

## 8.6.6. OUT-OF-BAND EMISSIONS

### LIMITS

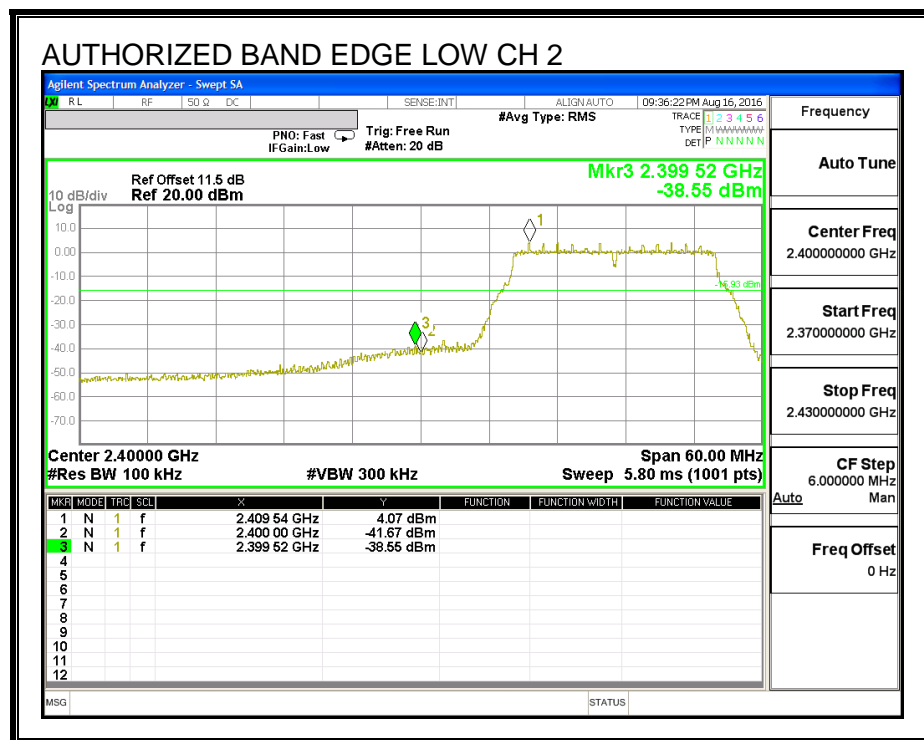
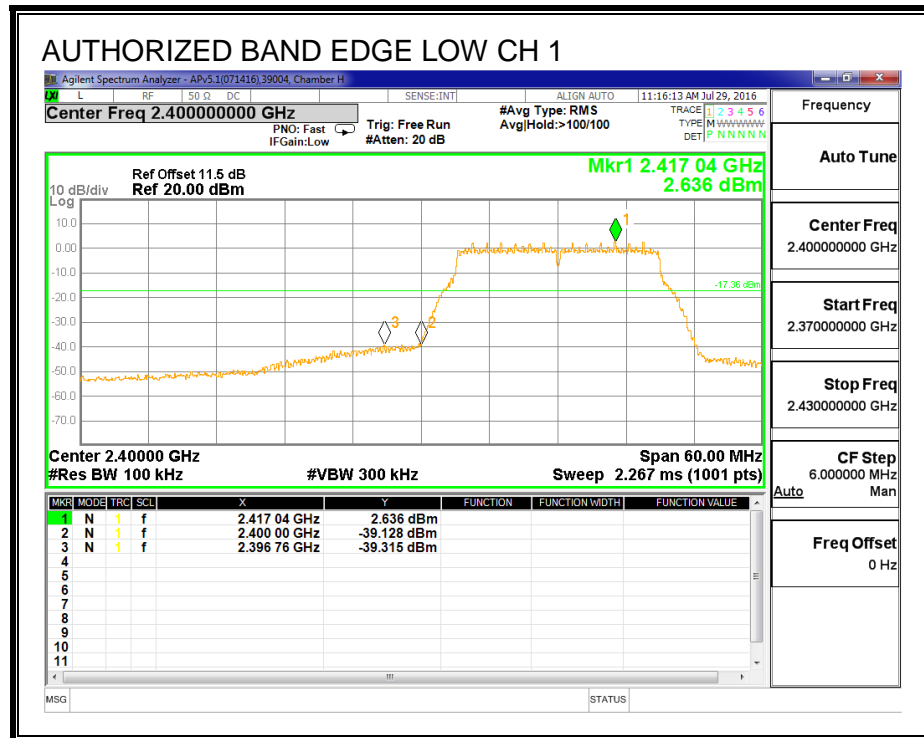
FCC §15.247 (d)

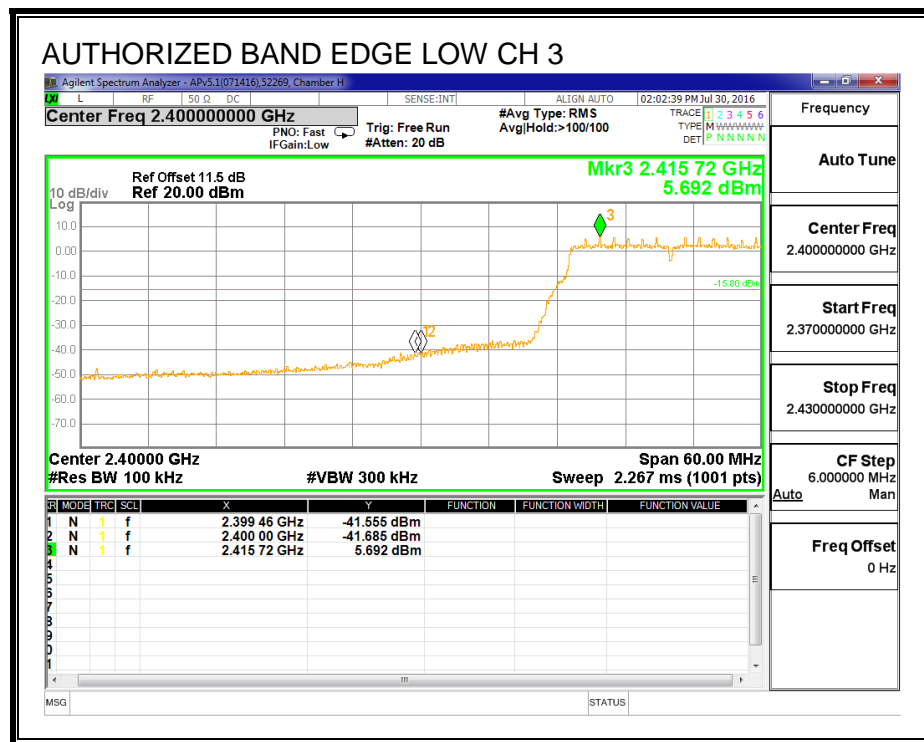
IC RSS-247 (5.5)

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.

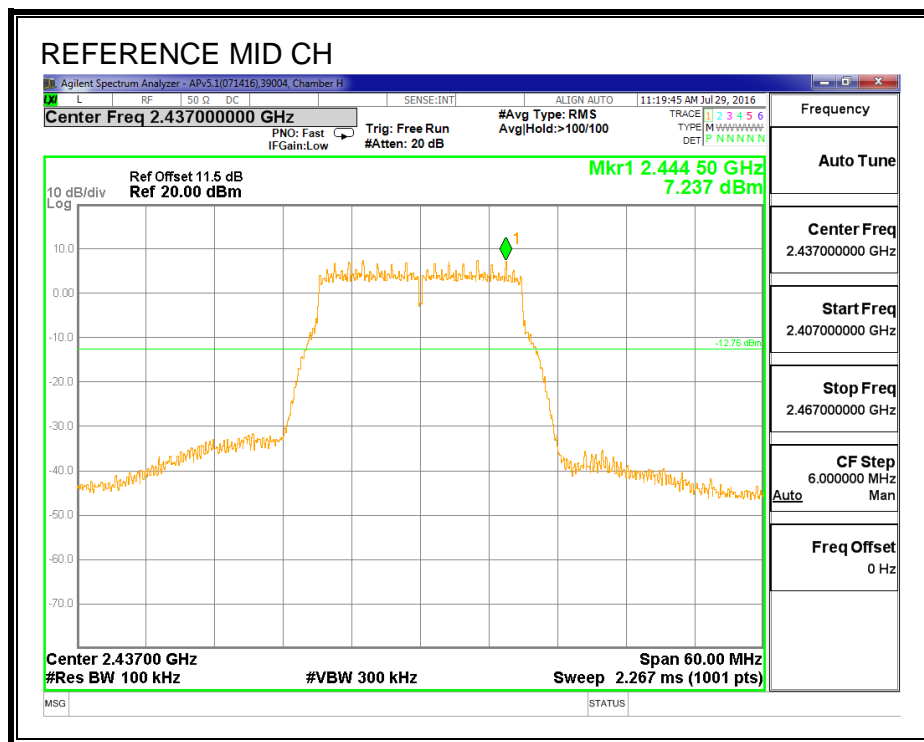
## RESULTS

### LOW CHANNEL BANDEDGE

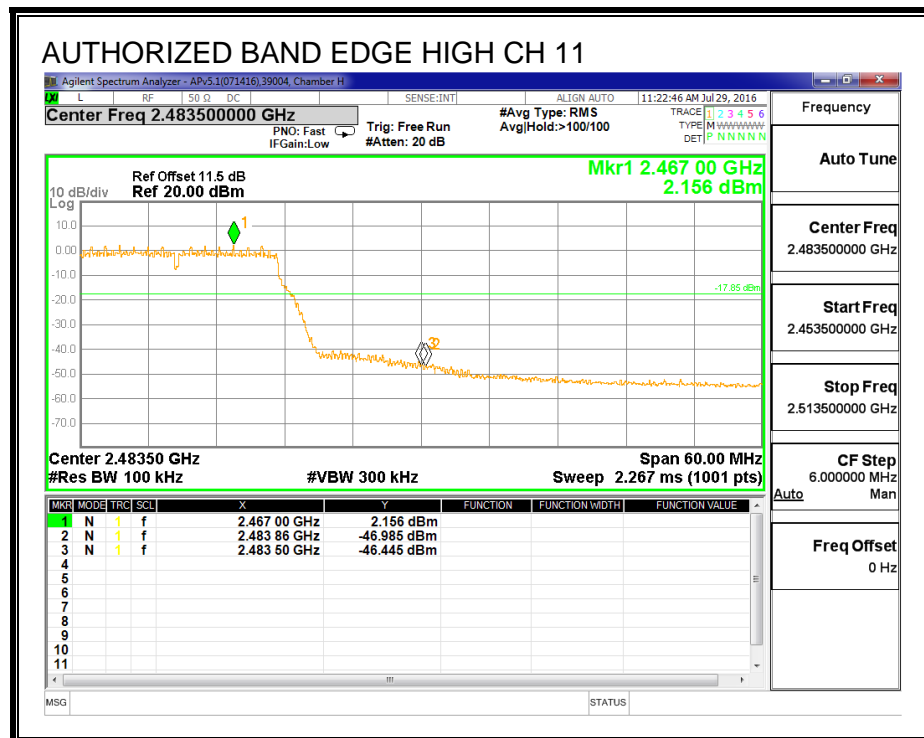
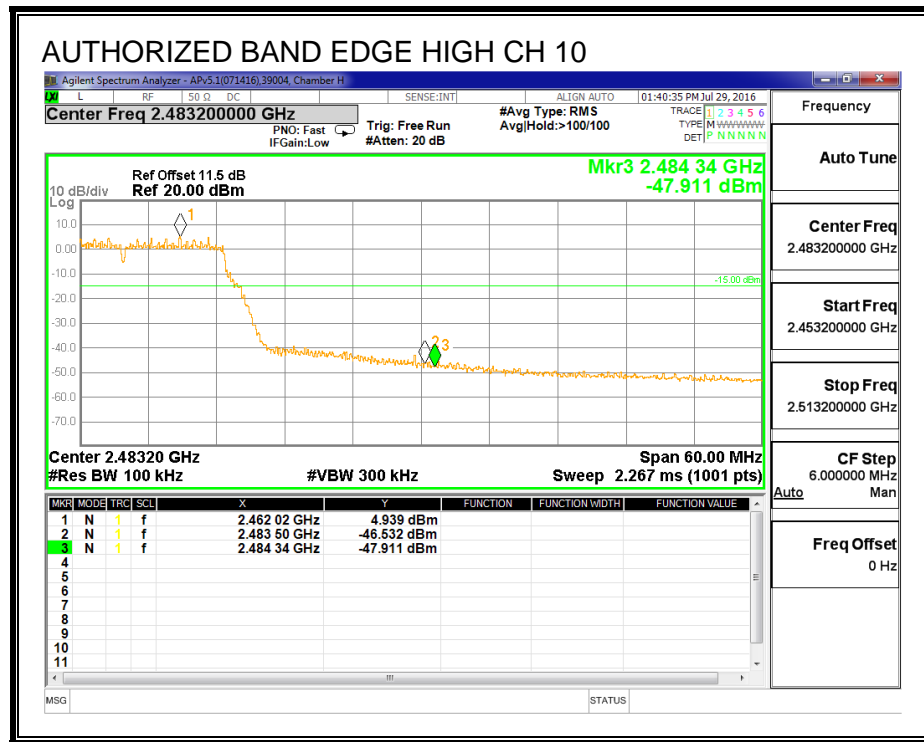


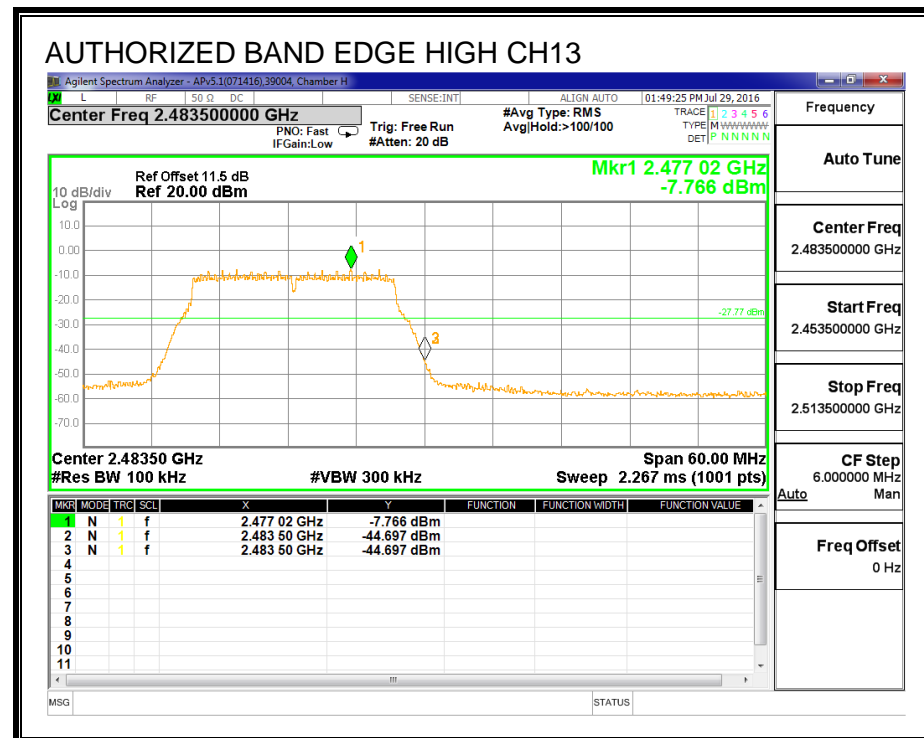
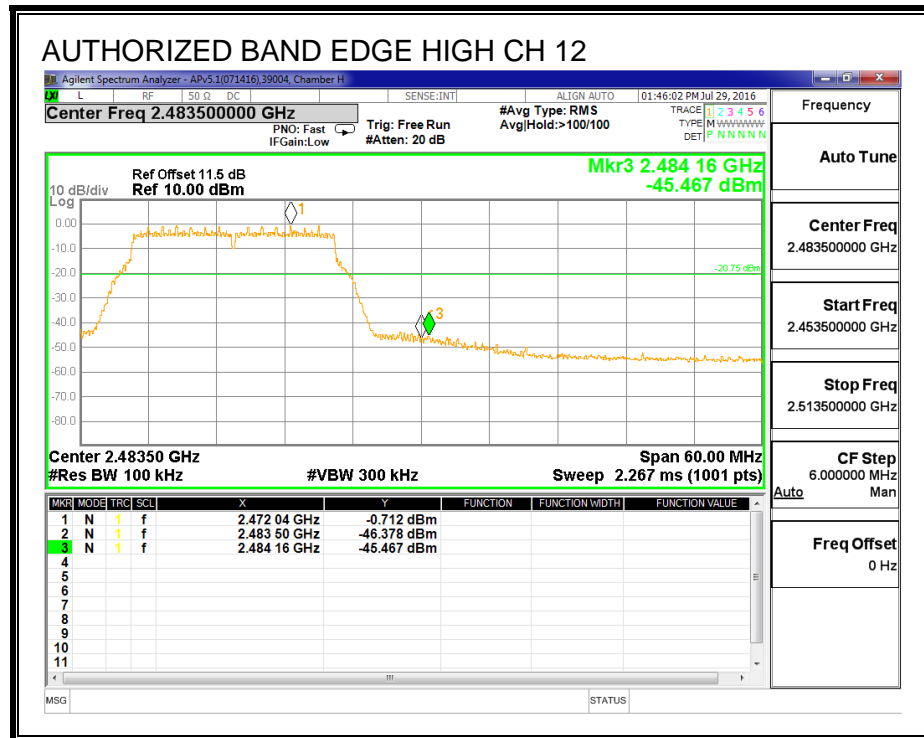


## MID CHANNEL REFERENCE

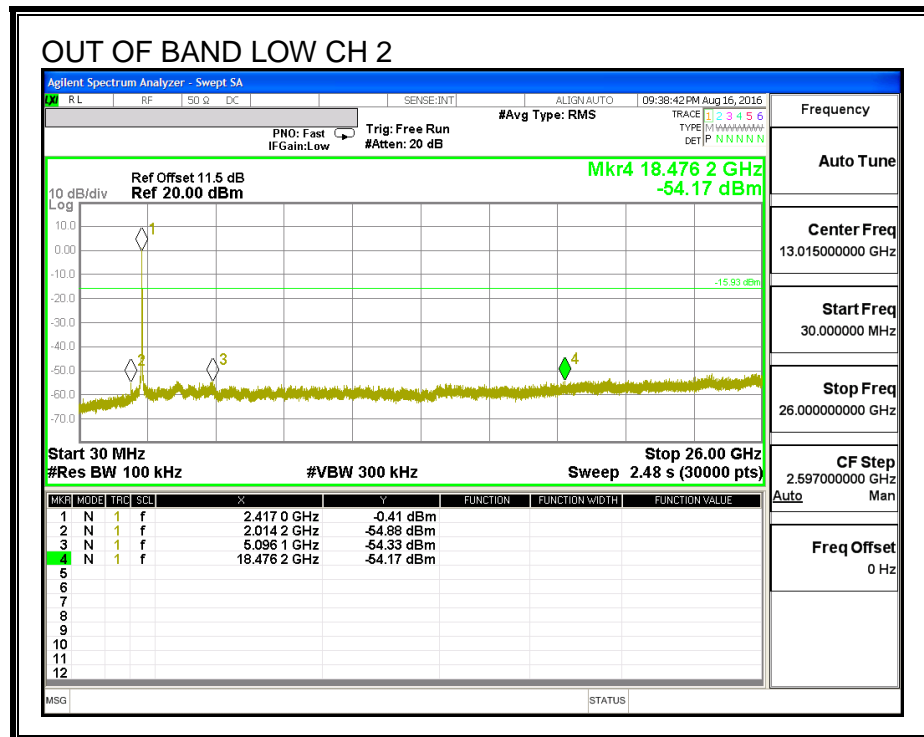
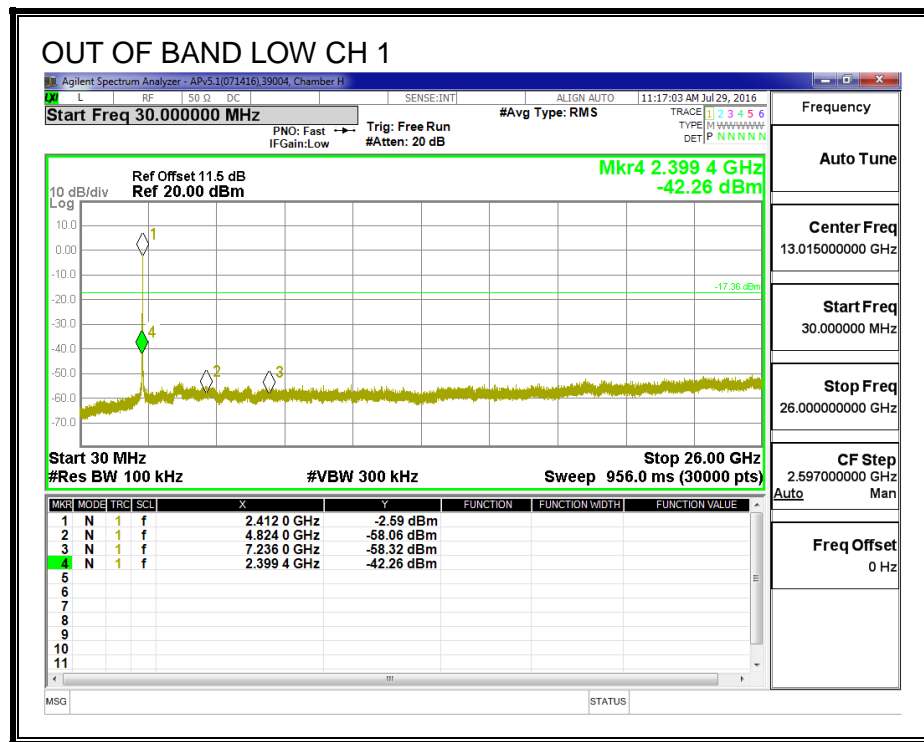


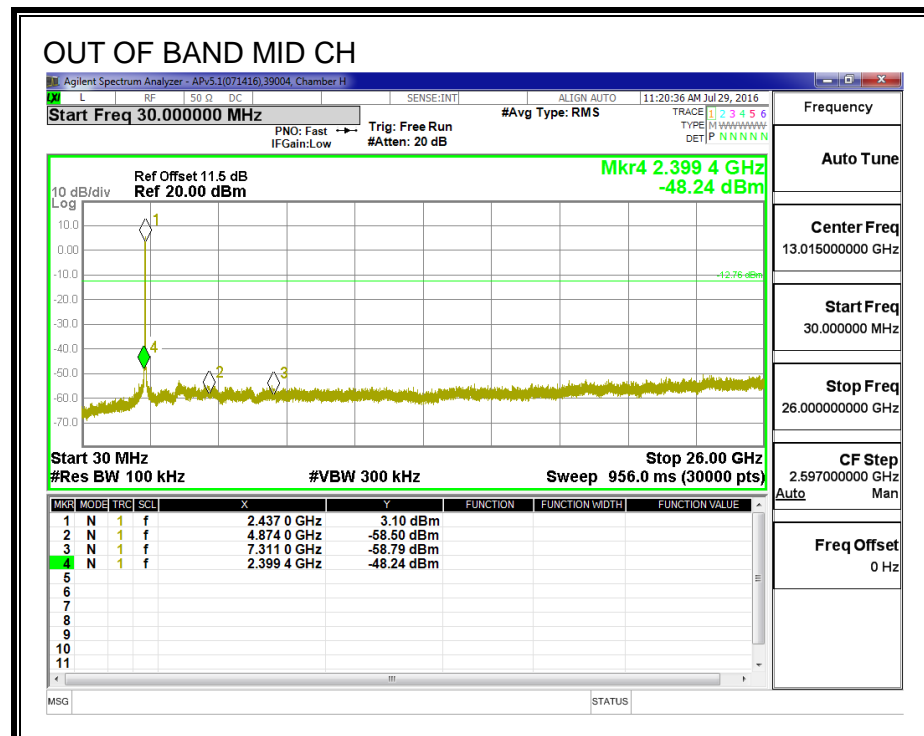
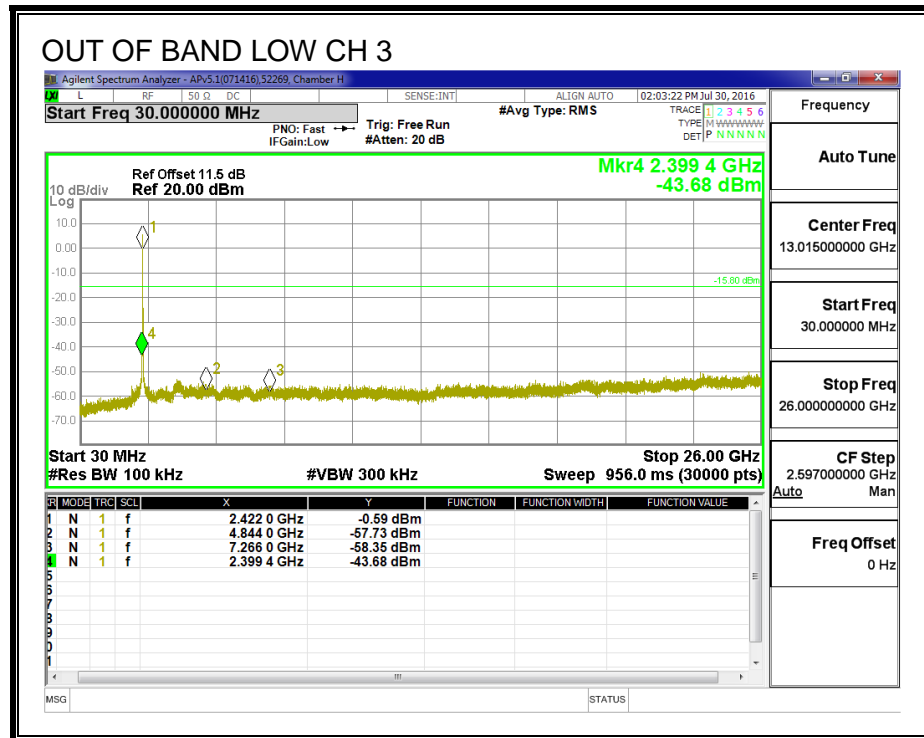
## HIGH CHANNEL BANDEDGE

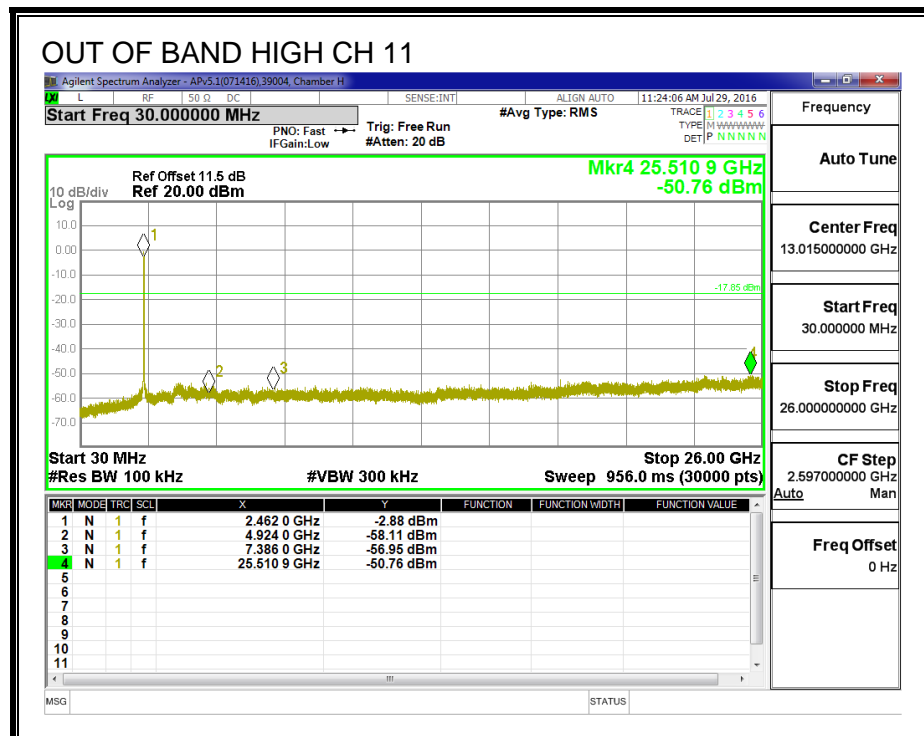
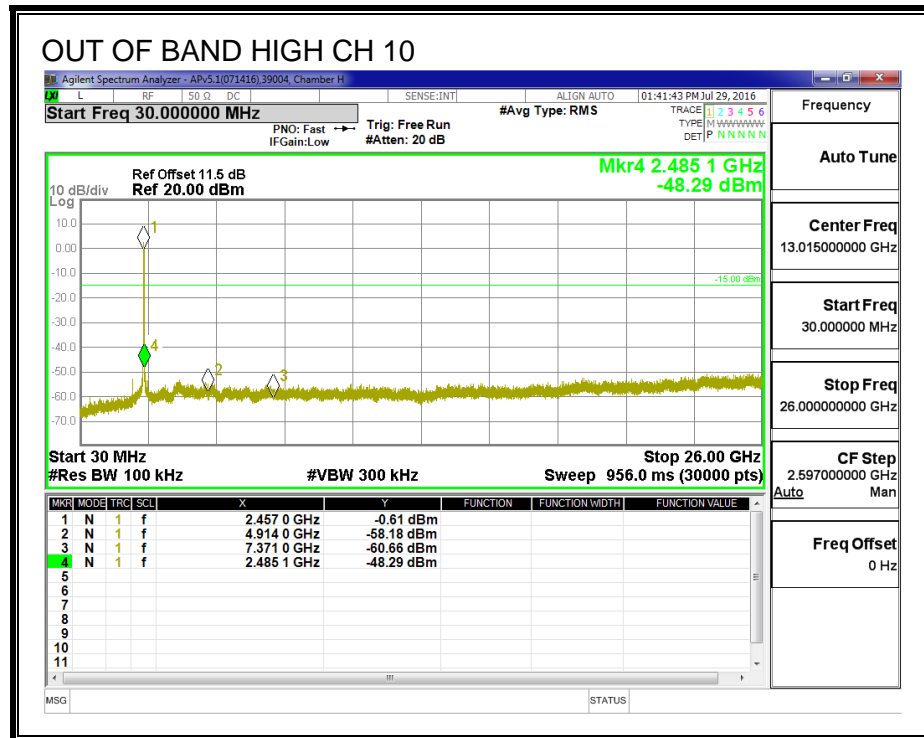




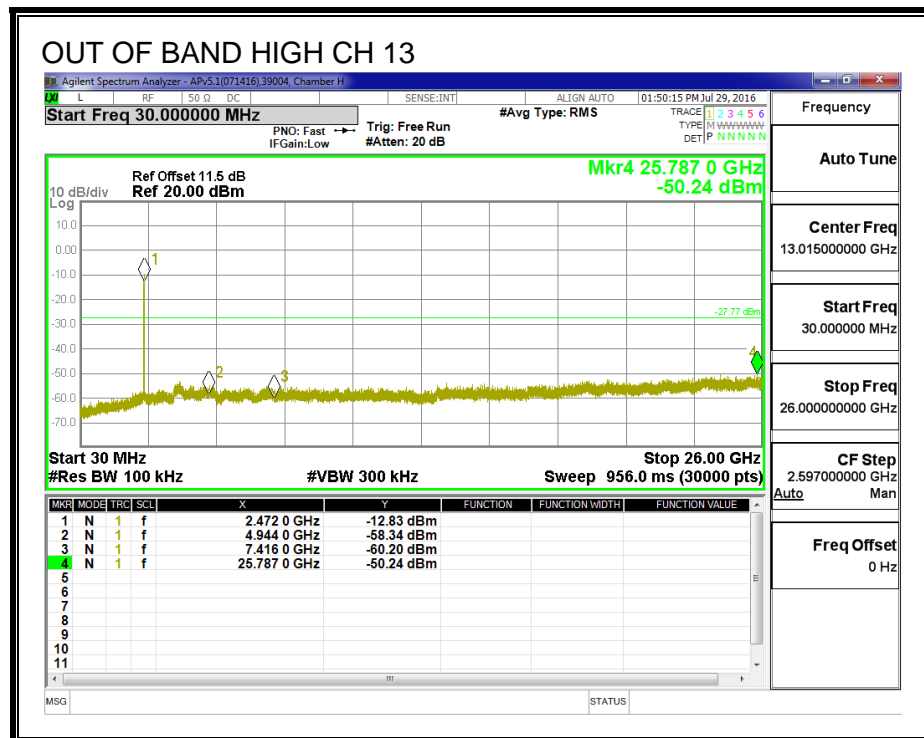
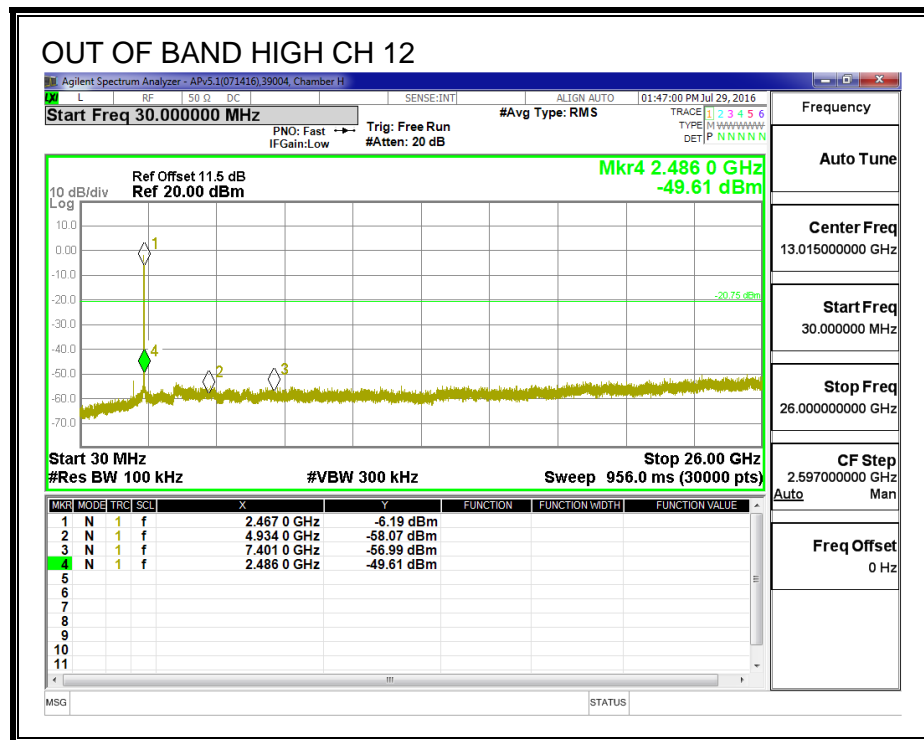
## OUT-OF-BAND EMISSIONS











## 8.7. 802.11n HT20 2Tx CDD MODE IN THE 2.4 GHz BAND

### 8.7.1. 6 dB BANDWIDTH

#### LIMITS

FCC §15.247 (a) (2)

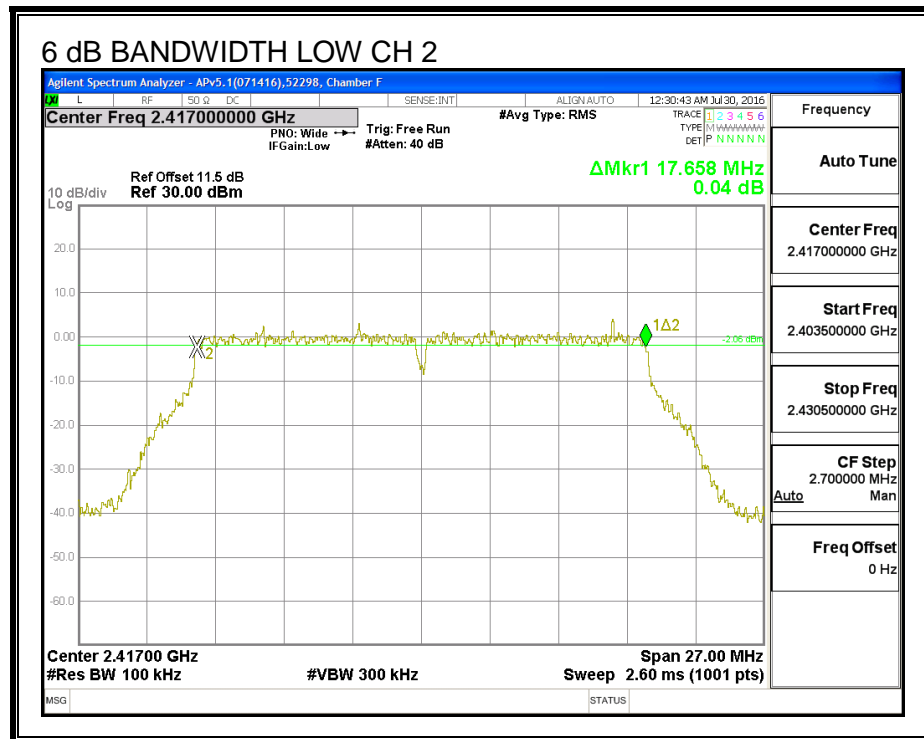
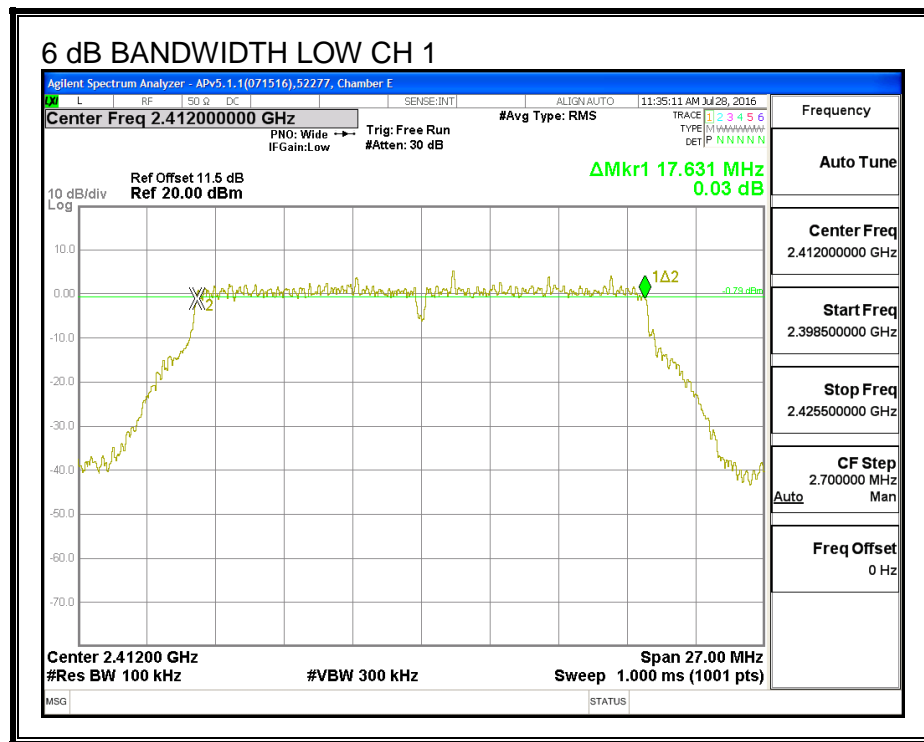
IC RSS-247 (5.2) (1)

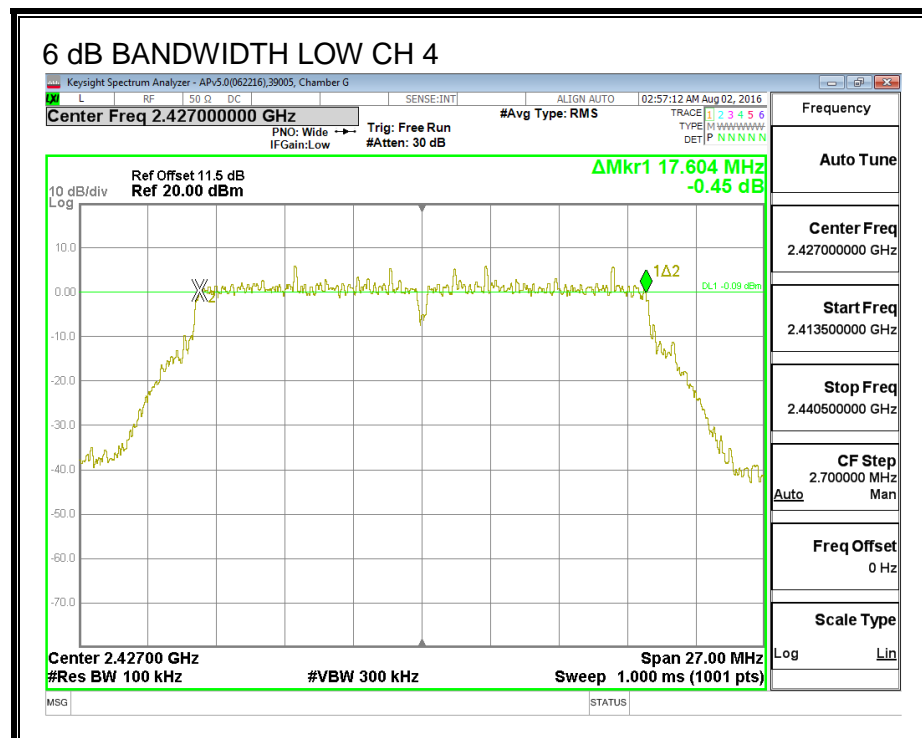
The minimum 6 dB bandwidth shall be at least 500 kHz.

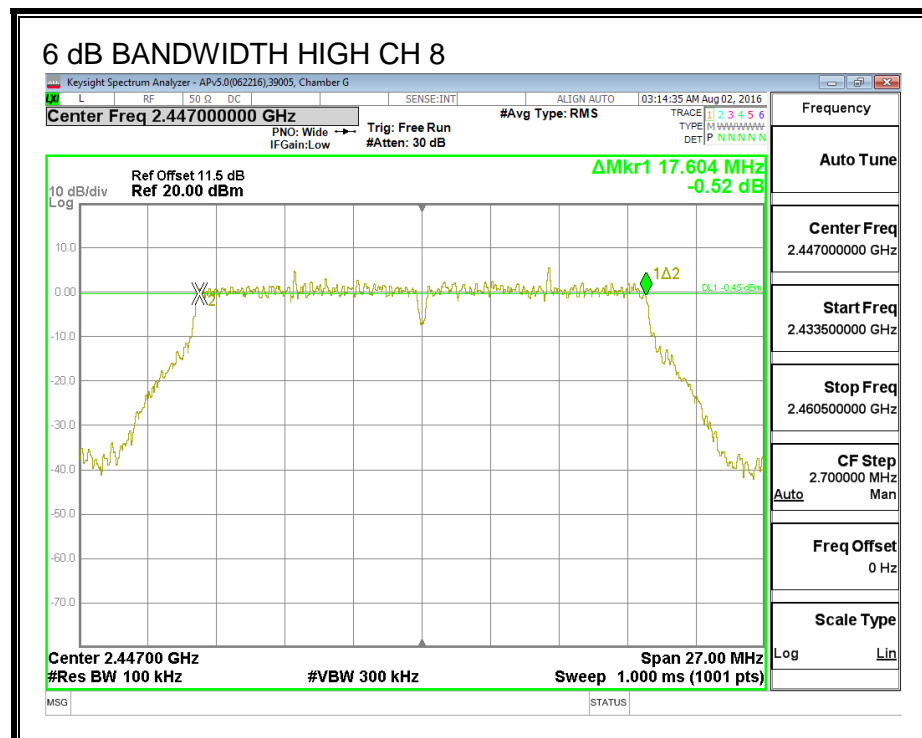
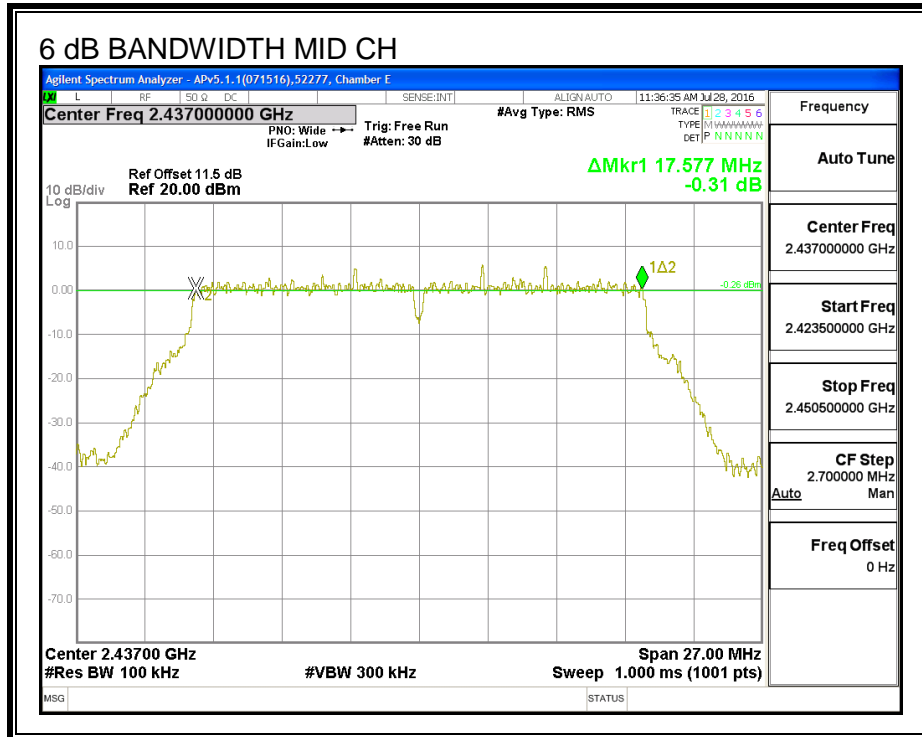
#### RESULTS

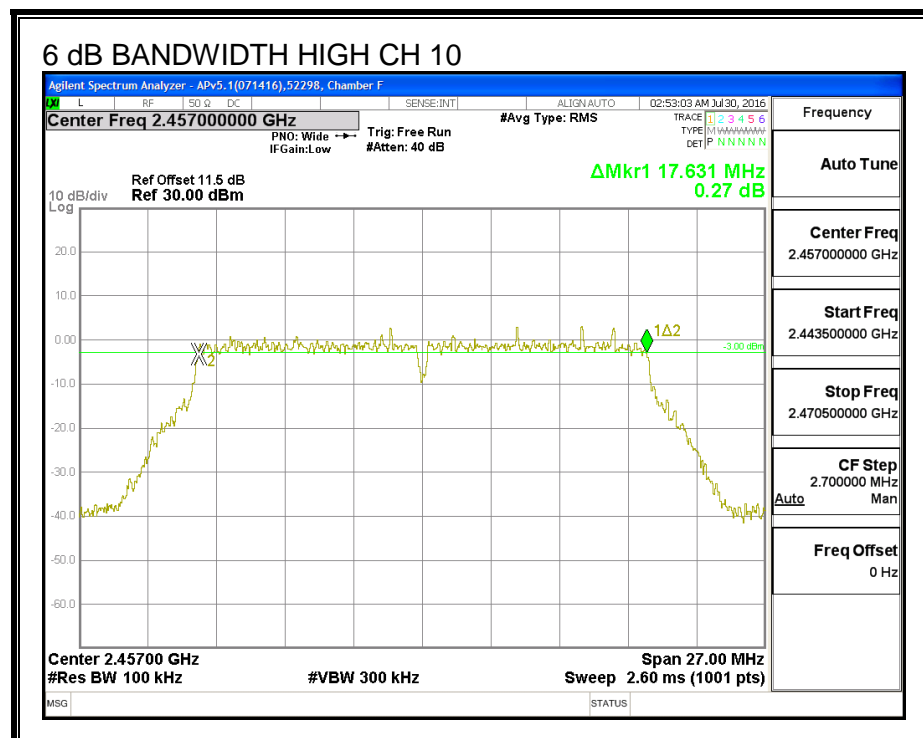
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low_1	2412	17.631	17.577	0.5
Low_2	2417	17.658	17.685	0.5
Low_3	2422	17.739	17.658	0.5
Low_4	2427	17.604	17.604	0.5
Mid_6	2437	17.577	17.631	0.5
High_8	2447	17.604	17.604	0.5
High_9	2452	17.577	17.631	0.5
High_10	2457	17.631	17.631	0.5
High_11	2462	17.604	17.631	0.5
High_12	2467	17.631	17.631	0.5
High_13	2472	17.631	17.631	0.5

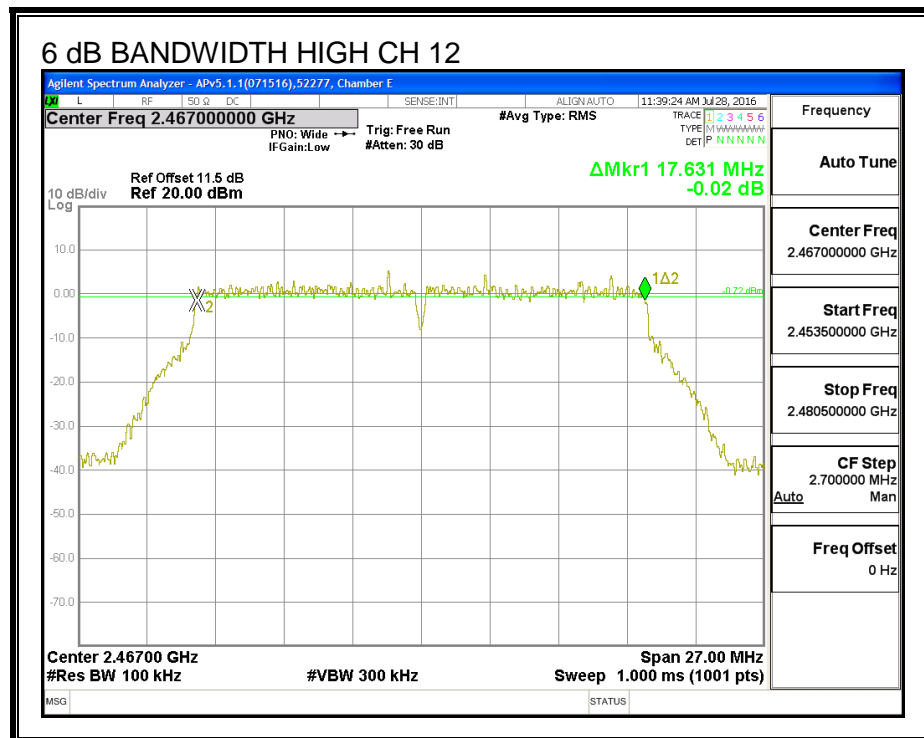
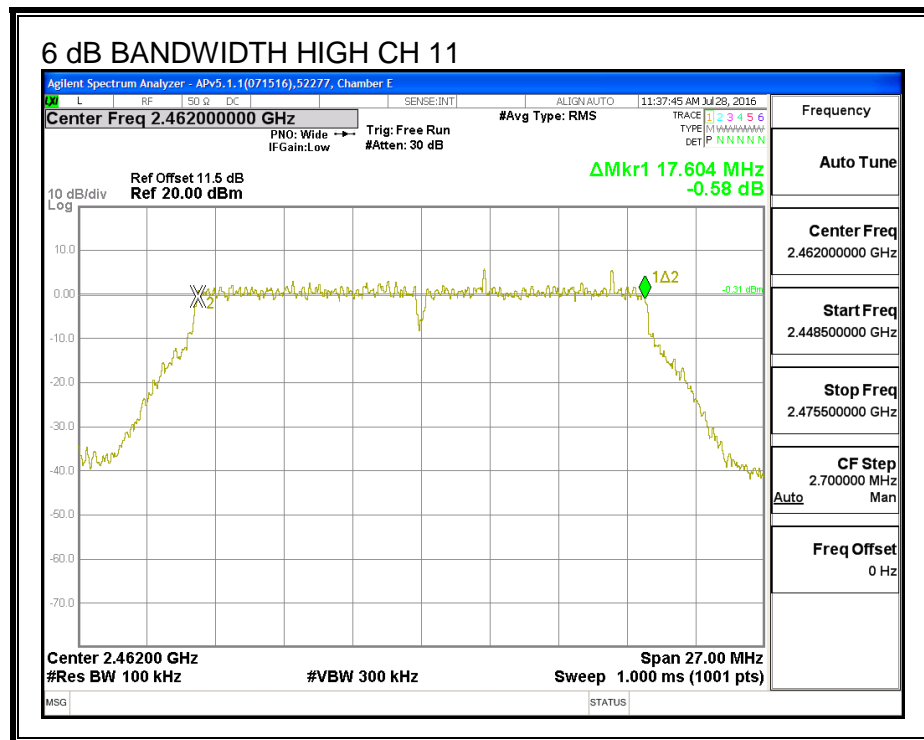
**6 dB BANDWIDTH, CHAIN 0**

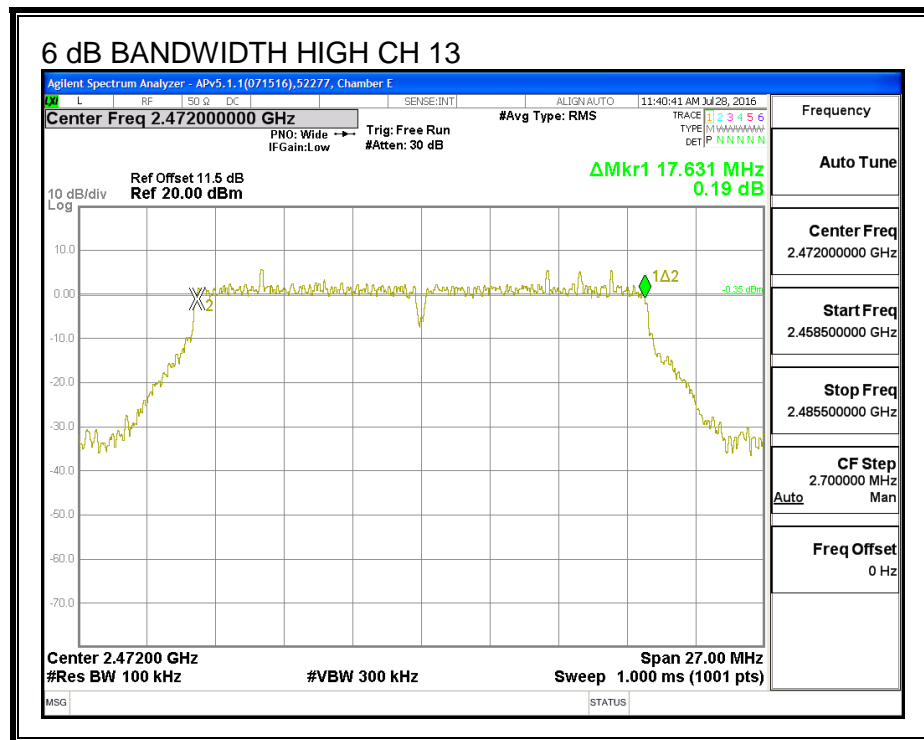




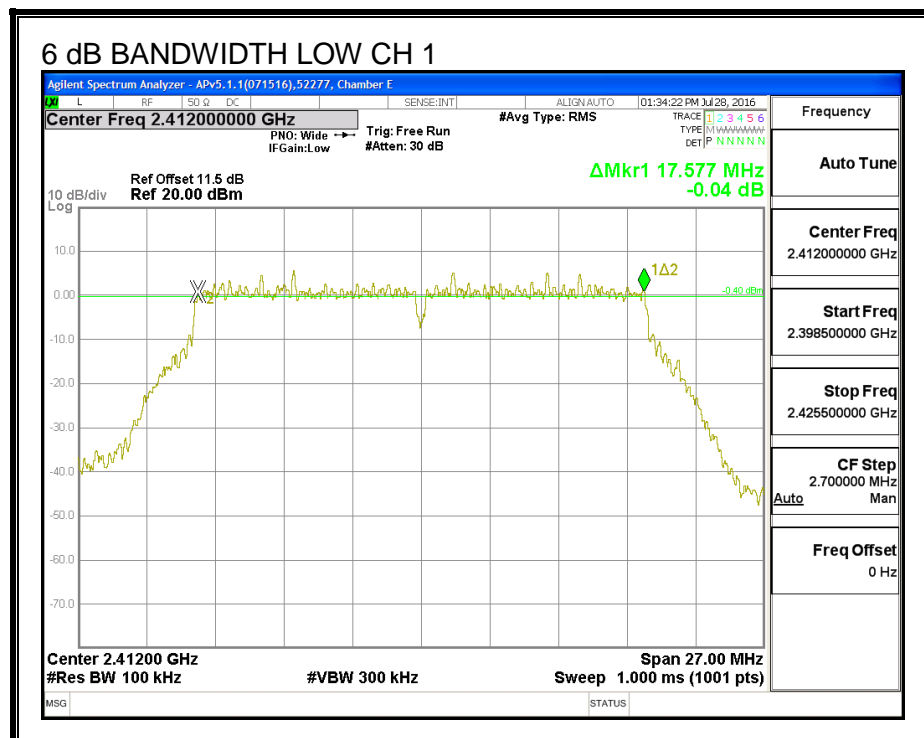




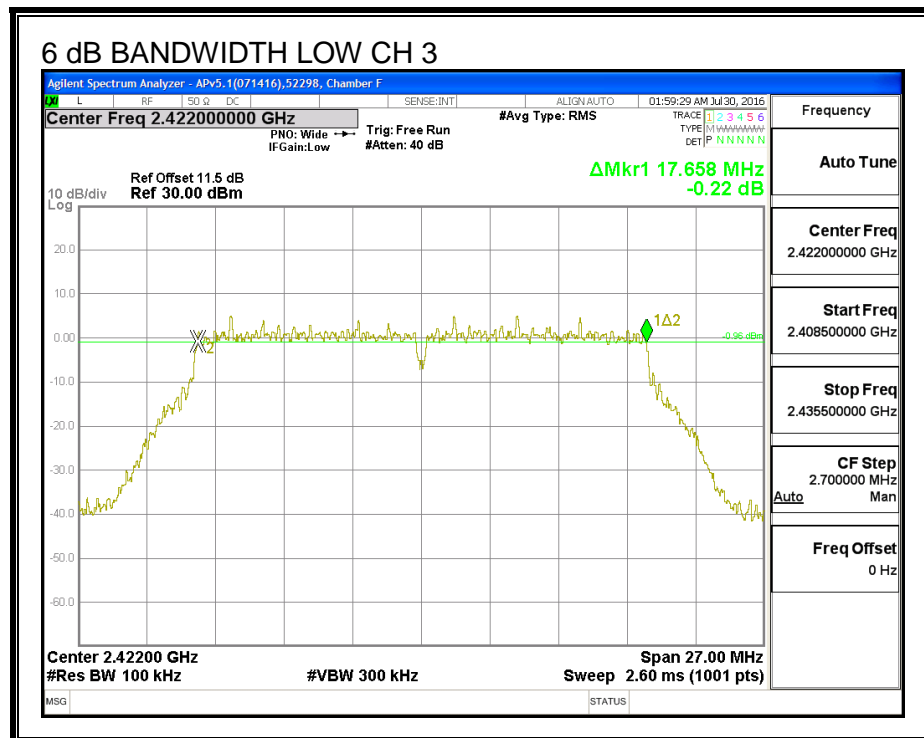
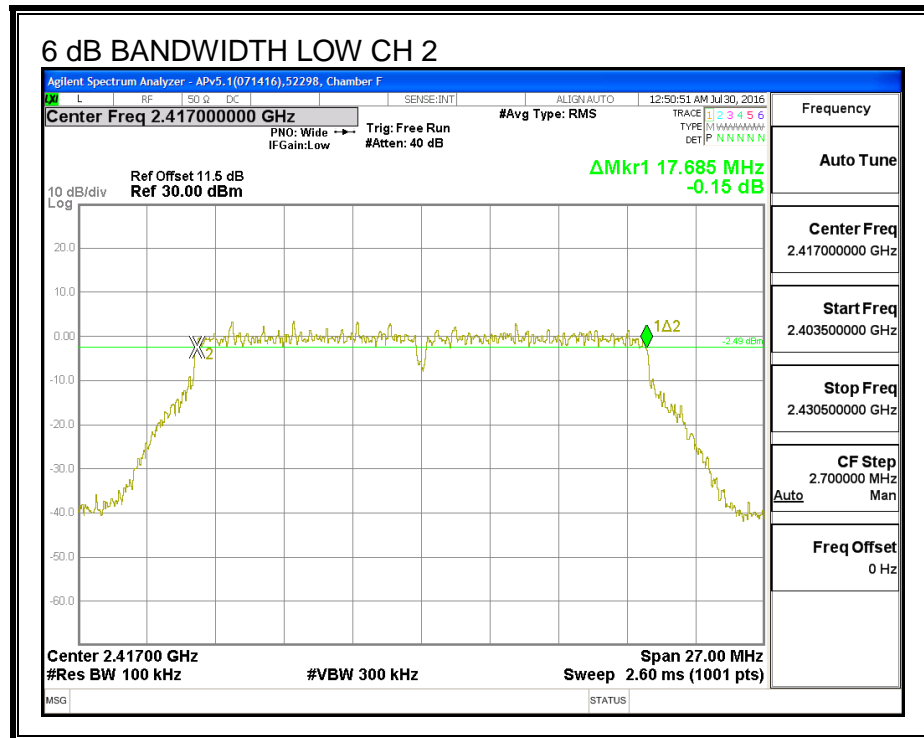


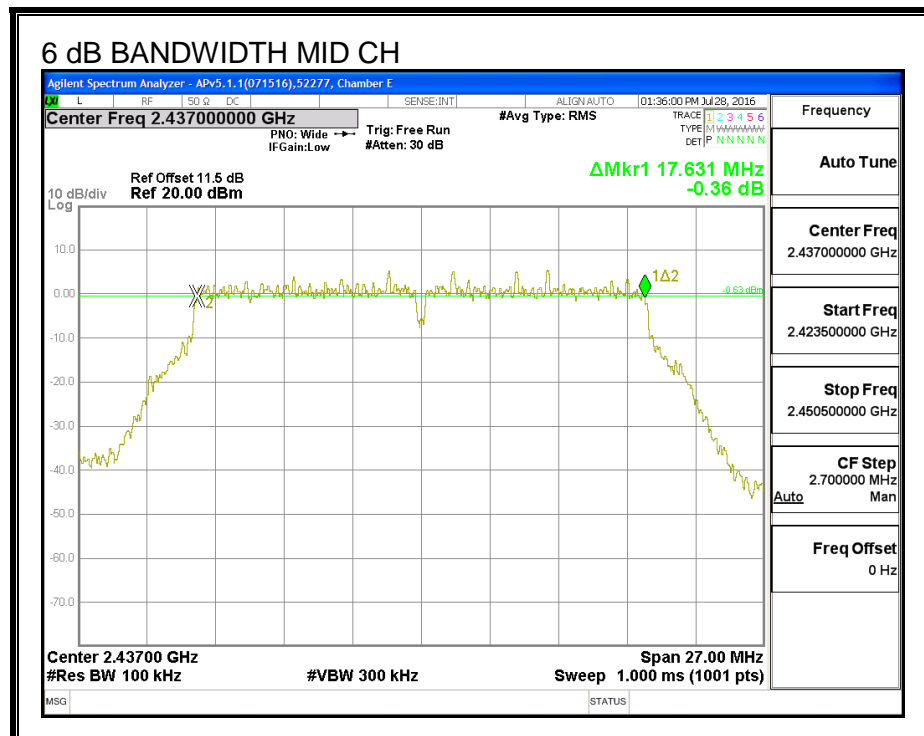
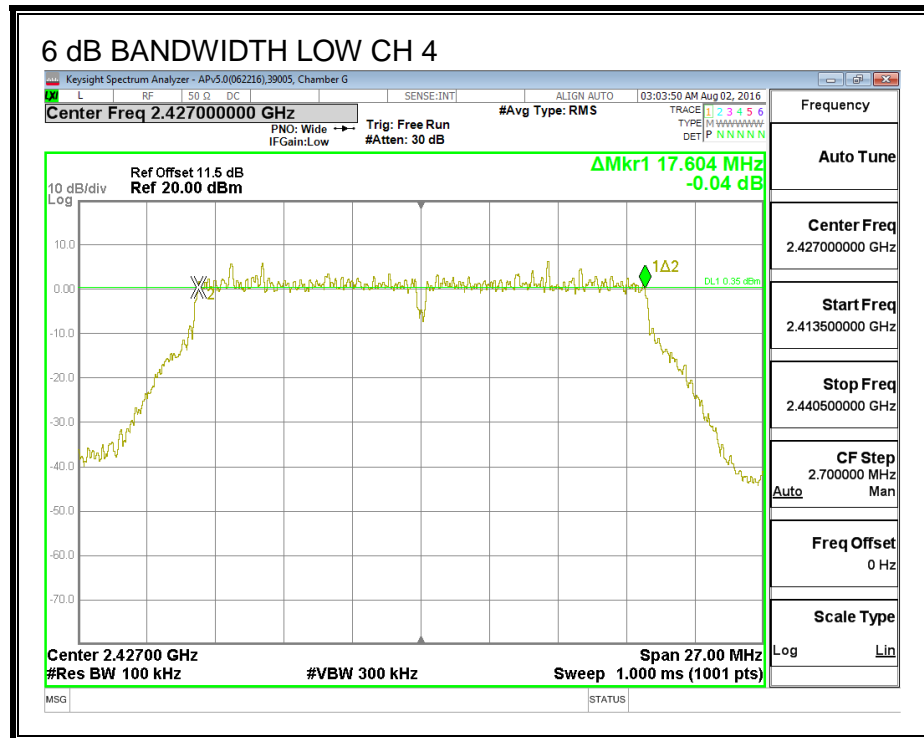


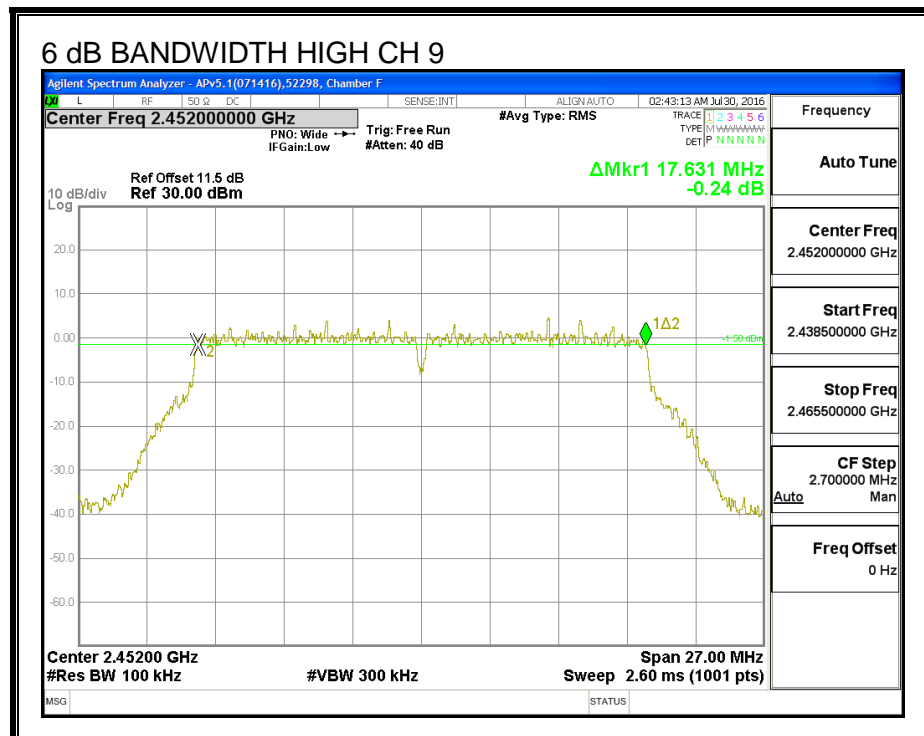
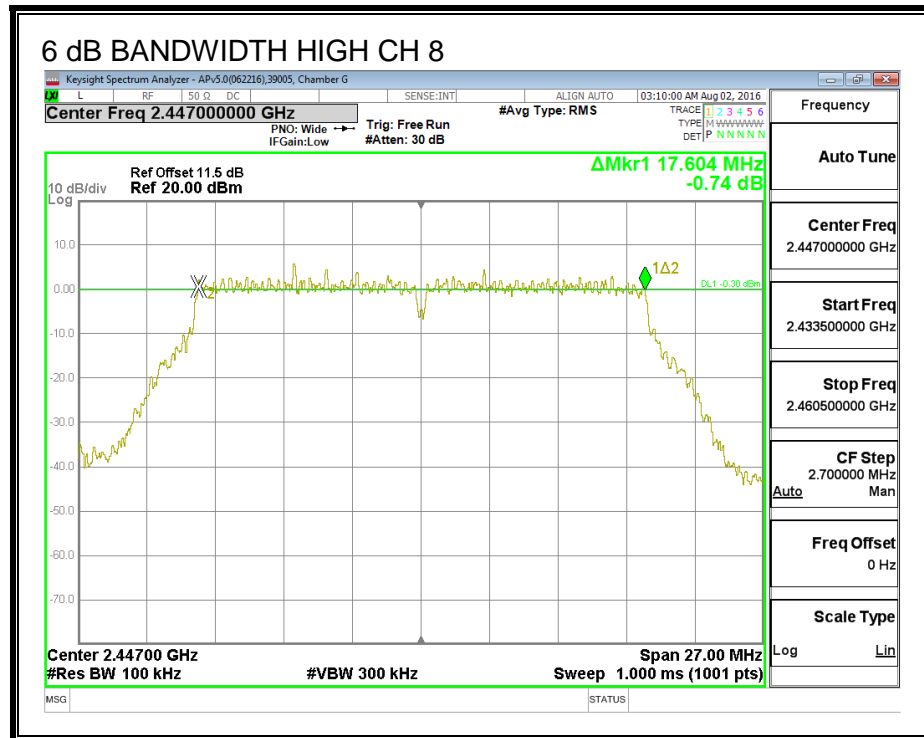
**6 dB BANDWIDTH, CHAIN 1**

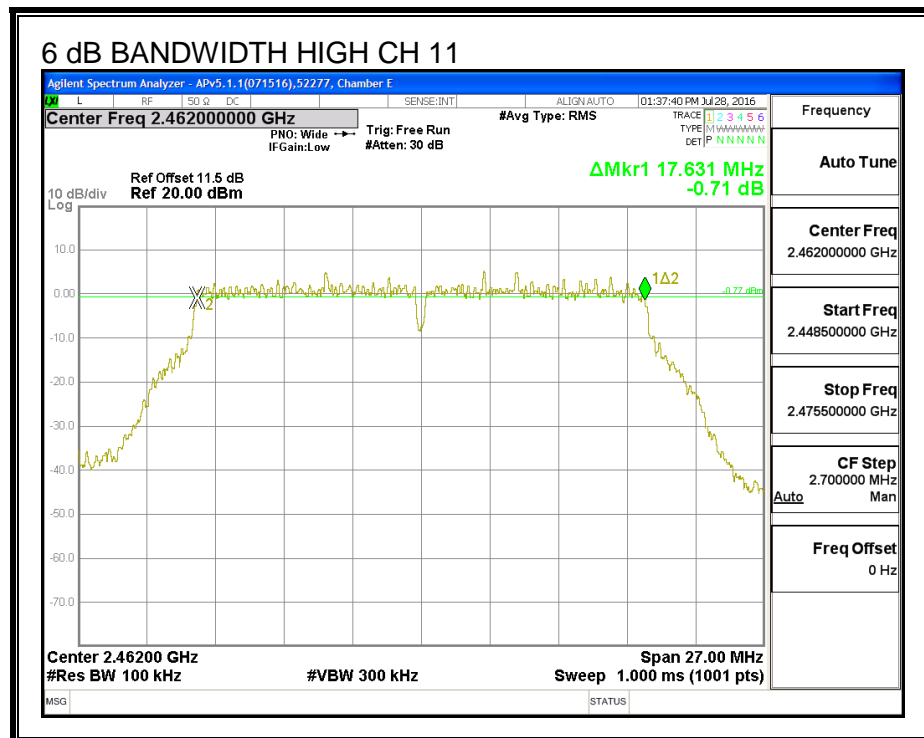
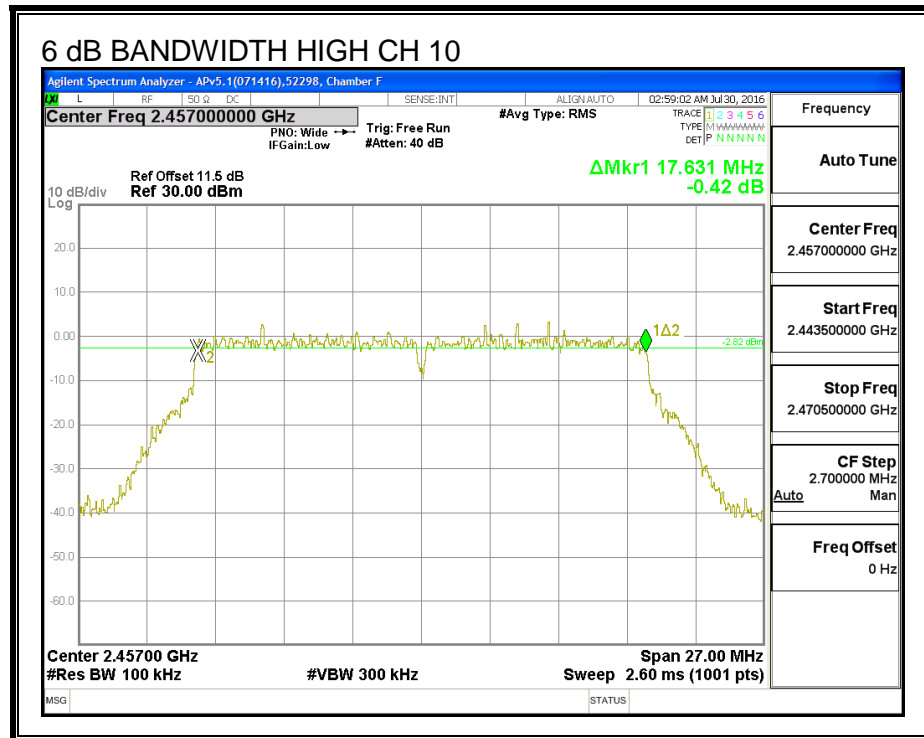


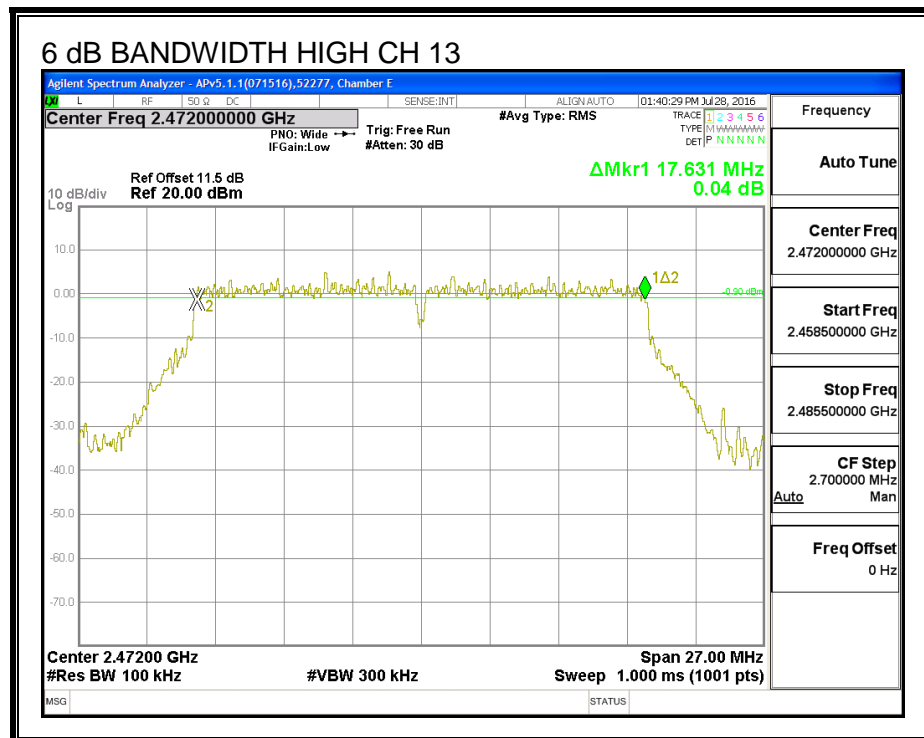
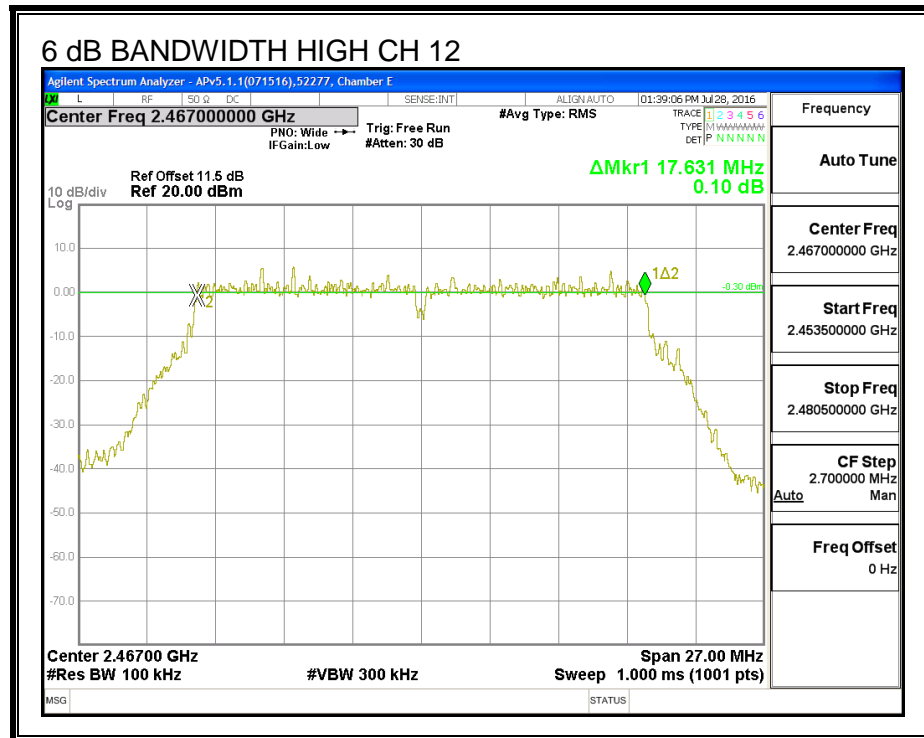












## 8.7.2. 99% BANDWIDTH

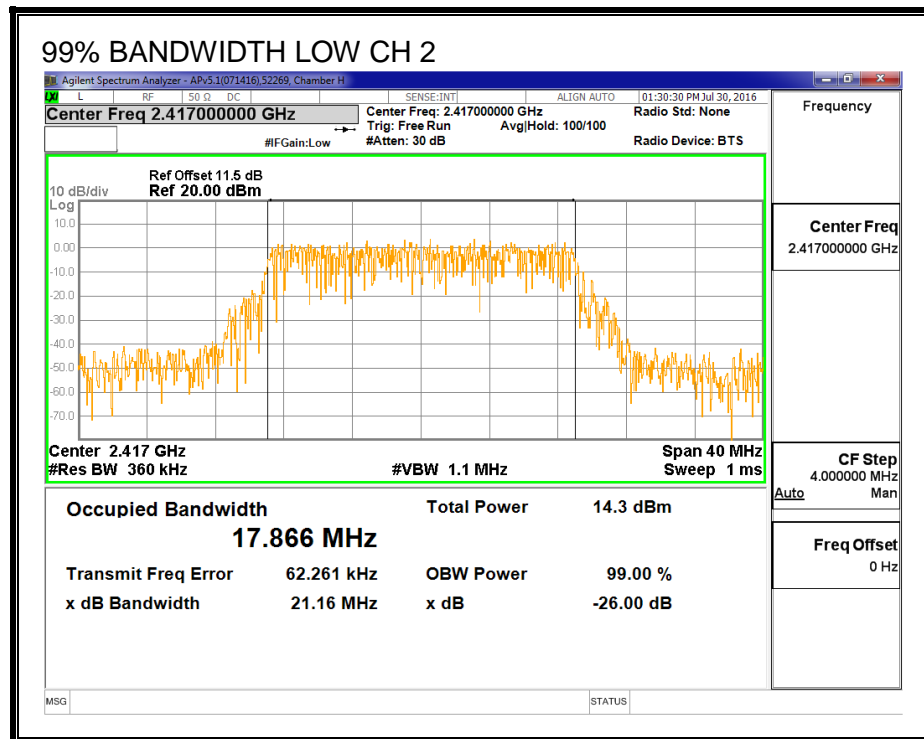
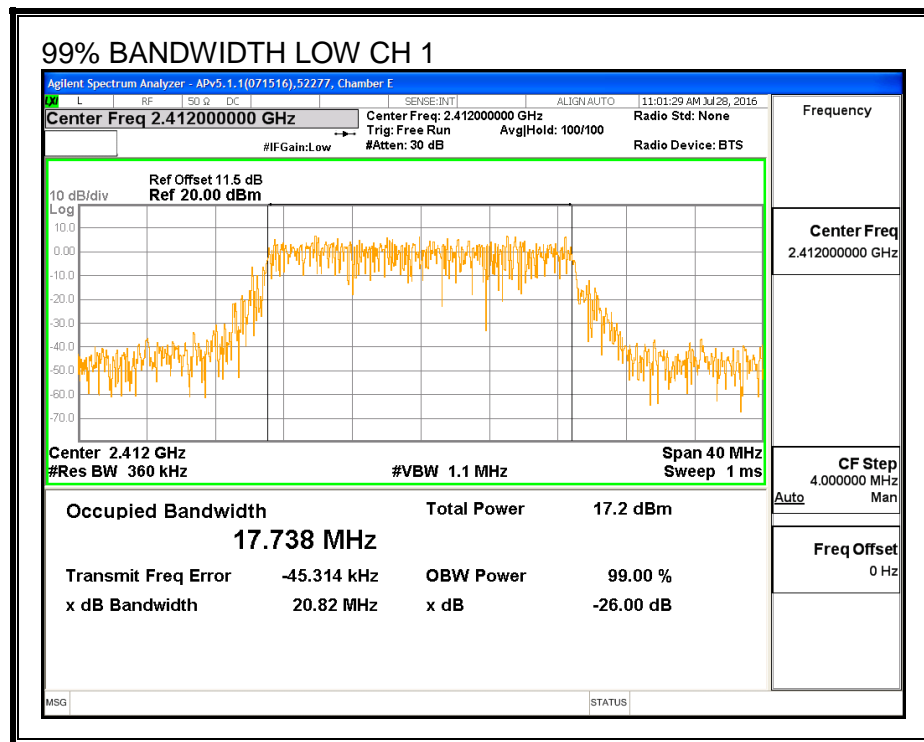
### LIMITS

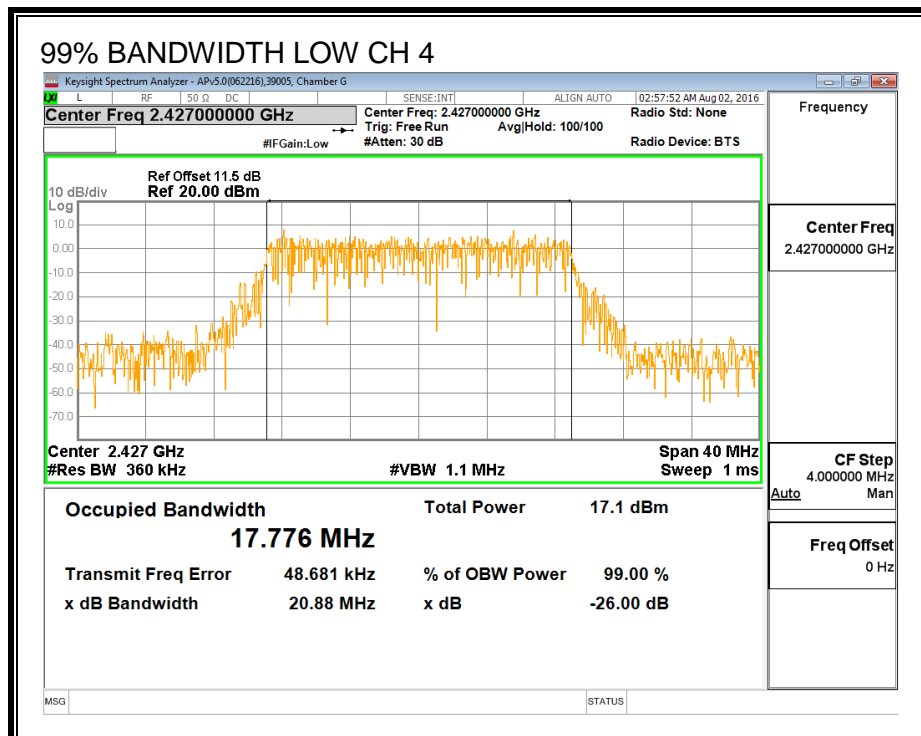
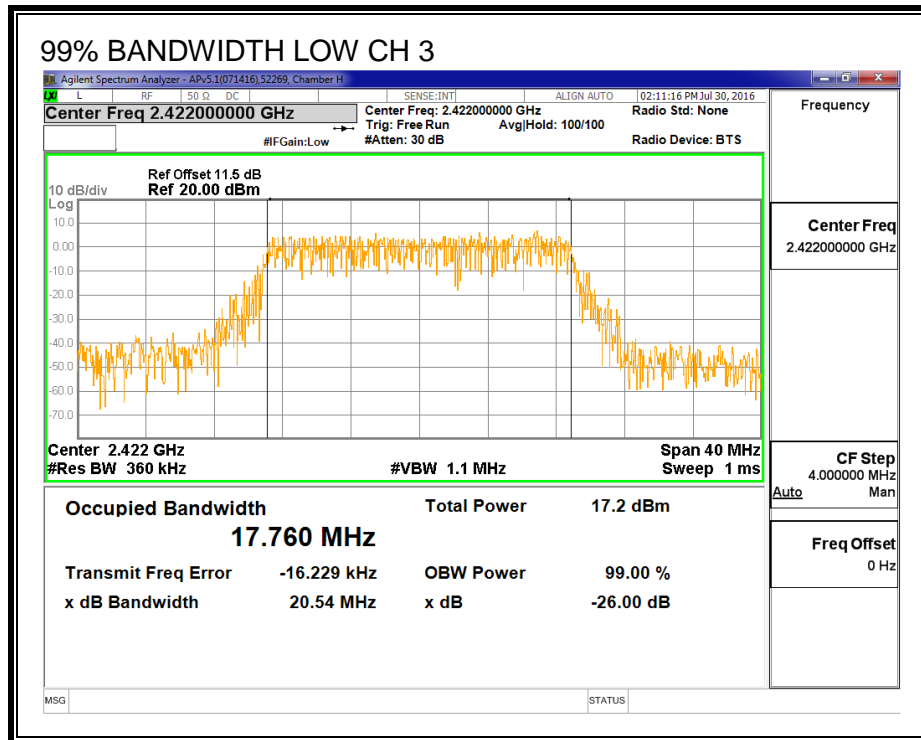
None; for reporting purposes only.

### RESULTS

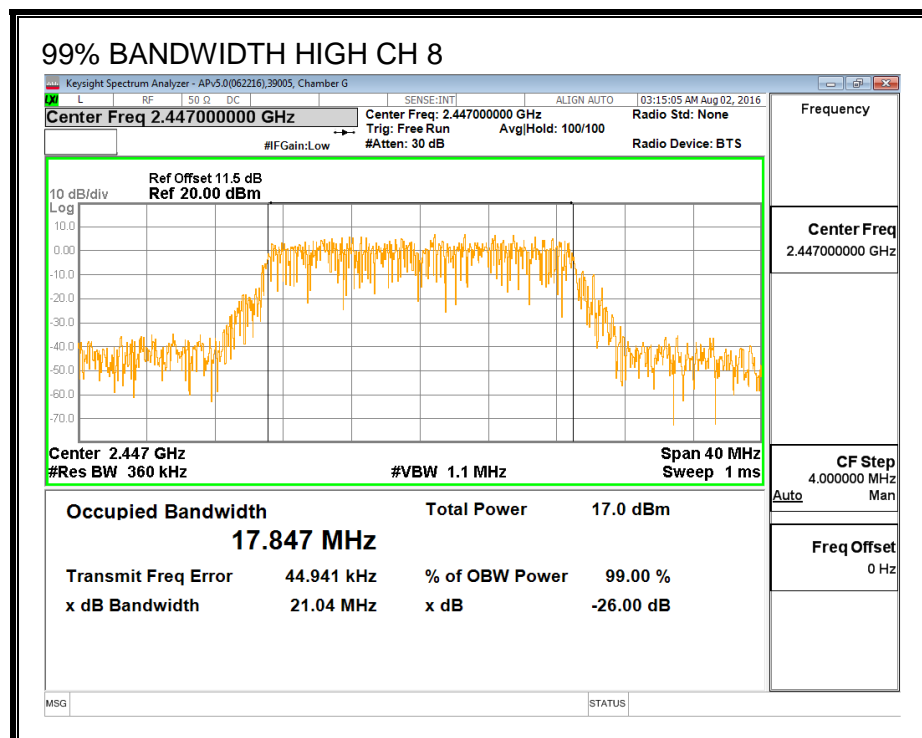
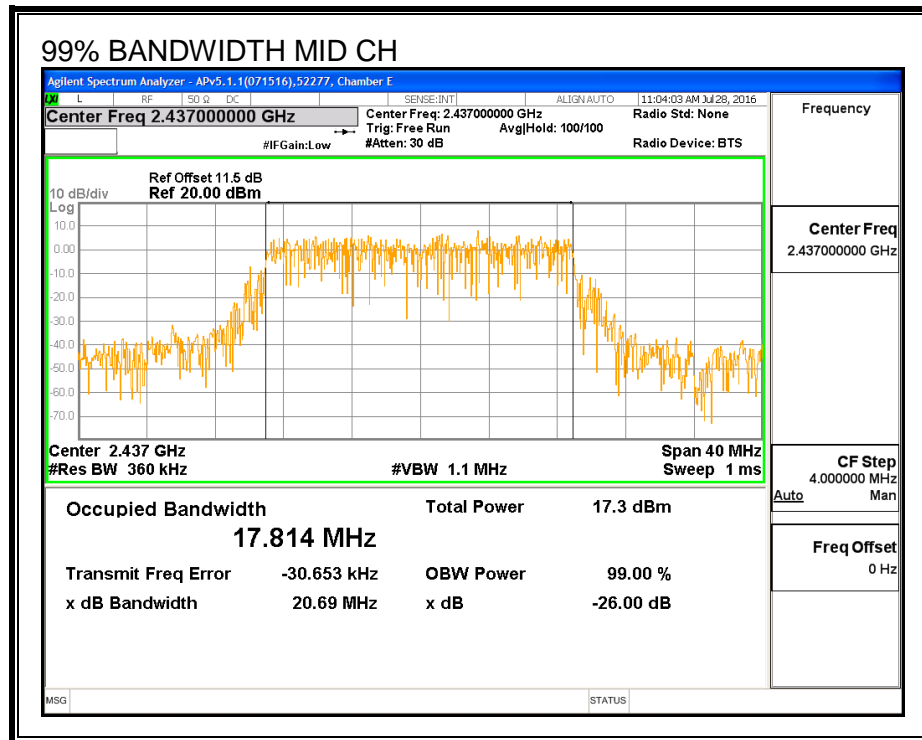
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low_1	2412	17.138	17.856
Low_2	2417	17.866	17.174
Low_3	2422	17.760	17.791
Low_4	2427	17.776	17.845
Mid_6	2437	17.814	17.840
High_8	2447	17.847	17.779
High_9	2452	17.818	17.798
High_10	2457	17.936	17.912
High_11	2462	17.732	17.821
High_12	2467	17.731	17.848
High_13	2472	17.894	18.029

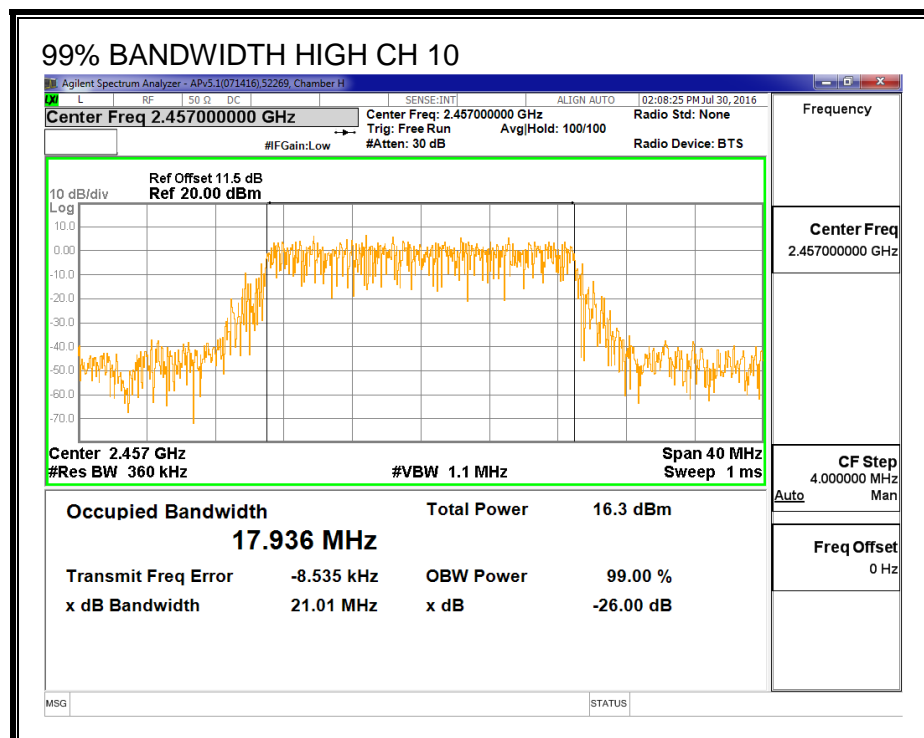
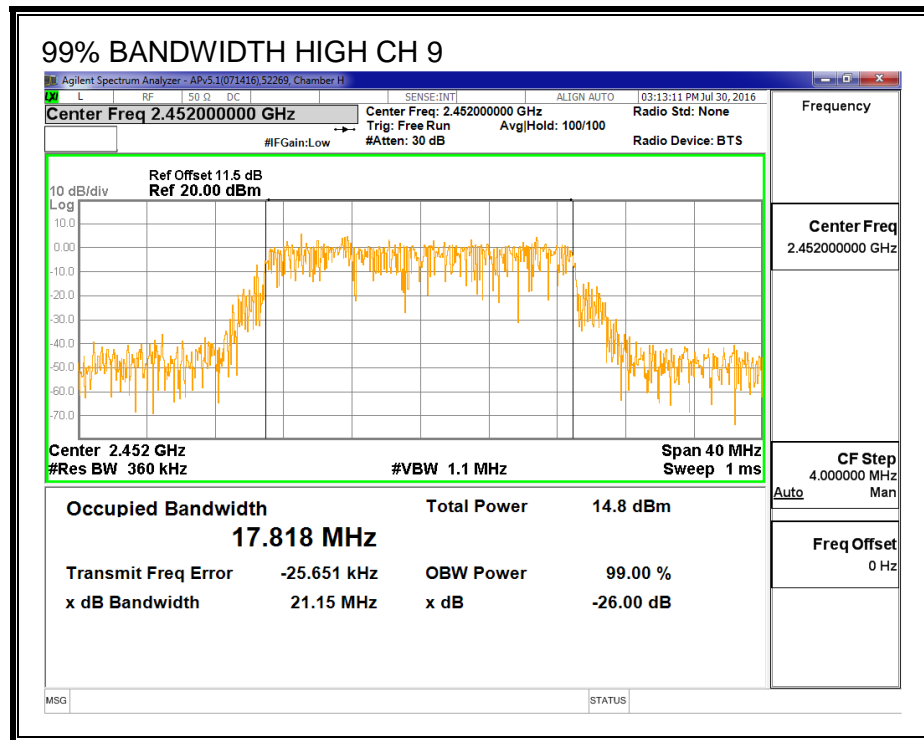
**99% BANDWIDTH, CHAIN 0**

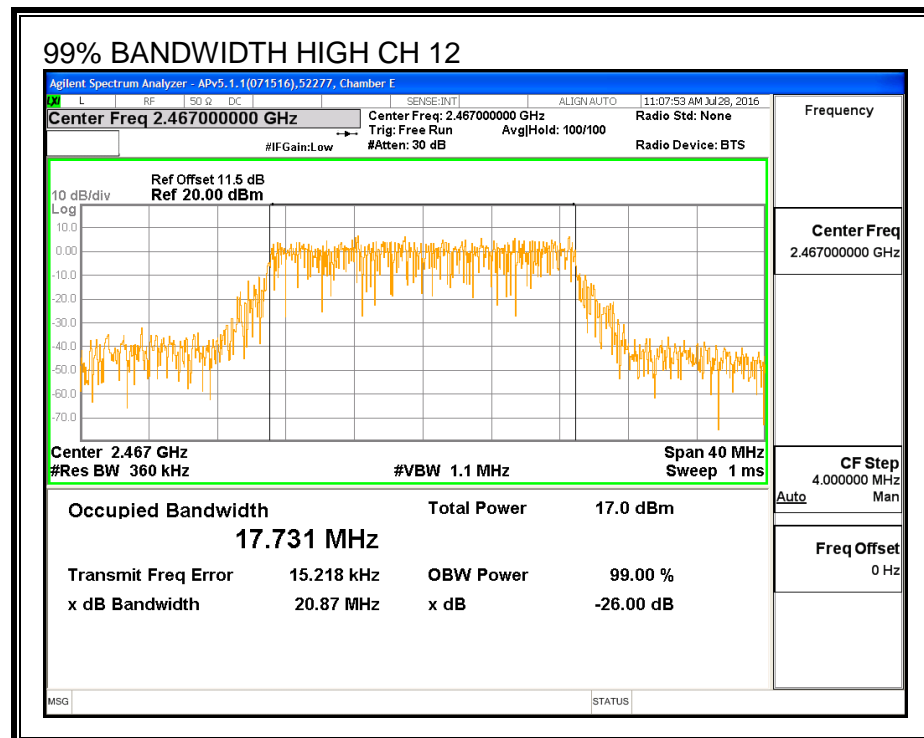
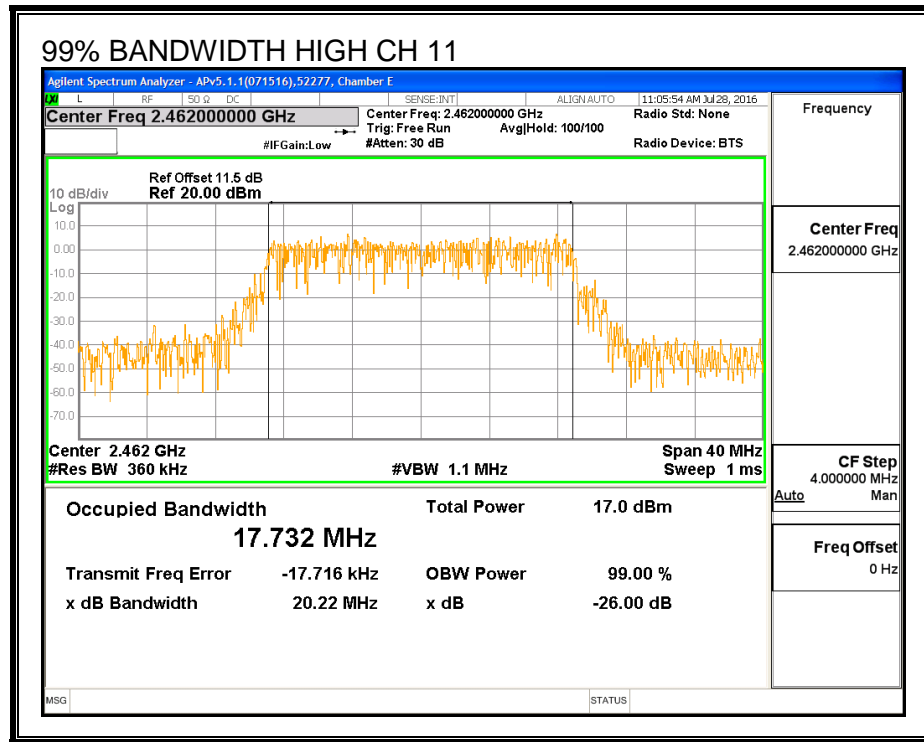


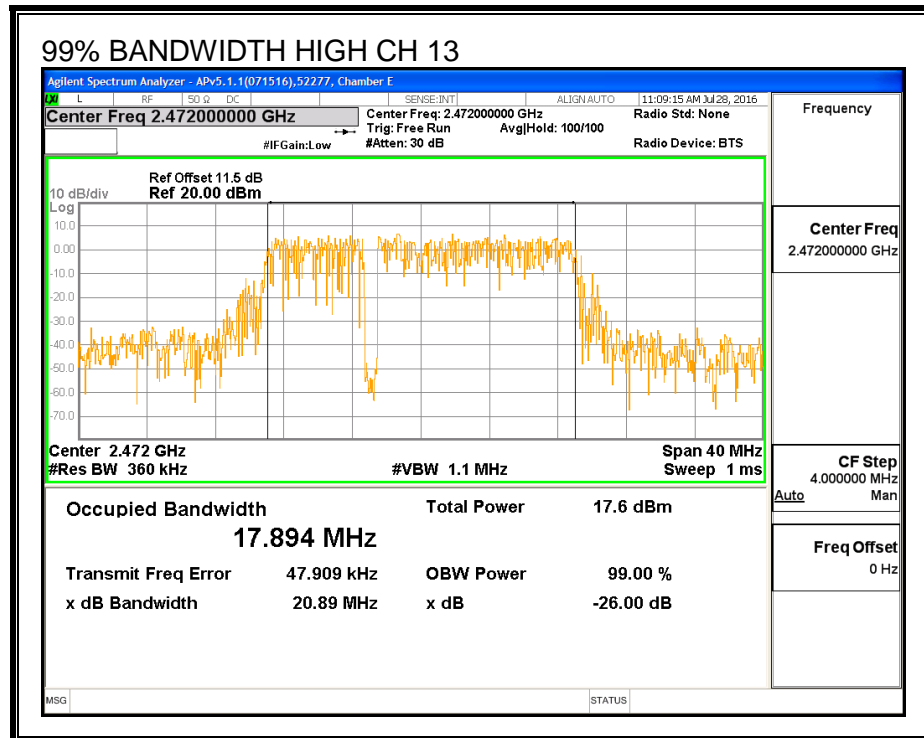




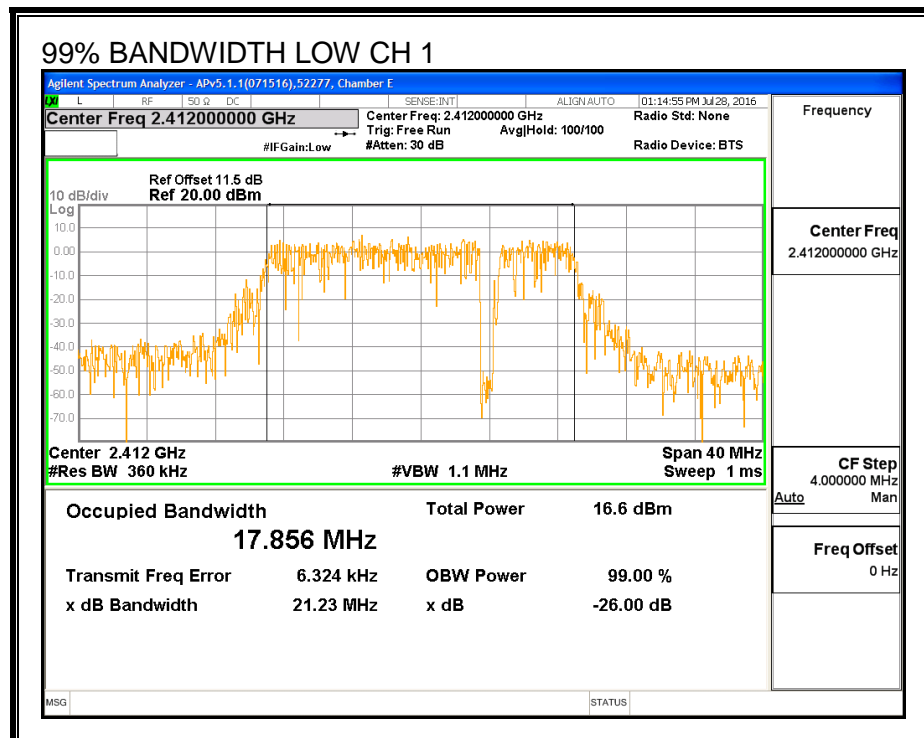


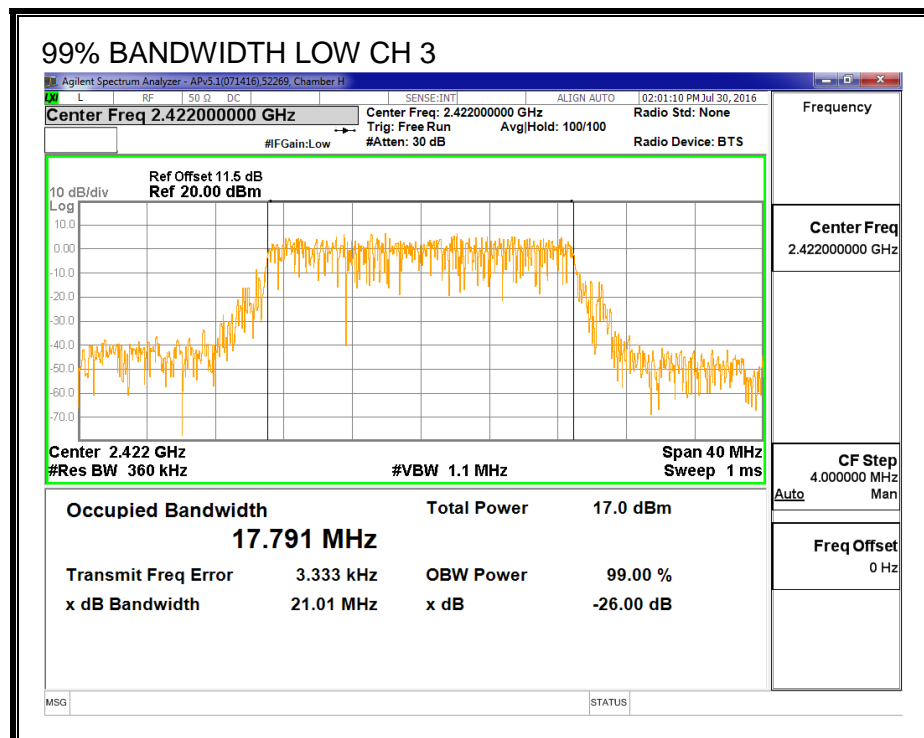
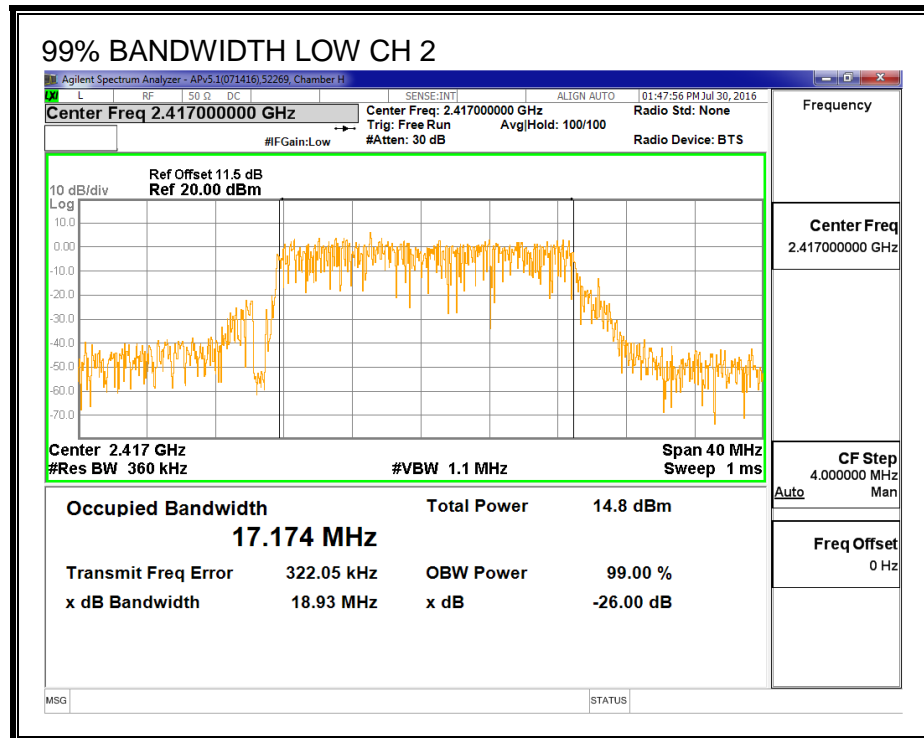


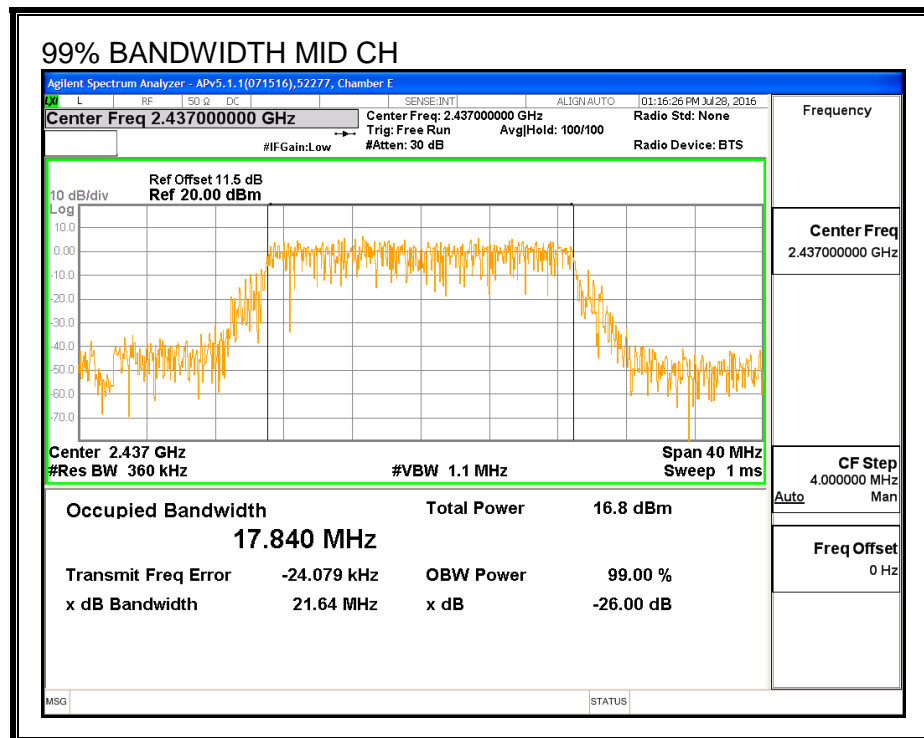
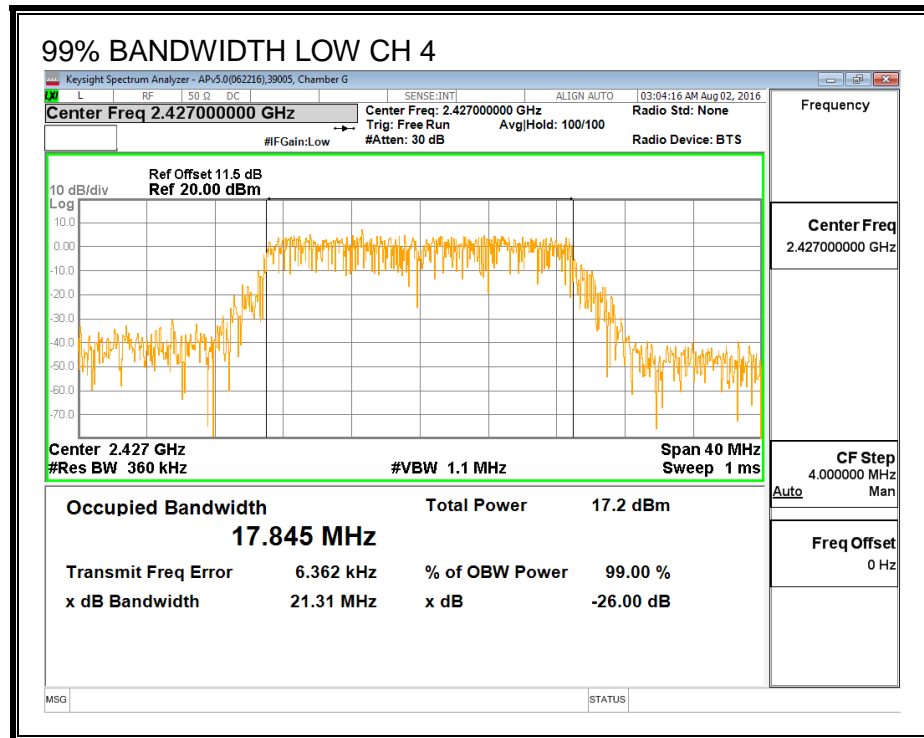


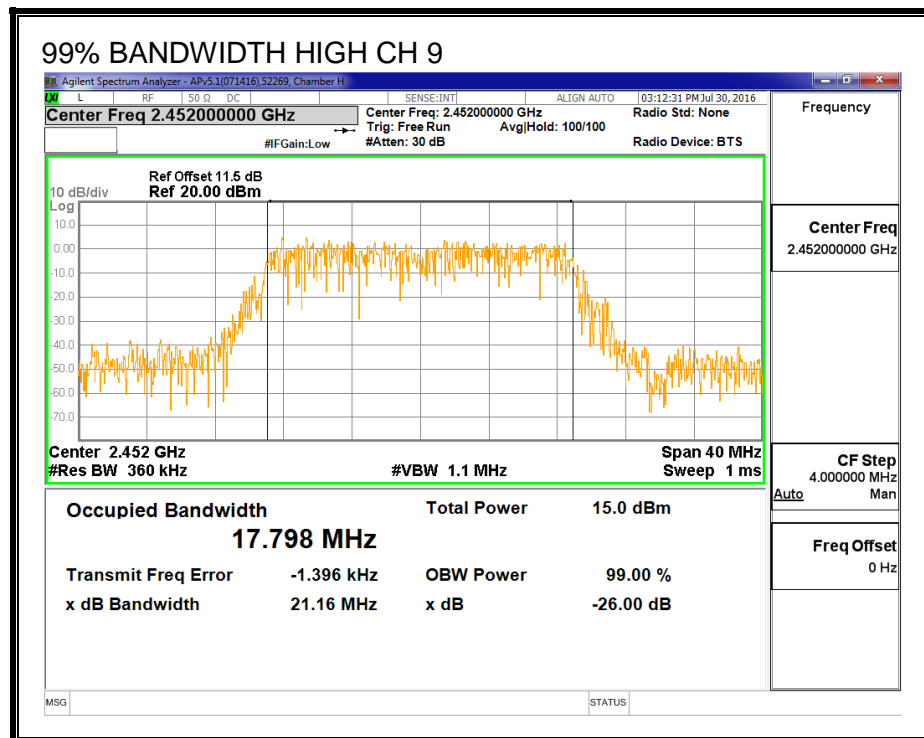
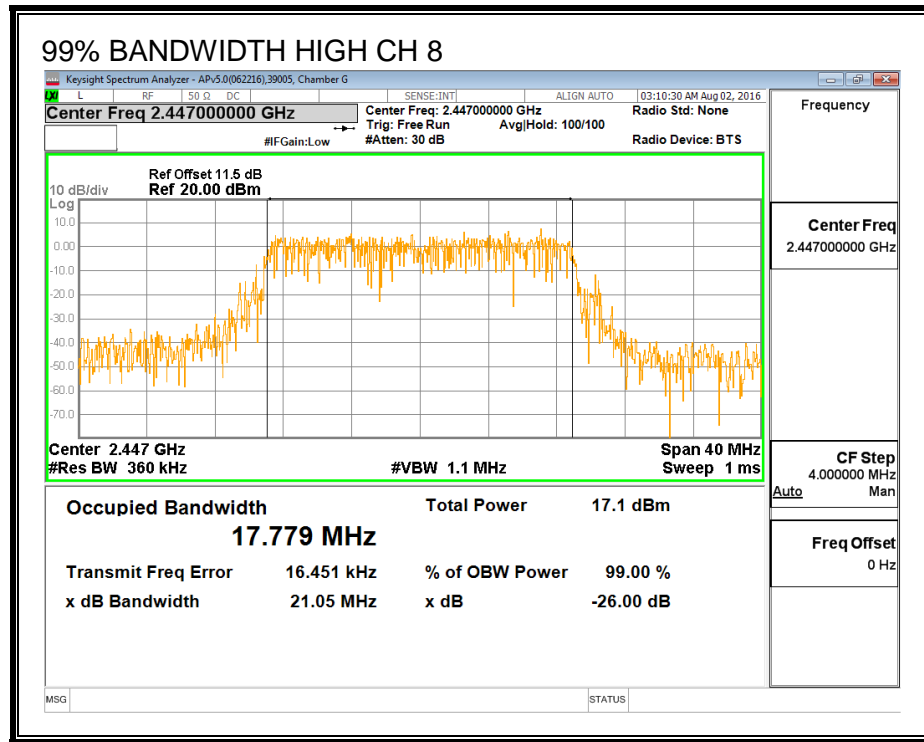


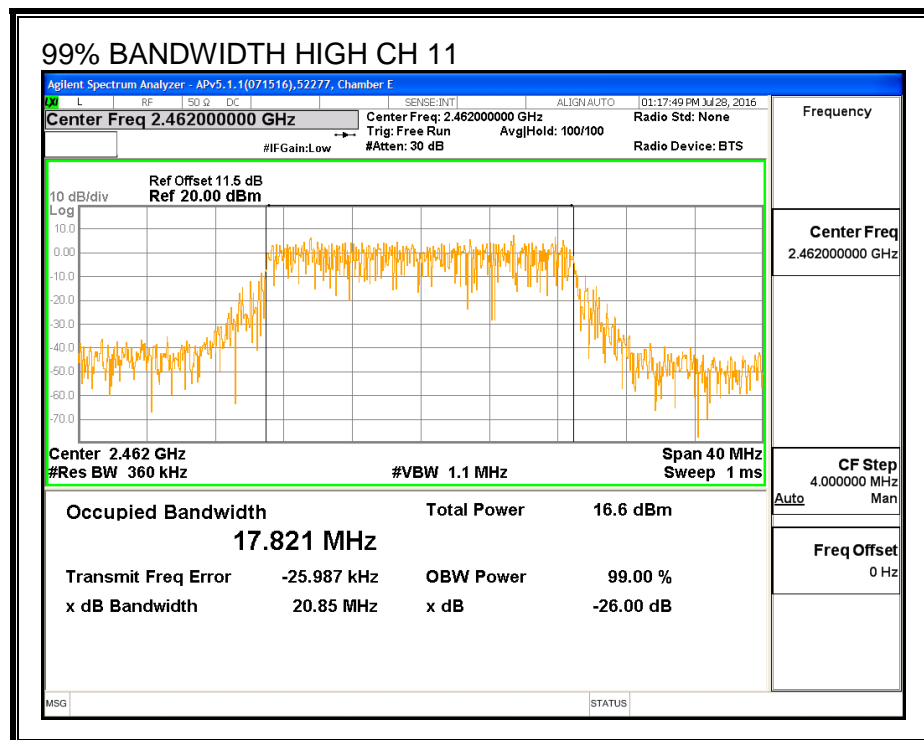
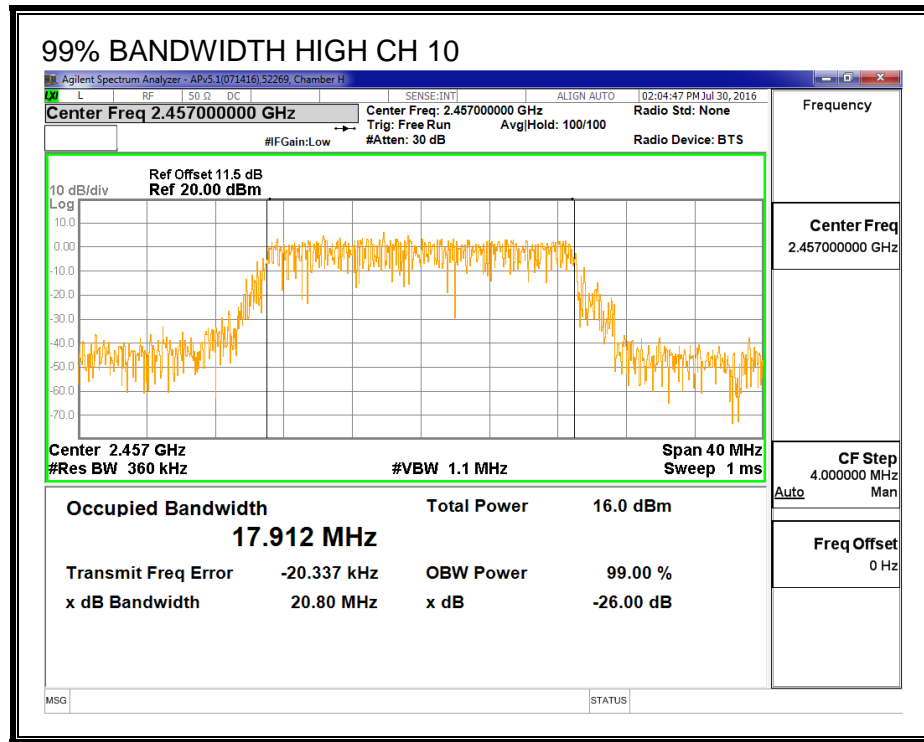
**99% BANDWIDTH, CHAIN 1**



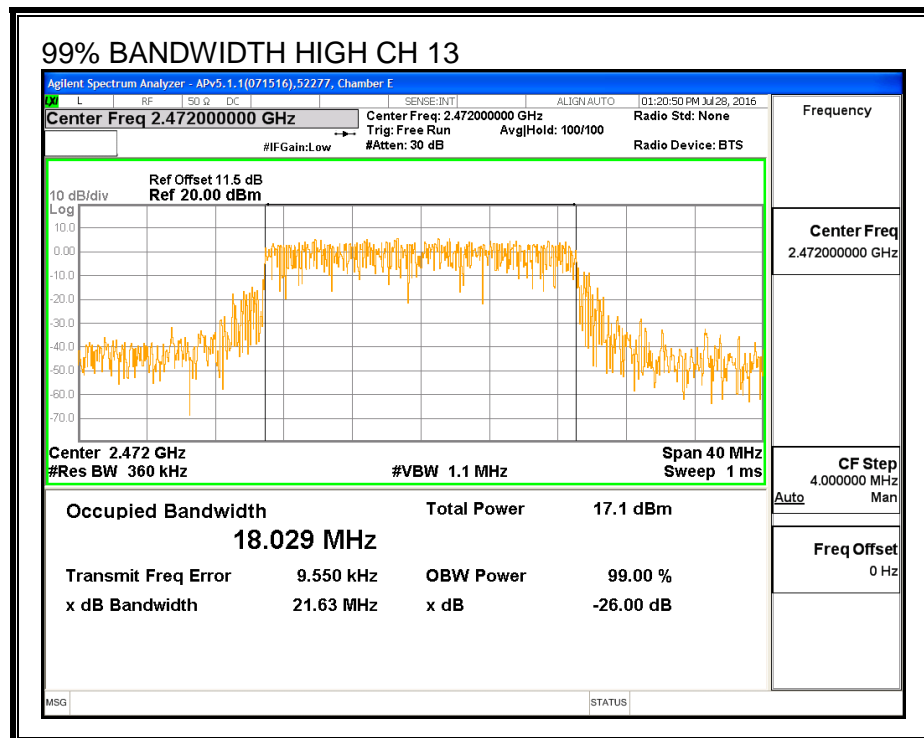
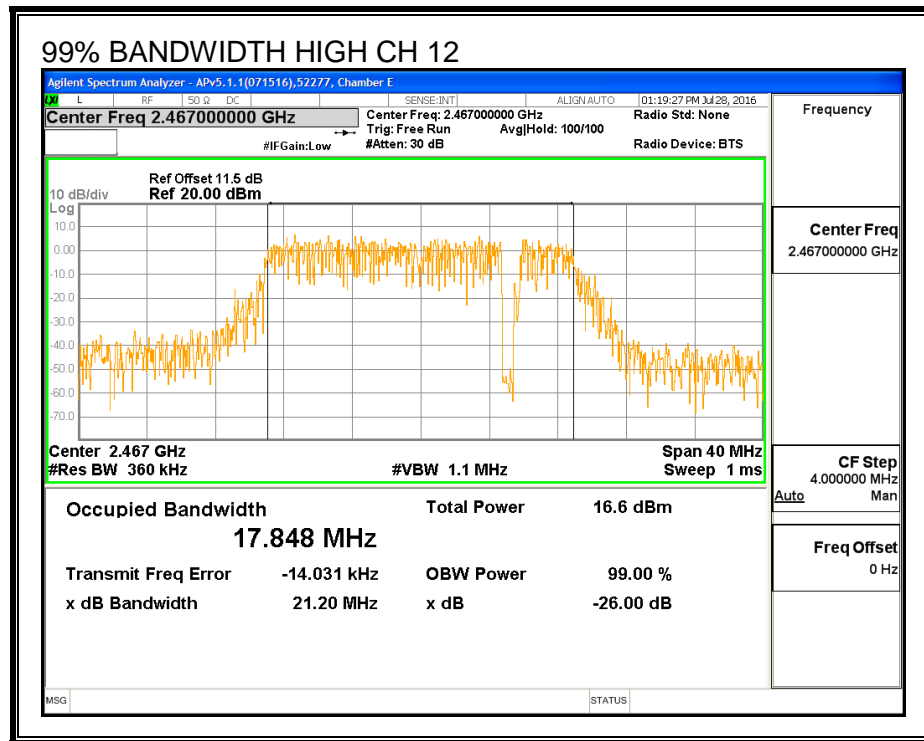












### 8.7.3. AVERAGE POWER

#### LIMITS

None; for reporting purposes only.

#### RESULTS

<b>ID:</b>	39919	<b>Date:</b>	9/1/16
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Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low_1	2412	13.91	13.99	16.96
Low_2	2417	15.47	15.48	18.49
Low_3	2422	16.45	16.42	19.45
Low_4	2427	16.73	16.72	19.74
Mid_6	2437	16.72	16.73	19.74
High_8	2447	16.71	16.73	19.73
High_9	2452	15.44	15.47	18.47
High_10	2457	14.48	14.42	17.46
High_11	2462	10.40	10.32	13.37
High_12	2467	8.35	8.48	11.43
High_13	2472	-3.03	-3.01	-0.01

#### 8.7.4. 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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenan Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.20	5.10	4.67

## RESULTS

<b>ID:</b>	39919	<b>Date:</b>	9/1/16
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### 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	4.67	30.00	30	36	30.00
Low_2	2417	4.67	30.00	30	36	30.00
Low_3	2422	4.67	30.00	30	36	30.00
Low_4	2427	4.67	30.00	30	36	30.00
Mid_6	2437	4.67	30.00	30	36	30.00
High_8	2447	4.67	30.00	30	36	30.00
High_9	2452	4.67	30.00	30	36	30.00
High_10	2457	4.67	30.00	30	36	30.00
High_11	2462	4.67	30.00	30	36	30.00
High_12	2467	4.67	30.00	30	36	30.00
High_13	2472	4.67	30.00	30	36	30.00

<b>Duty Cycle CF (dB)</b>	0.00	<b>Included in Calculations of Corr'd Power</b>
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### 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	17.88	17.93	20.92	30.00	-9.08
Low_2	2417	20.29	20.35	23.33	30.00	-6.67
Low_3	2422	22.48	22.33	25.42	30.00	-4.58
Low_4	2427	25.02	25.14	28.09	30.00	-1.91
Mid_6	2437	25.13	25.26	28.21	30.00	-1.79
High_8	2447	24.93	25.16	28.06	30.00	-1.94
High_9	2452	20.23	20.08	23.17	30.00	-6.83
High_10	2457	19.05	19.12	22.10	30.00	-7.90
High_11	2462	16.38	16.19	19.30	30.00	-10.70
High_12	2467	14.65	14.51	17.59	30.00	-12.41
High_13	2472	3.12	3.08	6.11	30.00	-23.89

## 8.7.5. 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.

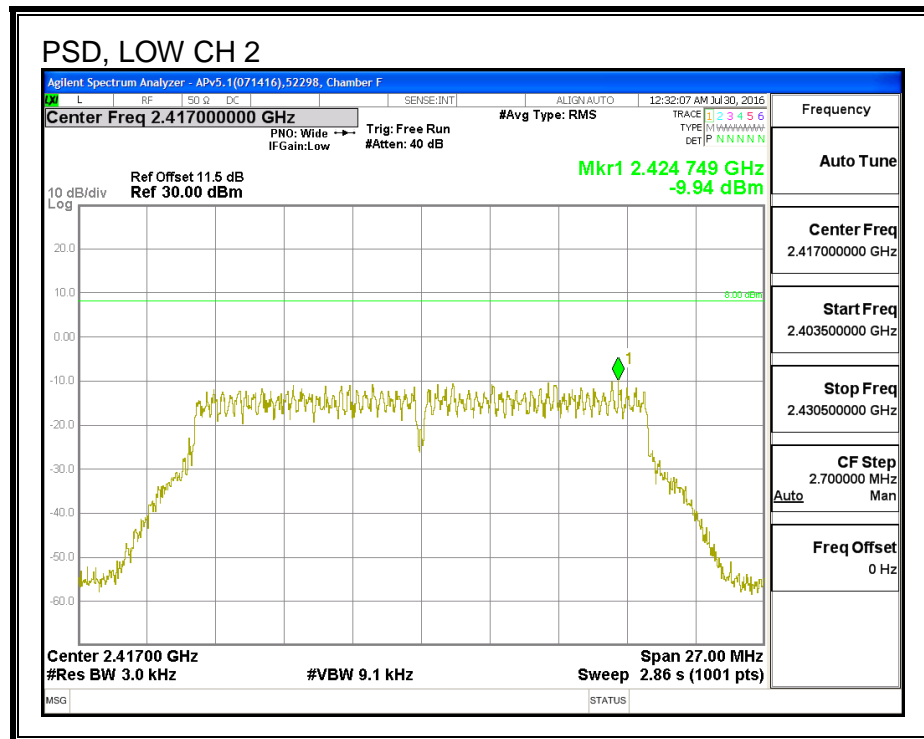
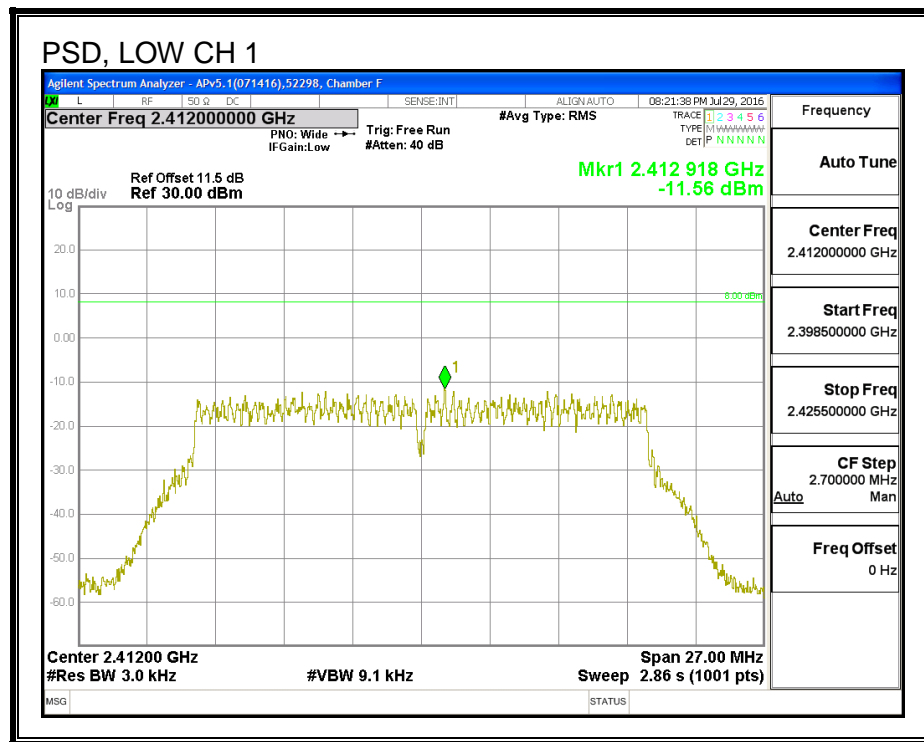
### RESULTS

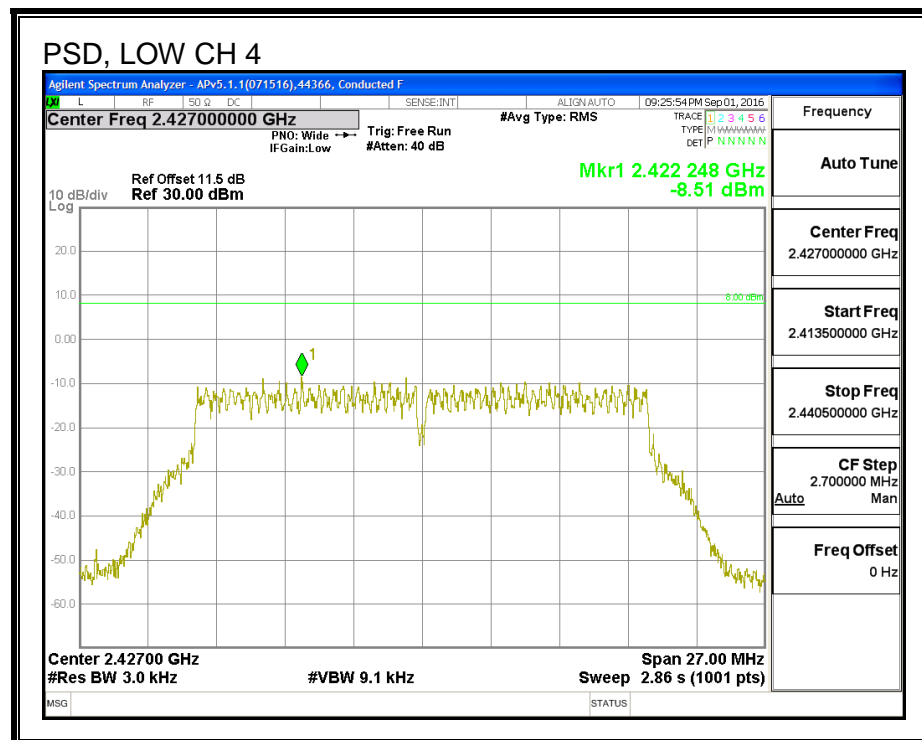
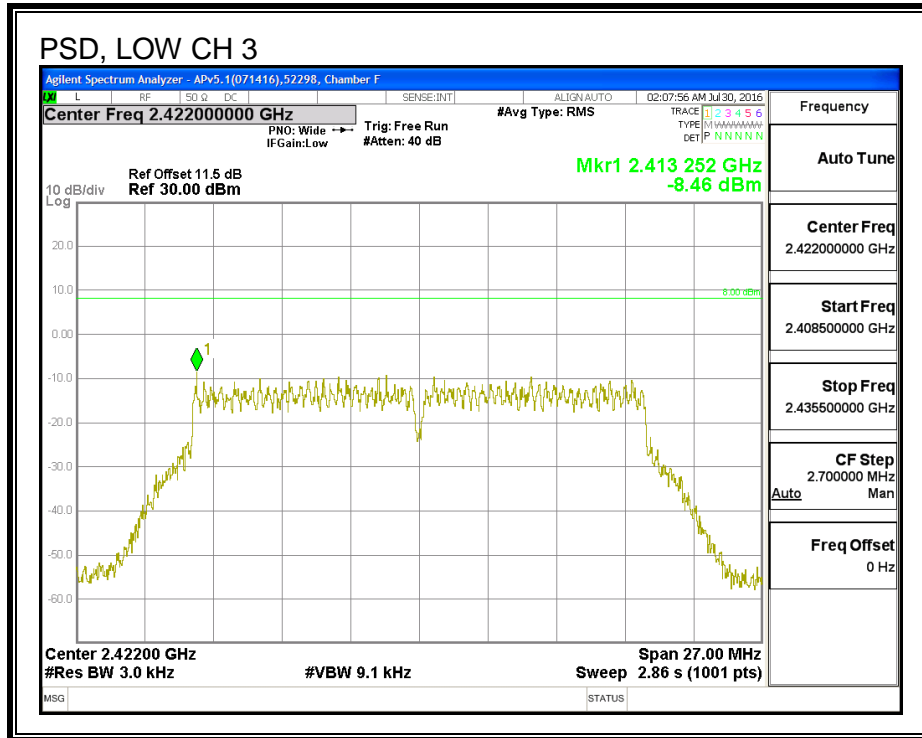
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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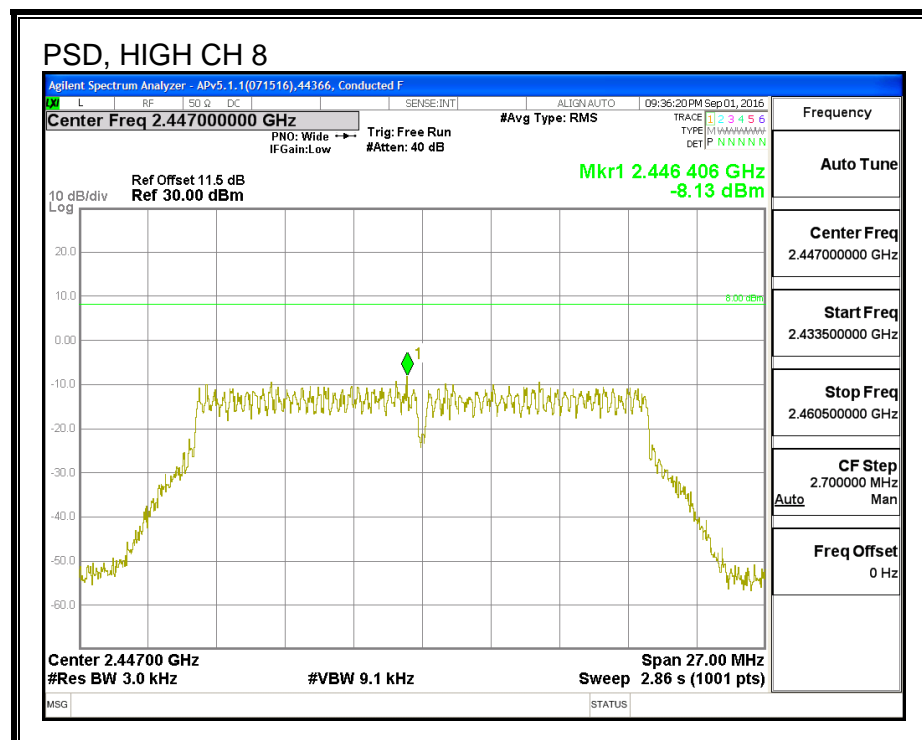
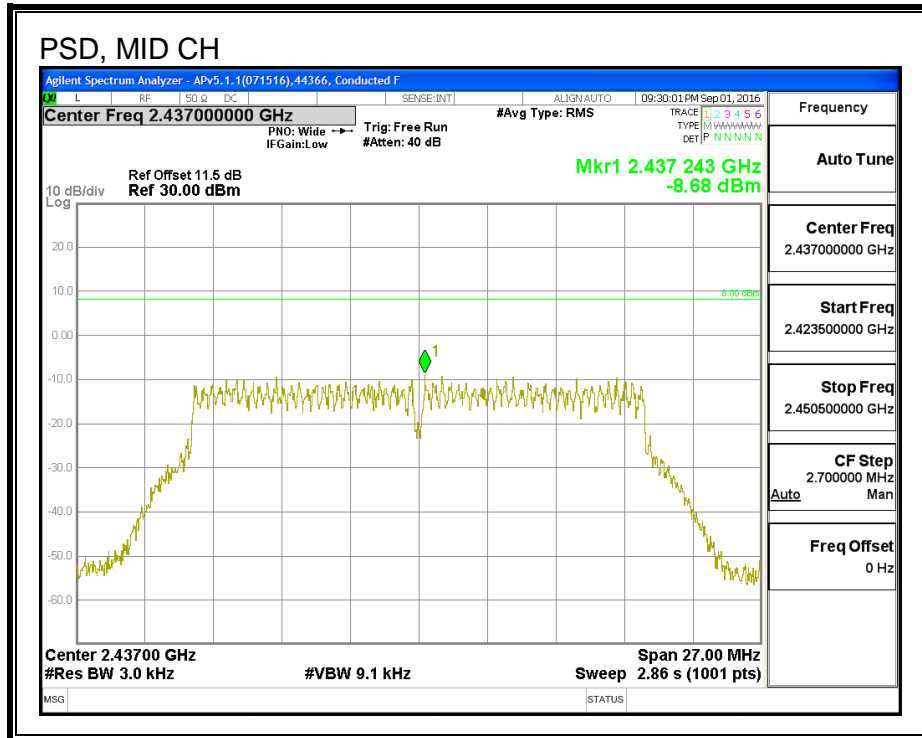
#### PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low_1	2412	-11.56	-11.91	-8.72	8.0	-16.7
Low_2	2417	-9.94	-9.74	-6.83	8.0	-14.8
Low_3	2422	-8.46	-9.12	-5.77	8.0	-13.8
Low_4	2427	-8.51	-8.45	-5.47	8.0	-13.5
Mid_6	2437	-8.68	-8.36	-5.51	8.0	-13.5
Low_8	2447	-8.13	-8.44	-5.27	8.0	-13.3
High_9	2452	-9.74	-9.31	-6.51	8.0	-14.5
High_10	2457	-10.31	-10.53	-7.41	8.0	-15.4
High_11	2462	-14.89	-15.92	-12.36	8.0	-20.4
High_12	2467	-16.95	-17.91	-14.39	8.0	-22.4
High_13	2472	-28.94	-28.81	-25.86	8.0	-33.9

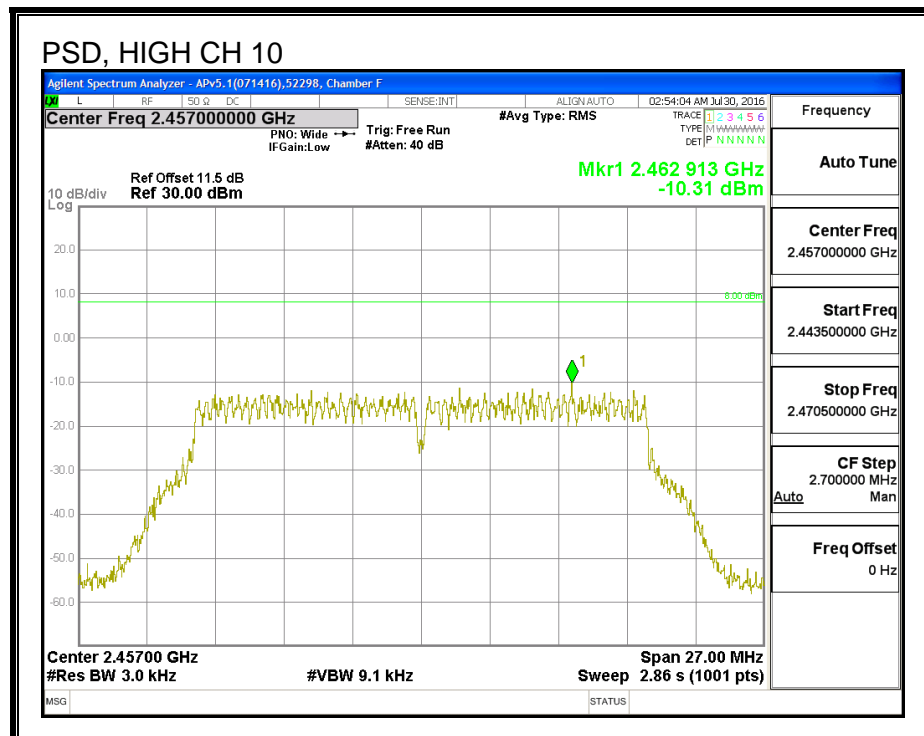
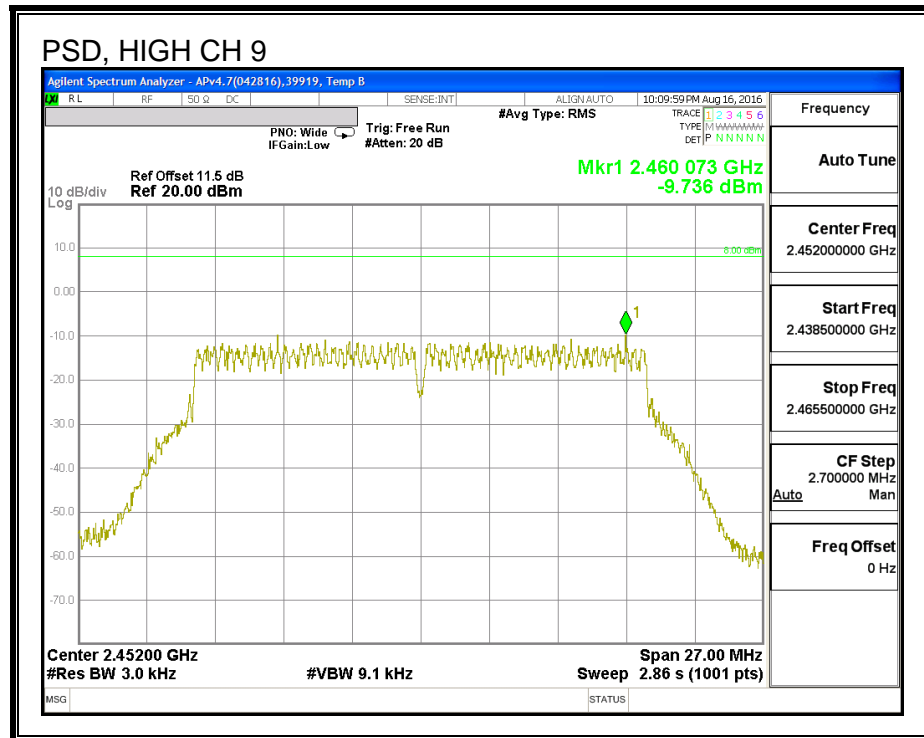
**PSD, CHAIN 0**

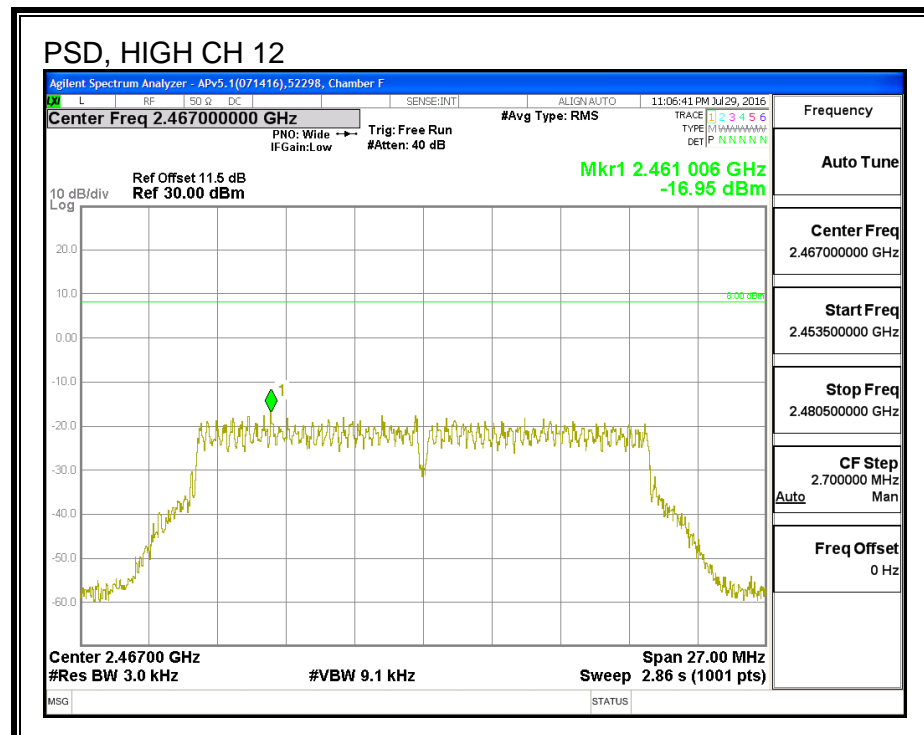
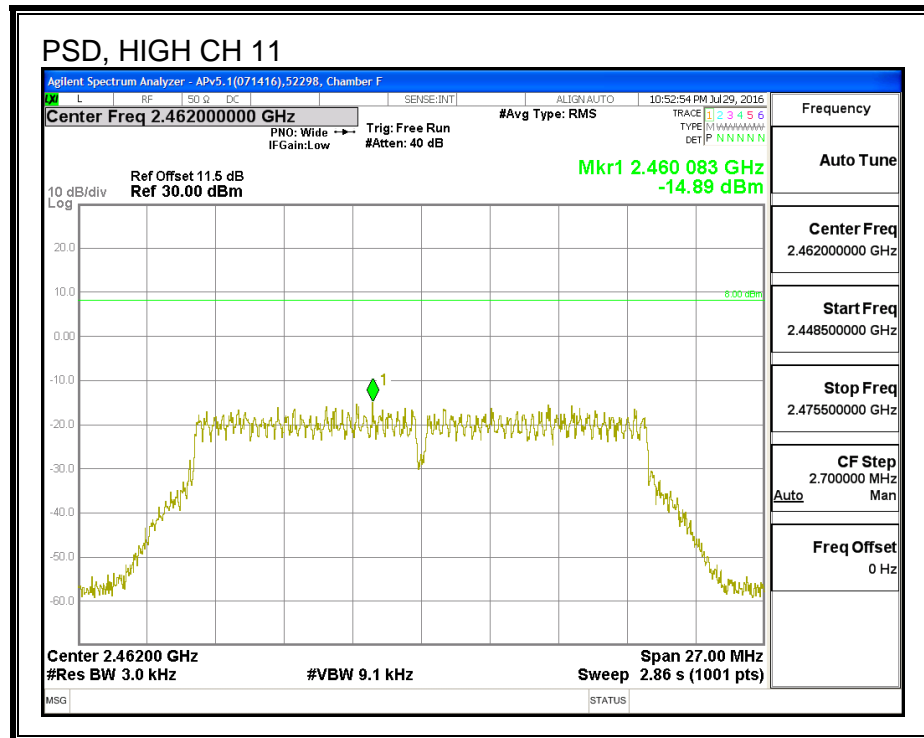


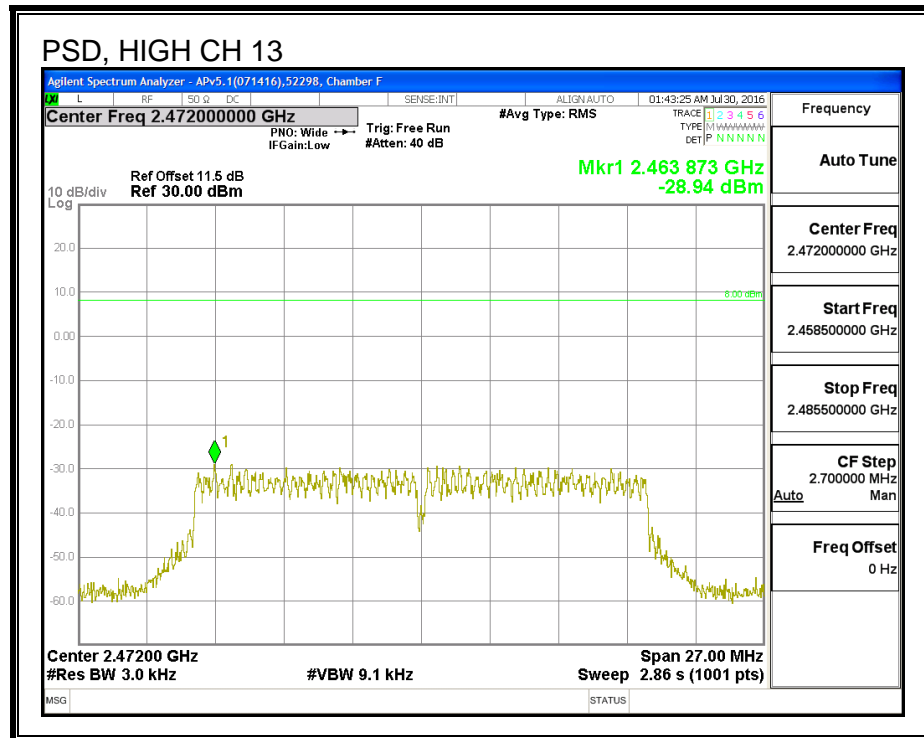




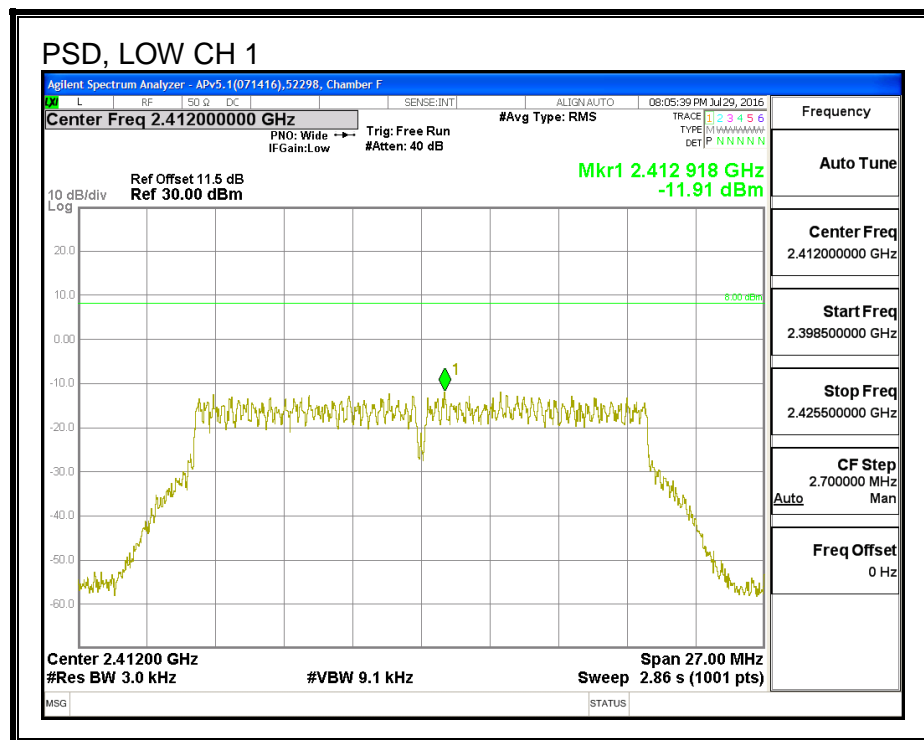


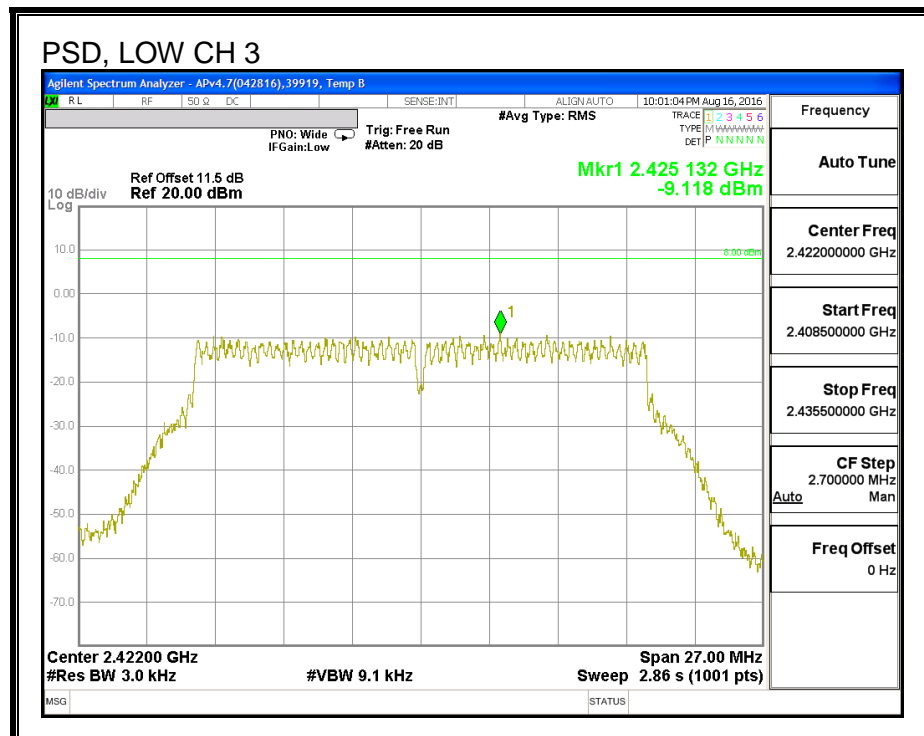
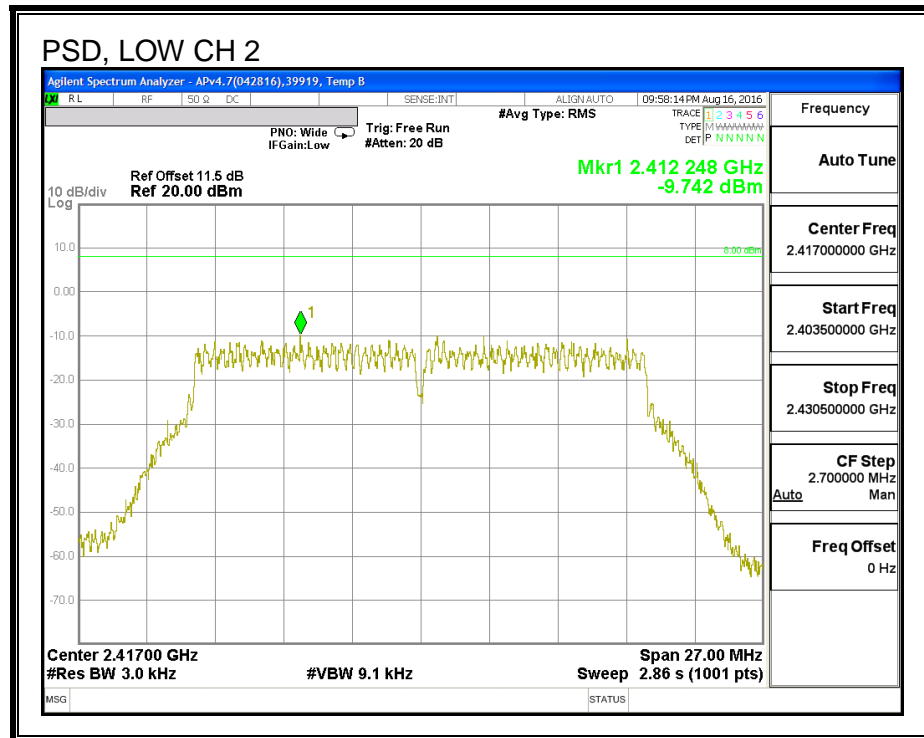


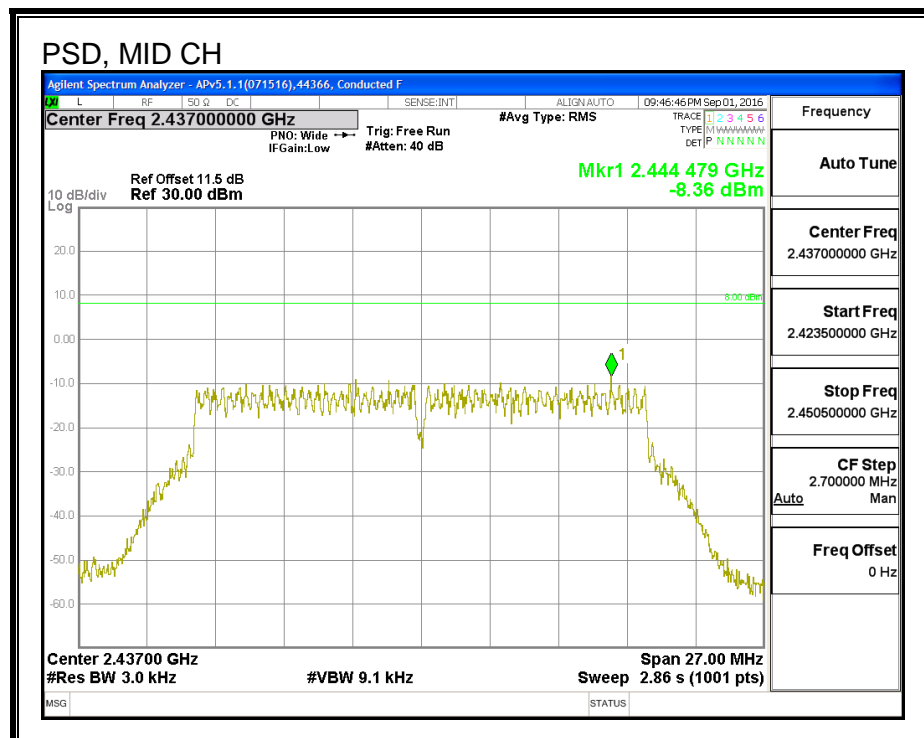
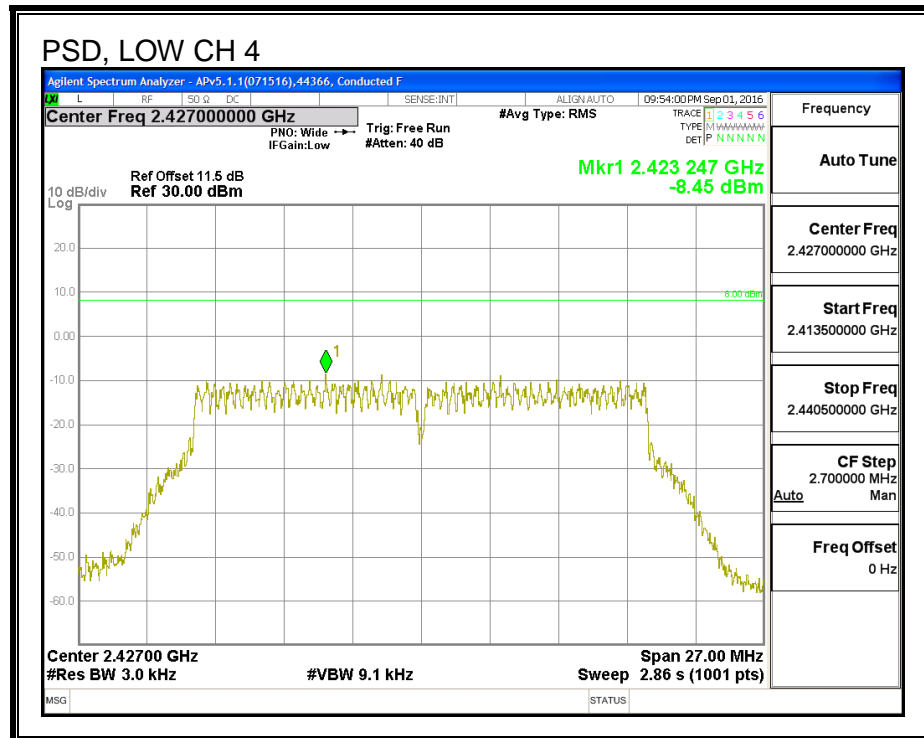


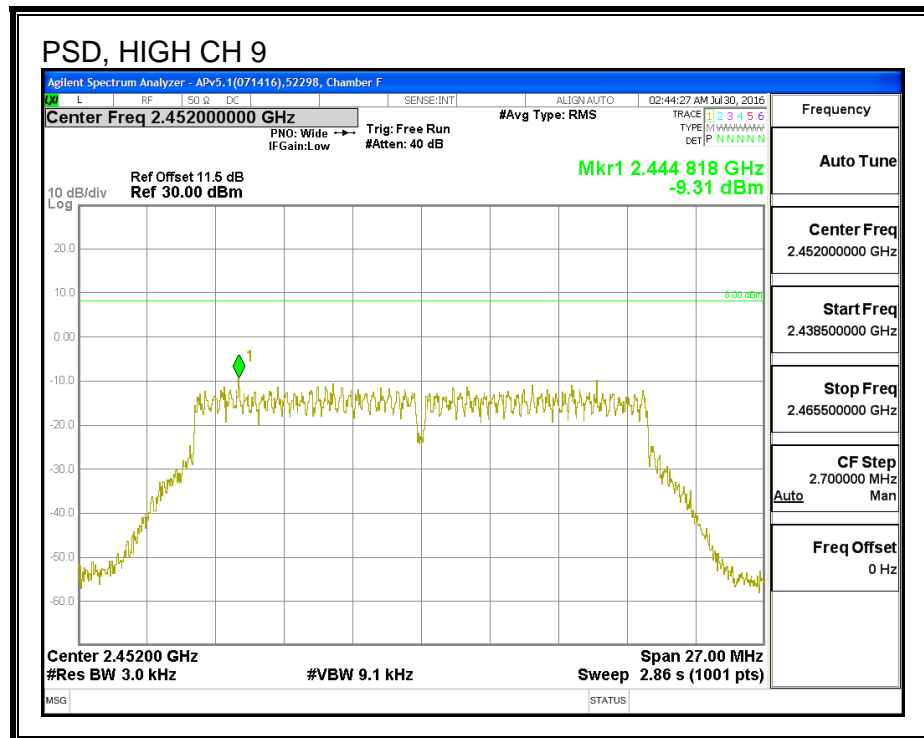
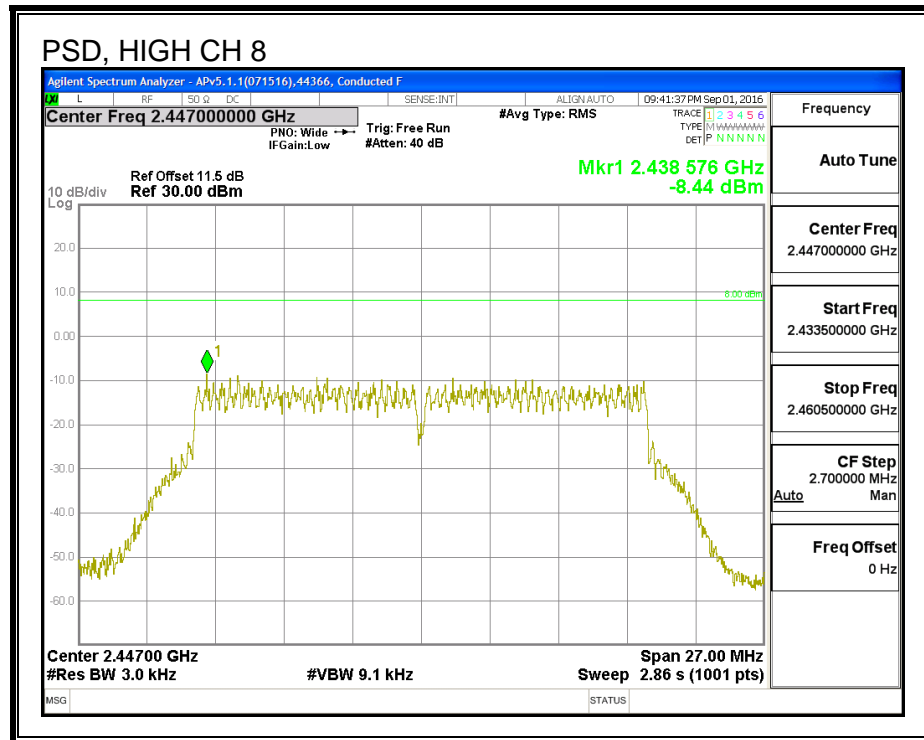


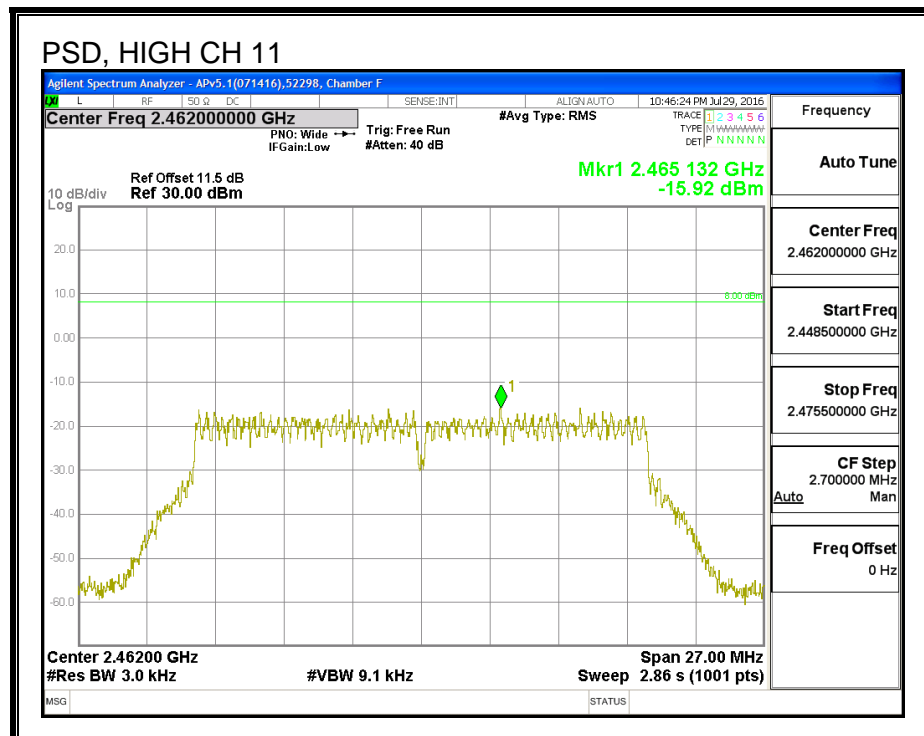
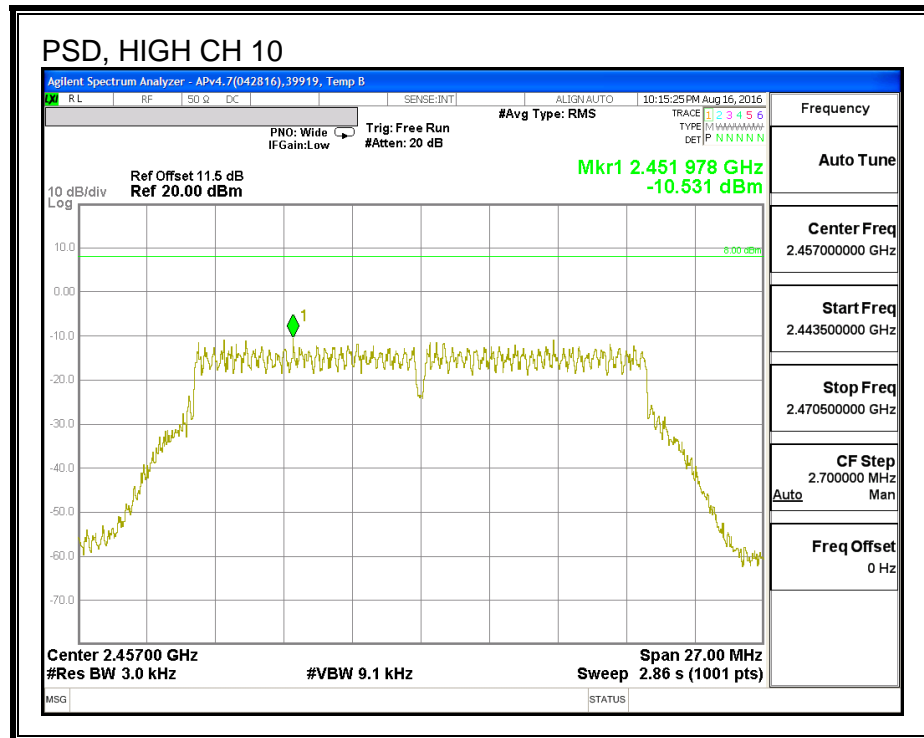
**PSD, CHAIN 1**

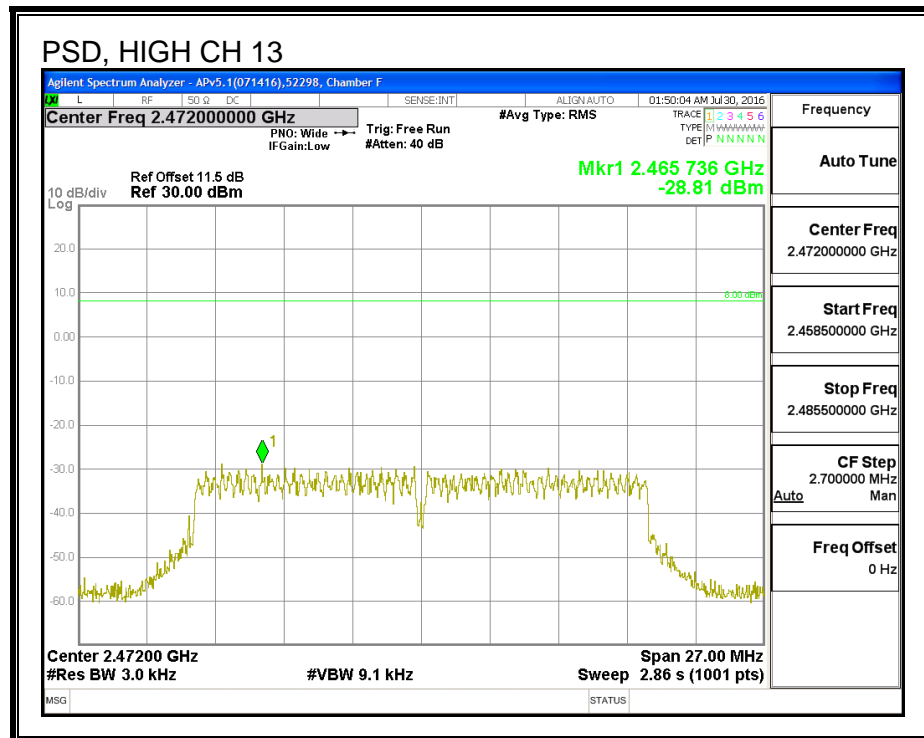
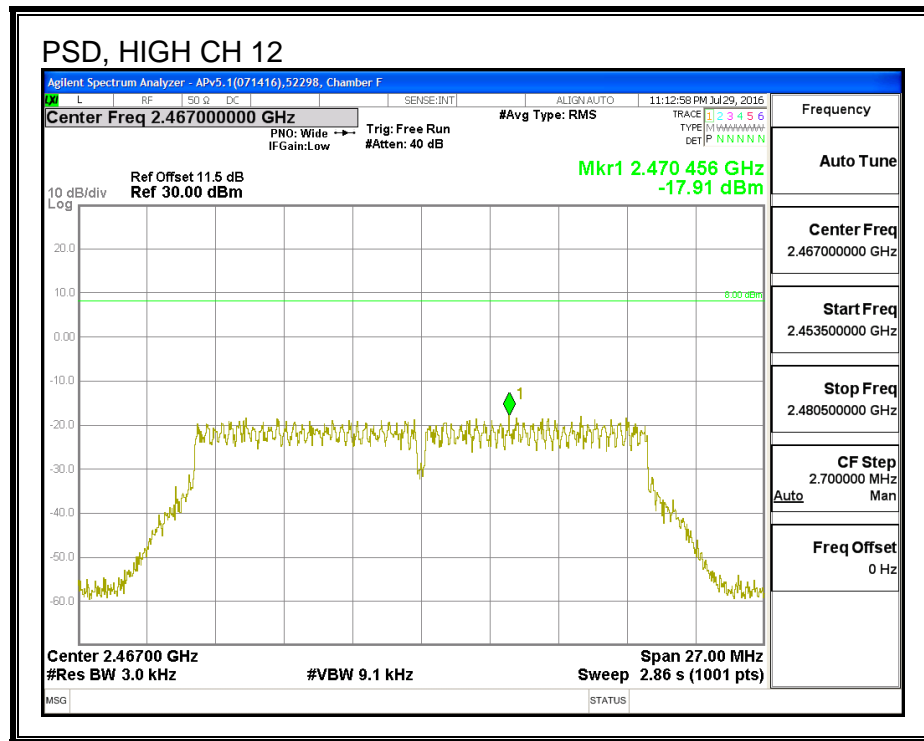














### 8.7.6. OUT-OF-BAND EMISSIONS

#### 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, CHAIN 0

