

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 Settling

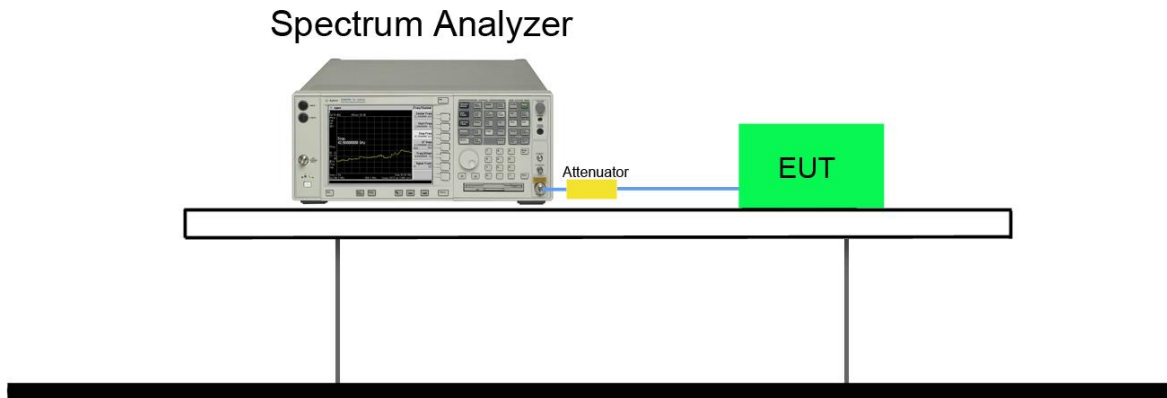
1. Reference level measurement

- (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 $\geq 3 \times$ 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

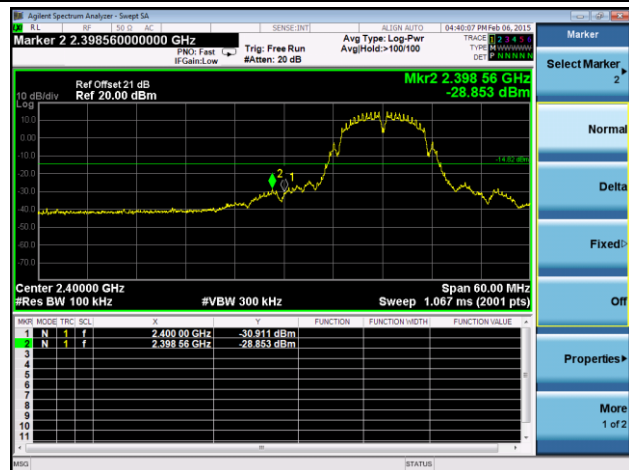
802.11b Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

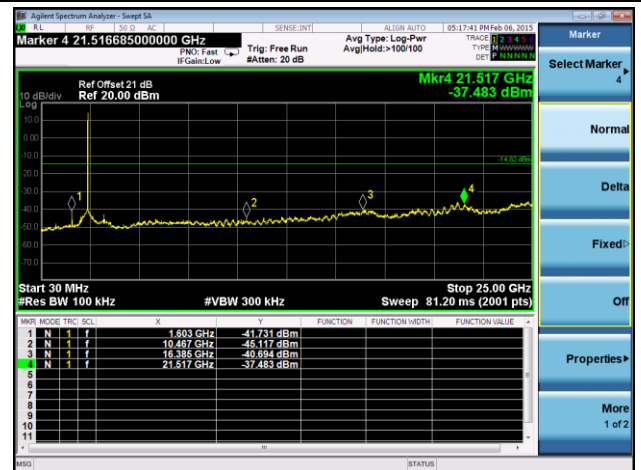


Channel 01 (2412MHz)

Low Band Edge

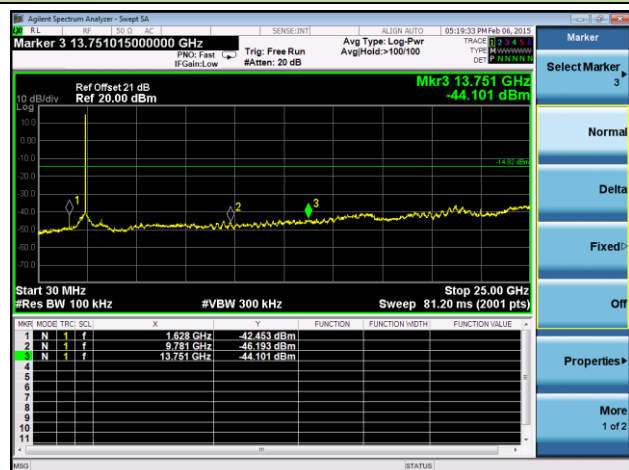


Spurious Emission



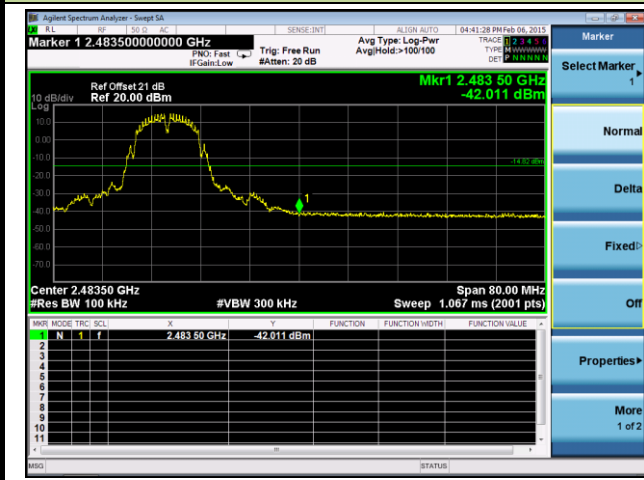
Channel 06 (2437MHz)

Spurious Emission

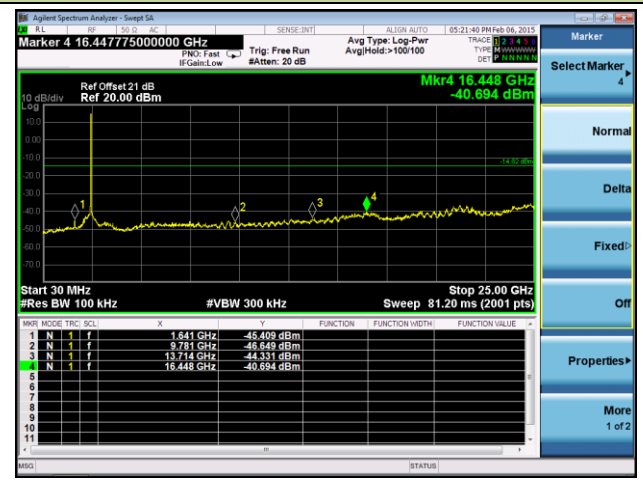


Channel 11 (2462MHz)

High Band Edge

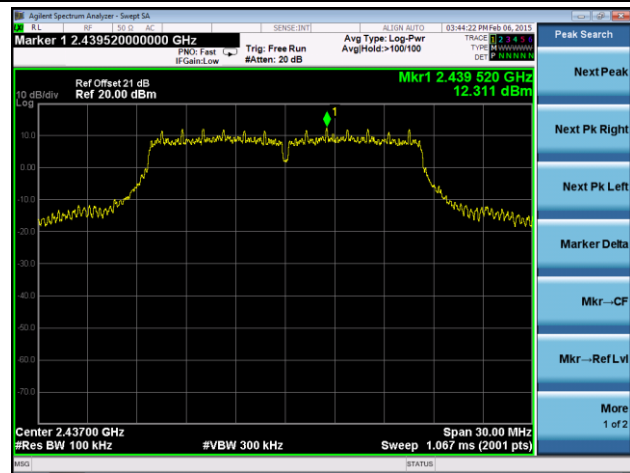


Spurious Emission



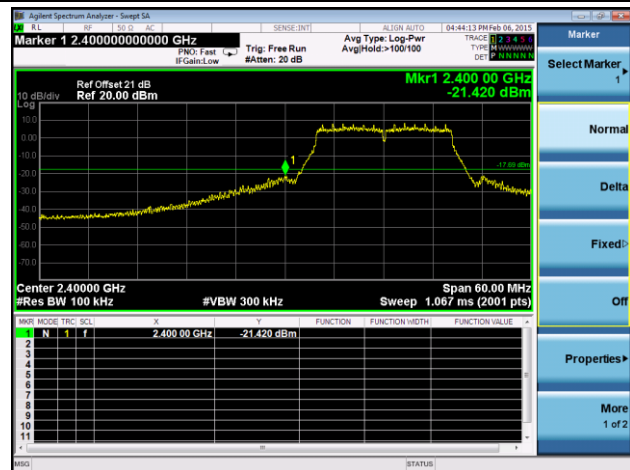
802.11g Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

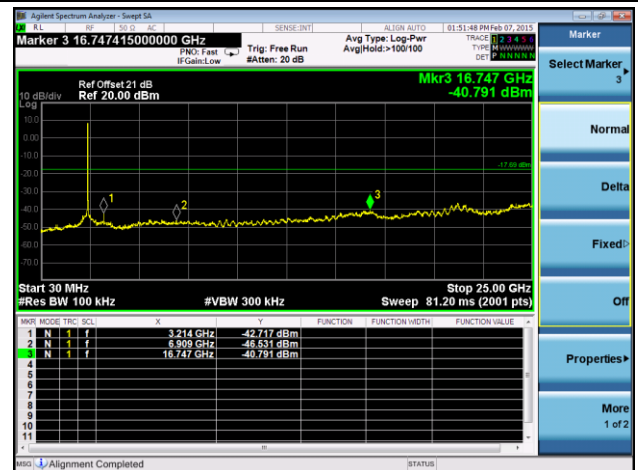


Channel 01 (2412MHz)

Low Band Edge

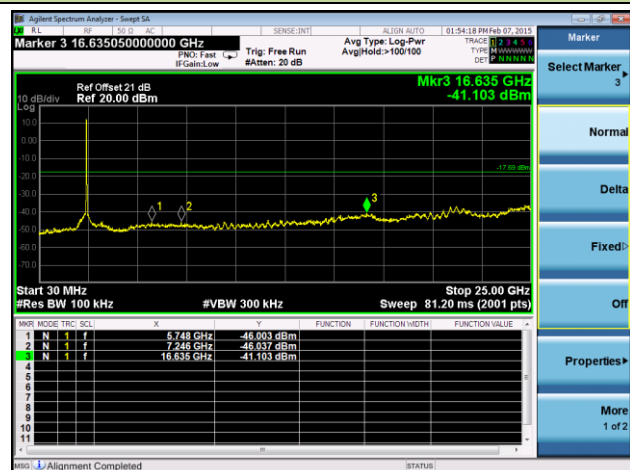


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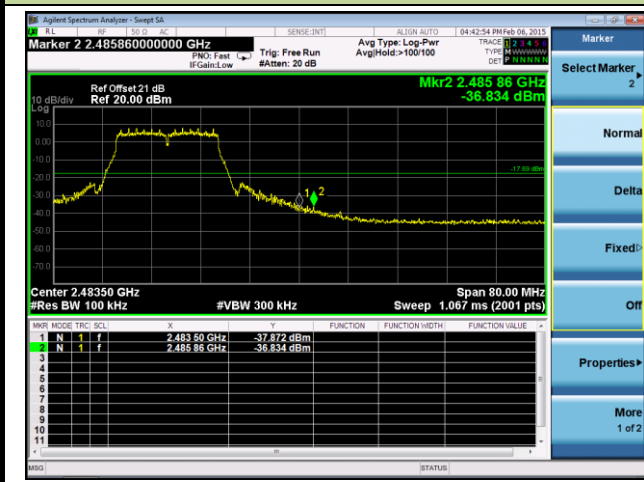
Channel 06 (2437MHz)

Spurious Emission

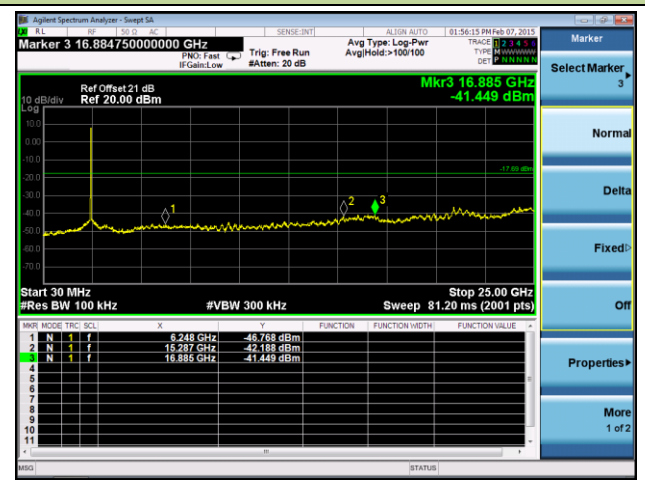


Channel 11 (2462MHz)

High Band Edge

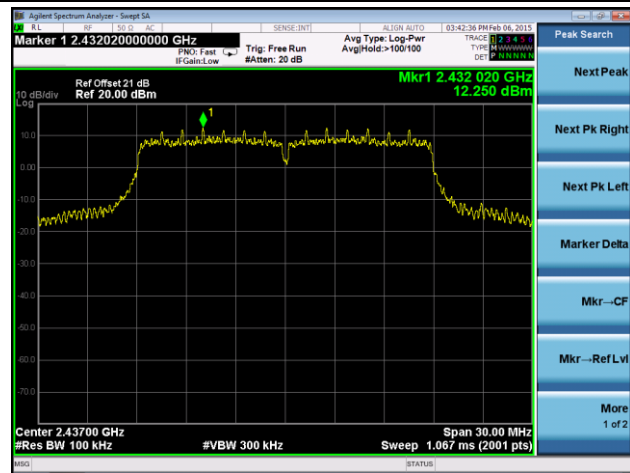


Spurious Emission



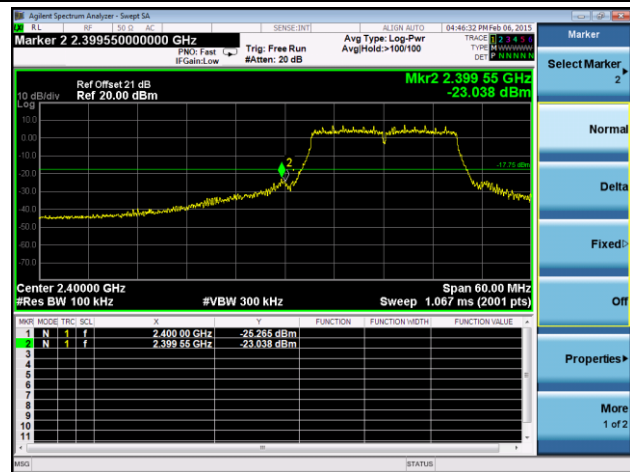
802.11n-HT20 Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

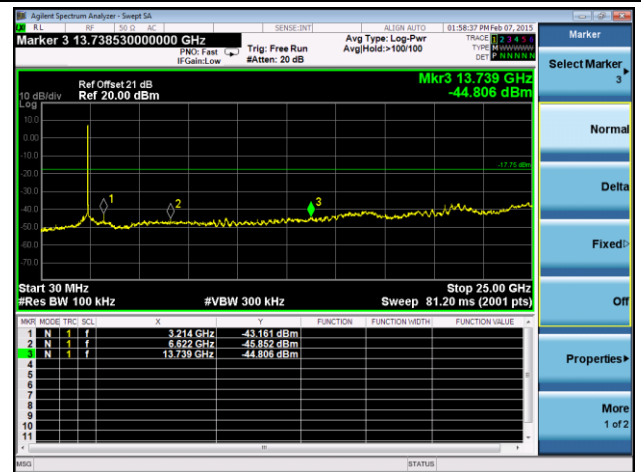


Channel 01 (2412MHz)

Low Band Edge

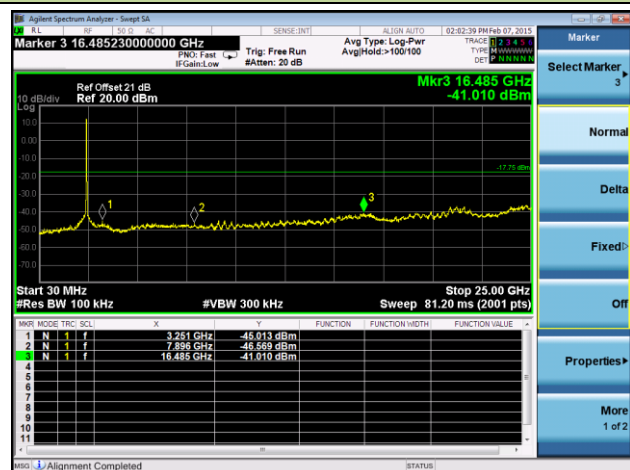


Spurious Emission



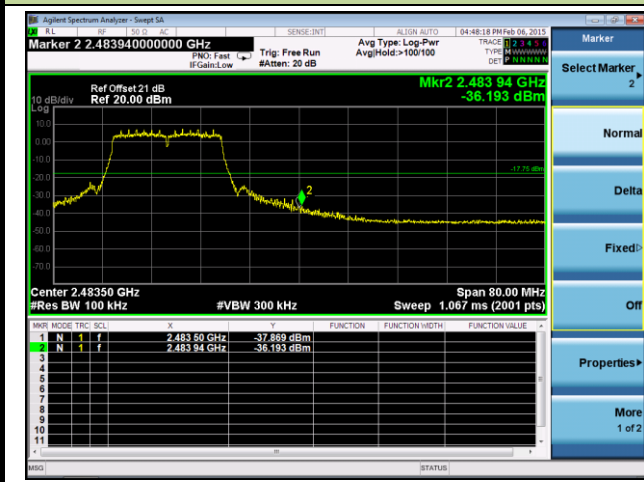
Channel 06 (2437MHz)

Spurious Emission

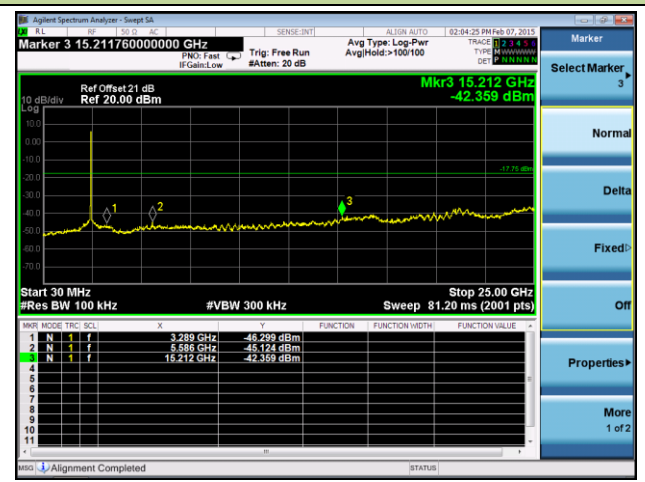


Channel 11 (2462MHz)

High Band Edge

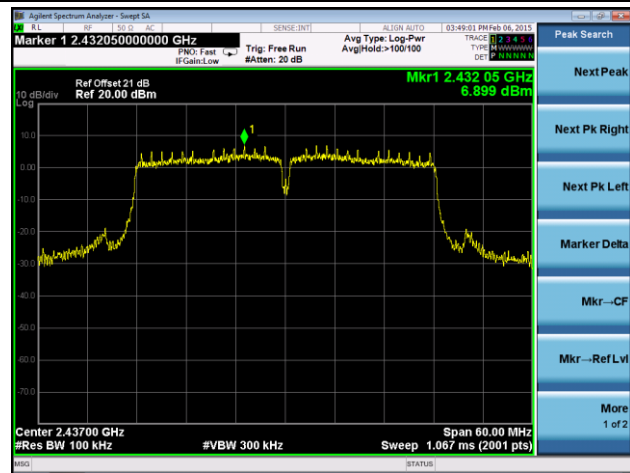


Spurious Emission



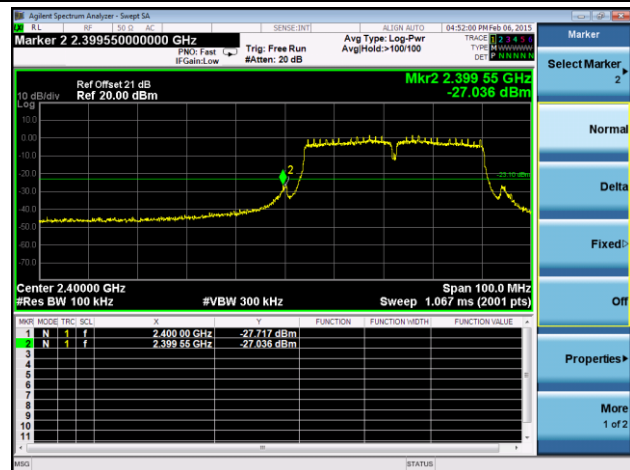
802.11n-HT40 Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

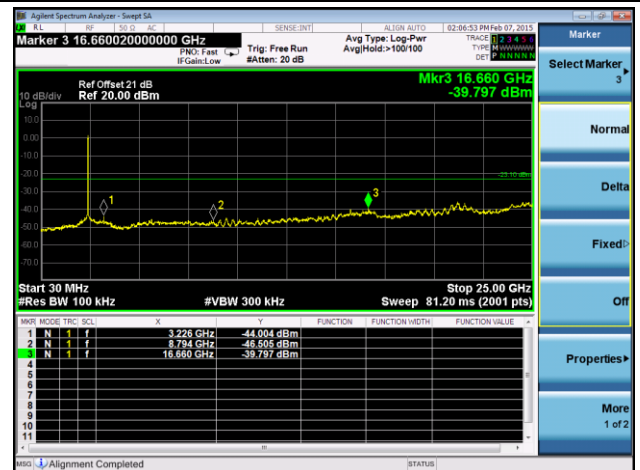


Channel 03 (2422MHz)

Low Band Edge

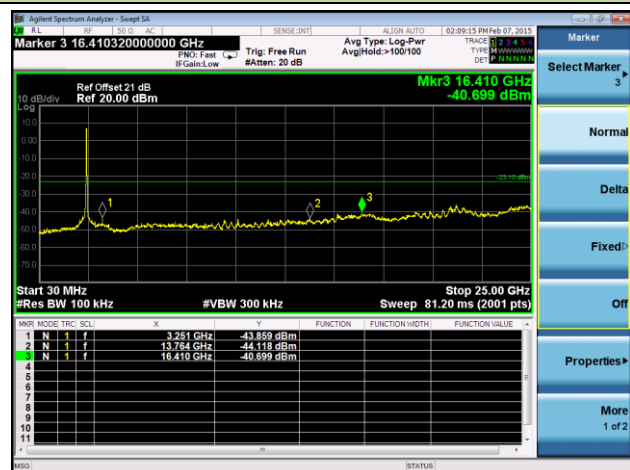


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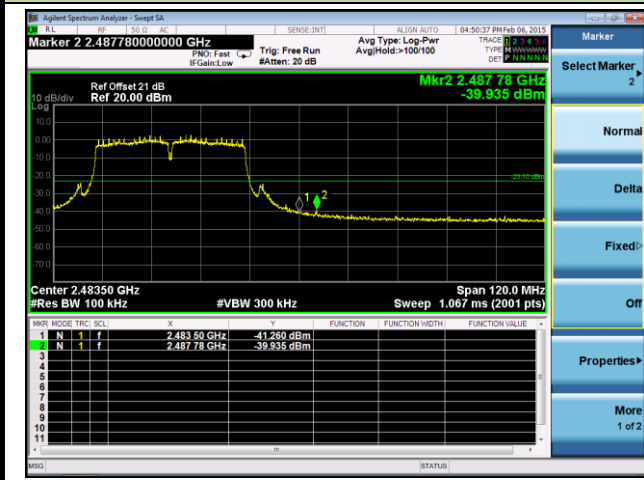
Channel 06 (2437MHz)

Spurious Emission

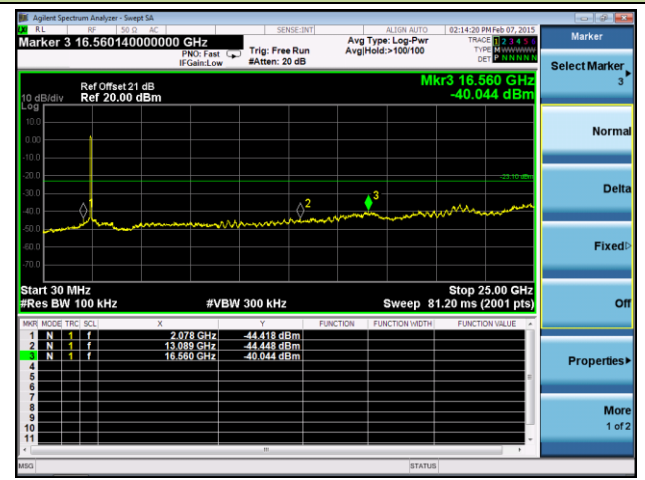


Channel 9 (2452MHz)

High Band Edge

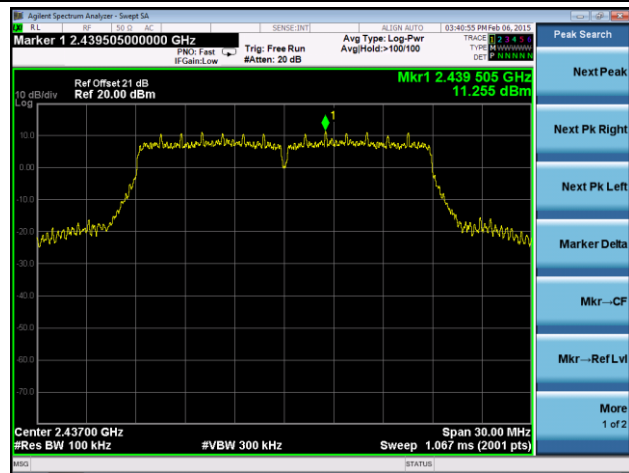


Spurious Emission



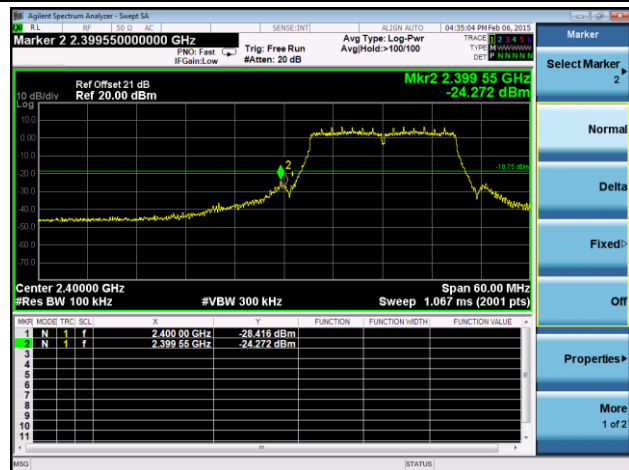
802.11n-HT20 Out-of-Band Emissions - Ant 1

100kHz PSD reference Level

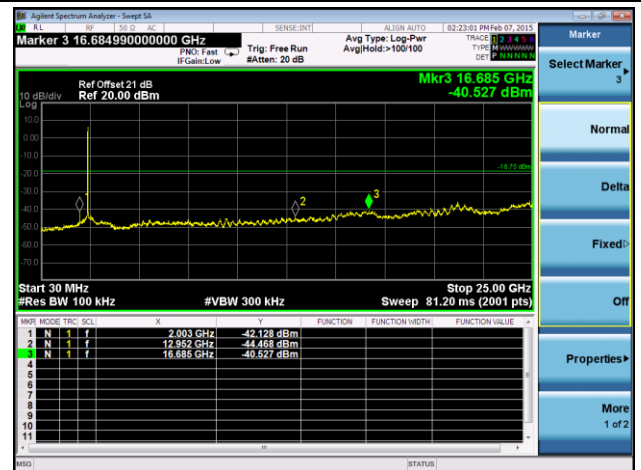


Channel 01 (2412MHz)

Low Band Edge

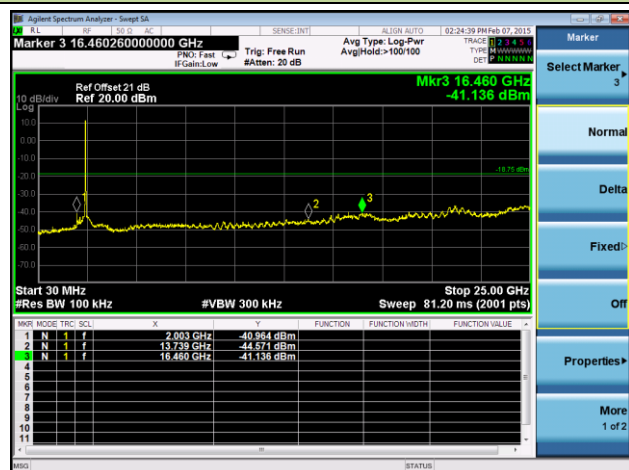


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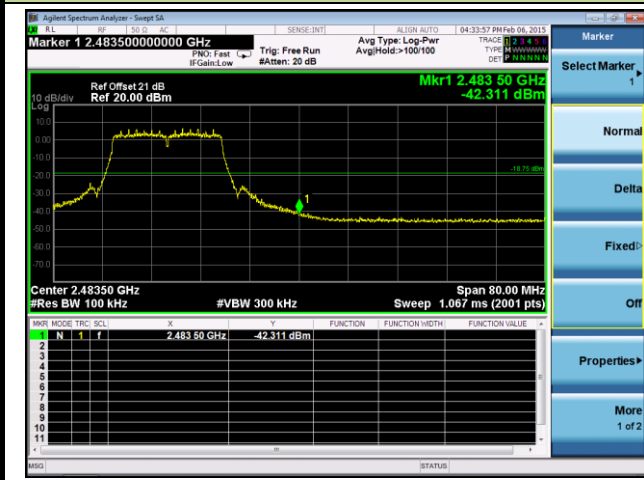
Channel 06 (2437MHz)

Spurious Emission

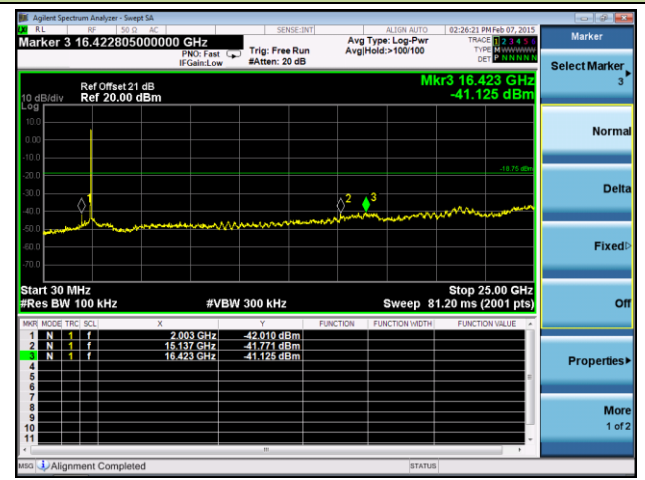


Channel 11 (2462MHz)

High Band Edge

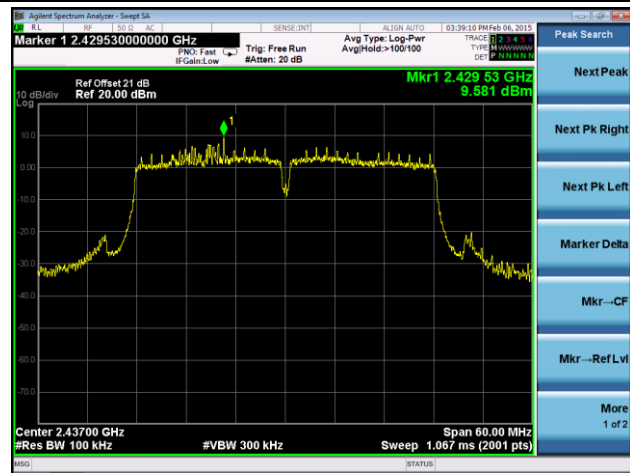


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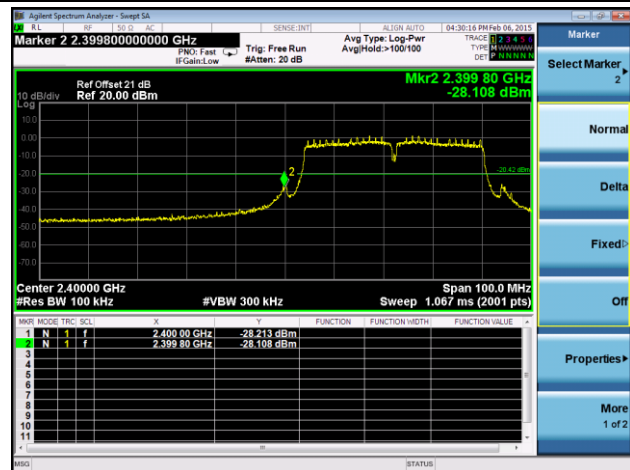
802.11n-HT40 Out-of-Band Emissions - Ant 1

100kHz PSD reference Level

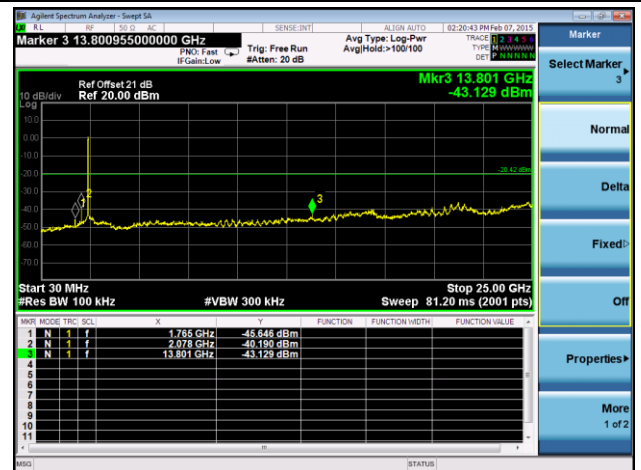


Channel 03 (2422MHz)

Low Band Edge

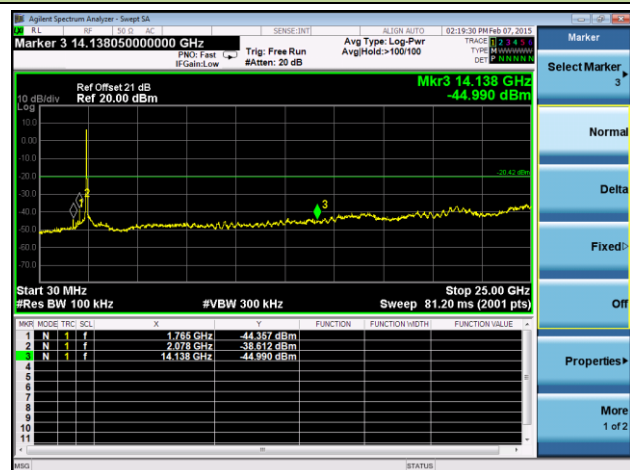


Spurious Emission



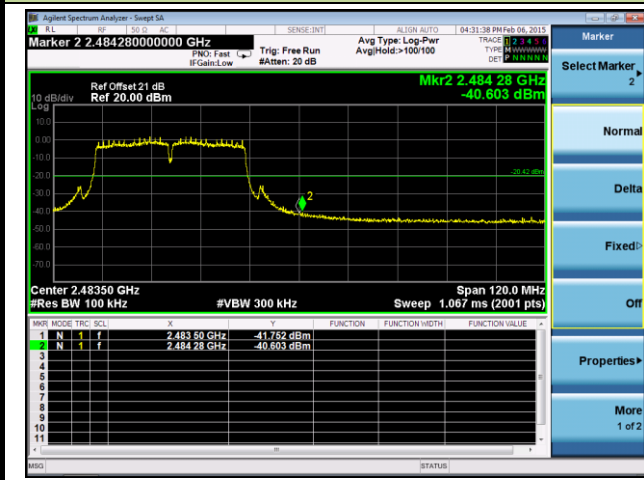
Channel 06 (2437MHz)

Spurious Emission

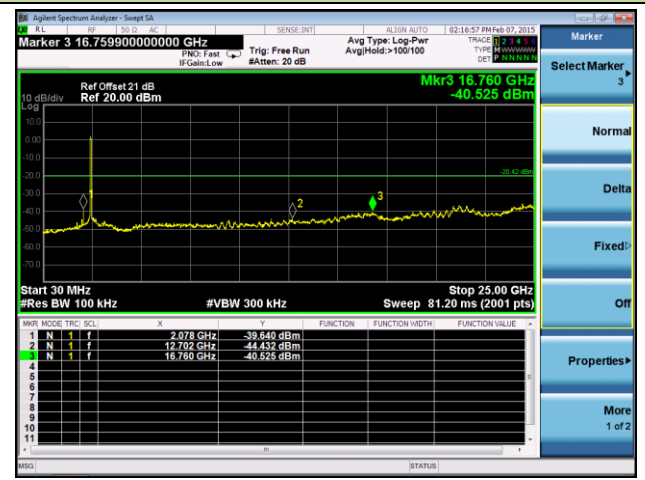


Channel 9 (2452MHz)

High Band Edge

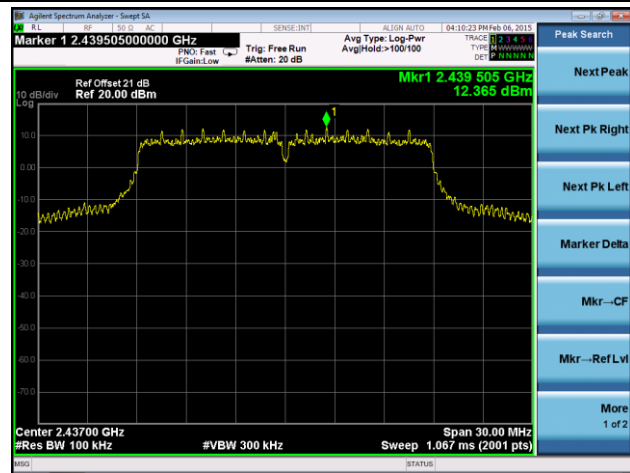


Spurious Emission



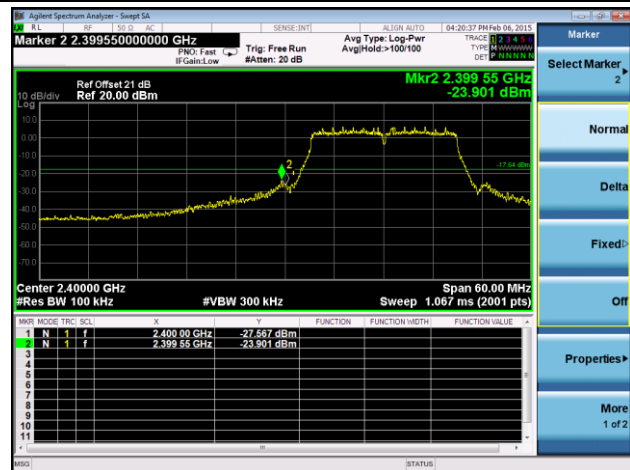
802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level

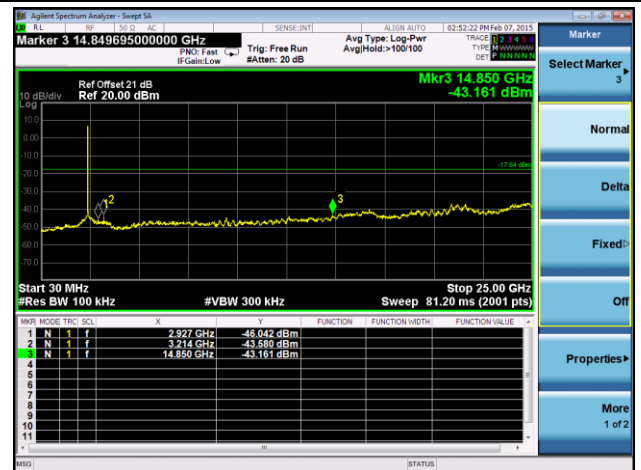


Channel 01 (2412MHz)

Low Band Edge

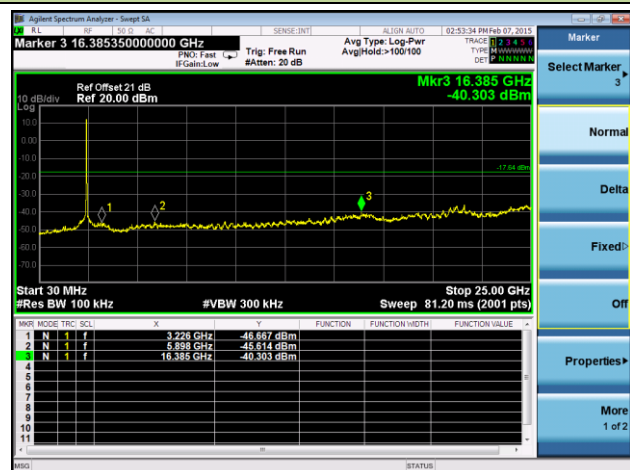


Spurious Emission



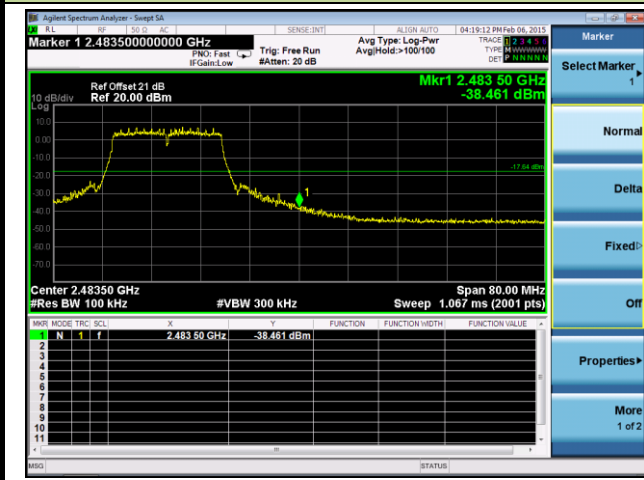
Channel 06 (2437MHz)

Spurious Emission

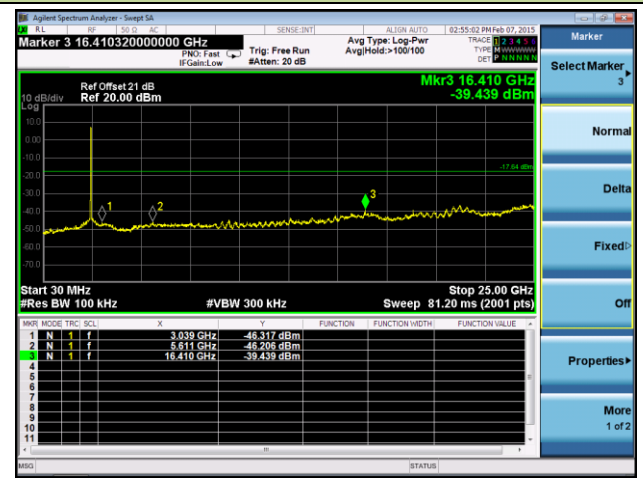


Channel 11 (2462MHz)

High Band Edge

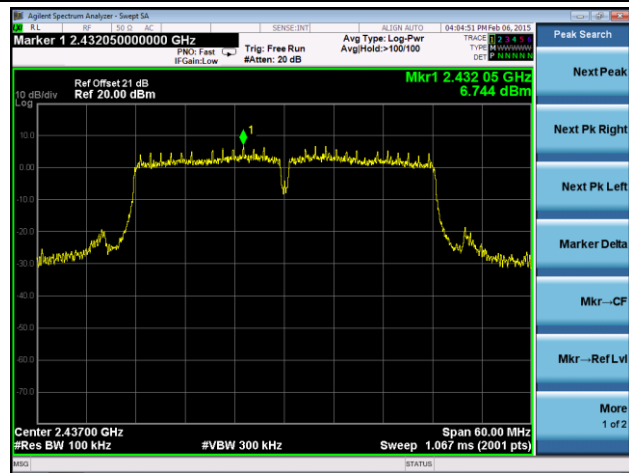


Spurious Emission



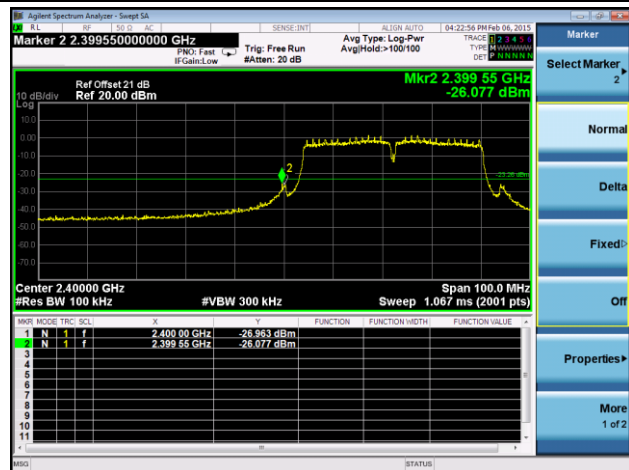
802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level

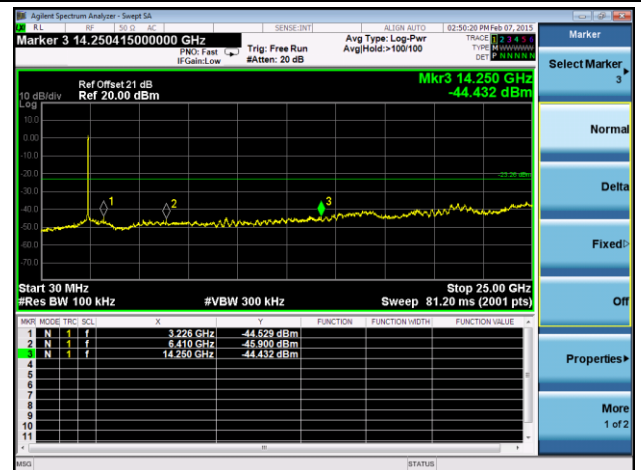


Channel 03 (2422MHz)

Low Band Edge

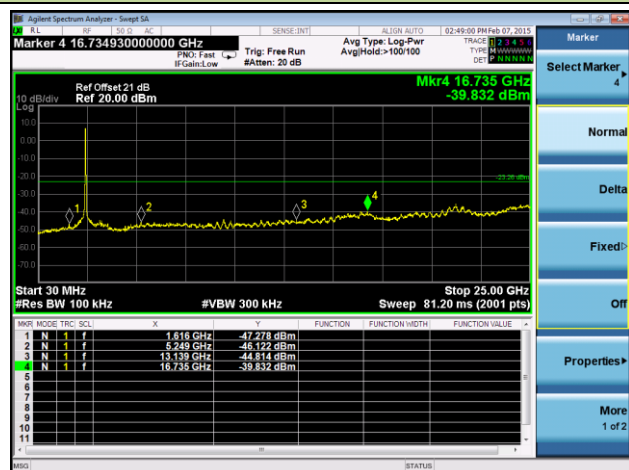


Spurious Emission



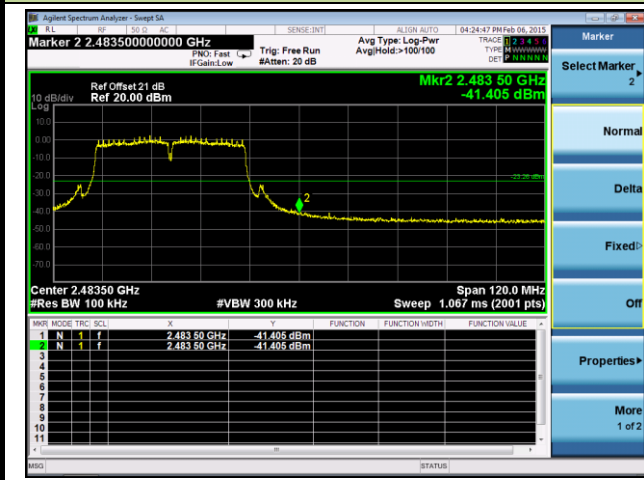
Channel 06 (2437MHz)

Spurious Emission

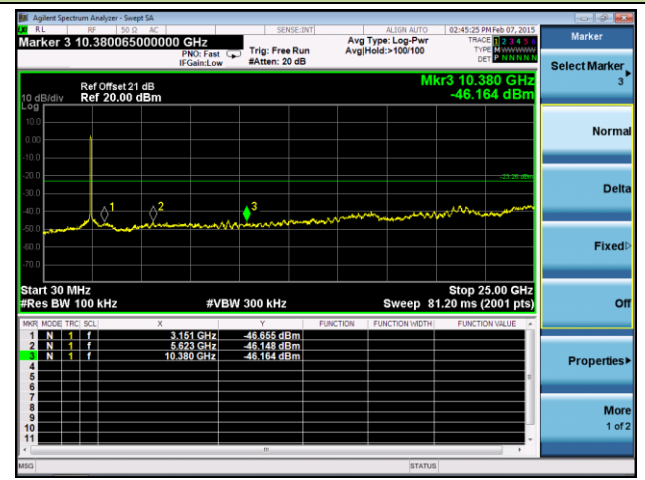


Channel 9 (2452MHz)

High Band Edge

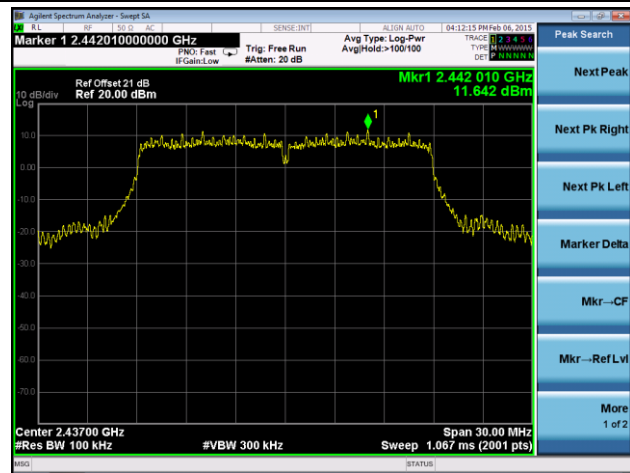


Spurious Emission



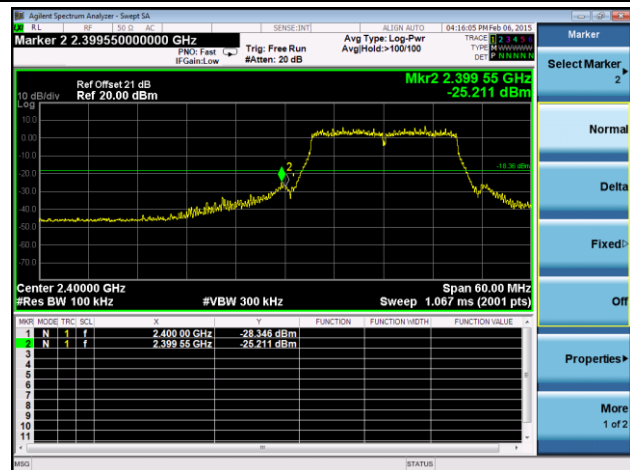
802.11n-HT20 Out-of-Band Emissions - Ant 1 / Ant 0 + 1

100kHz PSD reference Level

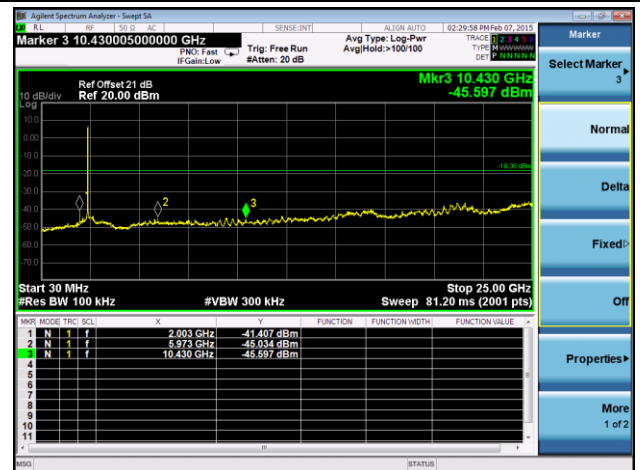


Channel 01 (2412MHz)

Low Band Edge

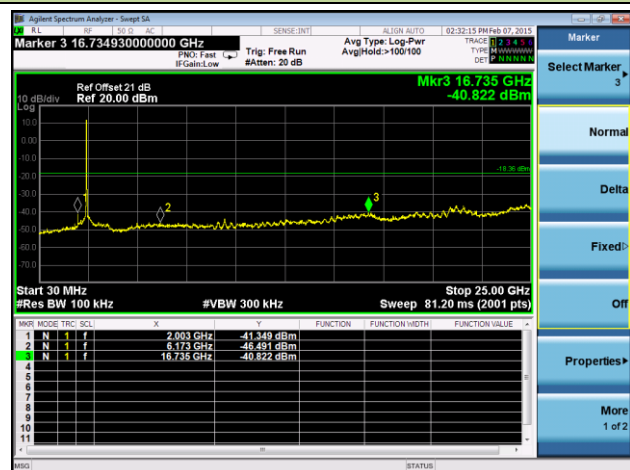


Spurious Emission



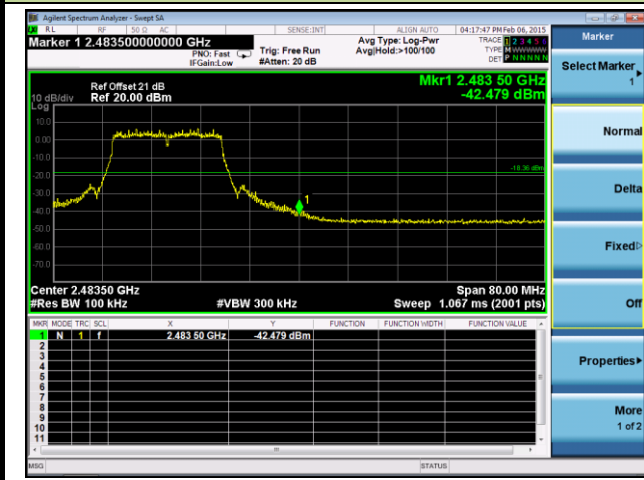
Channel 06 (2437MHz)

Spurious Emission

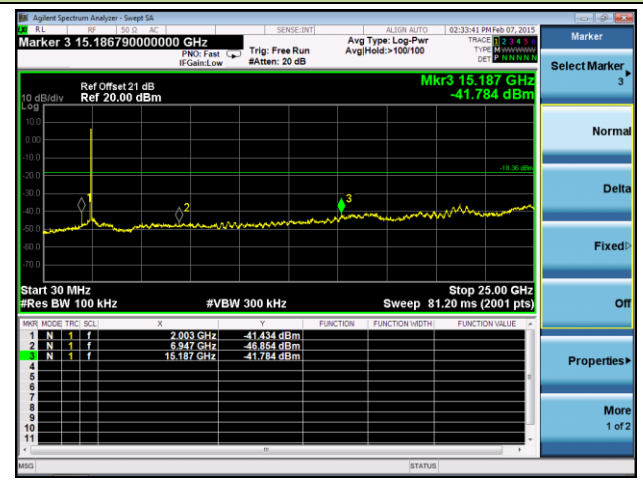


Channel 11 (2462MHz)

High Band Edge

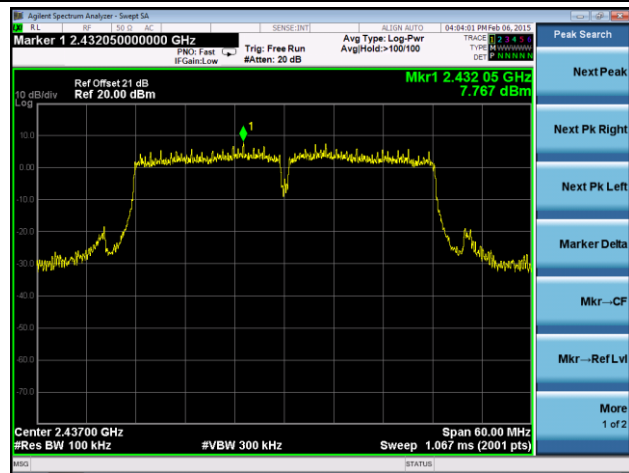


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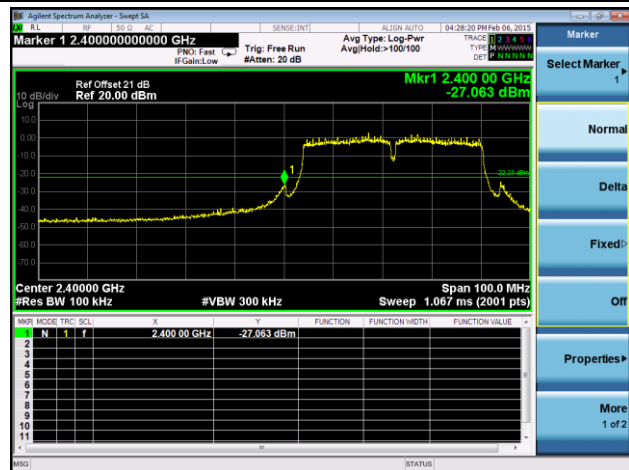
802.11n-HT40 Out-of-Band Emissions - Ant 1 / Ant 0 + 1

100kHz PSD reference Level

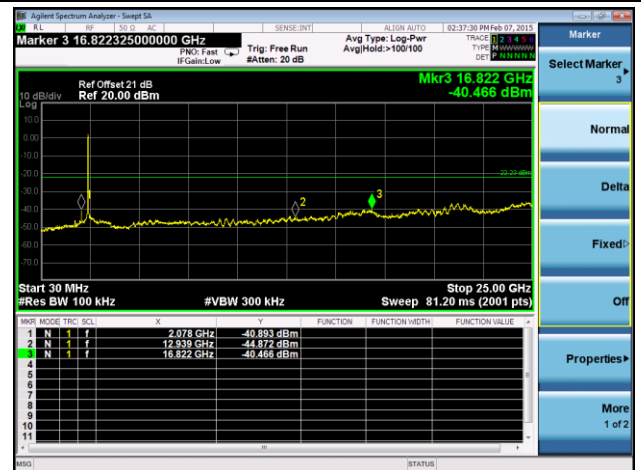


Channel 03 (2422MHz)

Low Band Edge

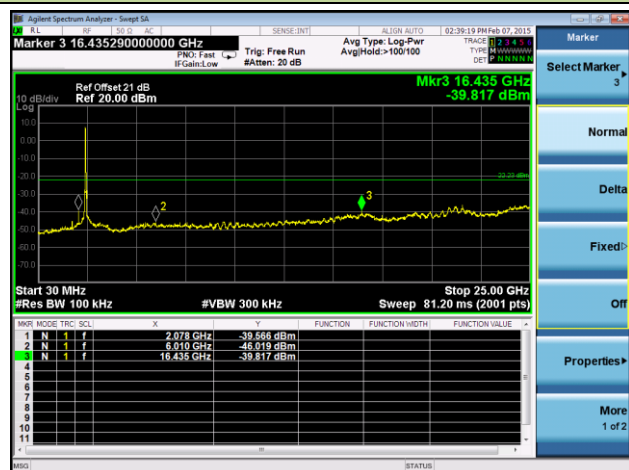


Spurious Emission



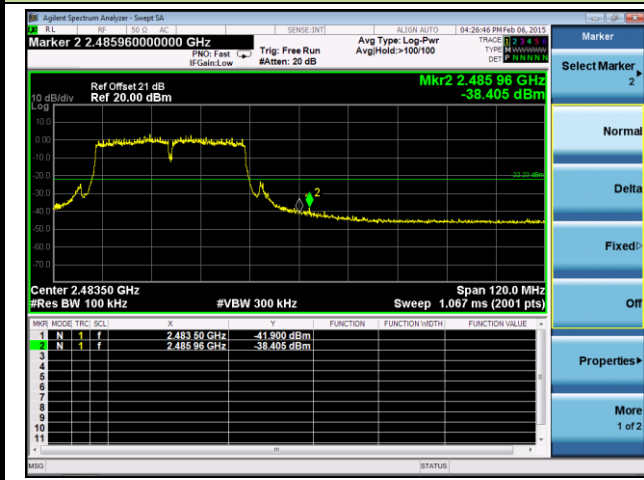
Channel 06 (2437MHz)

Spurious Emission

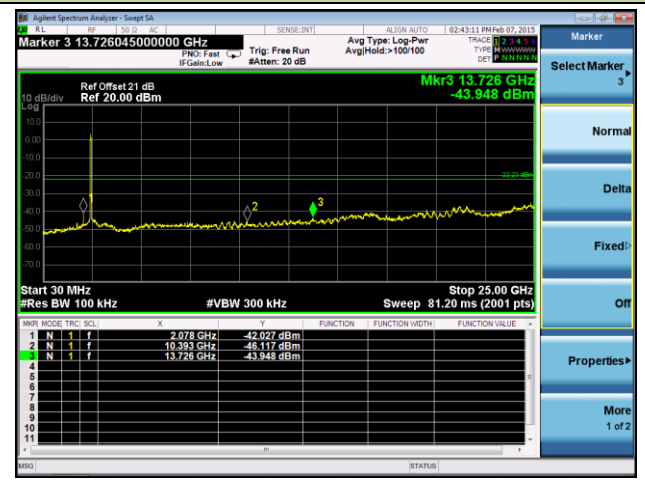


Channel 9 (2452MHz)

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

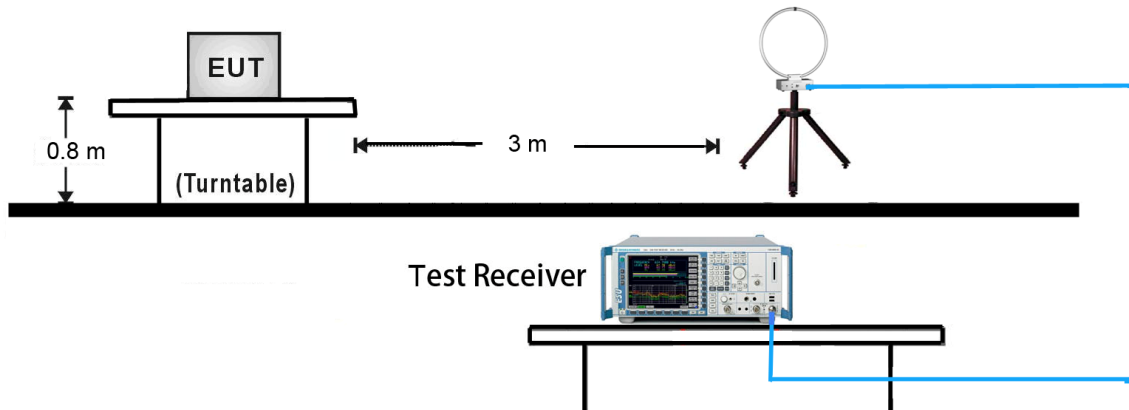
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

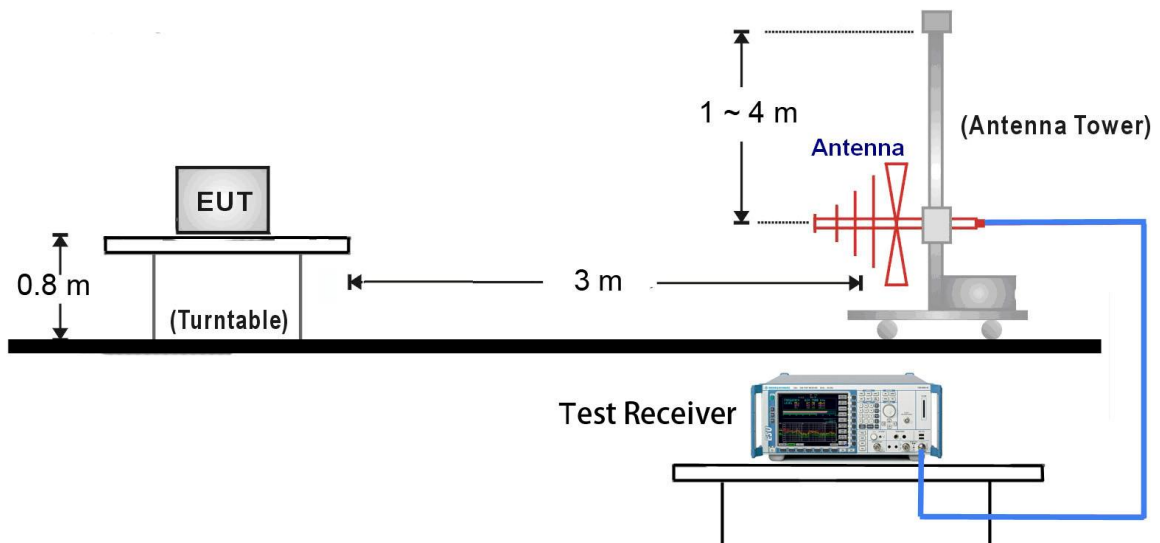
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

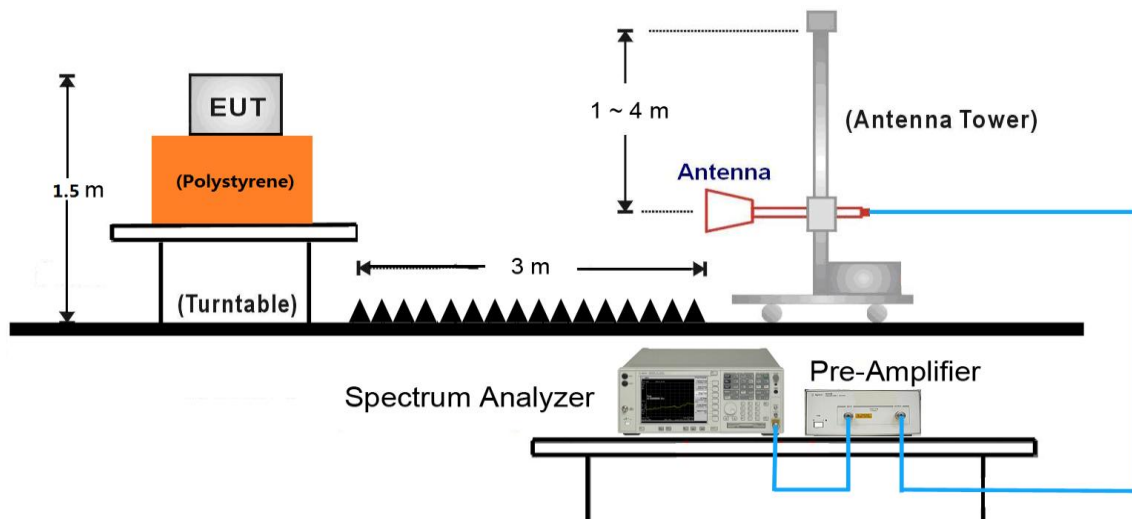
9kHz ~ 30MHz Test Setup:



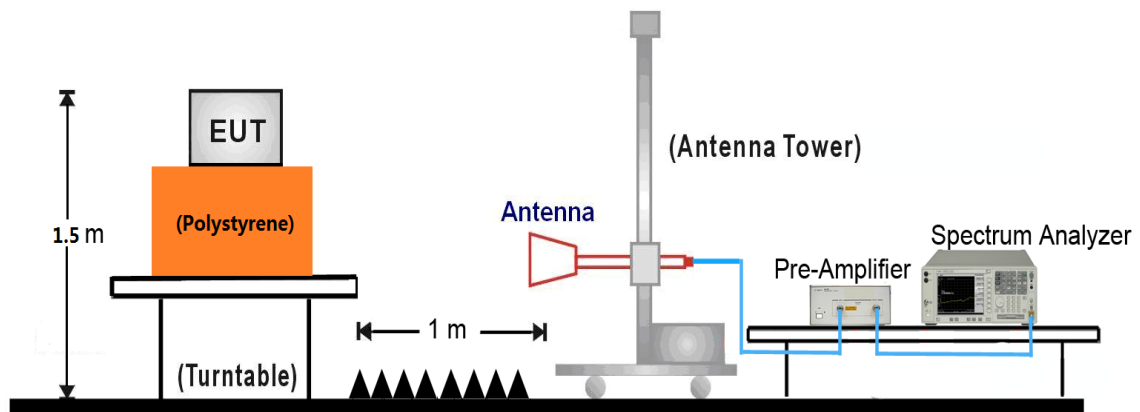
30MHz ~ 1GHz Test Setup:



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
	3932.5	39.7	0.3	40.0	74.0	-34.0	Peak	Horizontal
	4825.0	40.6	2.7	43.3	74.0	-30.7	Peak	Horizontal
*	6431.5	41.1	5.6	46.7	91.2	-44.5	Peak	Horizontal
*	8514.0	37.8	8.4	46.2	91.2	-45.0	Peak	Horizontal
	3660.5	40.2	-0.6	39.6	74.0	-34.4	Peak	Vertical
	4825.0	39.9	2.7	42.6	74.0	-31.4	Peak	Vertical
*	6431.5	40.6	5.6	46.2	91.2	-45.0	Peak	Vertical
*	9959.0	37.3	11.4	48.7	91.2	-42.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.2dBμV/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:	802.11b - 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
	3726.4	37.9	-0.5	37.4	74.0	-36.6	Peak	Horizontal
	4876.0	40.1	2.7	42.8	74.0	-31.2	Peak	Horizontal
*	6431.5	42.0	5.6	47.6	91.1	-43.5	Peak	Horizontal
*	7826.4	36.6	8.4	45.0	91.1	-46.1	Peak	Horizontal
	3726.7	37.4	-0.5	36.9	74.0	-37.1	Peak	Vertical
	4876.0	38.9	2.7	41.6	74.0	-32.4	Peak	Vertical
*	6431.5	40.6	5.6	46.2	91.1	-44.9	Peak	Vertical
*	9212.3	35.8	10.1	45.9	91.1	-45.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.1dBμV/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:	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
	3643.7	39.1	-0.6	38.5	74.0	-35.5	Peak	Horizontal
	4927.0	39.7	2.8	42.5	74.0	-31.5	Peak	Horizontal
*	6431.5	40.9	5.6	46.5	90.9	-44.4	Peak	Horizontal
*	8623.6	36.3	8.8	45.1	90.9	-45.8	Peak	Horizontal
	3743.7	37.2	-0.4	36.8	74.0	-37.2	Peak	Vertical
	4544.5	38.5	1.8	40.3	74.0	-33.7	Peak	Vertical
*	6431.5	40.6	5.6	46.2	90.9	-44.7	Peak	Vertical
*	7915.7	36.5	8.4	44.9	90.9	-46.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (110.9dBμV/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:	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
	3685.4	39.1	-0.6	38.5	74.0	-35.5	Peak	Horizontal
	5406.4	36.8	3.2	40.0	74.0	-34.0	Peak	Horizontal
*	6431.5	41.4	5.6	47.0	92.0	-45.0	Peak	Horizontal
*	8629.7	36.0	8.8	44.8	92.0	-47.2	Peak	Horizontal
	3782.7	37.4	-0.3	37.1	74.0	-36.9	Peak	Vertical
	4623.7	37.5	2.1	39.6	74.0	-34.4	Peak	Vertical
*	6431.5	40.7	5.6	46.3	92.0	-45.7	Peak	Vertical
*	8726.7	36.0	9.0	45.0	92.0	-47.0	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
	4799.5	38.2	2.7	40.9	74.0	-33.1	Peak	Horizontal
	7307.0	41.5	8.0	49.5	74.0	-24.5	Peak	Horizontal
*	8548.0	38.3	8.6	46.9	91.8	-44.9	Peak	Horizontal
*	10596.5	36.5	12.4	48.9	91.8	-42.9	Peak	Horizontal
	4876.0	38.9	2.7	41.6	74.0	-32.4	Peak	Vertical
	7298.5	40.1	8.0	48.1	74.0	-25.9	Peak	Vertical
*	8769.0	37.6	8.9	46.5	91.8	-45.3	Peak	Vertical
*	10129.0	36.1	11.6	47.7	91.8	-44.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.8dBμV/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
	3286.5	43.4	-1.8	41.6	74.0	-32.4	Peak	Horizontal
	4969.5	38.9	3.0	41.9	74.0	-32.1	Peak	Horizontal
*	6431.5	40.9	5.6	46.5	91.7	-45.2	Peak	Horizontal
*	7868.0	38.0	8.4	46.4	91.7	-45.3	Peak	Horizontal
	3826.6	38.2	-0.1	38.1	74.0	-35.9	Peak	Vertical
	5423.7	36.5	3.3	39.8	74.0	-34.2	Peak	Vertical
*	6431.5	41.9	5.6	47.5	91.7	-44.2	Peak	Vertical
*	8673.3	36.3	8.9	45.2	91.7	-46.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.7dBμV/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-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
	3726.7	37.8	-0.5	37.3	74.0	-36.7	Peak	Horizontal
	5416.4	36.1	3.3	39.4	74.0	-34.6	Peak	Horizontal
*	7817.0	37.2	8.4	45.6	89.9	-44.3	Peak	Horizontal
*	9206.4	35.9	10.1	46.0	89.9	-43.9	Peak	Horizontal
	3785.4	37.7	-0.3	37.4	74.0	-36.6	Peak	Vertical
	4615.4	37.4	2.1	39.5	74.0	-34.5	Peak	Vertical
*	6431.5	40.2	5.6	45.8	89.9	-44.1	Peak	Vertical
*	8613.7	35.9	8.8	44.7	89.9	-45.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (109.9dBμV/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:	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
	4876.0	38.4	2.7	41.1	74.0	-32.9	Peak	Horizontal
	7307.0	40.2	8.0	48.2	74.0	-25.8	Peak	Horizontal
*	9551.0	36.5	10.8	47.3	91.2	-43.9	Peak	Horizontal
*	10579.5	35.8	12.4	48.2	91.2	-43.0	Peak	Horizontal
	4689.0	38.7	2.3	41.0	74.0	-33.0	Peak	Vertical
	7324.0	40.7	8.0	48.7	74.0	-25.3	Peak	Vertical
*	8420.5	37.9	8.2	46.1	91.2	-45.1	Peak	Vertical
*	10418.0	36.5	12.2	48.7	91.2	-42.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.2dBμV/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	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
	3286.5	43.8	-1.8	42.0	74.0	-32.0	Peak	Horizontal
	4247.0	39.1	0.9	40.0	74.0	-34.0	Peak	Horizontal
*	6431.5	40.6	5.6	46.2	89.6	-43.4	Peak	Horizontal
*	7868.0	37.7	8.4	46.1	89.6	-43.5	Peak	Horizontal
	3786.3	37.8	-0.3	37.5	74.0	-36.5	Peak	Vertical
	5413.6	35.8	3.2	39.0	74.0	-35.0	Peak	Vertical
*	6431.5	40.8	5.6	46.4	89.6	-43.2	Peak	Vertical
*	8753.7	35.4	9.0	44.4	89.6	-45.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (109.6dBμV/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-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
	3756.7	38.0	-0.4	37.6	74.0	-36.4	Peak	Horizontal
	4956.4	37.2	2.9	40.1	74.0	-33.9	Peak	Horizontal
*	6431.5	40.1	5.6	45.7	83.8	-38.1	Peak	Horizontal
*	8623.7	35.6	8.8	44.4	83.8	-39.4	Peak	Horizontal
	3782.7	37.3	-0.3	37.0	74.0	-37.0	Peak	Vertical
	4865.9	36.1	2.7	38.8	74.0	-35.2	Peak	Vertical
*	6431.5	40.5	5.6	46.1	83.8	-37.7	Peak	Vertical
*	8645.4	35.7	8.8	44.5	83.8	-39.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.8dBμV/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
	3783.7	38.2	-0.3	37.9	74.0	-36.1	Peak	Horizontal
	4826.4	35.9	2.7	38.6	74.0	-35.4	Peak	Horizontal
*	6431.5	41.1	5.6	46.7	92.3	-45.6	Peak	Horizontal
*	8642.4	35.6	8.8	44.4	92.3	-47.9	Peak	Horizontal
	3726.4	37.0	-0.5	36.5	74.0	-37.5	Peak	Vertical
	4874.0	36.1	2.7	38.8	74.0	-35.2	Peak	Vertical
*	6431.5	39.9	5.6	45.5	92.3	-46.8	Peak	Vertical
*	8612.7	35.2	8.8	44.0	92.3	-48.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (112.3dBμV/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	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
	3846.7	37.4	0.0	37.4	74.0	-36.6	Peak	Horizontal
	4827.0	36.0	2.7	38.7	74.0	-35.3	Peak	Horizontal
*	6431.5	41.2	5.6	46.8	86.2	-39.4	Peak	Horizontal
*	8626.4	35.5	8.8	44.3	86.2	-41.9	Peak	Horizontal
	3846.4	37.4	0.0	37.4	74.0	-36.6	Peak	Vertical
	4816.4	35.8	2.7	38.5	74.0	-35.5	Peak	Vertical
*	6431.5	40.2	5.6	45.8	86.2	-40.4	Peak	Vertical
*	8679.2	36.4	9.0	45.4	86.2	-40.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (106.2dBμV/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 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
	3715.7	37.6	-0.5	37.1	74.0	-36.9	Peak	Horizontal
	4825.0	44.8	2.7	47.5	74.0	-26.5	Peak	Horizontal
*	6431.5	40.5	5.6	46.1	85.7	-39.6	Peak	Horizontal
*	8820.0	37.2	9.0	46.2	85.7	-39.5	Peak	Horizontal
	3745.4	37.0	-0.4	36.6	74.0	-37.4	Peak	Vertical
	4825.0	42.1	2.7	44.8	74.0	-29.2	Peak	Vertical
*	6431.5	39.5	5.6	45.1	85.7	-40.6	Peak	Vertical
*	8626.5	35.0	8.8	43.8	85.7	-41.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (105.7dBμV/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-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
	3816.5	37.6	-0.1	37.5	74.0	-36.5	Peak	Horizontal
	4876.0	41.2	2.7	43.9	74.0	-30.1	Peak	Horizontal
*	6431.5	41.2	5.6	46.8	89.6	-42.8	Peak	Horizontal
*	8727.0	35.3	9.0	44.3	89.6	-45.3	Peak	Horizontal
	3892.7	37.7	0.2	37.9	74.0	-36.1	Peak	Vertical
	4876.0	44.6	2.7	47.3	74.0	-26.7	Peak	Vertical
*	6431.5	40.4	5.6	46.0	89.6	-43.6	Peak	Vertical
*	8646.4	35.0	8.8	43.8	89.6	-45.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (109.6dBμV/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 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
	3826.4	37.2	-0.1	37.1	74.0	-36.9	Peak	Horizontal
	4927.0	40.0	2.8	42.8	74.0	-31.2	Peak	Horizontal
*	6431.5	40.6	5.6	46.2	86.7	-40.5	Peak	Horizontal
*	8653.7	35.4	8.8	44.2	86.7	-42.5	Peak	Horizontal
	3792.7	37.8	-0.2	37.6	74.0	-36.4	Peak	Vertical
	4927.0	45.9	2.8	48.7	74.0	-25.3	Peak	Vertical
*	6431.5	40.8	5.6	46.4	86.7	-40.3	Peak	Vertical
*	7893.5	38.8	8.3	47.1	86.7	-39.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (106.7dBμV/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:	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
	3746.6	38.4	-0.4	38.0	74.0	-36.0	Peak	Horizontal
	4856.4	37.1	2.7	39.8	74.0	-34.2	Peak	Horizontal
*	6431.5	40.2	5.6	45.8	80.7	-34.9	Peak	Horizontal
*	7851.0	37.4	8.4	45.8	80.7	-34.9	Peak	Horizontal
	3726.4	37.1	-0.5	36.6	74.0	-37.4	Peak	Vertical
	4892.4	37.8	2.7	40.5	74.0	-33.5	Peak	Vertical
*	6431.5	39.9	5.6	45.5	80.7	-35.2	Peak	Vertical
*	7851.0	38.6	8.4	47.0	80.7	-33.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (110.7dBμV/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:	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
	3846.3	37.4	0.0	37.4	74.0	-36.6	Peak	Horizontal
	4884.5	40.2	2.7	42.9	74.0	-31.1	Peak	Horizontal
*	6431.5	40.3	5.6	45.9	91.2	-45.3	Peak	Horizontal
*	7944.5	37.3	8.5	45.8	91.2	-45.4	Peak	Horizontal
	3765.7	38.0	-0.3	37.7	74.0	-36.3	Peak	Vertical
	4867.5	45.0	2.7	47.7	74.0	-26.3	Peak	Vertical
*	6431.5	40.7	5.6	46.3	91.2	-44.9	Peak	Vertical
*	8616.4	35.6	8.8	44.4	91.2	-46.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (111.2dBμV/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-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
	3763.7	37.4	-0.3	37.1	74.0	-36.9	Peak	Horizontal
	4826.5	36.6	2.7	39.3	74.0	-34.7	Peak	Horizontal
*	6431.5	40.6	5.6	46.2	82.4	-36.2	Peak	Horizontal
*	7927.5	37.7	8.5	46.2	82.4	-36.2	Peak	Horizontal
	3762.4	37.5	-0.4	37.1	74.0	-36.9	Peak	Vertical
	4910.0	39.8	2.7	42.5	74.0	-31.5	Peak	Vertical
*	6431.5	39.9	5.6	45.5	82.4	-36.9	Peak	Vertical
*	8645.4	35.3	8.8	44.1	82.4	-38.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.4dBμV/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-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
	3842.5	37.6	0.0	37.6	74.0	-36.4	Peak	Horizontal
	4816.5	42.7	2.7	45.4	74.0	-28.6	Peak	Horizontal
*	6431.5	39.9	5.6	45.5	90.5	-45.0	Peak	Horizontal
*	8593.7	35.9	8.7	44.6	90.5	-45.9	Peak	Horizontal
	3757.0	37.8	-0.4	37.4	74.0	-36.6	Peak	Vertical
	4825.0	43.4	2.7	46.1	74.0	-27.9	Peak	Vertical
*	6431.5	40.2	5.6	45.8	90.5	-44.7	Peak	Vertical
*	7077.5	38.4	7.3	45.7	90.5	-44.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (110.5dBμV/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:	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
	3826.4	38.0	-0.1	37.9	74.0	-36.1	Peak	Horizontal
	4867.5	43.1	2.7	45.8	74.0	-28.2	Peak	Horizontal
*	6431.5	40.4	5.6	46.0	90.7	-44.7	Peak	Horizontal
*	8626.4	36.0	8.8	44.8	90.7	-45.9	Peak	Horizontal
	3840.3	37.4	0.0	37.4	74.0	-36.6	Peak	Vertical
	4876.0	43.5	2.7	46.2	74.0	-27.8	Peak	Vertical
*	6431.5	40.4	5.6	46.0	90.7	-44.7	Peak	Vertical
*	8626.4	35.2	8.8	44.0	90.7	-46.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (110.7dBμV/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-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
	3752.7	37.4	-0.4	37.0	74.0	-37.0	Peak	Horizontal
	4918.5	42.6	2.8	45.4	74.0	-28.6	Peak	Horizontal
*	6431.5	40.1	5.6	45.7	90.6	-44.9	Peak	Horizontal
*	8645.4	34.6	8.8	43.4	90.6	-47.2	Peak	Horizontal
	3743.7	37.2	-0.4	36.8	74.0	-37.2	Peak	Vertical
	5413.6	35.8	3.2	39.0	74.0	-35.0	Peak	Vertical
*	6431.5	40.8	5.6	46.4	90.6	-44.2	Peak	Vertical
*	7915.7	36.5	8.4	44.9	90.6	-45.7	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-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
	3752.4	37.8	-0.4	37.4	74.0	-36.6	Peak	Horizontal
	4853.7	36.8	2.7	39.5	74.0	-34.5	Peak	Horizontal
*	6431.5	39.9	5.6	45.5	84.4	-38.9	Peak	Horizontal
*	8649.9	36.4	8.8	45.2	84.4	-39.2	Peak	Horizontal
	3752.4	37.2	-0.4	36.8	74.0	-37.2	Peak	Vertical
	4853.7	37.0	2.7	39.7	74.0	-34.3	Peak	Vertical
*	6431.5	40.0	5.6	45.6	84.4	-38.8	Peak	Vertical
*	8616.4	35.7	8.8	44.5	84.4	-39.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.4dBμV/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)