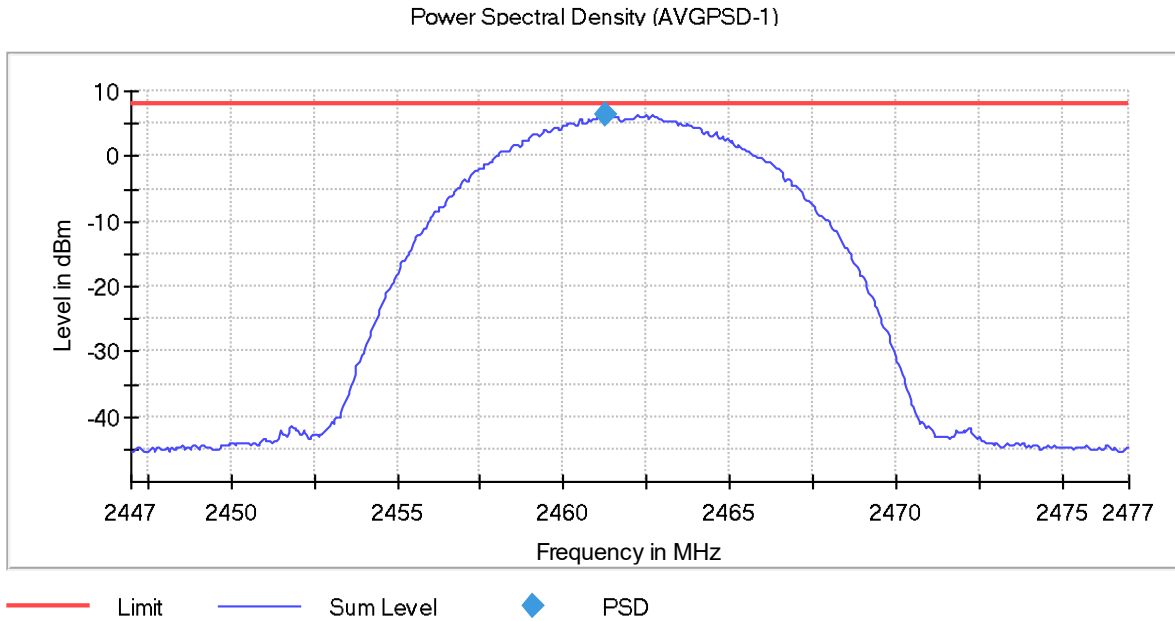
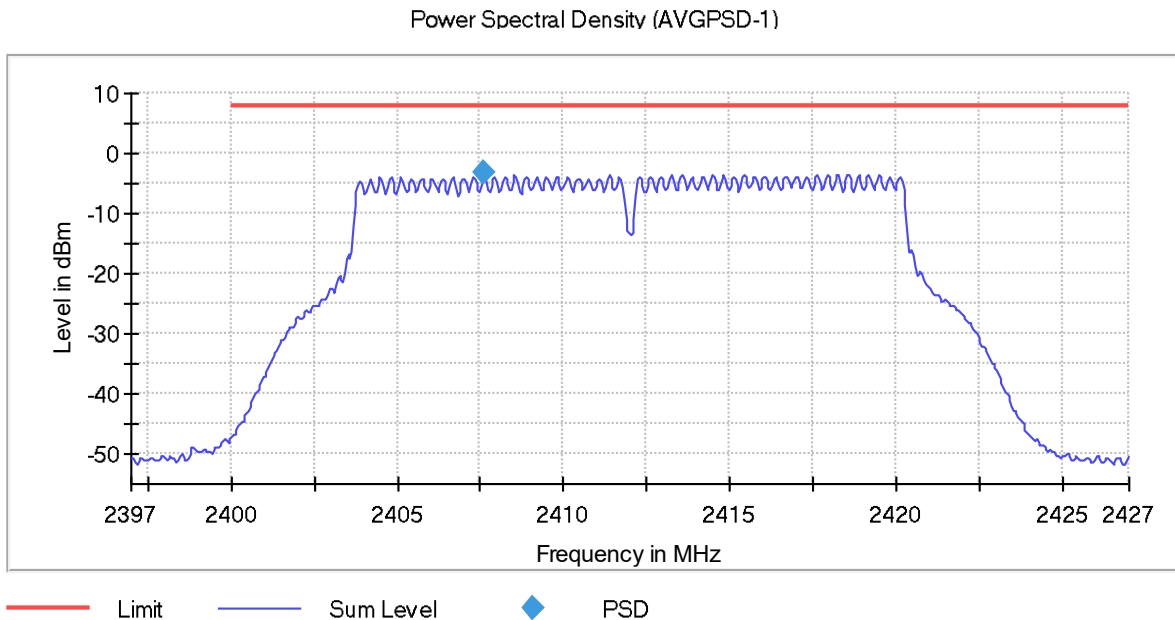


- High Channel (11):

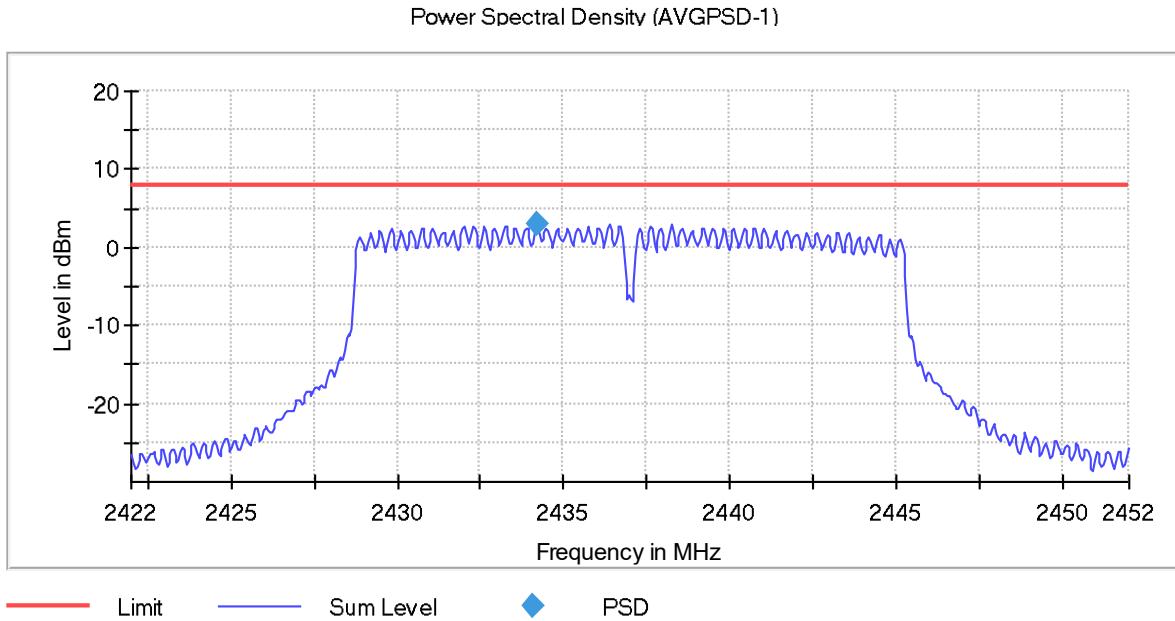


• SISO 802.11 g – Power Spectral Density:

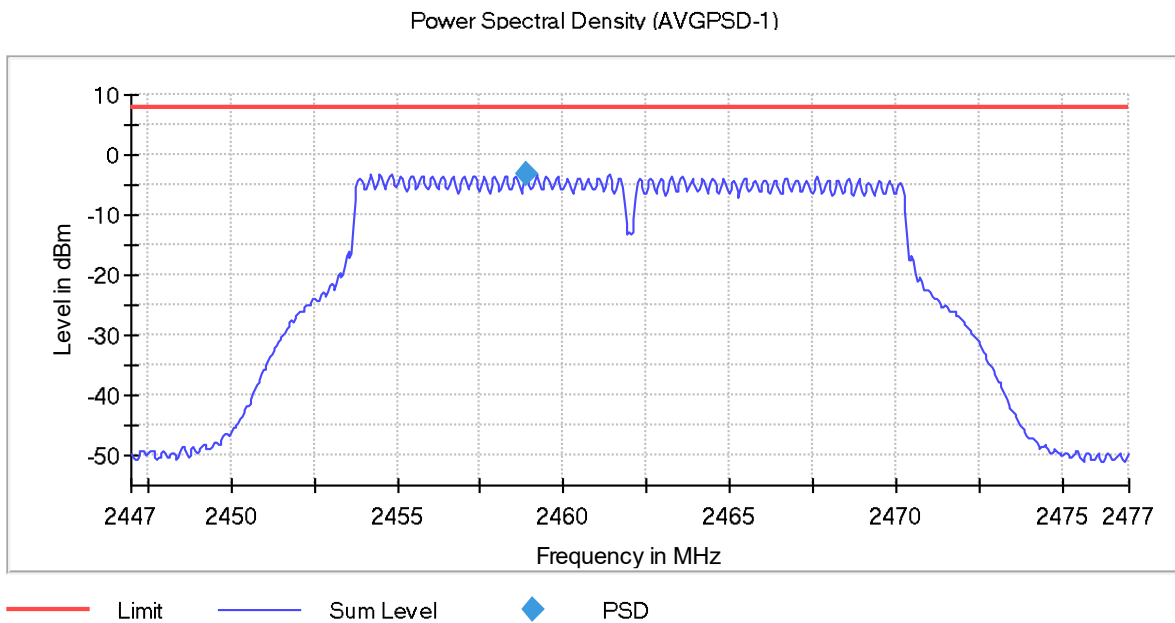
- Low Channel (1):



- Middle Channel (6):

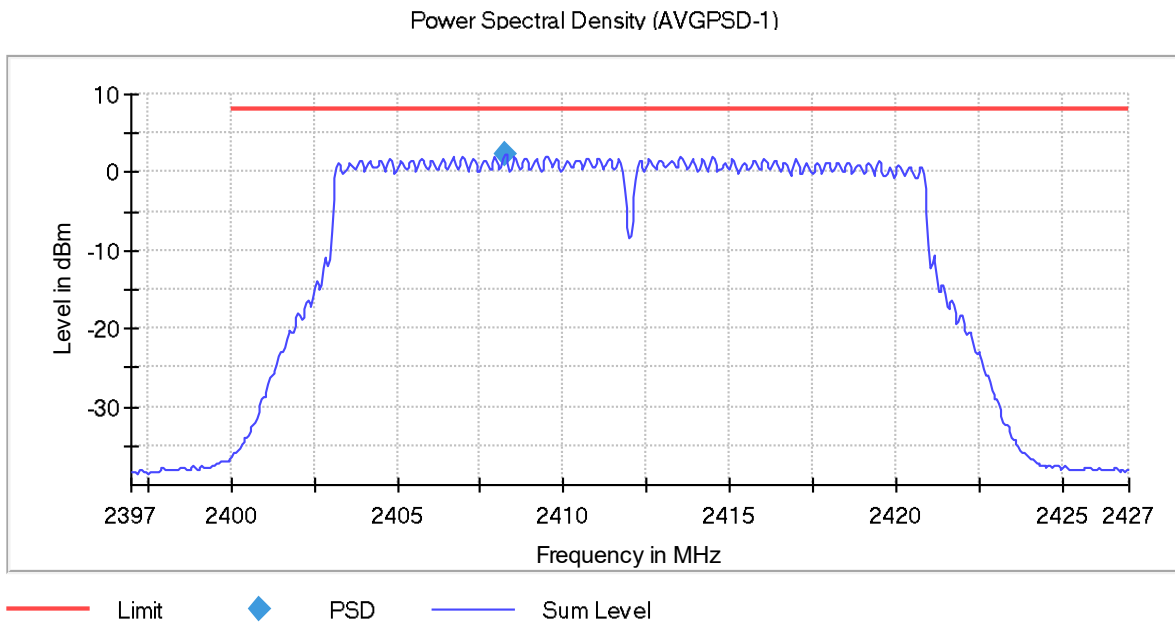


- High Channel (11):

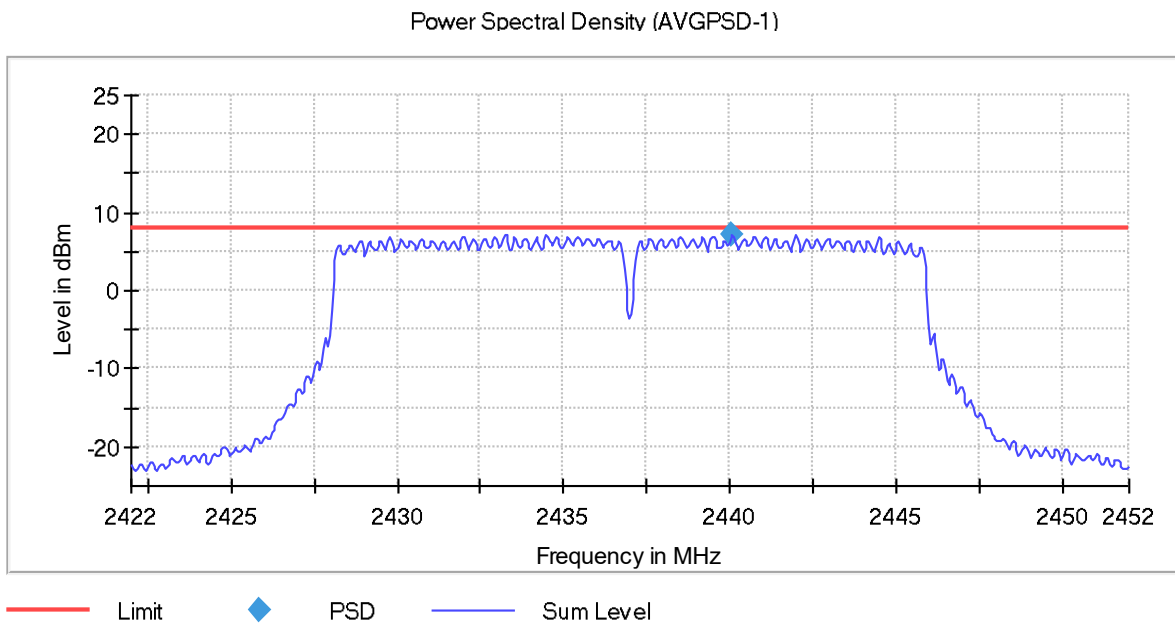


- **MIMO 802.11 n20 – Power Spectral Density:**

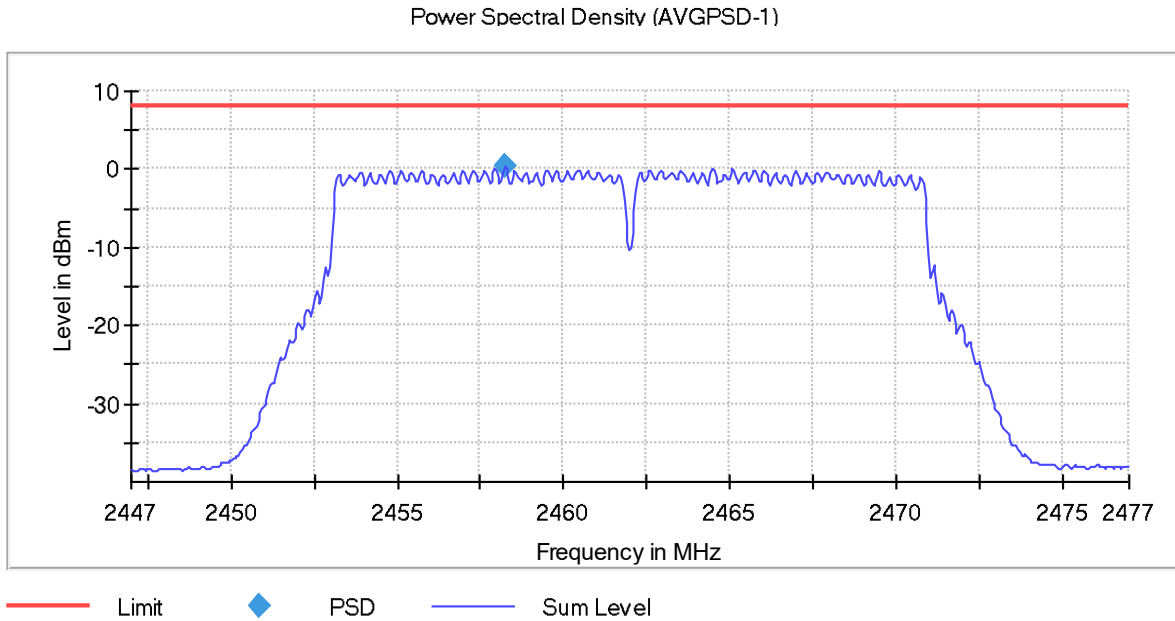
- Low Channel (1):



- Middle Channel (6):

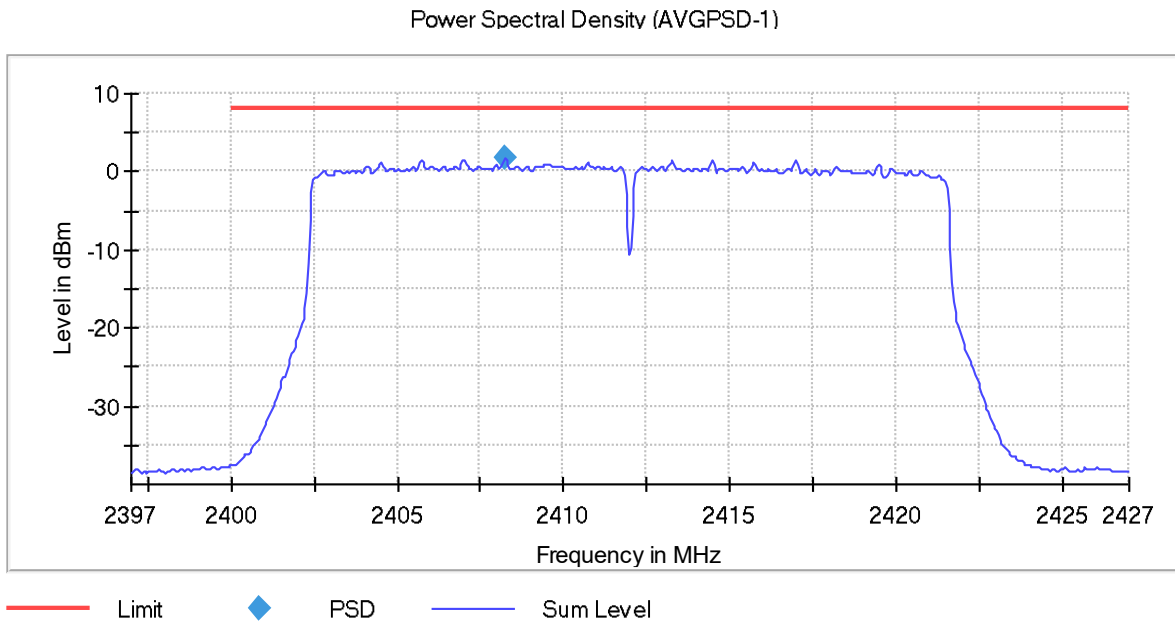


- High Channel (11):

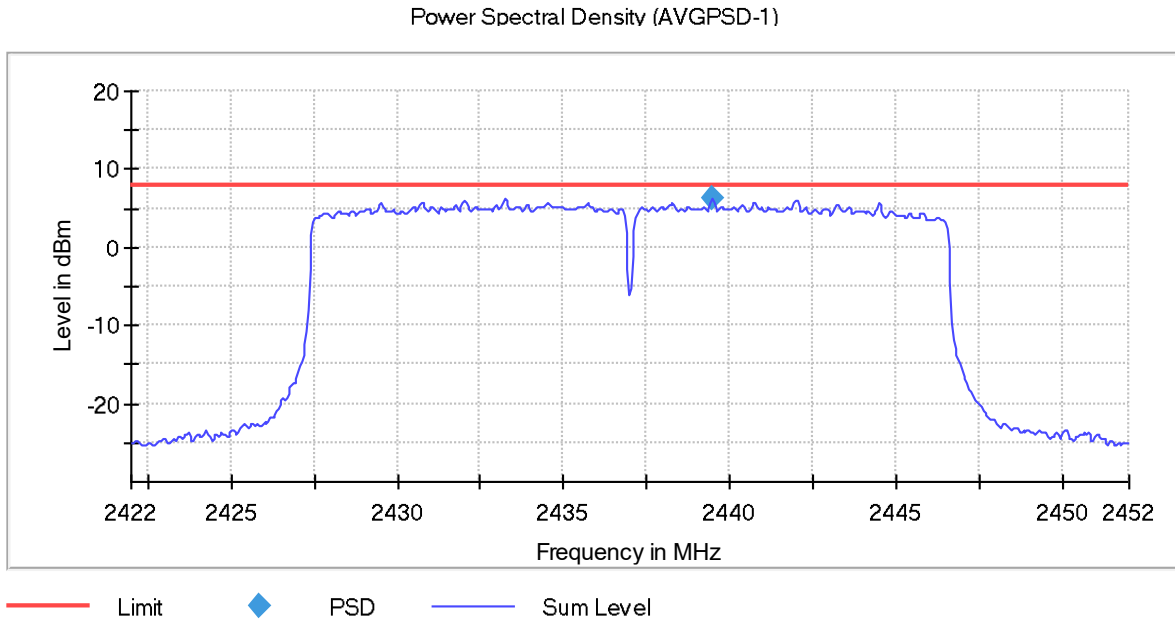


• MIMO 802.11 he20 – Power Spectral Density:

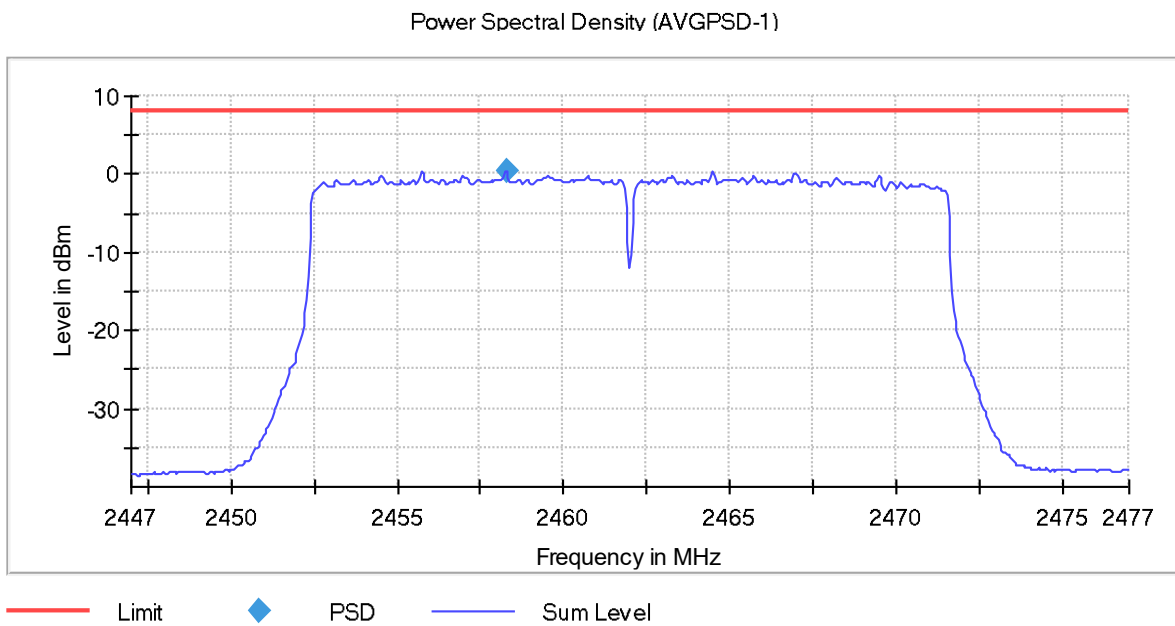
- Low Channel (1):



- Middle Channel (6):

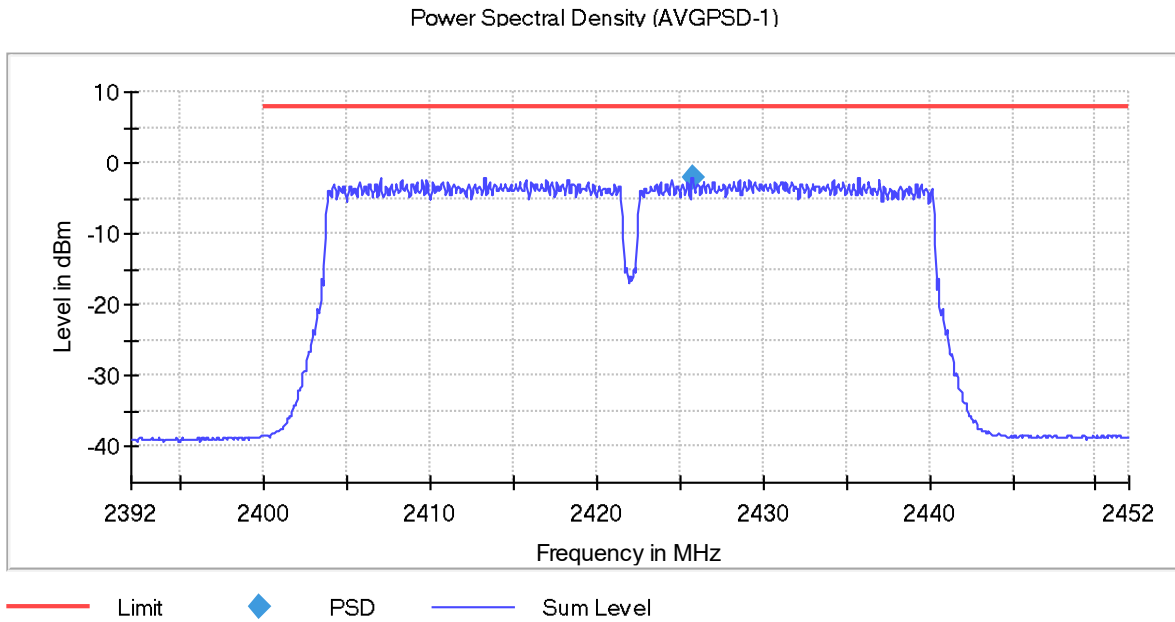


- High Channel (11):

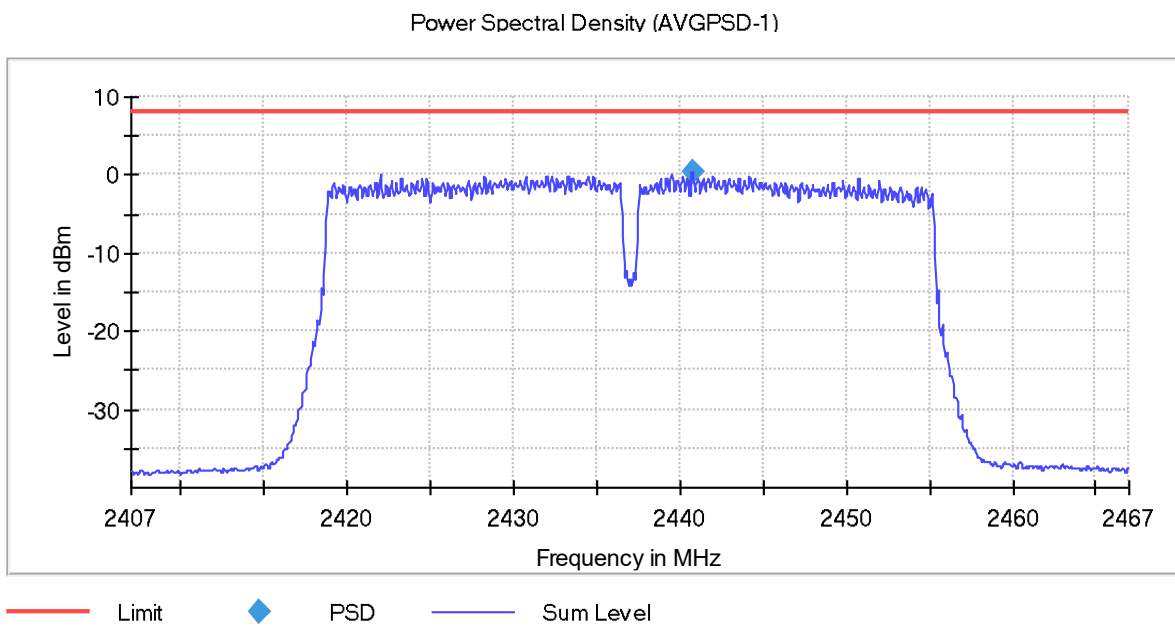


- **MIMO 802.11 n40 – Power Spectral Density:**

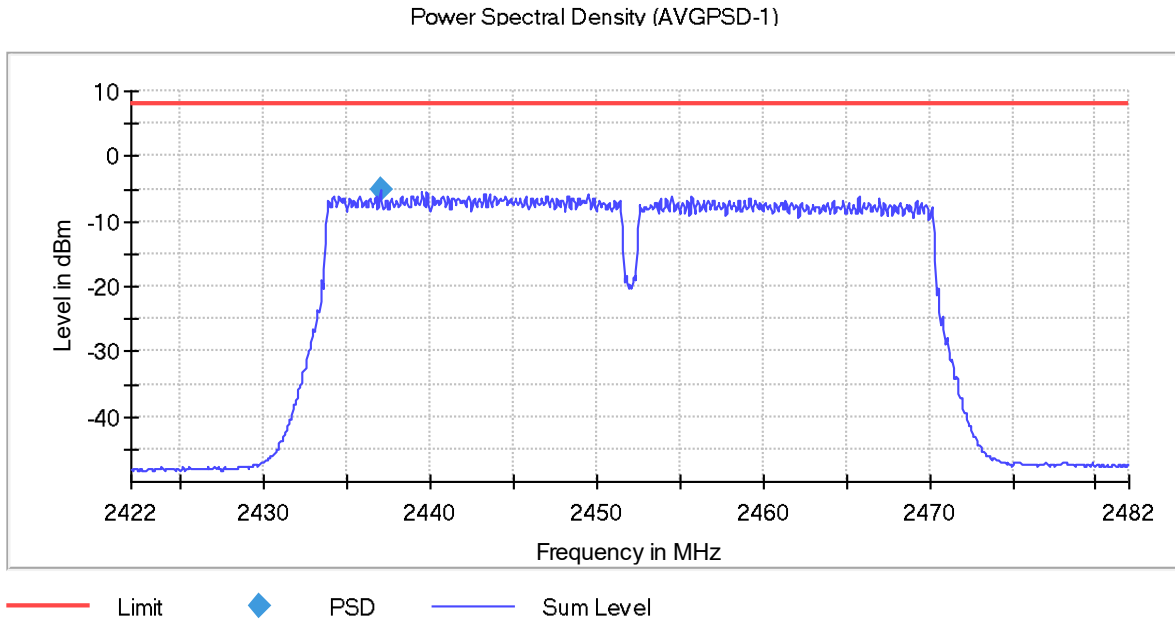
- Low Channel (3):



- Middle Channel (6):

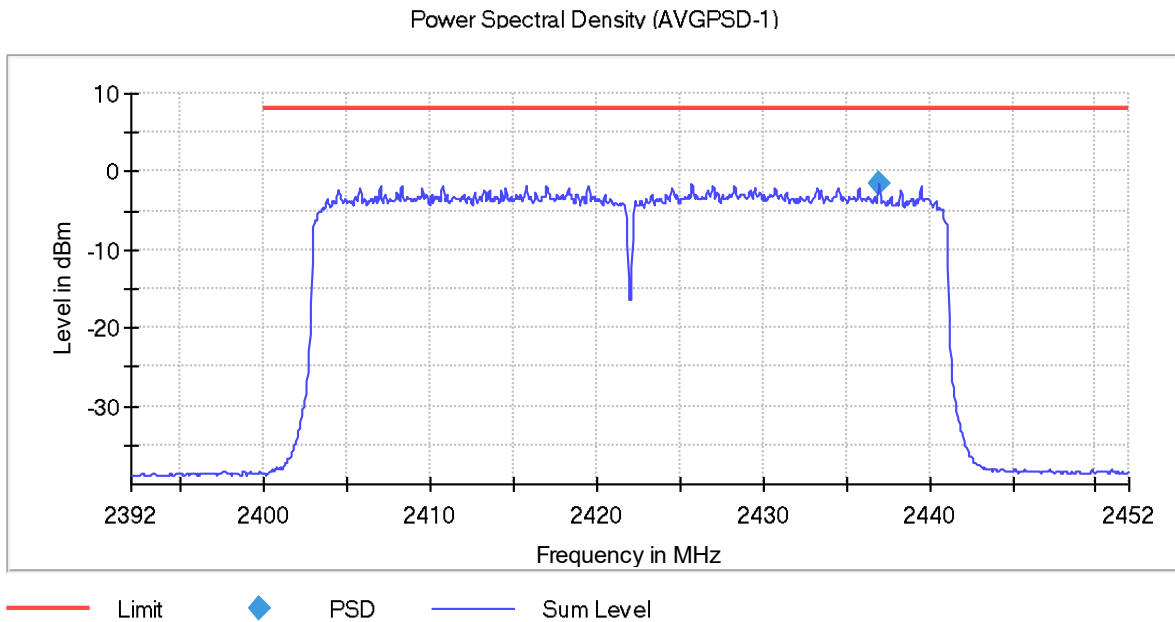


- High Channel (9):



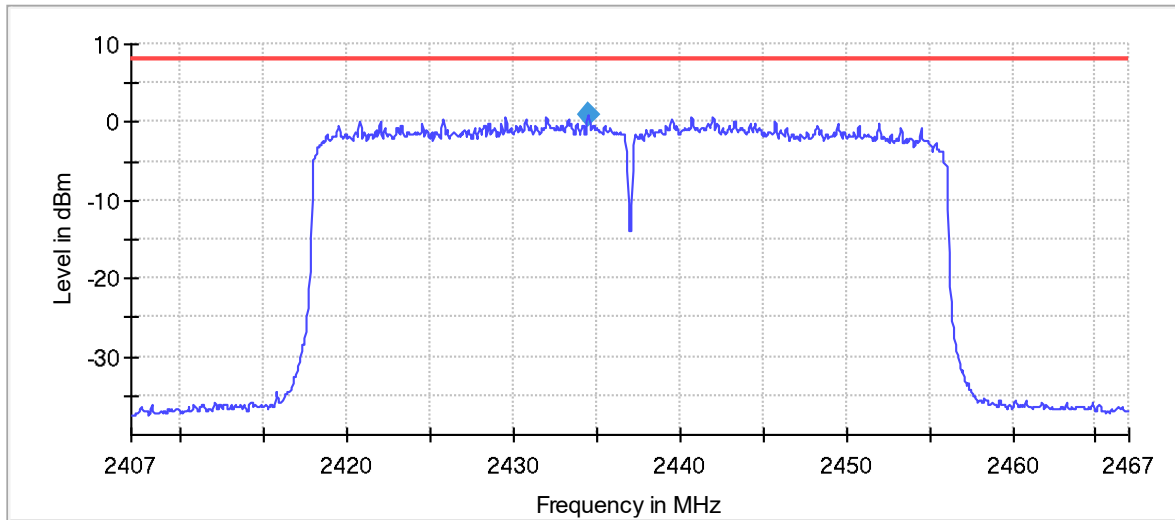
• MIMO 802.11 he40 – Power Spectral Density:

- Low Channel (3):



- Middle Channel (6):

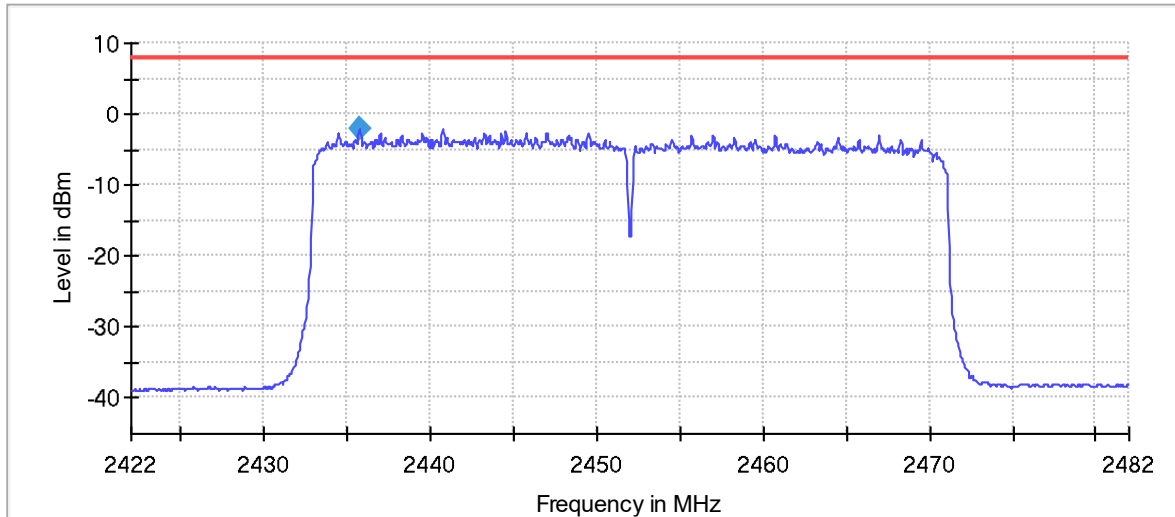
Power Spectral Density (AVGPSD-1)



— Limit    ◆ PSD    — Sum Level

- High Channel (9):

Power Spectral Density (AVGPSD-1)



— Limit    ◆ PSD    — Sum Level



## FCC 15.247 (d) Emission limitations radiated (Transmitter)

### SPECIFICATION:

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 ( $\mu\text{V}/\text{m}$ )	Field strength ( $\text{dB}\mu\text{V}/\text{m}$ )	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 - 25000	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:

The situation and orientation was 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 3 m for the frequency range 30 MHz-17 GHz and at distance of 1 m for the frequency range 17 GHz-26 GHz.

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.

- Preliminary tests determined the SISO worst case: ANT1.
- Preliminary tests determined the MIMO worst case: ANT0 & ANT1 & ANT2 & ANT3.

**Frequency range 30 MHz - 1 GHz (SISO worst case):**

The spurious frequencies do not depend neither on the operating channel nor the modulation mode.

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

Spurious Frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
53.183	25.72	V	Quasi-Peak
105.2235	31.26	V	Quasi-Peak
276.8165	31.60	H	Quasi-Peak
400.0065	37.14	V	Quasi-Peak
550.0170	45.73	V	Quasi-Peak

Measurement Uncertainty (dB)  $< \pm 5.1$

- **SISO 802.11 b (DSSS):**

**Frequency range 1 - 26 GHz:**

The results in the next tables show the maximum measured levels in the 1-26 GHz range including the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

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

- **LOW CHANNEL (1). Spurious frequencies closest to the limit:**

Spurious frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
2389.0000	57.76	V	Peak
2389.4800	46.48		Average
3618.0000	46.85	H	Peak
3849.5000	46.42	H	Peak
4824.0000	63.17	H	Peak
	50.52		Average
15400.0000	51.62	V	Peak

- MIDDLE CHANNEL(6). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
3655.5000	45.46	H	Peak
3850.0000	47.88	H	Peak
4873.5000	59.35	H	Peak
	45.03		Average
15400.0000	52.11	V	Peak

- HIGH CHANNEL (11). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2486.7590	62.33	V	Peak
2483.8380	51.05		Average
3692.5000	41.90	H	Peak
3850.0000	46.86	H	Peak
4929.5000	56.86	H	Peak
	51.89		Average
7387.0000	46.76	V	Peak
15400.0000	49.90	V	Peak

Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq \pm 5.13$   
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq \pm 5.08$

Verdict: PASS

**OFDM modes:**

For spurious emissions in the range 30 MHz - 26 GHz (except field strength at the band edges that was performed for all modes) a preliminary scan was performed to determine the worst case mode.

Spurious emissions in the Restricted Bands 2.31-2.39 GHz and 2.4835-2.5 GHz are measured for all modes. The following results and plots are for the OFDM worst case mode.

- **SISO OFDM worst case mode: 802.11 g.**
- **SISO 802.11 g (OFDM worst case for spurious emissions):**

**Frequency range 1 - 26 GHz:**

The results in the next tables show the maximum measured levels in the 1-26 GHz range including the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

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

- LOW CHANNEL (1). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
2389.8000	62.52	V	Peak
2389.9600	46.55		Average
3849.5000	46.82	H	Peak
4817.0000	63.48	H	Peak
	52.91		Average
7255.0000	57.43	H	Peak
	45.40		Average
15400.0000	51.52	V	Peak

- CHANNEL (2). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
2386.6830	60.29	V	Peak
5389.9600	49.13		Average

- CHANNEL (3). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
2389.5600	61.16	V	Peak
2388.9210	48.85		Average

- CHANNEL (4). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Polarization	Detector
2389.8000	60	V	Peak
2389.8800	48.67		Average

- CHANNEL (5). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.2410	63.69	H	Peak
2388.3620	48.86		Average

- MIDDLE CHANNEL (6). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.8800	60.63	V	Peak
2386.5200	48.60		Average
2495.4710	56.63	V	Peak
2493.9530	43.59		Average
3849.5000	46.59	H	Peak
4872.0000	54.83	H	Peak
	49.87		Average
15400.0000	51.08	V	Peak

- CHANNEL (7). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2485.2060	61.89	V	Peak
2486.2280	50.49		Average

- CHANNEL (8). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.9700	61.82	V	Peak
2484.1180	50.70		Average

- CHANNEL (9). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.5140	61.39	V	Peak
2488.0740	50.44		Average

- CHANNEL (10). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.4810	64.30	V	Peak
2483.6070	51.52		Average

- HIGH CHANNEL (11). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.6570	64.07	V	Peak
2483.5910	47.84		Average
3692.5000	40.76	H	Peak
3850.0000	48.37	H	Peak
4918.5000	57.73	H	Peak
	48.31		Average
7389.0000	53.94	H	Peak
	42.95		Average
12312.5000	52.49	V	Peak
15400.0000	49.68	V	Peak

Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq$ ± 5.13  
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq$ ± 5.08

Verdict: PASS

- **MIMO 802.11 n20 (OFDM):**

The results in the next tables show the maximum measured levels in the Restricted Bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Spurious frequencies with peak levels above the average limit (54 dB $\mu$ V/m at 3 m) are measured with average detector for checking compliance with the average limit.

- RESTRICTED BAND 2.31-2.39 GHz.

LOW CHANNEL (1). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2388.2000	66.52	V	Peak
2388.4400	49.64		Average

CHANNEL (2). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.9600	66.47	V	Peak
	50.35		Average

CHANNEL (3). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2388.6000	65.98	V	Peak
2389.4000	51.88		Average

CHANNEL (4). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2384.2000	66.79	V	Peak
2389.5600	51.96		Average

CHANNEL (5). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2388.3600	68.30	V	Peak
2389.0000	53		Average

MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.4000	63.85	V	Peak
2389.8000	51.44		Average

- RESTRICTED BAND 2.4835-2.5 GHz.

MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.6240	68.57	H	Peak
2483.5910	53.37		Average

CHANNEL (8). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.5580	66.41	V	Peak
2485.2240	52.85		Average

CHANNEL (9). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.9930	66.96	V	Peak
2484.9440	53.50		Average

CHANNEL (10). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.5910	66.66	V	Peak
2487.8640	53.32		Average

HIGH CHANNEL (11). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.6400	65.67	V	Peak
2483.5580	53.68		Average

Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq \pm 5.13$   
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq \pm 5.08$

Verdict: PASS



- **MIMO 802.11 n40 (OFDM):**

The results in the next tables show the maximum measured levels in the Restricted Bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Spurious frequencies with peak levels above the average limit (54 dB $\mu$ V/m at 3 m) are measured with average detector for checking compliance with the average limit.

\* *Duty Cycle Correction (dB): 0.11.*

- RESTRICTED BAND 2.31-2.39 GHz.

LOW CHANNEL (3). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2386.3600	67.97	67.97	V	Peak
2386.0400	51	51.11		Average

CHANNEL (4). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.9600	68.05	68.05	V	Peak
2389.7200	51.04	51.15		Average

CHANNEL (5). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2389.9600	71.29	71.29	V	Peak
2389.5600	51.32	51.43		Average

MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2387.1600	68.12	68.12	V	Peak
2387.9600	49.23	49.34		Average

- RESTRICTED BAND 2.4835-2.5 GHz.

MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2486.1150	70.45	70.45	V	Peak
2485.9670	51.61	51.72		Average

CHANNEL (7). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2483.5910	67.79	67.79	V	Peak
2483.6570	51.58	51.69		Average

CHANNEL (8). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2487.7320	65.88	65.88	V	Peak
2483.6210	51.83	51.94		Average

HIGH CHANNEL (9). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.7460	61.57	61.57	V	Peak
2484.4160	51.66	51.77		Average

Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq \pm 5.13$   
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq \pm 5.08$

Verdict: PASS

**OFDMA modes:**

For spurious emissions in the range 30 MHz - 26 GHz (except field strength at the band edges that was performed for all modes) a preliminary scan was performed to determine the worst case mode.

Spurious emissions in the Restricted Bands 2.31-2.39 GHz and 2.4835-2.5 GHz are measured for all modes. The following results and plots are for the OFDMA worst case mode.

- **MIMO OFDMA worst case mode: 802.11 he20.**
- **MIMO 802.11 he20 (OFDMA worst case for spurious emissions):**

**Frequency range 1 - 26 GHz:**

The results in the next tables show the maximum measured levels in the 1-26 GHz range including the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

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

\* Duty Cycle Correction (dB): 0.26.

- LOW CHANNEL (1). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2388.8400	69.43	69.43	V	Peak
2389.5600	53.31	53.57		Average
3617.5000	44.10	44.10	H	Peak
3849.5000	45.60	45.60	H	Peak
4820.0000	61.21	61.21	H	Peak
	53.33	53.59		Average
7250.5000	56.62	56.62	H	Peak
	47.46	47.72		Average
14472.0000	54.57	54.57	V	Peak
	47.46	47.46		Average
15400.0000	50.44	50.44	V	Peak

- CHANNEL (2). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.9600	65.25	65.25	V	Peak
2389.8800	50.19	50.44		Average

- CHANNEL (3). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.9600	62.91	62.91	V	Peak
2389.8800	49.28	49.54		Average

- CHANNEL (4). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.1600	62.84	62.84	V	Peak
2389.5600	48.99	49.25		Average

- CHANNEL (5). RESTRICTED BAND 2.31-2.39 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.4000	64.50	64.50	V	Peak
2389.9960	50.04	50.30		Average

- MIDDLE CHANNEL (6). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.2400	62.09	62.09	V	Peak
2389.4800	49.38	49.64		Average
2484.5480	66.56	66.56	V	Peak
2483.5250	53.05	53.31		Average
3655.5000	44.83	44.83	H	Peak
3849.5000	44.76	44.76	H	Peak
4882.0000	60.60	60.60	H	Peak
	46.86	47.12		Average
15400.0000	49.68	49.68	V	Peak

- CHANNEL (7). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2485.5710	66.81	66.81	V	Peak
2485.0260	52.68	52.96		Average

- CHANNEL (8). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2483.5580	65.71	65.71	V	Peak
2483.9370	52.08	52.34		Average

- CHANNEL (9). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2483.6900	64.42	64.42	H	Peak
2483.7060	51.79	52.05		Average

- CHANNEL (10). RESTRICTED BAND 2.4835-2.5 GHz. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.5480	66.79	66.79	H	Peak
	53.45	53.71		Average

- HIGH CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484.779	64.39	64.39	H	Peak
	53.32	0.26		Average
3850.000	43.13	43.13	H	Peak
4918.000	55.57	55.57	H	Peak
	44.61	44.87		Average
7399.500	46.53	46.53	H	Peak
15400.000	48.77	48.77	V	Peak

Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq$ ± 5.13  
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq$ ± 5.08

Verdict: PASS

- **MIMO 802.11 he40 (OFDMA):**

The results in the next tables show the maximum measured levels in the Restricted Bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

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

\* Duty Cycle Correction (dB): 0.43.

- RESTRICTED BAND 2.31-2.39 GHz. LOW CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2386.3600	67.97	67.97	V	Peak
2386.0400	51	51.43		Average

- CHANNEL (4). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.9600	68.05	68.05	V	Peak
2389.7200	51.04	51.47		Average

- CHANNEL (5). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2389.9600	71.29	71.29	V	Peak
2389.5600	51.32	51.75		Average

- MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2387.1600	68.12	68.12	V	Peak
2387.9600	49.23	49.66		Average

- RESTRICTED BAND 2.4835-2.5 GHz.

- MIDDLE CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2486.1150	70.45	70.45	V	Peak
2485.9670	51.61	52.04		Average

- CHANNEL (7). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dBµV/m)	Corrected Emission Level (dBµV/m)	Polarization	Detector
2483.5910	67.79	67.79	V	Peak
2483.6570	51.58	52.01		Average

- CHANNEL (8). Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2487.7320	65.88	65.88	V	Peak
2483.6210	52.83	53.26		Average

- HIGH CHANNEL. Spurious frequencies closest to the limit:

Spurious frequency (MHz)	Emission Level (dB $\mu$ V/m)	Corrected Emission Level (dB $\mu$ V/m)	Polarization	Detector
2484 (*)	63.30	63.30	V	Peak
	53.25	53.68		Average
2485.7820	65.13	65.13	V	Peak
2485.7390	53.54	53.97		Average

(\*) For emissions in restricted band, the integration method was used according to ANSI C63.10-2013 Section 11.13.3.

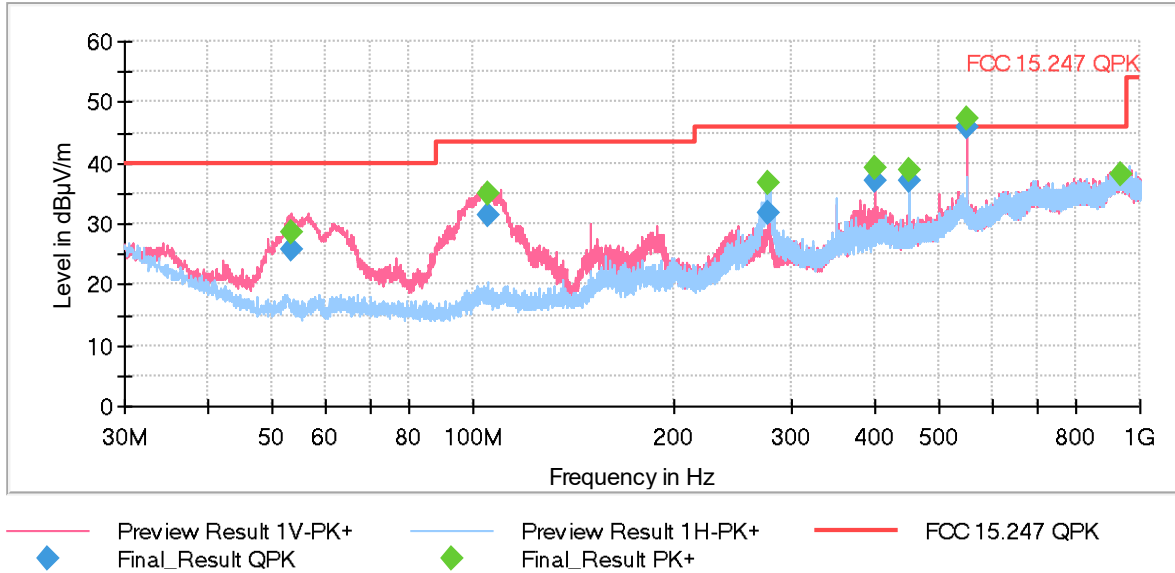
Measurement Uncertainty (dB): 1 GHz  $\leq$  f  $\leq$  17 GHz:  $\leq \pm 5.13$   
 17 GHz  $\leq$  f  $\leq$  26 GHz:  $\leq \pm 5.08$

Verdict: PASS

**SISO worst case:**

**FREQUENCY RANGE 30 MHz - 1 GHz (SISO worst case):**

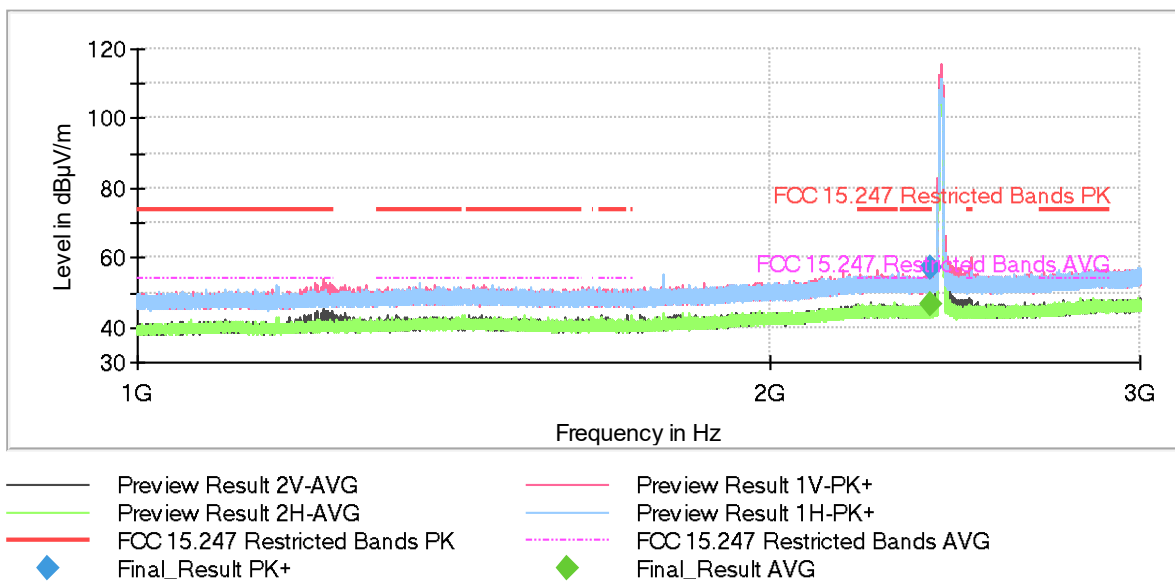
The spurious frequencies detected do not depend neither on the operating channel nor the modulation mode.



• **SISO 802.11 b (DSSS):**

**FREQUENCY RANGE 1 - 3 GHz (SISO 802.11 b (DSSS)):**

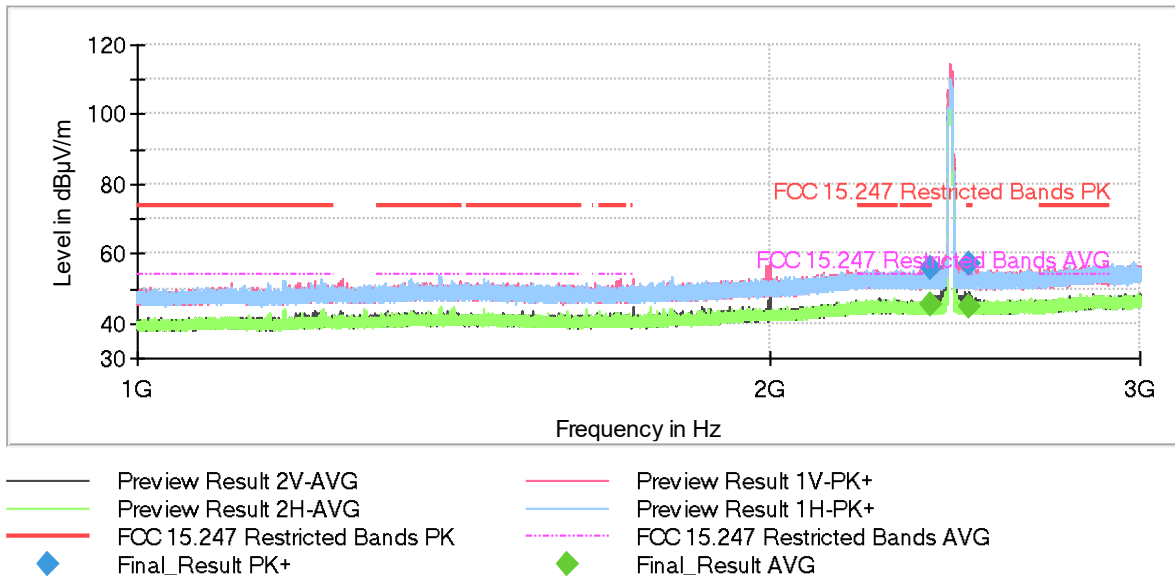
- Low Channel:



The peak above the limit is the carrier frequency.

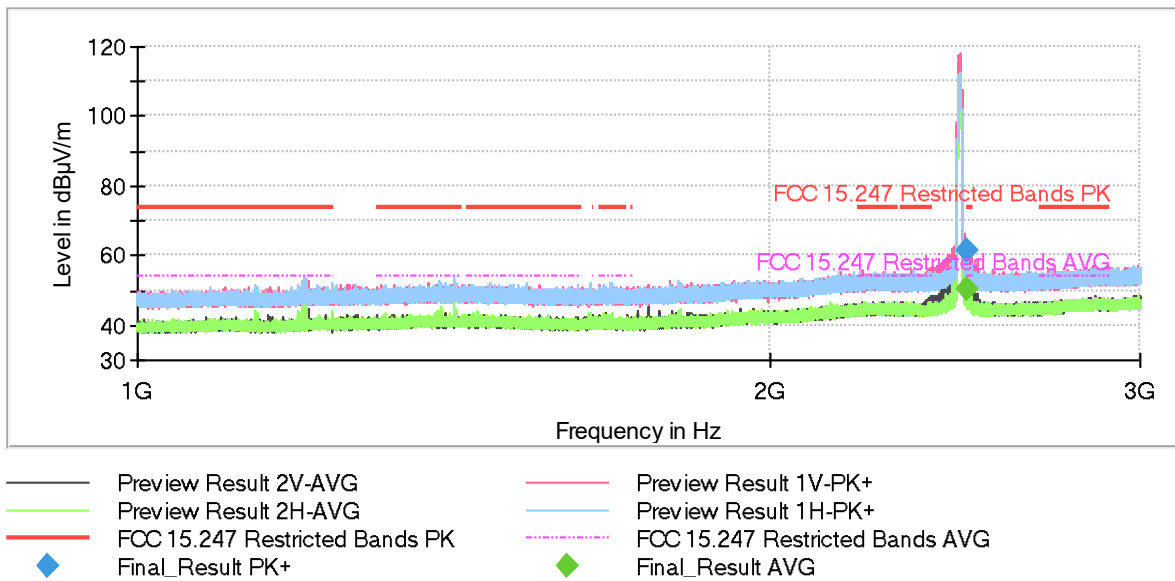


- Middle Channel:



The peak above the limit is the carrier frequency.

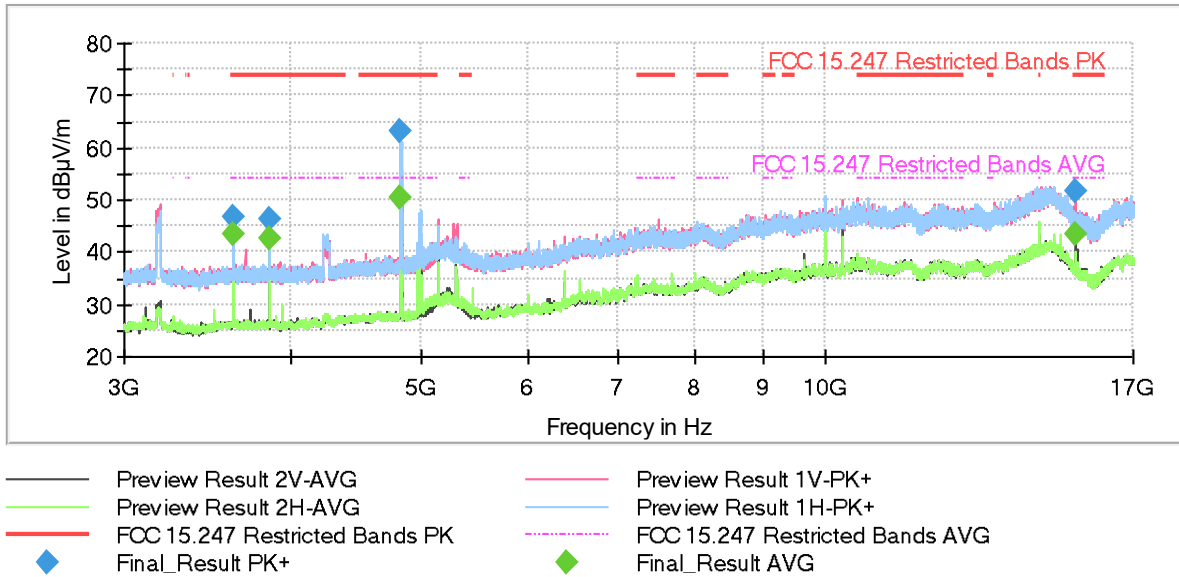
- High Channel:



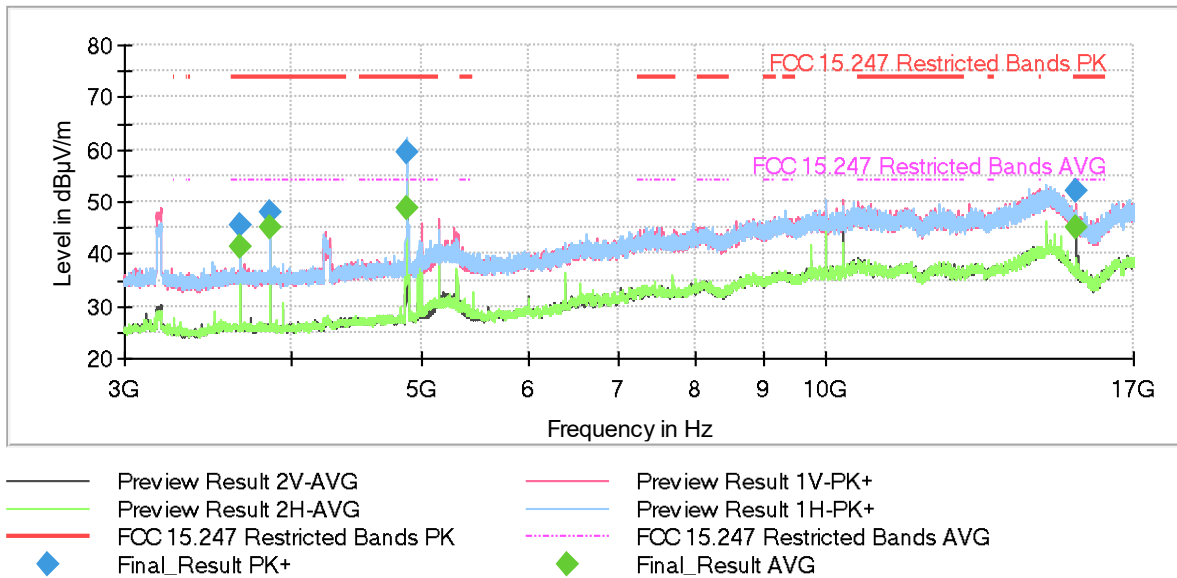
The peak above the limit is the carrier frequency.

**FREQUENCY RANGE 3 - 17 GHz (SISO 802.11 b (DSSS)):**

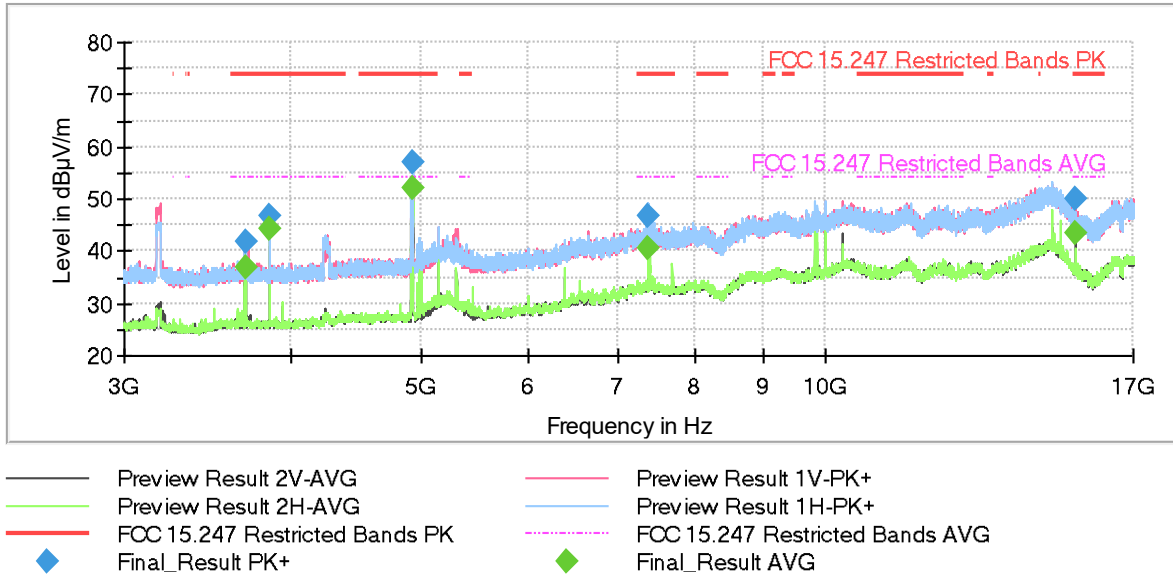
- Low Channel:



- Middle Channel:

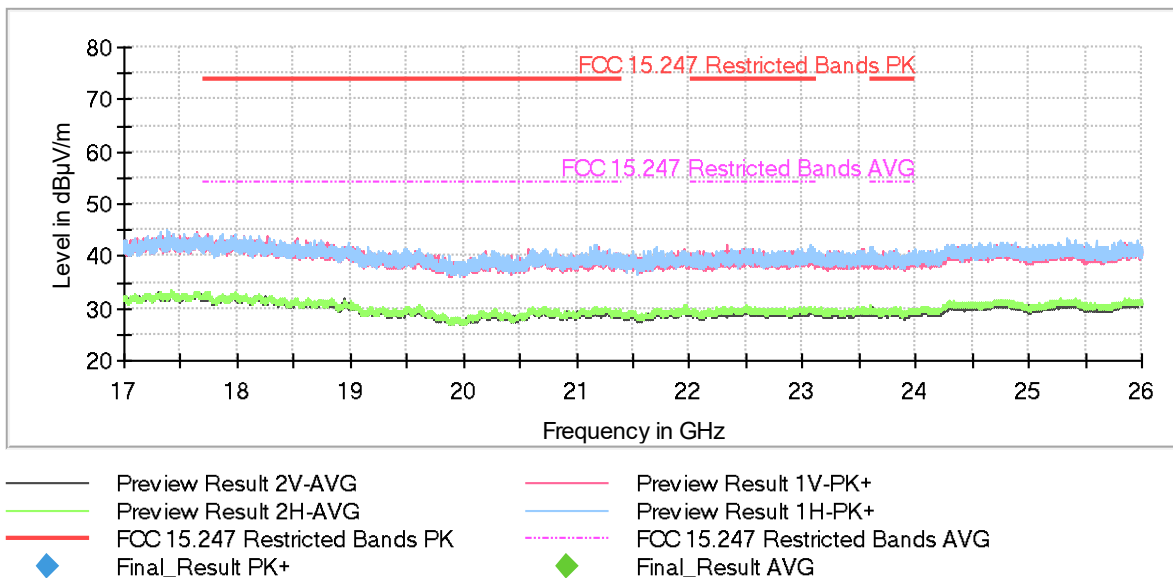


- High Channel:



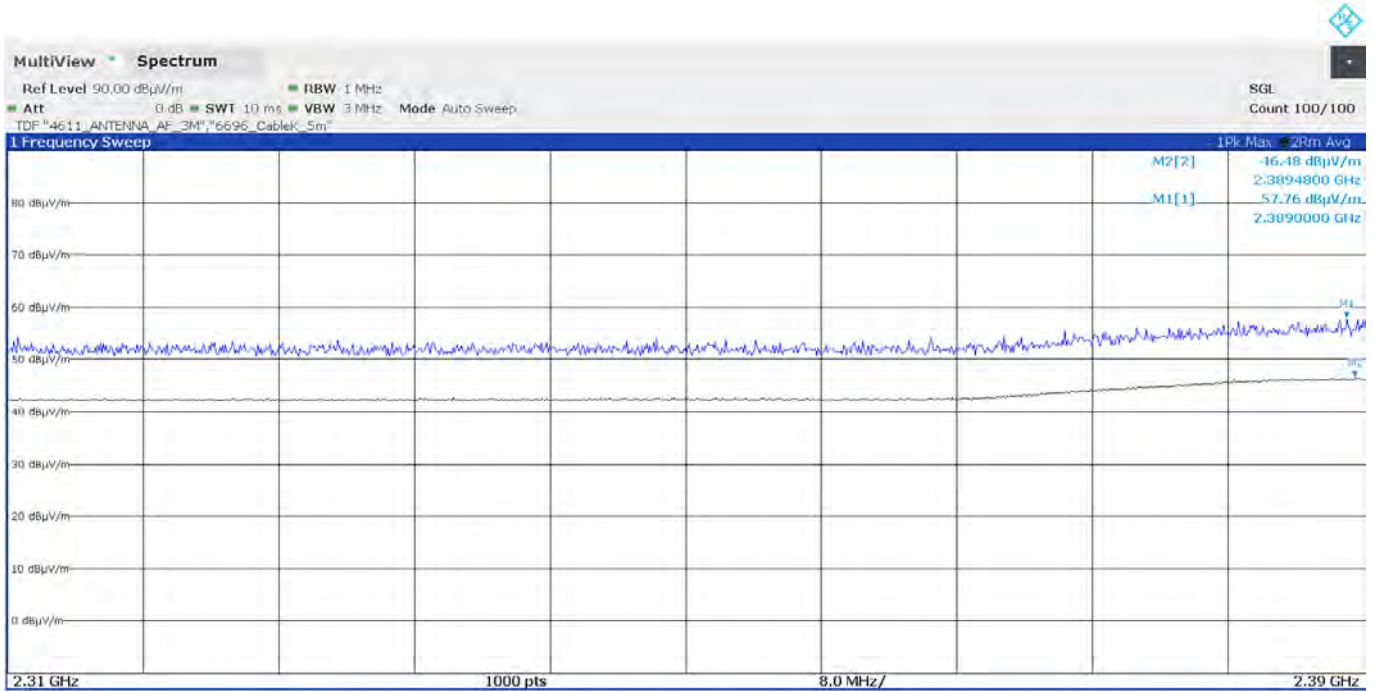
**FREQUENCY RANGE 17 - 26 GHz (SISO 802.11 b (DSSS)):**

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



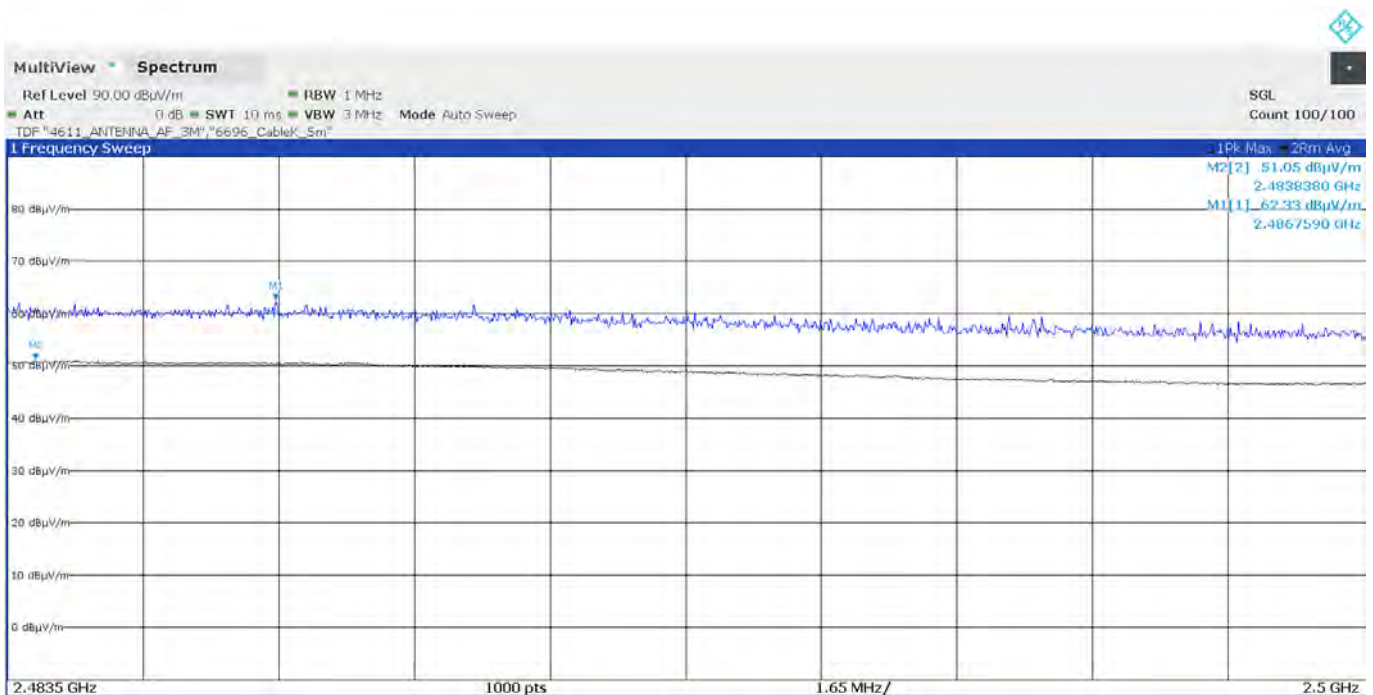
**RESTRICTED BAND 2.31-2.39 GHz (SISO 802.11 b (DSSS)):**

- Low Channel:



**RESTRICTED BAND 2.4835-2.5 GHz (SISO 802.11 b (DSSS)):**

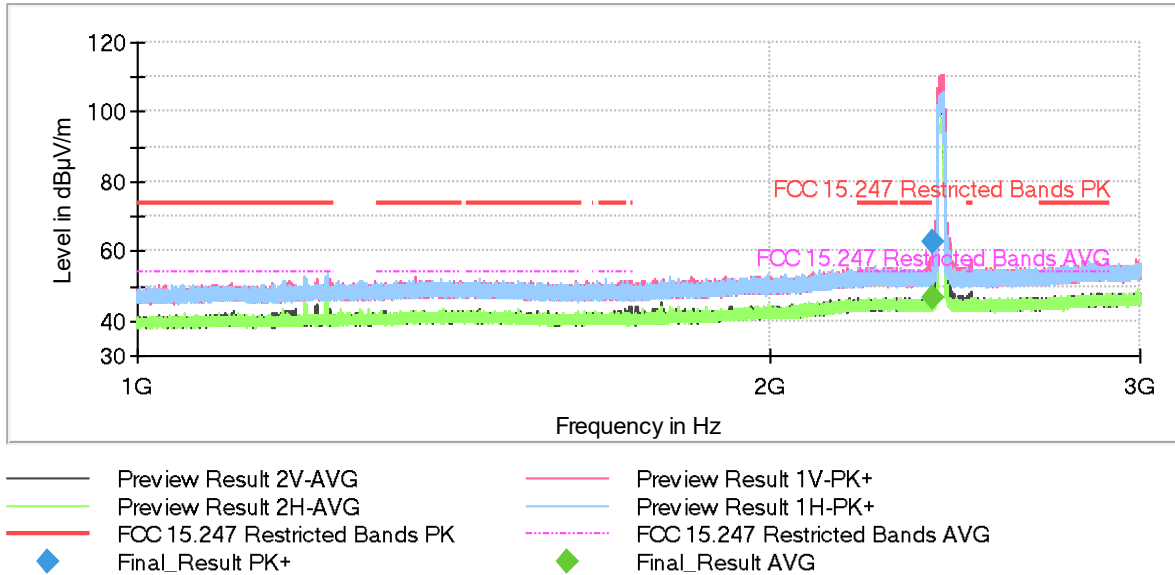
- High Channel:



• 802.11 g (OFDM worst case for spurious emissions):

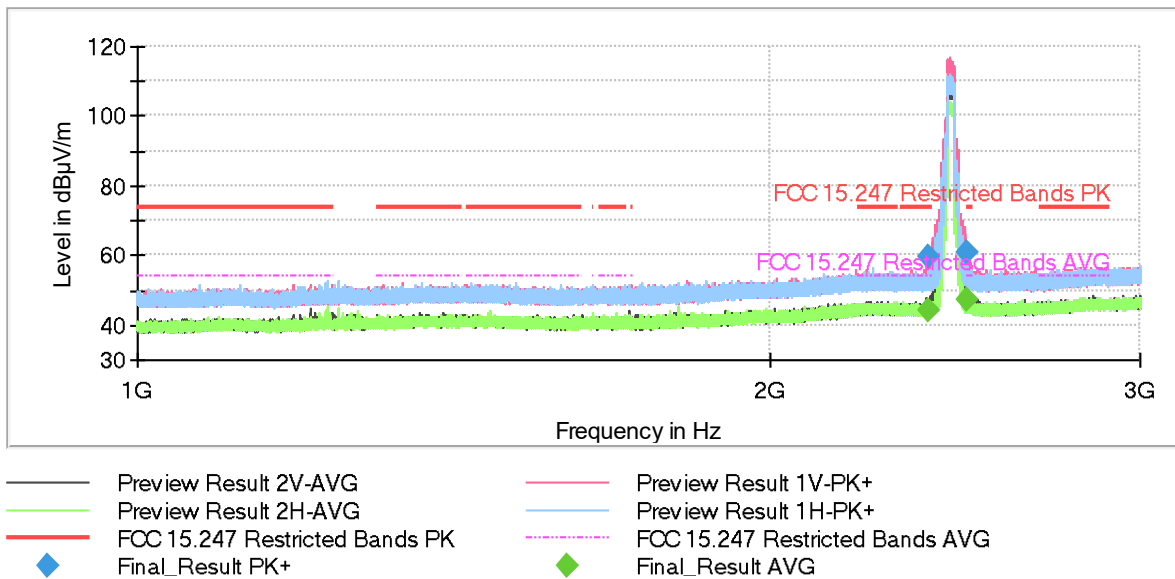
**FREQUENCY RANGE 1 - 3 GHz (SISO OFDM worst case for spurious emissions):**

- Low Channel:



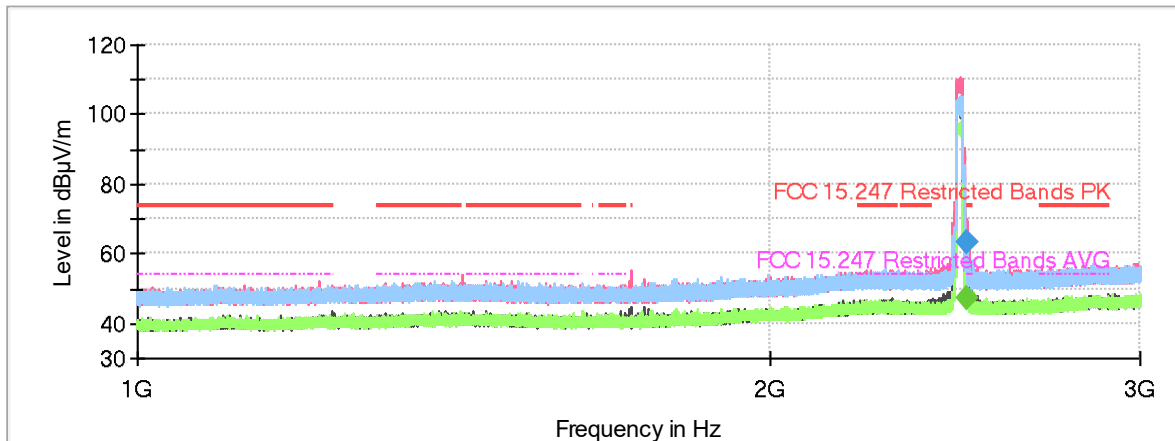
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

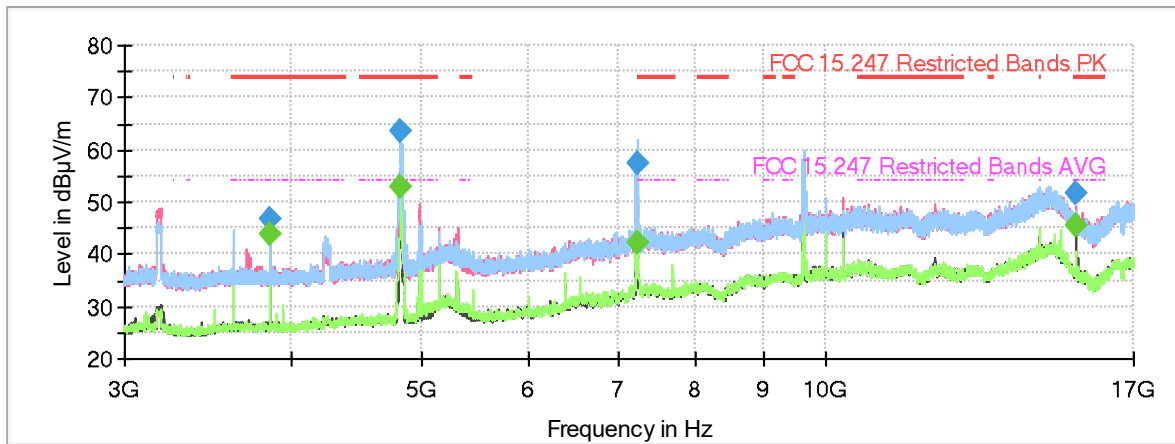
- High Channel:



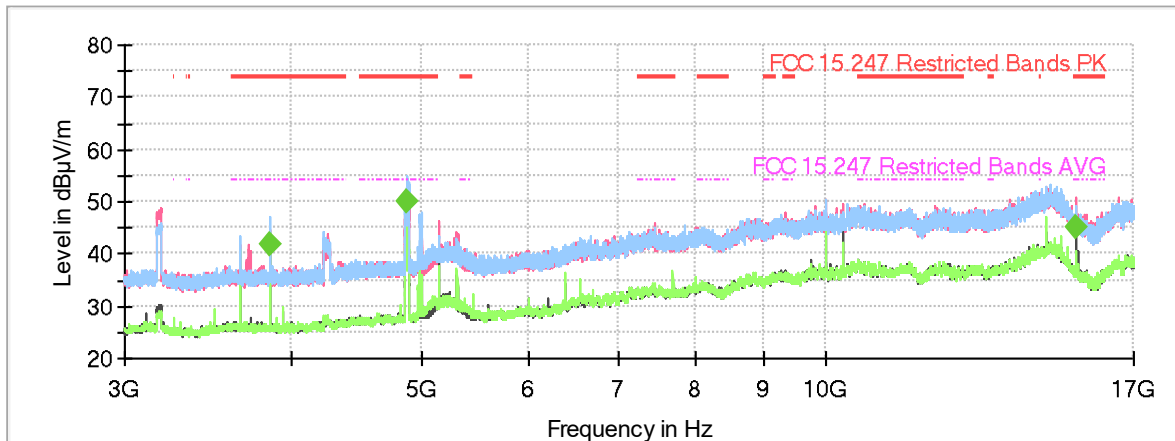
The peak above the limit is the carrier frequency.

**FREQUENCY RANGE 3 - 17 GHz (SISO OFDM worst case for spurious emissions):**

- Low Channel:

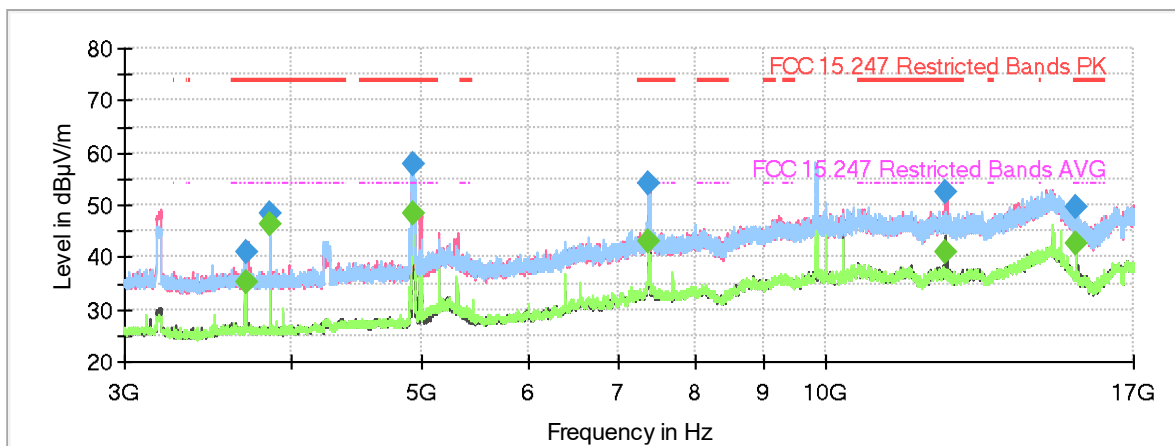


- Middle Channel:



- Preview Result 2V-AVG
- Preview Result 2H-AVG
- Preview Result 1V-PK+
- Preview Result 1H-PK+
- FCC 15.247 Restricted Bands PK
- FCC 15.247 Restricted Bands AVG
- ◆ Final\_Result PK+
- ◆ Final\_Result AVG

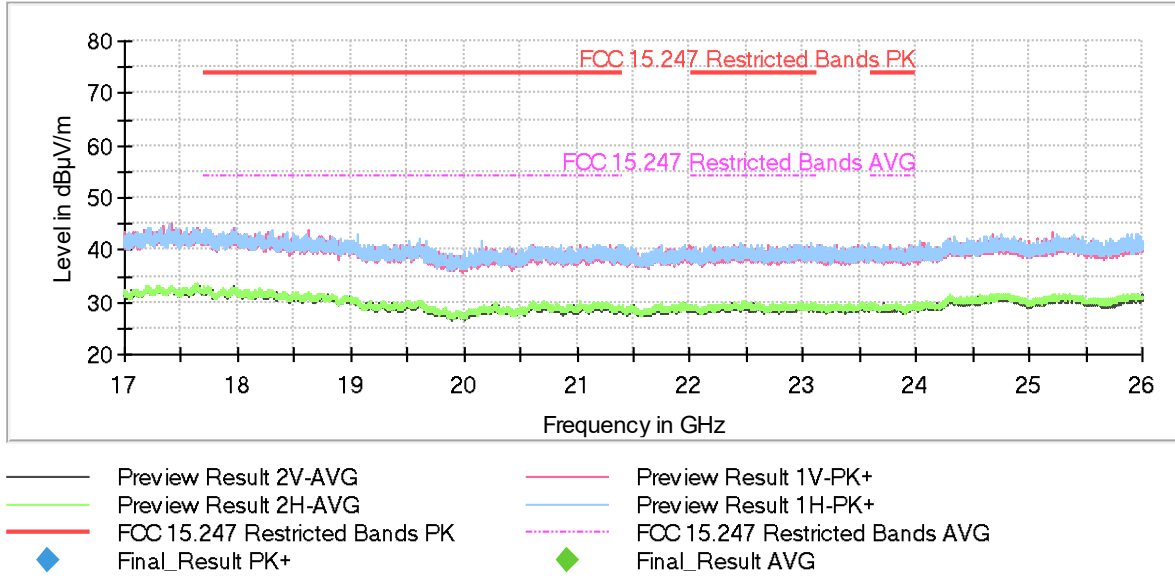
- High Channel:



- Preview Result 2V-AVG
- Preview Result 2H-AVG
- Preview Result 1V-PK+
- Preview Result 1H-PK+
- FCC 15.247 Restricted Bands PK
- FCC 15.247 Restricted Bands AVG
- ◆ Final\_Result PK+
- ◆ Final\_Result AVG

**FREQUENCY RANGE 17 - 26 GHz (SISO OFDM worst case for spurious emissions):**

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

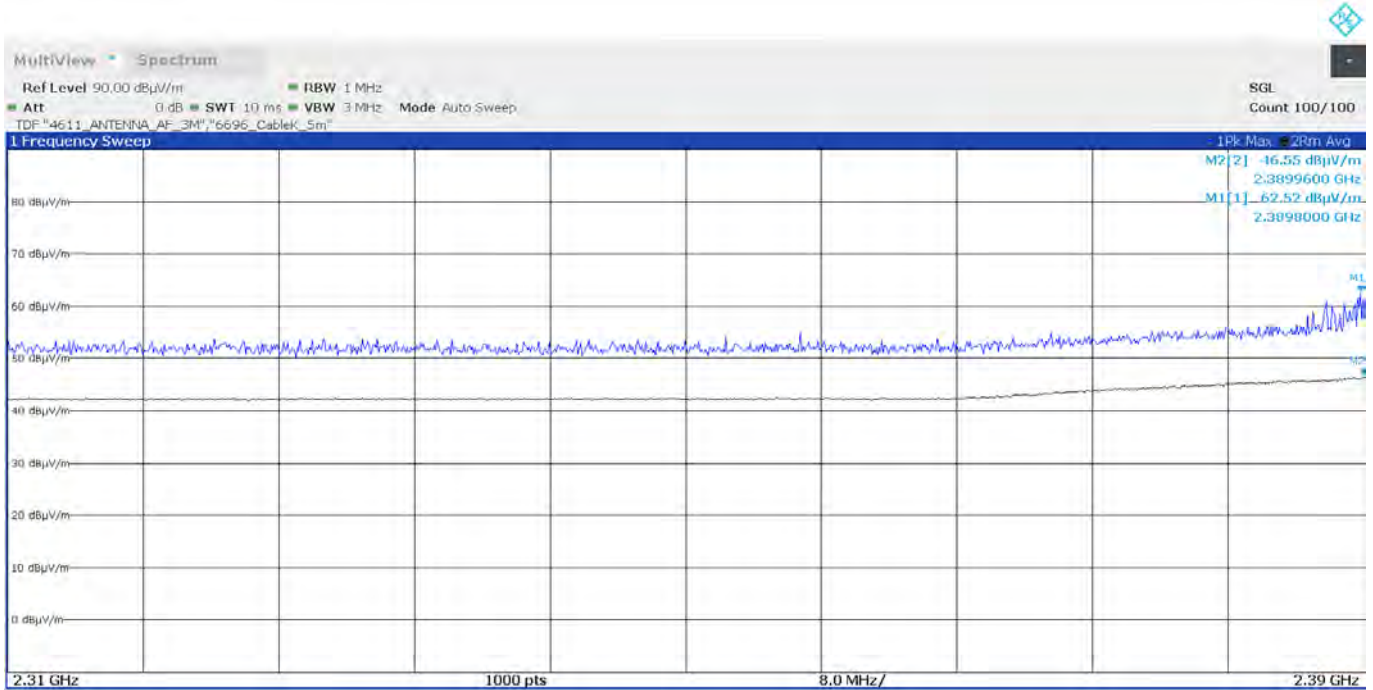




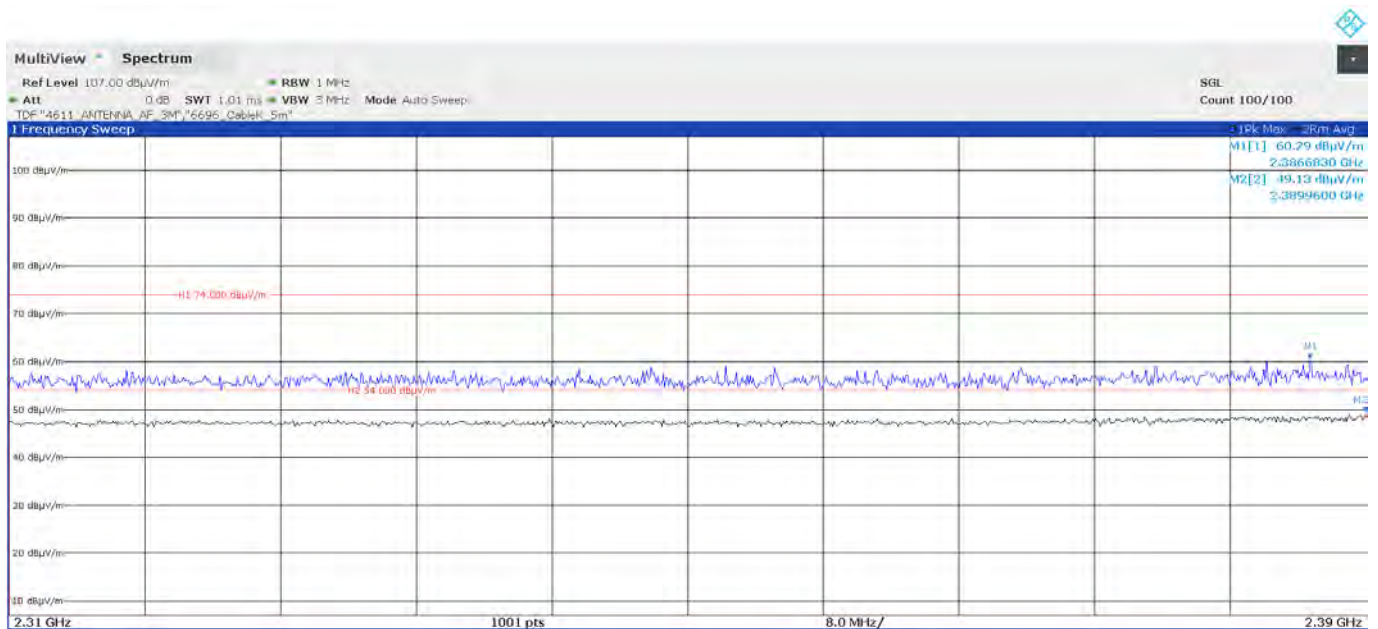
### RESTRICTED BAND 2.31-2.39 GHz

- SISO 802.11 g (OFDM):

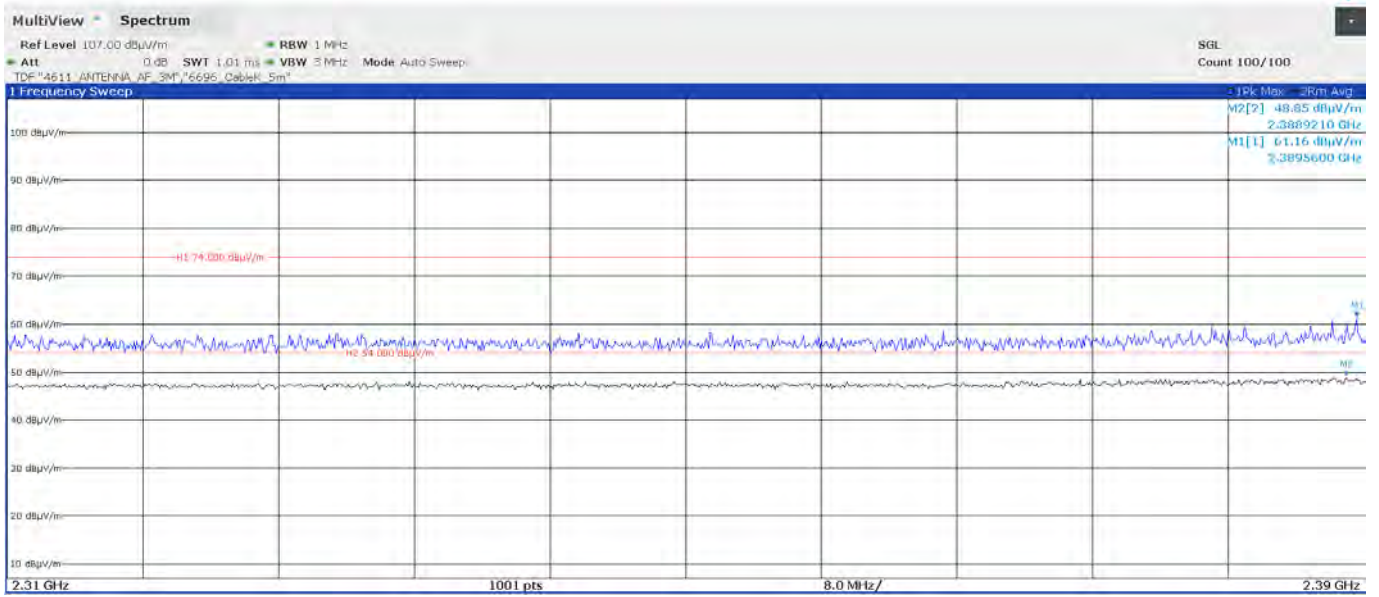
- Low Channel:



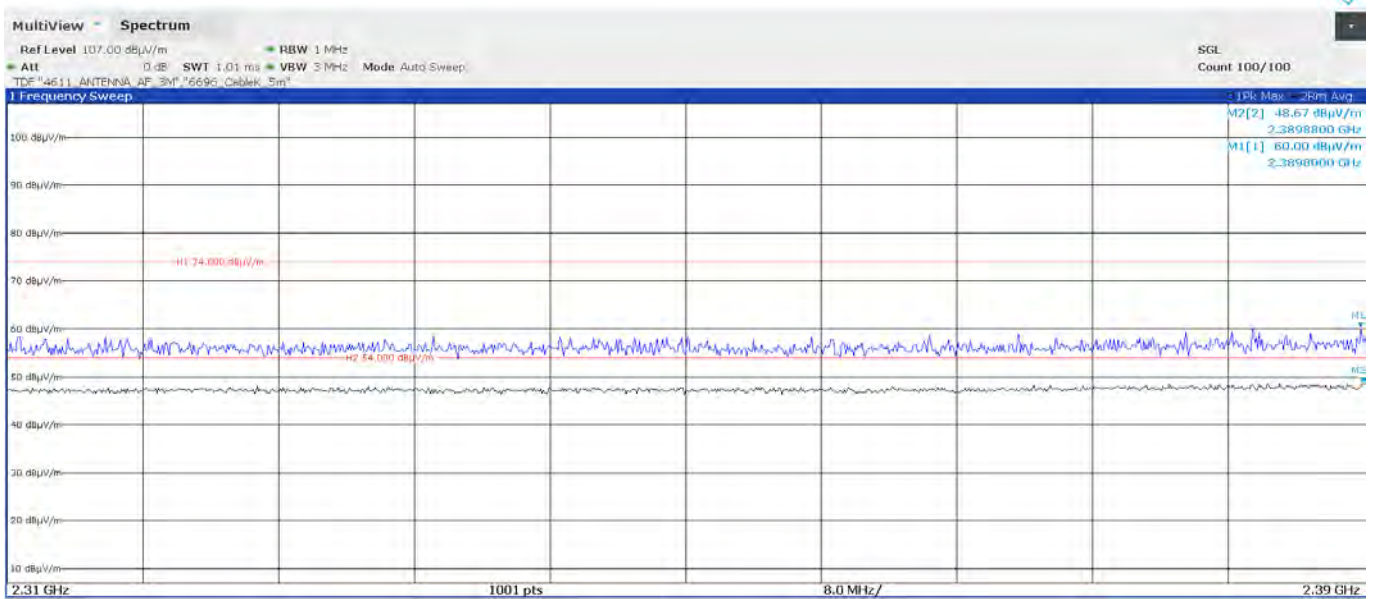
- Channel (2):



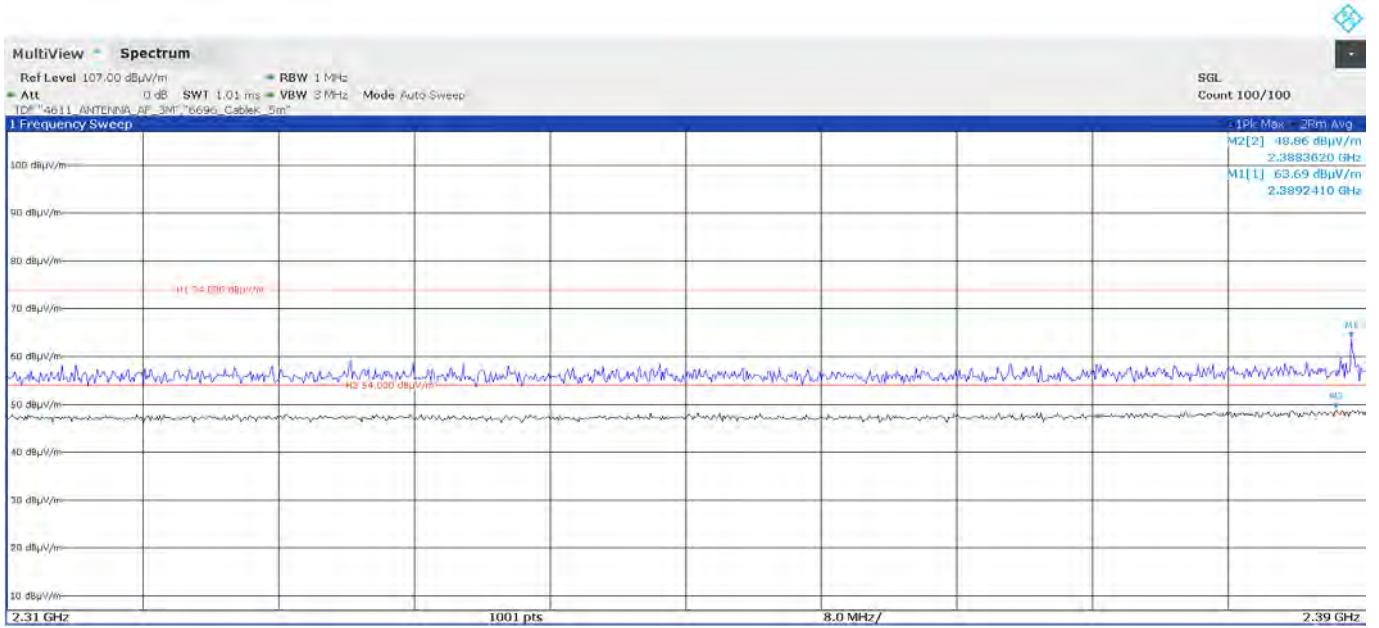
- Channel (3):



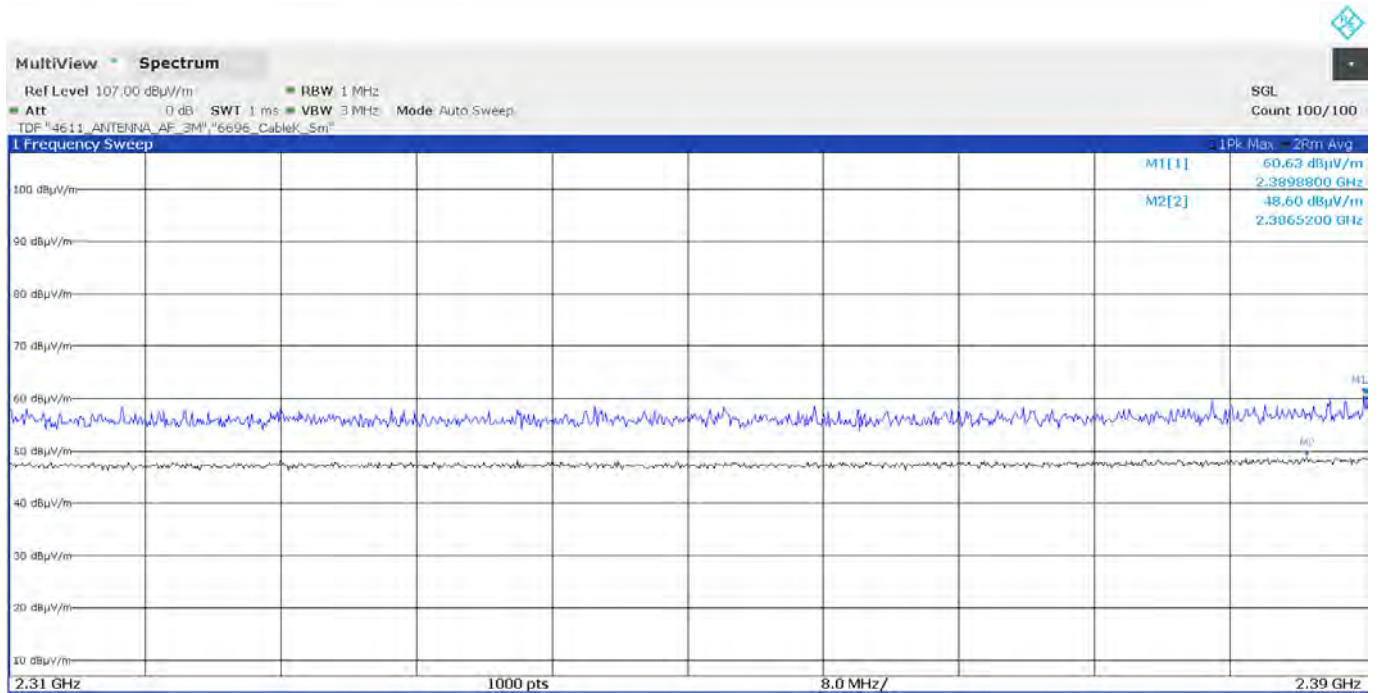
- Channel (4):



- Channel (5):

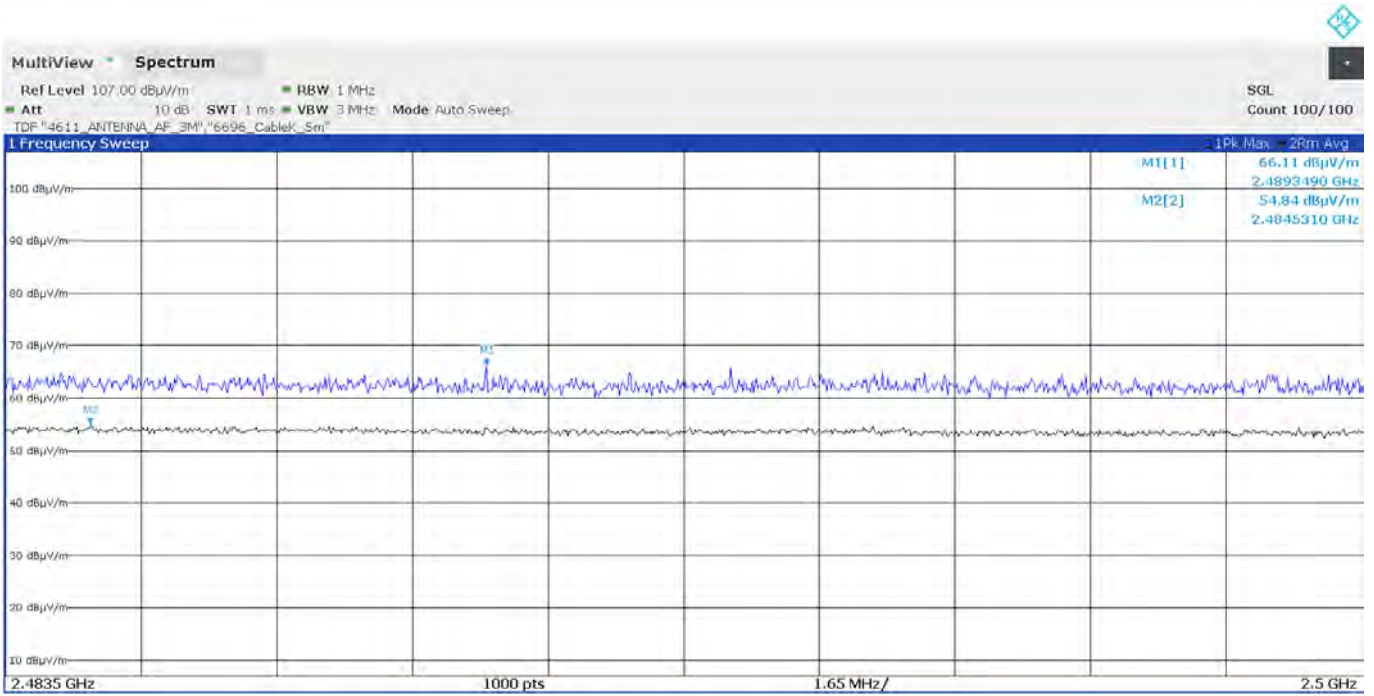


- Middle Channel:

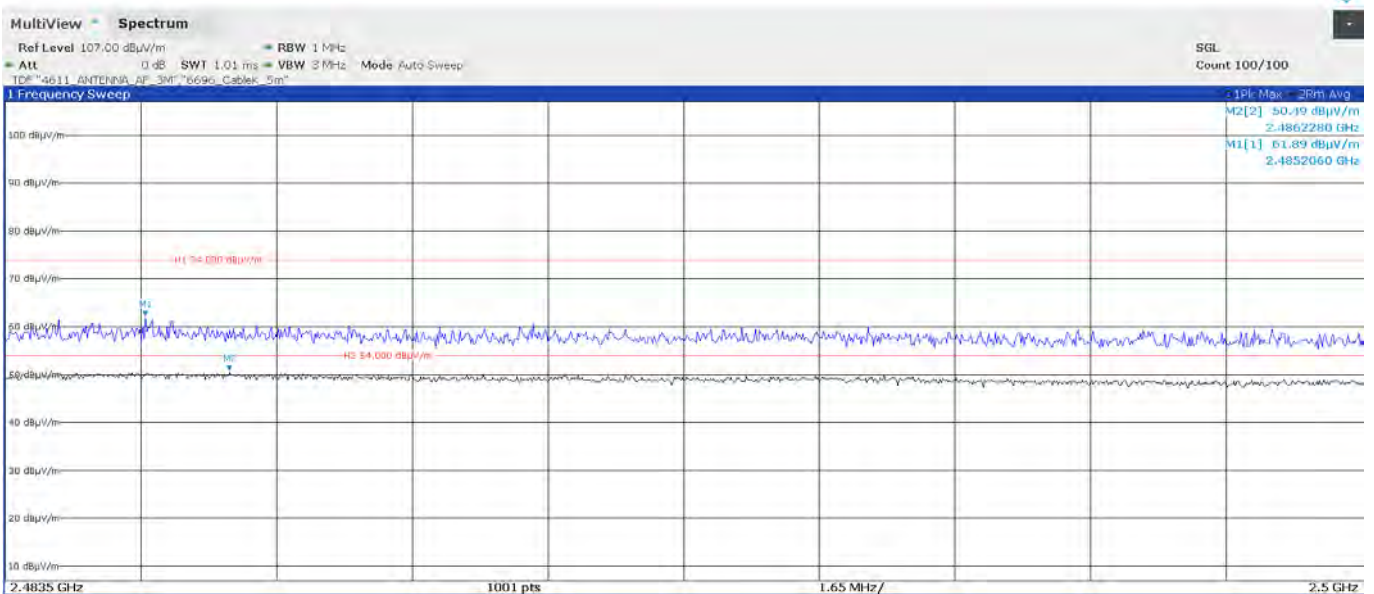


**RESTRICTED BAND 2.4835-2.5 GHz:**

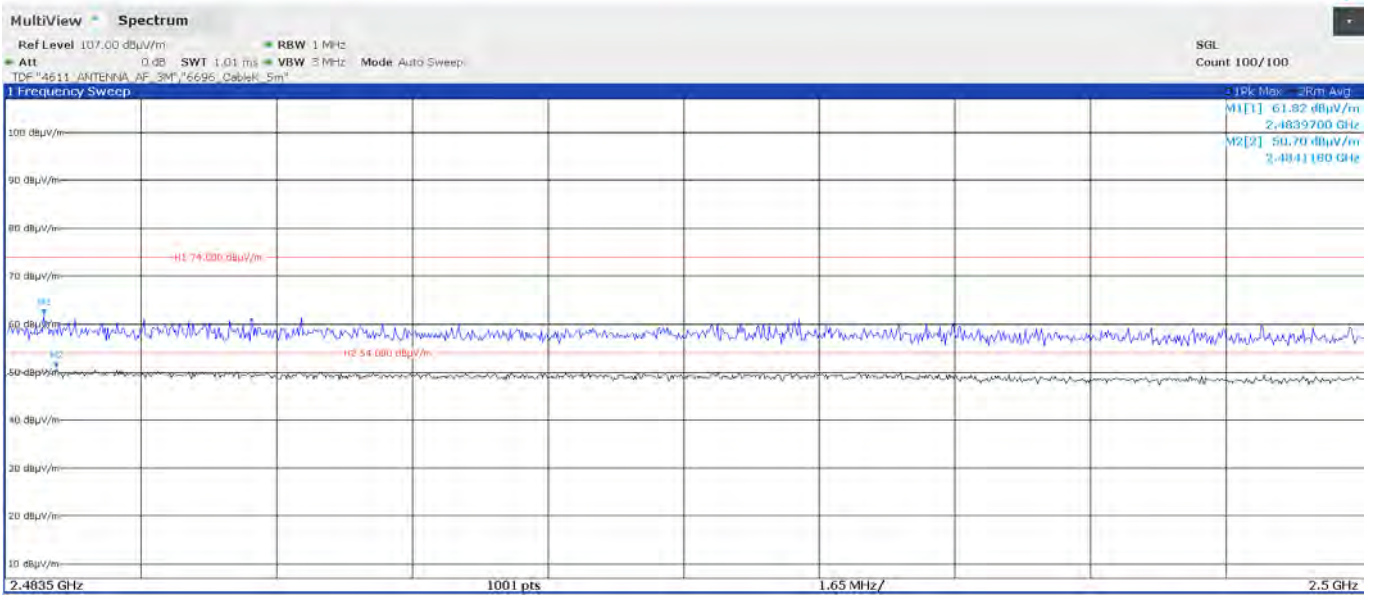
- Middle Channel:



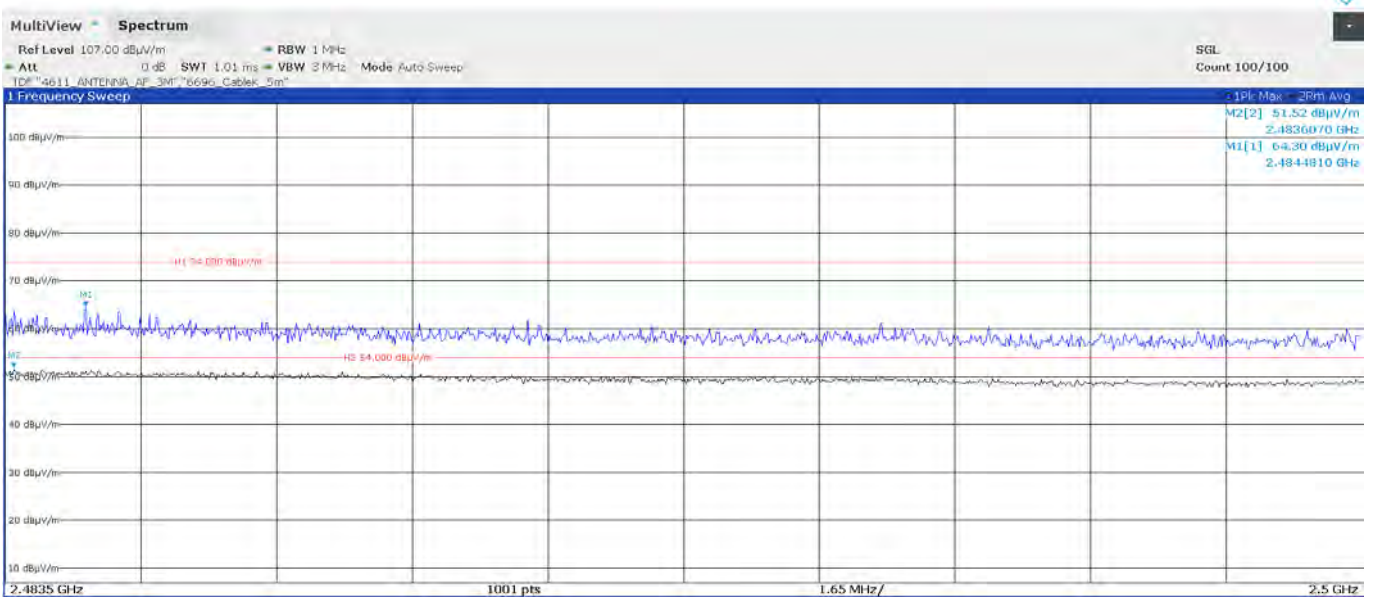
- Channel (7):



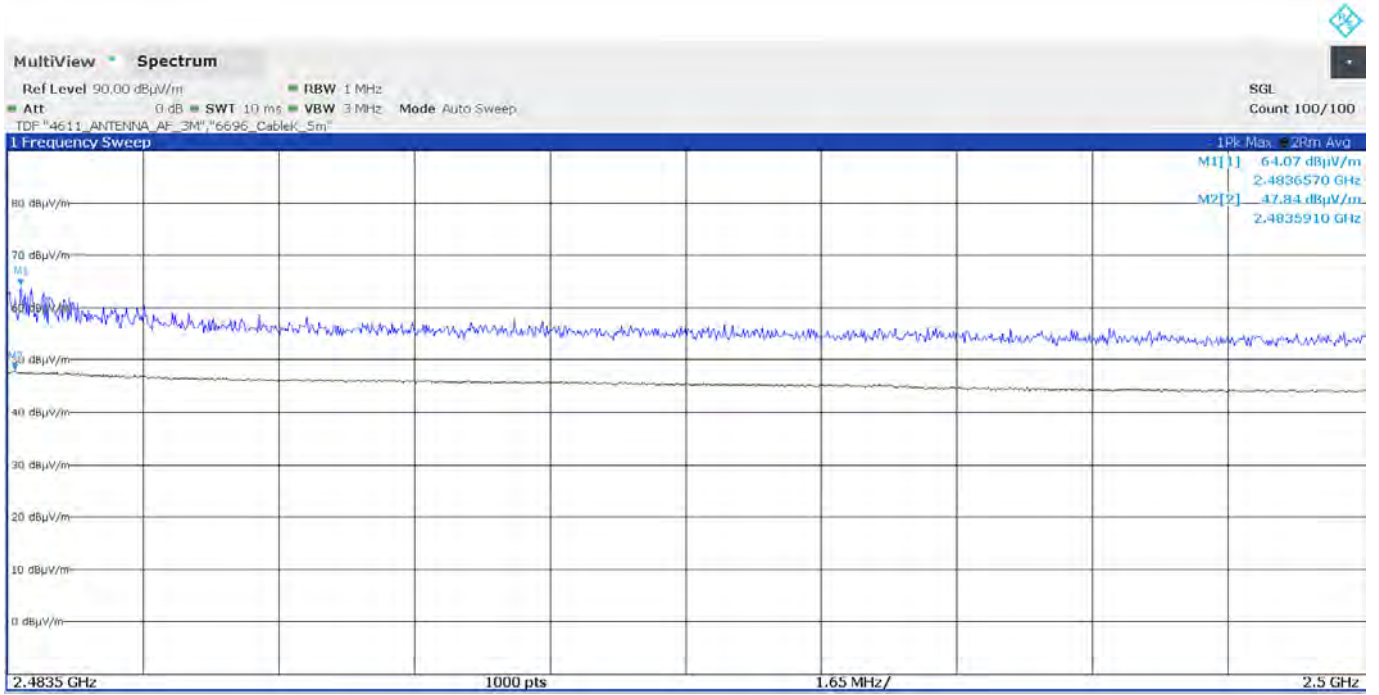
- Channel (8):



- Channel (10):

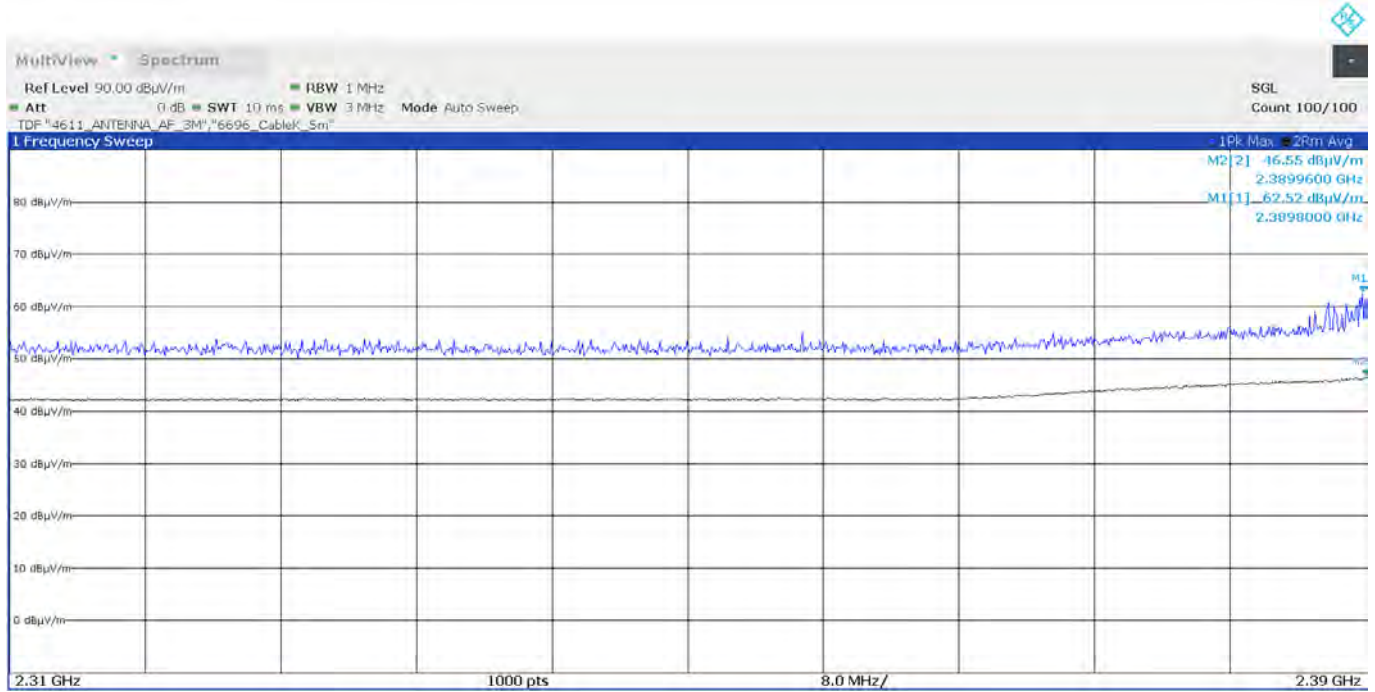


- High Channel:

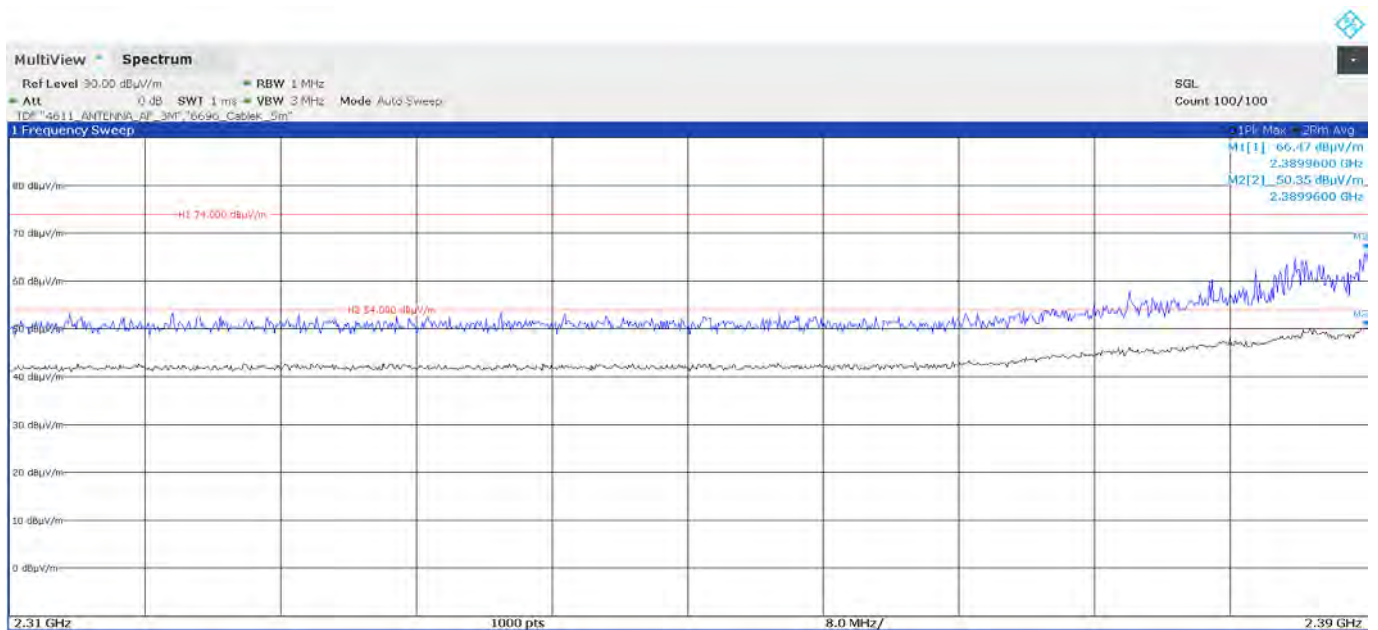


- MIMO 802.11 n20 (OFDM):

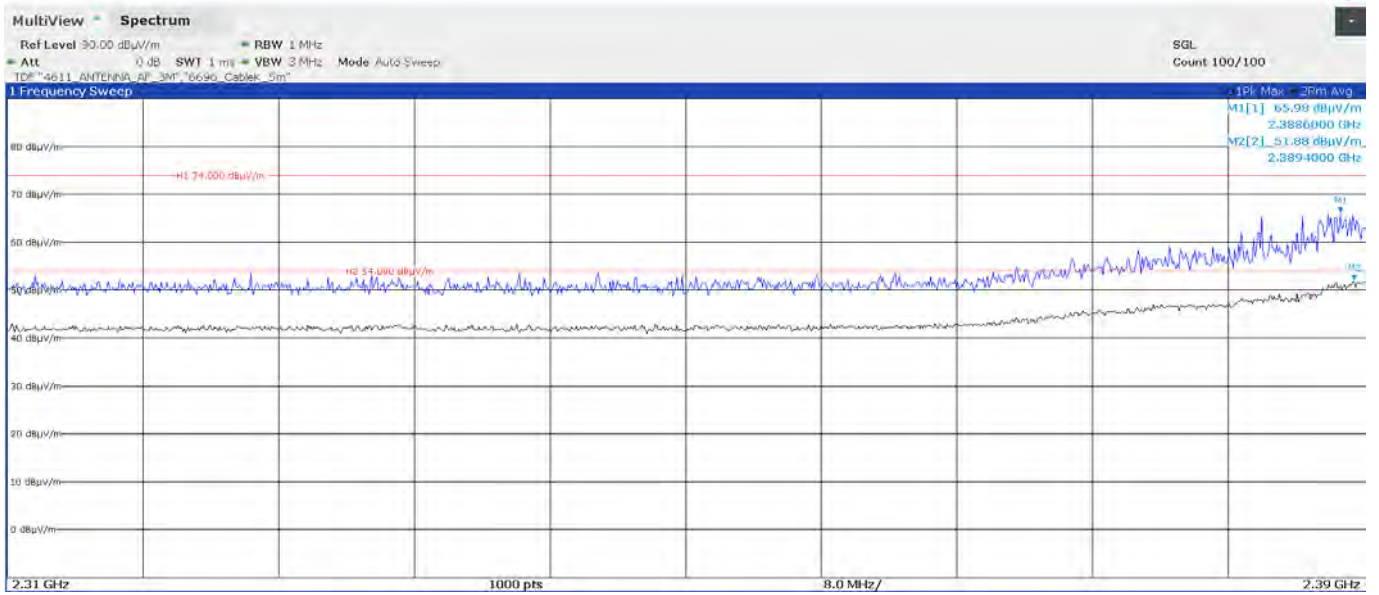
- Low Channel:



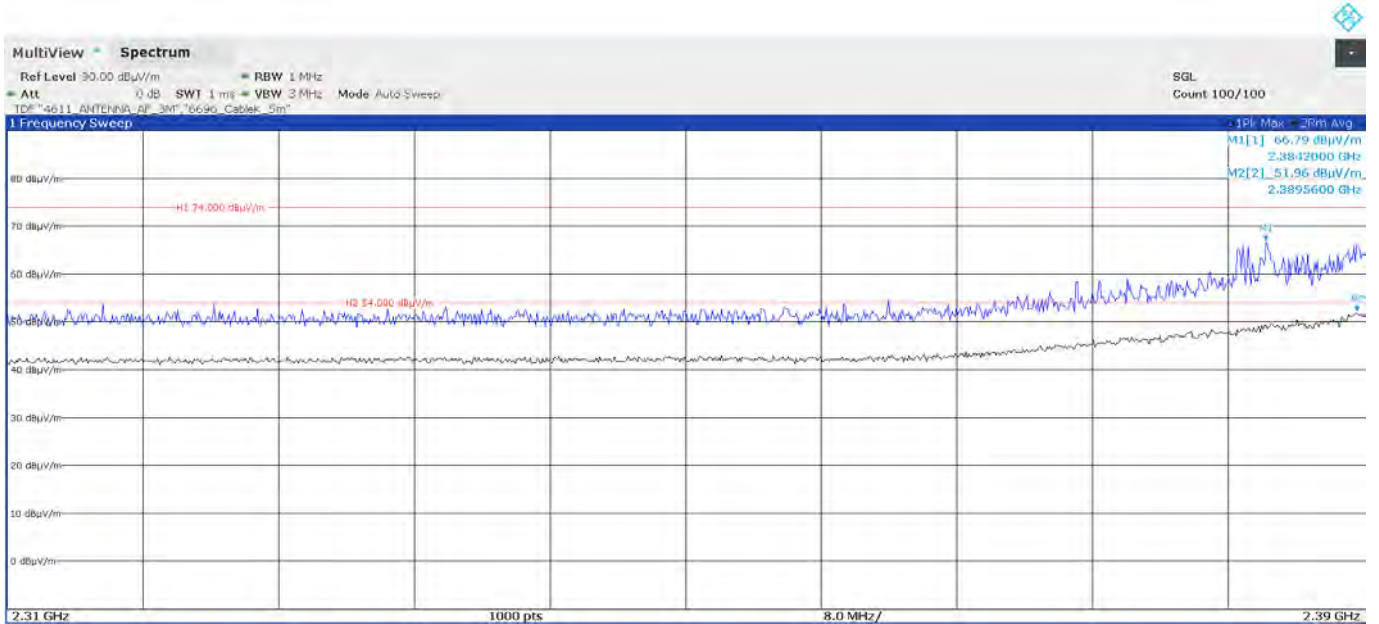
- Channel (2):



- Channel (3):

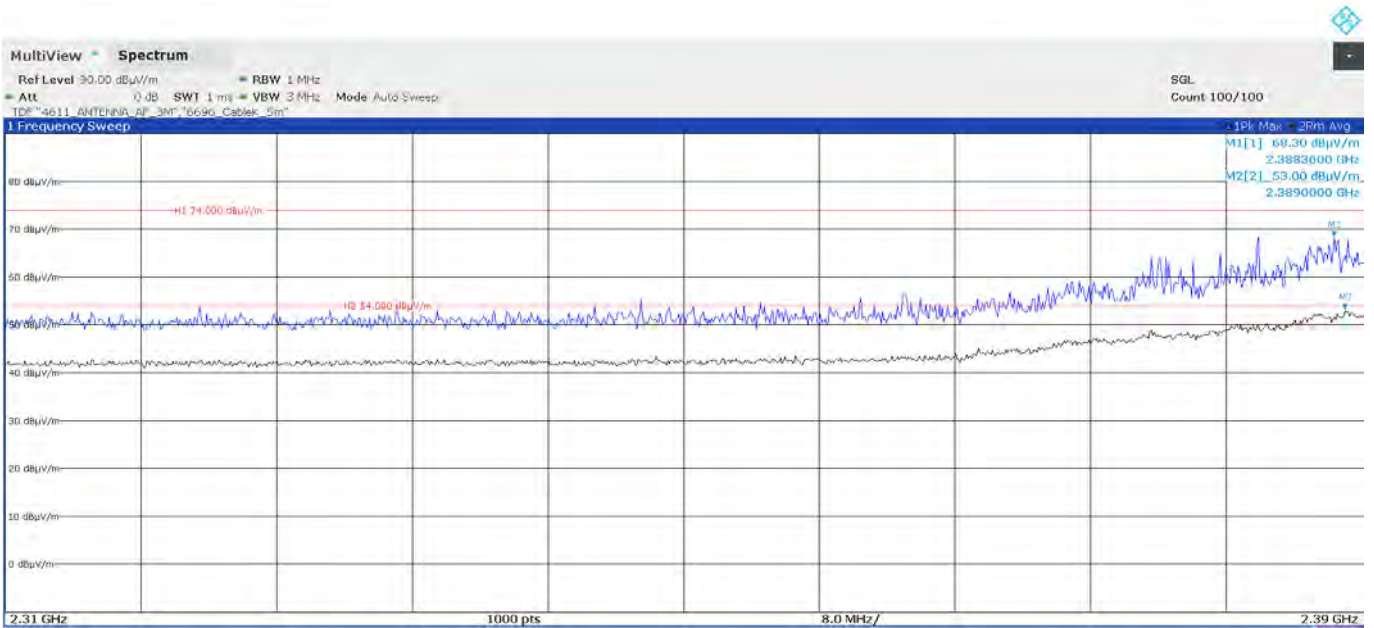


- Channel (4):

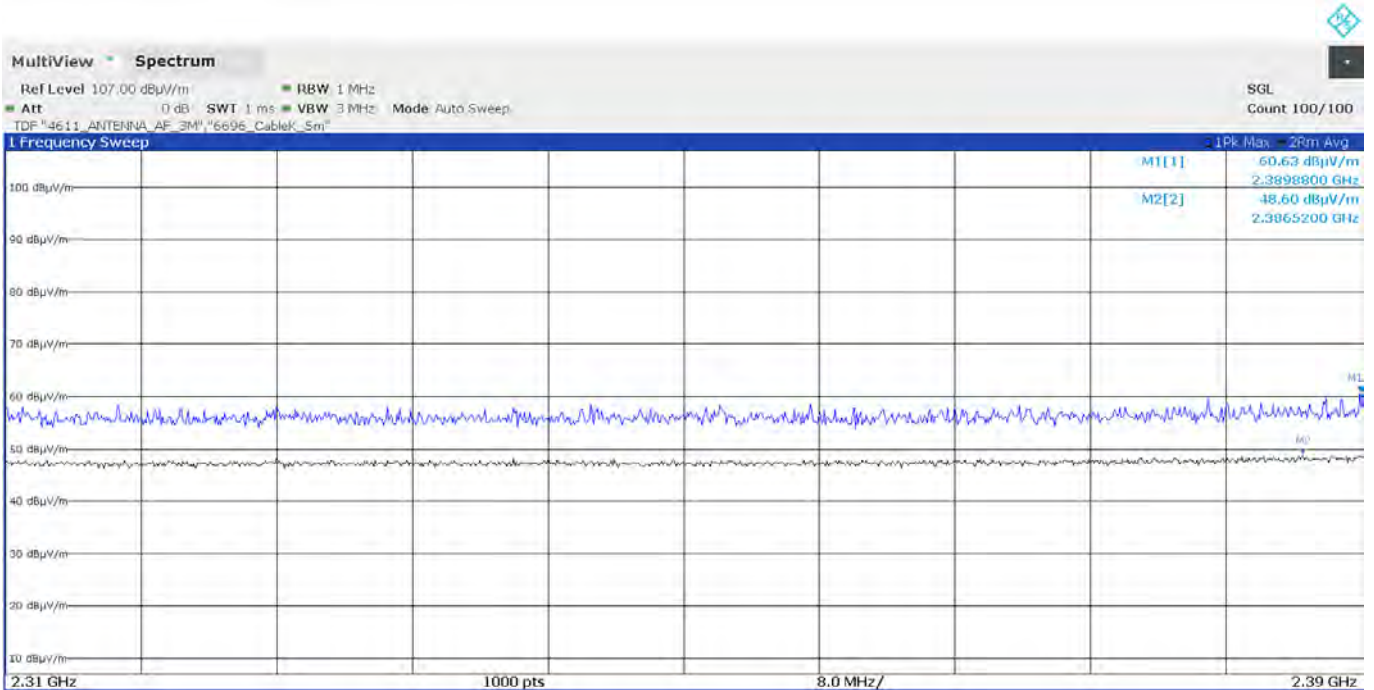




- Channel (5):

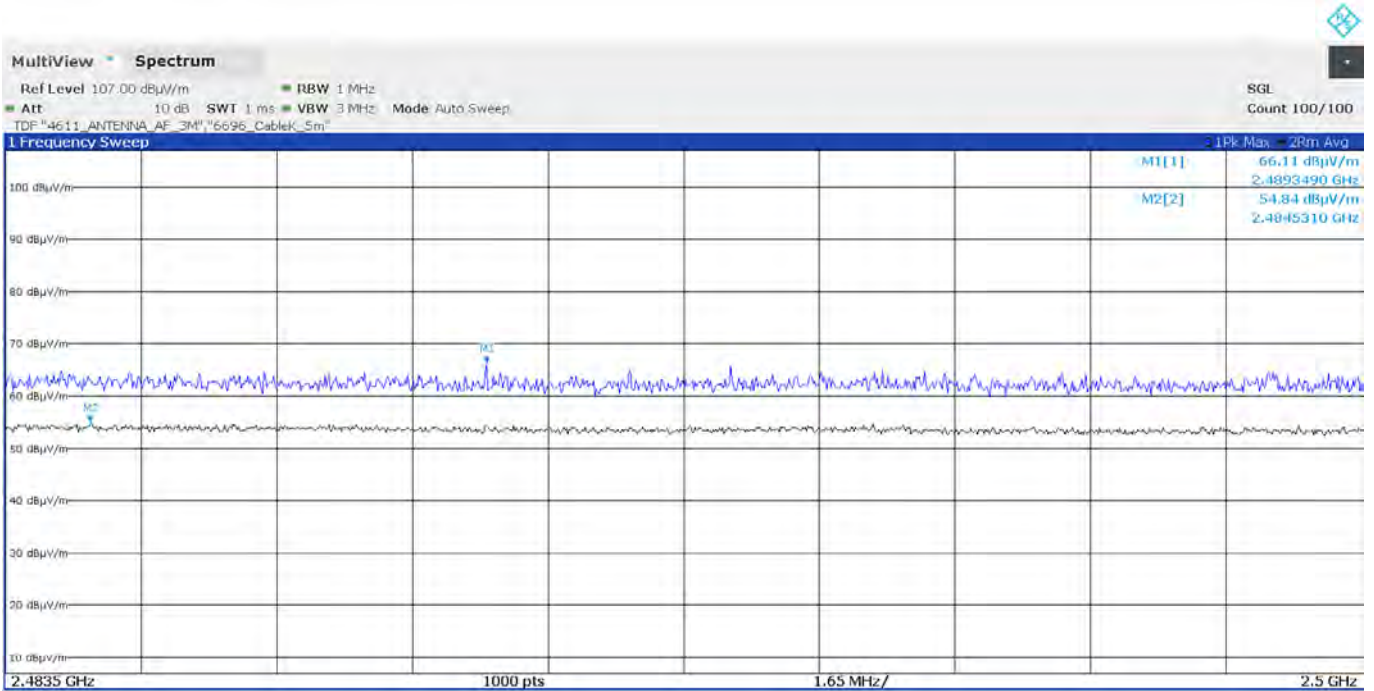


- Middle Channel:

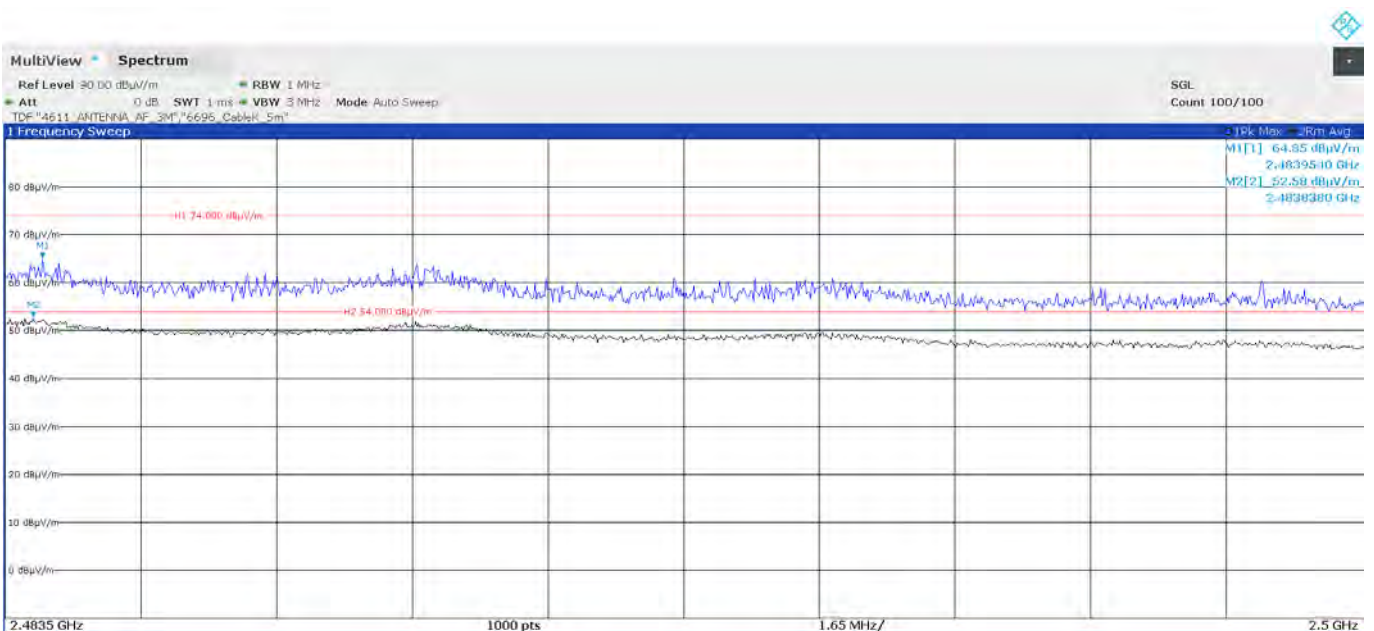


**RESTRICTED BAND 2.4835-2.5 GHz:**

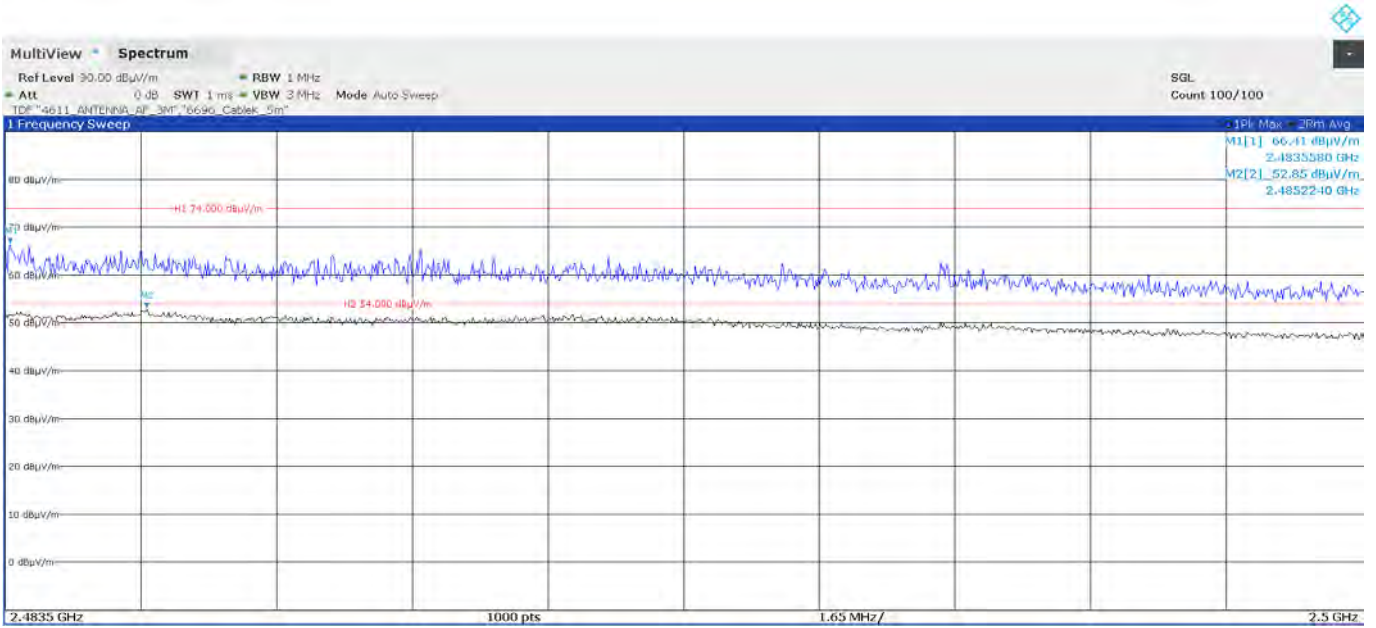
- Middle Channel:



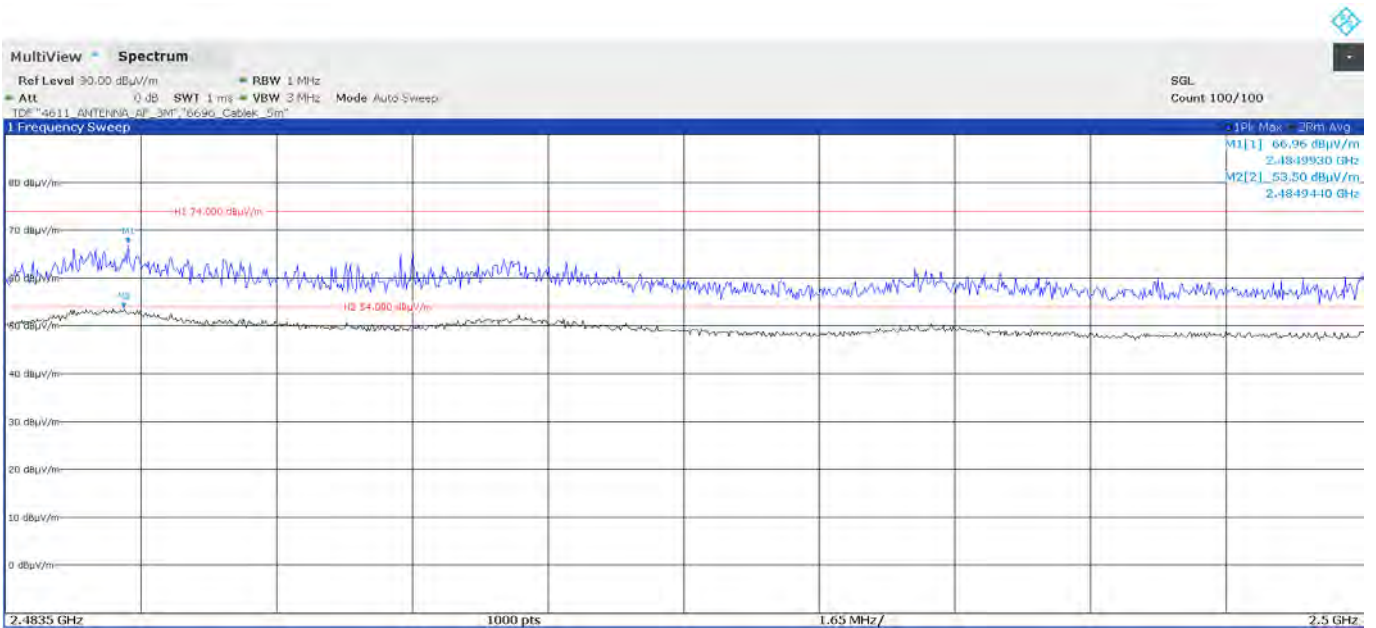
- Channel (7):



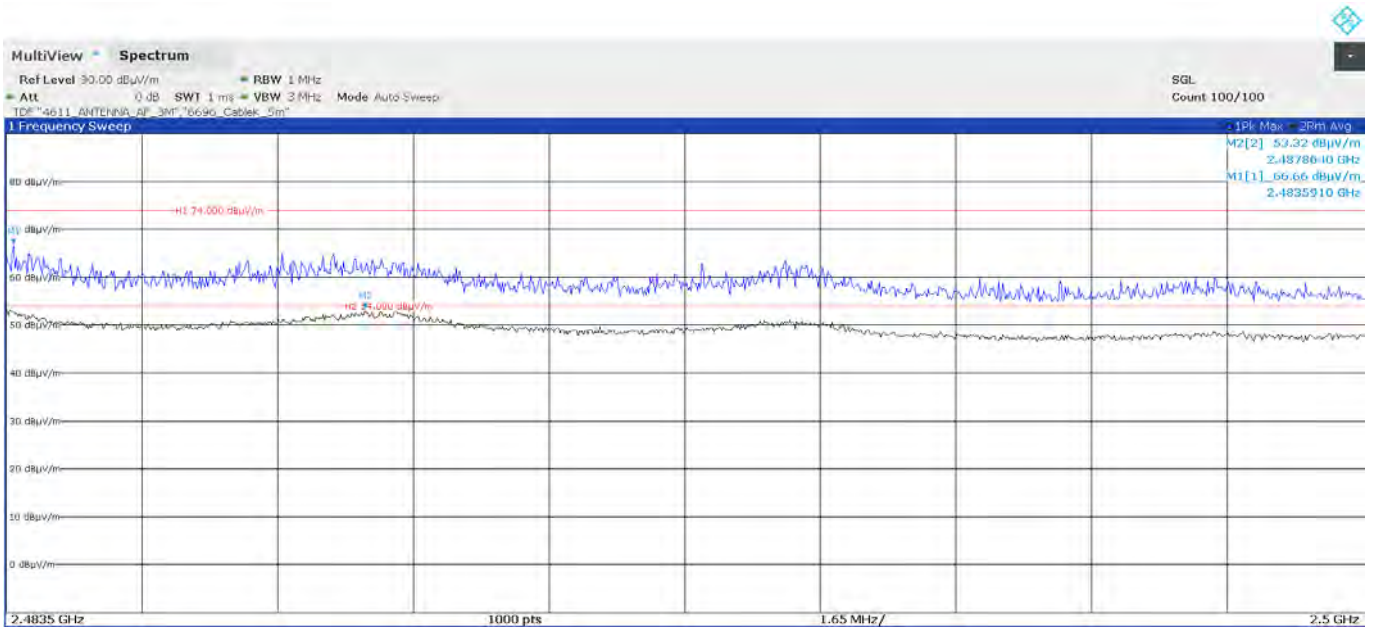
- Channel (8):



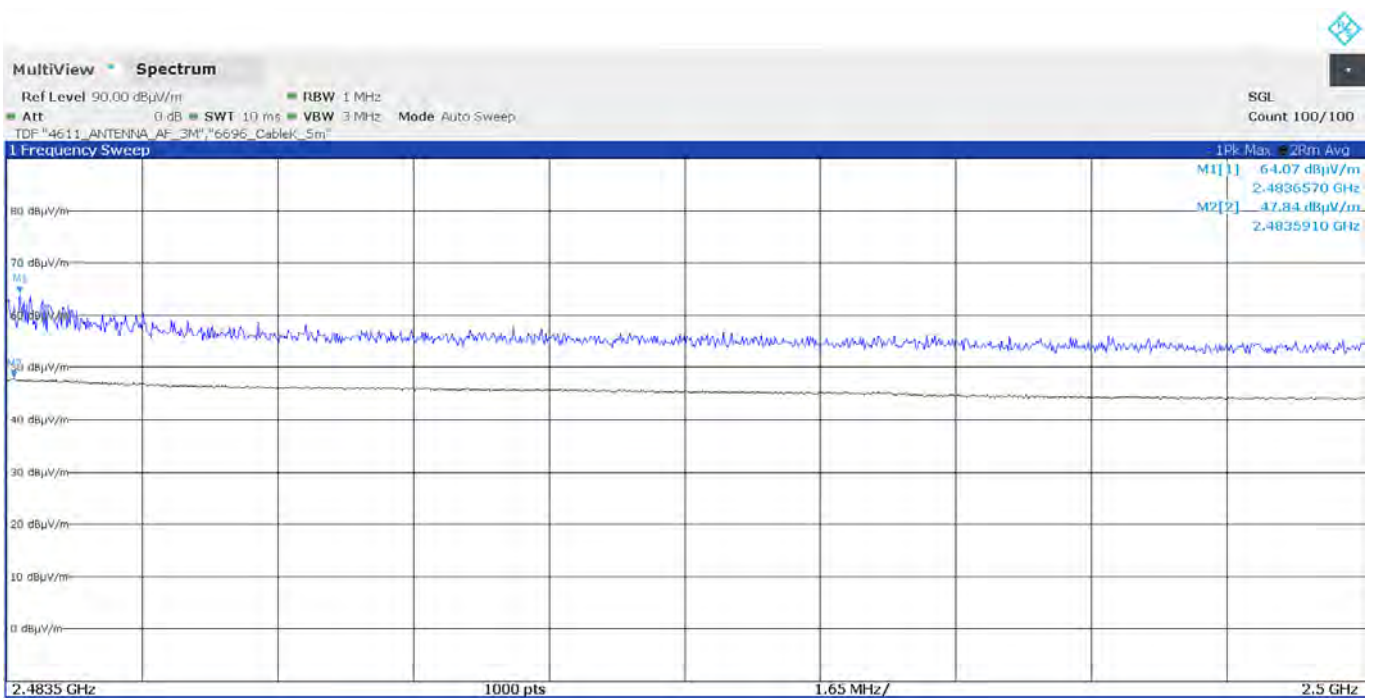
- Channel (9):



- Channel (10):



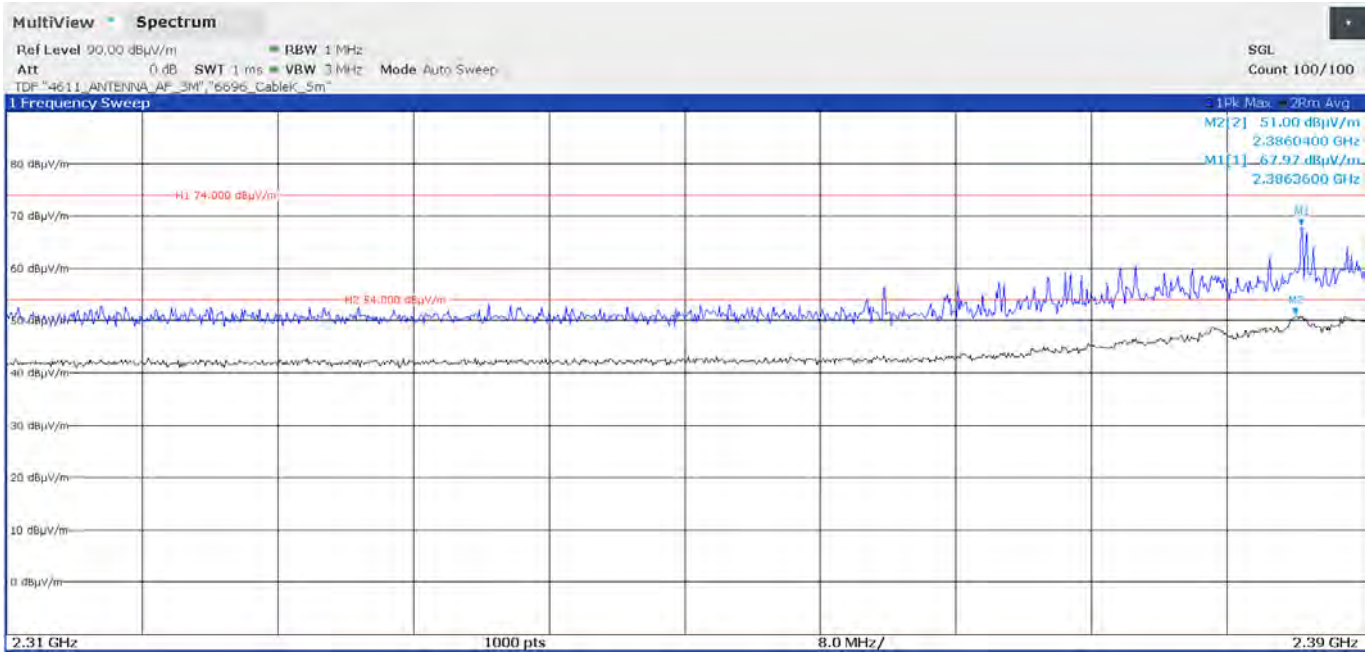
- High Channel:



- MIMO 802.11 n40 (OFDM):

**RESTRICTED BAND 2.31-2.39 GHz (MIMO 802.11 n40 (OFDM)):**

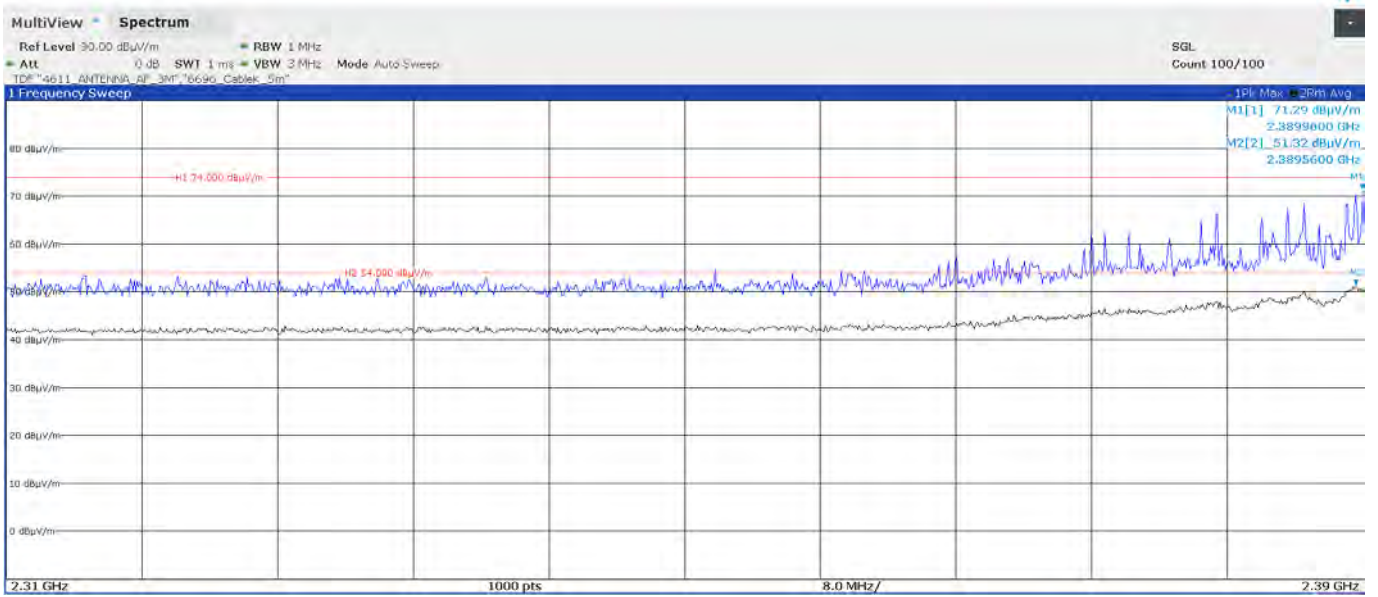
- Low Channel:



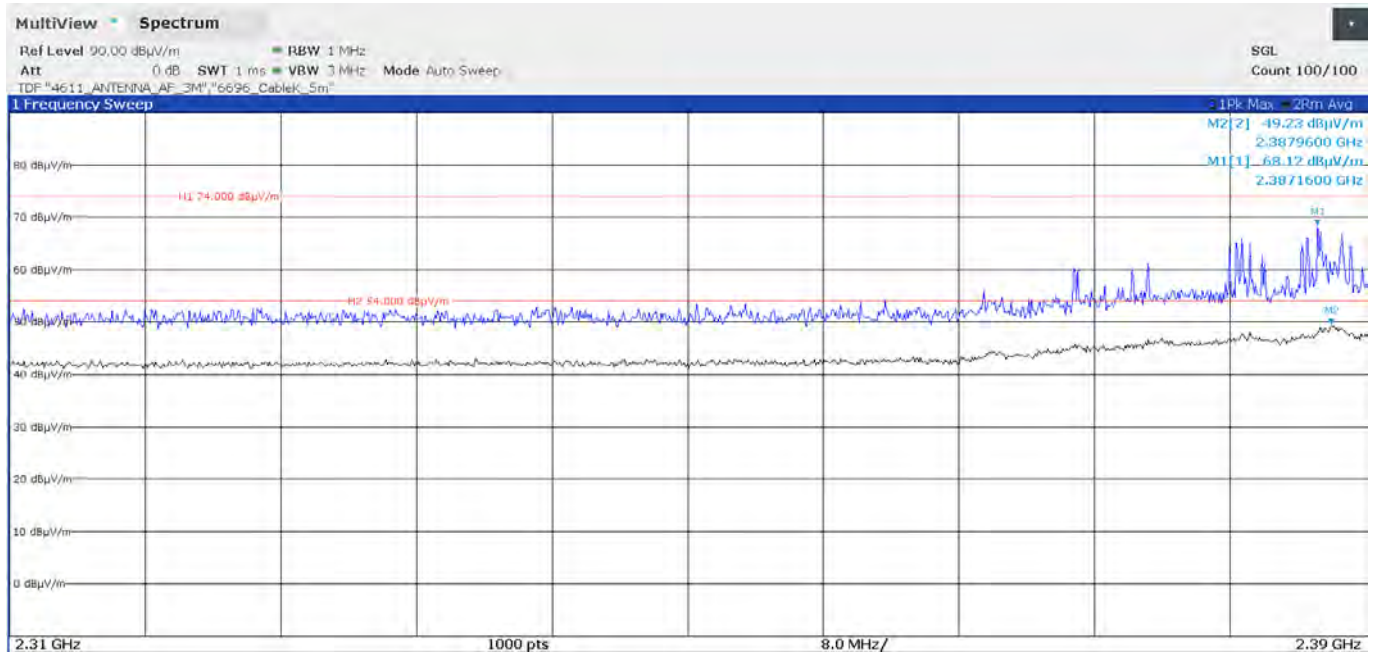
- Channel (4):



- Channel (5):

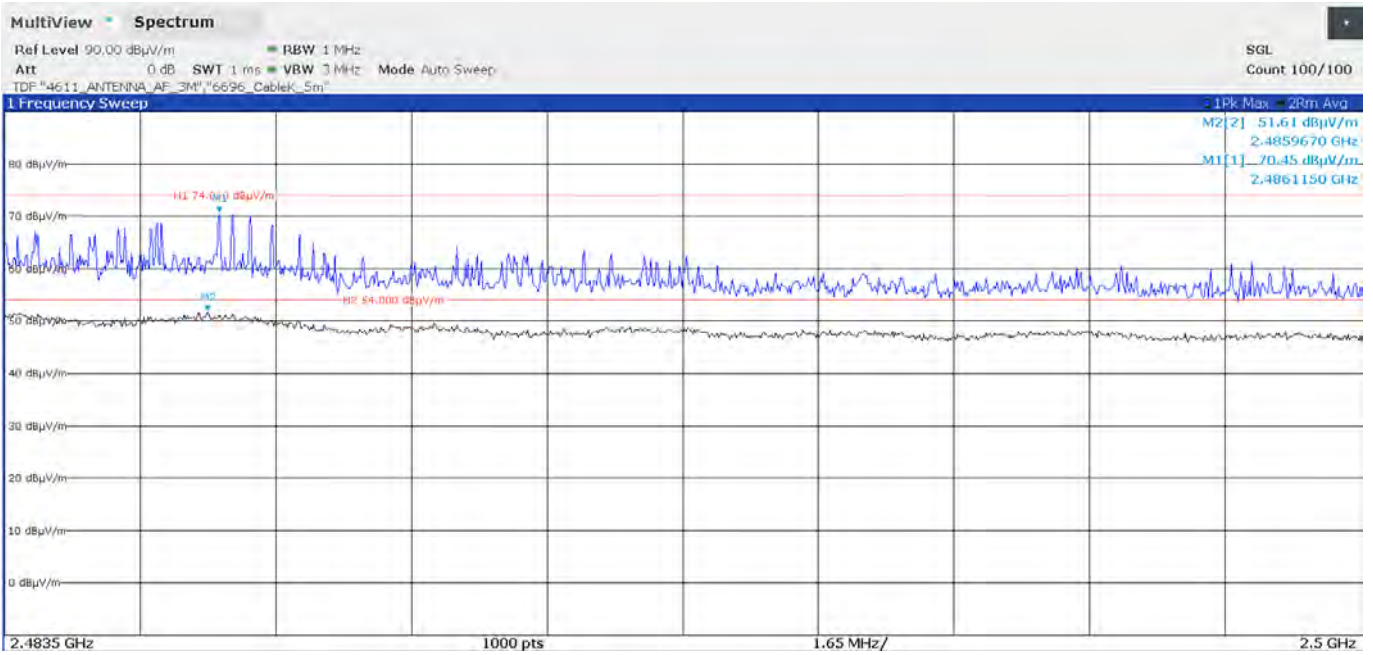


- Middle Channel:

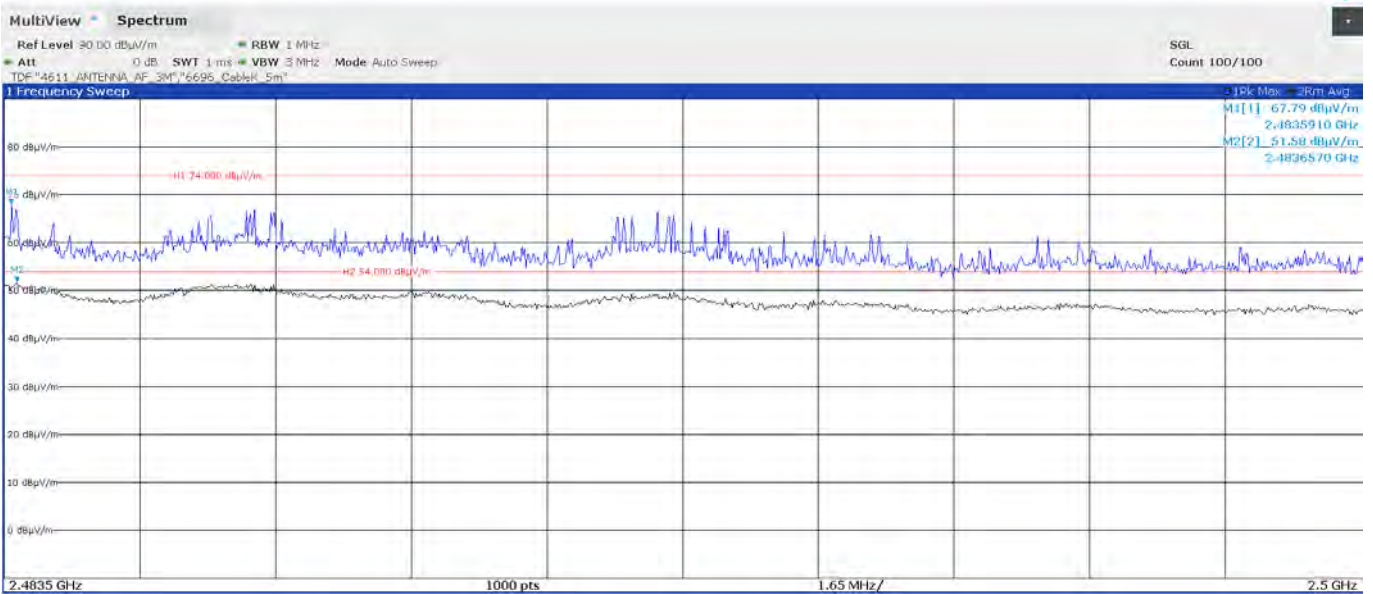


**RESTRICTED BAND 2.4835-2.5 GHz (MIMO 802.11 n40 (OFDM)):**

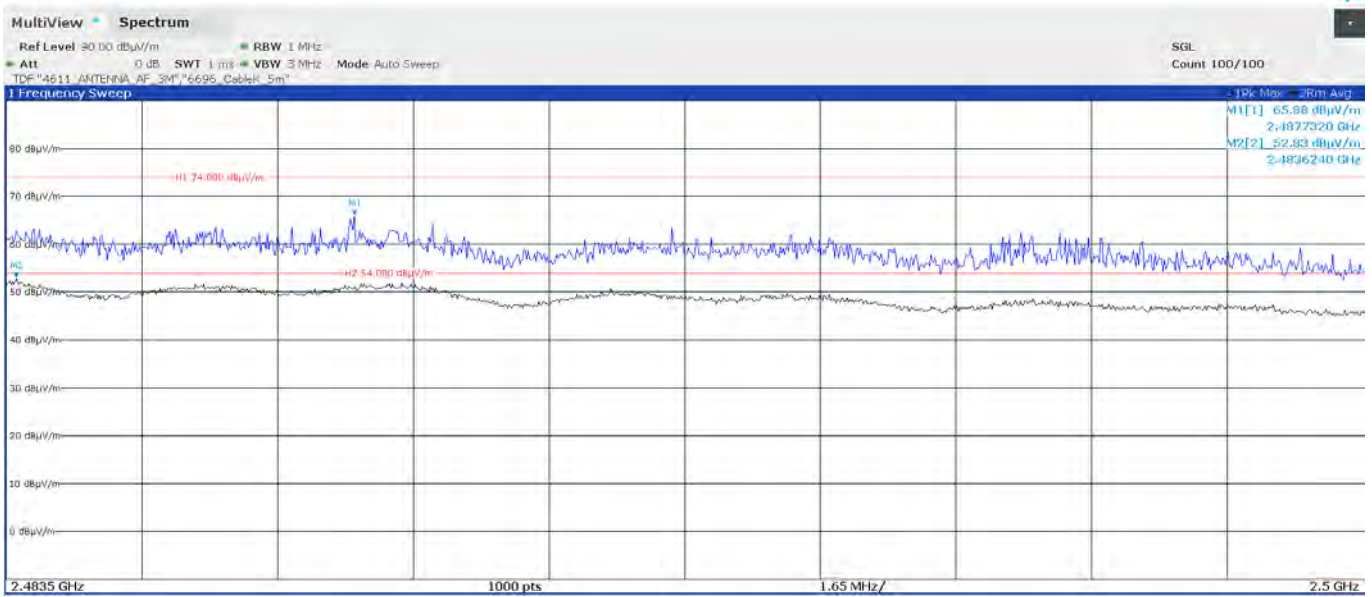
- Middle Channel:



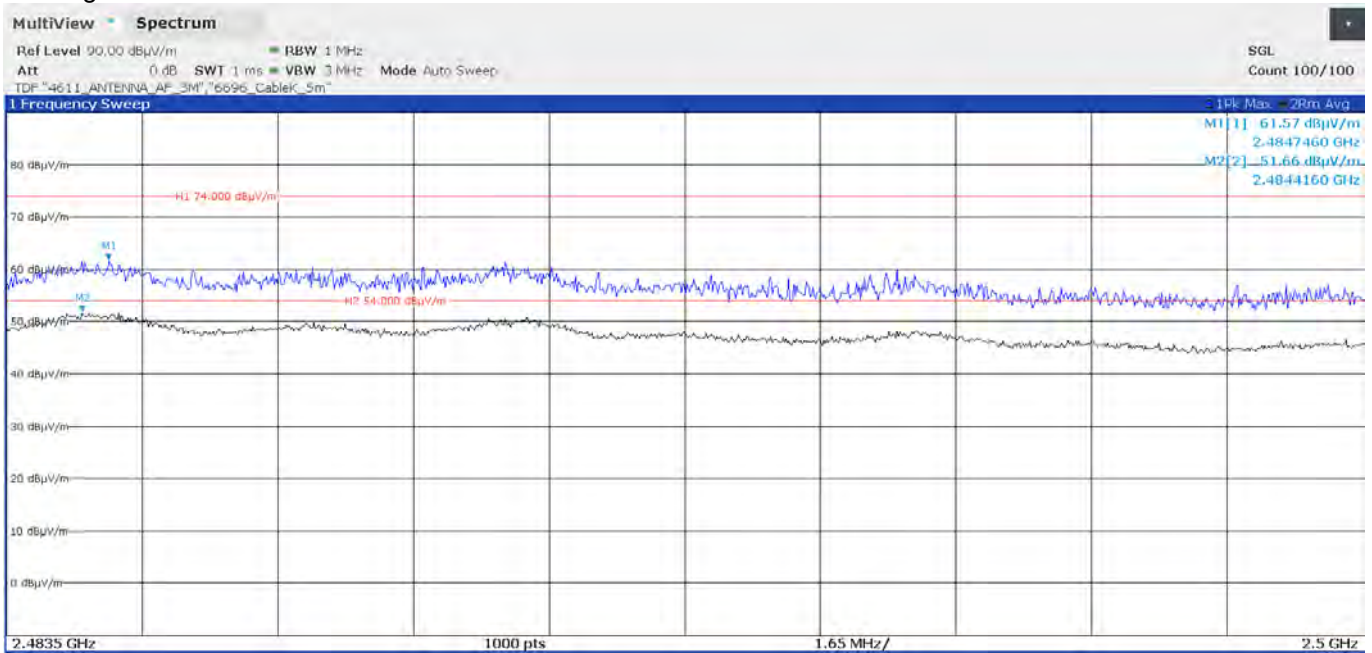
- Channel (7):



- Channel (8):



- High Channel:

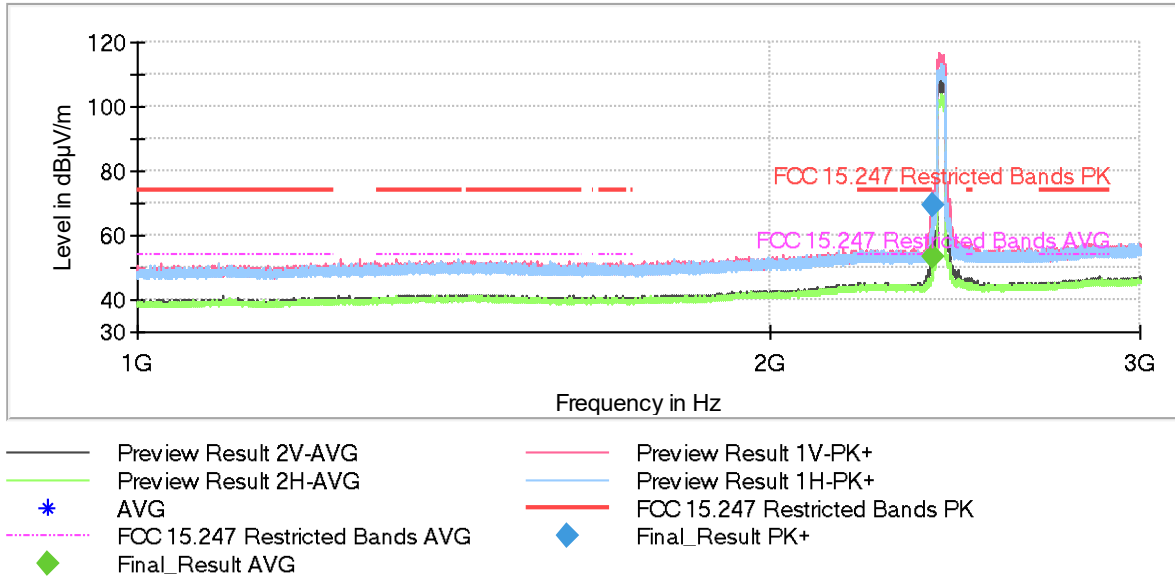




• MIMO 802.11 he20 (OFDMA worst case for spurious emissions):

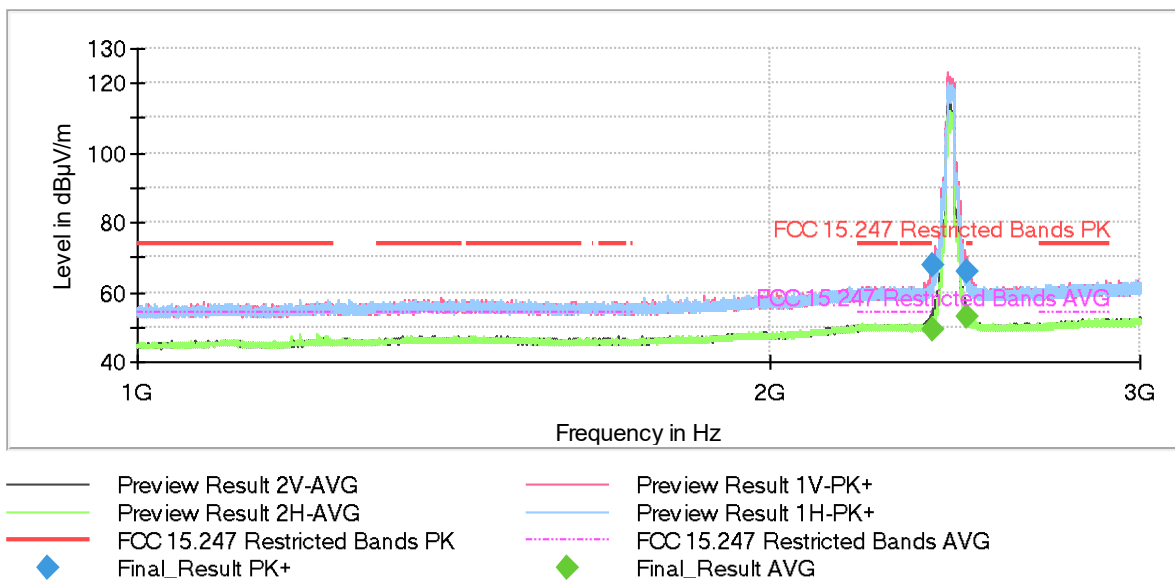
**FREQUENCY RANGE 1 - 3 GHz (MIMO OFDMA worst case for spurious emissions):**

- Low Channel:



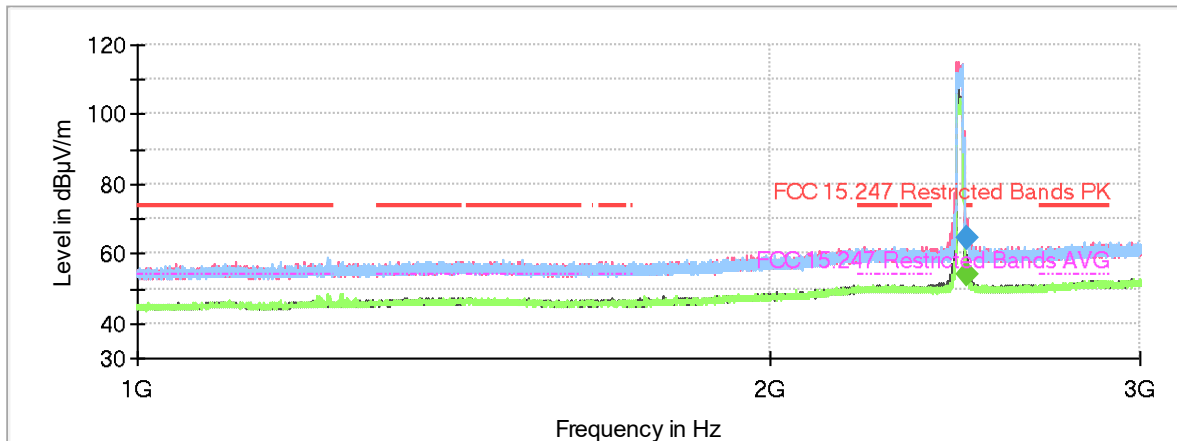
The peak above the limit is the carrier frequency.

- Middle Channel:



The peak above the limit is the carrier frequency.

- High Channel:

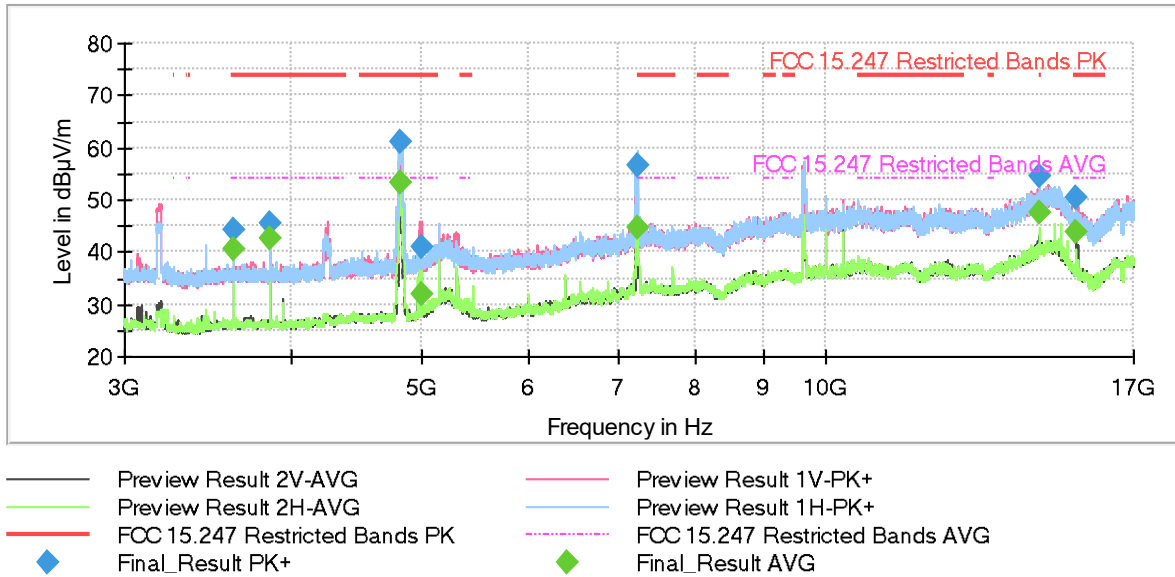


- |   |                                |   |                                 |
|---|--------------------------------|---|---------------------------------|
| — | Preview Result 2V-AVG          | — | Preview Result 1V-PK+           |
| — | Preview Result 2H-AVG          | — | Preview Result 1H-PK+           |
| — | FCC 15.247 Restricted Bands PK | — | FCC 15.247 Restricted Bands AVG |
| ◆ | Final_Result PK+               | ◆ | Final_Result AVG                |

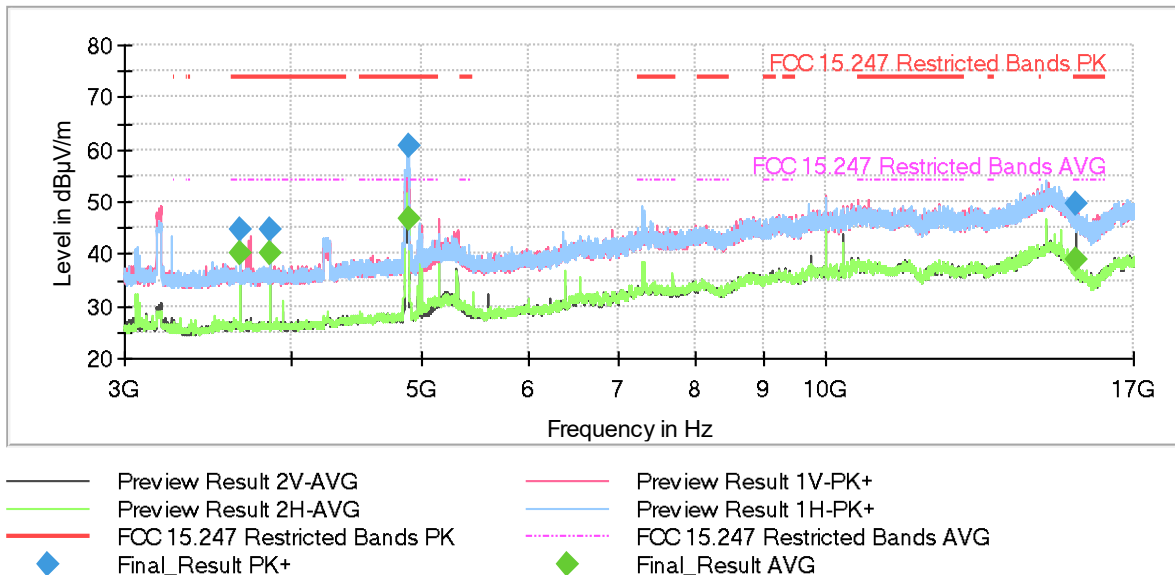
The peak above the limit is the carrier frequency.

**FREQUENCY RANGE 3 - 17 GHz (MIMO OFDMA worst case for spurious emissions):**

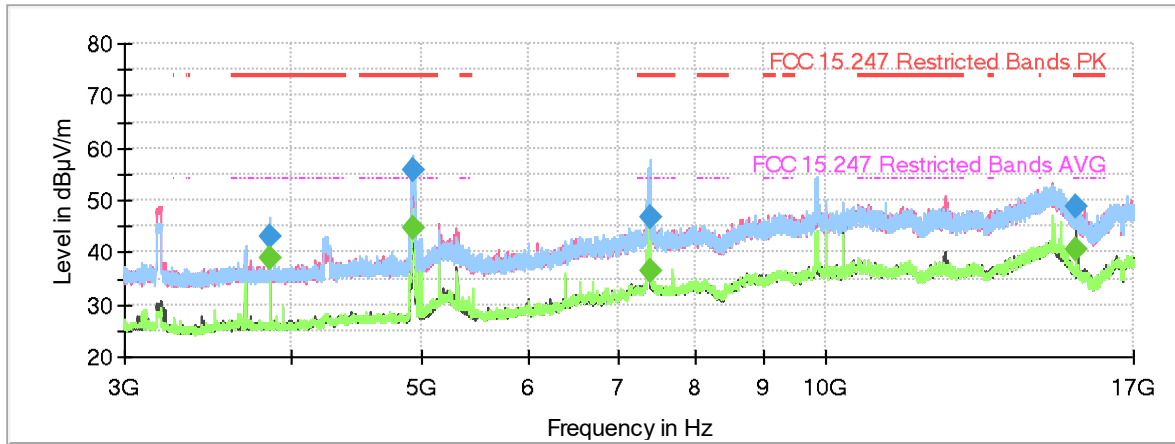
- Low Channel:



- Middle Channel:



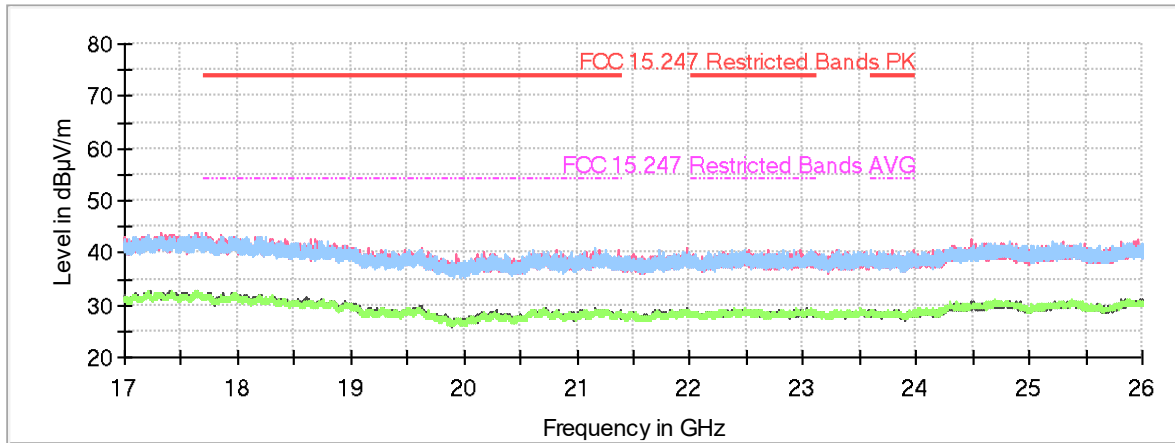
- High Channel:



- |   |                                |   |                                 |
|---|--------------------------------|---|---------------------------------|
| — | Preview Result 2V-AVG          | — | Preview Result 1V-PK+           |
| — | Preview Result 2H-AVG          | — | Preview Result 1H-PK+           |
| — | FCC 15.247 Restricted Bands PK | — | FCC 15.247 Restricted Bands AVG |
| ◆ | Final_Result PK+               | ◆ | Final_Result AVG                |

**FREQUENCY RANGE 17 - 26 GHz (MIMO OFDMA worst case for spurious emissions):**

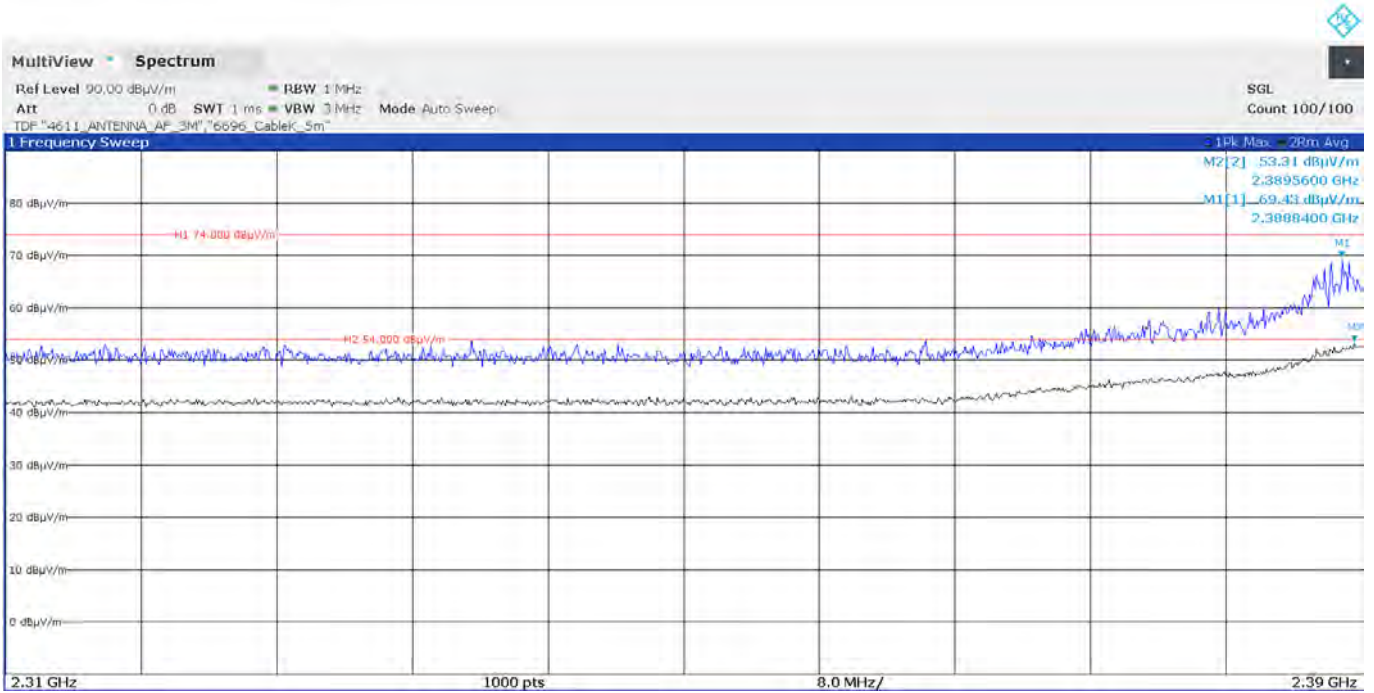
The spurious frequencies detected do not depend on the operating channel.



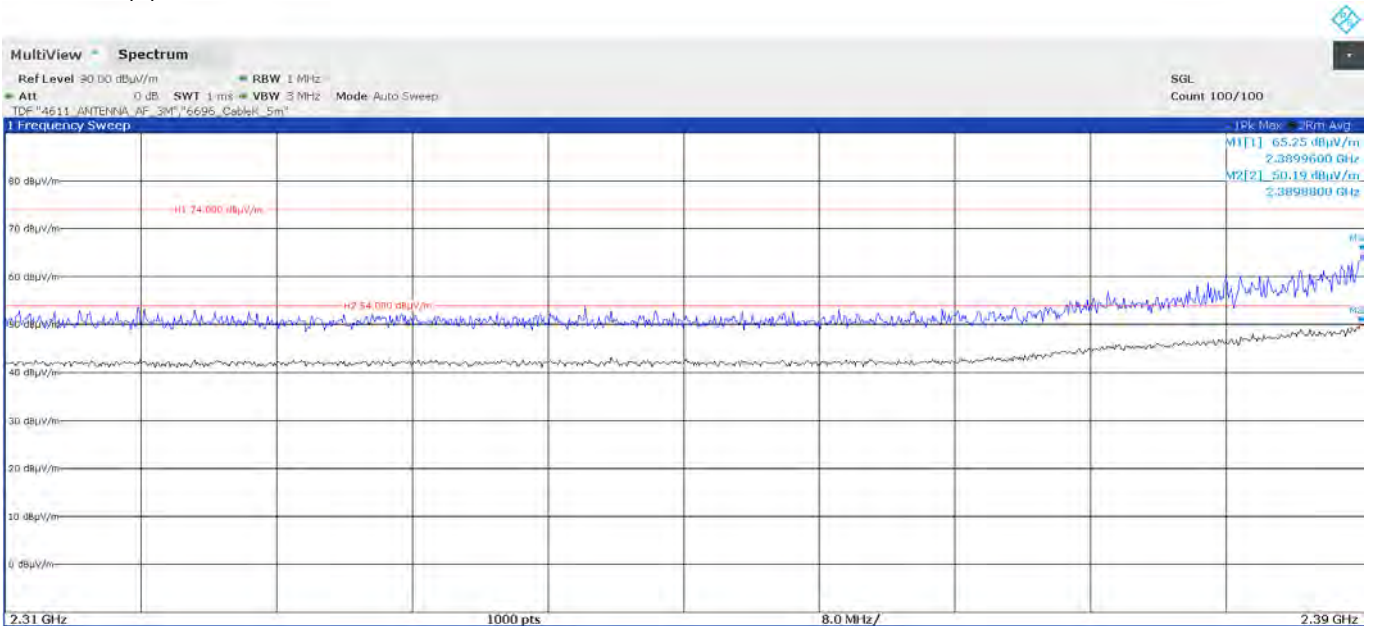
- |   |                                |   |                                 |
|---|--------------------------------|---|---------------------------------|
| — | Preview Result 2V-AVG          | — | Preview Result 1V-PK+           |
| — | Preview Result 2H-AVG          | — | Preview Result 1H-PK+           |
| — | FCC 15.247 Restricted Bands PK | — | FCC 15.247 Restricted Bands AVG |
| ◆ | Final_Result PK+               | ◆ | Final_Result AVG                |

**RESTRICTED BAND 2.31-2.39 GHz (MIMO OFDMA worst case for spurious emissions):**

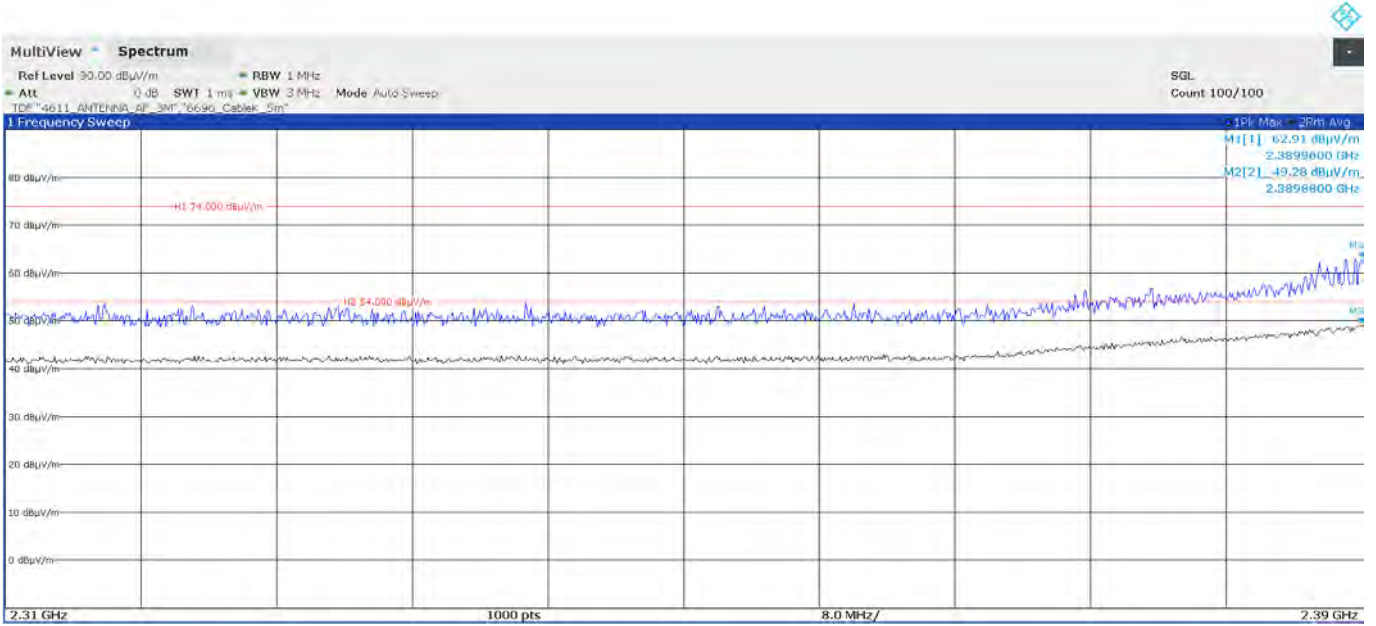
- **MIMO 802.11 he20 (OFDMA):**  
 - Low Channel:



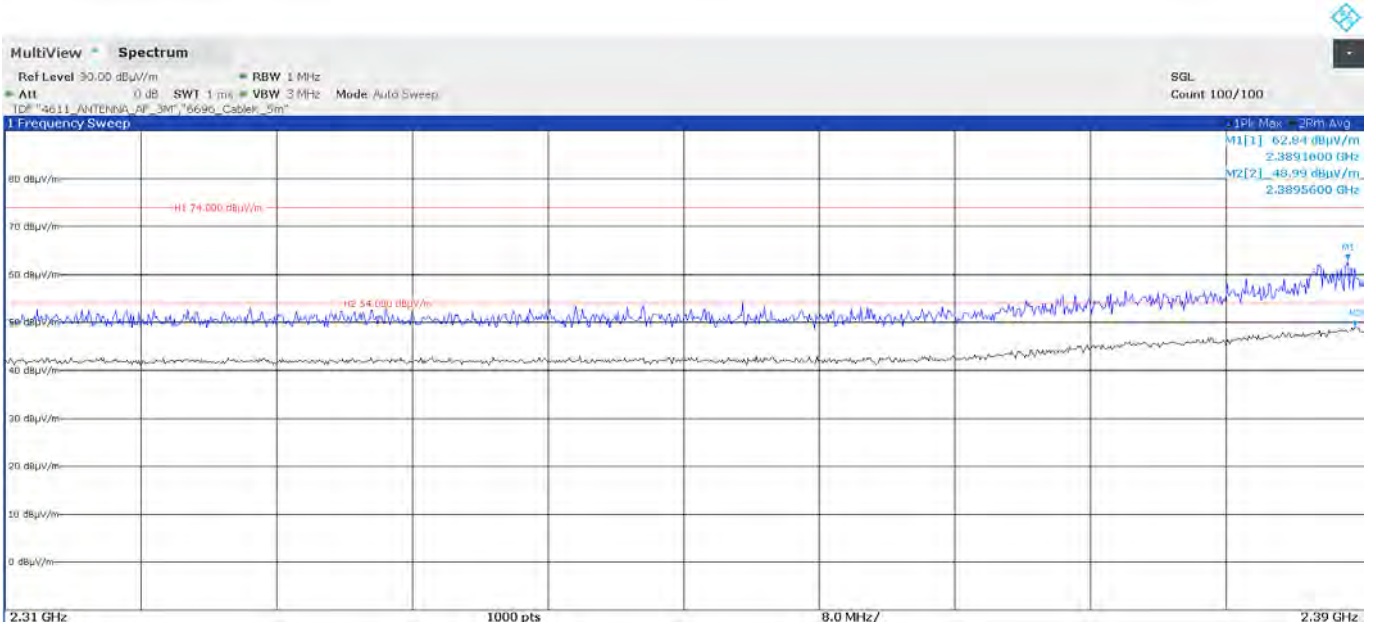
- Channel (2):



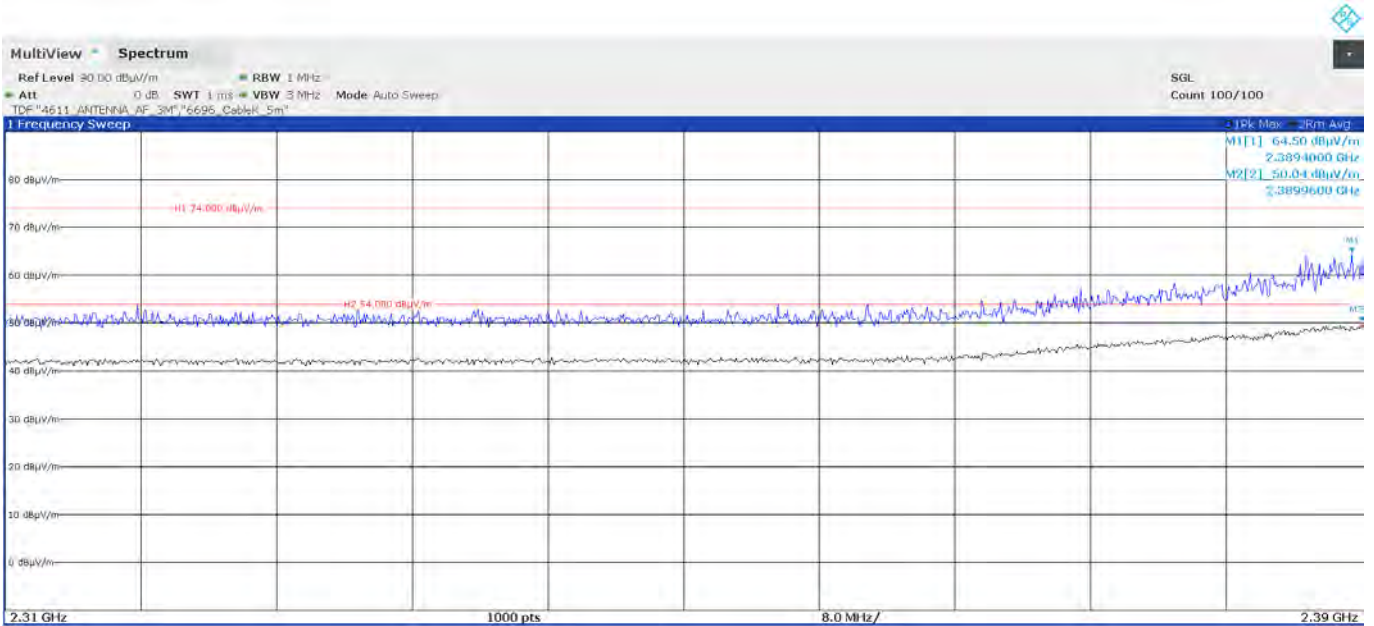
- Channel (3):



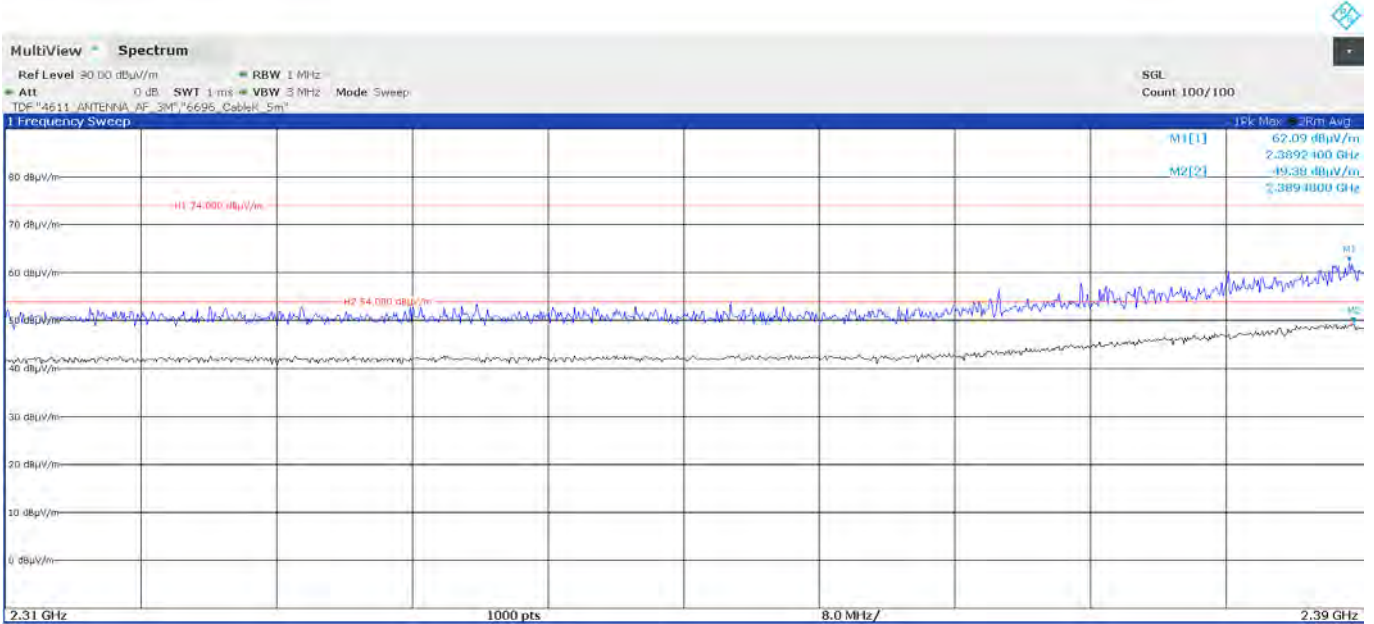
- Channel (4):



- Channel (5):

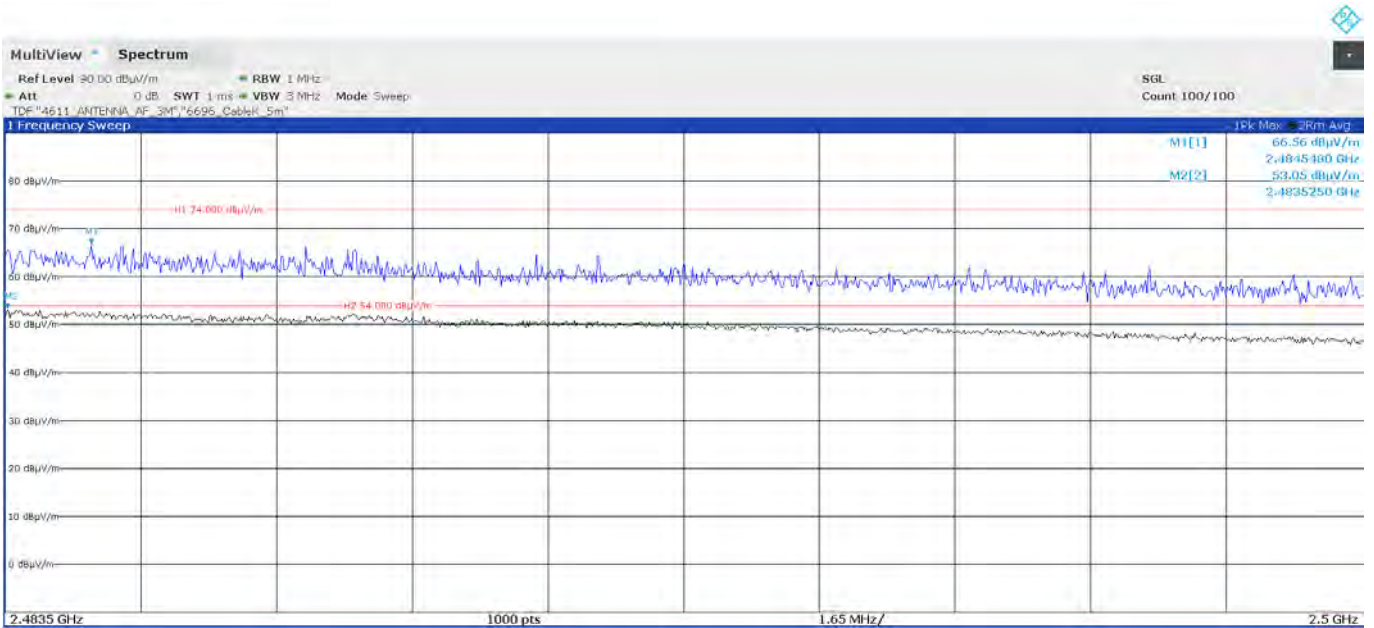


- Middle Channel:

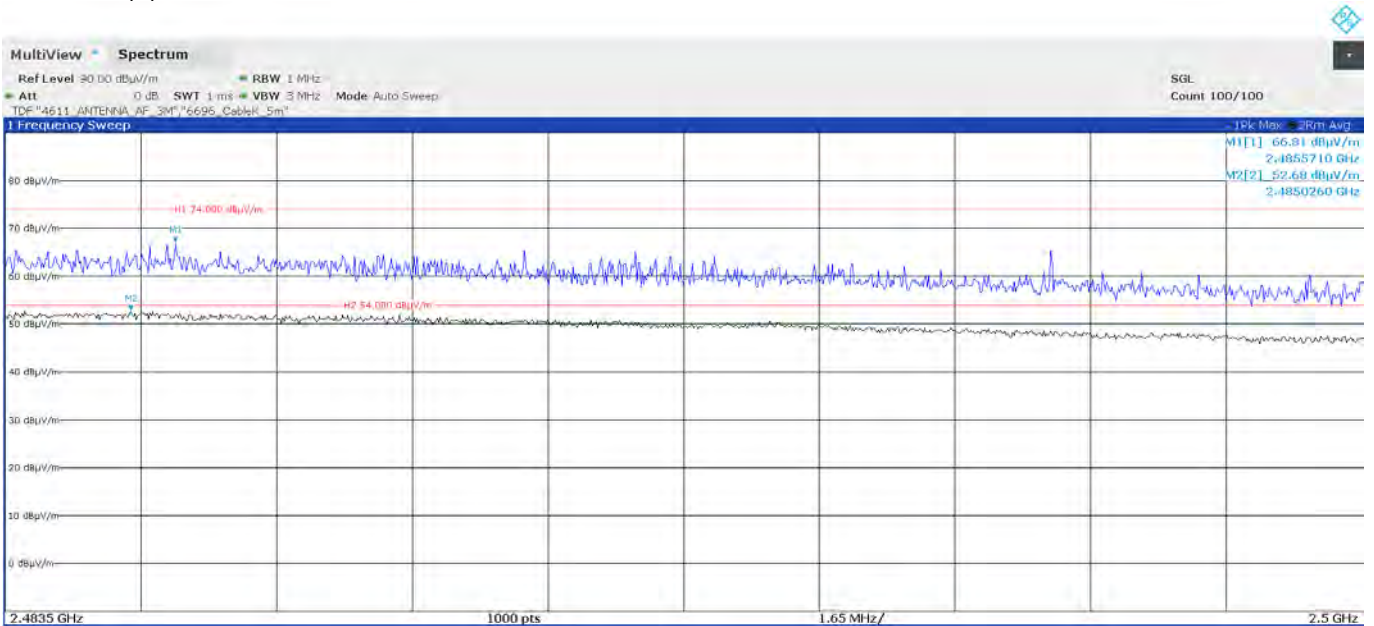


**RESTRICTED BAND 2.4835-2.5 GHz (MIMO OFDMA worst case for spurious emissions):**

- Middle Channel:

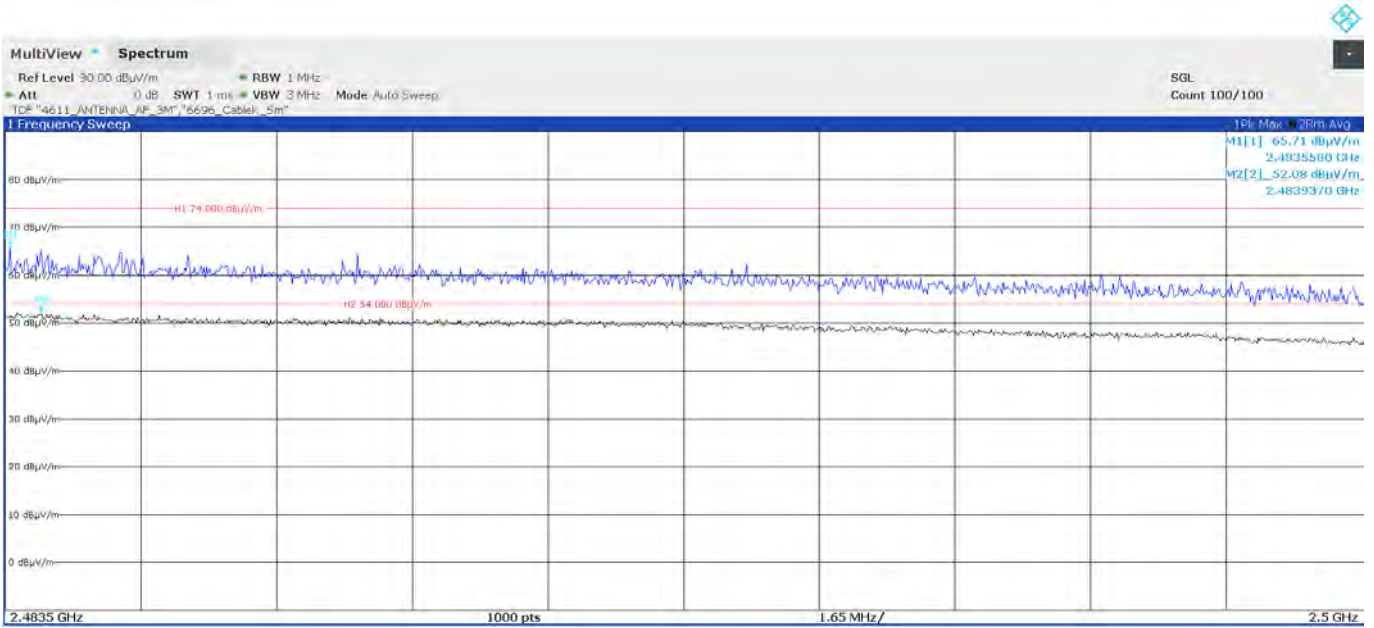


- Channel (7):

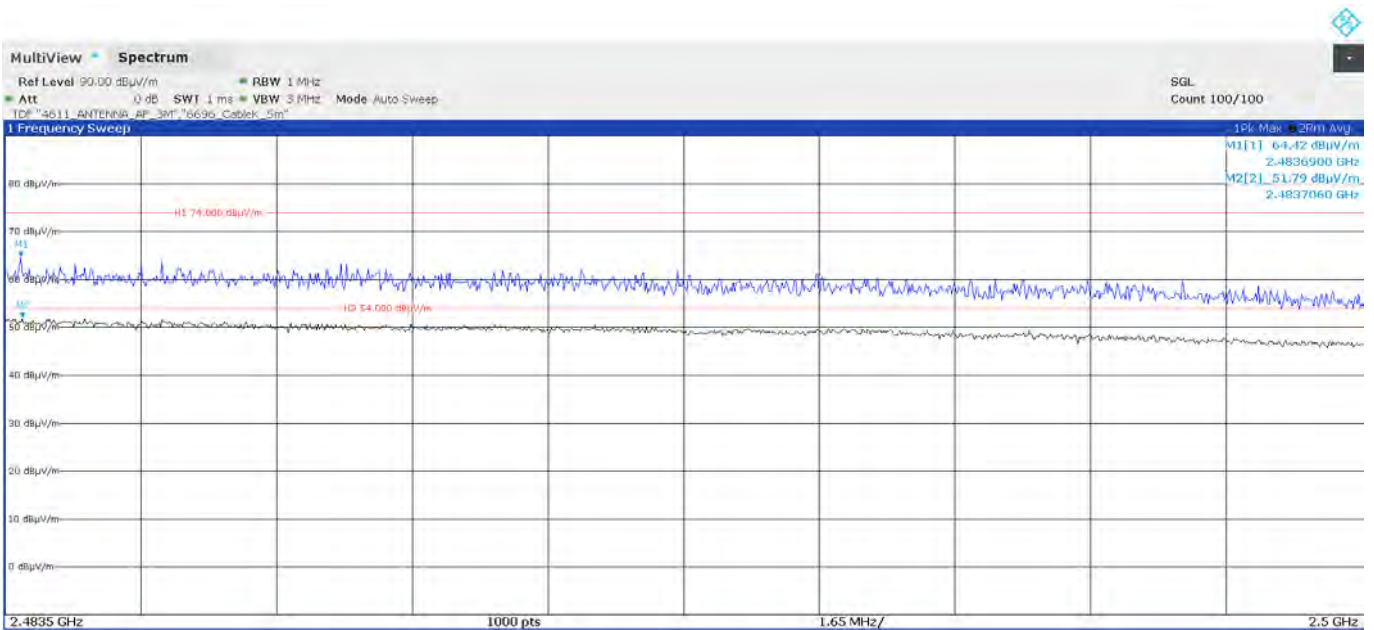




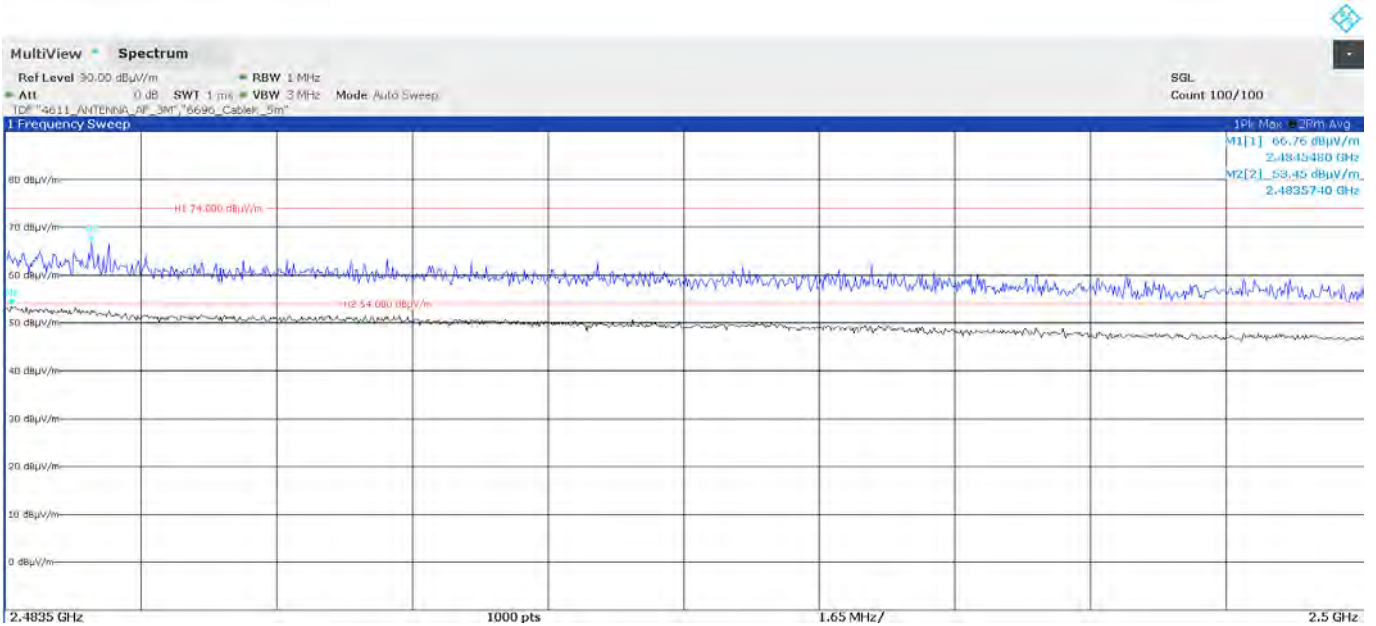
- Channel (8):



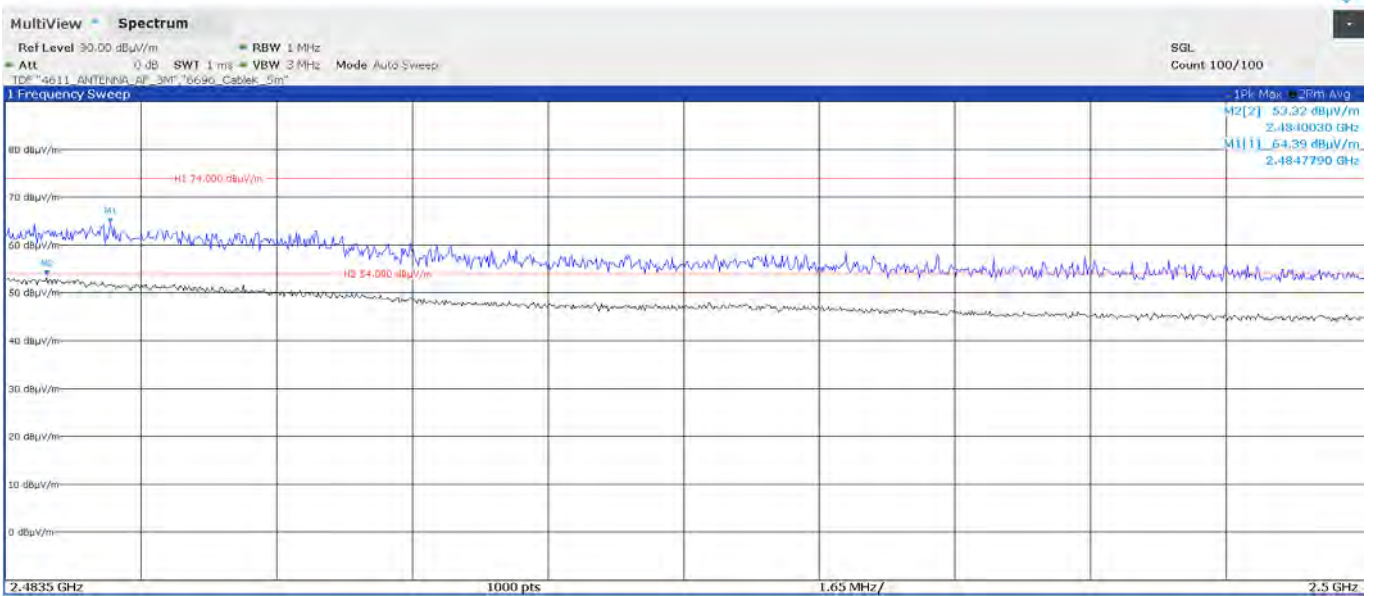
- Channel (9):



- Channel (10):



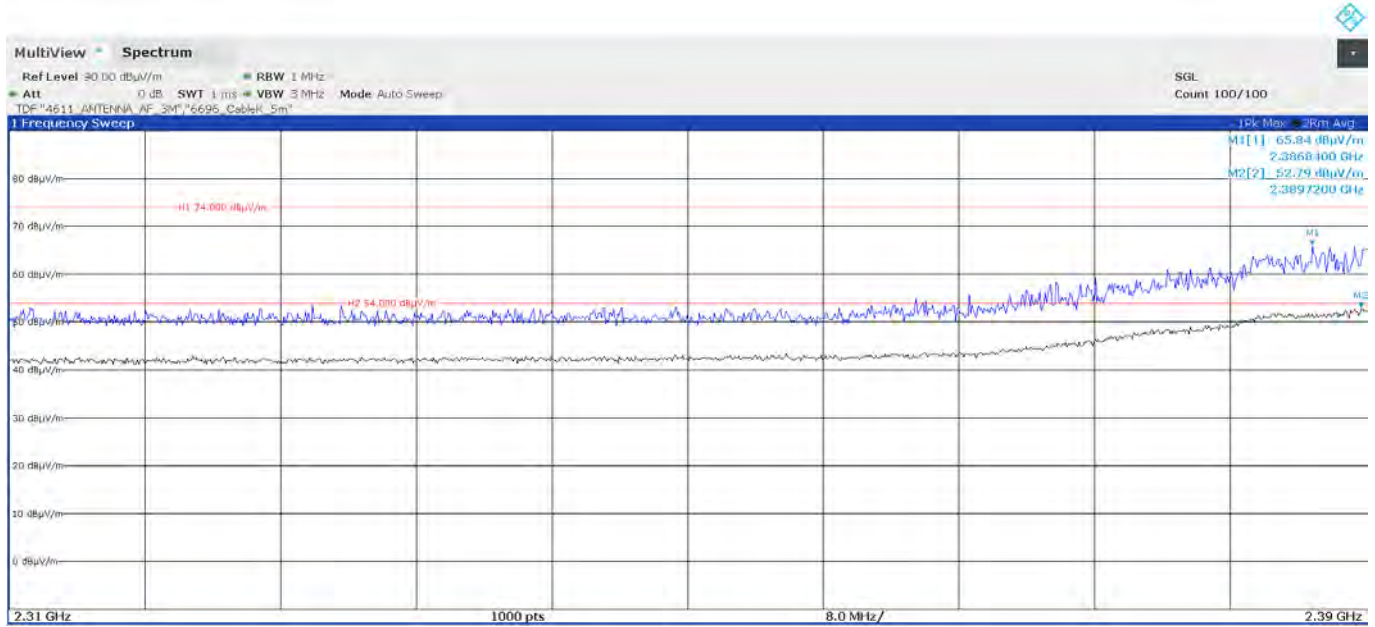
- High Channel:



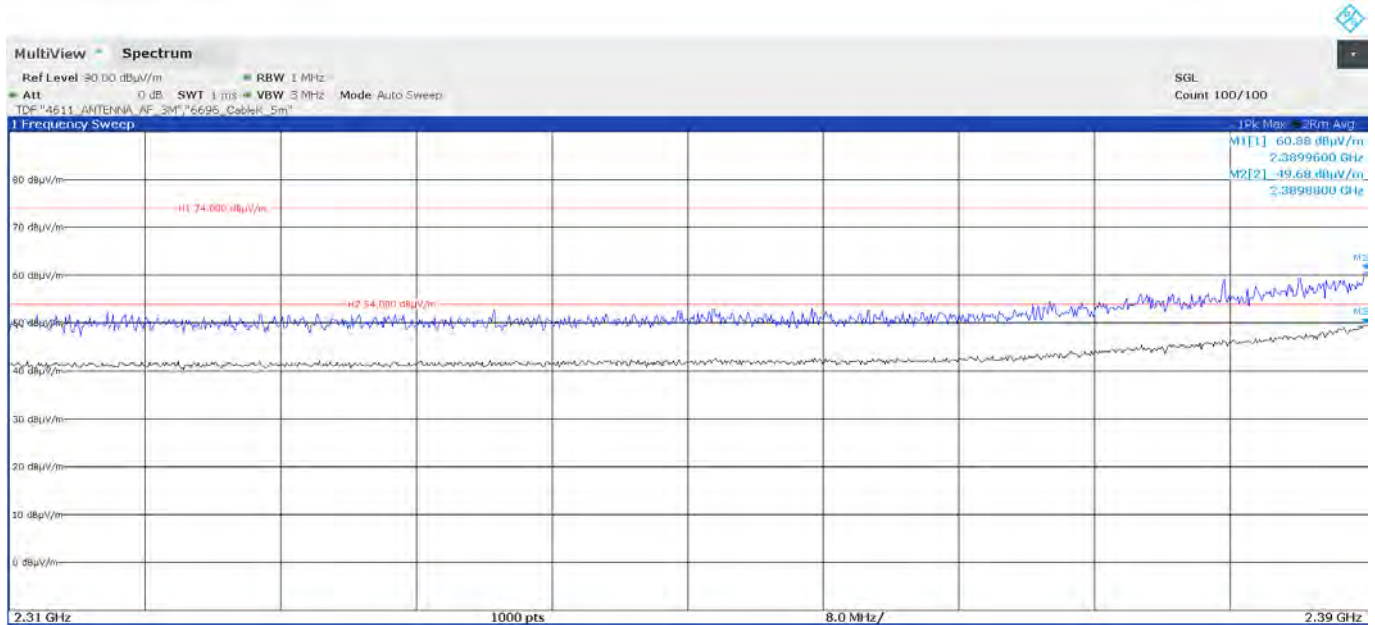
- MIMO 802.11 he40 (OFDMA):

**RESTRICTED BAND 2.31-2.39 GHz (MIMO 802.11 he40 (OFDMA)):**

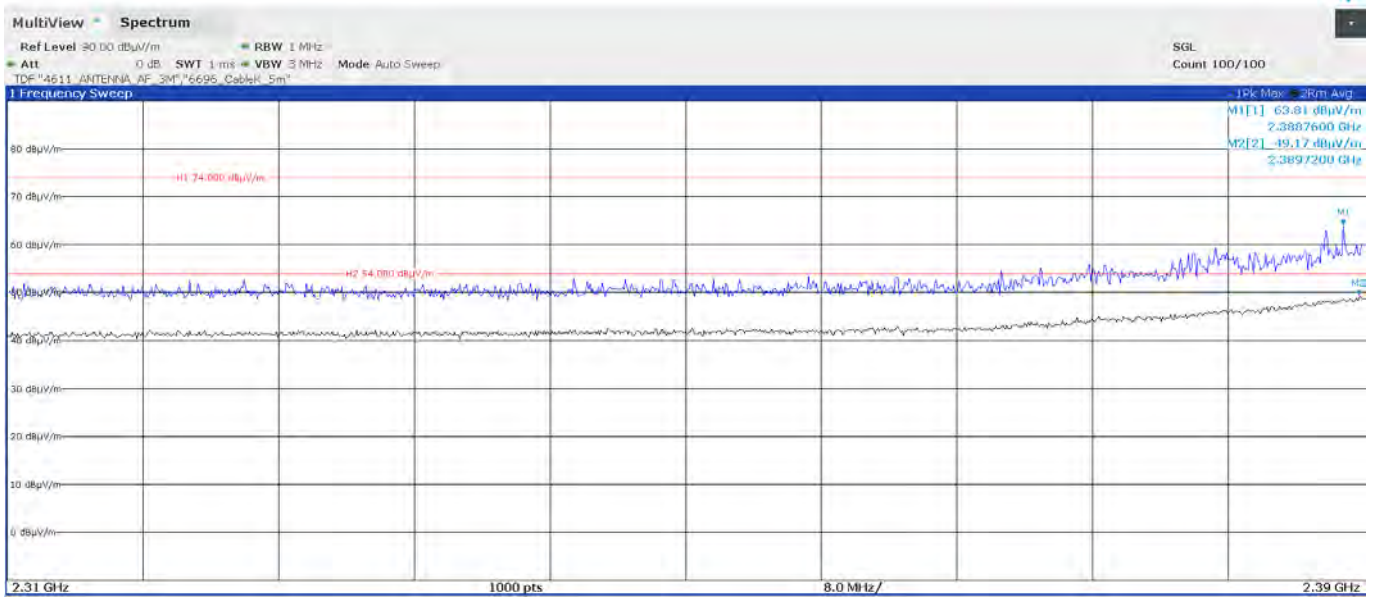
- Low Channel:



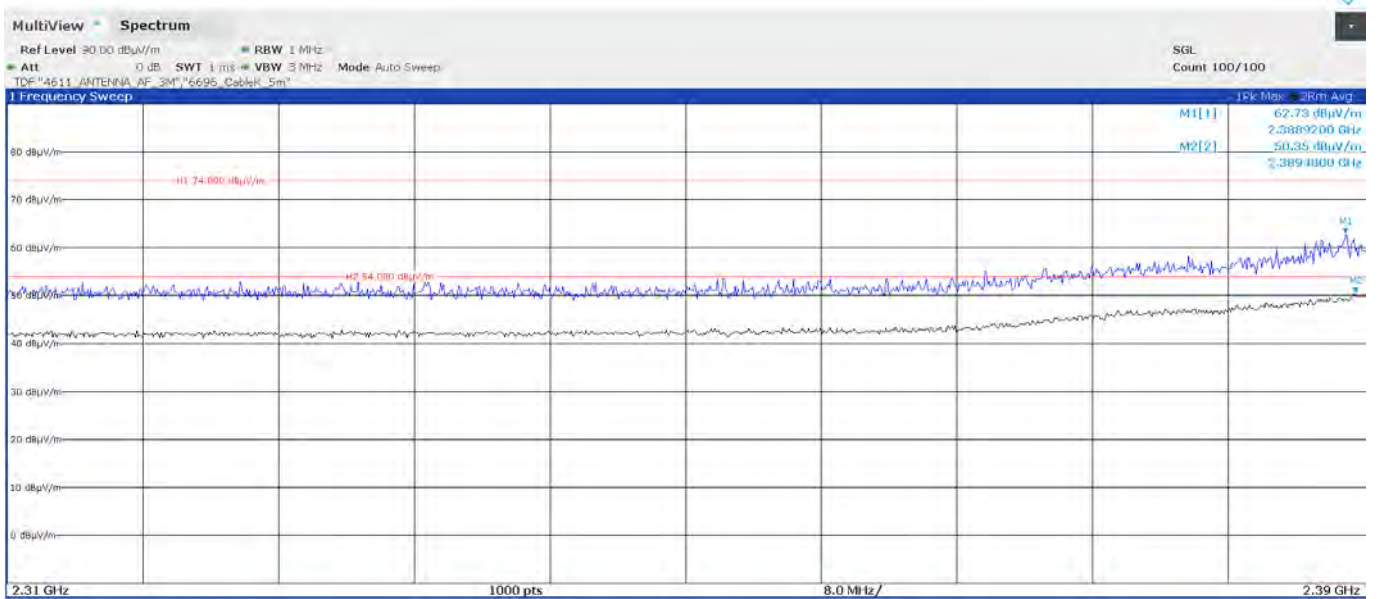
- Channel (4):



- Channel (5):

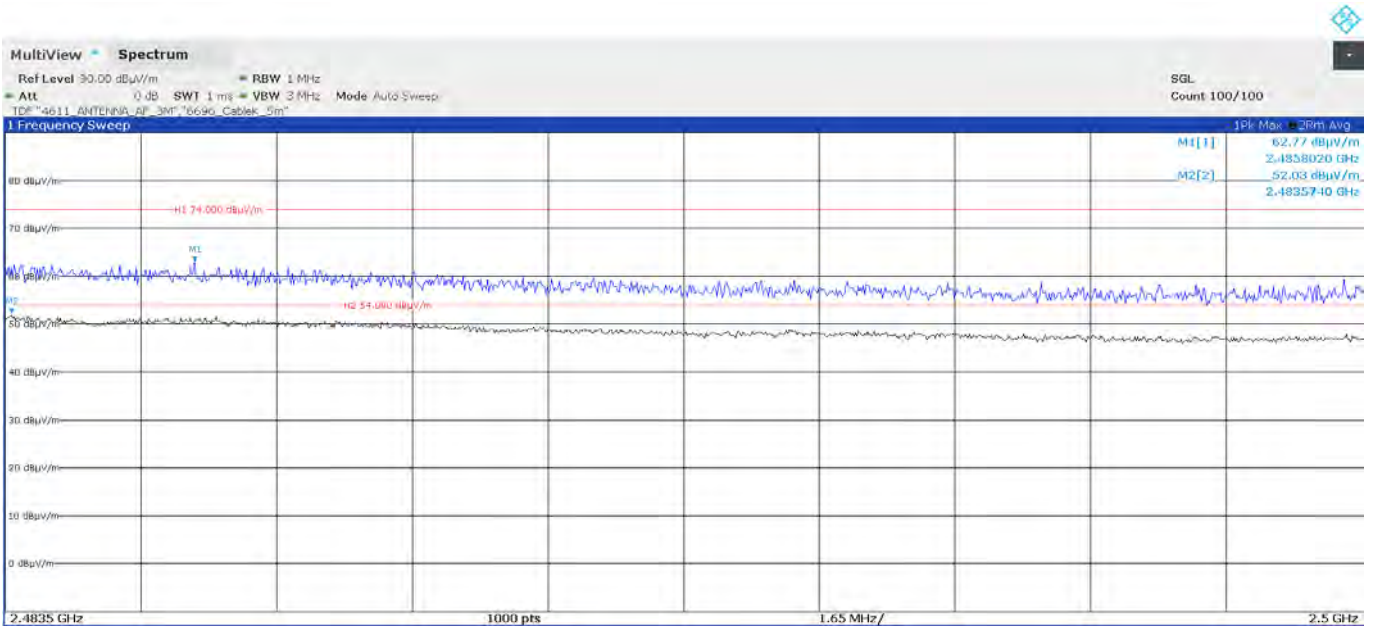


- Middle Channel:

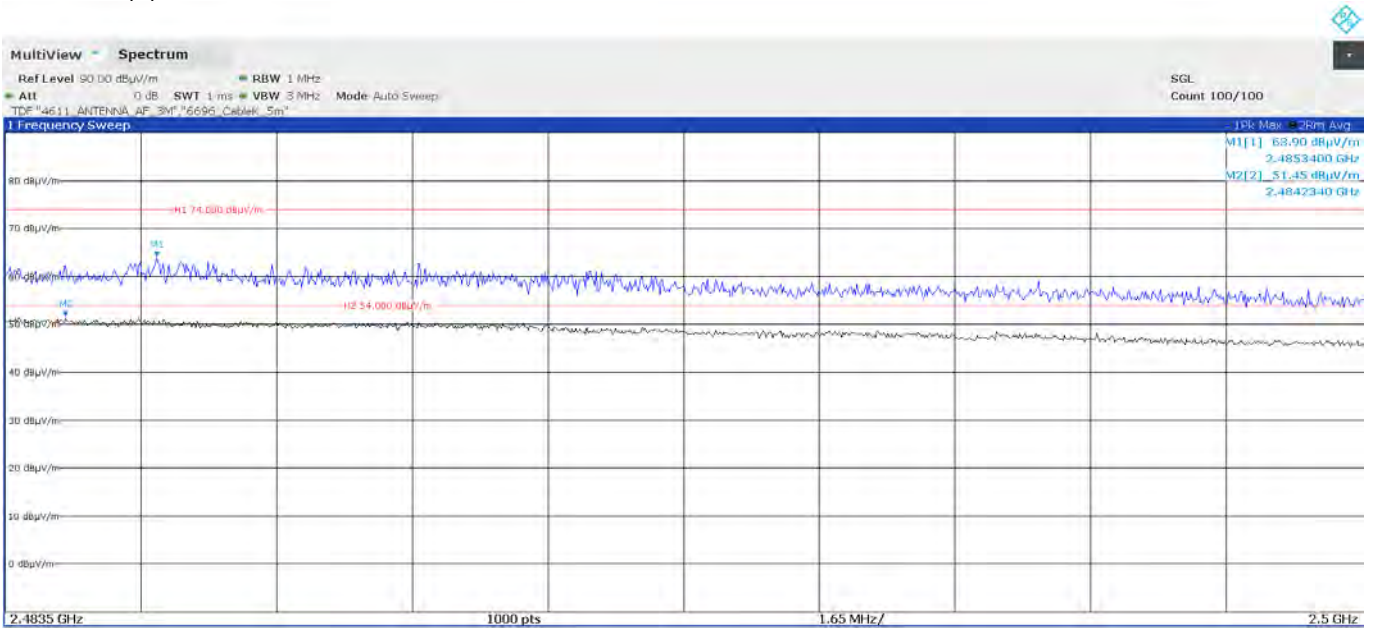


**RESTRICTED BAND 2.4835-2.5 GHz (MIMO 802.11 he40 (OFDMA)):**

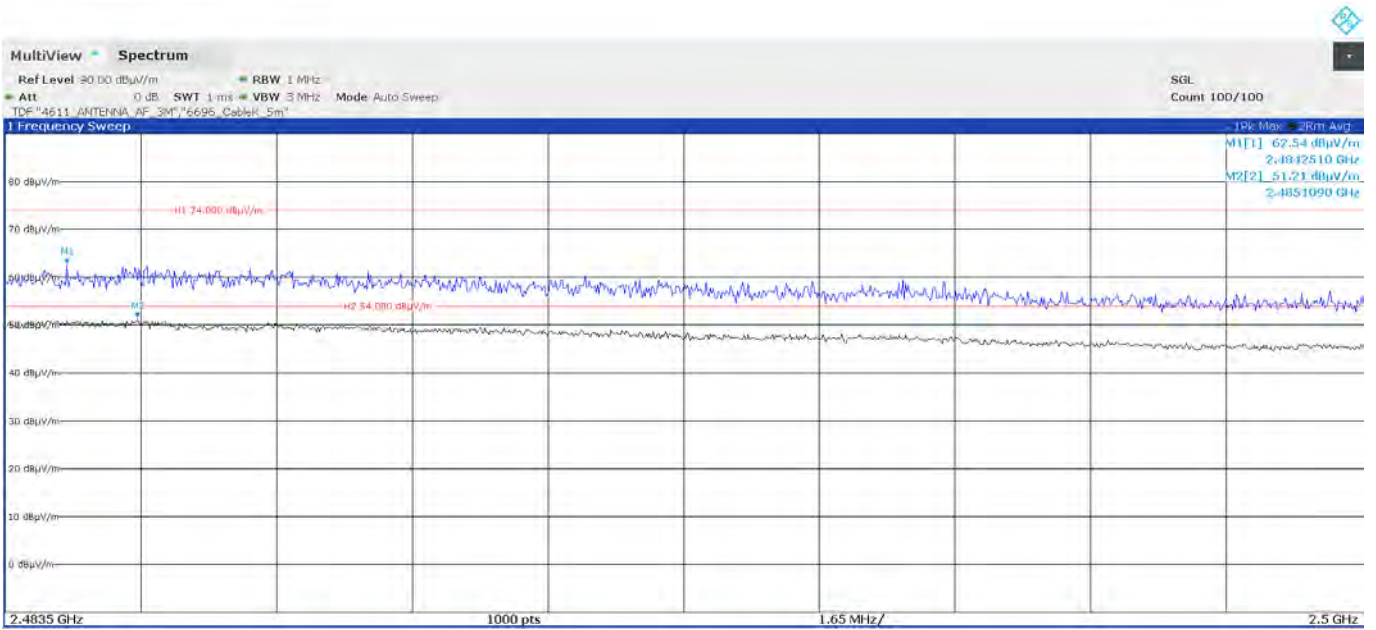
- Middle Channel:



- Channel (7):



- Channel (8):



- High Channel:



