

9.3. 11g 2TX CDD MIMO MODE IN THE 2.4GHz BAND

9.3.1. 6 dB BANDWIDTH

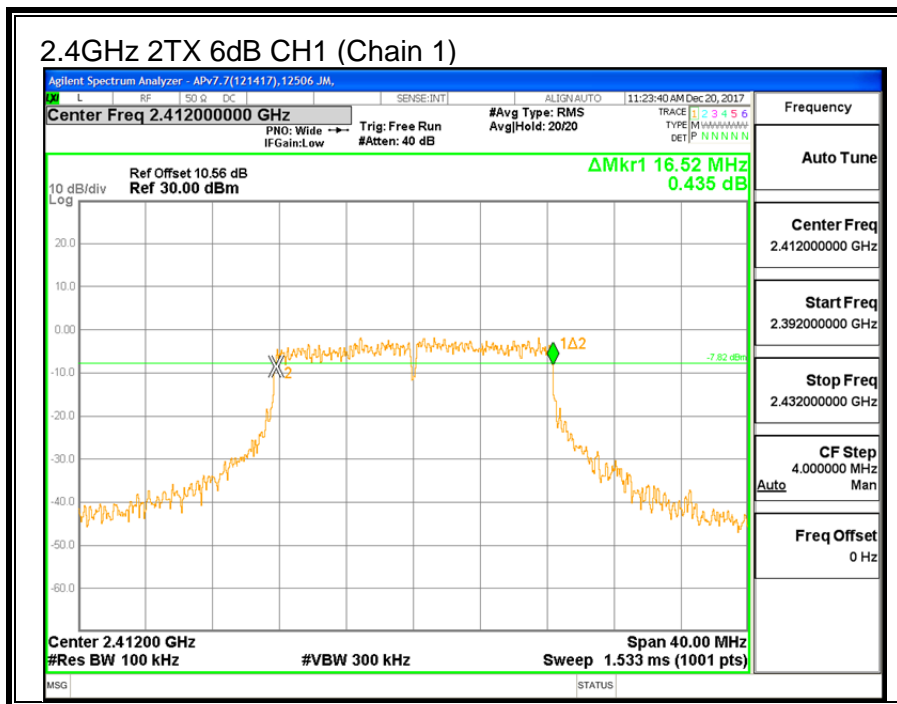
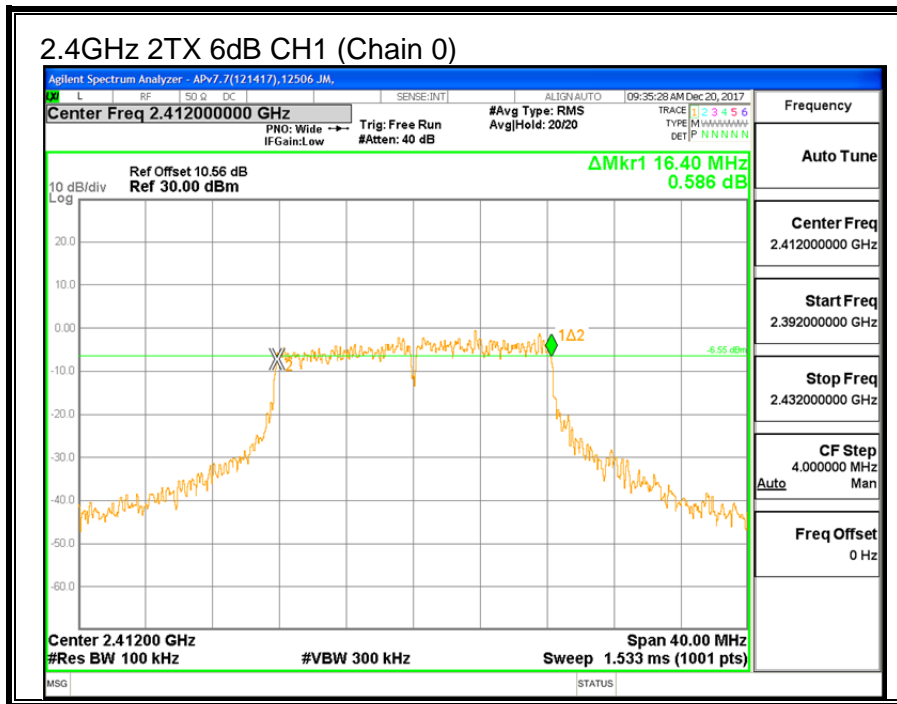
LIMITS

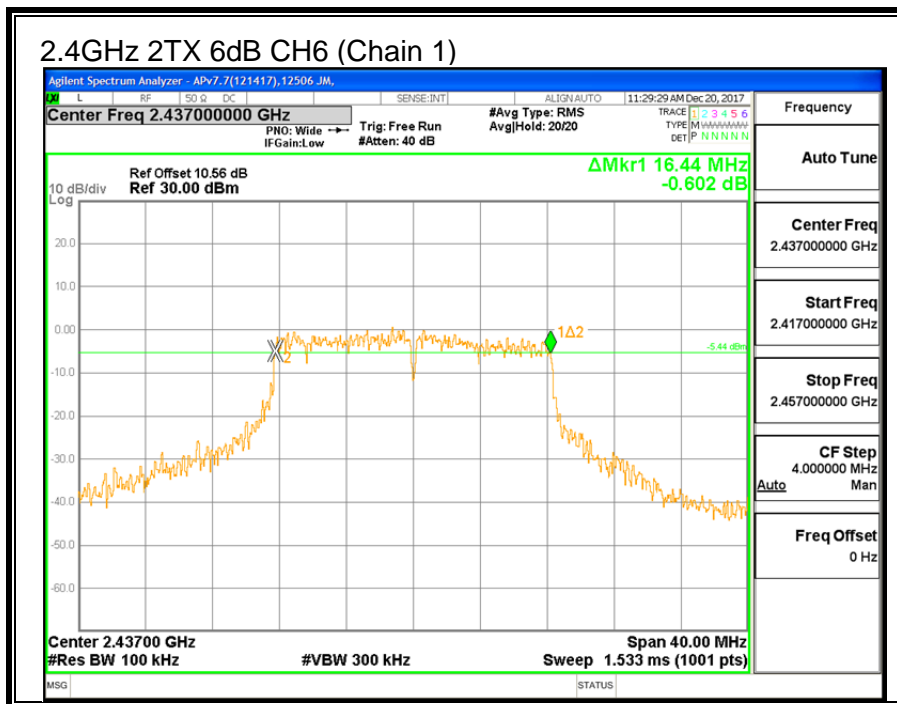
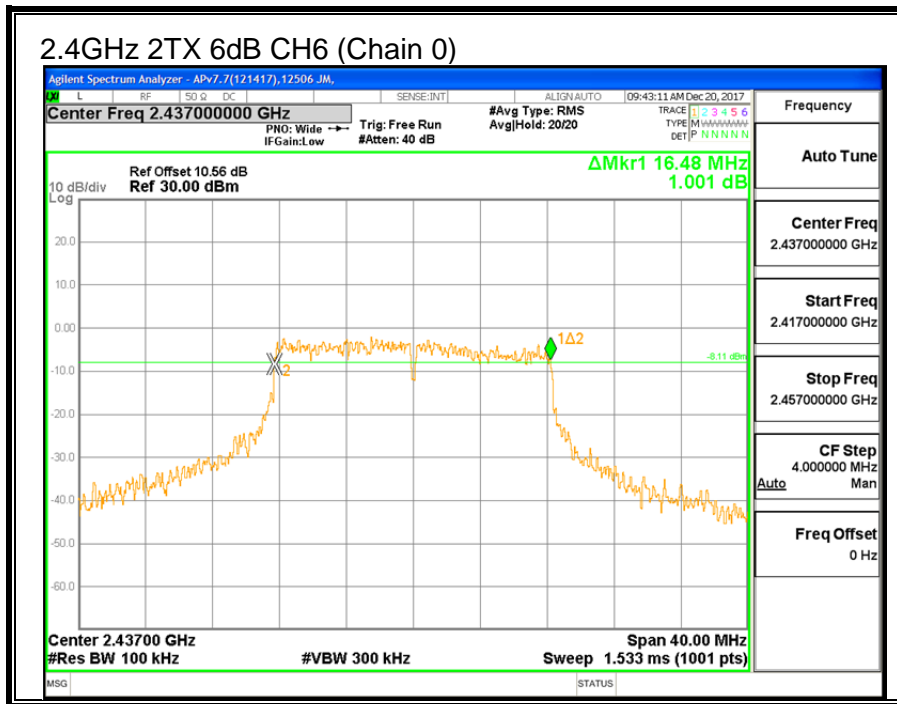
FCC §15.247 (a) (2)

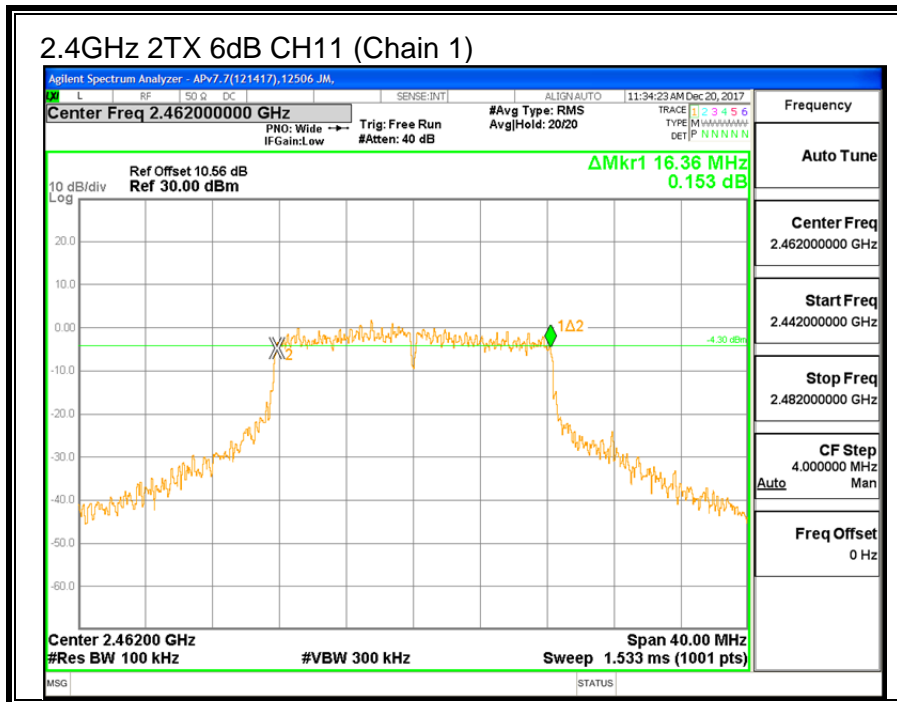
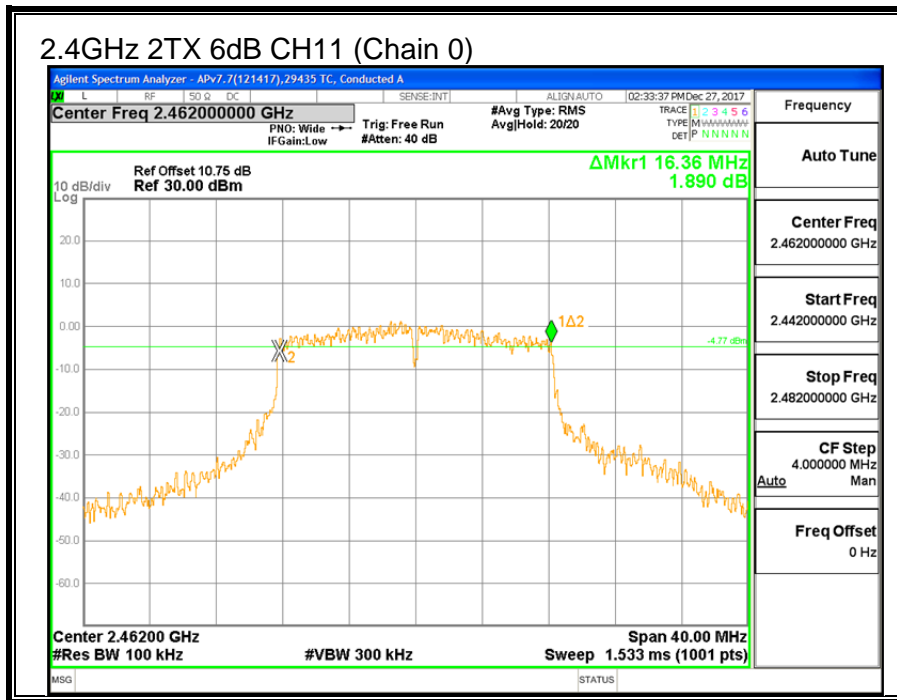
The minimum 6 dB bandwidth shall be at least 500 kHz.

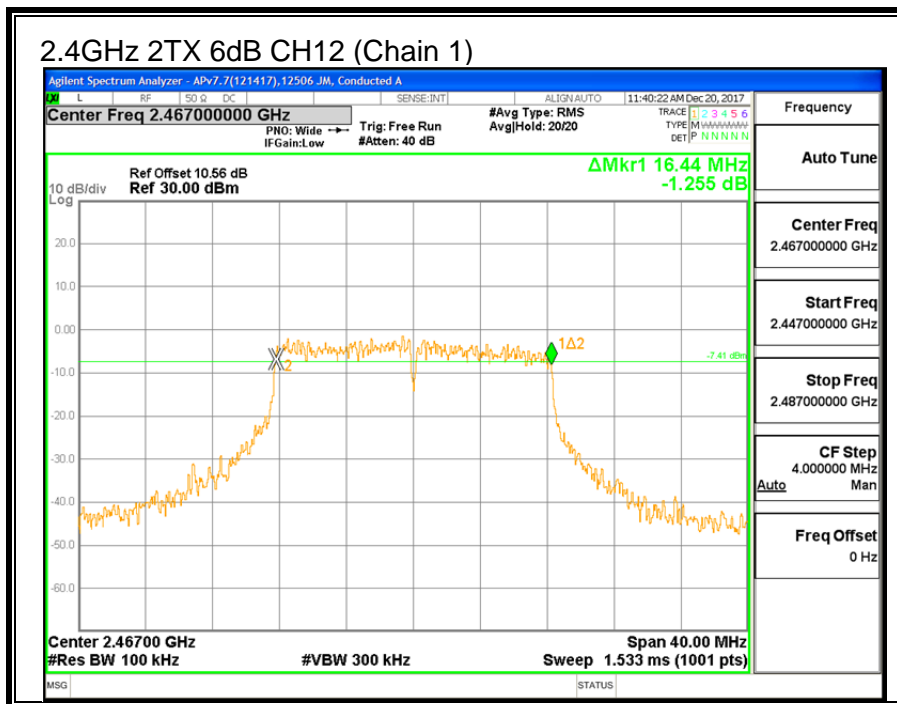
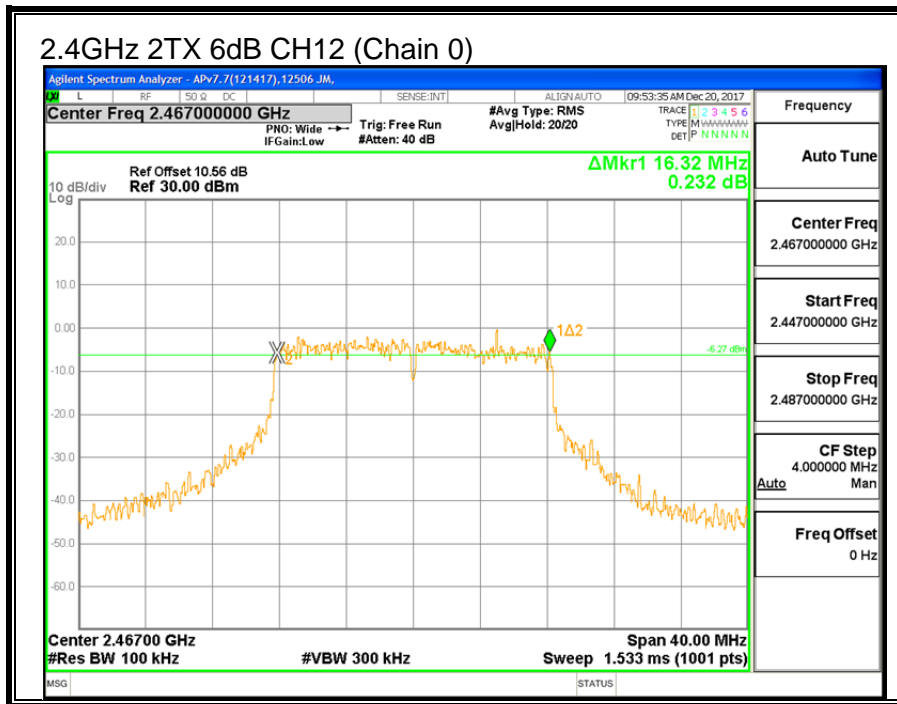
RESULTS

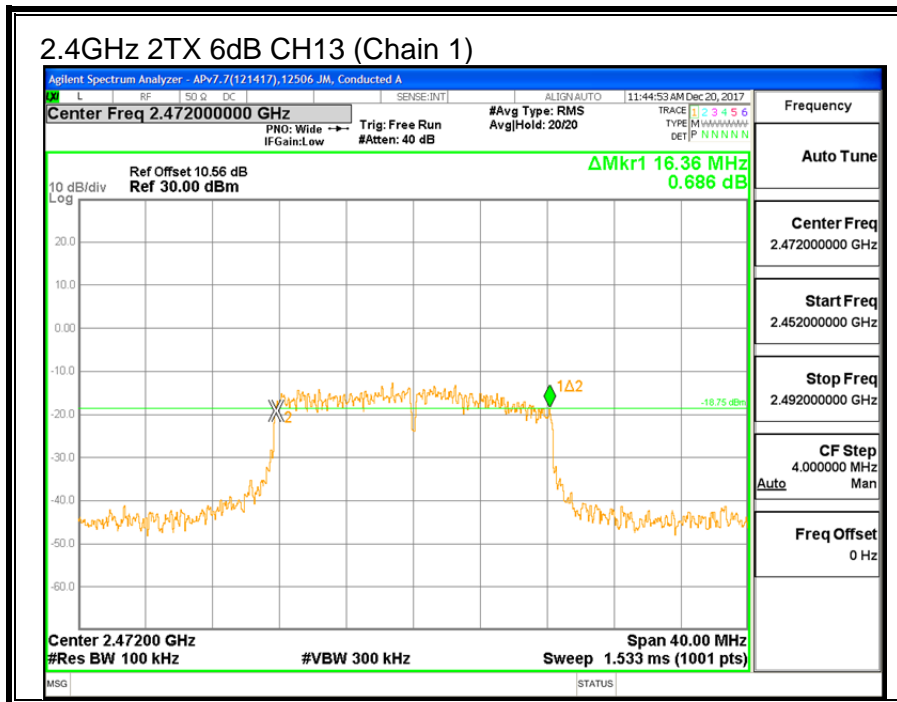
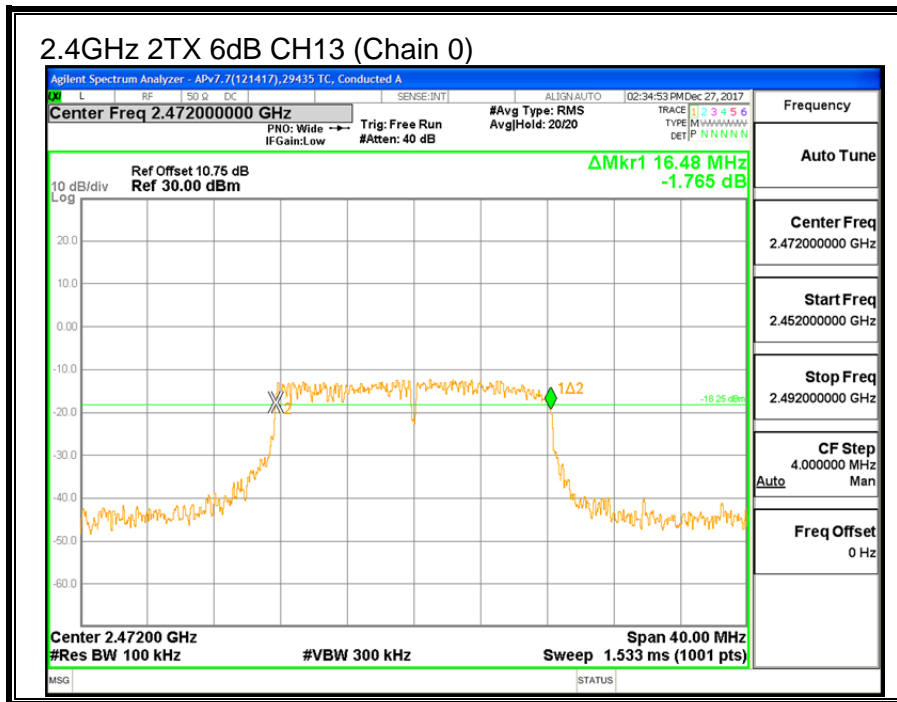
| Channel | Frequency | 6 dB BW Chain 0 (MHz) | 6 dB BW Chain 1 (MHz) | Minimum Limit (MHz) |
|---------|-----------|-----------------------------|-----------------------------|---------------------------|
| CH1 | 2412 | 16.40 | 16.52 | 0.5 |
| CH6 | 2437 | 16.48 | 16.44 | 0.5 |
| CH11 | 2462 | 16.36 | 16.36 | 0.5 |
| CH12 | 2467 | 16.32 | 16.44 | 0.5 |
| CH13 | 2472 | 16.48 | 16.36 | 0.5 |











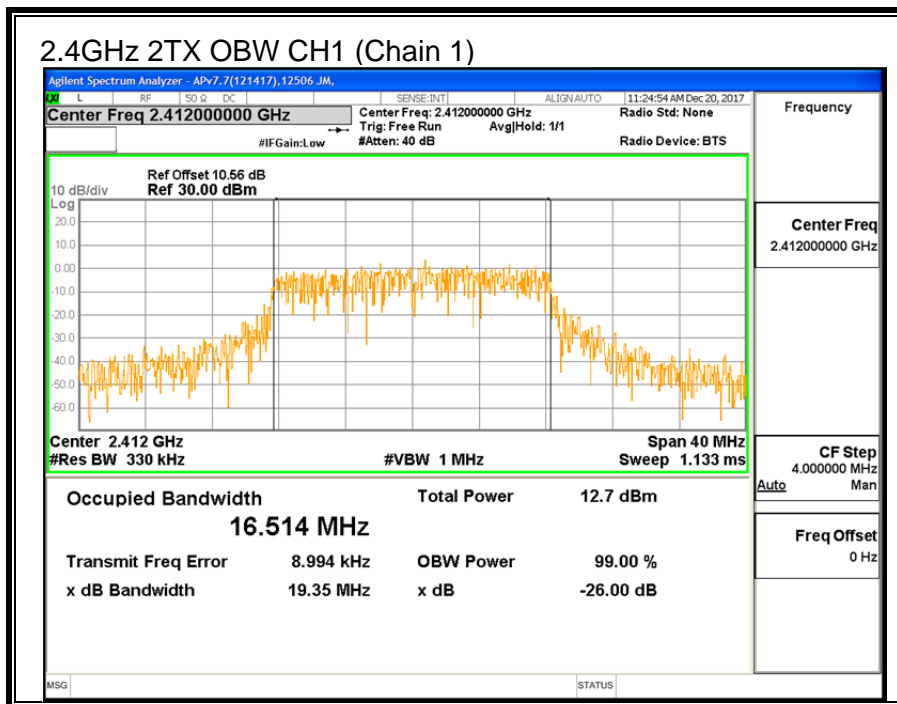
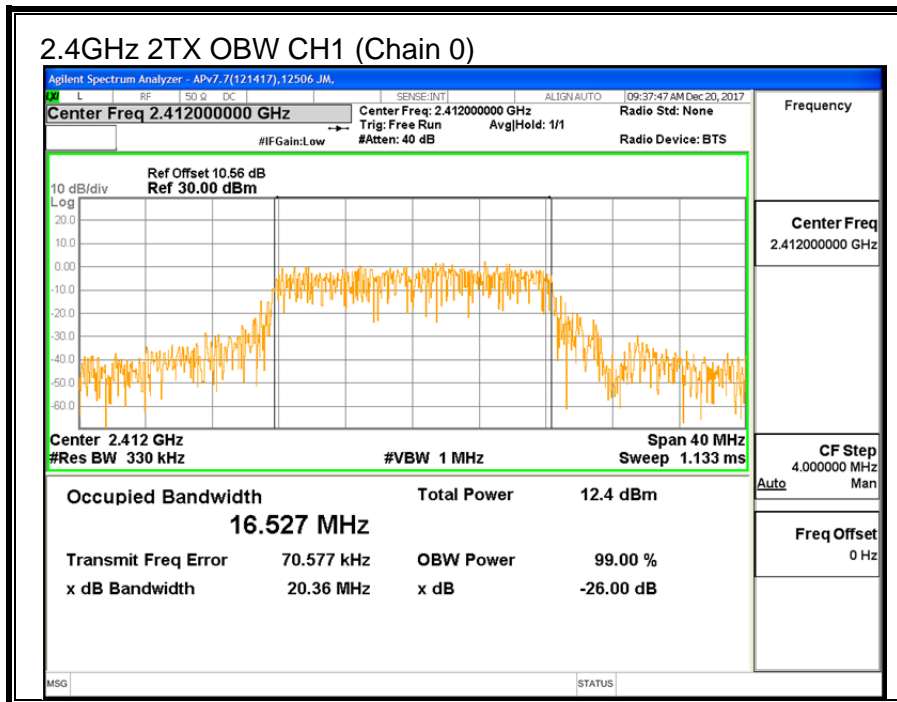
9.3.2. 99% BANDWIDTH

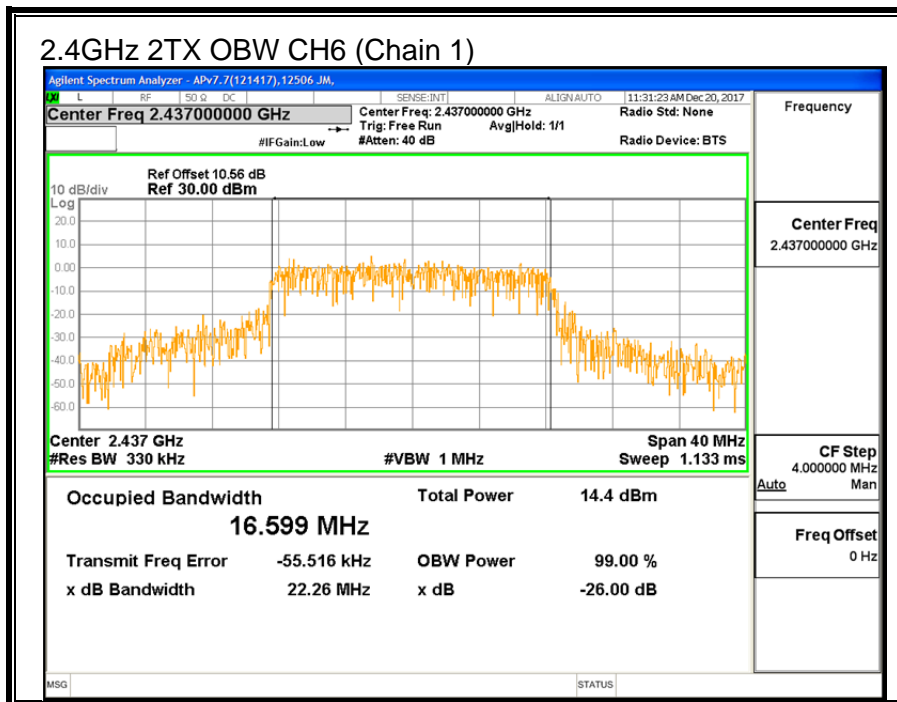
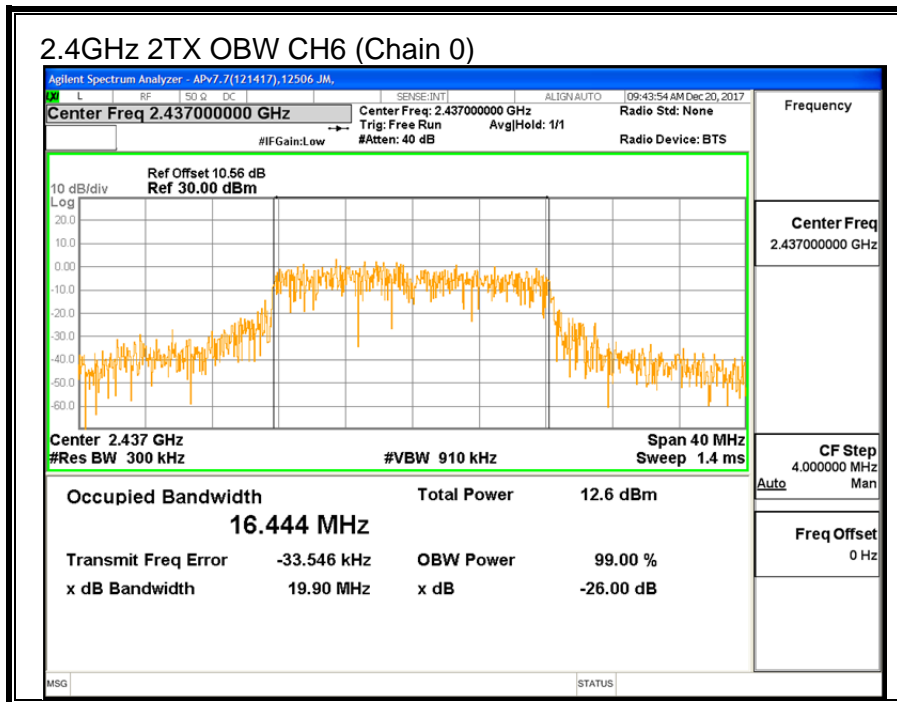
LIMITS

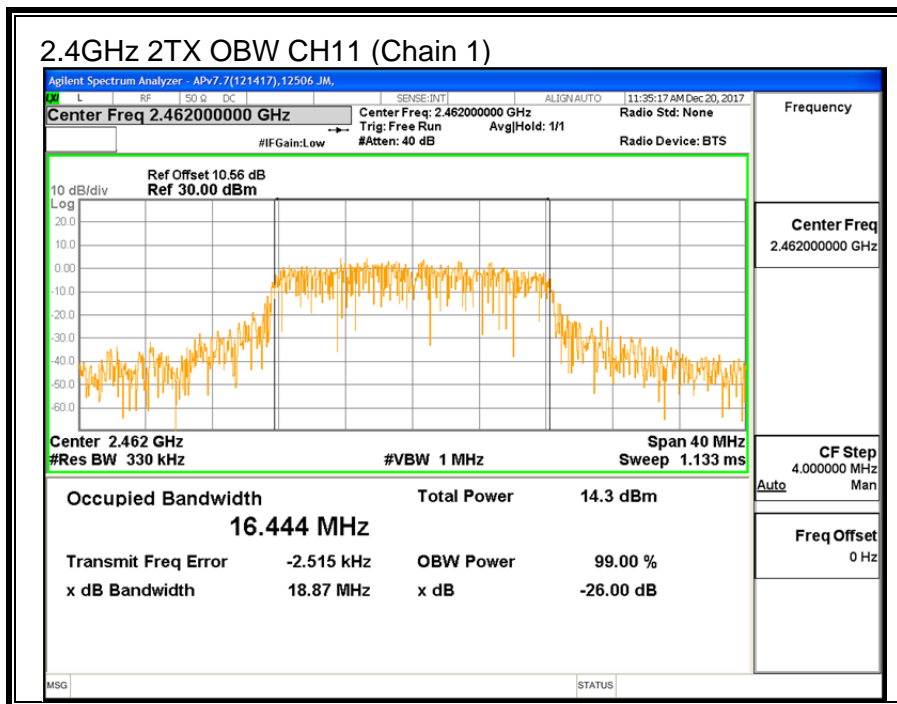
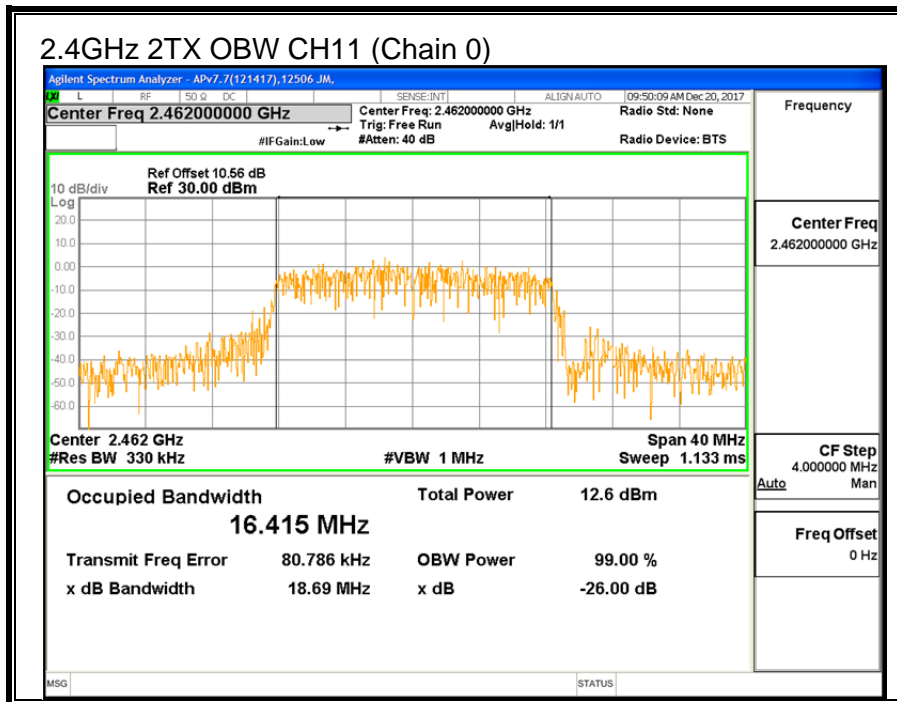
None; for reporting purposes only.

RESULTS

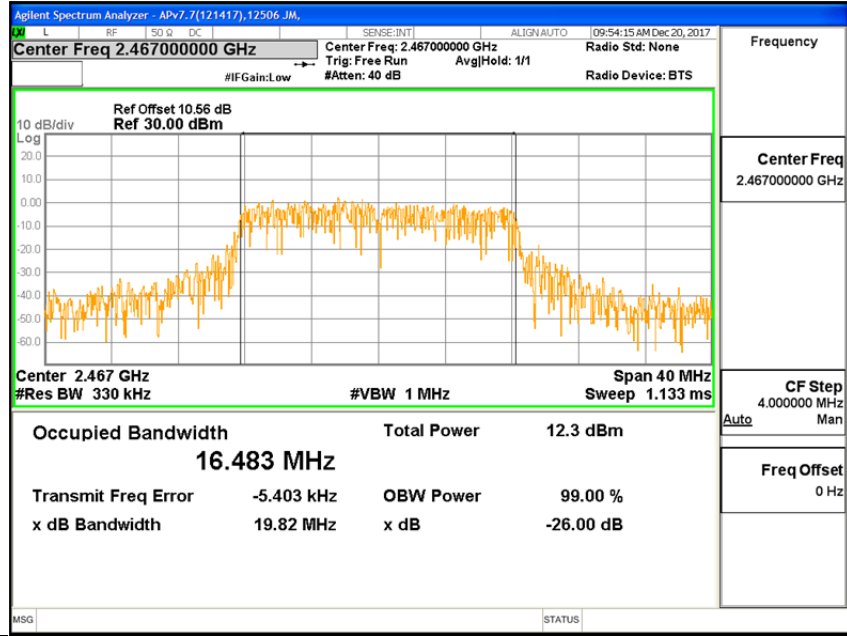
| Channel | Frequency (MHz) | 99% Bandwidth Chain 0 (MHz) | 99% Bandwidth Chain 1 (MHz) |
|---------|-----------------|-----------------------------|-----------------------------|
| CH1 | 2412 | 16.527 | 16.514 |
| CH6 | 2437 | 16.444 | 16.599 |
| CH11 | 2462 | 16.415 | 16.444 |
| CH12 | 2467 | 16.483 | 16.549 |
| CH13 | 2472 | 16.440 | 16.382 |



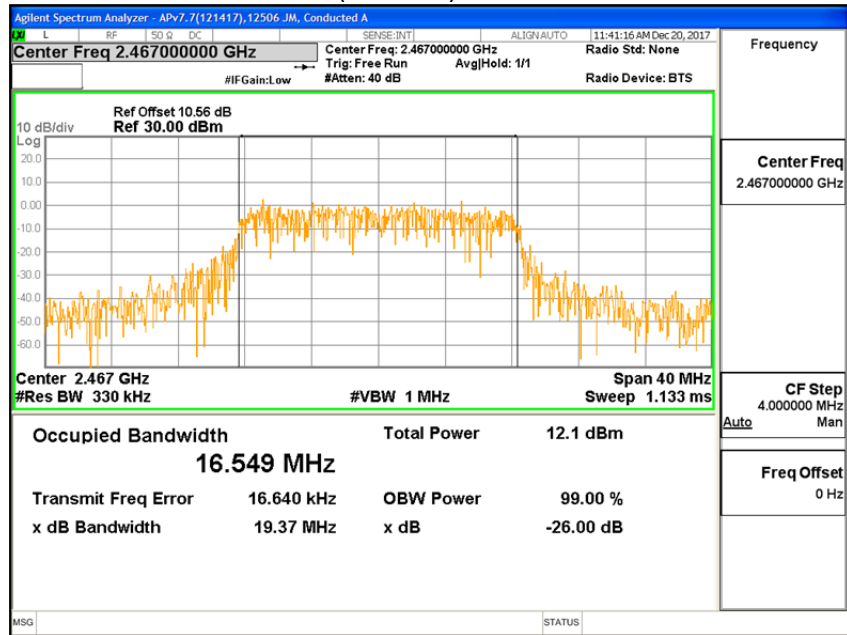


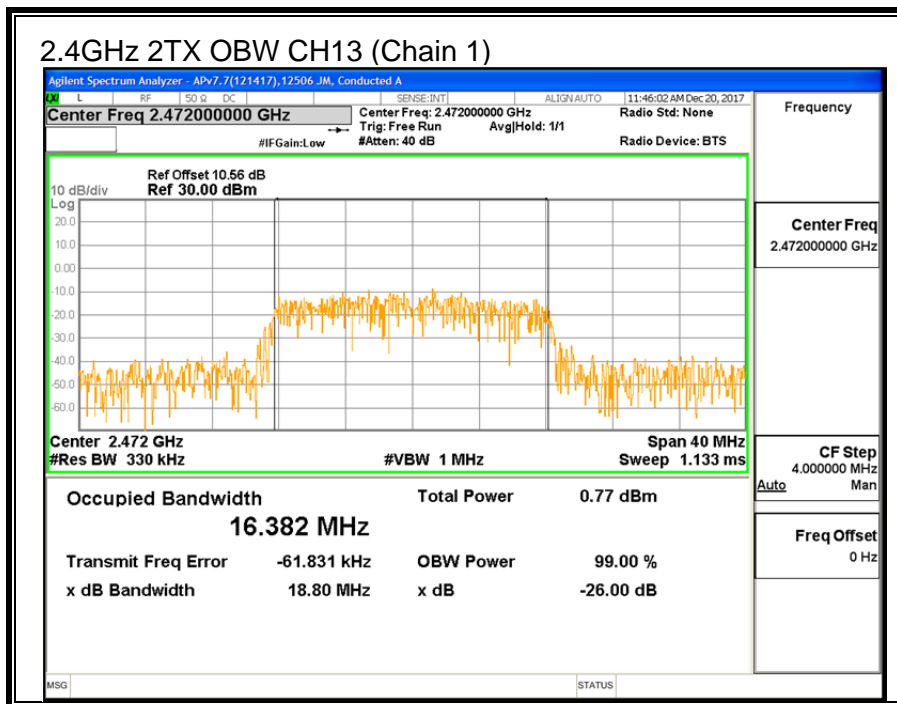
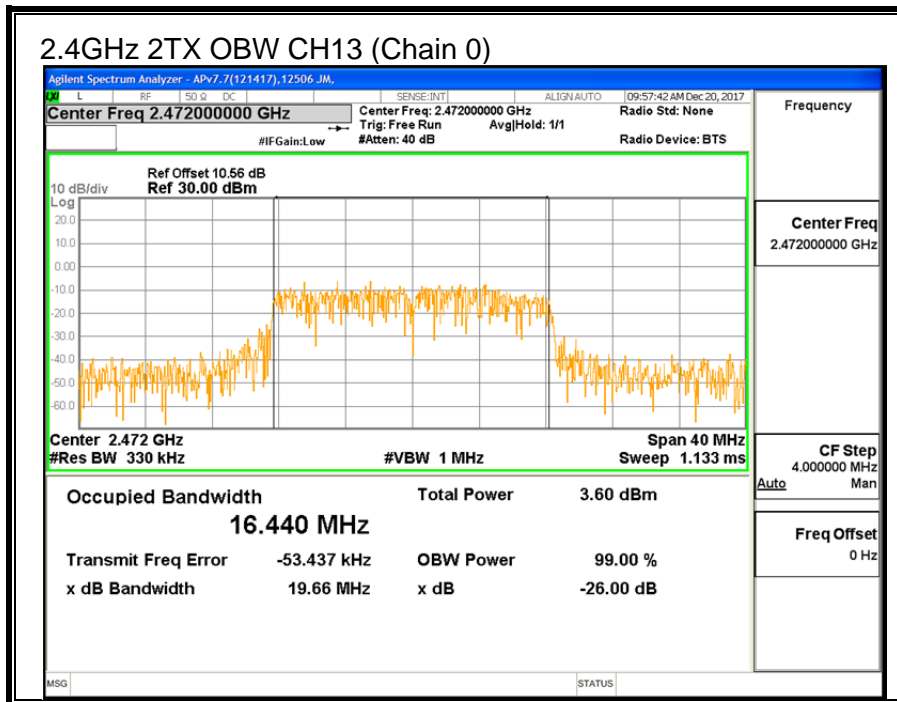


2.4GHz 2TX OBW CH12 (Chain 0)



2.4GHz 2TX OBW CH12 (Chain 1)





9.3.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

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.

TEST PROCEDURE

KDB 58074 D01 v04 Section 9.2.3.2

DIRECTIONAL ANTENNA GAIN

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

| Chain 0 Antenna Gain (dBi) | Chain 1 Antenna Gain (dBi) | Uncorrelated Chains Directional Gain (dBi) |
|-------------------------------------|-------------------------------------|---|
| -3.94 | -9.83 | -5.95 |

RESULTS

| | | | |
|------------|---------|--------------|----------|
| ID: | JM12056 | Date: | 12/19/17 |
|------------|---------|--------------|----------|

Limits

| Channel | Frequency (MHz) | Directional Gain (dBi) | FCC Power Limit (dBm) | IC Power Limit (dBm) | IC EIRP Limit (dBm) | Max Power (dBm) |
|---------|--------------------|------------------------------|--------------------------------|-------------------------------|------------------------------|-----------------------|
| CH1 | 2412 | -5.95 | 30.00 | 30 | 36 | 30.00 |
| CH6 | 2437 | -5.95 | 30.00 | 30 | 36 | 30.00 |
| CH11 | 2462 | -5.95 | 30.00 | 30 | 36 | 30.00 |
| CH12 | 2467 | -5.95 | 30.00 | 30 | 36 | 30.00 |
| CH13 | 2472 | -5.95 | 30.00 | 30 | 36 | 30.00 |

Results

| Channel | Frequency (MHz) | Chain 0 Meas Power (dBm) | Chain 1 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Margin (dB) |
|---------|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|----------------|
| CH1 | 2412 | 12.35 | 13.02 | 15.71 | 30.00 | -14.29 |
| CH6 | 2437 | 12.39 | 14.53 | 16.60 | 30.00 | -13.40 |
| CH11 | 2462 | 12.27 | 14.70 | 16.66 | 30.00 | -13.34 |
| CH12 | 2467 | 12.33 | 12.60 | 15.48 | 30.00 | -14.52 |
| CH13 | 2472 | 3.55 | 1.01 | 5.47 | 30.00 | -24.53 |

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.3.4. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

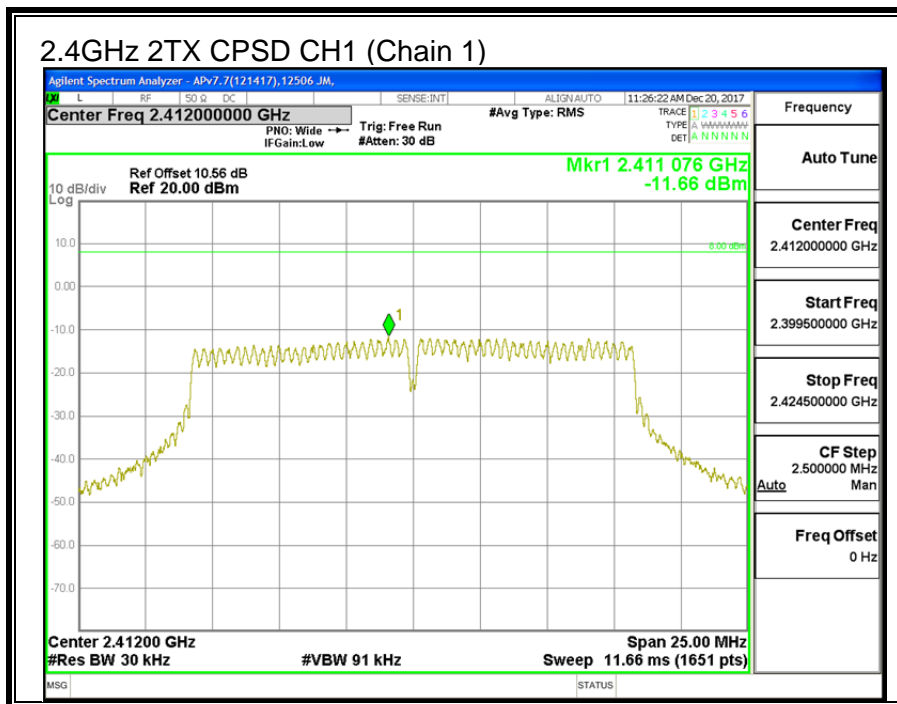
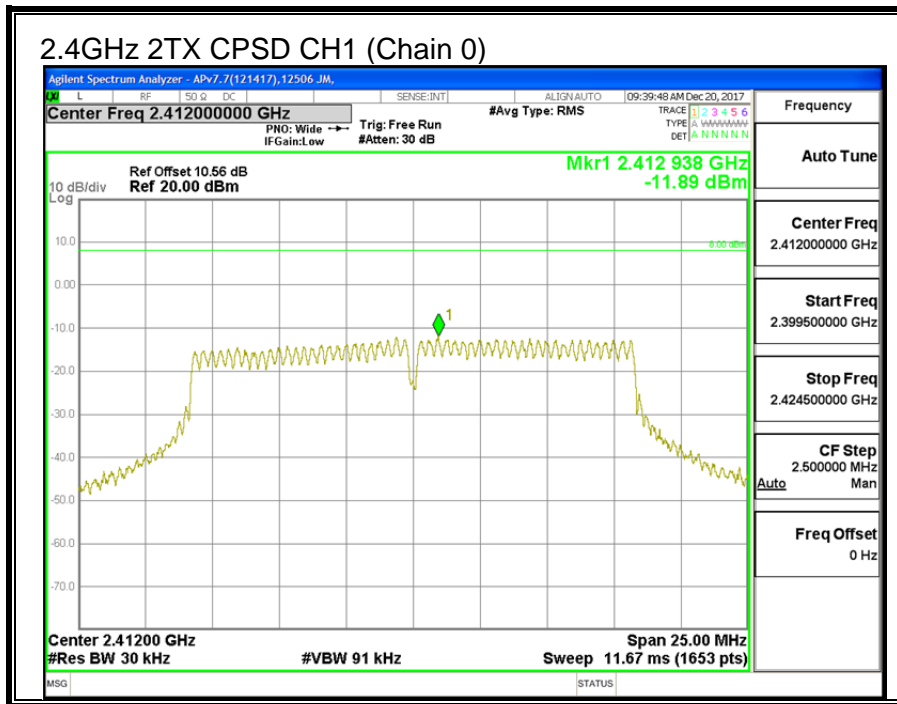
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 KHz band during any time interval of continuous transmissions.

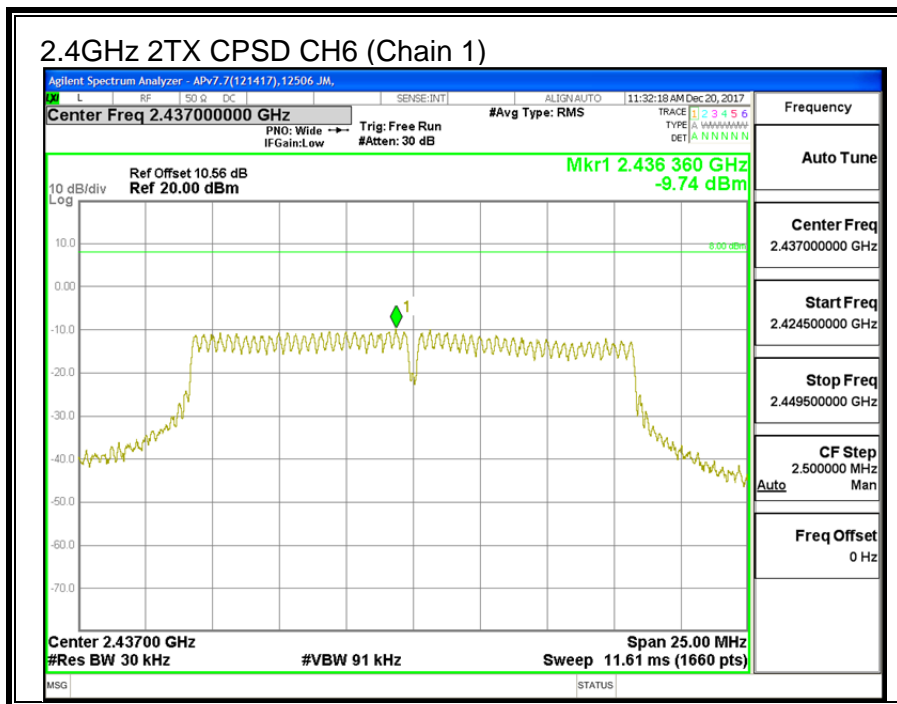
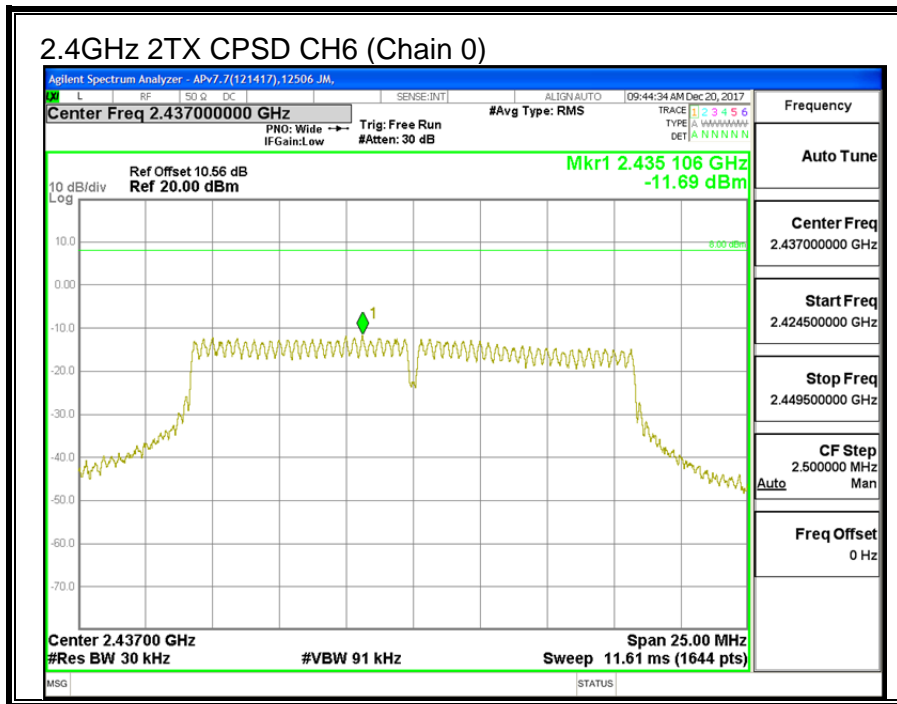
RESULTS

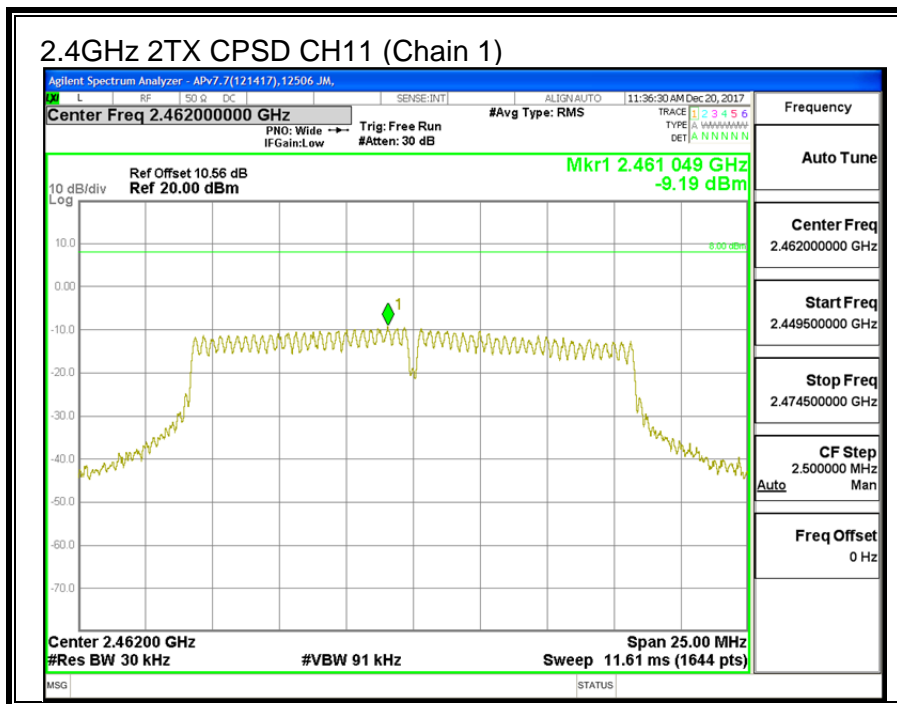
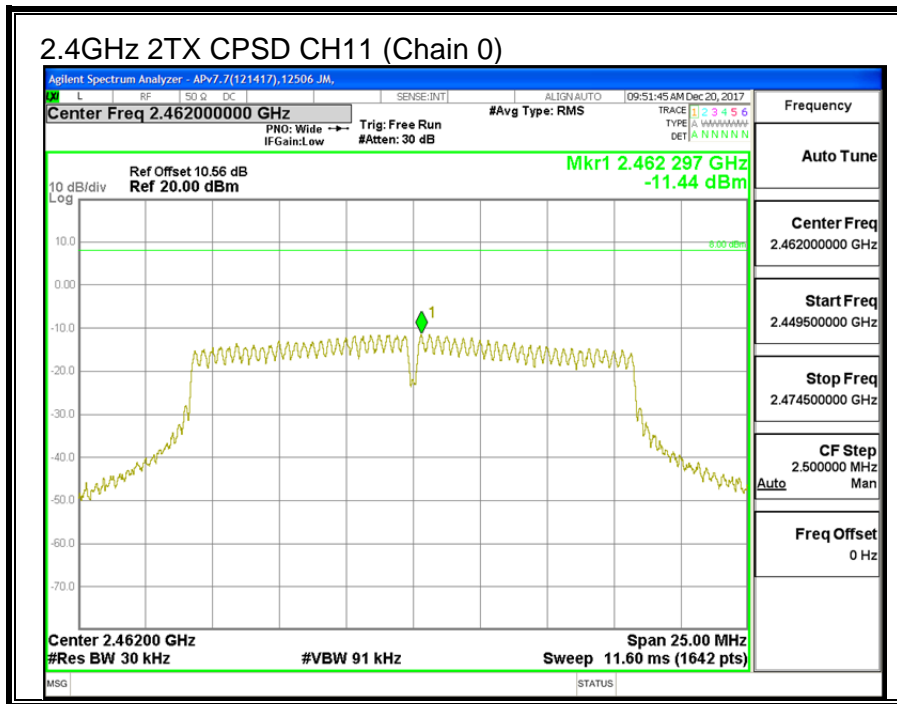
| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

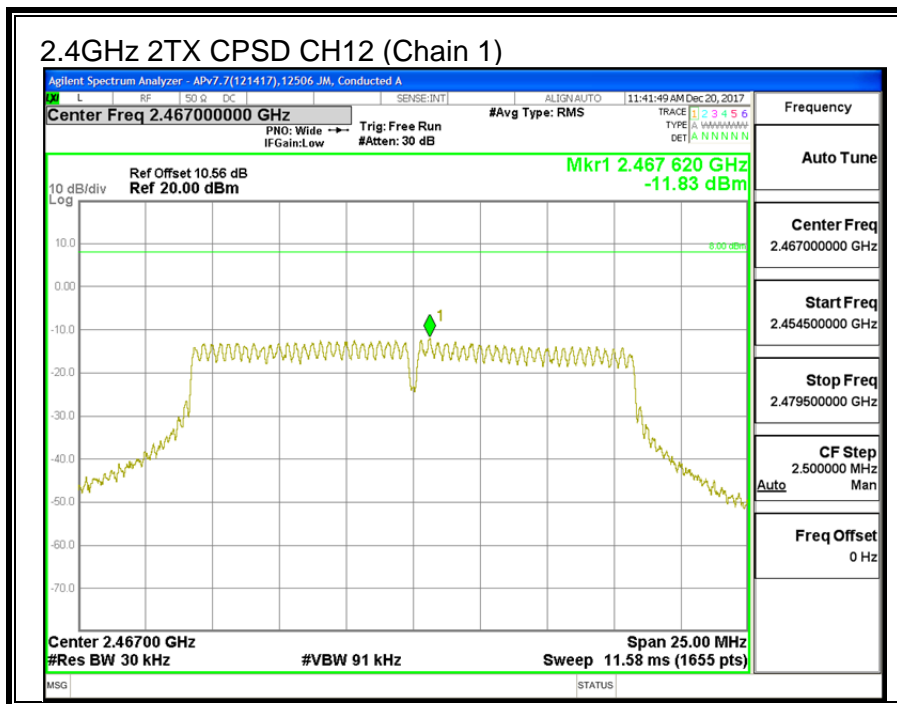
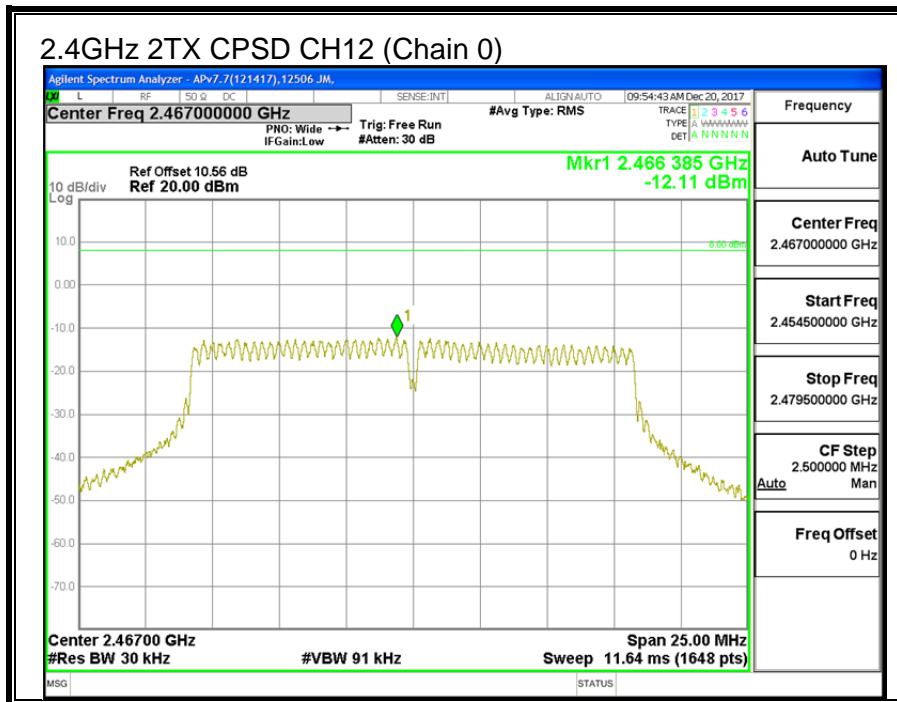
PSD Results

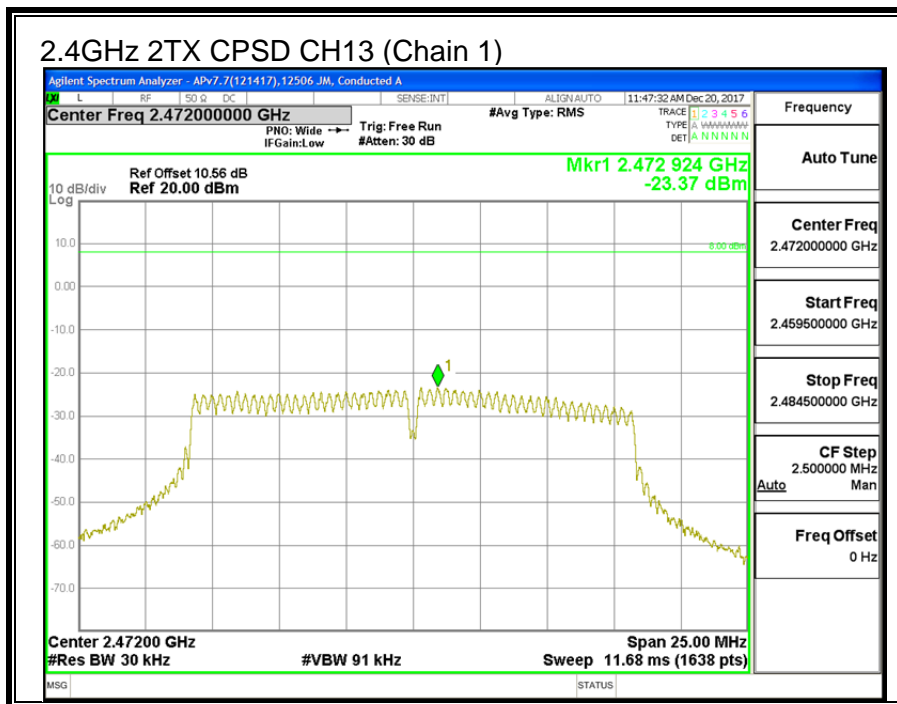
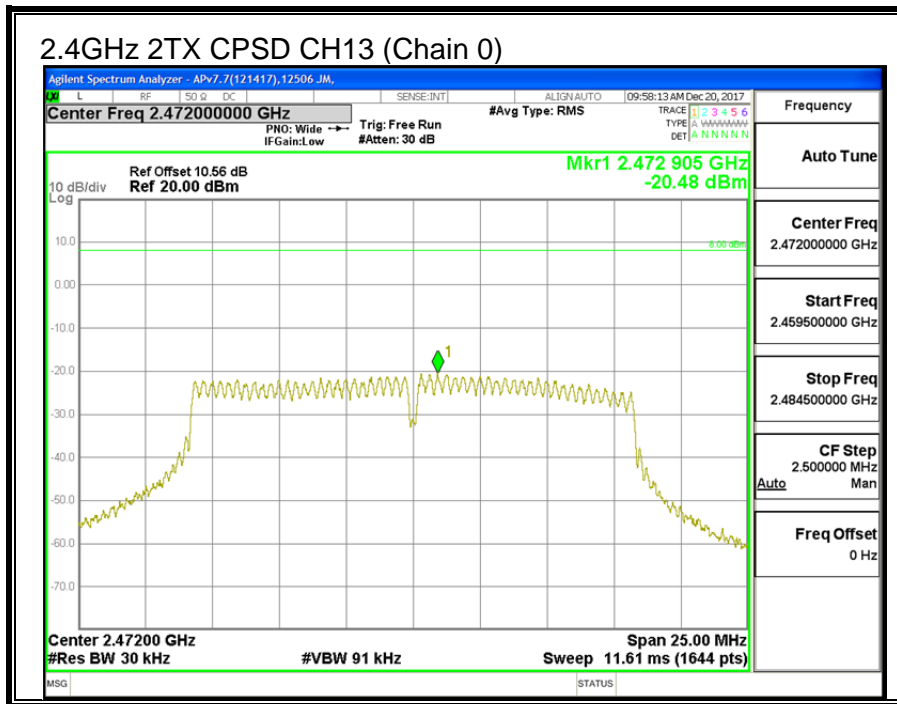
| Channel | Frequency (MHz) | Chain 0 Meas (dBm) | Chain 1 Meas (dBm) | Total Corr'd PSD (dBm) | Limit (dBm) | Margin (dB) |
|----------------|----------------------------|-----------------------------------|-----------------------------------|---|------------------------|------------------------|
| CH1 | 2412 | -11.89 | -11.66 | -8.76 | 8.0 | -16.8 |
| CH6 | 2437 | -11.69 | -9.74 | -7.60 | 8.0 | -15.6 |
| CH11 | 2462 | -11.44 | -9.19 | -7.16 | 8.0 | -15.2 |
| CH12 | 2467 | -12.11 | -11.83 | -8.96 | 8.0 | -17.0 |
| CH13 | 2472 | -20.48 | -23.37 | -18.68 | 8.0 | -26.7 |











9.3.5. CONDUCTED BANEDGE AND SPURIOUS EMISSIONS

