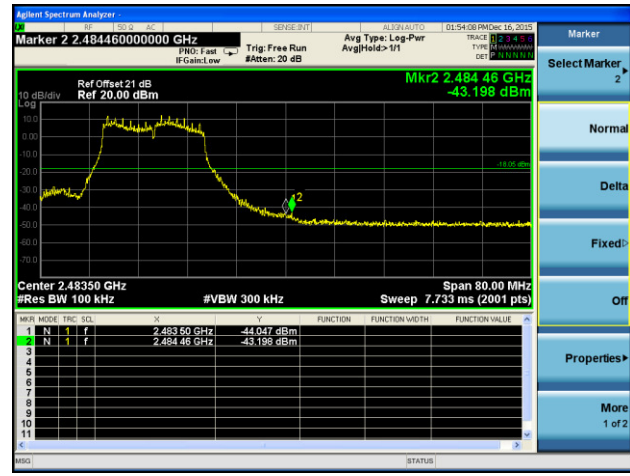


Channel 11 (2462MHz)

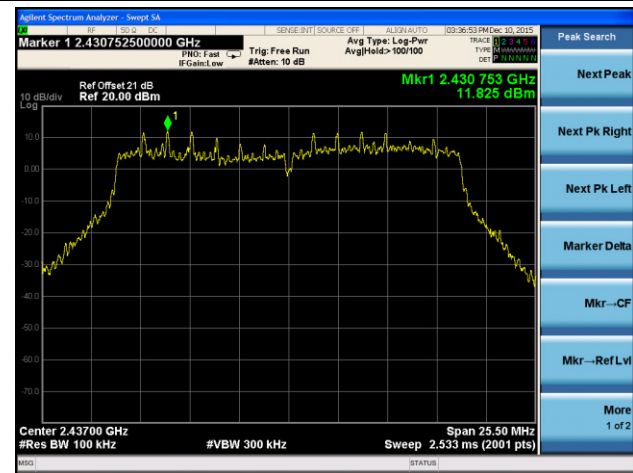
High Band Edge

Spurious Emission



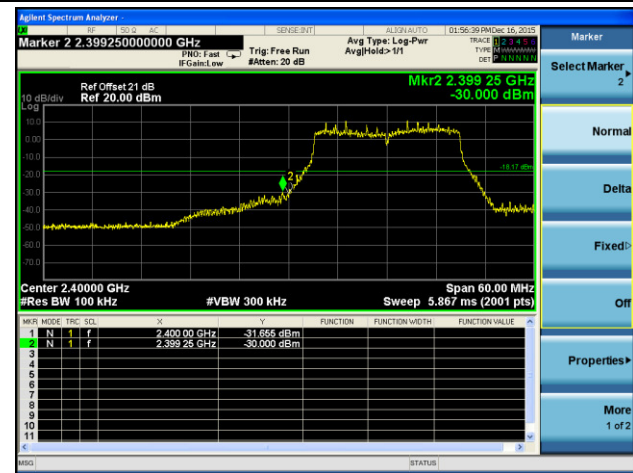
## 802.11n-HT20 Out-of-Band Emissions - Ant 2 / Ant 0 + 1 + 2

### 100kHz PSD Reference Level

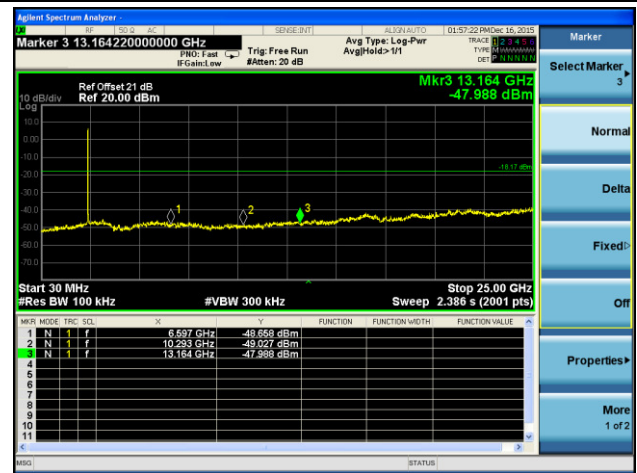


### Channel 01 (2412MHz)

#### Low Band Edge

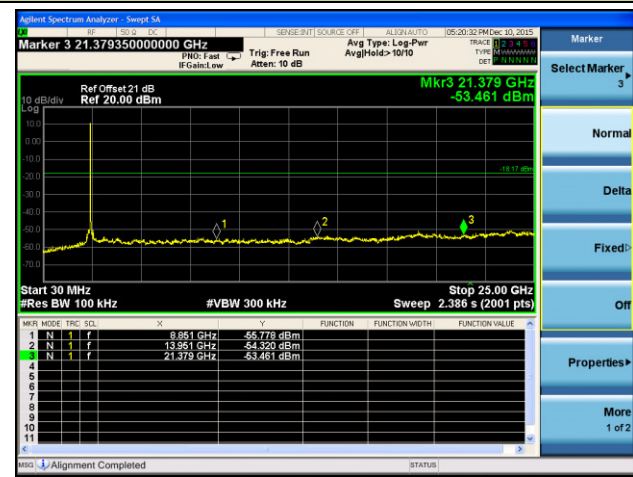


#### Spurious Emission



### Channel 06 (2437MHz)

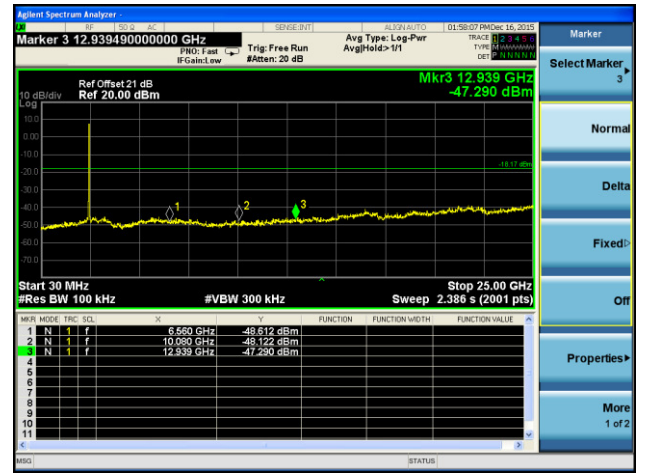
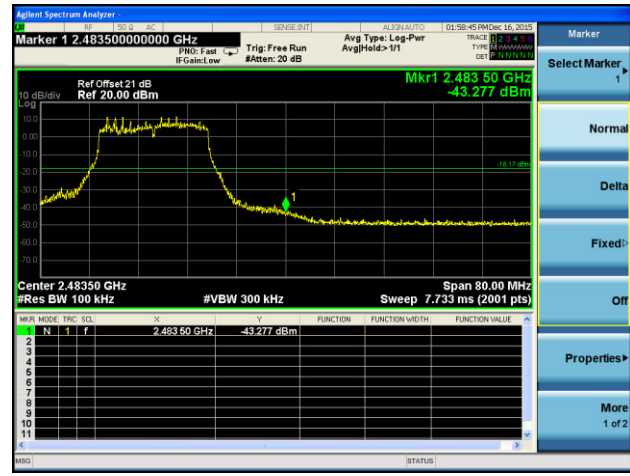
#### Spurious Emission



Channel 11 (2462MHz)

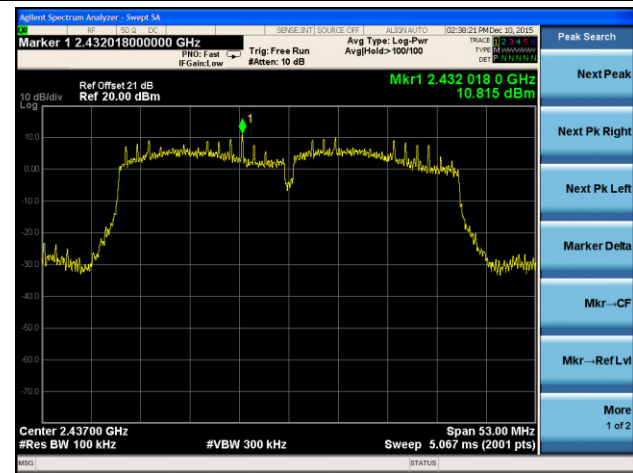
High Band Edge

Spurious Emission



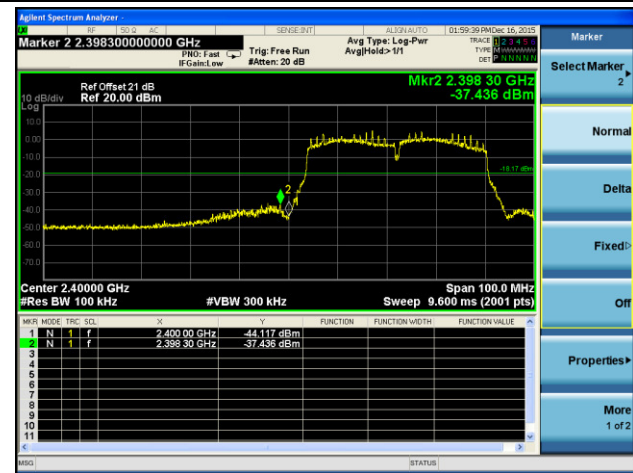
## 802.11n-HT40 Out-of-Band Emissions - Ant 2 / Ant 0 + 1 + 2

### 100kHz PSD Reference Level

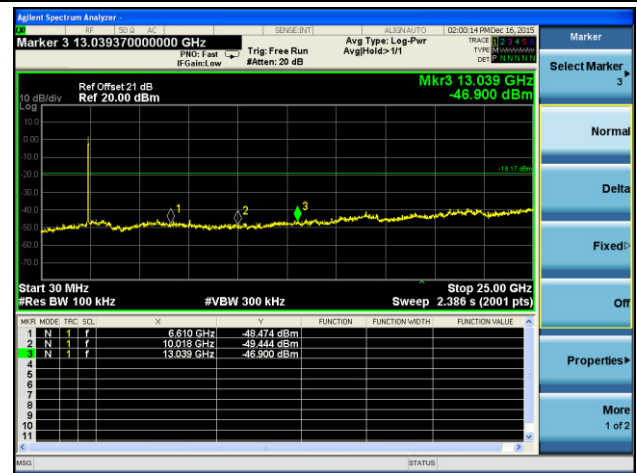


### Channel 03 (2422MHz)

#### Low Band Edge

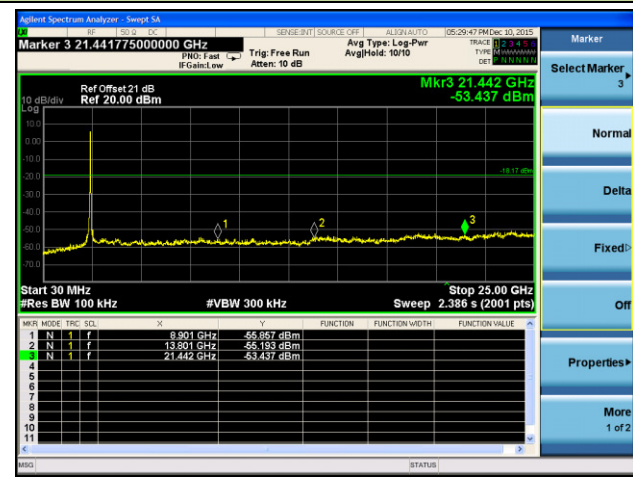


#### Spurious Emission



### Channel 06 (2437MHz)

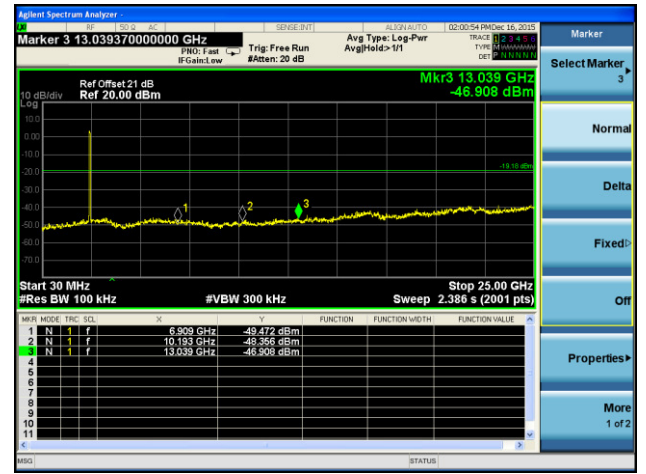
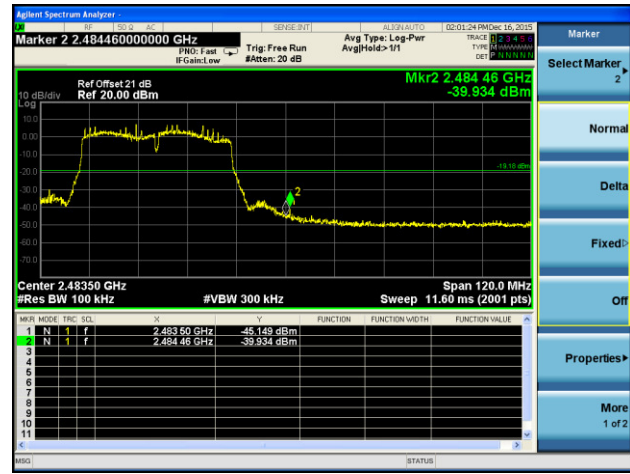
#### Spurious Emission



Channel 09 (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 D01v03r03 - Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r03 - Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r03 - 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

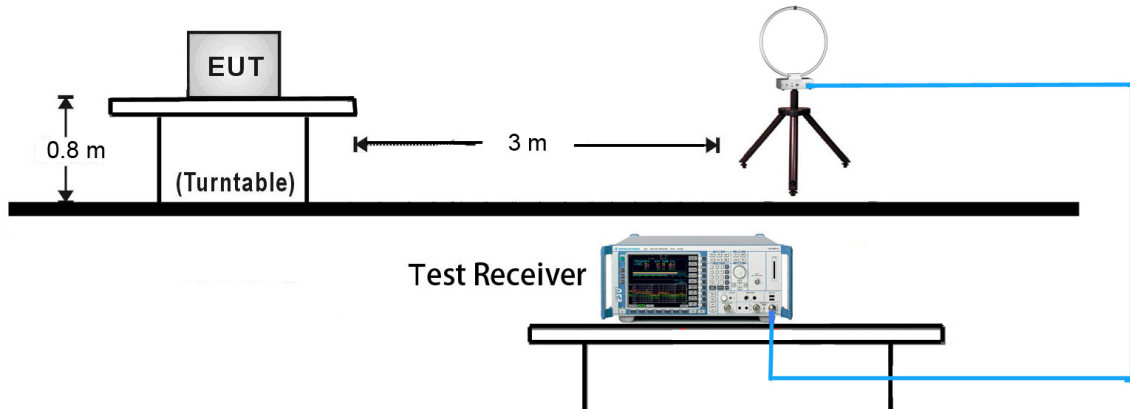
6.Sweep time = auto

7.Trace mode = max hold

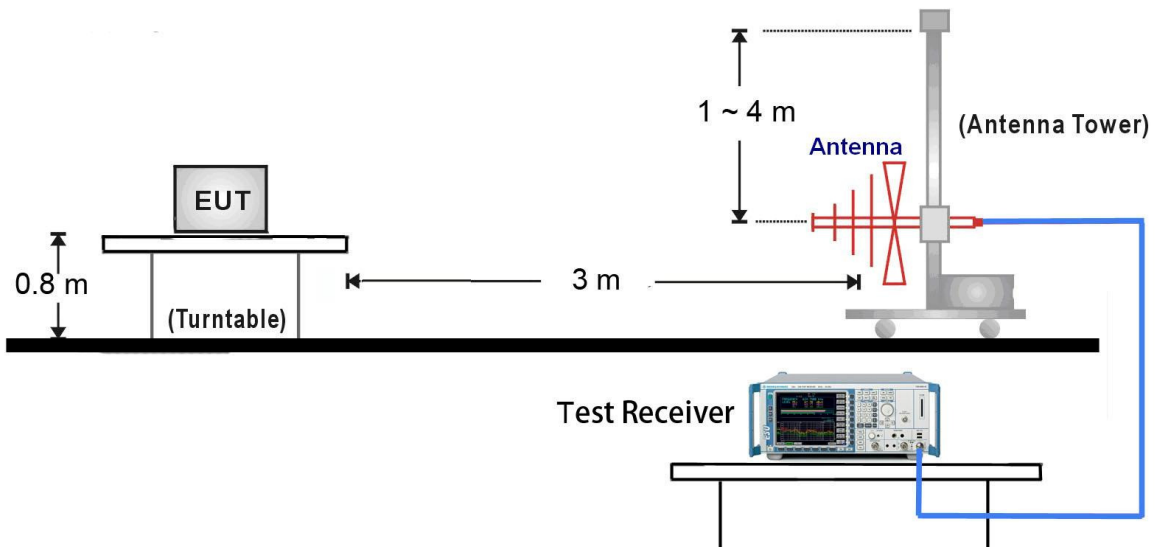
8.Allow max hold to run for at least 50 times (1/duty cycle) traces

### 7.6.4. Test Setup

9kHz ~ 30MHz Test Setup:

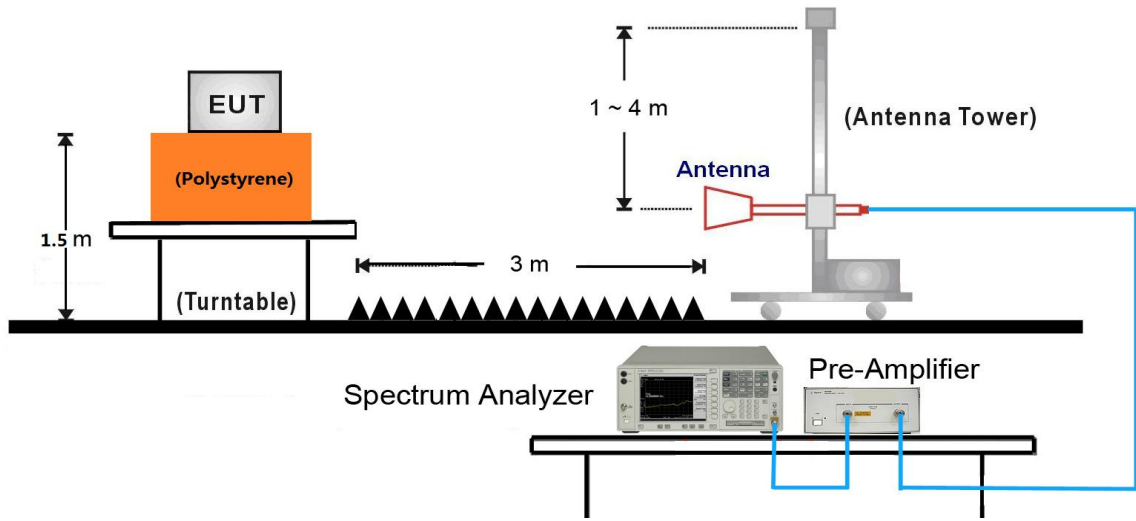


30MHz ~ 1GHz Test Setup:

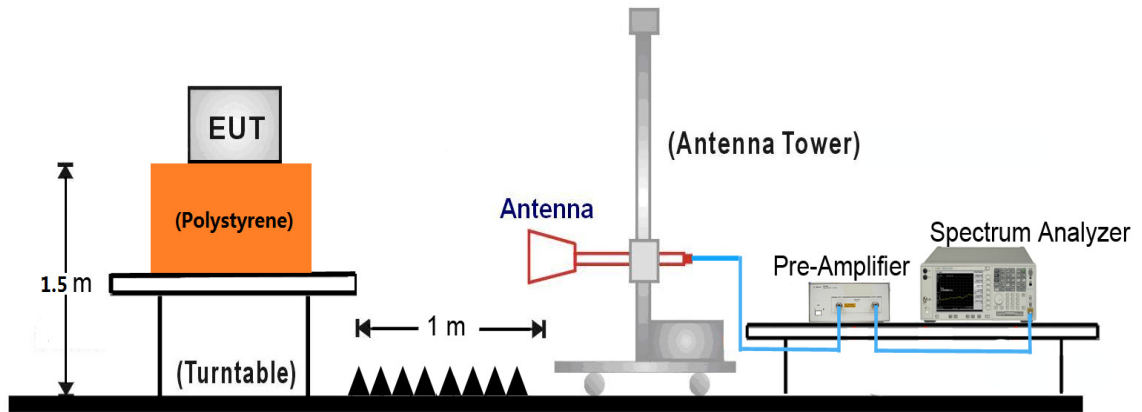




1GHz ~ 18GHz Test Setup:



18GHz ~ 25GHz Test Setup:



**7.6.5. Test Result**

Test Mode:	802.11b	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	3669.0	40.0	-0.6	39.4	74.0	-34.6	Peak	Horizontal
	4825.0	39.1	2.7	41.8	74.0	-32.2	Peak	Horizontal
*	7239.0	37.4	7.8	45.2	83.1	-37.9	Peak	Horizontal
*	9644.5	41.2	11.0	52.2	83.1	-30.9	Peak	Horizontal
	3873.0	38.5	0.1	38.6	74.0	-35.4	Peak	Vertical
	4825.0	36.8	2.7	39.5	74.0	-34.5	Peak	Vertical
*	7230.5	41.5	7.8	49.3	83.1	-33.8	Peak	Vertical
*	9644.5	42.7	11.0	53.7	83.1	-29.4	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	802.11b	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	39.4	8.0	47.4	74.0	-26.6	Peak	Horizontal
*	8726.5	33.5	9.0	42.5	83.3	-40.8	Peak	Horizontal
*	9746.5	39.5	11.3	50.8	83.3	-32.5	Peak	Horizontal
	4876.0	36.6	2.7	39.3	74.0	-34.7	Peak	Vertical
	7307.0	40.7	8.0	48.7	74.0	-25.3	Peak	Vertical
*	8777.5	33.8	8.9	42.7	83.3	-40.6	Peak	Vertical
*	9746.5	42.8	11.3	54.1	83.3	-29.2	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.3dBμV/m) or FCC 15.209 which is higher.

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	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
	4927.0	36.9	2.8	39.7	74.0	-34.3	Peak	Horizontal
	7383.5	40.7	7.9	48.6	74.0	-25.4	Peak	Horizontal
*	8956.0	33.8	9.0	42.8	83.7	-40.9	Peak	Horizontal
*	9848.5	37.9	11.6	49.5	83.7	-34.2	Peak	Horizontal
	4927.0	36.8	2.8	39.6	74.0	-34.4	Peak	Vertical
	7383.5	42.2	7.9	50.1	74.0	-23.9	Peak	Vertical
*	8735.0	33.8	8.9	42.7	83.7	-41.0	Peak	Vertical
*	9848.5	40.1	11.6	51.7	83.7	-32.0	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.7dBμV/m) or FCC 15.209 which is higher.

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	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
	3669.0	39.4	-0.6	38.8	74.0	-35.2	Peak	Horizontal
	4825.0	35.1	2.7	37.8	74.0	-36.2	Peak	Horizontal
*	7239.0	39.3	7.8	47.1	86.6	-39.5	Peak	Horizontal
*	9644.5	36.7	11.0	47.7	86.6	-38.9	Peak	Horizontal
	3873.0	38.9	0.1	39.0	74.0	-35.0	Peak	Vertical
	4816.5	35.1	2.7	37.8	74.0	-36.2	Peak	Vertical
*	7239.0	40.1	7.8	47.9	86.6	-38.7	Peak	Vertical
*	9644.5	36.0	11.0	47.0	86.6	-39.6	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.6dBμV/m) or FCC 15.209 which is higher.

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	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4876.0	36.2	2.7	38.9	74.0	-35.1	Peak	Horizontal
	7315.5	40.2	8.0	48.2	74.0	-25.8	Peak	Horizontal
*	8820.0	32.8	9.0	41.8	86.7	-44.9	Peak	Horizontal
*	9755.0	35.6	11.4	47.0	86.7	-39.7	Peak	Horizontal
	4867.5	35.2	2.7	37.9	74.0	-36.1	Peak	Vertical
	7324.0	42.5	8.0	50.5	74.0	-23.5	Peak	Vertical
*	8896.5	33.4	9.2	42.6	86.7	-44.1	Peak	Vertical
*	9755.0	36.0	11.4	47.4	86.7	-39.3	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.7dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	802.11g	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
	4927.0	36.4	2.8	39.2	74.0	-34.8	Peak	Horizontal
	7383.5	43.0	7.9	50.9	74.0	-23.1	Peak	Horizontal
*	8777.5	33.5	8.9	42.4	86.9	-44.5	Peak	Horizontal
*	9848.5	34.6	11.6	46.2	86.9	-40.7	Peak	Horizontal
	4927.0	35.8	2.8	38.6	74.0	-35.4	Peak	Vertical
	7375.0	43.9	7.9	51.8	74.0	-22.2	Peak	Vertical
*	8930.5	33.7	9.0	42.7	86.9	-44.2	Peak	Vertical
*	9857.0	36.1	11.6	47.7	86.9	-39.2	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.9dBμV/m) or FCC 15.209 which is higher.

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	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
	3669.0	40.3	-0.6	39.7	74.0	-34.3	Peak	Horizontal
	4799.5	35.0	2.7	37.7	74.0	-36.3	Peak	Horizontal
*	7239.0	37.7	7.8	45.5	85.2	-39.7	Peak	Horizontal
*	9644.5	35.9	11.0	46.9	85.2	-38.3	Peak	Horizontal
	3873.0	38.4	0.1	38.5	74.0	-35.5	Peak	Vertical
	4808.0	35.0	2.7	37.7	74.0	-36.3	Peak	Vertical
*	7239.0	37.0	7.8	44.8	85.2	-40.4	Peak	Vertical
*	9644.5	34.8	11.0	45.8	85.2	-39.4	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.2dBμV/m) or FCC 15.209 which is higher.

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	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4876.0	35.6	2.7	38.3	74.0	-35.7	Peak	Horizontal
	7324.0	39.7	8.0	47.7	74.0	-26.3	Peak	Horizontal
*	8675.5	34.3	8.9	43.2	85.8	-42.6	Peak	Horizontal
*	9738.0	35.0	11.2	46.2	85.8	-39.6	Peak	Horizontal
	4842.0	35.1	2.7	37.8	74.0	-36.2	Peak	Vertical
	7307.0	39.3	8.0	47.3	74.0	-26.7	Peak	Vertical
*	8565.0	34.2	8.7	42.9	85.8	-42.9	Peak	Vertical
*	9746.5	34.3	11.3	45.6	85.8	-40.2	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.8dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	802.11n-HT20	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
	4927.0	36.1	2.8	38.9	74.0	-35.1	Peak	Horizontal
	7392.0	41.3	7.9	49.2	74.0	-24.8	Peak	Horizontal
*	8828.5	33.3	9.1	42.4	86.7	-44.3	Peak	Horizontal
*	9848.5	35.2	11.6	46.8	86.7	-39.9	Peak	Horizontal
	4927.0	35.1	2.8	37.9	74.0	-36.1	Peak	Vertical
	7392.0	40.5	7.9	48.4	74.0	-25.6	Peak	Vertical
*	8718.0	33.7	9.0	42.7	86.7	-44.0	Peak	Vertical
*	9874.0	37.6	11.6	49.2	86.7	-37.5	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.7dBμV/m) or FCC 15.209 which is higher.

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	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4816.5	36.1	2.7	38.8	74.0	-35.2	Peak	Horizontal
	7256.0	38.3	7.9	46.2	74.0	-27.8	Peak	Horizontal
*	8786.0	33.8	8.9	42.7	80.2	-37.5	Peak	Horizontal
*	9687.0	34.9	10.9	45.8	80.2	-34.4	Peak	Horizontal
	3873.0	38.1	0.1	38.2	74.0	-35.8	Peak	Vertical
	7264.5	40.2	7.9	48.1	74.0	-25.9	Peak	Vertical
*	8820.0	34.3	9.0	43.3	80.2	-36.9	Peak	Vertical
*	9687.0	36.0	10.9	46.9	80.2	-33.3	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.2dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	802.11n-HT40	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	3669.0	40.3	-0.6	39.7	74.0	-34.3	Peak	Horizontal
	7298.5	40.4	8.0	48.4	74.0	-25.6	Peak	Horizontal
*	8658.5	33.8	8.8	42.6	91.5	-48.9	Peak	Horizontal
*	9763.5	34.8	11.4	46.2	91.5	-45.3	Peak	Horizontal
	3873.0	37.8	0.1	37.9	74.0	-36.1	Peak	Vertical
	7324.0	40.9	8.0	48.9	74.0	-25.1	Peak	Vertical
*	8888.0	33.2	9.2	42.4	91.5	-49.1	Peak	Vertical
*	9746.5	35.2	11.3	46.5	91.5	-45.0	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (121.5dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Test Mode:	802.11n-HT40	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 (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	4910.0	36.9	2.7	39.6	74.0	-34.4	Peak	Horizontal
	7366.5	41.0	7.9	48.9	74.0	-25.1	Peak	Horizontal
*	8956.0	34.6	9.0	43.6	83.1	-39.5	Peak	Horizontal
*	9823.0	34.2	11.6	45.8	83.1	-37.3	Peak	Horizontal
	4910.0	35.3	2.7	38.0	74.0	-36.0	Peak	Vertical
	7341.0	42.5	8.0	50.5	74.0	-23.5	Peak	Vertical
*	8675.5	34.3	8.9	43.2	83.1	-39.9	Peak	Vertical
*	9806.0	34.4	11.5	45.9	83.1	-37.2	Peak	Vertical

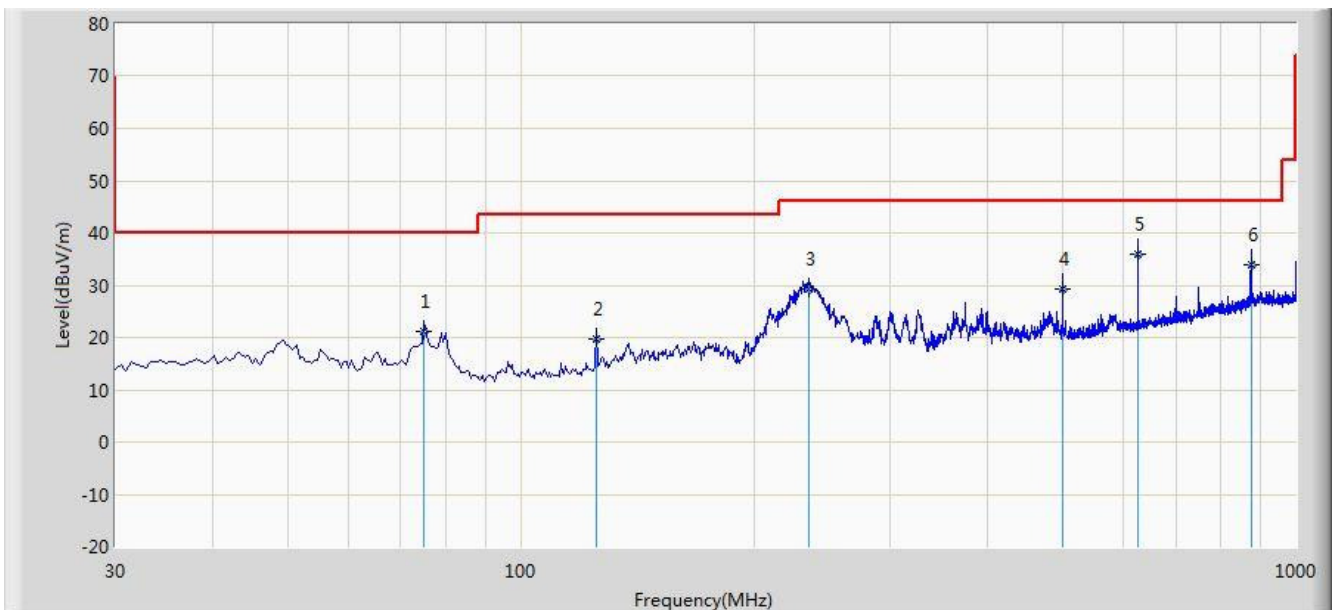
Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dB $\mu$ V/m) or FCC 15.209 which is higher.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

**The worst case of Radiated Emission below 1GHz:**

Site: AC 1	Time: 2015/12/16 - 16:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
<b>Worst Mode:</b> Transmit by 802.11n-HT20 at channel 2412MHz Ant 0 + 1 + 2	

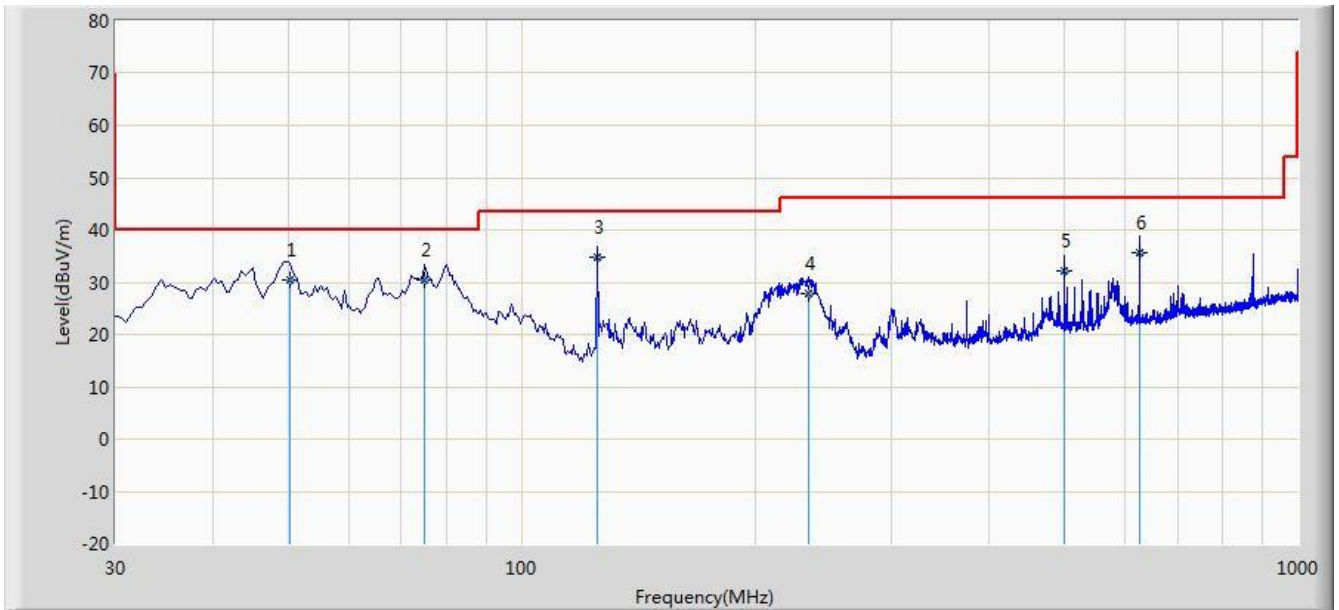


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			75.105	21.138	10.404	-18.862	40.000	10.734	QP
2			125.060	19.709	6.259	-23.791	43.500	13.450	QP
3			235.155	29.416	16.776	-16.584	46.000	12.641	QP
4			499.965	29.287	10.805	-16.713	46.000	18.482	QP
5		*	625.095	35.882	14.856	-10.118	46.000	21.026	QP
6			874.870	33.893	9.898	-12.107	46.000	23.995	QP

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC 1	Time: 2015/12/16 - 17:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
<b>Worst Mode:</b> Transmit by 802.11n-HT20 at channel 2412MHz Ant 0 + 1 + 2	

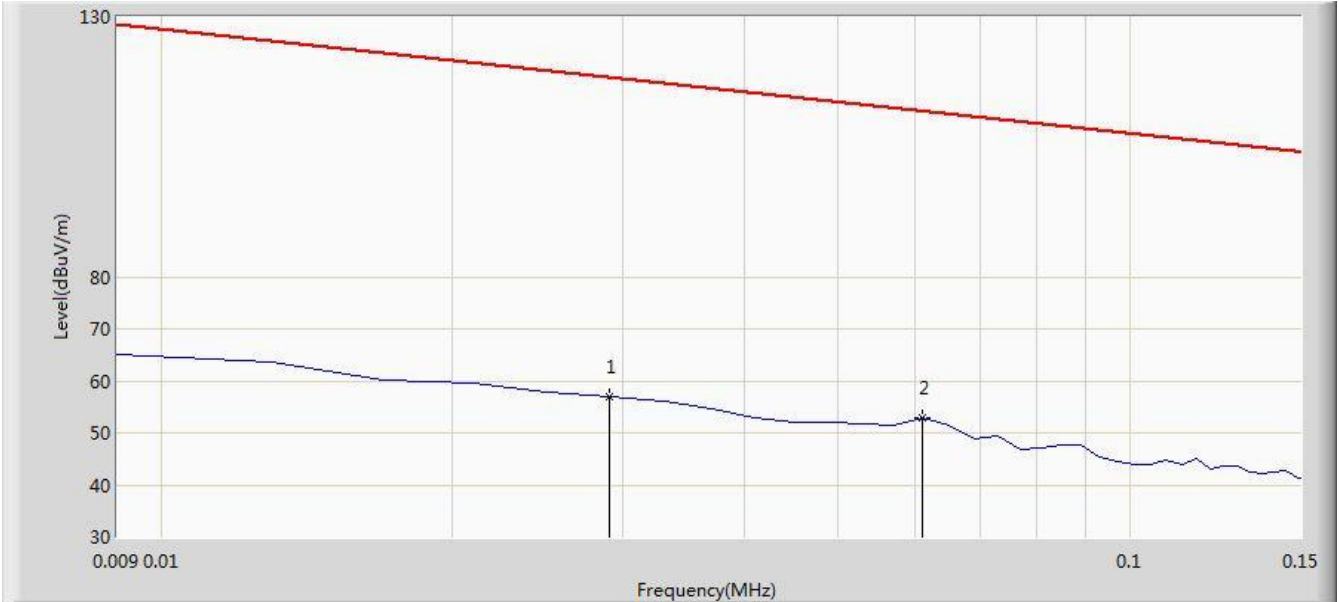


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			50.370	30.573	16.546	-9.427	40.000	14.027	QP
2			75.105	30.405	19.671	-9.595	40.000	10.734	QP
3		*	125.060	34.904	21.454	-8.596	43.500	13.450	QP
4			234.185	27.941	15.325	-18.059	46.000	12.616	QP
5			499.965	32.208	13.726	-13.792	46.000	18.482	QP
6			625.095	35.712	14.686	-10.288	46.000	21.026	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2015/12/15 - 09:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: Gateway	Power: AC 120V/60Hz
<b>Note: There is the ambient noise within frequency range 9kHz~30MHz.</b>	



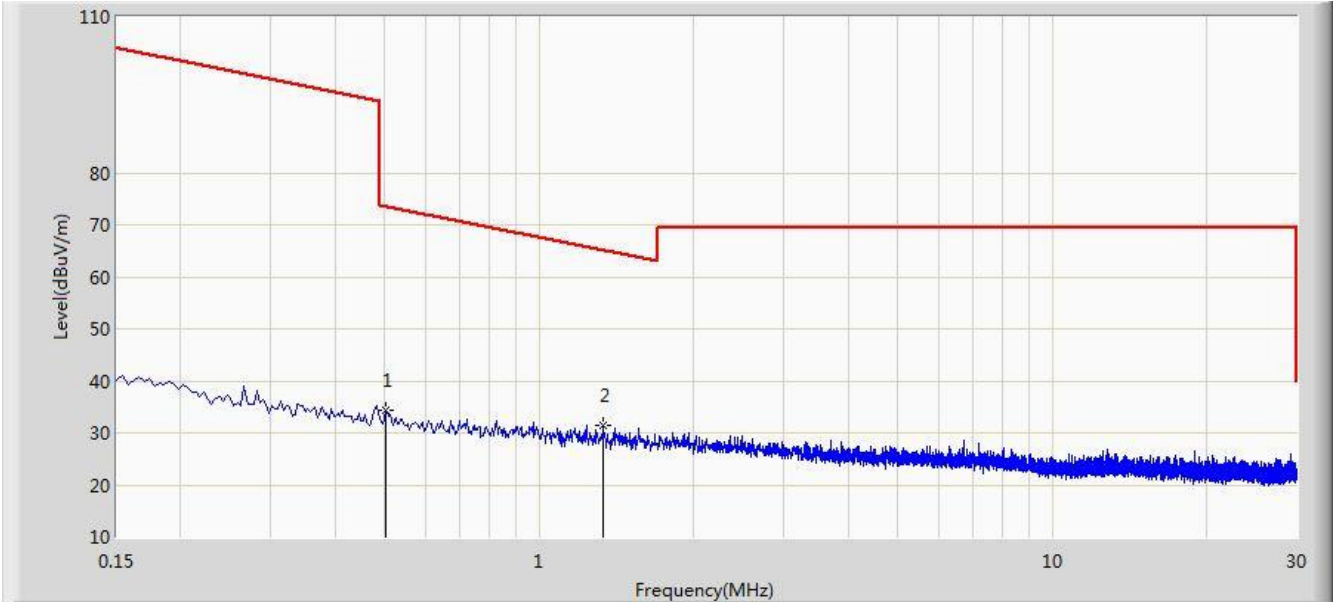
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.029	56.893	35.844	-61.463	118.356	21.049	PK
2		*	0.061	52.853	32.542	-59.045	111.898	20.311	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



Site: AC1	Time: 2015/12/15 - 09:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: Gateway	Power: AC 120V/60Hz
<b>Note: There is the ambient noise within frequency range 9kHz~30MHz.</b>	



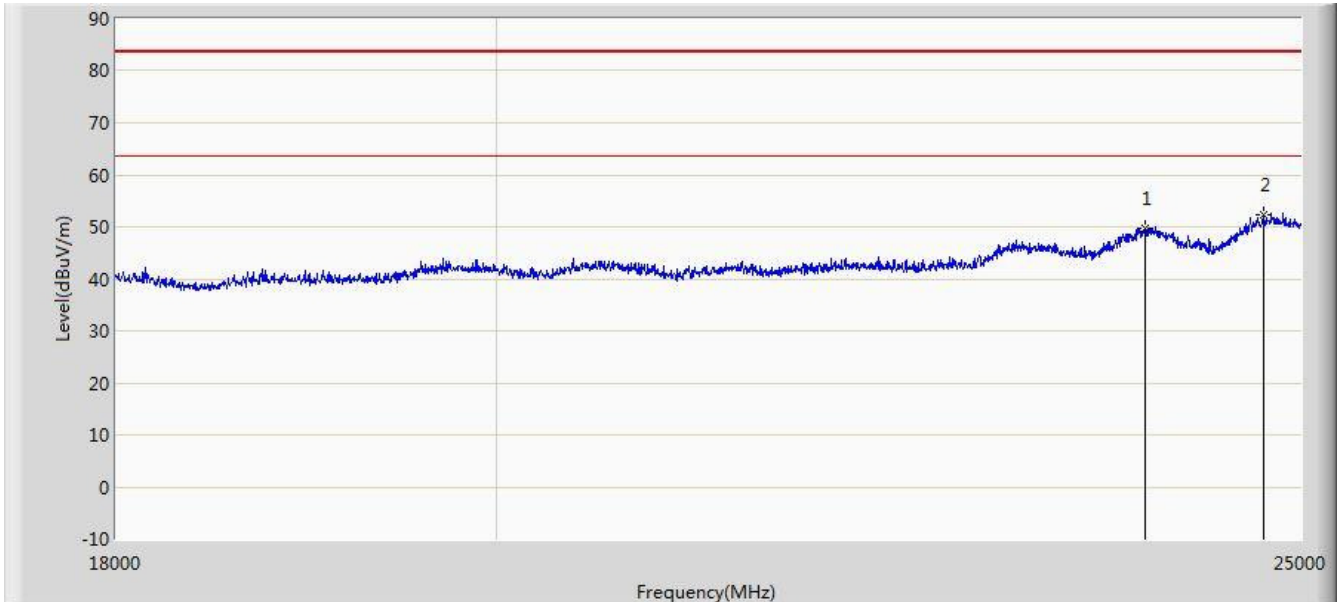
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.502	34.370	13.947	-39.220	73.590	20.423	QP
2		*	1.334	31.595	11.104	-33.530	65.125	20.491	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Limit@3m = 20\*Log(30uV/m) + 20\*Log(30m/3m) = 49.5dB $\mu$ v/m (Average detector), and 69.5dB $\mu$ v/m (Peak detector).

Site: AC1	Time: 2015/12/15 - 10:21
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
<b>Note: There is the ambient noise within frequency range 18GHz~25GHz.</b>	

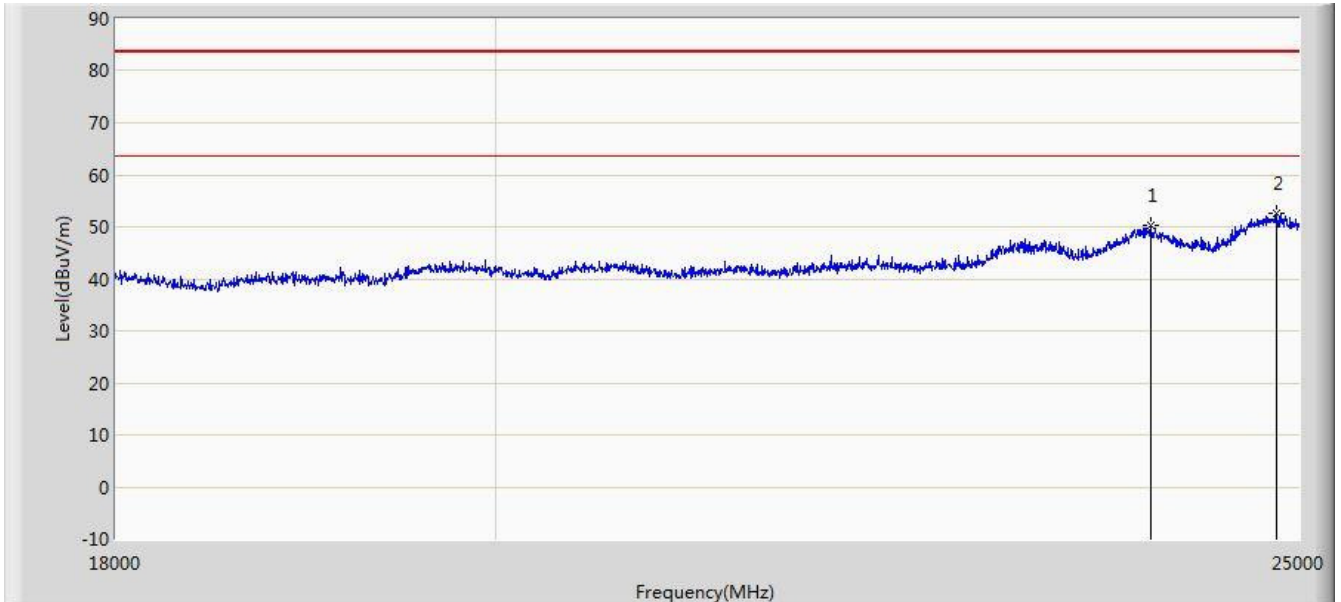


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23943.000	49.776	35.866	-33.724	83.500	13.910	PK
2		*	24741.000	52.375	37.681	-31.125	83.500	14.694	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2015/12/15 - 10:21
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
<b>Note: There is the ambient noise within frequency range 18GHz~25GHz.</b>	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23999.000	50.379	36.435	-33.121	83.500	13.944	PK
2		*	24846.000	52.503	37.735	-30.997	83.500	14.768	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

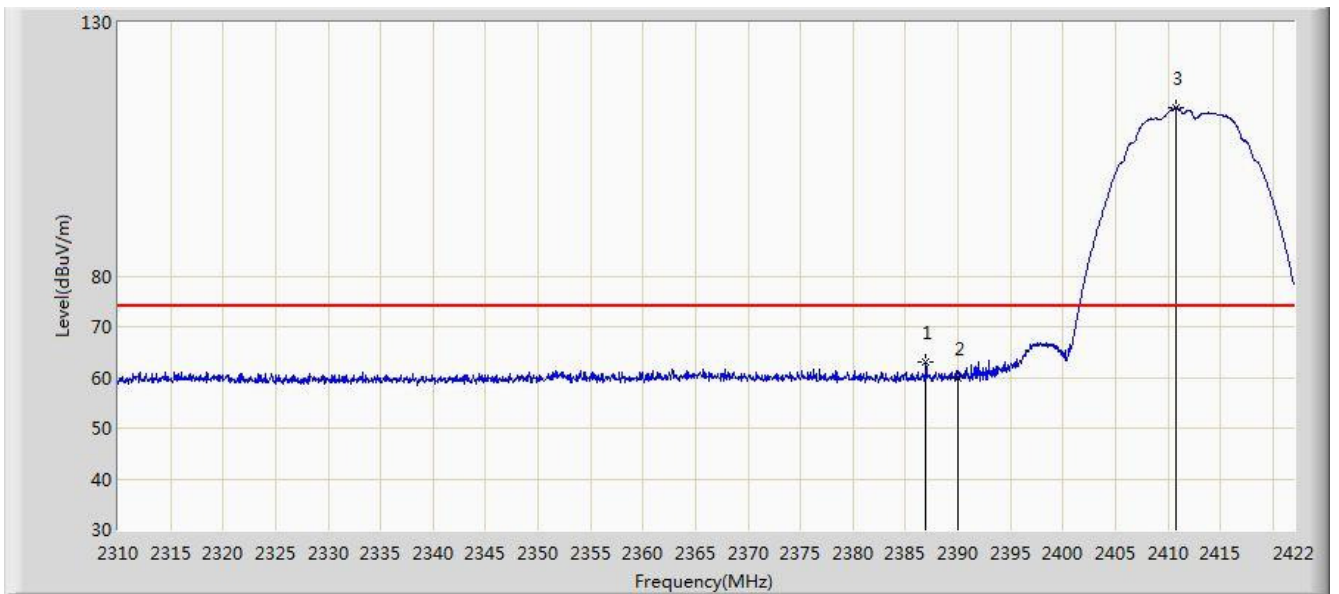
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Limit@1m = 20\*Log(500uV/m) + 20\*Log(3m/1m) = 63.5dB $\mu$ v/m (Average detector), and 83.5dB $\mu$ v/m (Peak detector).

## 7.7. Radiated Restricted Band Edge Measurement

### 7.7.1. Test Result

Site: AC1	Time: 2015/12/07 - 17:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz	

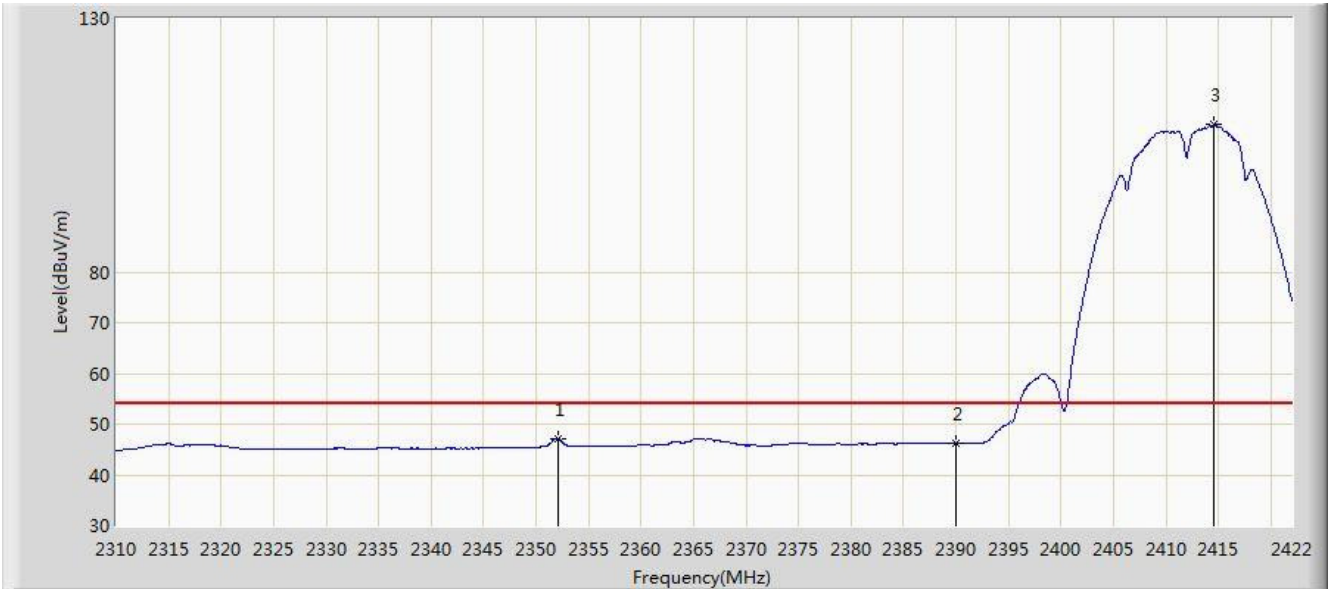


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.944	62.949	31.741	-11.051	74.000	31.209	PK
2			2390.000	59.953	28.750	-14.047	74.000	31.203	PK
3		*	2410.800	113.108	81.936	N/A	N/A	31.172	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 17:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz	

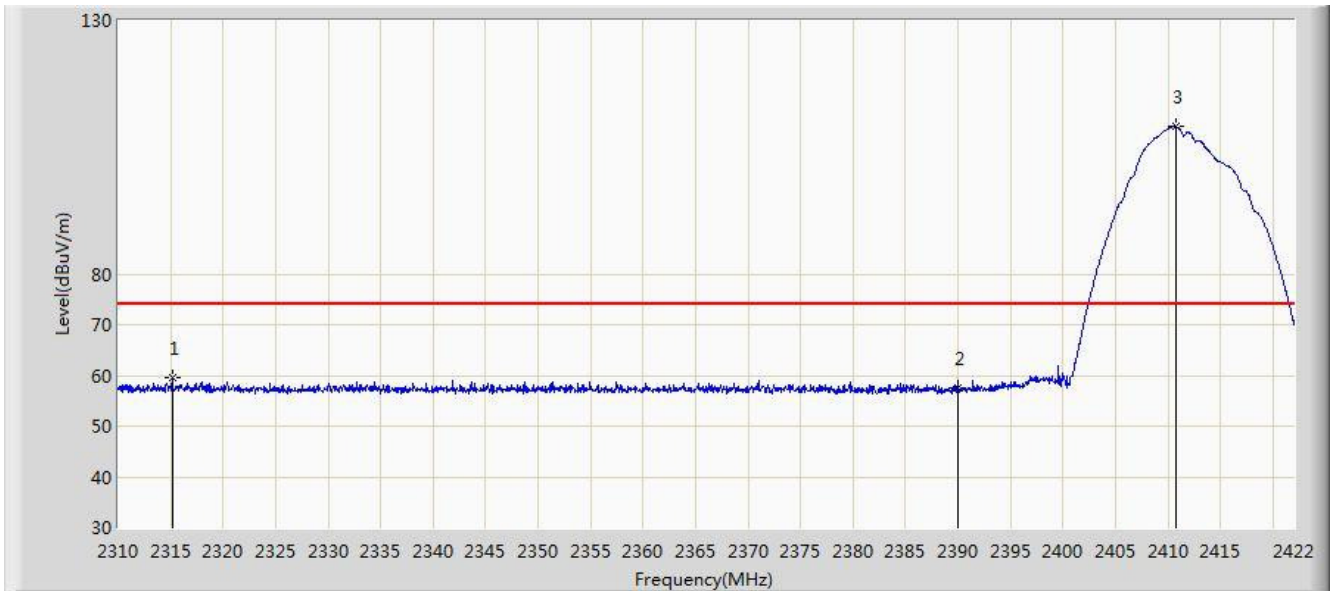


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2352.112	47.240	15.955	-6.760	54.000	31.284	AV
2			2390.000	46.227	15.024	-7.773	54.000	31.203	AV
3		*	2414.608	109.054	77.889	N/A	N/A	31.165	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz	

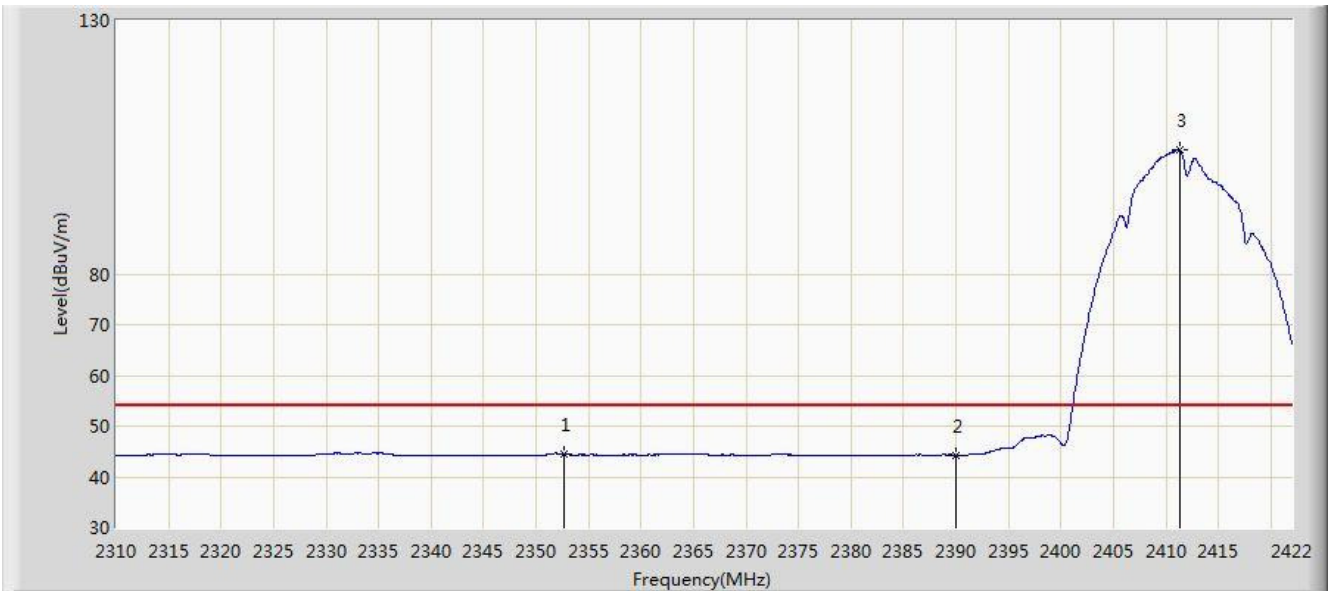


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2315.152	59.438	27.999	-14.562	74.000	31.439	PK
2			2390.000	57.655	26.452	-16.345	74.000	31.203	PK
3		*	2410.744	109.144	77.972	N/A	N/A	31.172	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz	

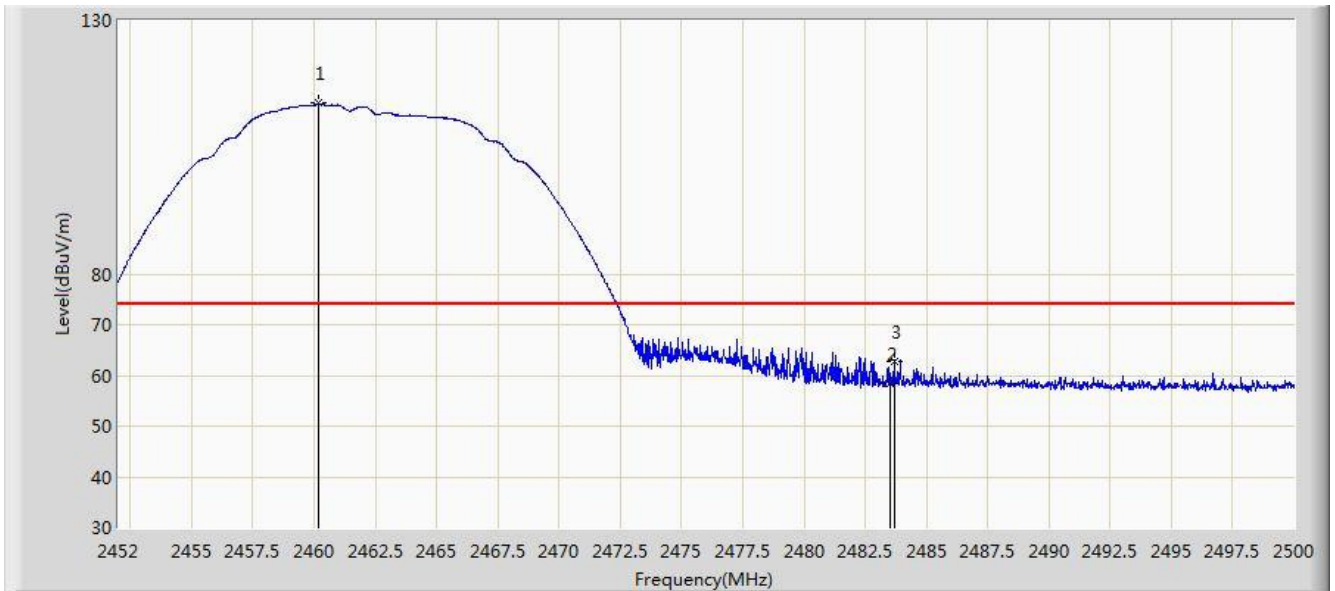


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2352.616	44.496	13.213	-9.504	54.000	31.283	AV
2			2390.000	44.340	13.137	-9.660	54.000	31.203	AV
3		*	2411.304	104.425	73.254	N/A	N/A	31.171	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.184	113.708	82.576	N/A	N/A	31.132	PK
2			2483.500	58.293	27.100	-15.707	74.000	31.194	PK
3			2483.704	62.819	31.625	-11.181	74.000	31.194	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).



Site: AC1	Time: 2015/12/07 - 18:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz	

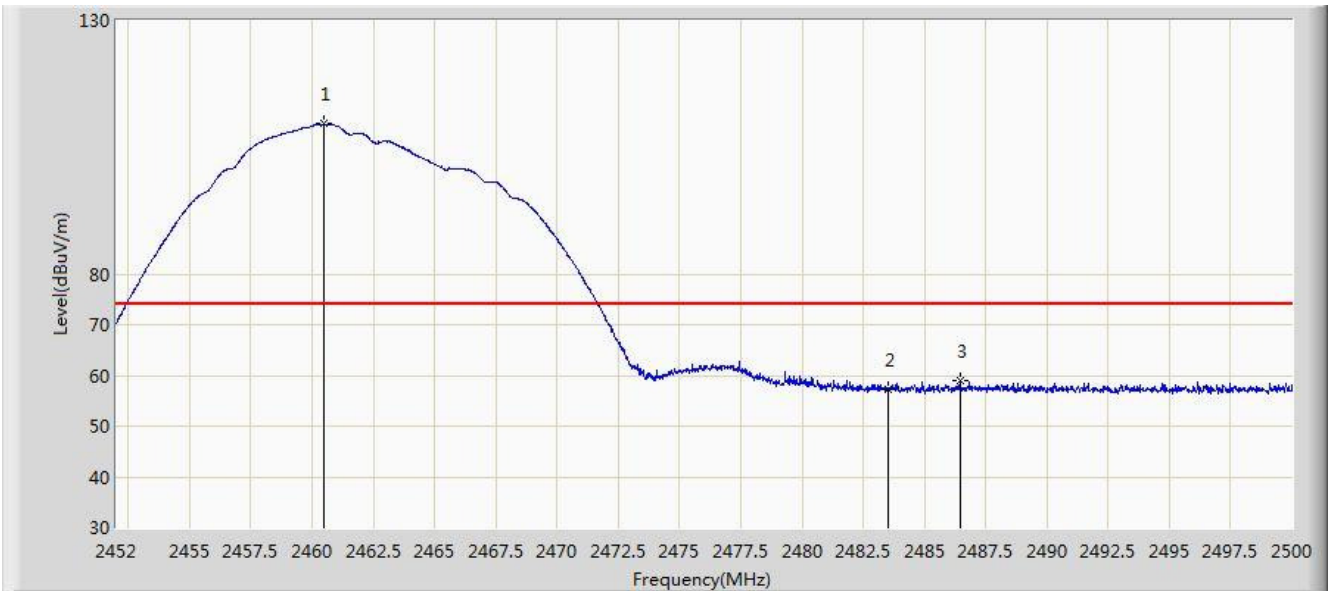


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.608	109.669	78.538	N/A	N/A	31.131	AV
2			2483.500	47.144	15.951	-6.856	54.000	31.194	AV
3			2487.208	47.388	16.185	-6.612	54.000	31.203	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.496	109.821	78.688	N/A	N/A	31.133	PK
2			2483.500	57.275	26.082	-16.725	74.000	31.194	PK
3			2486.464	58.995	27.794	-15.005	74.000	31.201	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:40
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz	

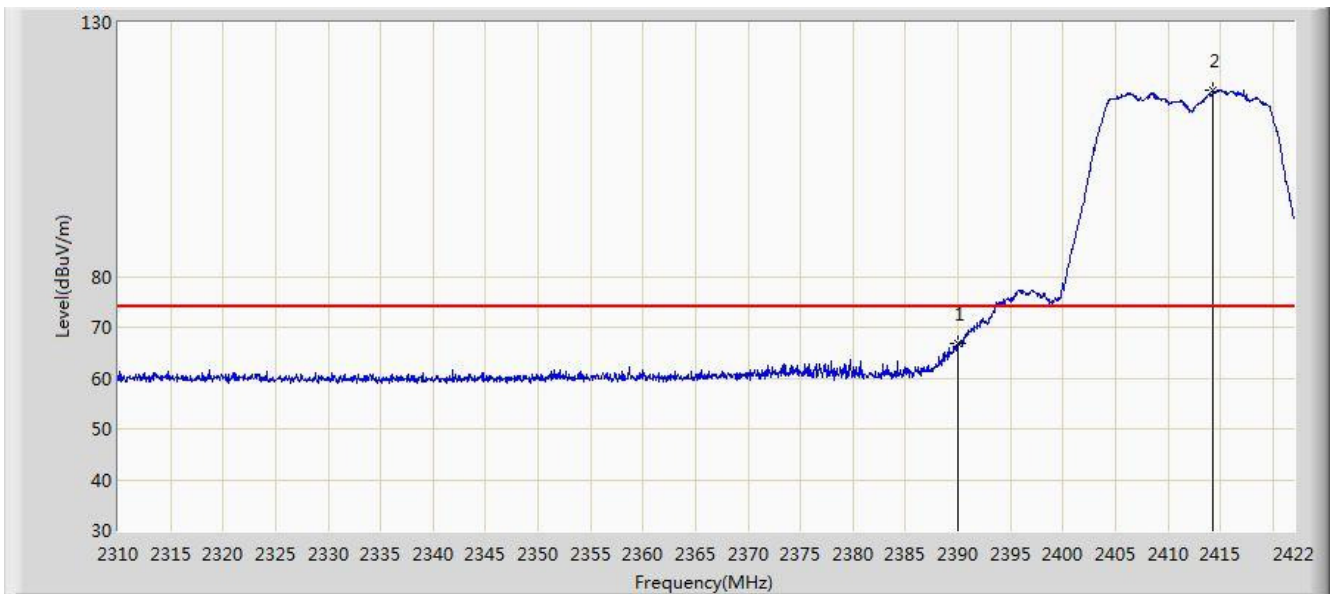


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.112	104.387	73.255	N/A	N/A	31.132	AV
2			2483.500	44.570	13.377	-9.430	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz	

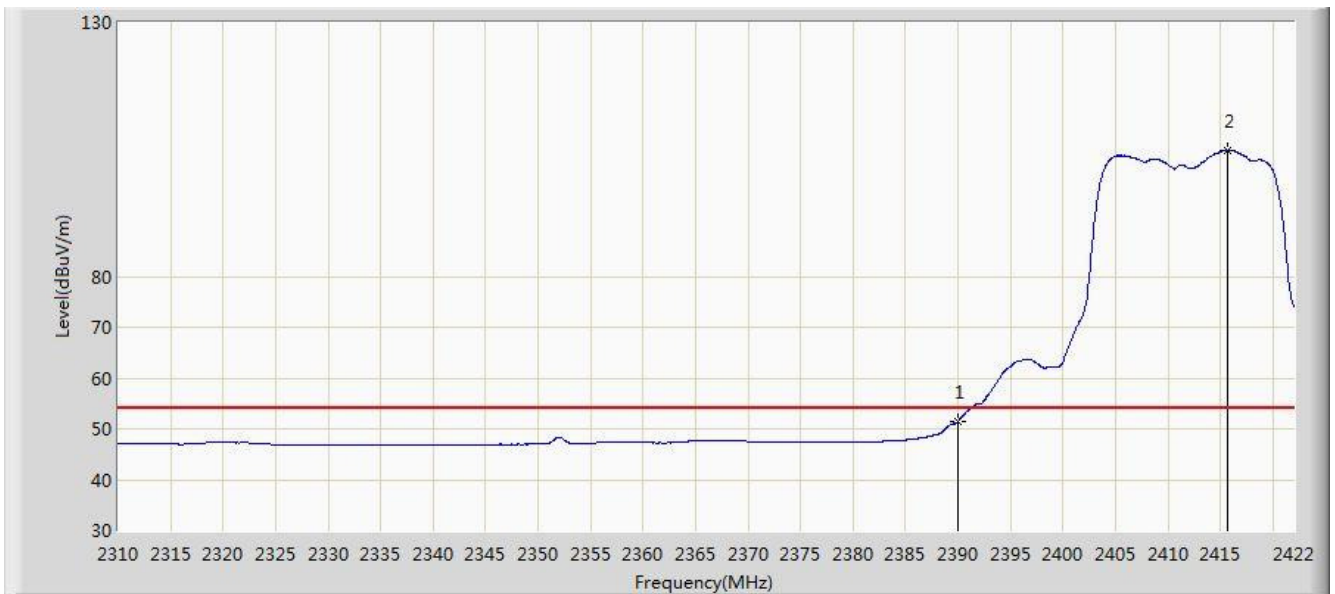


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	66.685	35.482	-7.315	74.000	31.203	PK
2		*	2414.272	116.596	85.430	N/A	N/A	31.166	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz	

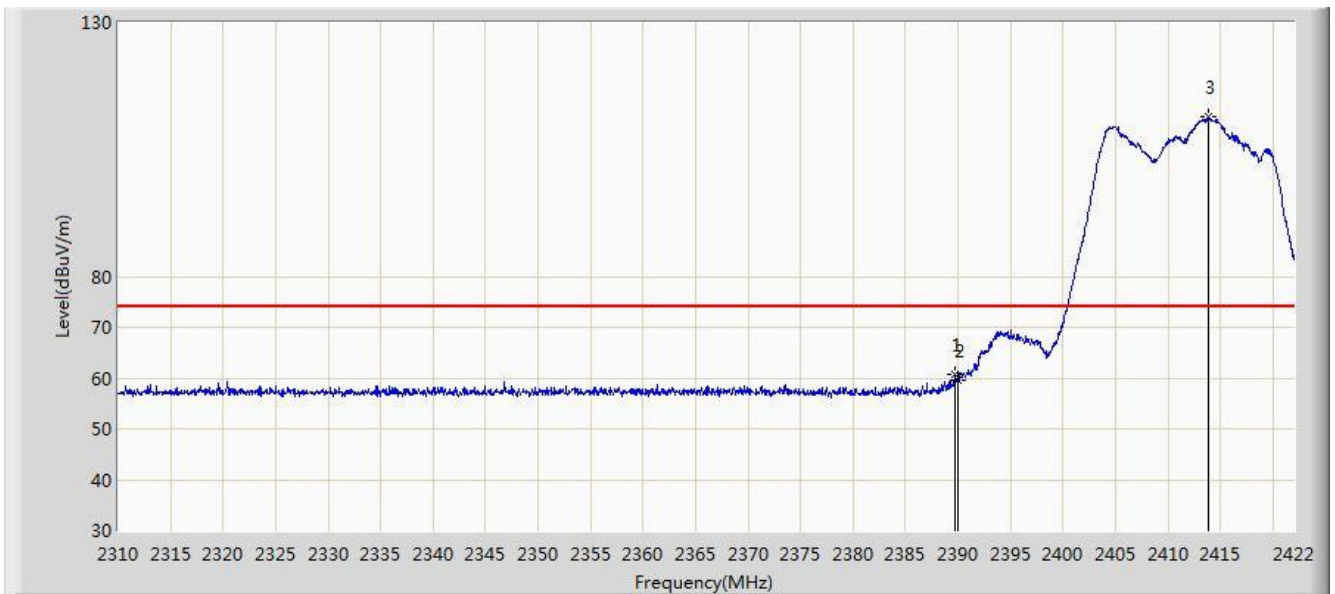


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	51.477	20.274	-2.523	54.000	31.203	AV
2		*	2415.672	104.805	73.642	N/A	N/A	31.163	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.688	60.629	29.426	-13.371	74.000	31.204	PK
2			2390.000	59.704	28.501	-14.296	74.000	31.203	PK
3		*	2413.824	111.549	80.383	N/A	N/A	31.167	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz	

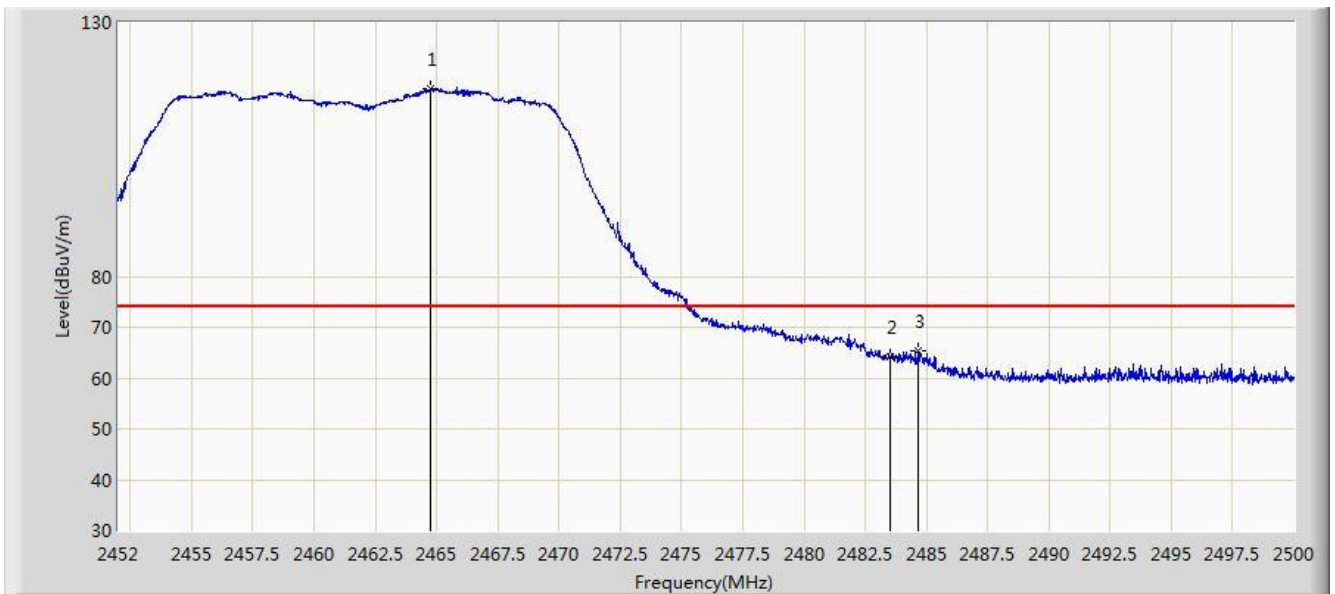


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.915	14.712	-8.085	54.000	31.203	AV
2		*	2413.208	98.807	67.640	N/A	N/A	31.167	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 18:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	



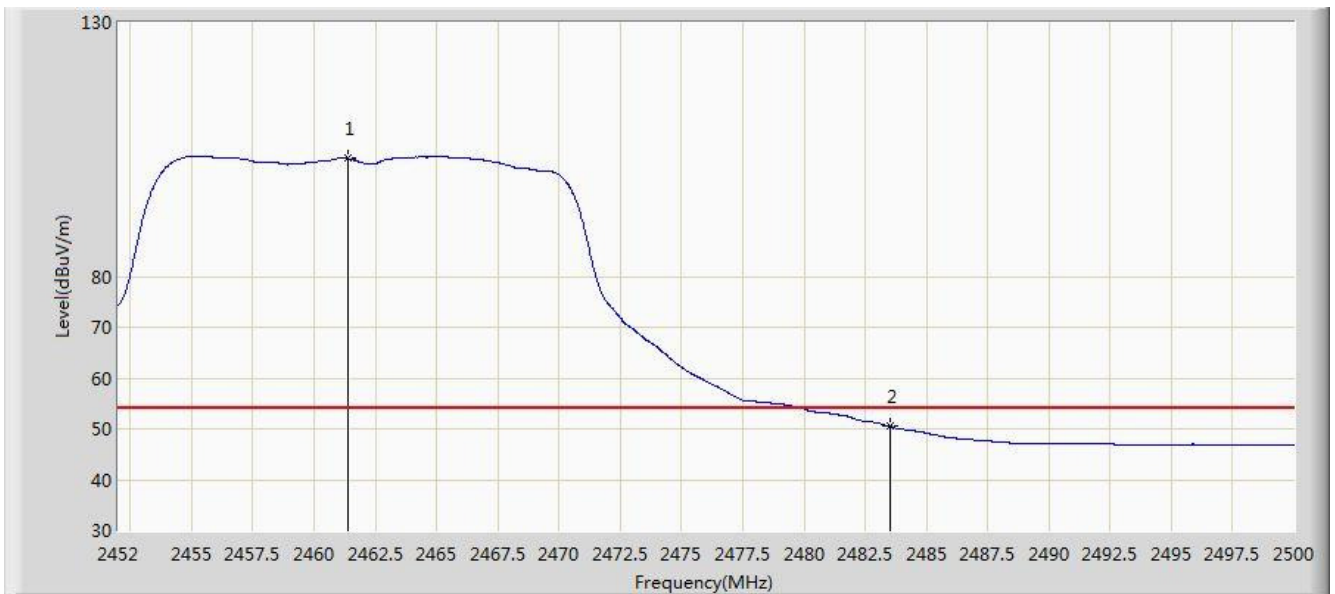
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.768	116.861	85.719	N/A	N/A	31.142	PK
2			2483.500	64.078	32.885	-9.922	74.000	31.194	PK
3			2484.664	65.463	34.267	-8.537	74.000	31.197	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).



Site: AC1	Time: 2015/12/07 - 19:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

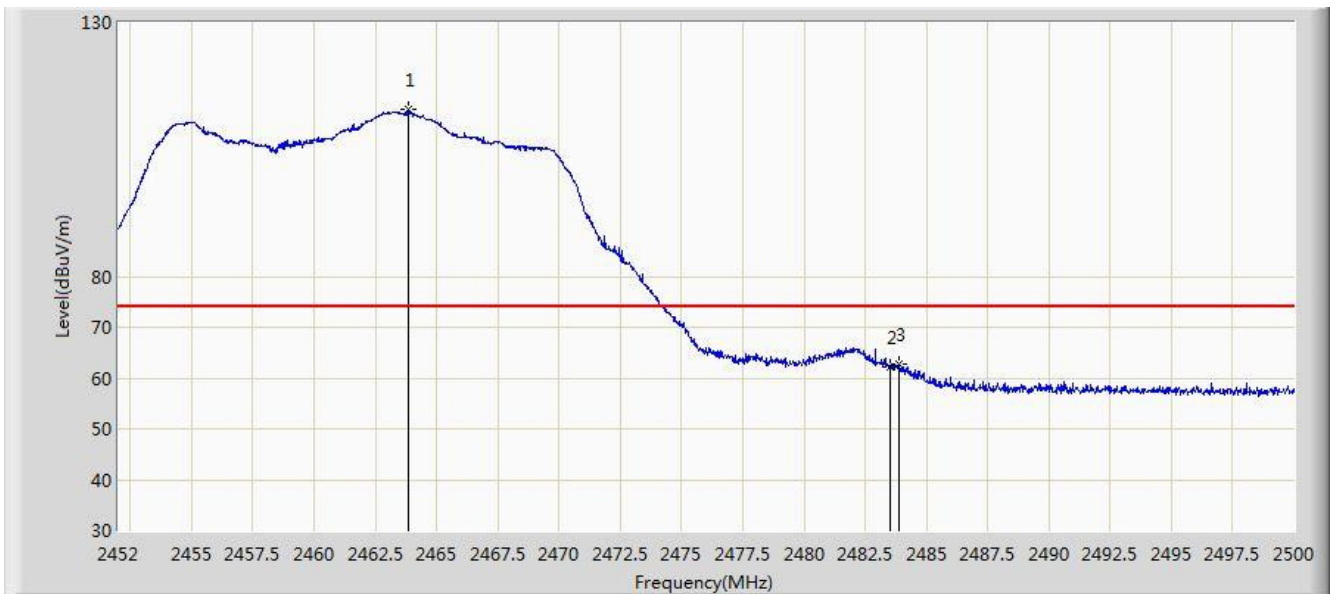


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.384	103.227	72.093	N/A	N/A	31.134	AV
2			2483.500	50.568	19.375	-3.432	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

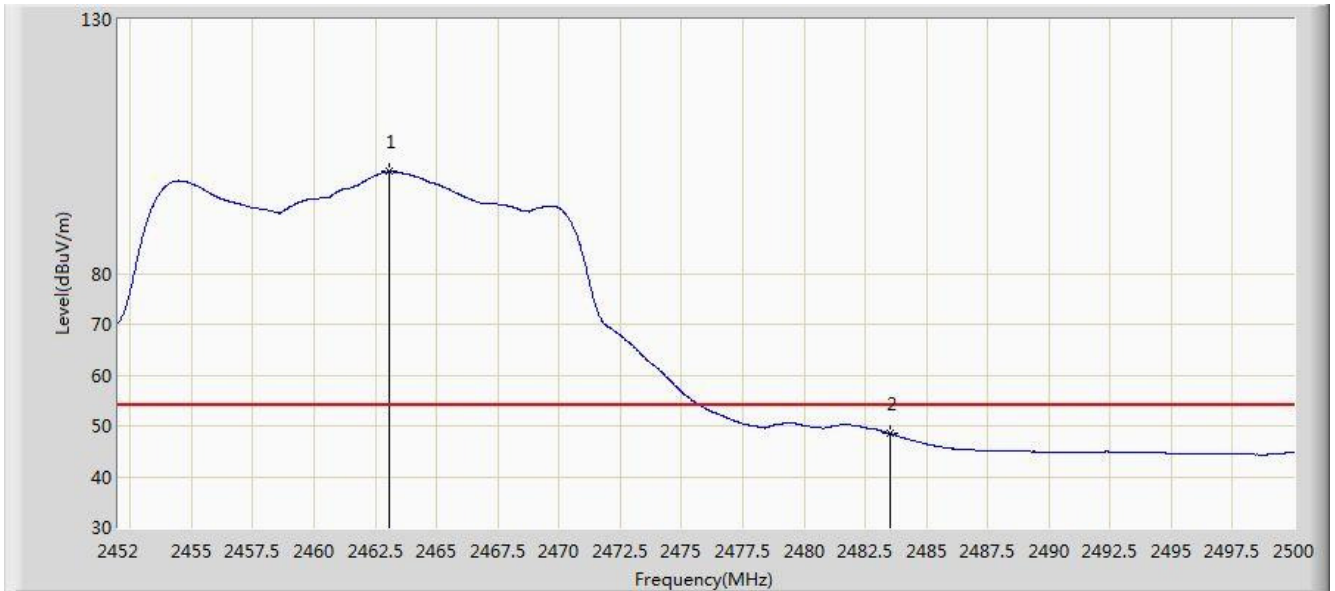


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.832	112.792	81.653	N/A	N/A	31.139	PK
2			2483.500	62.258	31.065	-11.742	74.000	31.194	PK
3			2483.896	62.656	31.462	-11.344	74.000	31.194	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz	

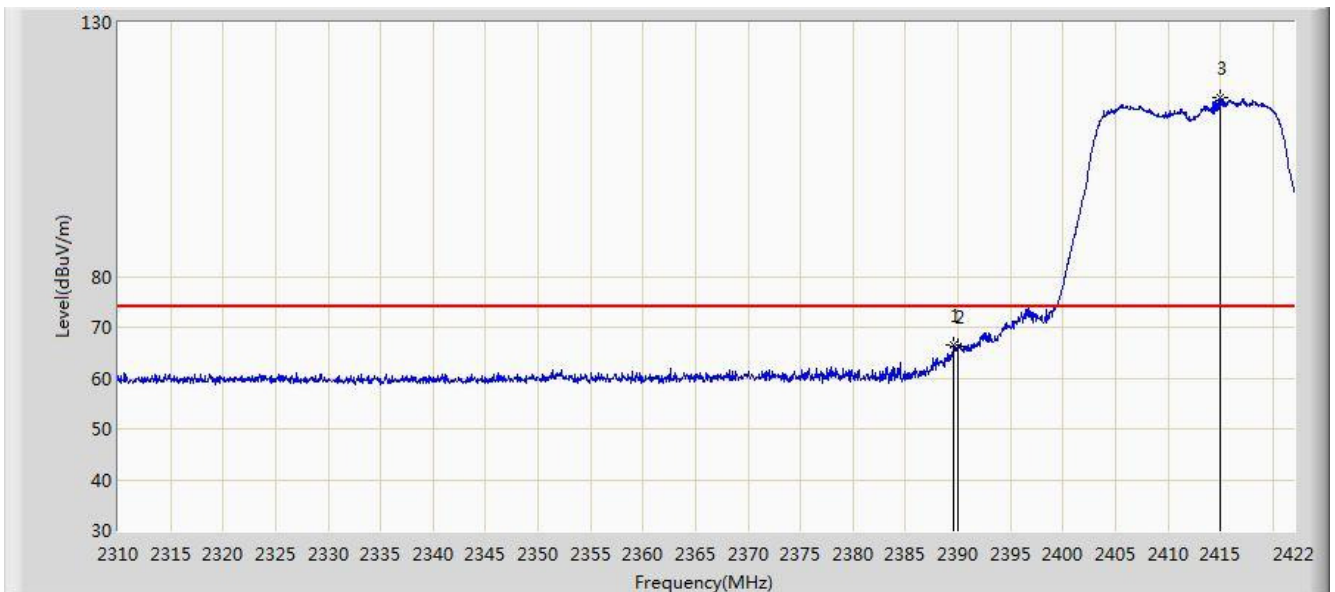


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.088	100.004	68.867	N/A	N/A	31.137	AV
2			2483.500	48.475	17.282	-5.525	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz	

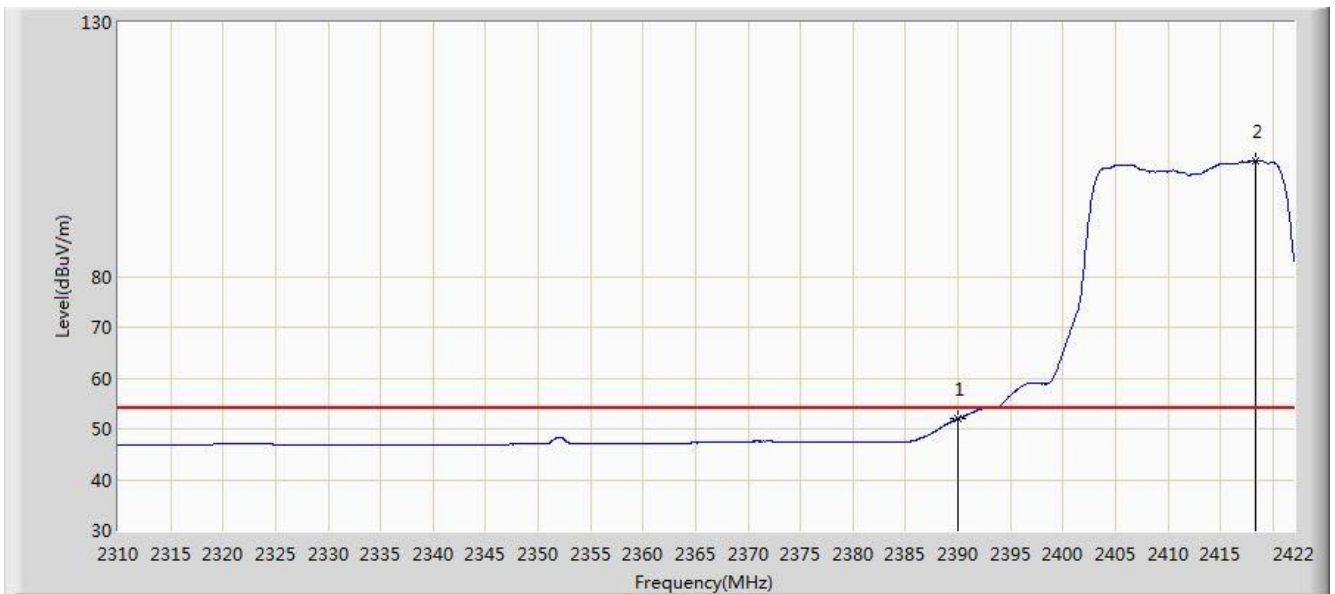


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.632	66.532	35.329	-7.468	74.000	31.204	PK
2			2390.000	66.229	35.026	-7.771	74.000	31.203	PK
3		*	2415.000	115.215	84.051	N/A	N/A	31.165	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz	

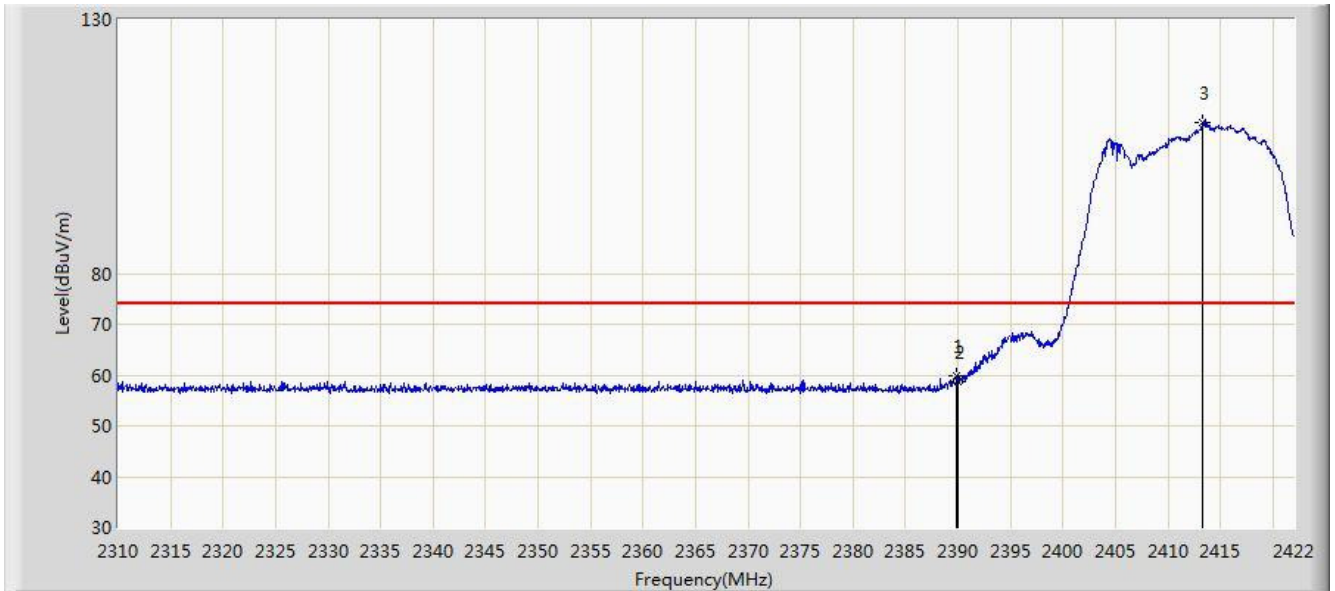


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	51.998	20.795	-2.002	54.000	31.203	AV
2		*	2418.304	102.691	71.532	N/A	N/A	31.159	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.912	59.882	28.679	-14.118	74.000	31.203	PK
2			2390.000	58.748	27.545	-15.252	74.000	31.203	PK
3		*	2413.320	109.754	78.587	N/A	N/A	31.168	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz	

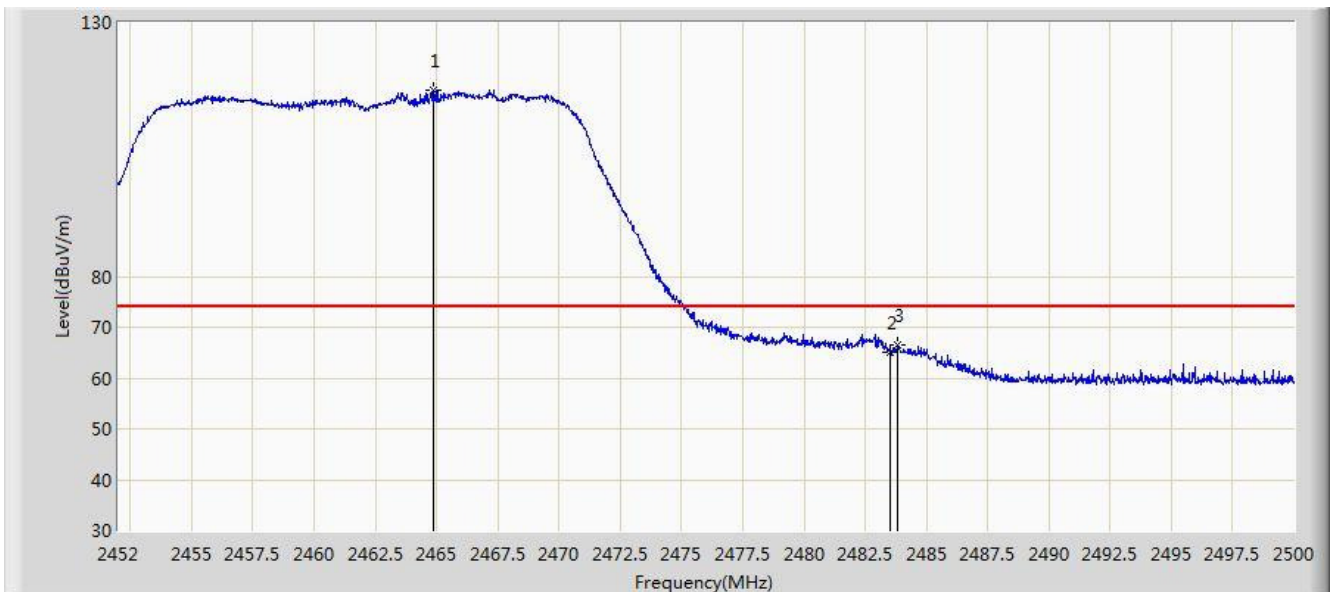


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.661	14.458	-8.339	54.000	31.203	AV
2		*	2415.000	96.756	65.592	N/A	N/A	31.165	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz	



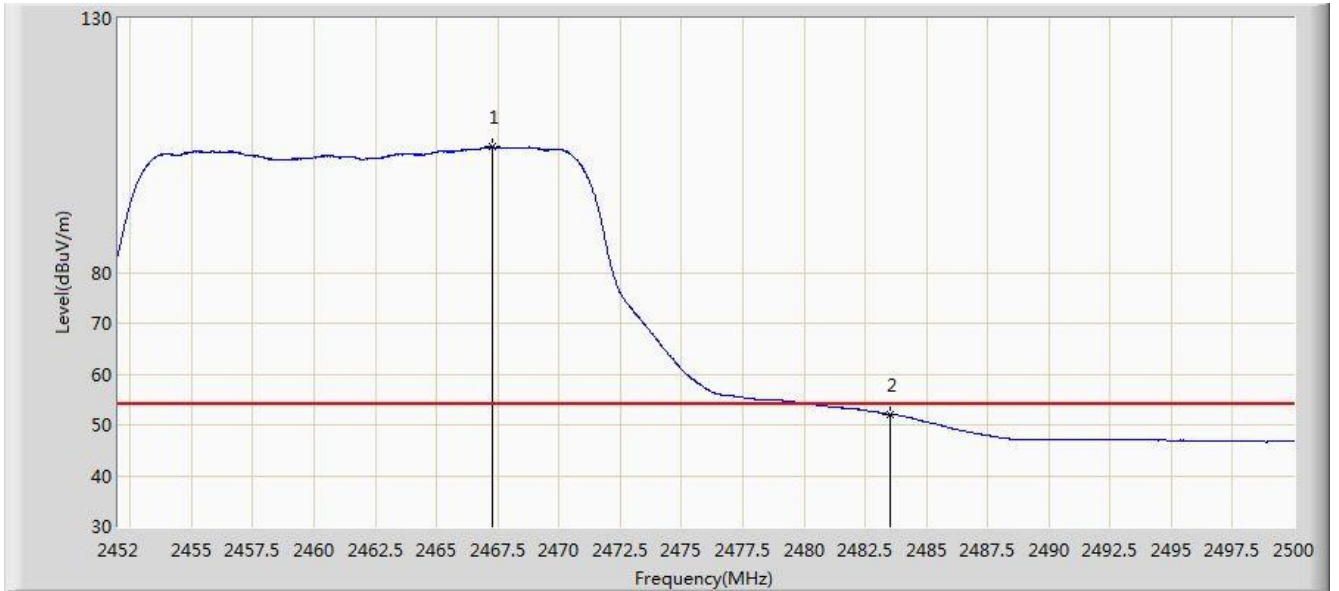
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.864	116.664	85.522	N/A	N/A	31.142	PK
2			2483.500	65.185	33.992	-8.815	74.000	31.194	PK
3			2483.824	66.410	35.216	-7.590	74.000	31.194	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).



Site: AC1	Time: 2015/12/07 - 19:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz	

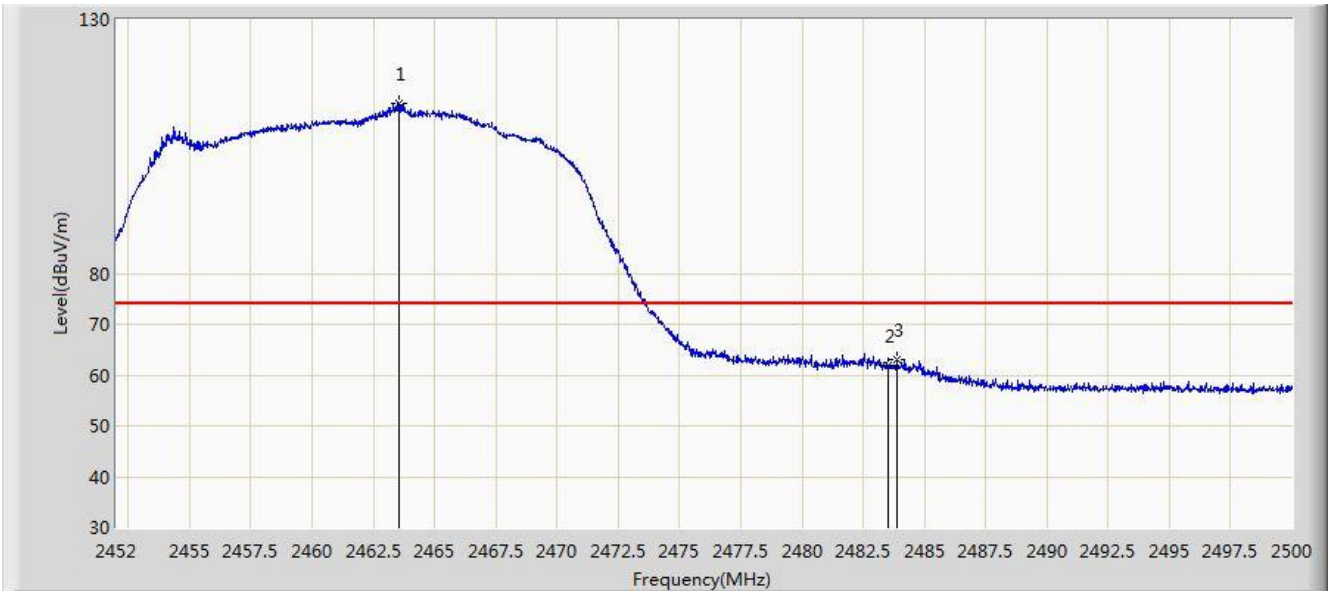


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.288	104.690	73.541	N/A	N/A	31.148	AV
2			2483.500	52.139	20.946	-1.861	54.000	31.194	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz	

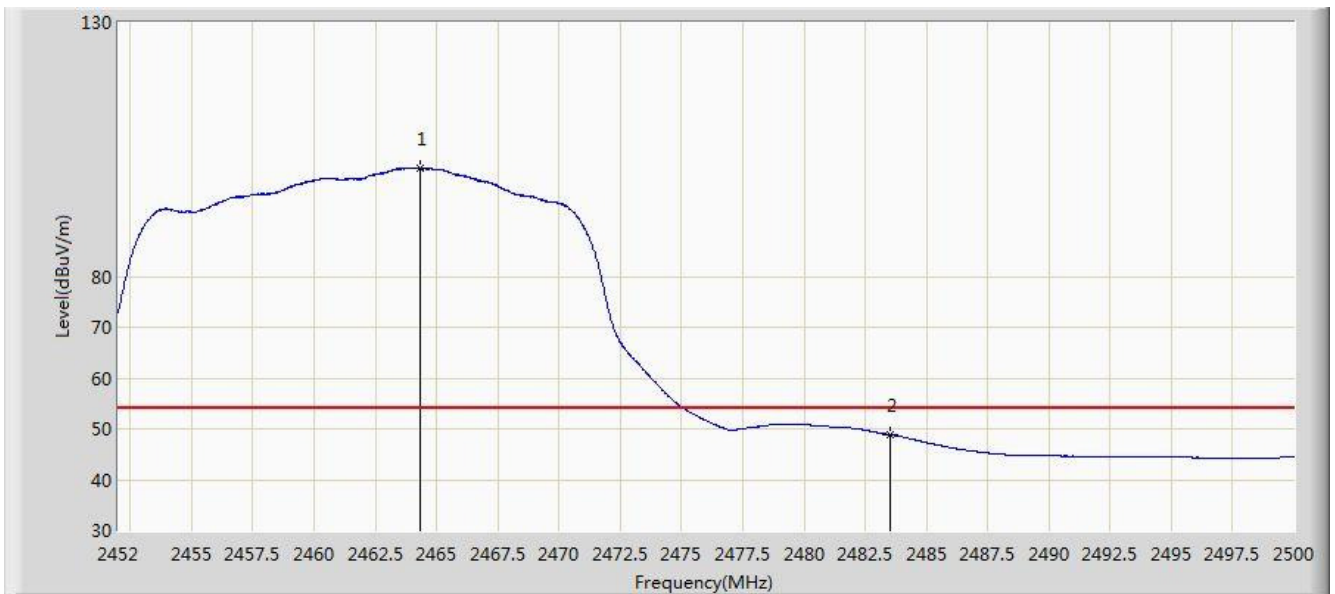


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.544	113.482	82.344	N/A	N/A	31.139	PK
2			2483.500	61.832	30.639	-12.168	74.000	31.194	PK
3			2483.872	62.917	31.723	-11.083	74.000	31.194	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 19:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz	

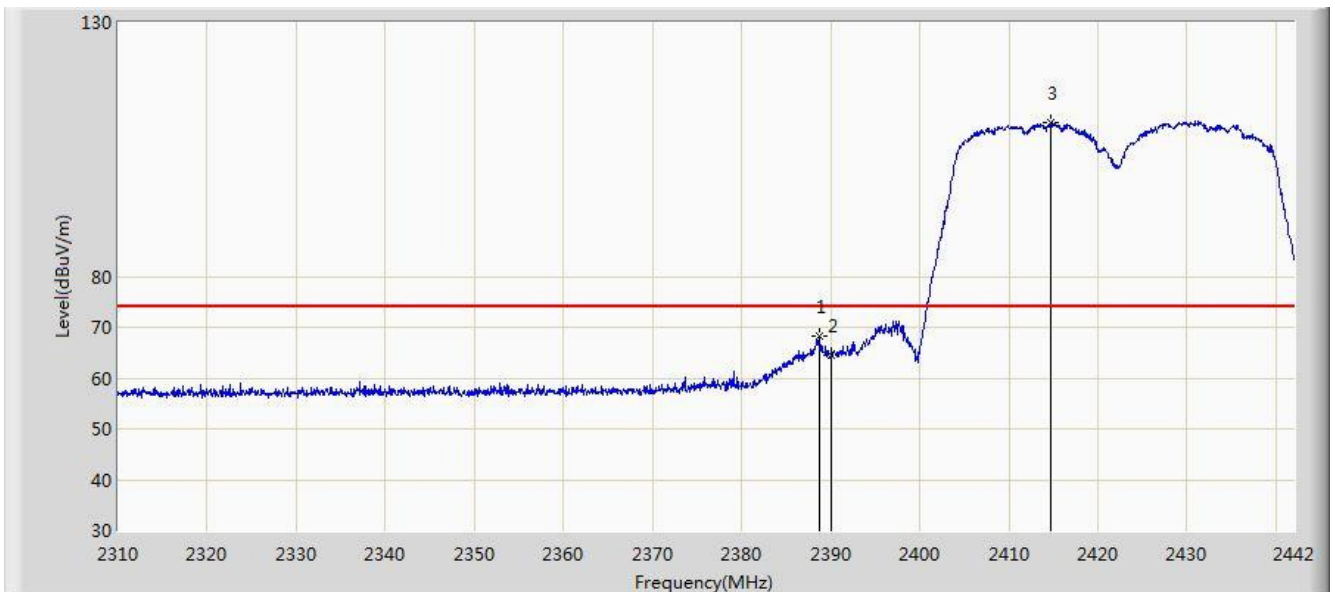


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.360	101.286	70.146	N/A	N/A	31.140	AV
2			2483.500	48.912	17.719	-5.088	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 20:40
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz	

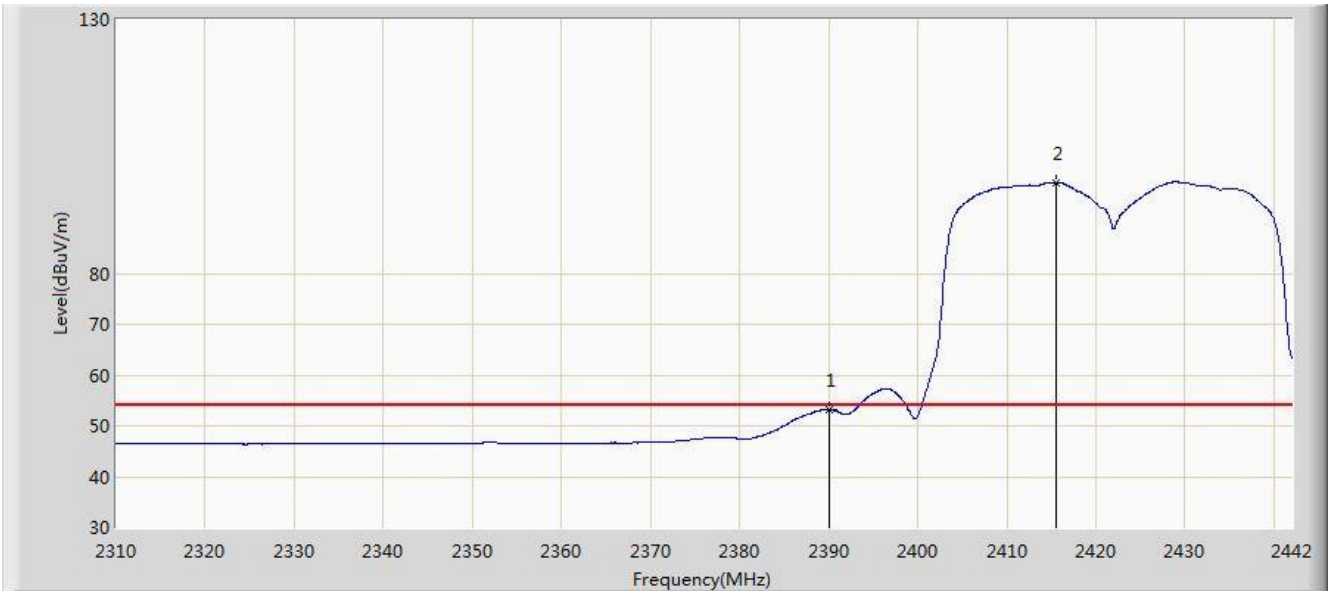


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.738	68.389	37.184	-5.611	74.000	31.205	PK
2			2390.000	64.450	33.247	-9.550	74.000	31.203	PK
3		*	2414.742	110.245	79.080	N/A	N/A	31.164	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 20:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz	

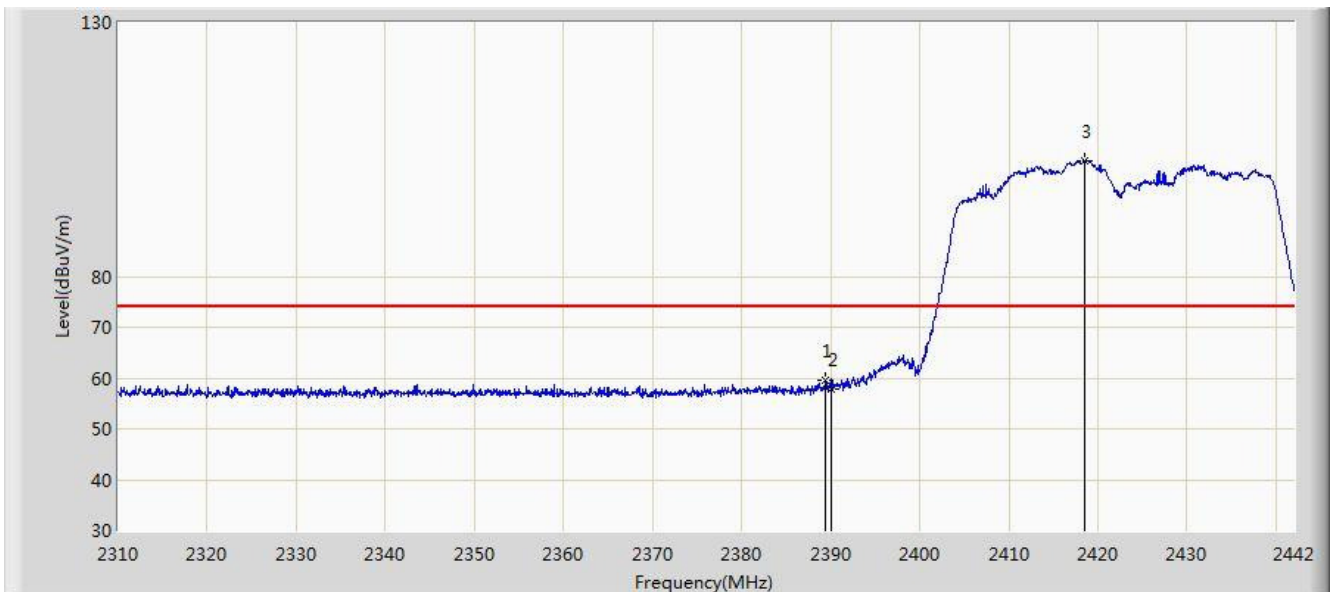


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.173	21.970	-0.827	54.000	31.203	AV
2		*	2415.468	97.934	66.770	N/A	N/A	31.164	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 20:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.464	59.691	28.487	-14.309	74.000	31.204	PK
2			2390.000	57.864	26.661	-16.136	74.000	31.203	PK
3		*	2418.570	102.874	71.716	N/A	N/A	31.158	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 20:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz	

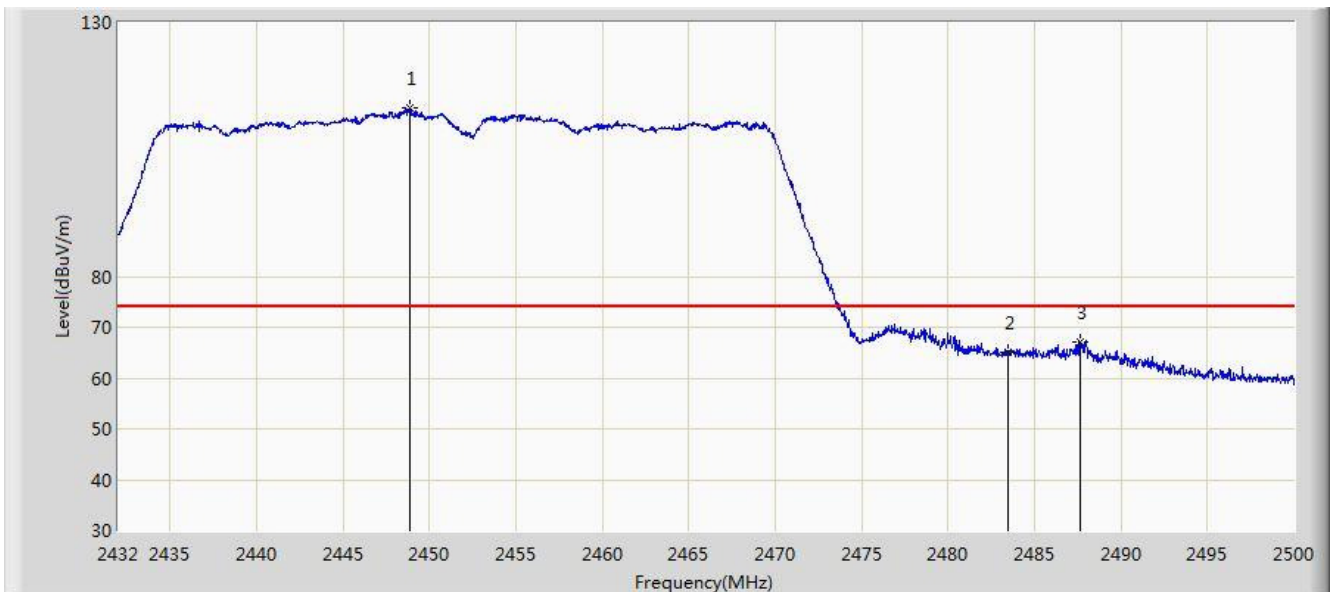


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.874	14.671	-8.126	54.000	31.203	AV
2		*	2419.362	91.624	60.467	N/A	N/A	31.156	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 21:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz	



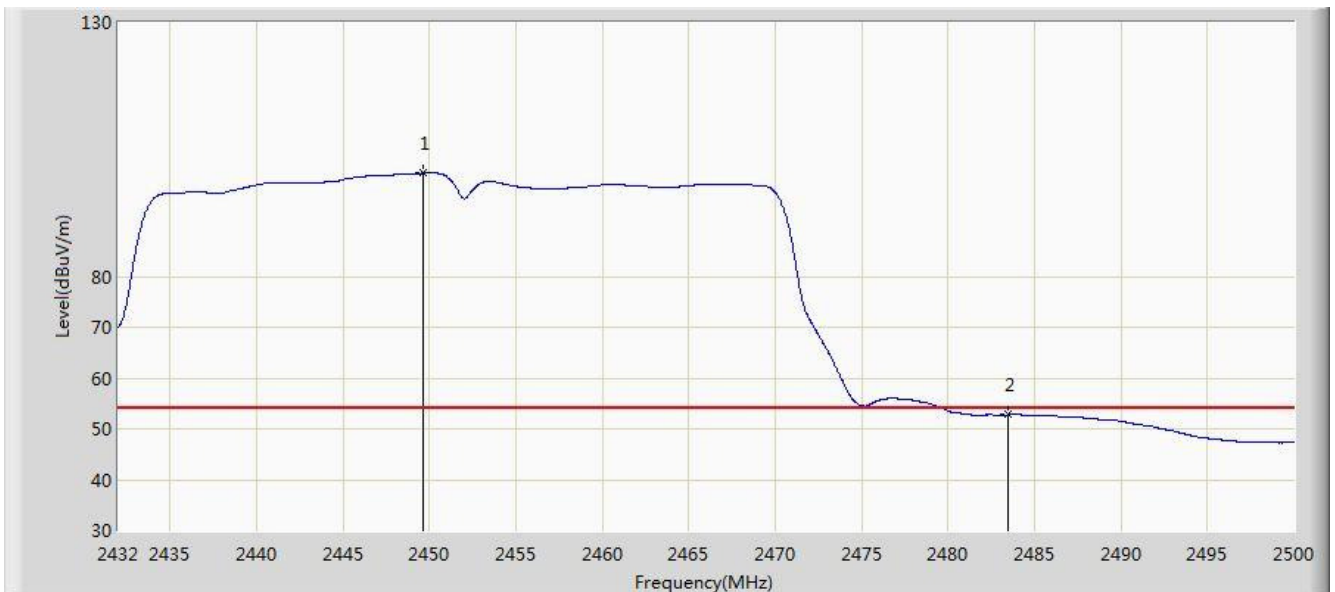
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2448.898	113.078	81.966	N/A	N/A	31.112	PK
2			2483.500	65.026	33.833	-8.974	74.000	31.194	PK
3			2487.624	67.206	36.002	-6.794	74.000	31.204	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).



Site: AC1	Time: 2015/12/07 - 21:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2449.646	100.346	69.233	N/A	N/A	31.113	AV
2			2483.500	52.758	21.565	-1.242	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 21:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz	

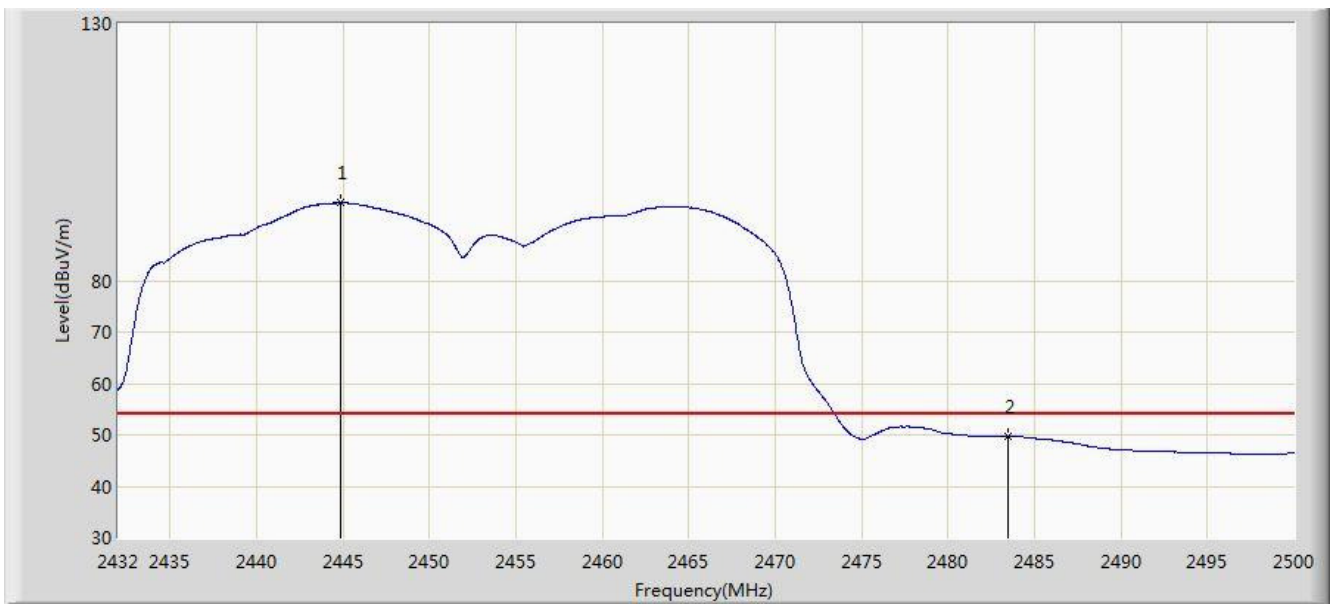


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2443.424	107.567	76.455	N/A	N/A	31.112	PK
2			2483.500	61.035	29.842	-12.965	74.000	31.194	PK
3			2483.782	62.623	31.429	-11.377	74.000	31.194	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/12/07 - 21:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Gateway	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2444.852	95.111	64.002	N/A	N/A	31.109	AV
2			2483.500	49.707	18.514	-4.293	54.000	31.194	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

## 7.8. AC Conducted Emissions Measurement

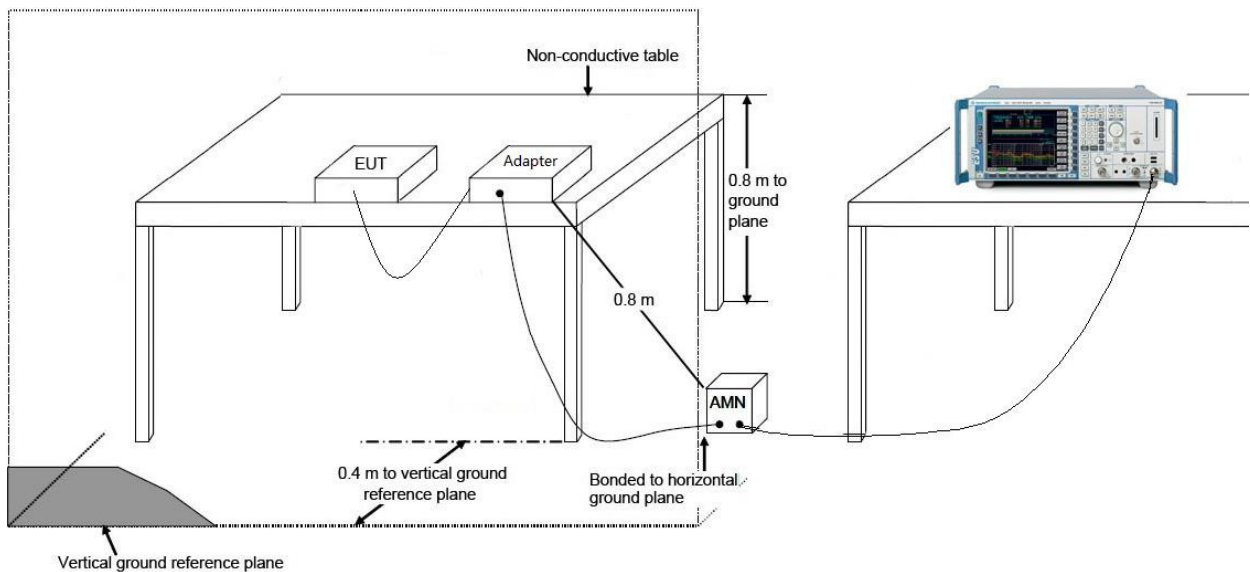
### 7.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

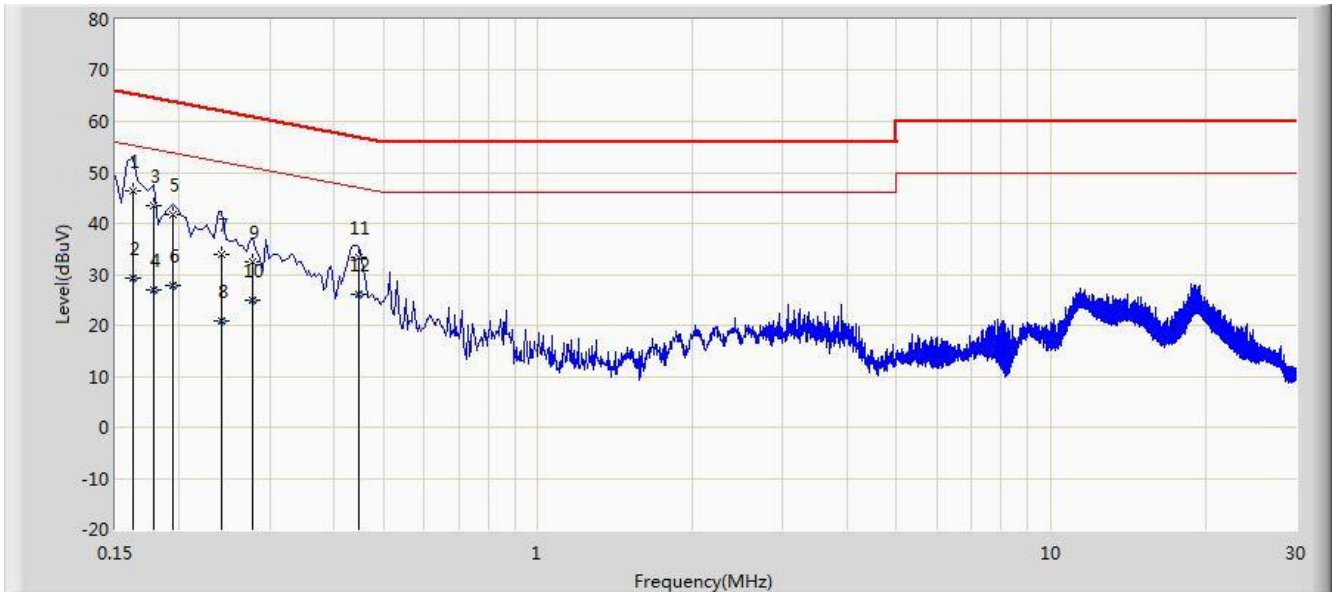
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

### 7.8.2. Test Setup



### 7.8.3. Test Result

Site: SR2	Time: 2015/12/16 - 11:38
Limit: FCC_Part15.207_CE_AC Power	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Gateway	Power: AC 120V/60Hz
Note: Mode 1	

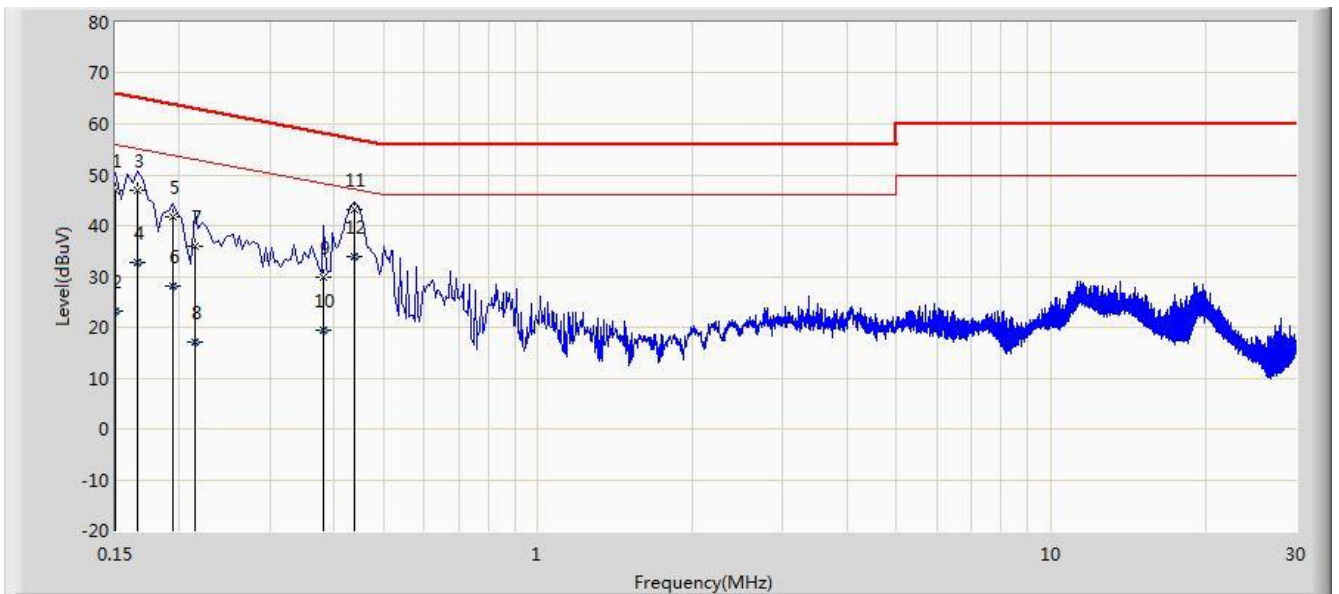


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.162	46.232	36.135	-19.129	65.361	10.097	QP
2			0.162	29.373	19.276	-25.988	55.361	10.097	AV
3			0.178	43.572	33.514	-21.006	64.578	10.058	QP
4			0.178	27.063	17.005	-27.516	54.578	10.058	AV
5			0.194	41.708	31.691	-22.156	63.864	10.017	QP
6			0.194	27.831	17.814	-26.032	53.864	10.017	AV
7			0.242	33.849	23.892	-28.178	62.027	9.958	QP
8			0.242	20.759	10.801	-31.269	52.027	9.958	AV
9			0.278	32.468	22.482	-28.407	60.875	9.986	QP
10			0.278	25.030	15.043	-25.846	50.875	9.986	AV
11			0.446	33.267	23.144	-23.683	56.949	10.123	QP
12			0.446	26.162	16.039	-20.787	46.949	10.123	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2015/12/16 - 11:45
Limit: FCC_Part15.207_CE_AC Power	Engineer: Vince Yu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Gateway	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	46.826	35.684	-19.174	66.000	11.142	QP
2			0.150	23.259	12.117	-32.741	56.000	11.142	AV
3			0.166	46.840	36.769	-18.318	65.158	10.071	QP
4			0.166	32.849	22.778	-22.309	55.158	10.071	AV
5			0.194	41.667	31.646	-22.196	63.864	10.021	QP
6			0.194	28.226	18.204	-25.638	53.864	10.021	AV
7			0.214	35.951	25.963	-27.098	63.049	9.988	QP
8			0.214	17.231	7.243	-35.818	53.049	9.988	AV
9			0.382	29.814	19.715	-28.422	58.236	10.099	QP
10			0.382	19.281	9.182	-28.955	48.236	10.099	AV
11			0.438	43.260	33.119	-13.840	57.100	10.141	QP
12		*	0.438	33.905	23.764	-13.195	47.100	10.141	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

## 8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Gateway FCC ID:**

**H8N-RG8000W** is in compliance with Part 15C of the FCC Rules.

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The End