

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

### 8.5.1. 6 dB BANDWIDTH

#### LIMITS

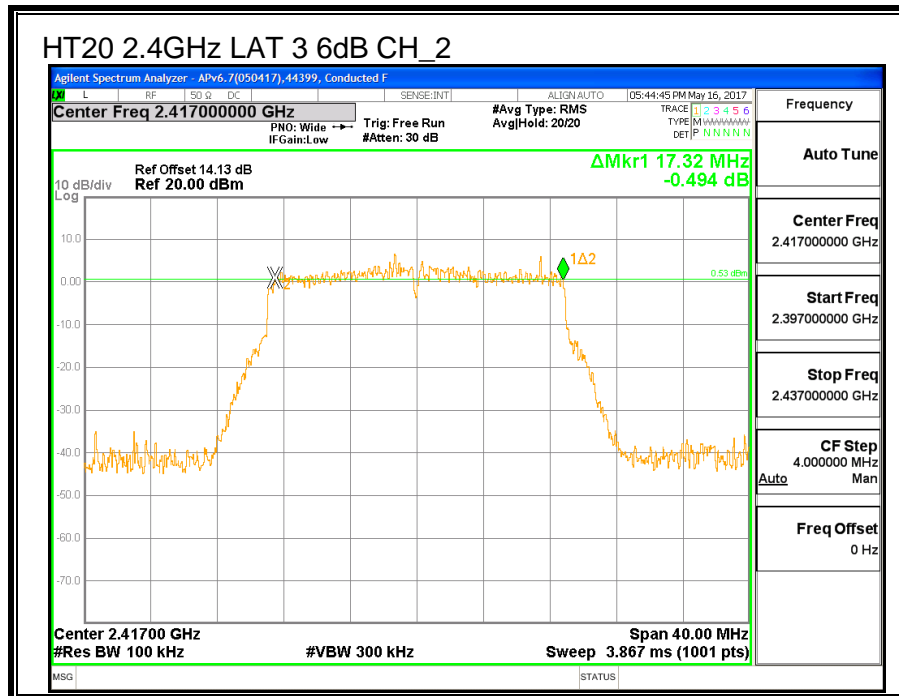
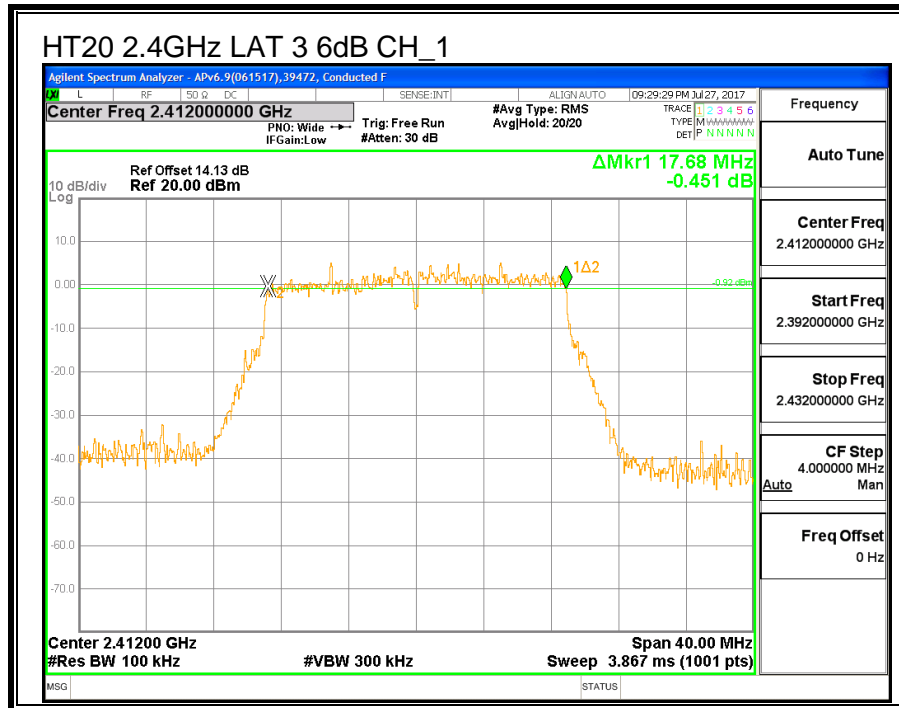
FCC §15.247 (a) (2)

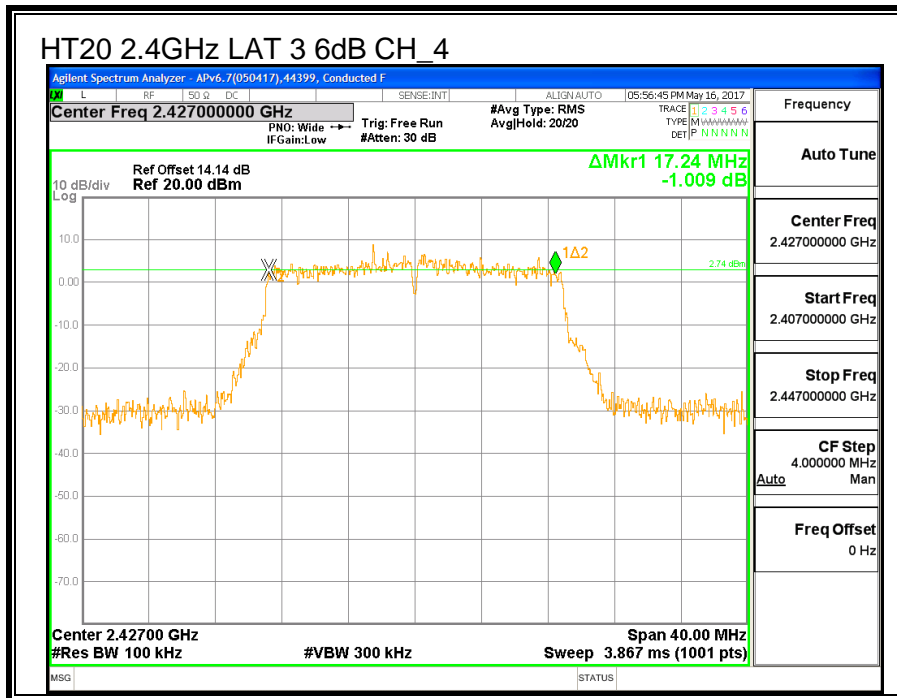
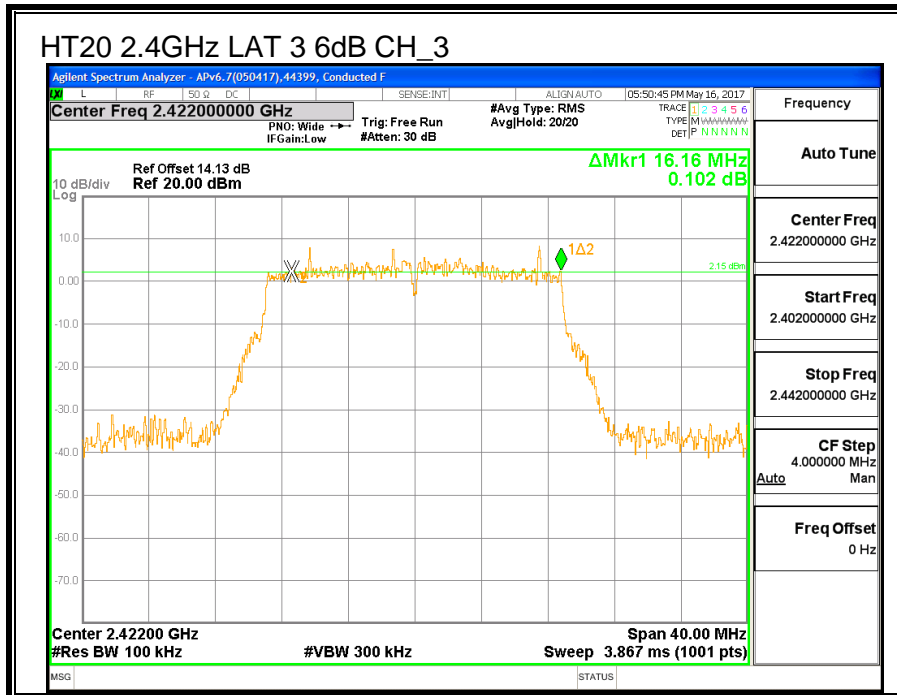
IC RSS-247 (5.2) (a)

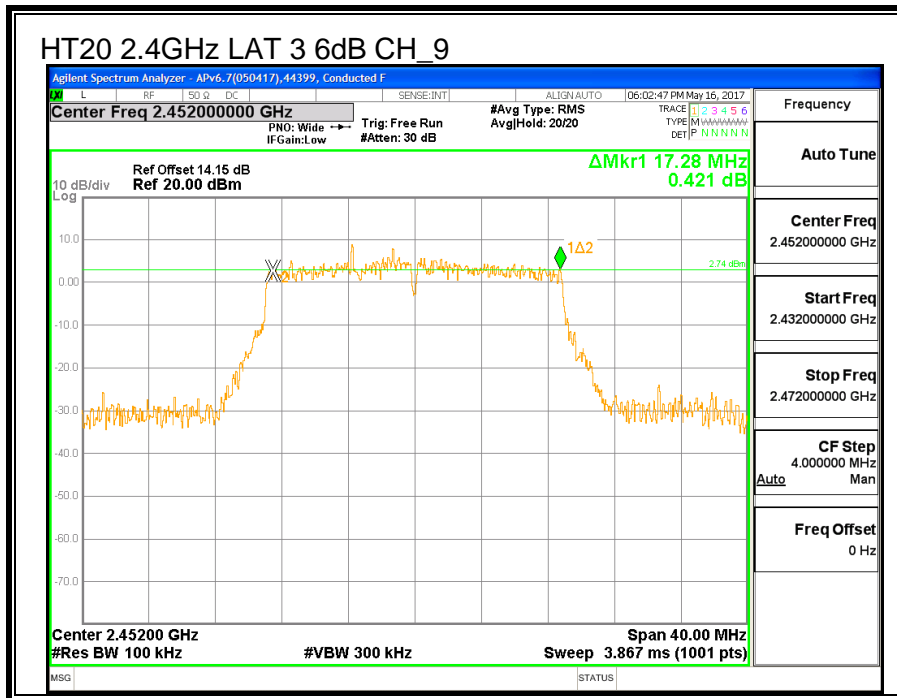
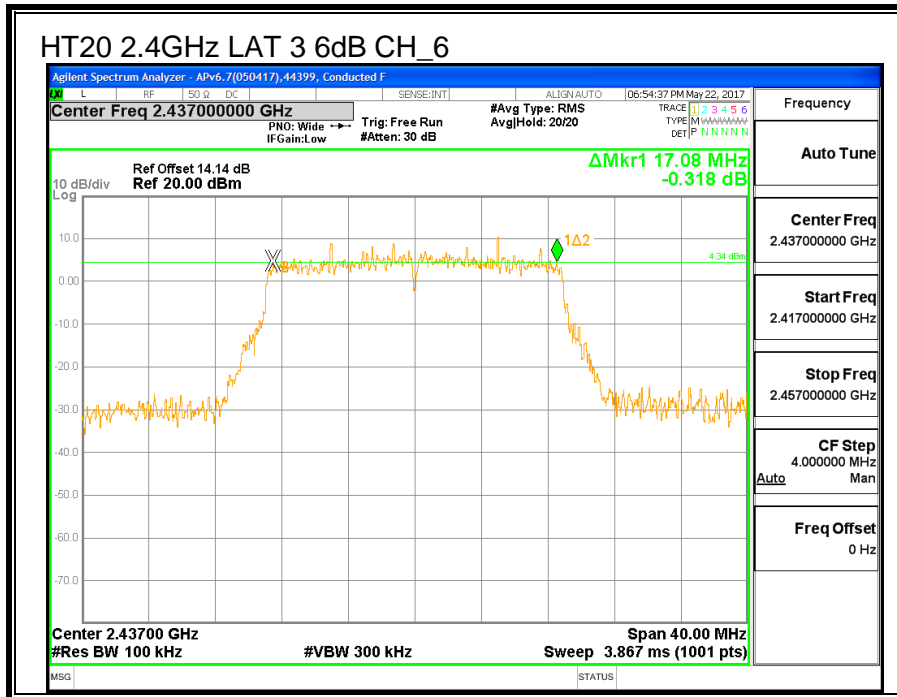
The minimum 6 dB bandwidth shall be at least 500 kHz.

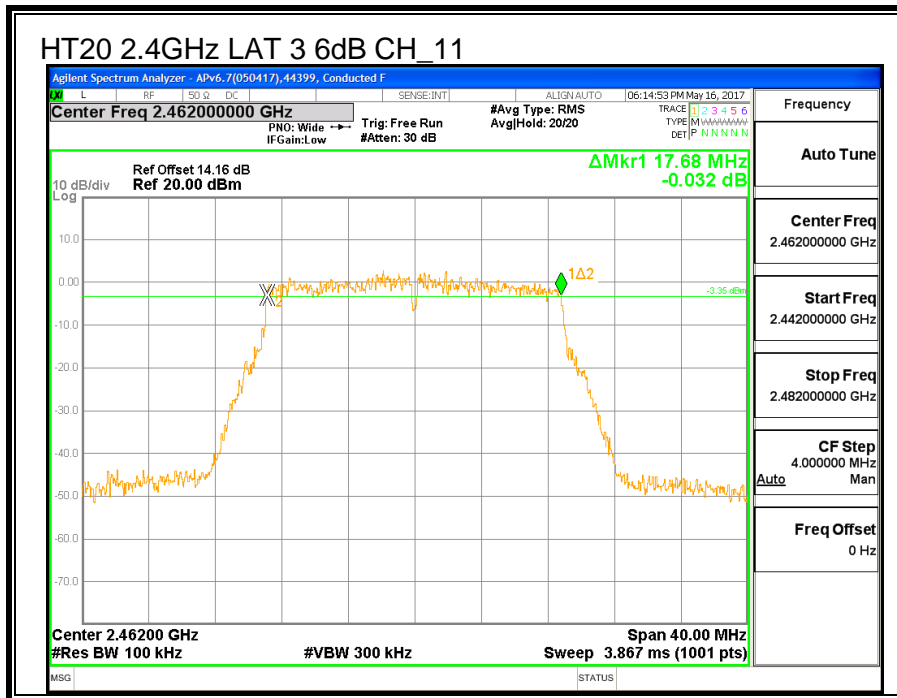
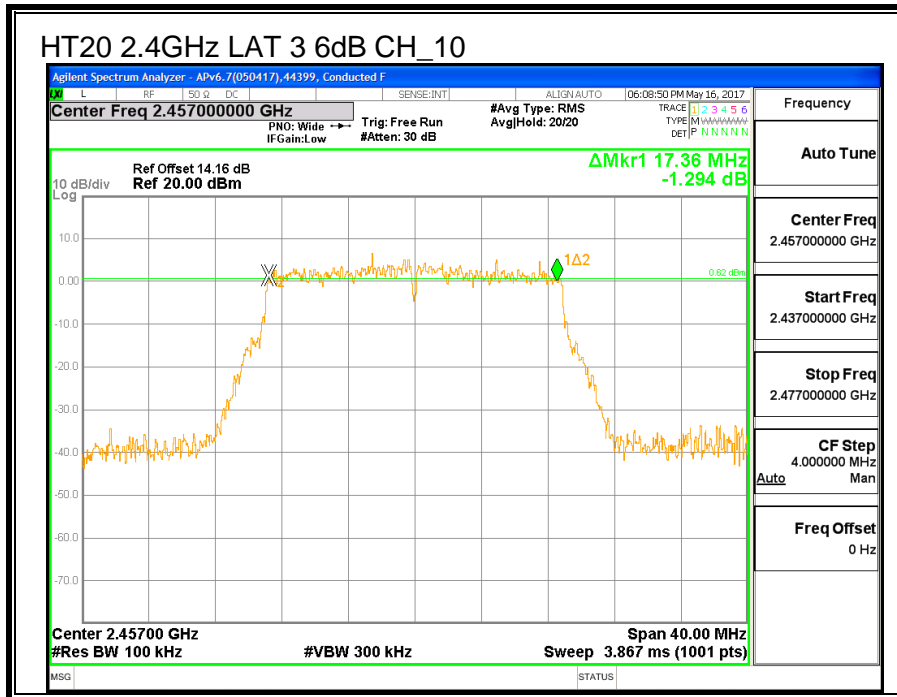
#### RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low_1	2412	17.680	0.5
Low_2	2417	17.320	0.5
Low_3	2422	16.160	0.5
Low_4	2427	17.240	0.5
Middle_6	2437	17.080	0.5
High_9	2452	17.280	0.5
High_10	2457	17.360	0.5
High_11	2462	17.680	0.5
High_12	2467	17.680	0.5
High_13	2472	17.360	0.5

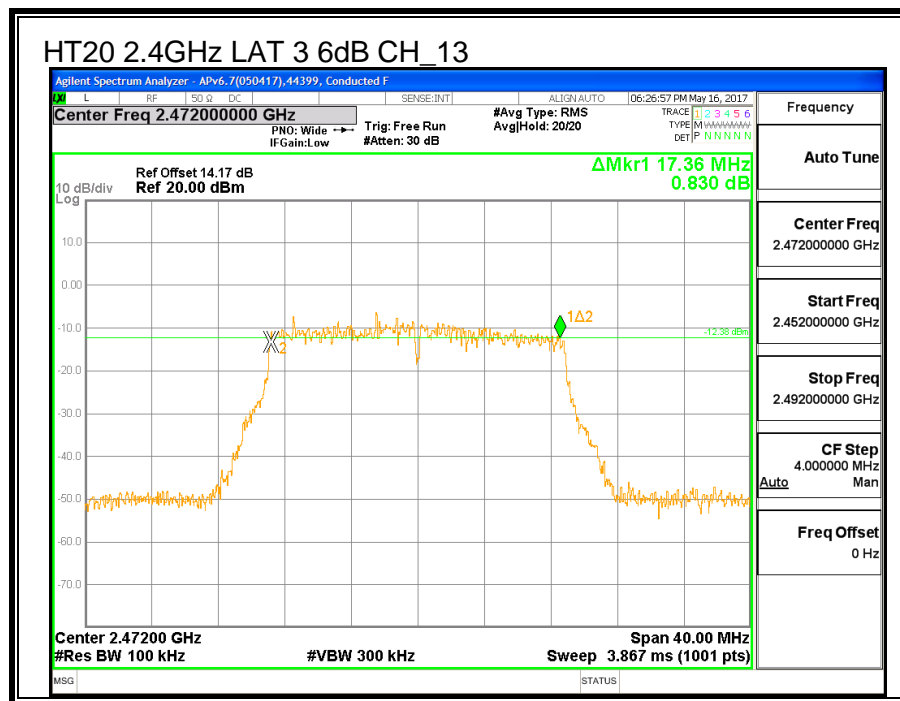












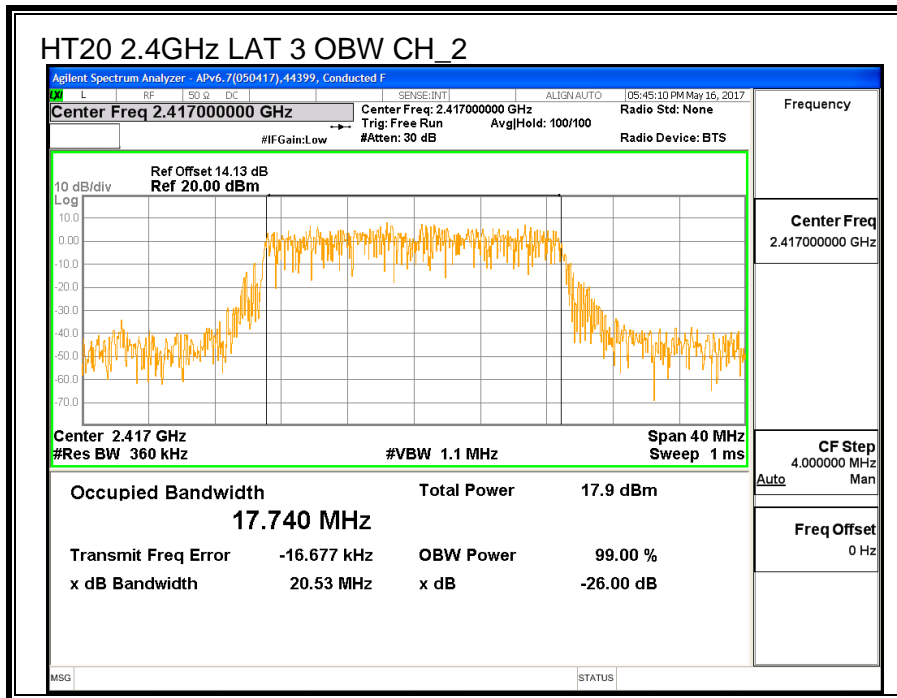
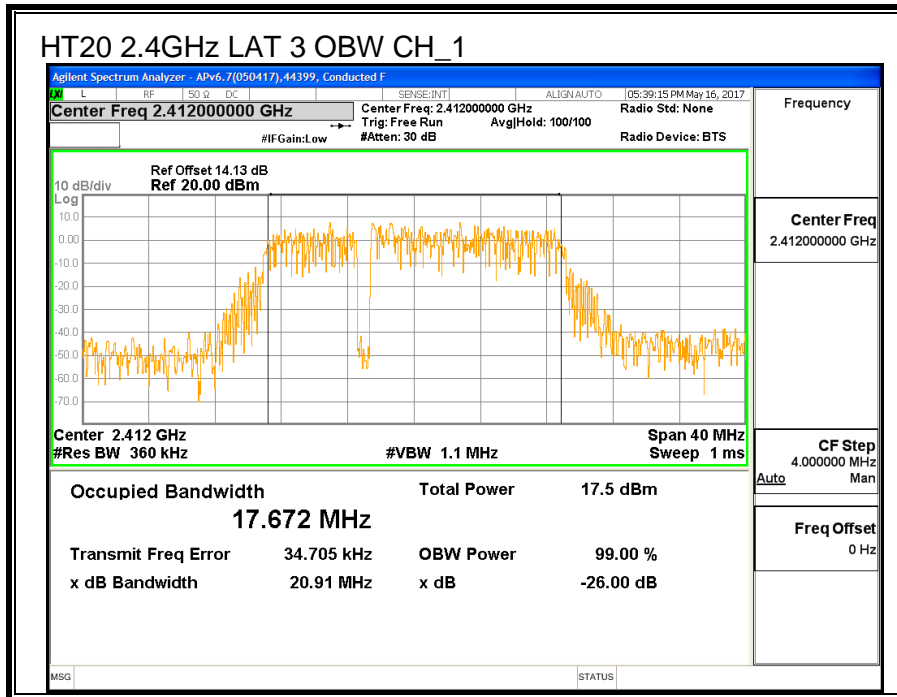
### 8.5.2. 99% BANDWIDTH

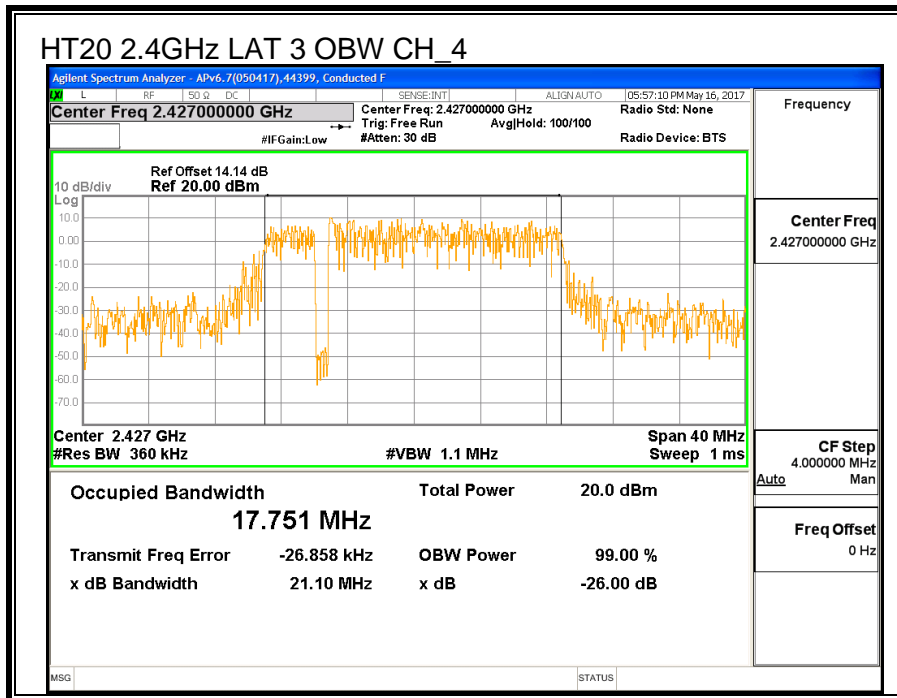
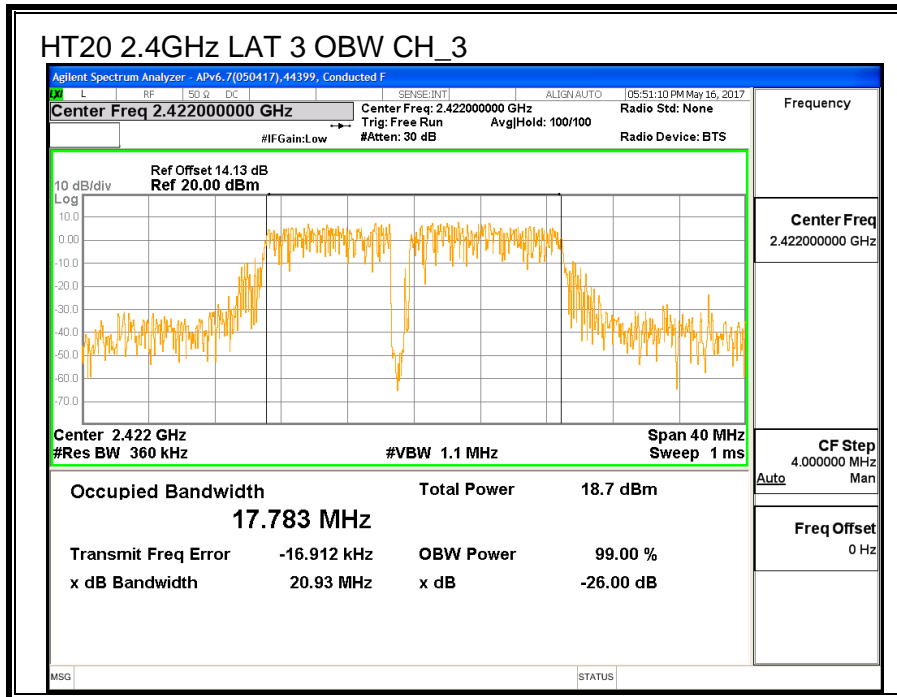
#### LIMITS

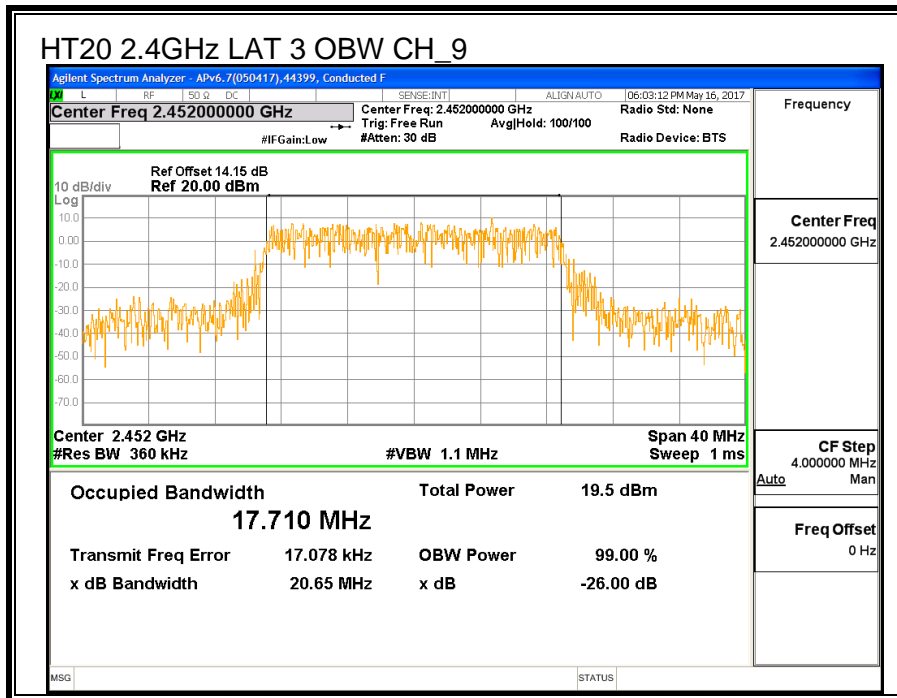
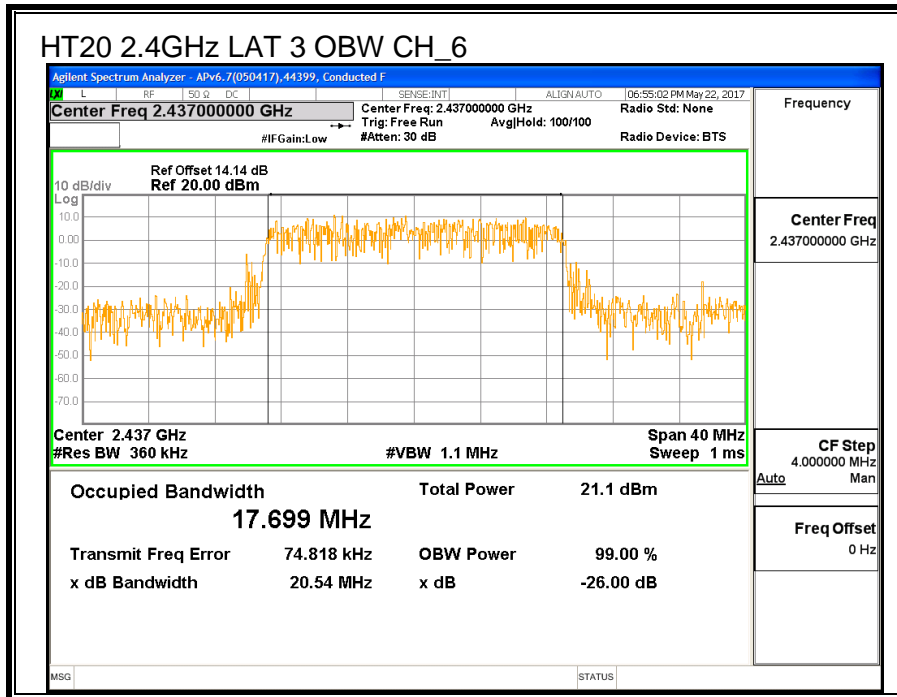
None; for reporting purposes only.

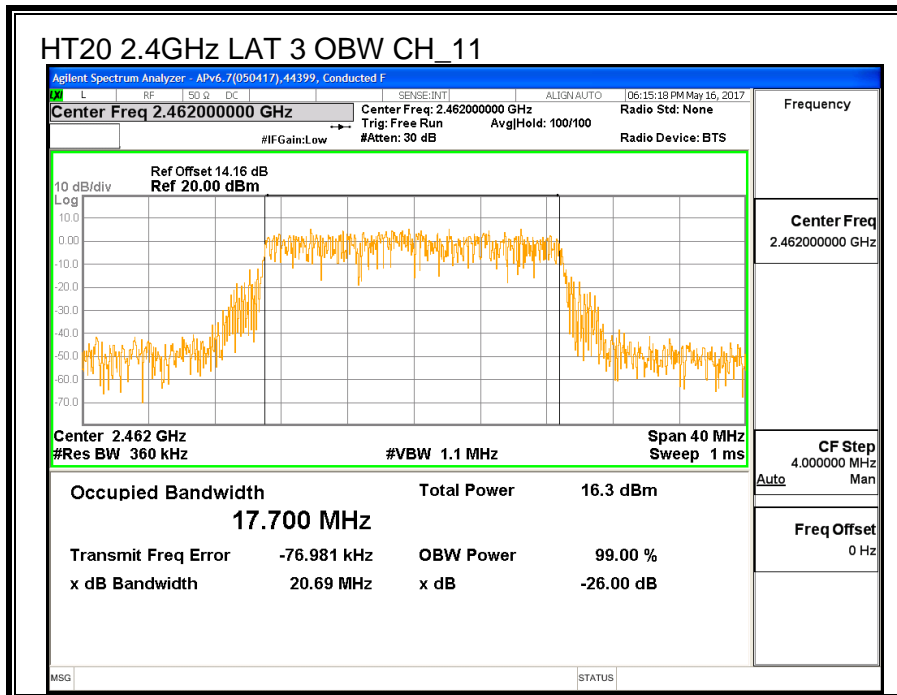
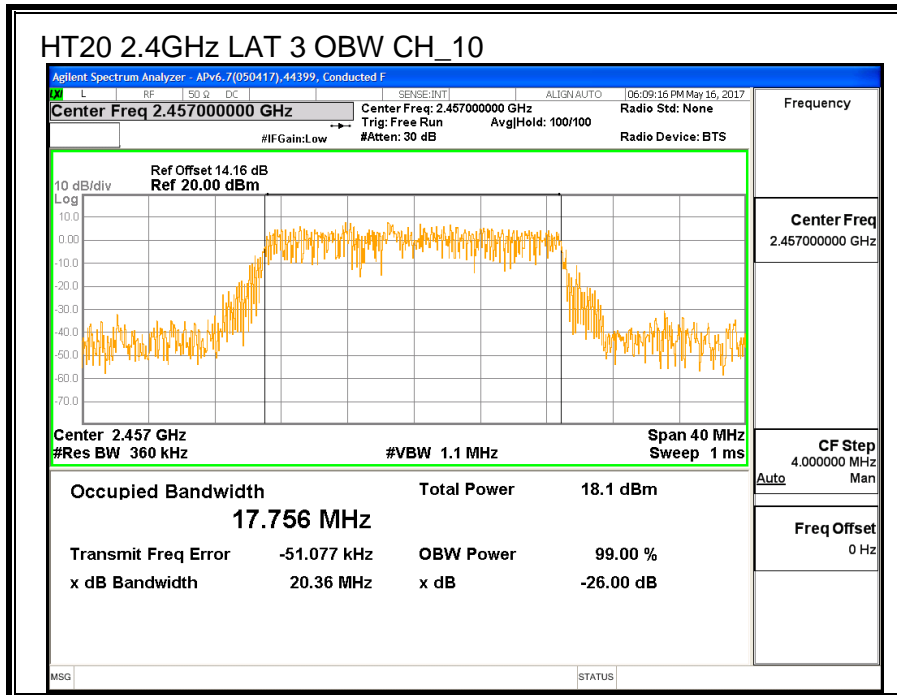
#### RESULTS

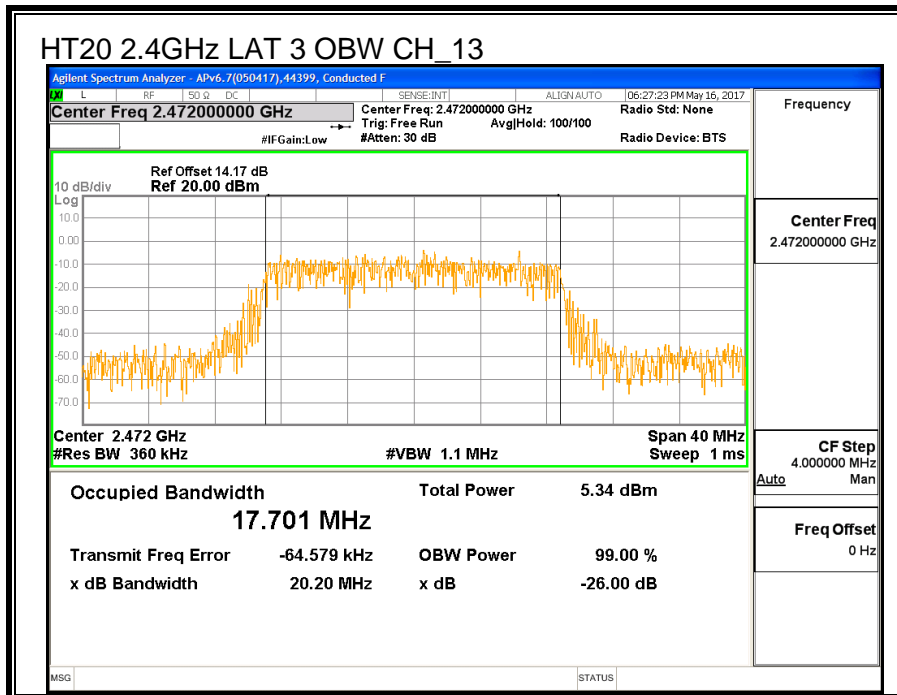
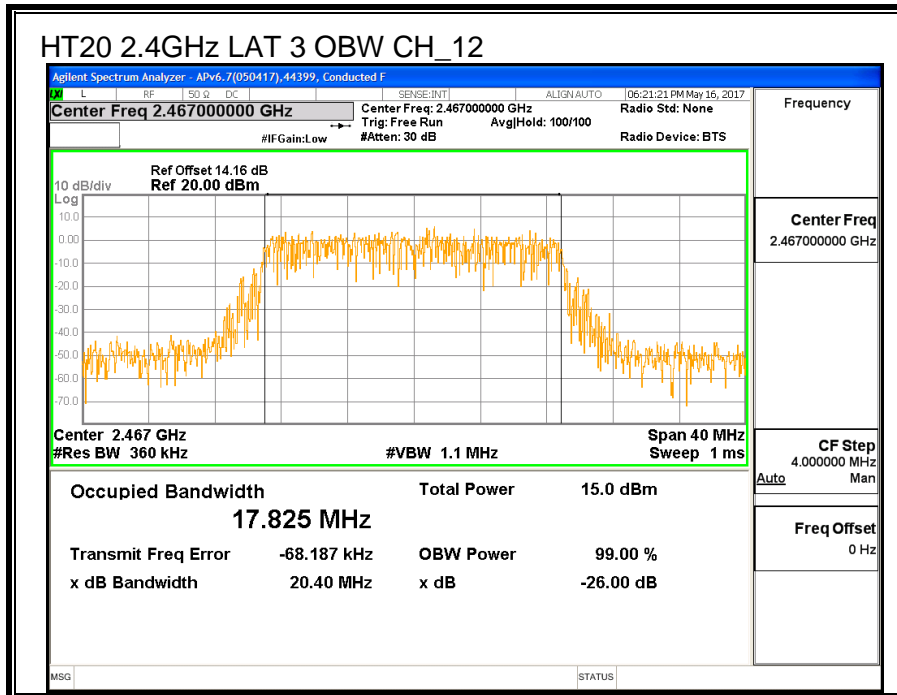
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low_1	2412	17.672
Low_2	2417	17.740
Low_3	2422	17.783
Low_4	2427	17.751
Middle_6	2437	17.699
High_9	2452	17.710
High_10	2457	17.756
High_11	2462	17.700
High_12	2467	17.825
High_13	2472	17.701











### 8.5.3. AVERAGE POWER

<b>ID:</b>	44366	<b>Date:</b>	7/25/17
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#### LIMITS

None; for reporting purposes only.

#### RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low_1	2412	17.26
Low_2	2417	19.25
Low_3	2422	21.42
Low_4	2427	21.29
Middle_6	2437	21.22
High_9	2452	21.17
High_10	2457	19.45
High_11	2462	17.30
High_12	2467	15.39
High_13	2472	7.85



#### 8.5.4. OUTPUT POWER

<b>ID:</b>	44366	<b>Date:</b>	7/25/17
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#### 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.

## 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	-4.42	30.00	30	36	30.00
Low_2	2417	-4.42	30.00	30	36	30.00
Low_3	2422	-4.42	30.00	30	36	30.00
Low_4	2427	-4.42	30.00	30	36	30.00
Middle_6	2437	-4.42	30.00	30	36	30.00
High_9	2452	-4.42	30.00	30	36	30.00
High_10	2457	-4.42	30.00	30	36	30.00
High_11	2462	-4.42	30.00	30	36	30.00
High_12	2467	-4.42	30.00	30	36	30.00
High_13	2472	-4.42	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	23.51	23.51	30.00	-6.49
Low_2	2417	25.79	25.79	30.00	-4.21
Low_3	2422	27.86	27.86	30.00	-2.14
Low_4	2427	27.87	27.87	30.00	-2.13
Middle_6	2437	27.56	27.56	30.00	-2.44
High_9	2452	27.48	27.48	30.00	-2.52
High_10	2457	25.88	25.88	30.00	-4.12
High_11	2462	23.77	23.77	30.00	-6.23
High_12	2467	21.80	21.80	30.00	-8.20
High_13	2472	14.35	14.35	30.00	-15.65

## 8.5.5. POWER SPECTRAL DENSITY

### LIMITS

FCC §15.247

IC RSS-247 (5.2) (b)

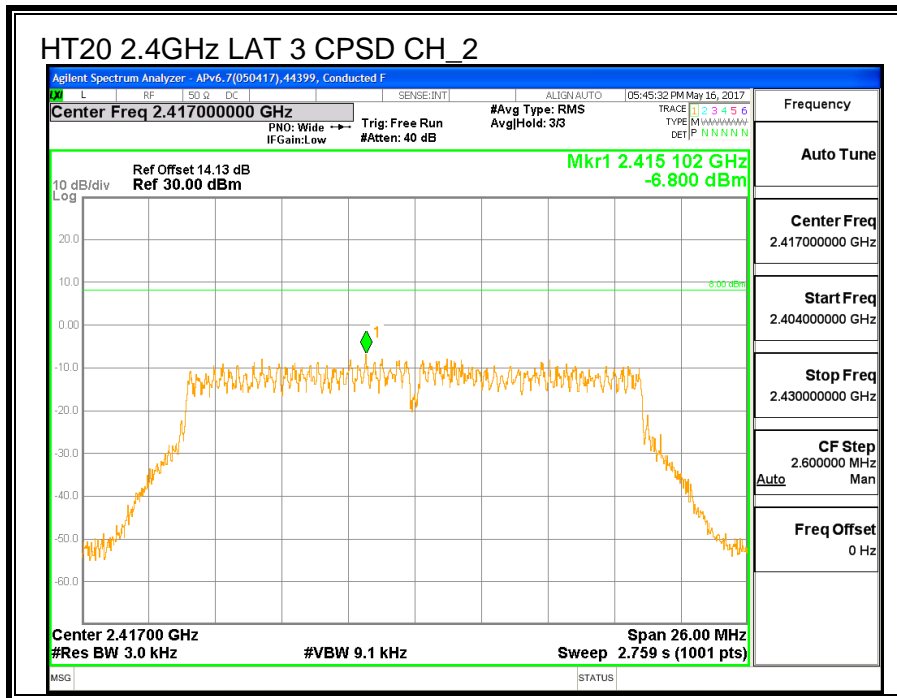
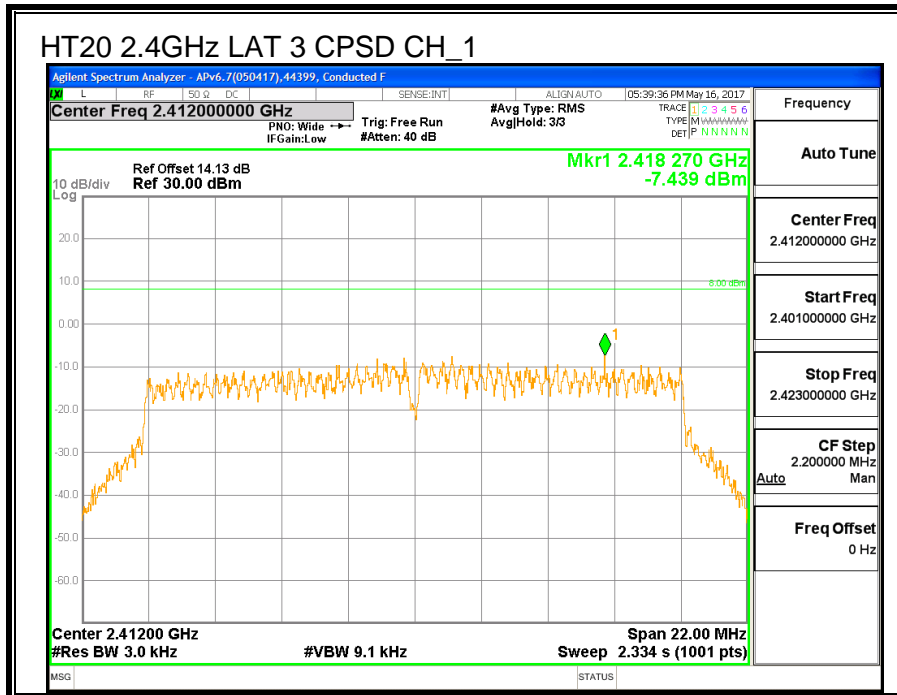
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

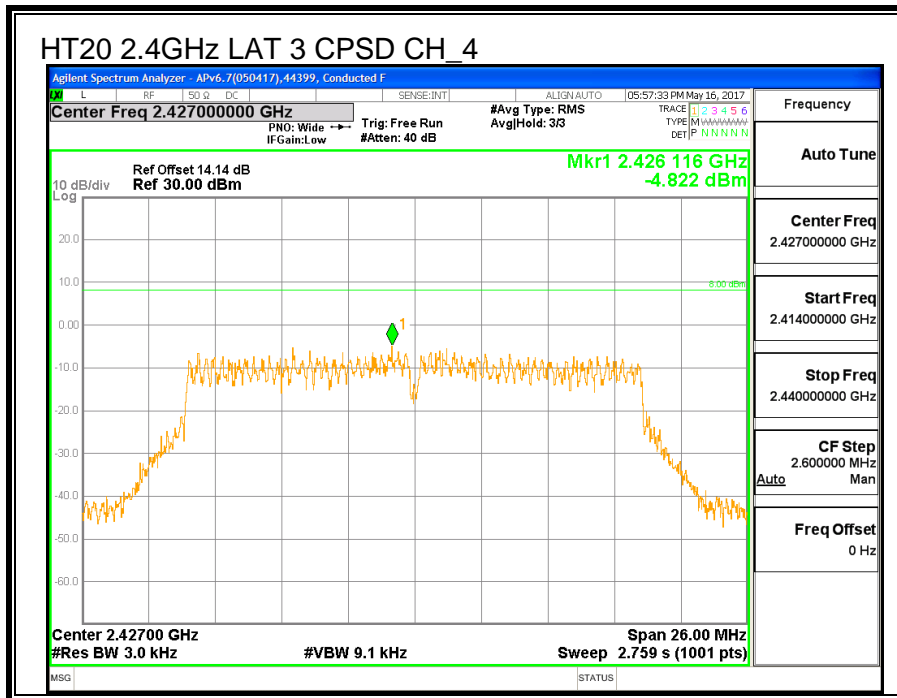
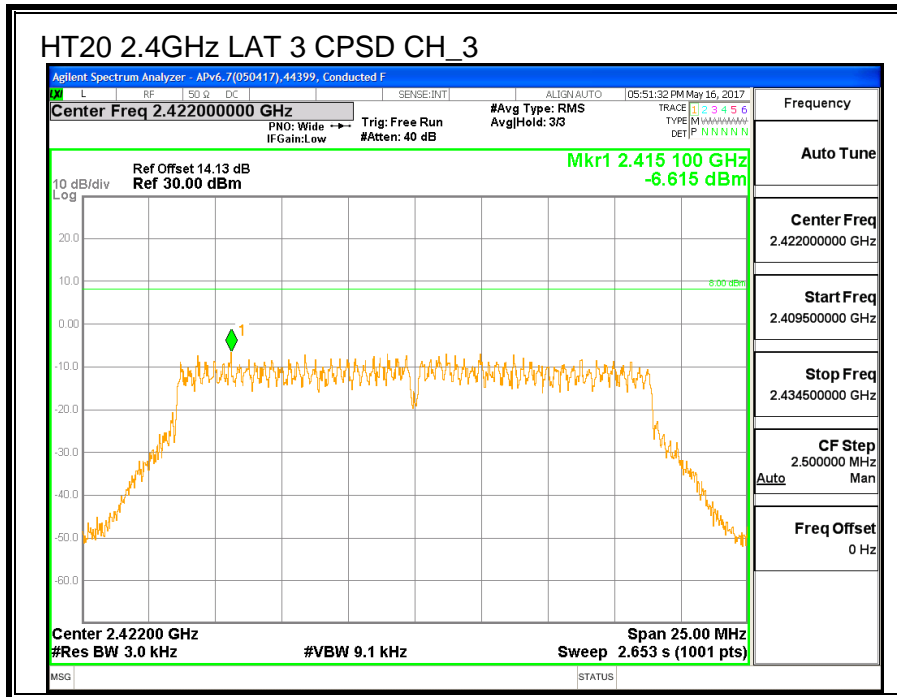
### RESULTS

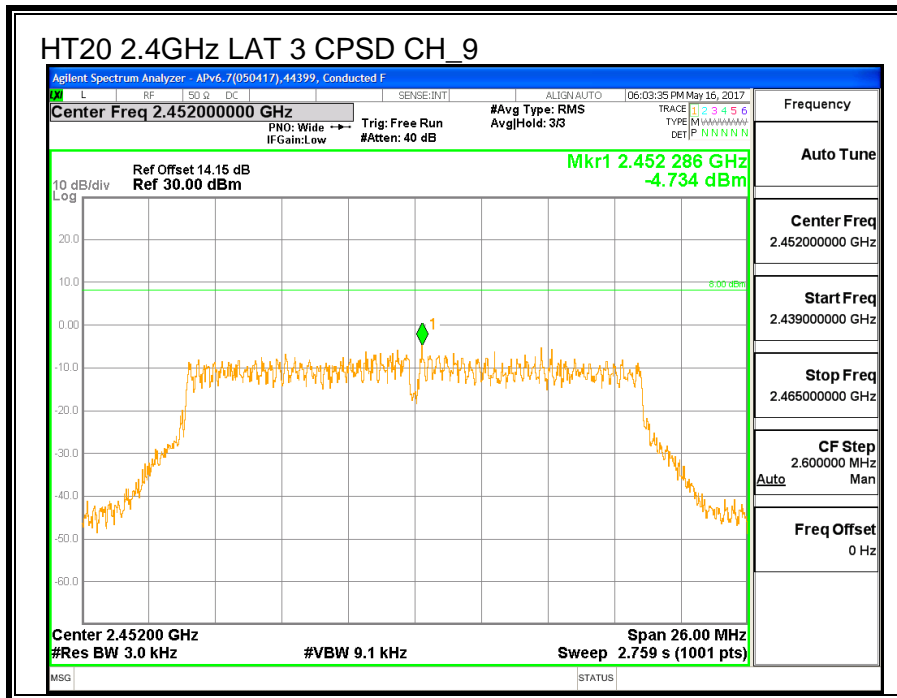
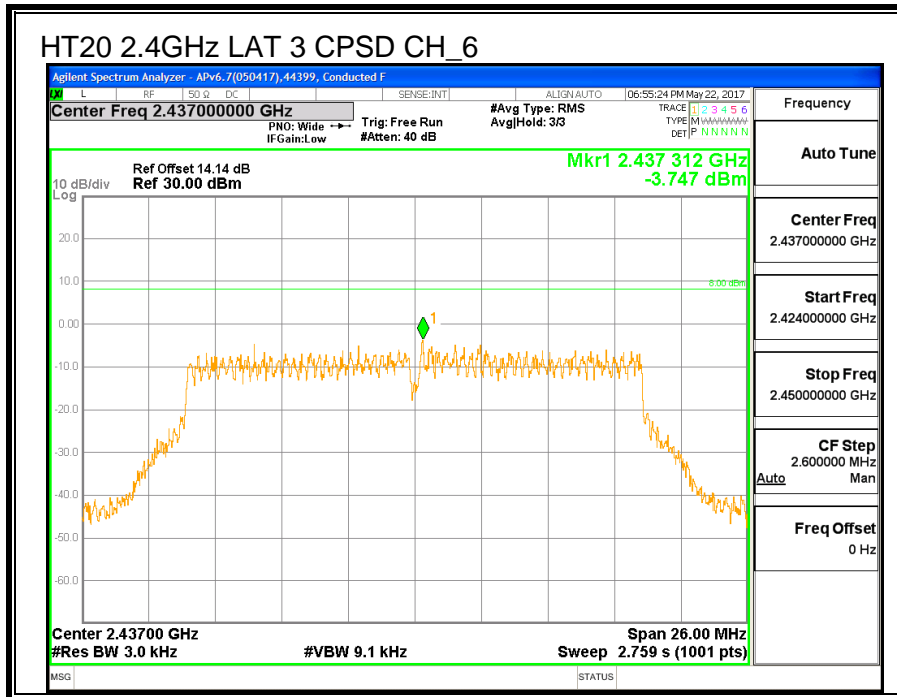
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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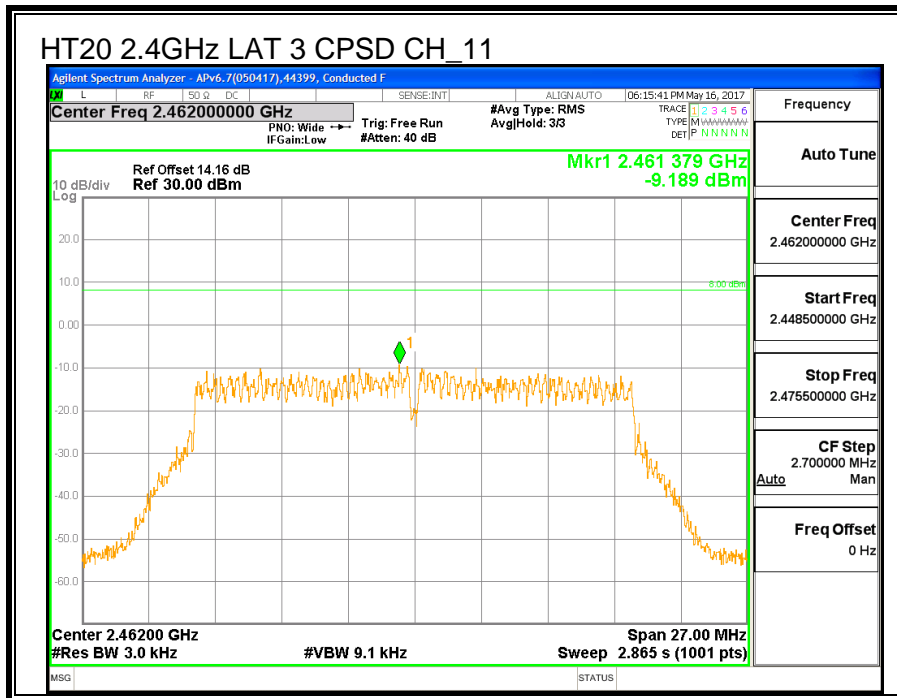
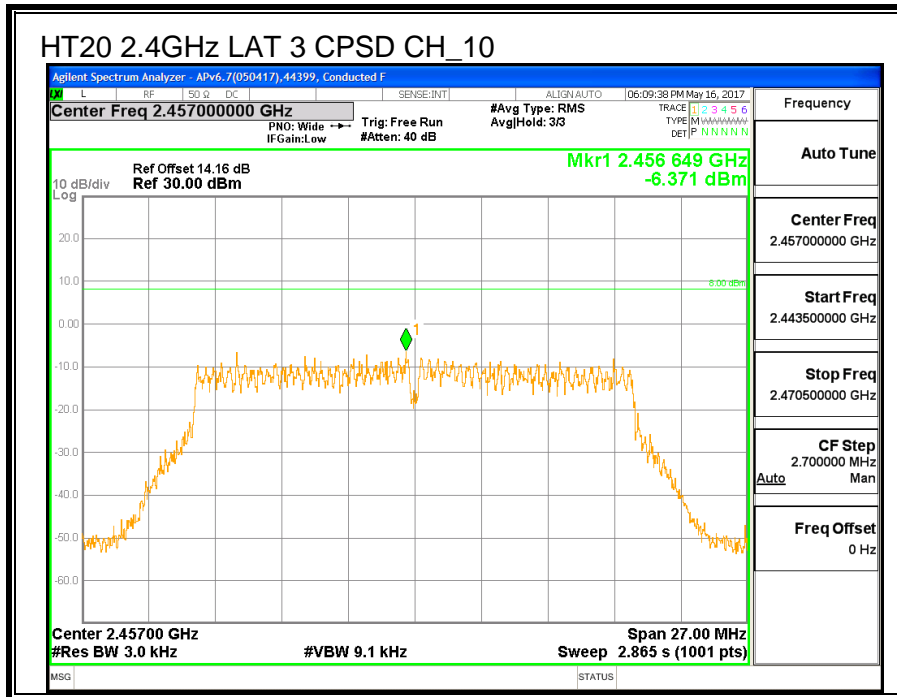
#### PSD Results

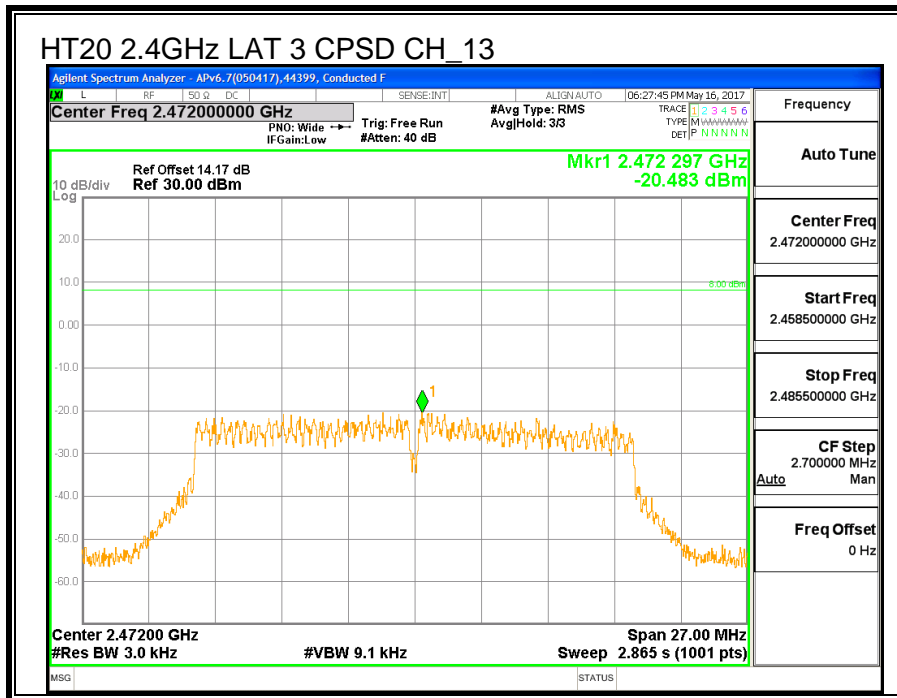
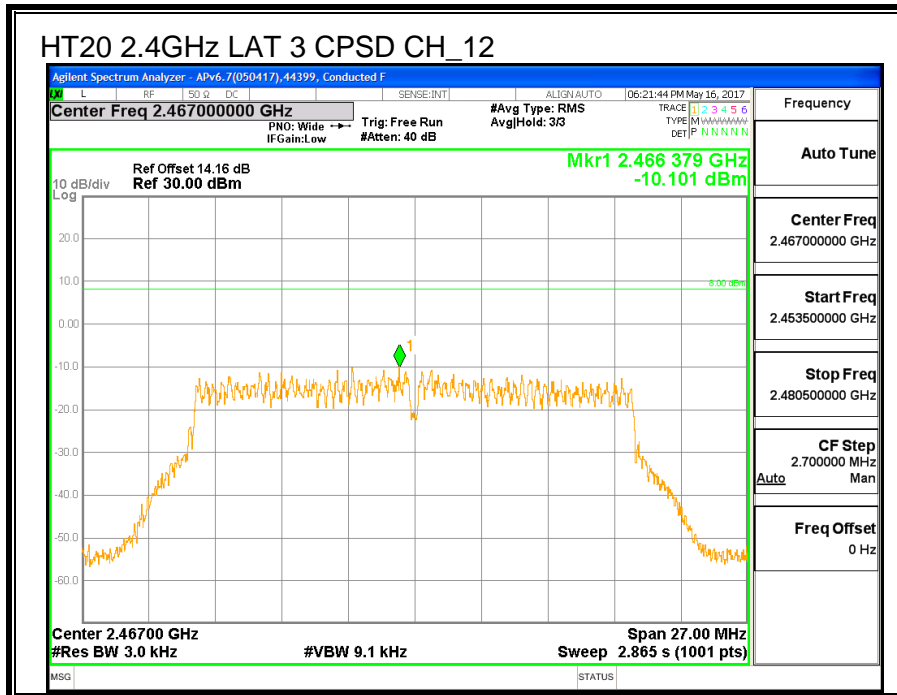
Channel	Frequency (MHz)	Meas (dBm)	Total Corr'd PSD (dBm/3KHz)	Limit (dBm)	Margin (dB)
Low_1	2412	-7.439	-7.439	8.0	-15.4
Low_2	2417	-6.800	-6.800	8.0	-14.8
Low_3	2422	-6.615	-6.615	8.0	-14.6
Low_4	2427	-4.822	-4.822	8.0	-12.8
Middle_6	2437	-3.747	-3.747	8.0	-11.7
High_9	2452	-4.734	-4.734	8.0	-12.7
High_10	2457	-6.371	-6.371	8.0	-14.4
High_11	2462	-9.189	-9.189	8.0	-17.2
High_12	2467	-10.101	-10.101	8.0	-18.1
High_13	2472	-20.483	-20.483	8.0	-28.5













## 8.5.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

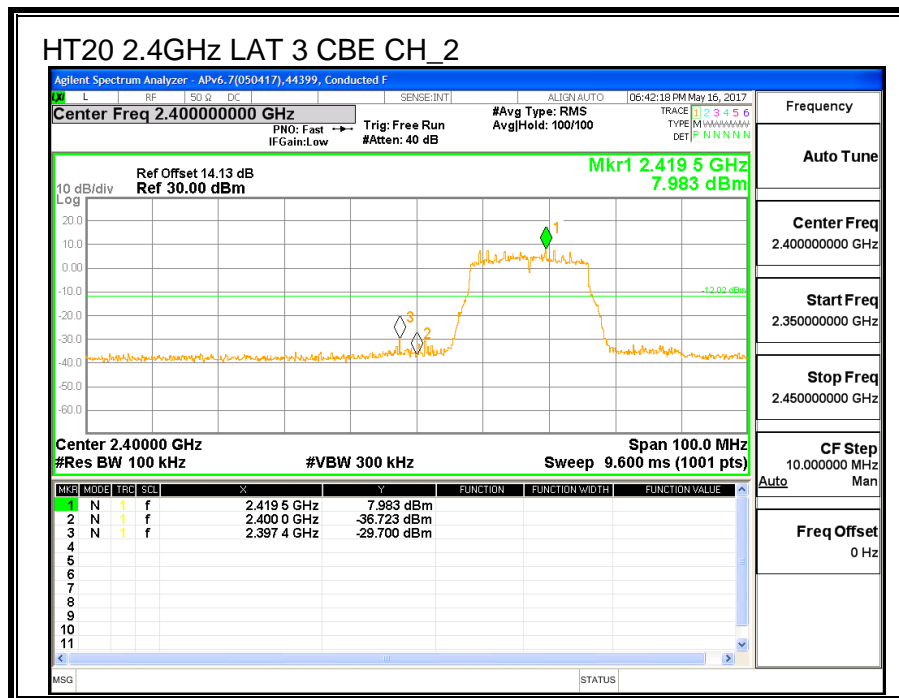
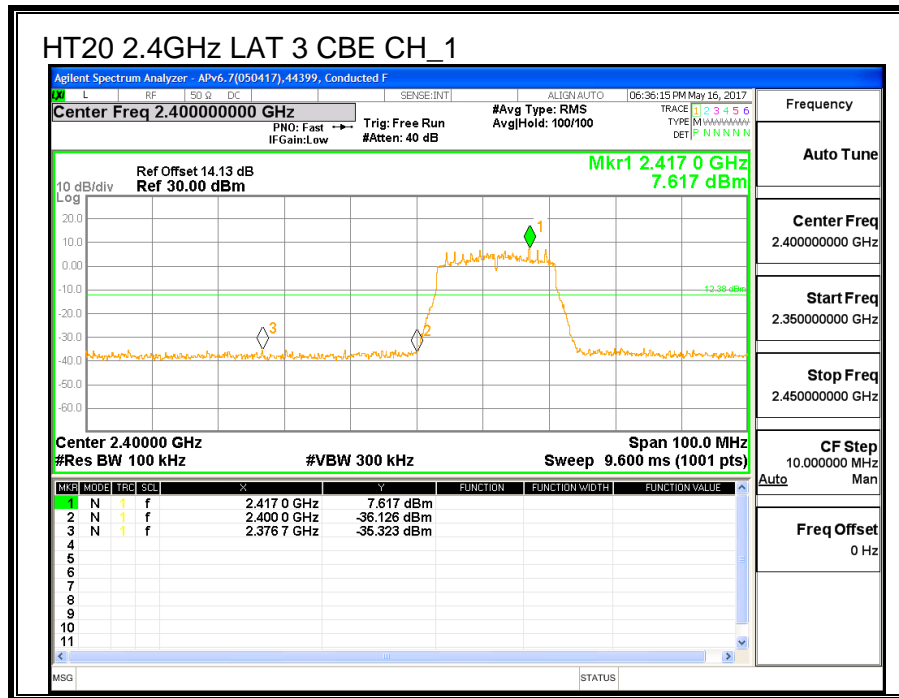
### LIMITS

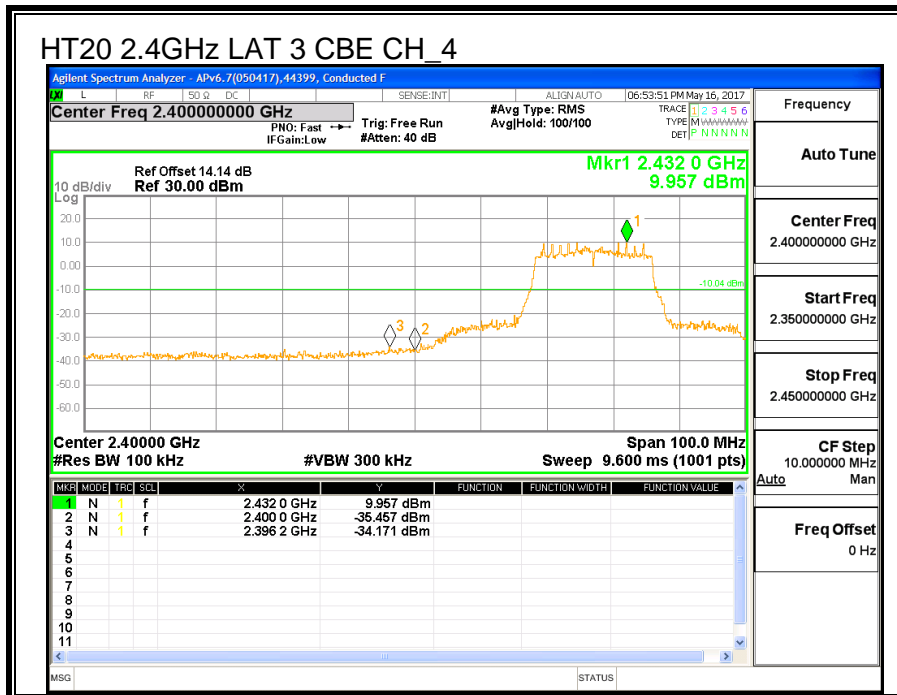
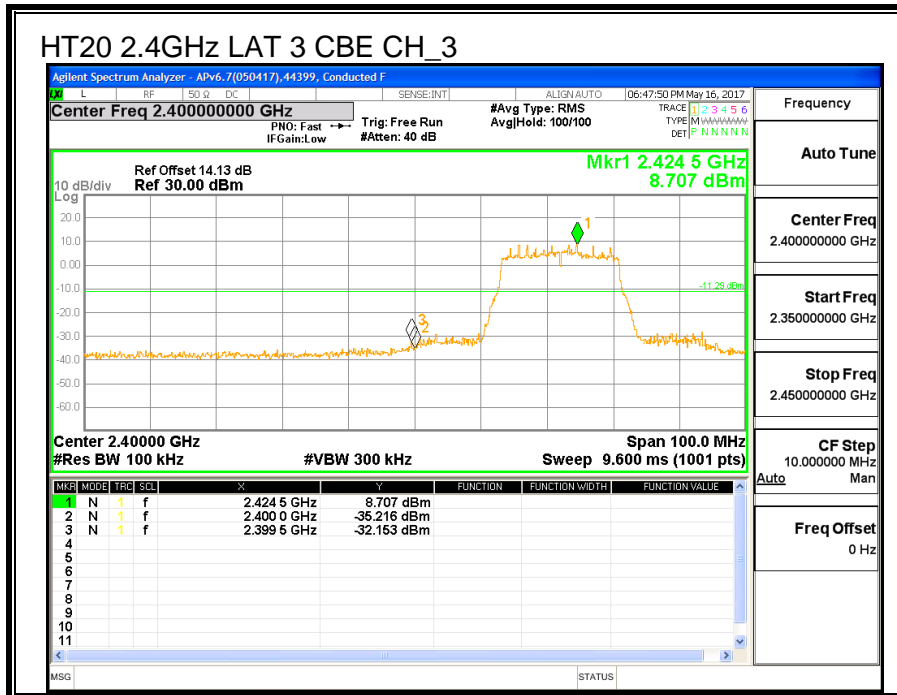
FCC §15.247 (d)

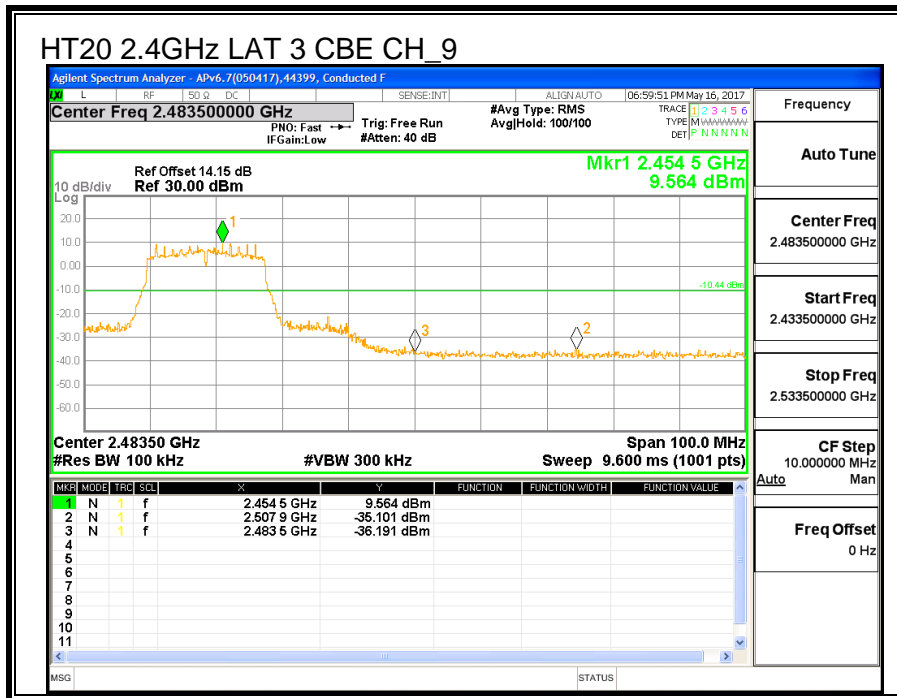
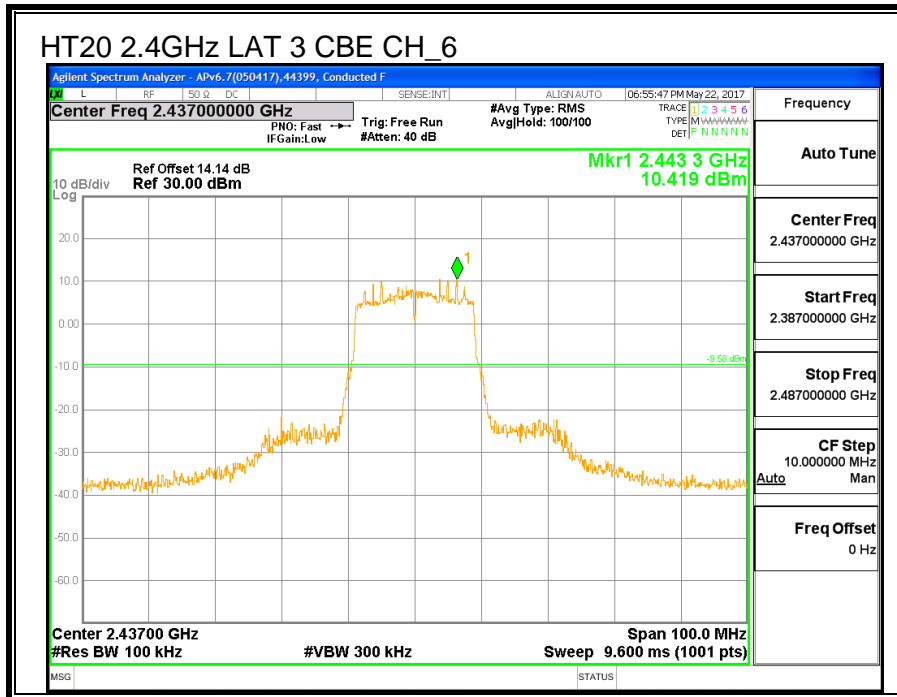
IC RSS-247 (5.5)

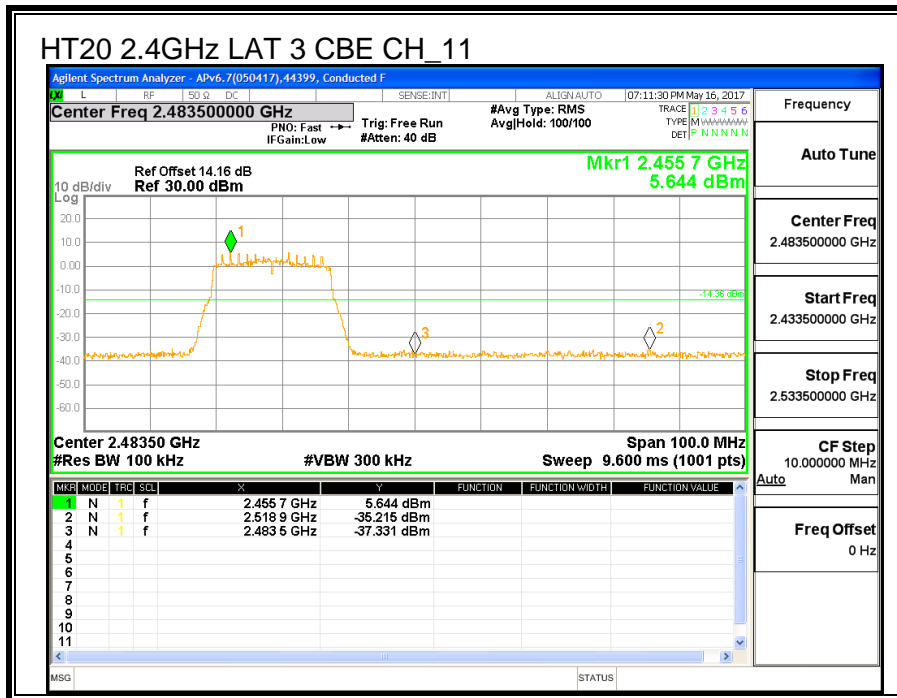
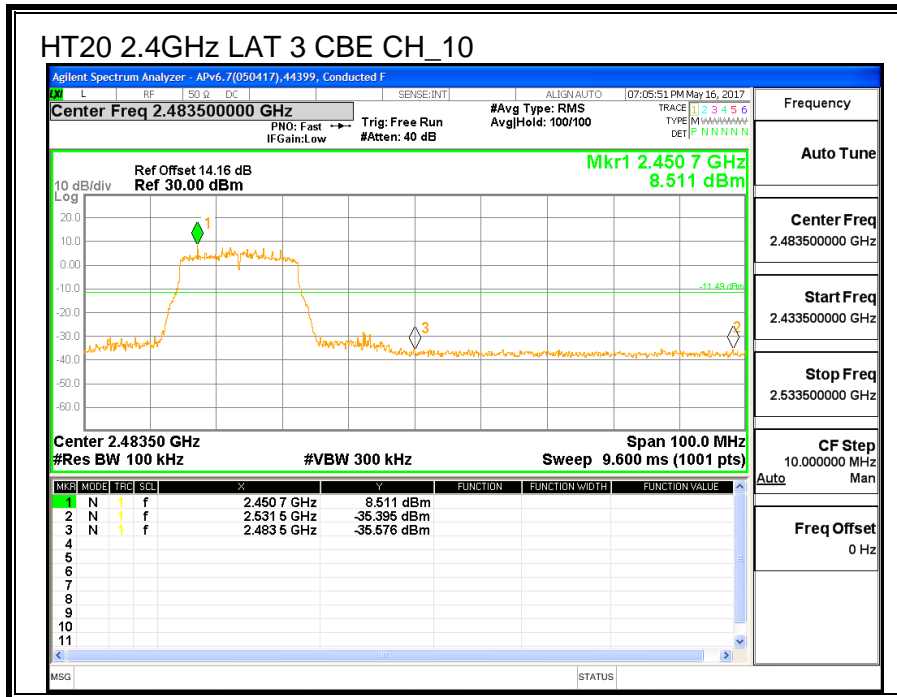
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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.

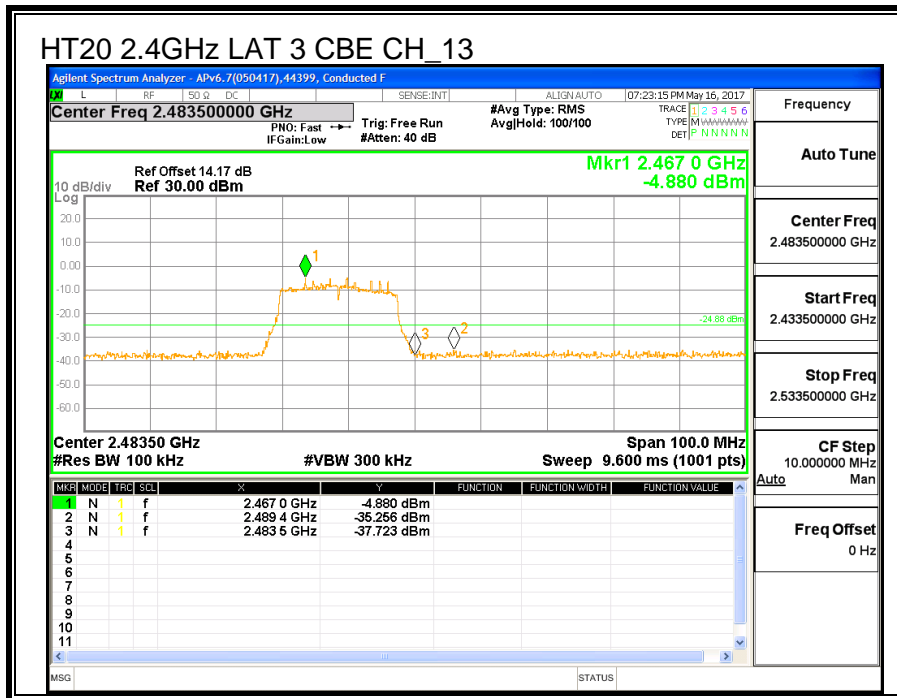
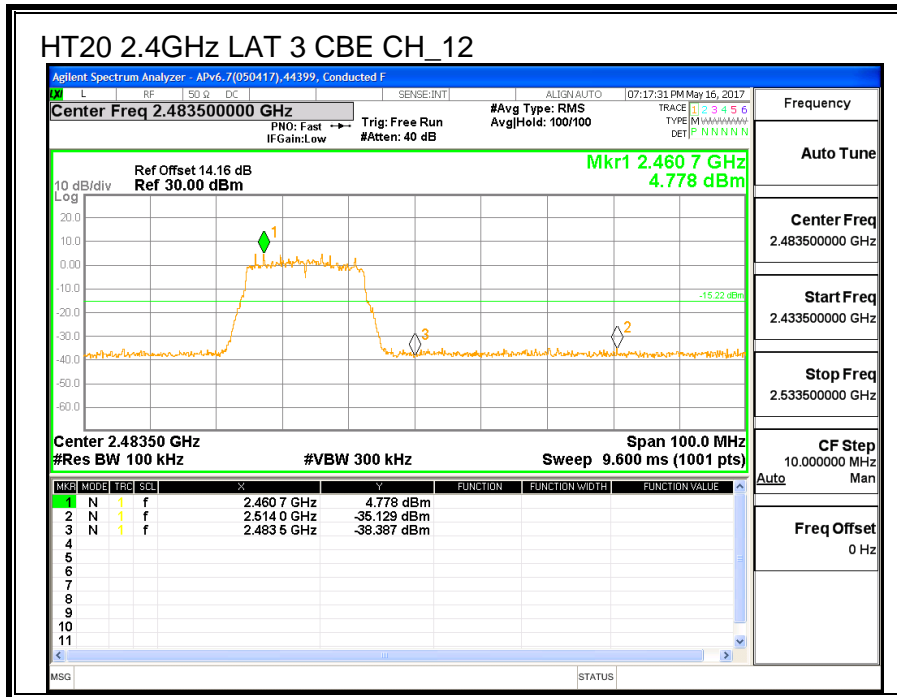
# **CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS**

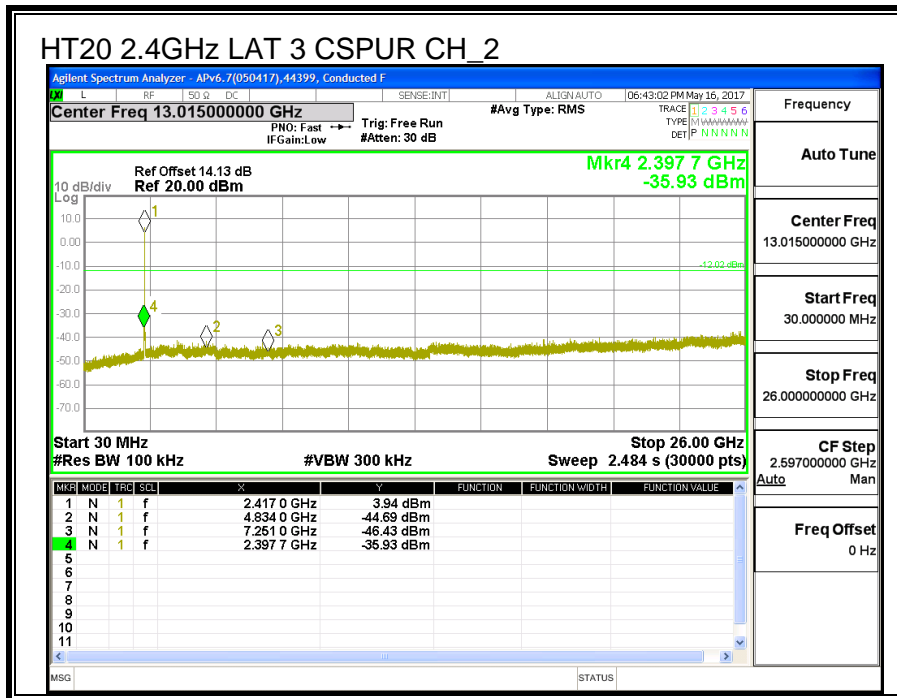
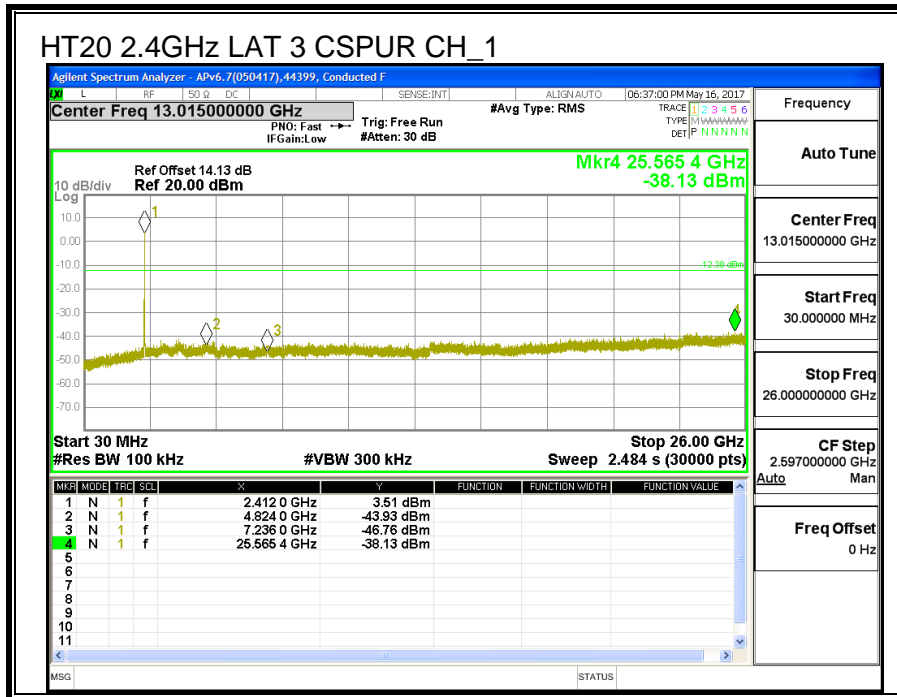


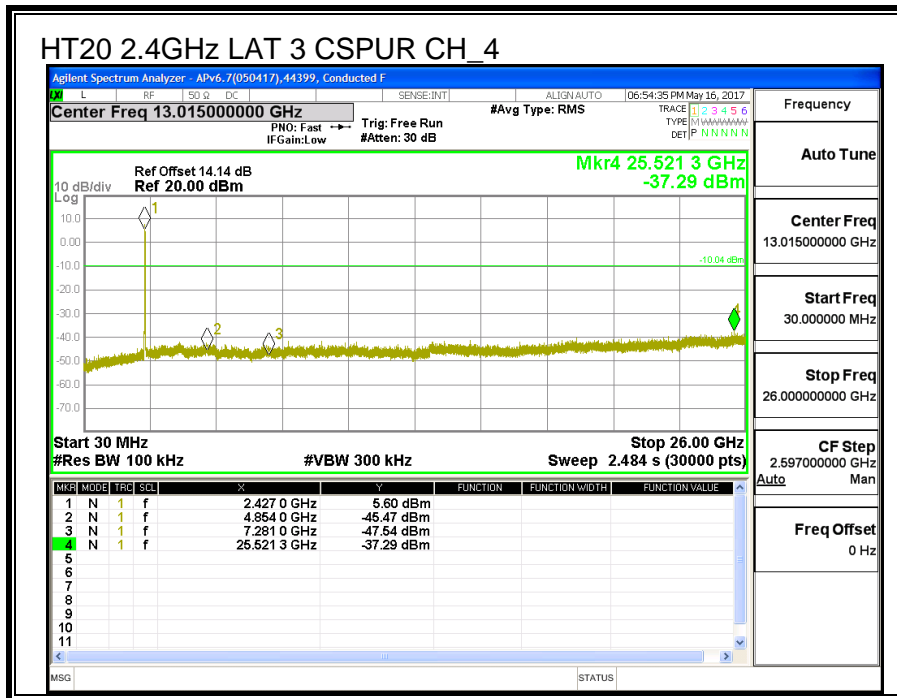
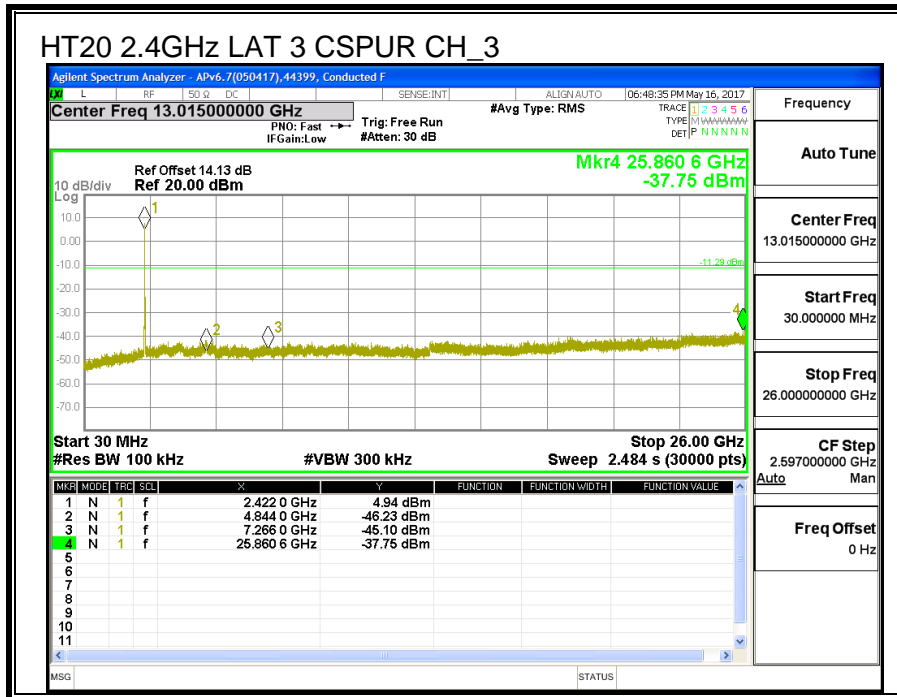




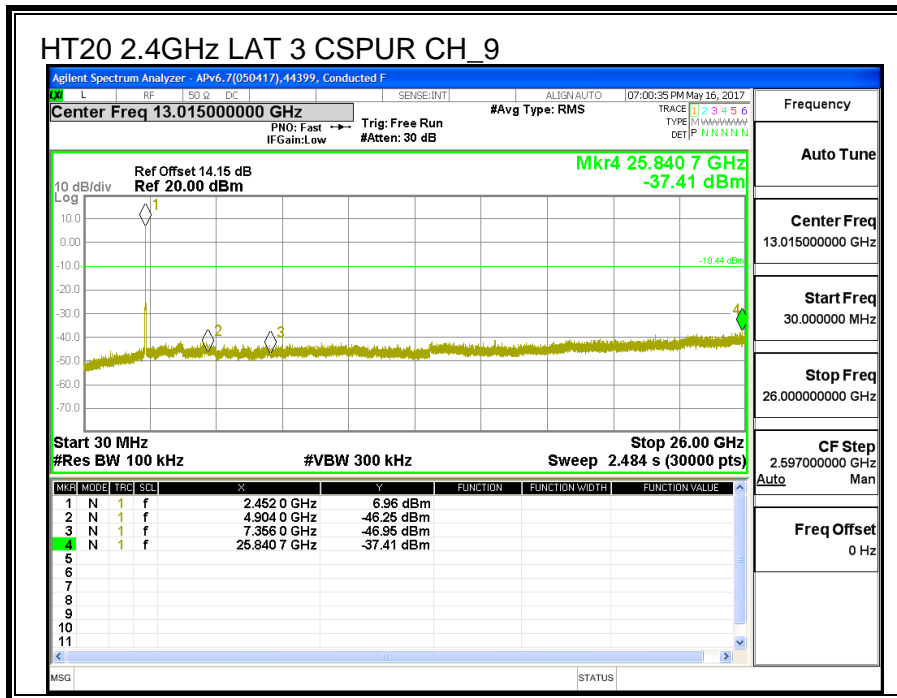
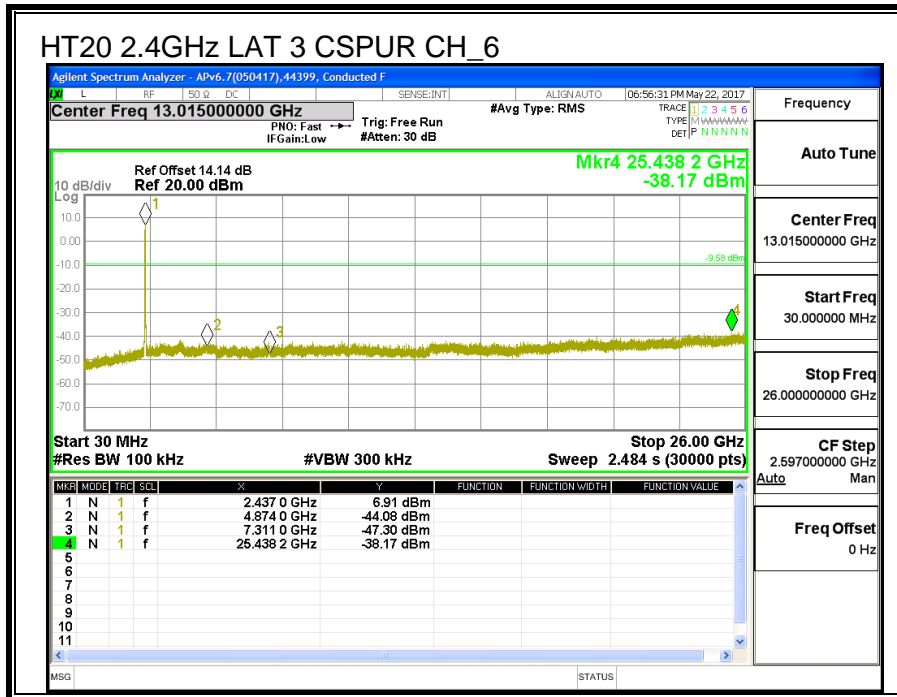


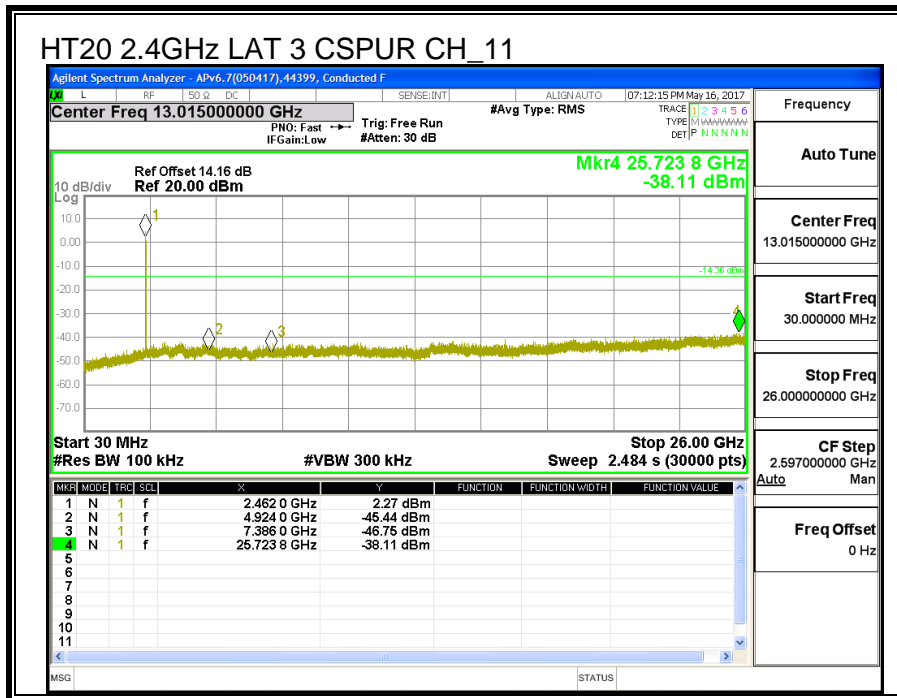
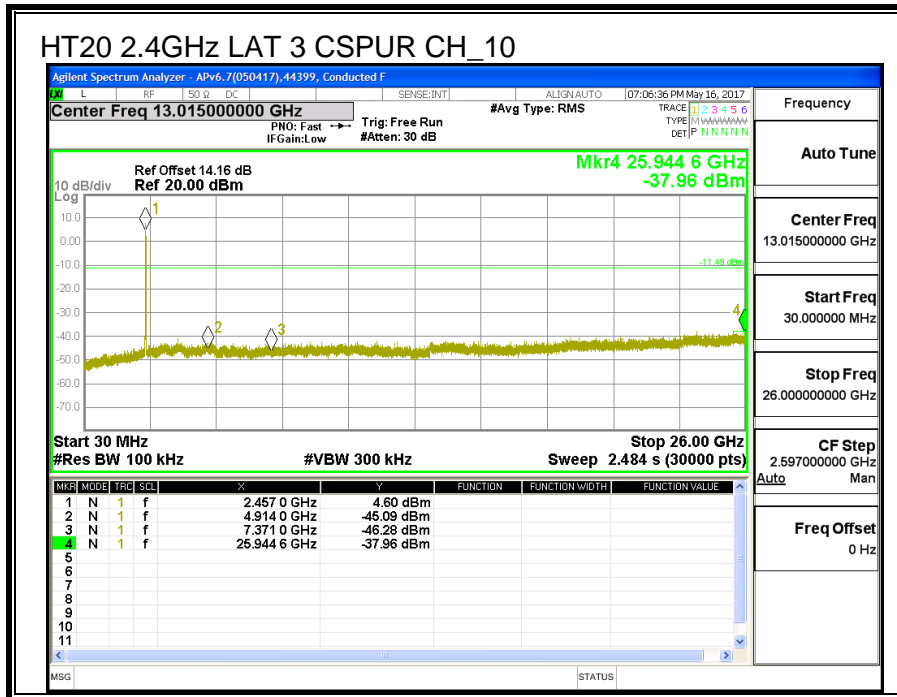


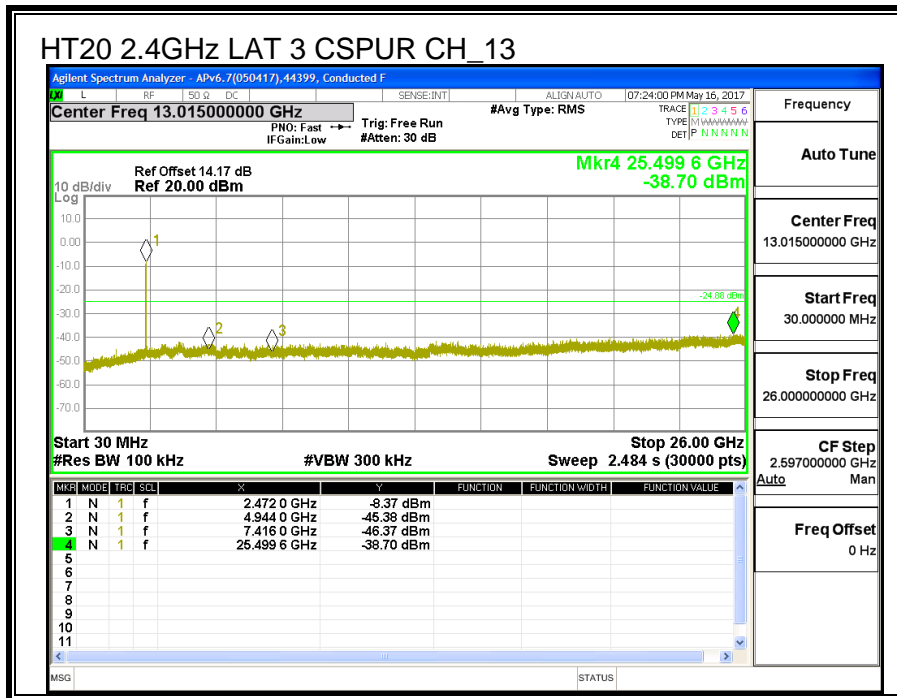
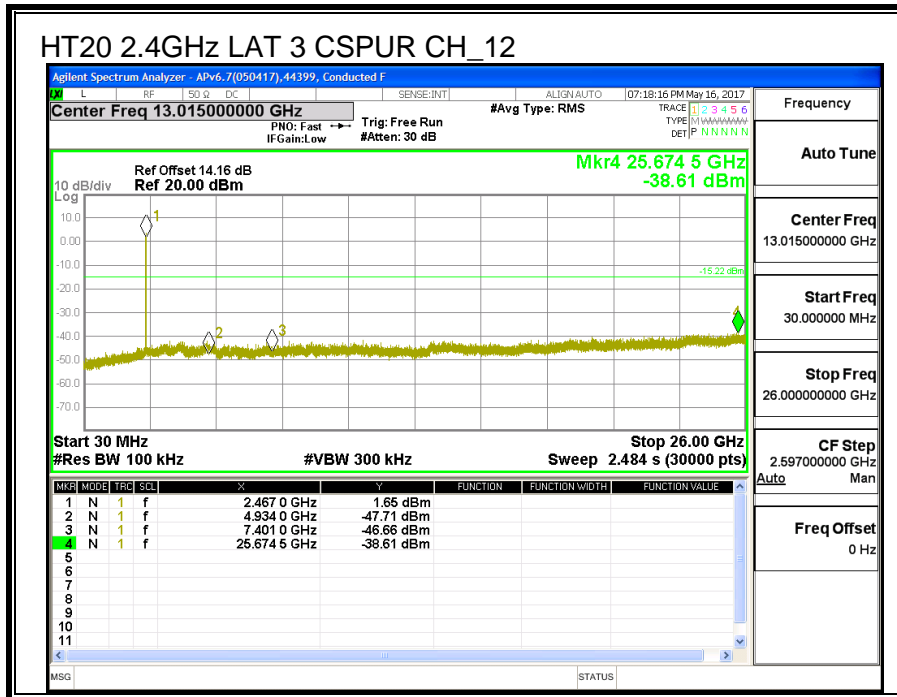












## 8.6. 11n HT20 2TX CDD MIMO MODE IN THE 2.4GHz BAND

### 8.6.1. 6 dB BANDWIDTH

#### LIMITS

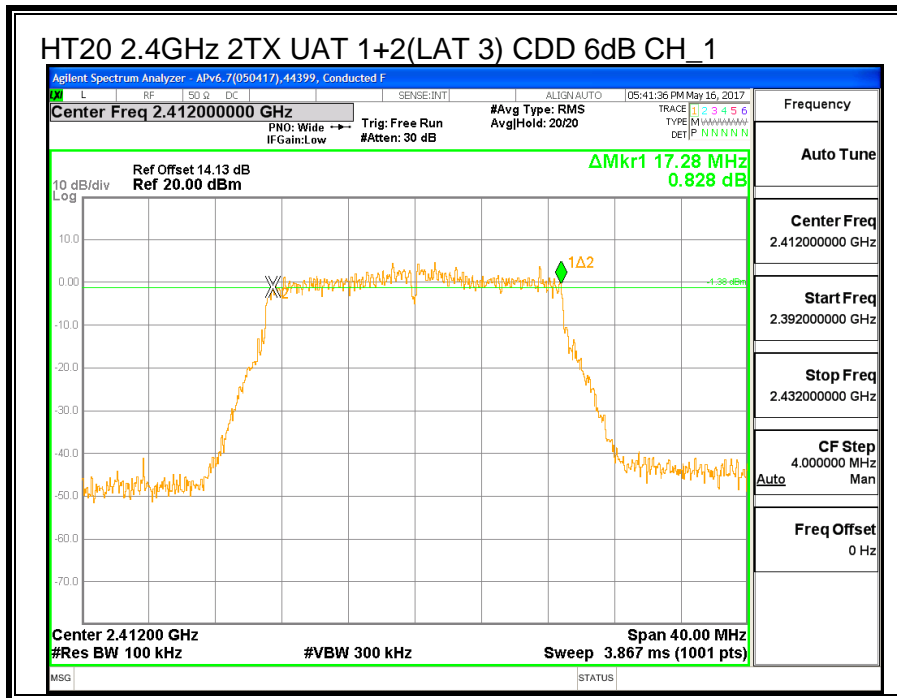
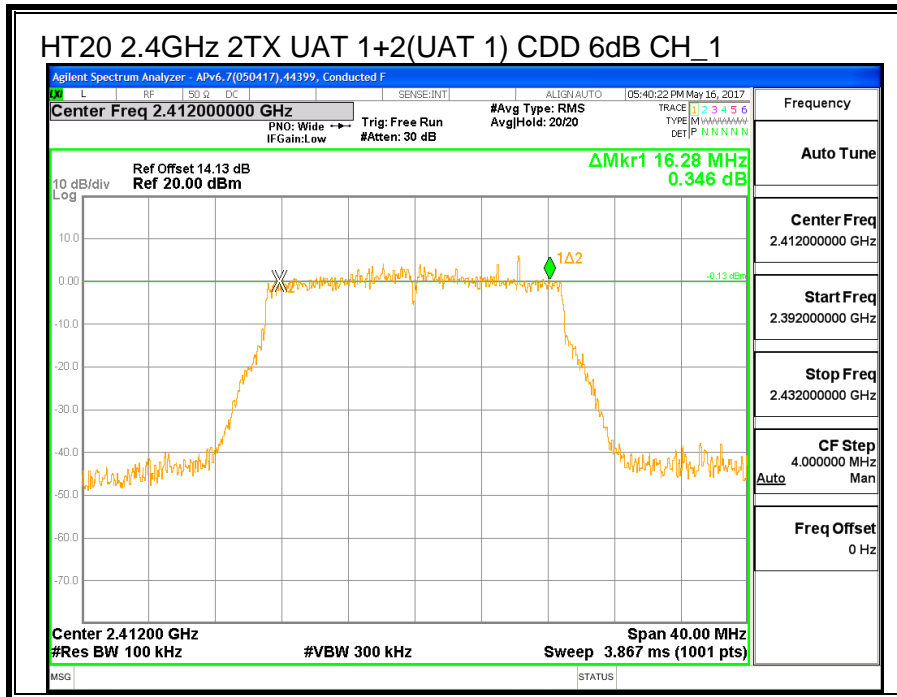
FCC §15.247 (a) (2)

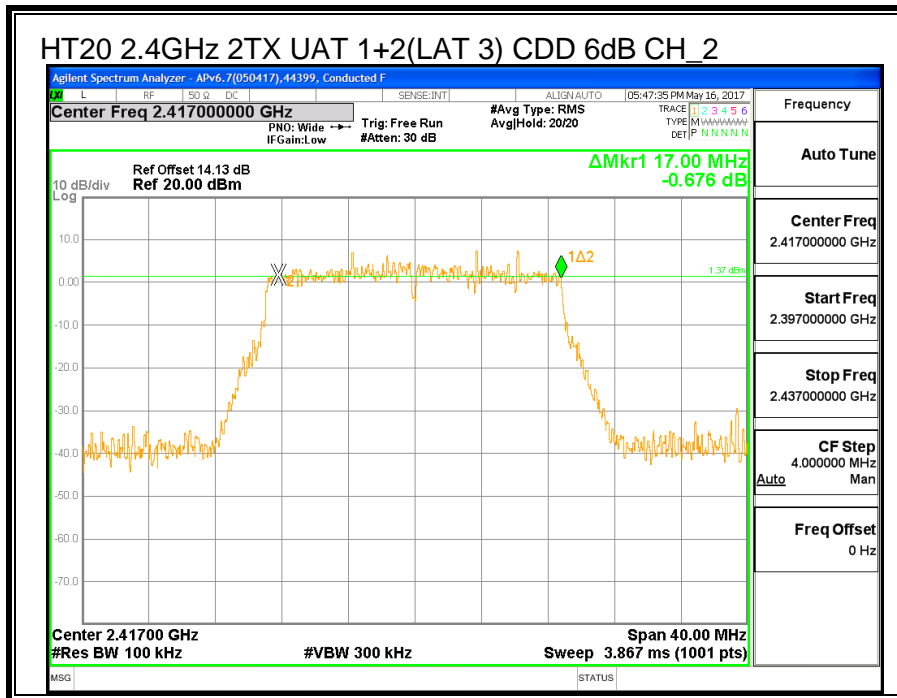
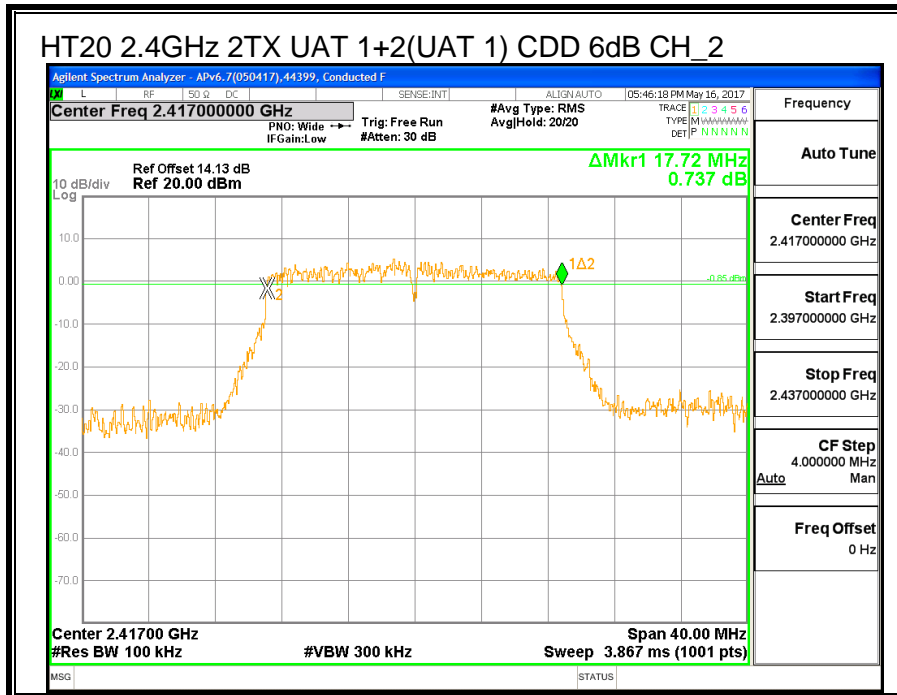
IC RSS-247 (5.2) (a)

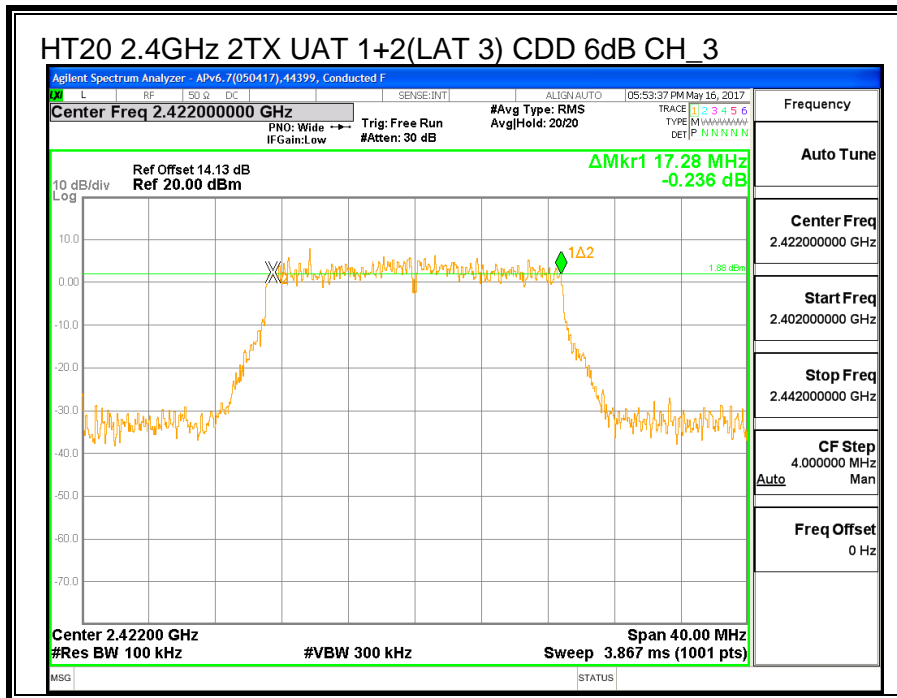
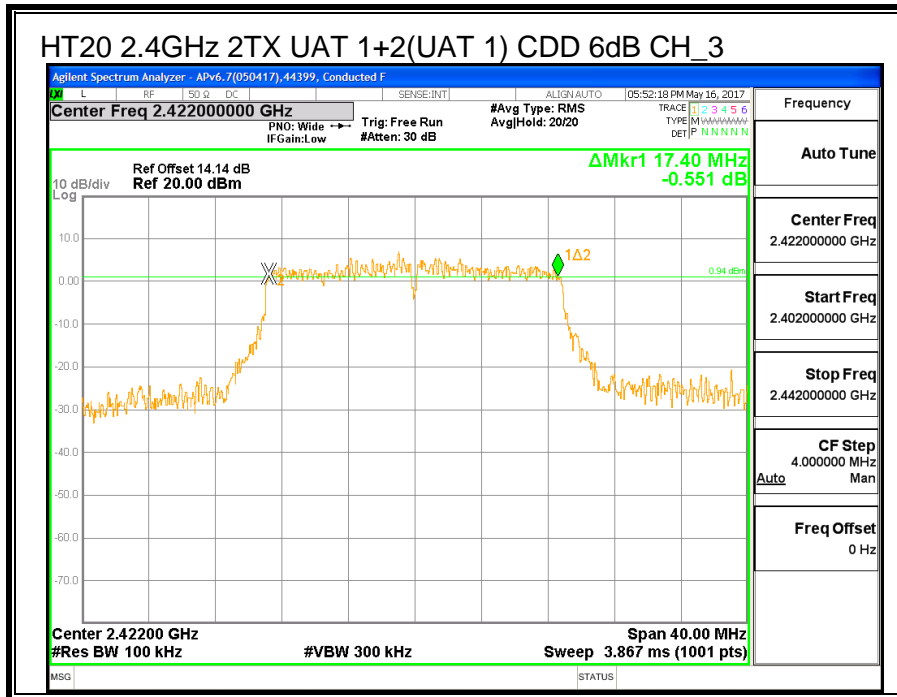
The minimum 6 dB bandwidth shall be at least 500 kHz.

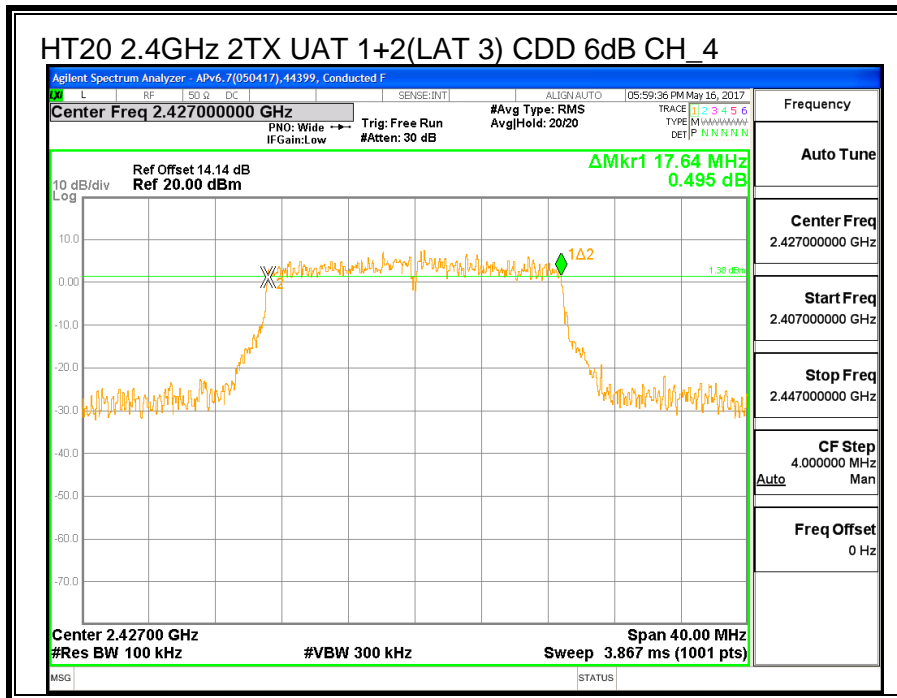
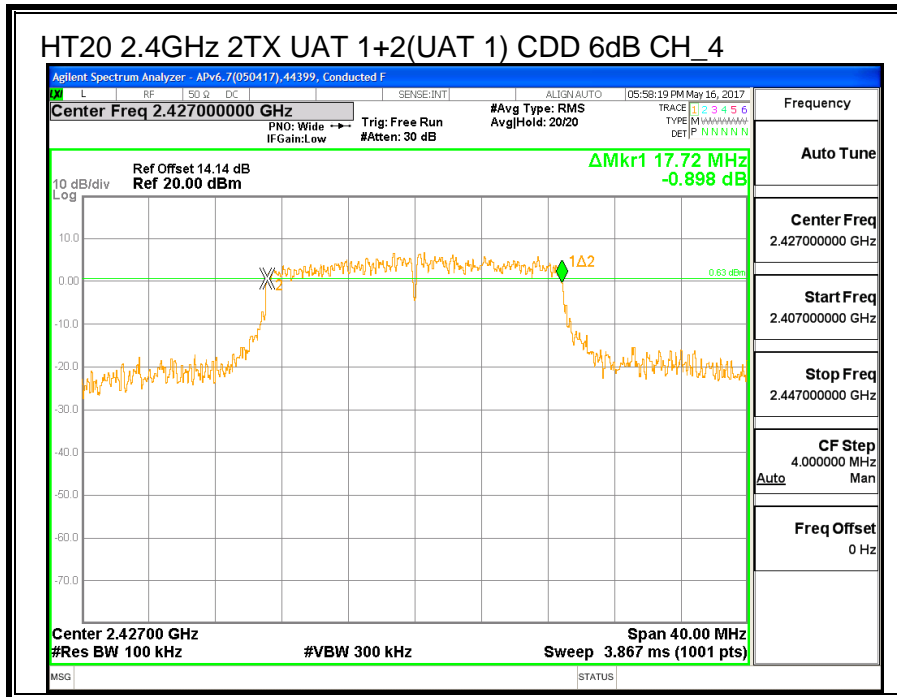
#### RESULTS

Channel	Frequency (MHz)	6 dB BW Ant 1 (MHz)	6 dB BW Ant 2 (MHz)	Minimum Limit (MHz)
Low_1	2412	16.28	17.28	0.5
Low_2	2417	17.72	17.00	0.5
Low_3	2422	17.40	17.28	0.5
Low_4	2427	17.72	17.64	0.5
Middle_6	2437	15.32	17.56	0.5
High_9	2452	17.68	17.56	0.5
High_10	2457	17.72	17.00	0.5
High_11	2462	17.60	17.64	0.5
High_12	2467	17.68	17.60	0.5
High_13	2472	17.68	16.24	0.5

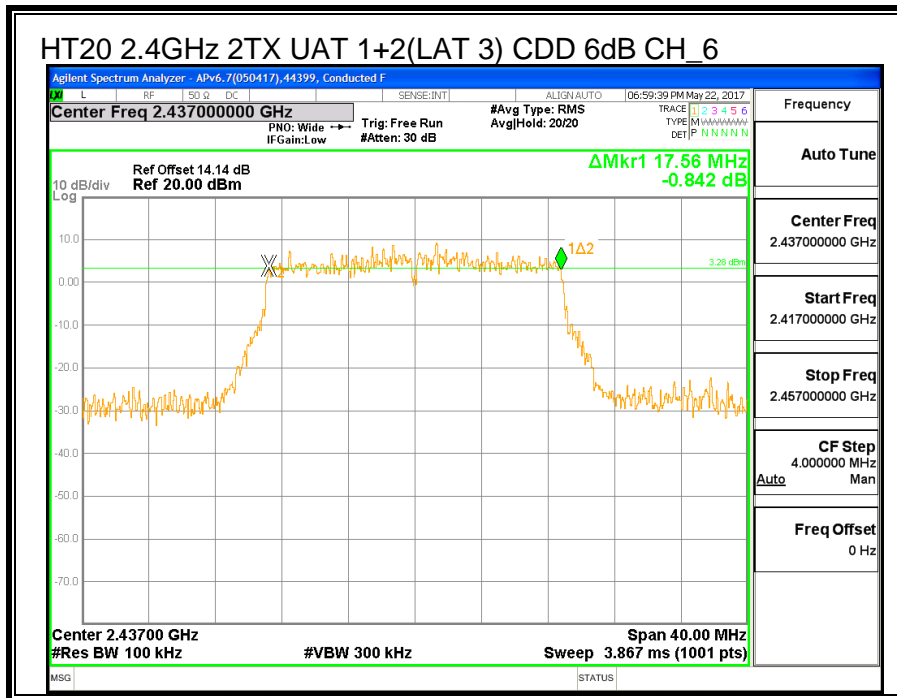
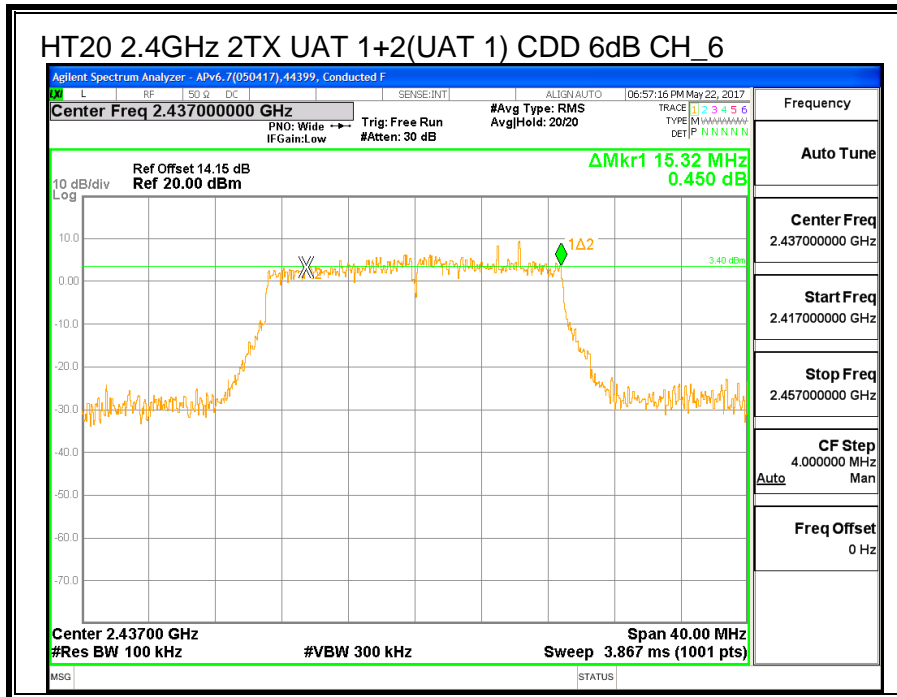


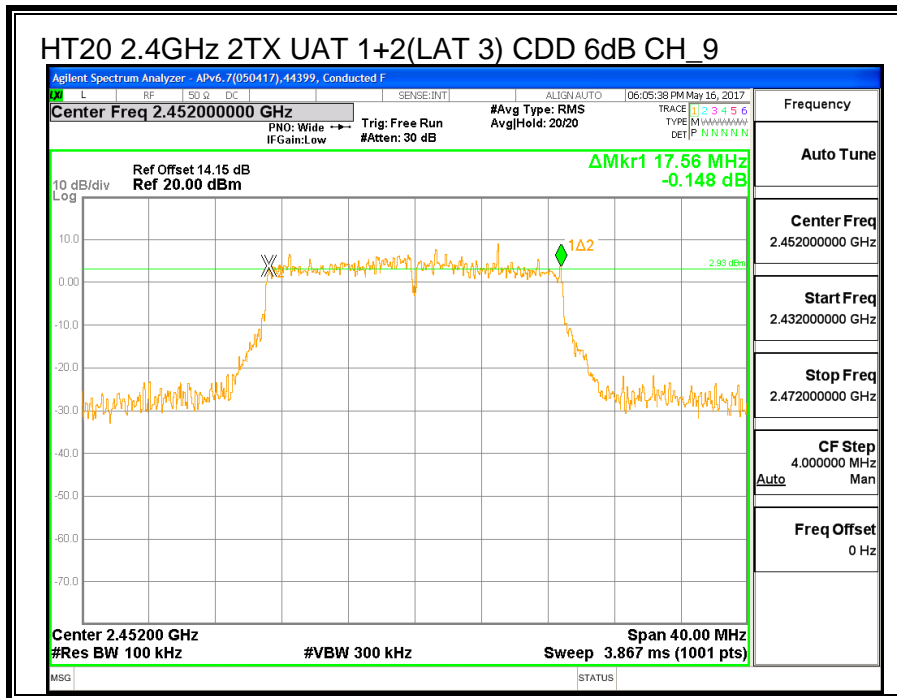
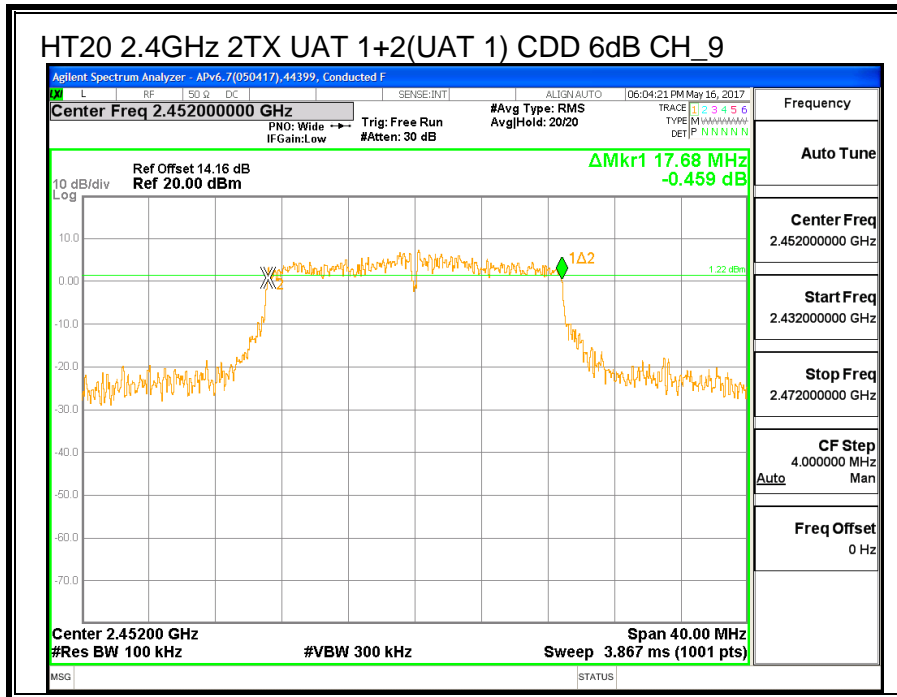


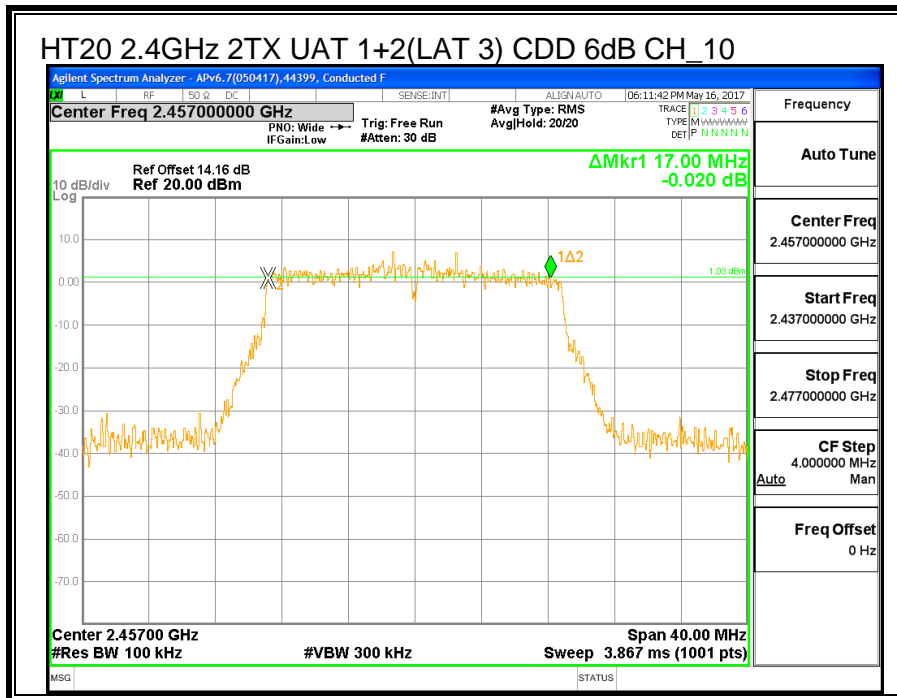
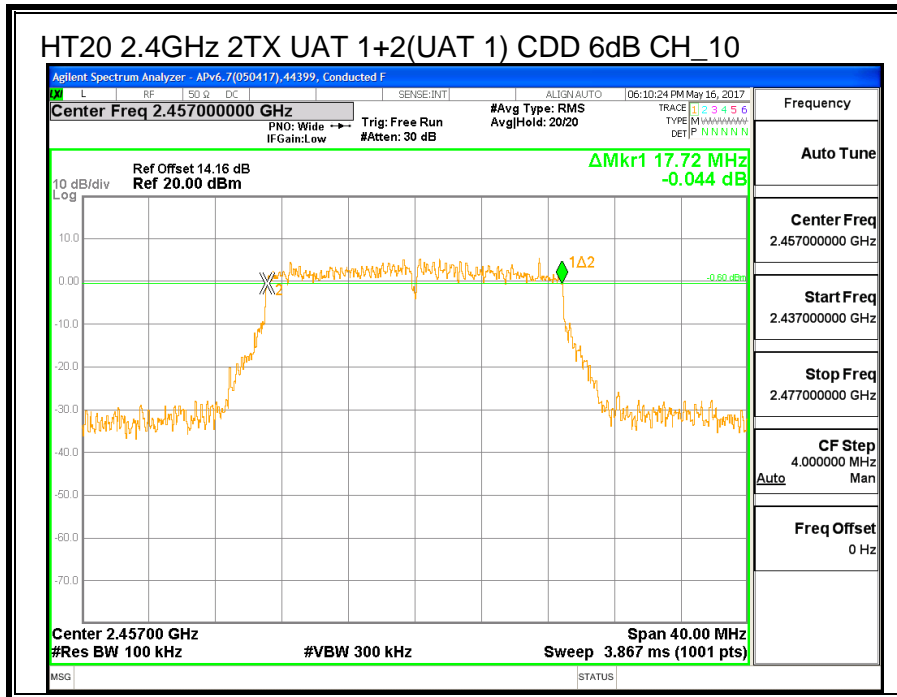


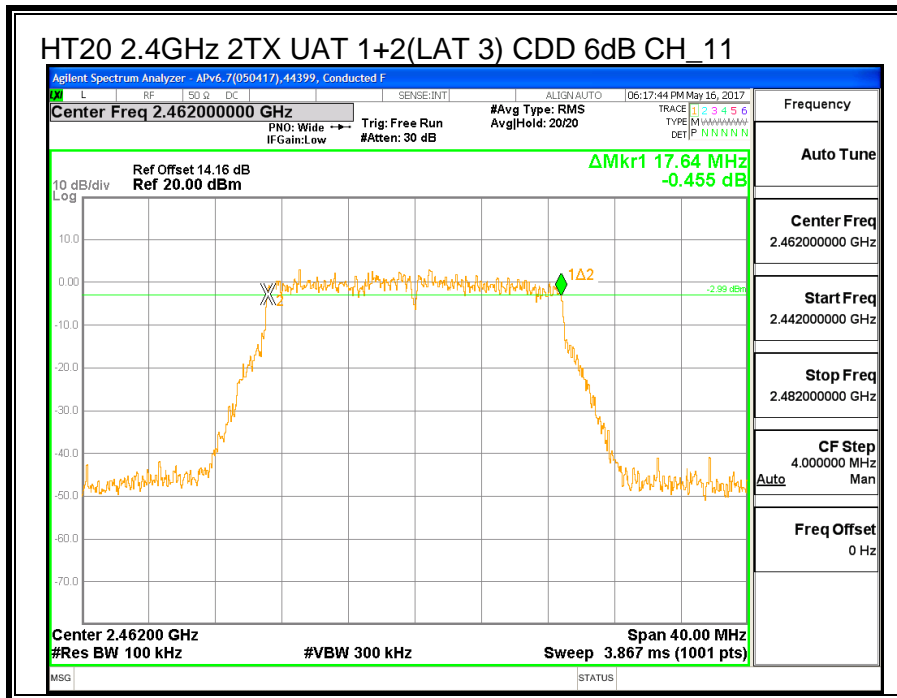
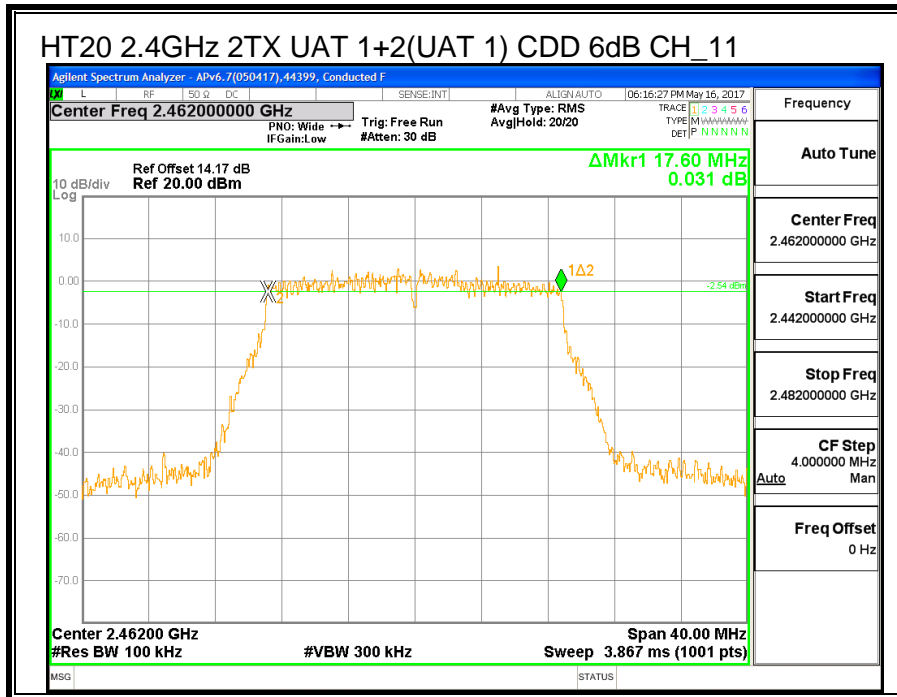


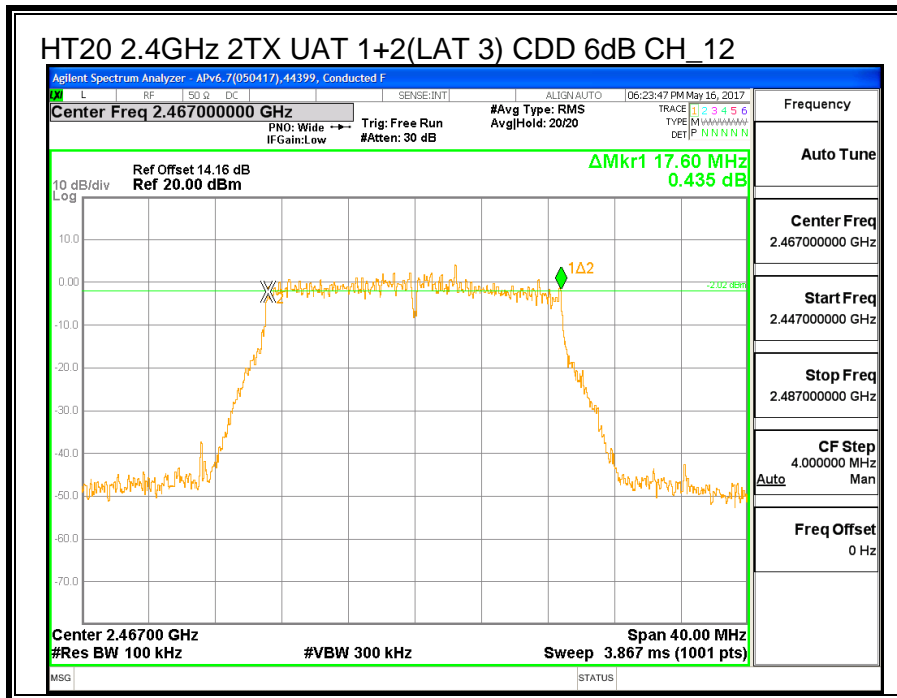
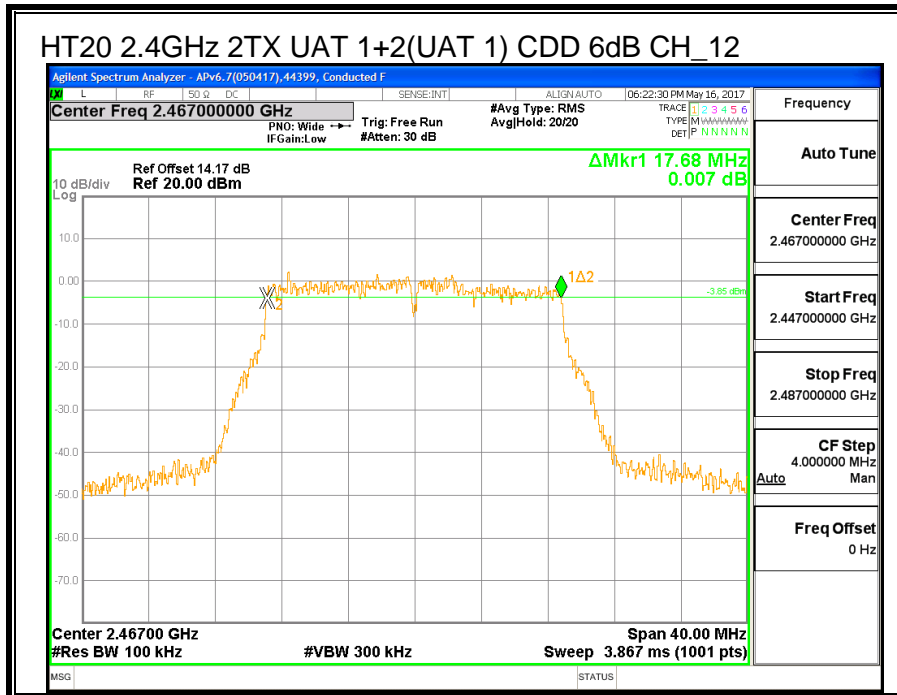


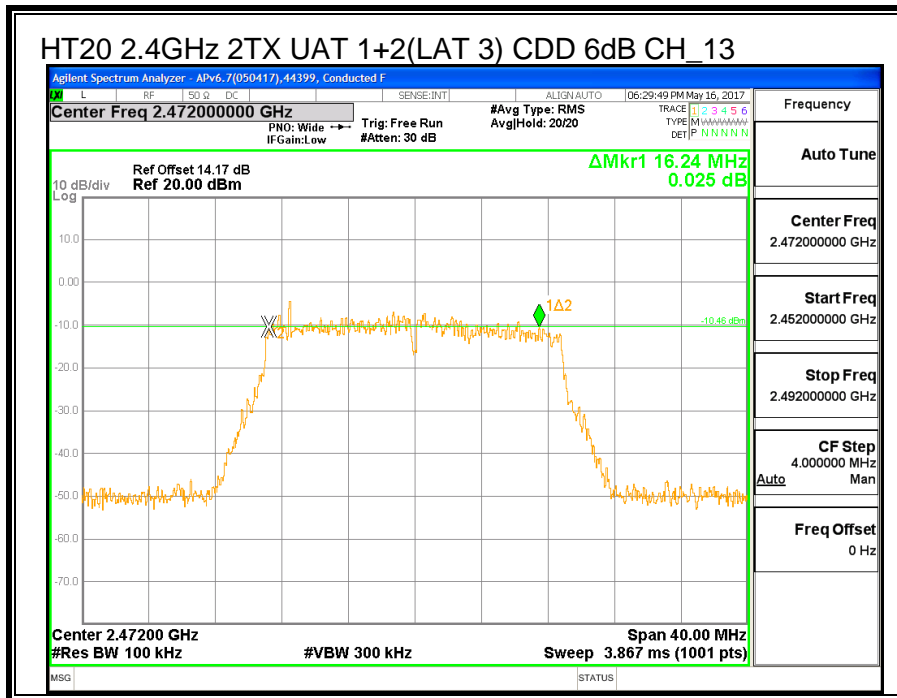
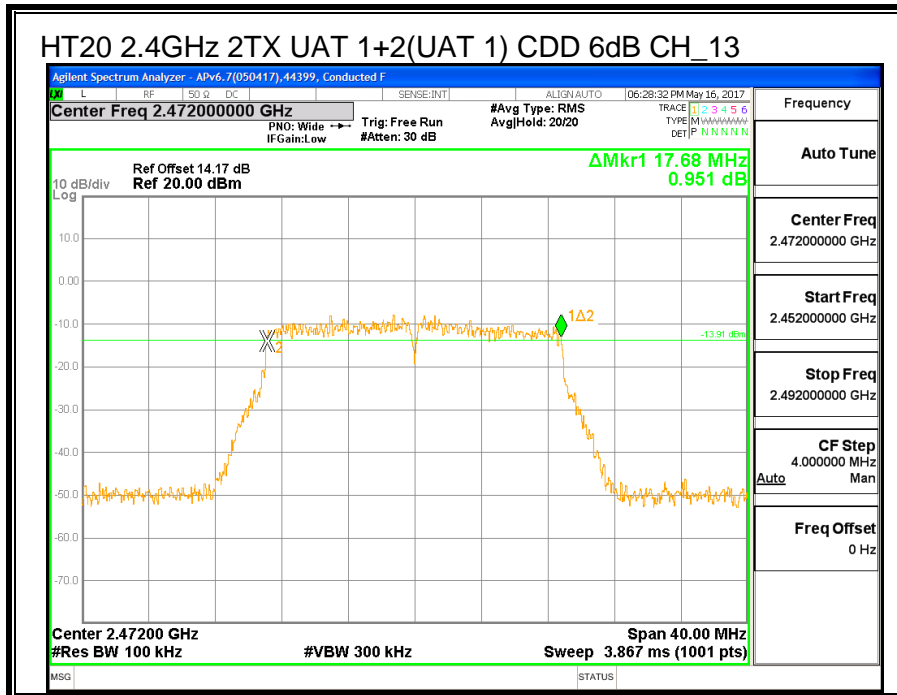












## 8.6.2. 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

### RESULTS

Channel	Frequency (MHz)	99% BW Ant 1 (MHz)	99% BW Ant 2 (MHz)
Low_1	2412	17.751	17.601
Low_2	2417	17.719	17.921
Low_3	2422	17.527	17.698
Low_4	2427	17.880	17.816
Middle_6	2437	18.046	17.794
High_9	2452	17.831	17.382
High_10	2457	17.796	17.681
High_11	2462	17.822	17.733
High_12	2467	17.697	17.747
High_13	2472	17.776	17.713

