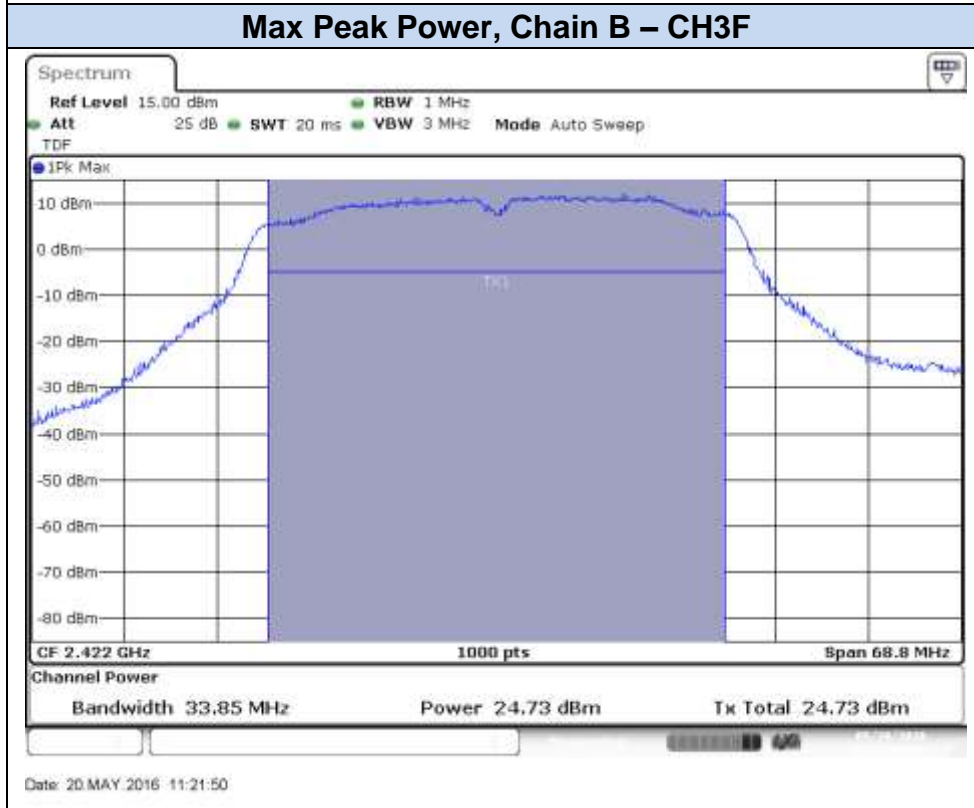
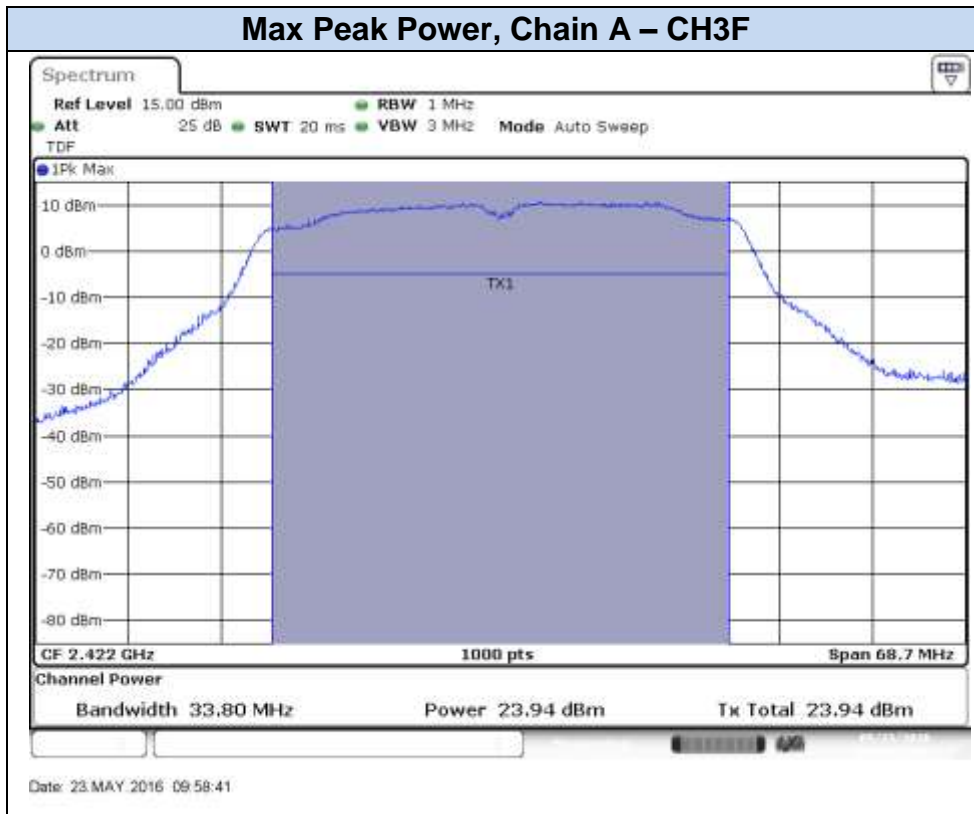
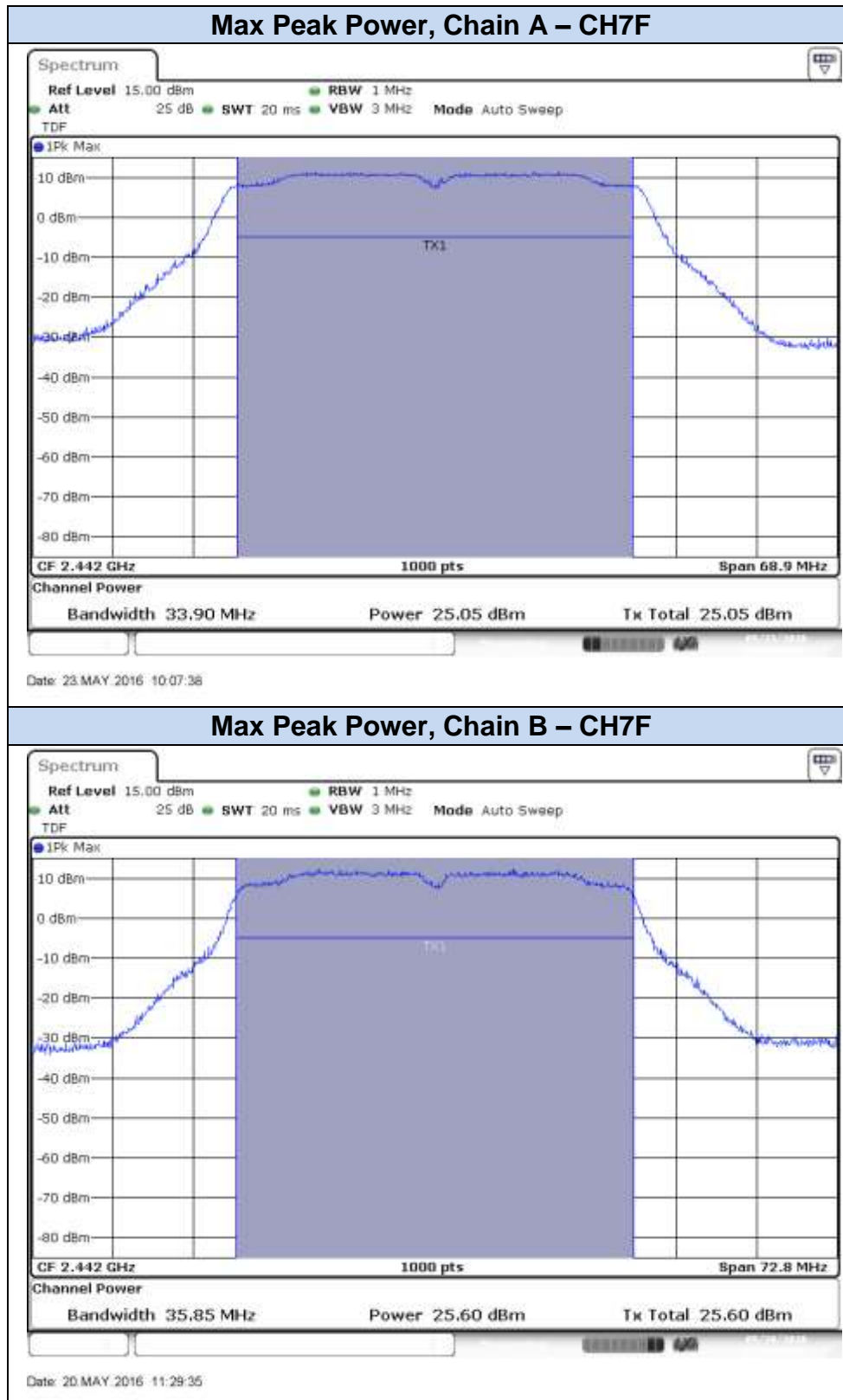
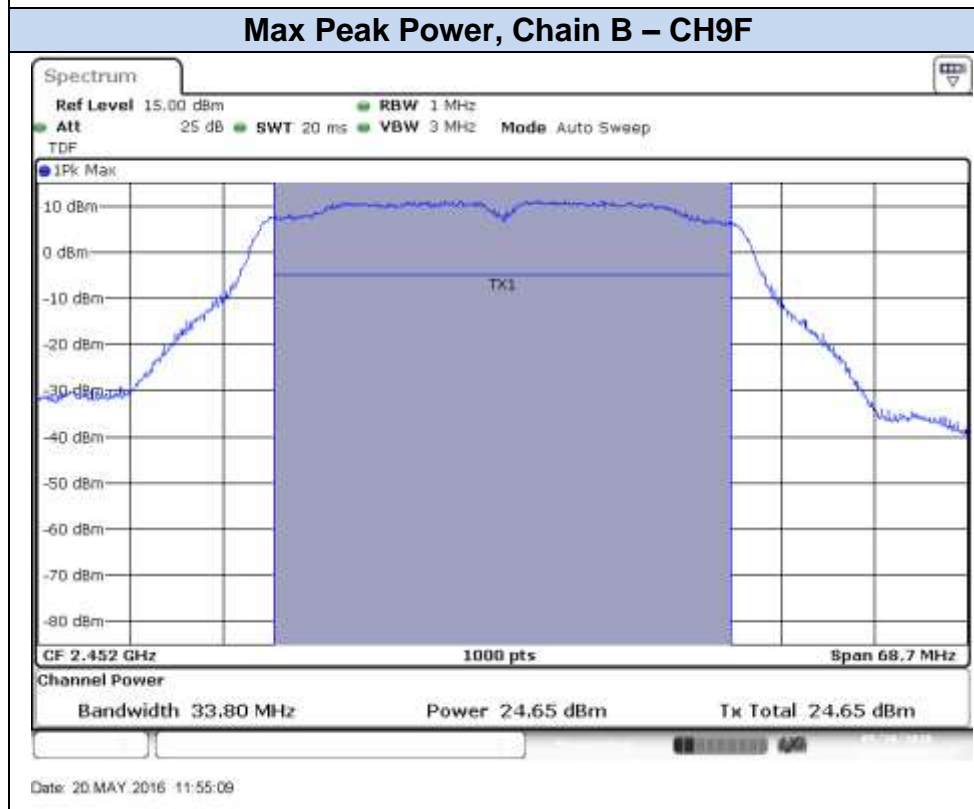
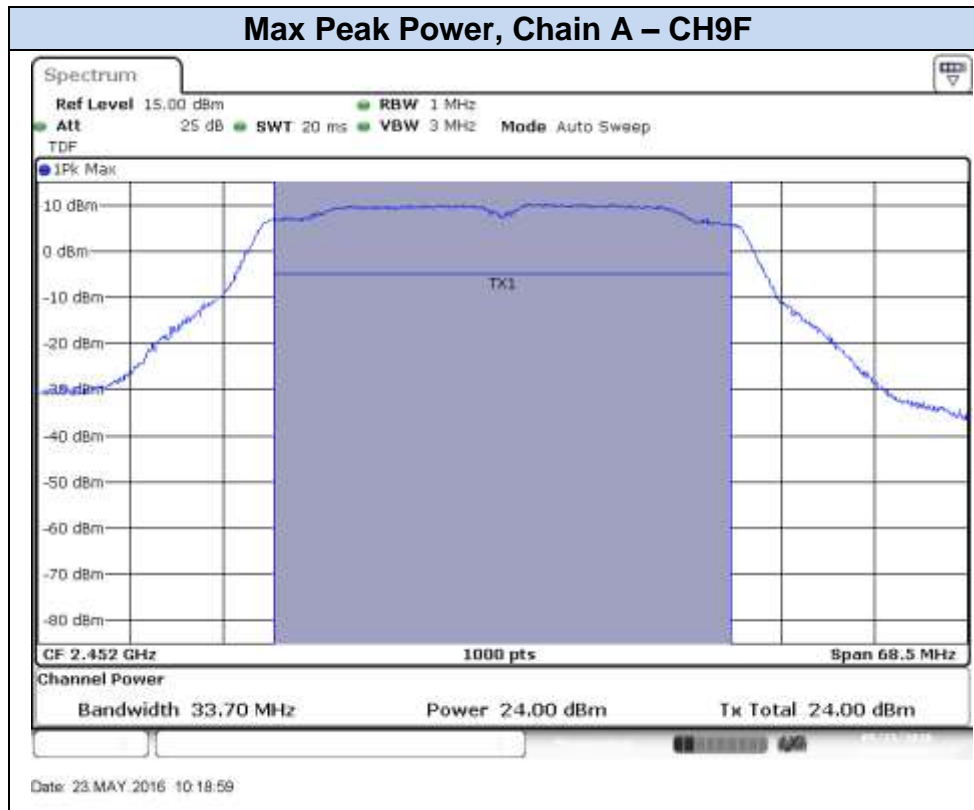
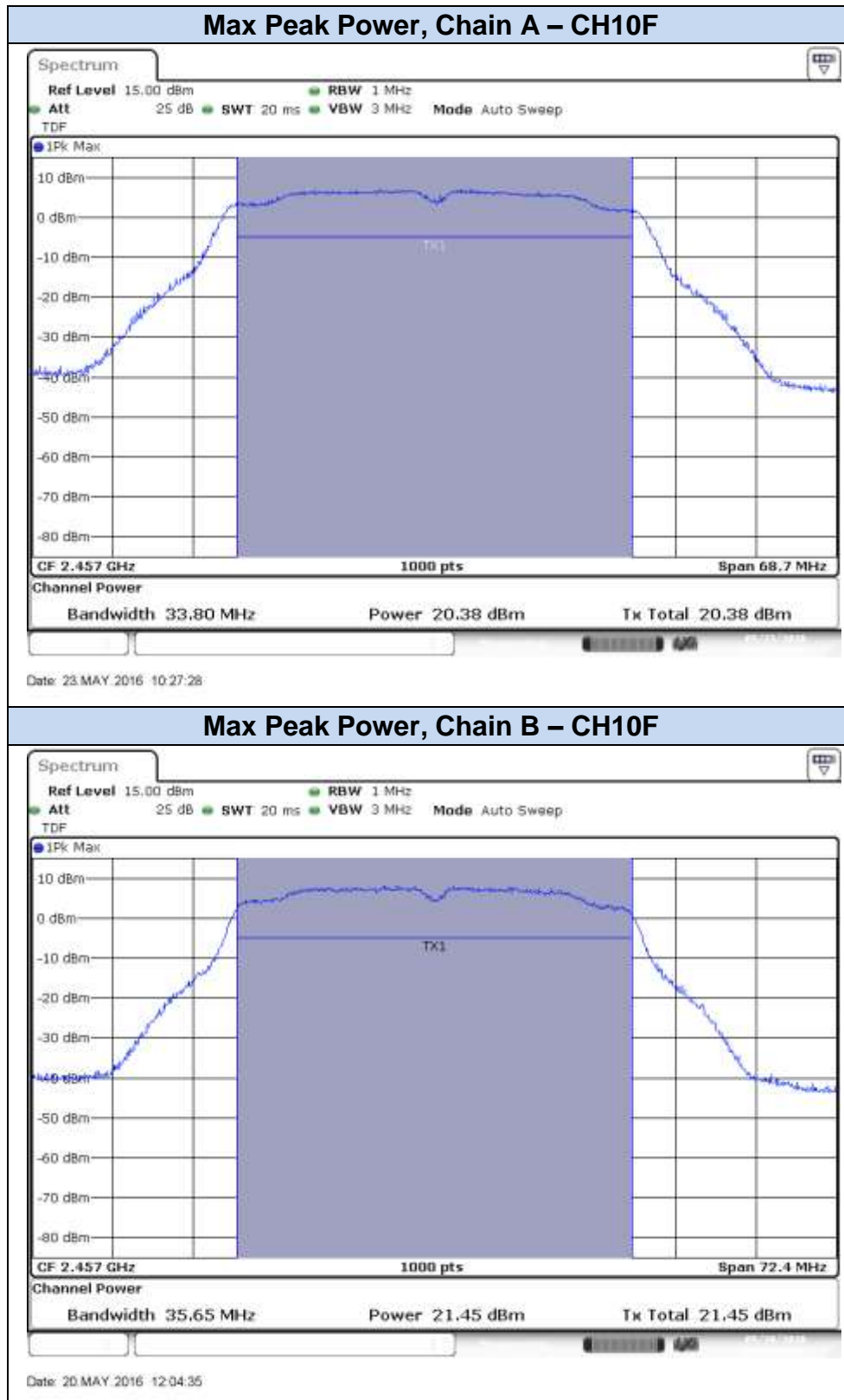


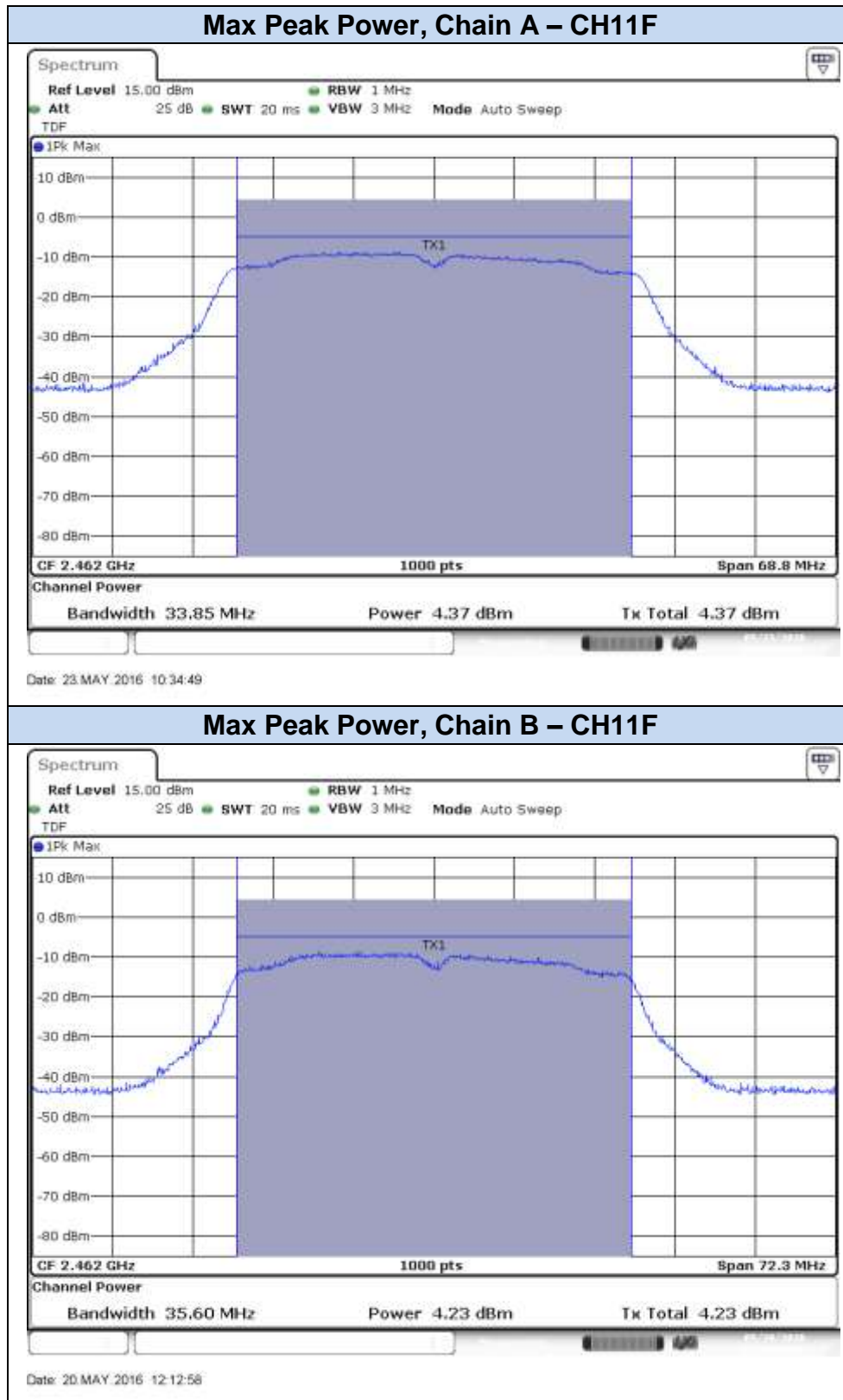
802.11n40 (MIMO), HT8











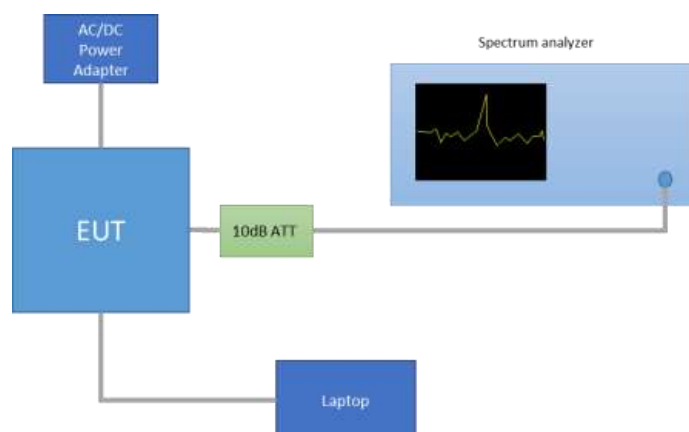
B.3 Out-of-band emissions (conducted)

Test limits:

| FCC part | RSS part | Limits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------------------------------|--|--------------------|-----------------------|-------------------------|--------------------|-------------|-------------|---|-----|-------------|--------------|---|-----|------------|----|---|----|-------|-----|----|---|--------|-----|------|---|---------|-----|----|---|-----------|-----|----|---|
| 15.247 (d) | RSS-247 Clause 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15.209 | RSS-247 Clause 6.2.2 (2) | <p>Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a):</p> <table border="1"> <thead> <tr> <th>Freq Range (MHz)</th> <th>Field Strength (μV/m)</th> <th>Field Strength (dBμV/m)</th> <th>Meas. Distance (m)</th> </tr> </thead> <tbody> <tr> <td>0.009-0.490</td> <td>2400/f(kHz)</td> <td>-</td> <td>300</td> </tr> <tr> <td>0.490-1.705</td> <td>24000/f(kHz)</td> <td>-</td> <td>300</td> </tr> <tr> <td>1.705-30.0</td> <td>30</td> <td>-</td> <td>30</td> </tr> <tr> <td>30-88</td> <td>100</td> <td>40</td> <td>3</td> </tr> <tr> <td>88-216</td> <td>150</td> <td>43.5</td> <td>3</td> </tr> <tr> <td>216-960</td> <td>200</td> <td>46</td> <td>3</td> </tr> <tr> <td>Above 960</td> <td>500</td> <td>54</td> <td>3</td> </tr> </tbody> </table> <p>The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p> <p>For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function, corresponding to 20 dB above the indicated values in the table.</p> | Freq Range (MHz) | Field Strength (μV/m) | Field Strength (dBμV/m) | Meas. Distance (m) | 0.009-0.490 | 2400/f(kHz) | - | 300 | 0.490-1.705 | 24000/f(kHz) | - | 300 | 1.705-30.0 | 30 | - | 30 | 30-88 | 100 | 40 | 3 | 88-216 | 150 | 43.5 | 3 | 216-960 | 200 | 46 | 3 | Above 960 | 500 | 54 | 3 |
| Freq Range (MHz) | Field Strength (μV/m) | Field Strength (dBμV/m) | Meas. Distance (m) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.009-0.490 | 2400/f(kHz) | - | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.490-1.705 | 24000/f(kHz) | - | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.705-30.0 | 30 | - | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30-88 | 100 | 40 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88-216 | 150 | 43.5 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 216-960 | 200 | 46 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Above 960 | 500 | 54 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Test procedure:

The setup below was used to measure the out-of-band emissions. The antenna terminal of the EUT is connected to the spectrum analyzer through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss.



The Band Edge High, was measured using the method according to point 13.3 (Integration Method) of KDB 558074 D01 DTS Meas Guidance v03r05.

In case of Band Edge measurements falling in restricted bands, the declared Antenna Gain is also compensated in the graph. The declared maximum antenna gain is 3.24dBi.

For Band Edge measurements falling in restricted bands, the following limits in dBm were applied for the average detector after the conversion from the limits detailed above in dBµV/m, according to FCC 47 CFR part 15 - Subpart C – §15.209(a). The limits in dBm for peak detector are 20dB above the indicated values in the table.

| §15.209(a) | | | Converted values | |
|------------------|--------------|-----------------------------------|--------------------------------------|-------------|
| Freq Range (MHz) | Distance (m) | Field strength (microvolts/meter) | Field strength (dB microvolts/meter) | Power (dBm) |
| Above 960 | 3 | 500 | 54.0 | -41.2 |

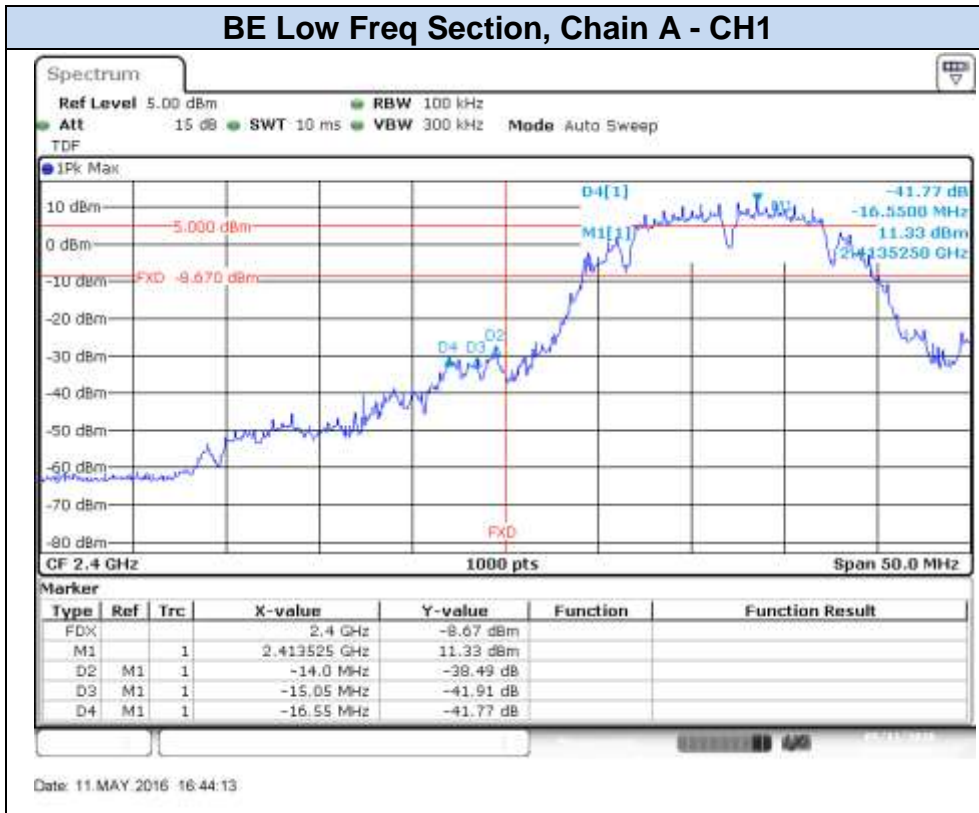
Note: these PSD_{Peak} values are shown just as a reference for the compliance of the Out-of-band Measurements. Thus the RBW used for these measurements was 100kHz.

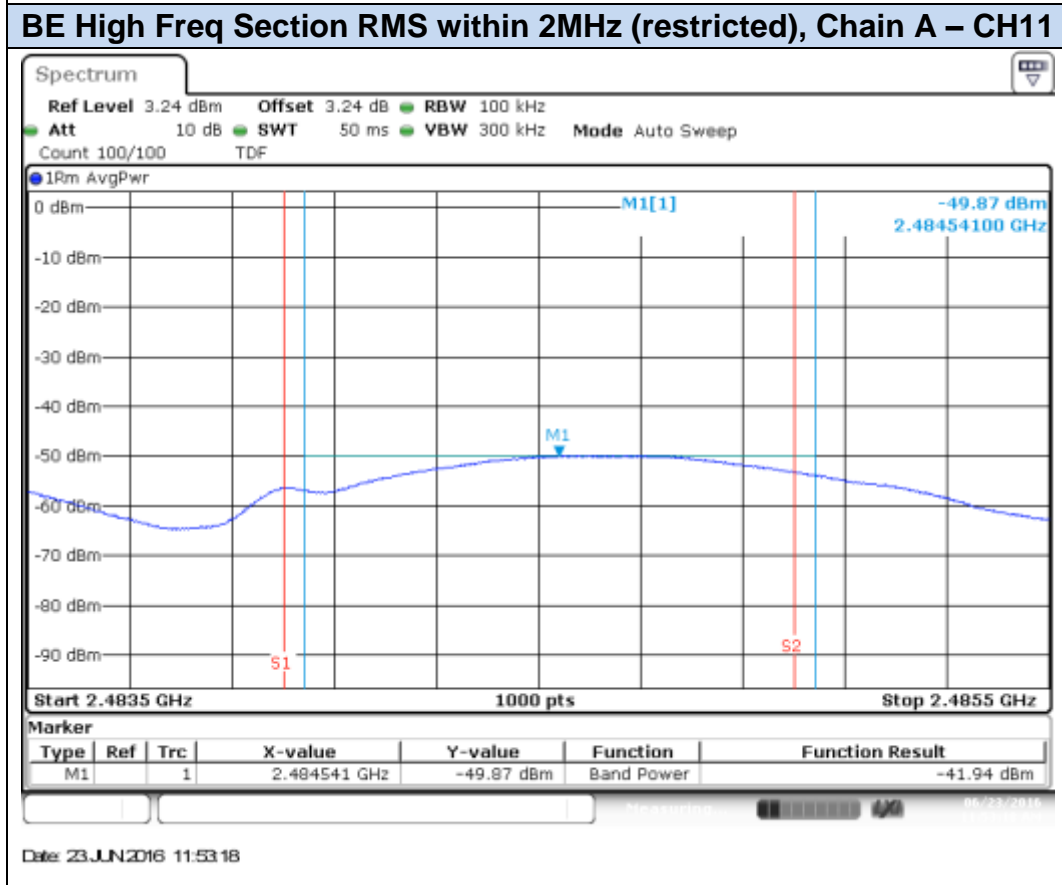
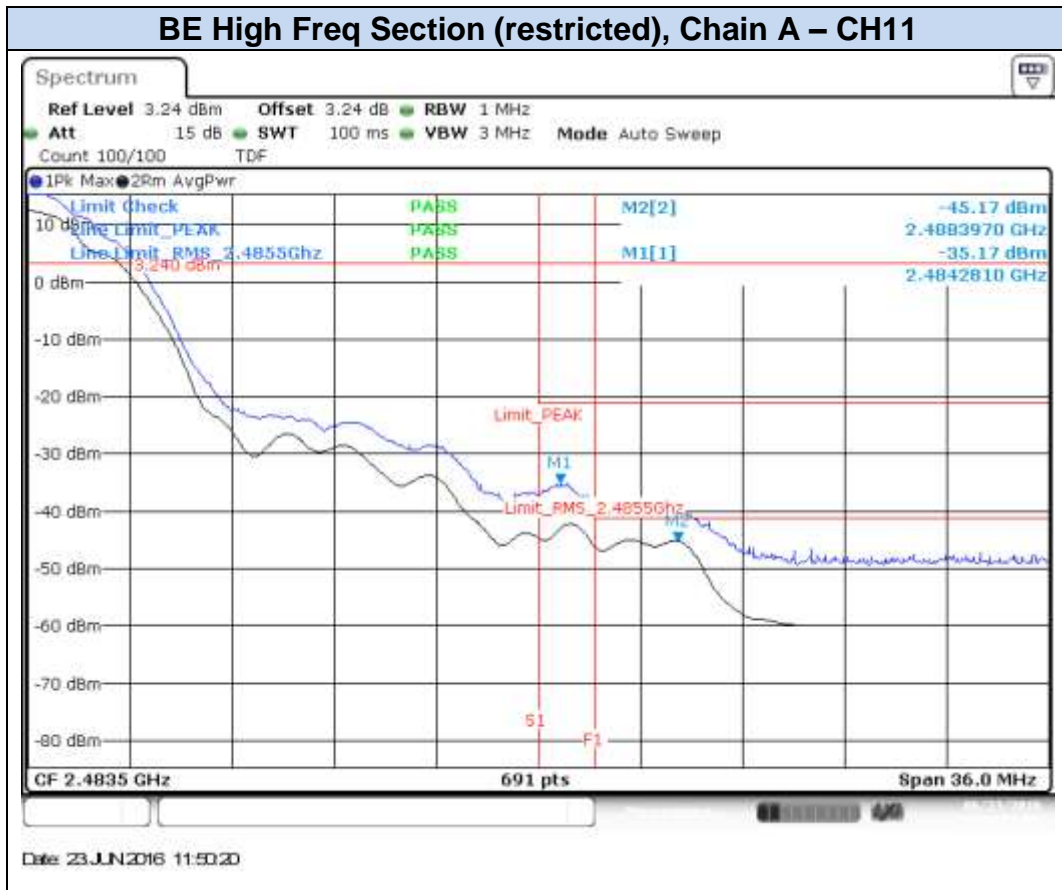
| Mode | Rate | Channel | Frequency [MHz] | Antenna | PSD Peak [dBm] |
|---------|-------|---------|-----------------|--------------|----------------|
| 802.11b | 1Mbps | 1 | 2412 | SISO CHAIN A | 11.33 |
| | | | | SISO CHAIN B | 11.41 |
| | | 7 | 2442 | SISO CHAIN A | 10.87 |
| | | | | SISO CHAIN B | 10.63 |
| | | 11 | 2462 | SISO CHAIN A | 10.94 |
| | | | | SISO CHAIN B | 9.11 |
| | | 12 | 2467 | SISO CHAIN A | 7.22 |
| | | | | SISO CHAIN B | 6.96 |
| | | 13 | 2472 | SISO CHAIN A | -0.84 |
| | | | | SISO CHAIN B | -0.92 |
| 802.11g | 6Mbps | 1 | 2412 | SISO CHAIN A | 8.18 |
| | | | | SISO CHAIN B | 8.56 |
| | | 7 | 2442 | SISO CHAIN A | 9.92 |
| | | | | SISO CHAIN B | 10.21 |
| | | 11 | 2462 | SISO CHAIN A | 6.94 |
| | | | | SISO CHAIN B | 6.34 |
| | | 12 | 2467 | SISO CHAIN A | 1.22 |
| | | | | SISO CHAIN B | 0.26 |
| | | 13 | 2472 | SISO CHAIN A | -14.77 |
| | | | | SISO CHAIN B | -13.09 |

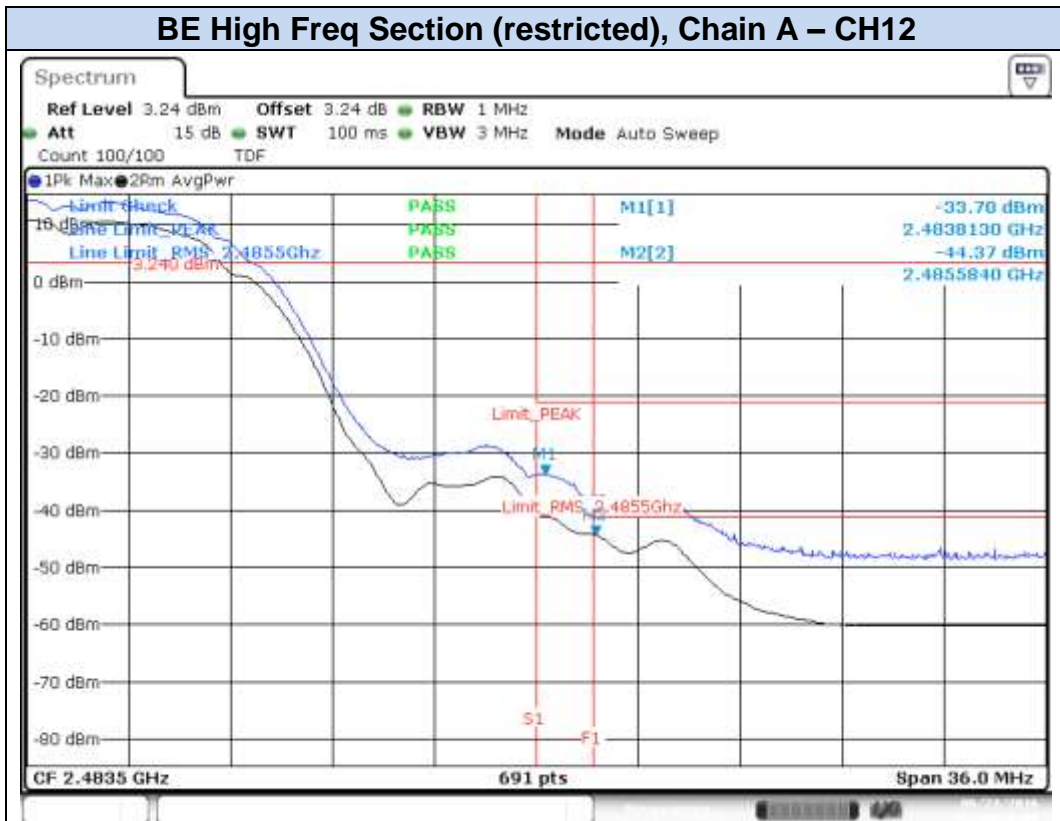
| Mode | Rate | Channel | Frequency [MHz] | Antenna | PSD Peak [dBm] |
|-----------|------|--------------|-----------------|--------------|----------------|
| 802.11n20 | HT0 | 1 | 2412 | SISO CHAIN A | 7.92 |
| | | | | SISO CHAIN B | 7.87 |
| | | 7 | 2442 | SISO CHAIN A | 10.24 |
| | | | | SISO CHAIN B | 9.96 |
| | | 11 | 2462 | SISO CHAIN A | 7.11 |
| | | | | SISO CHAIN B | 6.34 |
| | | 12 | 2467 | SISO CHAIN A | 0.88 |
| | | | | SISO CHAIN B | 0.52 |
| | | 13 | 2472 | SISO CHAIN A | -13.60 |
| | | | | SISO CHAIN B | -13.34 |
| | HT8 | 1 | 2412 | MIMO CHAIN A | 6.93 |
| | | | | MIMO CHAIN B | 7.47 |
| | | 7 | 2442 | MIMO CHAIN A | 8.38 |
| | | | | MIMO CHAIN B | 8.18 |
| | | 11 | 2462 | MIMO CHAIN A | 6.21 |
| | | | | MIMO CHAIN B | 5.58 |
| 12 | 2467 | MIMO CHAIN A | 0.58 | | |
| | | MIMO CHAIN B | 0.11 | | |
| 13 | 2472 | MIMO CHAIN A | -16.70 | | |
| | | MIMO CHAIN B | -16.17 | | |
| 802.11n40 | HT0 | 3F | 2422 | SISO CHAIN A | 5.49 |
| | | | | SISO CHAIN B | 4.06 |
| | | 7F | 2442 | SISO CHAIN A | 6.86 |
| | | | | SISO CHAIN B | 3.60 |
| | | 9F | 2452 | SISO CHAIN A | 3.76 |
| | | | | SISO CHAIN B | 3.74 |
| | | 10F | 2457 | SISO CHAIN A | -0.46 |
| | | | | SISO CHAIN B | 0.02 |
| | | 11F | 2462 | SISO CHAIN A | -15.63 |
| | | | | SISO CHAIN B | -15.80 |
| | HT8 | 3F | 2422 | MIMO CHAIN A | 1.77 |
| | | | | MIMO CHAIN B | 2.18 |
| | | 7F | 2442 | MIMO CHAIN A | 3.20 |
| | | | | MIMO CHAIN B | 3.15 |
| | | 9F | 2452 | MIMO CHAIN A | 2.30 |
| | | | | MIMO CHAIN B | 2.72 |
| 10F | 2457 | MIMO CHAIN A | -1.16 | | |
| | | MIMO CHAIN B | -1.32 | | |
| 11F | 2462 | MIMO CHAIN A | -17.08 | | |
| | | MIMO CHAIN B | -17.99 | | |

Band Edge results Screenshot:

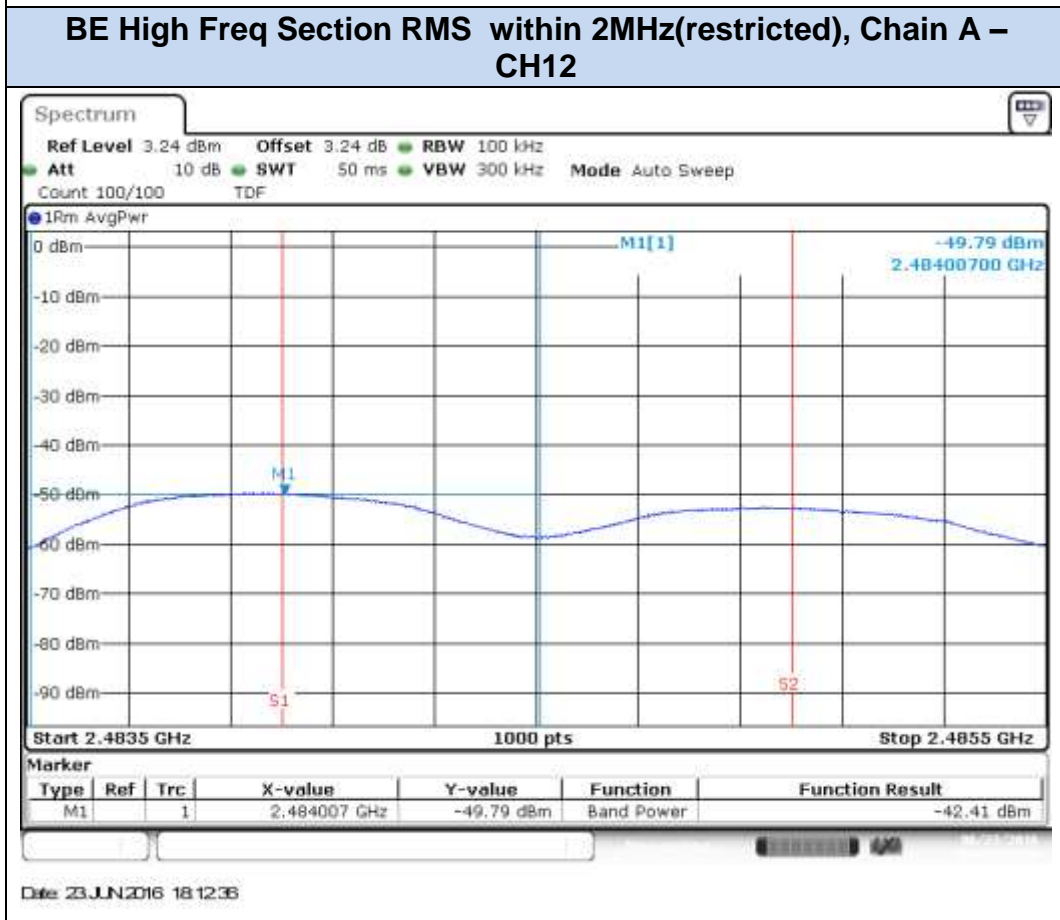
802.11b, 1Mbps

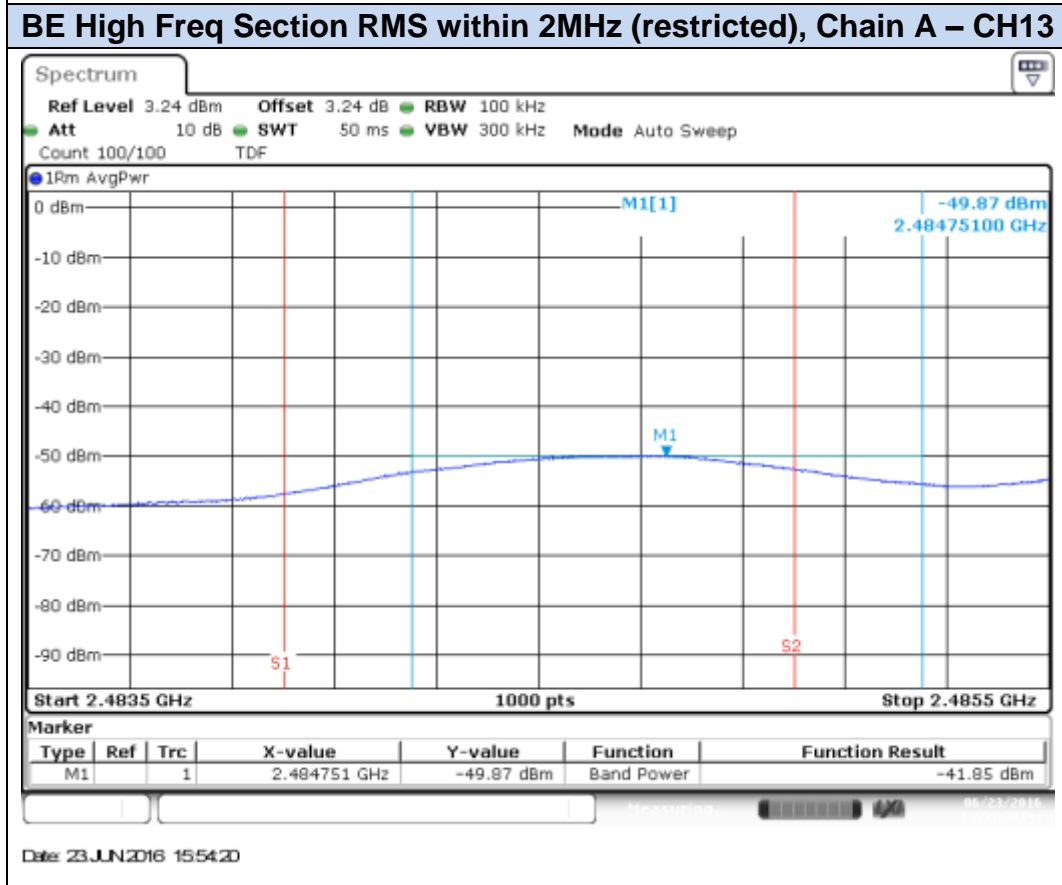
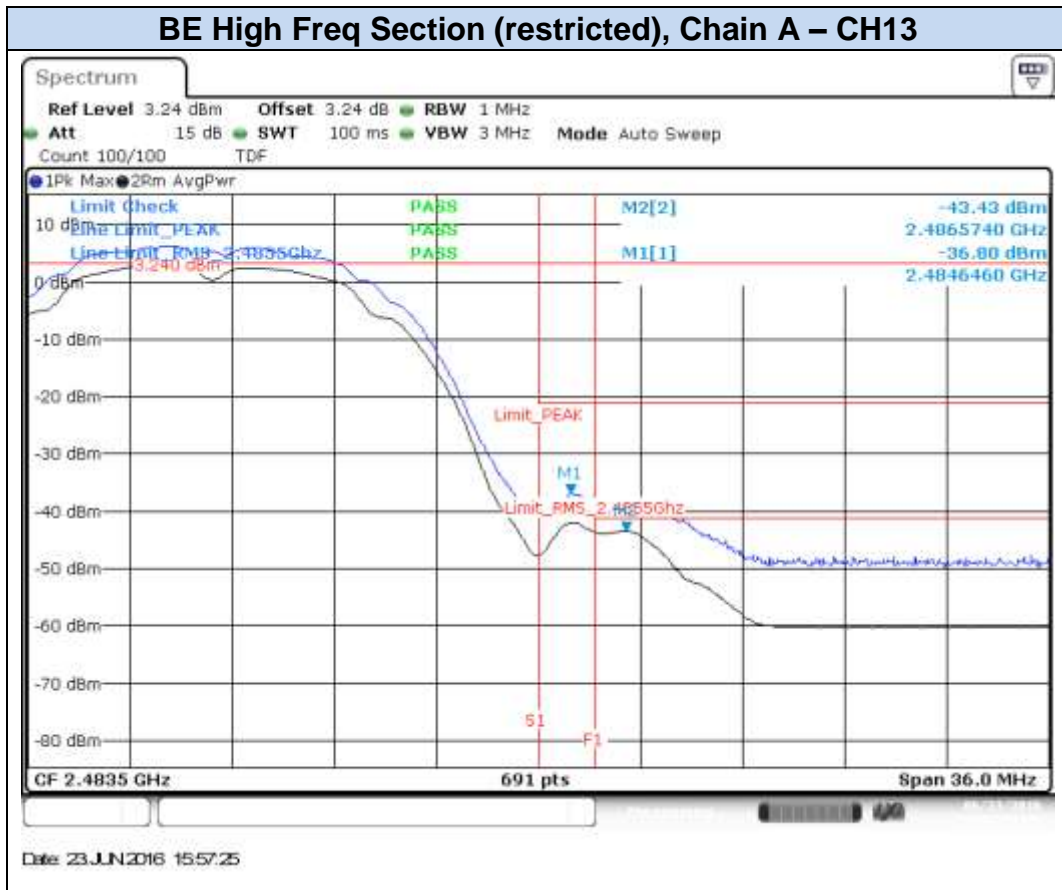


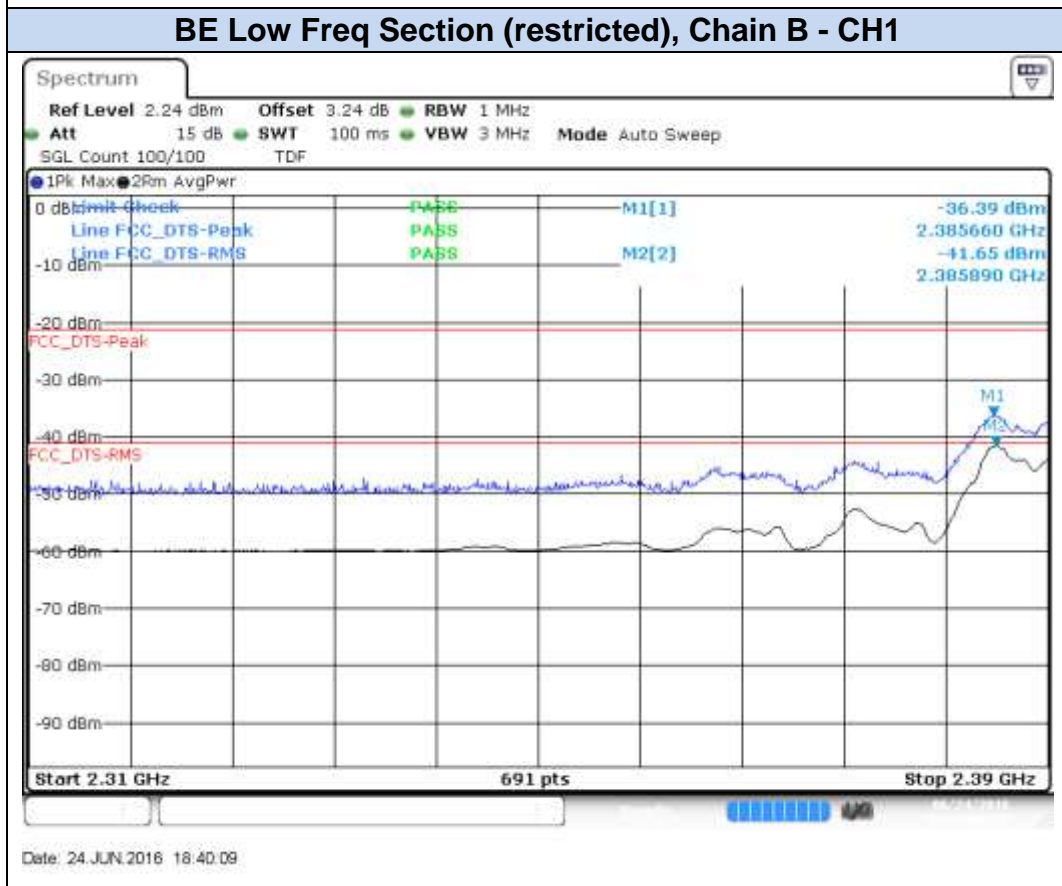
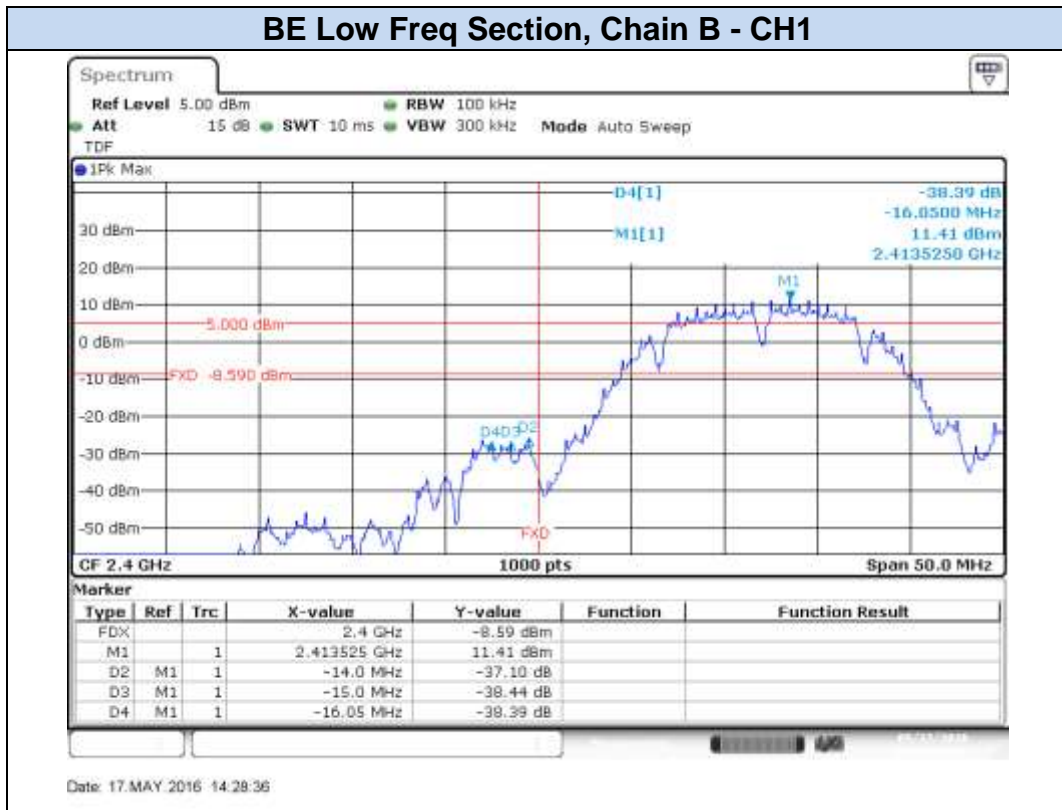


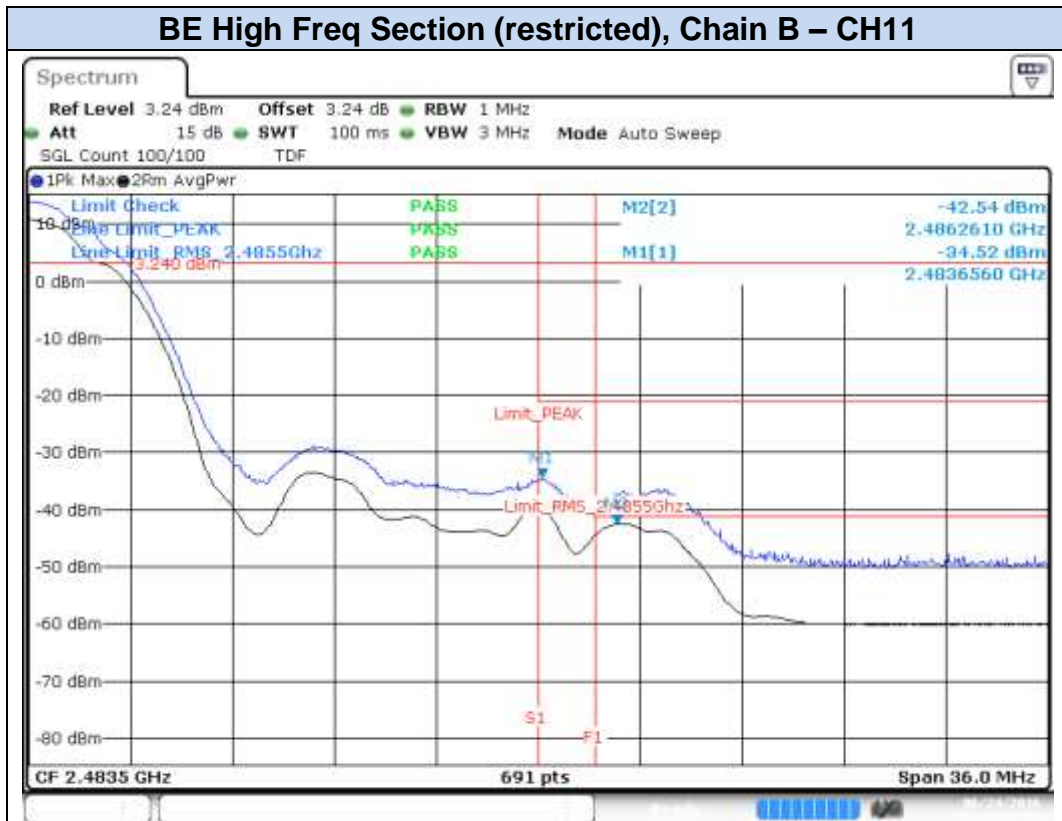


Date 23 JUN 2016 15:40:58

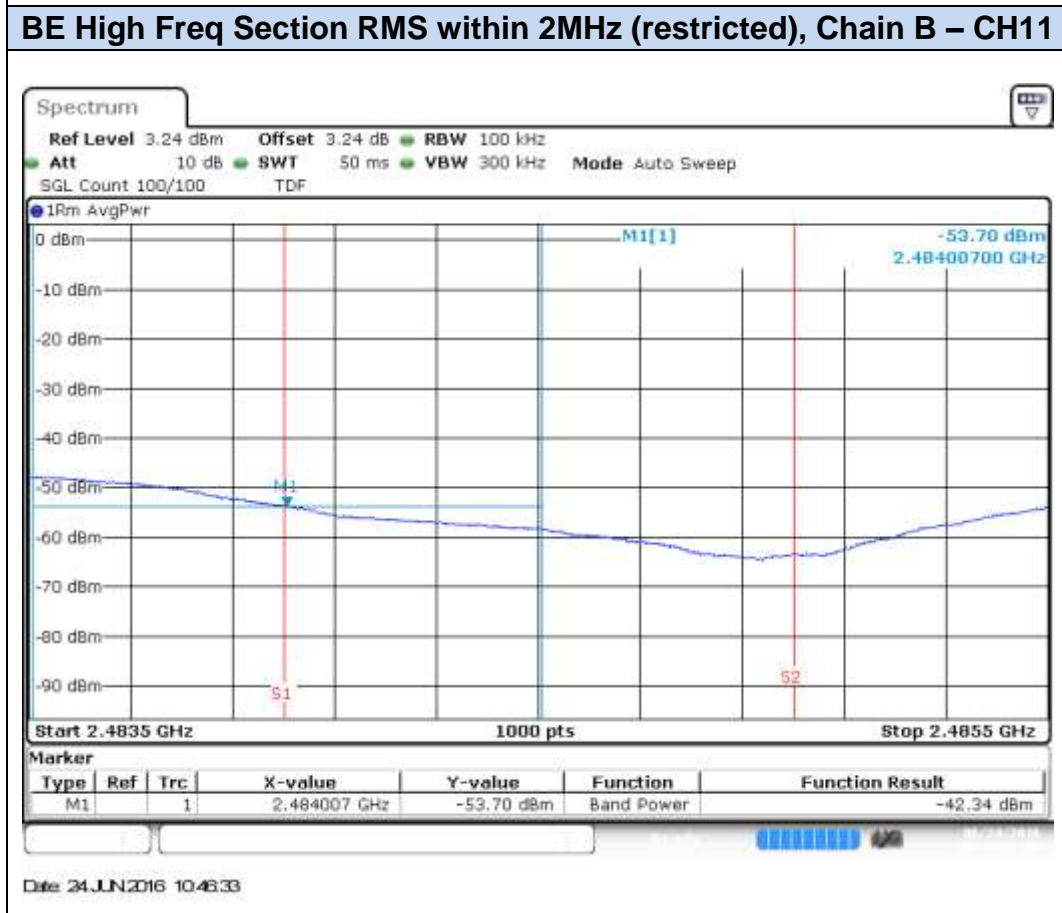


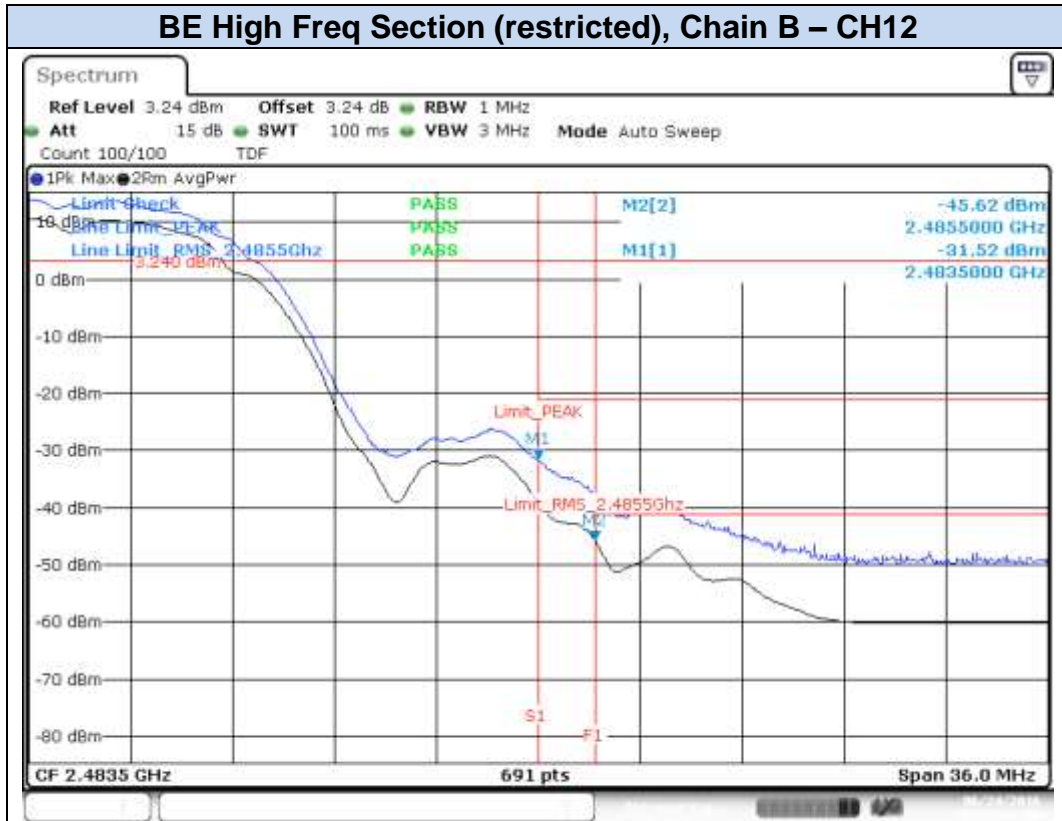




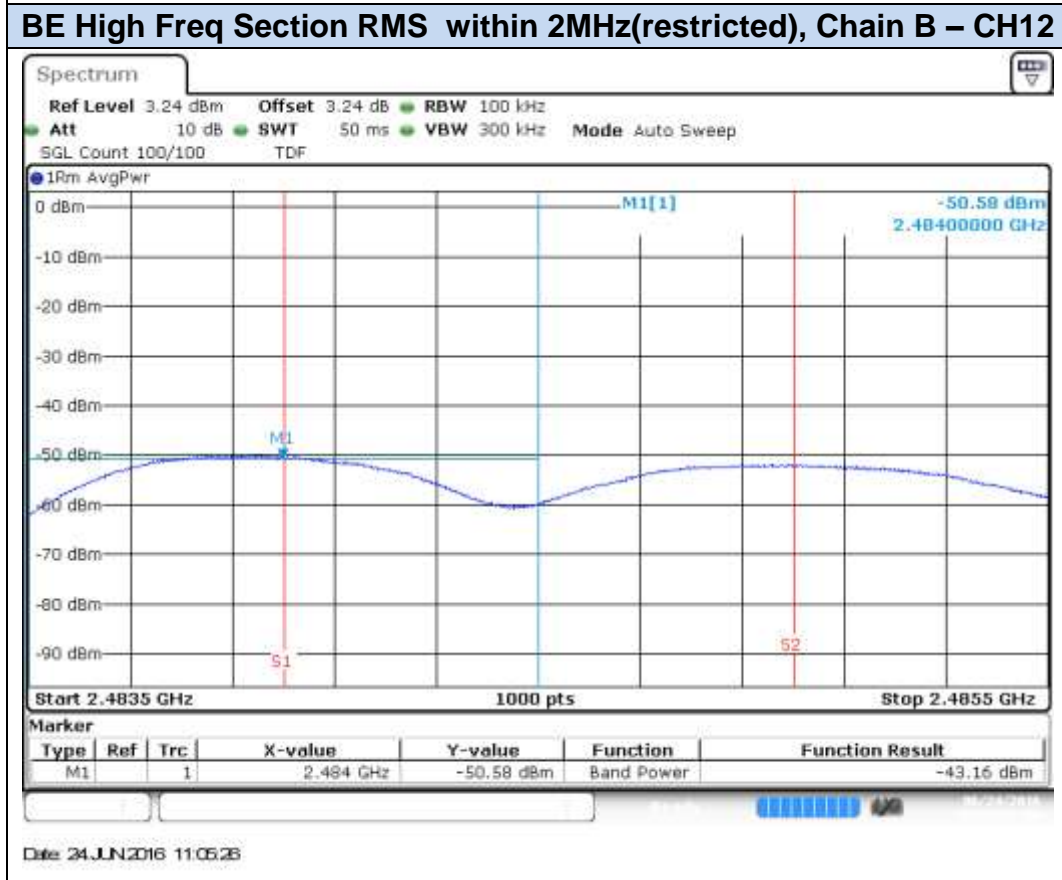


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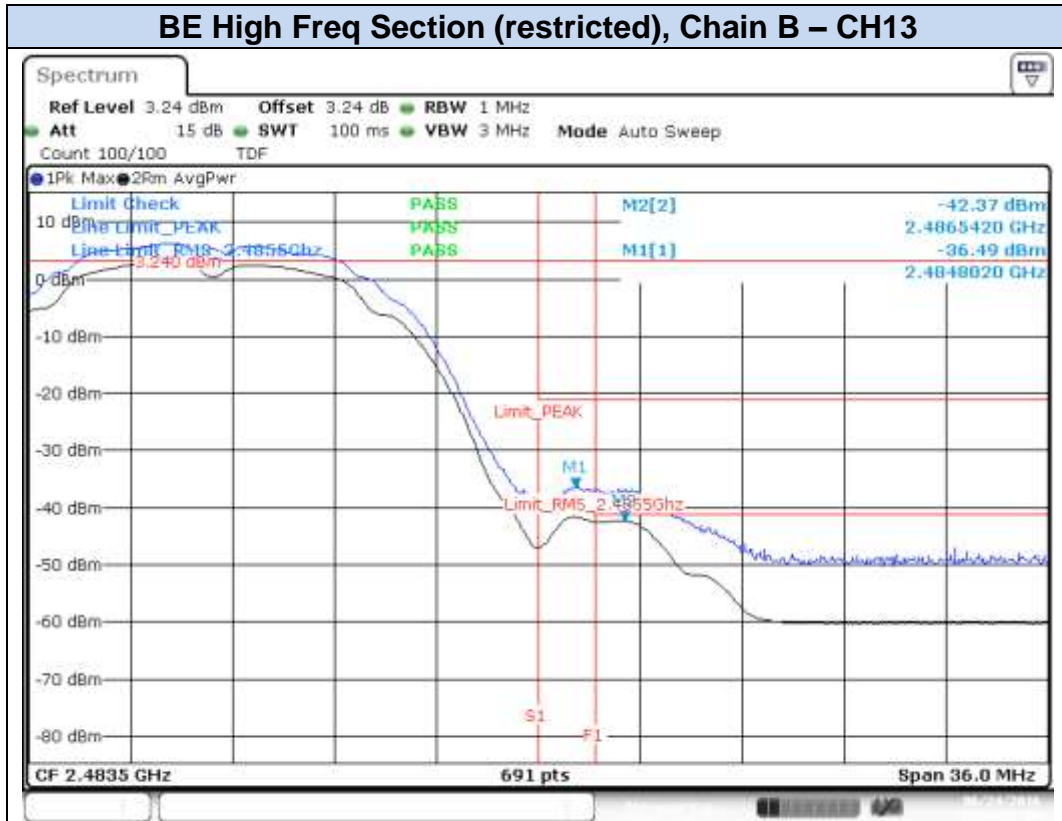




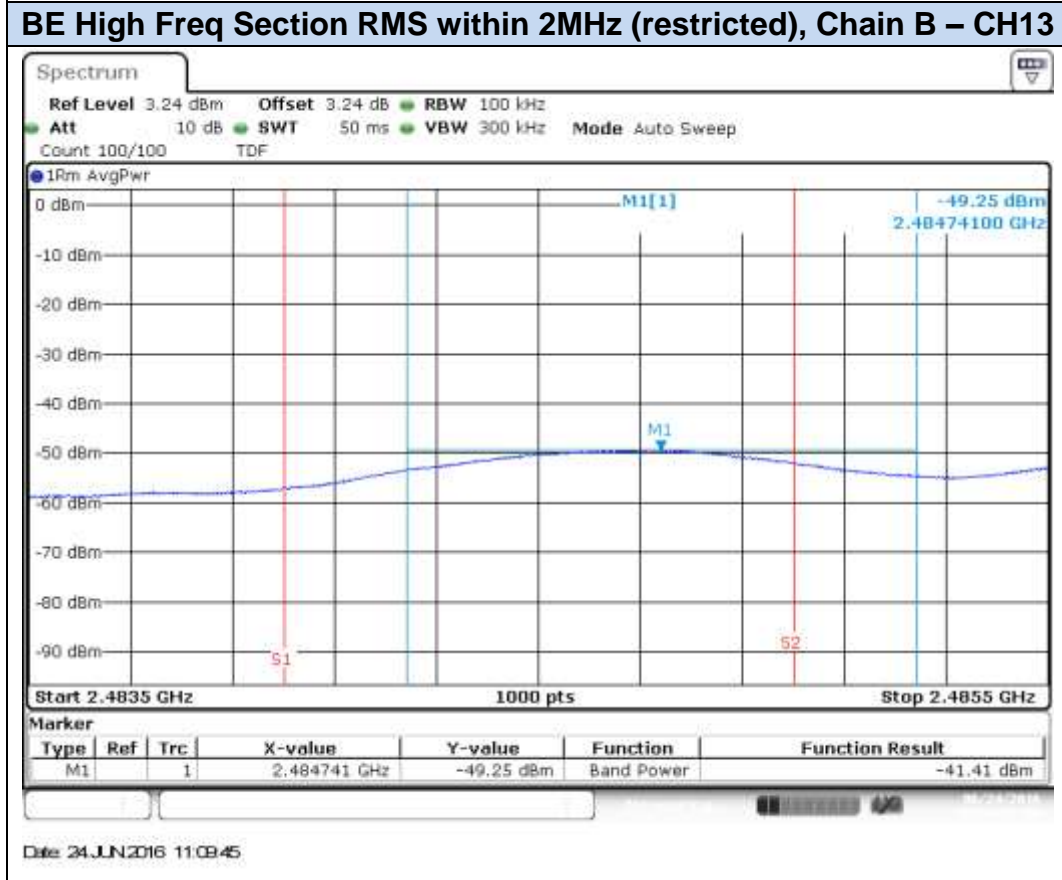
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Date 24.JUN.2016 11:05:28

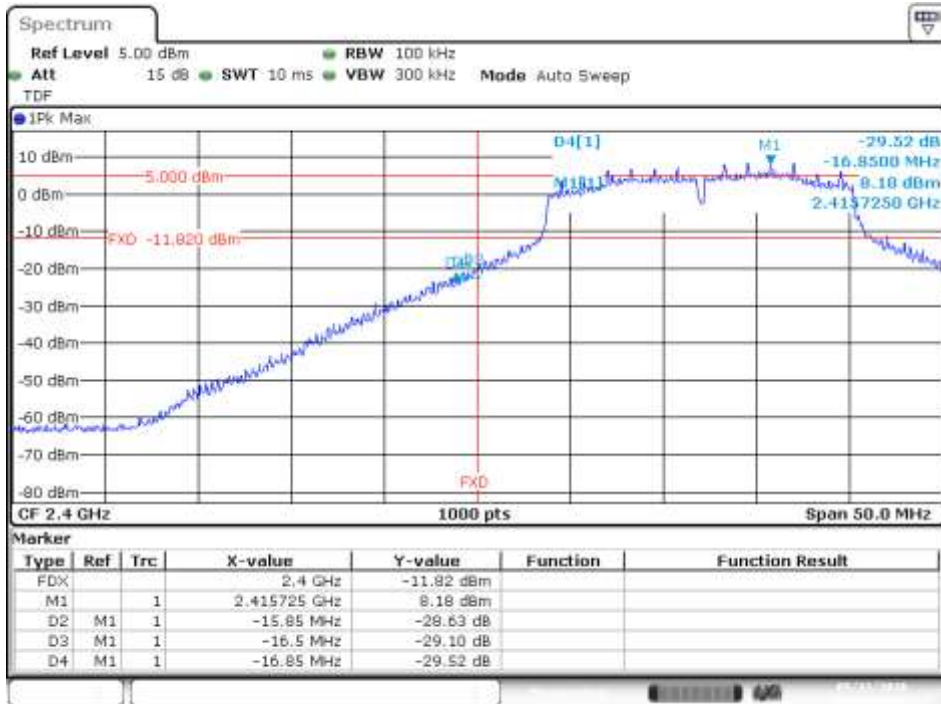


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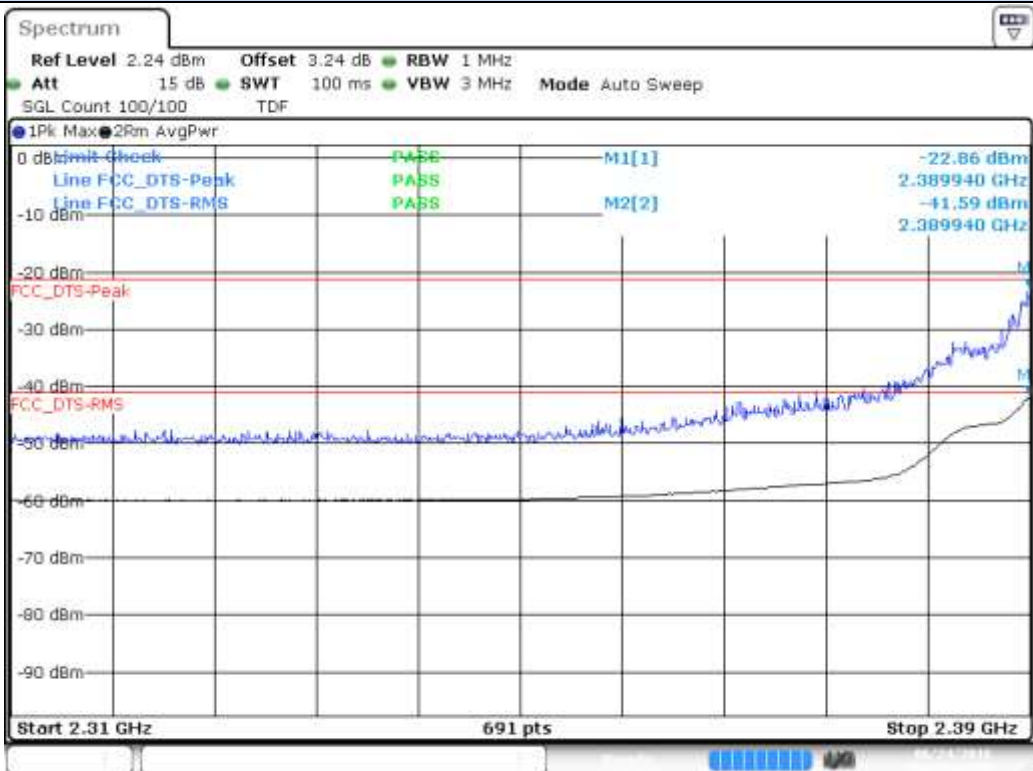
802.11g, 6Mbps

BE Low Freq Section, Chain A - CH1

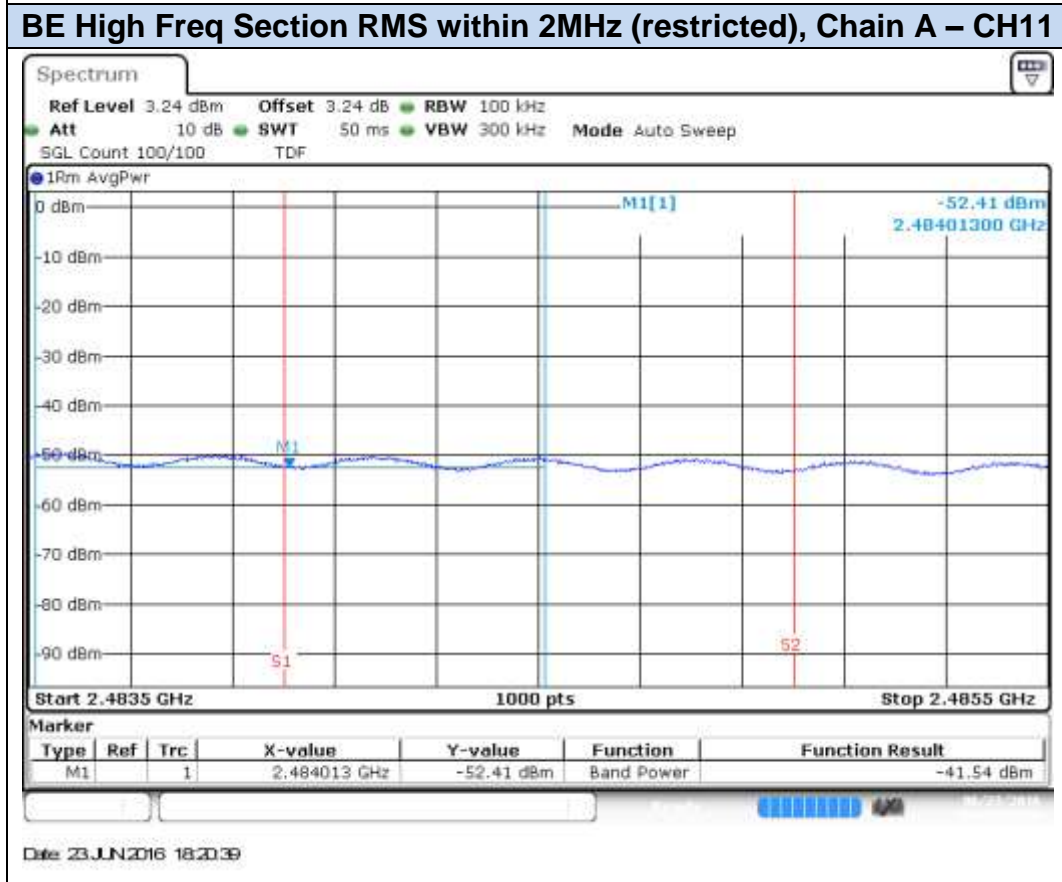
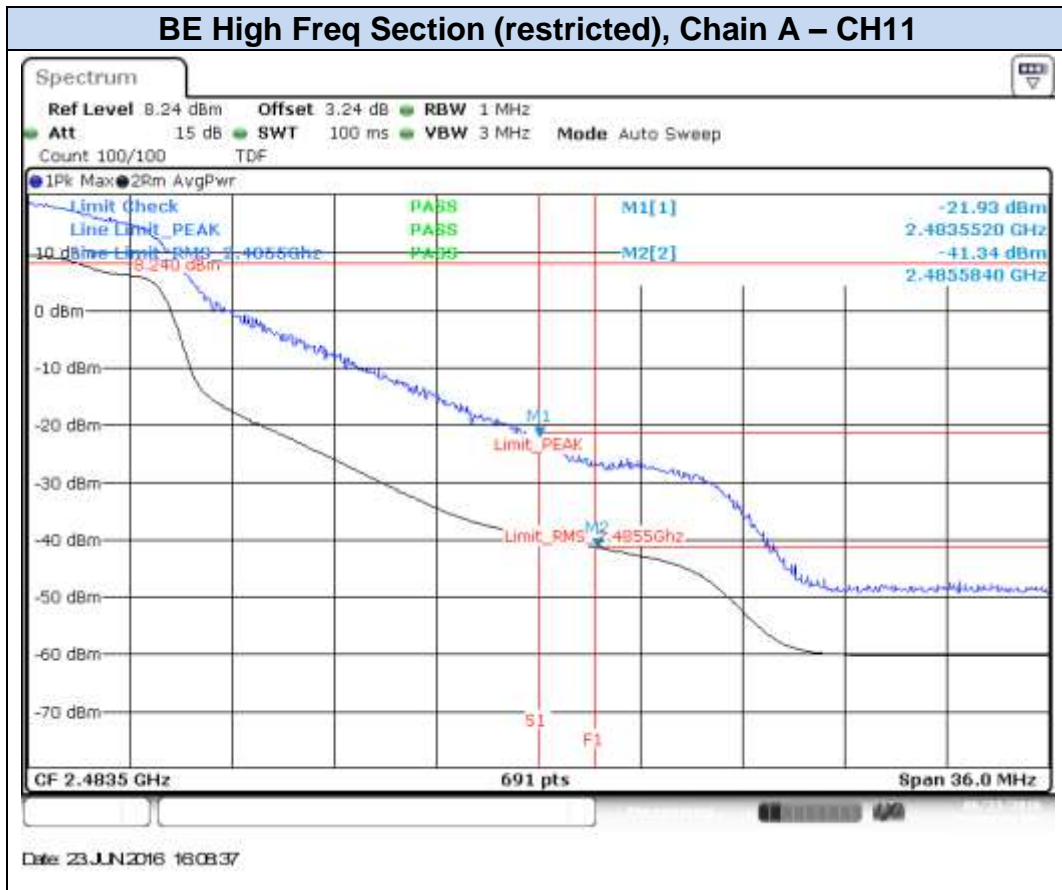


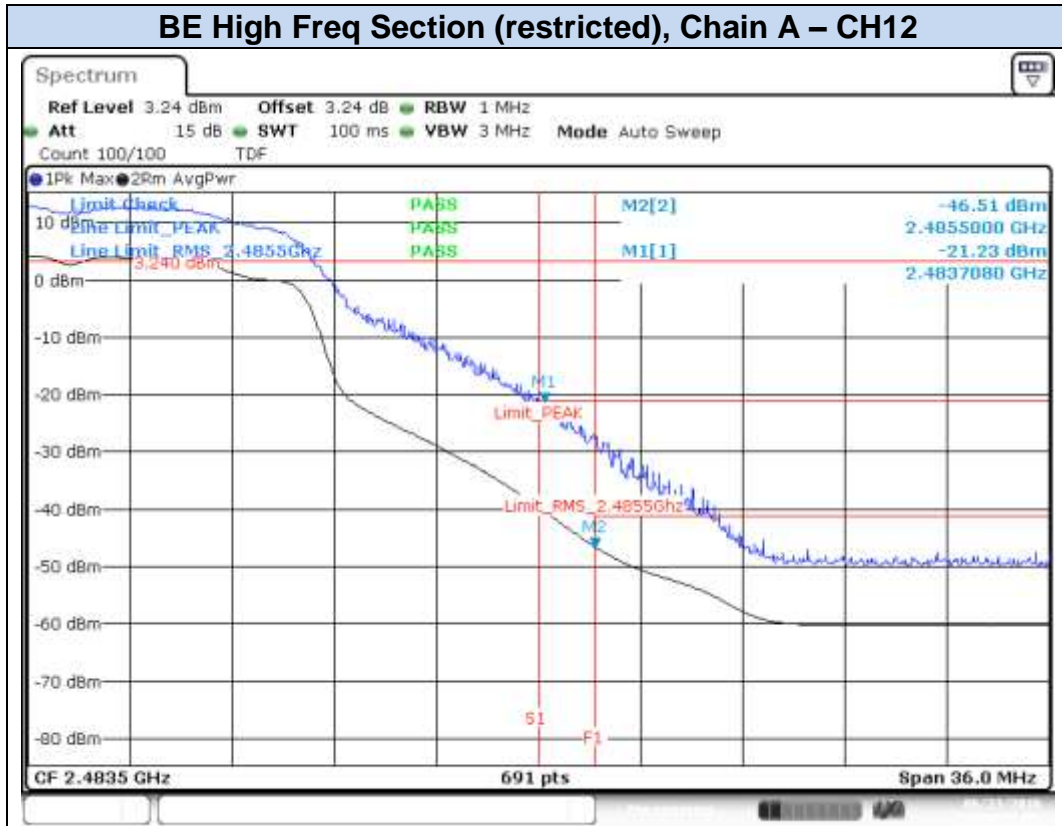
Date: 12 MAY 2016 10:50:16

BE Low Freq Section (restricted), Chain A - CH1

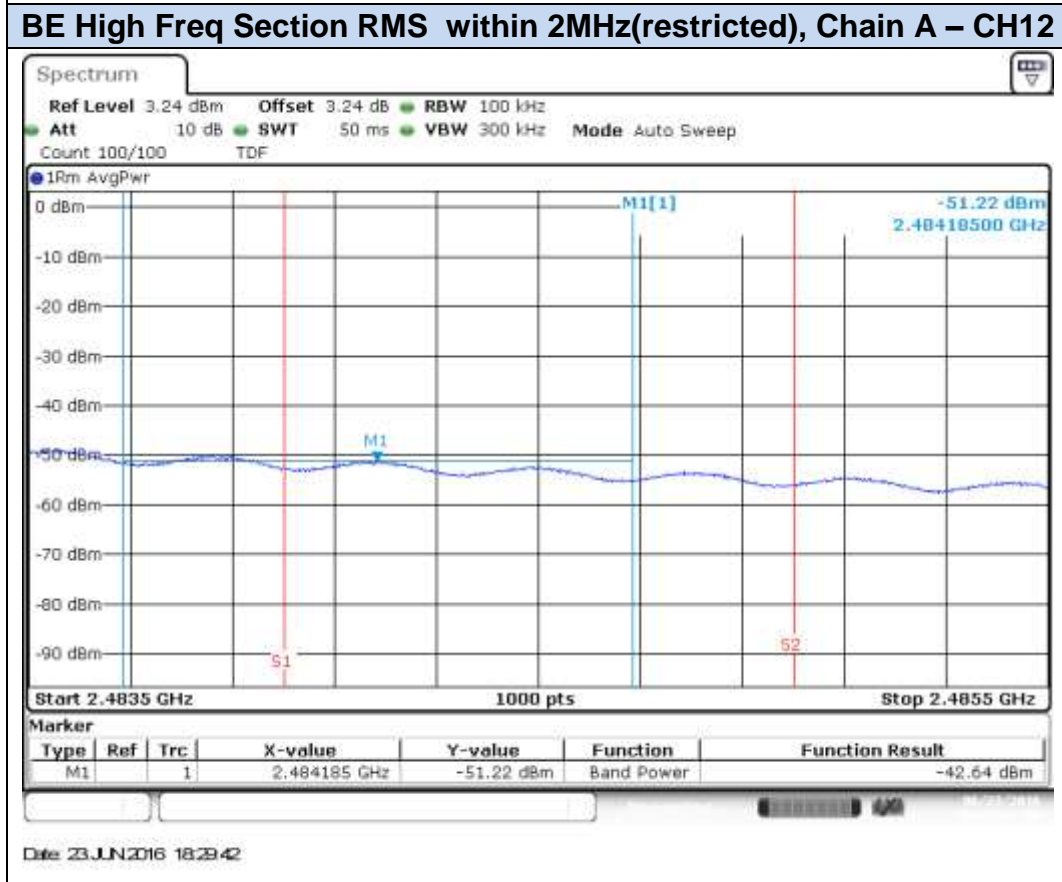


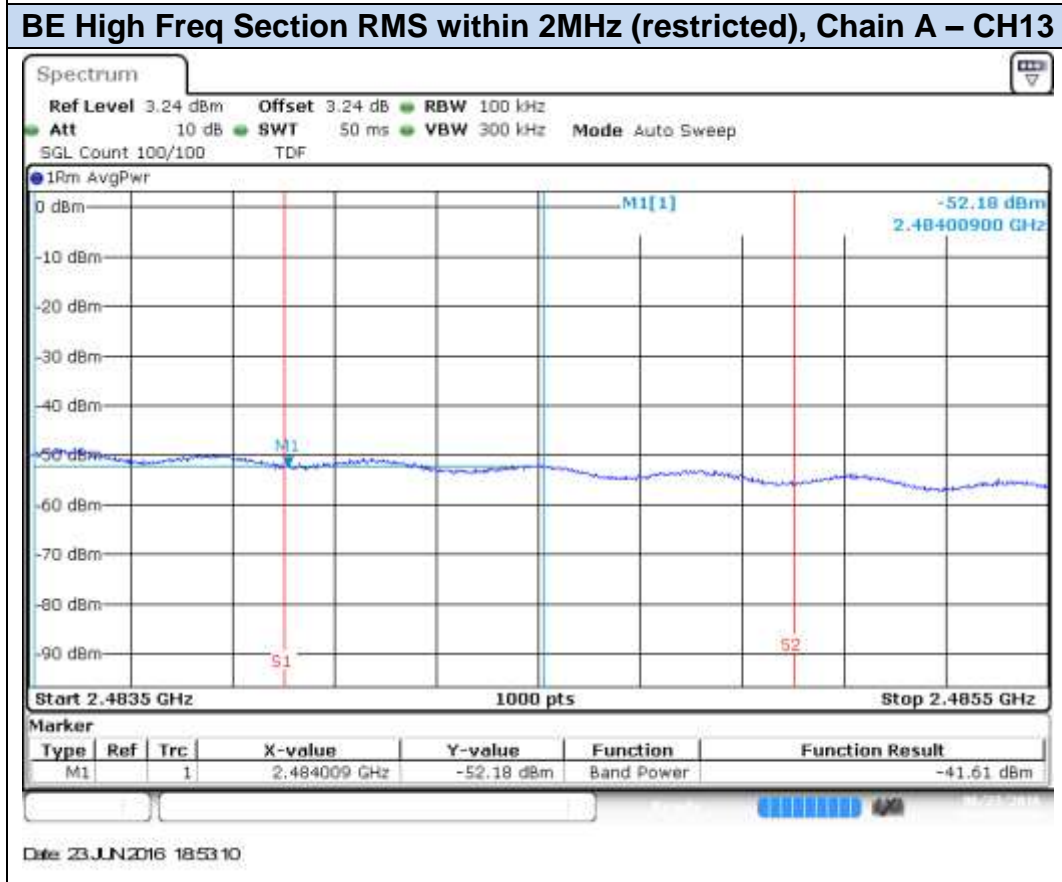
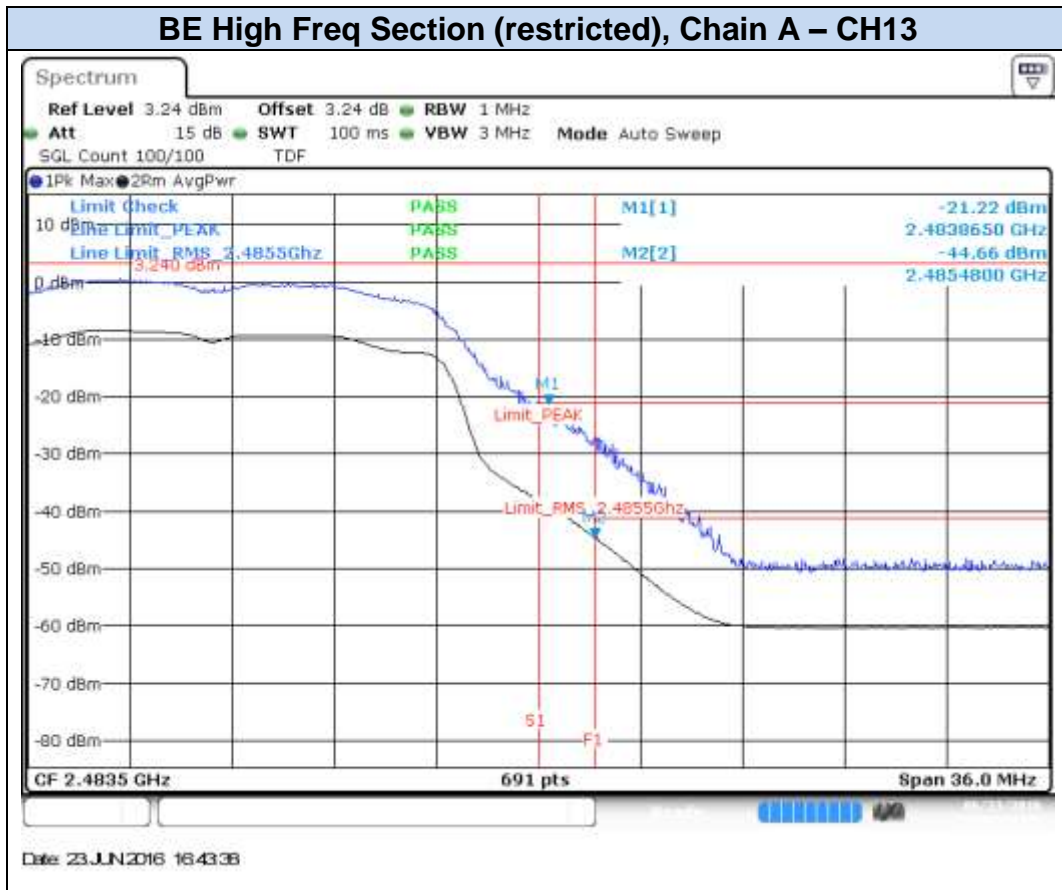
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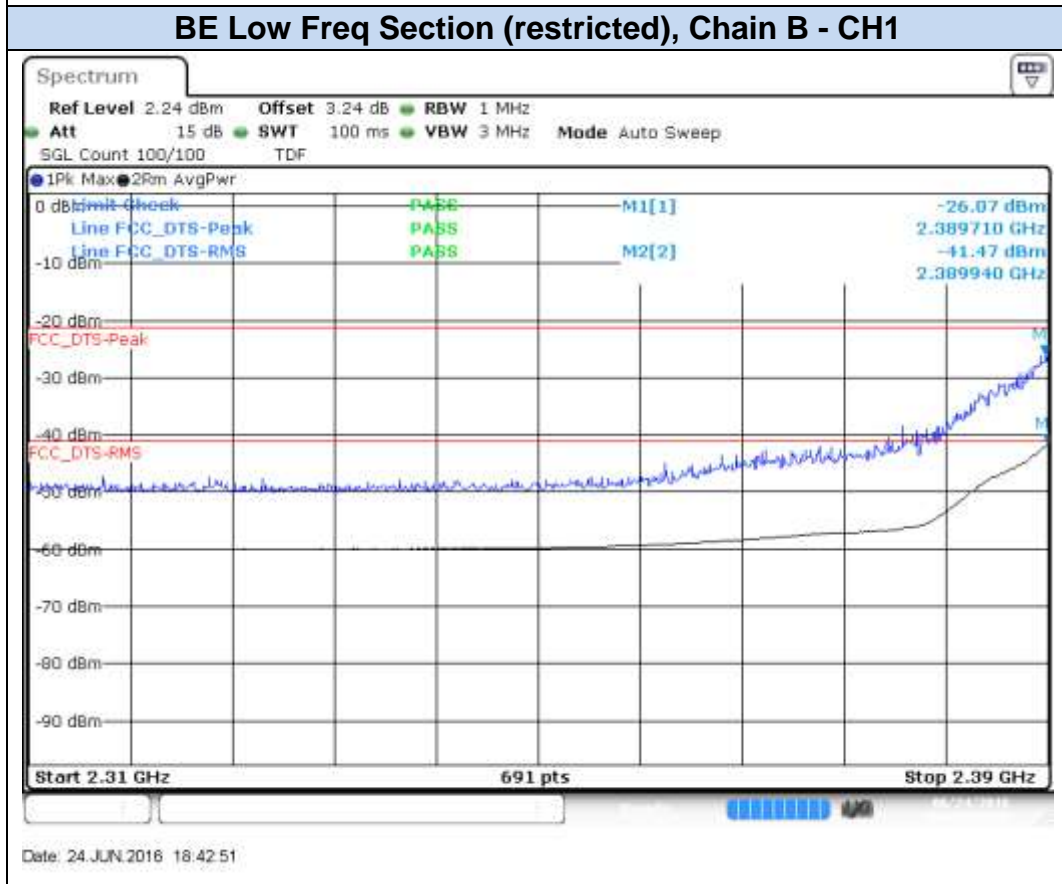
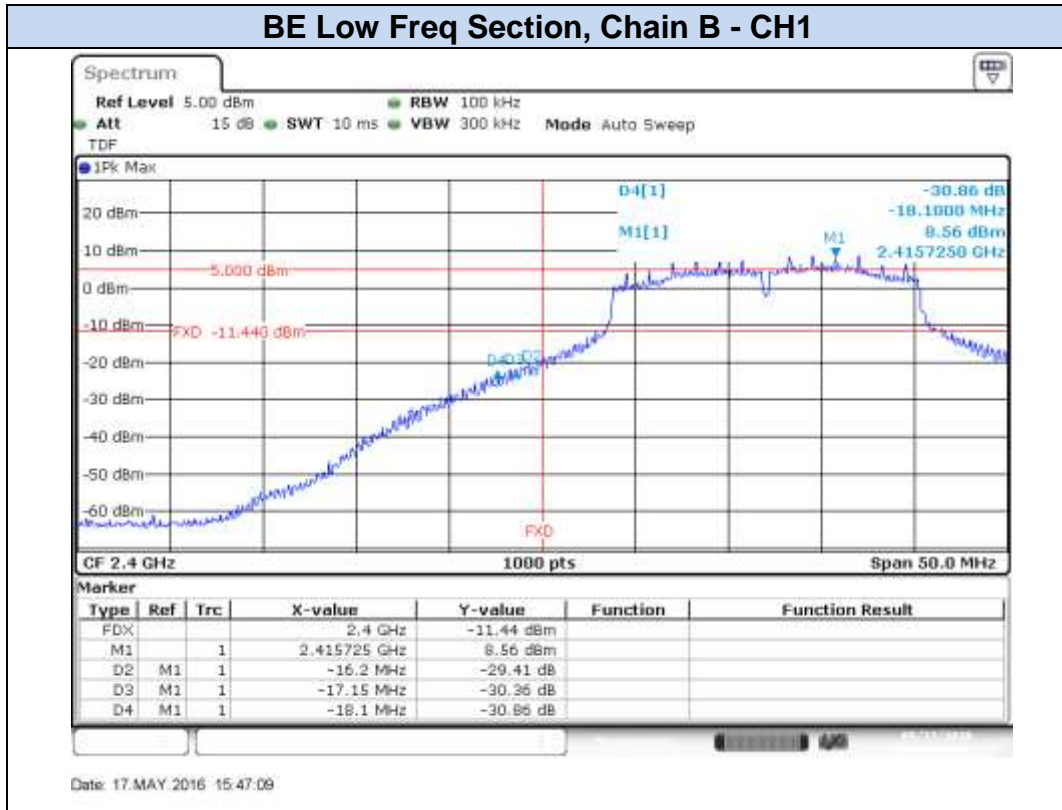


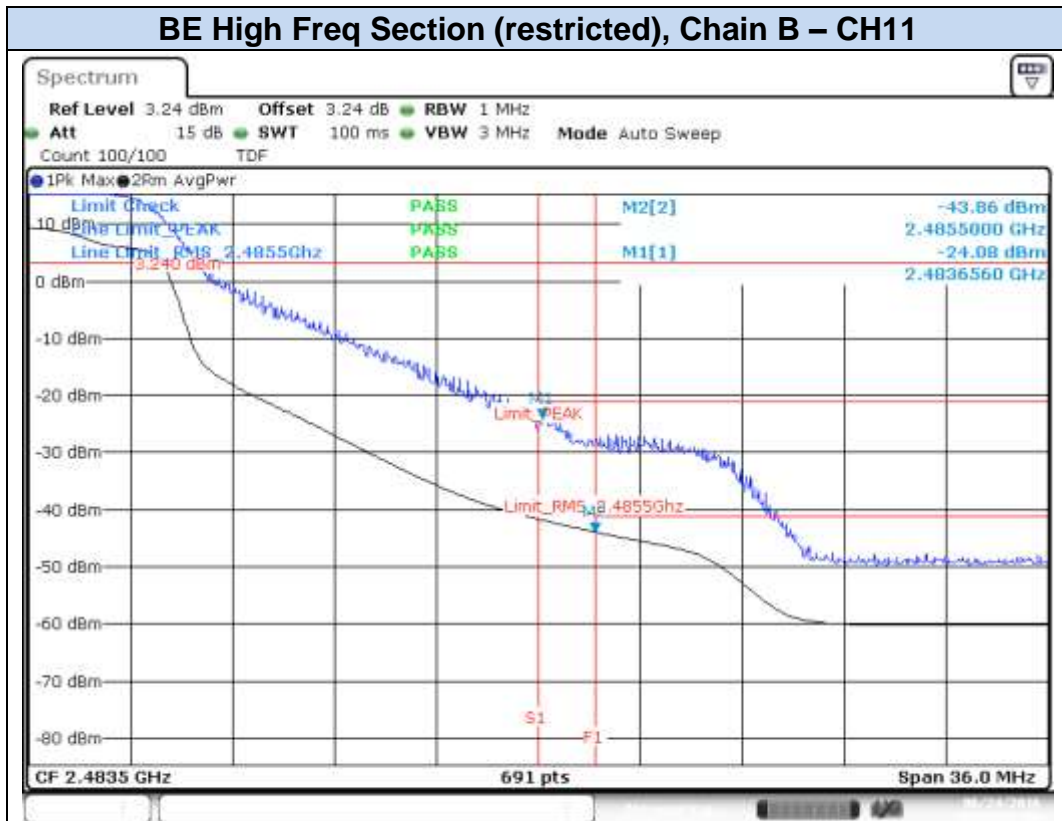


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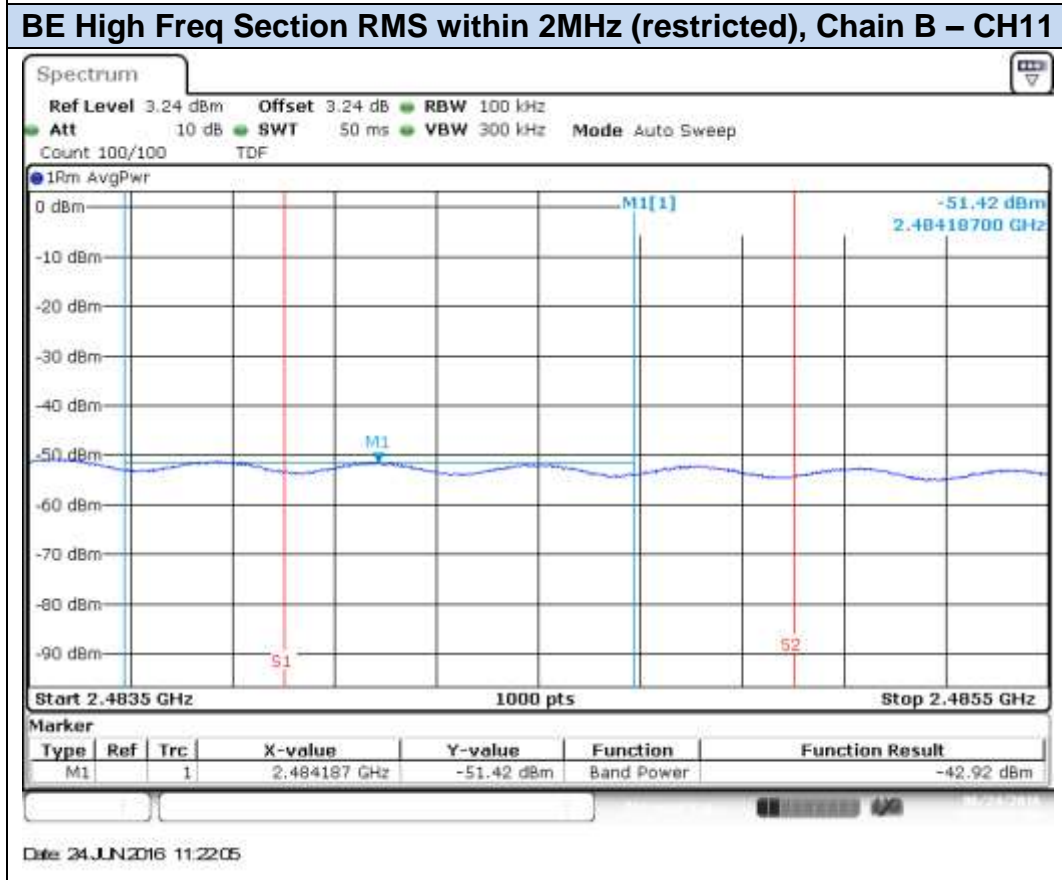




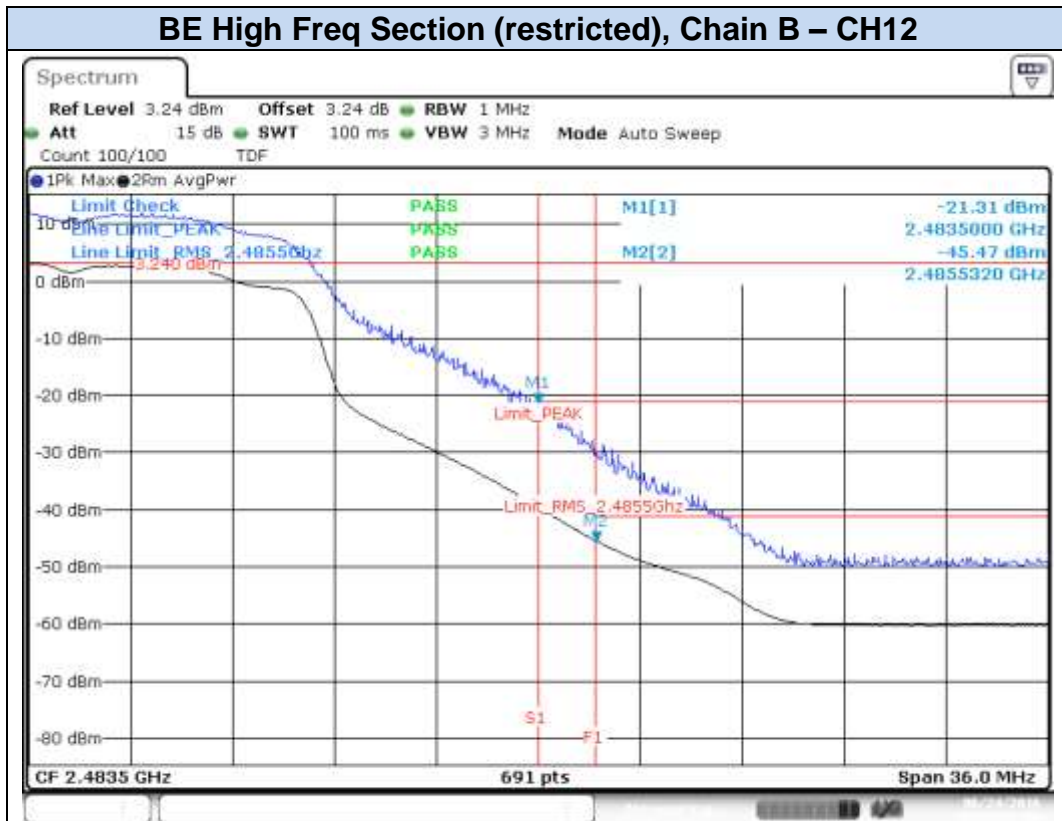




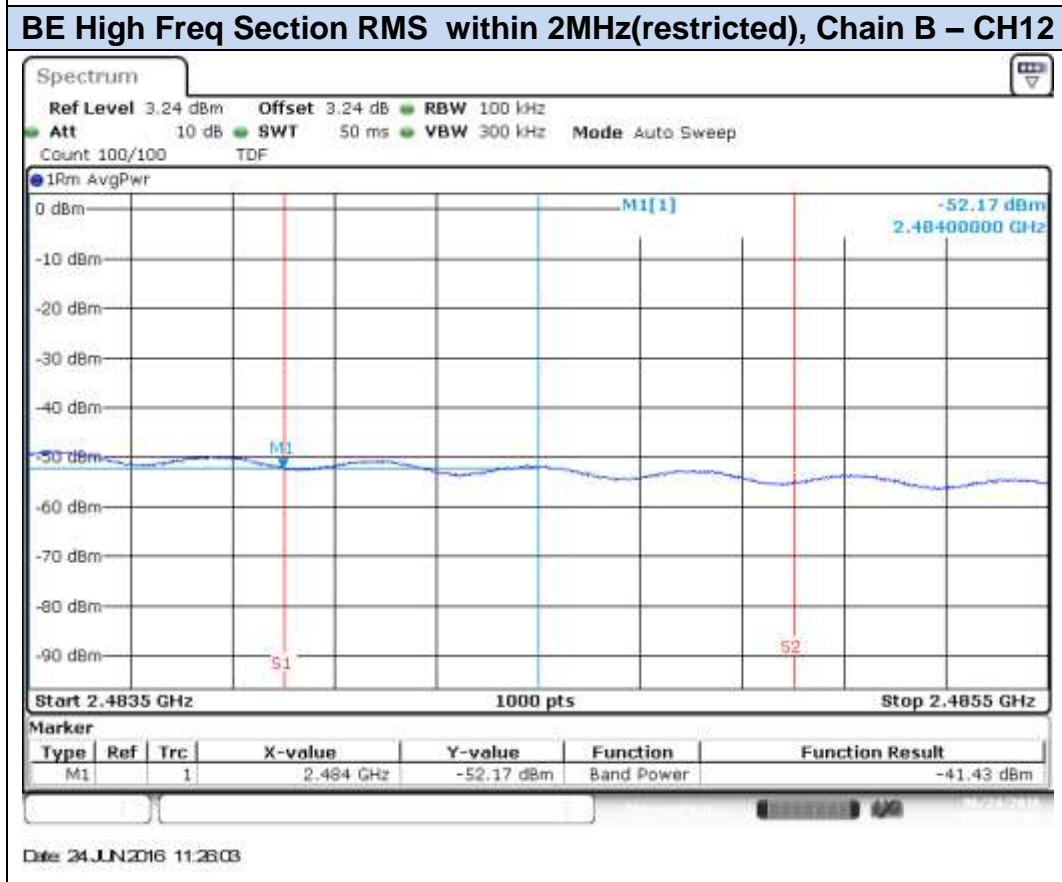
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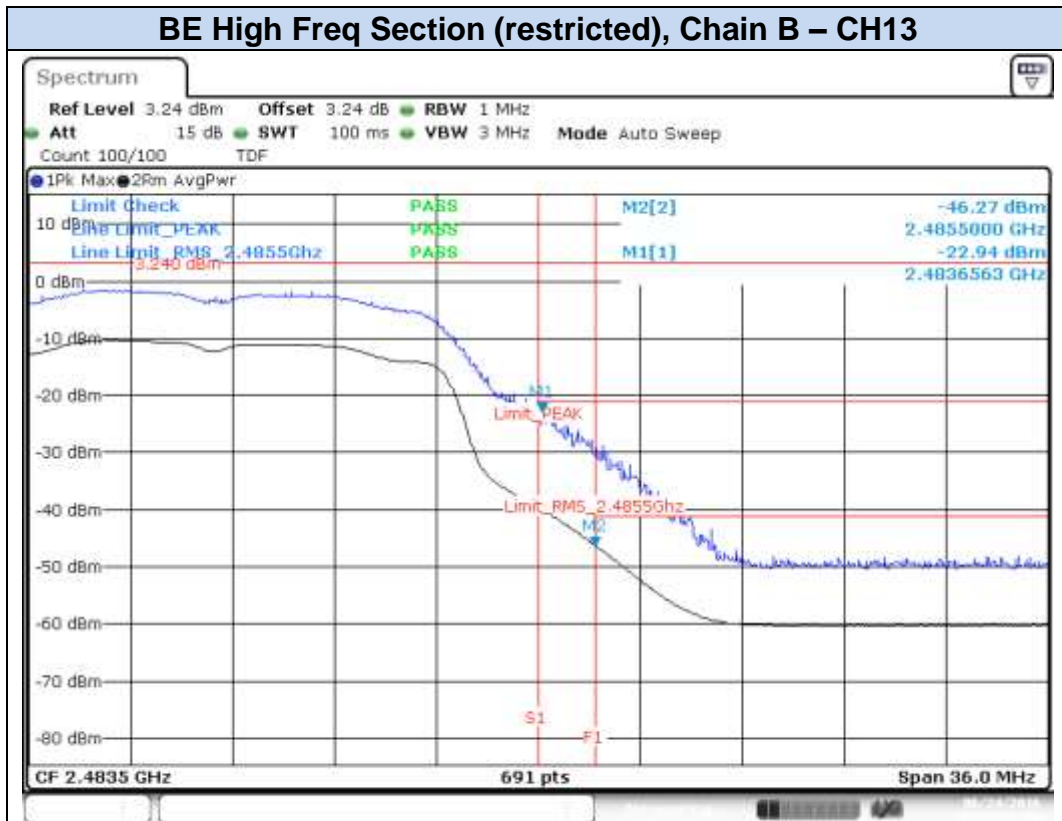


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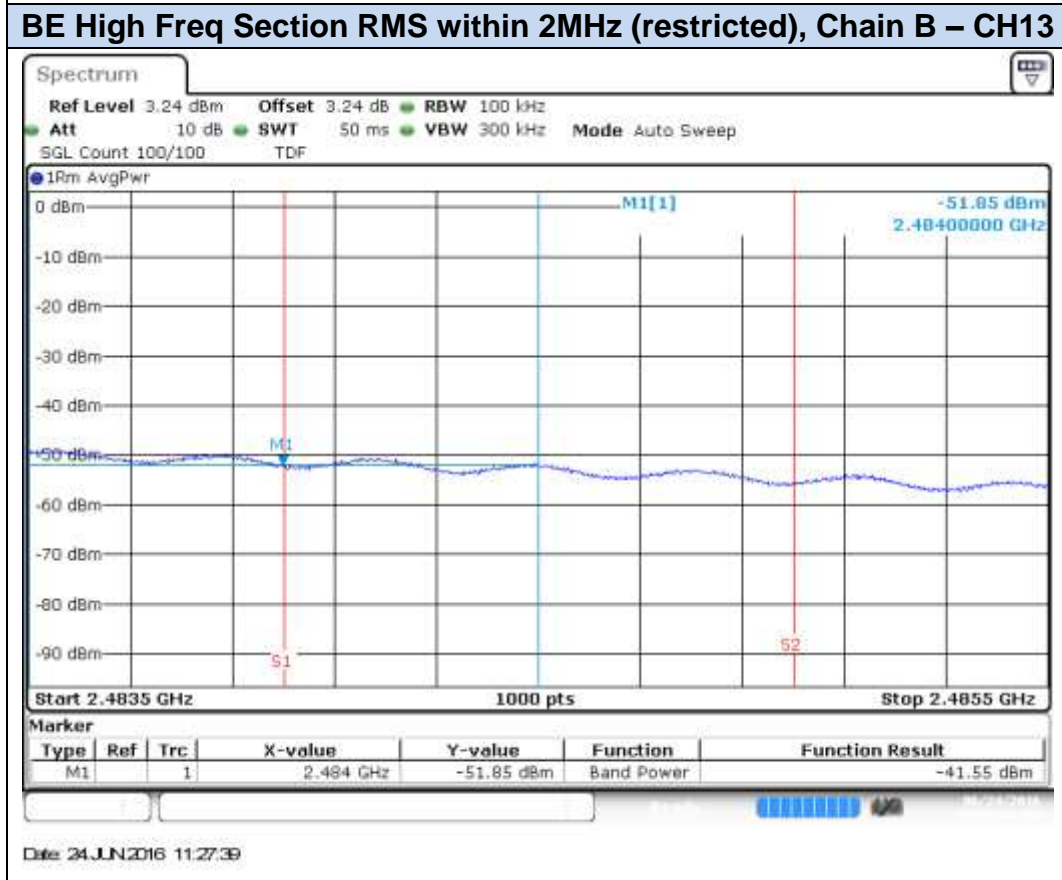


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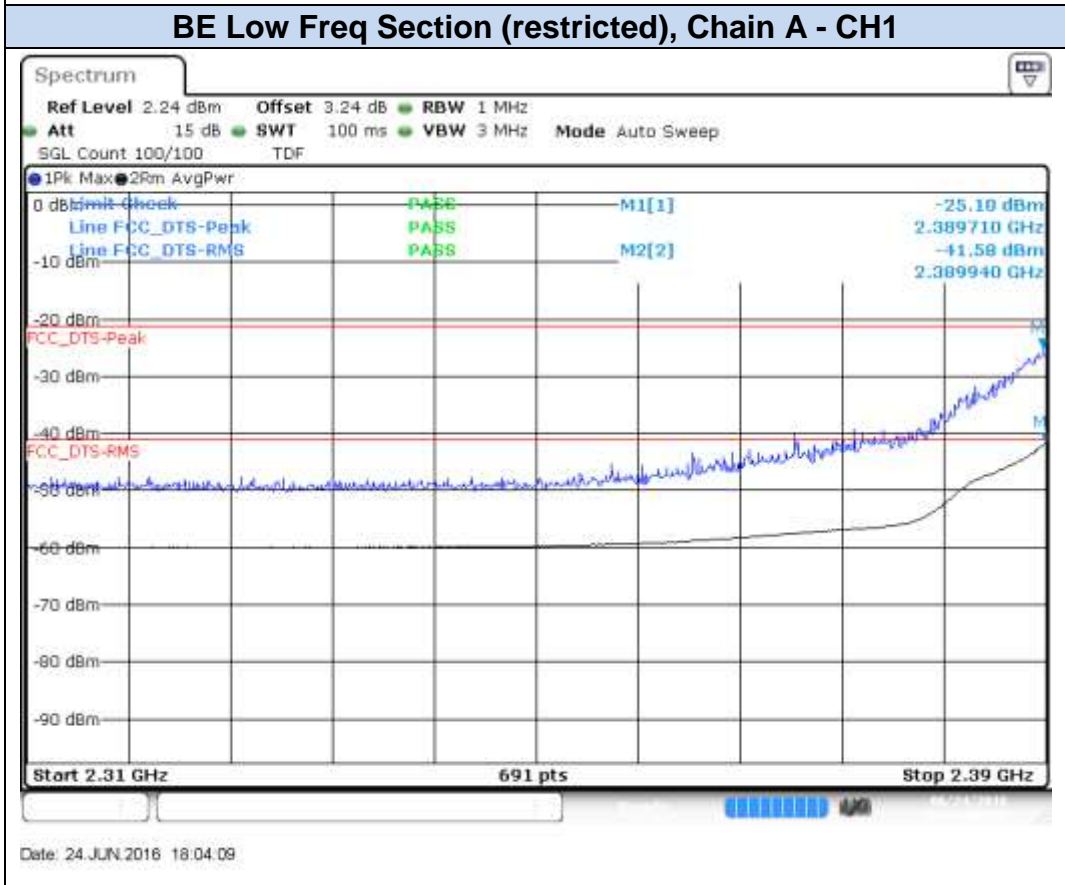
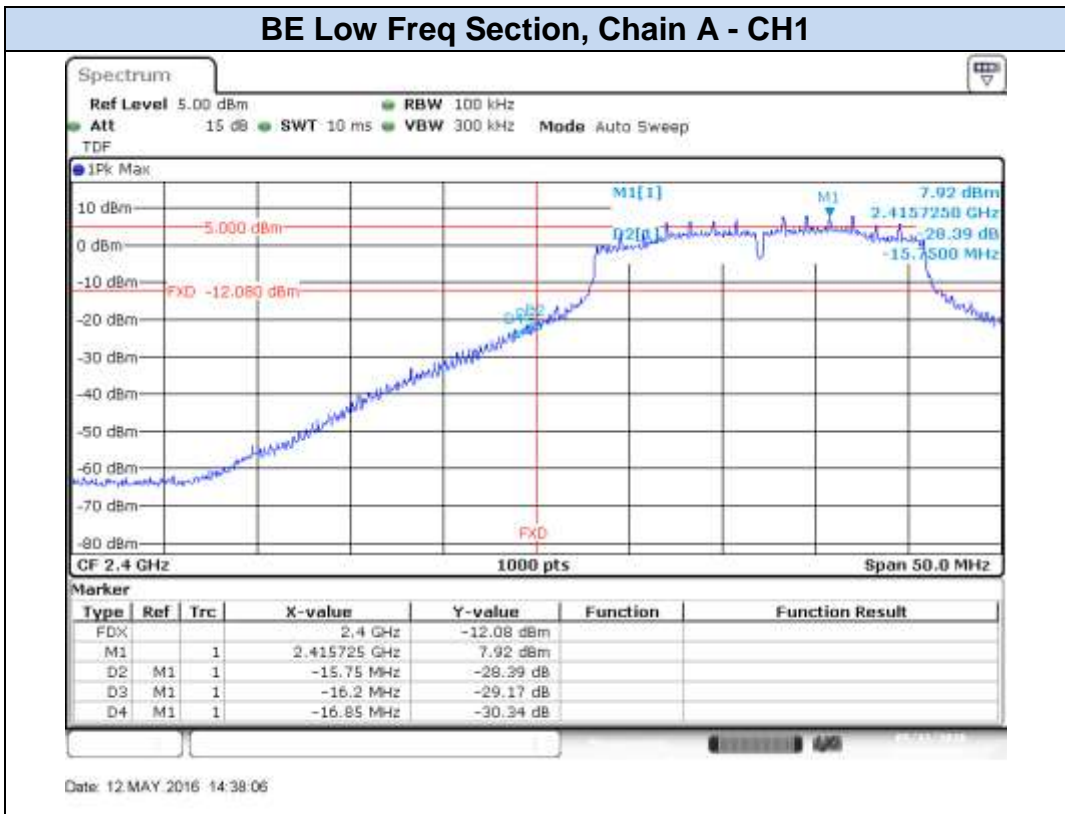


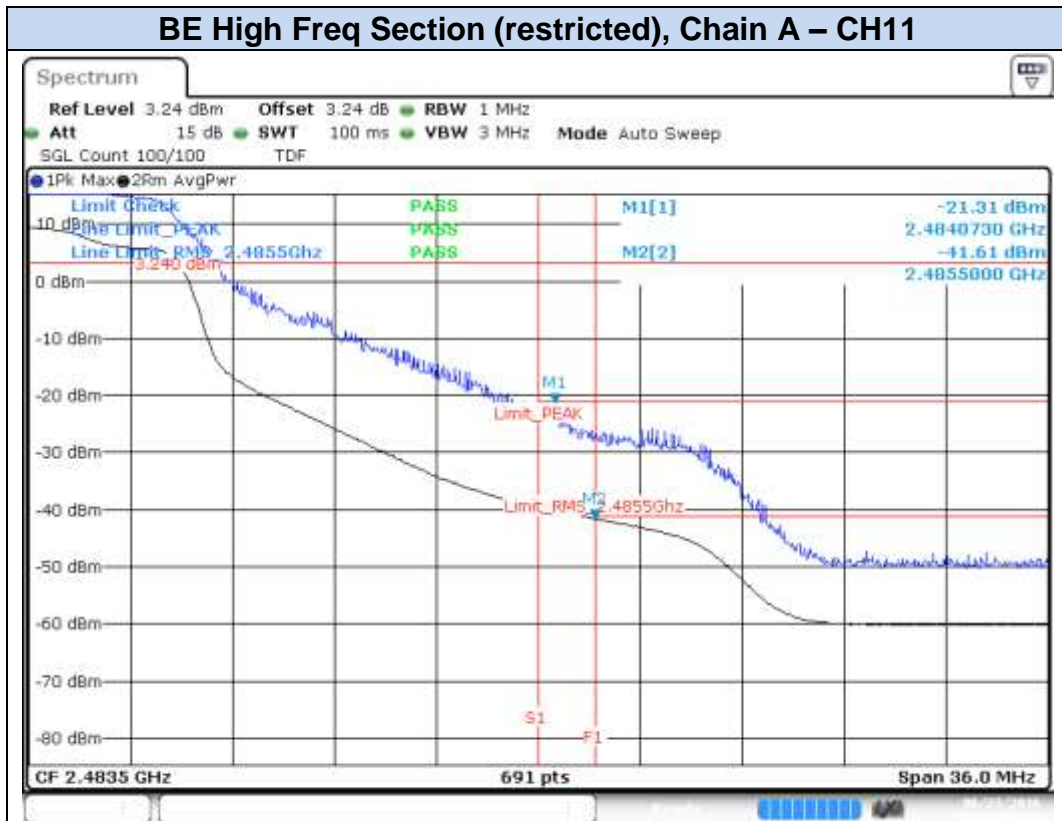


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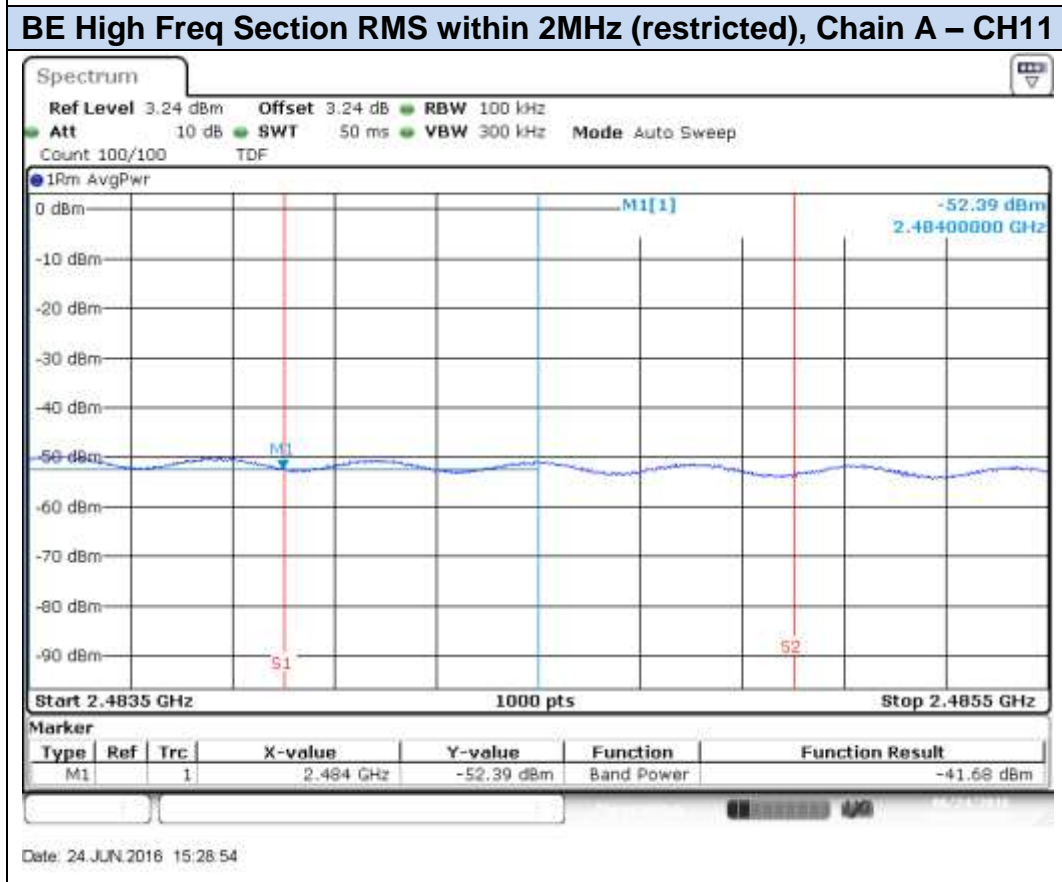


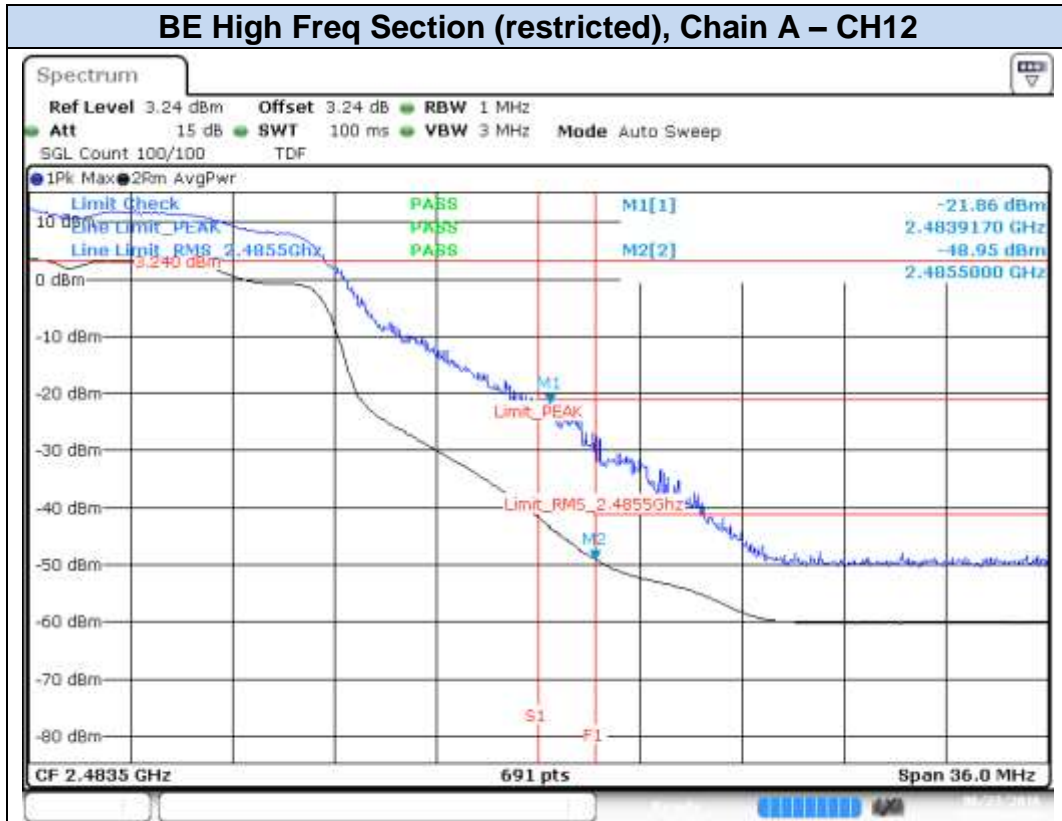
802.11n20 (SISO), HT0



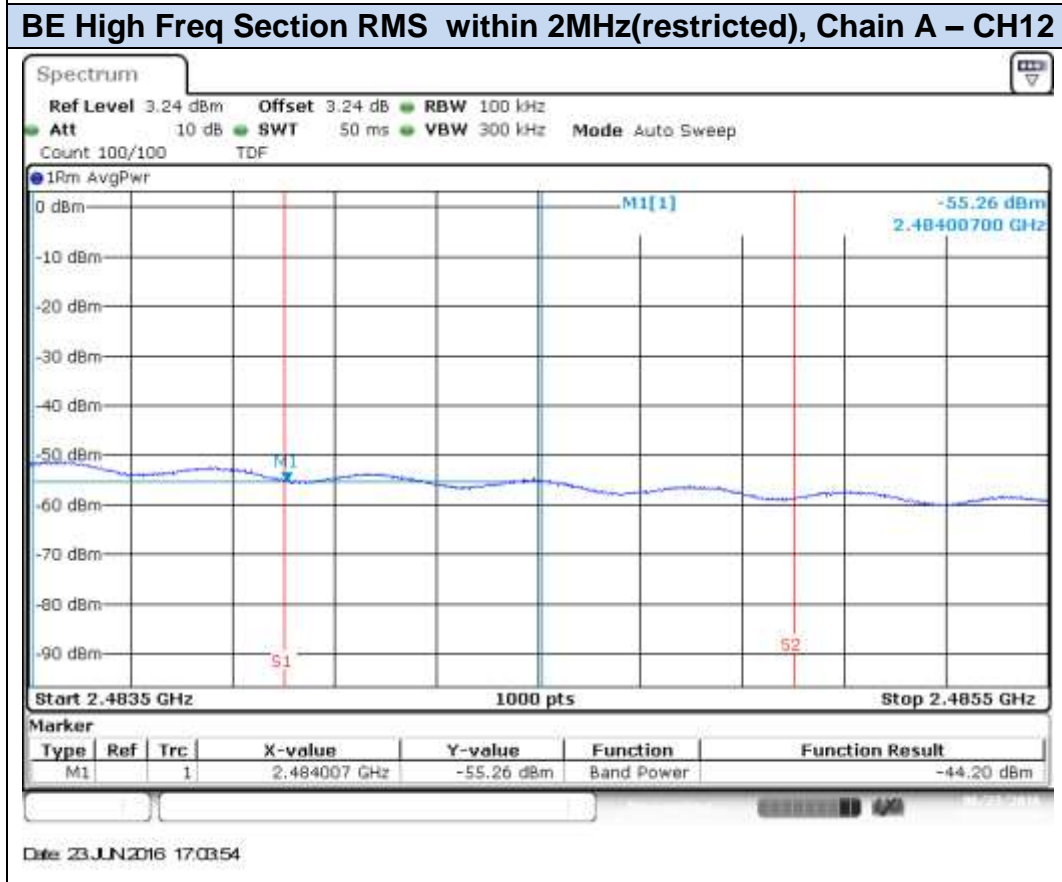


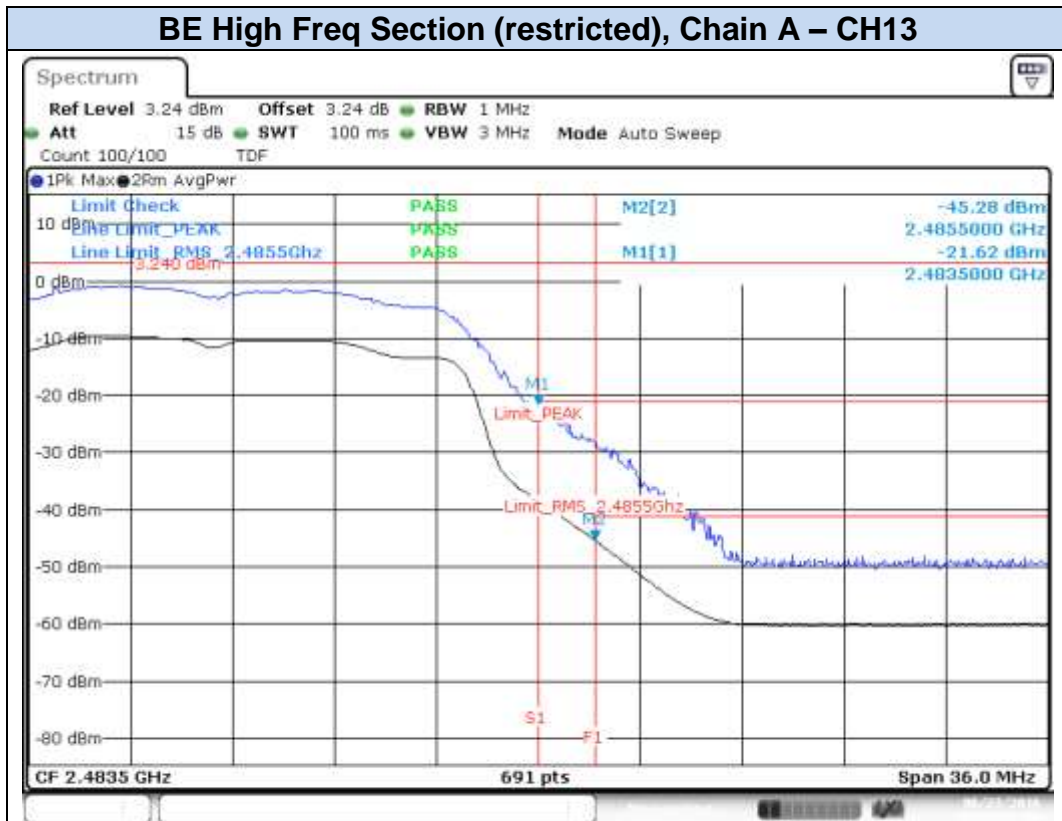
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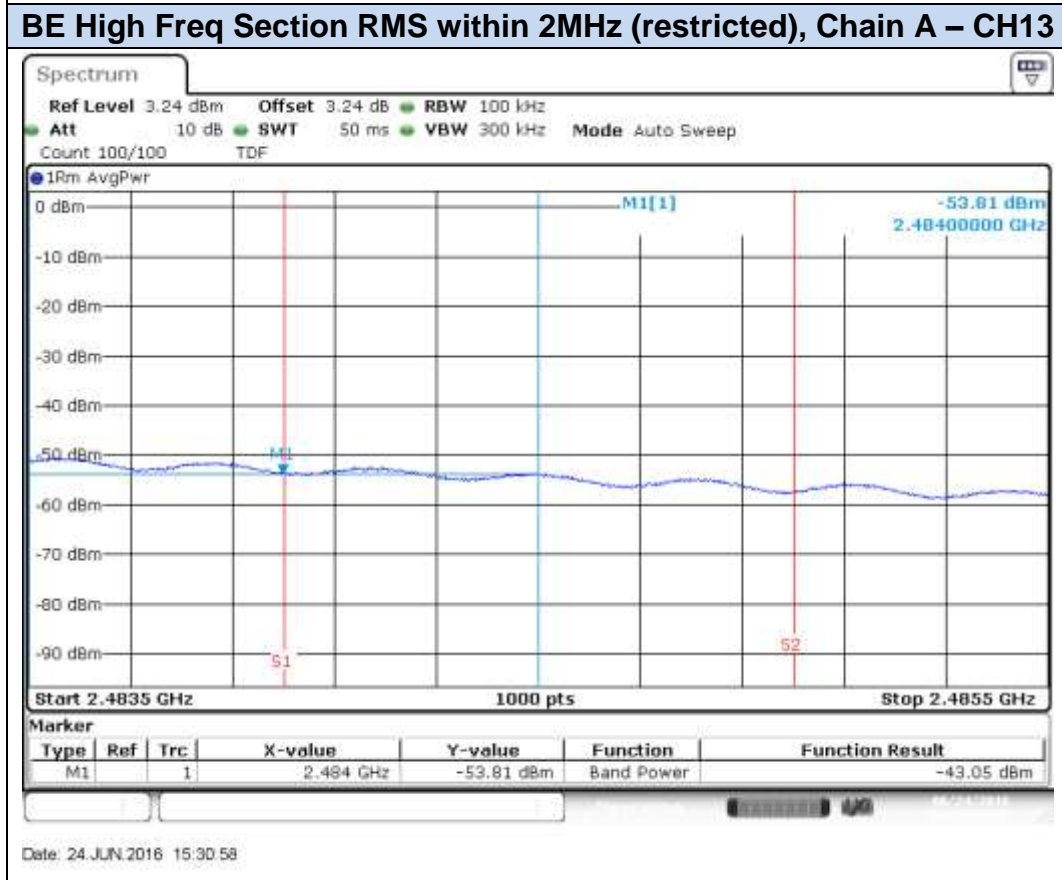


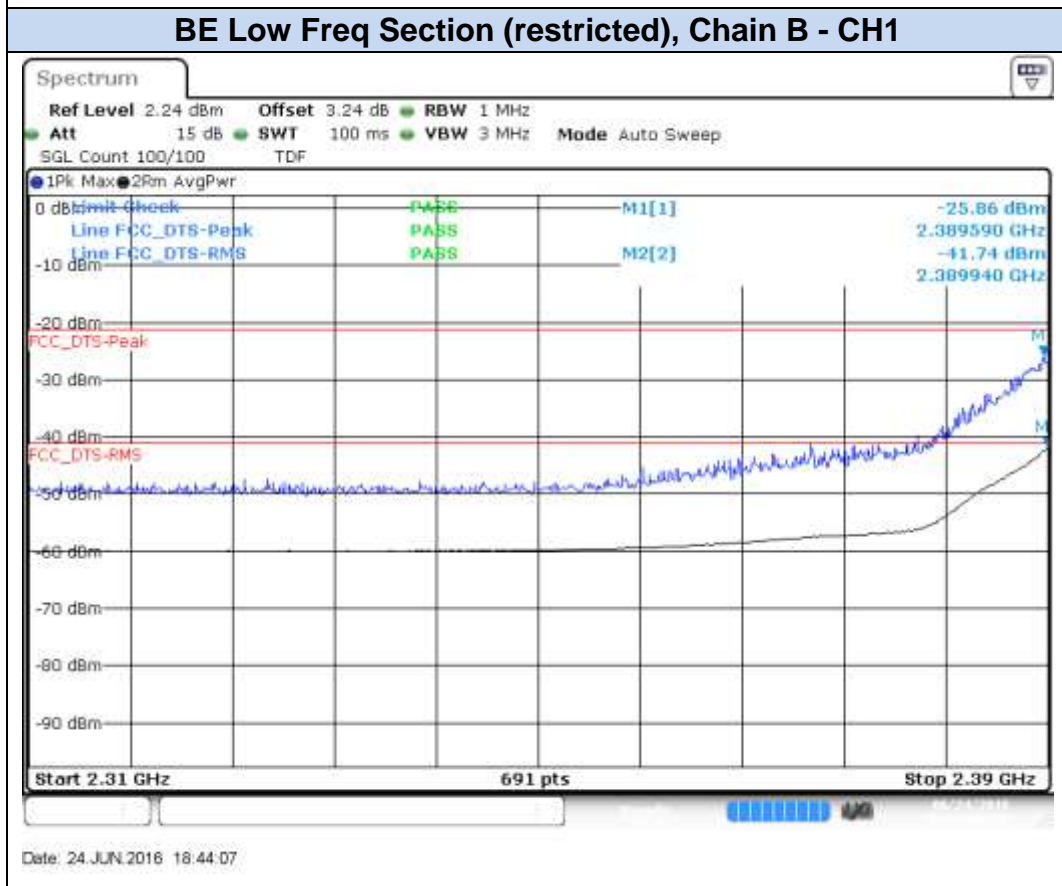
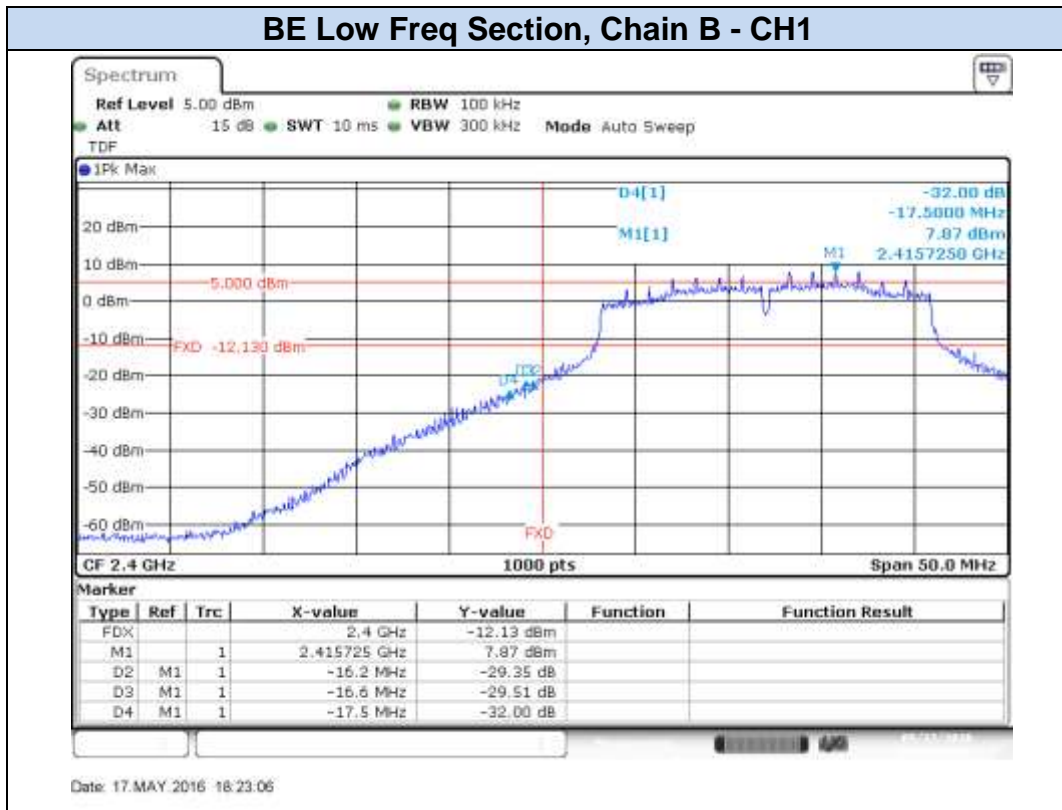
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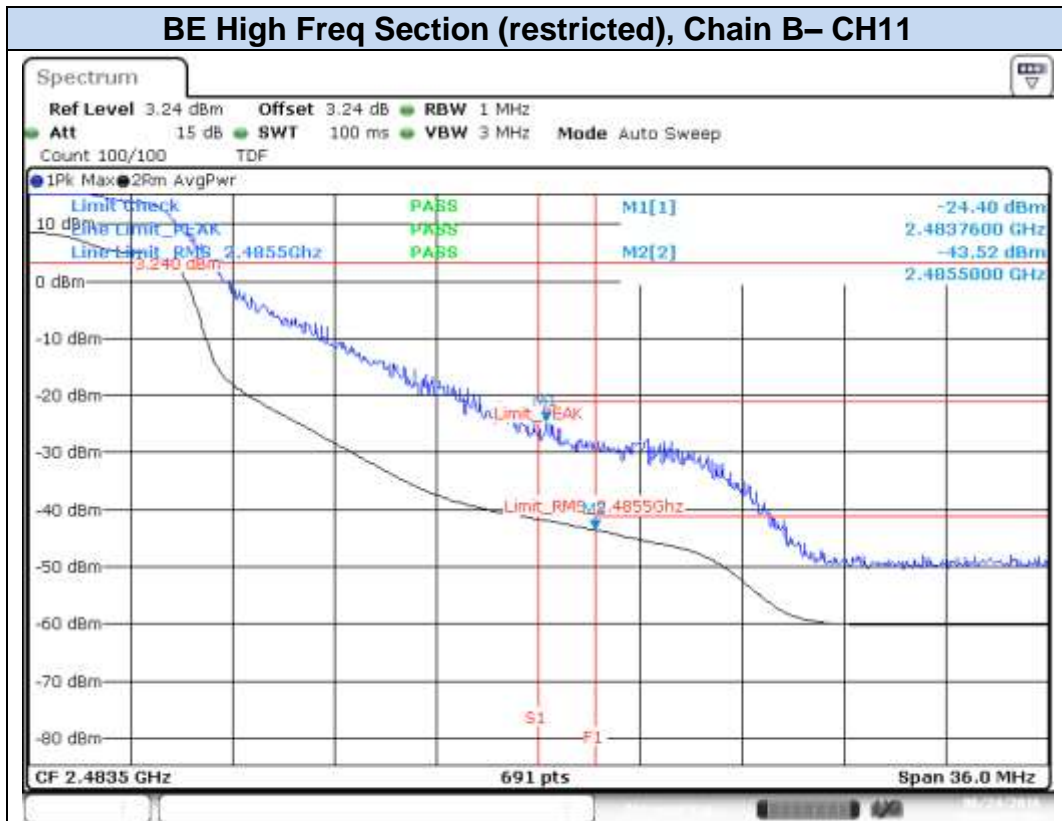




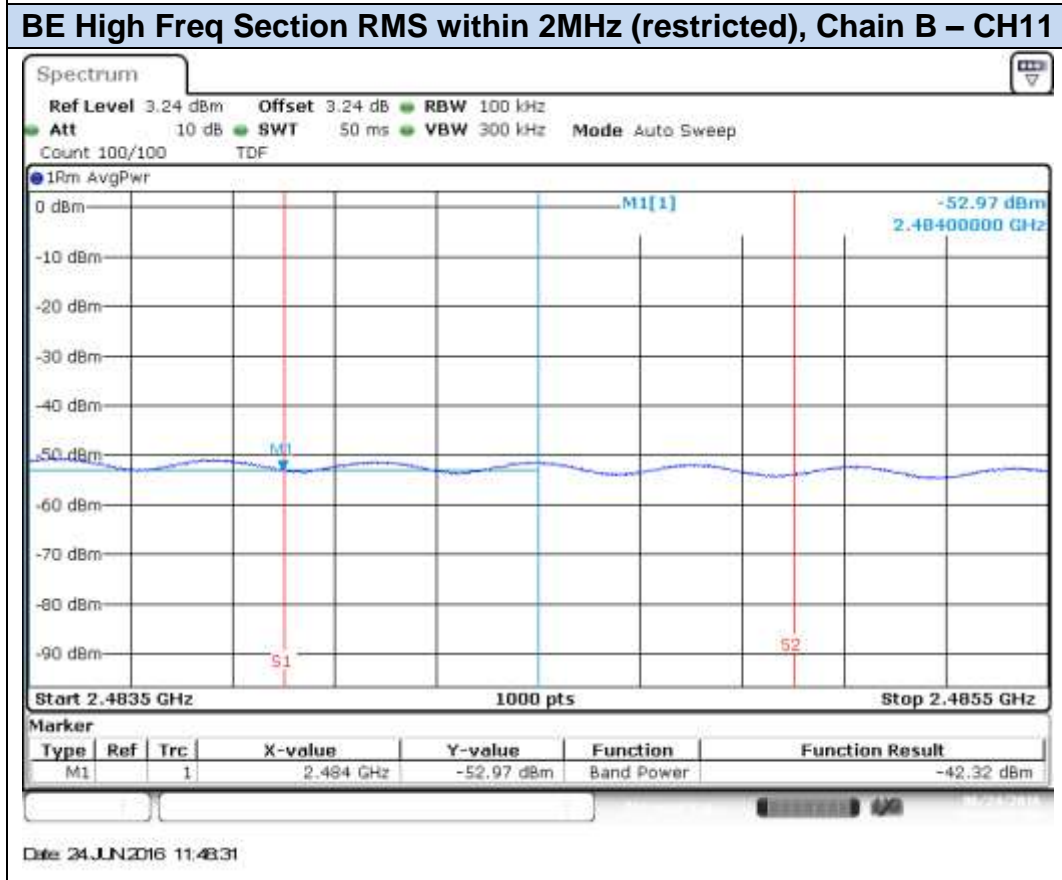
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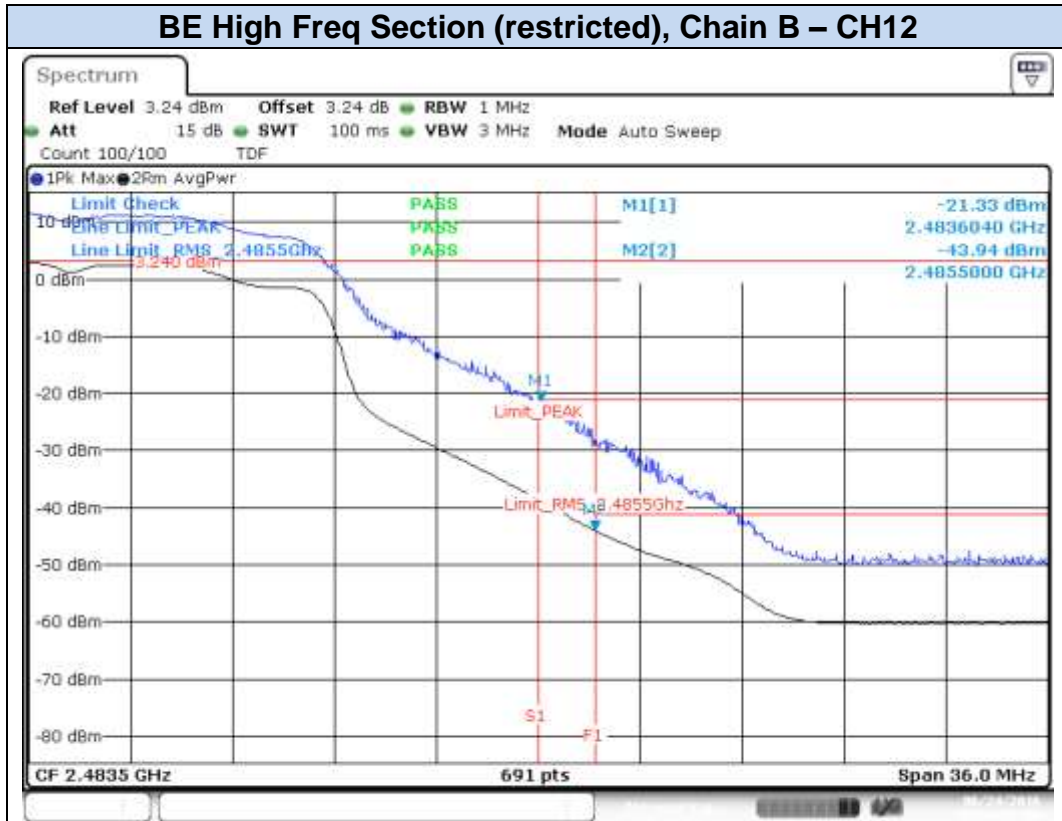




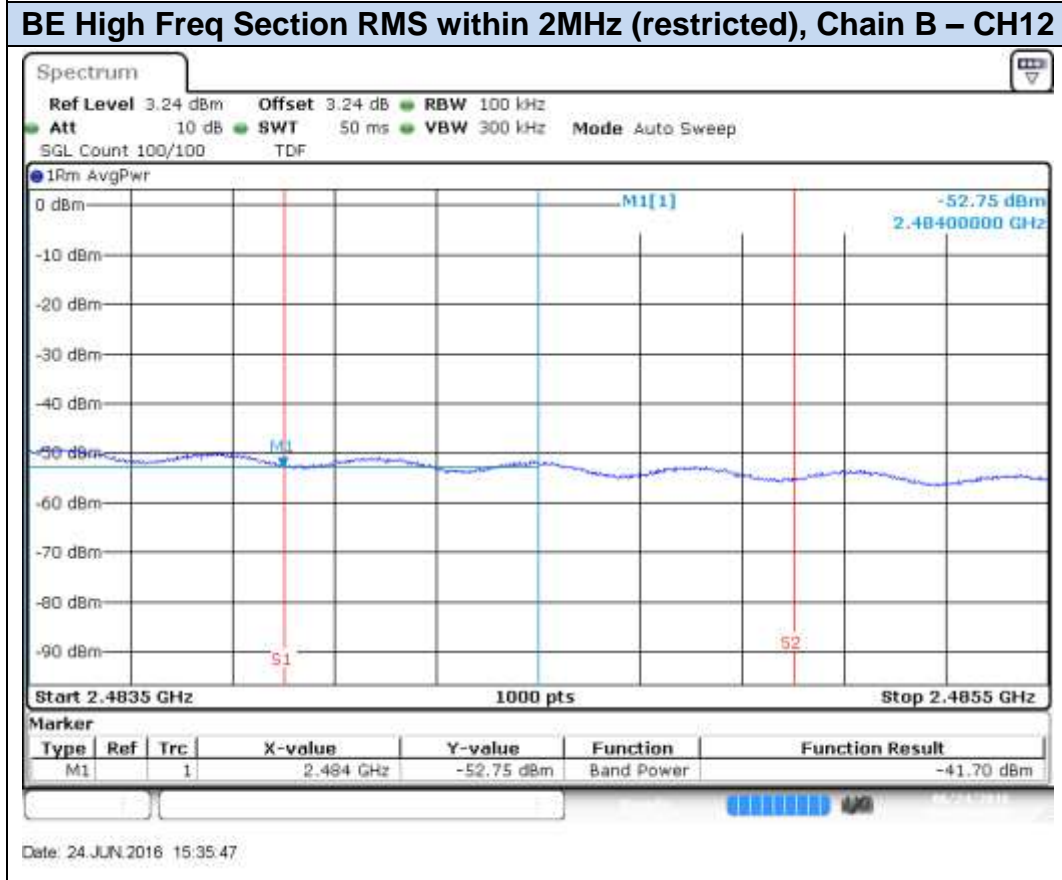
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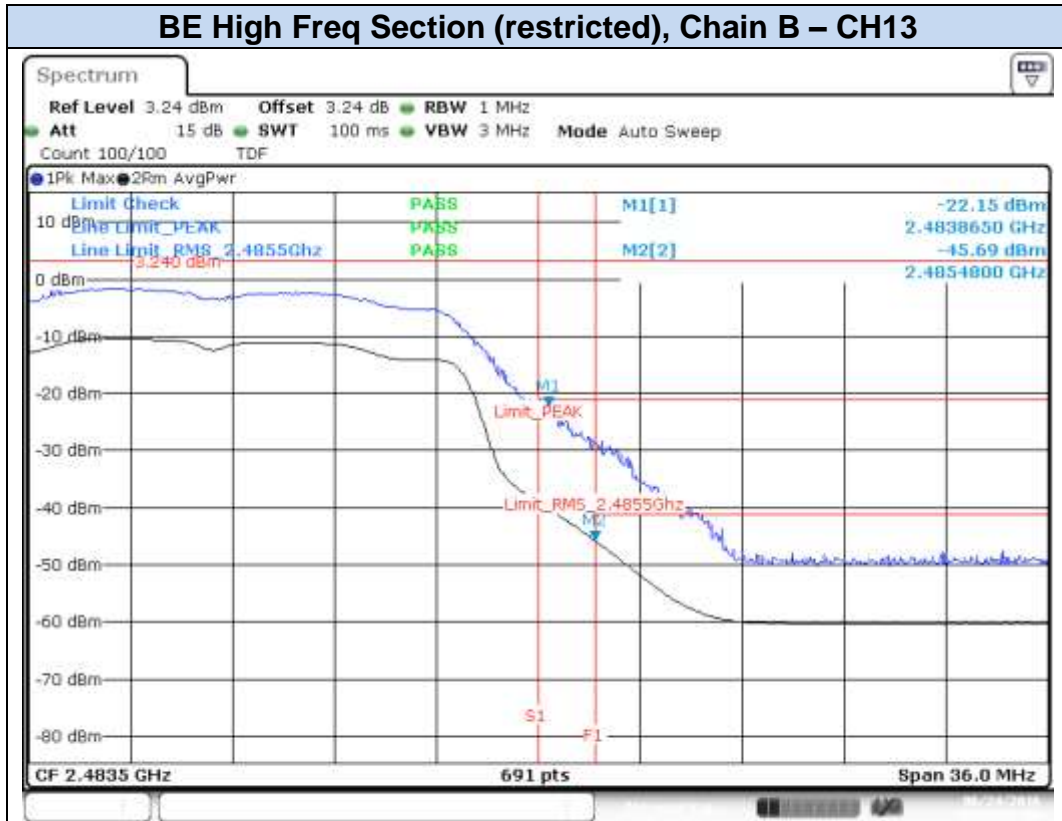


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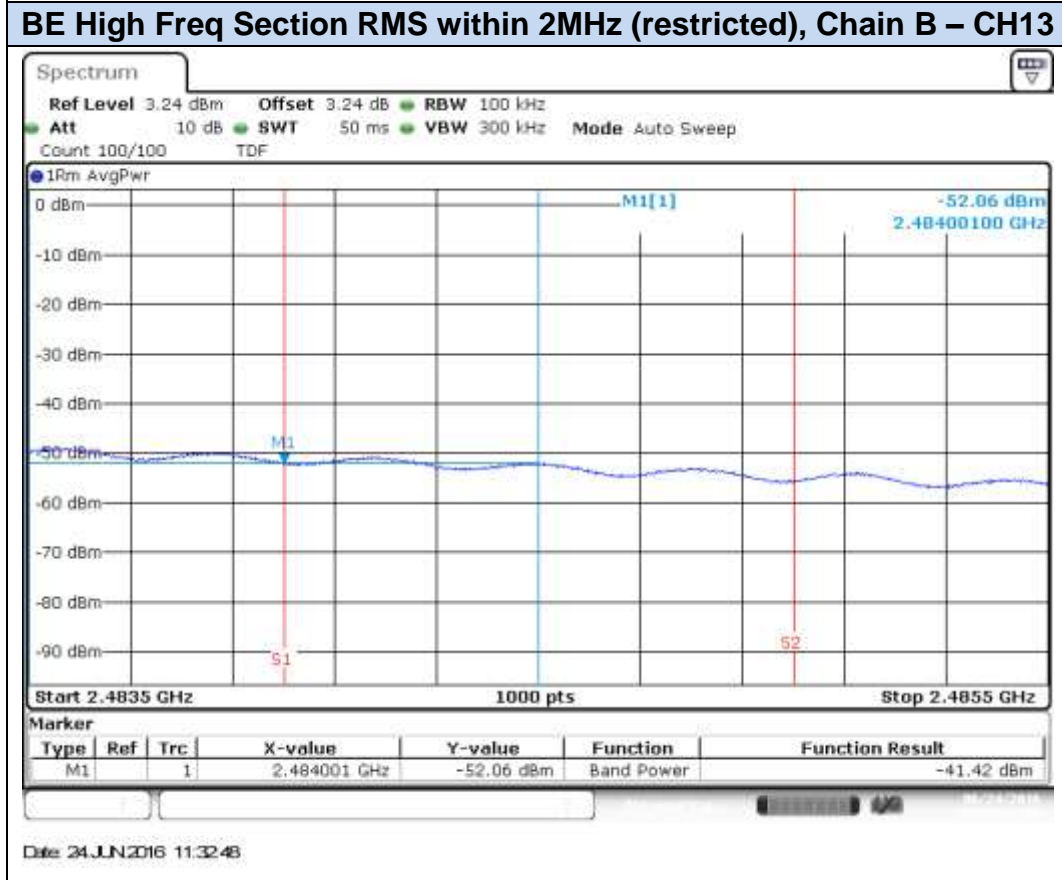


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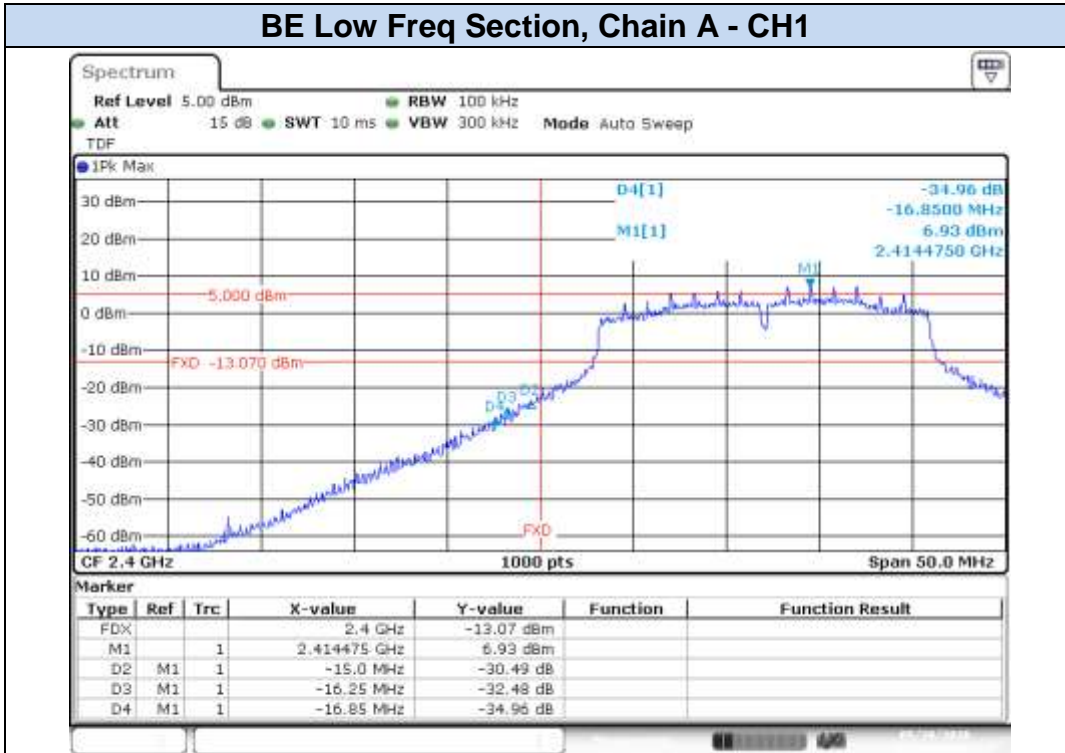


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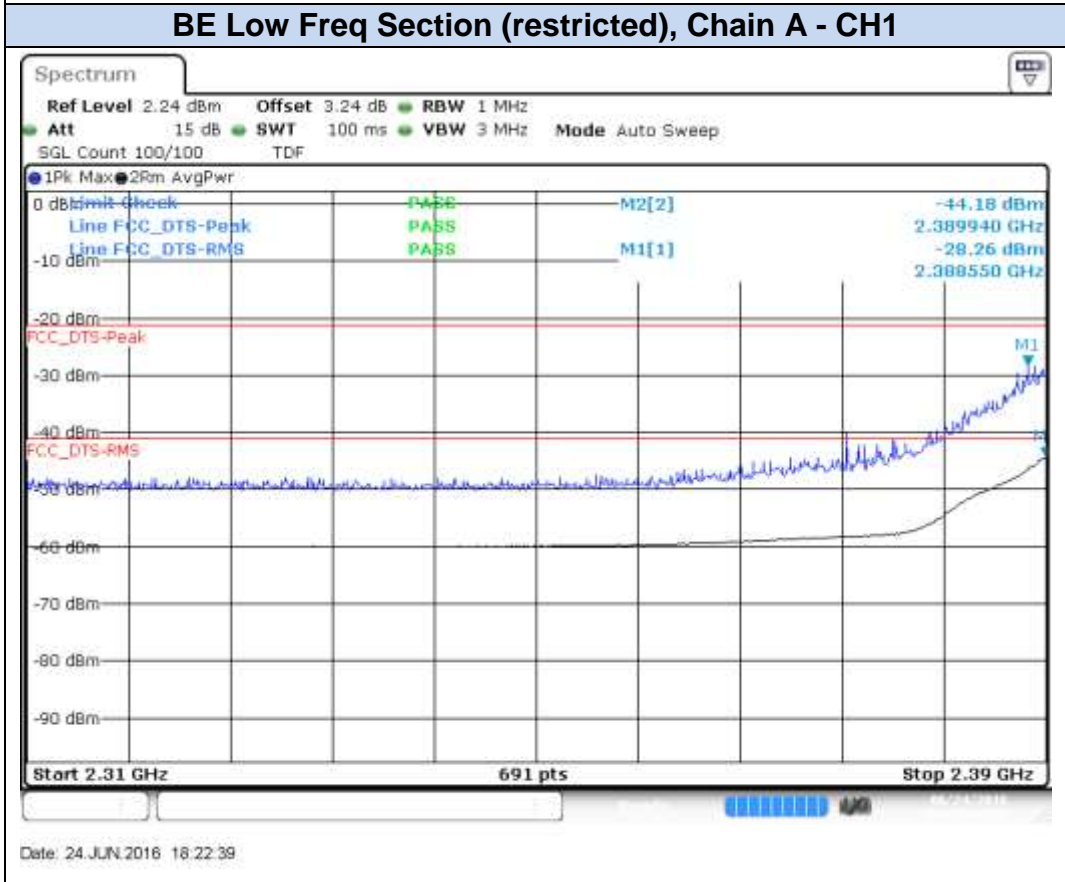


Date 24 JUN 2016 11:32:48

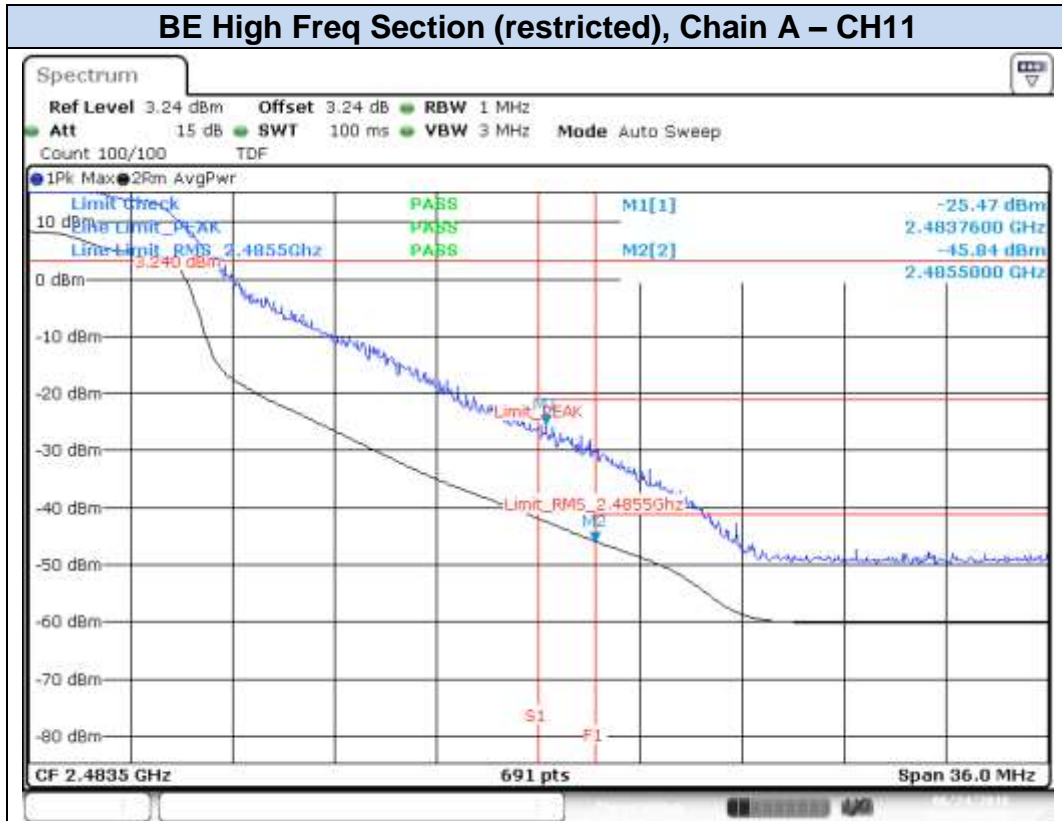
802.11n20 (MIMO), HT8



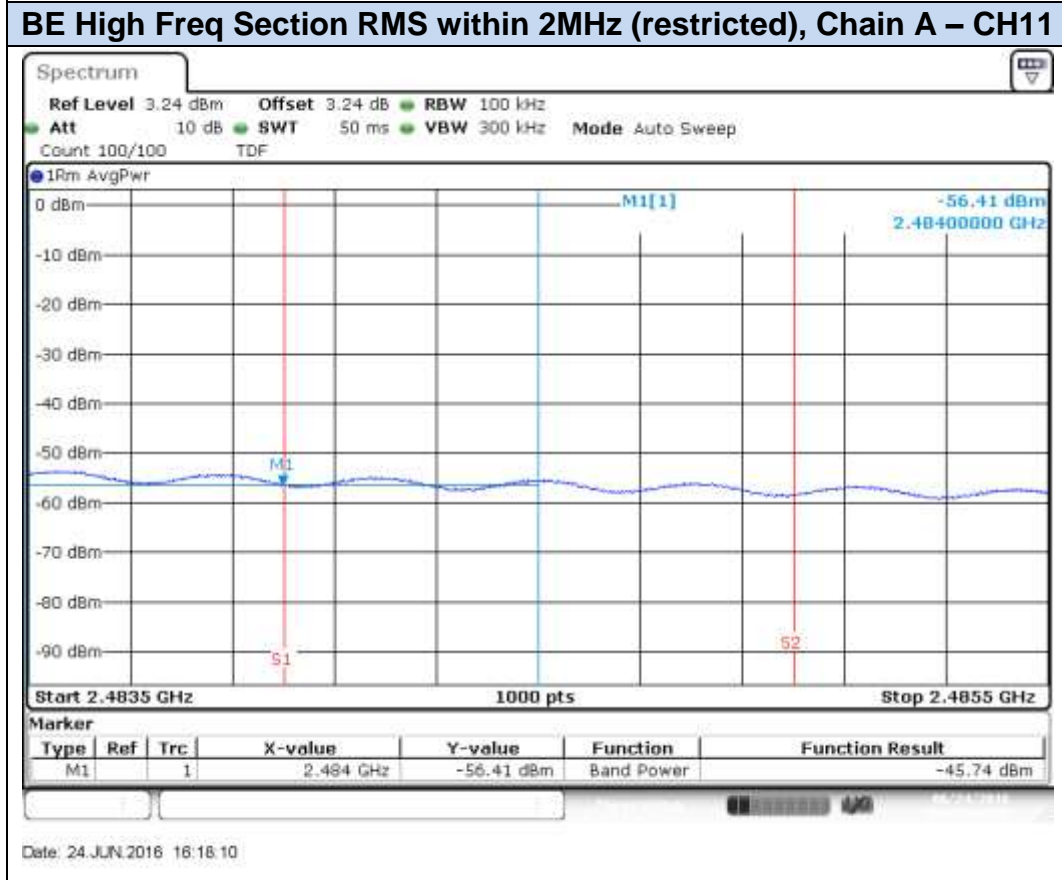
Date: 20.MAY.2016 17:14:21



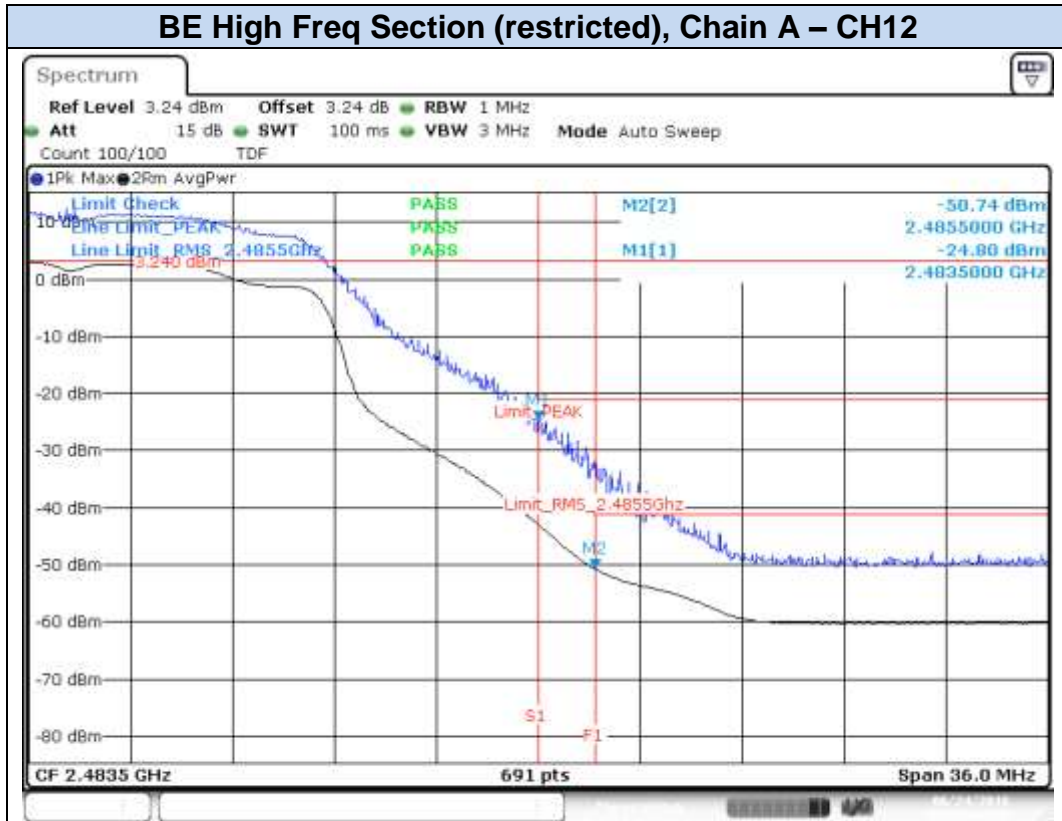
Date: 24.JUN.2016 18:22:39



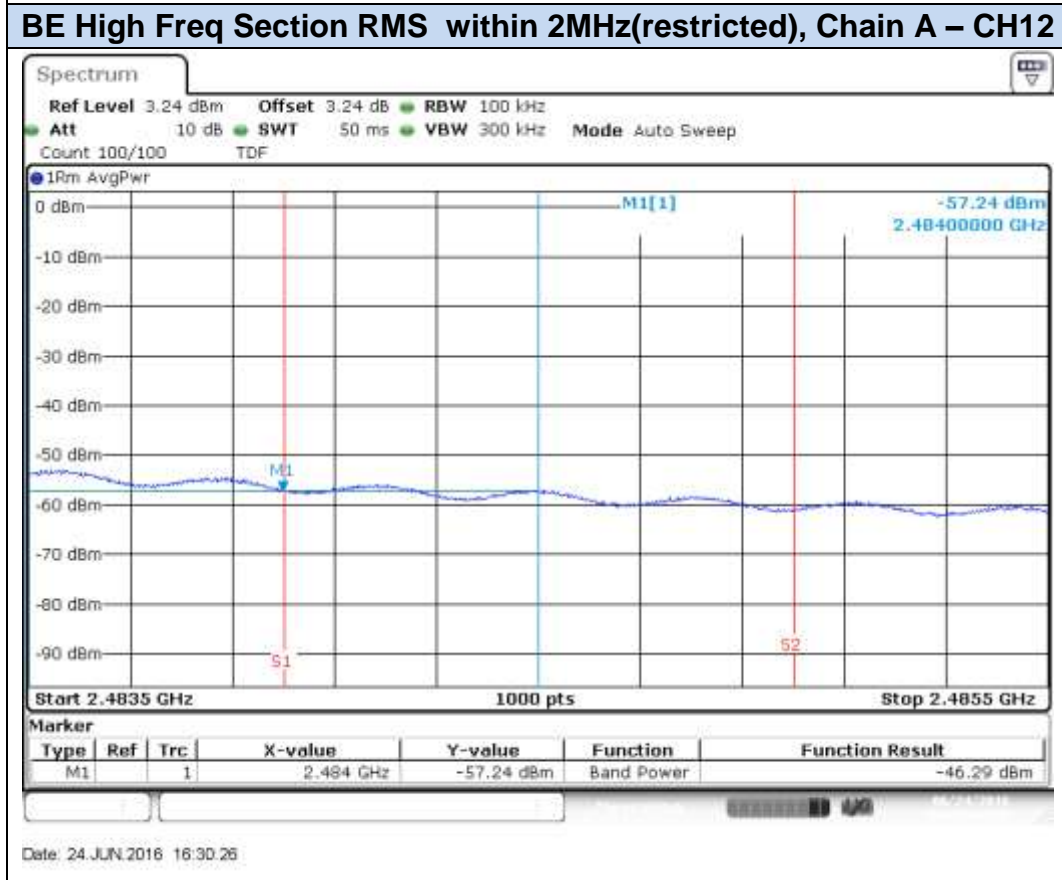
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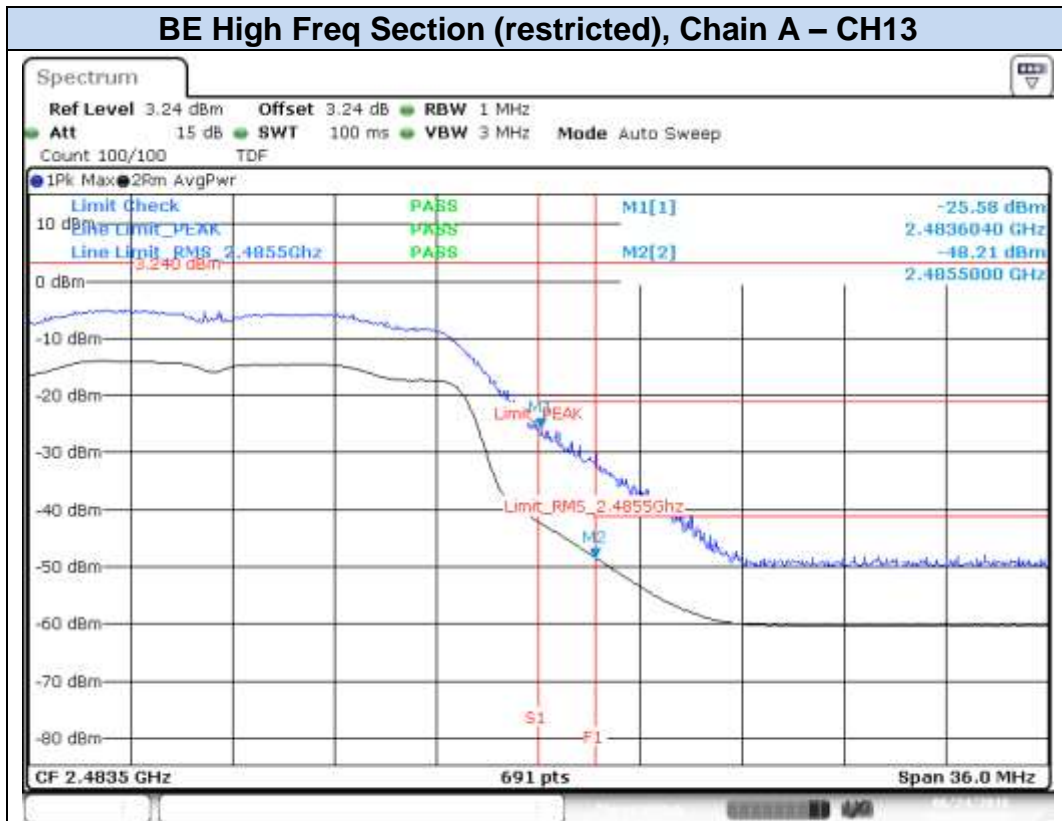
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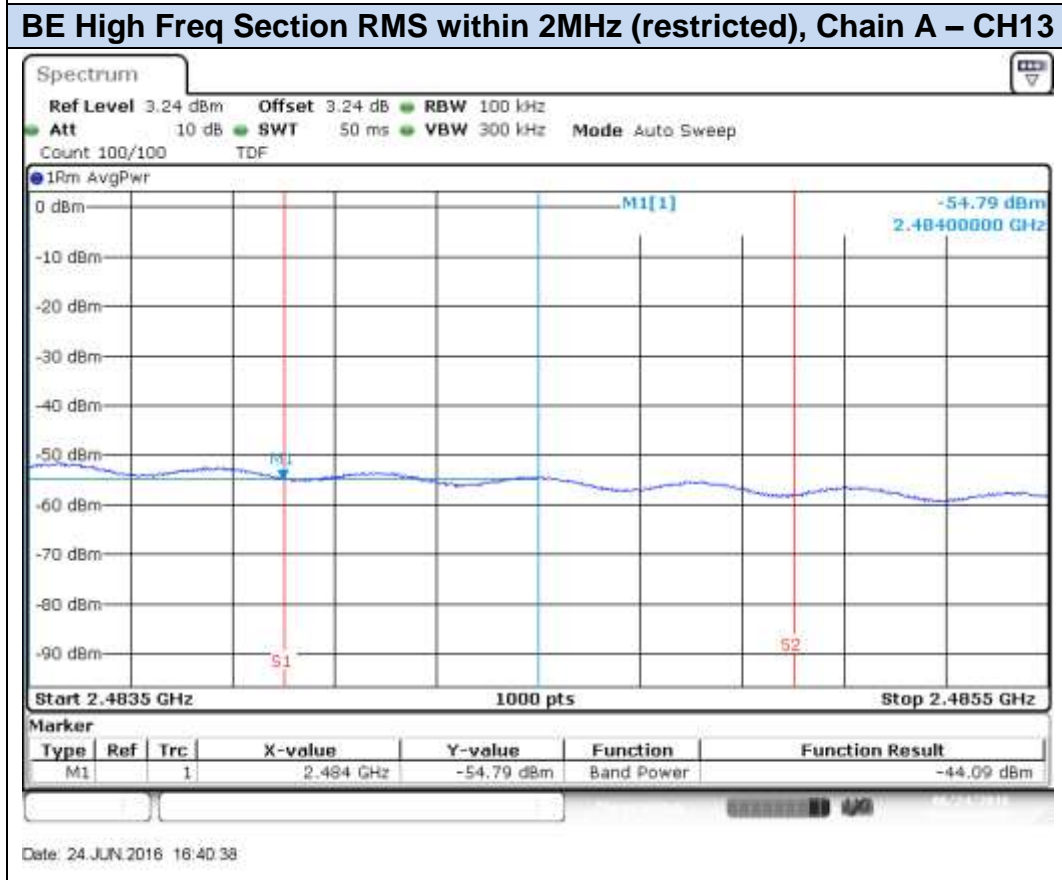
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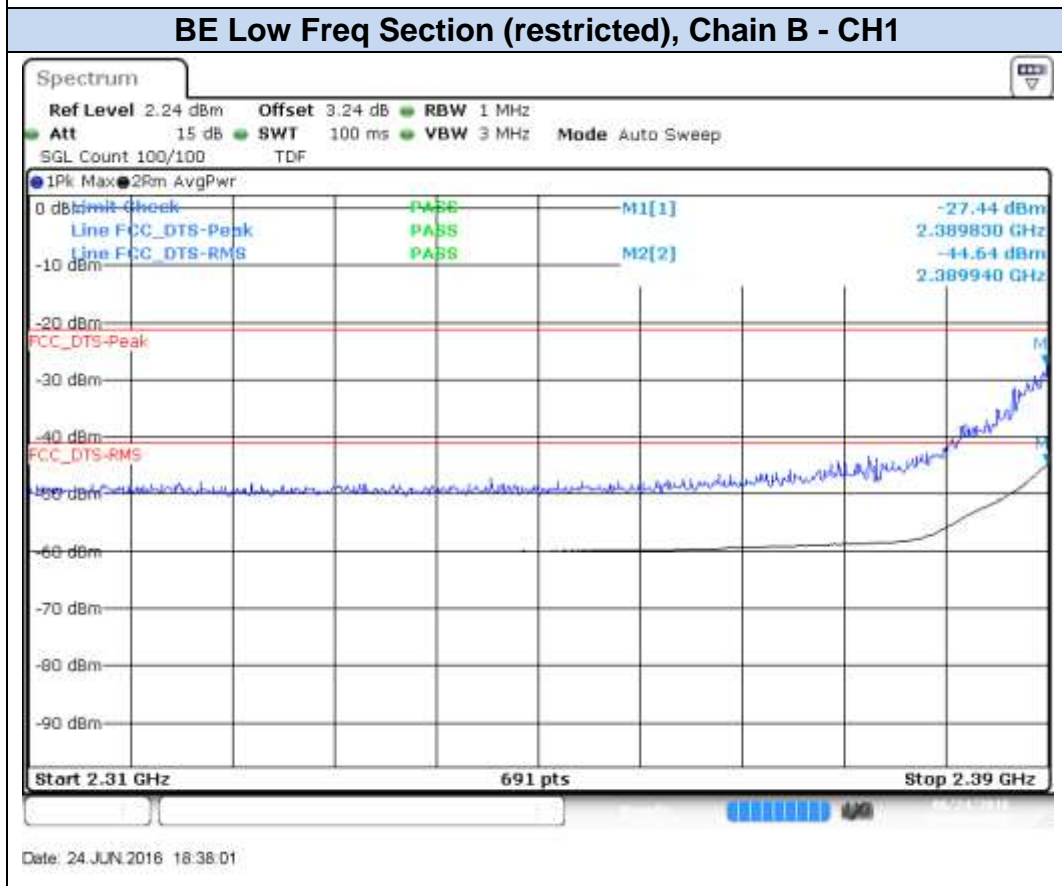
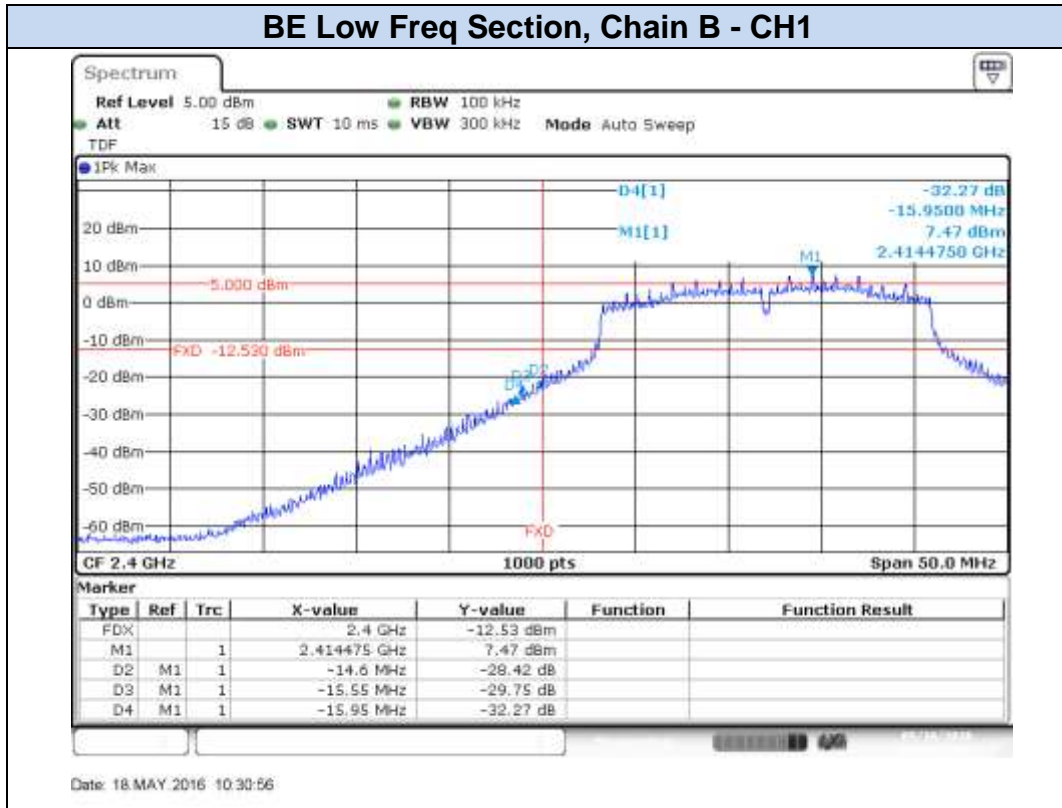


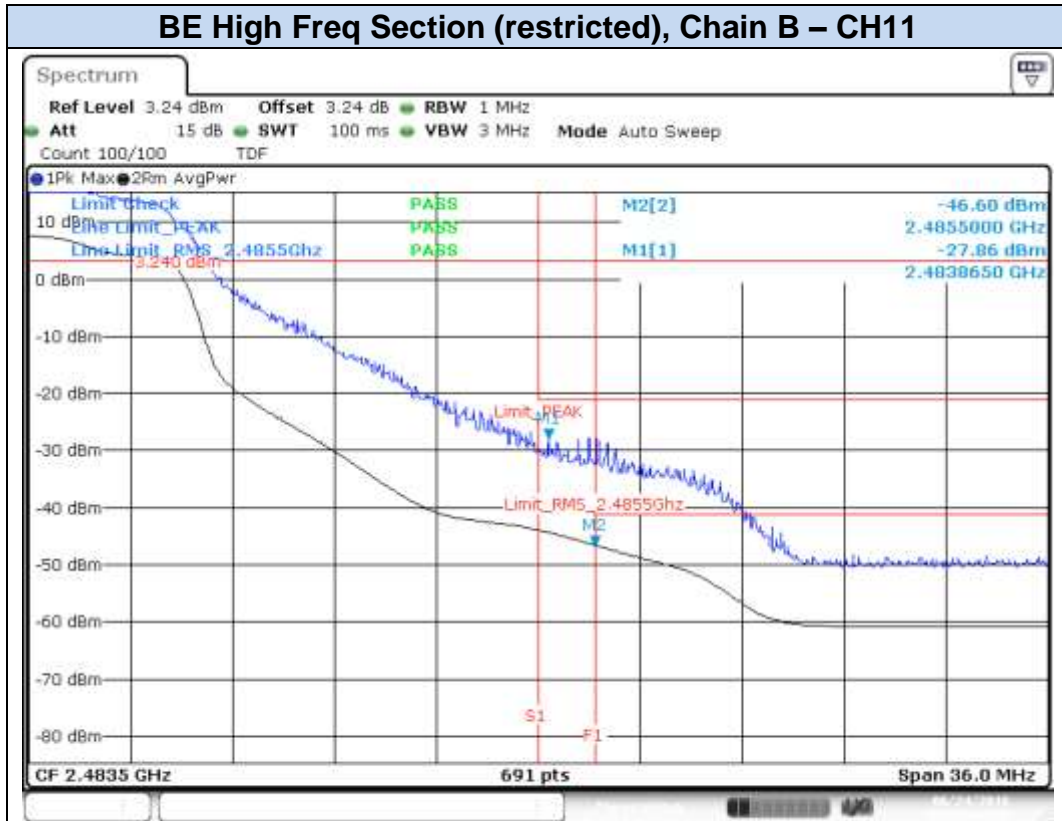
Date: 24 JUN 2016 16:30:26



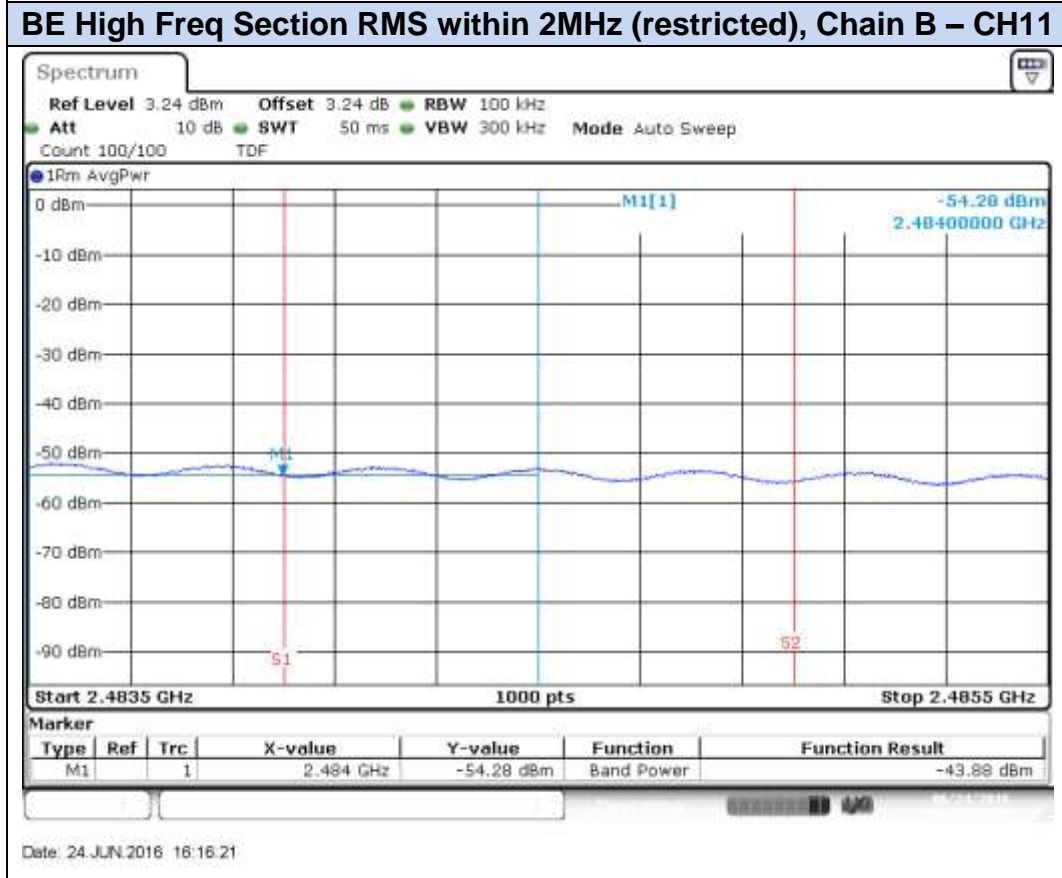
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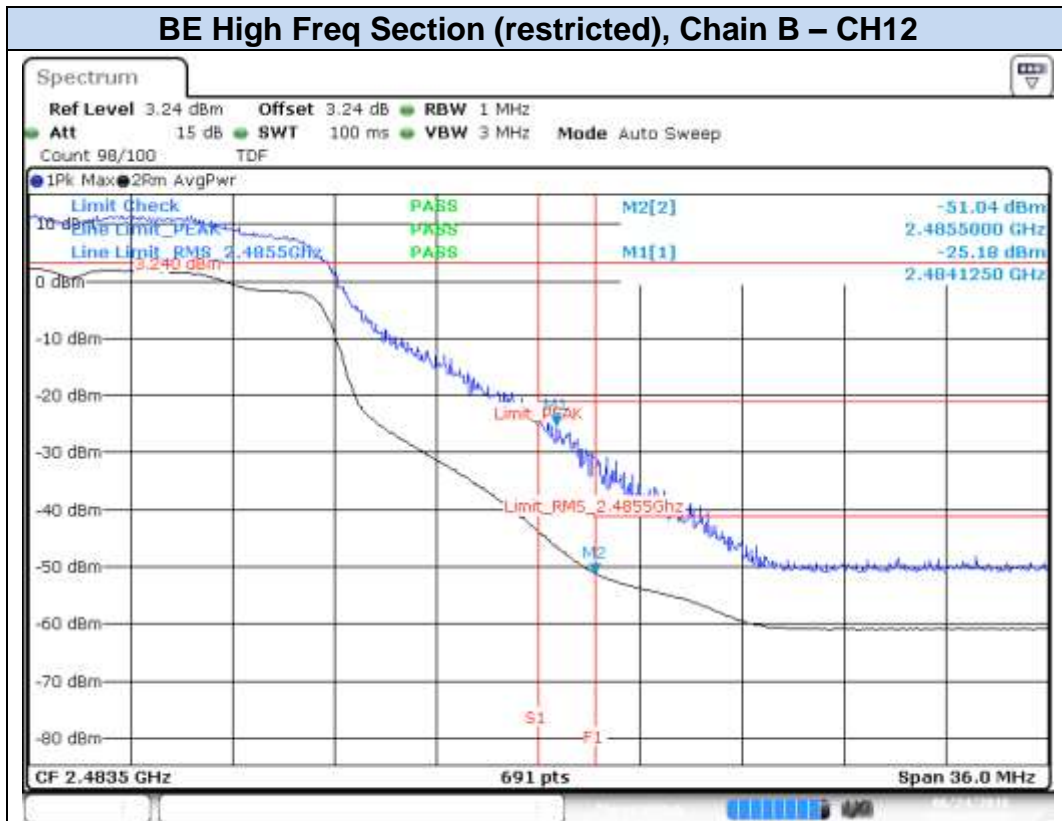




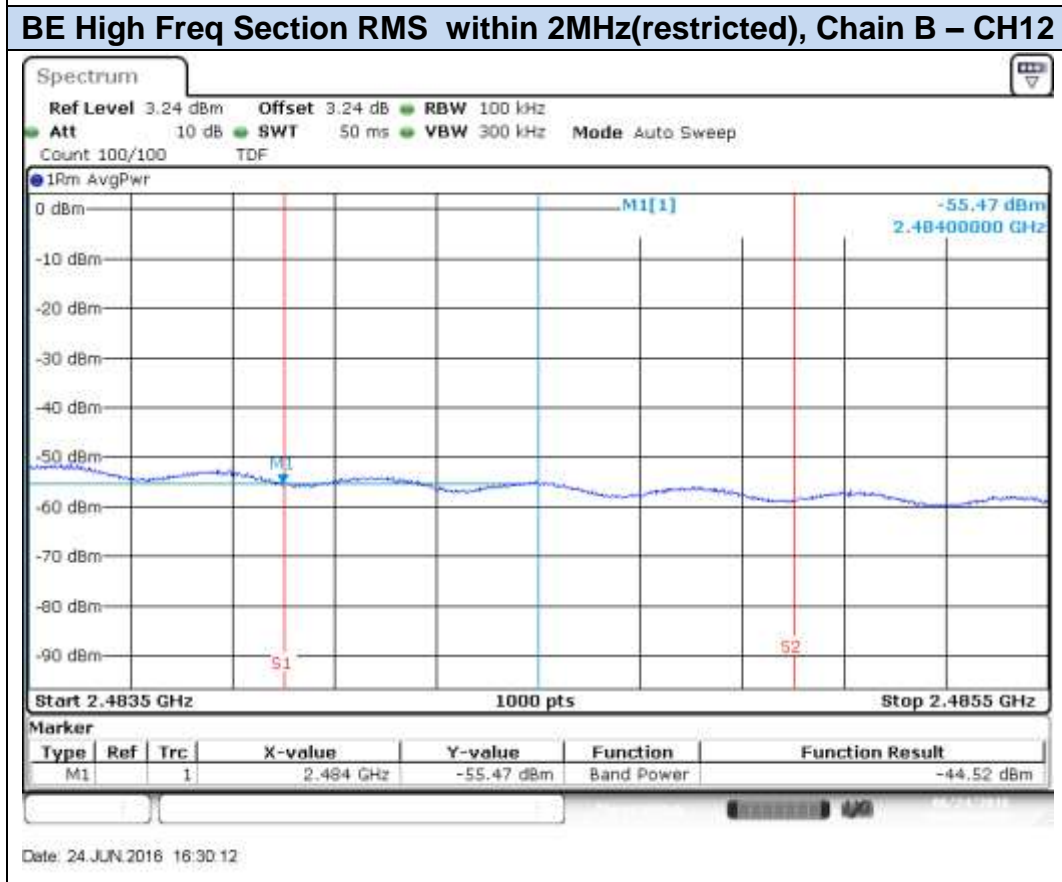
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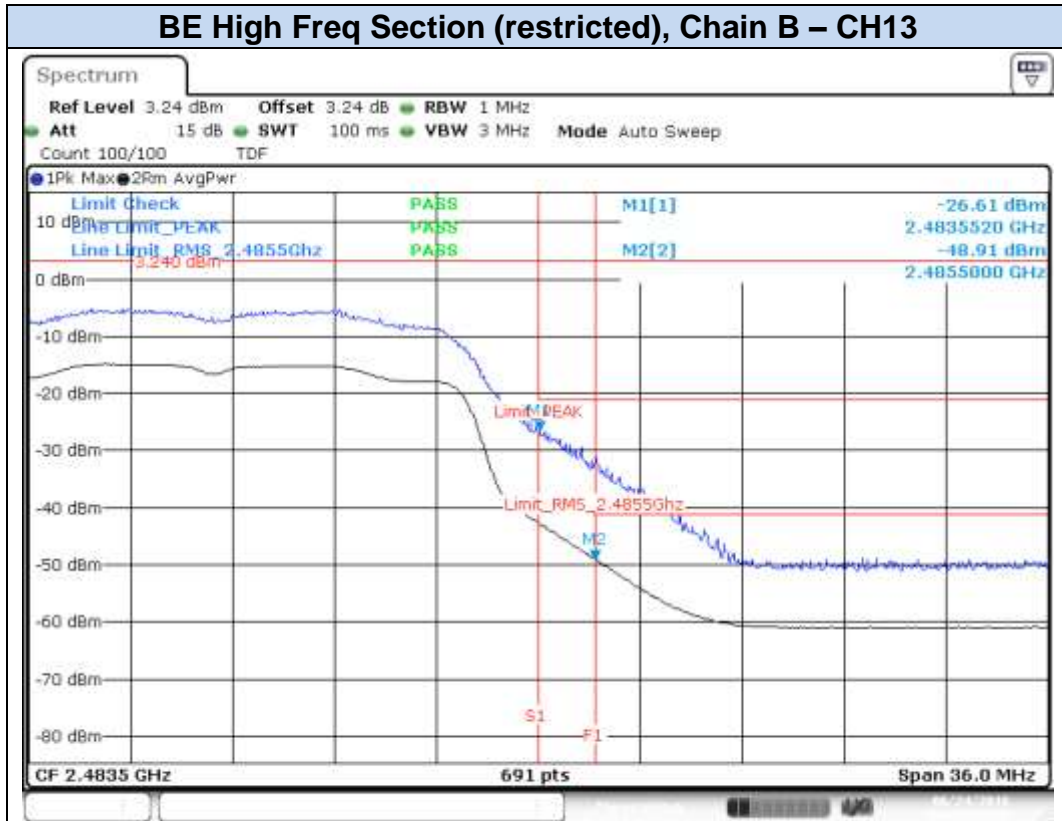
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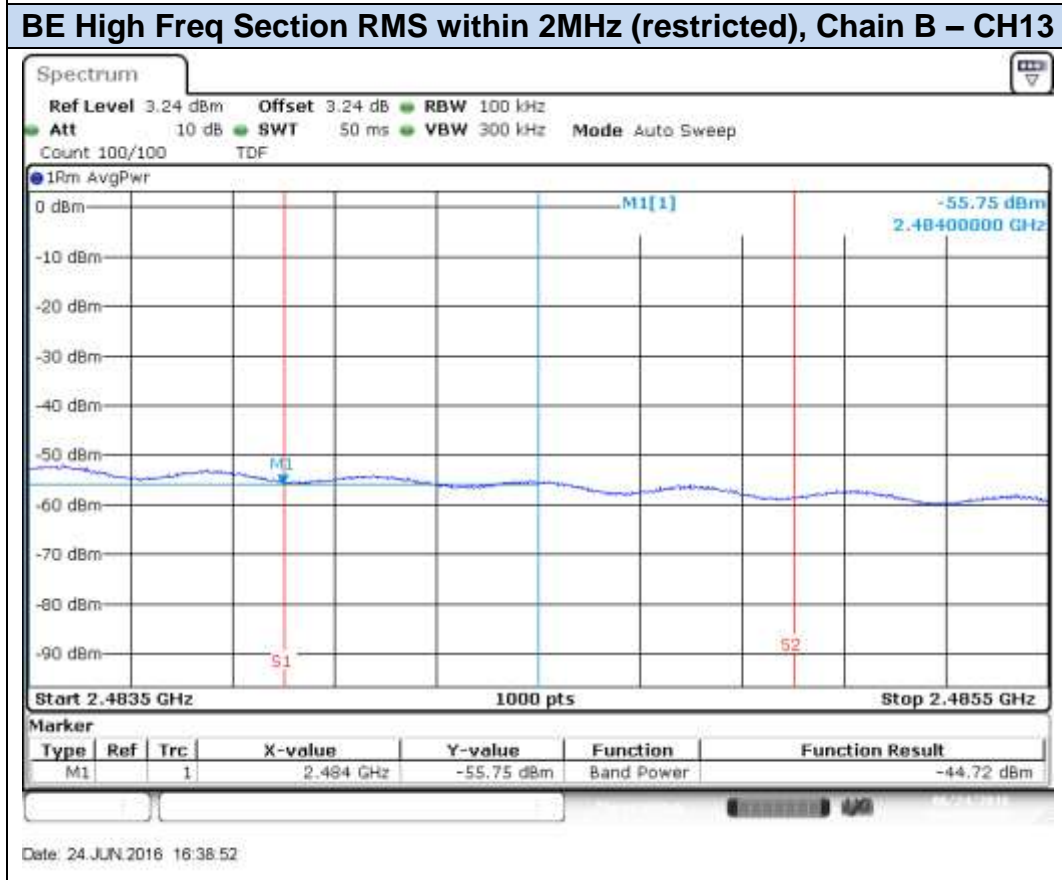
Date: 24 JUN 2016 17:44:14



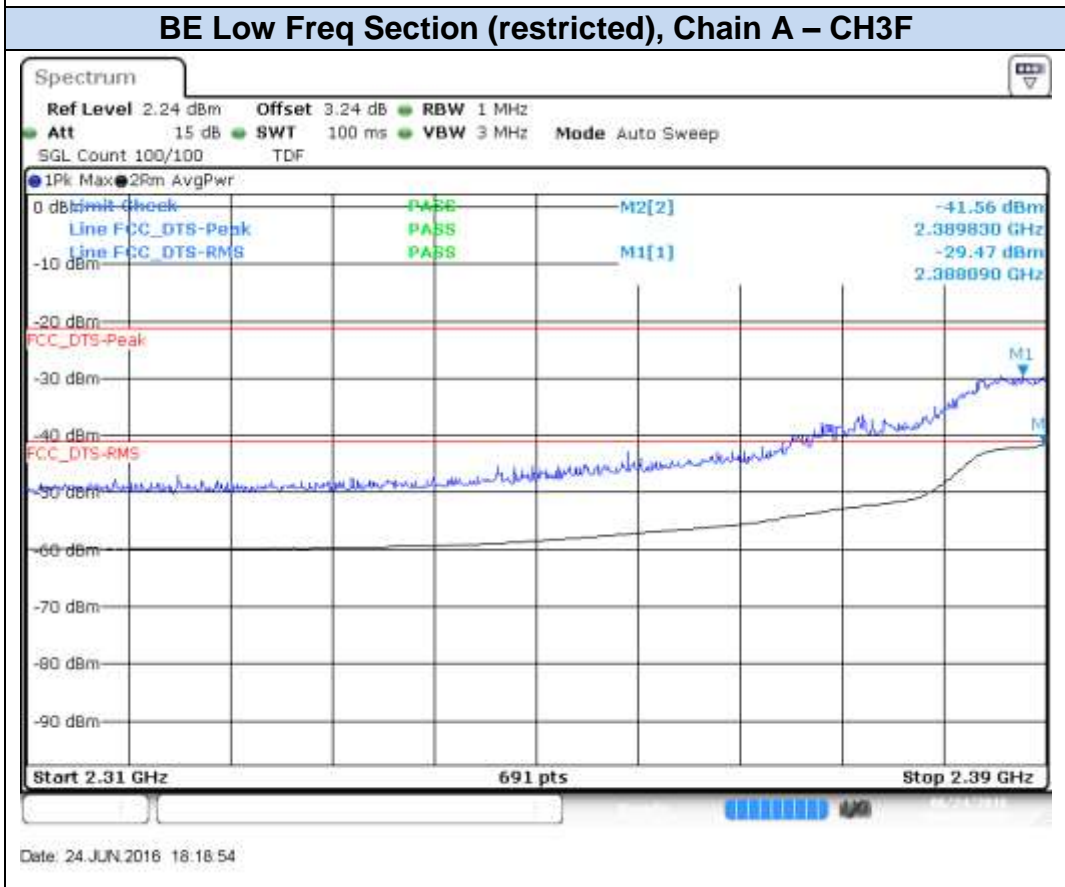
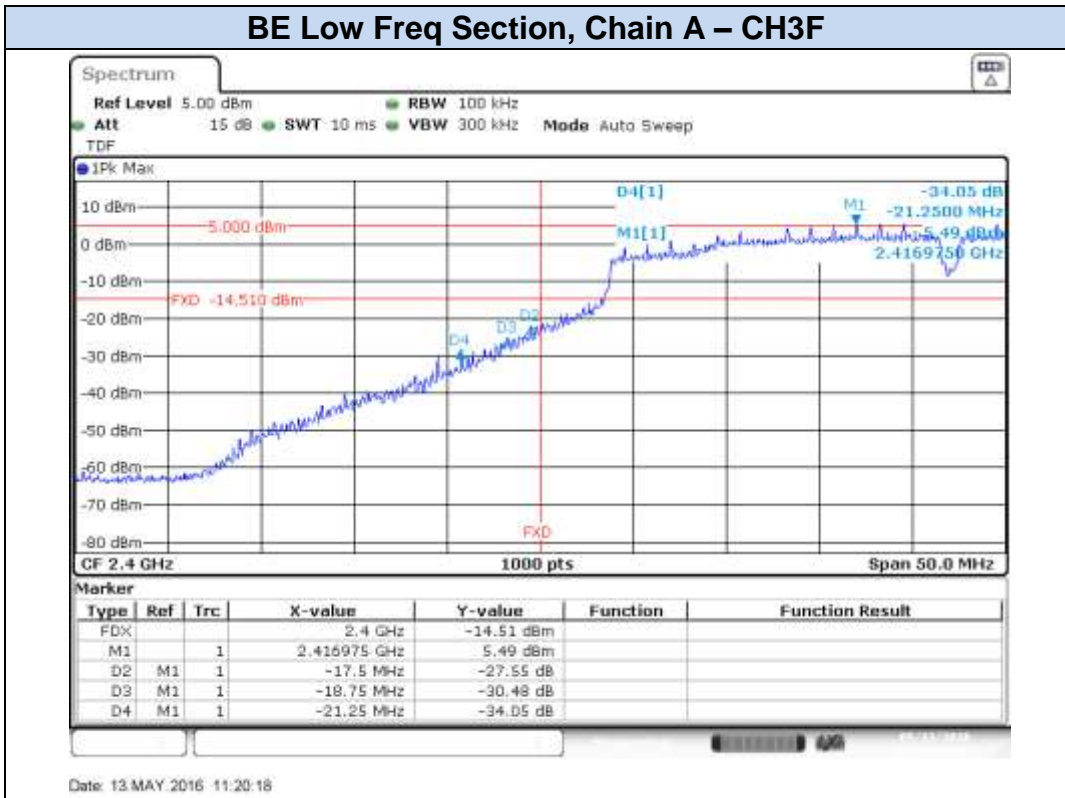
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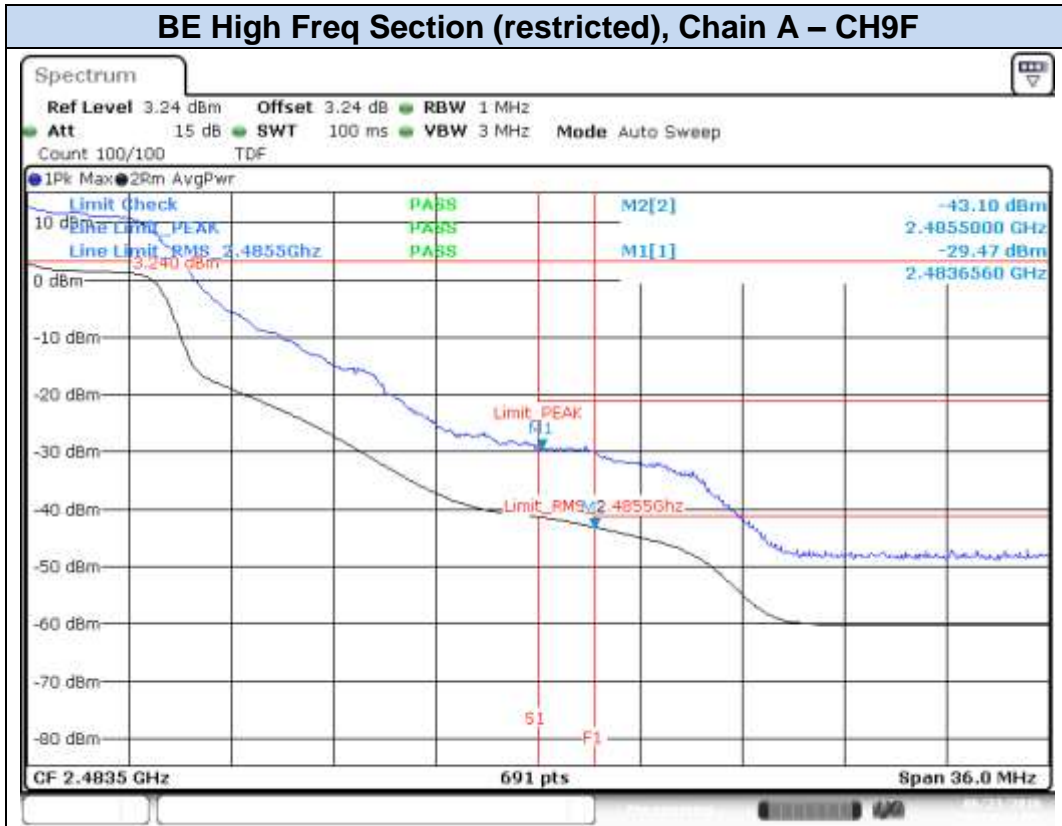


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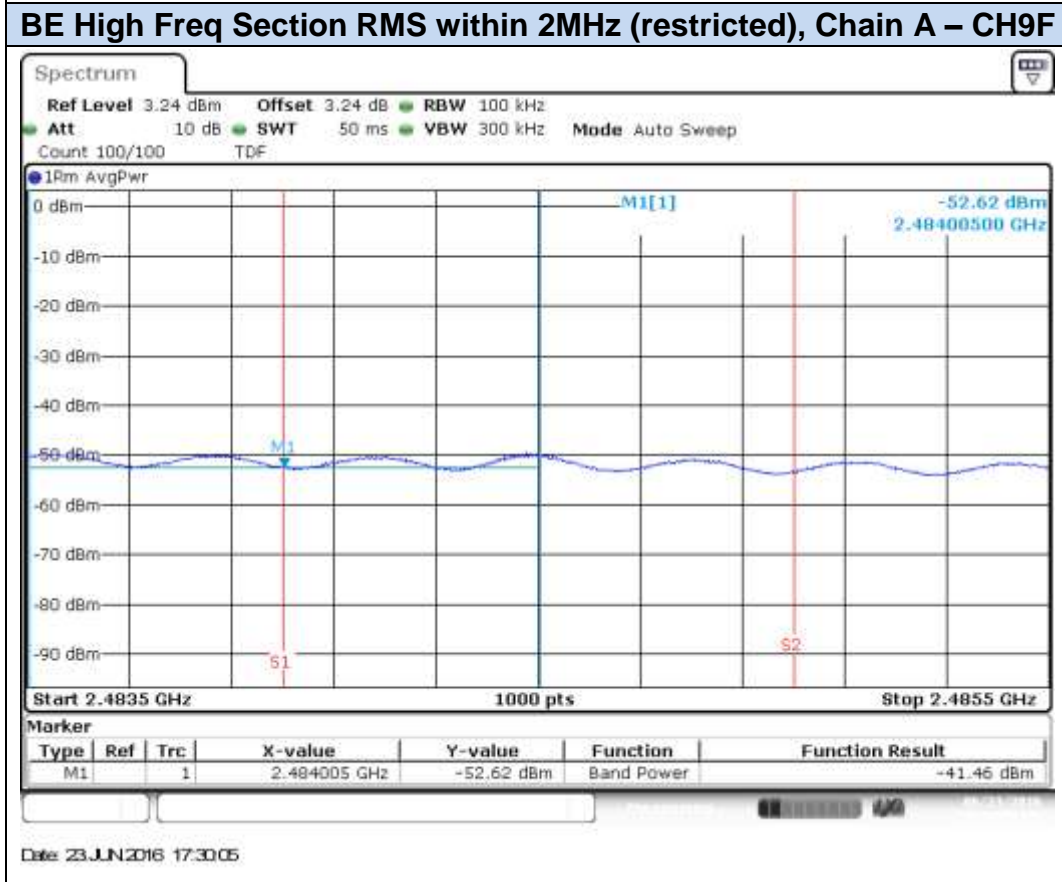


802.11n40 (SISO), HT0

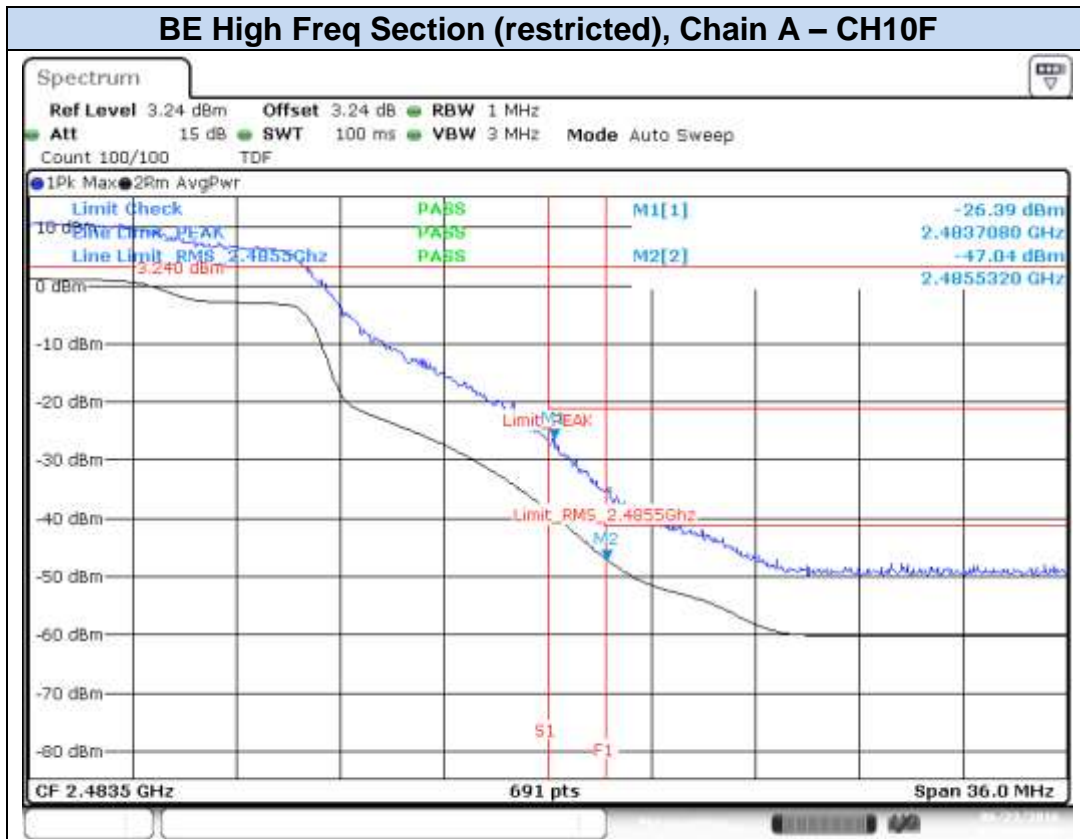




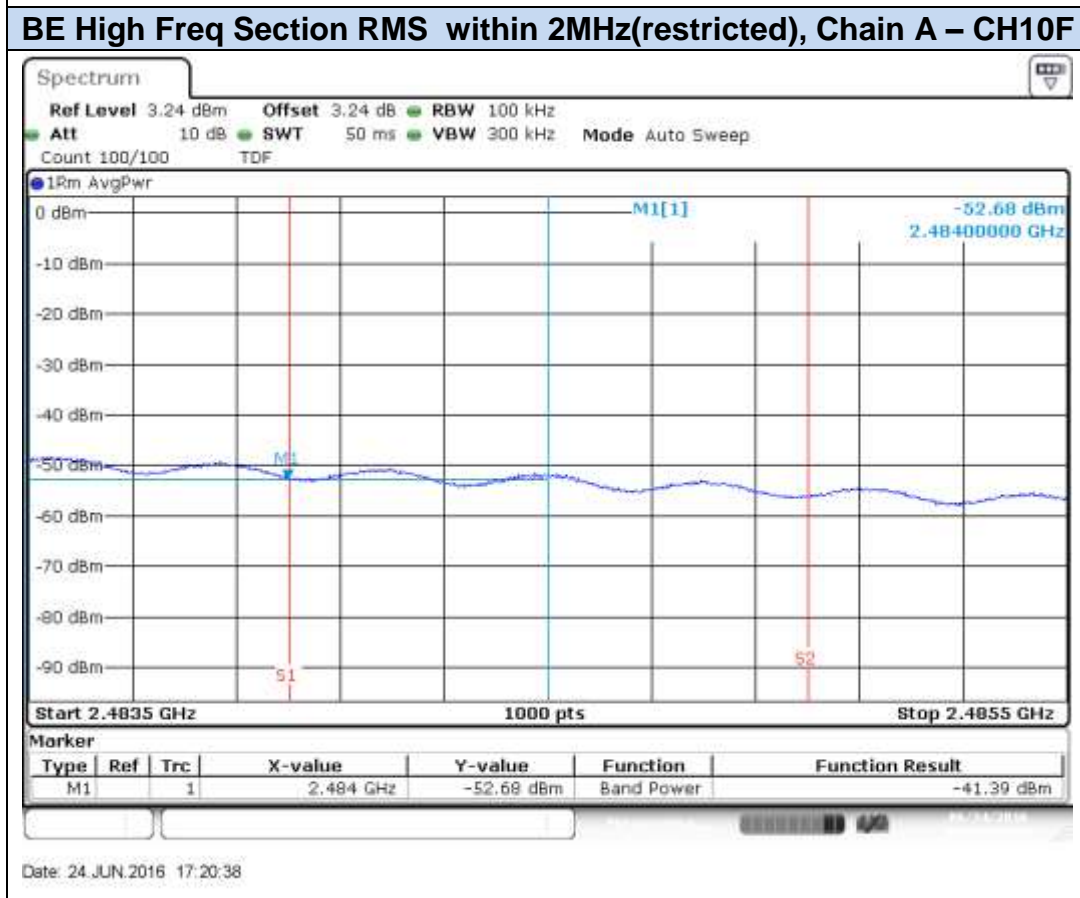
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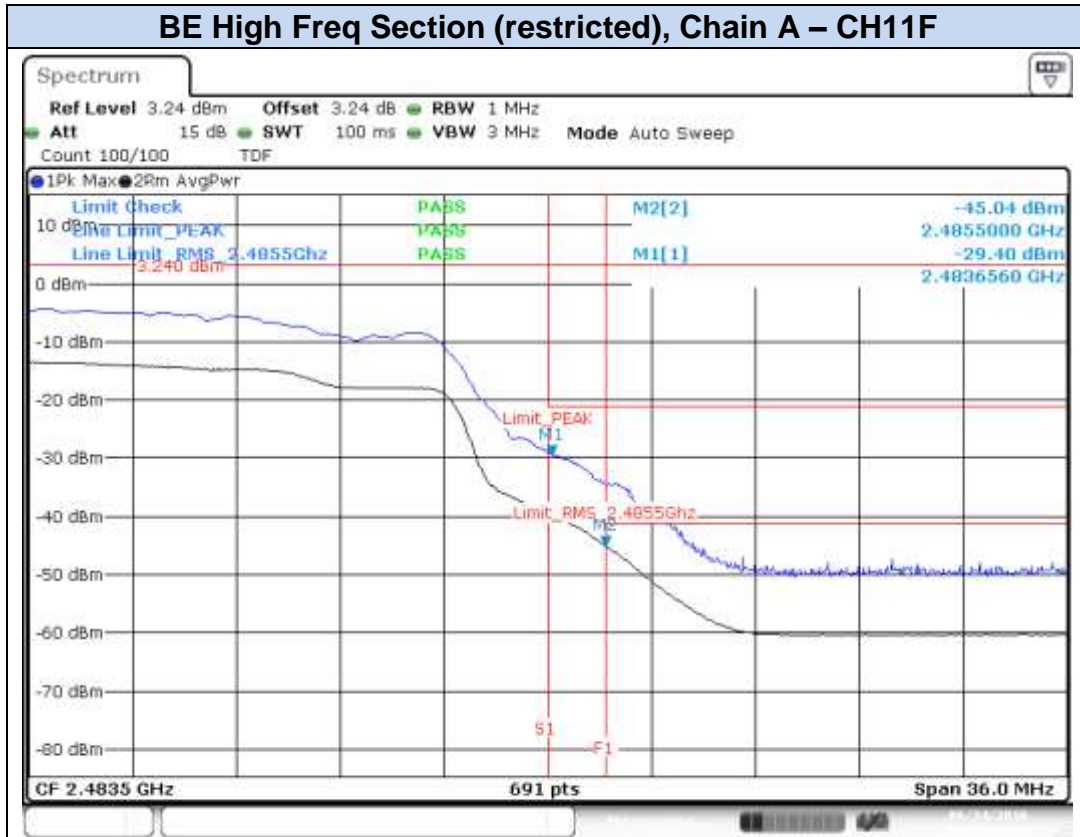


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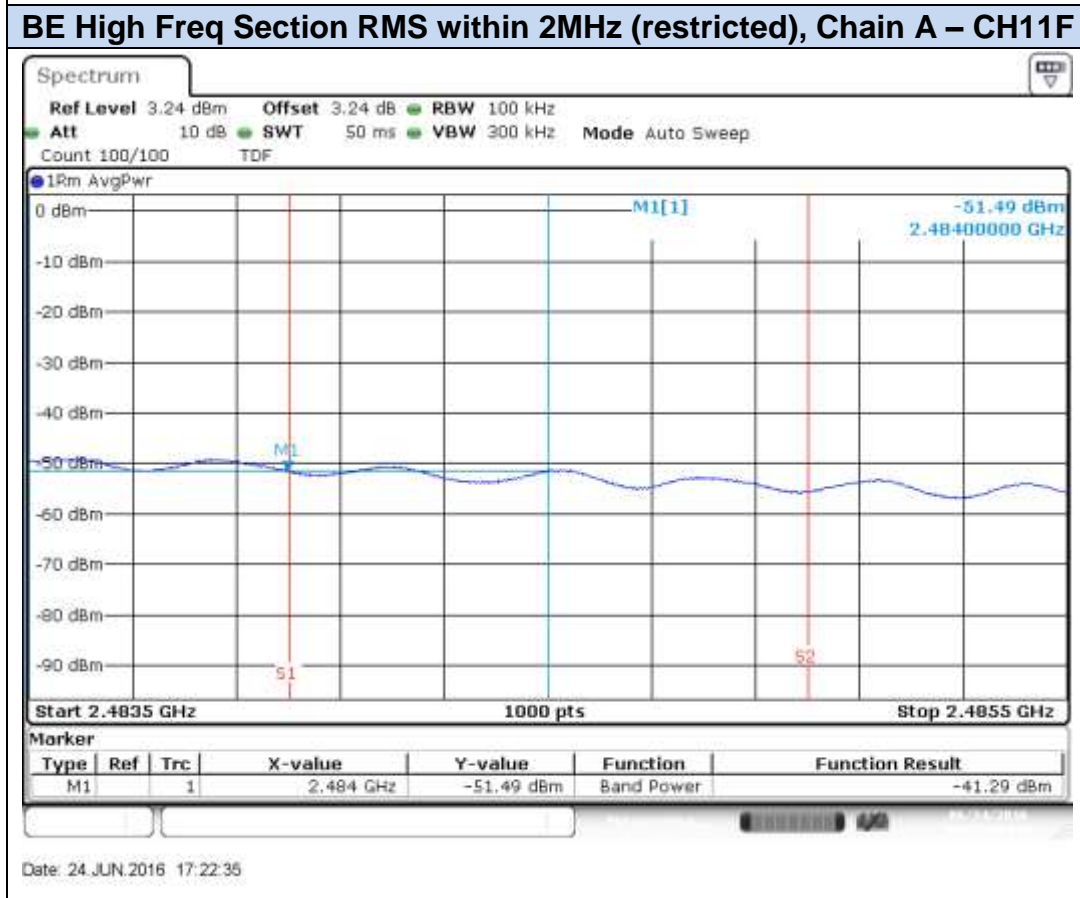


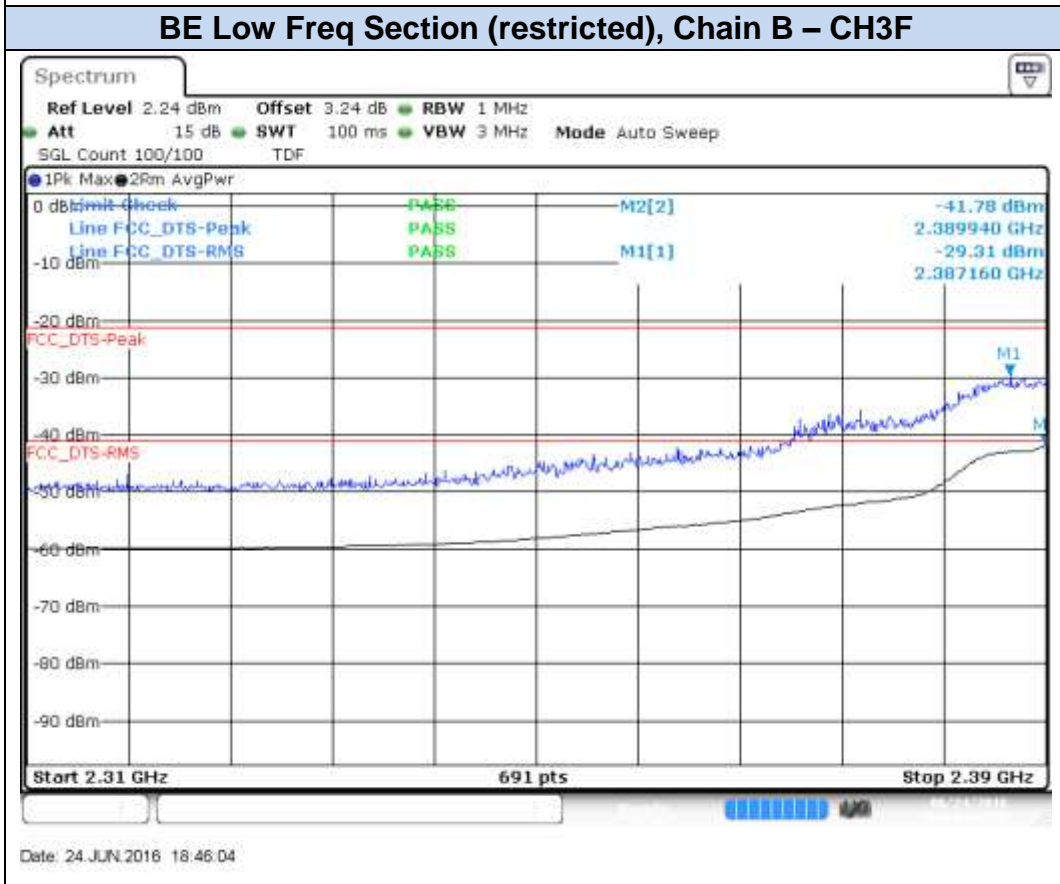
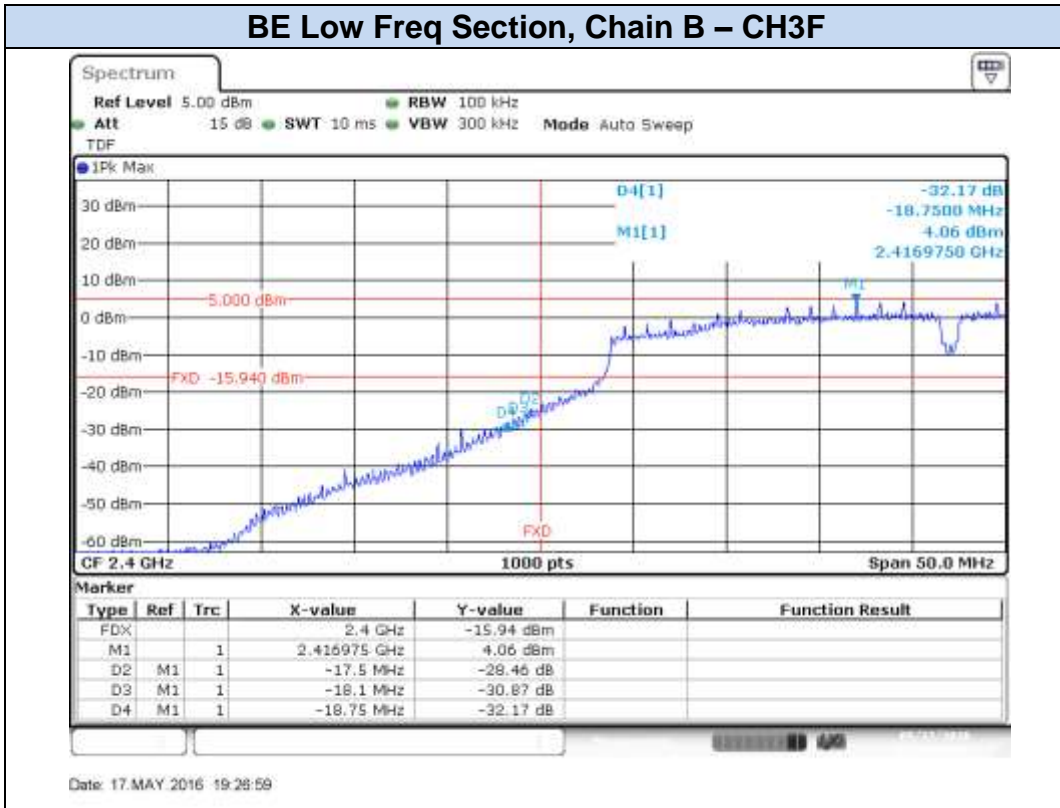
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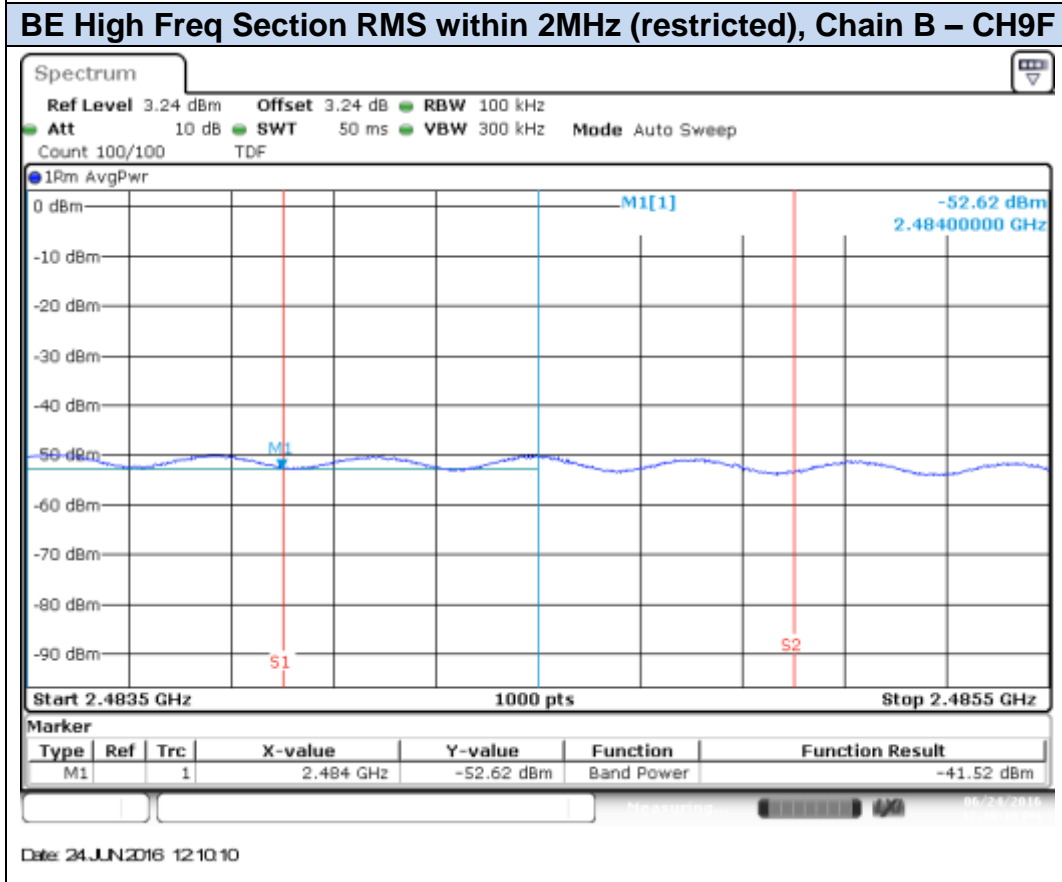


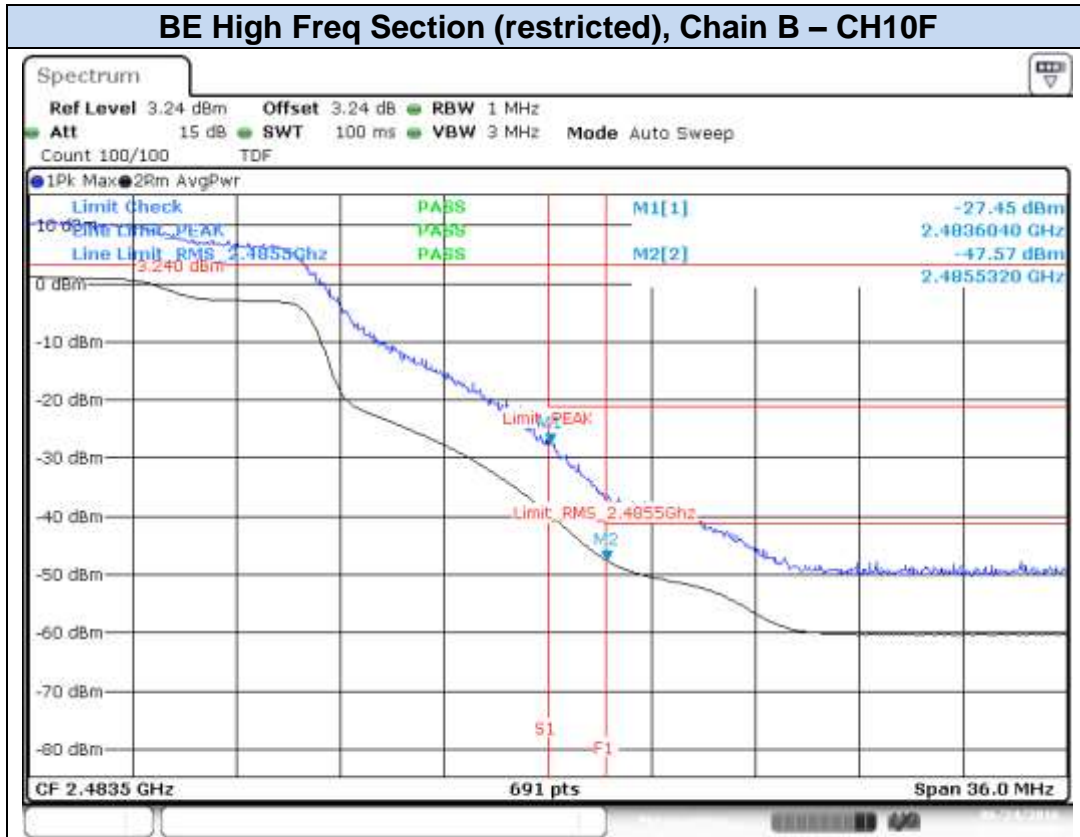


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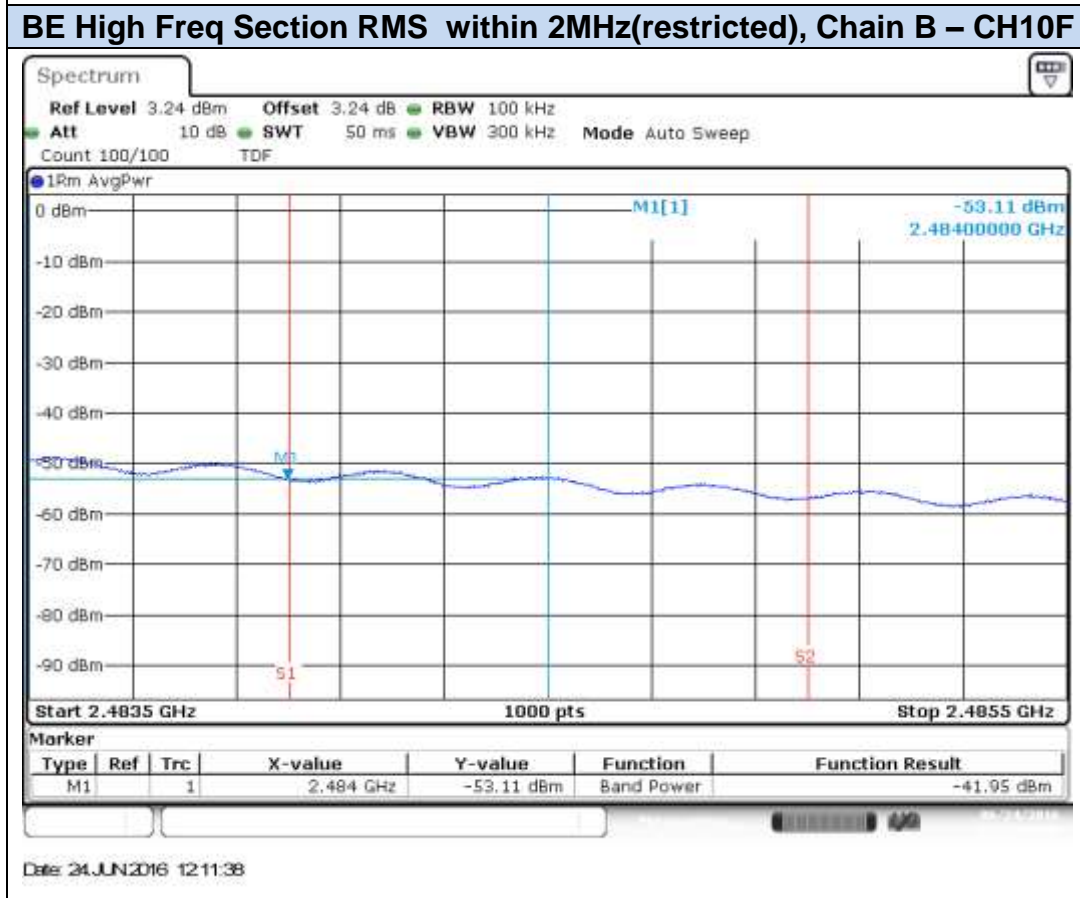




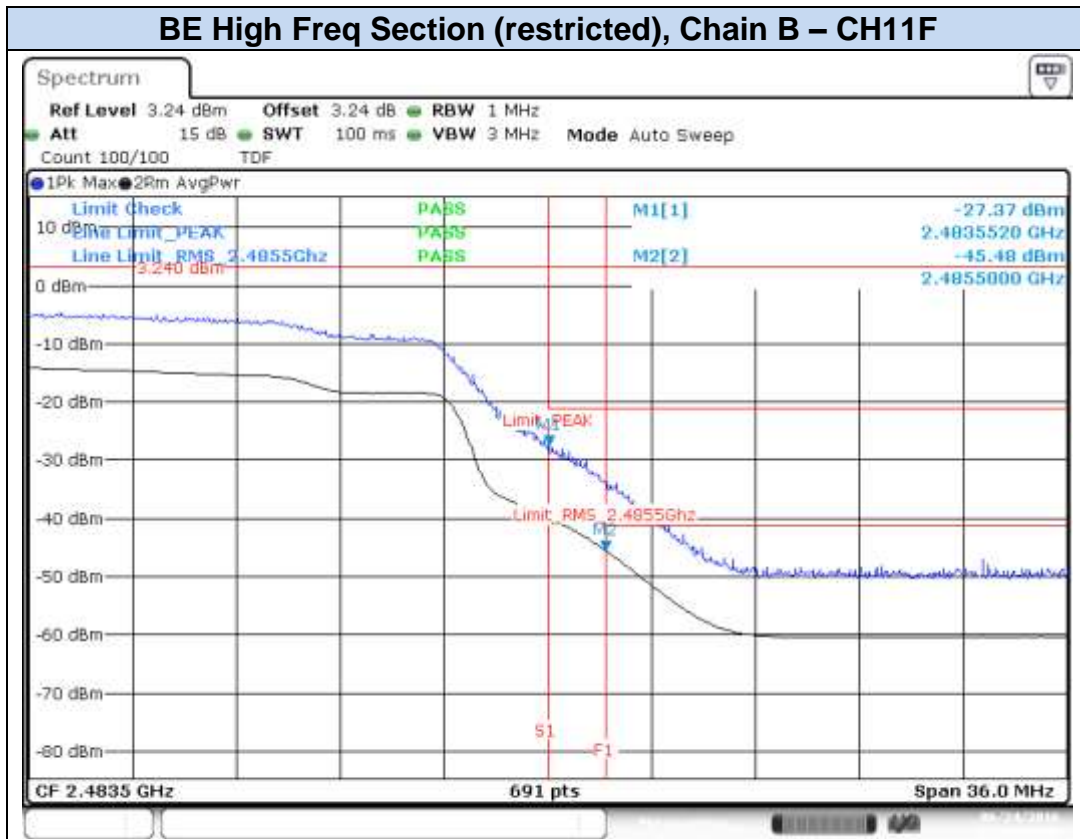




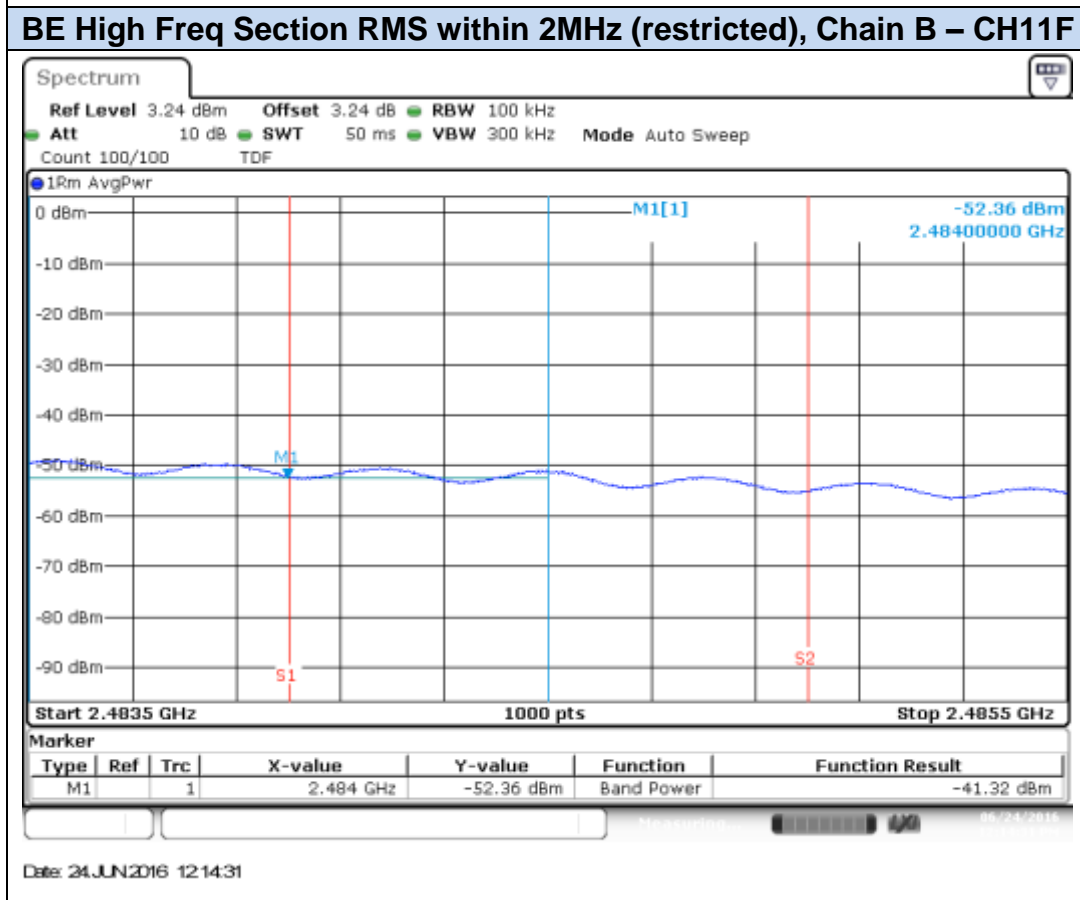
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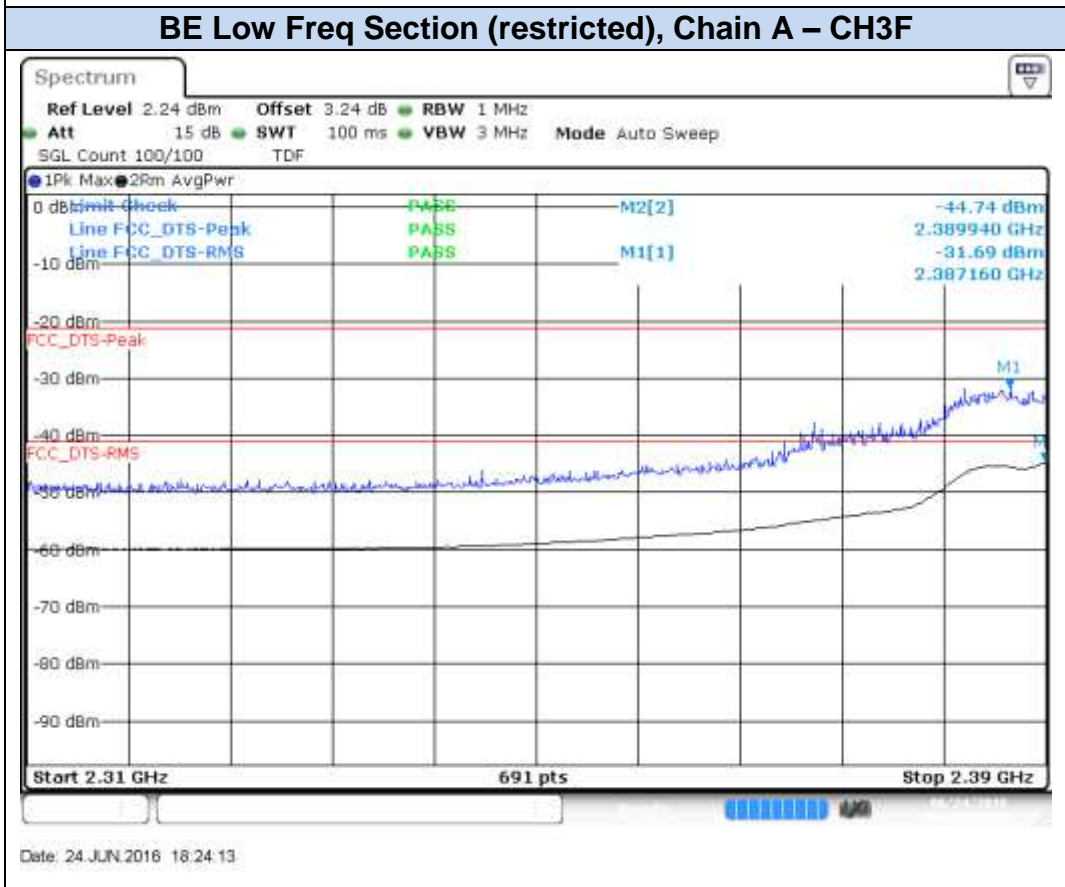
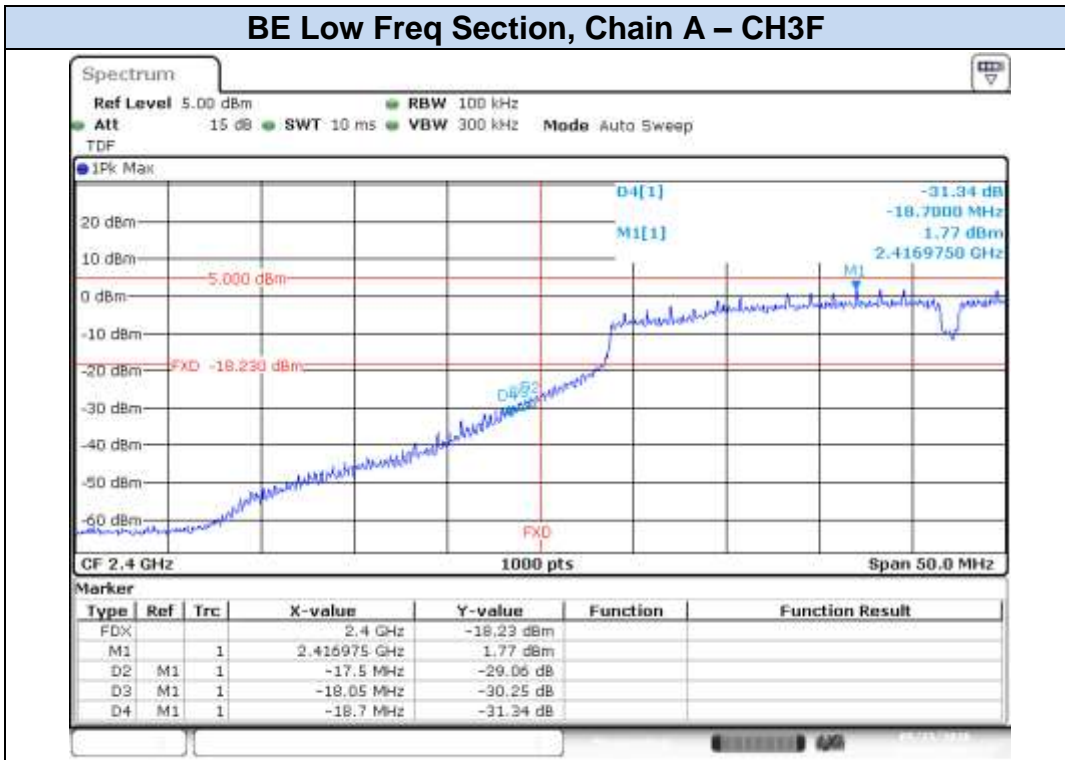
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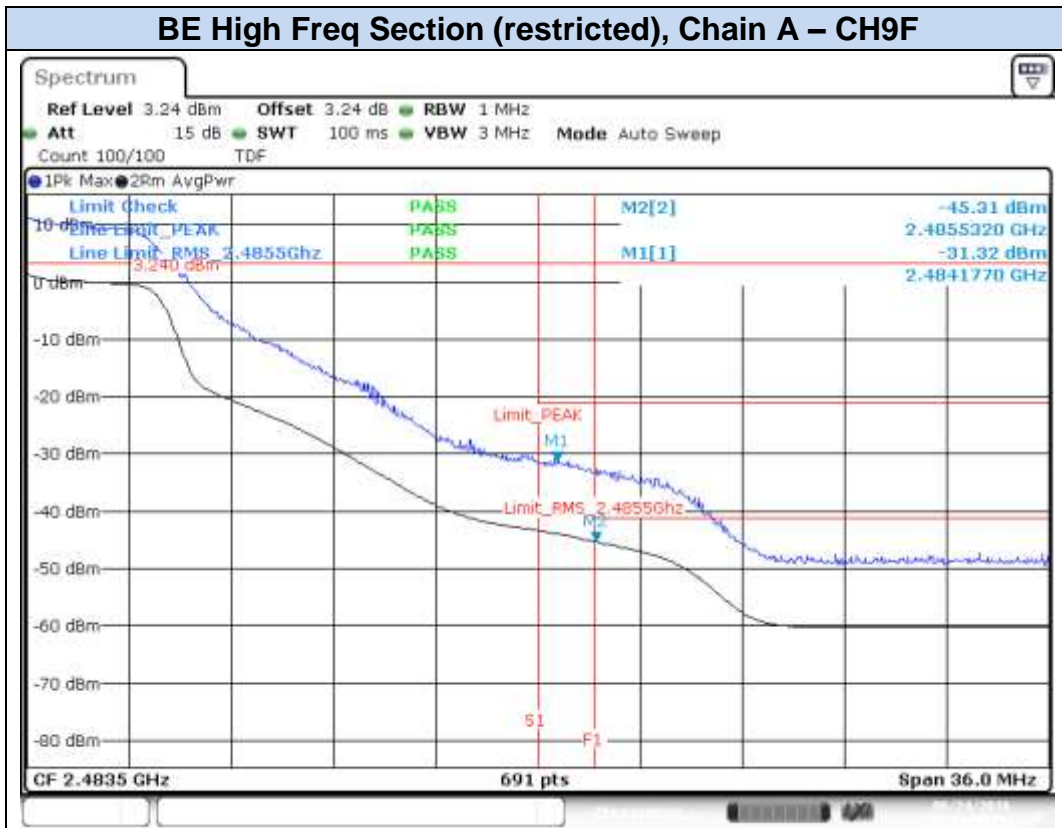


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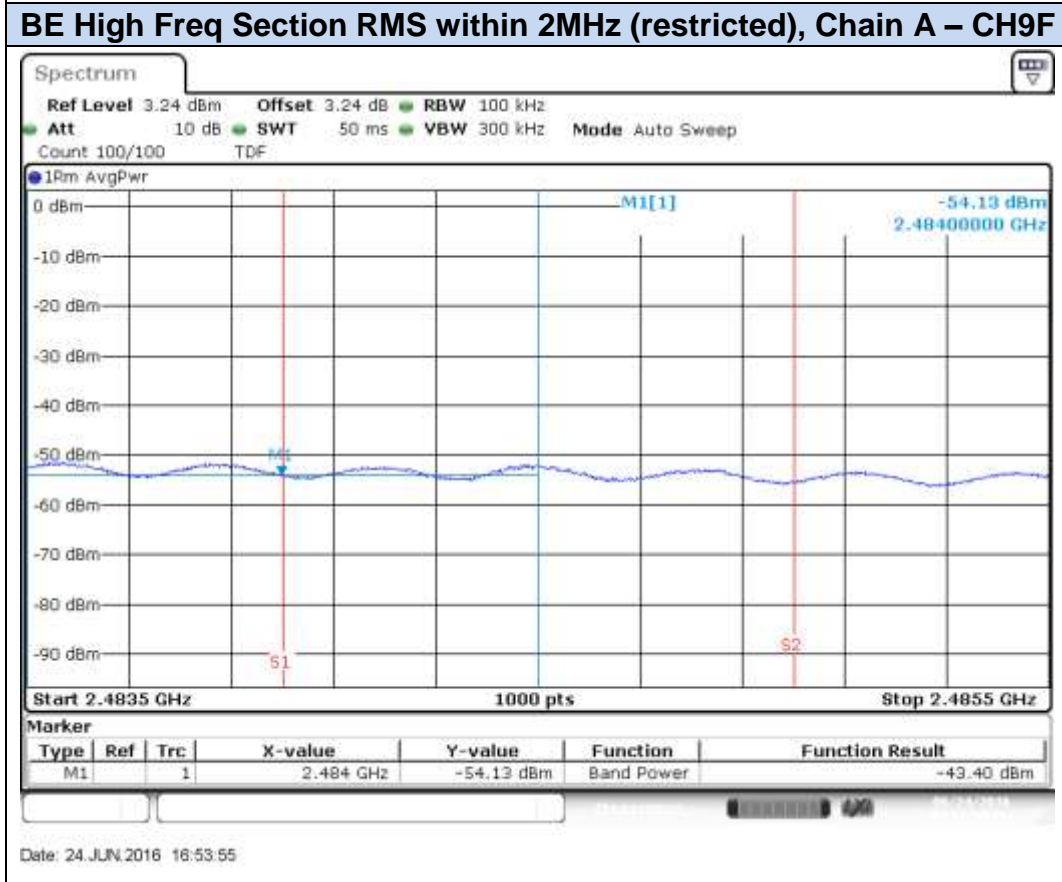


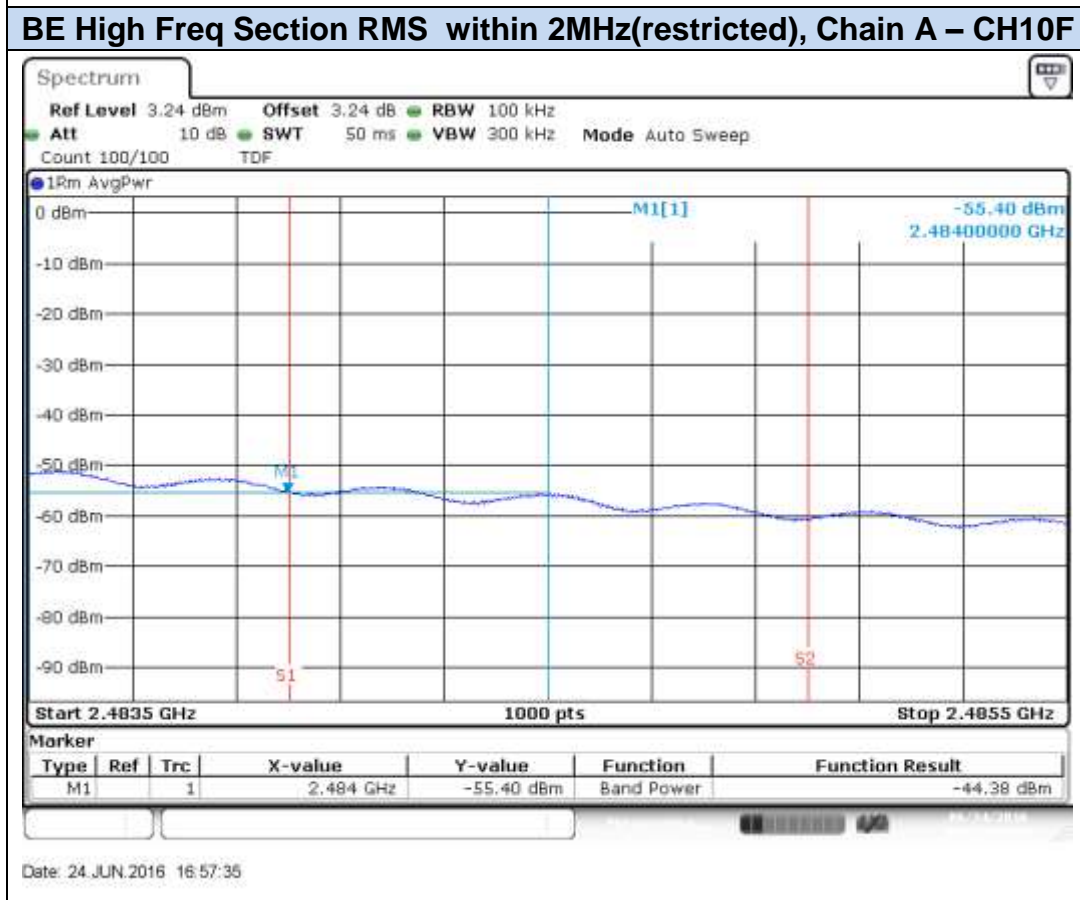
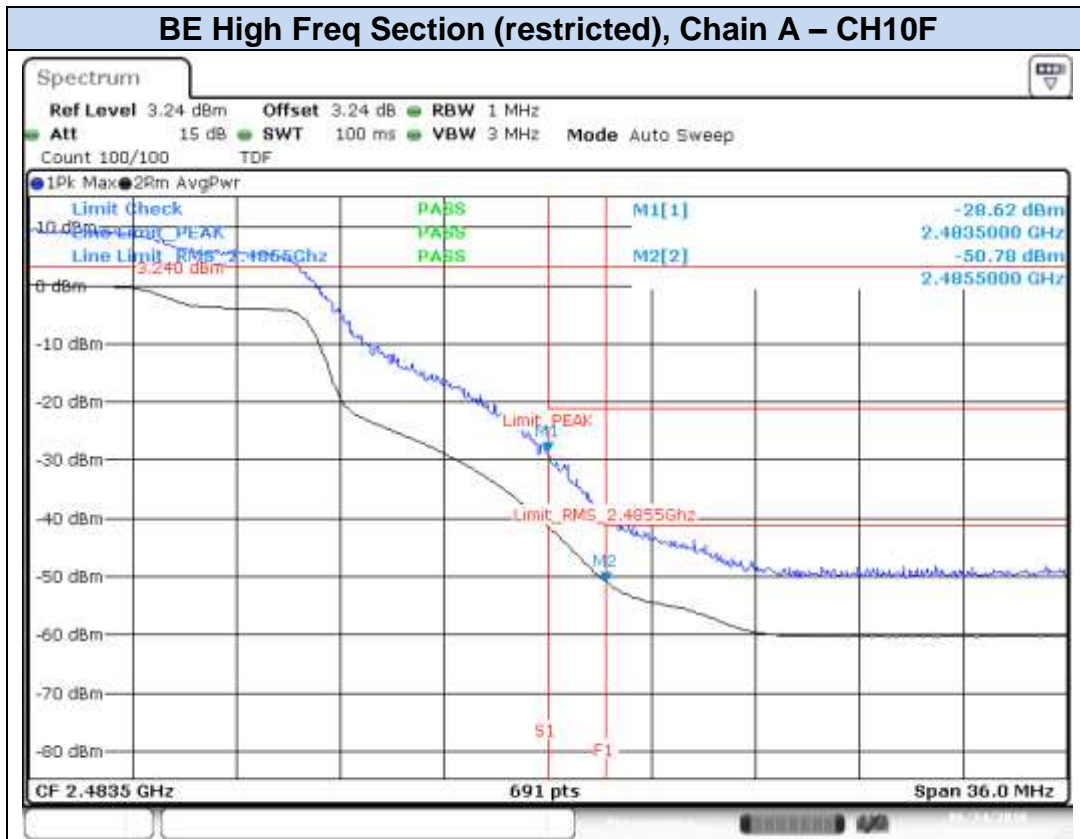
802.11n40 (MIMO), HT8

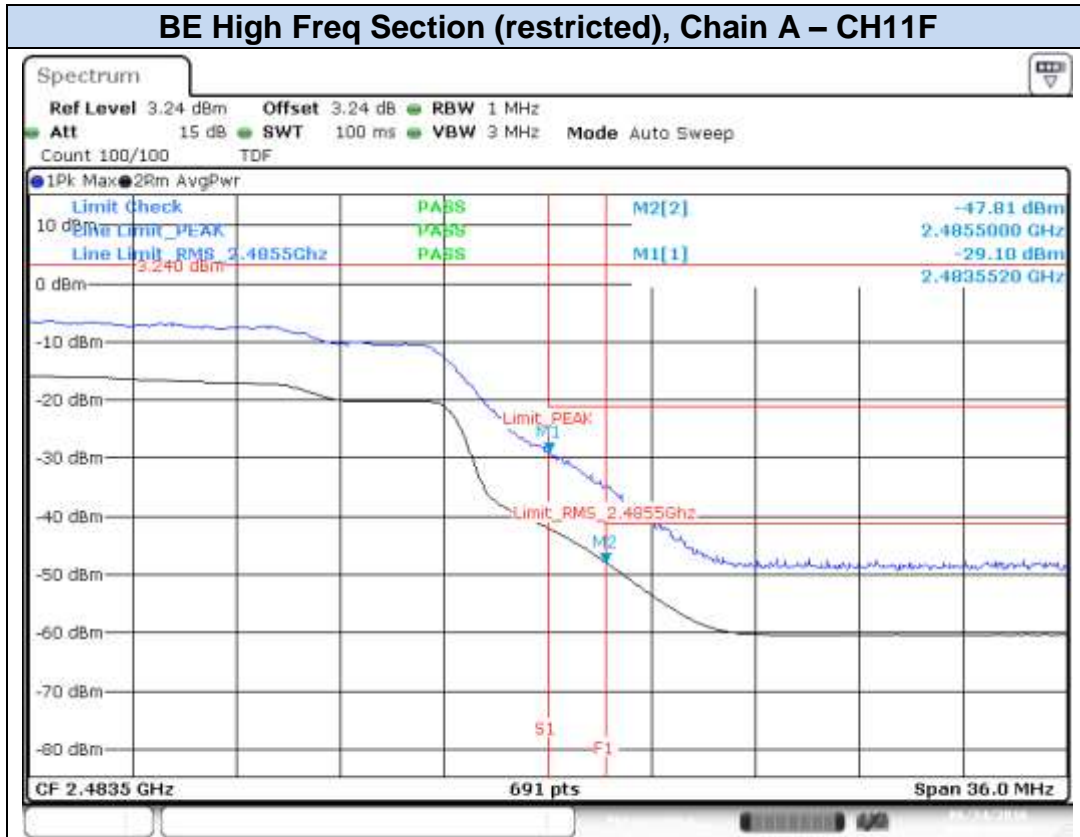




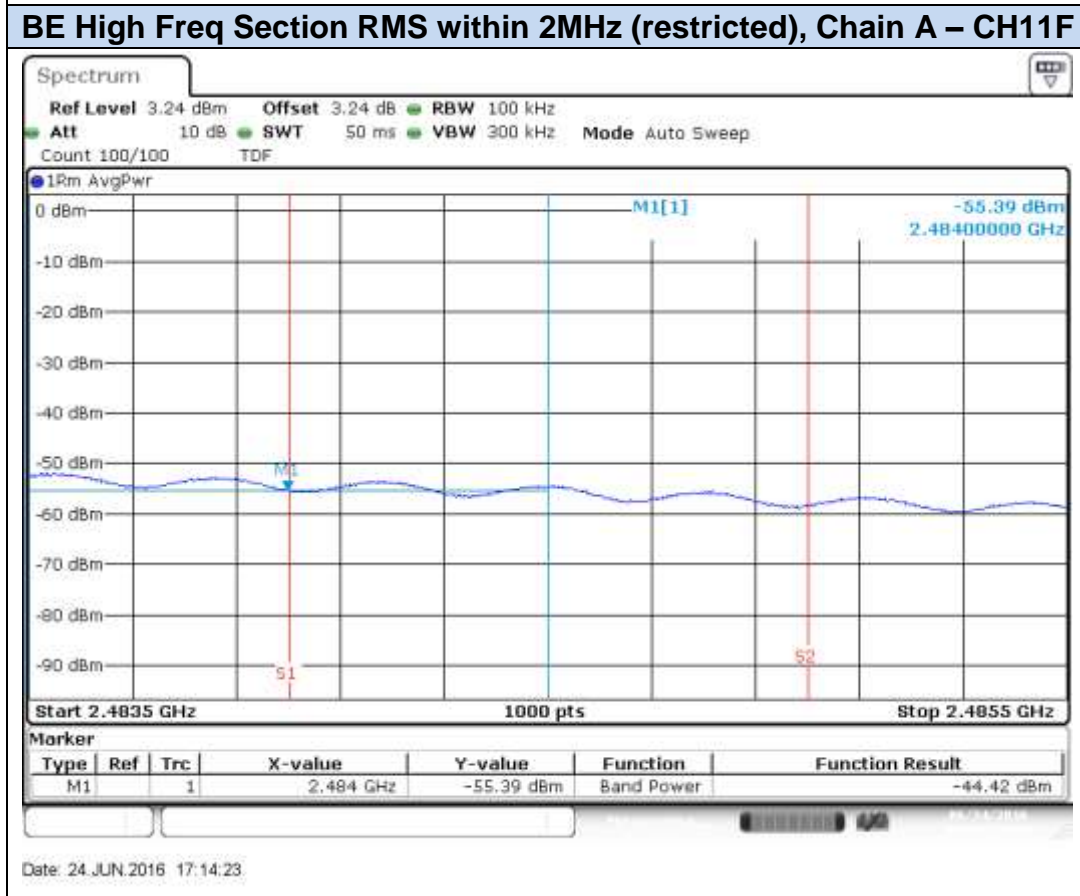
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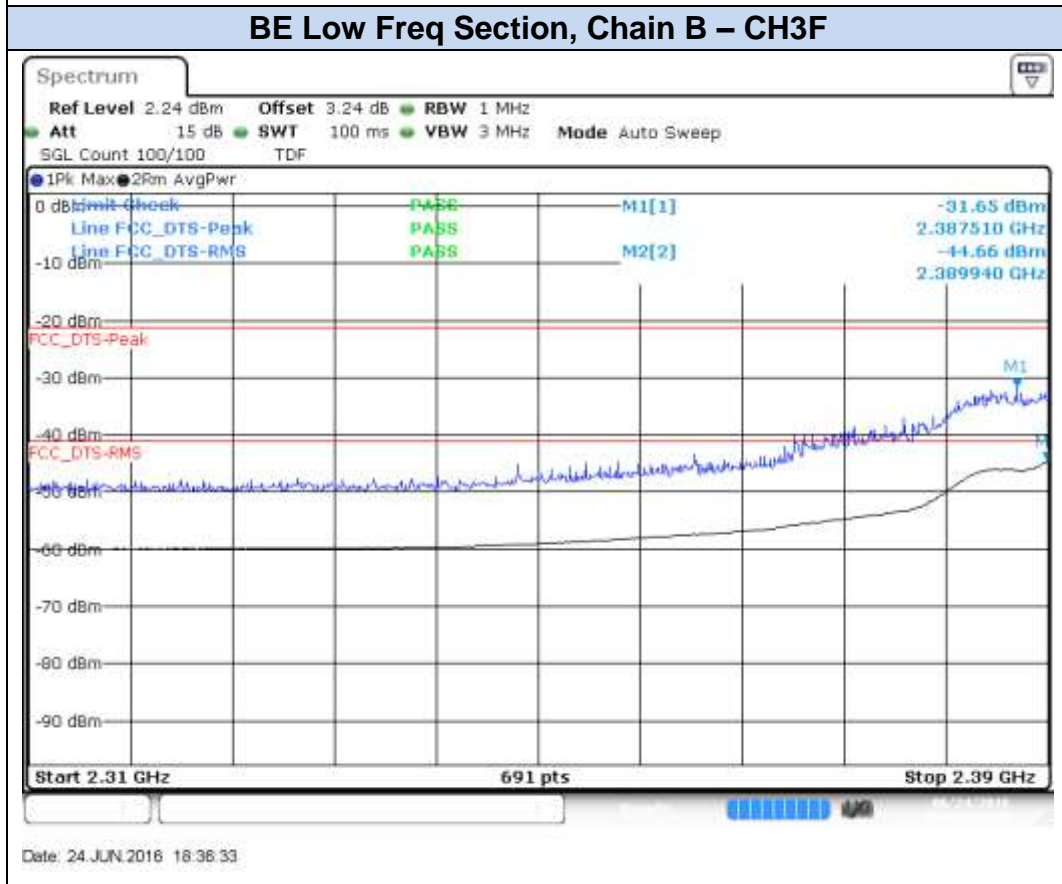
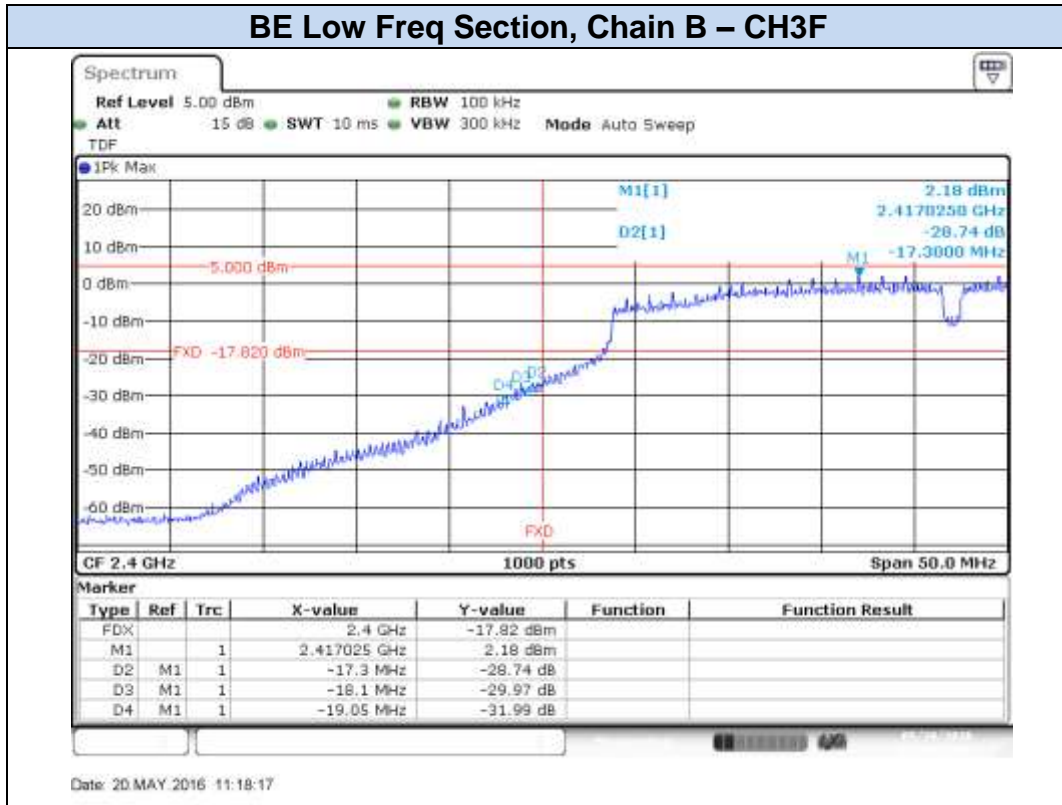


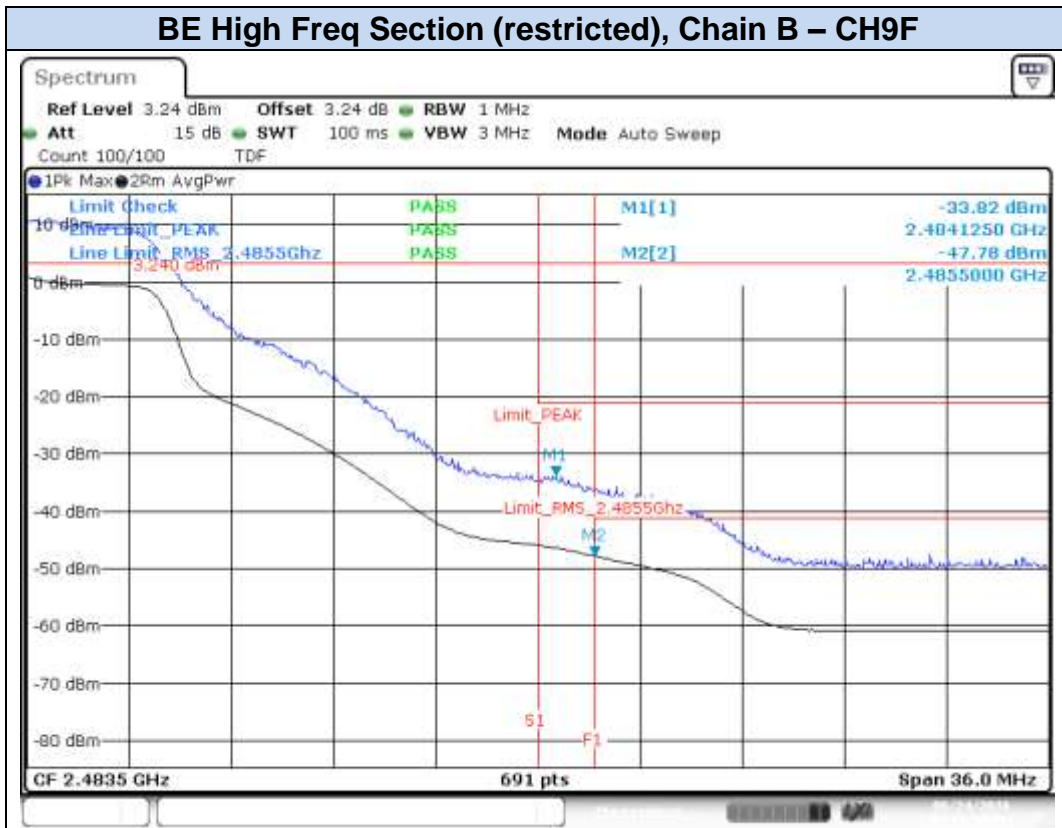




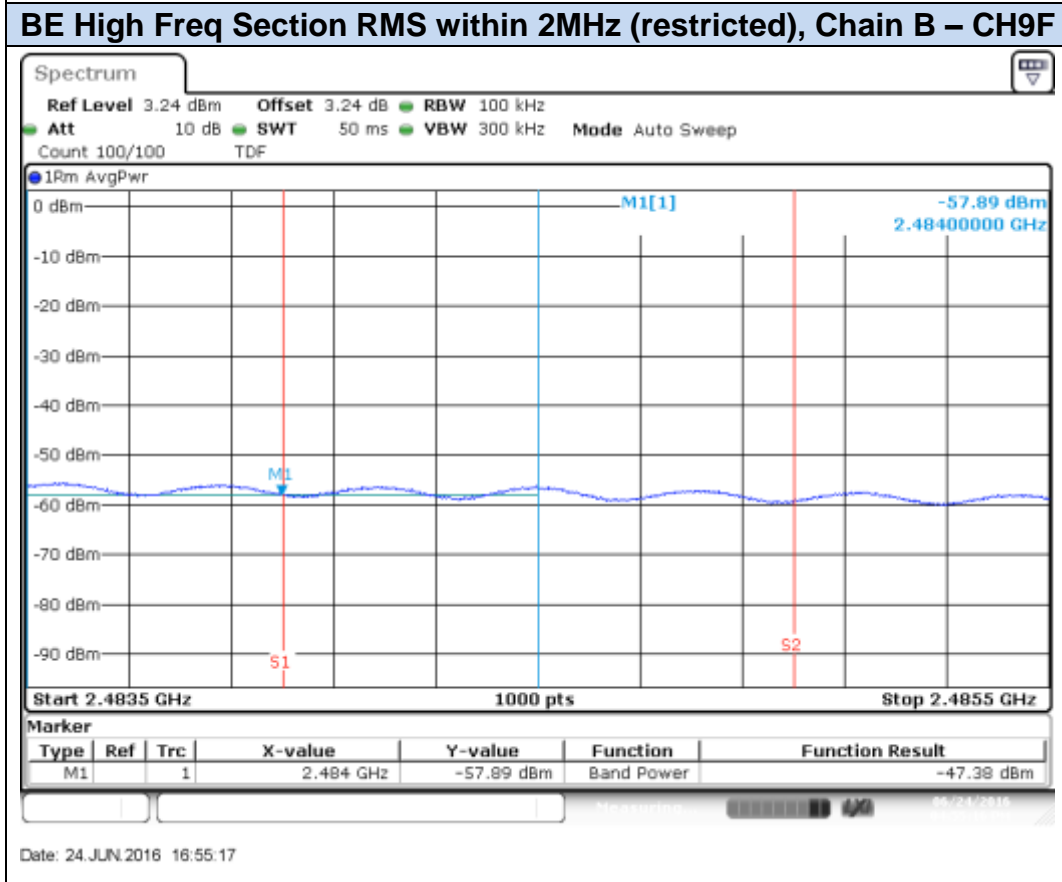
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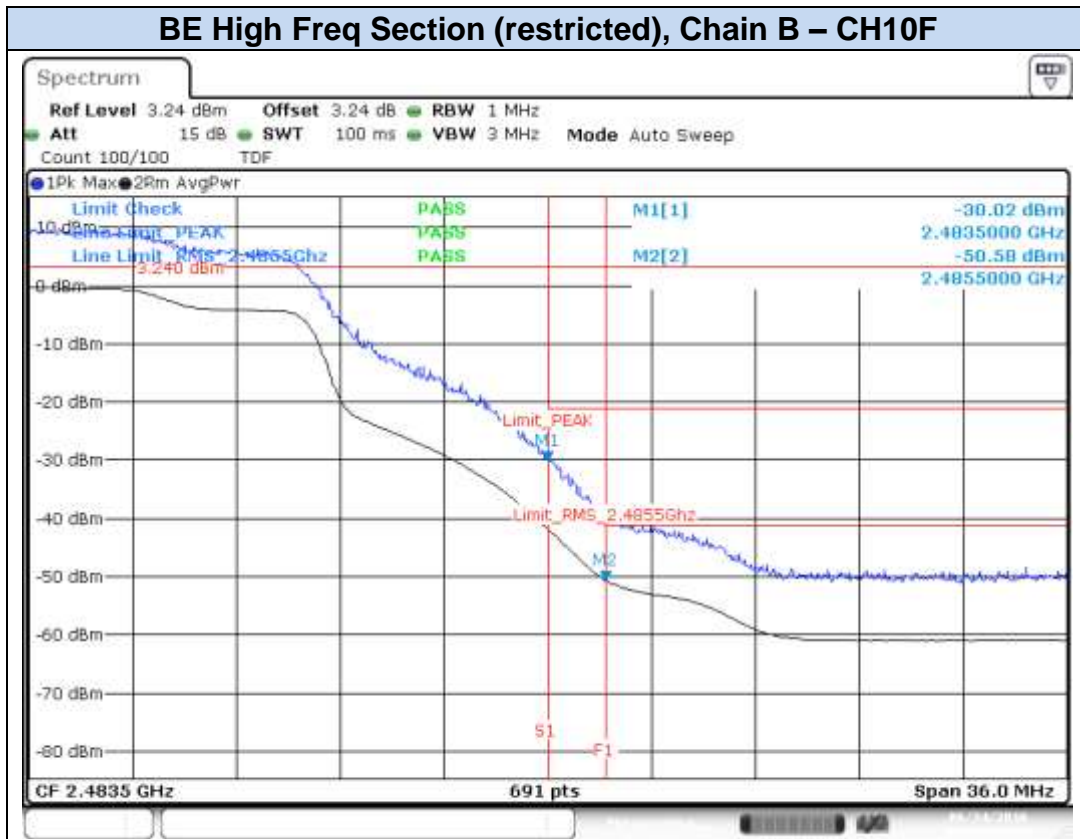




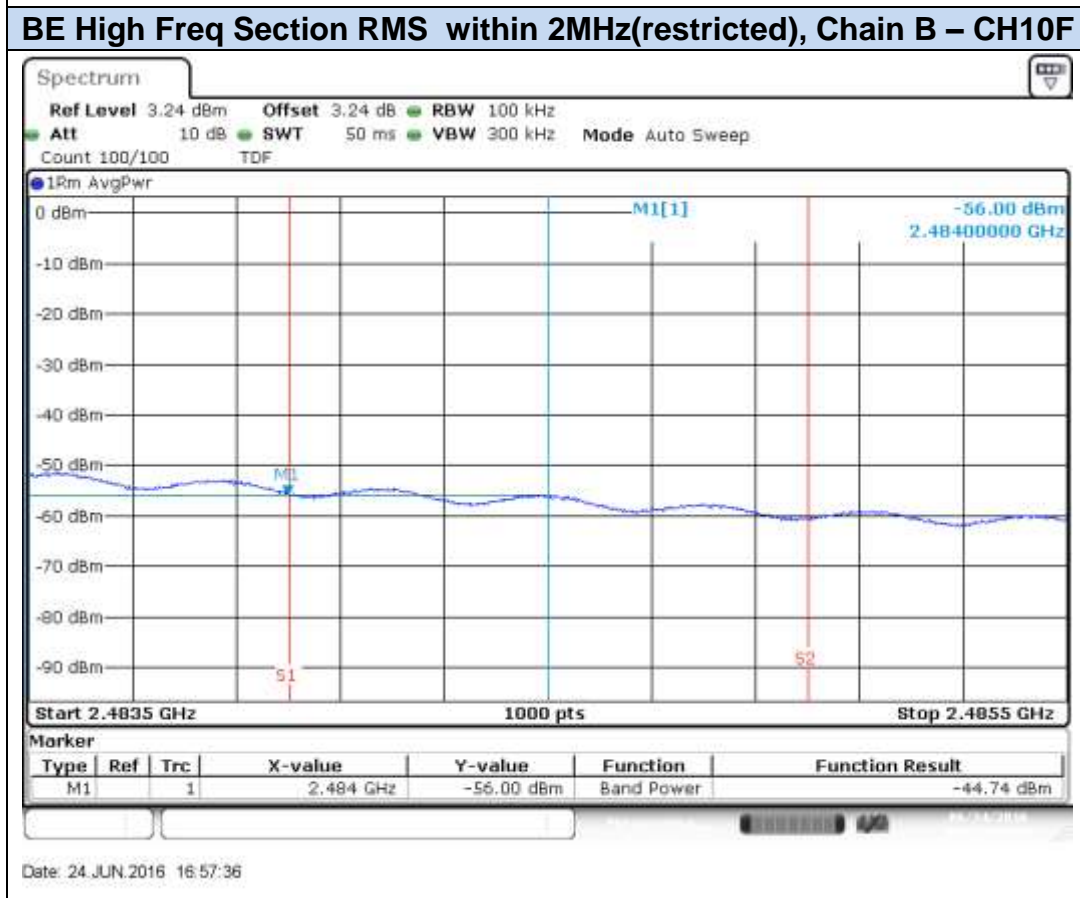


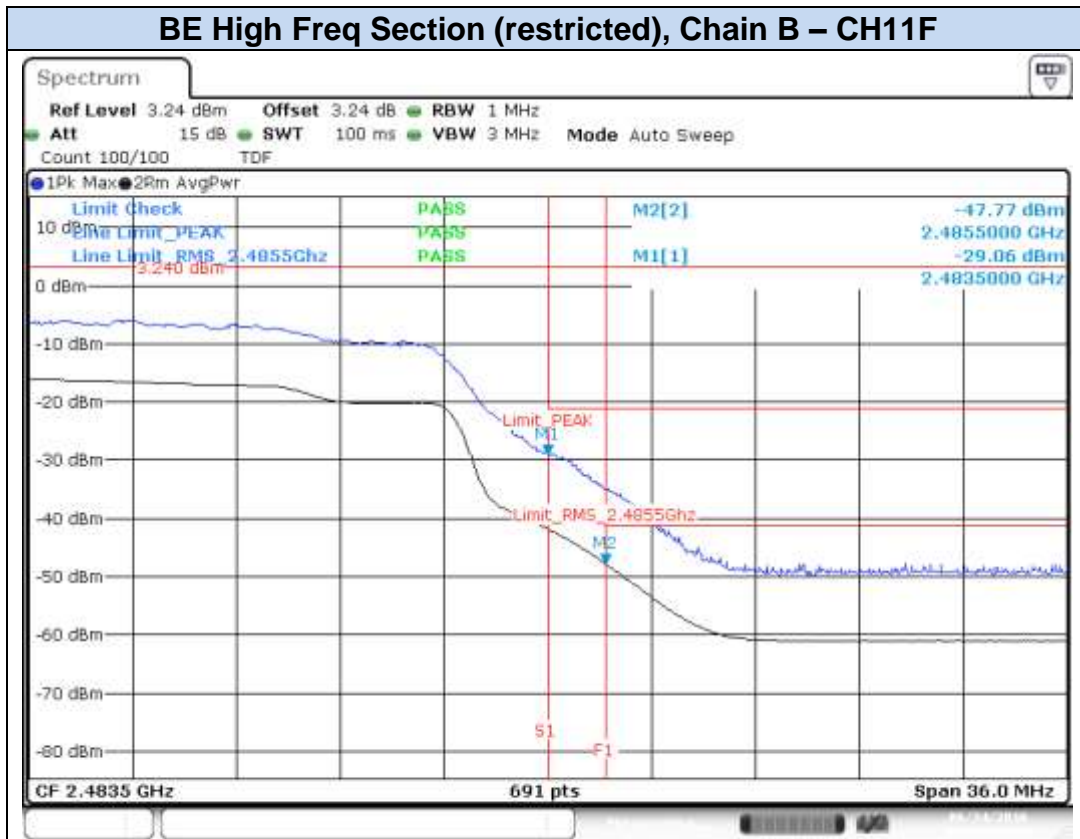
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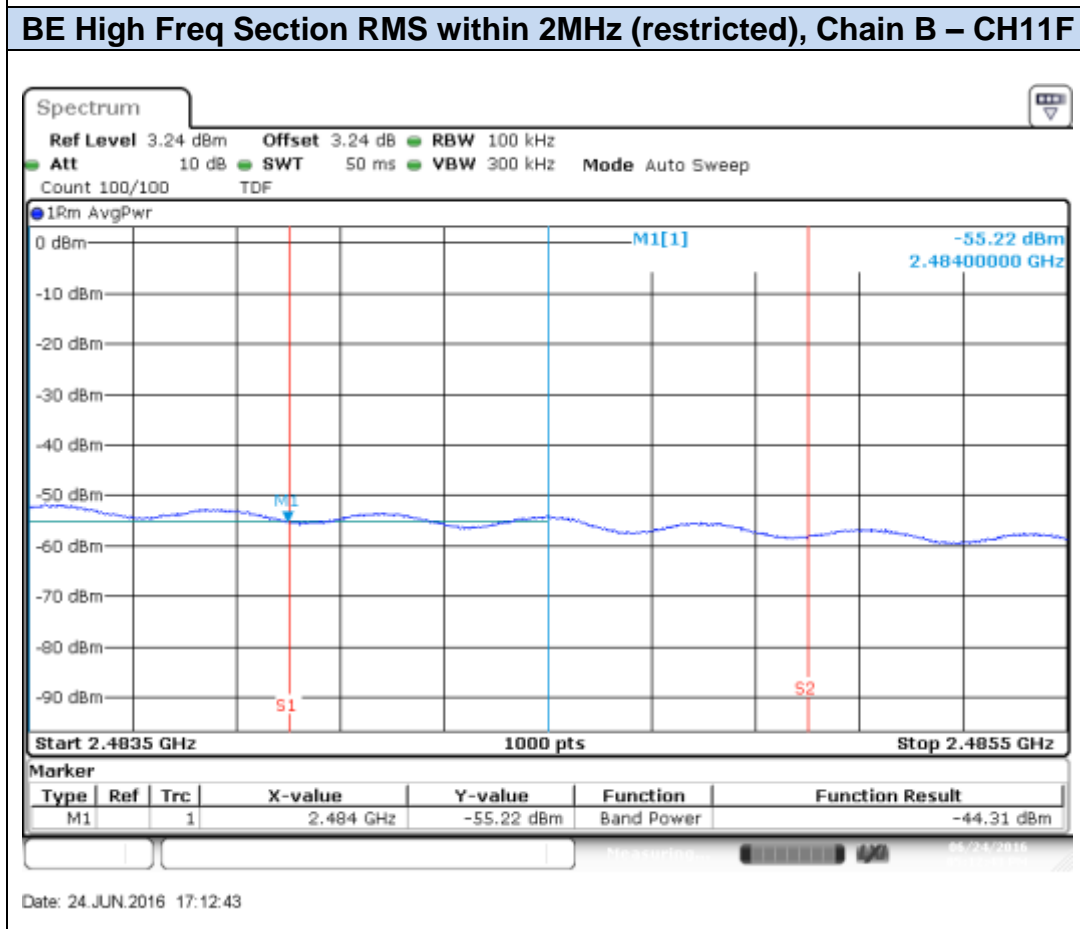


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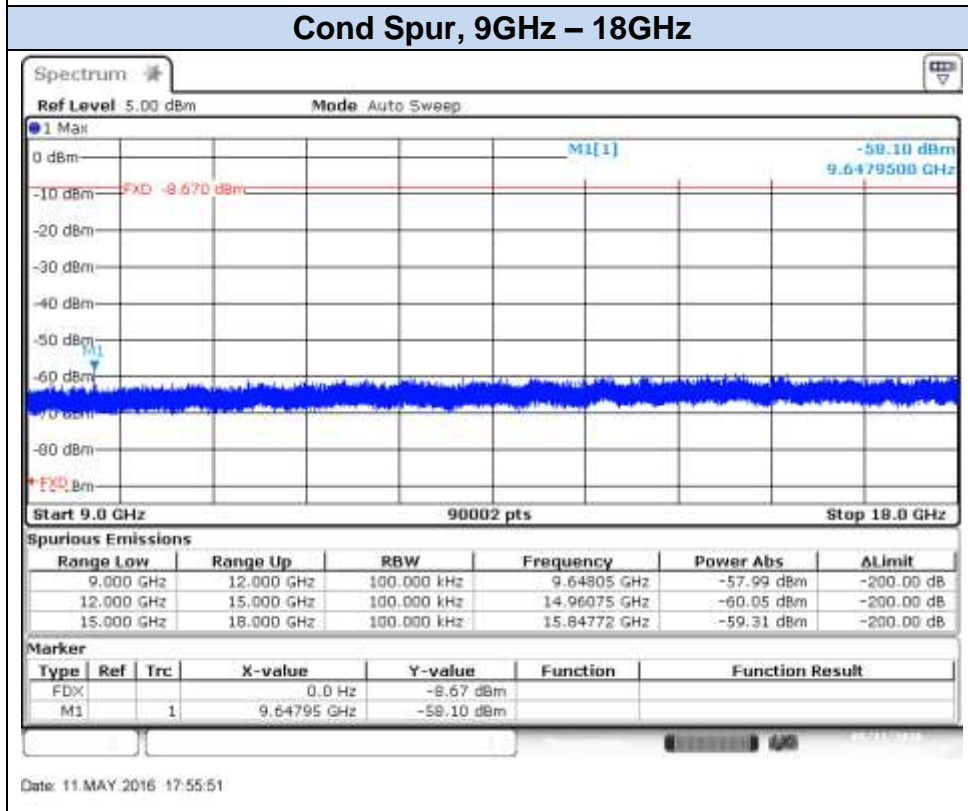
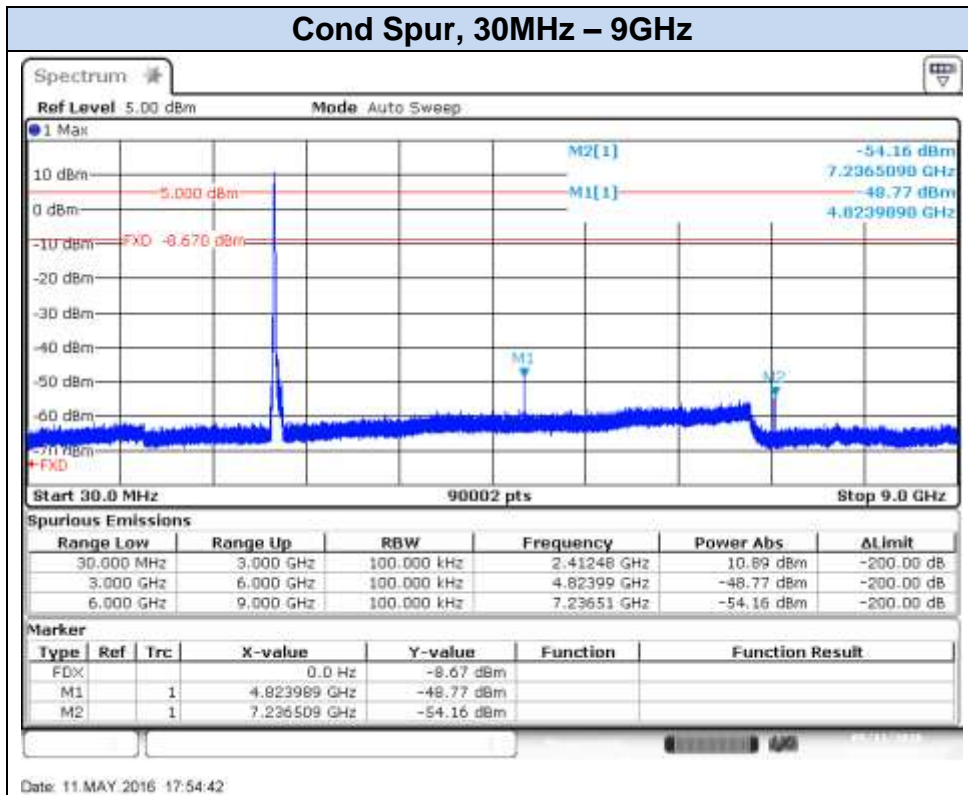
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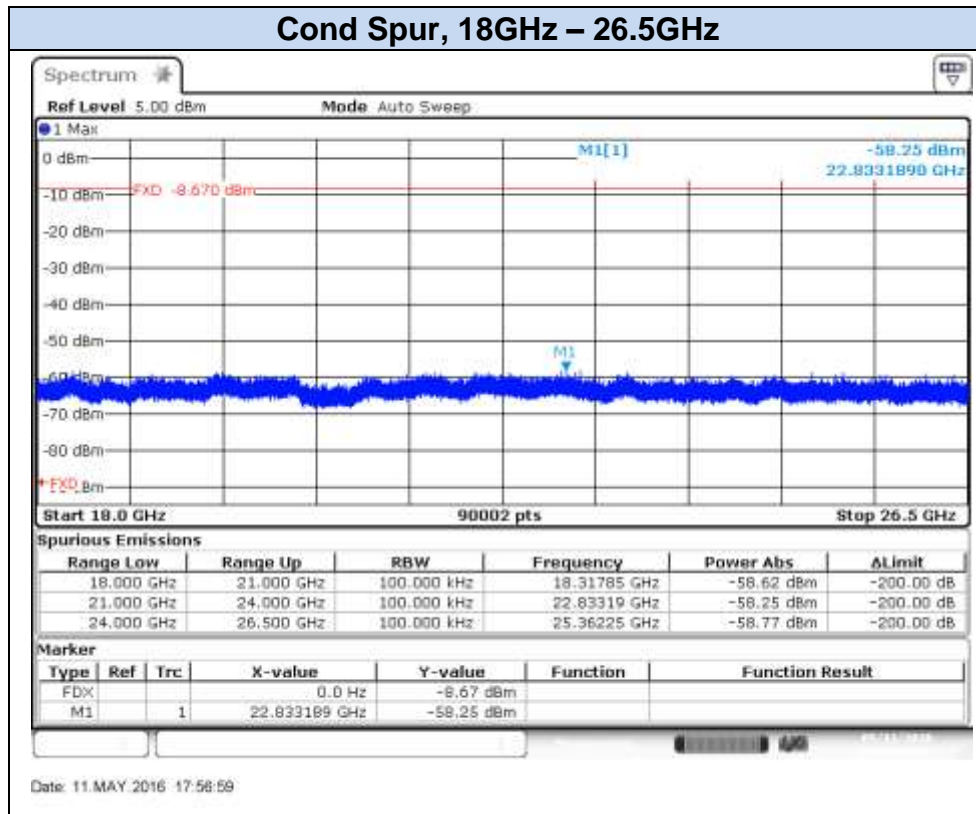


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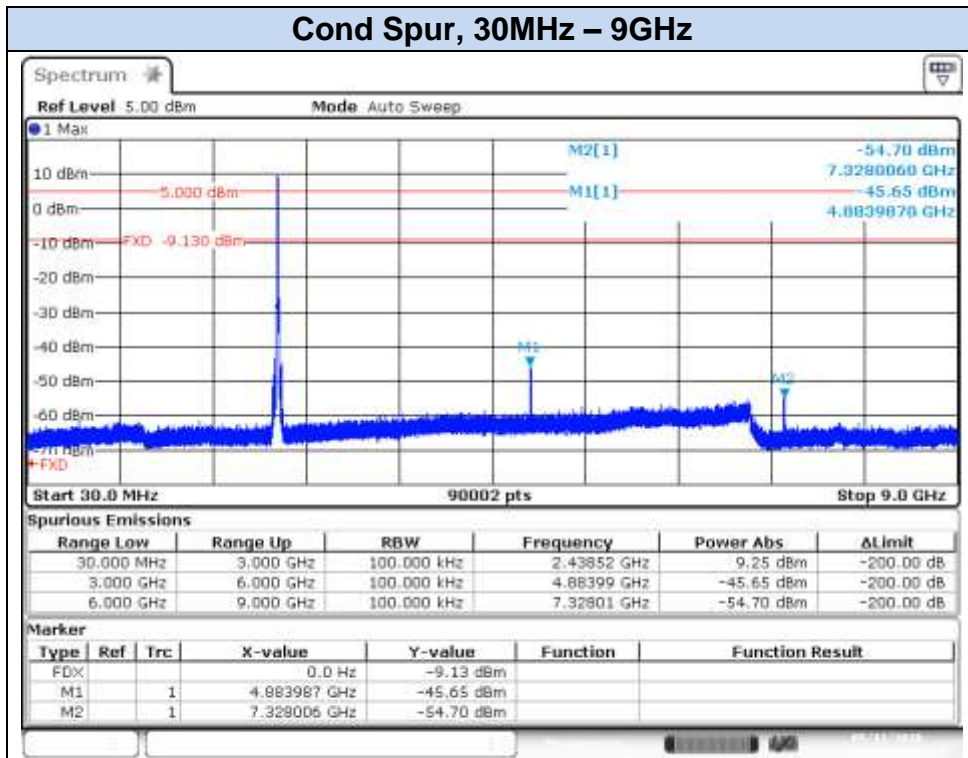
Conducted Spurious results Screenshot:

802.11b, 1Mbps – Chain A, CH1

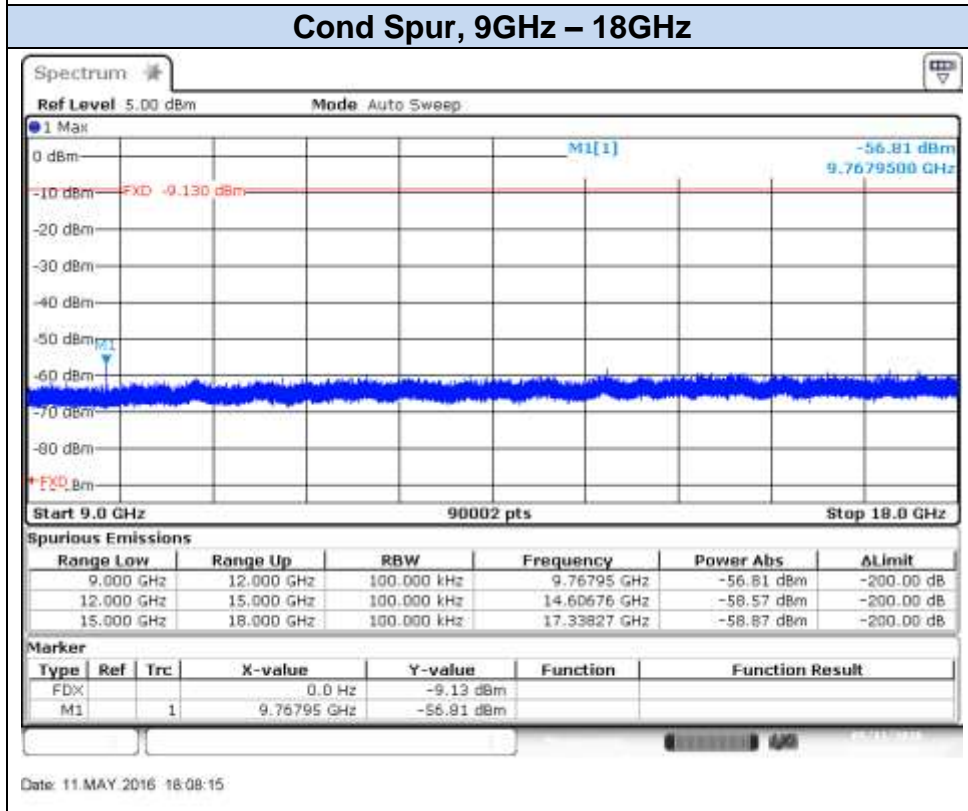




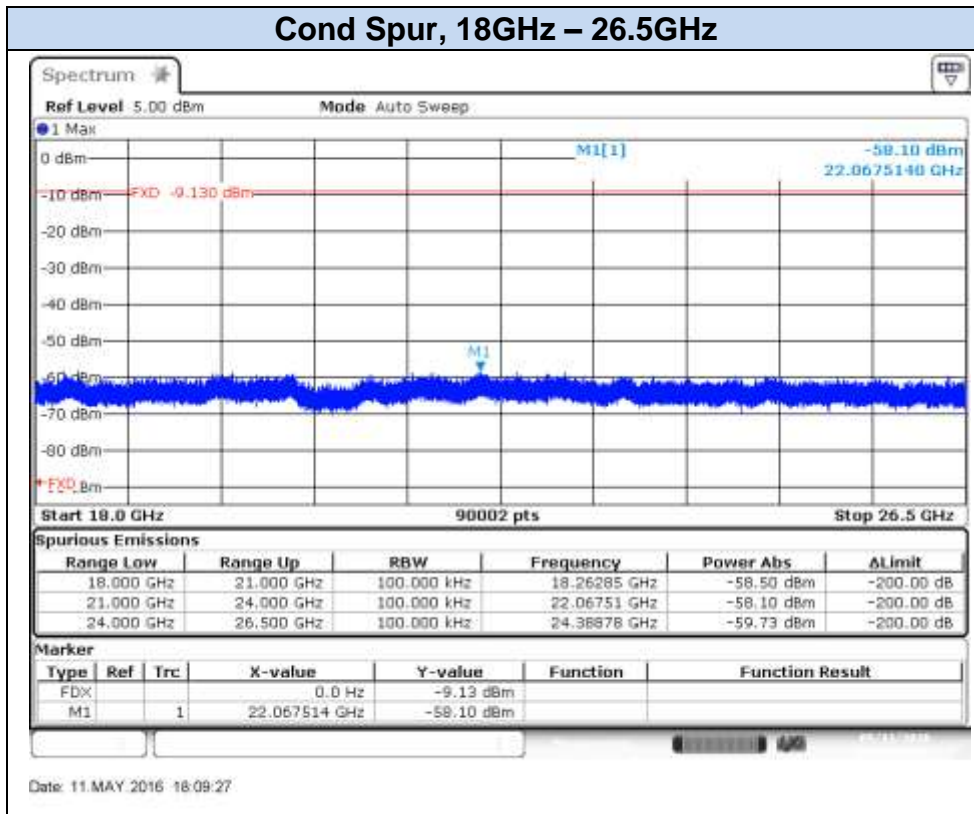
802.11b, 1Mbps – Chain A, CH7



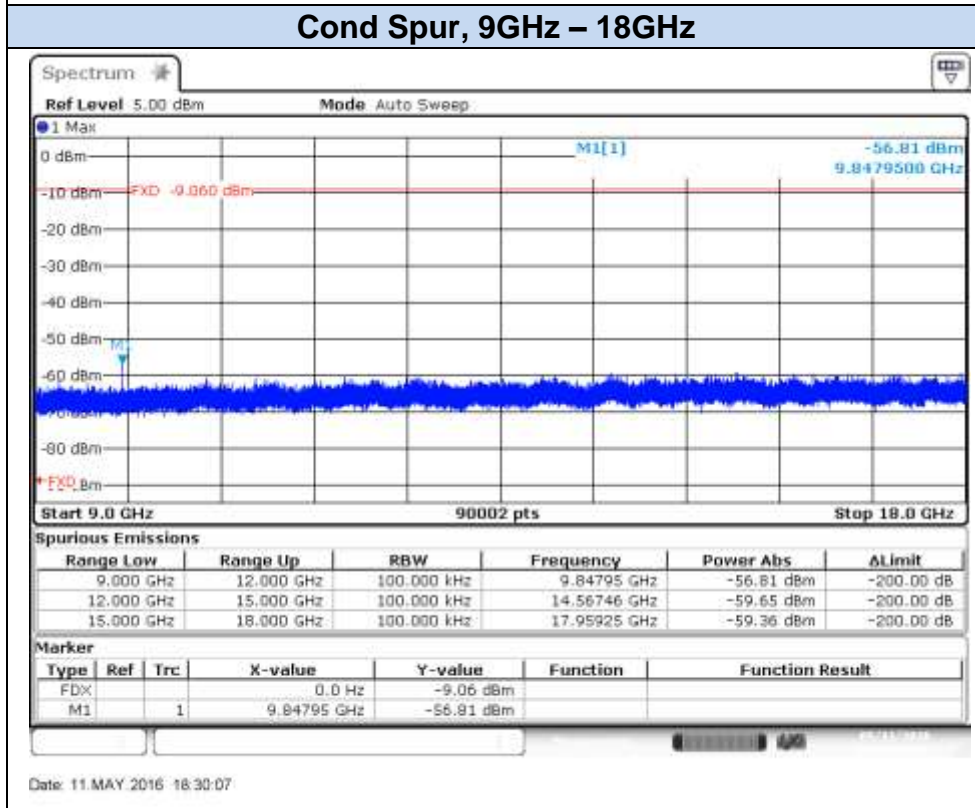
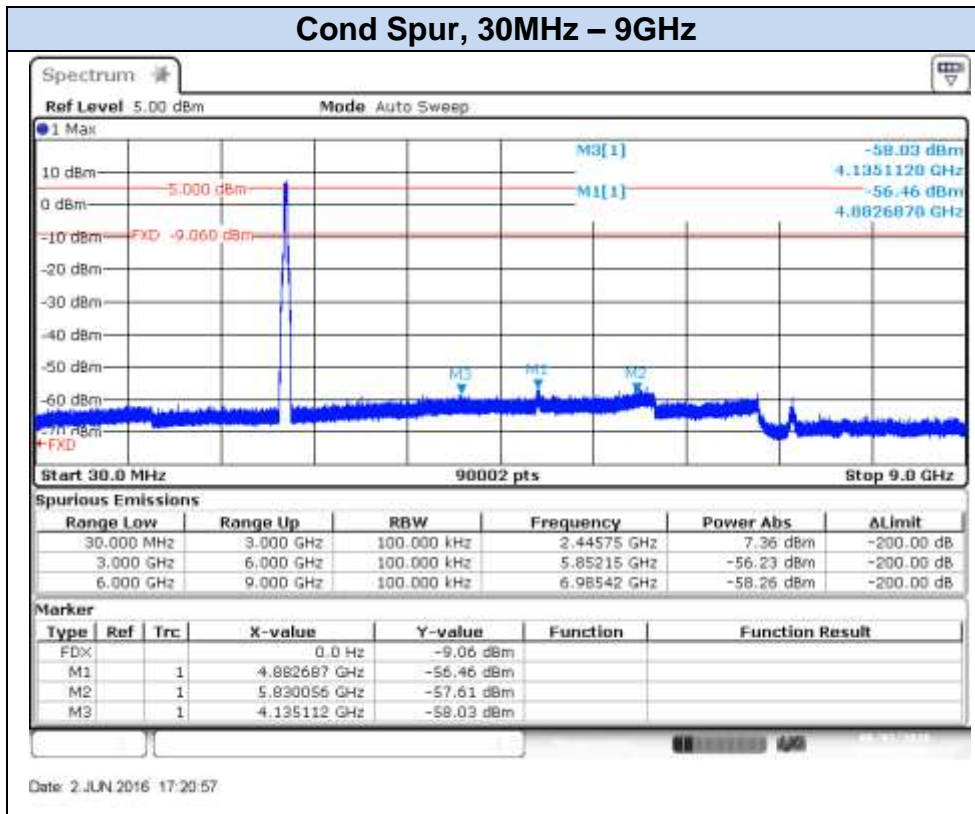
Date: 11.MAY.2016 18:08:54

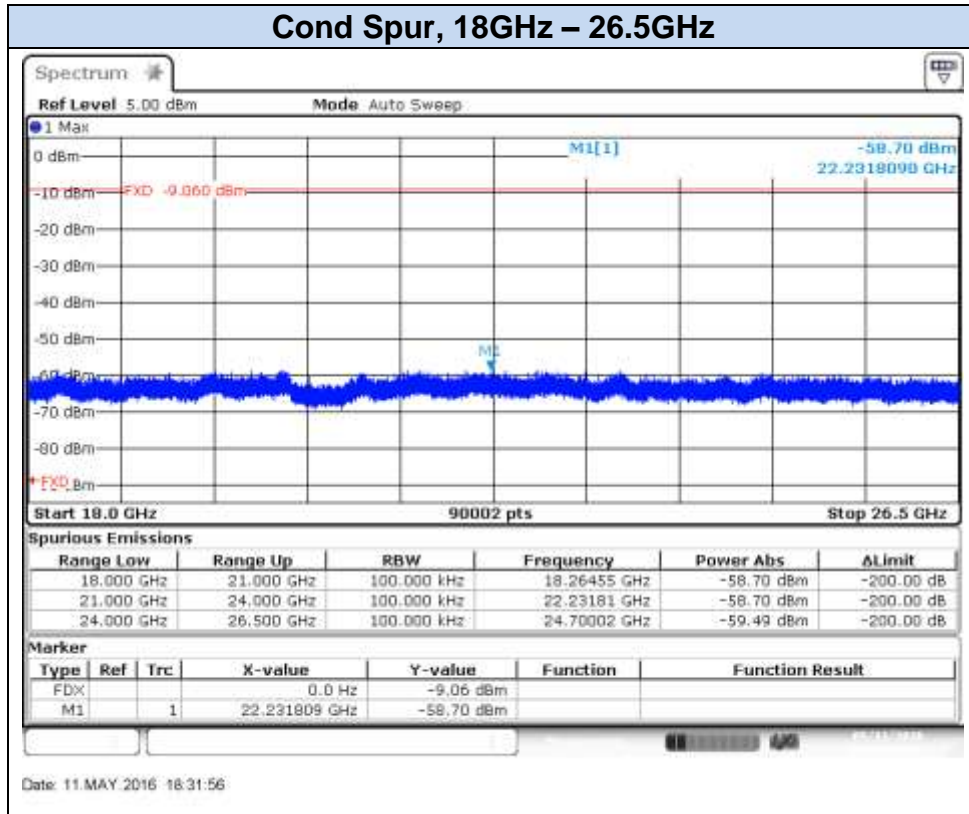


Date: 11.MAY.2016 18:08:15

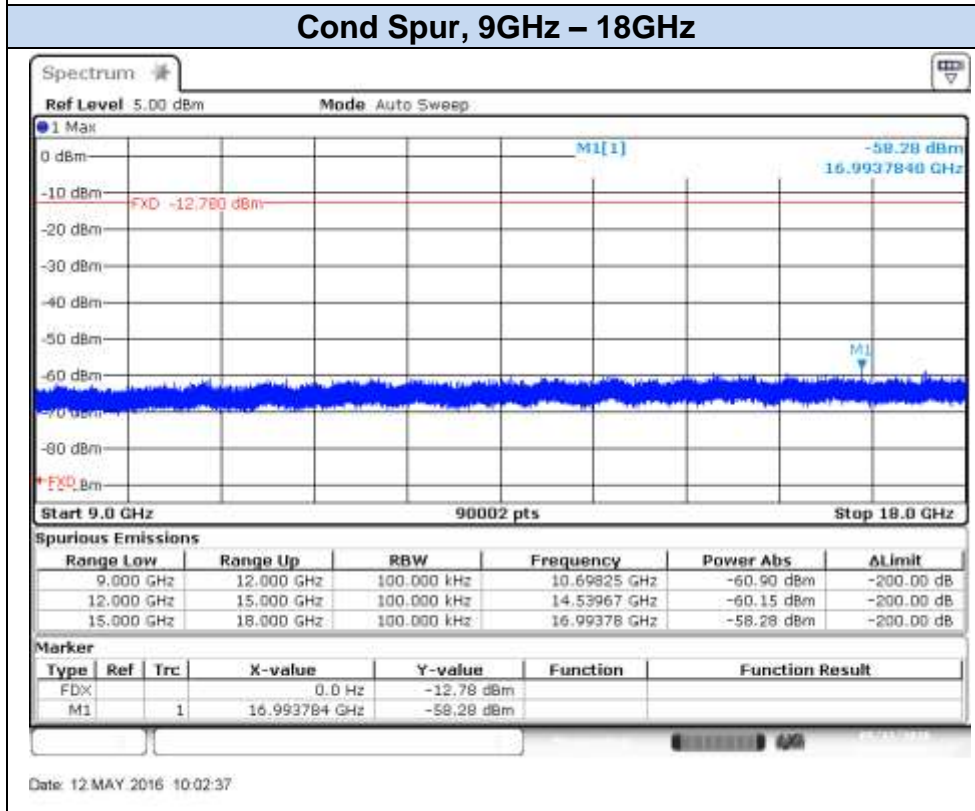
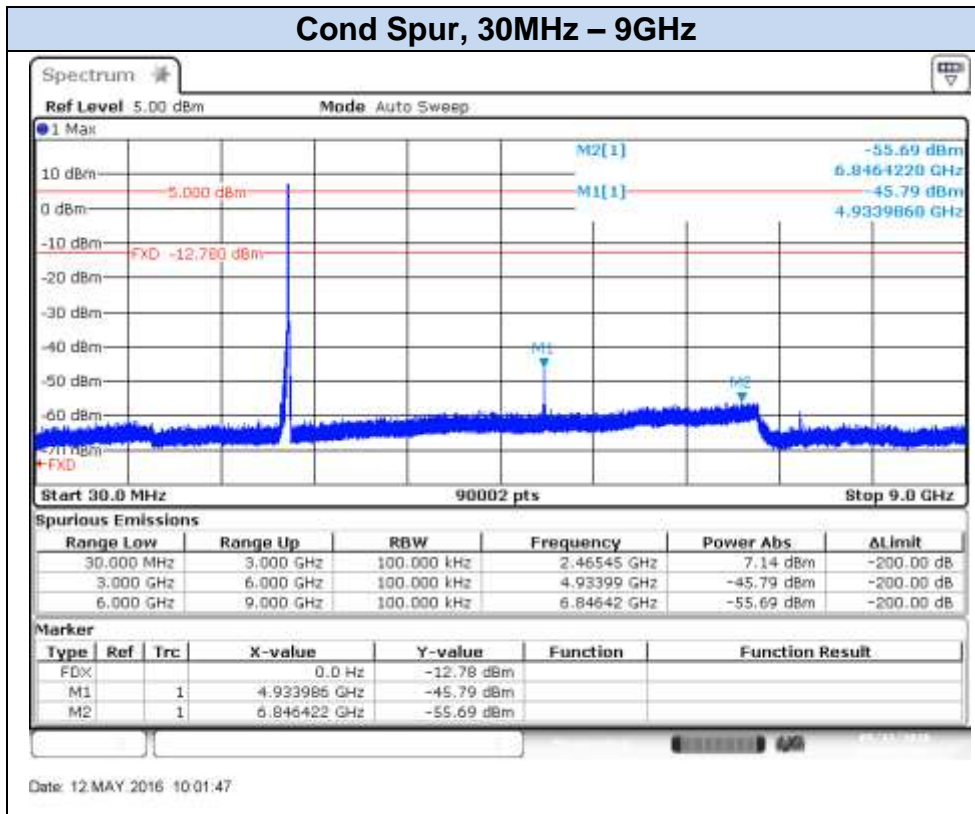


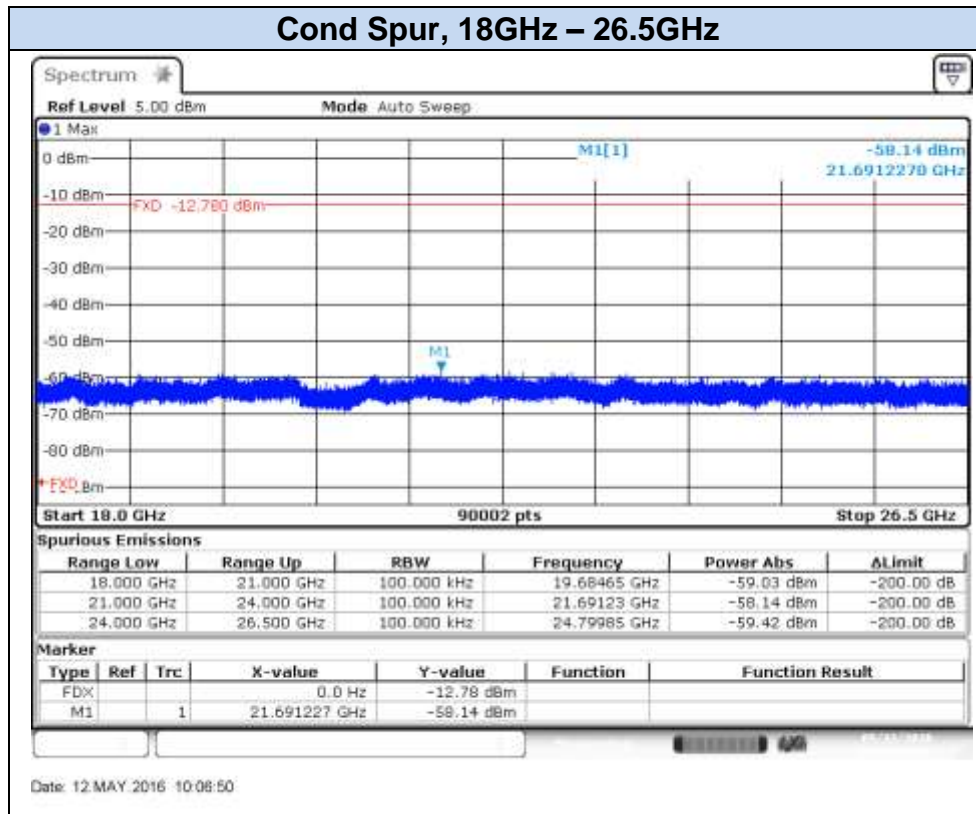
802.11b, 1Mbps – Chain A, CH11



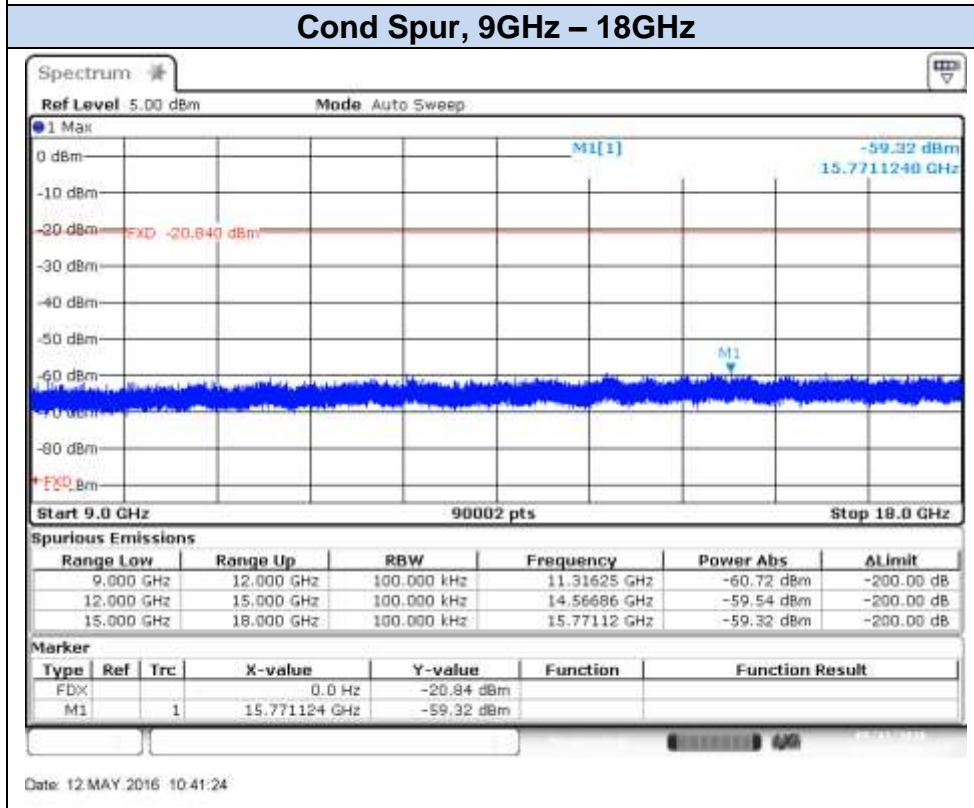
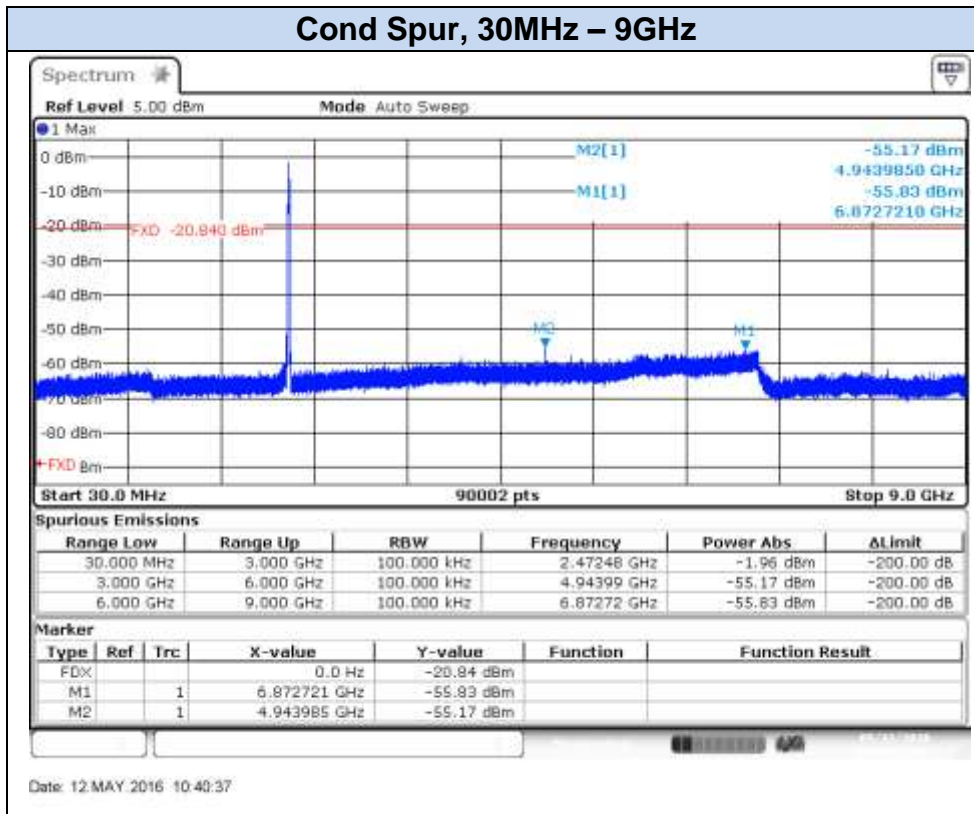


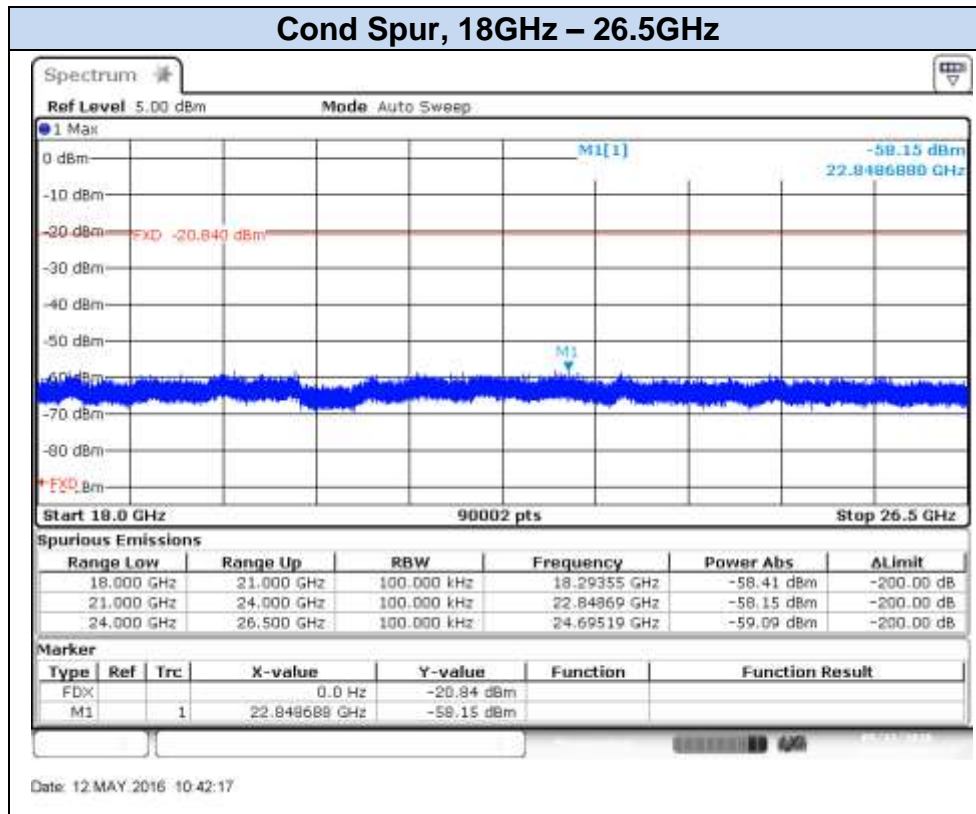
802.11b, 1Mbps – Chain A, CH12



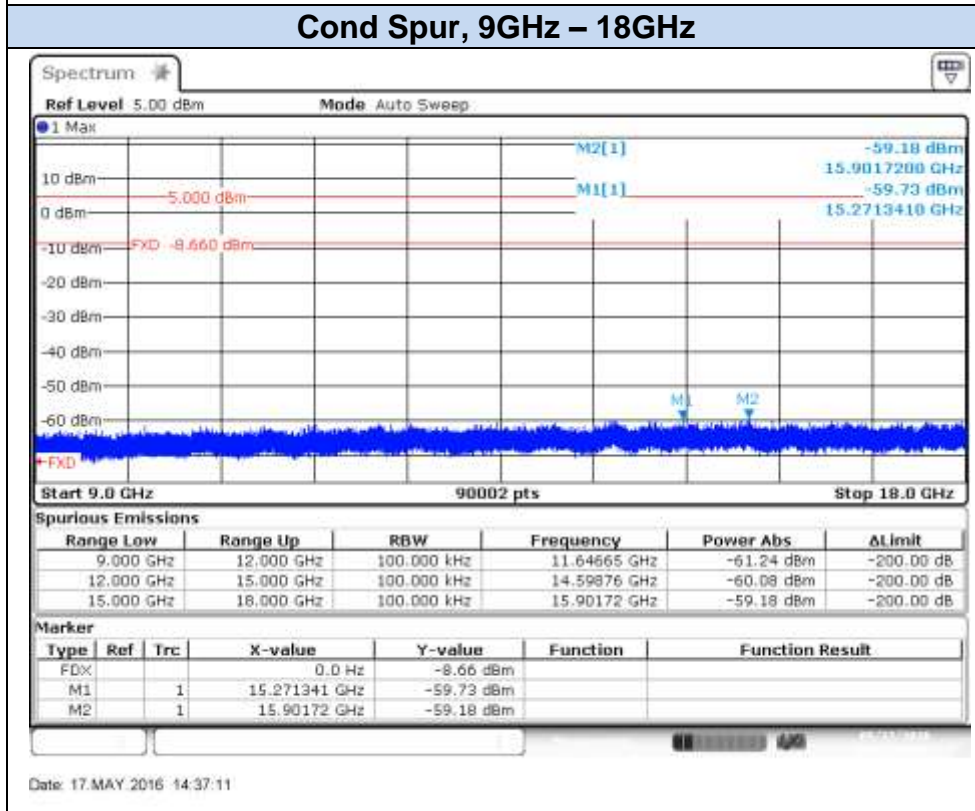
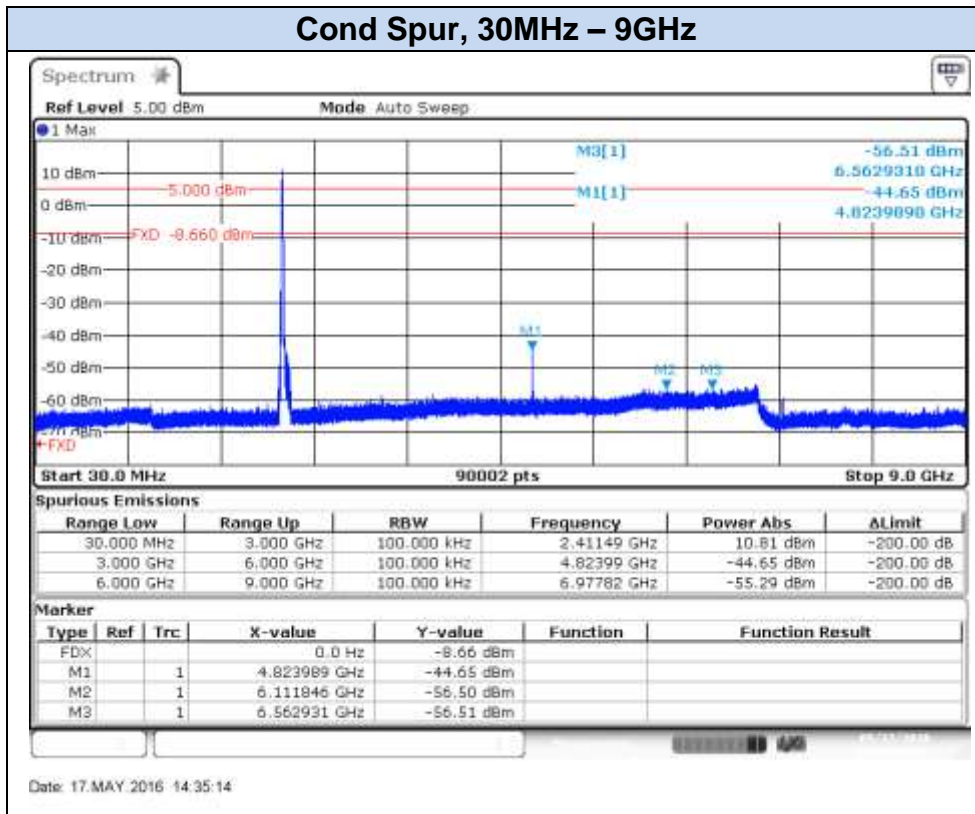


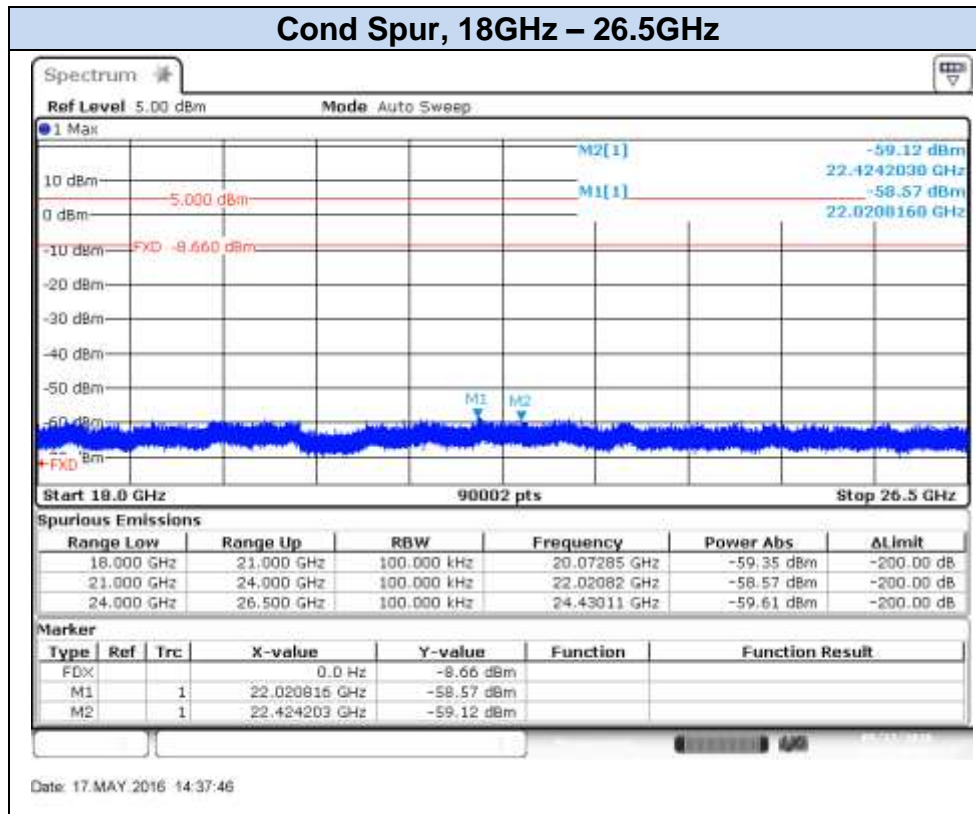
802.11b, 1Mbps – Chain A, CH13



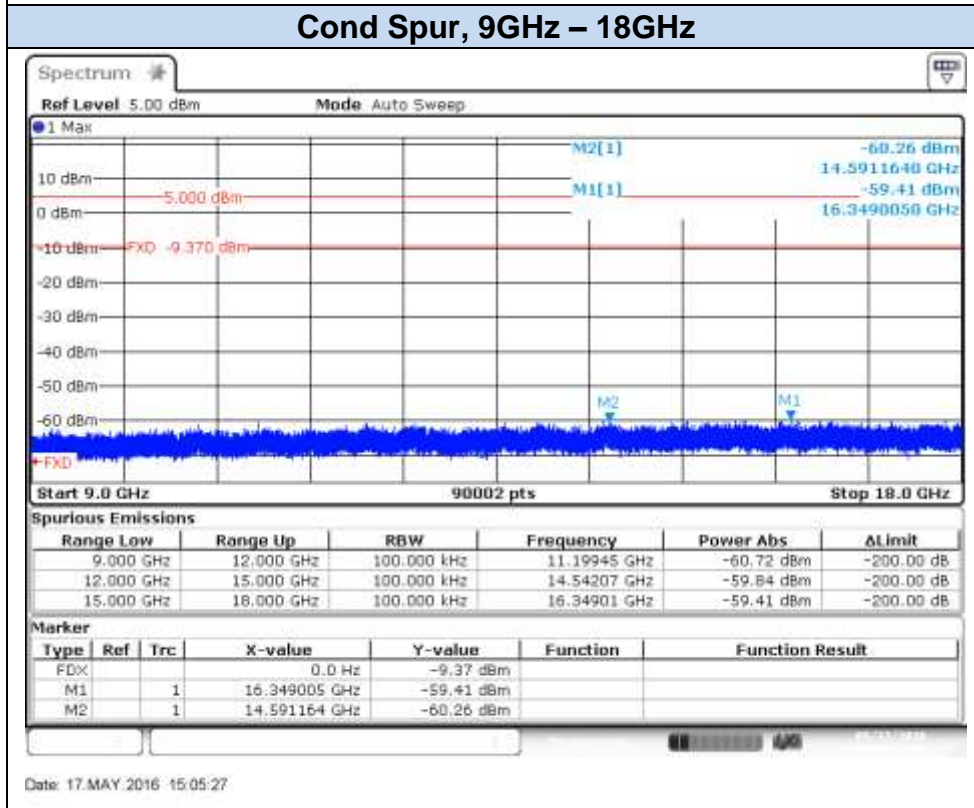
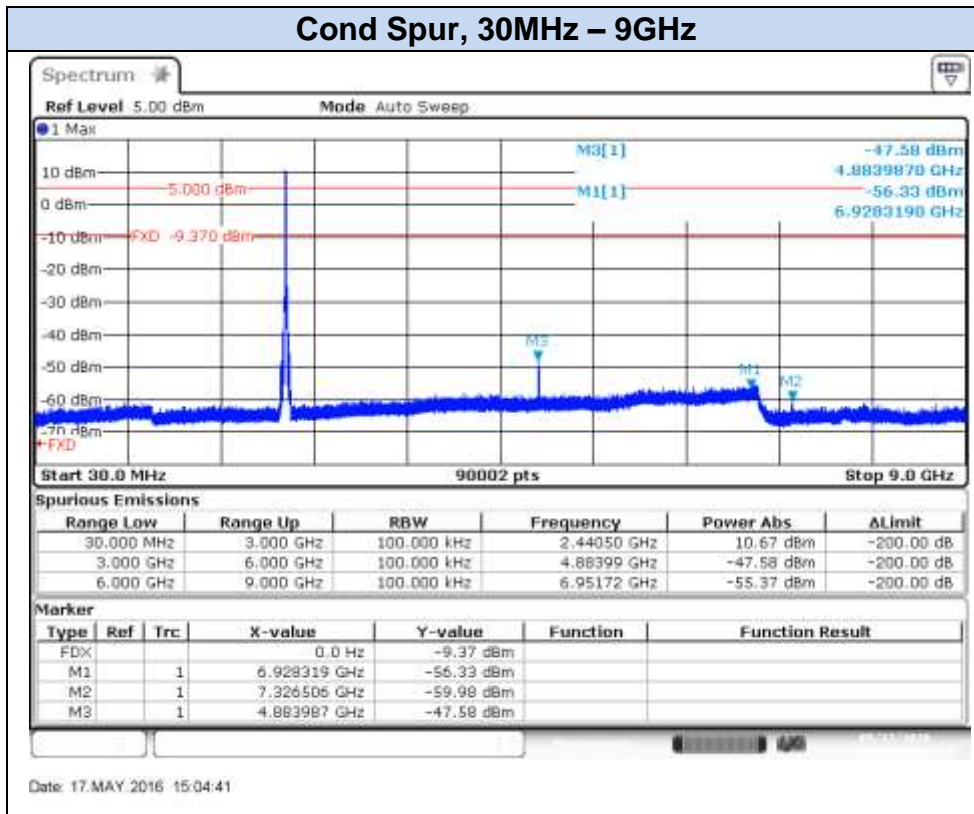


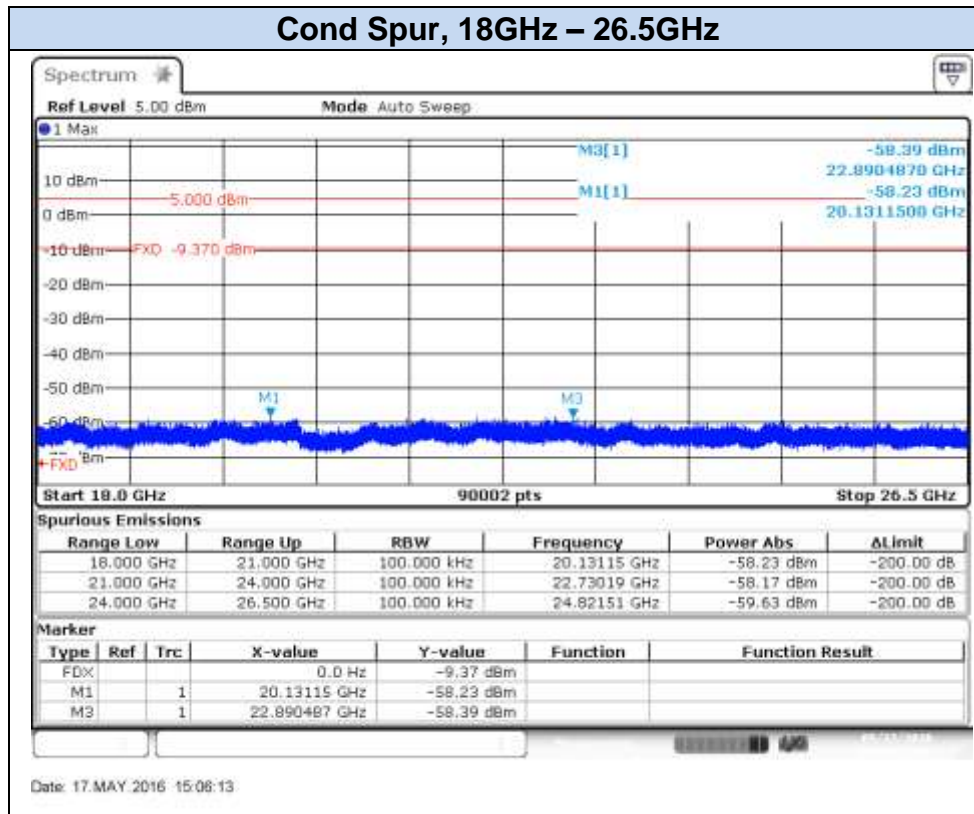
802.11b, 1Mbps – Chain B, CH1



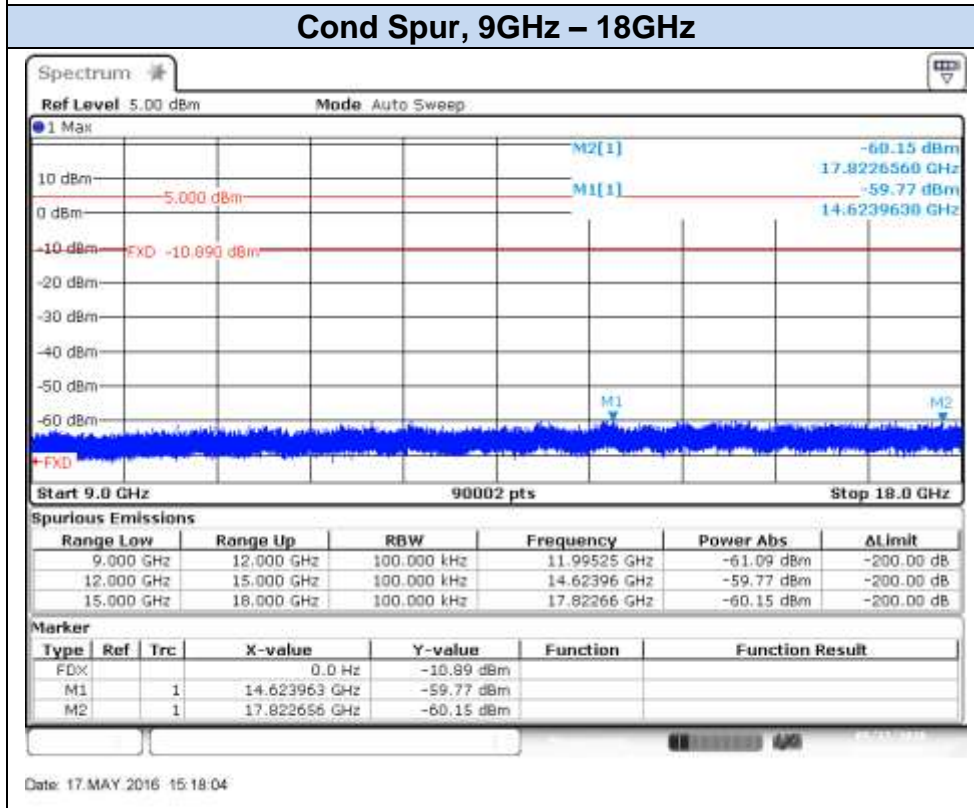
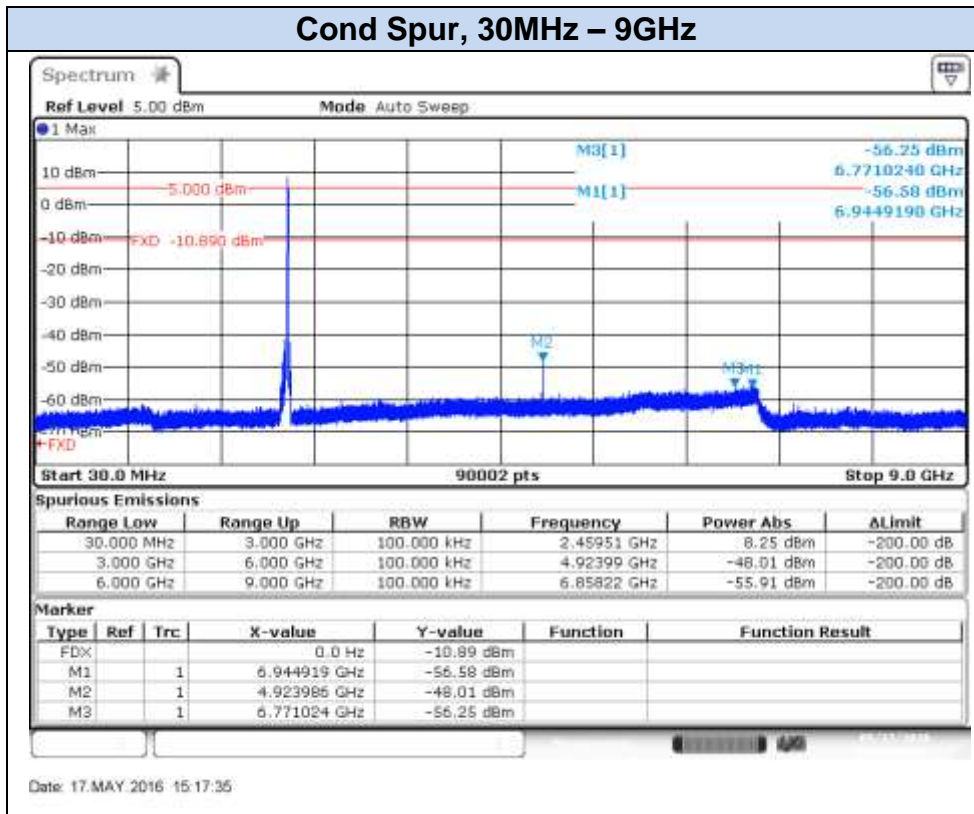


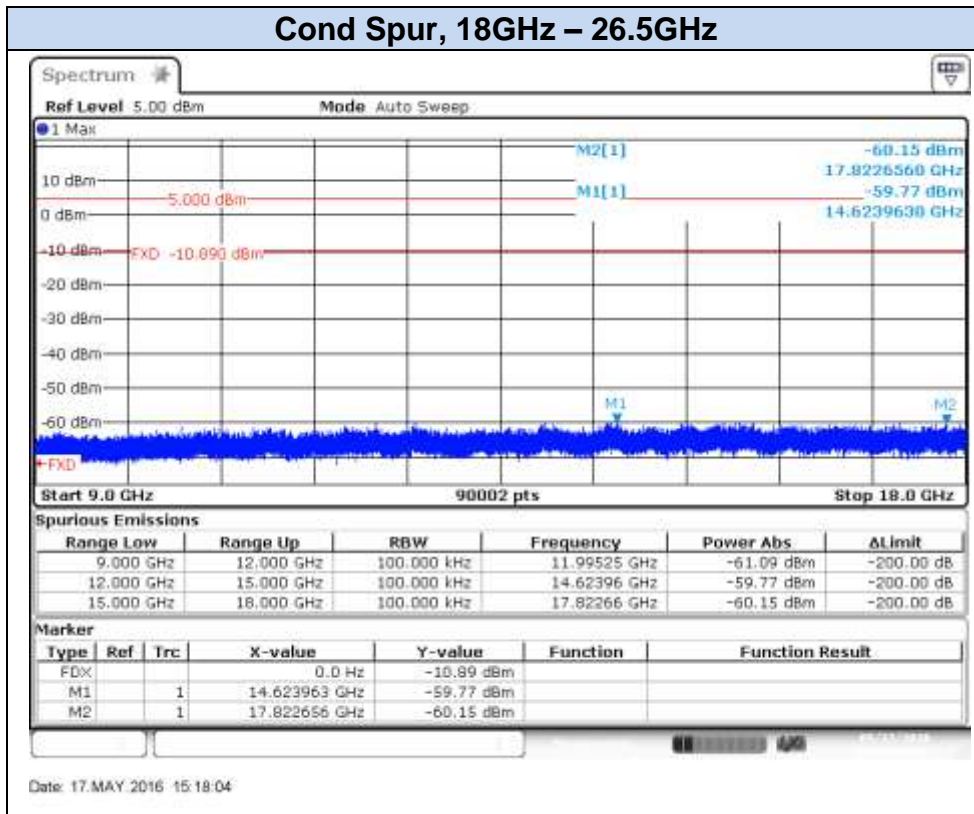
802.11b, 1Mbps – Chain B, CH7



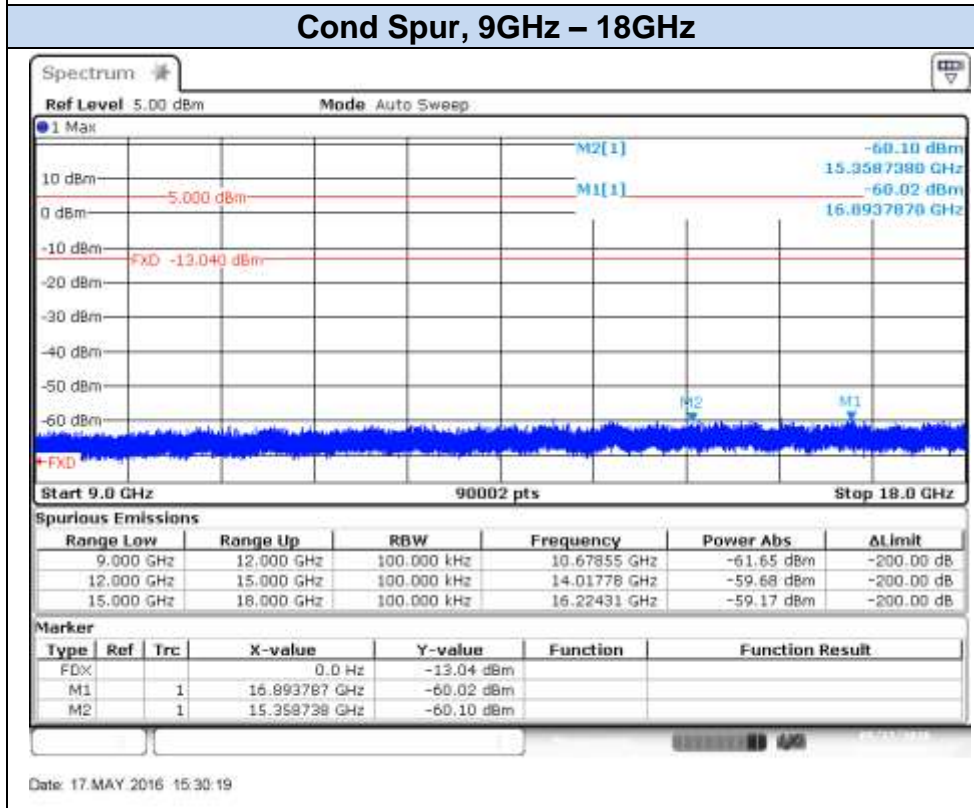
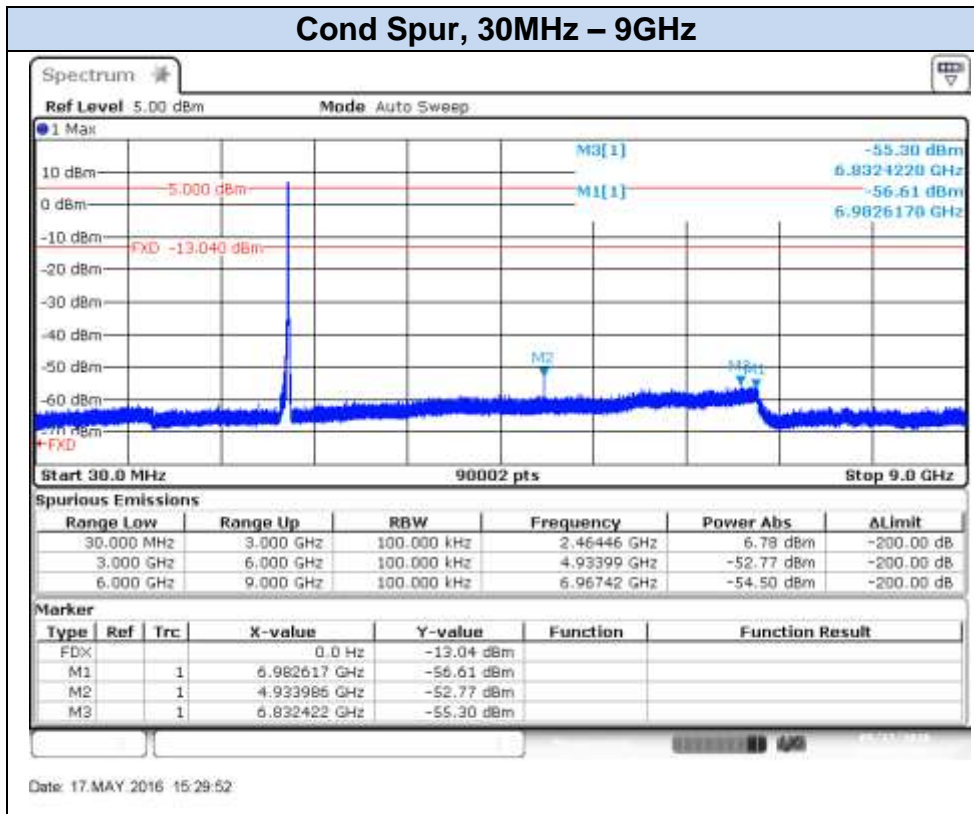


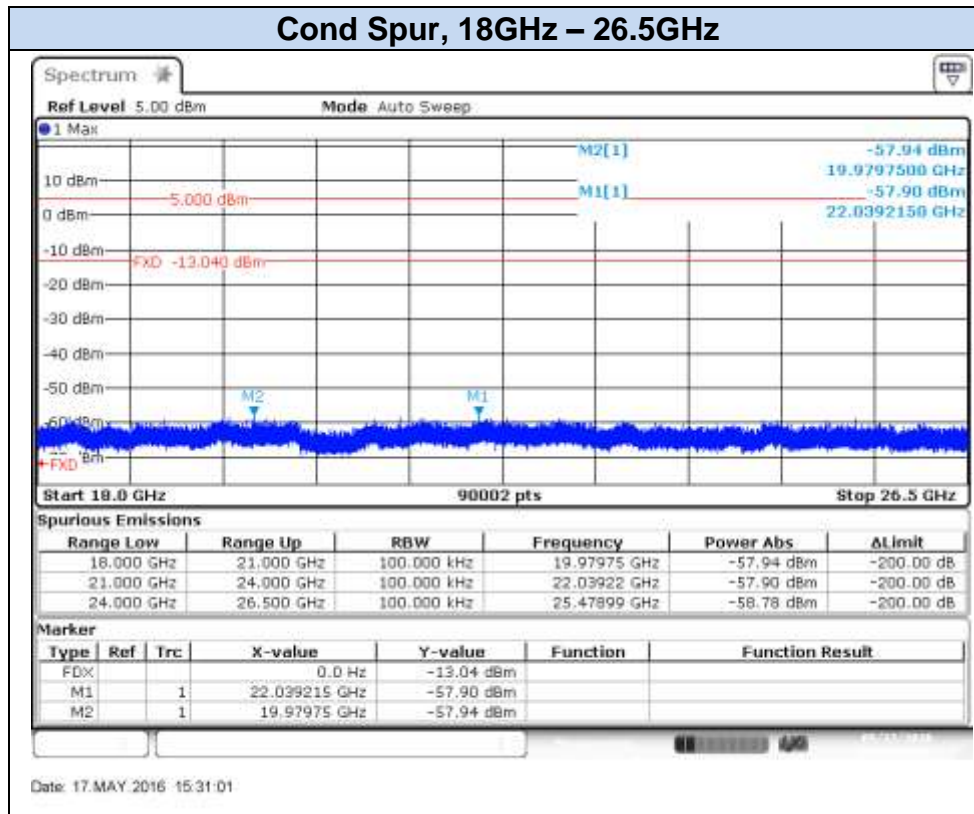
802.11b, 1Mbps – Chain B, CH11



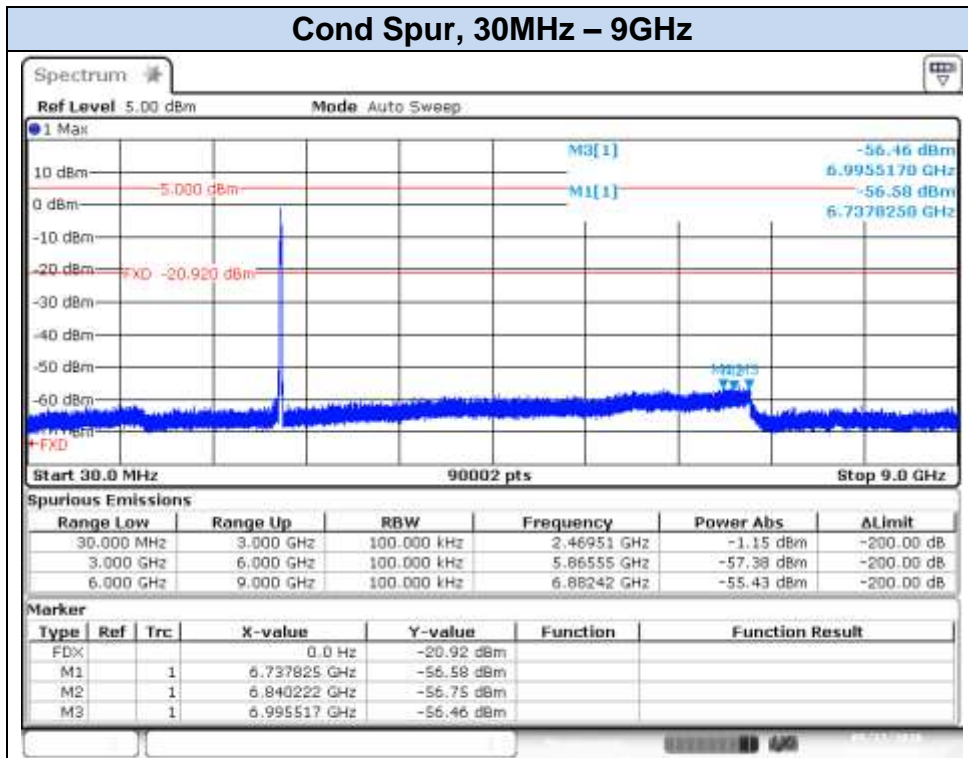


802.11b, 1Mbps – Chain B, CH12

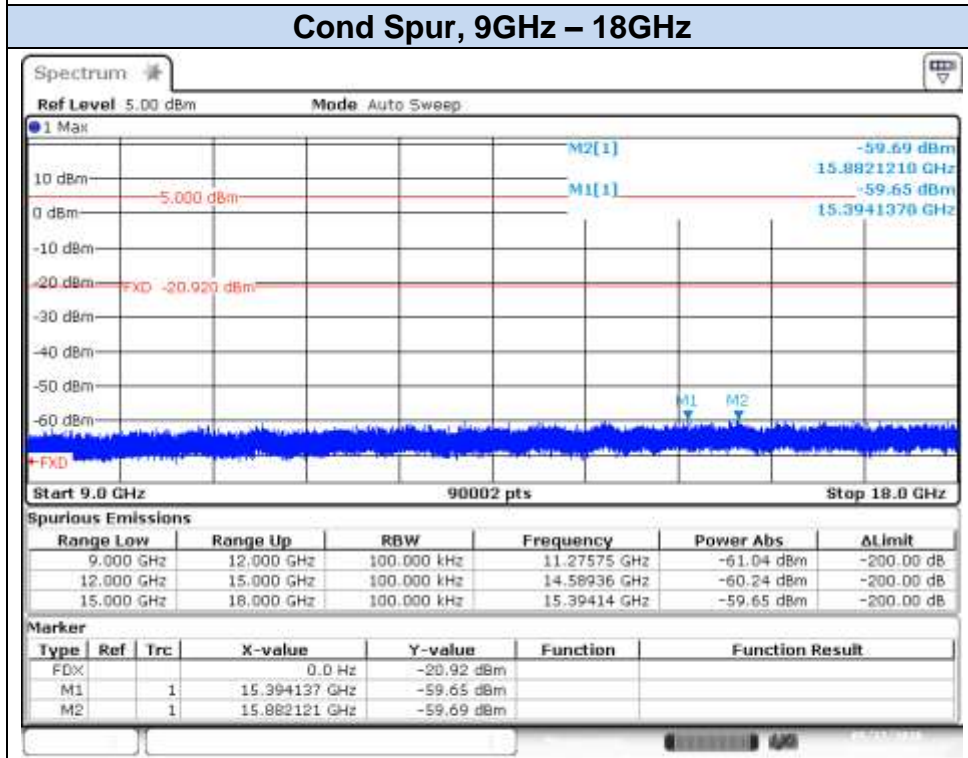




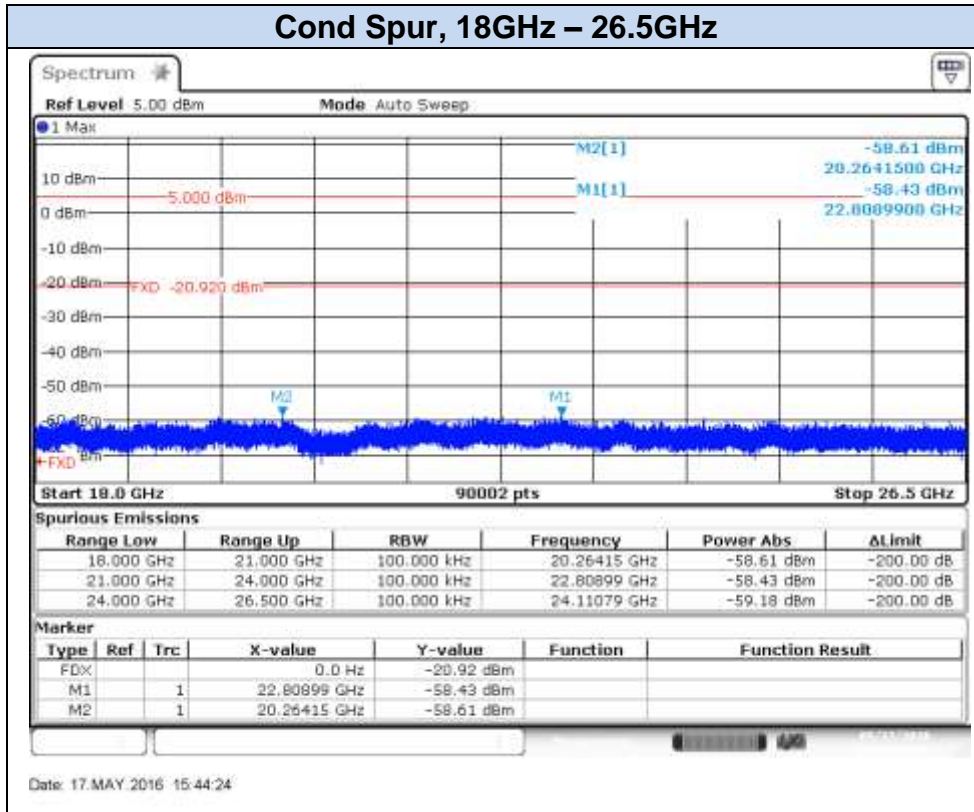
802.11b, 1Mbps – Chain B, CH13



Date: 17.MAY.2016 15:43:29



Date: 17.MAY.2016 15:43:55



802.11g, 6Mbps – Chain A, CH1

