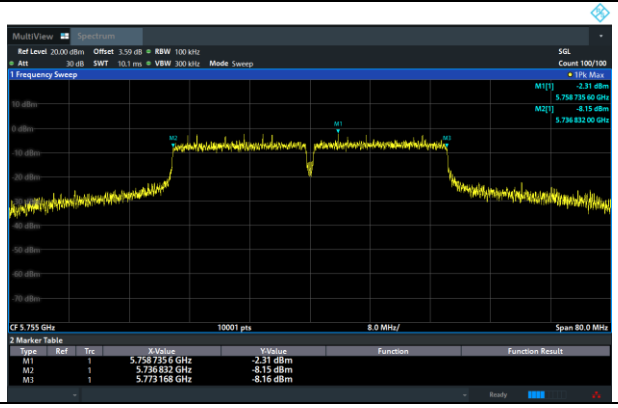
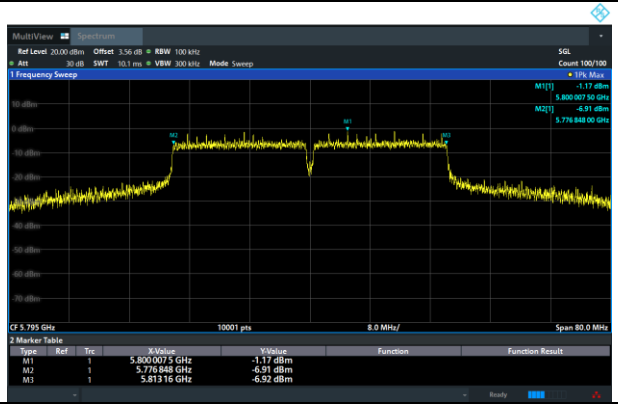
11n (HT40) CH151



11n (HT40) CH159



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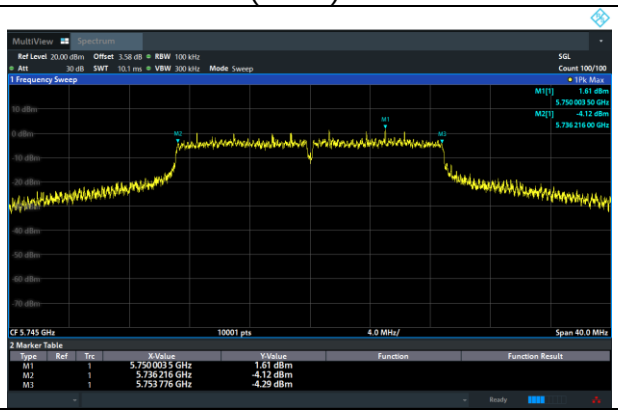

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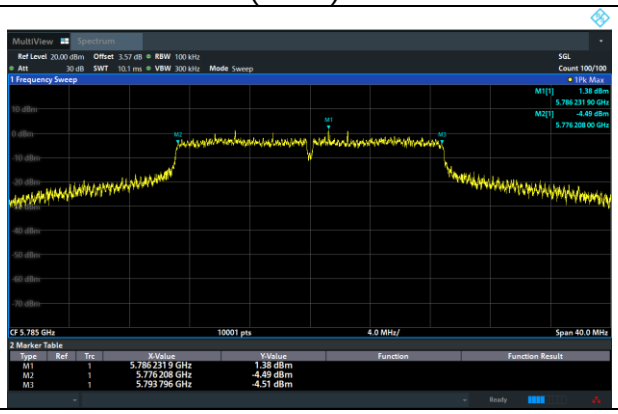

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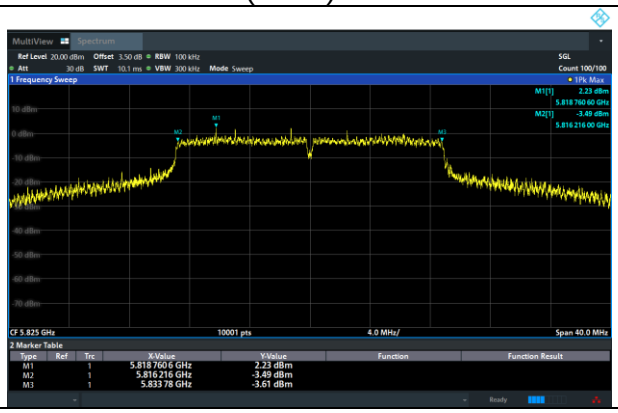

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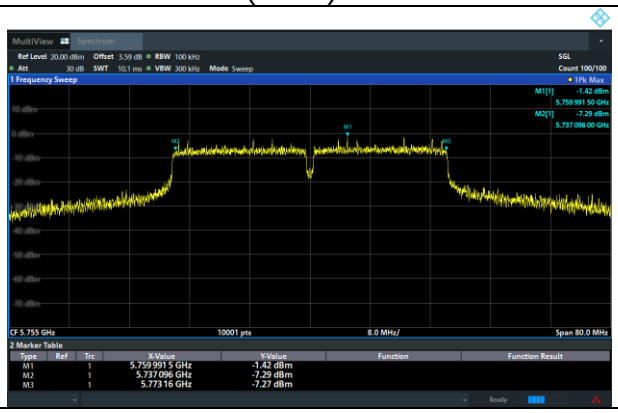

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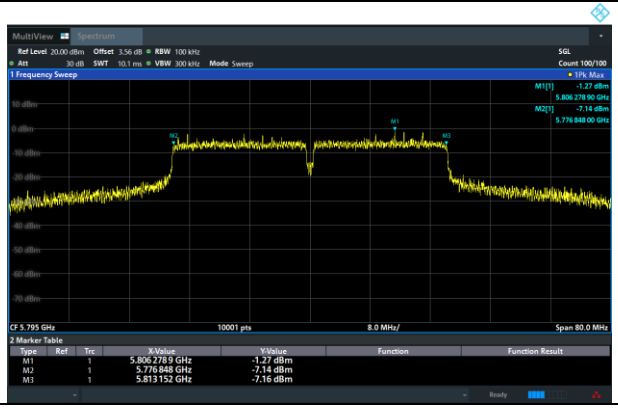

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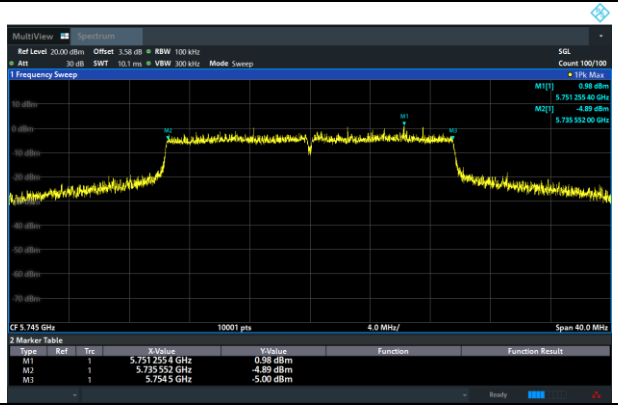

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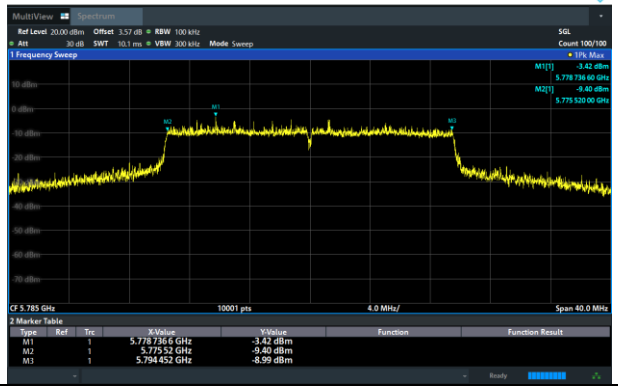

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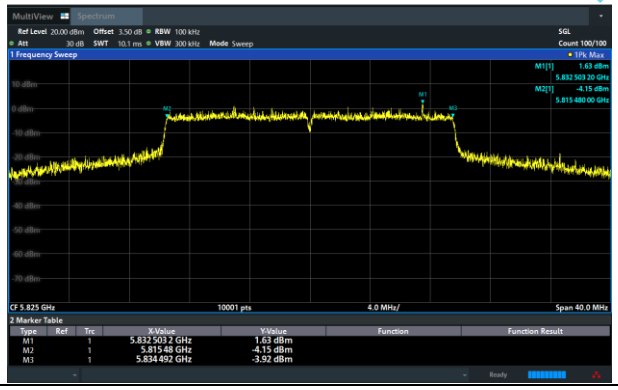

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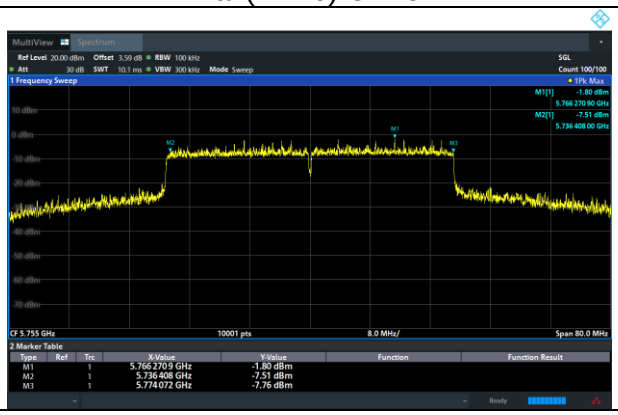

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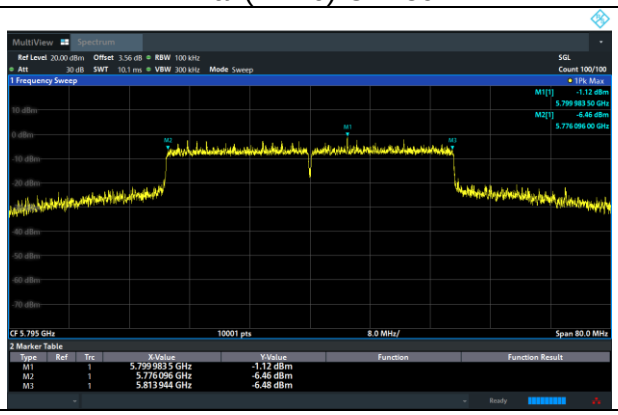


5.8 Out Of Band Emission

5.8.1 Limit

According to FCC §15.407(b).

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) 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 e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

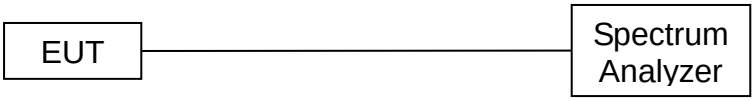
(4) For transmitters operating solely in the 5.725–5.850 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz 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.

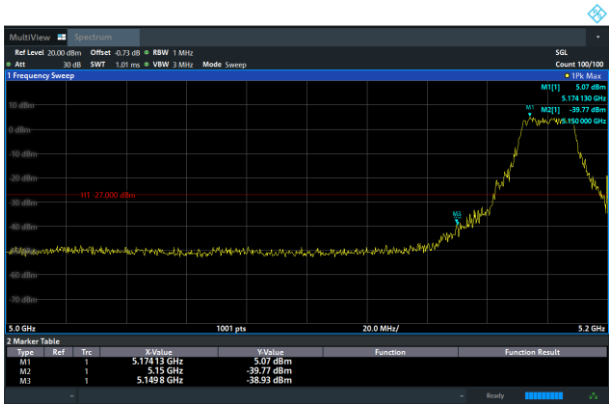
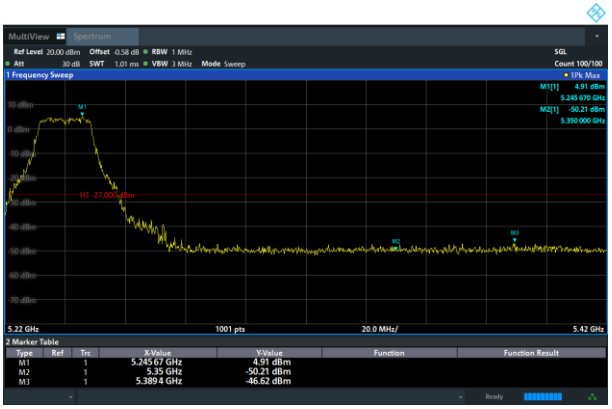
5.8.2 Test Procedure

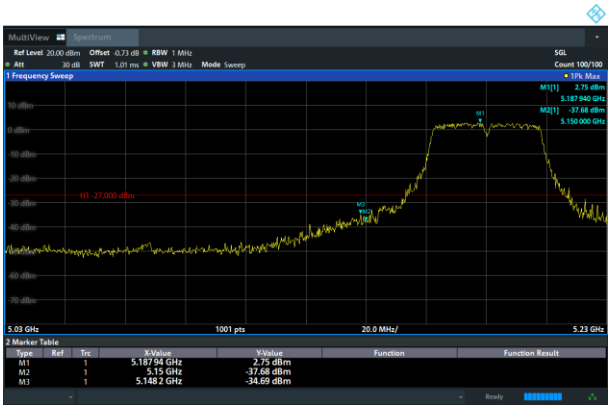
a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
c) Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
e) Repeat above procedures until all measured frequencies were complete.

5.8.3 Test Setup



5.8.4 Test Results

5150-5250 MHz	
(802.11a) Band Edge, Left Side	(802.11n20) Band Edge, Left Side
	
(802.11a) Band Edge, Right Side	(802.11n20) Band Edge, Right Side
	

5150-5250 MHz	
(802.11n40) Band Edge, Left Side	(802.11ac20) Band Edge, Left Side
	
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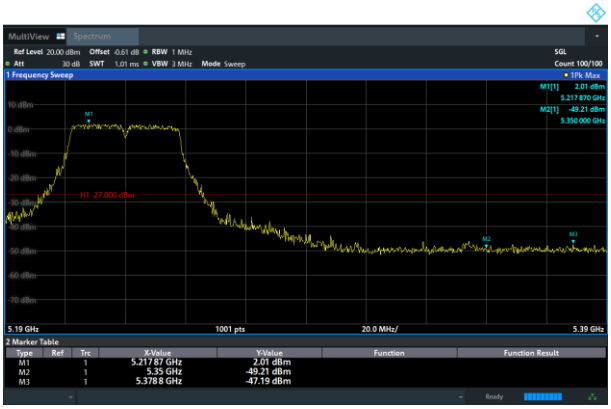
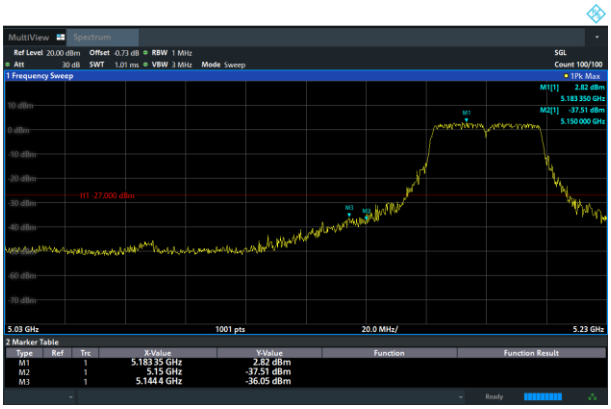
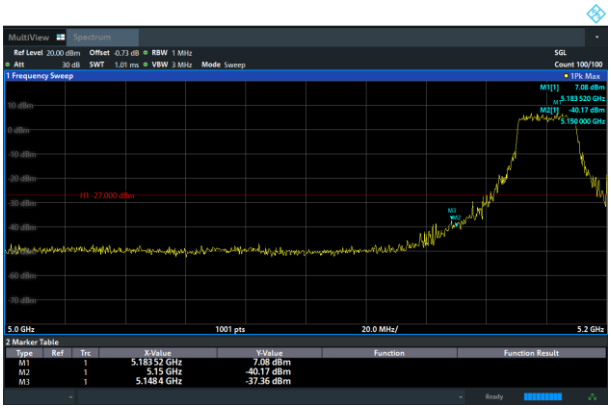
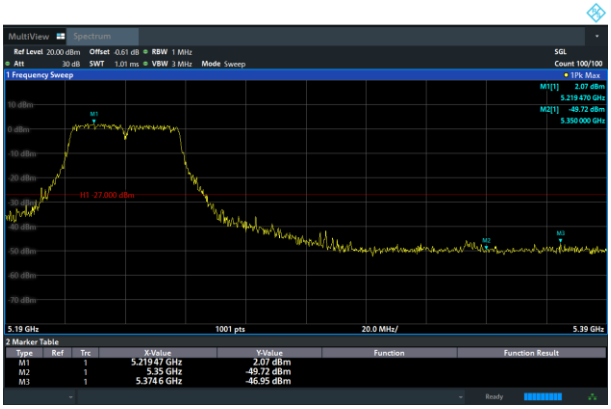
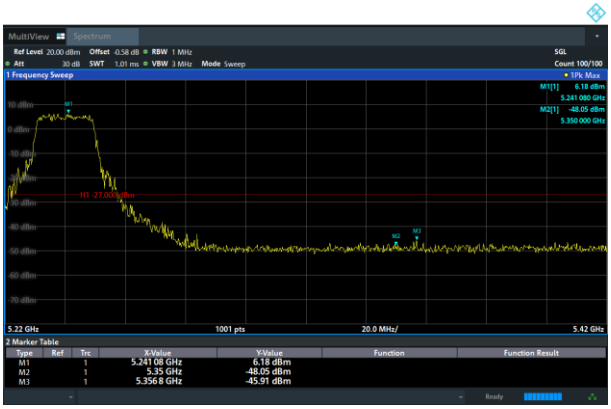
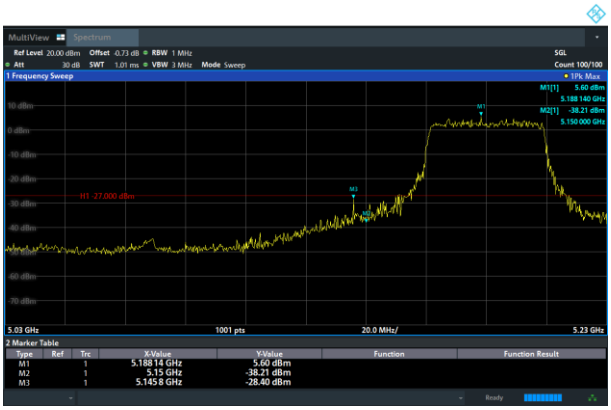
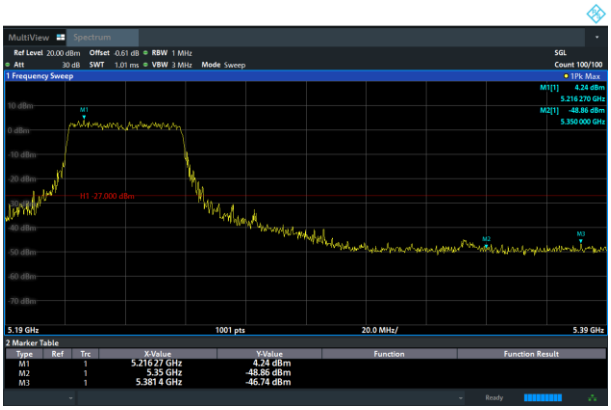
	

5150-5250 MHz	
(802.11ac40) Band Edge, Left Side	(802.11ax20) Band Edge, Left Side
	
(802.11ac40) Band Edge, Right Side	(802.11ax20) Band Edge, Right Side
	

5150-5250 MHz	
(802.11ax40) Band Edge, Left Side	(802.11ax40) Band Edge, Right Side
	

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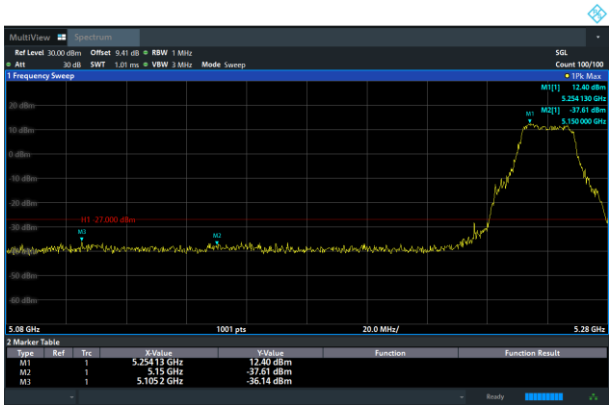	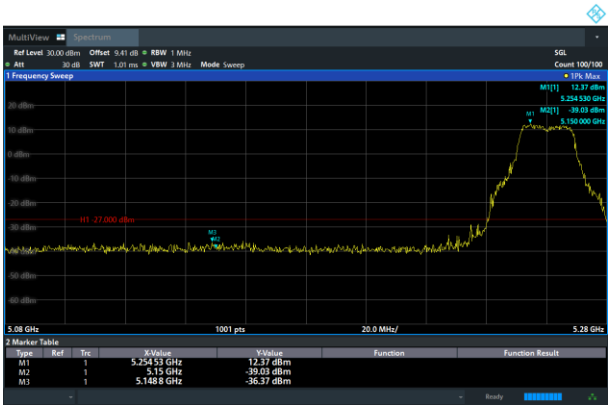
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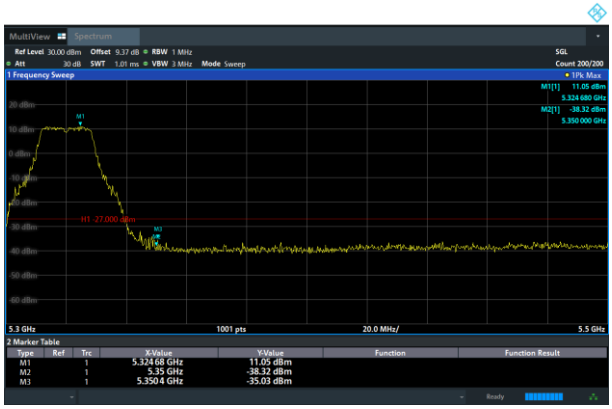	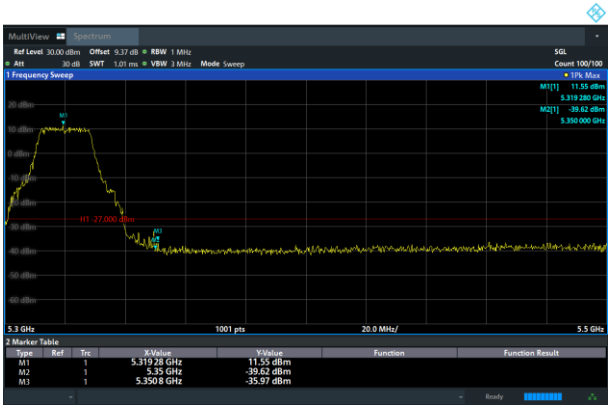

5250-5235 MHz	
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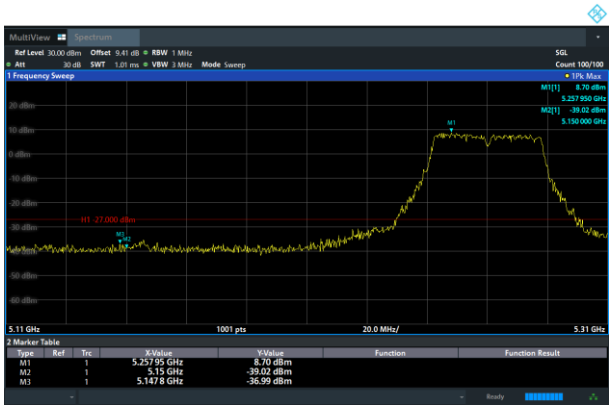	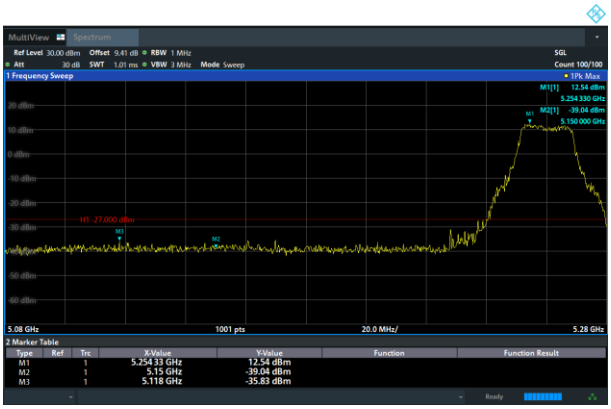
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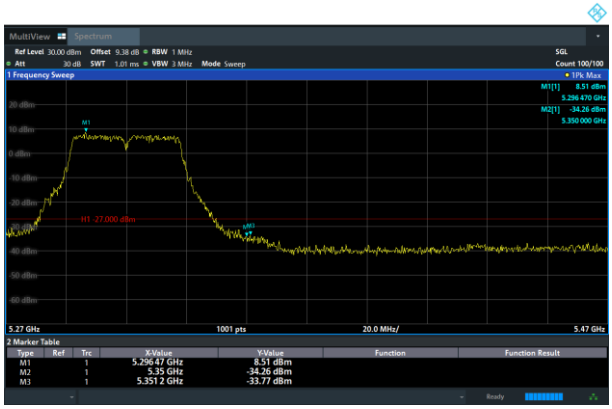	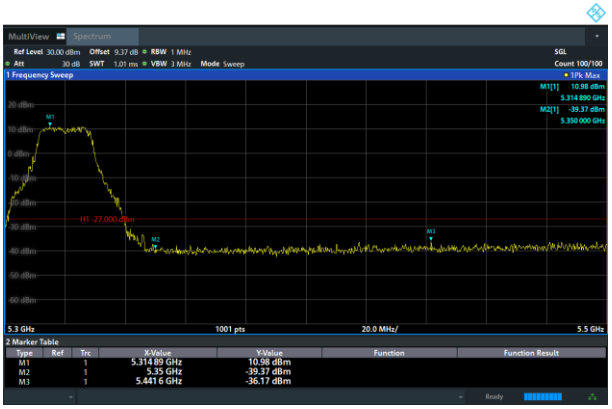

5250-5235 MHz	
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	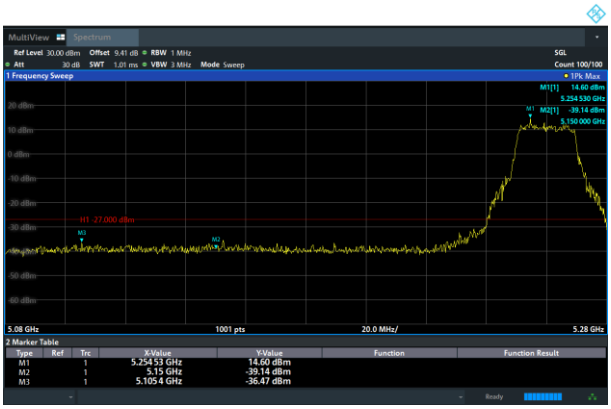
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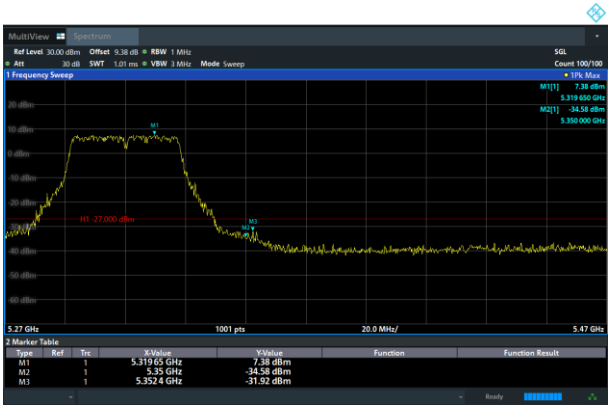
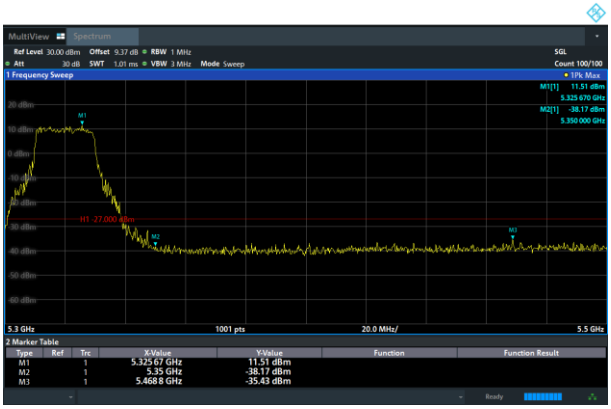
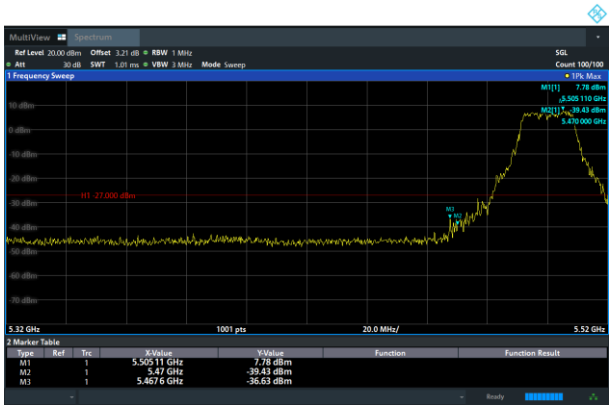
	

5250-5235 MHz	
(802.11ax40) Band Edge, Left Side	(802.11ax40) Band Edge, Right Side

5470-5725 MHz	
(802.11a) Band Edge, Left Side	(802.11n20) Band Edge, Left Side
	
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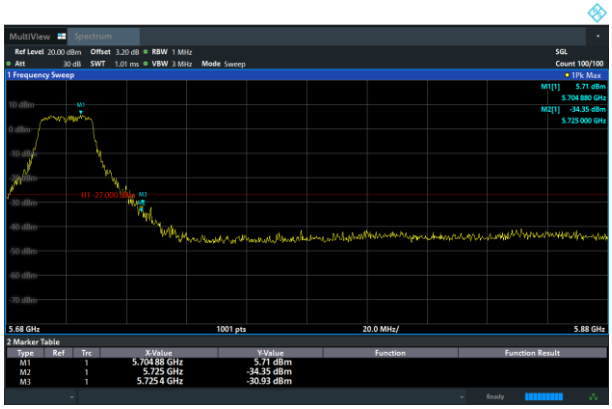	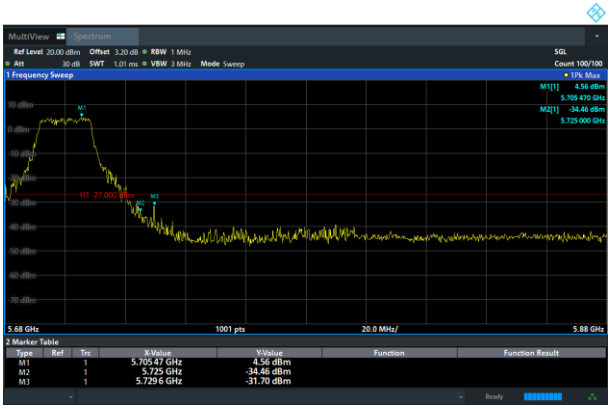

5470-5725 MHz	
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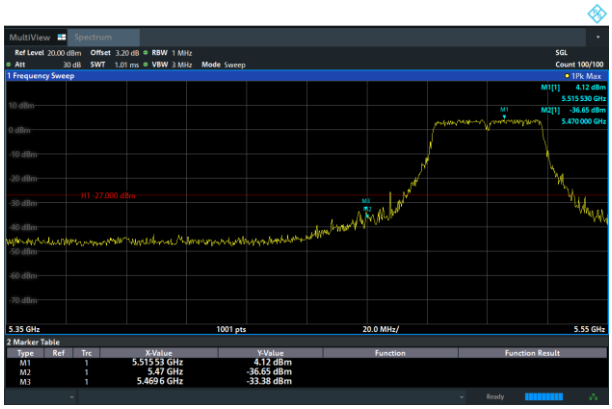
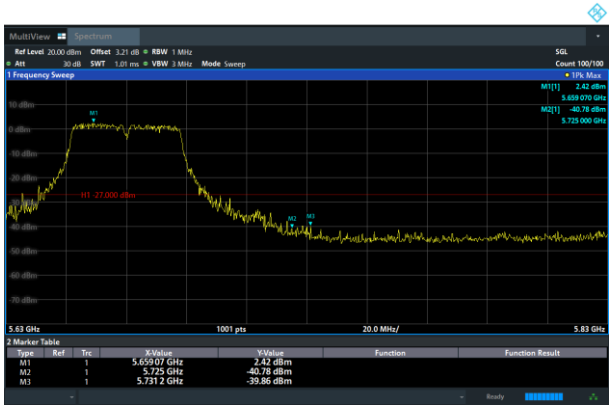
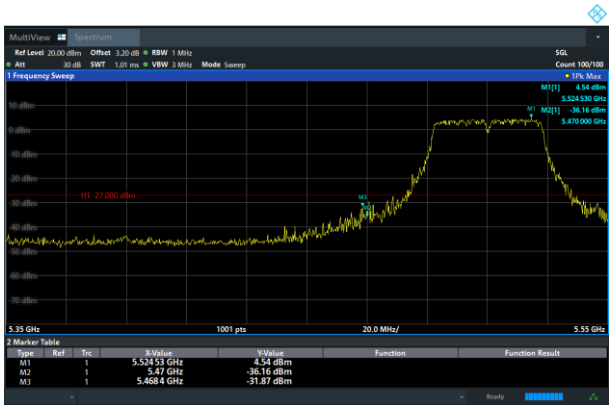
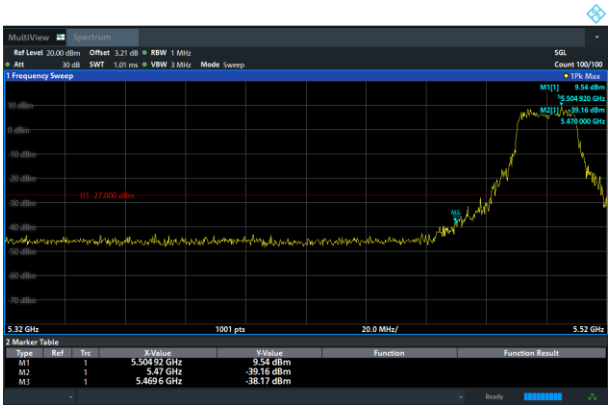
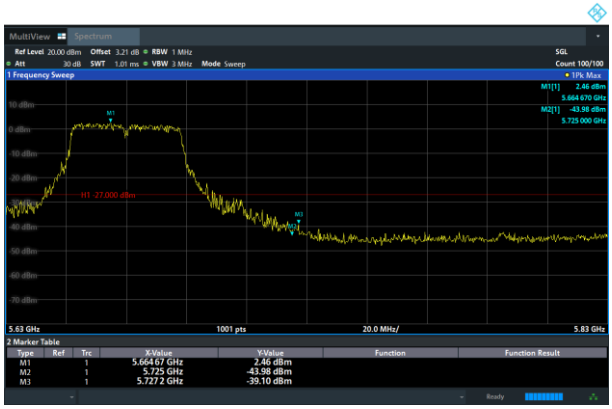
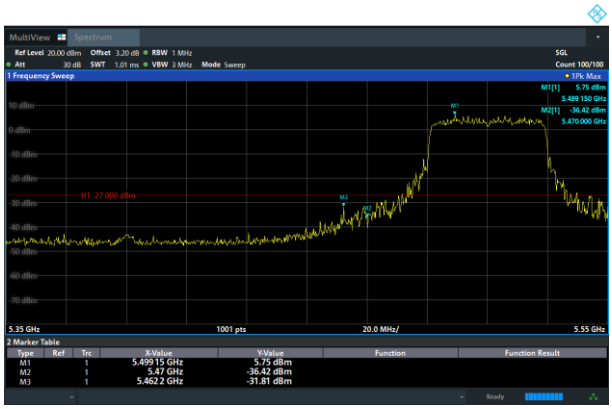
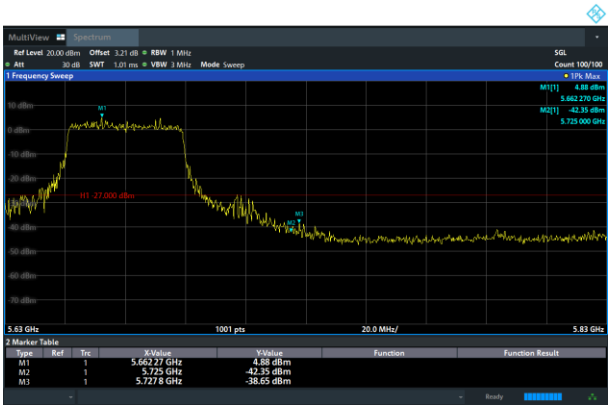
	
(802.11n40) Band Edge, Right Side	(802.11ac20) Band Edge, Right Side
	

5470-5725 MHz	
(802.11ac40) Band Edge, Left Side	(802.11ax20) Band Edge, Left Side
	
(802.11ac40) Band Edge, Right Side	(802.11ax20) Band Edge, Right Side
	

5470-5725 MHz	
(802.11ax40) Band Edge, Left Side	(802.11ax40) Band Edge, Right Side
	

5750-5850 MHz	
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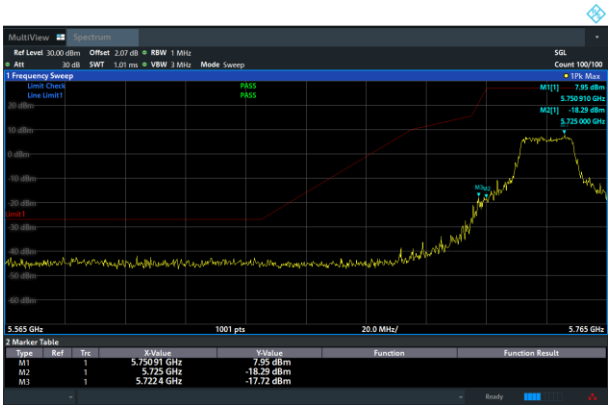
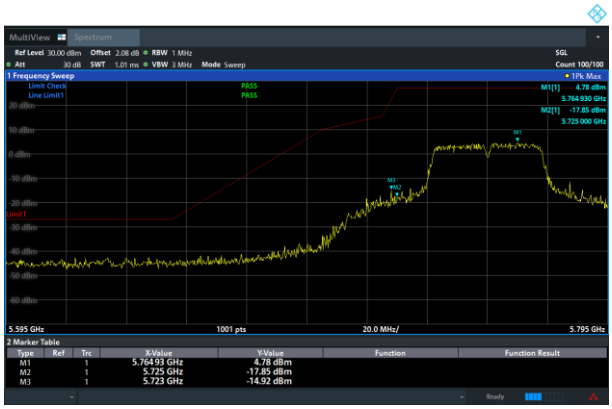
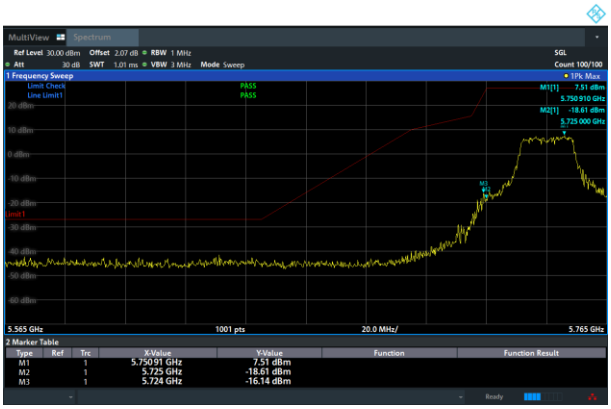
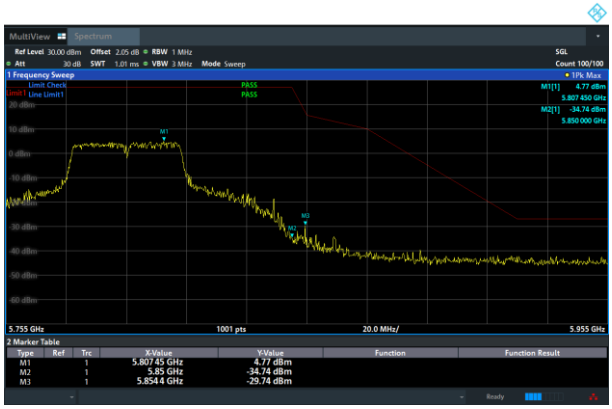
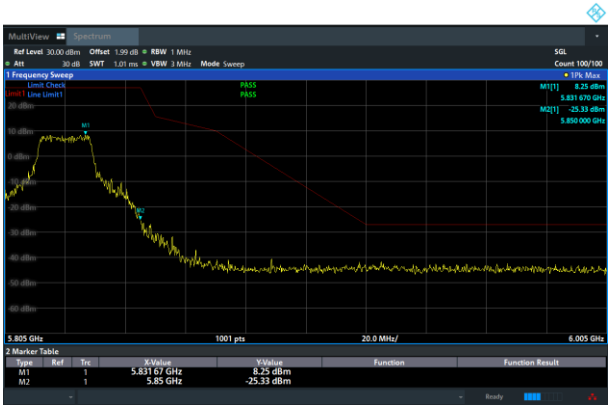
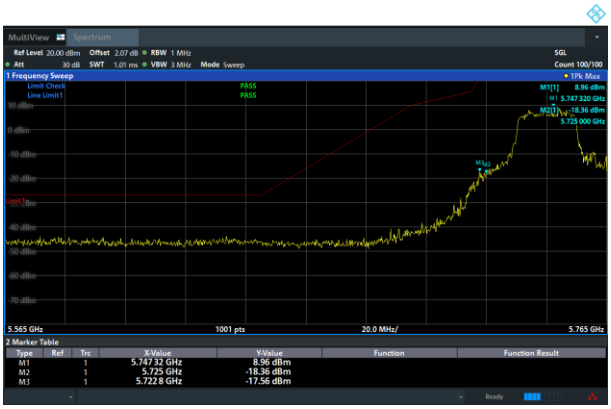
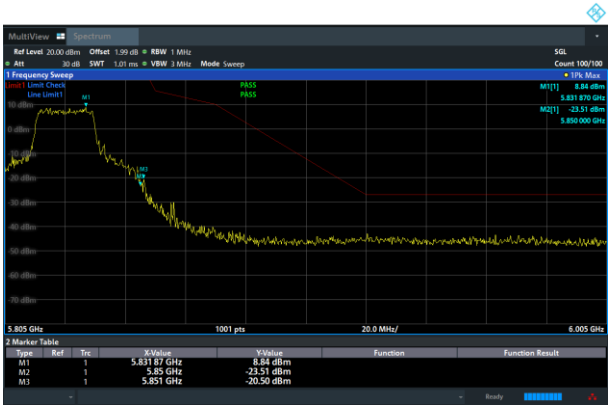
	
(802.11a) Band Edge, Right Side	(802.11n20) Band Edge, Right Side

5750-5850 MHz	
(802.11n40) Band Edge, Left Side	(802.11ac20) Band Edge, Left Side
	
(802.11n40) Band Edge, Right Side	(802.11ac20) Band Edge, Right Side
	

5750-5850 MHz	
(802.11ac40) Band Edge, Left Side	(802.11ax20) Band Edge, Left Side
	
(802.11ac40) Band Edge, Right Side	(802.11ax20) Band Edge, Right Side
	

5750-5850 MHz	
(802.11ax40) Band Edge, Left Side	(802.11ax40) Band Edge, Right Side

5.9 Spurious RF Conducted Emissions

5.9.1 Limit

According to FCC §15.407(b).

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) 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 e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

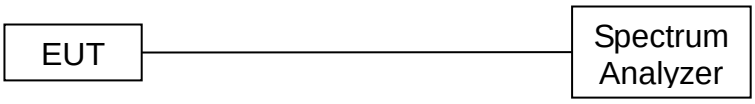
(4) For transmitters operating solely in the 5.725–5.850 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz 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.

5.9.2 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2020 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBW= 300kHz to measure the peak field strength, and measure frequency range from 9kHz to 26.5GHz.

5.9.3 Test Setup



5.9.4 Test Results

Note: the measurement frequency range is from 9kHz to the 10th harmonic of the fundamental frequency; The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

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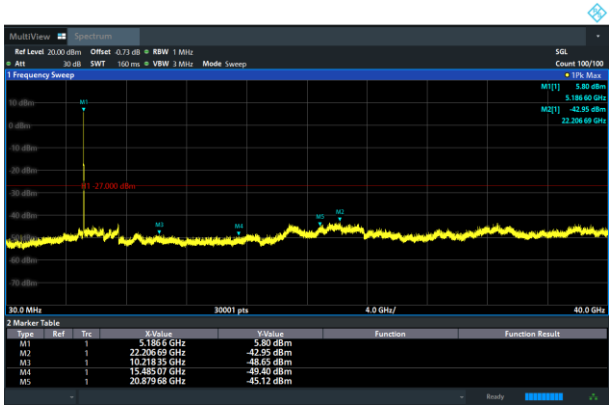
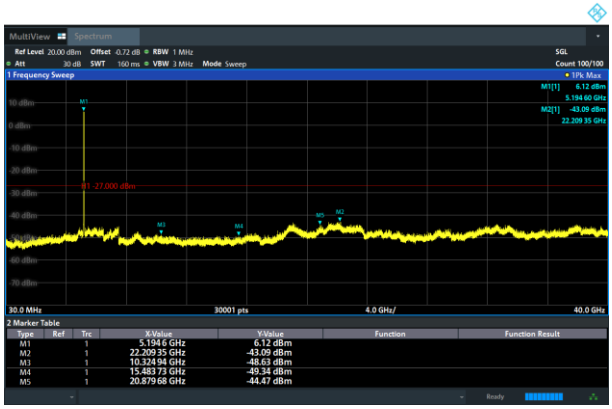
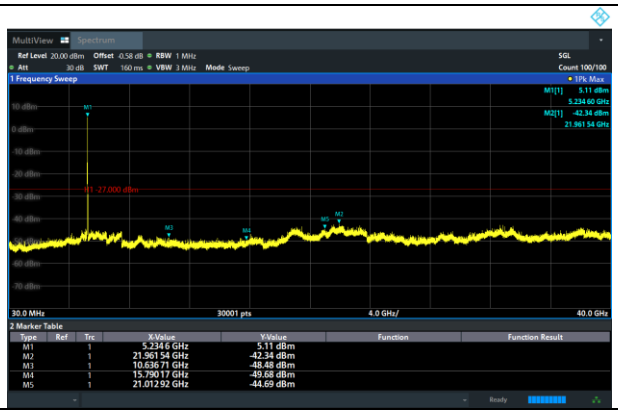
11a CH36



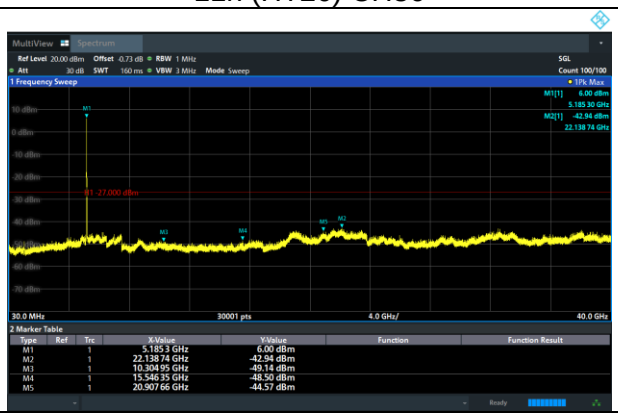
11a CH40



11a CH48



11n (HT20) CH36



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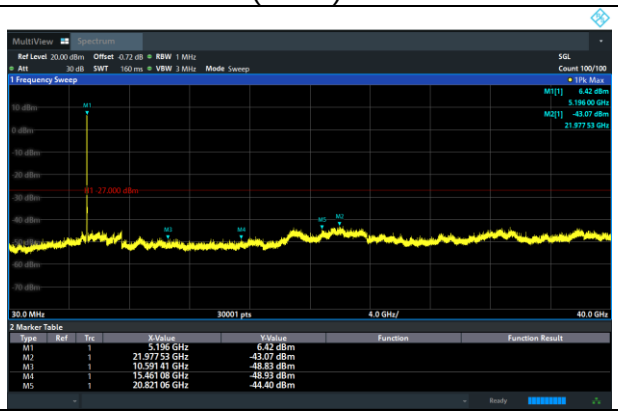

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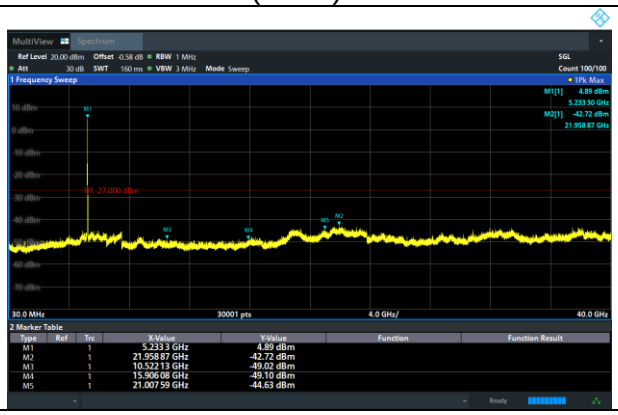

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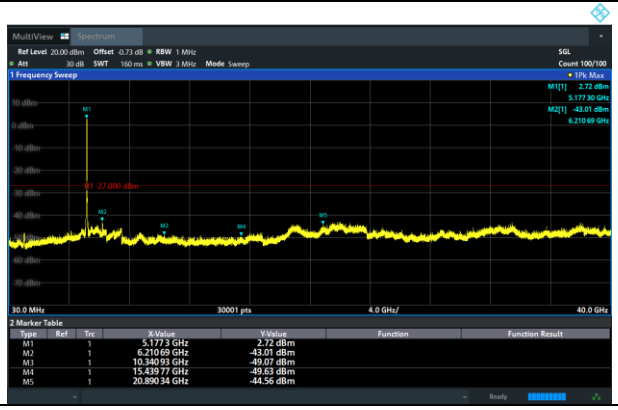

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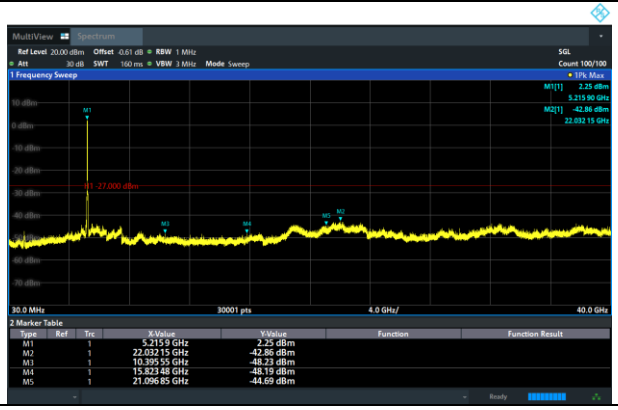

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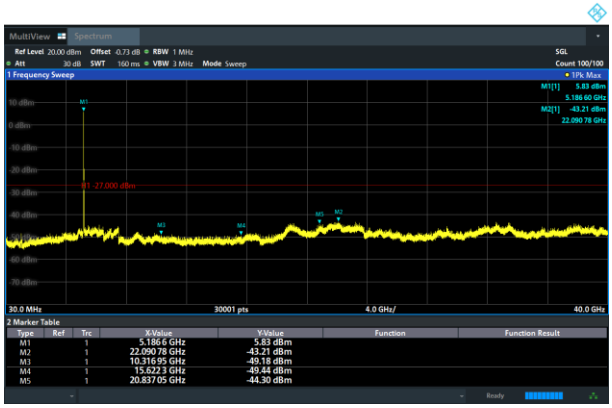

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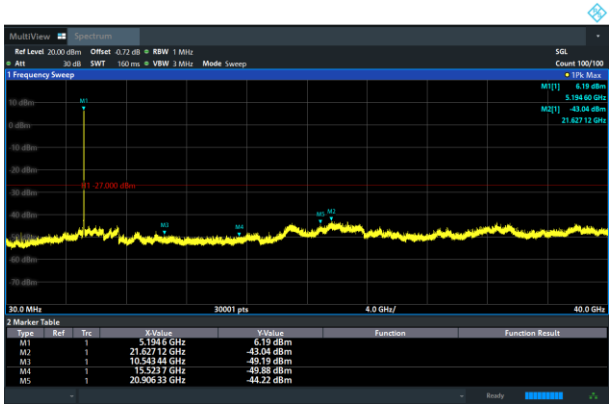

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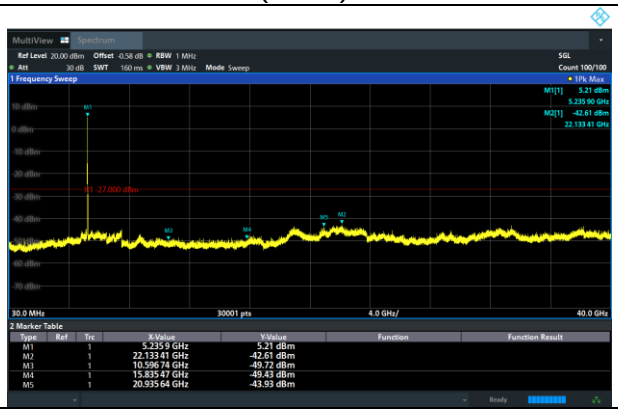

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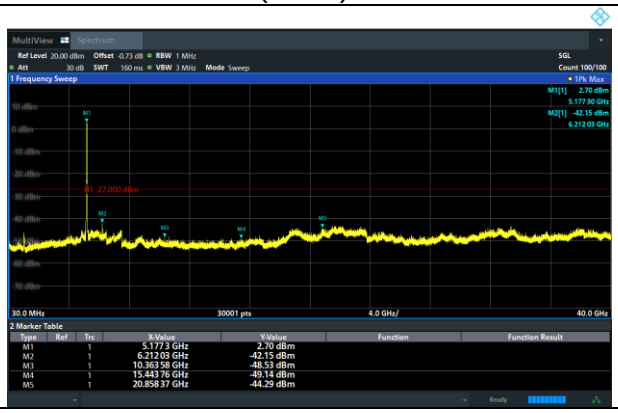

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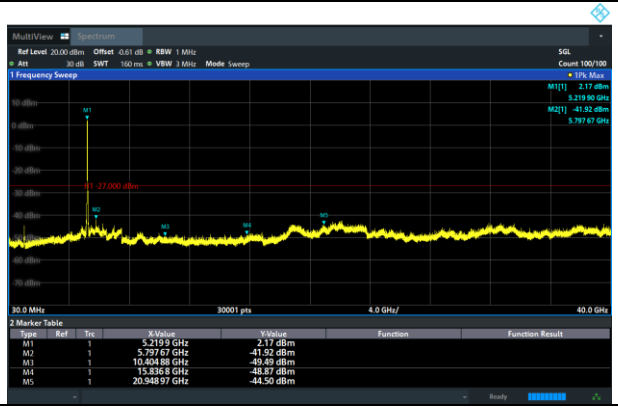
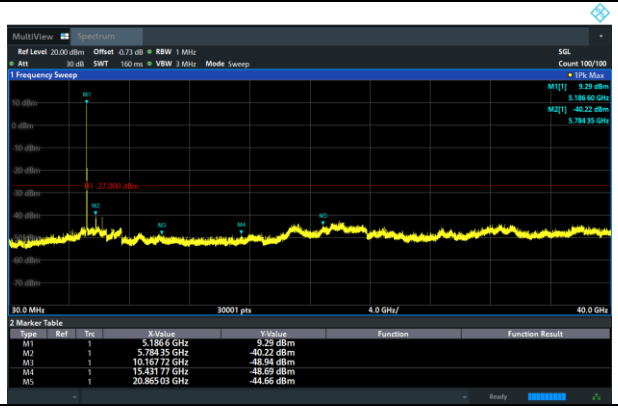


11ax (HE20) CH36



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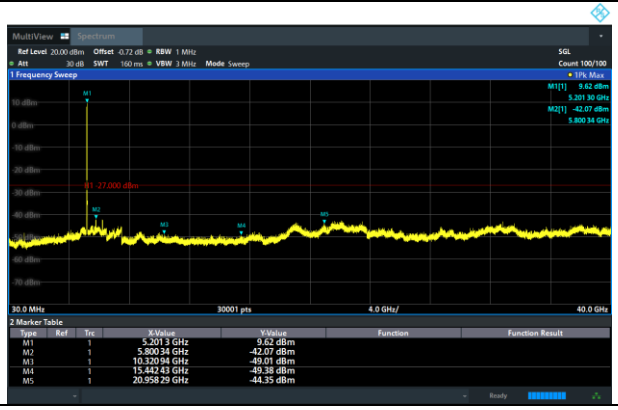

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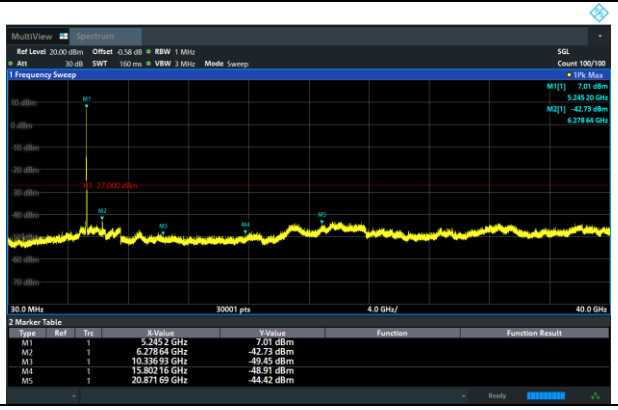

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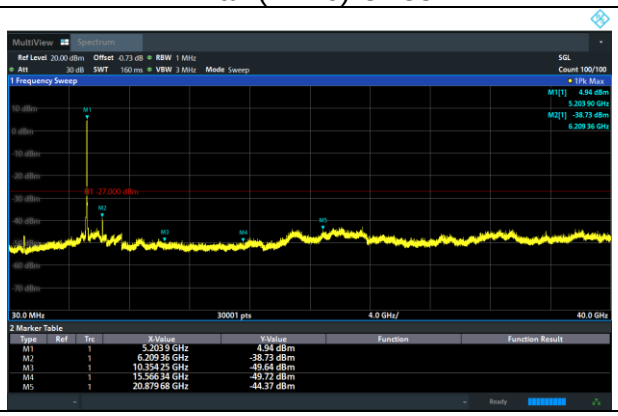

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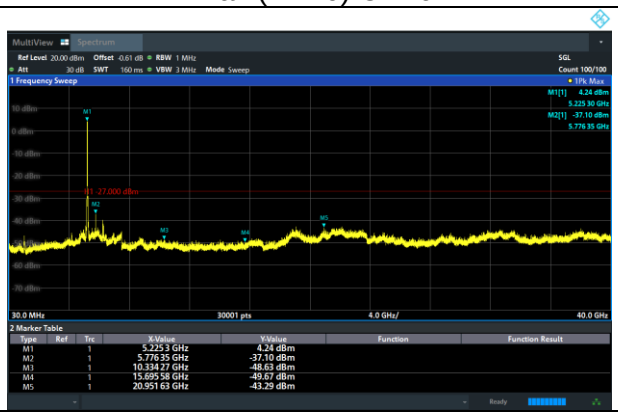

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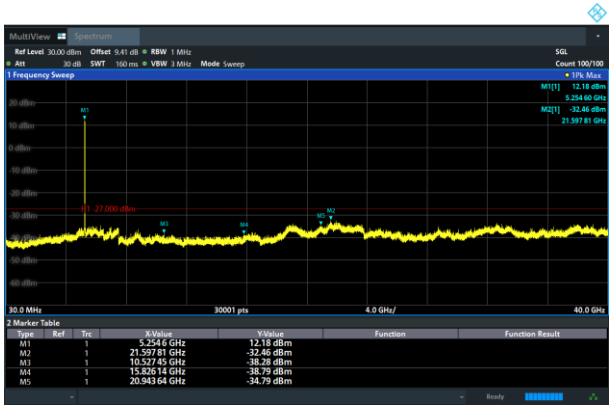
11a CH52



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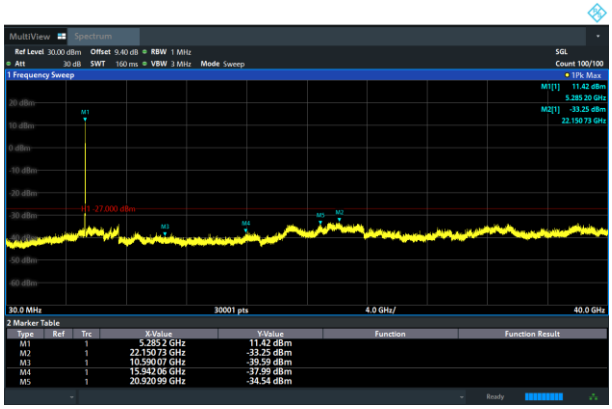

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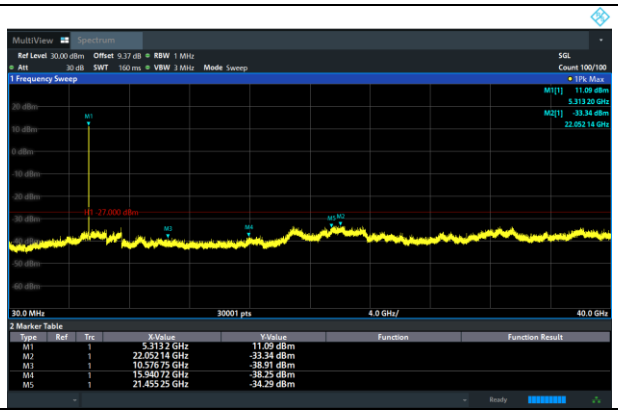

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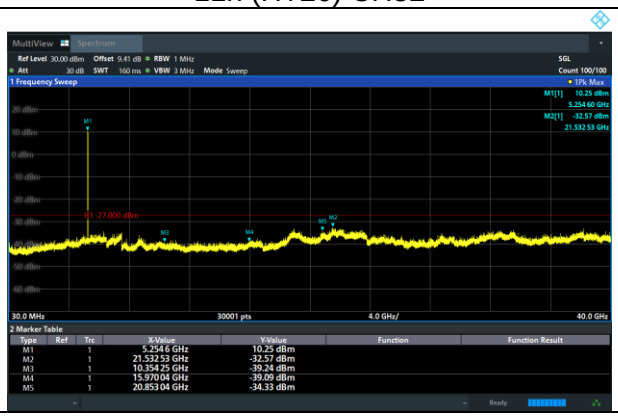

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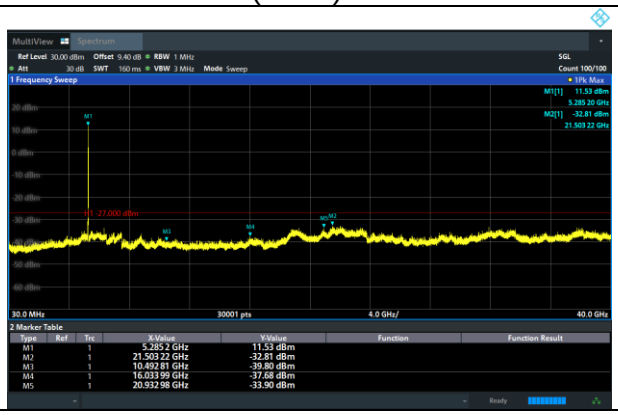
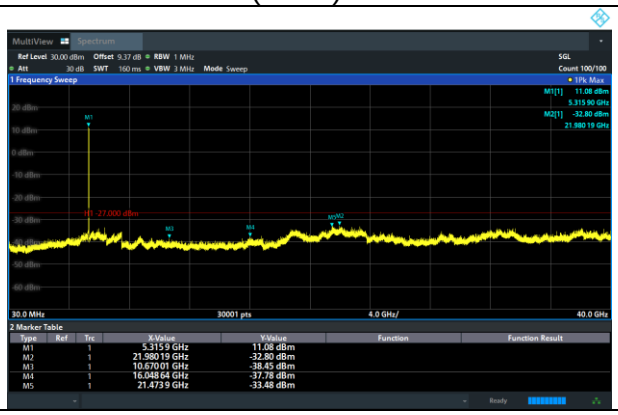
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