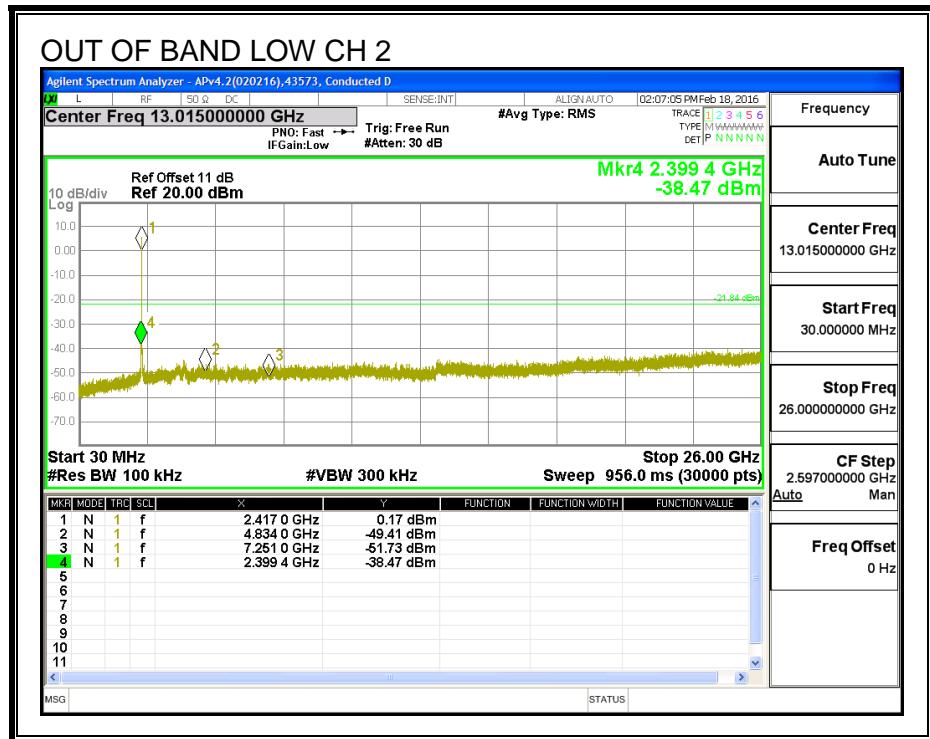
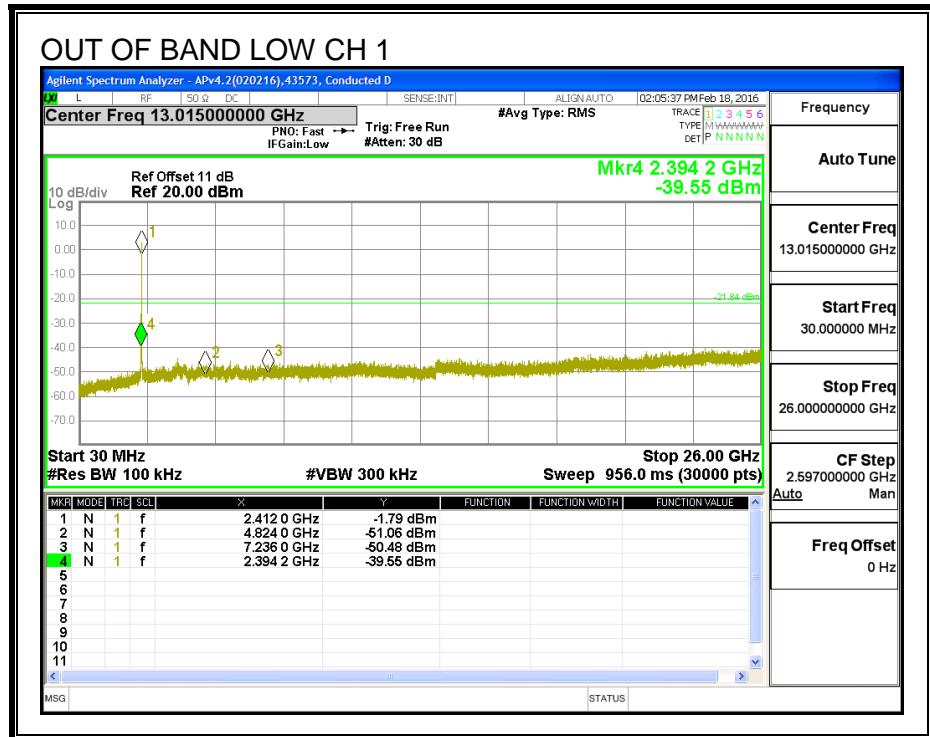
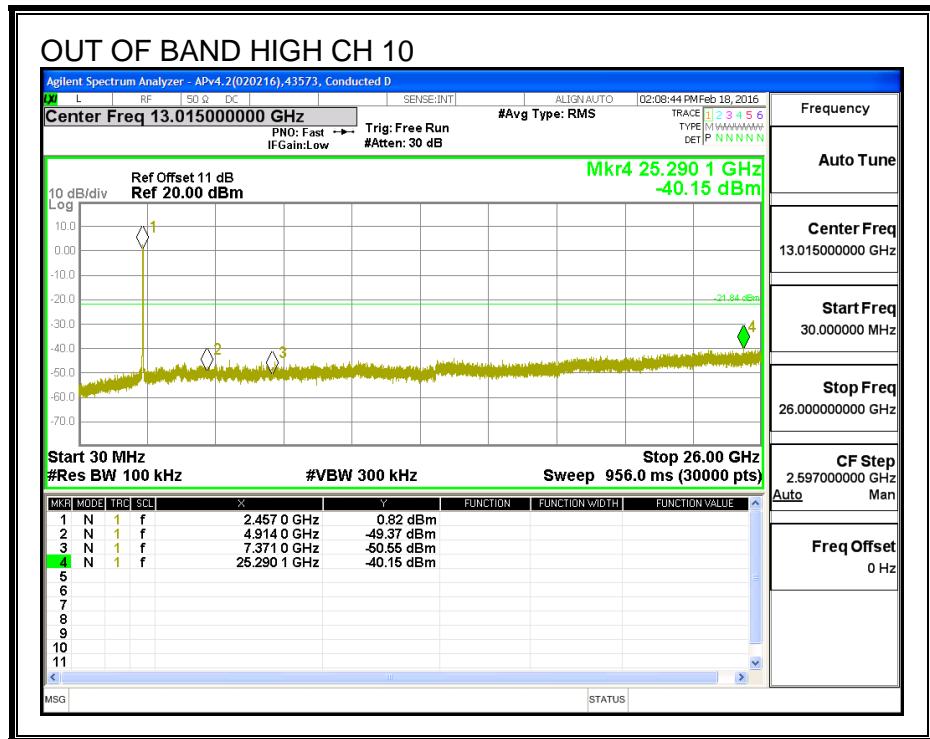
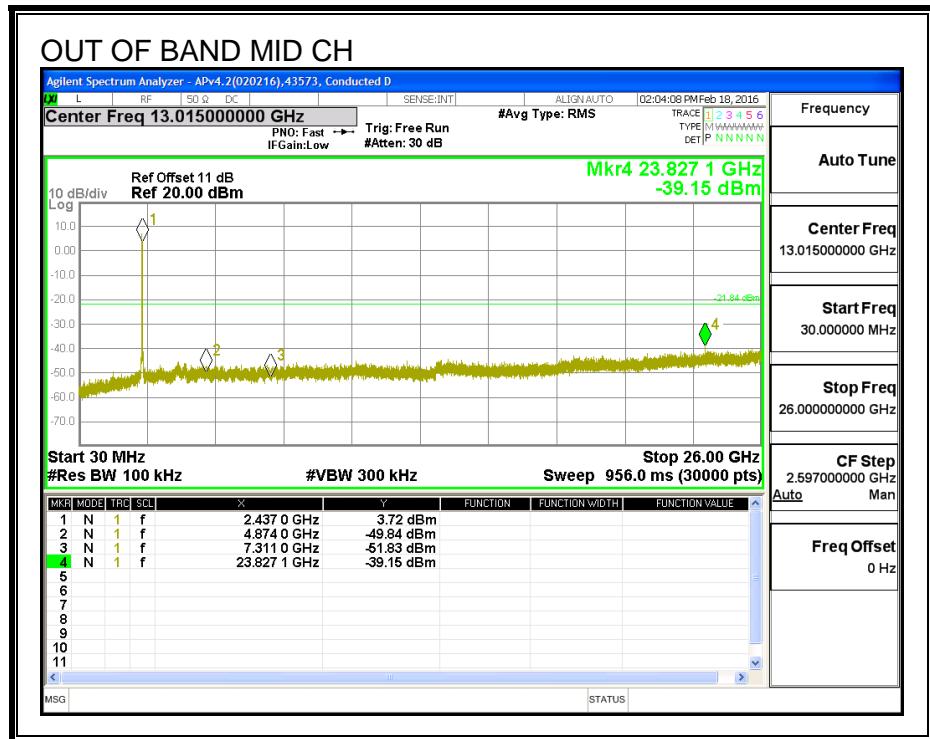
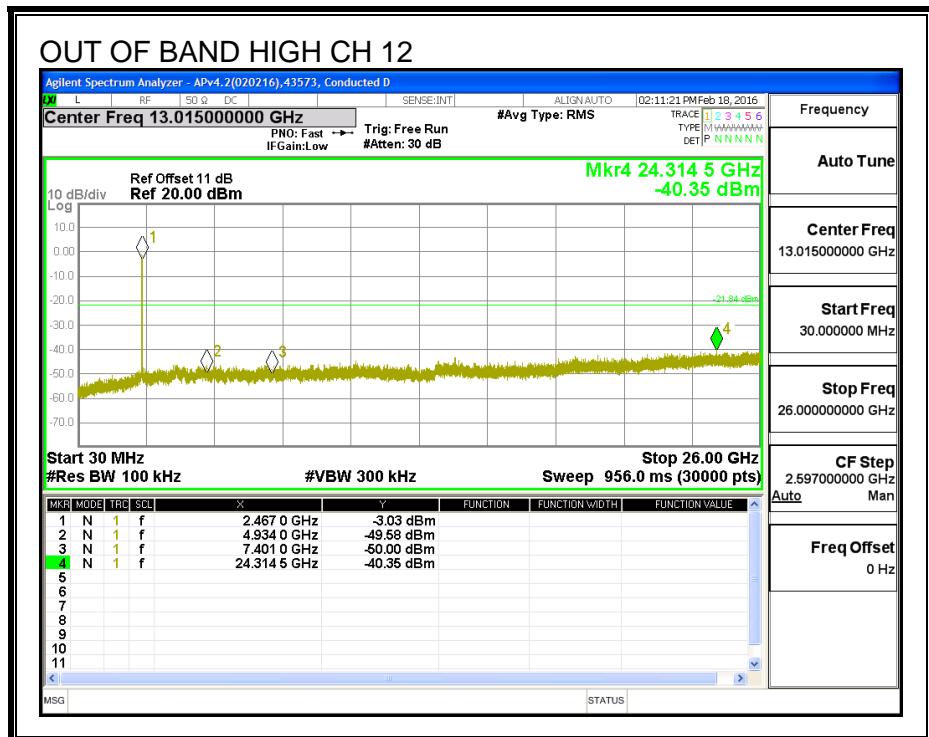
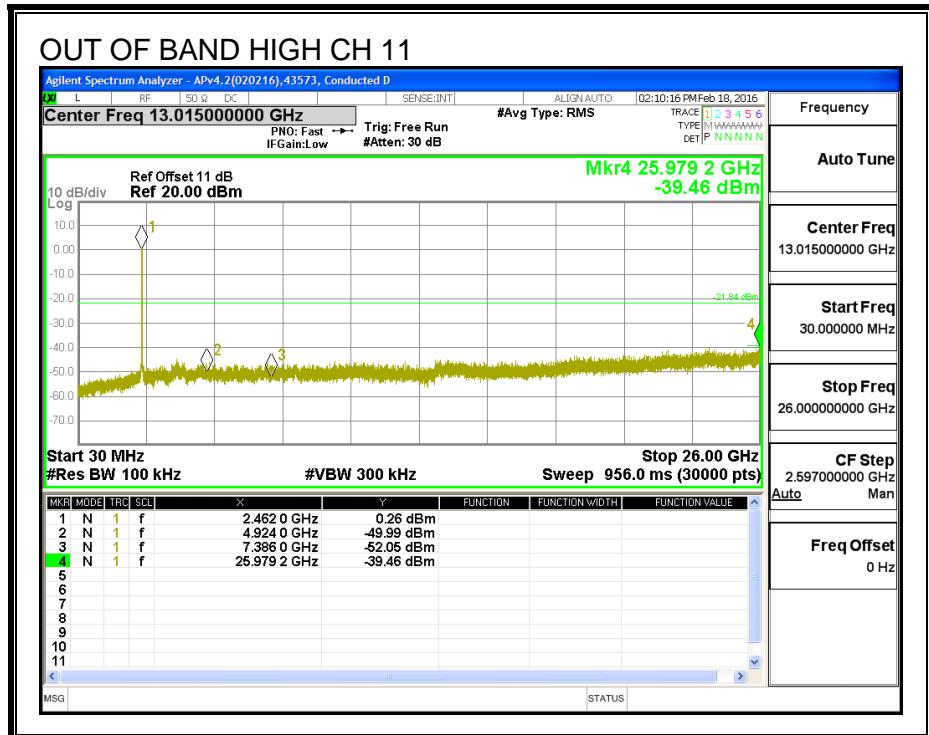
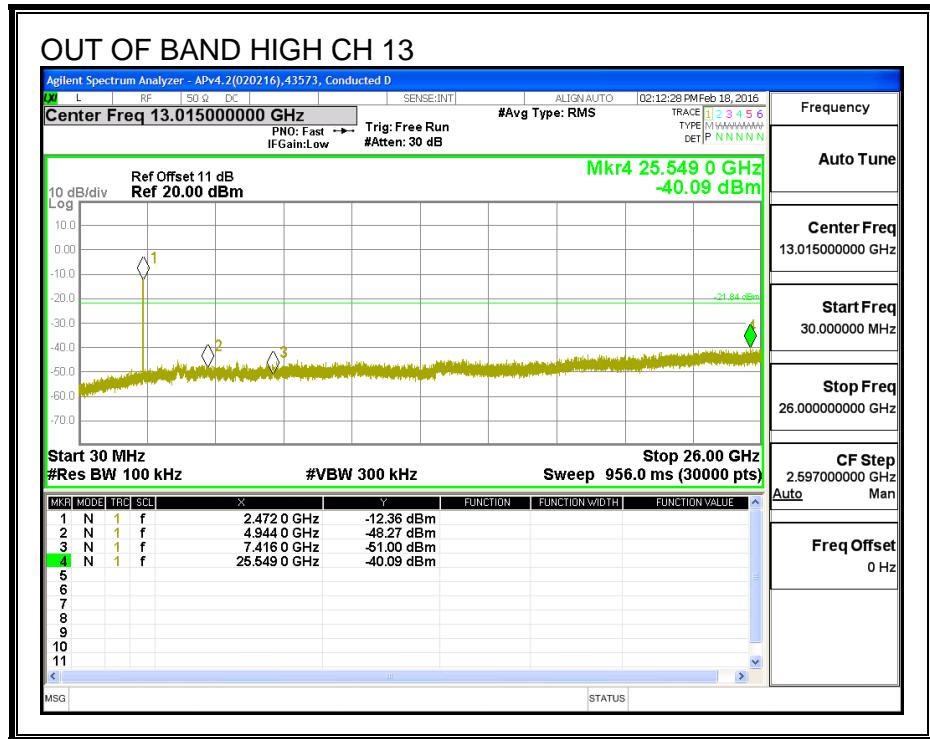


OUT-OF-BAND EMISSIONS









8.8. 802.11g 2Tx CDD MODE IN THE 2.4 GHz BAND

Noted: Covered by 802.11n HT20 2TX CDD MODE IN THE 2.4 GHz BAND

8.9. 802.11n HT20 2Tx CDD MODE IN THE 2.4 GHz BAND

8.9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

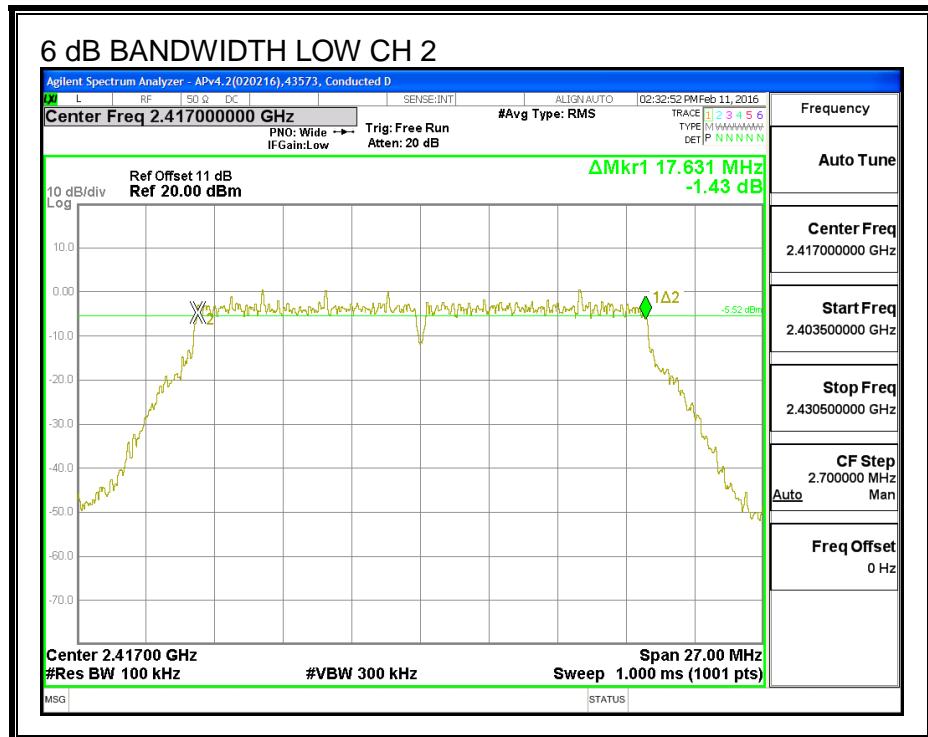
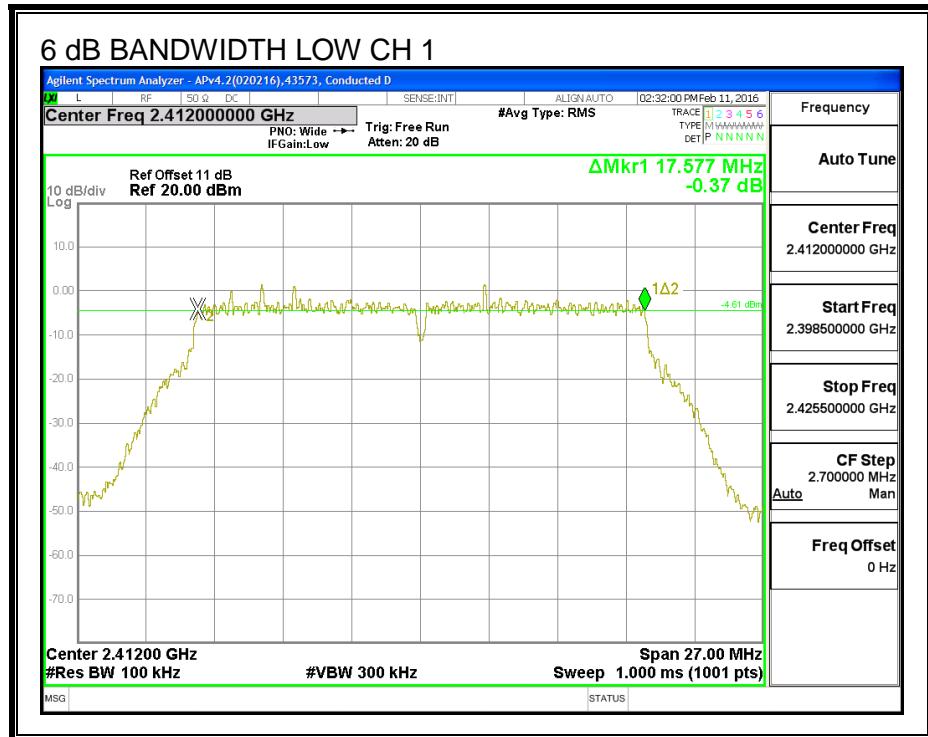
IC RSS-247 (5.2) (1)

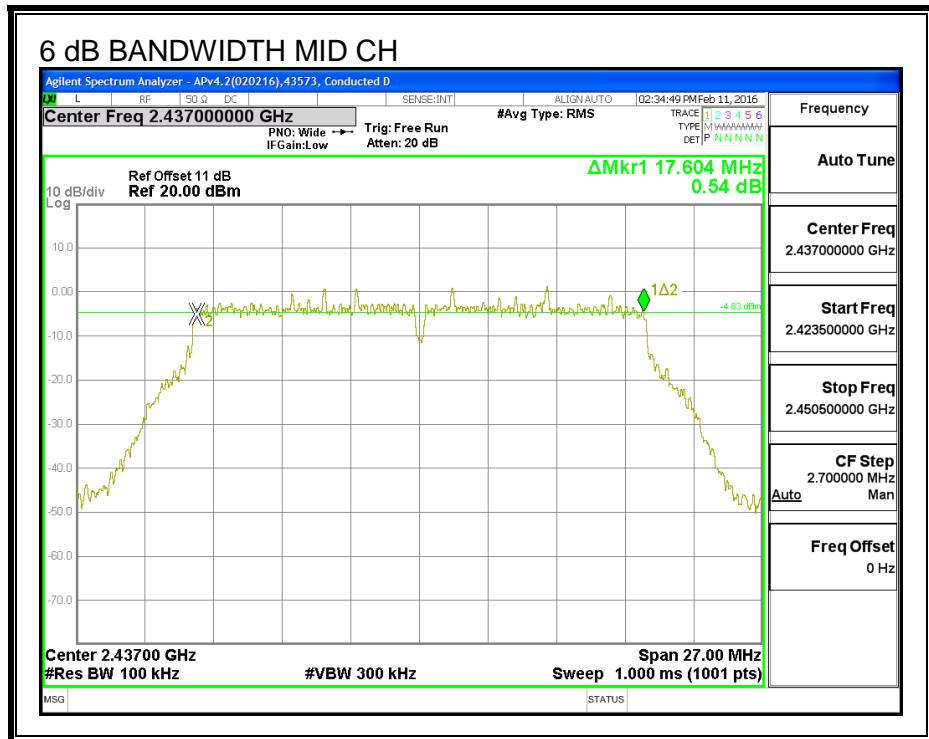
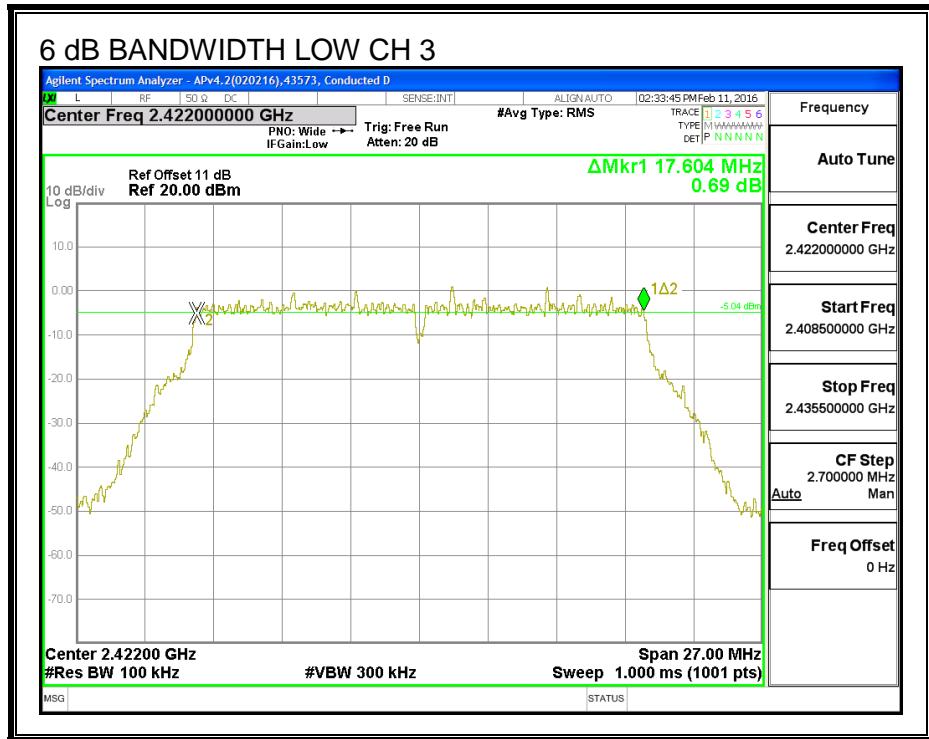
The minimum 6 dB bandwidth shall be at least 500 kHz.

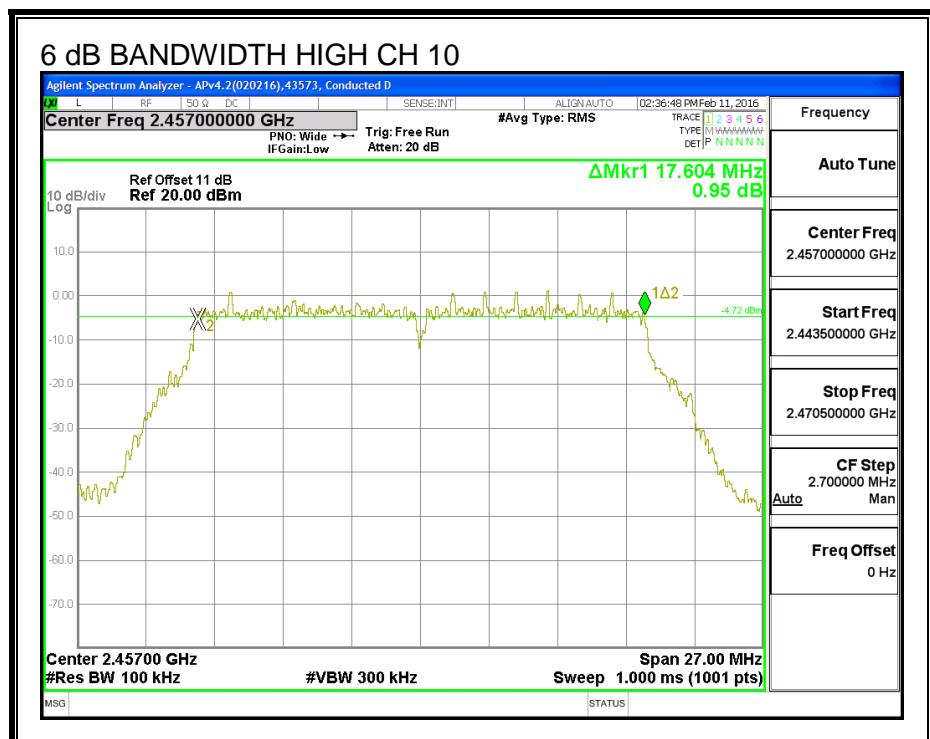
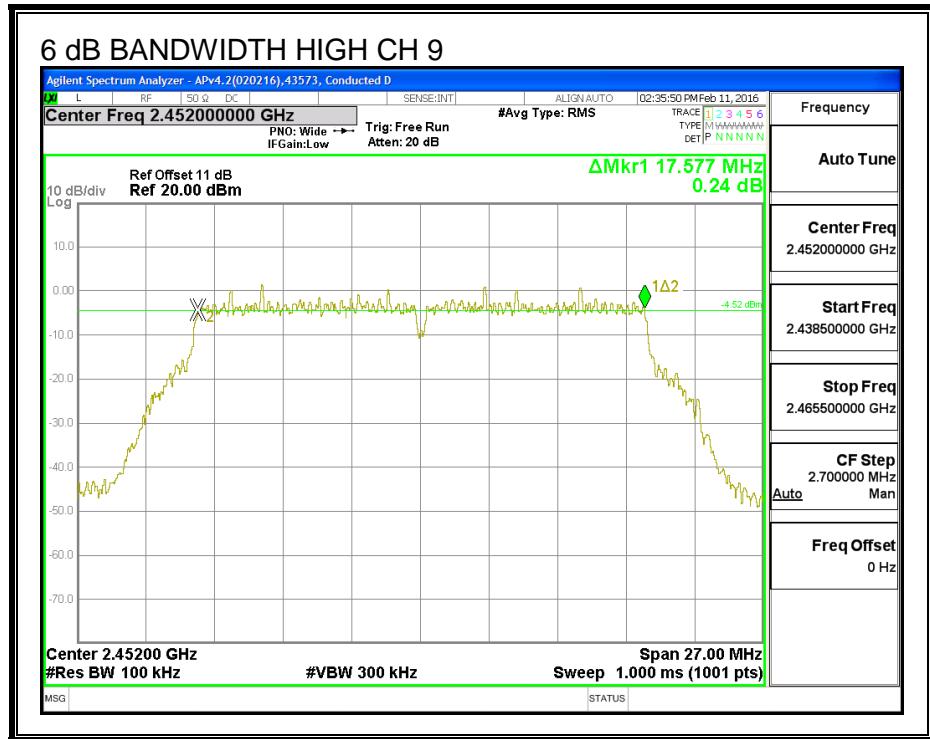
RESULTS

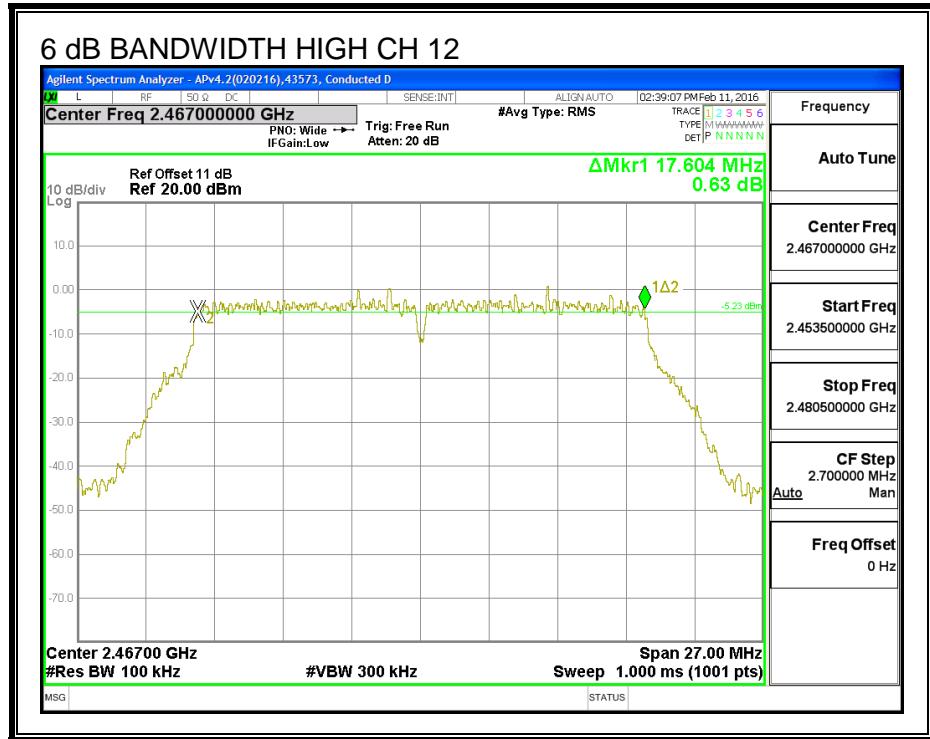
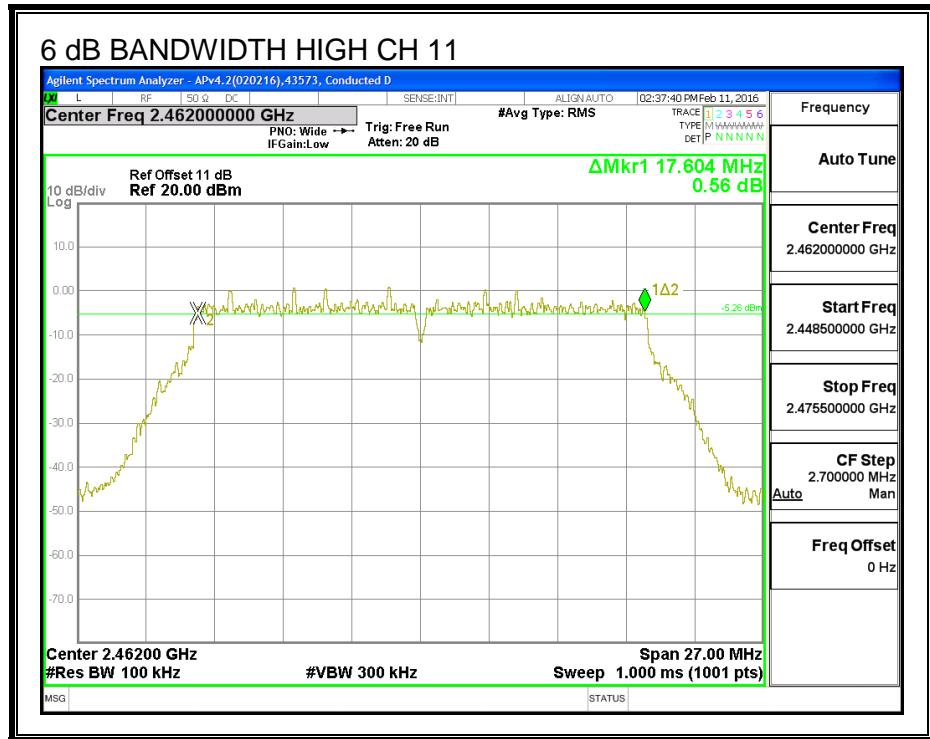
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low_1	2412	17.58	17.60	0.5
Low_2	2417	17.63	17.63	0.5
Low_3	2422	17.60	17.58	0.5
Mid_6	2437	17.60	17.63	0.5
High_9	2452	17.58	17.63	0.5
High_10	2457	17.60	17.60	0.5
High_11	2462	17.60	17.63	0.5
High_12	2467	17.60	17.60	0.5
High_13	2472	17.60	17.60	0.5

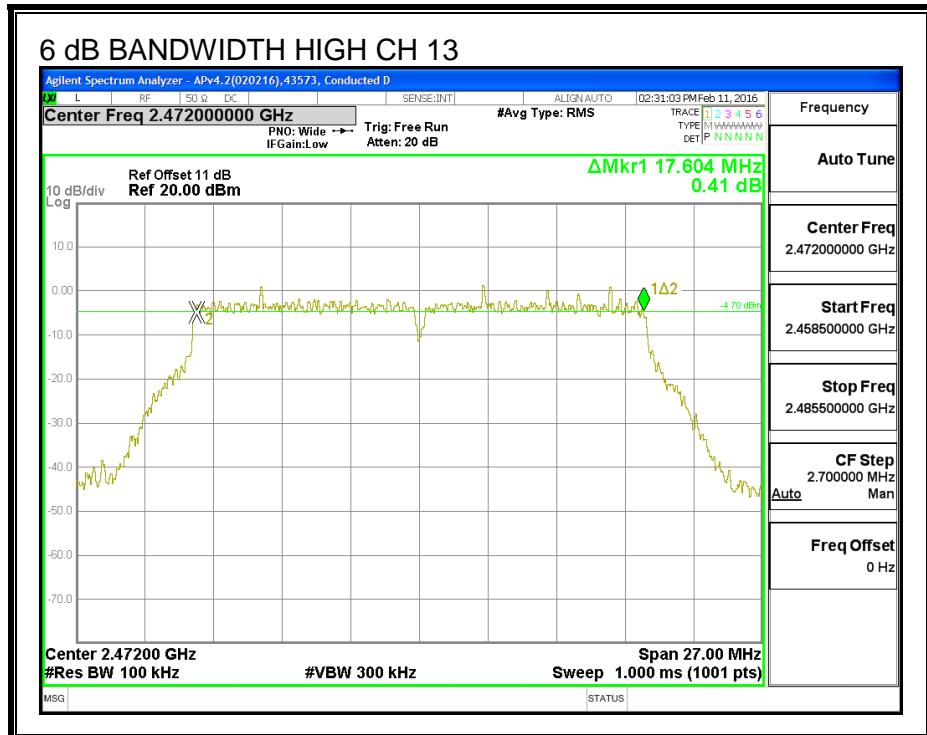
6 dB BANDWIDTH, Chain 0



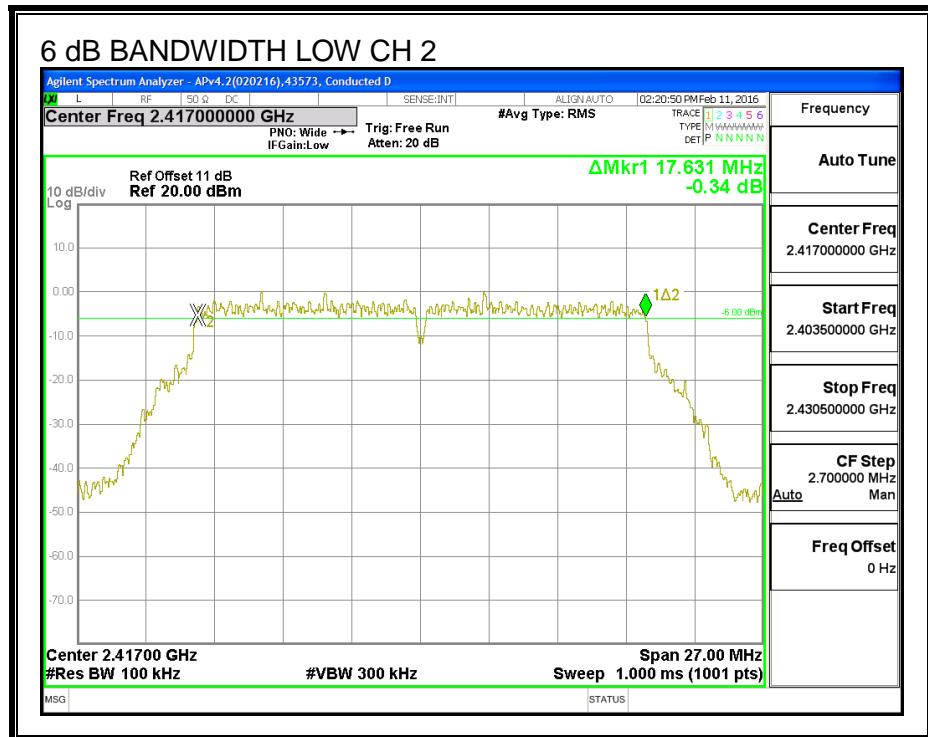
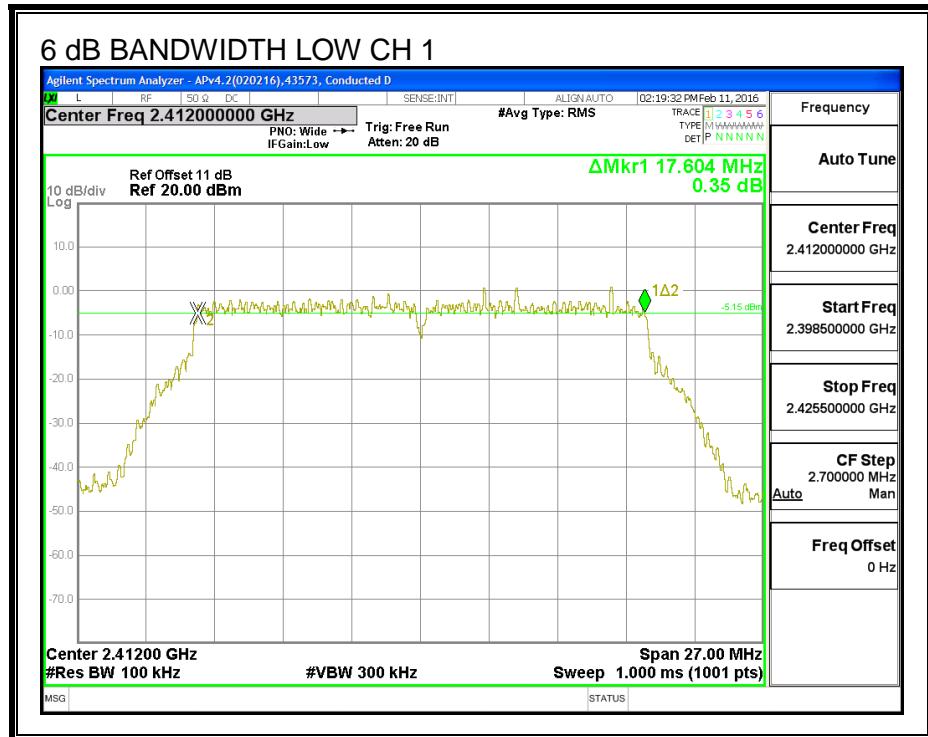


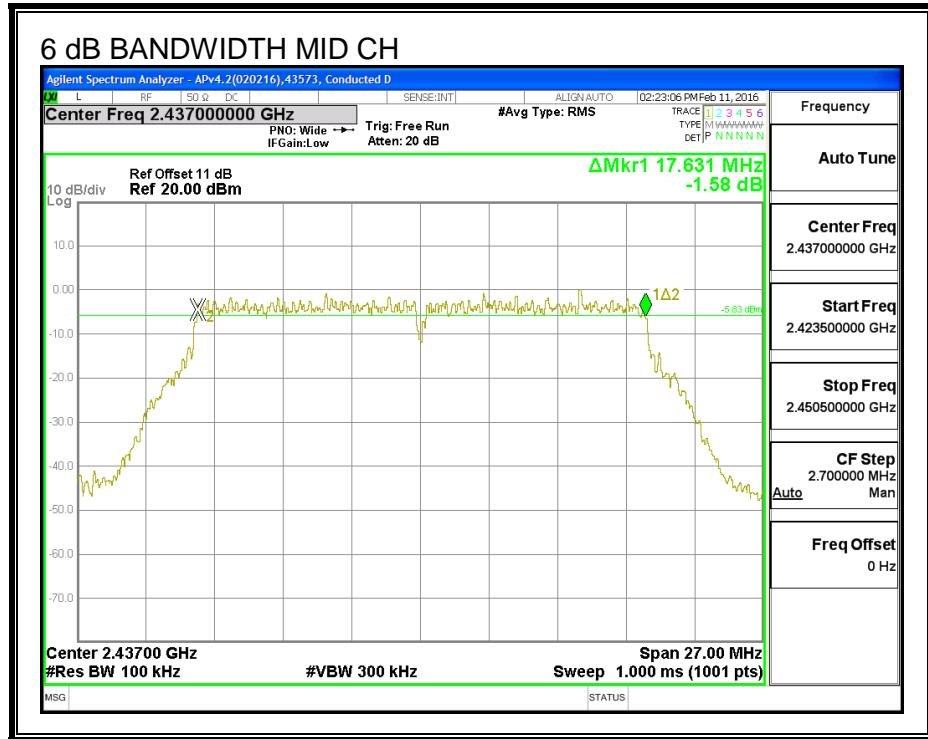
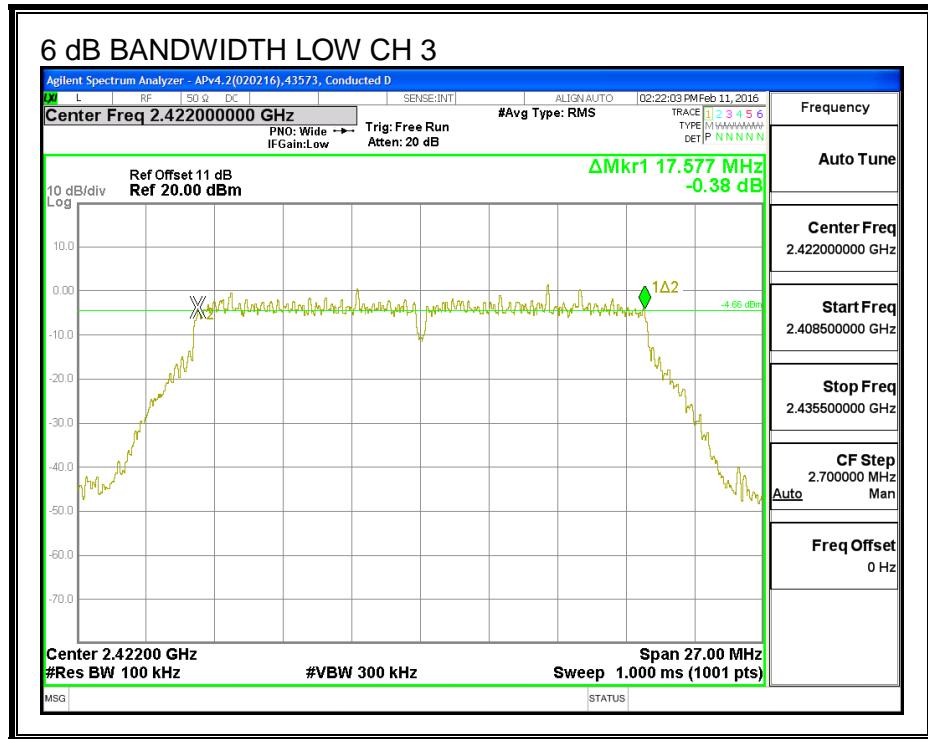


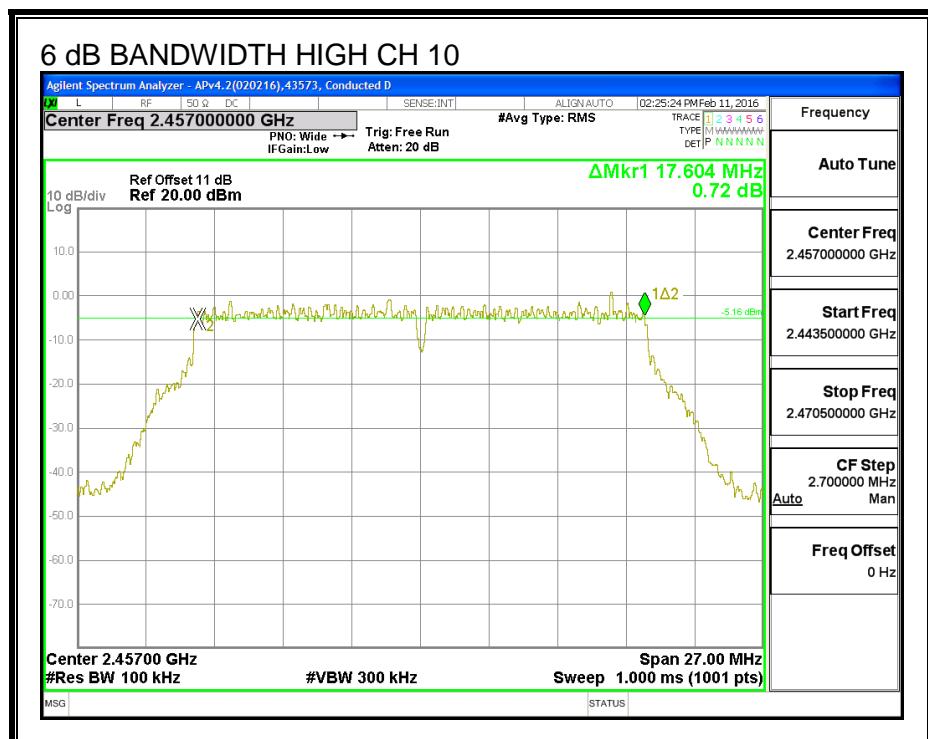
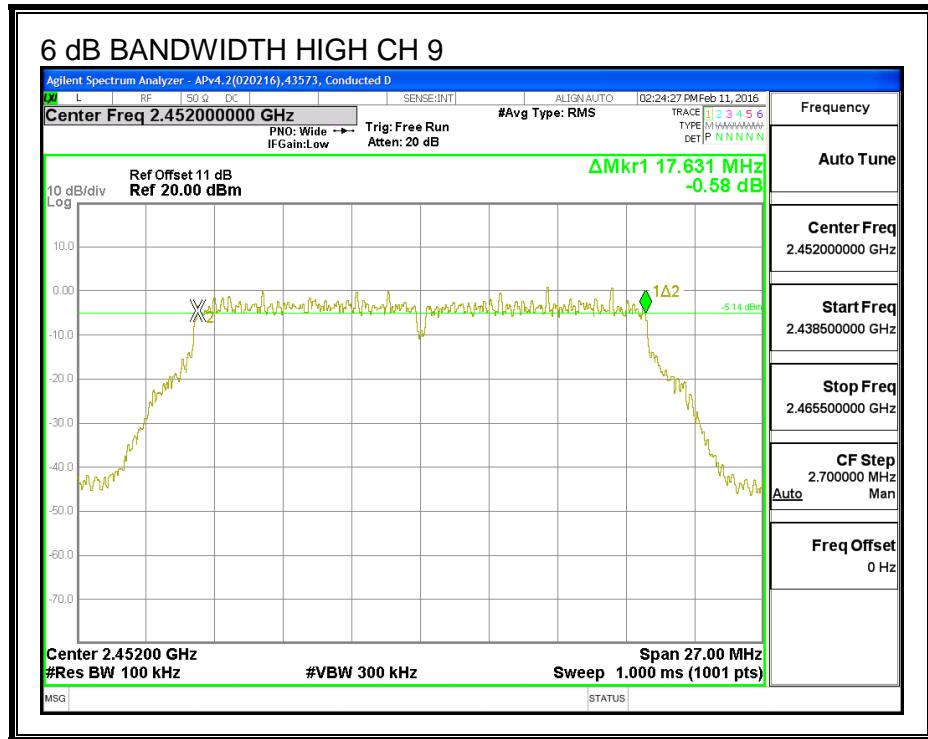


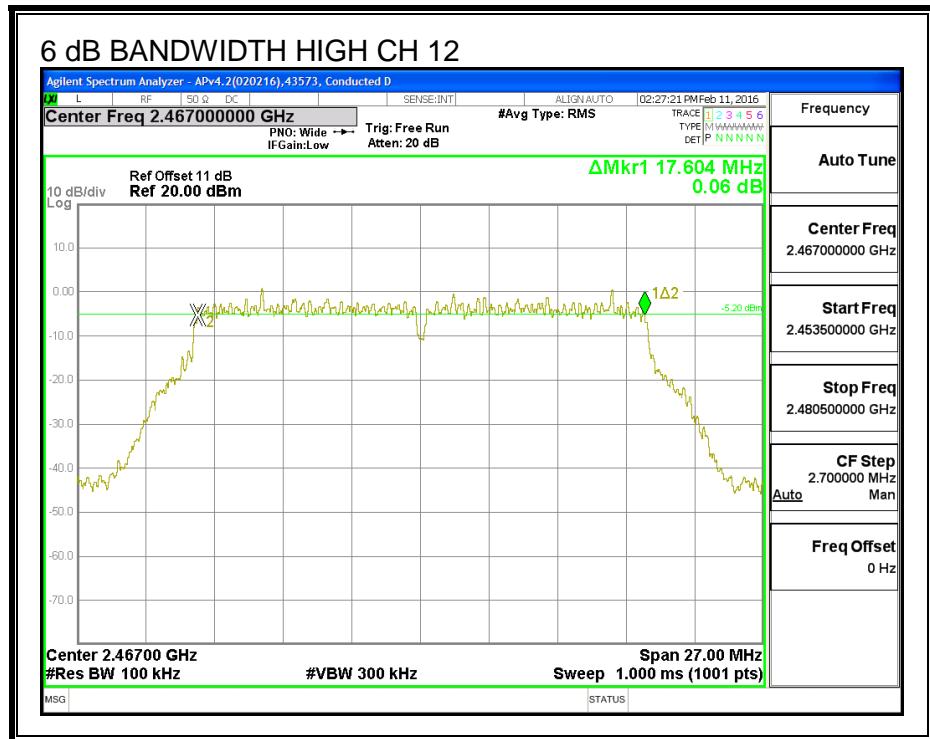
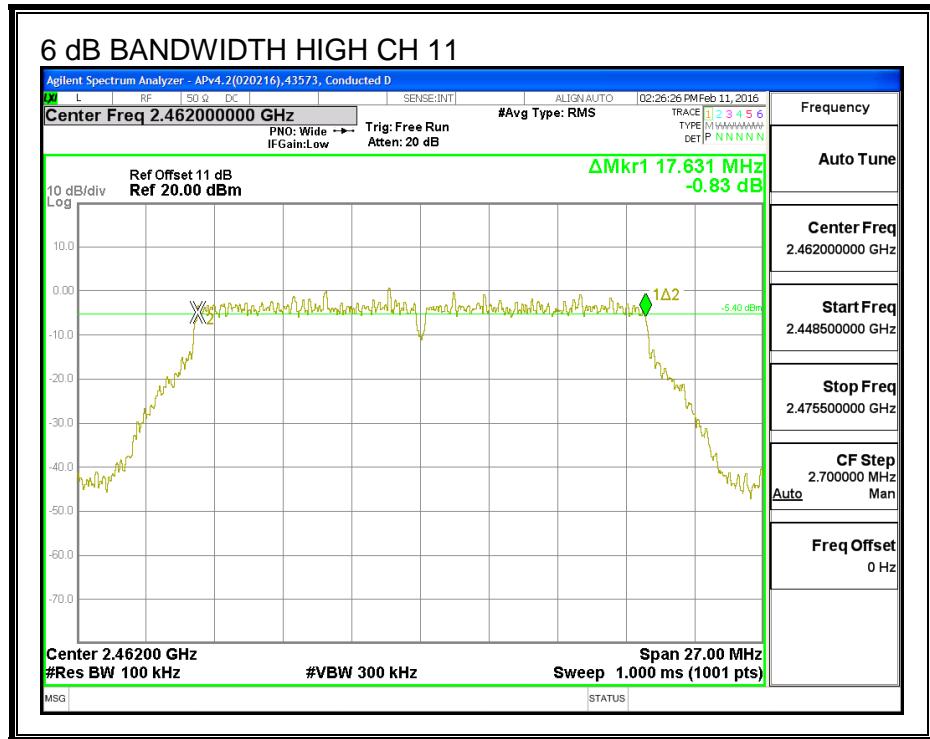


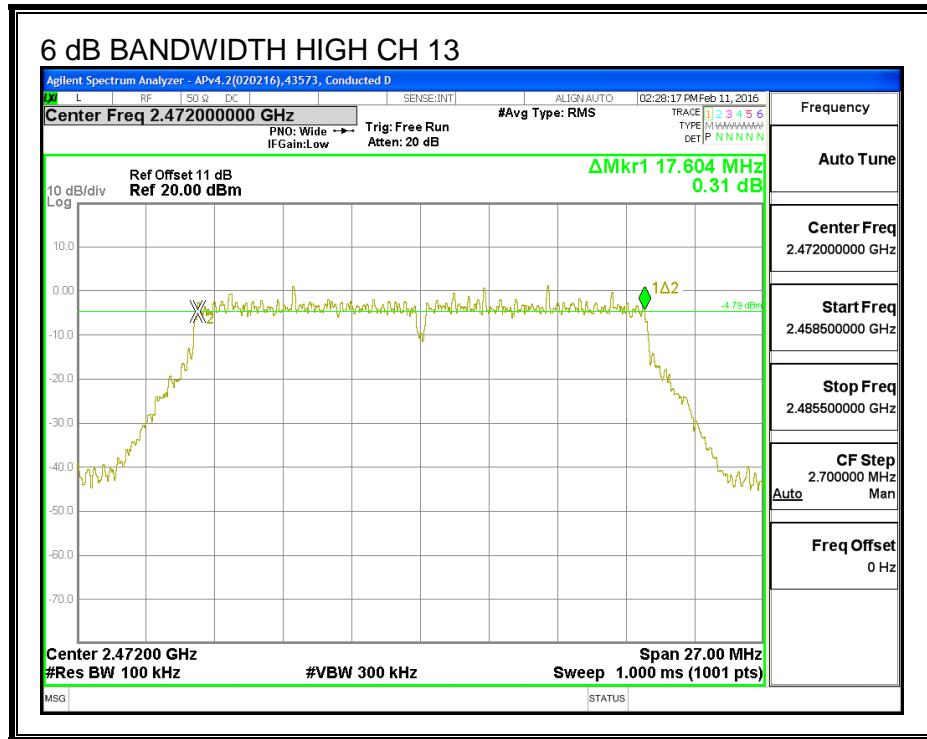
6 dB BANDWIDTH, Chain 1











8.9.2. 99% BANDWIDTH

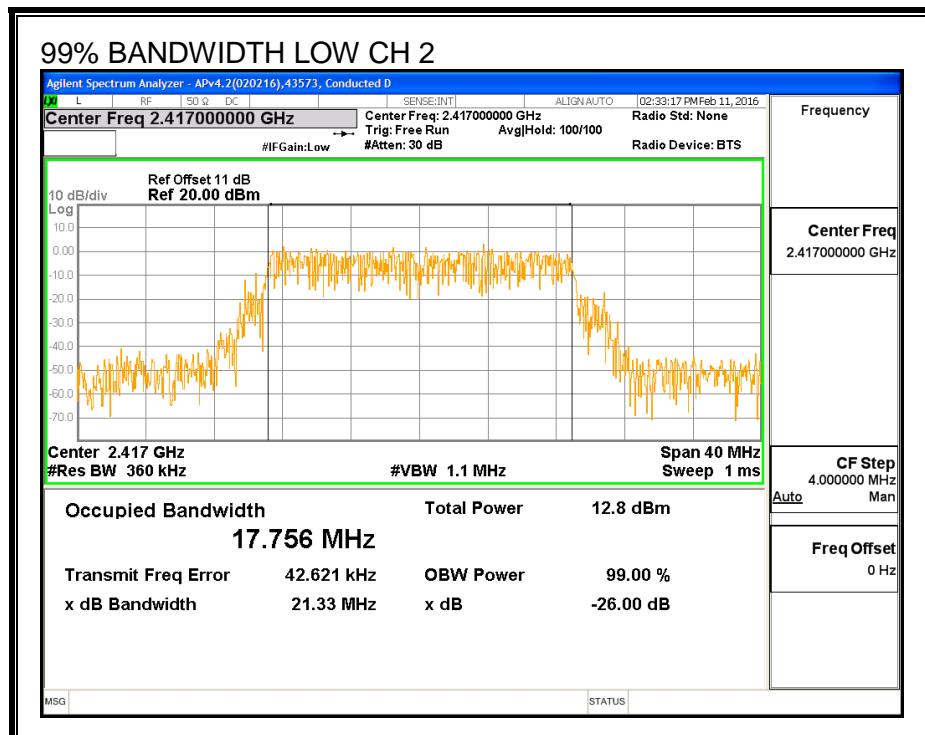
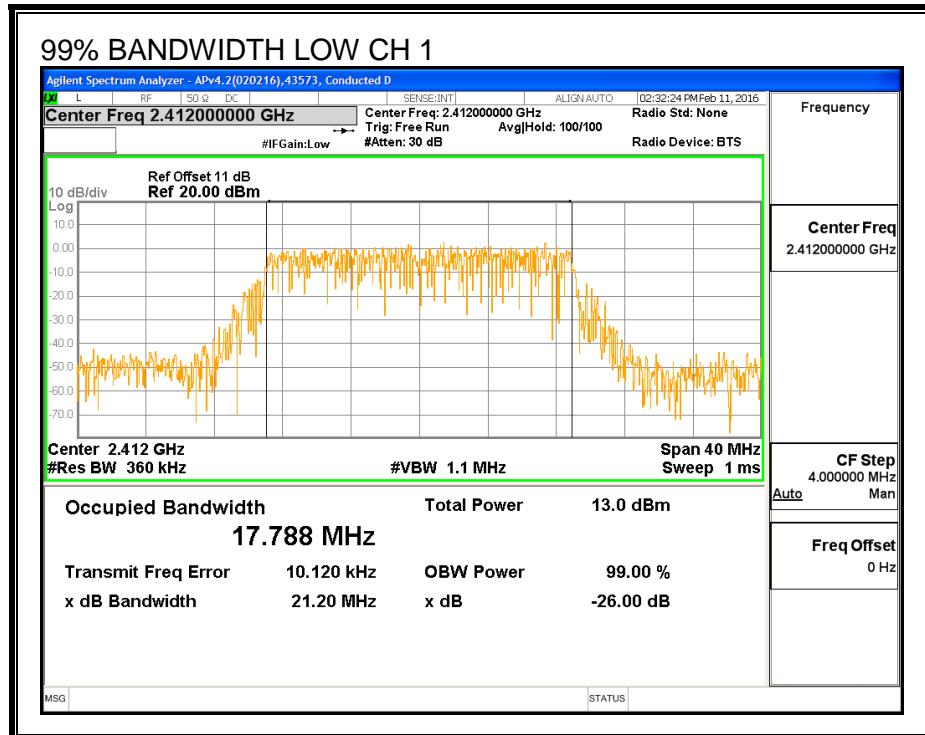
LIMITS

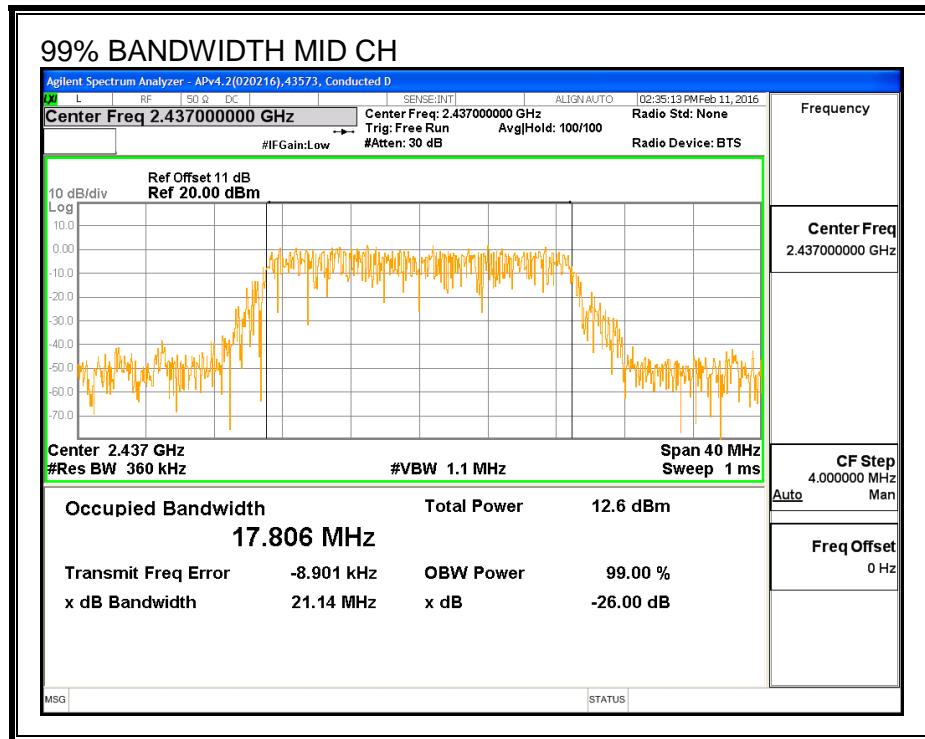
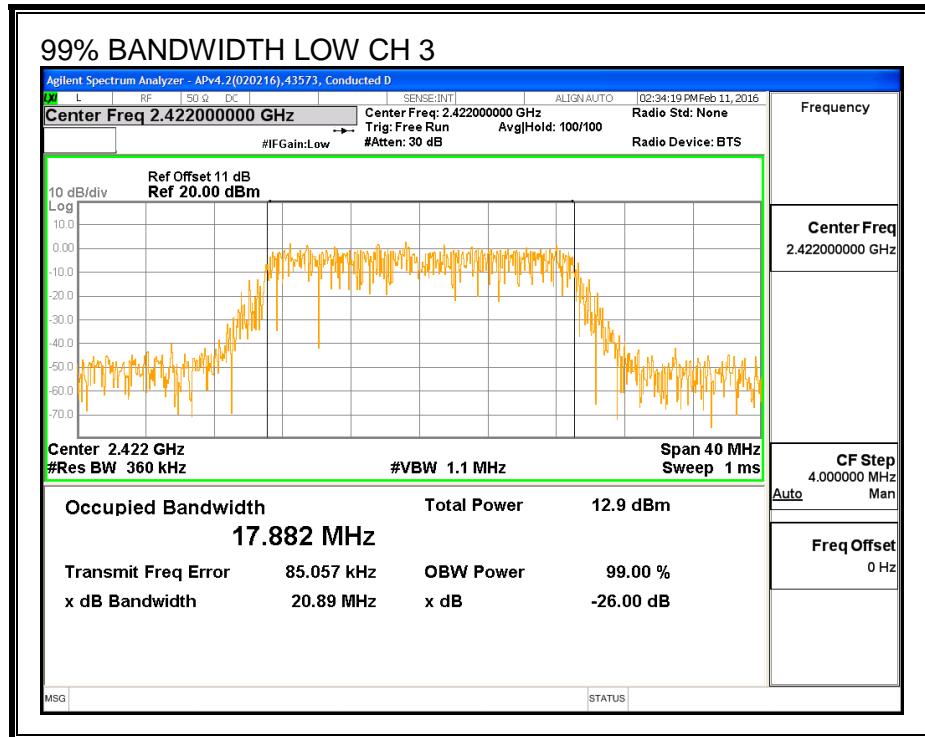
None; for reporting purposes only.

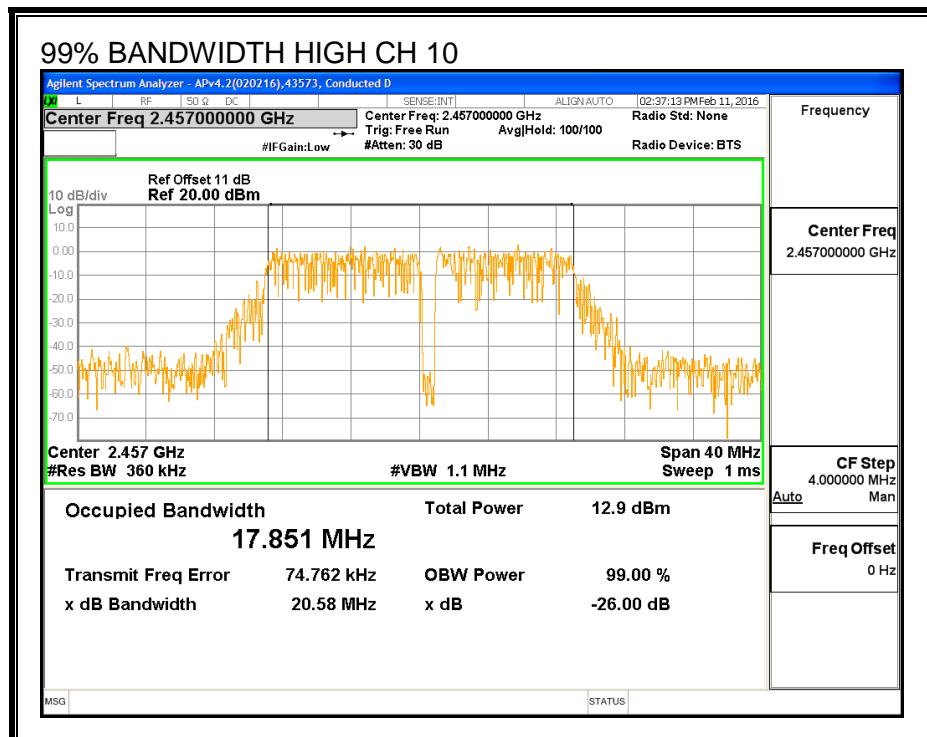
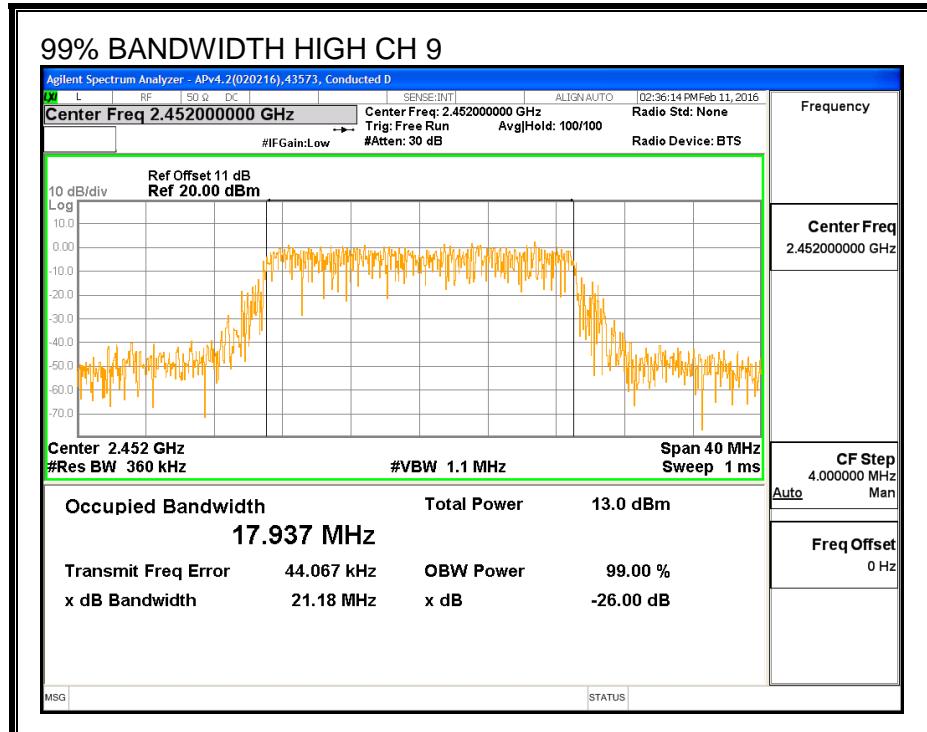
RESULTS

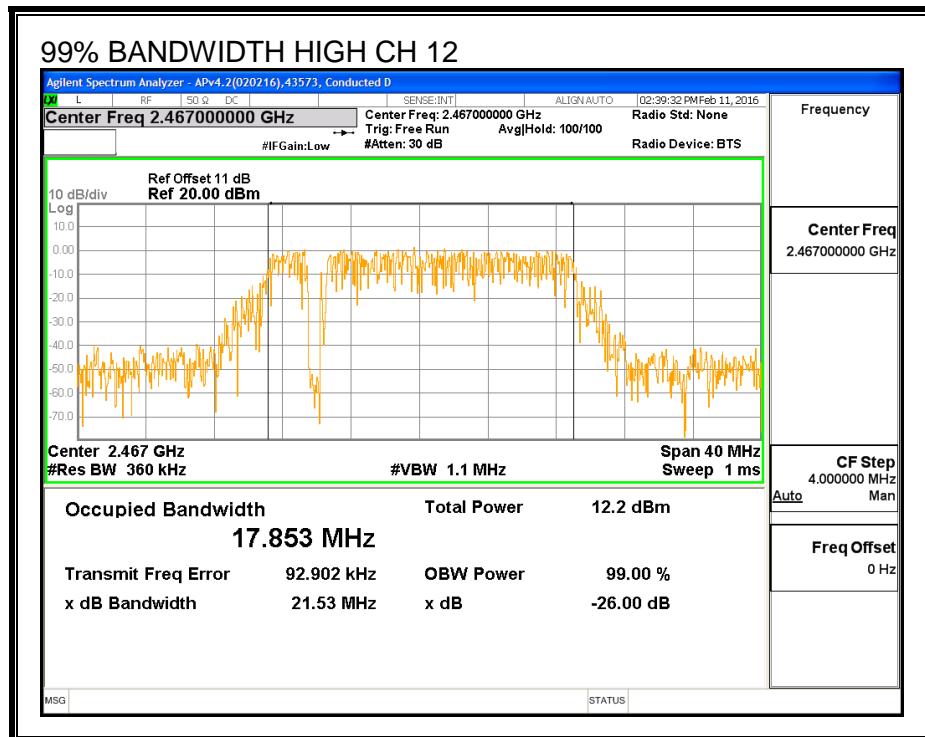
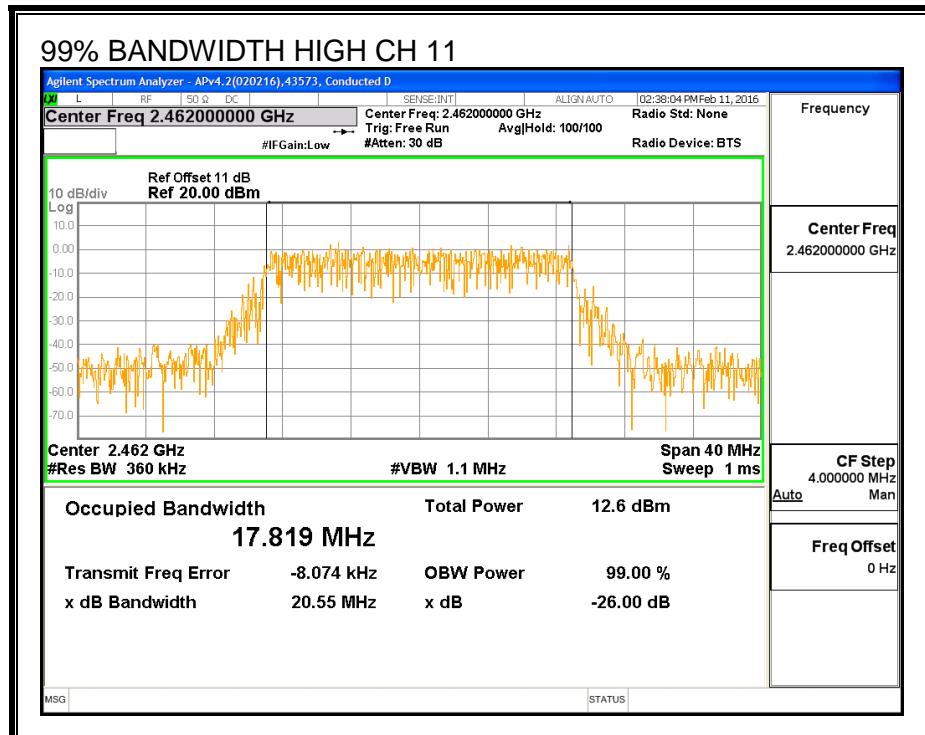
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low_1	2412	17.788	17.969
Low_2	2417	17.756	17.820
Low_3	2422	17.882	17.851
Mid_6	2437	17.806	17.782
High_9	2452	17.937	17.854
High_10	2457	17.851	17.750
High_11	2462	17.819	17.817
High_12	2467	17.853	17.790
High_13	2472	17.850	17.776

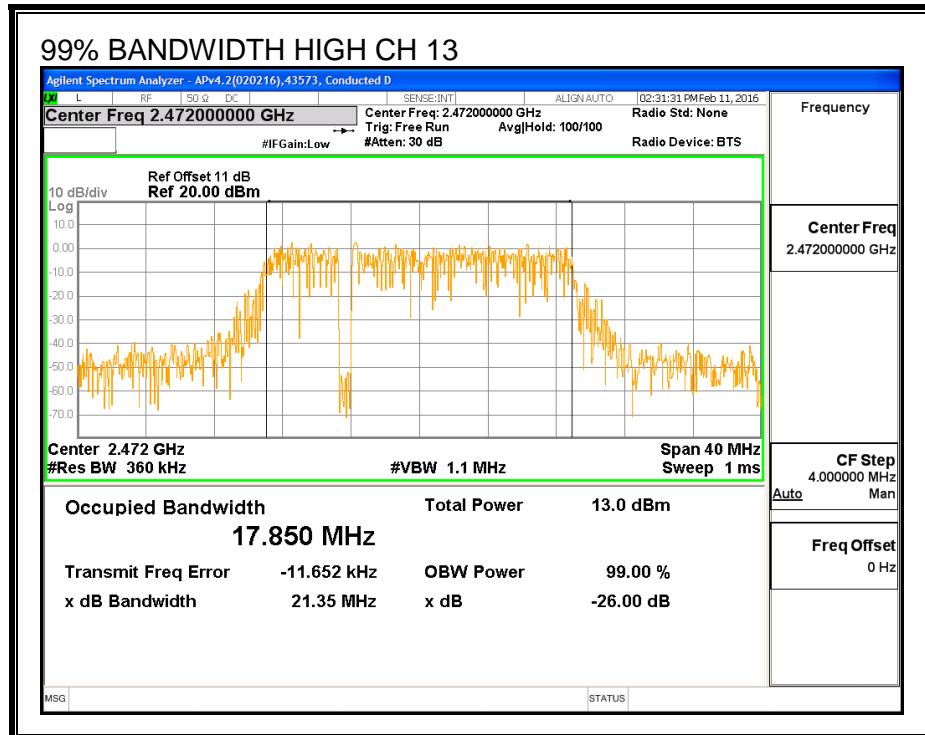
99% BANDWIDTH, Chain 0



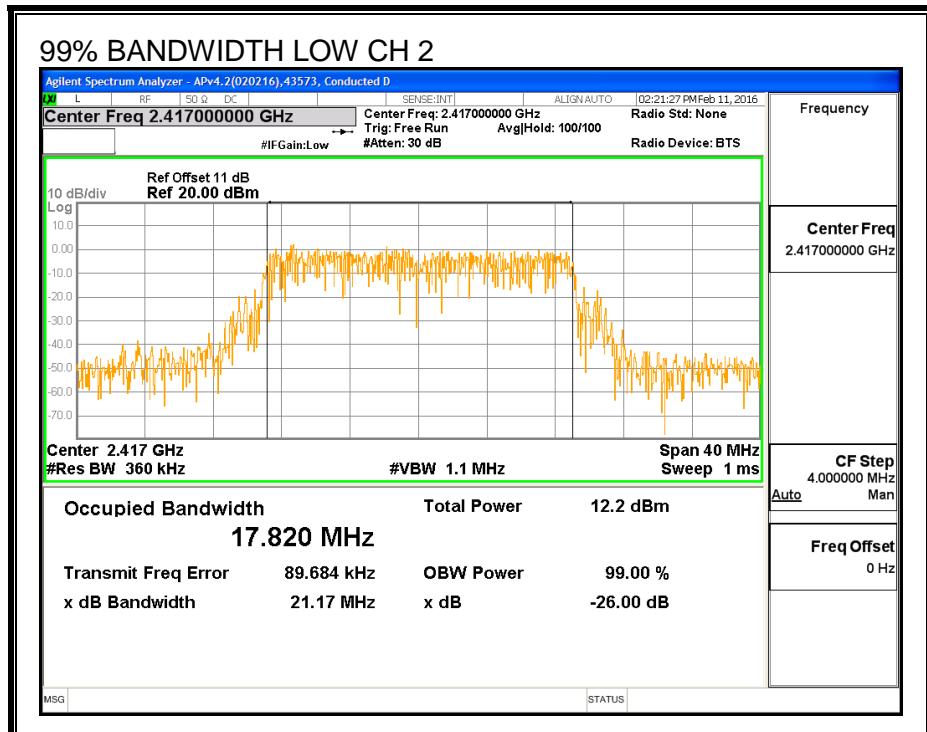
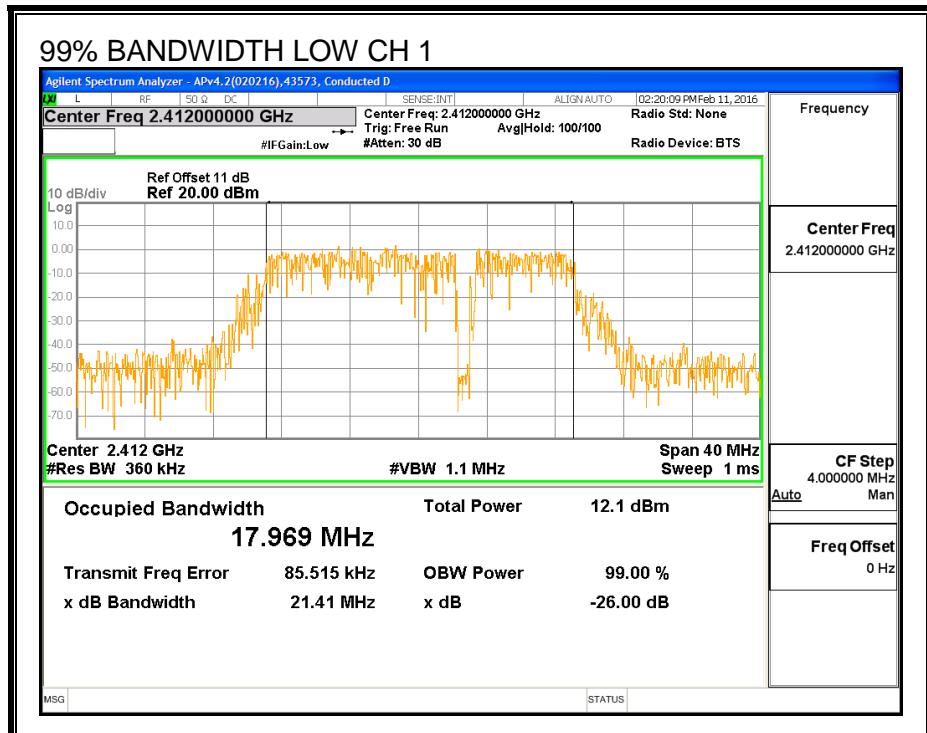


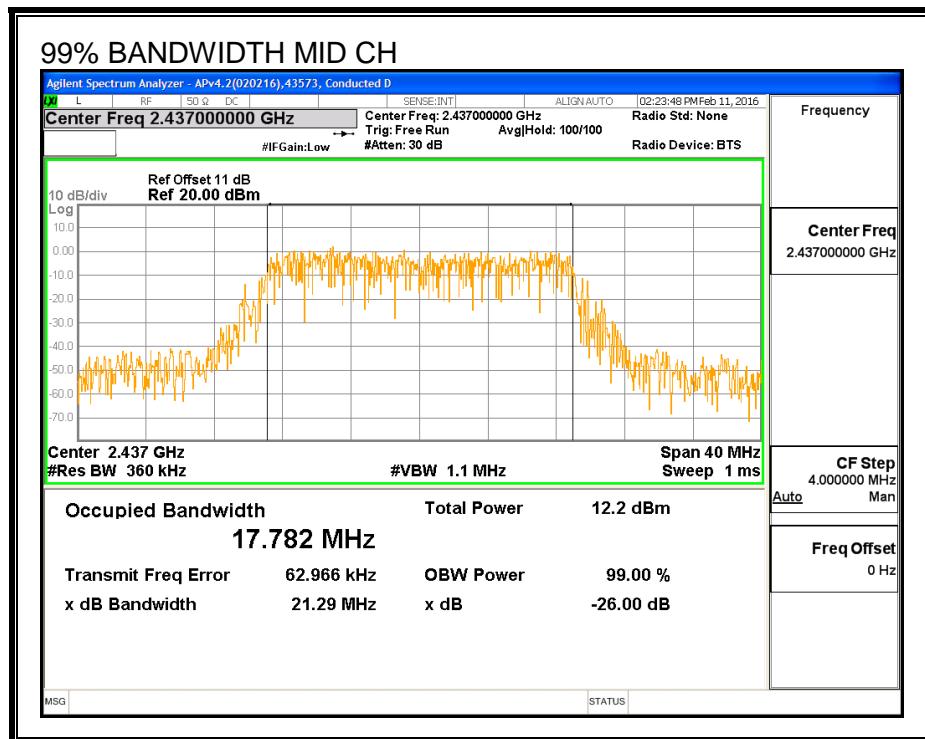
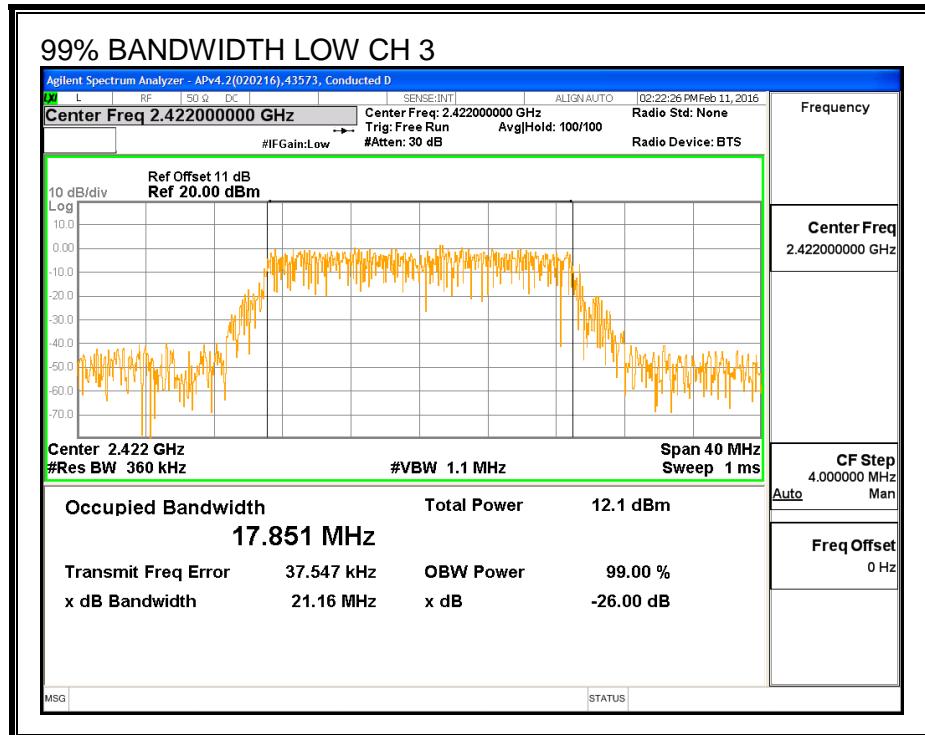


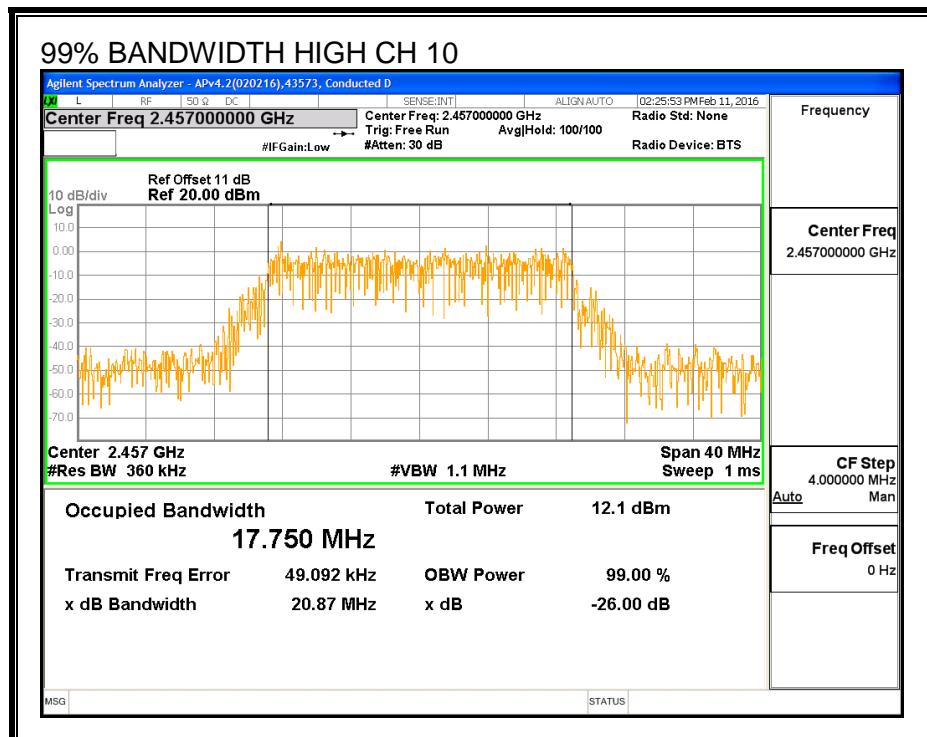
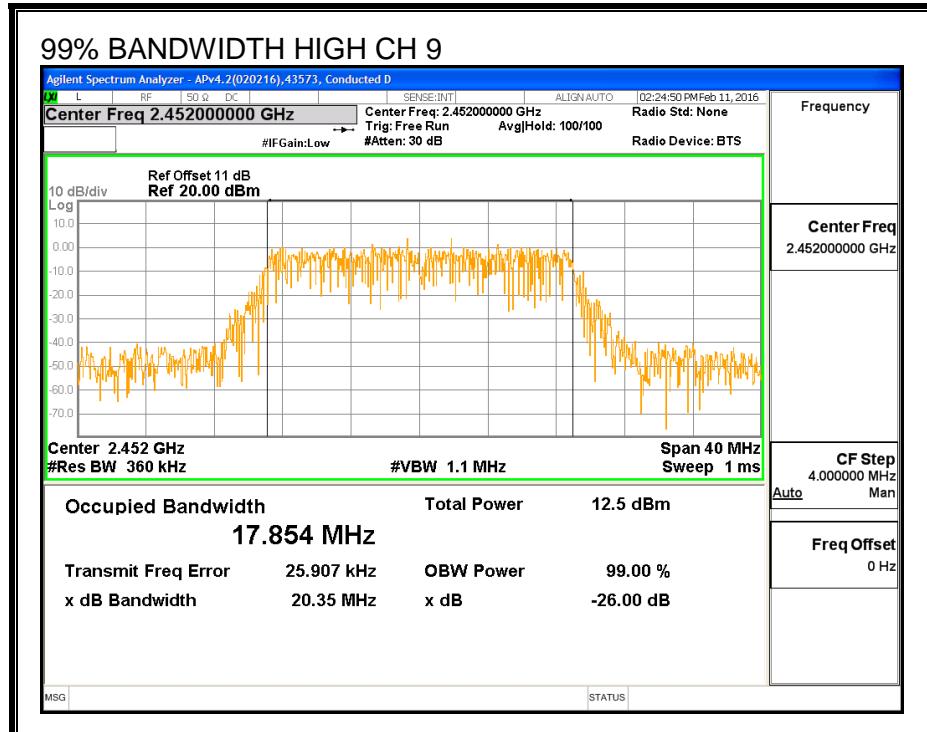


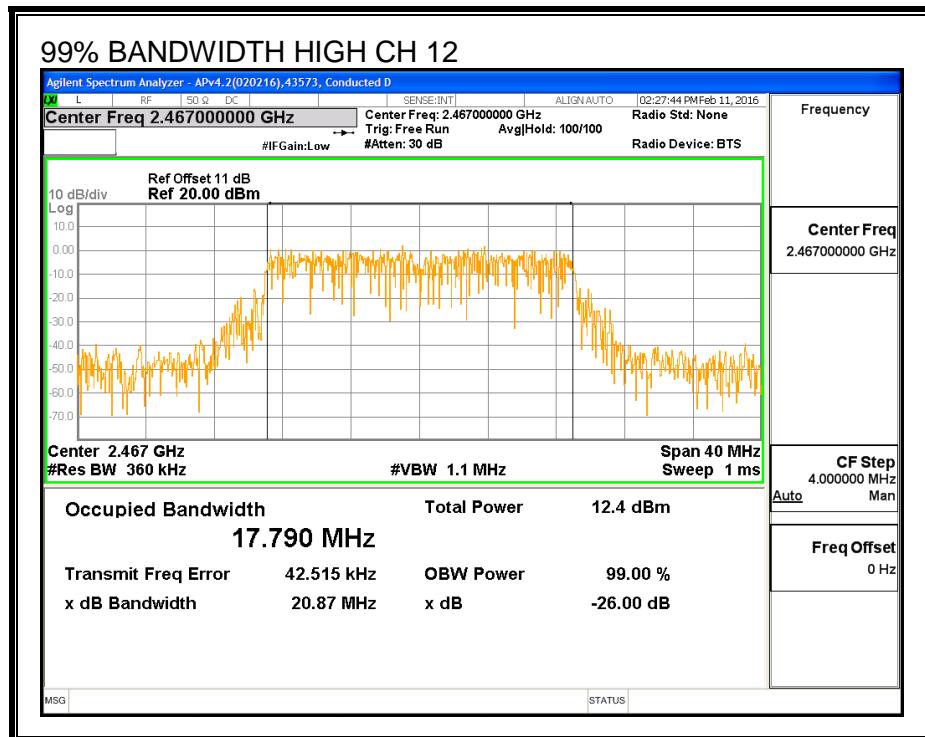
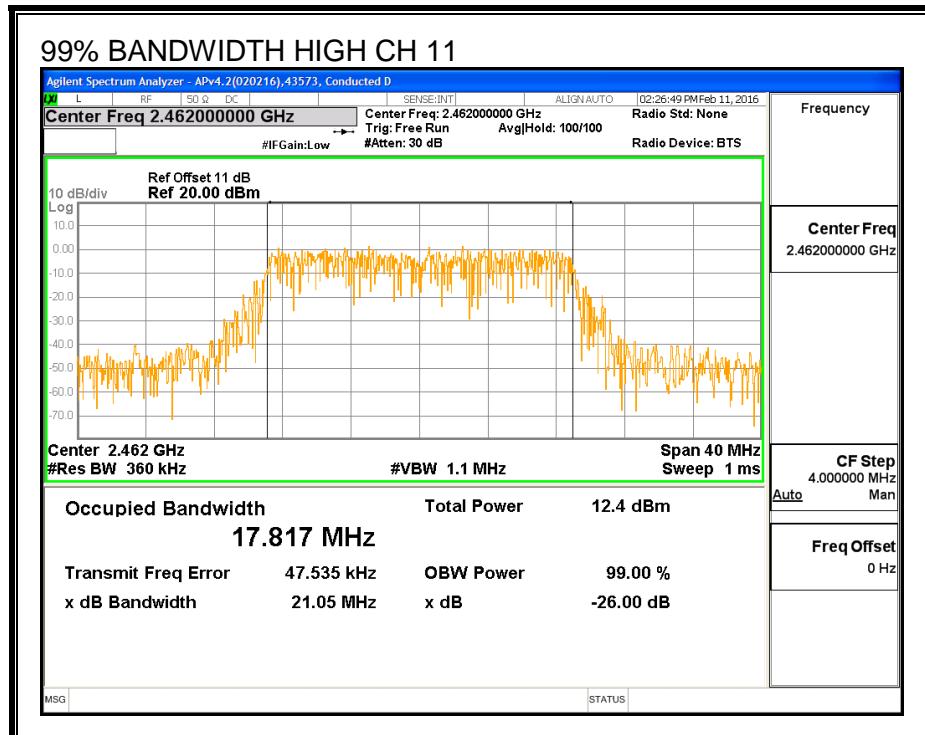


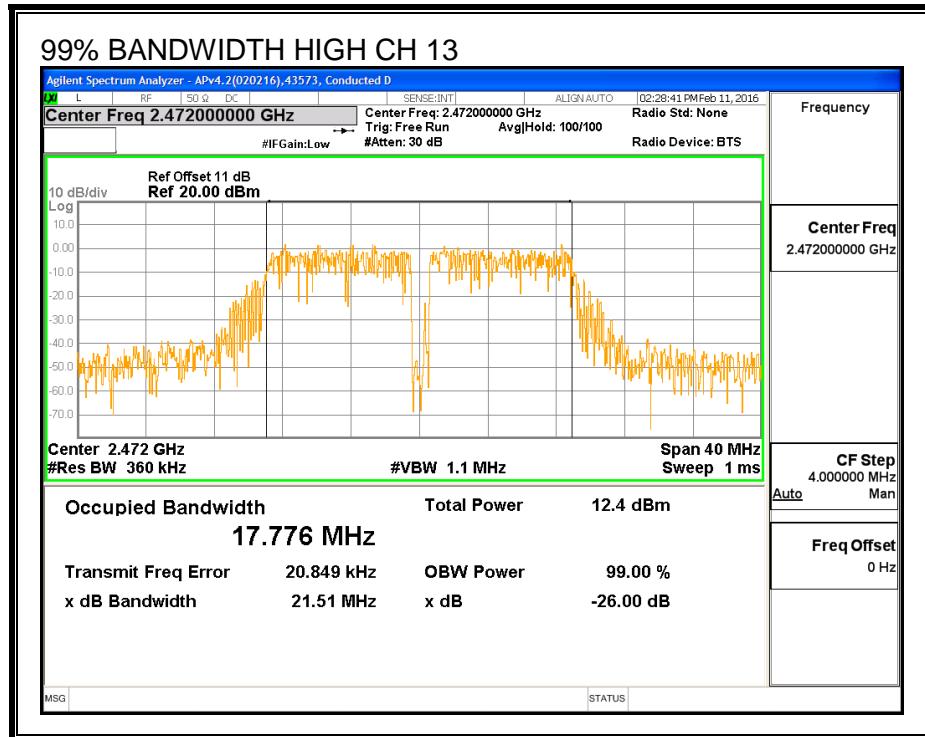
99% BANDWIDTH, Chain 1











8.9.3. 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.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.24	3.40	2.86

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	2.86	30.00	30	36	30.00
Low_2	2417	2.86	30.00	30	36	30.00
Low_3	2422	2.86	30.00	30	36	30.00
Mid_6	2437	2.86	30.00	30	36	30.00
High_9	2452	2.86	30.00	30	36	30.00
High_10	2457	2.86	30.00	30	36	30.00
High_11	2462	2.86	30.00	30	36	30.00
High_12	2467	2.86	30.00	30	36	30.00
High_13	2472	2.86	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low_1	2412	12.92	13.00	15.97	30.00	-14.03
Low_2	2417	15.91	15.99	18.96	30.00	-11.04
Low_3	2422	18.88	18.84	21.87	30.00	-8.13
Mid_6	2437	18.91	18.88	21.91	30.00	-8.09
High_9	2452	18.84	18.86	21.86	30.00	-8.14
High_10	2457	16.88	16.90	19.90	30.00	-10.10
High_11	2462	11.93	11.92	14.94	30.00	-15.06
High_12	2467	8.92	8.90	11.92	30.00	-18.08
High_13	2472	-0.02	0.00	3.00	30.00	-27.00

8.9.4. 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.

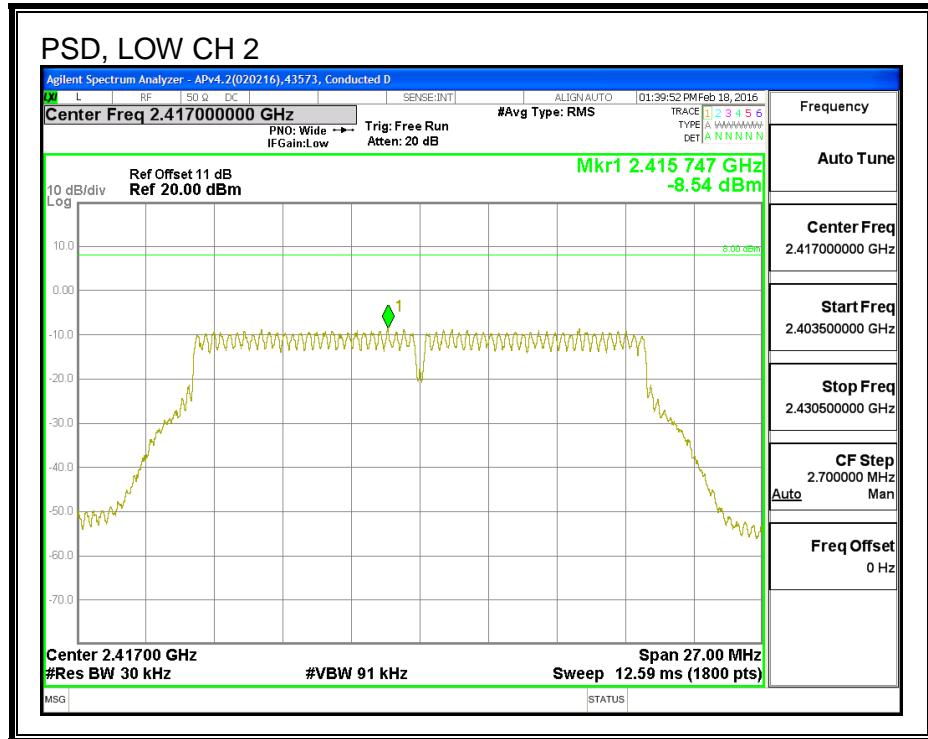
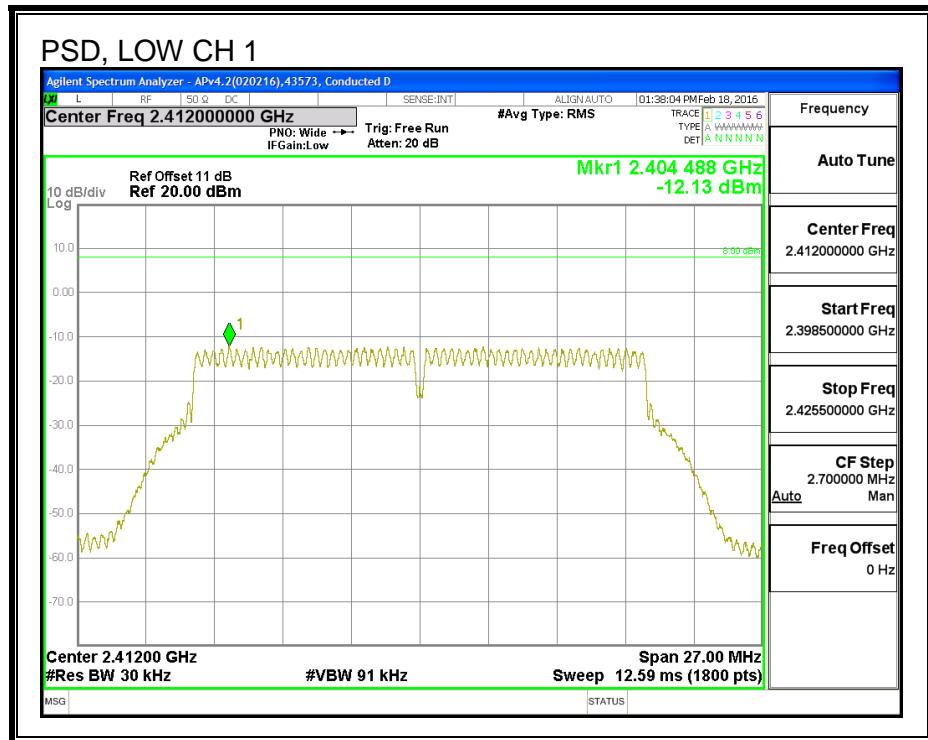
RESULTS

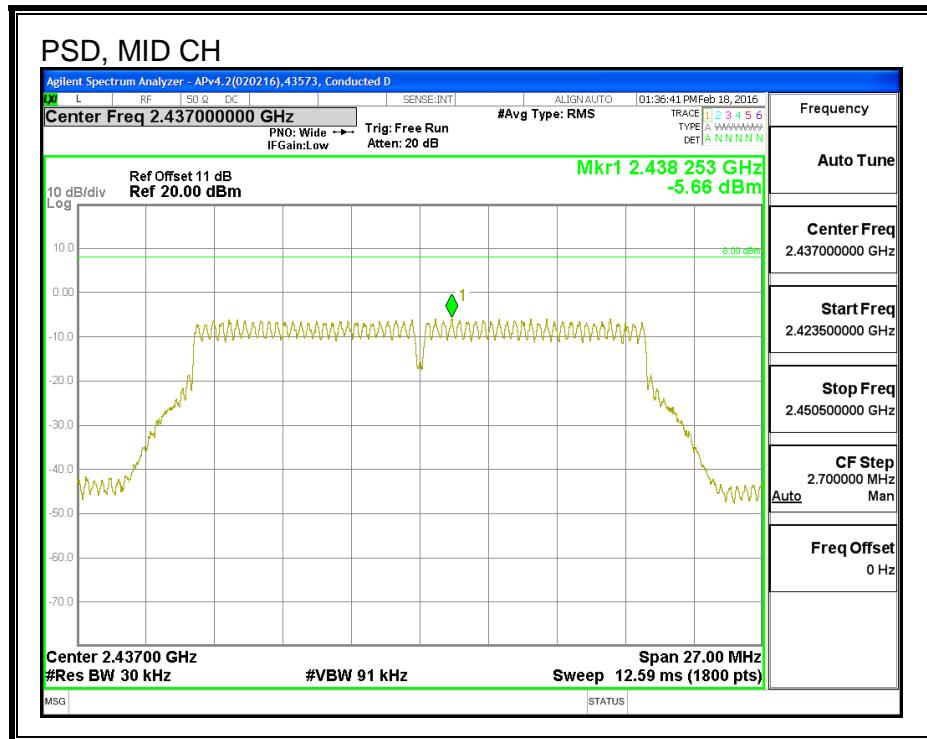
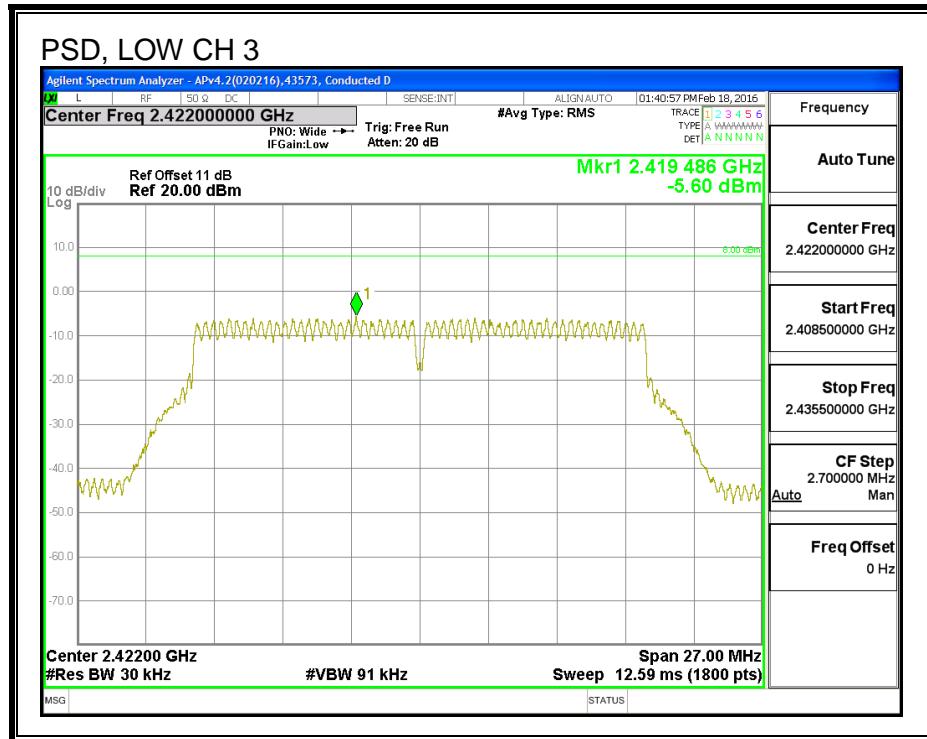
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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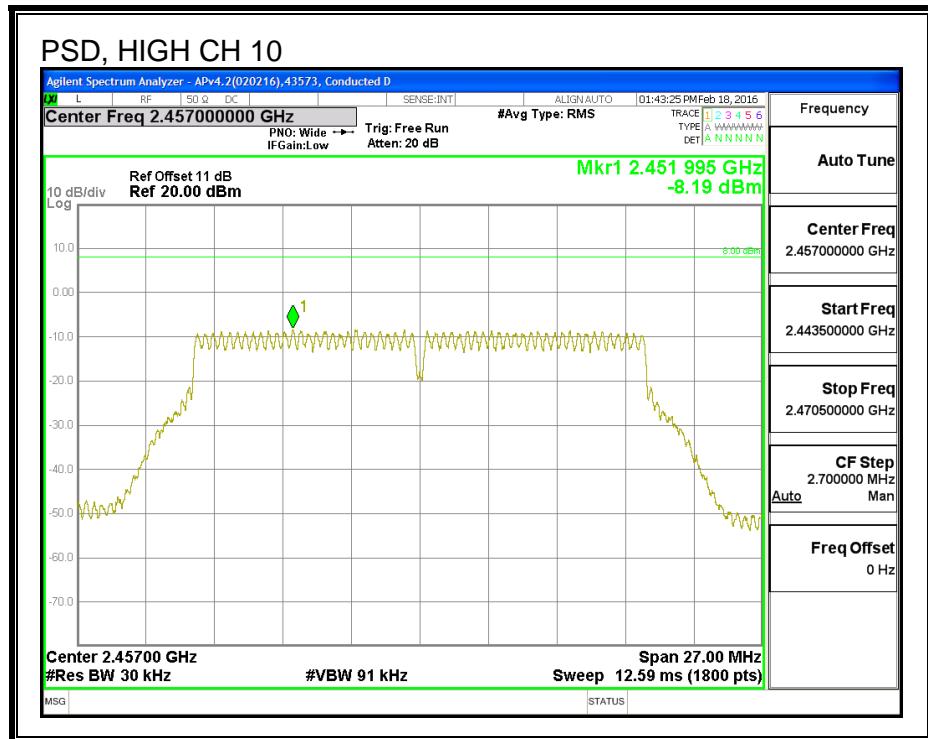
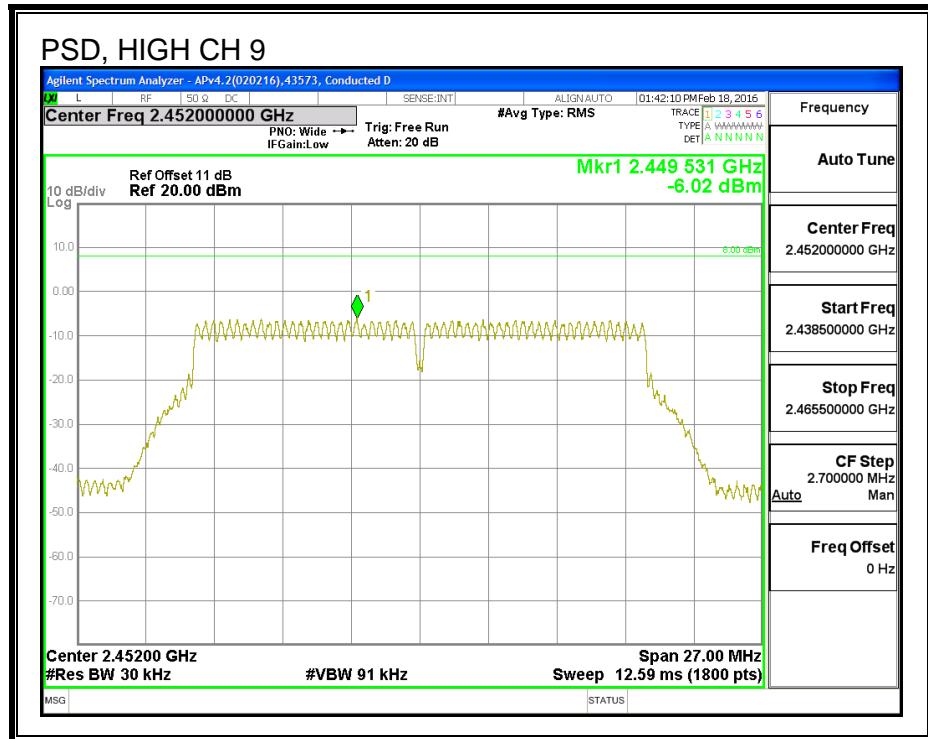
PSD Results

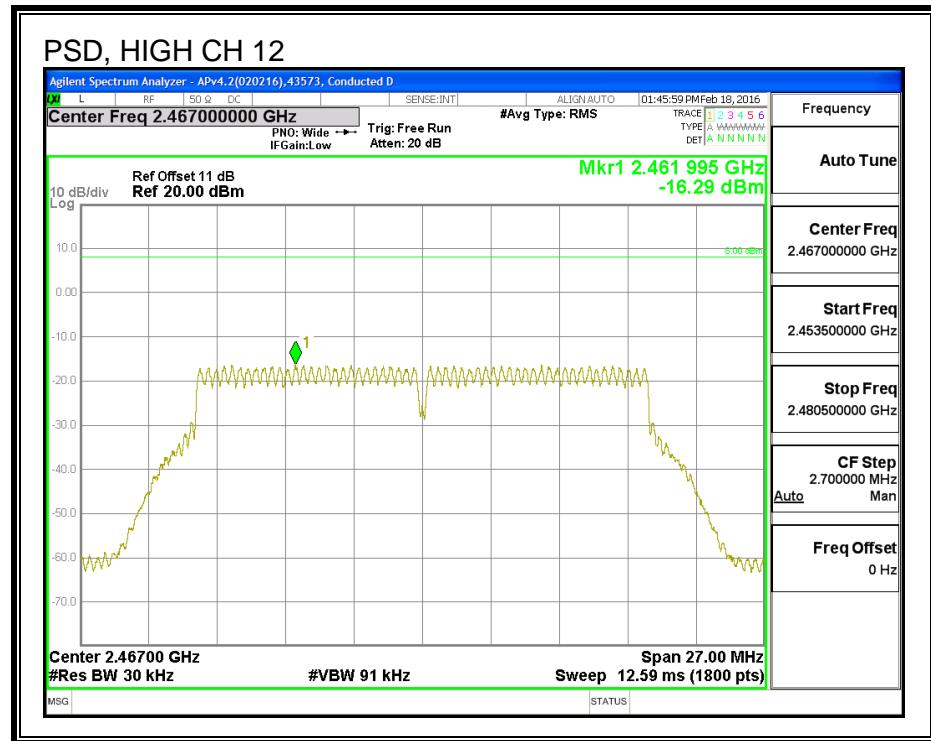
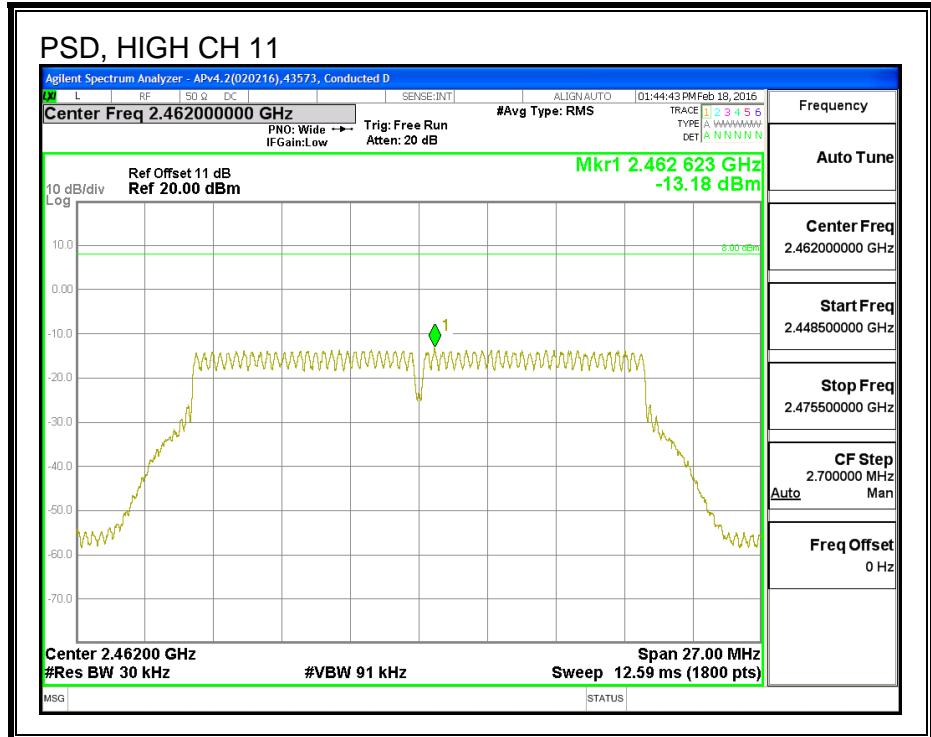
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-12.13	-12.21	-9.16	8.0	-17.2
Low_2	2417	-8.54	-9.11	-5.81	8.0	-13.8
Low_3	2422	-5.60	-6.50	-3.02	8.0	-11.0
Mid_6	2437	-5.66	-6.50	-3.05	8.0	-11.0
High_9	2452	-6.02	-6.04	-3.02	8.0	-11.0
High_10	2457	-8.19	-8.45	-5.31	8.0	-13.3
High_11	2462	-13.18	-14.07	-10.59	8.0	-18.6
High_12	2467	-16.29	-16.99	-13.62	8.0	-21.6
High_13	2472	-24.73	-24.29	-21.49	8.0	-29.5

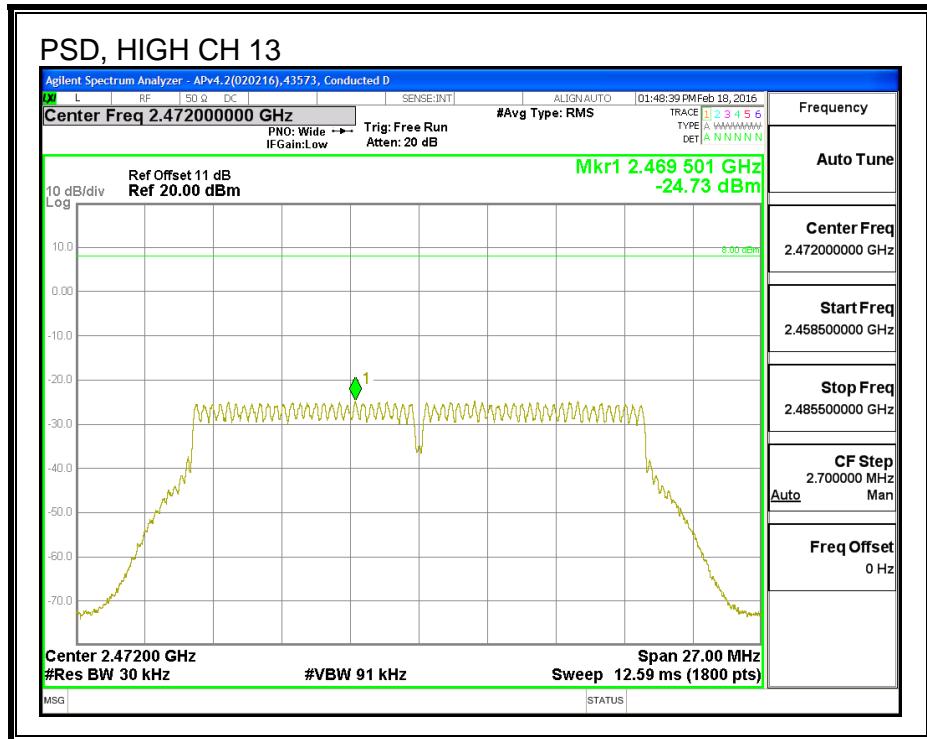
PSD, Chain 0



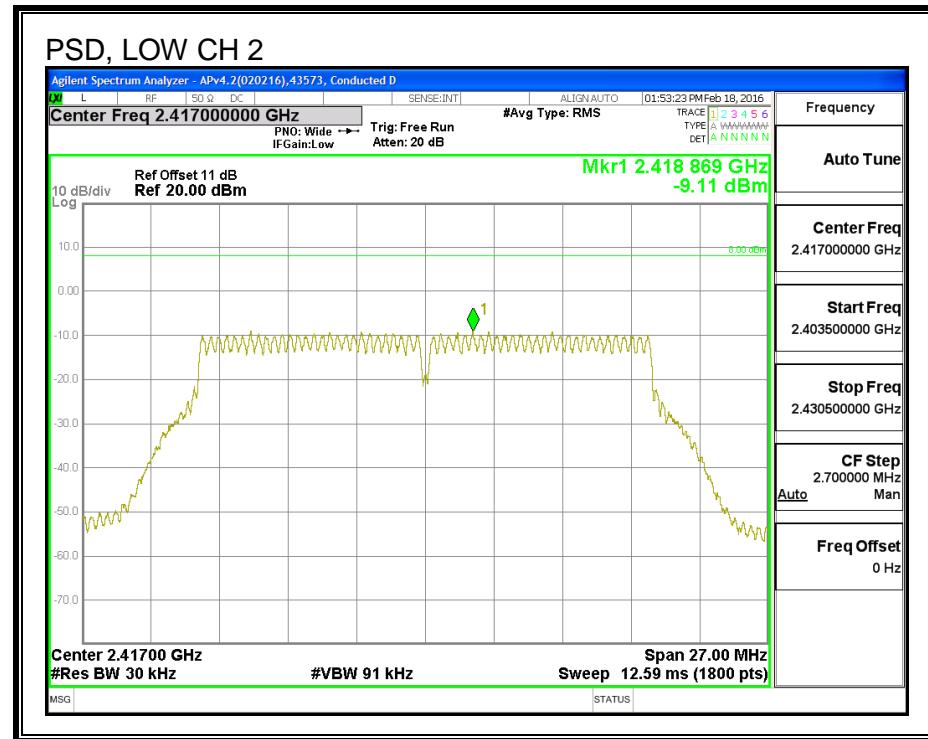
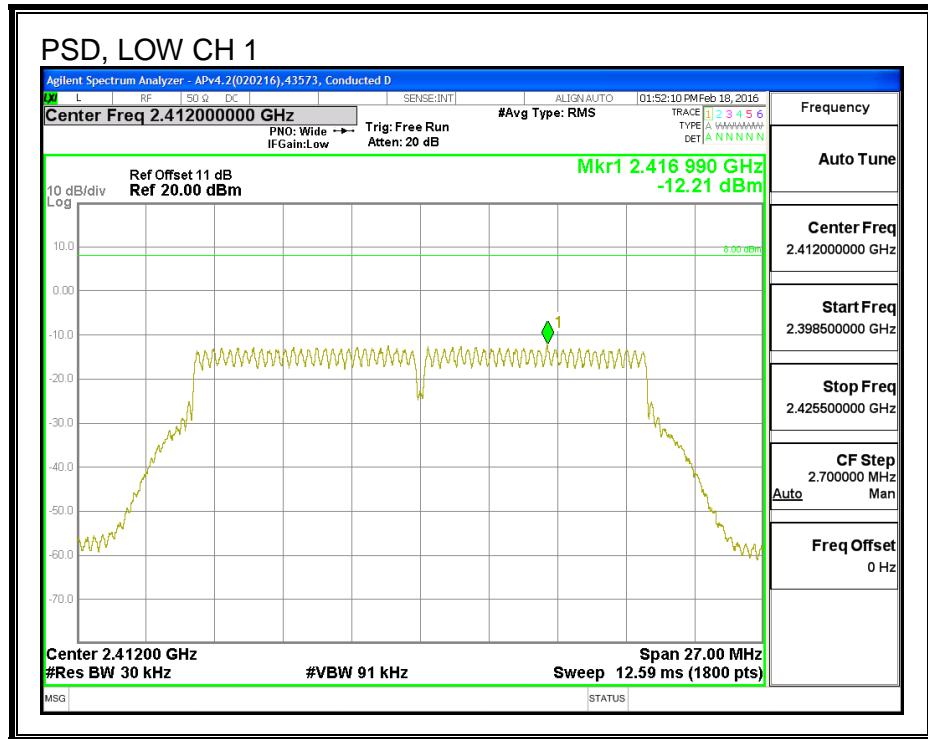


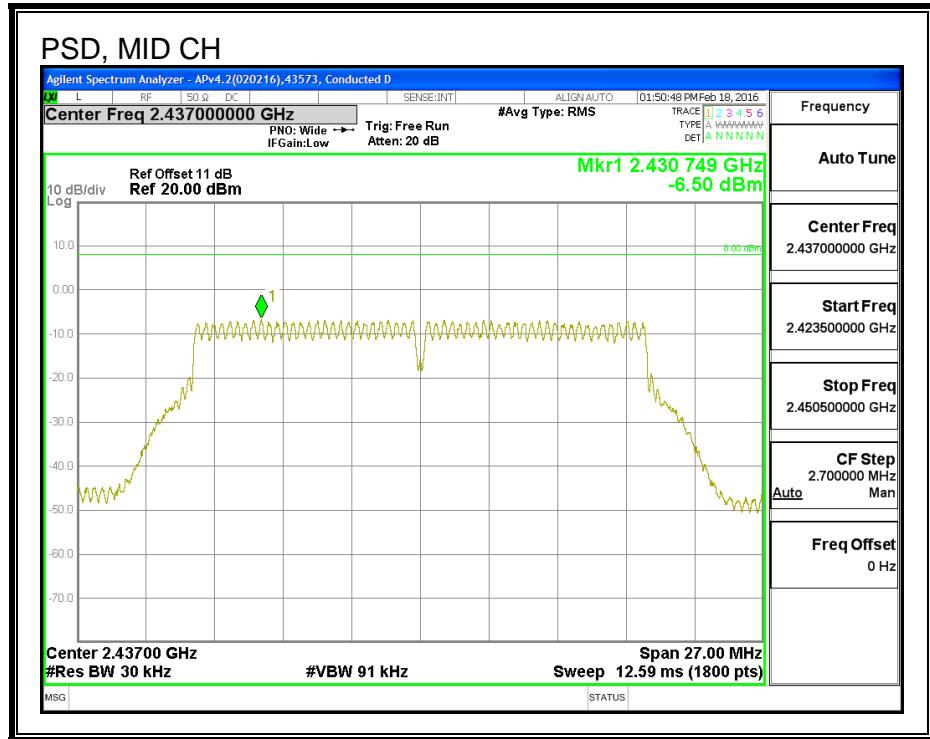
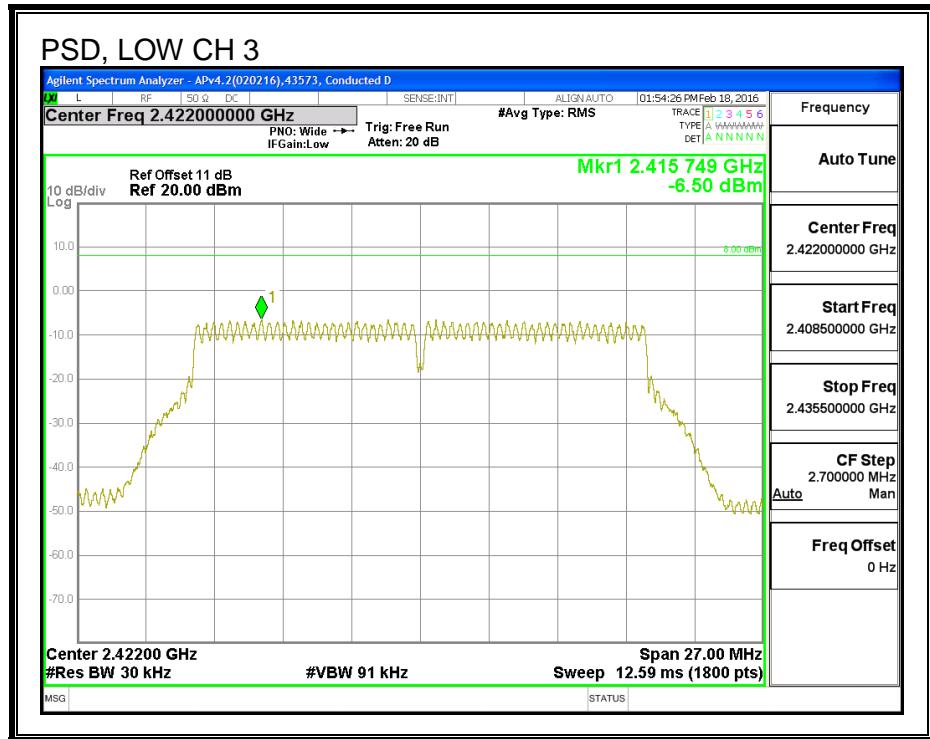


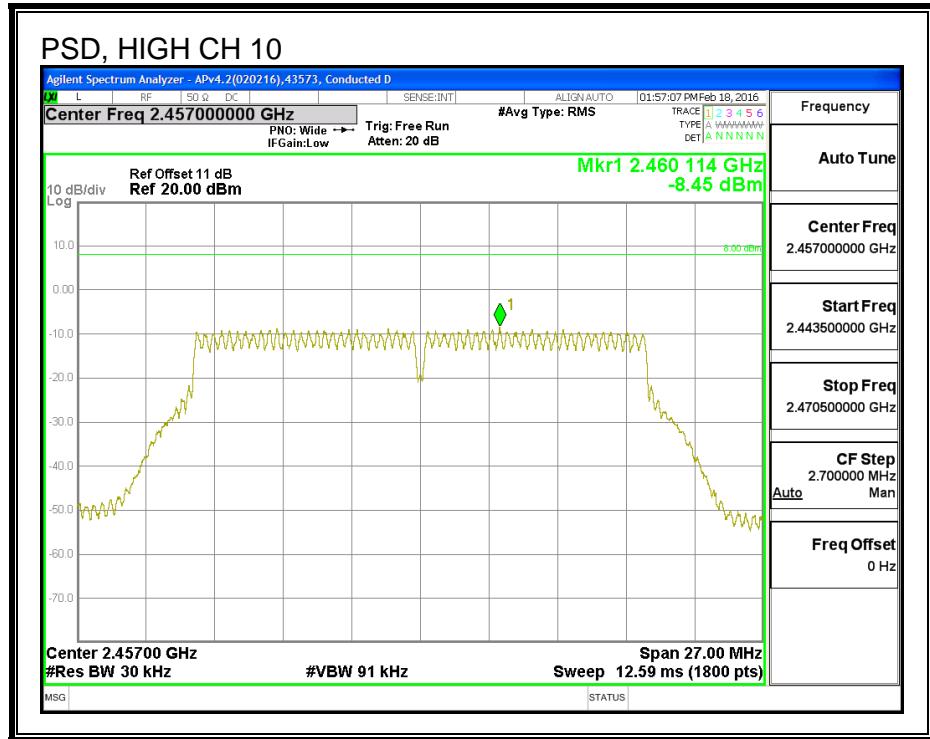
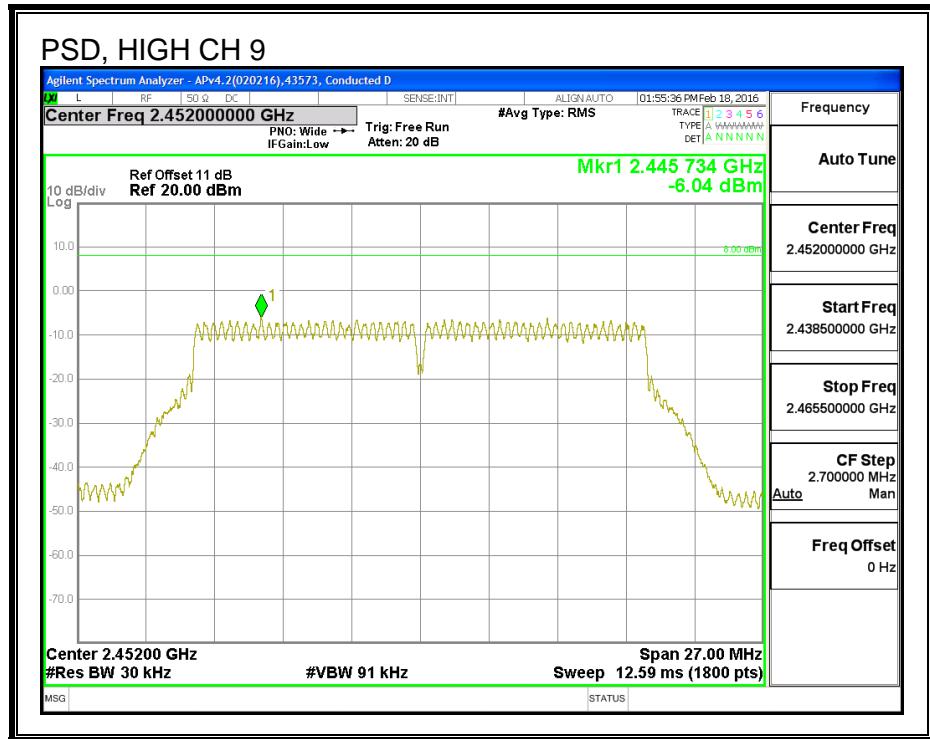


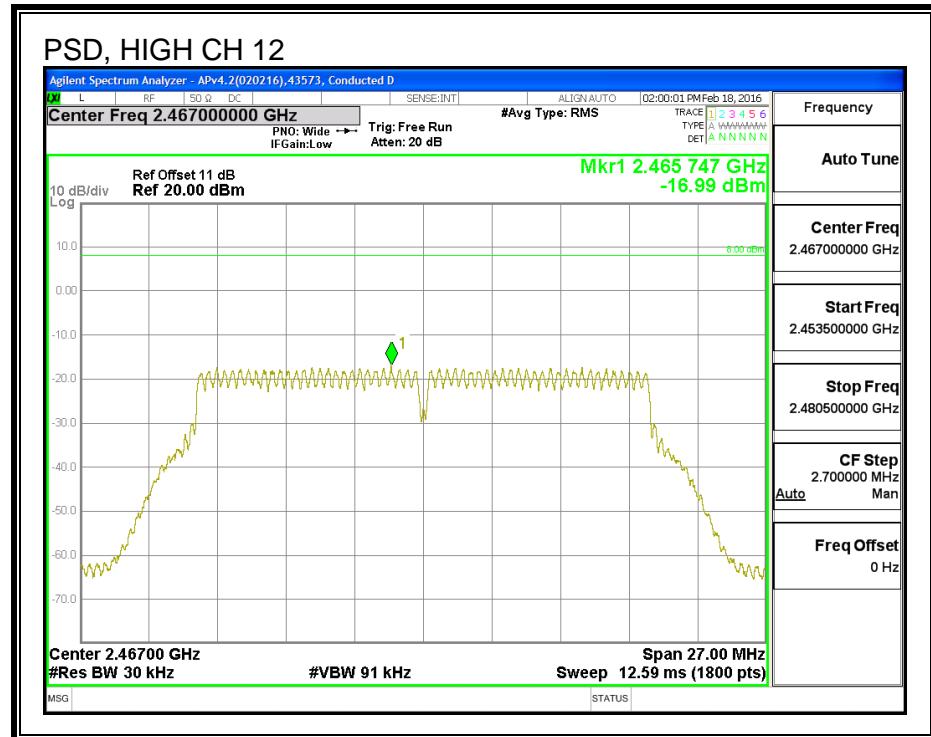
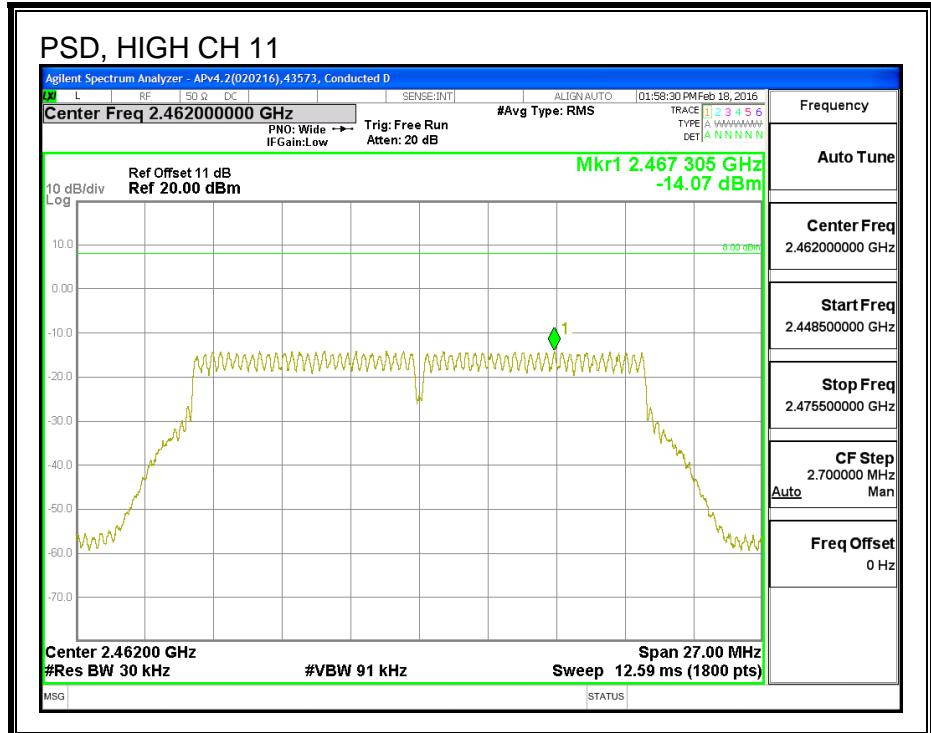


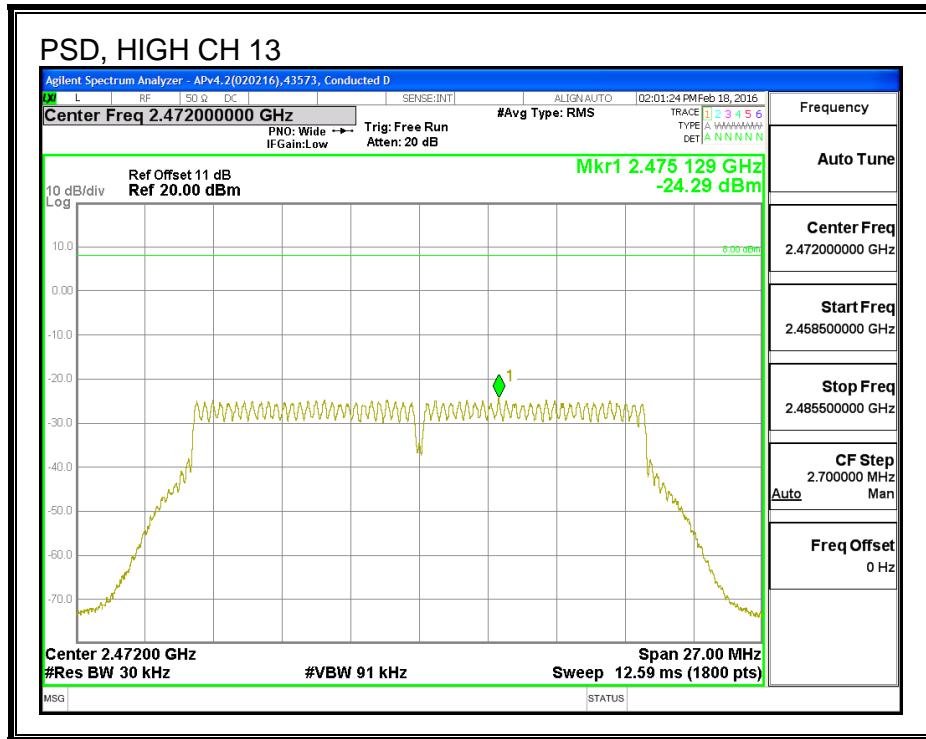
PSD, Chain 1











8.9.5. OUT-OF-BAND EMISSIONS

LIMITS

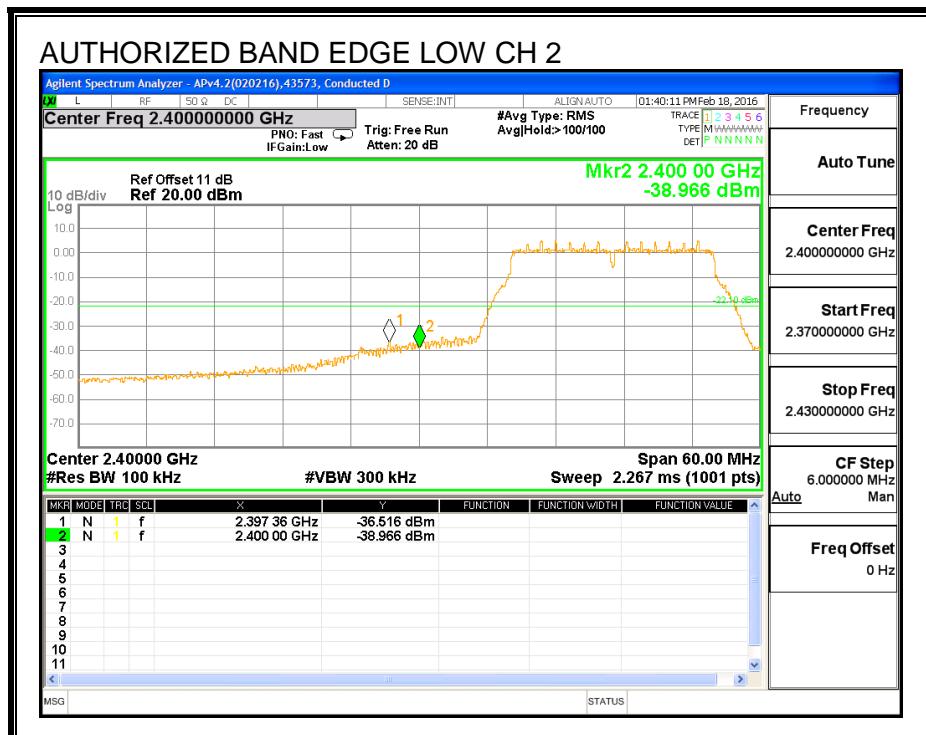
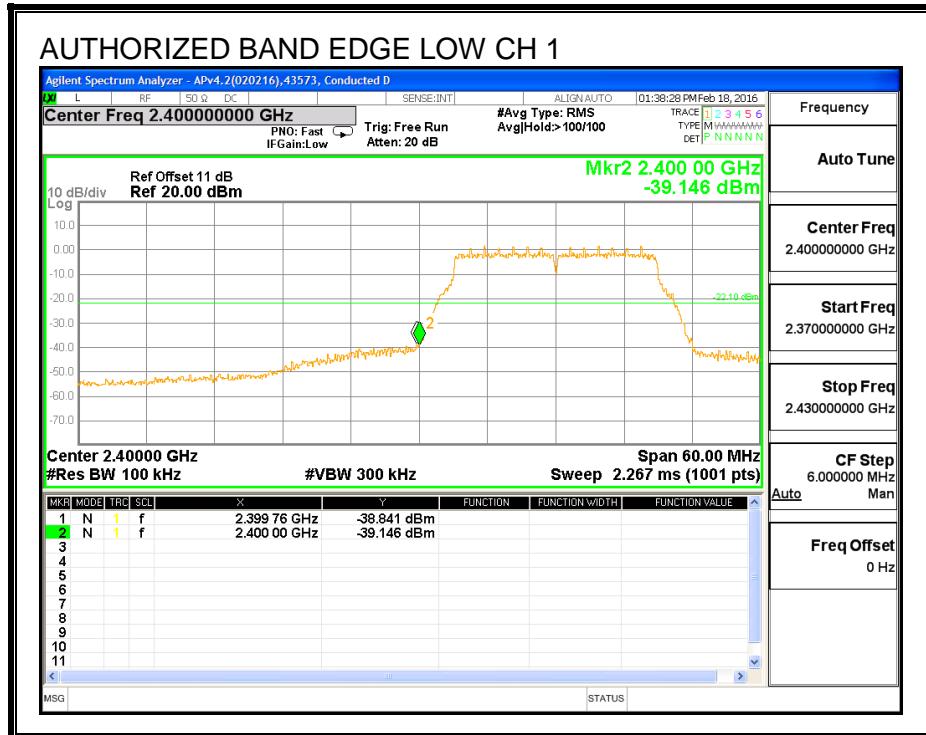
FCC §15.247 (d)

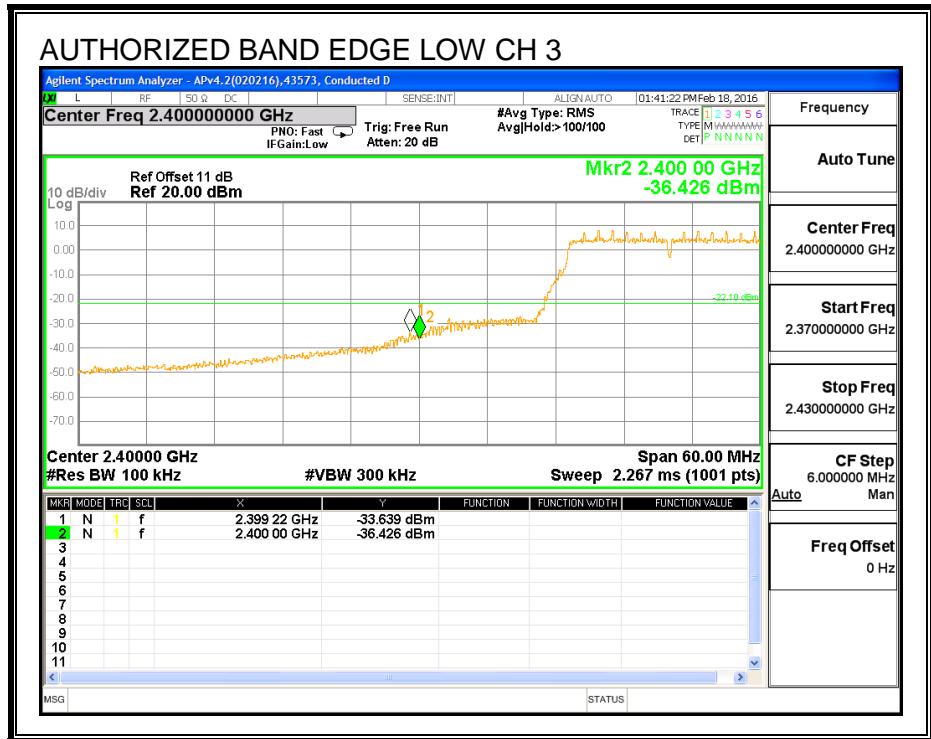
IC RSS-247 (5.5)

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.

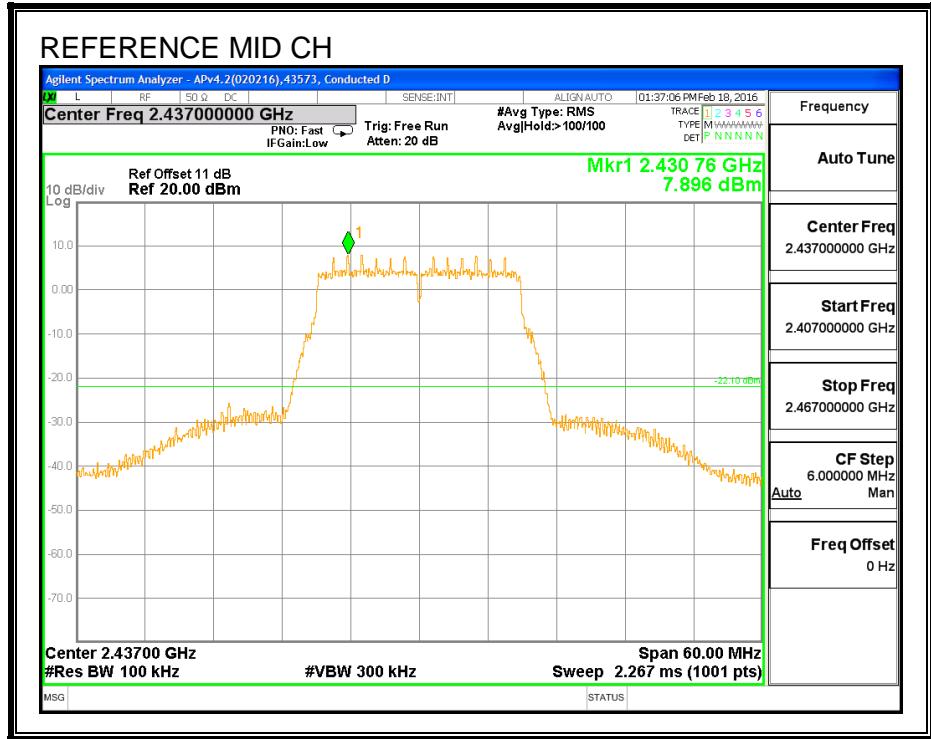
RESULTS

LOW CHANNEL BANDEDGE, Chain 0

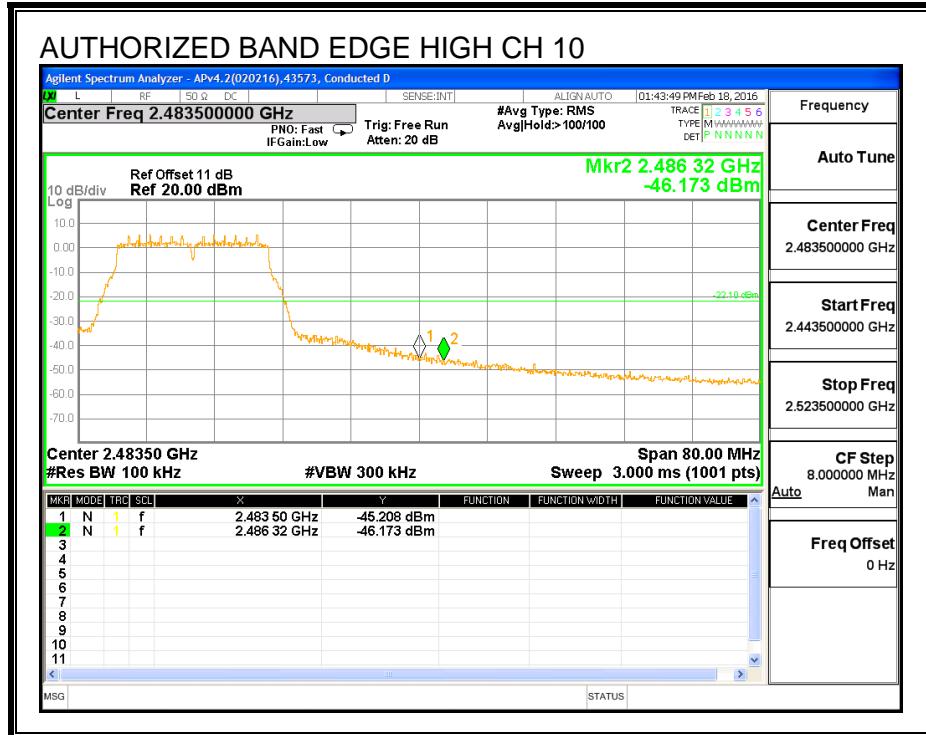
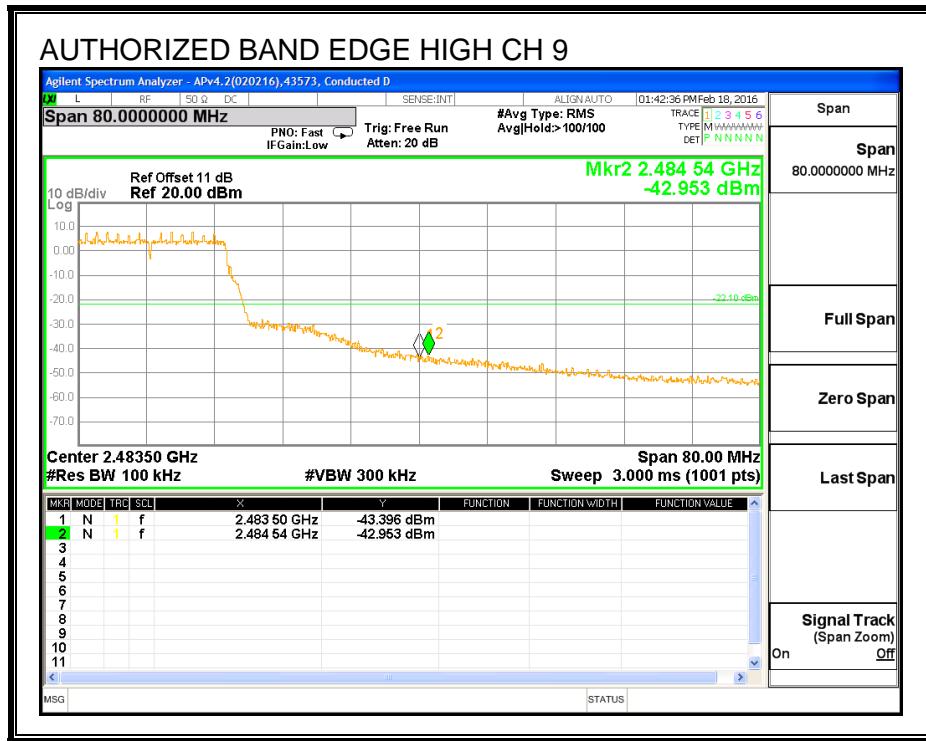


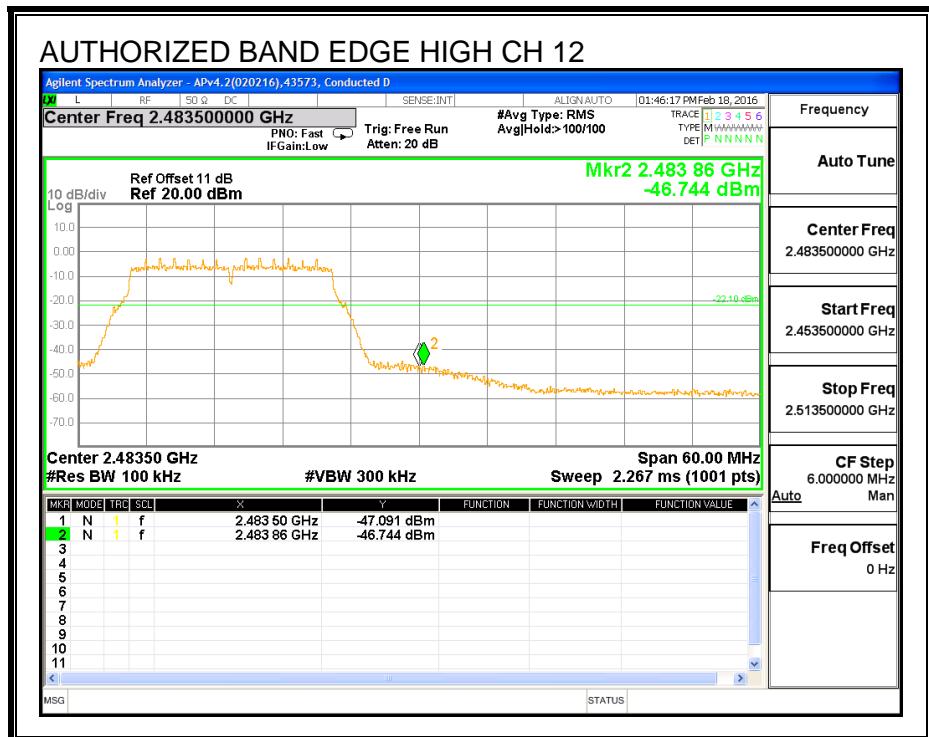
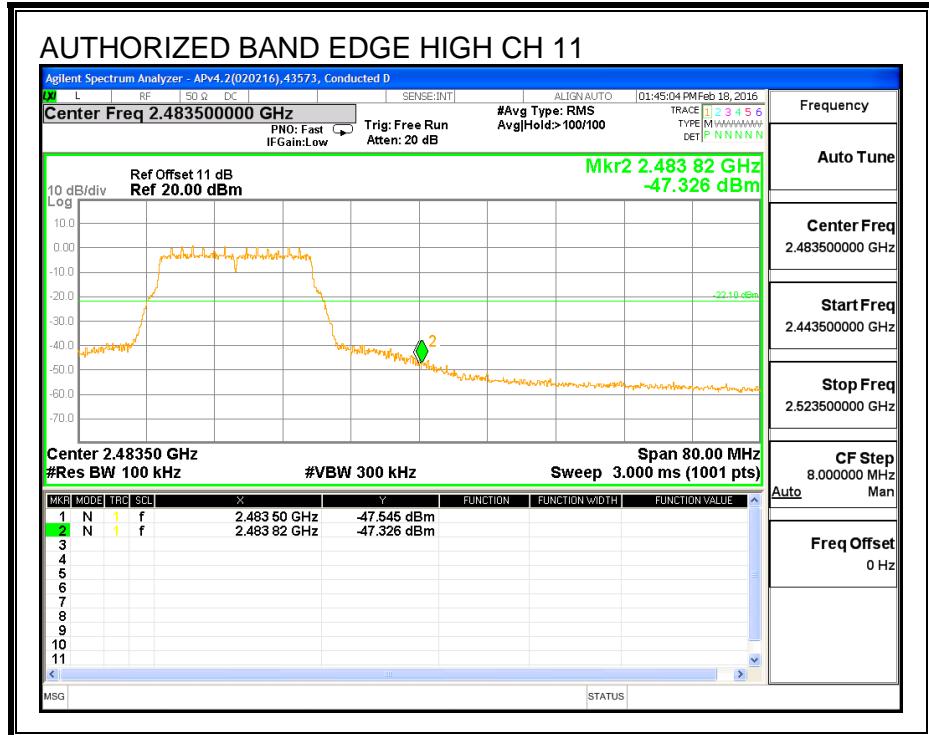


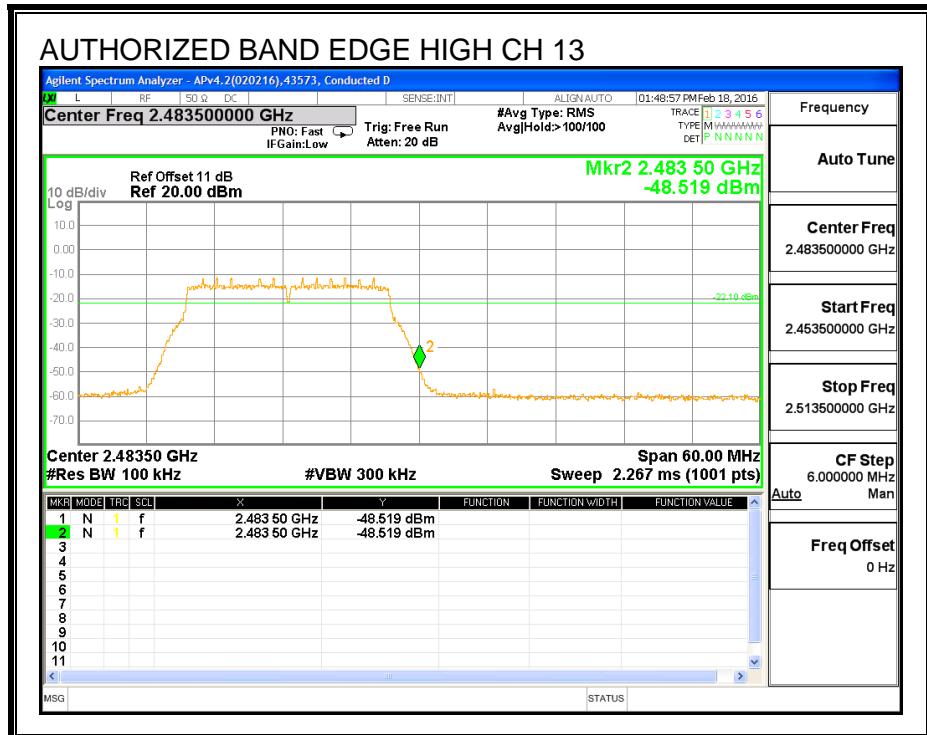
MID CHANNEL REFERENCE, Chain 0



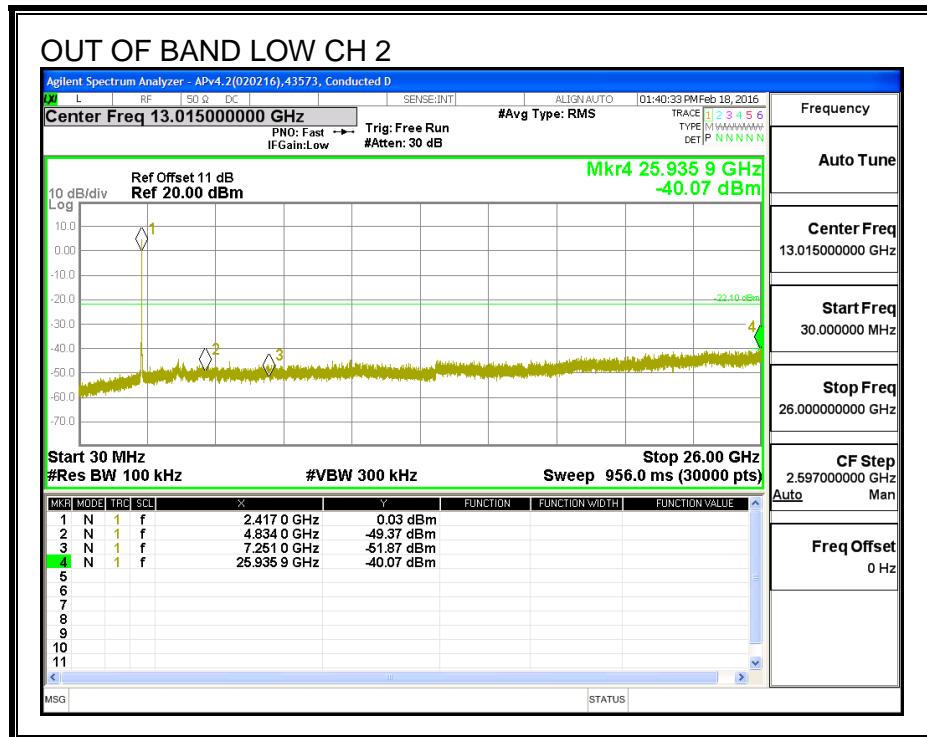
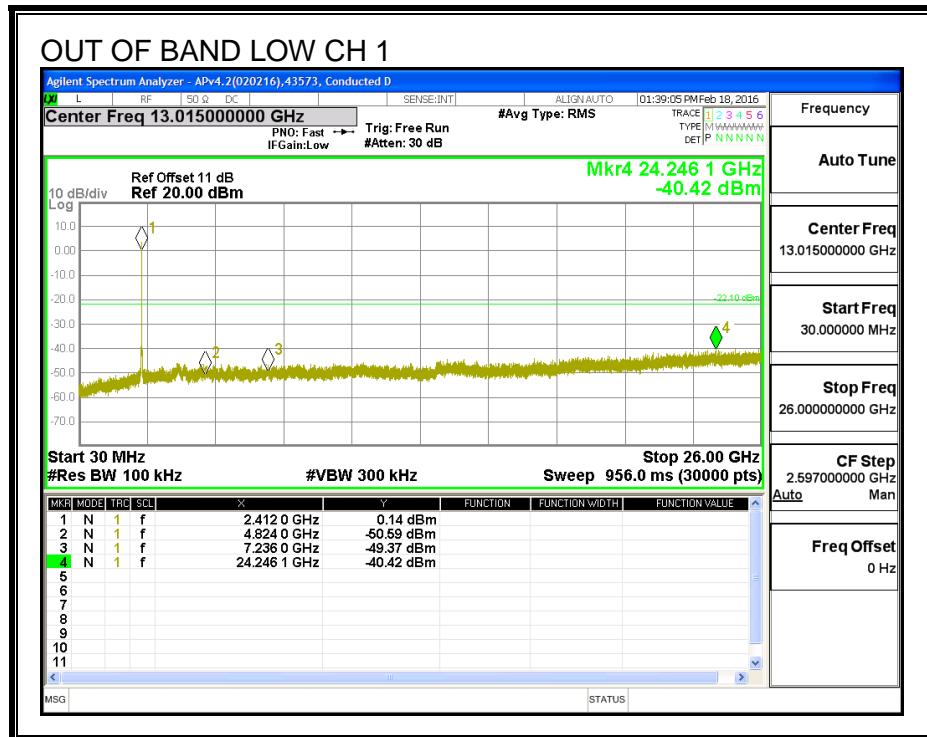
HIGH CHANNEL BANDEDGE, Chain 0

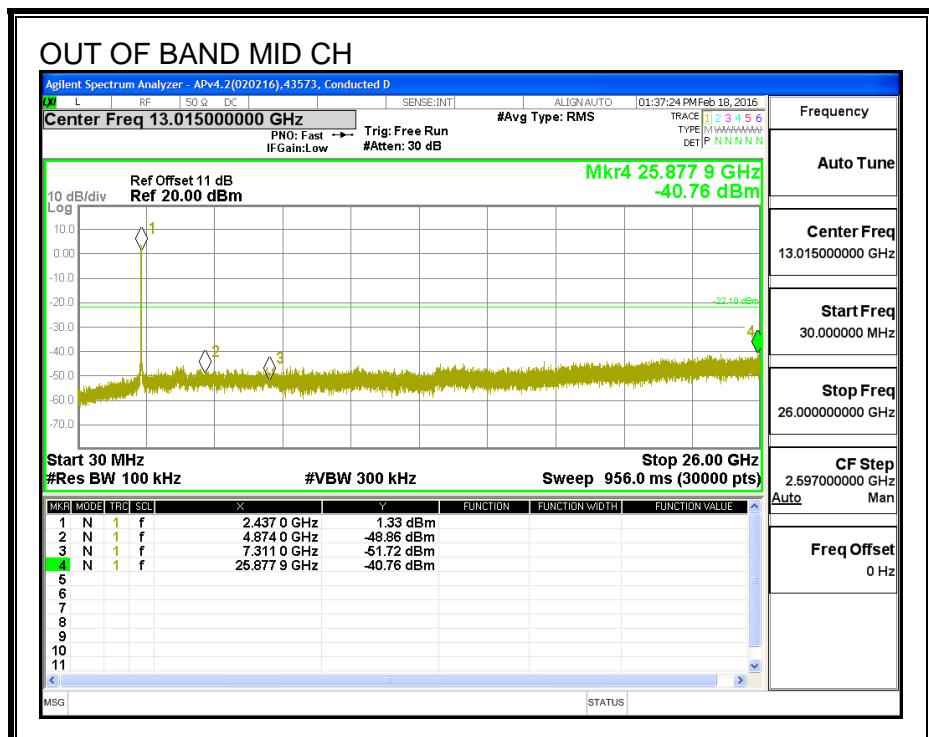
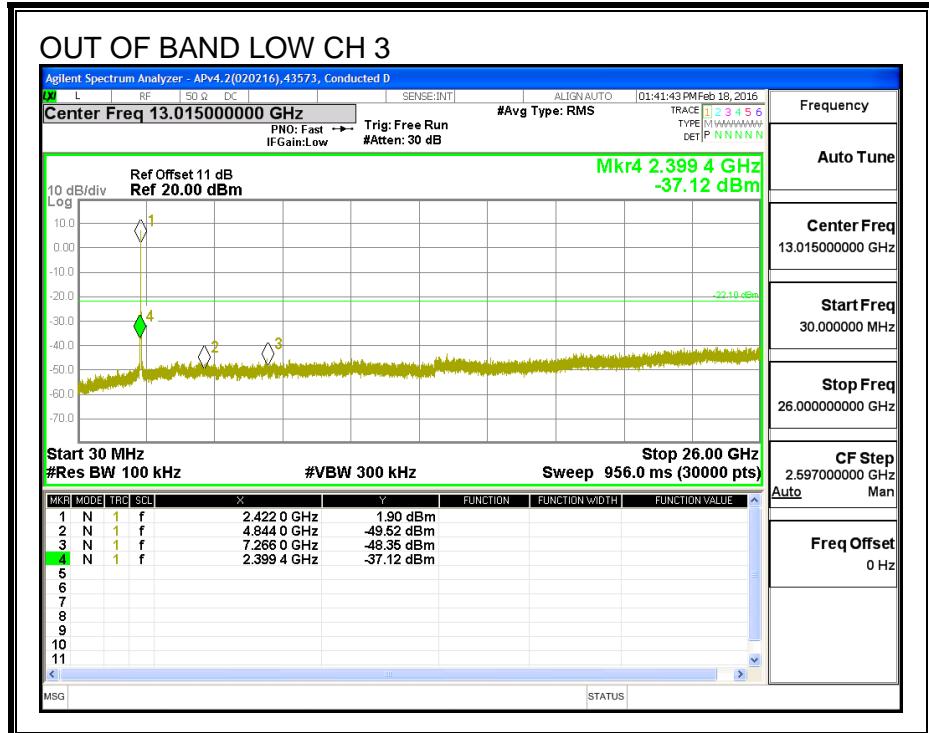


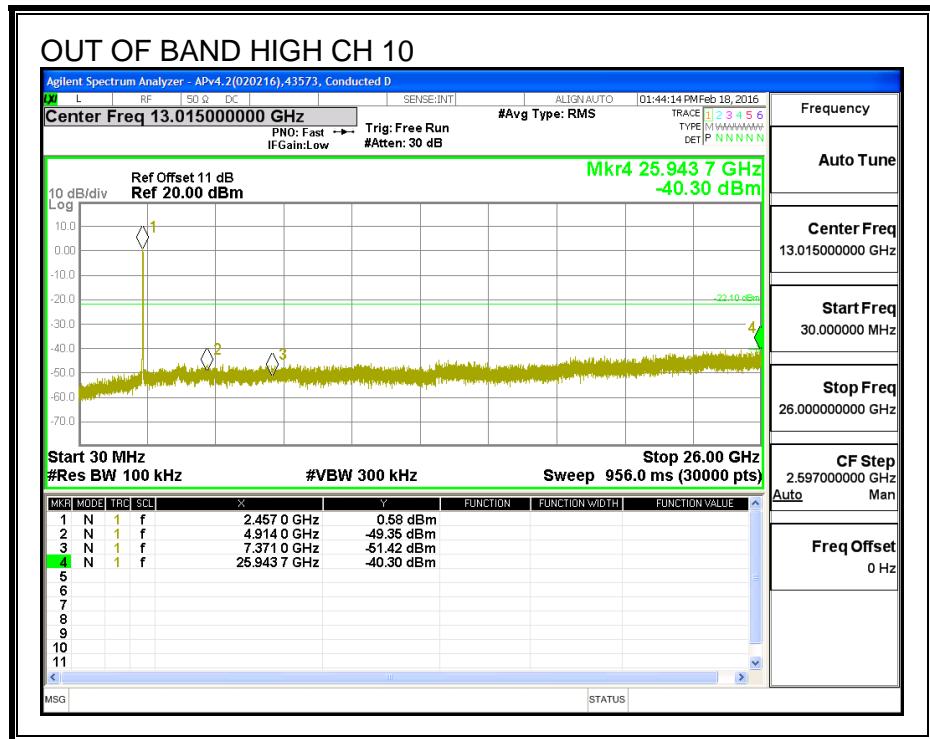
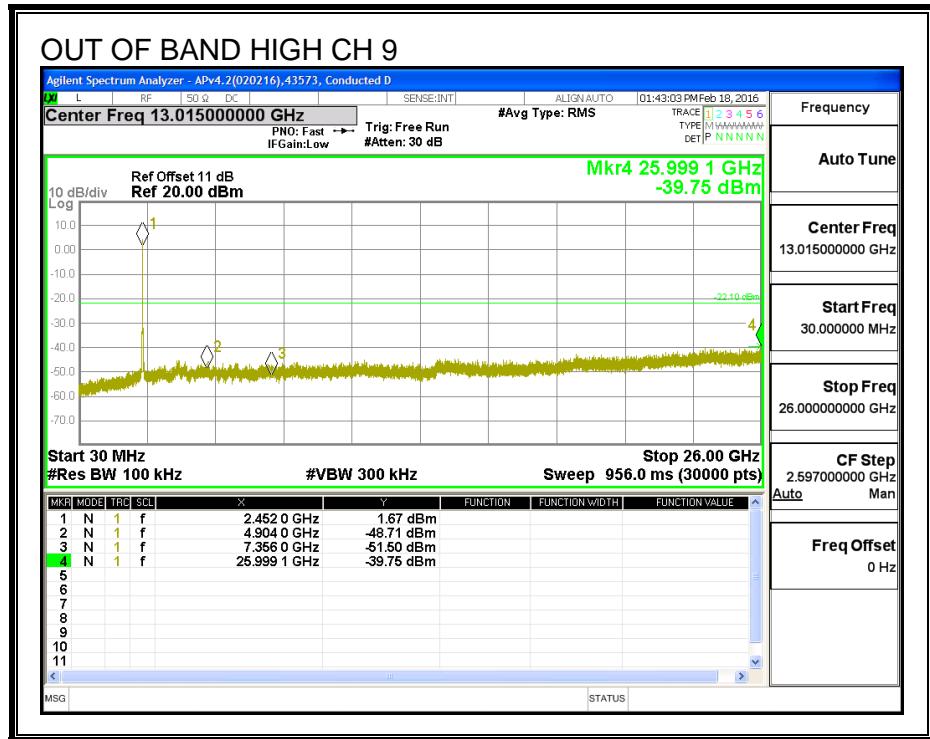


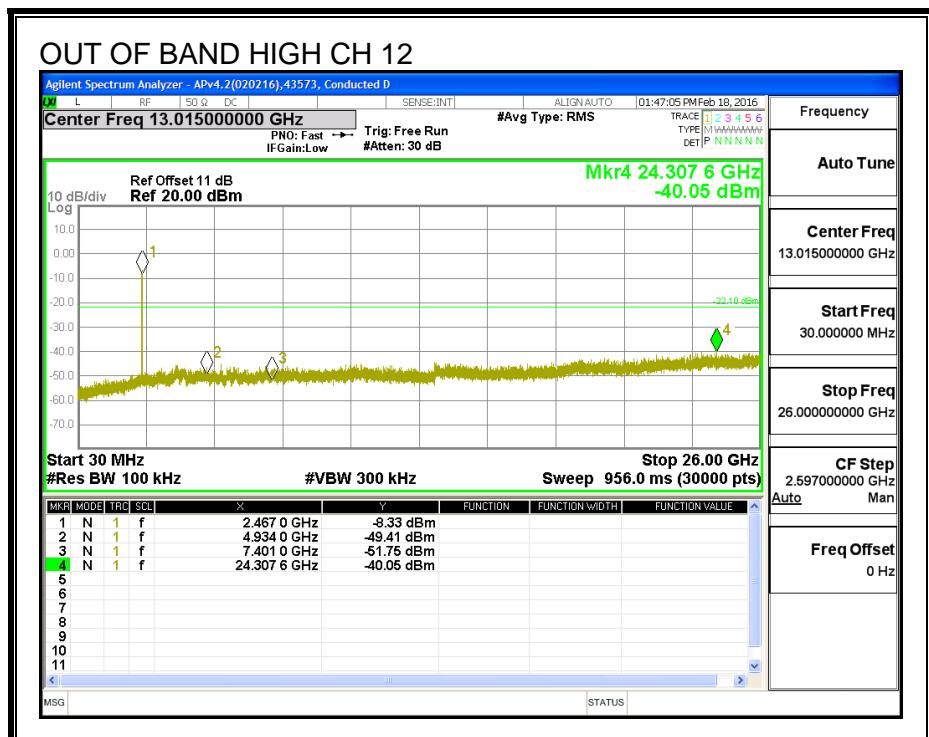
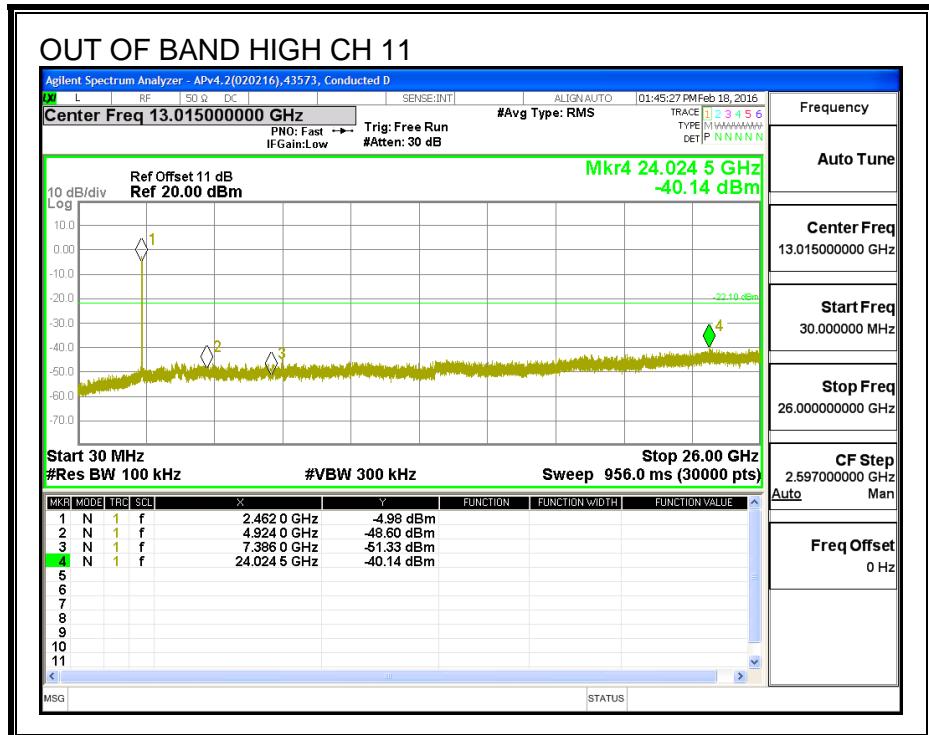


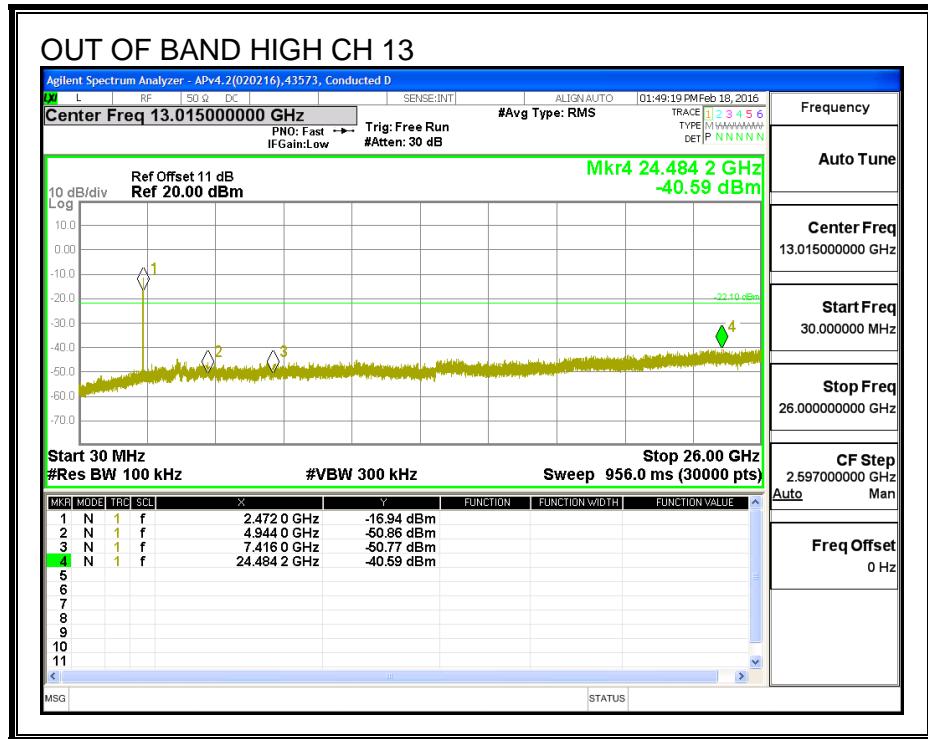
OUT-OF-BAND EMISSIONS, Chain 0



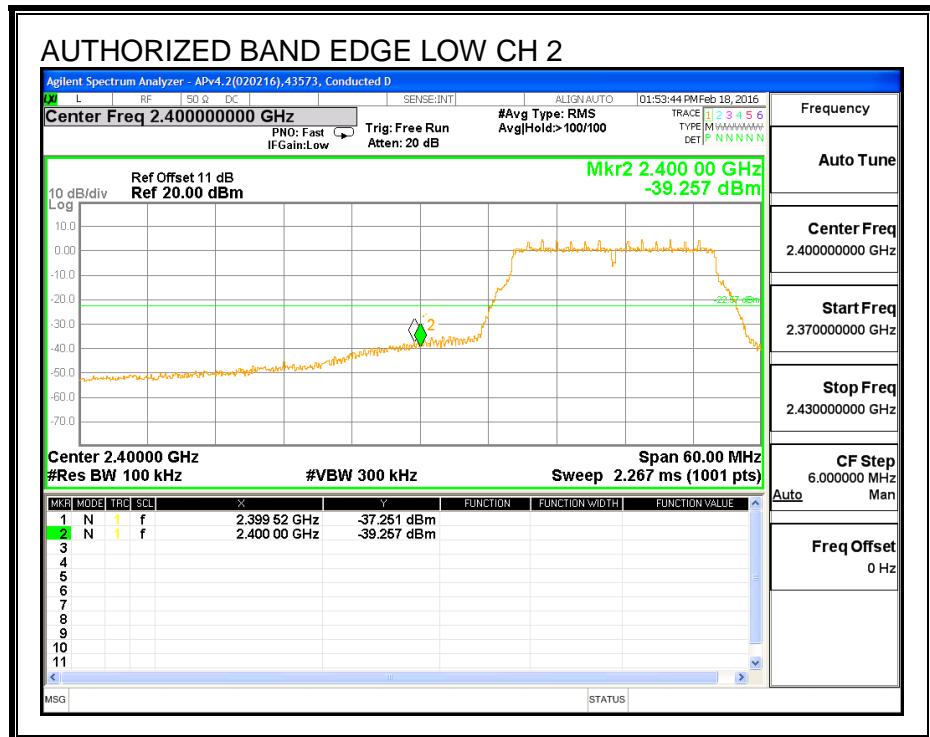
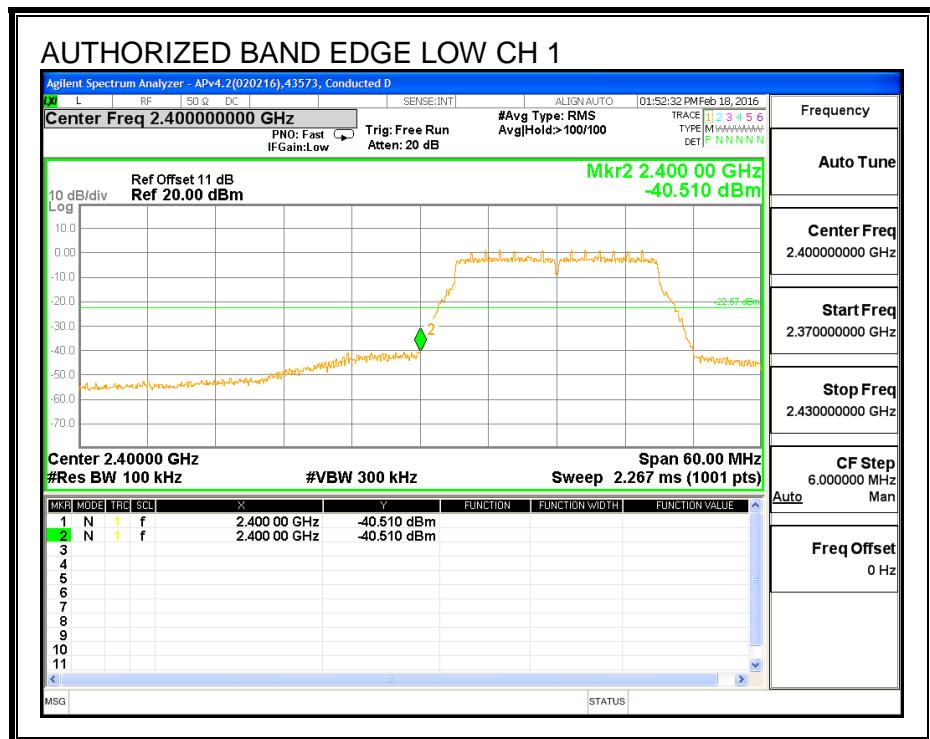


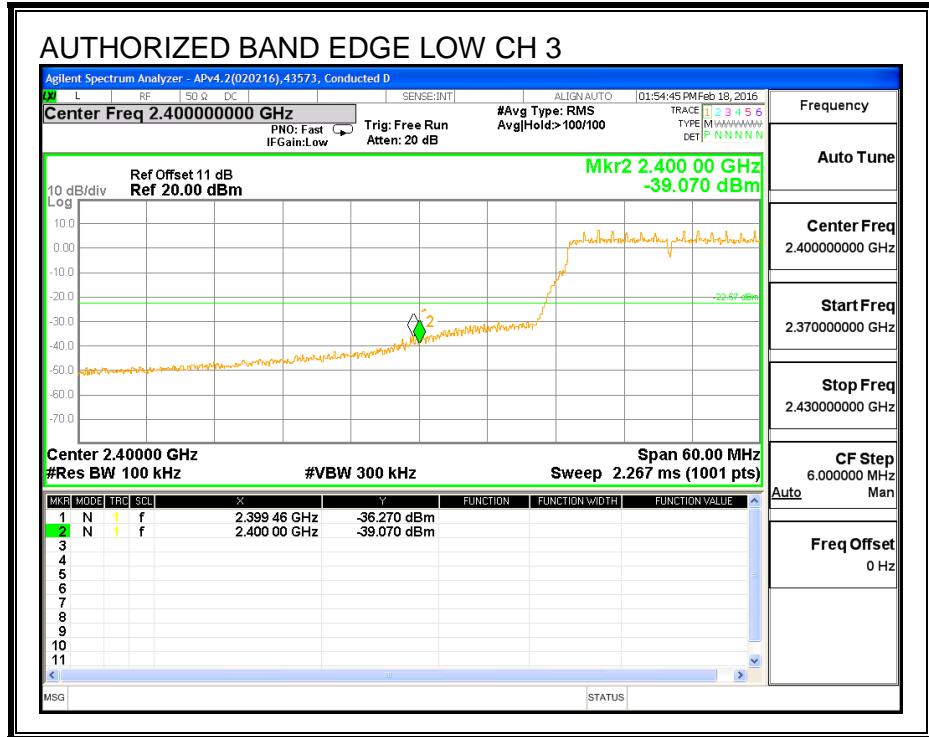




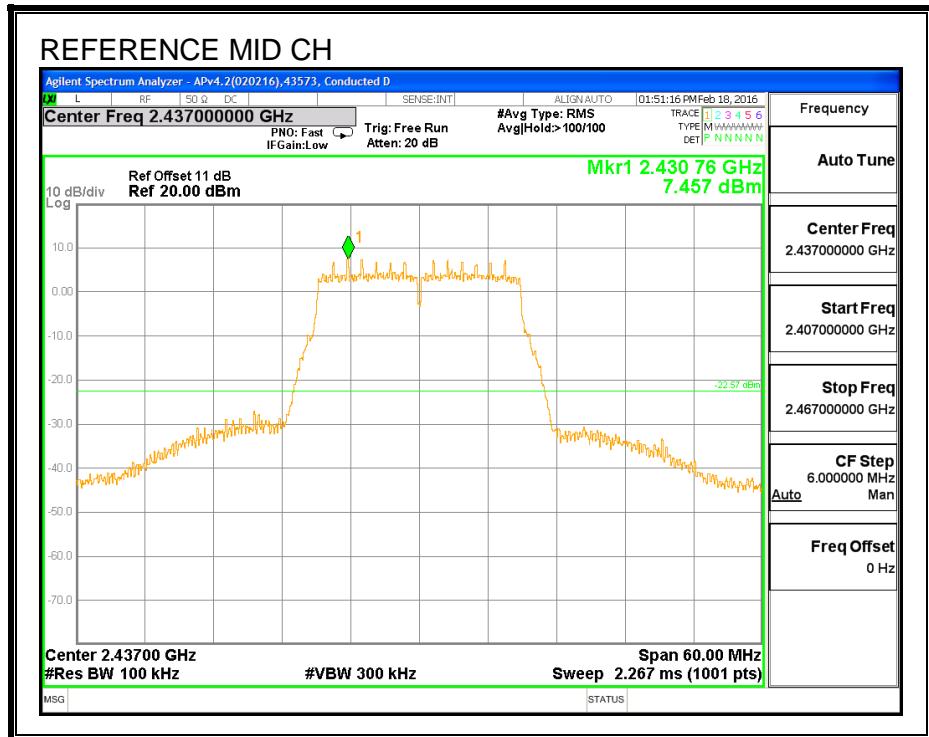


LOW CHANNEL BANDEDGE, Chain 1

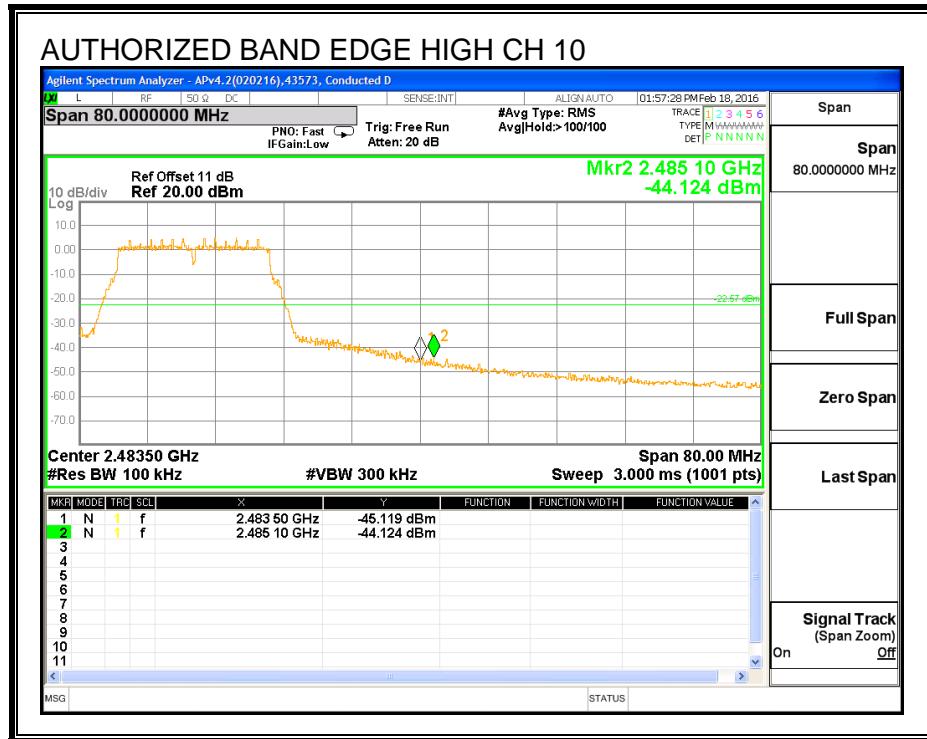
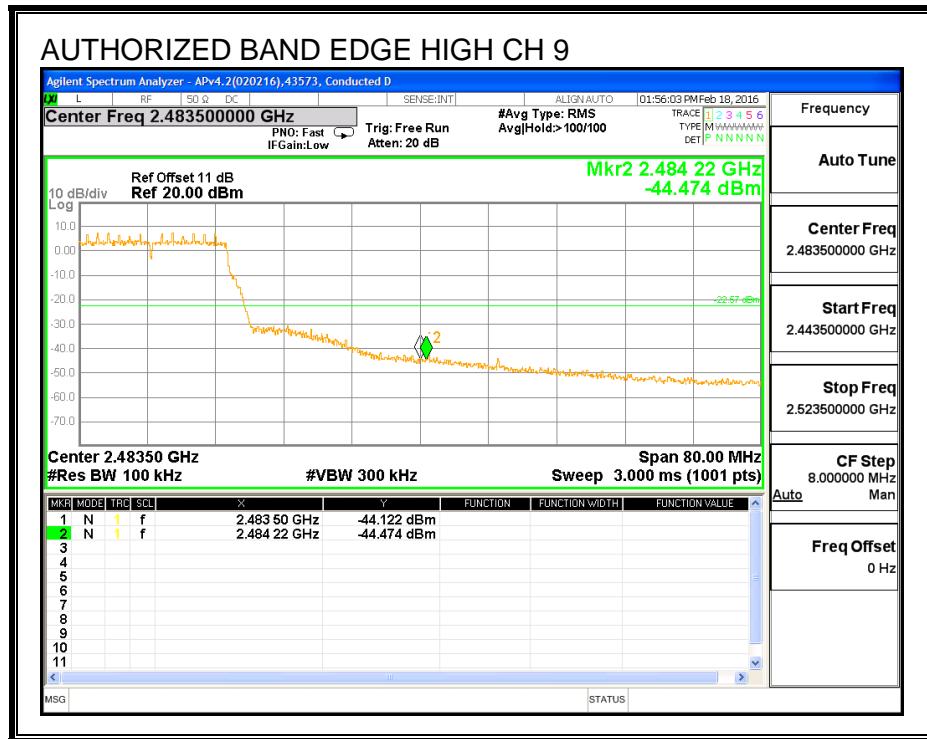


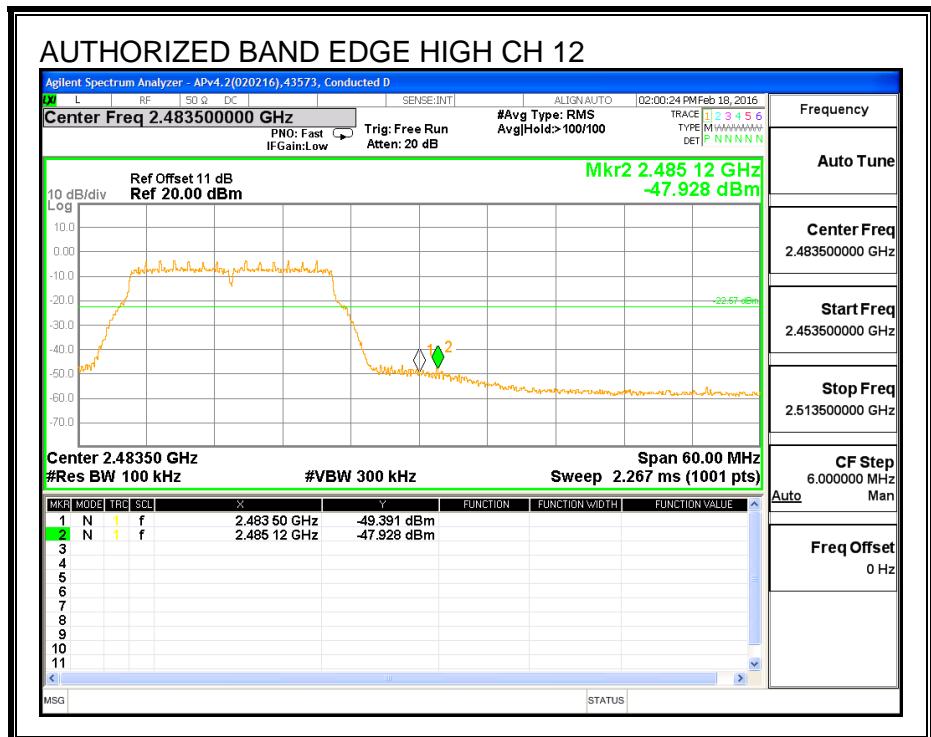
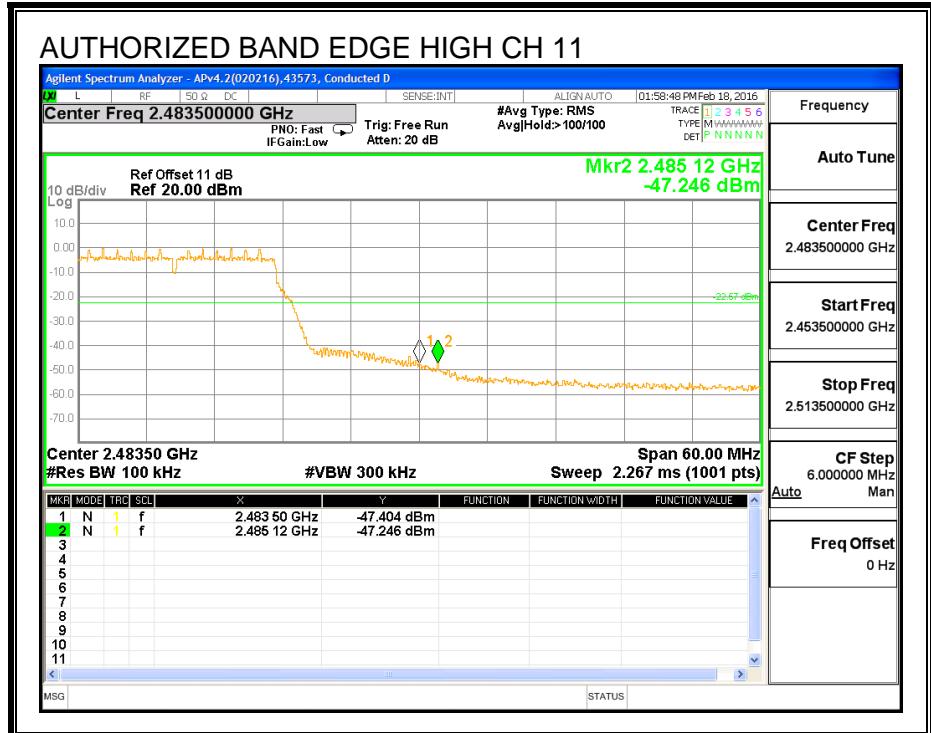


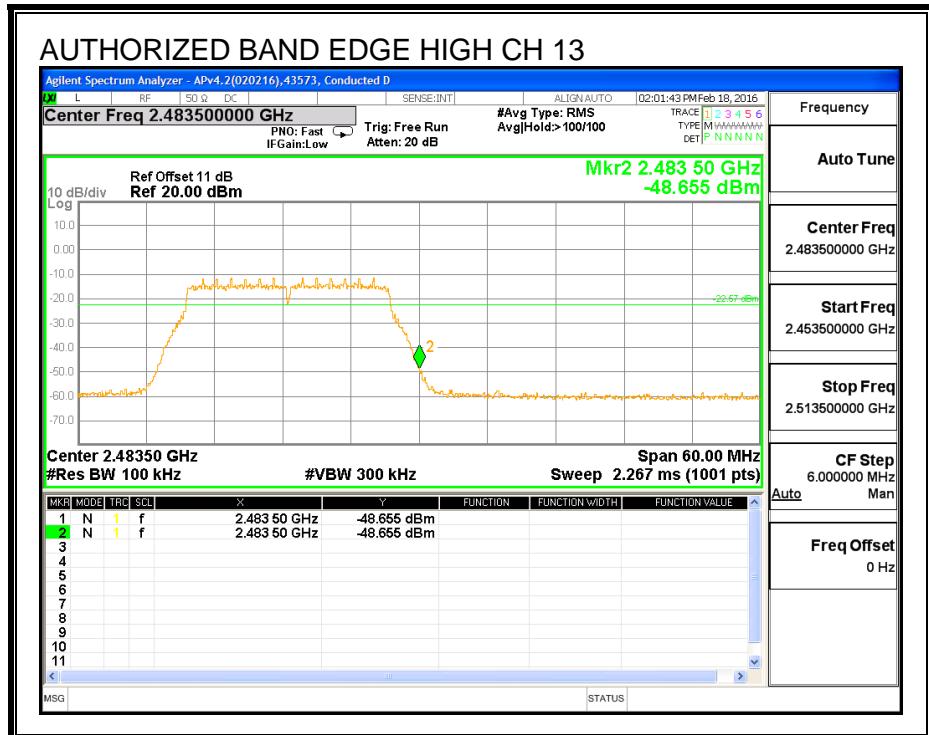
MID CHANNEL REFERENCE, Chain 1



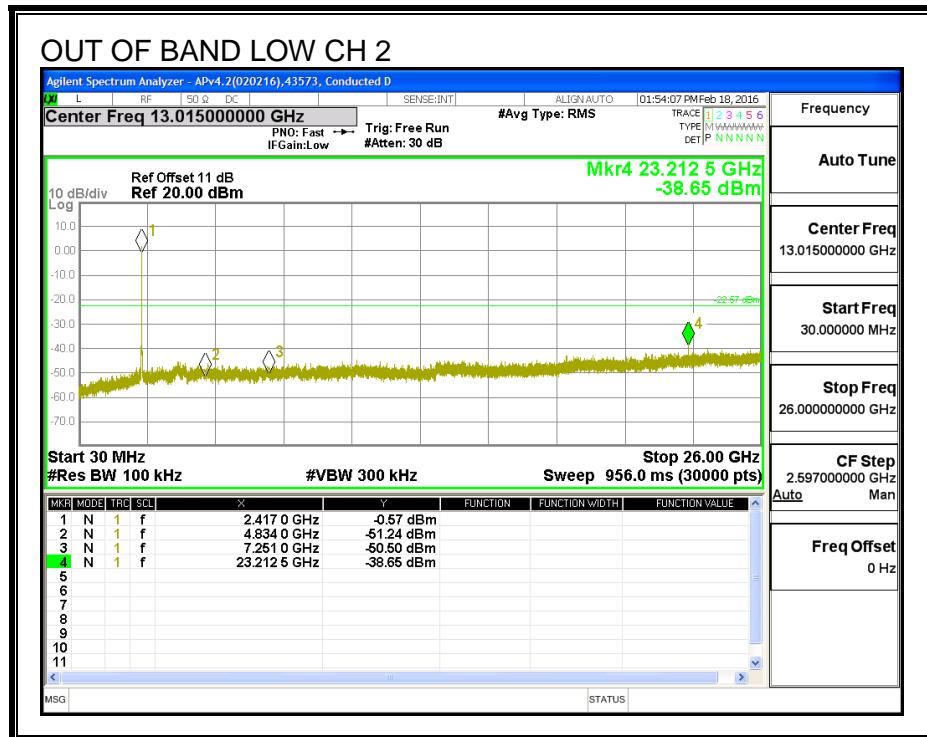
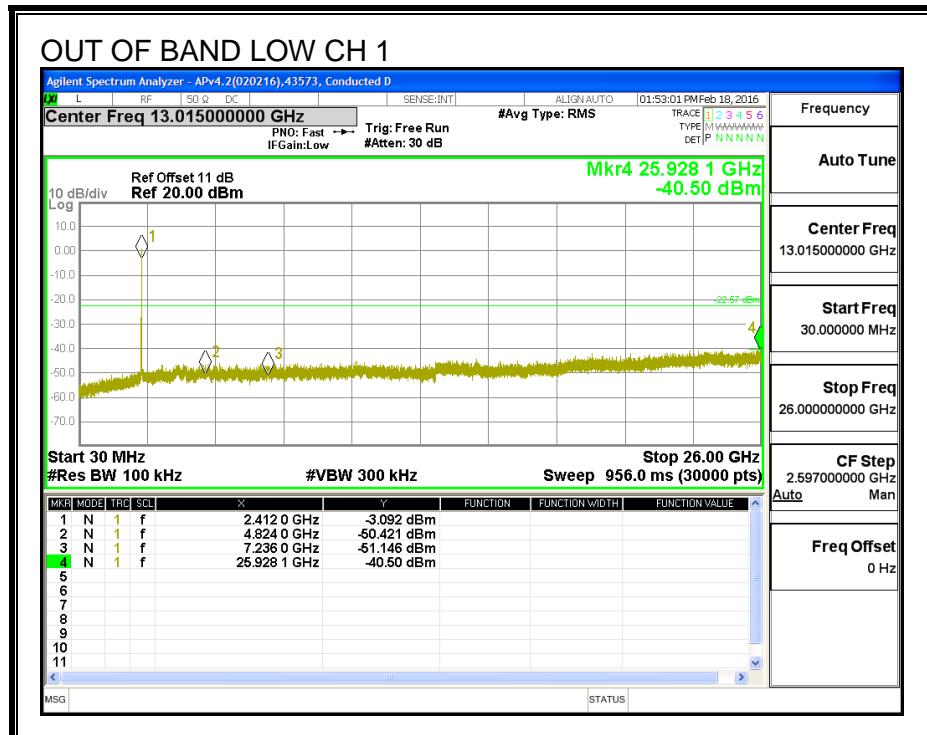
HIGH CHANNEL BANDEDGE, Chain 1

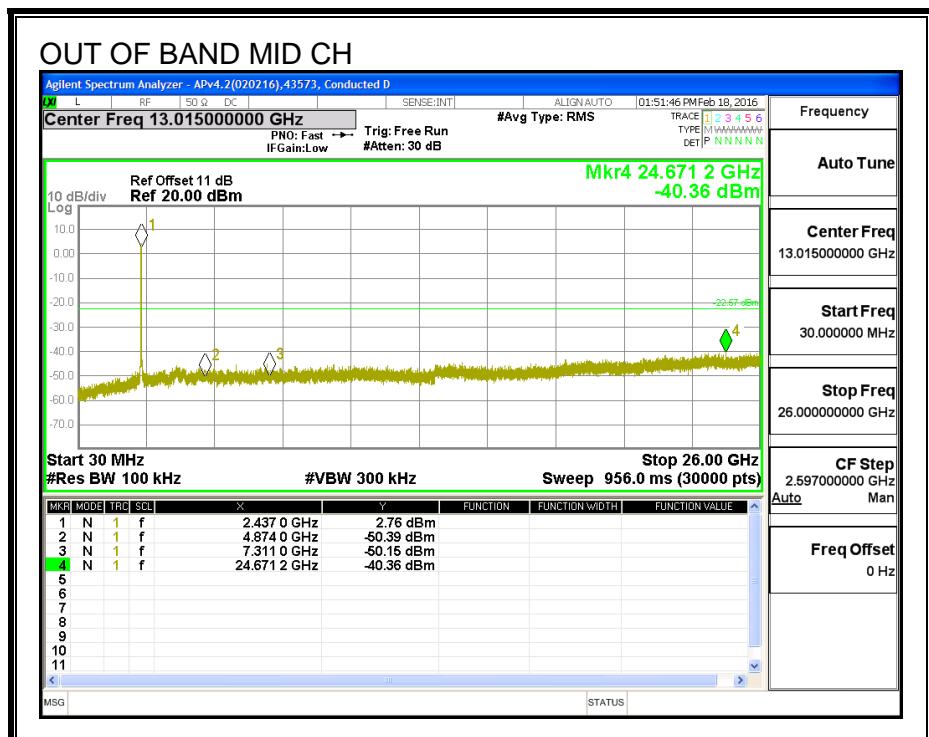
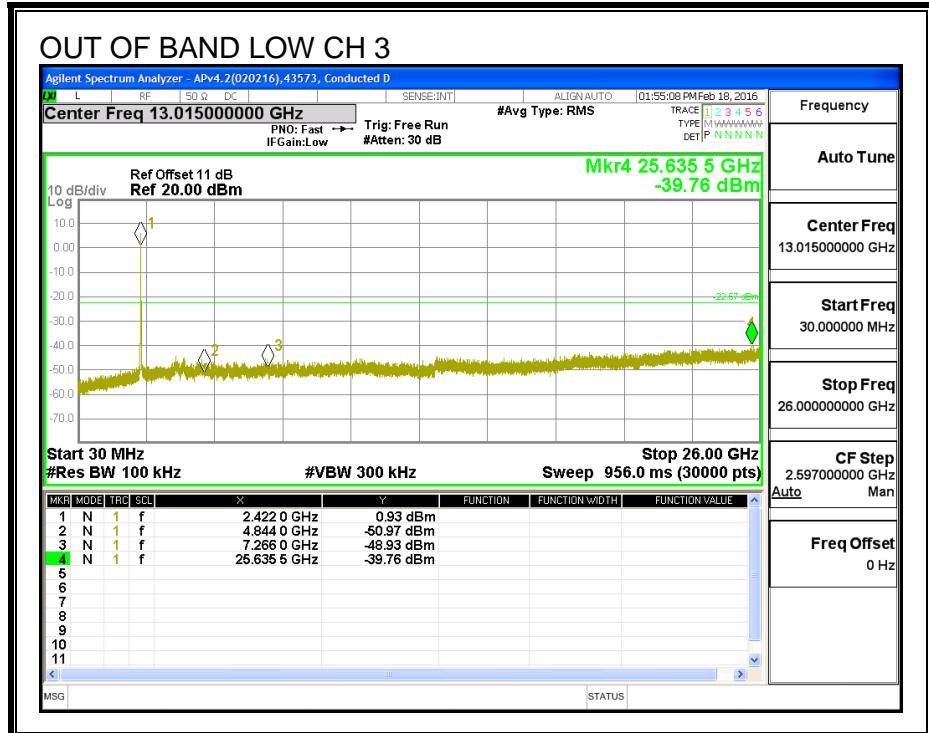


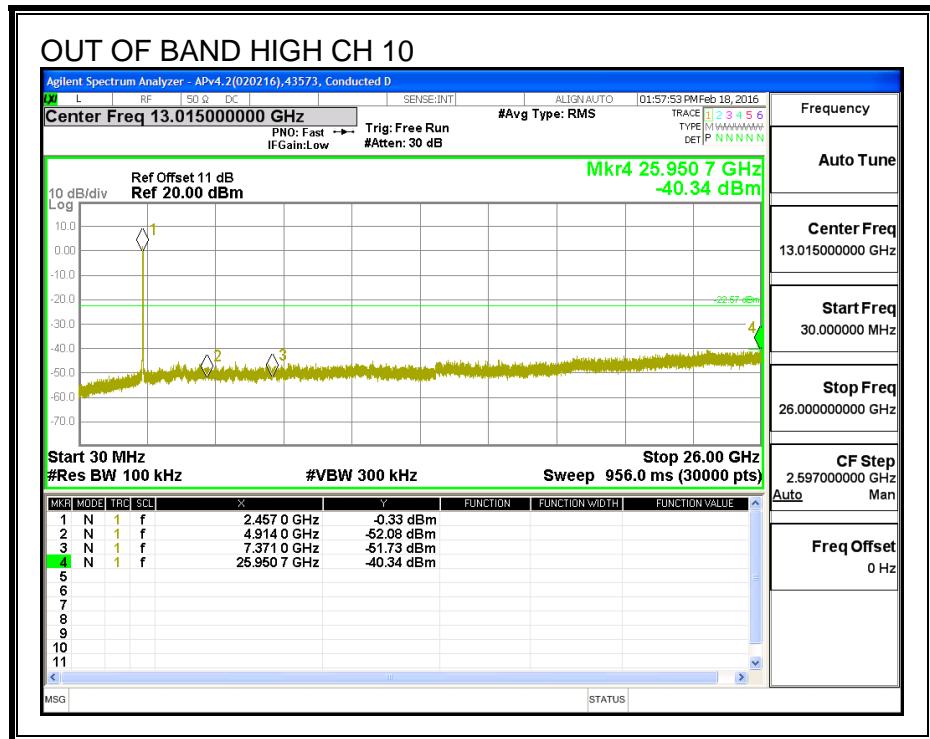
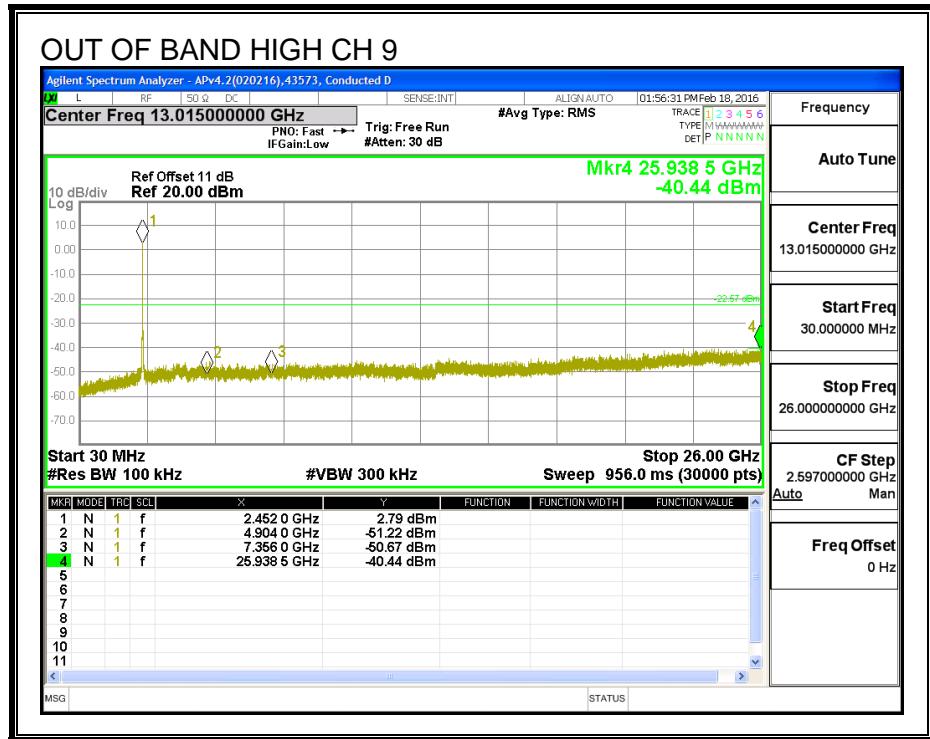


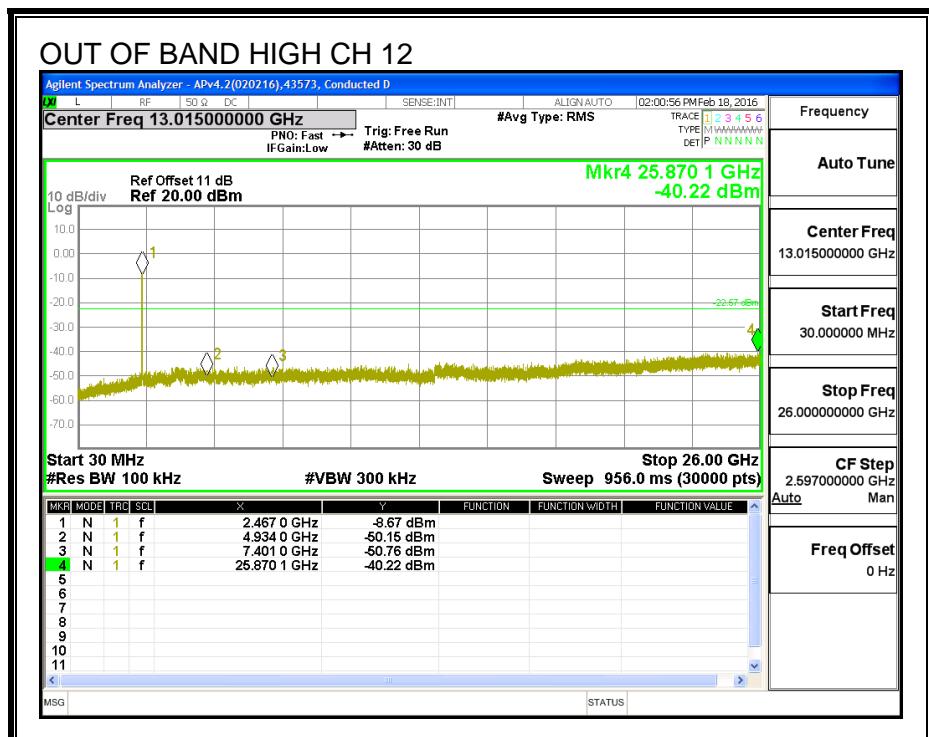
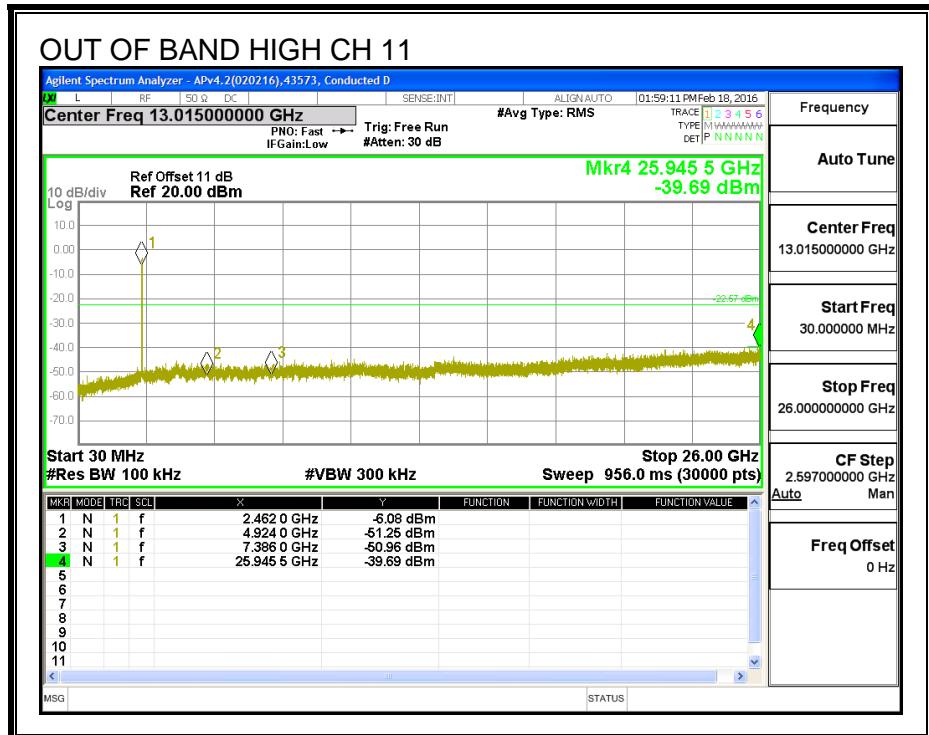


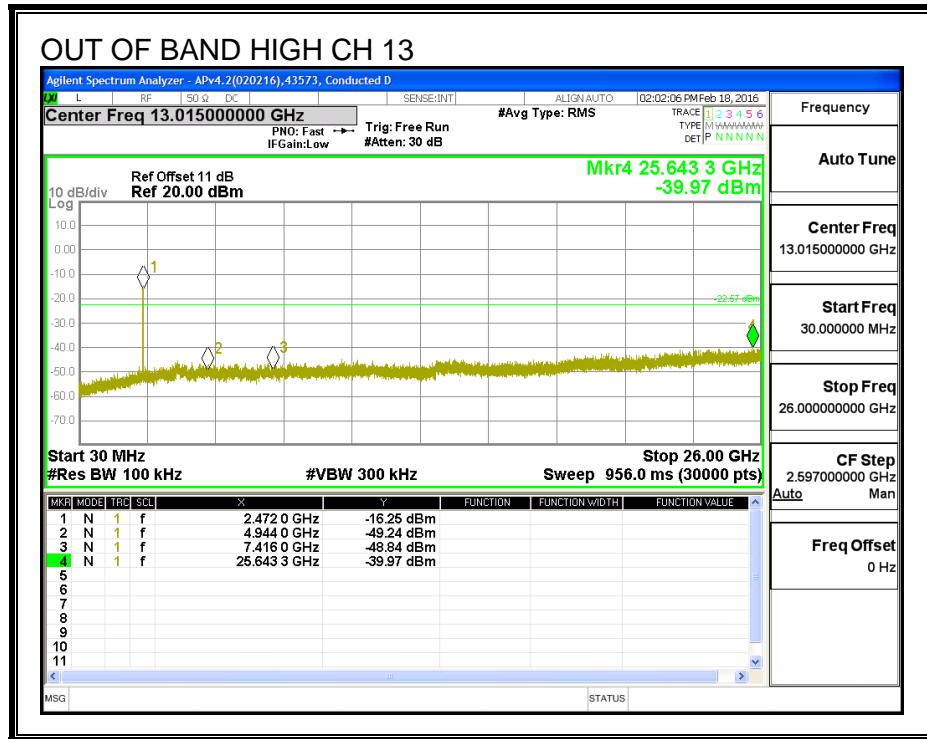
OUT-OF-BAND EMISSIONS, Chain 1











8.10. 802.11ac VHT20 BEAM FORMING MODE IN THE 2.4 GHz BAND

8.10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

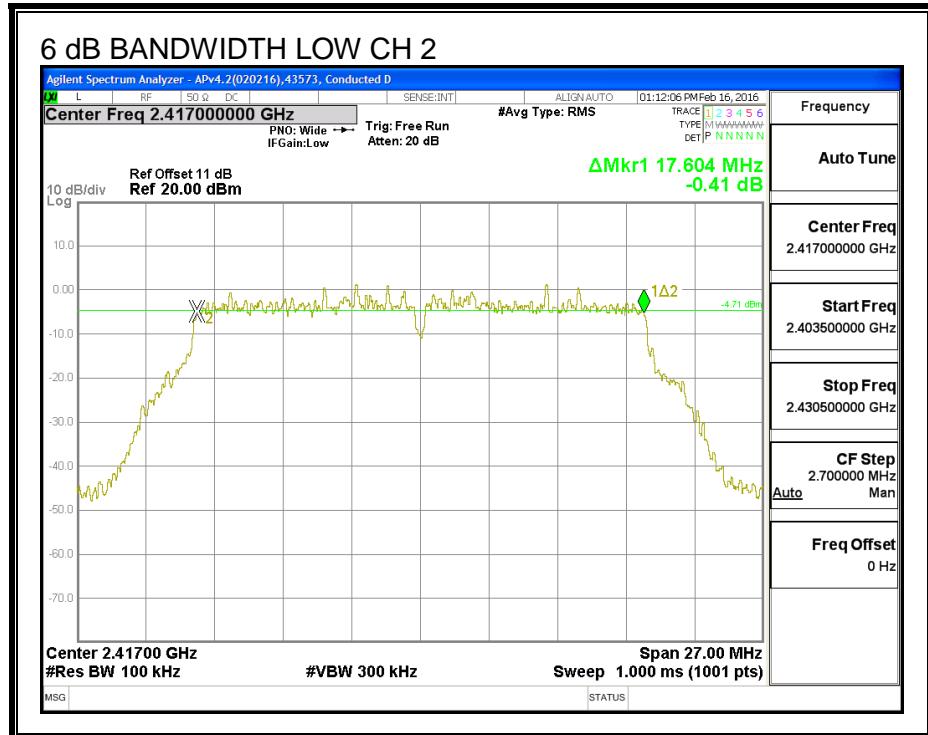
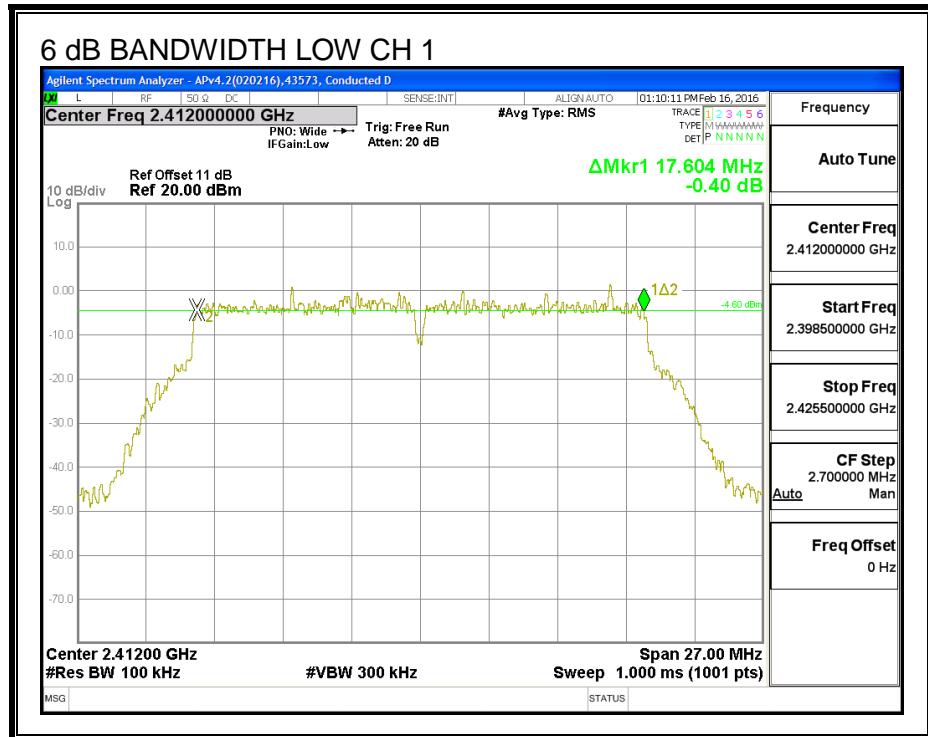
IC RSS-247 (5.2) (1)

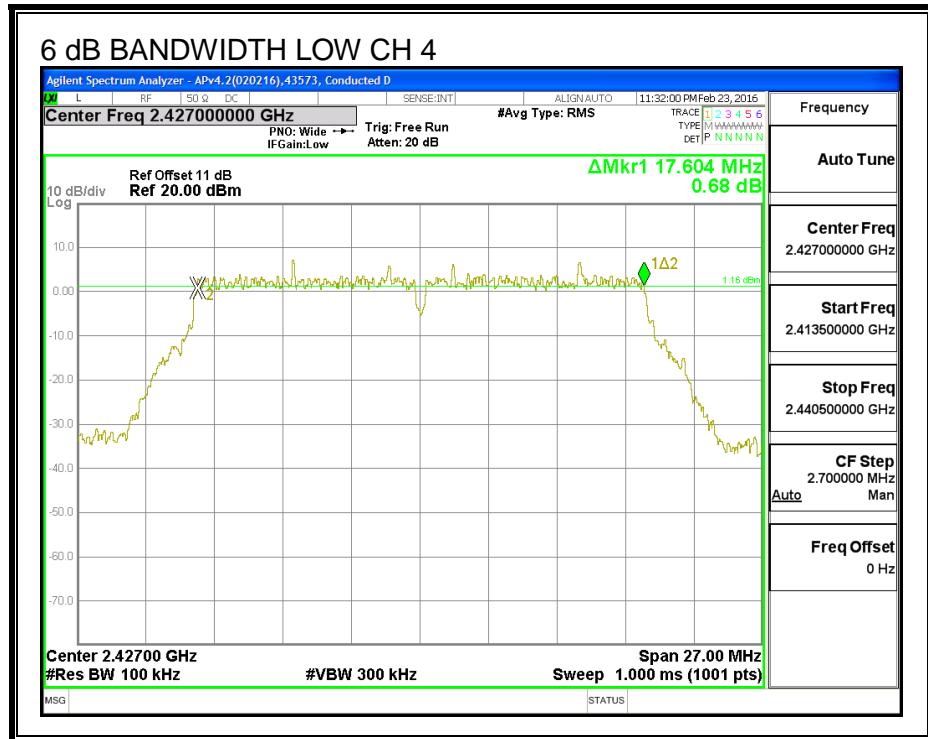
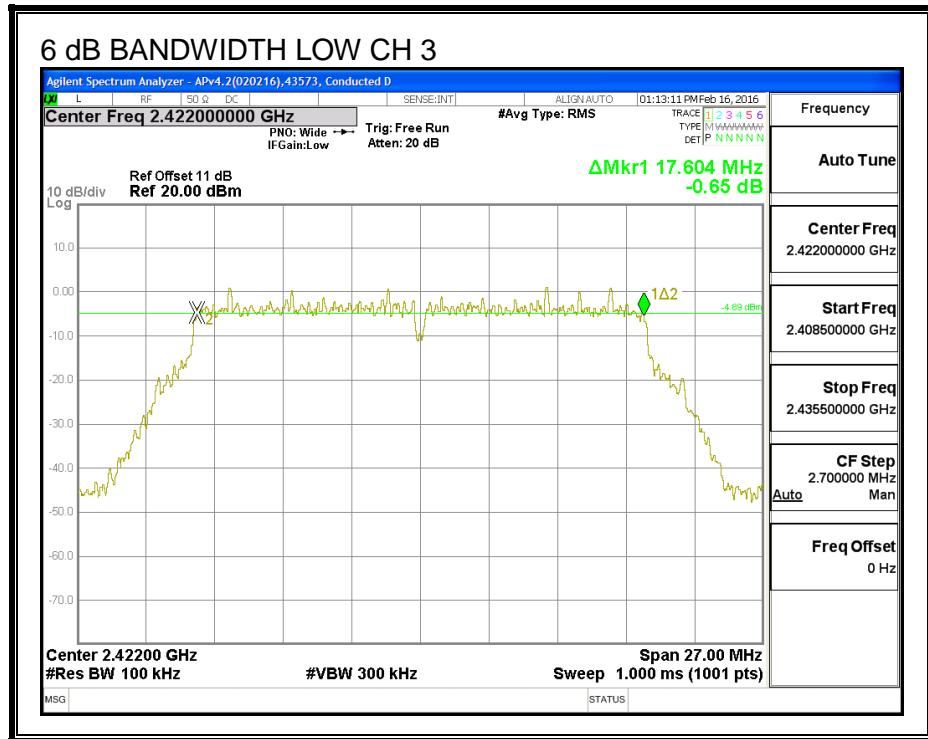
The minimum 6 dB bandwidth shall be at least 500 kHz.

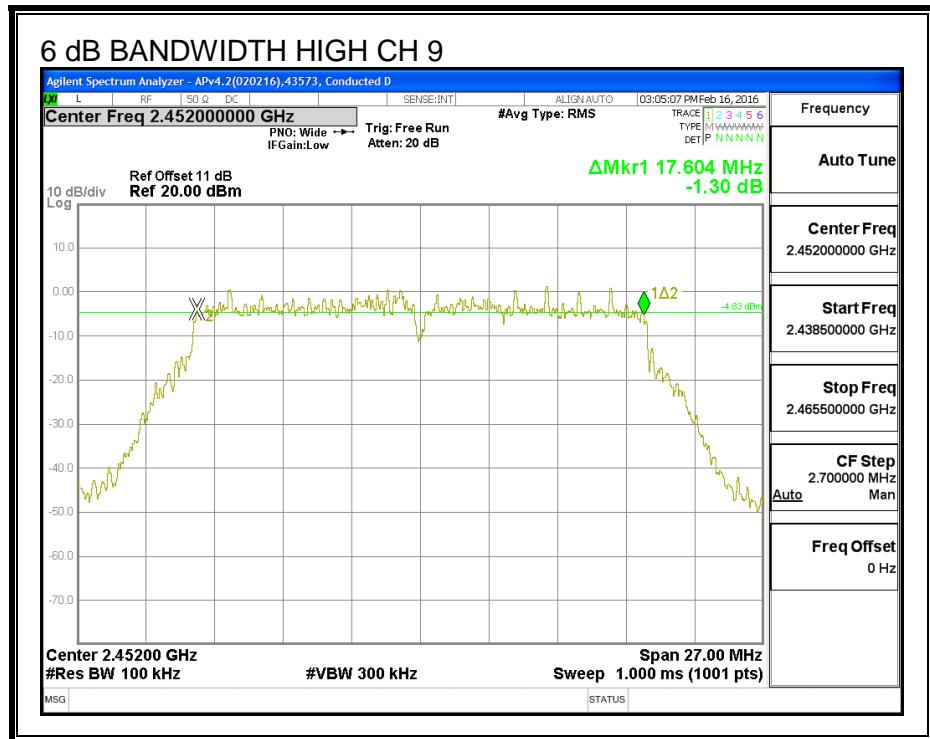
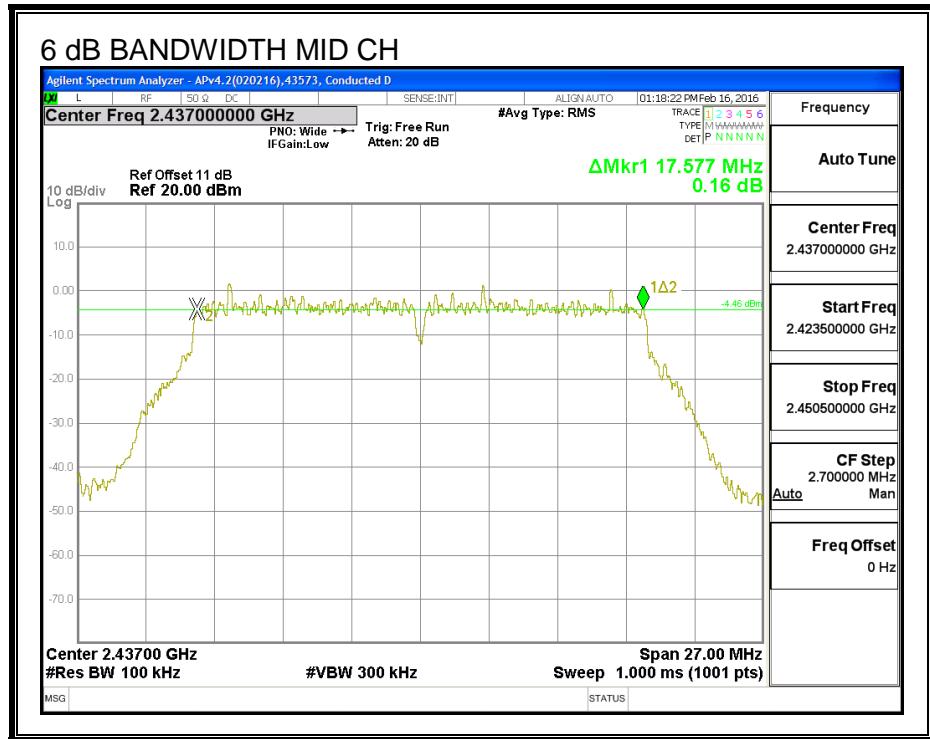
RESULTS

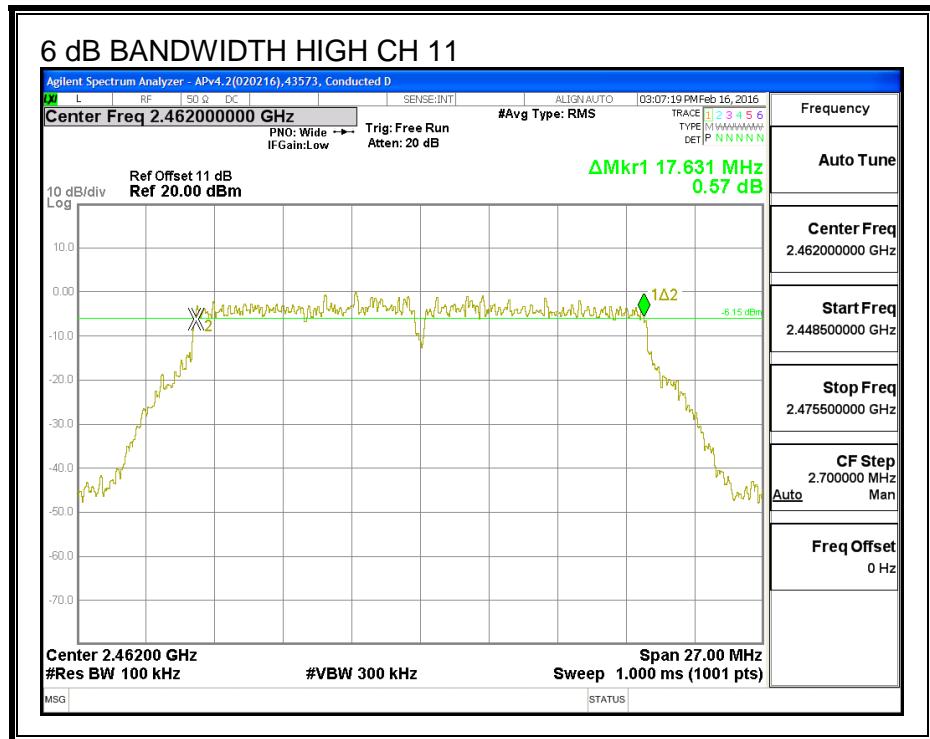
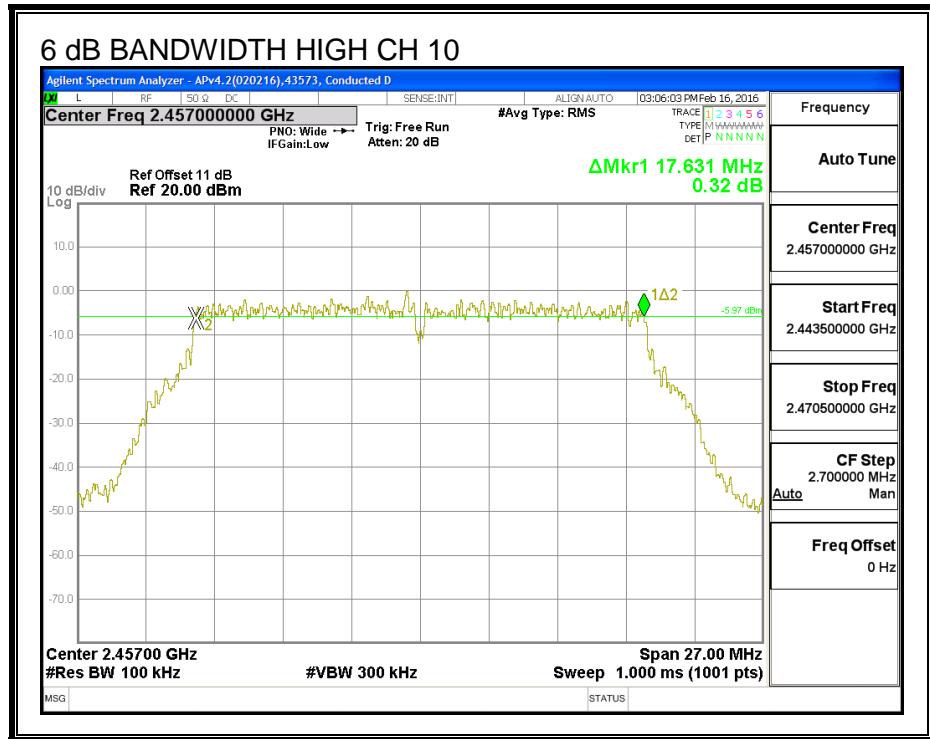
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low_1	2412	17.60	17.60	0.5
Low_2	2417	17.60	17.66	0.5
Low_3	2422	17.60	17.69	0.5
Low_4	2427	17.60	17.63	0.5
Mid_6	2437	17.58	17.63	0.5
High_9	2452	17.60	17.69	0.5
High_10	2457	17.63	17.63	0.5
High_11	2462	17.63	17.60	0.5
High_12	2467	17.60	17.60	0.5
High_13	2472	17.66	17.60	0.5

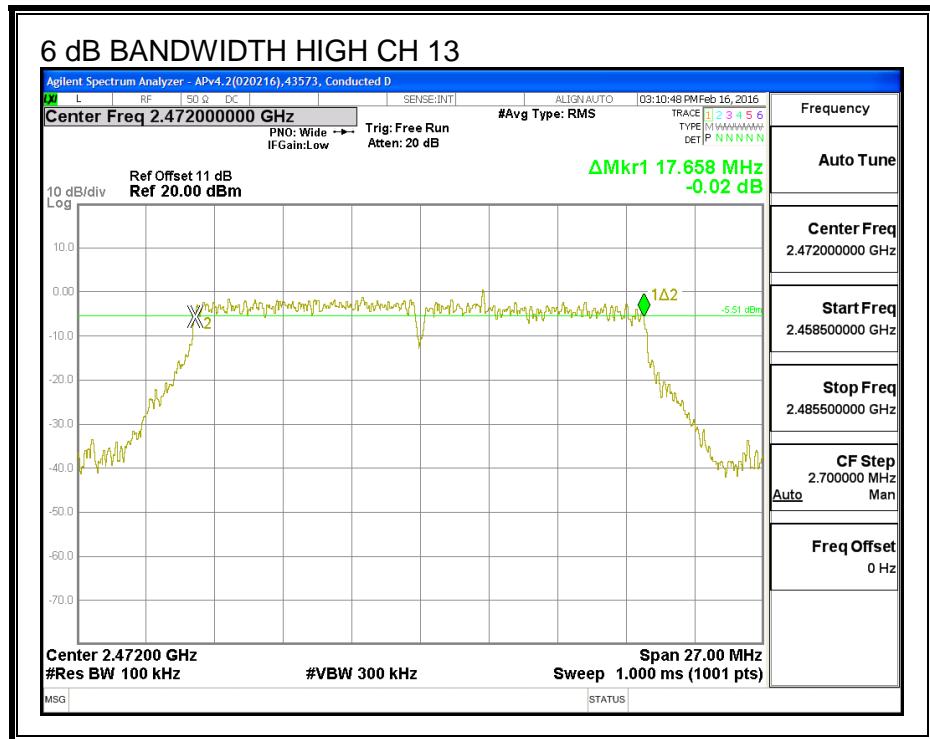
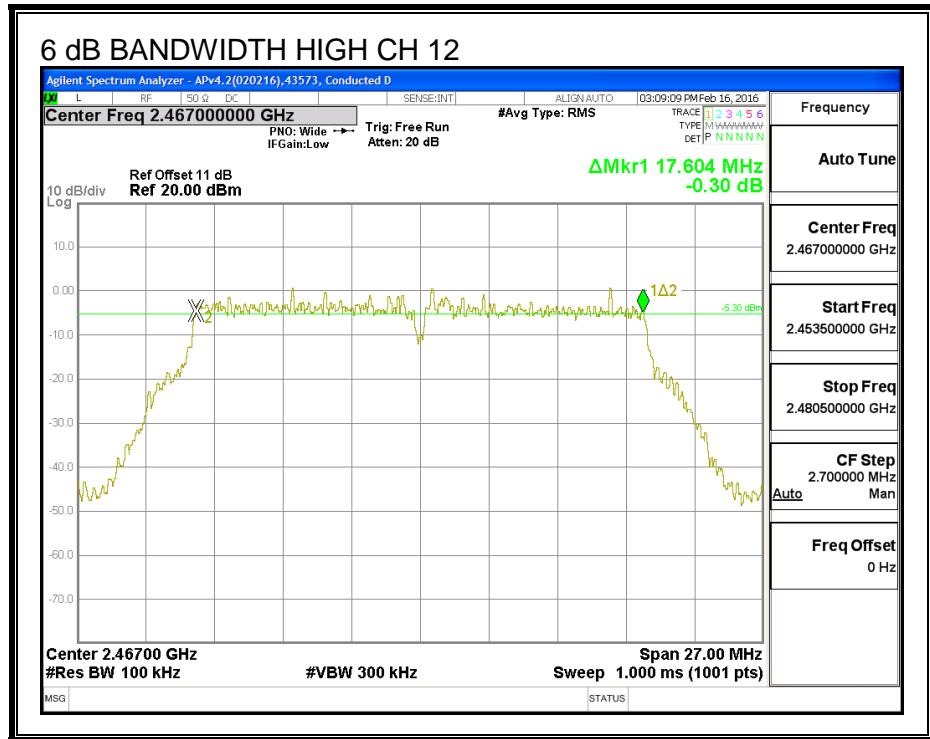
6 dB BANDWIDTH, Chain 0











6 dB BANDWIDTH, Chain 1

