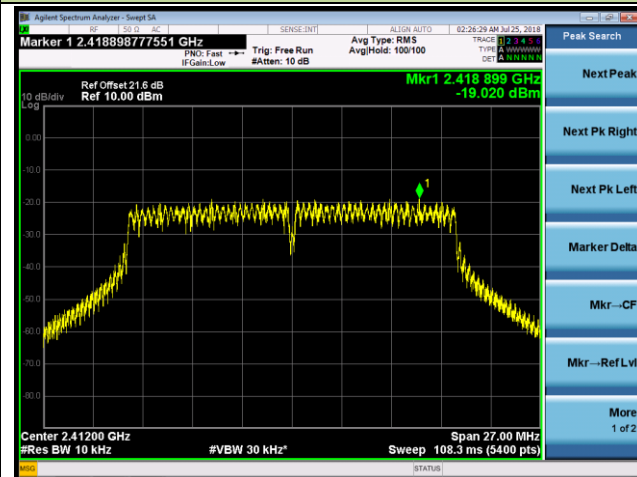
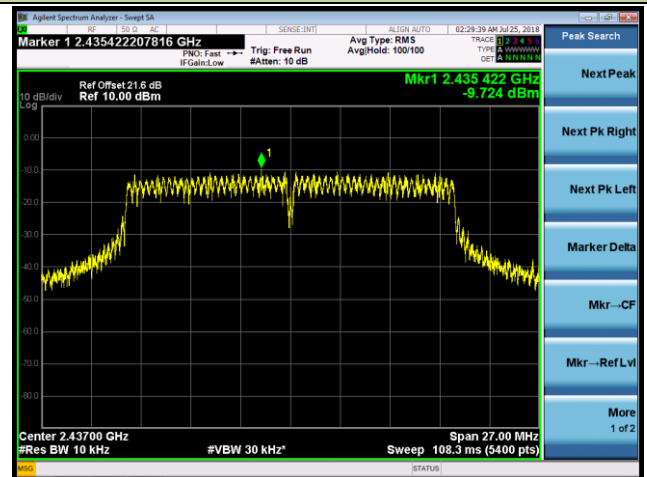


## 802.11n-HT20 AVGPDS - Ant 1 / Ant 0 + 1 + 2 + 3

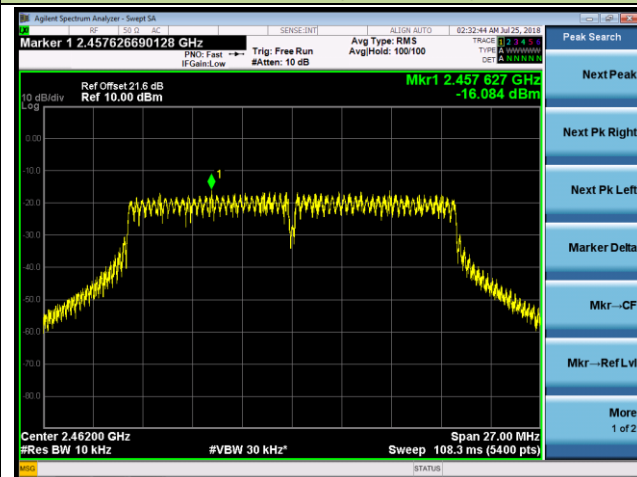
## Channel 01 (2412MHz)



## Channel 06 (2437MHz)

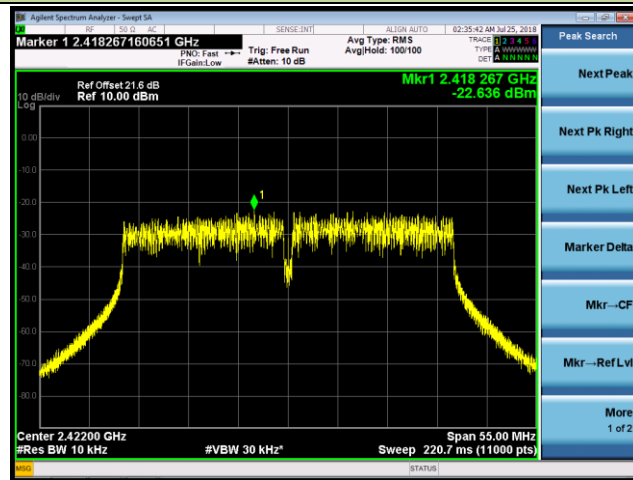


## Channel 11 (2462MHz)

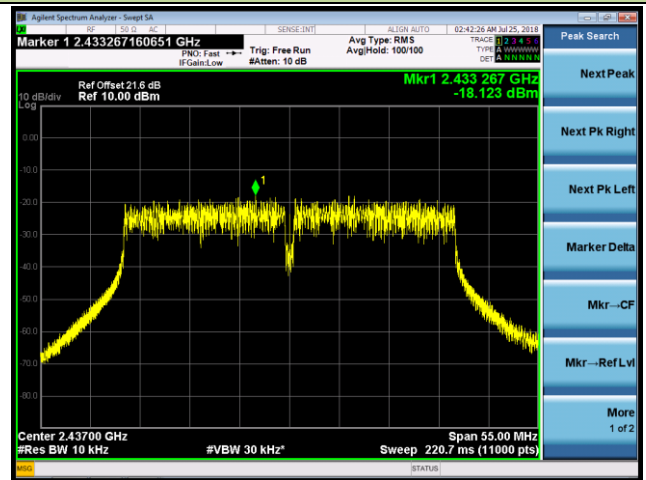


## 802.11n-HT40 AVGPSD - Ant 1 / Ant 0 + 1 + 2 + 3

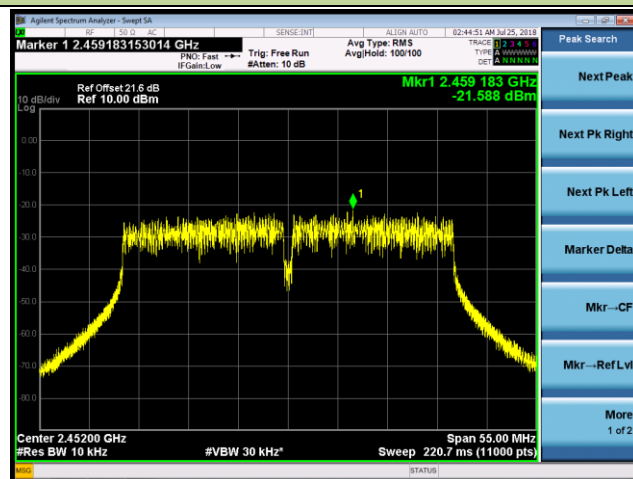
## Channel 03 (2422MHz)



## Channel 06 (2437MHz)

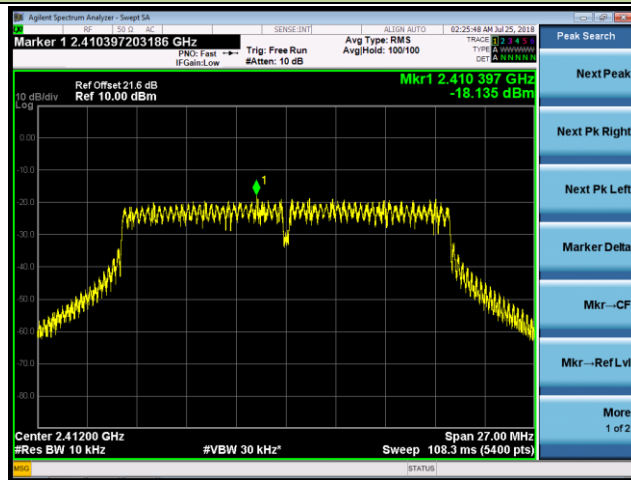


## Channel 09 (2452MHz)

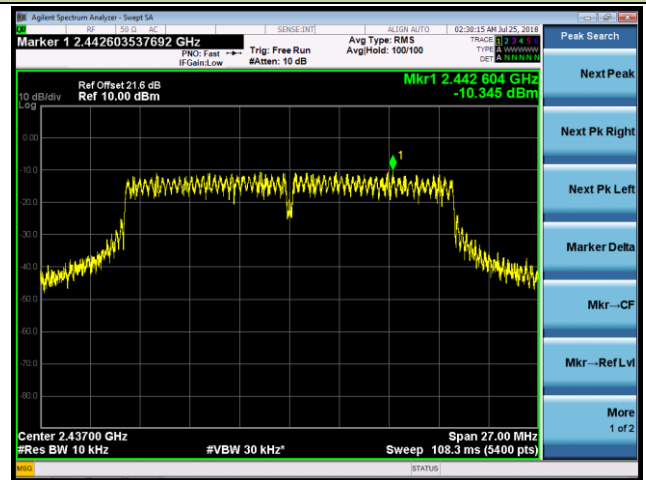


## 802.11n-HT20 AVGPDS - Ant 2 / Ant 0 + 1 + 2 + 3

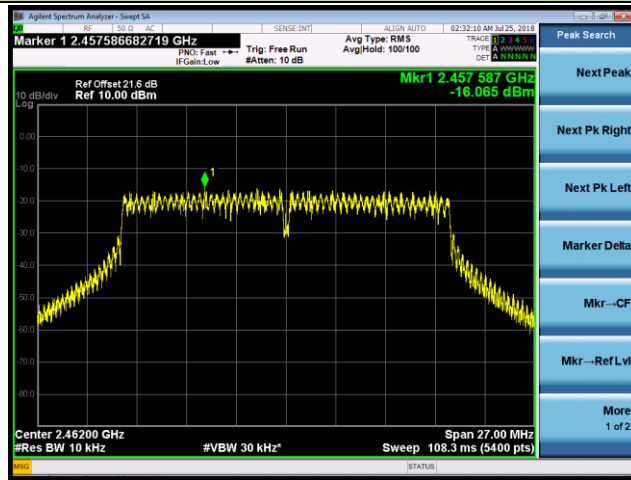
## Channel 01 (2412MHz)



## Channel 06 (2437MHz)

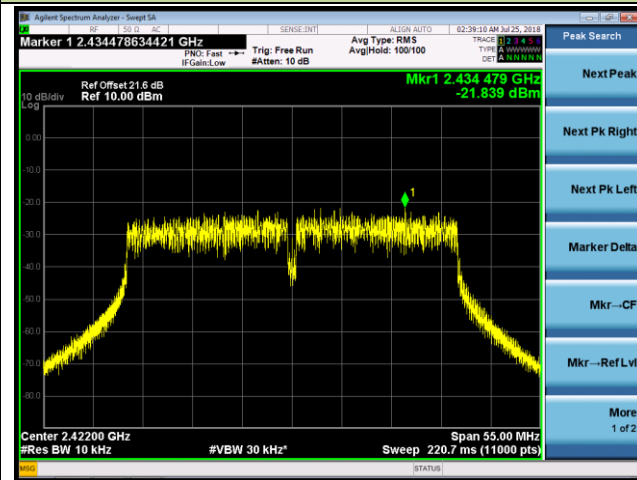


## Channel 11 (2462MHz)

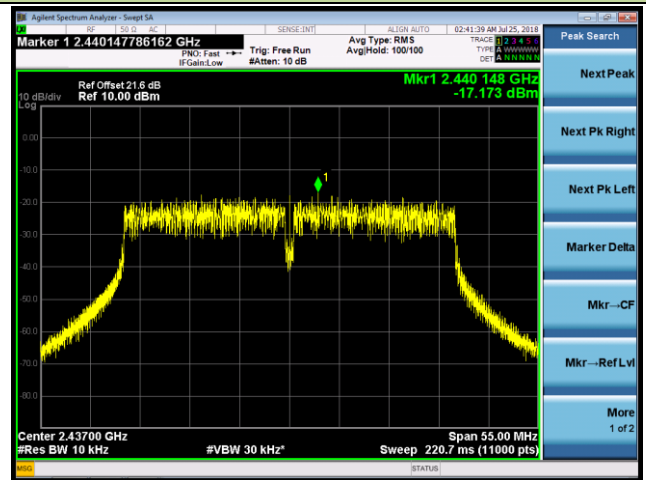


## 802.11n-HT40 AVGPDS - Ant 2 / Ant 0 + 1 + 2 + 3

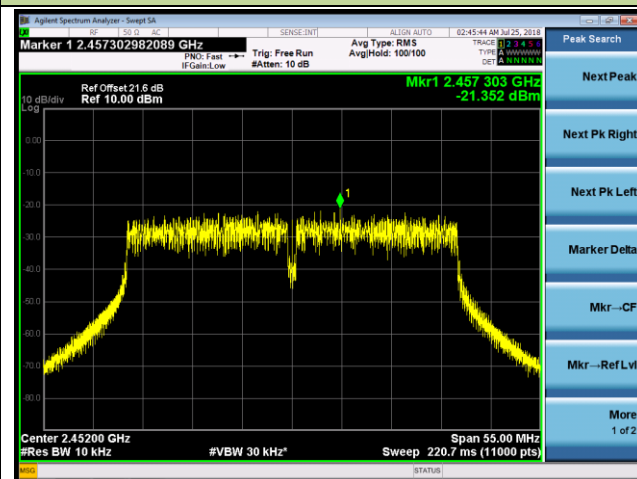
## Channel 03 (2422MHz)



## Channel 06 (2437MHz)

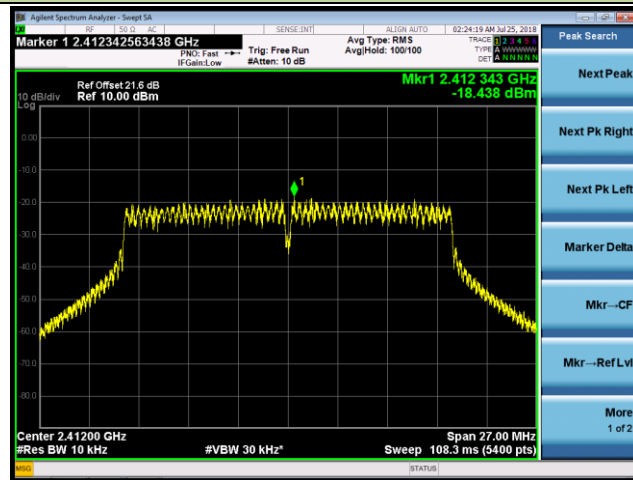


## Channel 09 (2452MHz)

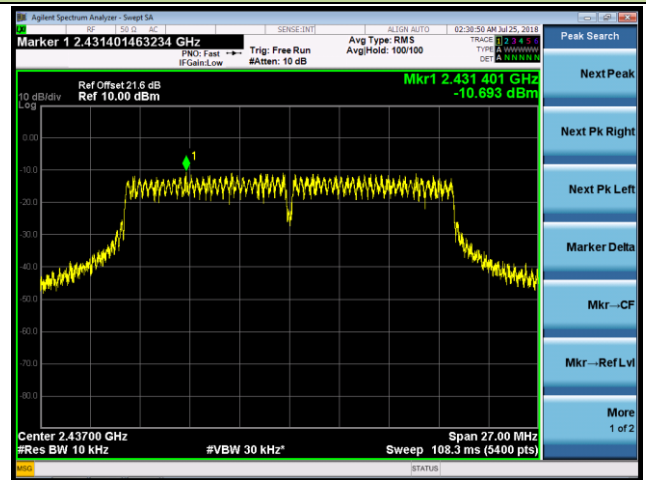


## 802.11n-HT20 AVGPDS - Ant 3 / Ant 0 + 1 + 2 + 3

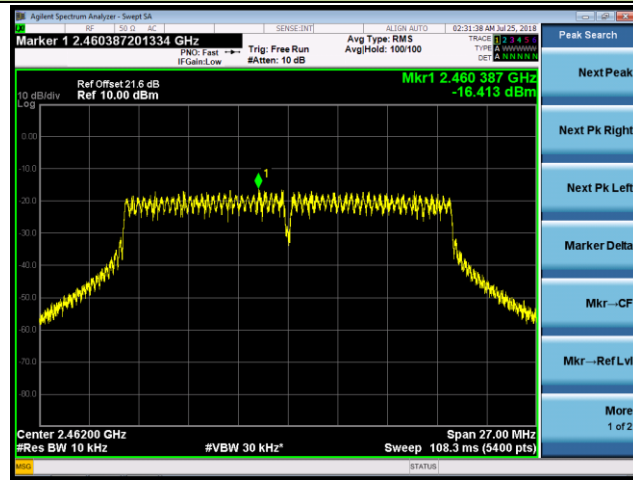
## Channel 01 (2412MHz)



## Channel 06 (2437MHz)

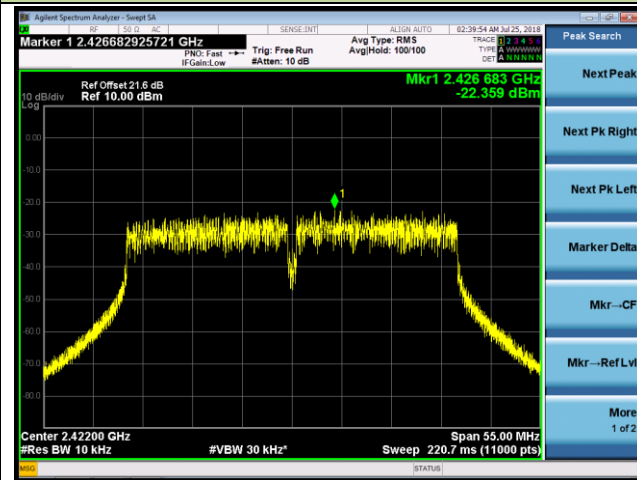


## Channel 11 (2462MHz)

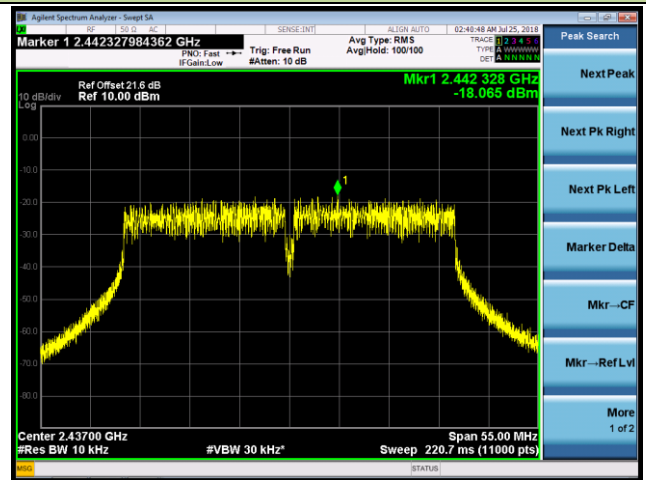


## 802.11n-HT40 AVGPSD - Ant 3 / Ant 0 + 1 + 2 + 3

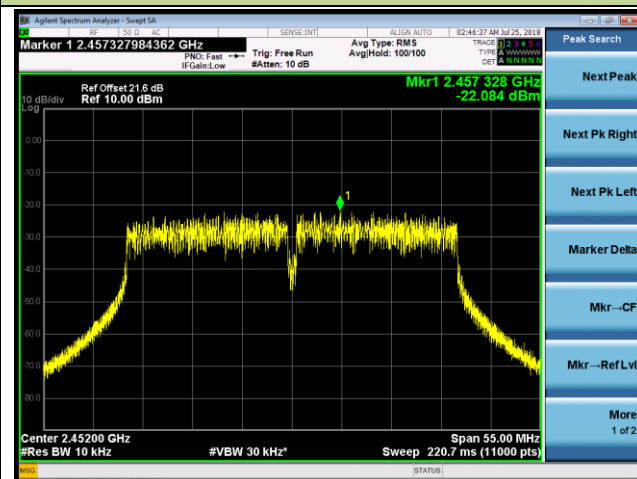
## Channel 03 (2422MHz)



## Channel 06 (2437MHz)



## Channel 09 (2452MHz)



## **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 100 kHz bandwidth per the PSD procedure.

### **7.5.2. Test Procedure Used**

ANSI C63.10 Section 11.11

### **7.5.3. Test Setting**

#### **Reference level measurement**

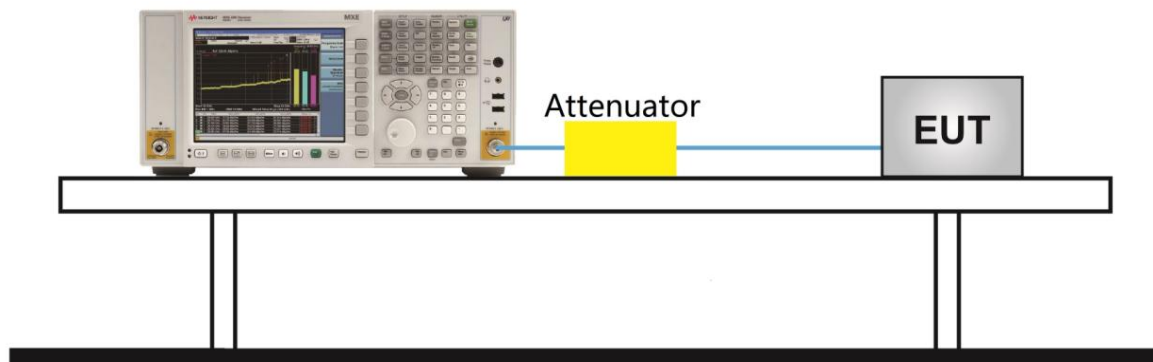
1. Set instrument center frequency to DTS channel center frequency
2. Set the span to  $\geq 1.5$  times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW  $\geq 3 \times$  RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

#### **Emission level measurement**

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

#### 7.5.4. Test Setup

##### Spectrum Analyzer





### 7.5.5. Test Result

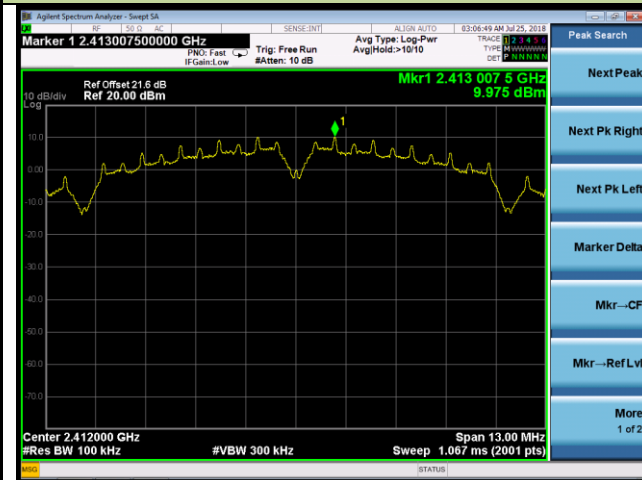
Product	4x4 Wave-2 802.11BGN Mini PCIe WiFi Module	Temperature	23°C
Test Engineer	Vince Yu	Relative Humidity	52%
Test Site	TR3	Test Date	2018/07/25

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	Limit	Result
Ant 2					
802.11b	1Mbps	01	2412	30dBc	Pass
802.11b	1Mbps	06	2437	30dBc	Pass
802.11b	1Mbps	11	2462	30dBc	Pass
802.11g	6Mbps	01	2412	30dBc	Pass
802.11g	6Mbps	06	2437	30dBc	Pass
802.11g	6Mbps	11	2462	30dBc	Pass
Ant 2 / Ant 0 + 1 + 2 + 3					
802.11n-HT20	MCS24	01	2412	30dBc	Pass
802.11n-HT20	MCS24	06	2437	30dBc	Pass
802.11n-HT20	MCS24	11	2462	30dBc	Pass
802.11n-HT40	MCS24	03	2422	30dBc	Pass
802.11n-HT40	MCS24	06	2437	30dBc	Pass
802.11n-HT40	MCS24	09	2452	30dBc	Pass

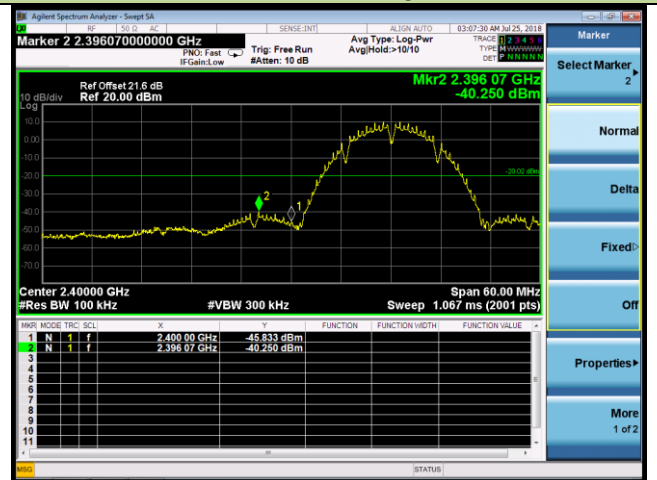
## 802.11b Out-of-Band Emissions - Ant 2

## Channel 01 (2412MHz)

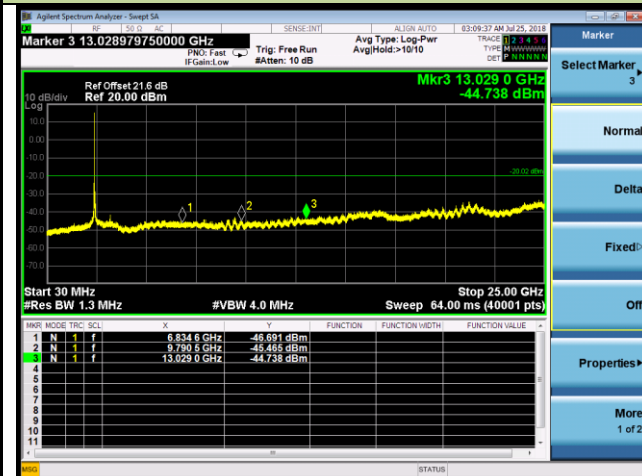
## 100kHz PSD Reference Level



## Low Band Edge

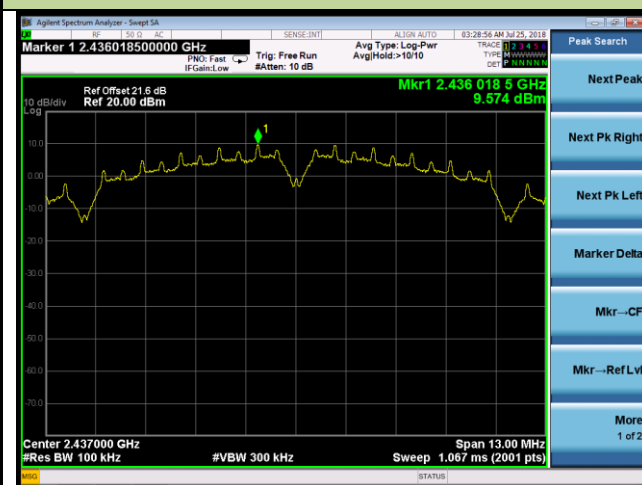


## Spurious Emission

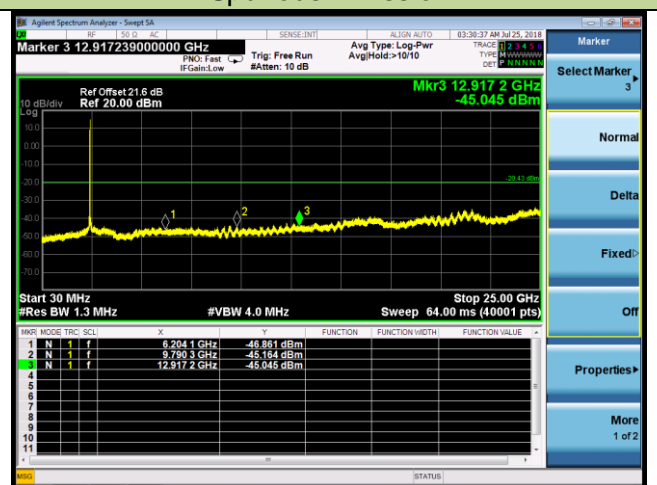


## Channel 06 (2437MHz)

## 100kHz PSD Reference Level

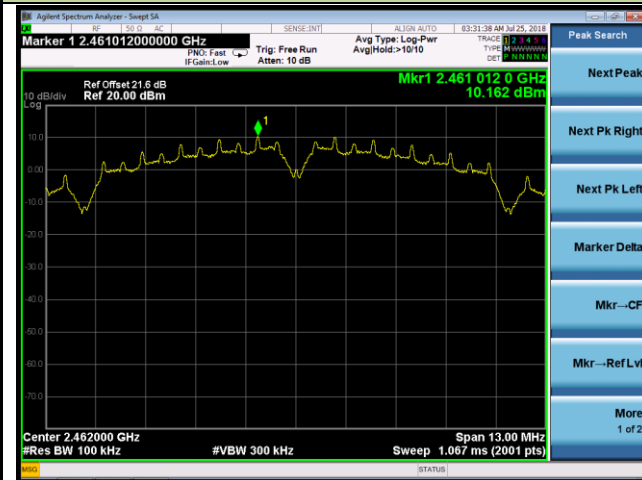


## Spurious Emission

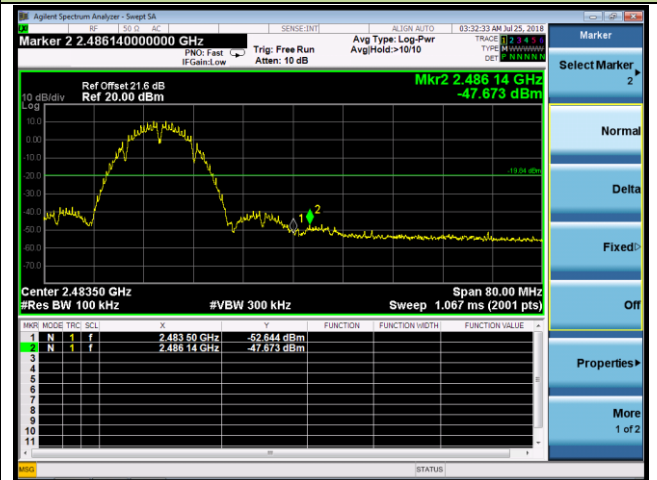


## Channel 11 (2462MHz)

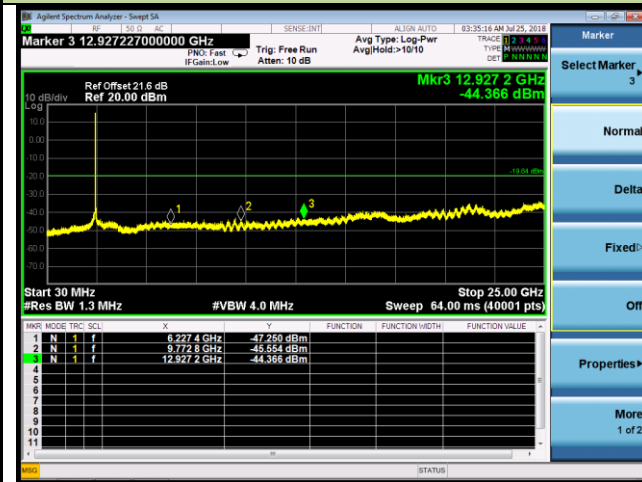
## 100kHz PSD Reference Level



## High Band Edge



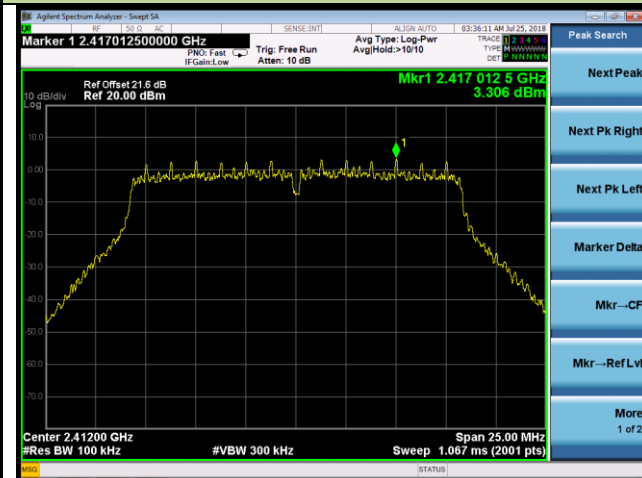
## Spurious Emission



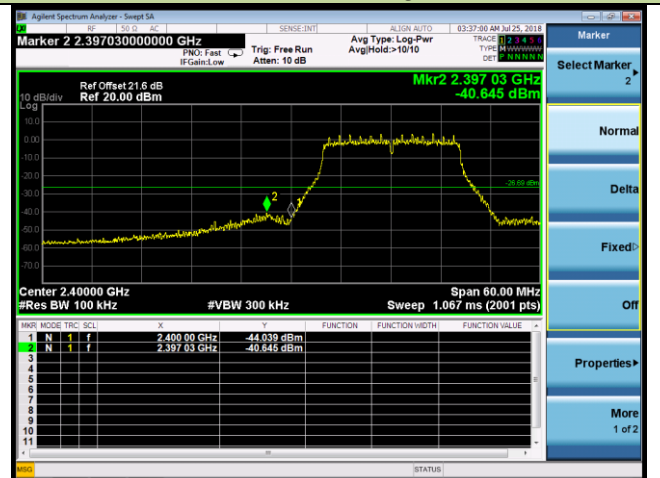
## 802.11g Out-of-Band Emissions - Ant 2

## Channel 01 (2412MHz)

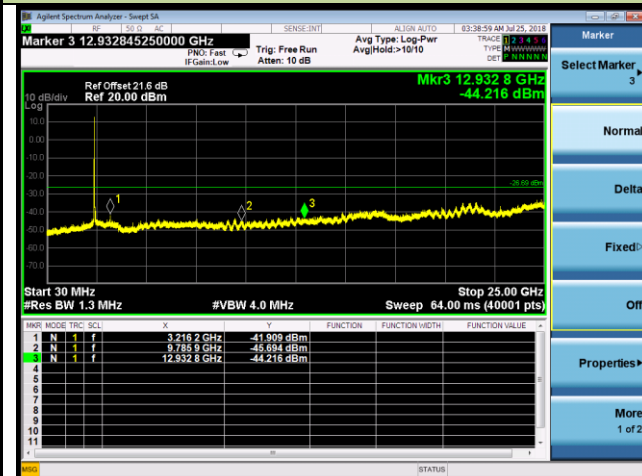
## 100kHz PSD Reference Level



## Low Band Edge

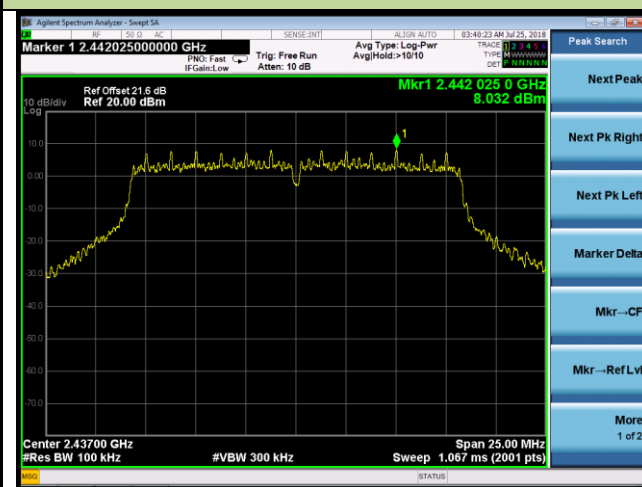


## Spurious Emission

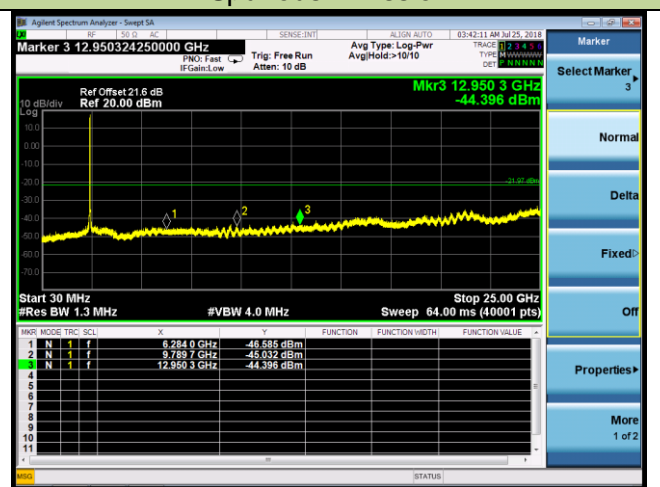


## Channel 06 (2437MHz)

## 100kHz PSD Reference Level

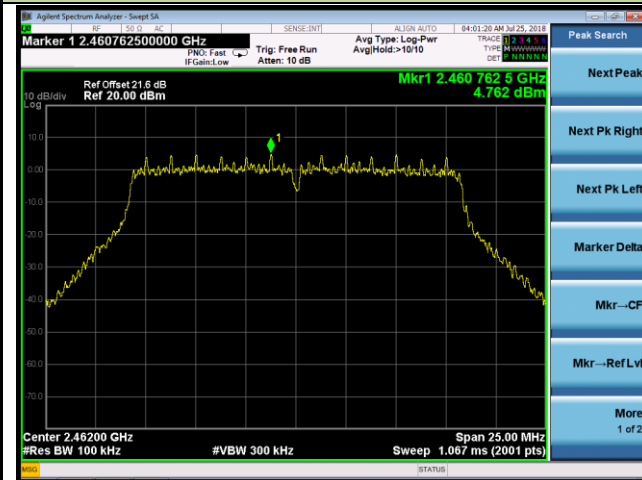


## Spurious Emission

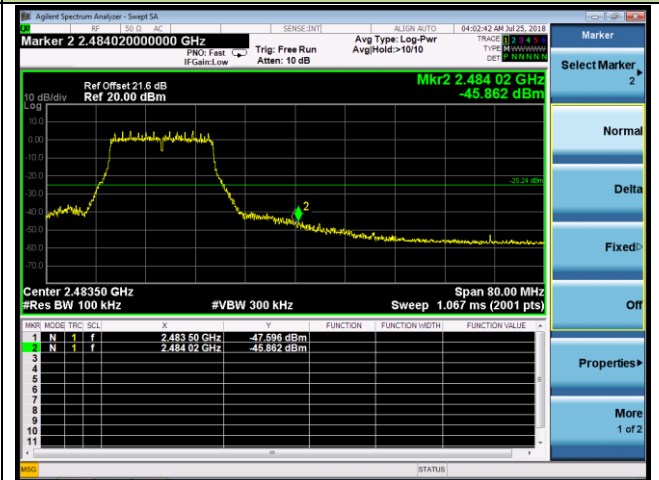


## Channel 11 (2462MHz)

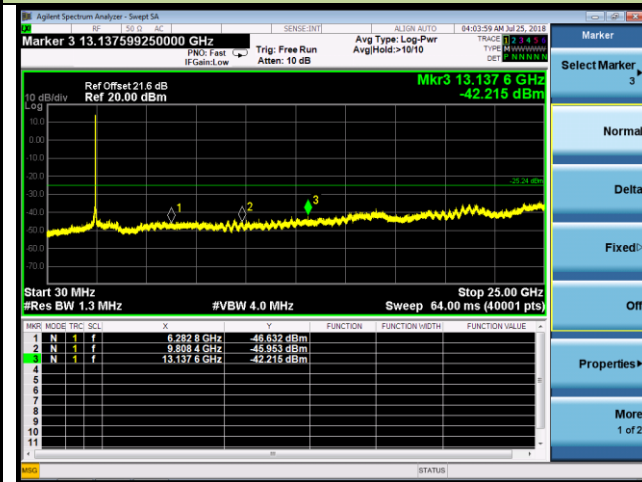
## 100kHz PSD Reference Level



## High Band Edge



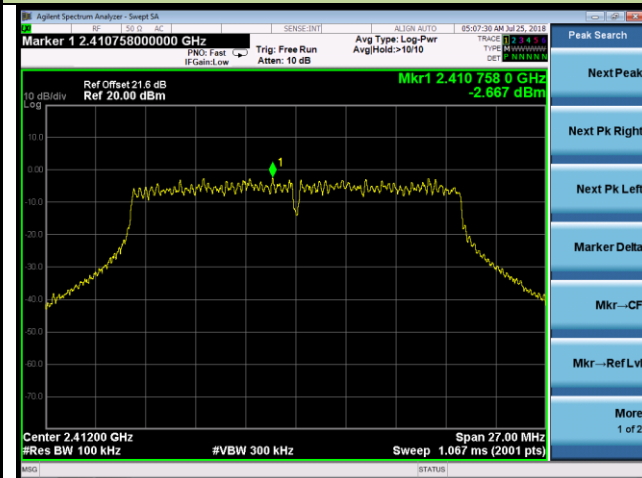
## Spurious Emission



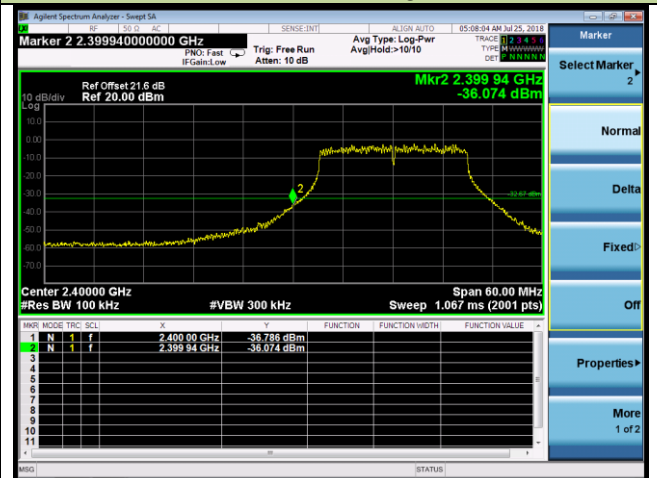
## 802.11n-HT20 Out-of-Band Emissions - Ant 2 / Ant 0 + 1 + 2 + 3

## Channel 01 (2412MHz)

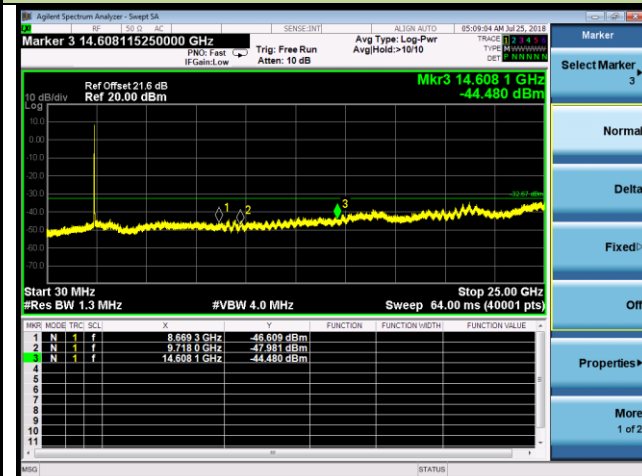
## 100kHz PSD Reference Level



## Low Band Edge

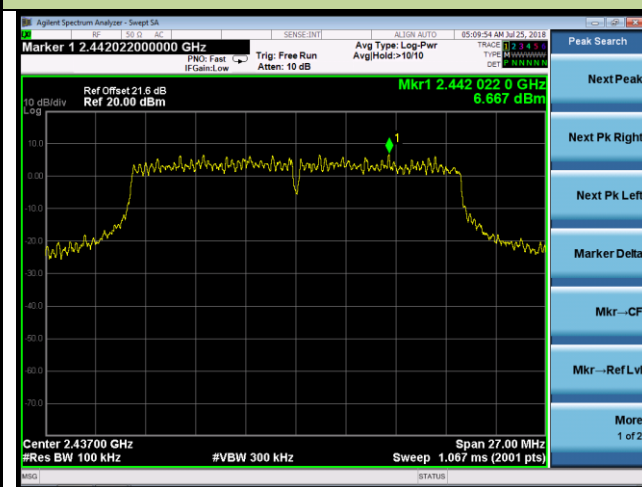


## Spurious Emission

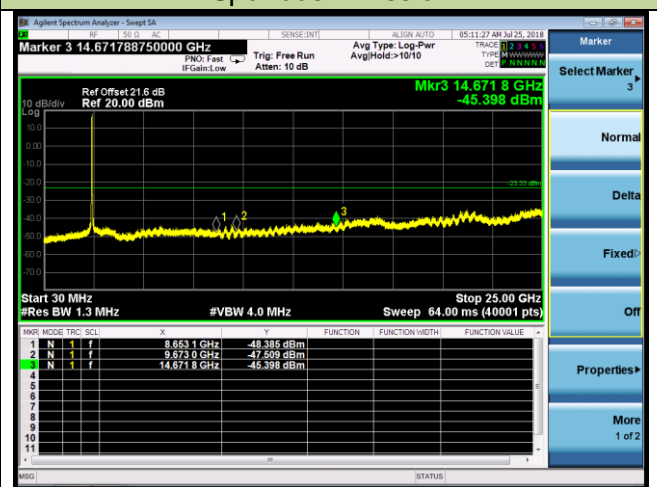


## Channel 06 (2437MHz)

## 100kHz PSD Reference Level

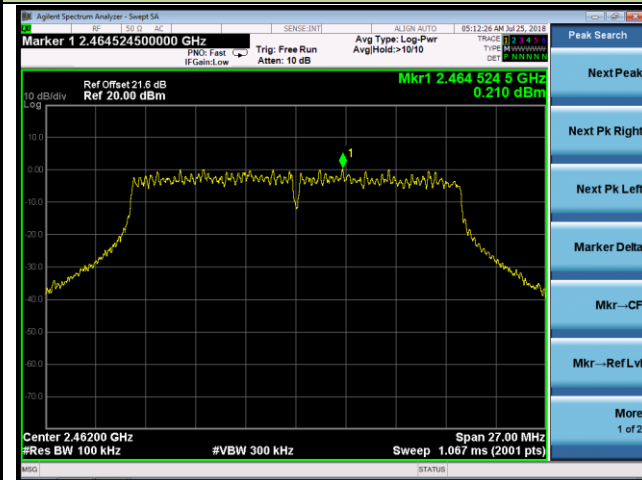


## Spurious Emission

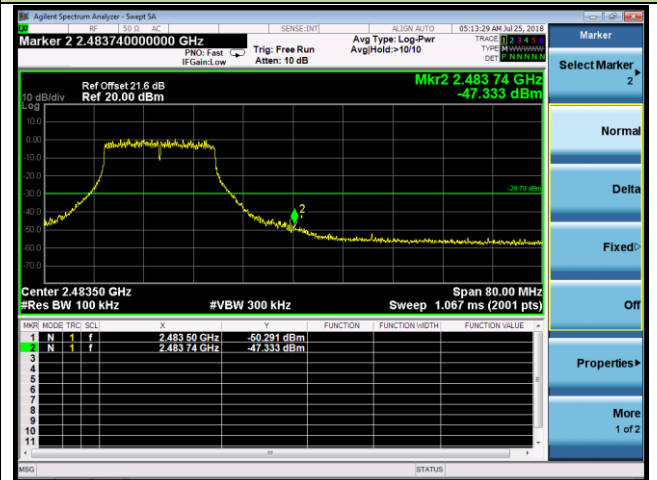


## Channel 11 (2462MHz)

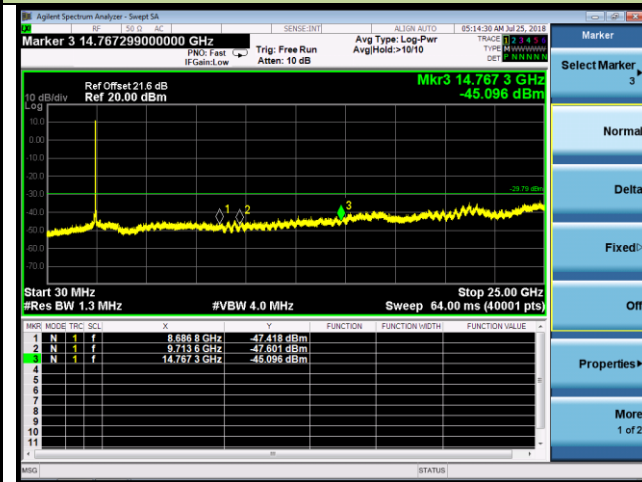
## 100kHz PSD Reference Level



## High Band Edge



## Spurious Emission

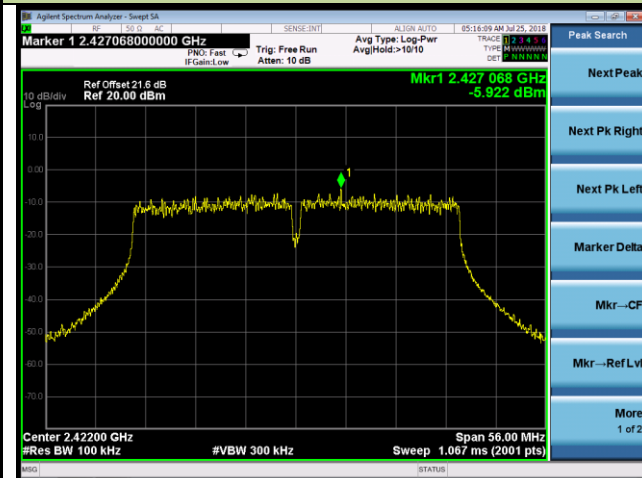




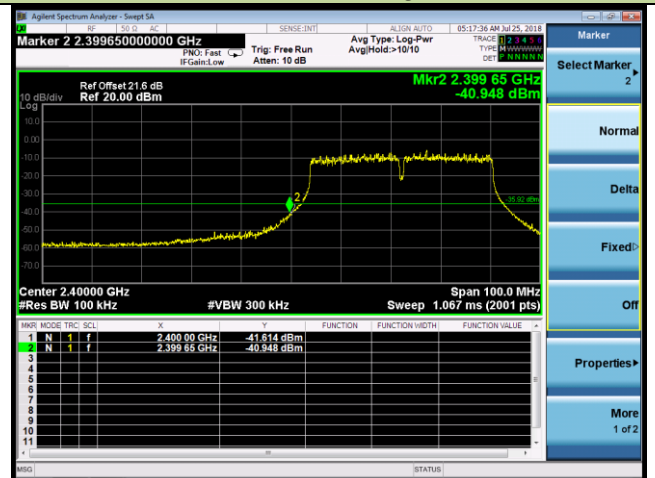
## 802.11n-HT40 Out-of-Band Emissions - Ant 2 / Ant 0 + 1 + 2 + 3

## Channel 03 (2422MHz)

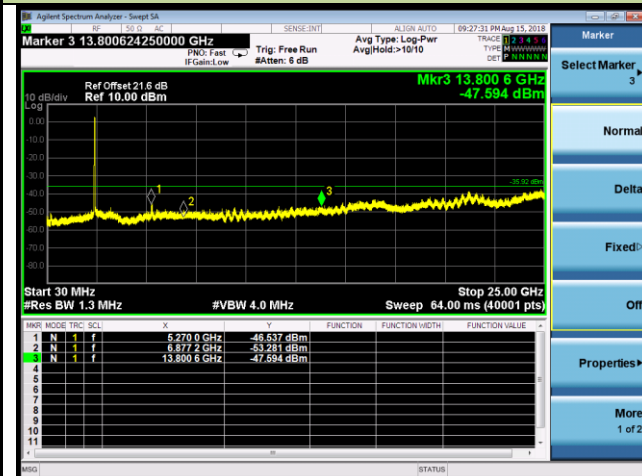
## 100kHz PSD Reference Level



## Low Band Edge

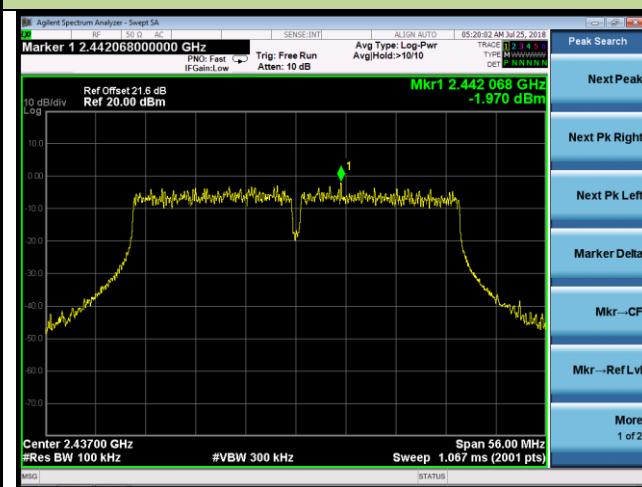


## Spurious Emission

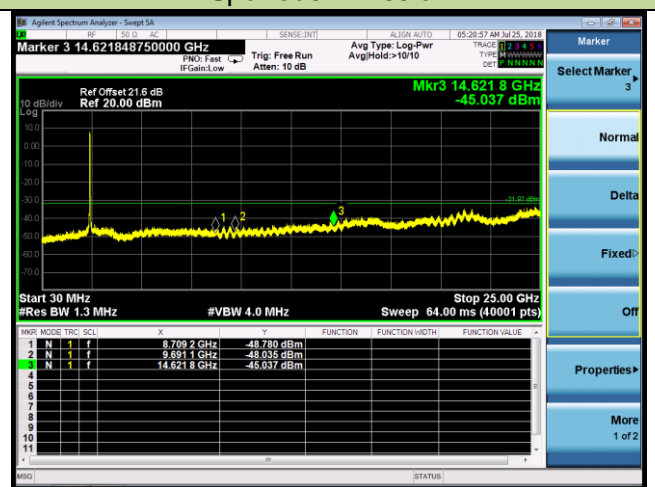


## Channel 06 (2437MHz)

## 100kHz PSD Reference Level



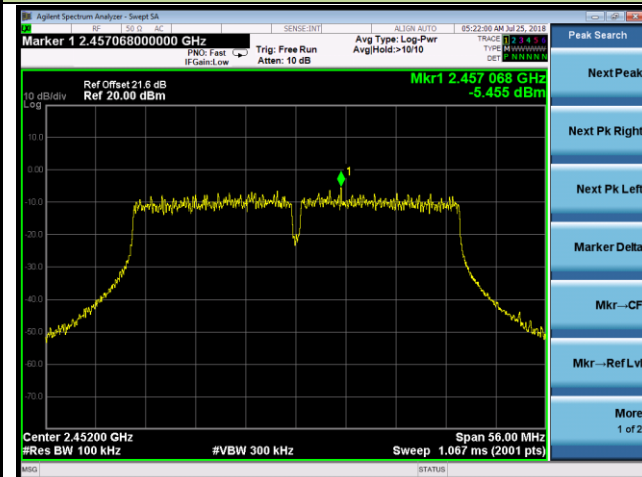
## Spurious Emission



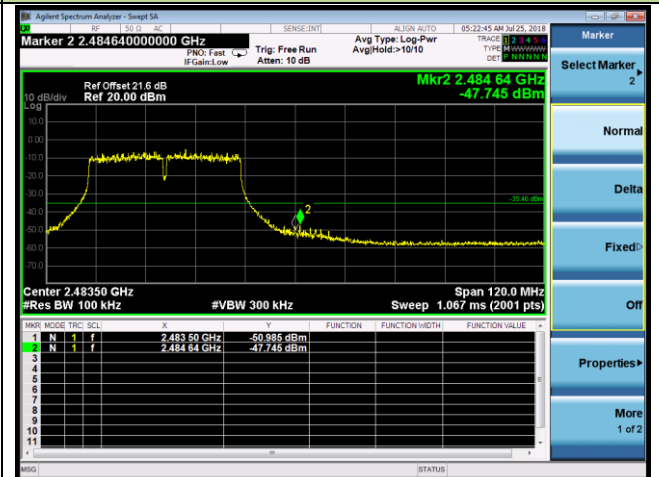


## Channel 09 (2452MHz)

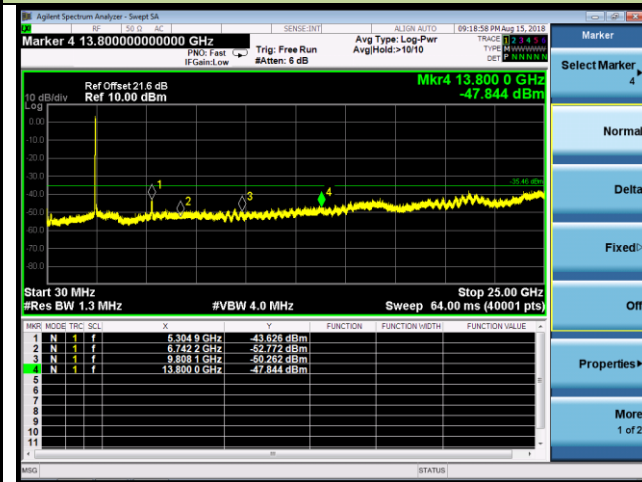
## 100kHz PSD Reference Level



## High Band Edge



## Spurious Emission



## 7.6. Radiated Spurious Emission Measurement

### 7.6.1. Test Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205 of the Title 47 CFR, must also comply with the radiated emission limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.205		
Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	--
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	334.5 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

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 ( $\mu\text{V/m}$ )	Measured Distance (m)
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

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method for 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

### 7.6.3. Test Setting

**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

**Quasi-Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

**Peak Measurements above 1GHz**

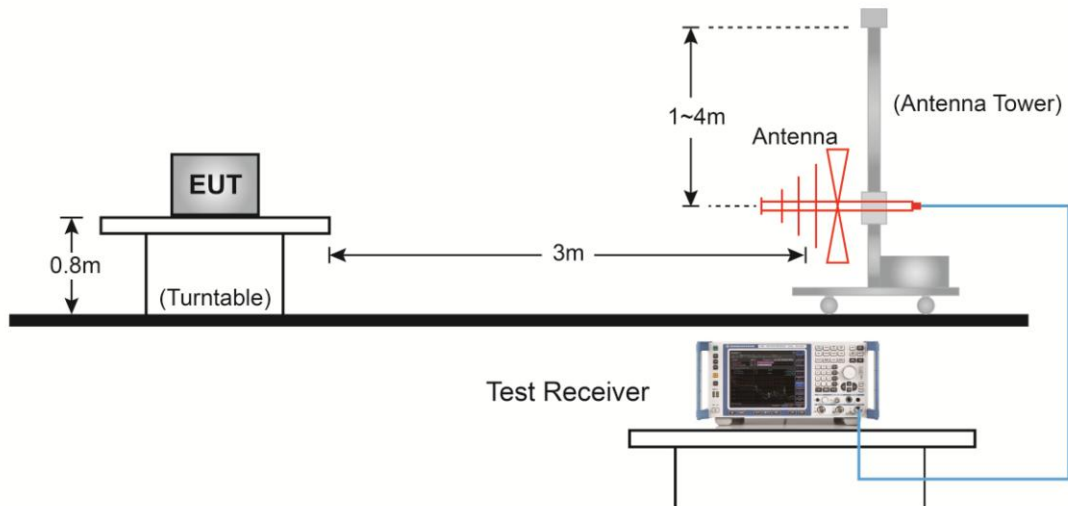
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Average Measurements above 1GHz (Method VB)**

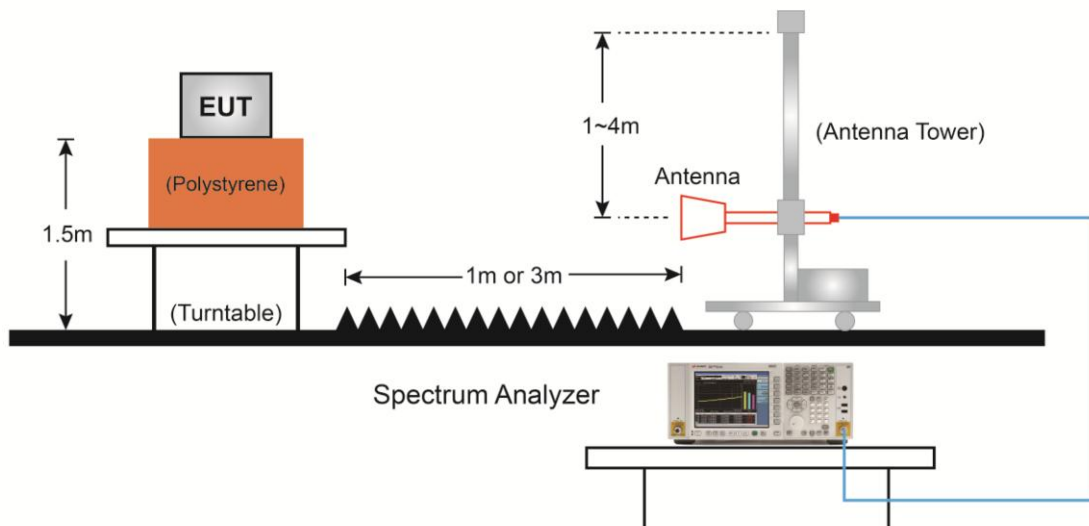
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### 7.6.4. Test Setup

##### Below 1GHz Test Setup:



##### Above 1GHz Test Setup:



### 7.6.5.Test Result

Test Mode	802.11b - Ant 0	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	48.2	2.2	50.4	74.0	-23.6	Peak	Horizontal
	4825.0	43.4	5.9	49.3	74.0	-24.7	Peak	Horizontal
*	7239.0	40.5	12.7	53.2	82.8	-29.6	Peak	Horizontal
*	9644.5	37.5	15.5	53.0	82.8	-29.8	Peak	Horizontal
	3669.0	48.6	2.2	50.8	74.0	-23.2	Peak	Vertical
	5003.5	40.9	6.3	47.2	74.0	-26.8	Peak	Vertical
*	6457.0	36.3	9.8	46.1	82.8	-36.7	Peak	Vertical
*	7239.0	38.6	12.7	51.3	82.8	-31.5	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/m) or 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 - Ant 0	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	44.0	6.0	50.0	74.0	-24.0	Peak	Horizontal
	7307.0	42.1	12.5	54.6	74.0	-19.4	Peak	Horizontal
	7310.0	37.0	12.5	49.5	54.0	-4.5	Average	Horizontal
*	9746.5	40.3	16.1	56.4	87.8	-31.4	Peak	Horizontal
*	10307.5	33.6	17.3	50.9	87.8	-36.9	Peak	Horizontal
	7307.0	41.8	12.5	54.3	74.0	-19.7	Peak	Vertical
	7309.7	37.2	12.5	49.7	54.0	-4.3	Average	Vertical
	12186.0	38.0	17.5	55.5	74.0	-18.5	Peak	Vertical
	12187.5	33.4	17.5	50.9	54.0	-3.1	Average	Vertical
*	13112.5	34.2	18.7	52.9	87.8	-34.9	Peak	Vertical
*	16266.0	35.1	19.4	54.5	87.8	-33.3	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (117.8dBμV/m) or 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 - Ant 0	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	39.2	6.1	45.3	74.0	-28.7	Peak	Horizontal
	7383.5	39.2	12.6	51.8	74.0	-22.2	Peak	Horizontal
*	8888.0	36.3	13.2	49.5	84.5	-35.0	Peak	Horizontal
*	9848.5	36.8	16.7	53.5	84.5	-31.0	Peak	Horizontal
	4927.0	40.2	6.1	46.3	74.0	-27.7	Peak	Vertical
	7383.5	39.4	12.6	52.0	74.0	-22.0	Peak	Vertical
*	8633.0	36.3	12.9	49.2	84.5	-35.3	Peak	Vertical
*	9848.5	36.5	16.7	53.2	84.5	-31.3	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (114.5dBμV/m) or 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 - Ant 0	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	45.7	2.2	47.9	74.0	-26.1	Peak	Horizontal
	5003.5	38.4	6.3	44.7	74.0	-29.3	Peak	Horizontal
*	5989.5	35.6	7.9	43.5	81.9	-38.4	Peak	Horizontal
*	7128.5	35.7	12.3	48.0	81.9	-33.9	Peak	Horizontal
	3669.0	47.3	2.2	49.5	74.0	-24.5	Peak	Vertical
	5003.5	40.1	6.3	46.4	74.0	-27.6	Peak	Vertical
*	6397.5	36.5	9.2	45.7	81.9	-36.2	Peak	Vertical
*	7137.0	35.6	12.4	48.0	81.9	-33.9	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9dBμV/m) or 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 - Ant 0	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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
	4859.0	37.5	5.9	43.4	74.0	-30.6	Peak	Horizontal
	7307.0	38.8	12.5	51.3	74.0	-22.7	Peak	Horizontal
*	8871.0	35.2	13.2	48.4	88.0	-39.6	Peak	Horizontal
*	9840.0	33.9	16.7	50.6	88.0	-37.4	Peak	Horizontal
	4876.0	38.9	6.0	44.9	74.0	-29.1	Peak	Vertical
	7298.5	38.0	12.5	50.5	74.0	-23.5	Peak	Vertical
*	7842.5	36.4	13.3	49.7	88.0	-38.3	Peak	Vertical
*	8548.0	36.5	12.8	49.3	88.0	-38.7	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (118.0dBμV/m) or 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 - Ant 0	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.4	2.2	49.6	74.0	-24.4	Peak	Horizontal
	7494.0	36.8	12.7	49.5	74.0	-24.5	Peak	Horizontal
*	8582.0	35.7	12.8	48.5	84.7	-36.2	Peak	Horizontal
*	9831.5	34.3	16.6	50.9	84.7	-33.8	Peak	Horizontal
	3669.0	47.3	2.2	49.5	74.0	-24.5	Peak	Vertical
	5003.5	40.9	6.3	47.2	74.0	-26.8	Peak	Vertical
*	5964.0	35.2	7.9	43.1	84.7	-41.6	Peak	Vertical
*	6593.0	35.3	10.2	45.5	84.7	-39.2	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (114.7dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	48.7	2.2	50.9	74.0	-23.1	Peak	Horizontal
	5003.5	39.2	6.3	45.5	74.0	-28.5	Peak	Horizontal
*	7077.5	36.1	11.9	48.0	81.7	-33.7	Peak	Horizontal
*	9644.5	37.0	15.5	52.5	81.7	-29.2	Peak	Horizontal
	3669.0	48.1	2.2	50.3	74.0	-23.7	Peak	Vertical
	5003.5	40.9	6.3	47.2	74.0	-26.8	Peak	Vertical
*	5836.5	36.1	7.7	43.8	81.7	-37.9	Peak	Vertical
*	6899.0	36.3	10.8	47.1	81.7	-34.6	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (111.7dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	48.0	2.2	50.2	74.0	-23.8	Peak	Horizontal
	4874.0	44.0	6.0	50.0	54.0	-4.0	Average	Horizontal
	4876.0	45.9	6.0	51.9	74.0	-22.1	Peak	Horizontal
*	6950.0	36.5	11.1	47.6	87.1	-39.5	Peak	Horizontal
*	9746.5	38.2	16.1	54.3	87.1	-32.8	Peak	Horizontal
	3669.0	48.2	2.2	50.4	74.0	-23.6	Peak	Vertical
	4876.0	41.1	6.0	47.1	74.0	-26.9	Peak	Vertical
*	8871.0	36.0	13.2	49.2	87.1	-37.9	Peak	Vertical
*	9746.5	36.7	16.1	52.8	87.1	-34.3	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.1dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.4	2.2	49.6	74.0	-24.4	Peak	Horizontal
	4927.0	38.9	6.1	45.0	74.0	-29.0	Peak	Horizontal
*	6015.0	35.4	7.9	43.3	84.7	-41.4	Peak	Horizontal
*	6890.5	37.5	10.7	48.2	84.7	-36.5	Peak	Horizontal
	3669.0	47.6	2.2	49.8	74.0	-24.2	Peak	Vertical
	4927.0	38.9	6.1	45.0	74.0	-29.0	Peak	Vertical
*	5972.5	34.6	7.9	42.5	84.7	-42.2	Peak	Vertical
*	6890.5	37.5	10.7	48.2	84.7	-36.5	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (114.7dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.2	2.2	49.4	74.0	-24.6	Peak	Horizontal
	5003.5	37.7	6.3	44.0	74.0	-30.0	Peak	Horizontal
*	5938.5	34.7	7.8	42.5	80.0	-37.5	Peak	Horizontal
*	7137.0	35.6	12.4	48.0	80.0	-32.0	Peak	Horizontal
	3669.0	47.3	2.2	49.5	74.0	-24.5	Peak	Vertical
	5003.5	39.2	6.3	45.5	74.0	-28.5	Peak	Vertical
*	5811.0	33.5	7.6	41.1	80.0	-38.9	Peak	Vertical
*	6916.0	34.6	10.9	45.5	80.0	-34.5	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (110.0dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	40.4	6.0	46.4	74.0	-27.6	Peak	Horizontal
	8106.0	37.9	13.4	51.3	74.0	-22.7	Peak	Horizontal
*	8692.5	33.8	13.0	46.8	86.8	-40.0	Peak	Horizontal
*	10239.5	34.3	17.2	51.5	86.8	-35.3	Peak	Horizontal
	3669.0	46.4	2.2	48.6	74.0	-25.4	Peak	Vertical
	4876.0	36.6	6.0	42.6	74.0	-31.4	Peak	Vertical
*	6108.5	37.5	8.1	45.6	86.8	-41.2	Peak	Vertical
*	7111.5	35.4	12.2	47.6	86.8	-39.2	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (116.8dBμV/m) or 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 - Ant 1	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.6	2.2	48.8	74.0	-25.2	Peak	Horizontal
	5003.5	37.3	6.3	43.6	74.0	-30.4	Peak	Horizontal
*	5734.5	34.8	7.4	42.2	84.7	-42.5	Peak	Horizontal
*	7052.0	35.7	11.8	47.5	84.7	-37.2	Peak	Horizontal
	3669.0	46.6	2.2	48.8	74.0	-25.2	Peak	Vertical
	4825.0	37.9	5.9	43.8	74.0	-30.2	Peak	Vertical
*	6304.0	37.0	8.8	45.8	84.7	-38.9	Peak	Vertical
*	6967.0	36.7	11.1	47.8	84.7	-36.9	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (114.7dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	48.2	2.2	50.4	74.0	-23.6	Peak	Horizontal
	4825.0	41.6	5.9	47.5	74.0	-26.5	Peak	Horizontal
*	7086.0	36.4	11.9	48.3	88.6	-40.3	Peak	Horizontal
*	9644.5	40.2	15.5	55.7	88.6	-32.9	Peak	Horizontal
	3669.0	47.9	2.2	50.1	74.0	-23.9	Peak	Vertical
	4825.0	42.2	5.9	48.1	74.0	-25.9	Peak	Vertical
*	6414.5	36.1	9.4	45.5	88.6	-43.1	Peak	Vertical
*	9644.5	41.8	15.5	57.3	88.6	-31.3	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (118.6dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	44.5	6.0	50.5	74.0	-23.5	Peak	Horizontal
	7502.5	36.9	12.7	49.6	74.0	-24.4	Peak	Horizontal
*	9746.5	42.2	16.1	58.3	86.4	-28.1	Peak	Horizontal
*	10265.0	33.0	17.2	50.2	86.4	-36.2	Peak	Horizontal
	3669.0	47.7	2.2	49.9	74.0	-24.1	Peak	Vertical
	4876.0	45.2	6.0	51.2	74.0	-22.8	Peak	Vertical
*	7060.5	36.2	11.8	48.0	86.4	-38.4	Peak	Vertical
*	9746.5	42.0	16.1	58.1	86.4	-28.3	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (116.4dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.1	2.2	48.3	74.0	-25.7	Peak	Horizontal
	4924.0	44.1	6.1	50.2	54.0	-3.8	Average	Horizontal
	4927.0	46.3	6.1	52.4	74.0	-21.6	Peak	Horizontal
*	7842.5	34.7	13.3	48.0	83.1	-35.1	Peak	Horizontal
*	9848.5	39.6	16.7	56.3	83.1	-26.8	Peak	Horizontal
	3669.0	47.2	2.2	49.4	74.0	-24.6	Peak	Horizontal
	4924.0	46.6	6.1	52.7	54.0	-1.3	Average	Vertical
	4927.0	47.3	6.1	53.4	74.0	-20.6	Peak	Vertical
*	6873.5	36.1	10.6	46.7	83.1	-36.4	Peak	Vertical
*	9848.5	40.1	16.7	56.8	83.1	-26.3	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.2	2.2	49.4	74.0	-24.6	Peak	Horizontal
	5003.5	37.9	6.3	44.2	74.0	-29.8	Peak	Horizontal
*	5828.0	35.8	7.7	43.5	74.3	-30.8	Peak	Horizontal
*	6967.0	36.1	11.1	47.2	74.3	-27.1	Peak	Horizontal
	3669.0	46.8	2.2	49.0	74.0	-25.0	Peak	Vertical
	5003.5	39.6	6.3	45.9	74.0	-28.1	Peak	Vertical
*	5836.5	35.3	7.7	43.0	74.3	-31.3	Peak	Vertical
*	6703.5	34.1	10.1	44.2	74.3	-30.1	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (104.3dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.6	2.2	48.8	74.0	-25.2	Peak	Horizontal
	4876.0	42.0	6.0	48.0	74.0	-26.0	Peak	Horizontal
*	6933.0	35.4	11.1	46.5	86.5	-40.0	Peak	Horizontal
*	9746.5	37.4	16.1	53.5	86.5	-33.0	Peak	Horizontal
	3669.0	46.6	2.2	48.8	74.0	-25.2	Peak	Vertical
	4867.5	42.1	6.0	48.1	74.0	-25.9	Peak	Vertical
*	6950.0	35.9	11.1	47.0	86.5	-39.5	Peak	Vertical
*	9746.5	37.7	16.1	53.8	86.5	-32.7	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (116.5dBμV/m) or 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 - Ant 2	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.8	2.2	49.0	74.0	-25.0	Peak	Horizontal
	4910.0	37.3	6.1	43.4	74.0	-30.6	Peak	Horizontal
*	8021.0	36.5	13.7	50.2	81.9	-31.7	Peak	Horizontal
*	8837.0	35.7	13.2	48.9	81.9	-33.0	Peak	Horizontal
	3669.0	46.4	2.2	48.6	74.0	-25.4	Peak	Vertical
	5003.5	40.6	6.3	46.9	74.0	-27.1	Peak	Vertical
*	6091.5	36.5	8.1	44.6	81.9	-37.3	Peak	Vertical
*	6924.5	36.1	11.0	47.1	81.9	-34.8	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (111.9dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	48.8	2.2	51.0	74.0	-23.0	Peak	Horizontal
	7502.5	39.3	12.7	52.0	74.0	-22.0	Peak	Horizontal
*	8743.5	36.0	13.1	49.1	78.1	-29.0	Peak	Horizontal
*	9644.5	37.1	15.5	52.6	78.1	-25.5	Peak	Horizontal
	3669.0	47.8	2.2	50.0	74.0	-24.0	Peak	Vertical
	5003.5	40.4	6.3	46.7	74.0	-27.3	Peak	Vertical
*	7162.5	36.1	12.5	48.6	78.1	-29.5	Peak	Vertical
*	9644.5	36.4	15.5	51.9	78.1	-26.2	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (108.1dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	40.0	6.0	46.0	74.0	-28.0	Peak	Horizontal
	12184.2	31.6	17.5	49.1	54.0	-4.9	Average	Horizontal
	12186.0	37.8	17.5	55.3	74.0	-18.7	Peak	Horizontal
*	12883.0	34.7	18.5	53.2	86.3	-33.1	Peak	Horizontal
*	12925.5	35.3	18.5	53.8	86.3	-32.5	Peak	Horizontal
	4876.0	41.1	6.0	47.1	74.0	-26.9	Peak	Vertical
	12186.0	38.3	17.5	55.8	74.0	-18.2	Peak	Vertical
	12187.4	33.3	17.5	50.8	54.0	-3.2	Average	Vertical
*	12789.5	33.7	18.1	51.8	86.3	-34.5	Peak	Vertical
*	13104.0	35.6	18.8	54.4	86.3	-31.9	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.3dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.2	2.2	49.4	74.0	-24.6	Peak	Horizontal
	4927.0	41.9	6.1	48.0	74.0	-26.0	Peak	Horizontal
*	6355.0	36.0	9.1	45.1	81.3	-36.2	Peak	Horizontal
*	7128.5	35.9	12.3	48.2	81.3	-33.1	Peak	Horizontal
	4927.0	42.5	6.1	48.6	74.0	-25.4	Peak	Vertical
	12305.0	38.2	17.3	55.5	74.0	-18.5	Peak	Vertical
	12309.0	33.8	17.3	51.1	54.0	-2.9	Average	Vertical
*	12942.5	33.1	18.6	51.7	81.3	-29.6	Peak	Vertical
*	13172.0	33.8	18.8	52.6	81.3	-28.7	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.3dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.2	2.2	49.4	74.0	-24.6	Peak	Horizontal
	4825.0	37.0	5.9	42.9	74.0	-31.1	Peak	Horizontal
*	6057.5	36.4	7.9	44.3	75.3	-31.0	Peak	Horizontal
*	6865.0	36.0	10.6	46.6	75.3	-28.7	Peak	Horizontal
	3669.0	47.8	2.2	50.0	74.0	-24.0	Peak	Vertical
	5003.5	41.0	6.3	47.3	74.0	-26.7	Peak	Vertical
*	5998.0	35.4	8.0	43.4	75.3	-31.9	Peak	Vertical
*	6567.5	35.0	10.2	45.2	75.3	-30.1	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (105.3dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	47.1	2.2	49.3	74.0	-24.7	Peak	Horizontal
	4876.0	37.0	6.0	43.0	74.0	-31.0	Peak	Horizontal
*	6006.5	35.9	7.9	43.8	89.1	-45.3	Peak	Horizontal
*	6916.0	36.4	10.9	47.3	89.1	-41.8	Peak	Horizontal
	3669.0	47.0	2.2	49.2	74.0	-24.8	Peak	Vertical
	4876.0	37.7	6.0	43.7	74.0	-30.3	Peak	Vertical
*	6032.0	35.5	7.9	43.4	89.1	-45.7	Peak	Vertical
*	6525.0	35.5	10.0	45.5	89.1	-43.6	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (119.1dBμV/m) or 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 - Ant 3	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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
	4748.5	35.8	5.7	41.5	74.0	-32.5	Peak	Horizontal
	7502.5	37.2	12.7	49.9	74.0	-24.1	Peak	Horizontal
*	7851.0	36.0	13.3	49.3	81.3	-32.0	Peak	Horizontal
*	9610.5	33.9	15.3	49.2	81.3	-32.1	Peak	Horizontal
	5003.5	39.3	6.3	45.6	74.0	-28.4	Peak	Vertical
	7579.0	36.6	12.8	49.4	74.0	-24.6	Peak	Vertical
*	8760.5	33.2	13.2	46.4	81.3	-34.9	Peak	Vertical
*	10426.5	35.0	17.3	52.3	81.3	-29.0	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (111.3dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	01	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.6	2.2	48.8	74.0	-25.2	Peak	Horizontal
	5003.5	36.8	6.3	43.1	74.0	-30.9	Peak	Horizontal
*	6083.0	36.4	8.0	44.4	79.8	-35.4	Peak	Horizontal
*	7052.0	35.3	11.8	47.1	79.8	-32.7	Peak	Horizontal
	3669.0	46.7	2.2	48.9	74.0	-25.1	Peak	Vertical
	5003.5	37.7	6.3	44.0	74.0	-30.0	Peak	Vertical
*	6023.5	36.7	7.9	44.6	79.8	-35.2	Peak	Vertical
*	6975.5	35.8	11.2	47.0	79.8	-32.8	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (109.8dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	40.2	6.0	46.2	74.0	-27.8	Peak	Horizontal
	7315.5	37.0	12.6	49.6	74.0	-24.4	Peak	Horizontal
*	7970.0	36.8	13.6	50.4	90.9	-40.5	Peak	Horizontal
*	9746.5	35.7	16.1	51.8	90.9	-39.1	Peak	Horizontal
	4867.5	39.6	6.0	45.6	74.0	-28.4	Peak	Vertical
	7298.5	38.6	12.5	51.1	74.0	-22.9	Peak	Vertical
*	7808.5	34.1	13.2	47.3	90.9	-43.6	Peak	Vertical
*	8777.5	34.2	13.2	47.4	90.9	-43.5	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (120.9dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	11	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.1	2.2	48.3	74.0	-25.7	Peak	Horizontal
	5003.5	36.9	6.3	43.2	74.0	-30.8	Peak	Horizontal
*	6049.0	34.6	7.9	42.5	84.0	-41.5	Peak	Horizontal
*	7171.0	35.1	12.5	47.6	84.0	-36.4	Peak	Horizontal
	5003.5	40.5	6.3	46.8	74.0	-27.2	Peak	Vertical
	7417.5	37.0	12.7	49.7	74.0	-24.3	Peak	Vertical
*	7910.5	34.5	13.4	47.9	84.0	-36.1	Peak	Vertical
*	8675.5	34.1	13.0	47.1	84.0	-36.9	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (114.0dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	03	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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
	5003.5	38.4	6.3	44.7	74.0	-29.3	Peak	Horizontal
	7502.5	38.6	12.7	51.3	74.0	-22.7	Peak	Horizontal
*	7970.0	35.8	13.6	49.4	75.7	-26.3	Peak	Horizontal
*	8658.5	34.2	13.0	47.2	75.7	-28.5	Peak	Horizontal
	3669.0	47.4	2.2	49.6	74.0	-24.4	Peak	Vertical
	5003.5	39.4	6.3	45.7	74.0	-28.3	Peak	Vertical
*	6372.0	36.6	9.1	45.7	75.7	-30.0	Peak	Vertical
*	6916.0	35.2	10.9	46.1	75.7	-29.6	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (105.7dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	06	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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	46.6	2.2	48.8	74.0	-25.2	Peak	Horizontal
	5003.5	36.5	6.3	42.8	74.0	-31.2	Peak	Horizontal
*	5972.5	37.5	7.9	45.4	80.4	-35.0	Peak	Horizontal
*	6941.5	35.8	11.1	46.9	80.4	-33.5	Peak	Horizontal
	4017.5	37.9	3.4	41.3	74.0	-32.7	Peak	Vertical
	4961.0	35.6	6.1	41.7	74.0	-32.3	Peak	Vertical
*	5989.5	35.1	7.9	43.0	80.4	-37.4	Peak	Vertical
*	6865.0	34.7	10.6	45.3	80.4	-35.1	Peak	Vertical

Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (110.4dBμV/m) or 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 - Ant 0+1+2+3	Test Site	AC1
Test Channel	09	Test Engineer	Cloud Guo
Remark	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 30dB 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
	4833.5	36.5	5.9	42.4	74.0	-31.6	Peak	Horizontal
	7502.5	37.8	12.7	50.5	74.0	-23.5	Peak	Horizontal
*	7825.5	34.6	13.2	47.8	75.8	-28.0	Peak	Horizontal
*	8667.0	35.1	12.9	48.0	75.8	-27.8	Peak	Horizontal
	3669.0	47.4	2.2	49.6	74.0	-24.4	Peak	Vertical
	5003.5	41.0	6.3	47.3	74.0	-26.7	Peak	Vertical
*	6465.5	36.1	9.8	45.9	75.8	-29.9	Peak	Vertical
*	7137.0	36.5	12.4	48.9	75.8	-26.9	Peak	Vertical

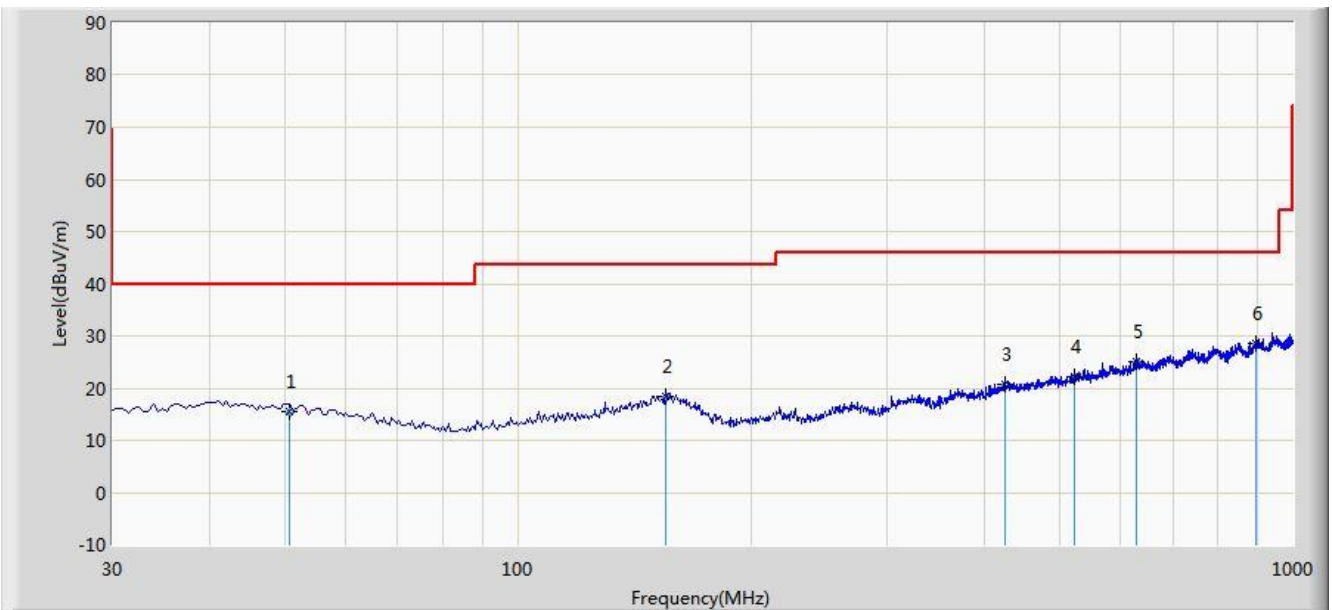
Note 1: “\*” is not in restricted band, its limit is 30dBc of the fundamental emission level (105.8dBμV/m) or 15.209 which is higher.

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

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

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

Site: AC1	Time: 2018/07/22 - 18:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: VULB 9168_20-2000MHz	Polarity: Horizontal
EUT: 4x4 Wave-2 802.11BGN Mini PCIe WiFi Module	Power: AC 120V/60Hz
<b>Worst Case Mode:</b> Transmit by 802.11n-HT20 at Channel 2412MHz Ant 0 + 1 + 2 + 3	



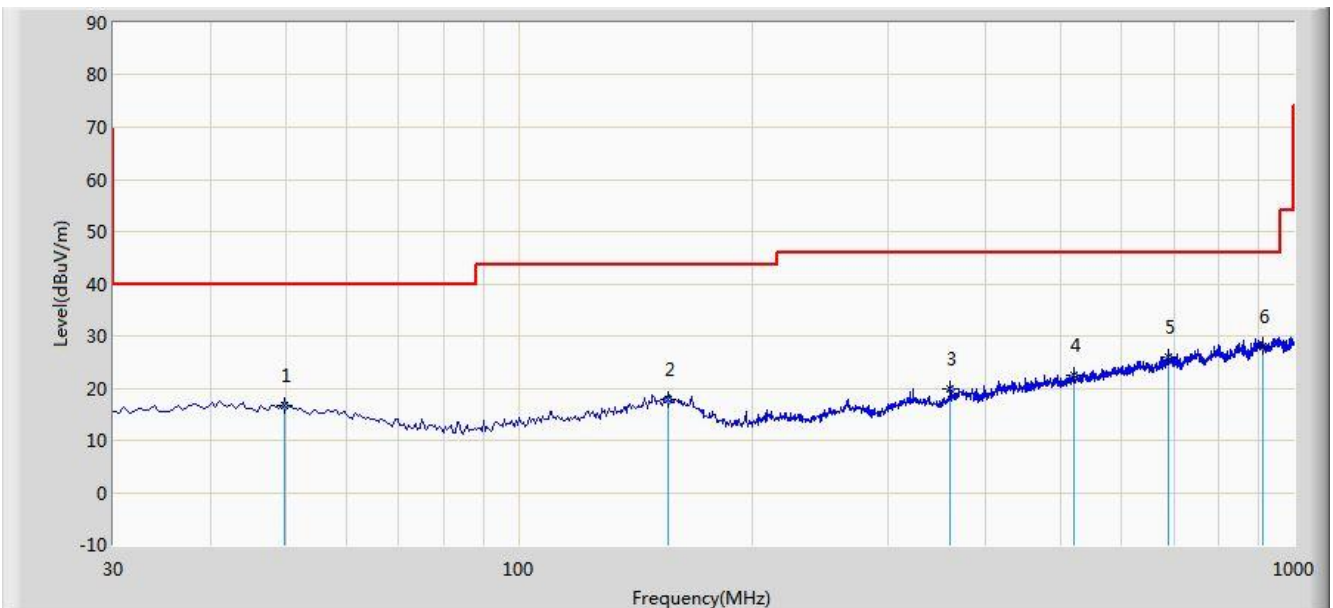
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			50.855	15.366	1.240	-24.634	40.000	14.126	QP
2			155.130	18.426	3.130	-25.074	43.500	15.296	QP
3			424.790	20.712	3.440	-25.288	46.000	17.272	QP
4			522.760	22.210	3.180	-23.790	46.000	19.029	QP
5			627.035	25.073	3.940	-20.927	46.000	21.133	QP
6		*	898.150	28.428	4.030	-17.572	46.000	24.398	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2018/07/22 - 18:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Cat Hu
Probe: VULB 9168_20-2000MHz	Polarity: Vertical
EUT:4x4 Wave-2 802.11n Mini PCIe WiFi Module	Power: AC 120V/60Hz
<b>Worst Case Mode:</b> Transmit by 802.11n-HT20 at Channel 2412MHz Ant 0 + 1 + 2 + 3	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			49.885	16.577	2.390	-23.423	40.000	14.187	QP
2			156.100	17.937	2.640	-25.563	43.500	15.297	QP
3			360.770	19.925	4.140	-26.075	46.000	15.784	QP
4			519.850	22.410	3.440	-23.590	46.000	18.970	QP
5			689.600	25.919	3.960	-20.081	46.000	21.959	QP
6		*	910.760	28.075	3.490	-17.925	46.000	24.585	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

## 7.7. Radiated Restricted Band Edge Measurement

### 7.7.1. Test Limit

Radiated emissions which fall in the restricted bands, as defined in Section 15.205 of the Title 47 CFR, must also comply with the radiated emission limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.205		
Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	--
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	334.5 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

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 ( $\mu\text{V}/\text{m}$ )	Measured Distance (m)
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

### 7.7.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

### 7.7.3.Test Setting

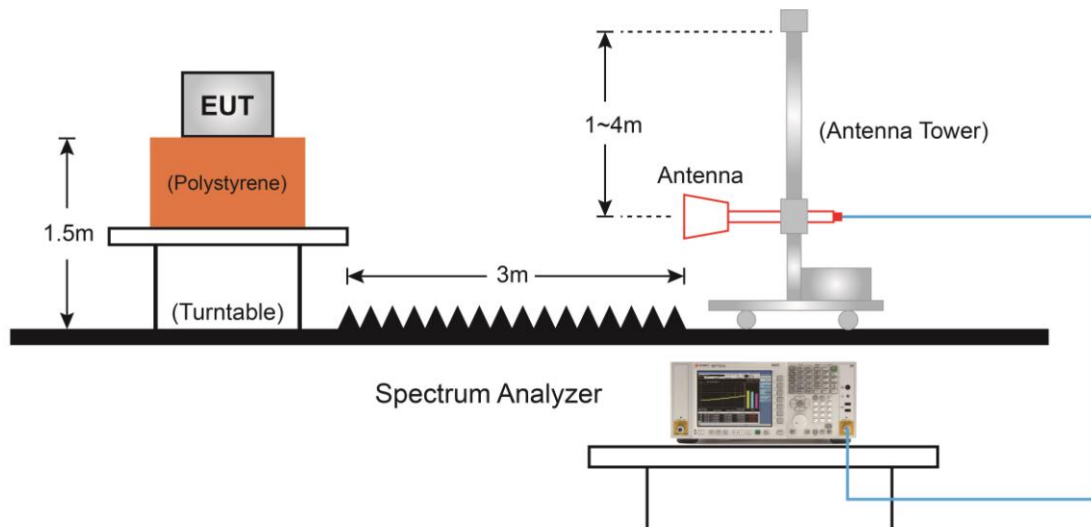
#### Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle  $\geq 98\%$ , set VBW = 10 Hz.  
If the EUT duty cycle is  $< 98\%$ , set VBW  $\geq 1/T$ . T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

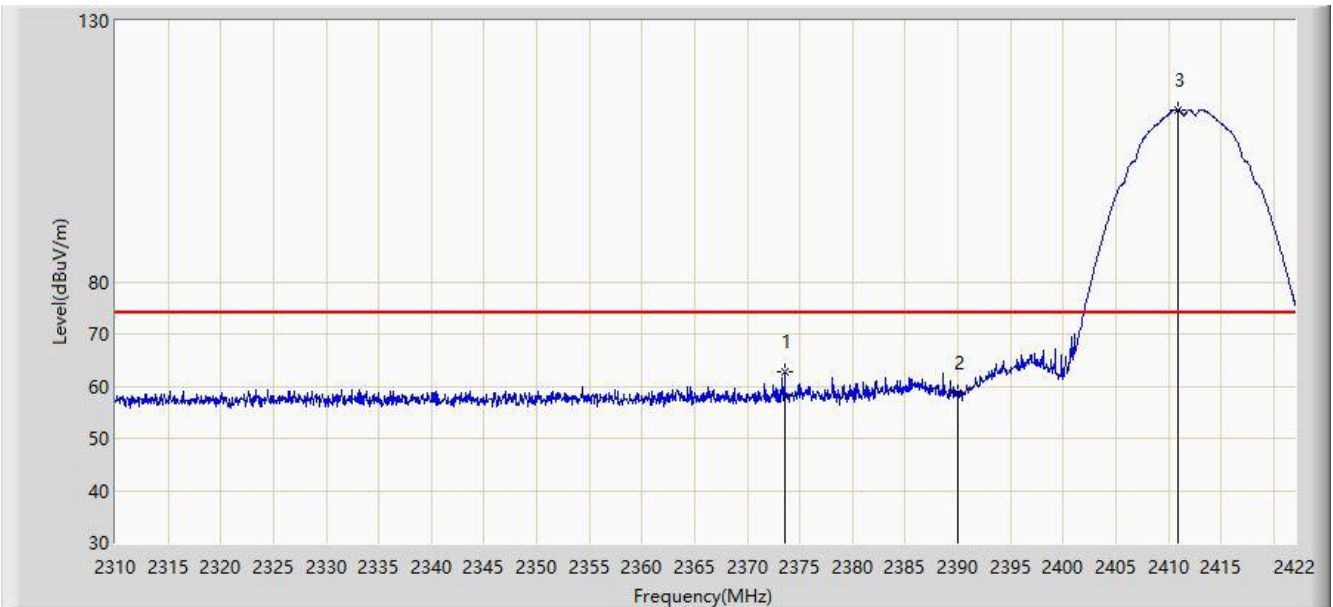
#### 7.7.4.Test Setup





### 7.7.5.Test Result

Site: AC1	Time: 2018/07/18 - 20:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 4x4 Wave-2 802.11BGN Mini PCIe WiFi Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz Ant 0	

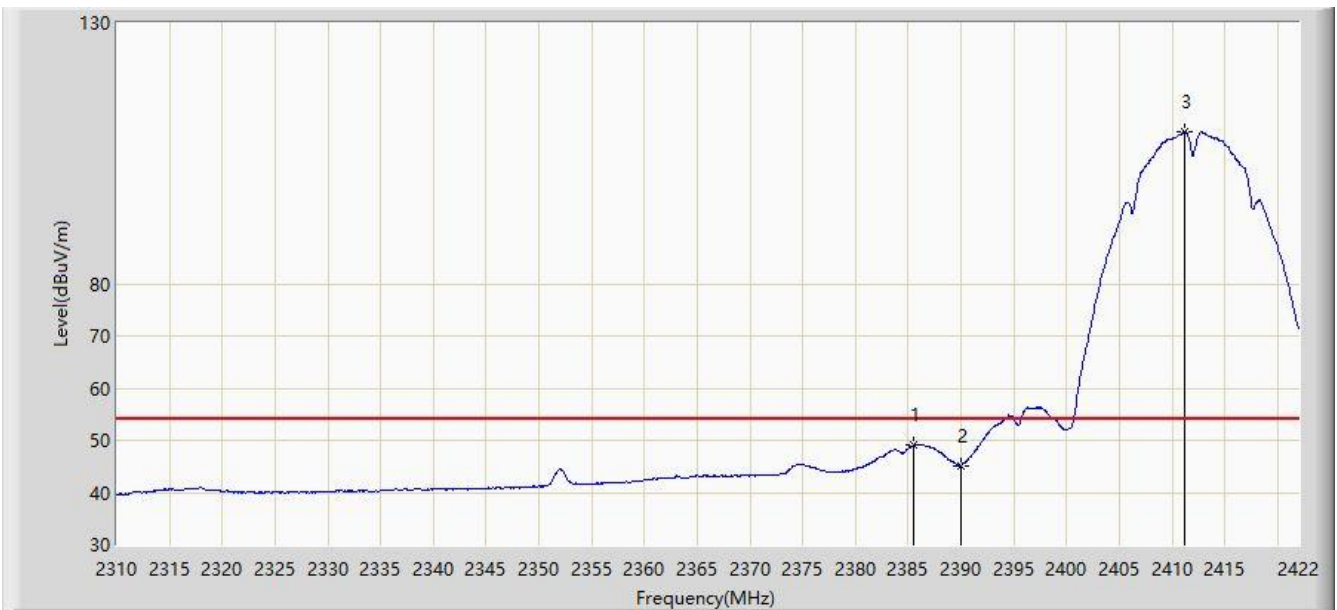


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2373.560	62.798	30.447	-11.202	74.000	32.352	PK
2			2390.000	58.734	26.407	-15.266	74.000	32.327	PK
3		*	2410.856	112.819	80.533	N/A	N/A	32.286	PK

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

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

Site: AC1	Time: 2018/07/18 - 20:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 4x4 Wave-2 802.11BGN Mini PCIe WiFi Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at channel 2412MHz Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2385.544	49.111	16.778	-4.889	54.000	32.333	AV
2			2390.000	45.186	12.859	-8.814	54.000	32.327	AV
3		*	2411.136	109.131	76.846	N/A	N/A	32.285	AV

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

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