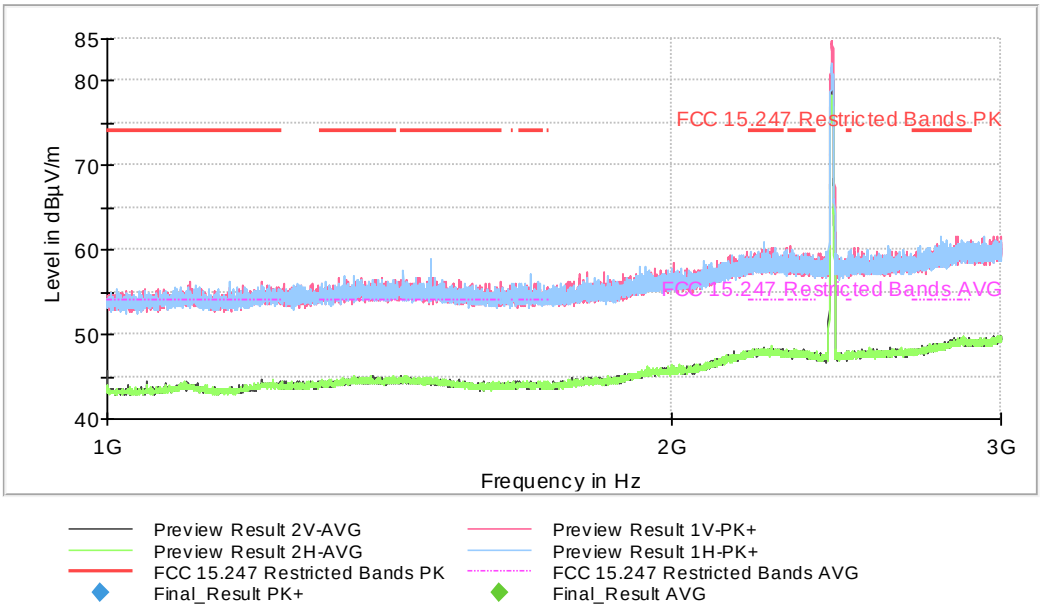


Full Spectrum

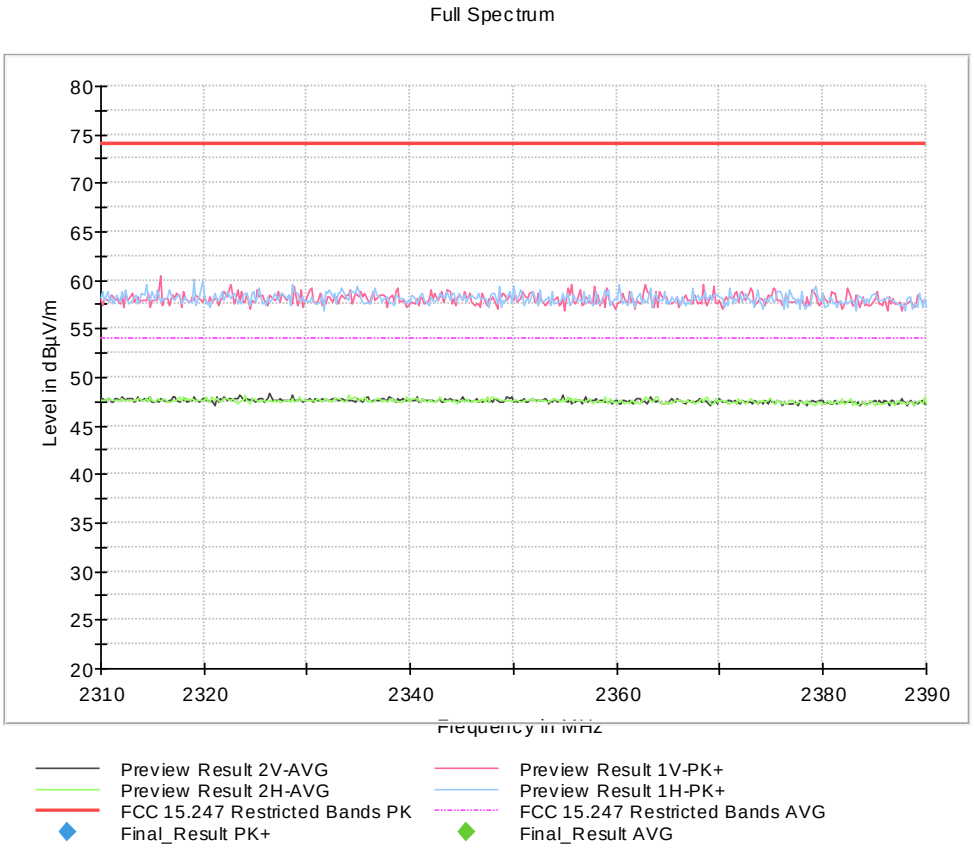


Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [1, 3]

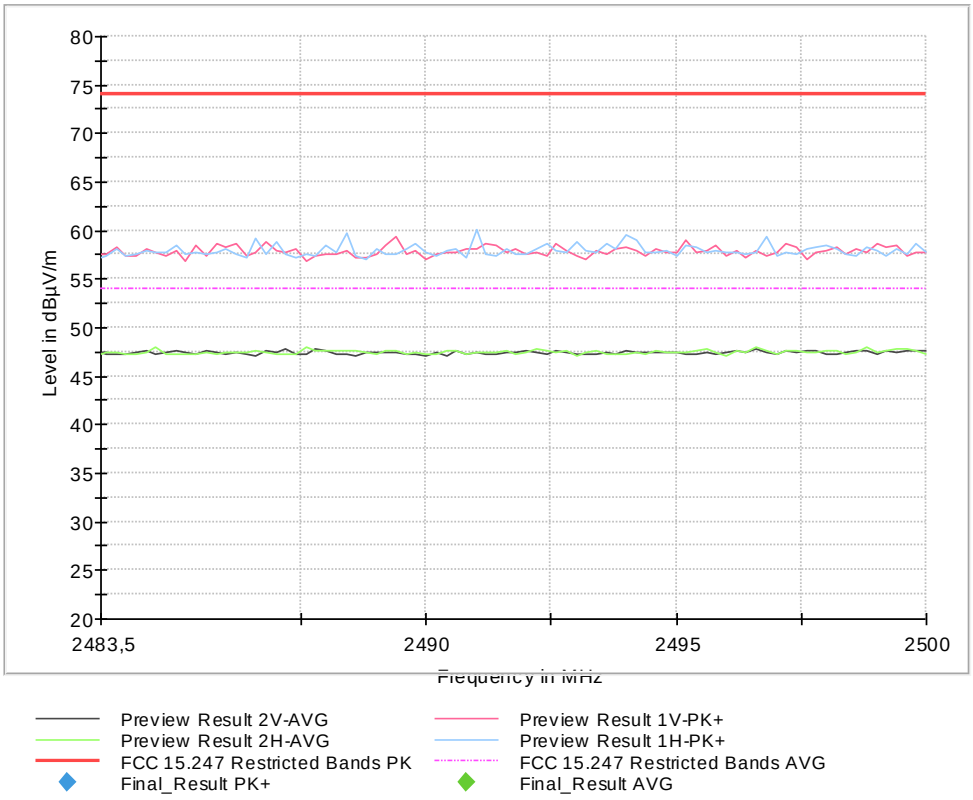
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

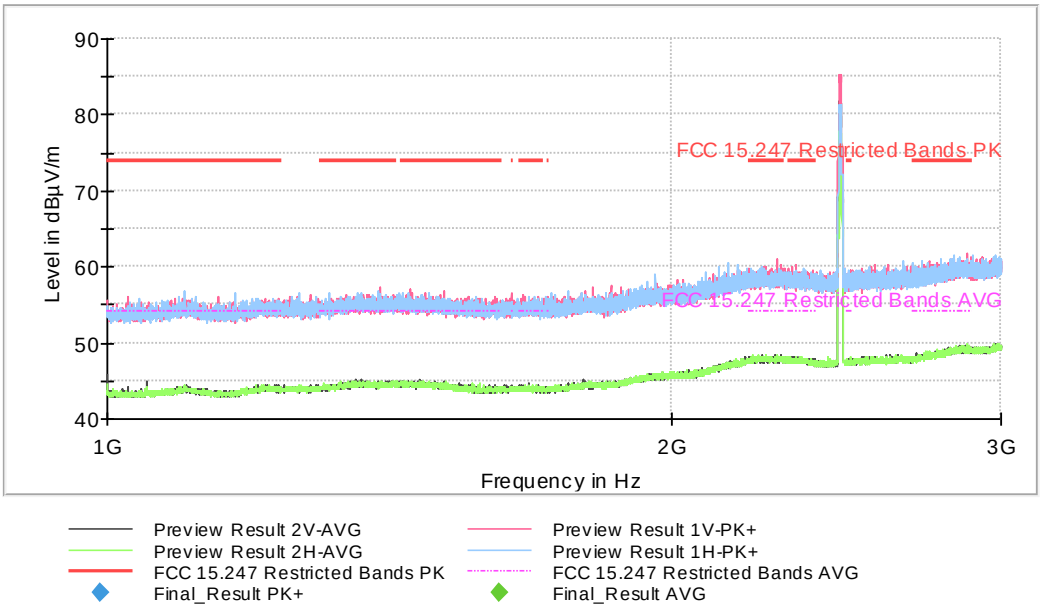


Full Spectrum

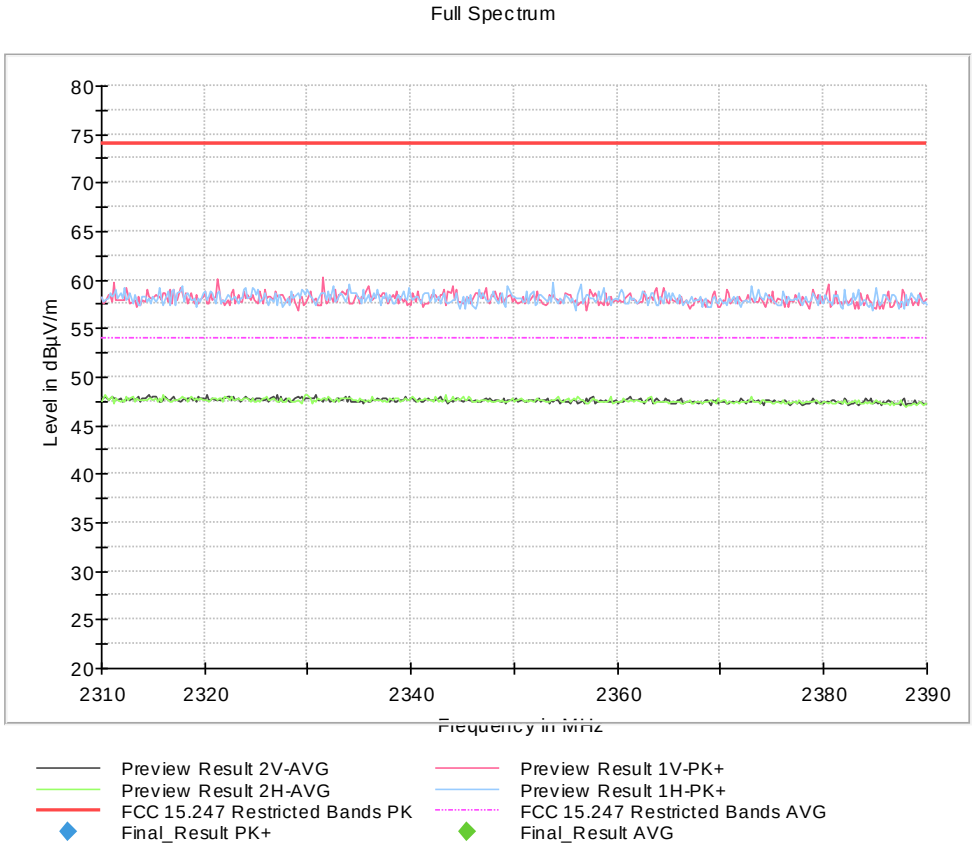


Frequency (MHz) = 2462.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [1, 3]

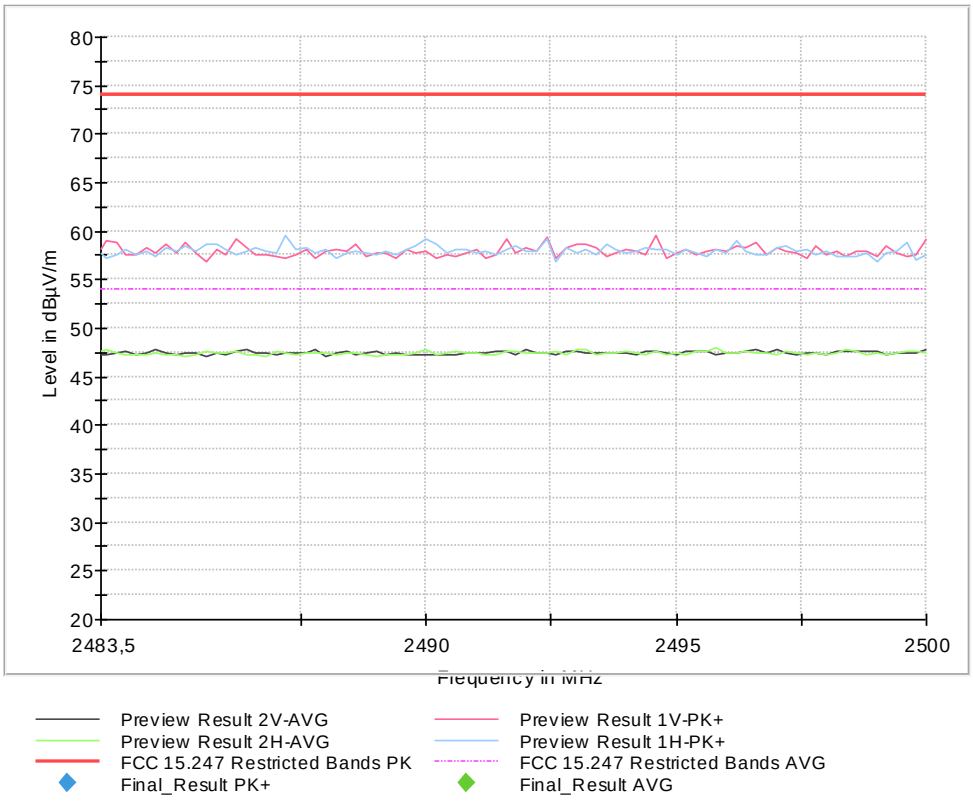
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

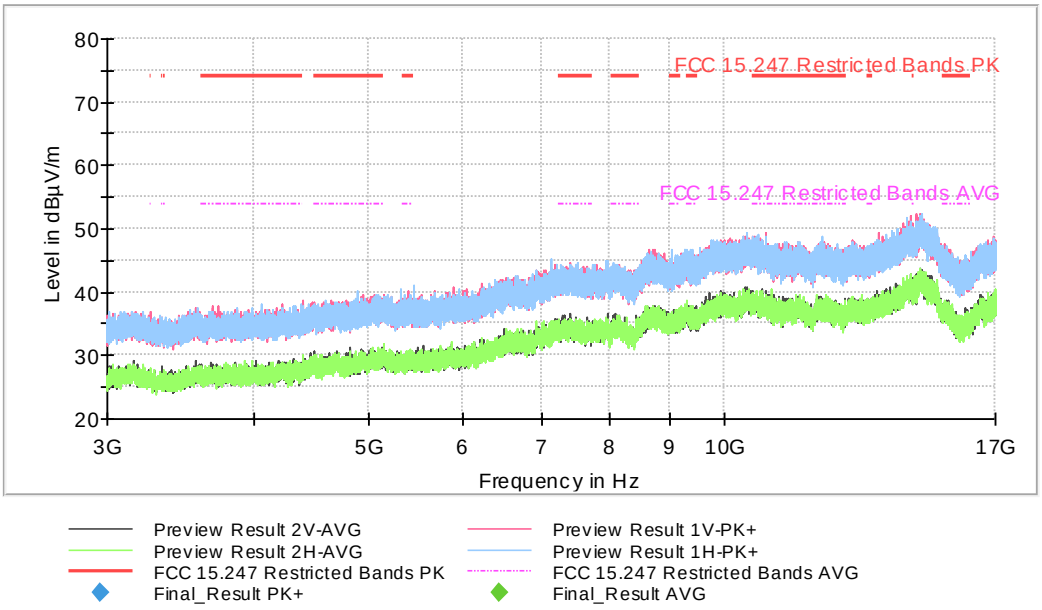


Full Spectrum



Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [3, 17]

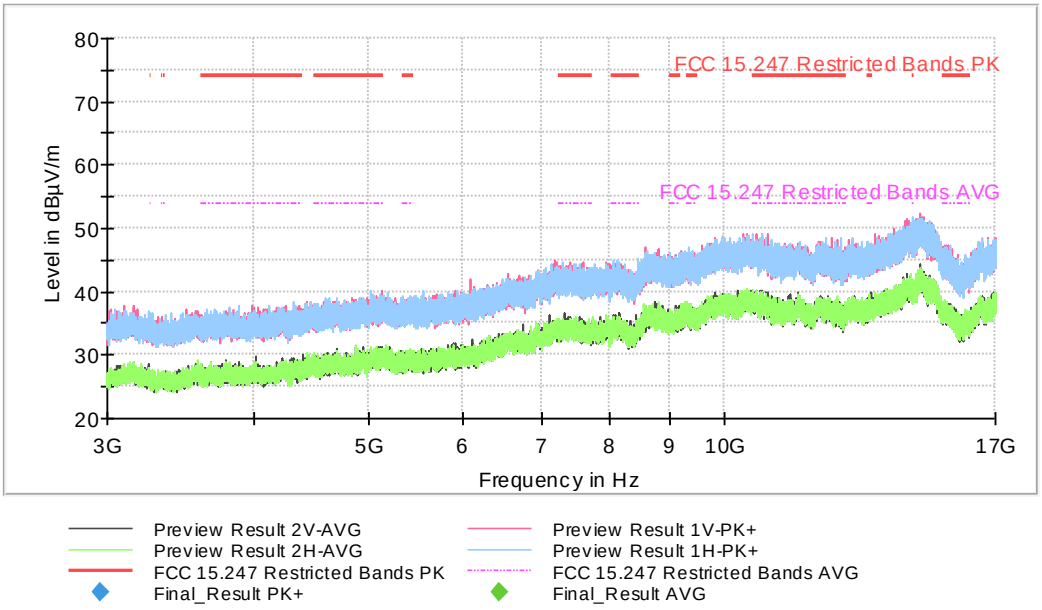
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [3, 17]

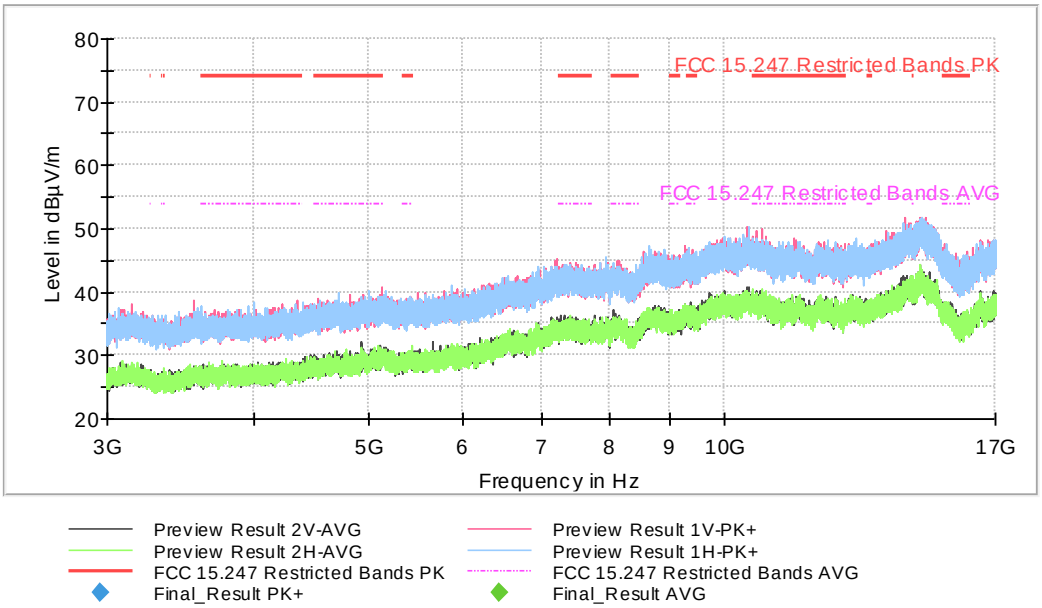
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Frequency (MHz) = 2462.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [3, 17]

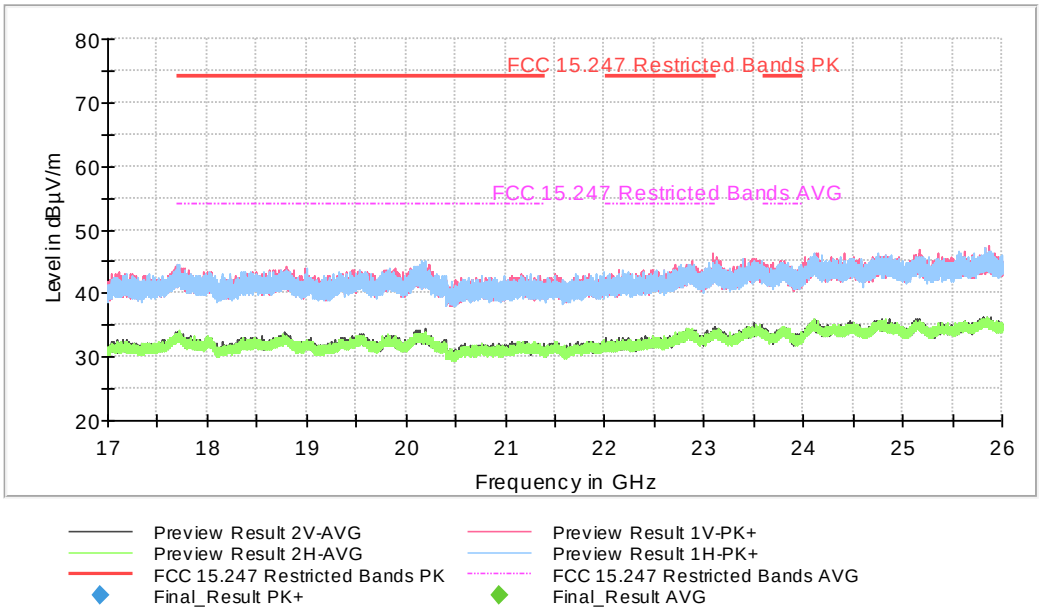
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Equipment Type: Digital Transmission System (DTS), Modulation: 802.11b (DSSS 1 Mbit/s), Frequency Range (GHz) = [17, 26]

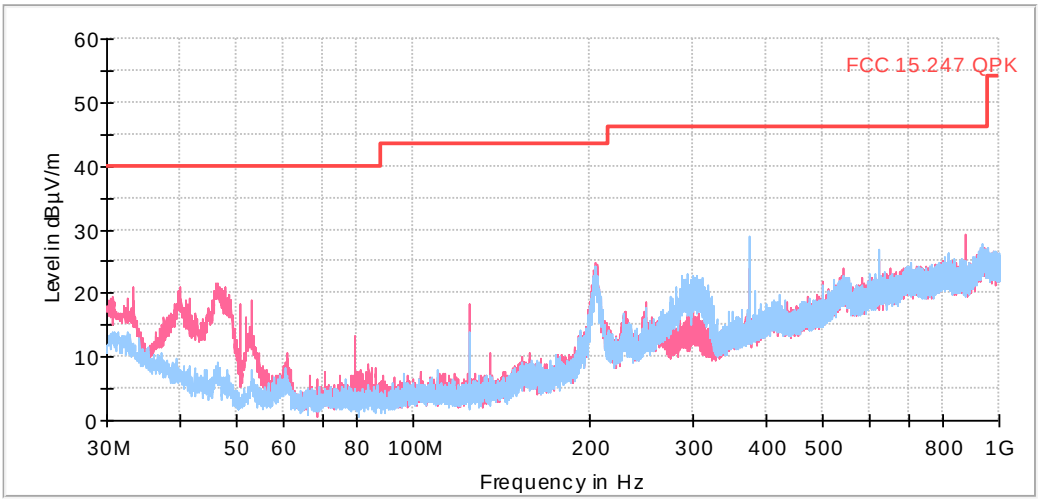
Plots:



This plot is valid for Low, Middle and High Channels.
Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 32001

Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [0.03, 1]

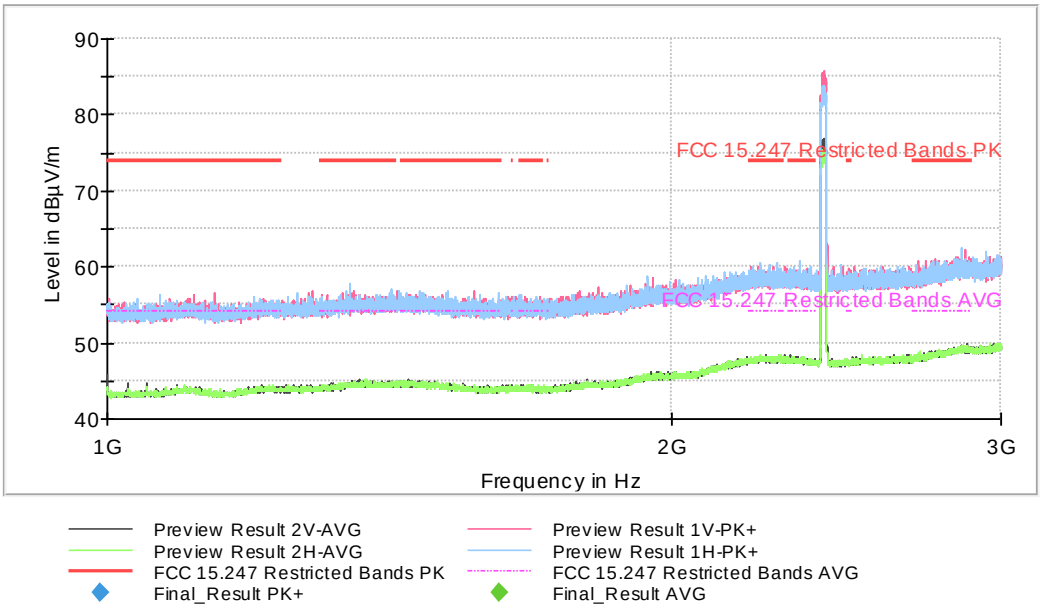
Plots:



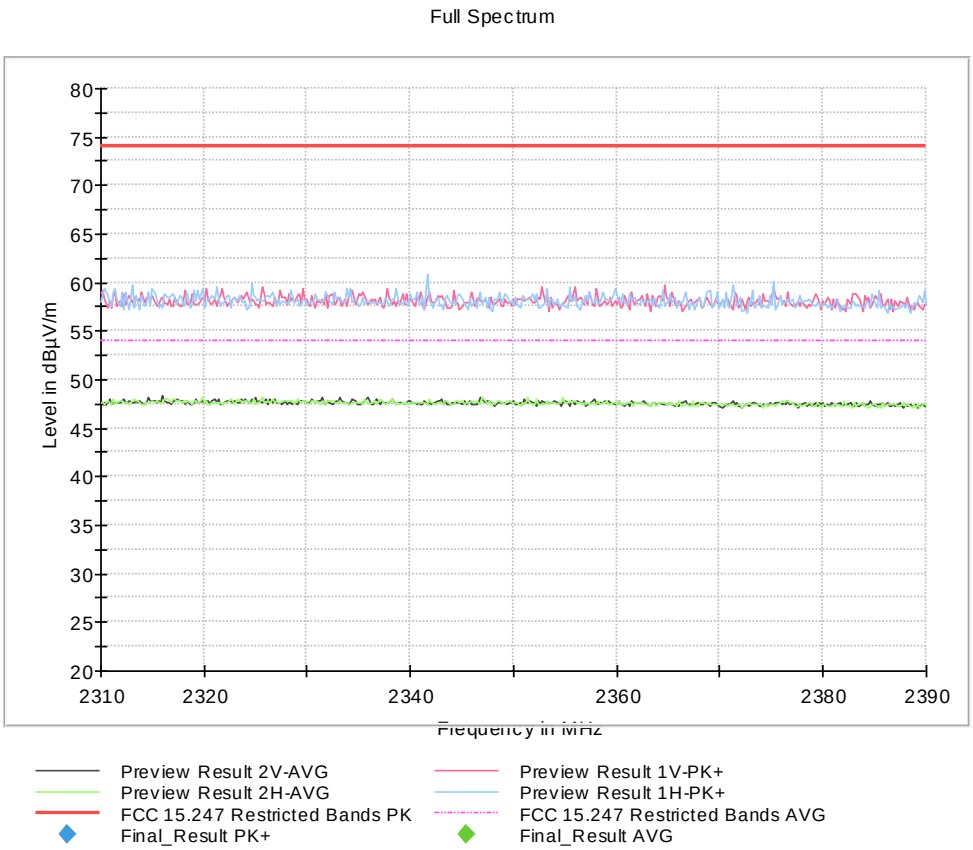
This plot is valid for Low, Middle and High Channels.
Settings: RBW = 100 kHz / VBW = 300 kHz / Sweep Time = 1s / Sweep points = 32001

Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [1, 3]

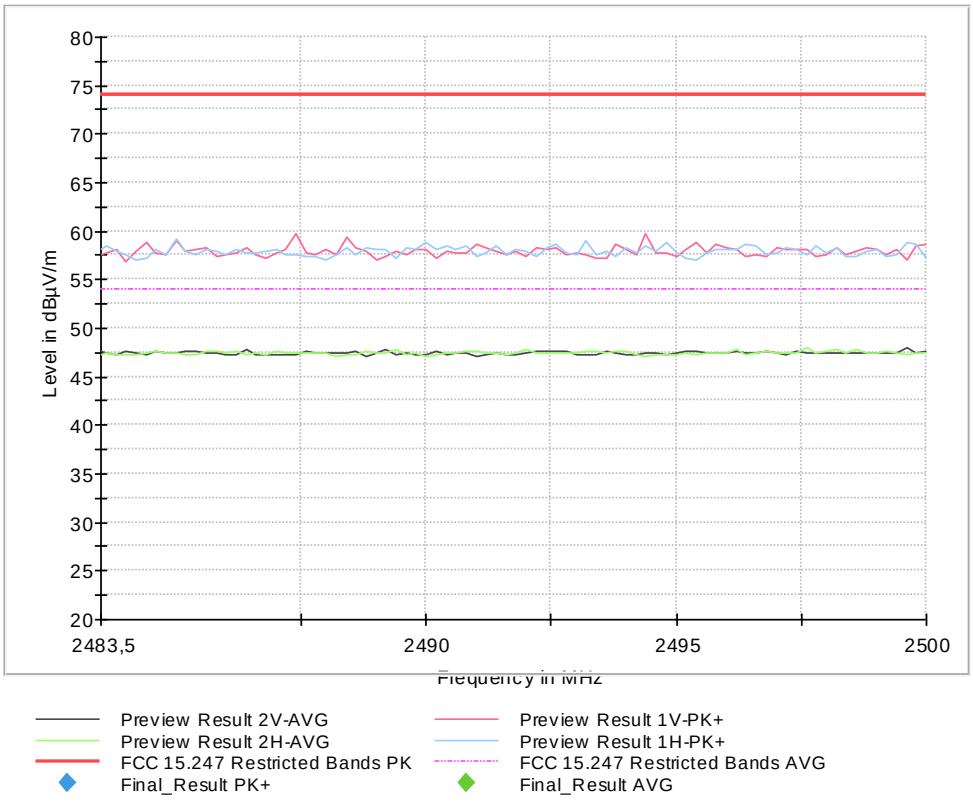
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

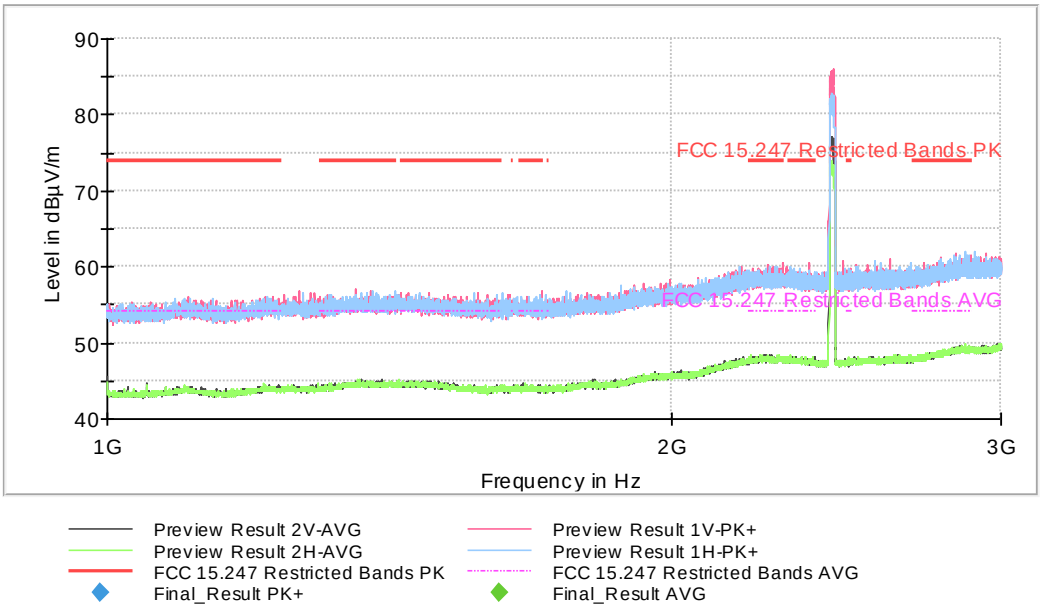


Full Spectrum

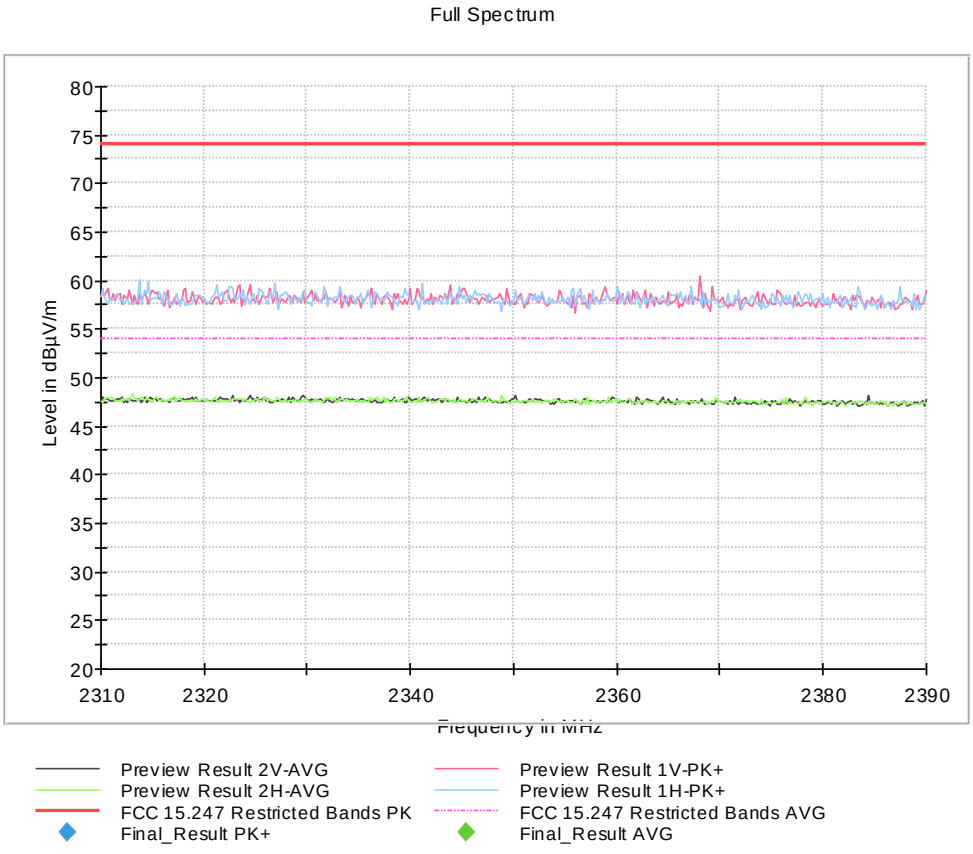


Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [1, 3]

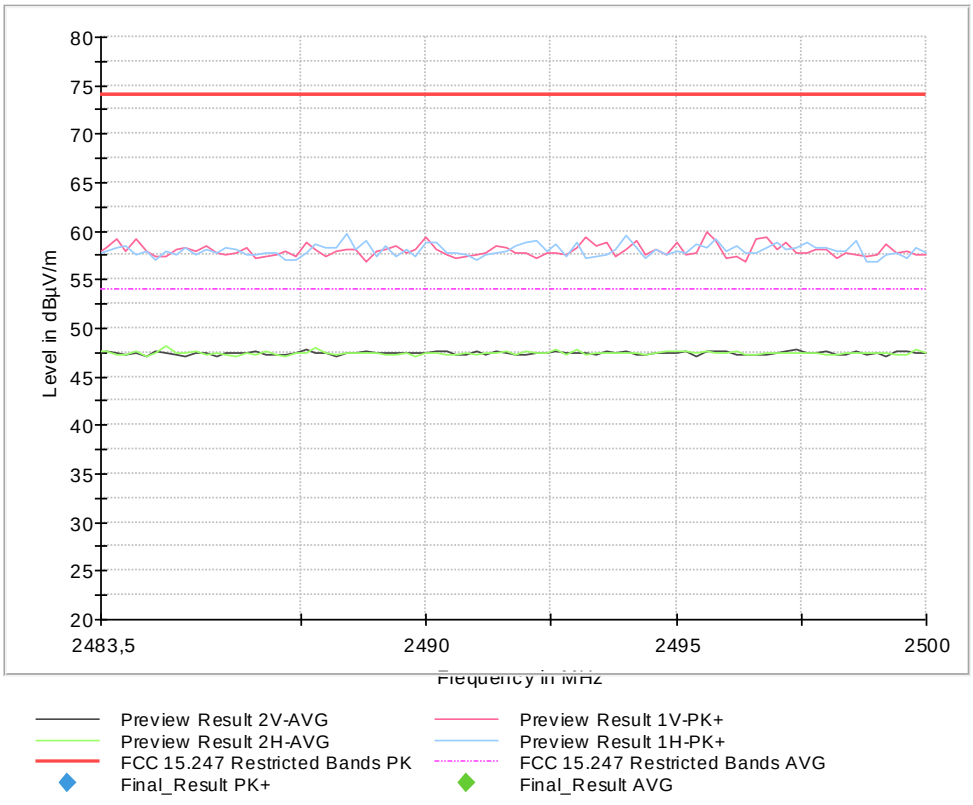
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

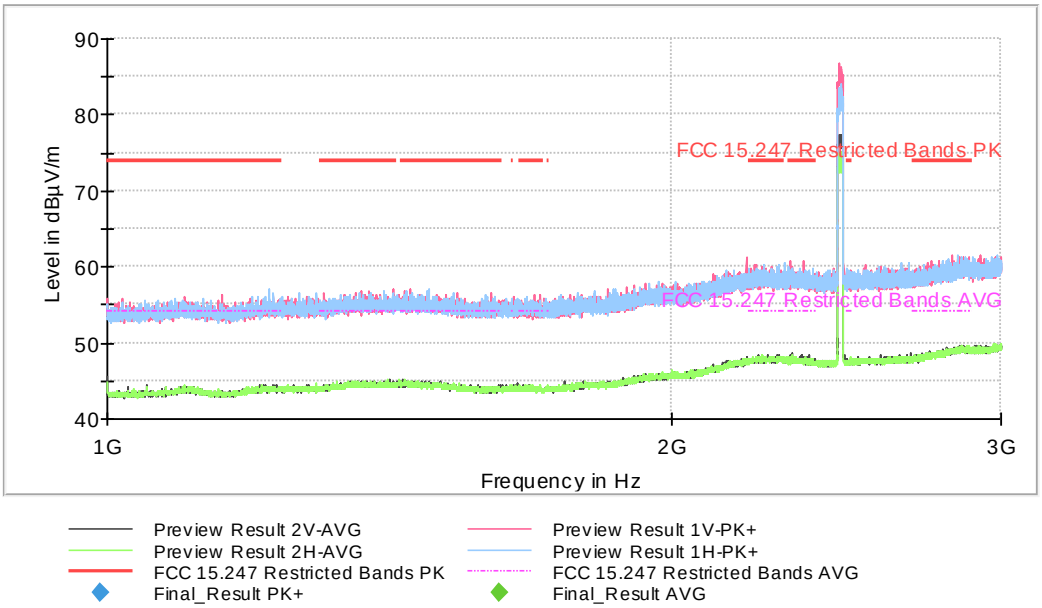


Full Spectrum

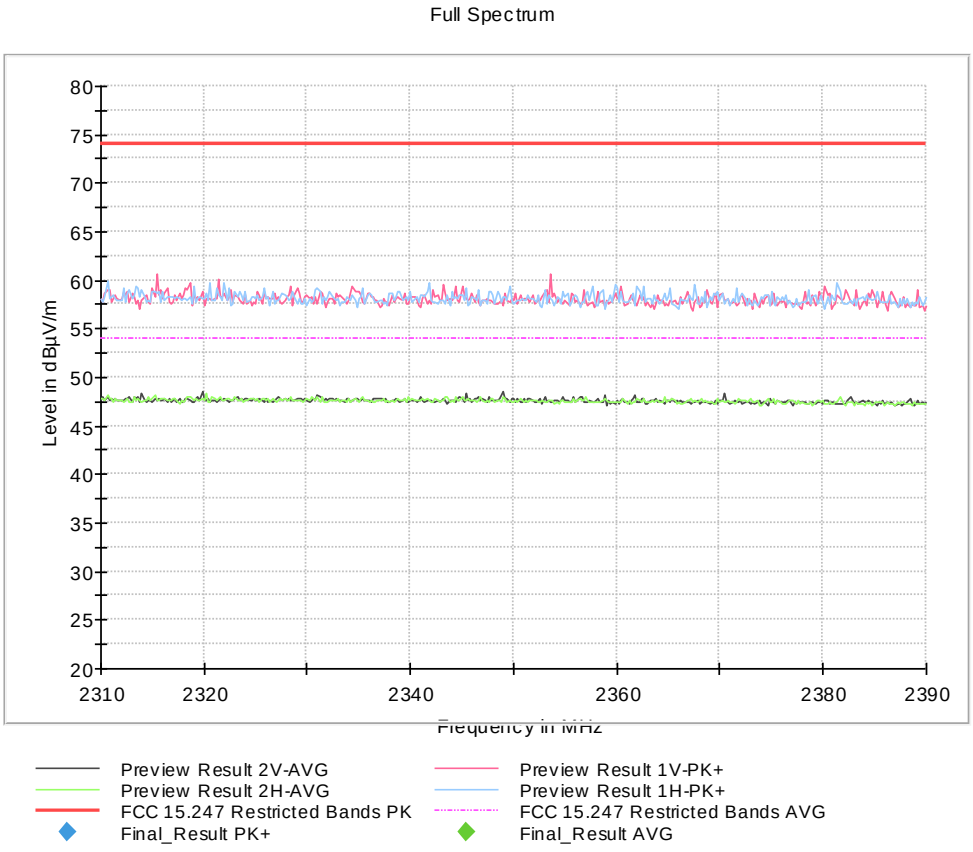


Frequency (MHz) = 2462.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [1, 3]

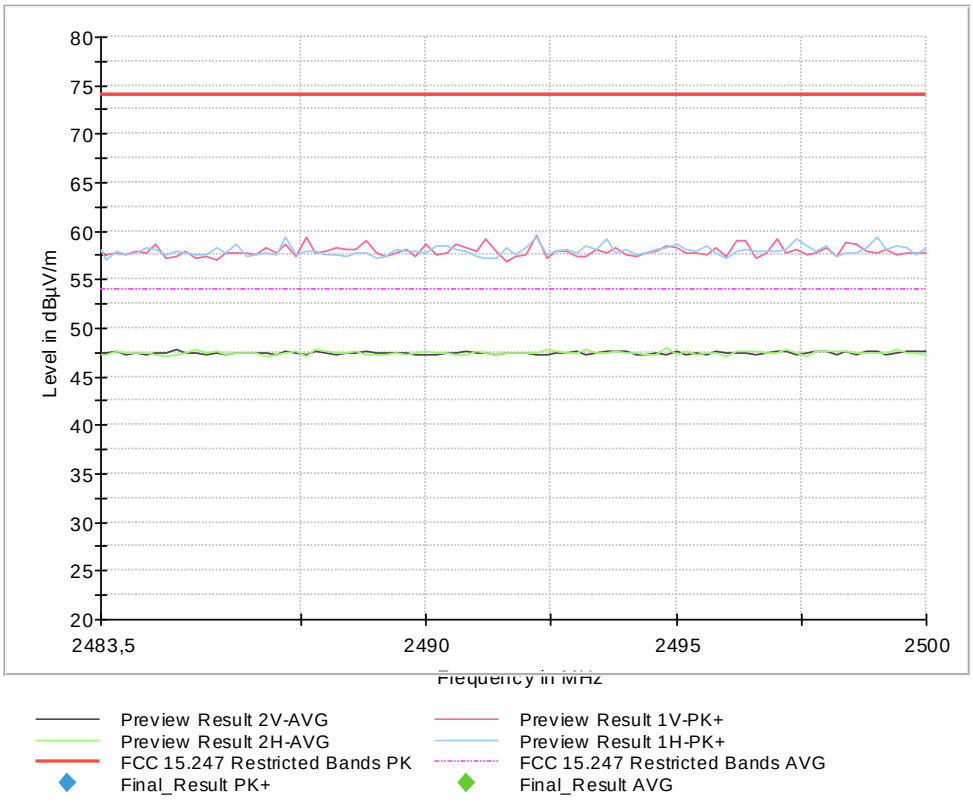
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

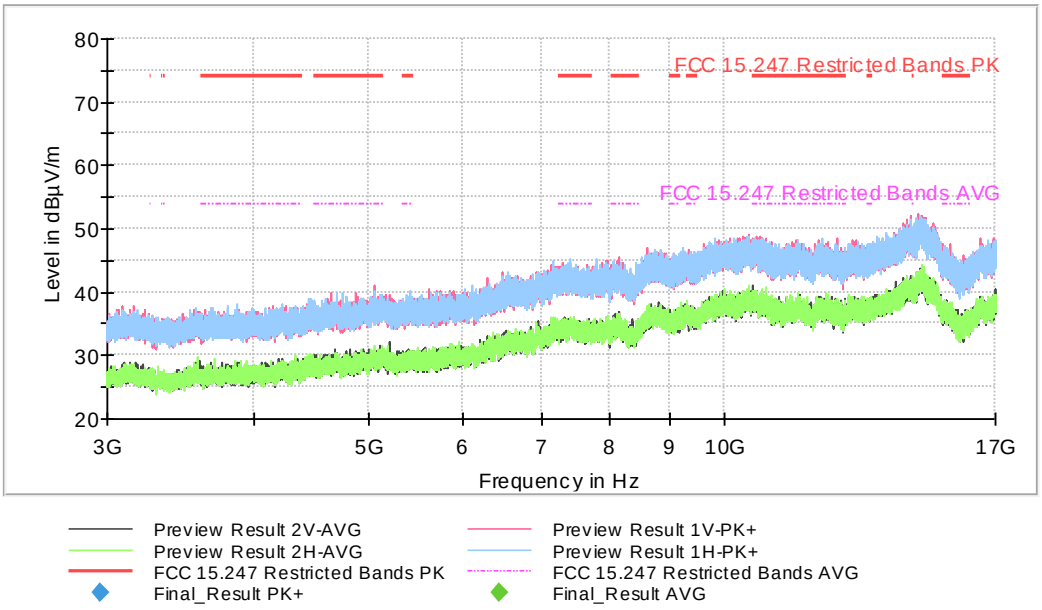


Full Spectrum



Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [3, 17]

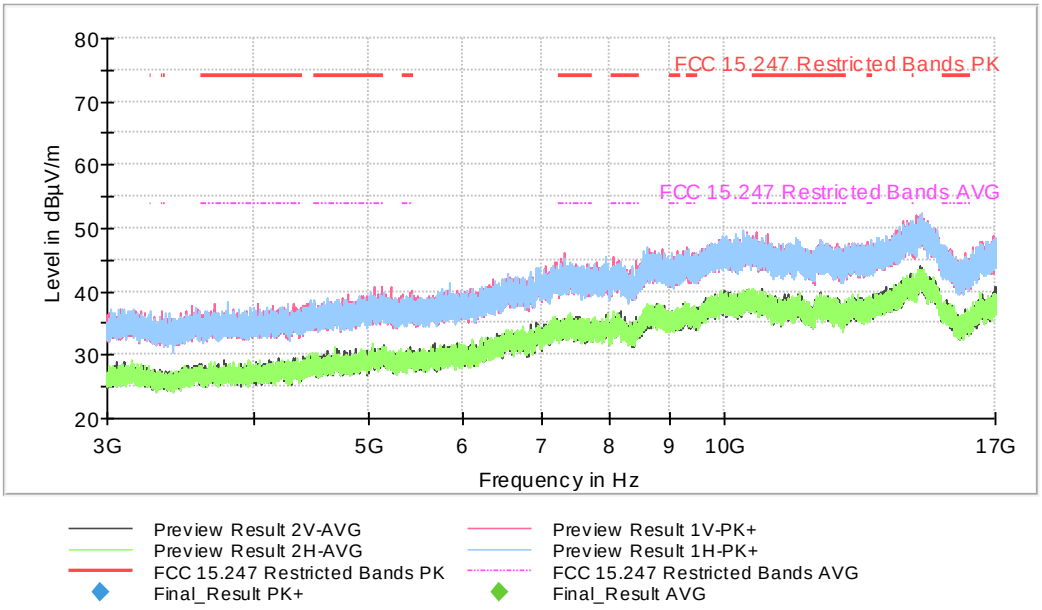
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [3, 17]

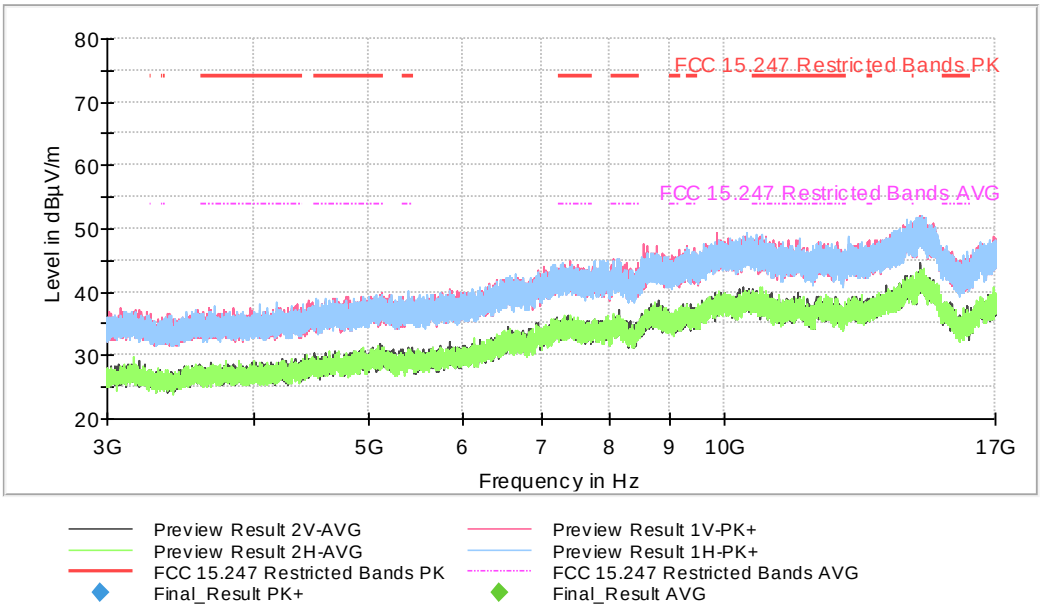
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Frequency (MHz) = 2462.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [3, 17]

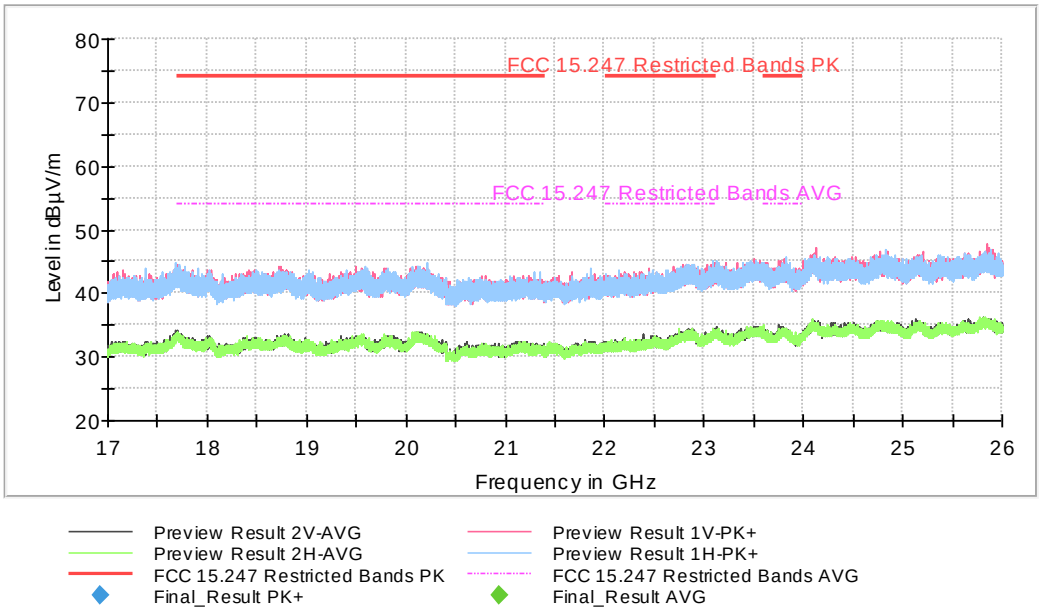
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Equipment Type: Digital Transmission System (DTS), Modulation: 802.11g (OFDM 6 Mbit/s), Frequency Range (GHz) = [17, 26]

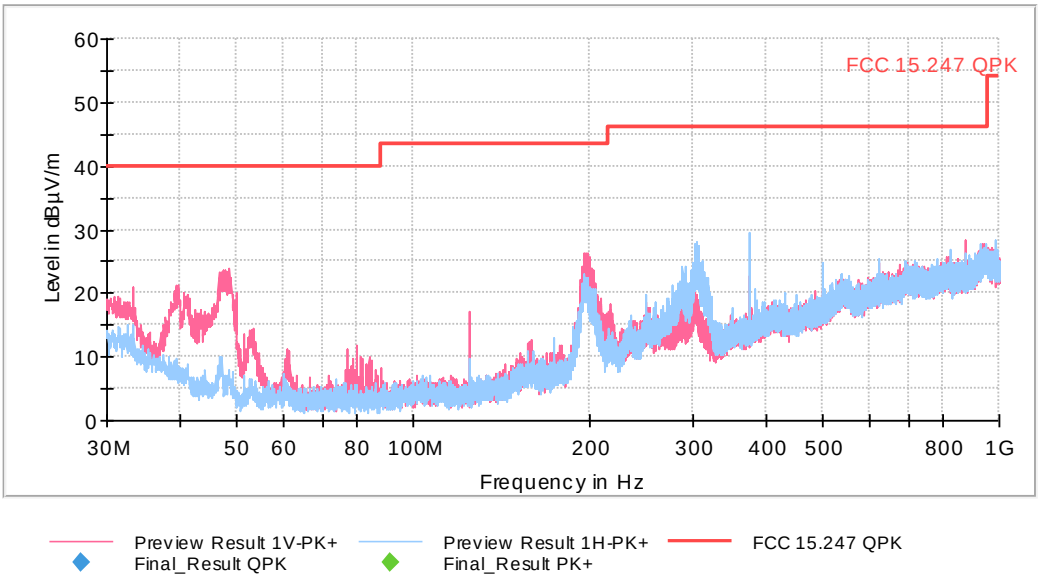
Plots:



This plot is valid for Low, Middle and High Channels.
Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 32001

Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [0.03, 1]

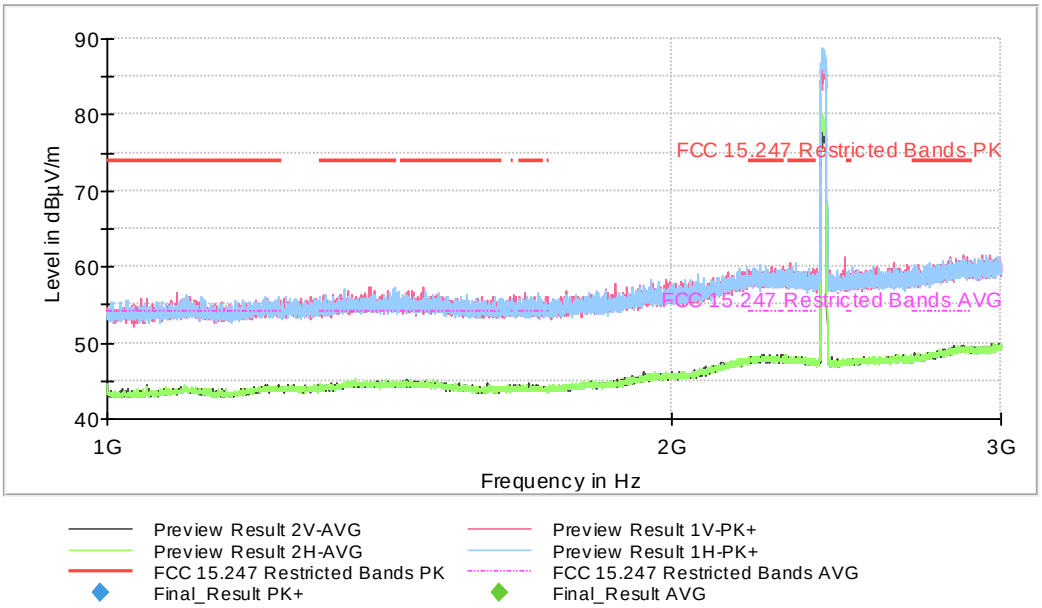
Plots:



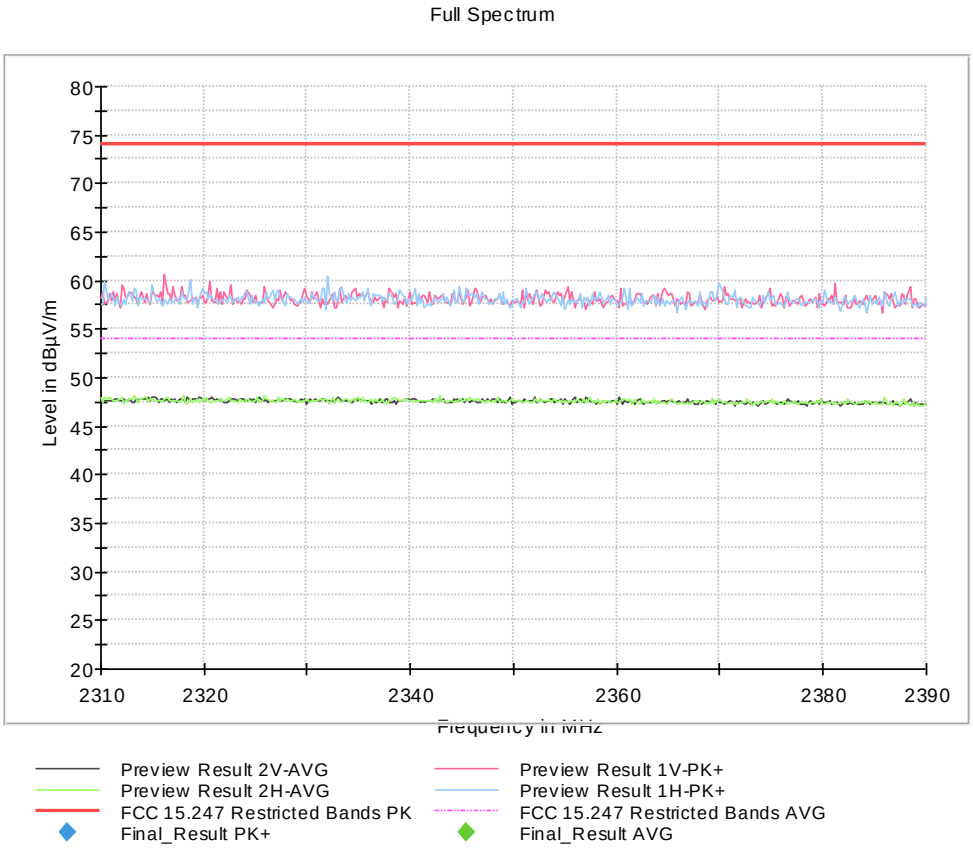
This plot is valid for Low, Middle and High Channels.
Settings: RBW = 100 kHz / VBW = 300 kHz / Sweep Time = 1s / Sweep points = 32001

Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [1, 3]

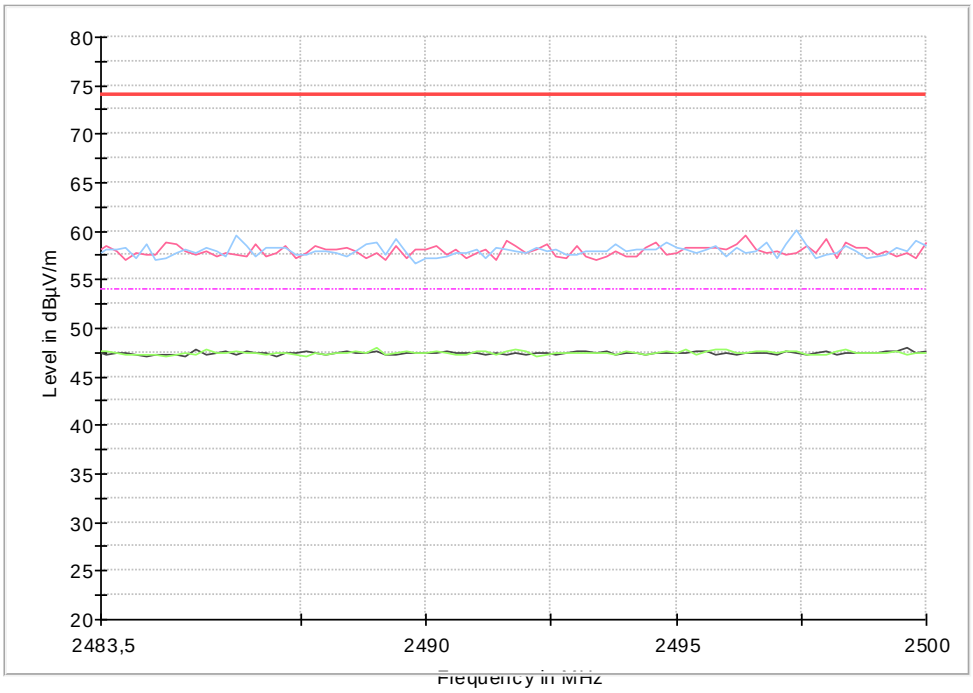
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

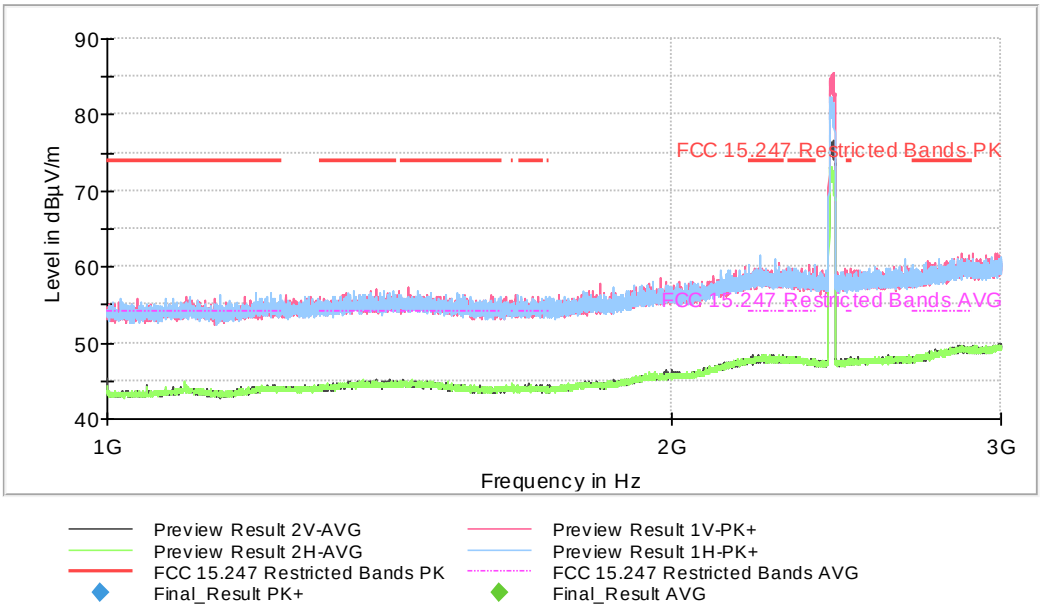


Full Spectrum

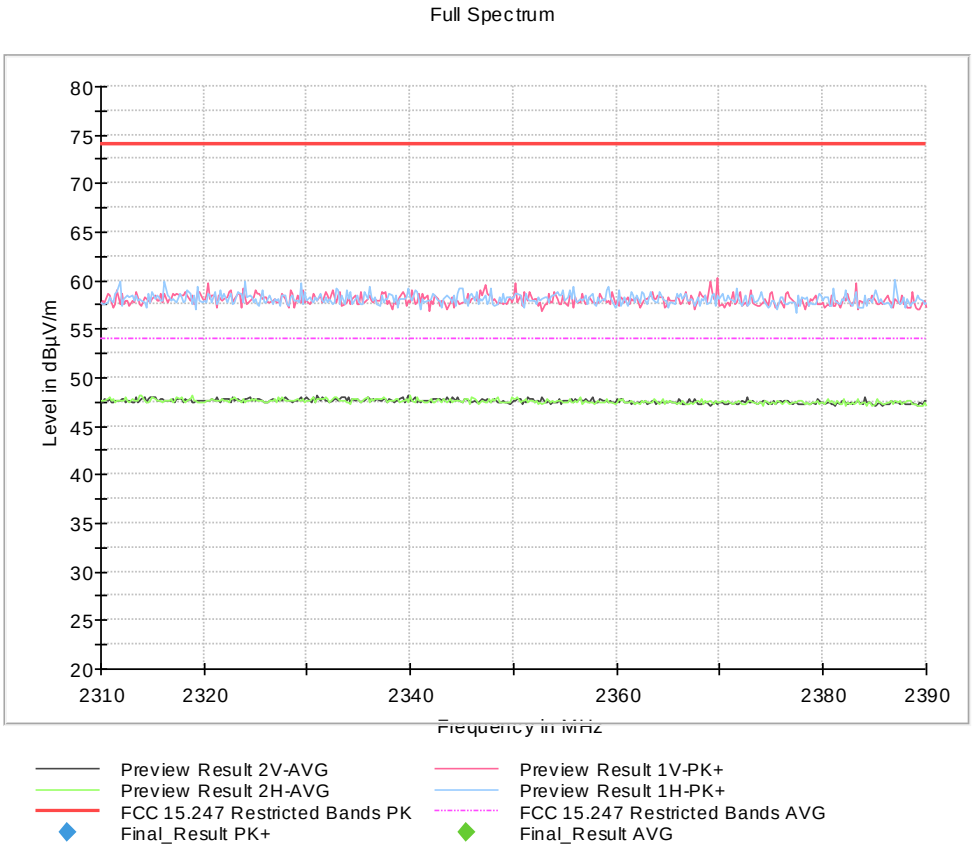


Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [1, 3]

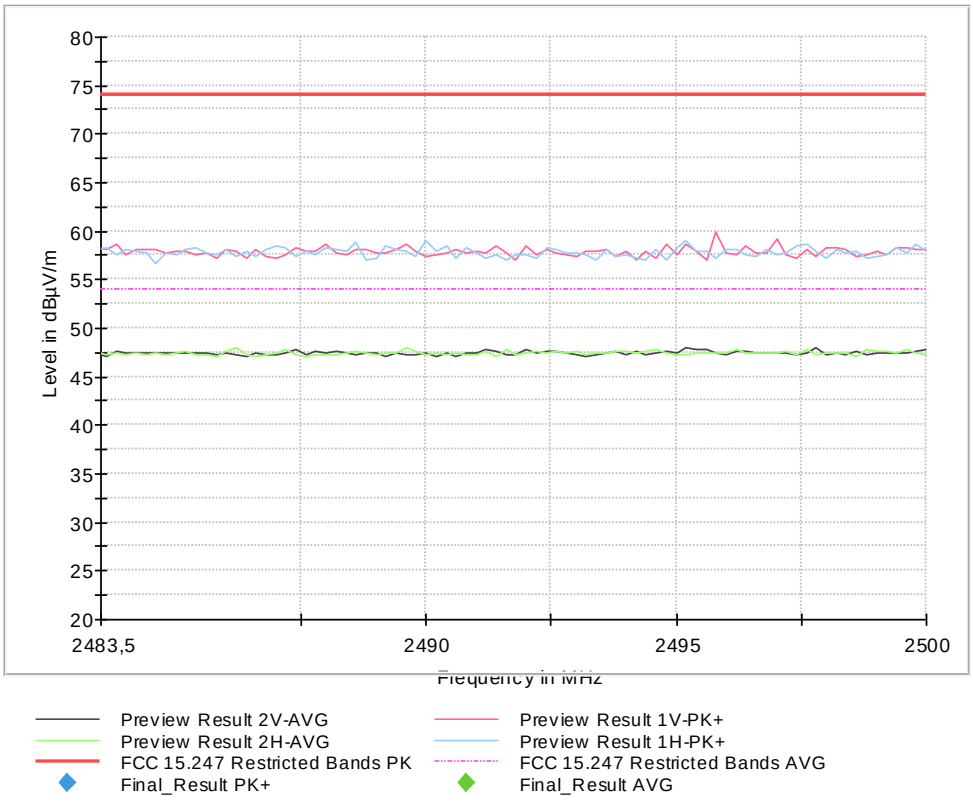
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

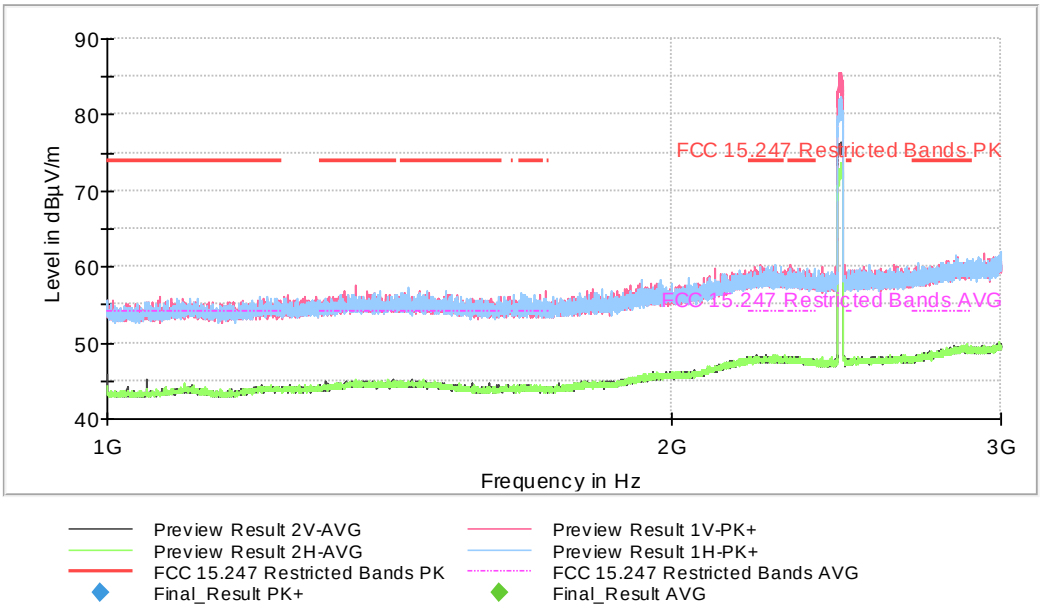


Full Spectrum

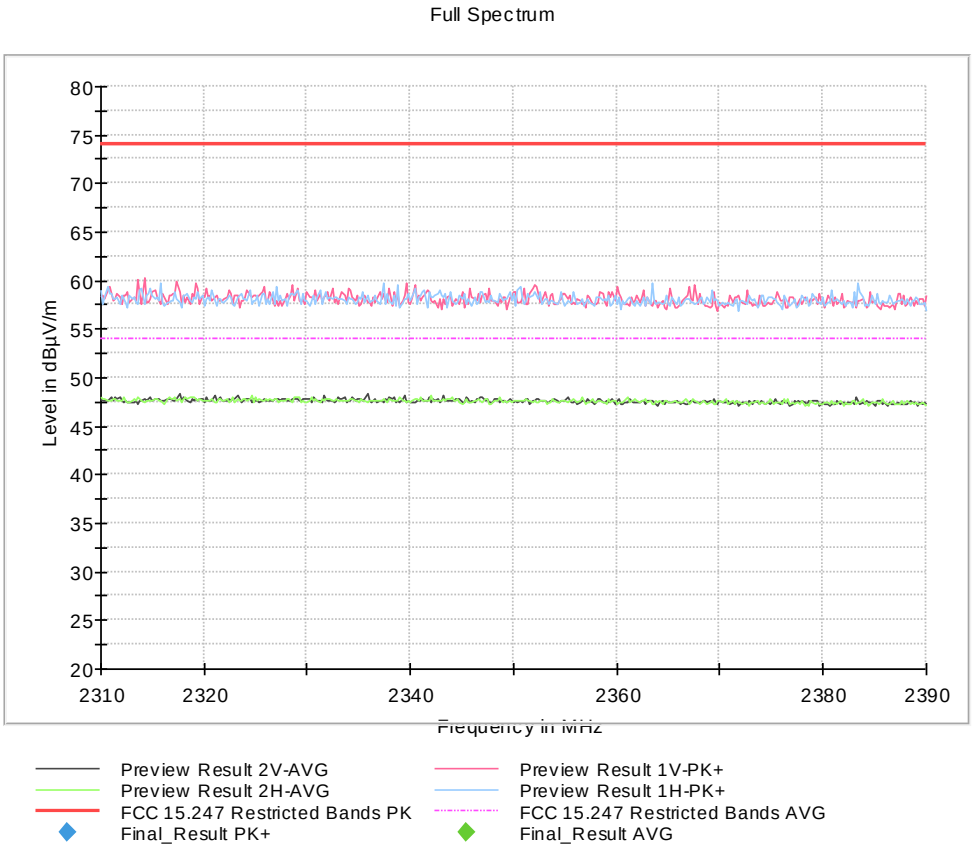


Frequency (MHz) = 2462.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [1, 3]

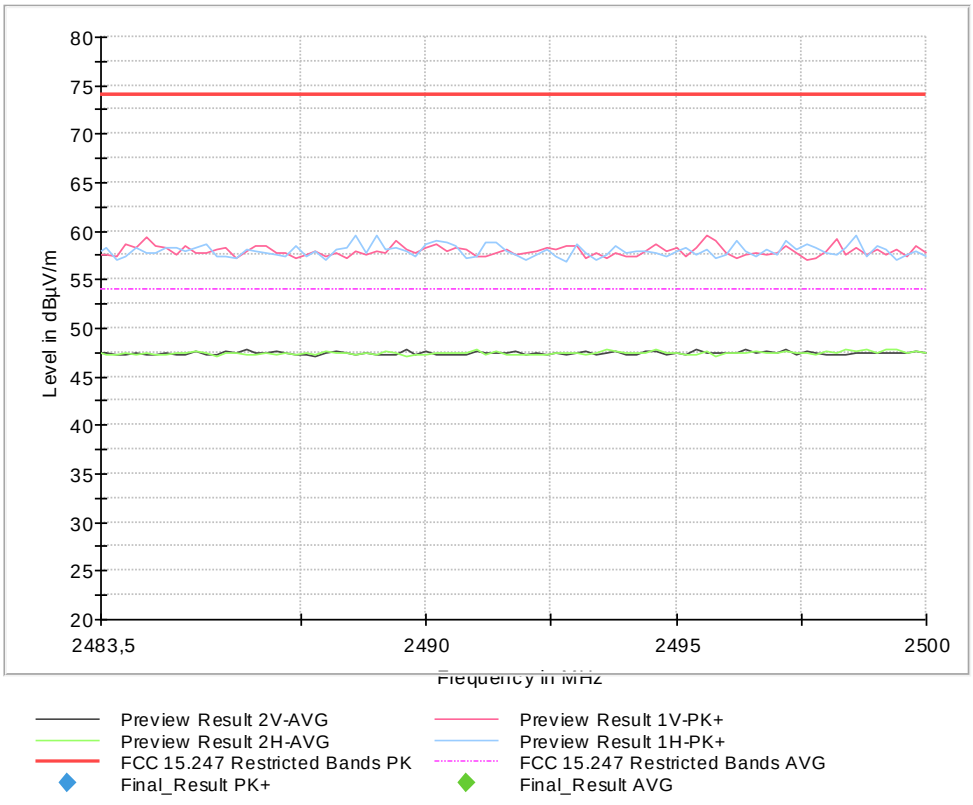
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 10000

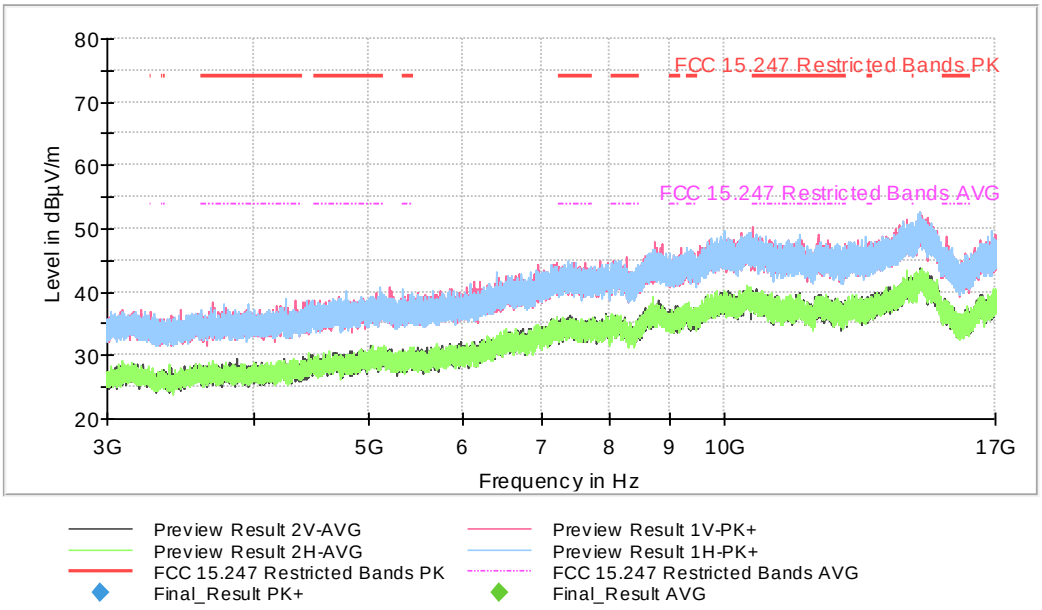


Full Spectrum



Frequency (MHz) = 2412.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [3, 17]

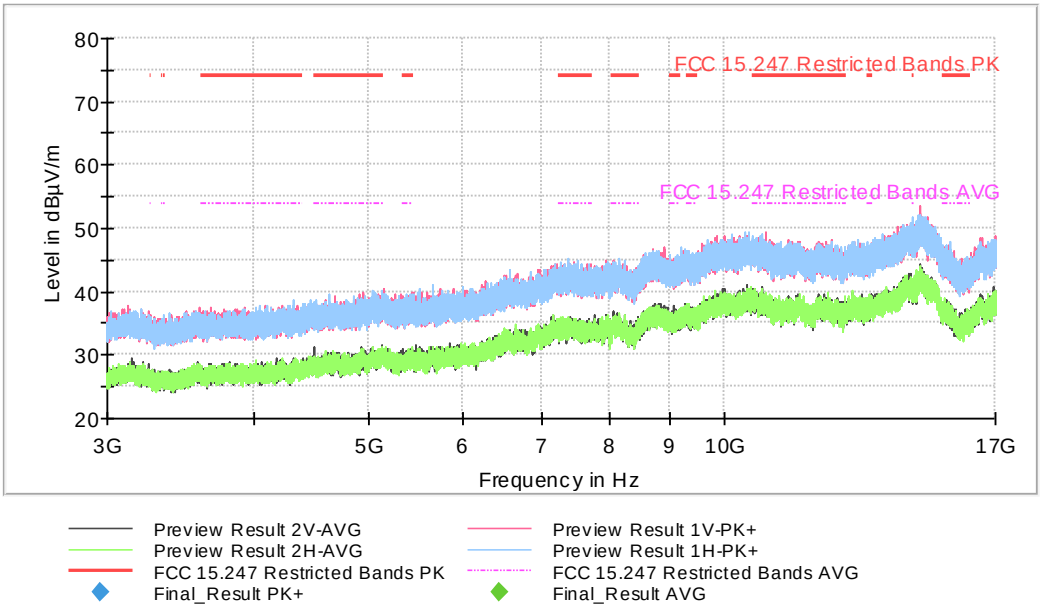
Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000

Frequency (MHz) = 2437.00000, Equipment Type: Digital Transmission System (DTS), Modulation: 802.11n HT20 (OFDM MCS0 6.5 Mbit/s), Frequency Range (GHz) = [3, 17]

Plots:



Settings: RBW = 1 MHz / VBW = 3 MHz / Sweep Time = 1s / Sweep points = 100000