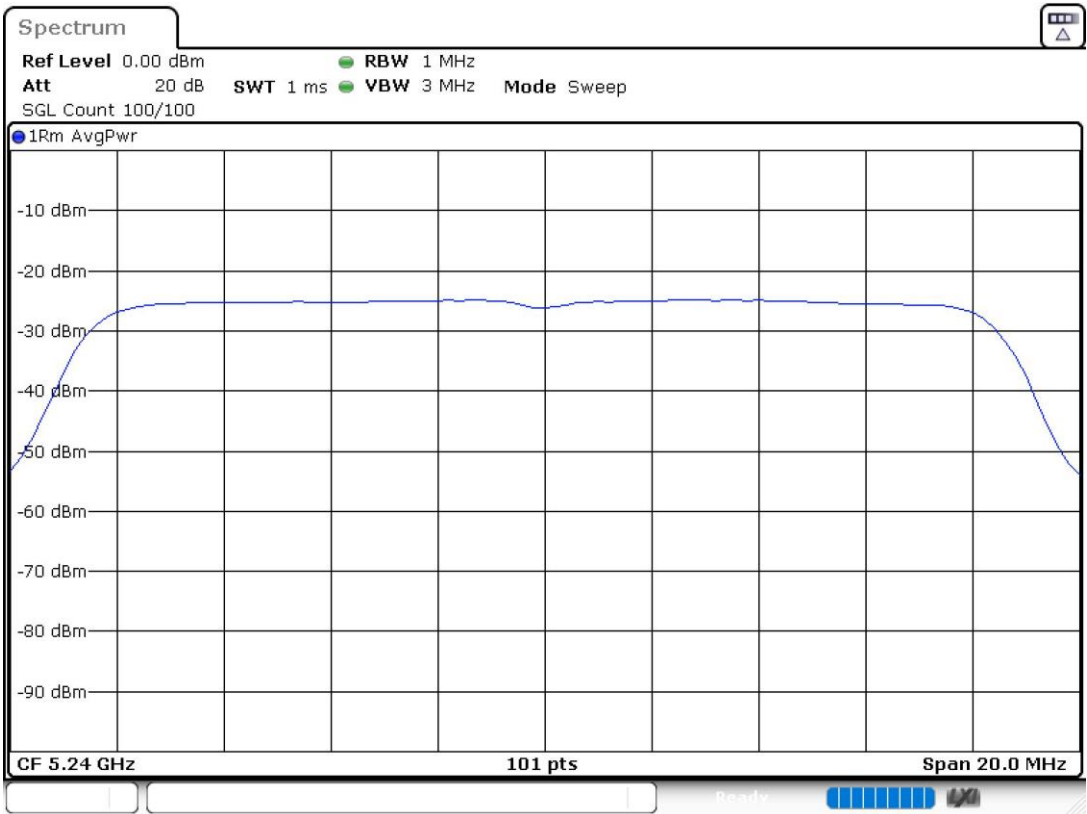
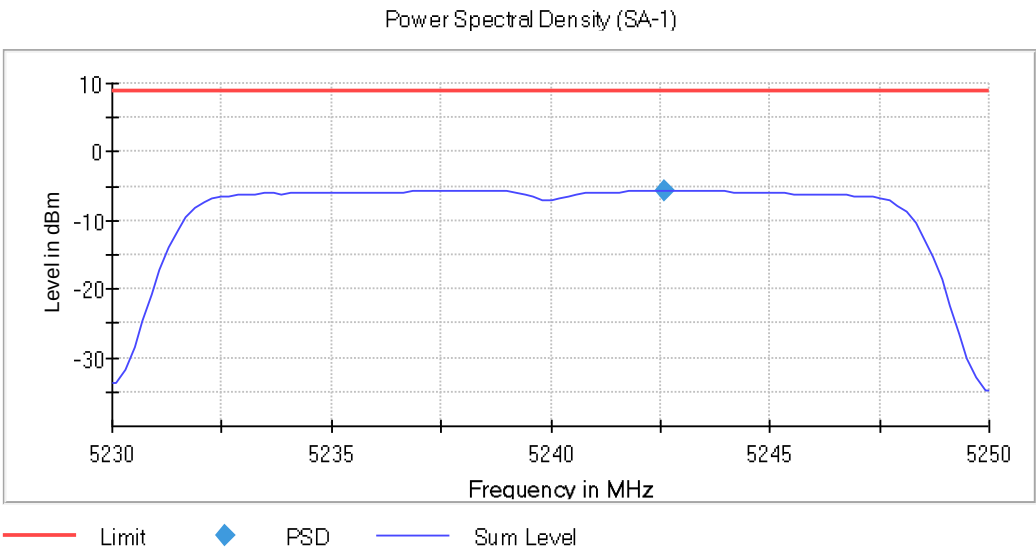
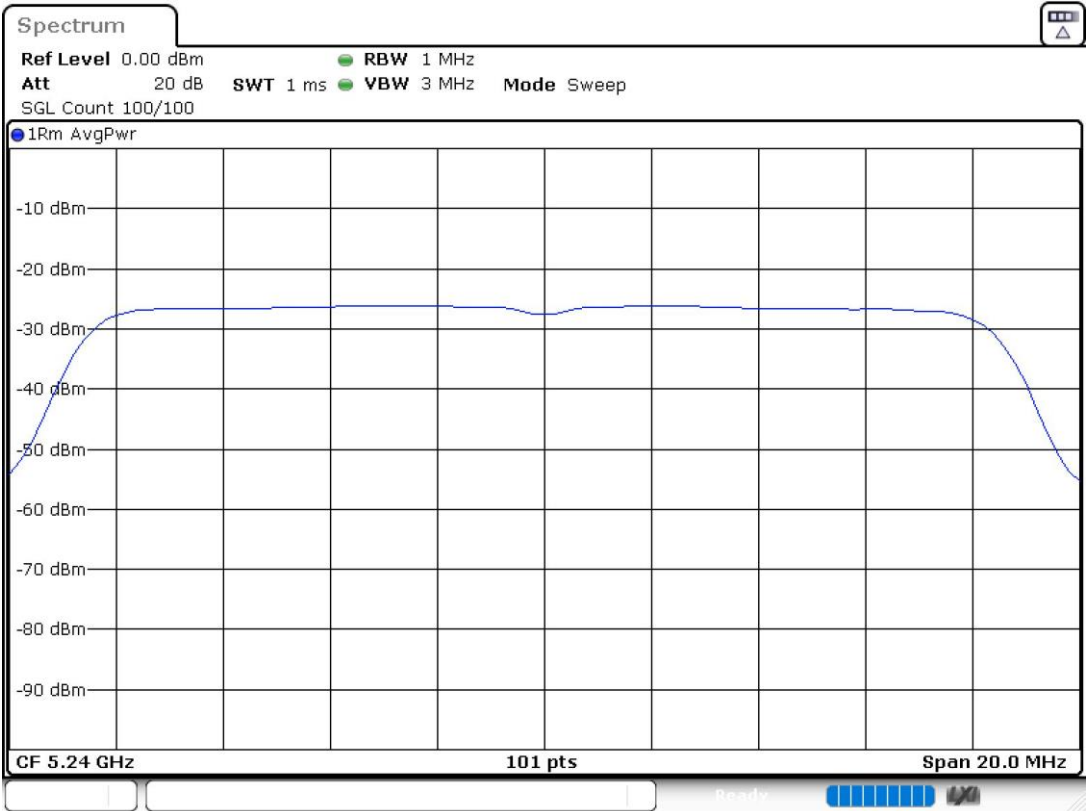


- High Channel 48 (5240 MHz):



PSD Chain 1

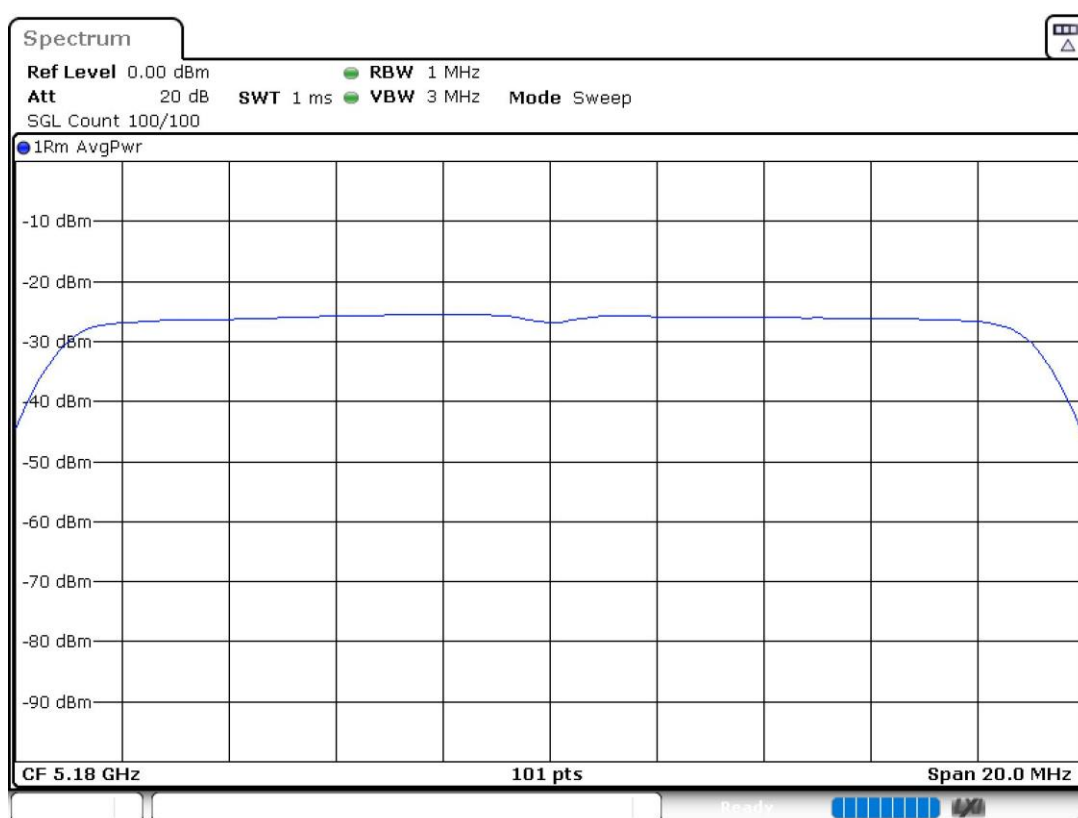
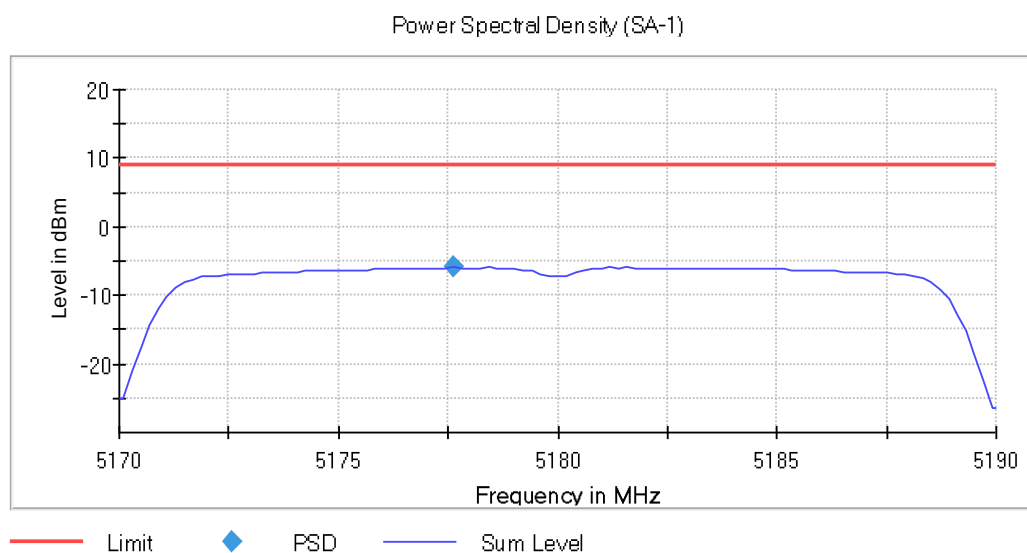


PSD Chain 0

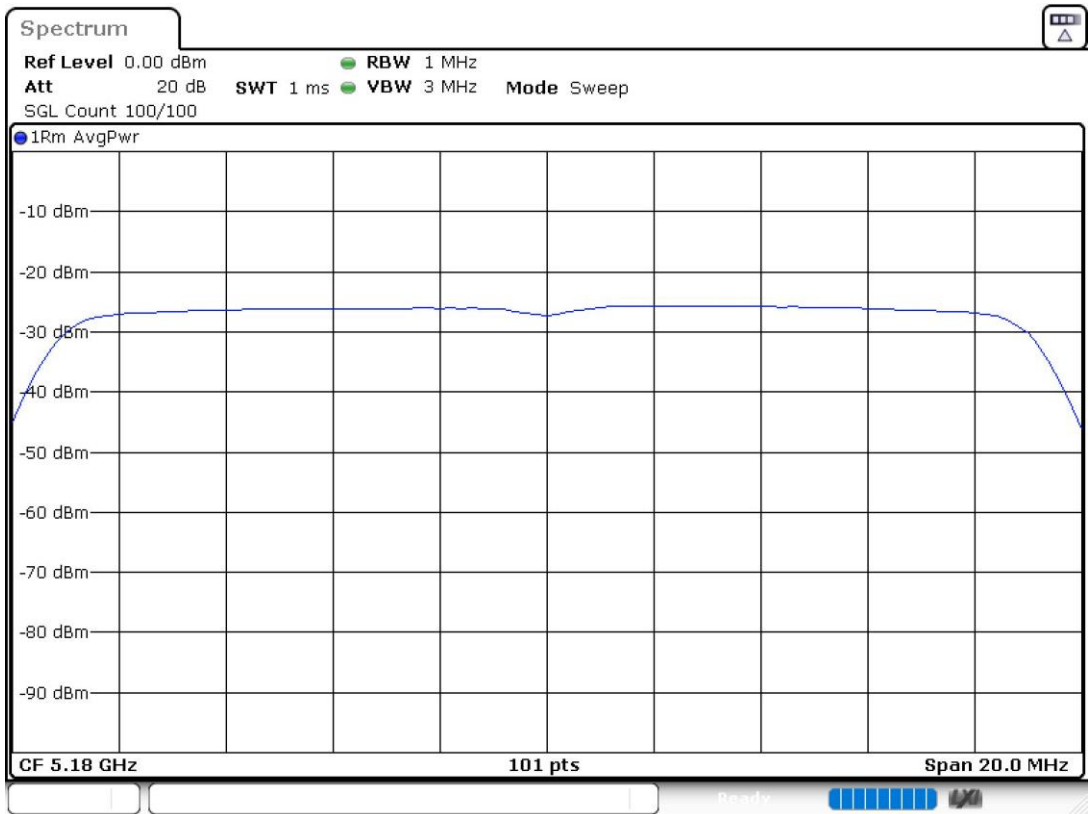
MIMO 802.11 n20 (HT20):

U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):

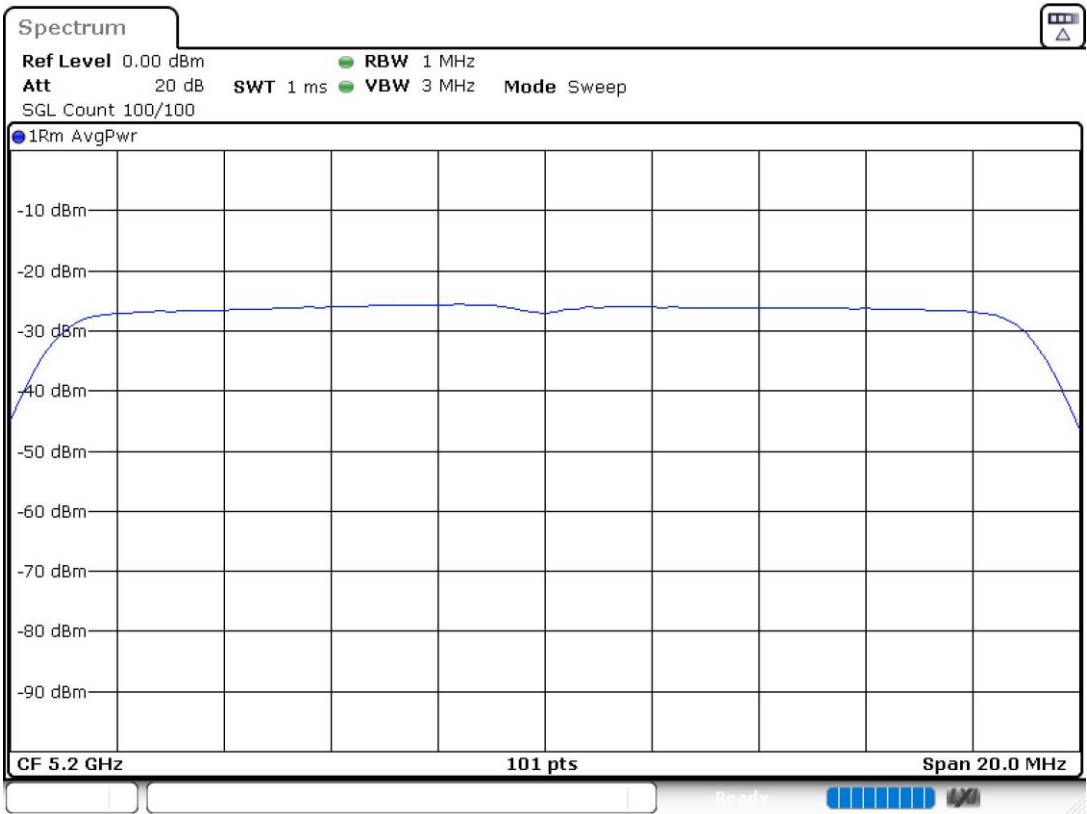
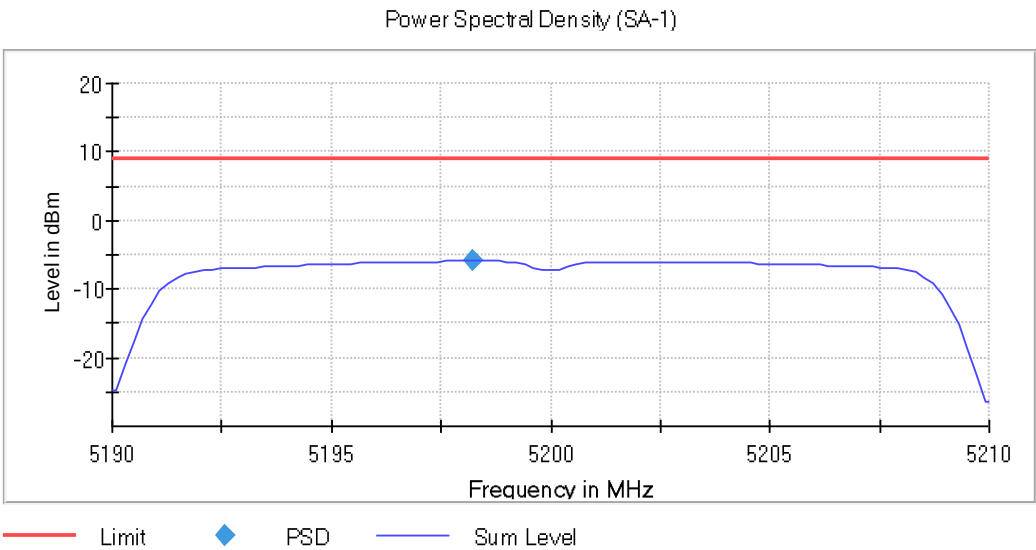


PSD Chain 1

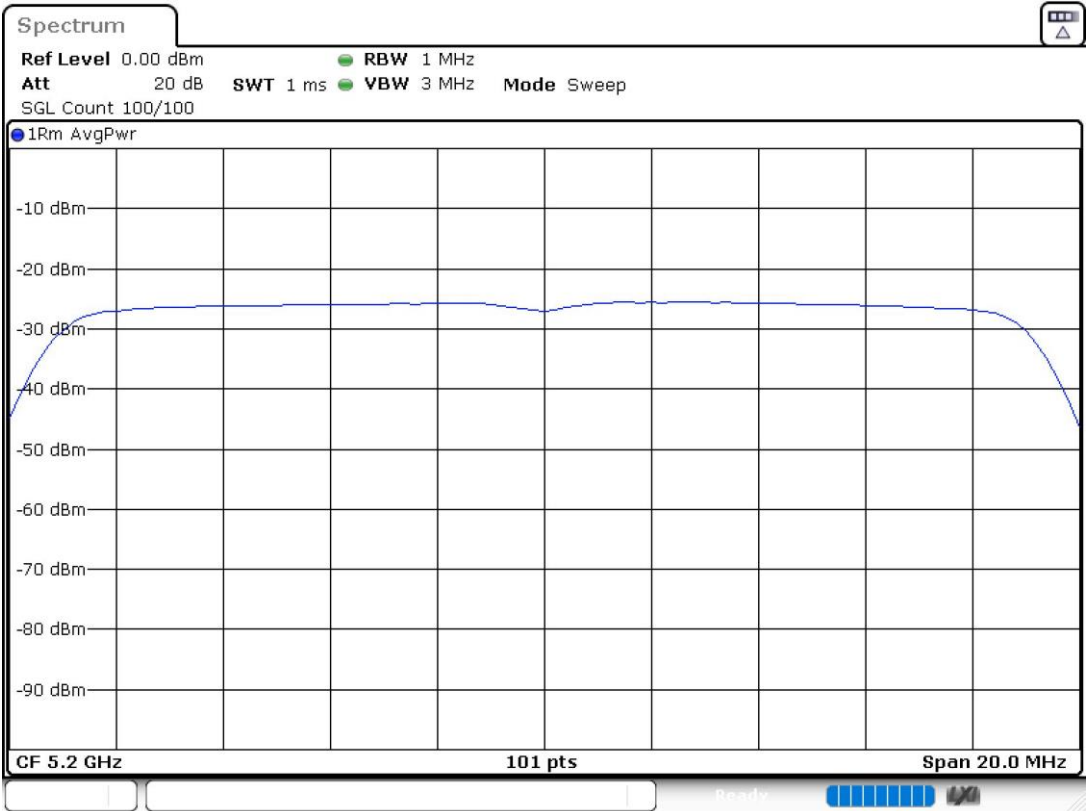


PSD Chain 0

- Channel 40 (5200 MHz):

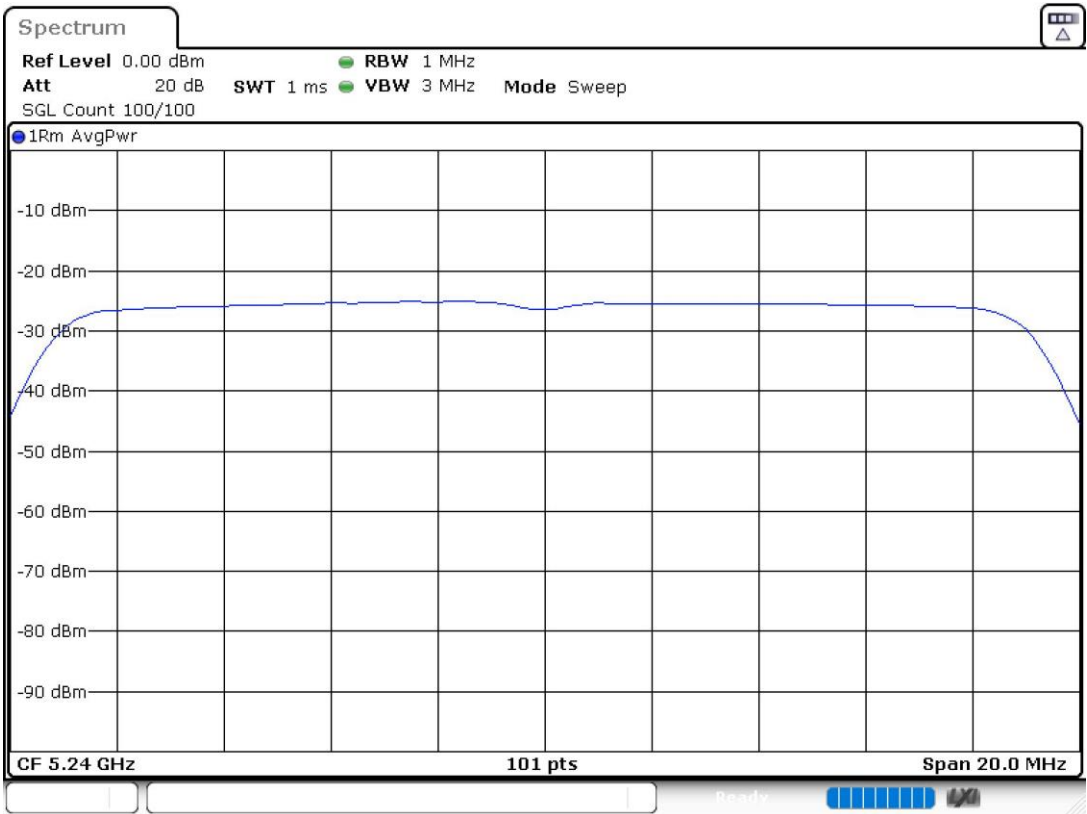
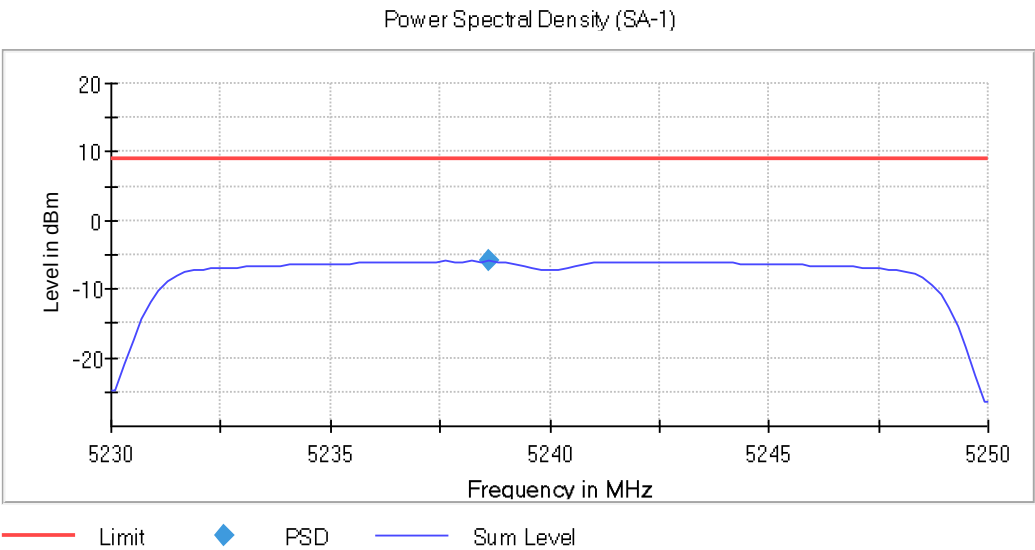


PSD Chain 1

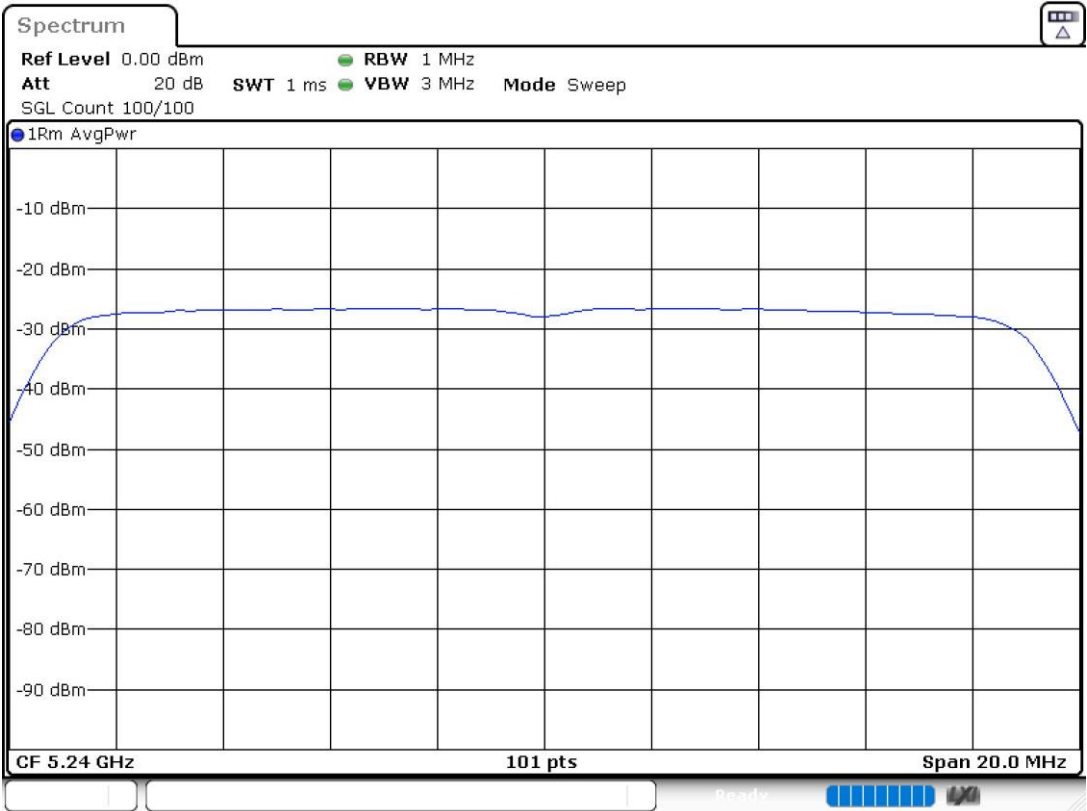


PSD Chain 0

- High Channel 48 (5240 MHz):



PSD Chain 1

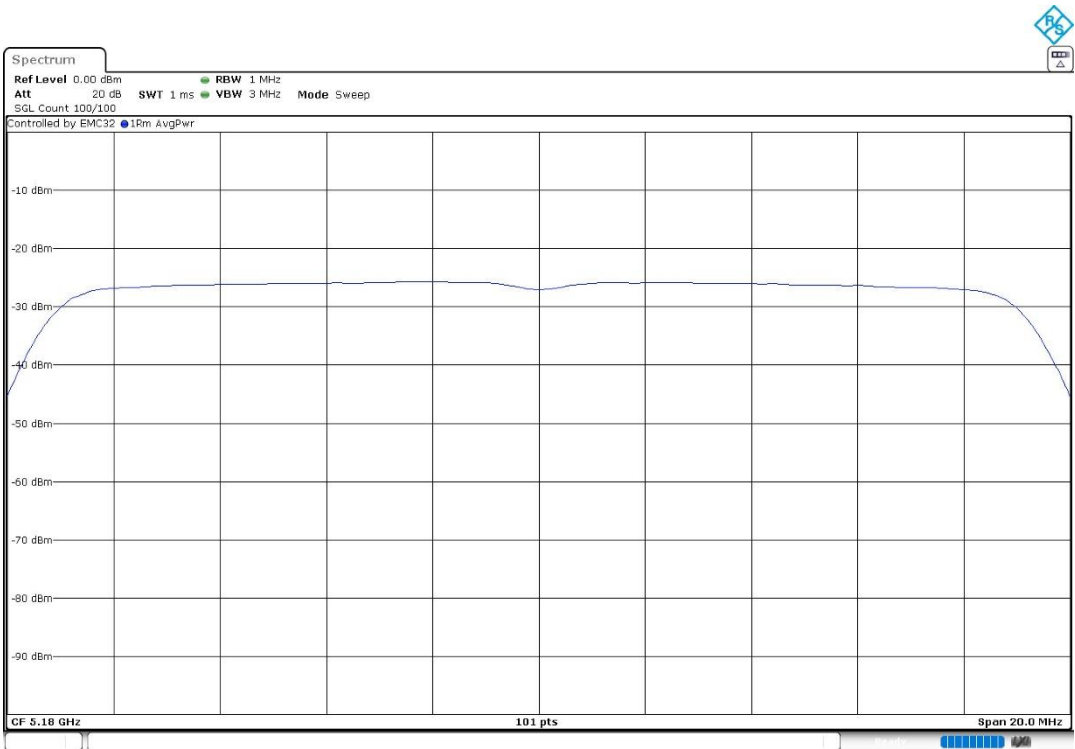
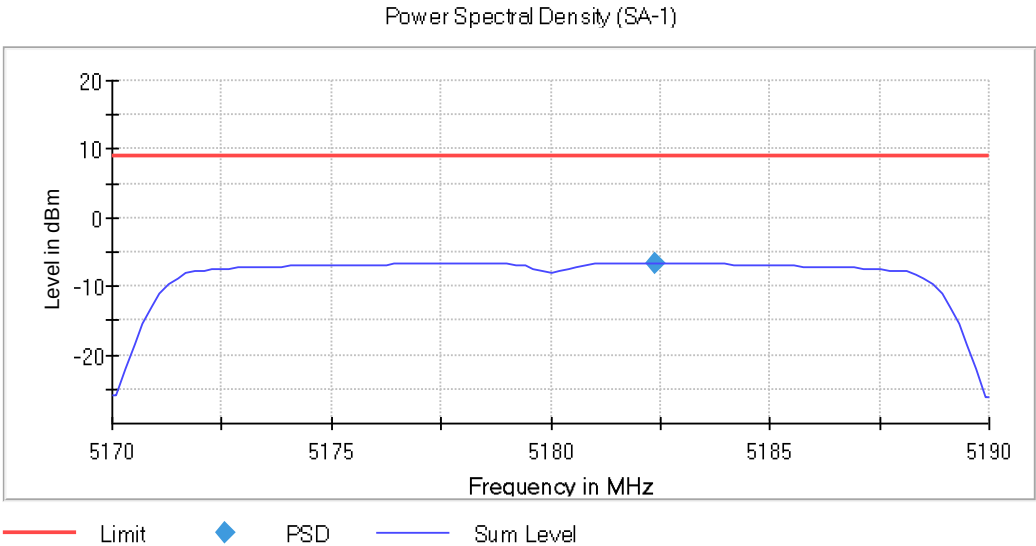


PSD Chain 0

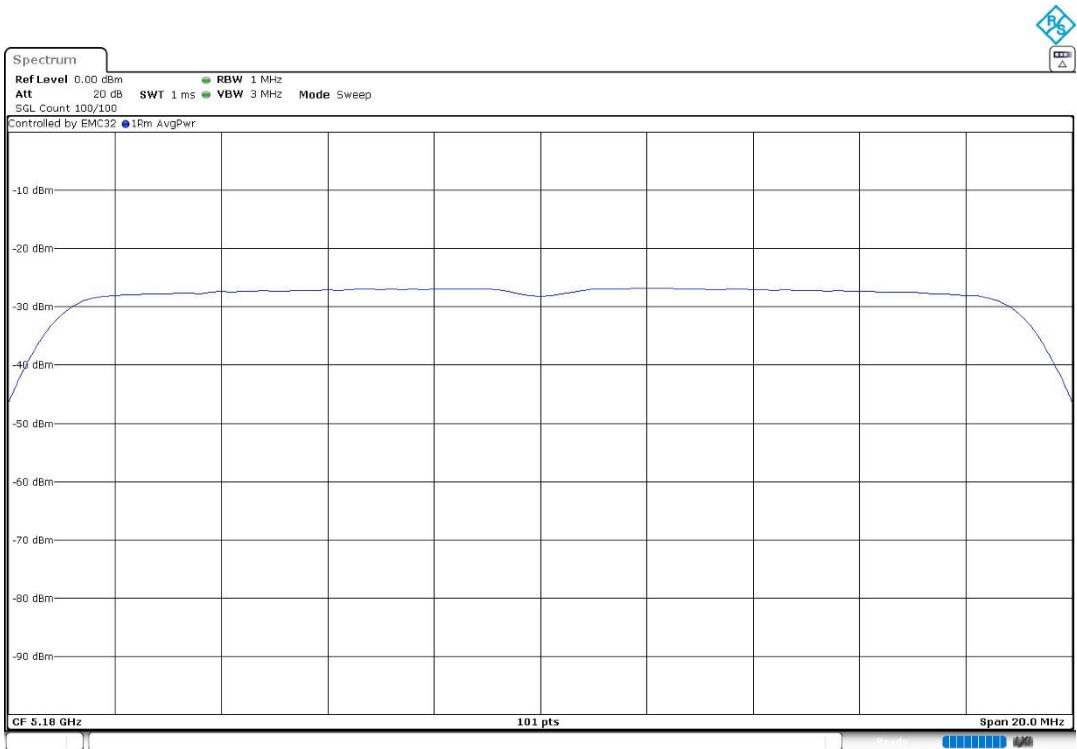
MIMO 802.11 ac20 (VHT20):

U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):

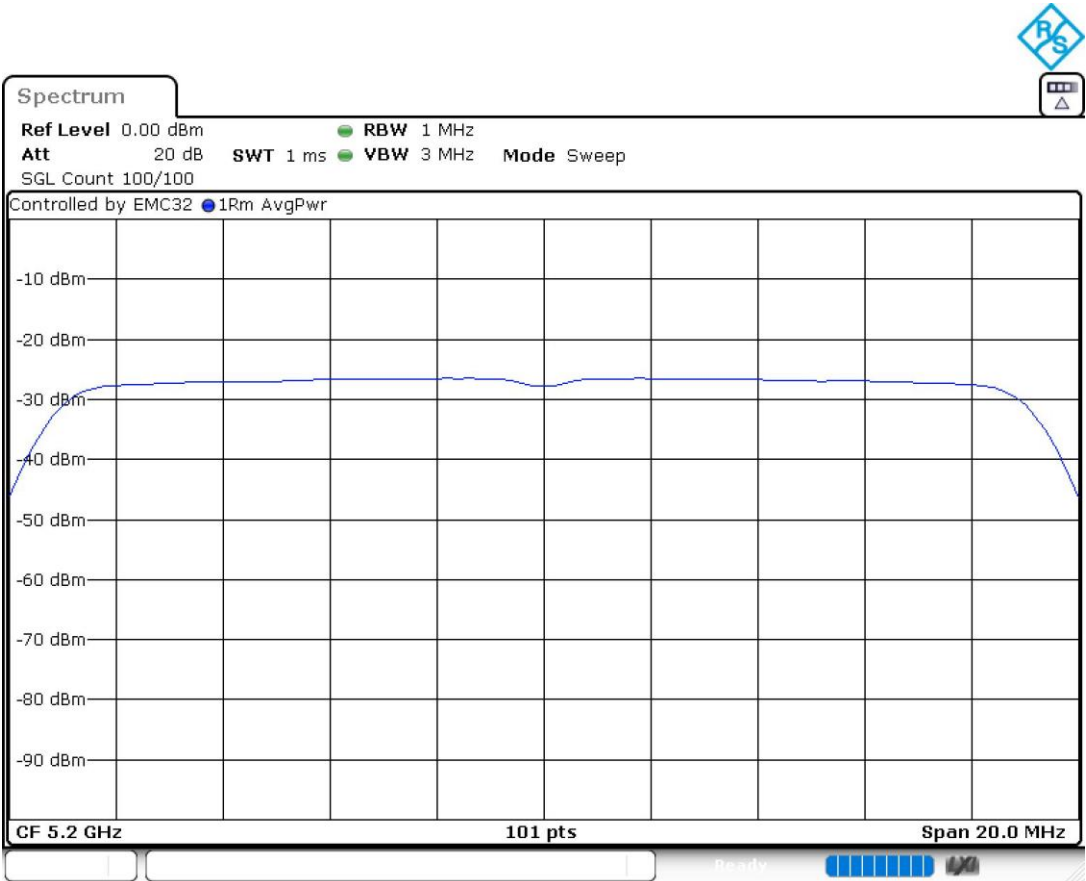
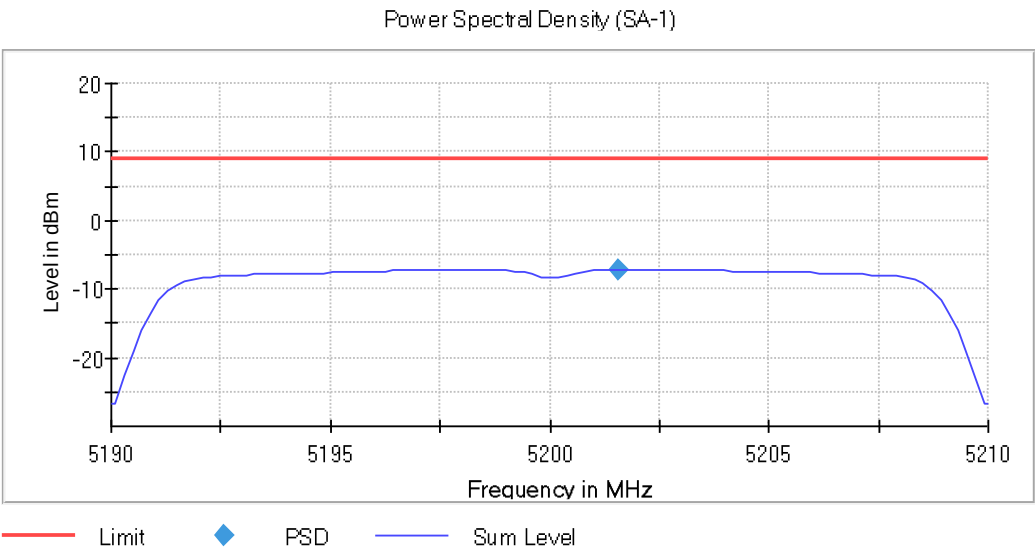


PSD Chain 1

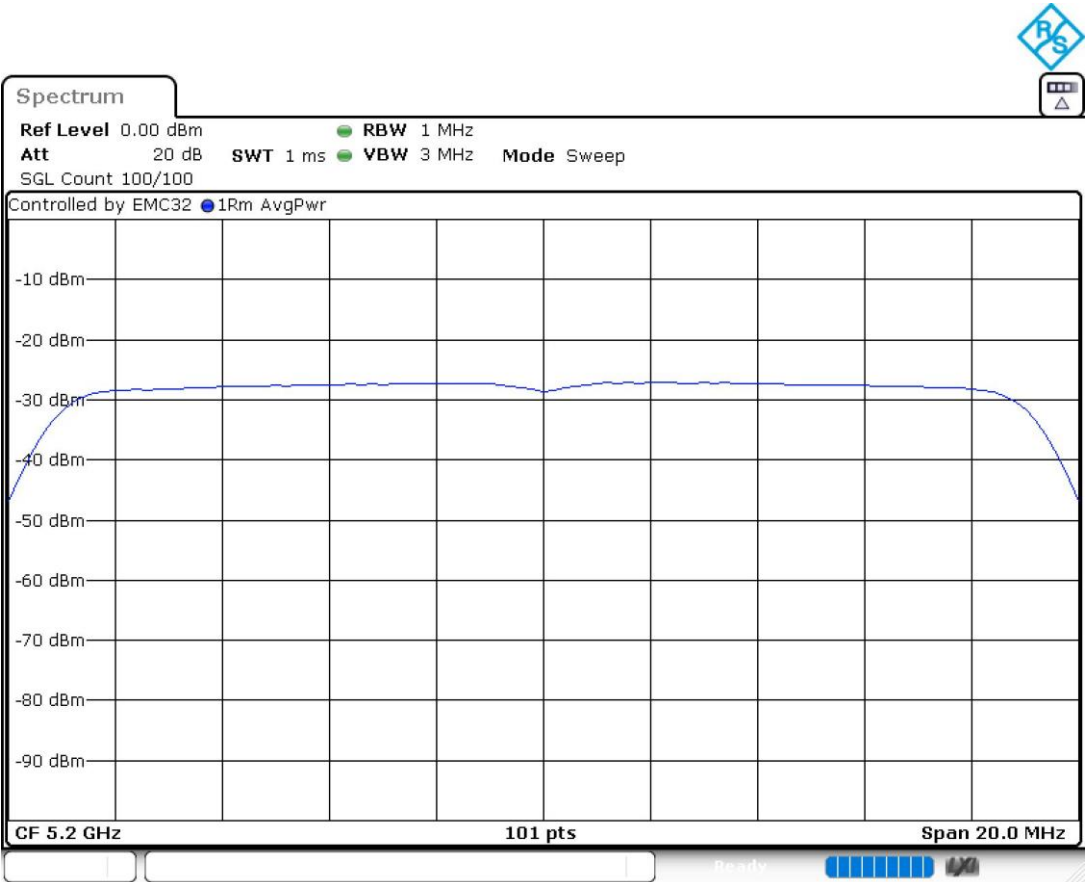


PSD Chain 0

- Channel 40 (5200 MHz):

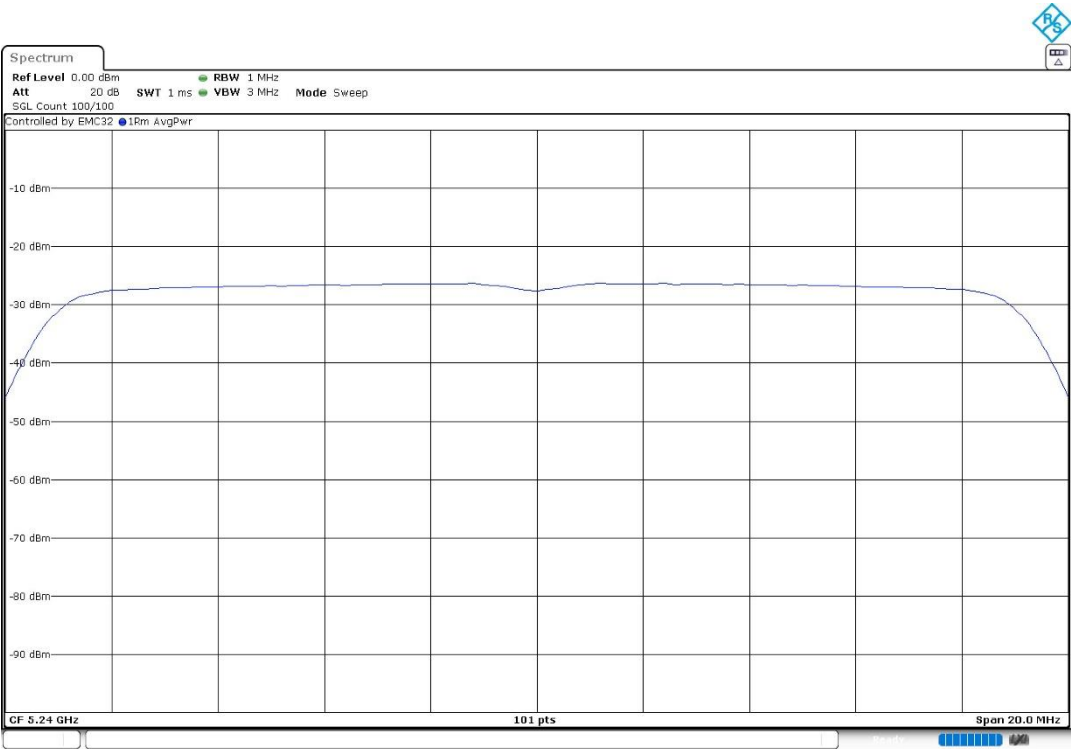
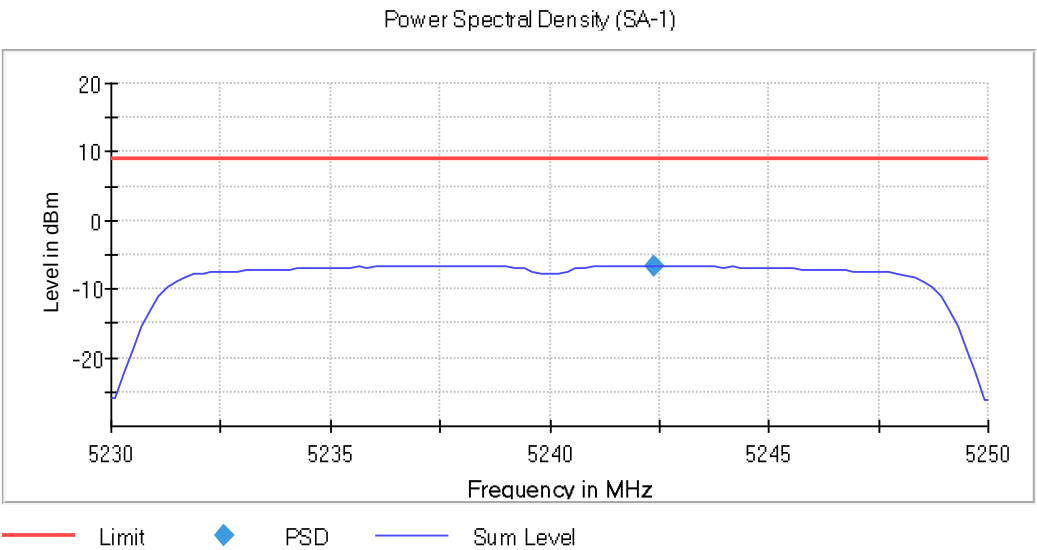


PSD Chain 1

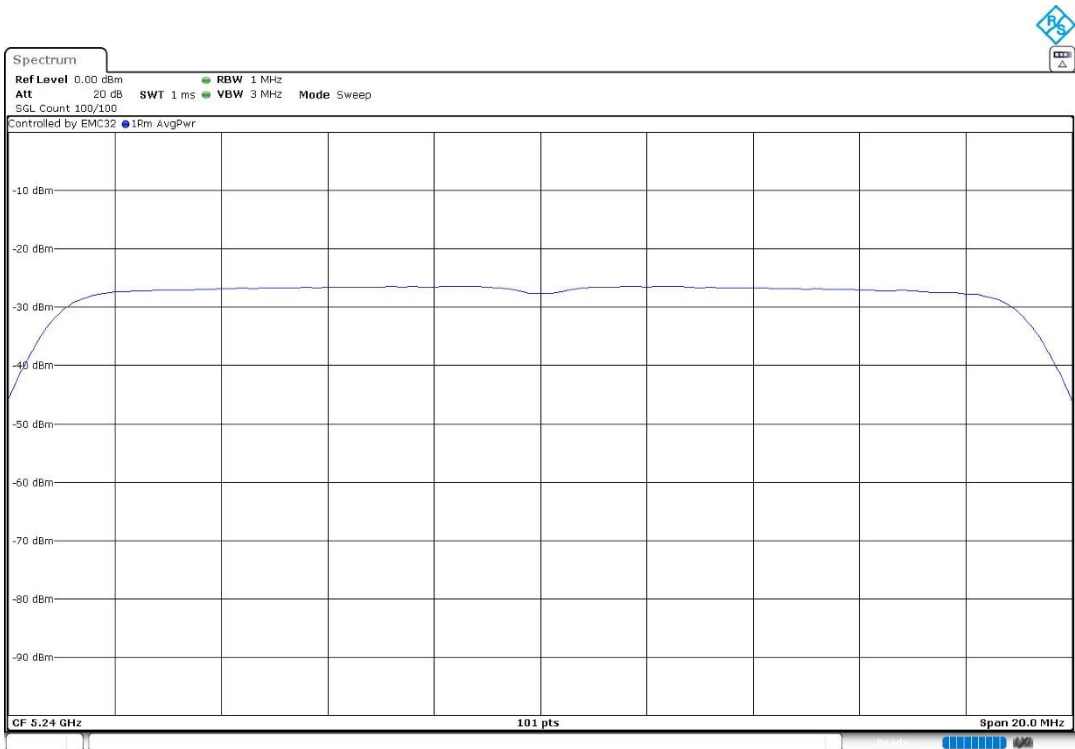


PSD Chain 0

- High Channel 48 (5240 MHz):



PSD Chain 1

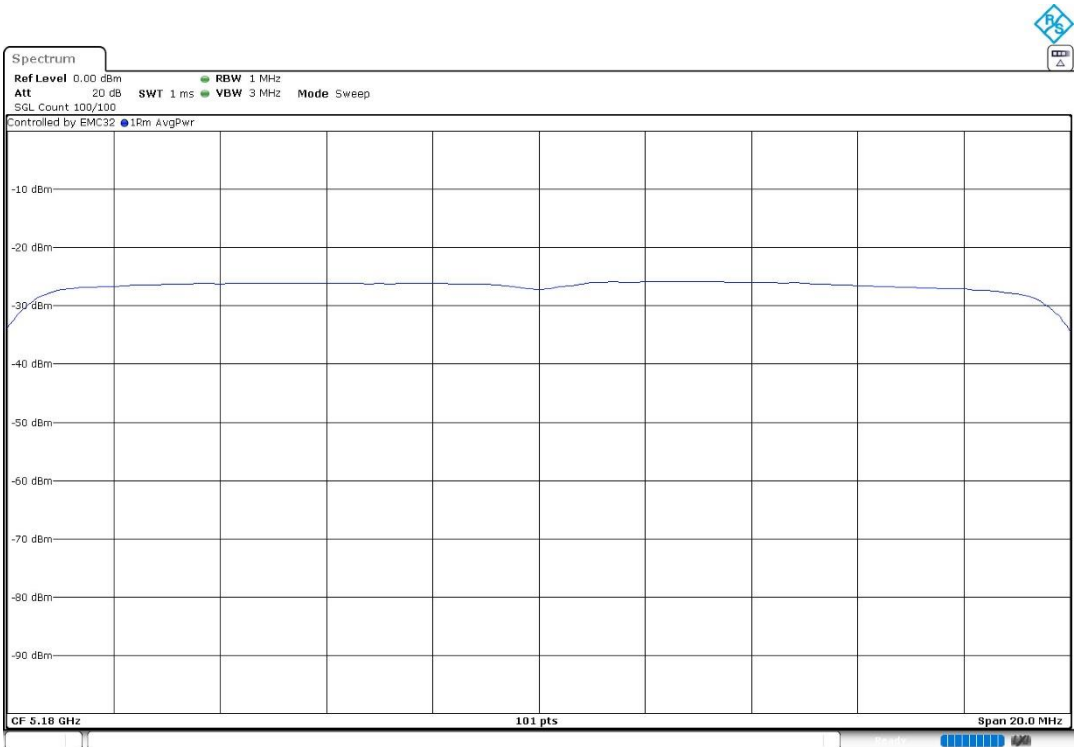
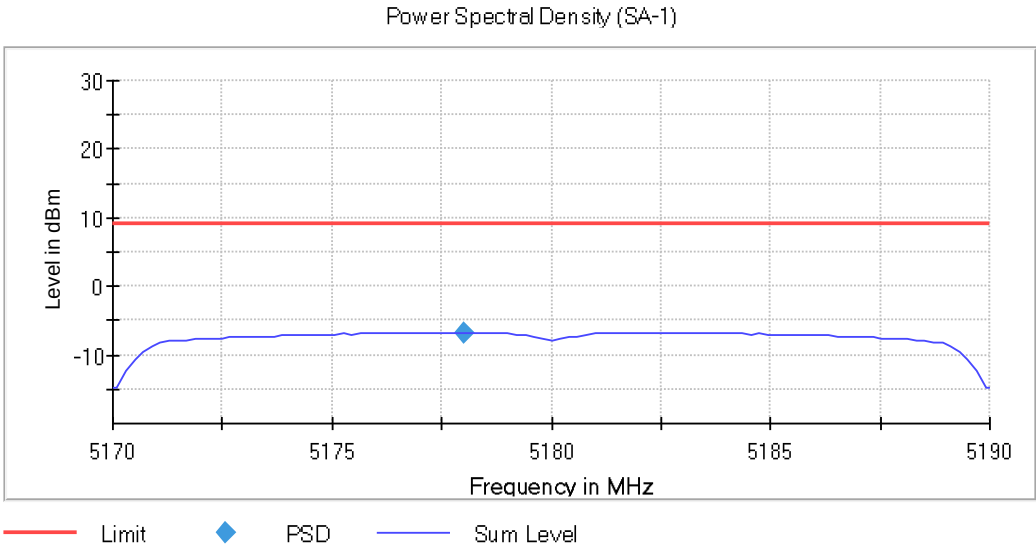


PSD Chain 0

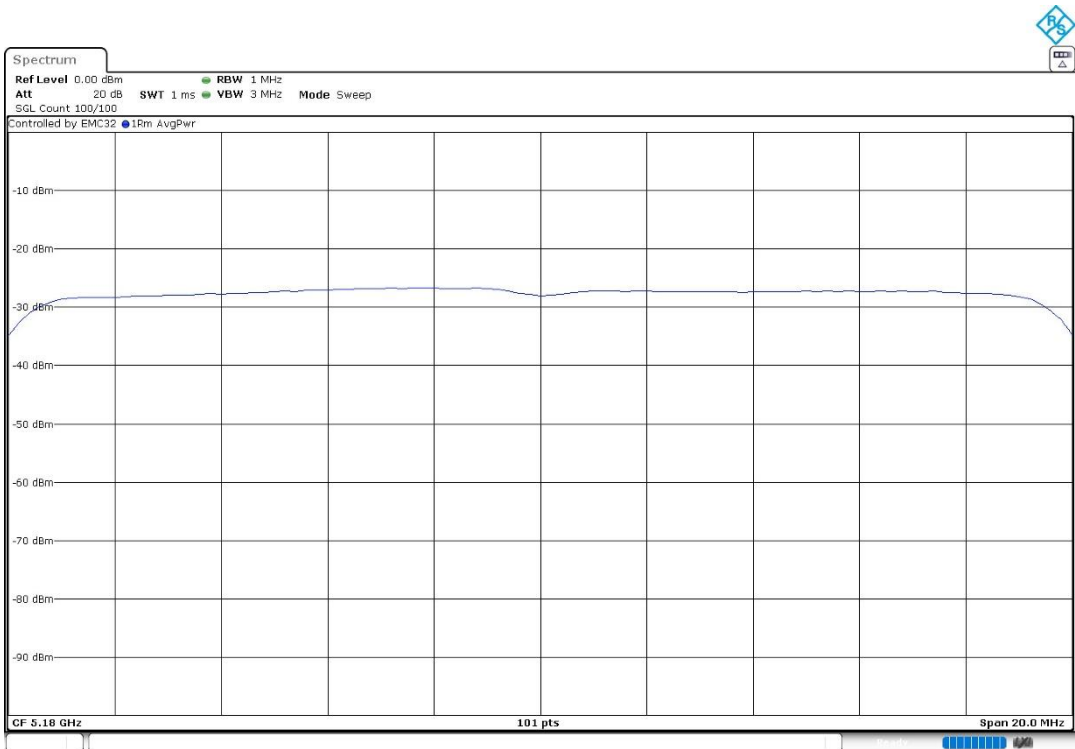
MIMO 802.11 ax20 (HE20) – SU Full channel allocation:

U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz):

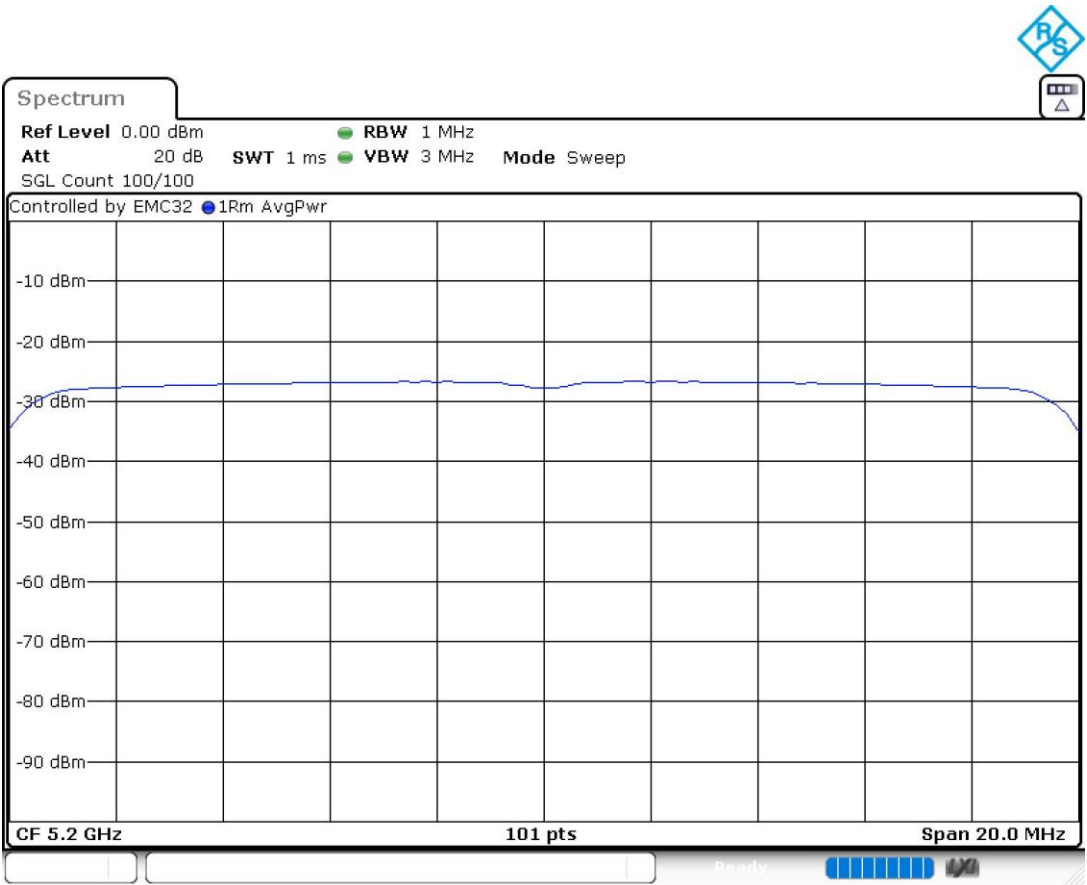
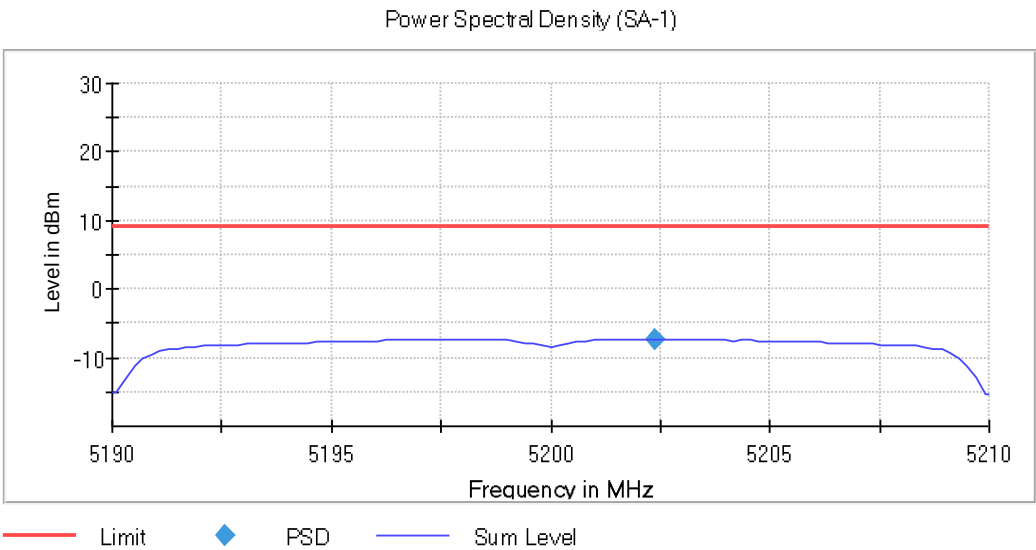


PSD Chain 1

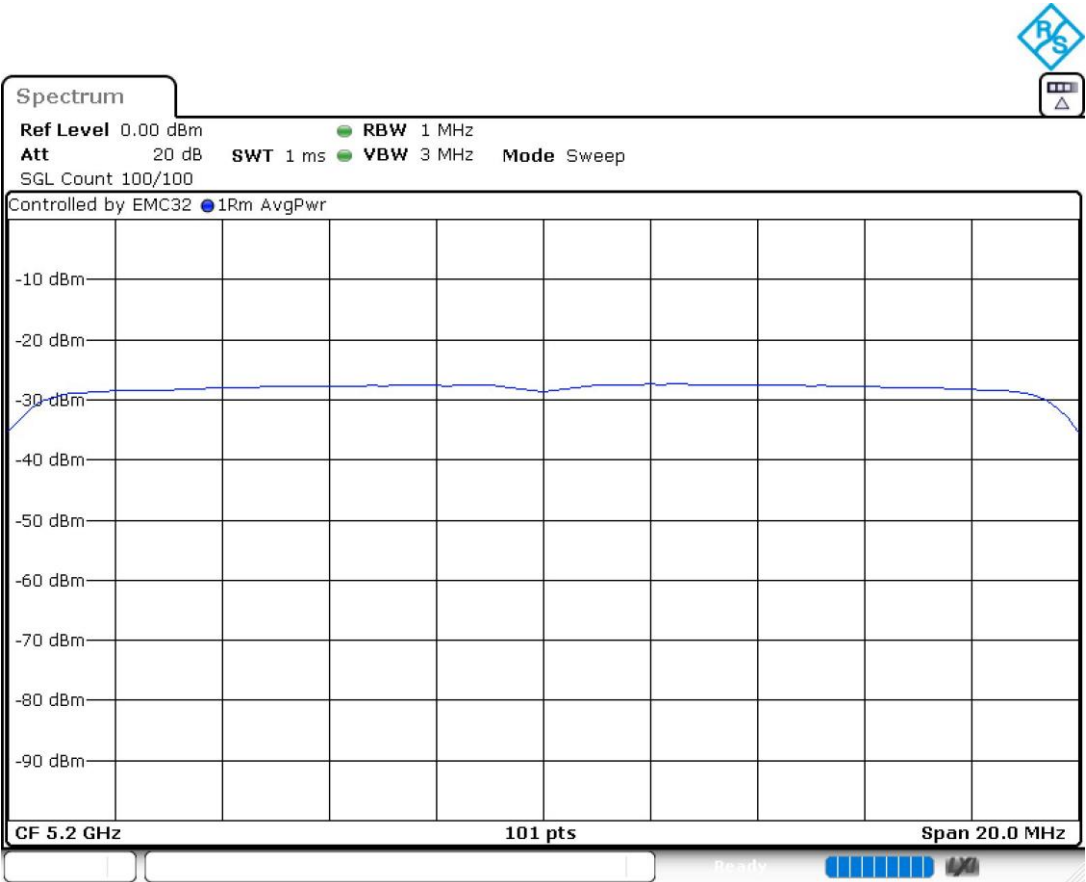


PSD Chain 0

- Channel 40 (5200 MHz):

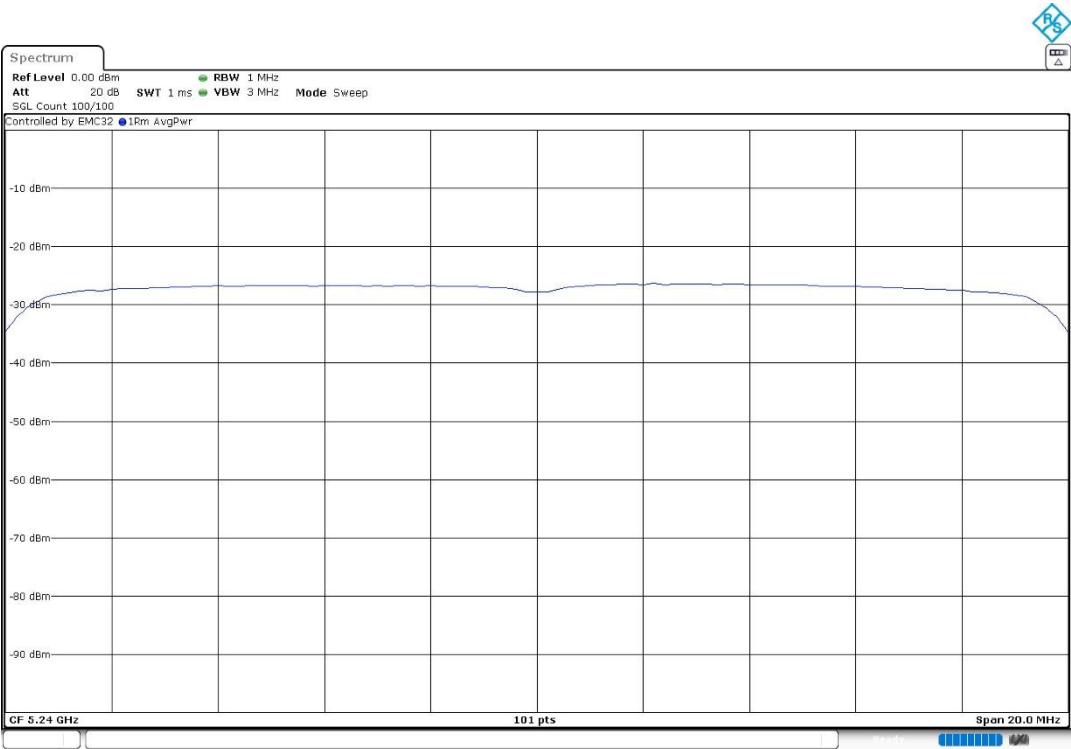
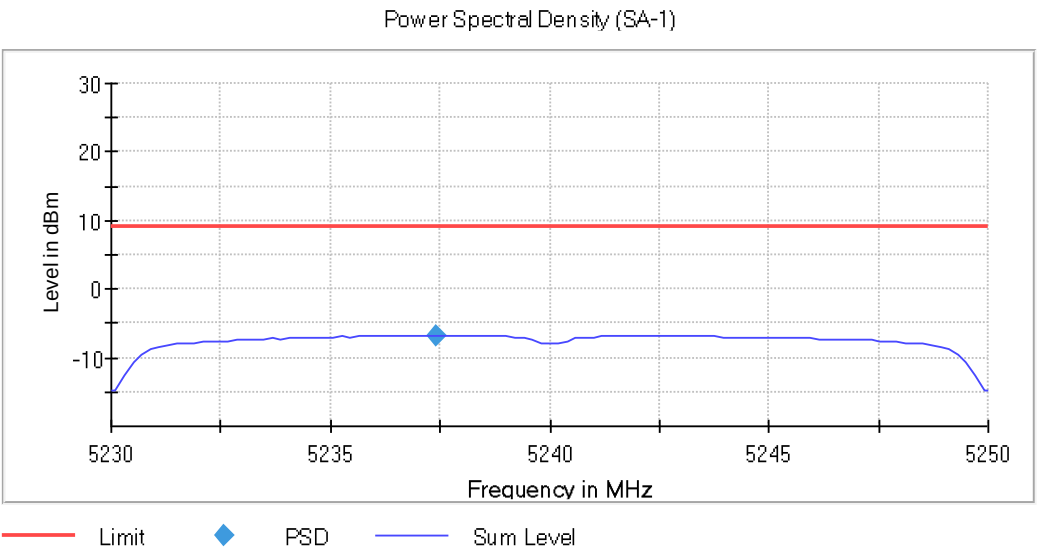


PSD Chain 1

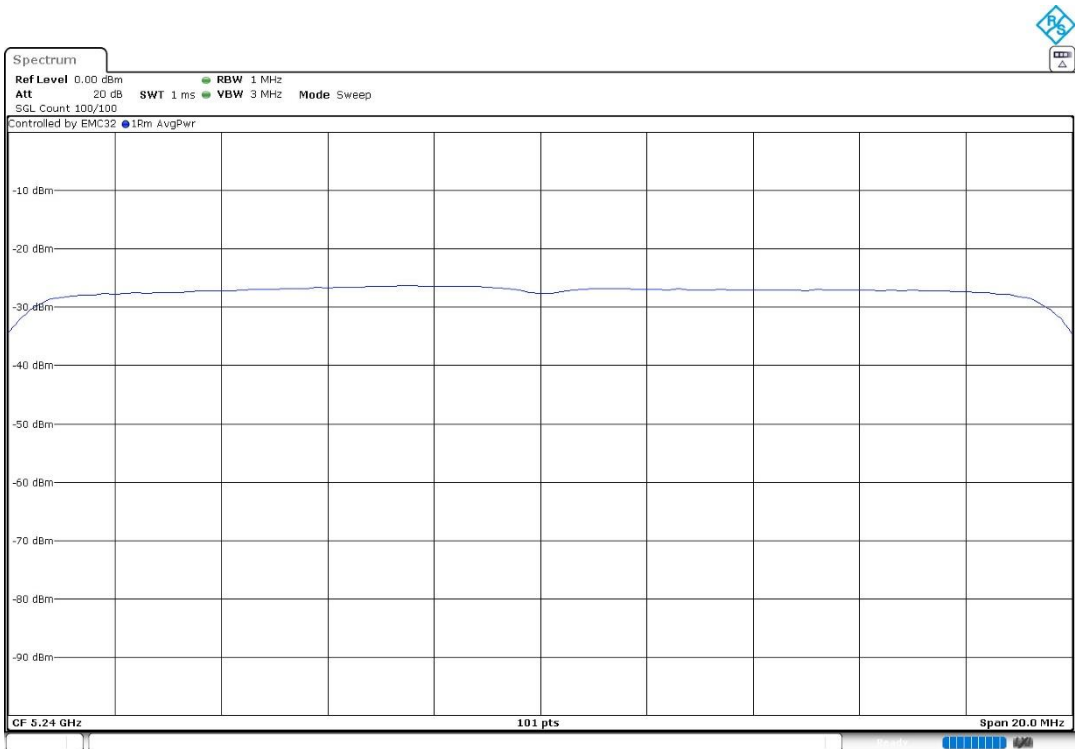


PSD Chain 0

- High Channel 48 (5240 MHz):



PSD Chain 1

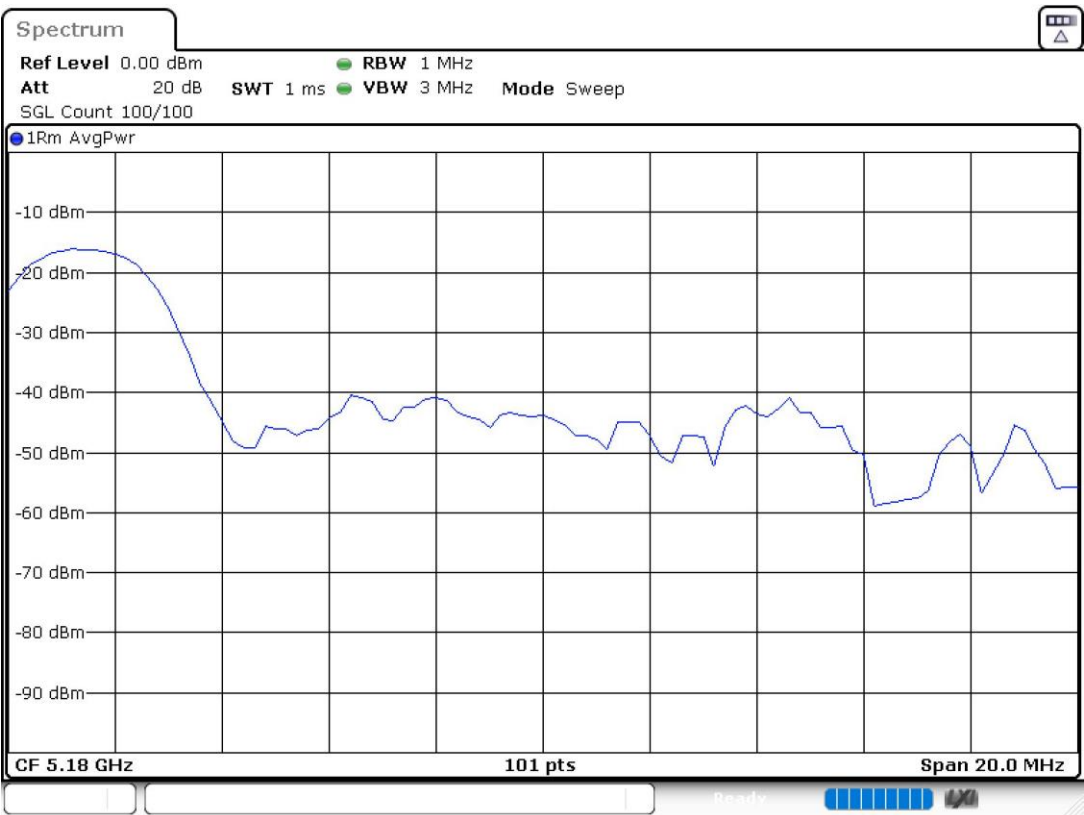
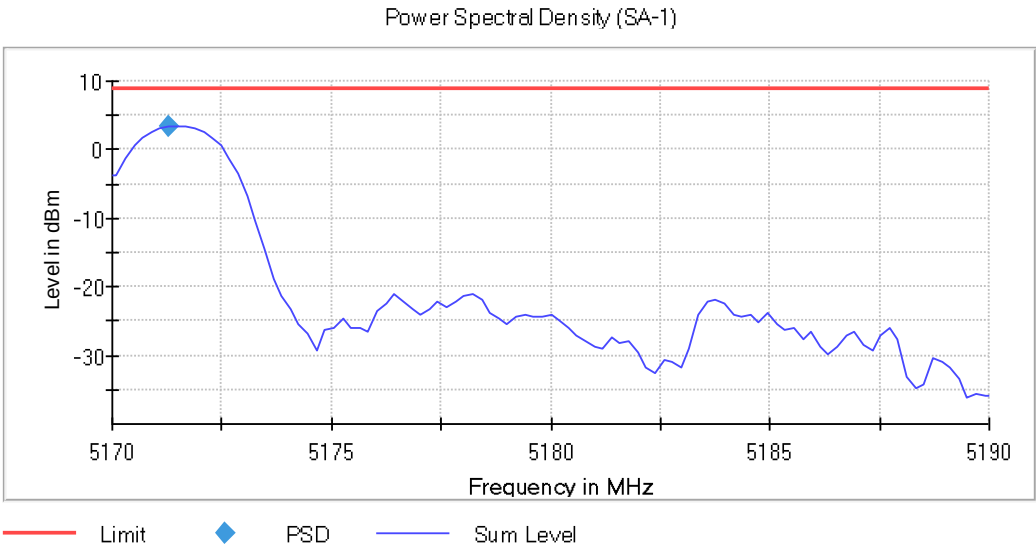


PSD Chain 0

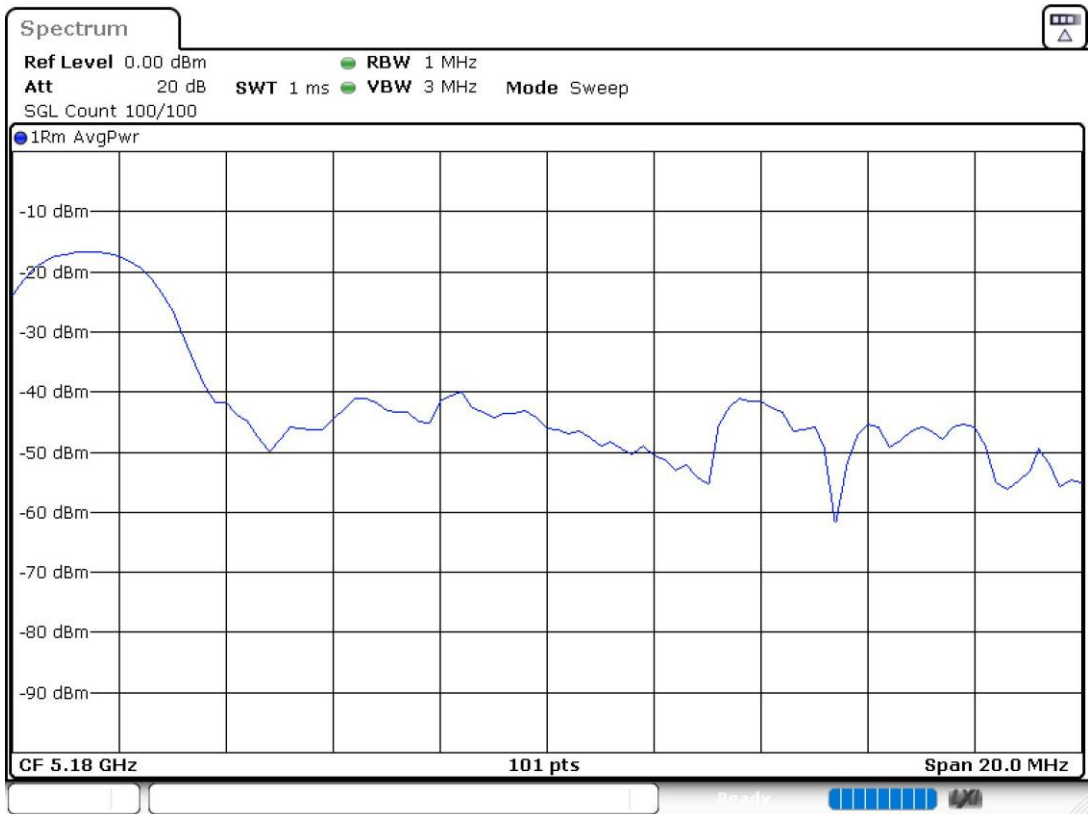
MIMO 802.11 ax20 (HE20) – RU Subcarrier allocation (RU26):

U-NII-1 (5150-5250 MHz)

- Low Channel 36 (5180 MHz) / RU26 Offset 0:

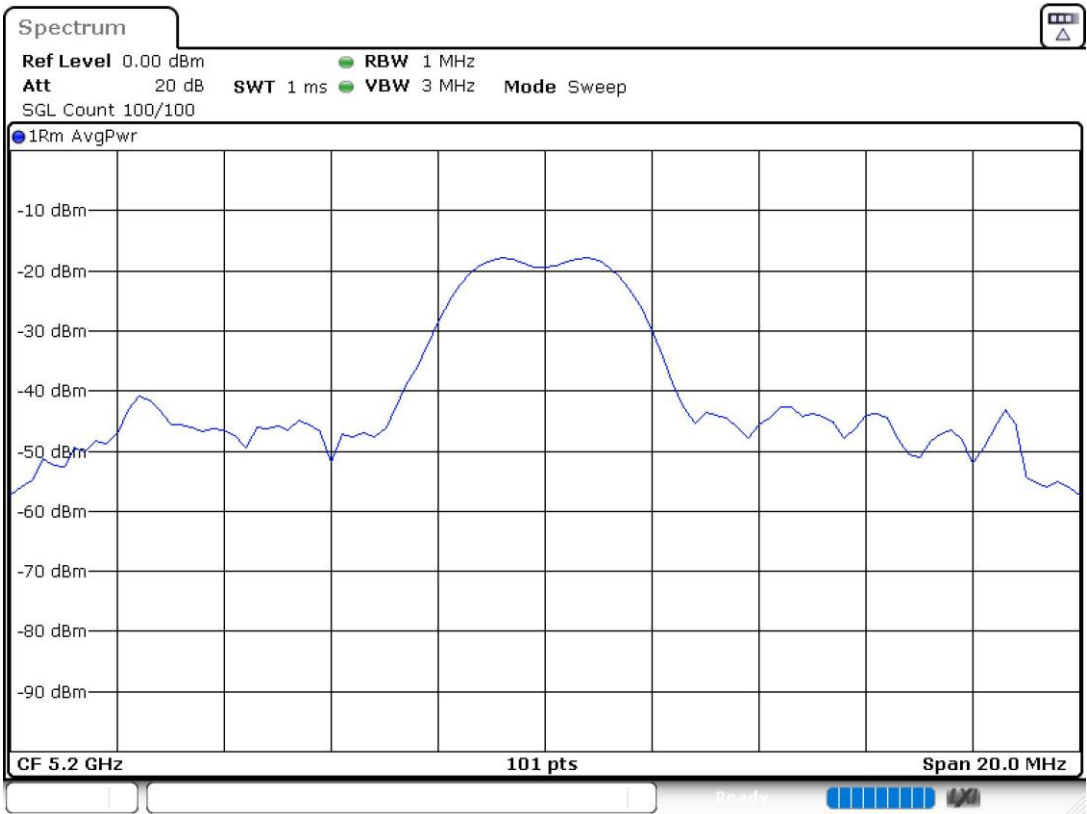
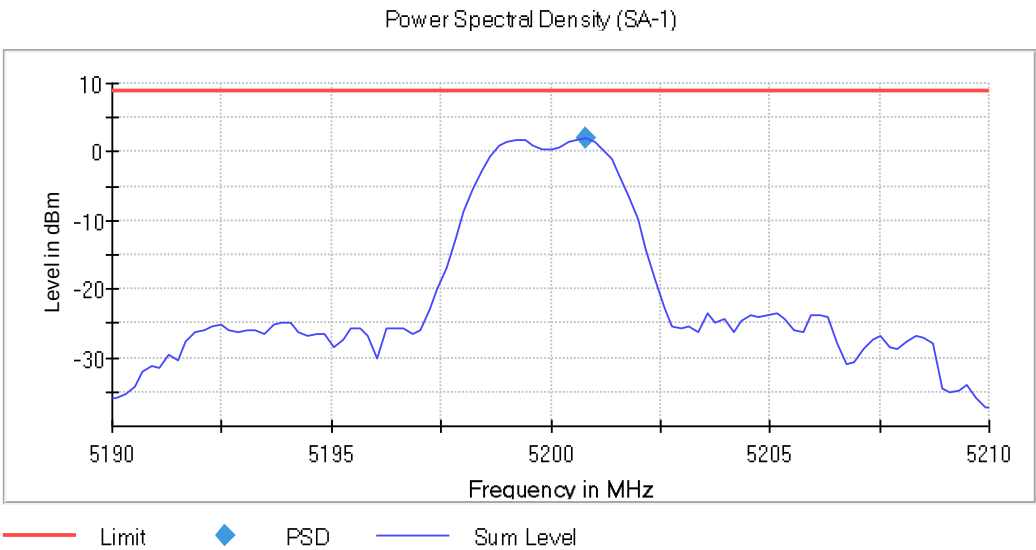


PSD Chain 1

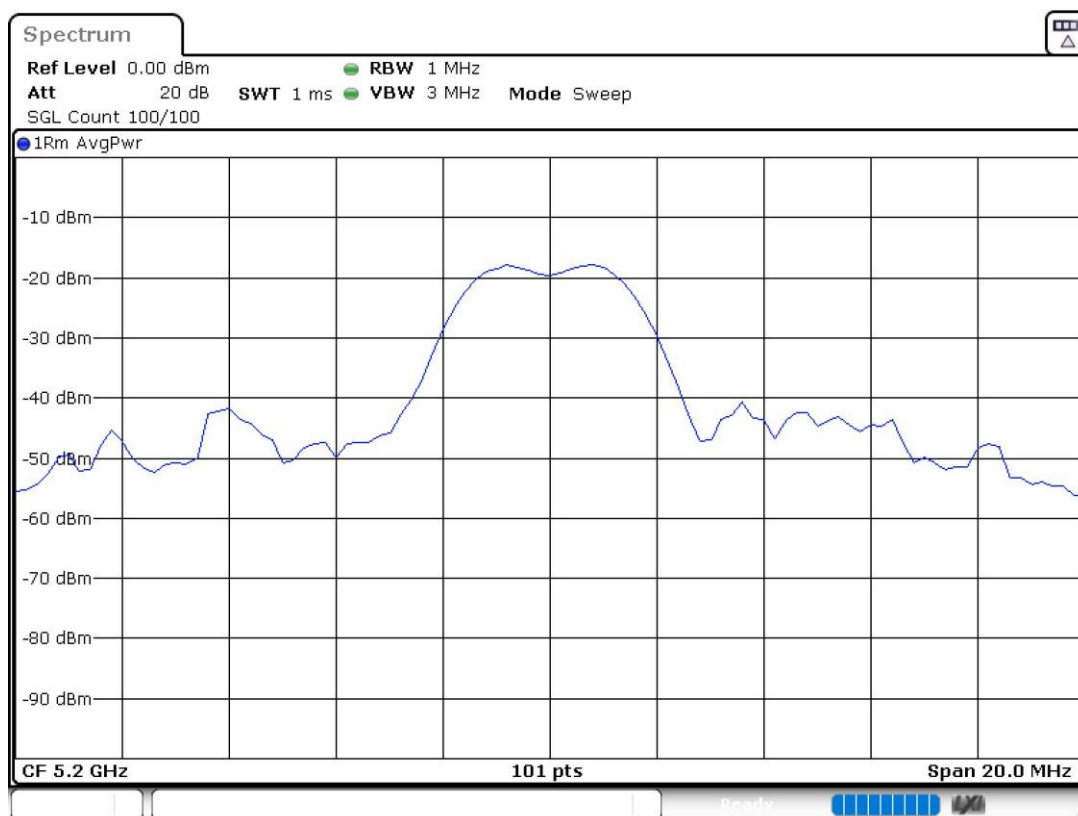


PSD Chain 0

- Channel 40 (5200 MHz) / RU26 Offset 4:

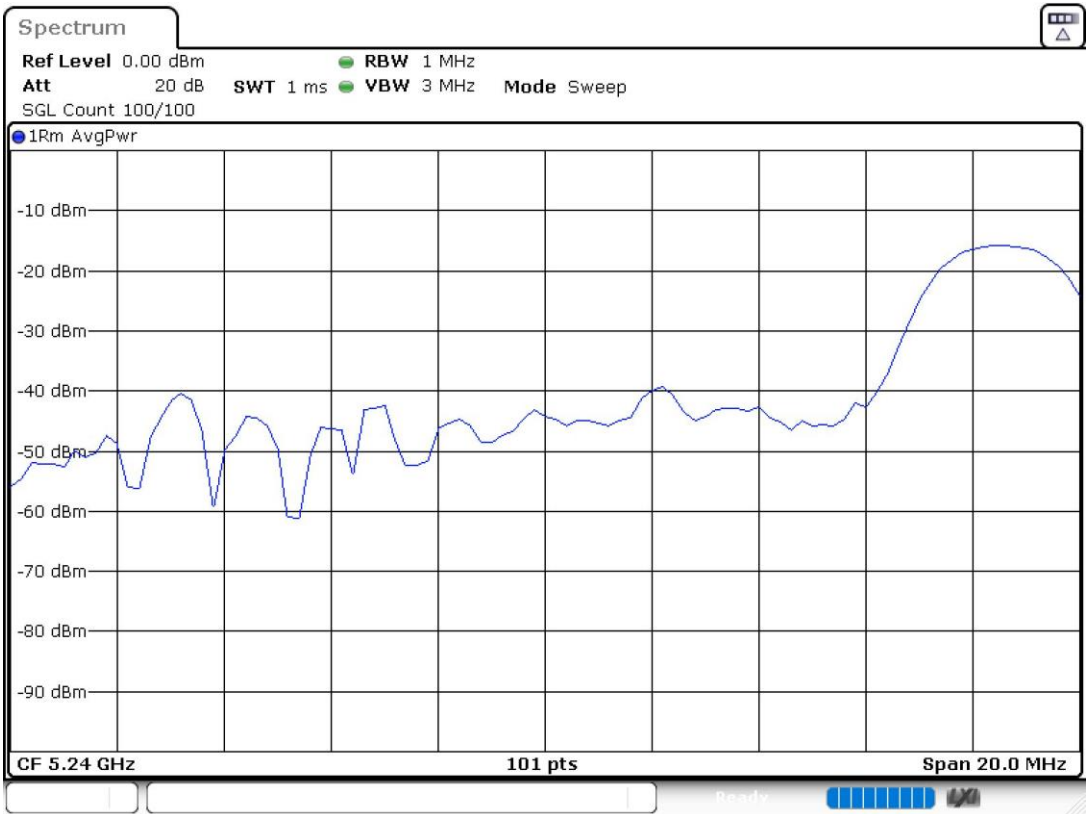
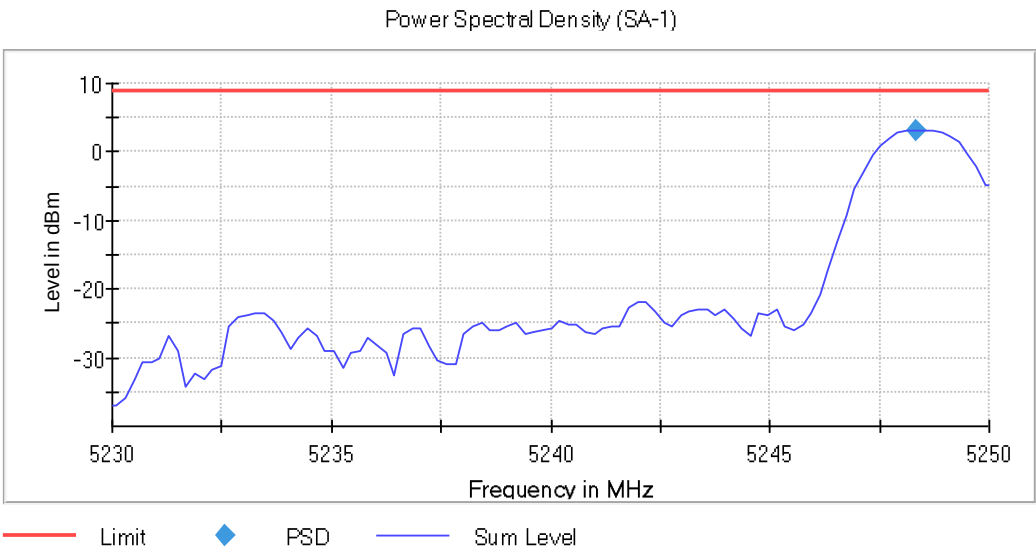


PSD Chain 1

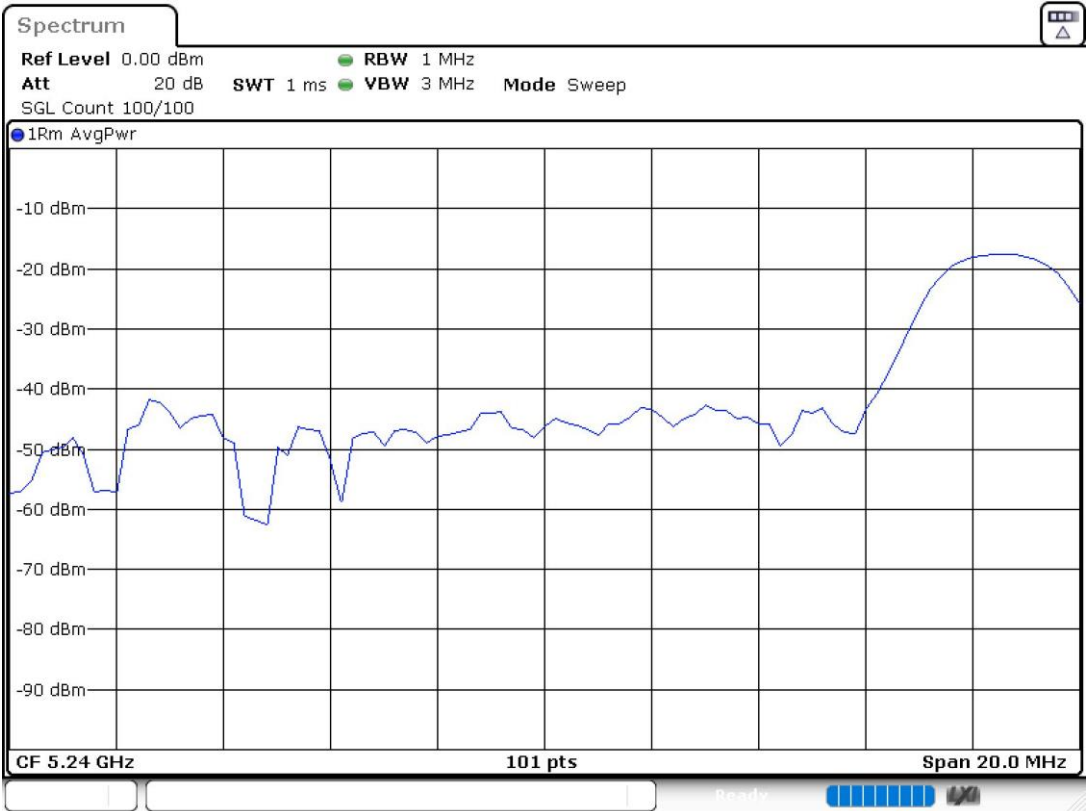


PSD Chain 0

- High Channel 48 (5240 MHz) / RU26 Offset 8:



PSD Chain 1

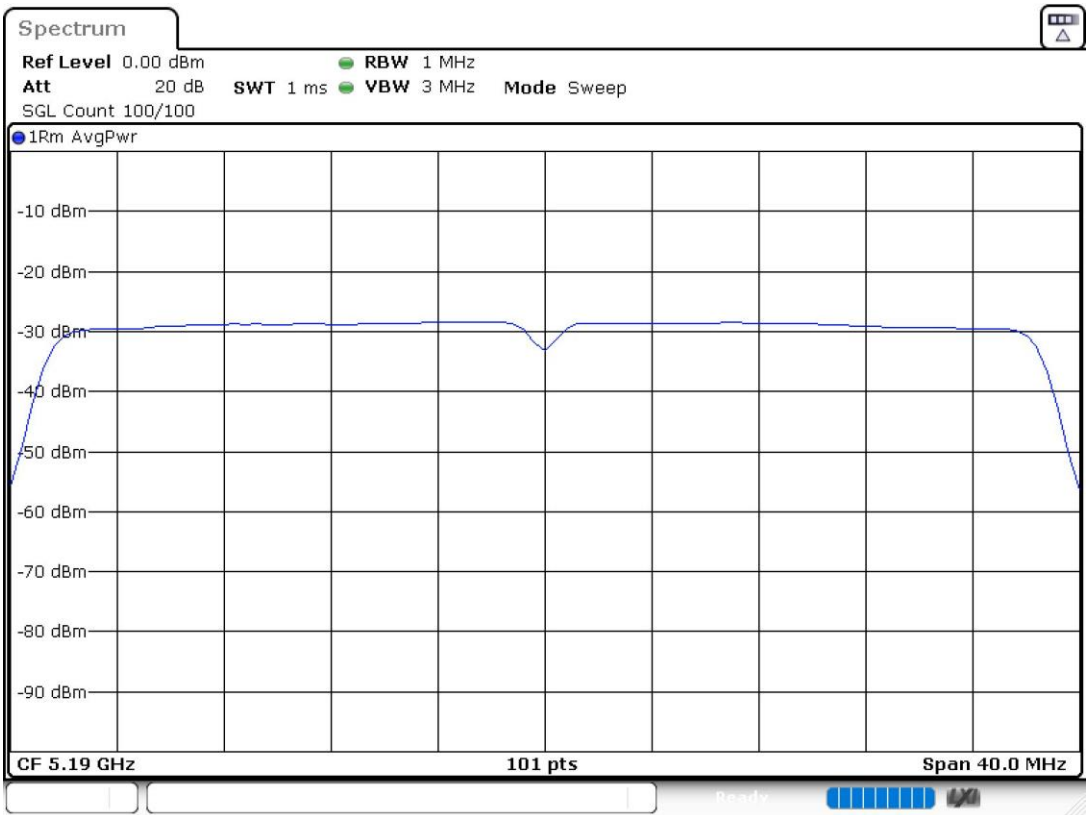
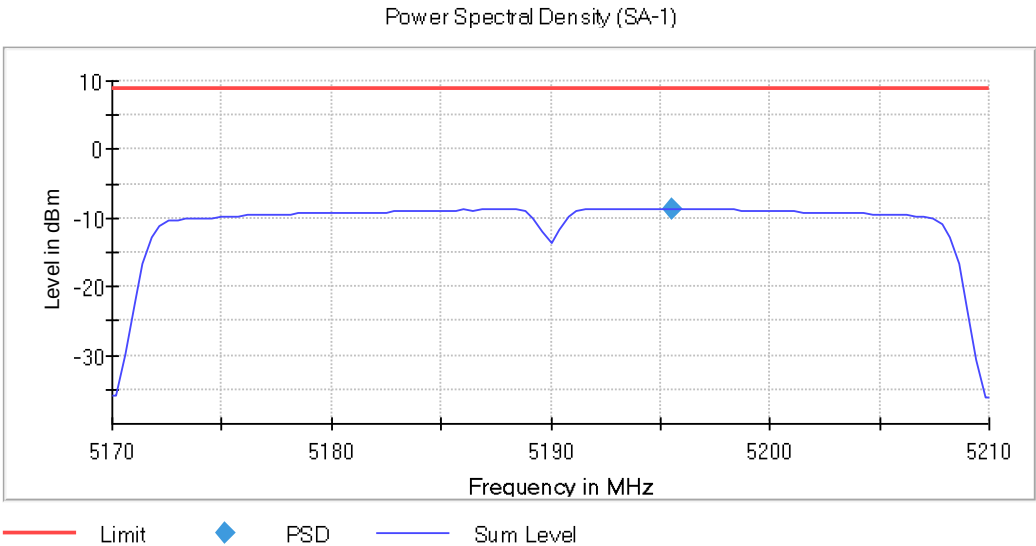


PSD Chain 0

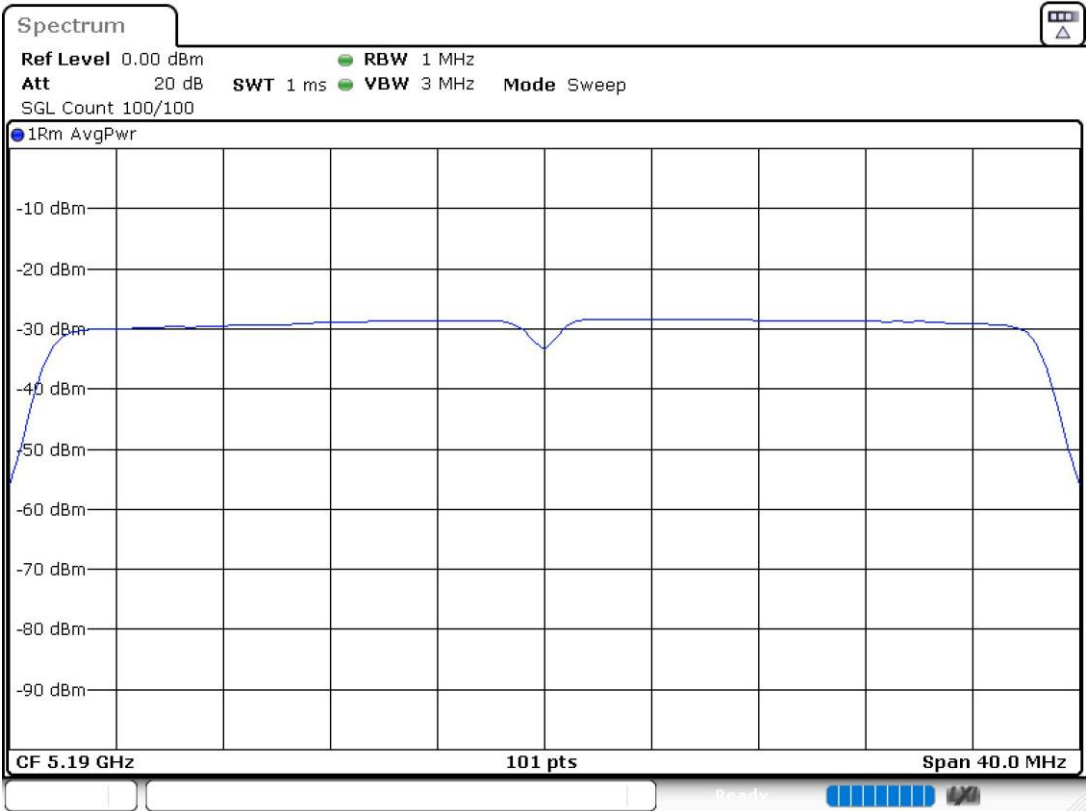
MIMO 802.11 n40 (HT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):

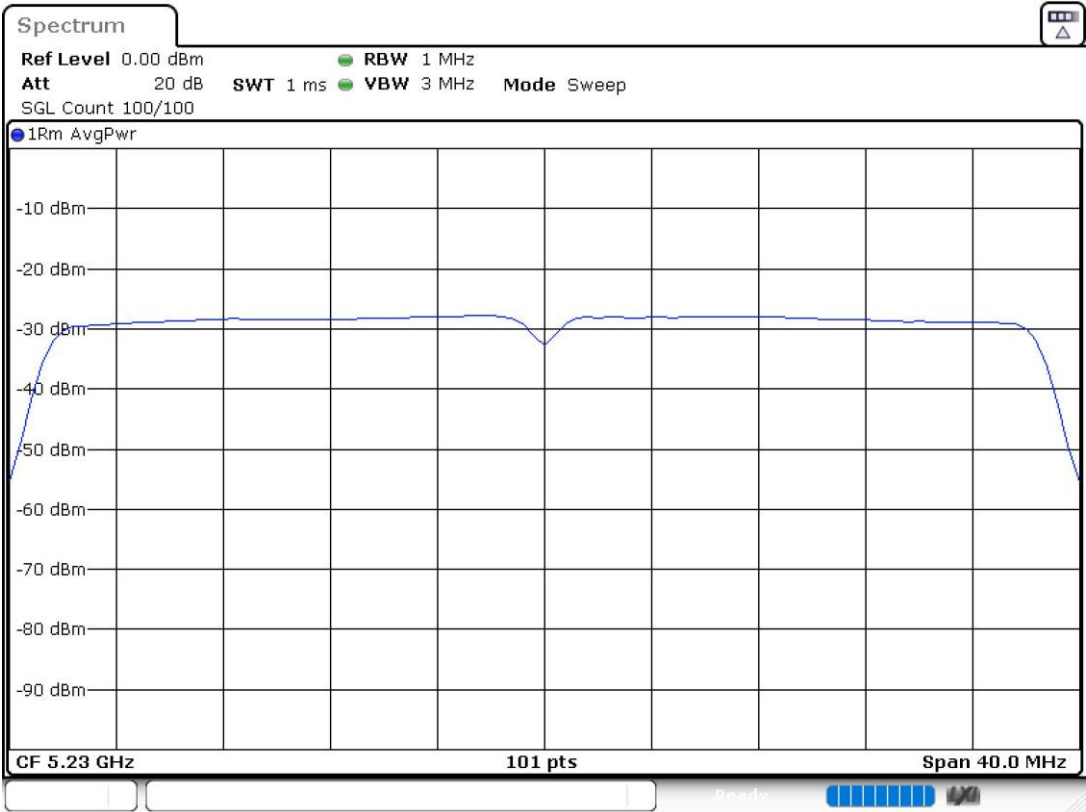
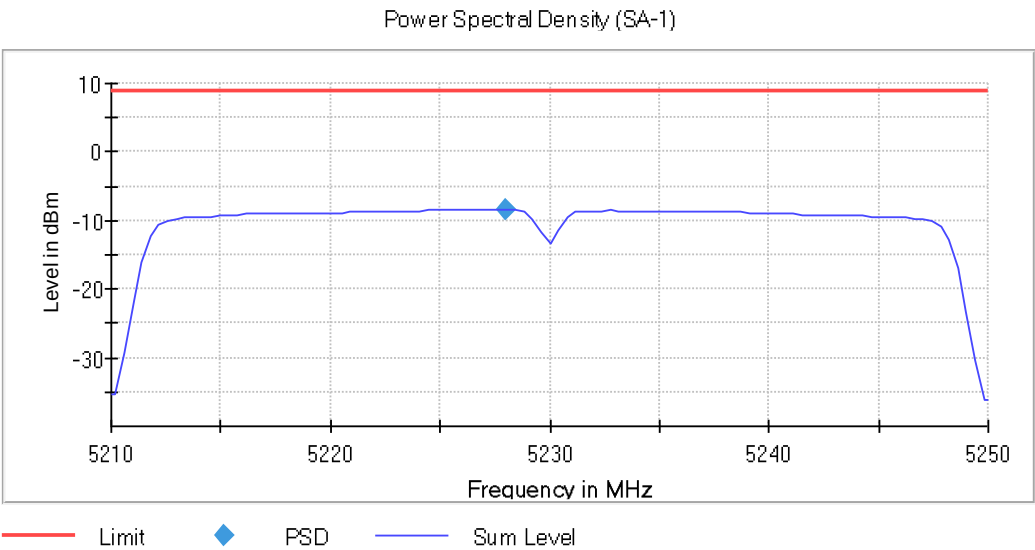


PSD Chain 1

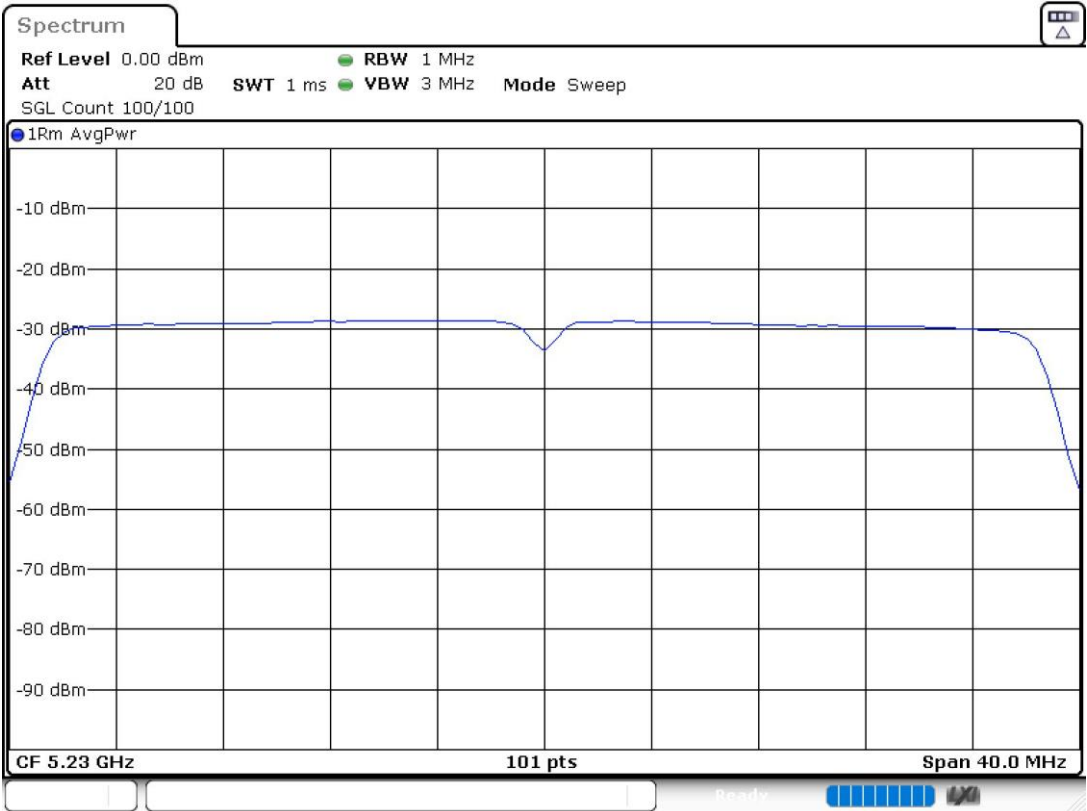


PSD Chain 0

- High Channel 46 (5230 MHz):



PSD Chain 1

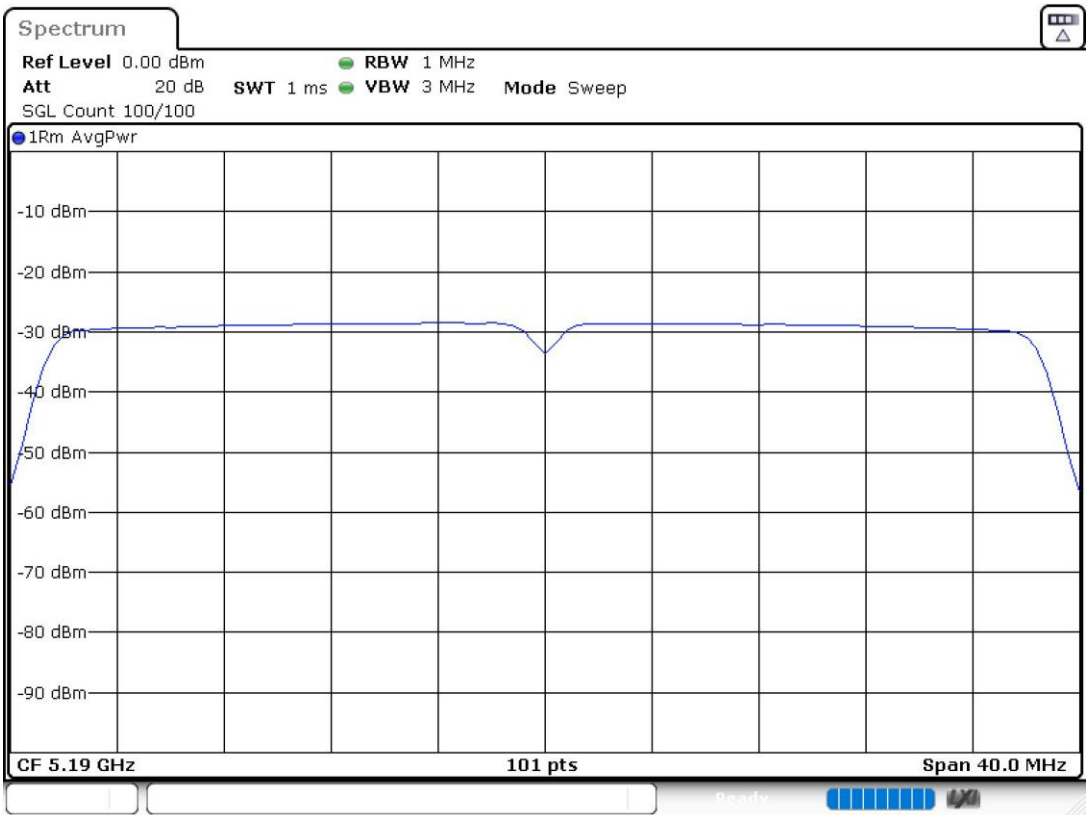
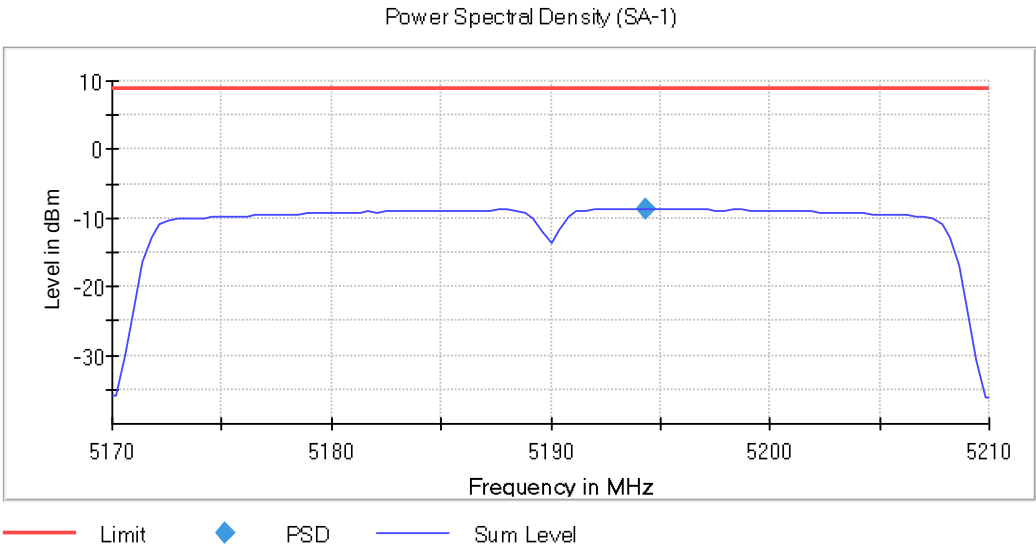


PSD Chain 0

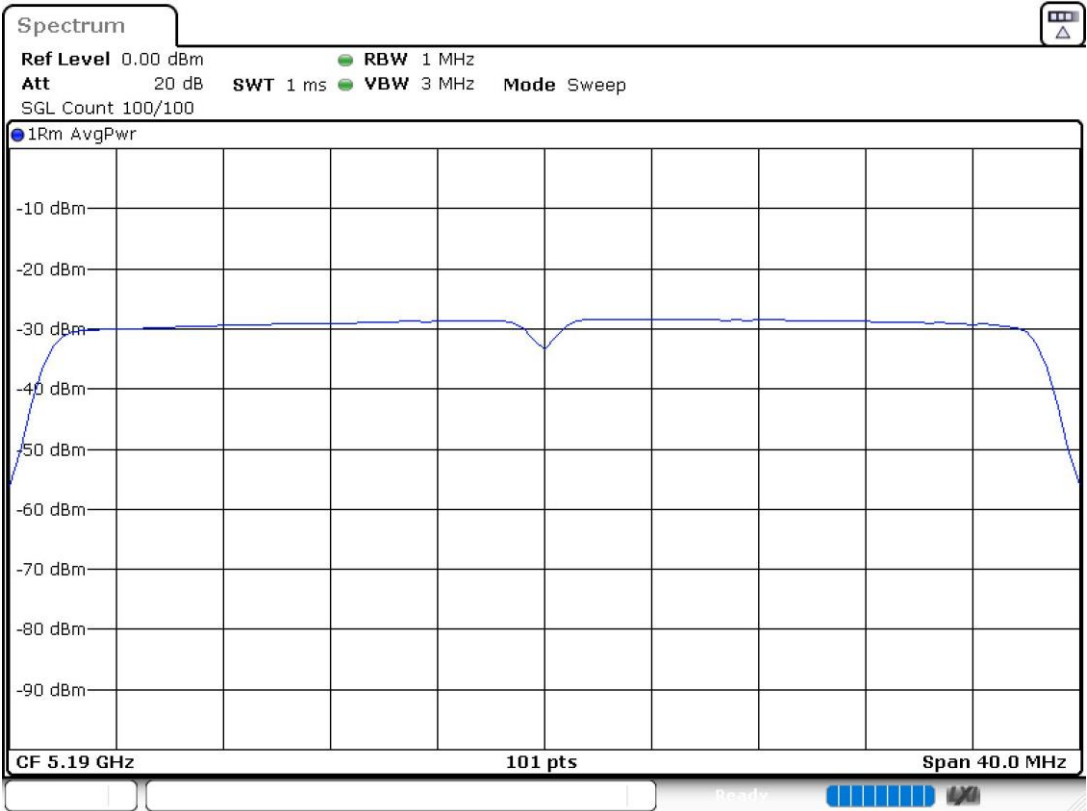
MIMO 802.11 ac40 (VHT40):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):

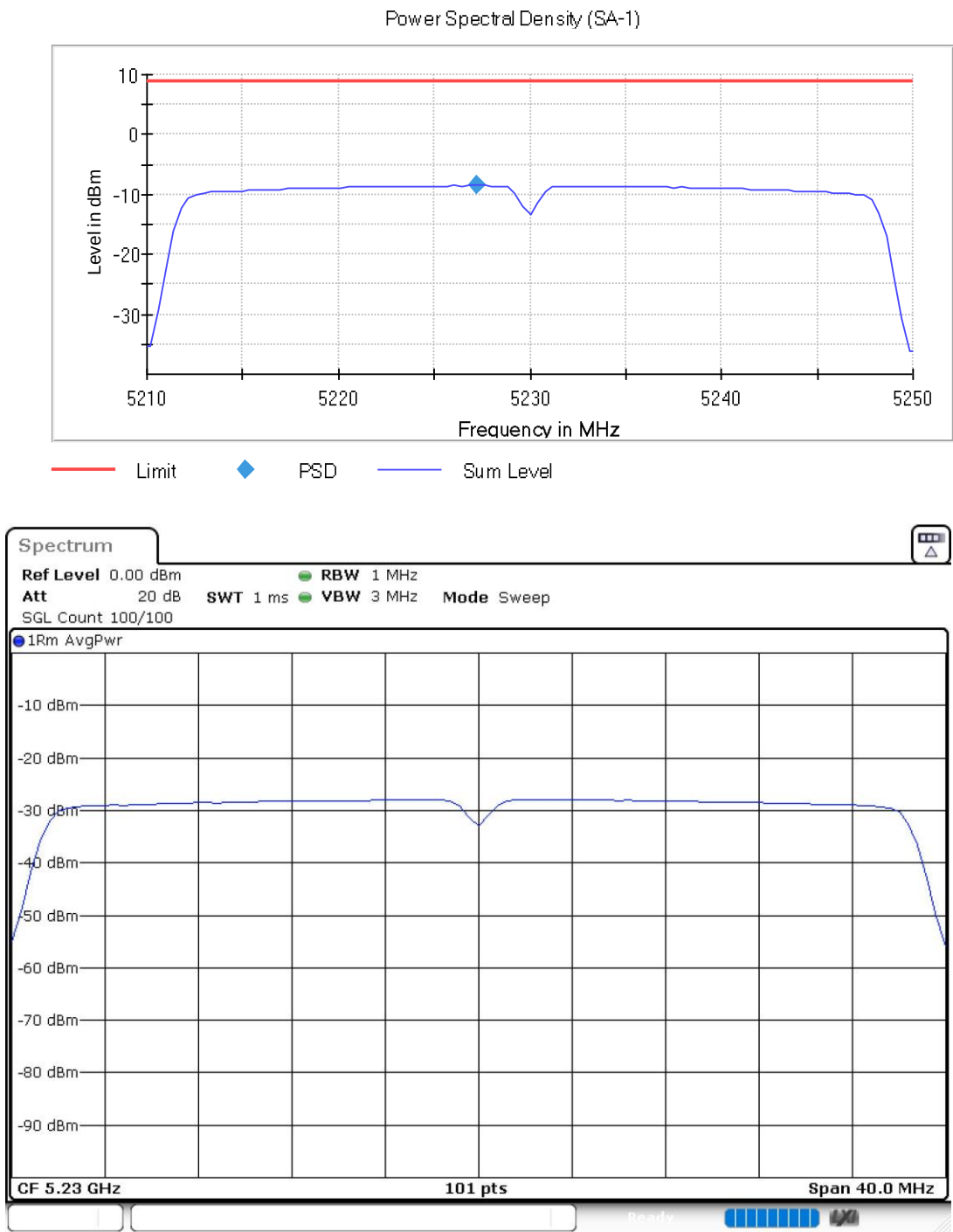


PSD Chain 1

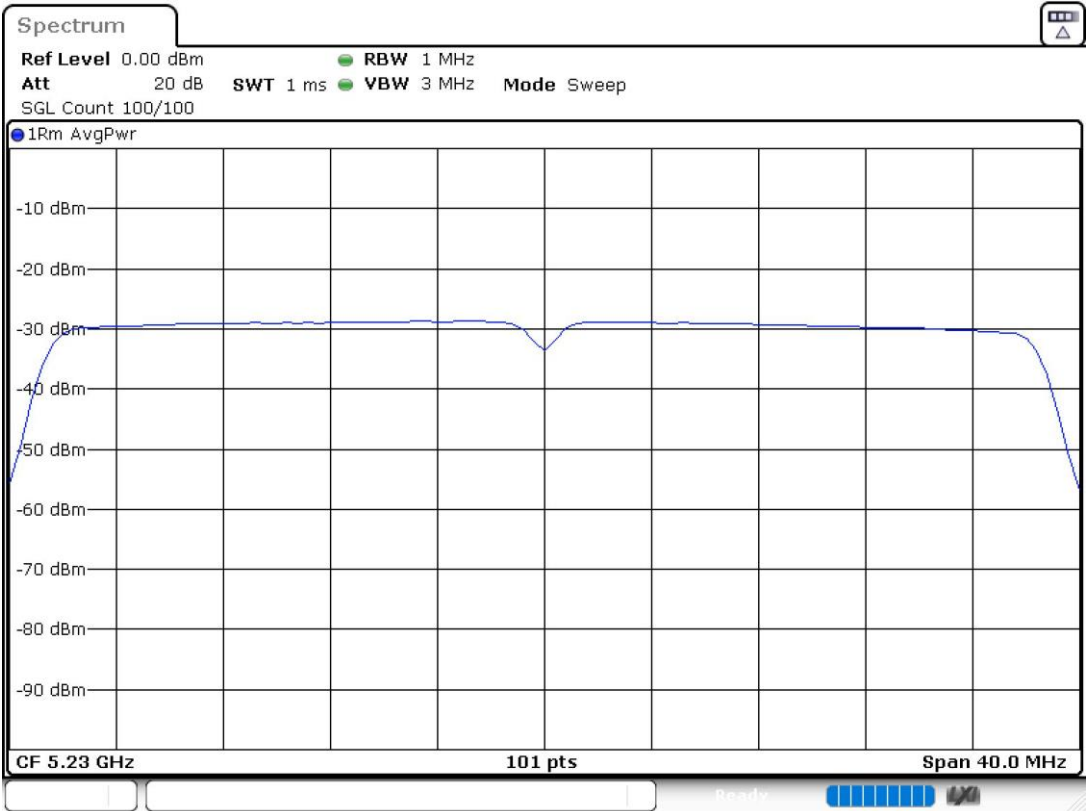


PSD Chain 0

- High Channel 46 (5230 MHz):



PSD Chain 1

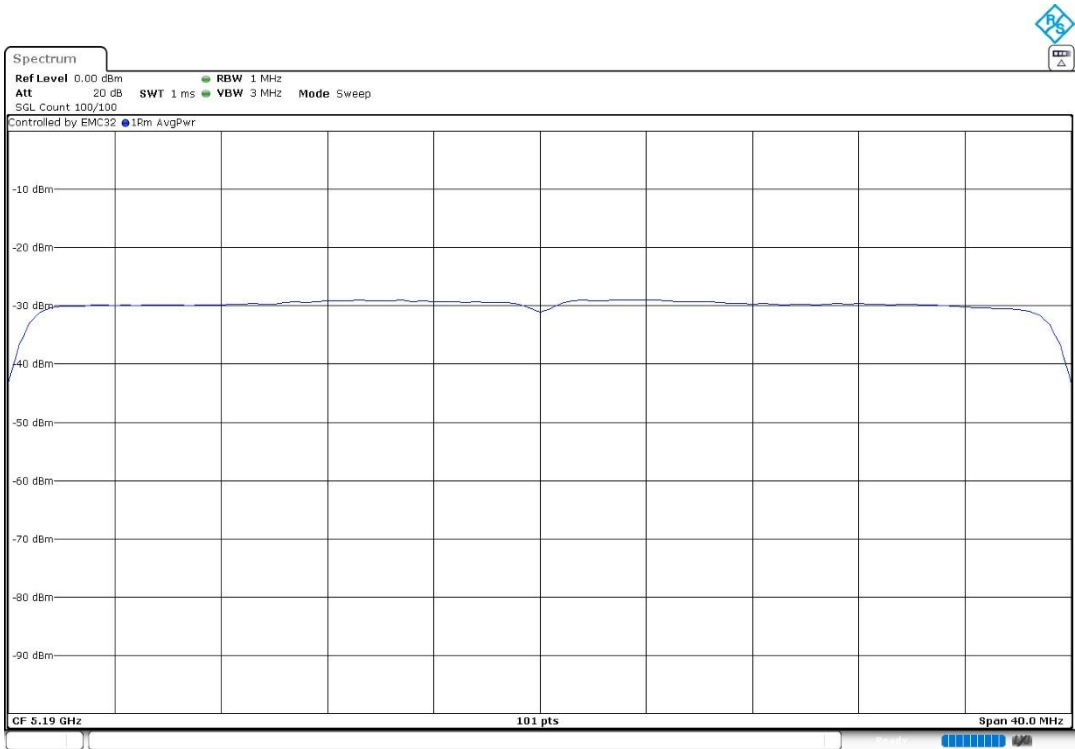
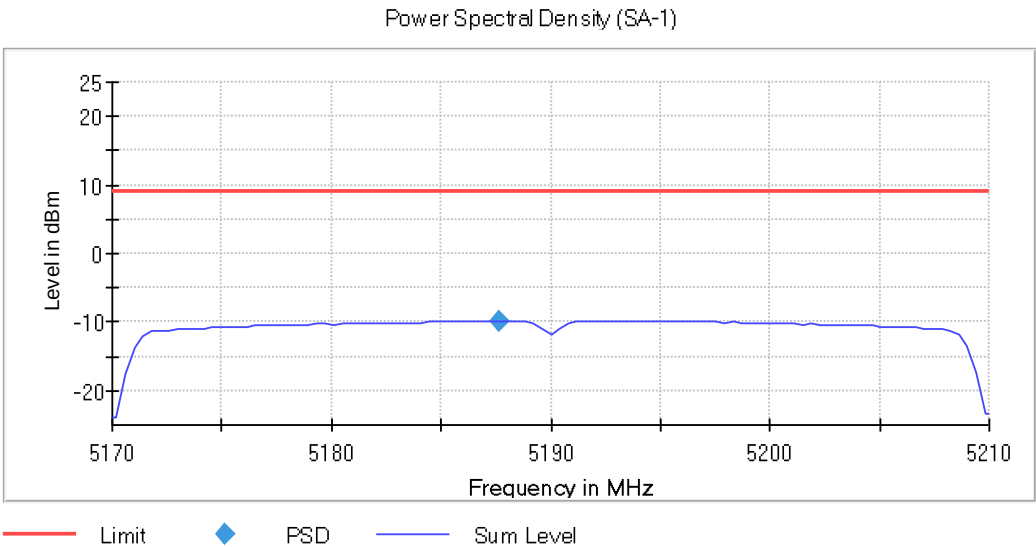


PSD Chain 0

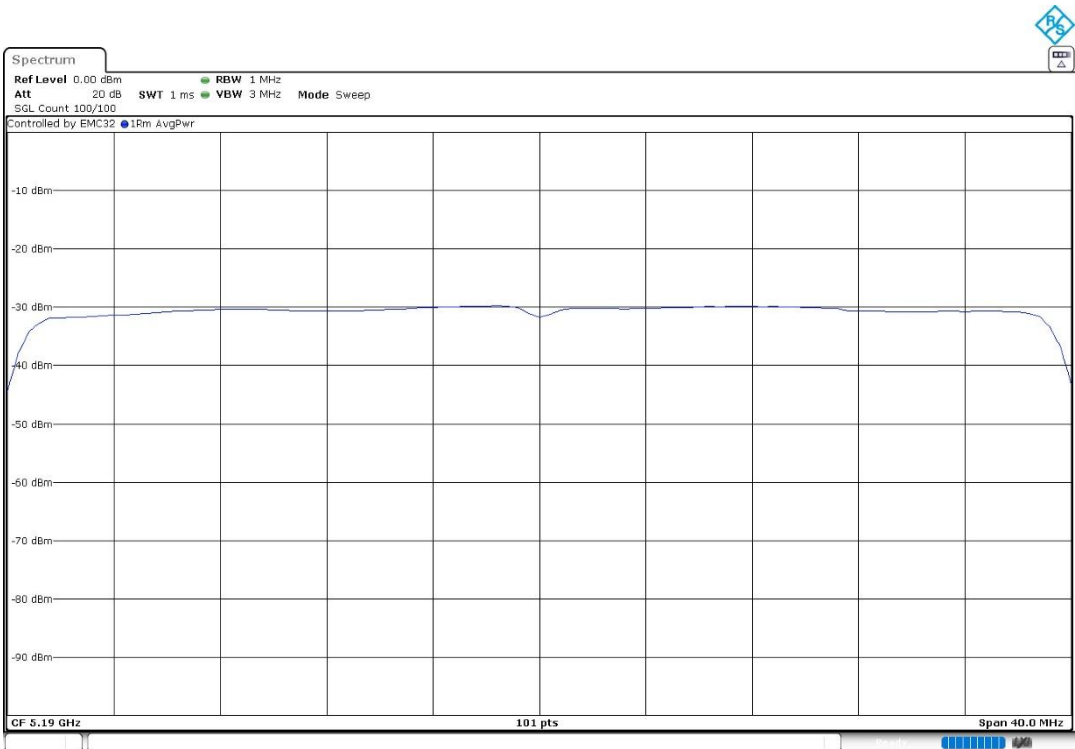
MIMO 802.11 ax40 (HE40) – SU Full channel allocation:

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz):

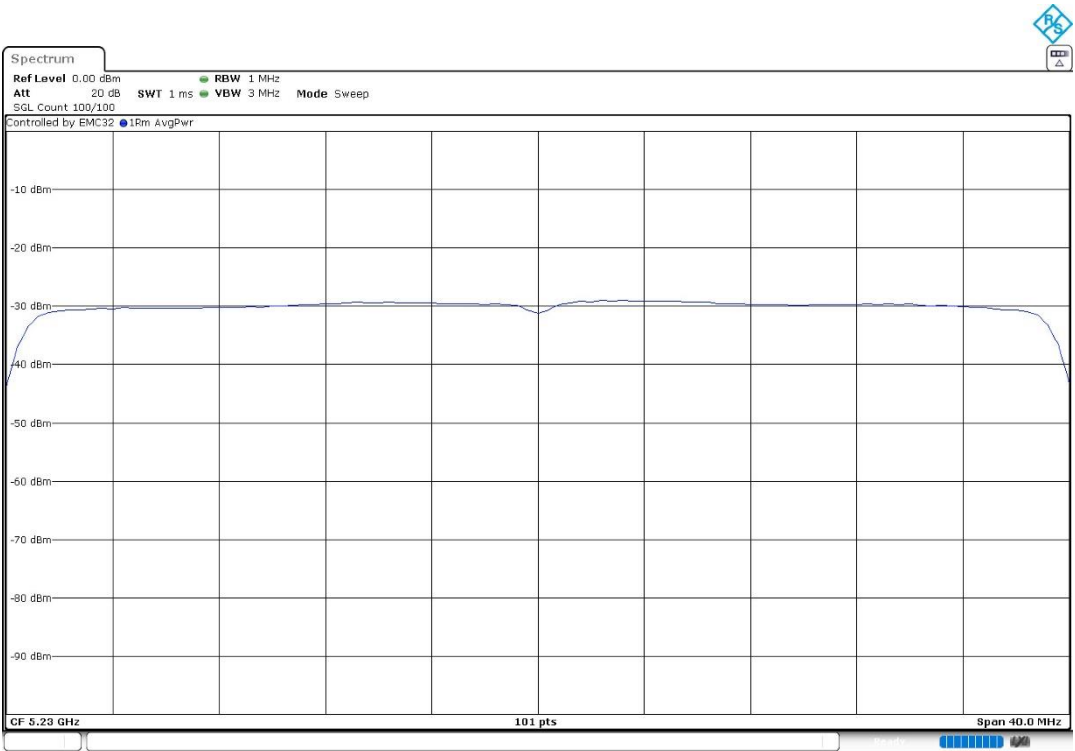
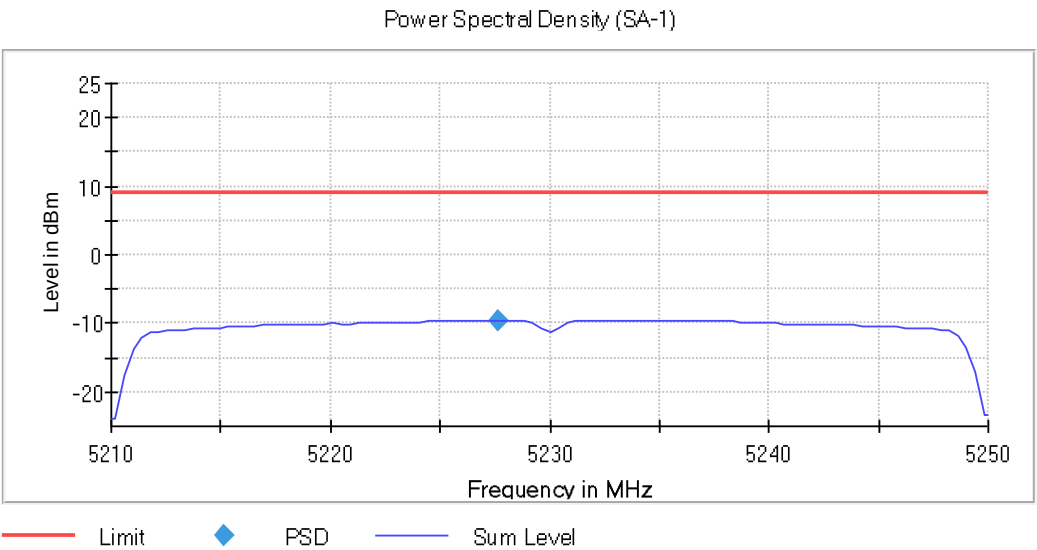


PSD Chain 1

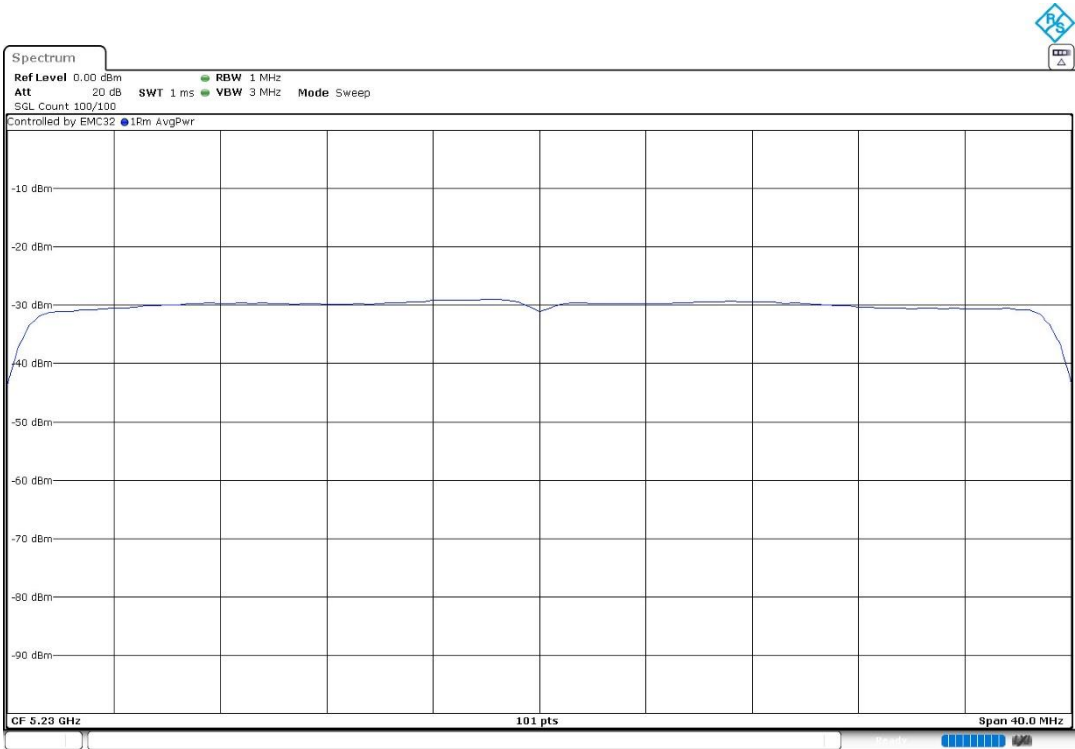


PSD Chain 0

- High Channel 46 (5230 MHz):



PSD Chain 1

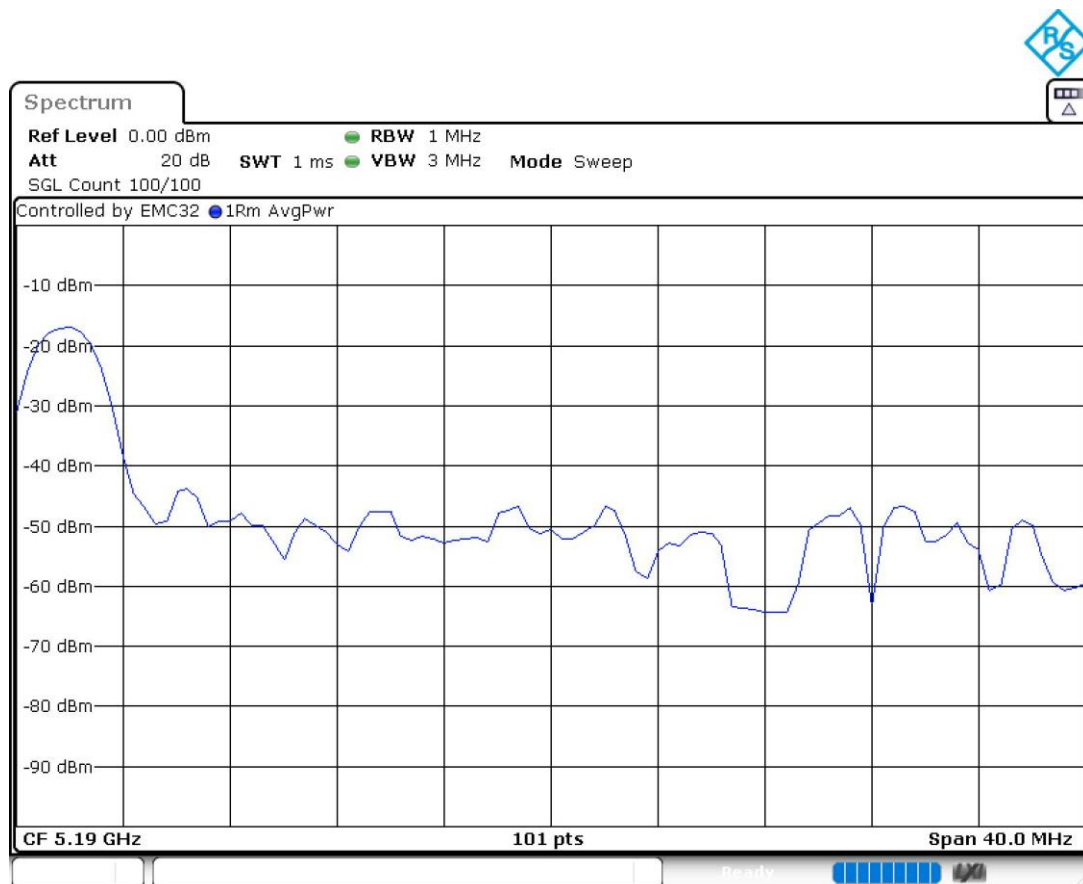
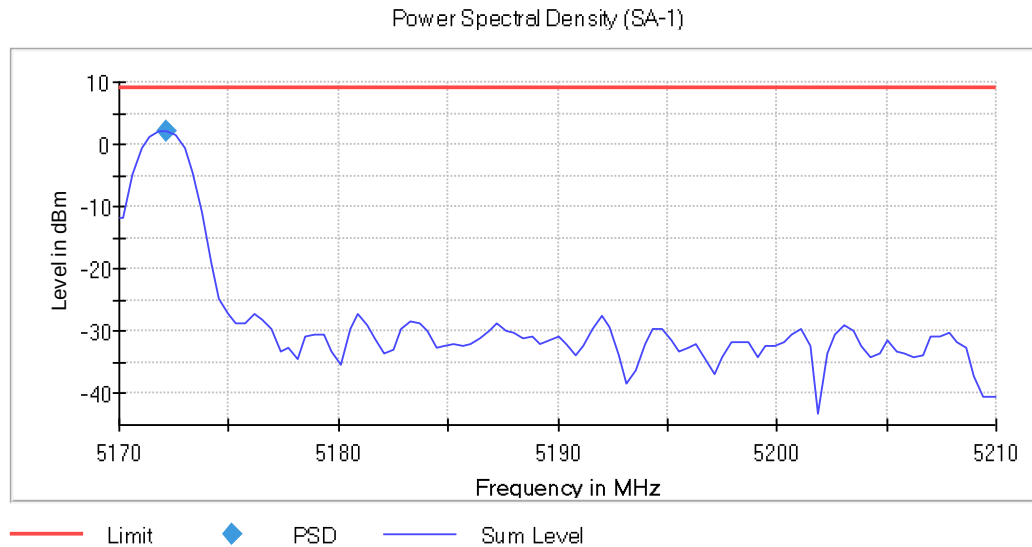


PSD Chain 0

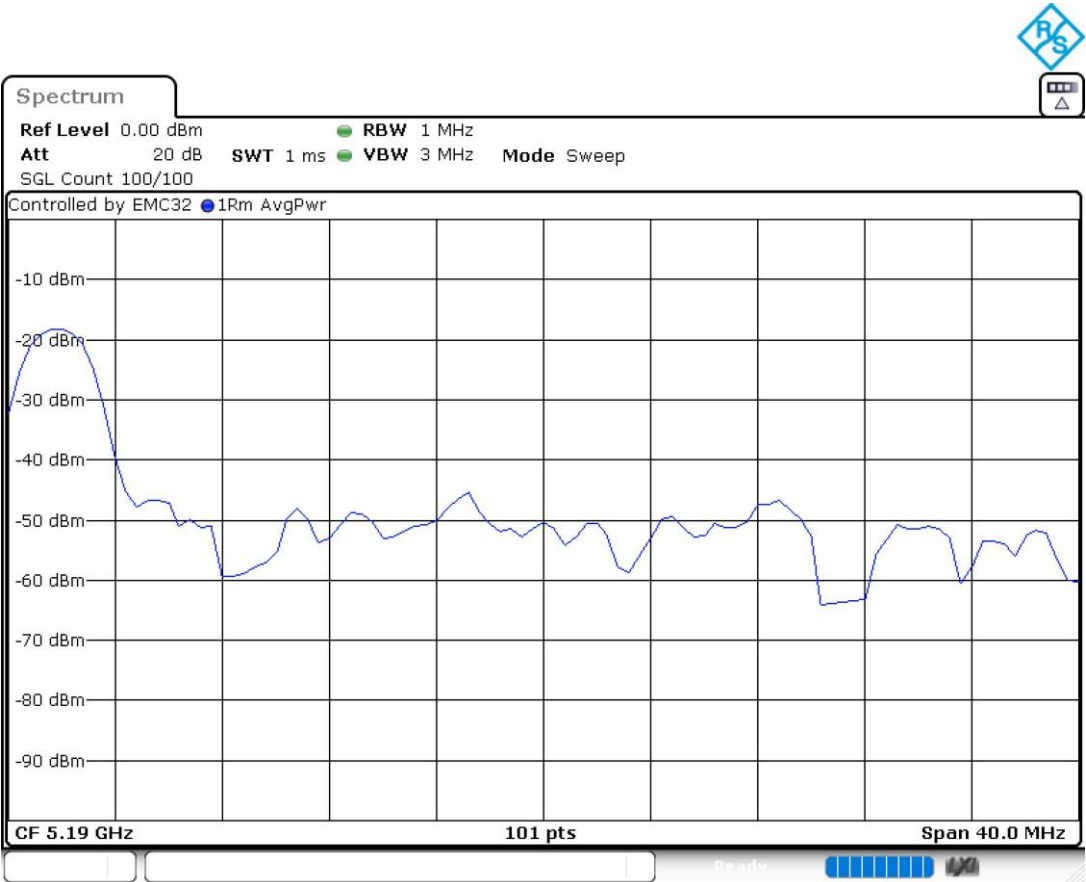
MIMO 802.11 ax40 (HE40) – RU Subcarrier allocation (RU26):

U-NII-1 (5150-5250 MHz)

- Low Channel 38 (5190 MHz) / RU26 Offset 0:

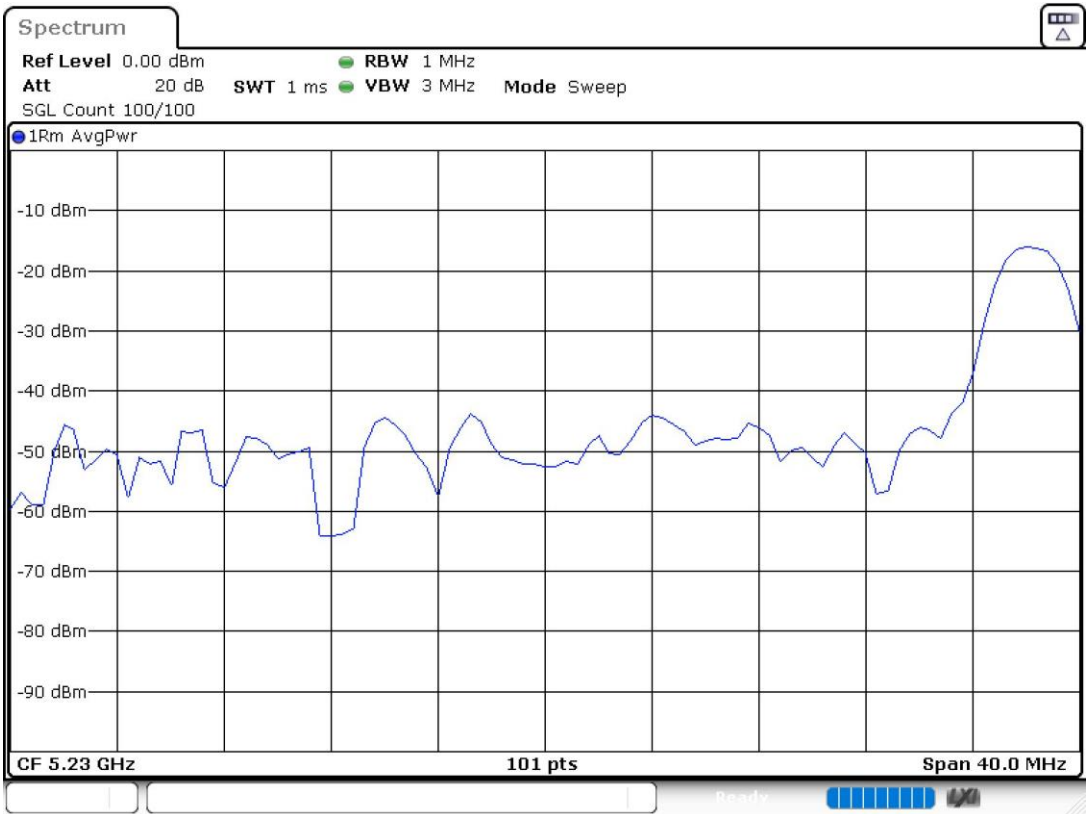
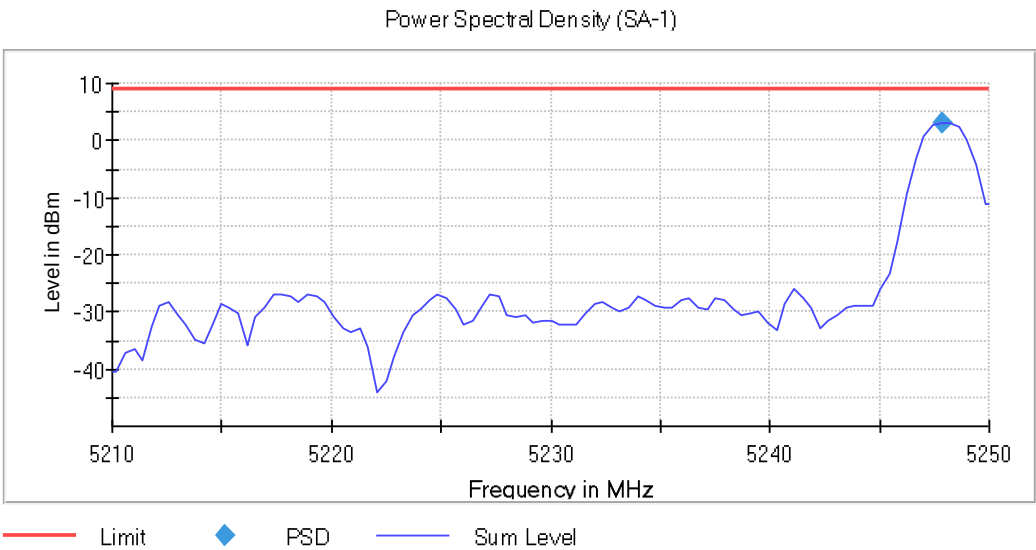


PSD Chain 1

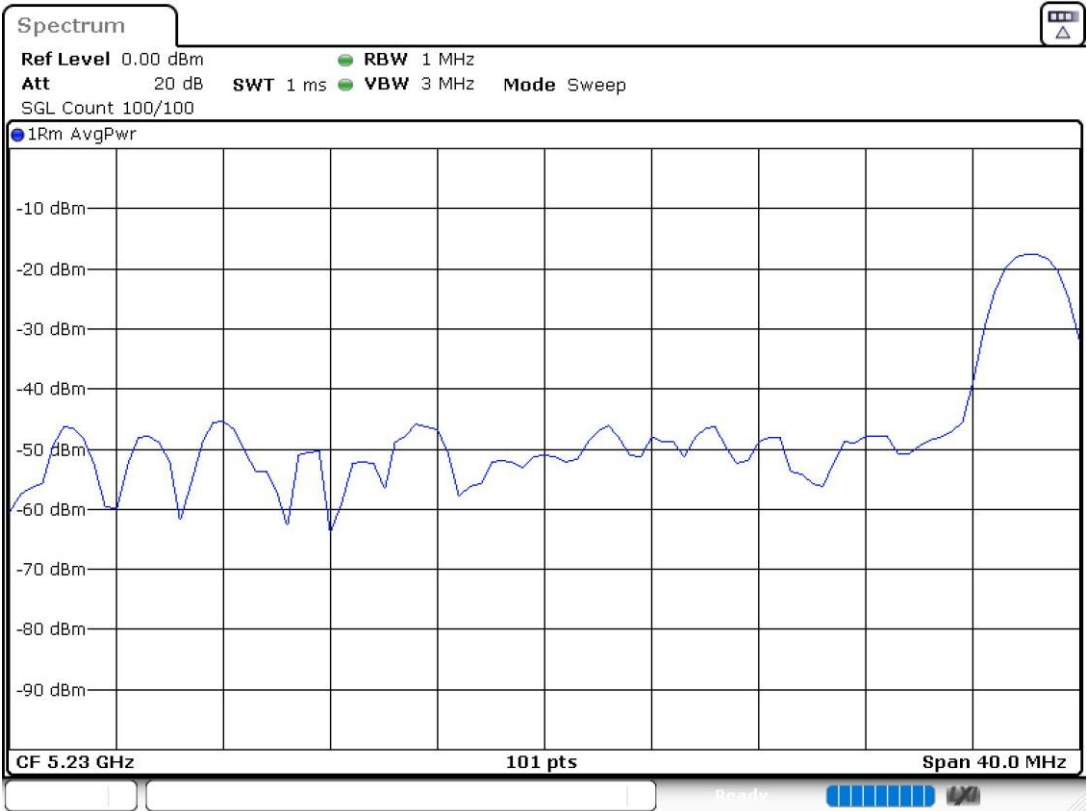


PSD Chain 0

- High Channel 46 (5230 MHz):



PSD Chain 1

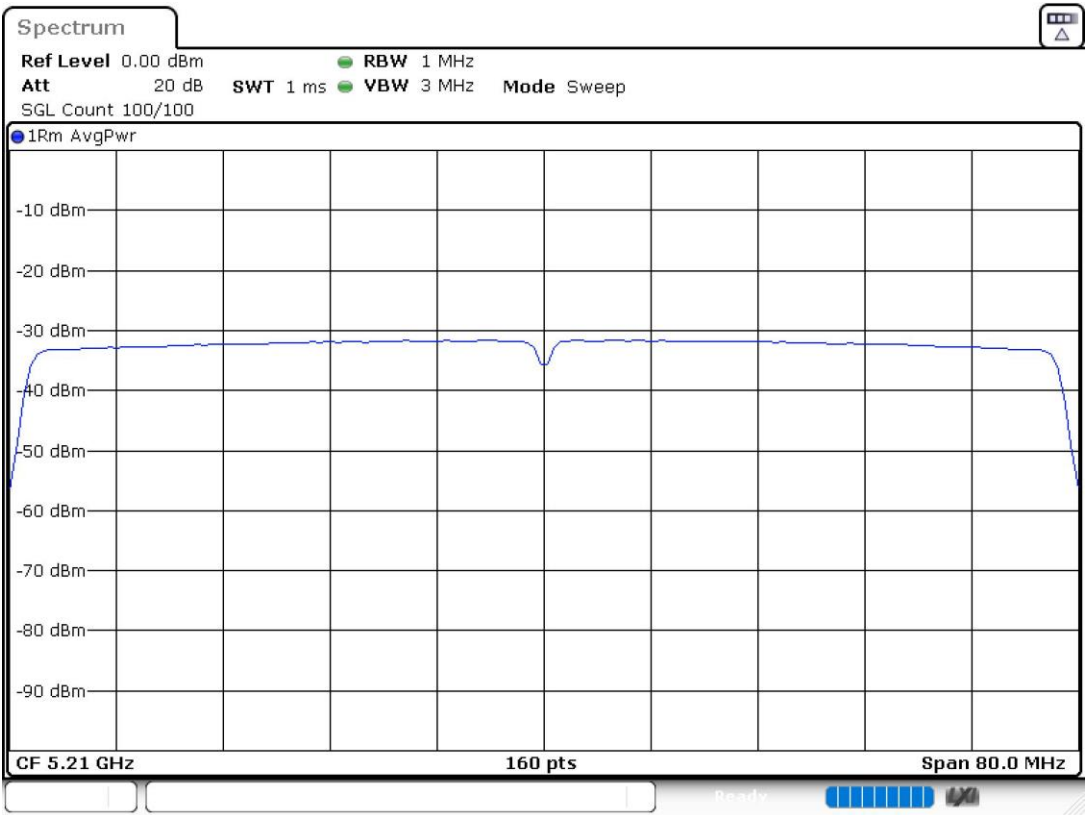
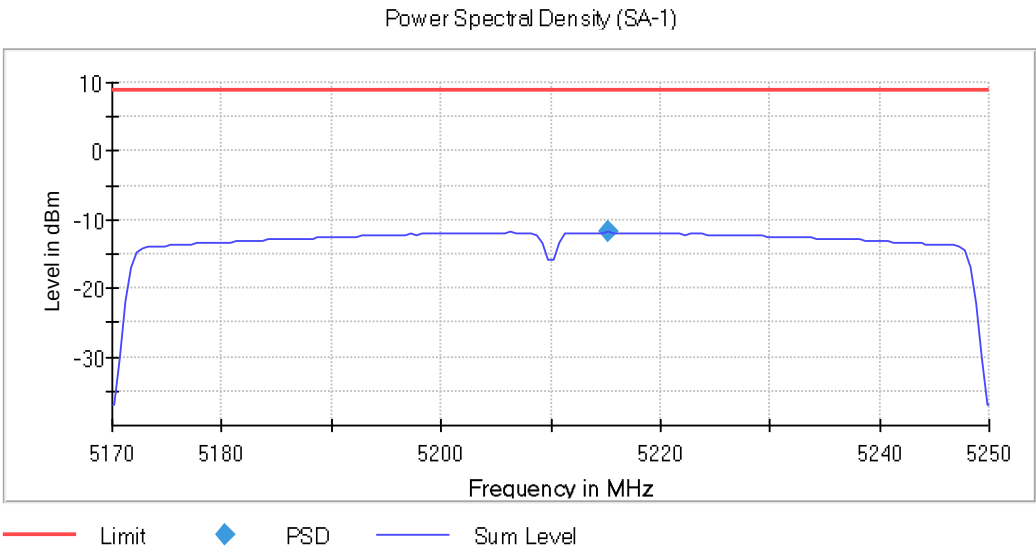


PSD Chain 0

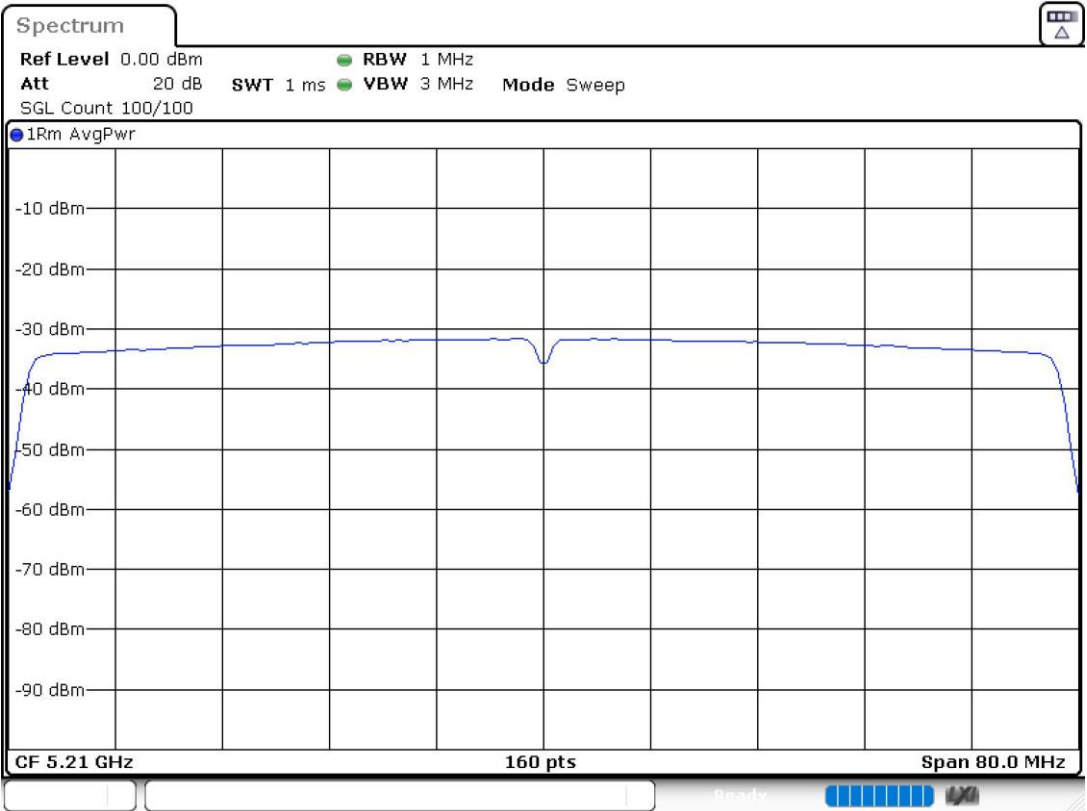
MIMO 802.11 ac80 (VHT80):

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



PSD Chain 1

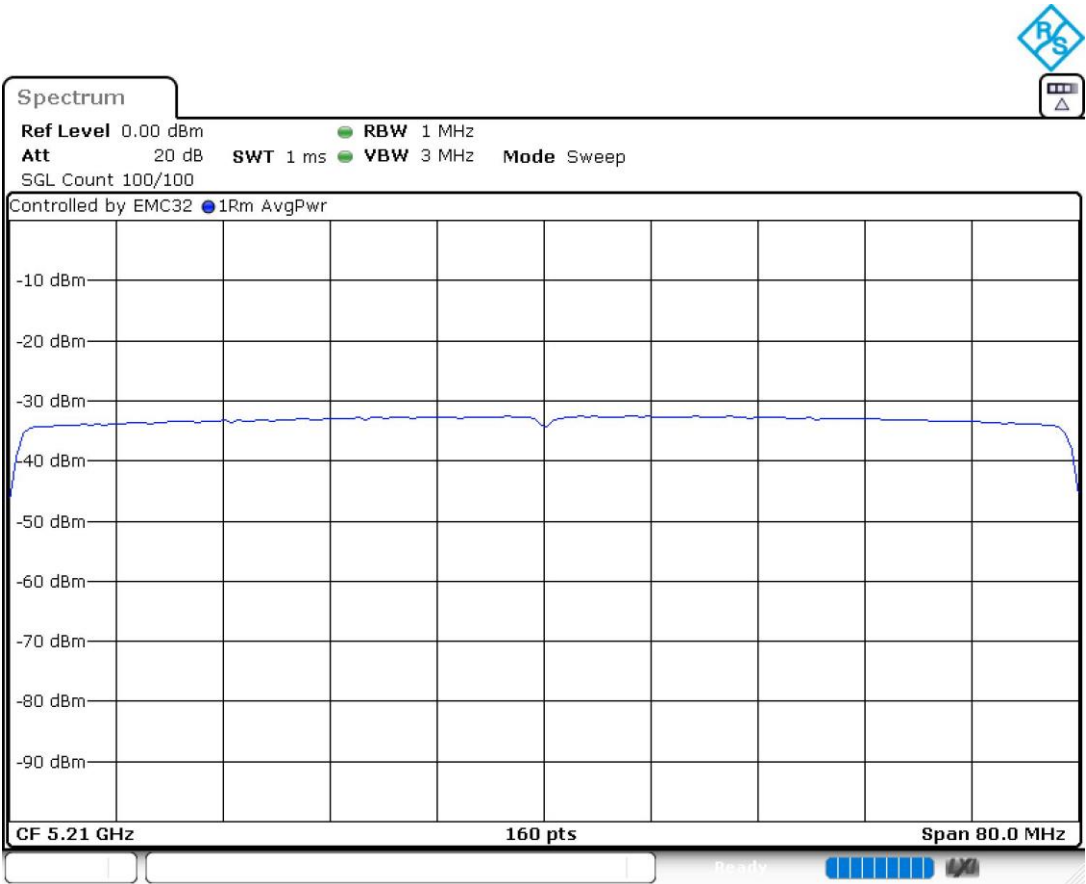
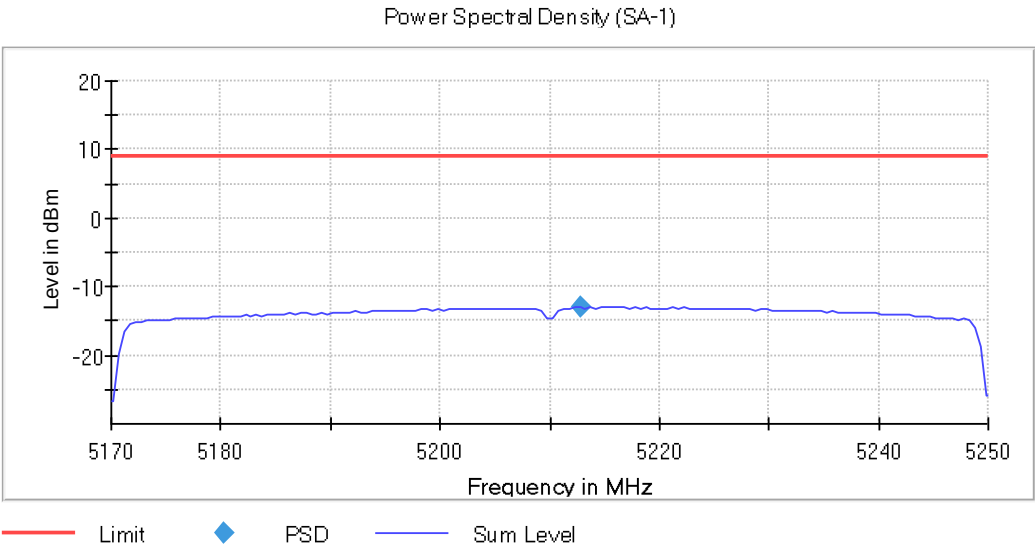


PSD Chain 0

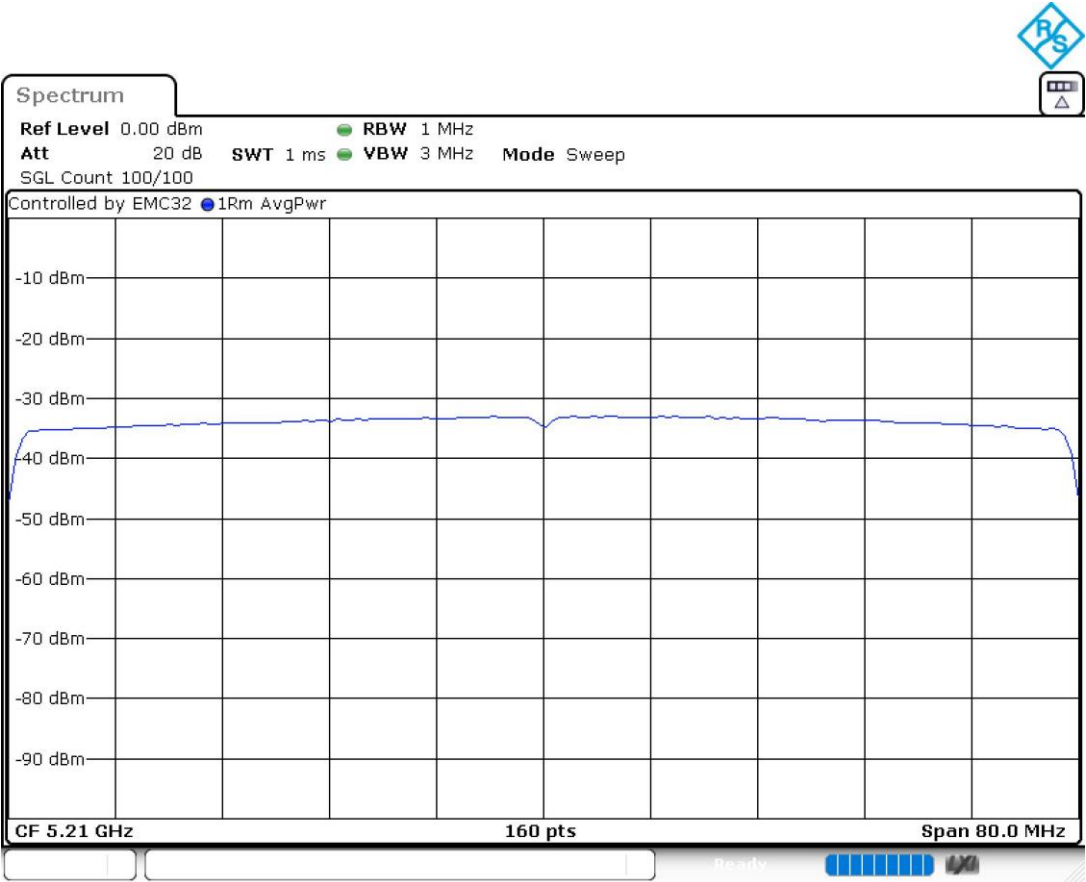
MIMO 802.11 ax80 (HE80) – SU Full channel allocation:

U-NII-1 (5150-5250 MHz)

- Single Channel 42 (5210 MHz):



PSD Chain 1



PSD Chain 0

FCC 15.407 (b)(1) Transmitter Out of Band Radiated Emissions

SPECIFICATION:

For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.23 dBμV/m at 3 m distance).

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, specified when measuring with peak detector function.

RESULTS:

The situation and orientation of the equipment under test were varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

All tests were performed in a semi-anechoic chamber at a distance of 1.5 m for the frequency range 1 GHz-40 GHz and a distance of 3m for frequency range 30MHz-1GHz.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

The worst case was determined by measuring the e.i.r.p density (radiated). Test performed on the worst-case:

Preliminary tests determined the SISO worst case: Chain 1.

Test performed on all the supported modes of the EUT, in the worst data rates after preliminary testing.

Worst case mode in terms of spurious emissions is reported below.

SISO worst-case: 802.11 ax80 (HE80) – RU Subcarrier allocation, RU26 Offset 36.

Frequency range 30 MHz - 1 GHz

The spurious emissions below 1 GHz do not depend either on the operating channel or the modulation mode selected in the EUT.

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

Spurious frequency (MHz)	Emission Level (dBμV/m)	Polarization	Detector
600.026563	33.76	V	Quasi-Peak
874.991250	31.00	H	Quasi-Peak

Measurement Uncertainty (dB) < ± 5.1

Frequency range 1 - 40 GHz

Spurious frequencies with peak levels above the average limit (54 dBμV/m at 3 m) are measured with an average detector for checking compliance with the average limit.

- Single Channel. RU26 Offset 36.

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

Spurious frequency (GHz)	Emission Level (dBμV/m)	Polarization	Detector
1.323400	41.00	H	Peak
1.375300	40.70	V	Peak
1.527700	41.39	V	Peak
1.625200	41.24	V	Peak

Measurement Uncertainty (dB): 1 GHz – 6.5 GHz < ±4.11
6.5 GHz – 17 GHz < ±4.32
17 GHz – 40 GHz < ±4.75

Verdict: PASS

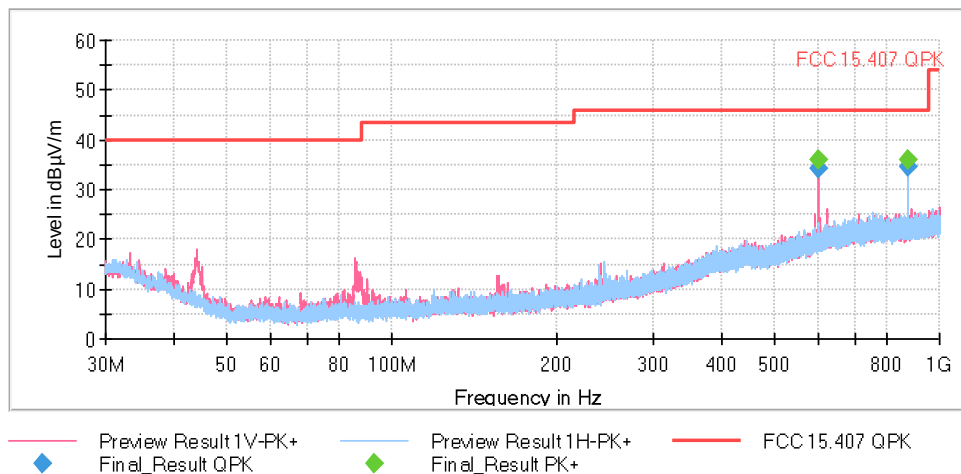
The measurement settings for each range of frequency is as follows:

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
Receiver: [ESW 44] 30 MHz - 1 GHz	30,312 kHz	PK+	100 kHz	1 s	0 dB
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
Receiver: [ESW 44] 1 GHz - 6,5 GHz	100 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
Receiver: [ESW 44] 6,5 GHz - 17 GHz	105 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
Receiver: [ESW 44] 17 GHz - 40 GHz	766,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

SISO worst case

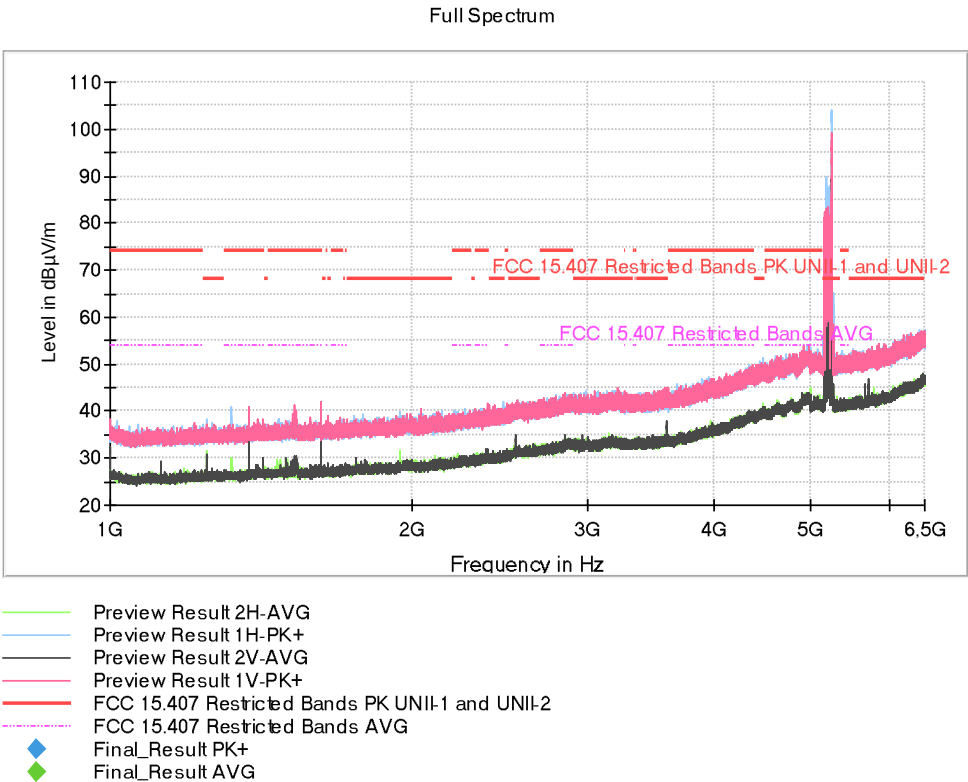
FREQUENCY RANGE 30 MHz - 1 GHz:

This plot is valid for Low, Middle and High Channels.



FREQUENCY RANGE 1 - 6.5 GHz:

- Single Channel 42 (5210 MHz):



Note: The peak shown in the plot above the limit is the carrier frequency.