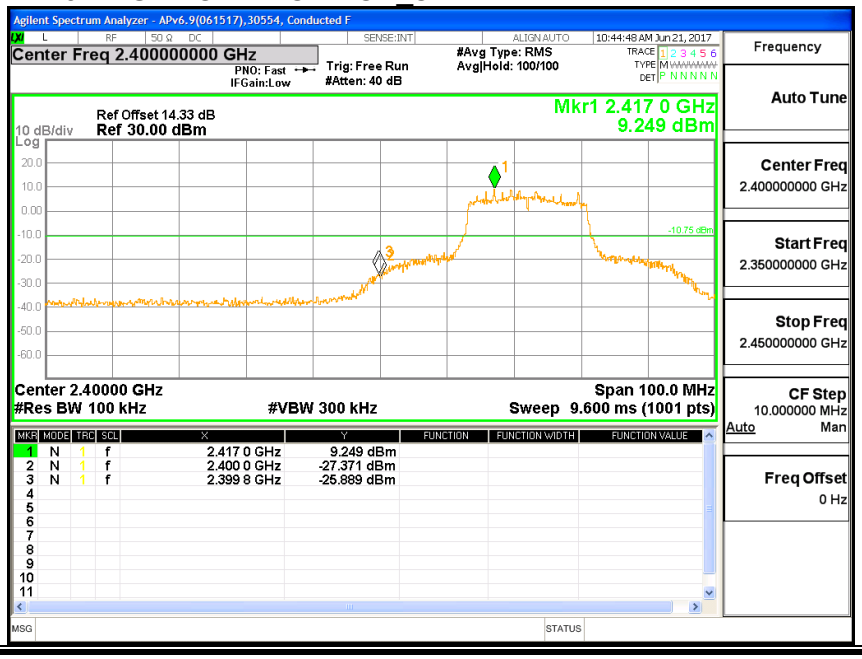
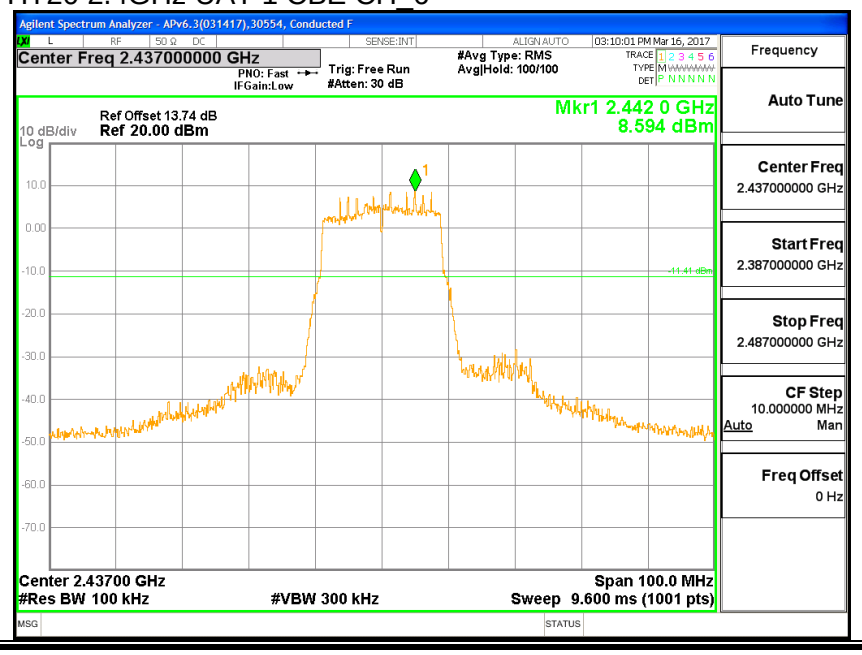
HT20 2.4GHz UAT 1 CBE CH_3



HT20 2.4GHz UAT 1 CBE CH_6



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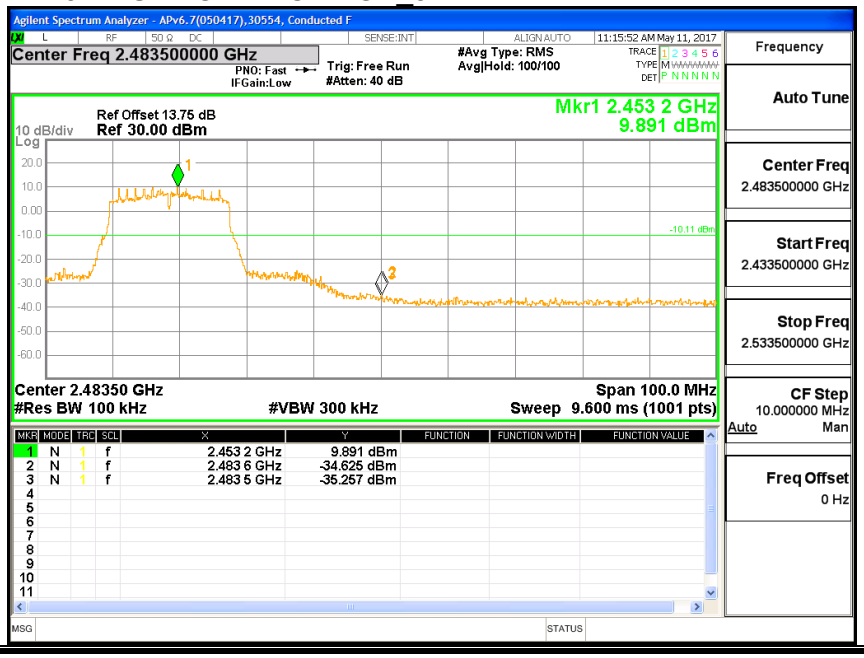
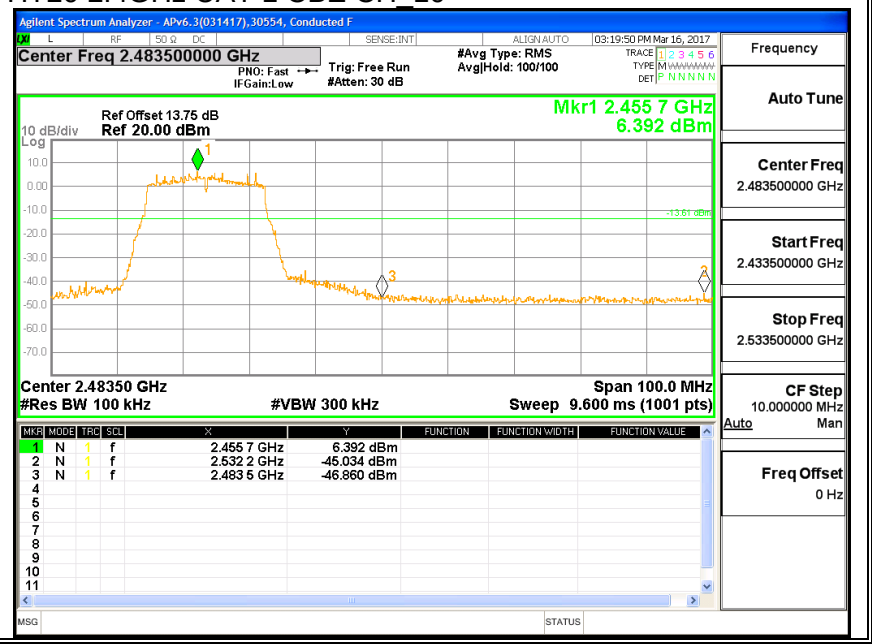
HT20 2.4GHz UAT 1 CBE CH_9



HT20 2.4GHz UAT 1 CBE CH_10



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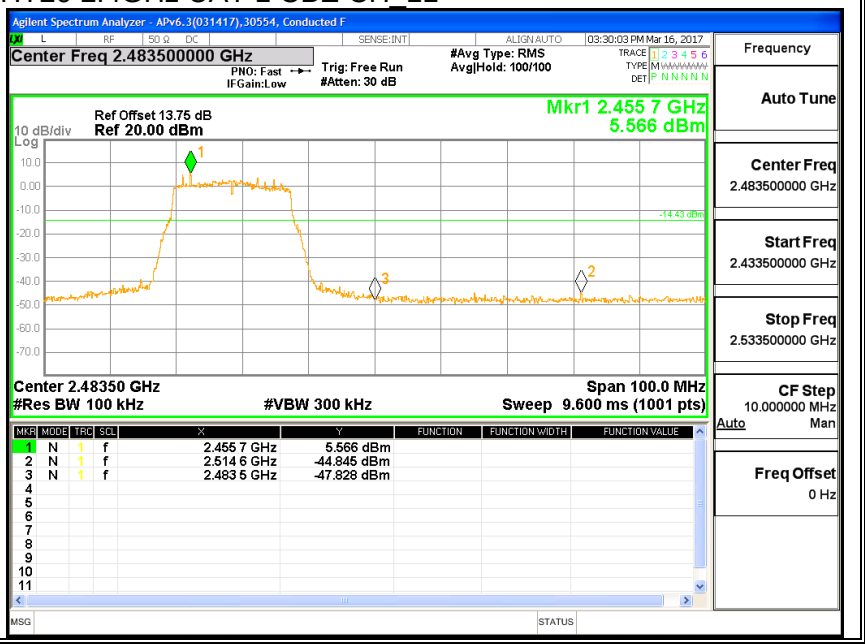
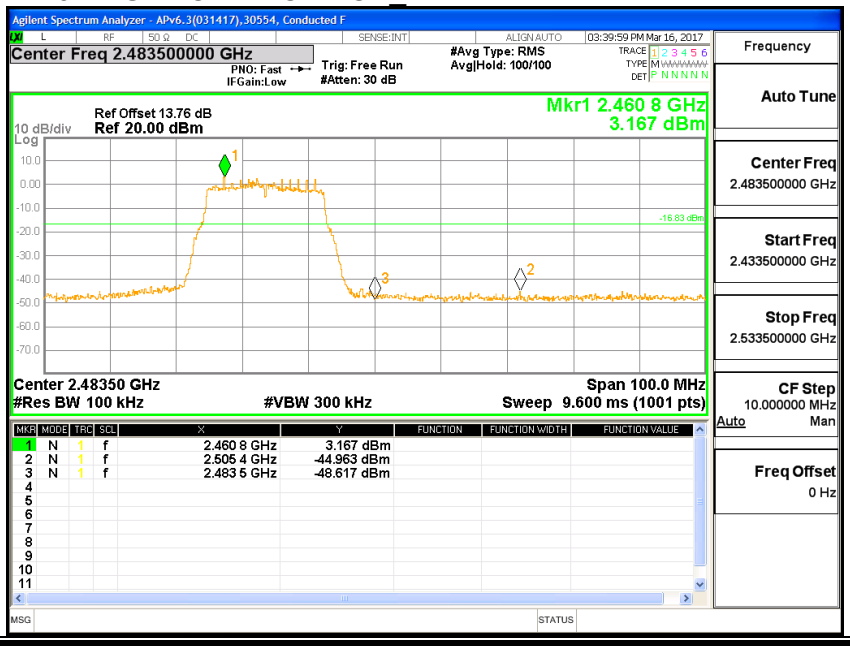
HT20 2.4GHz UAT 1 CBE CH_11



HT20 2.4GHz UAT 1 CBE CH_12



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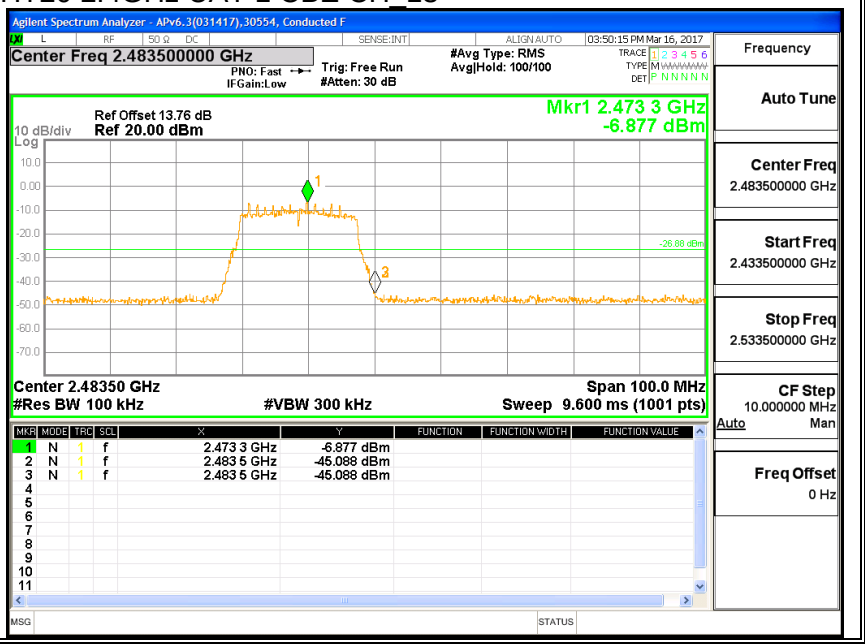
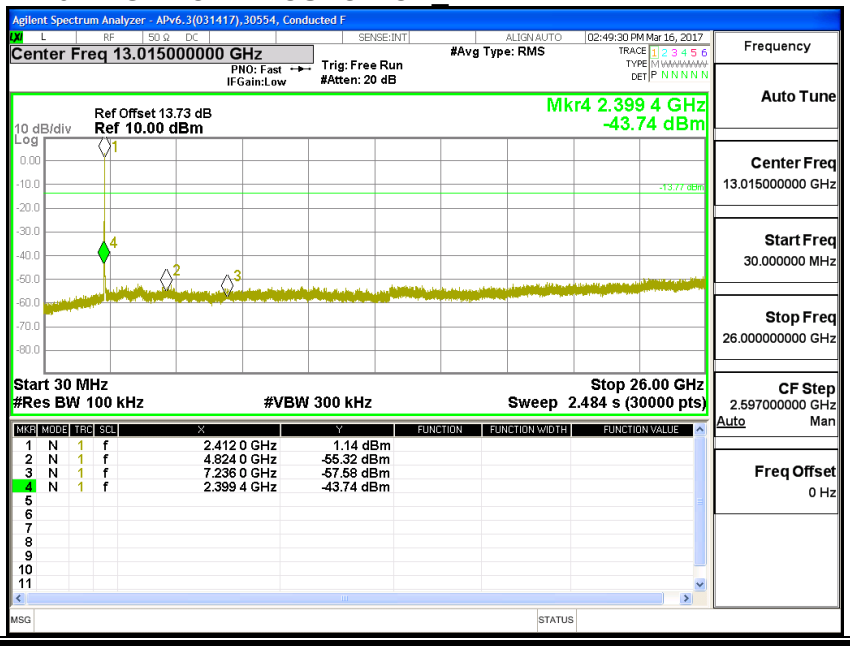
HT20 2.4GHz UAT 1 CBE CH_13



HT20 2.4GHz UAT 1 CSPUR CH_1



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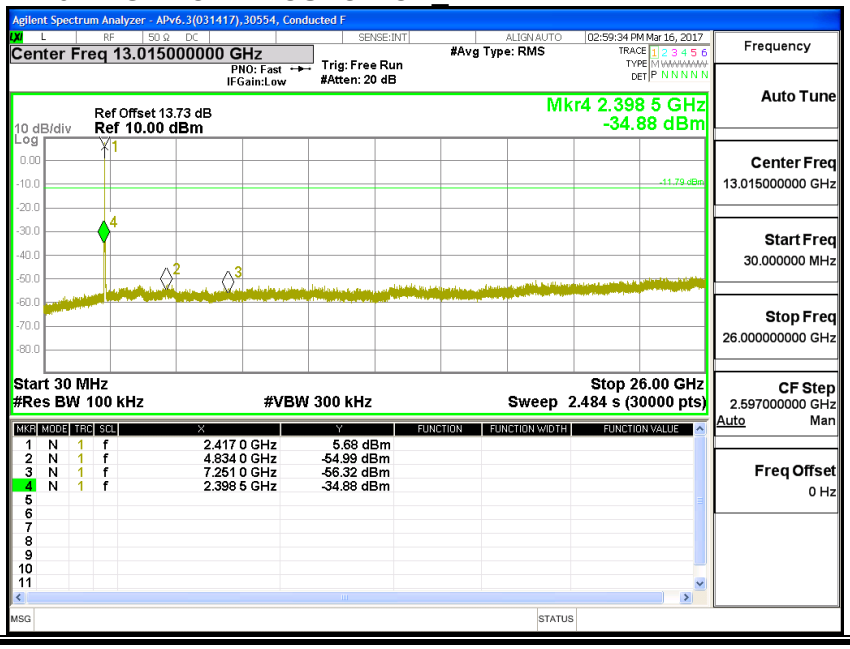
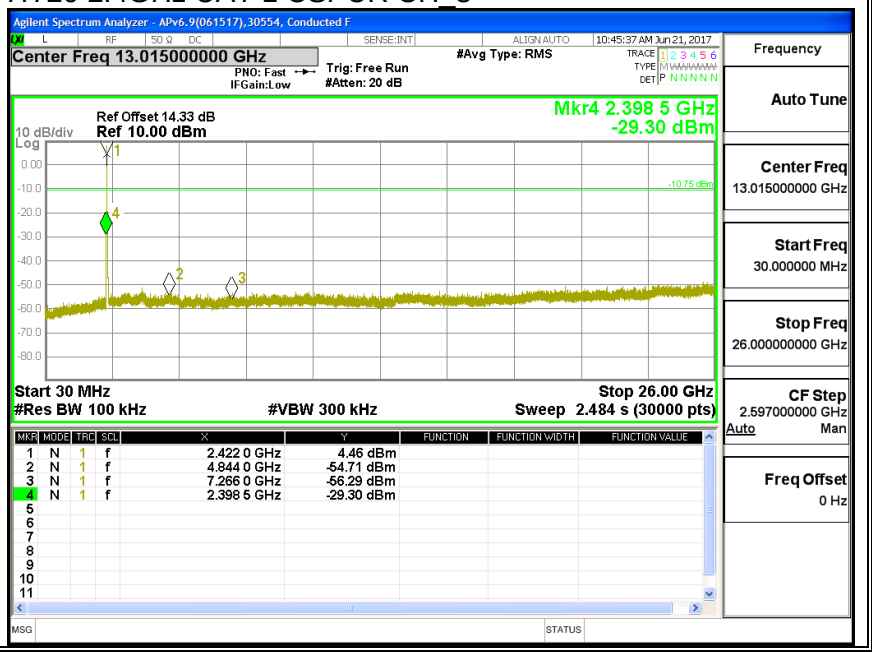
HT20 2.4GHz UAT 1 CSPUR CH_2



HT20 2.4GHz UAT 1 CSPUR CH_3



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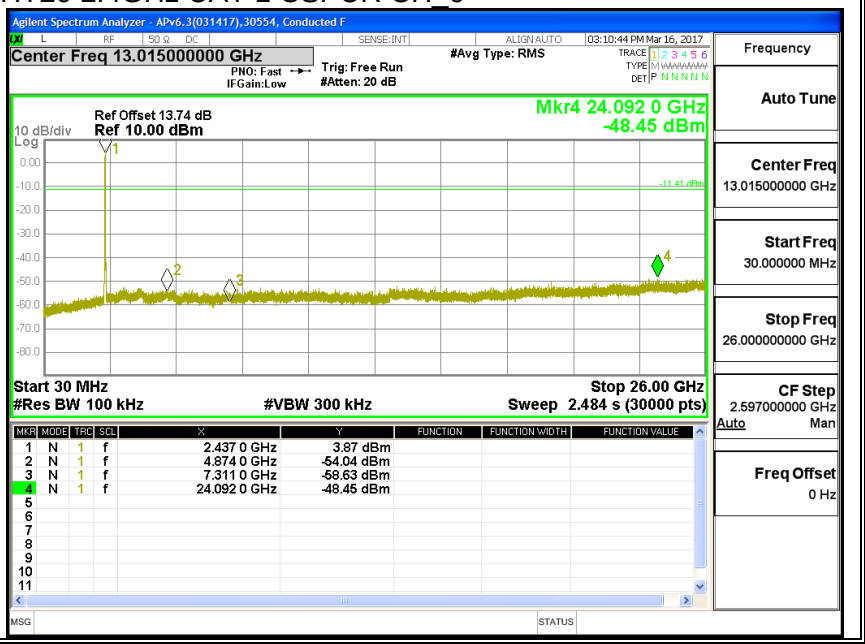
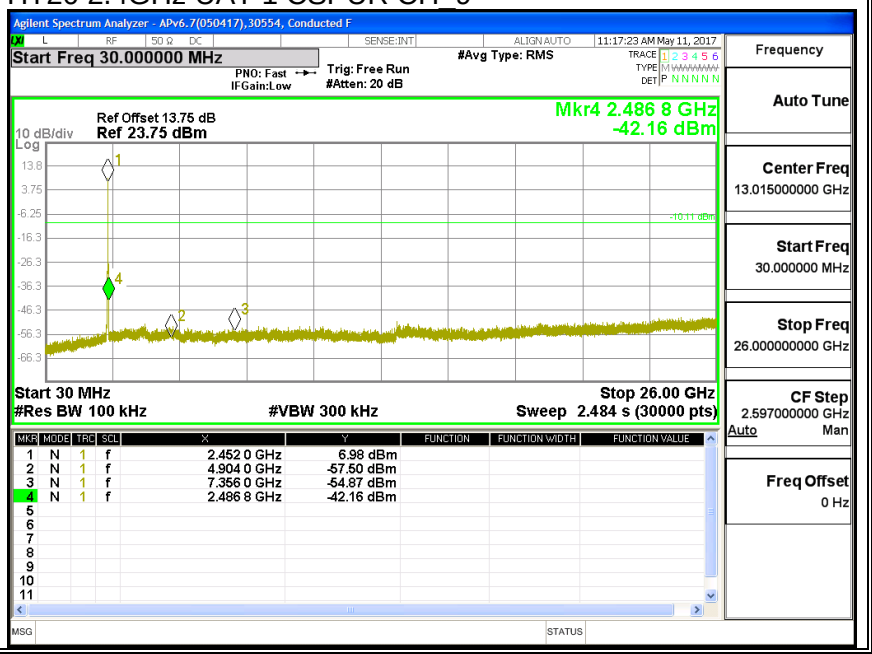
HT20 2.4GHz UAT 1 CSPUR CH_6



HT20 2.4GHz UAT 1 CSPUR CH_9



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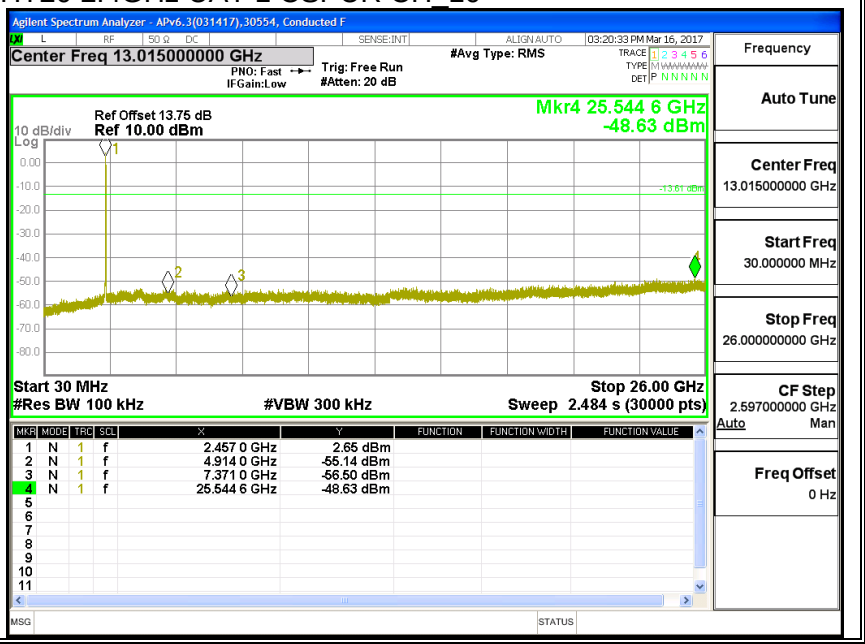
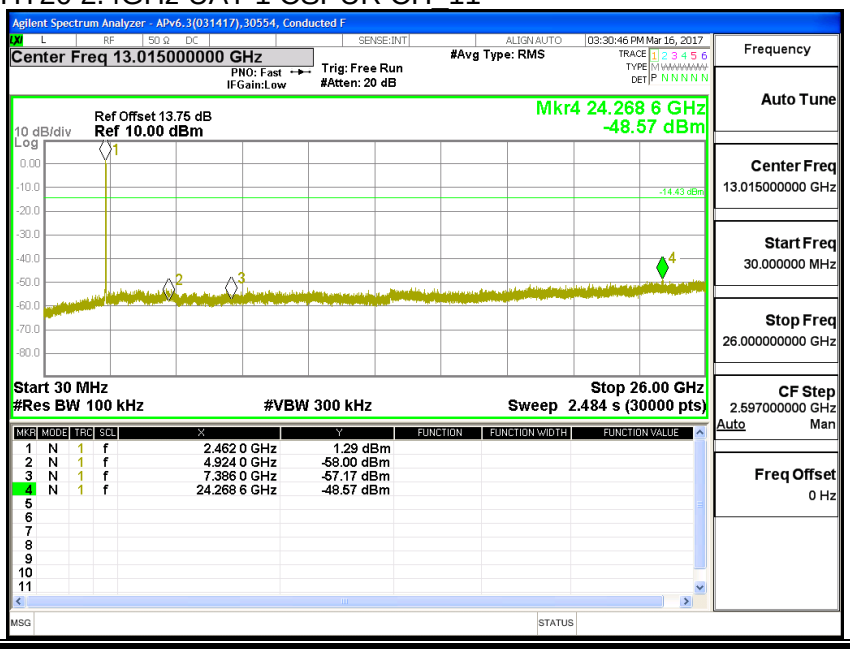
HT20 2.4GHz UAT 1 CSPUR CH_10



HT20 2.4GHz UAT 1 CSPUR CH_11



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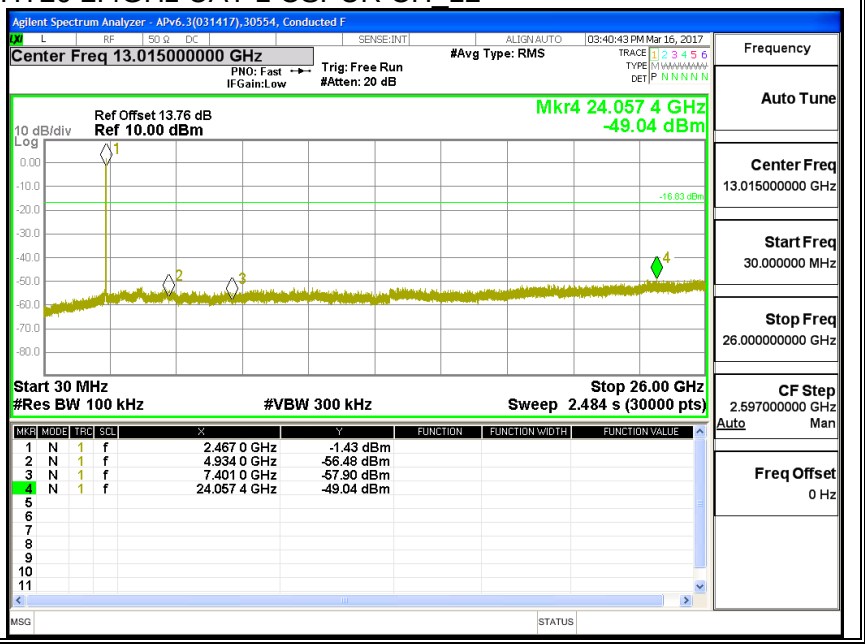
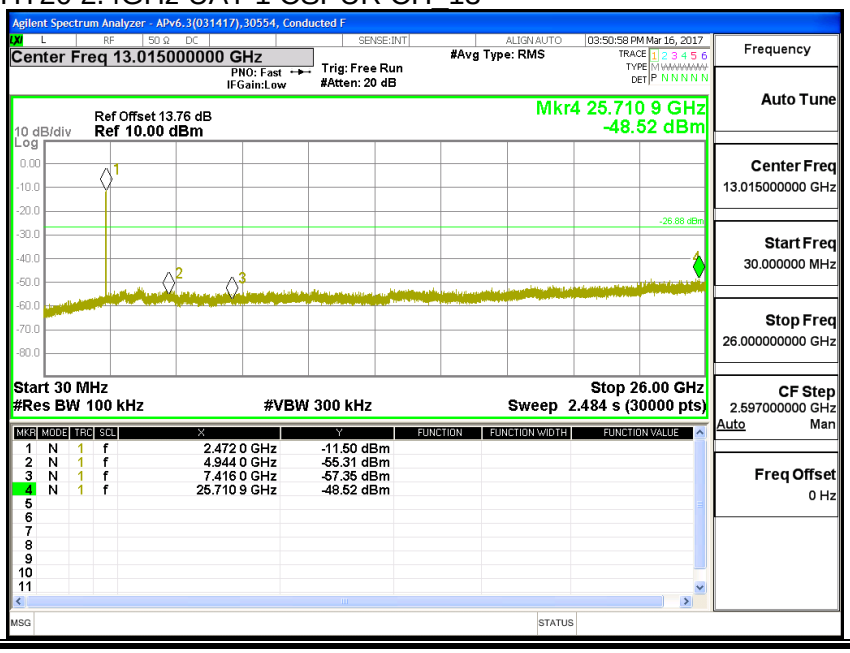
HT20 2.4GHz UAT 1 CSPUR CH_12



HT20 2.4GHz UAT 1 CSPUR CH_13



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8.5. 11n HT20 LAT 3 SISO MODE IN THE 2.4GHz BAND

8.5.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (a)

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

RESULTS

Channel	Frequency	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low_1	2412	17.350	0.5
Low_2	2417	16.650	0.5
Low_3	2422	16.240	0.5
Middle_6	2437	16.360	0.5
High_9	2452	17.54	0.5
High_10	2457	17.285	0.5
High_11	2462	17.515	0.5
High_12	2467	17.710	0.5
High_13	2472	17.345	0.5

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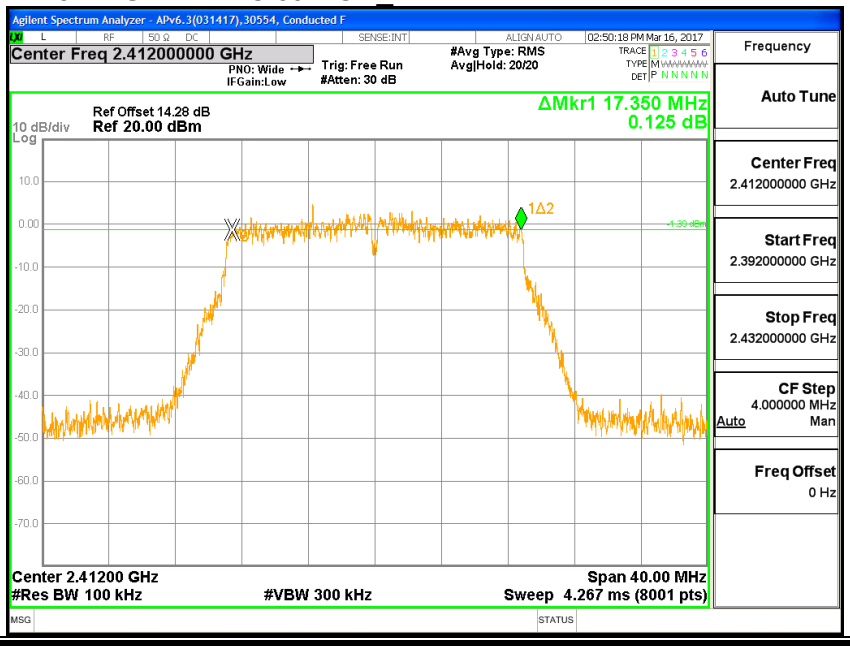
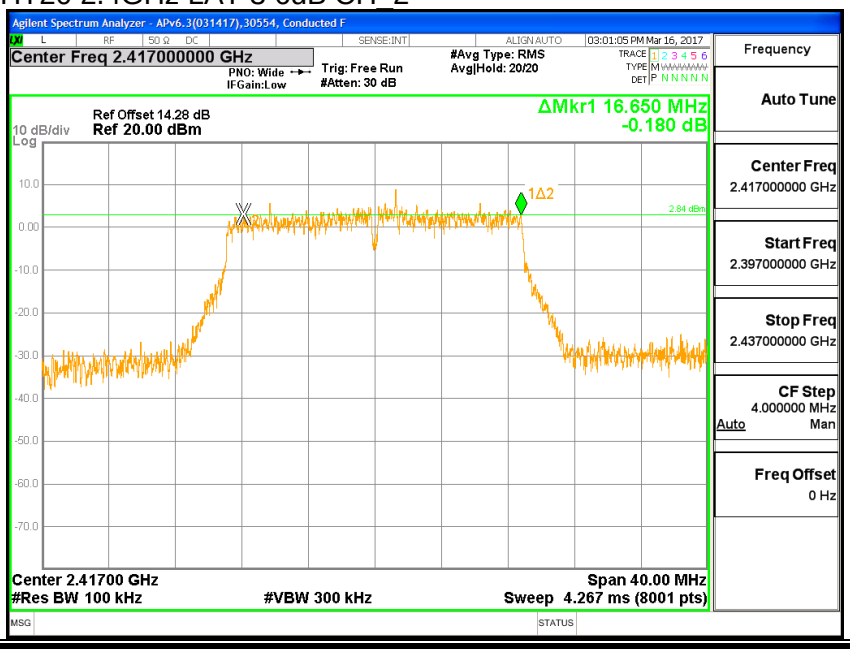
HT20 2.4GHz LAT 3 6dB CH_1



HT20 2.4GHz LAT 3 6dB CH_2



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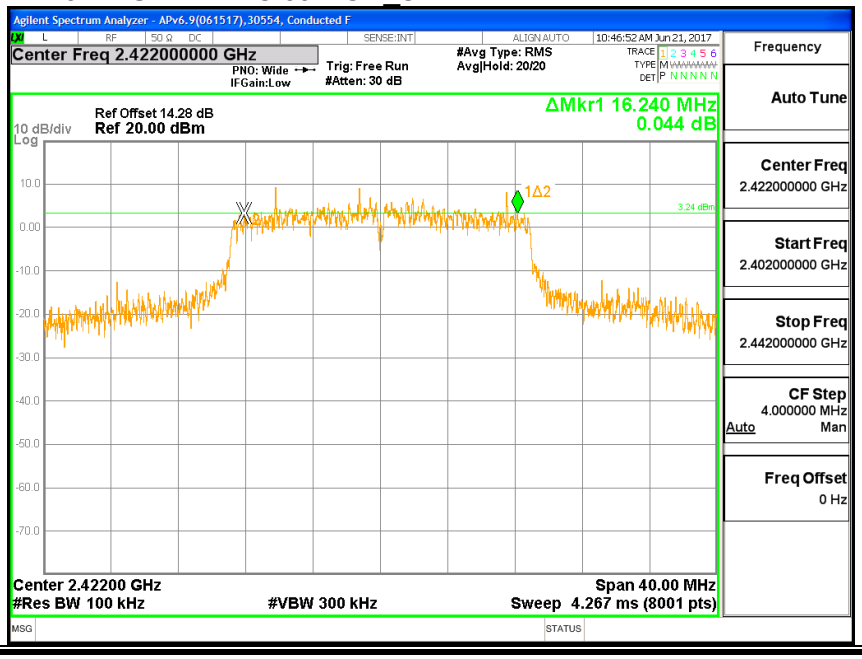
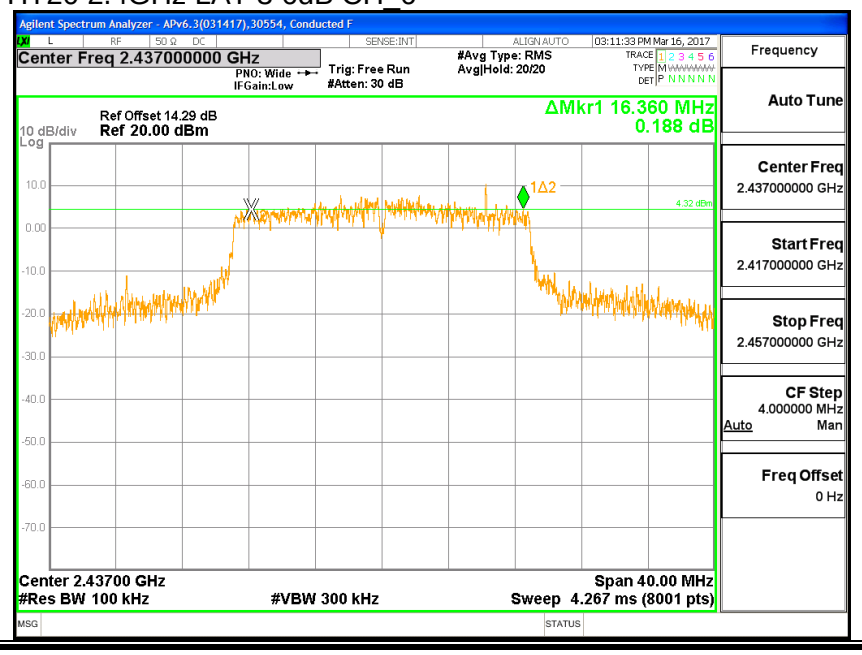
HT20 2.4GHz LAT 3 6dB CH_3



HT20 2.4GHz LAT 3 6dB CH_6



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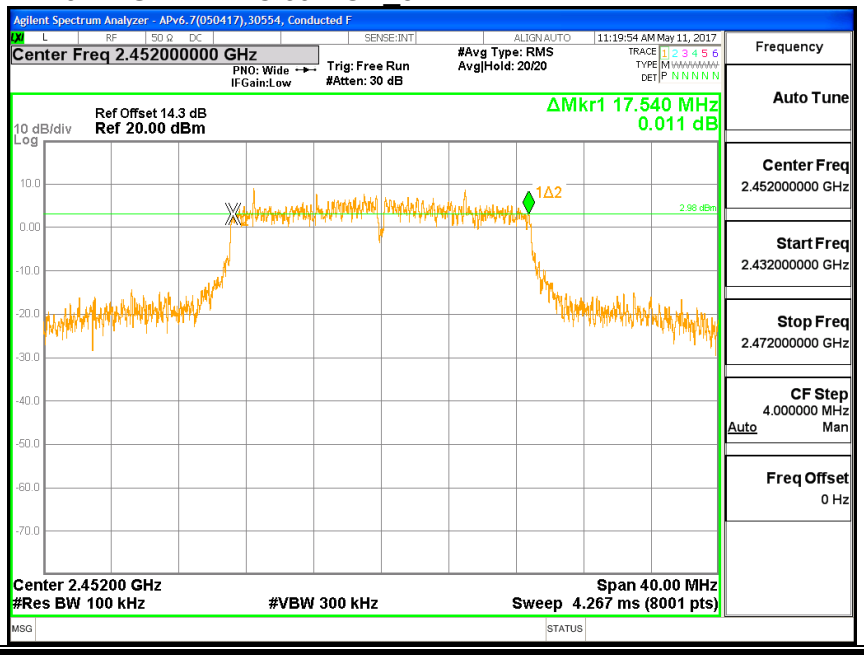
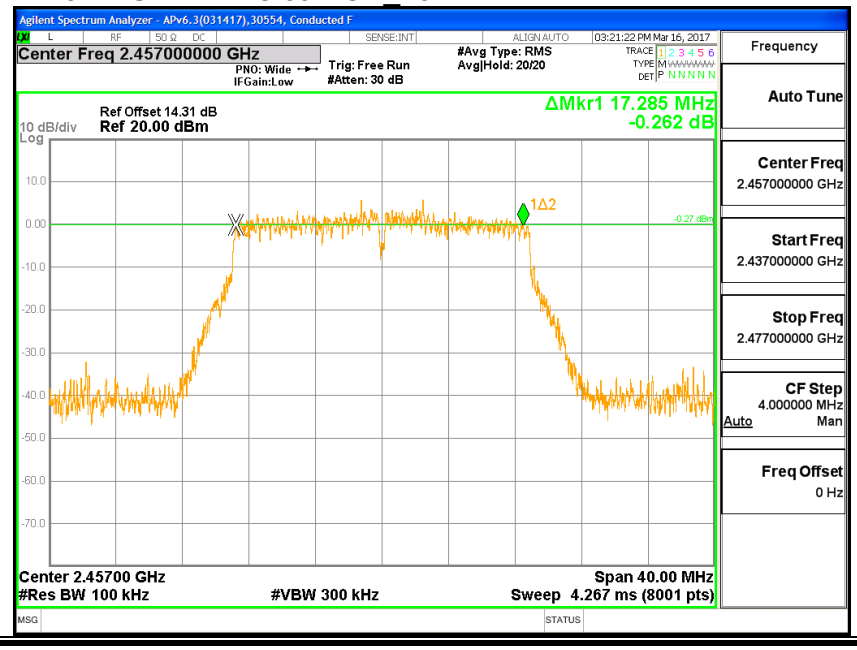
HT20 2.4GHz LAT 3 6dB CH_9



HT20 2.4GHz LAT 3 6dB CH_10



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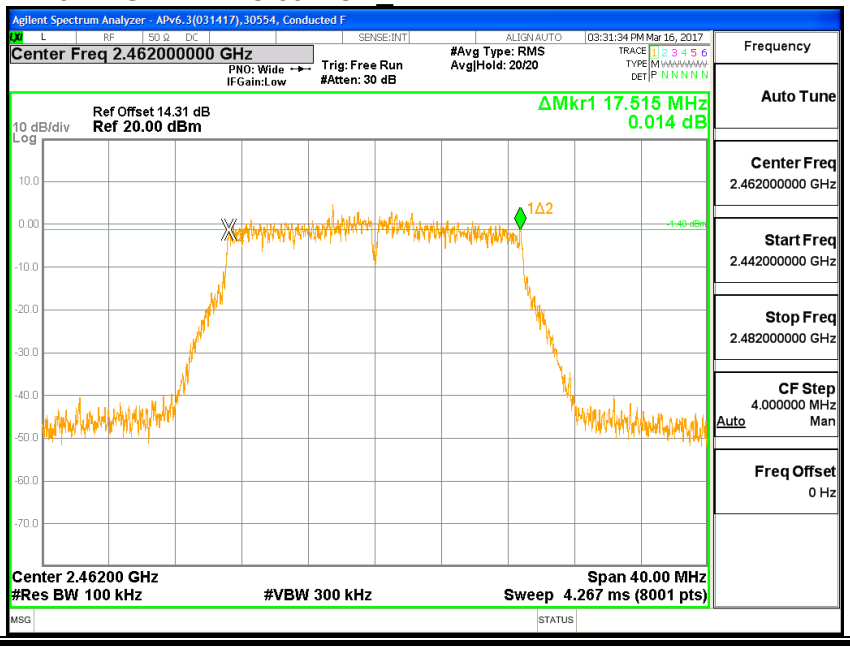
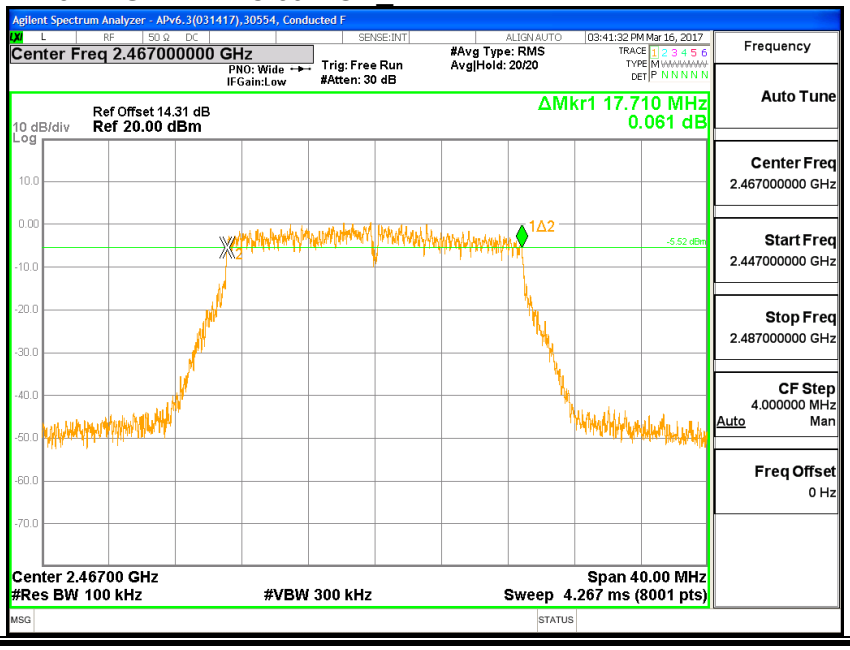
HT20 2.4GHz LAT 3 6dB CH_11



HT20 2.4GHz LAT 3 6dB CH_12



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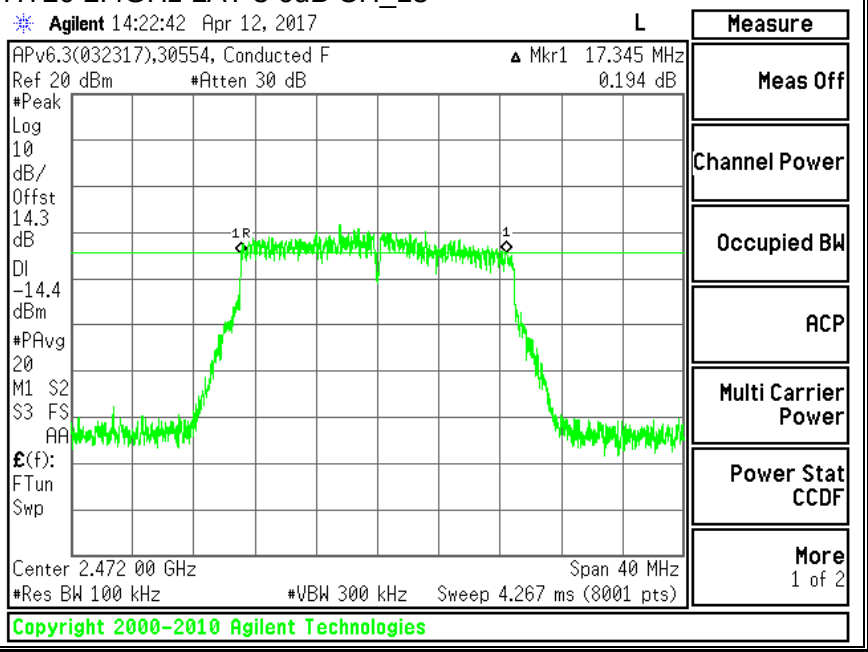
HT20 2.4GHz LAT 3 6dB CH_13



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8.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth LAT 3 (MHz)
Low_1	2412	17.759
Low_2	2417	17.905
Low_3	2422	18.267
Middle_6	2437	18.082
High_9	2452	17.917
High_10	2457	17.748
High_11	2462	17.798
High_12	2467	17.756
High_13	2472	17.873

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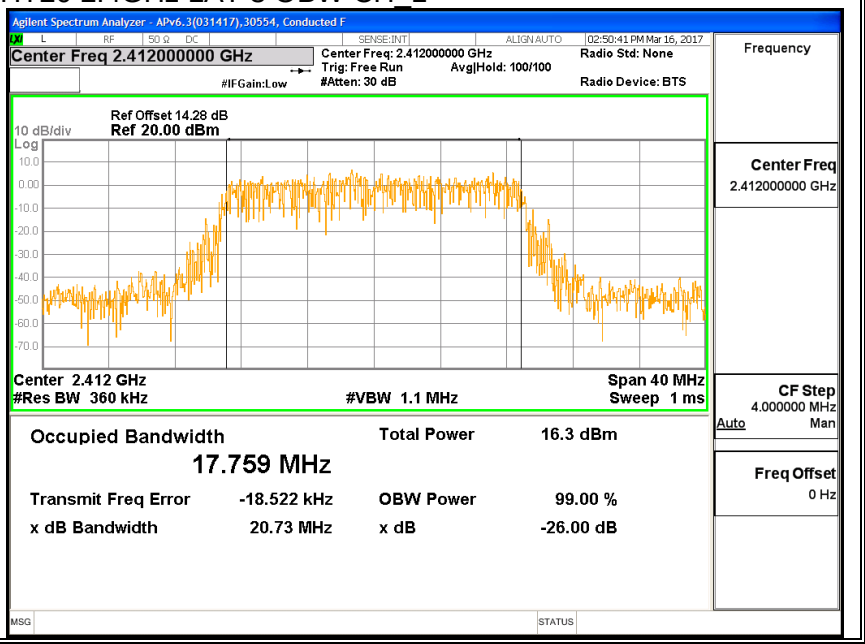
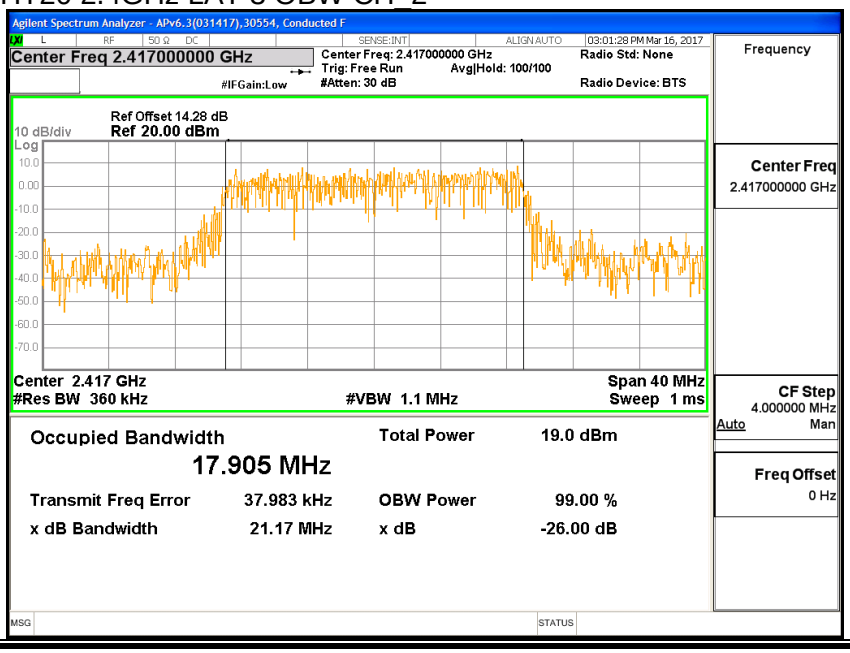
HT20 2.4GHz LAT 3 OBW CH_1



HT20 2.4GHz LAT 3 OBW CH_2



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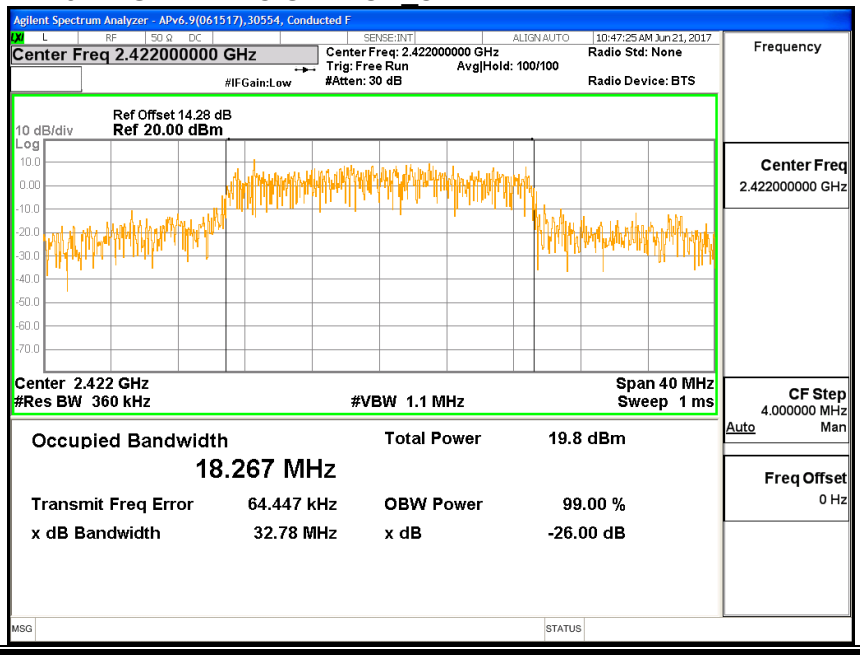
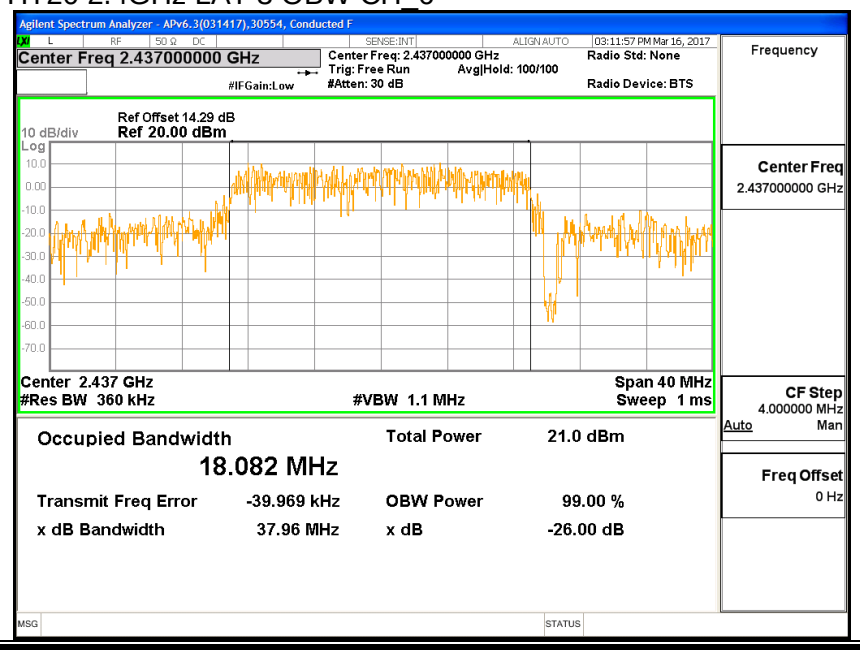
HT20 2.4GHz LAT 3 OBW CH_3



HT20 2.4GHz LAT 3 OBW CH_6



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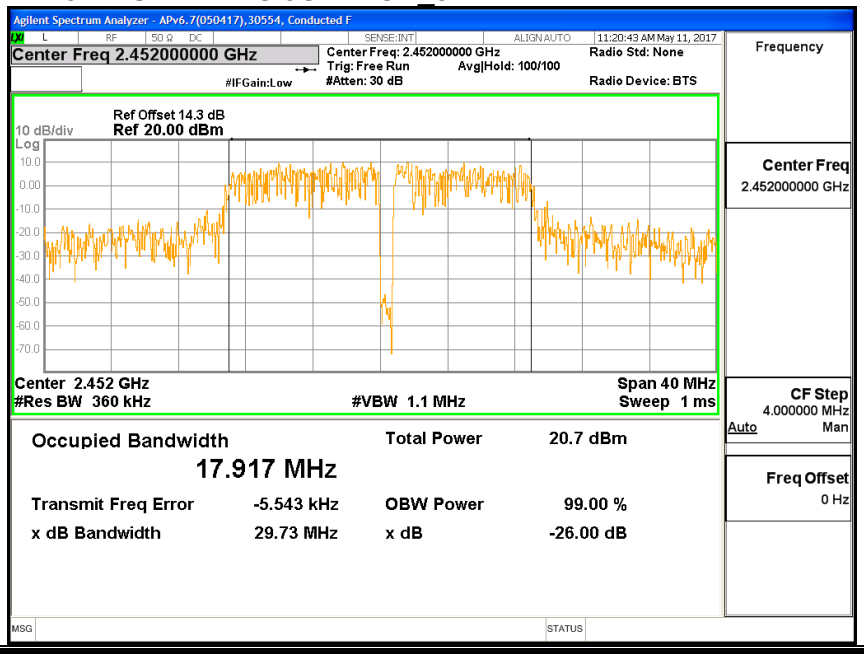
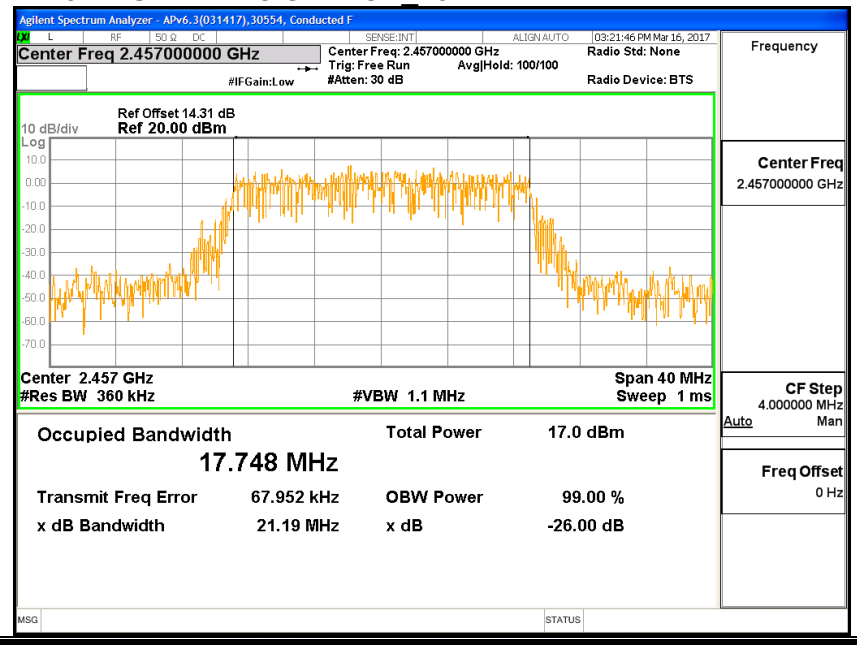
HT20 2.4GHz LAT 3 6OBW CH_9



HT20 2.4GHz LAT 3 OBW CH_10



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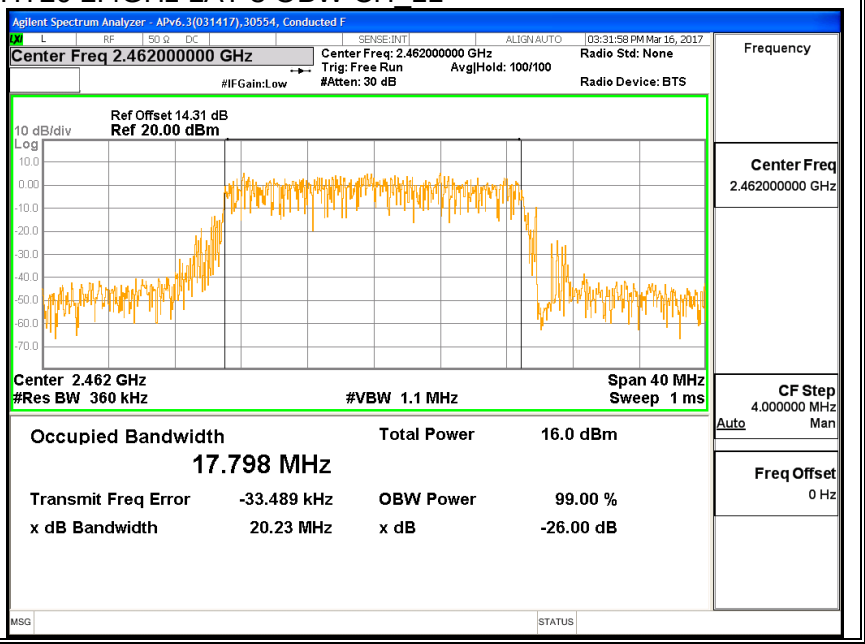
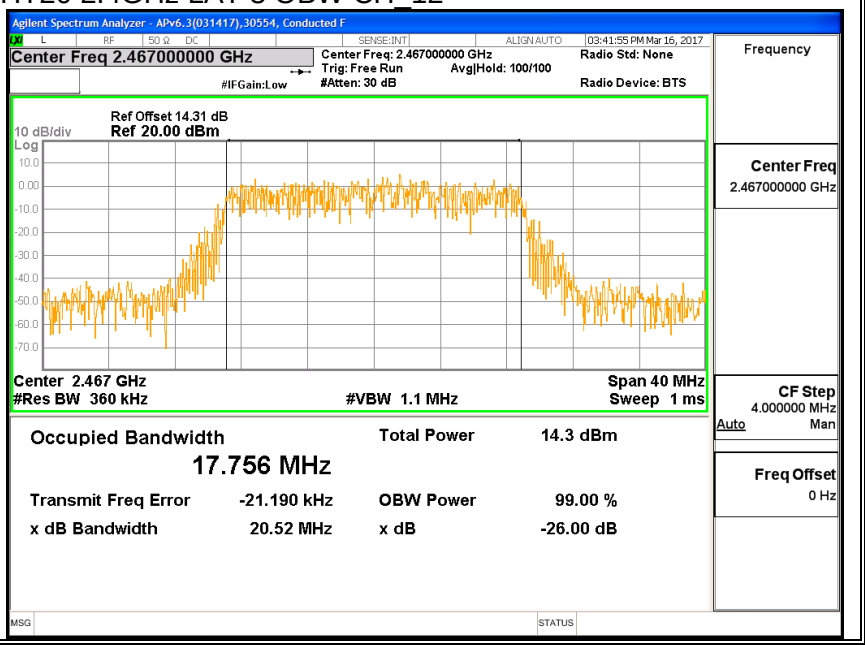
HT20 2.4GHz LAT 3 OBW CH_11



HT20 2.4GHz LAT 3 OBW CH_12



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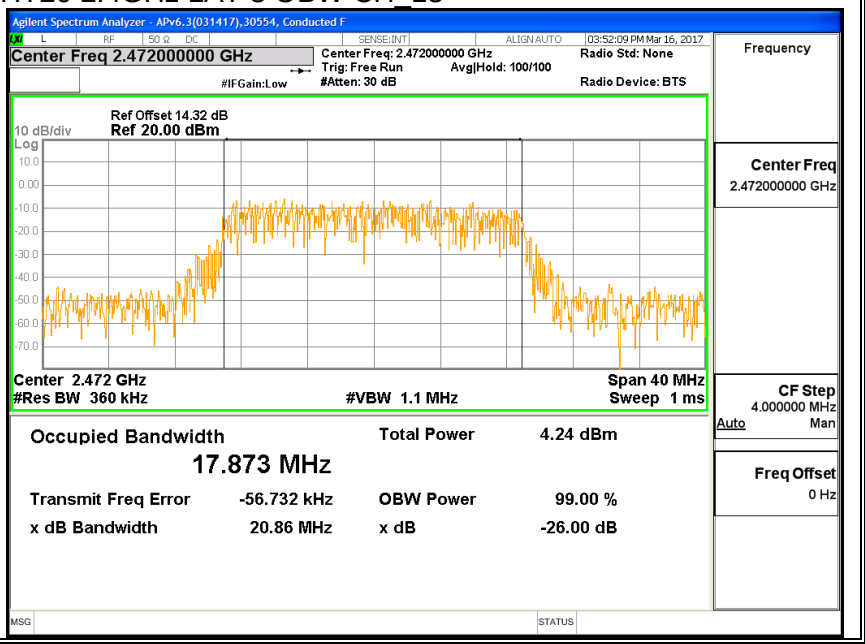
HT20 2.4GHz LAT 3 OBW CH_13



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8.5.3. AVERAGE POWER

ID:	30554	Date:	6/14/2017

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	Power LAT 3(MHz)
Low_1	2412	15.85
Low_2	2417	18.36
Low_3	2422	19.84
Middle_6	2437	20.89
High_9	2452	19.86
High_10	2457	17.33
High_11	2462	15.87
High_12	2467	13.38
High_13	2472	3.96

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8.5.4. OUTPUT POWER

ID:	30554	Date:	6/14/2017

LIMITS

FCC §15.247

IC RSS-247 (5.4) (d)

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.

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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	-2.24	30.00	30	36	30.00
Low_2	2417	-2.24	30.00	30	36	30.00
Low_3	2422	-2.24	30.00	30	36	30.00
Mid	2437	-2.24	30.00	30	36	30.00
High_9	2452	-2.24	30.00	30	36	30.00
High_10	2457	-2.24	30.00	30	36	30.00
High_11	2462	-2.24	30.00	30	36	30.00
High_12	2467	-2.24	30.00	30	36	30.00
High_13	2472	-2.24	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	23.08	23.08	30.00	-6.92
Low_2	2417	25.69	25.69	30.00	-4.31
Low_3	2422	26.32	26.32	30.00	-3.68
Mid	2437	27.56	27.56	30.00	-2.44
High_9	2452	27.19	27.19	30.00	-2.81
High_10	2457	24.16	24.16	30.00	-5.84
High_11	2462	22.70	22.70	30.00	-7.30
High_12	2467	20.71	20.71	30.00	-9.29
High_13	2472	10.79	10.79	30.00	-19.21

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8.5.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247

IC RSS-247 (5.2) (b)

For digitally modulated systems, the power spectral density conducted form 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

PSD Results

Channel	Frequency (MHz)	Meas (dBm/3kHz)	Total Corr'd PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low_1	2412	-8.92	-8.92	8.0	-16.9
Low_2	2417	-4.92	-4.92	8.0	-12.9
Low_3	2422	-6.16	-6.16	8.0	-14.2
Mid	2437	-4.87	-4.87	8.0	-12.9
High_9	2452	-3.81	-3.81	8.0	-11.8
High_10	2457	-8.00	-8.00	8.0	-16.0
High_11	2462	-9.39	-9.39	8.0	-17.4
High_12	2467	-11.48	-11.48	8.0	-19.5
High_13	2472	-21.77	-21.77	8.0	-29.8

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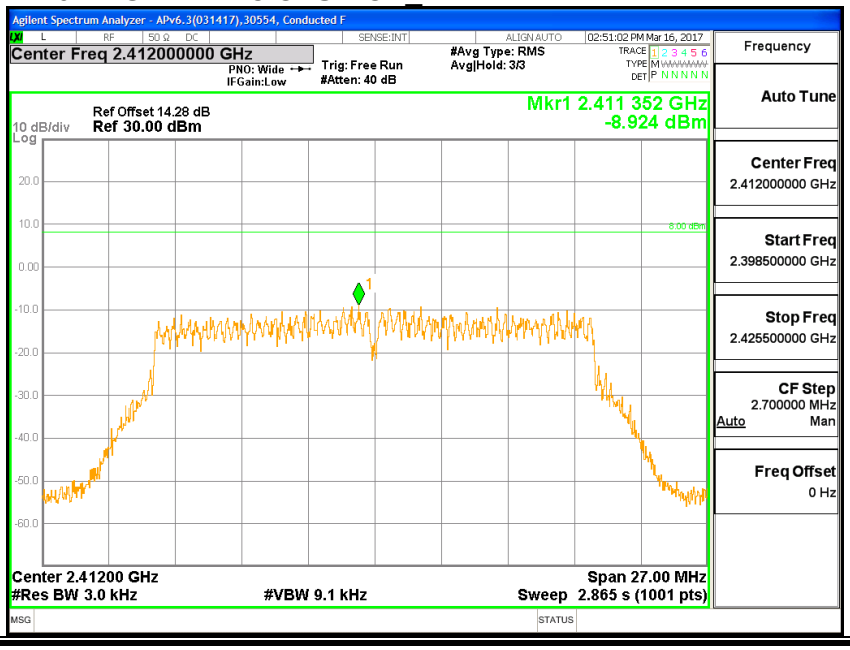
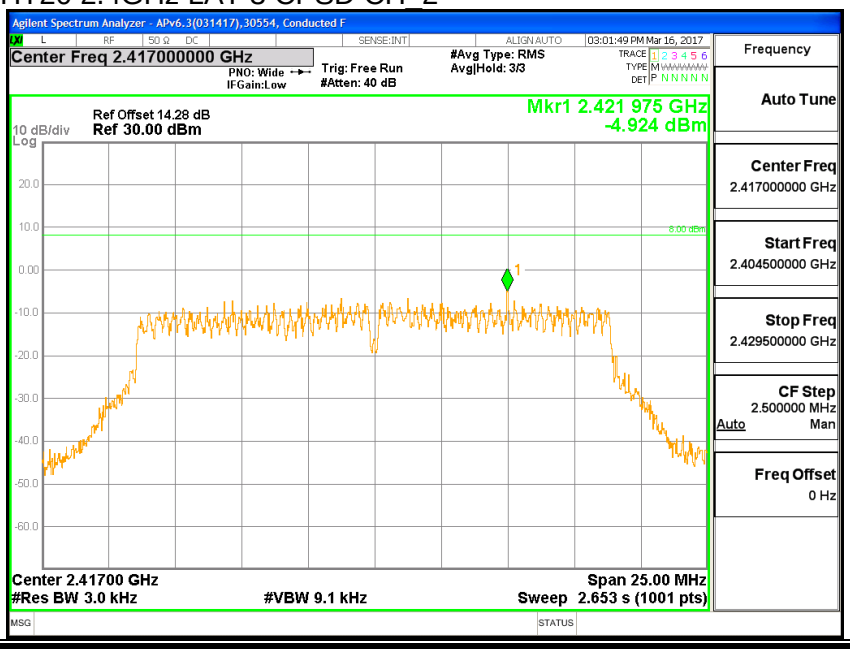
HT20 2.4GHz LAT 3 CPSD CH_1



HT20 2.4GHz LAT 3 CPSD CH_2



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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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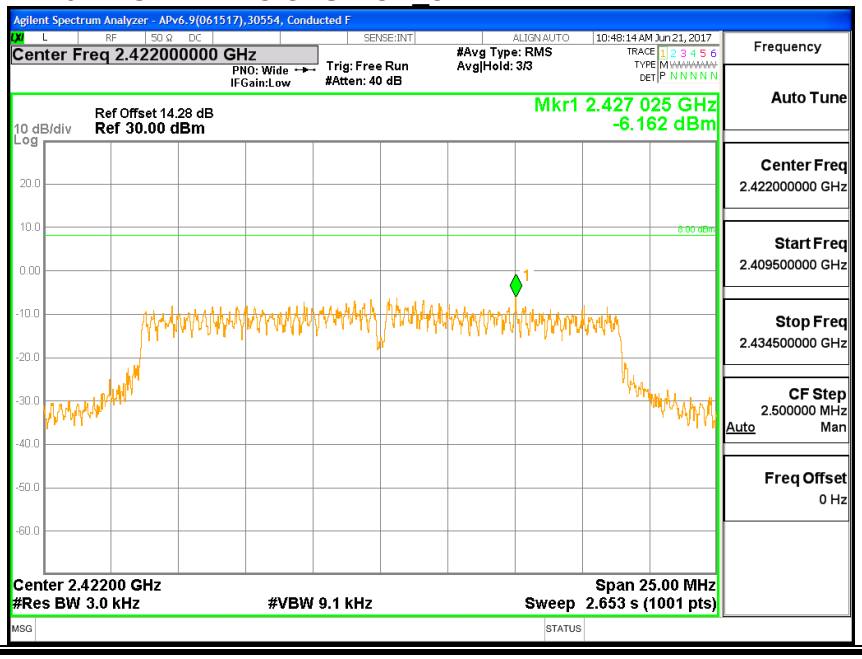
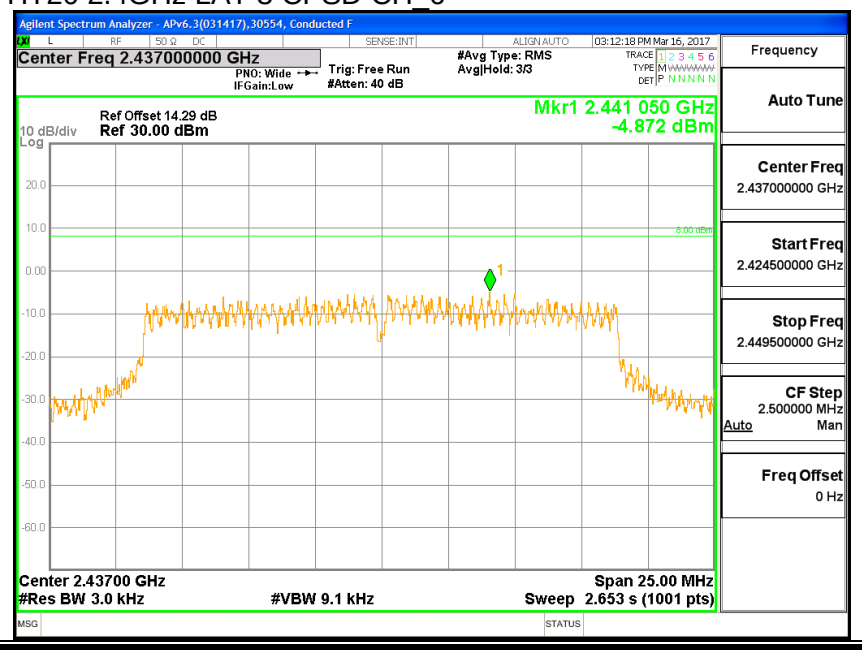
HT20 2.4GHz LAT 3 CPSD CH_3



HT20 2.4GHz LAT 3 CPSD CH_6



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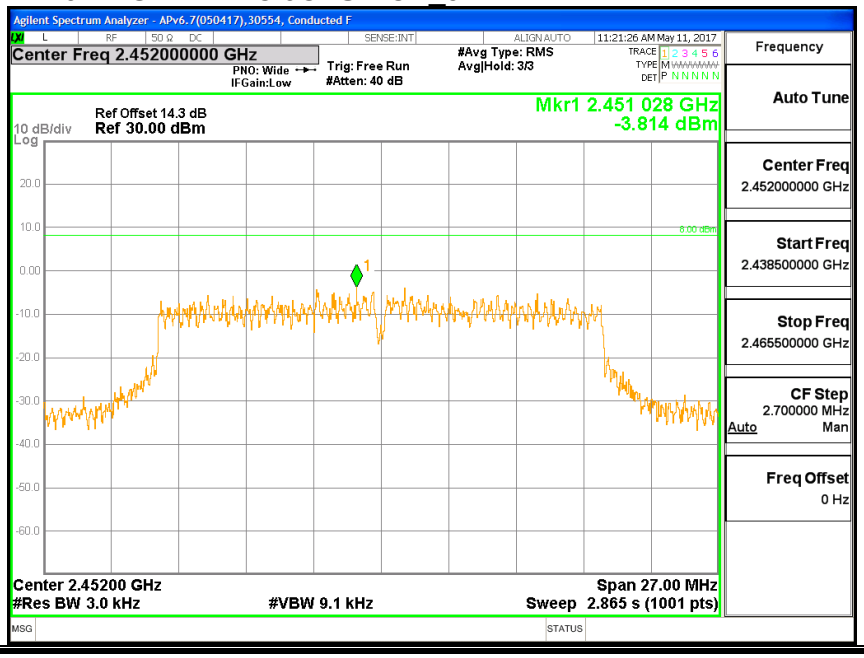
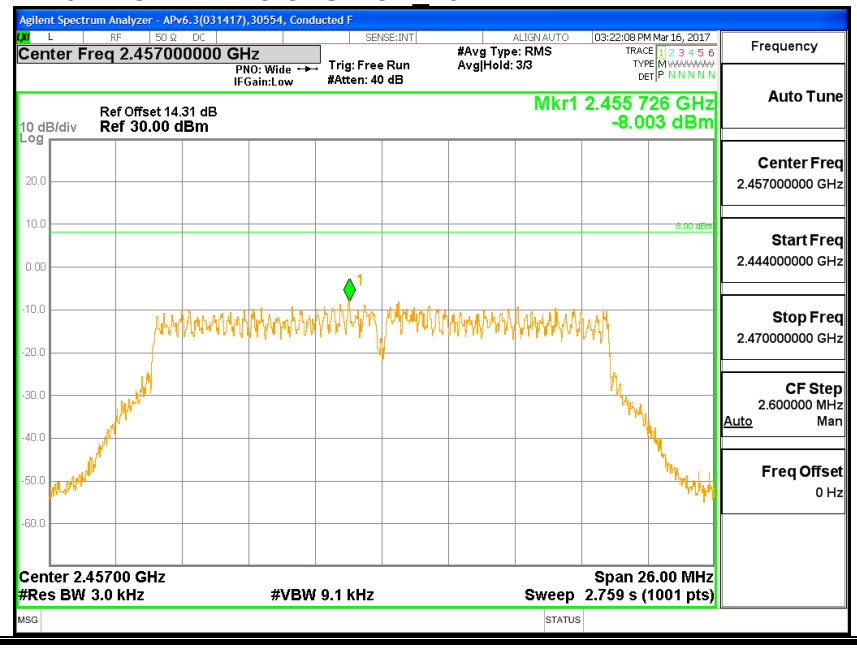
HT20 2.4GHz LAT 3 6CPSD CH_9



HT20 2.4GHz LAT 3 CPSD CH_10



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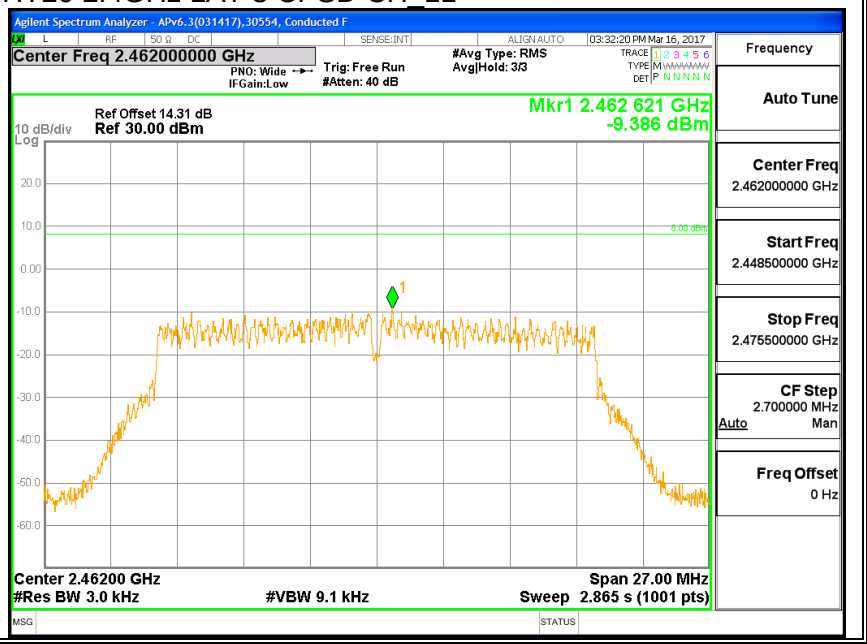
HT20 2.4GHz LAT 3 CPSD CH_11



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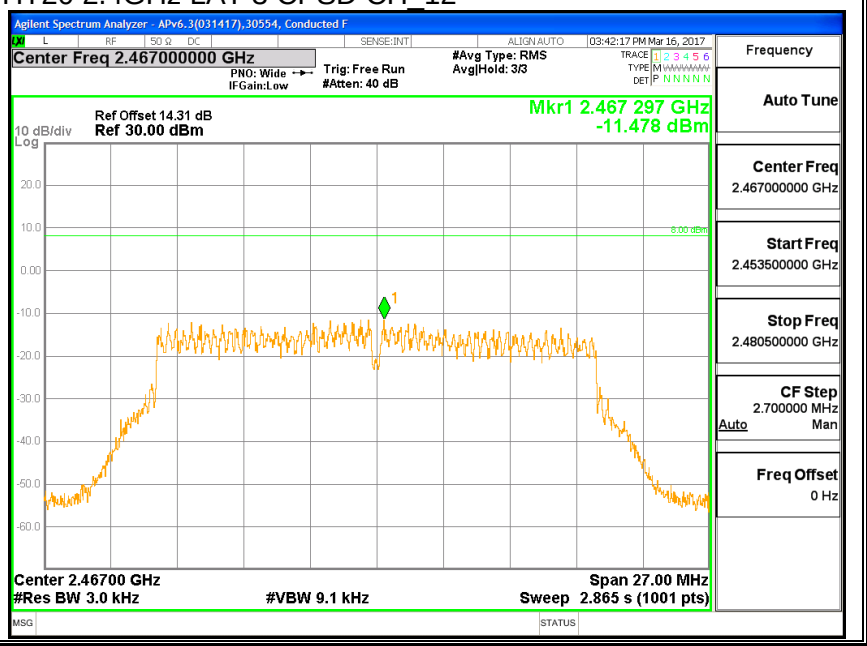

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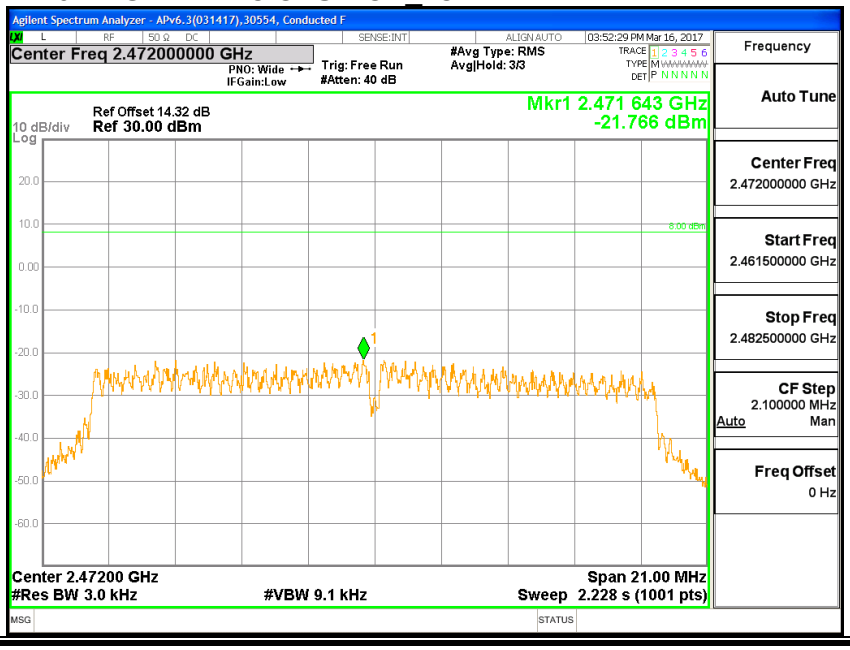
HT20 2.4GHz LAT 3 CPSD CH_13



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8.5.6. CONDUCTED BANDEDGE AND SPURIOUS 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.

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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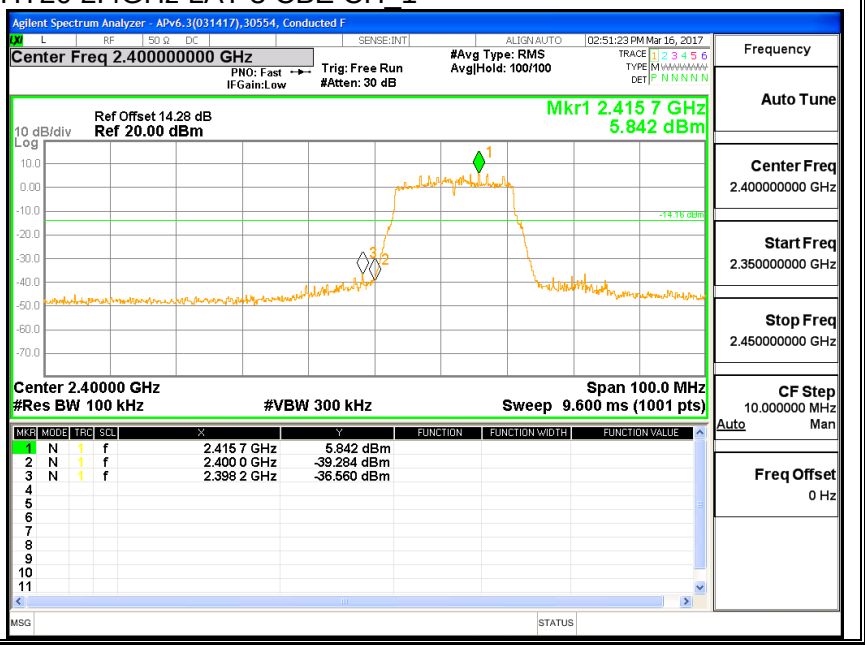
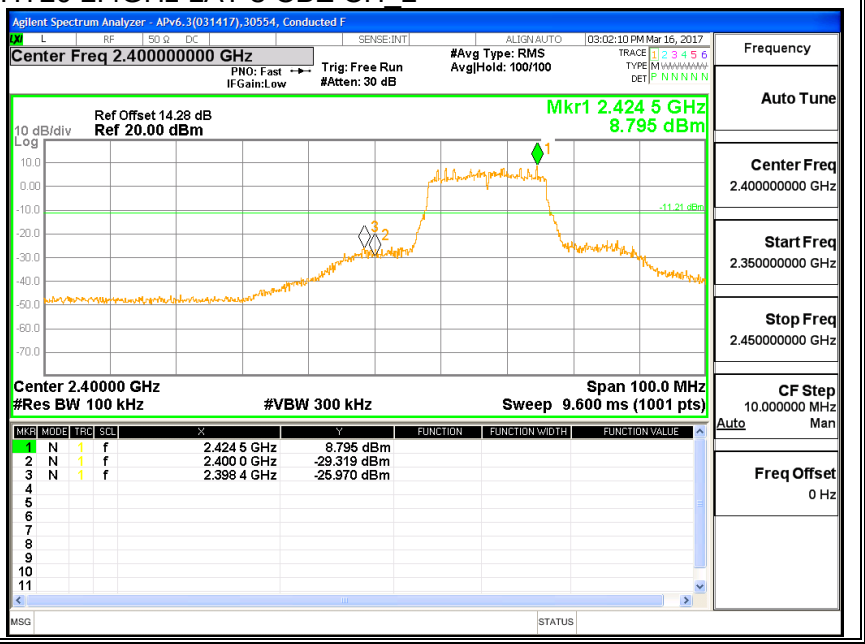
RESULTS

HT20 2.4GHz LAT 3 CBE CH_1



HT20 2.4GHz LAT 3 CBE CH_2



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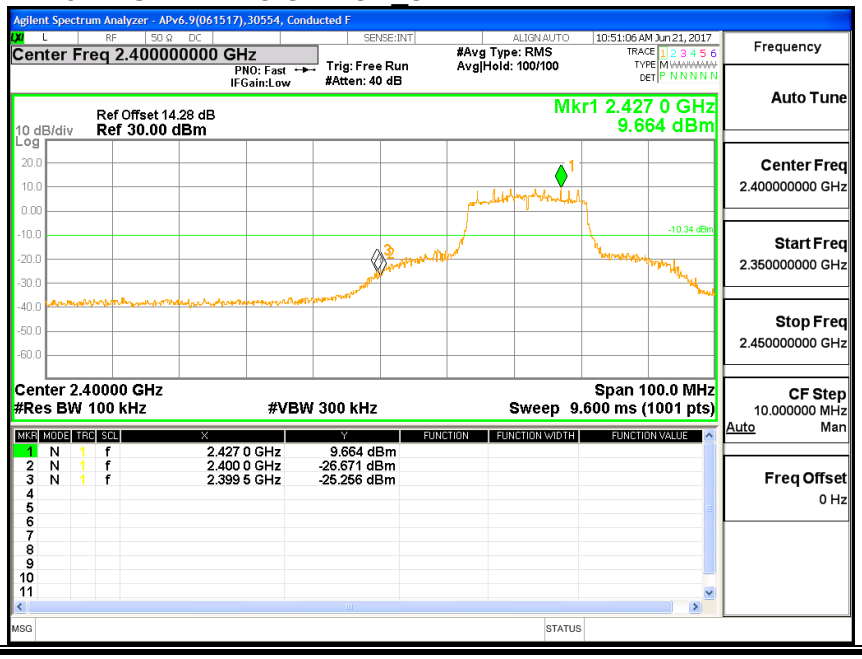
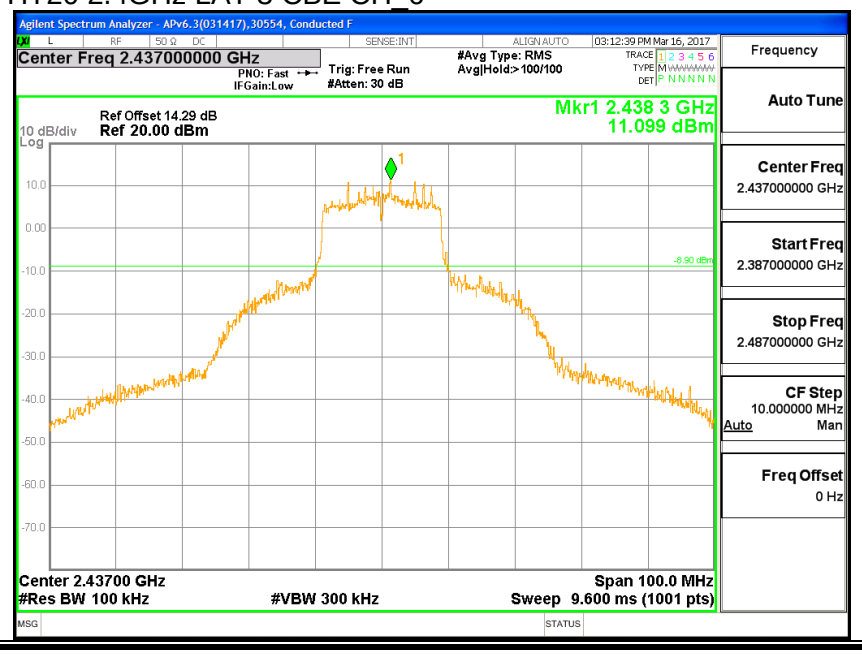
HT20 2.4GHz LAT 3 CBE CH_3



HT20 2.4GHz LAT 3 CBE CH_6



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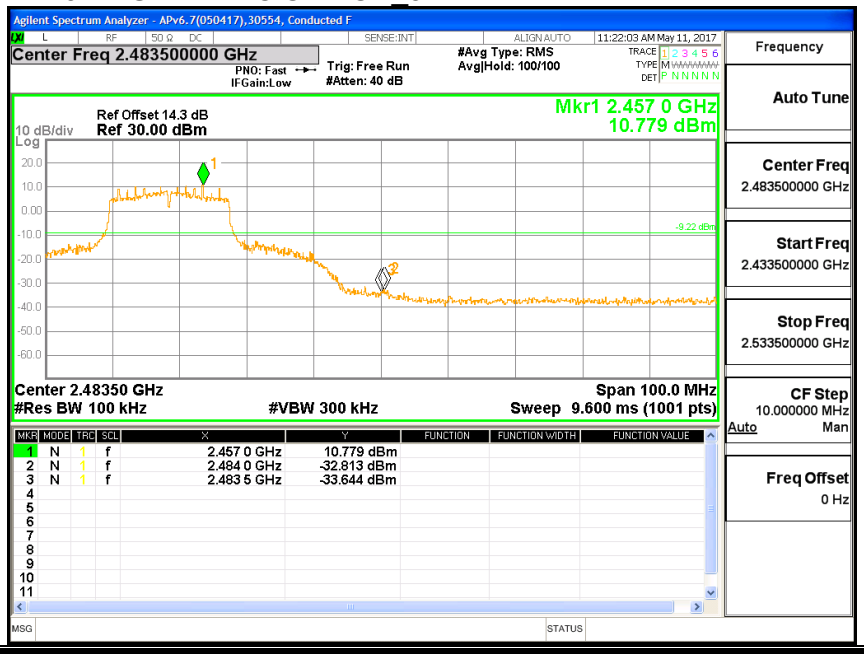
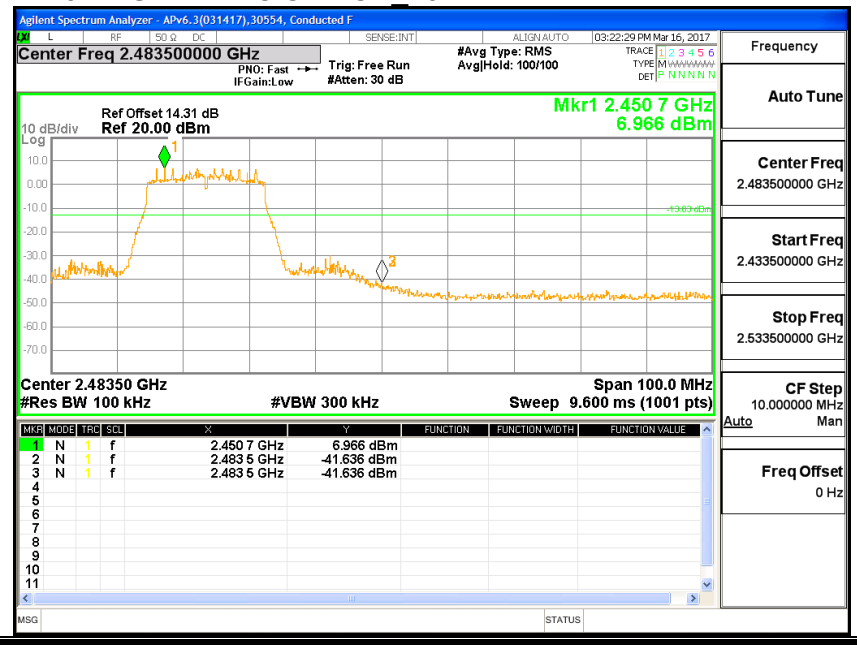
HT20 2.4GHz LAT 3 CBE CH_9



HT20 2.4GHz LAT 3 CBE CH_10



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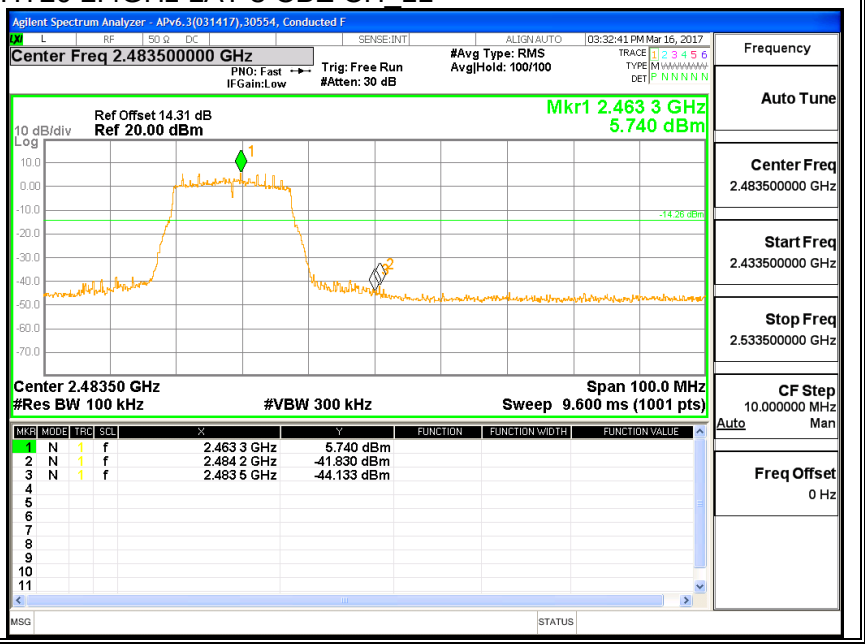
HT20 2.4GHz LAT 3 CBE CH_11



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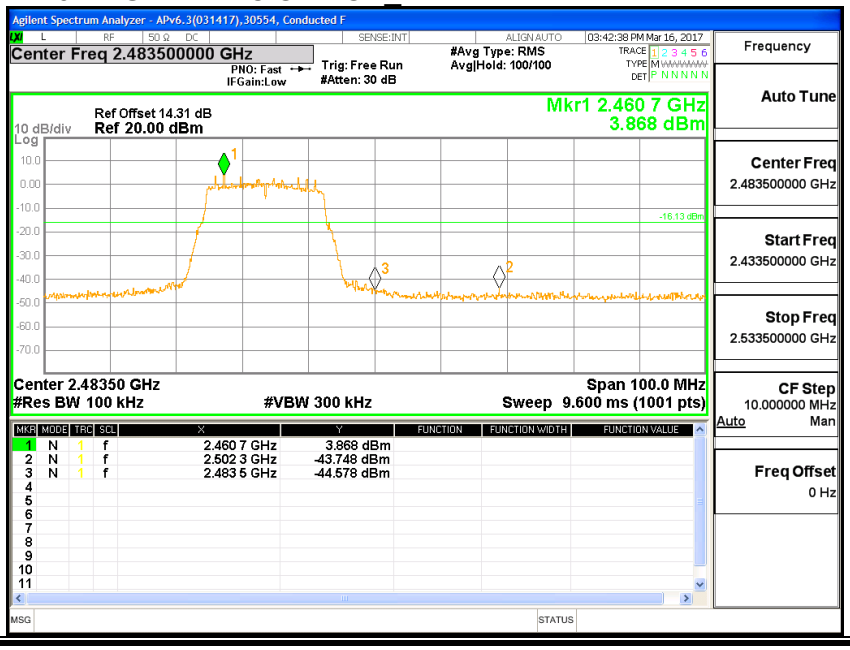

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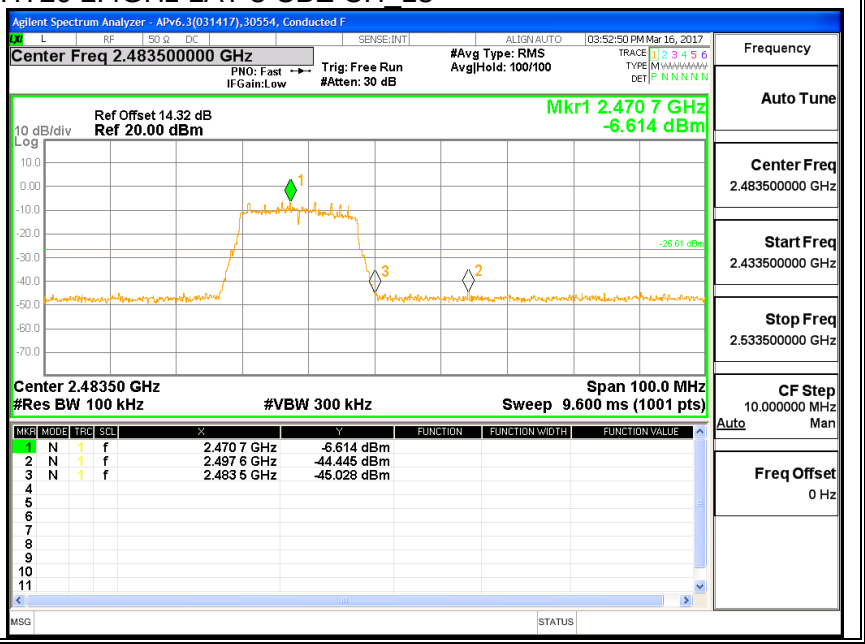
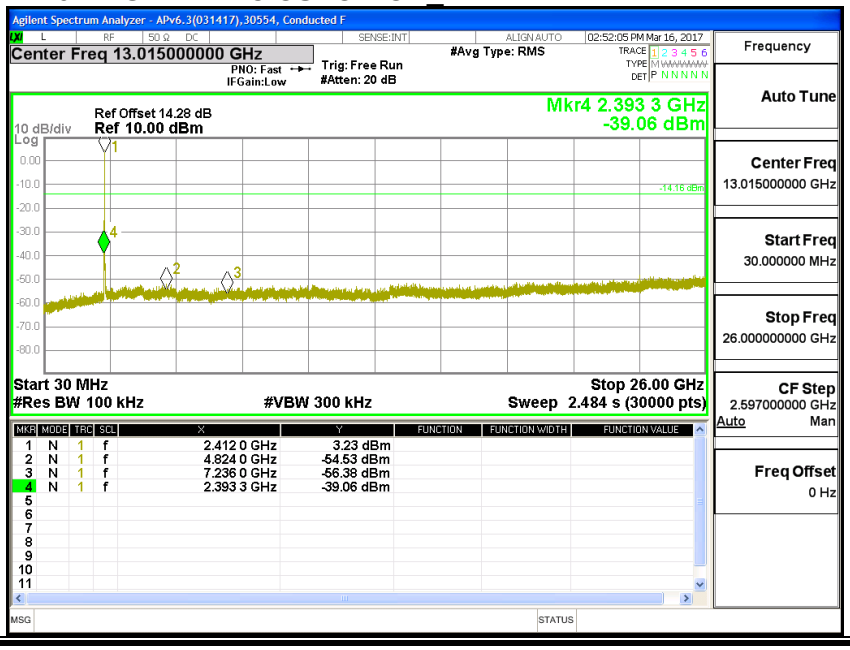
HT20 2.4GHz LAT 3 CBE CH_13



HT20 2.4GHz LAT 3 CSPUR CH_1



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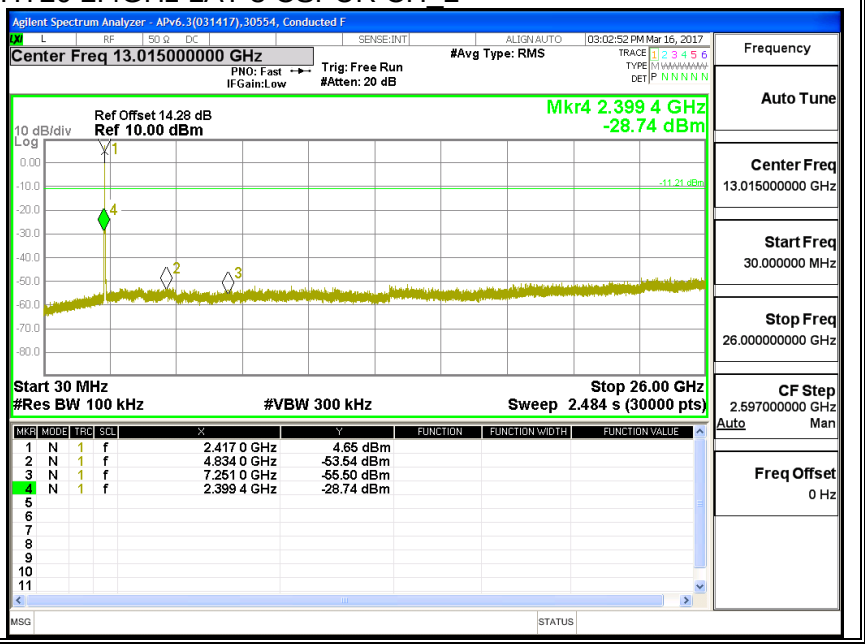
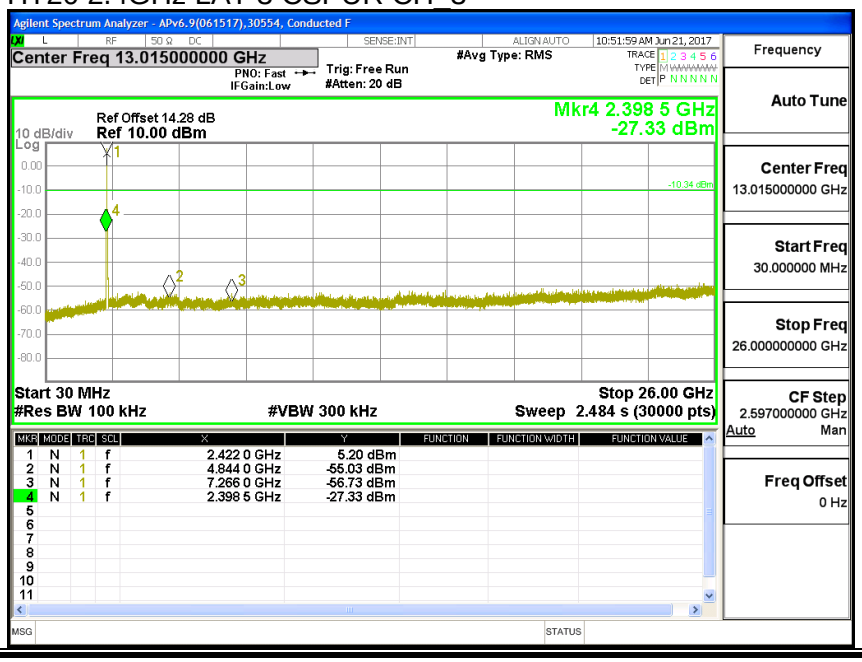
HT20 2.4GHz LAT 3 CSPUR CH_2



HT20 2.4GHz LAT 3 CSPUR CH_3



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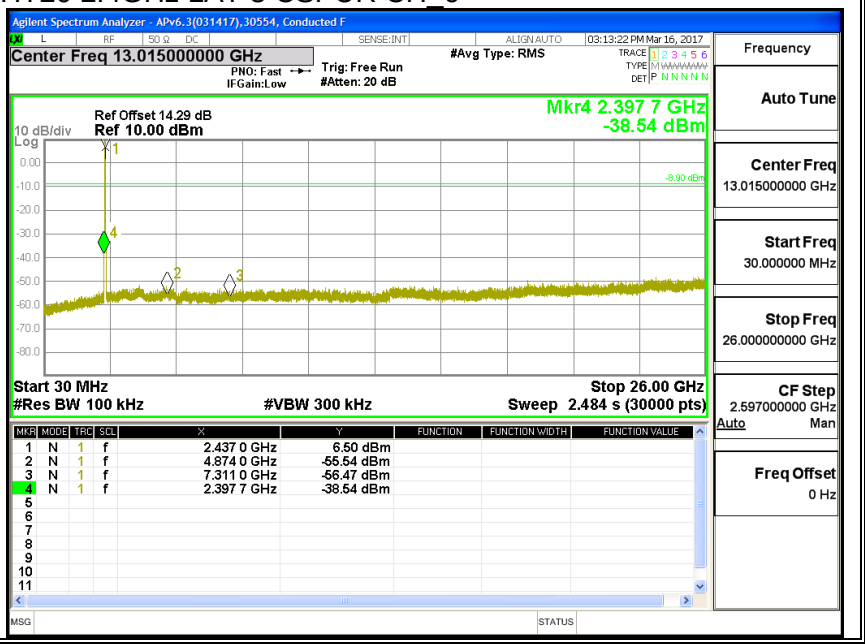
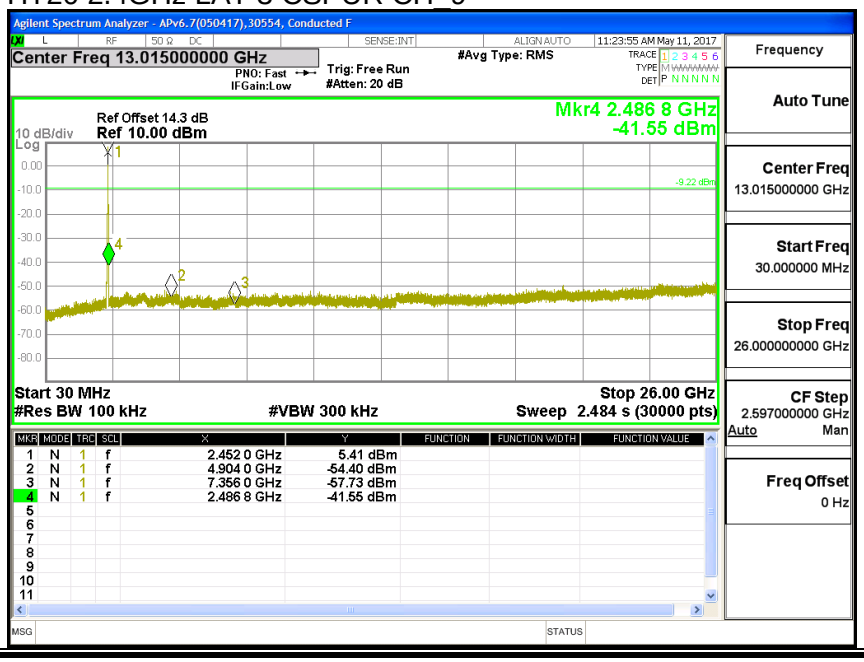
HT20 2.4GHz LAT 3 CSPUR CH_6



HT20 2.4GHz LAT 3 CSPUR CH_9



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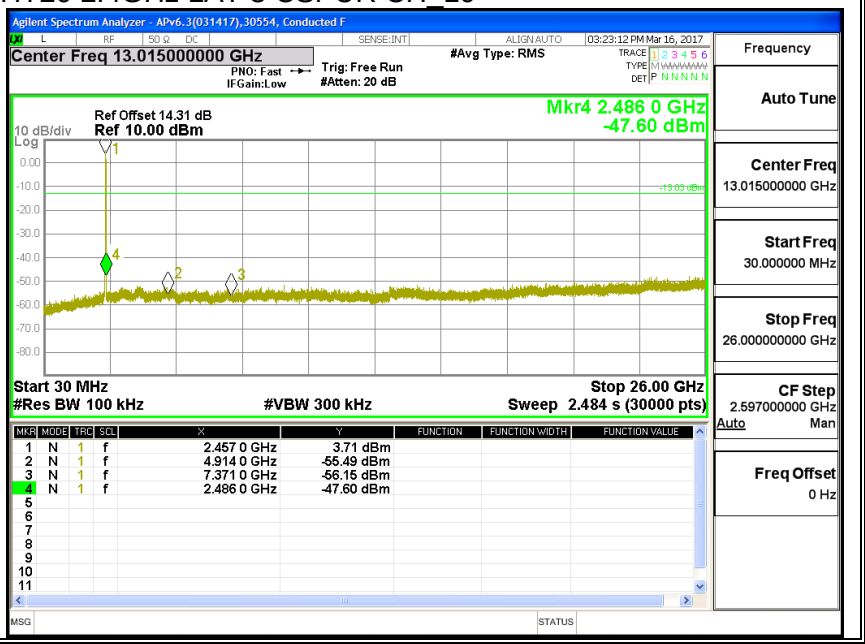
HT20 2.4GHz LAT 3 CSPUR CH_10



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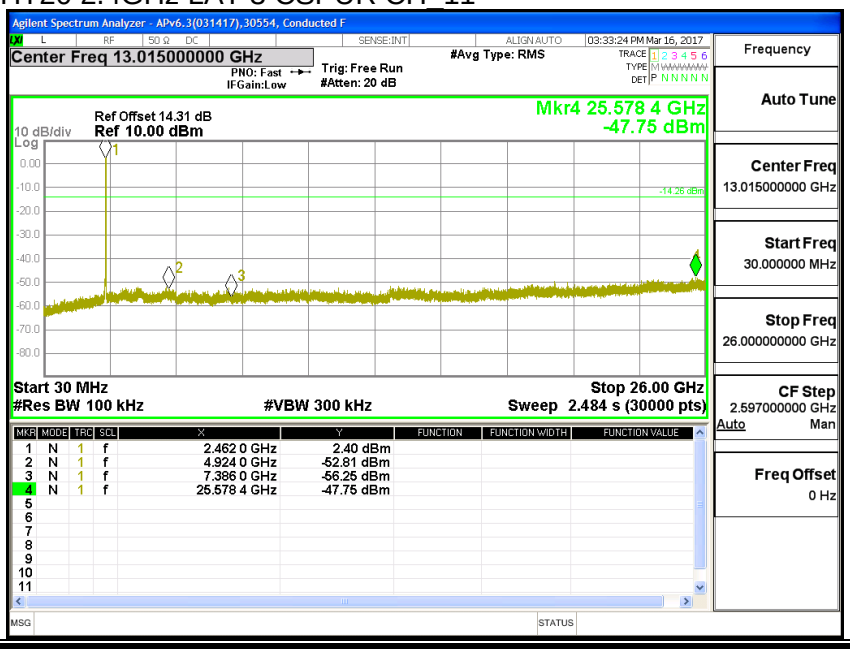

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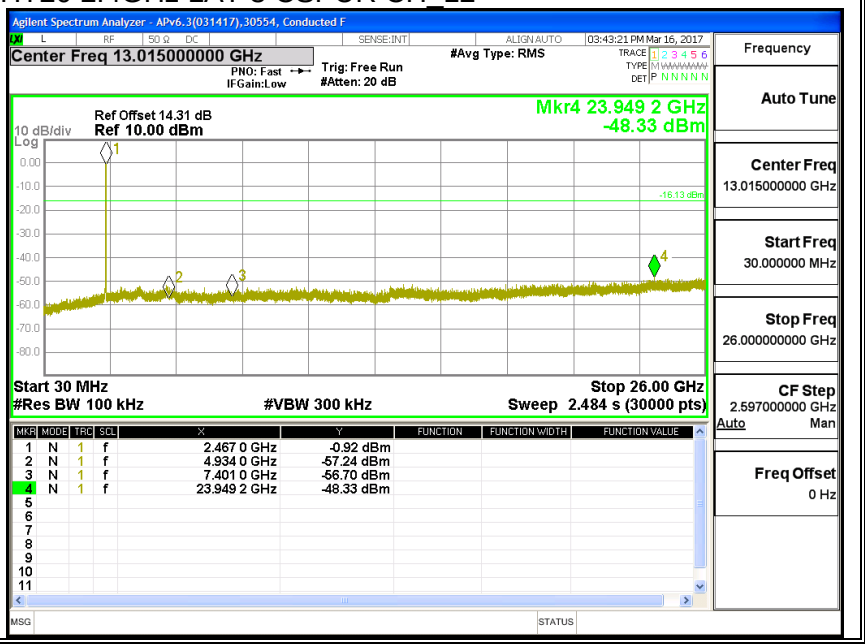
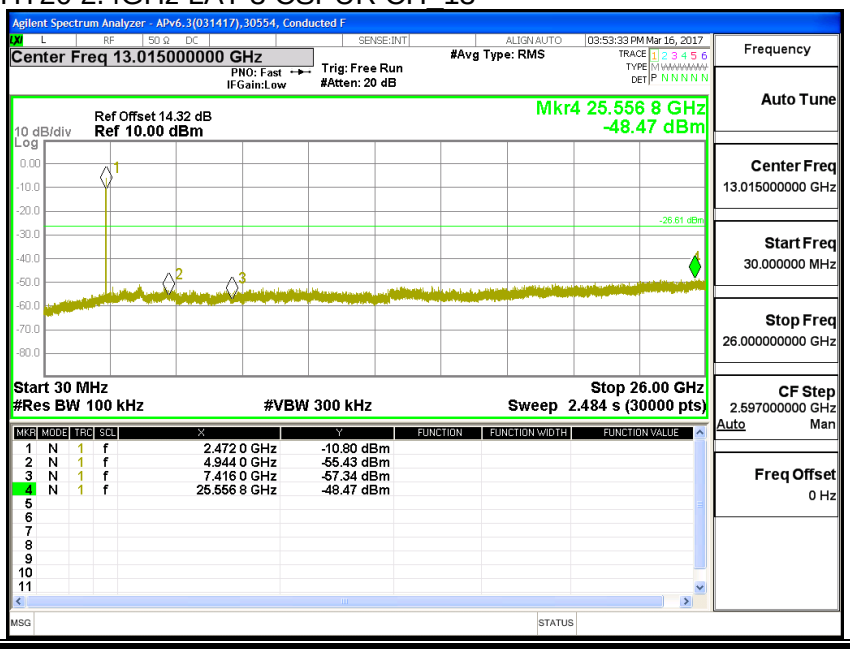
HT20 2.4GHz LAT 3 CSPUR CH_12



HT20 2.4GHz LAT 3 CSPUR CH_13



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8.6. 11n HT20 2TX CDD MODE IN THE 2.4 GHz BAND

8.6.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 (5.2) (a)

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

RESULTS

Channel	Frequency (MHz)	6 dB BW UAT 1 (MHz)	6 dB BW LAT 3 (MHz)	Minimum Limit (MHz)
Low_1	2412	16.285	17.595	0.5
Low_2	2417	17.630	17.640	0.5
Low_3	2422	16.355	17.575	0.5
Mid	2437	16.660	17.175	0.5
High_9	2452	17.545	15.710	0.5
High_10	2457	16.610	15.025	0.5
High_11	2462	16.305	16.930	0.5
High_12	2467	16.535	17.580	0.5
High_13	2472	17.185	16.920	0.5

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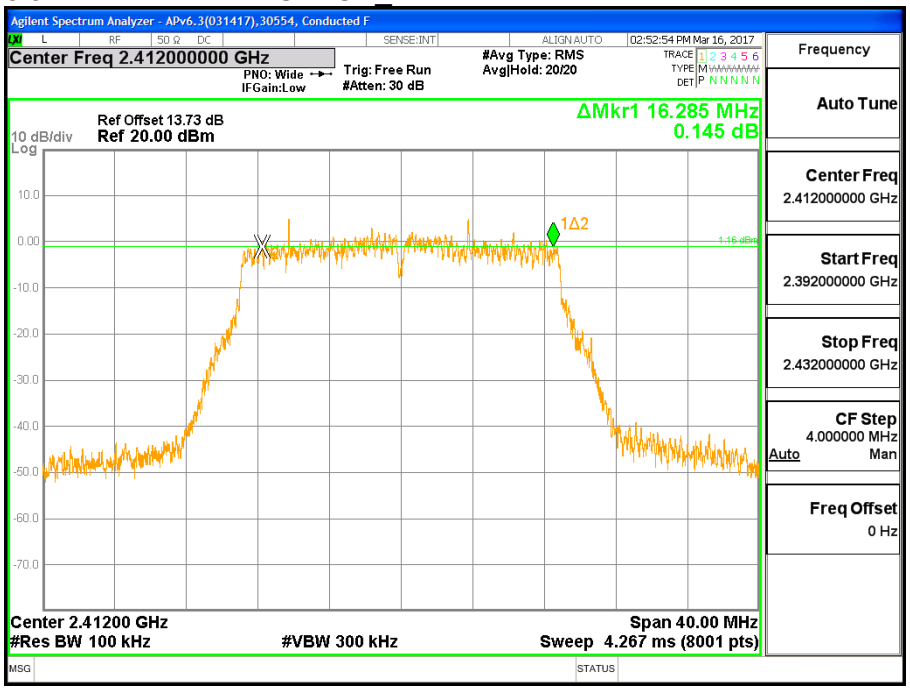
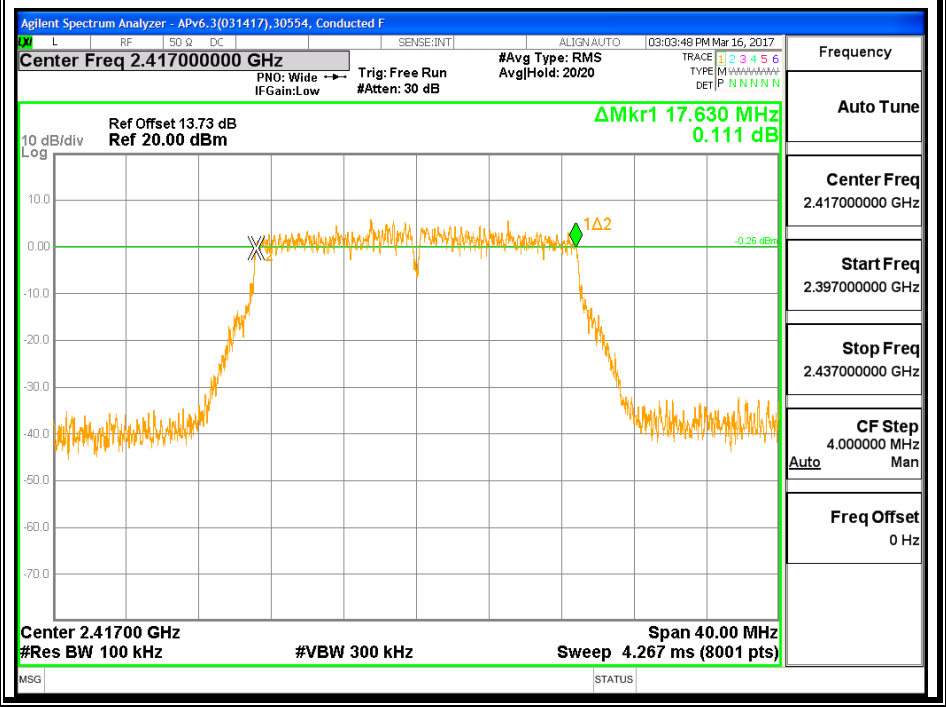
6 dB BANDWIDTH UAT 1

6 dB BANDWIDTH LOW CH_1



6 dB BANDWIDTH LOW CH_2



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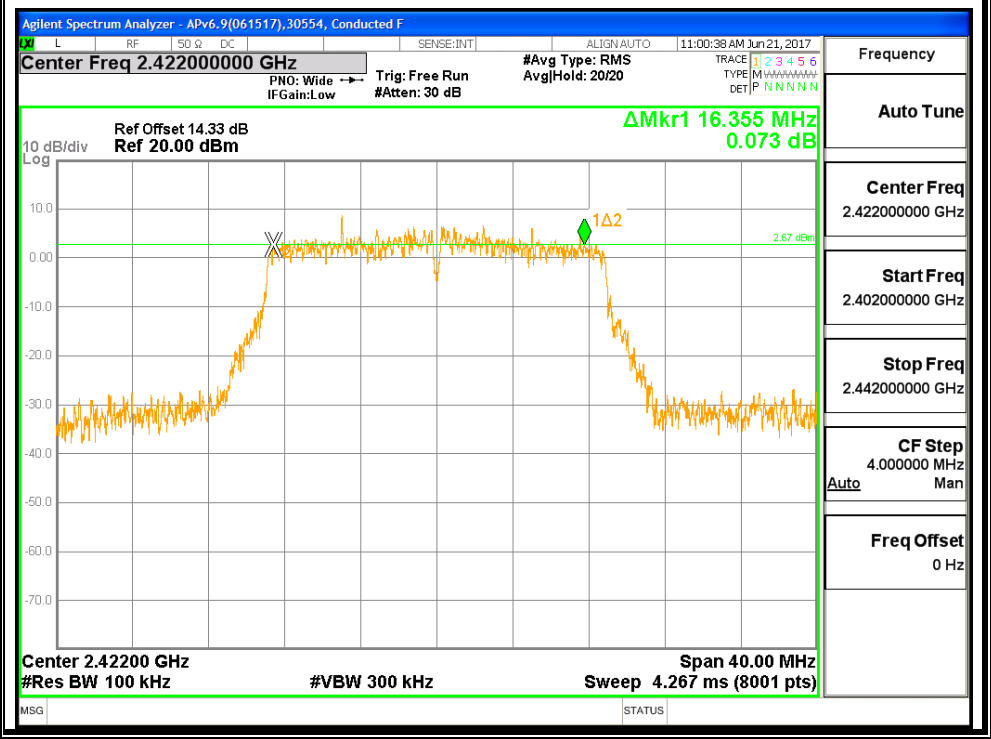
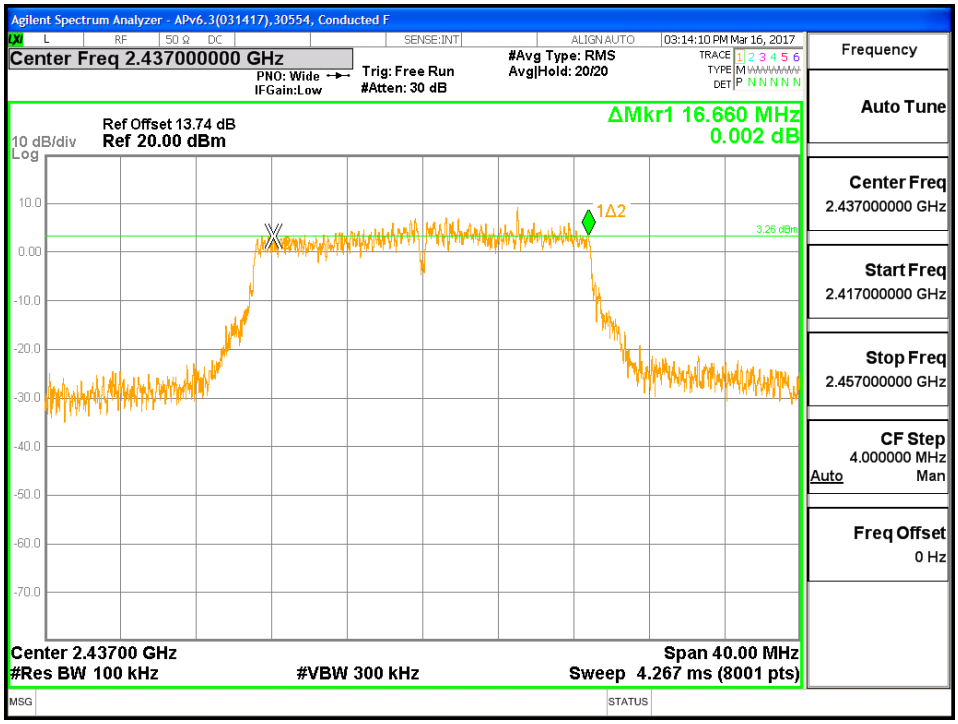
6 dB BANDWIDTH LOW CH_3



6 dB BANDWIDTH MID CH



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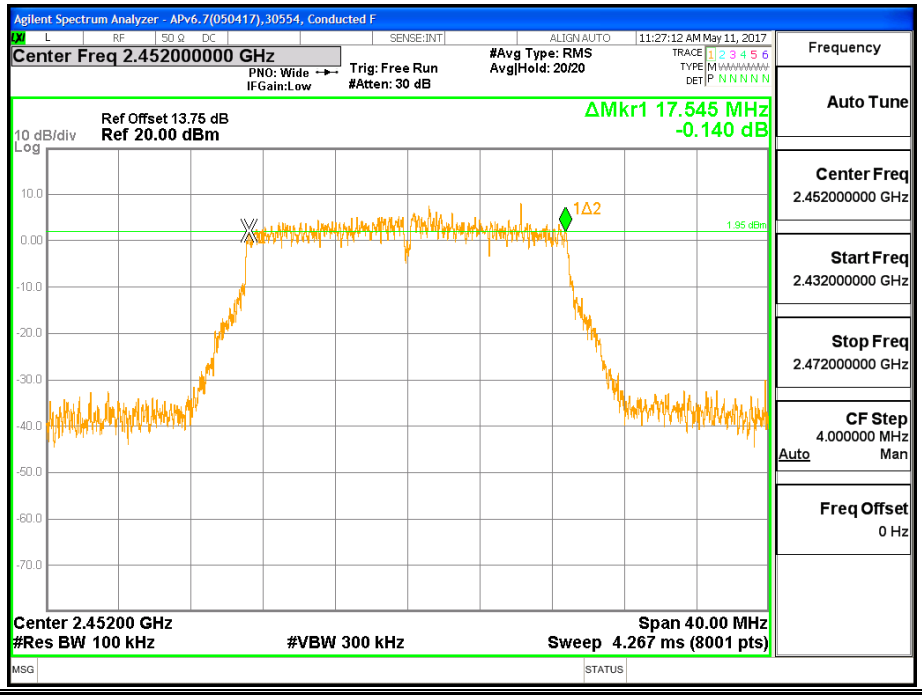
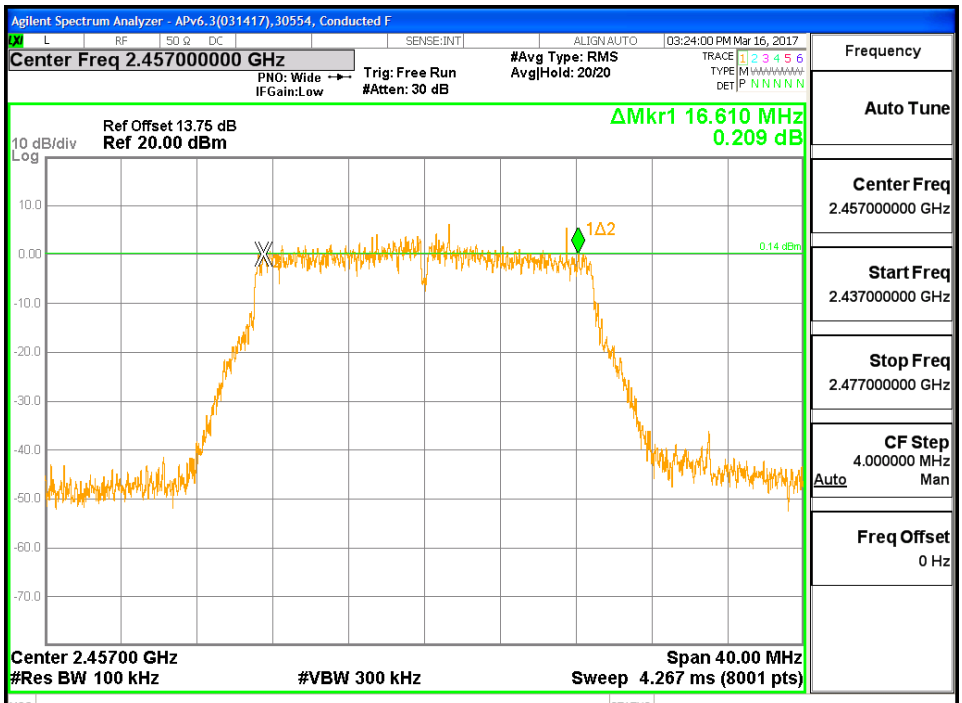
6 dB BANDWIDTH HIGH CH 9



6 dB BANDWIDTH HIGH CH 10



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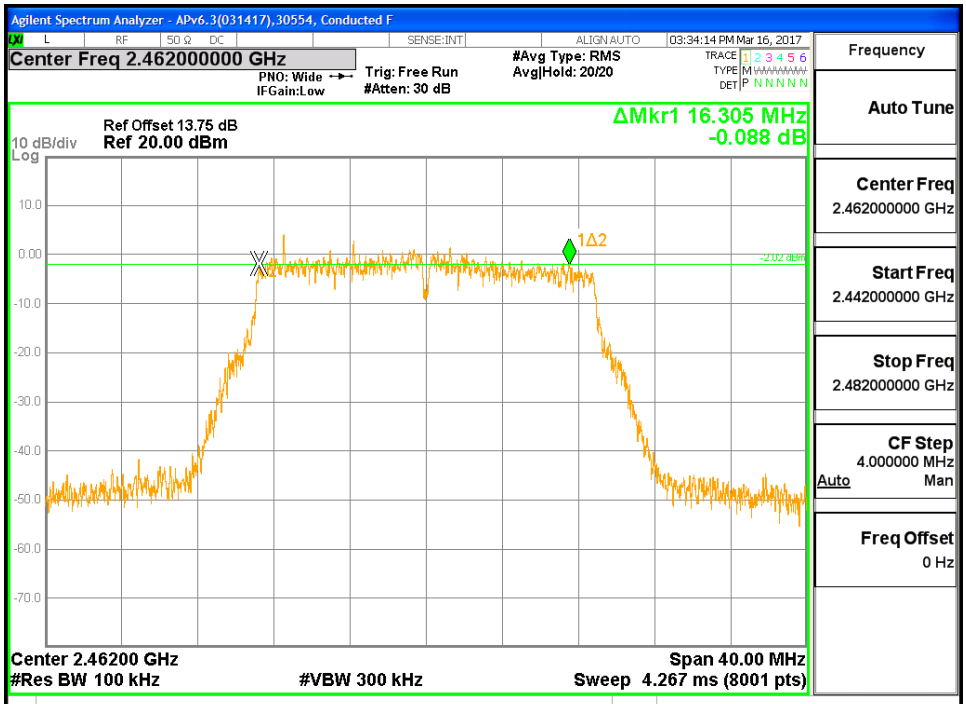
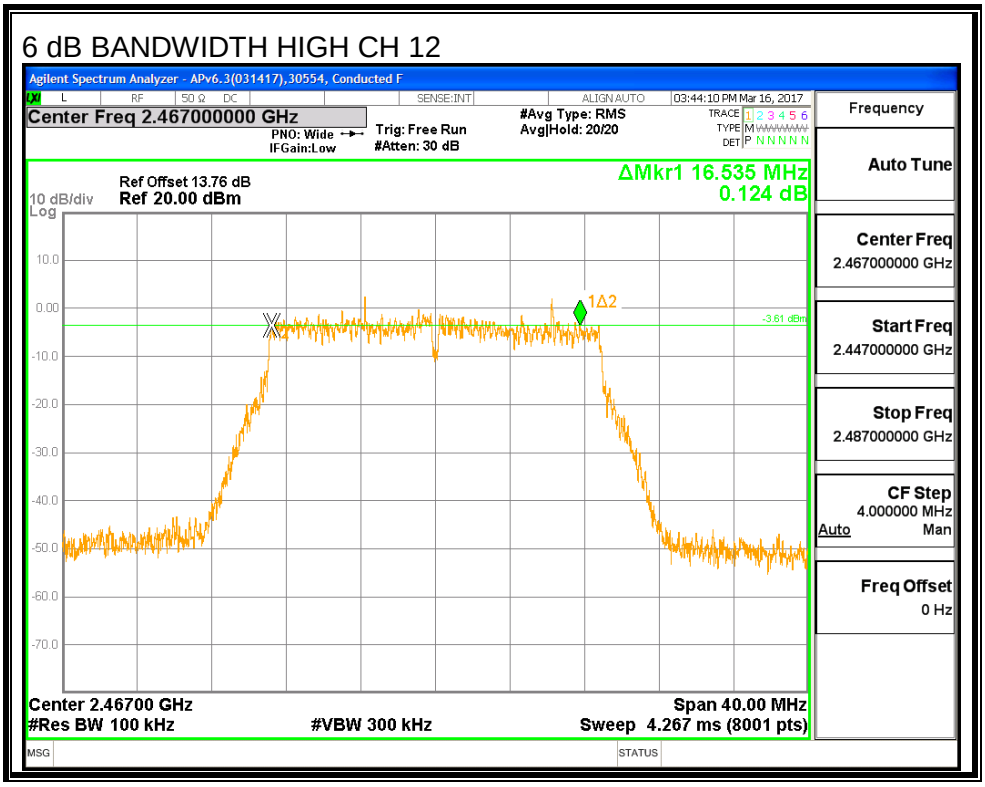
6 dB BANDWIDTH HIGH CH 11



6 dB BANDWIDTH HIGH CH 12



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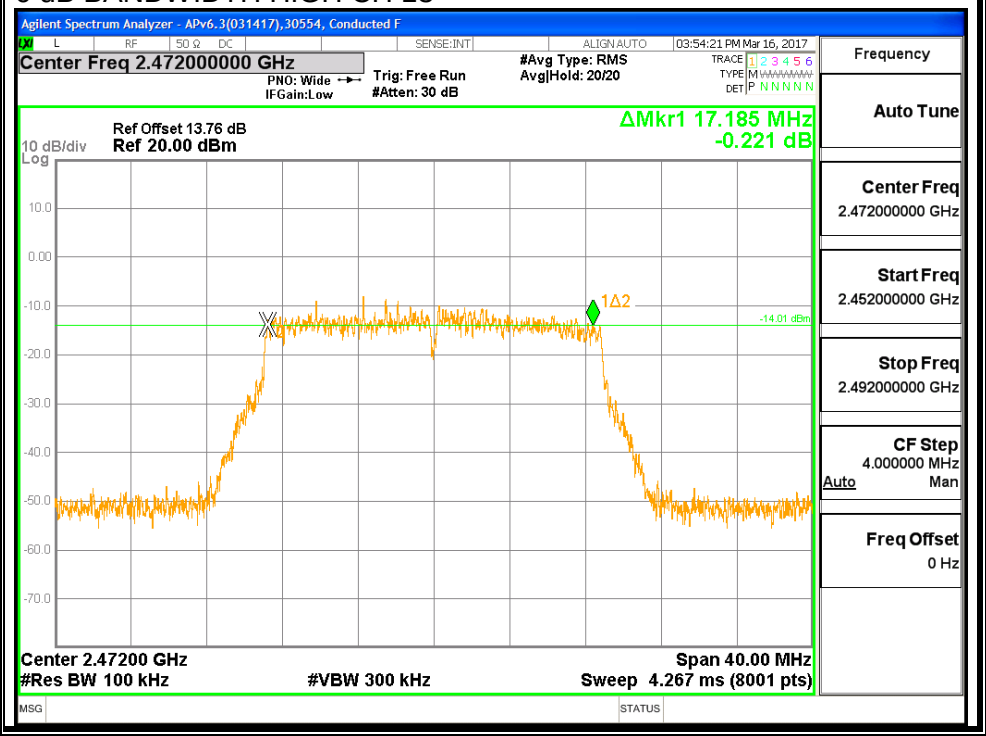
6 dB BANDWIDTH HIGH CH 13



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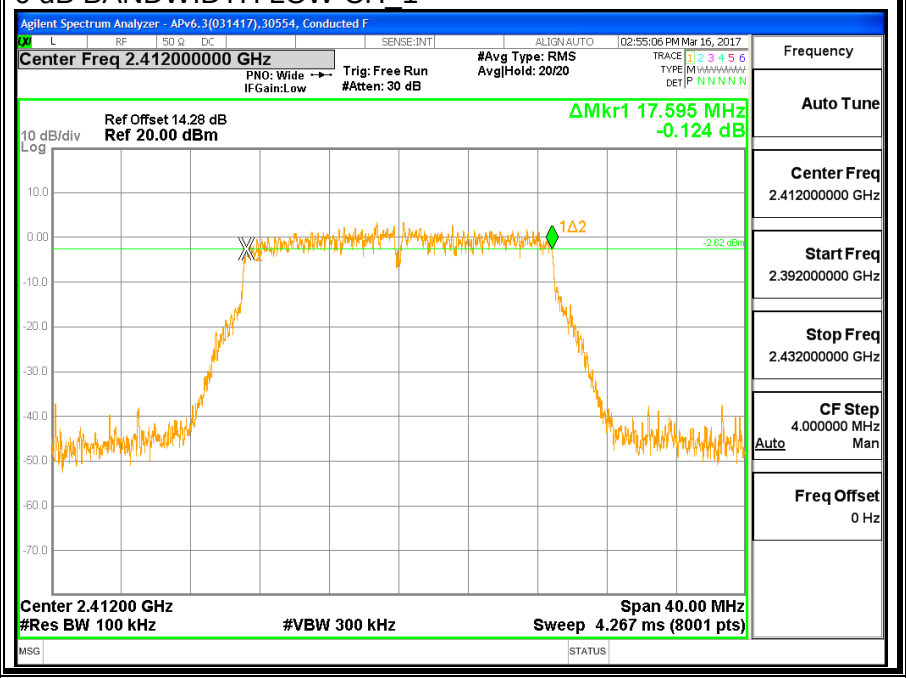
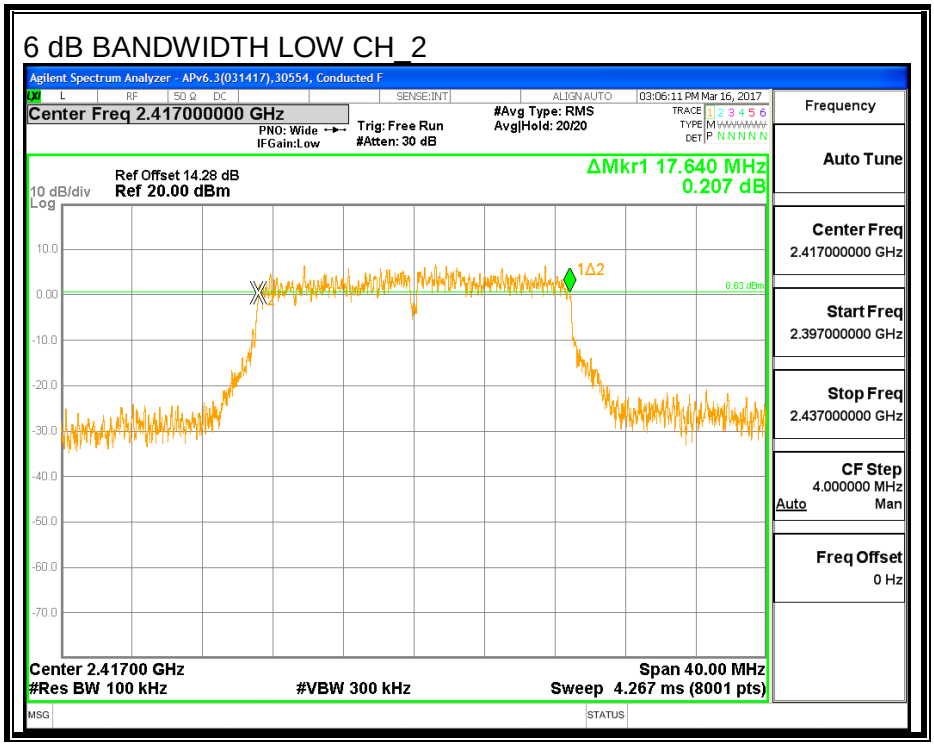
6 dB BANDWIDTH LAT 3

6 dB BANDWIDTH LOW CH_1



6 dB BANDWIDTH LOW CH_2



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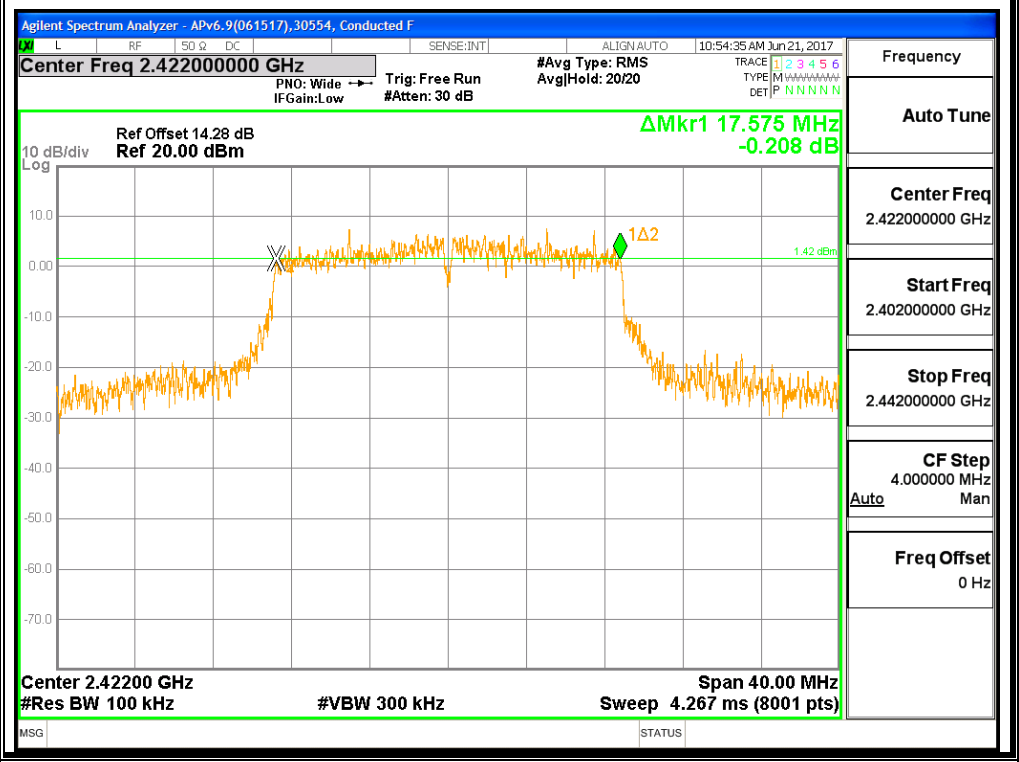
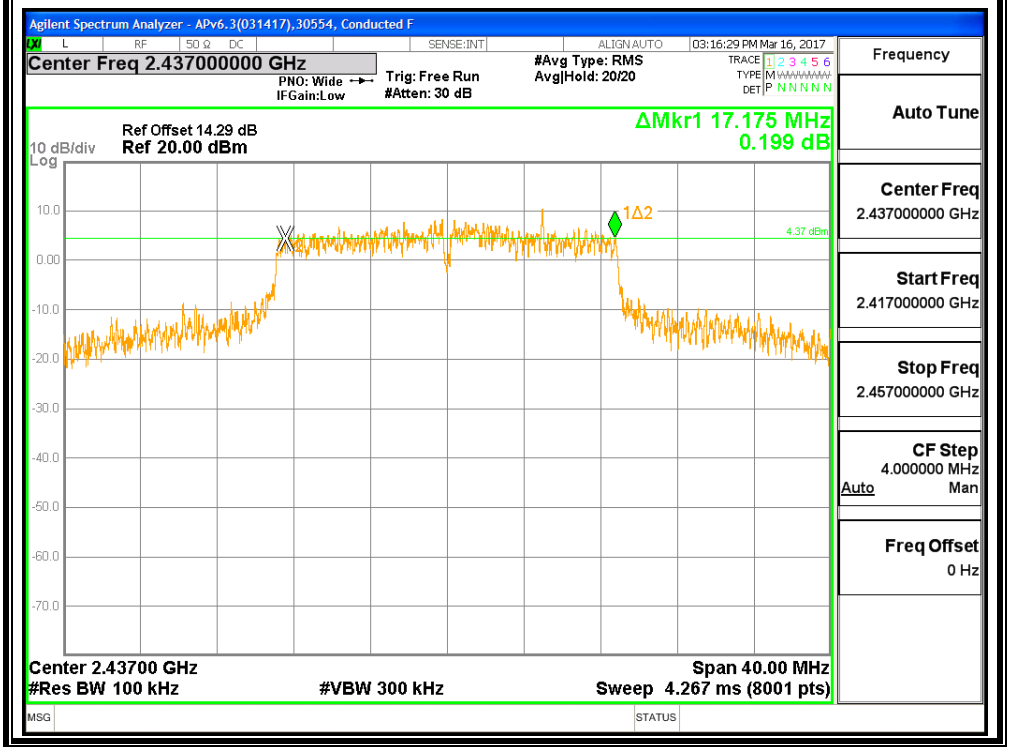
6 dB BANDWIDTH LOW CH_3



6 dB BANDWIDTH MID CH



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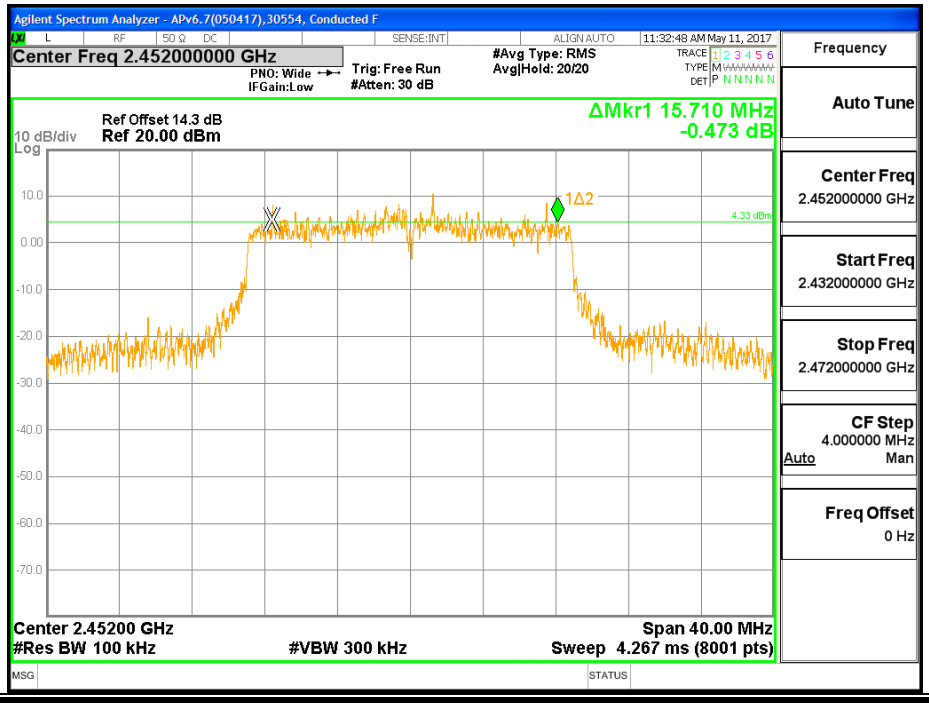
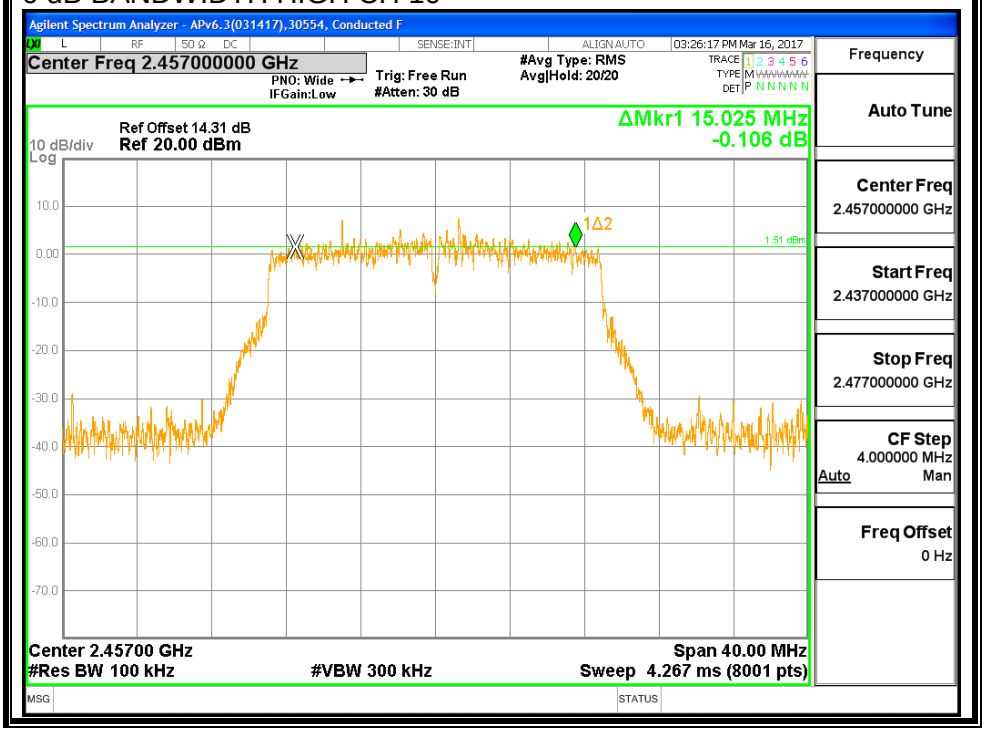
6 dB BANDWIDTH HIGH CH 9



6 dB BANDWIDTH HIGH CH 10



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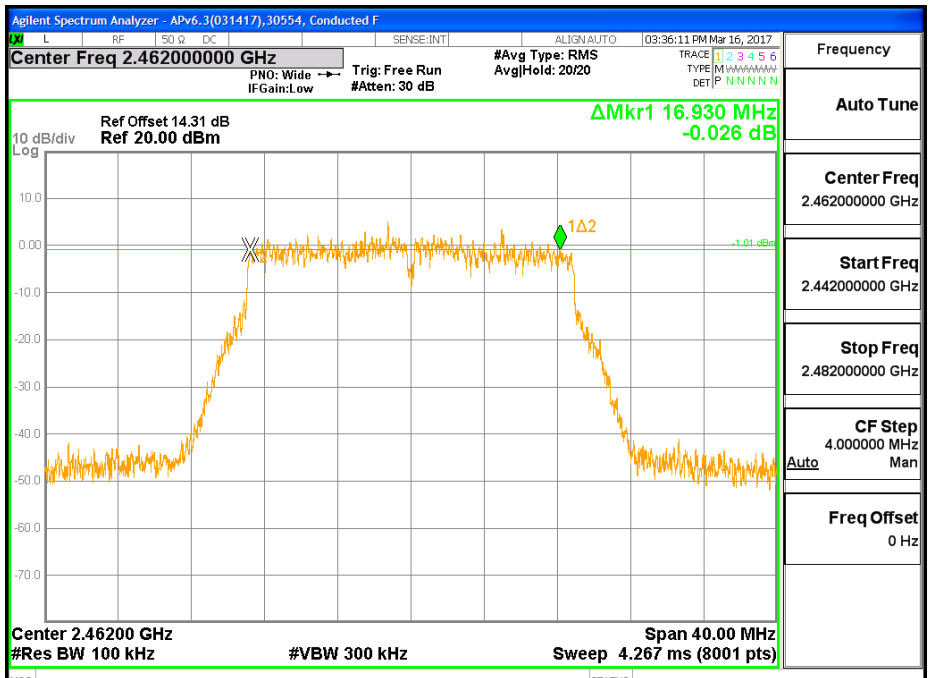
6 dB BANDWIDTH HIGH CH 11



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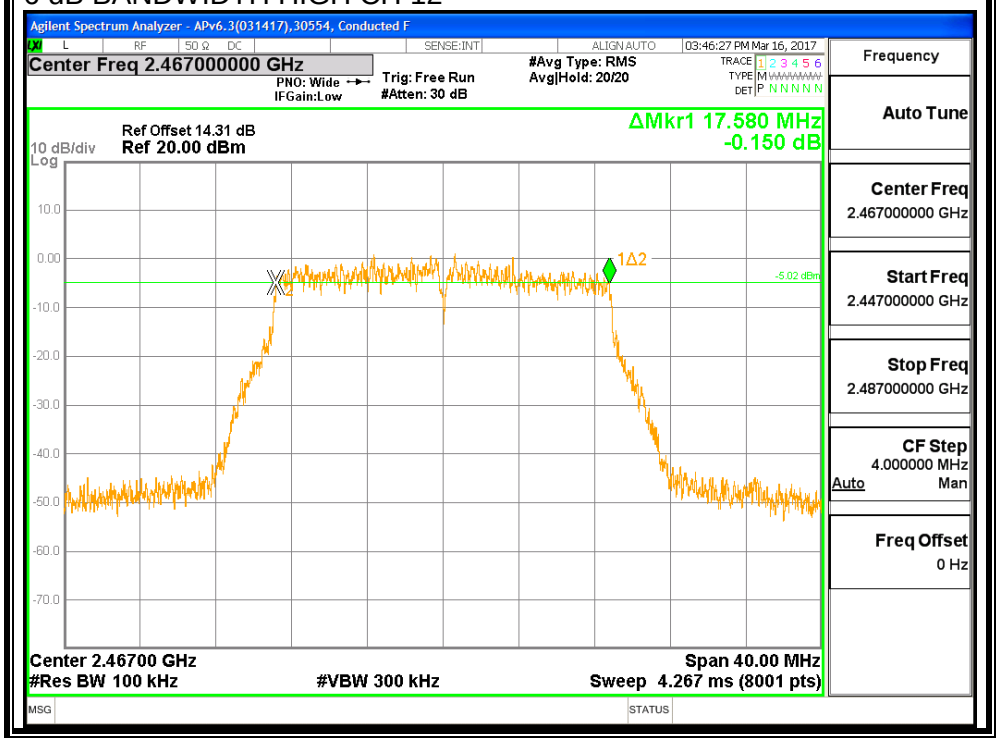

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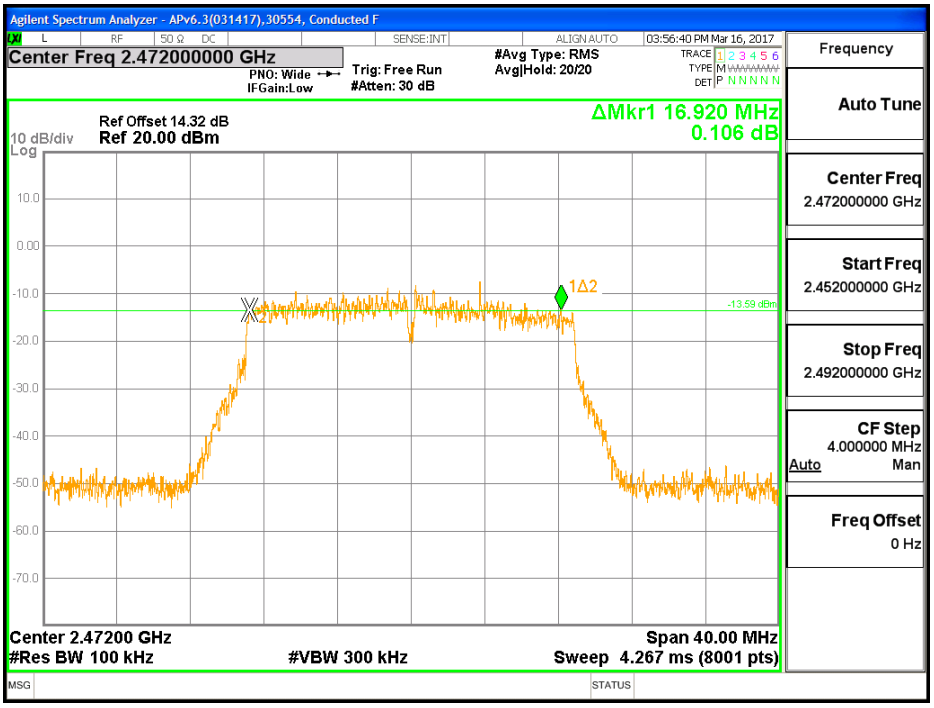
6 dB BANDWIDTH HIGH CH 13



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