Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH Low	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	77.53	35.82	-9.43	26.39	40.00	-13.61	Peak	VERTICAL
2	250.19	34.48	-5.51	28.97	46.00	-17.03	Peak	VERTICAL
3	394.72	33.19	-2.09	31.10	46.00	-14.90	Peak	VERTICAL
4	498.51	31.68	-0.65	31.03	46.00	-14.97	Peak	VERTICAL
5	833.16	34.82	5.18	40.00	46.00	-6.00	Peak	VERTICAL
6	875.84	28.58	5.71	34.29	46.00	-11.71	Peak	VERTICAL
1	101.78	41.24	-9.91	31.33	43.50	-12.17	Peak	HORIZONTAL
2	166.77	37.36	-5.11	32.25	43.50	-11.25	Peak	HORIZONTAL
3	250.19	41.69	-5.51	36.18	46.00	-9.82	Peak	HORIZONTAL
4	298.69	32.85	-3.85	29.00	46.00	-17.00	Peak	HORIZONTAL
5	521.79	34.24	0.11	34.35	46.00	-11.65	Peak	HORIZONTAL
6	833.16	31.12	5.18	36.30	46.00	-9.70	Peak	HORIZONTAL

Remark:

1 No further spurious emissions detected from the lowest internal frequency and 30MHz.

2 Measuring frequencies from the lowest internal frequency to the 1GHz.

3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP

4 Measurement result within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5 The IF bandwidth of SPA between 9kHz to 30MHz was 10kHz, VBW= 30kHz; between 30MHz to 1GHz was 100kHz, VBW=300kHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH Mid	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	177.44	26.65	-5.87	20.78	43.50	-22.72	Peak	VERTICAL
2	325.85	26.99	-3.27	23.72	46.00	-22.28	Peak	VERTICAL
3	378.23	28.56	-2.35	26.21	46.00	-19.79	Peak	VERTICAL
4	496.57	32.04	-0.67	31.37	46.00	-14.63	Peak	VERTICAL
5	598.42	28.26	1.49	29.75	46.00	-16.25	Peak	VERTICAL
6	709.97	27.96	3.20	31.16	46.00	-14.84	Peak	VERTICAL
1	157.07	27.03	-5.04	21.99	43.50	-21.51	Peak	HORIZONTAL
2	263.77	25.53	-5.05	20.48	46.00	-25.52	Peak	HORIZONTAL
3	341.37	27.59	-3.02	24.57	46.00	-21.43	Peak	HORIZONTAL
4	492.69	28.46	-0.70	27.76	46.00	-18.24	Peak	HORIZONTAL
5	571.26	28.58	0.74	29.32	46.00	-16.68	Peak	HORIZONTAL
6	730.34	27.11	3.50	30.61	46.00	-15.39	Peak	HORIZONTAL

Remark:

1 No further spurious emissions detected from the lowest internal frequency and 30MHz.

2 Measuring frequencies from the lowest internal frequency to the 1GHz.

3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP

4 Measurement result within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5 The IF bandwidth of SPA between 9kHz to 30MHz was 10kHz, VBW= 30kHz; between 30MHz to 1GHz was 100kHz, VBW=300kHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH High	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	162.89	26.87	-5.03	21.84	43.50	-21.66	Peak	VERTICAL
2	273.47	25.75	-4.65	21.10	46.00	-24.90	Peak	VERTICAL
3	486.87	28.83	-0.77	28.06	46.00	-17.94	Peak	VERTICAL
4	623.64	27.80	1.75	29.55	46.00	-16.45	Peak	VERTICAL
5	756.53	28.54	4.13	32.67	46.00	-13.33	Peak	VERTICAL
6	866.14	27.87	5.56	33.43	46.00	-12.57	Peak	VERTICAL
1	156.10	27.37	-5.08	22.29	43.50	-21.21	Peak	HORIZONTAL
2	326.82	26.09	-3.26	22.83	46.00	-23.17	Peak	HORIZONTAL
3	394.72	26.82	-2.09	24.73	46.00	-21.27	Peak	HORIZONTAL
4	497.54	35.08	-0.67	34.41	46.00	-11.59	Peak	HORIZONTAL
5	625.58	28.14	1.77	29.91	46.00	-16.09	Peak	HORIZONTAL
6	741.01	27.24	3.85	31.09	46.00	-14.91	Peak	HORIZONTAL

Remark:

1 No further spurious emissions detected from the lowest internal frequency and 30MHz.

2 Measuring frequencies from the lowest internal frequency to the 1GHz.

3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP

4 Measurement result within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5 The IF bandwidth of SPA between 9kHz to 30MHz was 10kHz, VBW= 30kHz; between 30MHz to 1GHz was 100kHz, VBW=300kHz.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	801.11b TX mode	Test Date	2019/11/25
Channel number	CH Low	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3212.00	64.06	-14.52	49.54	74.00	-24.46	Peak	VERTICAL
2	4824.00	44.49	-9.35	35.14	74.00	-38.86	Peak	VERTICAL
1	1609.00	56.12	-19.14	36.98	74.00	-37.02	Peak	HORIZONTAL
2	4824.00	43.63	-9.35	34.28	74.00	-39.72	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

3 Measurement of data within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.

5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b TX mode	Test Date	2019/11/25
Channel number	CH Mid	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	1497.00	55.79	-19.15	36.64	74.00	-37.36	Peak	VERTICAL
2	4874.00	44.72	-9.22	35.50	74.00	-38.50	Peak	VERTICAL
1	1497.00	57.49	-19.15	38.34	74.00	-35.66	Peak	HORIZONTAL
2	4874.00	45.26	-9.22	36.04	74.00	-37.96	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.

5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11b TX mode	Test Date	2019/11/25
Channel number	CH High	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3282.00	57.58	-14.71	42.87	74.00	-31.13	Peak	VERTICAL
2	7386.00	52.61	-1.72	50.89	54.00	-3.11	Average	VERTICAL
3	7391.00	62.25	-1.72	60.53	74.00	-13.47	Peak	VERTICAL
1	1497.00	54.40	-19.15	35.25	74.00	-38.75	Peak	HORIZONTAL
2	7386.00	48.95	-1.72	47.23	54.00	-6.77	Average	HORIZONTAL
3	7391.00	58.32	-1.72	56.60	74.00	-17.40	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.

5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	801.11g TX mode	Test Date	2019/11/25
Channel number	CH Low	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3212.00	64.38	-14.52	49.86	74.00	-24.14	Peak	VERTICAL
2	7236.00	53.69	-1.81	51.88	74.00	-22.12	Peak	VERTICAL
1	3212.00	51.83	-14.52	37.31	74.00	-36.69	Peak	HORIZONTAL
2	4824.00	43.64	-9.35	34.29	74.00	-39.71	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.1g TX mode	Test Date	2019/11/25
Channel number	CH Mid	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3723.00	49.67	-13.12	36.55	74.00	-37.45	Peak	VERTICAL
2	7311.00	53.95	-1.77	52.18	74.00	-21.82	Peak	VERTICAL
1	2001.00	51.58	-17.85	33.73	74.00	-40.27	Peak	HORIZONTAL
2	4874.00	45.10	-9.22	35.88	74.00	-38.12	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11g TX mode	Test Date	2019/11/25
Channel number	CH High	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3282.00	58.83	-14.71	44.12	74.00	-29.88	Peak	VERTICAL
2	7386.00	53.35	-1.72	51.63	74.00	-22.37	Peak	VERTICAL
1	4073.00	48.46	-11.86	36.60	74.00	-37.40	Peak	HORIZONTAL
2	7386.00	51.14	-1.72	49.42	74.00	-24.58	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT20 TX mode	Test Date	2019/11/25
Channel number	CH Low	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3212.00	63.94	-14.52	49.42	74.00	-24.58	Peak	VERTICAL
2	7236.00	52.06	-1.81	50.25	74.00	-23.75	Peak	VERTICAL
1	1609.00	55.33	-19.14	36.19	74.00	-37.81	Peak	HORIZONTAL
2	7236.00	49.93	-1.81	48.12	74.00	-25.88	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT20 TX mode	Test Date	2019/11/25
Channel number	CH Mid	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3247.00	60.47	-14.62	45.85	74.00	-28.15	Peak	VERTICAL
2	7311.00	50.61	-1.77	48.84	74.00	-25.16	Peak	VERTICAL
1	1574.00	52.60	-19.14	33.46	74.00	-40.54	Peak	HORIZONTAL
2	4874.00	44.03	-9.22	34.81	74.00	-39.19	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT20 TX mode	Test Date	2019/11/25
Channel number	CH High	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3282.00	57.82	-14.71	43.11	74.00	-30.89	Peak	VERTICAL
2	7386.00	52.42	-1.72	50.70	74.00	-23.30	Peak	VERTICAL
1	1595.00	52.77	-19.13	33.64	74.00	-40.36	Peak	HORIZONTAL
2	7386.00	50.24	-1.72	48.52	74.00	-25.48	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH Low	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3226.00	58.53	-14.55	43.98	74.00	-30.02	Peak	VERTICAL
2	4844.00	46.26	-9.31	36.95	74.00	-37.05	Peak	VERTICAL
1	2057.00	51.61	-17.11	34.50	74.00	-39.50	Peak	HORIZONTAL
2	4844.00	45.32	-9.31	36.01	74.00	-37.99	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH Mid	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	3247.00	56.53	-14.62	41.91	74.00	-32.09	Peak	VERTICAL
2	4874.00	45.08	-9.22	35.86	74.00	-38.14	Peak	VERTICAL
1	2057.00	50.69	-17.11	33.58	74.00	-40.42	Peak	HORIZONTAL
2	4874.00	46.16	-9.22	36.94	74.00	-37.06	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode	802.11n HT40 TX mode	Test Date	2019/11/25
Channel number	CH High	Test By	Weitin
Temperature	25 ℃	Pol	Ver./Hor
Humidity	60 %		

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	4248.00	52.59	-11.33	41.26	74.00	-32.74	Peak	VERTICAL
2	4904.00	45.77	-9.14	36.63	74.00	-37.37	Peak	VERTICAL
1	4080.00	48.72	-11.83	36.89	74.00	-37.11	Peak	HORIZONTAL
2	4904.00	45.21	-9.14	36.07	74.00	-37.93	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

3 Measurement of data within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.

5 Spectrum AV mode if bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

9 100kHz Bandwidth of Band Edges Measurement

9.1 Standard Applicable:

According to §15.247(c), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in15.209(a).

9.2 Measurement Equipment Used:

Refer to section 8.2 for details.

9.3 Test Setup

Refer to section 8.3 for details.

9.4 Measurement Procedure:

Refer to section 8.4 for details.

9.5 Field Strength Calculation:

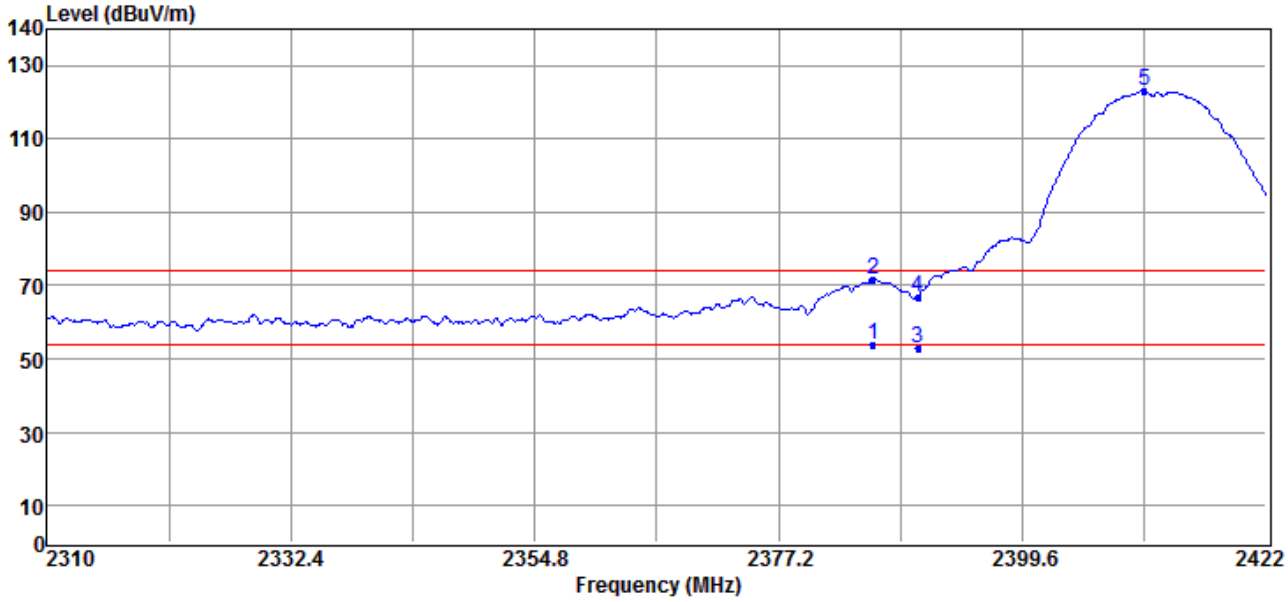
Refer to section 8.5 for details.

9.6 Measurement Result:

Note: Refer to next page spectrum analyzer data chart and tabular data sheets.

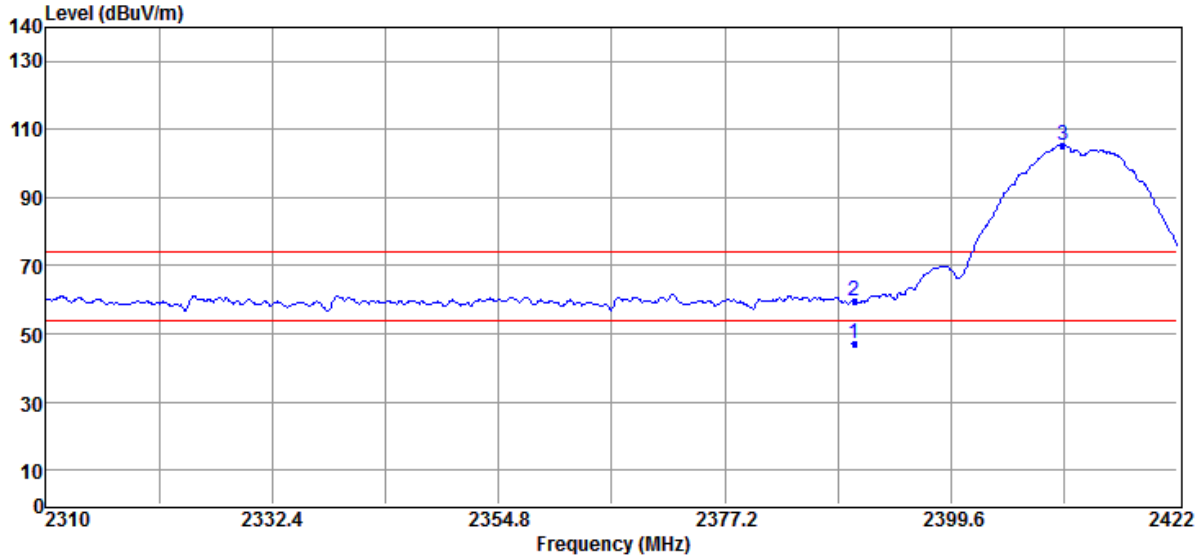
Radiated Emission: 802.11 b mode

Operation Mode	TX CH Low	Test Date	2019/11/25
Fundamental Frequency	2412 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2385.94	21.29	32.59	53.88	54.00	-0.12	Average	VERTICAL
2	2385.94	39.00	32.59	71.59	74.00	-2.41	Peak	VERTICAL
3	2390.00	20.41	32.59	53.00	54.00	-1.00	Average	VERTICAL
4	2390.00	34.49	32.59	67.08	74.00	-6.92	Peak	VERTICAL
5	2410.80	90.50	32.59	123.09	F	---	Peak	VERTICAL

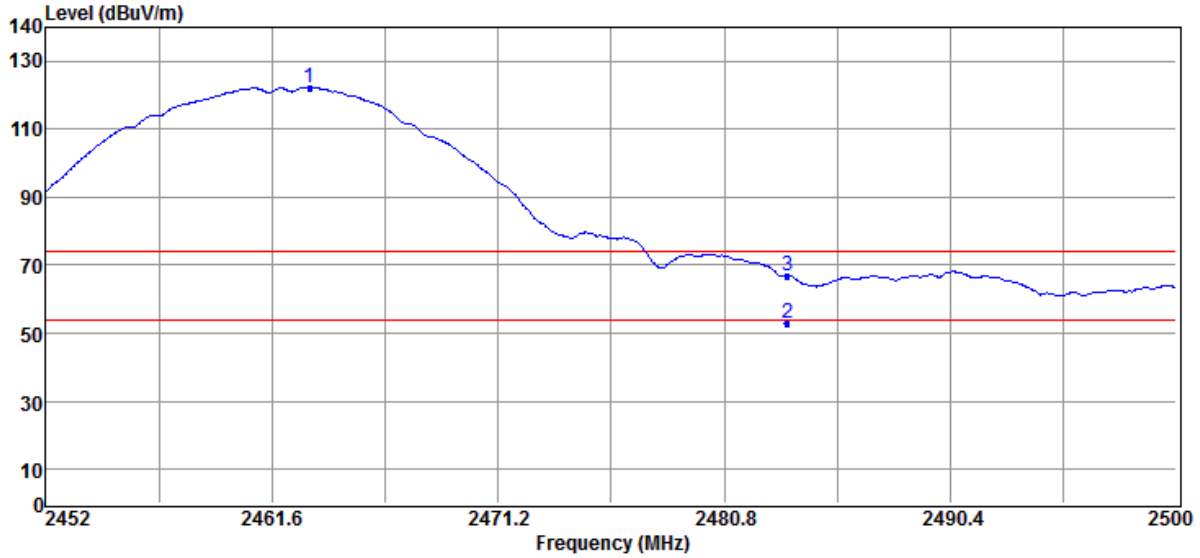
Remark: F” denotes fundamental frequency



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2390.00	14.63	32.59	47.22	54.00	-6.78	Average	HORIZONTAL
2	2390.00	27.05	32.59	59.64	74.00	-14.36	Peak	HORIZONTAL
3	2410.69	72.99	32.59	105.58	F	--	Peak	HORIZONTAL

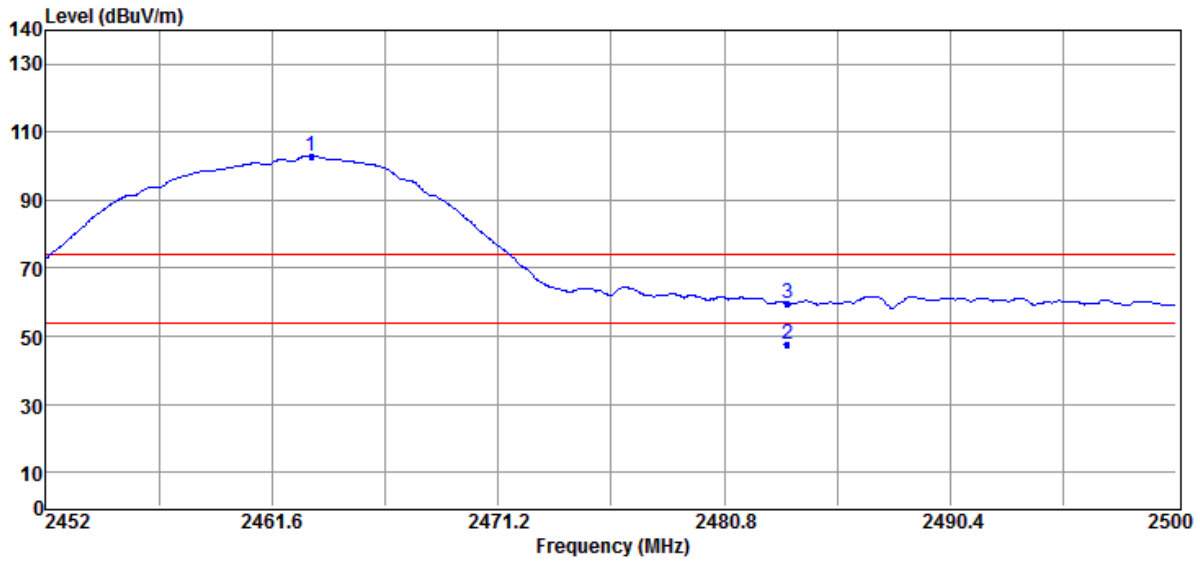
Remark: F” denotes fundamental frequency

Operation Mode	TX CH High	Test Date	2019/11/25
Fundamental Frequency	2462 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2463.18	89.82	32.61	122.43	F	---	Peak	VERTICAL
2	2483.50	20.37	32.63	53.00	54.00	-1.00	Average	VERTICAL
3	2483.50	34.47	32.63	67.10	74.00	-6.90	Peak	VERTICAL

Remark: “F” denotes fundamental frequency

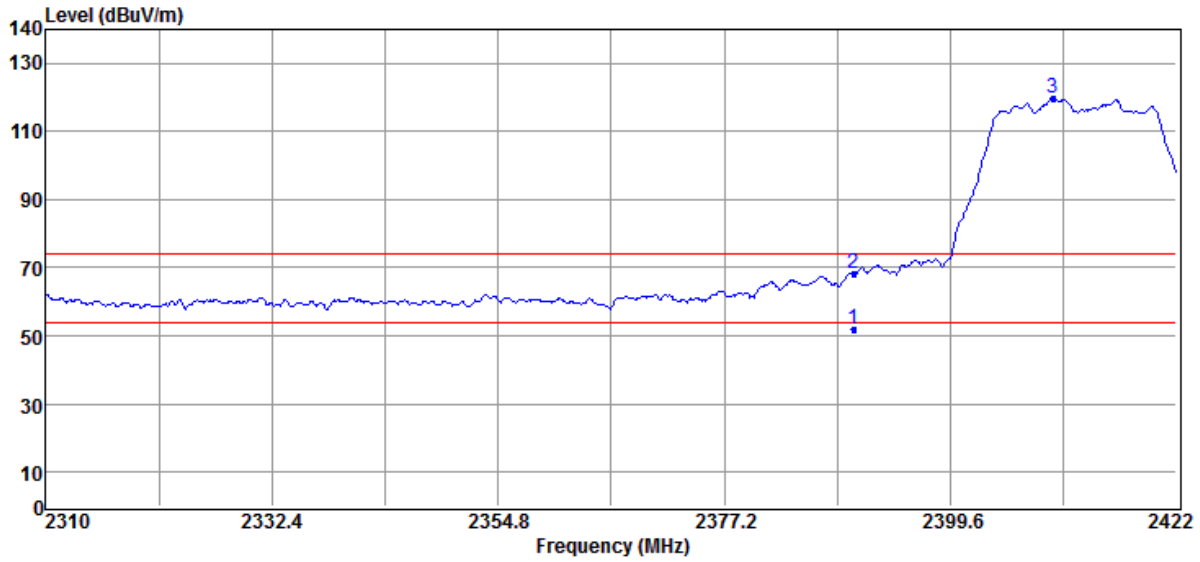


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2463.28	70.47	32.61	103.08	F	---	Peak	HORIZONTAL
2	2483.50	14.85	32.63	47.48	54.00	-6.52	Average	HORIZONTAL
3	2483.50	27.16	32.63	59.79	74.00	-14.21	Peak	HORIZONTAL

Remark: “F” denotes fundamental frequency

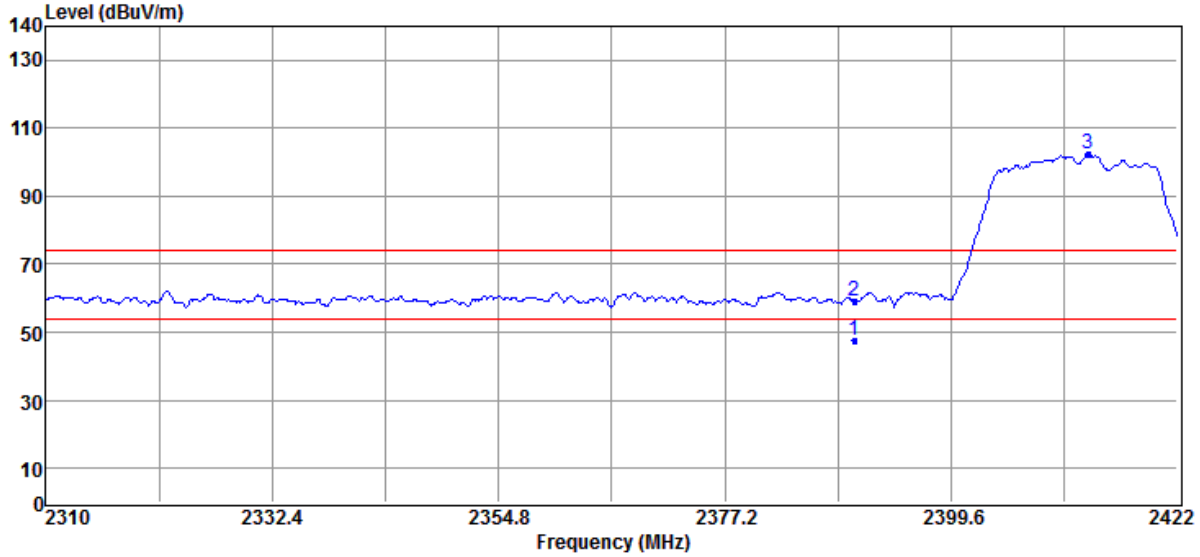
Radiated Emission: 802.11 g mode

Operation Mode	TX CH Low	Test Date	2019/11/25
Fundamental Frequency	2412 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2390.00	19.45	32.59	52.04	54.00	-1.96	Average	VERTICAL
2	2390.00	35.59	32.59	68.18	74.00	-5.82	Peak	VERTICAL
3	2409.79	87.24	32.59	119.83	F	---	Peak	VERTICAL

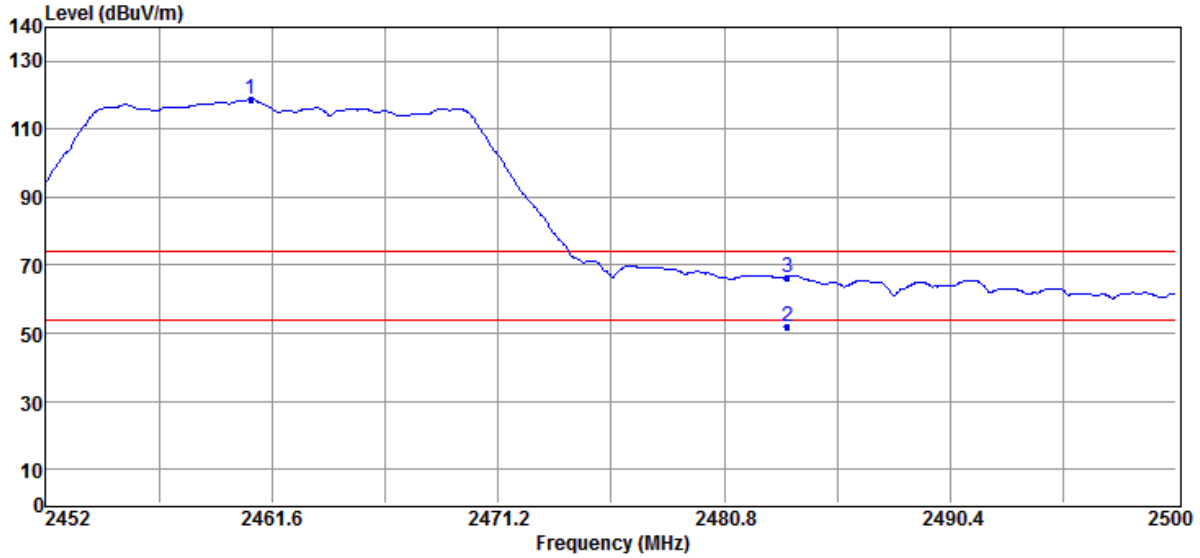
Remark: “F” denotes fundamental frequency



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2390.00	15.23	32.59	47.82	54.00	-6.18	Average	HORIZONTAL
2	2390.00	26.37	32.59	58.96	74.00	-15.04	Peak	HORIZONTAL
3	2413.15	69.84	32.58	102.42	F	---	Peak	HORIZONTAL

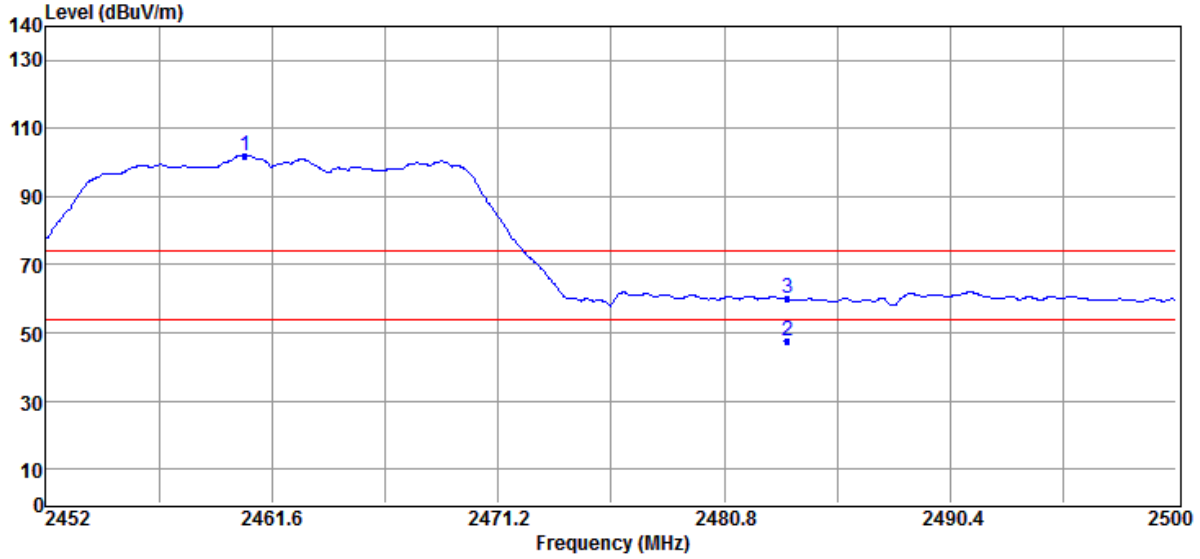
Remark: “F” denotes fundamental frequency

Operation Mode	TX CH High	Test Date	2019/11/25
Fundamental Frequency	2462 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2460.69	86.30	32.62	118.92	F	---	Peak	VERTICAL
2	2483.50	19.54	32.63	52.17	54.00	-1.83	Average	VERTICAL
3	2483.50	33.88	32.63	66.51	74.00	-7.49	Peak	VERTICAL

Remark: “F” denotes fundamental frequency

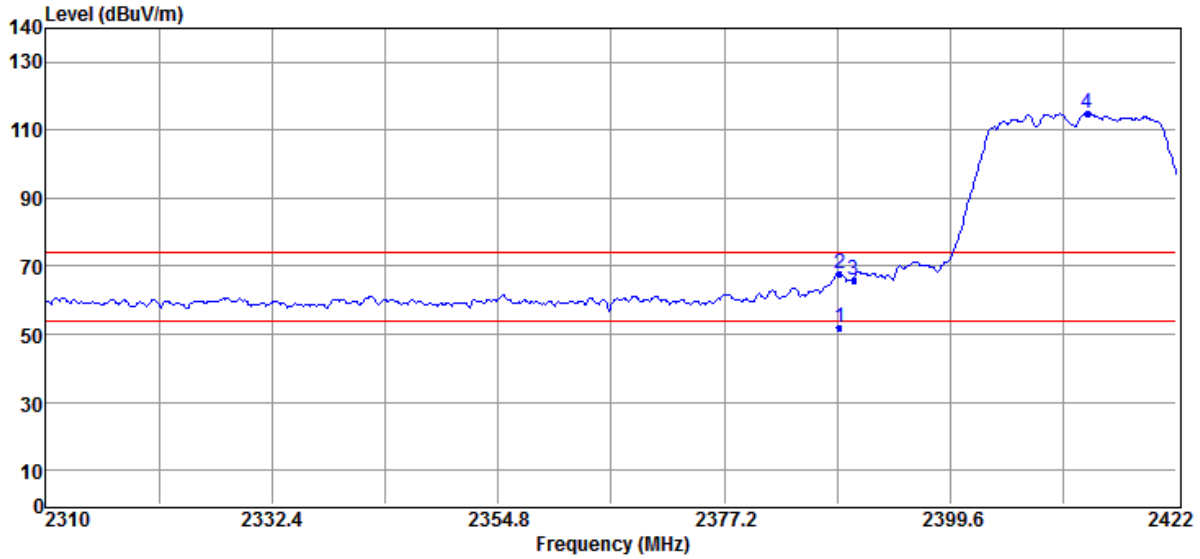


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2460.45	69.59	32.62	102.21	F	---	Peak	HORIZONTAL
2	2483.50	14.77	32.63	47.40	54.00	-6.60	Average	HORIZONTAL
3	2483.50	27.34	32.63	59.97	74.00	-14.03	Peak	HORIZONTAL

Remark: “F” denotes fundamental frequency

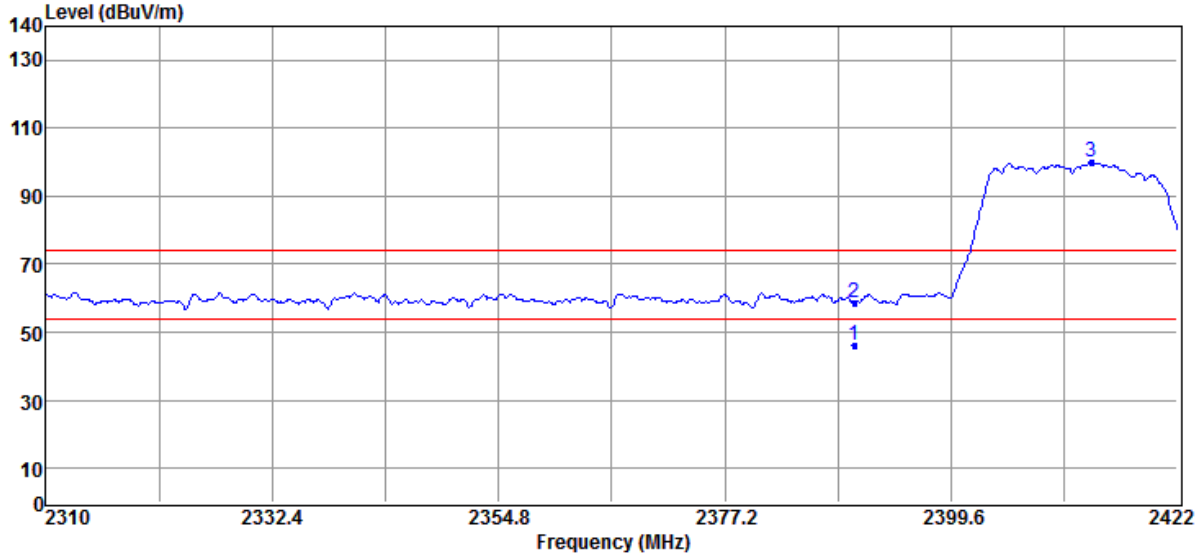
Radiated Emission: 802.11 n_HT20 mode

Operation Mode	TX CH Low	Test Date	2019/11/25
Fundamental Frequency	2412 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2388.62	19.52	32.59	52.11	54.00	-1.89	Average	VERTICAL
2	2388.62	35.20	32.59	67.79	74.00	-6.21	Peak	VERTICAL
3	2390.00	33.31	32.59	65.90	74.00	-8.10	Peak	VERTICAL
4	2413.15	82.29	32.58	114.87	F	---	Peak	VERTICAL

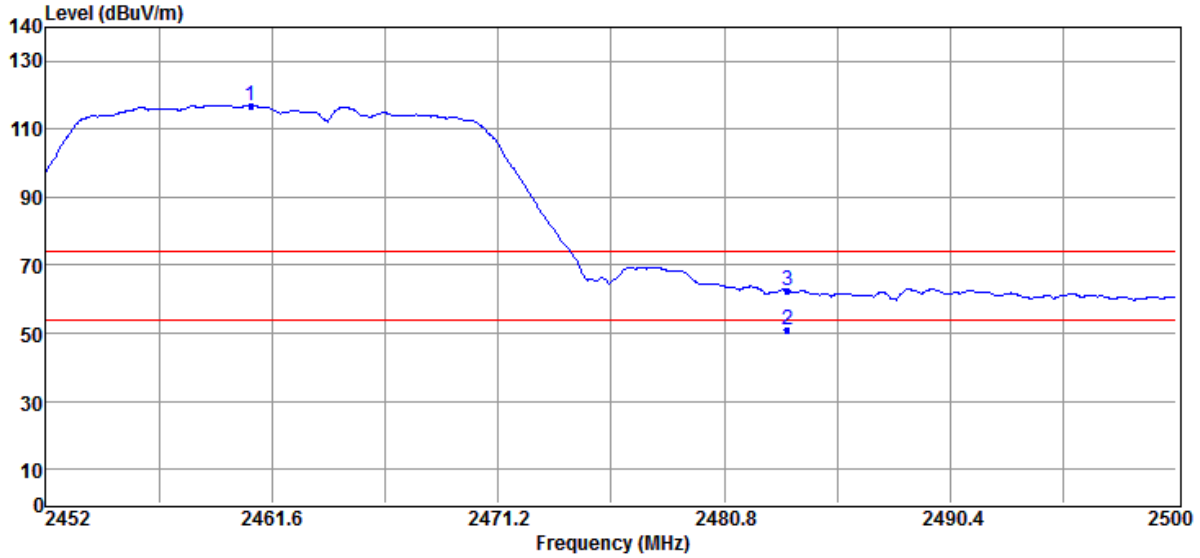
Remark: “F” denotes fundamental frequency



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2390.00	13.55	32.59	46.14	54.00	-7.86	Average	HORIZONTAL
2	2390.00	26.14	32.59	58.73	74.00	-15.27	Peak	HORIZONTAL
3	2413.49	67.45	32.58	100.03	F	---	Peak	HORIZONTAL

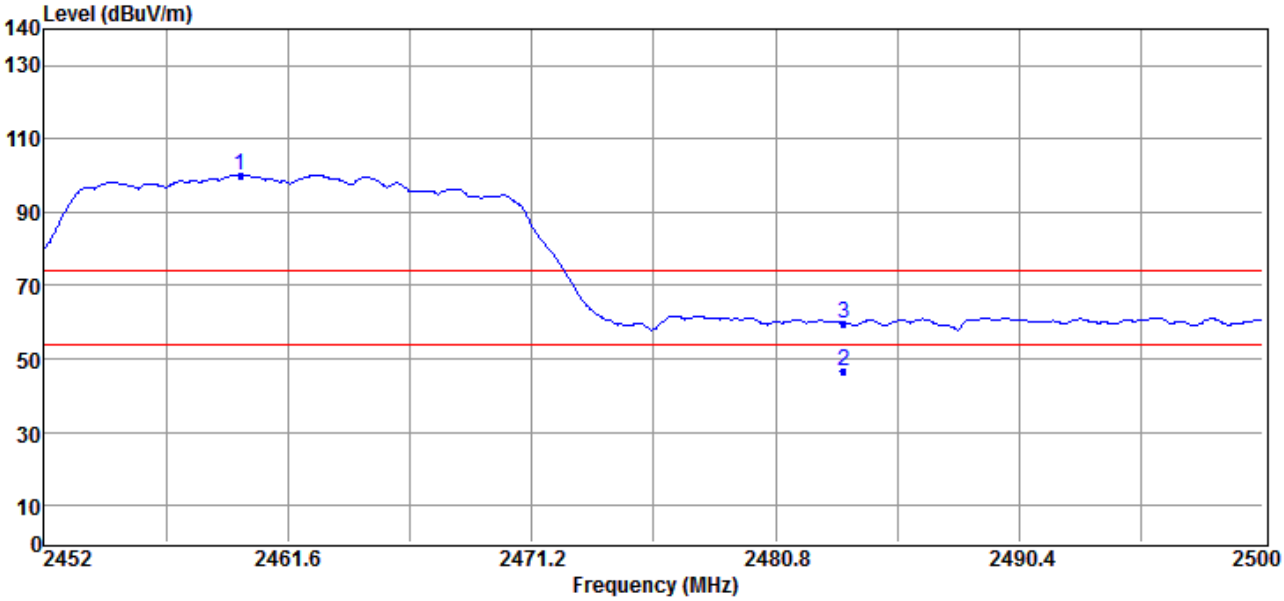
Remark: “F” denotes fundamental frequency

Operation Mode	TX CH High	Test Date	2019/11/25
Fundamental Frequency	2462 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2460.69	84.46	32.62	117.08	F	---	Peak	VERTICAL
2	2483.50	18.43	32.63	51.06	54.00	-2.94	Average	VERTICAL
3	2483.50	30.13	32.63	62.76	74.00	-11.24	Peak	VERTICAL

Remark: “F” denotes fundamental frequency

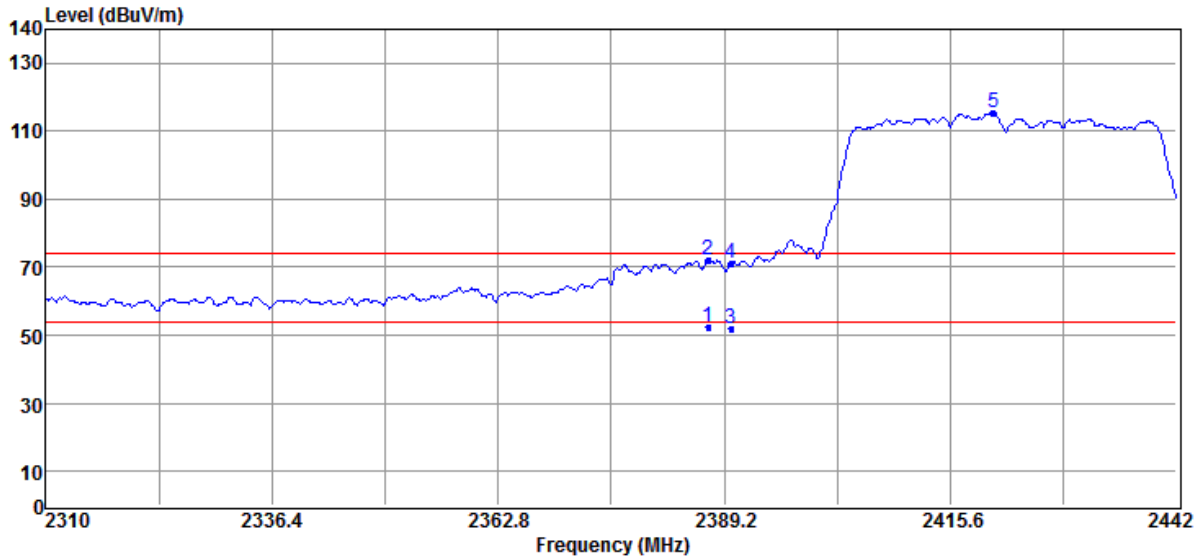


No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2459.73	67.58	32.62	100.20	F	---	Peak	HORIZONTAL
2	2483.50	14.01	32.63	46.64	54.00	-7.36	Average	HORIZONTAL
3	2483.50	27.01	32.63	59.64	74.00	-14.36	Peak	HORIZONTAL

Remark: “F” denotes fundamental frequency

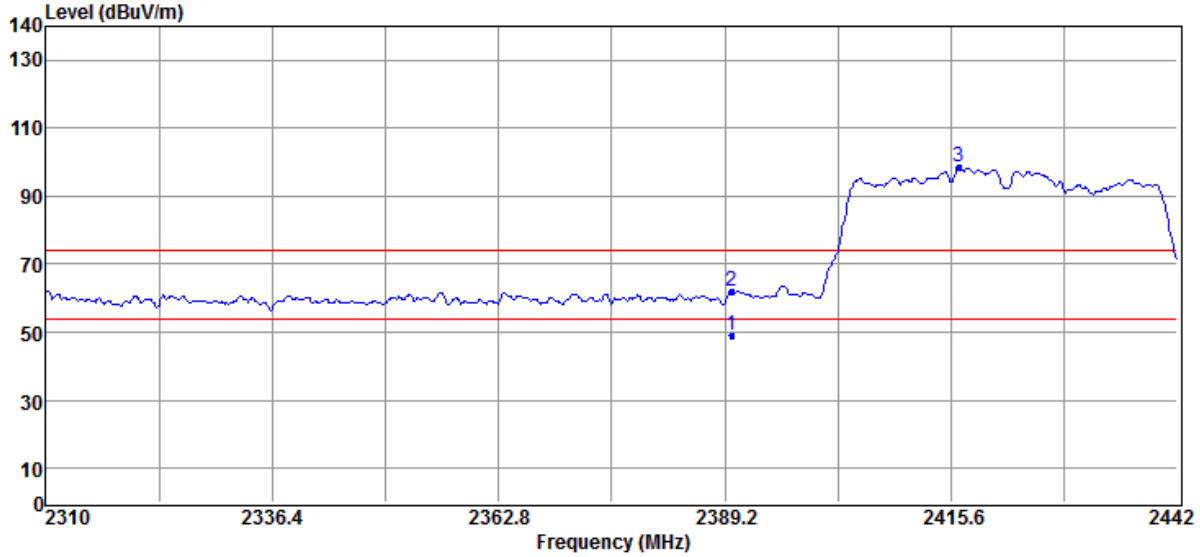
Radiated Emission: 802.11 n_HT40 mode

Operation Mode	TX CH Low	Test Date	2019/11/25
Fundamental Frequency	2422 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2387.35	20.02	32.59	52.61	54.00	-1.39	Average	VERTICAL
2	2387.35	39.76	32.59	72.35	74.00	-1.65	Peak	VERTICAL
3	2390.00	19.53	32.59	52.12	54.00	-1.88	Average	VERTICAL
4	2390.00	38.71	32.59	71.30	74.00	-2.70	Peak	VERTICAL
5	2420.62	82.93	32.59	115.52	F	---	Peak	VERTICAL

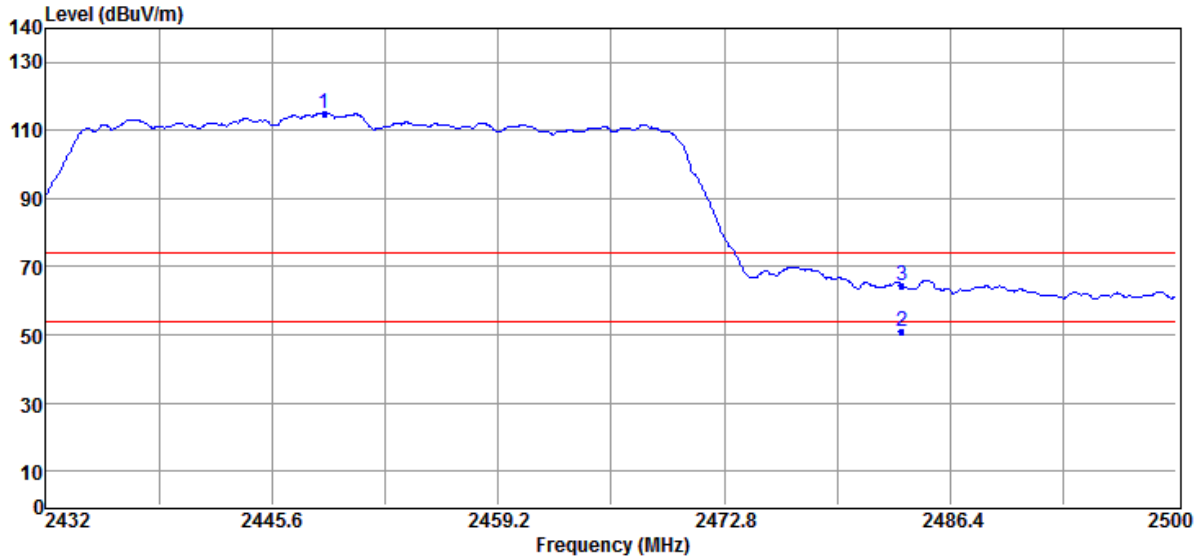
Remark: “F” denotes fundamental frequency



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2390.00	16.28	32.59	48.87	54.00	-5.13	Average	HORIZONTAL
2	2390.00	29.32	32.59	61.91	74.00	-12.09	Peak	HORIZONTAL
3	2416.52	65.80	32.59	98.39	F	---	Peak	HORIZONTAL

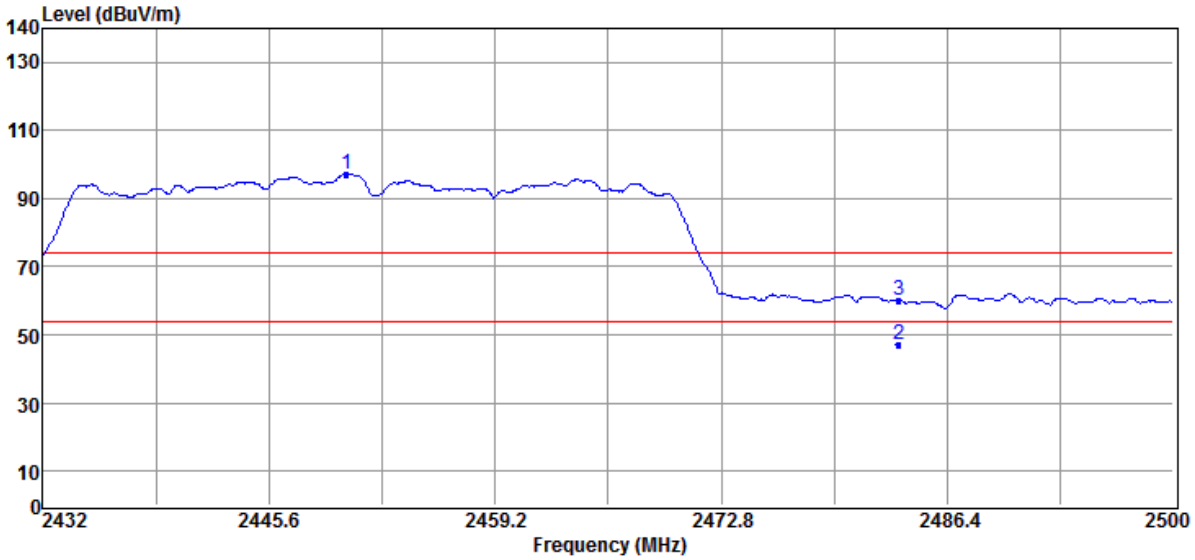
Remark: “F” denotes fundamental frequency

Operation Mode	TX CH High	Test Date	2019/11/25
Fundamental Frequency	2452 MHz	Test By	Weitin
Temperature	25 ℃	Humidity	60 %



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2448.73	82.59	32.61	115.20	F	---	Peak	VERTICAL
2	2483.50	18.55	32.63	51.18	54.00	-2.82	Average	VERTICAL
3	2483.50	31.88	32.63	64.51	74.00	-9.49	Peak	VERTICAL

Remark: “F” denotes fundamental frequency



No	Freq MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	2450.29	64.73	32.61	97.34	F	---	Peak	HORIZONTAL
2	2483.50	14.64	32.63	47.27	54.00	-6.73	Average	HORIZONTAL
3	2483.50	27.71	32.63	60.34	74.00	-13.66	Peak	HORIZONTAL

Remark: “F” denotes fundamental frequency

10 Peak Power Spectral Density

10.1 Standard Applicable:

According to §15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

10.2 Measurement Equipment Used:

Refer to section 6.2 for details.

10.3 Test Set-up:

Refer to section 7.3 for details.

10.4 Measurement Procedure:

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW =3kHz, VBW = 10kHz, Set the span to 1.5 DTS bandwidth., Sweep=Auto
4. Record the max. reading.
5. Repeat above procedures until all frequency measured were complete.

10.5 Measurement Result:

CDD mode

	CH	Output Chain (dBm)			Combine Power Density (dBm/3kHz)	Limit (dBm)	Result
		Chain 1	chain 2	Chain 3			
802.11b	Low	-1.81	-3.73	-1.32	2.60	5.07	Pass
	Mid	-1.50	-2.51	-1.61	2.92	5.07	
	High	-1.83	-2.08	-3.49	2.37	5.07	
802.11g	Low	-8.93	-9.20	-8.62	-4.14	5.07	
	Mid	-8.59	-9.36	-9.55	-4.38	5.07	
	High	-7.91	-8.54	-8.31	-3.47	5.07	
802.11n HT20	Low	-12.14	-11.29	-11.50	-6.86	5.07	
	Mid	-0.84	-1.06	-0.17	4.10	5.07	
	High	-10.59	-8.60	-10.44	-5.00	5.07	
802.11n HT40	Low	-14.02	-13.72	-14.21	-9.21	5.07	
	Mid	-13.34	-11.12	-12.29	-7.38	5.07	
	High	-14.82	-14.07	-13.97	-9.50	5.07	

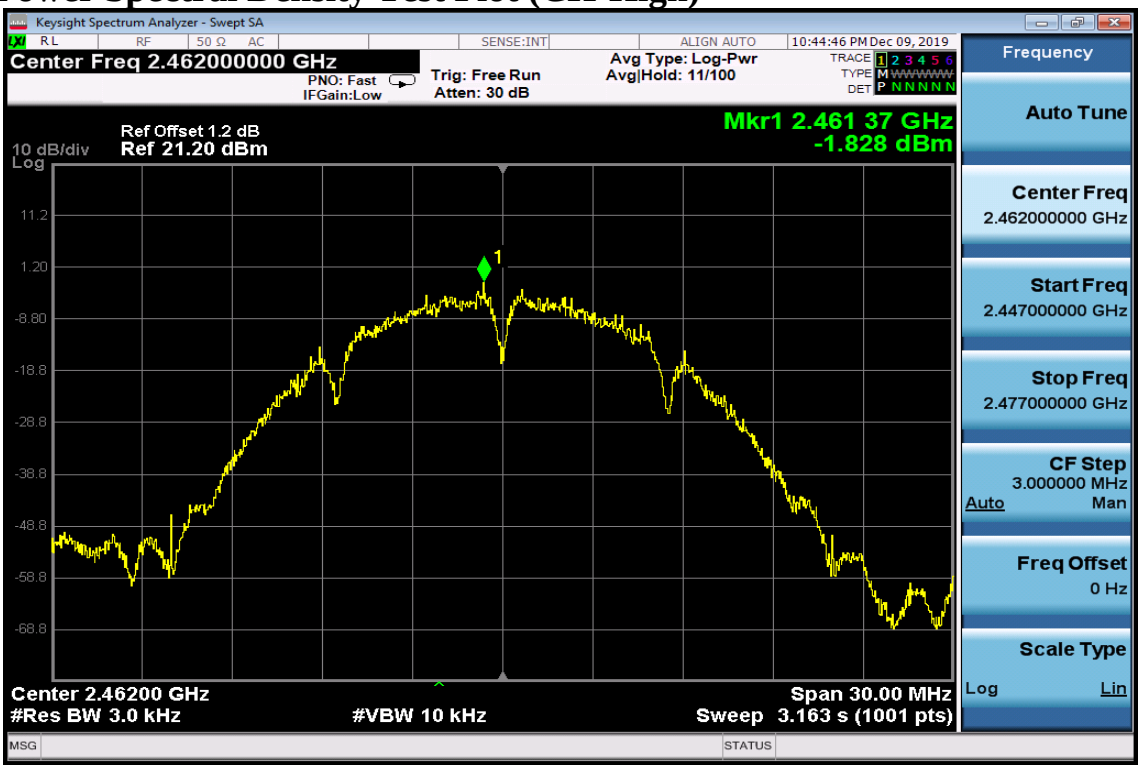
CDD mode

802.11b (Antenna 1)

Power Spectral Density Test Plot (CH-Low)

Power Spectral Density Test Plot (CH-Mid)

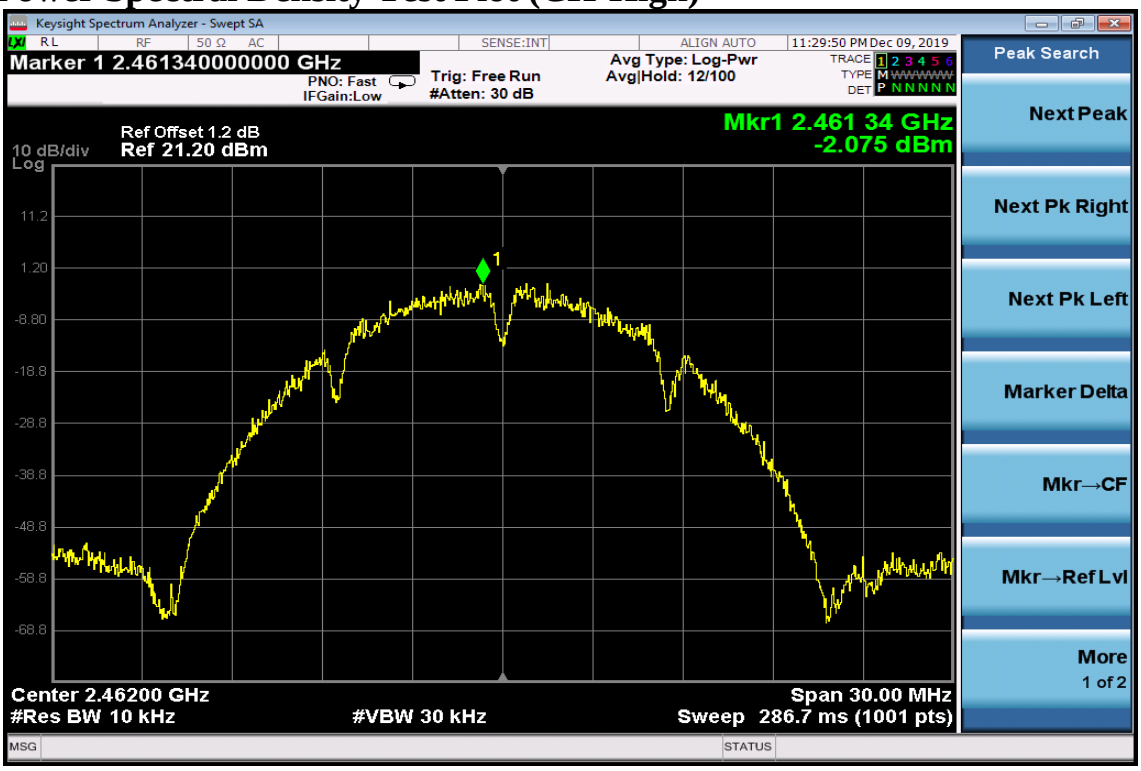
Power Spectral Density Test Plot (CH-High)



802.11b (Antenna 2)
Power Spectral Density Test Plot (CH-Low)

Power Spectral Density Test Plot (CH-Mid)

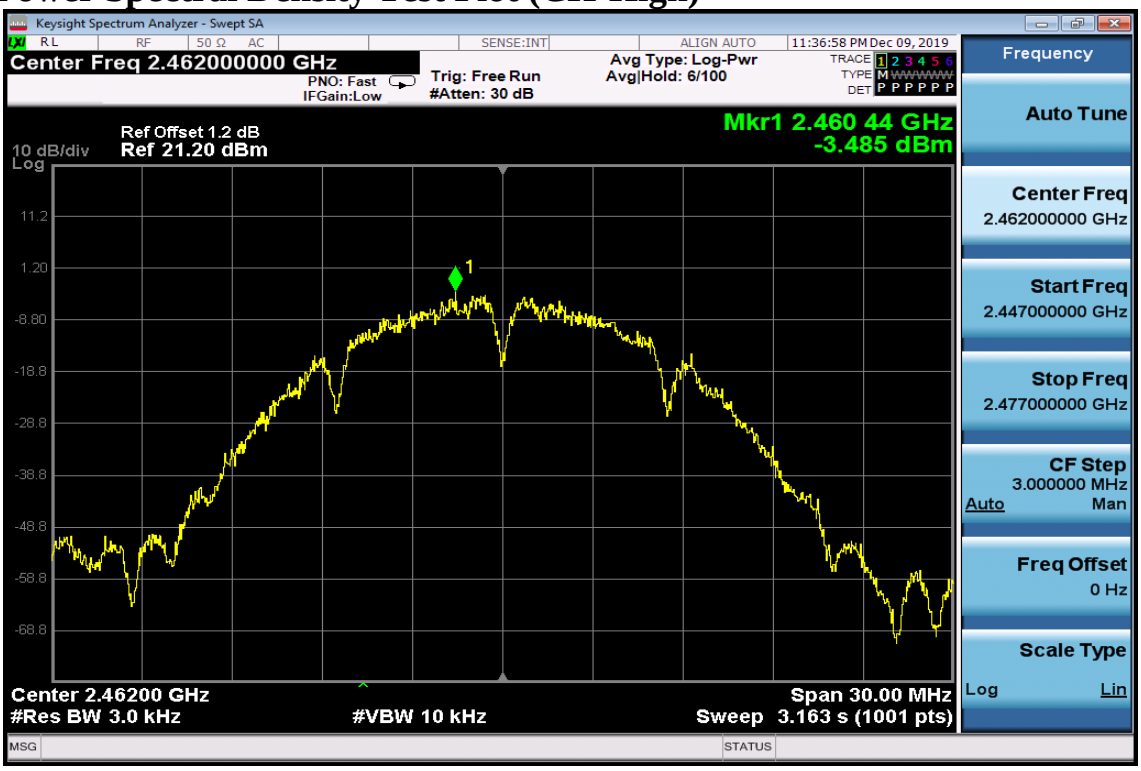
Power Spectral Density Test Plot (CH-High)



802.11b (Antenna 3)
Power Spectral Density Test Plot (CH-Low)

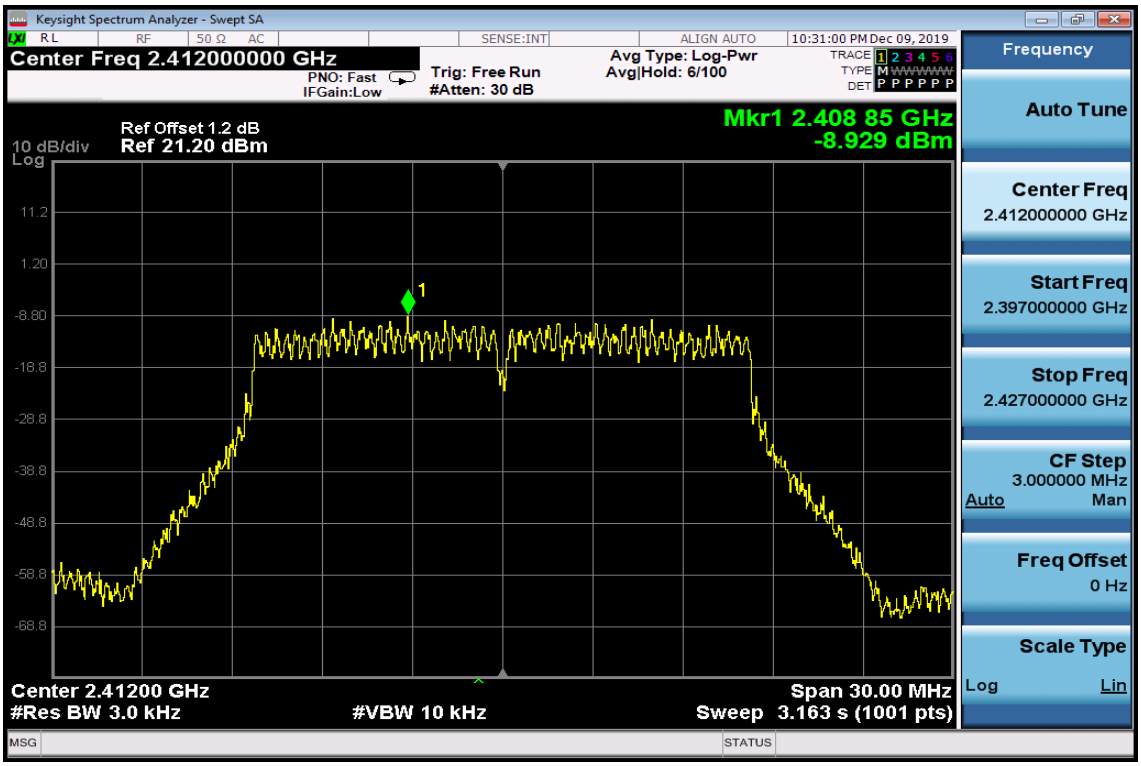
Power Spectral Density Test Plot (CH-Mid)

Power Spectral Density Test Plot (CH-High)

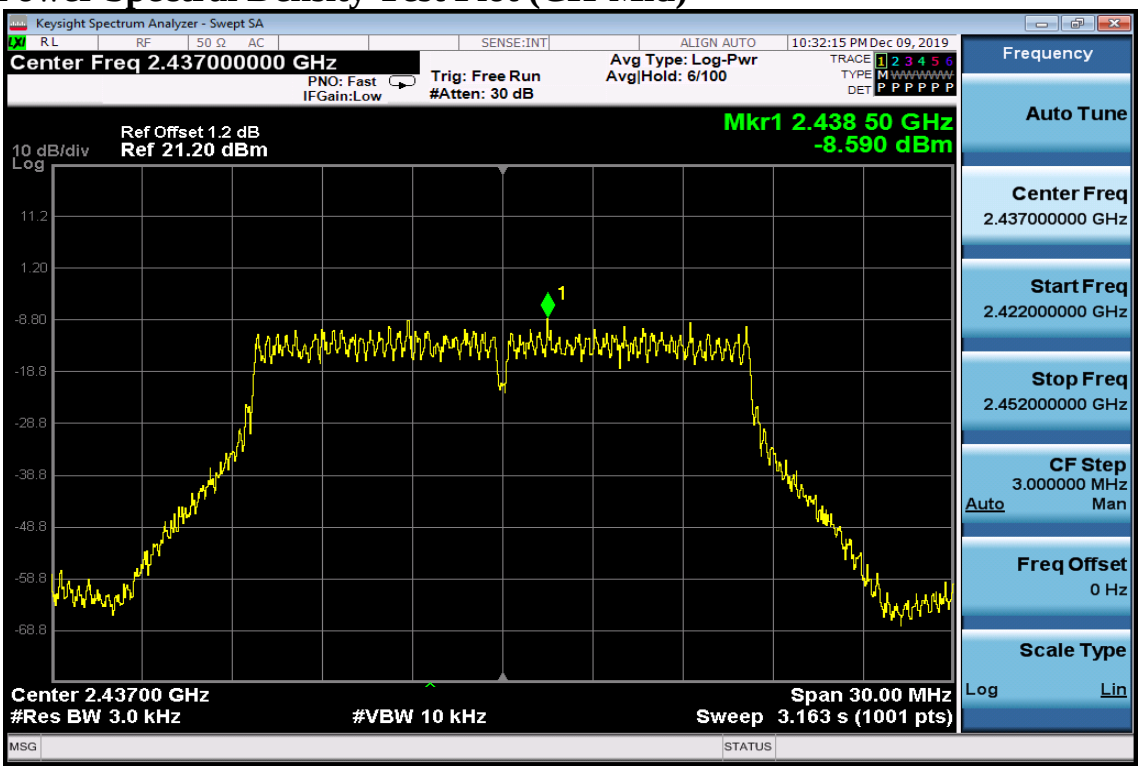


802.11g (Antenna 1)

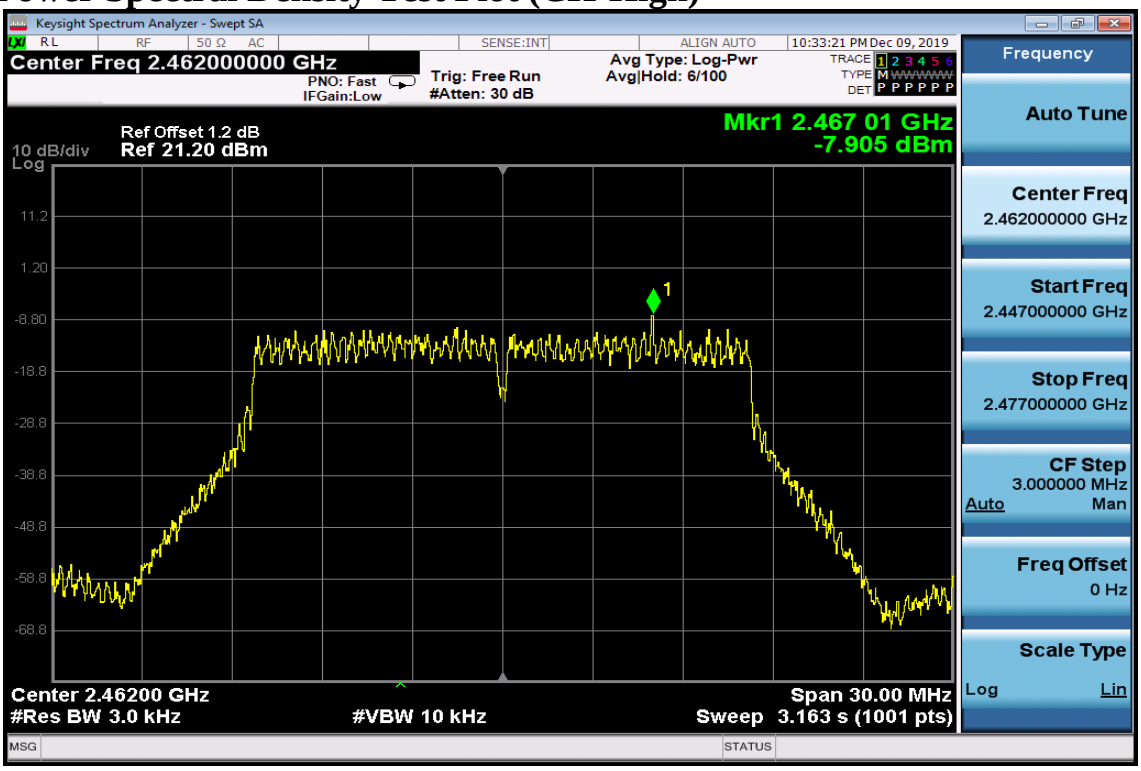
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

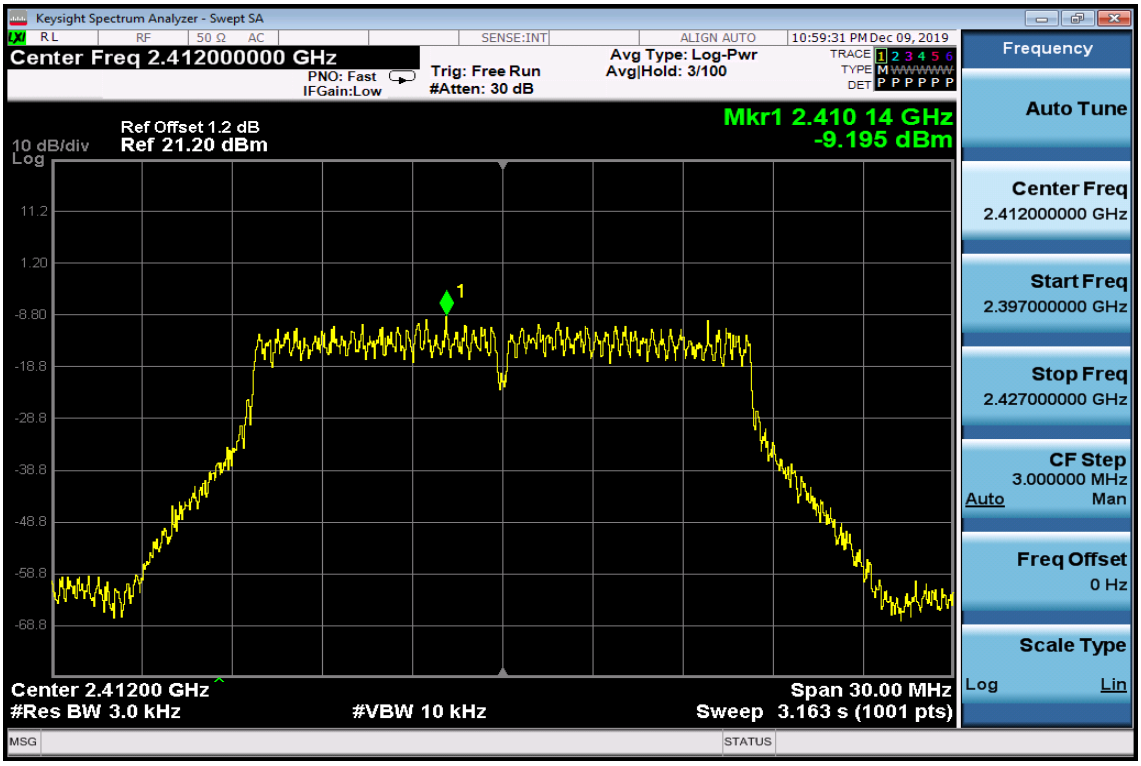


Power Spectral Density Test Plot (CH-High)

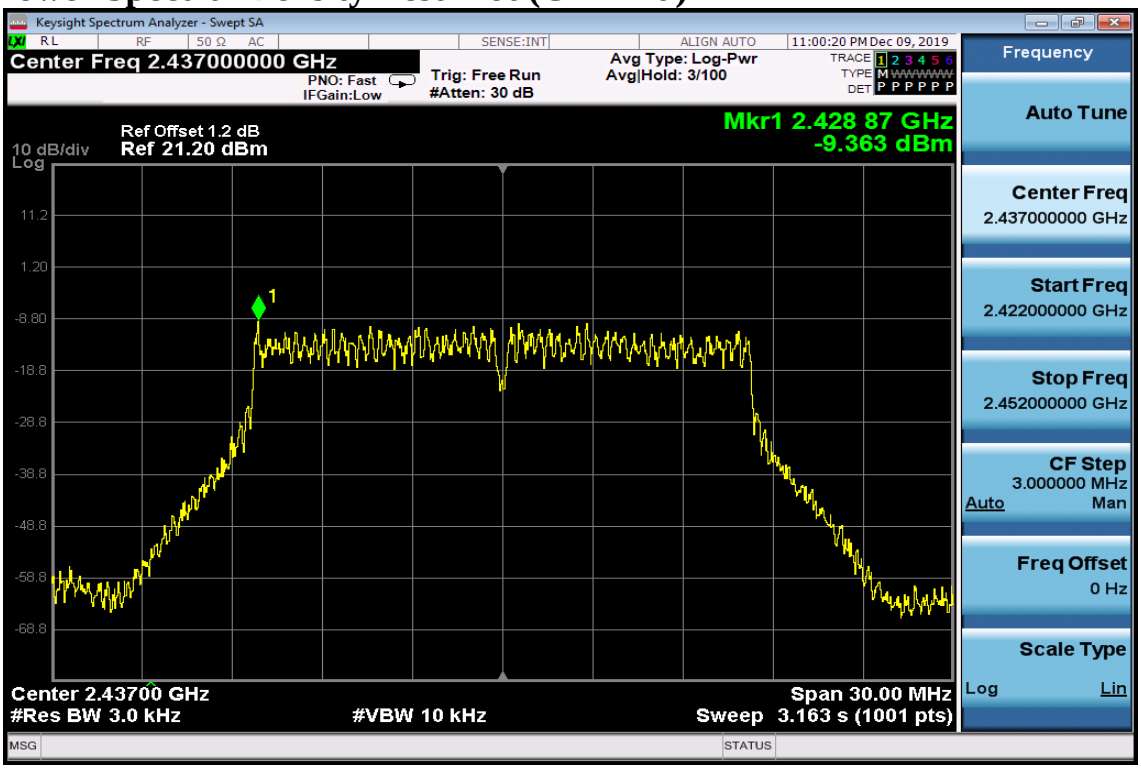


802.11g (Antenna 2)

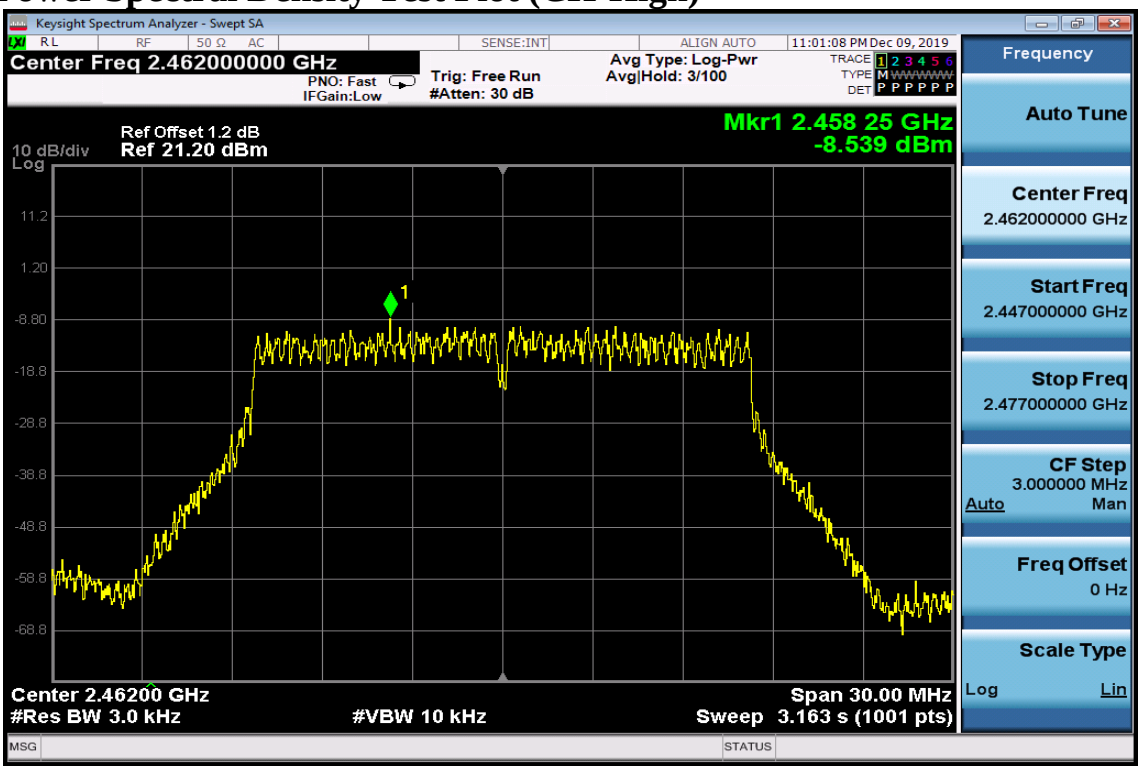
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

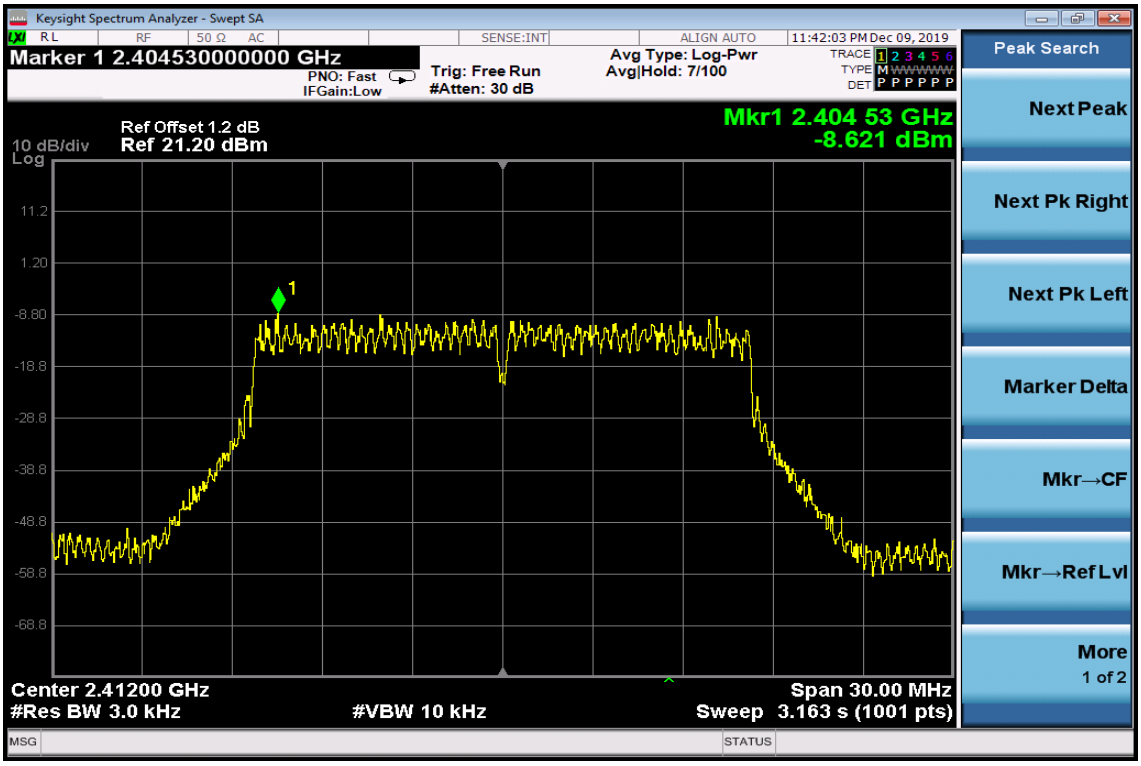


Power Spectral Density Test Plot (CH-High)

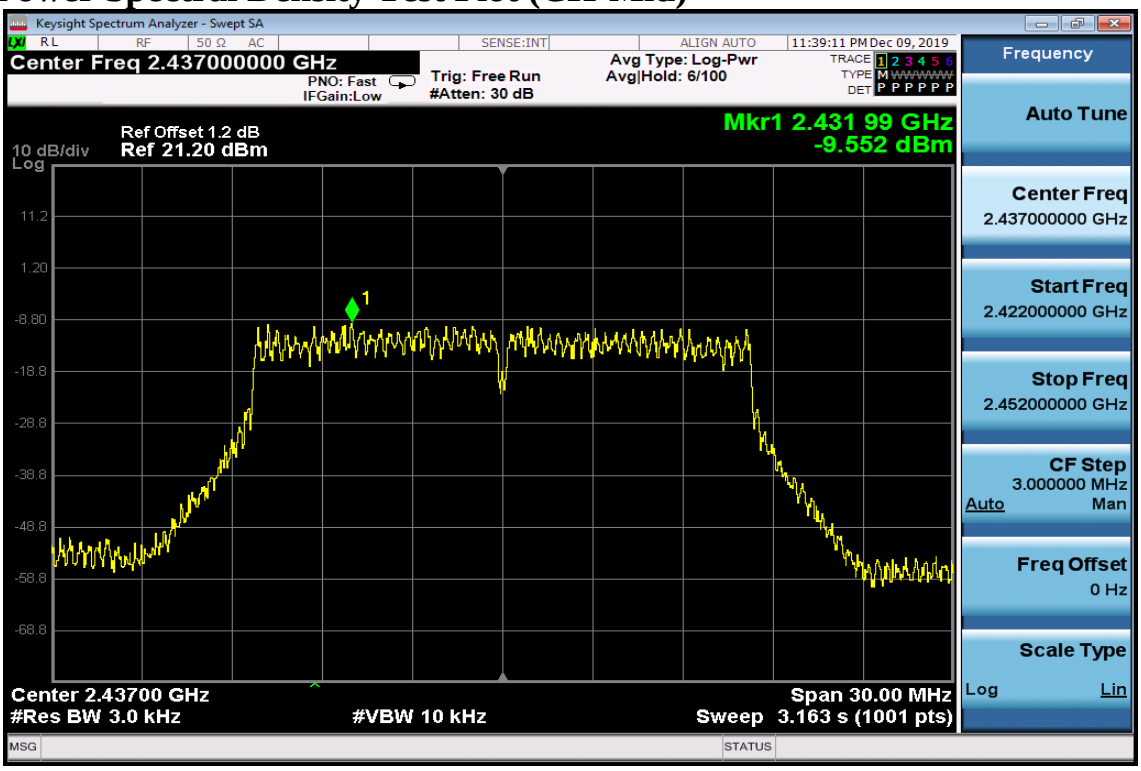


802.11g (Antenna 3)

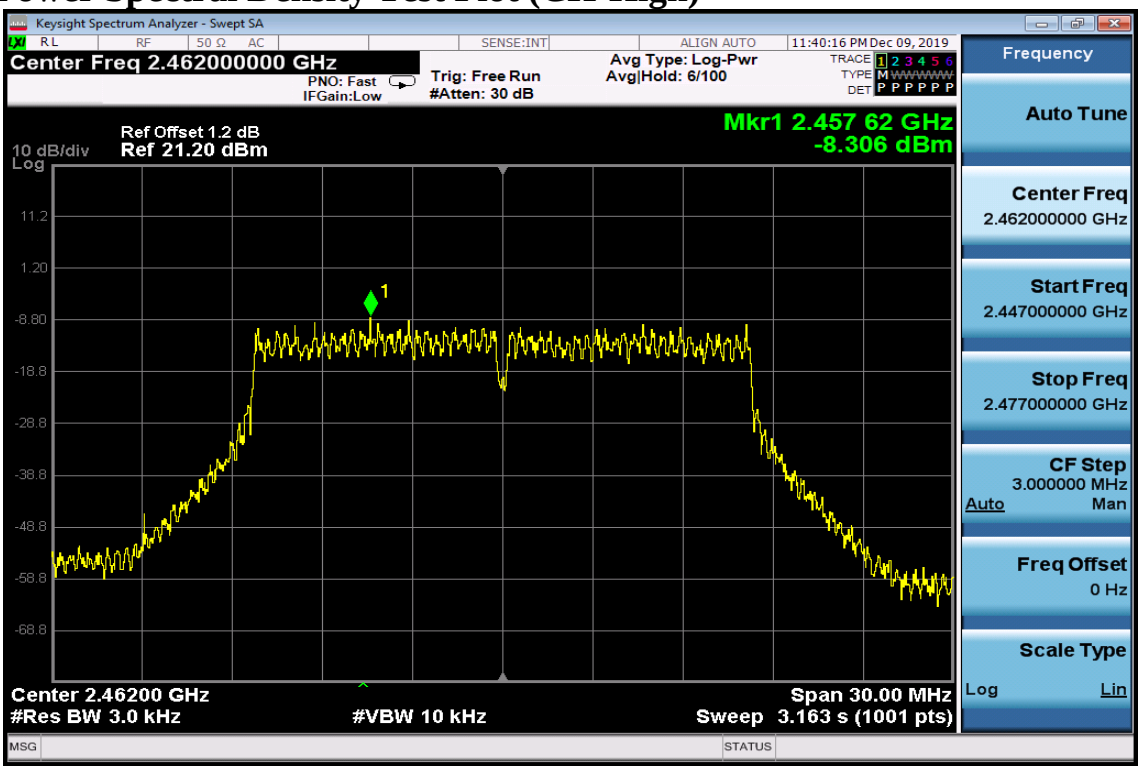
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

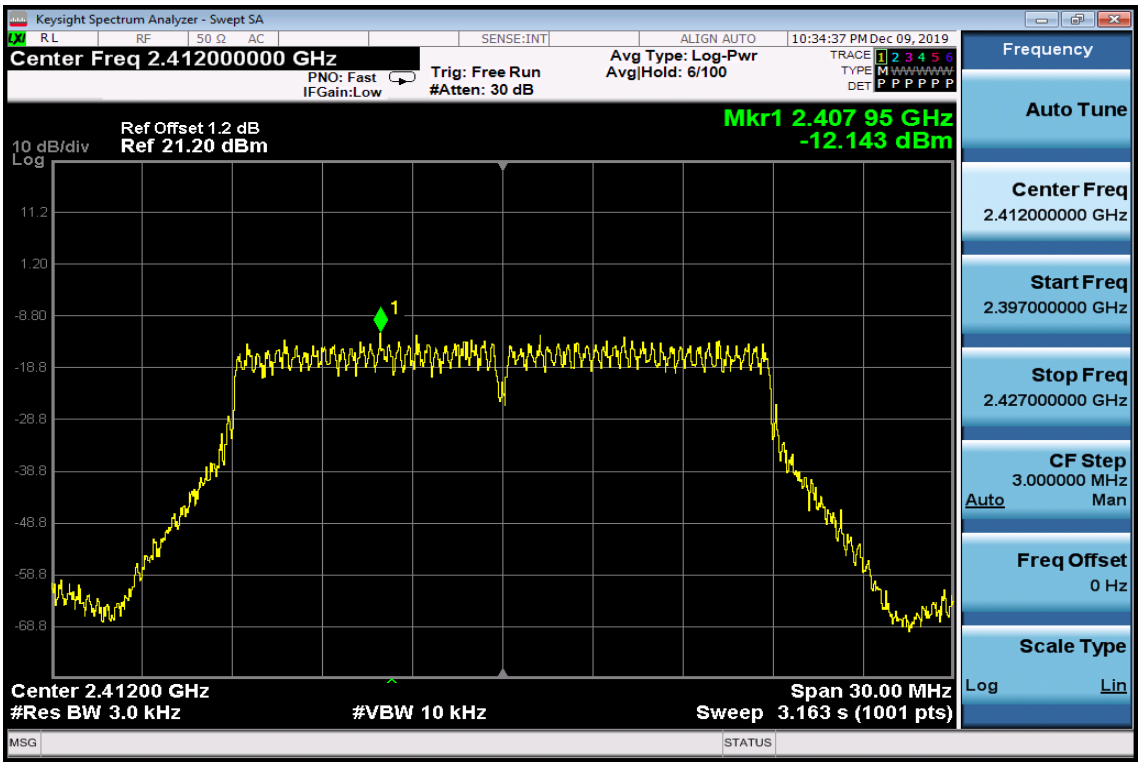


Power Spectral Density Test Plot (CH-High)

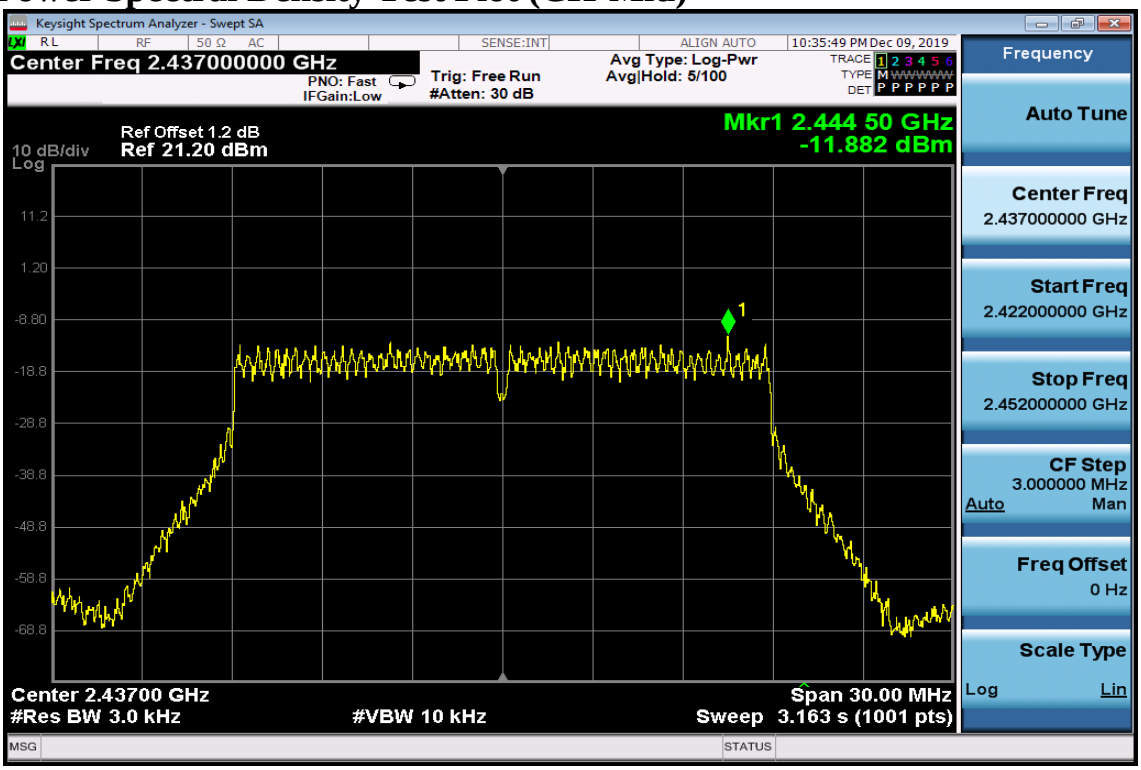


802.11n_HT20 (Antenna 1)

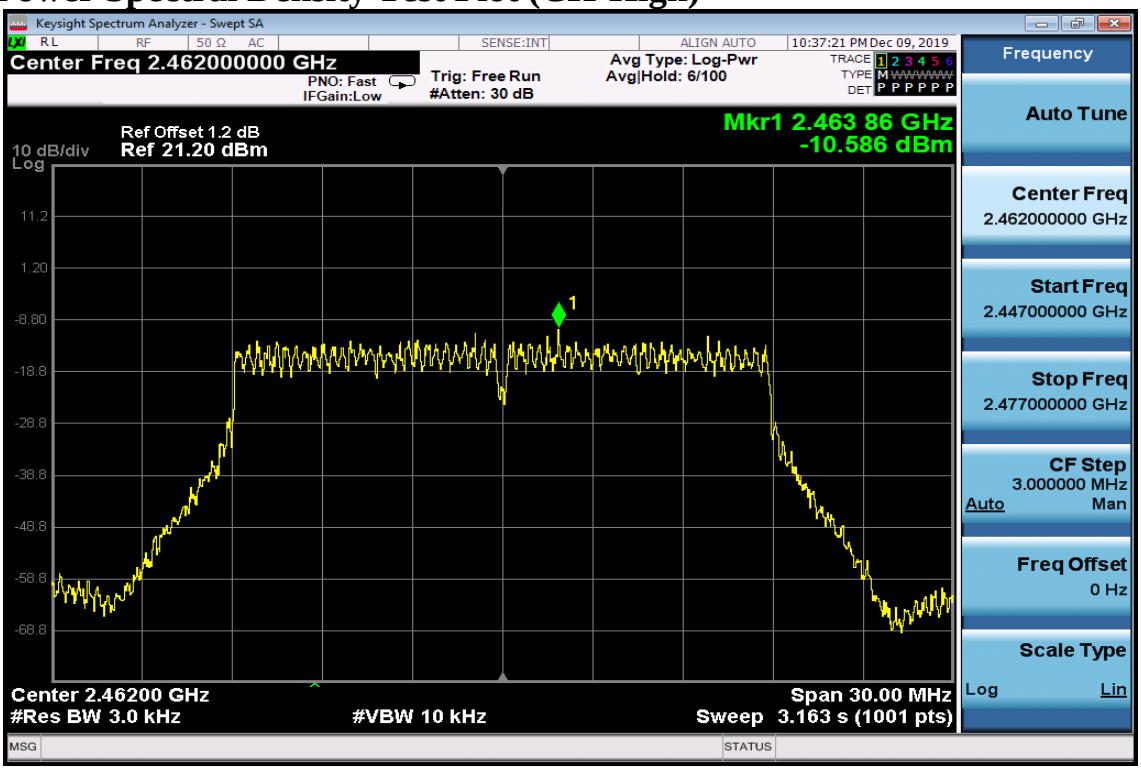
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

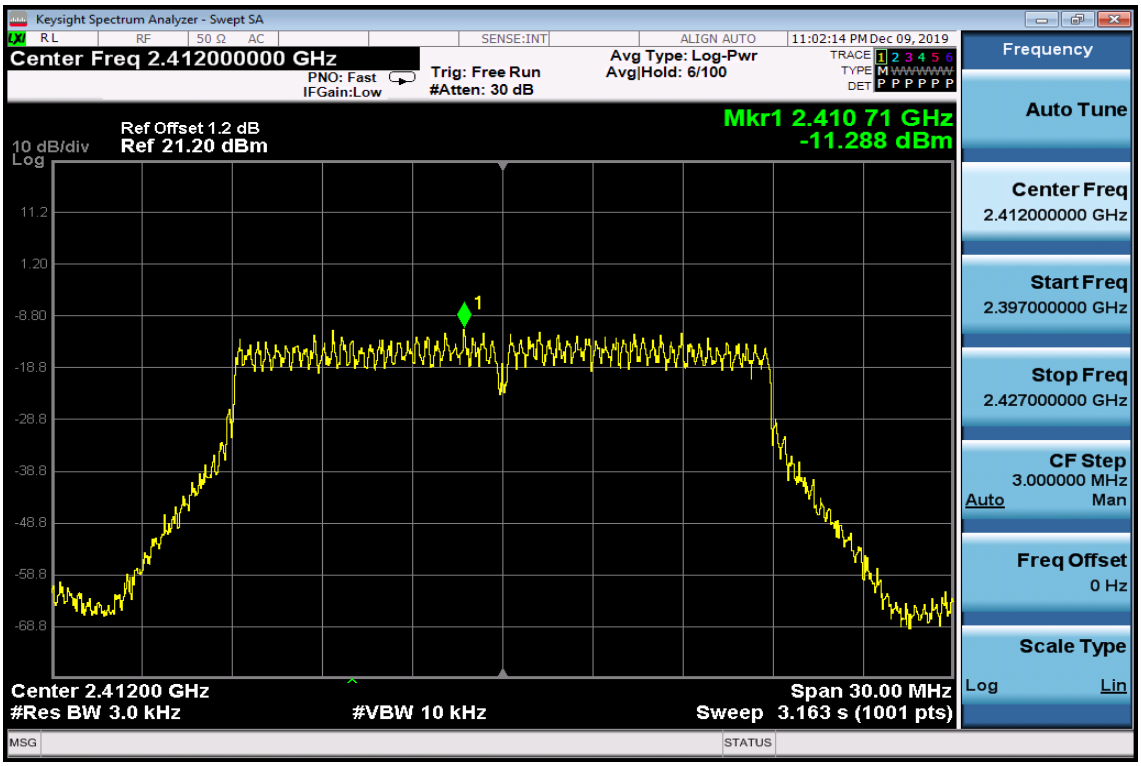


Power Spectral Density Test Plot (CH-High)

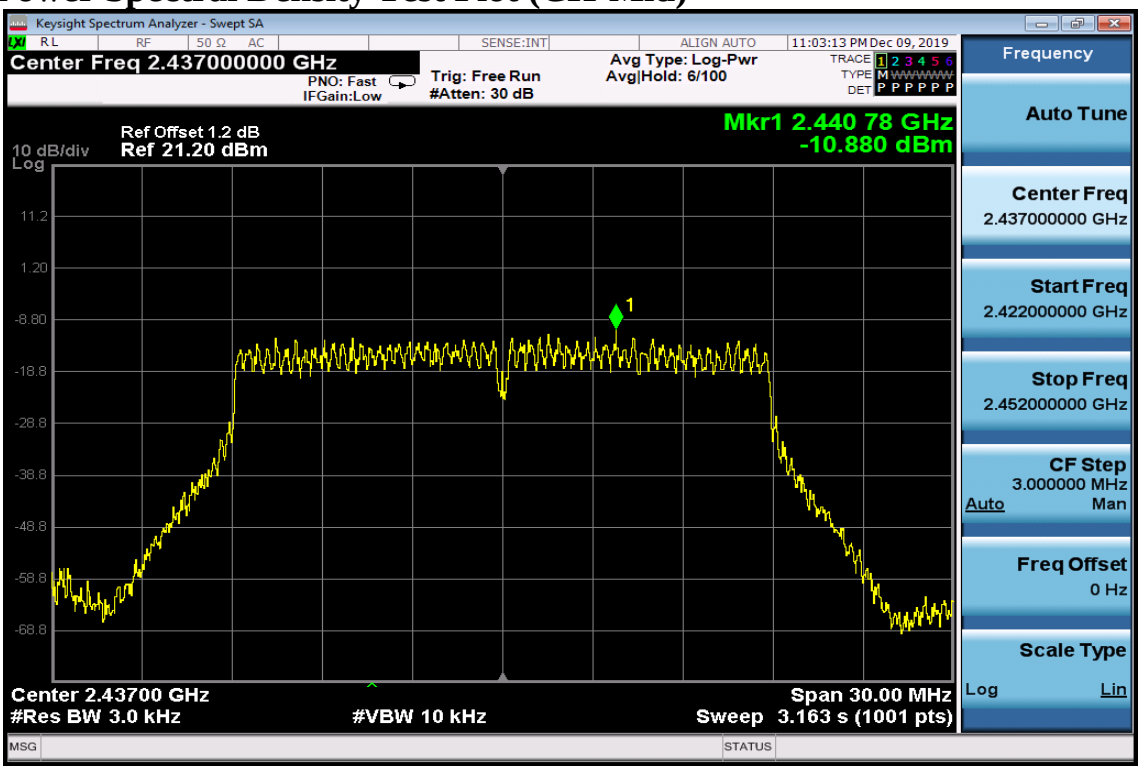


802.11n_HT20 (Antenna 2)

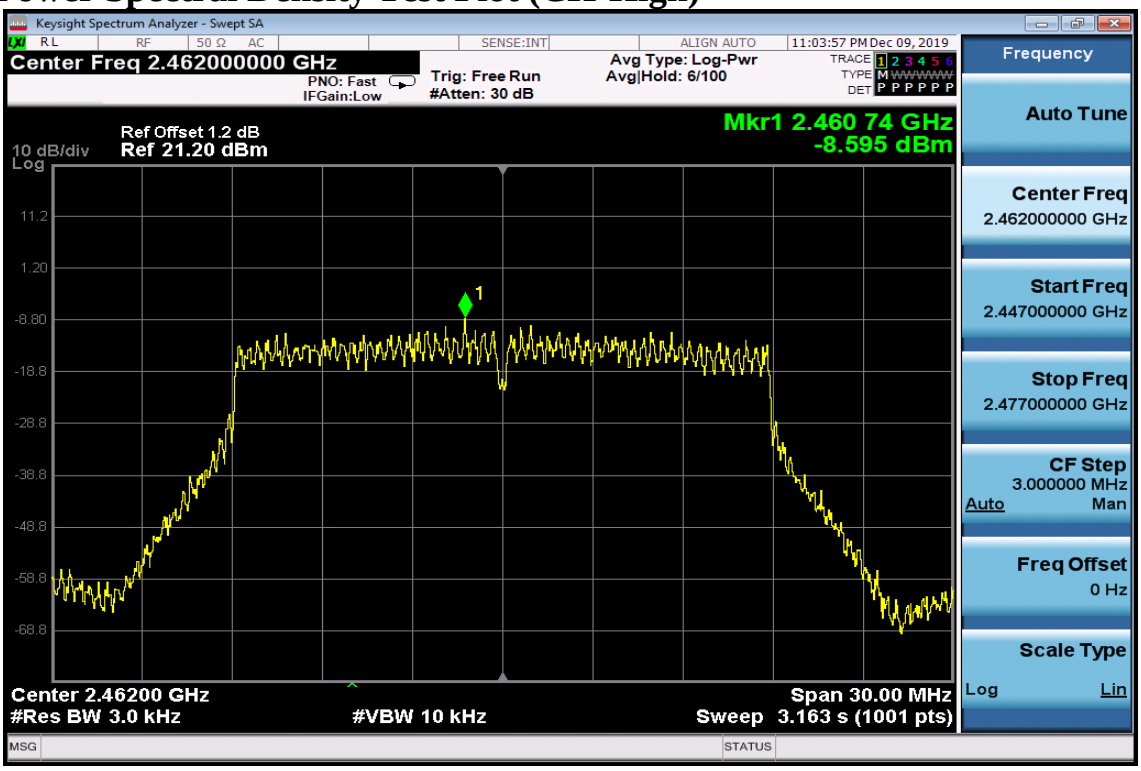
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

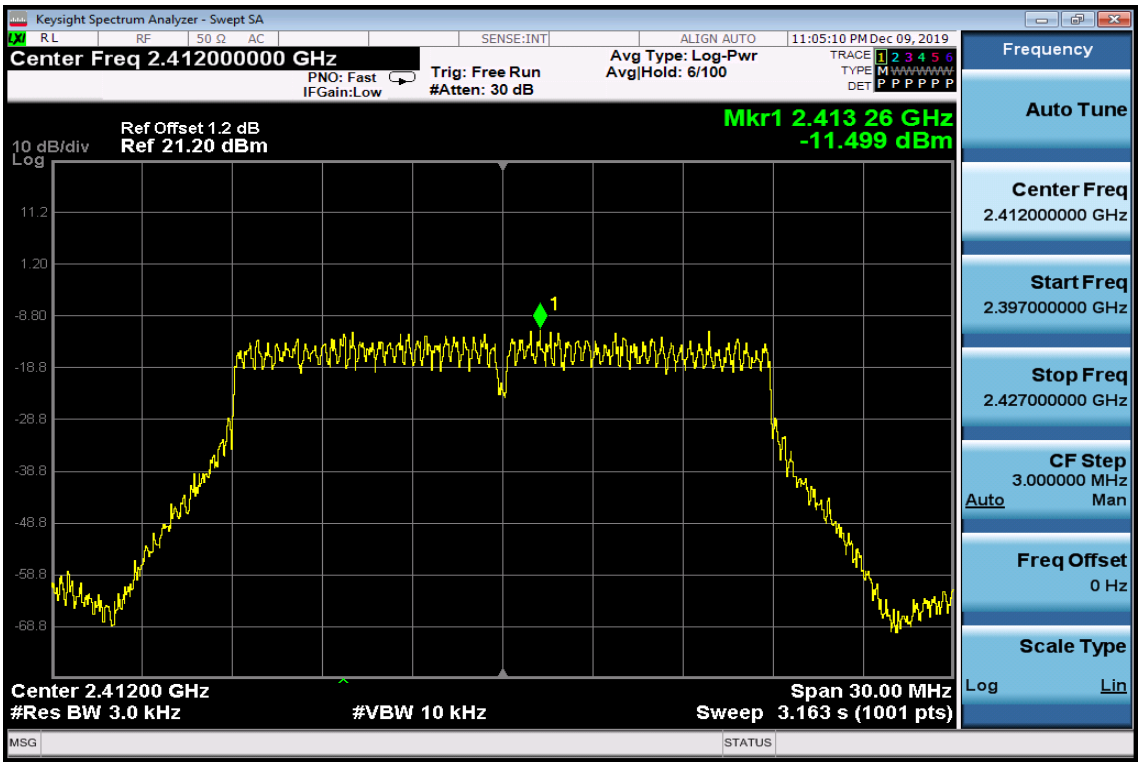


Power Spectral Density Test Plot (CH-High)

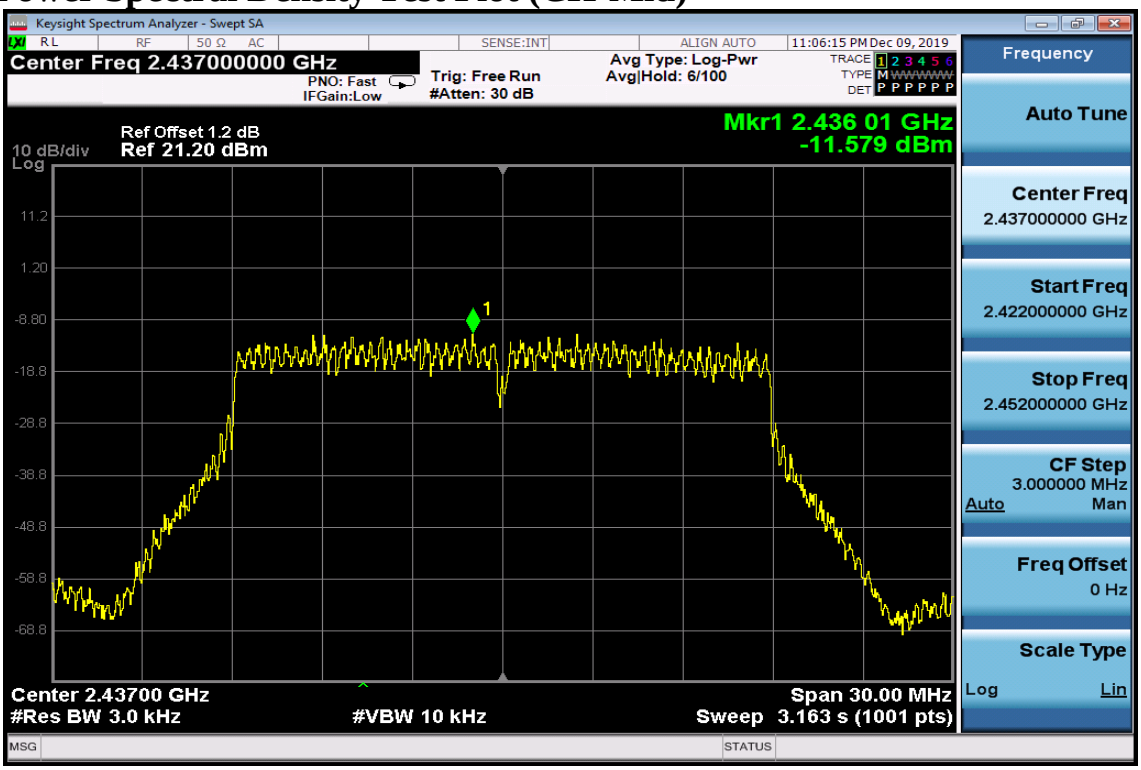


802.11n_HT20 (Antenna 3)

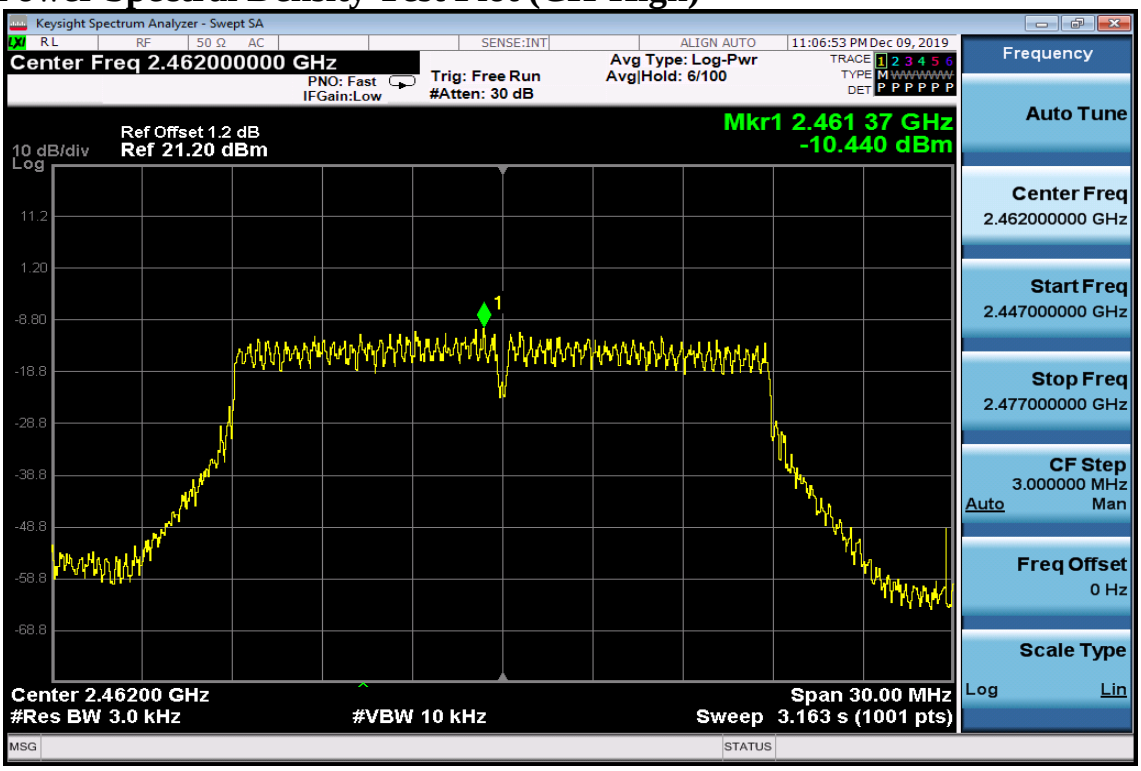
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

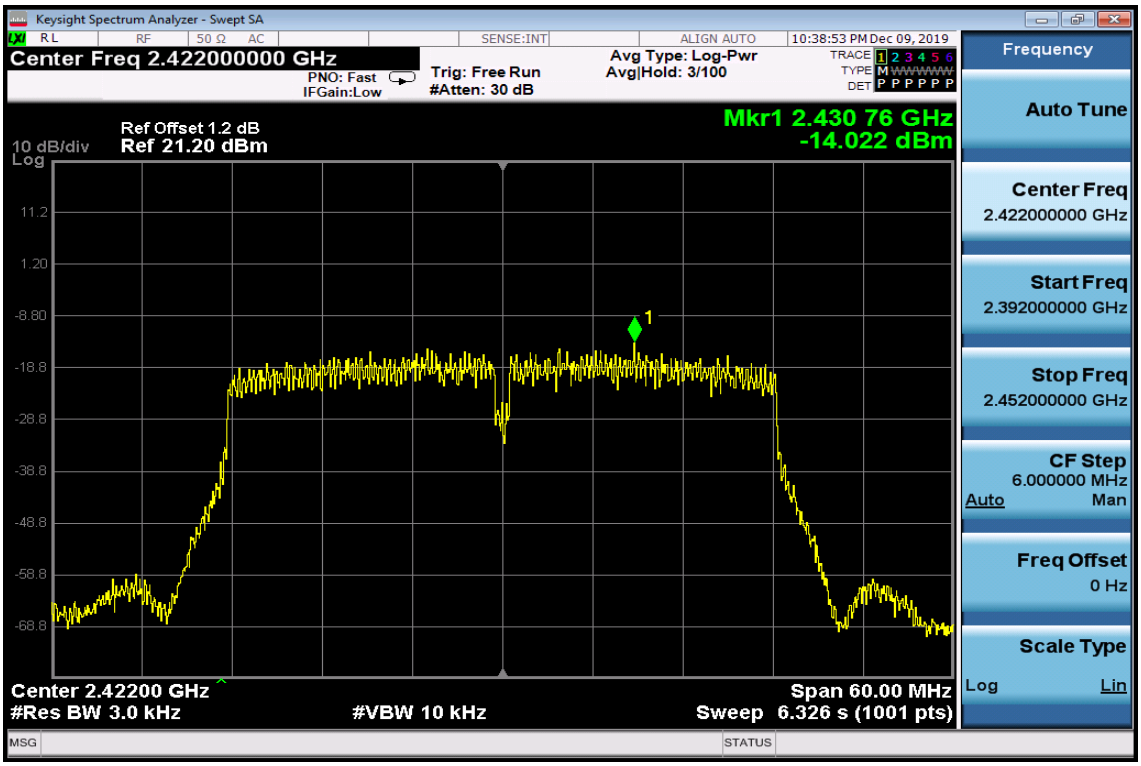


Power Spectral Density Test Plot (CH-High)

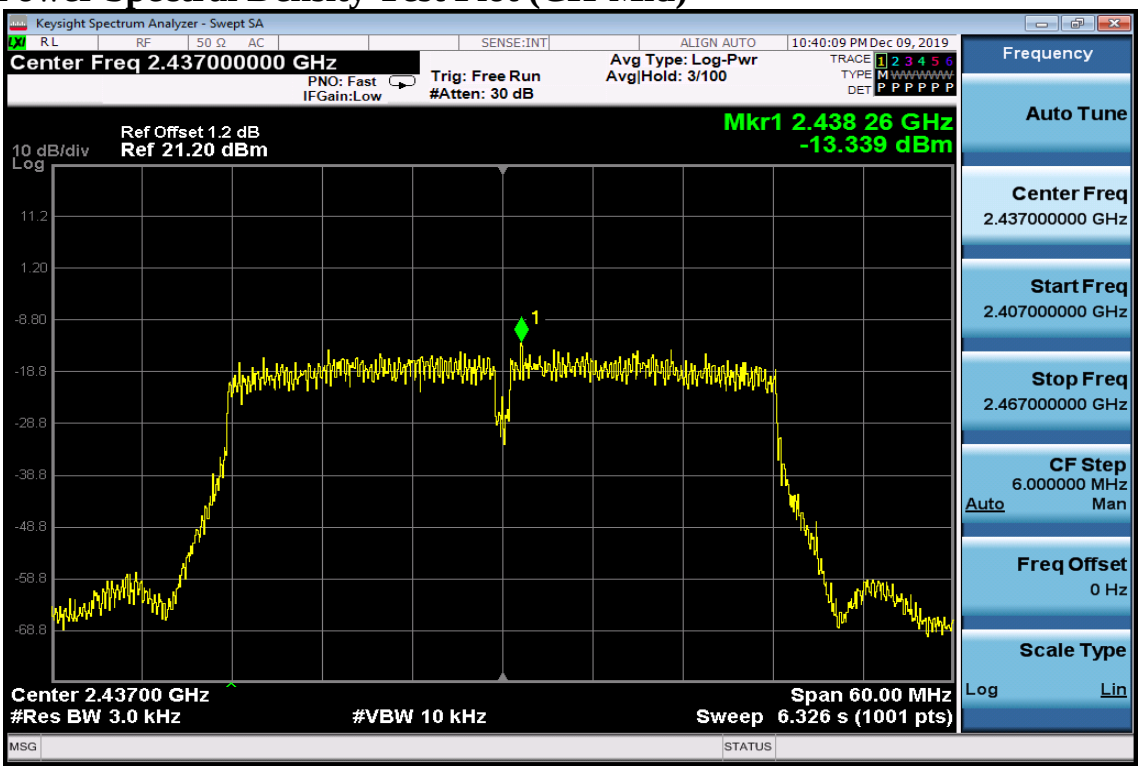


802.11n_HT40 (Antenna 1)

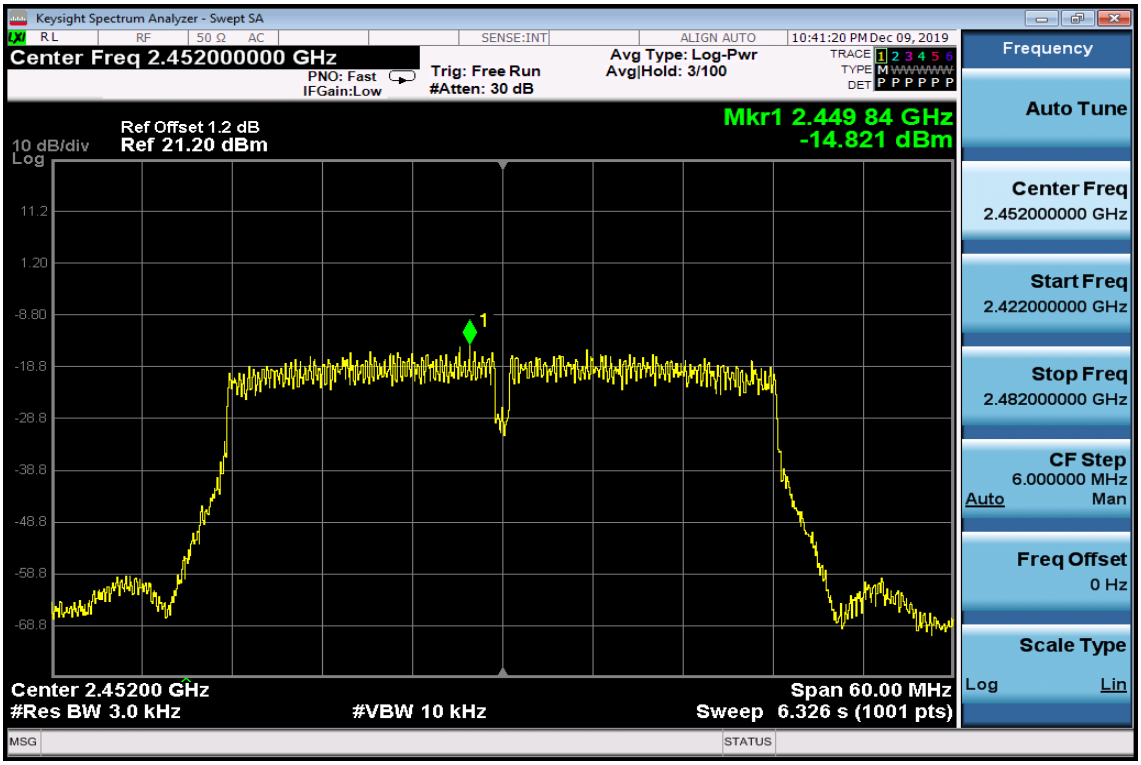
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

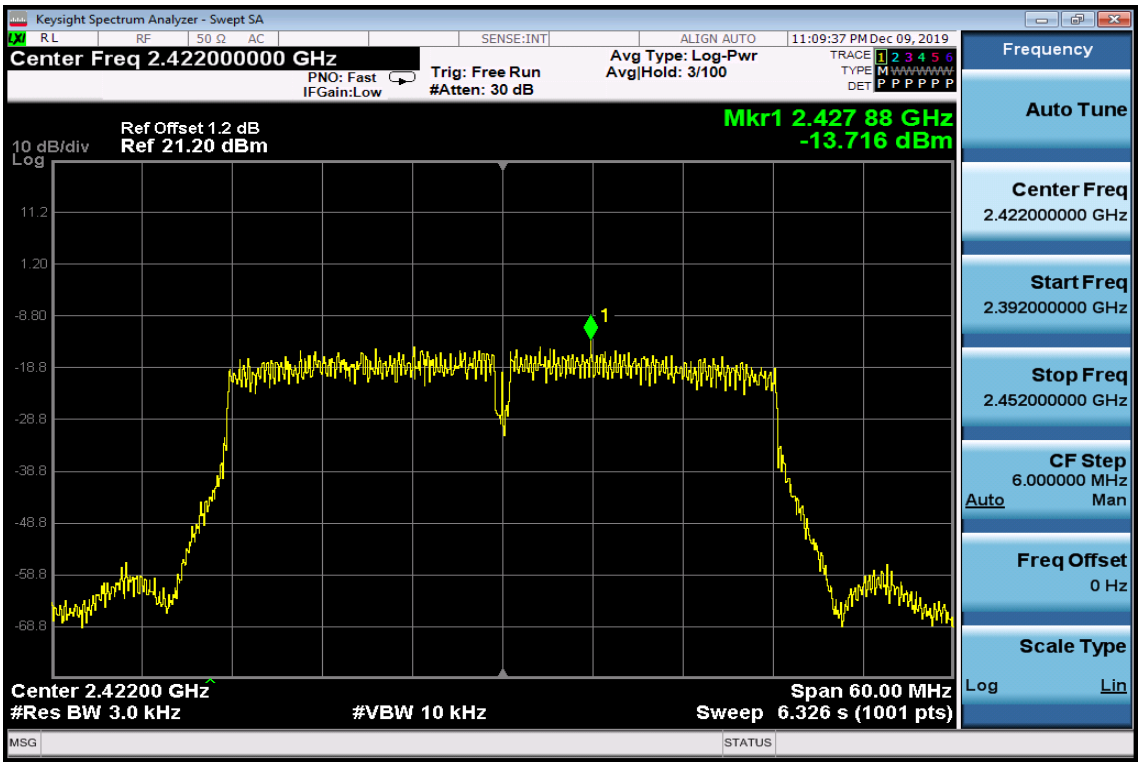


Power Spectral Density Test Plot (CH-High)

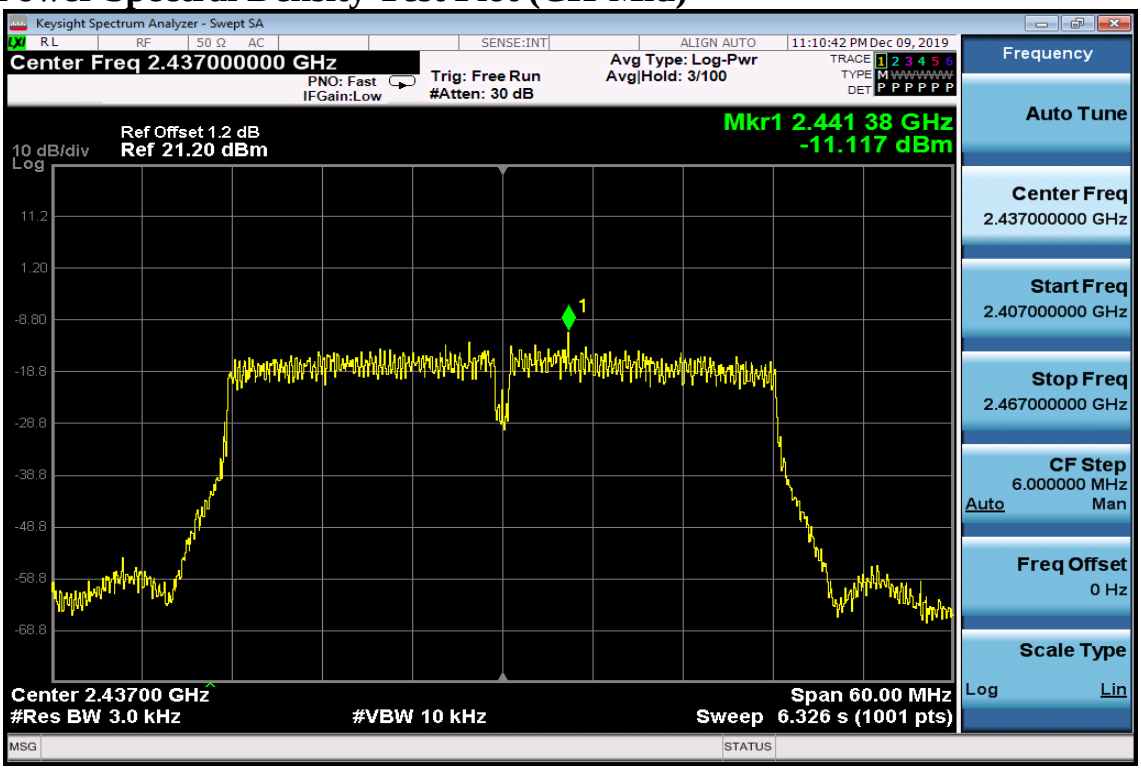


802.11n_HT40 (Antenna 2)

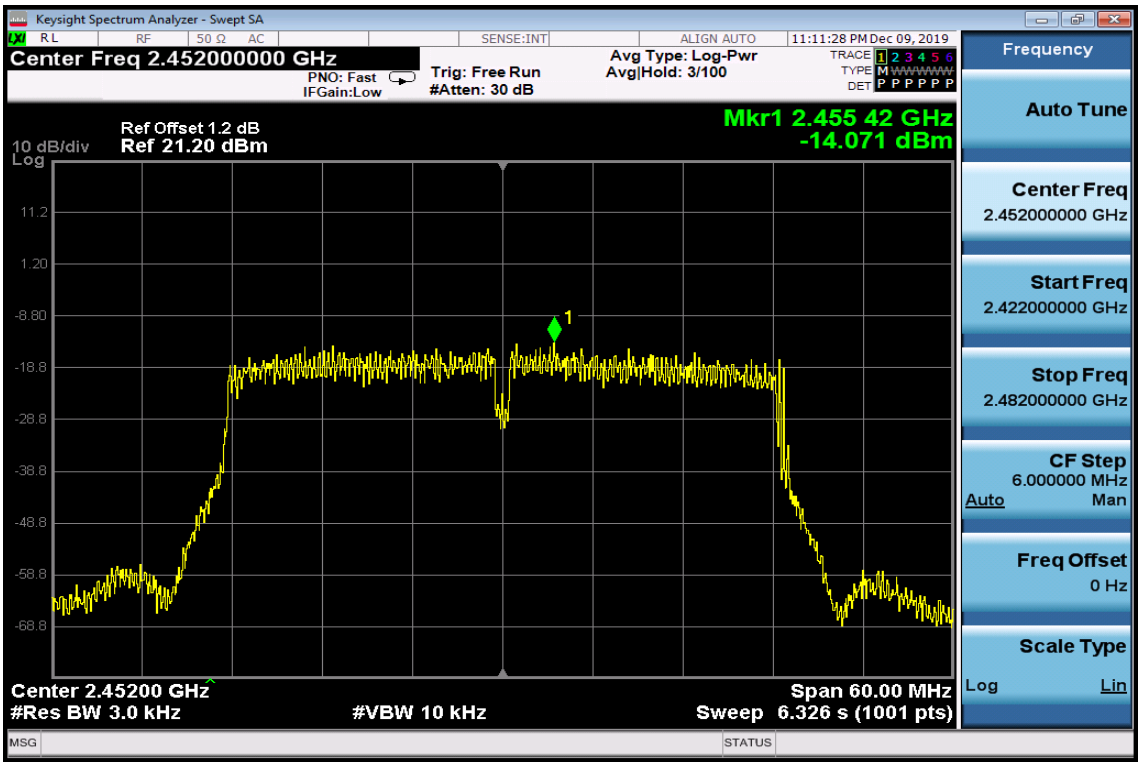
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

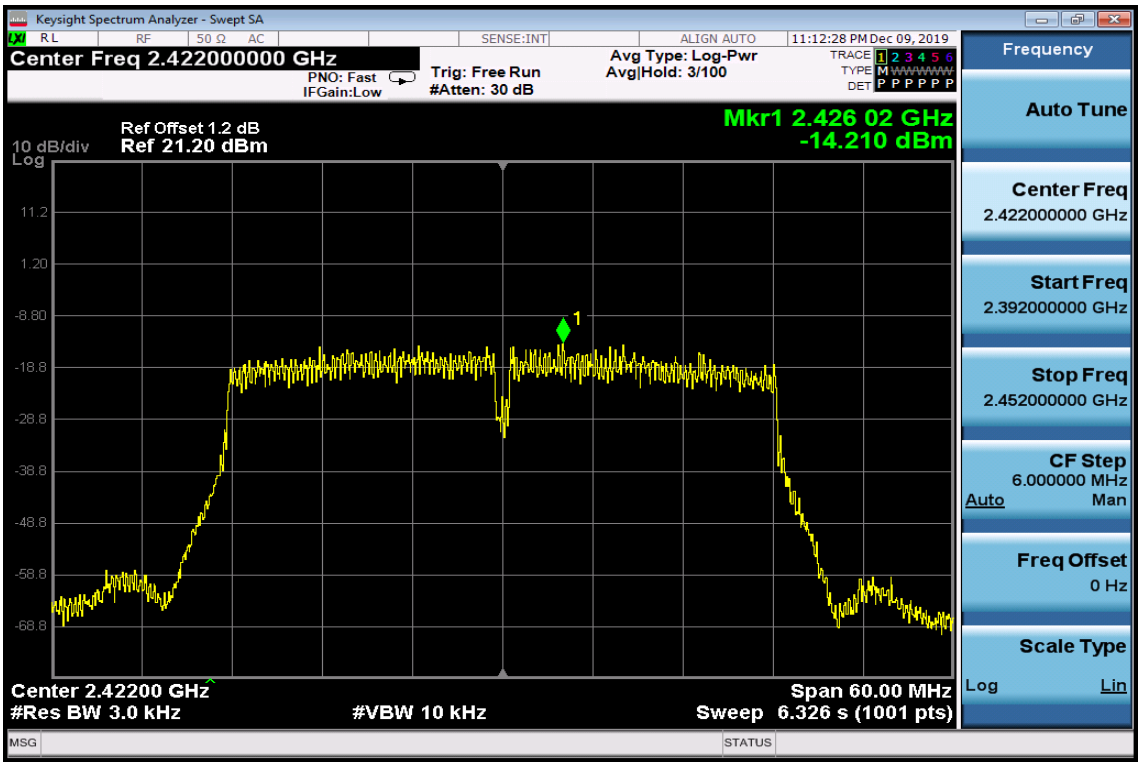


Power Spectral Density Test Plot (CH-High)

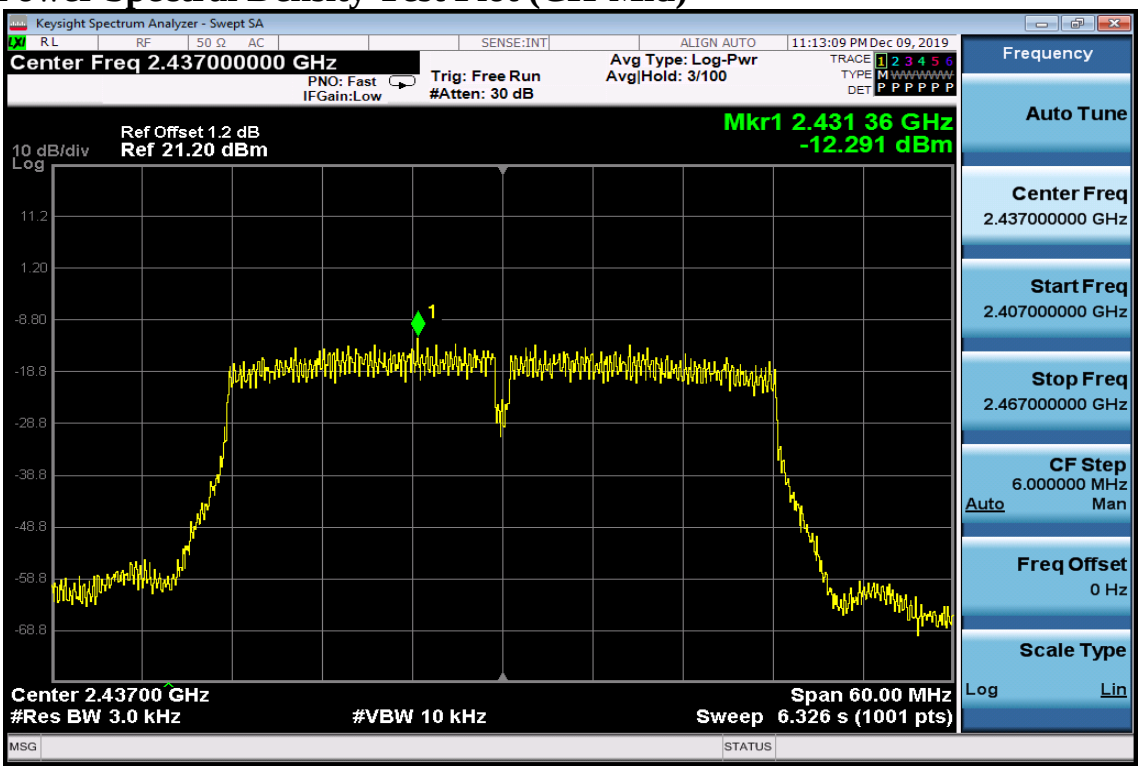


802.11n_HT40 (Antenna 3)

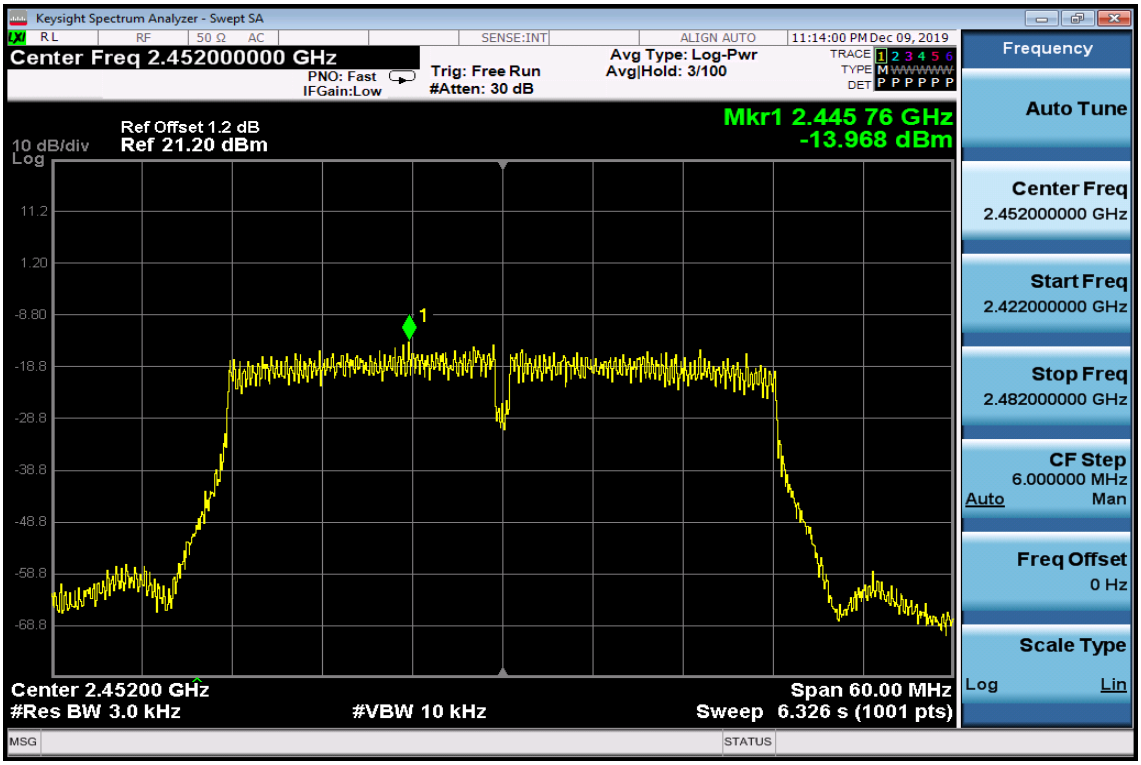
Power Spectral Density Test Plot (CH-Low)



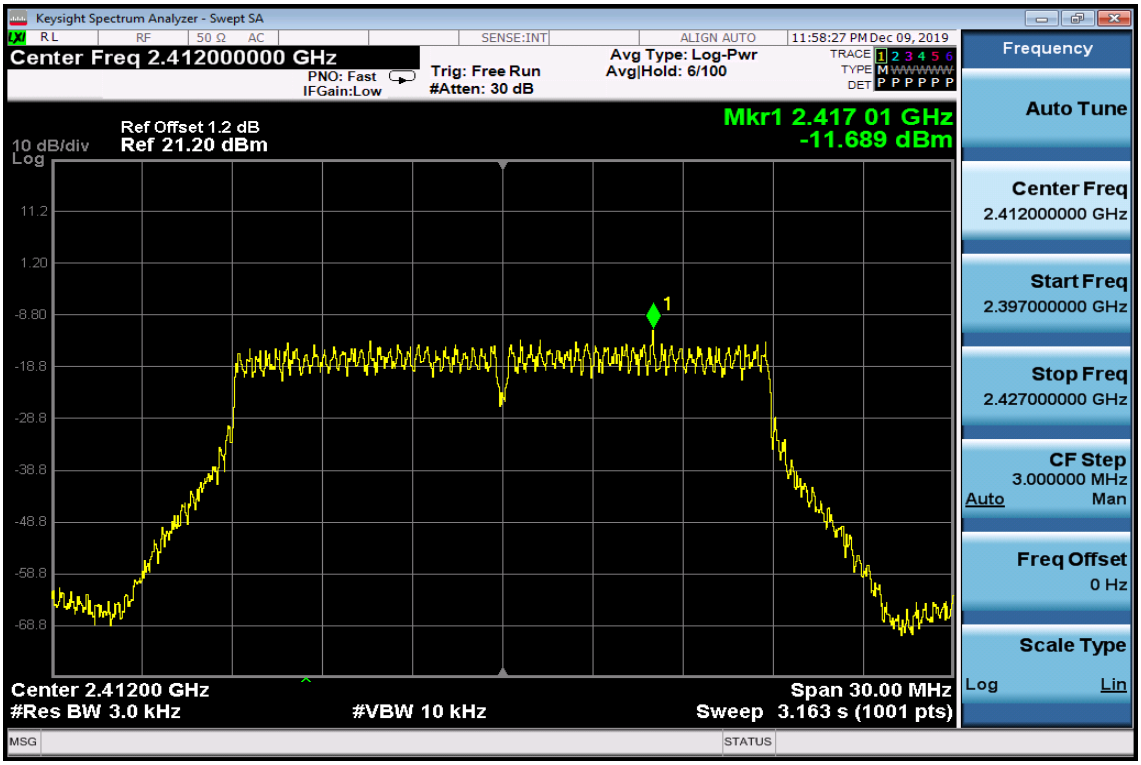
Power Spectral Density Test Plot (CH-Mid)



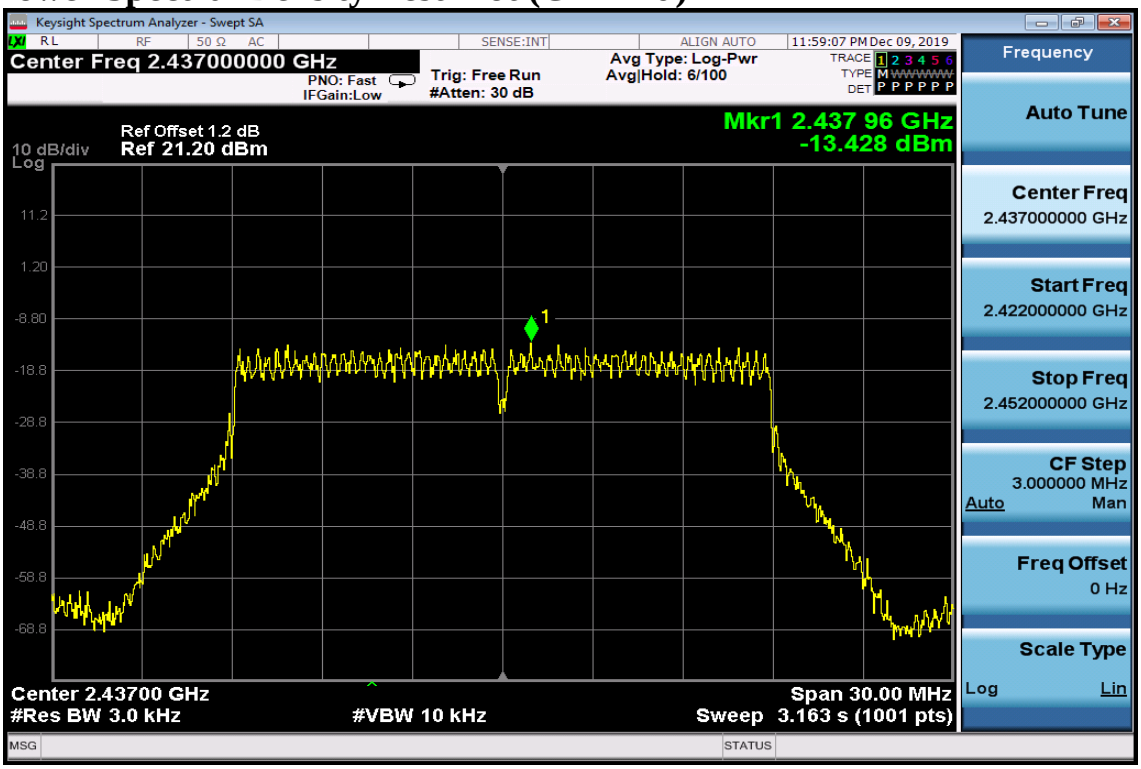
Power Spectral Density Test Plot (CH-High)



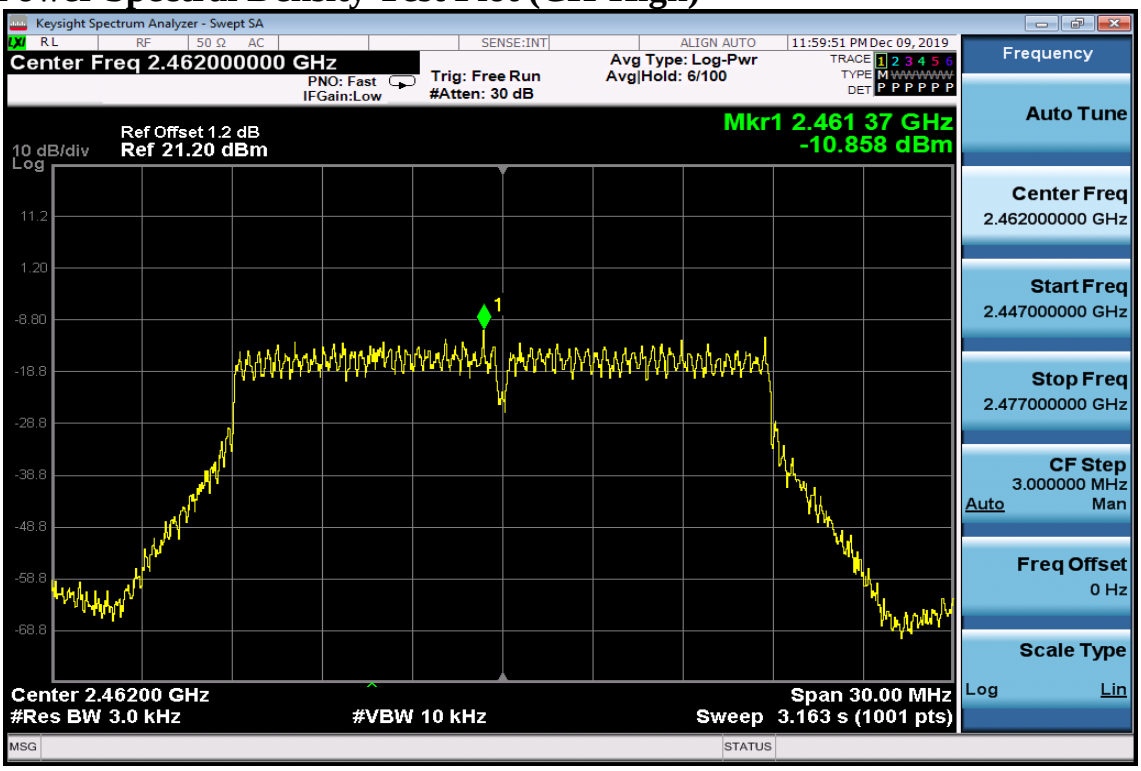
Beamforming mode
802.11n_HT20 (Antenna 1)
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

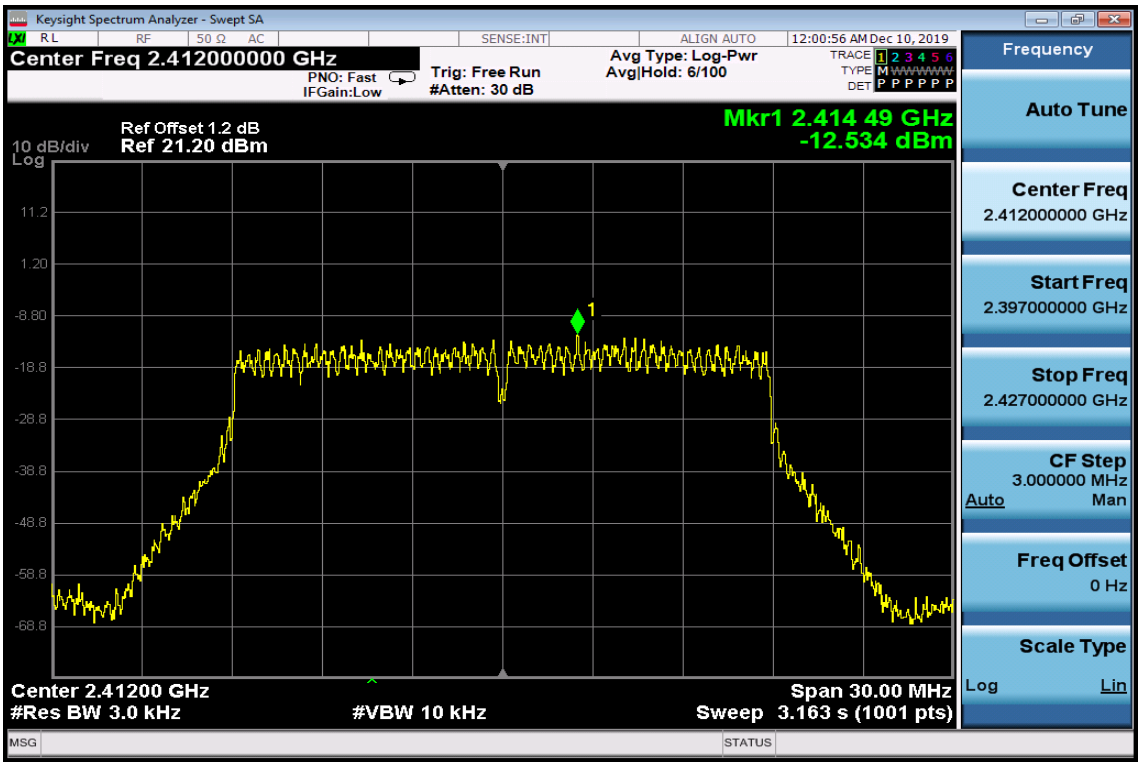


Power Spectral Density Test Plot (CH-High)

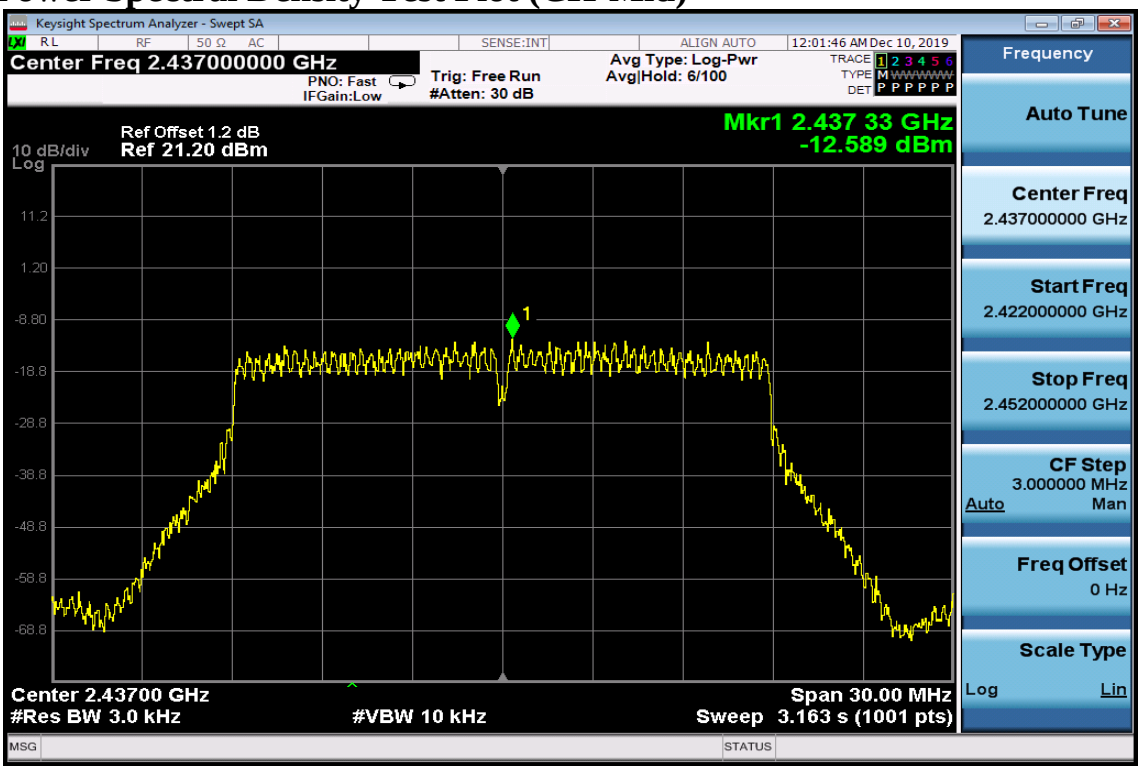


802.11n_HT20 (Antenna 2)

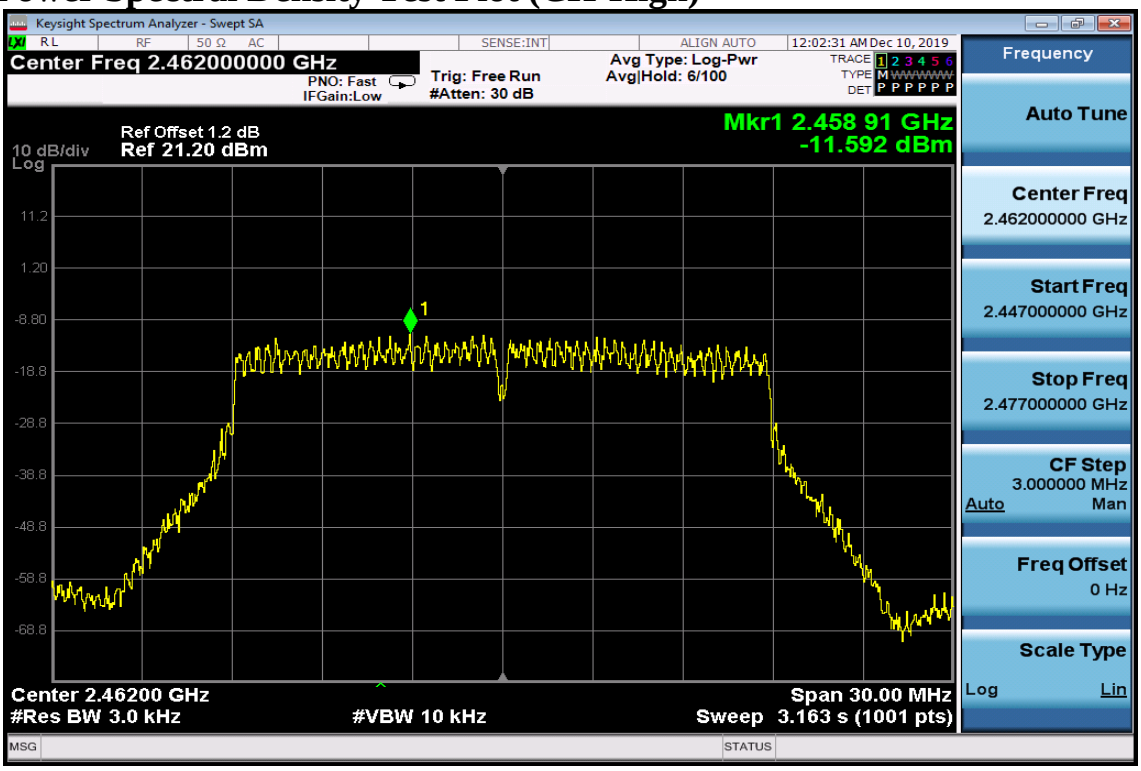
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

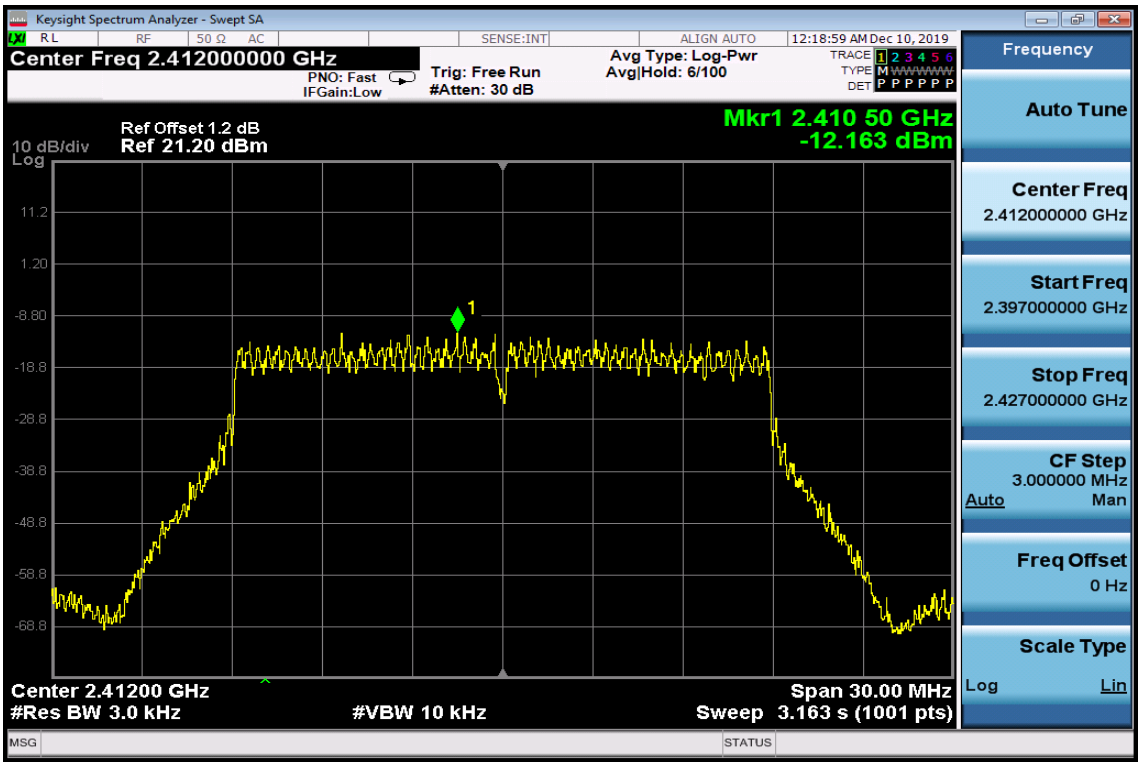


Power Spectral Density Test Plot (CH-High)

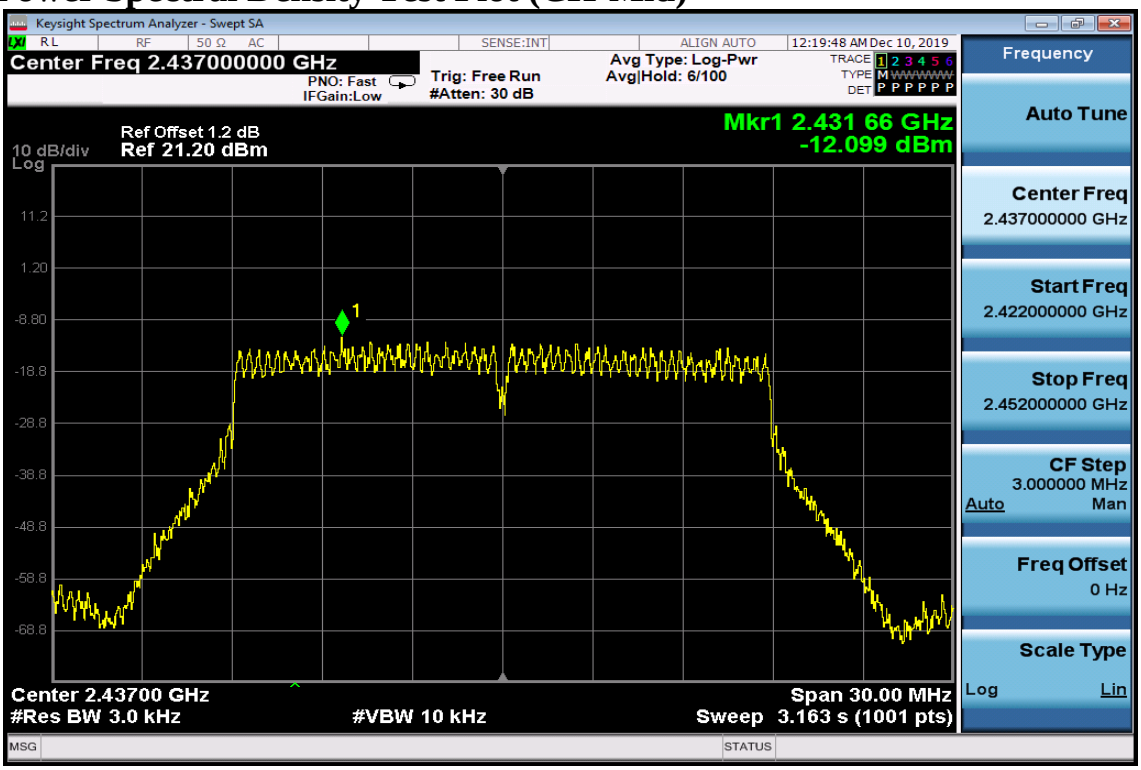


802.11n_HT20 (Antenna 3)

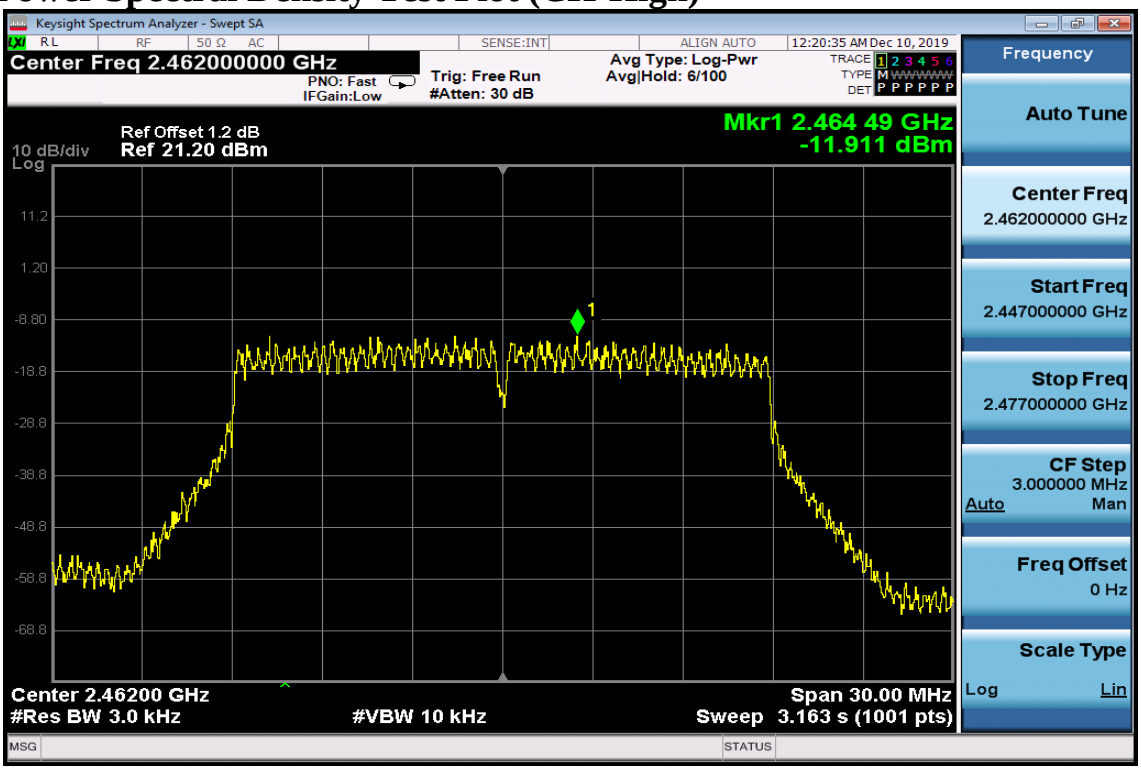
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

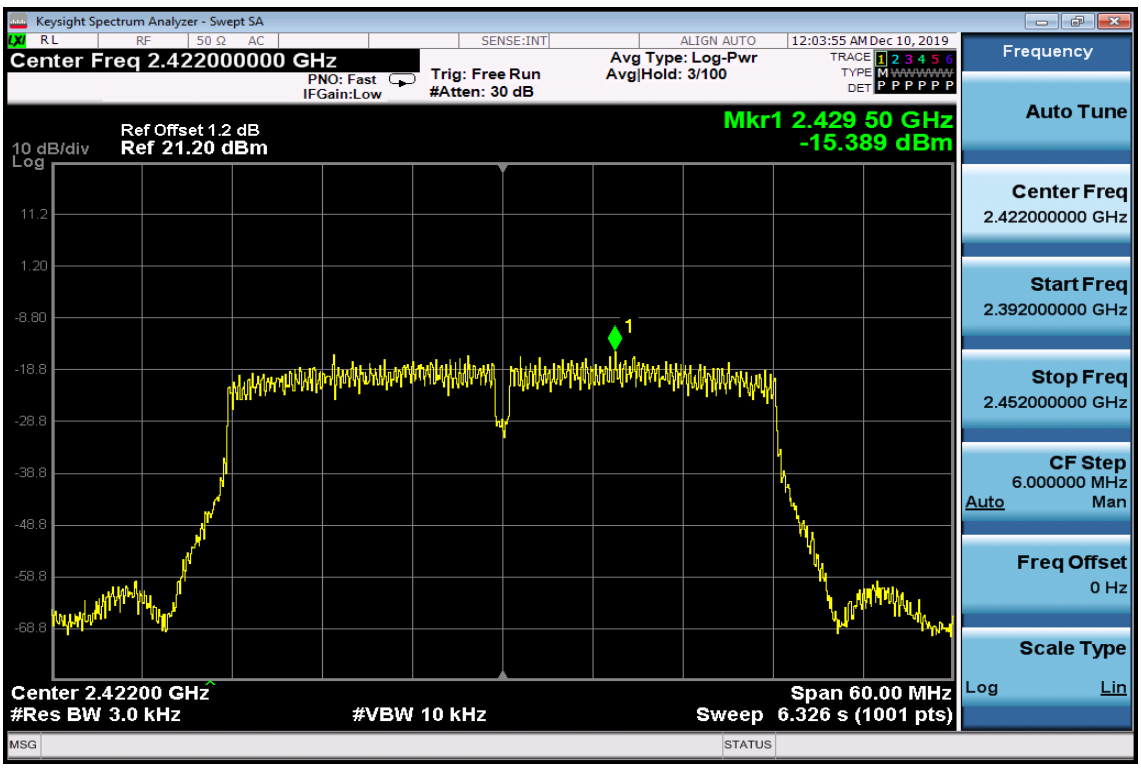


Power Spectral Density Test Plot (CH-High)

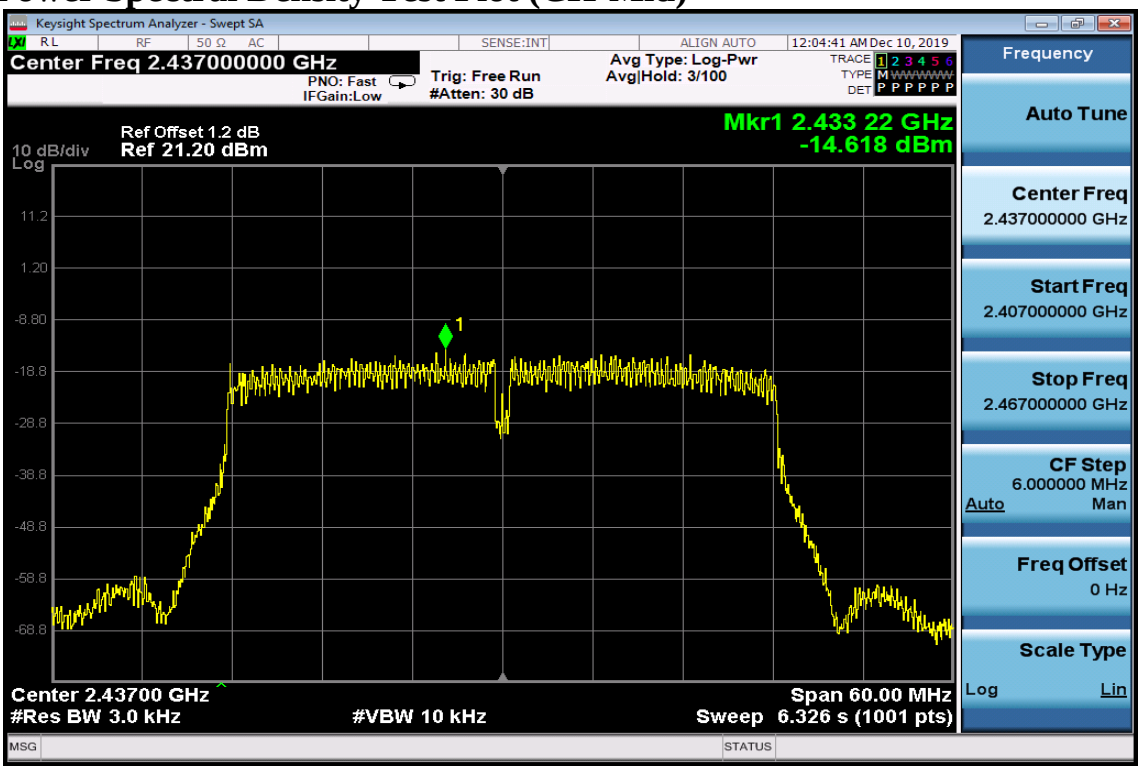


802.11n_HT40 (Antenna 1)

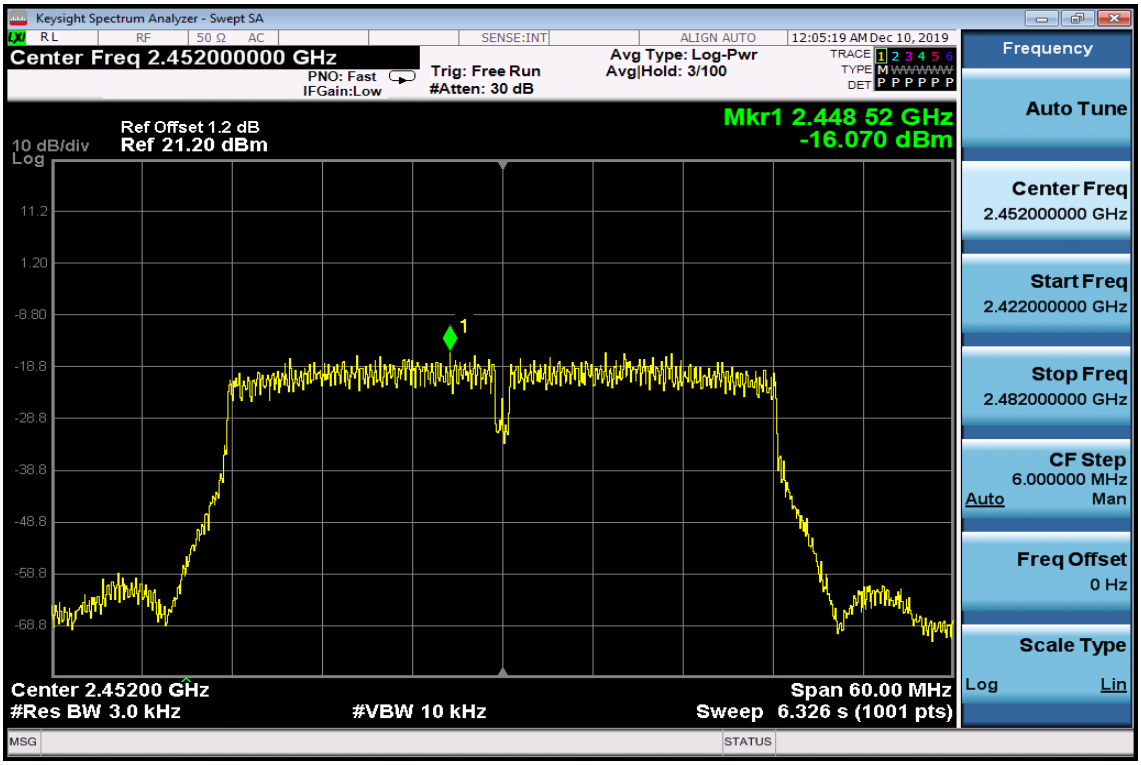
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

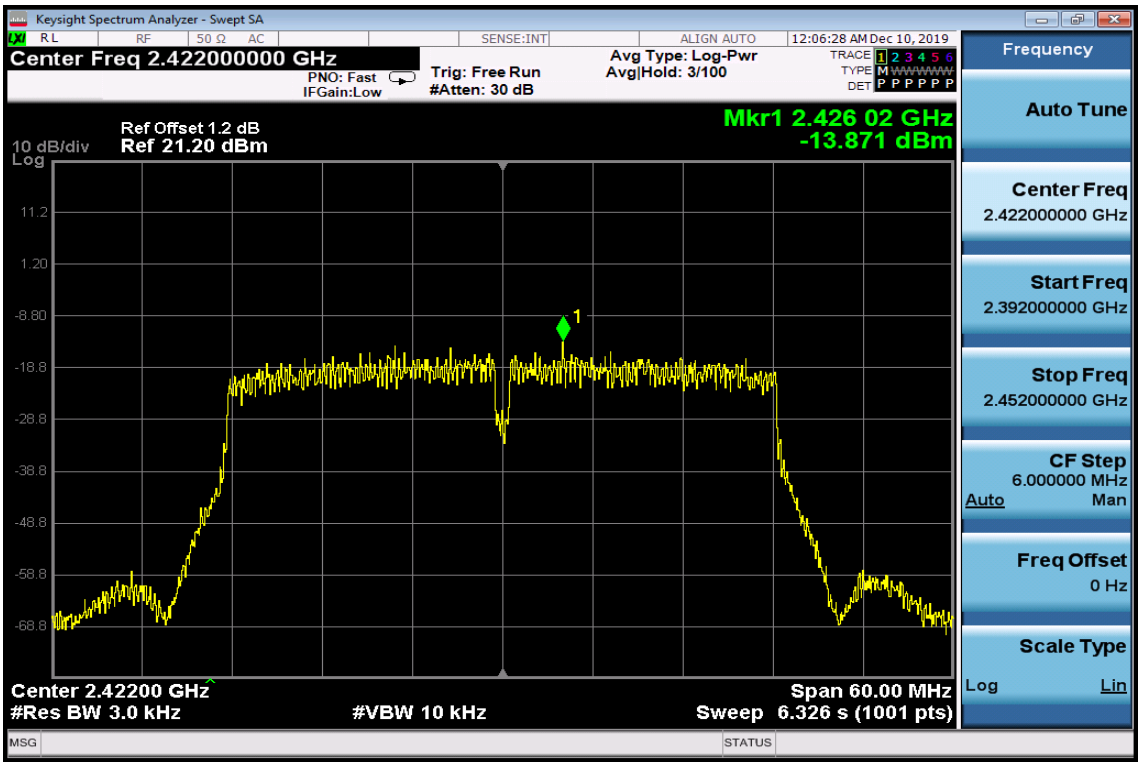


Power Spectral Density Test Plot (CH-High)

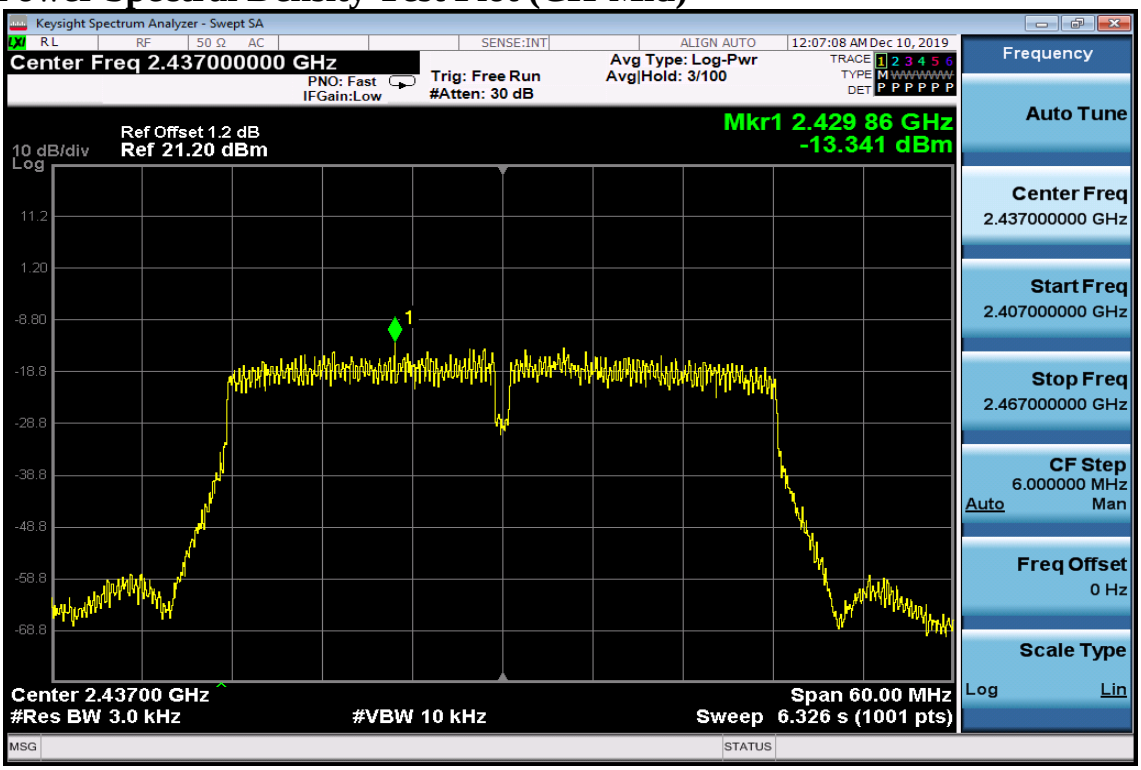


802.11n_HT40 (Antenna 2)

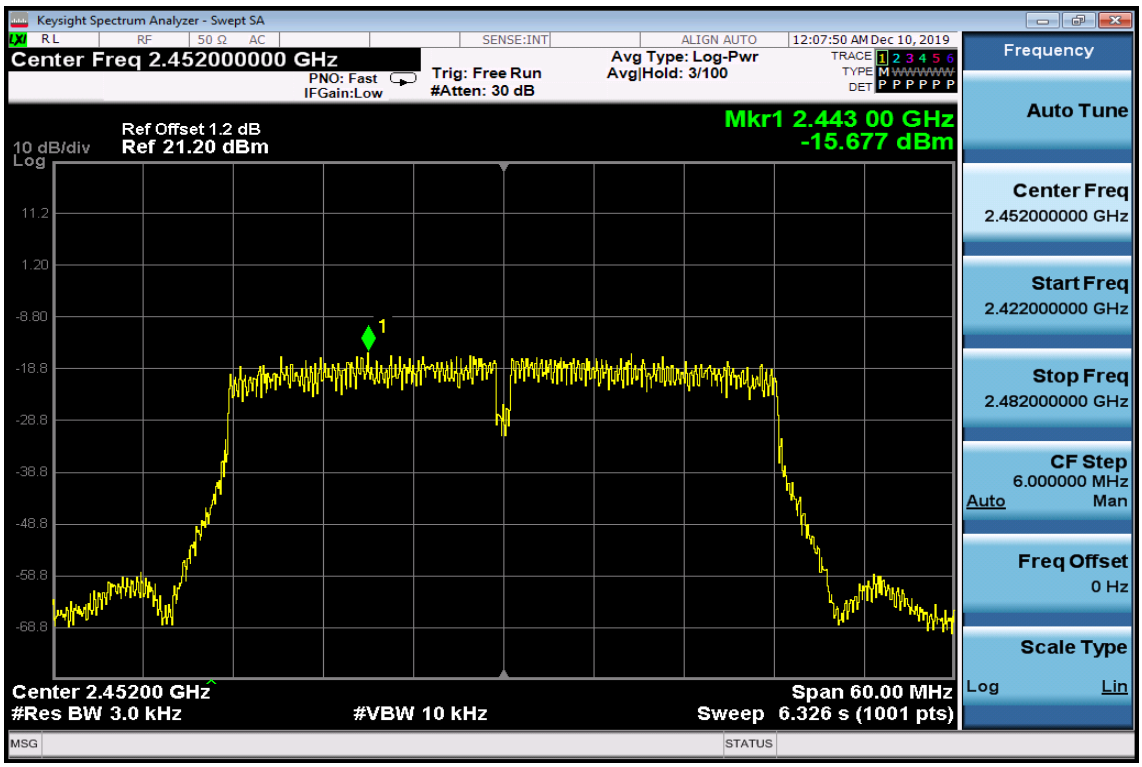
Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)

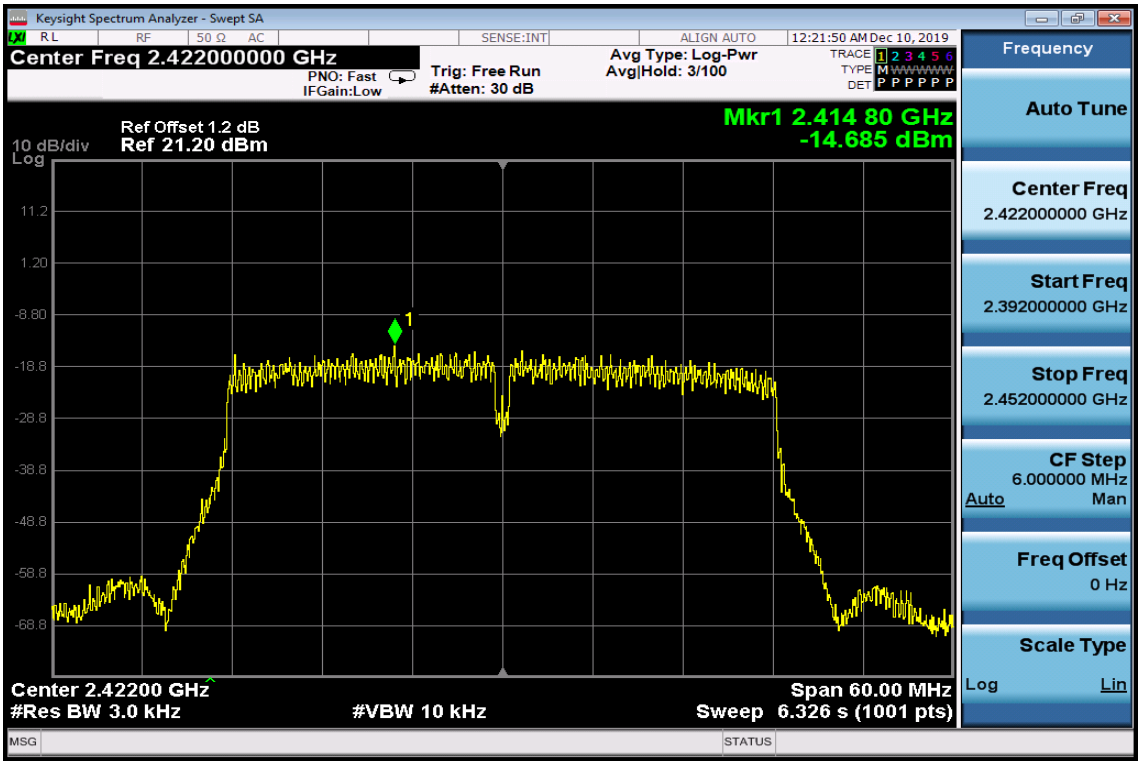


Power Spectral Density Test Plot (CH-High)

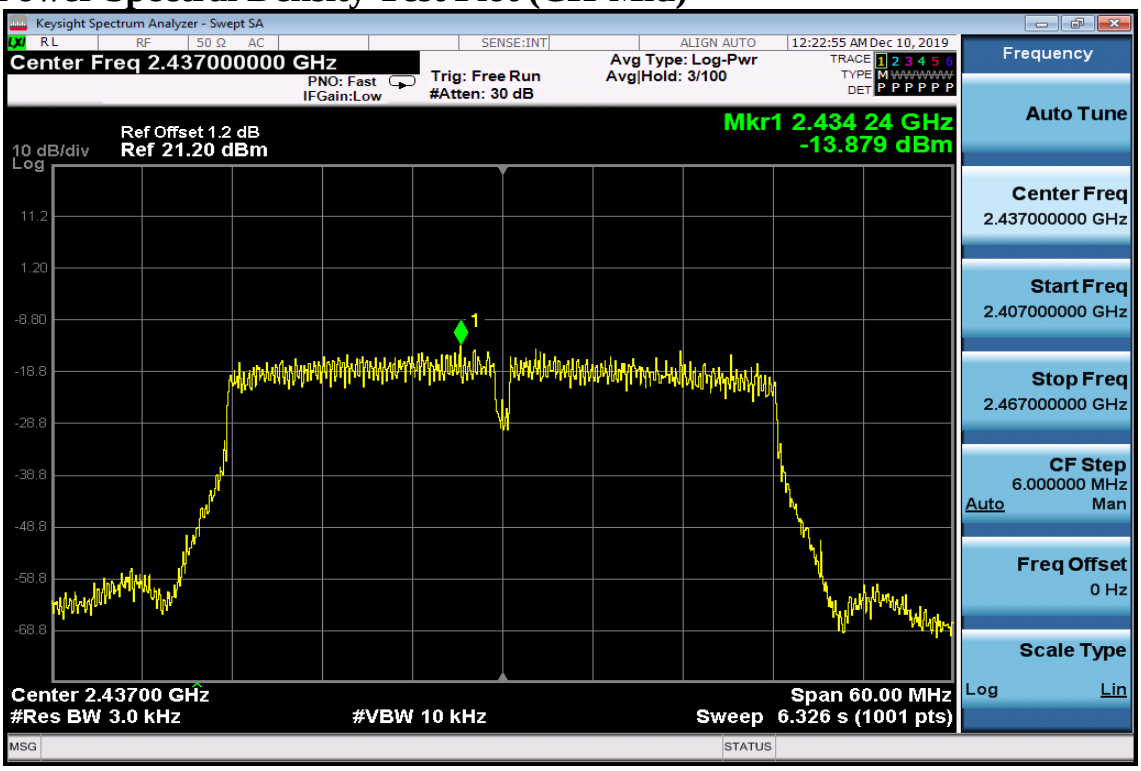
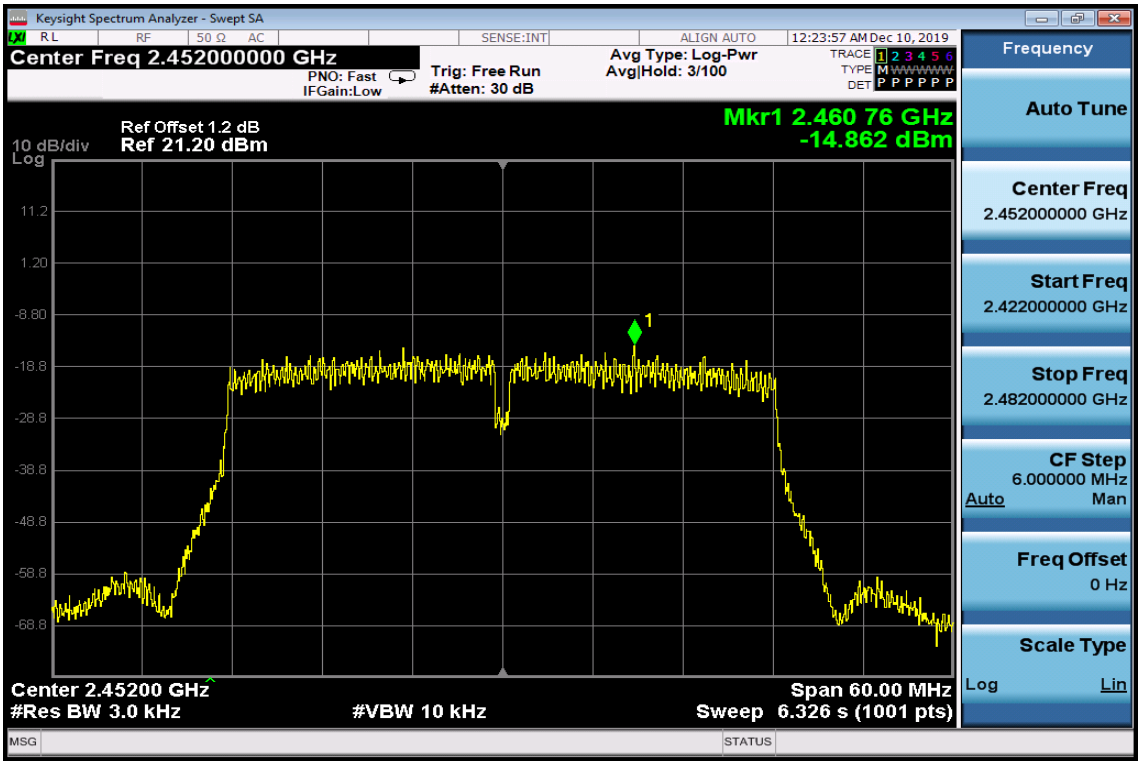


802.11n_HT40 (Antenna 3)

Power Spectral Density Test Plot (CH-Low)



Power Spectral Density Test Plot (CH-Mid)



Power Spectral Density Test Plot (CH-High)