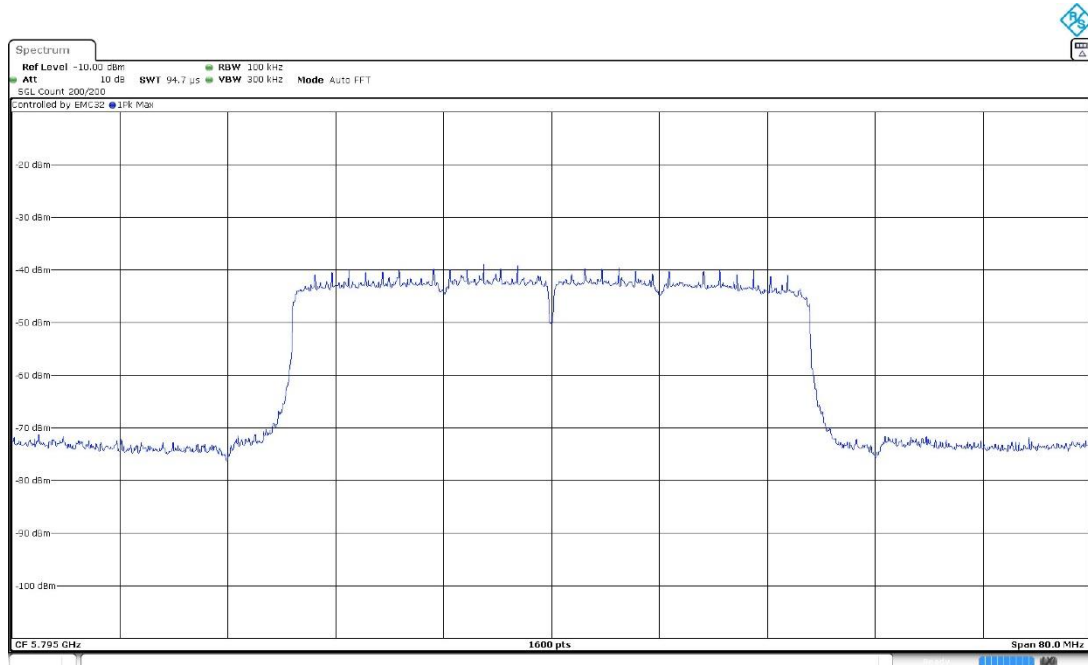
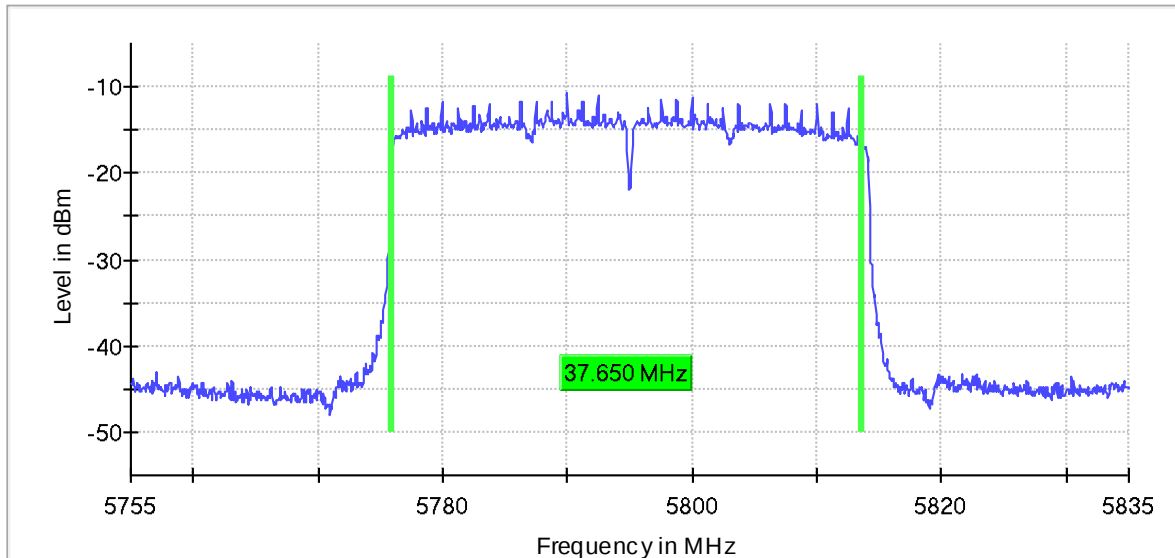


Operation Band MHz = [5725, 5850] Active Port = 3+4
Frequency MHz = 5795.00000 Modulation = 802.11ax HE40 (OFDMA MCS0) – SU
MIMO Mode = MIMO CDD Mode 2x2

Images:

6 dB Bandwidth



Results

Modulation: 802.11ax HE80 (OFDMA MCS0) – SU

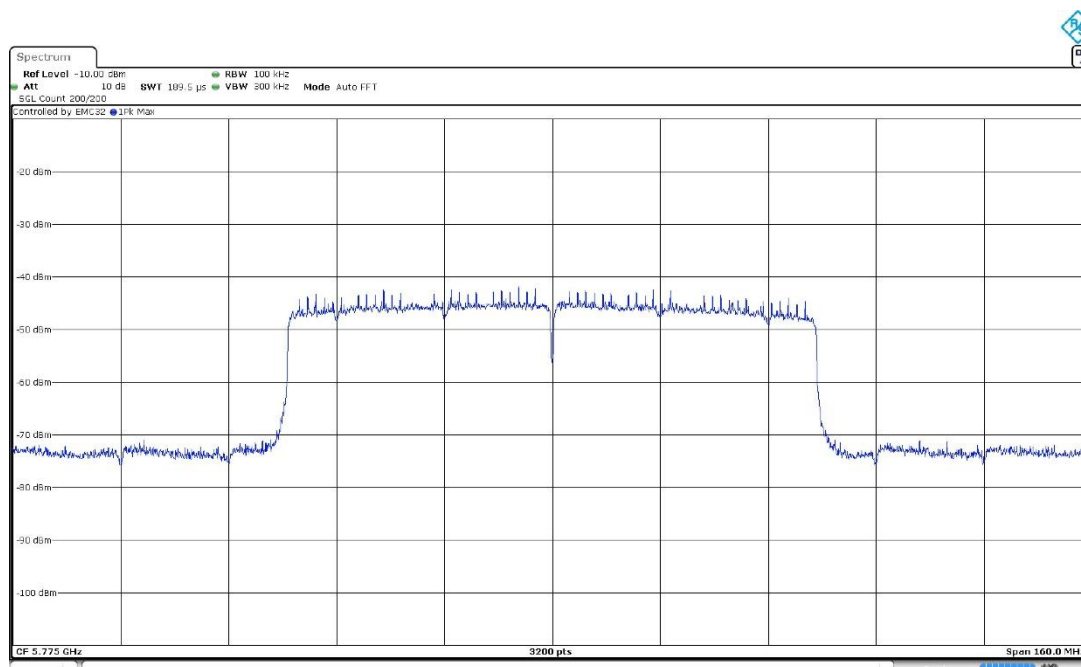
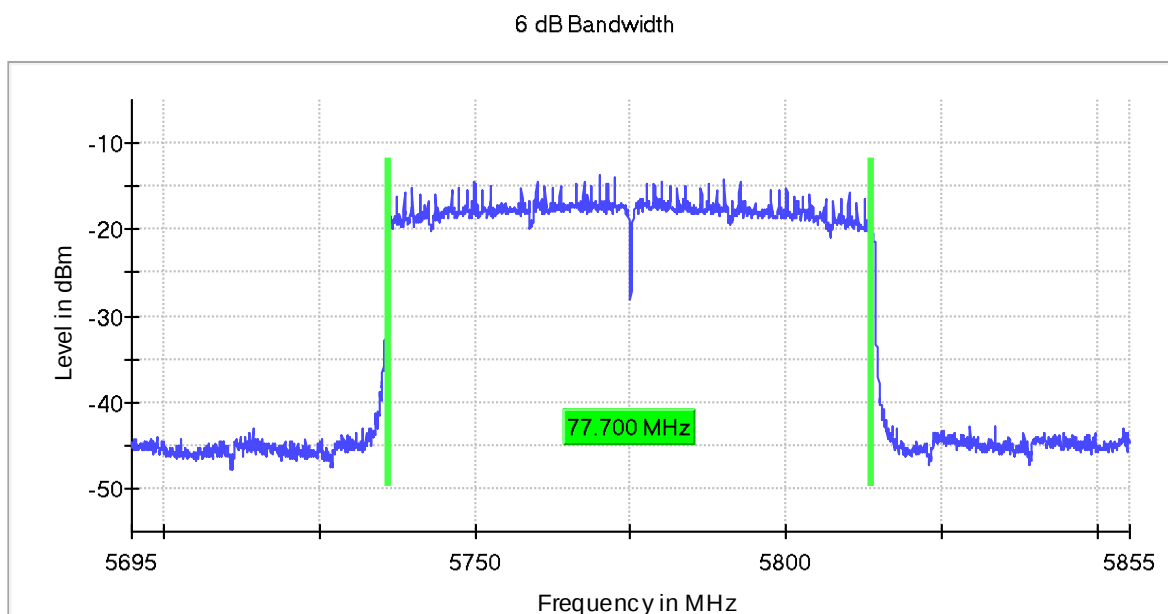
MIMO Mode: MIMO CDD Mode 2x2

Operation Band (MHz)	Port	Freq (MHz)	Ebw (MHz)
[5725, 5850]	3+4	5775.00000	77.700

Verdict

Pass

Operation Band MHz = [5725, 5850] Active Port = 3+4
Frequency MHz = 5775.00000 Modulation = 802.11ax HE80 (OFDMA MCS0) – SU
MIMO Mode = MIMO CDD Mode 2x2



FCC 15.407 (b) (4) (6) Transmitter Out of Band Radiated Emissions For transmitters operating solely in the 5.725-5.850 GHz band

Limits

* FCC 15.407: For transmitters operating in the 5.725–5.85 GHz band: All emissions shall be limited to a level of –27 dBm/MHz (68.23 dBμV/m at 3 m distance) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

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 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 40000	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 corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

Results

Spurious emissions were evaluated for the worst-case modes within each modulation family, including OFDM-based modulations (802.11g/n/ac) and OFDMA modulations (802.11ax). The modes with the highest power spectral density were selected for testing, as specified in ANSI C63.10-2013 Section 5.6.2.2 (b).

Frequency range 30 MHz – 1 GHz:

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

Spurious frequencies detected less than 20 dB below the limit:

Operation Band (MHz)	Port	Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
[5150, 5250]	3+4	[0.03, 1]	5180.00000	46.878	21.57	V	PK
				46.878	19.39	V	QP
				77.191	21.84	V	PK
				77.191	18.83	V	QP
				224.970	23.43	V	QP
				224.970	24.90	V	PK

Verdict

Pass

Attachments

Operation Band MHz = [5150, 5250]

Active Port = 3+4

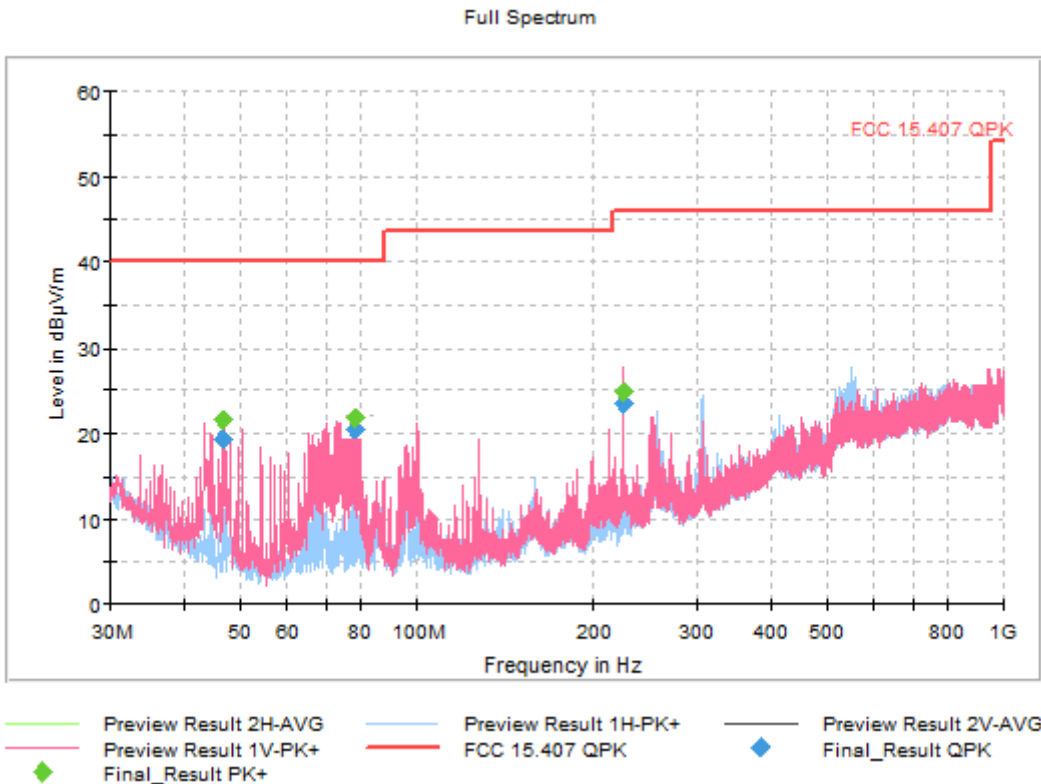
Frequency Range GHz = [0.03, 1]

Frequency MHz = The spurious frequencies detected do not depend on the operating channel.

Modulation = The spurious frequencies detected do not depend on the modulation.

MIMO Mode = MIMO CDD Mode 2x2

Images:



Spectrum analyzer parameters:

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 1 GHz	50 kHz	PK+	100 kHz	0,01 s	0 dB

Frequency range 1 GHz – 17 GHz:

Modulation: 802.11n HT20 (OFDM MCS0) (worst-case OFDM modulation)

MIMO Mode: MIMO CDD Mode 2x2

No spurious frequencies detected at less than 20 dB below the limit.

Verdict

Pass

Attachments

Operation Band MHz = [5725, 5850]

Active Port = 3+4

Frequency Range GHz = [1, 17]

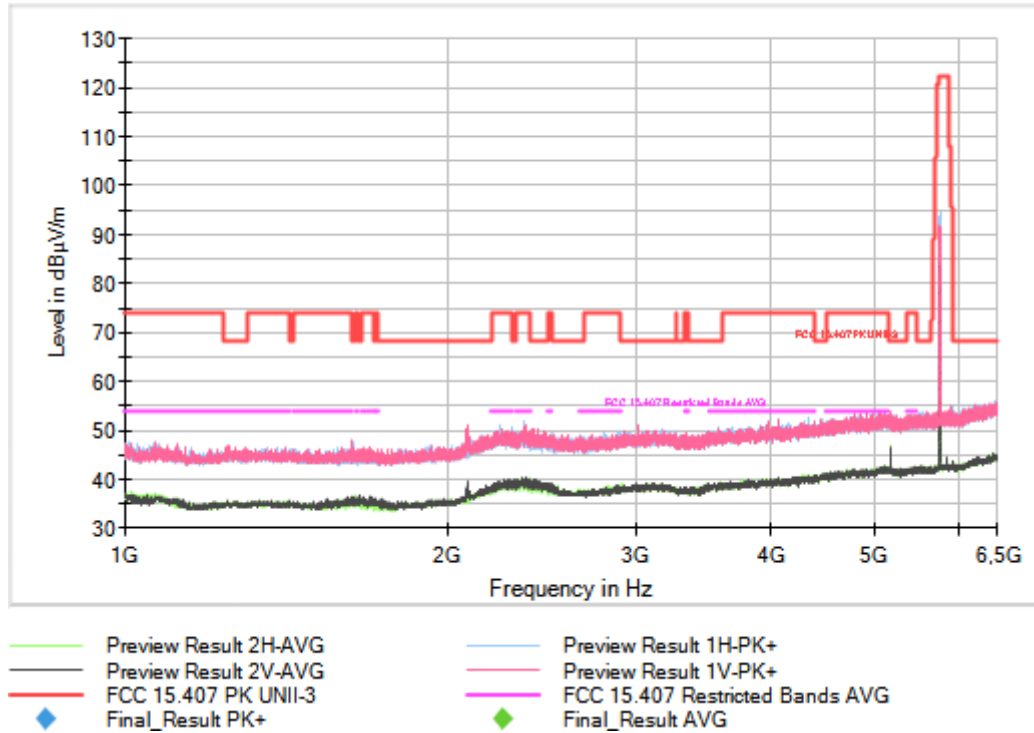
Frequency MHz = 5745.00000

Modulation = 802.11n HT20 (OFDM MCS0)

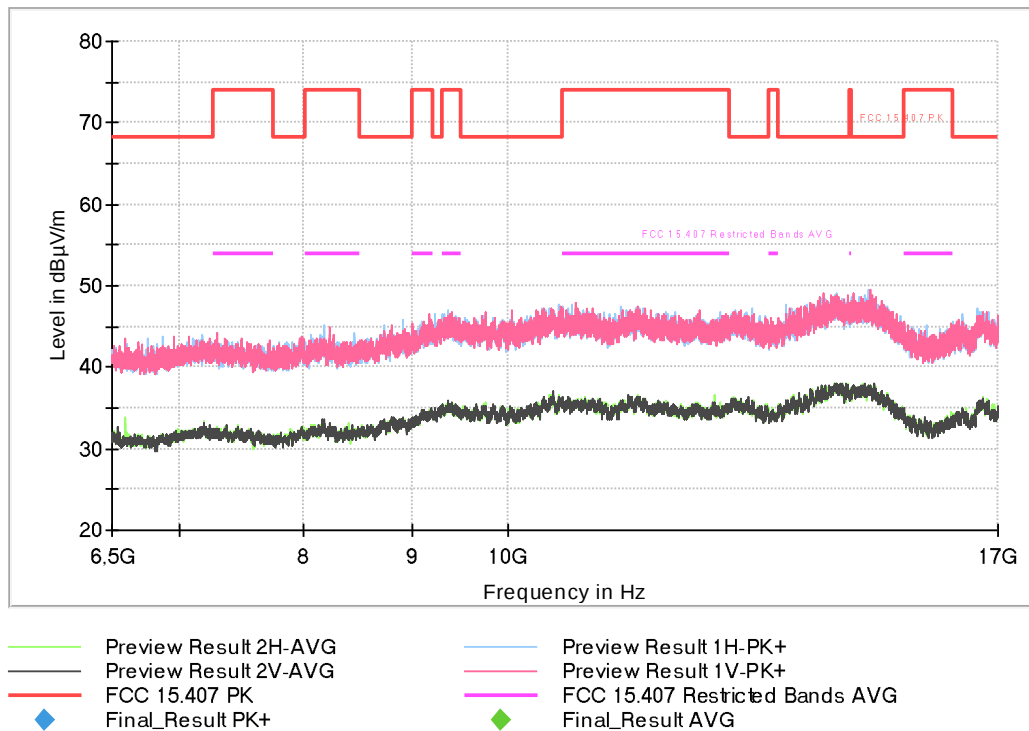
MIMO Mode = MIMO CDD Mode 2x2

Images:

Full Spectrum



Full Spectrum



Operation Band MHz = [5725, 5850]

Active Port = 3+4

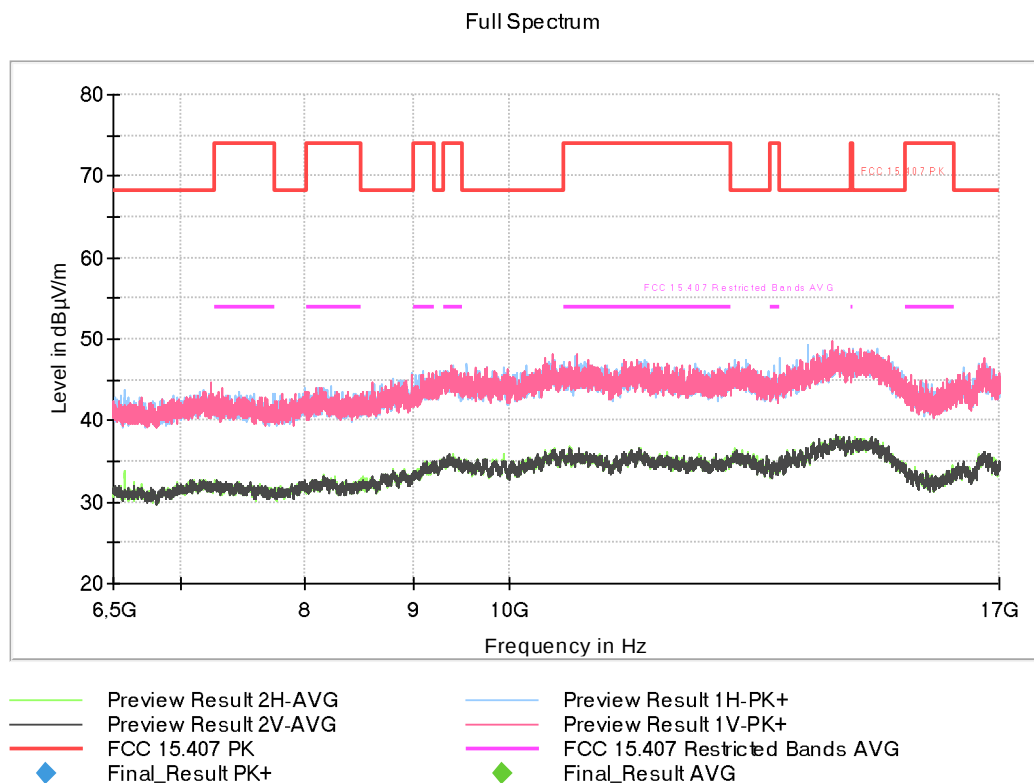
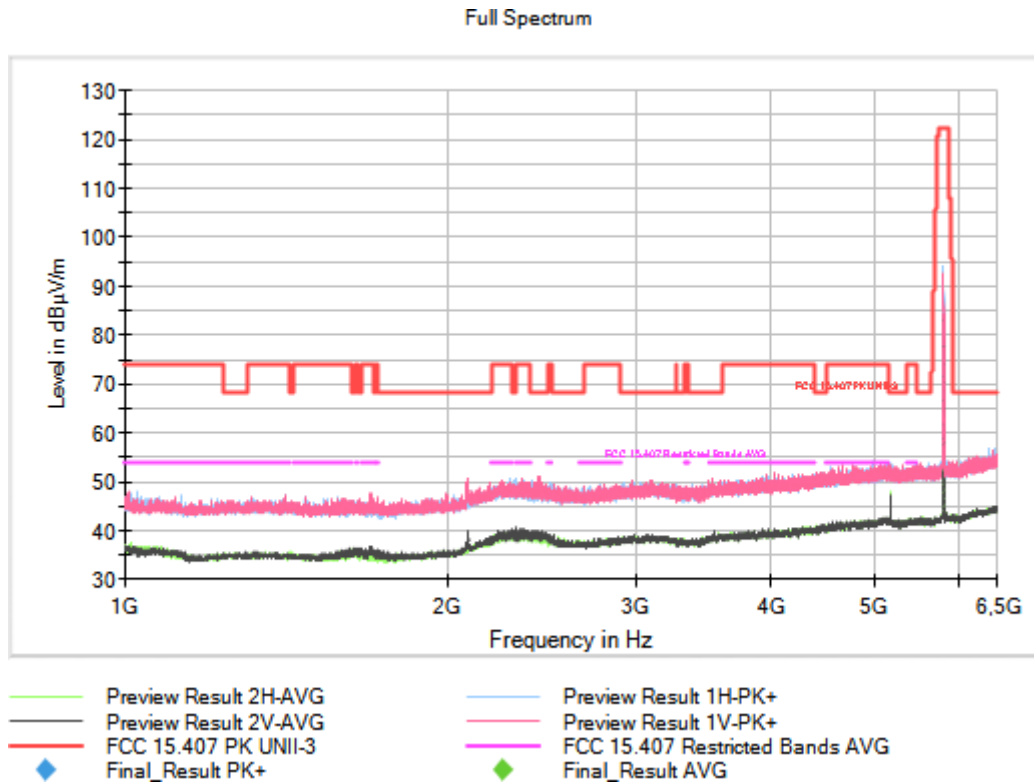
Frequency Range GHz = [1, 17]

Frequency MHz = 5785.00000

Modulation = 802.11n HT20 (OFDM MCS0)

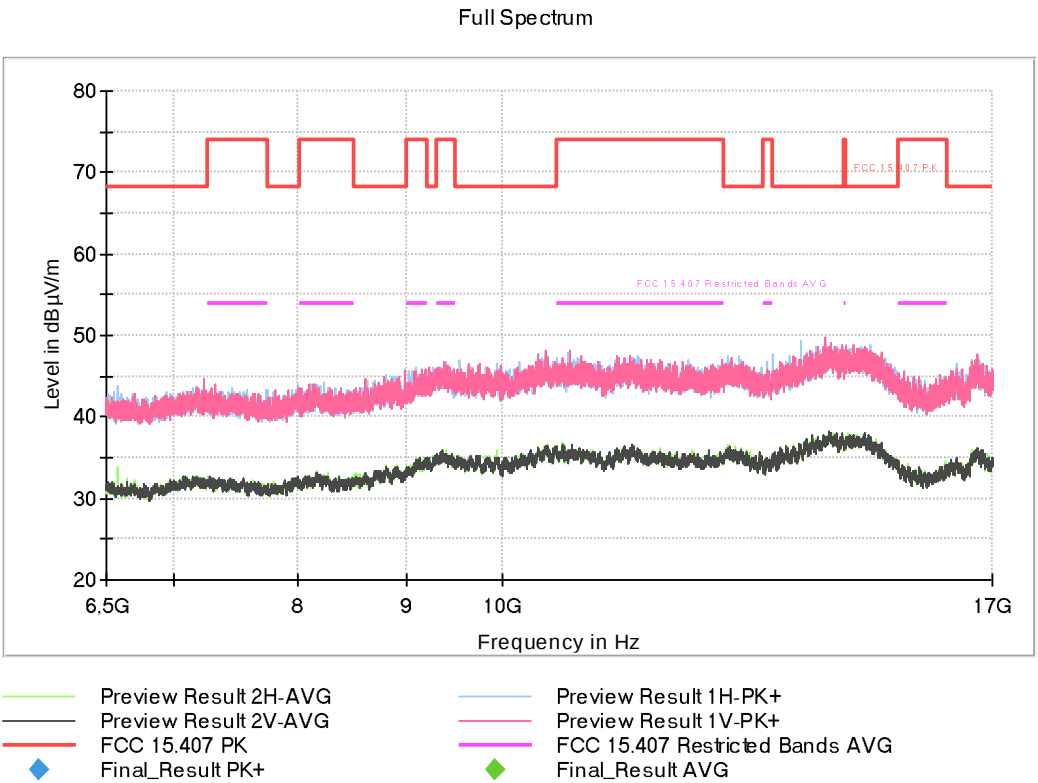
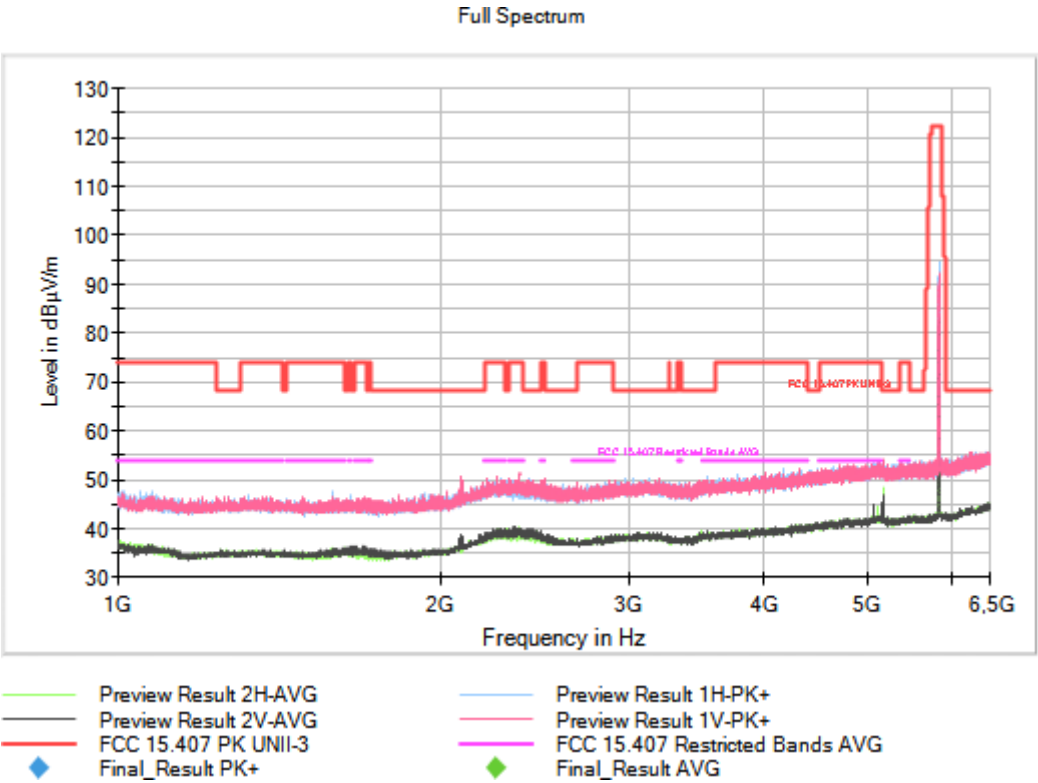
MIMO Mode = MIMO CDD Mode 2x2

Images:



Operation Band MHz = [5725, 5850] Active Port = 3+4
Frequency Range GHz = [1, 17] Frequency MHz = 5825.00000
Modulation = 802.11n HT20 (OFDM MCS0) MIMO Mode = MIMO CDD Mode 2x2

Images:



Spectrum analyzer parameters:

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 6,5 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB
6,5 GHz - 17 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB

Modulation: 802.11ax HE80 (OFDMA MCS0) – RU (worst-case OFDMA modulation)

MIMO Mode: MIMO CDD Mode 2x2

No spurious frequencies detected at less than 20 dB below the limit.

Verdict

Pass

Attachments

Operation Band MHz = [5725, 5850]

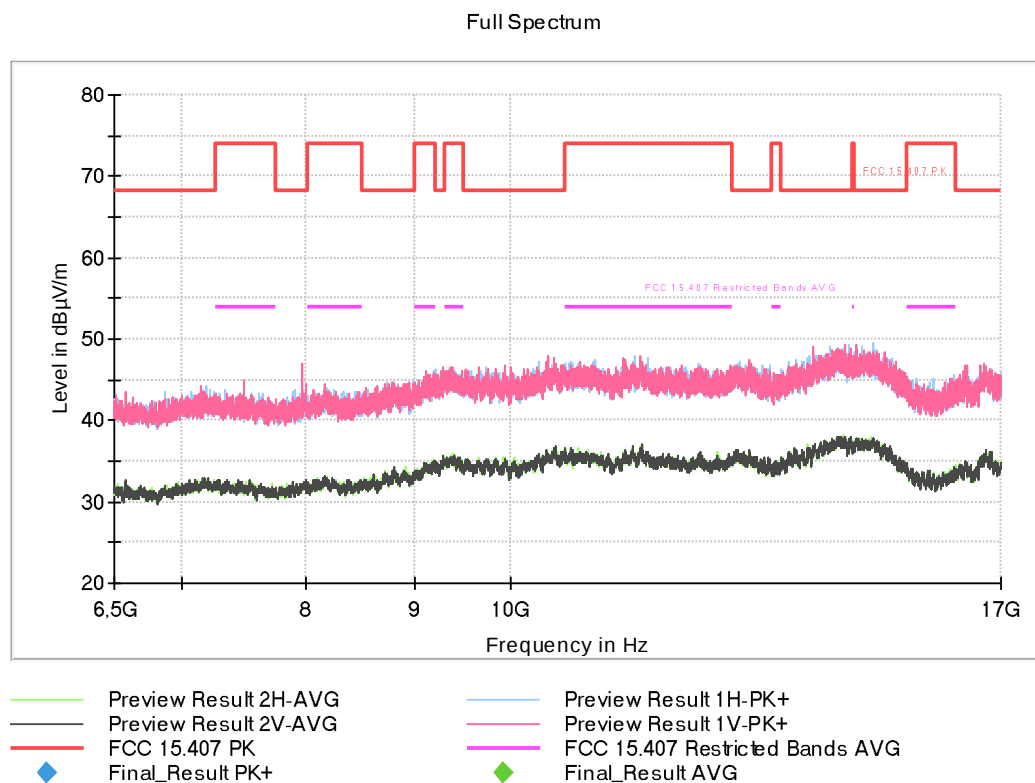
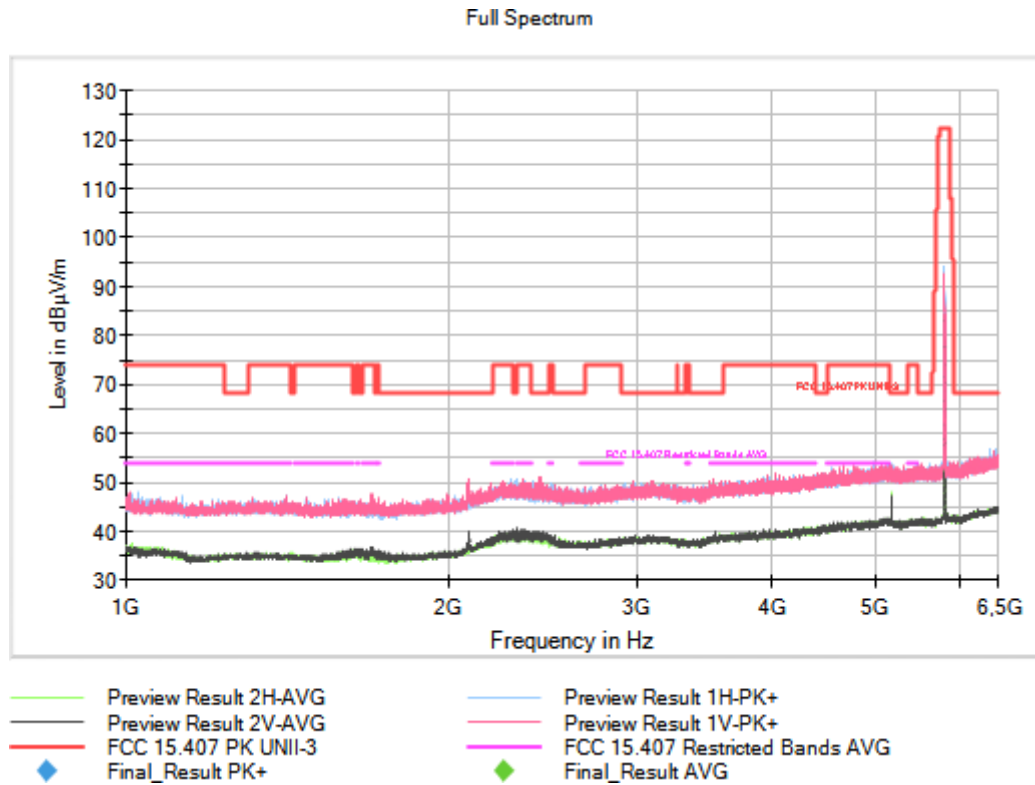
Active Port = 3+4

Frequency Range GHz = [1, 6.5]

Frequency MHz = 5775.00000

Modulation = 802.11ax HE80 (OFDMA MCS0) – RU MIMO Mode = MIMO CDD Mode 2x2

Images:



Spectrum analyzer parameters:

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 6,5 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB
6,5 GHz - 17 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB

BAND EDGE EMISSIONS

Spurious emissions inside of the mask 5.65-5.925 GHz

Modulation: 802.11n HT20 (OFDM MCS0)

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

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

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ac VHT20 (OFDM MCS0)

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ac VHT40 (OFDM MCS0)

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ac VHT80 (OFDM MCS0)

- Single Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE20 (OFDMA MCS0) – SU

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE20 (OFDMA MCS0) – RU

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE40 (OFDMA MCS0) – SU

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE40 (OFDMA MCS0) – RU

- Low Channel:

No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE80 (OFDMA MCS0) – SU

- Single Channel:

No spurious frequencies found at less than 20 dB below the limit.

Modulation: 802.11ax HE80 (OFDMA MCS0) – RU

- Single Channel:

No spurious frequencies found at less than 20 dB below the limit.

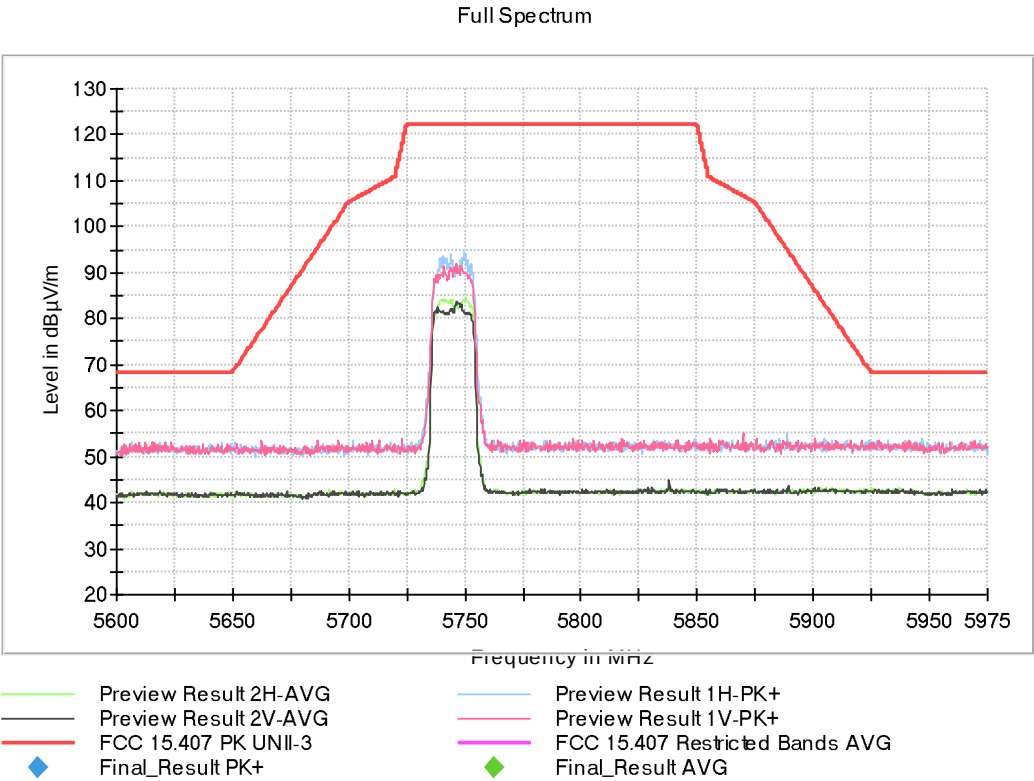
Verdict

Pass

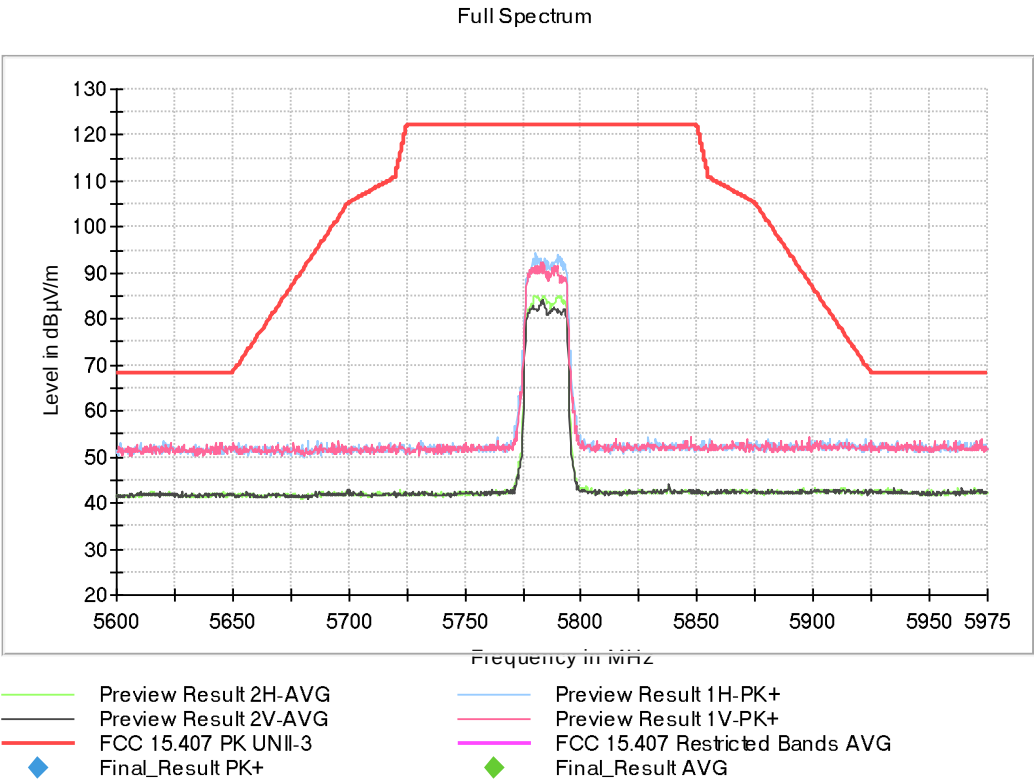
Attachments

Modulation: 802.11n HT20 (OFDM MCS0)

- Low Channel:

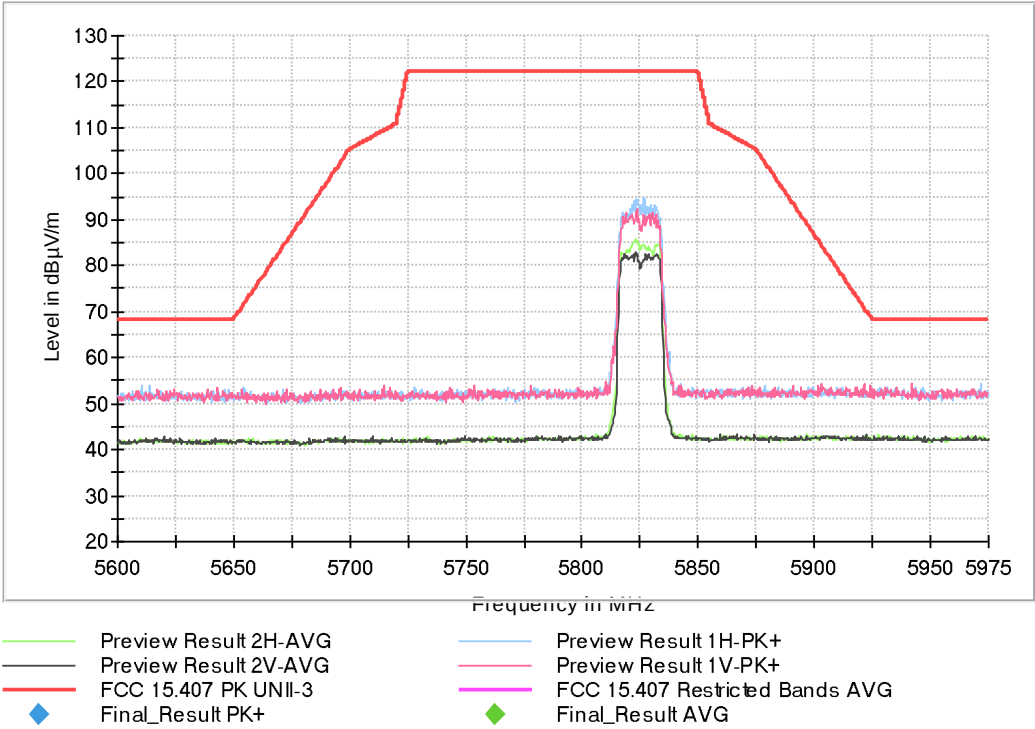


- Middle Channel:



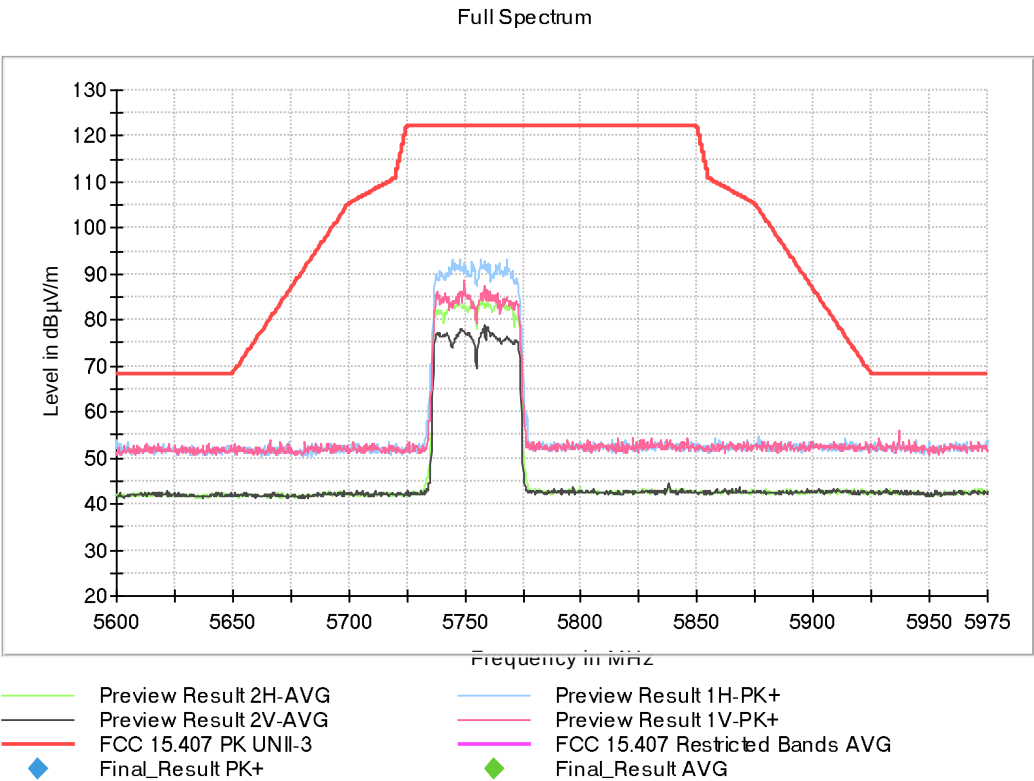
- High Channel:

Full Spectrum

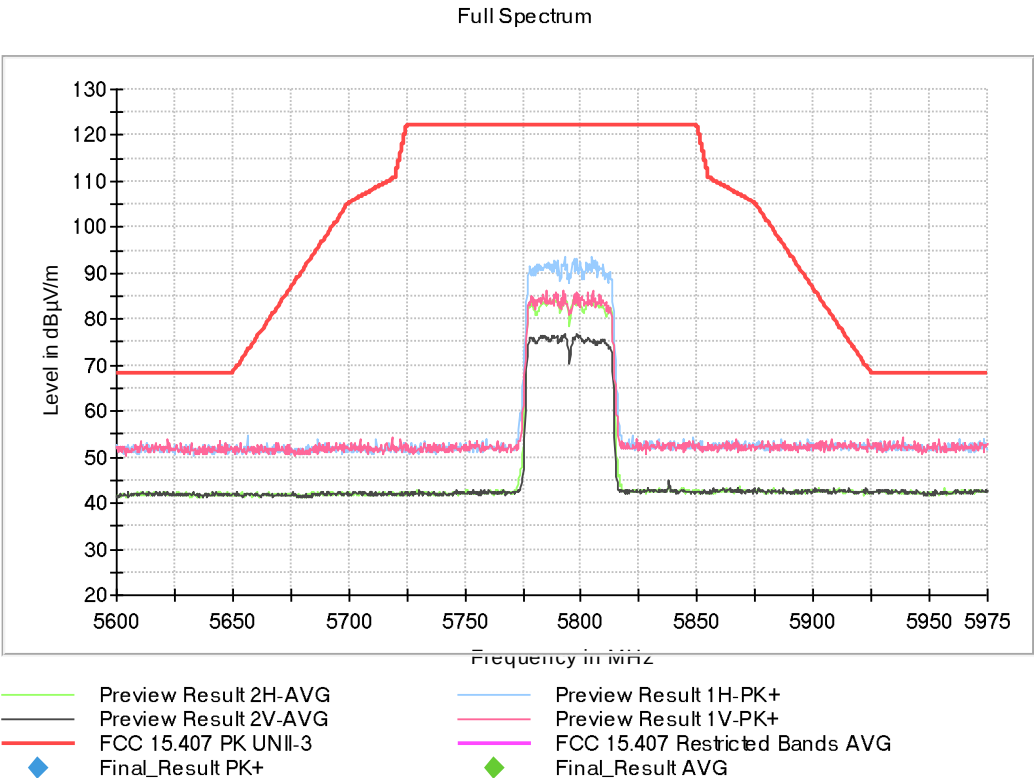


Modulation: 802.11n HT40 (OFDM MCS0 13.5 Mbit/s)

- Low Channel:



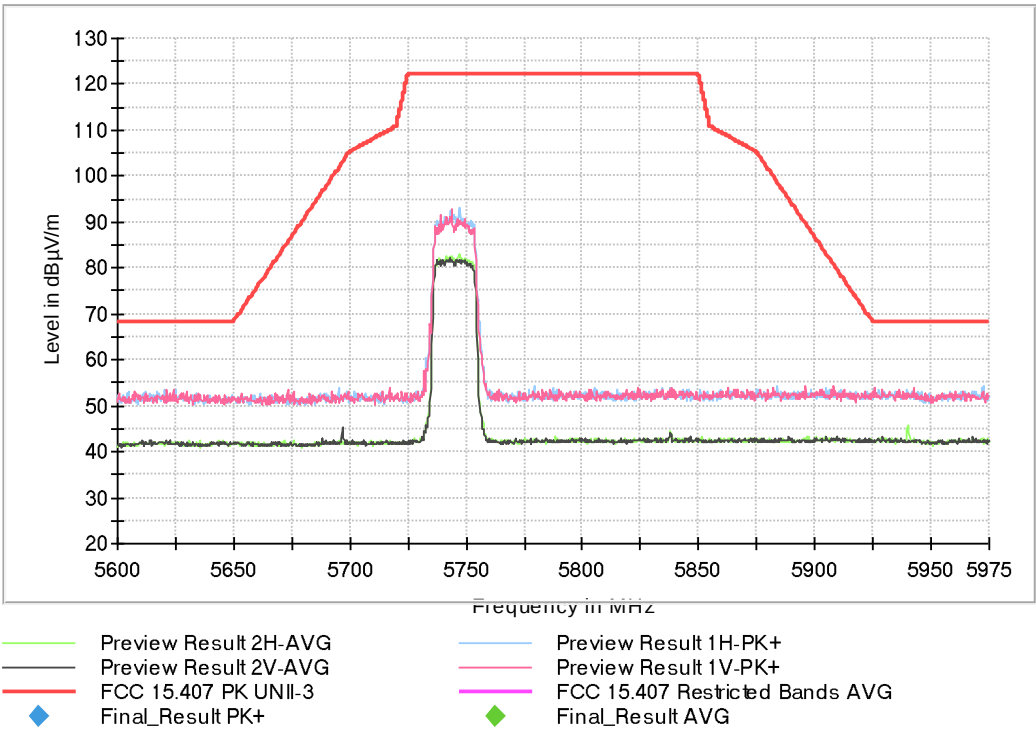
- High Channel:



Modulation: 802.11ac VHT20 (OFDM MCS0)

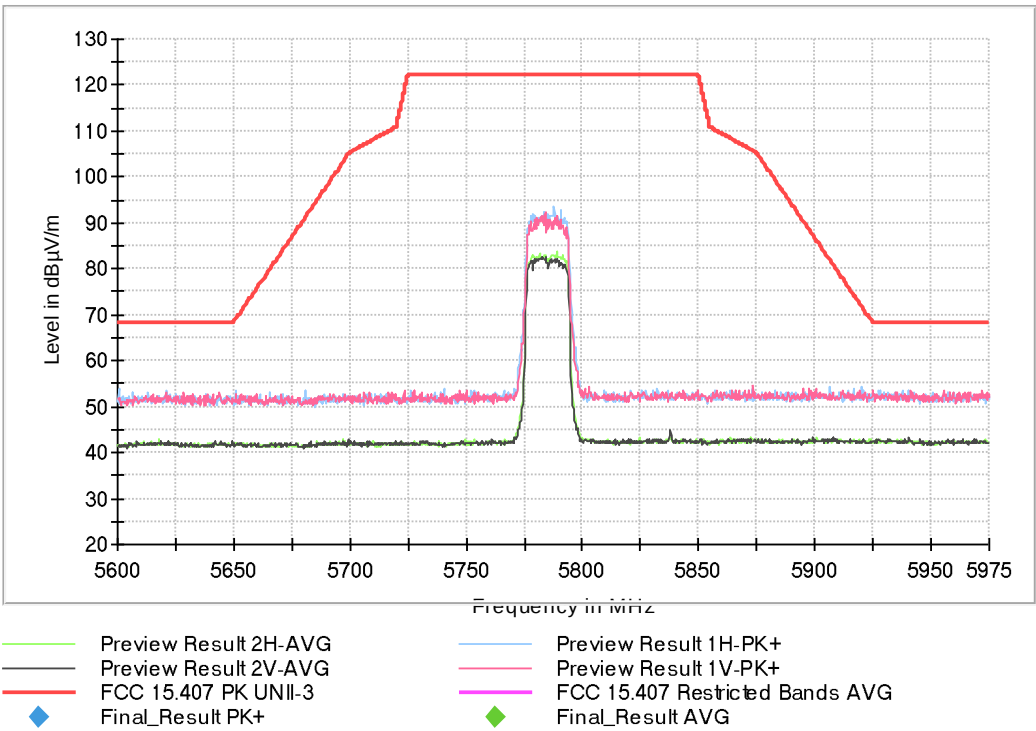
- Low Channel:

Full Spectrum



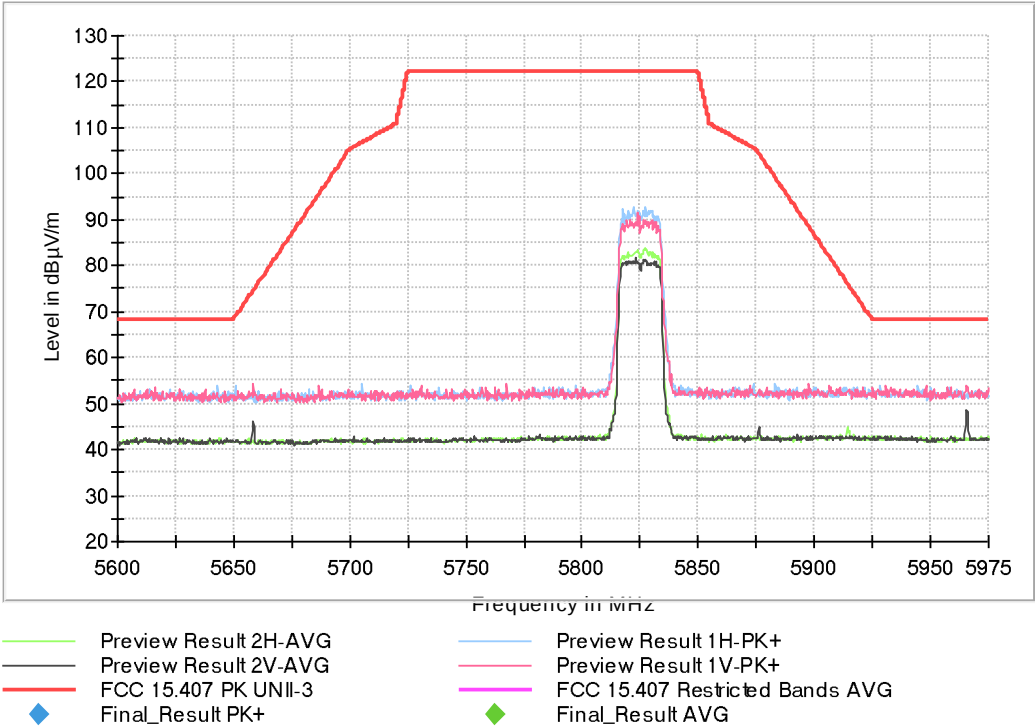
- Middle Channel:

Full Spectrum



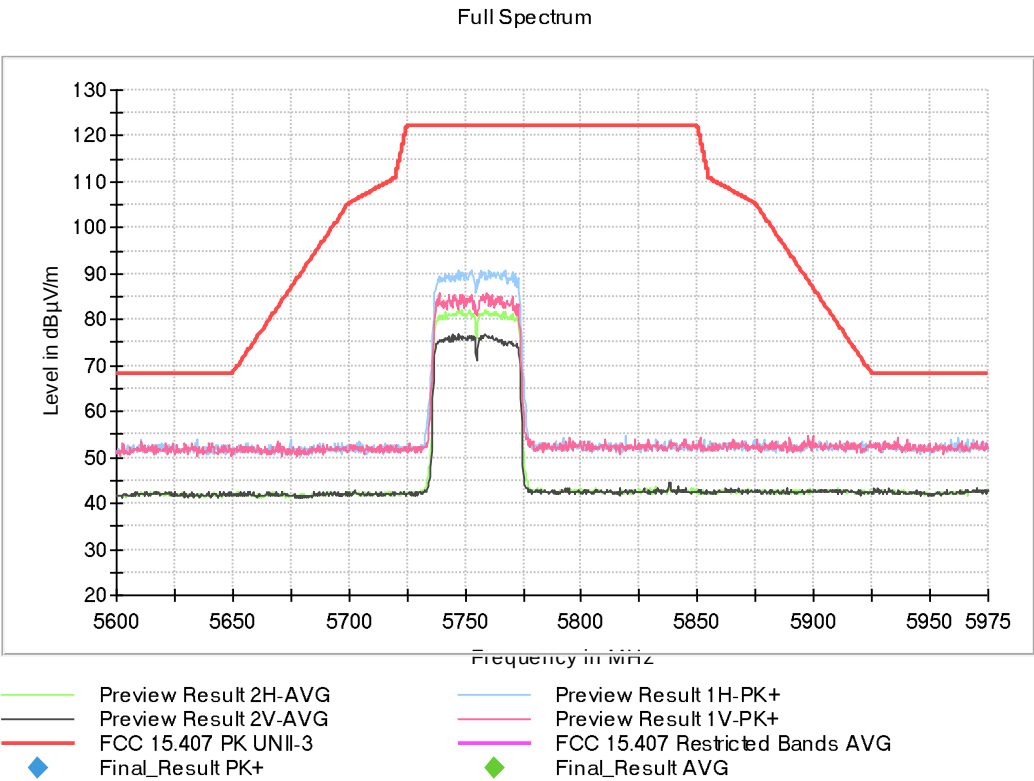
- High Channel:

Full Spectrum

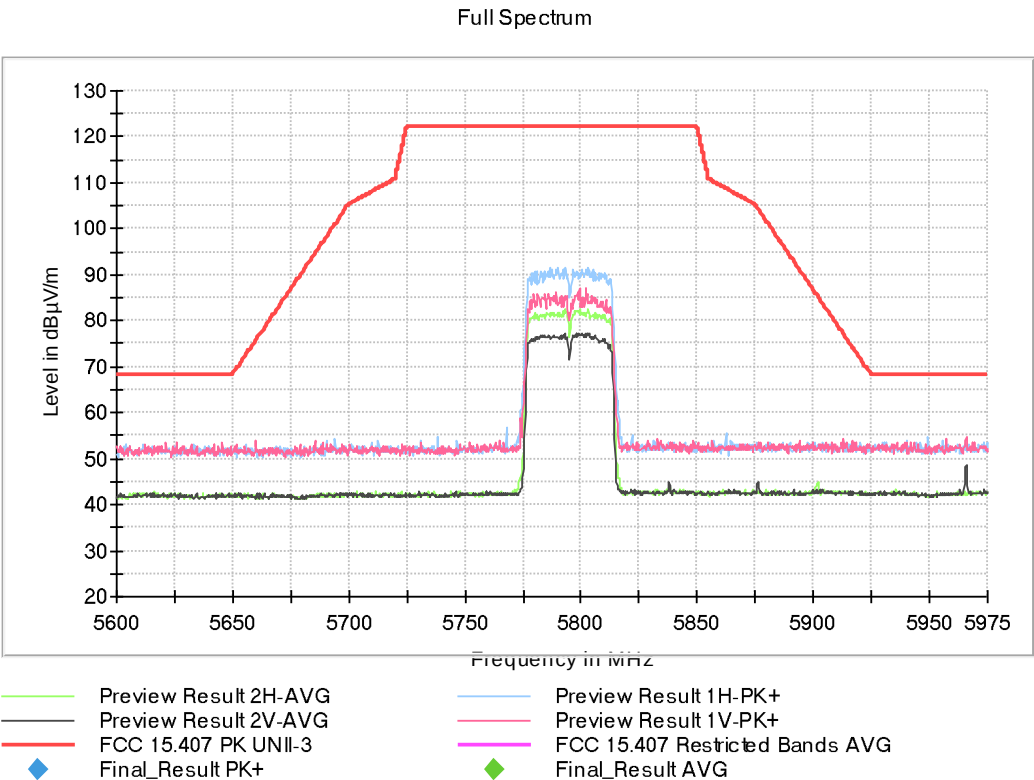


Modulation: 802.11ac VHT40 (OFDM MCS0)

- Low Channel:

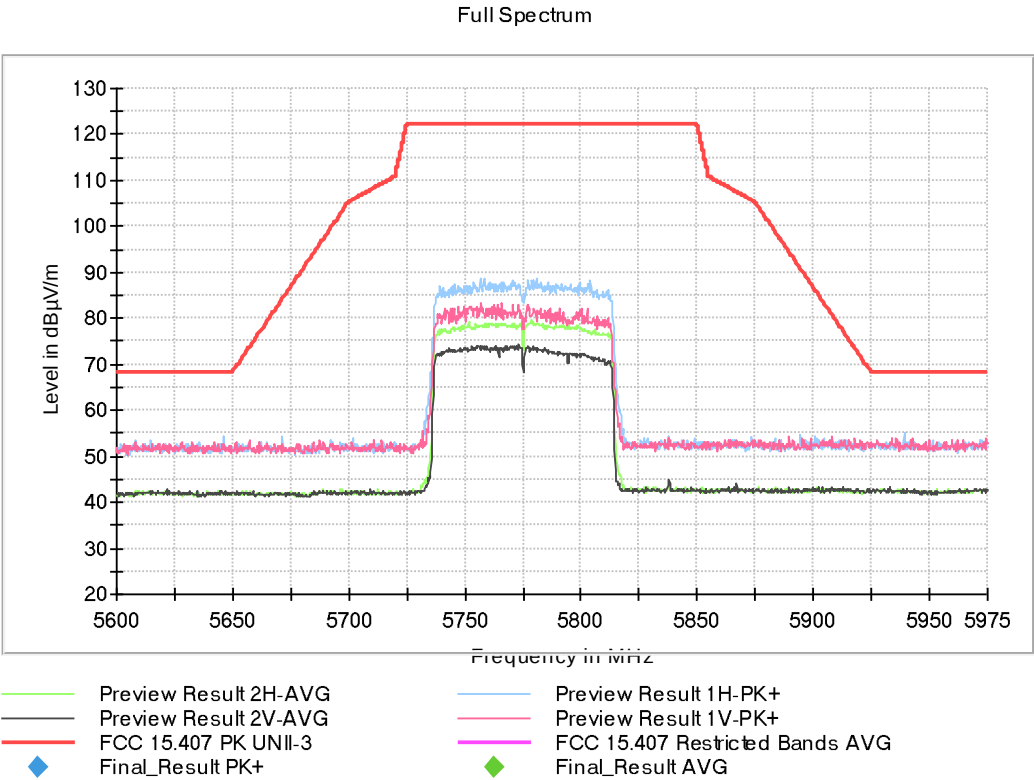


- High Channel:



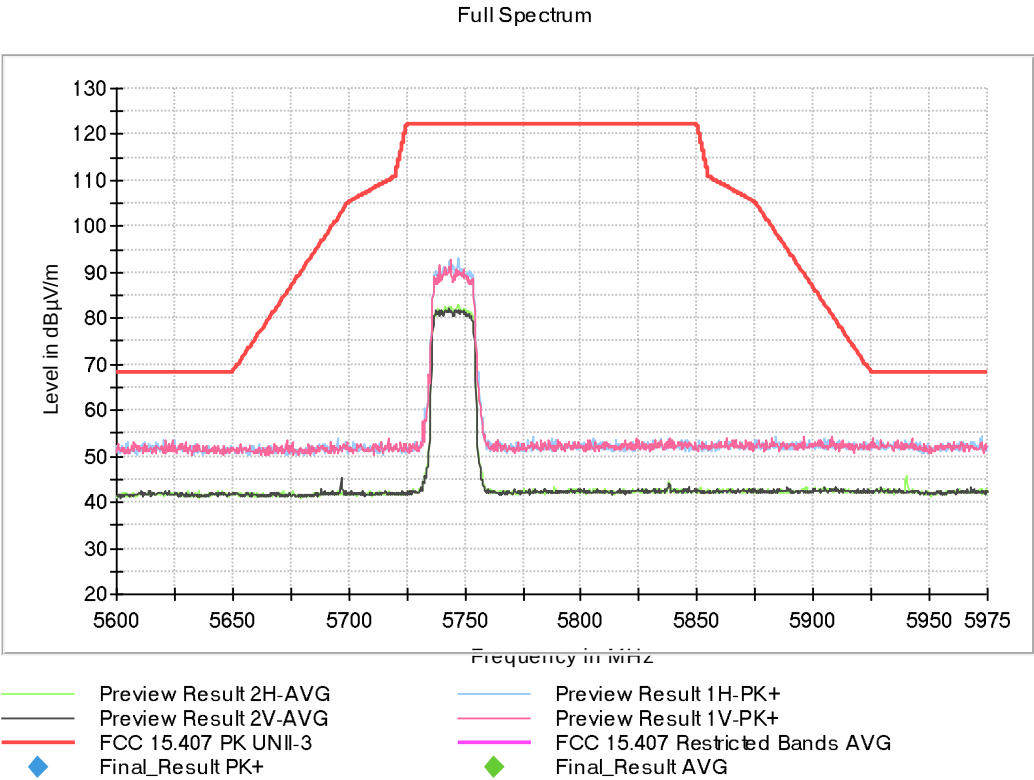
Modulation: 802.11ac VHT80 (OFDM MCS0)

- Single Channel:

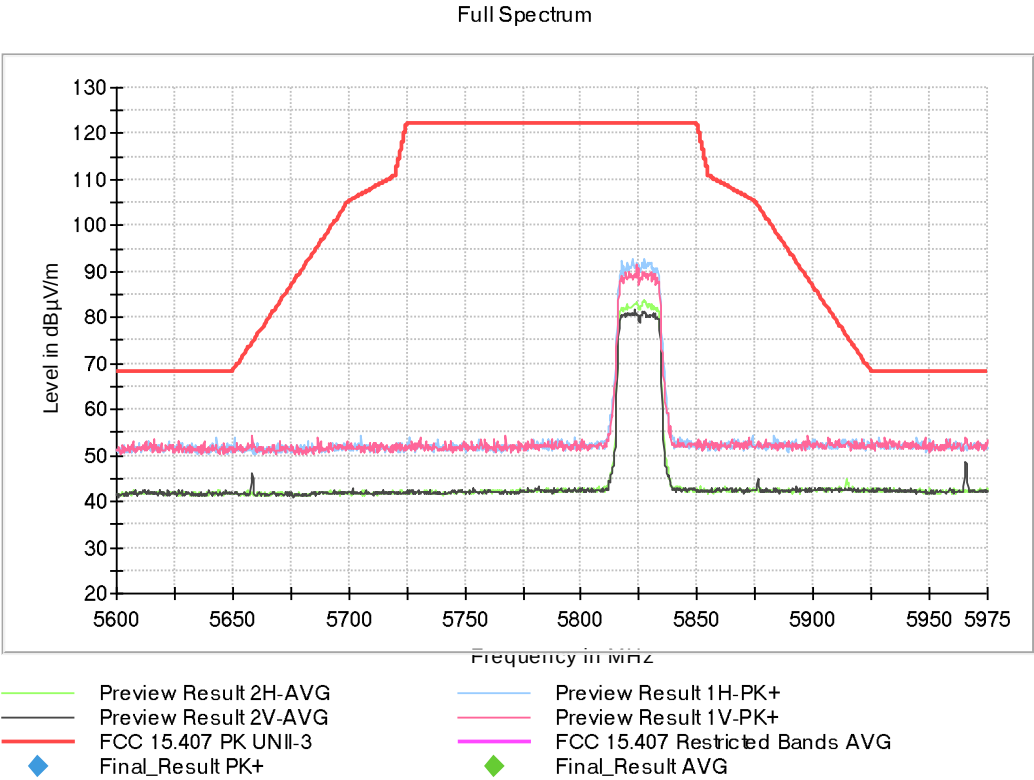


Modulation: 802.11ax HE20 (OFDMA MCS0) – SU

- Low Channel:

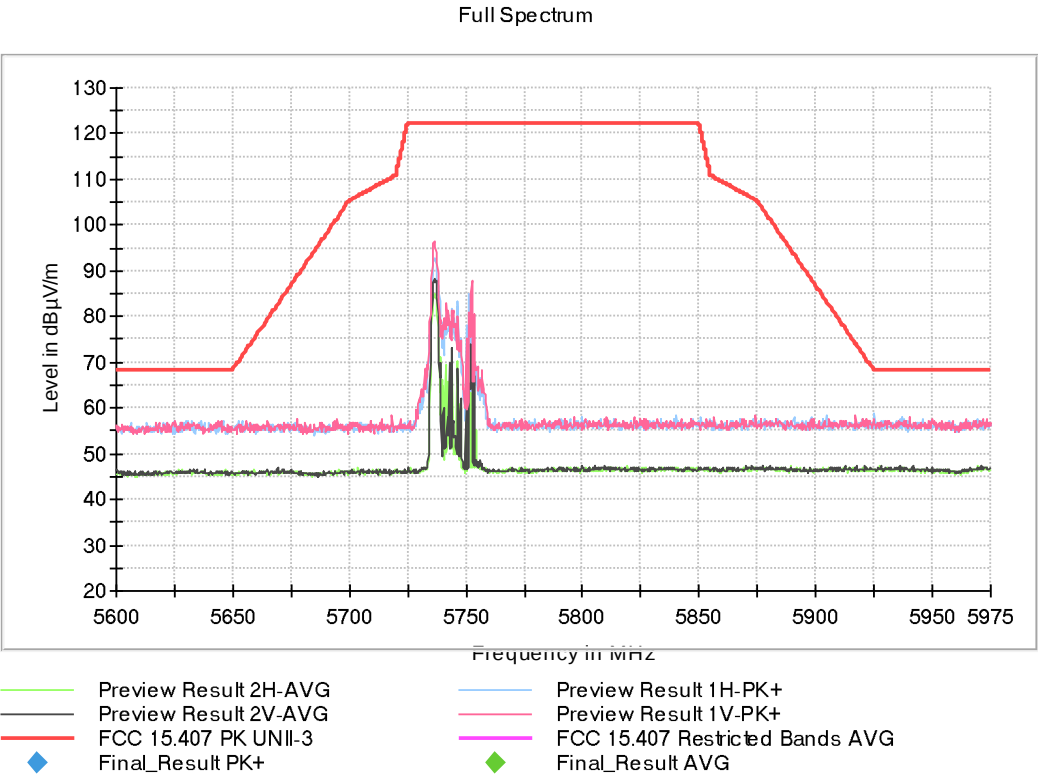


- High Channel:

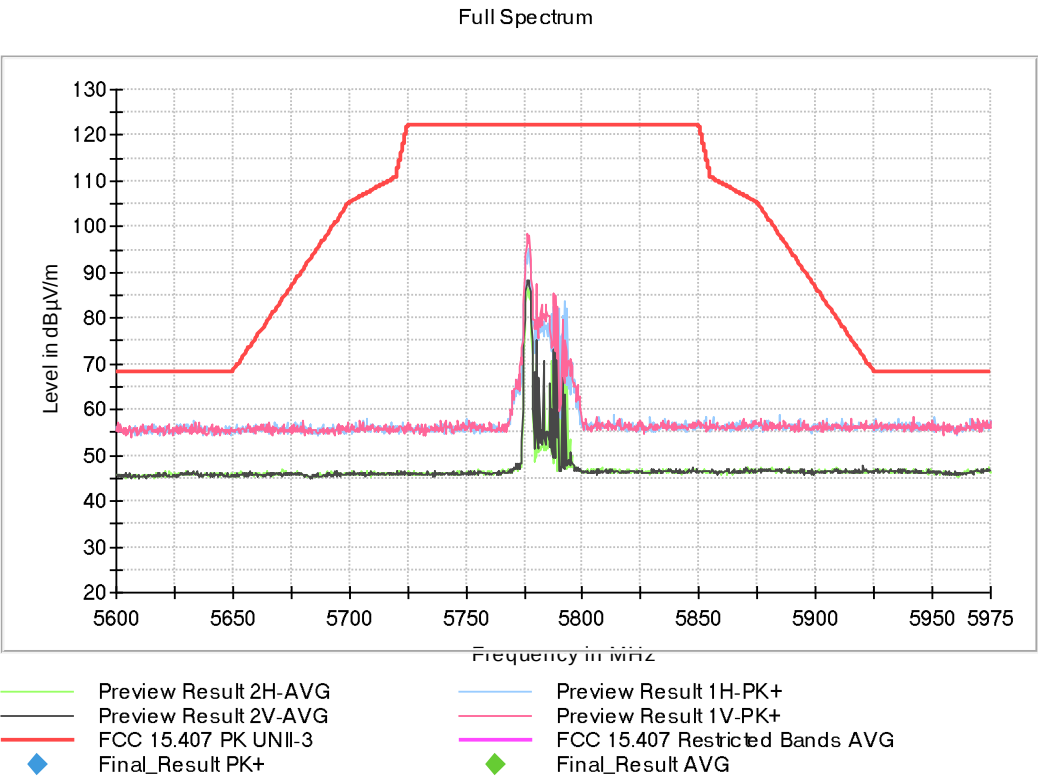


Modulation: 802.11ax HE20 (OFDMA MCS0) – RU

- Low Channel:

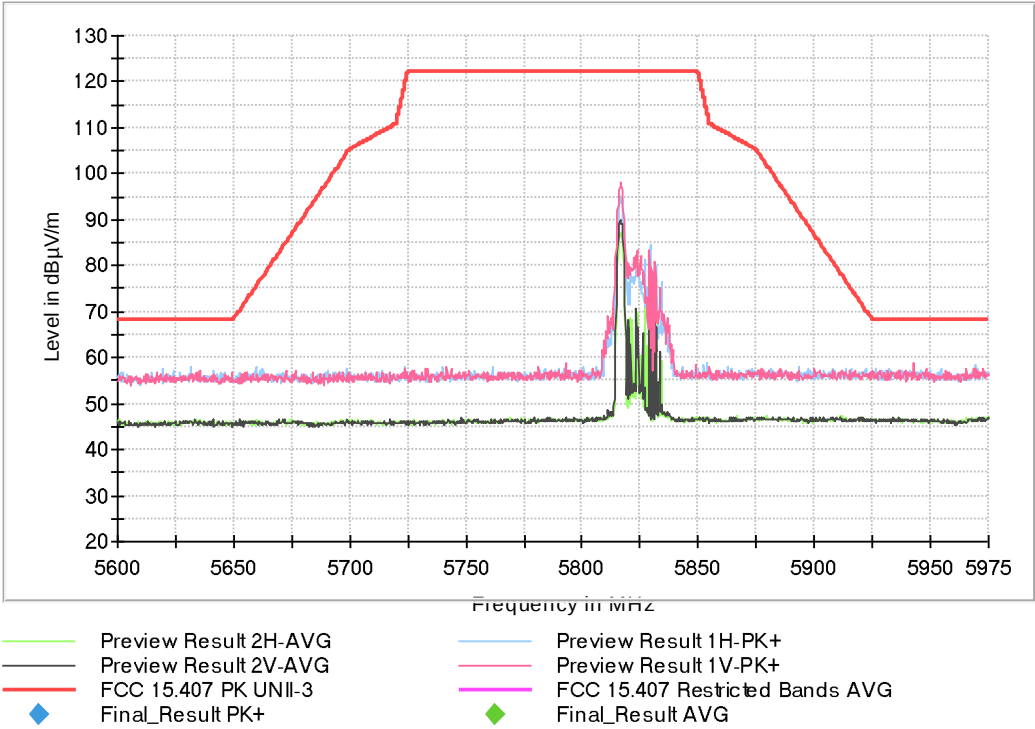


- Middle Channel:



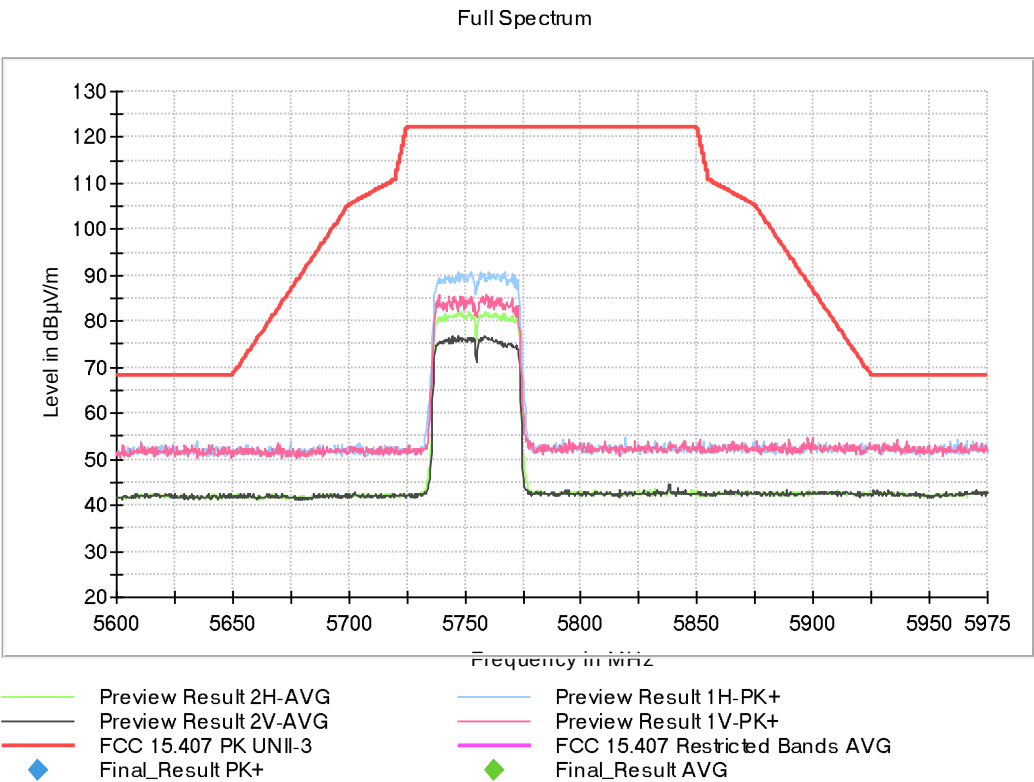
- High Channel:

Full Spectrum

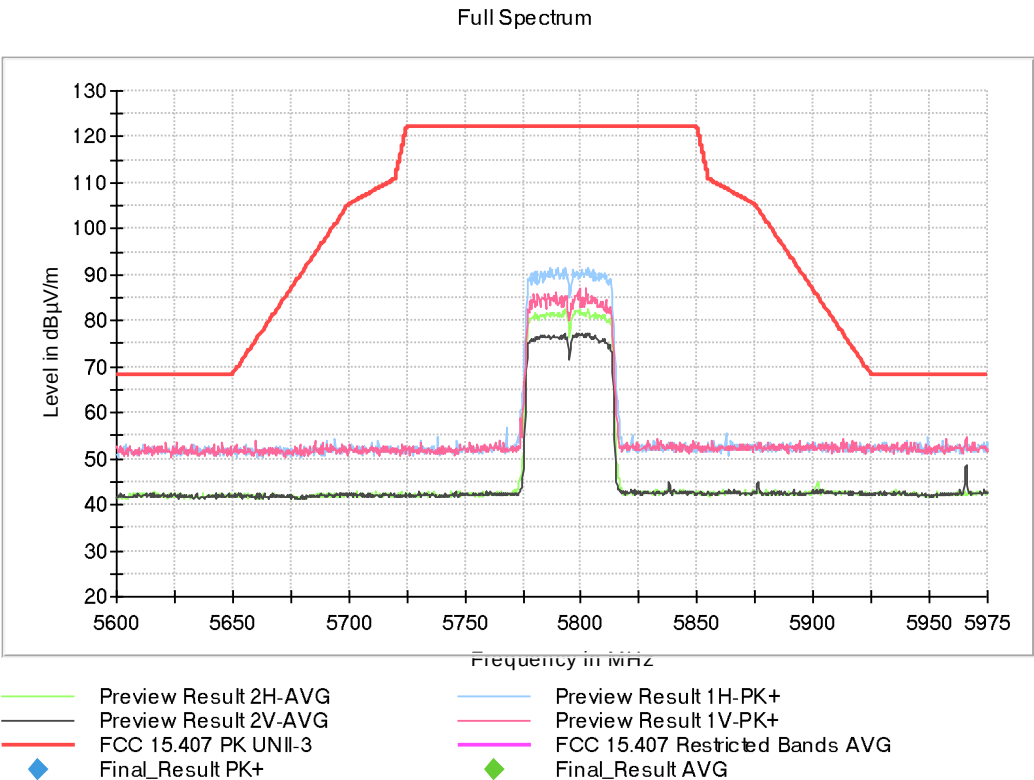


Modulation: 802.11ax HE40 (OFDMA MCS0) – SU

- Low Channel:



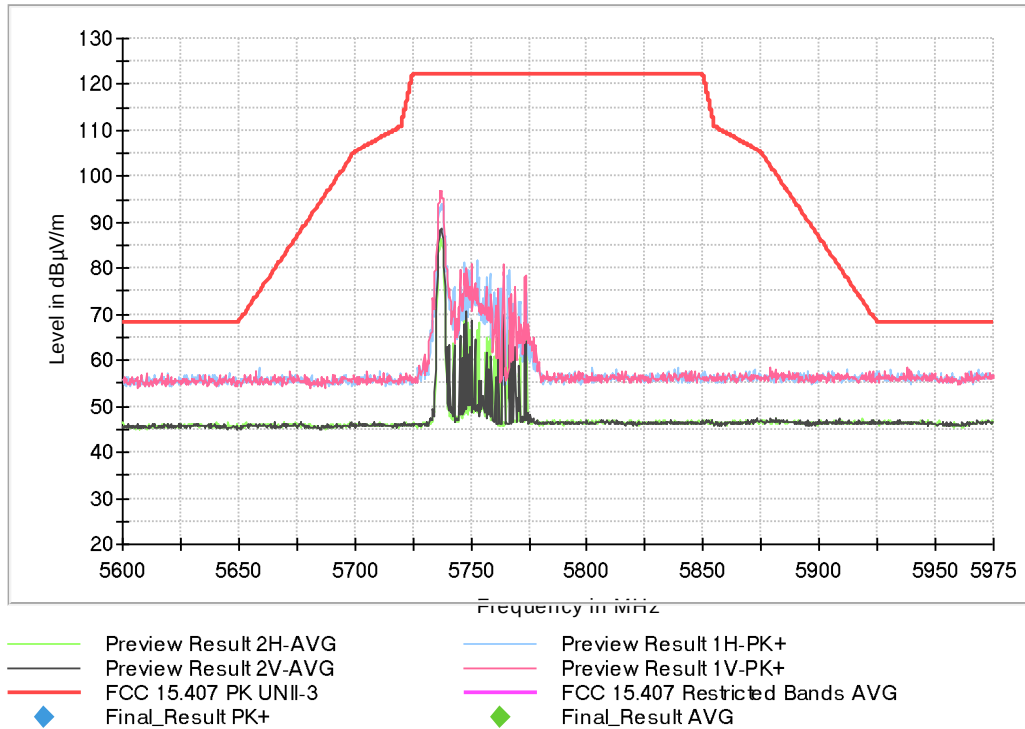
- High Channel:



Modulation: 802.11ax HE40 (OFDMA MCS0) – RU

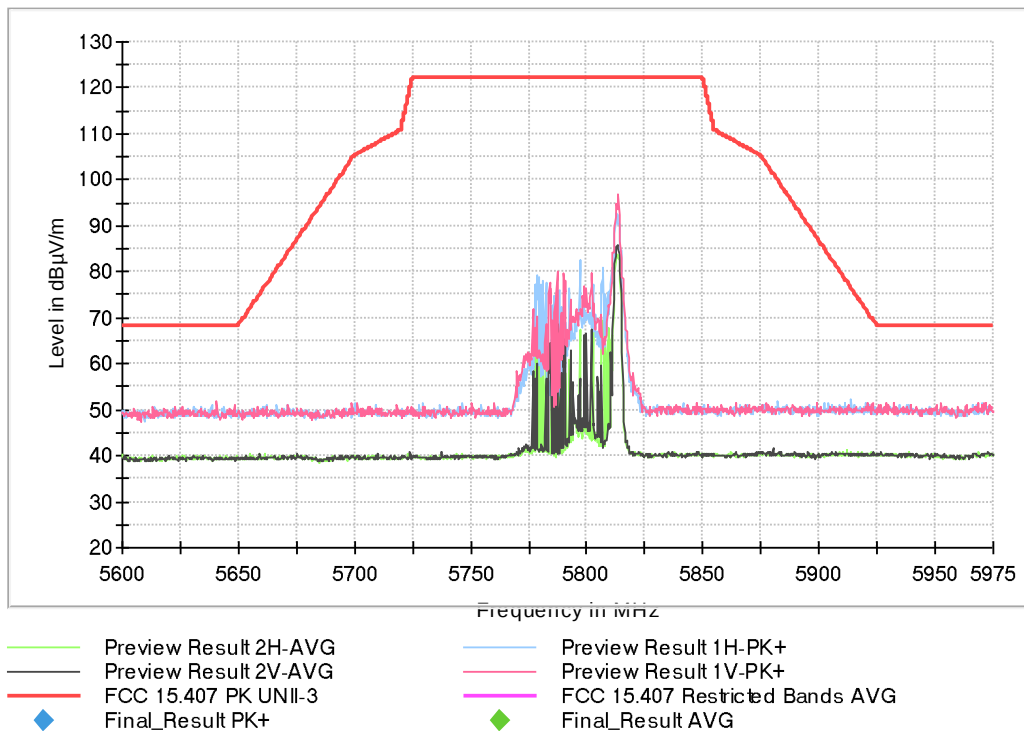
- Low Channel:

Full Spectrum



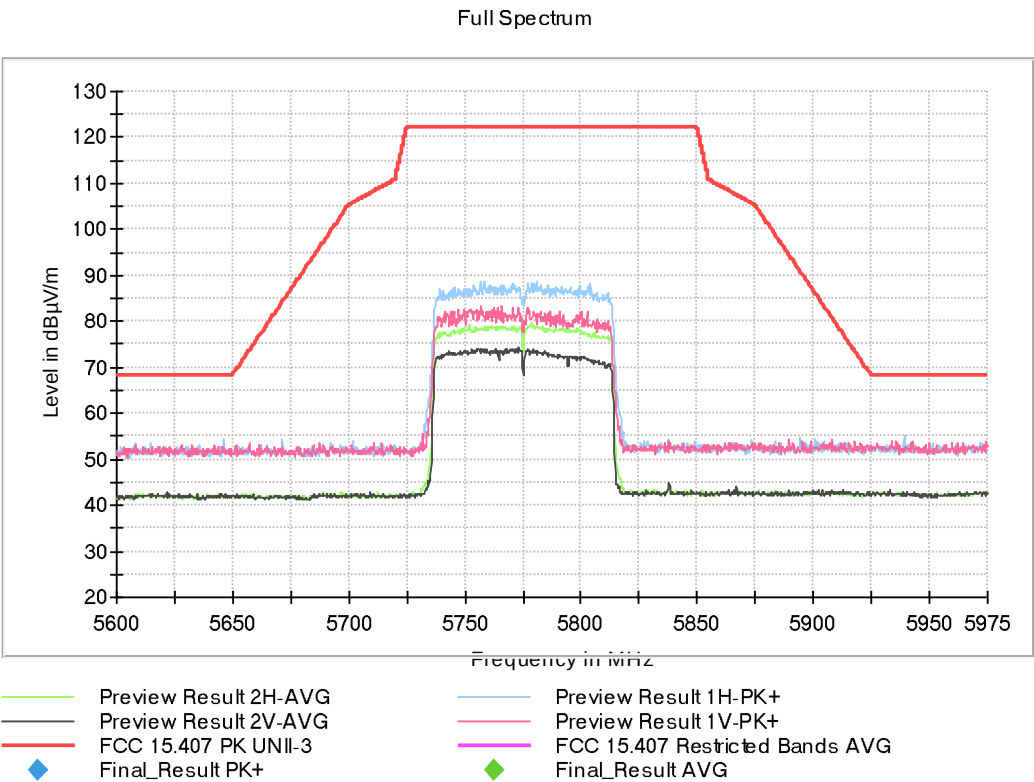
- High Channel:

Full Spectrum



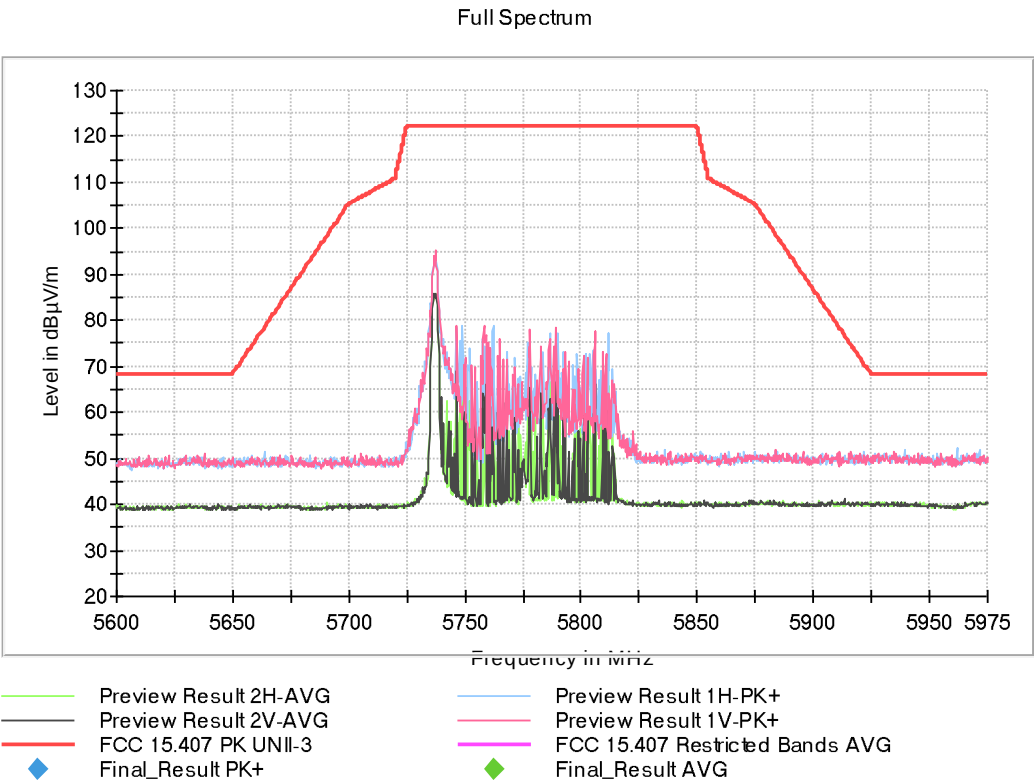
Modulation: 802.11ax HE80 (OFDMA MCS0) – SU

- Single Channel:



Modulation: 802.11ax HE80 (OFDMA MCS0) – RU

- Single Channel:



Spectrum analyzer parameters:

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
1 GHz - 6,5 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB
6,5 GHz - 17 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB

Frequency range 17 GHz – 40 GHz:

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

No spurious frequencies detected at less than 20 dB below the limit.

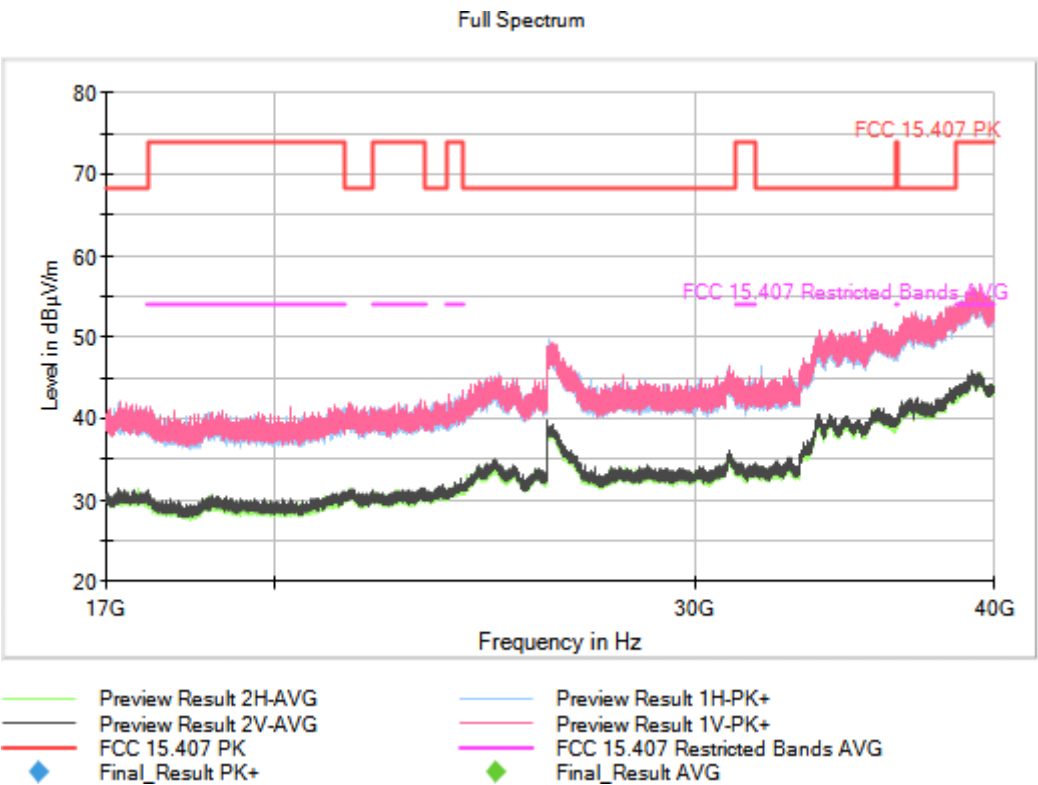
Verdict

Pass

Attachments

Operation Band MHz = [5150, 5250]	Active Port = 3+4
Frequency Range GHz = [17, 40]	Frequency MHz = The spurious frequencies detected do not depend on the operating channel.
Modulation = The spurious frequencies detected do not depend on the modulation.	MIMO Mode = MIMO CDD Mode 2x2

Images:



Spectrum analyzer parameters:

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
17 GHz - 40 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB