

8.6.2. 99% BANDWIDTH

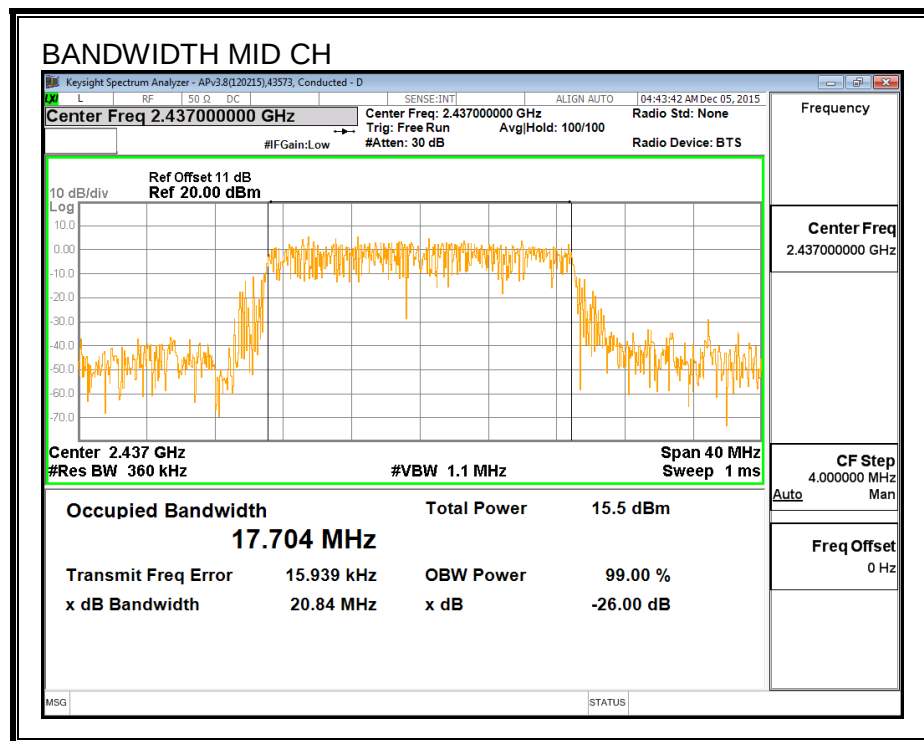
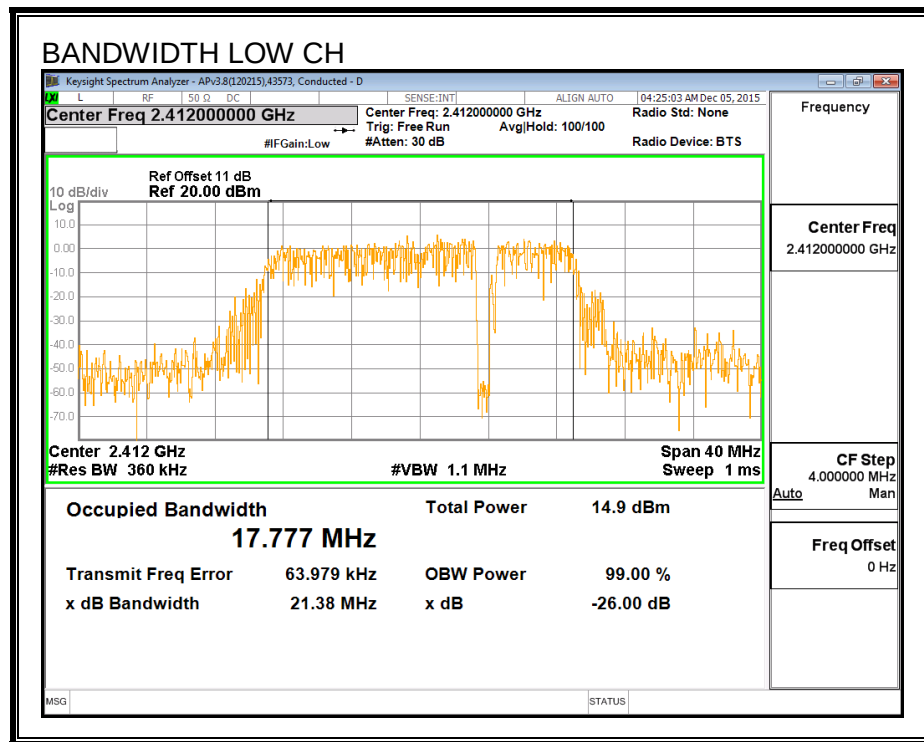
LIMITS

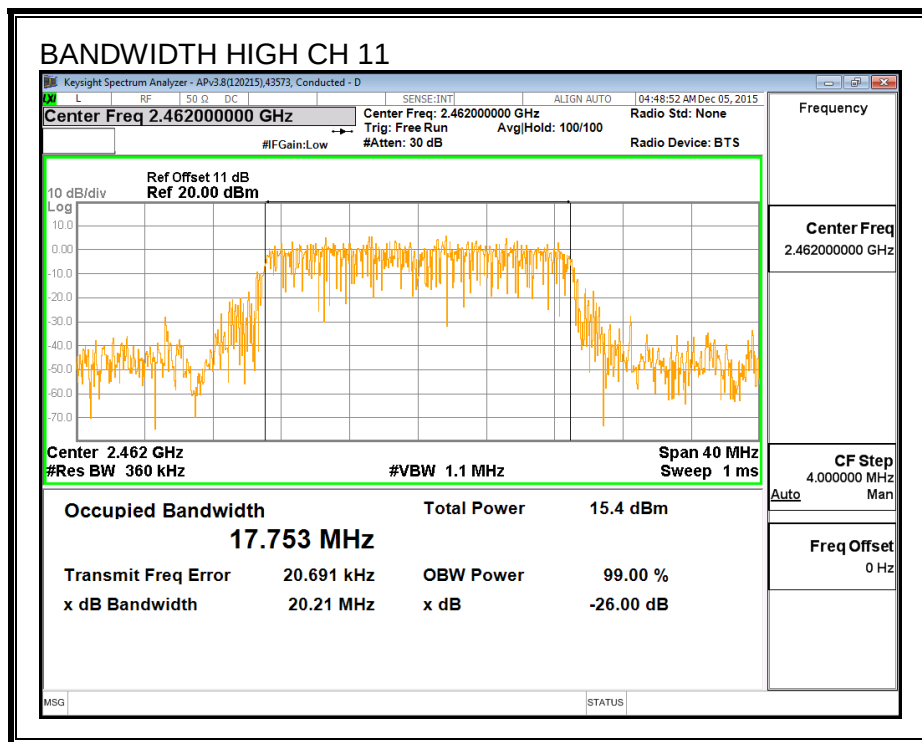
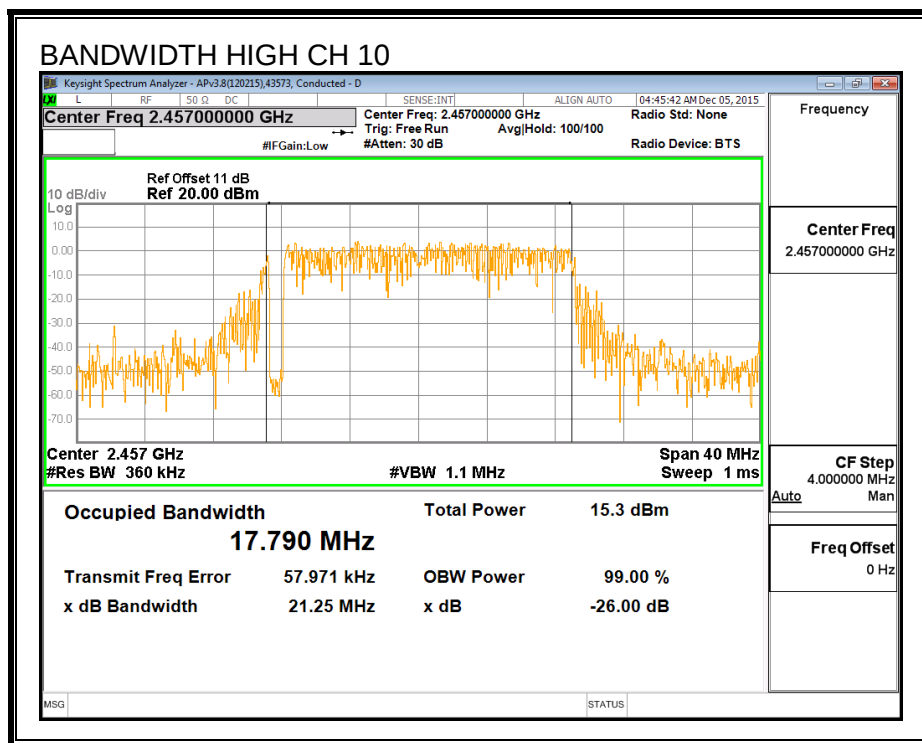
None; for reporting purposes only.

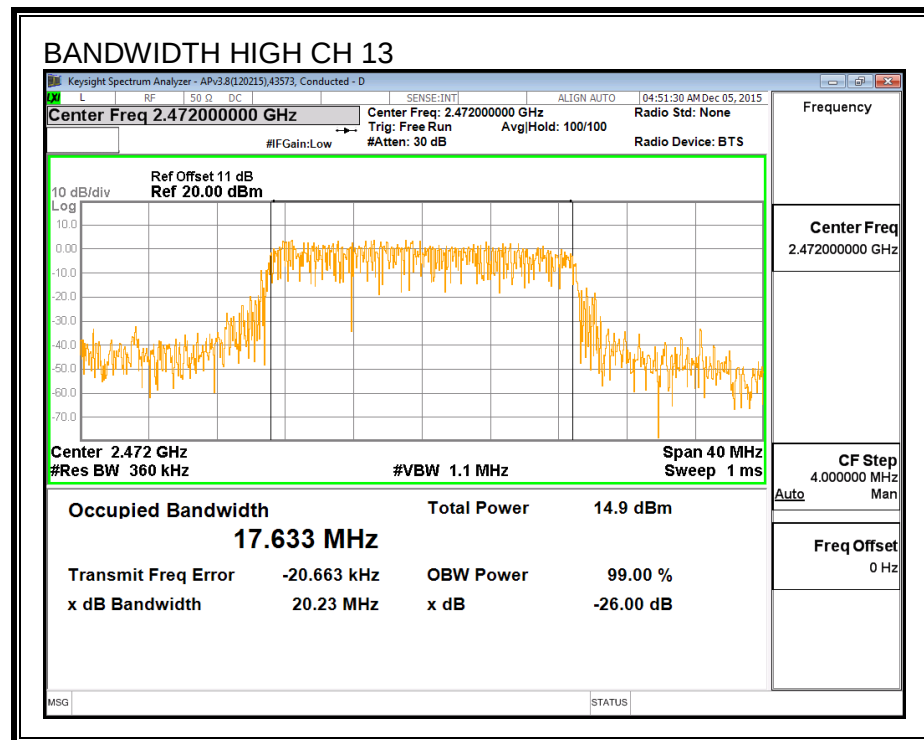
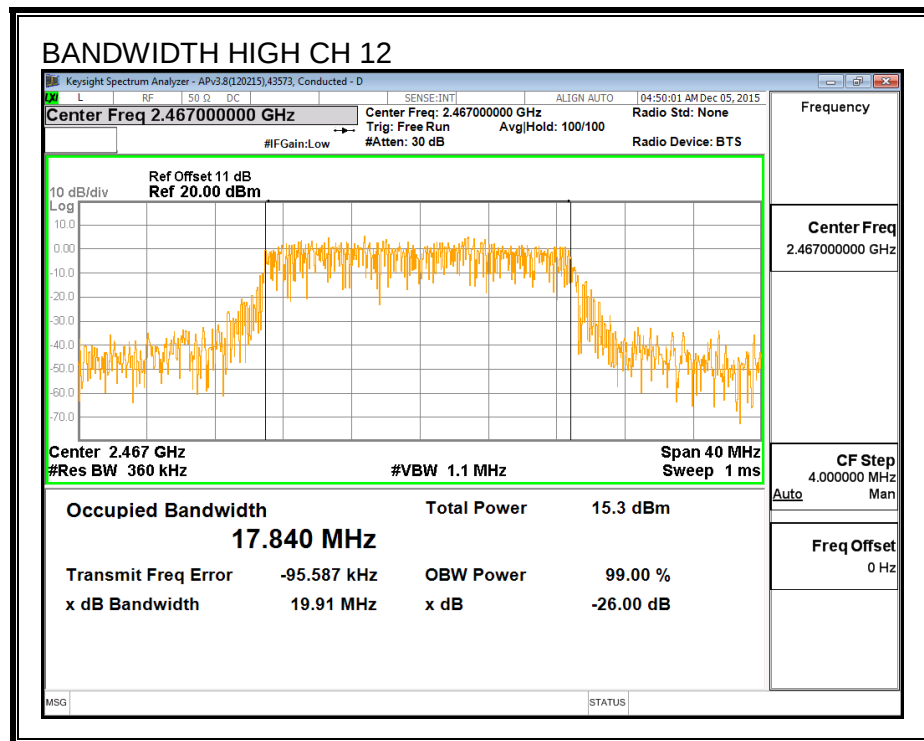
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.777
Mid	2437	17.704
High_10	2457	17.790
High_11	2462	17.753
High_12	2467	17.840
High_13	2472	17.633

99% BANDWIDTH







8.6.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	14.89
Mid	2437	15.98
High_10	2457	15.82
High_11	2462	13.84
High_12	2467	11.97
High_13	2472	2.89

8.6.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.75	30.00	30	36	30.00
Mid	2437	-1.75	30.00	30	36	30.00
High_10	2457	-1.75	30.00	30	36	30.00
High_11	2462	-1.75	30.00	30	36	30.00
High_12	2467	-1.75	30.00	30	36	30.00
High_13	2472	-1.75	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	23.12	23.12	30.00	-6.88
Mid	2437	24.22	24.22	30.00	-5.78
High_10	2457	23.94	23.94	30.00	-6.06
High_11	2462	22.08	22.08	30.00	-7.92
High_12	2467	20.15	20.15	30.00	-9.85
High_13	2472	11.76	11.76	30.00	-18.24

8.6.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

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 transmissions.

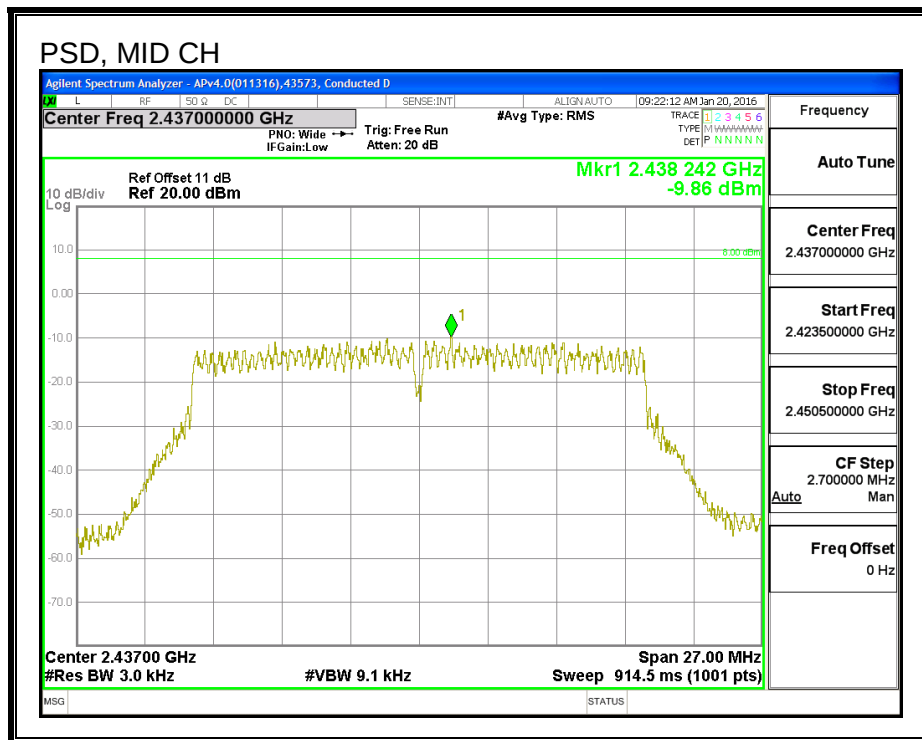
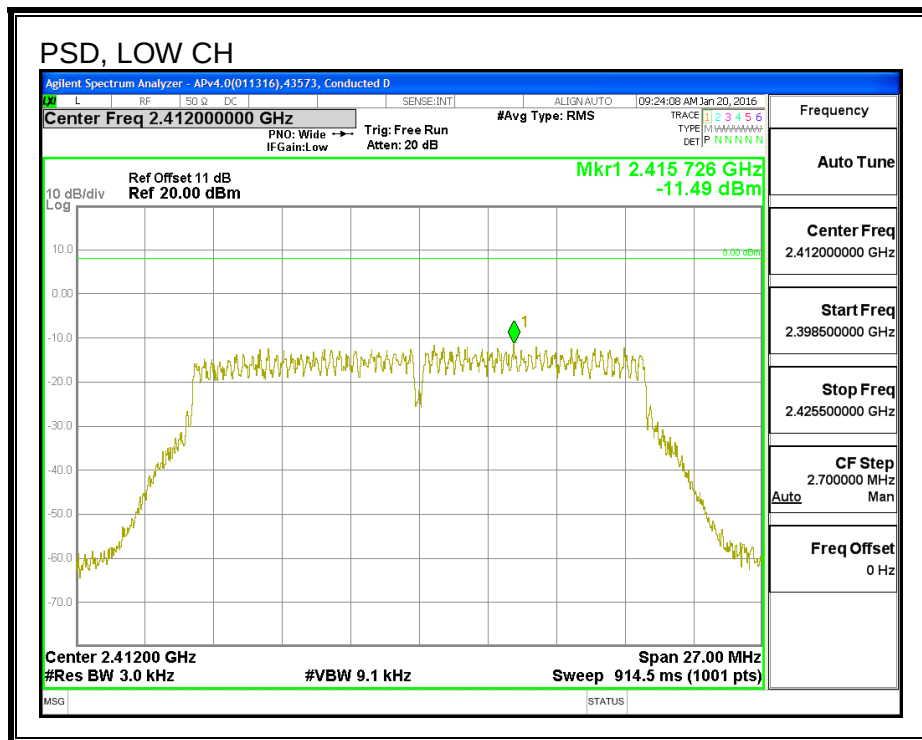
RESULTS

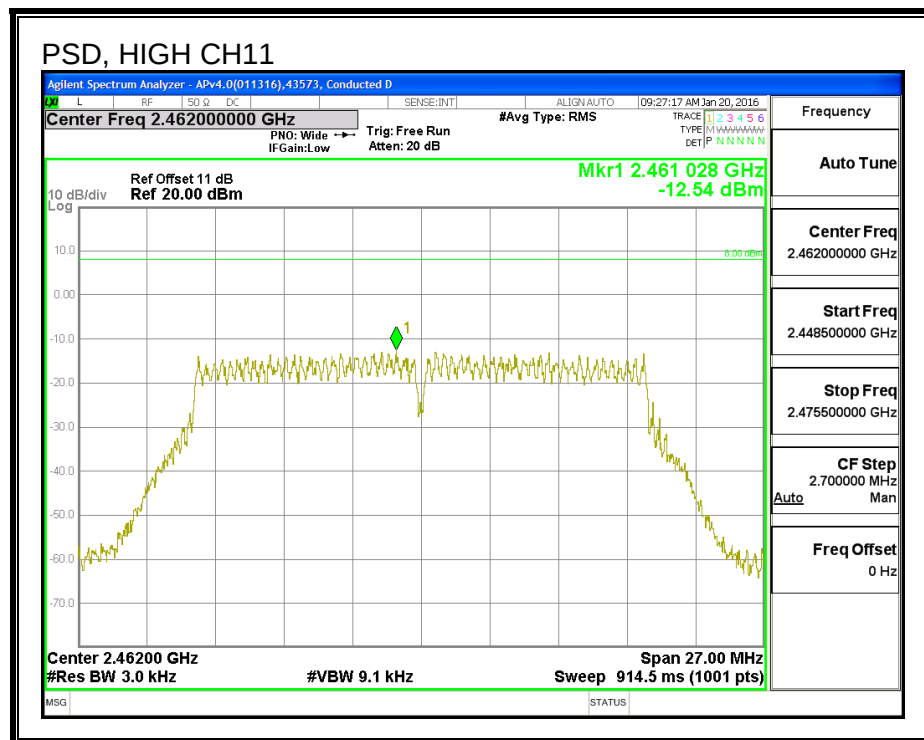
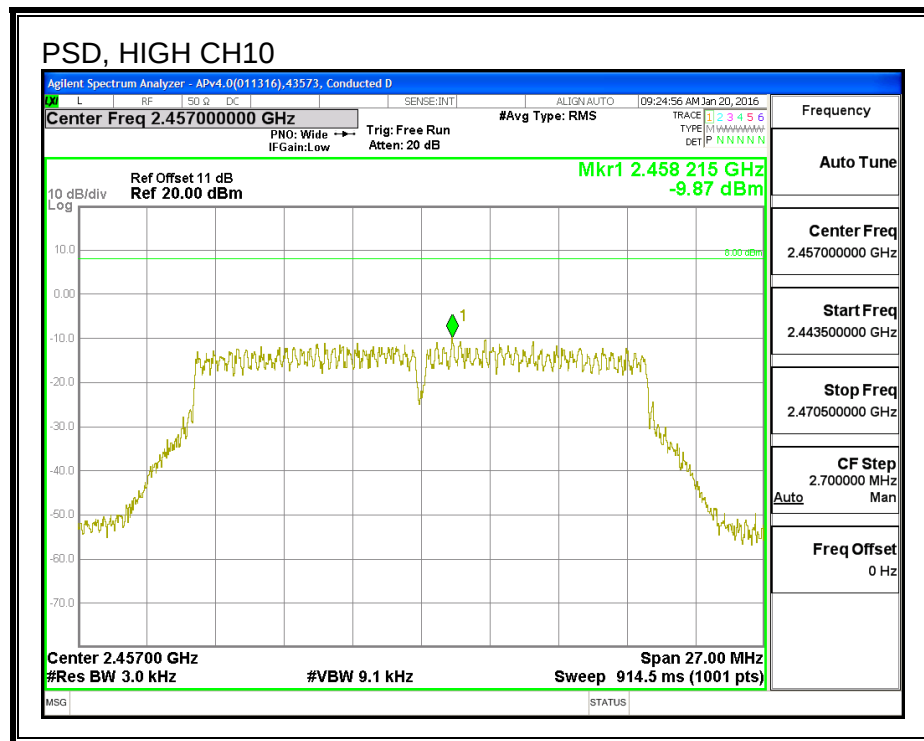
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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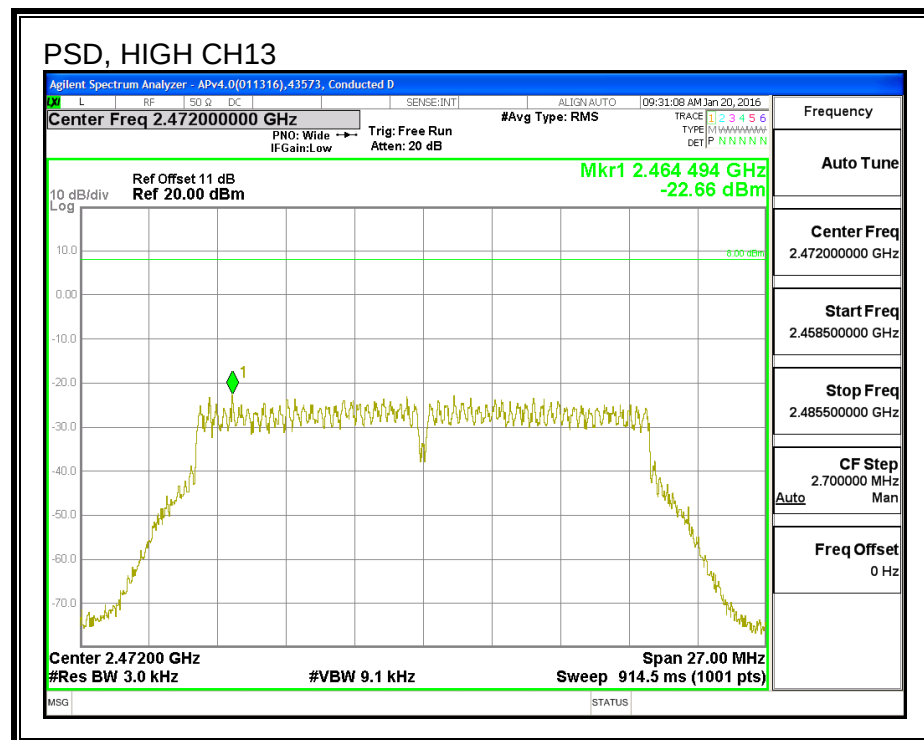
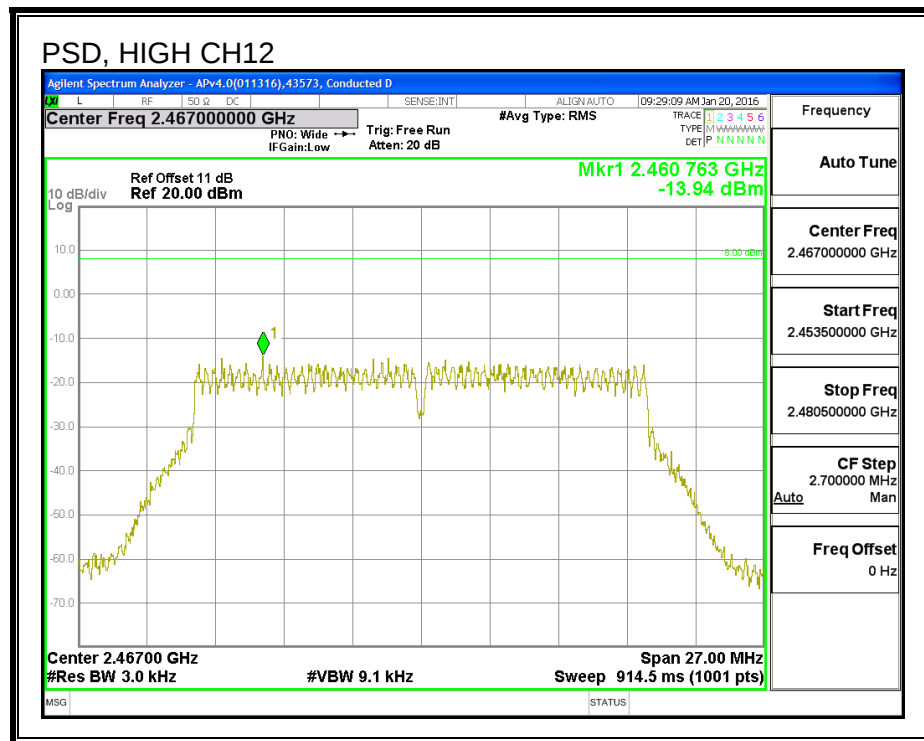
PSD Results

Channel	Frequency (MHz)	Antenna B Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-11.49	-11.49	8.0	-19.5
Mid	2437	-9.86	-9.86	8.0	-17.9
High_10	2457	-9.87	-9.87	8.0	-17.9
High_11	2462	-12.54	-12.54	8.0	-20.5
High_12	2467	-13.94	-13.94	8.0	-21.9
High_13	2472	-22.66	-22.66	8.0	-30.7

PSD







8.6.6. OUT-OF-BAND EMISSIONS

LIMITS

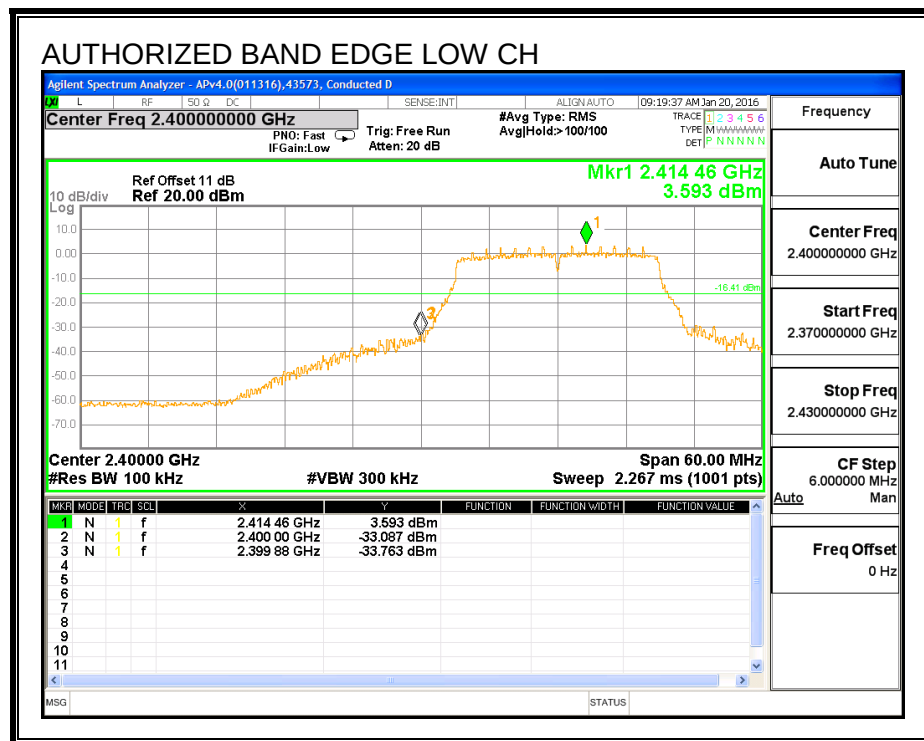
FCC §15.247 (d)

IC RSS-247 (5.5)

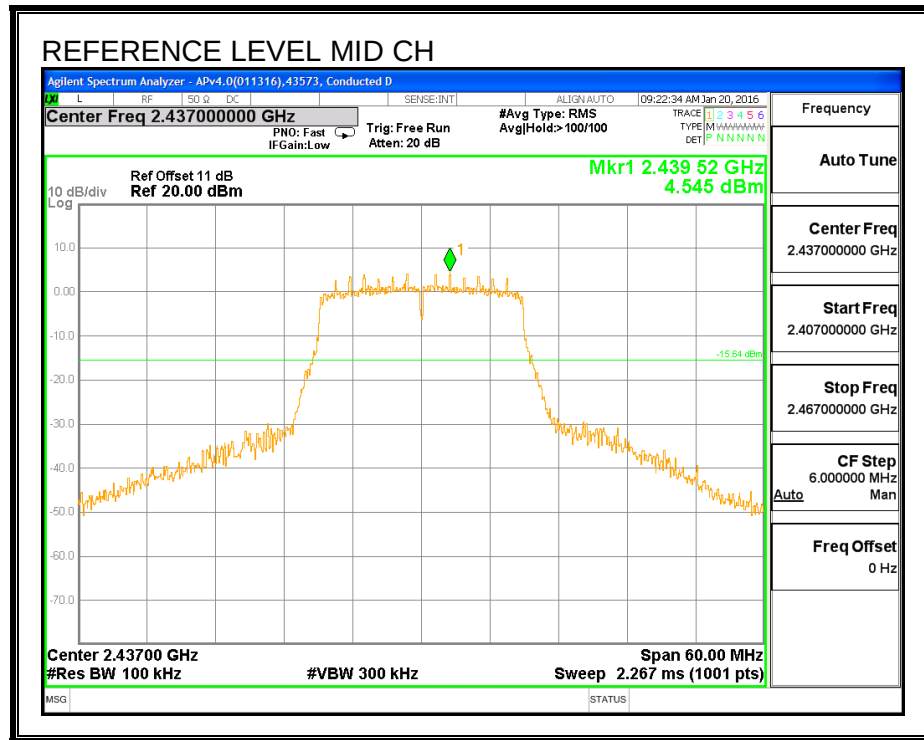
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

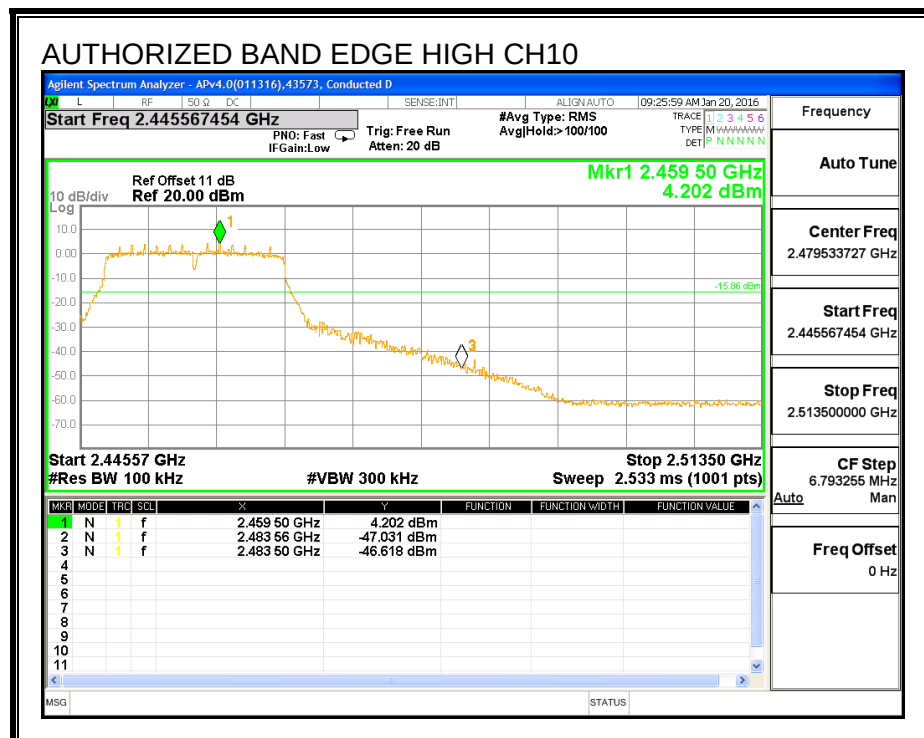
LOW CHANNEL BANDEDGE

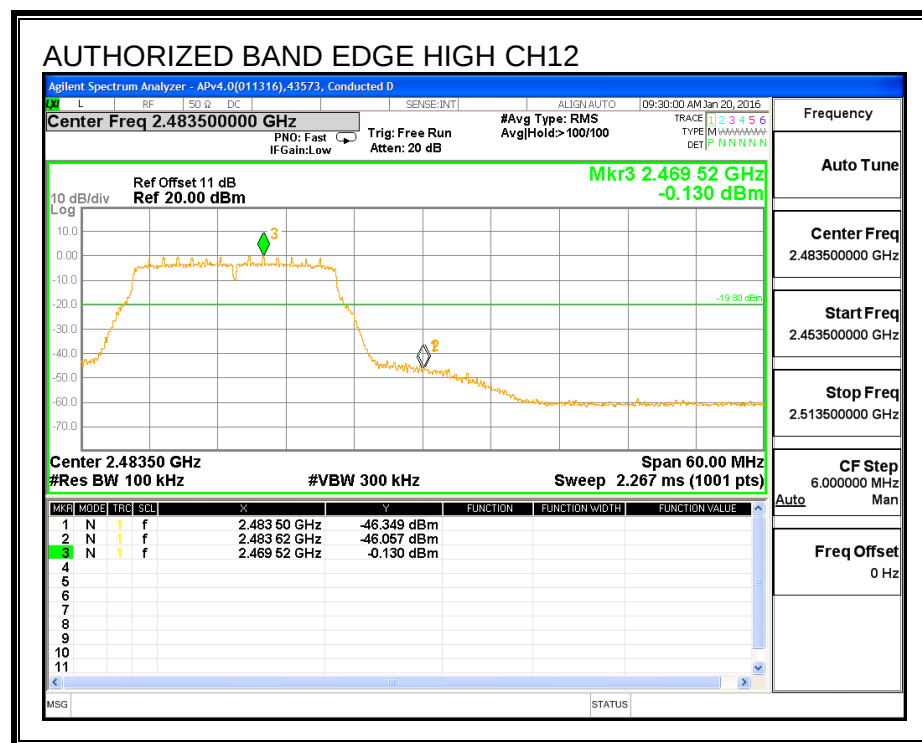
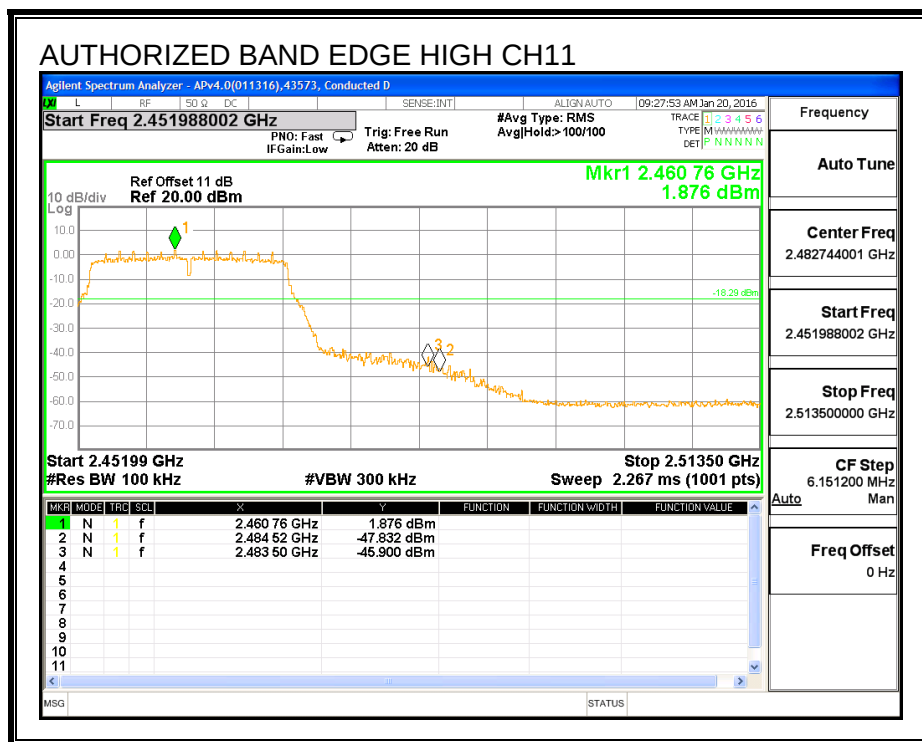


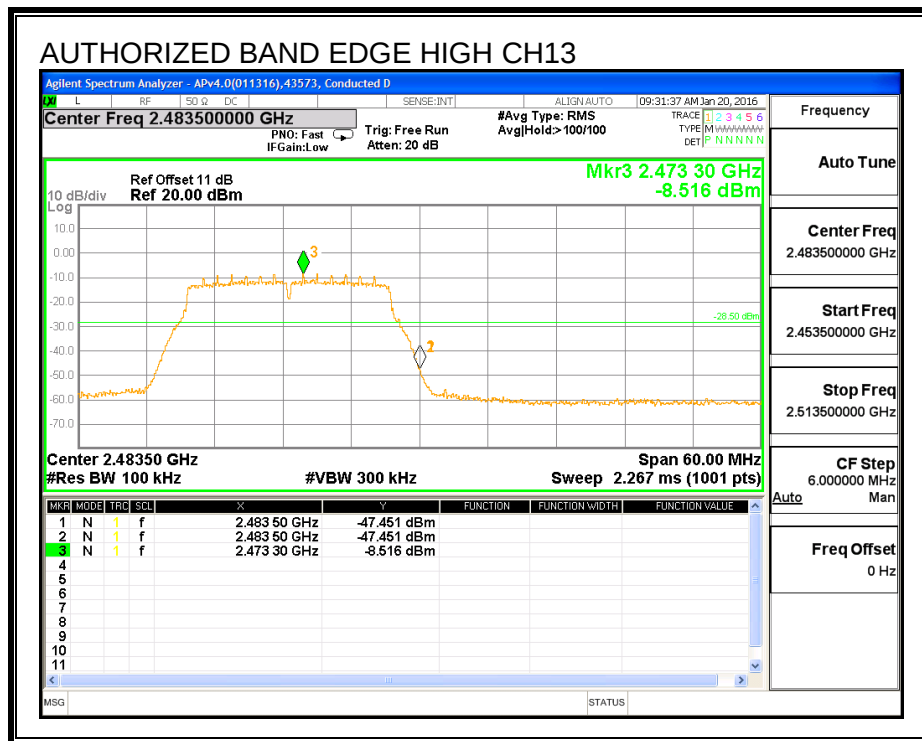
MID CHANNEL BANDEDGE



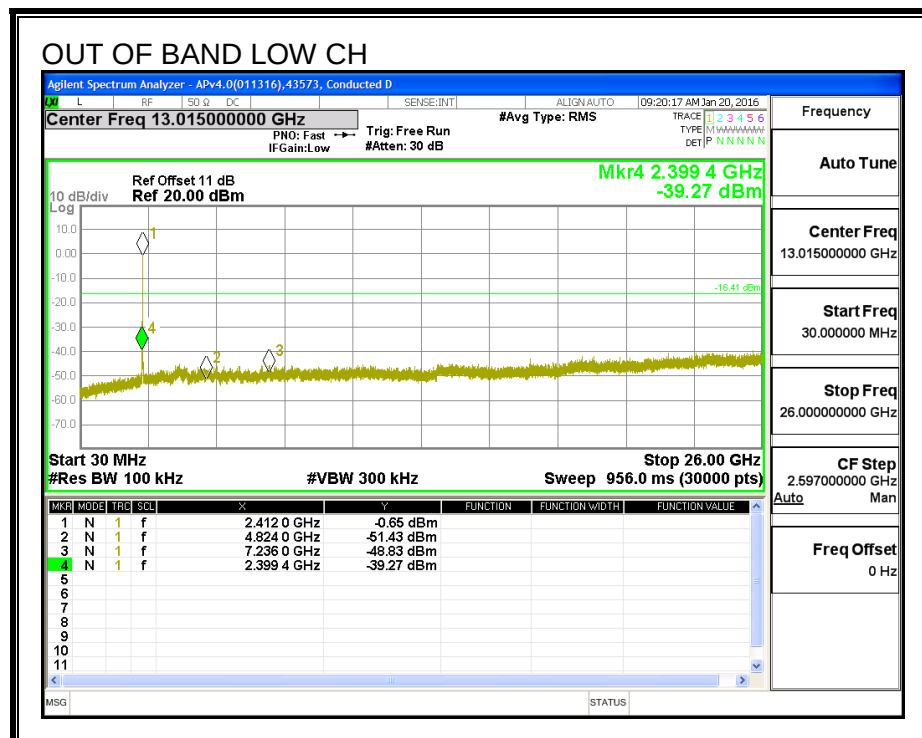
HIGH CHANNEL BANDEDGE

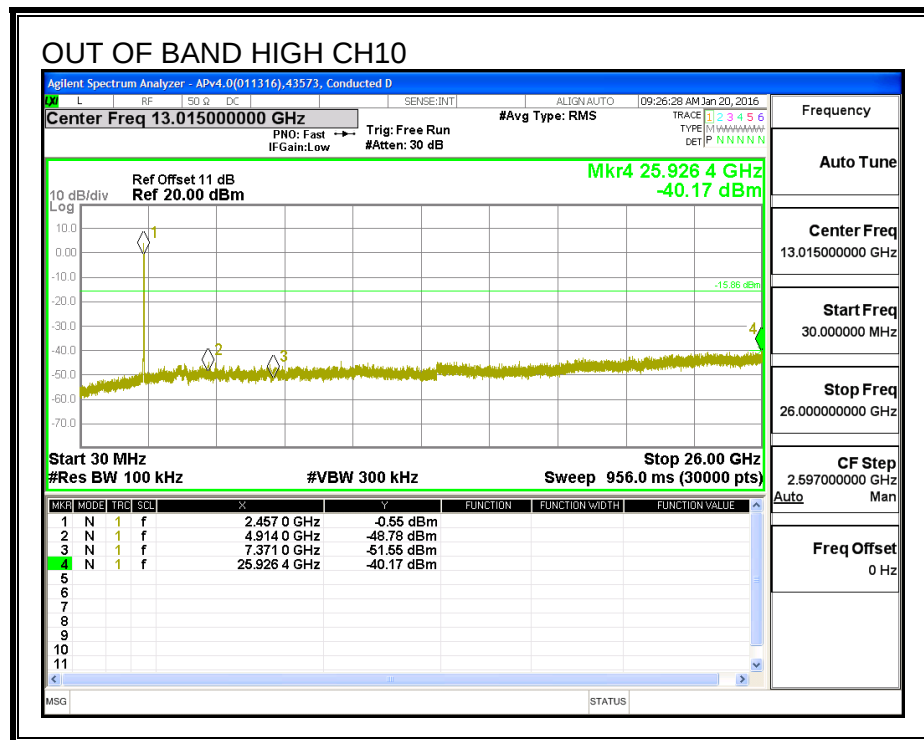
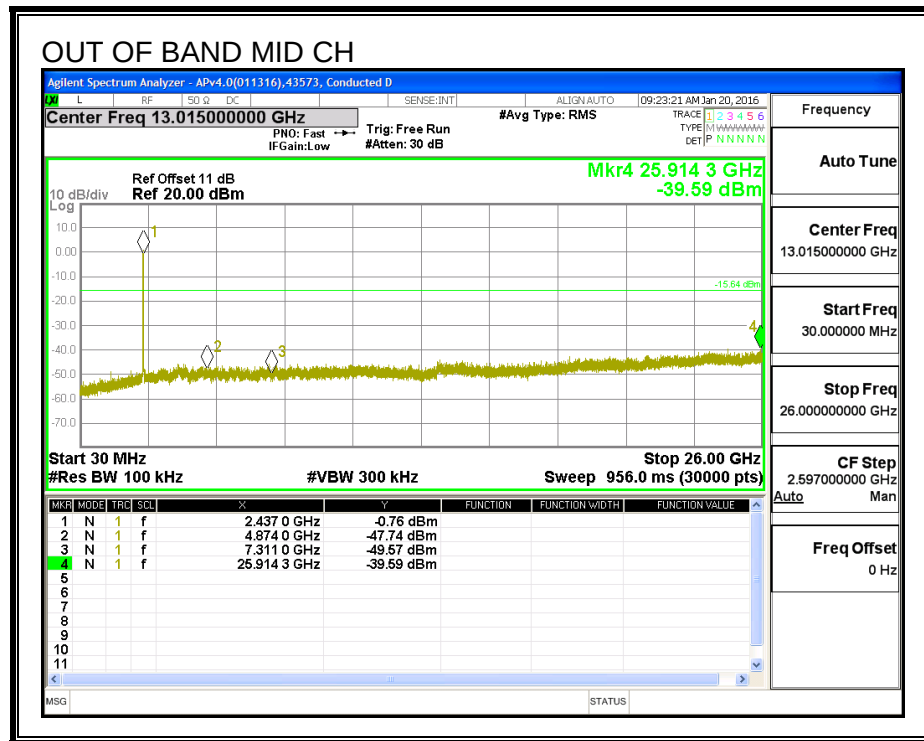


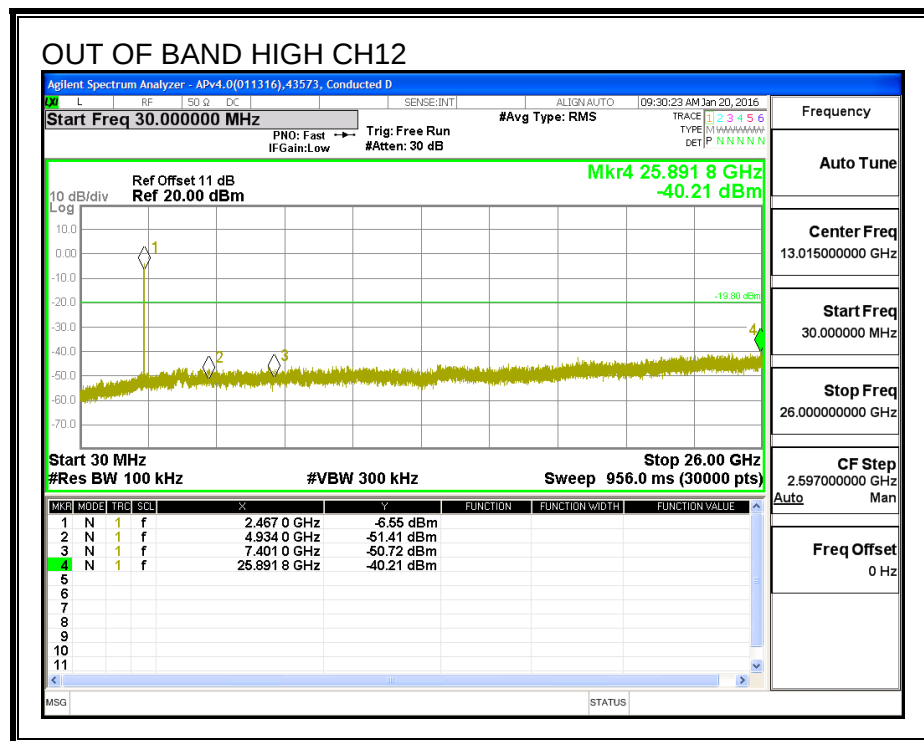
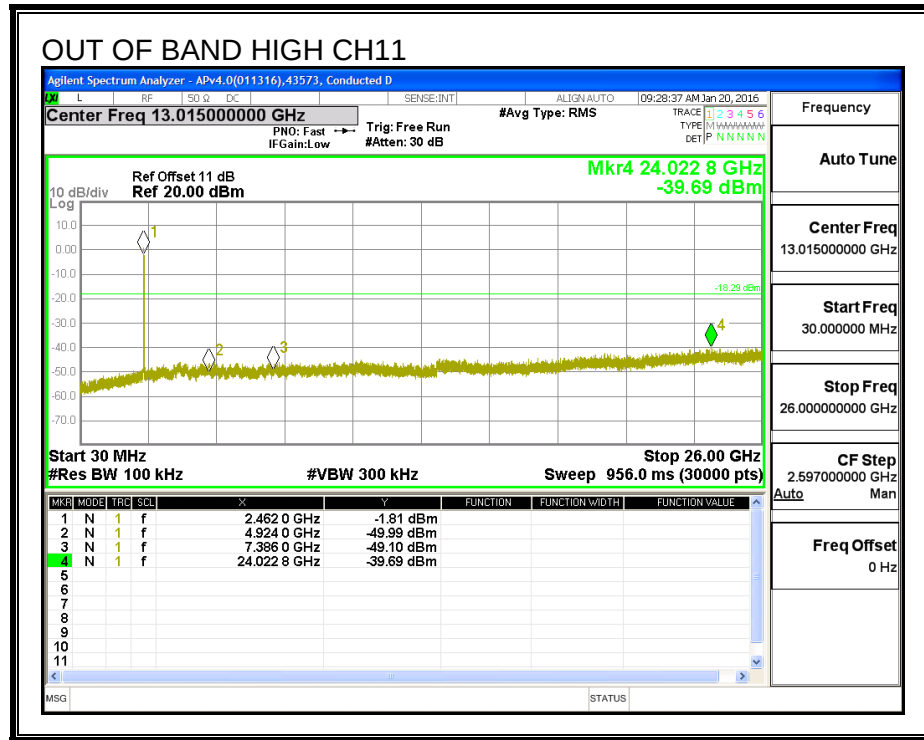


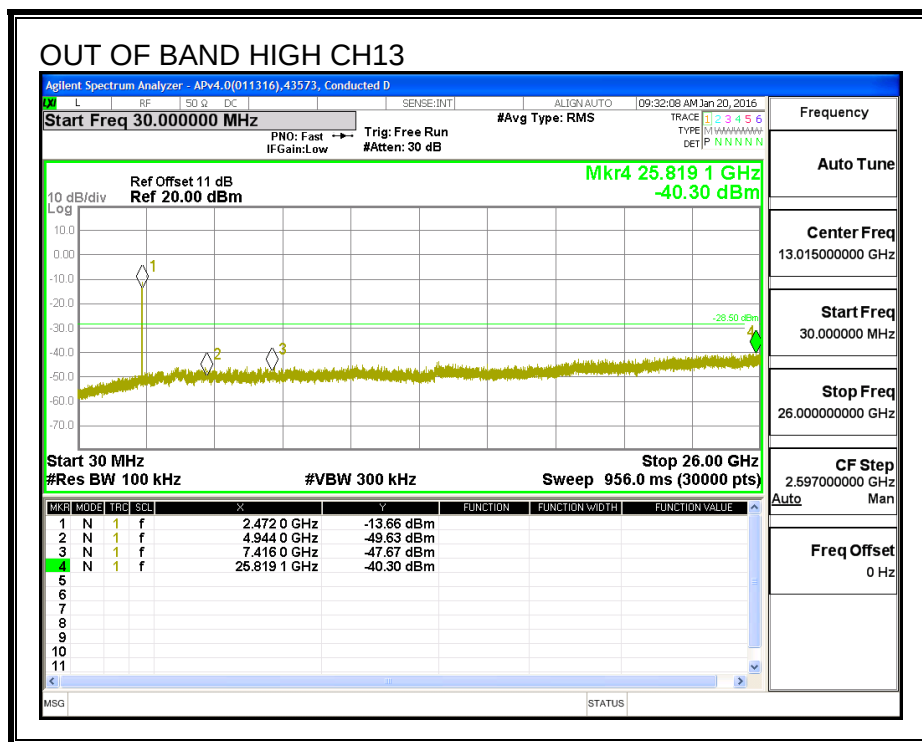


OUT-OF-BAND EMISSIONS









8.7. 802.11g SISO MODE IN THE 2.4 GHz BAND (ANTENNA A)

Noted: Covered by 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND (ANTENNA A)

8.8. 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND (ANTENNA A)

8.8.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

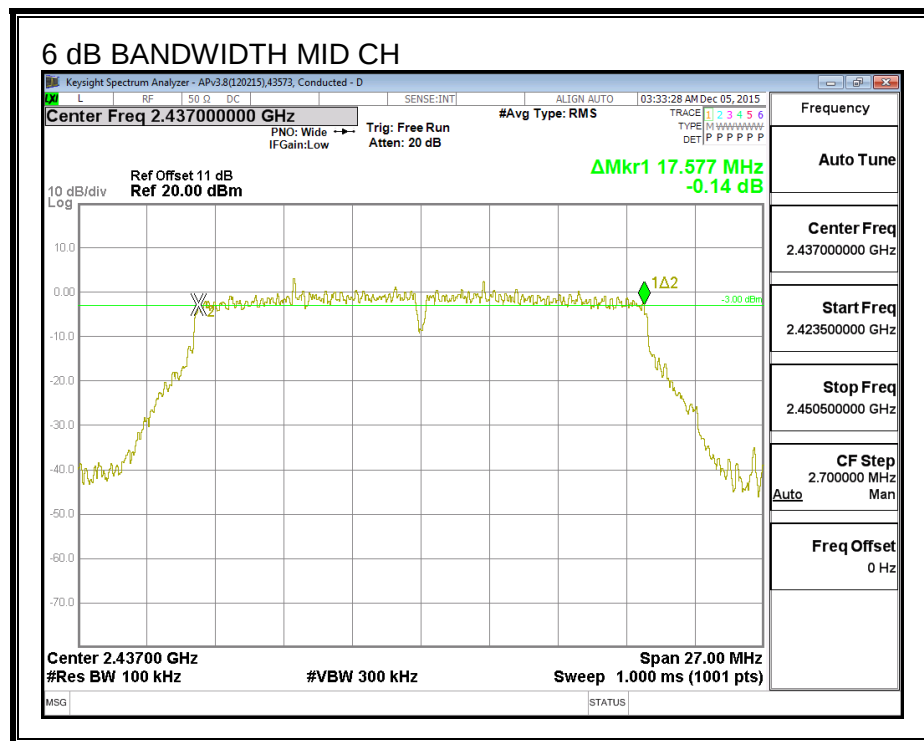
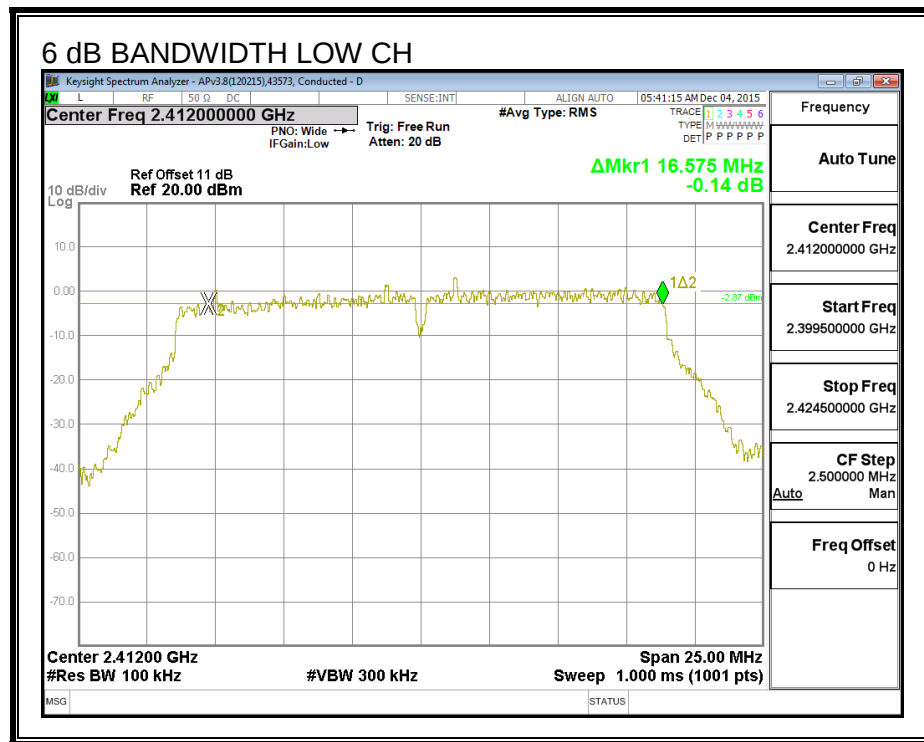
IC RSS-247 (5.2) (1)

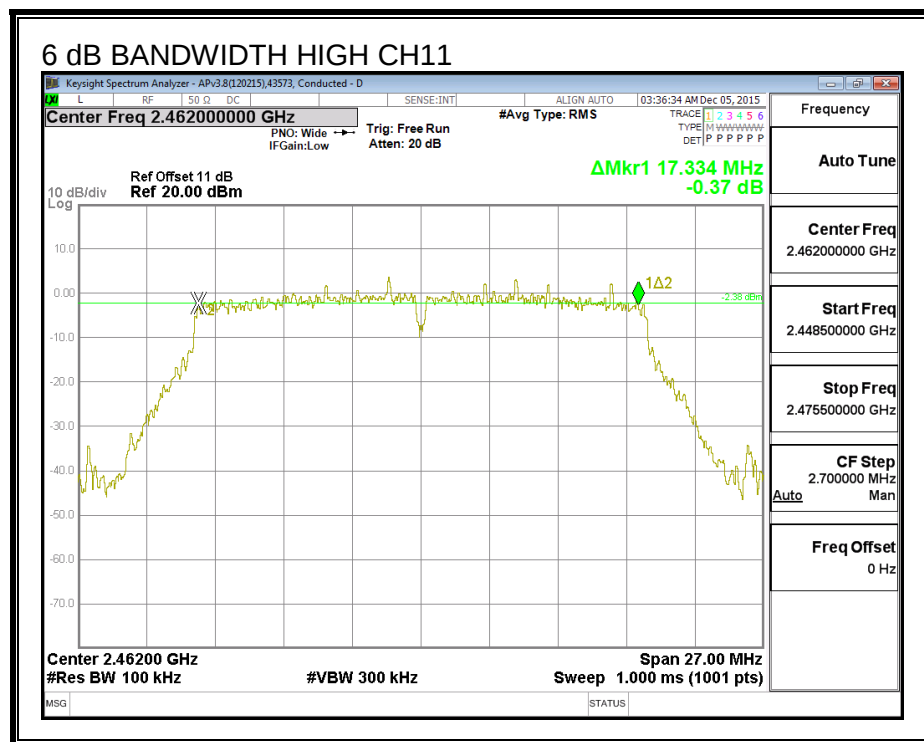
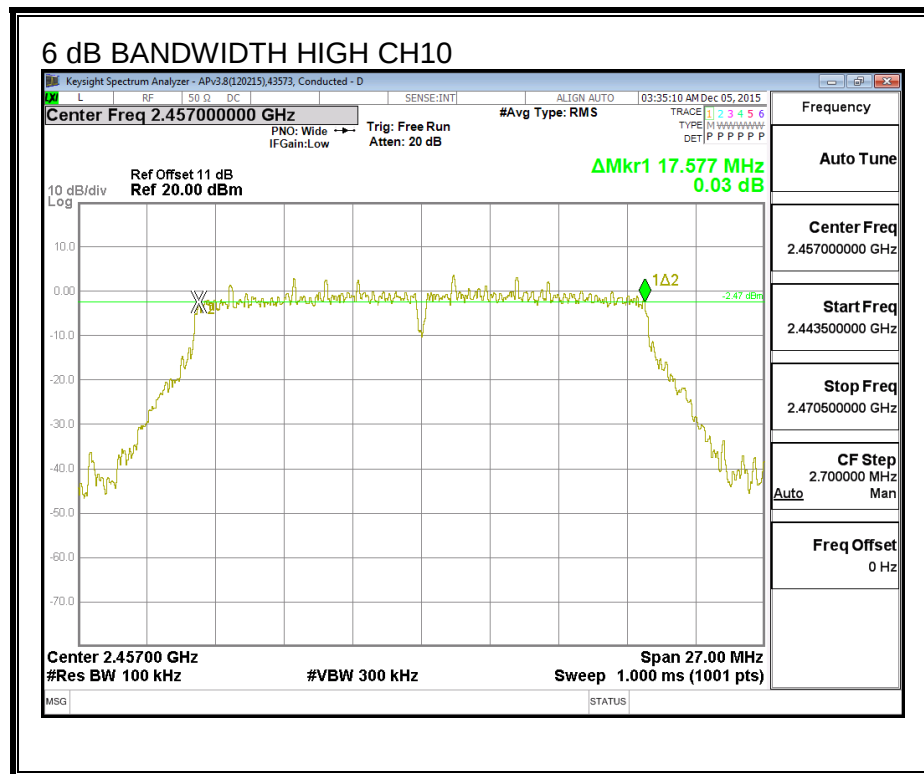
The minimum 6 dB bandwidth shall be at least 500 kHz.

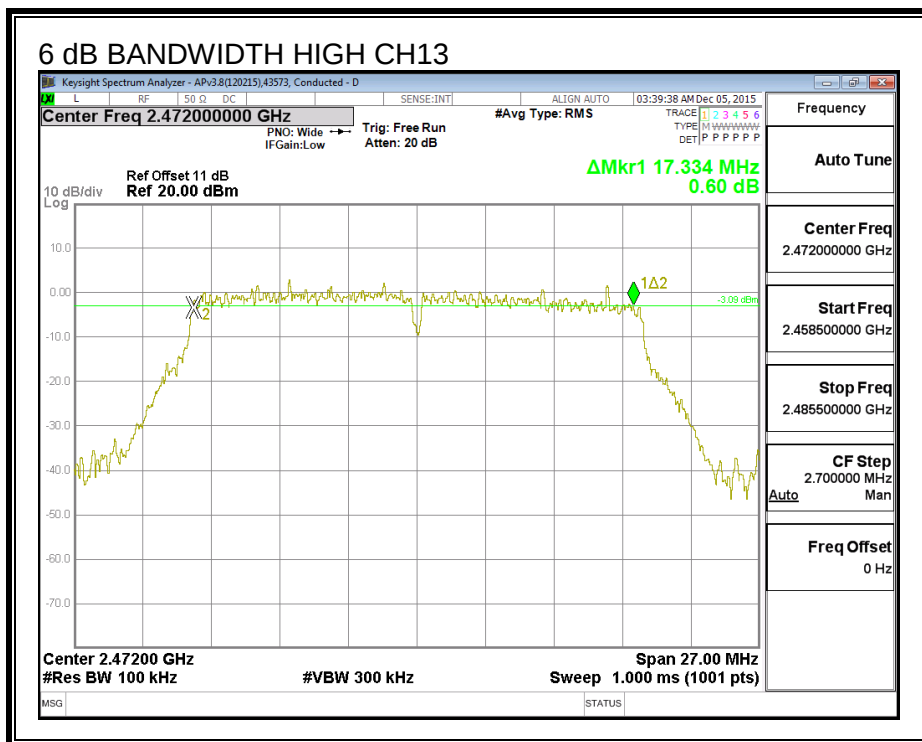
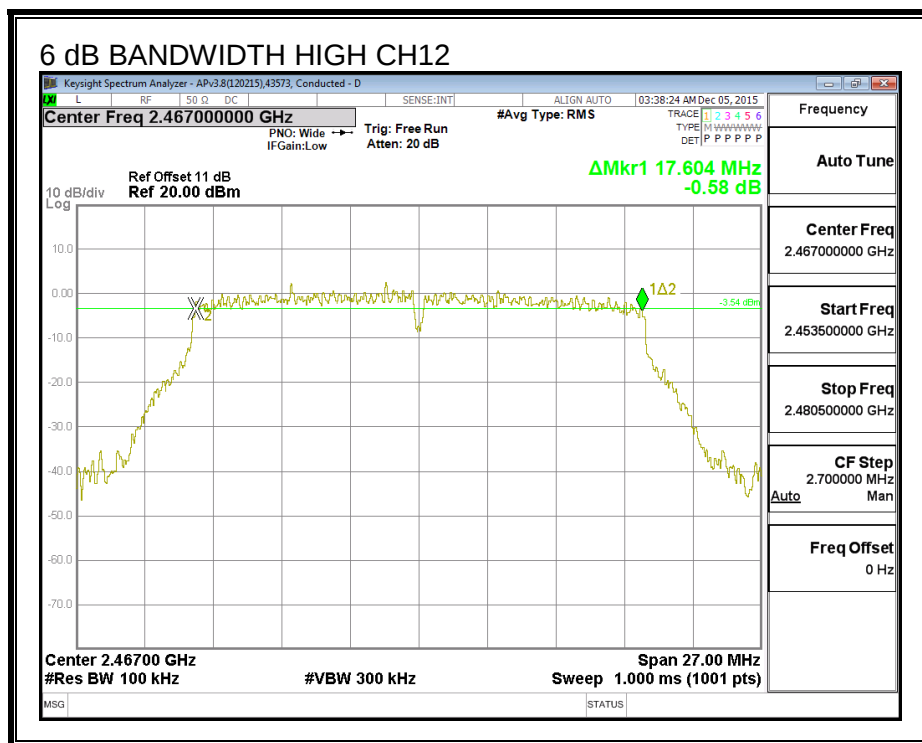
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.58	0.5
Mid	2437	17.58	0.5
High_10	2457	17.58	0.5
High_11	2462	17.33	0.5
High_12	2467	17.60	0.5
High_13	2472	17.33	0.5

6 dB BANDWIDTH







8.8.2. 99% BANDWIDTH

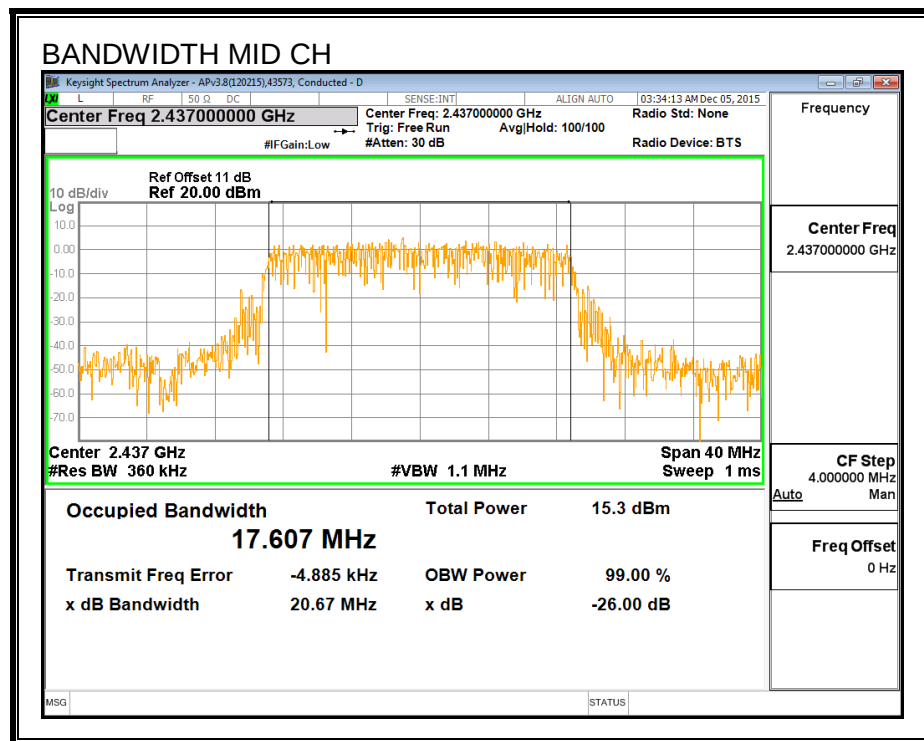
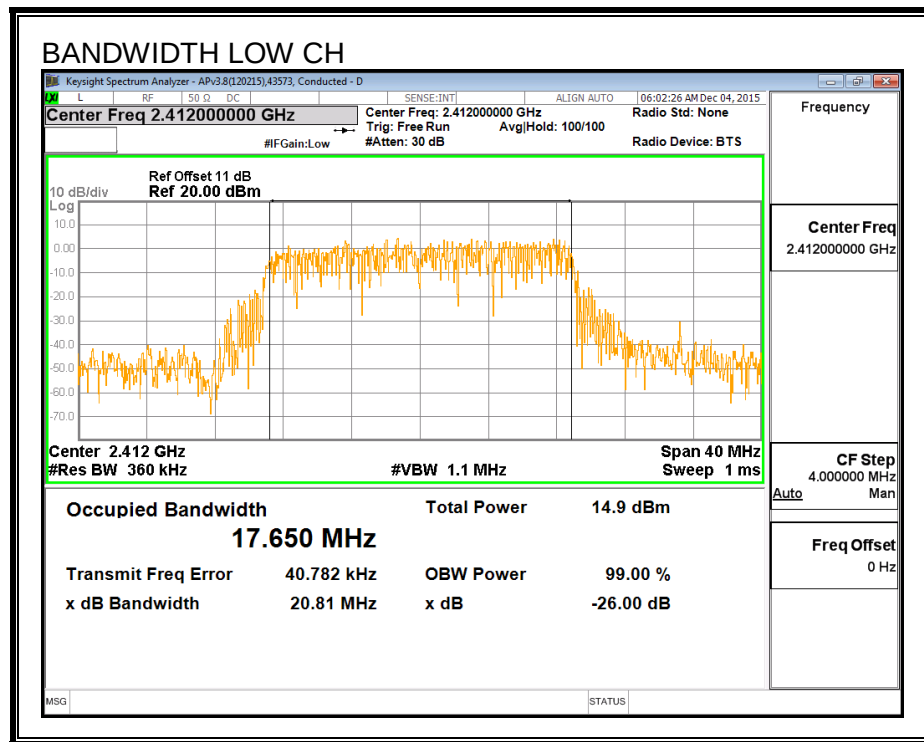
LIMITS

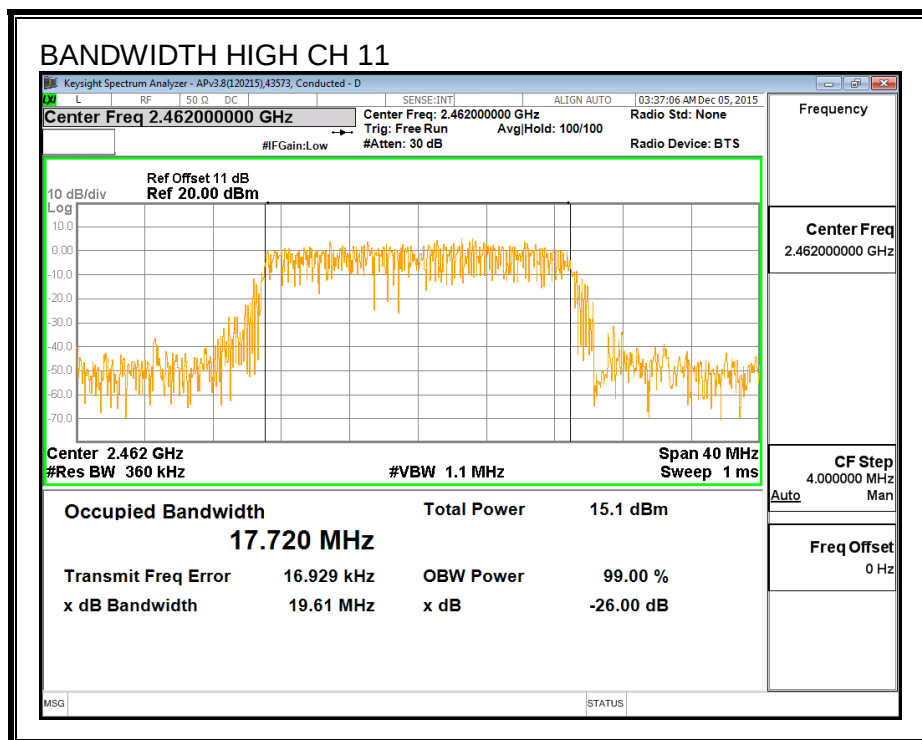
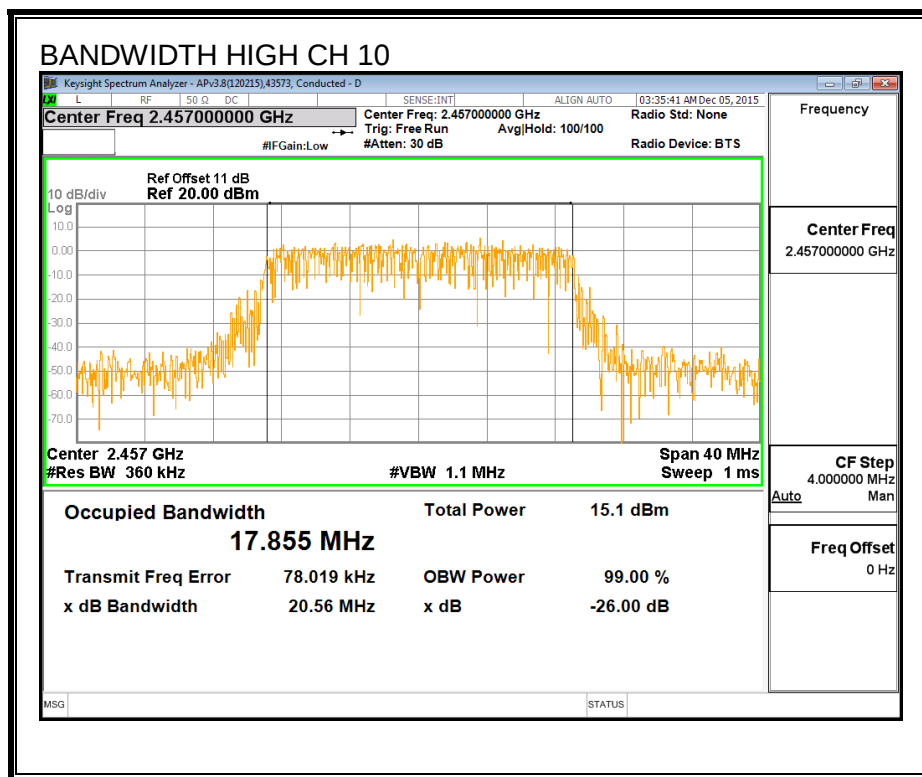
None; for reporting purposes only.

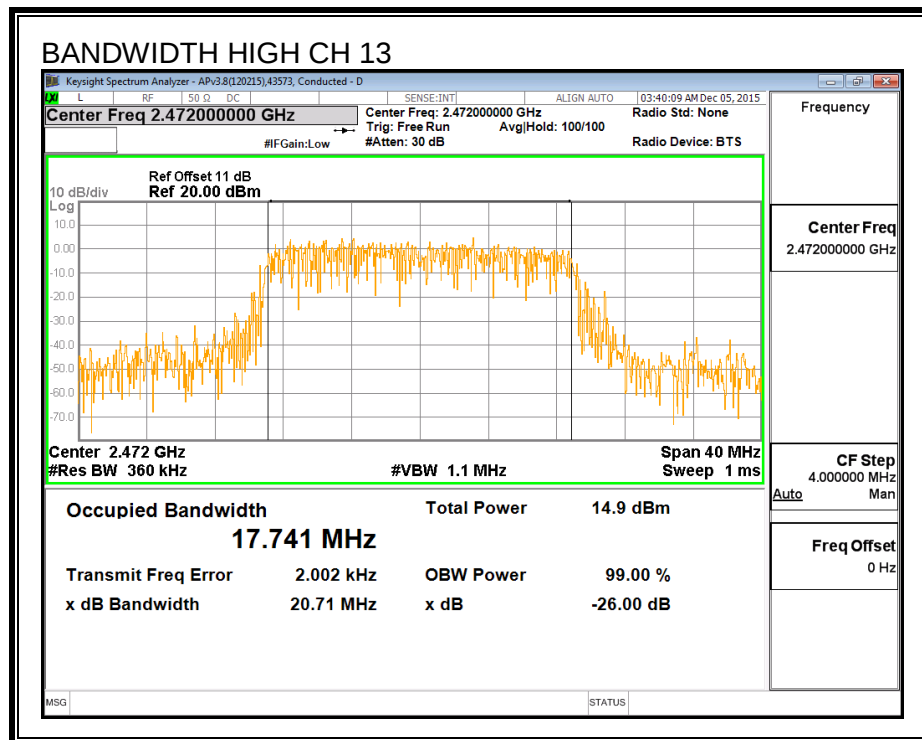
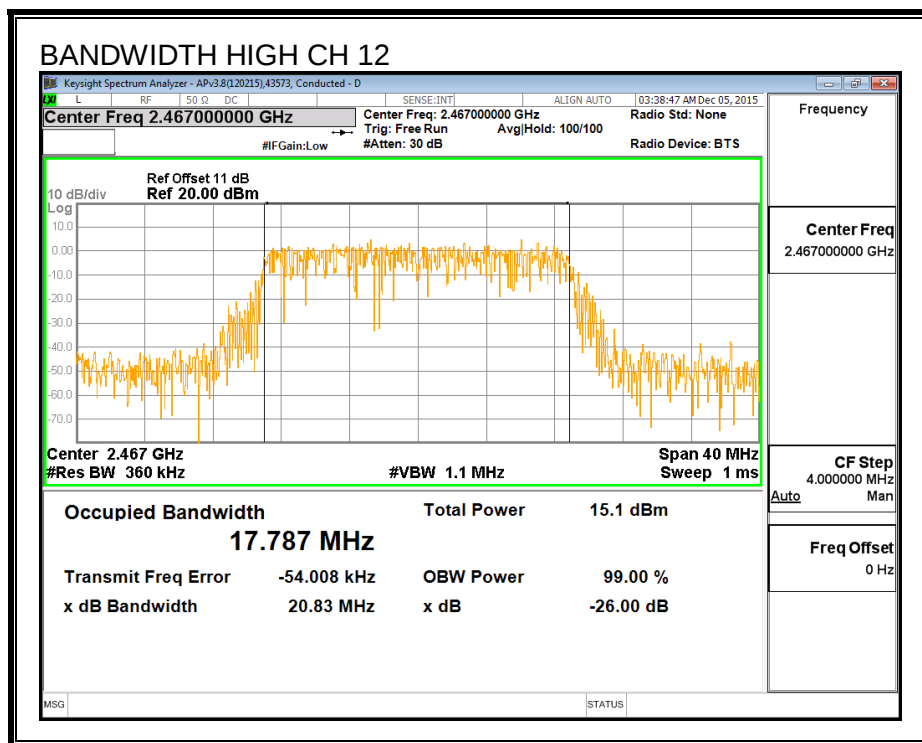
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.650
Mid	2437	17.607
High_10	2457	17.855
High_11	2462	17.720
High_12	2467	17.787
High_13	2472	17.741

99% BANDWIDTH







8.8.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS for Chain 0

Channel	Frequency (MHz)	Power (dBm)
Low	2412	14.87
Mid	2437	16.48
High_10	2457	16.37
High_11	2462	13.82
High_12	2467	11.88
High_13	2472	2.78

8.8.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-0.18	30.00	30	36	30.00
Mid	2437	-0.18	30.00	30	36	30.00
High_10	2457	-0.18	30.00	30	36	30.00
High_11	2462	-0.18	30.00	30	36	30.00
High_12	2467	-0.18	30.00	30	36	30.00
High_13	2472	-0.18	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	23.09	23.09	30.00	-6.91
Mid	2437	24.59	24.59	30.00	-5.41
High_10	2457	24.36	24.36	30.00	-5.64
High_11	2462	22.04	22.04	30.00	-7.96
High_12	2467	20.09	20.09	30.00	-9.91
High_13	2472	11.62	11.62	30.00	-18.38

8.8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

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 transmissions.

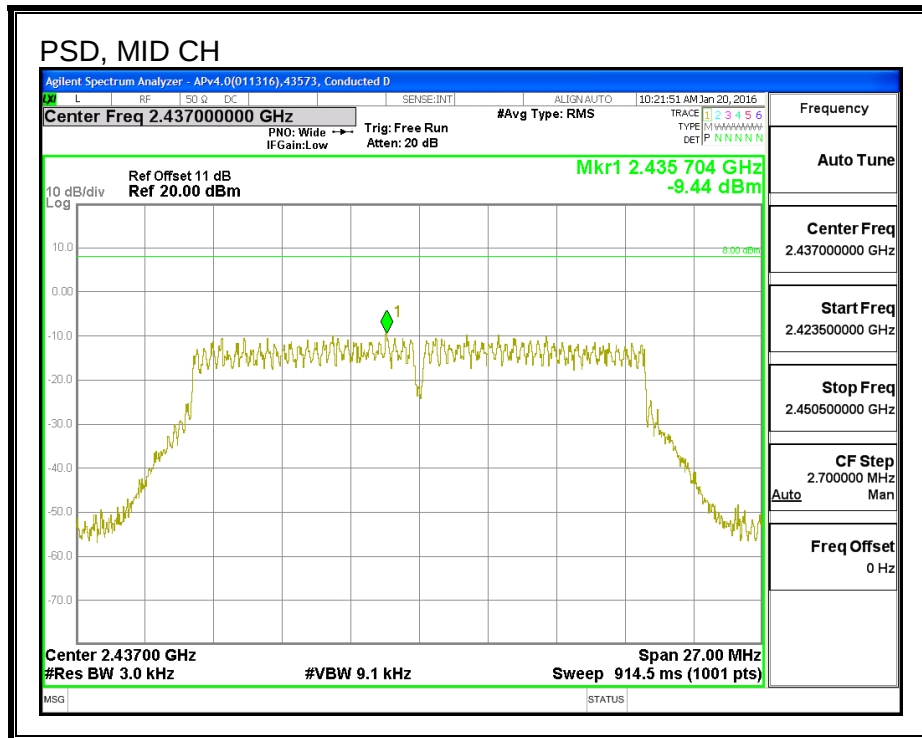
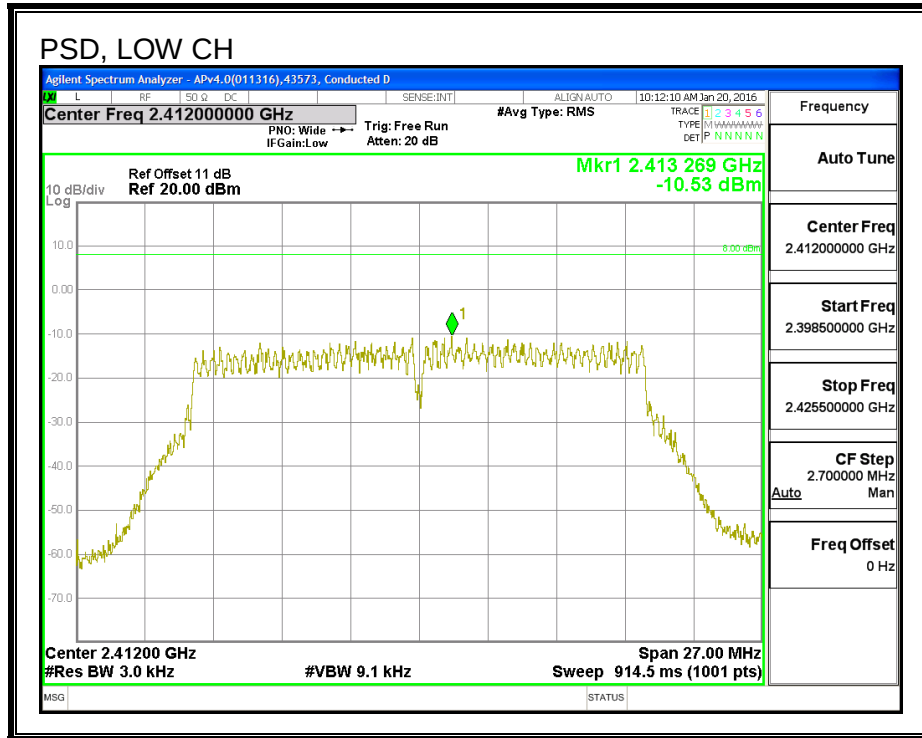
RESULTS

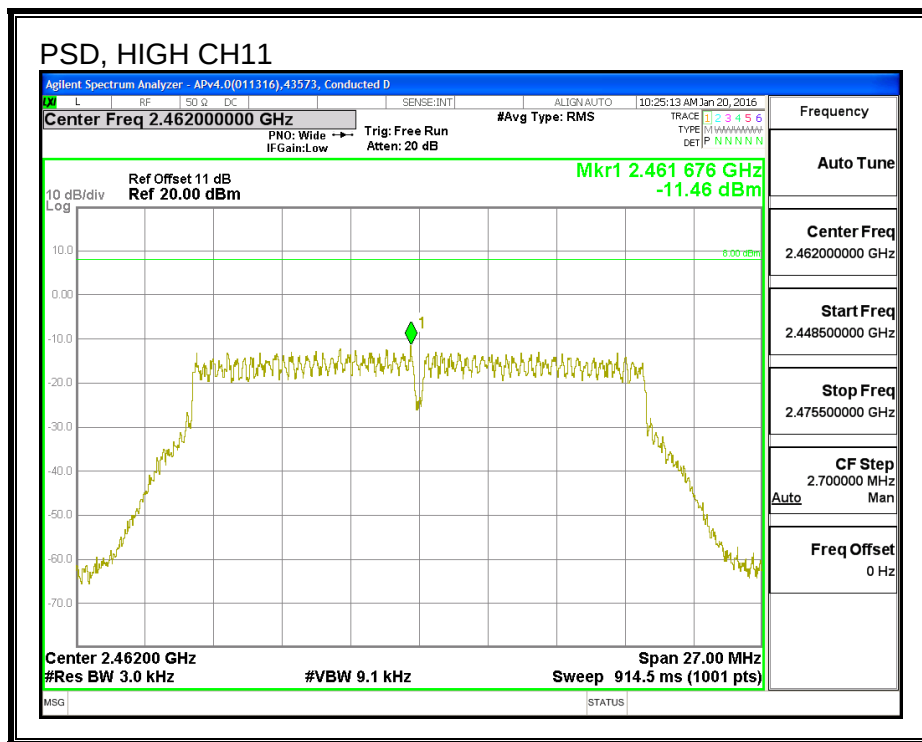
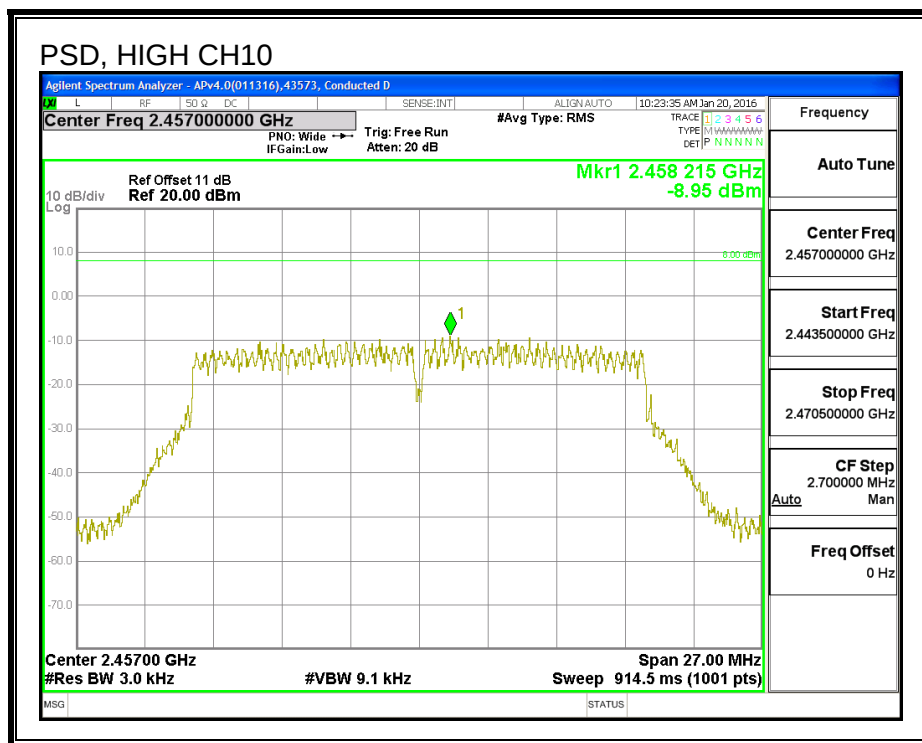
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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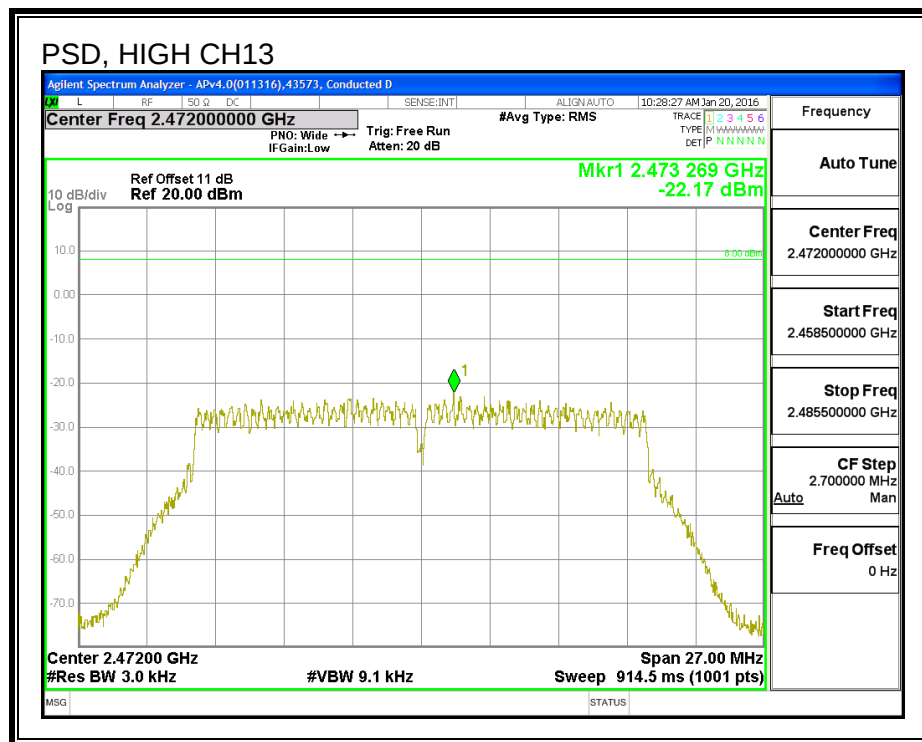
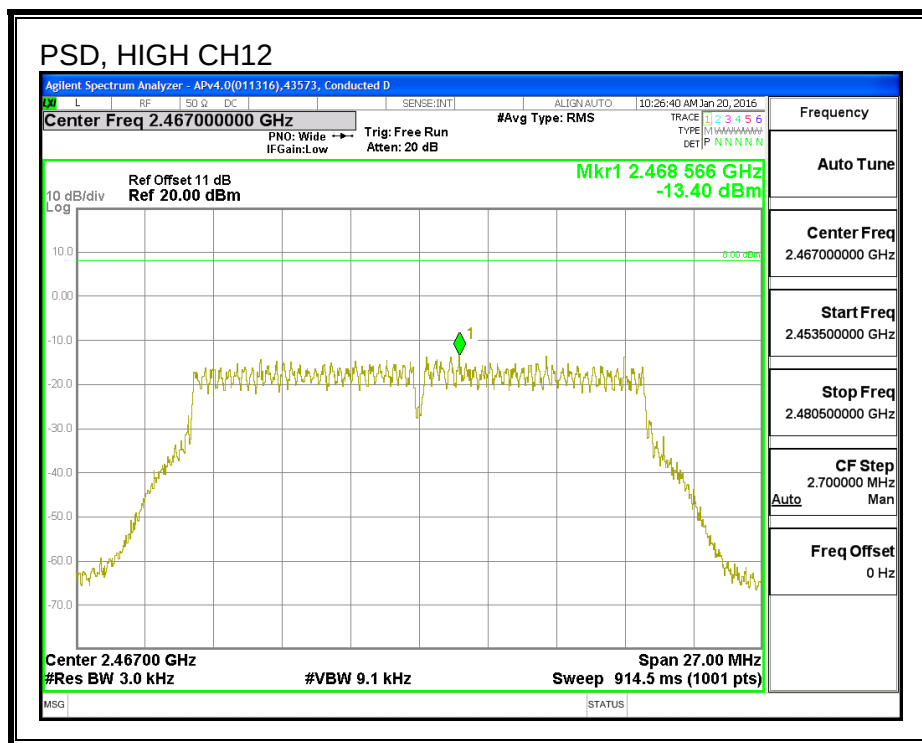
PSD Results

Channel	Frequency (MHz)	Antenna A Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-10.53	-10.53	8.0	-18.5
Mid	2437	-9.44	-9.44	8.0	-17.4
High_10	2457	-8.95	-8.95	8.0	-17.0
High_11	2462	-11.46	-11.46	8.0	-19.5
High_12	2467	-13.40	-13.40	8.0	-21.4
High_13	2472	-22.17	-22.17	8.0	-30.2

PSD







8.8.6. OUT-OF-BAND EMISSIONS

LIMITS

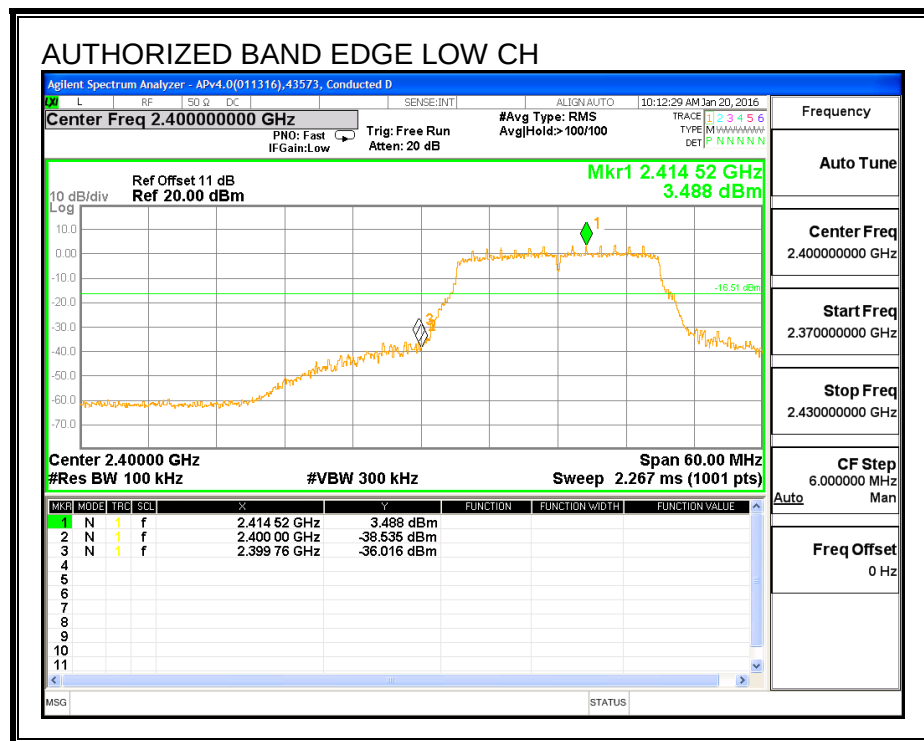
FCC §15.247 (d)

IC RSS-247 (5.5)

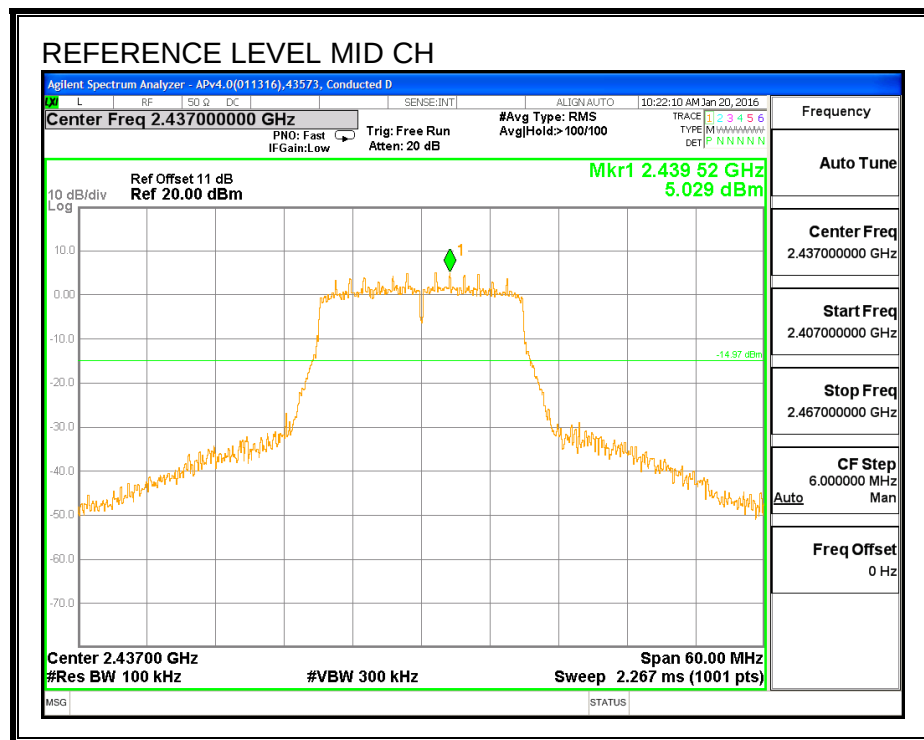
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

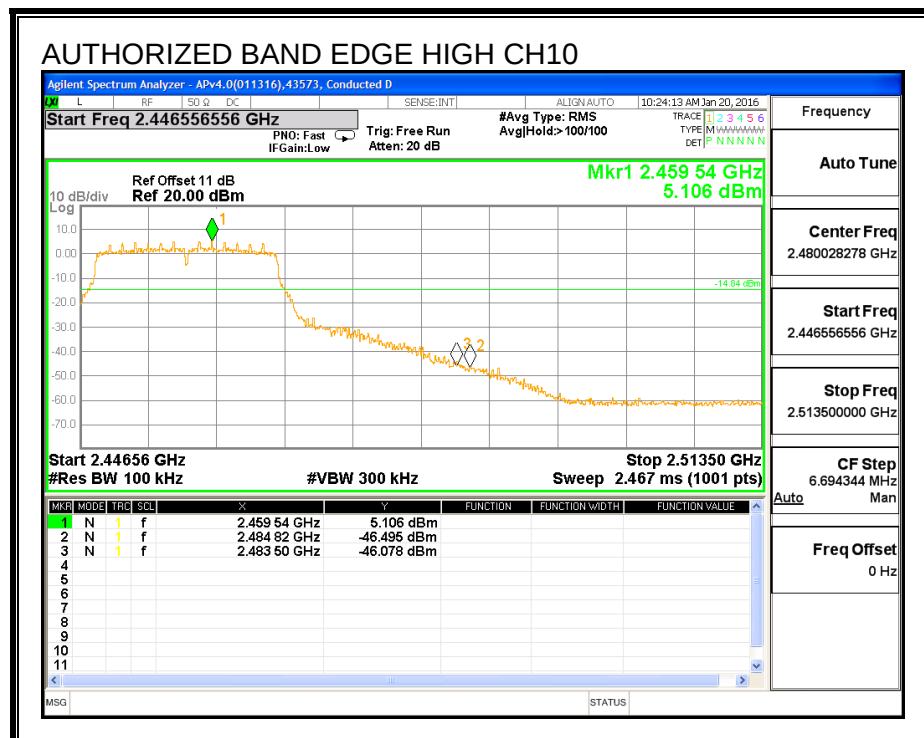
LOW CHANNEL BANDEDGE

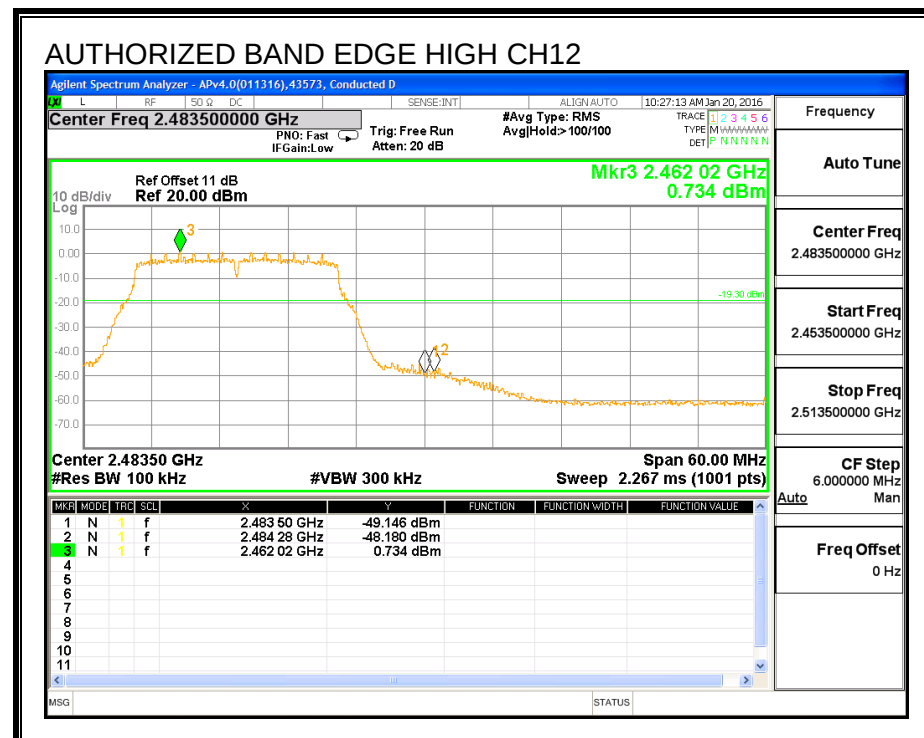
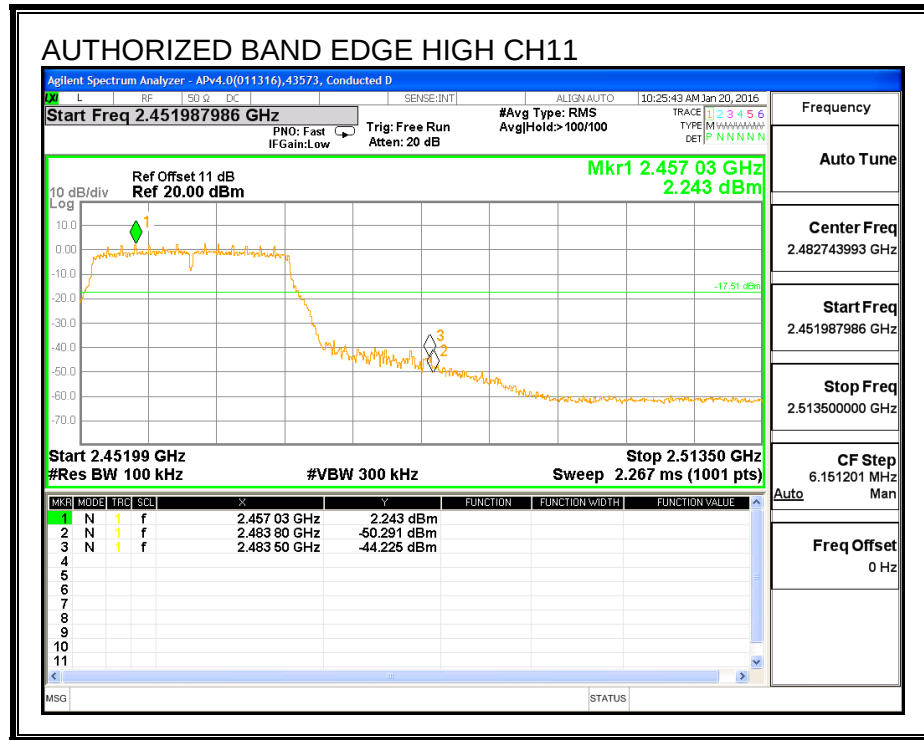


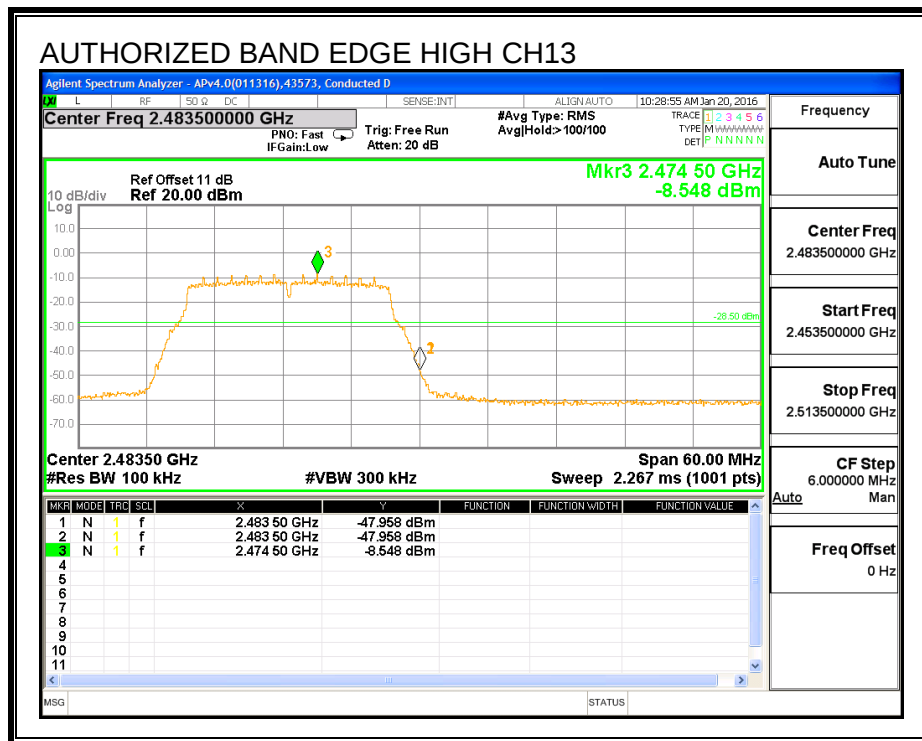
MID CHANNEL BANDEDGE



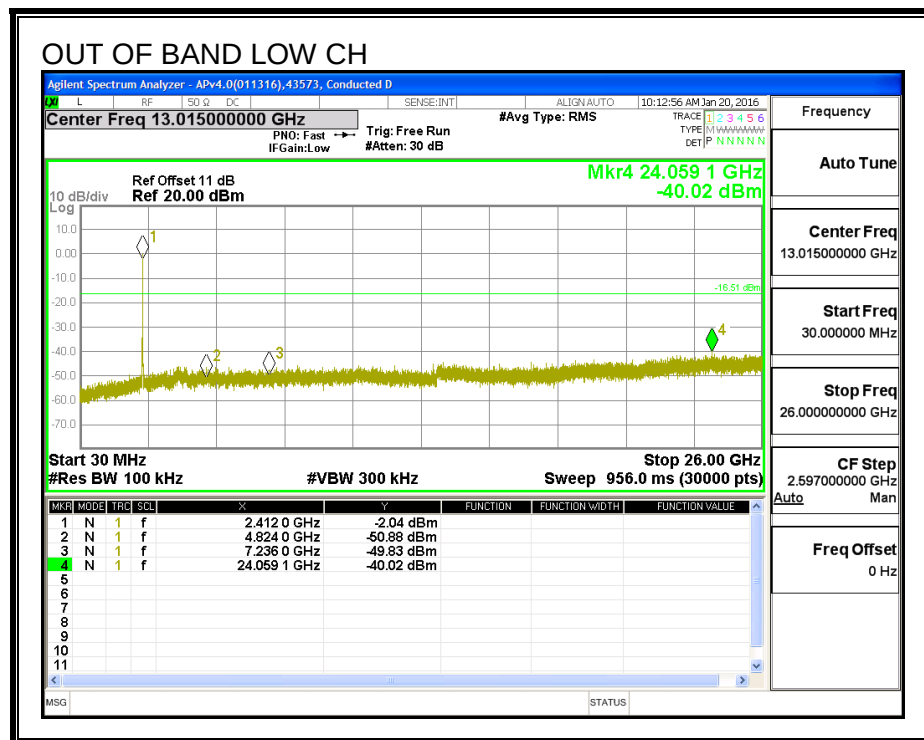
HIGH CHANNEL BANDEDGE

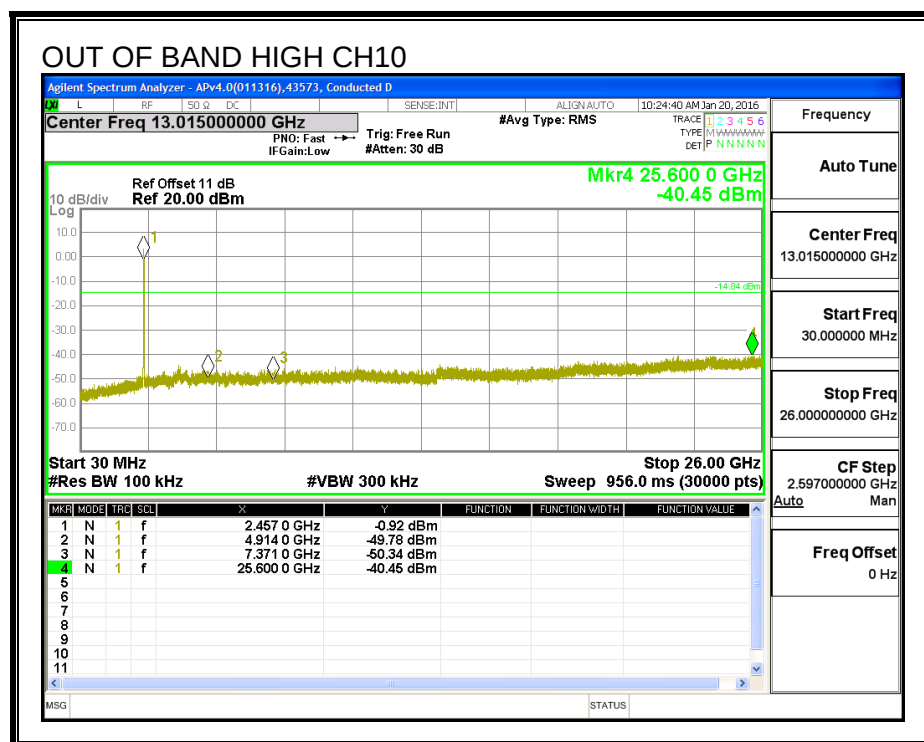
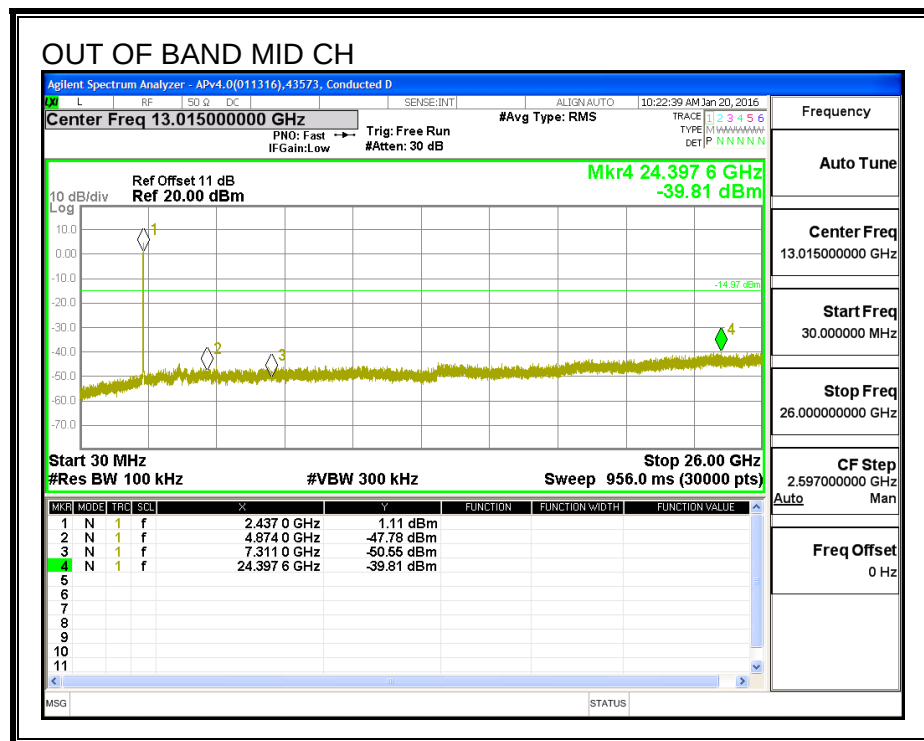


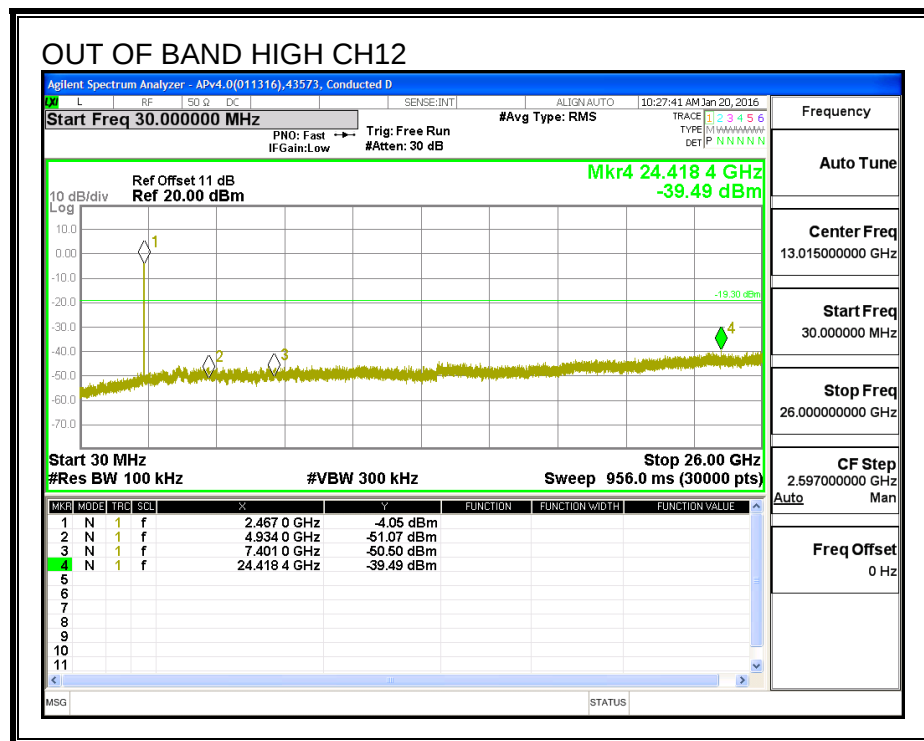
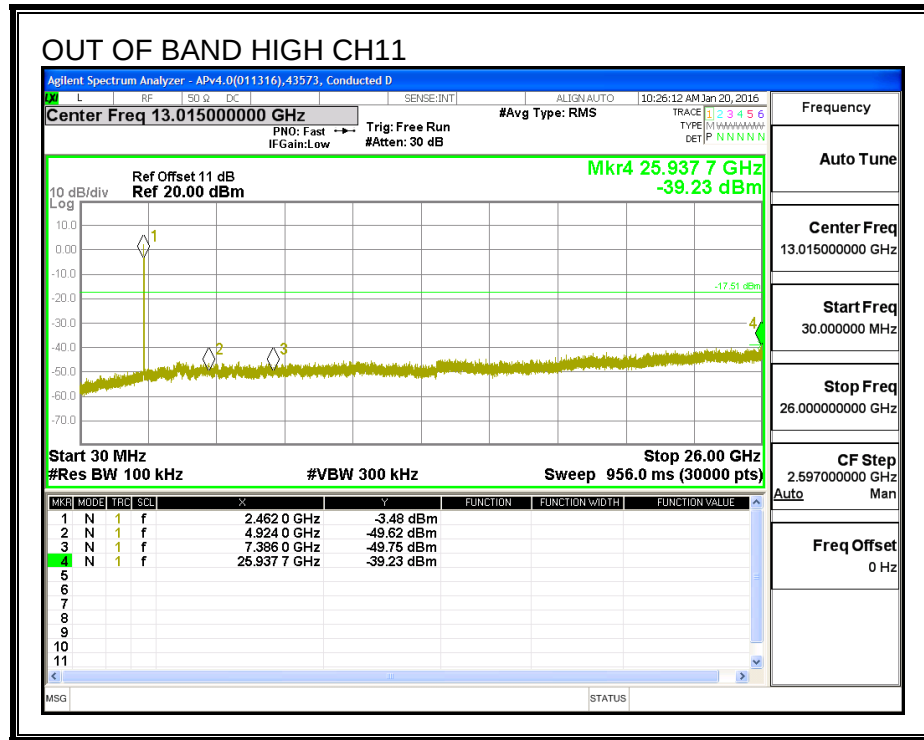


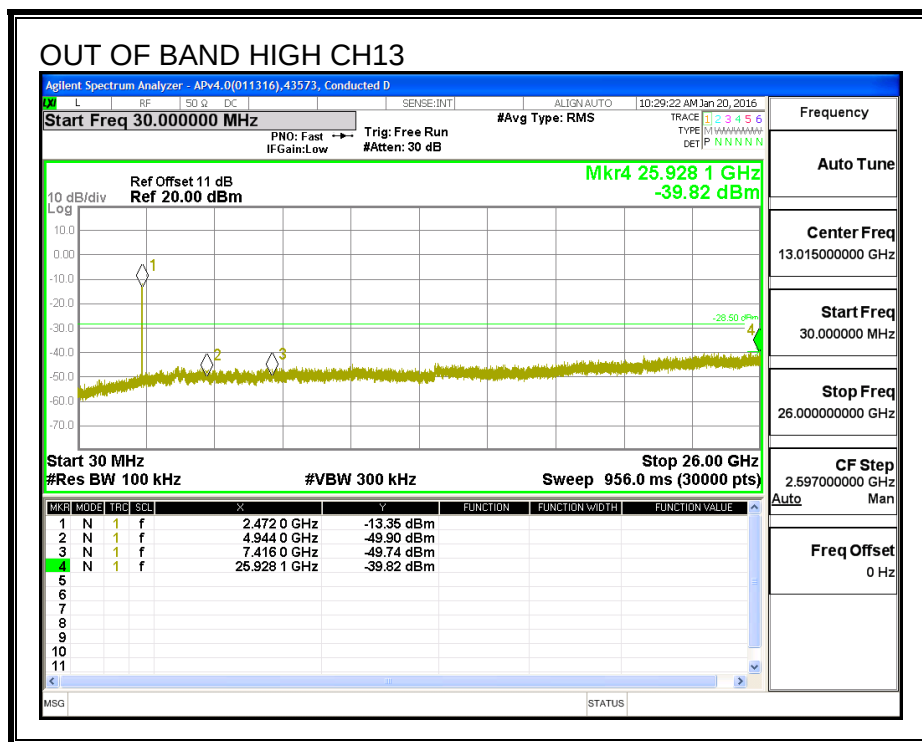


OUT-OF-BAND EMISSIONS









8.9. 802.11g SISO MODE IN THE 2.4 GHz BAND (ANTENNA D)

Noted: Covered by 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND (ANTENNA D)

8.10. 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND (ANTENNA D)

8.10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

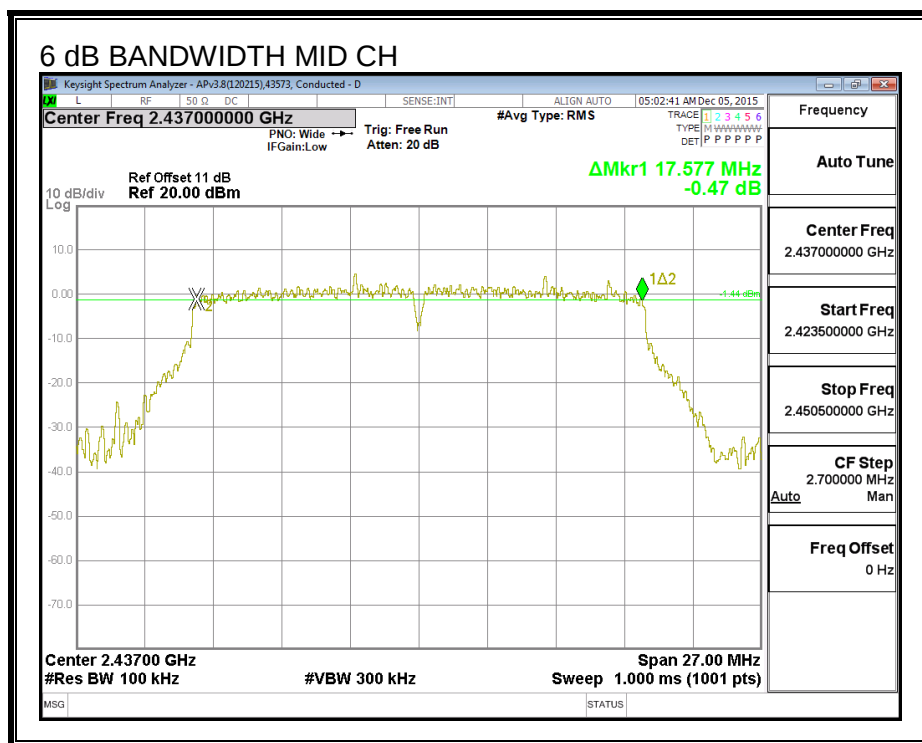
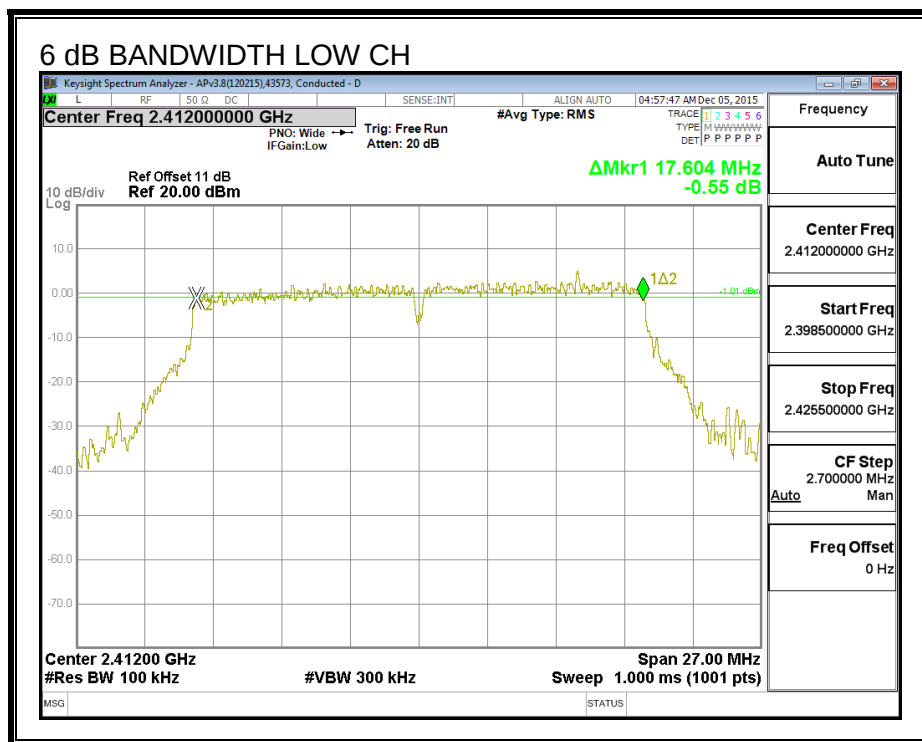
IC RSS-247 (5.2) (1)

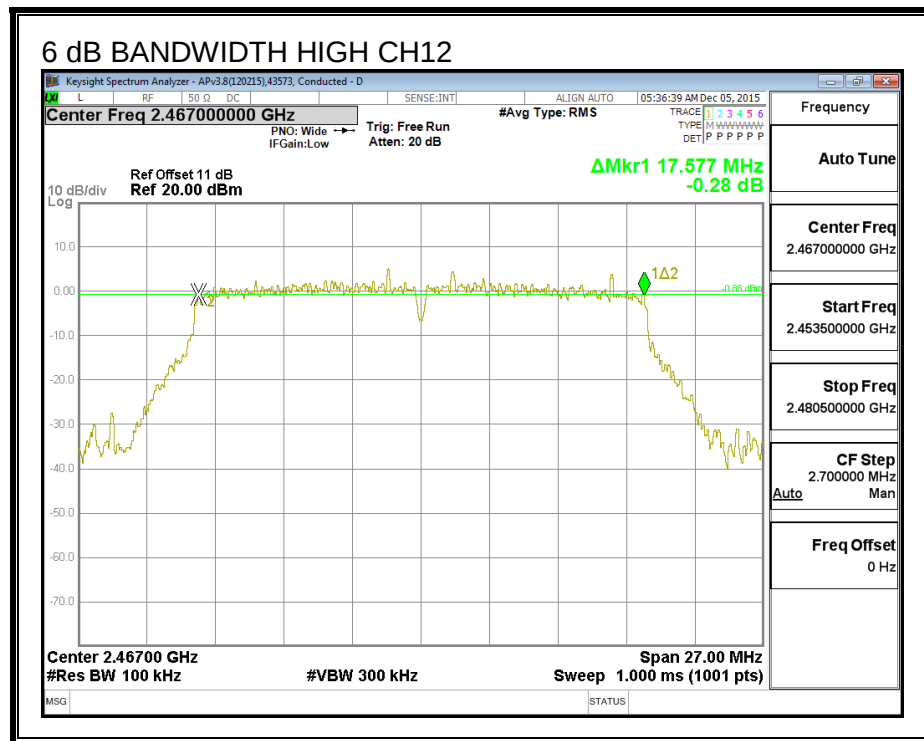
The minimum 6 dB bandwidth shall be at least 500 kHz.

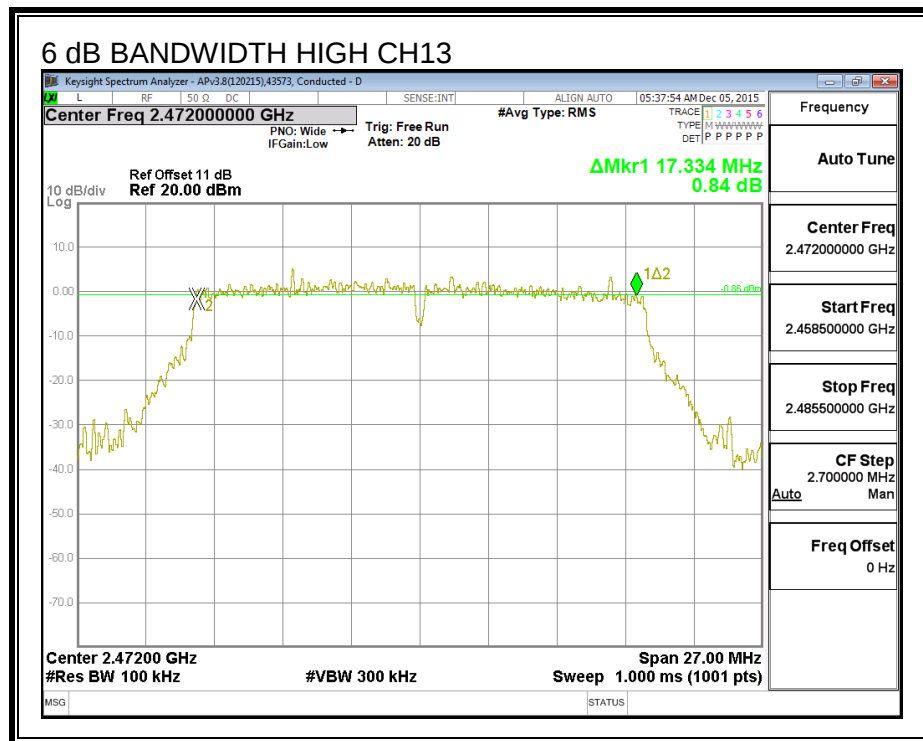
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.60	0.5
Mid	2437	17.58	0.5
High_11	2462	17.33	0.5
High_12	2467	17.58	0.5
High_13	2472	17.33	0.5

6 dB BANDWIDTH







8.10.2. 99% BANDWIDTH

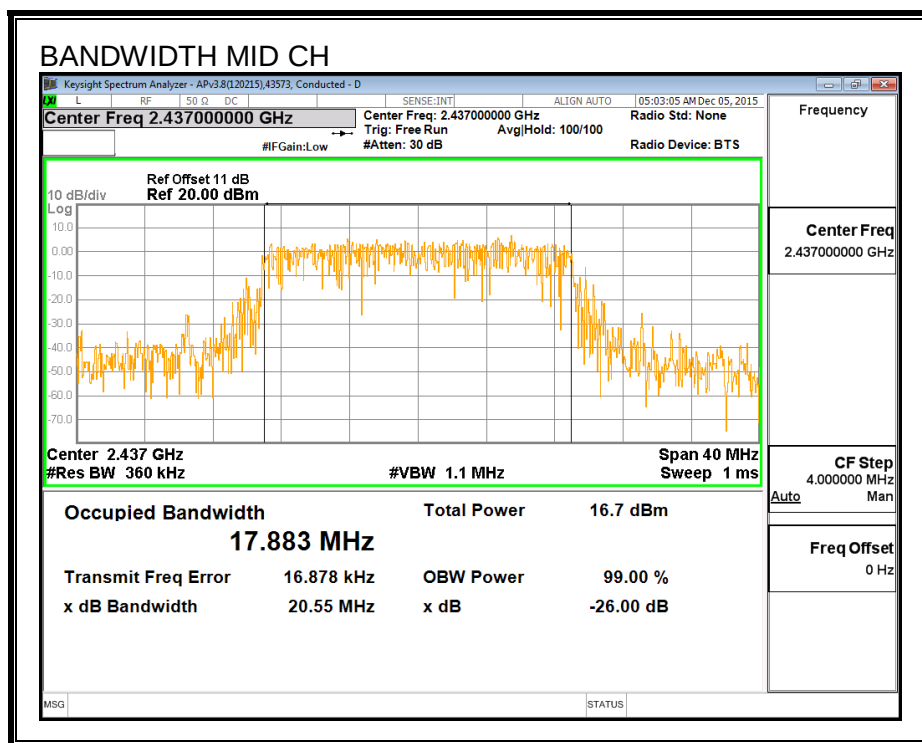
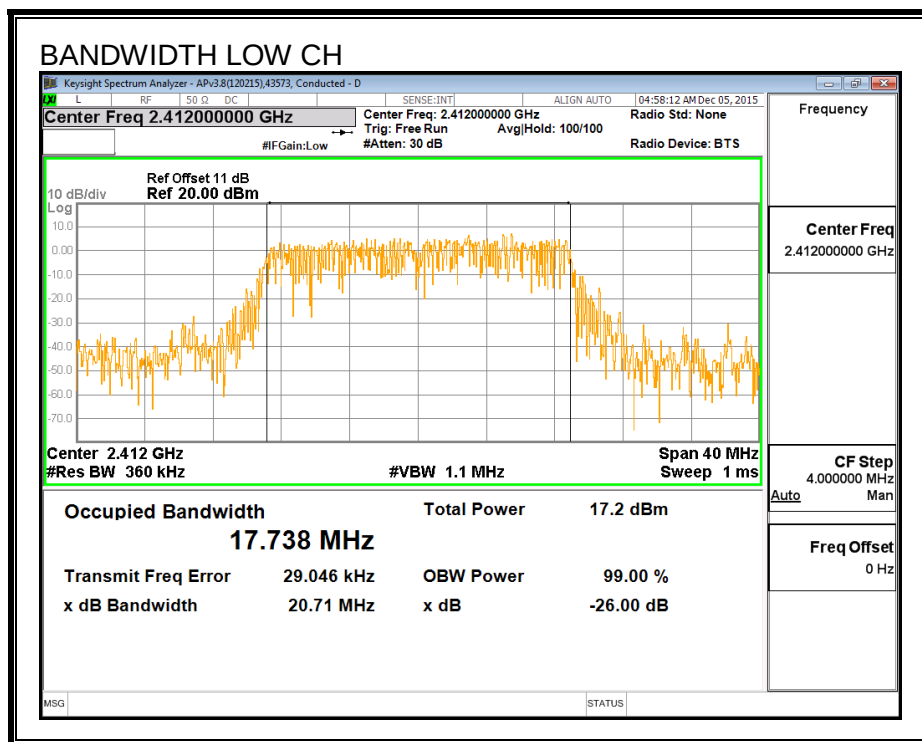
LIMITS

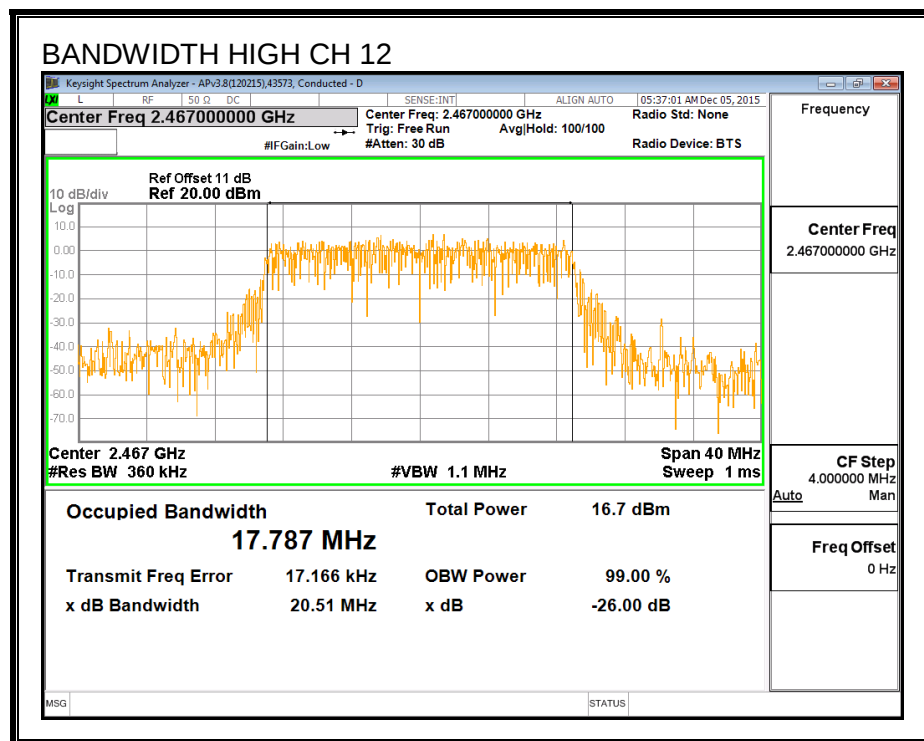
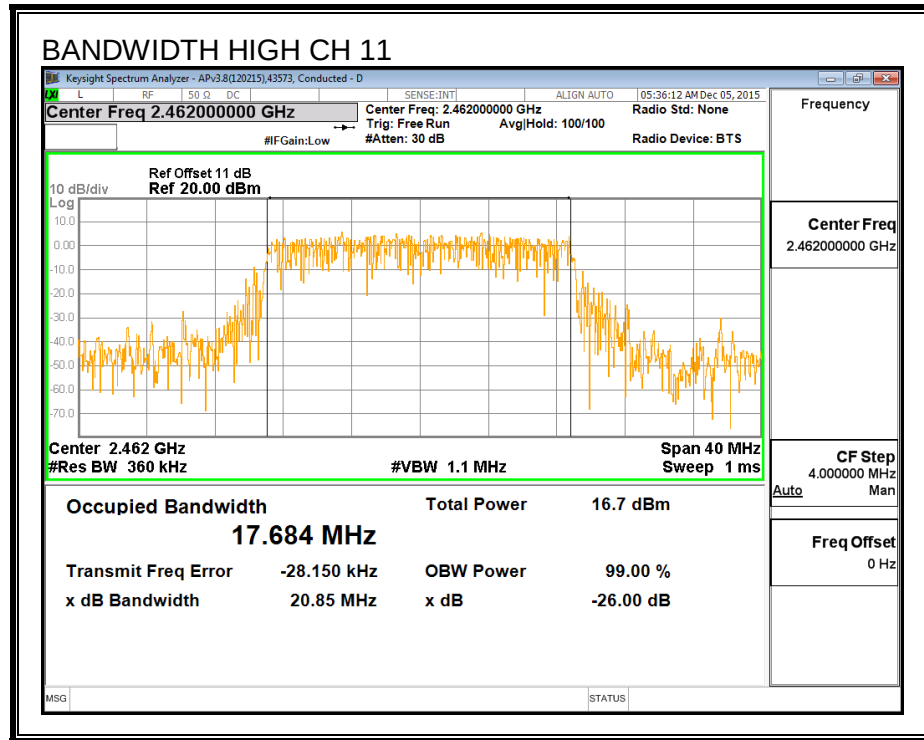
None; for reporting purposes only.

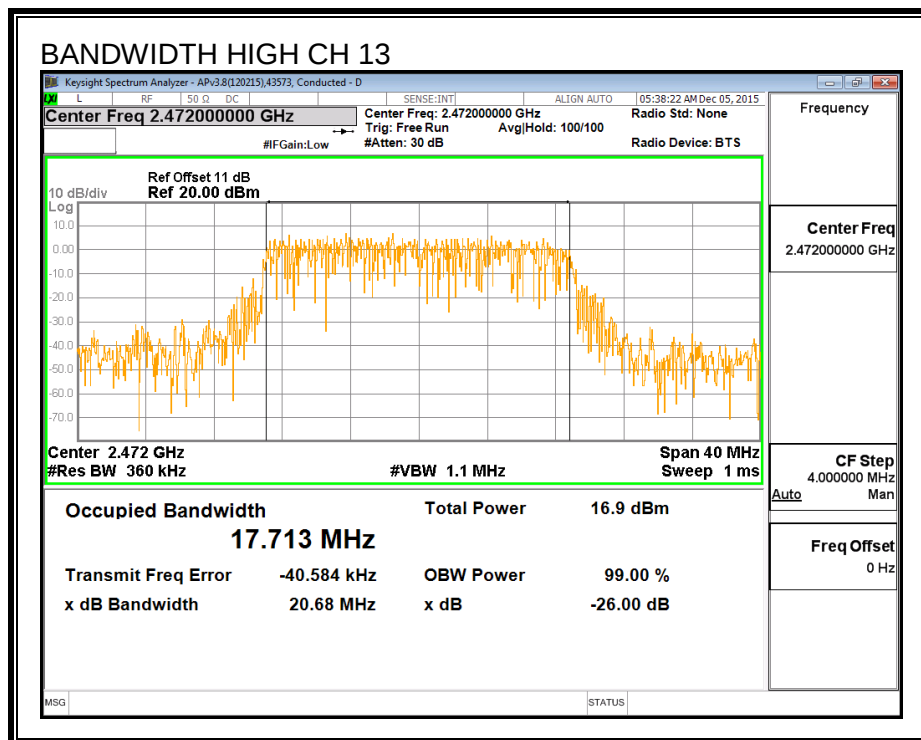
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.738
Mid	2437	17.883
High_11	2462	17.684
High_12	2467	17.787
High_13	2472	17.713

99% BANDWIDTH







8.10.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS for Chain 0

Channel	Frequency (MHz)	Power (dBm)
Low	2412	10.91
Mid	2437	10.93
High_11	2462	10.95
High_12	2467	10.96
High_13	2472	2.98

8.10.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.96	30.00	30	36	30.00
Mid	2437	0.96	30.00	30	36	30.00
High_11	2462	0.96	30.00	30	36	30.00
High_12	2467	0.96	30.00	30	36	30.00
High_13	2472	0.96	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna D Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	19.57	19.57	30.00	-10.43
Mid	2437	19.61	19.61	30.00	-10.39
High_11	2462	19.58	19.58	30.00	-10.42
High_12	2467	19.60	19.60	30.00	-10.40
High_13	2472	11.59	11.59	30.00	-18.41

8.10.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

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 transmissions.

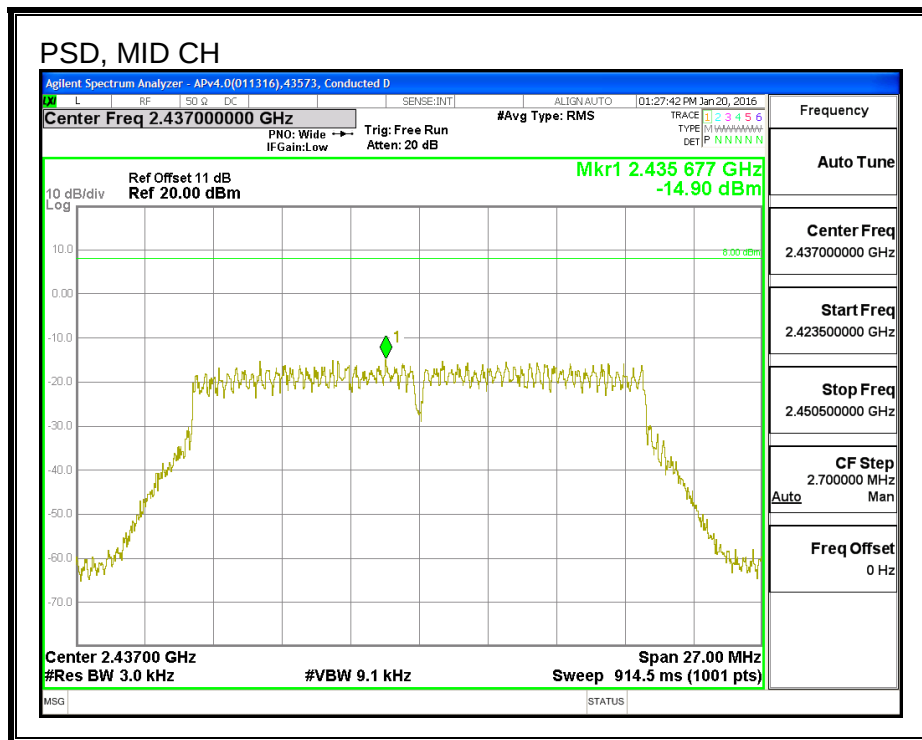
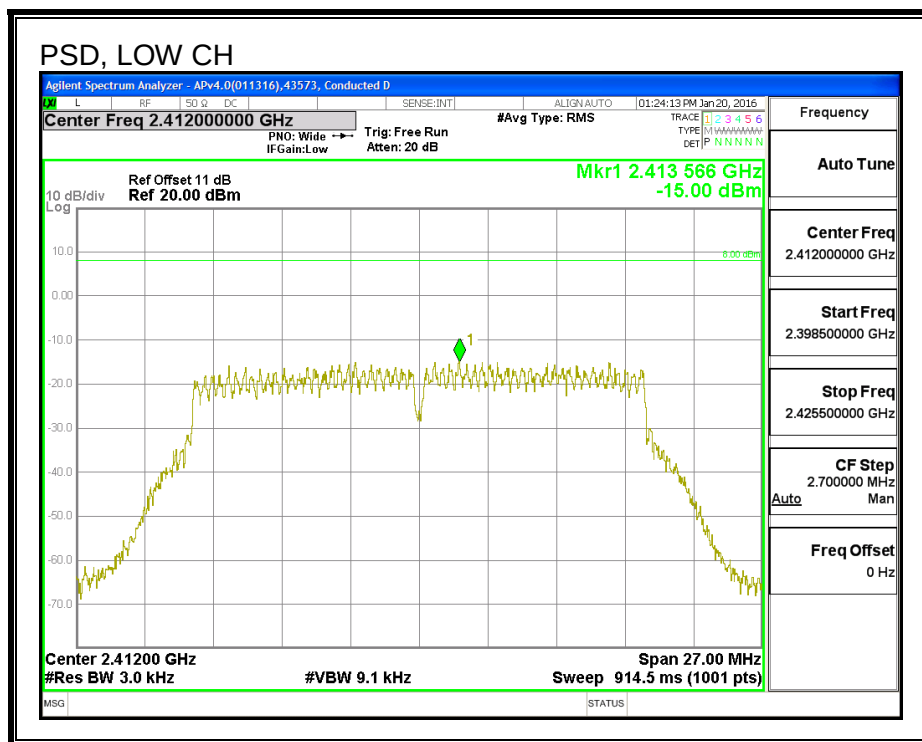
RESULTS

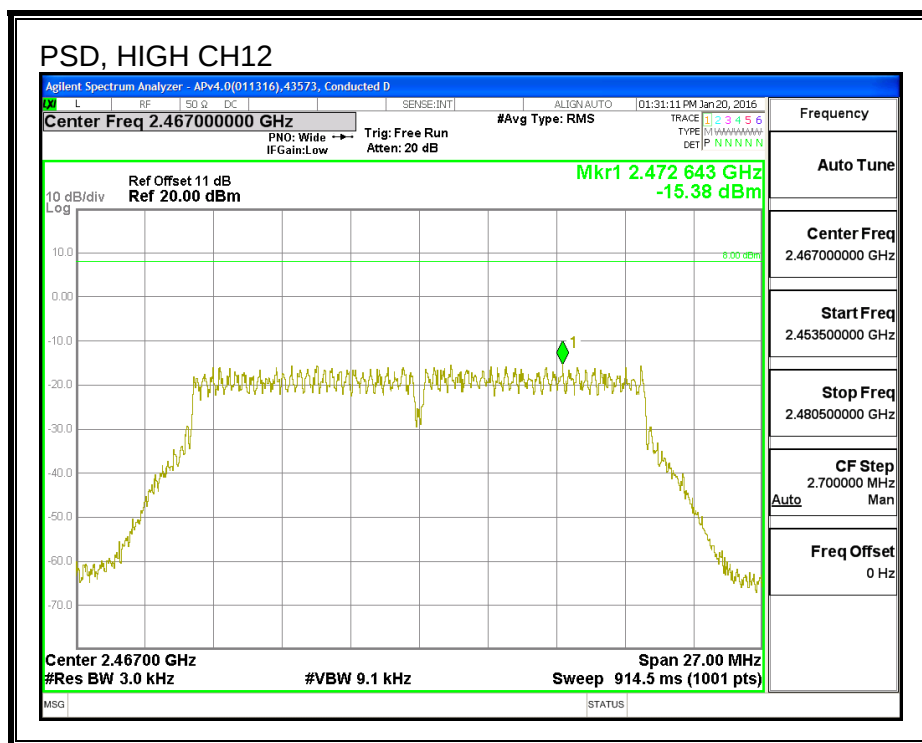
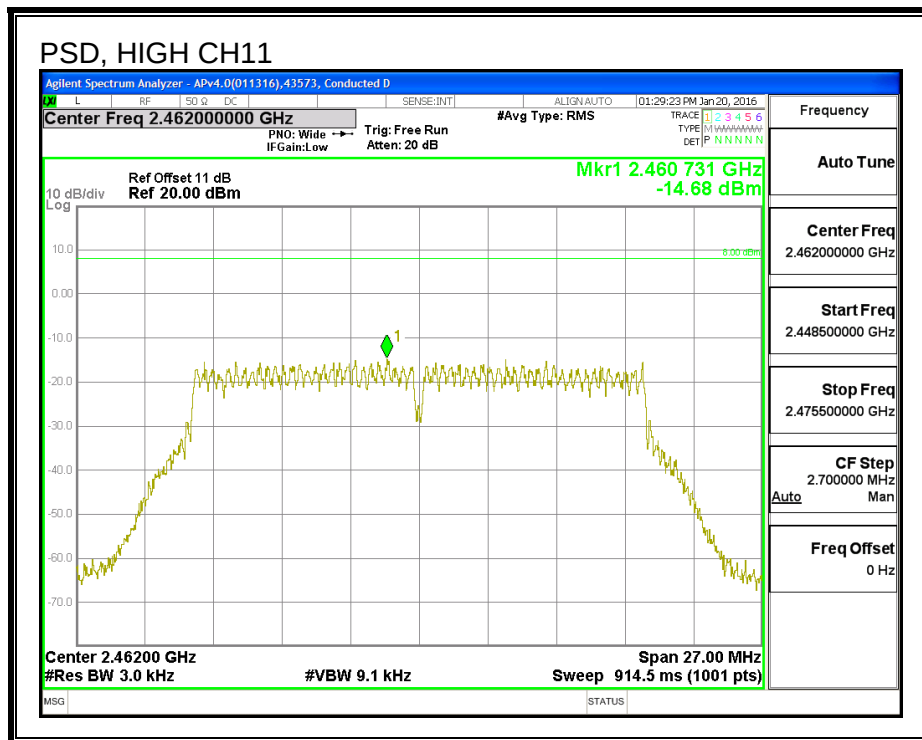
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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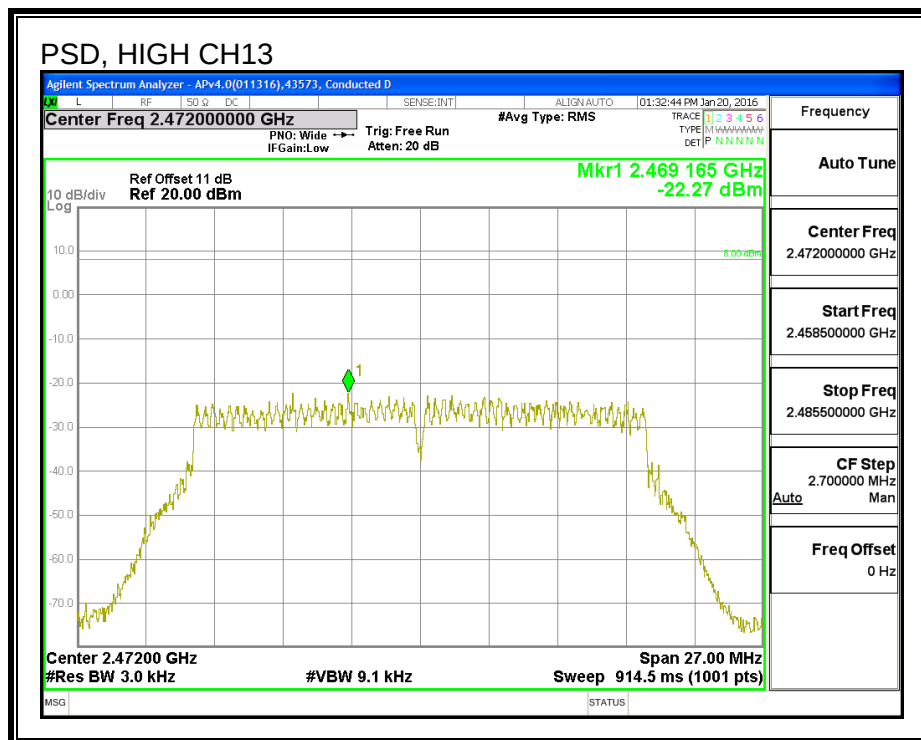
PSD Results

Channel	Frequency (MHz)	Antenna D Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-15.00	-15.00	8.0	-23.0
Mid	2437	-14.90	-14.90	8.0	-22.9
High_11	2462	-14.68	-14.68	8.0	-22.7
High_12	2467	-15.38	-15.38	8.0	-23.4
High_13	2472	-22.27	-22.27	8.0	-30.3

PSD







8.10.6. OUT-OF-BAND EMISSIONS

LIMITS

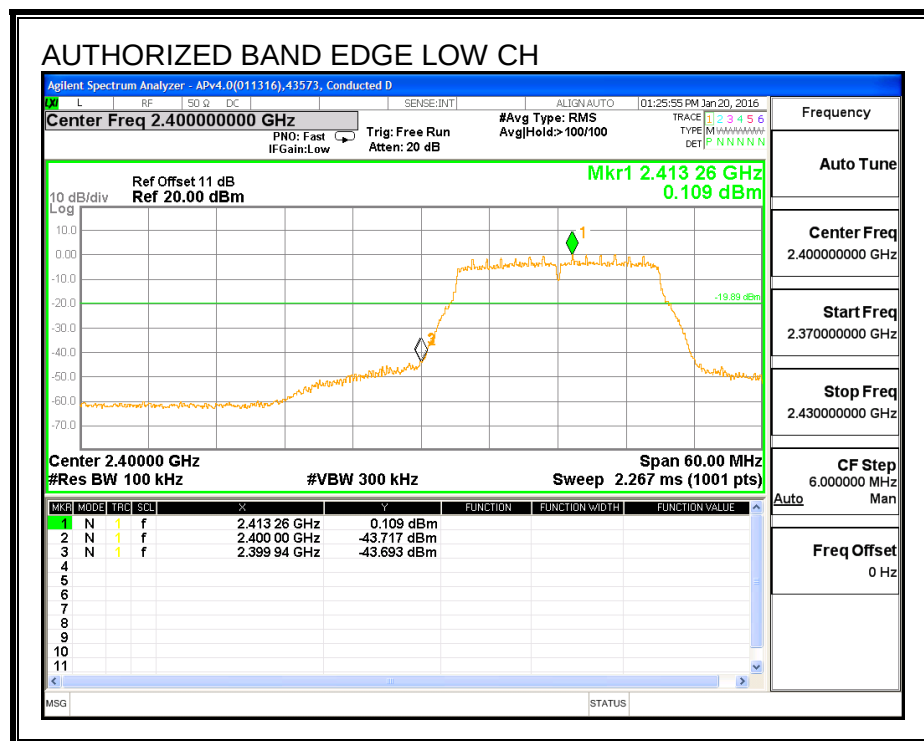
FCC §15.247 (d)

IC RSS-247 (5.5)

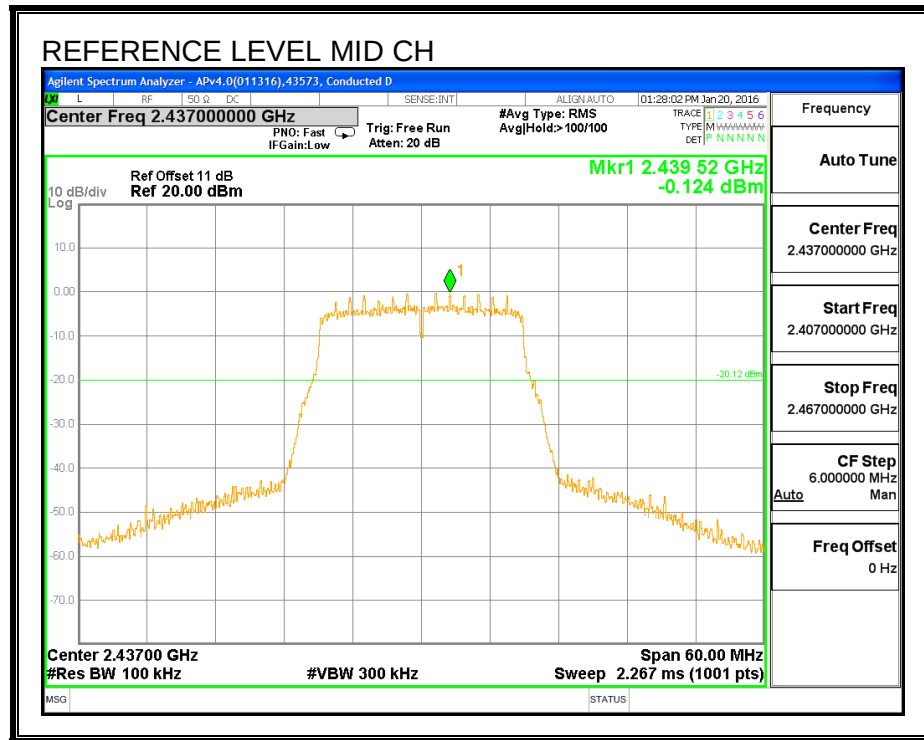
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

RESULTS

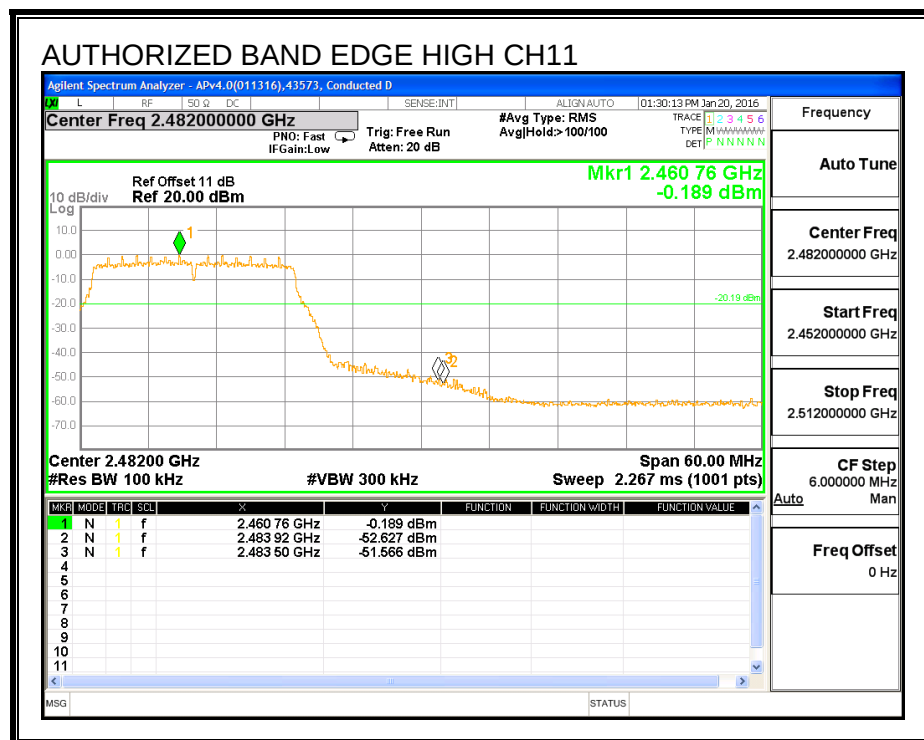
LOW CHANNEL BANDEDGE

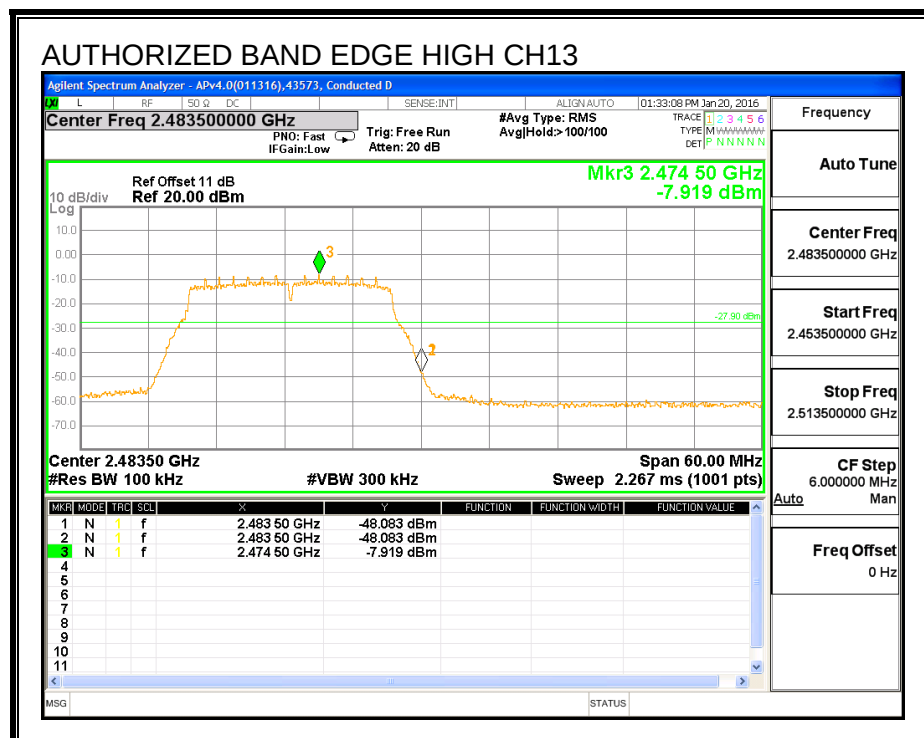
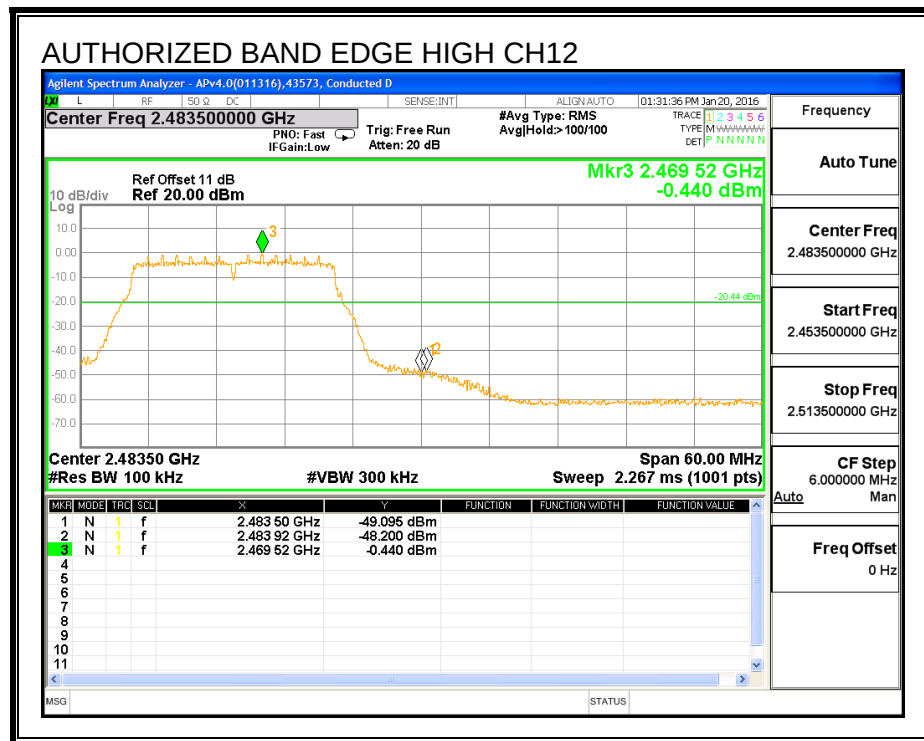


MID CHANNEL BANDEDGE

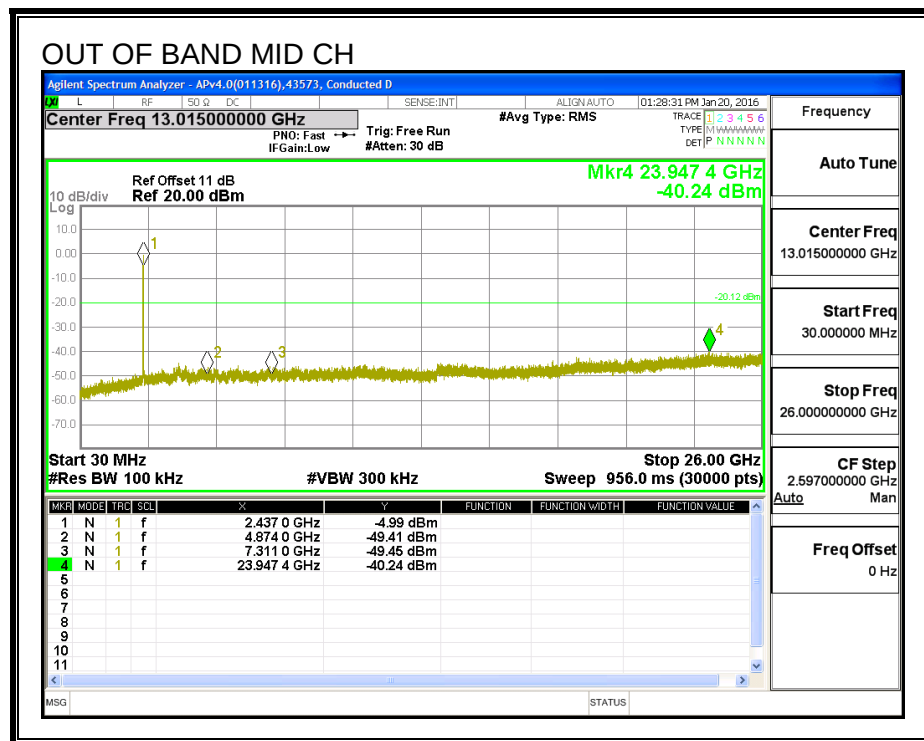
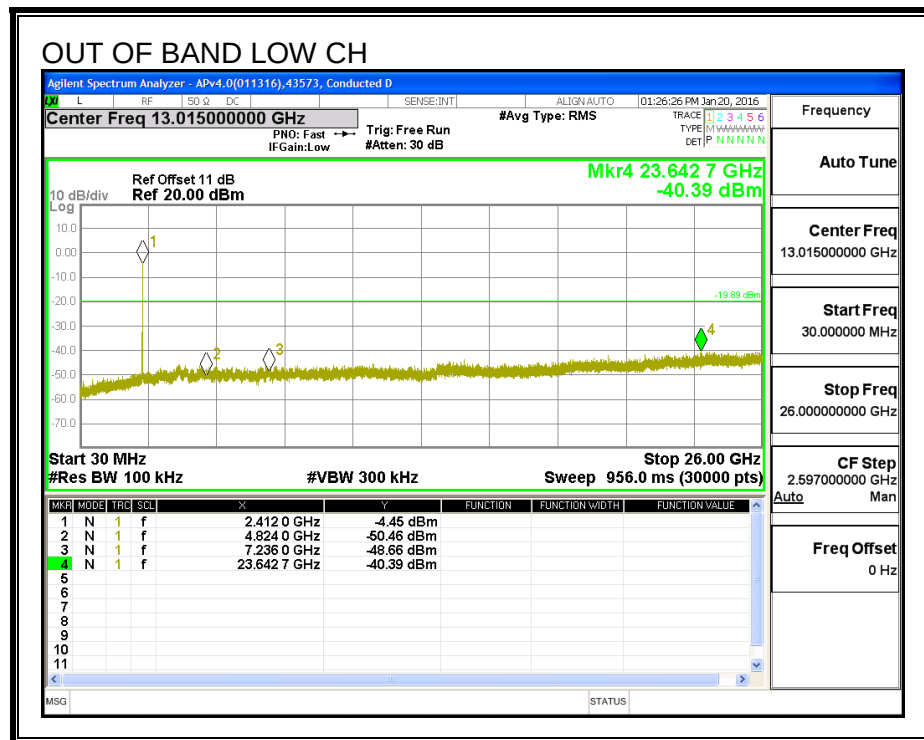


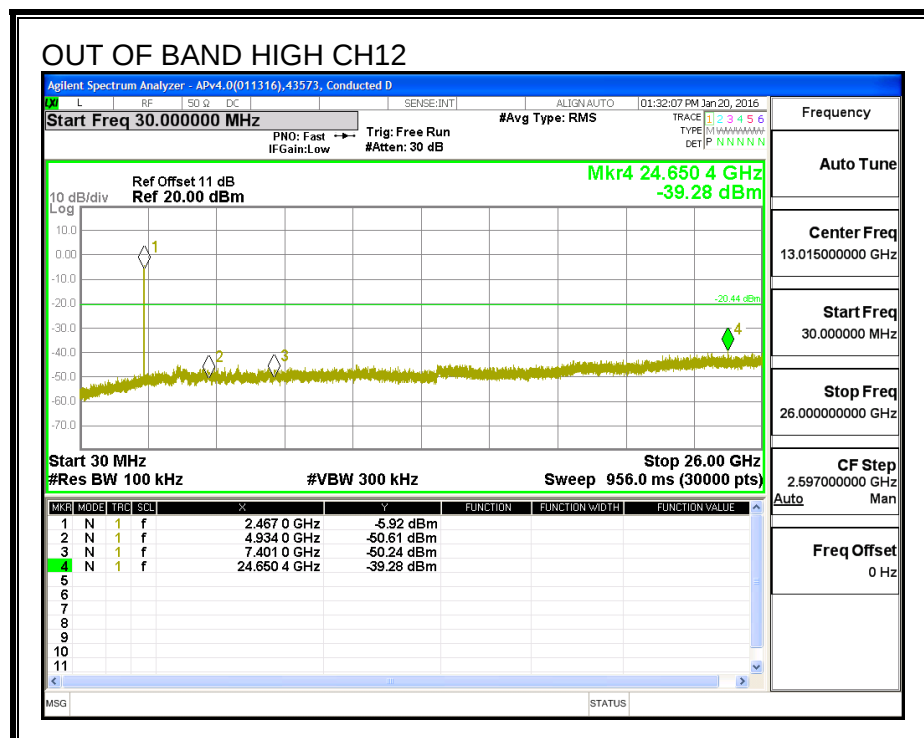
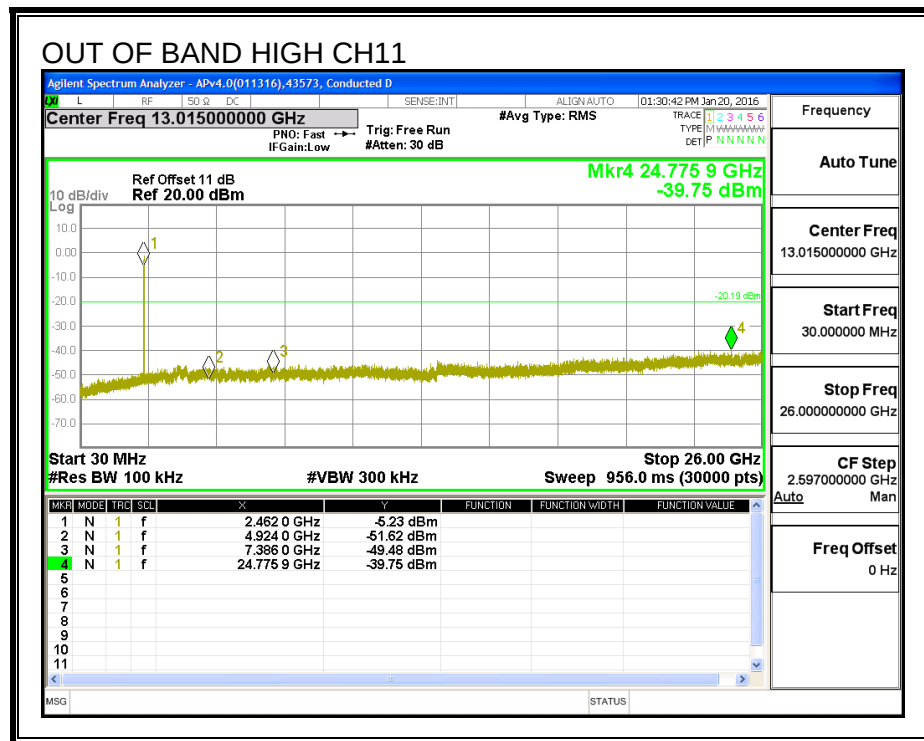
HIGH CHANNEL BANDEDGE

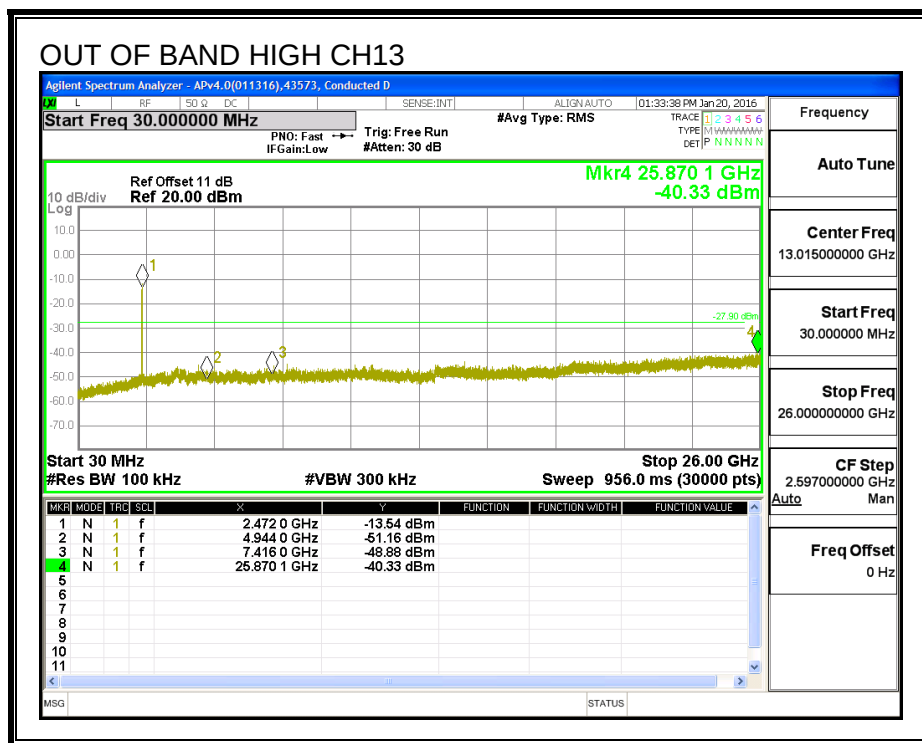




OUT-OF-BAND EMISSIONS







8.11. 802.11g 2TX CDD MODE IN THE 2.4 GHz BAND (ANTENNA A+ANTENNA B)

Noted: 802.11n HT20 2TX CDD MODE IN THE 2.4 GHz BAND (ANTENNA A+ANTENNA B)

8.12. 802.11n HT20 2TX CDD MODE IN THE 2.4 GHz BAND (ANTENNA A+ANTENNA B)

8.12.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

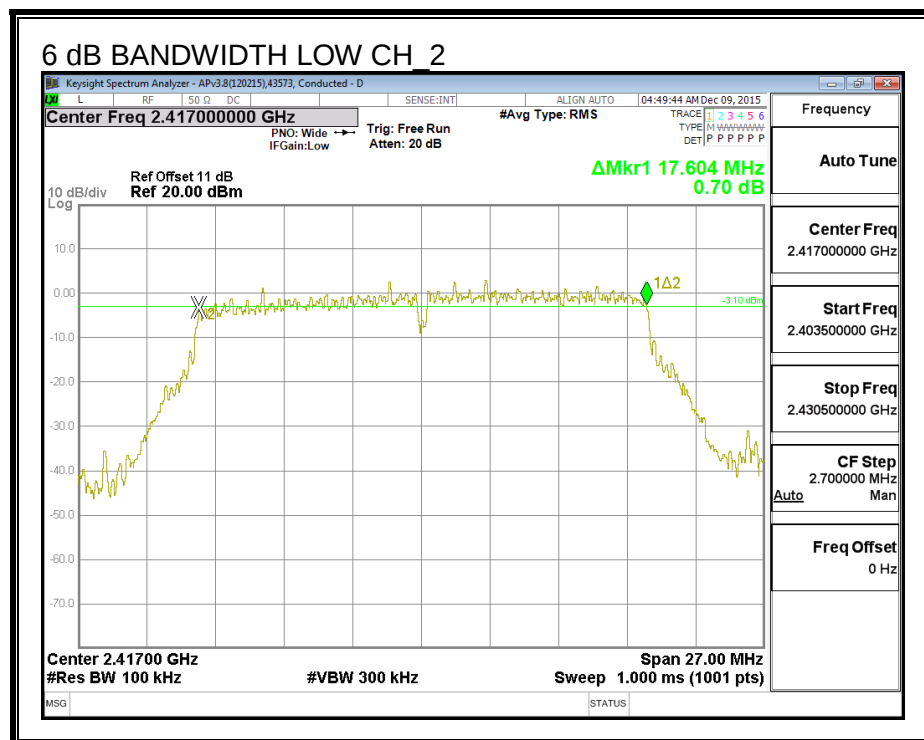
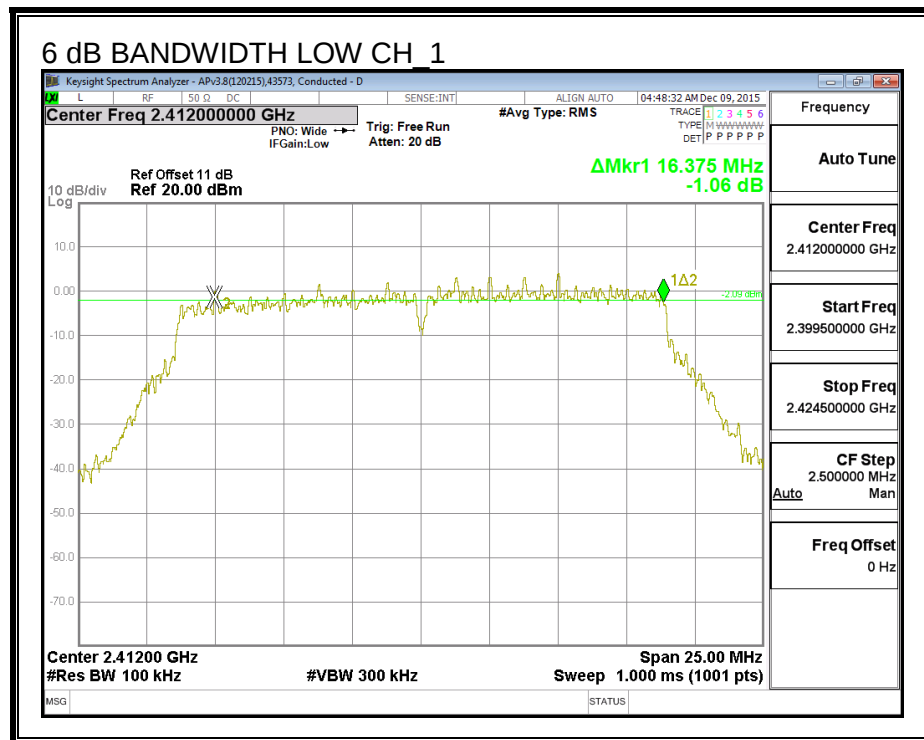
IC RSS-247 (5.2) (1)

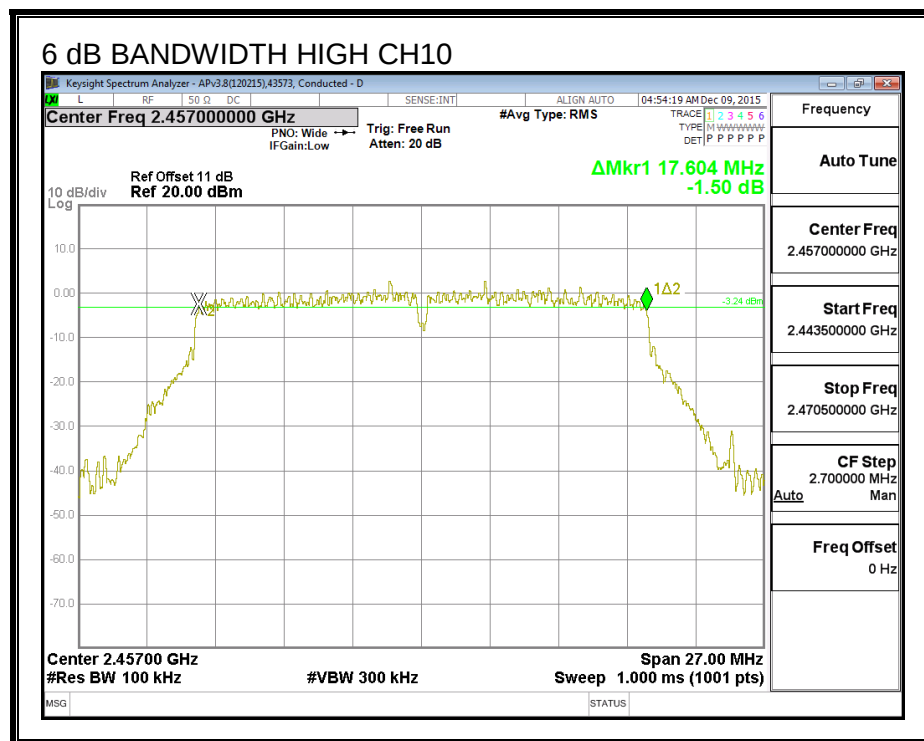
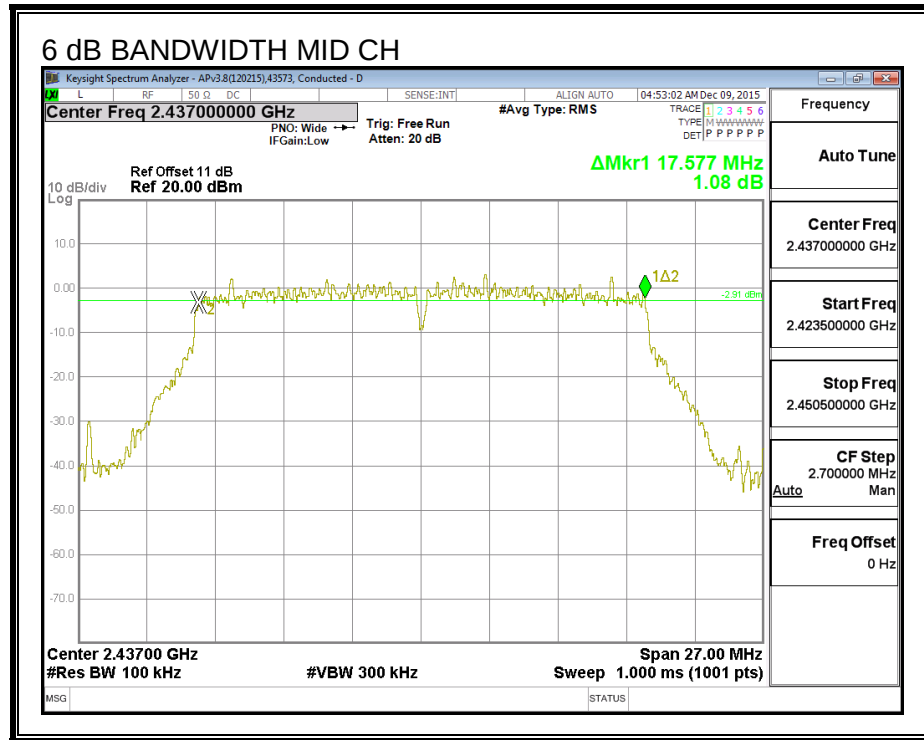
The minimum 6 dB bandwidth shall be at least 500 kHz.

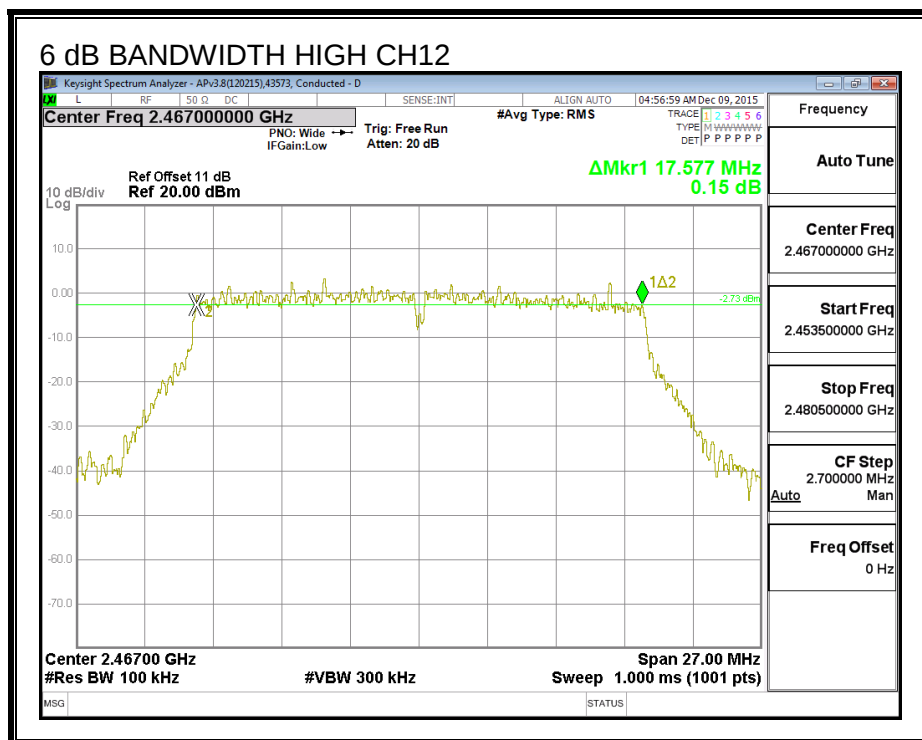
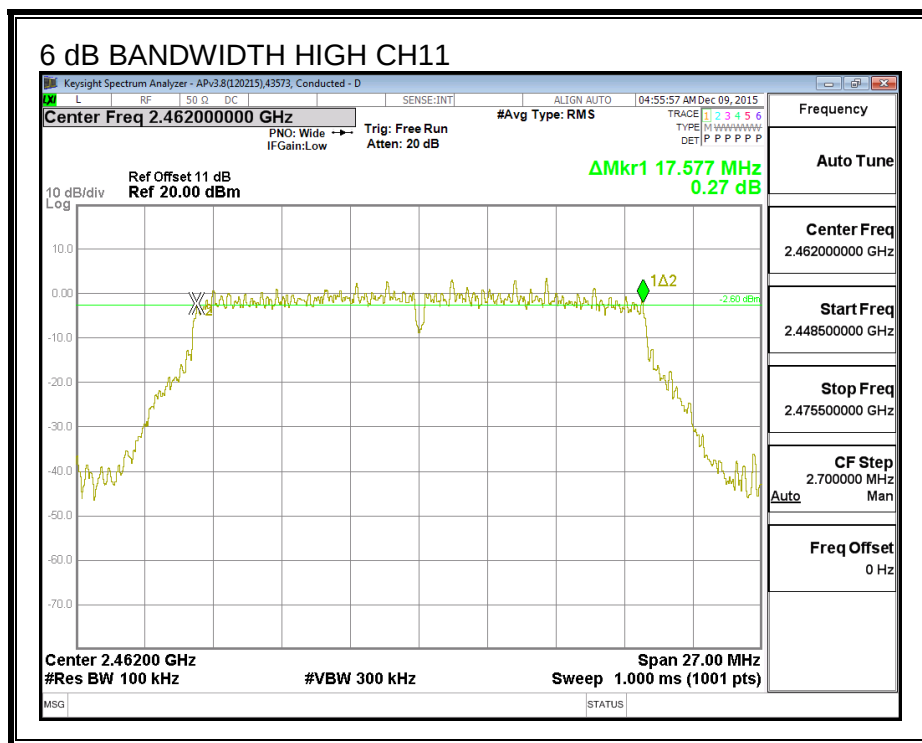
RESULTS

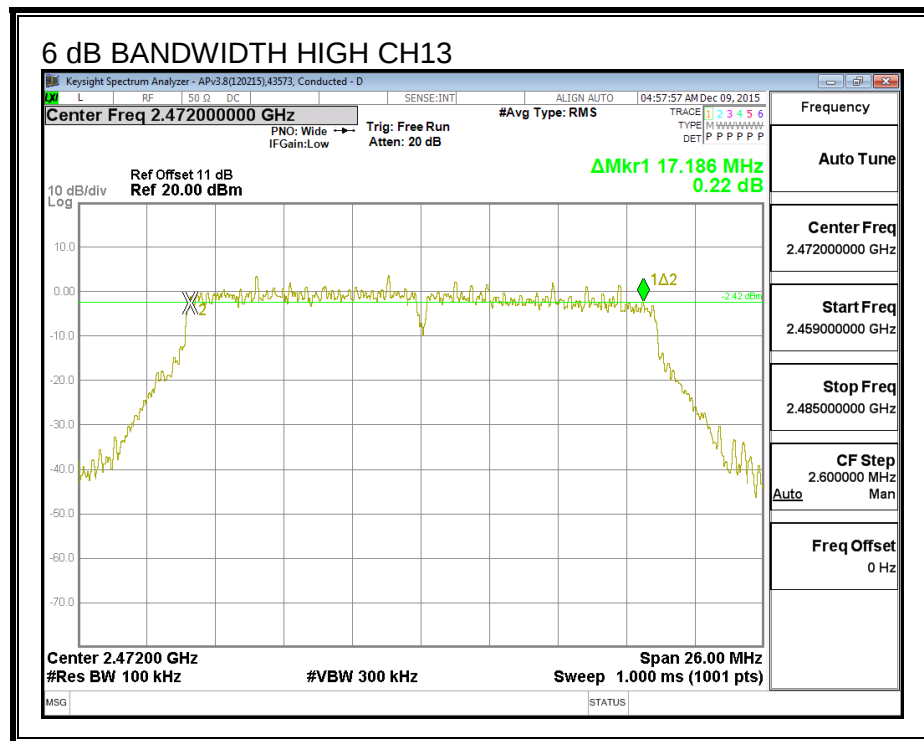
Channel	Frequency (MHz)	6 dB BW Antenna A (MHz)	6 dB BW Antenna B (MHz)	Minimum Limit (MHz)
Low_1	2412	16.38	17.69	0.5
Low_2	2417	17.60	17.58	0.5
Mid	2437	17.58	17.52	0.5
High_10	2457	17.60	17.55	0.5
High_11	2462	17.58	17.58	0.5
High_12	2467	17.58	17.32	0.5
High_13	2472	17.19	17.66	0.5

6 dB BANDWIDTH, ANTENNA A

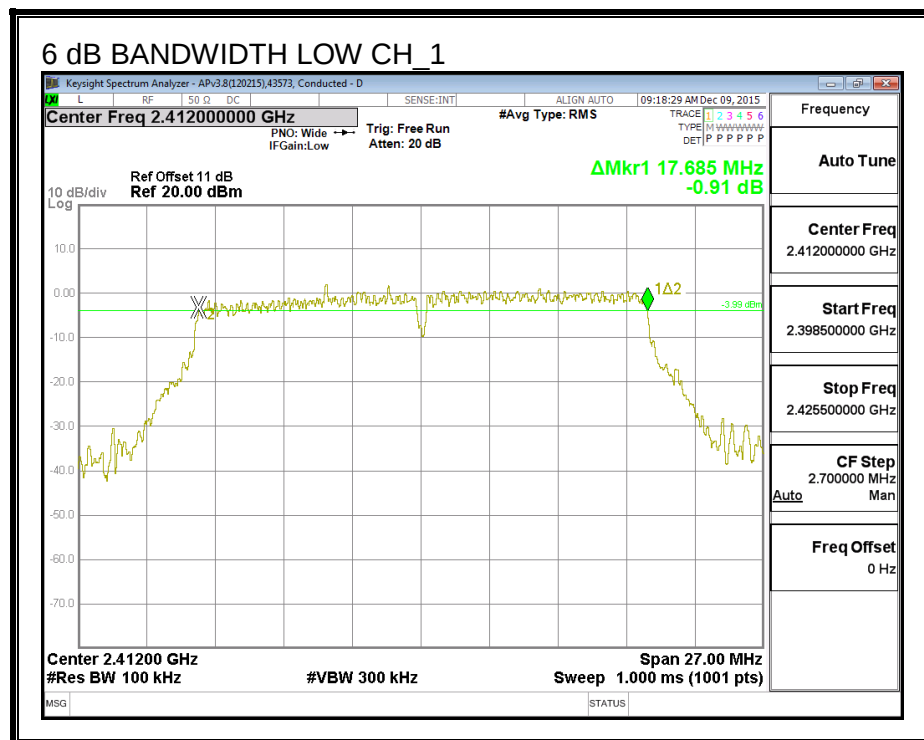


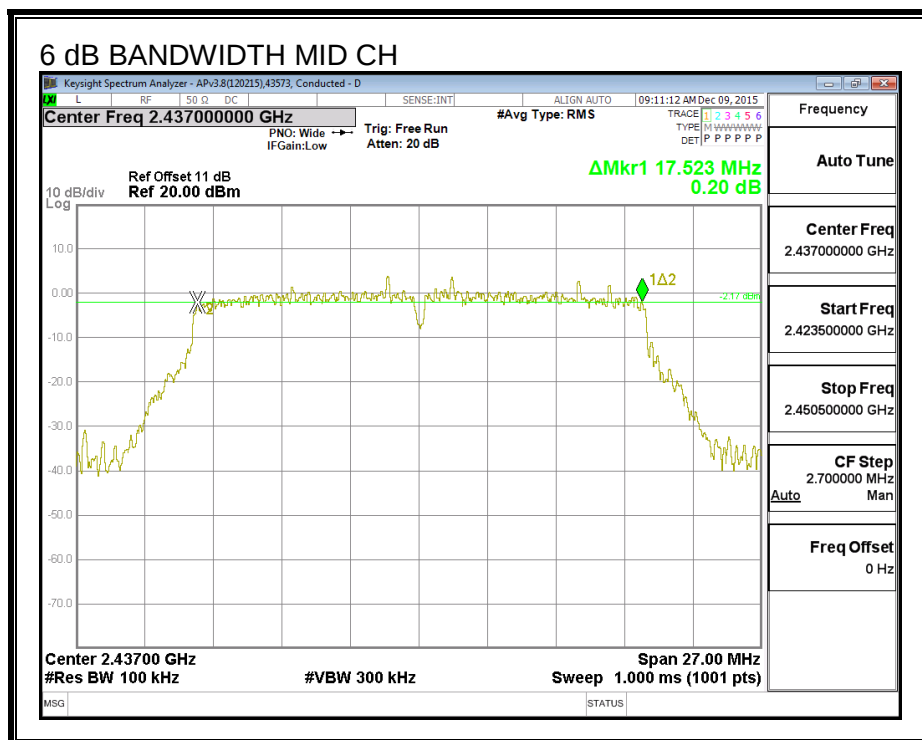
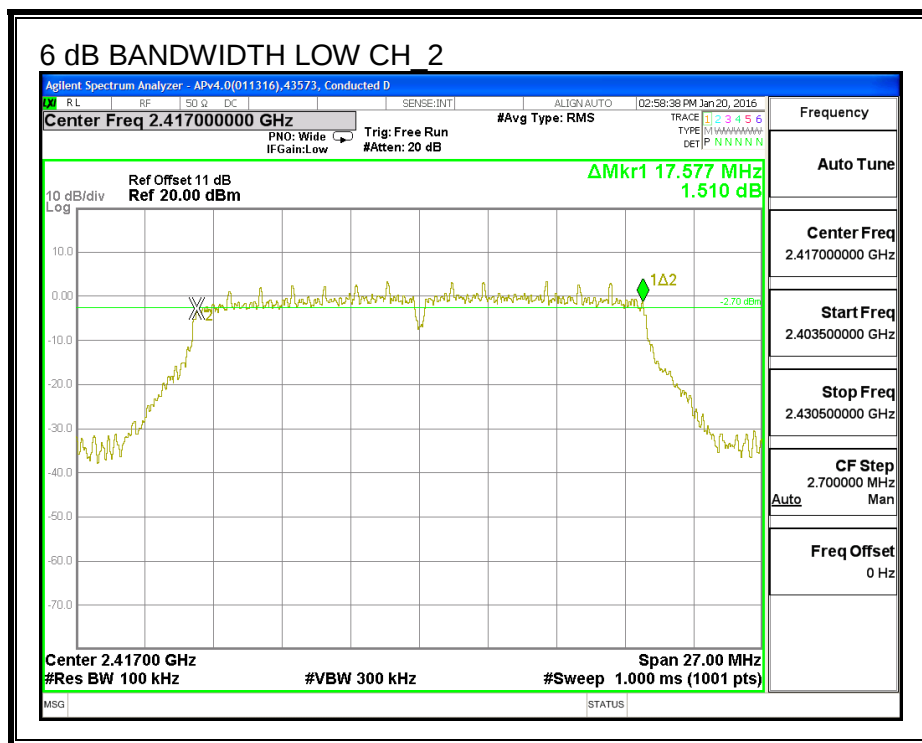


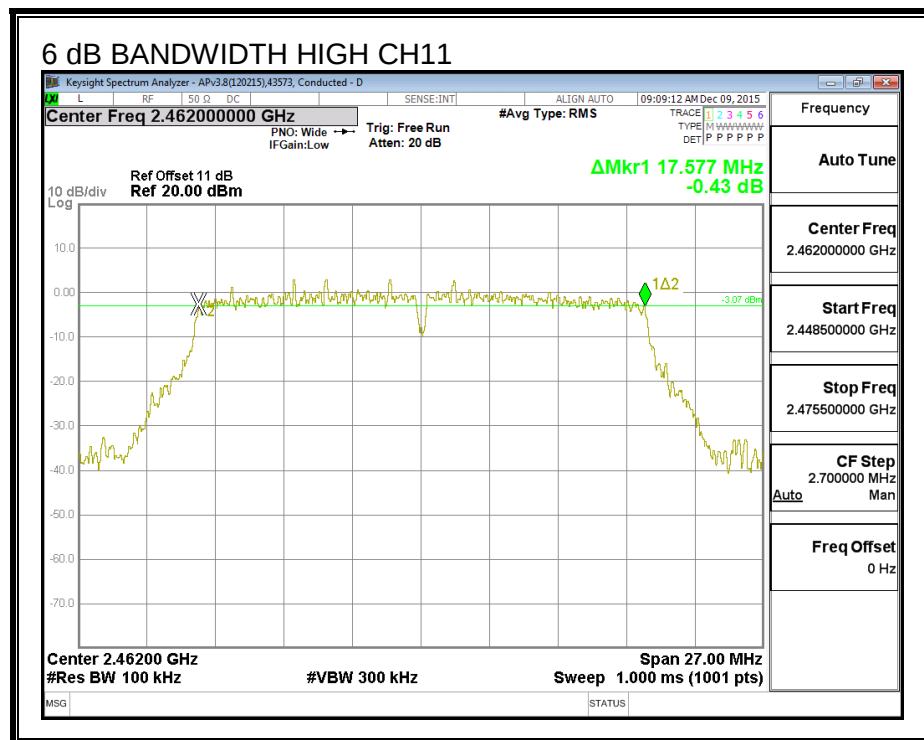
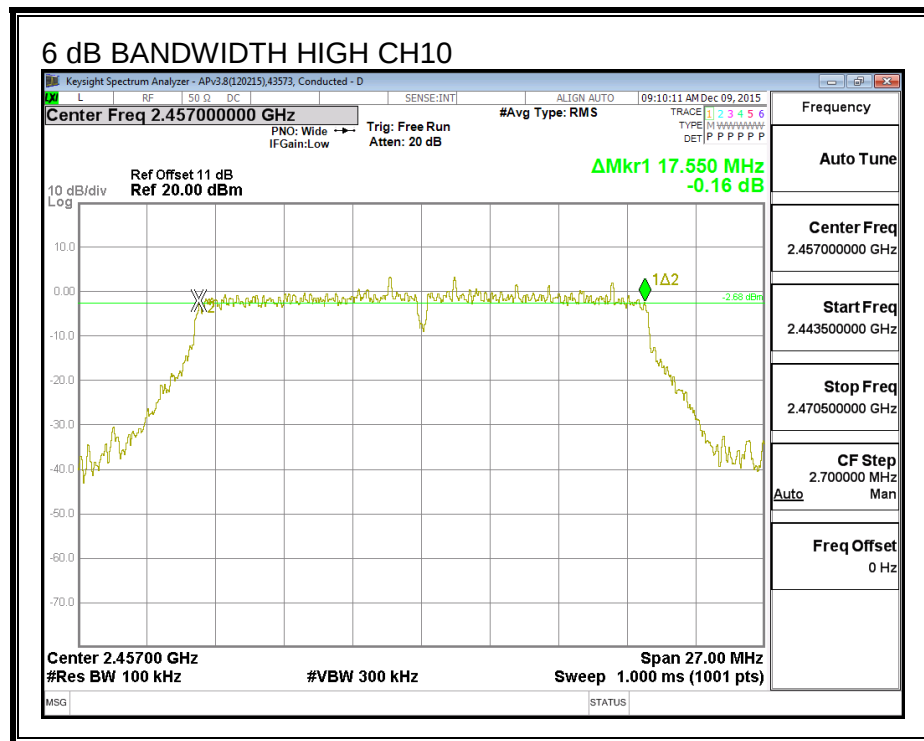


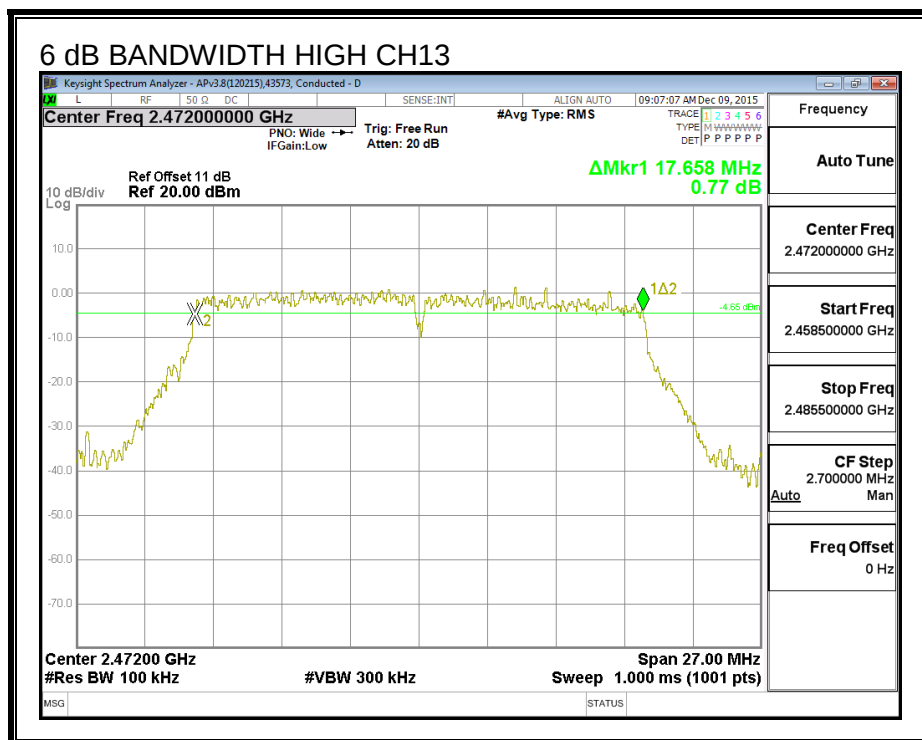
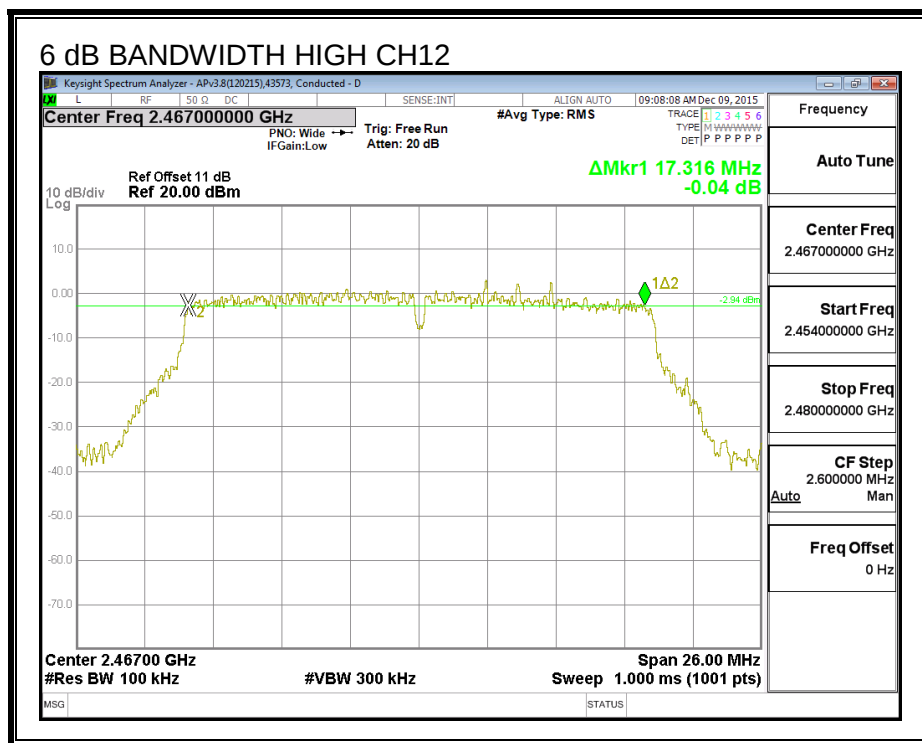


6 dB BANDWIDTH, ANTENNA B









8.12.2. 99% BANDWIDTH

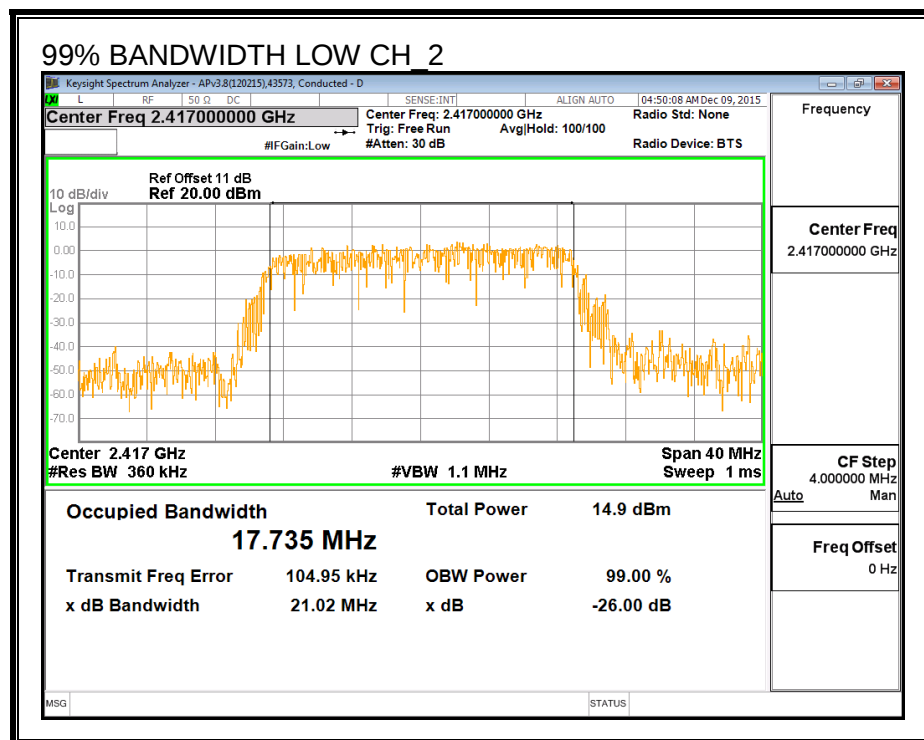
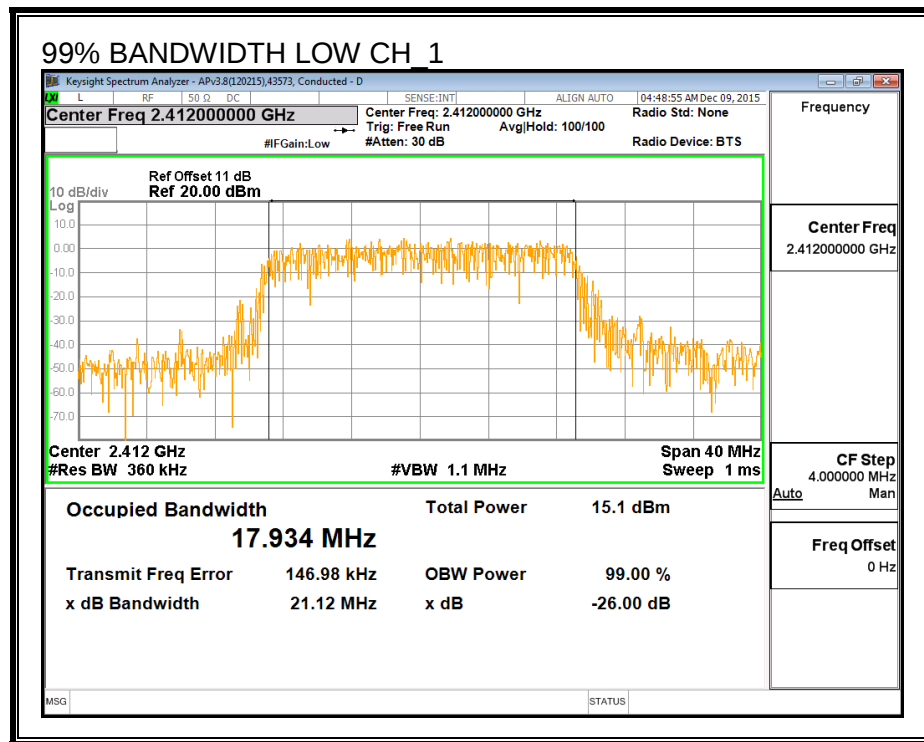
LIMITS

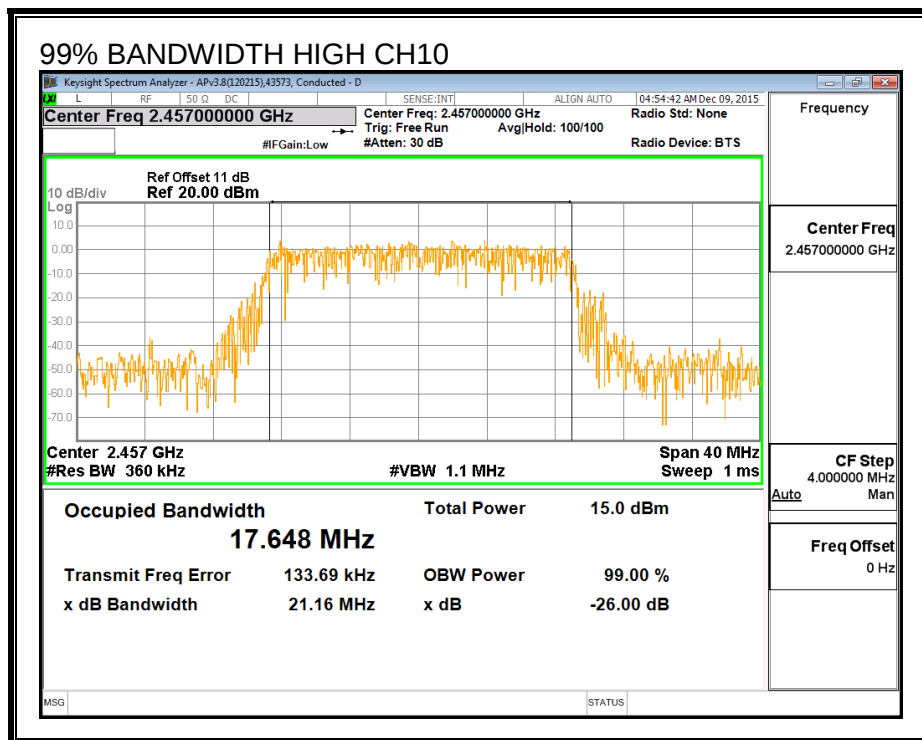
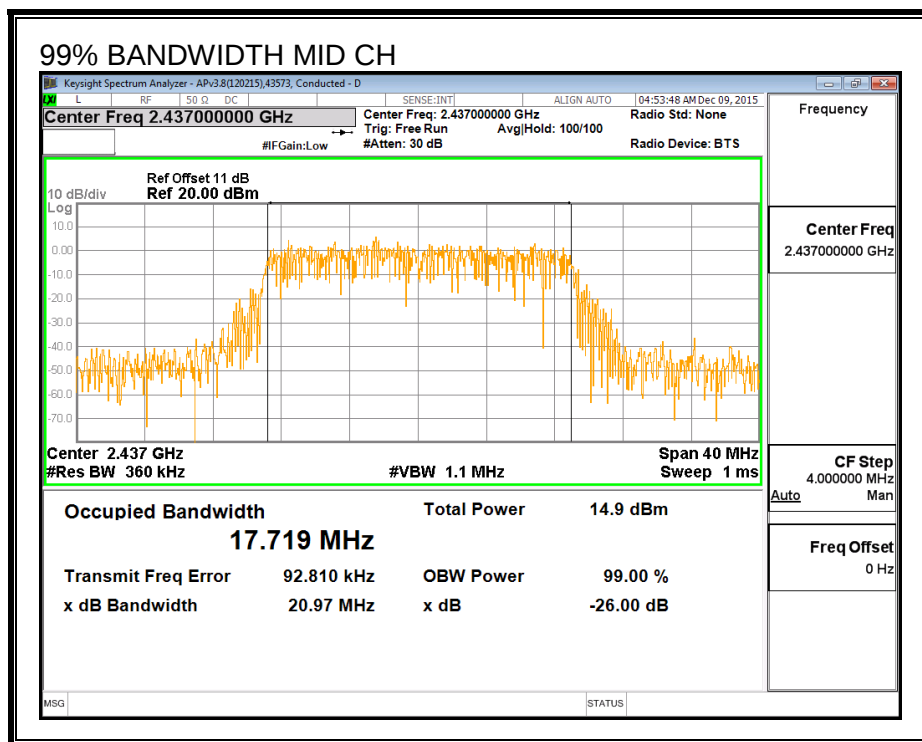
None; for reporting purposes only.

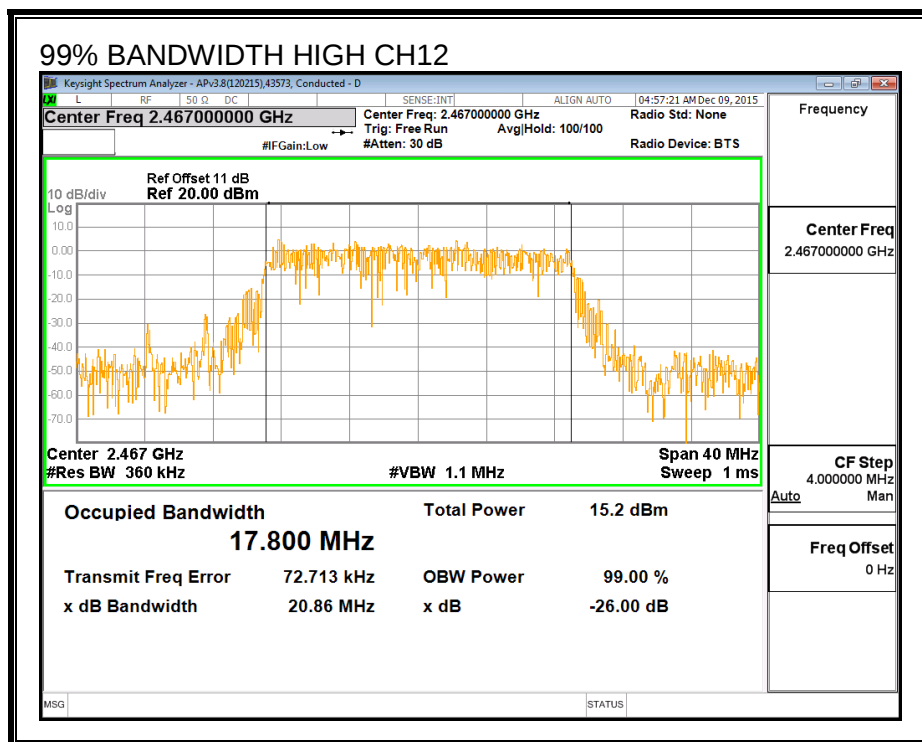
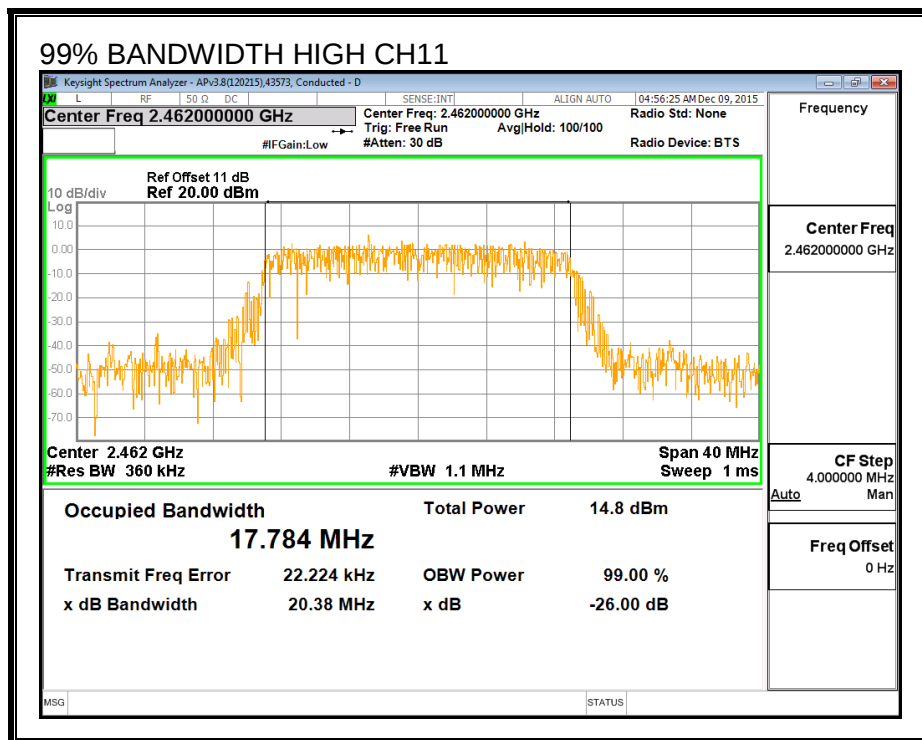
RESULTS

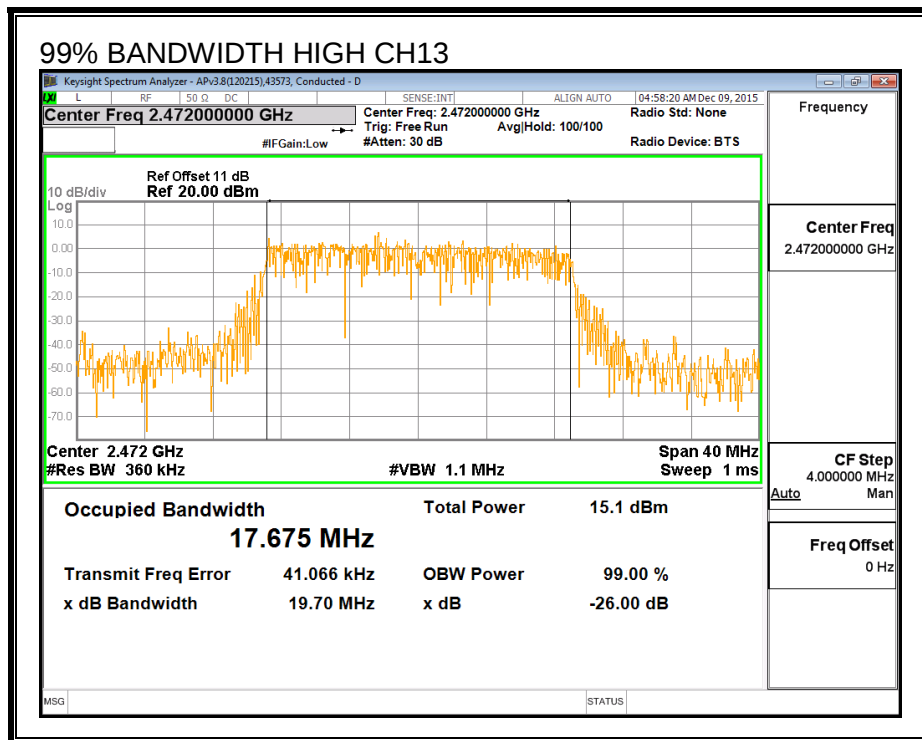
Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna B (MHz)
Low_1	2412	17.934	17.833
Low_2	2417	17.735	17.672
Mid	2437	17.719	17.734
High_10	2457	17.648	17.721
High_11	2462	17.784	17.640
High_12	2467	17.800	17.691
High_13	2472	17.675	17.681

99% BANDWIDTH, ANTENNA A

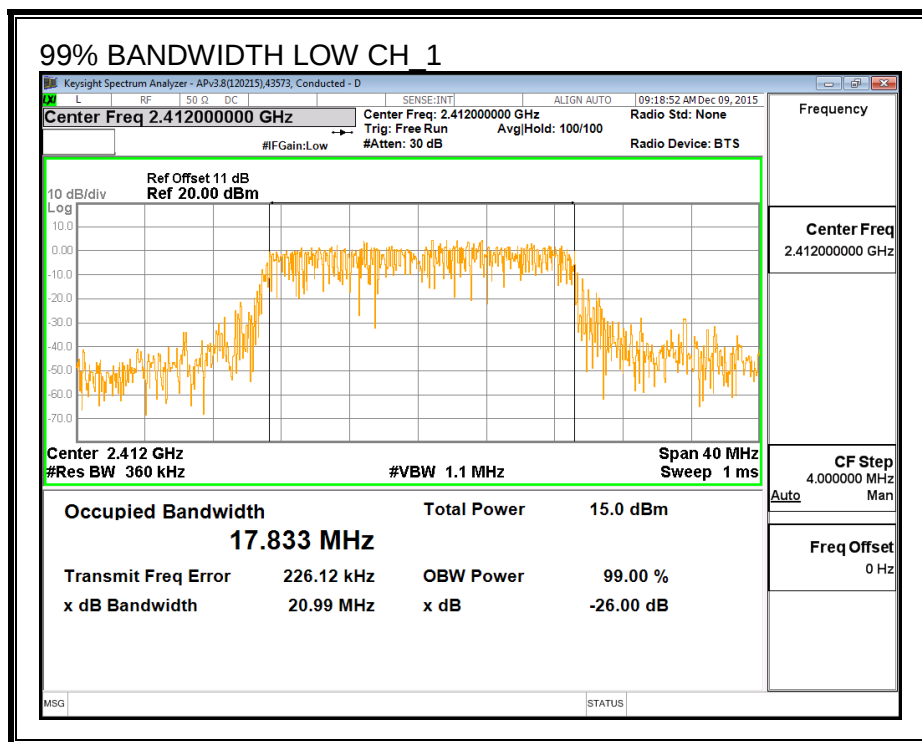


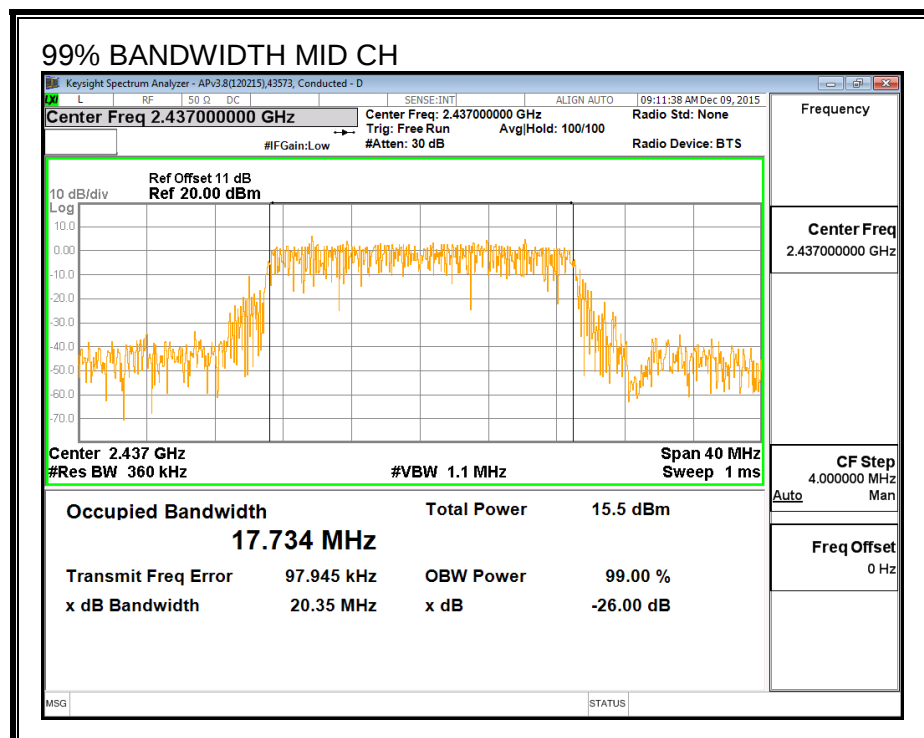
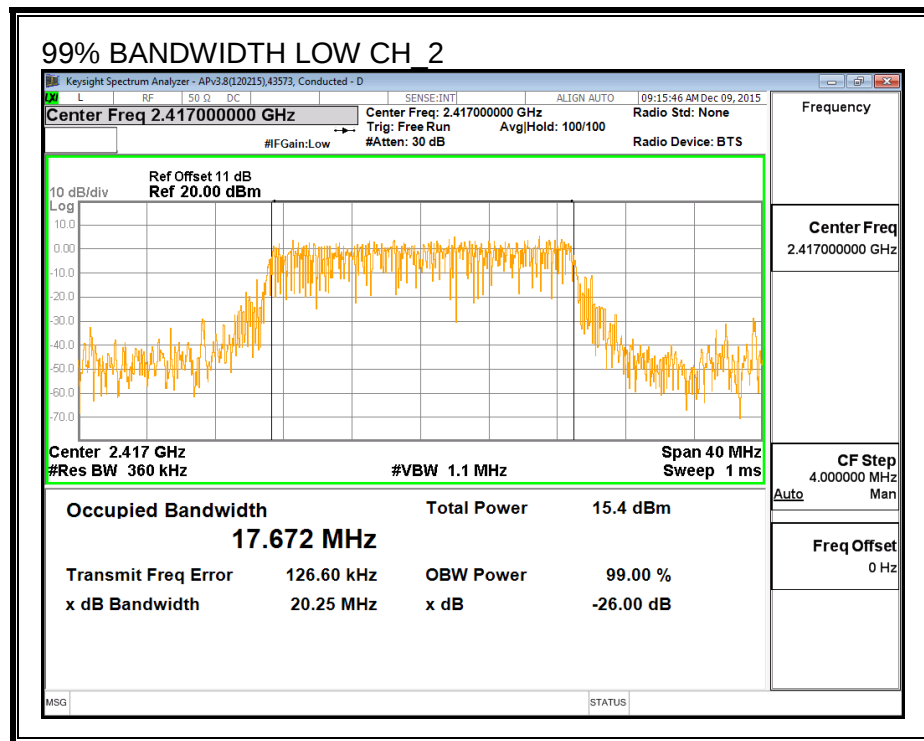


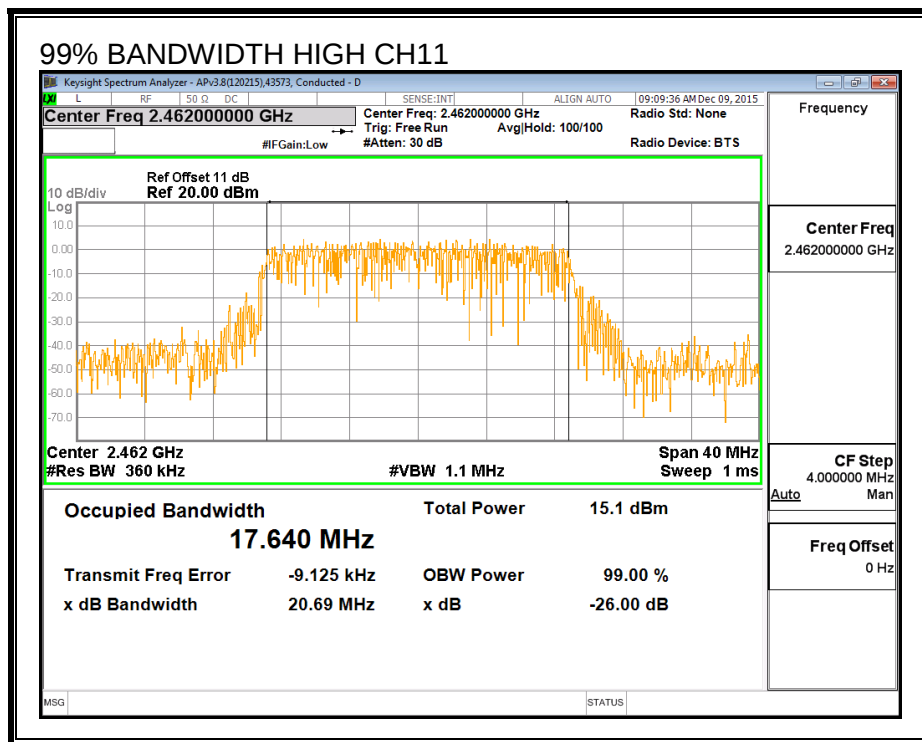
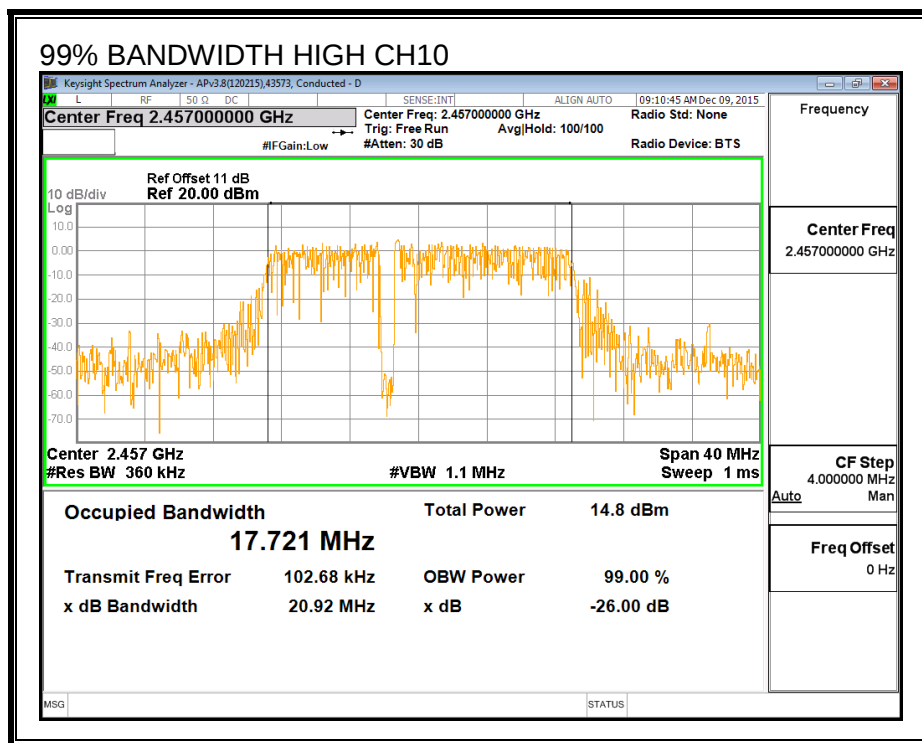


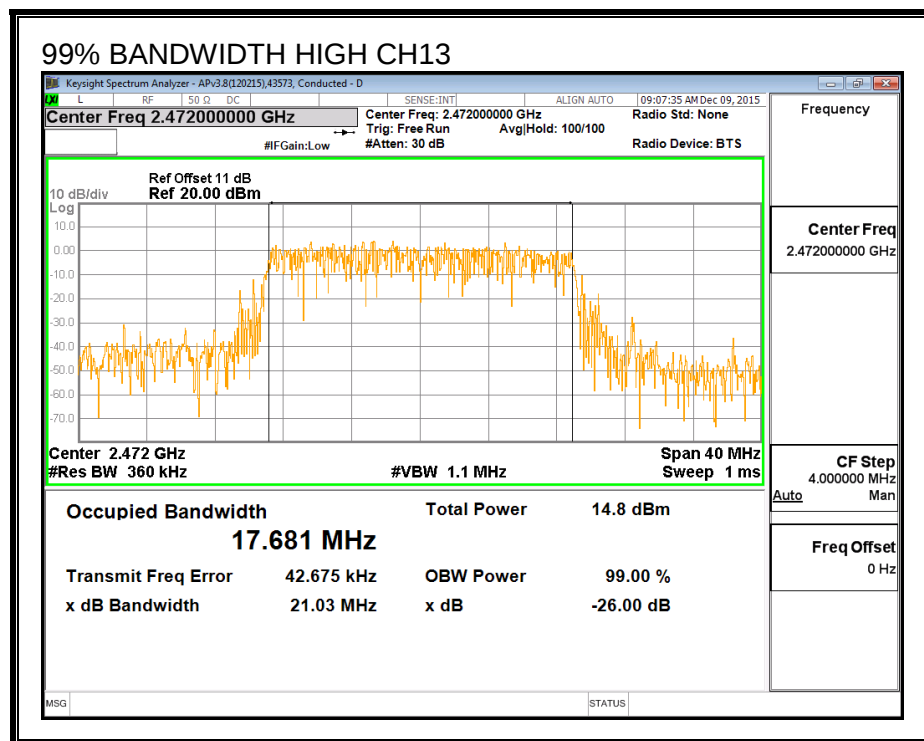
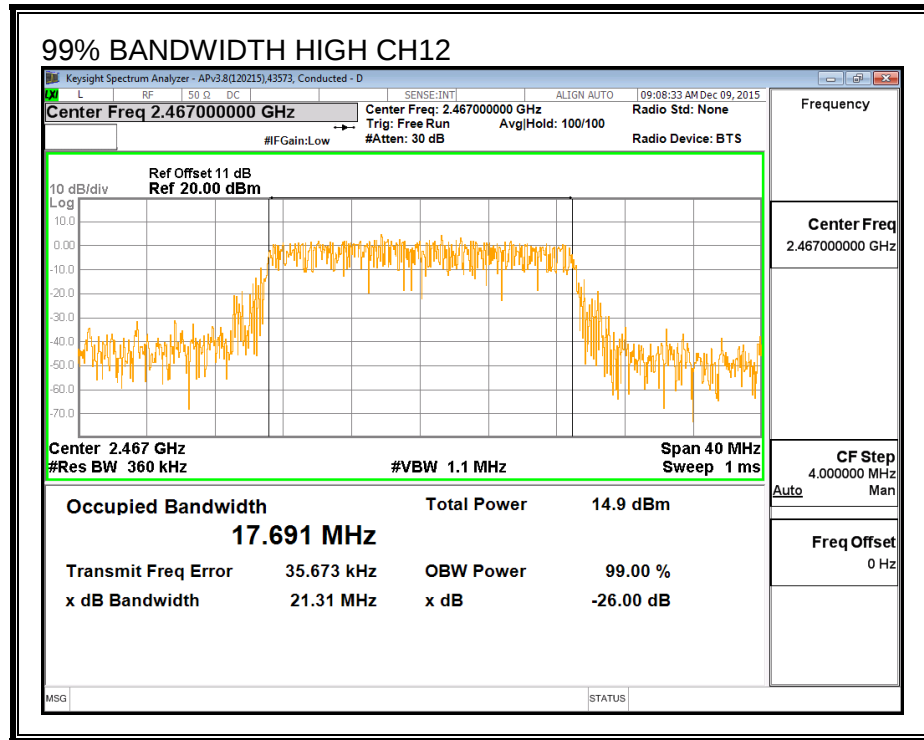


99% BANDWIDTH, ANTENNA B









8.12.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna B Power (dBm)	Total Power (dBm)
Low_1	2412	13.92	13.79	16.87
Low_2	2417	16.42	15.83	19.15
Mid	2437	16.45	15.92	19.20
High_10	2457	16.35	15.84	19.11
High_11	2462	12.92	12.98	15.96
High_12	2467	10.90	10.95	13.94
High_13	2472	1.95	1.76	4.87

8.12.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Antenna A Antenna Gain (dBi)	Antenna B Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-0.18	-1.75	-0.89

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low_1	2412	-0.89	30.00	30	36	30.00
Low_2	2417	-0.89	30.00	30	36	30.00
Mid	2437	-0.89	30.00	30	36	30.00
High_10	2457	-0.89	30.00	30	36	30.00
High_11	2462	-0.89	30.00	30	36	30.00
High_12	2467	-0.89	30.00	30	36	30.00
High_13	2472	-0.89	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low_1	2412	22.19	22.01	25.11	30.00	-4.89
Low_2	2417	24.40	23.89	27.16	30.00	-2.84
Mid	2437	24.47	23.94	27.22	30.00	-2.78
High_10	2457	24.42	23.92	27.19	30.00	-2.81
High_11	2462	21.59	21.68	24.65	30.00	-5.35
High_12	2467	19.78	19.84	22.82	30.00	-7.18
High_13	2472	10.83	10.59	13.72	30.00	-16.28

8.12.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (2)

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 transmissions.

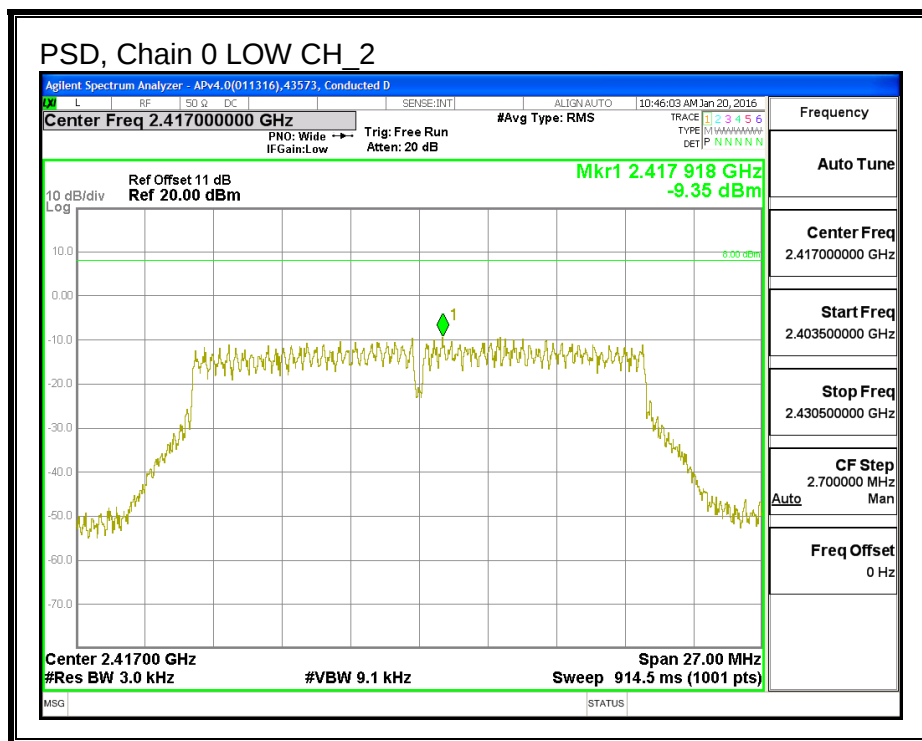
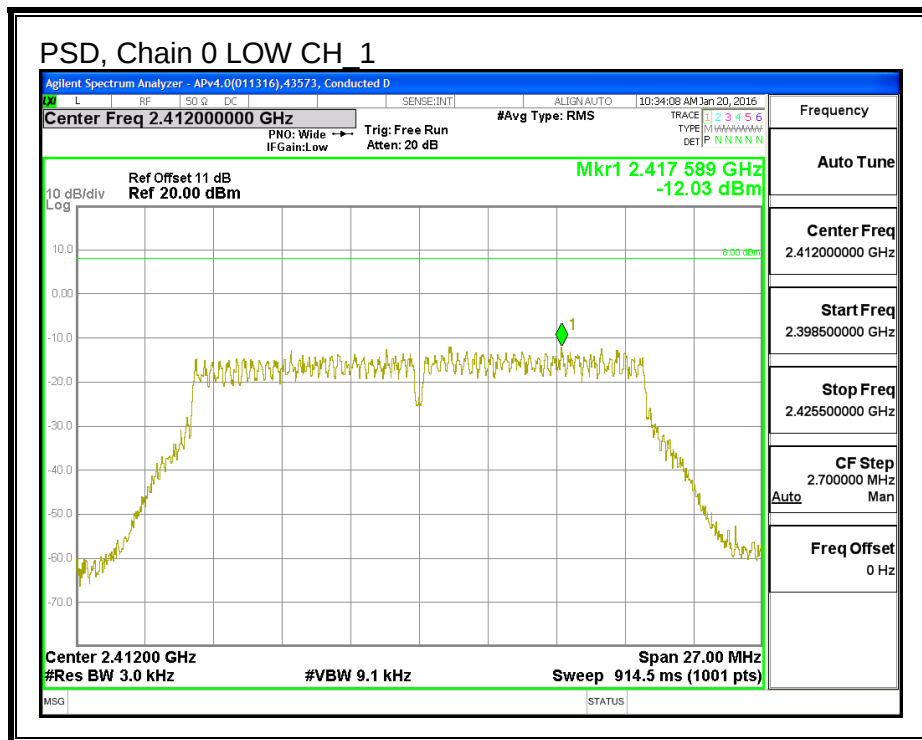
RESULTS

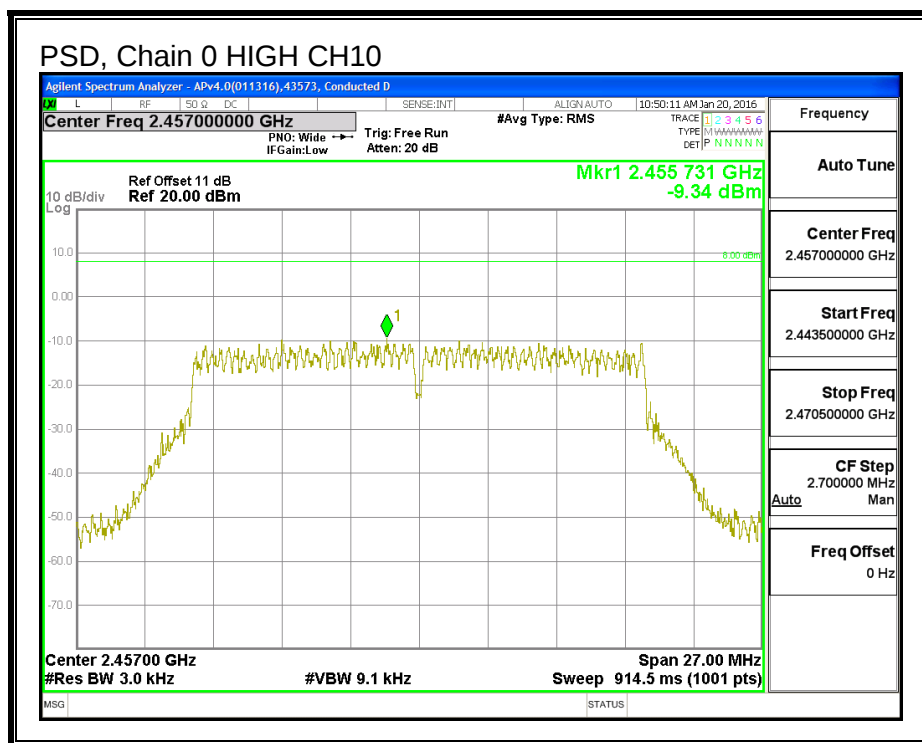
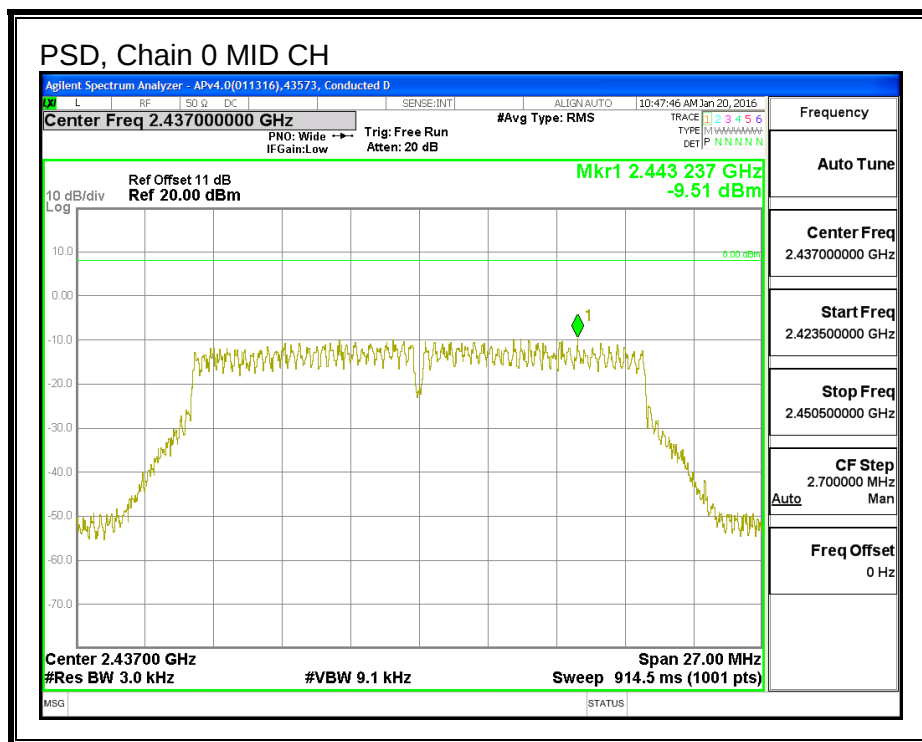
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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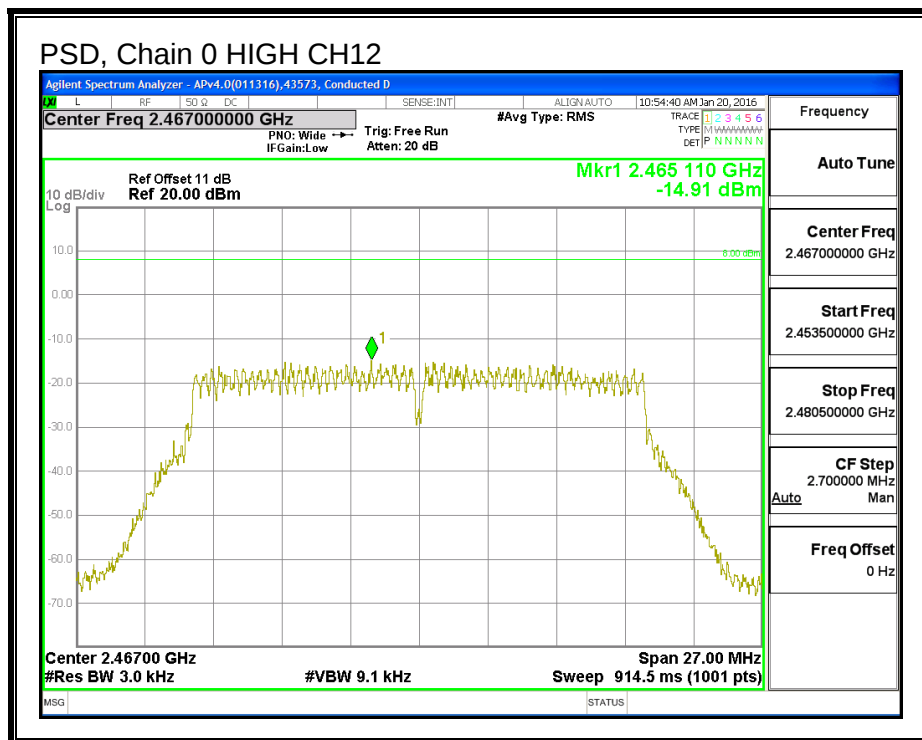
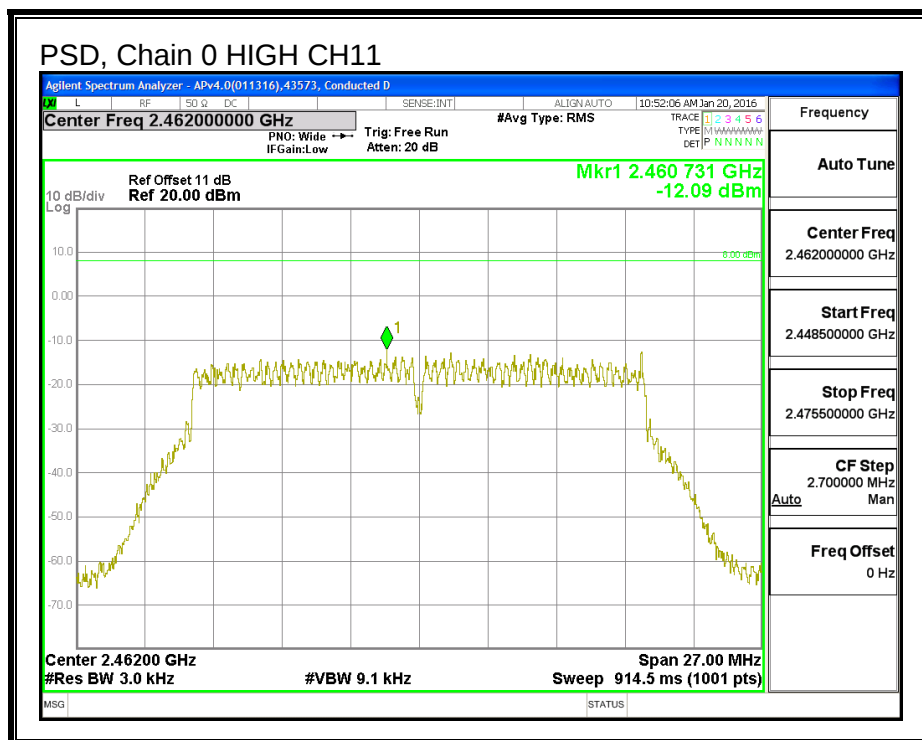
PSD Results

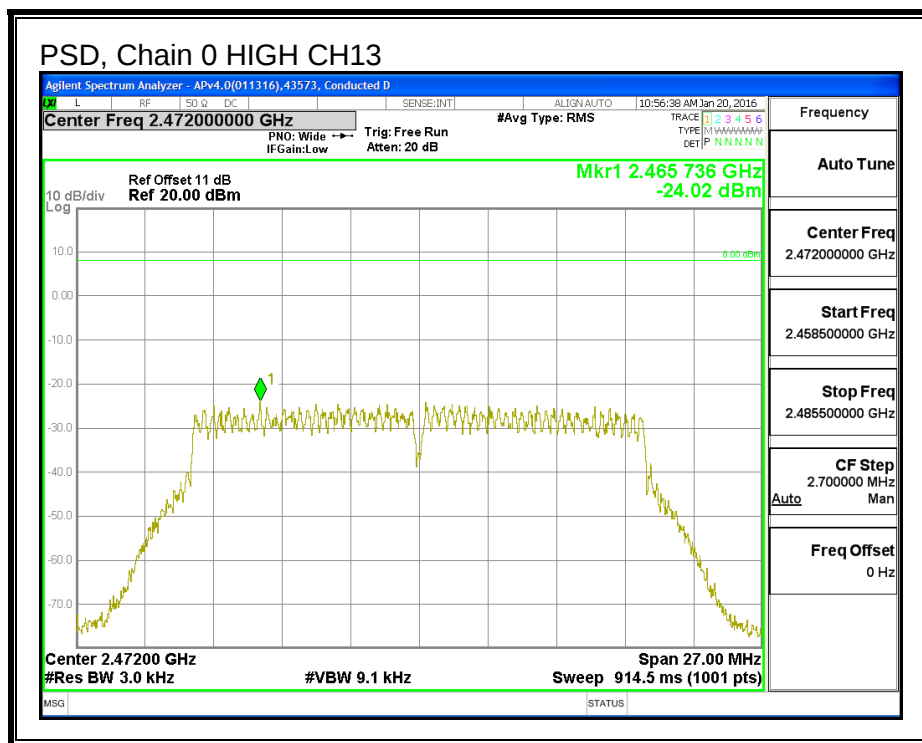
Channel	Frequency (MHz)	Antenna A Meas (dBm)	Antenna B Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-12.03	-11.76	-8.88	8.0	-16.9
Low_2	2417	-9.35	-10.62	-6.93	8.0	-14.9
Mid	2437	-9.51	-10.47	-6.95	8.0	-15.0
High_10	2457	-9.34	-10.19	-6.73	8.0	-14.7
High_11	2462	-12.09	-12.36	-9.21	8.0	-17.2
High_12	2467	-14.91	-14.37	-11.62	8.0	-19.6
High_13	2472	-24.02	-23.17	-20.56	8.0	-28.6

PSD, Antenna A









PSD, Antenna B

