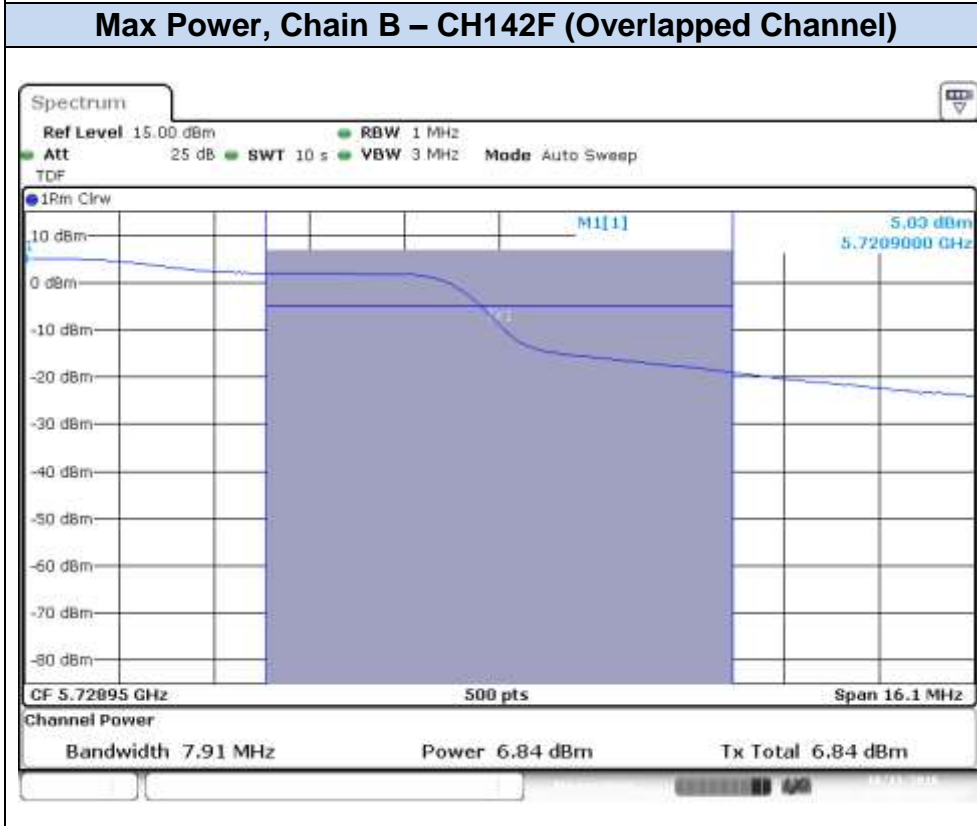
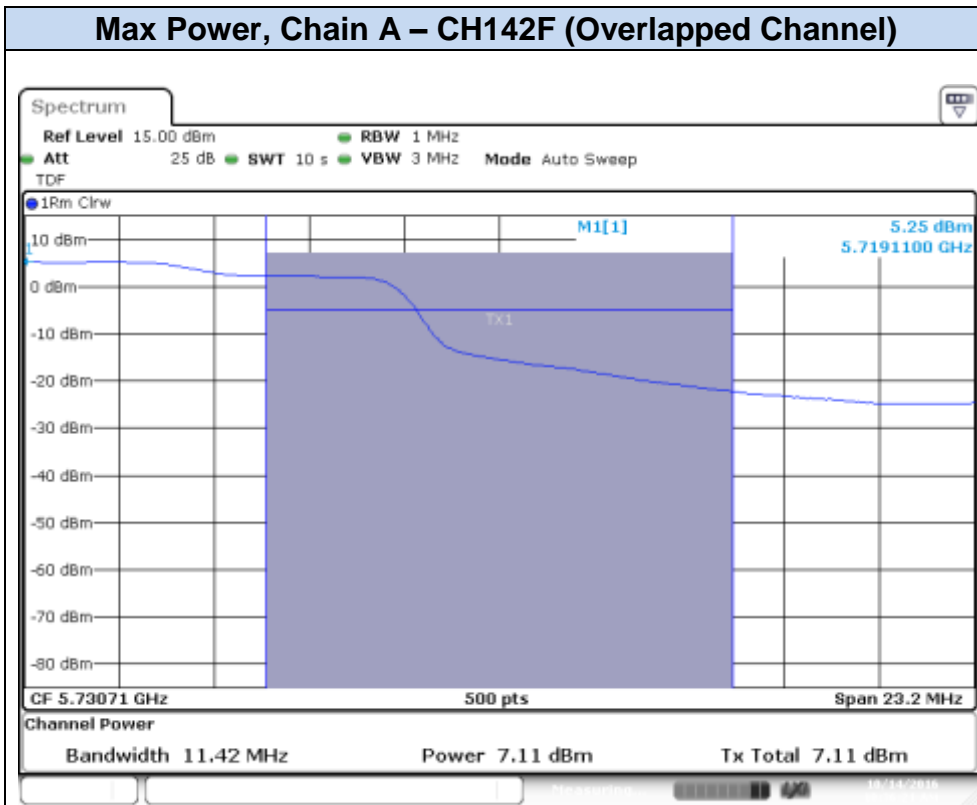
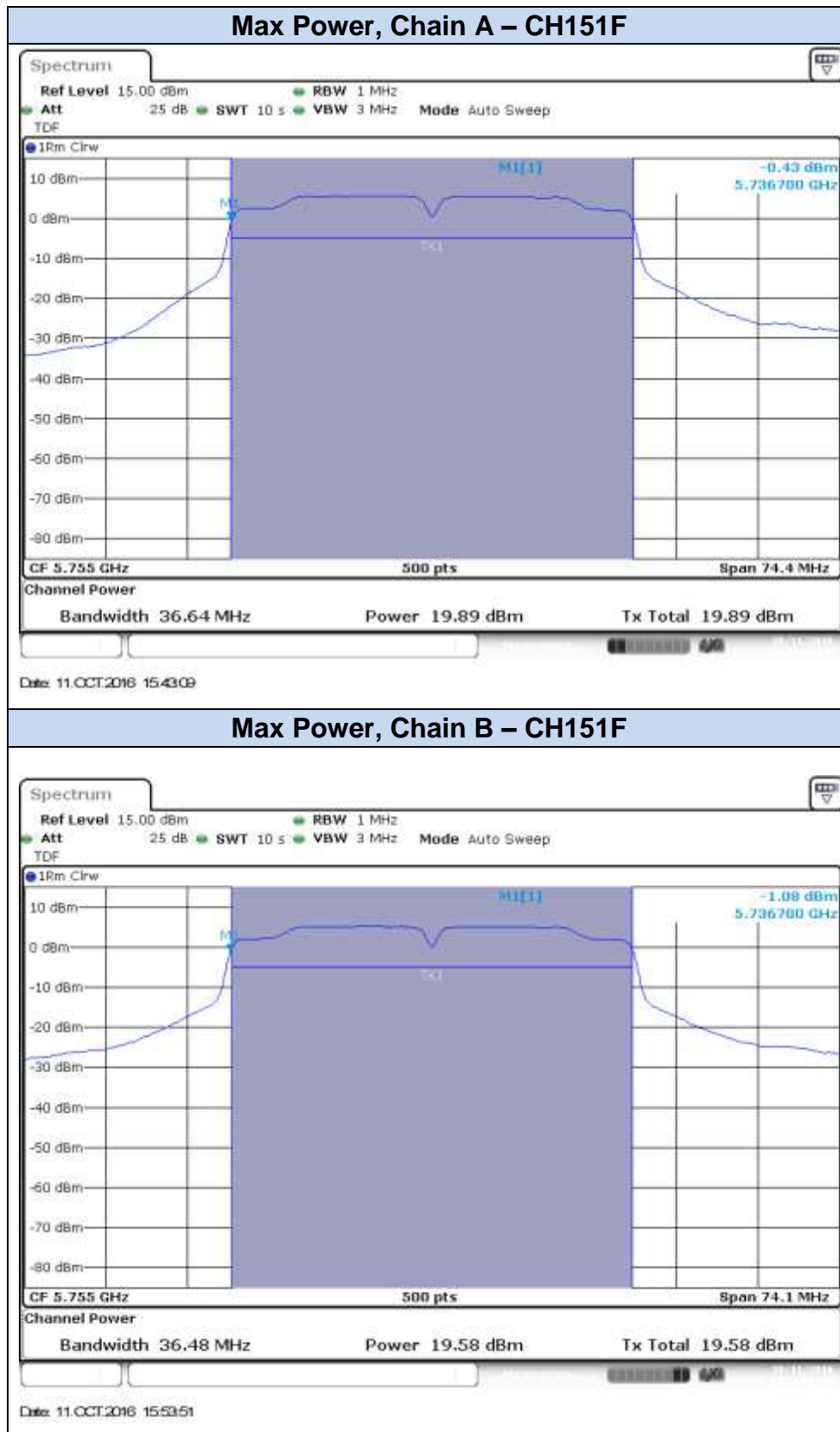
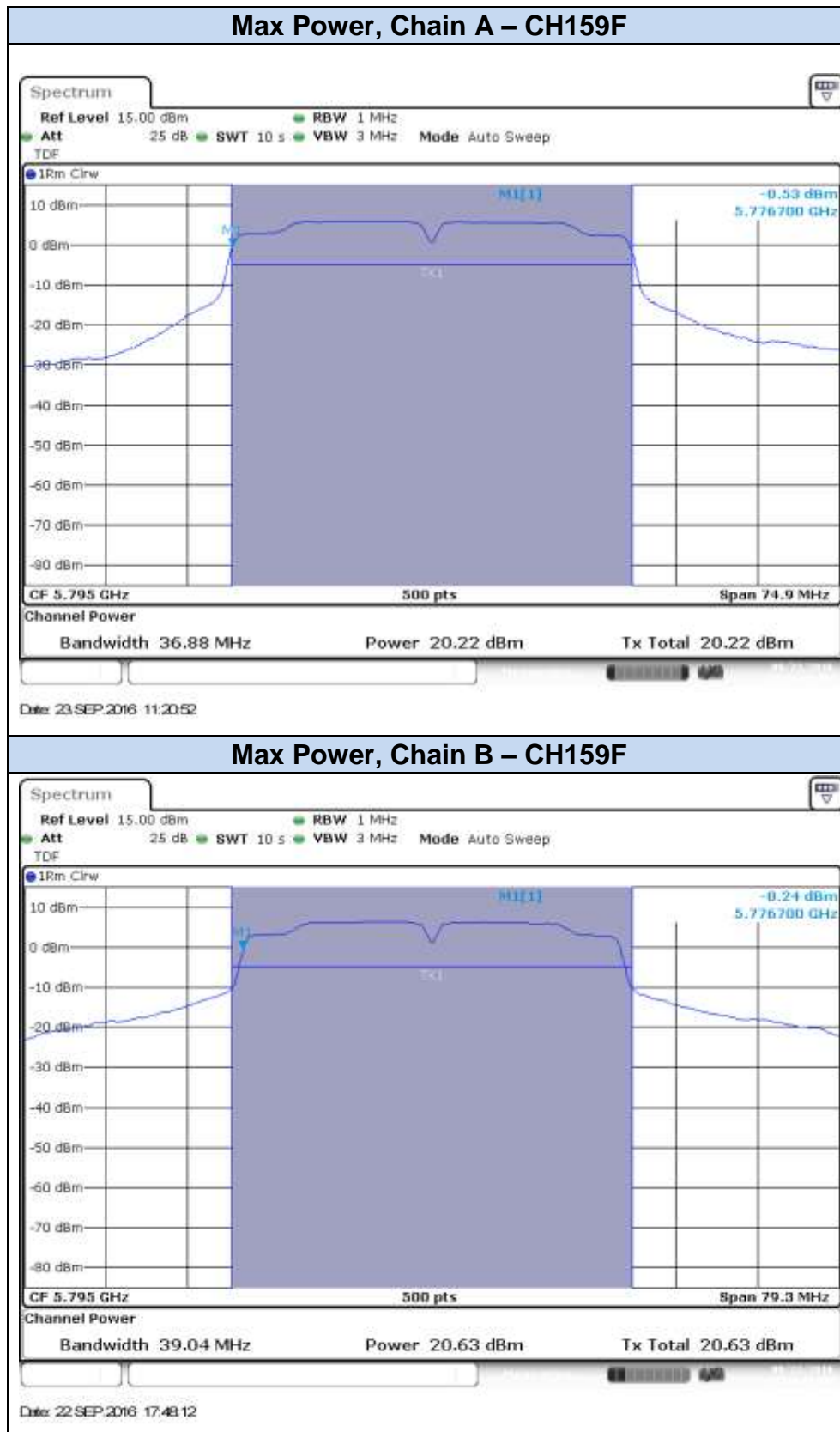
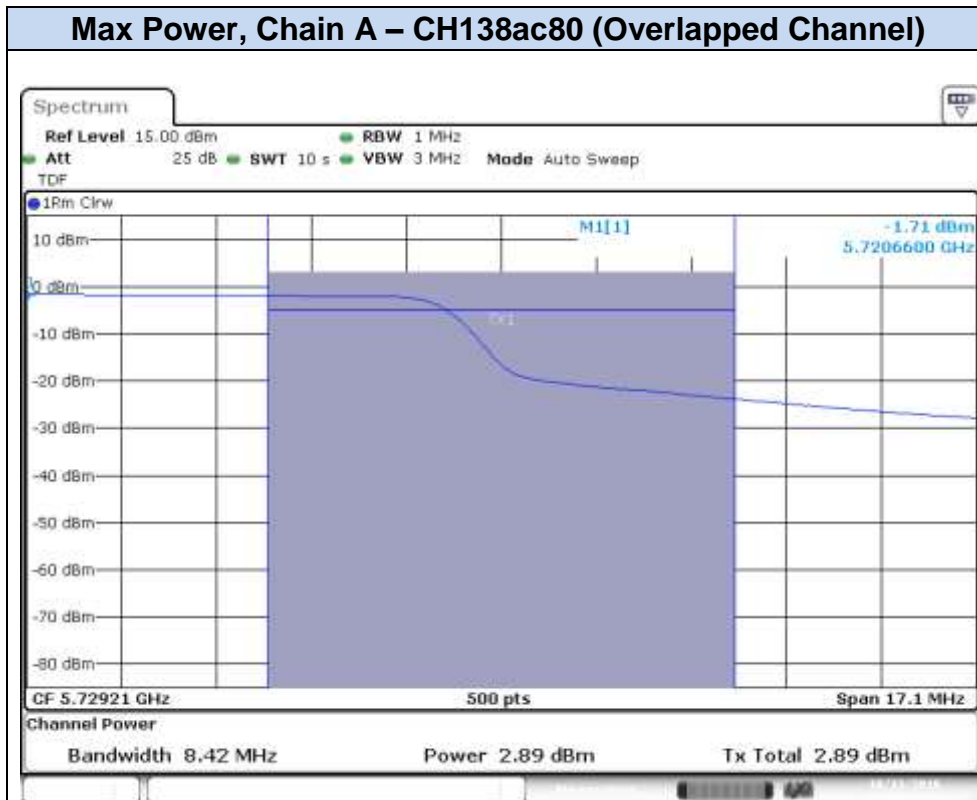
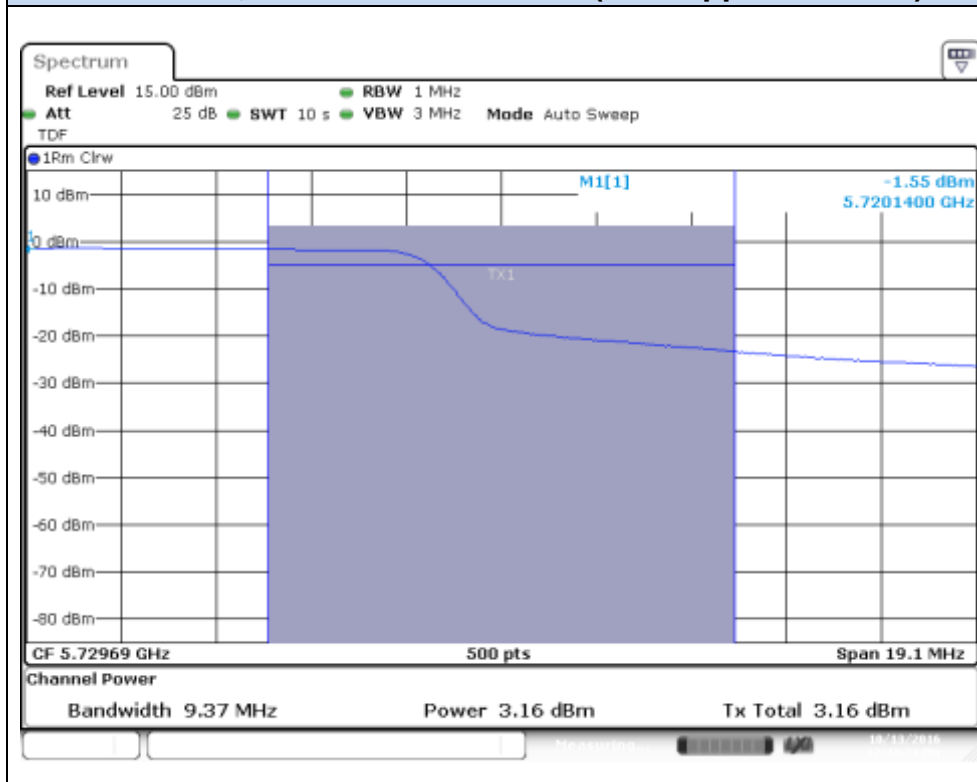


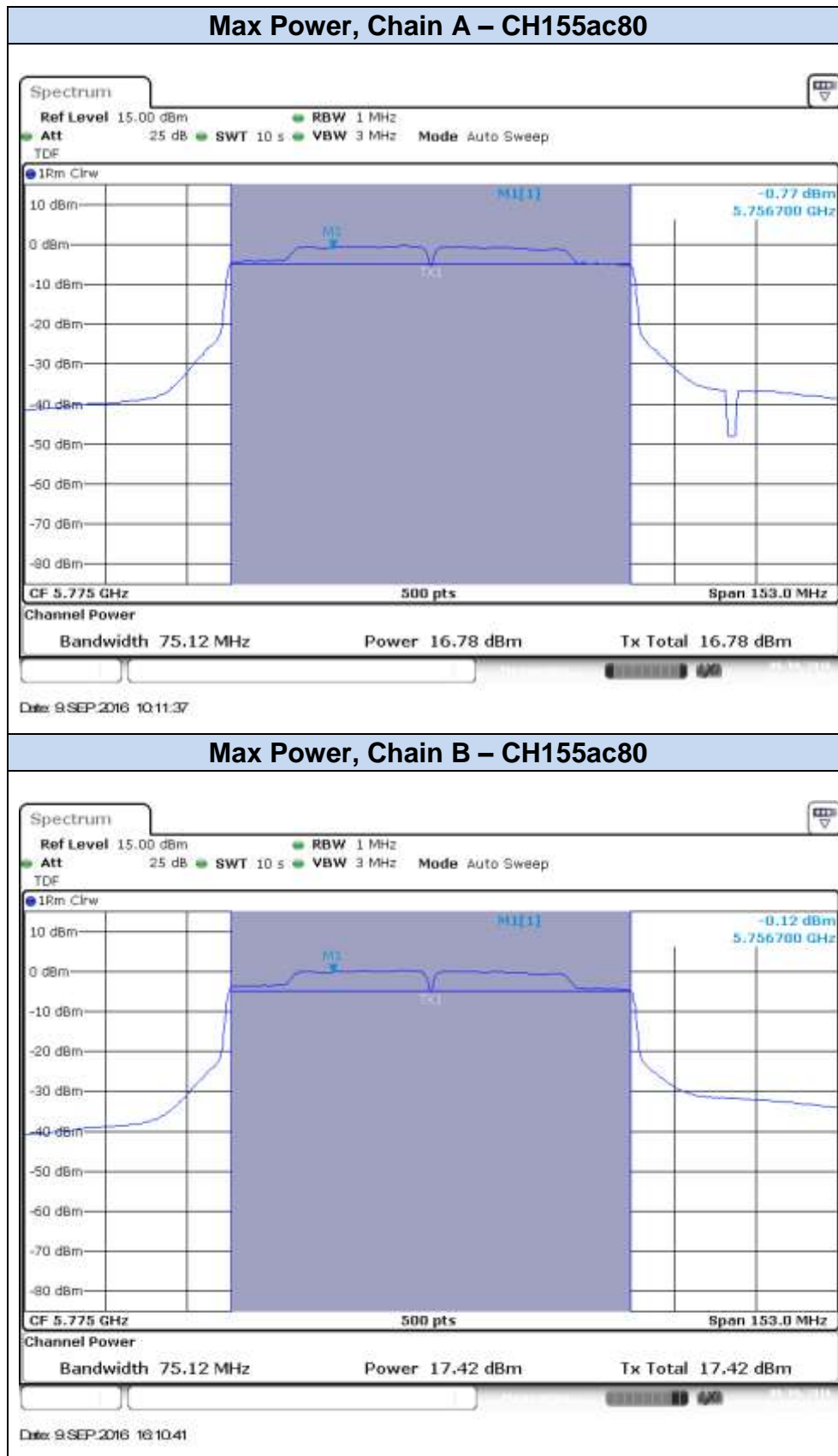
802.11n40, HT8 (MIMO)

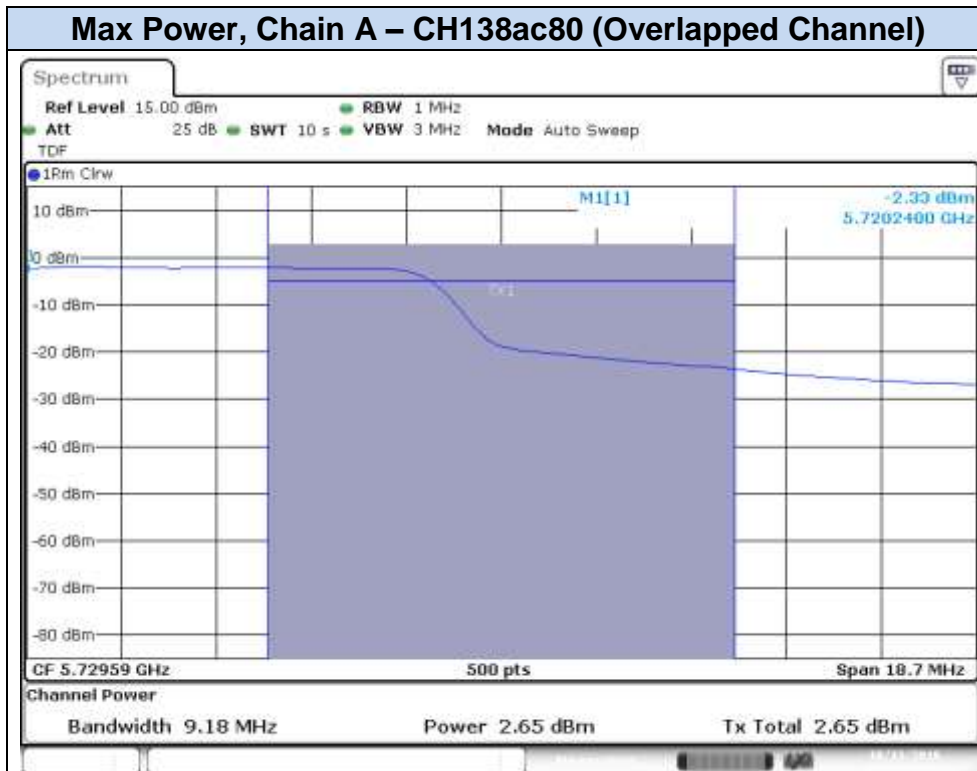
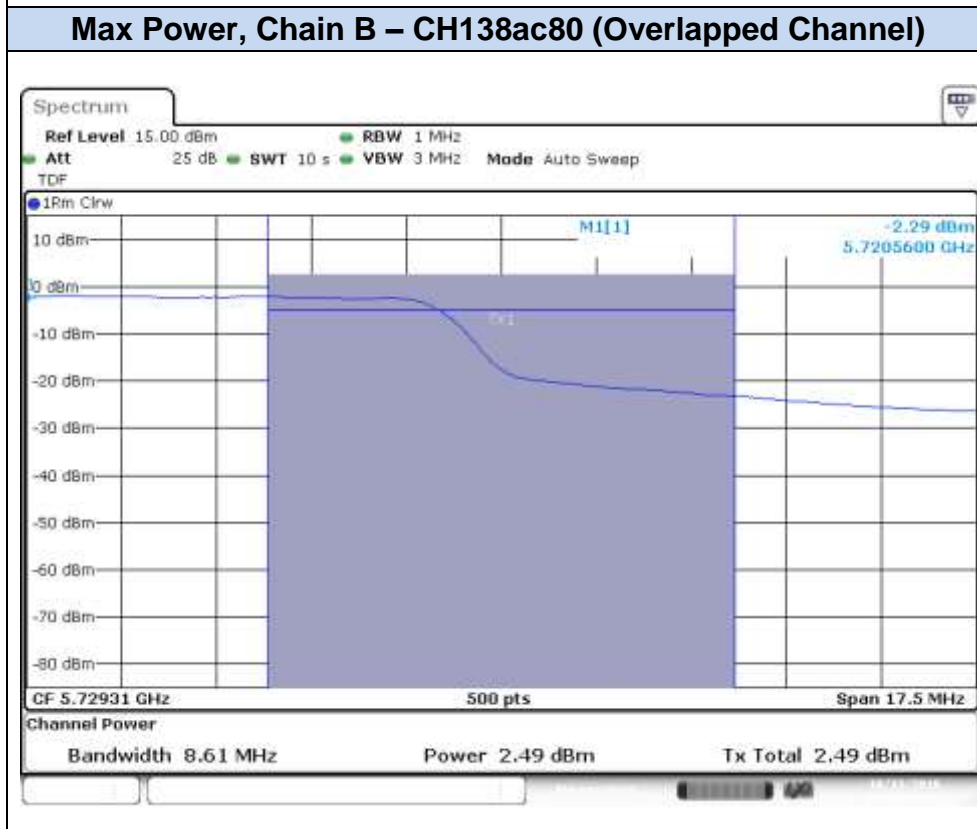


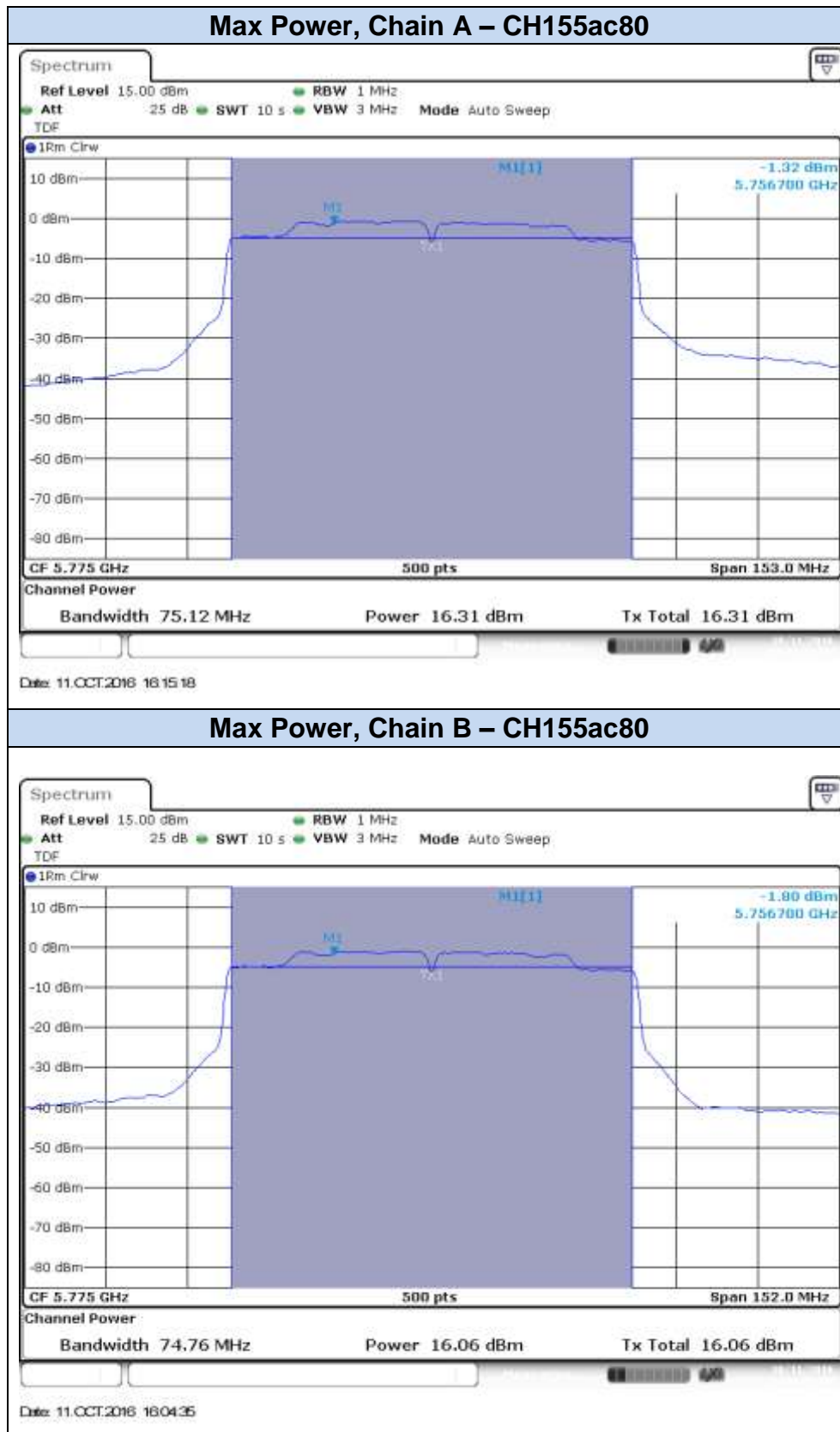


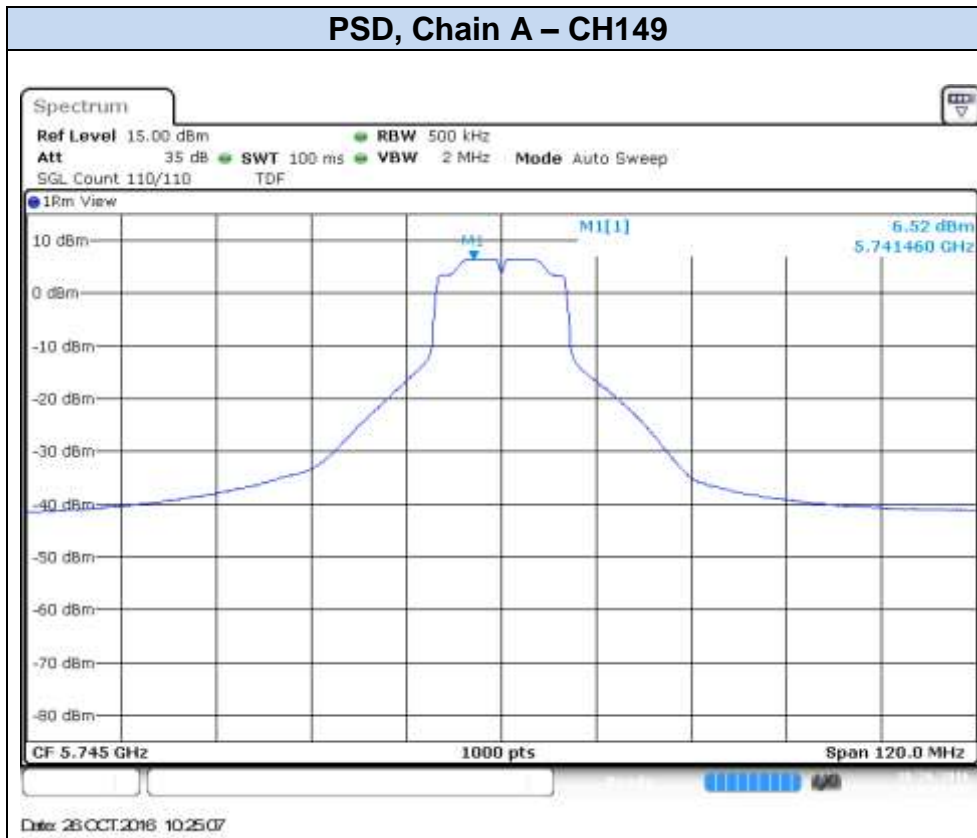
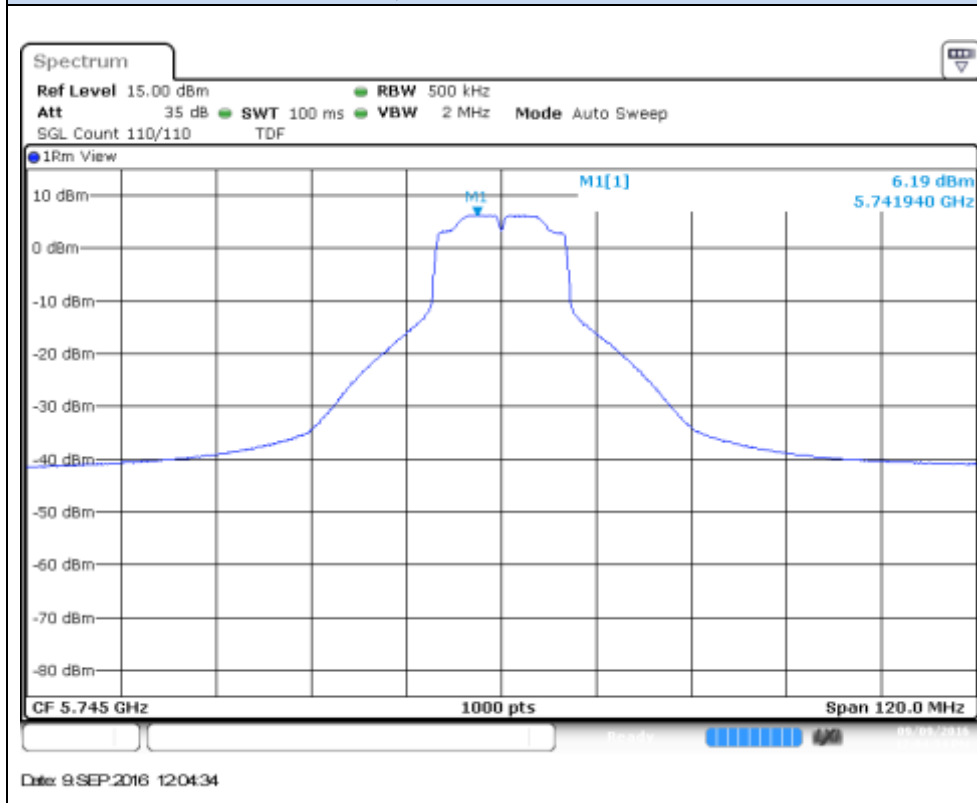


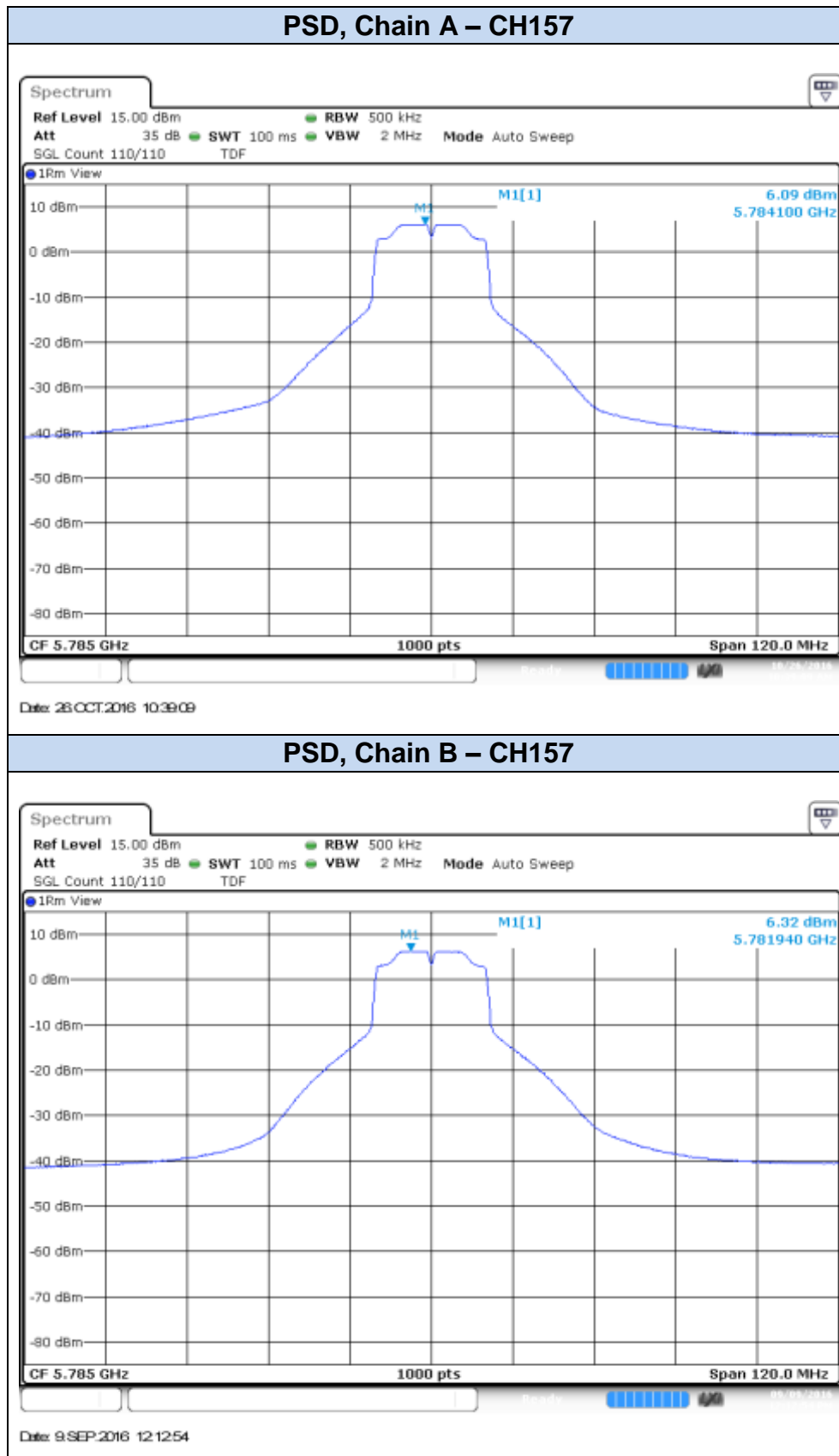
802.11ac80, VHT0 (SISO)**Max Power, Chain A – CH138ac80 (Overlapped Channel)****Max Power, Chain B – CH138ac80 (Overlapped Channel)**

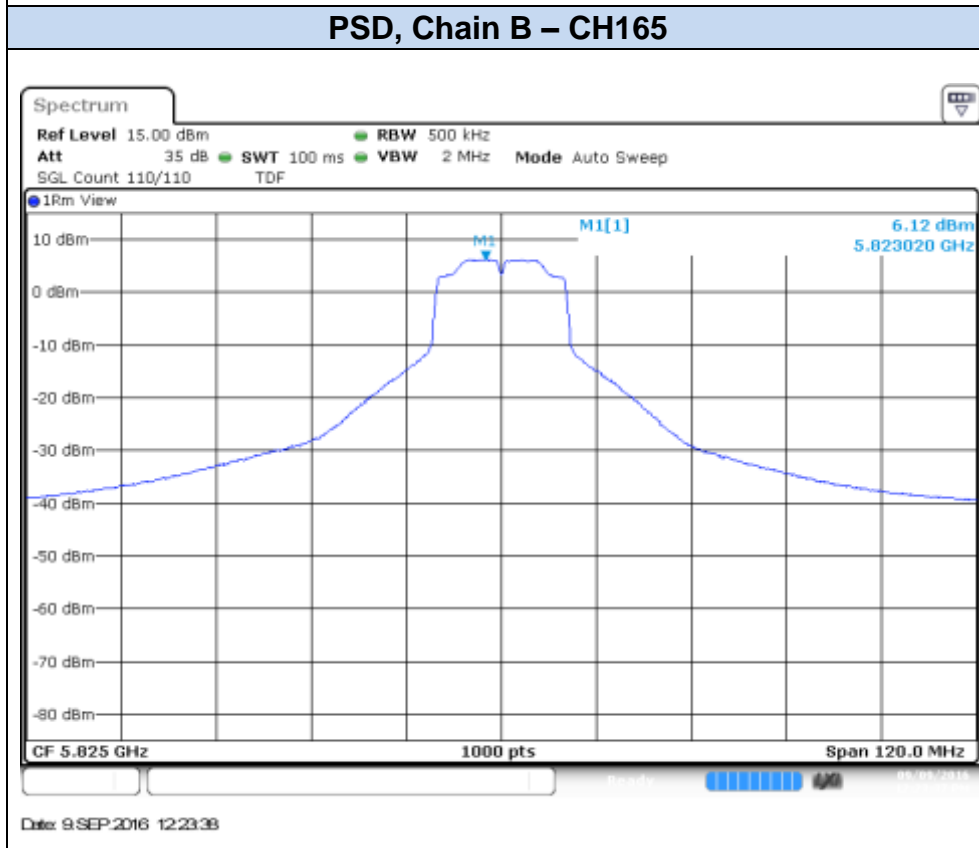
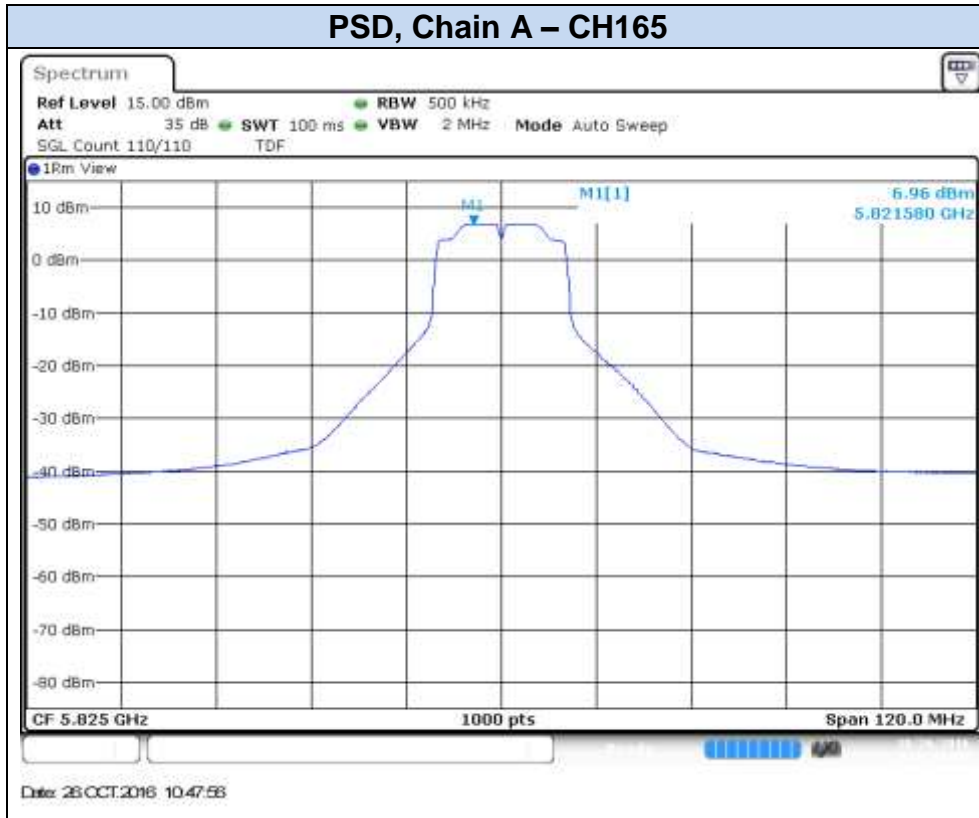


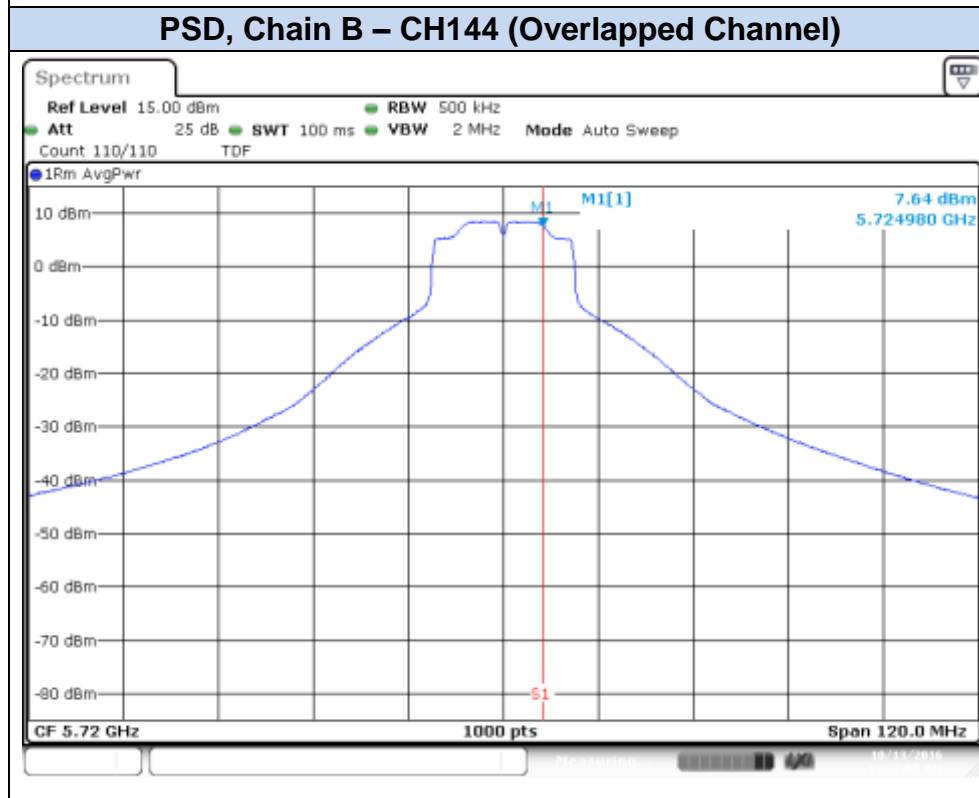
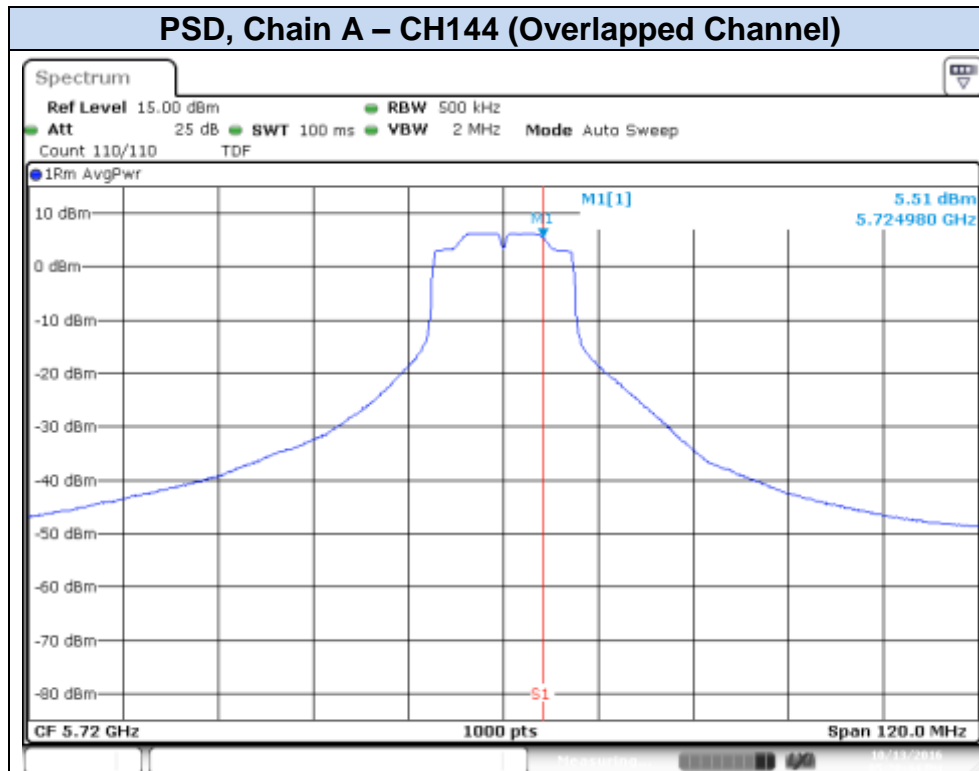
802.11ac80, VHT0 (MIMO)**Max Power, Chain A – CH138ac80 (Overlapped Channel)****Max Power, Chain B – CH138ac80 (Overlapped Channel)**

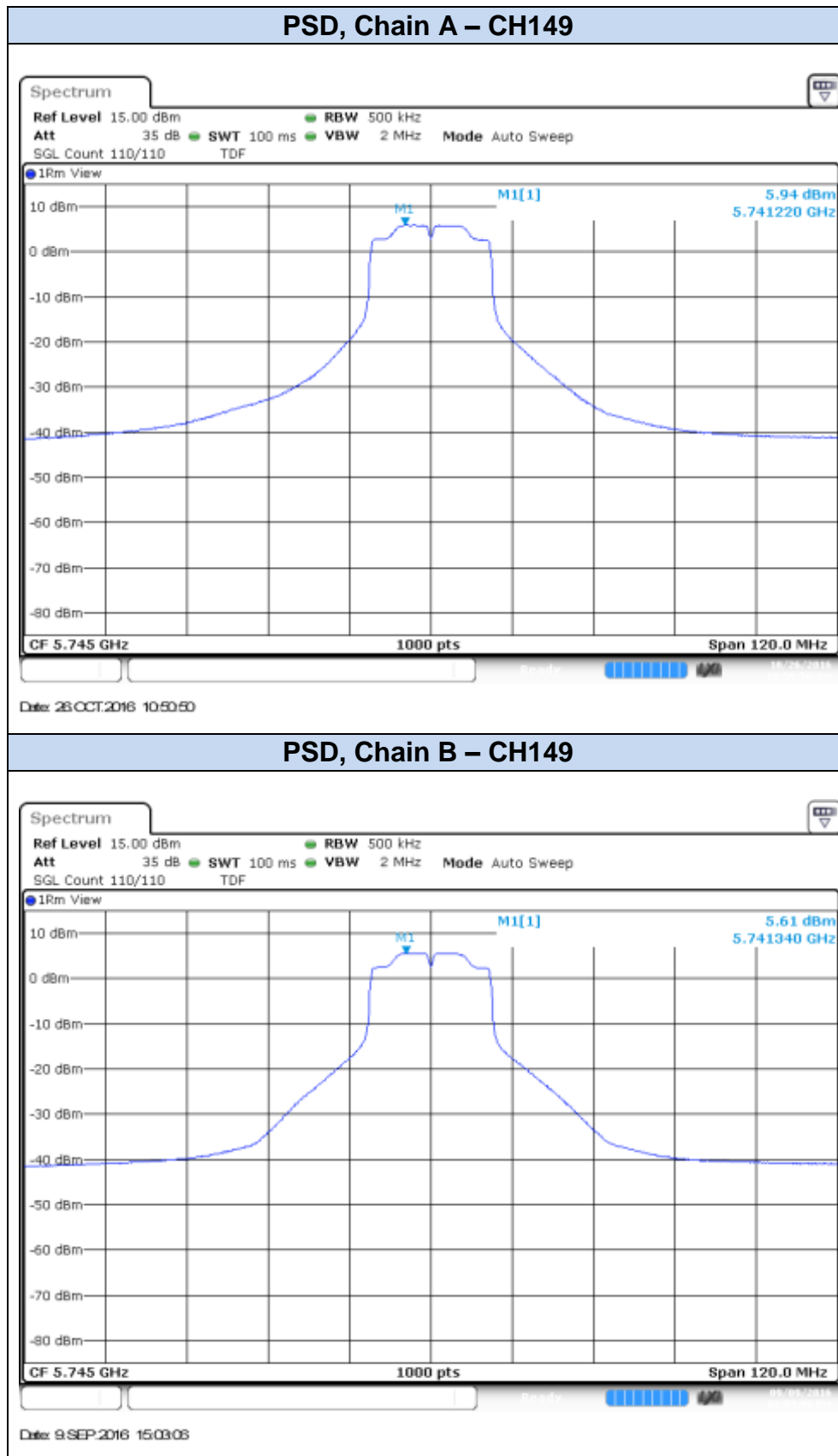


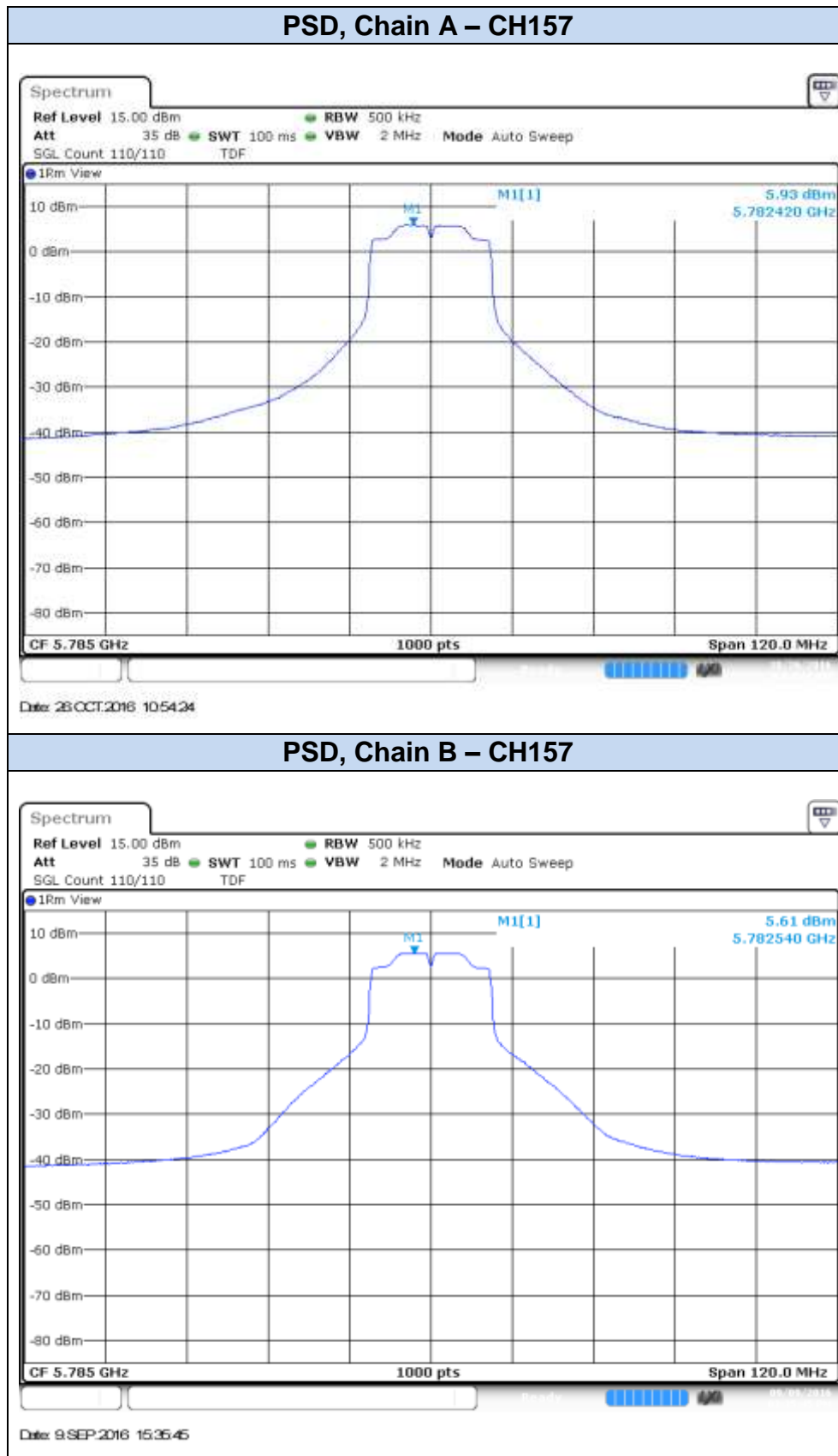
802.11a, 6Mbps**PSD, Chain A – CH149****PSD, Chain B – CH149**

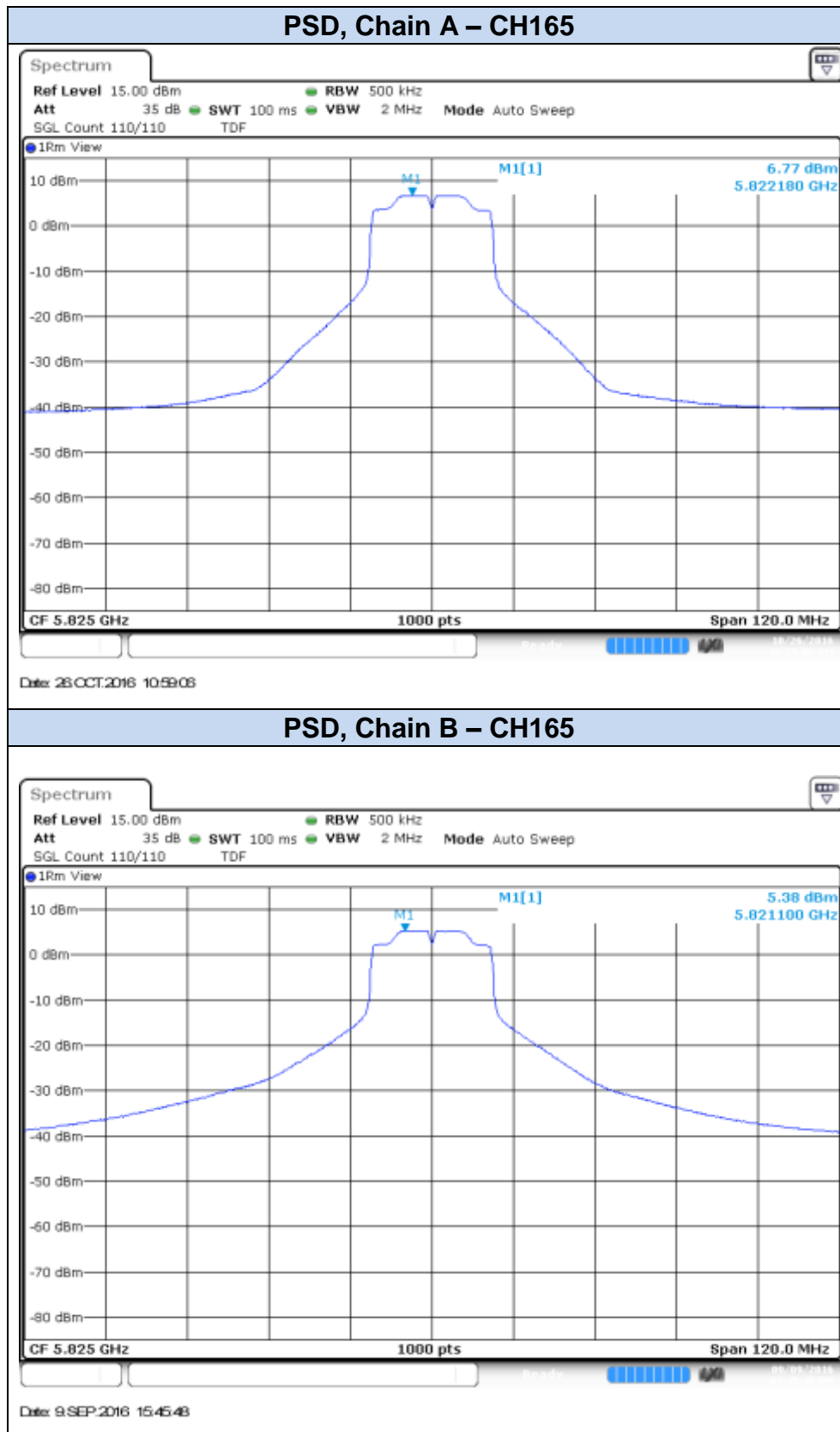


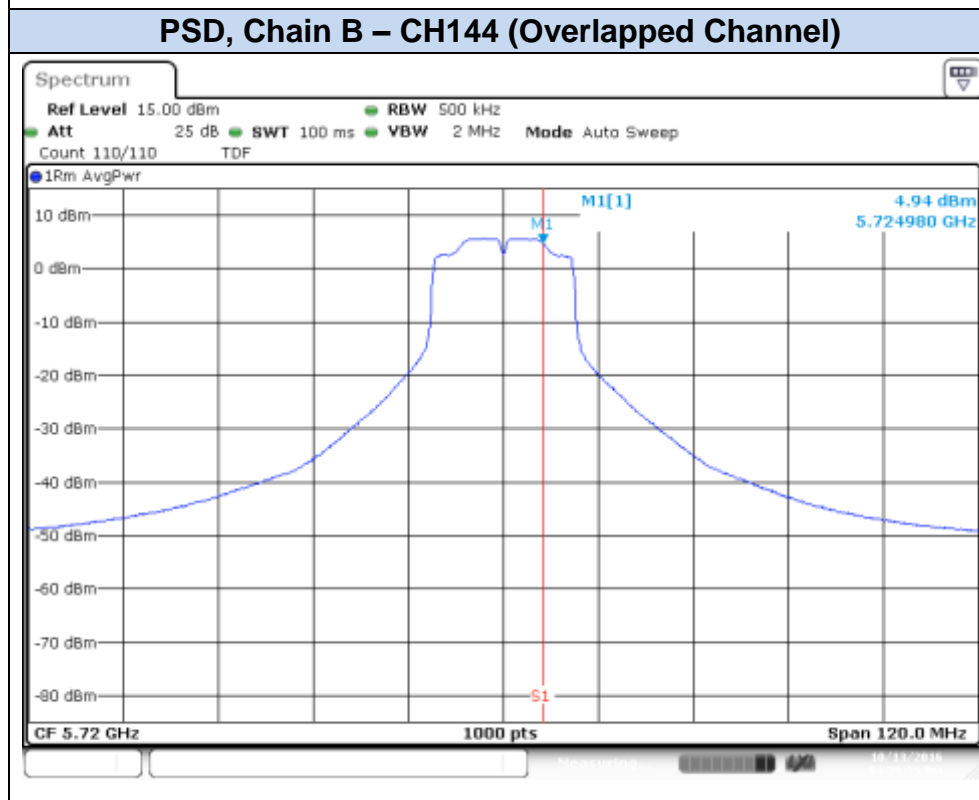
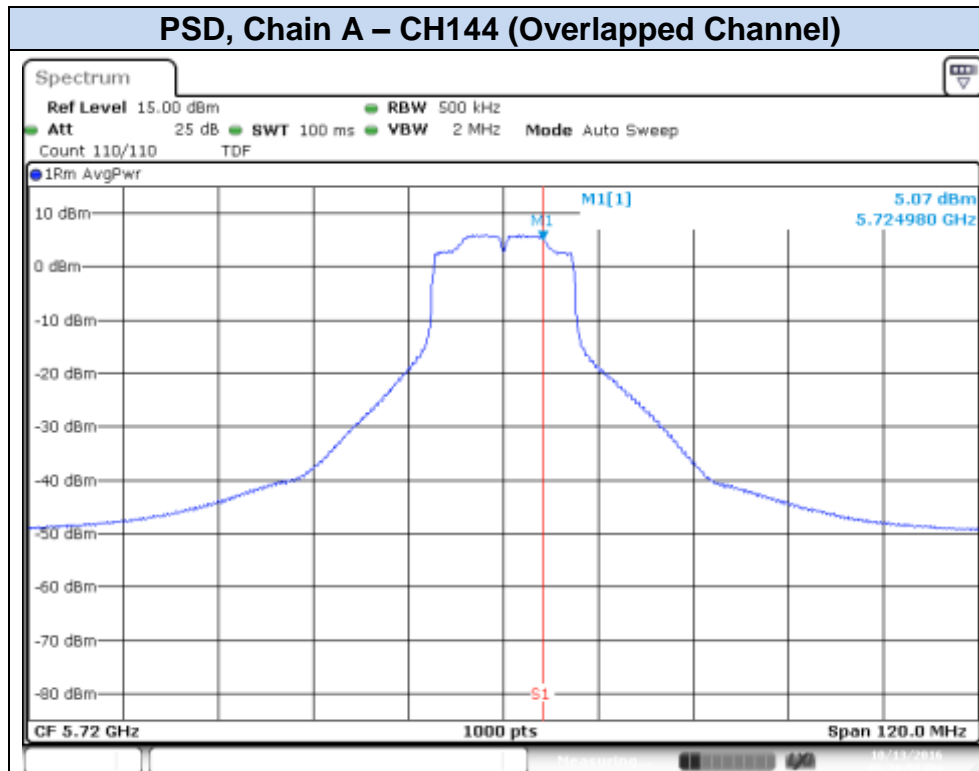


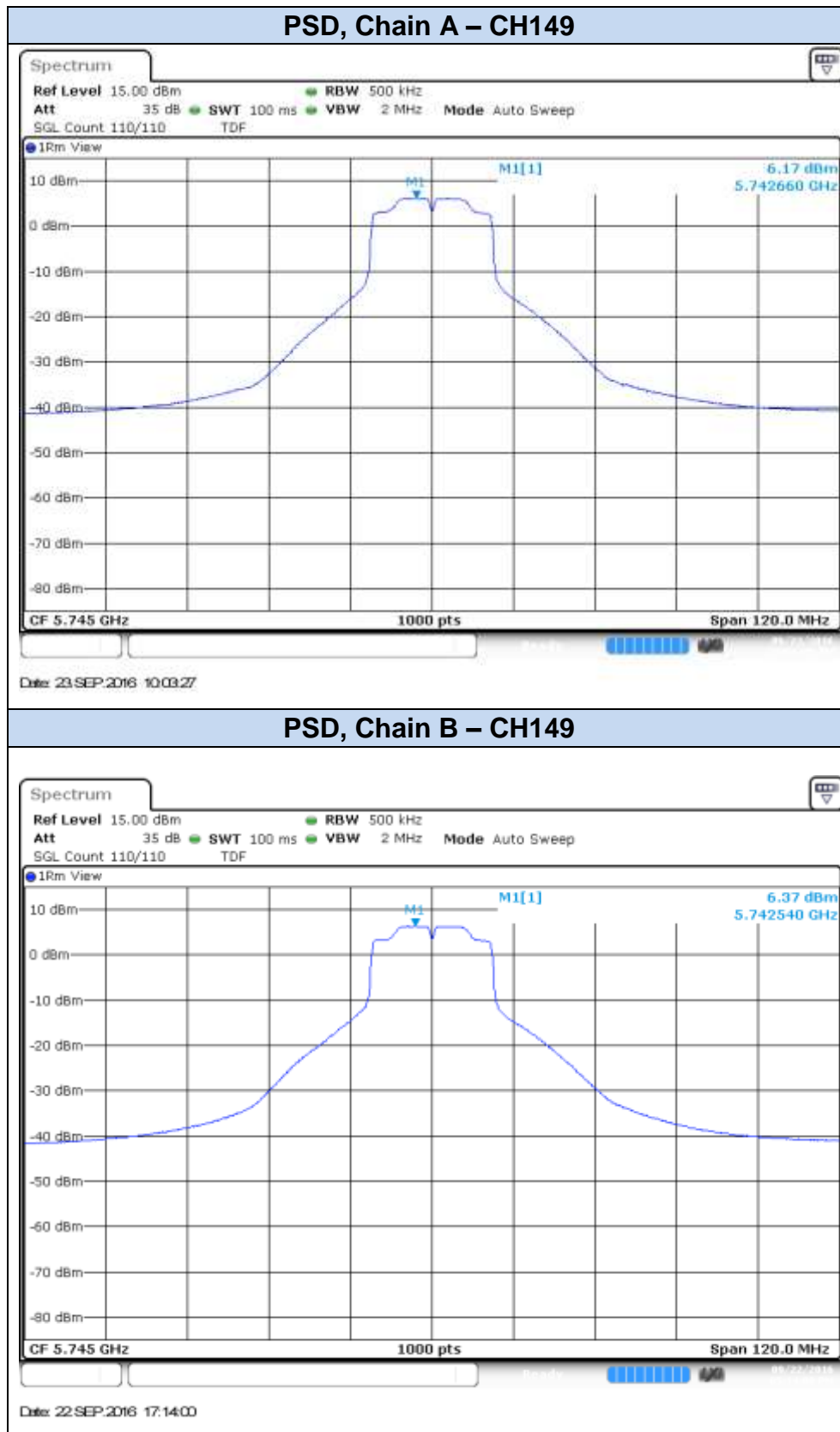
802.11n20, HT0 (SISO)

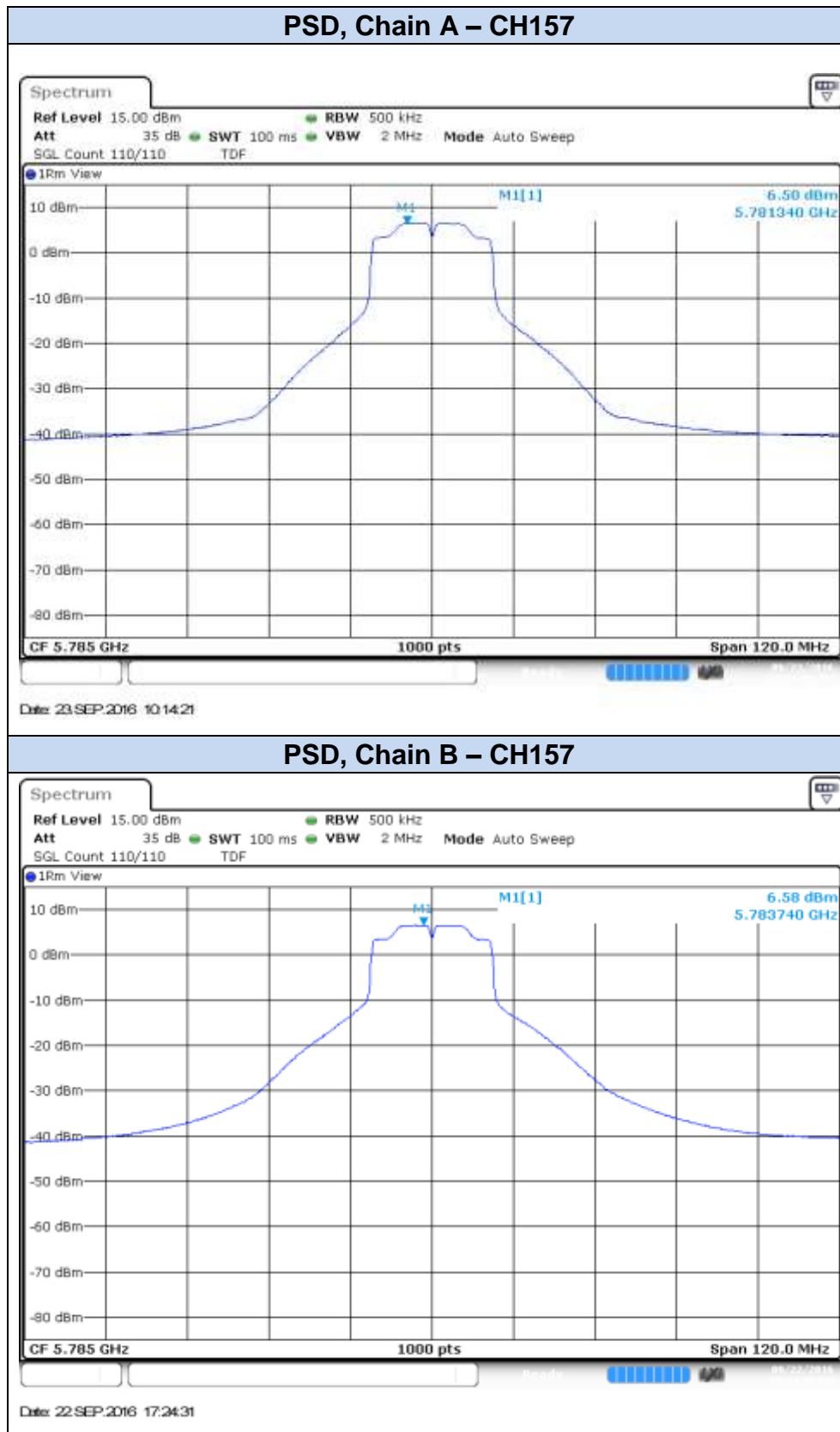


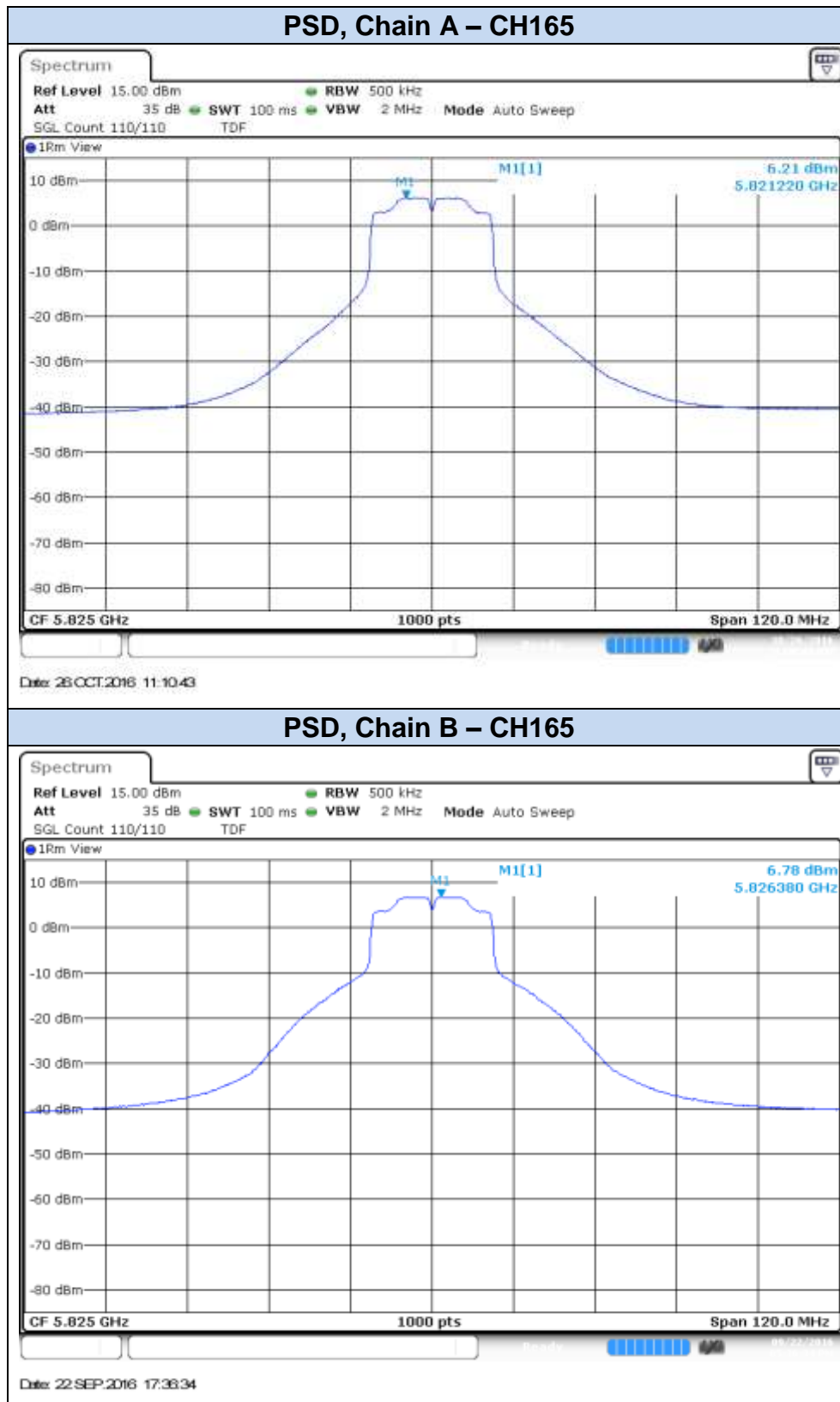




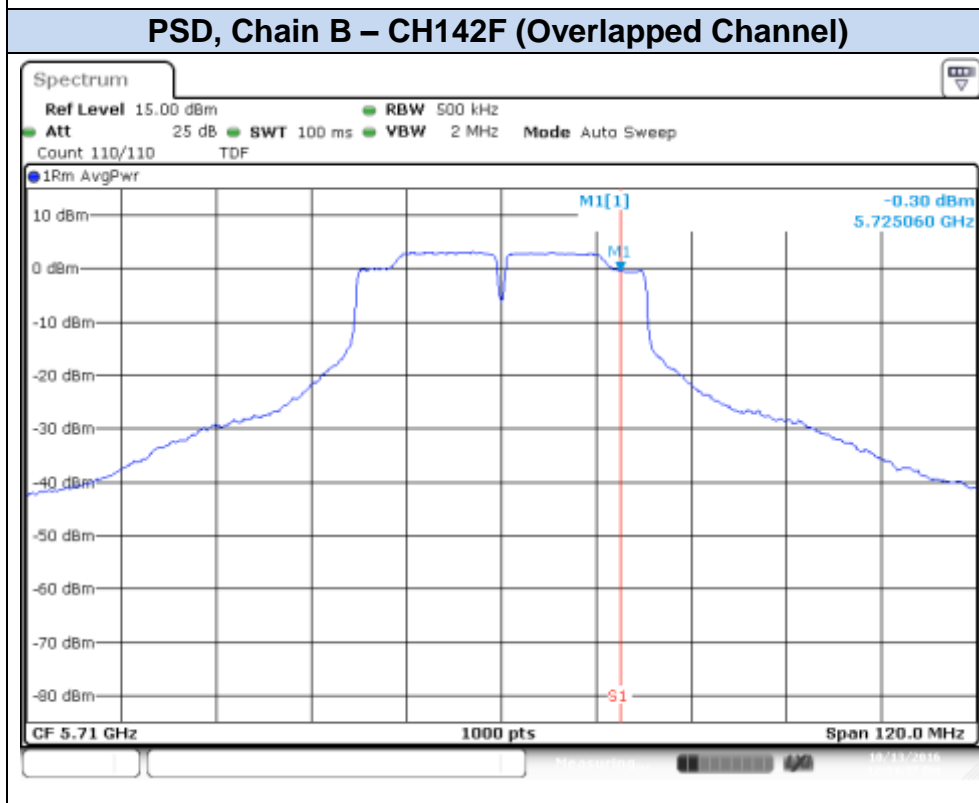
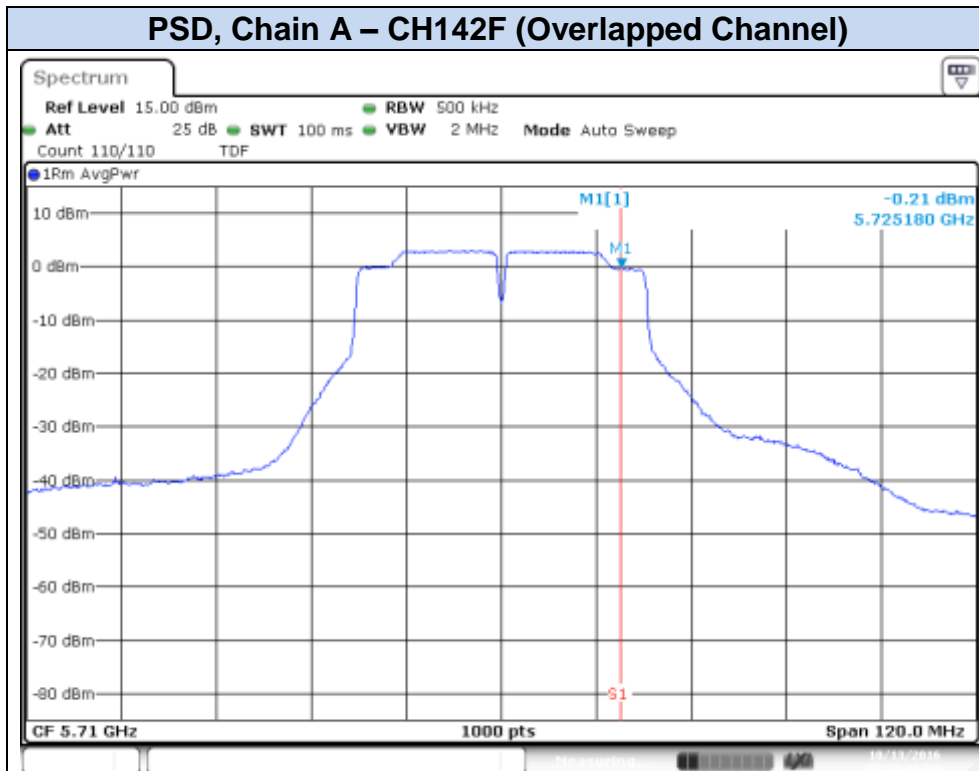
802.11n20, HT8 (MIMO)

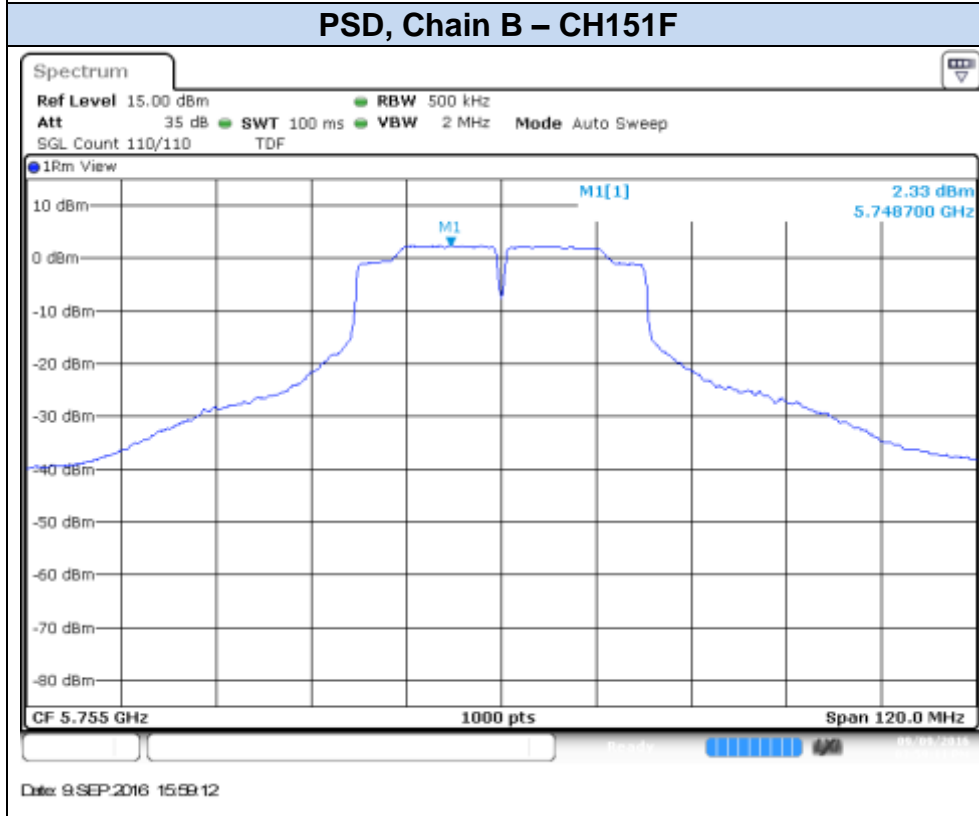
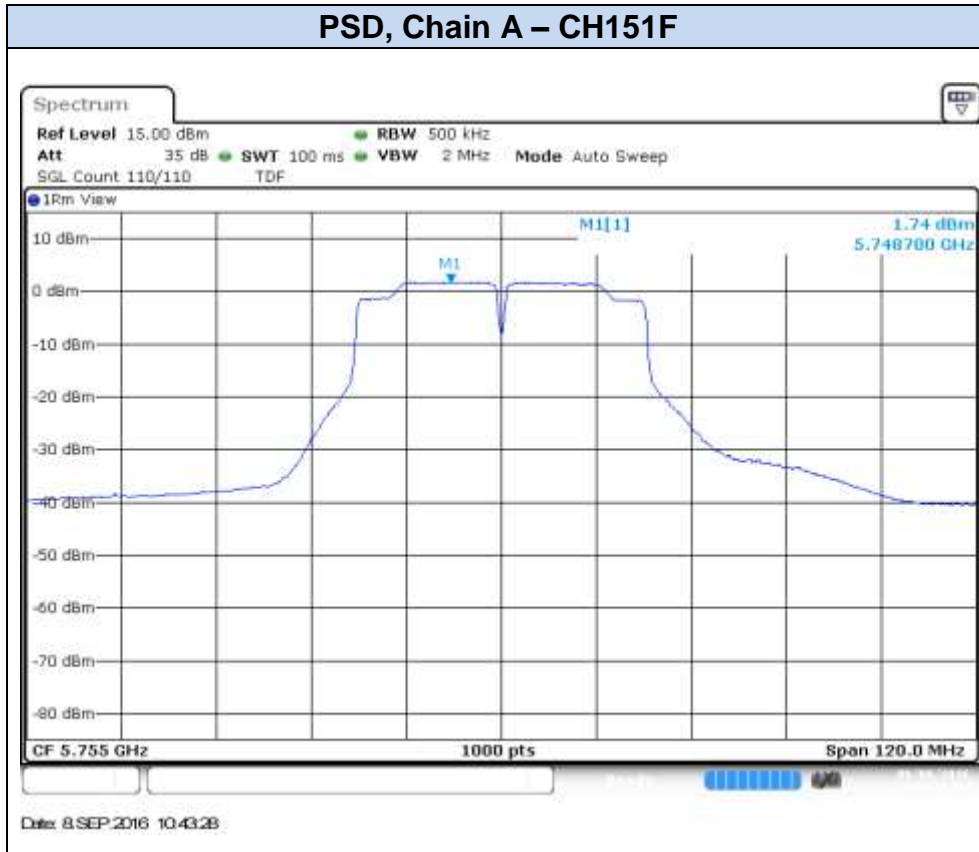


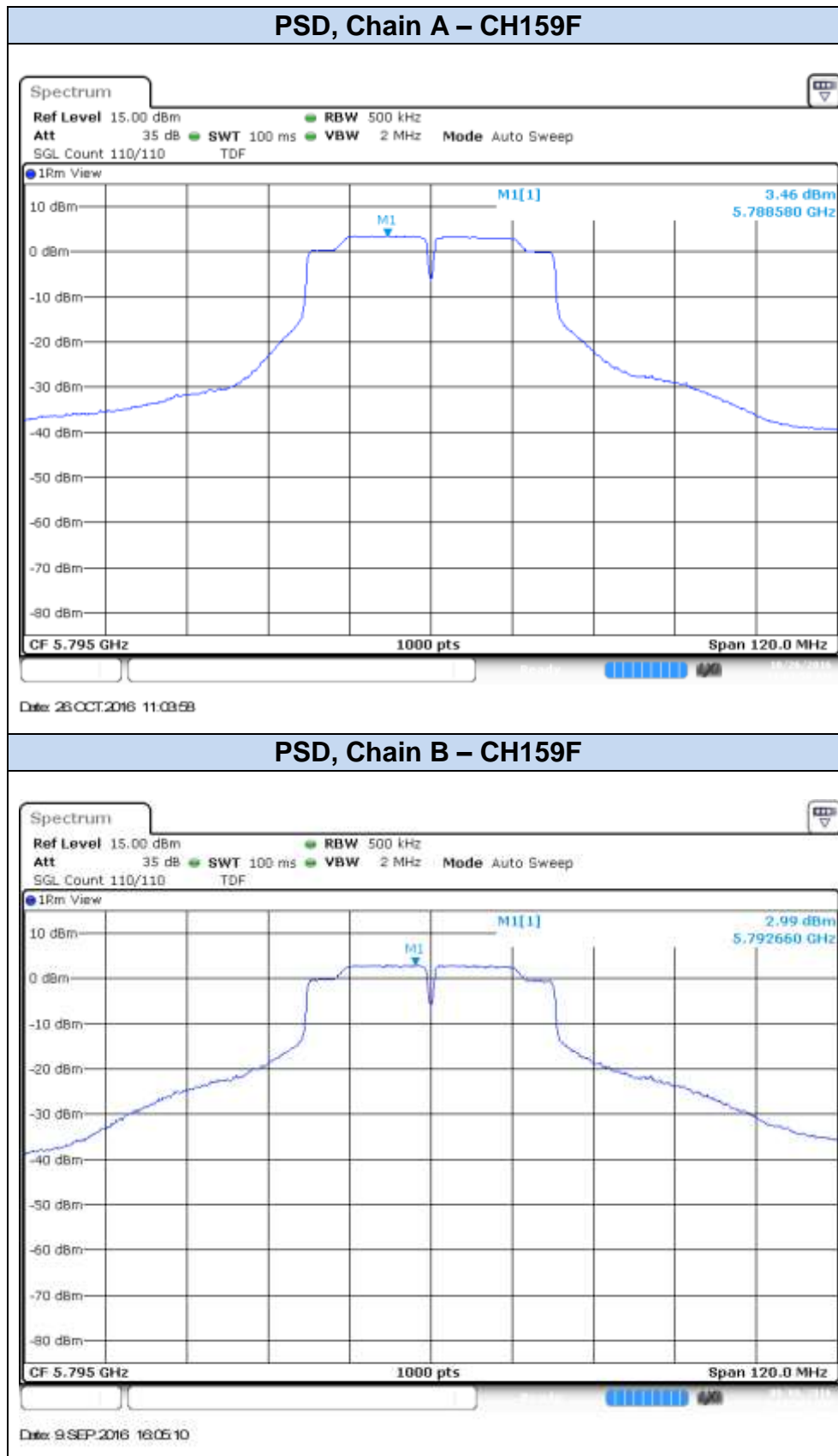


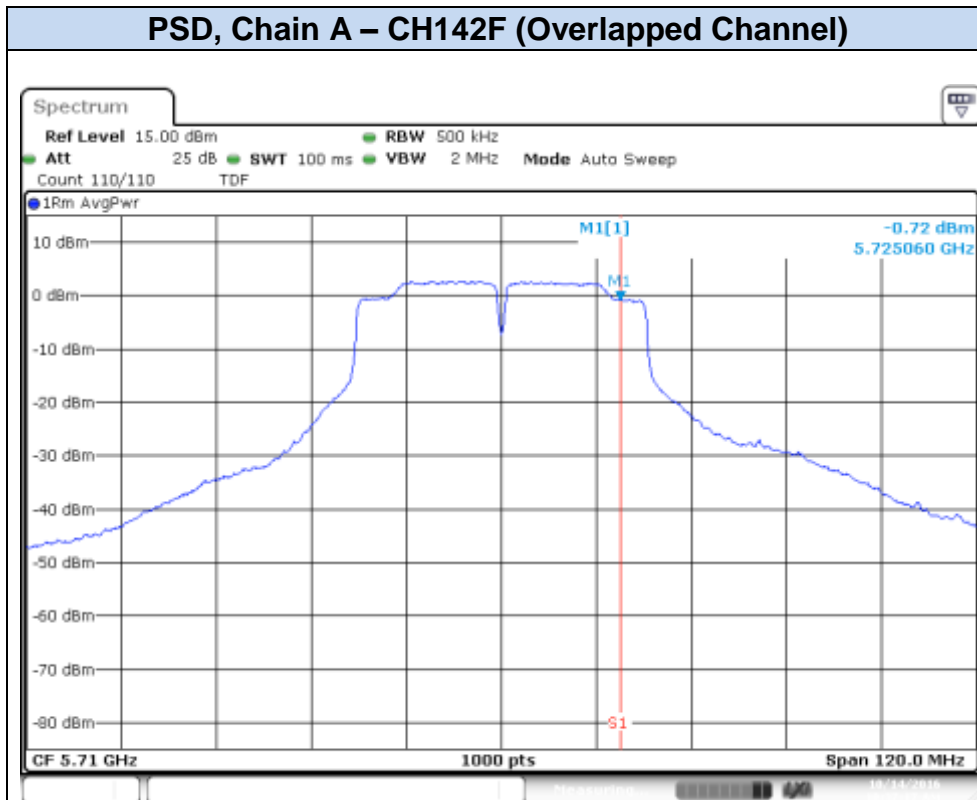
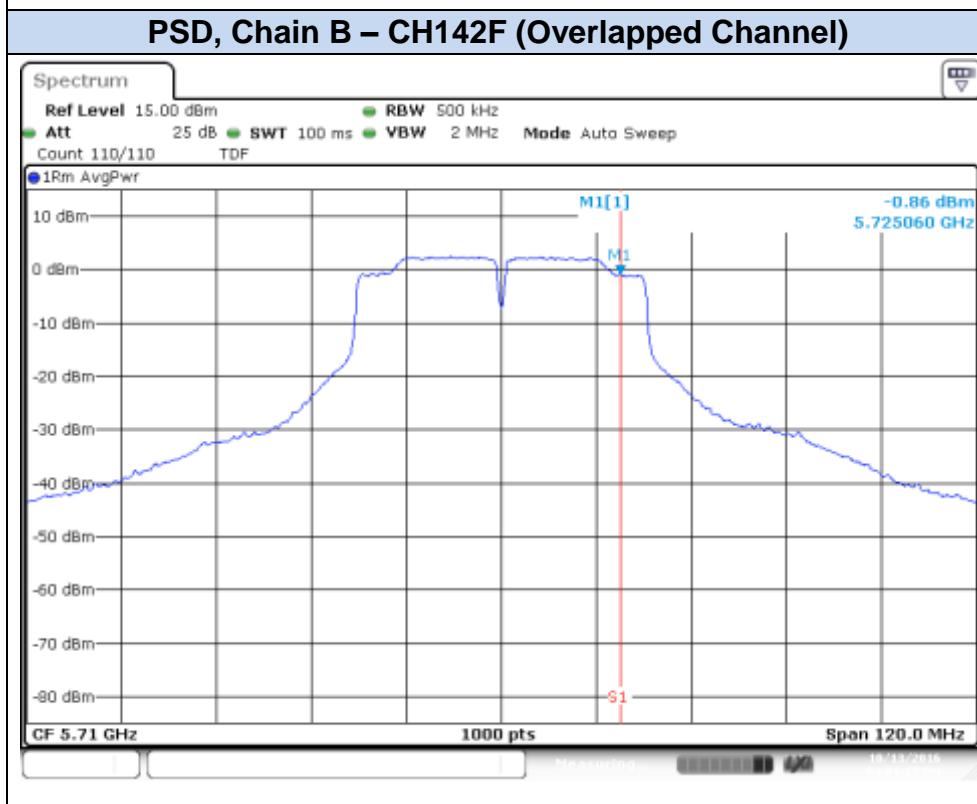


802.11n40, HT0 (SISO)

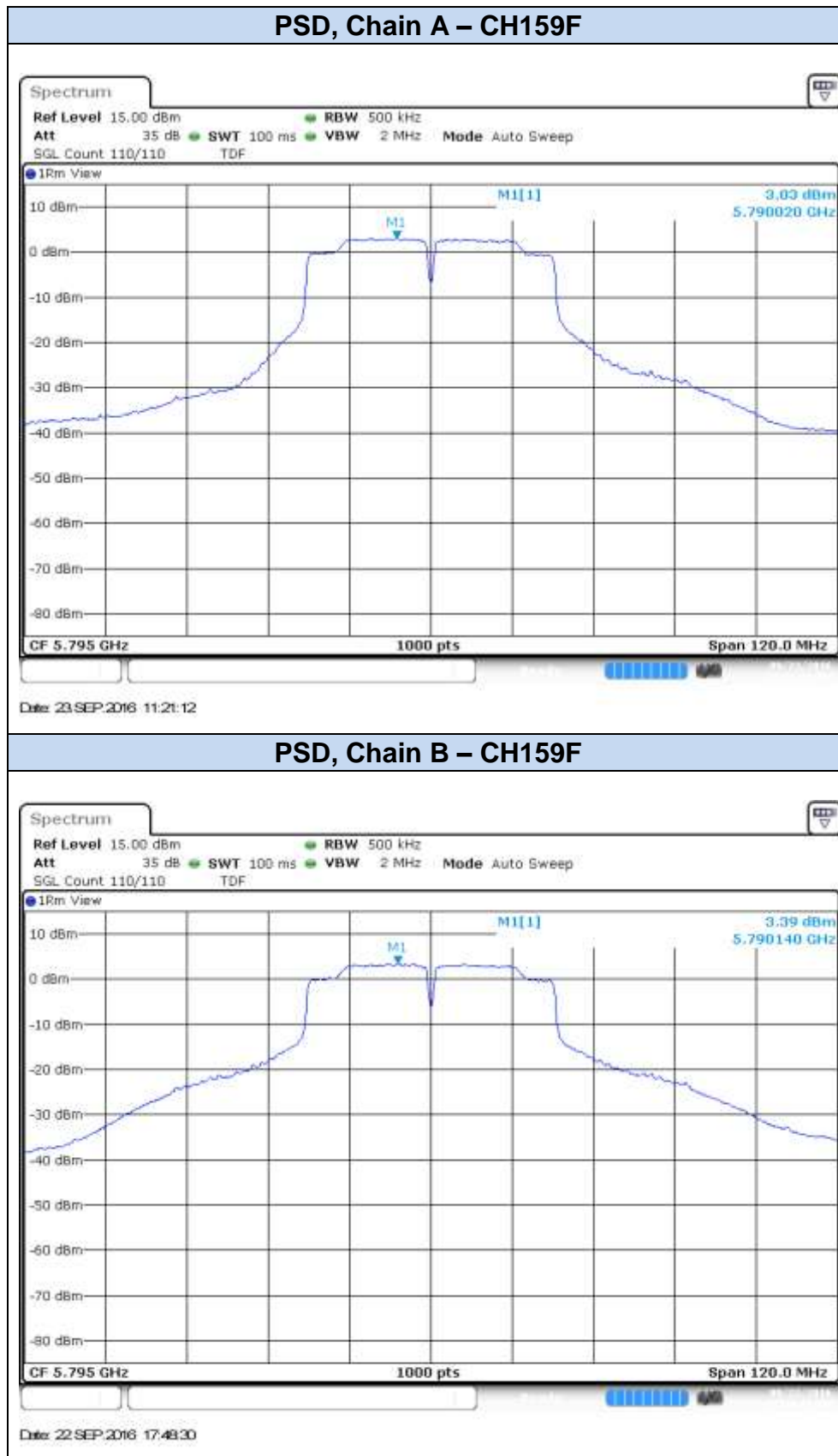


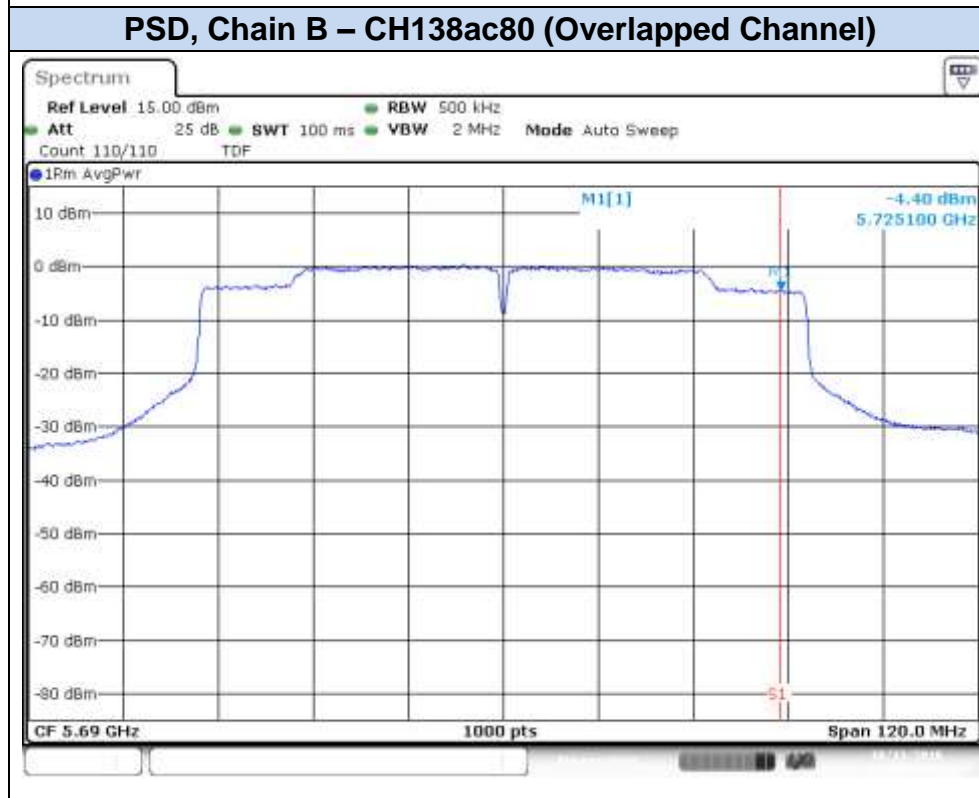
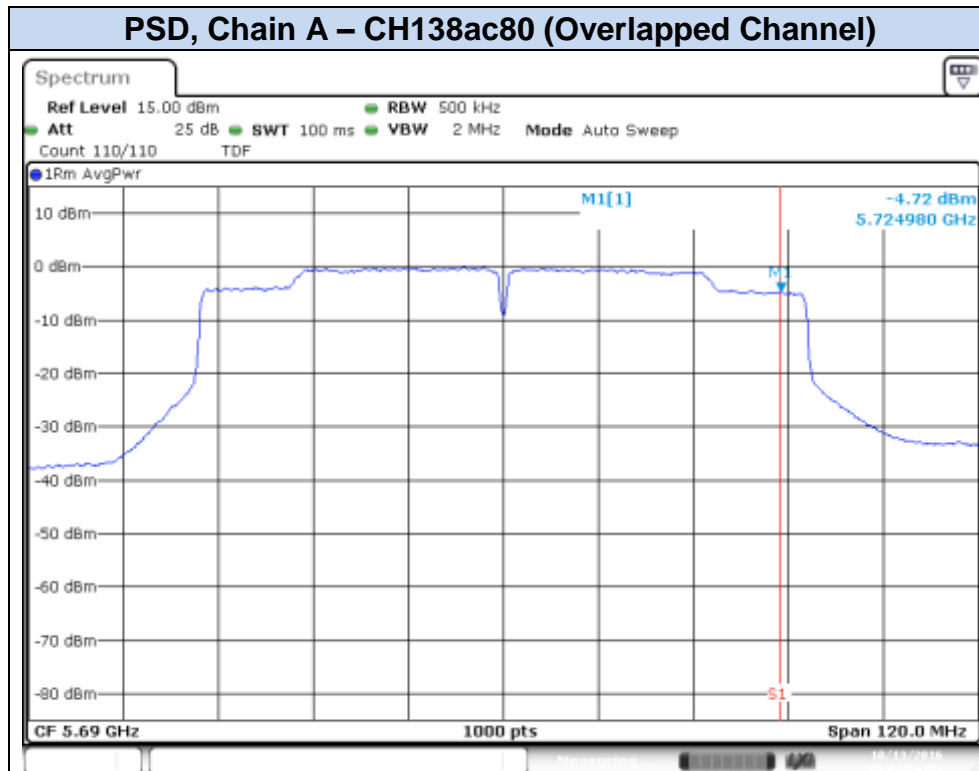


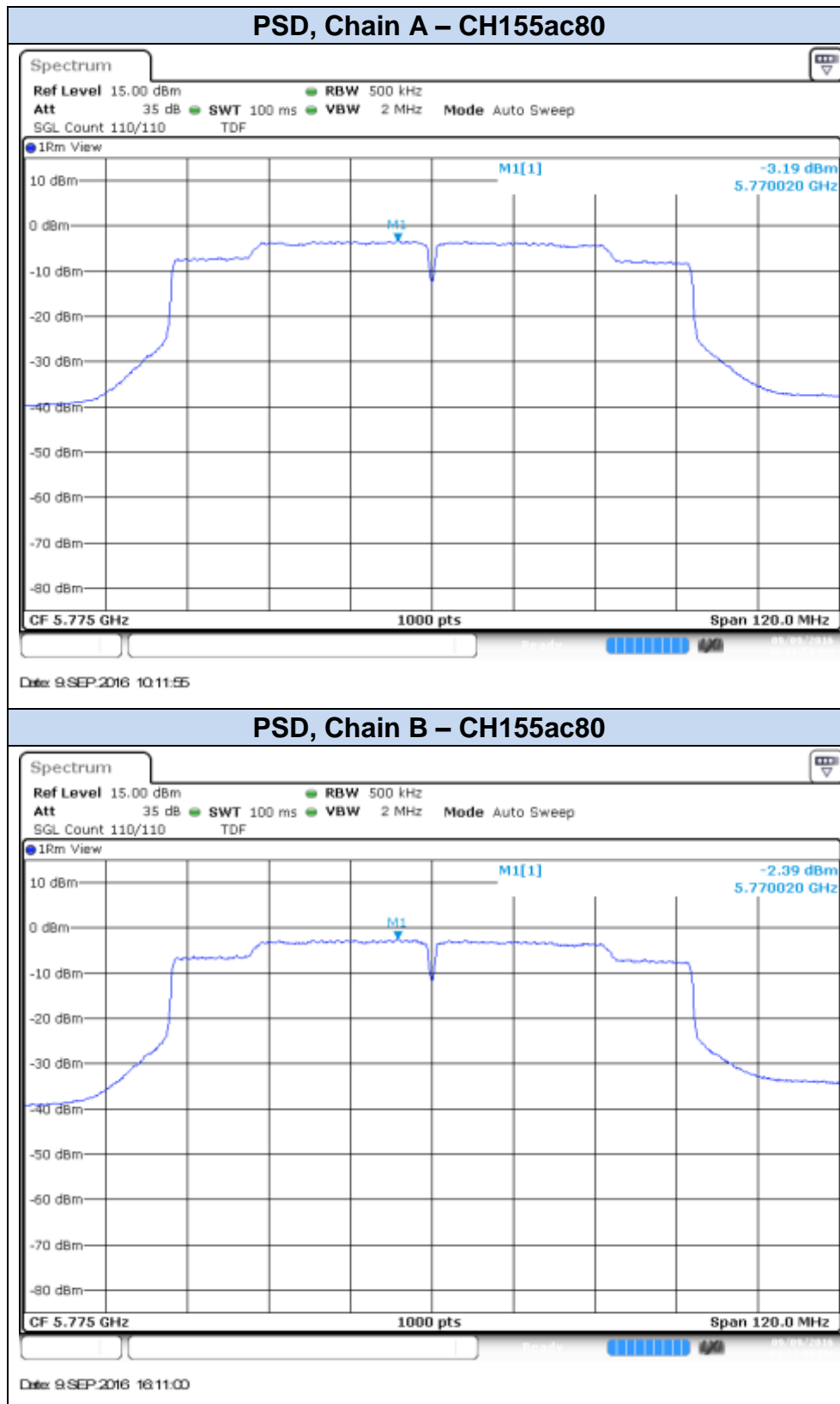


802.11n40, HT8 (MIMO)**PSD, Chain A – CH142F (Overlapped Channel)****PSD, Chain B – CH142F (Overlapped Channel)**

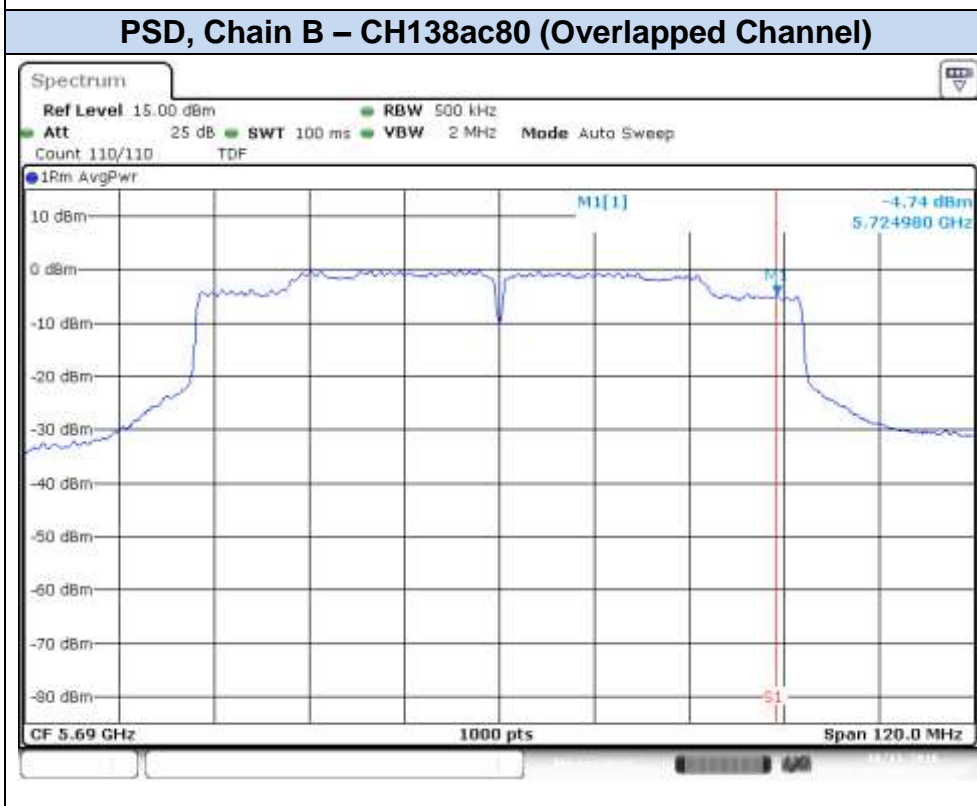
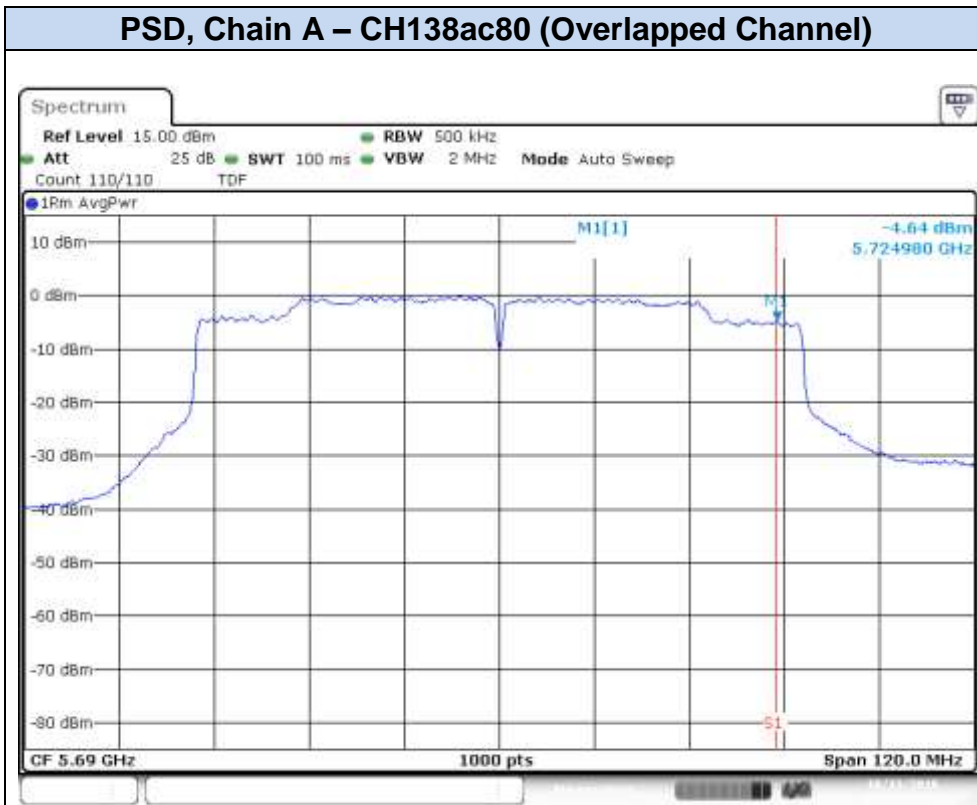


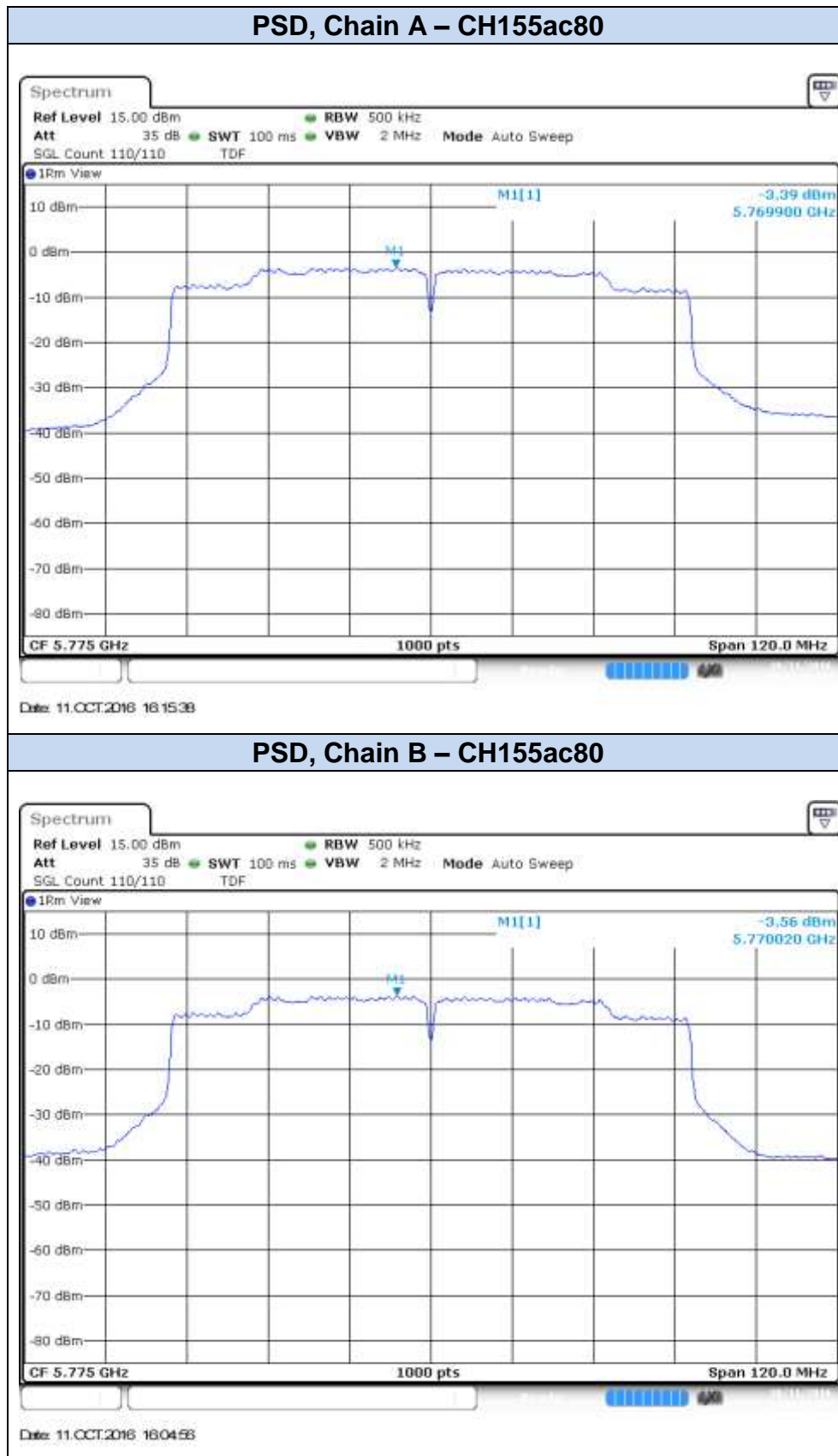


802.11ac80, VHT0 (SISO)



802.11ac80, VHT0 (MIMO)





B.3 Undesirable emissions limits: Band Edge (conducted)

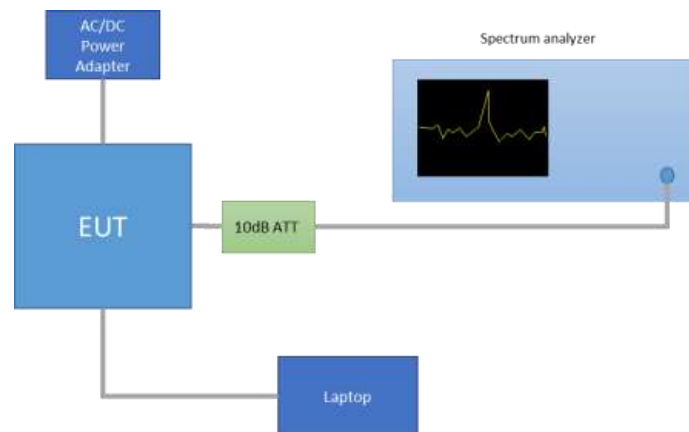
Test limits:

FCC part	Limits
15.407 (b) (4)	(4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Test procedure:

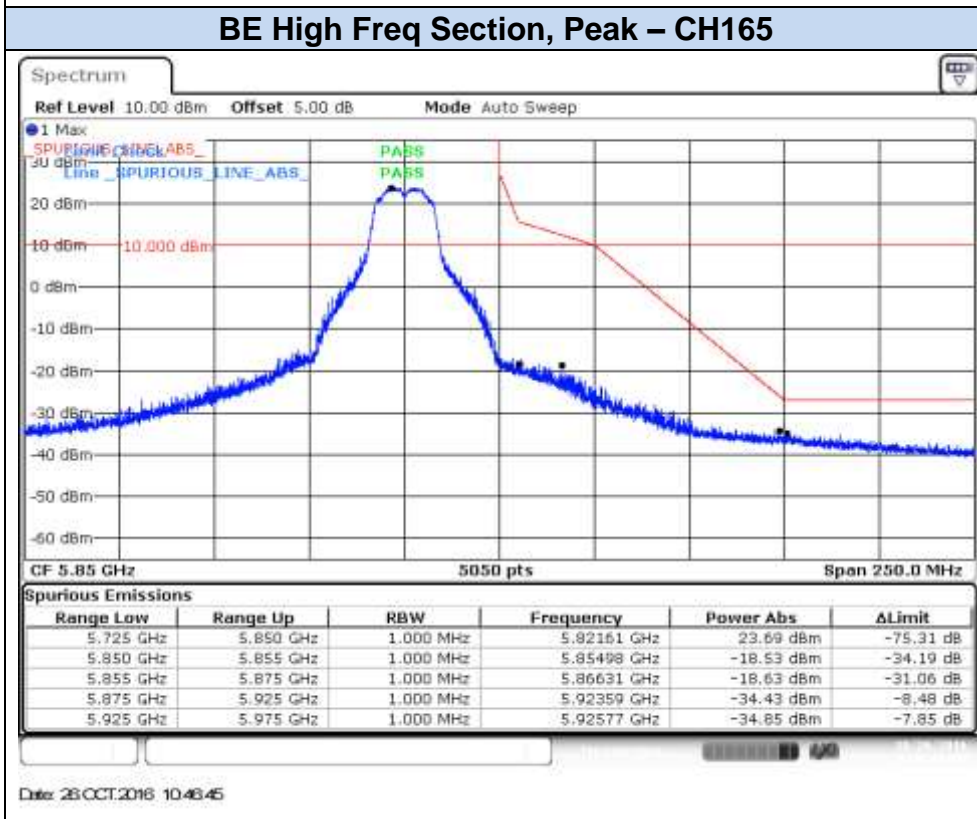
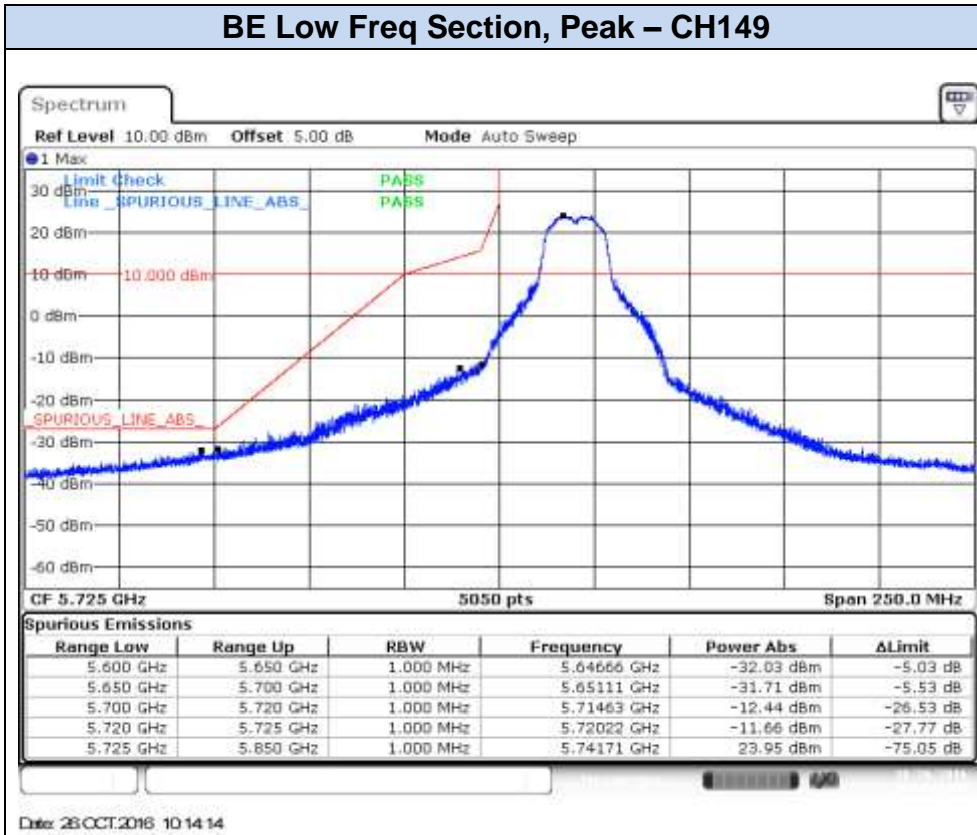
The setup below was used to measure undesirable emissions on the Band Edge domain. The antenna terminal of the EUT is connected to the spectrum through an attenuator, and the spectrum analyzer reading is compensated to include the RF path loss and the declared Antenna Gain.

The declared maximum antenna gain is 5dBi.

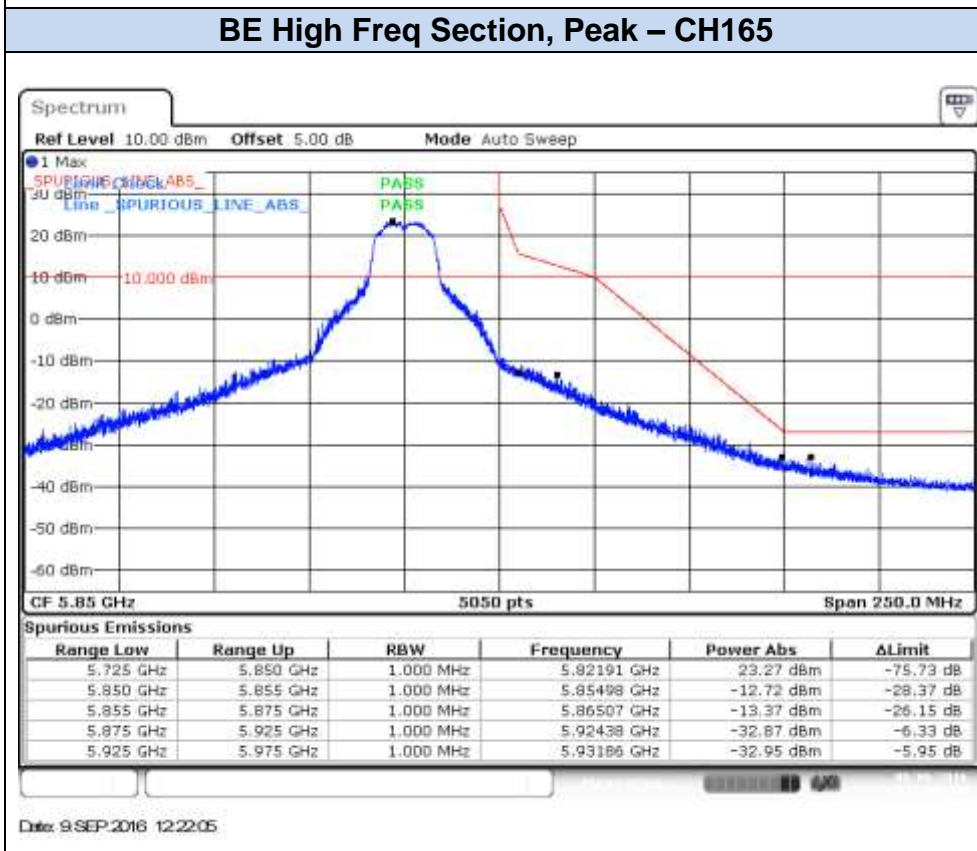
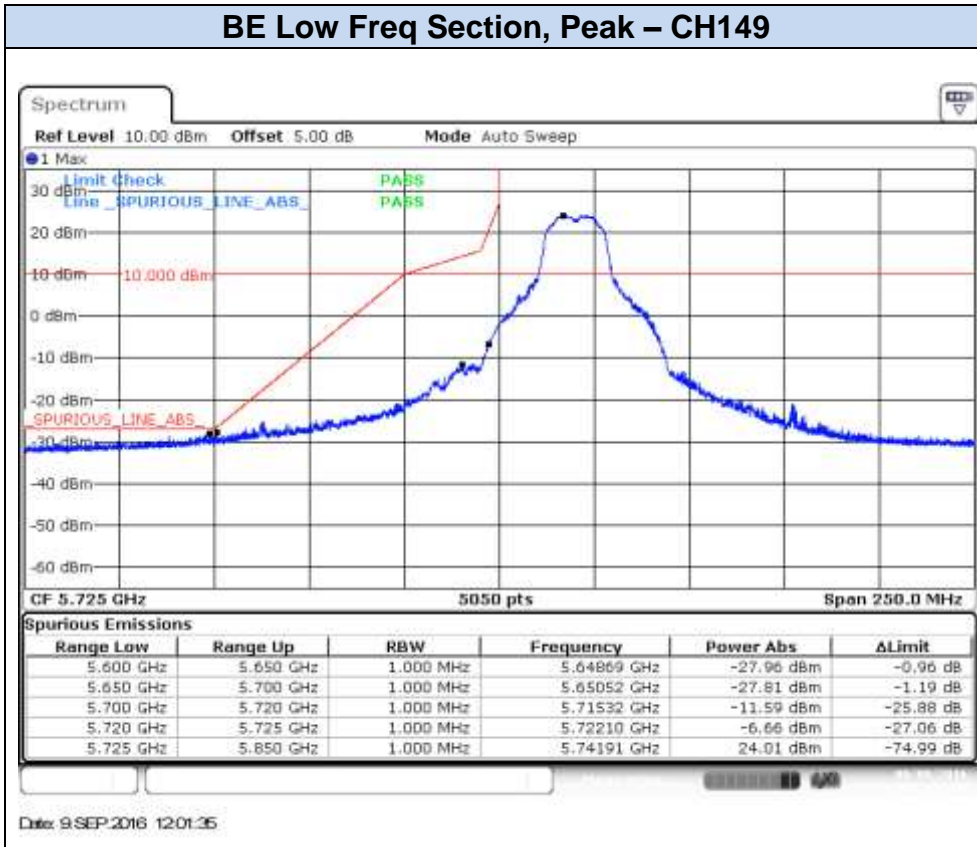


Results Screenshot:

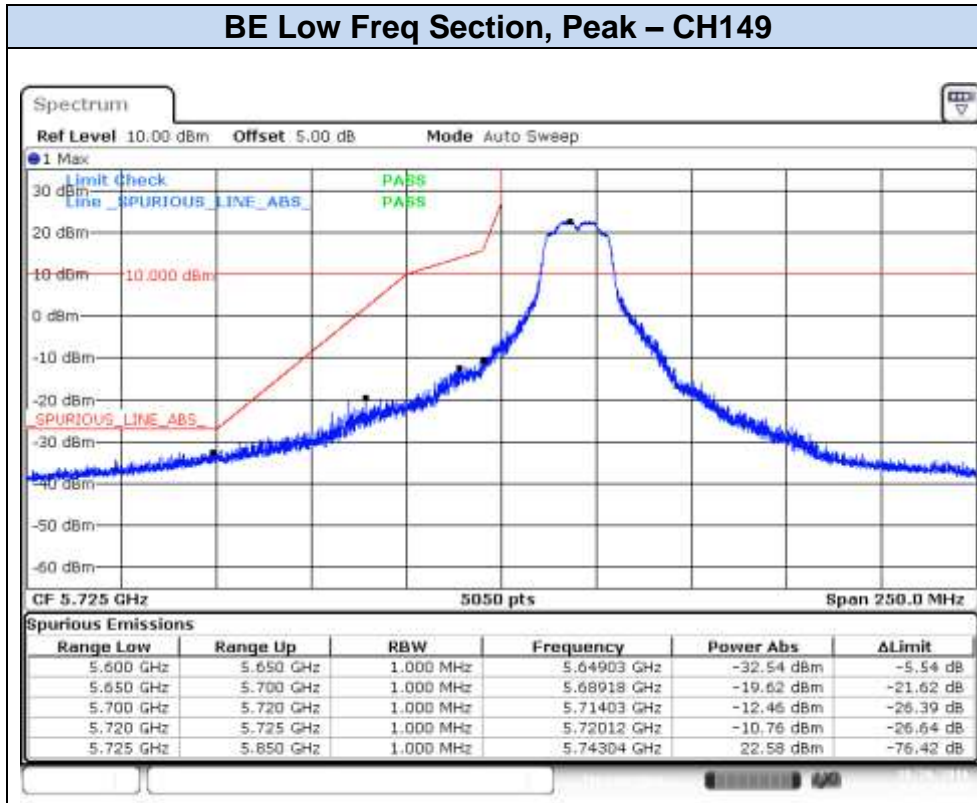
802.11a, 6Mbps – Chain A



802.11a, 6Mbps – Chain B

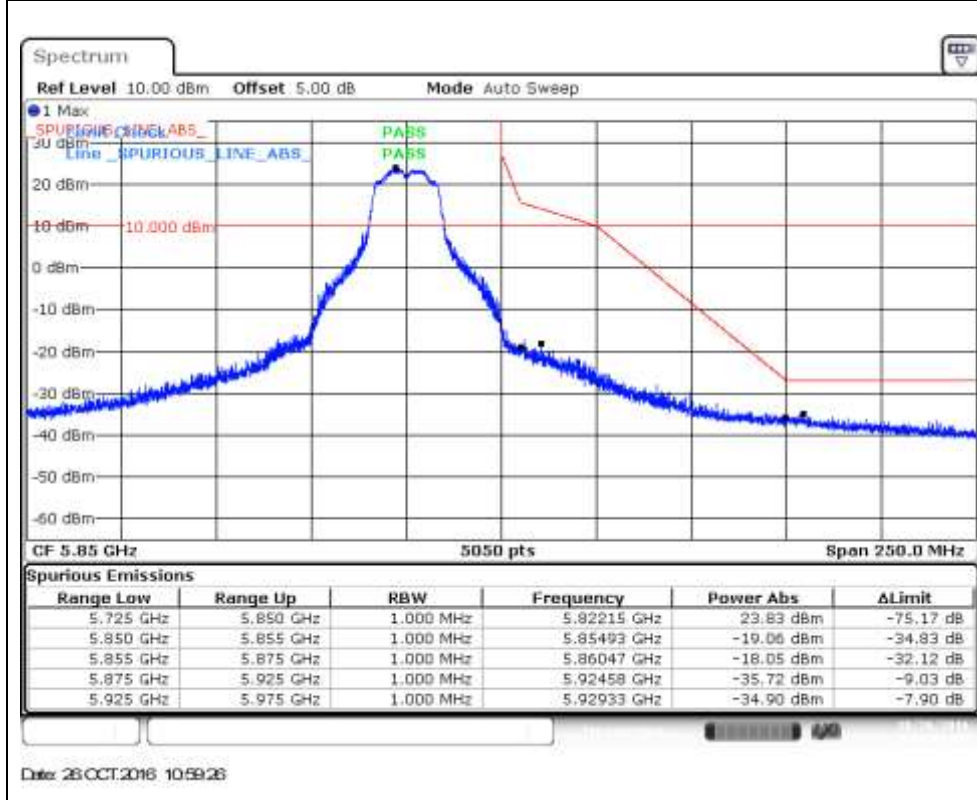


802.11n20, HT0 (SISO) – Chain A



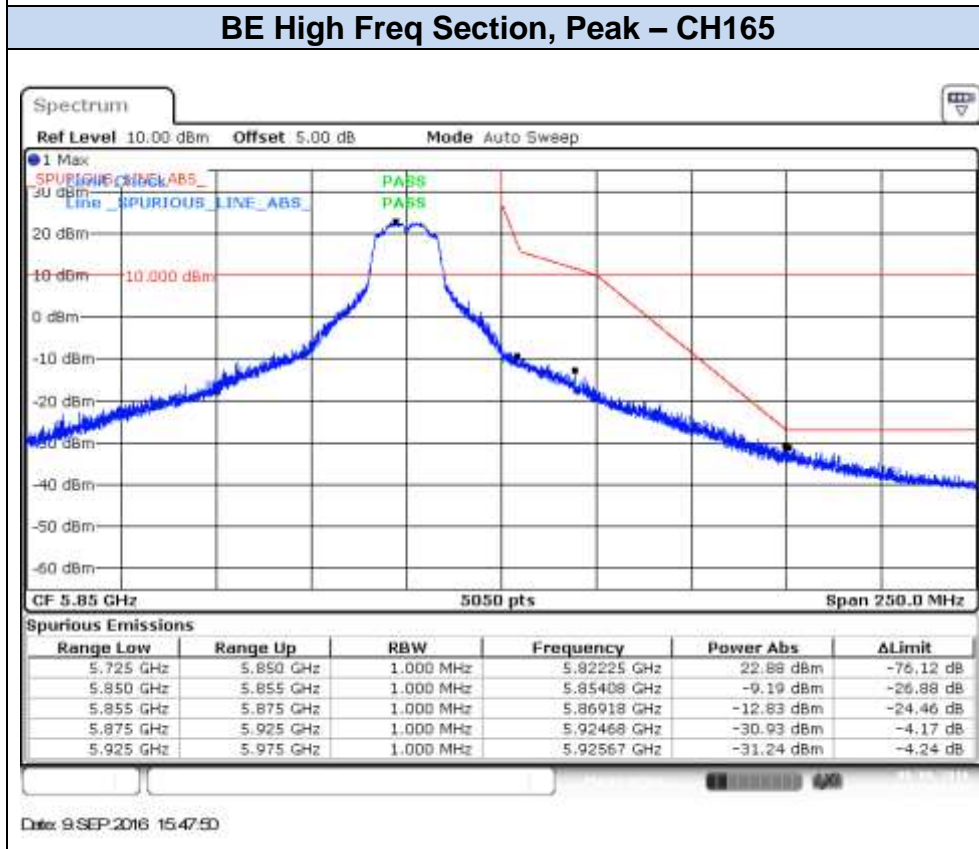
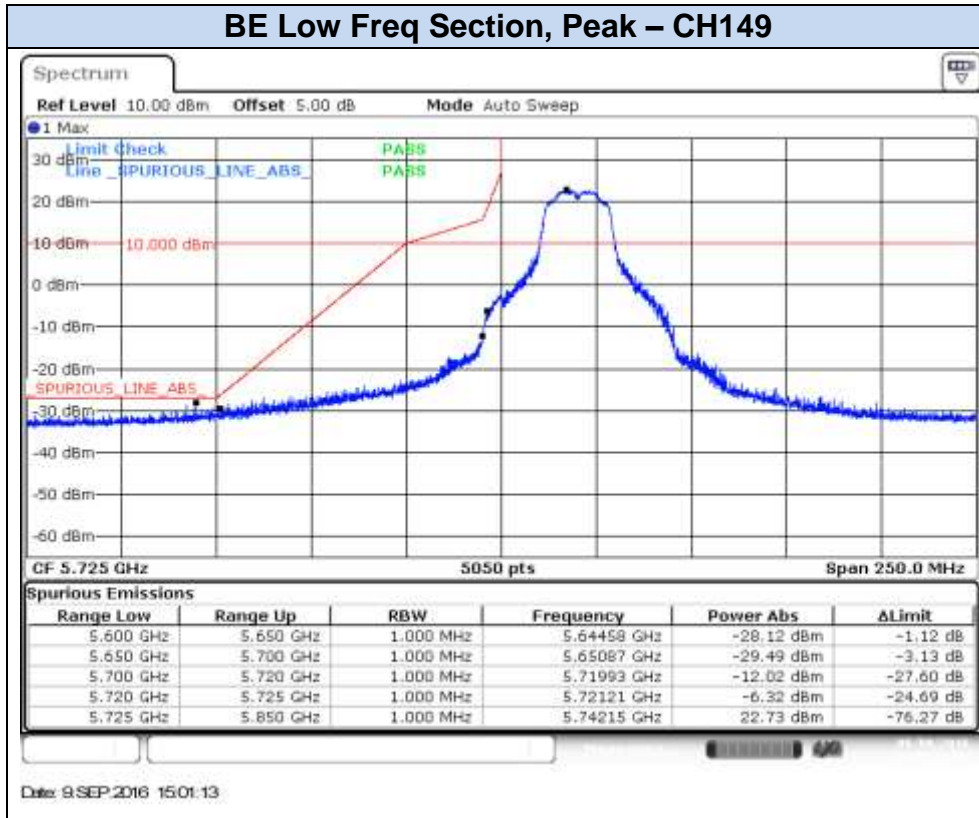
Date: 28 OCT 2016 10:51:18

BE High Freq Section, Peak – CH165

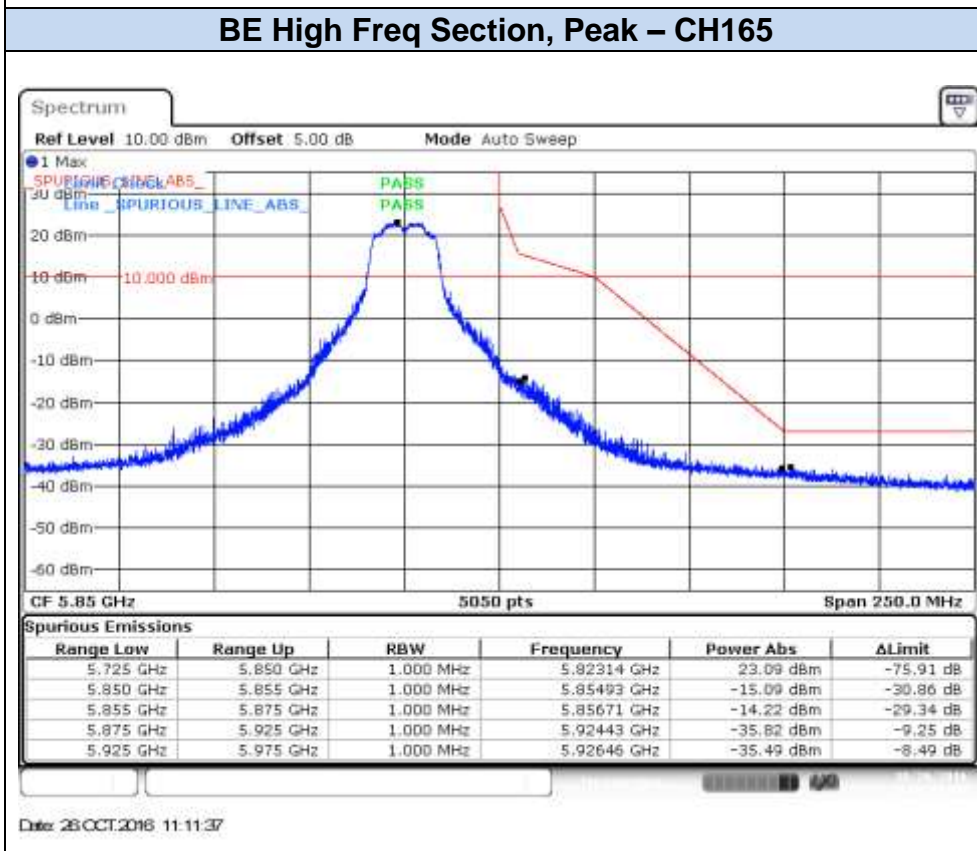
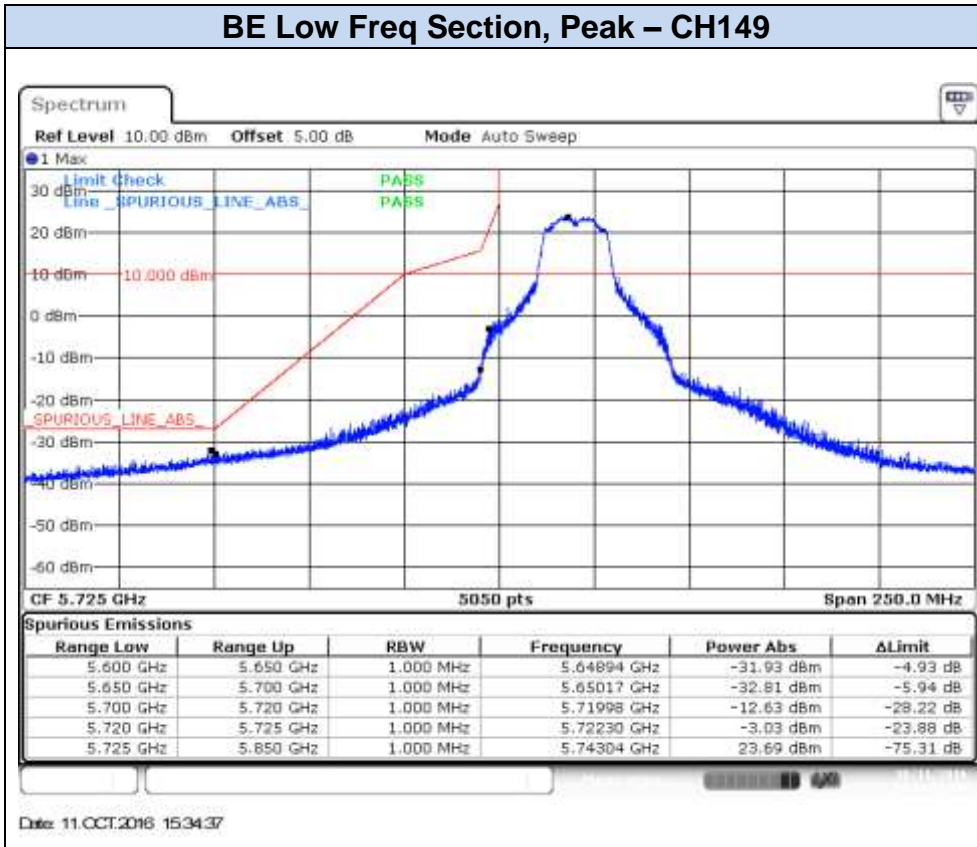


Date: 28 OCT 2016 10:59:26

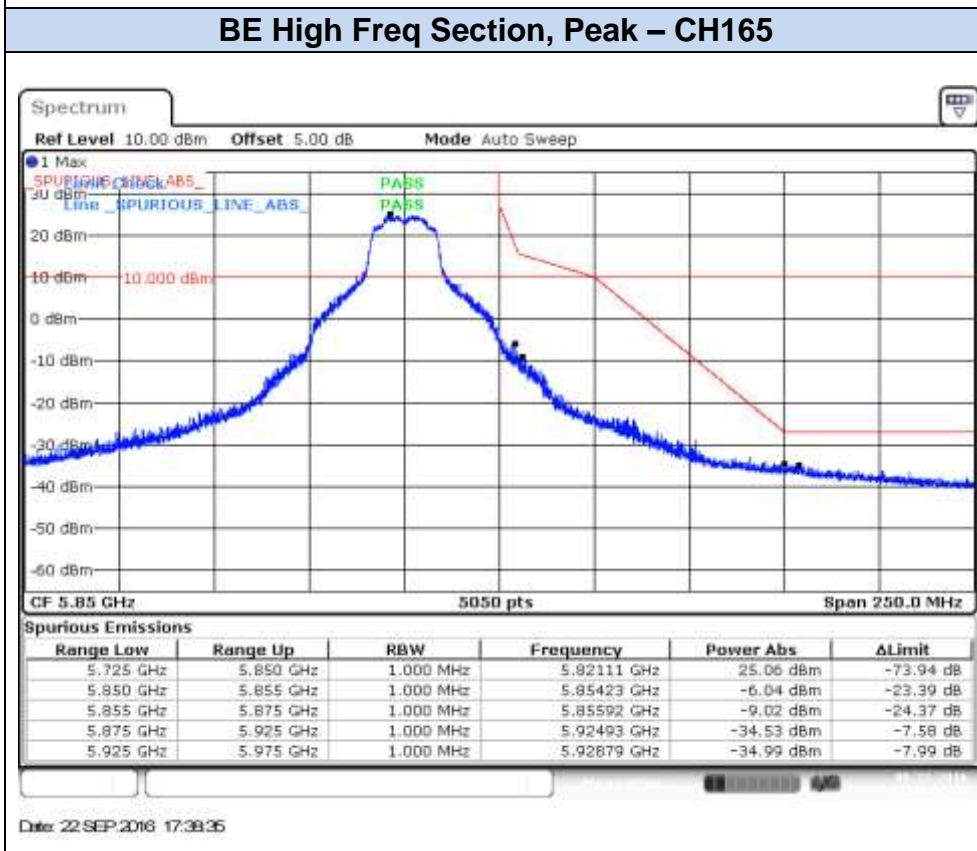
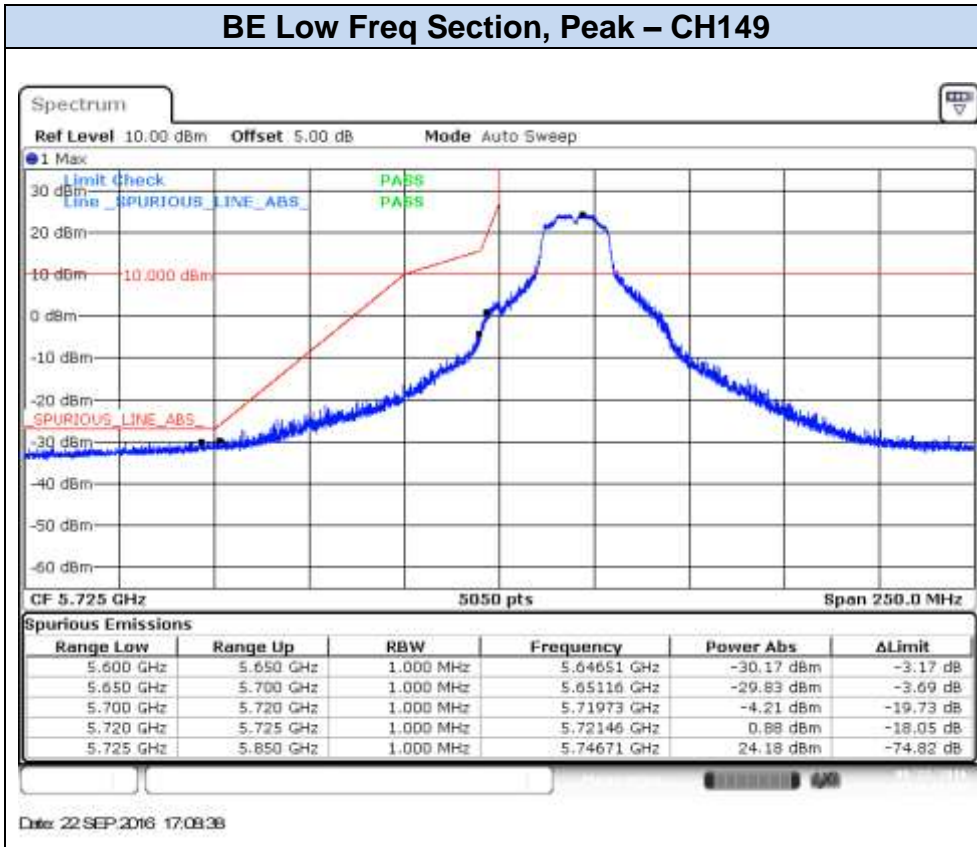
802.11n20, HT0 (SISO) – Chain B



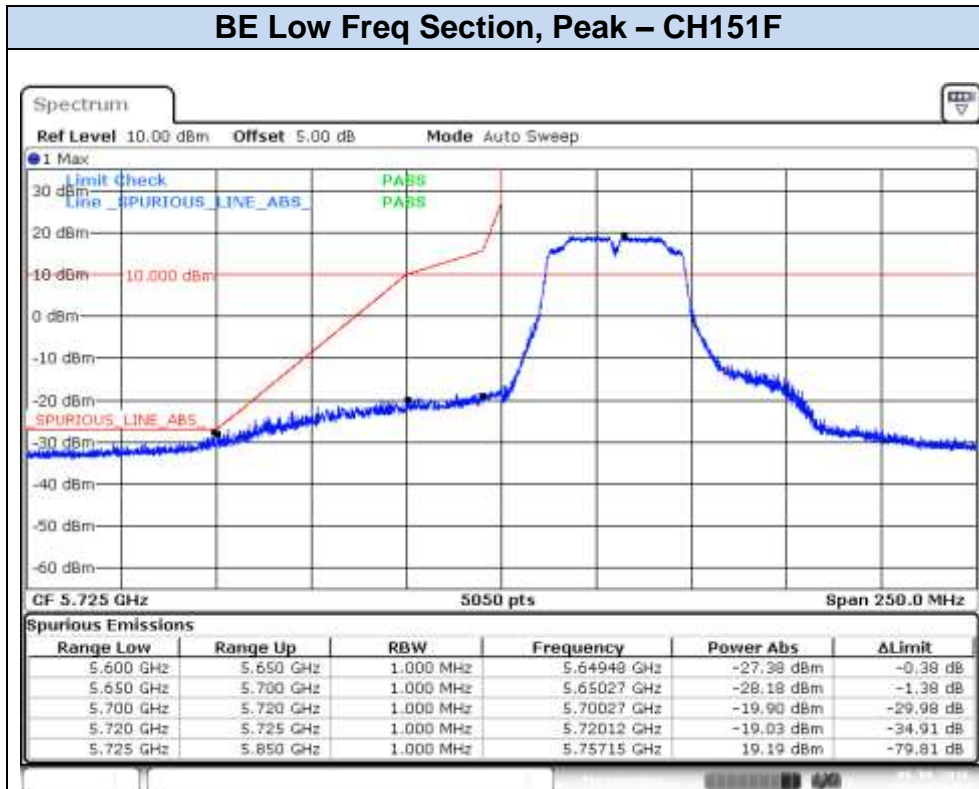
802.11n20, HT8 (MIMO) – Chain A



802.11n20, HT8 (MIMO) – Chain B

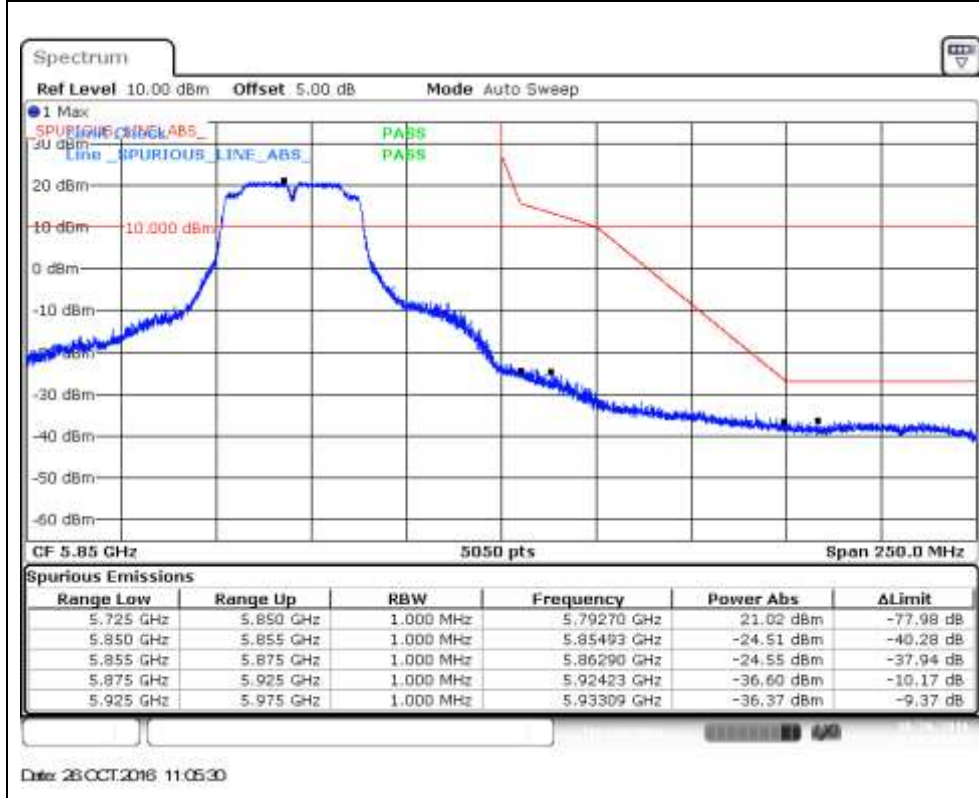


802.11n40, HT0 (SISO) – Chain A



Date: 8 SEP 2016 10:38:57

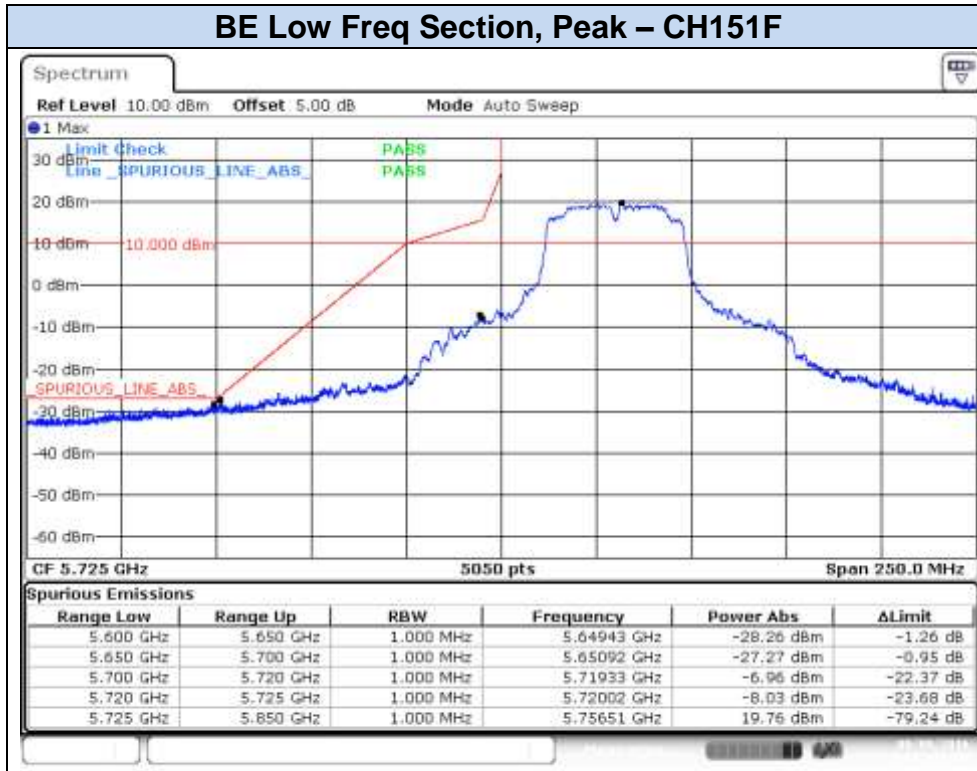
BE High Freq Section, Peak – CH159F



Date: 28 OCT 2016 11:05:30

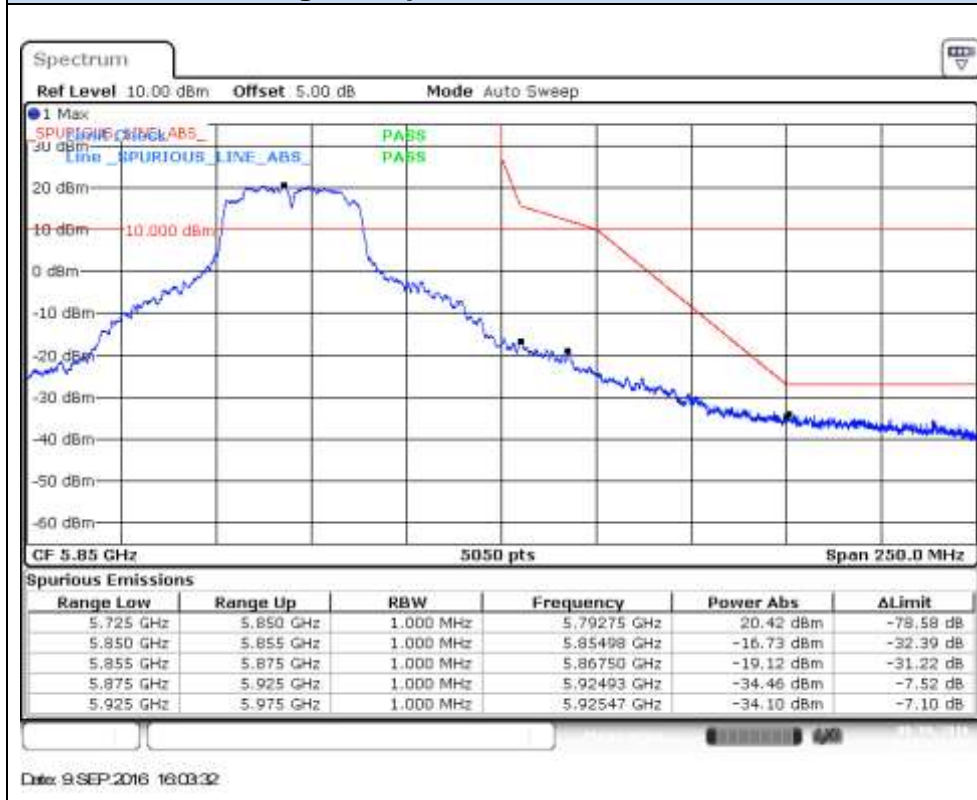
802.11n40, HT0 (SISO) – Chain B

BE Low Freq Section, Peak – CH151F



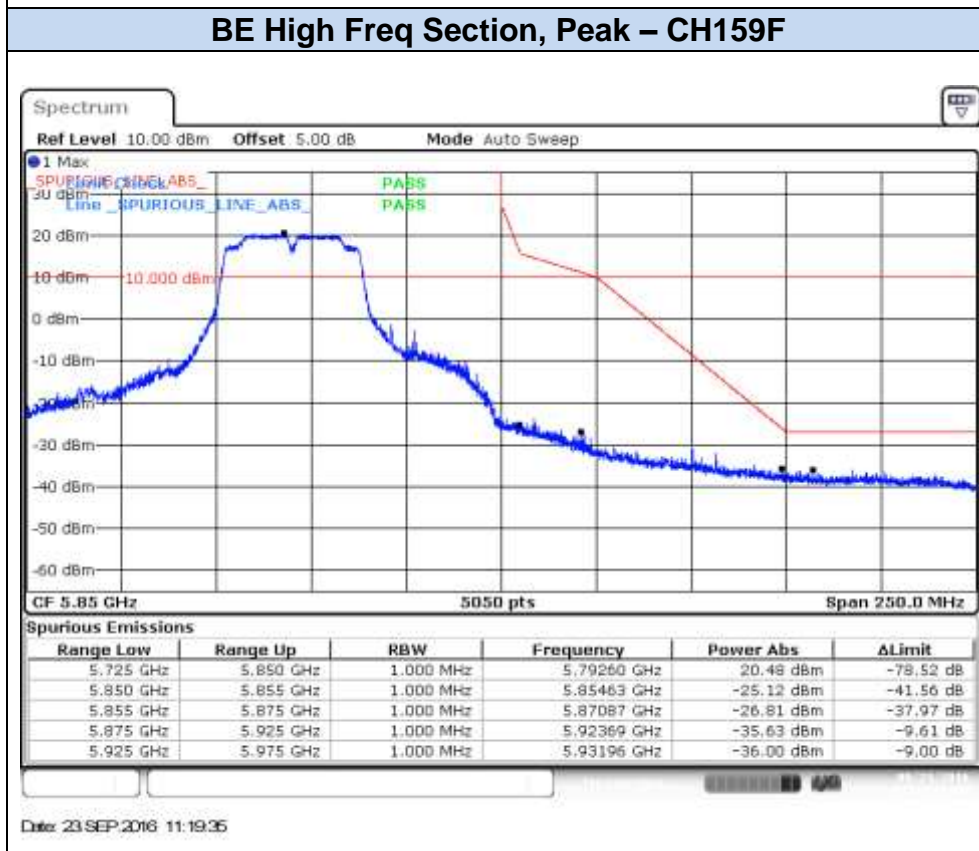
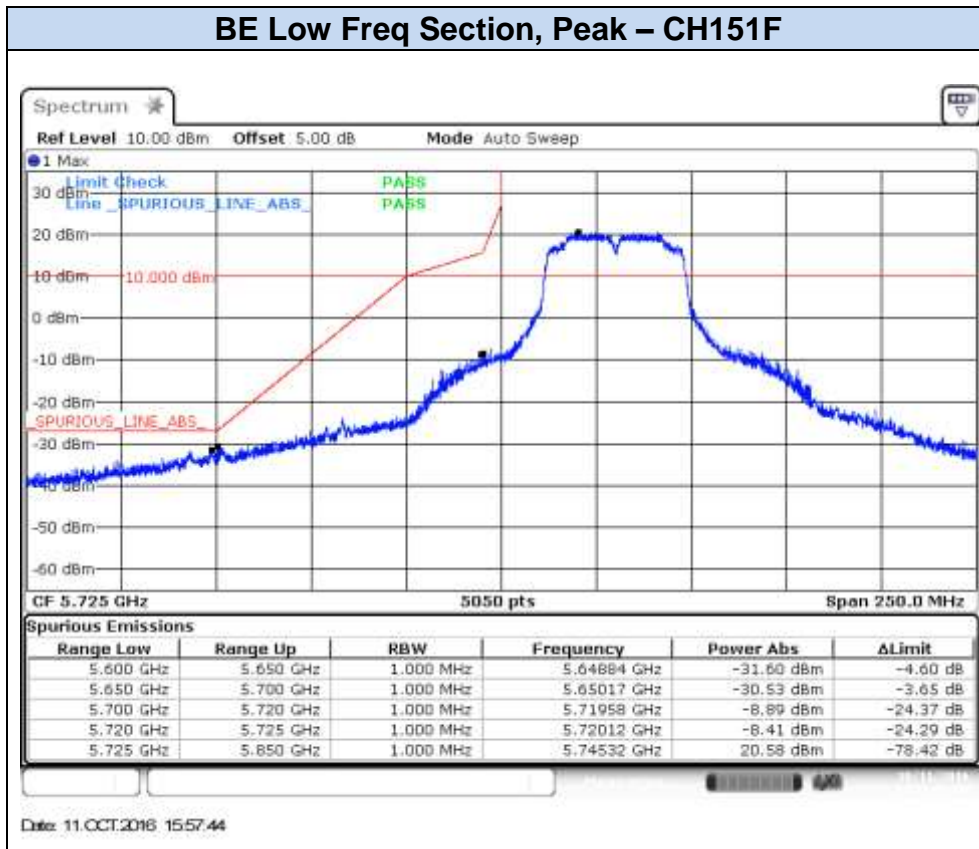
Date: 9 SEP 2016 18:01:37

BE High Freq Section, Peak – CH159F

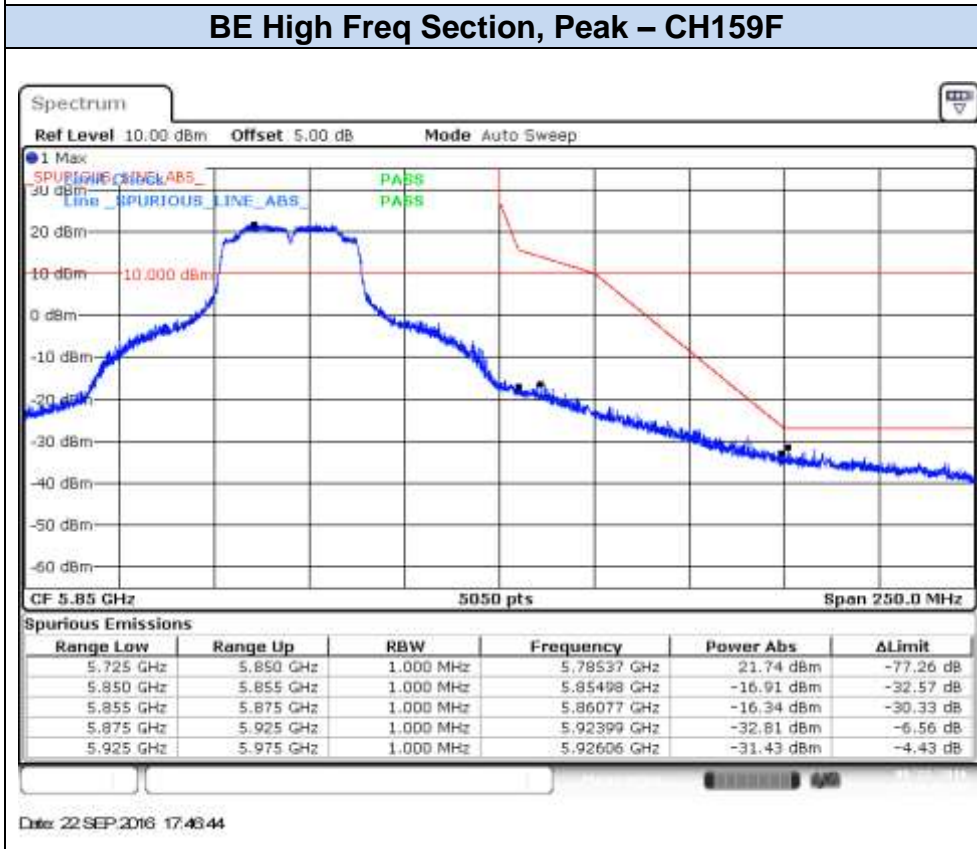
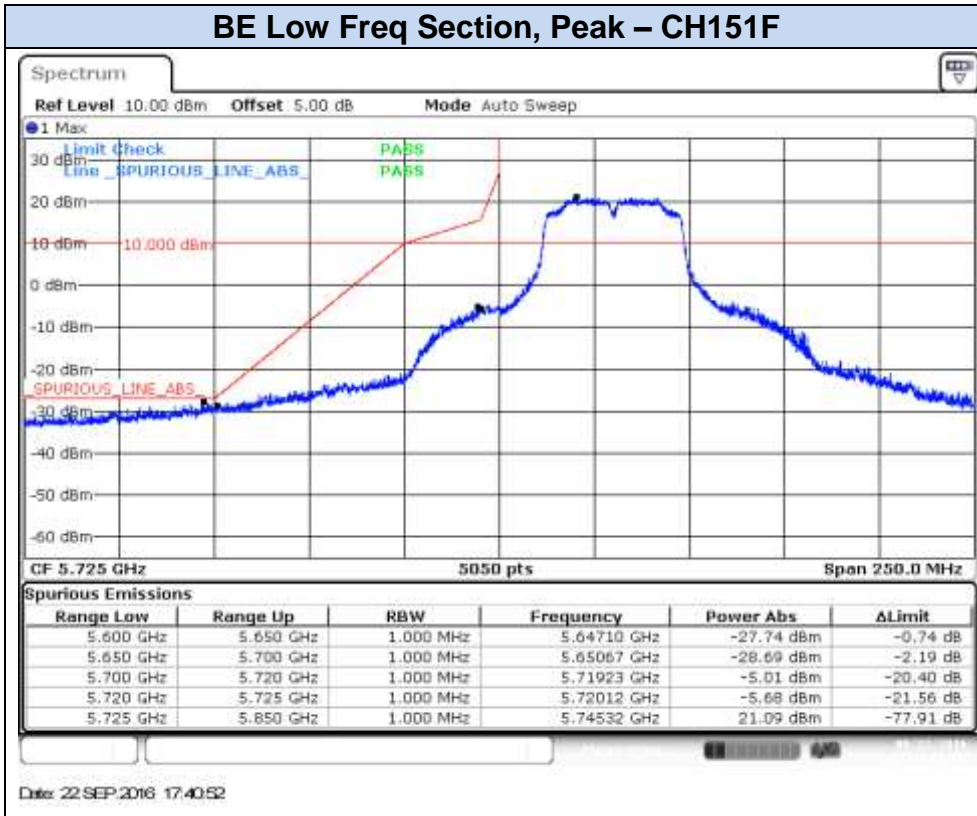


Date: 9 SEP 2016 18:03:32

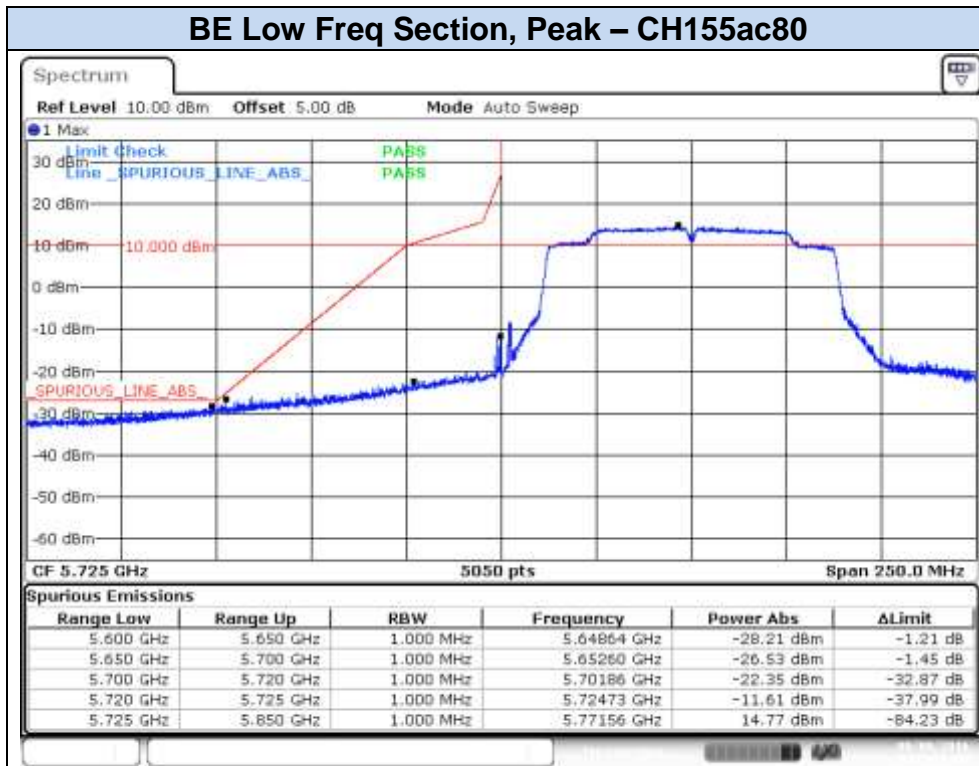
802.11n40, HT8 (MIMO) – Chain A



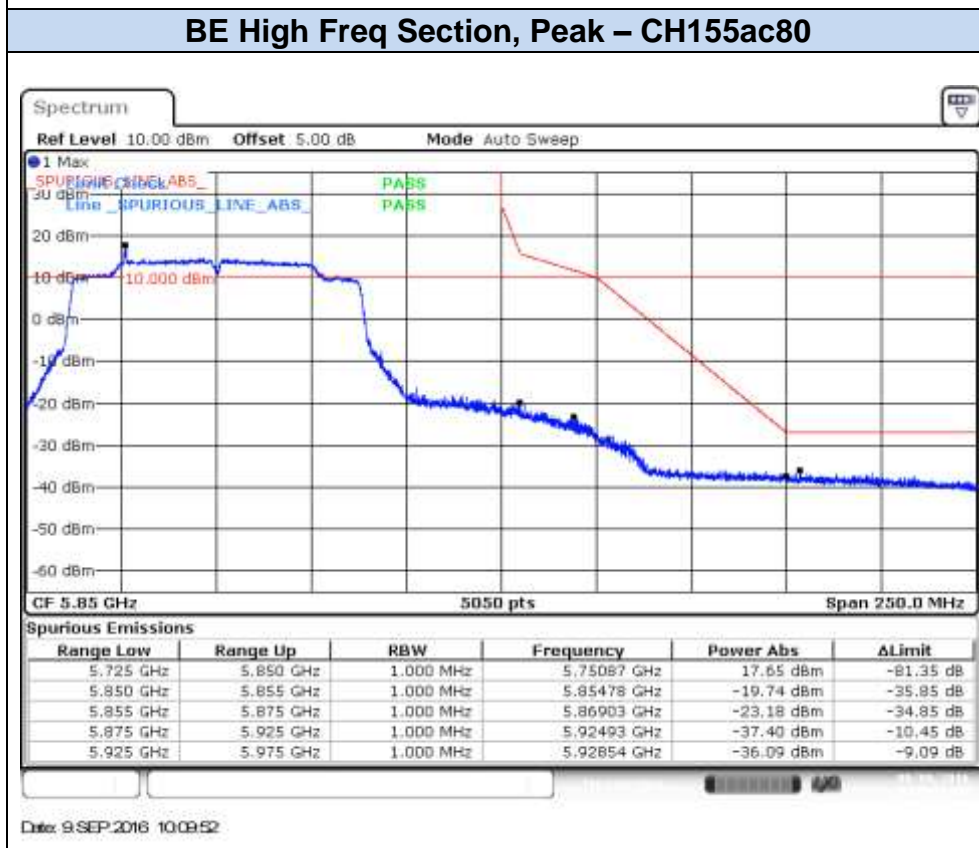
802.11n40, HT8 (MIMO) – Chain B



802.11ac80, VHT0 (SISO)- Chain A

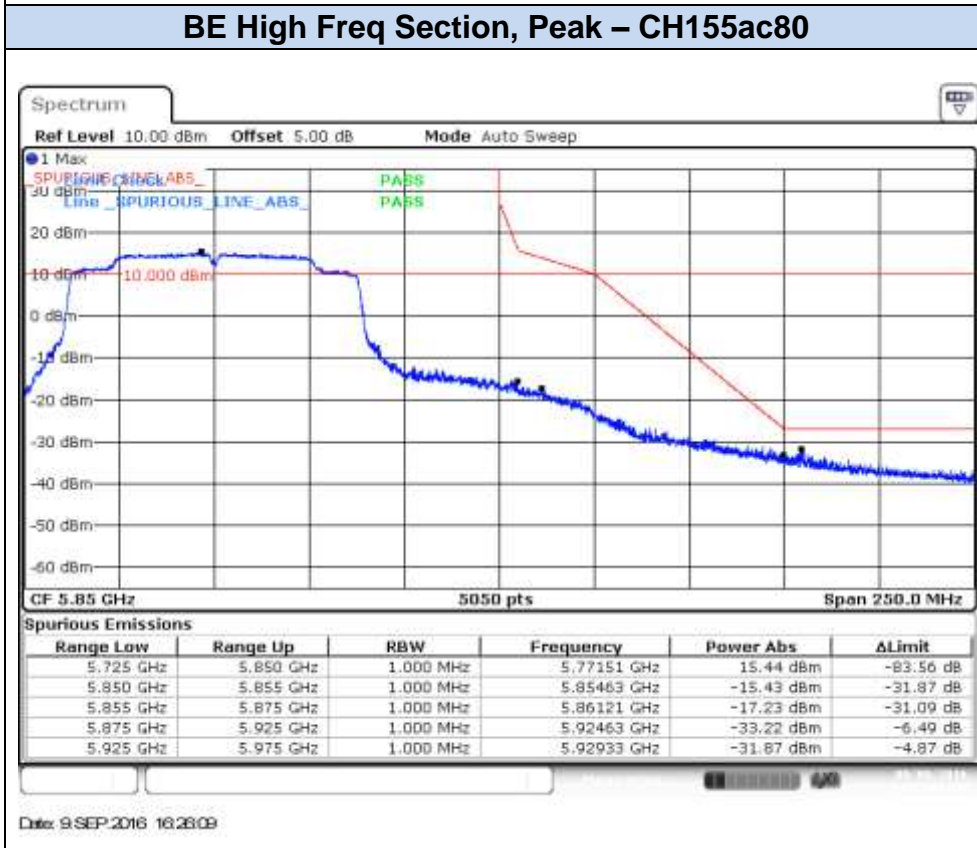
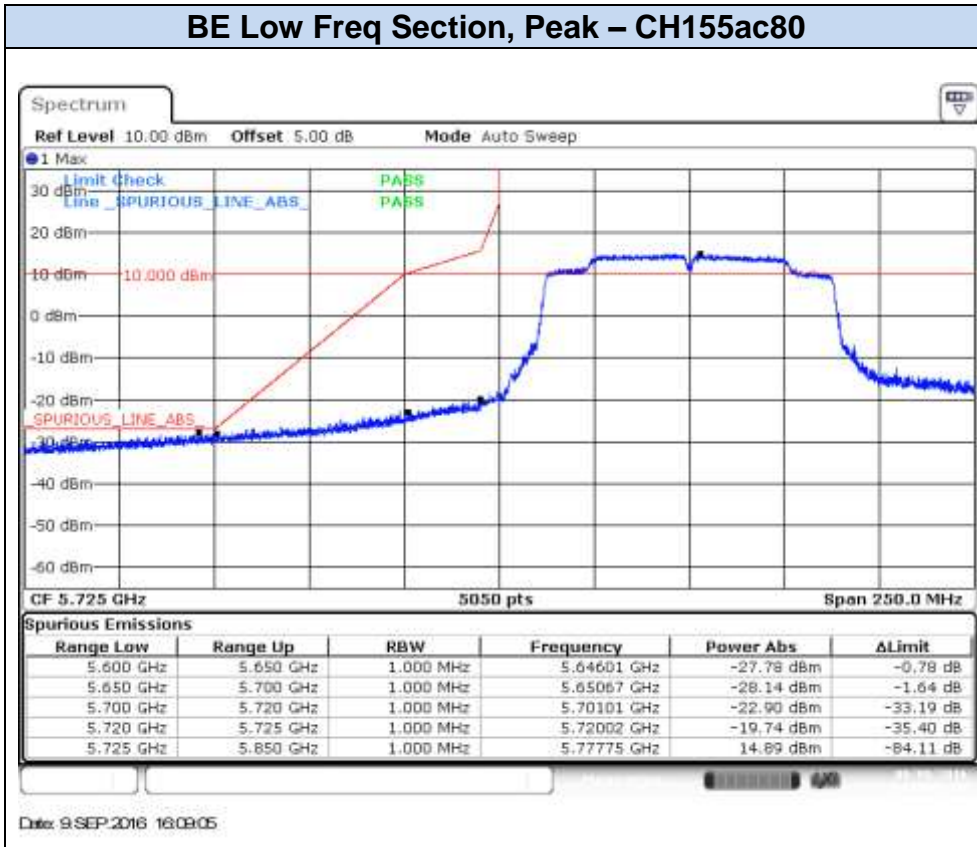


Date: 9 SEP 2016 10:07:59

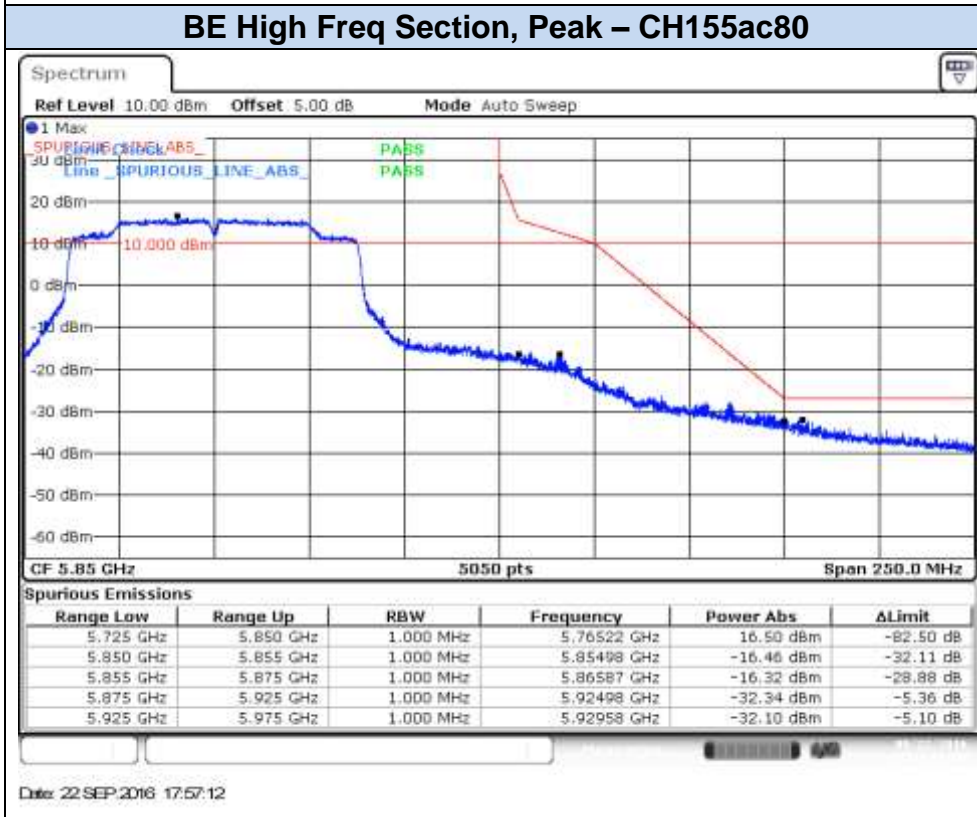
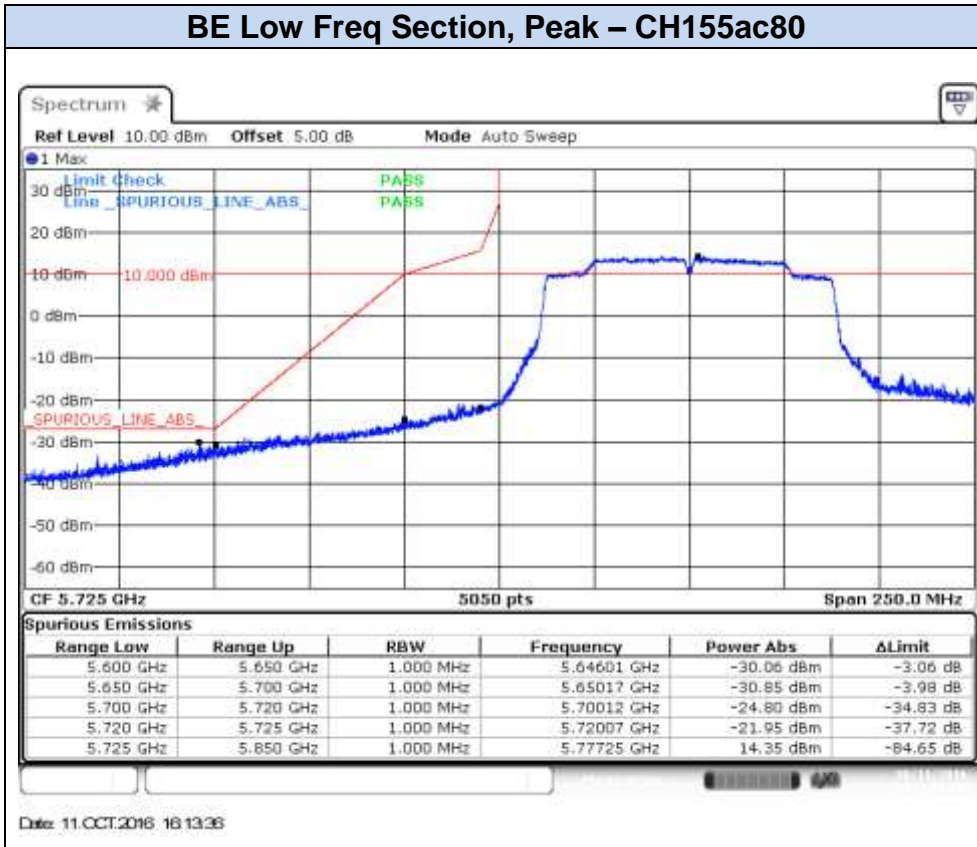


Date: 9 SEP 2016 10:08:52

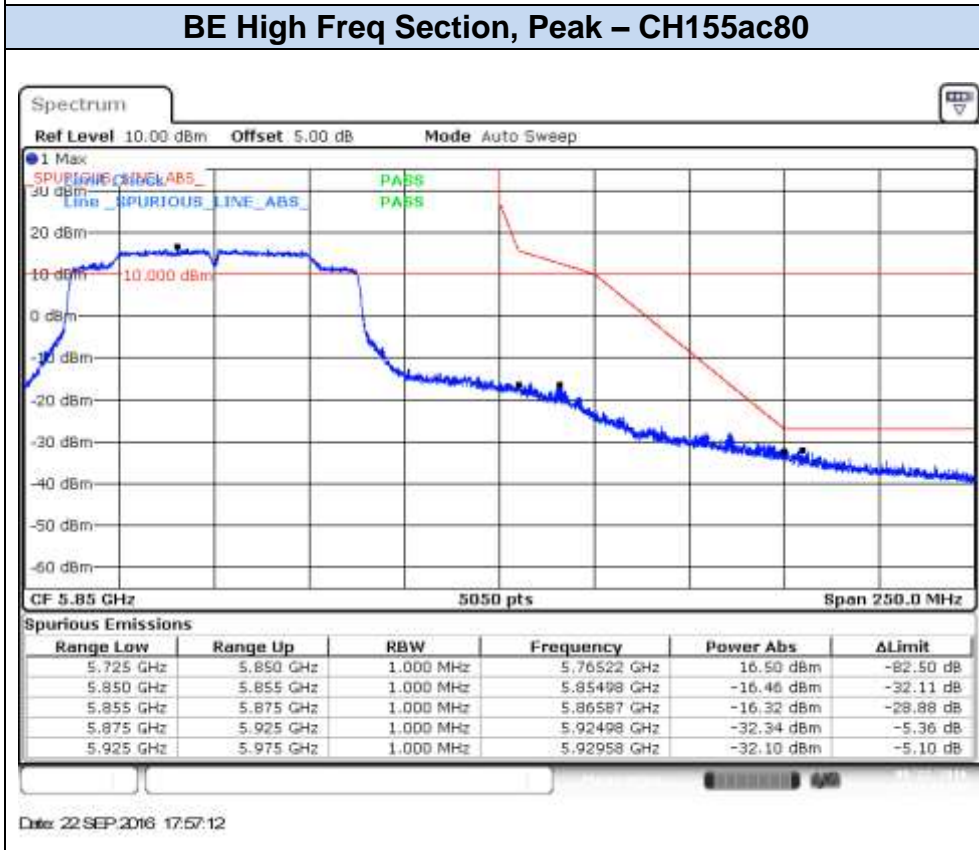
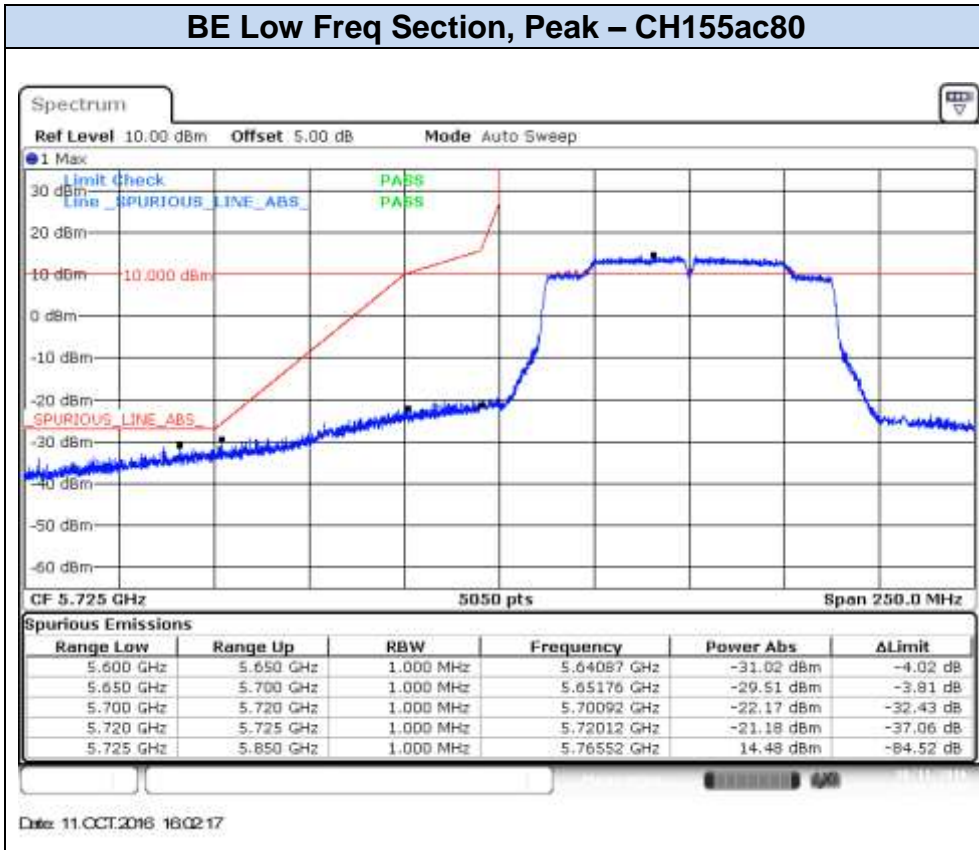
802.11ac80, VHT0 (SISO)- Chain B



802.11ac80, VHT0 (MIMO)- Chain A



802.11ac80, VHT0 (MIMO)- Chain B



B.4 Radiated spurious emission

Standard references:

FCC part	Limits																																
15.407 (b) (4)	<p>(4) For transmitters operating in the 5.725-5.85 GHz band:</p> <p>(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p>																																
15.209	<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" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #d9e1f2;">Freq Range (MHz)</th> <th style="background-color: #d9e1f2;">Field Strength (µV/m)</th> <th style="background-color: #d9e1f2;">Field Strength (dBµV/m)</th> <th style="background-color: #d9e1f2;">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. 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:

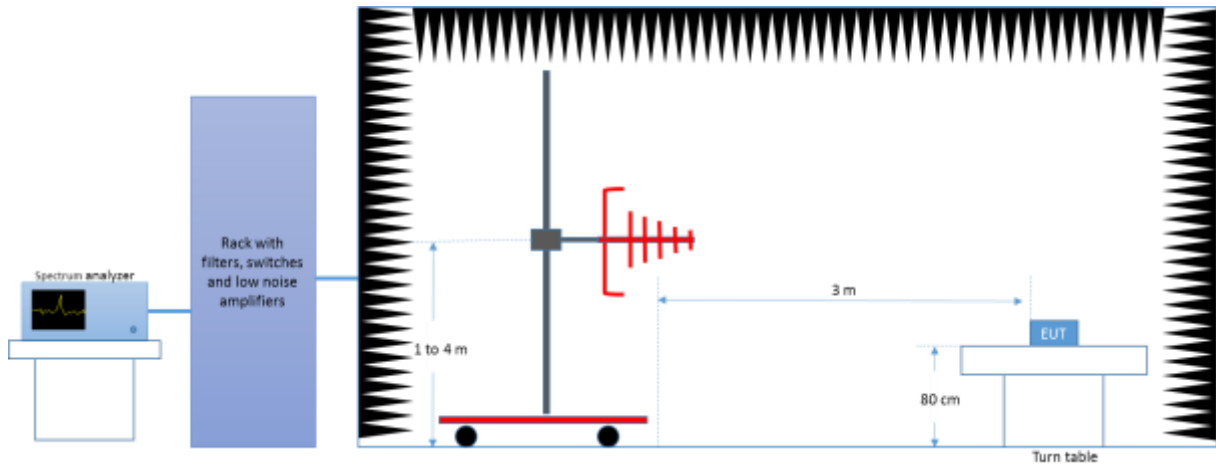
The below setups were used to measure the radiated spurious emissions.

Depending of the frequency range and bands being tested, different antennas and filters were used. The final measurement is done by varying the antenna height, the EUT azimuth over 360° and for both Vertical and Horizontal polarizations.

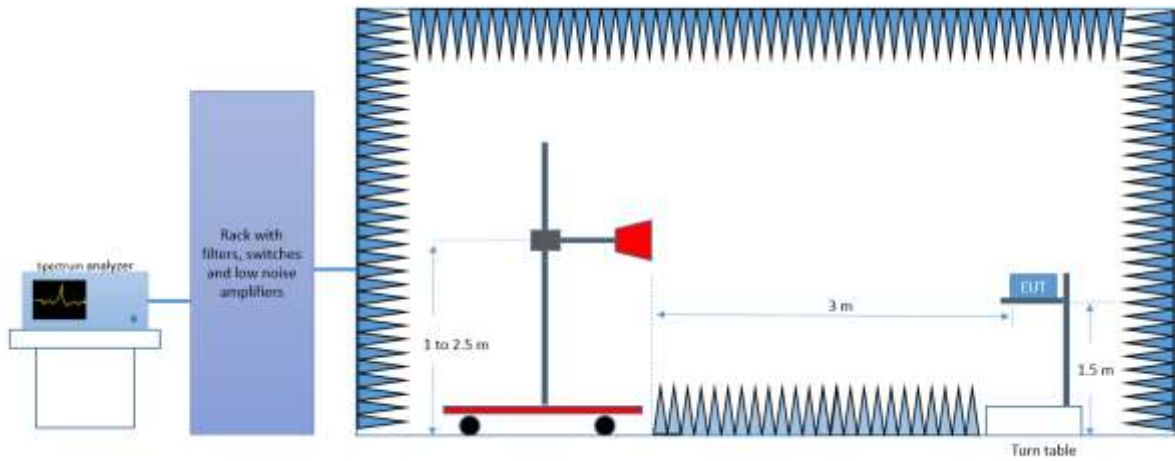
The radiated spurious emissions were measured on the worst case configuration selected from the chapter B.2 and using the lowest, middle and highest channels.

For technologies 802.n20, 802.n40 and 802.ac80 the worst case in terms of spurious emissions found among the low, mid and high channels when tested on chain A and B separately is used to perform the test in MIMO mode (Chain A+B).

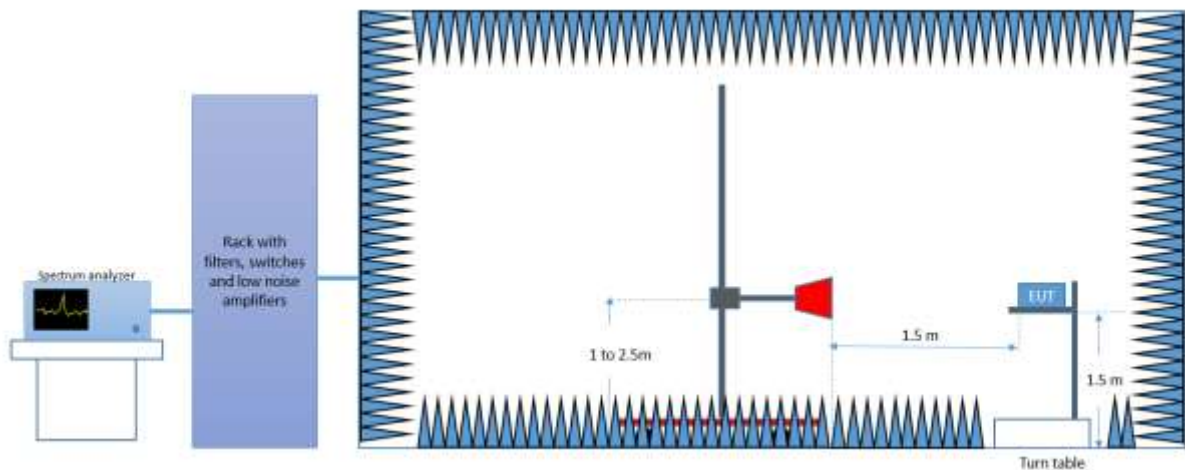
Radiated Setup < 1GHz



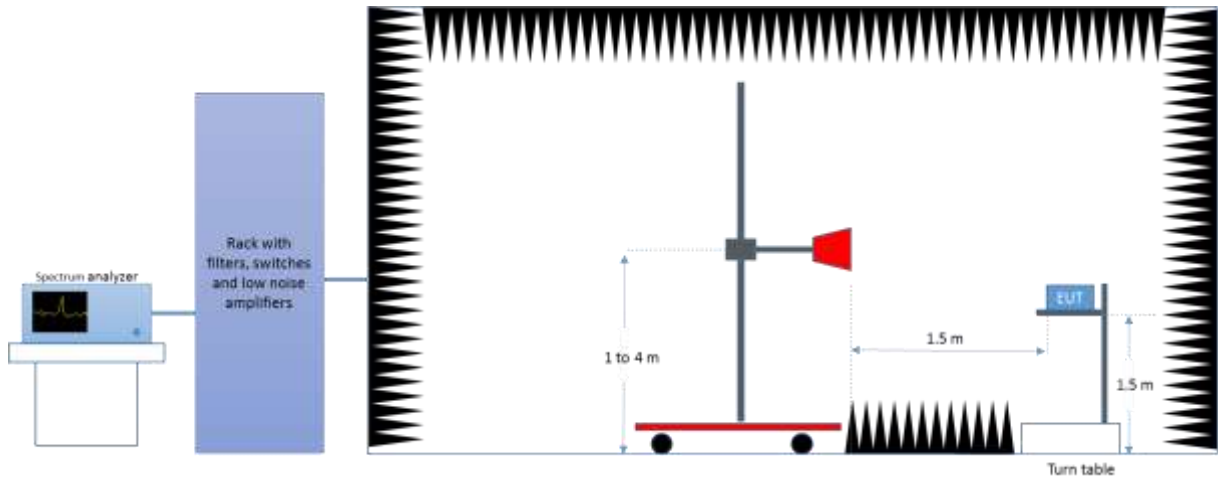
Radiated Setup 1 GHz - 18 GHz



Radiated Setup 18 GHz - 26.5 GHz



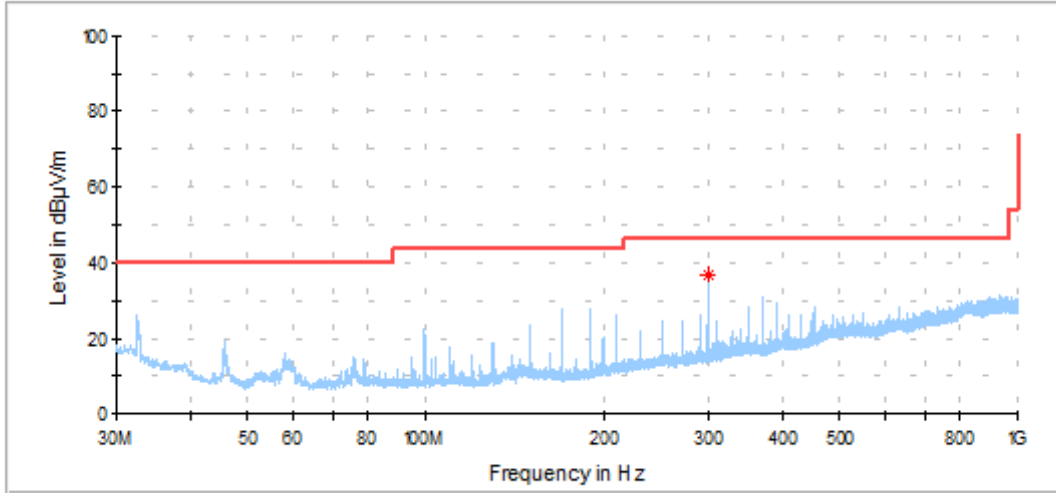
Radiated Setup > 26.5 GHz



Test Results:

30MHz – 1GHz

Radiated Spurious – All Modes



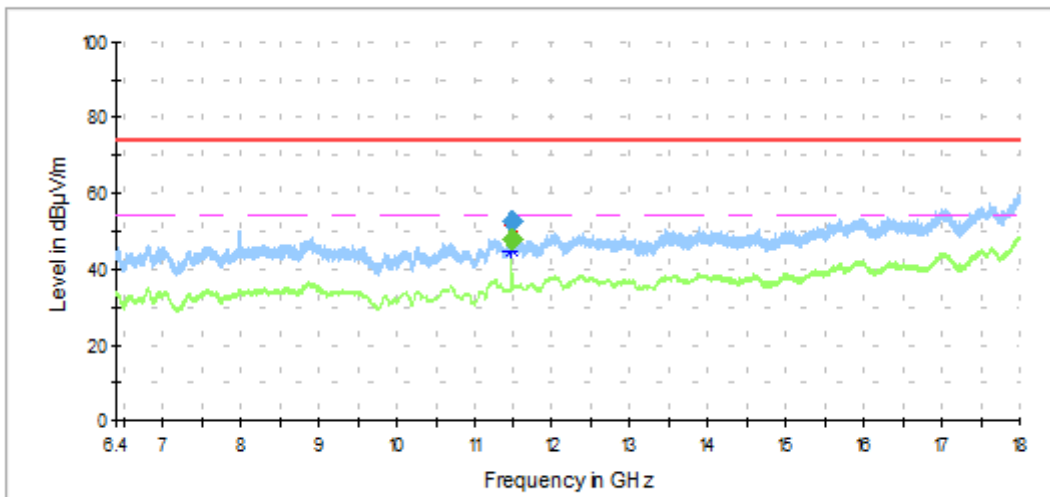
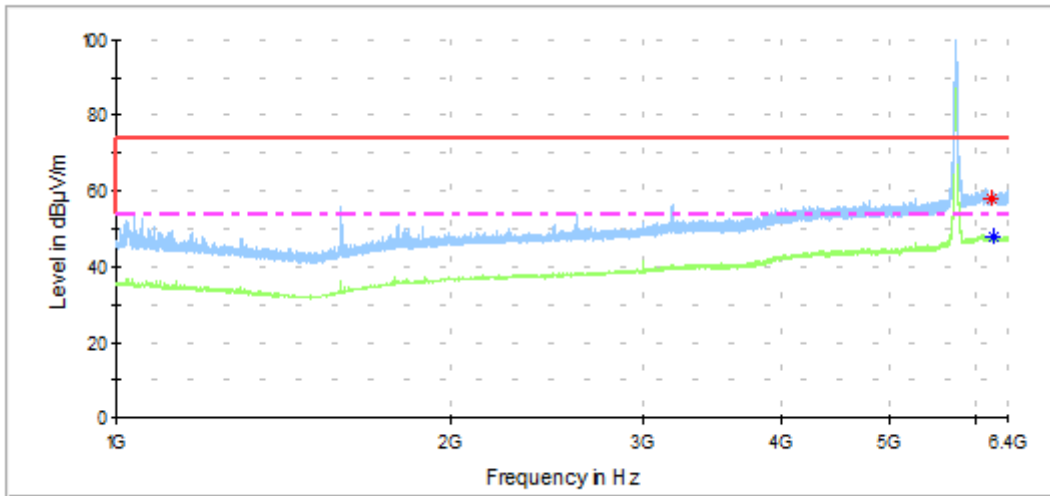
— Peak measurements — Limit FCC Peak

Frequency	Max Peak	Limit	Margin
MHz	dBuV/m	dBuV/m	dB
299.9	36.9	46.1	9.2

Note 1: The spurious signals detected do not depend on either the operating channel or the modulation mode.

1 GHz –18GHz, 802.11a, 6Mbps, Chain A

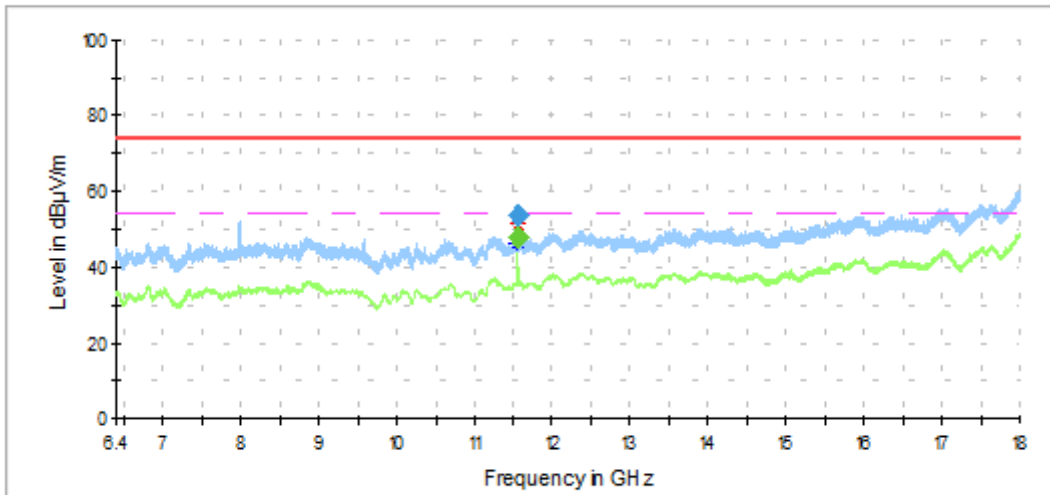
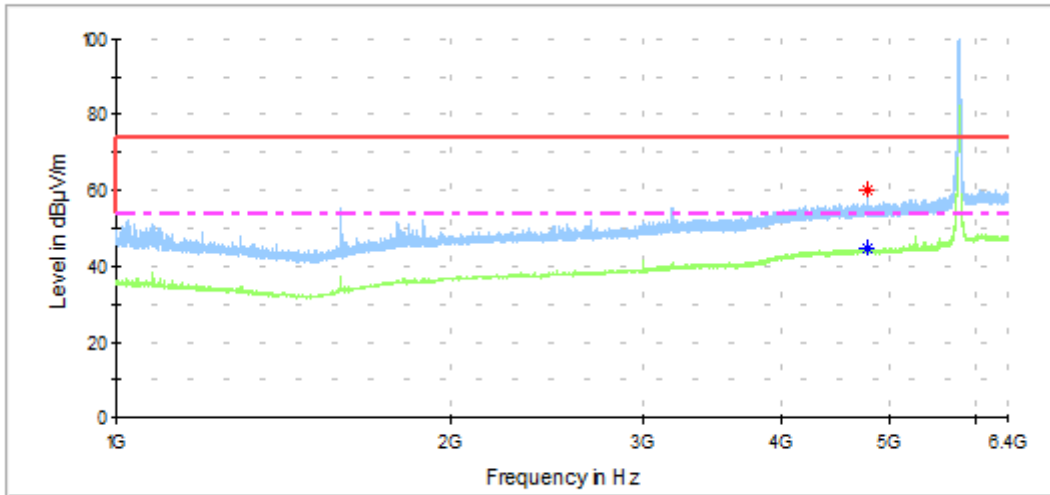
Radiated Spurious – CH149



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6192.1	58.0	---	74.0	16.0
6208.8	---	47.9	54.0	6.1
11487.9	52.8	---	74.0	21.2
11490.2	---	47.8	54.0	6.2

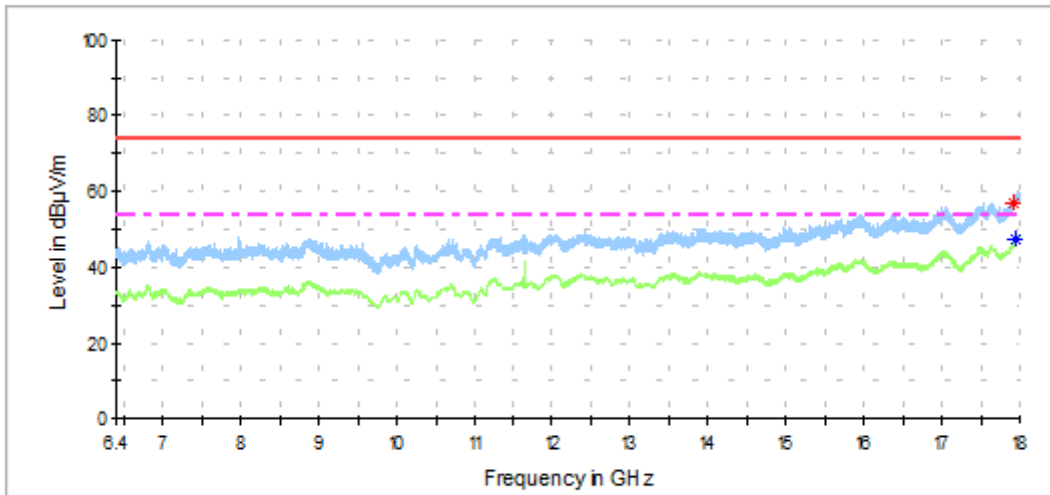
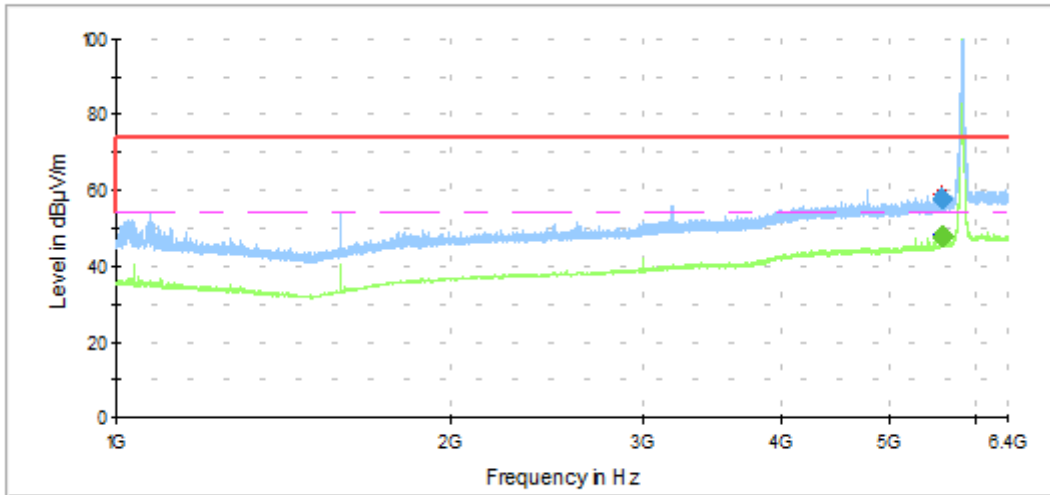
Radiated Spurious – CH157



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
4790.1	---	44.6	54.0	9.4
4790.1	60.2	---	74.0	13.8
11570.0	---	47.8	54.0	6.2
11570.0	53.9	---	74.0	20.1

Radiated Spurious – CH165

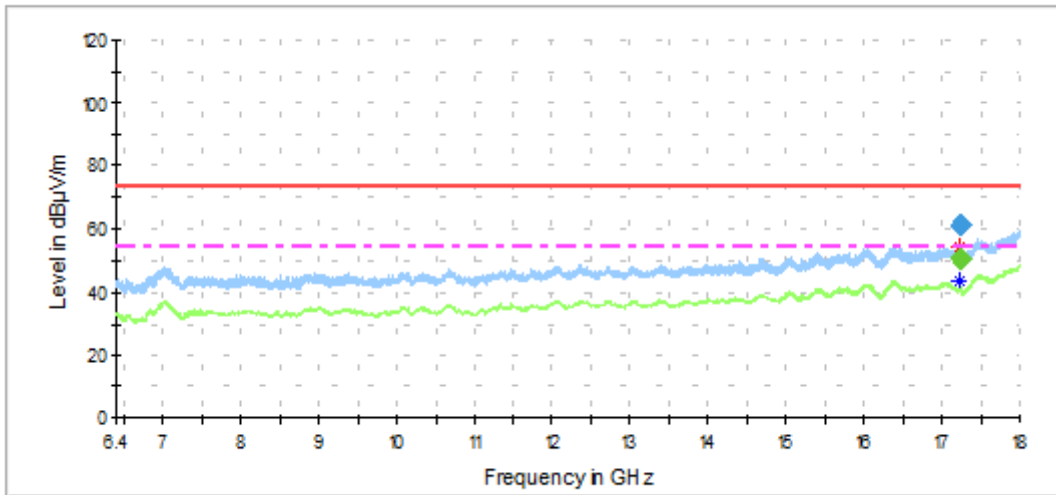
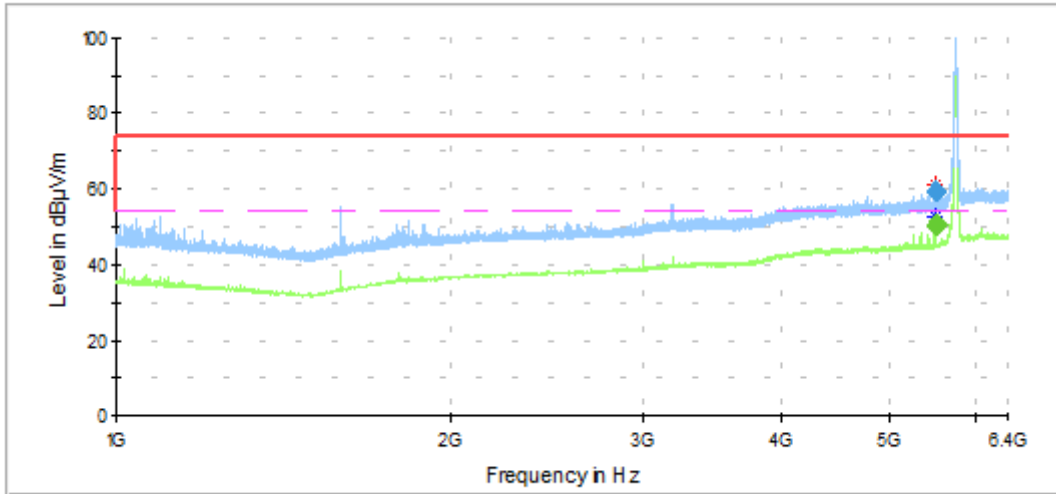


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5581.9	---	47.7	54.0	6.3
5589.0	58.0	---	74.0	16.0
17930.4	57.0	---	74.0	17.0
17957.6	---	47.2	54.0	6.8

1 GHz – 18 GHz, 802.11a, 6Mbps, Chain B

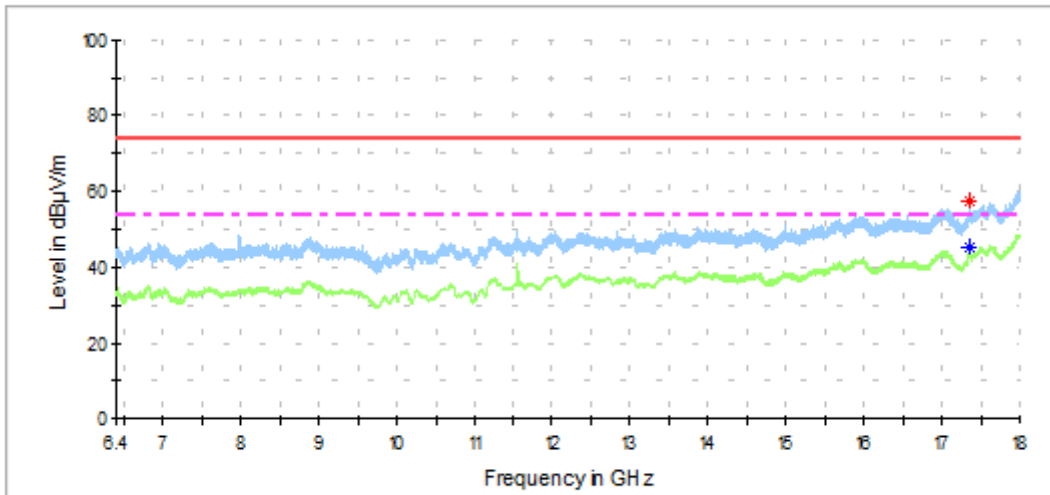
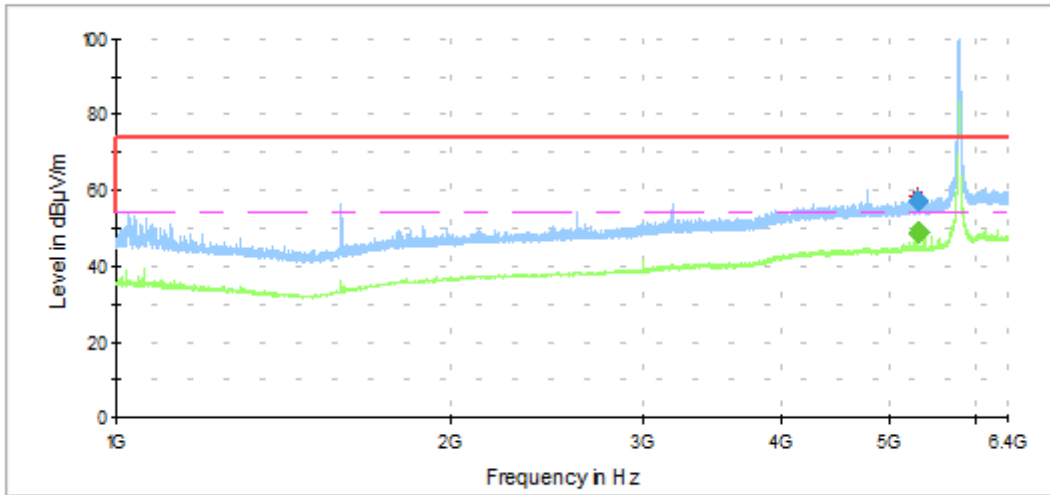
Radiated Spurious – CH149



— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5505.3	61.2	---	74.0	12.8
5505.6	---	52.6	54.0	1.4
17221.8	61.1	---	74.1	13.0
17236.3	---	50.8	54.1	3.3

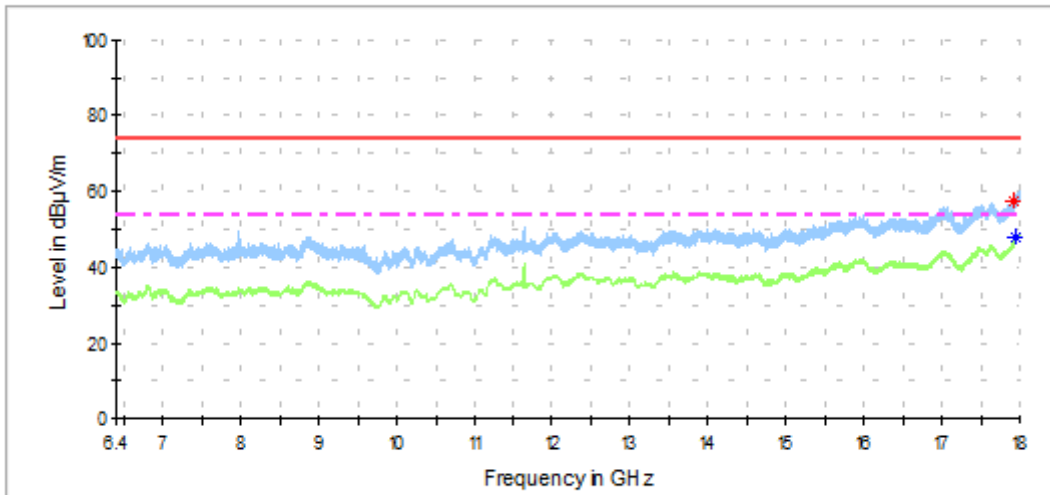
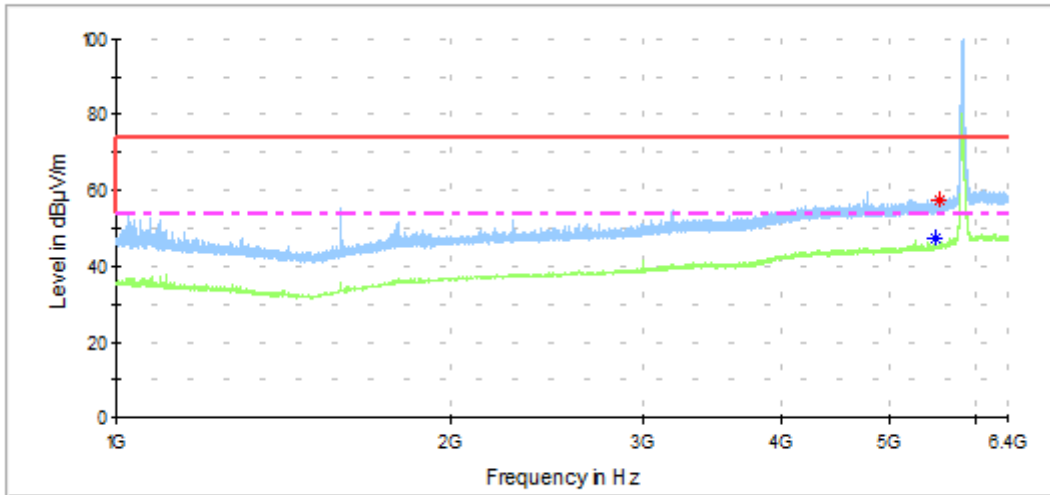
Radiated Spurious – CH157



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5302.1	57.1	---	74.0	16.9
5303.6	---	48.8	54.0	5.2
17357.1	57.2	---	74.0	16.8
17357.1	---	45.4	54.0	8.6

Radiated Spurious – CH165

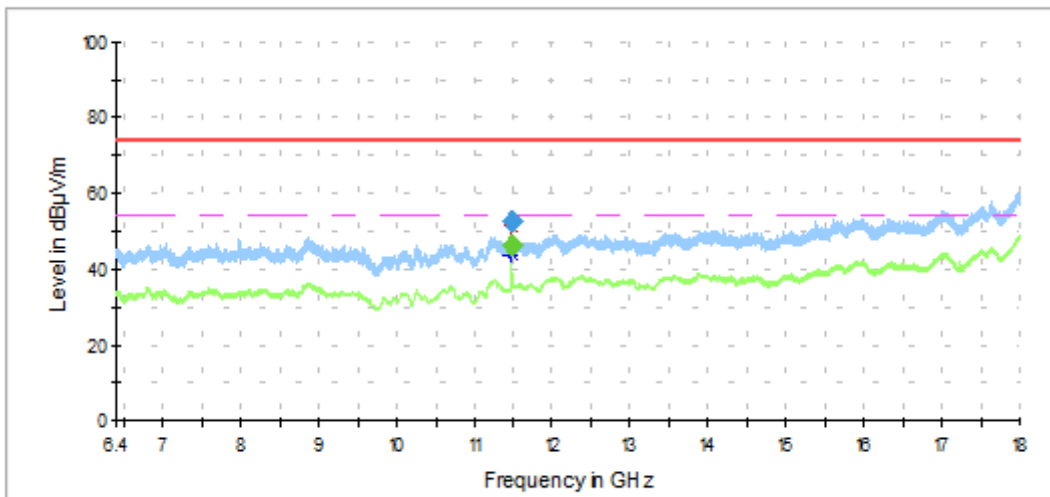
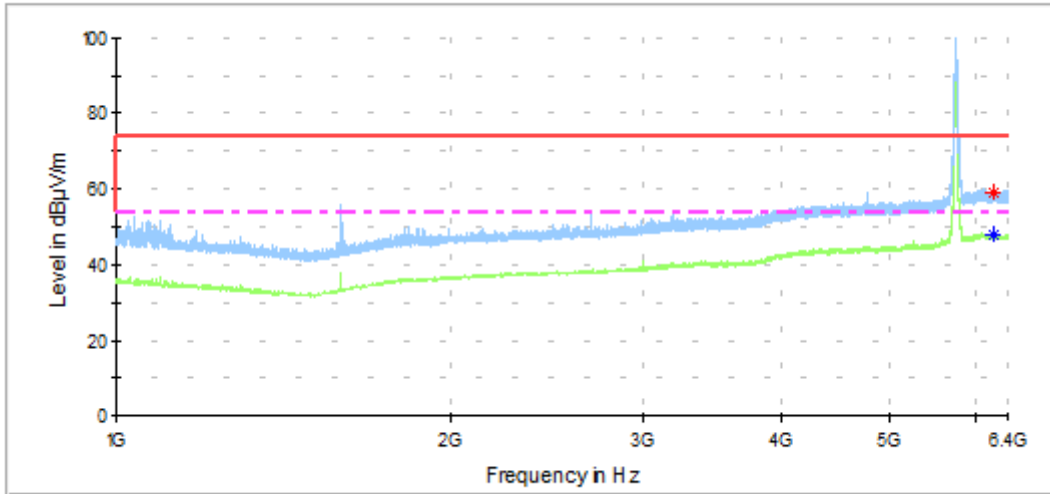


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5509.2	---	47.4	54.0	6.6
5546.3	57.5	---	74.0	16.5
17921.9	57.6	---	74.0	16.4
17959.4	---	47.7	54.0	6.3

1 GHz – 18 GHz, 802.11n20, HT0, Chain A

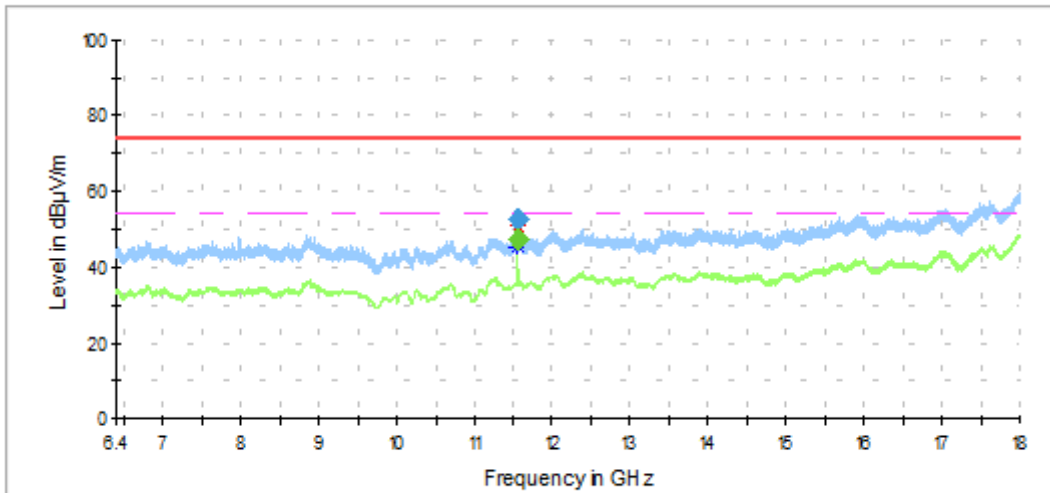
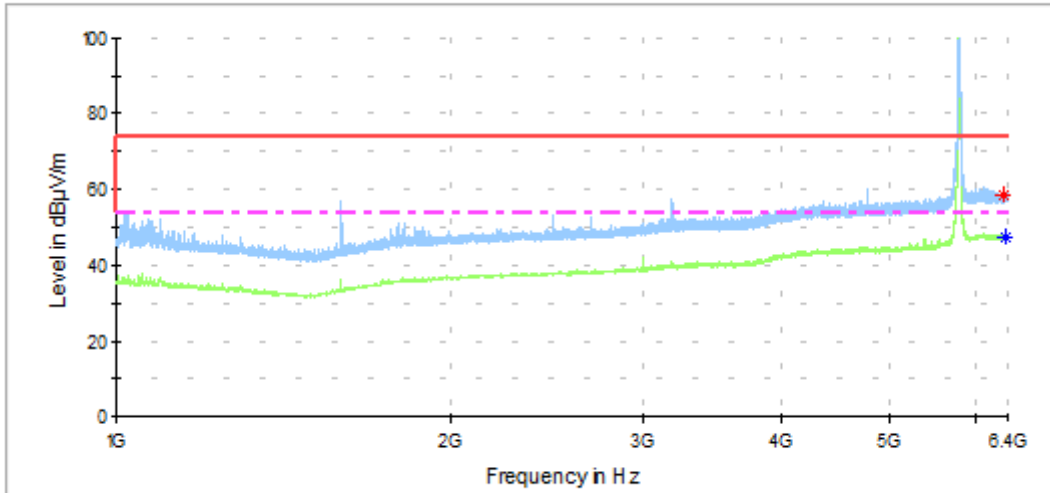
Radiated Spurious – CH149



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6206.3	58.7	---	74.0	15.3
6212.5	---	48.0	54.0	6.0
11489.7	---	46.4	54.0	7.6
11490.6	52.8	---	74.0	21.2

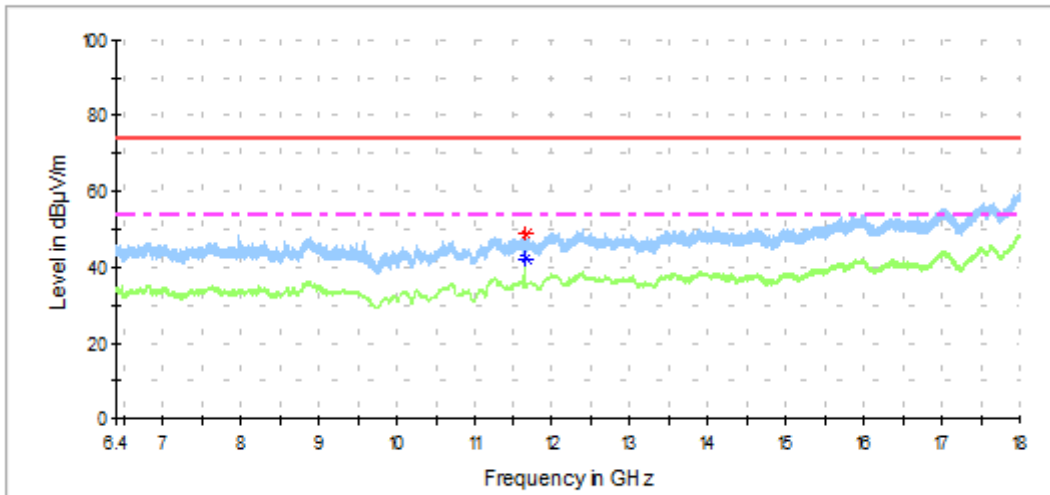
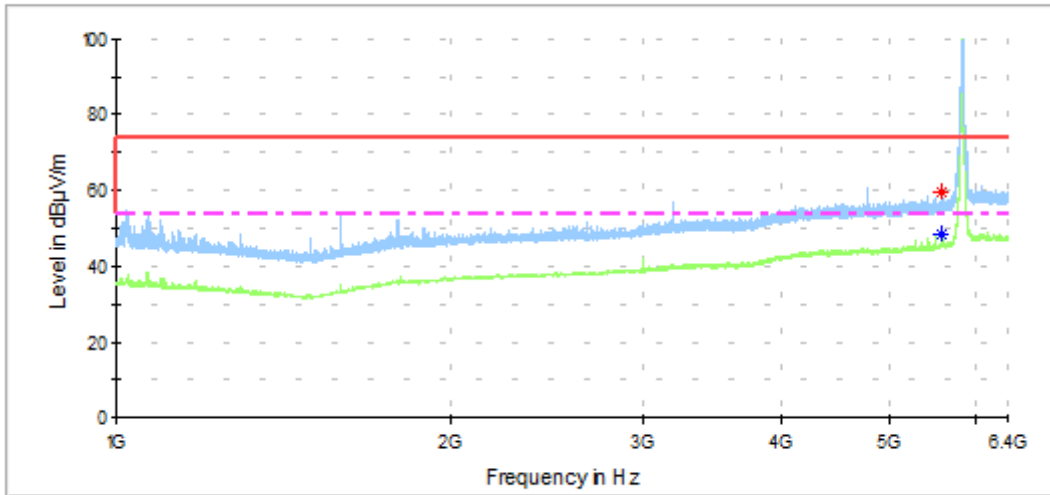
Radiated Spurious – CH157



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6356.8	58.5	---	74.0	15.5
6377.7	---	47.4	54.0	6.6
11570.0	---	47.1	54.0	6.9
11570.0	52.4	---	74.0	21.6

Radiated Spurious – CH165

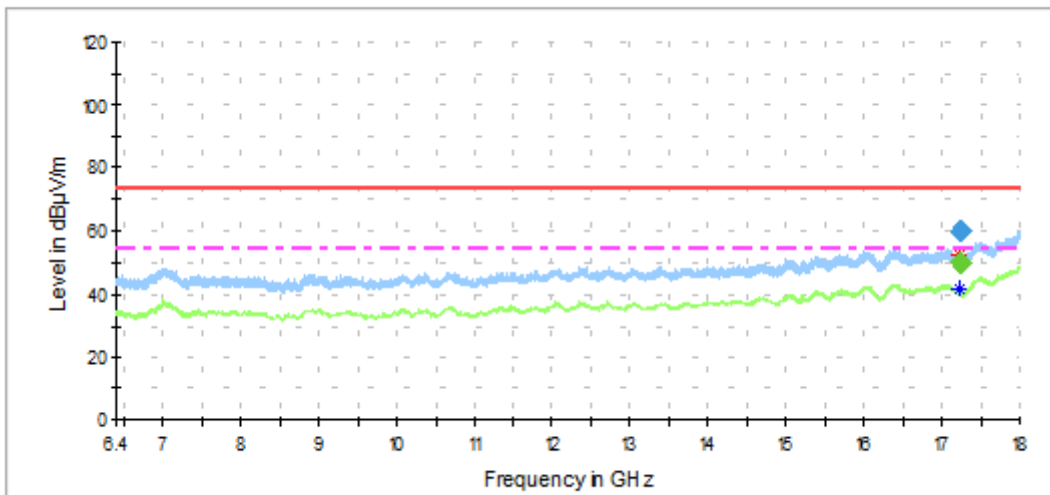
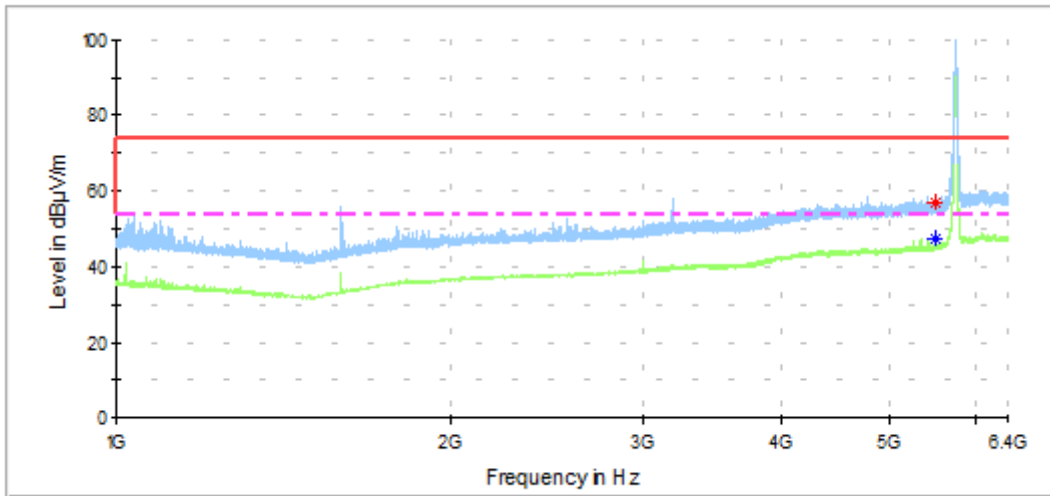


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5582.1	---	48.5	54.0	5.5
5582.1	59.4	---	74.0	14.6
11649.9	48.8	---	74.0	25.2
11649.9	---	42.3	54.0	11.7

1 GHz – 18 GHz, 802.11n20, HT0, Chain B

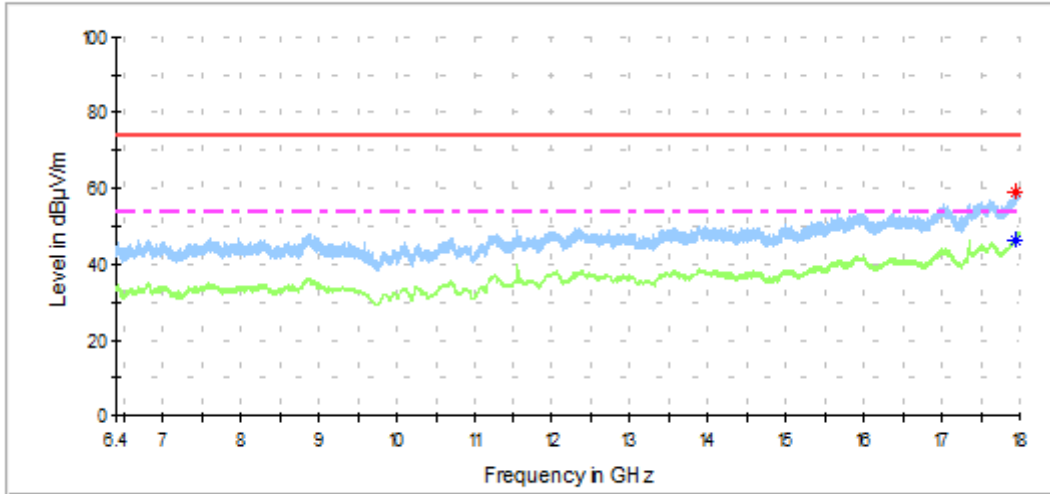
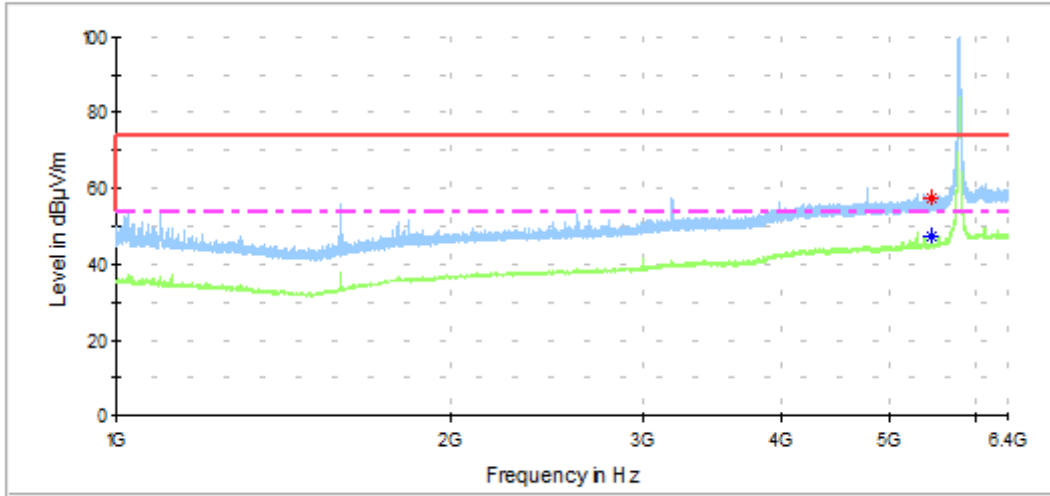
Radiated Spurious – CH149



— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5502.6	---	47.2	54.0	6.8
5511.2	57.1	---	74.0	16.9
17236.3	60.3	---	74.1	13.8
17235.9	---	49.9	54.1	4.2

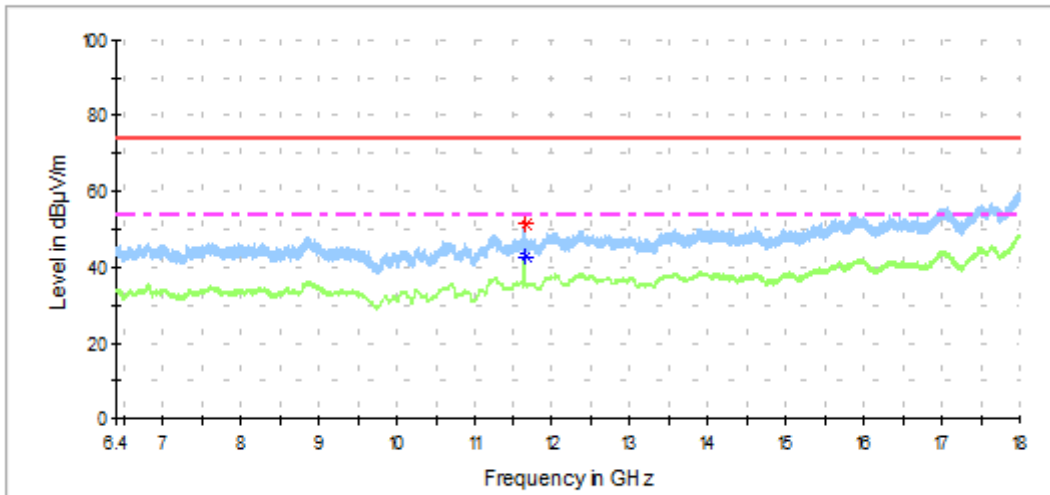
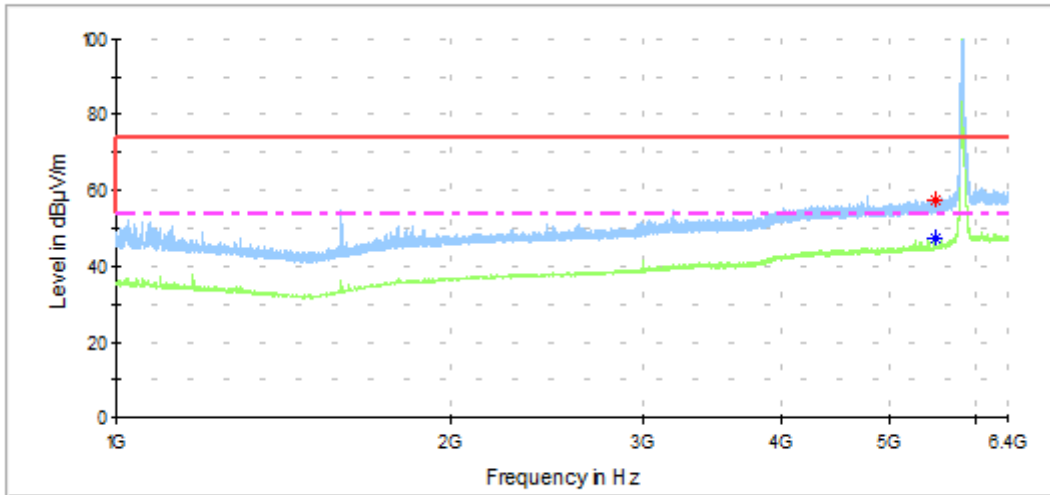
Radiated Spurious – CH157



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5466.5	---	47.5	54.0	6.5
5471.0	57.5	---	74.0	16.5
17940.7	---	46.6	54.0	7.4
17948.7	58.7	---	74.0	15.3

Radiated Spurious – CH165

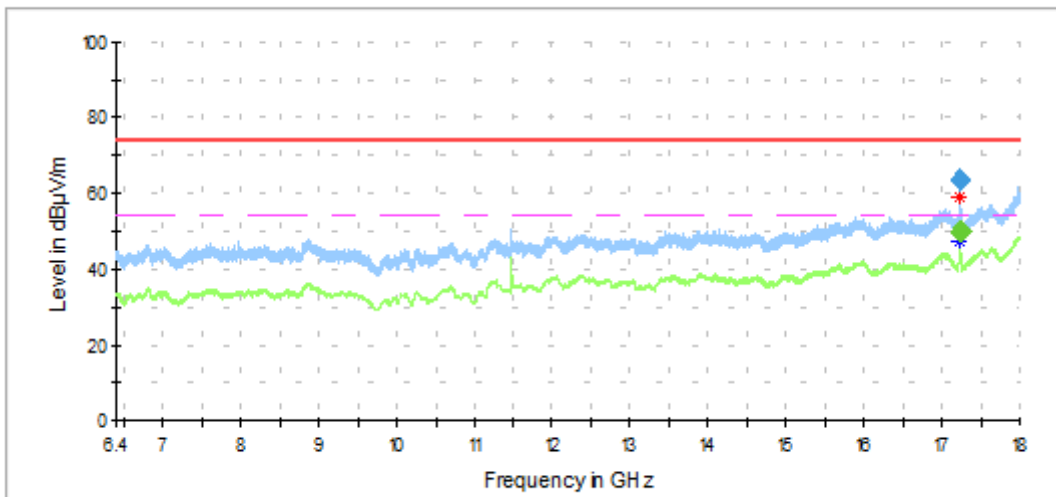
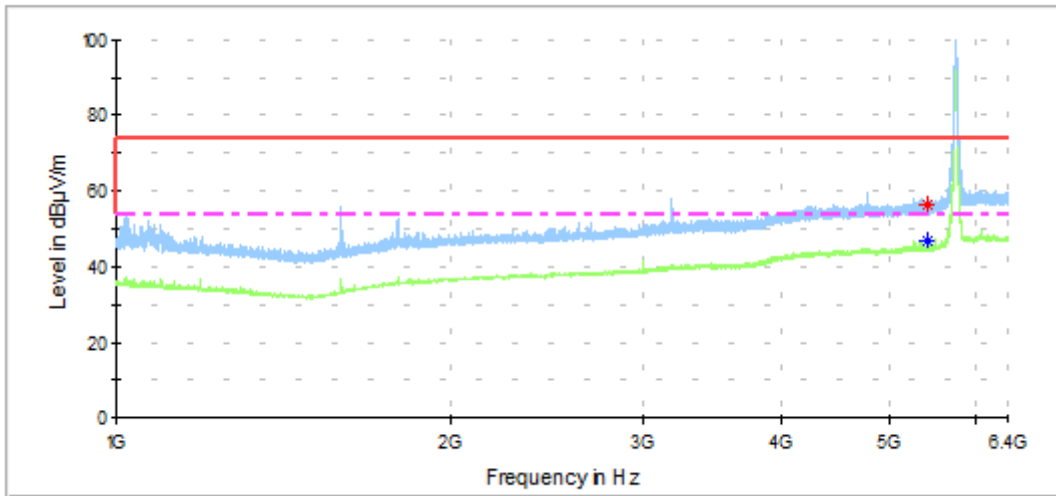


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5505.6	---	47.6	54.0	6.4
5506.1	57.5	---	74.0	16.5
11649.9	---	42.6	54.0	11.4
11650.3	51.5	---	74.0	22.5

1 GHz – 18 GHz, 802.11n20, HT8, Chain A+B

Radiated Spurious – CH149

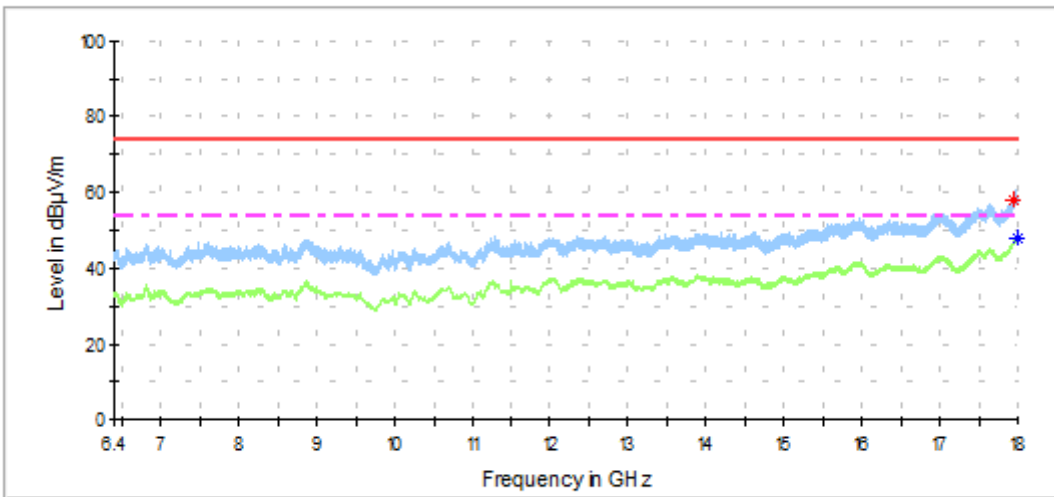
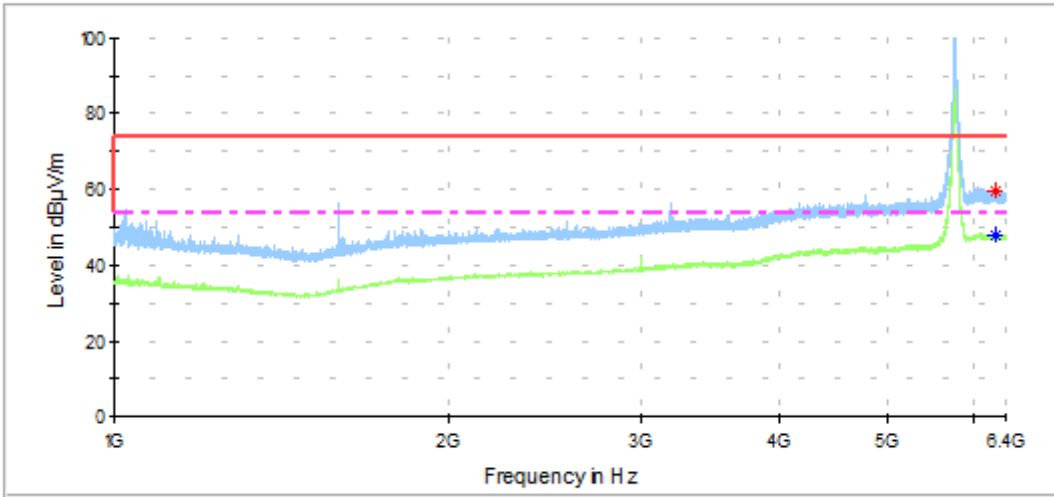


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
5426.0	---	46.8	54.0	7.2
5427.5	56.5	---	74.0	17.5
17231.7	63.9	---	74.0	10.1
17238.0	---	50.0	54.0	4.0

1 GHz – 18 GHz, 802.11n40, HT0, Chain A

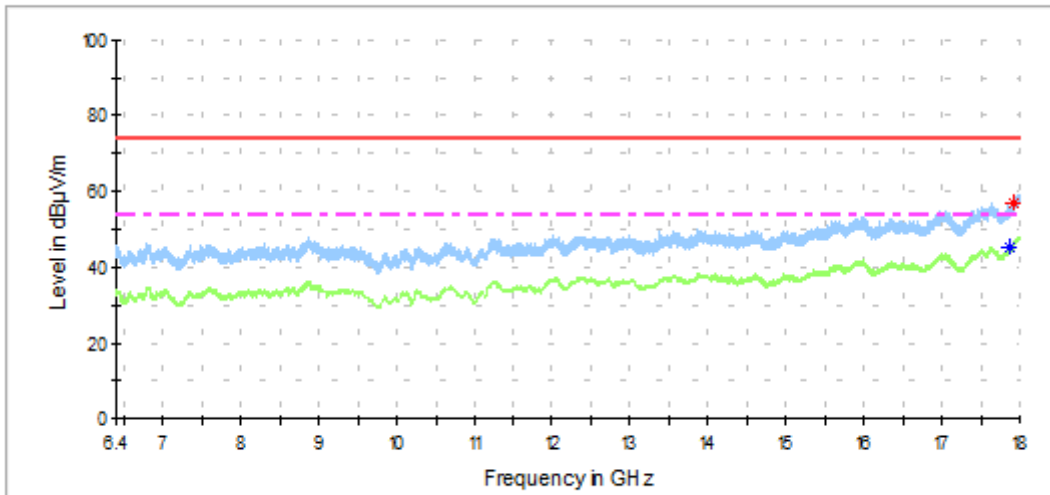
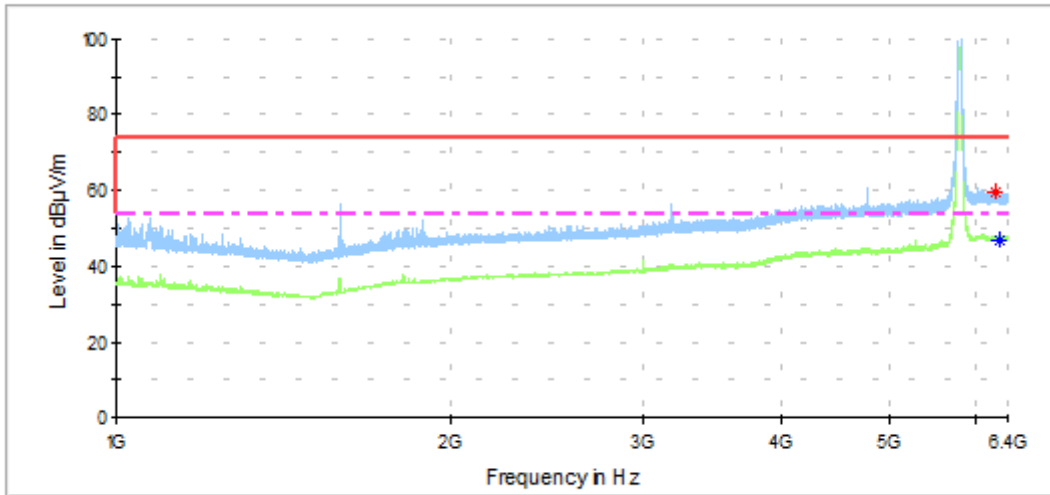
Radiated Spurious – CH151F



— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6261.3	59.3	---	74.0	14.7
6263.8	---	48.1	54.0	5.9
17950.5	57.7	---	74.0	16.3
17995.5	---	47.7	54.0	6.3

Radiated Spurious – CH159F

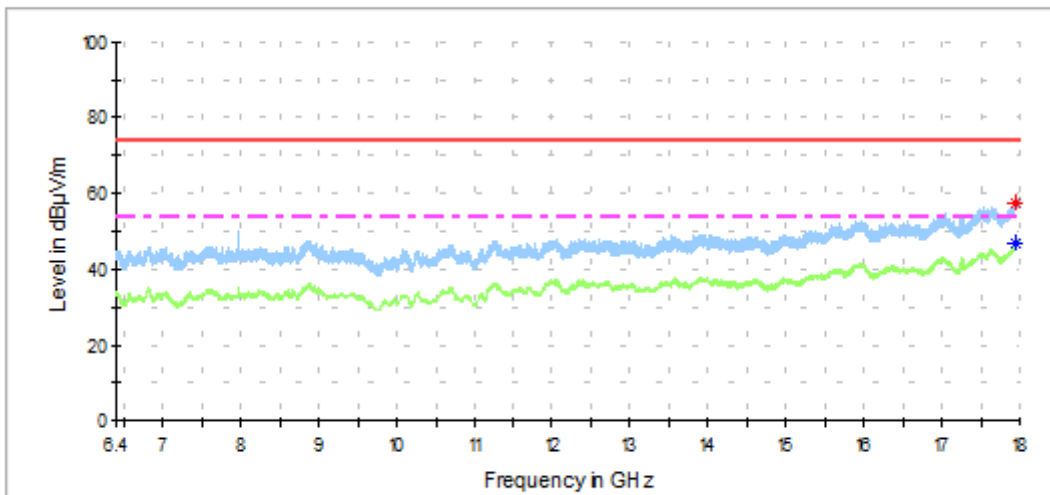
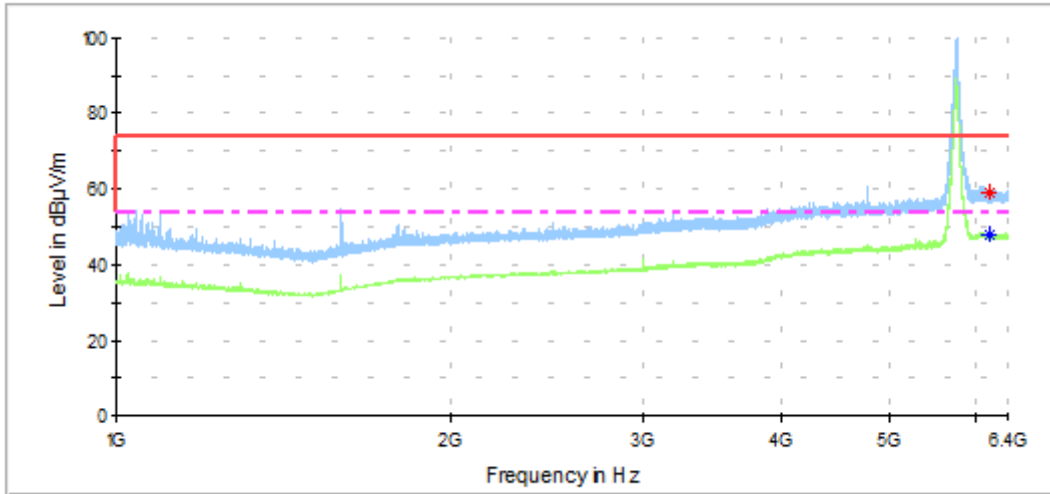


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6232.8	59.3	---	74.0	14.7
6298.6	---	46.9	54.0	7.1
17881.8	---	45.4	54.0	8.6
17929.5	56.6	---	74.0	17.4

1 GHz – 18 GHz, 802.11n40, HT0, Chain B

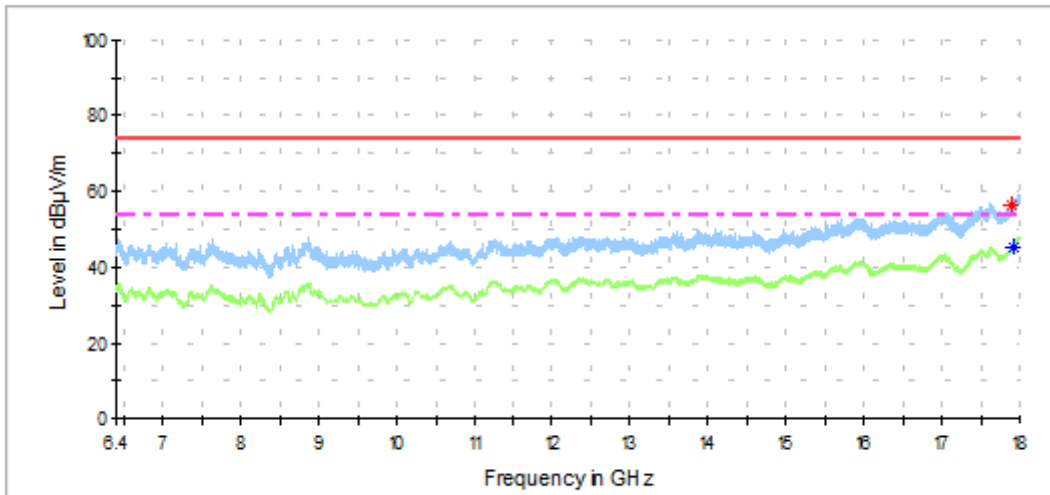
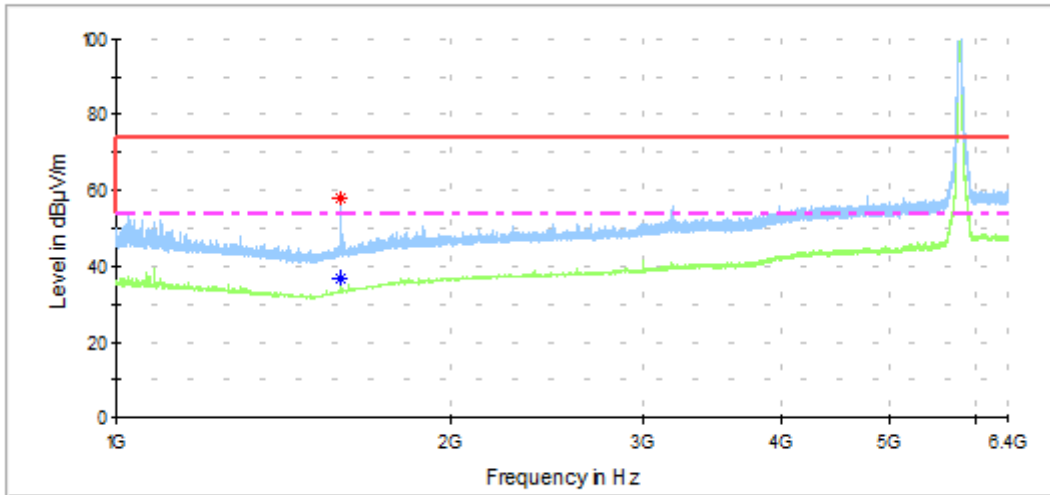
Radiated Spurious – CH151F



— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6162.2	---	47.8	54.0	6.2
6165.3	59.2	---	74.0	14.8
17953.2	57.1	---	74.0	16.9
17959.0	---	47.0	54.0	7.0

Radiated Spurious – CH159F

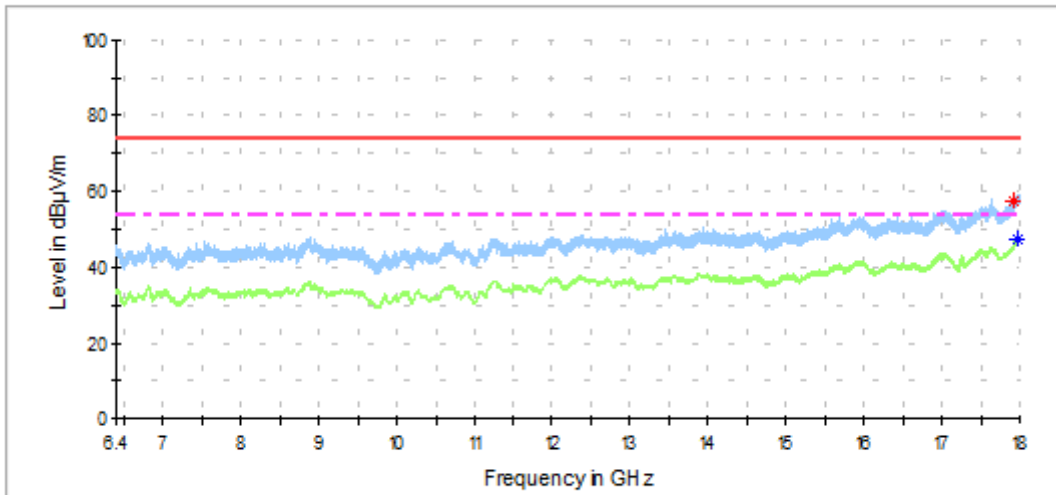
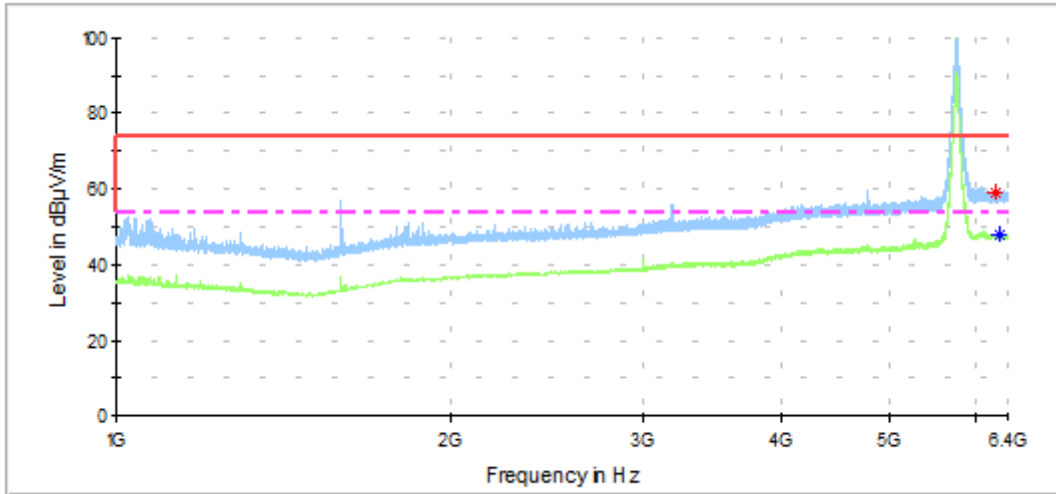


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
1596.0	57.9	---	74.0	16.1
1596.0	---	36.6	54.0	17.4
17898.3	56.1	---	74.0	17.9
17920.1	---	45.3	54.0	8.7

1 GHz – 18 GHz, 802.11n40, HT8, Chain A+B

Radiated Spurious – CH151F

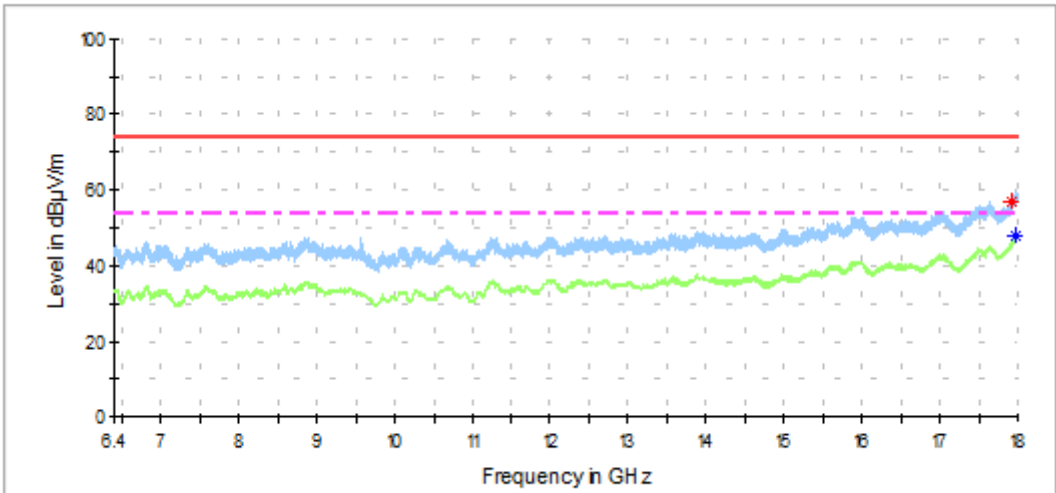
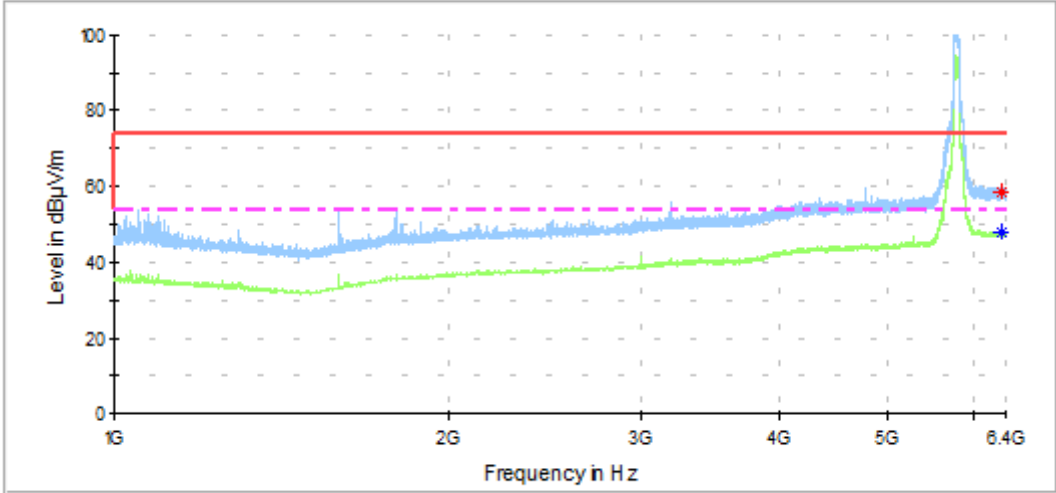


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6245.9	58.9	---	74.0	15.1
6303.0	---	47.8	54.0	6.2
17929.1	57.3	---	74.0	16.7
17987.1	---	47.5	54.0	6.5

1 GHz – 18 GHz, 802.11ac80, HT0, Chain A

Radiated Spurious – CH155ac80

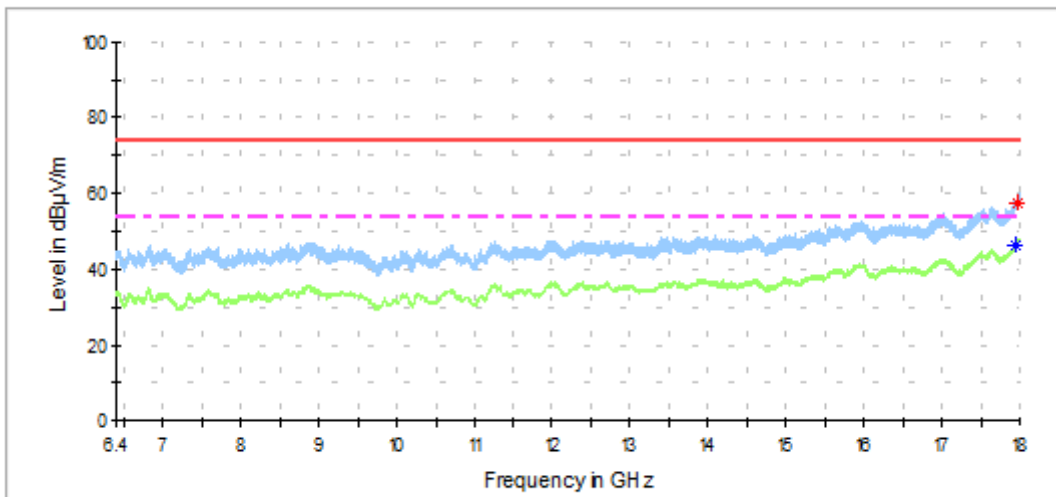
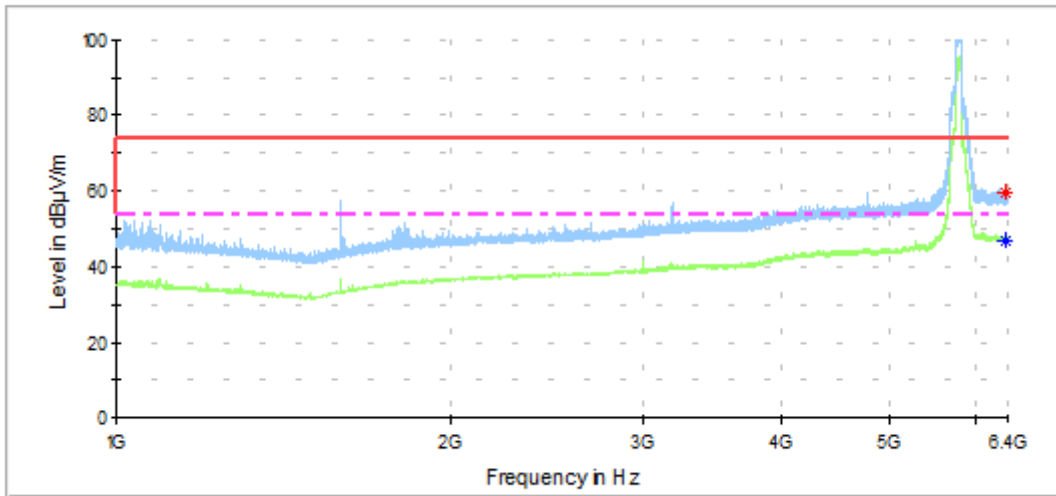


— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6338.6	58.4	---	74.0	15.6
6353.4	---	47.7	54.0	6.3
17934.4	56.8	---	74.0	17.2
17965.6	---	47.7	54.0	6.3

1 GHz – 18 GHz, 802.11ac80, HT0, Chain B

Radiated Spurious – CH155ac80

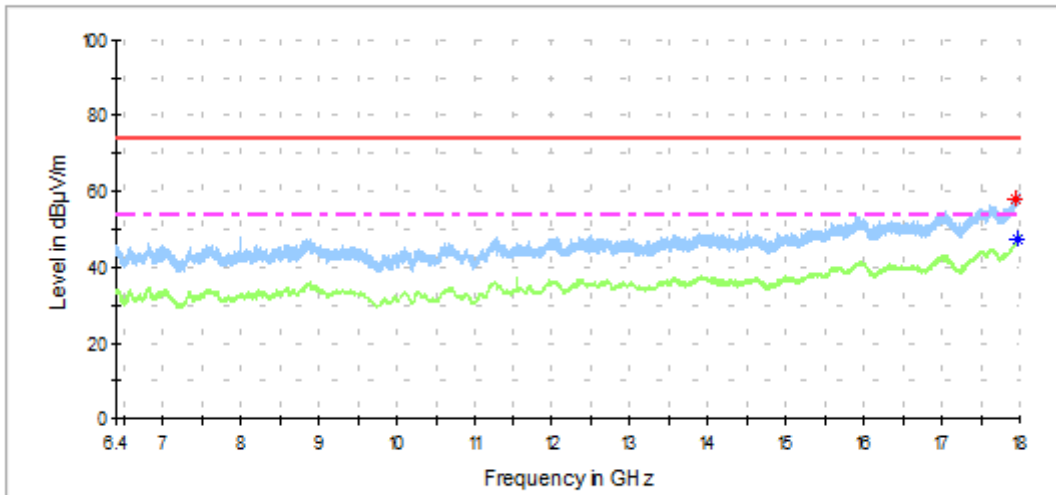
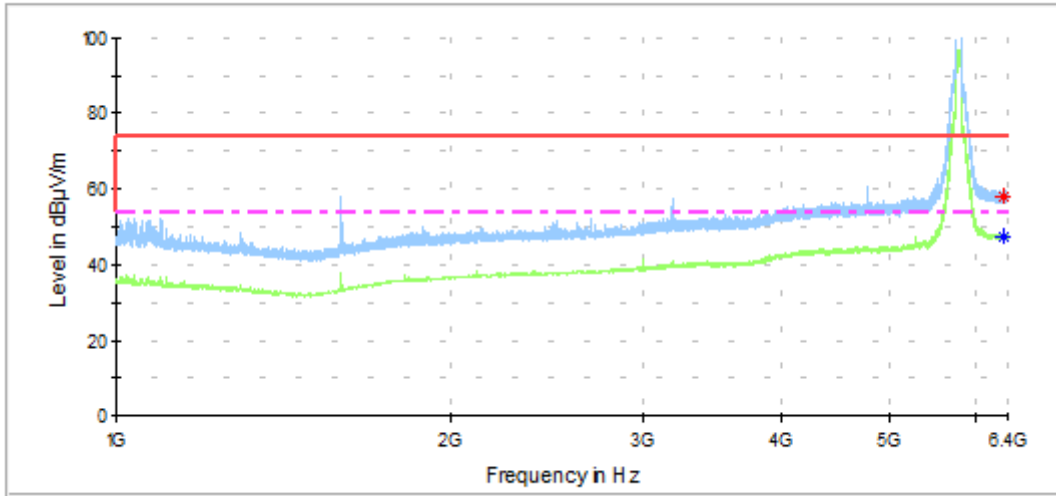


— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6366.6	---	47.0	54.0	7.0
6374.0	59.3	---	74.0	14.7
17938.9	---	46.1	54.0	7.9
17986.2	57.3	---	74.0	16.7

1 GHz – 18 GHz, 802.11ac80, HT8, Chain A+B

Radiated Spurious – CH155ac80

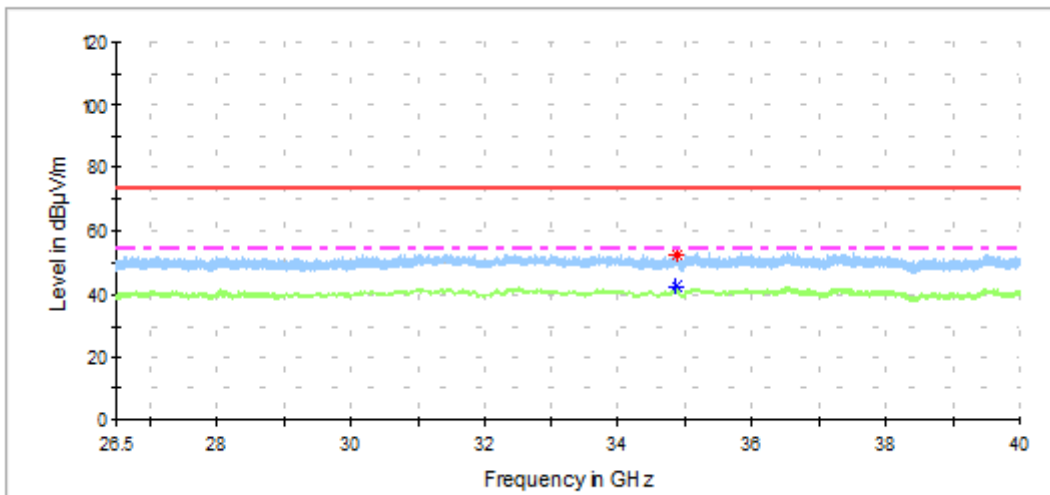
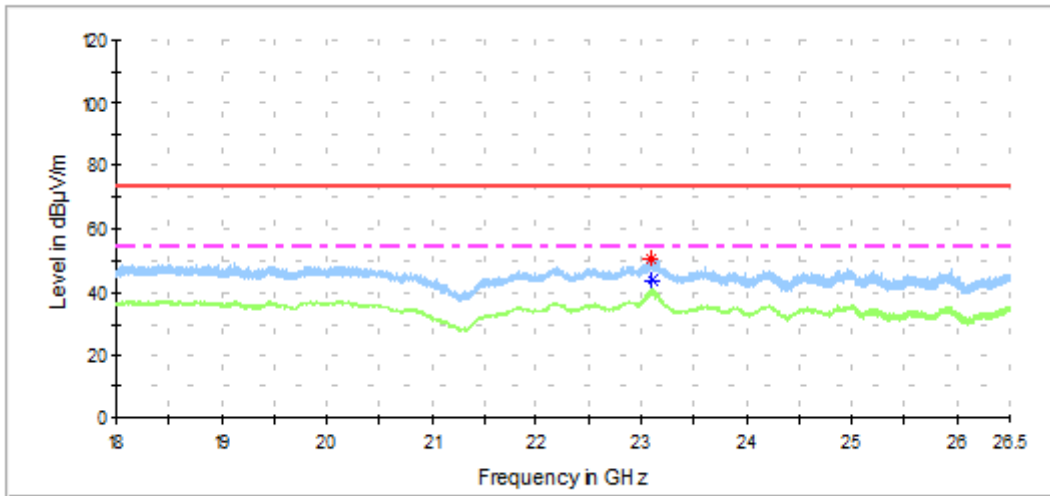


— Peak measurements — Avg measurements — Limit FCC Peak - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
6334.0	---	47.4	54.0	6.6
6356.3	58.0	---	74.0	16.0
17948.7	57.9	---	74.0	16.1
17971.9	---	47.5	54.0	6.5

18GHz – 40GHz

Radiated Spurious – All modes



— Peak measurements
 — Avg measurements
 — Limit FCC Peak
 - - - Limit FCC Avg

Frequency	MaxPeak	AvG	Limit	Margin
MHz	dBuV/m	dBuV/m	dBuV/m	dB
23098.1	50.7	---	74.0	23.3
23100.0	---	43.7	54.0	10.3
34860.4	---	42.2	54.0	11.8
34887.4	52.7	---	74.0	21.3

Note 1: The spurious signals detected do not depend on either the operating channel or the modulation mode.