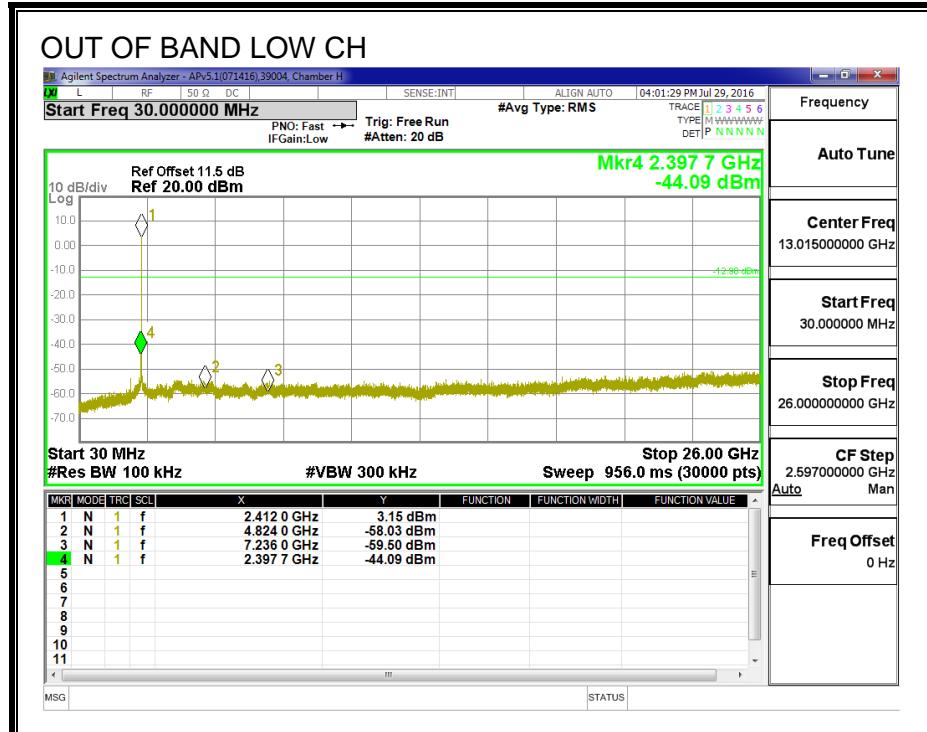
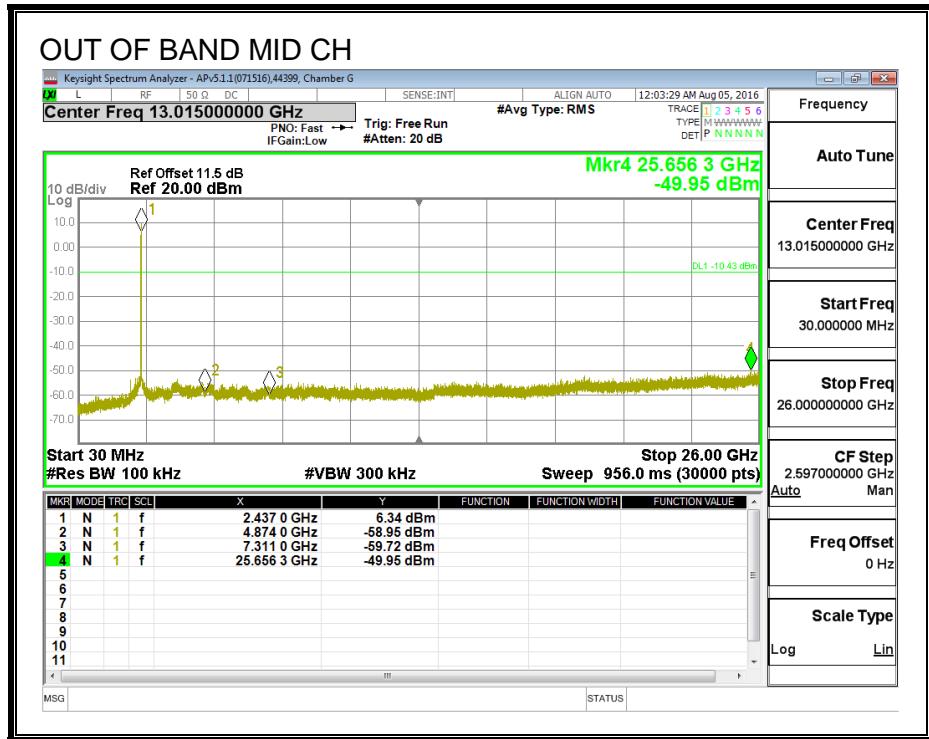
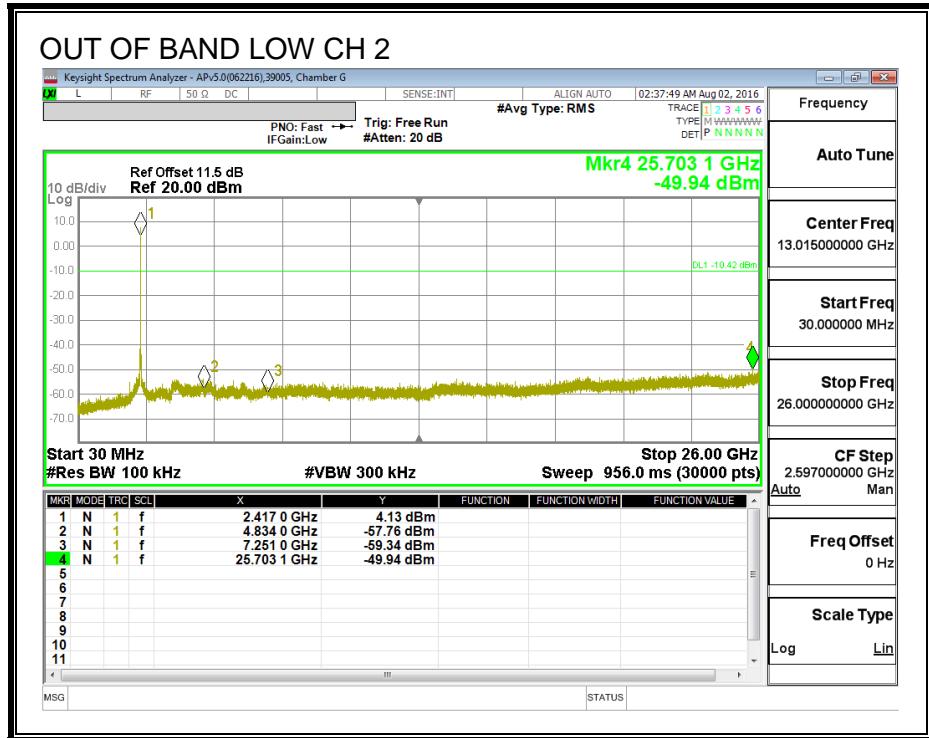
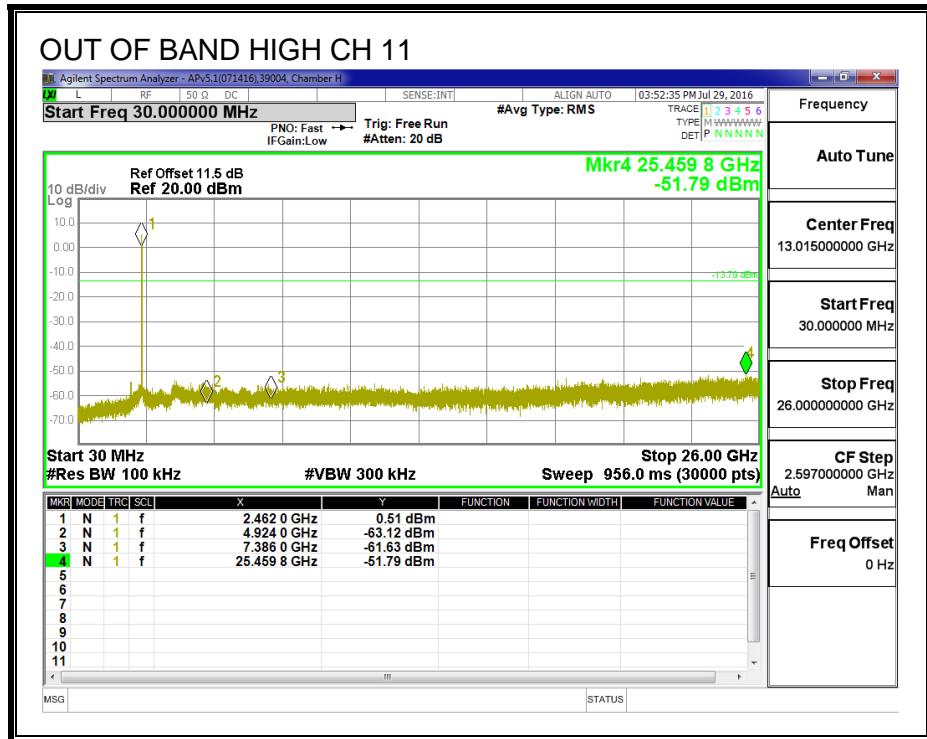
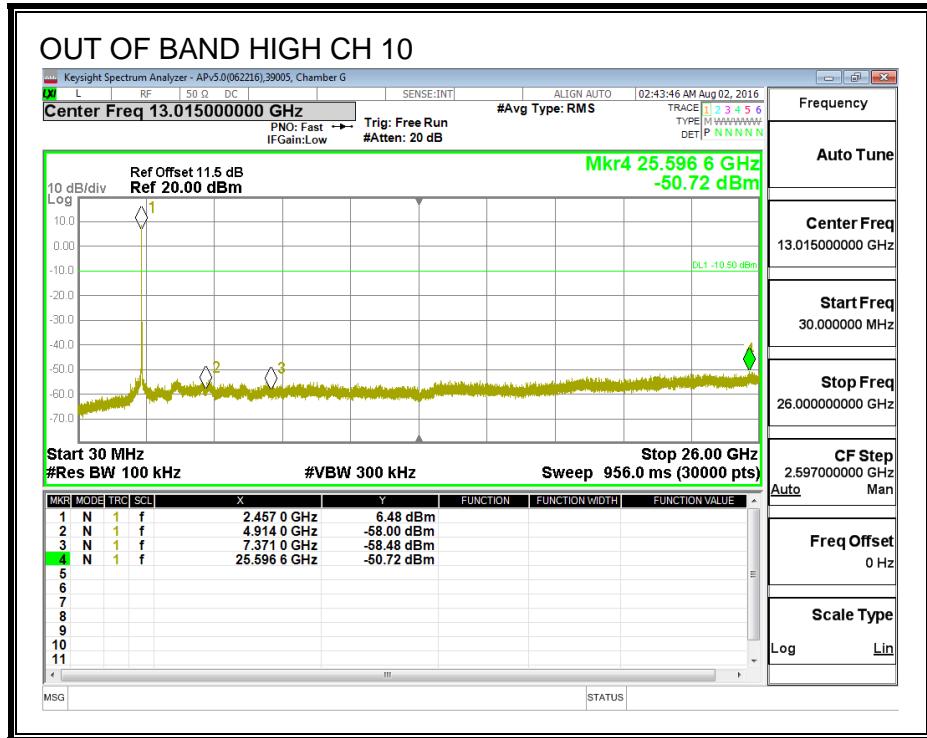
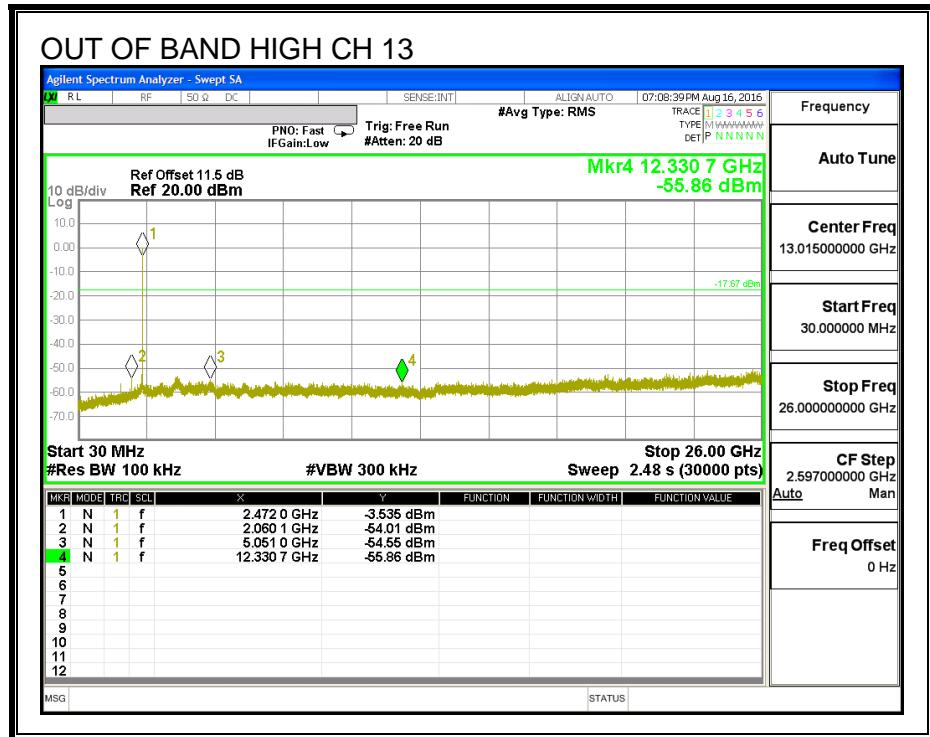
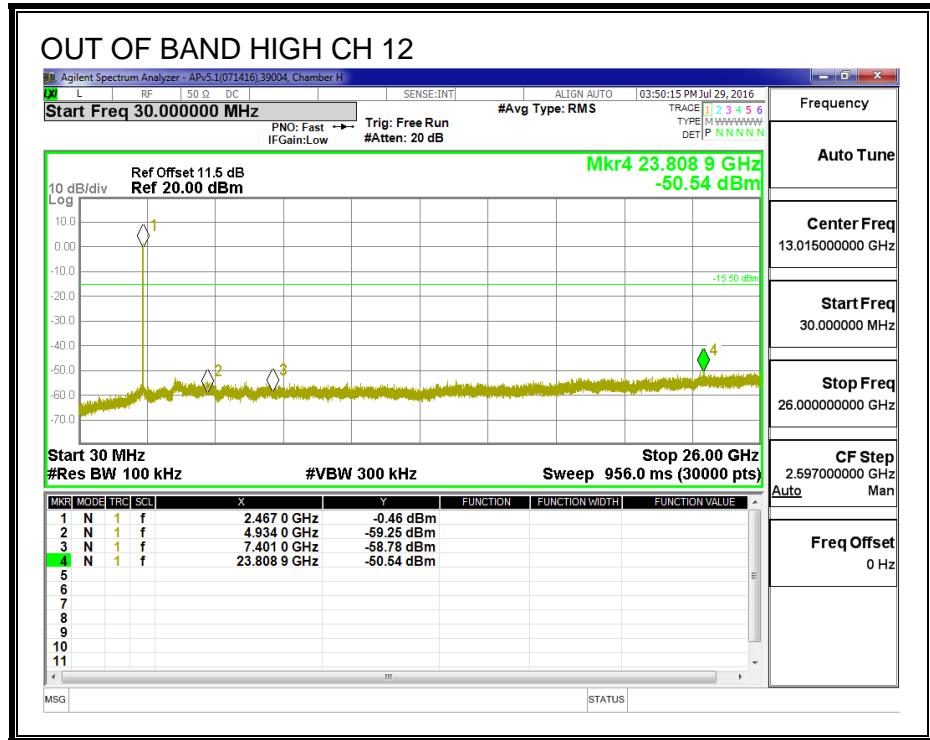


OUT-OF-BAND EMISSIONS, CHAIN 1









8.4. 802.11g SISO MODE IN THE 2.4 GHz BAND

Noted: Covered by 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND

8.5. 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND, CHAIN 0

8.5.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

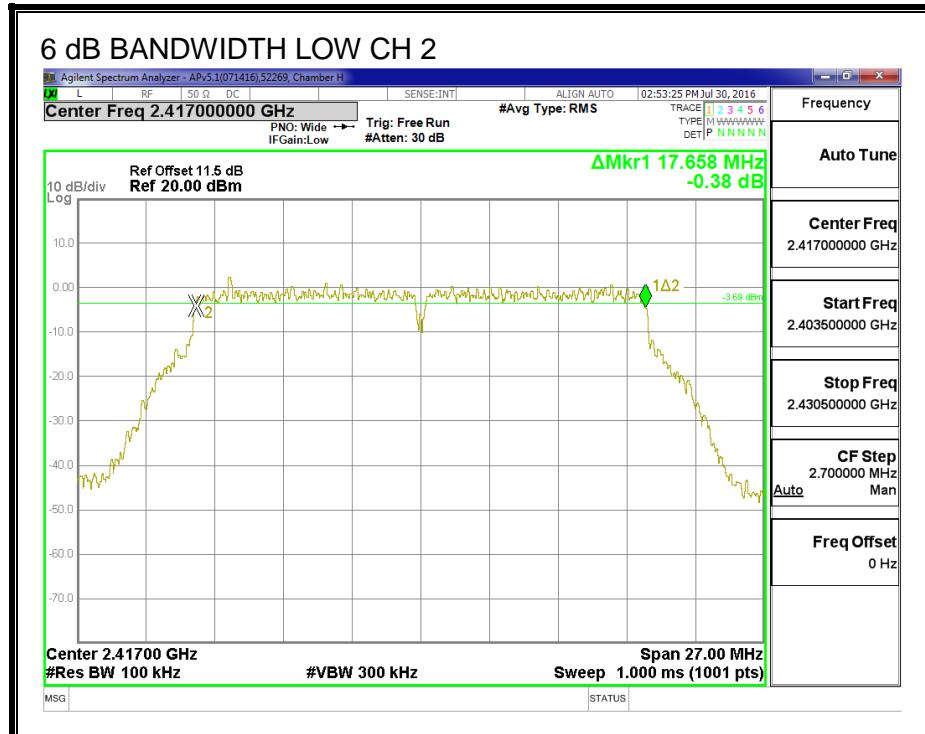
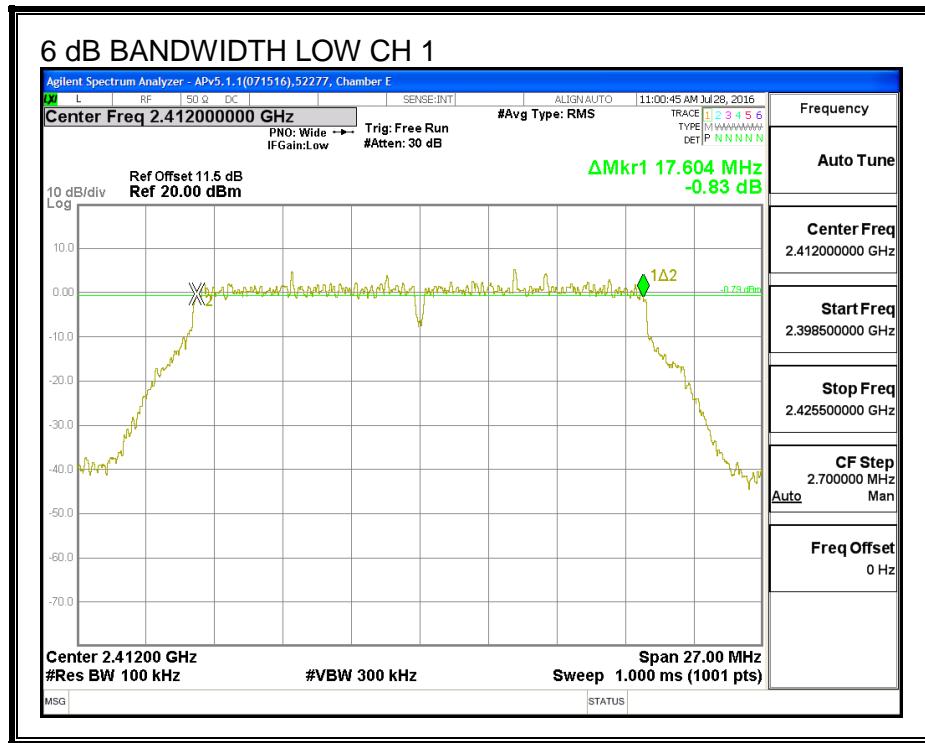
IC RSS-247 (5.2) (1)

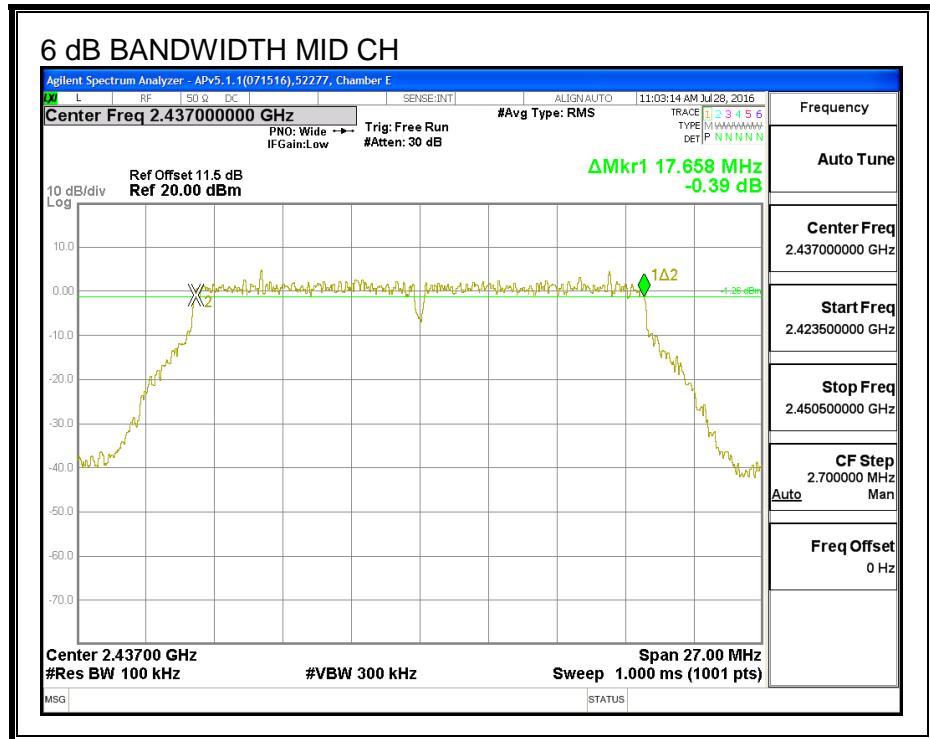
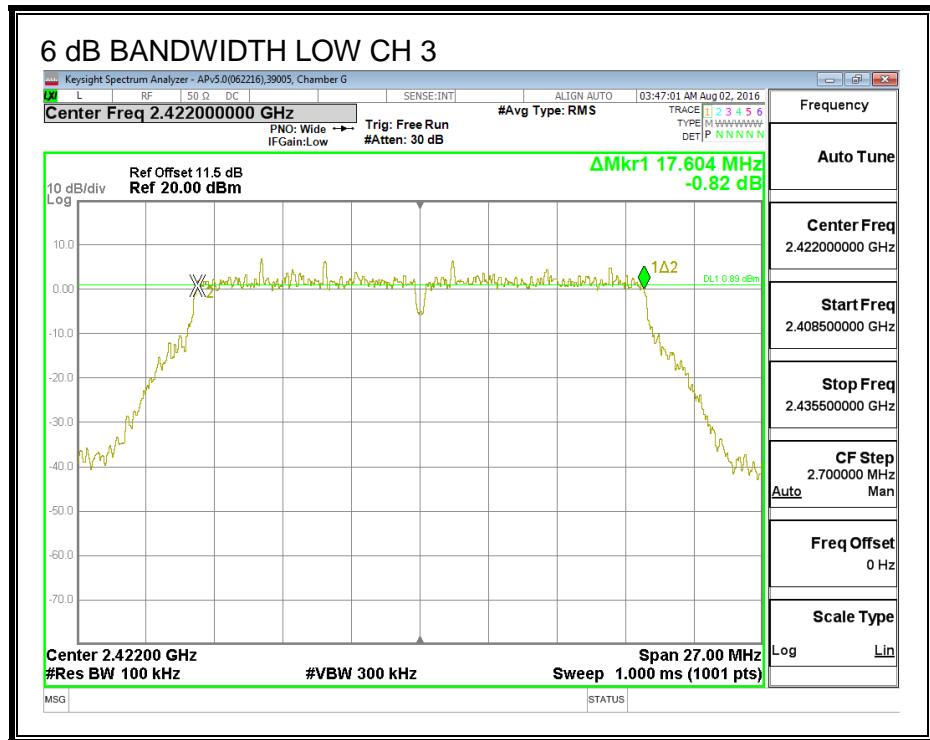
The minimum 6 dB bandwidth shall be at least 500 kHz.

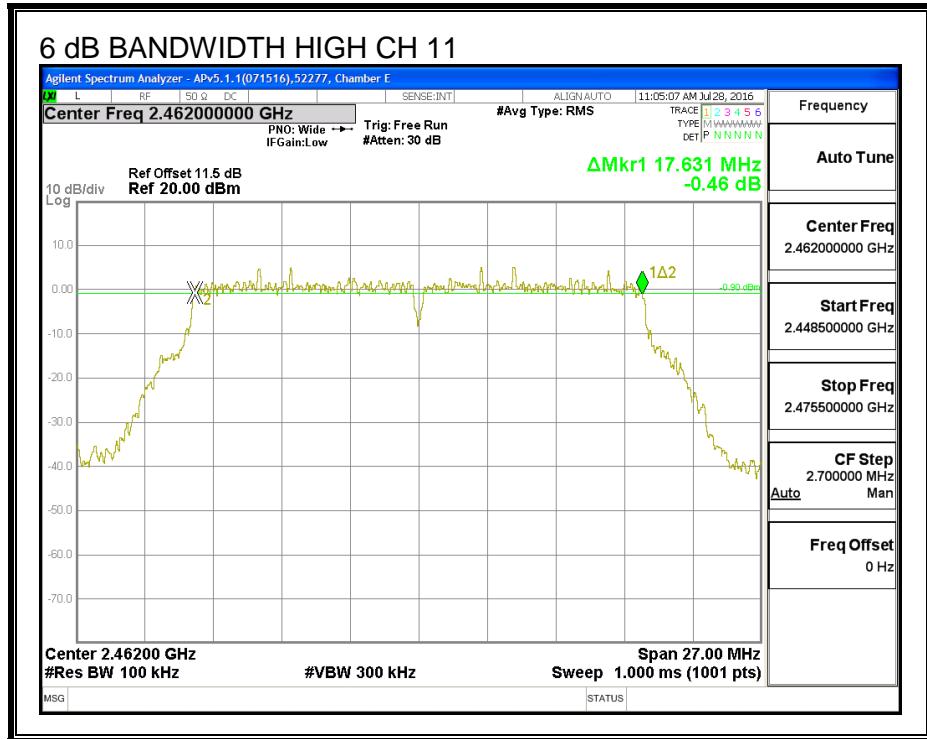
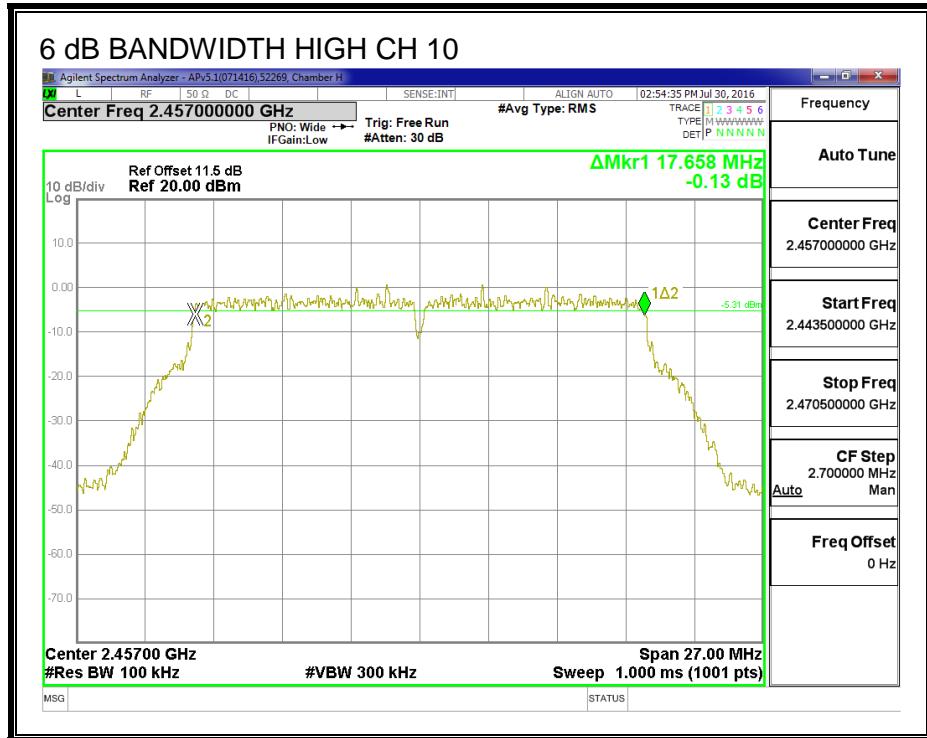
RESULTS

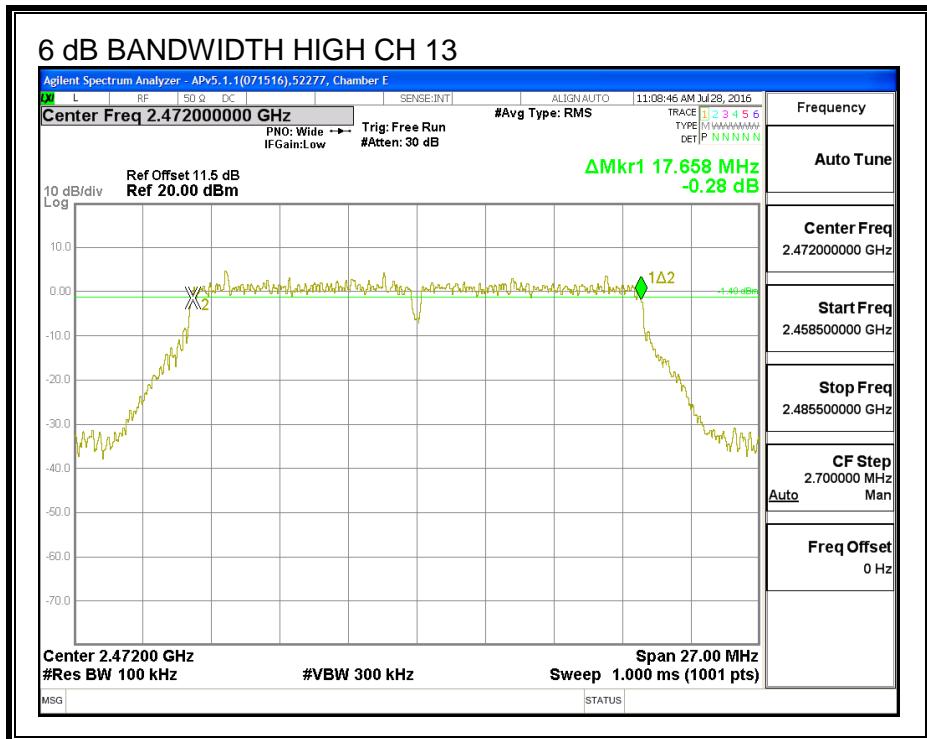
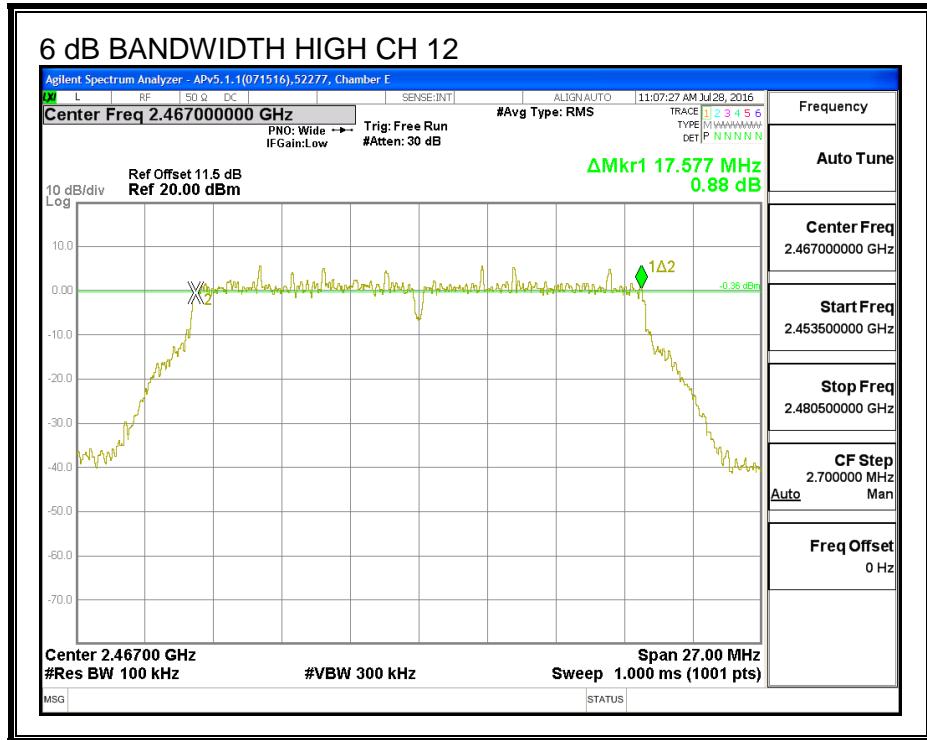
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low_1	2412	17.604	0.5
Low_2	2417	17.658	0.5
Low_3	2422	17.604	0.5
Mid_6	2437	17.658	0.5
High_10	2457	17.658	0.5
High_11	2462	17.631	0.5
High_12	2467	17.577	0.5
High_13	2472	17.658	0.5

6 dB BANDWIDTH









8.5.2. 99% BANDWIDTH

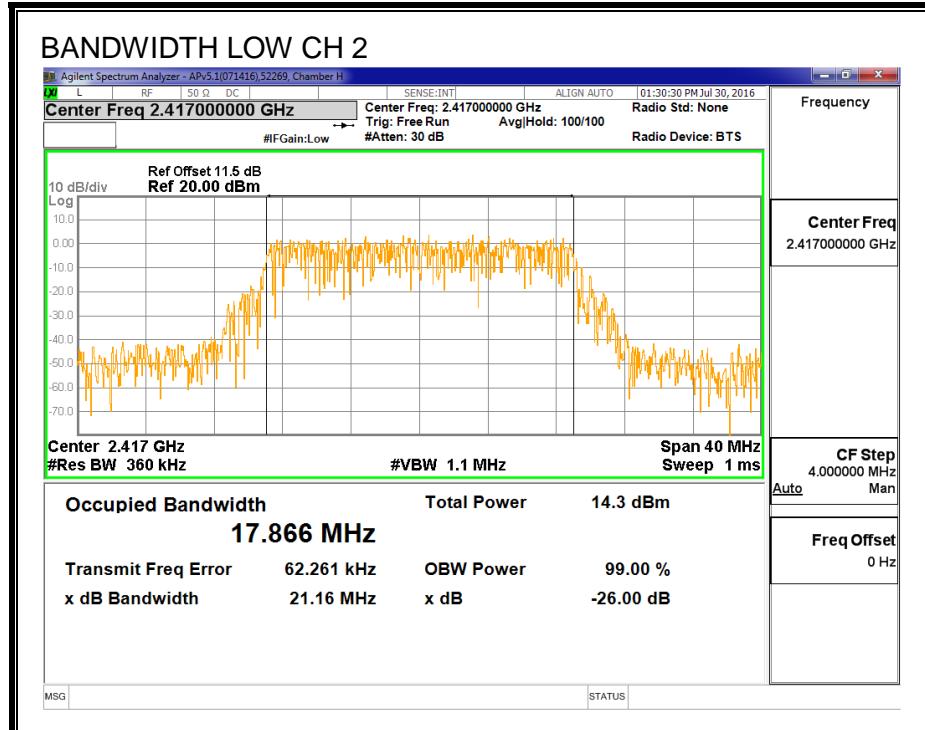
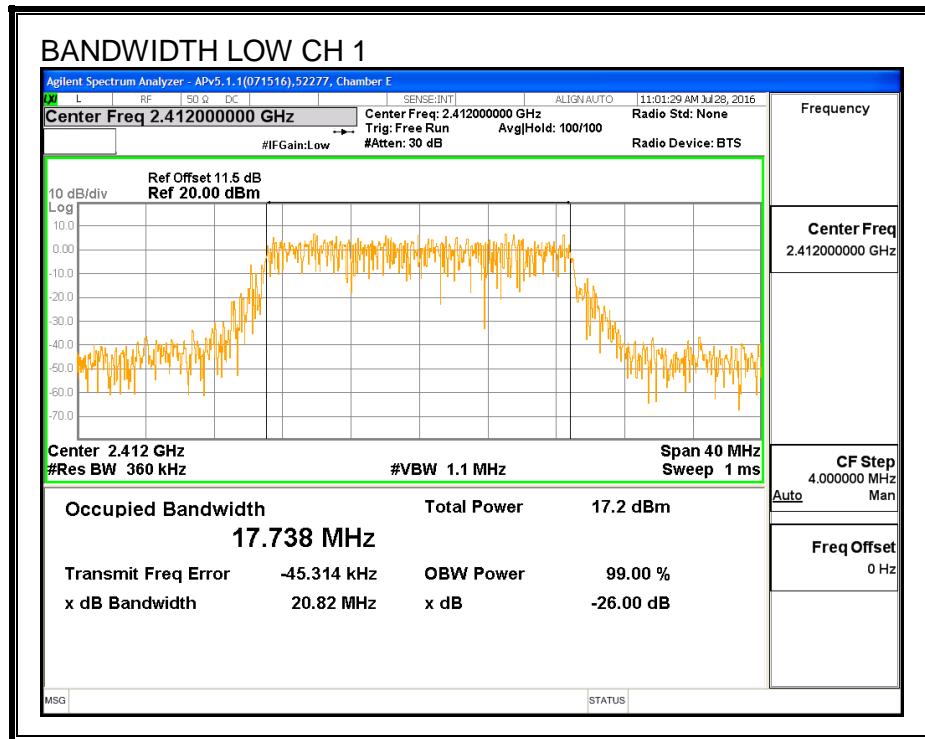
LIMITS

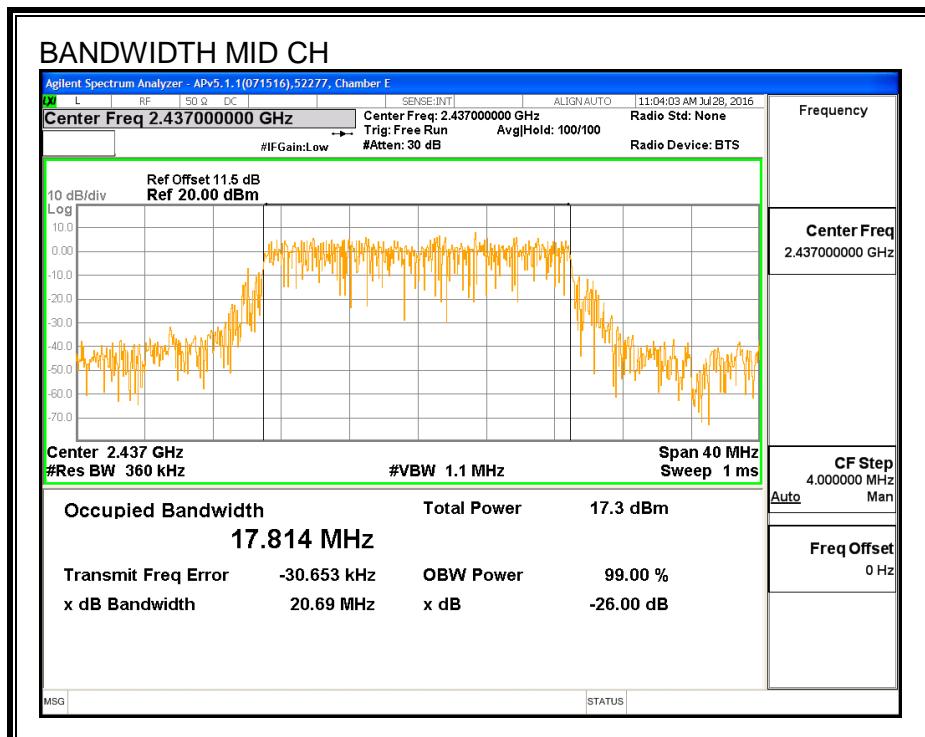
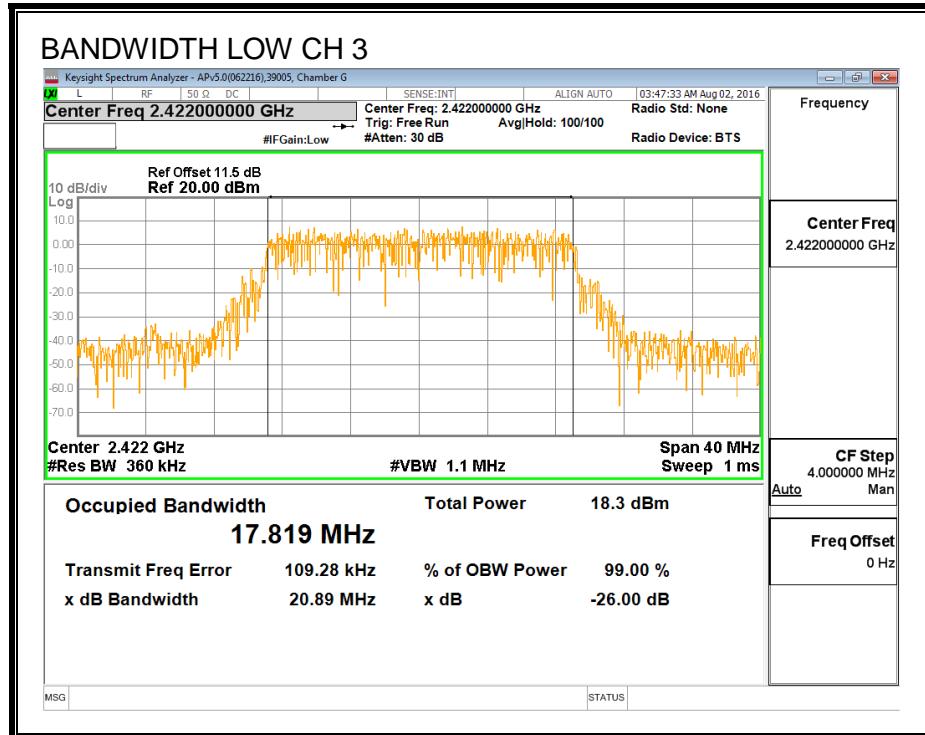
None; for reporting purposes only.

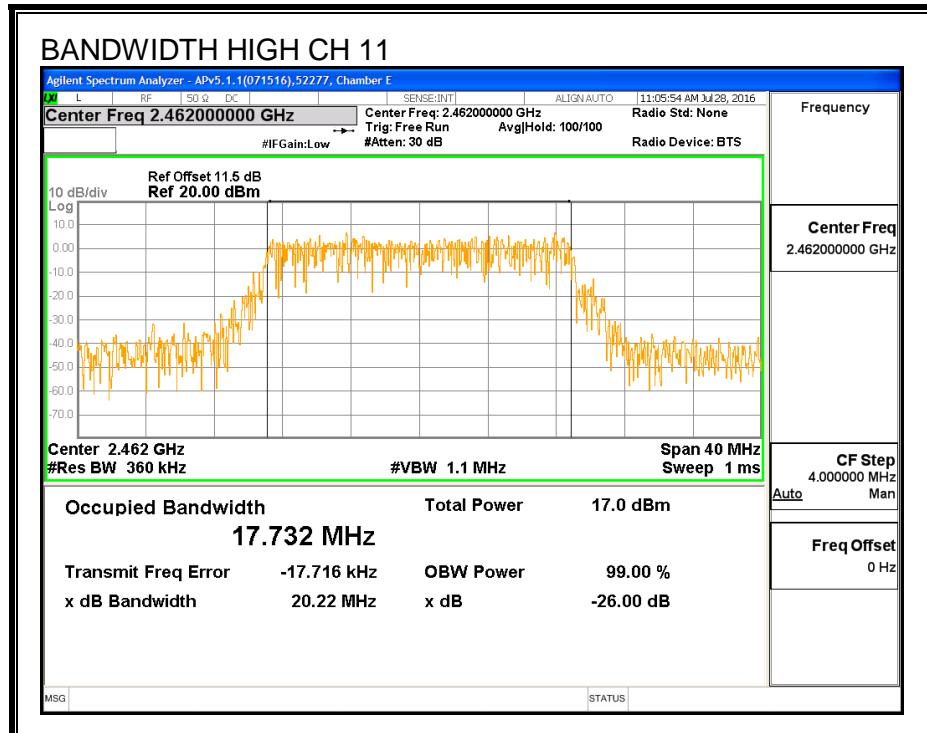
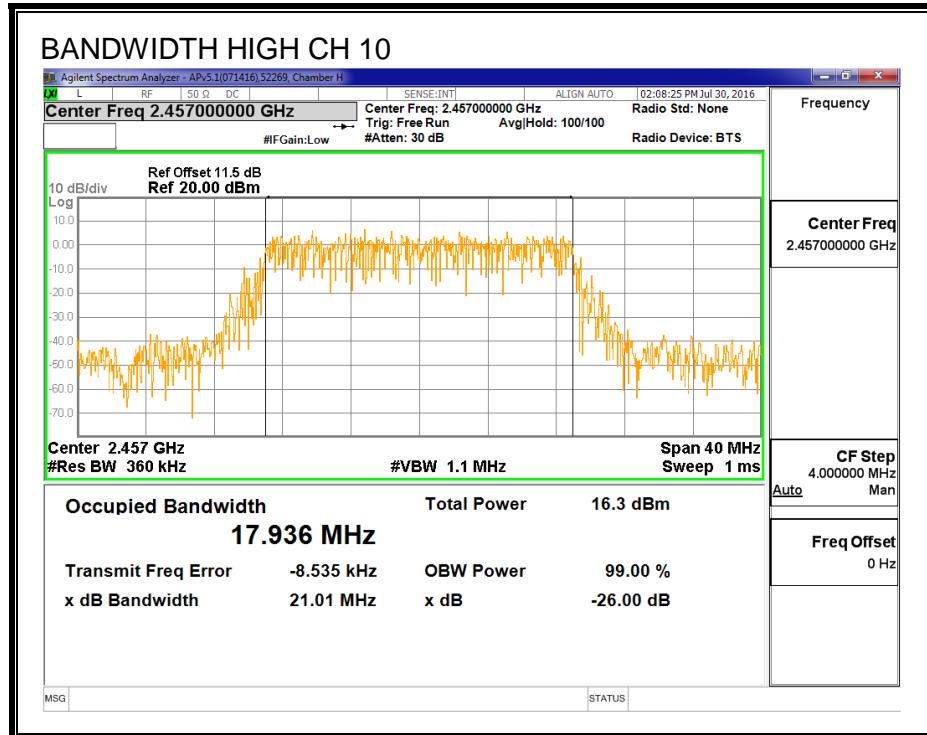
RESULTS

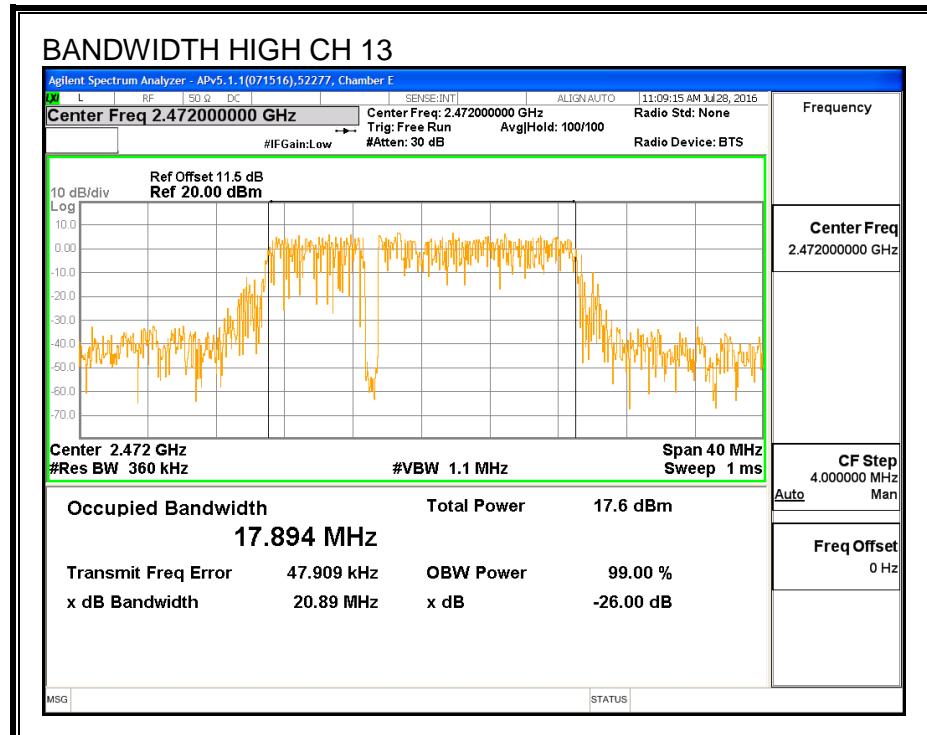
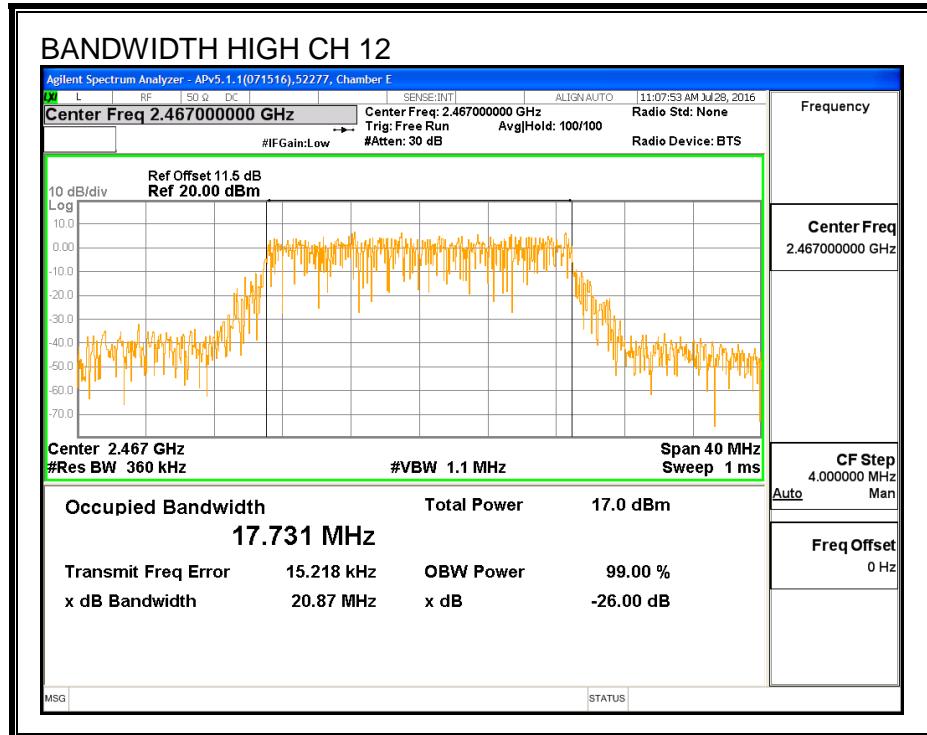
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low_1	2412	17.738
Low_2	2417	17.866
Low_3	2422	17.819
Mid_6	2437	17.814
High_10	2457	17.936
High_11	2462	17.732
High_12	2467	17.731
High_13	2472	17.894

99% BANDWIDTH









8.5.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

ID:	39919	Date:	8/31/16
-----	-------	-------	---------

Channel	Frequency (MHz)	Power (dBm)
Low_1	2412	13.95
Low_2	2417	15.38
Low_3	2422	16.65
Mid_6	2437	16.71
High_10	2457	16.63
High_11	2462	13.47
High_12	2467	10.49
High_13	2472	-0.30

8.5.4. 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

ID:	39919	Date:	8/31/16
-----	-------	-------	---------

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	4.20	30.00	30	36	30.00
Low_2	2417	4.20	30.00	30	36	30.00
Low_3	2422	4.20	30.00	30	36	30.00
Mid_6	2437	4.20	30.00	30	36	30.00
High_10	2457	4.20	30.00	30	36	30.00
High_11	2462	4.20	30.00	30	36	30.00
High_12	2467	4.20	30.00	30	36	30.00
High_13	2472	4.20	30.00	30	36	30.00

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

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low_1	2412	20.06	20.06	30.00	-9.94
Low_2	2417	21.56	21.56	30.00	-8.44
Low_3	2422	23.84	23.84	30.00	-6.16
Mid_6	2437	24.07	24.07	30.00	-5.93
High_10	2457	23.76	23.76	30.00	-6.24
High_11	2462	19.74	19.74	30.00	-10.26
High_12	2467	16.62	16.62	30.00	-13.38
High_13	2472	6.33	6.33	30.00	-23.67

8.5.5. 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.

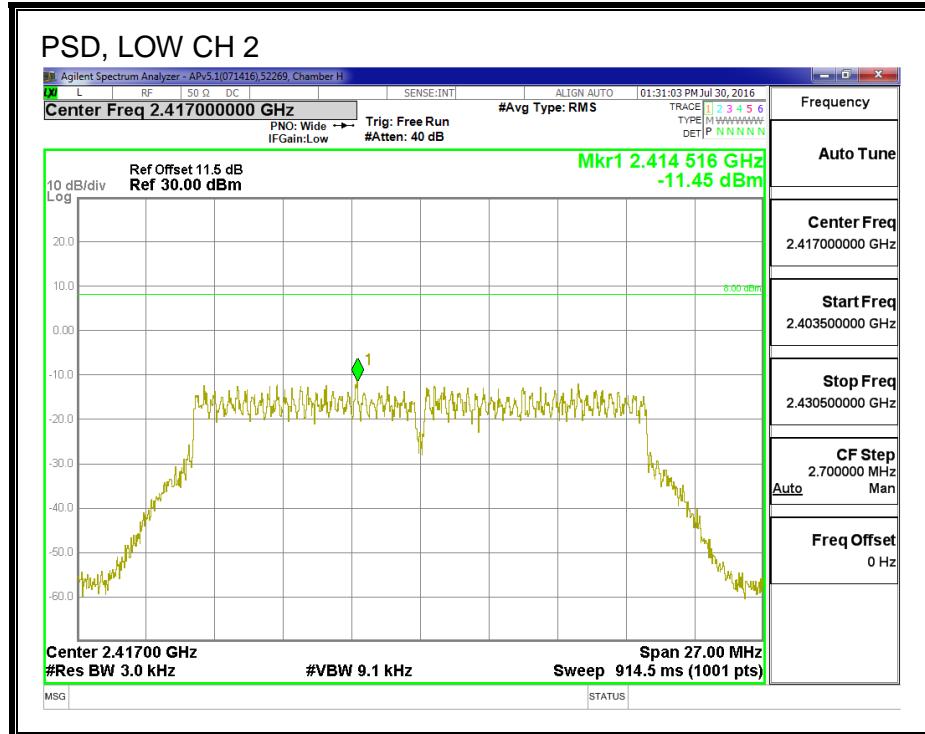
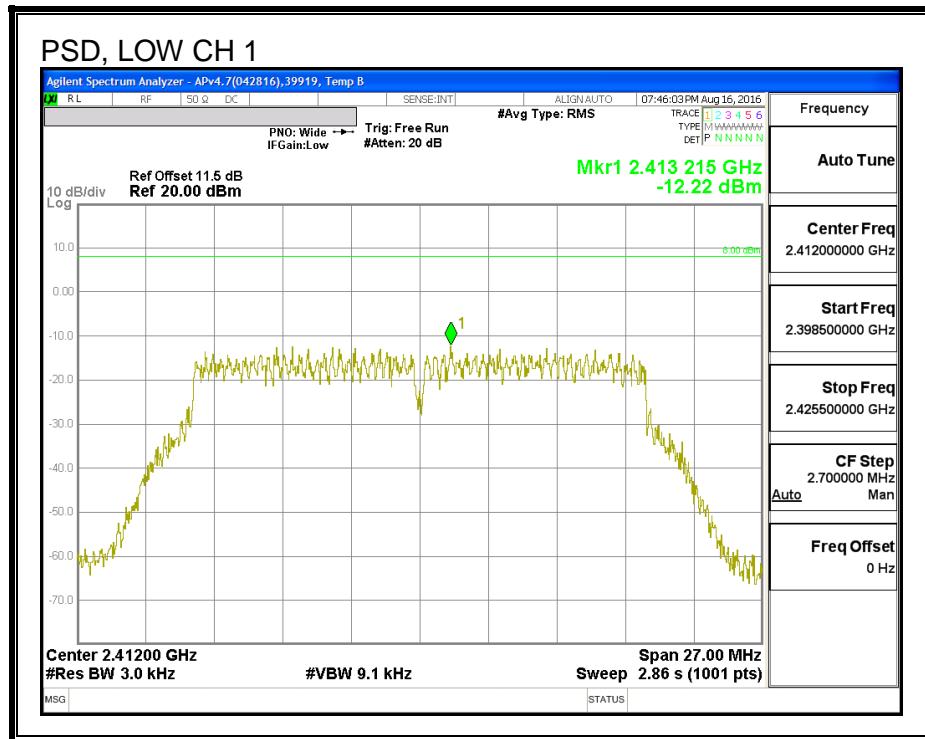
RESULTS

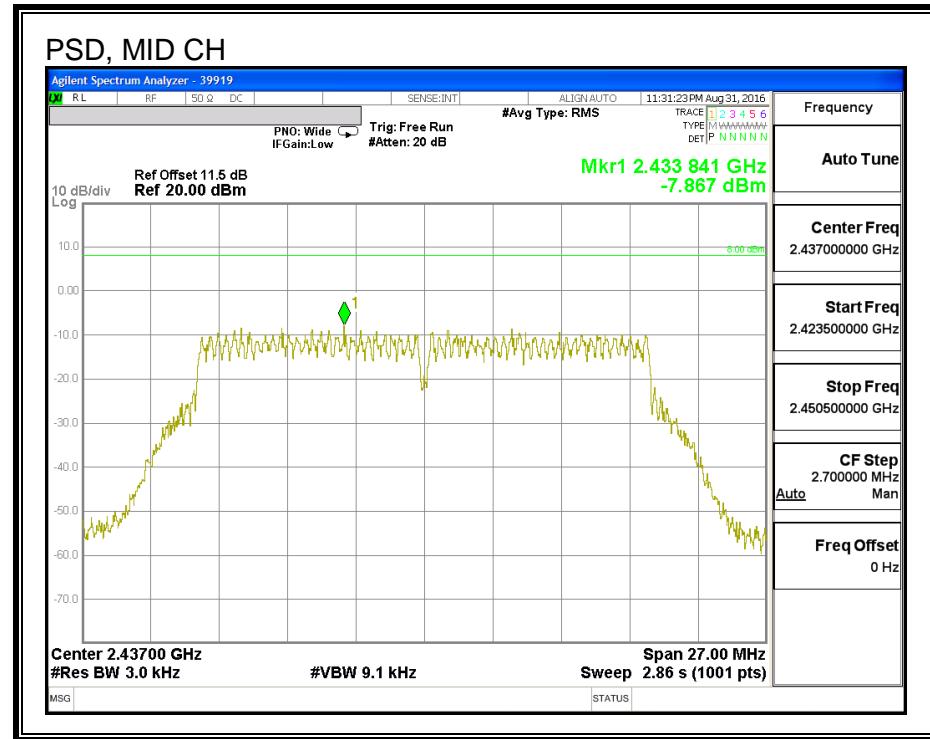
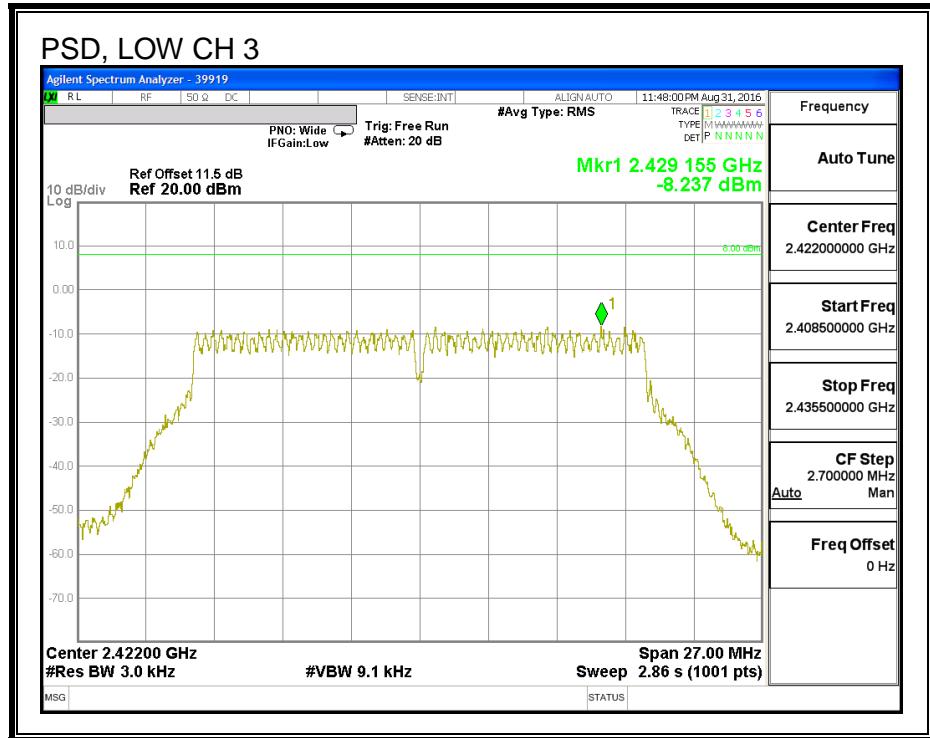
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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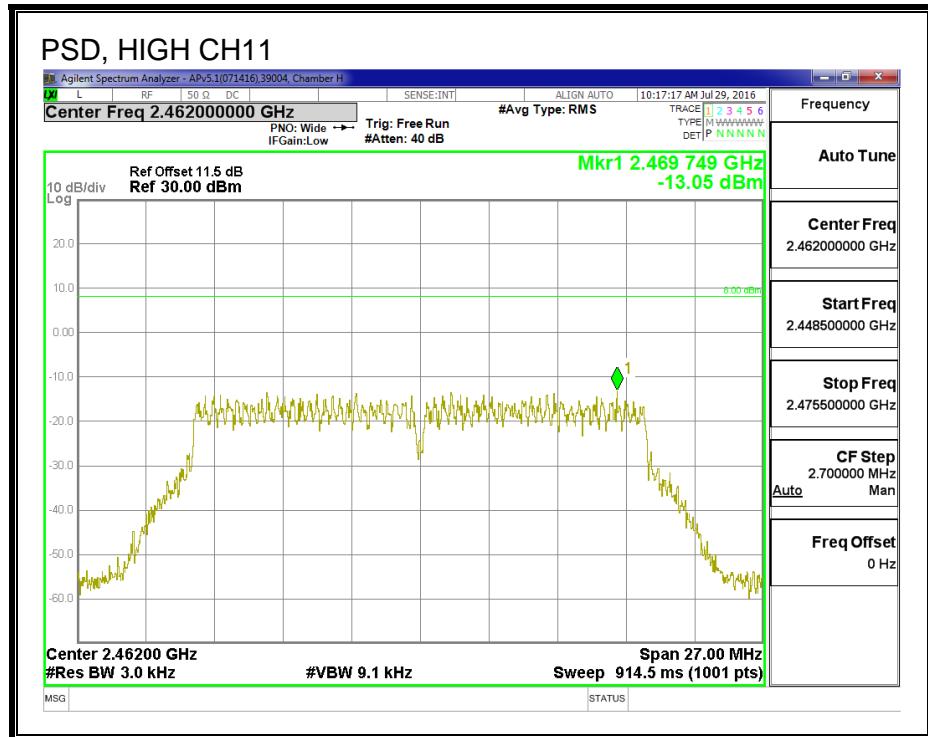
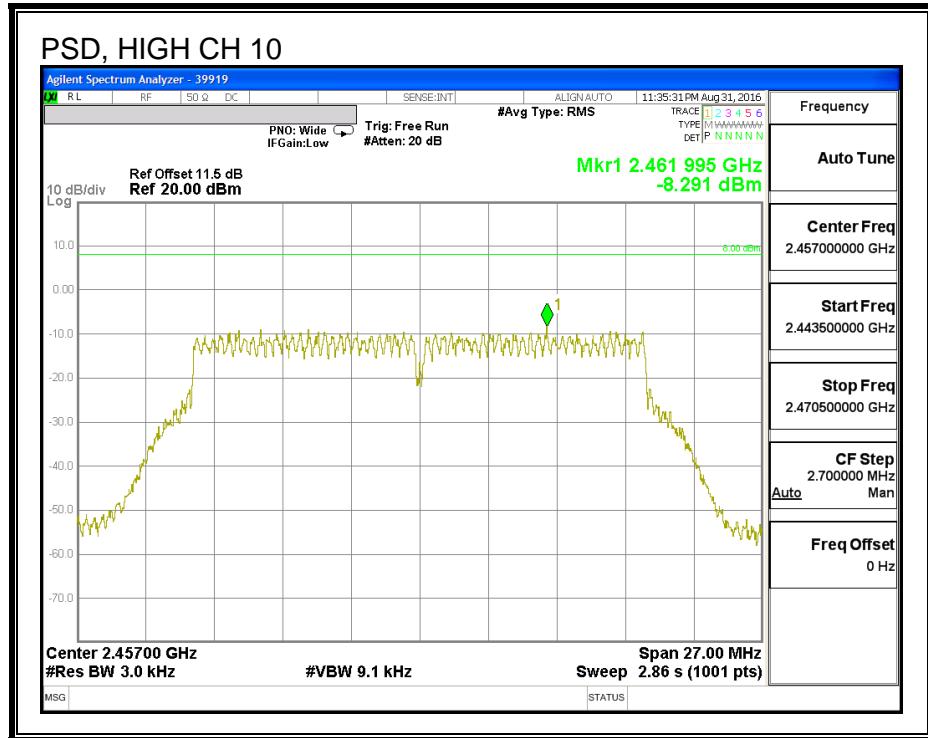
PSD Results

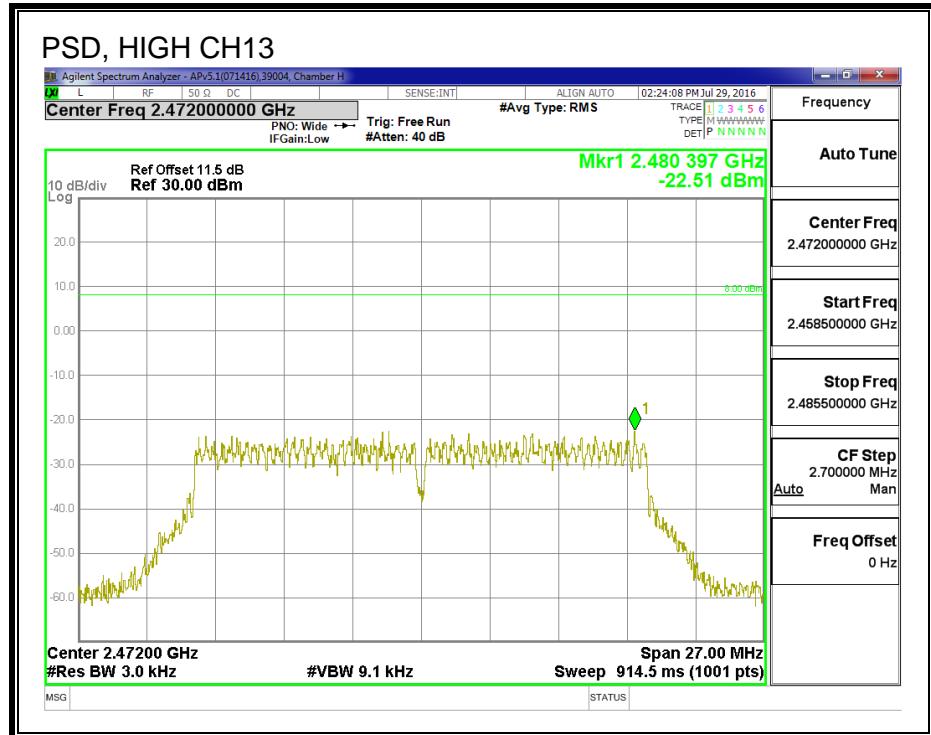
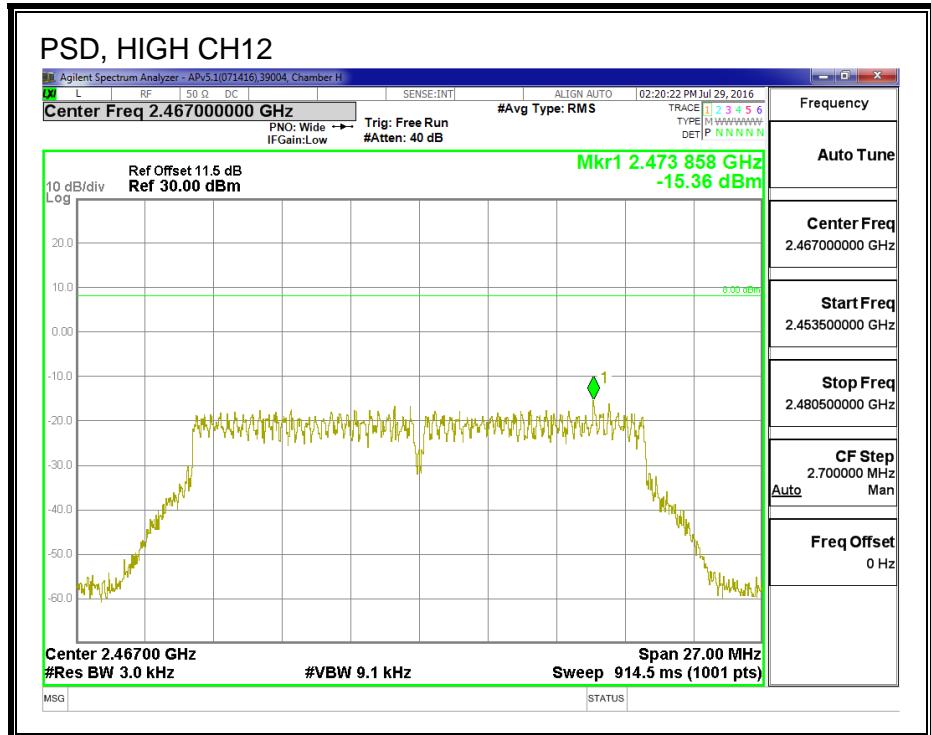
Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-12.22	-12.22	8.0	-20.2
Low_2	2417	-11.45	-11.45	8.0	-19.5
Low_3	2422	-8.24	-8.24	8.0	-16.2
Mid_6	2437	-7.87	-7.87	8.0	-15.9
High_10	2457	-8.29	-8.29	8.0	-16.3
High_11	2462	-13.05	-13.05	8.0	-21.1
High_12	2467	-15.36	-15.36	8.0	-23.4
High_13	2472	-22.51	-22.51	8.0	-30.5

PSD









8.5.6. OUT-OF-BAND EMISSIONS

LIMITS

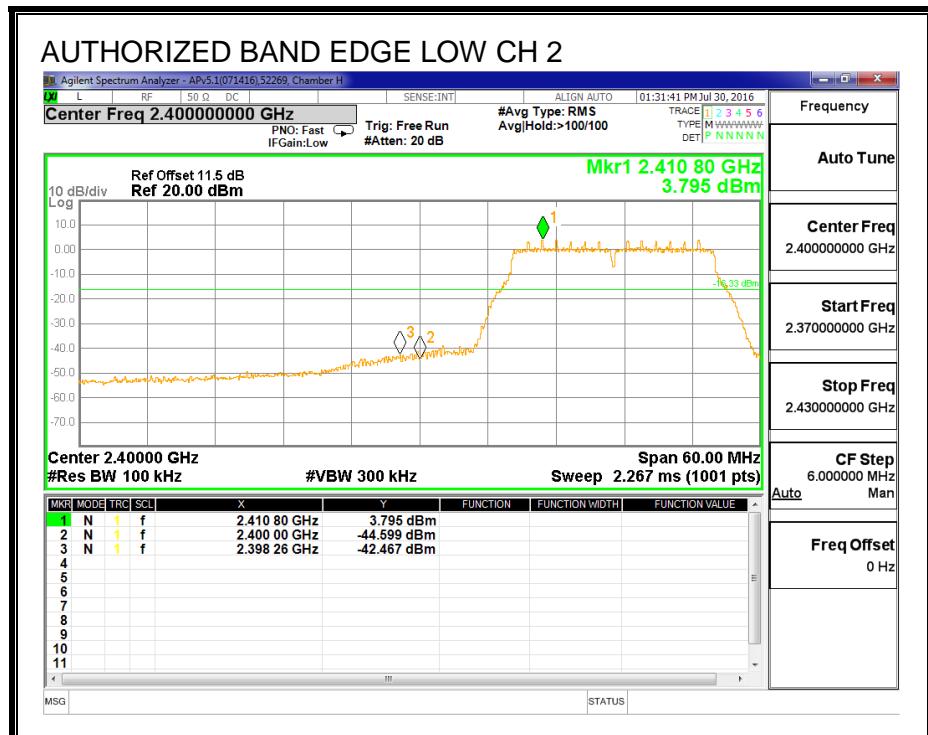
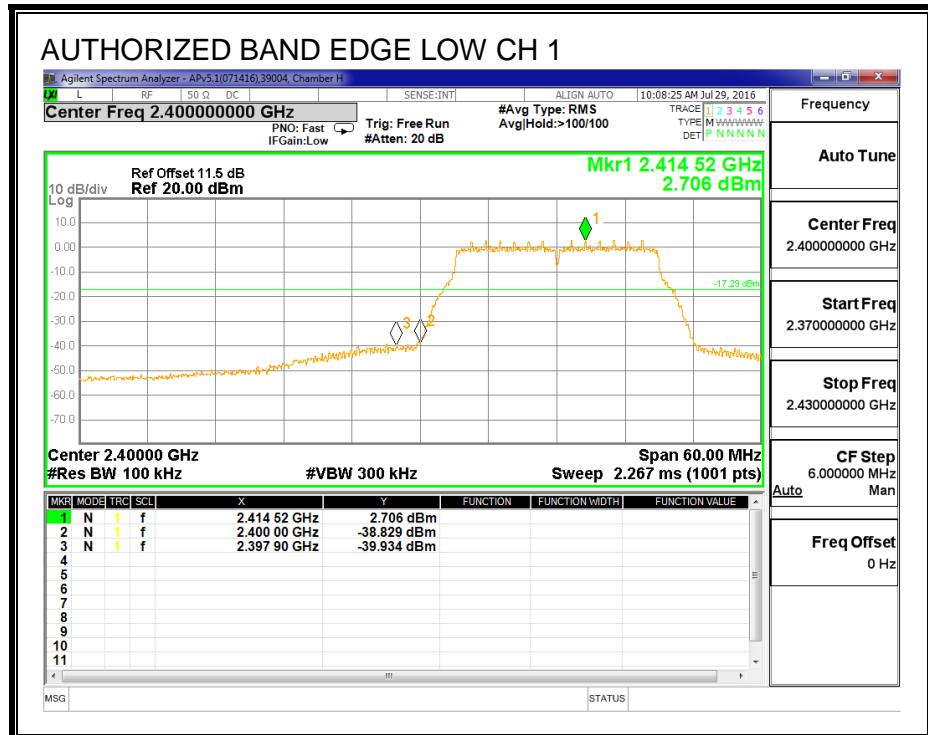
FCC §15.247 (d)

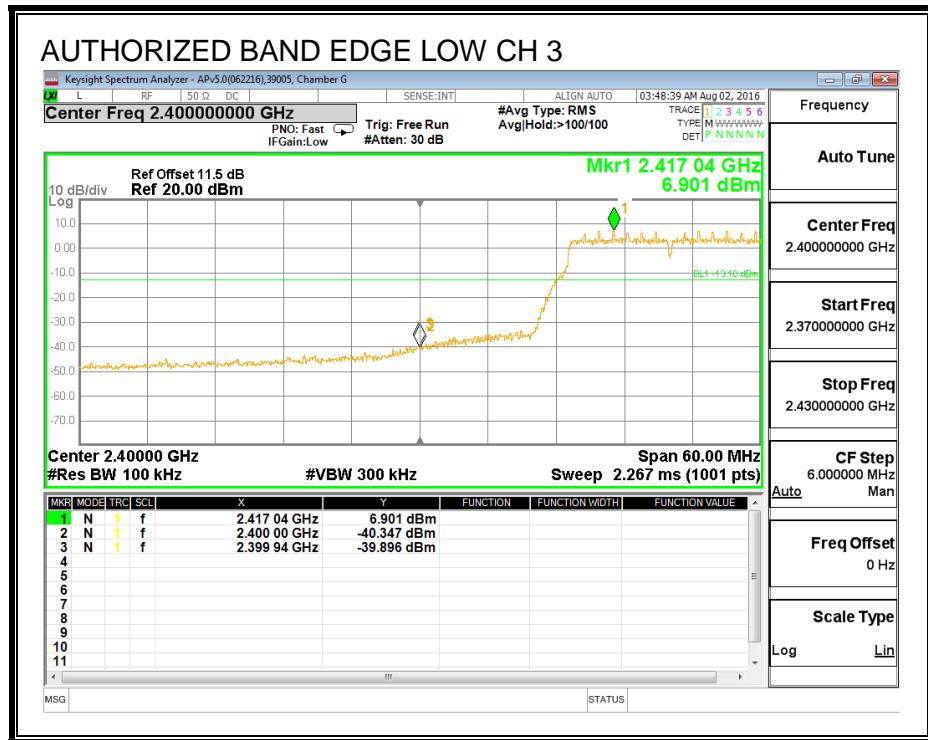
IC RSS-247 (5.5)

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.

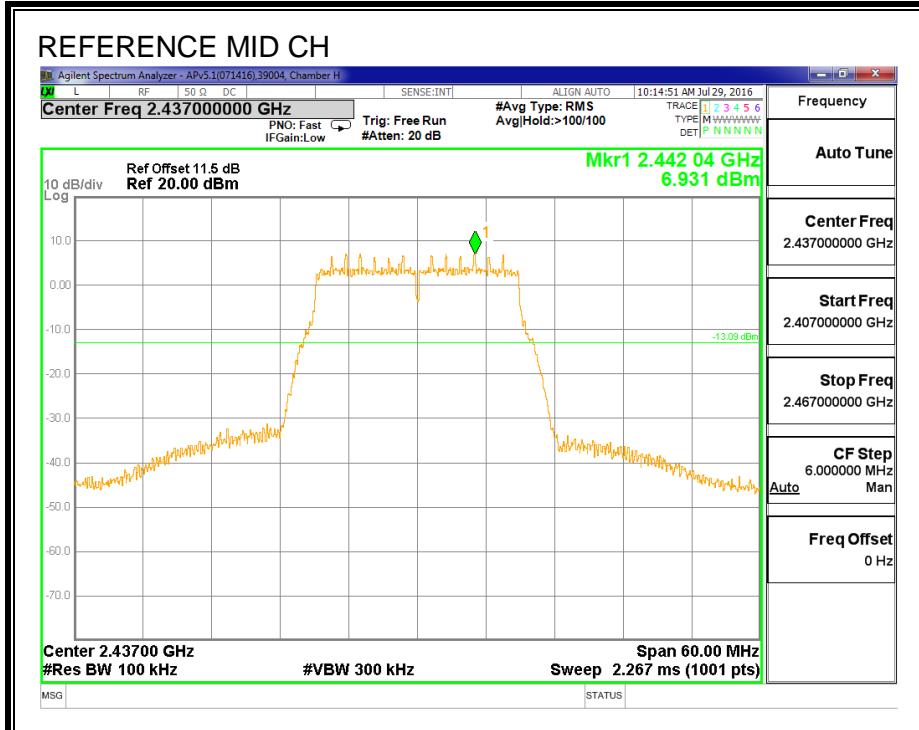
RESULTS

LOW CHANNEL BANDEDGE

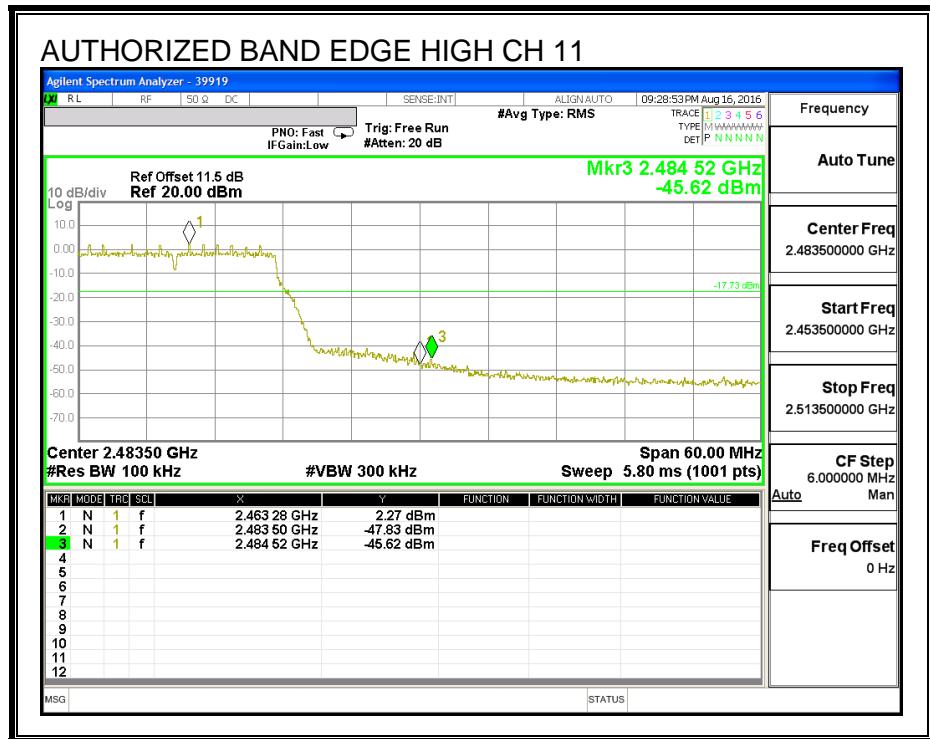
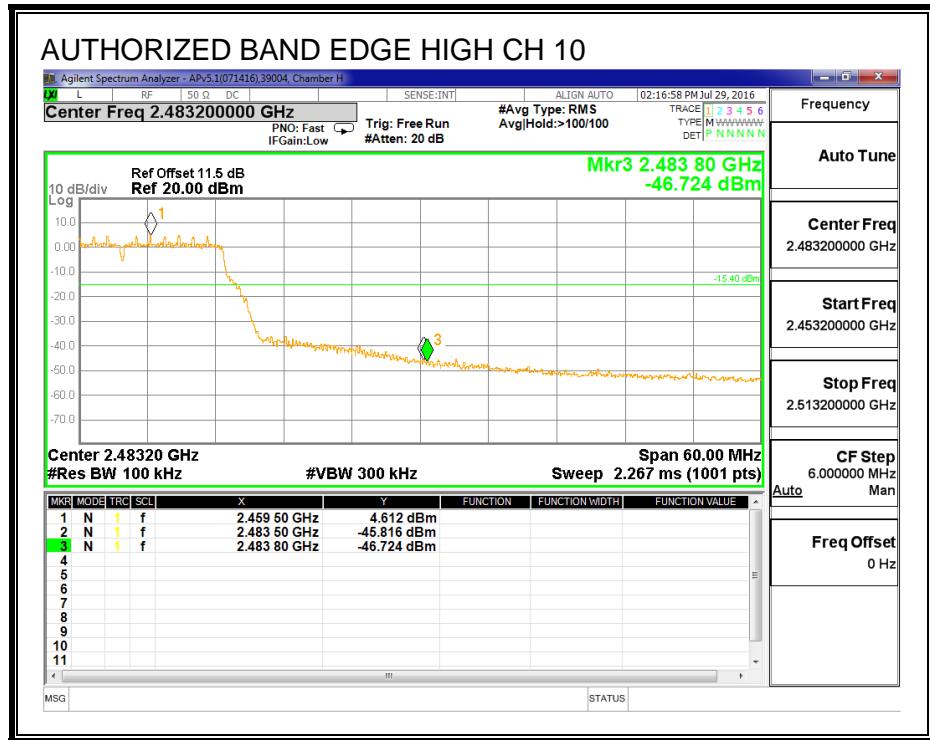


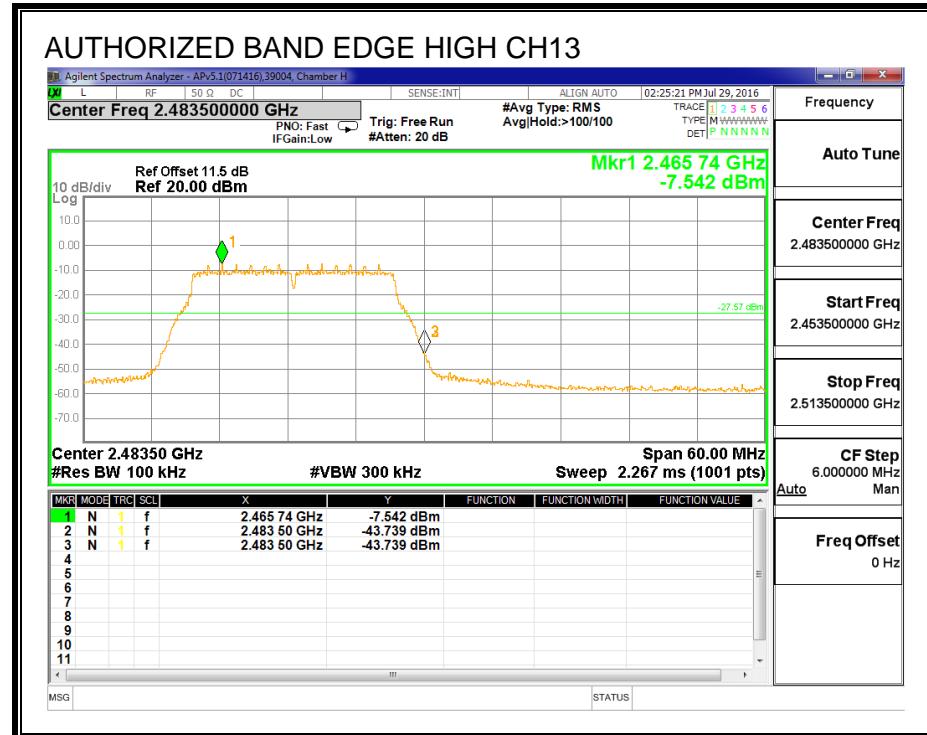
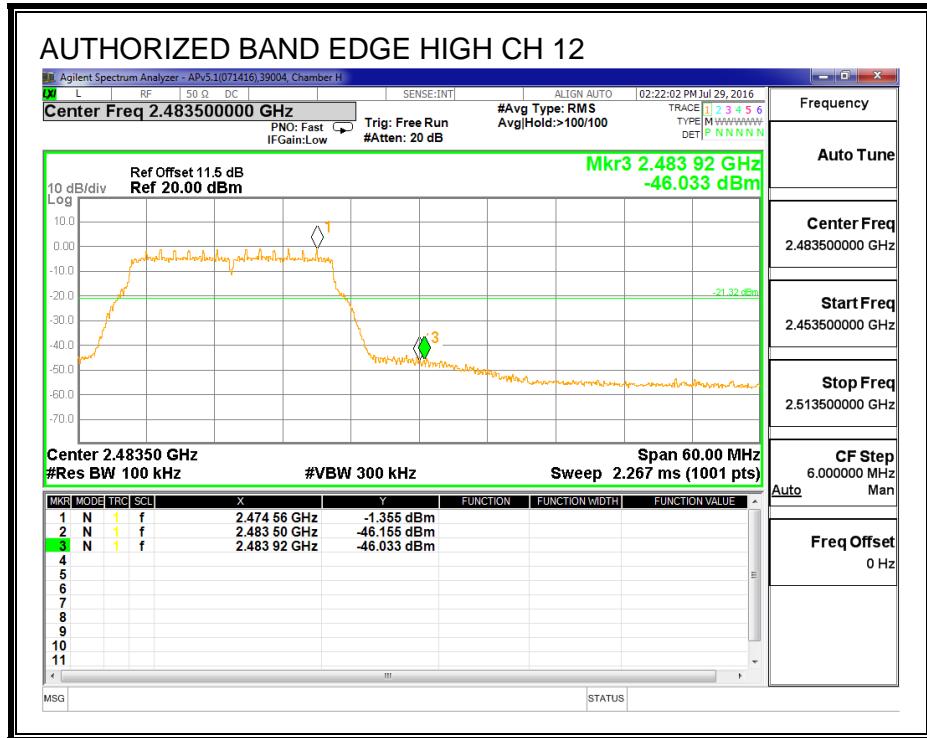


MID CHANNEL REFERENCE

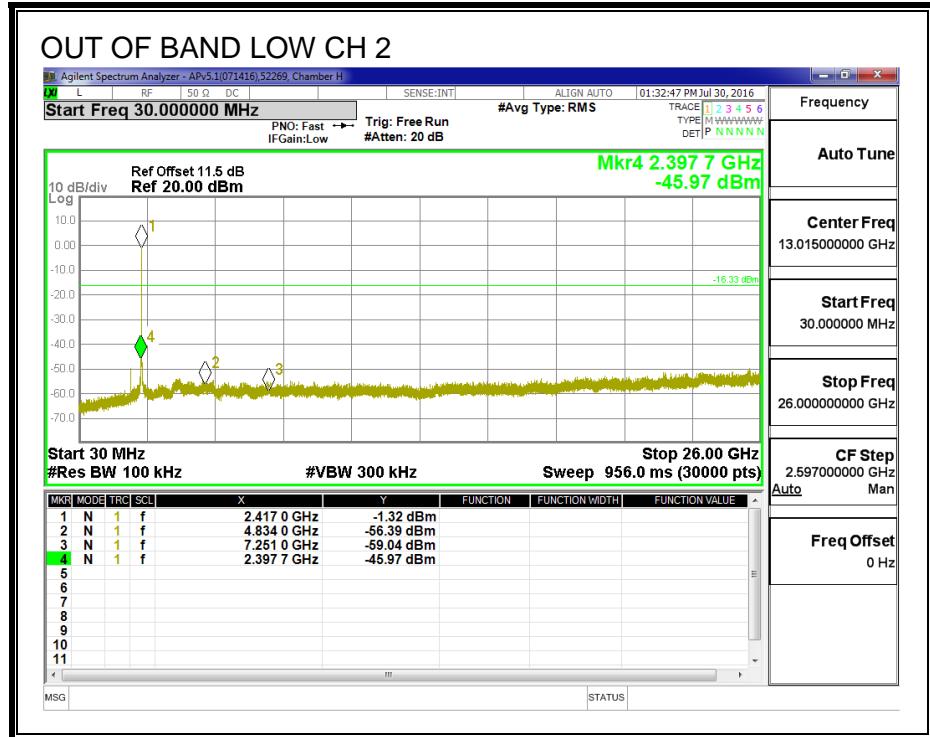
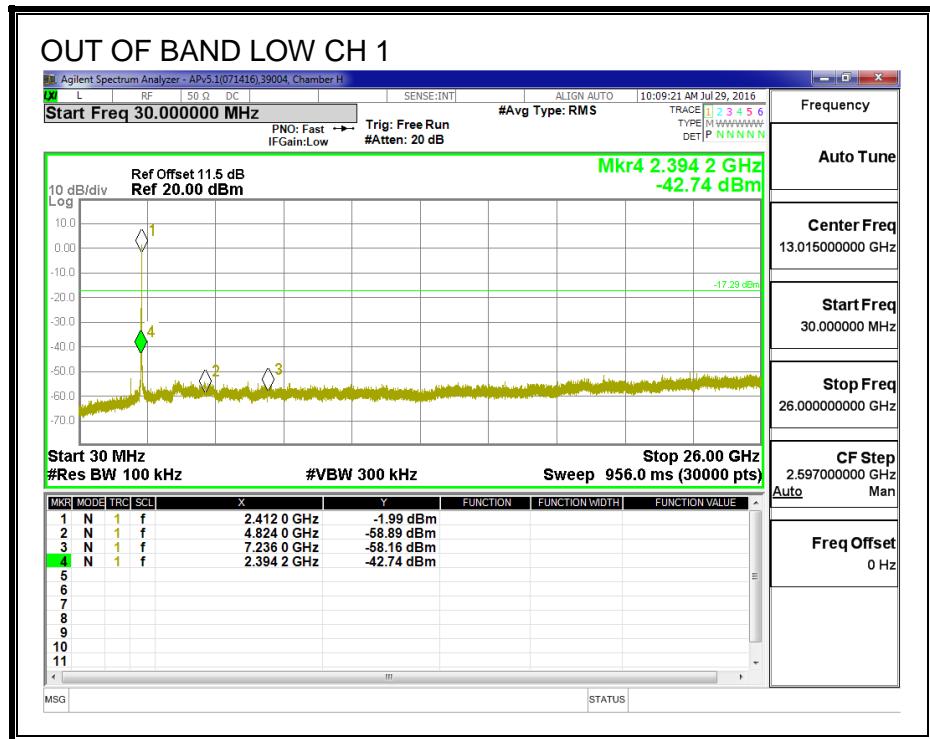


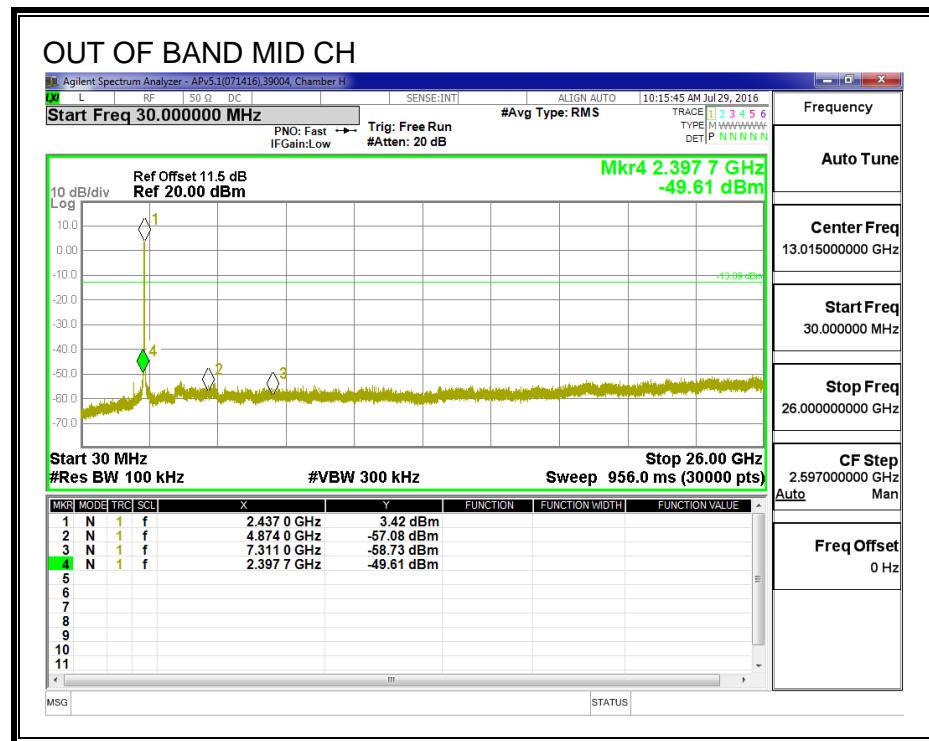
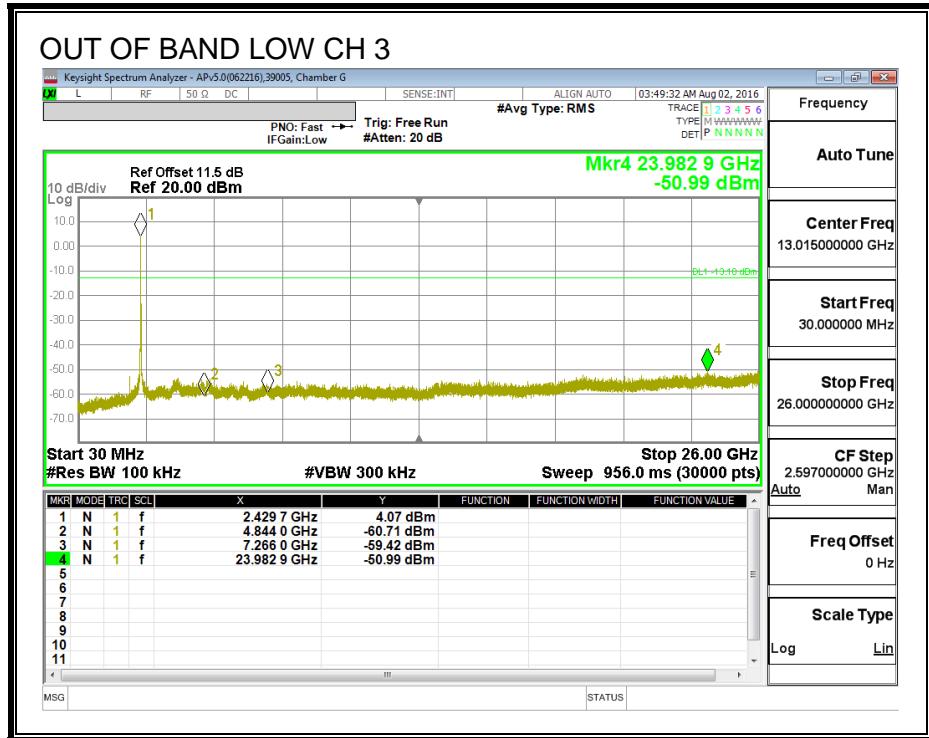
HIGH CHANNEL BANDEDGE

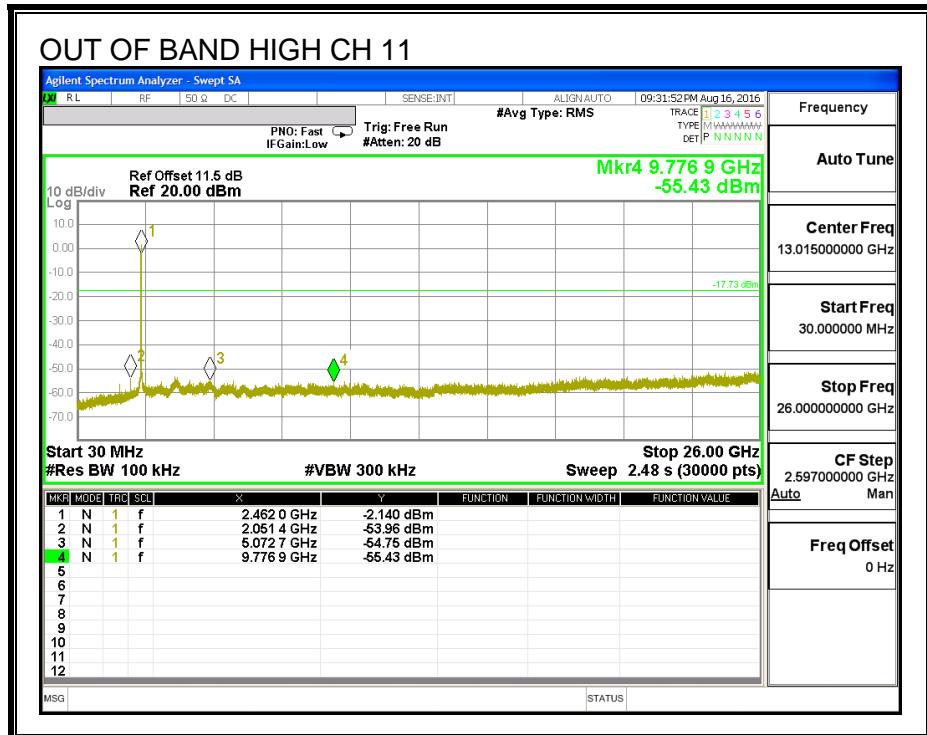
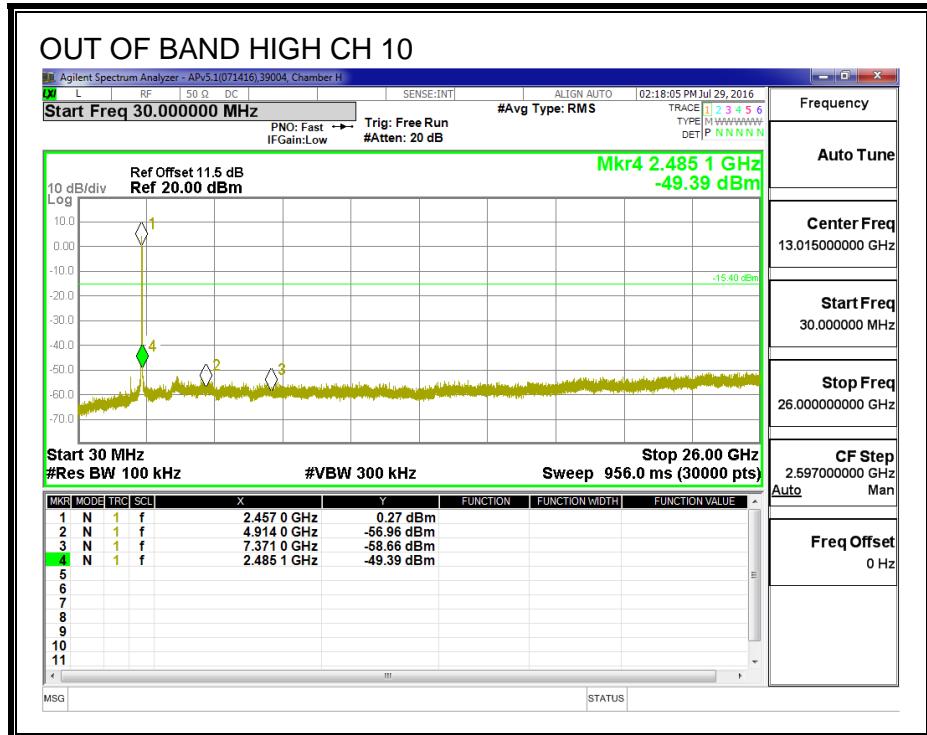


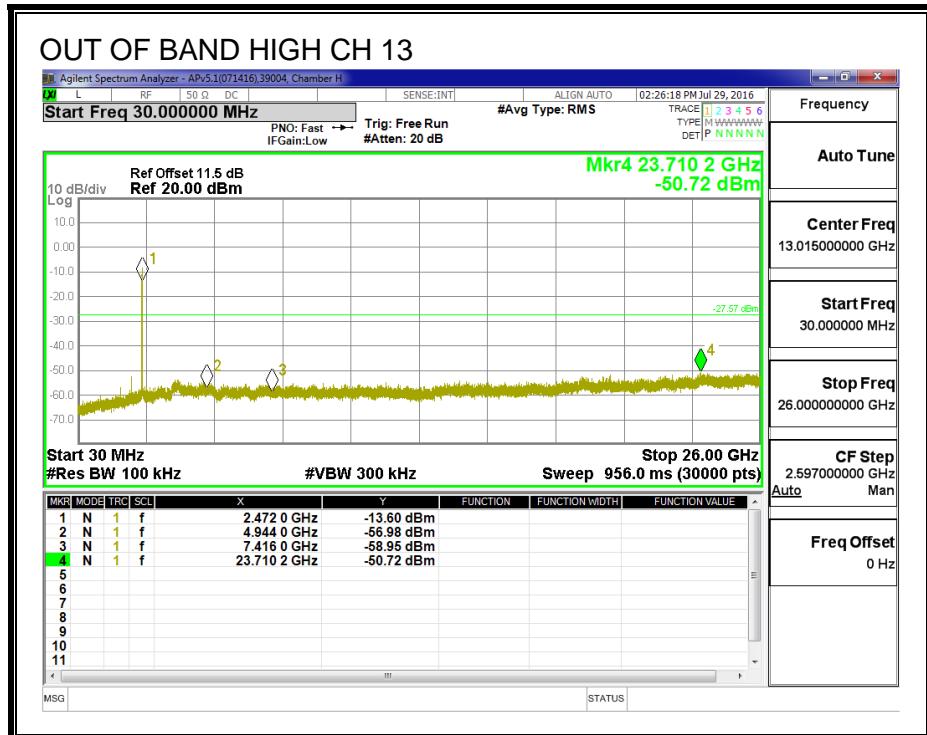
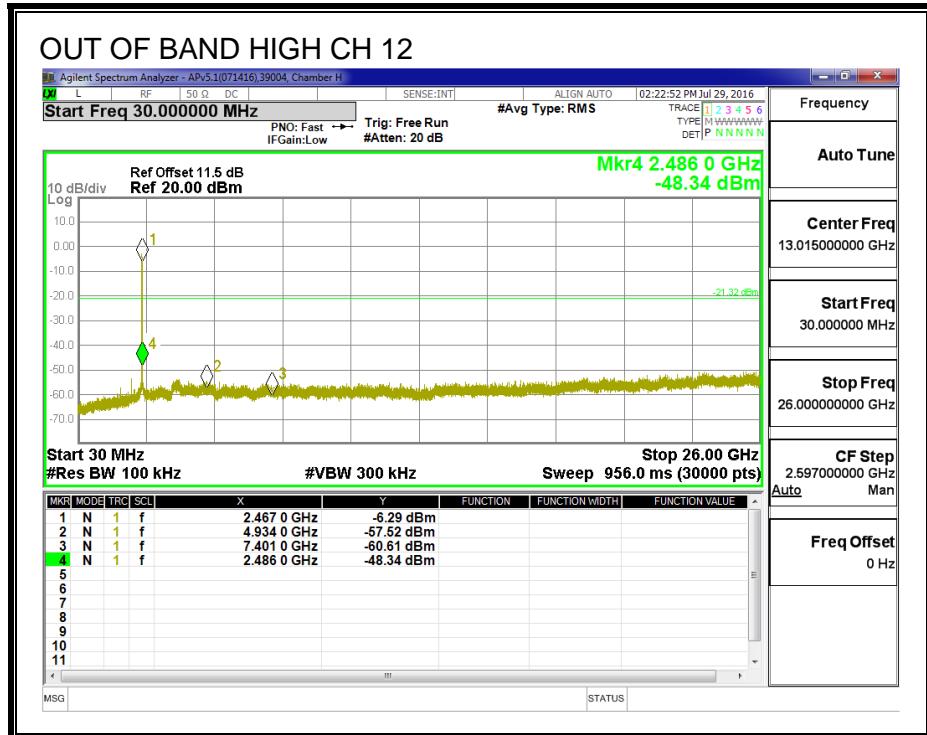


OUT-OF-BAND EMISSIONS









8.6. 802.11n HT20 SISO MODE IN THE 2.4 GHz BAND, CHAIN 1

8.6.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

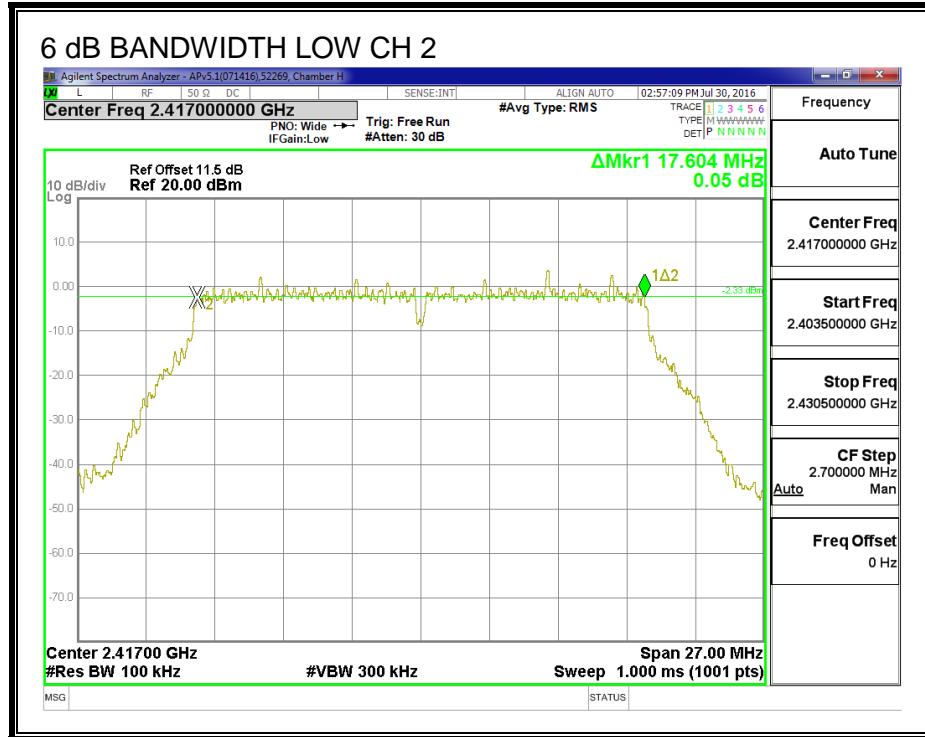
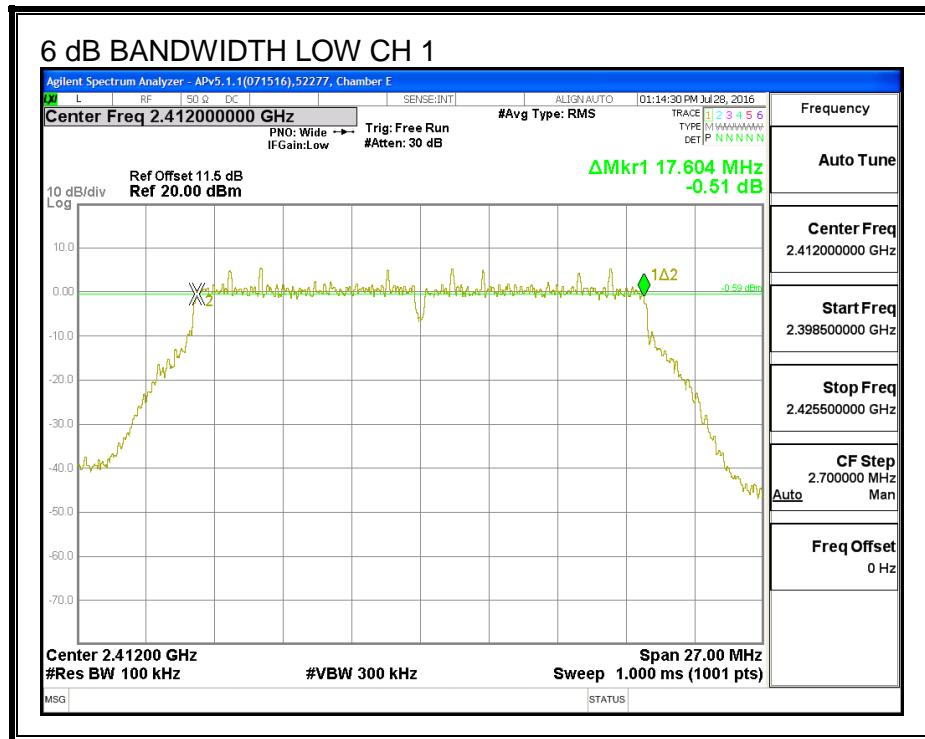
IC RSS-247 (5.2) (1)

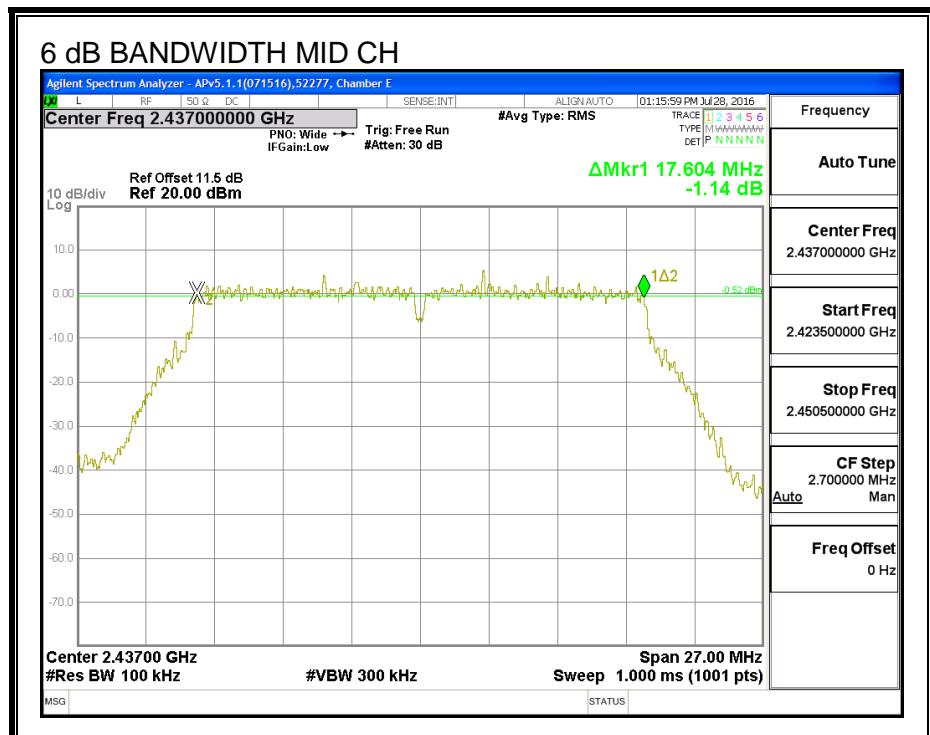
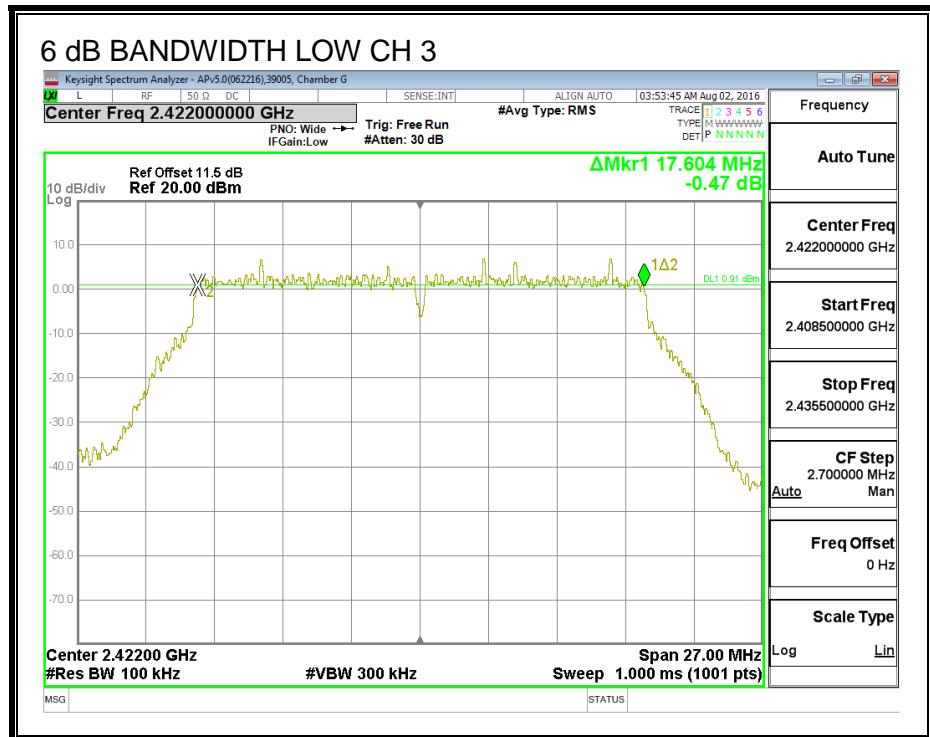
The minimum 6 dB bandwidth shall be at least 500 kHz.

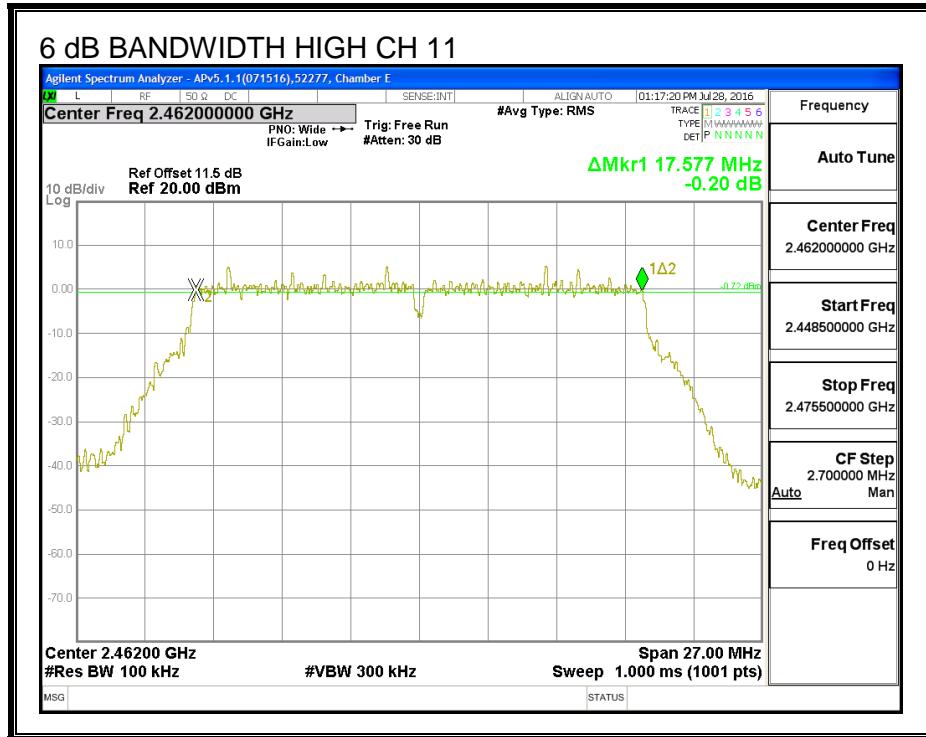
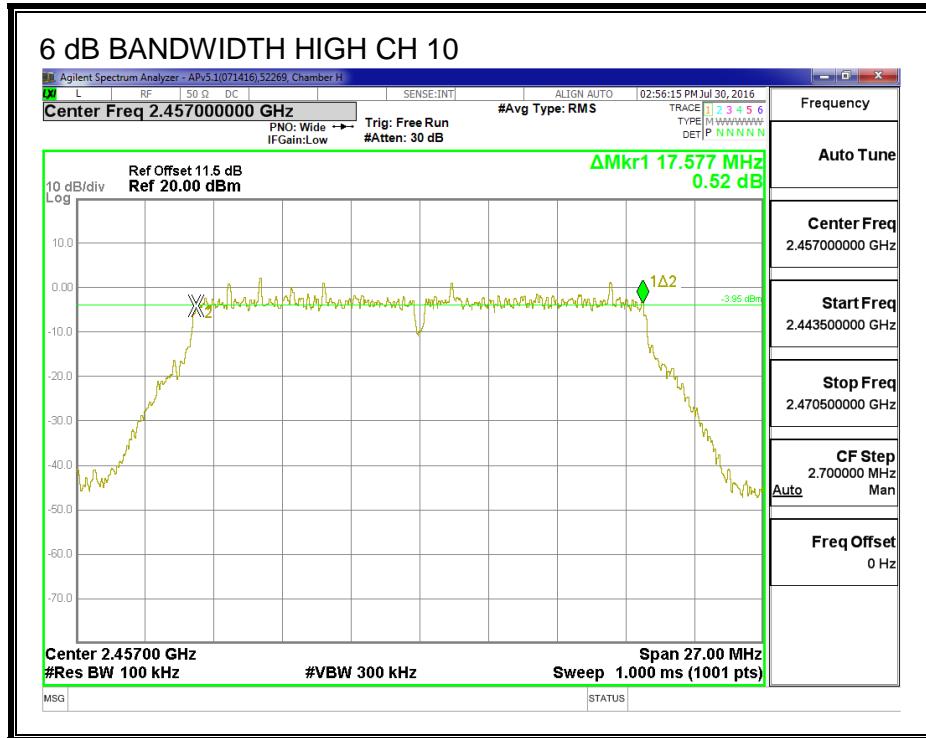
RESULTS

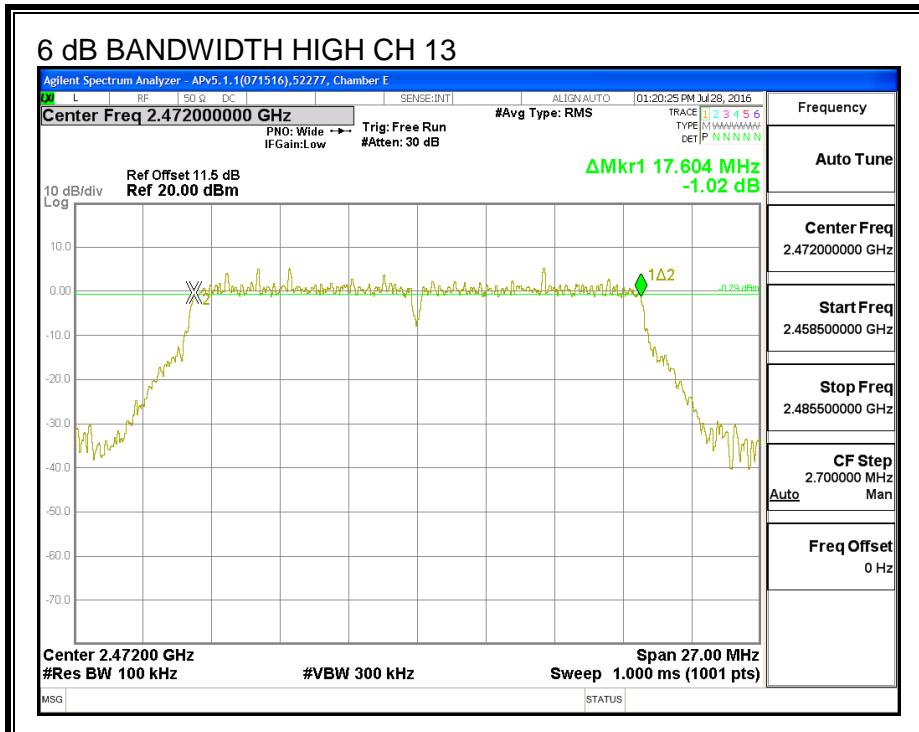
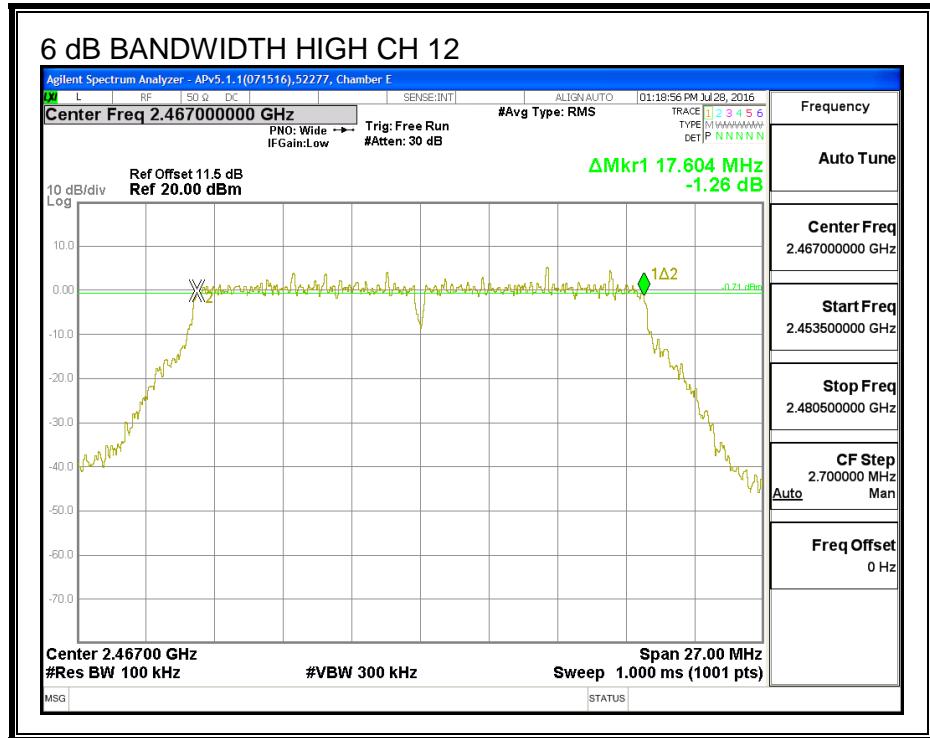
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low_1	2412	17.604	0.5
Low_2	2417	17.604	0.5
Low_3	2422	17.604	0.5
Mid_6	2437	17.604	0.5
High_10	2457	17.577	0.5
High_11	2462	17.577	0.5
High_12	2467	17.604	0.5
High_13	2472	17.604	0.5

6 dB BANDWIDTH









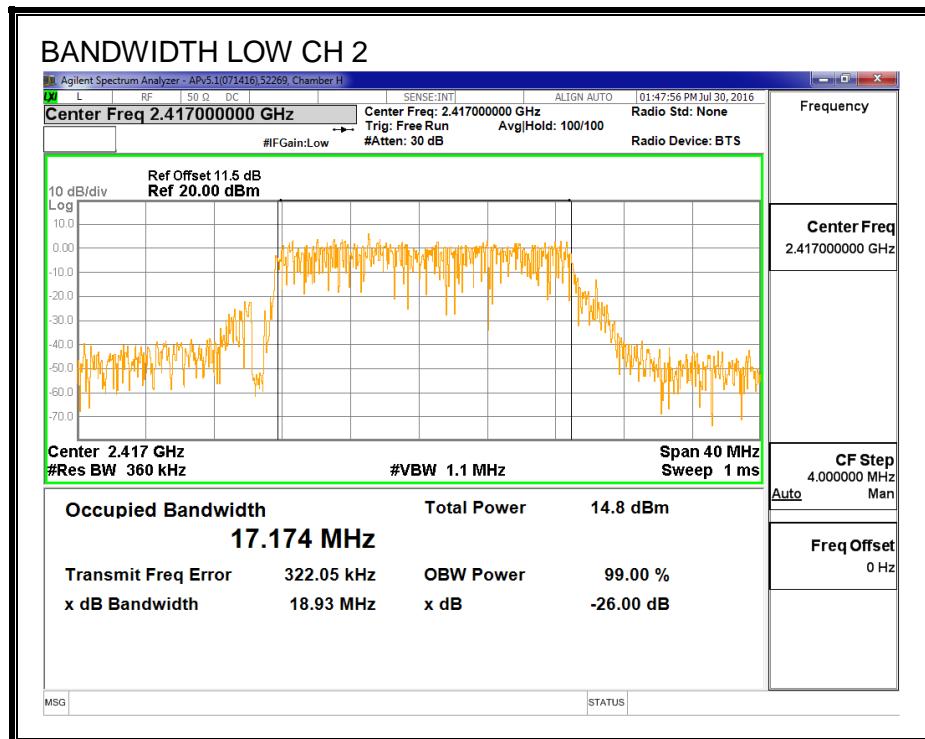
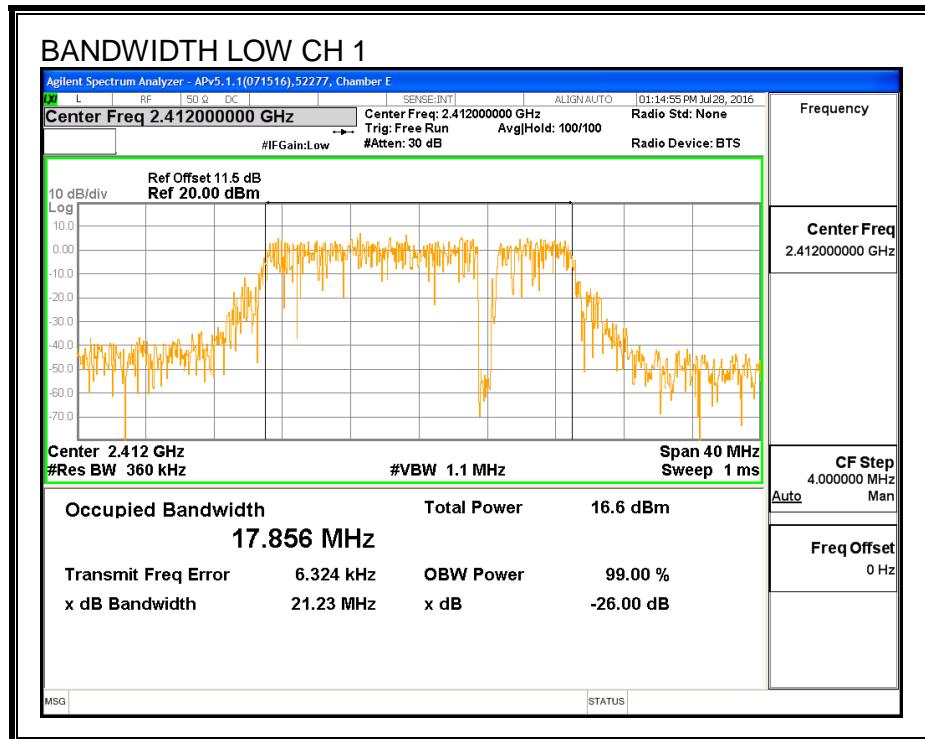
8.6.2. 99% BANDWIDTH

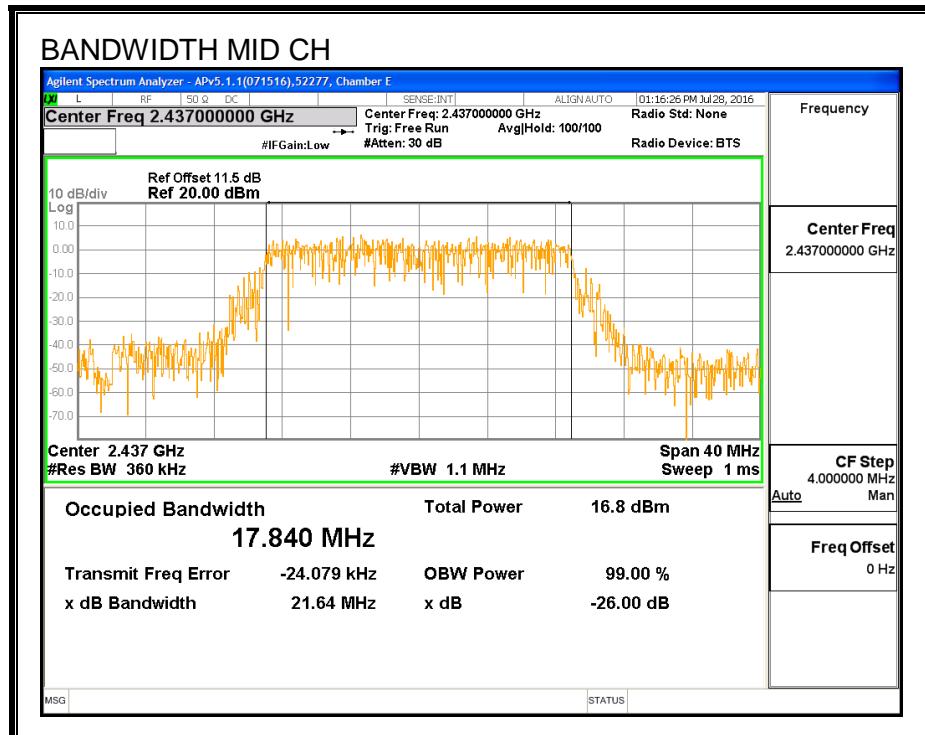
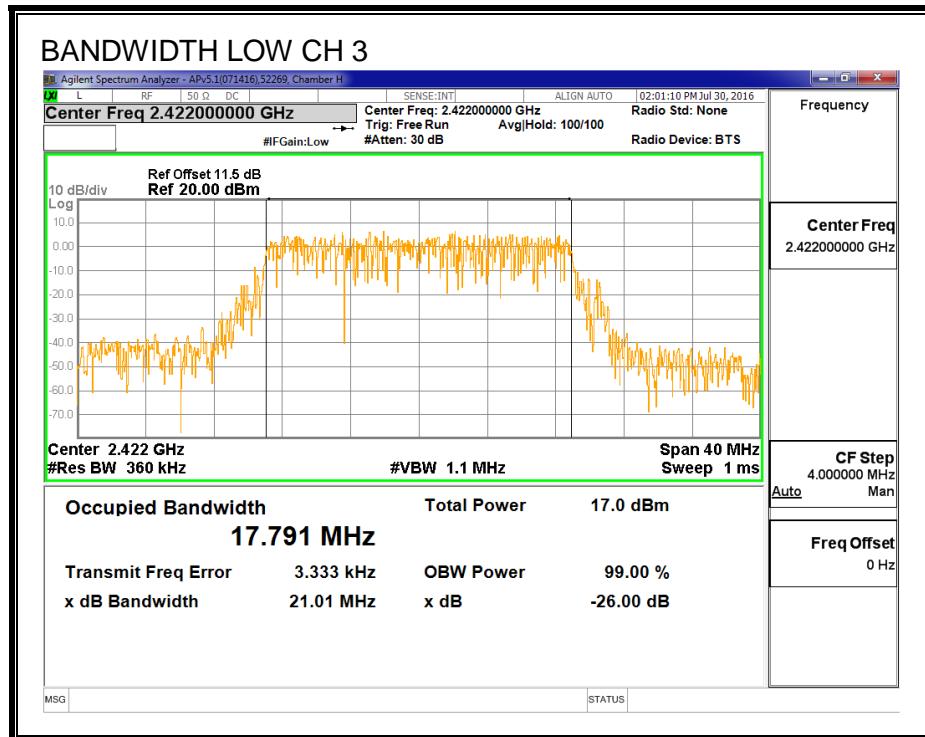
LIMITS

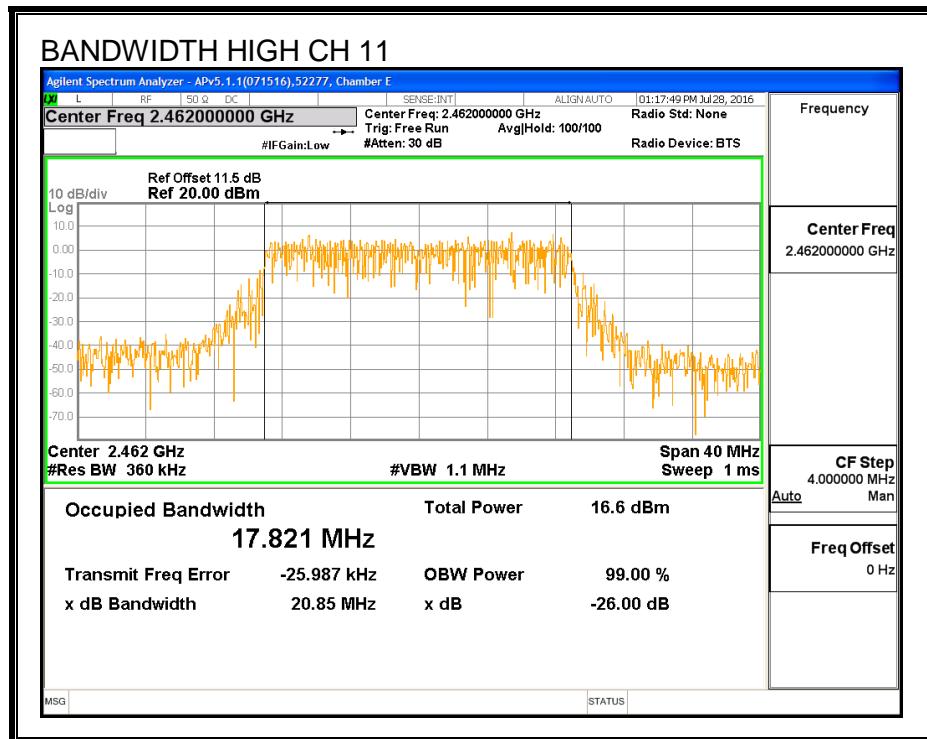
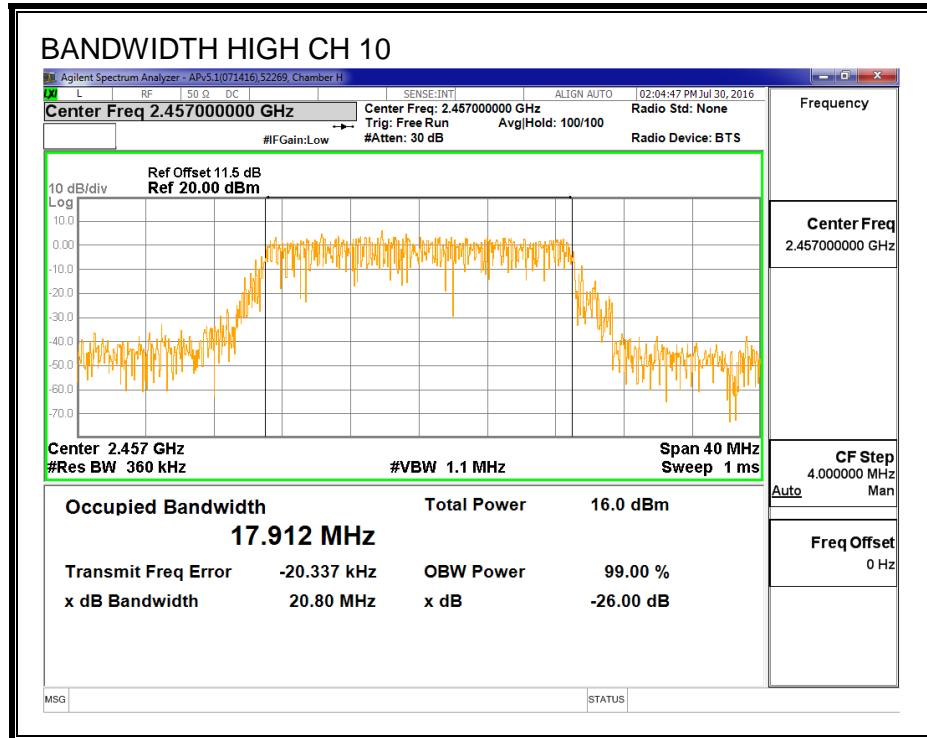
None; for reporting purposes only.

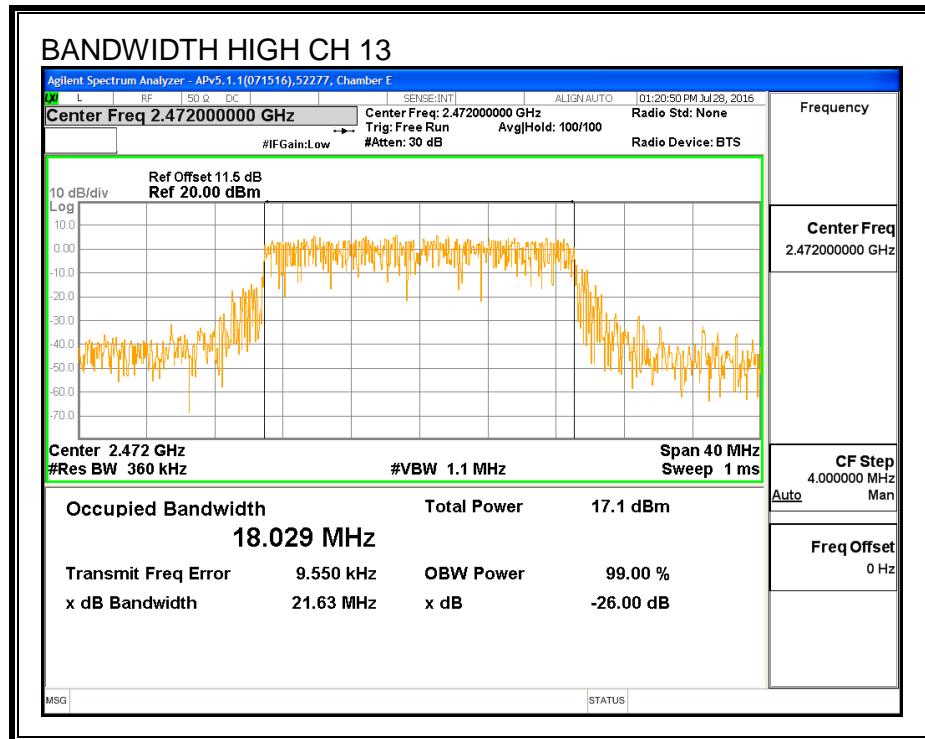
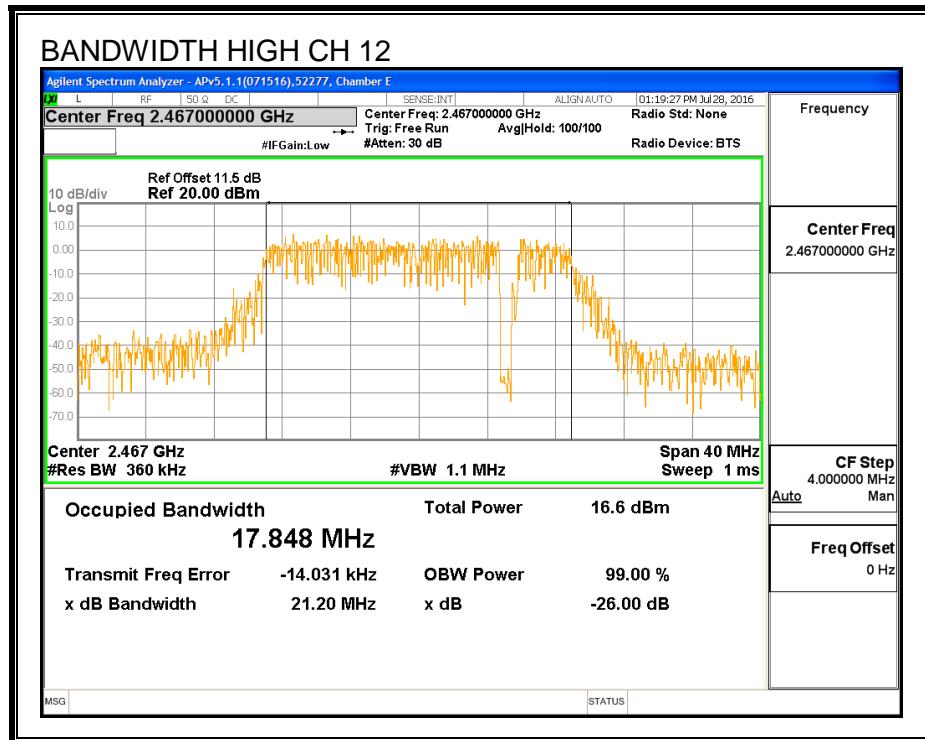
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low_1	2412	17.856
Low_2	2417	17.174
Low_3	2422	17.791
Mid_6	2437	17.840
High_10	2457	17.912
High_11	2462	17.821
High_12	2467	17.848
High_13	2472	18.029

99% BANDWIDTH







8.6.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

ID:	39919	Date:	8/31/16
-----	-------	-------	---------

Channel	Frequency (MHz)	Power (dBm)
Low_1	2412	13.91
Low_2	2417	15.45
Low_3	2422	16.68
Mid_6	2437	16.73
High_10	2457	16.61
High_11	2462	13.44
High_12	2467	10.41
High_13	2472	-0.21

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

ID:	39919	Date:	8/31/16
-----	-------	-------	---------

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	5.10	30.00	30	36	30.00
Low_2	2417	5.10	30.00	30	36	30.00
Low_3	2422	5.10	30.00	30	36	30.00
Mid_6	2437	5.10	30.00	30	36	30.00
High_10	2457	5.10	30.00	30	36	30.00
High_11	2462	5.10	30.00	30	36	30.00
High_12	2467	5.10	30.00	30	36	30.00
High_13	2472	5.10	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)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low_1	2412	19.65	19.65	30.00	-10.35
Low_2	2417	21.47	21.47	30.00	-8.53
Low_3	2422	23.91	23.91	30.00	-6.09
Mid_6	2437	24.11	24.11	30.00	-5.89
High_10	2457	23.82	23.82	30.00	-6.18
High_11	2462	19.23	19.23	30.00	-10.77
High_12	2467	16.74	16.74	30.00	-13.26
High_13	2472	6.18	6.18	30.00	-23.82

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)	Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-10.88	-10.88	8.0	-18.9
Low_2	2417	-8.87	-8.87	8.0	-16.9
Low_3	2422	-8.16	-8.16	8.0	-16.2
Mid_6	2437	-7.84	-7.84	8.0	-15.8
High_10	2457	-8.36	-8.36	8.0	-16.4
High_11	2462	-11.63	-11.63	8.0	-19.6
High_12	2467	-15.12	-15.12	8.0	-23.1
High_13	2472	-22.35	-22.35	8.0	-30.4

PSD

