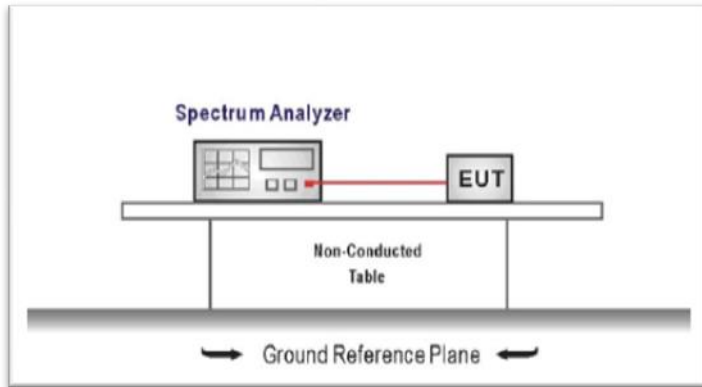


5.7. Band Edge and Spurious Emissions (Conducted)

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Establish a reference level by using the following procedure
 Center frequency=DTS channel center frequency
 The span = 1.5 times the DTS bandwidth.
 RBW = 100 kHz, VBW \geq 3 x RBW
 Detector = peak, Sweep time = auto couple, Trace mode = max hold
 Allow trace to fully stabilize
 Use the peak marker function to determine the maximum PSD level

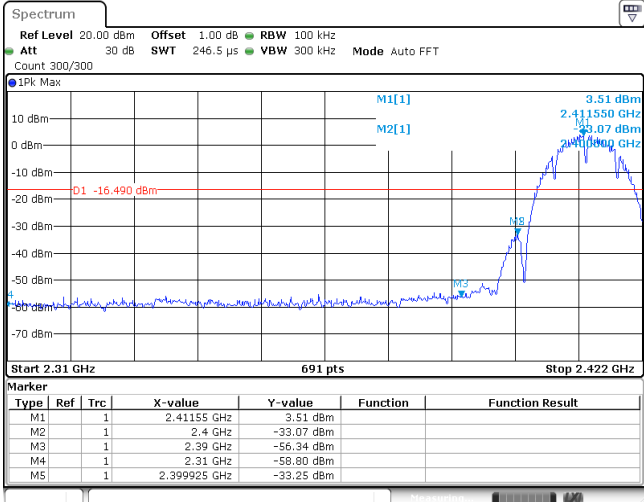
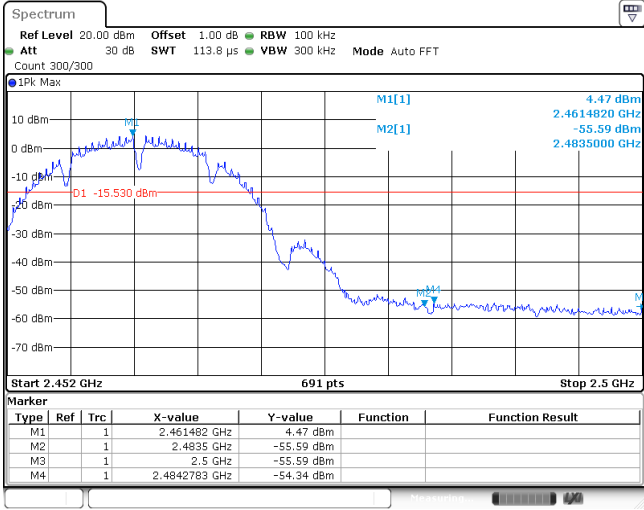
 Note: the channel found to contain the maximum PSD level can be used to establish the reference level.
3. Emission level measurement
 Set the center frequency and span to encompass frequency range to be measured
 RBW = 100 kHz, VBW \geq 3 x RBW
 Detector = peak, Sweep time = auto couple, Trace mode = max hold
 Allow trace to fully stabilize
 Use the peak marker function to determine the maximum amplitude level.
4. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
5. Ensure that the amplitude of all unwanted emission outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emission relative to the limit.

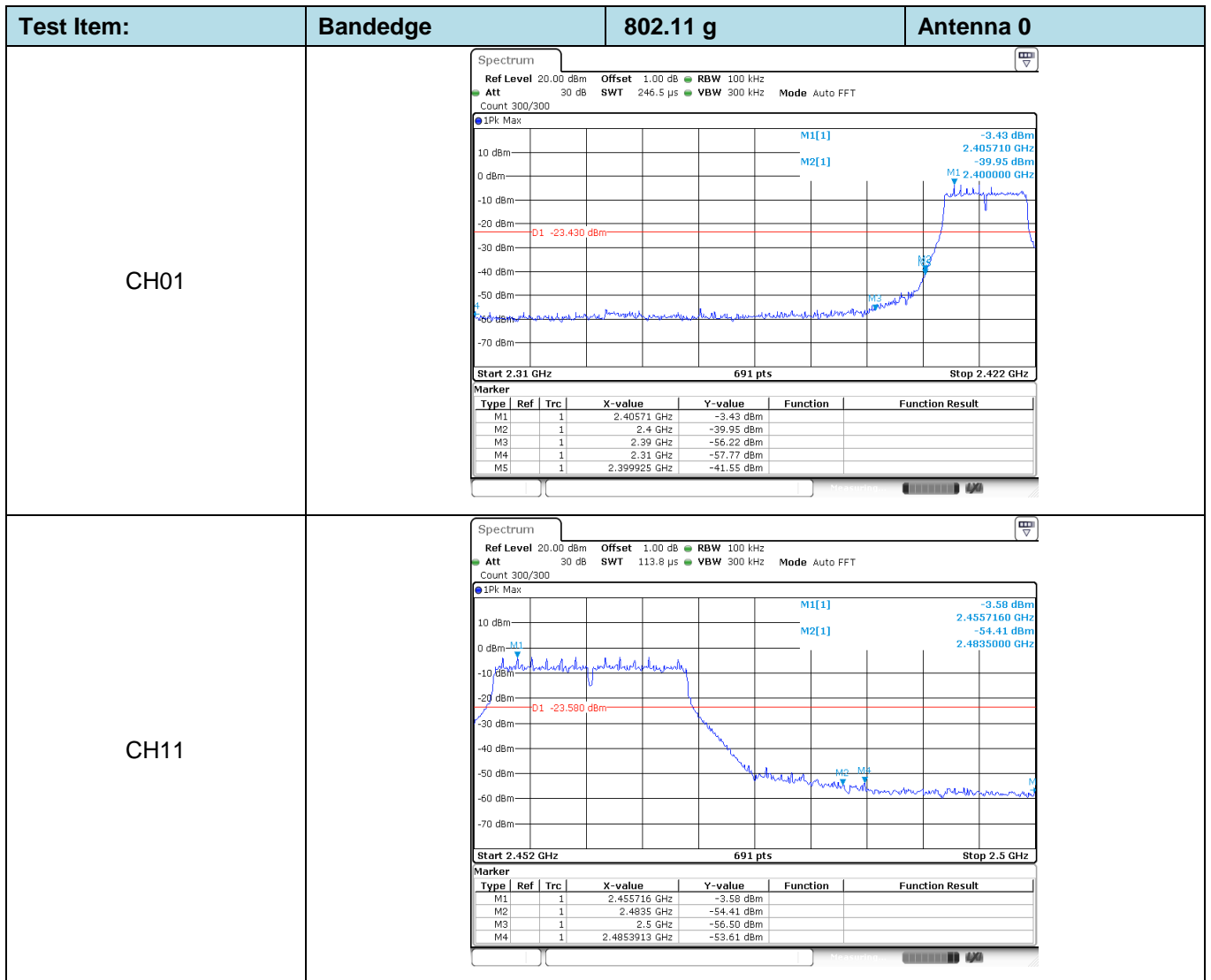
TEST MODE:

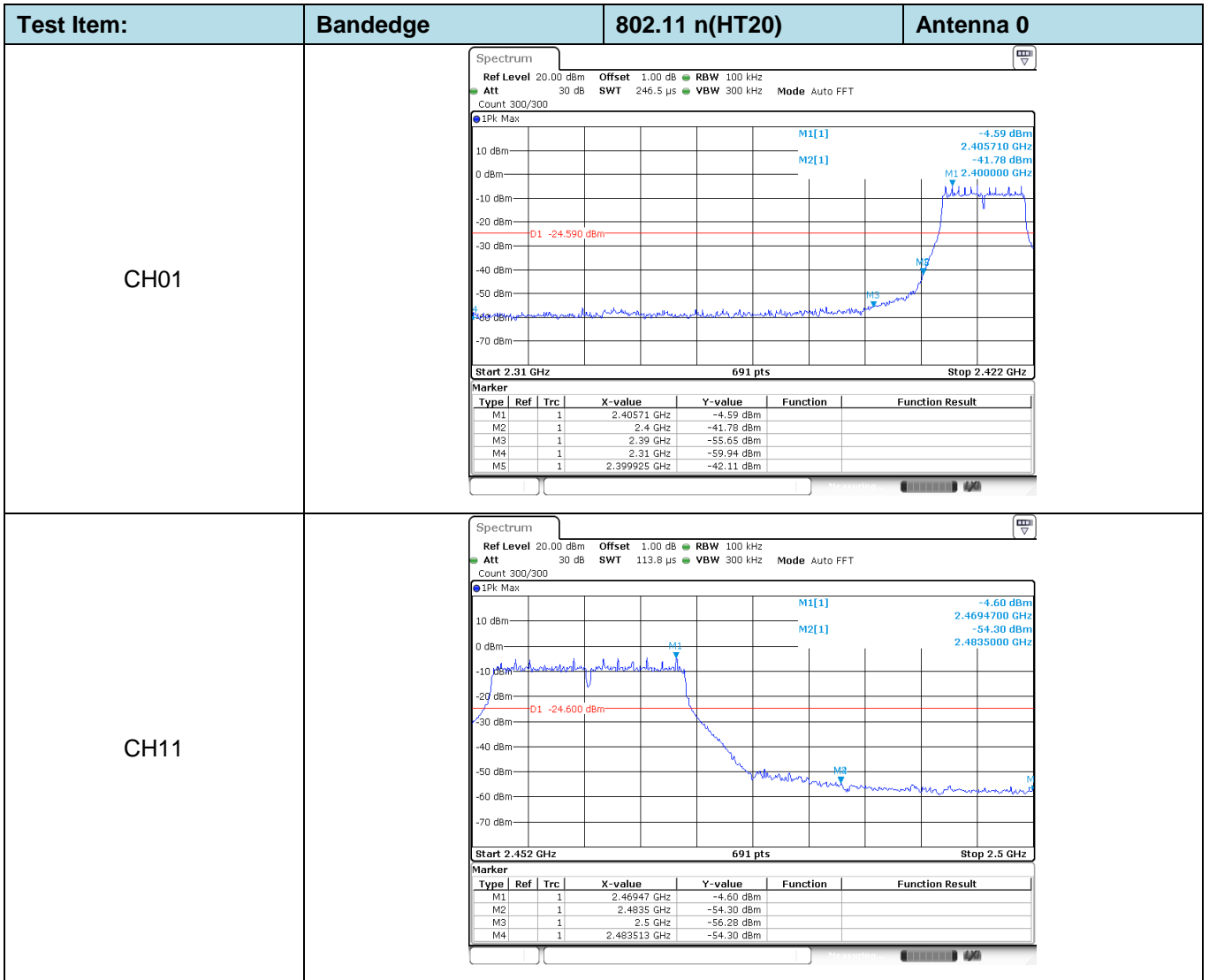
Please refer to the clause 3.3

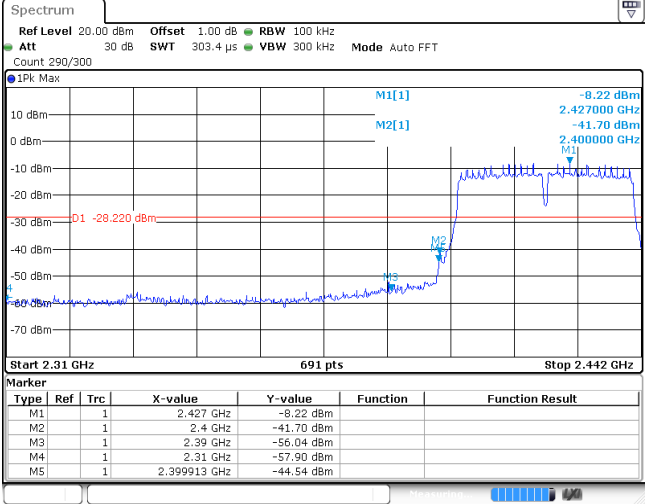
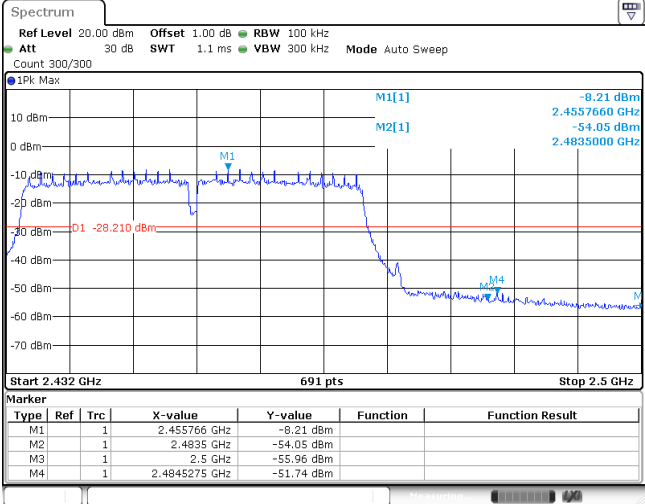
TEST RESULTS

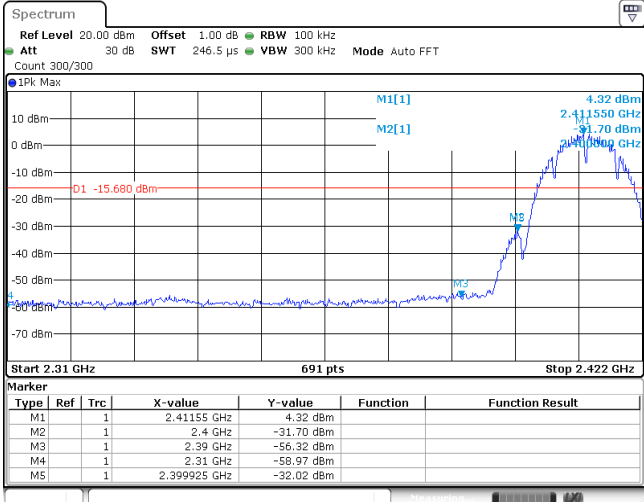
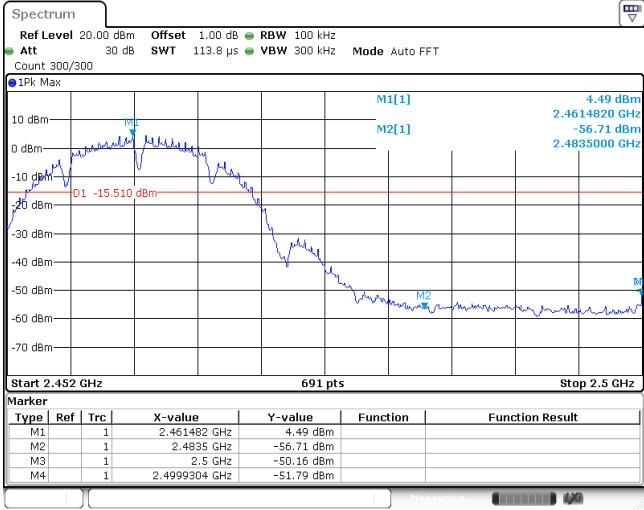
Passed Not Applicable

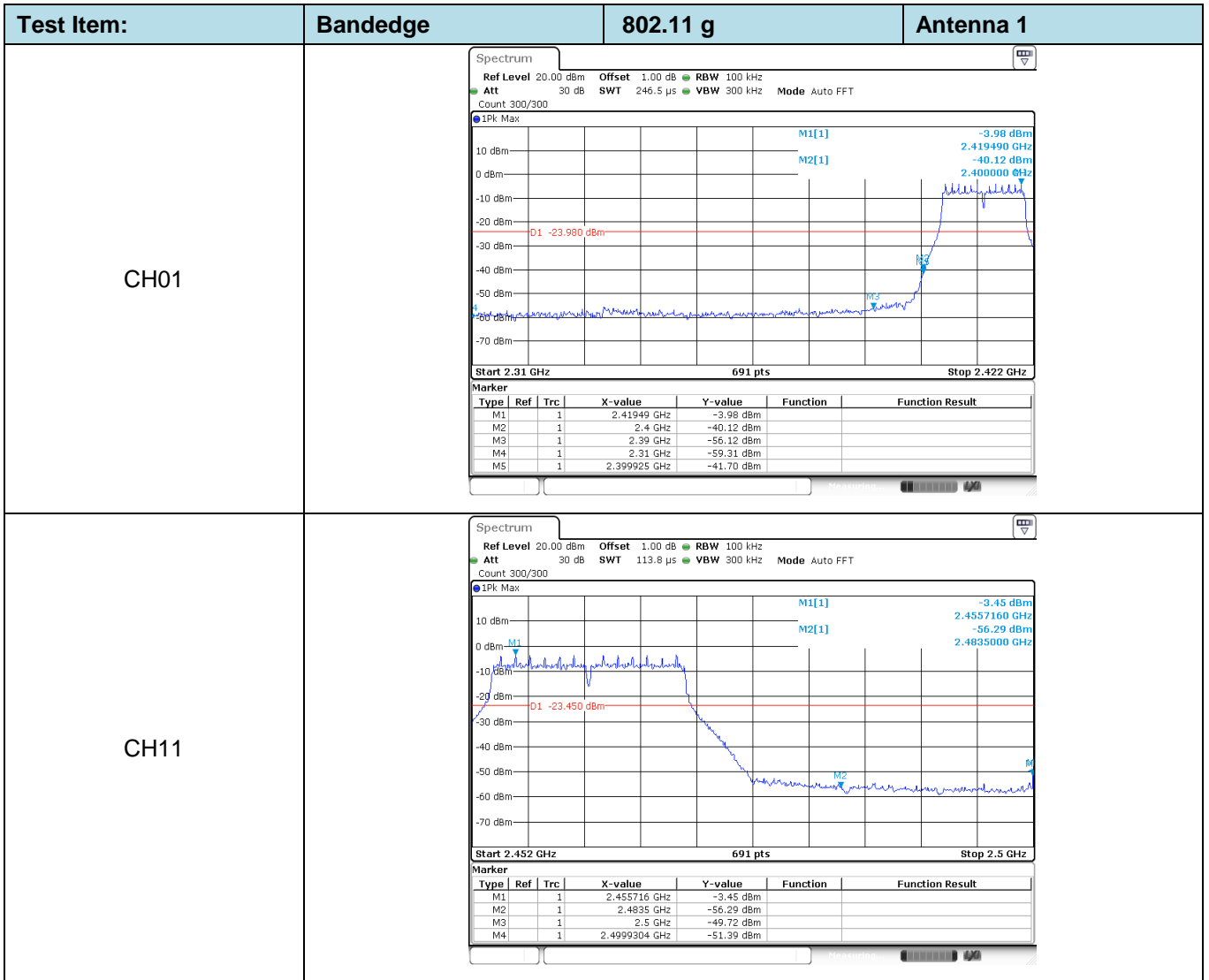
Test Item:	Bandedge	802.11 b	Antenna 0																																										
CH01	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 246.5 μs VBW 300 kHz Mode Auto FFT Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] 3.51 dBm 2.411550 GHz M2[1] -33.07 dBm 2.411550 GHz</p> <p>D1 -16.490 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.422 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td>1</td> <td>2.41155 GHz</td> <td>3.51 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td>1</td> <td>2.4 GHz</td> <td>-33.07 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td>1</td> <td>2.39 GHz</td> <td>-55.34 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td>1</td> <td>2.31 GHz</td> <td>-58.60 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td>1</td> <td>2.399925 GHz</td> <td>-33.25 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	2.41155 GHz	3.51 dBm			M2	1	1	2.4 GHz	-33.07 dBm			M3	1	1	2.39 GHz	-55.34 dBm			M4	1	1	2.31 GHz	-58.60 dBm			M5	1	1	2.399925 GHz	-33.25 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1	1	2.41155 GHz	3.51 dBm																																									
M2	1	1	2.4 GHz	-33.07 dBm																																									
M3	1	1	2.39 GHz	-55.34 dBm																																									
M4	1	1	2.31 GHz	-58.60 dBm																																									
M5	1	1	2.399925 GHz	-33.25 dBm																																									
CH11	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 113.8 μs VBW 300 kHz Mode Auto FFT Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] 4.47 dBm 2.4614820 GHz M2[1] -55.59 dBm 2.4835000 GHz</p> <p>D1 -15.530 dBm</p> <p>Start 2.452 GHz 691 pts Stop 2.5 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td>1</td> <td>2.461482 GHz</td> <td>4.47 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td>1</td> <td>2.4835 GHz</td> <td>-55.59 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td>1</td> <td>2.5 GHz</td> <td>-55.59 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td>1</td> <td>2.4842763 GHz</td> <td>-54.34 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1	1	2.461482 GHz	4.47 dBm			M2	1	1	2.4835 GHz	-55.59 dBm			M3	1	1	2.5 GHz	-55.59 dBm			M4	1	1	2.4842763 GHz	-54.34 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1	1	2.461482 GHz	4.47 dBm																																									
M2	1	1	2.4835 GHz	-55.59 dBm																																									
M3	1	1	2.5 GHz	-55.59 dBm																																									
M4	1	1	2.4842763 GHz	-54.34 dBm																																									

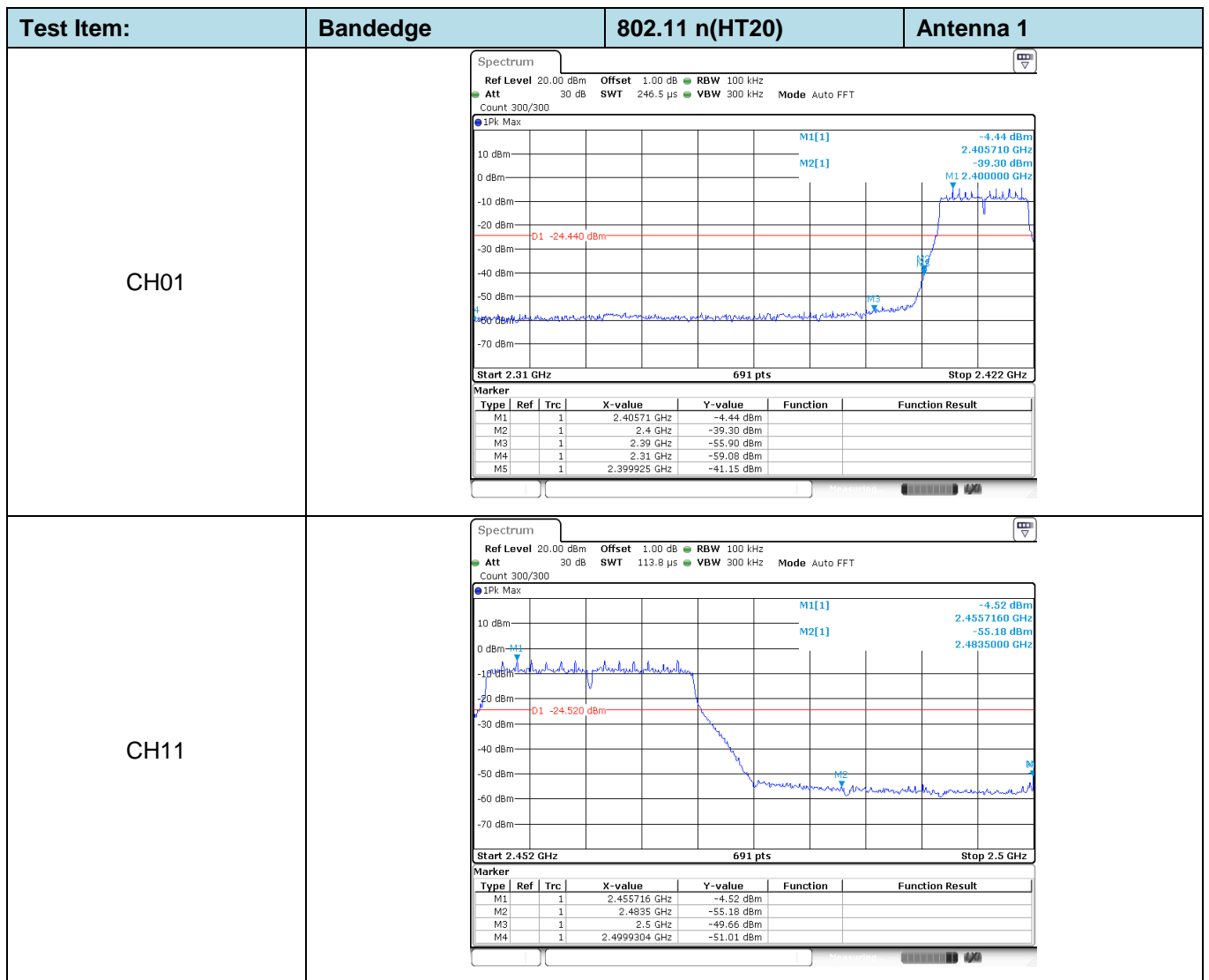


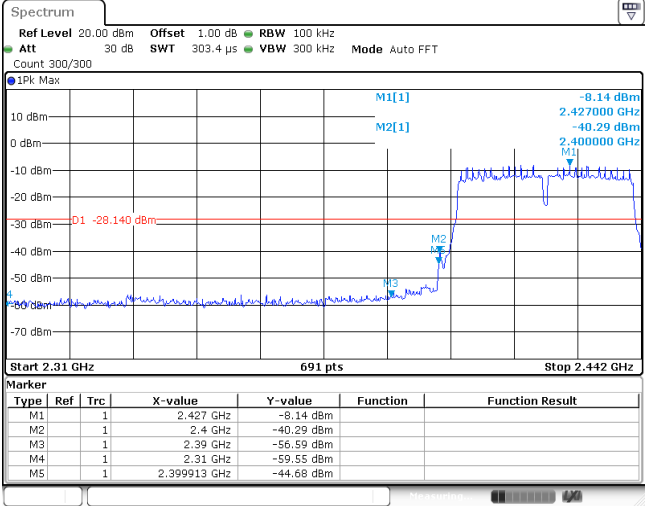
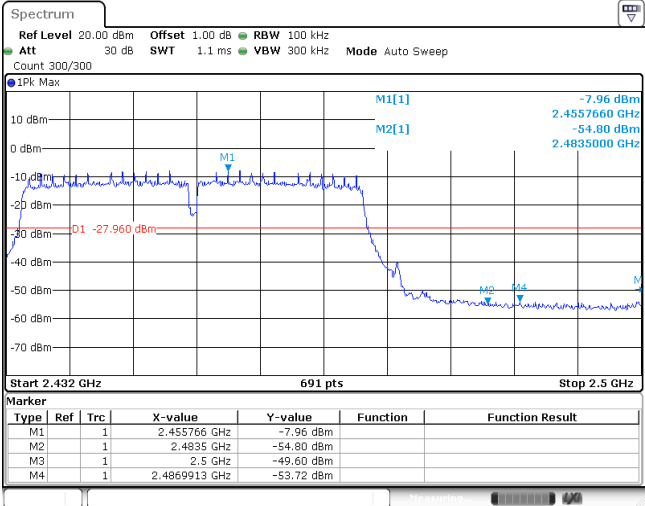


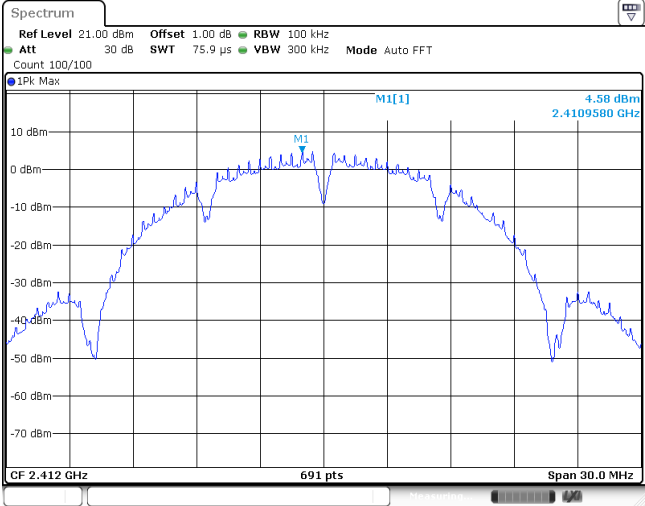
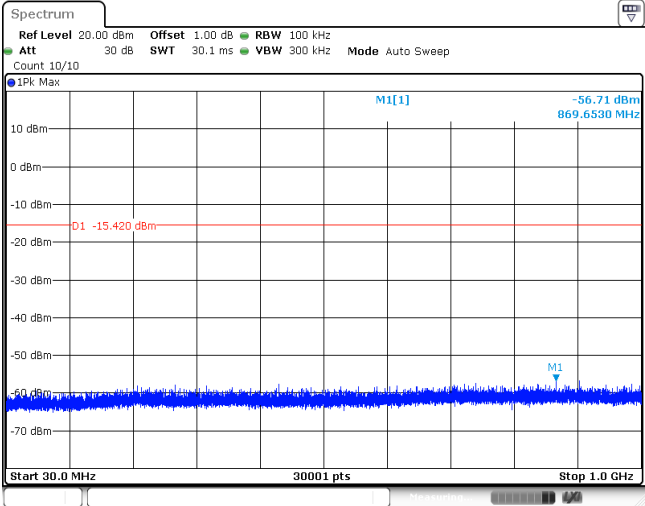
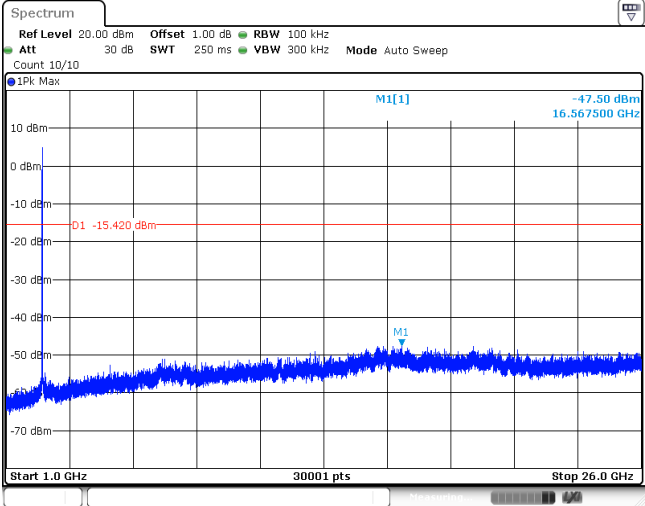
Test Item:	Bandedge	802.11 n(HT40)	Antenna 0																																										
CH03	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 303.4 μs VBW 300 kHz Mode Auto FFT Count 290/300</p> <p>1Pk Max</p> <p>M1[1] -8.22 dBm 2.427000 GHz M2[1] -41.70 dBm 2.400000 GHz</p> <p>D1 -28.220 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.442 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.427 GHz</td> <td>-8.22 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-41.70 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-56.04 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-57.90 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399913 GHz</td> <td>-44.54 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.427 GHz	-8.22 dBm			M2	1		2.4 GHz	-41.70 dBm			M3	1		2.39 GHz	-56.04 dBm			M4	1		2.31 GHz	-57.90 dBm			M5	1		2.399913 GHz	-44.54 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.427 GHz	-8.22 dBm																																									
M2	1		2.4 GHz	-41.70 dBm																																									
M3	1		2.39 GHz	-56.04 dBm																																									
M4	1		2.31 GHz	-57.90 dBm																																									
M5	1		2.399913 GHz	-44.54 dBm																																									
CH09	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300</p> <p>1Pk Max</p> <p>M1[1] -8.21 dBm 2.455766 GHz M2[1] -54.05 dBm 2.483500 GHz</p> <p>D1 -28.210 dBm</p> <p>Start 2.432 GHz 691 pts Stop 2.5 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.455766 GHz</td> <td>-8.21 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-54.05 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-55.96 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.4845275 GHz</td> <td>-51.74 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.455766 GHz	-8.21 dBm			M2	1		2.4835 GHz	-54.05 dBm			M3	1		2.5 GHz	-55.96 dBm			M4	1		2.4845275 GHz	-51.74 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.455766 GHz	-8.21 dBm																																									
M2	1		2.4835 GHz	-54.05 dBm																																									
M3	1		2.5 GHz	-55.96 dBm																																									
M4	1		2.4845275 GHz	-51.74 dBm																																									

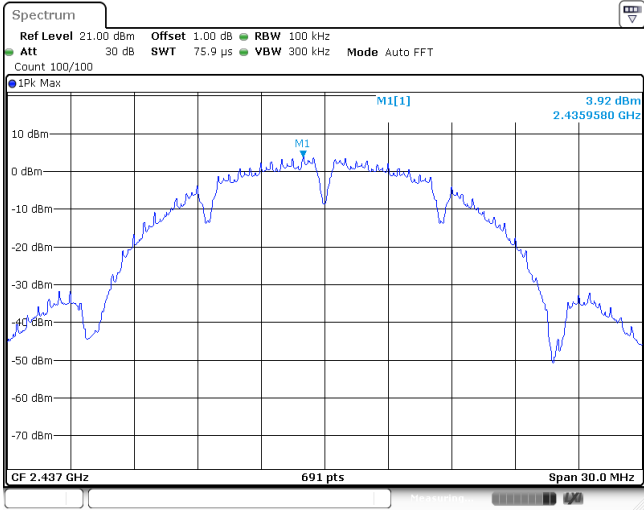
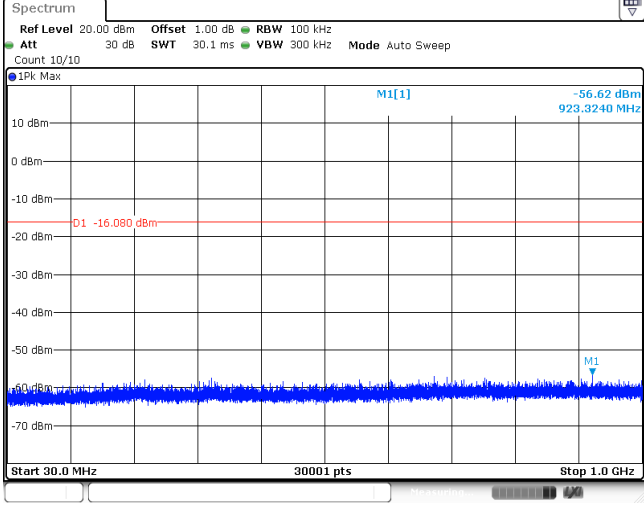
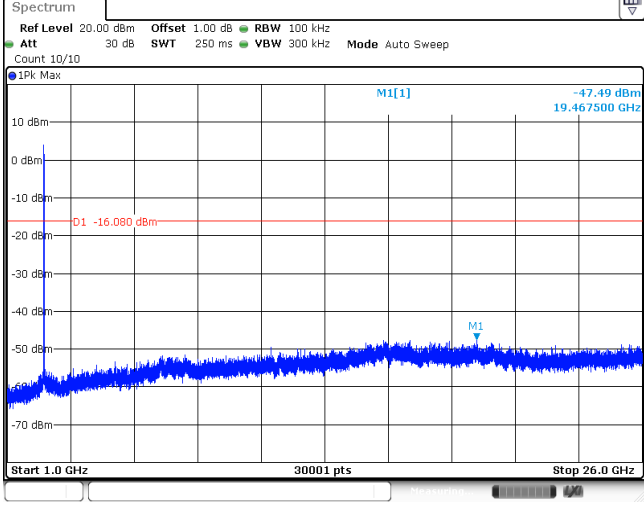
Test Item:	Bandedge	802.11 b	Antenna 1																																										
CH01	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 246.5 μs VBW 300 kHz Mode Auto FFT Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] 4.32 dBm 2.411550 GHz M2[1] -31.70 dBm 2.399925 GHz</p> <p>D1 -15.680 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.422 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.41155 GHz</td> <td>4.32 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-31.70 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-56.32 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-58.97 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399925 GHz</td> <td>-32.02 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.41155 GHz	4.32 dBm			M2	1		2.4 GHz	-31.70 dBm			M3	1		2.39 GHz	-56.32 dBm			M4	1		2.31 GHz	-58.97 dBm			M5	1		2.399925 GHz	-32.02 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.41155 GHz	4.32 dBm																																									
M2	1		2.4 GHz	-31.70 dBm																																									
M3	1		2.39 GHz	-56.32 dBm																																									
M4	1		2.31 GHz	-58.97 dBm																																									
M5	1		2.399925 GHz	-32.02 dBm																																									
CH11	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 113.8 μs VBW 300 kHz Mode Auto FFT Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] 4.49 dBm 2.4614820 GHz M2[1] -56.71 dBm 2.4835000 GHz</p> <p>D1 -15.510 dBm</p> <p>Start 2.452 GHz 691 pts Stop 2.5 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.461482 GHz</td> <td>4.49 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-56.71 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-50.16 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.4999304 GHz</td> <td>-51.79 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.461482 GHz	4.49 dBm			M2	1		2.4835 GHz	-56.71 dBm			M3	1		2.5 GHz	-50.16 dBm			M4	1		2.4999304 GHz	-51.79 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.461482 GHz	4.49 dBm																																									
M2	1		2.4835 GHz	-56.71 dBm																																									
M3	1		2.5 GHz	-50.16 dBm																																									
M4	1		2.4999304 GHz	-51.79 dBm																																									

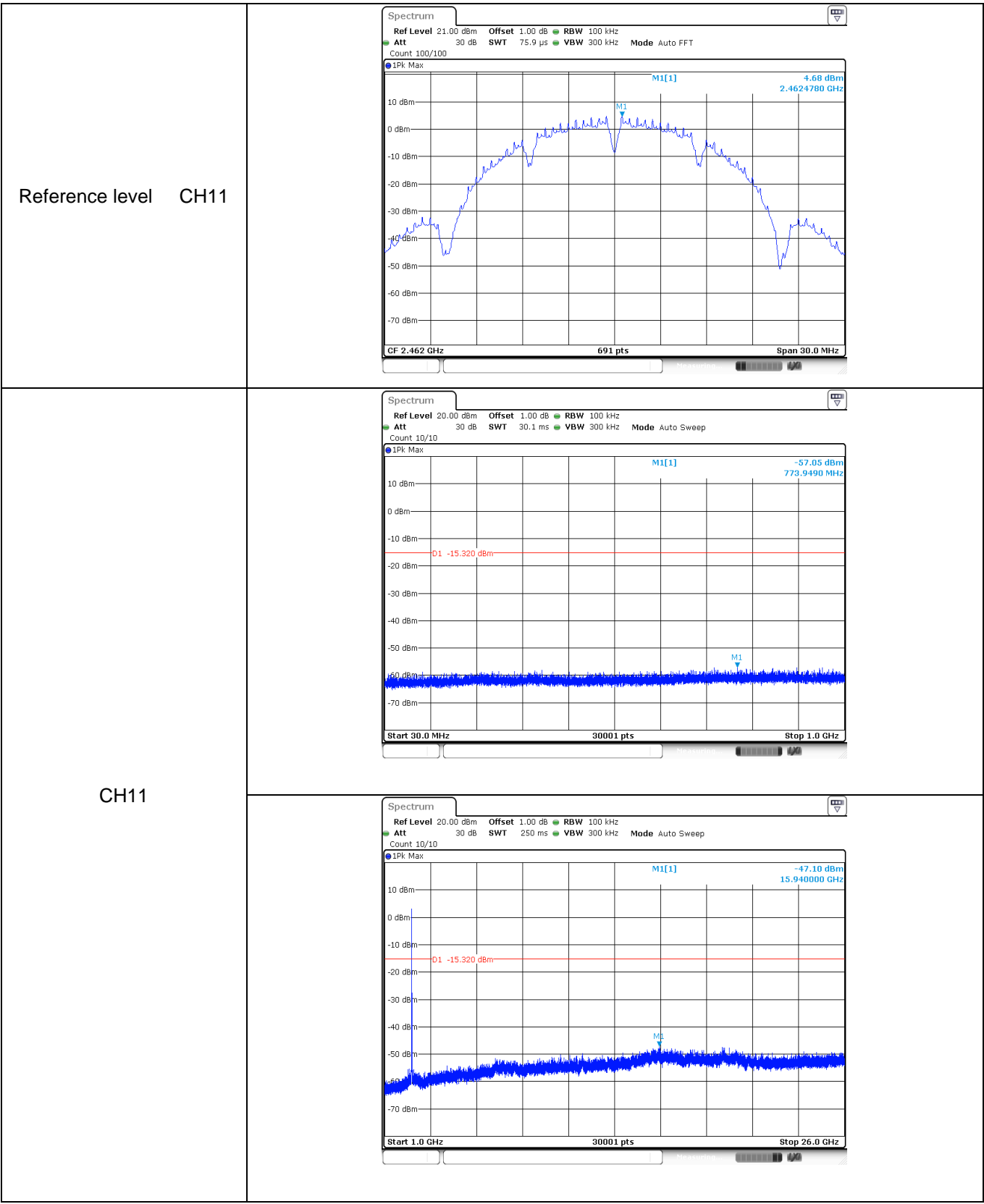


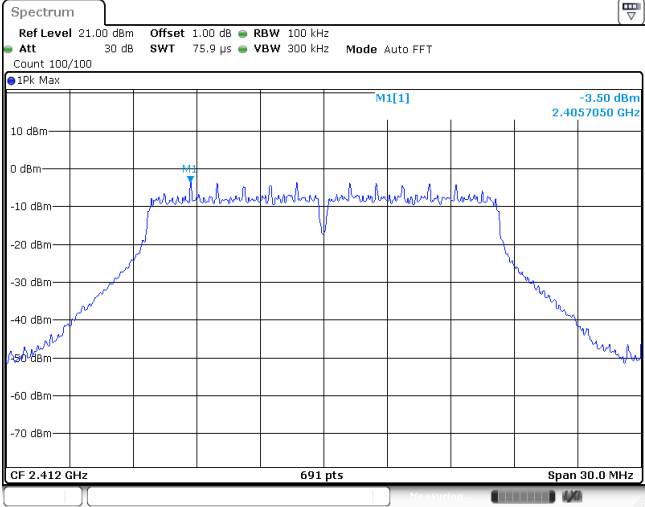
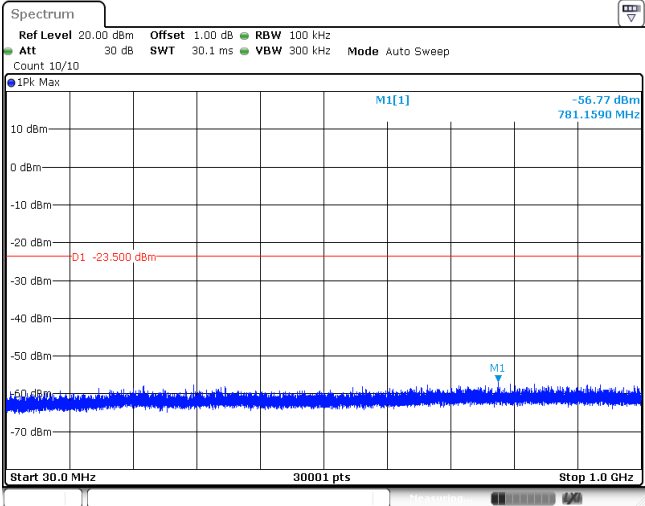
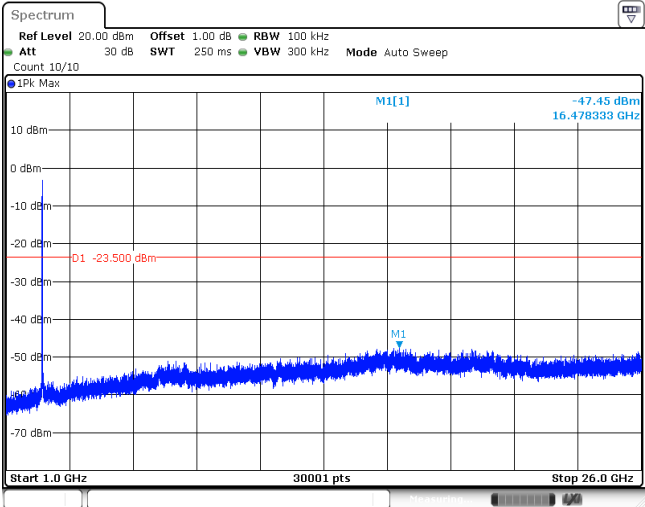


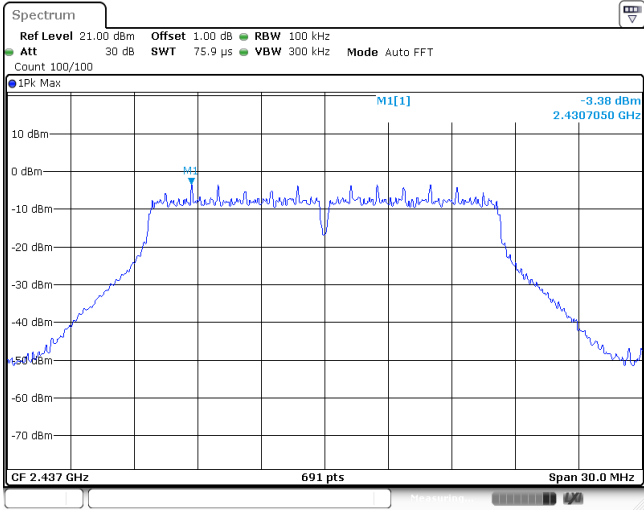
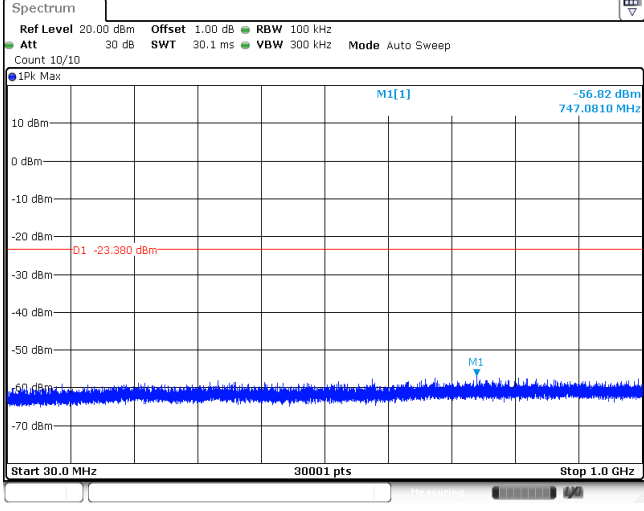
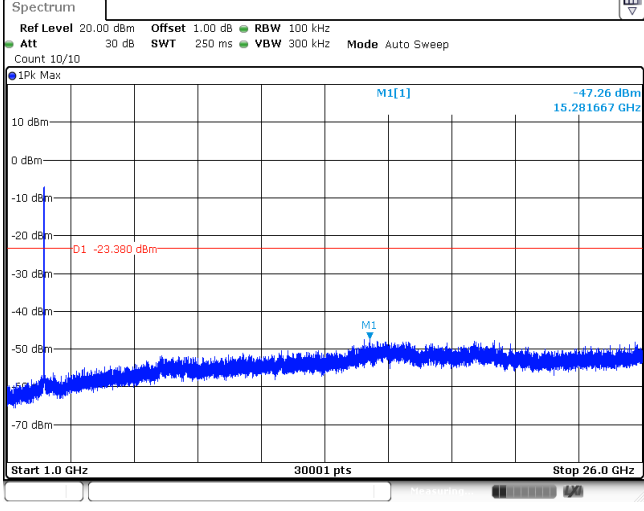
Test Item:	Bandedge	802.11 n(HT40)	Antenna 1																																										
CH03	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 303.4 μs VBW 300 kHz Mode Auto FFT Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] -8.14 dBm 2.427000 GHz M2[1] -40.29 dBm 2.400000 GHz D1 -29.140 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.442 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.427 GHz</td> <td>-8.14 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-40.29 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-50.59 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-59.55 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399913 GHz</td> <td>-44.68 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.427 GHz	-8.14 dBm			M2	1		2.4 GHz	-40.29 dBm			M3	1		2.39 GHz	-50.59 dBm			M4	1		2.31 GHz	-59.55 dBm			M5	1		2.399913 GHz	-44.68 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.427 GHz	-8.14 dBm																																									
M2	1		2.4 GHz	-40.29 dBm																																									
M3	1		2.39 GHz	-50.59 dBm																																									
M4	1		2.31 GHz	-59.55 dBm																																									
M5	1		2.399913 GHz	-44.68 dBm																																									
CH09	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300</p> <p>1Pk Max</p> <p>10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm</p> <p>M1[1] -7.96 dBm 2.455766 GHz M2[1] -54.80 dBm 2.483500 GHz D1 -27.960 dBm</p> <p>Start 2.432 GHz 691 pts Stop 2.5 GHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.455766 GHz</td> <td>-7.96 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-54.80 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-49.60 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.4869913 GHz</td> <td>-53.72 dBm</td> <td></td> <td></td> </tr> </tbody> </table>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.455766 GHz	-7.96 dBm			M2	1		2.4835 GHz	-54.80 dBm			M3	1		2.5 GHz	-49.60 dBm			M4	1		2.4869913 GHz	-53.72 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.455766 GHz	-7.96 dBm																																									
M2	1		2.4835 GHz	-54.80 dBm																																									
M3	1		2.5 GHz	-49.60 dBm																																									
M4	1		2.4869913 GHz	-53.72 dBm																																									

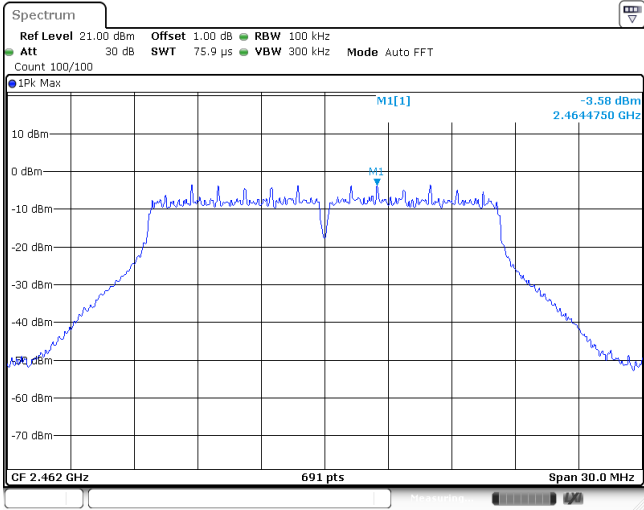
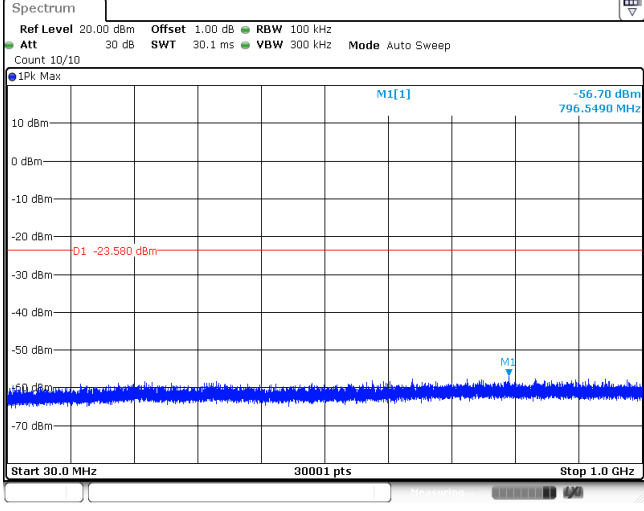
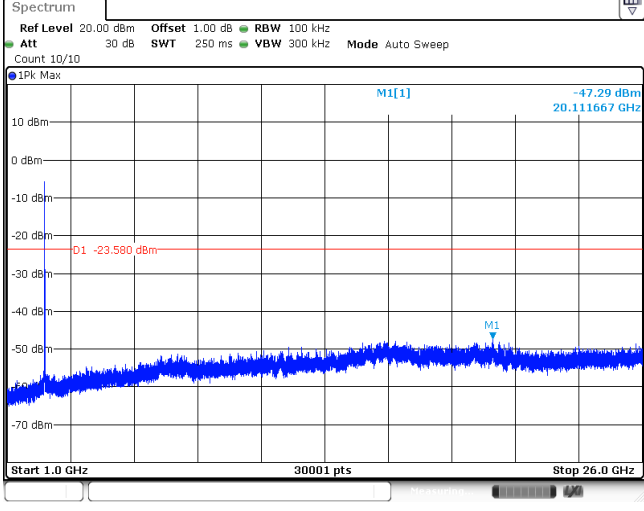
Test Item:	SE	802.11 b	Antenna 0
Reference level CH01			
CH01			
CH01			

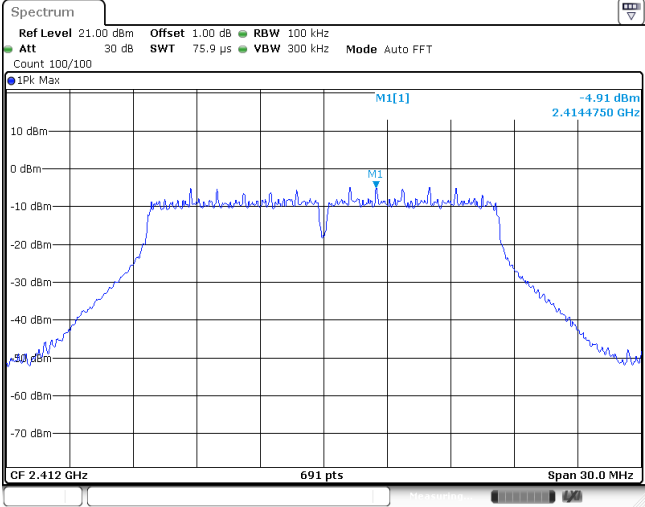
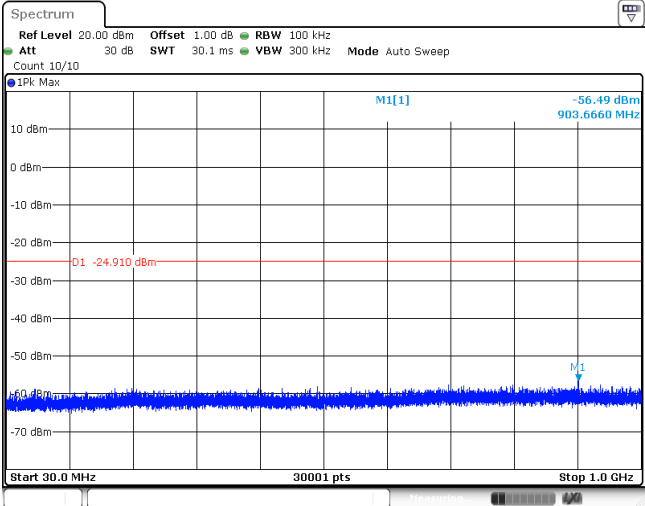
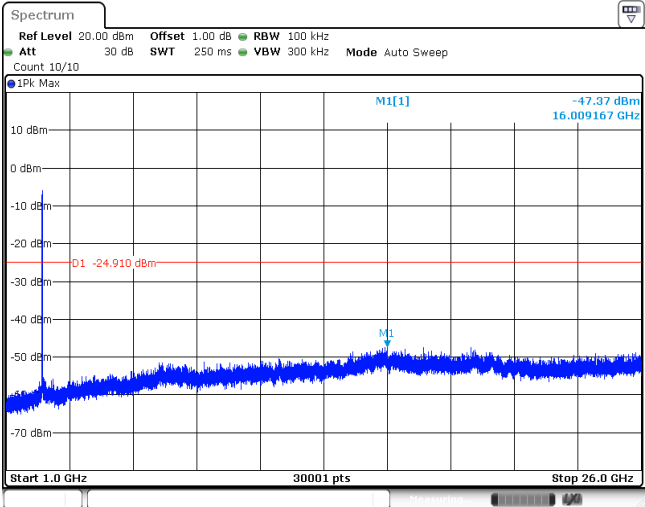
<p>Reference level CH06</p>	
<p>CH06</p>	
	



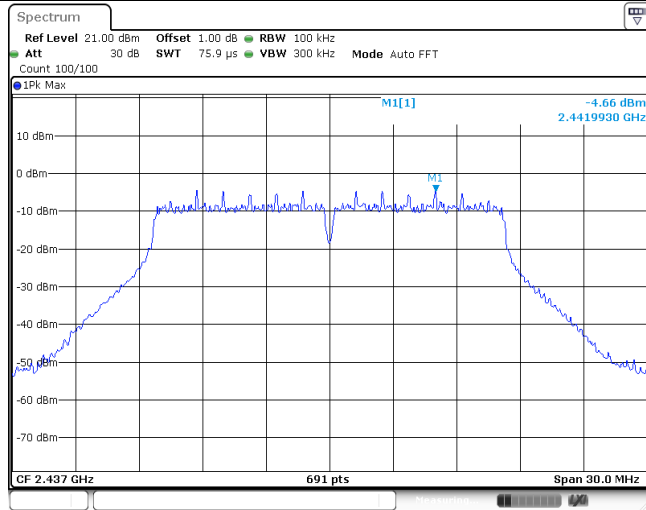
Test Item:	SE	802.11 g	Antenna 0
Reference level CH01			
CH01			
CH01			

Reference level CH06	
CH06	
CH06	

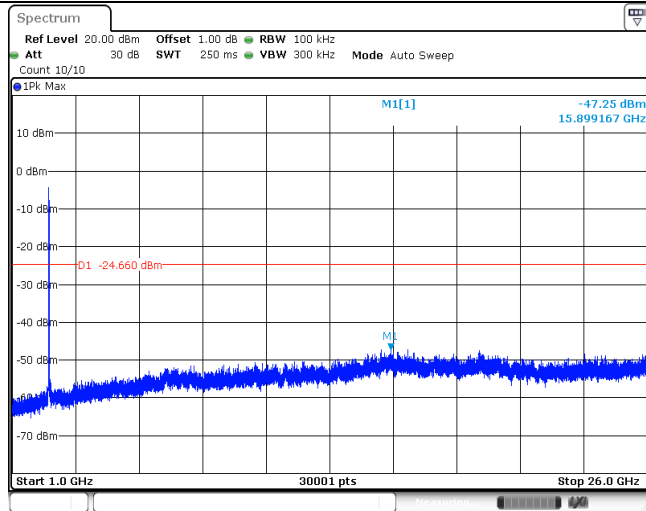
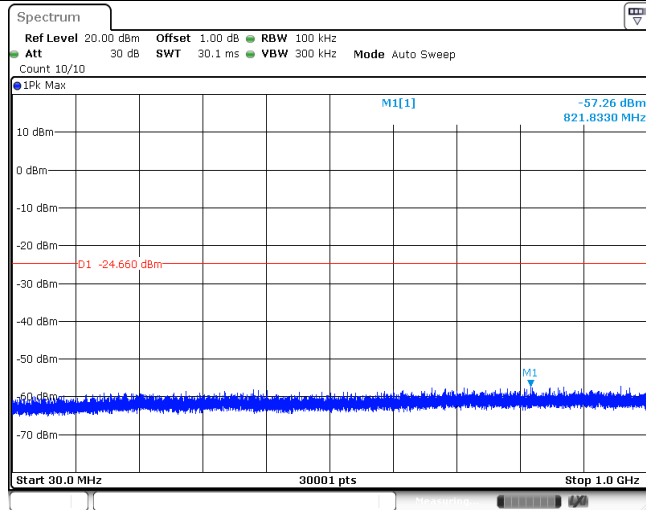
Reference level CH11	
CH11	
CH11	

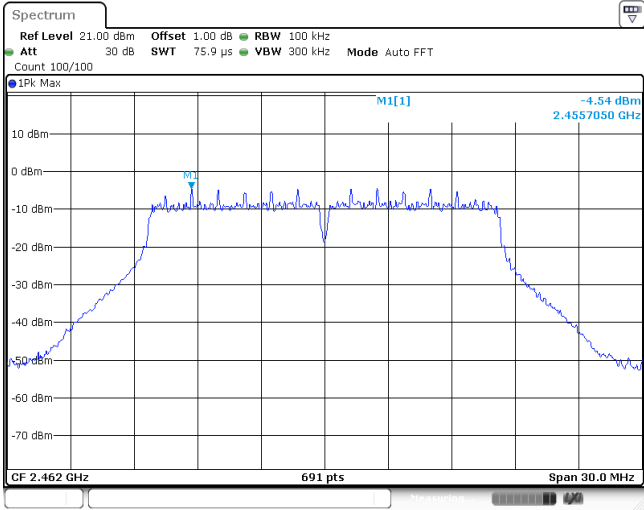
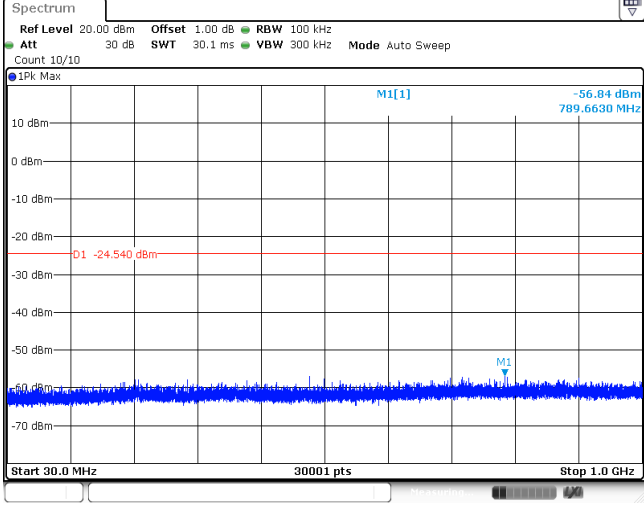
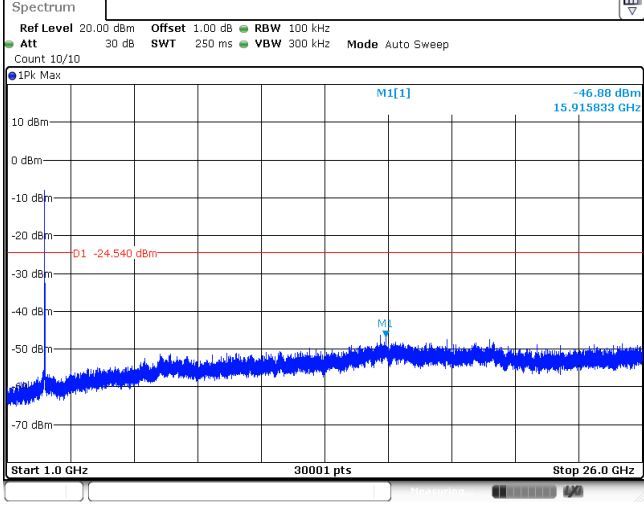
Test Item:	SE	802.11 n(HT20)	Antenna 0
Reference level CH01			
CH01			
CH01			

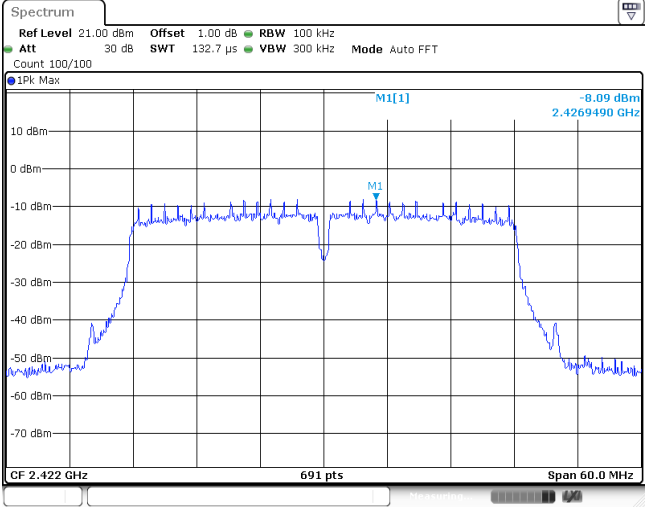
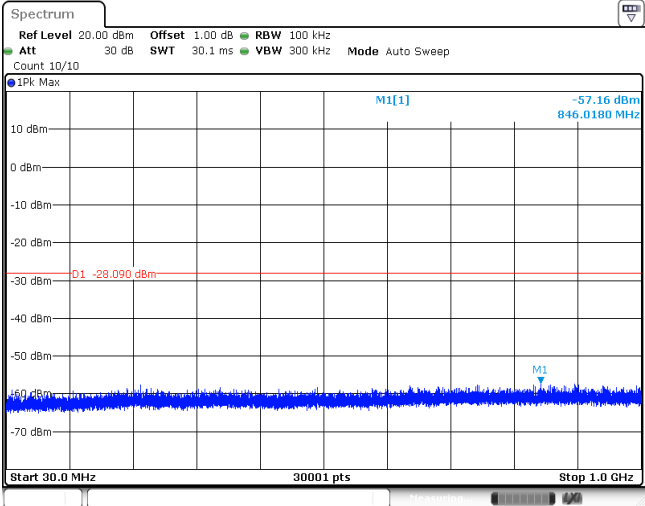
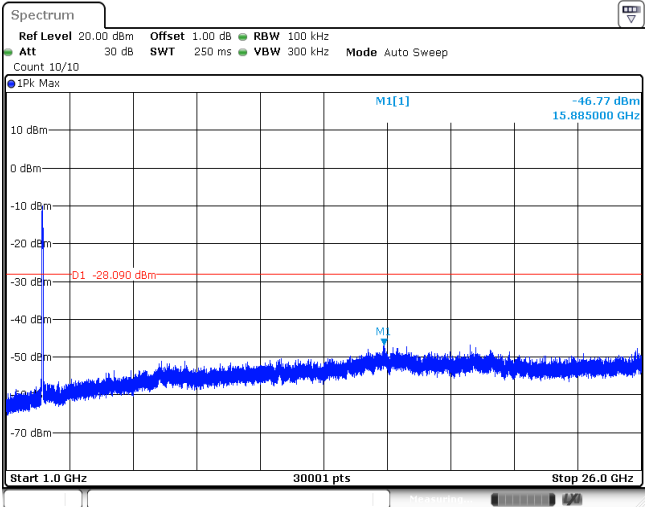
Reference level CH06



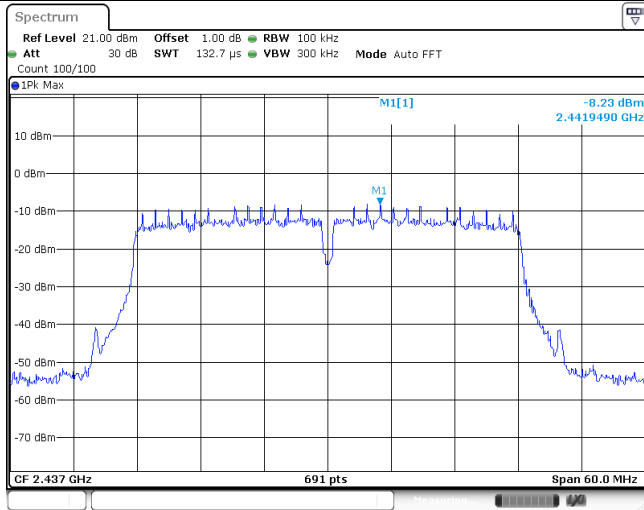
CH06



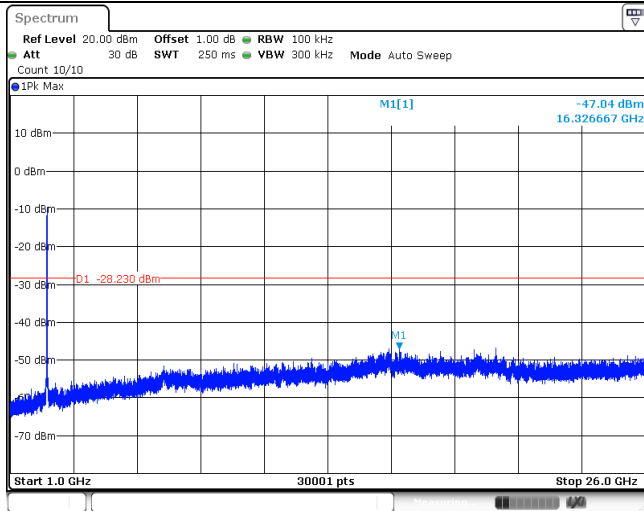
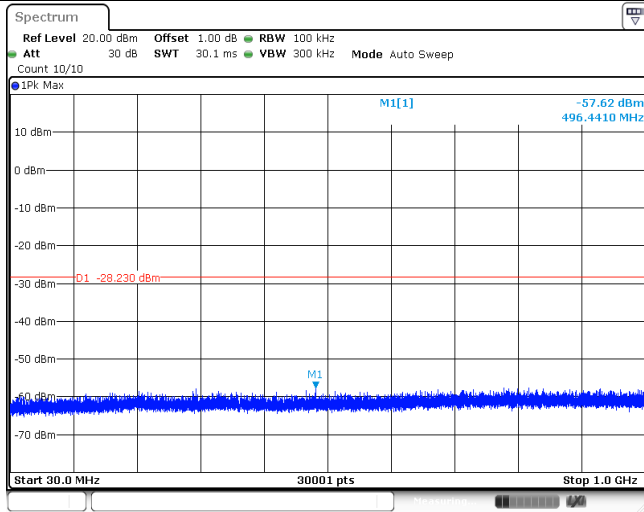
Reference level CH11	
CH11	
CH11	

Test Item:	SE	802.11 n(HT40)	Antenna 0
Reference level CH03			
CH03			
CH03			

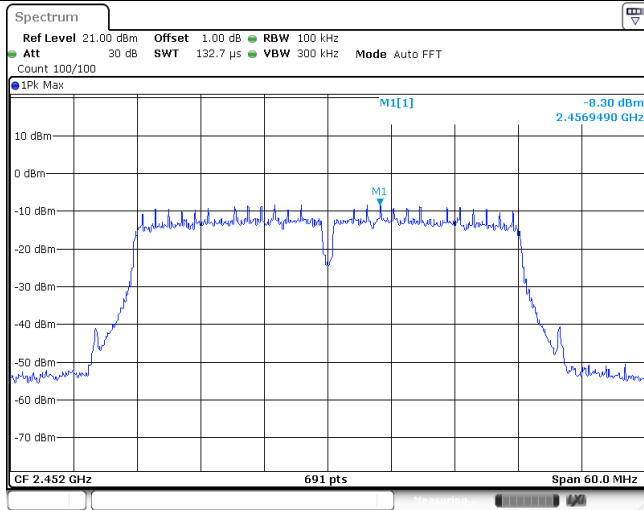
Reference level CH06



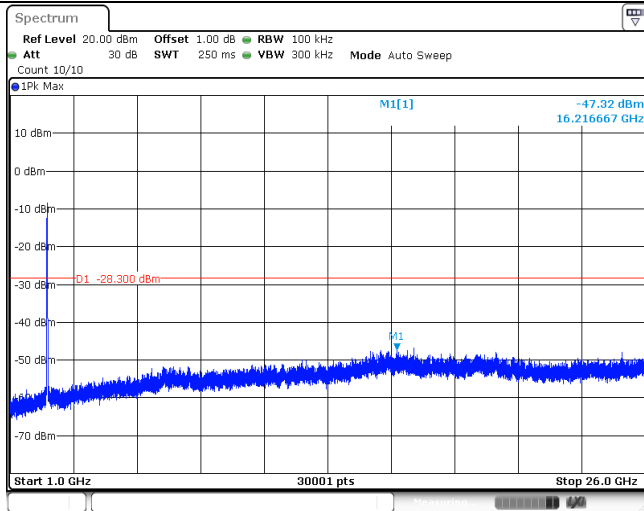
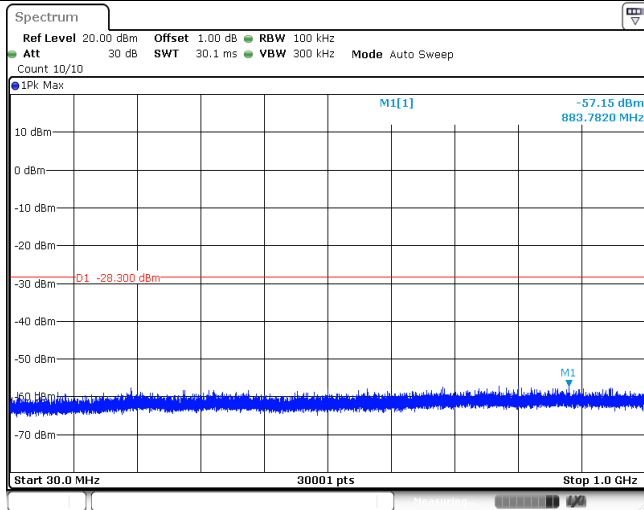
CH06

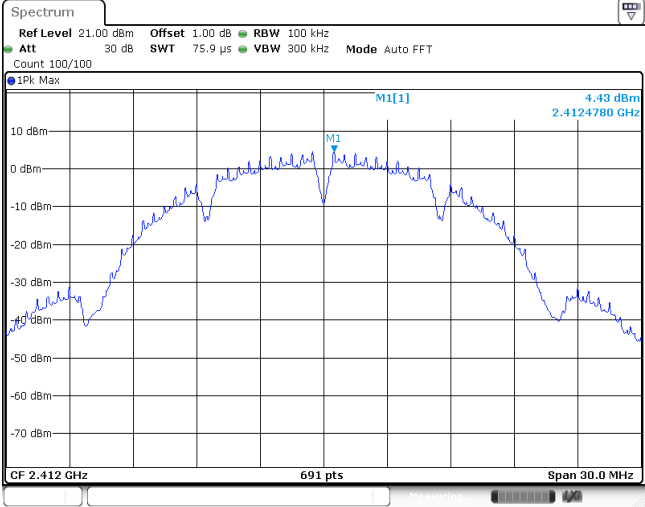
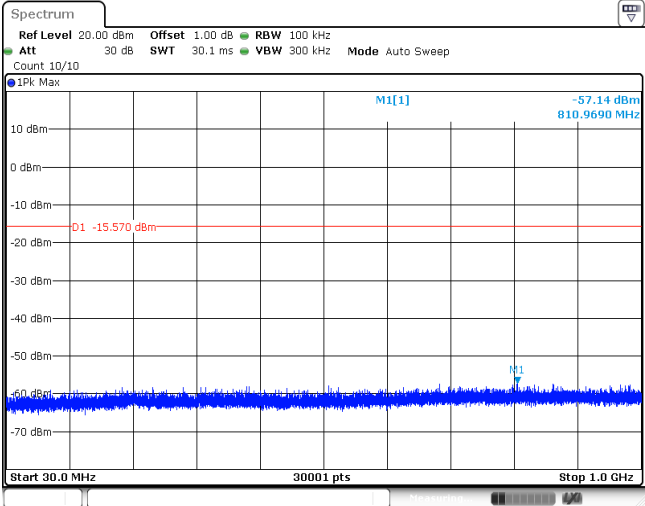
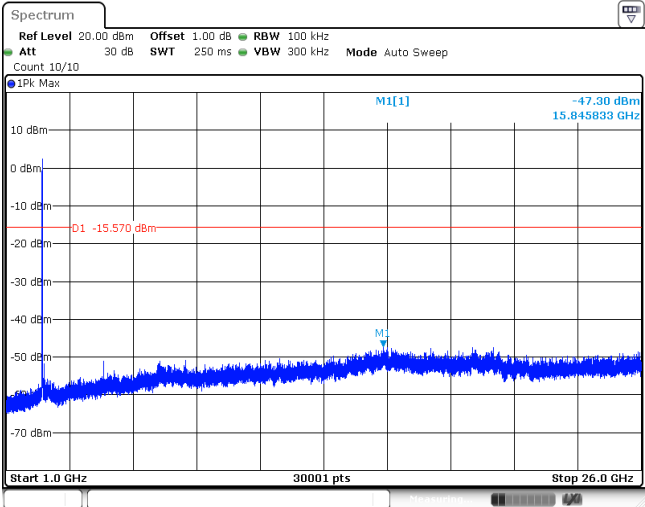


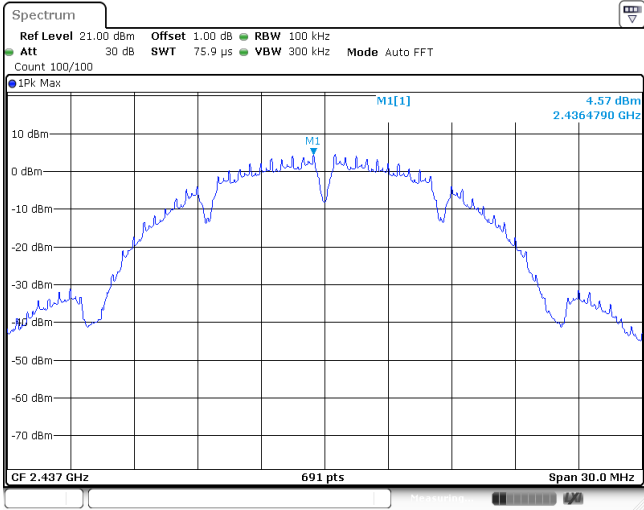
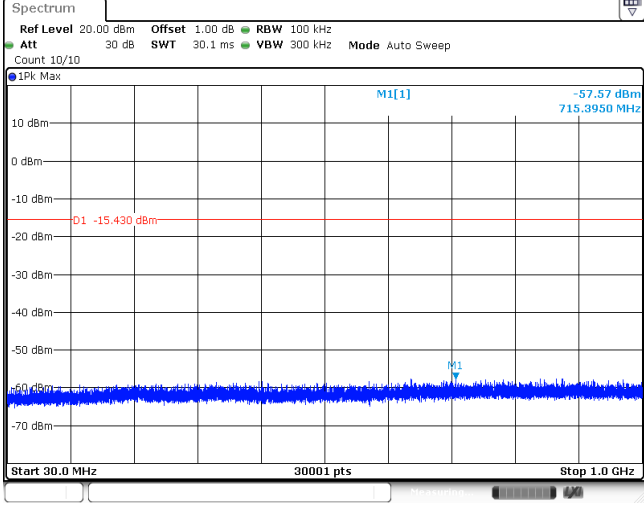
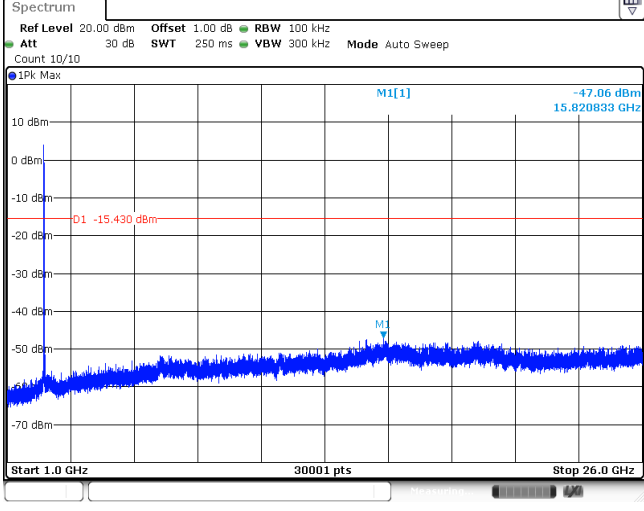
Reference level CH09

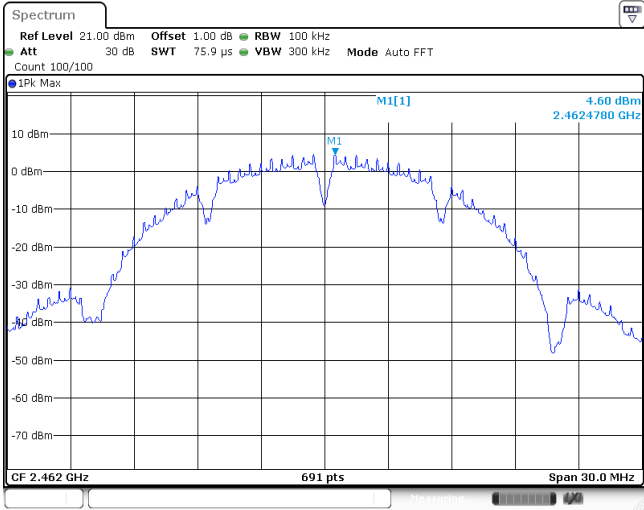
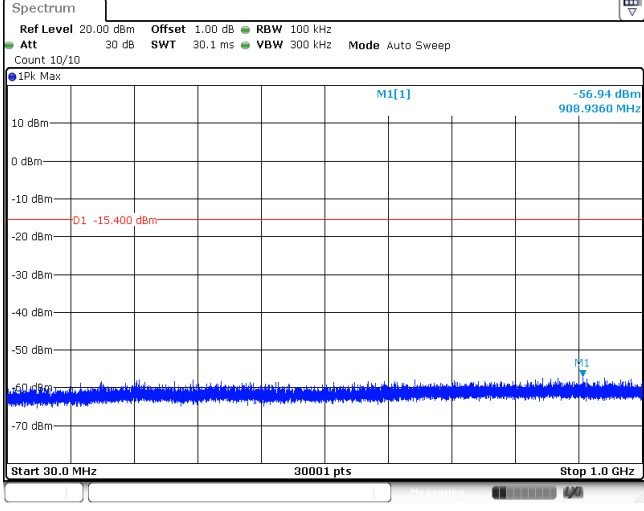
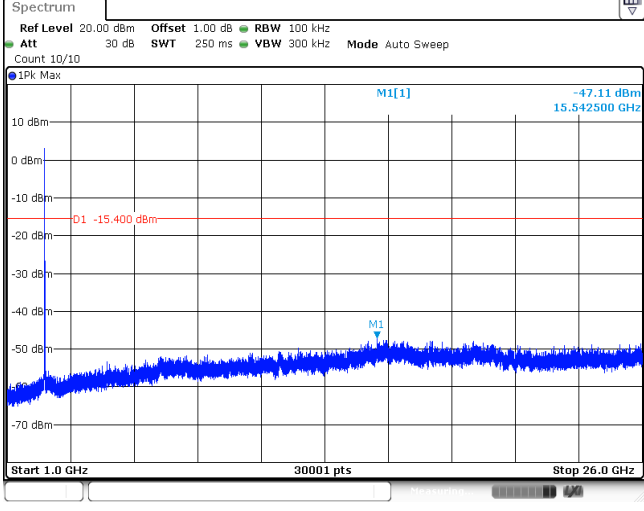


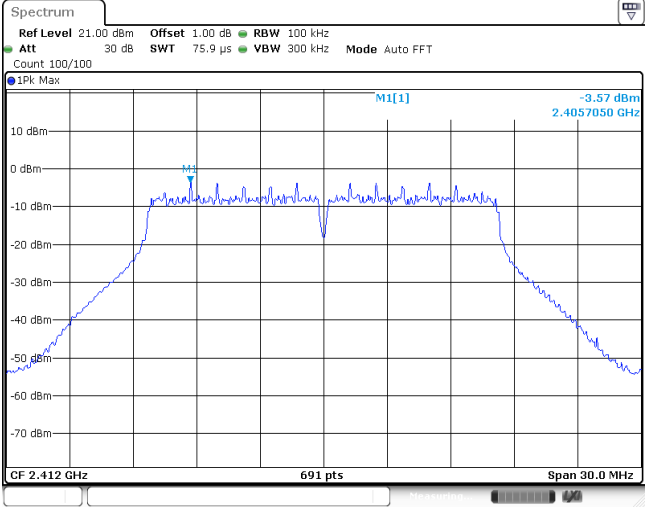
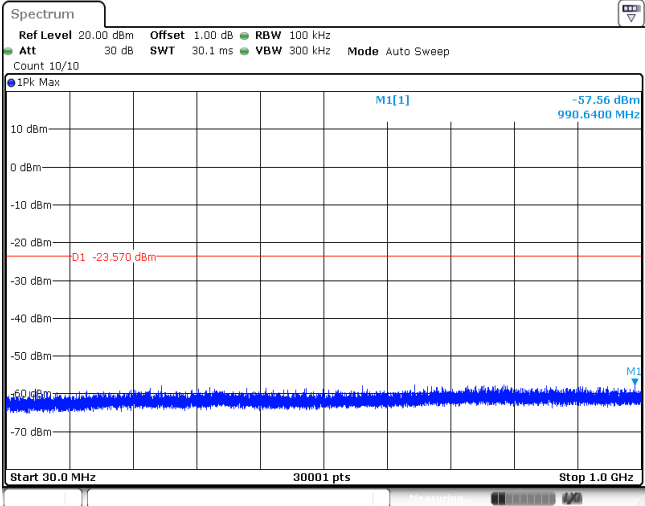
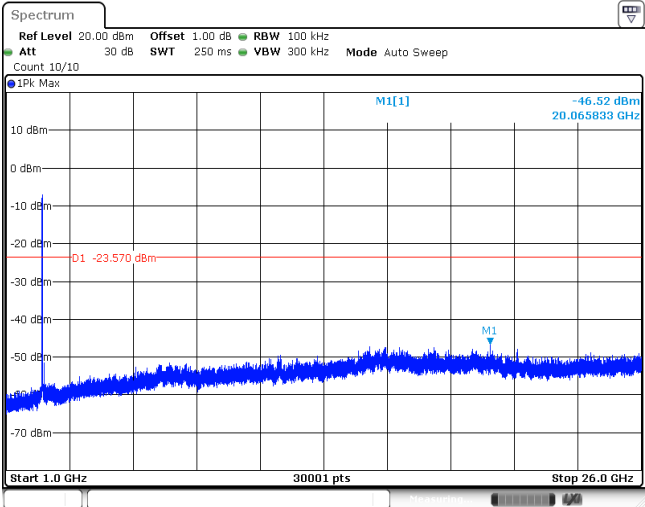
CH09

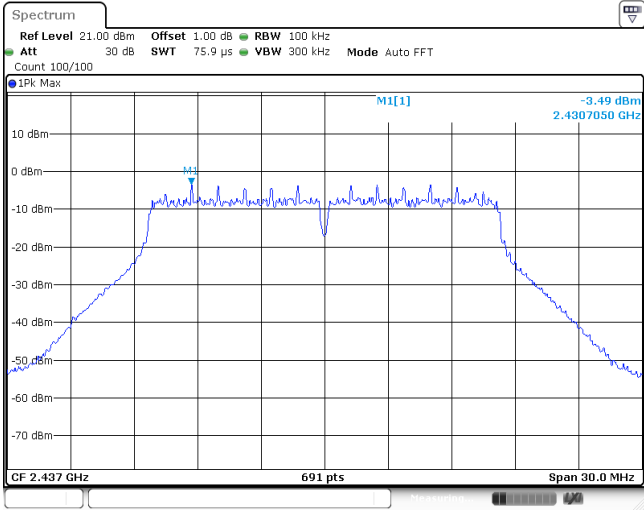
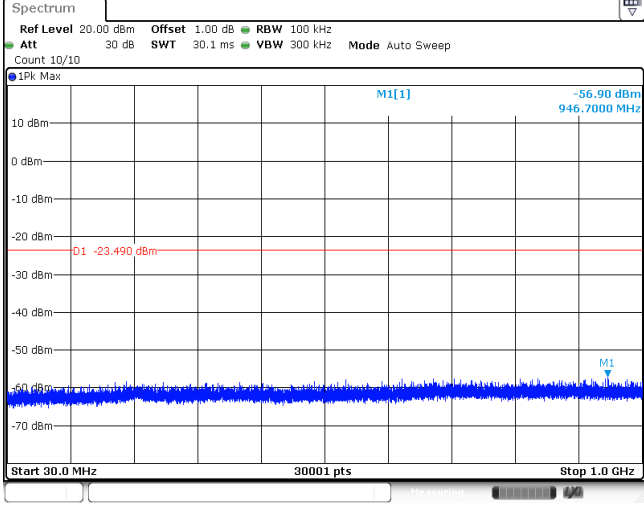
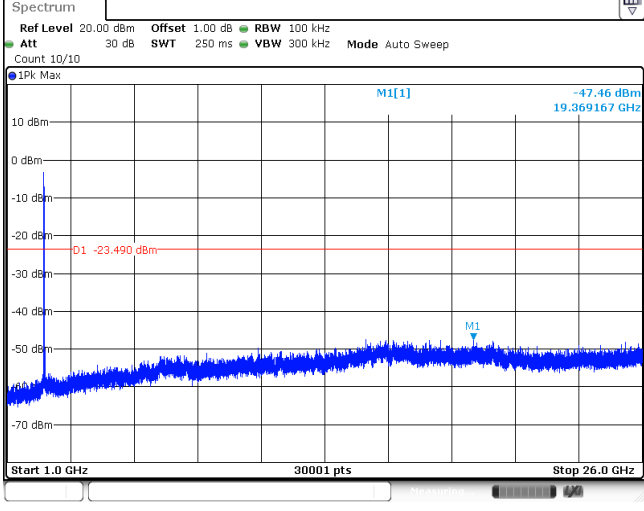


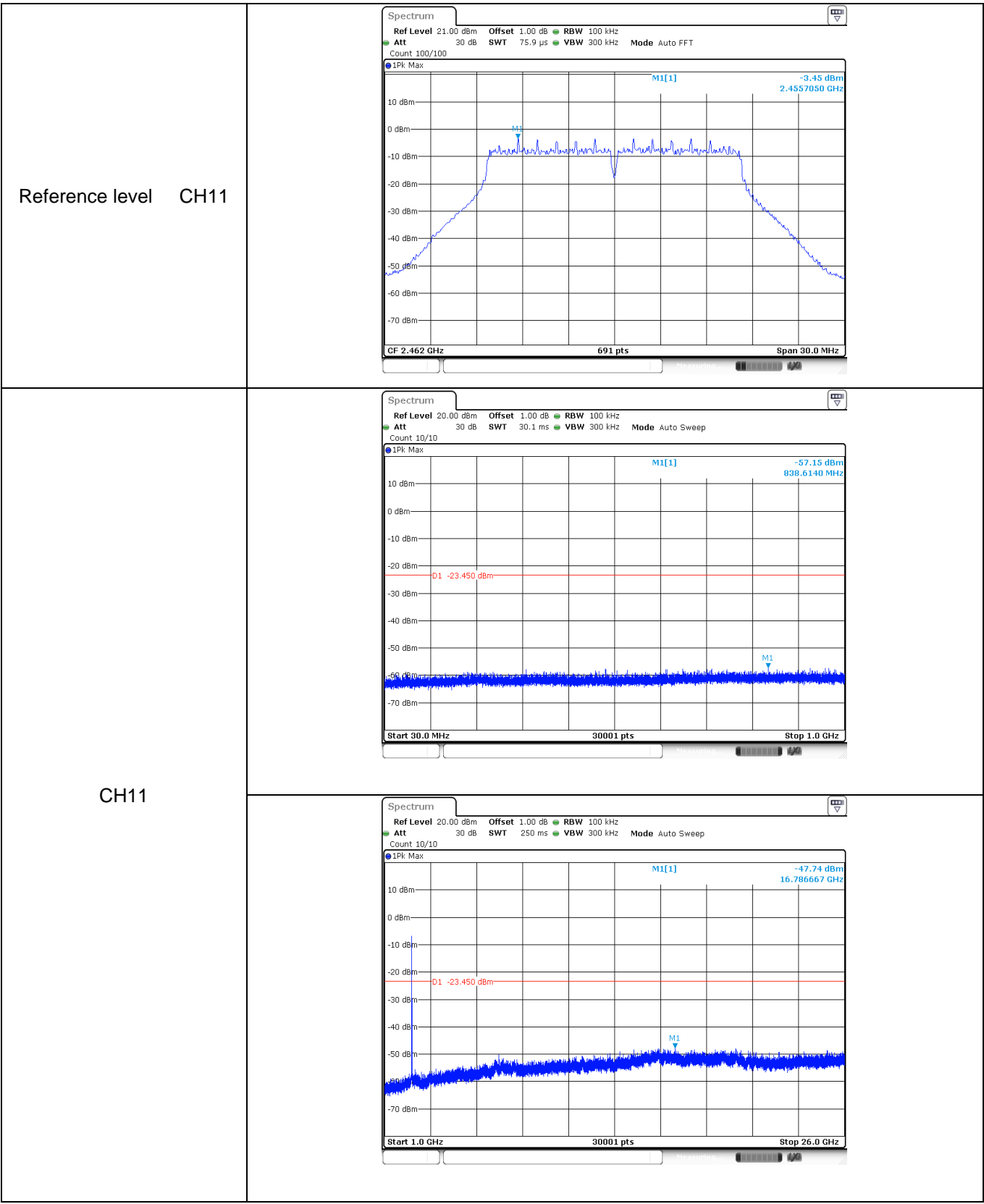
Test Item:	SE	802.11 b	Antenna 1
Reference level CH01			
CH01			
CH01			

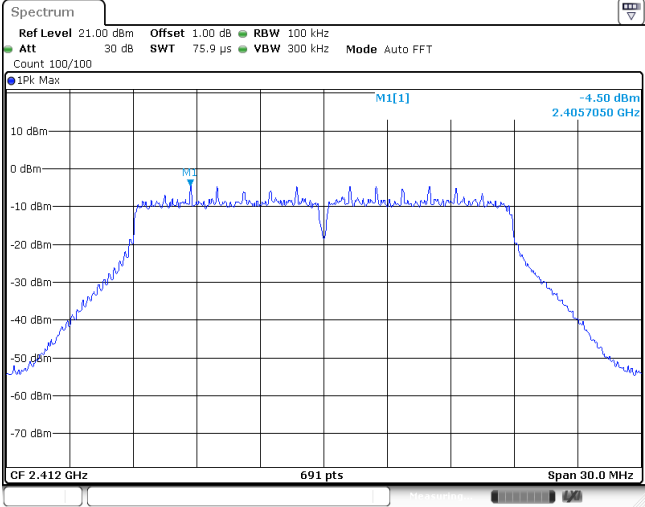
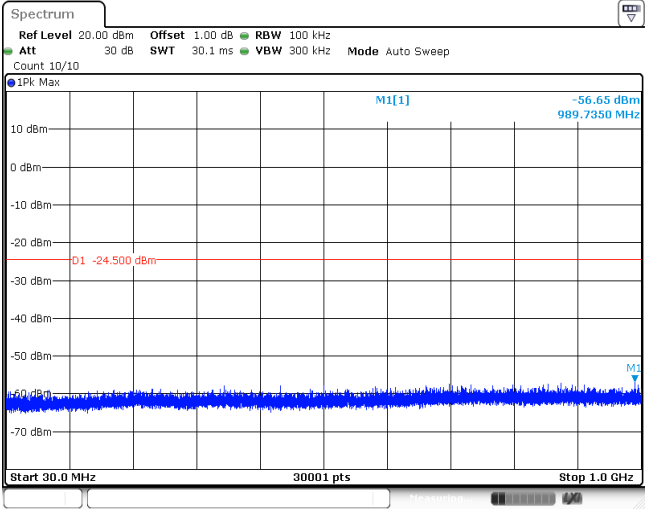
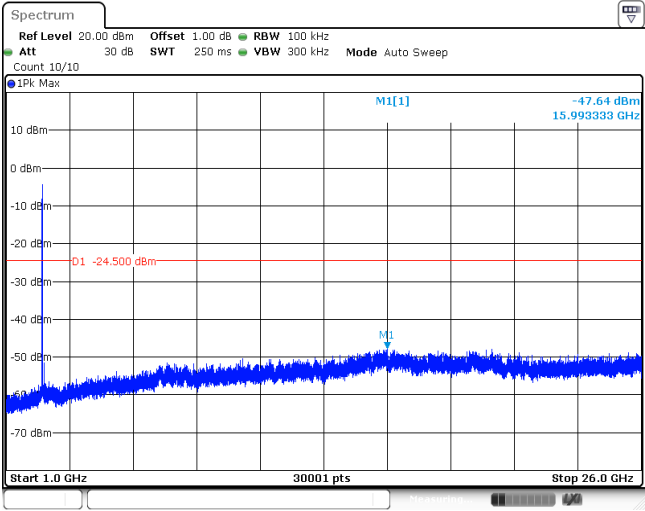
Reference level CH06	
CH06	
CH06	

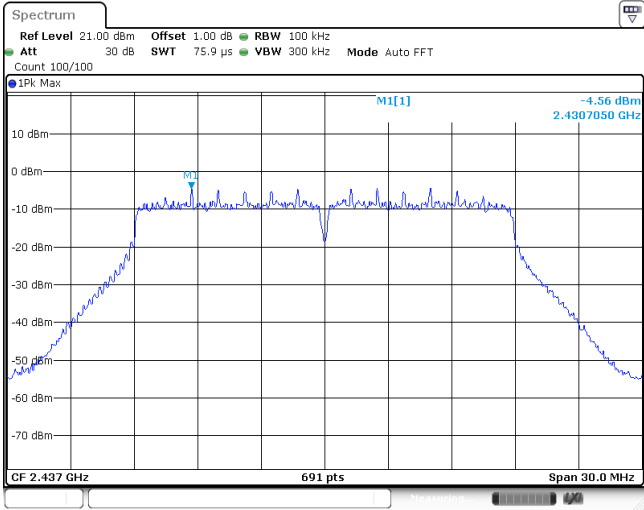
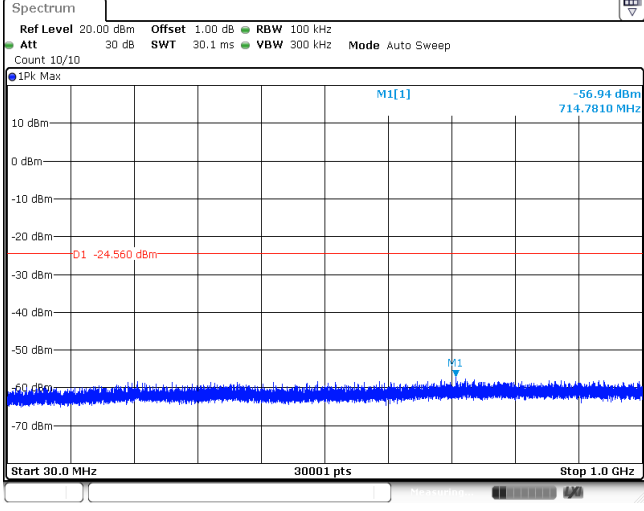
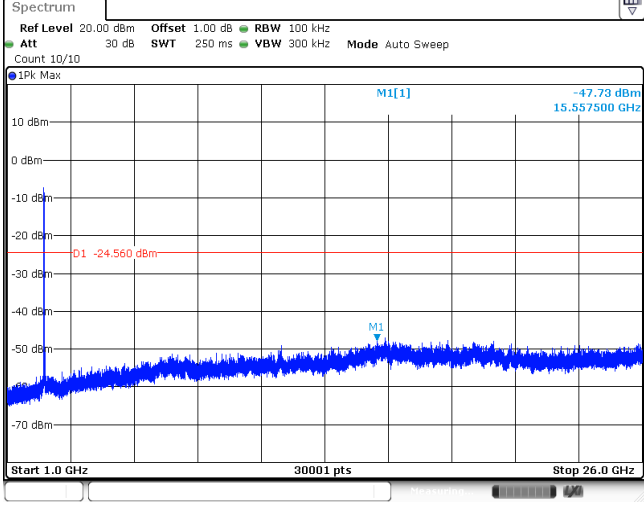
<p>Reference level CH11</p>	
<p>CH11</p>	
	

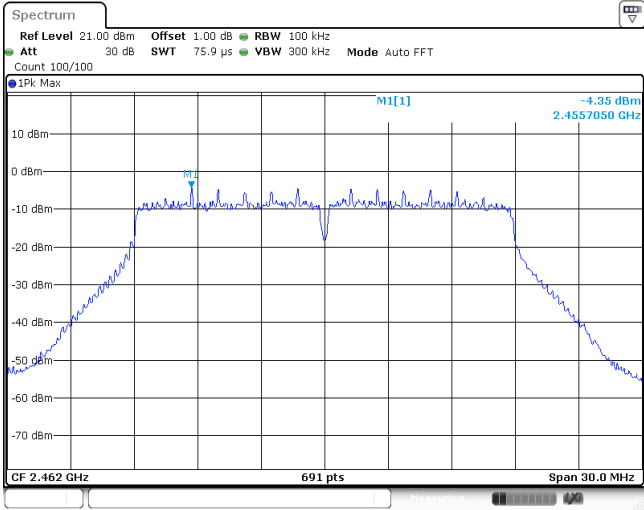
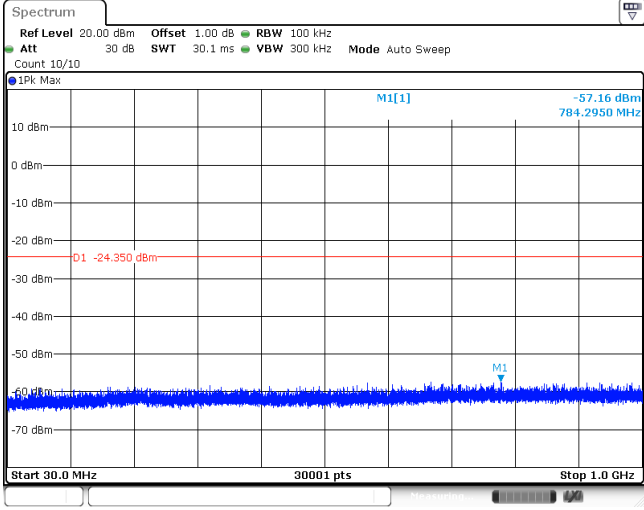
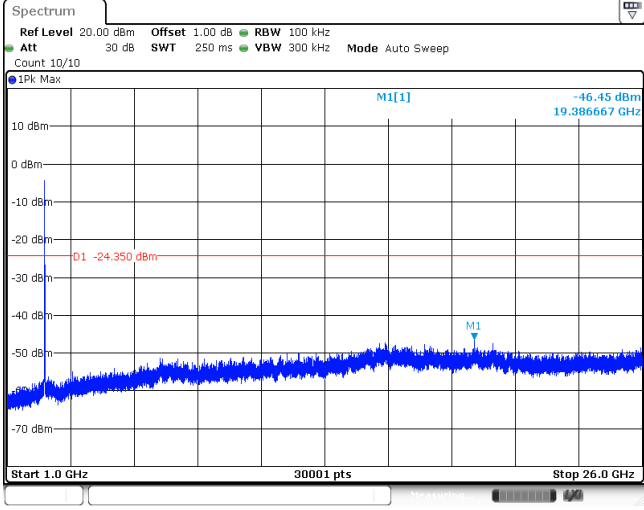
Test Item:	SE	802.11 g	Antenna 1
Reference level CH01			
CH01			
CH01			

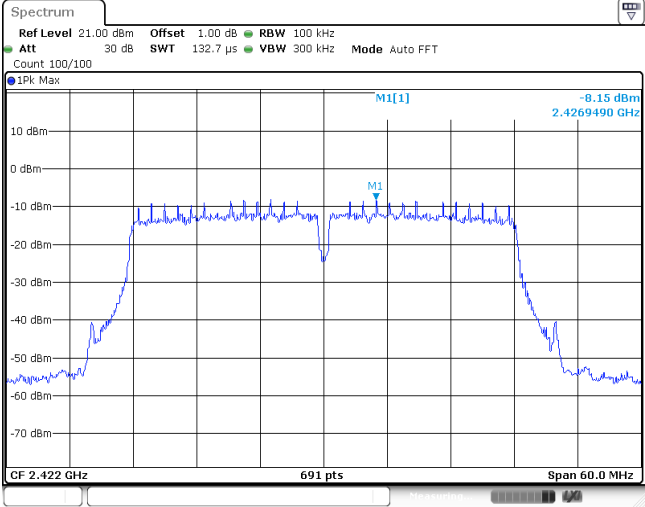
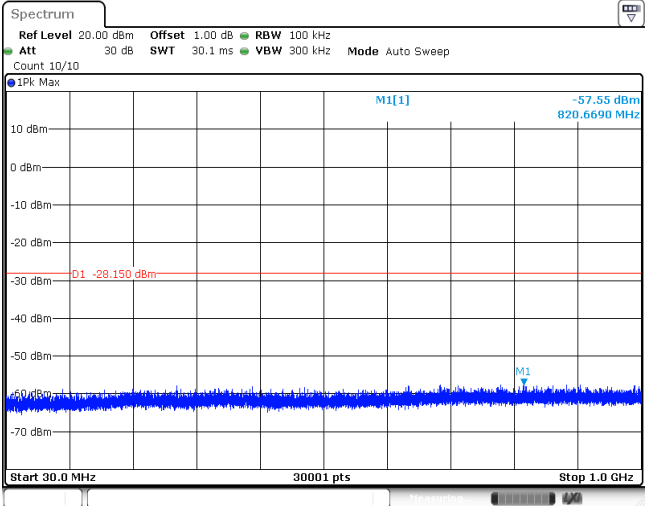
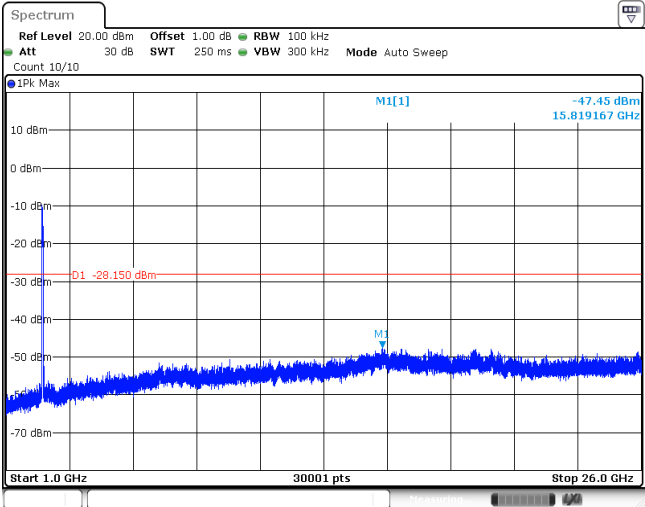
Reference level CH06	
CH06	
CH06	

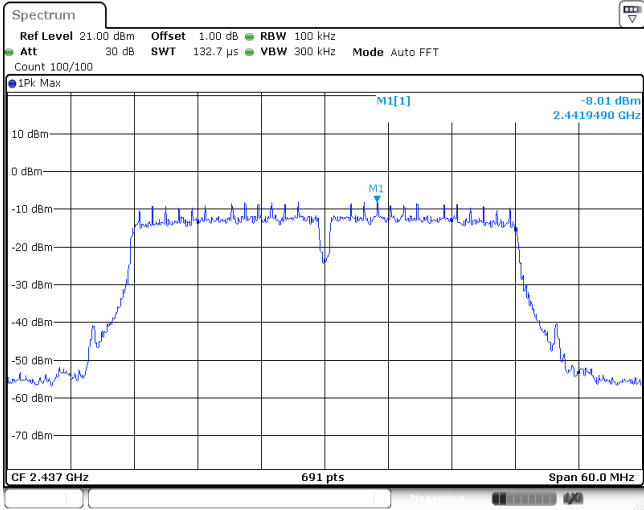
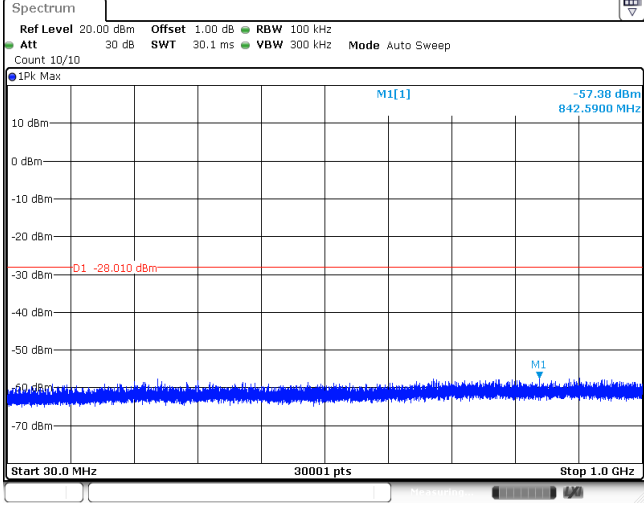
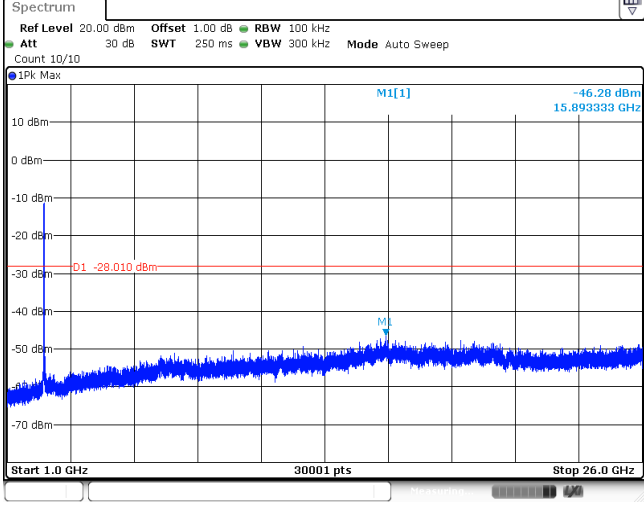


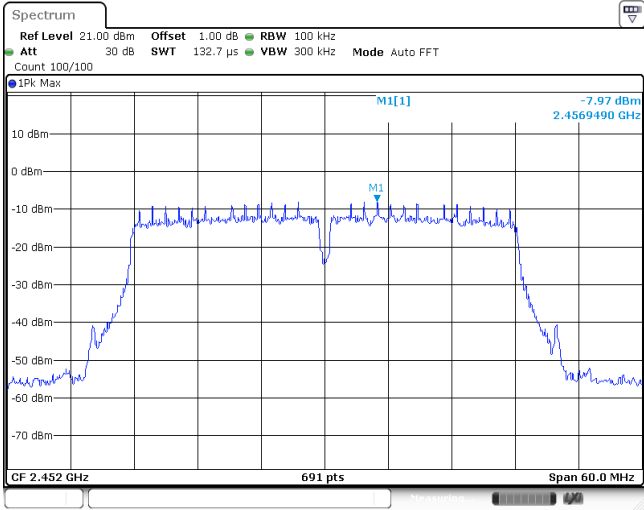
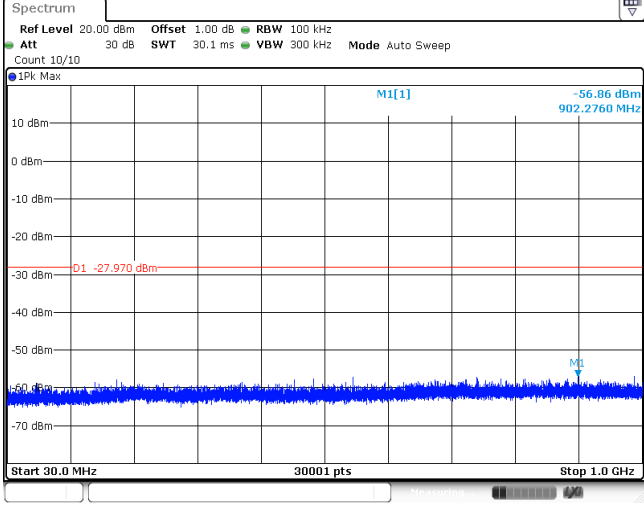
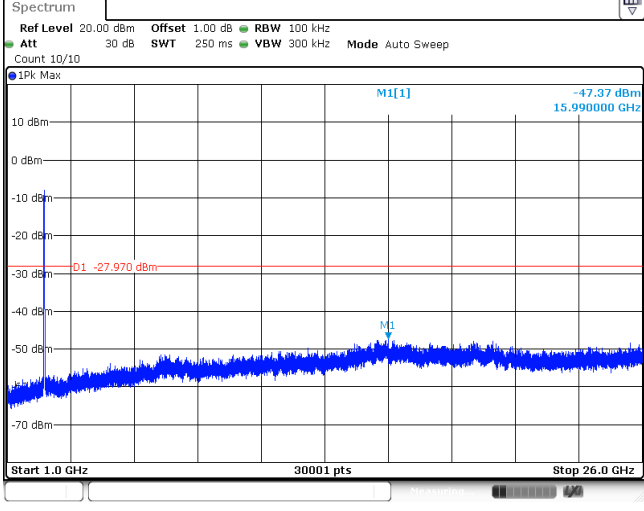
Test Item:	SE	802.11 n(HT20)	Antenna 1
Reference level CH01			
CH01			
CH01			

<p>Reference level CH06</p>	
<p>CH06</p>	
	

<p>Reference level CH11</p>	
<p>CH11</p>	
	

Test Item:	SE	802.11 n(HT40)	Antenna 1
Reference level CH03			
CH03			
			

<p>Reference level CH06</p>	
<p>CH06</p>	
<p>CH06</p>	

<p>Reference level CH09</p>	
<p>CH09</p>	
<p>CH09</p>	

5.8. Spurious Emissions (Radiated)

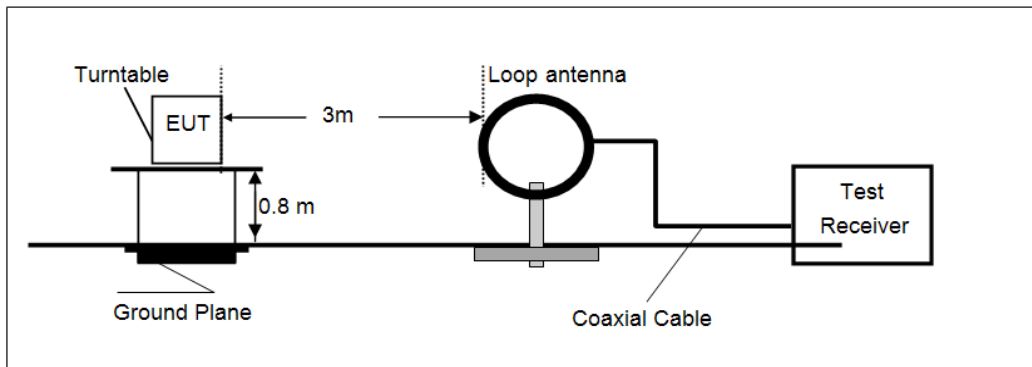
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

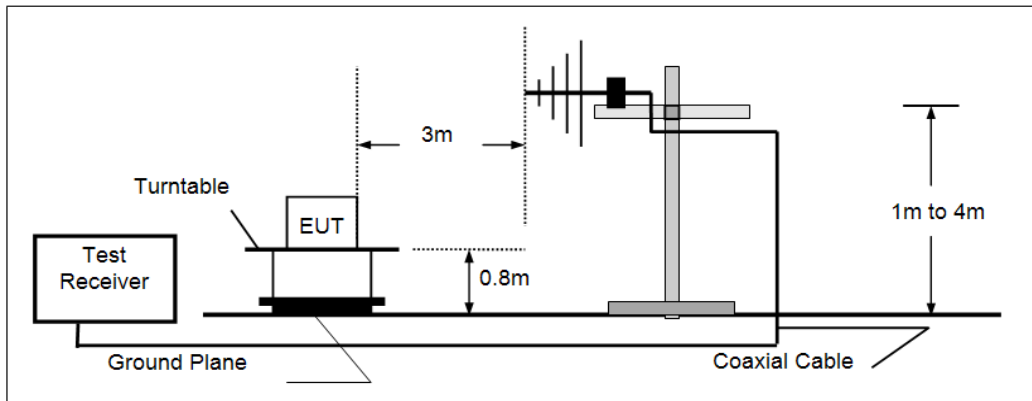
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

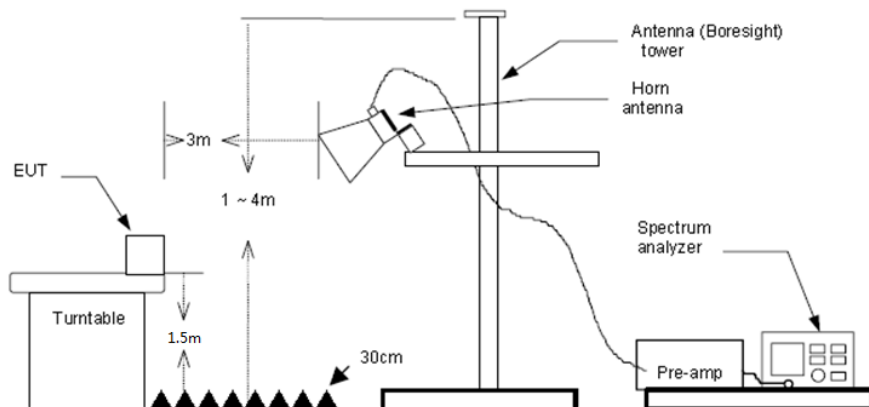
➤ 9kHz ~30MHz



➤ 30MHz ~ 1GHz



➤ Above 1GHz



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
2. The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
5. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1GHz, RBW=120kHz, VBW=300kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) Above 1GHz, RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
RBW=1MHz, VBW=3MHz RMS detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

Passed **Not Applicable**

Note:

- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.

➤ **9kHz ~ 30MHz**

The EUT was pre-scanned the frequency band (9kHz~30MHz), found the radiated level lower than the limit, so don't show on the report.

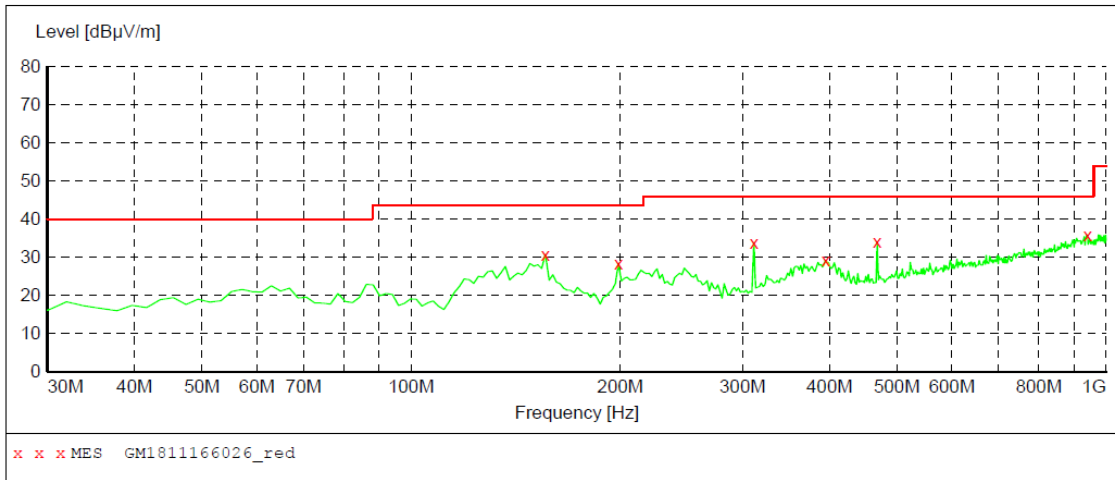
➤ **30MHz ~1000MHz**

Have pre-scan all modulation mode, found the 802.11b mode CH01 which it was worst case, so only the worst case's data on the test report.

➤ 30MHz ~ 1GHz

Polarization:

Vertical



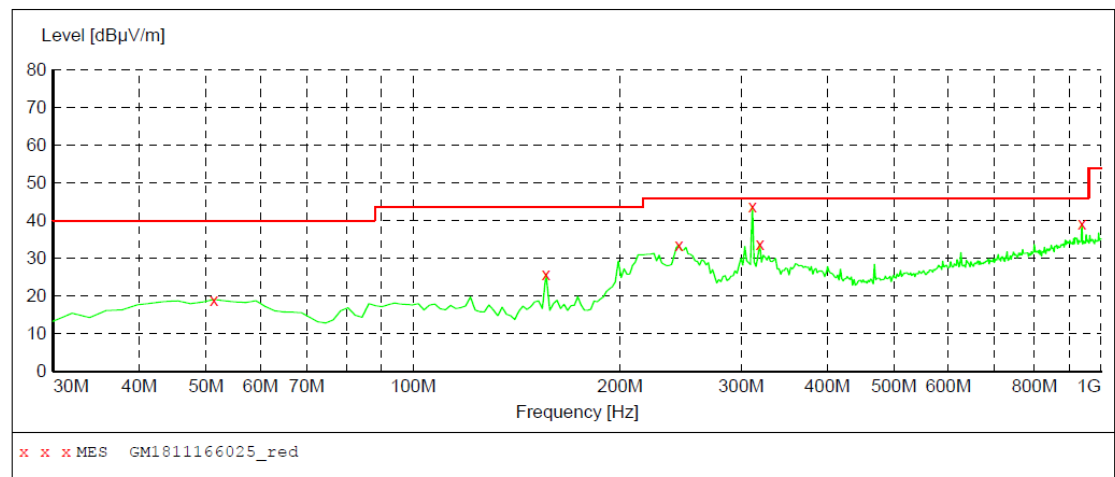
MEASUREMENT RESULT: "GM1811166026_red"

11/16/2018 11:59AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
156.100000	30.80	-13.4	43.5	12.7	QP	100.0	349.00	VERTICAL
198.780000	28.40	-9.5	43.5	15.1	QP	100.0	314.00	VERTICAL
311.300000	33.90	-6.7	46.0	12.1	QP	100.0	276.00	VERTICAL
394.720000	29.20	-4.0	46.0	16.8	QP	100.0	199.00	VERTICAL
468.440000	34.10	-2.4	46.0	11.9	QP	100.0	183.00	VERTICAL
939.860000	35.90	8.1	46.0	10.1	QP	100.0	148.00	VERTICAL

Polarization:

Horizontal



MEASUREMENT RESULT: "GM1811166025_red"

11/16/2018 11:57AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
51.340000	19.10	-8.8	40.0	20.9	QP	100.0	85.00	HORIZONTAL
156.100000	25.90	-13.4	43.5	17.6	QP	100.0	211.00	HORIZONTAL
243.400000	33.60	-8.3	46.0	12.4	QP	100.0	250.00	HORIZONTAL
311.300000	43.80	-6.7	46.0	2.2	QP	100.0	289.00	HORIZONTAL
319.060000	33.90	-6.4	46.0	12.1	QP	100.0	185.00	HORIZONTAL
937.920000	39.30	8.1	46.0	6.7	QP	100.0	73.00	HORIZONTAL

➤ 1 GHz~25GHz

802.11b					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.538	51.15	28.60	7.48	37.58	49.65	74.00	-24.35	Vertical	Peak
3681.469	32.41	29.30	8.36	37.00	33.07	74.00	-40.93	Vertical	Peak
4983.987	41.38	31.48	9.66	35.41	47.11	74.00	-26.89	Vertical	Peak
6628.177	30.27	34.20	11.39	33.69	42.17	74.00	-31.83	Vertical	Peak
2987.923	44.21	28.59	7.47	37.58	42.69	74.00	-31.31	Horizontal	Peak
4332.852	31.78	30.30	9.07	36.44	34.71	74.00	-39.29	Horizontal	Peak
4821.757	39.95	31.56	9.55	35.69	45.37	74.00	-28.63	Horizontal	Peak
6851.185	30.17	34.36	11.66	33.80	42.39	74.00	-31.61	Horizontal	Peak

802.11b					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
3003.17	50.32	28.61	7.48	37.58	48.83	74.00	-25.17	Vertical	Peak
3993.90	33.85	29.70	8.77	36.76	35.56	74.00	-38.44	Vertical	Peak
4996.69	38.71	31.50	9.67	35.39	44.49	74.00	-29.51	Vertical	Peak
5325.01	35.62	31.35	10.02	34.75	42.24	74.00	-31.76	Vertical	Peak
2987.92	43.14	28.59	7.47	37.58	41.62	74.00	-32.38	Horizontal	Peak
3883.62	32.61	29.68	8.62	36.84	34.07	74.00	-39.93	Horizontal	Peak
4871.10	36.42	31.46	9.59	35.61	41.86	74.00	-32.14	Horizontal	Peak
8002.06	30.73	37.10	12.30	33.07	47.06	74.00	-26.94	Horizontal	Peak

802.11b					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	49.26	28.60	7.48	37.58	47.76	74.00	-26.24	Vertical	Peak
4310.85	31.82	30.23	9.05	36.46	34.64	74.00	-39.36	Vertical	Peak
4996.69	43.44	31.50	9.67	35.39	49.22	74.00	-24.78	Vertical	Peak
7190.69	30.01	36.14	11.86	33.54	44.47	74.00	-29.53	Vertical	Peak
2995.54	44.31	28.60	7.48	37.58	42.81	74.00	-31.19	Horizontal	Peak
4065.71	32.65	29.83	8.83	36.69	34.62	74.00	-39.38	Horizontal	Peak
4996.69	35.98	31.50	9.67	35.39	41.76	74.00	-32.24	Horizontal	Peak
7820.82	29.64	36.23	13.16	33.05	45.98	74.00	-28.02	Horizontal	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11g					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	51.55	28.60	7.48	37.58	50.05	74.00	-23.95	Vertical	Peak
3993.90	37.49	29.70	8.77	36.76	39.20	74.00	-34.80	Vertical	Peak
4996.69	37.41	31.50	9.67	35.39	43.19	74.00	-30.81	Vertical	Peak
7245.81	35.21	36.25	11.91	33.45	49.92	74.00	-24.08	Vertical	Peak
2995.54	42.97	28.60	7.48	37.58	41.47	74.00	-32.53	Horizontal	Peak
4245.51	32.69	30.09	8.98	36.52	35.24	74.00	-38.76	Horizontal	Peak
4821.76	39.25	31.56	9.55	35.69	44.67	74.00	-29.33	Horizontal	Peak
7338.62	31.00	36.30	12.01	33.29	46.02	74.00	-27.98	Horizontal	Peak

802.11g					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2987.92	49.07	28.59	7.47	37.58	47.55	74.00	-26.45	Vertical	Peak
3883.62	33.23	29.68	8.62	36.84	34.69	74.00	-39.31	Vertical	Peak
4996.69	38.11	31.50	9.67	35.39	43.89	74.00	-30.11	Vertical	Peak
7394.88	31.87	36.30	12.06	33.20	47.03	74.00	-26.97	Vertical	Peak
2995.54	44.46	28.60	7.48	37.58	42.96	74.00	-31.04	Horizontal	Peak
4170.53	32.79	29.97	8.92	36.59	35.09	74.00	-38.91	Horizontal	Peak
4871.10	37.67	31.46	9.59	35.61	43.11	74.00	-30.89	Horizontal	Peak
7301.36	29.34	36.30	11.97	33.35	44.26	74.00	-29.74	Horizontal	Peak

802.11g					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2987.92	50.52	28.59	7.47	37.58	49.00	74.00	-25.00	Vertical	Peak
4343.90	32.23	30.33	9.08	36.43	35.21	74.00	-38.79	Vertical	Peak
4983.99	44.00	31.48	9.66	35.41	49.73	74.00	-24.27	Vertical	Peak
7282.79	29.07	36.28	11.95	33.39	43.91	74.00	-30.09	Vertical	Peak
2987.92	42.44	28.59	7.47	37.58	40.92	74.00	-33.08	Horizontal	Peak
4045.06	32.54	29.79	8.82	36.72	34.43	74.00	-39.57	Horizontal	Peak
4920.96	34.54	31.42	9.62	35.52	40.06	74.00	-33.94	Horizontal	Peak
7527.83	31.37	36.13	12.49	33.02	46.97	74.00	-27.03	Horizontal	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n(HT20)					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	50.34	28.60	7.48	37.58	48.84	74.00	-25.16	Vertical	Peak
3672.11	34.47	29.30	8.35	37.00	35.12	74.00	-38.88	Vertical	Peak
4983.99	40.98	31.48	9.66	35.41	46.71	74.00	-27.29	Vertical	Peak
7432.62	30.78	36.23	12.18	33.13	46.06	74.00	-27.94	Vertical	Peak
2987.92	50.48	28.59	7.47	37.58	48.96	74.00	-25.04	Horizontal	Peak
4170.53	32.03	29.97	8.92	36.59	34.33	74.00	-39.67	Horizontal	Peak
4983.99	43.16	31.48	9.66	35.41	48.89	74.00	-25.11	Horizontal	Peak
7154.17	30.69	35.93	11.86	33.61	44.87	74.00	-29.13	Horizontal	Peak

802.11n(HT20)					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	50.33	28.60	7.48	37.58	48.83	74.00	-25.17	Vertical	Peak
4138.80	32.53	29.94	8.89	36.62	34.74	74.00	-39.26	Vertical	Peak
4983.99	41.66	31.48	9.66	35.41	47.39	74.00	-26.61	Vertical	Peak
7566.25	29.86	36.17	12.61	33.03	45.61	74.00	-28.39	Vertical	Peak
2995.54	46.75	28.60	7.48	37.58	45.25	74.00	-28.75	Horizontal	Peak
4377.20	32.06	30.43	9.11	36.40	35.20	74.00	-38.80	Horizontal	Peak
4871.10	36.70	31.46	9.59	35.61	42.14	74.00	-31.86	Horizontal	Peak
7190.69	30.02	36.14	11.86	33.54	44.48	74.00	-29.52	Horizontal	Peak

802.11n(HT20)					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	50.83	28.60	7.48	37.58	49.33	74.00	-24.67	Vertical	Peak
4421.99	32.54	30.54	9.17	36.36	35.89	74.00	-38.11	Vertical	Peak
6461.58	30.36	33.73	11.10	33.66	41.53	74.00	-32.47	Vertical	Peak
8022.46	30.94	37.08	12.35	33.06	47.31	74.00	-26.69	Vertical	Peak
2995.54	44.88	28.60	7.48	37.58	43.38	74.00	-30.62	Horizontal	Peak
4138.80	32.17	29.94	8.89	36.62	34.38	74.00	-39.62	Horizontal	Peak
4996.69	35.26	31.50	9.67	35.39	41.04	74.00	-32.96	Horizontal	Peak
8022.46	31.28	37.08	12.35	33.06	47.65	74.00	-26.35	Horizontal	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

802.11n(HT40)					CH03				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	47.11	28.60	7.48	37.58	45.61	74.00	-28.39	Vertical	Peak
3993.90	34.39	29.70	8.77	36.76	36.10	74.00	-37.90	Vertical	Peak
4983.99	40.35	31.48	9.66	35.41	46.08	74.00	-27.92	Vertical	Peak
6747.34	30.35	34.10	11.54	33.75	42.24	74.00	-31.76	Vertical	Peak
2995.54	44.15	28.60	7.48	37.58	42.65	74.00	-31.35	Horizontal	Peak
4086.46	32.26	29.87	8.85	36.67	34.31	74.00	-39.69	Horizontal	Peak
4871.10	35.66	31.46	9.59	35.61	41.10	74.00	-32.90	Horizontal	Peak
8063.40	31.41	37.04	12.45	33.05	47.85	74.00	-26.15	Horizontal	Peak

802.11n(HT40)					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	47.47	28.60	7.48	37.58	45.97	74.00	-28.03	Vertical	Peak
3662.78	33.58	29.30	8.34	37.01	34.21	74.00	-39.79	Vertical	Peak
4983.99	36.27	31.48	9.66	35.41	42.00	74.00	-32.00	Vertical	Peak
7135.98	32.20	35.82	11.86	33.64	46.24	74.00	-27.76	Vertical	Peak
2995.54	47.40	28.60	7.48	37.58	45.90	74.00	-28.10	Horizontal	Peak
3983.75	33.68	29.70	8.76	36.77	35.37	74.00	-38.63	Horizontal	Peak
4996.69	34.22	31.50	9.67	35.39	40.00	74.00	-34.00	Horizontal	Peak
7432.62	31.21	36.23	12.18	33.13	46.49	74.00	-27.51	Horizontal	Peak

802.11n(HT40)					CH09				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2995.54	48.07	28.60	7.48	37.58	46.57	74.00	-27.43	Vertical	Peak
4288.96	32.38	30.18	9.02	36.48	35.10	74.00	-38.90	Vertical	Peak
4996.69	42.61	31.50	9.67	35.39	48.39	74.00	-25.61	Vertical	Peak
7860.74	30.38	36.47	12.97	33.06	46.76	74.00	-27.24	Vertical	Peak
2987.92	43.88	28.59	7.47	37.58	42.36	74.00	-31.64	Horizontal	Peak
4983.99	34.65	31.48	9.66	35.41	40.38	74.00	-33.62	Horizontal	Peak
6172.20	30.92	32.79	10.96	33.96	40.71	74.00	-33.29	Horizontal	Peak
8571.38	31.51	37.19	12.88	32.93	48.65	74.00	-25.35	Horizontal	Peak

Remark:

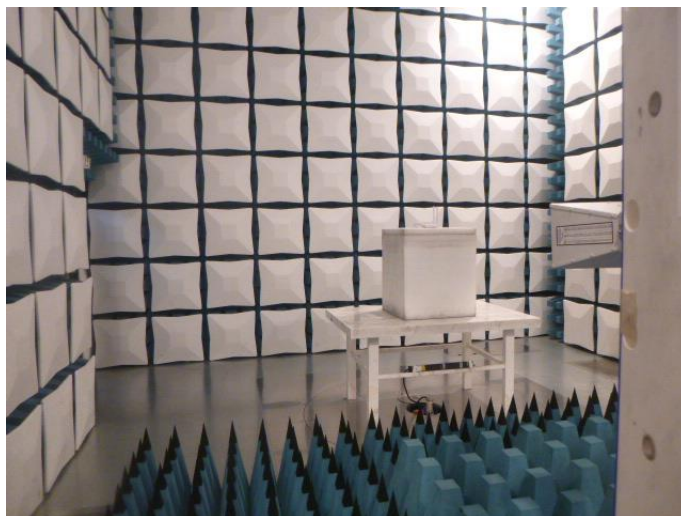
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

6. TEST SETUP PHOTOS

Conducted Emissions

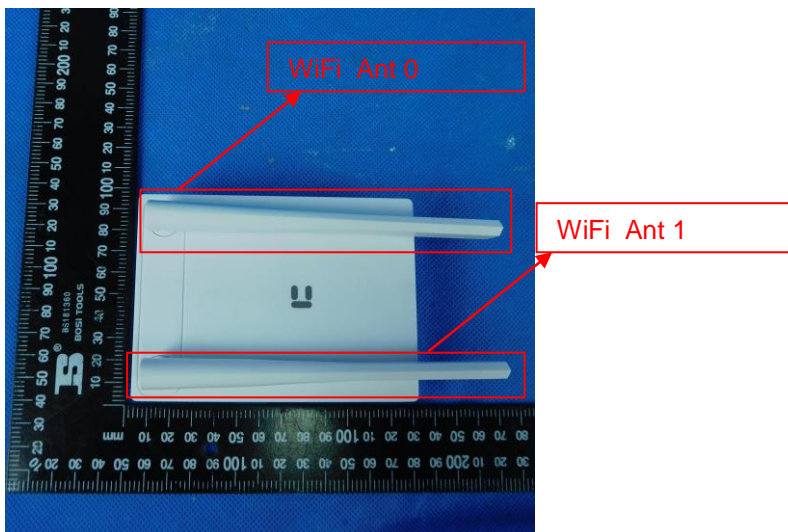
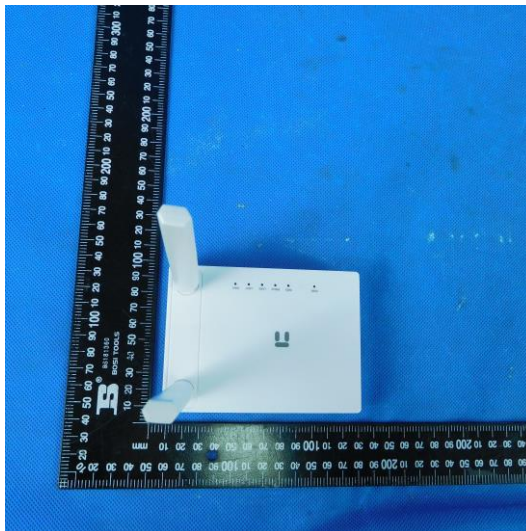
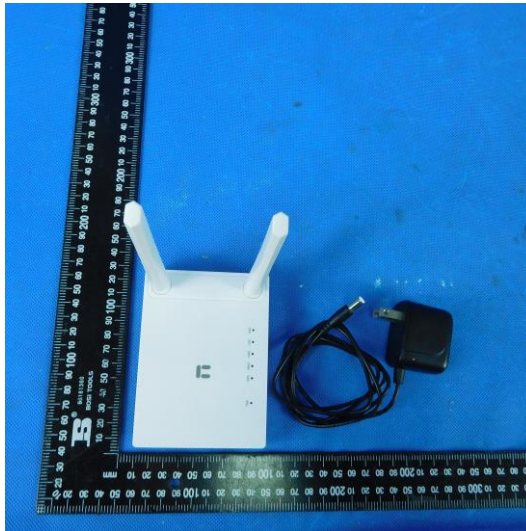


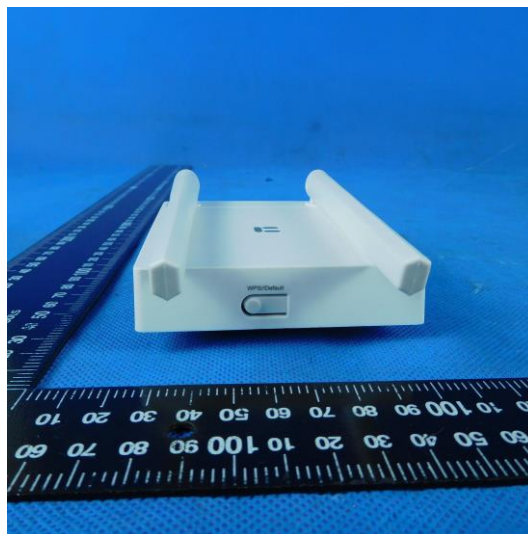
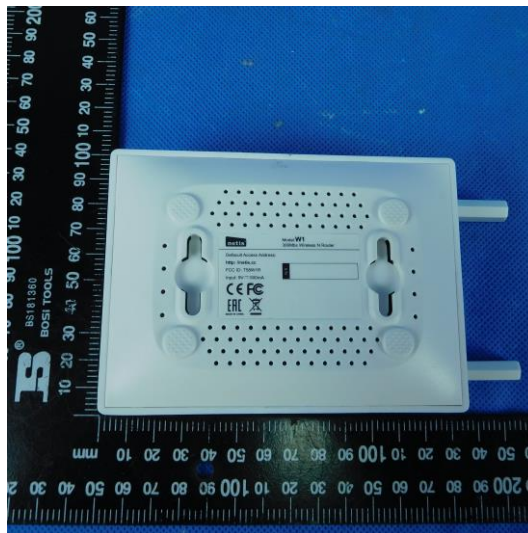
Radiated Emissions

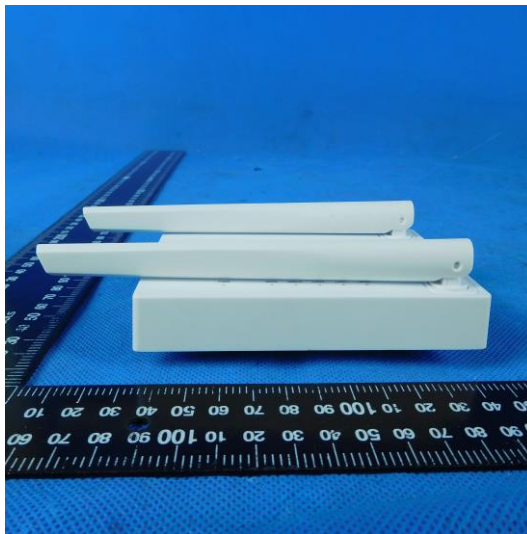
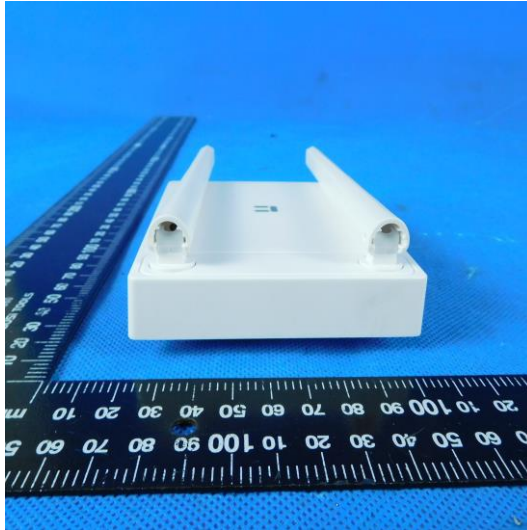


7. EXTERNAL AND INTERNAL PHOTOS

External Photo

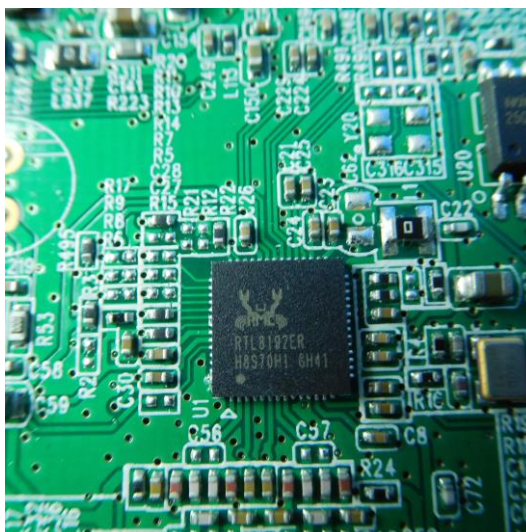
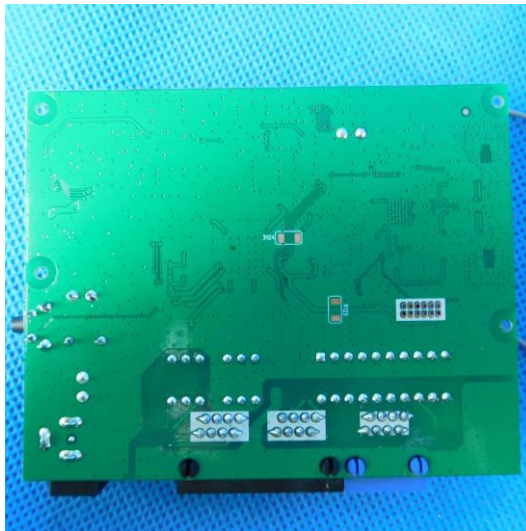






Internal Photo







.....End of Report.....