7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the PSD procedure.

7.5.2. Test Procedure Used

KDB 558074 D01v03r02 - Section 11.2 & Section 11.3

7.5.3. Test Settitng

1. Reference level measurement

(a) Set instrument center frequency to DTS channel center frequency

(b) Set the span to ≥ 1.5 times the DTS bandwidth

(c) Set the RBW = 100 kHz

(d) Set the VBW ≥ 3 x RBW

(e) Detector = peak

(f) Sweep time = auto couple

(g) Trace mode = max hold

(h) Allow trace to fully stabilize

2. Emission level measurement

(a) Set the center frequency and span to encompass frequency range to be measured

(b) RBW = 100kHz

(c) VBW = 300kHz

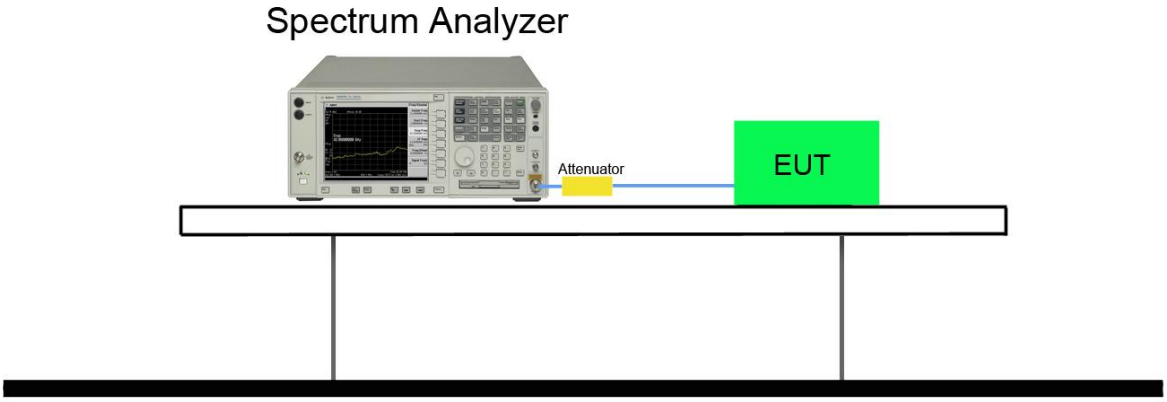
(d) Detector = Peak

(e) Trace mode = max hold

(f) Sweep time = auto couple

(g) The trace was allowed to stabilize

7.5.4. Test Setup



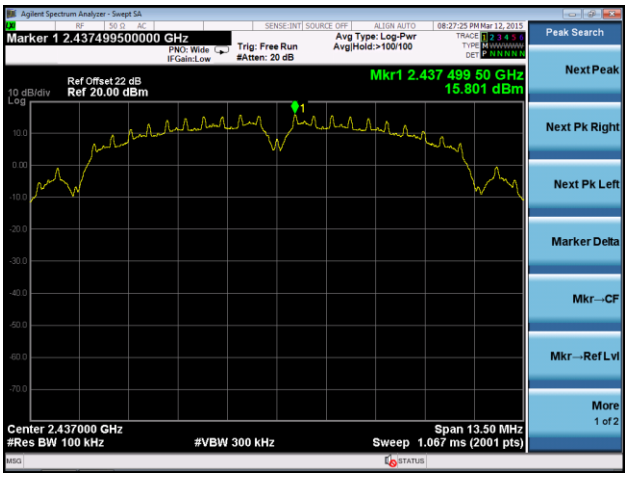
7.5.5. Test Result

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
Ant 0					
802.11b	1	01	2412	30dBc	Pass
802.11b	1	06	2437	30dBc	Pass
802.11b	1	11	2462	30dBc	Pass
802.11g	6	01	2412	30dBc	Pass
802.11g	6	06	2437	30dBc	Pass
802.11g	6	11	2462	30dBc	Pass
802.11n-HT20	6.5	01	2412	30dBc	Pass
802.11n-HT20	6.5	06	2437	30dBc	Pass
802.11n-HT20	6.5	11	2462	30dBc	Pass
802.11n-HT40	13.5	03	2422	30dBc	Pass
802.11n-HT40	13.5	06	2437	30dBc	Pass
802.11n-HT40	13.5	09	2452	30dBc	Pass
Ant 1					
802.11n-HT20	6.5	01	2412	30dBc	Pass
802.11n-HT20	6.5	06	2437	30dBc	Pass
802.11n-HT20	6.5	11	2462	30dBc	Pass
802.11n-HT40	13.5	03	2422	30dBc	Pass
802.11n-HT40	13.5	06	2437	30dBc	Pass
802.11n-HT40	13.5	09	2452	30dBc	Pass

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
Ant 0 / Ant 0 + 1					
802.11n-HT20	6.5	01	2412	30dBc	Pass
802.11n-HT20	6.5	06	2437	30dBc	Pass
802.11n-HT20	6.5	11	2462	30dBc	Pass
802.11n-HT40	13.5	03	2422	30dBc	Pass
802.11n-HT40	13.5	06	2437	30dBc	Pass
802.11n-HT40	13.5	09	2452	30dBc	Pass
Ant 1 / Ant 0 + 1					
802.11n-HT20	6.5	01	2412	30dBc	Pass
802.11n-HT20	6.5	06	2437	30dBc	Pass
802.11n-HT20	6.5	11	2462	30dBc	Pass
802.11n-HT40	13.5	03	2422	30dBc	Pass
802.11n-HT40	13.5	06	2437	30dBc	Pass
802.11n-HT40	13.5	09	2452	30dBc	Pass

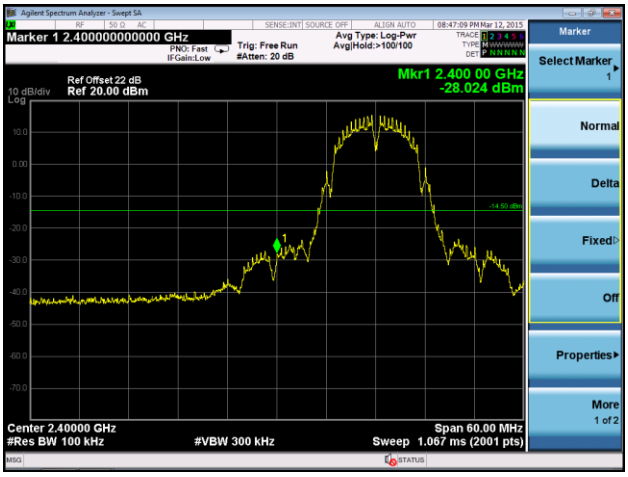
802.11b Out-of-Band Emissions - Ant 0

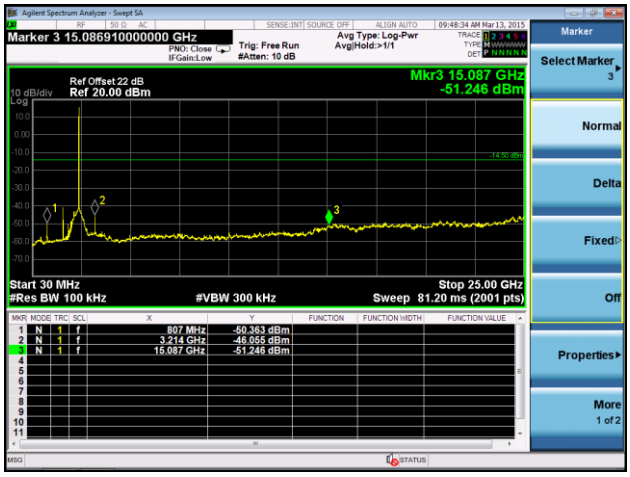
100kHz PSD reference Level



Channel 01 (2412MHz)

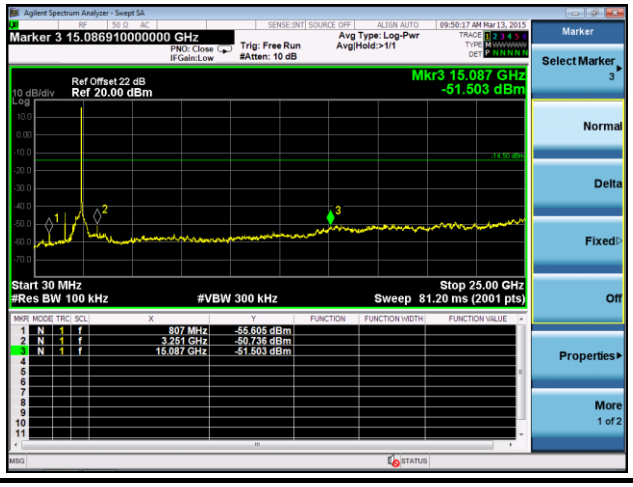
Low Band Edge	Spurious Emission

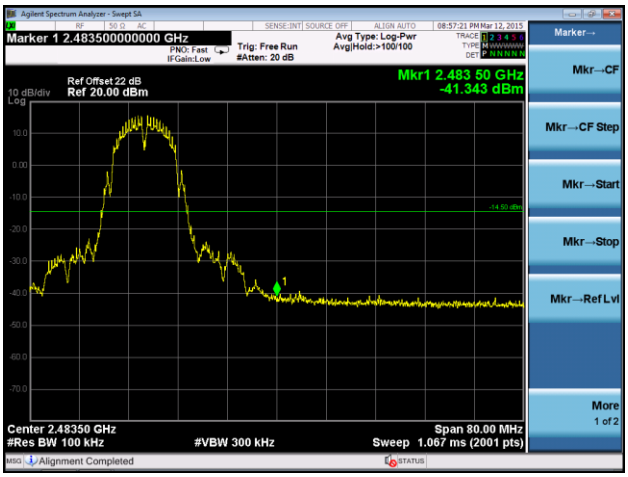
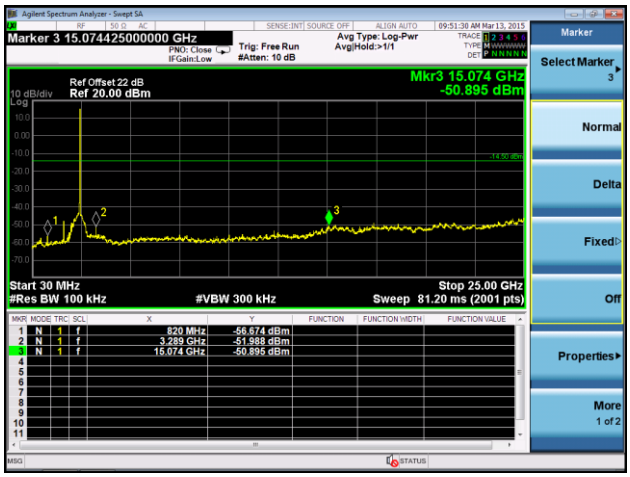




Channel 06 (2437MHz)

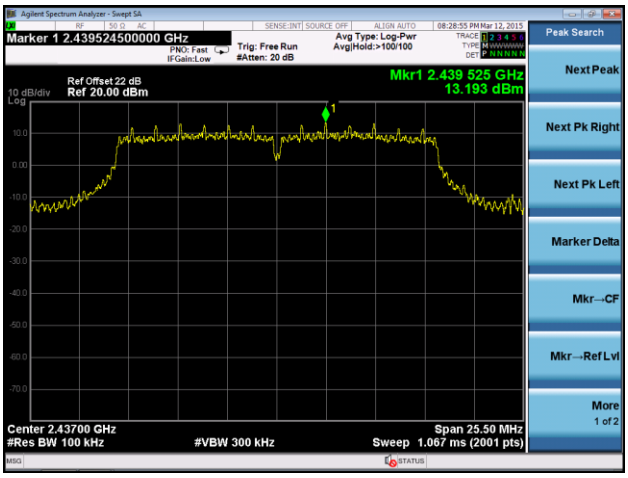
Spurious Emission	



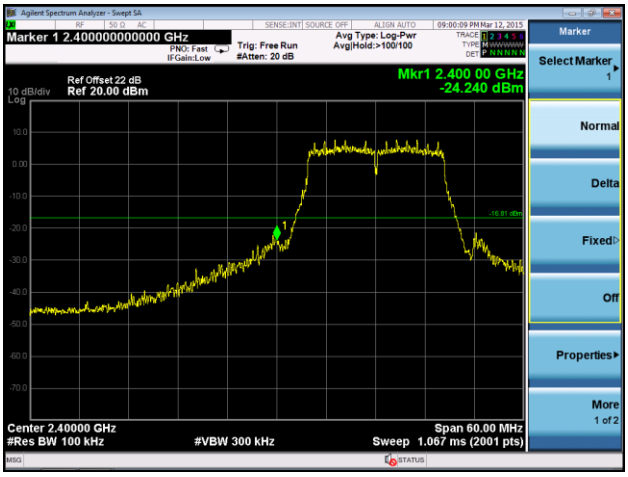
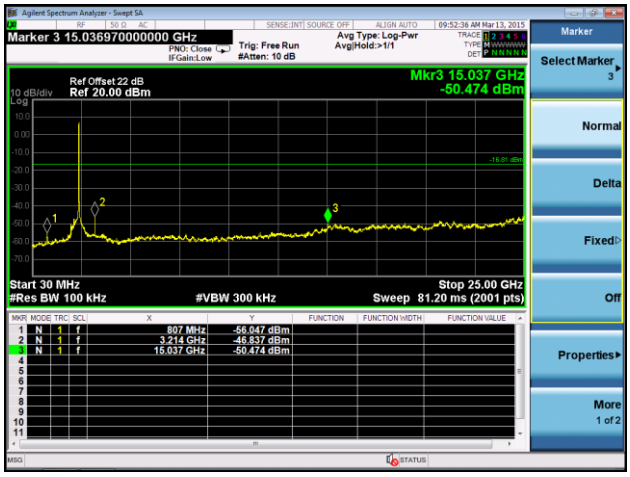
Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

802.11g Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

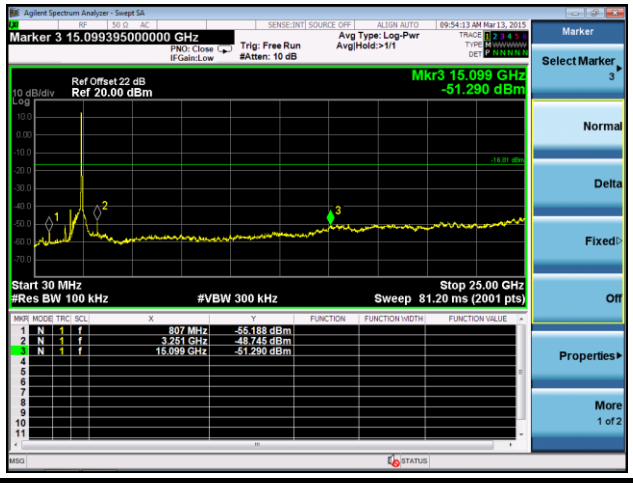


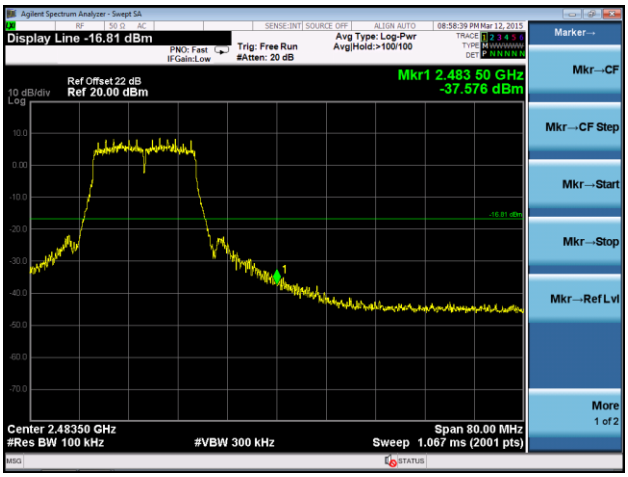
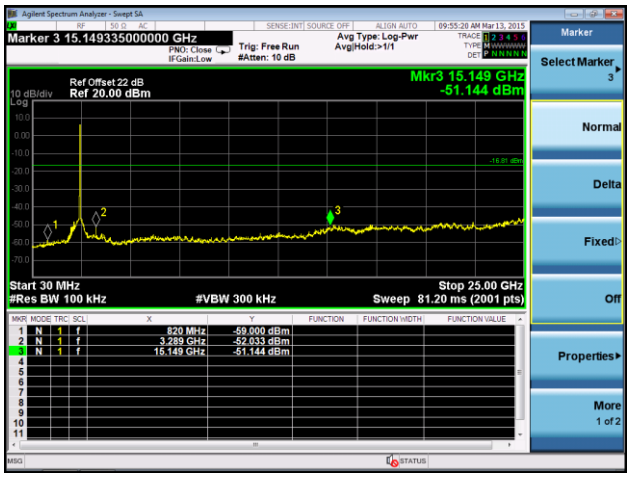
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

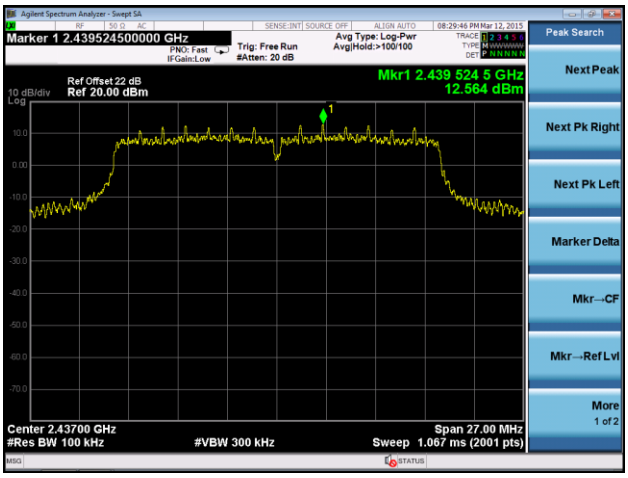
Spurious Emission



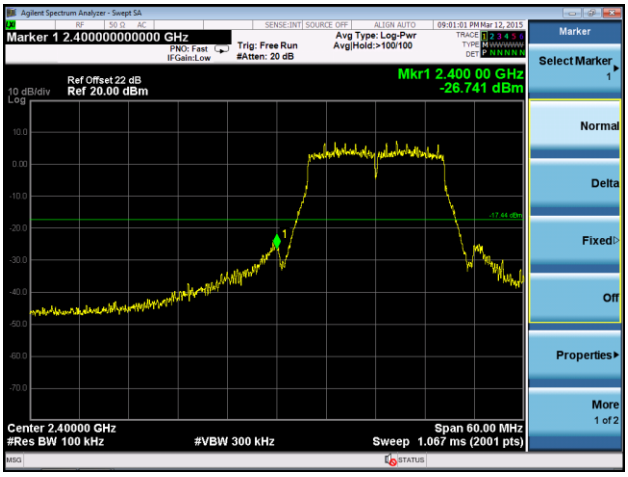
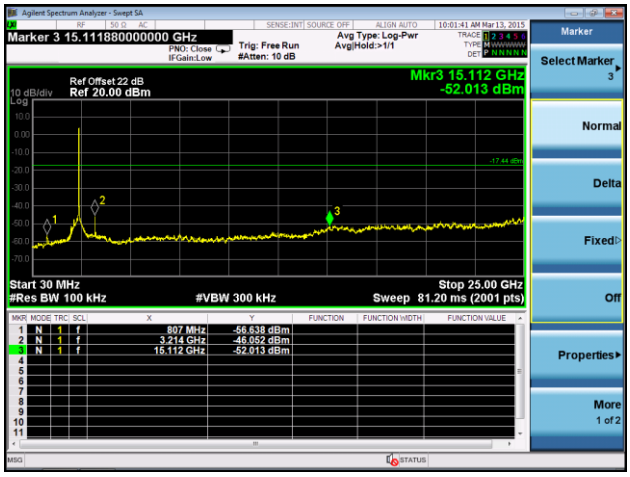
Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

802.11n-HT20 Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

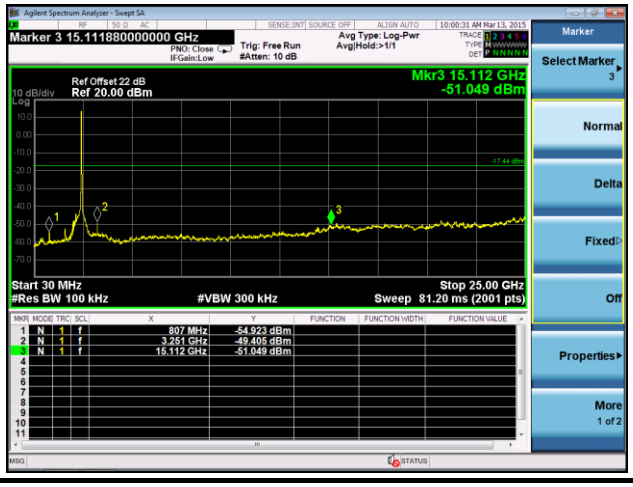


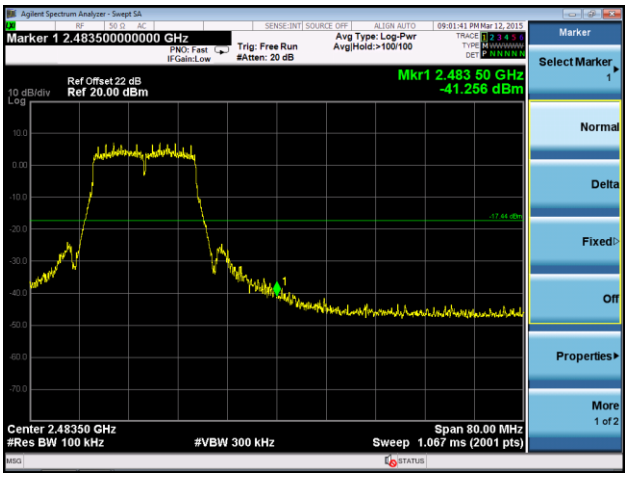
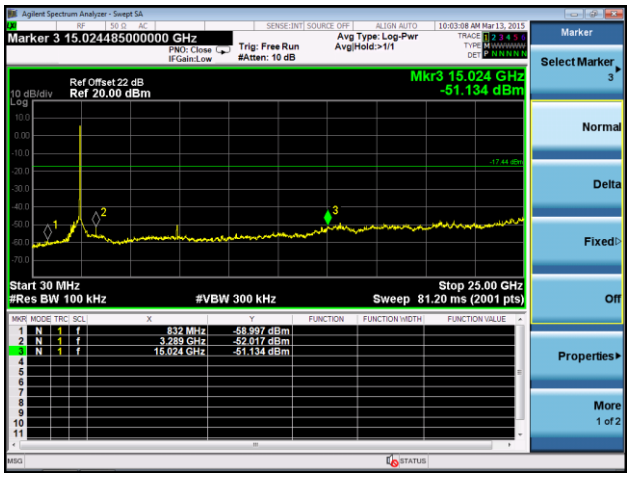
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

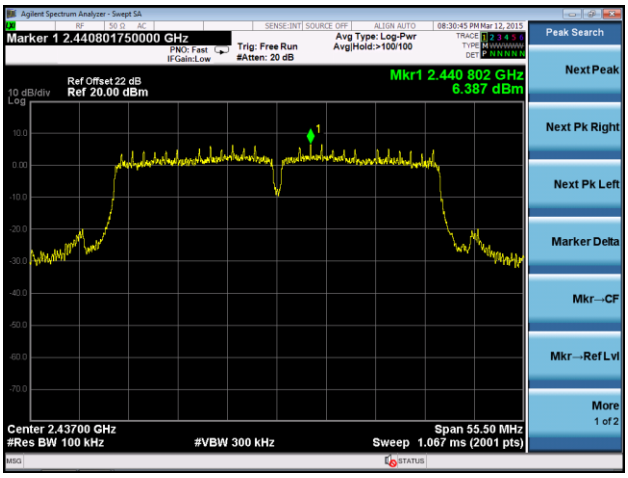
Spurious Emission



Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

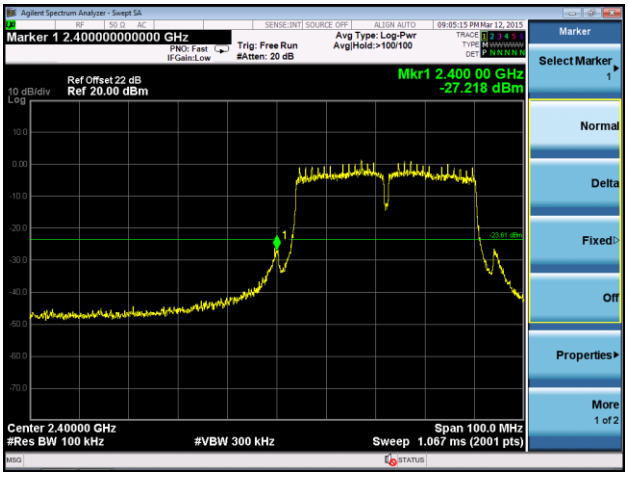
802.11n-HT40 Out-of-Band Emissions - Ant 0

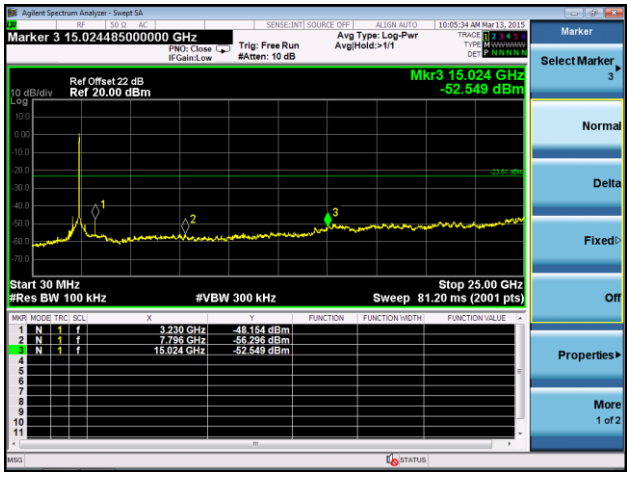
100kHz PSD reference Level



Channel 03 (2422MHz)

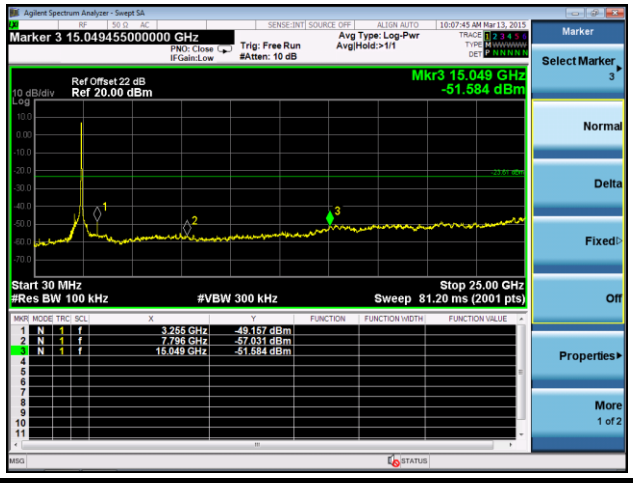
Low Band Edge	Spurious Emission

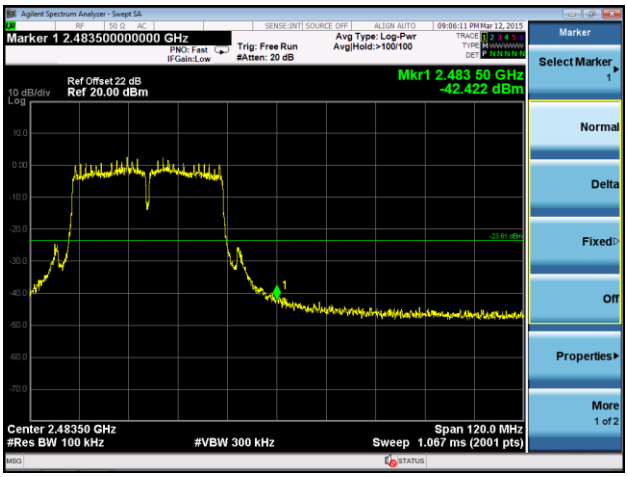
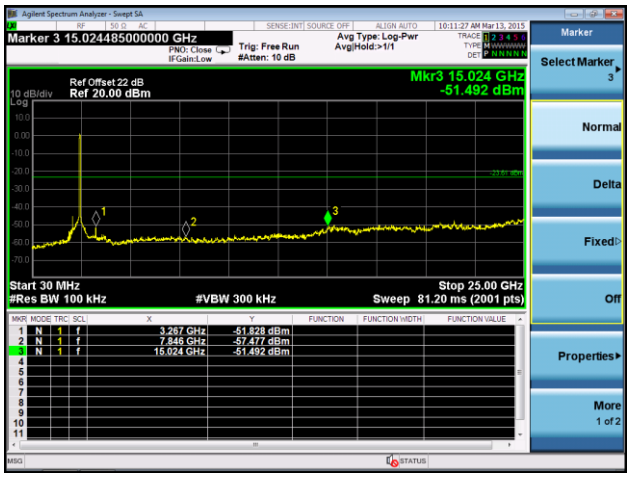




Channel 06 (2437MHz)

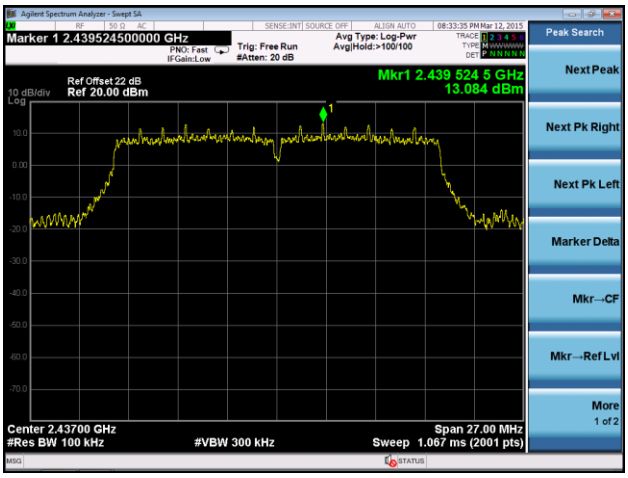
Spurious Emission



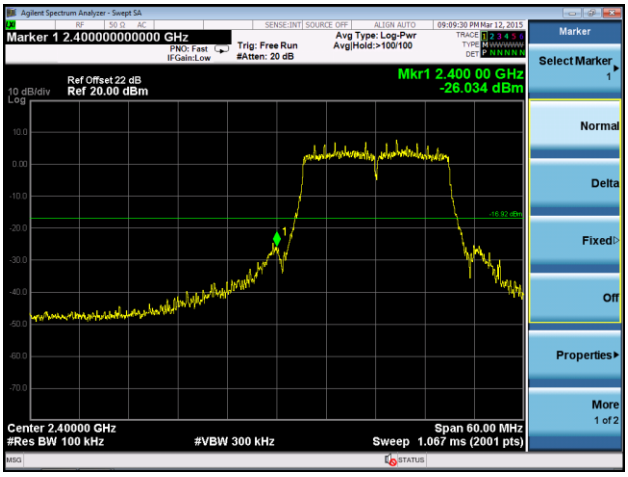
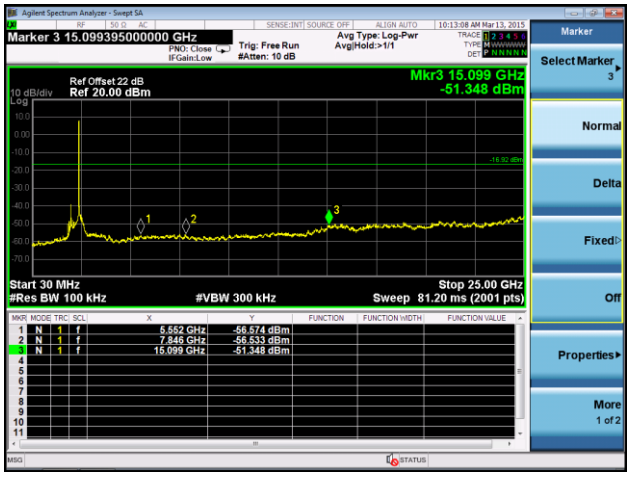
Channel 9 (2452MHz)	
High Band Edge	**Spurious Emission**
	

802.11n-HT20 Out-of-Band Emissions - Ant 1

100kHz PSD reference Level

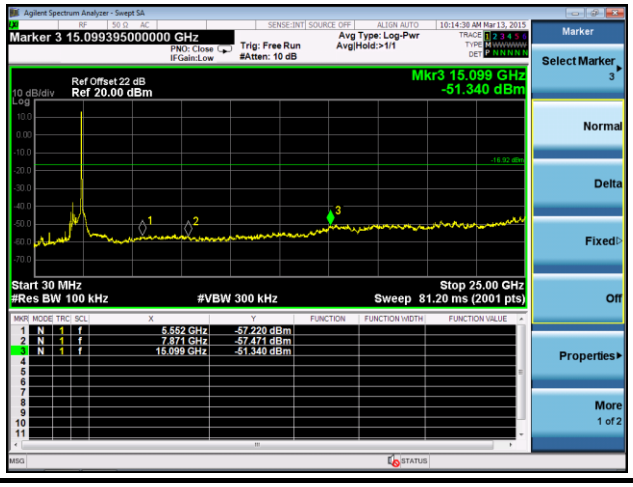


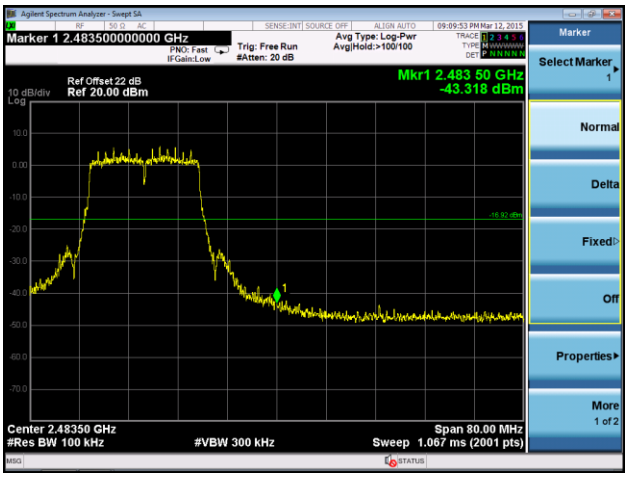
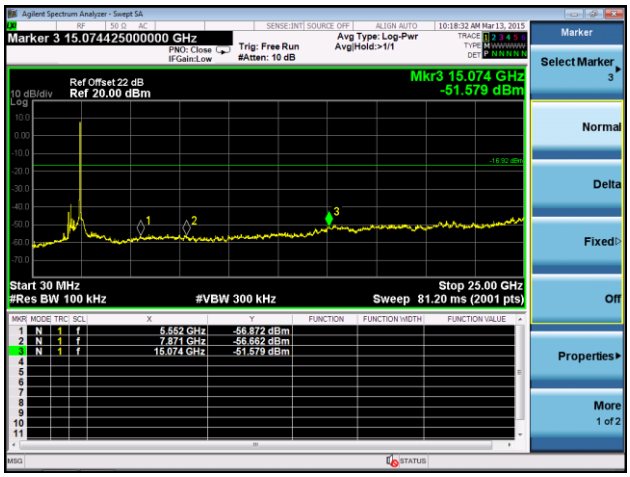
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

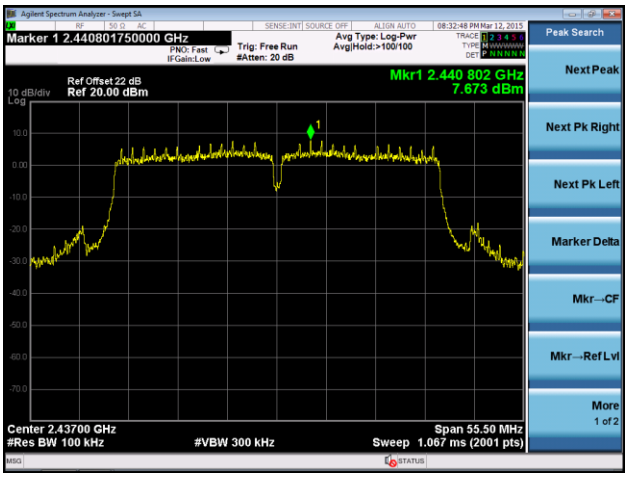
Spurious Emission



Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

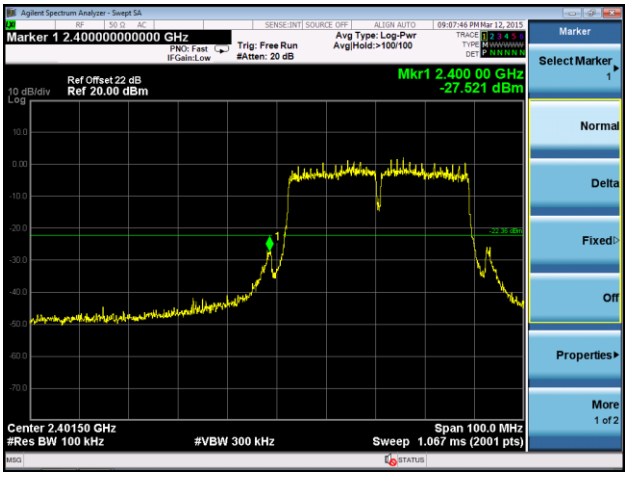
802.11n-HT40 Out-of-Band Emissions - Ant 1

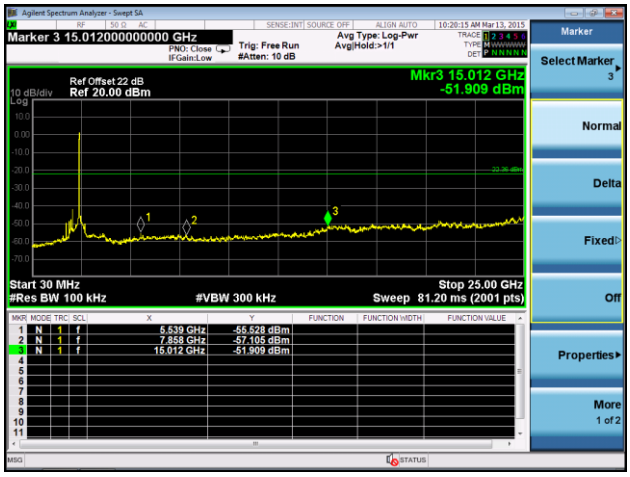
100kHz PSD reference Level



Channel 03 (2422MHz)

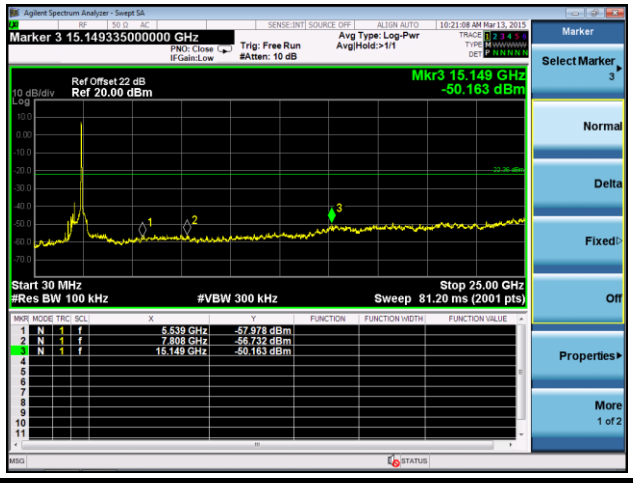
Low Band Edge	Spurious Emission

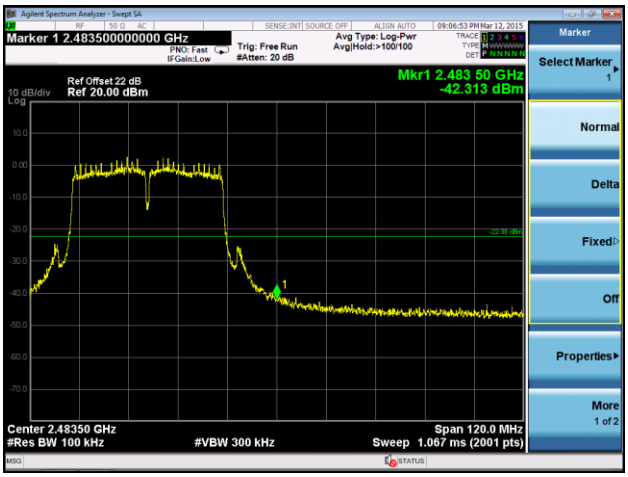
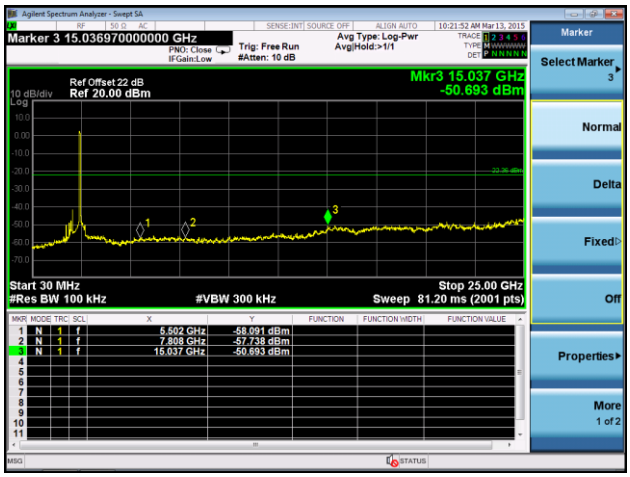




Channel 06 (2437MHz)

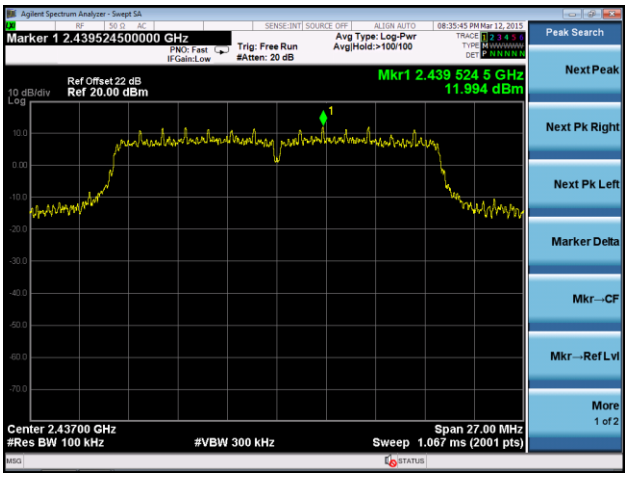
Spurious Emission	



Channel 9 (2452MHz)	
High Band Edge	**Spurious Emission**
	

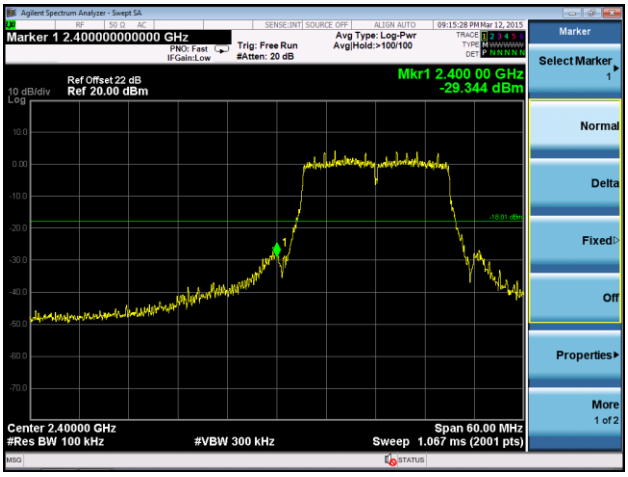
802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

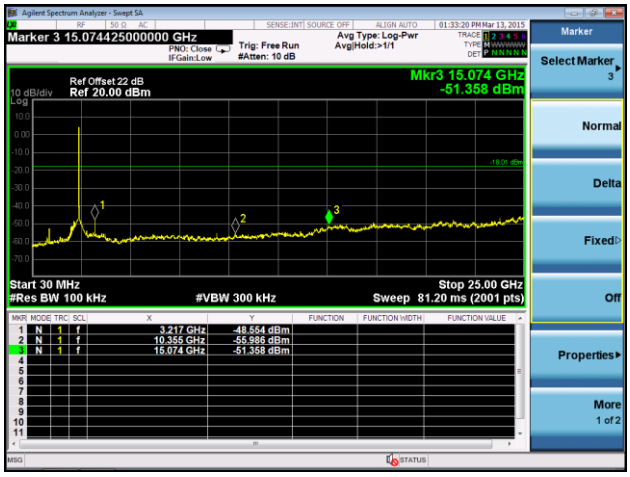
100kHz PSD reference Level



Channel 01 (2412MHz)

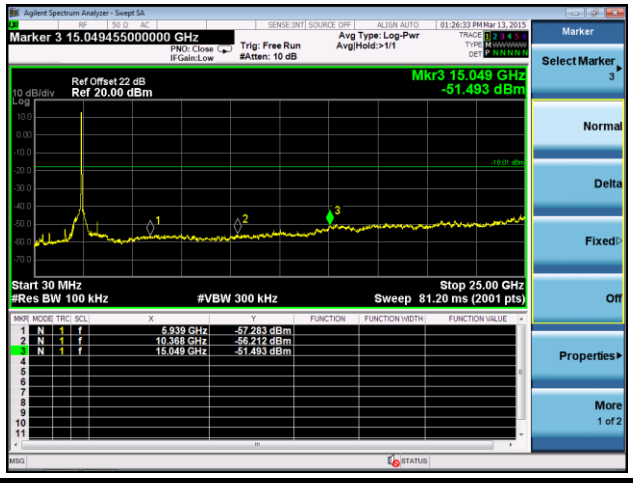
Low Band Edge	Spurious Emission

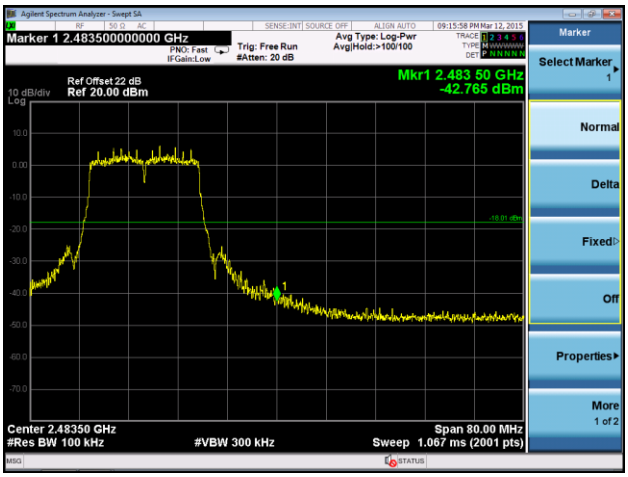
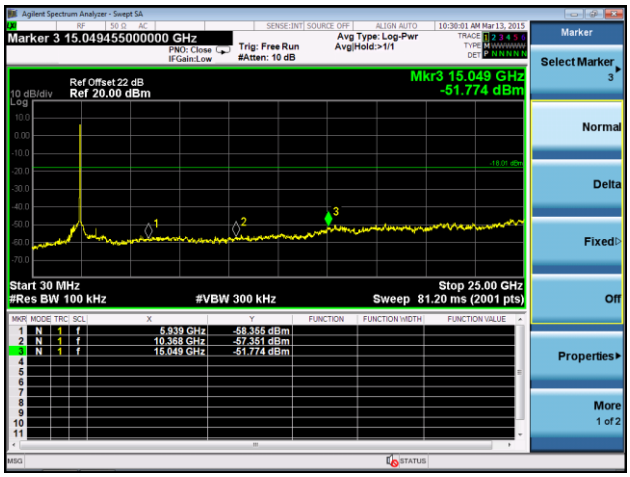




Channel 06 (2437MHz)

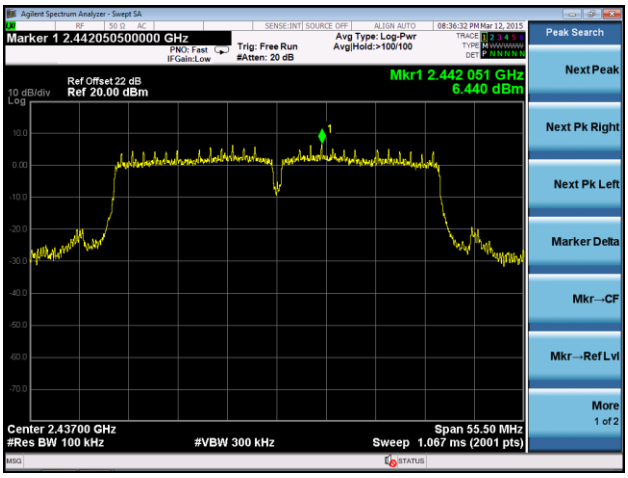
Spurious Emission	



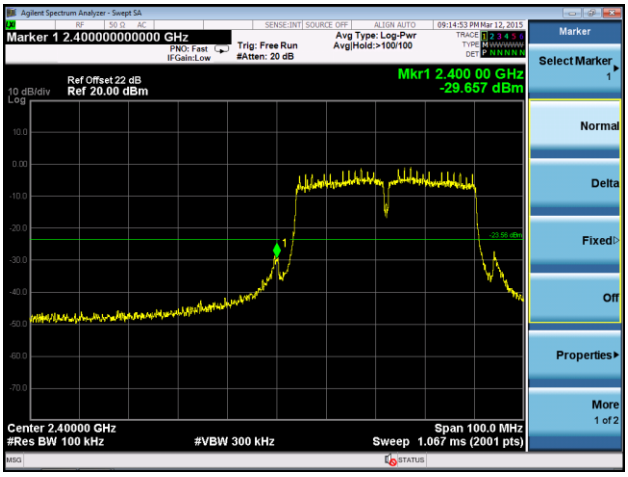
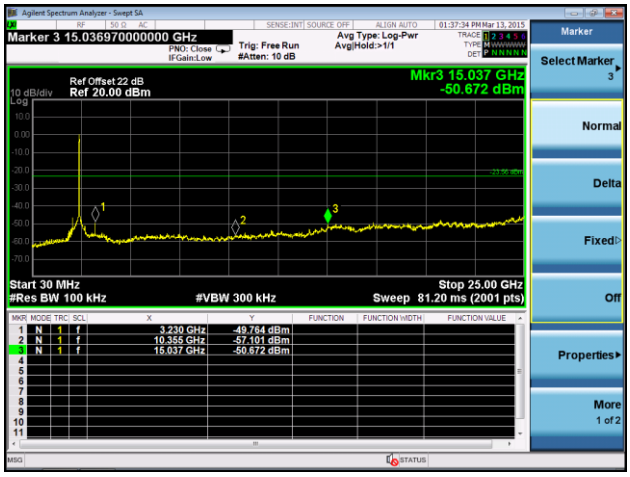
Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

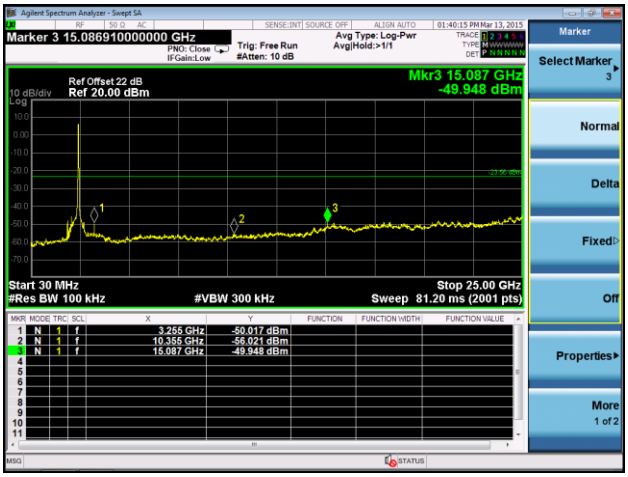
100kHz PSD reference Level

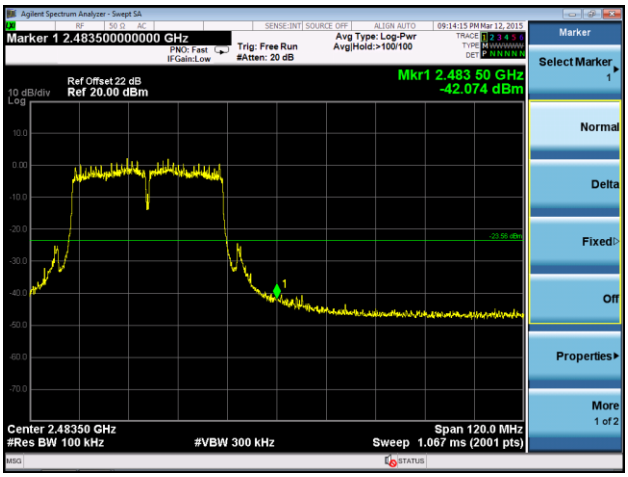
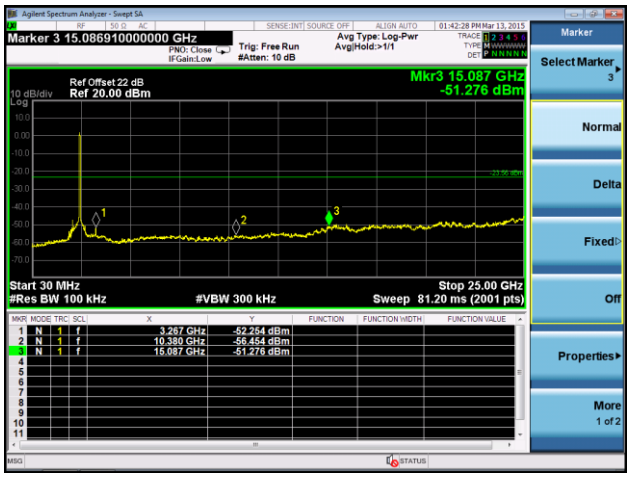


Channel 03 (2422MHz)

Low Band Edge	Spurious Emission
	

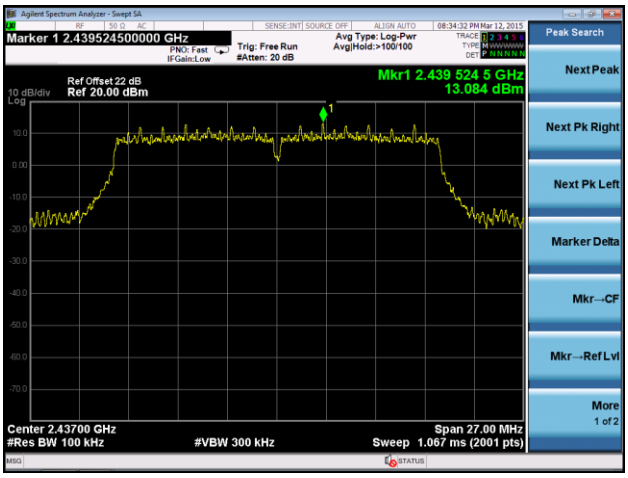
Channel 06 (2437MHz)

Spurious Emission	
	

Channel 9 (2452MHz)	
High Band Edge	**Spurious Emission**
	

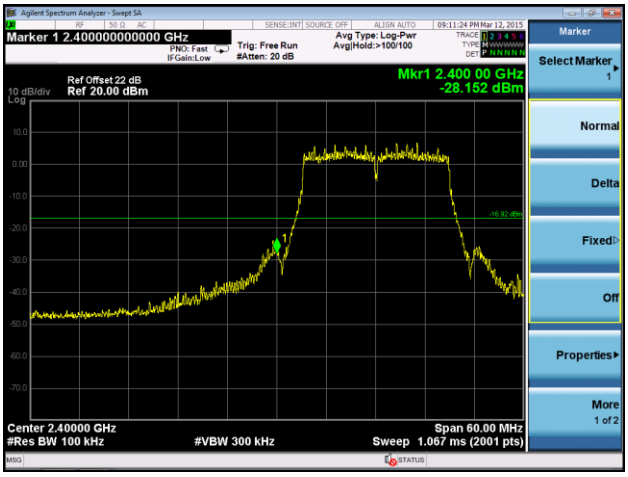
802.11n-HT20 Out-of-Band Emissions - Ant 1 / Ant 0 + 1

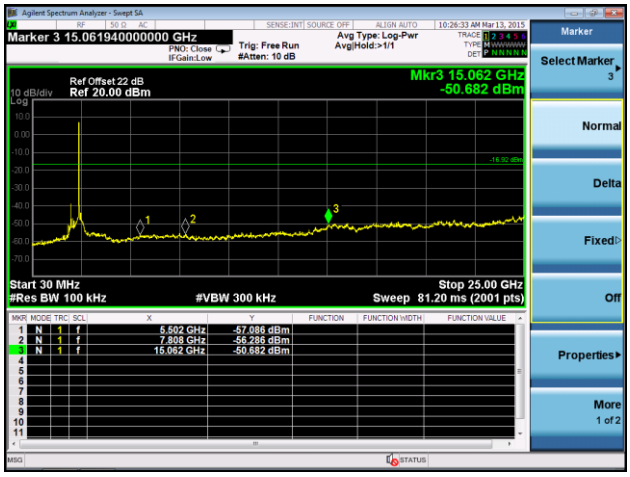
100kHz PSD reference Level



Channel 01 (2412MHz)

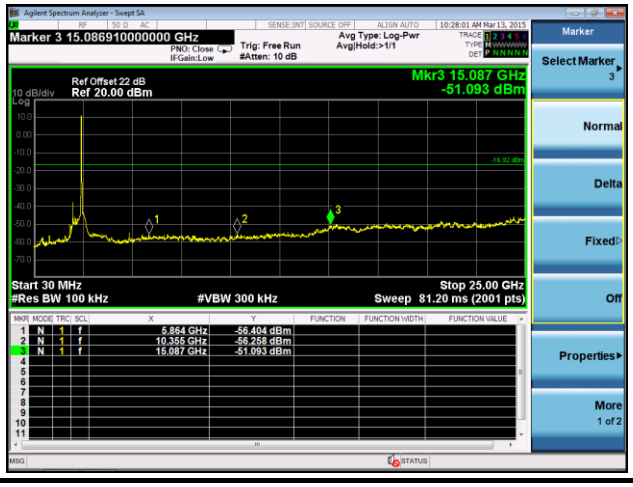
Low Band Edge	Spurious Emission

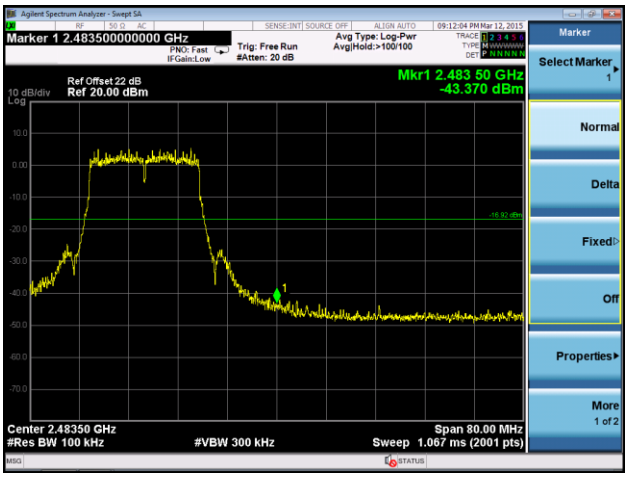
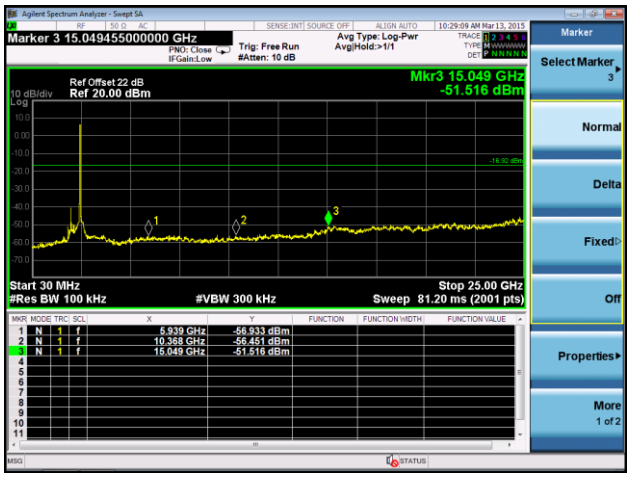




Channel 06 (2437MHz)

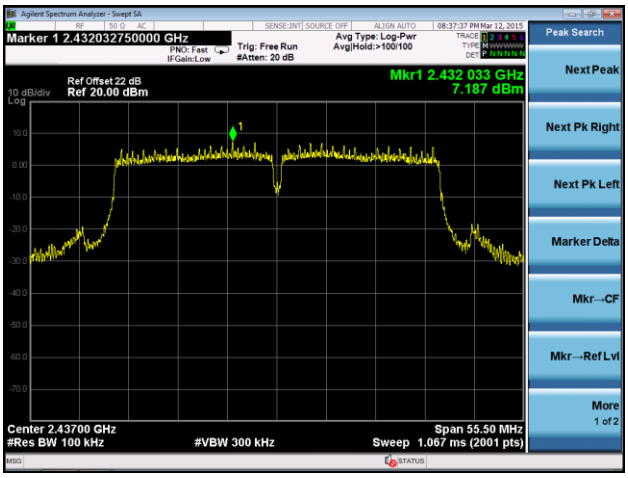
Spurious Emission	



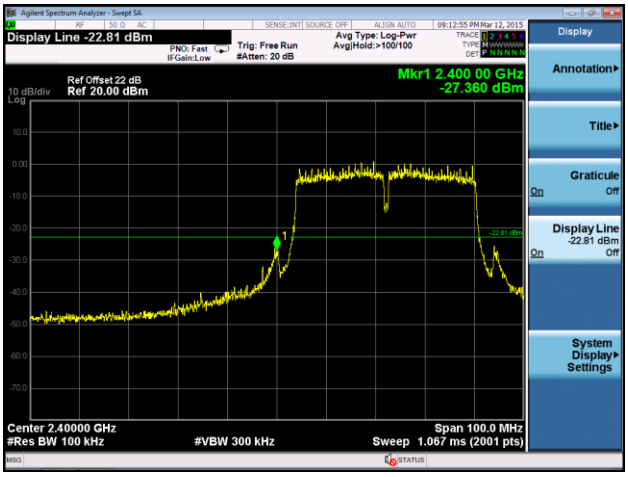
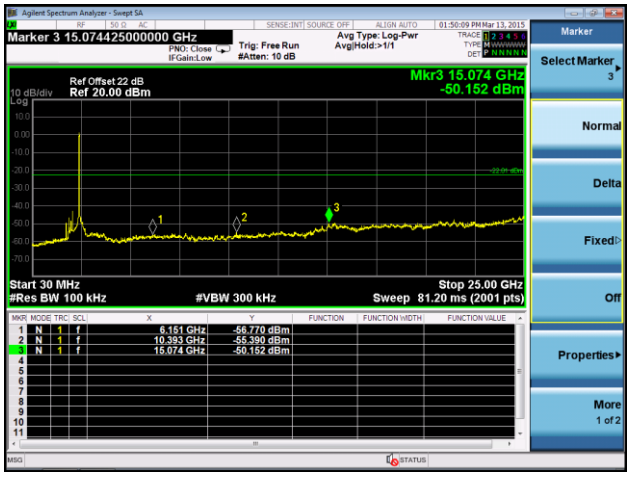
Channel 11 (2462MHz)	
High Band Edge	**Spurious Emission**
	

802.11n-HT40 Out-of-Band Emissions - Ant 1 / Ant 0 + 1

100kHz PSD reference Level

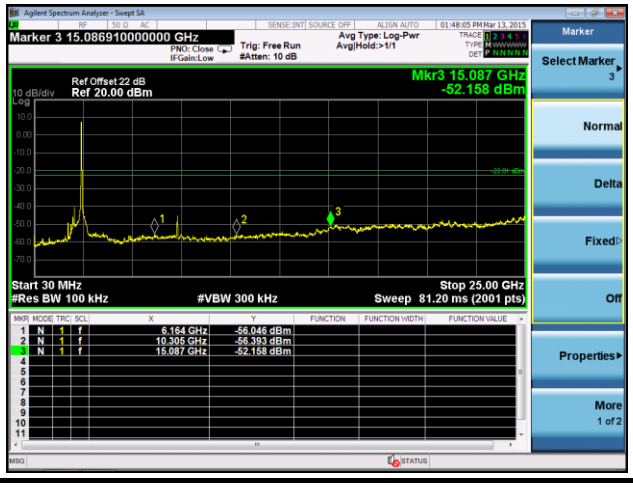


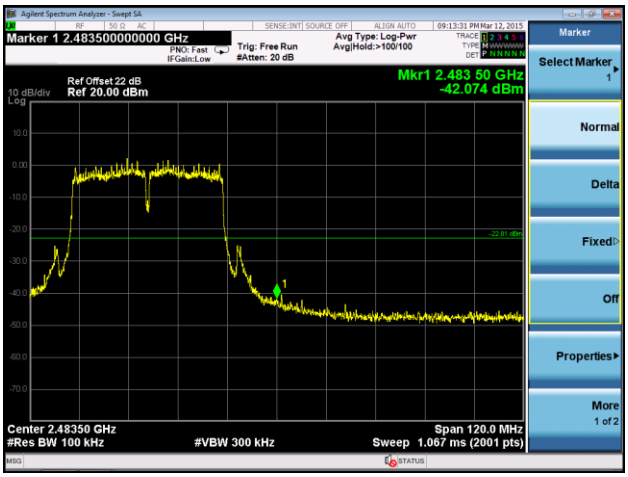
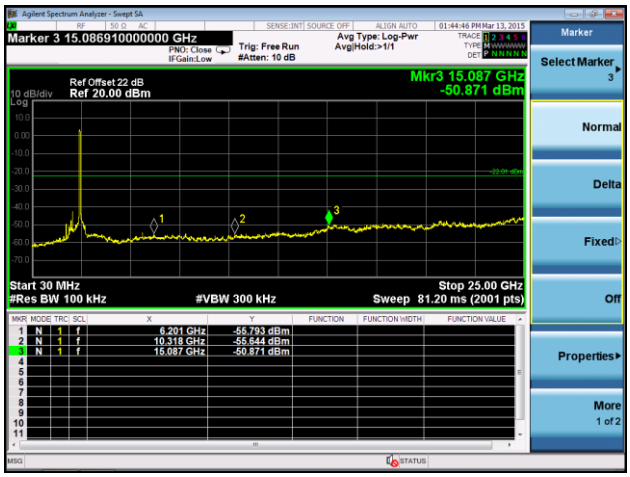
Channel 03 (2422MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

Spurious Emission



Channel 9 (2452MHz)	
High Band Edge	**Spurious Emission**
	

7.6. Radiated Spurious Emission Measurement

7.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.6.2. Test Procedure Used

KDB 558074 D01v03r02 - Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r02 - Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r02 - Section 12.2.5 (average power measurements)

7.6.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak

5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

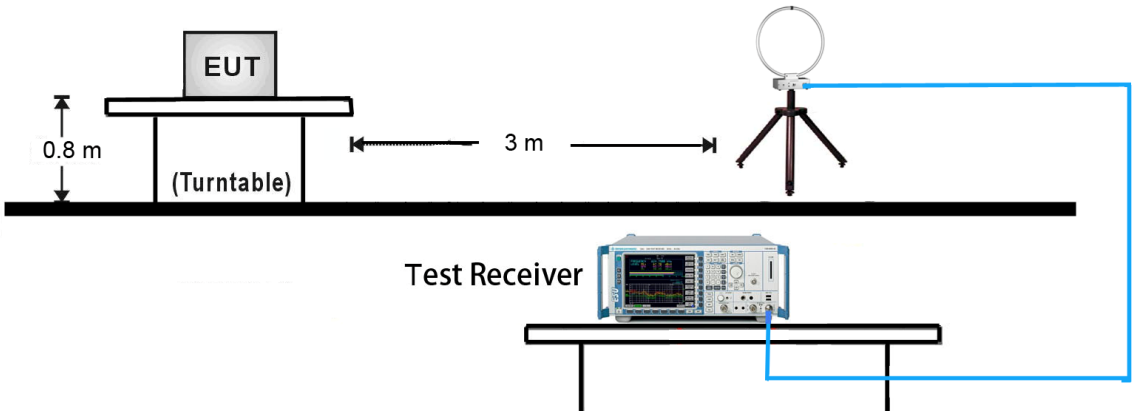
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

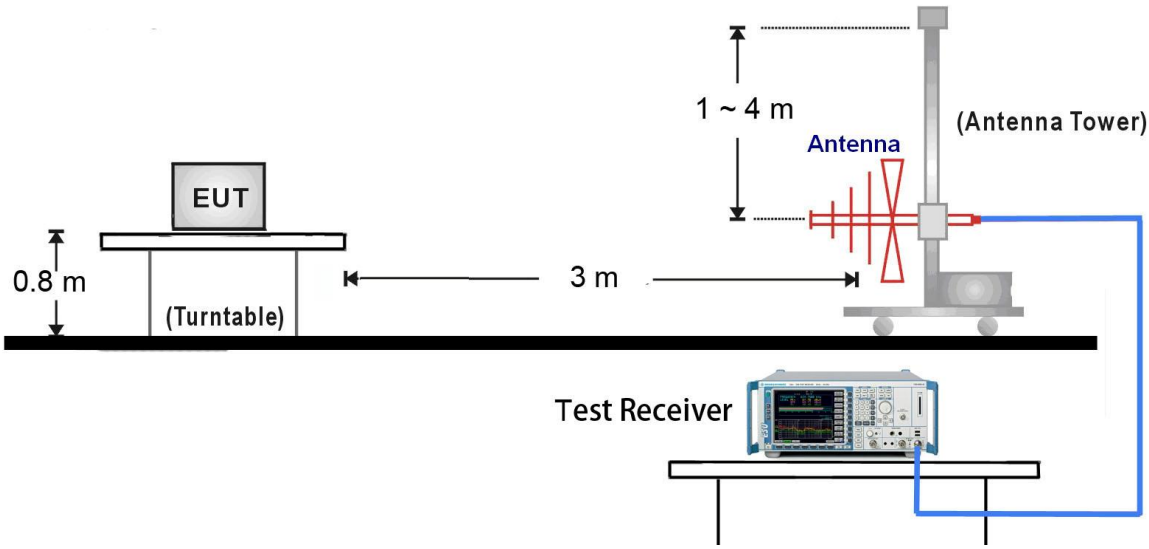
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.6.4. Test Setup

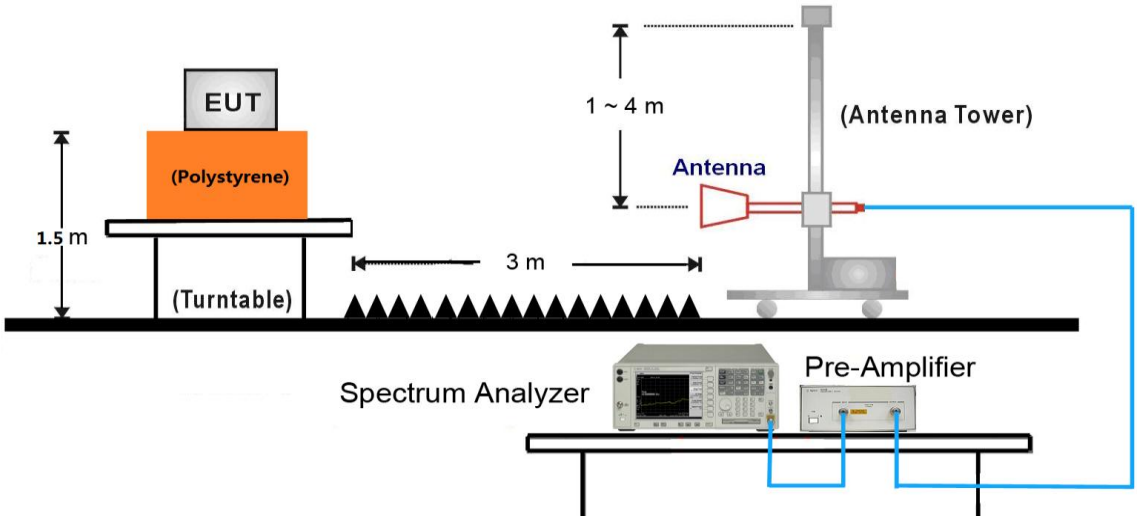
9kHz ~ 30MHz Test Setup:



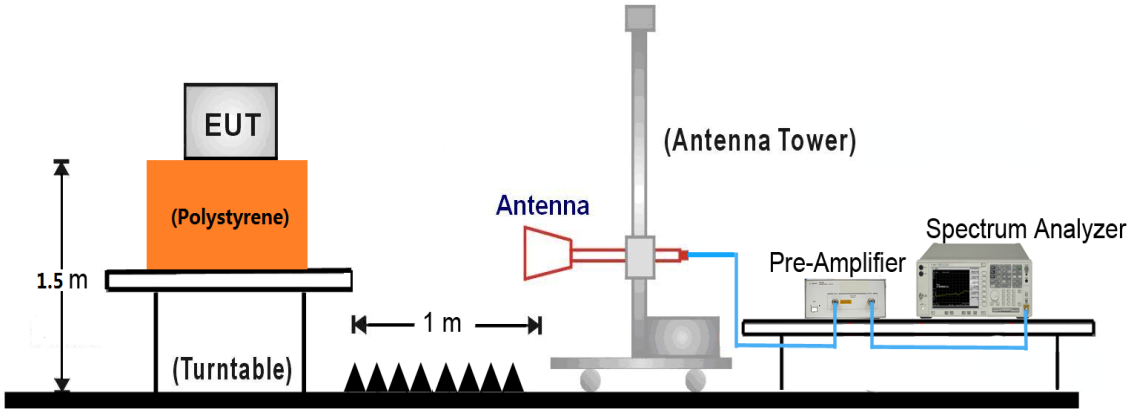
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.6.5. Test Result

Test Mode:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3218.5	50.4	4.1	54.5	94.1	-39.6	Peak	Horizontal
*	3426.7	38.7	4.0	42.7	94.1	-51.4	Peak	Horizontal
	4865.5	36.8	7.3	44.1	74.0	-29.9	Peak	Horizontal
	8355.5	36.1	15.2	51.3	74.0	-22.7	Peak	Horizontal
*	3218.5	47.2	4.1	51.3	94.1	-42.8	Peak	Vertical
*	4352.6	36.8	6.1	42.9	94.1	-51.2	Peak	Vertical
	5022.6	35.9	7.6	43.5	74.0	-30.5	Peak	Vertical
	8216.4	36.2	15.4	51.6	74.0	-22.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (114.1dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3252.5	46.8	4.0	50.8	95.4	-44.6	Peak	Horizontal
*	4426.9	37.0	6.2	43.2	95.4	-52.2	Peak	Horizontal
	4869.1	37.5	7.3	44.8	74.0	-29.2	Peak	Horizontal
	8256.6	36.1	15.3	51.4	74.0	-22.6	Peak	Horizontal
*	3252.5	44.4	4.0	48.4	95.4	-47.0	Peak	Vertical
*	4446.9	37.2	6.2	43.4	95.4	-52.0	Peak	Vertical
	4863.3	36.7	7.3	44.0	74.0	-30.0	Peak	Vertical
	7310.2	33.2	14.8	48.0	54.0	-6.0	Average	Vertical
	7315.5	41.4	14.9	56.3	74.0	-17.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (115.4dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
*	3126.5	40.1	4.2	44.3	94.0	-49.7	Peak	Horizontal
*	4463.3	37.3	6.2	43.5	94.0	-50.5	Peak	Horizontal
	4863.3	36.6	7.3	43.9	74.0	-30.1	Peak	Horizontal
	8256.5	36.2	15.3	51.5	74.0	-22.5	Peak	Horizontal
*	3145.7	39.8	4.2	44.0	94.0	-50.0	Peak	Vertical
*	4426.4	36.9	6.2	43.1	94.0	-50.9	Peak	Vertical
	4623.9	37.7	6.6	44.3	74.0	-29.7	Peak	Vertical
	8421.4	35.6	15.4	51.0	74.0	-23.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (114.0dBµV/m).

Note 2: Measure Level (dBµV/m) = Reading Level (dBµV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g - Ant 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3145.7	39.9	4.2	44.1	92.0	-47.9	Peak	Horizontal
*	4457.0	37.2	6.2	43.4	92.0	-48.6	Peak	Horizontal
	4897.4	37.6	7.4	45.0	74.0	-29.0	Peak	Horizontal
	8365.6	35.4	15.2	50.6	74.0	-23.4	Peak	Horizontal
*	3218.5	47.2	4.1	51.3	92.0	-40.7	Peak	Vertical
*	4456.7	37.1	6.2	43.3	92.0	-48.7	Peak	Vertical
	4763.9	37.2	6.9	44.1	74.0	-29.9	Peak	Vertical
	8194.7	36.7	15.5	52.2	74.0	-21.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (112.0dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g - Ant 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3126.6	39.2	4.2	43.4	95.9	-52.5	Peak	Horizontal
*	4486.4	37.0	6.3	43.3	95.9	-52.6	Peak	Horizontal
	7315.5	39.9	14.9	54.8	74.0	-19.2	Peak	Horizontal
	8245.7	36.1	15.3	51.4	74.0	-22.6	Peak	Horizontal
*	3244.7	39.2	4.0	43.2	95.9	-52.7	Peak	Vertical
*	4479.0	37.0	6.3	43.3	95.9	-52.6	Peak	Vertical
	5026.4	36.2	7.6	43.8	74.0	-30.2	Peak	Vertical
	7315.5	42.5	14.9	57.4	74.0	-16.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (115.9dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11g - Ant 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3204.9	39.1	4.1	43.2	92.5	-49.3	Peak	Horizontal
*	4421.4	36.7	6.2	42.9	92.5	-49.6	Peak	Horizontal
	4869.3	36.4	7.3	43.7	74.0	-30.3	Peak	Horizontal
	8425.7	35.6	15.4	51.0	74.0	-23.0	Peak	Horizontal
*	3105.3	38.5	4.1	42.6	92.5	-49.9	Peak	Vertical
*	4487.4	37.3	6.3	43.6	92.5	-48.9	Peak	Vertical
	5002.4	36.1	7.6	43.7	74.0	-30.3	Peak	Vertical
	7383.5	39.3	14.9	54.2	74.0	-19.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (112.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3145.7	39.5	4.2	43.7	91.5	-47.8	Peak	Horizontal
*	4426.4	37.3	6.2	43.5	91.5	-48.0	Peak	Horizontal
	4869.3	37.3	7.3	44.6	74.0	-29.4	Peak	Horizontal
	8365.5	36.0	15.2	51.2	74.0	-22.8	Peak	Horizontal
*	3105.7	39.2	4.1	43.3	91.5	-48.2	Peak	Vertical
*	4452.5	36.8	6.2	43.0	91.5	-48.5	Peak	Vertical
	4963.6	36.1	7.5	43.6	74.0	-30.4	Peak	Vertical
	8369.5	34.5	15.2	49.7	74.0	-24.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3154.9	39.5	4.3	43.8	95.9	-52.1	Peak	Horizontal
*	4458.7	36.4	6.2	42.6	95.9	-53.3	Peak	Horizontal
	4737.0	36.8	6.8	43.6	74.0	-30.4	Peak	Horizontal
	8213.7	35.9	15.4	51.3	74.0	-22.7	Peak	Horizontal
*	3126.5	39.9	4.2	44.1	95.9	-51.8	Peak	Vertical
*	4436.5	36.6	6.2	42.8	95.9	-53.1	Peak	Vertical
	7307.0	41.6	14.8	56.4	74.0	-17.6	Peak	Vertical
	7310.0	32.8	14.8	47.6	54.0	-6.4	Average	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (115.9dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3165.7	39.0	4.2	43.2	91.4	-48.2	Peak	Horizontal
*	4436.6	36.5	6.2	42.7	91.4	-48.7	Peak	Horizontal
	4759.6	37.0	6.9	43.9	74.0	-30.1	Peak	Horizontal
	8264.3	35.8	15.3	51.1	74.0	-22.9	Peak	Horizontal
*	3154.7	38.9	4.3	43.2	91.4	-48.2	Peak	Vertical
*	4456.3	36.9	6.2	43.1	91.4	-48.3	Peak	Vertical
	4863.7	36.2	7.3	43.5	74.0	-30.5	Peak	Vertical
	8254.3	35.2	15.3	50.5	74.0	-23.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.4dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 0	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3265.4	38.2	3.9	42.1	85.0	-42.9	Peak	Horizontal
*	4456.4	36.2	6.2	42.4	85.0	-42.6	Peak	Horizontal
	4836.5	37.4	7.2	44.6	74.0	-29.4	Peak	Horizontal
	8236.6	35.5	15.3	50.8	74.0	-23.2	Peak	Horizontal
*	3065.9	39.3	4.1	43.4	85.0	-41.6	Peak	Vertical
*	4426.6	36.5	6.2	42.7	85.0	-42.3	Peak	Vertical
	4623.9	37.4	6.6	44.0	74.0	-30.0	Peak	Vertical
	8369.6	34.8	15.2	50.0	74.0	-24.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (105.0dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3066.0	38.7	4.1	42.8	95.7	-52.9	Peak	Horizontal
*	4426.6	36.6	6.2	42.8	95.7	-52.9	Peak	Horizontal
	4636.0	37.1	6.6	43.7	74.0	-30.3	Peak	Horizontal
	8156.3	35.7	15.8	51.5	74.0	-22.5	Peak	Horizontal
*	3005.7	40.0	4.0	44.0	95.7	-51.7	Peak	Vertical
*	4426.4	37.4	6.2	43.6	95.7	-52.1	Peak	Vertical
	4625.3	37.4	6.6	44.0	74.0	-30.0	Peak	Vertical
	8265.7	35.8	15.3	51.1	74.0	-22.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (115.7dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 0	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3157.0	38.8	4.2	43.0	87.5	-44.5	Peak	Horizontal
*	4432.7	36.5	6.2	42.7	87.5	-44.8	Peak	Horizontal
	4632.3	36.7	6.6	43.3	74.0	-30.7	Peak	Horizontal
	8356.3	34.6	15.2	49.8	74.0	-24.2	Peak	Horizontal
*	3247.0	38.3	4.0	42.3	87.5	-45.2	Peak	Vertical
*	4426.7	36.5	6.2	42.7	87.5	-44.8	Peak	Vertical
	5003.0	35.7	7.6	43.3	74.0	-30.7	Peak	Vertical
	8365.3	34.6	15.2	49.8	74.0	-24.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (107.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3156.3	39.3	4.2	43.5	86.3	-42.8	Peak	Horizontal
*	4412.7	37.1	6.2	43.3	86.3	-43.0	Peak	Horizontal
	4893.3	36.6	7.4	44.0	74.0	-30.0	Peak	Horizontal
	8026.5	36.6	16.0	52.6	74.0	-21.4	Peak	Horizontal
*	3165.4	38.8	4.2	43.0	86.3	-43.3	Peak	Vertical
*	4436.5	36.9	6.2	43.1	86.3	-43.2	Peak	Vertical
	4936.6	35.9	7.4	43.3	74.0	-30.7	Peak	Vertical
	8165.4	35.4	15.7	51.1	74.0	-22.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (106.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3246.4	38.7	4.0	42.7	93.9	-51.2	Peak	Horizontal
*	4458.3	37.7	6.2	43.9	93.9	-50.0	Peak	Horizontal
	5002.7	36.7	7.6	44.3	74.0	-29.7	Peak	Horizontal
	8168.3	35.7	15.7	51.4	74.0	-22.6	Peak	Horizontal
*	3216.6	40.0	4.1	44.1	93.9	-49.8	Peak	Vertical
*	4425.7	36.3	6.2	42.5	93.9	-51.4	Peak	Vertical
	4736.3	36.8	6.8	43.6	74.0	-30.4	Peak	Vertical
	8165.4	37.2	15.7	52.9	74.0	-21.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (113.9dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3216.6	41.1	4.1	45.2	84.1	-38.9	Peak	Horizontal
*	4436.6	37.1	6.2	43.3	84.1	-40.8	Peak	Horizontal
	4895.3	37.4	7.4	44.8	74.0	-29.2	Peak	Horizontal
	8365.3	35.3	15.2	50.5	74.0	-23.5	Peak	Horizontal
*	3026.6	39.1	4.0	43.1	84.1	-41.0	Peak	Vertical
*	4426.7	36.9	6.2	43.1	84.1	-41.0	Peak	Vertical
	4936.3	36.3	7.4	43.7	74.0	-30.3	Peak	Vertical
	8132.6	36.2	15.9	52.1	74.0	-21.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.1dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3006.6	38.5	4.0	42.5	81.3	-38.8	Peak	Horizontal
*	4416.4	36.3	6.2	42.5	81.3	-38.8	Peak	Horizontal
	4625.3	36.7	6.6	43.3	74.0	-30.7	Peak	Horizontal
	8365.3	34.6	15.2	49.8	74.0	-24.2	Peak	Horizontal
*	3166.0	38.5	4.2	42.7	81.3	-38.6	Peak	Vertical
*	4436.3	36.7	6.2	42.9	81.3	-38.4	Peak	Vertical
	4536.7	36.3	6.4	42.7	74.0	-31.3	Peak	Vertical
	8366.0	34.7	15.2	49.9	74.0	-24.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3126.5	39.6	4.2	43.8	94.7	-50.9	Peak	Horizontal
*	4412.7	36.5	6.2	42.7	94.7	-52.0	Peak	Horizontal
	5126.4	35.4	7.9	43.3	74.0	-30.7	Peak	Horizontal
	8265.4	35.6	15.3	50.9	74.0	-23.1	Peak	Horizontal
*	3026.7	38.9	4.0	42.9	94.7	-51.8	Peak	Vertical
*	4456.3	37.1	6.2	43.3	94.7	-51.4	Peak	Vertical
	4532.6	36.5	6.4	42.9	74.0	-31.1	Peak	Vertical
	8326.6	34.8	15.2	50.0	74.0	-24.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (114.7dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 1	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3120.6	38.8	4.1	42.9	82.2	-39.3	Peak	Horizontal
*	4416.3	36.4	6.2	42.6	82.2	-39.6	Peak	Horizontal
	4625.7	36.7	6.6	43.3	74.0	-30.7	Peak	Horizontal
	8156.3	36.2	15.8	52.0	74.0	-22.0	Peak	Horizontal
*	3200.7	39.2	4.1	43.3	82.2	-38.9	Peak	Vertical
*	4456.4	36.5	6.2	42.7	82.2	-39.5	Peak	Vertical
	5002.4	35.7	7.6	43.3	74.0	-30.7	Peak	Vertical
	8436.3	34.6	15.4	50.0	74.0	-24.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.2dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3246.6	38.4	4.0	42.4	90.6	-48.2	Peak	Horizontal
*	4436.6	36.4	6.2	42.6	90.6	-48.0	Peak	Horizontal
	5936.3	34.8	9.1	43.9	74.0	-30.1	Peak	Horizontal
	8326.5	35.3	15.2	50.5	74.0	-23.5	Peak	Horizontal
*	3126.5	39.5	4.2	43.7	90.6	-46.9	Peak	Vertical
*	4436.6	36.4	6.2	42.6	90.6	-48.0	Peak	Vertical
	4625.4	36.8	6.6	43.4	74.0	-30.6	Peak	Vertical
	8356.3	34.2	15.2	49.4	74.0	-24.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (110.6dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3165.3	39.0	4.2	43.2	93.5	-50.3	Peak	Horizontal
*	4436.3	36.6	6.2	42.8	93.5	-50.7	Peak	Horizontal
	7315.8	26.4	14.9	41.3	54.0	-12.7	Average	Horizontal
	7324.0	40.7	14.9	55.6	74.0	-18.4	Peak	Horizontal
	8156.3	36.0	15.8	51.8	74.0	-22.2	Peak	Horizontal
*	3126.6	39.4	4.2	43.6	93.5	-49.9	Peak	Vertical
*	4456.9	37.4	6.2	43.6	93.5	-49.9	Peak	Vertical
	4635.3	37.2	6.6	43.8	74.0	-30.2	Peak	Vertical
	7308.6	28.2	14.8	43.0	54.0	-11.0	Average	Vertical
	7315.5	42.6	14.9	57.5	74.0	-16.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (113.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 - Ant 0 + 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3165.3	39.3	4.2	43.5	91.3	-47.8	Peak	Horizontal
*	4457.0	37.1	6.2	43.3	91.3	-48.0	Peak	Horizontal
	4635.7	37.9	6.6	44.5	74.0	-29.5	Peak	Horizontal
	8263.6	35.8	15.3	51.1	74.0	-22.9	Peak	Horizontal
*	3145.6	38.8	4.2	43.0	91.3	-48.3	Peak	Vertical
*	4426.4	37.2	6.2	43.4	91.3	-47.9	Peak	Vertical
	4869.3	37.0	7.3	44.3	74.0	-29.7	Peak	Vertical
	8154.4	35.4	15.8	51.2	74.0	-22.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 - Ant 0 + 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3189.4	40.3	4.2	44.5	85.5	-41.0	Peak	Horizontal
*	4416.6	36.4	6.2	42.6	85.5	-42.9	Peak	Horizontal
	5006.4	36.3	7.6	43.9	74.0	-30.1	Peak	Horizontal
	8365.9	35.1	15.2	50.3	74.0	-23.7	Peak	Horizontal
*	3164.6	39.2	4.2	43.4	85.5	-42.1	Peak	Vertical
*	4423.7	37.0	6.2	43.2	85.5	-42.3	Peak	Vertical
	4769.3	37.2	6.9	44.1	74.0	-29.9	Peak	Vertical
	8365.3	34.9	15.2	50.1	74.0	-23.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (105.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)