



REPORT No. : XM19020007W03

# TEST REPORT

**APPLICANT** : Hot Pepper, Inc.

**PRODUCT NAME** : 4G Smart Phone

**MODEL NAME** : HPP-GS1

**BRAND NAME** : Hot Pepper

**FCC ID** : 2APD4-A81C

**STANDARD(S)** : 47 CFR Part 15 Subpart C

**TEST DATE** : 2019-03-22 to 2019-04-19

**ISSUE DATE** : 2019-05-23

Prepared by:

A handwritten signature in black ink, appearing to read "Lion Xiao".

Lion Xiao (Project Manager)

Approved by:

A handwritten signature in black ink, appearing to read "Anne Liu".

Anne Liu(Supervisor)

**NOTE:** 1.The report is invalid when there is no the approver signature and the special stamp for test report. 2.The test report shall not be reproduced except in full without prior written permission of the company. 3.The report copy is invalid when there is no the special stamp for test repor. 4.The altered report is invalid. 5.The entrust test is responsibility for the received sample only.



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| Change History |            |                   |
|----------------|------------|-------------------|
| Version        | Date       | Reason for change |
| 1.0            | 2019-05-23 | First edition     |
|                |            |                   |



# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

|                              |                                                    |
|------------------------------|----------------------------------------------------|
| <b>Applicant:</b>            | Hot Pepper, Inc.                                   |
| <b>Applicant Address:</b>    | 5151 California Ave., Suite 100, Irvine 92617, USA |
| <b>Manufacturer:</b>         | Hot Pepper, Inc.                                   |
| <b>Manufacturer Address:</b> | 5151 California Ave., Suite 100, Irvine 92617, USA |

## 1.2. Equipment Under Test (EUT) Description

|                                   |                                                                              |                                                     |
|-----------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Product Name:</b>              | 4G Smart Phone                                                               |                                                     |
| <b>Serial No:</b>                 | (N/A, marked #1 by test site)                                                |                                                     |
| <b>Hardware Version:</b>          | A81C_MAINBOARD_P1                                                            |                                                     |
| <b>Software Version:</b>          | HPP- GS1-V1.0.4-190121                                                       |                                                     |
| <b>Modulation Type:</b>           | DSSS, OFDM                                                                   |                                                     |
| <b>Operating Frequency Range:</b> | 802.11b/g/n-20MHz: 2.412GHz - 2.462GHz<br>802.11n-40MHz: 2.422GHz - 2.452GHz |                                                     |
| <b>Channel Number:</b>            | 802.11b/g/n-20MHz: 11<br>802.11n-40MHz: 7                                    |                                                     |
| <b>Antenna Type:</b>              | PIFA Antenna                                                                 |                                                     |
| <b>Antenna Gain:</b>              | 0.2 dBi                                                                      |                                                     |
| <b>Ancillary Equipment:</b>       | <b>AC Adapter</b>                                                            |                                                     |
|                                   | Manufacturer:                                                                | Shenzhen Tianyin Electronics Co.,Ltd.               |
|                                   | Model No.:                                                                   | TPA-23A050200UU01                                   |
|                                   | Rated Input:                                                                 | 100-240V~ 50/60Hz, 0.3A                             |
|                                   | Rated Output:                                                                | 5V=2.0A                                             |
|                                   | <b>Battery</b>                                                               |                                                     |
|                                   | Manufacturer:                                                                | SHENZHEN HUATIAN TONG TECHNOLOGY CO., LTD           |
|                                   | Model Name:                                                                  | H2019GS1                                            |
|                                   | Manufacturer:                                                                | Shenzhen Nine Liyuan Electronic Technology Co., Ltd |
|                                   | Model Name:                                                                  | H2019GS1A                                           |



**Note 1:** The EUT is operating at 2.4GHz ISM; it supports 802.11b, 802.11g, 802.11n and they are all tested in this report.

For 802.11b/g/n-20MHz (2.4GHz band), the frequencies allocated is  $F \text{ (MHz)} = 2412 + 5 \cdot (n-1)$  ( $1 \leq n \leq 11$ ). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).

For 802.11n-40MHz, the frequencies allocated is  $F \text{ (MHz)} = 2412 + 5 \cdot (n-1)$  ( $3 \leq n \leq 9$ ). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 3 (2422MHz), 6 (2437MHz) and 9 (2452MHz).

**Note 2:** The EUT connected to the serial port of the computer with a serial communication cable, we use the dedicated software to control the EUT continuous transmission.

**Note 3:** For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



### 1.3. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

| No | Identity       | Document Title          |
|----|----------------|-------------------------|
| 1  | 47 CFR Part 15 | Radio Frequency Devices |

Test detailed items/section required by FCC rules and results are as below:

| No.                                                                                                                                                                                | Section              | Description                               | Test Date                    | Test Engineer | Result      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------|------------------------------|---------------|-------------|
| 1                                                                                                                                                                                  | 15.203               | Antenna Requirement                       | N/A                          | N/A           | PASS        |
| 2                                                                                                                                                                                  | 15.247(b)            | Output Power                              | Mar 08, 2019<br>Mar 09, 2019 | Lion Xiao     | <u>PASS</u> |
| 3                                                                                                                                                                                  | 15.247(a)            | Bandwidth                                 | Mar 08, 2019<br>Mar 09, 2019 | Lion Xiao     | <u>PASS</u> |
| 4                                                                                                                                                                                  | 15.247(d)            | Conducted Spurious Emission and Band Edge | Mar 08, 2019<br>Mar 09, 2019 | Lion Xiao     | <u>PASS</u> |
| 5                                                                                                                                                                                  | 15.247(e)            | Power spectral density (PSD)              | Mar 08, 2019<br>Mar 09, 2019 | Lion Xiao     | <u>PASS</u> |
| 6                                                                                                                                                                                  | 15.247(d)            | Restricted Frequency Bands                | Apr 22, 2019                 | Jinxin Huang  | <u>PASS</u> |
| 7                                                                                                                                                                                  | 15.207               | Conducted Emission                        | Apr 08, 2019                 | Jinxin Huang  | <u>PASS</u> |
| 8                                                                                                                                                                                  | 15.209,<br>15.247(d) | Radiated Emission                         | Apr 10, 2019<br>Apr 18, 2019 | Jiefeng Zhang | <u>PASS</u> |
| <b>Note:</b> The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10 2013 and KDB558074 D01 v05r02. |                      |                                           |                              |               |             |

### 1.4. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

|                             |         |
|-----------------------------|---------|
| Temperature (°C):           | 15 - 35 |
| Relative Humidity (%):      | 30 -60  |
| Atmospheric Pressure (kPa): | 86-106  |



## 2. 47 CFR Part 15C Requirements

### 2.1. Antenna requirement

#### 2.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

#### 2.1.2. Result: Compliant

The EUT has a N type antenna connector. The antenna is N type Omni-Directional FRP antenna and max gain is 0.2dBi. Please refer to the EUT external photos.

## 2.2. Output Power

### 2.2.1. Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum peak conducted output power of the intentional radiator shall not exceed 1 Watt.

### 2.2.2. Test Description

The measured output power was calculated by the reading of the USB Wideband Power Sensor and calibration.

#### A. Test Setup:



The EUT (Equipment under the test) which is coupled to the USB Wideband Power Sensor; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

#### B. Equipments List:

Please refer ANNEX B(4).

### 2.2.3. Test Result

#### Duty Cycle Factor

| Mode          | Channel | Frequency (MHz) | T <sub>on</sub> (ms) | T <sub>(on+off)</sub> (ms) | Duty Cycle (%) | Duty Cycle Factor |
|---------------|---------|-----------------|----------------------|----------------------------|----------------|-------------------|
| 802.11b       | 6       | 2437            | 100                  | 100                        | 100            | 0                 |
| 802.11g       | 6       | 2437            | 100                  | 100                        | 100            | 0                 |
| 802.11n-20MHz | 6       | 2437            | 100                  | 100                        | 100            | 0                 |
| 802.11n-40MHz | 6       | 2437            | 100                  | 100                        | 100            | 0                 |

**Output Average Power**

| Mode           | Channel | Frequency<br>(MHz) | Output Average Power |       | Limit |   | Verdict |
|----------------|---------|--------------------|----------------------|-------|-------|---|---------|
|                |         |                    | dBm                  | W     | dBm   | W |         |
| 802.11 b       | 1       | 2412               | 16.51                | 0.045 | 30    | 1 | PASS    |
|                | 6       | 2437               | 17.07                | 0.051 |       |   | PASS    |
|                | 11      | 2462               | 17.24                | 0.053 |       |   | PASS    |
| 802.11 g       | 1       | 2412               | 14.57                | 0.029 |       |   | PASS    |
|                | 6       | 2437               | 15.31                | 0.034 |       |   | PASS    |
|                | 11      | 2462               | 14.85                | 0.031 |       |   | PASS    |
| 802.11<br>HT20 | 1       | 2412               | 13.08                | 0.020 |       |   | PASS    |
|                | 6       | 2437               | 13.50                | 0.022 |       |   | PASS    |
|                | 11      | 2462               | 12.75                | 0.019 |       |   | PASS    |
| 802.11<br>HT40 | 3       | 2422               | 12.19                | 0.017 |       |   | PASS    |
|                | 6       | 2437               | 12.61                | 0.018 |       |   | PASS    |
|                | 9       | 2452               | 12.47                | 0.018 |       |   | PASS    |

**Output Peak Power**

| Mode           | Channel | Frequency<br>(MHz) | Output Average Power |       | Limit |   | Verdict |
|----------------|---------|--------------------|----------------------|-------|-------|---|---------|
|                |         |                    | dBm                  | W     | dBm   | W |         |
| 802.11 b       | 1       | 2412               | 18.73                | 0.075 | 30    | 1 | PASS    |
|                | 6       | 2437               | 19.29                | 0.085 |       |   | PASS    |
|                | 11      | 2462               | 19.59                | 0.091 |       |   | PASS    |
| 802.11 g       | 1       | 2412               | 20.77                | 0.119 |       |   | PASS    |
|                | 6       | 2437               | 21.75                | 0.150 |       |   | PASS    |
|                | 11      | 2462               | 21.10                | 0.129 |       |   | PASS    |
| 802.11<br>HT20 | 1       | 2412               | 19.97                | 0.099 |       |   | PASS    |
|                | 6       | 2437               | 20.54                | 0.113 |       |   | PASS    |
|                | 11      | 2462               | 19.69                | 0.093 |       |   | PASS    |
| 802.11<br>HT40 | 3       | 2422               | 19.34                | 0.086 |       |   | PASS    |
|                | 6       | 2437               | 19.92                | 0.098 |       |   | PASS    |
|                | 9       | 2452               | 19.66                | 0.092 |       |   | PASS    |

**Note:** The duty cycle factor has been compensated into the test result

## 2.3. Bandwidth

### 2.3.1. Requirement

According to FCC section 15.247(a) (2), Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 2.3.2. Test Description

#### A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ω; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

KDB558074 D01 V05R02 Section 8.1 Option 1 was used in order to prove compliance.

#### B. Equipments List:

Please refer ANNEX B(4).



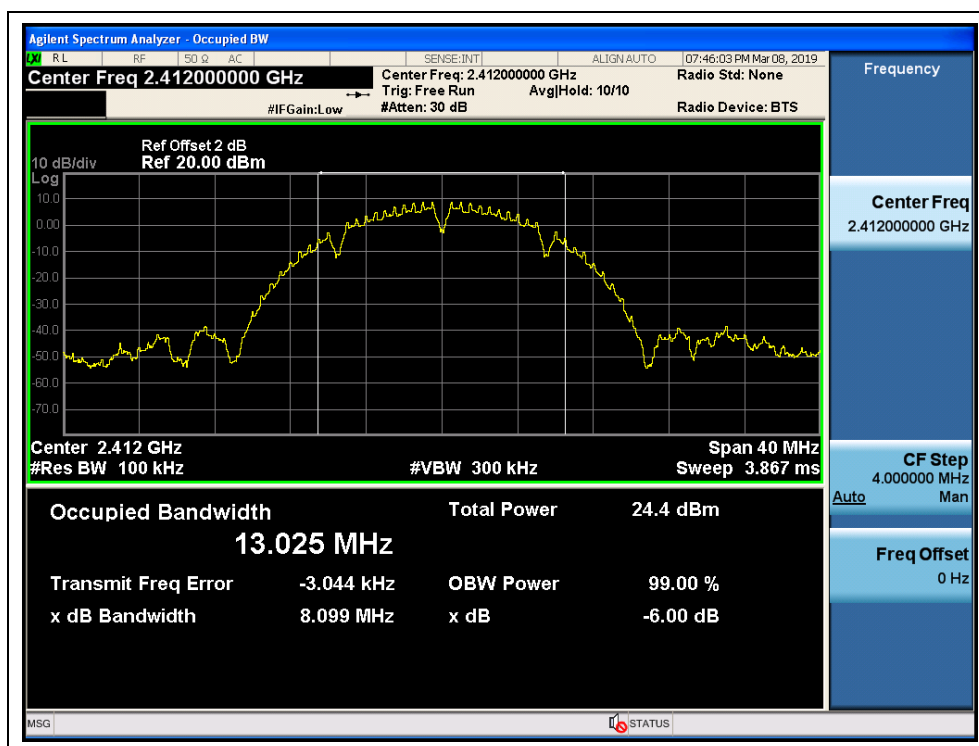
### 2.3.3. Test Result

#### 802.11b Test mode

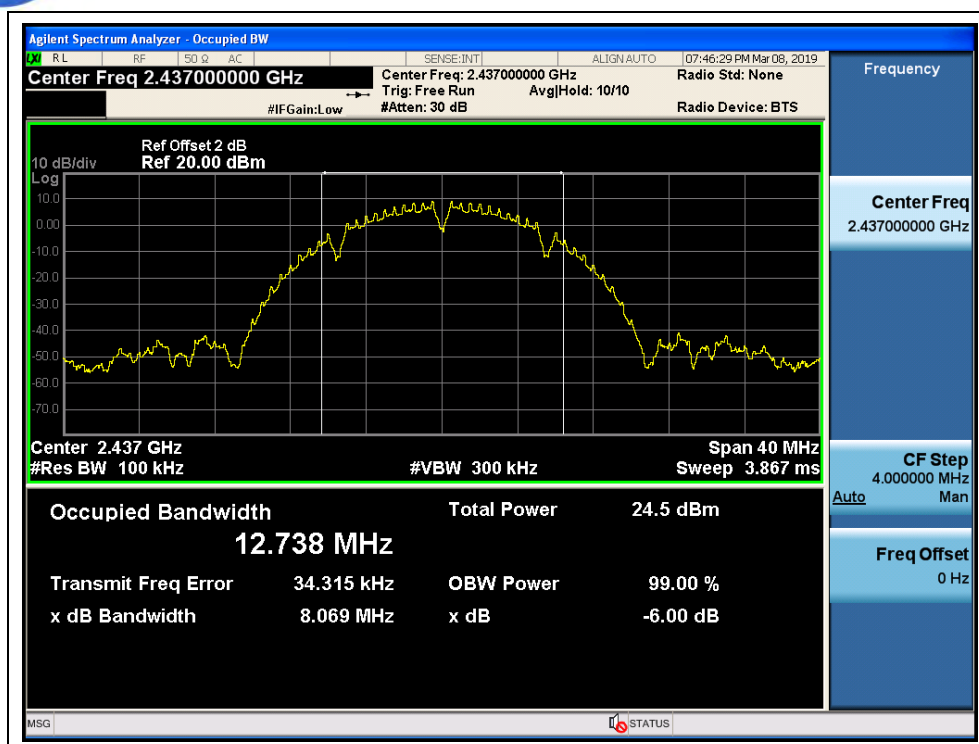
##### A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits(kHz) | Result      |
|---------|-----------------|----------------------|-------------|-------------|
| 1       | 2412            | 8.099                | ≥500        | <b>PASS</b> |
| 6       | 2437            | 8.069                | ≥500        | <b>PASS</b> |
| 11      | 2462            | 8.055                | ≥500        | <b>PASS</b> |

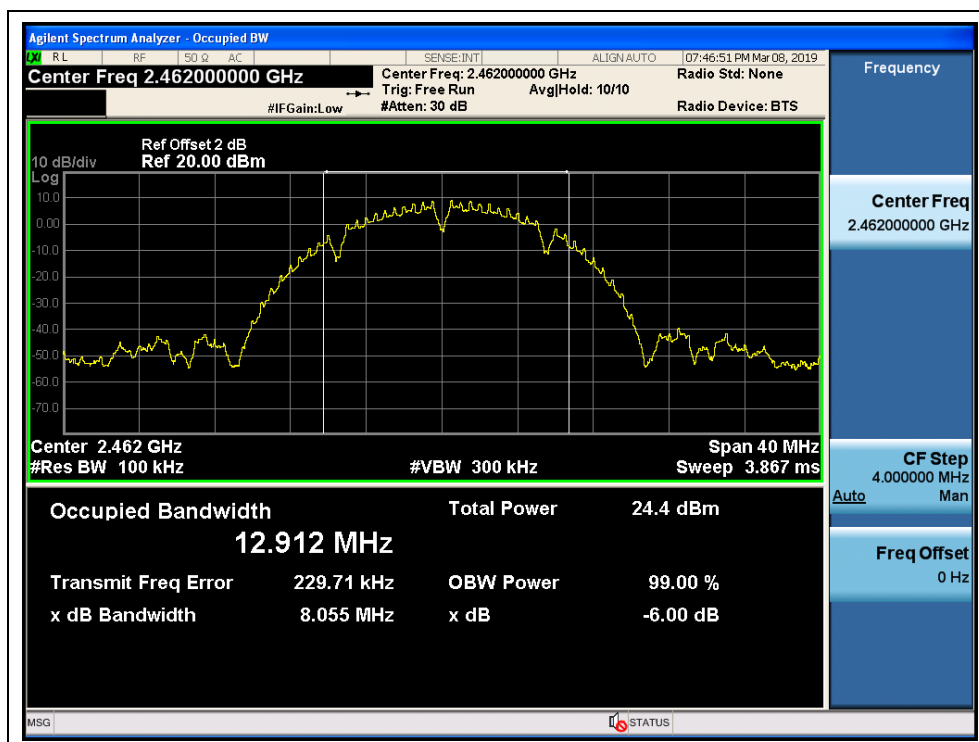
##### B. Test Plots



(Channel 1, 2412MHz, 802.11b)



(Channel 6, 2437 MHz, 802.11b)



(Channel 11, 2462MHz, 802.11b)

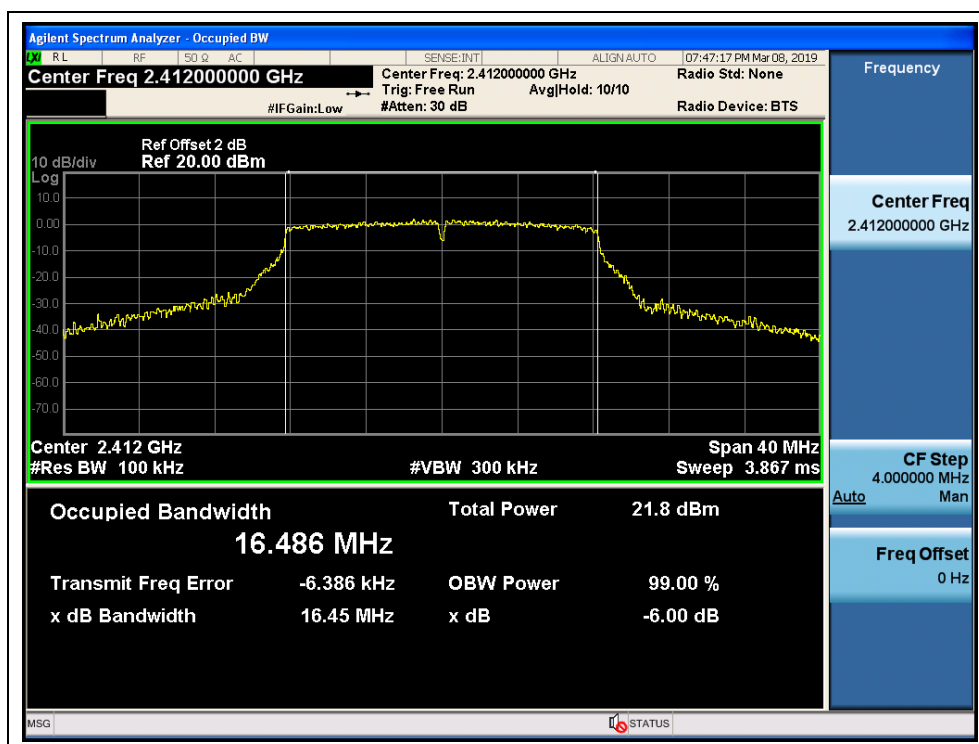


## 802.11g Test mode

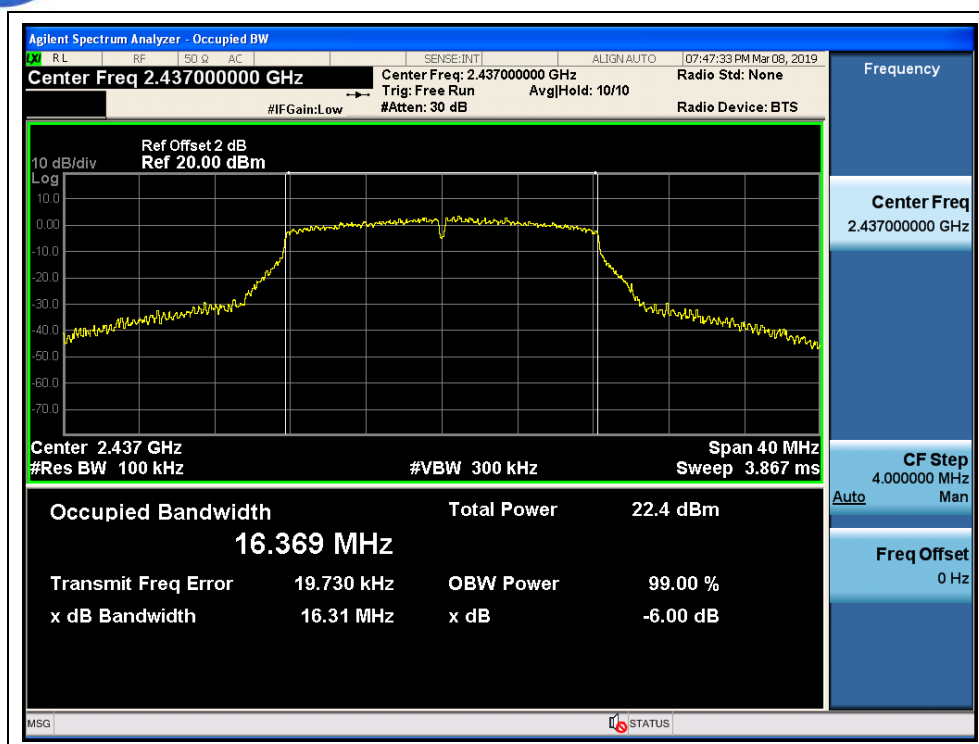
### A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result      |
|---------|-----------------|----------------------|--------------|-------------|
| 1       | 2412            | 16.450               | ≥500         | <b>PASS</b> |
| 6       | 2437            | 16.369               | ≥500         | <b>PASS</b> |
| 11      | 2462            | 16.480               | ≥500         | <b>PASS</b> |

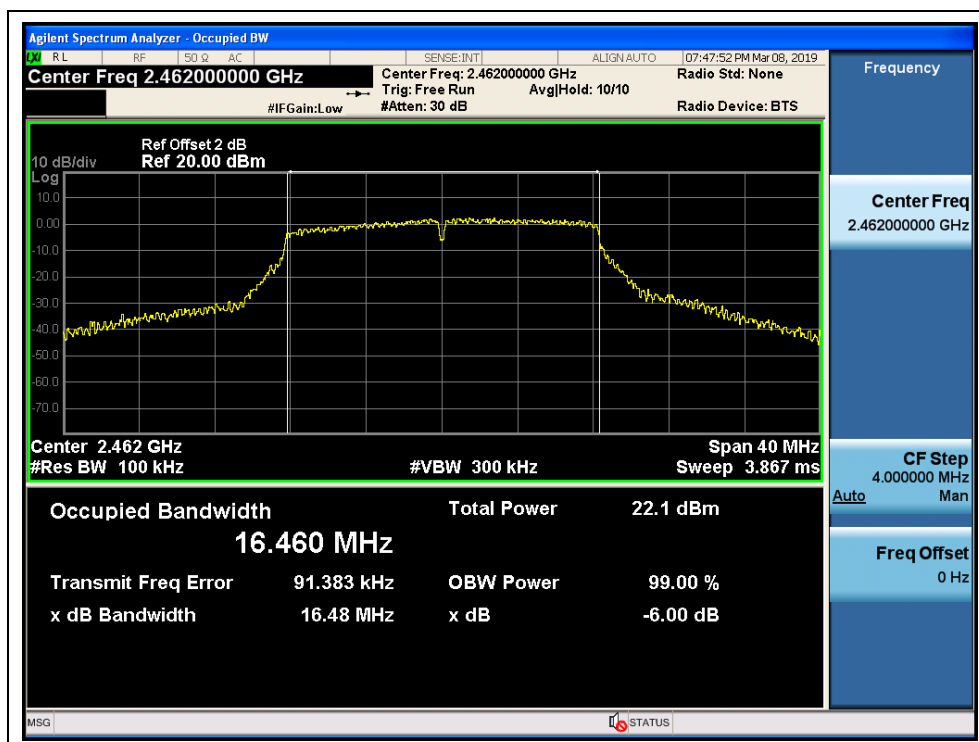
### B. Test Plots:



(Channel 1, 2412MHz, 802.11g)



(Channel 6, 2437MHz, 802.11g)



(Channel 11, 2462MHz, 802.11g)

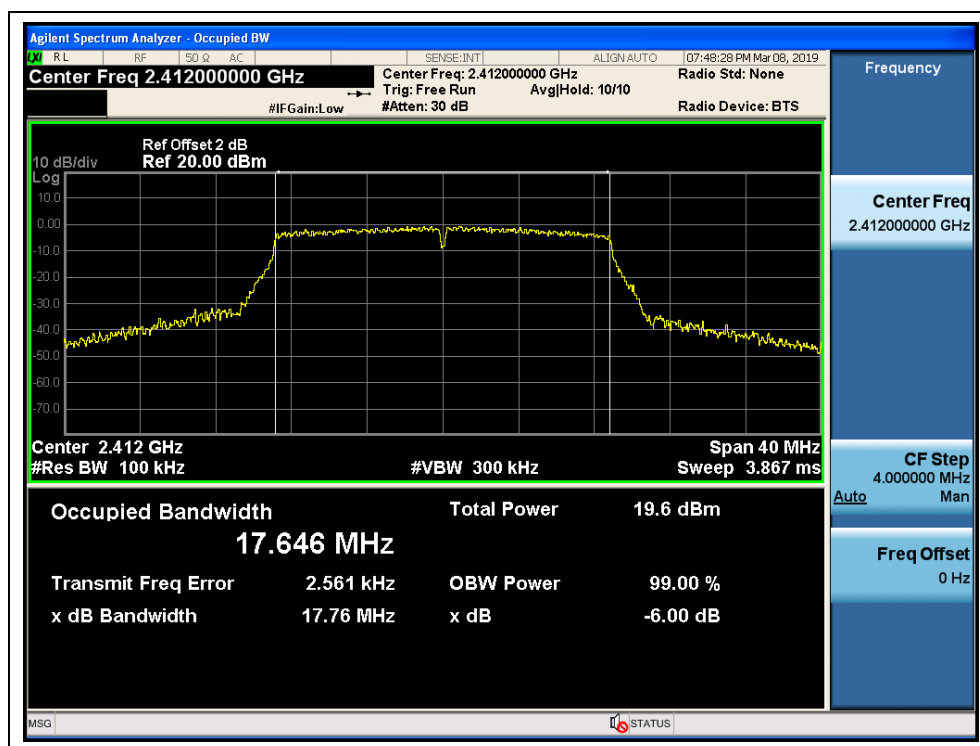


## 802.11n-20 Test mode

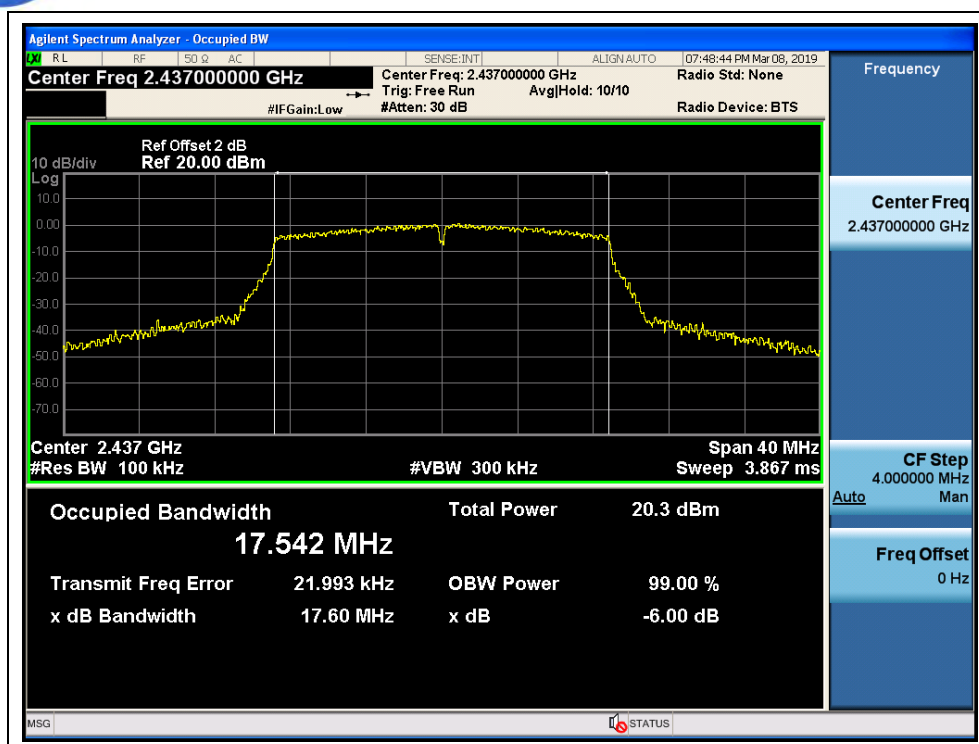
### A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result      |
|---------|-----------------|----------------------|--------------|-------------|
| 1       | 2412            | 17.76                | ≥500         | <b>PASS</b> |
| 6       | 2437            | 17.60                | ≥500         | <b>PASS</b> |
| 11      | 2462            | 17.49                | ≥500         | <b>PASS</b> |

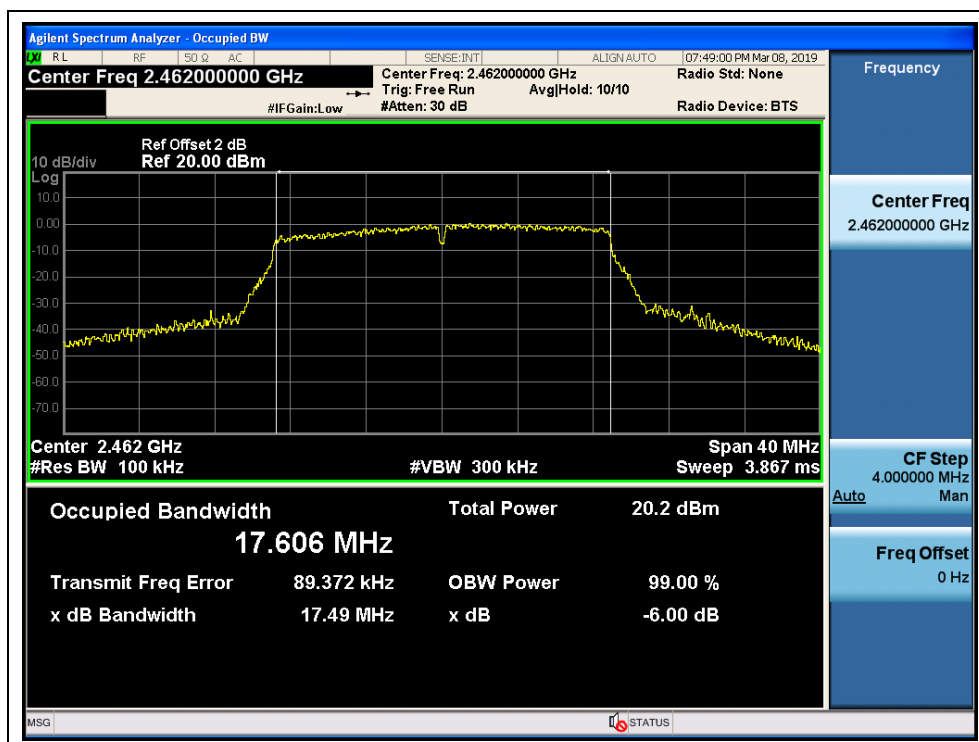
### B. Test Plots:



(Channel 1, 2412MHz, 802.11n-20)



(Channel 6, 2437MHz, 802.11n-20)



(Channel 11, 2462MHz, 802.11n-20)

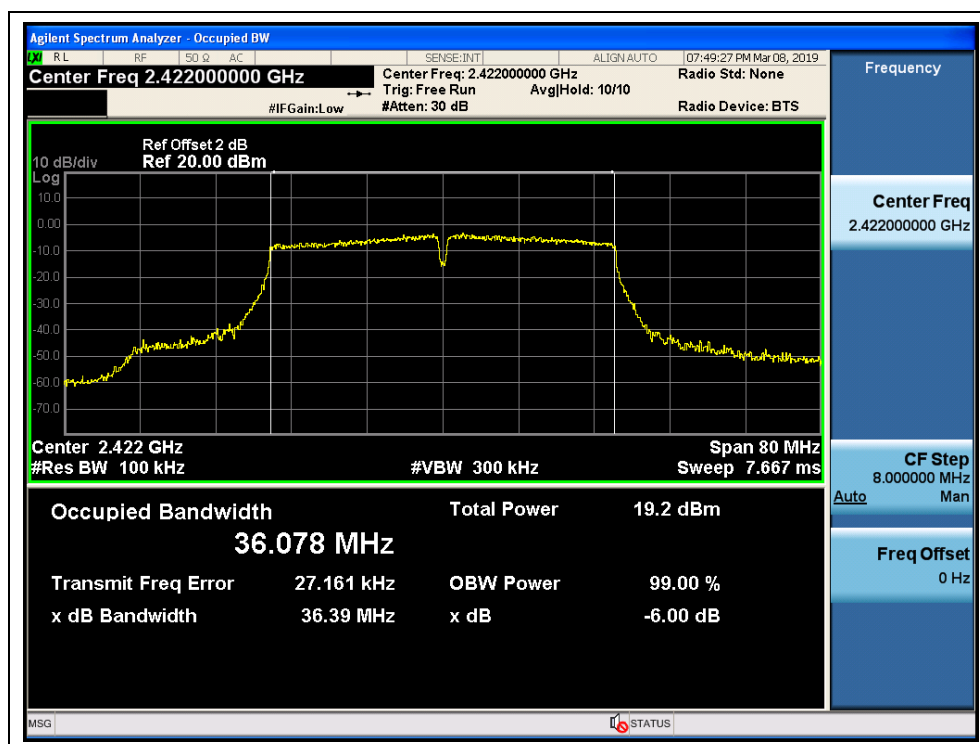


## 802.11n-40 Test mode

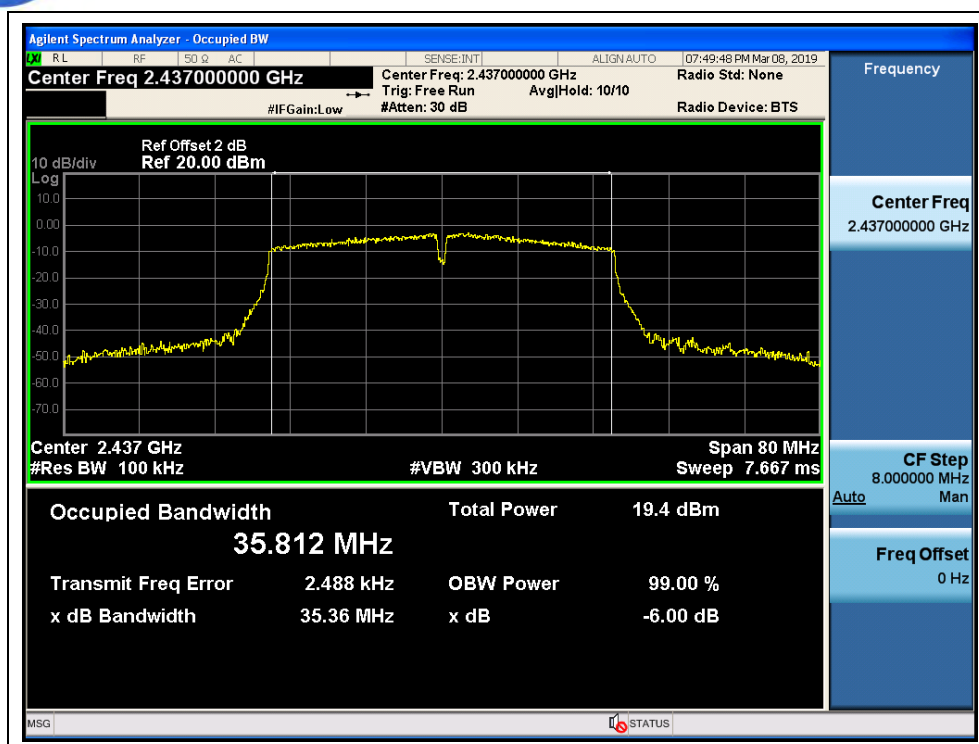
### A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result      |
|---------|-----------------|----------------------|--------------|-------------|
| 3       | 2422            | 36.39                | ≥500         | <b>PASS</b> |
| 6       | 2437            | 35.36                | ≥500         | <b>PASS</b> |
| 9       | 2452            | 36.53                | ≥500         | <b>PASS</b> |

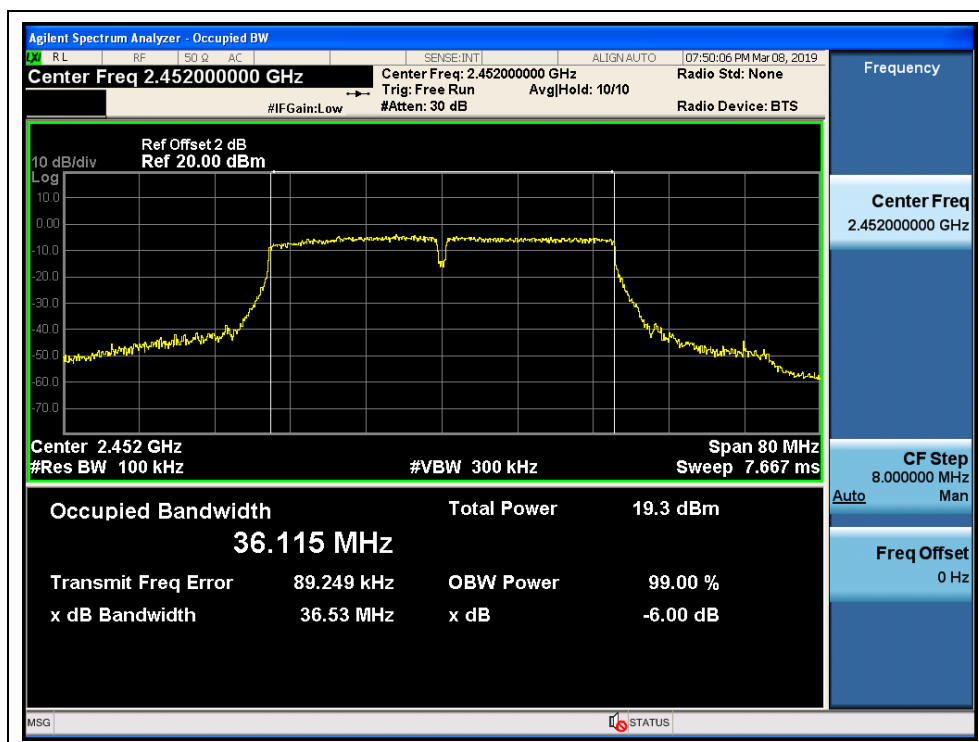
### B. Test Plots:



(Channel 3, 2422Mz, 802.11n-40)



(Channel 6, 2437MHz, 802.11n-40)



(Channel 9, 2452MHz, 802.11n-40)

## 2.4. Conducted Spurious Emissions and Band Edge

### 2.4.1. Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

### 2.4.2. Test Description

#### A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

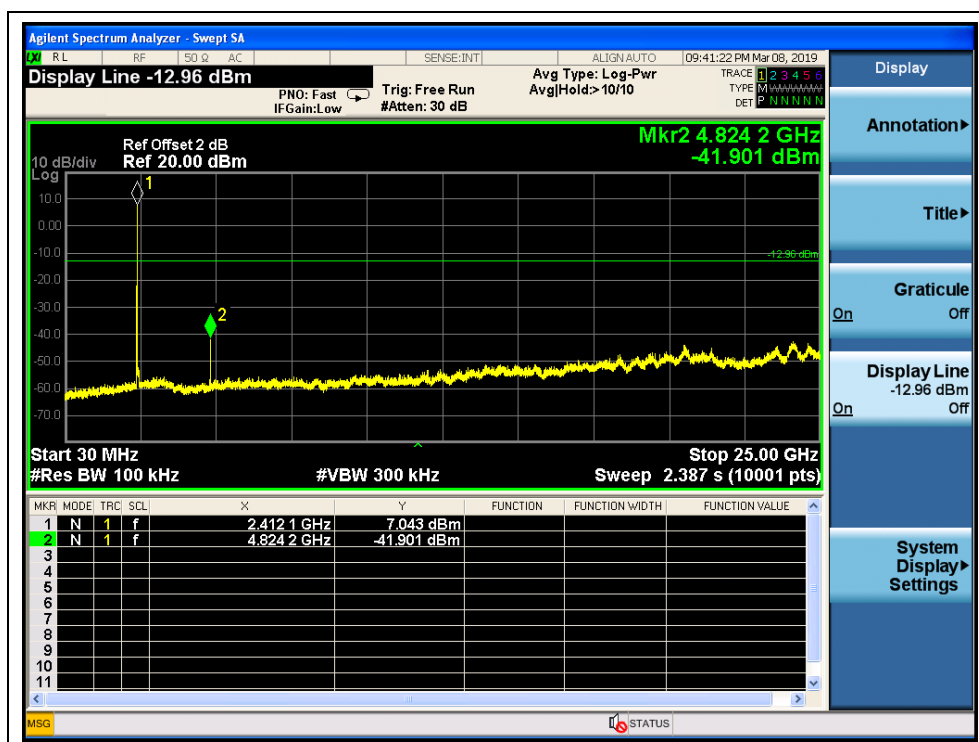
KDB558074 D01 V05R02 Section 11.0 was used in order to prove compliance.

#### B. Equipments List:

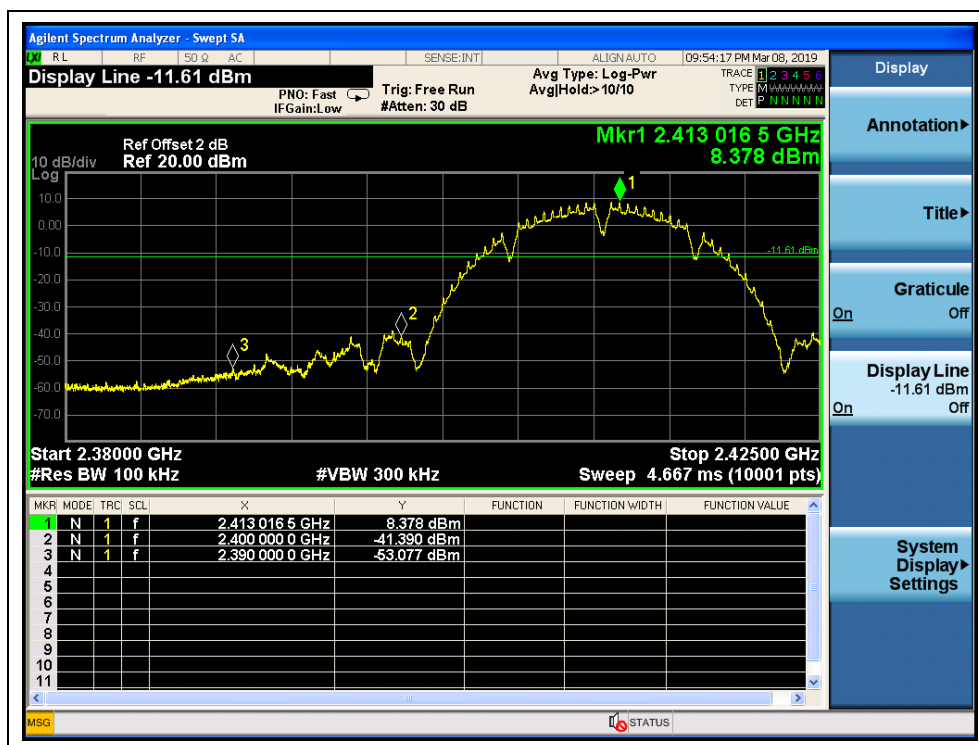
Please refer ANNEX B(4).



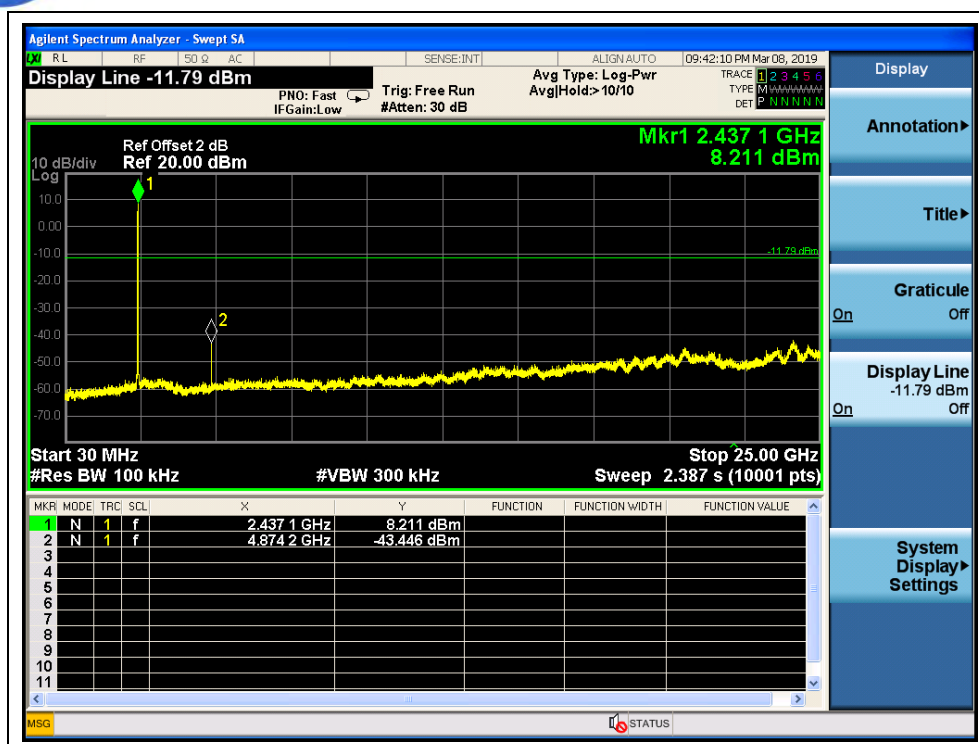
## 2.4.3. Test Result



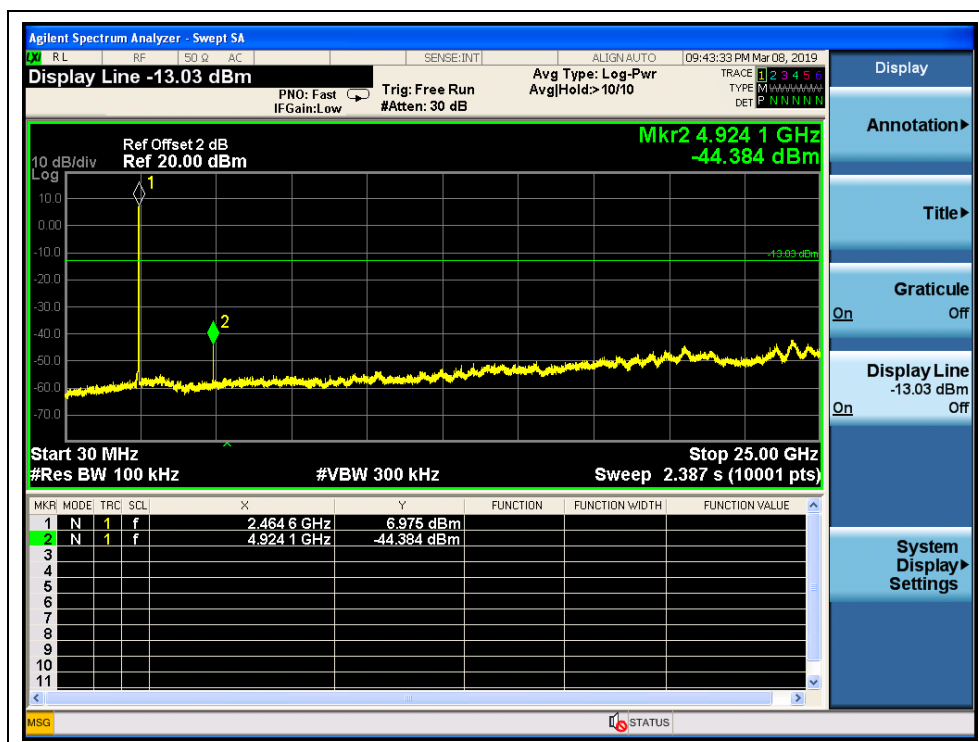
(802.11 b, Channel = 1, 30MHz to 25GHz)



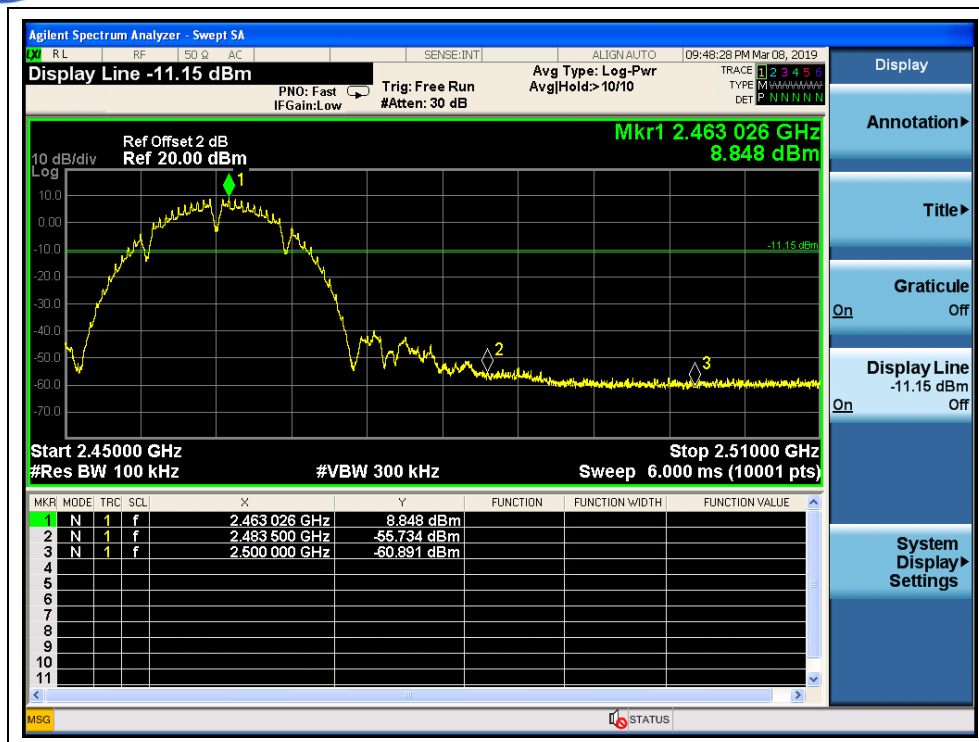
(802.11 b, Band Edge @ Channel = 1)



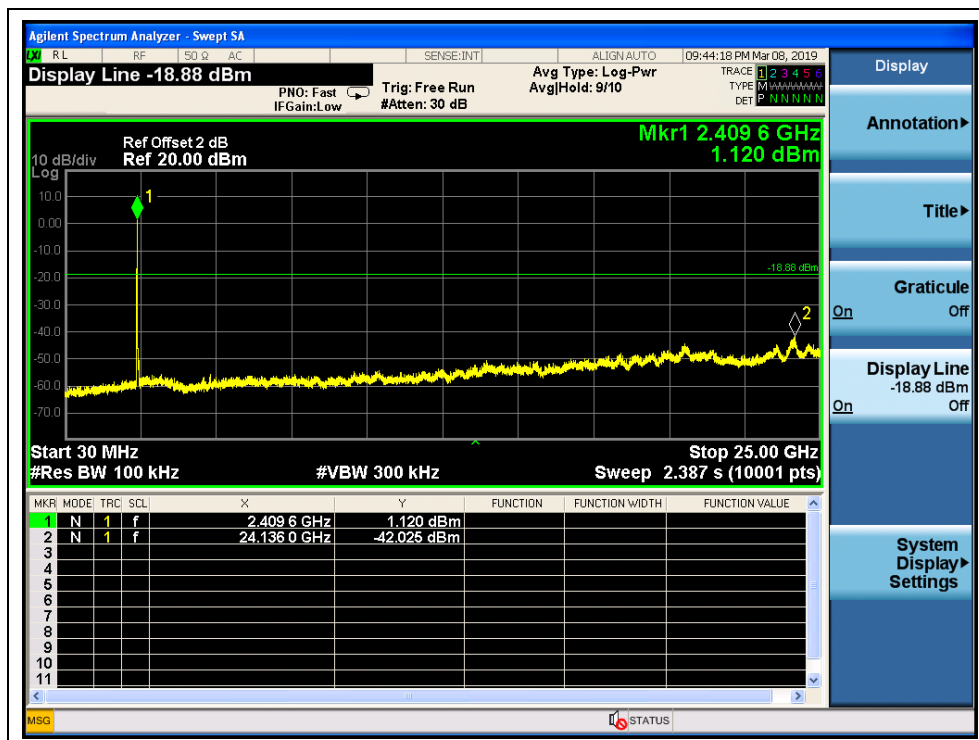
(802.11 b, Channel = 6, 30MHz to 25GHz)



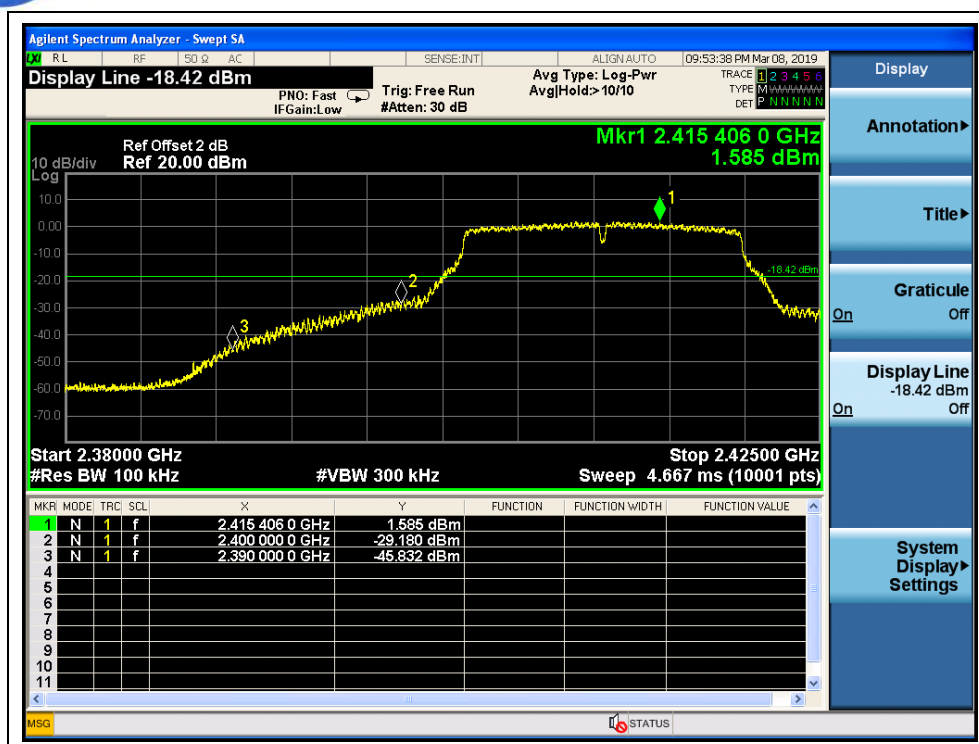
(802.11 b, Channel = 11, 30MHz to 25GHz)



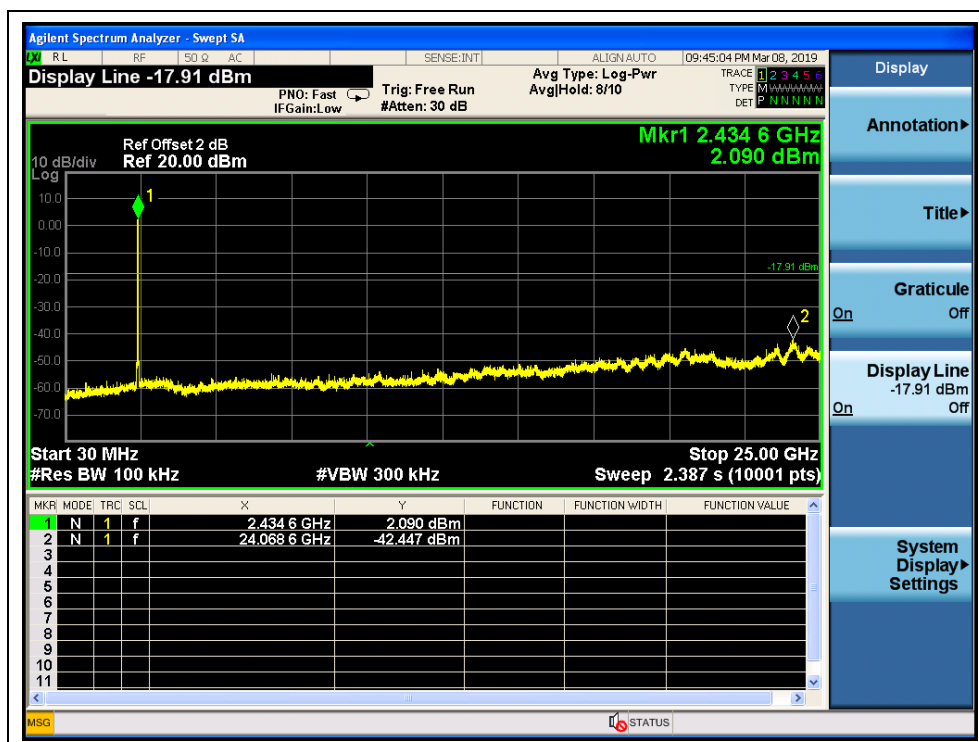
(802.11 b, Band Edge @ Channel = 11)



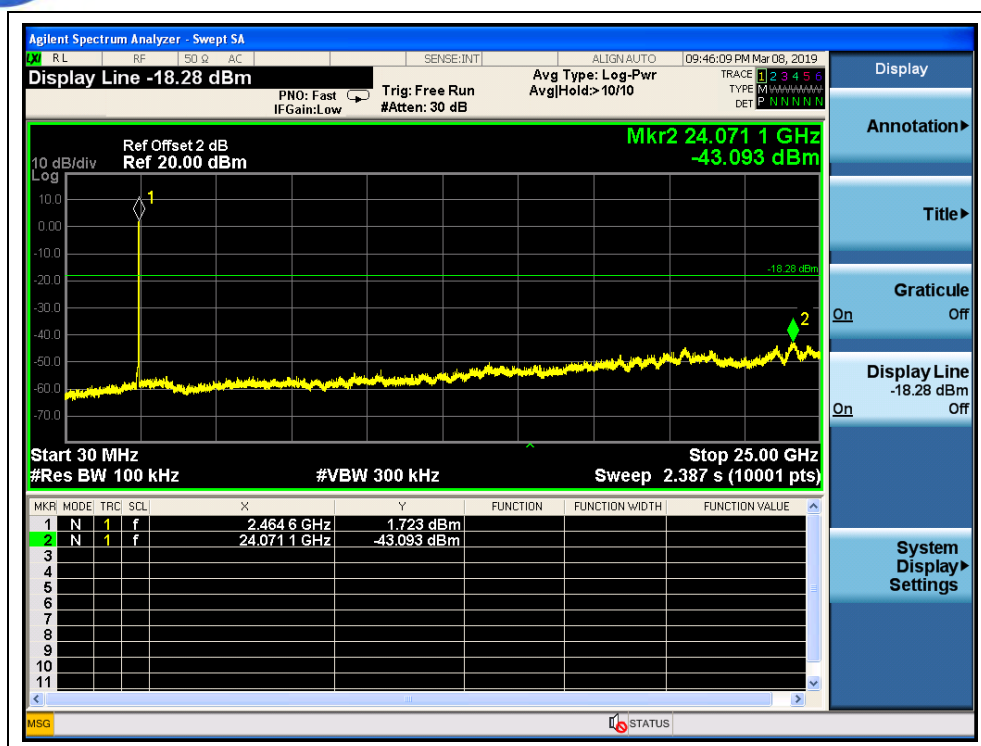
(802.11 g, Channel = 1, 30MHz to 25GHz)



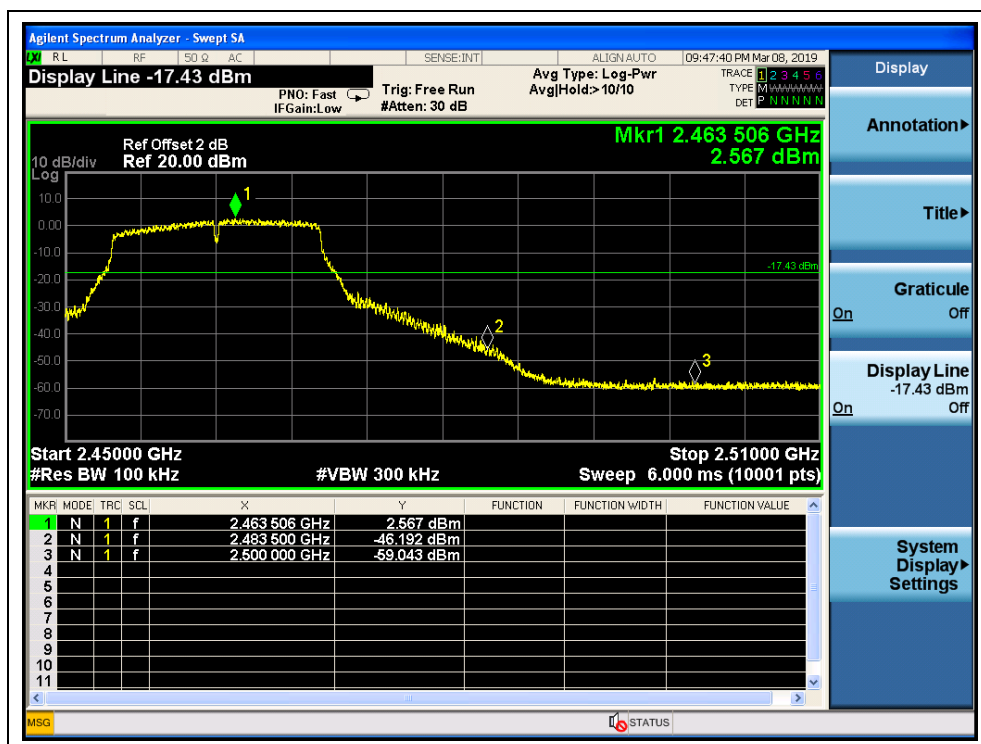
(802.11 g, Band Edge @ Channel = 1)



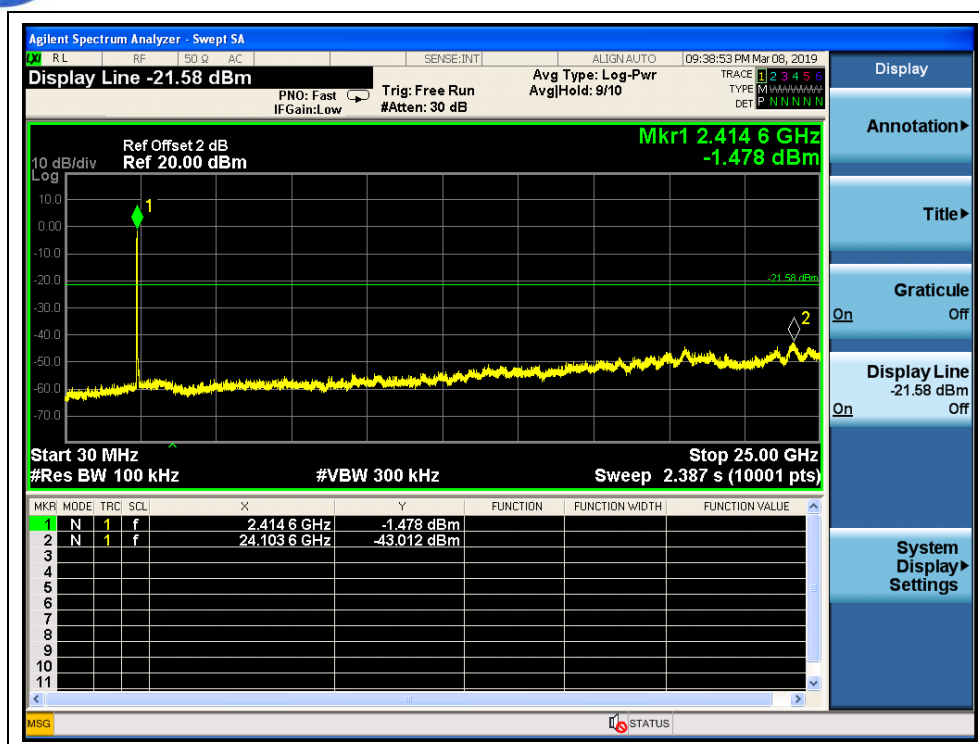
(802.11 g, Channel = 6, 30MHz to 25GHz)



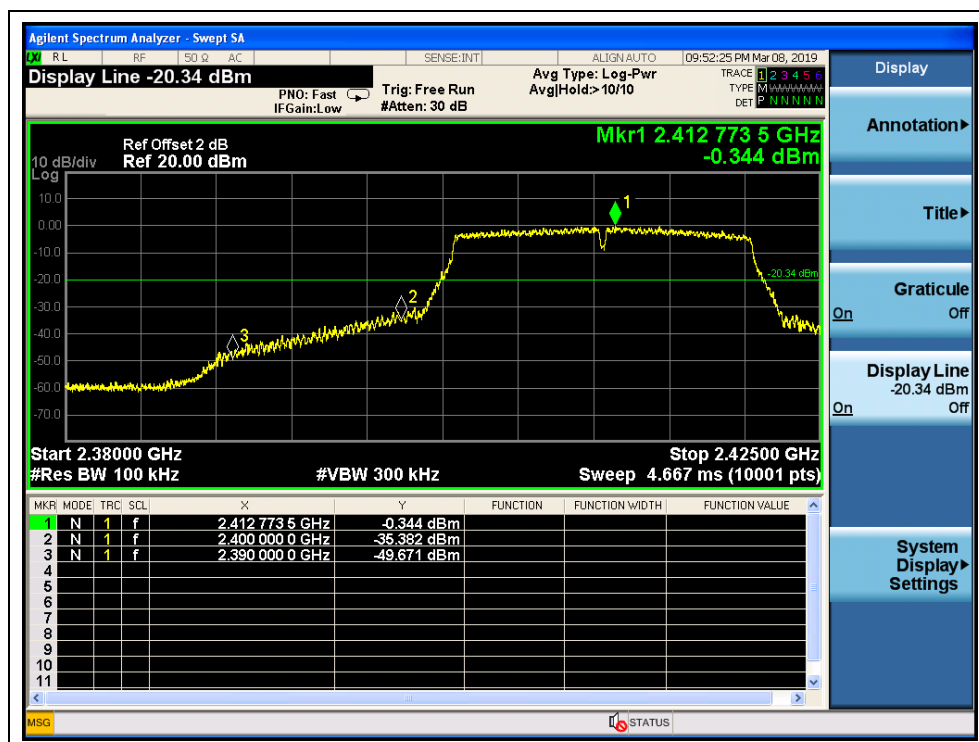
(802.11 g, Channel = 11, 30MHz to 25GHz)



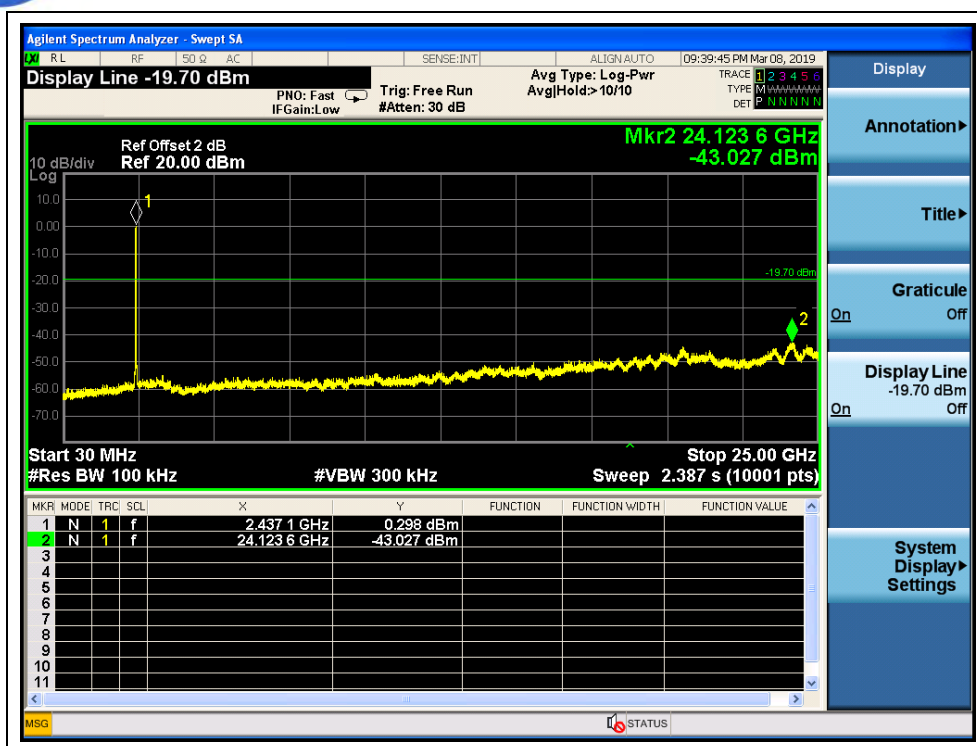
(802.11 g, Band Edge @ Channel = 11)



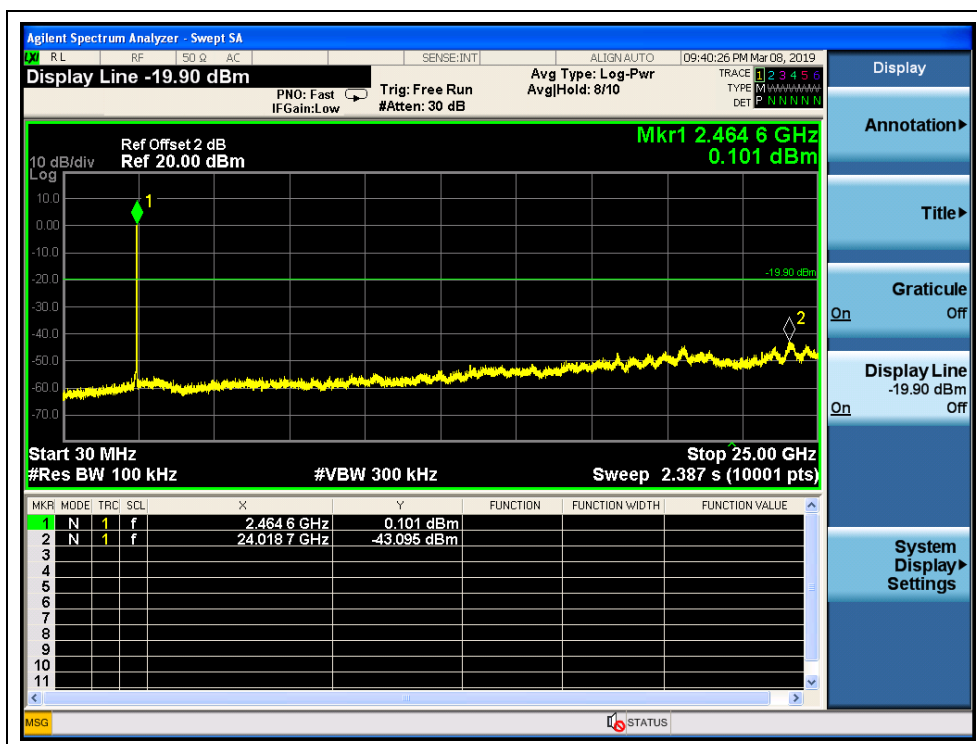
(802.11 HT20, Channel = 1, 30MHz to 25GHz)



(802.11 HT20, Band Edge @ Channel = 1)



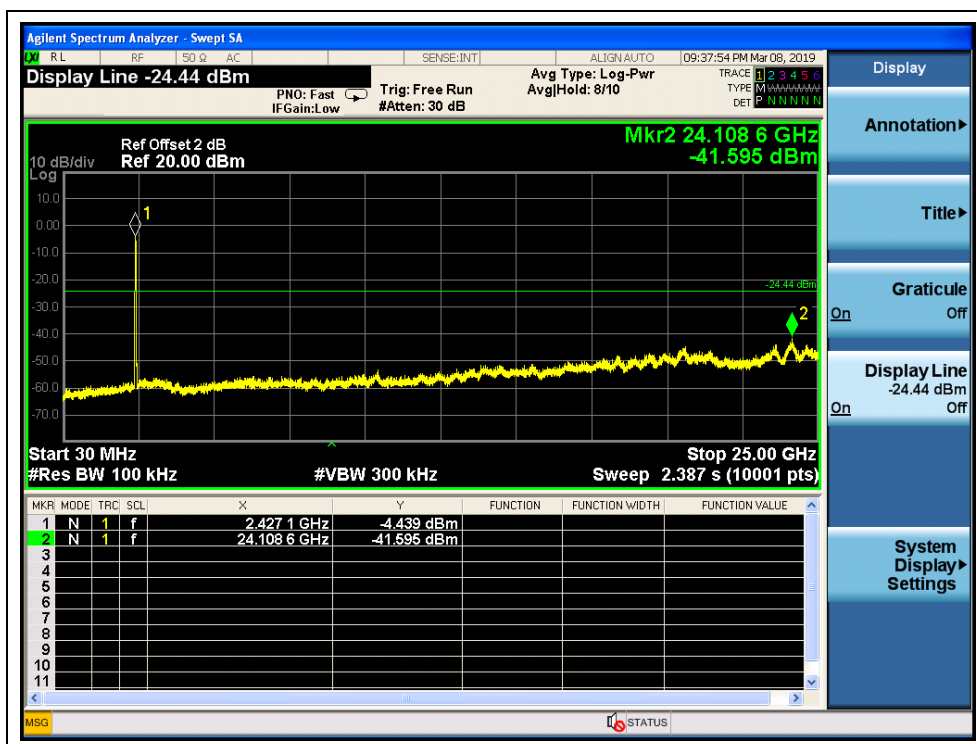
(802.11 HT20, Channel = 6, 30MHz to 25GHz)



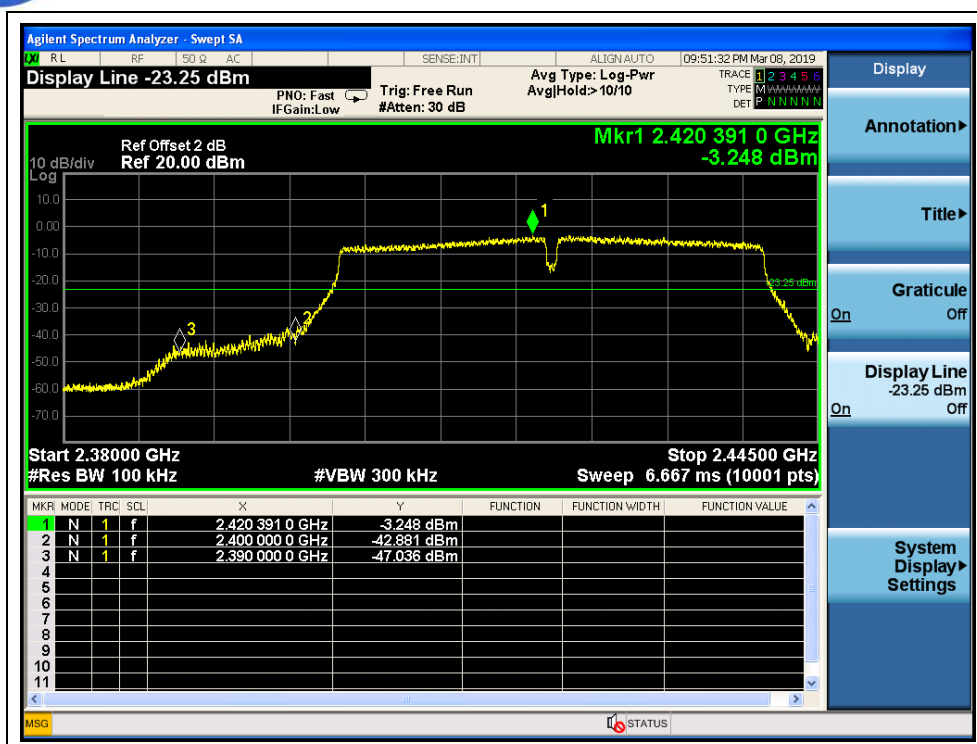
(802.11 HT20, Channel = 11, 30MHz to 25GHz)



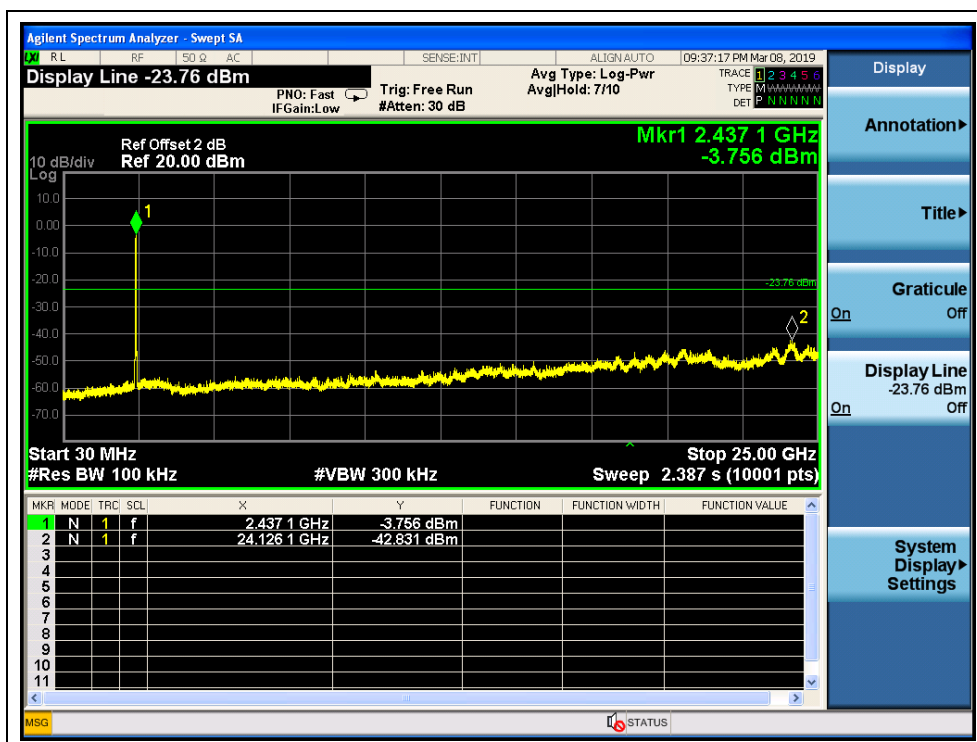
(802.11 HT20, Band Edge @ Channel = 11)



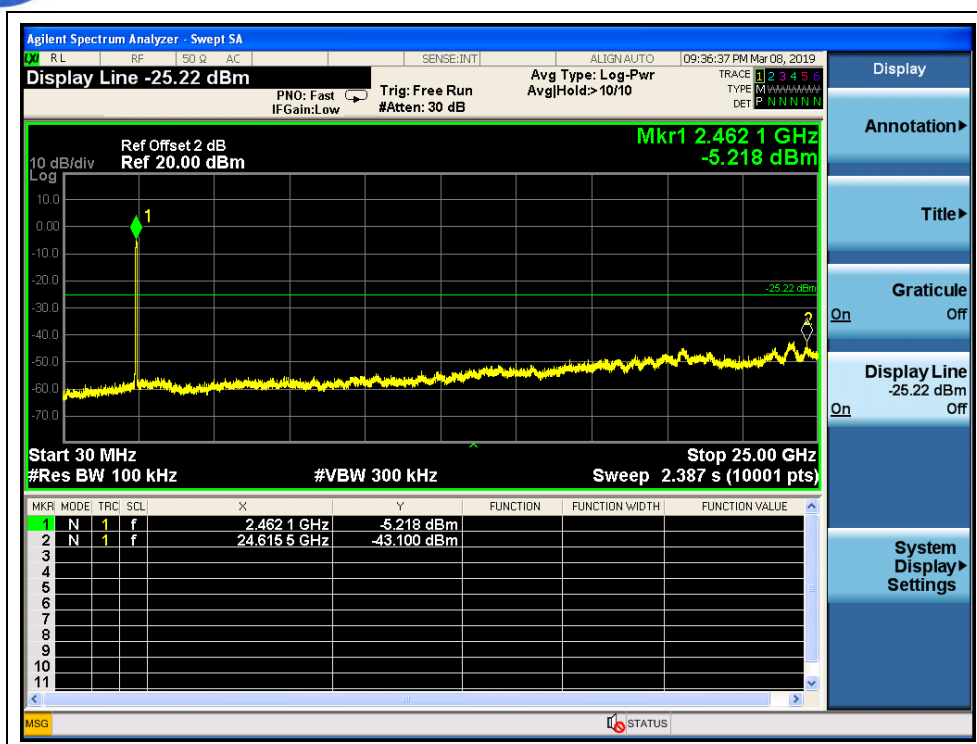
(802.11 HT40, Channel = 3, 30MHz to 25GHz)



(802.11 HT40, Band Edge @ Channel = 3)



(802.11 HT40, Channel = 6, 30MHz to 25GHz)



(802.11 HT40, Channel = 9, 30MHz to 25GHz)



(802.11 HT40, Band Edge @ Channel = 9)

## 2.5. Power spectral density (PSD)

### 2.5.1. Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 2.5.2. Test Description

#### A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

KDB558074 D01 V05R02 Section 10.2 was used in order to prove compliance.

#### B. Equipments List:

Please refer ANNEX B(4).



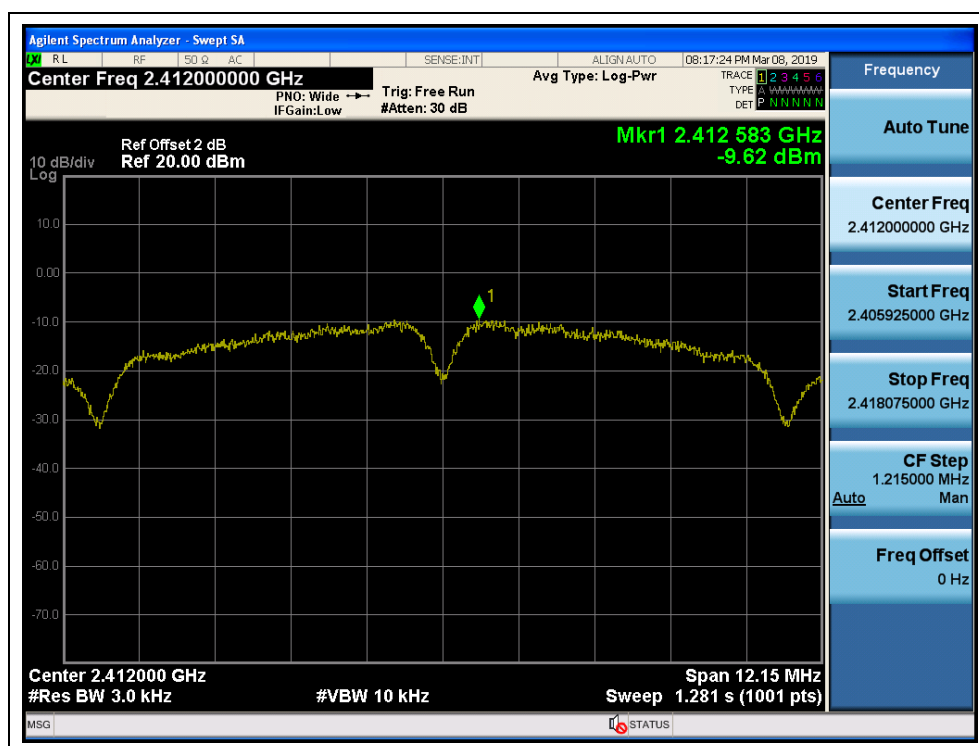
### 2.5.3. Test Result

#### 802.11b Test mode

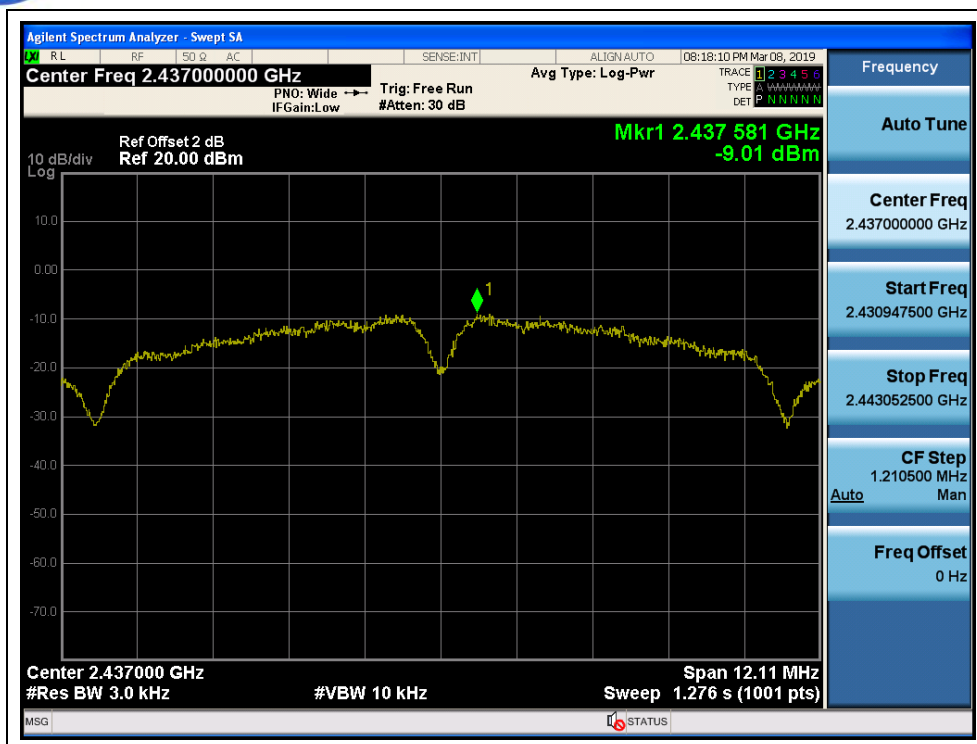
##### A. Test Verdict:

| Spectral power density (dBm/3kHz) |                 |                         |                  |         |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel                           | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1                                 | 2412            | -9.62                   | 8                | PASS    |
| 6                                 | 2437            | -9.01                   | 8                | PASS    |
| 11                                | 2462            | -8.92                   | 8                | PASS    |

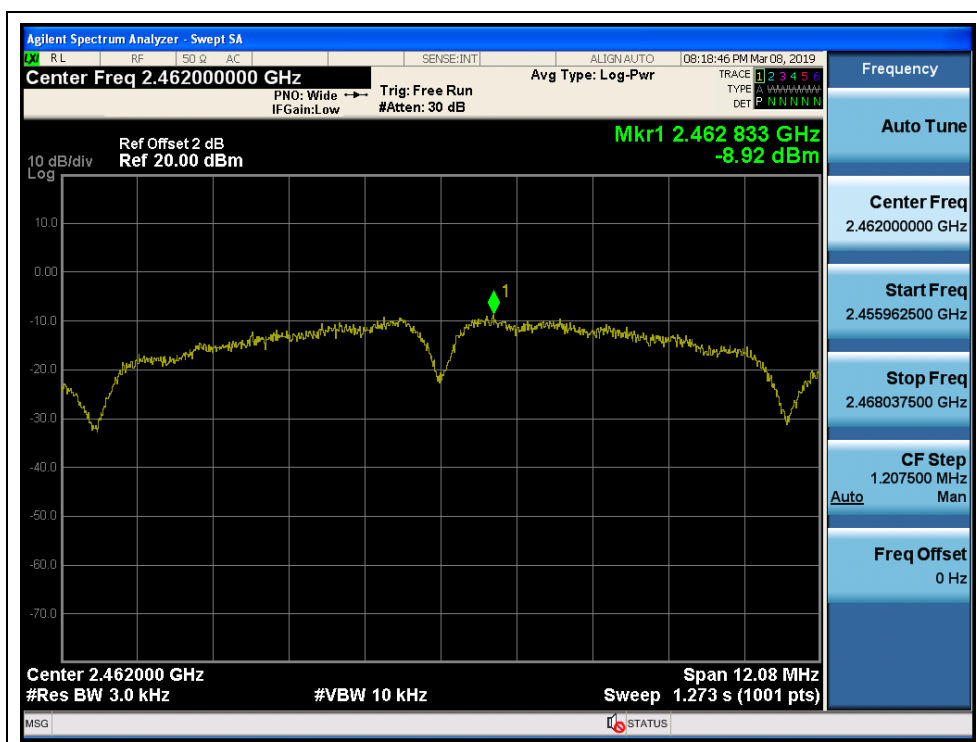
##### B. Test Plots:



(Channel = 1, 802.11b)



(Channel = 6, 802.11b)



(Channel = 11, 802.11b)

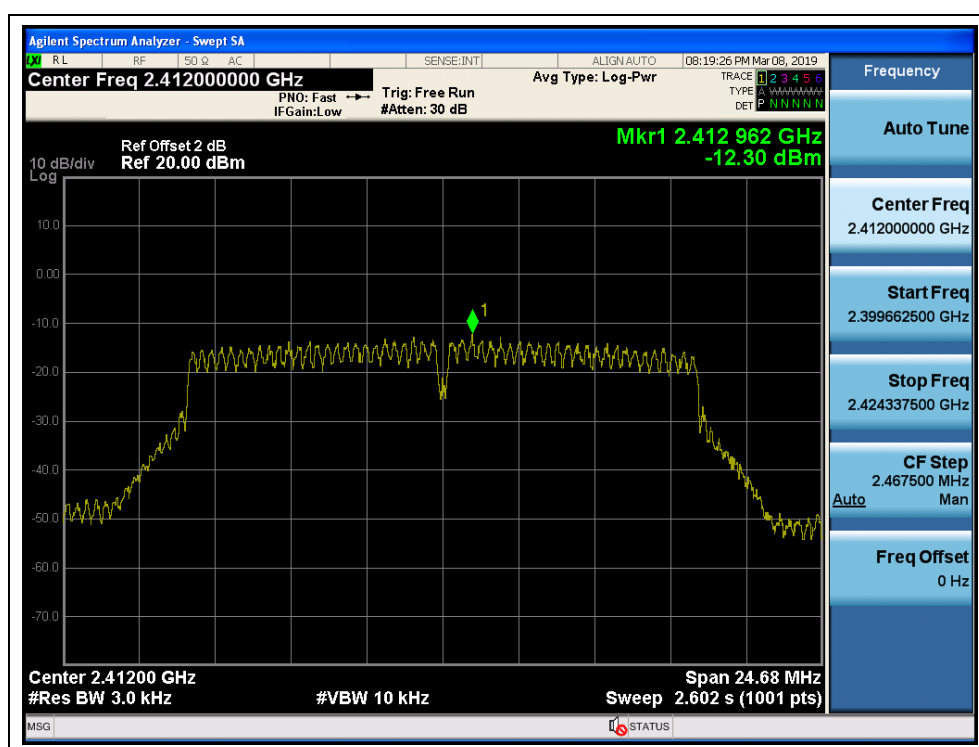


## 802.11g Test mode

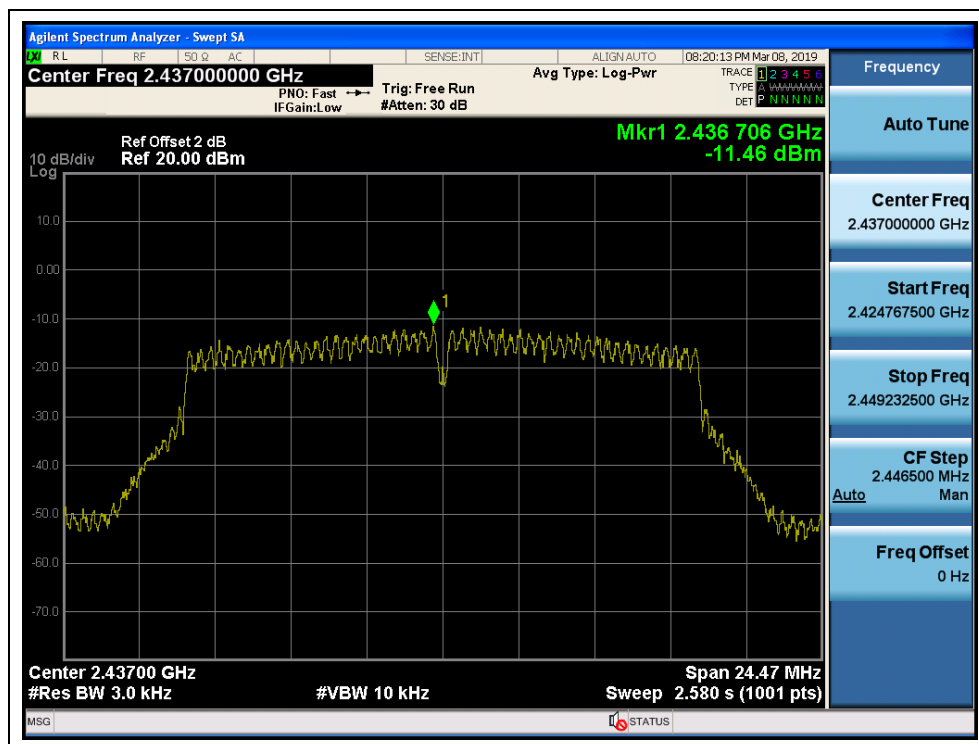
### A. Test Verdict:

| Spectral power density (dBm/3kHz) |                 |                         |                  |         |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel                           | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1                                 | 2412            | -12.30                  | 8                | PASS    |
| 6                                 | 2437            | -11.46                  | 8                | PASS    |
| 11                                | 2462            | -12.07                  | 8                | PASS    |

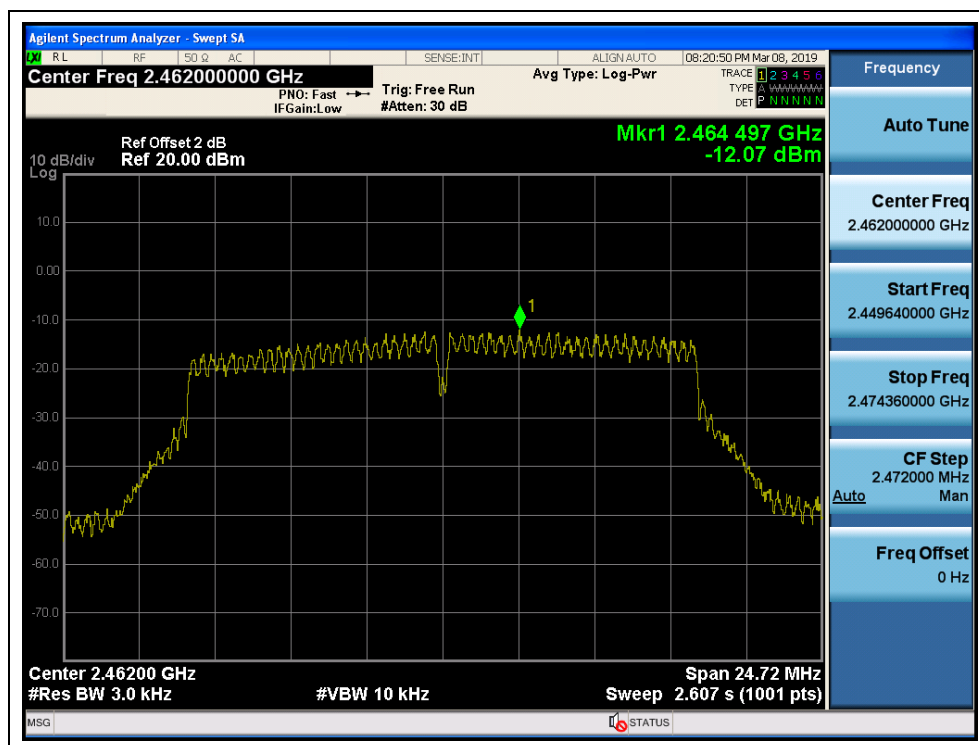
### B. Test Plots:



(Channel = 1, 802.11g)



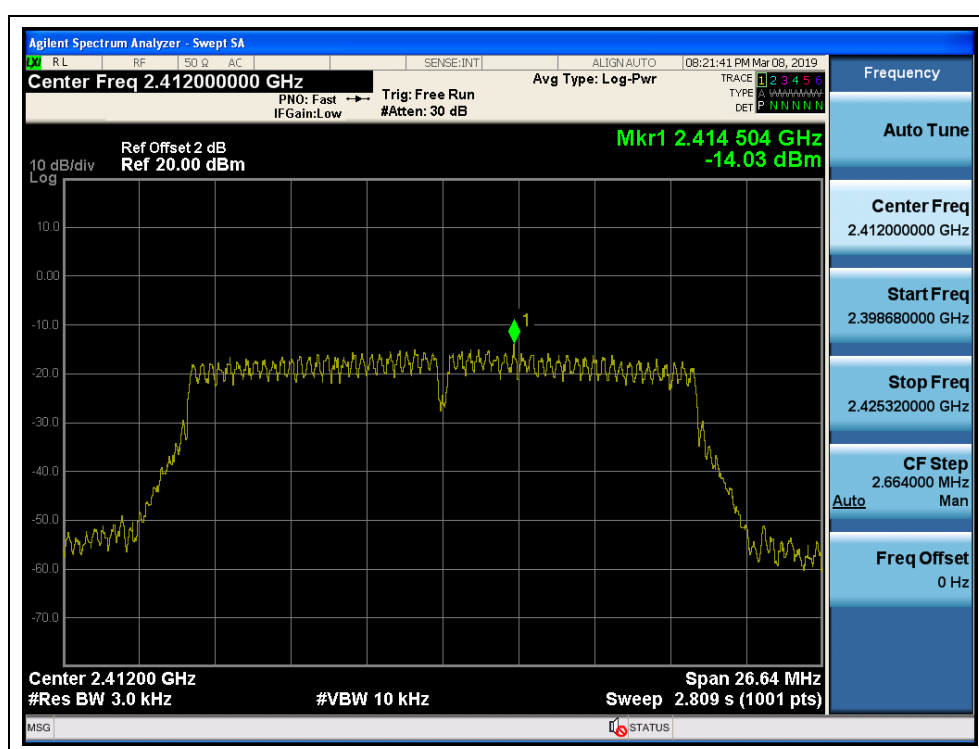
(Channel = 6, 802.11g)



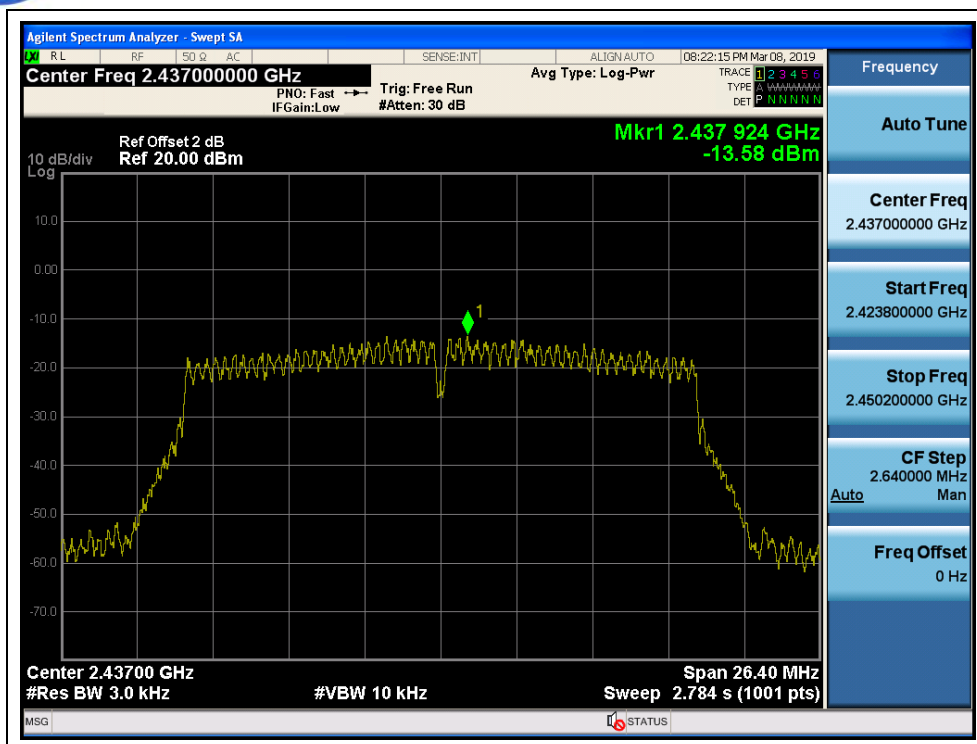
(Channel = 11, 802.11g)

**802.11n-20MHz Test mode****A. Test Verdict:**

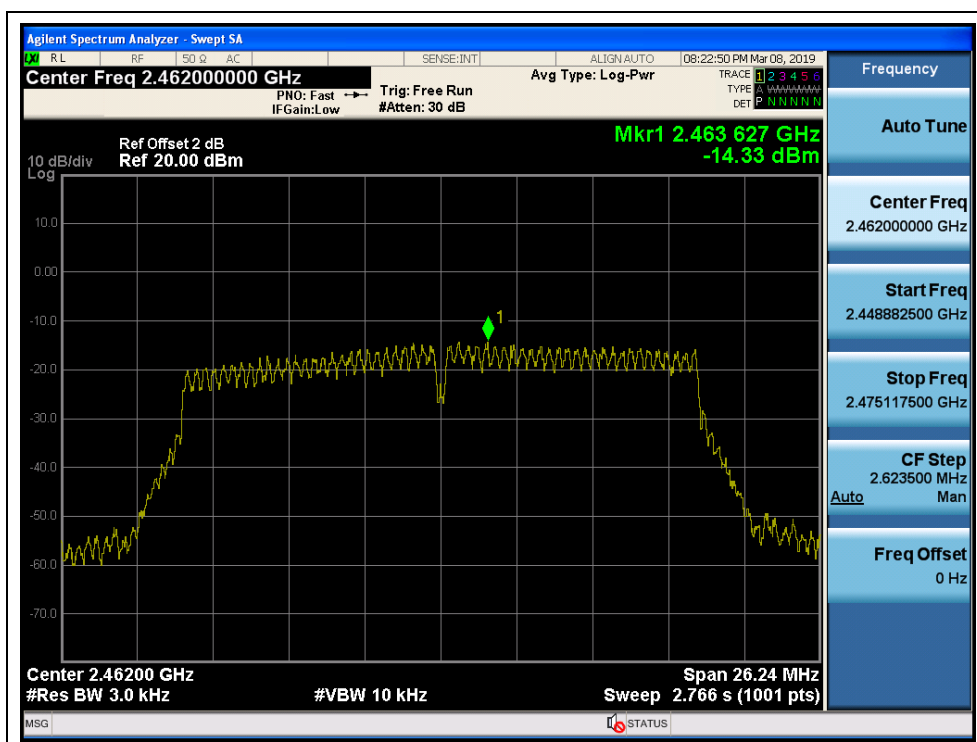
| Spectral power density (dBm/3kHz) |                 |                         |                  |         |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel                           | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1                                 | 2412            | -14.03                  | 8                | PASS    |
| 6                                 | 2437            | -13.58                  | 8                | PASS    |
| 11                                | 2462            | -14.33                  | 8                | PASS    |

**B. Test Plots:**

(Channel = 1, 802.11n-20MHz)



(Channel = 6, 802.11n-20MHz)



(Channel = 11, 802.11n-20MHz)

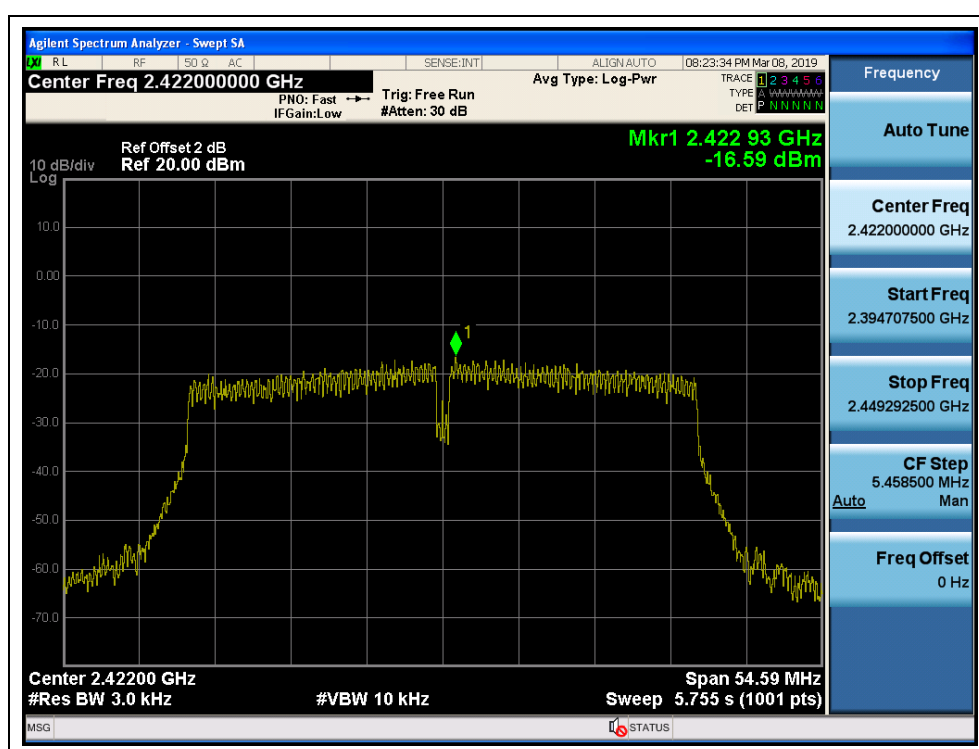


## 802.11n-40MHz Test mode

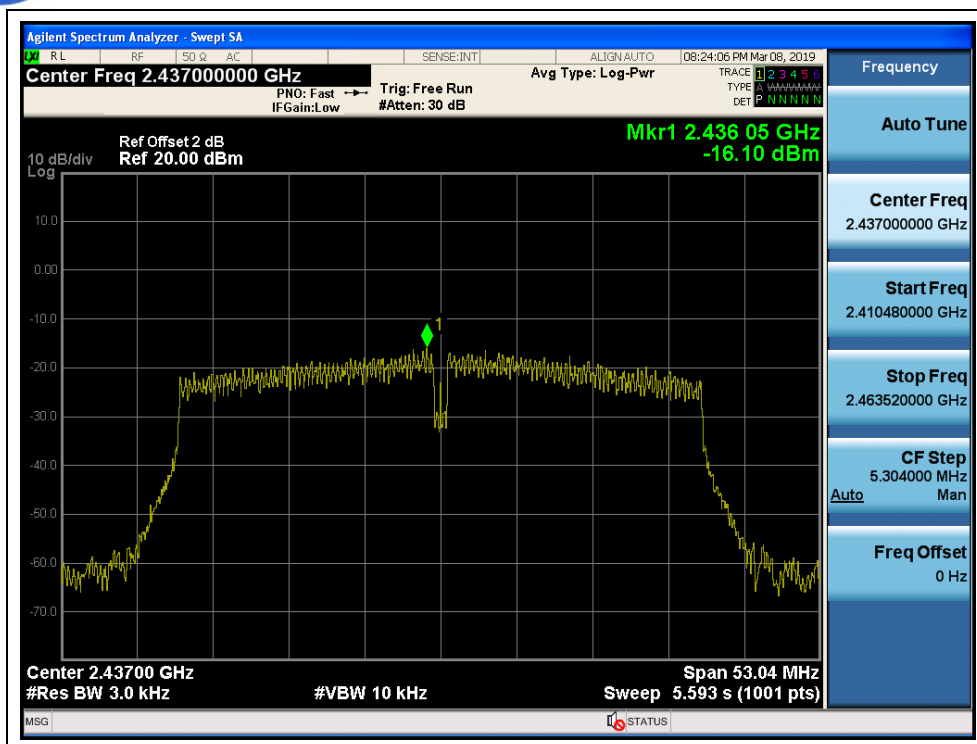
### A. Test Verdict:

| Spectral power density (dBm/3kHz) |                 |                         |                  |         |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel                           | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 3                                 | 2422            | -16.59                  | 8                | PASS    |
| 6                                 | 2437            | -16.10                  | 8                | PASS    |
| 9                                 | 2452            | -16.29                  | 8                | PASS    |

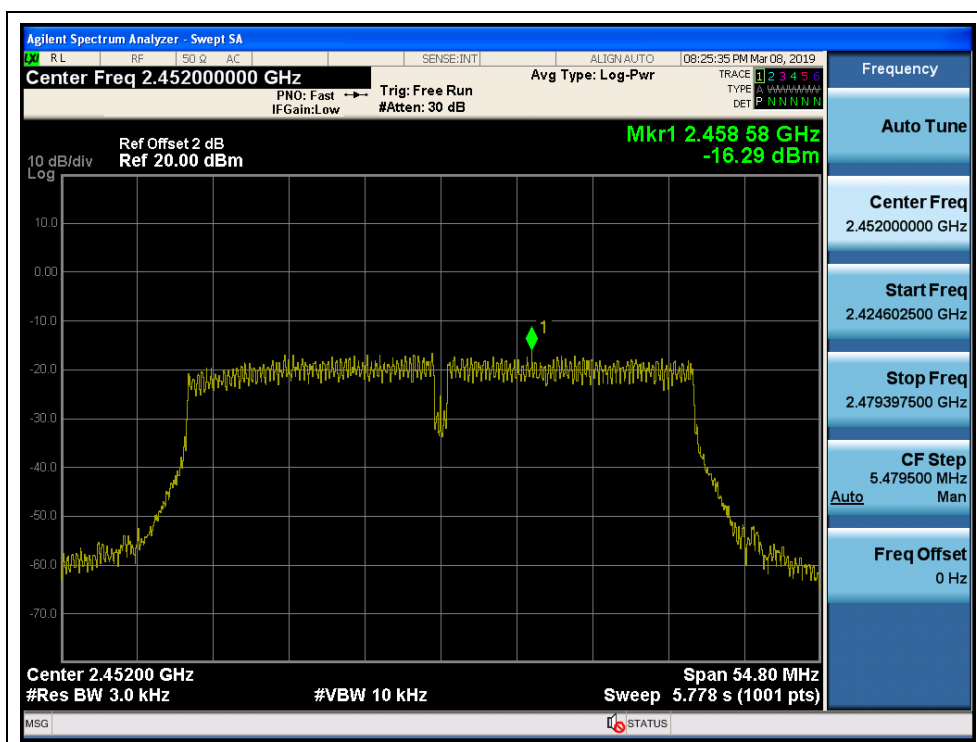
### B. Test Plots:



(Channel = 3, 802.11n-40MHz)



(Channel = 6, 802.11n-40MHz)



(Channel = 9, 802.11n-40MHz)

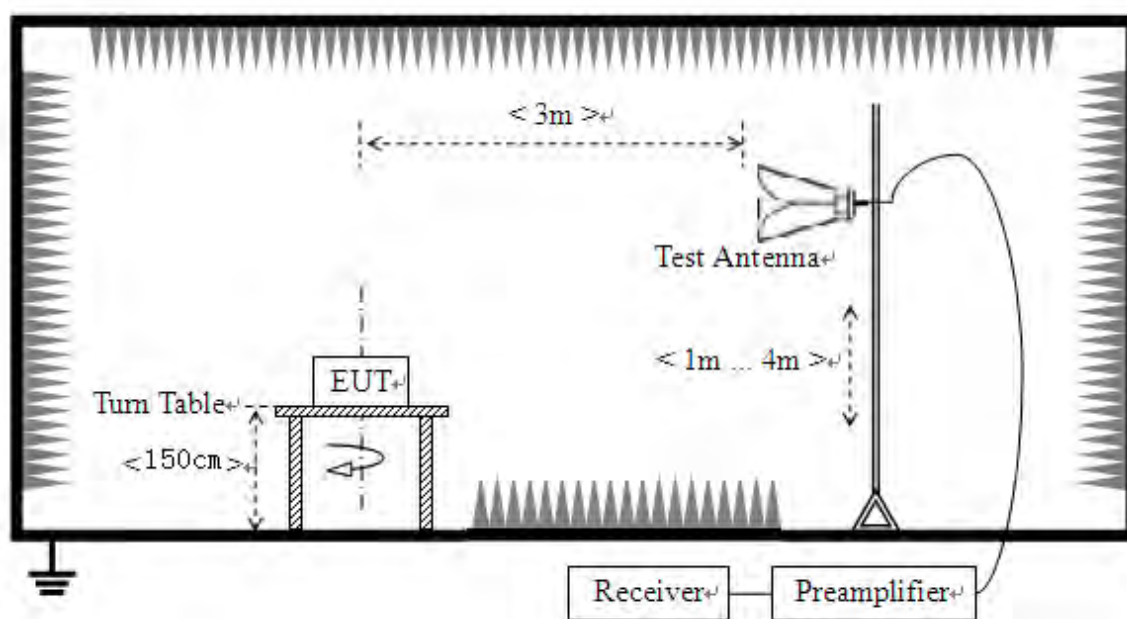
## 2.6. Restricted Frequency Bands

### 2.6.1. Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 2.6.2. Test Description

#### A. Test Setup



The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

KDB558074 D01 V05R02 Section 12.1 was used in order to prove compliance.



For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasipeak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

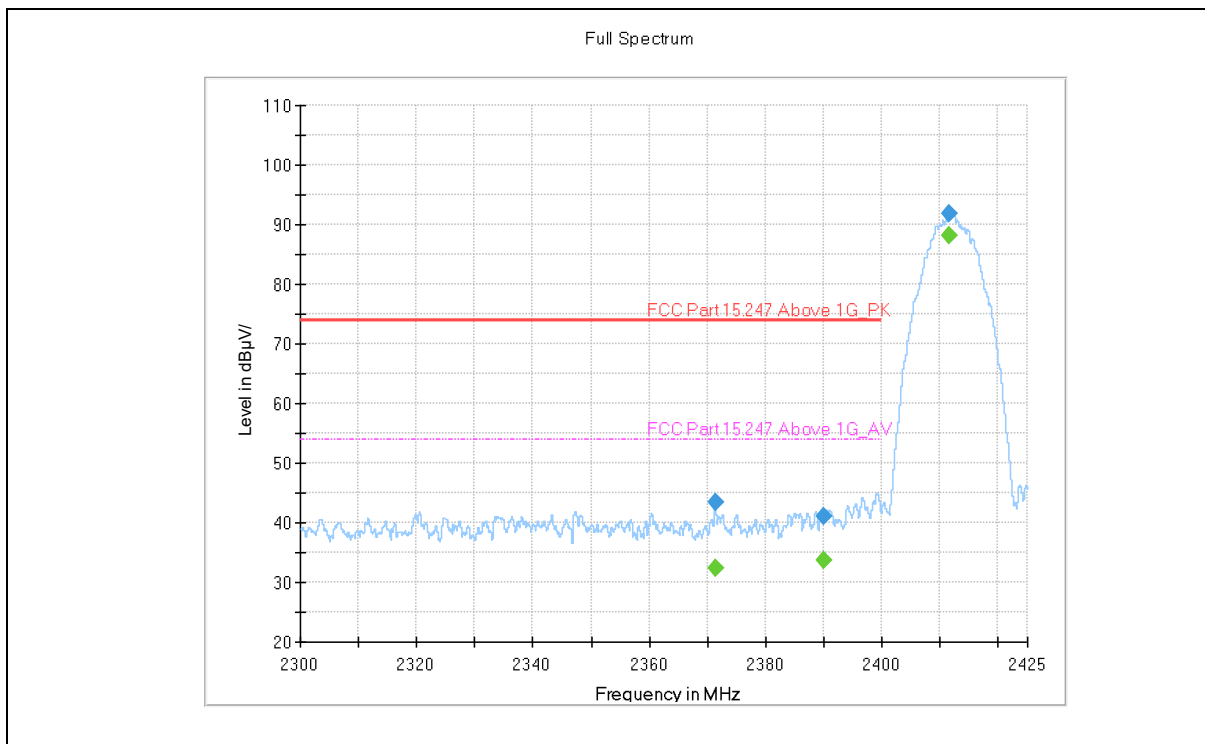
## **B. Equipments List:**

Please refer ANNEX B(4).



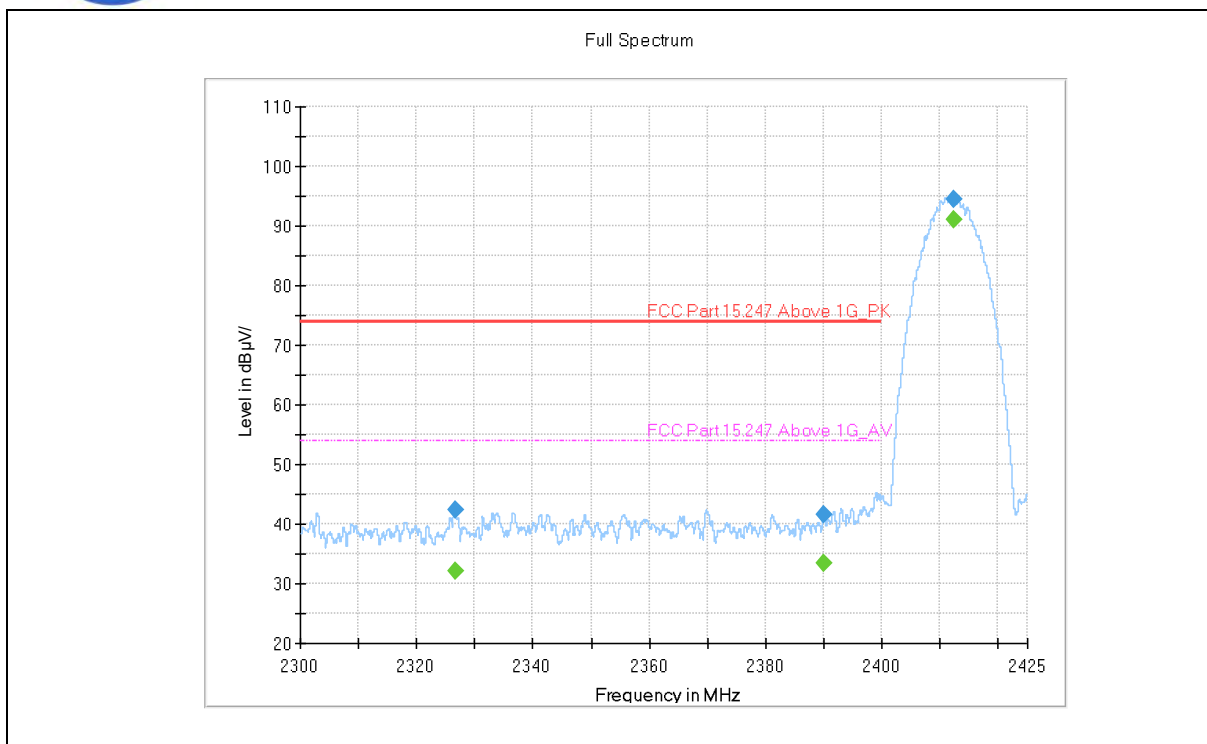
### 2.6.3. Test Result

#### 802.11b Test mode



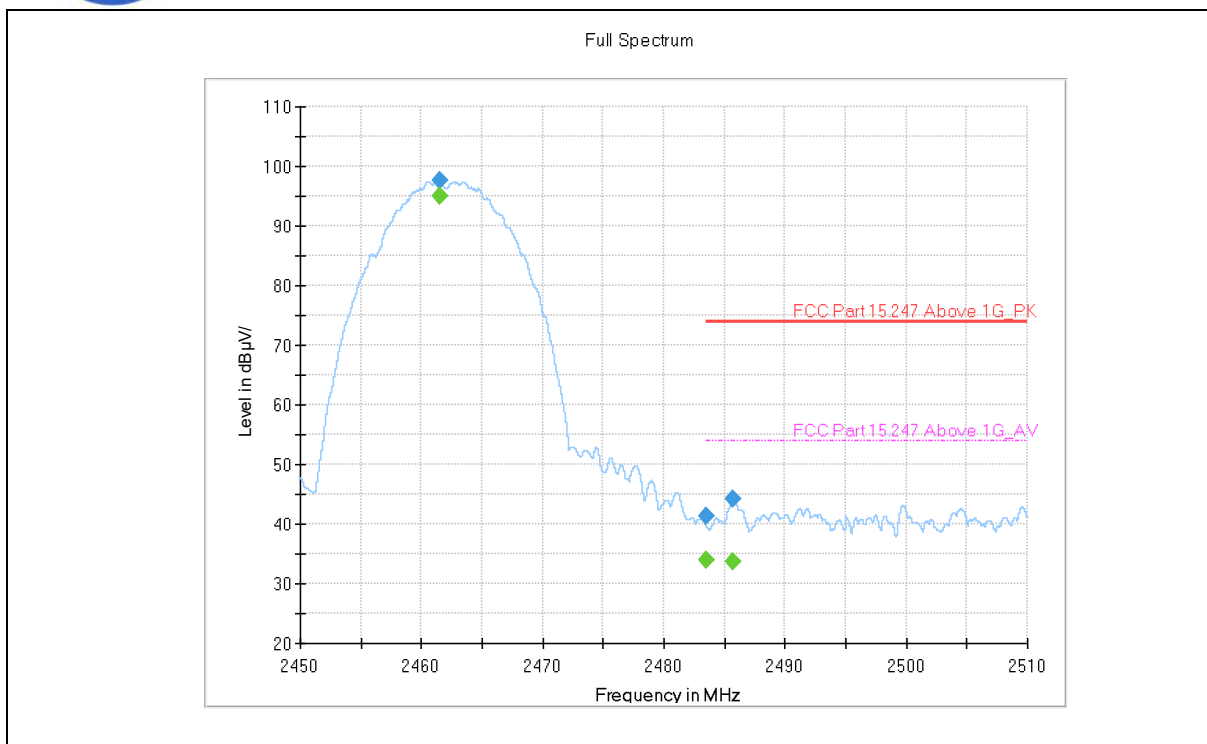
(802.11b \_2412MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2371.312500     | ---              | 32.25            | 54.00          | 24.32       | H   | 7.3          |
| 2371.312500     | 43.30            | ---              | 74.00          | 14.65       | H   | 7.3          |
| 2390.006945     | 41.04            | ---              | 74.00          | 24.34       | H   | 8.0          |
| 2390.006945     | ---              | 33.62            | 54.00          | 13.58       | H   | 8.0          |
| 2411.631945     | 91.83            | ---              | ---            | ---         | H   | 8.7          |
| 2411.631945     | ---              | 88.29            | ---            | ---         | H   | 8.7          |



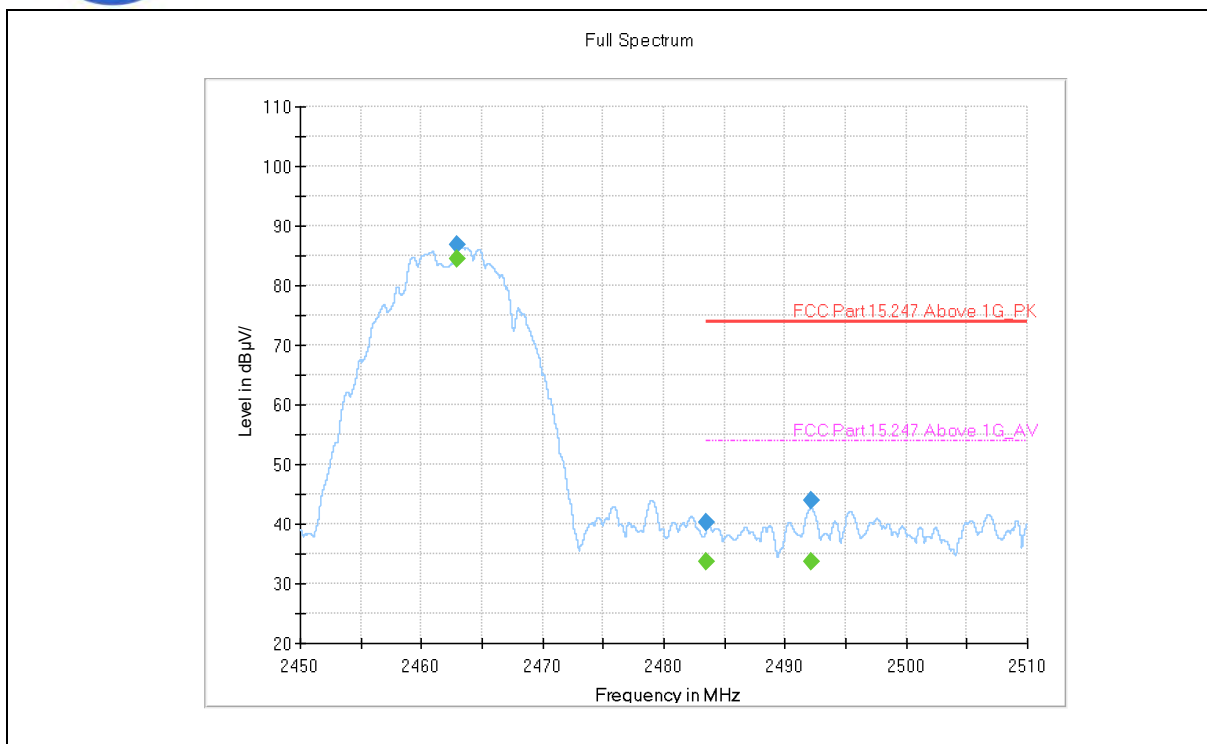
(802.11b \_2412MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2326.680556     | ---                    | 32.17                  | 54.00                | 32.24       | V   | 7.3          |
| 2326.680556     | 42.34                  | ---                    | 74.00                | 22.24       | V   | 7.3          |
| 2390.006945     | 41.64                  | ---                    | 74.00                | 35.94       | V   | 8.0          |
| 2390.006945     | ---                    | 33.45                  | 54.00                | 23.08       | V   | 8.0          |
| 2412.465278     | 94.42                  | ---                    | ---                  | ---         | V   | 8.7          |
| 2412.465278     | ---                    | 90.97                  | ---                  | ---         | V   | 8.7          |



(802.11b \_2462MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2461.453333     | ---              | 94.92            | ---            | ---         | H   | 7.9          |
| 2461.453333     | 97.75            | ---              | ---            | ---         | H   | 7.9          |
| 2483.503333     | 41.23            | ---              | 74.00          | 32.77       | H   | 8.3          |
| 2483.503333     | ---              | 33.95            | 54.00          | 20.05       | H   | 8.3          |
| 2485.740000     | 44.15            | ---              | 74.00          | 29.85       | H   | 8.3          |
| 2485.740000     | ---              | 33.57            | 54.00          | 20.43       | H   | 8.3          |

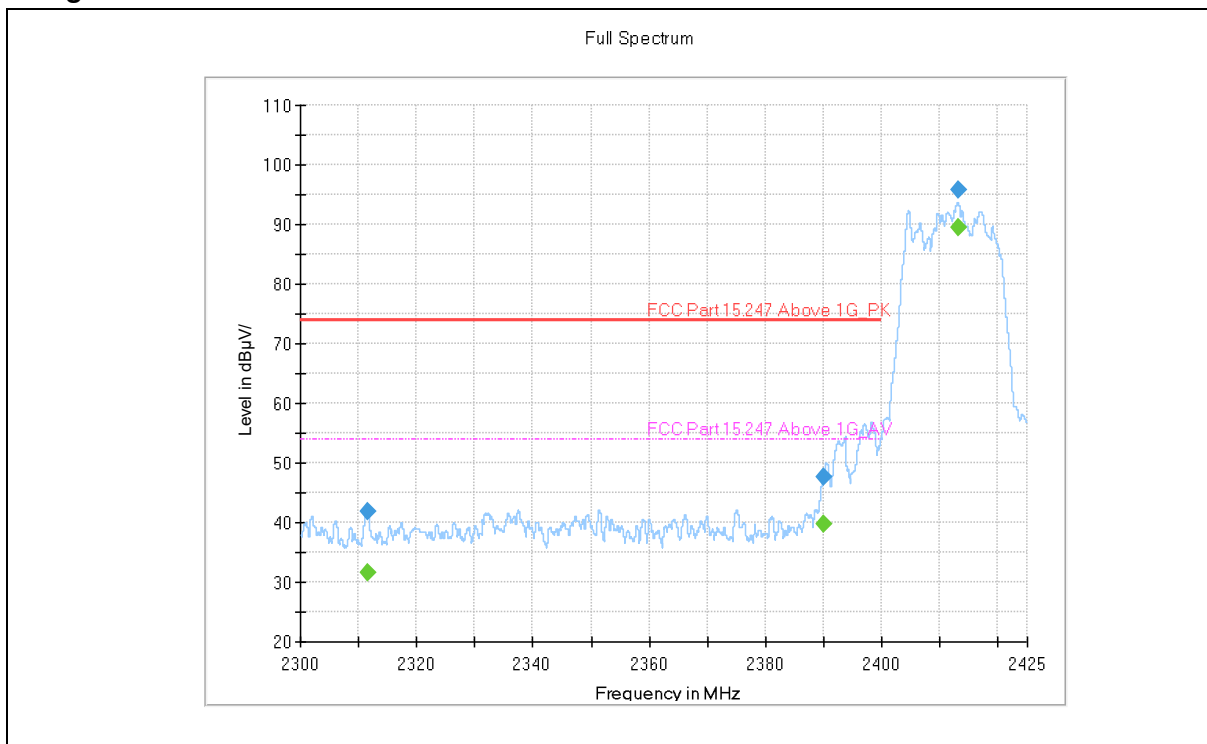


(802.11b \_2462MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2459.196667     | ---              | 91.97            | ---            | ---         | V   | 7.9          |
| 2459.196667     | 94.83            | ---              | ---            | ---         | V   | 7.9          |
| 2483.506667     | ---              | 29.72            | 54.00          | 24.28       | V   | 8.3          |
| 2483.506667     | 38.59            | ---              | 74.00          | 35.41       | V   | 8.3          |
| 2500.476667     | ---              | 29.60            | 54.00          | 24.40       | V   | 8.4          |
| 2500.476667     | 40.43            | ---              | 74.00          | 33.57       | V   | 8.4          |

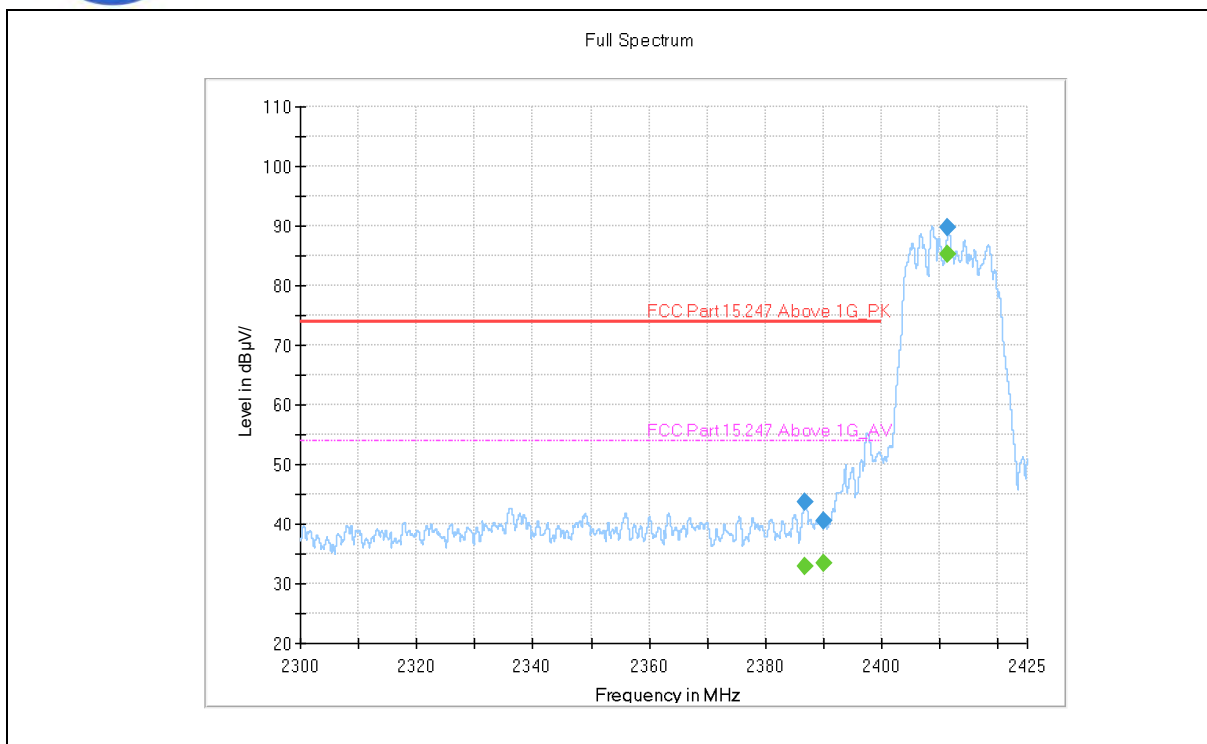


# 802.11g Test mode



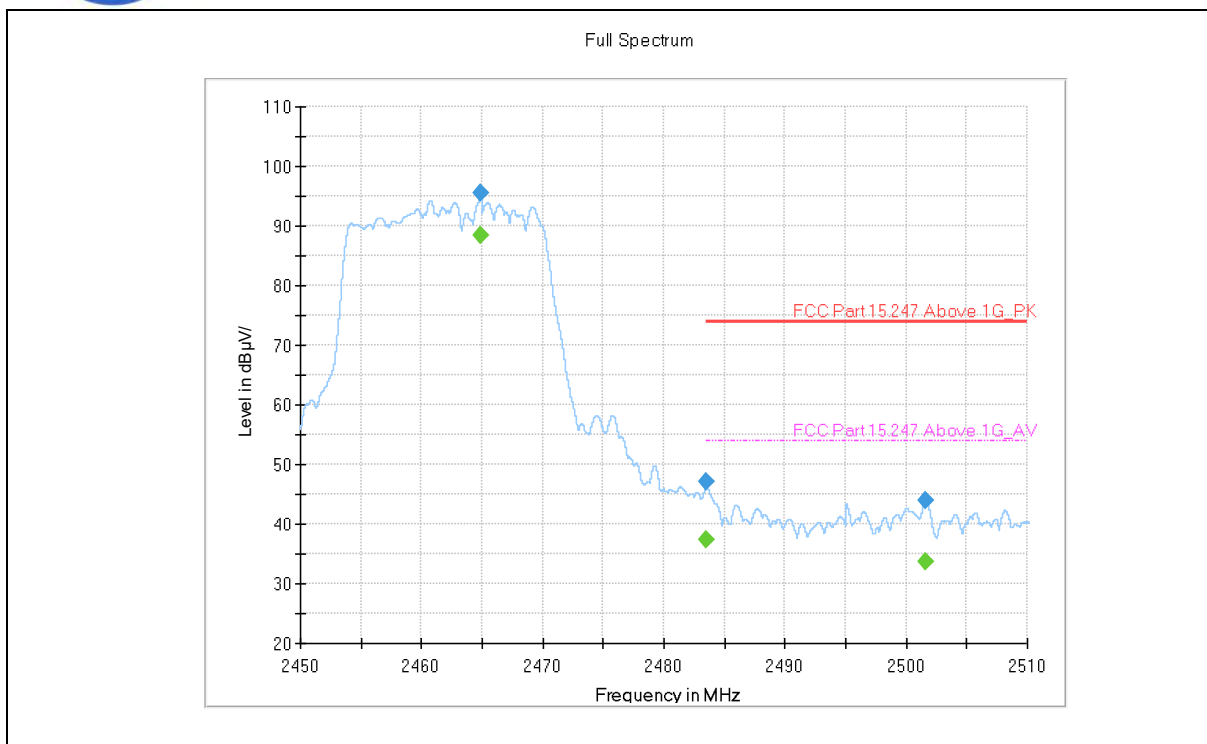
(802.11g \_2412MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2311.493056     | ---              | 31.58            | 54.00          | 22.42       | H   | 6.8          |
| 2311.493056     | 41.75            | ---              | 74.00          | 32.25       | H   | 6.8          |
| 2390.000000     | ---              | 39.75            | 54.00          | 14.25       | H   | 8.0          |
| 2390.000000     | 47.69            | ---              | 74.00          | 26.31       | H   | 8.0          |
| 2413.243056     | ---              | 89.57            | ---            | ---         | H   | 8.6          |
| 2413.243056     | 95.78            | ---              | ---            | ---         | H   | 8.6          |



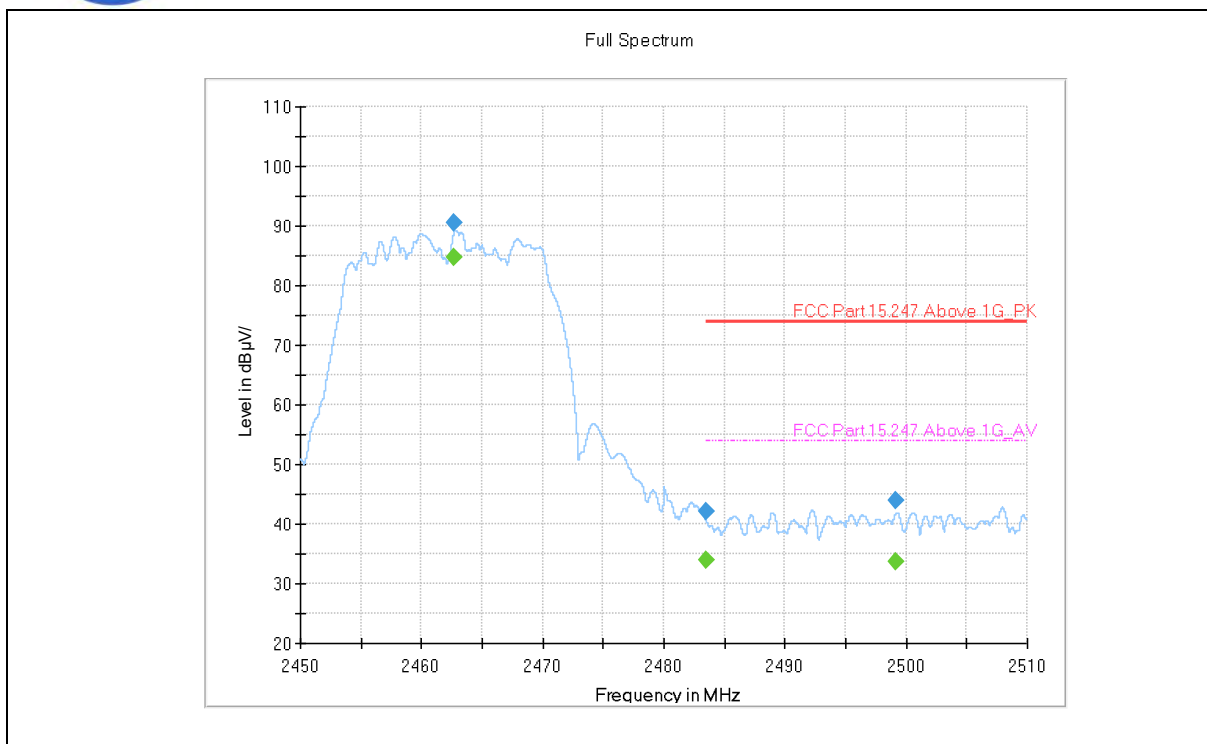
(802.11g \_2412MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2386.763889     | 43.57                  | ---                    | 74.00                | 30.43       | V   | 7.8          |
| 2386.763889     | ---                    | 32.94                  | 54.00                | 21.06       | V   | 7.8          |
| 2390.000000     | ---                    | 33.47                  | 54.00                | 20.53       | V   | 8.0          |
| 2390.000000     | 40.44                  | ---                    | 74.00                | 33.56       | V   | 8.0          |
| 2411.361111     | 89.78                  | ---                    | ---                  | ---         | V   | 8.7          |
| 2411.361111     | ---                    | 85.20                  | ---                  | ---         | V   | 8.7          |



(802.11g \_2462MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2464.823333     | ---                    | 88.35                  | ---                  | ---         | H   | 7.9          |
| 2464.823333     | 95.49                  | ---                    | ---                  | ---         | H   | 7.9          |
| 2483.550000     | ---                    | 37.34                  | 54.00                | 16.66       | H   | 8.3          |
| 2483.550000     | 47.02                  | ---                    | 74.00                | 26.98       | H   | 8.3          |
| 2501.630000     | ---                    | 33.65                  | 54.00                | 20.35       | H   | 8.3          |
| 2501.630000     | 43.97                  | ---                    | 74.00                | 30.03       | H   | 8.3          |

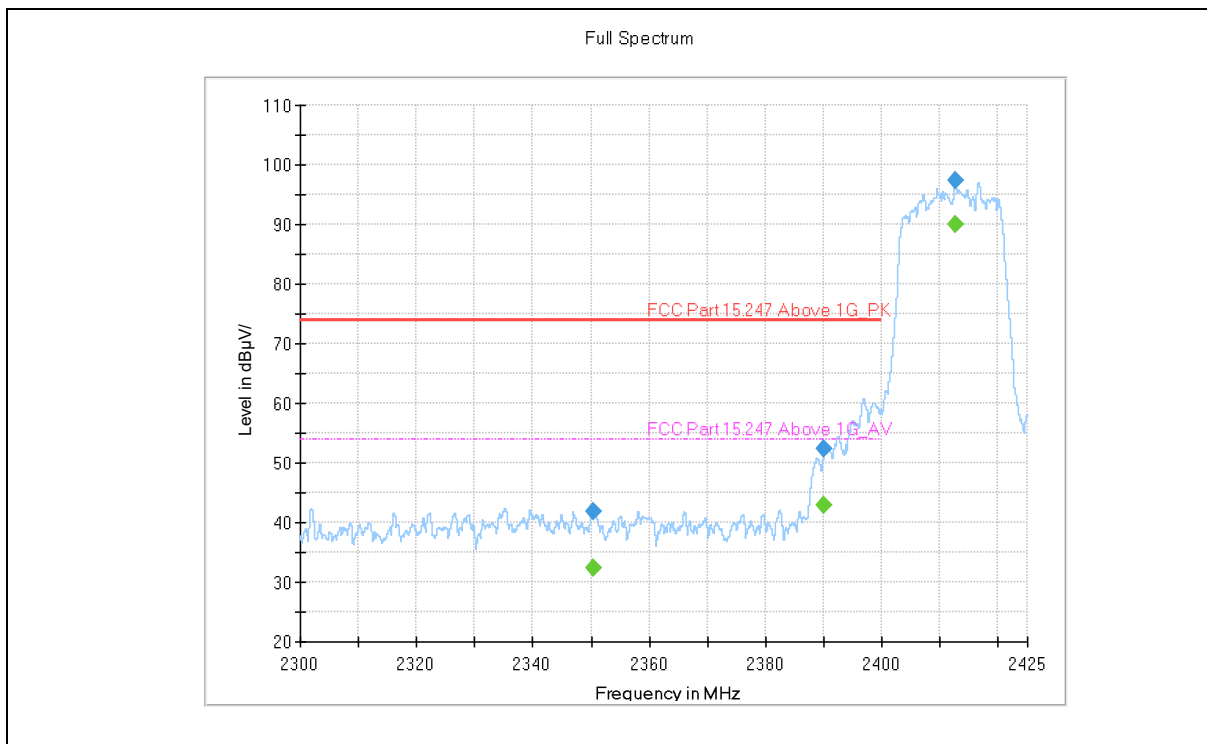


(802.11g \_2462MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2462.680000     | 90.41                  | ---                    | ---                  | ---         | V   | 7.9          |
| 2462.680000     | ---                    | 84.83                  | ---                  | ---         | V   | 7.9          |
| 2483.503333     | 42.18                  | ---                    | 74.00                | 31.82       | V   | 8.3          |
| 2483.503333     | ---                    | 33.83                  | 54.00                | 20.17       | V   | 8.3          |
| 2499.113333     | ---                    | 33.65                  | 54.00                | 20.35       | V   | 8.4          |
| 2499.113333     | 43.96                  | ---                    | 74.00                | 30.04       | V   | 8.4          |

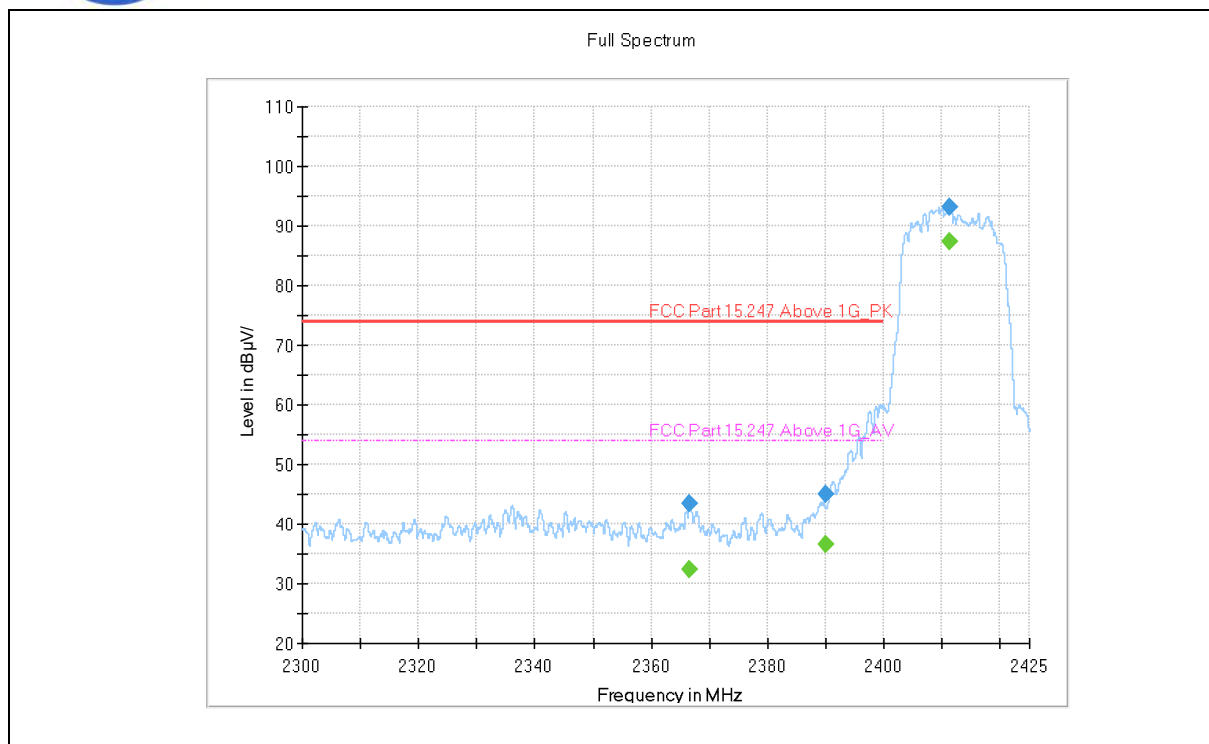


## 802.11n-20MHz Test mode



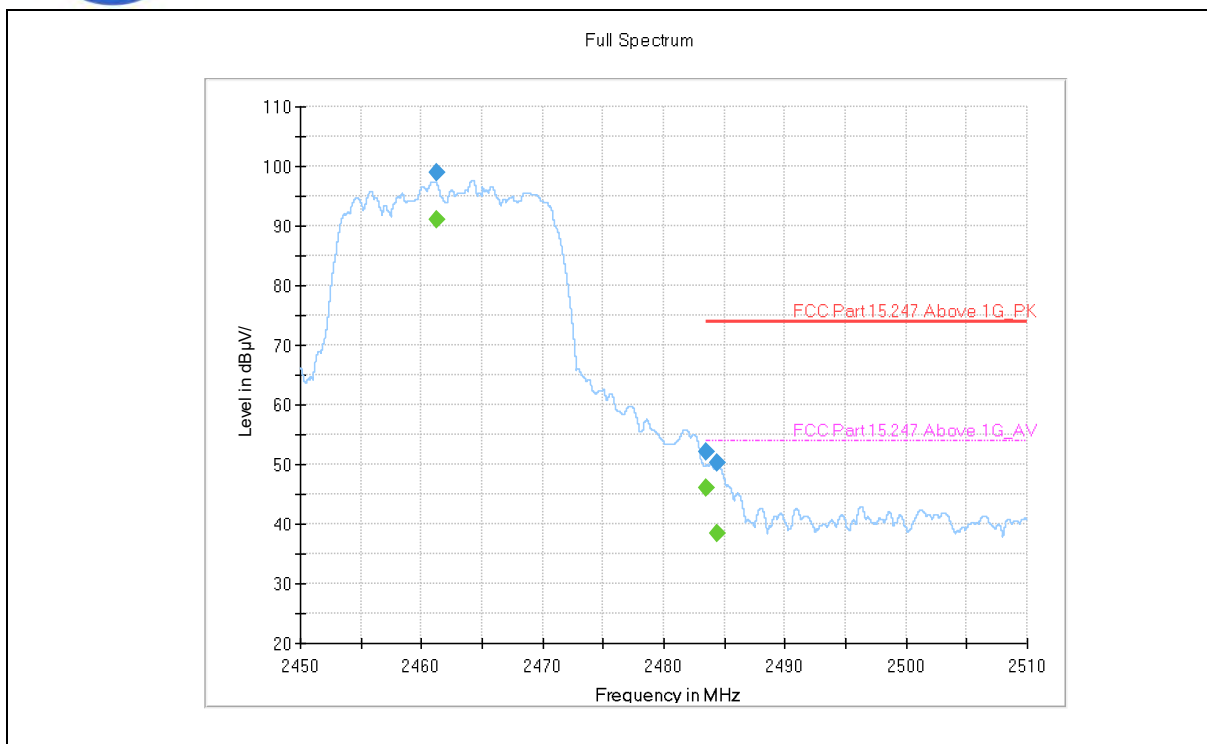
(802.11n\_20M\_2412MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2350.479167     | ---                    | 32.32                  | 54.00                | 21.68       | H   | 7.7          |
| 2350.479167     | 41.91                  | ---                    | 74.00                | 32.09       | H   | 7.7          |
| 2390.069445     | ---                    | 43.02                  | 54.00                | 10.98       | H   | 8.0          |
| 2390.069445     | 52.31                  | ---                    | 74.00                | 21.69       | H   | 8.0          |
| 2412.597222     | ---                    | 89.91                  | ---                  | ---         | H   | 8.6          |
| 2412.597222     | 97.39                  | ---                    | ---                  | ---         | H   | 8.6          |



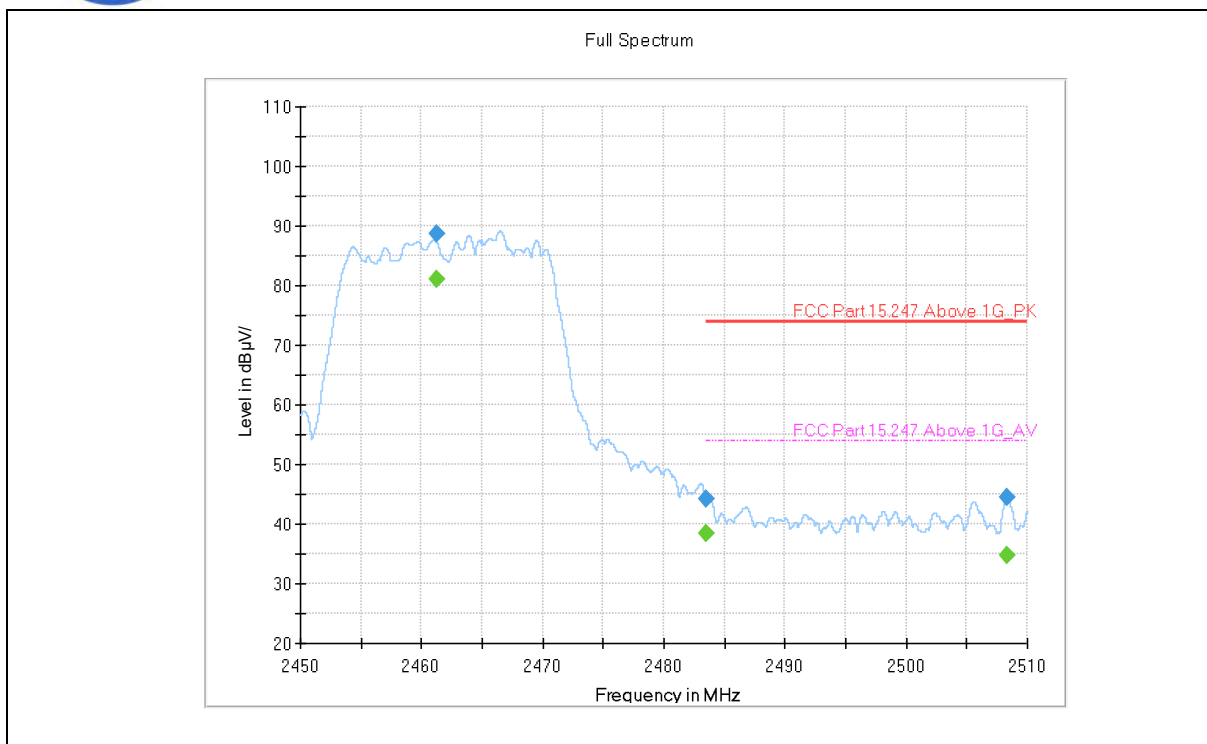
(802.11n\_20M\_2412MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2366.465278     | 43.36                  | ---                    | 74.00                | 30.64       | V   | 7.4          |
| 2366.465278     | ---                    | 32.34                  | 54.00                | 21.66       | V   | 7.4          |
| 2390.041667     | 45.12                  | ---                    | 74.00                | 18.88       | V   | 8.0          |
| 2390.041667     | ---                    | 36.55                  | 54.00                | 17.45       | V   | 8.0          |
| 2411.361111     | ---                    | 87.38                  | ---                  | ---         | V   | 8.7          |
| 2411.361111     | 93.14                  | ---                    | ---                  | ---         | V   | 8.7          |



(802.11n\_20M\_2462MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2461.300000     | ---              | 91.09            | ---            | ---         | H   | 7.9          |
| 2461.300000     | 98.84            | ---              | ---            | ---         | H   | 7.9          |
| 2483.506667     | 52.09            | ---              | 74.00          | 21.91       | H   | 8.3          |
| 2483.506667     | ---              | 45.99            | 54.00          | 8.01        | H   | 8.3          |
| 2484.393333     | 50.20            | ---              | 74.00          | 23.80       | H   | 8.3          |
| 2484.393333     | ---              | 38.39            | 54.00          | 15.61       | H   | 8.3          |

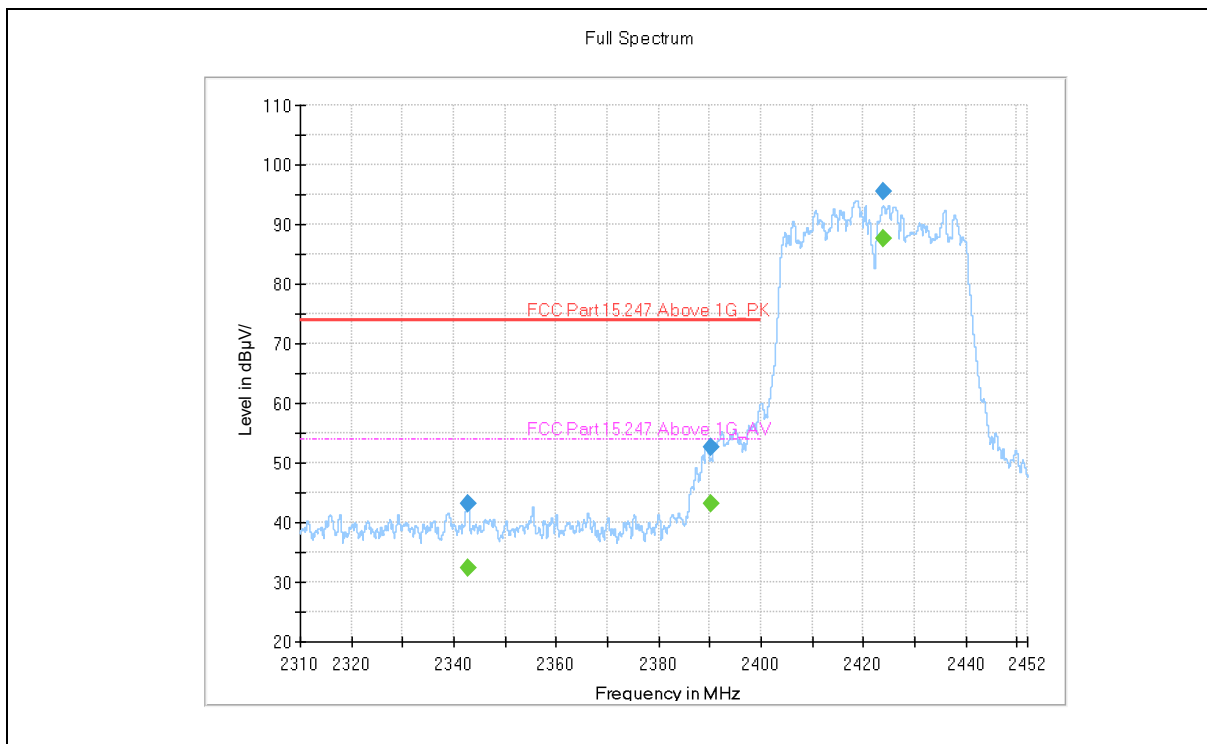


(802.11n\_20M\_2462MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2461.236667     | ---              | 81.17            | ---            | ---         | V   | 7.9          |
| 2461.236667     | 88.71            | ---              | ---            | ---         | V   | 7.9          |
| 2483.500000     | 44.27            | ---              | 74.00          | 29.73       | V   | 8.3          |
| 2483.500000     | ---              | 38.39            | 54.00          | 15.61       | V   | 8.3          |
| 2508.330000     | 44.59            | ---              | 74.00          | 29.41       | V   | 8.3          |
| 2508.330000     | ---              | 34.68            | 54.00          | 19.32       | V   | 8.3          |

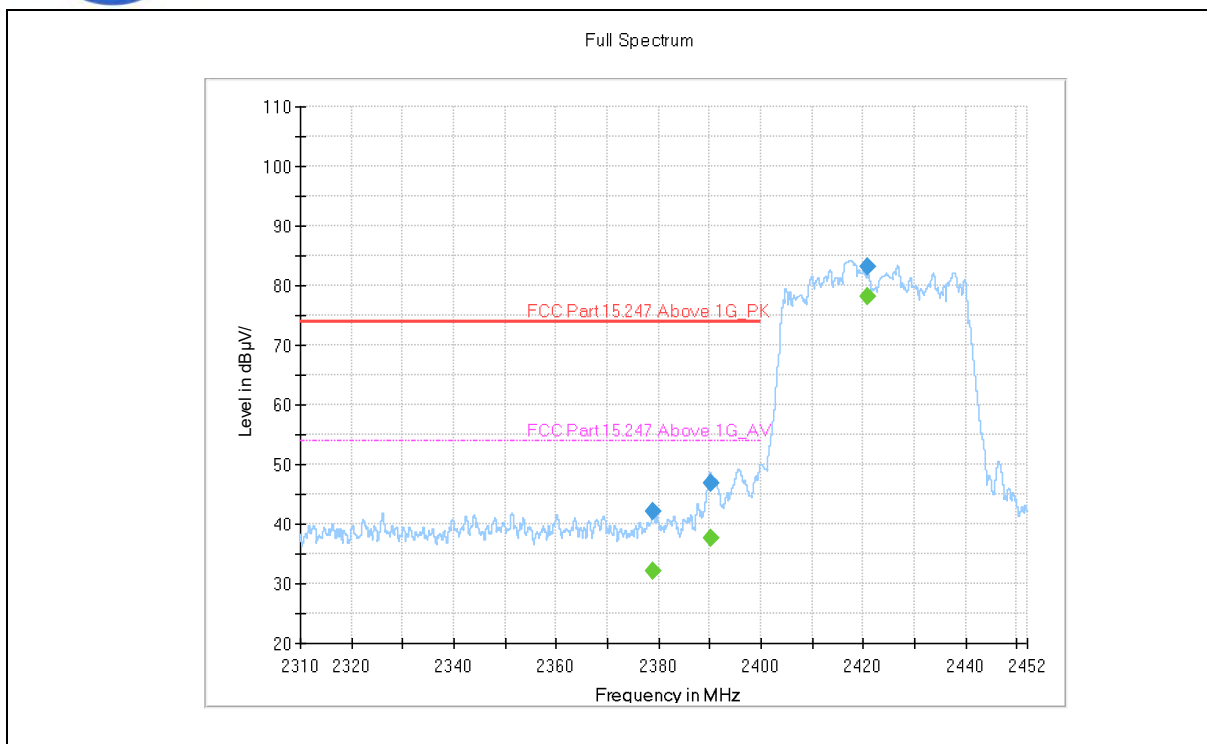


802.11n-40MHz Test mode



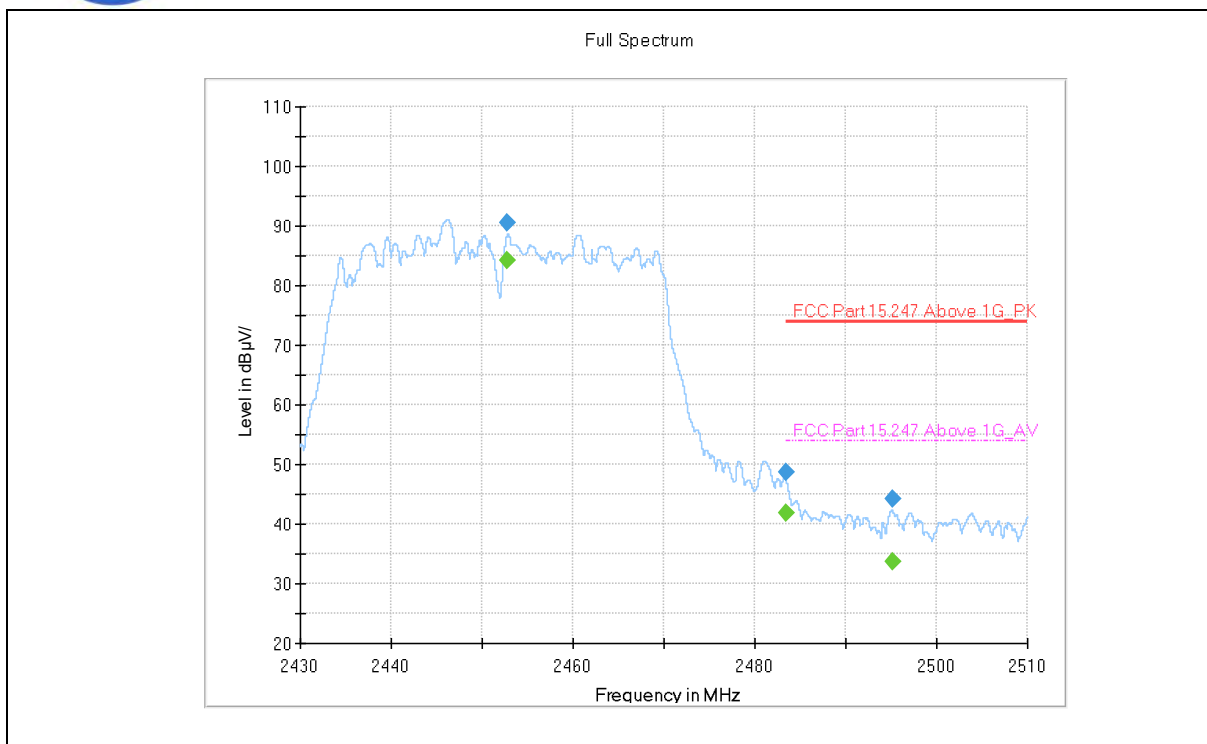
(802.11n\_40M \_2422MHz, Antenna Horizontal)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2342.628445     | ---              | 32.25            | 54.00          | 21.75       | H   | 7.6          |
| 2342.628445     | 43.25            | ---              | 74.00          | 30.75       | H   | 7.6          |
| 2390.056445     | 52.59            | ---              | 74.00          | 21.41       | H   | 8.0          |
| 2390.056445     | ---              | 43.12            | 54.00          | 10.88       | H   | 8.0          |
| 2423.891889     | 95.44            | ---              | ---            | ---         | H   | 8.6          |
| 2423.891889     | ---              | 87.58            | ---            | ---         | H   | 8.6          |

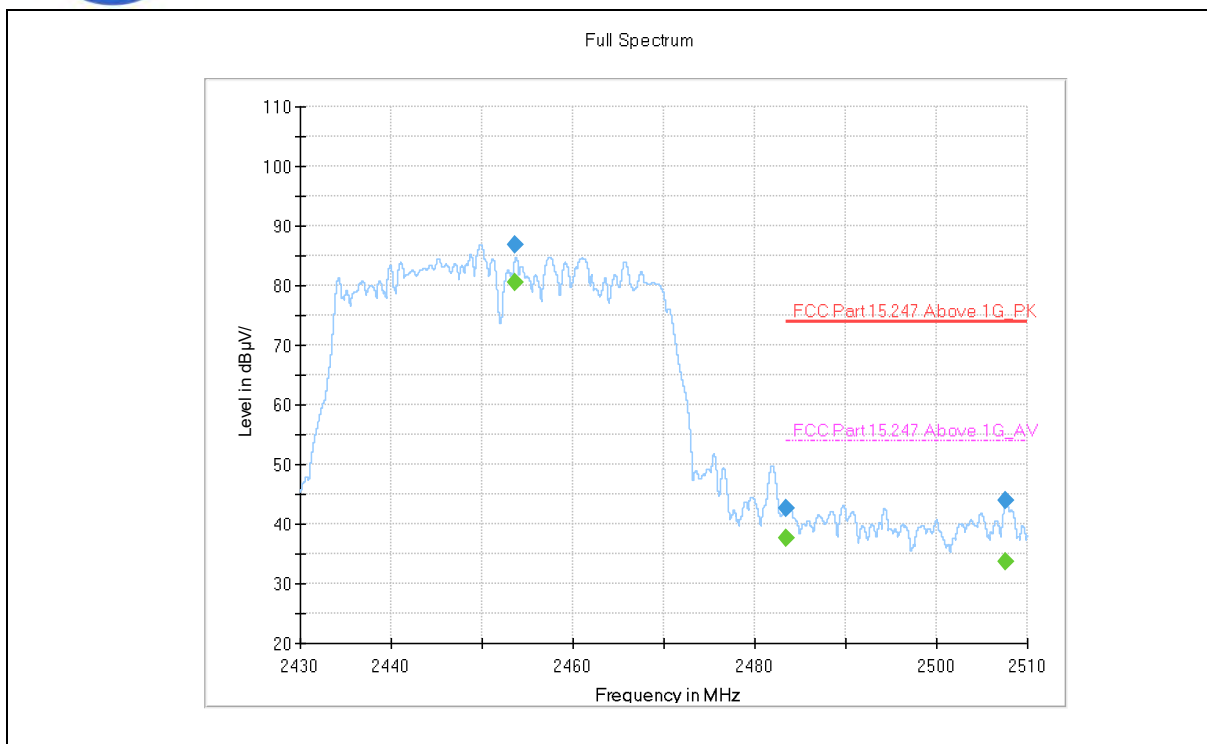


(802.11n\_40M\_2422MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2378.948889     | 42.14            | ---              | 74.00          | 31.86       | V   | 7.3          |
| 2378.948889     | ---              | 32.23            | 54.00          | 21.77       | V   | 7.3          |
| 2390.040667     | ---              | 37.50            | 54.00          | 16.50       | V   | 8.0          |
| 2390.040667     | 46.96            | ---              | 74.00          | 27.04       | V   | 8.0          |
| 2420.720556     | 83.05            | ---              | ---            | ---         | V   | 8.7          |
| 2420.720556     | ---              | 78.13            | ---            | ---         | V   | 8.7          |



| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 2452.715556     | 90.45            | ---              | ---            | ---         | H   | 7.8          |
| 2452.715556     | ---              | 84.09            | ---            | ---         | H   | 7.8          |
| 2483.502222     | 48.75            | ---              | 74.00          | 25.25       | H   | 8.3          |
| 2483.502222     | ---              | 41.77            | 54.00          | 12.23       | H   | 8.3          |
| 2495.164445     | ---              | 33.75            | 54.00          | 20.25       | H   | 8.4          |
| 2495.164445     | 44.19            | ---              | 74.00          | 29.81       | H   | 8.4          |



(802.11n\_40M\_2452MHz, Antenna Vertical)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 2453.702222     | 86.72                  | ---                    | ---                  | ---         | V   | 7.8          |
| 2453.702222     | ---                    | 80.41                  | ---                  | ---         | V   | 7.8          |
| 2483.502222     | ---                    | 37.59                  | 54.00                | 16.41       | V   | 8.3          |
| 2483.502222     | 42.68                  | ---                    | 74.00                | 31.32       | V   | 8.3          |
| 2507.657778     | 43.99                  | ---                    | 74.00                | 30.01       | V   | 8.3          |
| 2507.657778     | ---                    | 33.61                  | 54.00                | 20.39       | V   | 8.3          |

## 2.7. Conducted Emission

### 2.7.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

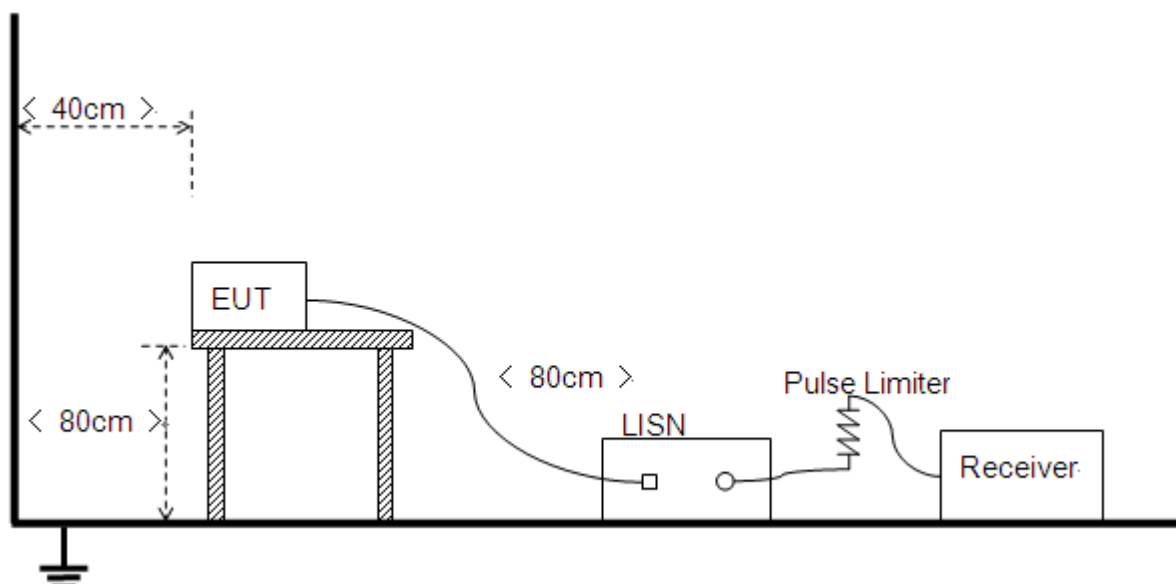
| Frequency range<br>(MHz) | Conducted Limit (dB $\mu$ V) |          |
|--------------------------|------------------------------|----------|
|                          | Quai-peak                    | Average  |
| 0.15 - 0.50              | 66 to 56                     | 56 to 46 |
| 0.50 - 5                 | 56                           | 46       |
| 5 - 30                   | 60                           | 50       |

#### NOTE:

- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

### 2.7.2. Test Description

#### A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10 2013.



## B. Equipments List:

Please refer ANNEX B(4).

### 2.7.3. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

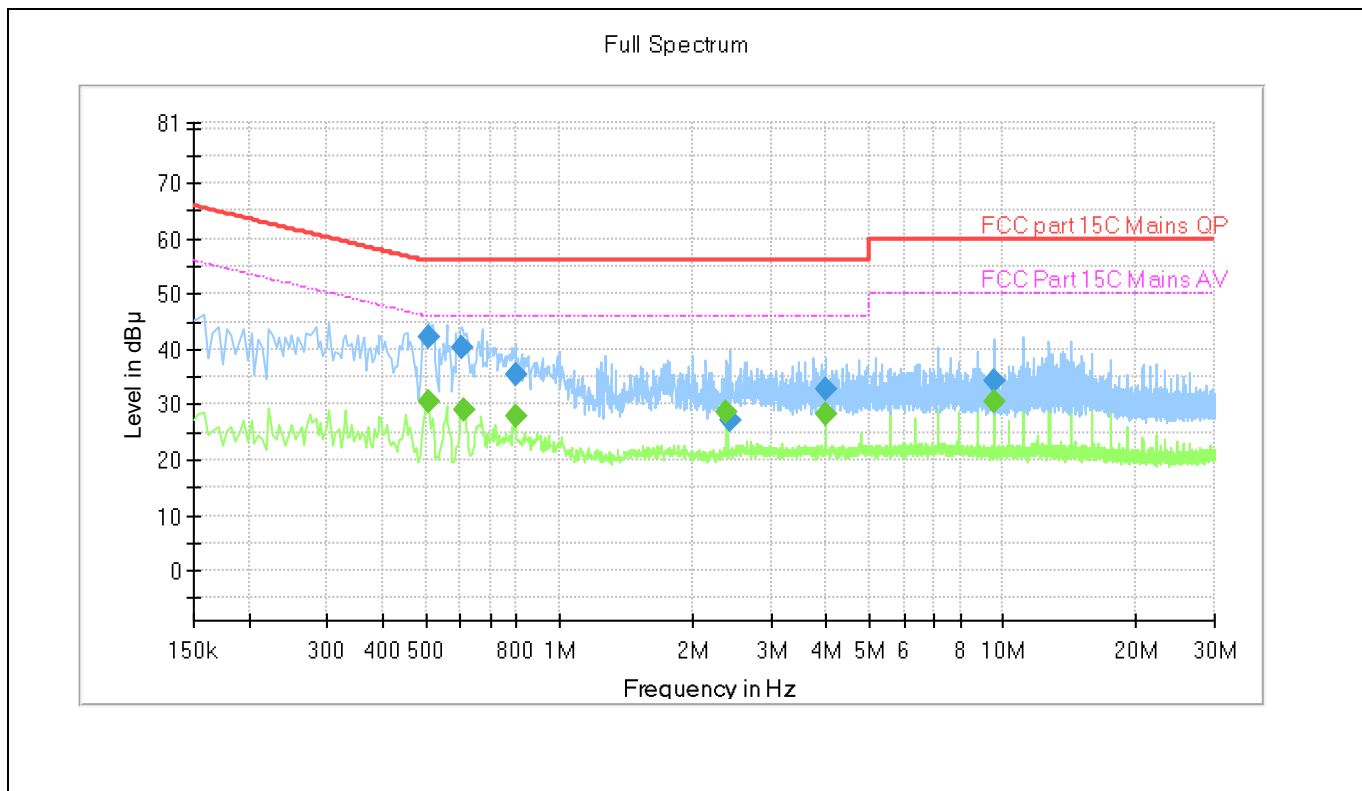
**Note:** Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

#### A. Test setup:

The EUT configuration of the emission tests is EUT +Wlan Link.

**Note:** The test voltage is AC 120V/60Hz.

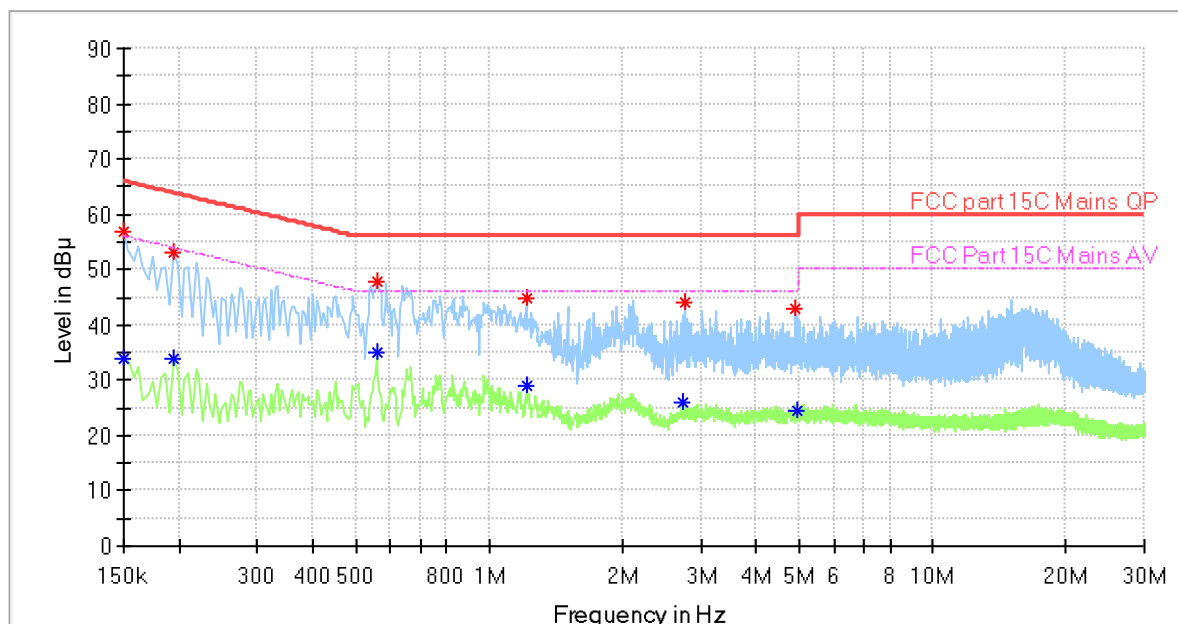
## B. Test Plots:



(Plot A: L Phase)

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.506000        | ---            | 30.50          | 46.00        | 15.50       | L1   | 10.2       |
| 0.510000        | 42.22          | ---            | 56.00        | 13.78       | L1   | 10.2       |
| 0.602000        | 40.31          | ---            | 56.00        | 15.69       | L1   | 10.2       |
| 0.610000        | ---            | 28.85          | 46.00        | 17.15       | L1   | 10.2       |
| 0.798000        | 35.56          | ---            | 56.00        | 20.44       | L1   | 10.2       |
| 0.798000        | ---            | 27.73          | 46.00        | 18.27       | L1   | 10.2       |
| 2.386000        | ---            | 28.77          | 46.00        | 17.23       | L1   | 10.3       |
| 2.434000        | 27.11          | ---            | 56.00        | 28.89       | L1   | 10.3       |
| 3.974000        | 32.71          | ---            | 56.00        | 23.29       | L1   | 10.4       |
| 3.978000        | ---            | 28.16          | 46.00        | 17.84       | L1   | 10.4       |
| 9.538000        | 34.41          | ---            | 60.00        | 25.59       | L1   | 10.7       |
| 9.542000        | ---            | 30.71          | 50.00        | 19.29       | L1   | 10.7       |

Full Spectrum



(Plot A: N Phase)

| Frequency (MHz) | MaxPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.150000        | ---            | 33.97          | 56.00        | 22.03       | N    | 10.2       |
| 0.150000        | 56.72          | ---            | 66.00        | 9.28        | N    | 10.2       |
| 0.194000        | ---            | 33.87          | 53.86        | 19.99       | N    | 10.2       |
| 0.194000        | 53.25          | ---            | 63.86        | 10.62       | N    | 10.2       |
| 0.558000        | ---            | 34.87          | 46.00        | 11.13       | N    | 10.2       |
| 0.558000        | 47.66          | ---            | 56.00        | 8.34        | N    | 10.2       |
| 1.214000        | ---            | 29.04          | 46.00        | 16.96       | N    | 10.3       |
| 1.214000        | 44.89          | ---            | 56.00        | 11.11       | N    | 10.3       |
| 2.746000        | ---            | 25.99          | 46.00        | 20.01       | N    | 10.4       |
| 2.754000        | 43.97          | ---            | 56.00        | 12.03       | N    | 10.4       |
| 4.914000        | 43.08          | ---            | 56.00        | 12.93       | N    | 10.4       |
| 4.942000        | ---            | 24.51          | 46.00        | 21.49       | N    | 10.4       |



## 2.8. Radiated Emission

### 2.8.1. Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength ( $\mu\text{V/m}$ ) | Measurement Distance (m) |
|-----------------|------------------------------------|--------------------------|
| 0.009 - 0.490   | 2400/F(kHz)                        | 300                      |
| 0.490 - 1.705   | 24000/F(kHz)                       | 30                       |
| 1.705 - 30.0    | 30                                 | 30                       |
| 30 - 88         | 100                                | 3                        |
| 88 - 216        | 150                                | 3                        |
| 216 - 960       | 200                                | 3                        |
| Above 960       | 500                                | 3                        |

Note:

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

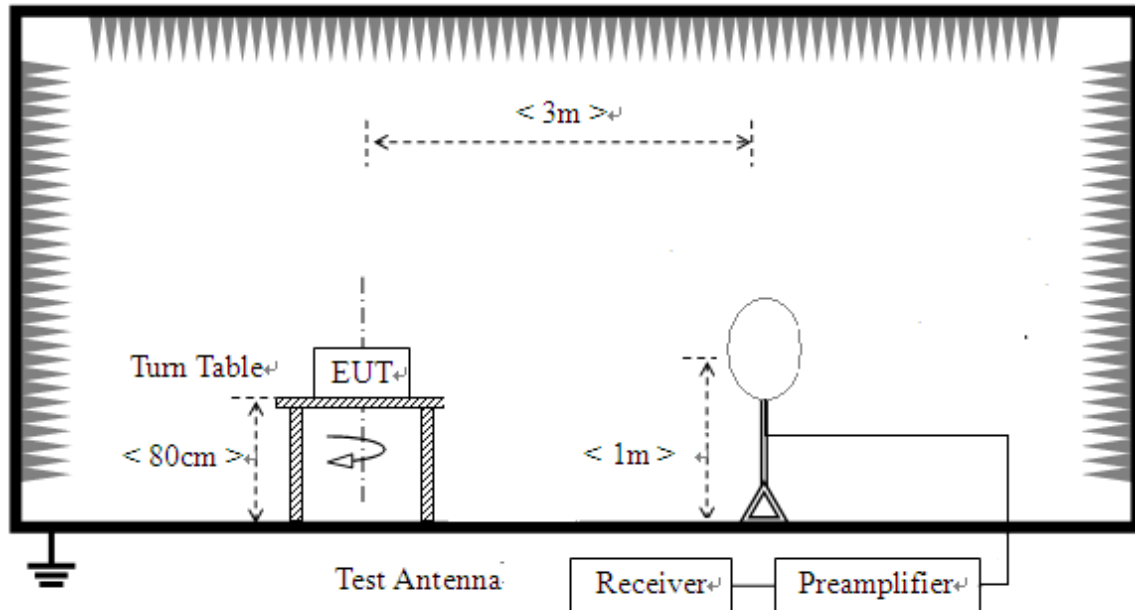
For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK)

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

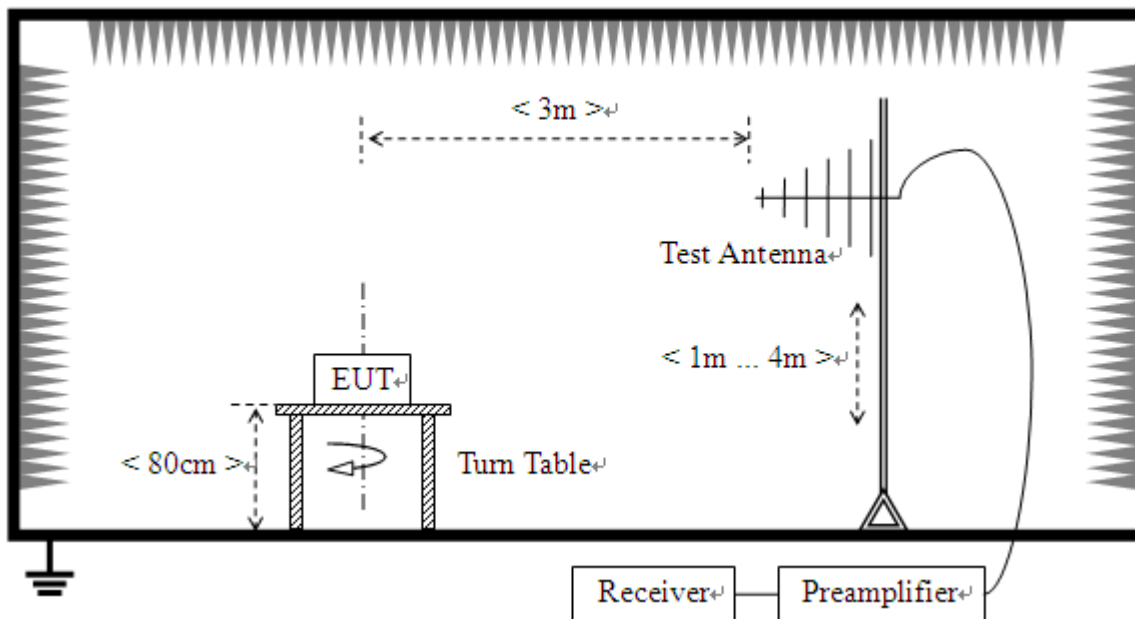
### 2.8.2. Test Description

#### A. Test Setup:

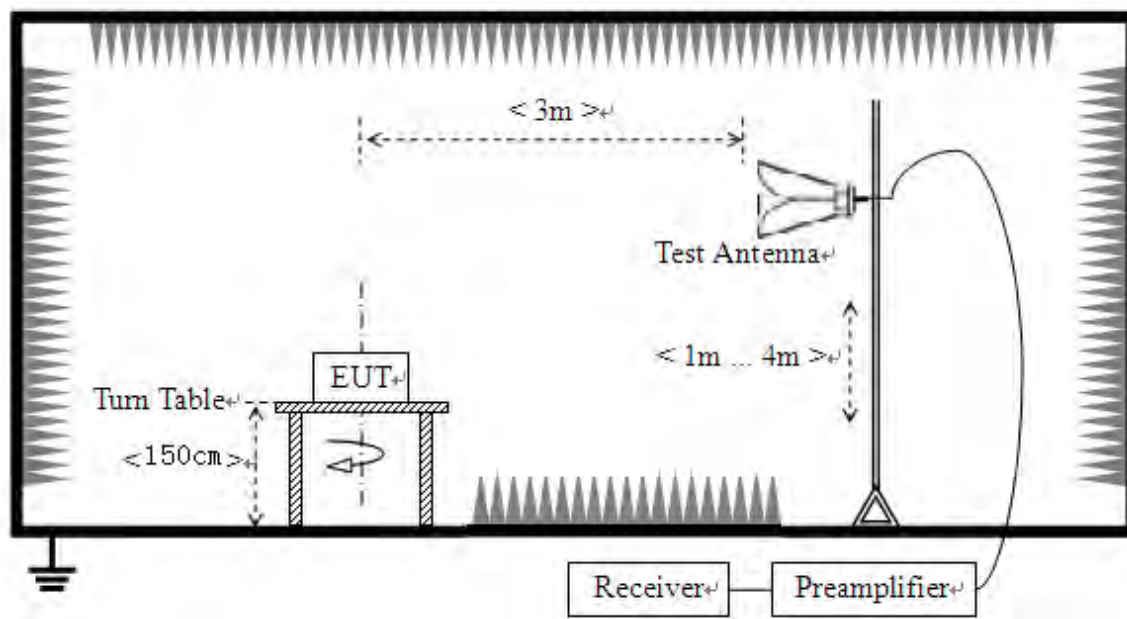
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



The RF absorbing material used on the reference ground plane and on the turntable have a maximum height (thickness) of 30 cm (12 in) and have a minimum-rated attenuation of 20 dB at all frequencies from 1 GHz to 18 GHz. Test site have a minimum area of the ground plane covered with RF absorbing material as specified in Figure 6 of ANSI C63.4: 2014.

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10 (2013). For radiated emissions below or equal to 1GHz, The EUT was set-up on insulator 80cm above the Ground Plane, For radiated emissions above 1GHz, The EUT was set-up on insulator 150cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading



For the Test Antenna:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Place the test antenna at 3m away from area of the EUT, while keeping the test antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The test antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final test antenna elevation shall be that which maximizes the emissions. The test antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. The emission levels at both horizontal and vertical polarizations should be tested.

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are



set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasipeak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.

4. All modes of operation were investigated and the worst-case emissions are reported.

#### **A. Equipments List:**

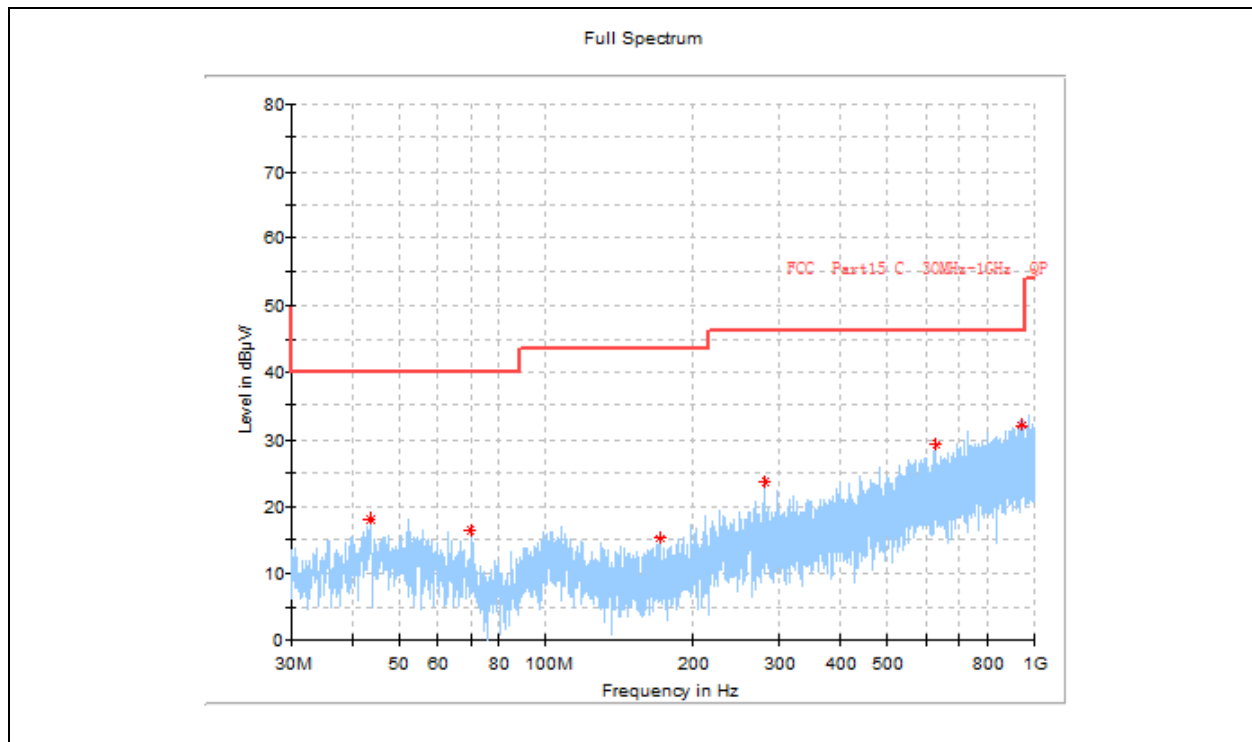
Please refer ANNEX B(4).

### 2.8.3. Test Result

**Note1:** For the frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

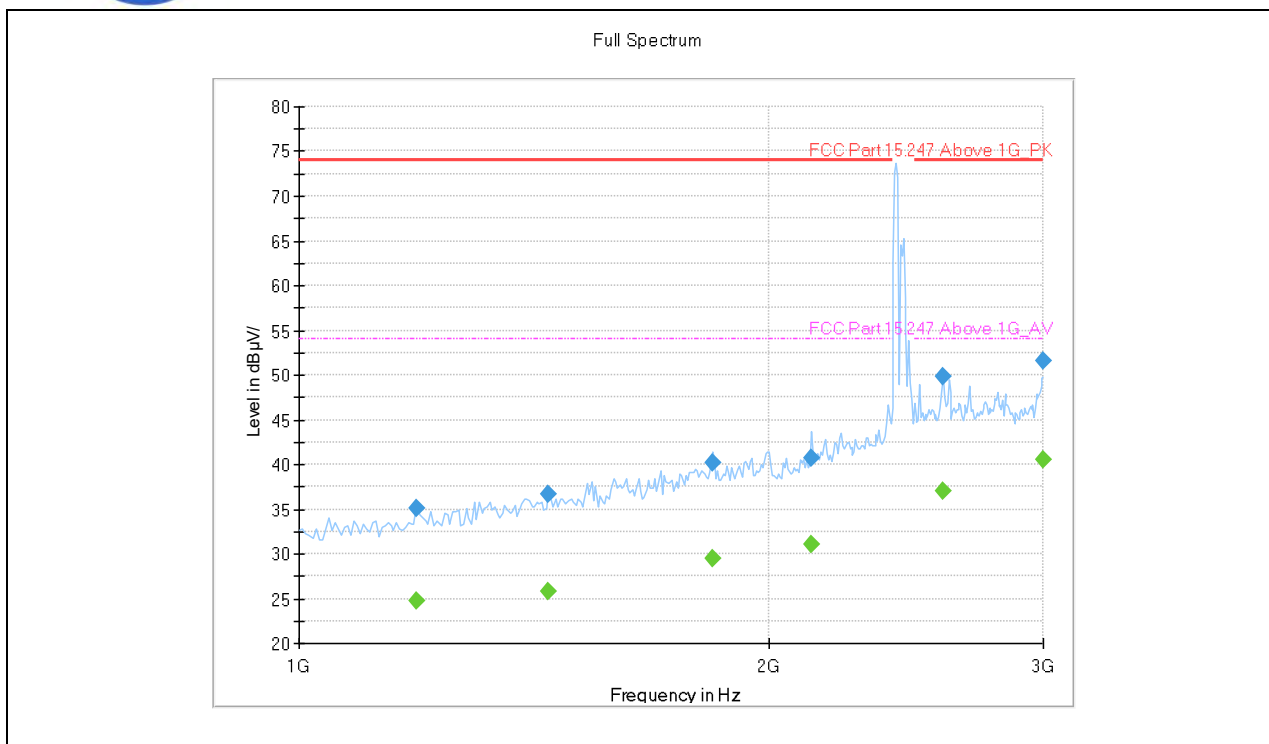
**Note2:** For the frequency, which started from 18GHz to 40GHz, was pre-scanned and the result which was 10dB lower than the limit was not recorded.

#### 802.11b Test mode



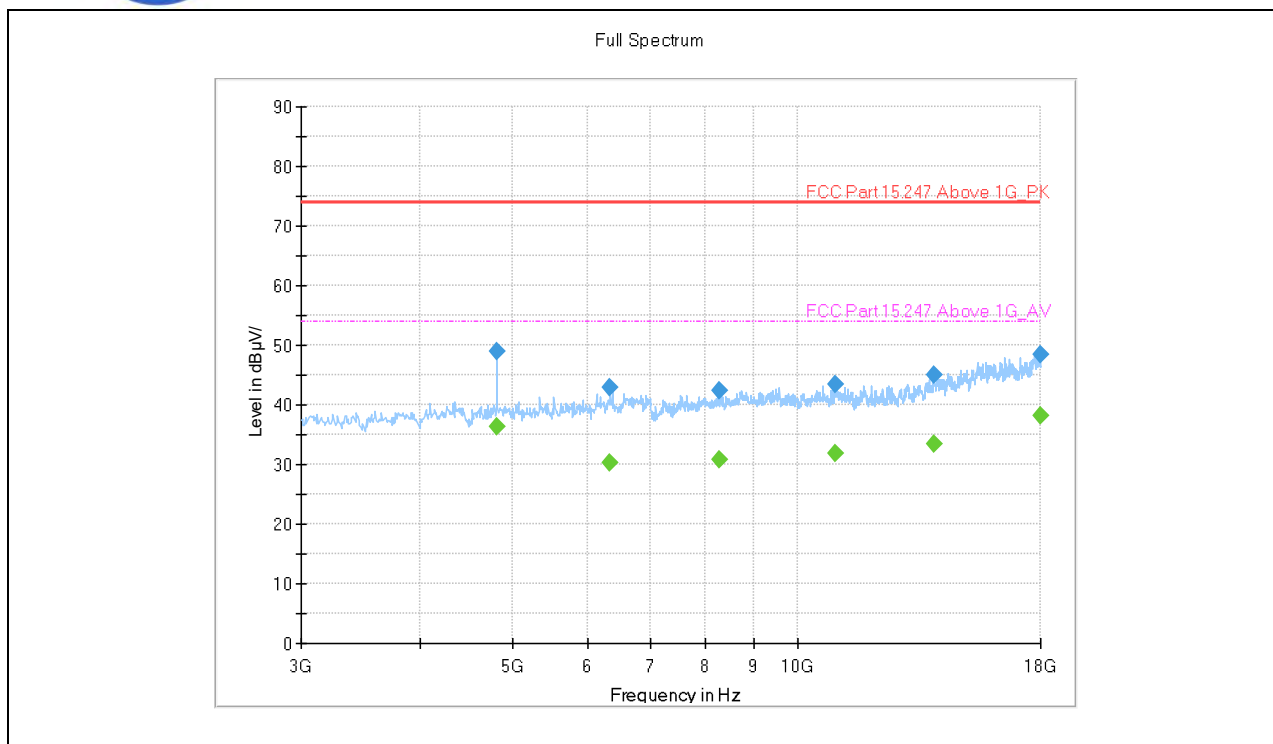
(802.11b \_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 43.660833       | 18.03            | ---                | 40.00          | 21.97       | H   | 15.3         |
| 70.214583       | 16.48            | ---                | 40.00          | 23.52       | H   | 12.0         |
| 171.498750      | 15.11            | ---                | 43.50          | 28.39       | H   | 12.1         |
| 280.583333      | 23.68            | ---                | 46.00          | 22.32       | H   | 16.7         |
| 629.904583      | 29.22            | ---                | 46.00          | 16.78       | H   | 23.9         |
| 944.831250      | 31.94            | ---                | 46.00          | 14.06       | H   | 28.3         |



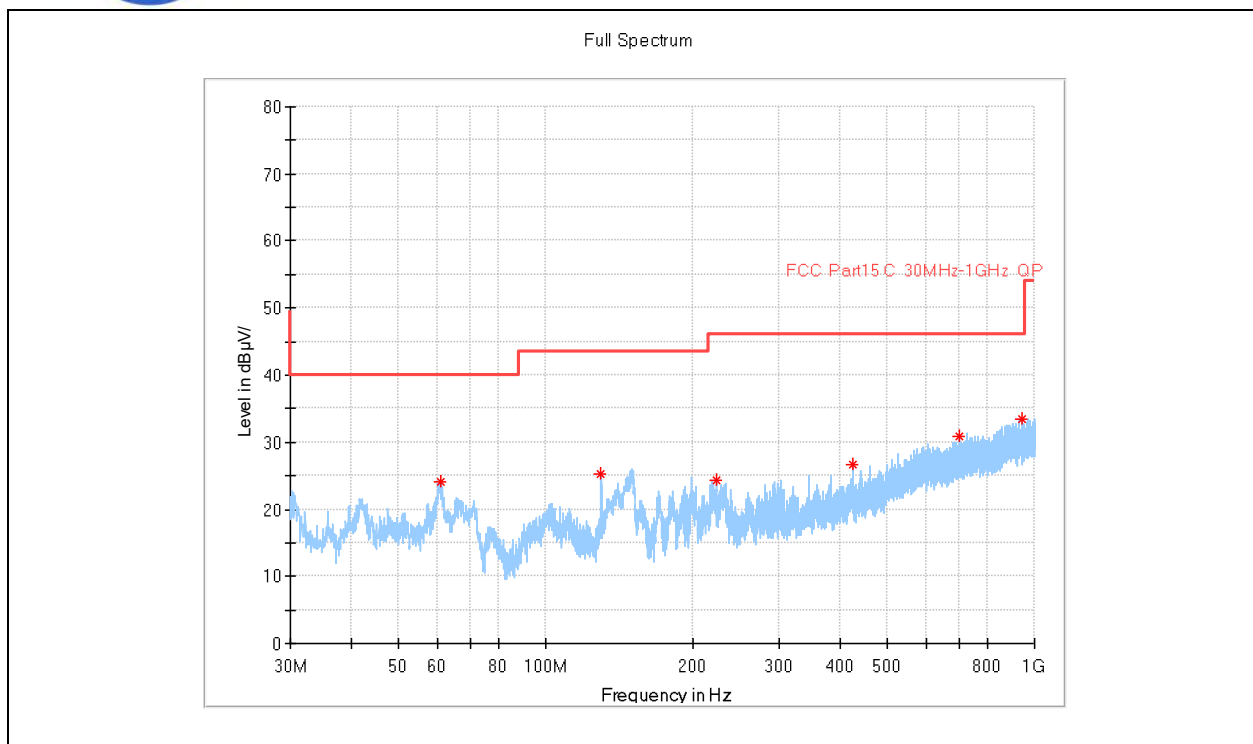
(802.11b \_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1190.000000     | ---                    | 24.70                  | 54.00                | 29.30       | H   | -0.8         |
| 1190.000000     | 35.13                  | ---                    | 74.00                | 38.87       | H   | -0.8         |
| 1445.000000     | 36.75                  | ---                    | 74.00                | 37.25       | H   | 1.1          |
| 1445.000000     | ---                    | 25.82                  | 54.00                | 28.18       | H   | 1.1          |
| 1840.000000     | 40.16                  | ---                    | 74.00                | 33.84       | H   | 5.9          |
| 1840.000000     | ---                    | 29.52                  | 54.00                | 24.48       | H   | 5.9          |
| 2130.000000     | 40.78                  | ---                    | 74.00                | 33.22       | H   | 8.2          |
| 2130.000000     | ---                    | 31.11                  | 54.00                | 22.89       | H   | 8.2          |
| 2590.000000     | ---                    | 37.05                  | 54.00                | 16.95       | H   | 14.5         |
| 2590.000000     | 49.81                  | ---                    | 74.00                | 24.19       | H   | 14.5         |
| 3000.000000     | 51.52                  | ---                    | 74.00                | 22.48       | H   | 18.4         |
| 3000.000000     | ---                    | 40.56                  | 54.00                | 13.44       | H   | 18.4         |



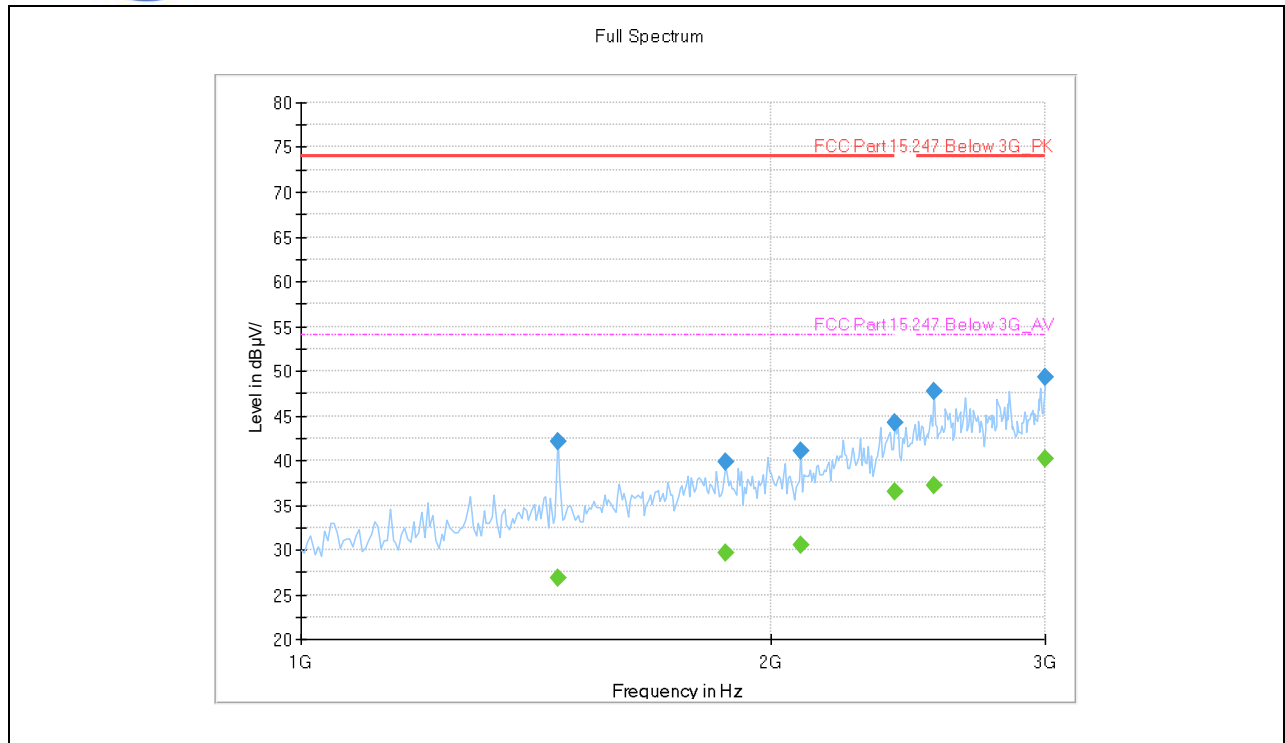
(802.11b \_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4822.500000     | 49.05            | ---              | 74.00          | 24.95       | H   | -3.2         |
| 4822.500000     | ---              | 36.30            | 54.00          | 17.70       | H   | -3.2         |
| 6345.000000     | ---              | 30.33            | 54.00          | 23.67       | H   | -1.0         |
| 6345.000000     | 42.81            | ---              | 74.00          | 31.19       | H   | -1.0         |
| 8265.000000     | ---              | 30.74            | 54.00          | 23.26       | H   | 1.3          |
| 8265.000000     | 42.40            | ---              | 74.00          | 31.60       | H   | 1.3          |
| 10942.50000     | ---              | 31.79            | 54.00          | 22.21       | H   | 3.3          |
| 10942.50000     | 43.34            | ---              | 74.00          | 30.66       | H   | 3.3          |
| 13897.50000     | 45.01            | ---              | 74.00          | 28.99       | H   | 7.6          |
| 13897.50000     | ---              | 33.49            | 54.00          | 20.51       | H   | 7.6          |
| 17992.50000     | ---              | 38.26            | 54.00          | 15.74       | H   | 15.0         |
| 17992.50000     | 48.41            | ---              | 74.00          | 25.59       | H   | 15.0         |



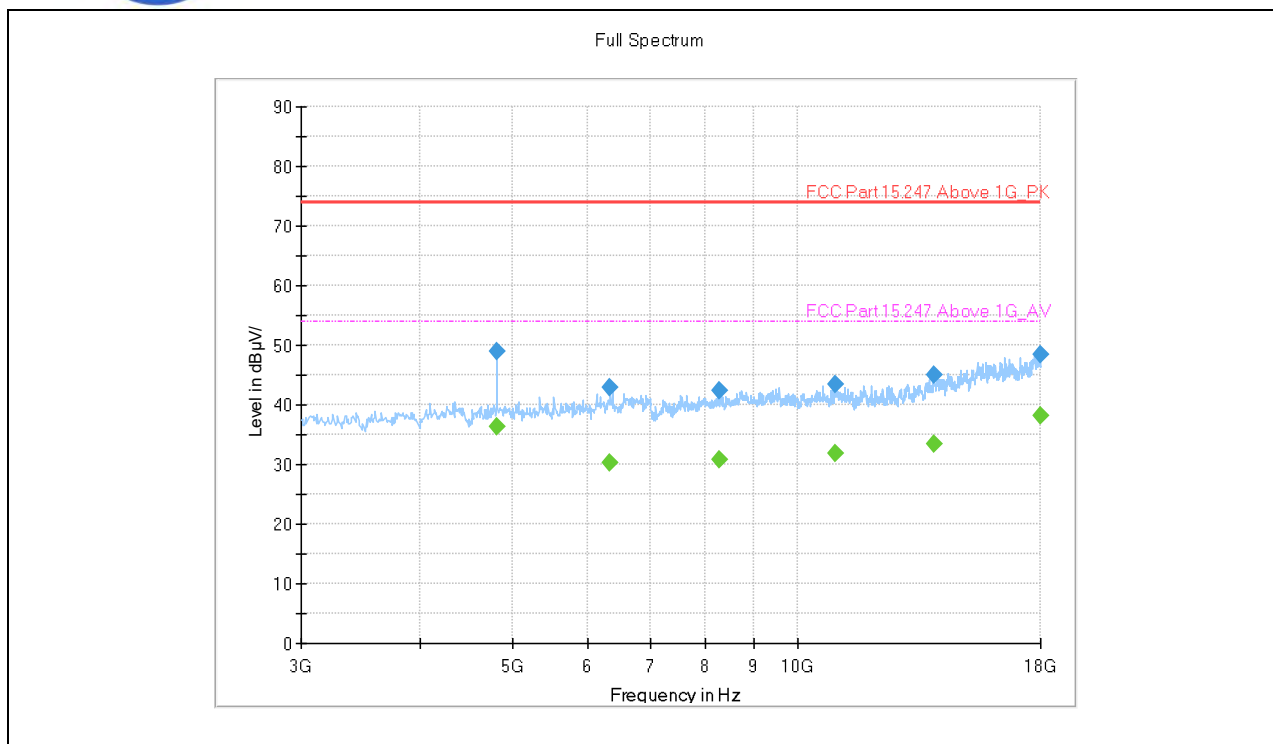
(802.11b \_2412MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 60.999583       | 24.19            | ---                | 40.00          | 15.81       | V   | 14.2         |
| 129.869583      | 25.17            | ---                | 43.50          | 18.33       | V   | 12.3         |
| 222.989583      | 24.42            | ---                | 46.00          | 21.58       | V   | 14.3         |
| 424.143333      | 26.56            | ---                | 46.00          | 19.44       | V   | 19.8         |
| 701.037917      | 30.96            | ---                | 46.00          | 15.04       | V   | 24.9         |
| 941.719167      | 33.37            | ---                | 46.00          | 12.63       | V   | 28.4         |



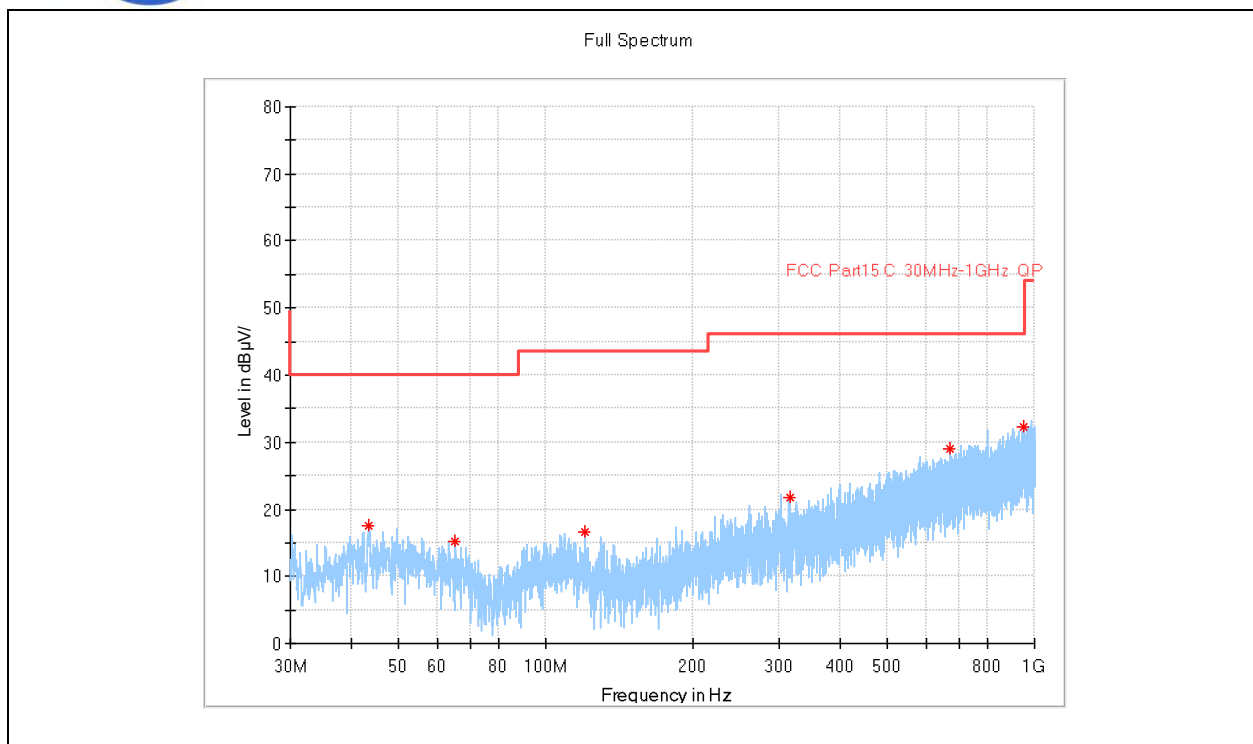
(802.11b \_2412MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1460.000000     | ---              | 26.77            | 54.00          | 27.23       | V   | 1.6          |
| 1460.000000     | 42.18            | ---              | 74.00          | 31.82       | V   | 1.6          |
| 1870.000000     | ---              | 29.69            | 54.00          | 24.31       | V   | 5.9          |
| 1870.000000     | 39.83            | ---              | 74.00          | 34.17       | V   | 5.9          |
| 2090.000000     | ---              | 30.58            | 54.00          | 23.42       | V   | 7.5          |
| 2090.000000     | 40.98            | ---              | 74.00          | 33.02       | V   | 7.5          |
| 2400.000000     | 44.16            | ---              | 74.00          | 29.84       | V   | 13.5         |
| 2400.000000     | ---              | 36.50            | 54.00          | 17.50       | V   | 13.5         |
| 2545.000000     | 47.70            | ---              | 74.00          | 26.30       | V   | 14.6         |
| 2545.000000     | ---              | 37.18            | 54.00          | 16.82       | V   | 14.6         |
| 3000.000000     | ---              | 40.15            | 54.00          | 13.85       | V   | 18.4         |
| 3000.000000     | 49.29            | ---              | 74.00          | 24.71       | V   | 18.4         |

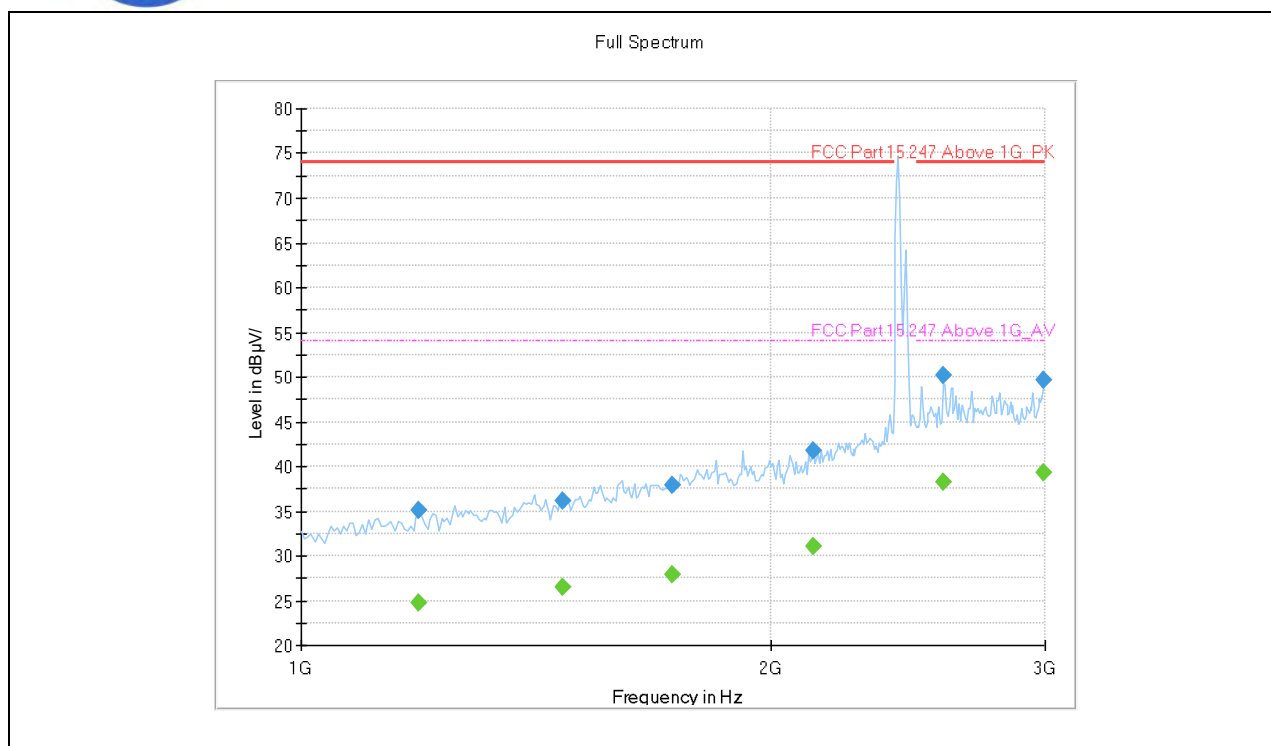


(802.11b \_2412MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4822.500000     | 49.05            | ---              | 74.00          | 24.95       | V   | -3.2         |
| 4822.500000     | ---              | 36.30            | 54.00          | 17.70       | V   | -3.2         |
| 6345.000000     | ---              | 30.33            | 54.00          | 23.67       | V   | -1.0         |
| 6345.000000     | 42.81            | ---              | 74.00          | 31.19       | V   | -1.0         |
| 8265.000000     | ---              | 30.74            | 54.00          | 23.26       | V   | 1.3          |
| 8265.000000     | 42.40            | ---              | 74.00          | 31.60       | V   | 1.3          |
| 10942.50000     | ---              | 31.79            | 54.00          | 22.21       | V   | 3.3          |
| 10942.50000     | 43.34            | ---              | 74.00          | 30.66       | V   | 3.3          |
| 13897.50000     | 45.01            | ---              | 74.00          | 28.99       | V   | 7.6          |
| 13897.50000     | ---              | 33.49            | 54.00          | 20.51       | V   | 7.6          |
| 17992.50000     | ---              | 38.26            | 54.00          | 15.74       | V   | 15.0         |
| 17992.50000     | 48.41            | ---              | 74.00          | 25.59       | V   | 15.0         |

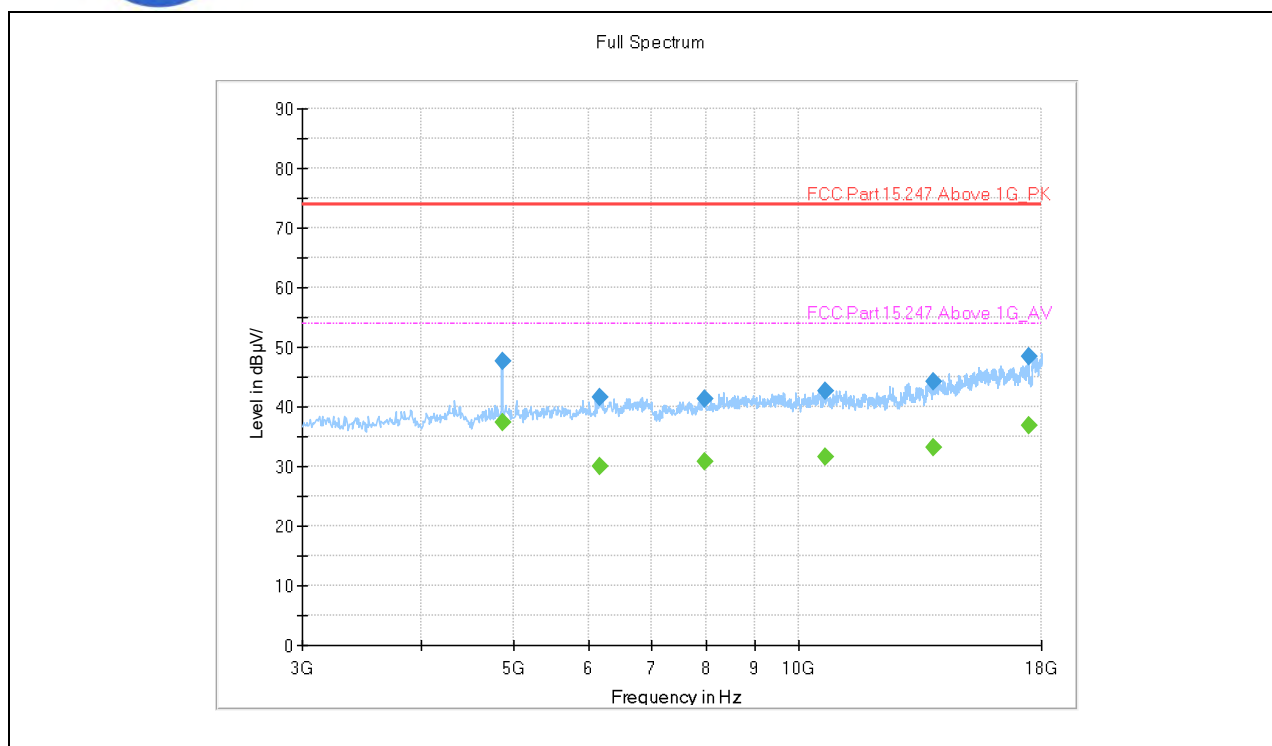


| Frequency<br>(MHz) | MaxPeak<br>(dBμV/m) | QuasiPeak<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pol | Corr.<br>(dB/m) |
|--------------------|---------------------|-----------------------|-------------------|----------------|-----|-----------------|
| 43.539583          | 17.48               | ---                   | 40.00             | 22.52          | H   | 15.4            |
| 65.324167          | 15.25               | ---                   | 40.00             | 24.75          | H   | 10.6            |
| 120.290833         | 16.67               | ---                   | 43.50             | 26.83          | H   | 13.9            |
| 316.028750         | 21.82               | ---                   | 46.00             | 24.18          | H   | 17.3            |
| 669.997917         | 29.10               | ---                   | 46.00             | 16.90          | H   | 19.3            |
| 951.338333         | 32.22               | ---                   | 46.00             | 13.78          | H   | 28.1            |



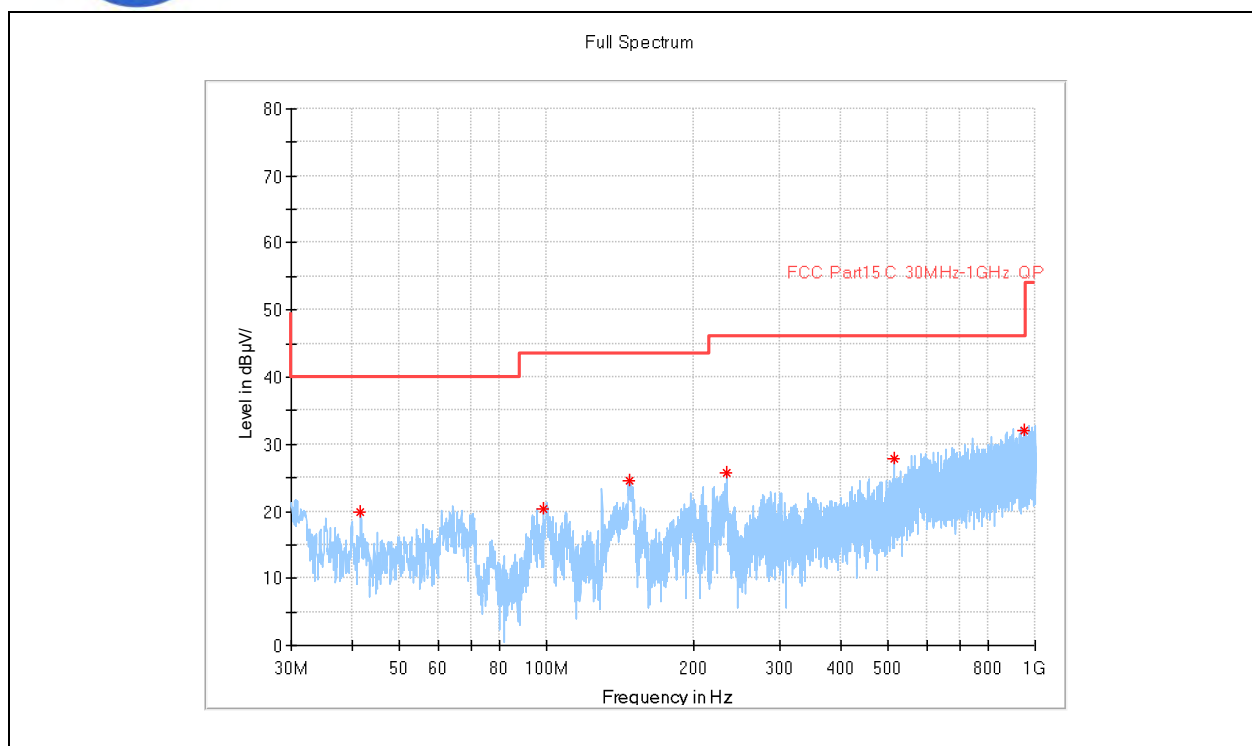
(802.11b \_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1190.000000     | 35.05            | ---              | 74.00          | 38.95       | H   | -0.8         |
| 1190.000000     | ---              | 24.76            | 54.00          | 29.24       | H   | -0.8         |
| 1470.000000     | 36.08            | ---              | 74.00          | 37.92       | H   | 1.7          |
| 1470.000000     | ---              | 26.42            | 54.00          | 27.58       | H   | 1.7          |
| 1730.000000     | 37.94            | ---              | 74.00          | 36.06       | H   | 4.1          |
| 1730.000000     | ---              | 27.98            | 54.00          | 26.02       | H   | 4.1          |
| 2130.000000     | ---              | 31.10            | 54.00          | 22.90       | H   | 8.2          |
| 2130.000000     | 41.81            | ---              | 74.00          | 32.19       | H   | 8.2          |
| 2580.000000     | 50.24            | ---              | 74.00          | 23.76       | H   | 13.9         |
| 2580.000000     | ---              | 38.24            | 54.00          | 15.76       | H   | 13.9         |
| 2995.000000     | ---              | 39.35            | 54.00          | 14.65       | H   | 17.9         |
| 2995.000000     | 49.72            | ---              | 74.00          | 24.28       | H   | 17.9         |



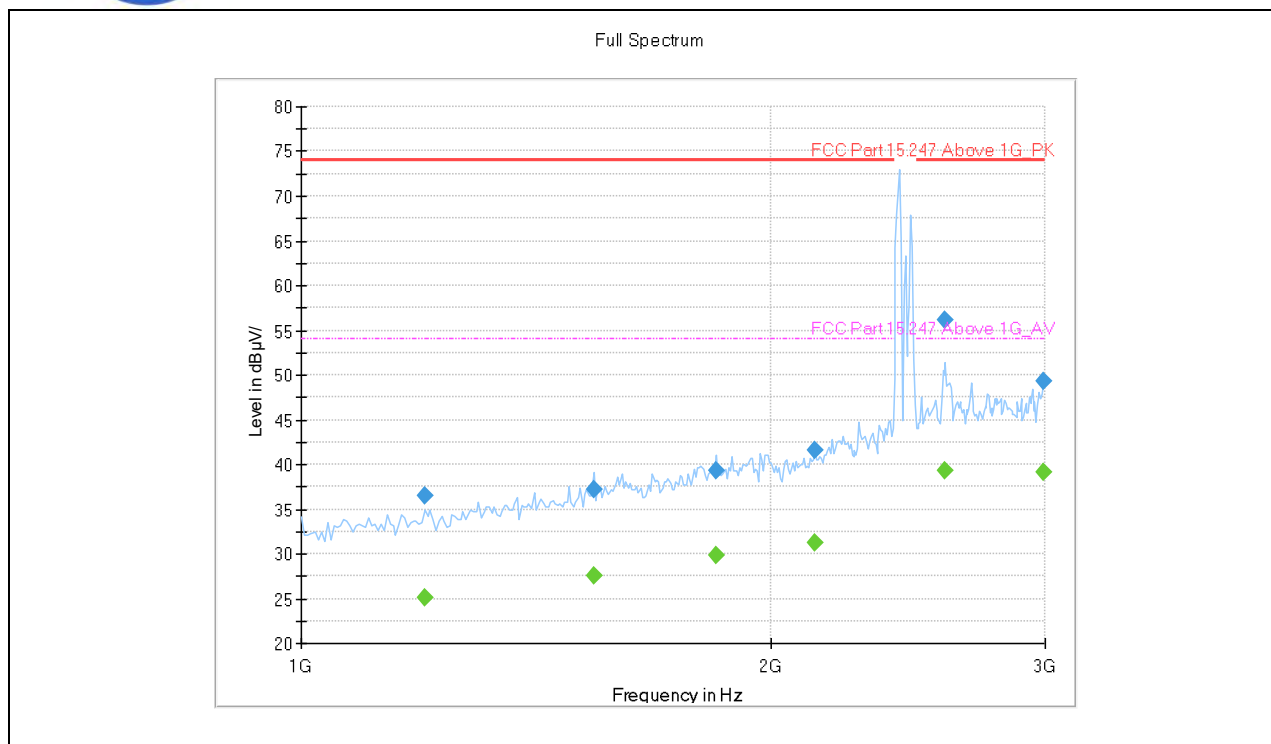
(802.11b \_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4875.000000     | 47.65            | ---              | 74.00          | 26.35       | H   | -2.9         |
| 4875.000000     | ---              | 37.37            | 54.00          | 16.63       | H   | -2.9         |
| 6172.500000     | ---              | 30.05            | 54.00          | 23.95       | H   | -1.6         |
| 6172.500000     | 41.60            | ---              | 74.00          | 32.40       | H   | -1.6         |
| 7957.500000     | ---              | 30.74            | 54.00          | 23.26       | H   | 1.4          |
| 7957.500000     | 41.24            | ---              | 74.00          | 32.76       | H   | 1.4          |
| 10665.00000     | 42.69            | ---              | 74.00          | 29.31       | H   | 2.6          |
| 10665.00000     | ---              | 31.52            | 54.00          | 22.48       | H   | 2.6          |
| 13852.50000     | ---              | 33.05            | 54.00          | 20.95       | H   | 7.2          |
| 13852.50000     | 44.20            | ---              | 74.00          | 29.80       | H   | 7.2          |
| 17437.50000     | ---              | 36.92            | 54.00          | 17.08       | H   | 13.3         |
| 17437.50000     | 48.39            | ---              | 74.00          | 25.61       | H   | 13.3         |



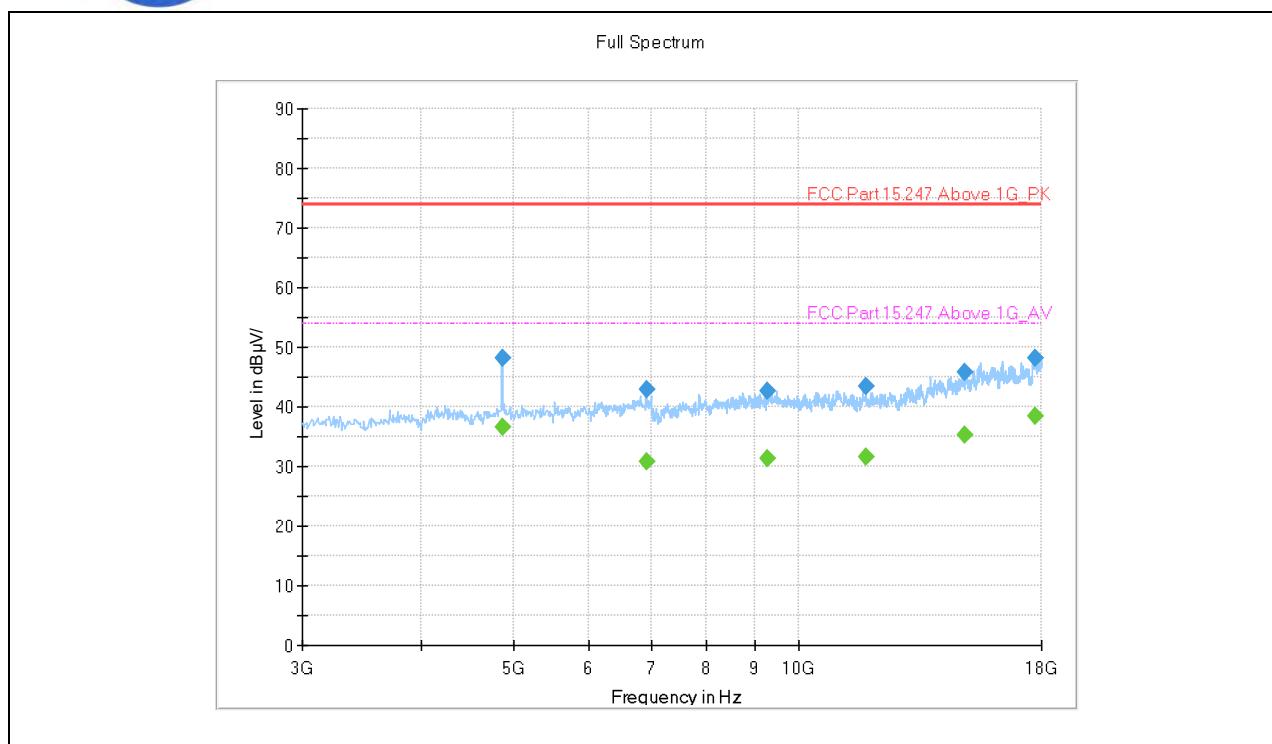
(802.11b \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) |  | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--|--------------------|----------------|-------------|-----|--------------|
| 41.640000       | 19.93            |  | ---                | 40.00          | 20.07       | V   | 15.0         |
| 98.385000       | 20.24            |  | ---                | 43.50          | 23.26       | V   | 13.9         |
| 147.289167      | 24.51            |  | ---                | 43.50          | 18.99       | V   | 10.9         |
| 233.093750      | 25.83            |  | ---                | 46.00          | 20.17       | V   | 14.5         |
| 514.636250      | 27.93            |  | ---                | 46.00          | 18.07       | V   | 22.0         |
| 950.570417      | 32.07            |  | ---                | 46.00          | 13.93       | V   | 28.3         |



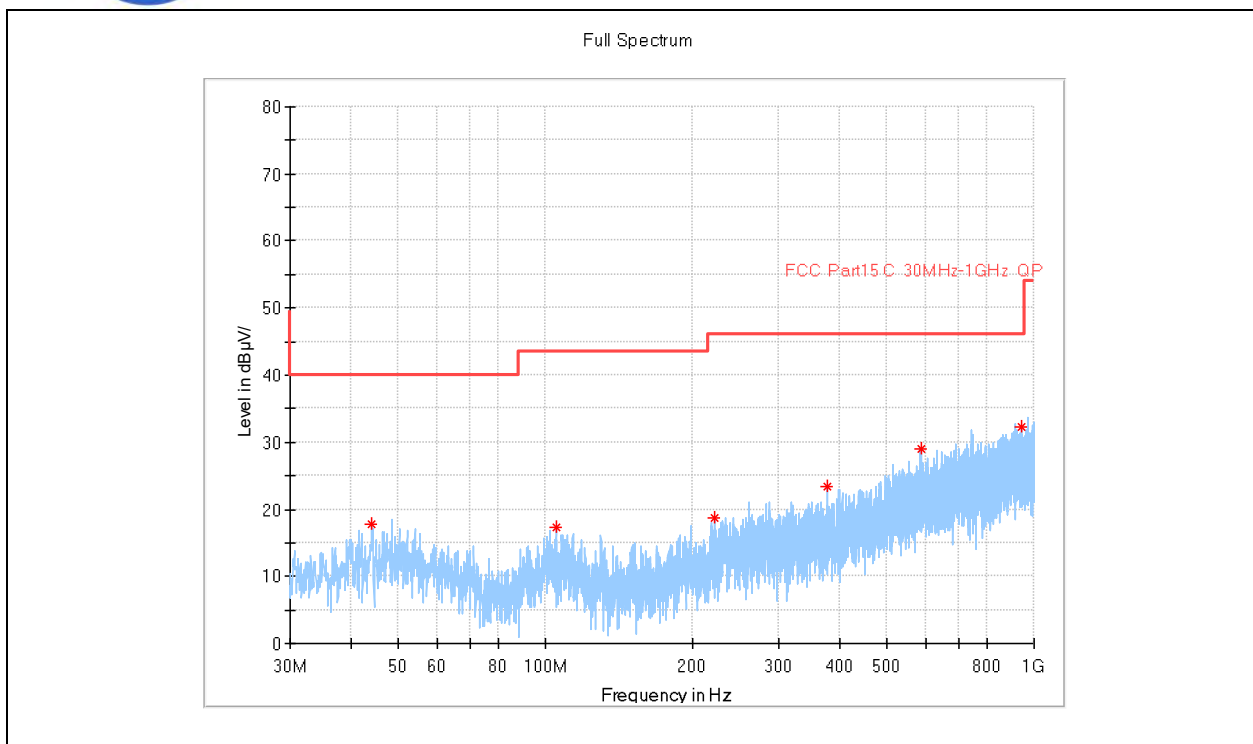
(802.11b \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1200.000000     | 36.55            | ---              | 74.00          | 37.45       | V   | -0.4         |
| 1200.000000     | ---              | 25.01            | 54.00          | 28.99       | V   | -0.4         |
| 1540.000000     | 37.25            | ---              | 74.00          | 36.75       | V   | 2.8          |
| 1540.000000     | ---              | 27.49            | 54.00          | 26.51       | V   | 2.8          |
| 1845.000000     | 39.31            | ---              | 74.00          | 34.69       | V   | 5.8          |
| 1845.000000     | ---              | 29.76            | 54.00          | 24.24       | V   | 5.8          |
| 2135.000000     | ---              | 31.23            | 54.00          | 22.77       | V   | 8.2          |
| 2135.000000     | 41.50            | ---              | 74.00          | 32.50       | V   | 8.2          |
| 2590.000000     | ---              | 39.26            | 54.00          | 14.74       | V   | 14.5         |
| 2590.000000     | 56.10            | ---              | 74.00          | 17.90       | V   | 14.5         |
| 2990.000000     | 49.31            | ---              | 74.00          | 24.69       | V   | 17.4         |
| 2990.000000     | ---              | 39.04            | 54.00          | 14.96       | V   | 17.4         |



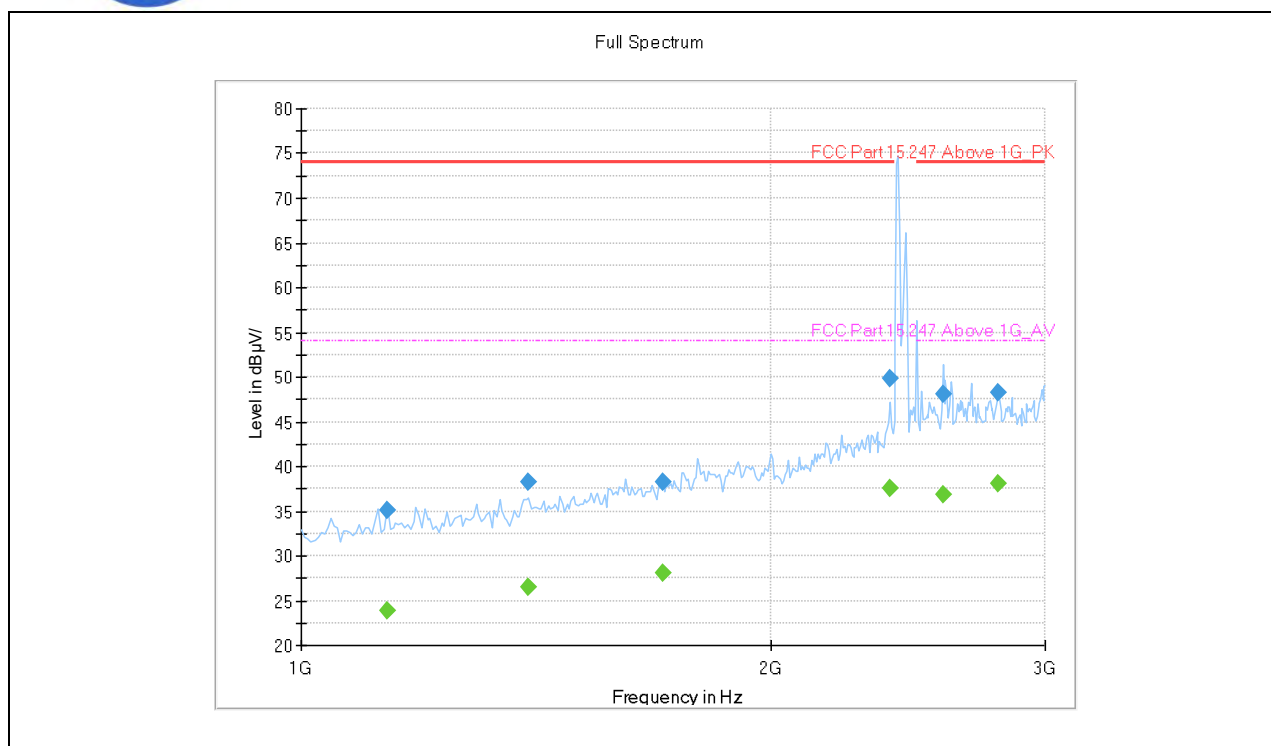
(802.11b \_2437MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4875.000000     | ---              | 36.59            | 54.00          | 17.41       | V   | -2.9         |
| 4875.000000     | 48.27            | ---              | 74.00          | 25.73       | V   | -2.9         |
| 6915.000000     | 42.94            | ---              | 74.00          | 31.06       | V   | -0.8         |
| 6915.000000     | ---              | 30.67            | 54.00          | 23.33       | V   | -0.8         |
| 9262.500000     | ---              | 31.33            | 54.00          | 22.67       | V   | 2.5          |
| 9262.500000     | 42.62            | ---              | 74.00          | 29.38       | V   | 2.5          |
| 11752.500000    | ---              | 31.66            | 54.00          | 22.34       | V   | 3.9          |
| 11752.500000    | 43.42            | ---              | 74.00          | 30.58       | V   | 3.9          |
| 14970.000000    | ---              | 35.22            | 54.00          | 18.78       | V   | 10.0         |
| 14970.000000    | 45.67            | ---              | 74.00          | 28.33       | V   | 10.0         |
| 17730.000000    | 48.08            | ---              | 74.00          | 25.92       | V   | 14.9         |
| 17730.000000    | ---              | 38.41            | 54.00          | 15.59       | V   | 14.9         |



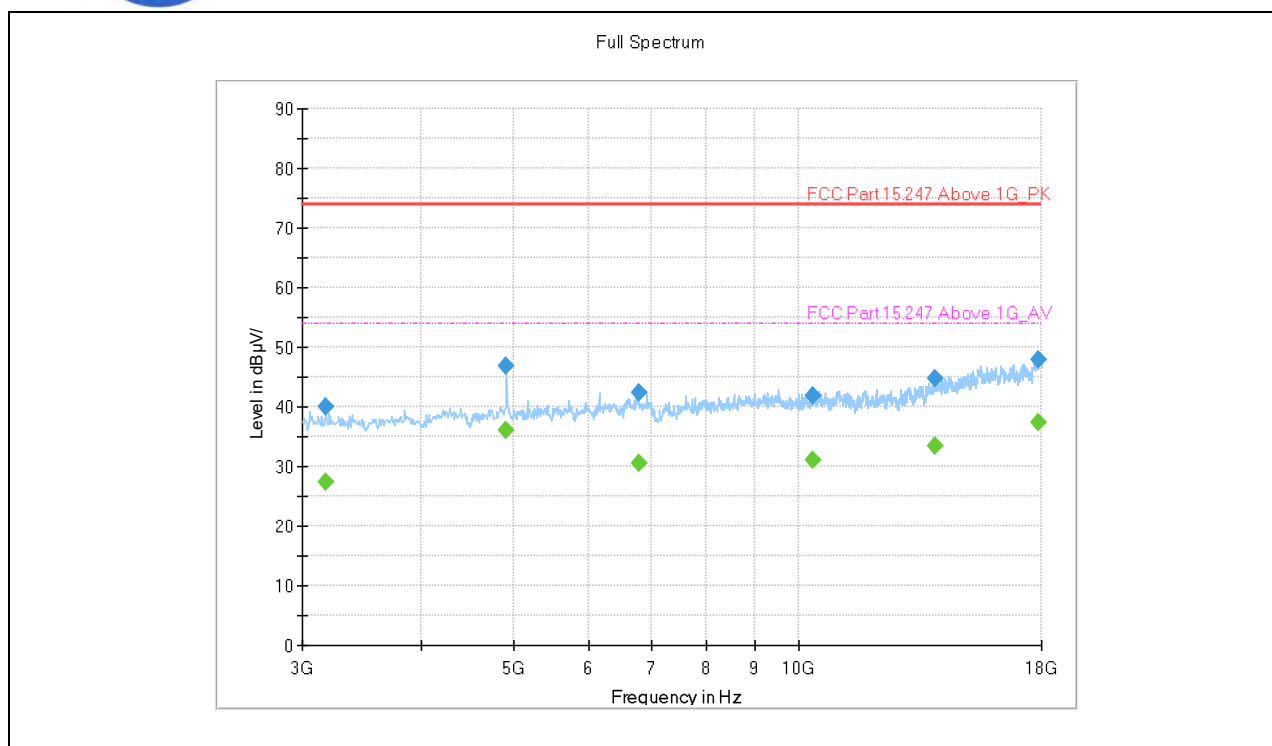
(802.11b \_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency<br>(MHz) | MaxPeak<br>(dBμV/m) | QuasiPeak<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pol | Corr.<br>(dB/m) |
|--------------------|---------------------|-----------------------|-------------------|----------------|-----|-----------------|
| 44.024583          | 17.86               | ---                   | 40.00             | 22.14          | H   | 15.3            |
| 104.892083         | 17.37               | ---                   | 43.50             | 26.13          | H   | 14.1            |
| 221.898333         | 18.76               | ---                   | 46.00             | 27.24          | H   | 14.5            |
| 376.330417         | 23.28               | ---                   | 46.00             | 22.72          | H   | 18.6            |
| 585.688750         | 29.07               | ---                   | 46.00             | 16.93          | H   | 23.1            |
| 944.022917         | 32.31               | ---                   | 46.00             | 13.69          | H   | 28.4            |



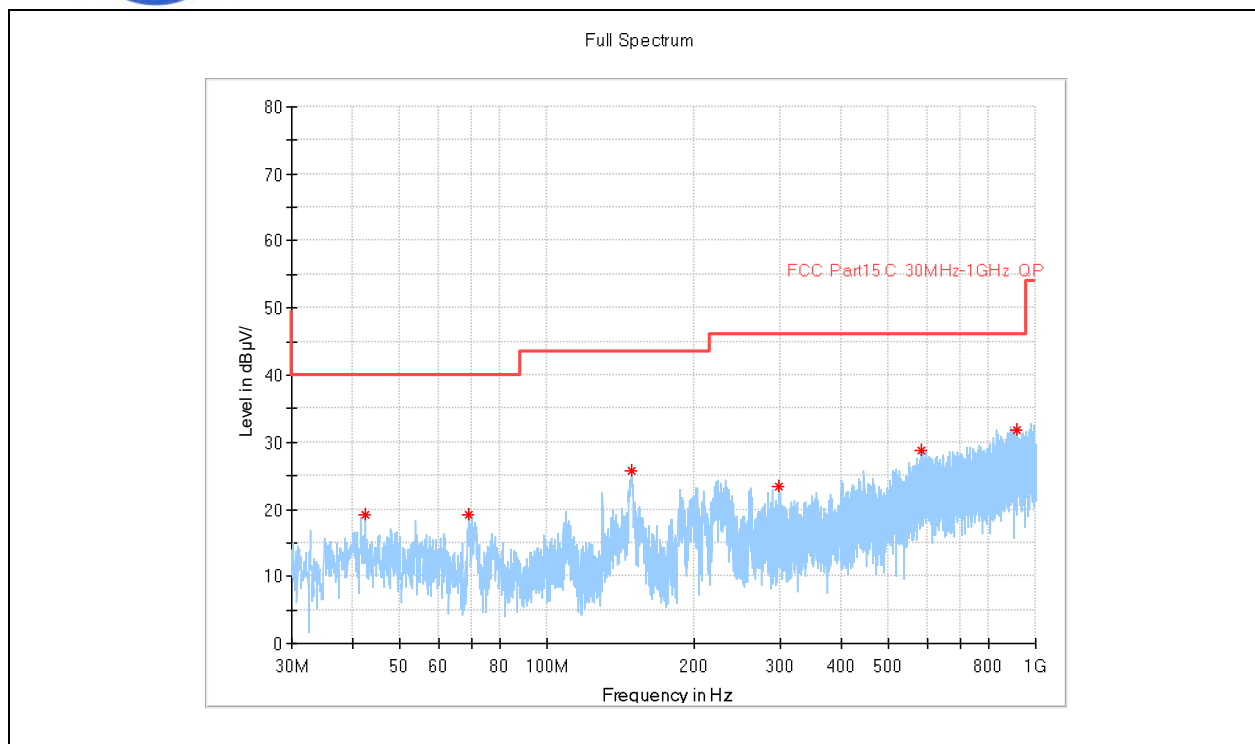
(802.11b \_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1135.000000     | 35.17                  | ---                    | 74.00                | 38.83       | H   | -1.9         |
| 1135.000000     | ---                    | 23.81                  | 54.00                | 30.19       | H   | -1.9         |
| 1400.000000     | 38.32                  | ---                    | 74.00                | 35.68       | H   | 1.7          |
| 1400.000000     | ---                    | 26.52                  | 54.00                | 27.48       | H   | 1.7          |
| 1705.000000     | ---                    | 27.99                  | 54.00                | 26.01       | H   | 4.0          |
| 1705.000000     | 38.16                  | ---                    | 74.00                | 35.84       | H   | 4.0          |
| 2385.000000     | ---                    | 37.53                  | 54.00                | 16.47       | H   | 12.3         |
| 2385.000000     | 49.87                  | ---                    | 74.00                | 24.13       | H   | 12.3         |
| 2580.000000     | ---                    | 36.77                  | 54.00                | 17.23       | H   | 13.9         |
| 2580.000000     | 48.03                  | ---                    | 74.00                | 25.97       | H   | 13.9         |
| 2800.000000     | ---                    | 38.05                  | 54.00                | 15.95       | H   | 16.5         |
| 2800.000000     | 48.30                  | ---                    | 74.00                | 25.70       | H   | 16.5         |

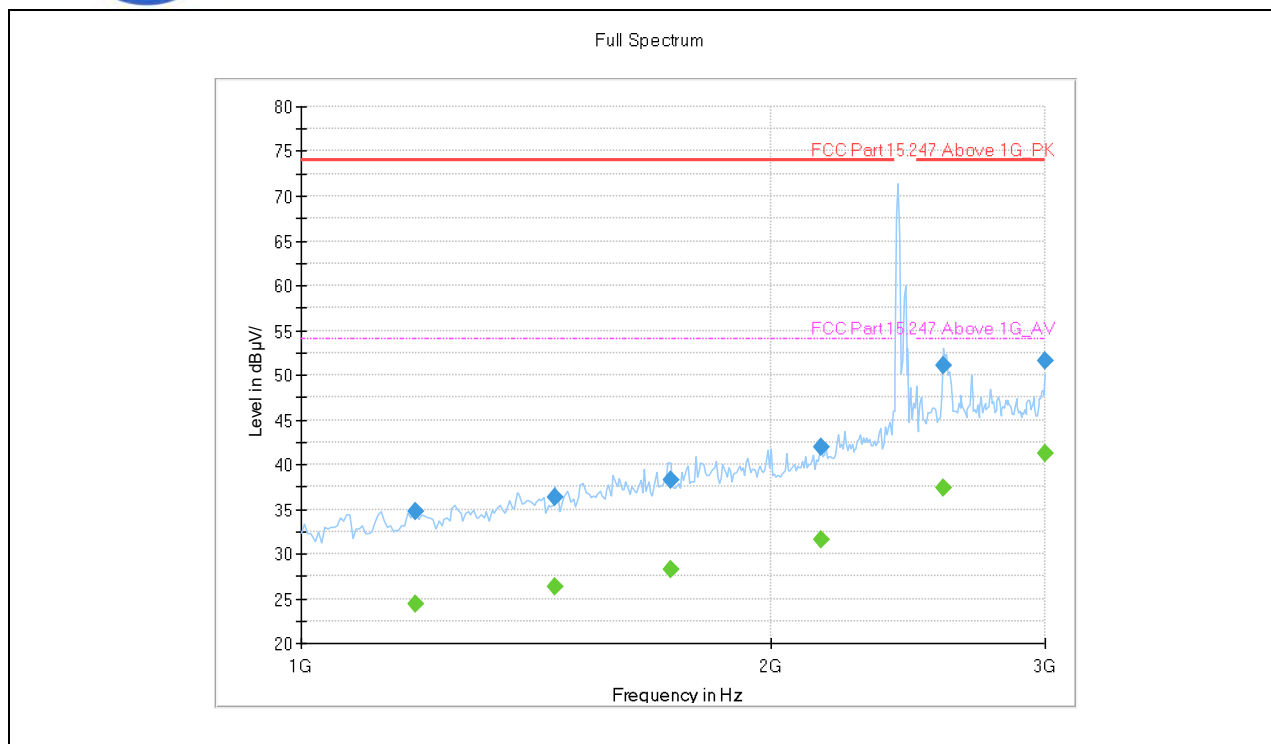


(802.11b \_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3180.000000     | 39.99            | ---              | 74.00          | 34.01       | H   | -6.2         |
| 3180.000000     | ---              | 27.33            | 54.00          | 26.67       | H   | -6.2         |
| 4920.000000     | ---              | 36.09            | 54.00          | 17.91       | H   | -2.8         |
| 4920.000000     | 46.94            | ---              | 74.00          | 27.06       | H   | -2.8         |
| 6780.000000     | ---              | 30.56            | 54.00          | 23.44       | H   | -1.2         |
| 6780.000000     | 42.36            | ---              | 74.00          | 29.64       | H   | -1.2         |
| 10342.500000    | 41.87            | ---              | 74.00          | 28.13       | H   | 2.1          |
| 10342.500000    | ---              | 31.16            | 54.00          | 22.84       | H   | 2.1          |
| 13920.000000    | 44.69            | ---              | 74.00          | 29.31       | H   | 7.7          |
| 13920.000000    | ---              | 33.54            | 54.00          | 20.46       | H   | 7.7          |
| 17842.500000    | 47.96            | ---              | 74.00          | 26.04       | H   | 14.7         |
| 17842.500000    | ---              | 37.47            | 54.00          | 16.53       | H   | 14.7         |

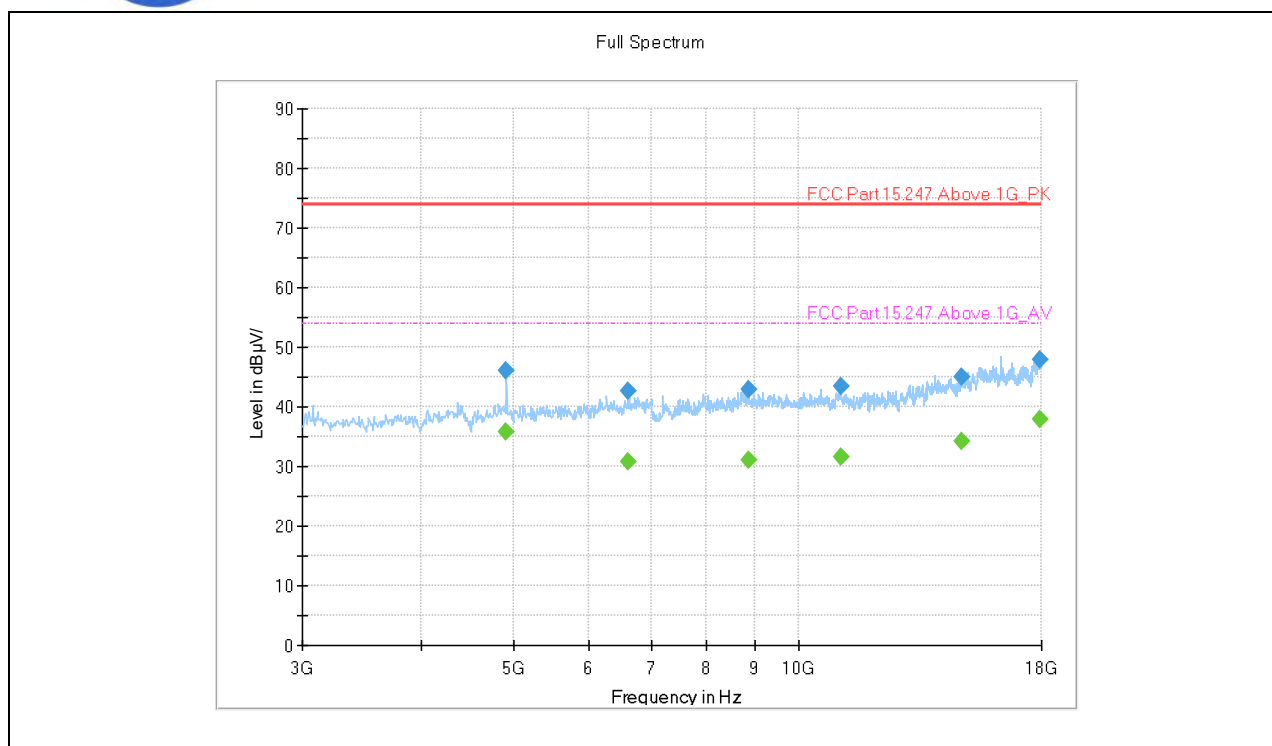


| Frequency<br>(MHz) | MaxPeak<br>(dBμV/m) | QuasiPeak<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pol | Corr.<br>(dB/m) |
|--------------------|---------------------|-----------------------|-------------------|----------------|-----|-----------------|
| 42.407917          | 19.20               | ---                   | 40.00             | 20.80          | V   | 15.2            |
| 69.163750          | 19.11               | ---                   | 40.00             | 20.89          | V   | 12.2            |
| 148.582500         | 25.76               | ---                   | 43.50             | 17.74          | V   | 11.2            |
| 297.275417         | 23.28               | ---                   | 46.00             | 22.72          | V   | 16.6            |
| 582.495833         | 28.87               | ---                   | 46.00             | 17.13          | V   | 23.1            |
| 916.418333         | 31.79               | ---                   | 46.00             | 14.21          | V   | 28.0            |



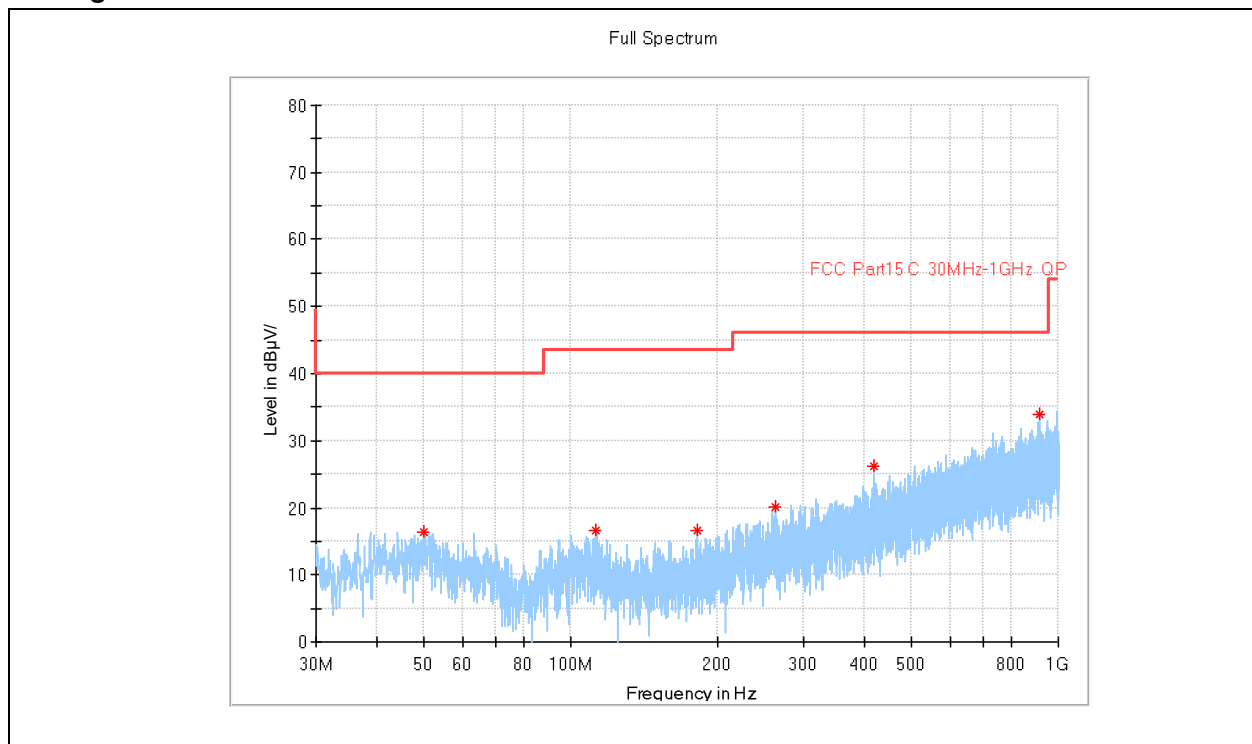
(802.11b \_2462MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1185.000000     | 34.75            | ---              | 74.00          | 39.25       | V   | -1.2         |
| 1185.000000     | ---              | 24.39            | 54.00          | 29.61       | V   | -1.2         |
| 1455.000000     | ---              | 26.38            | 54.00          | 27.62       | V   | 1.4          |
| 1455.000000     | 36.27            | ---              | 74.00          | 37.73       | V   | 1.4          |
| 1725.000000     | ---              | 28.27            | 54.00          | 25.73       | V   | 4.1          |
| 1725.000000     | 38.24            | ---              | 74.00          | 35.76       | V   | 4.1          |
| 2155.000000     | ---              | 31.62            | 54.00          | 22.38       | V   | 8.3          |
| 2155.000000     | 41.85            | ---              | 74.00          | 32.15       | V   | 8.3          |
| 2580.000000     | ---              | 37.44            | 54.00          | 16.56       | V   | 13.9         |
| 2580.000000     | 51.11            | ---              | 74.00          | 22.89       | V   | 13.9         |
| 3000.000000     | 51.60            | ---              | 74.00          | 22.40       | V   | 18.4         |
| 3000.000000     | ---              | 41.26            | 54.00          | 12.74       | V   | 18.4         |



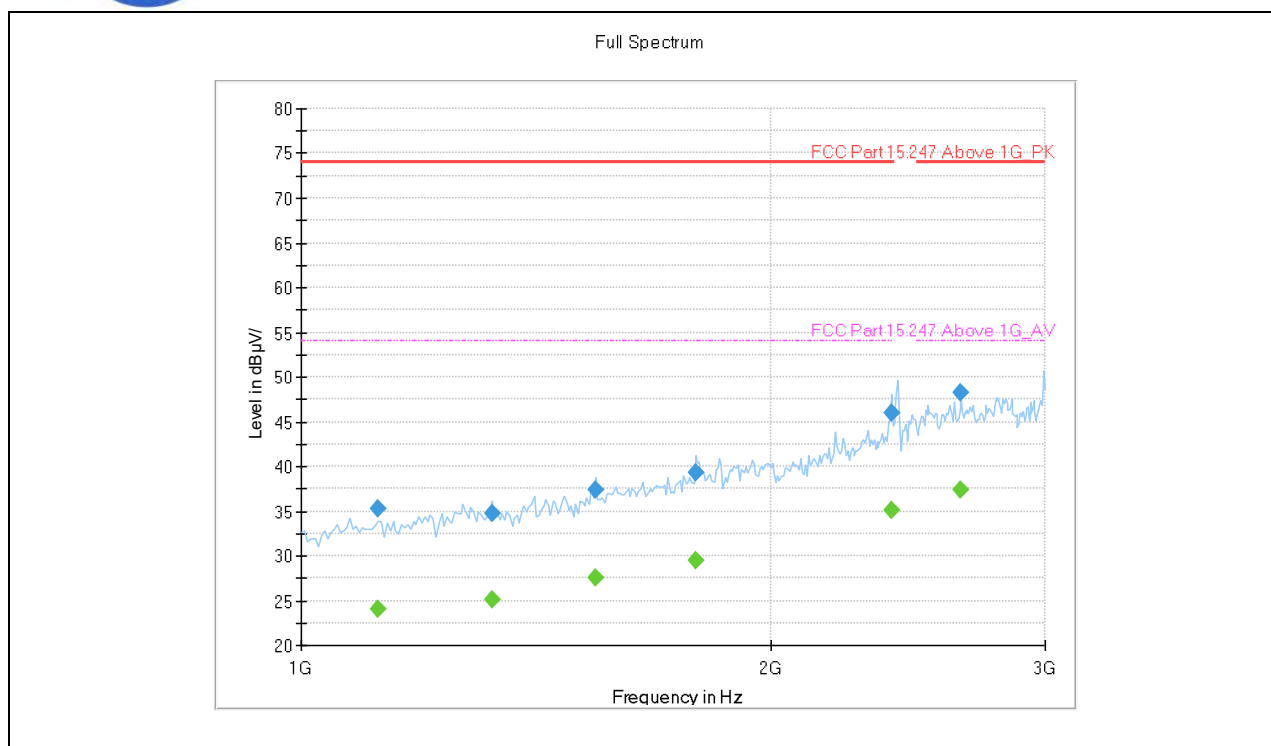
(802.11b \_2462MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4920.000000     | 45.97            | ---              | 74.00          | 28.03       | V   | -2.8         |
| 4920.000000     | ---              | 35.72            | 54.00          | 18.28       | V   | -2.8         |
| 6607.500000     | ---              | 30.91            | 54.00          | 23.09       | V   | -0.9         |
| 6607.500000     | 42.66            | ---              | 74.00          | 31.34       | V   | -0.9         |
| 8850.000000     | ---              | 31.07            | 54.00          | 22.93       | V   | 1.3          |
| 8850.000000     | 42.79            | ---              | 74.00          | 31.21       | V   | 1.3          |
| 11070.000000    | ---              | 31.60            | 54.00          | 22.40       | V   | 3.3          |
| 11070.000000    | 43.32            | ---              | 74.00          | 30.68       | V   | 3.3          |
| 14835.000000    | ---              | 34.26            | 54.00          | 19.74       | V   | 9.0          |
| 14835.000000    | 44.90            | ---              | 74.00          | 29.10       | V   | 9.0          |
| 17955.000000    | 47.92            | ---              | 74.00          | 26.08       | V   | 14.6         |
| 17955.000000    | ---              | 37.95            | 54.00          | 16.05       | V   | 14.6         |

**802.11g Test mode**

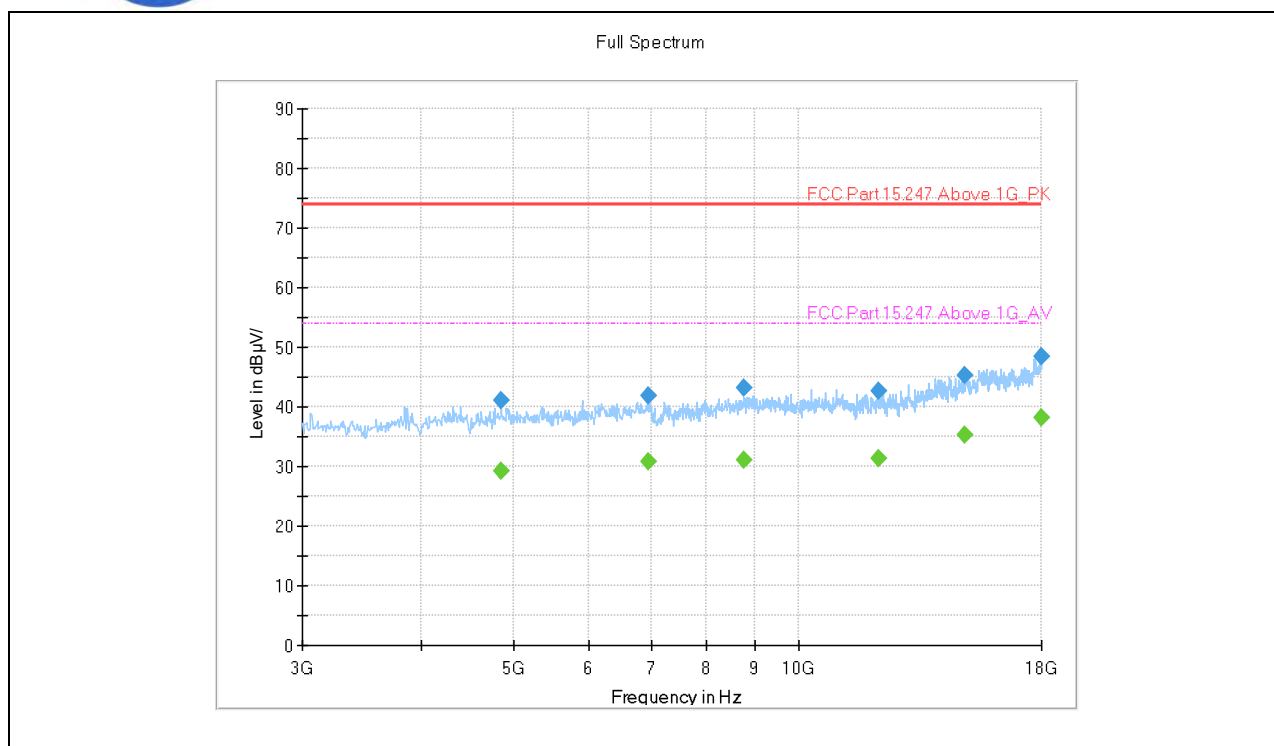
(802.11g \_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 49.925417       | 16.44            | ---                | 40.00          | 23.56       | H   | 16.2         |
| 112.854167      | 16.59            | ---                | 43.50          | 26.91       | H   | 13.9         |
| 181.602917      | 16.58            | ---                | 43.50          | 26.92       | H   | 12.6         |
| 262.800000      | 20.11            | ---                | 46.00          | 25.89       | H   | 15.5         |
| 418.323333      | 26.16            | ---                | 46.00          | 19.84       | H   | 20.0         |
| 918.479583      | 34.02            | ---                | 46.00          | 11.98       | H   | 28.0         |



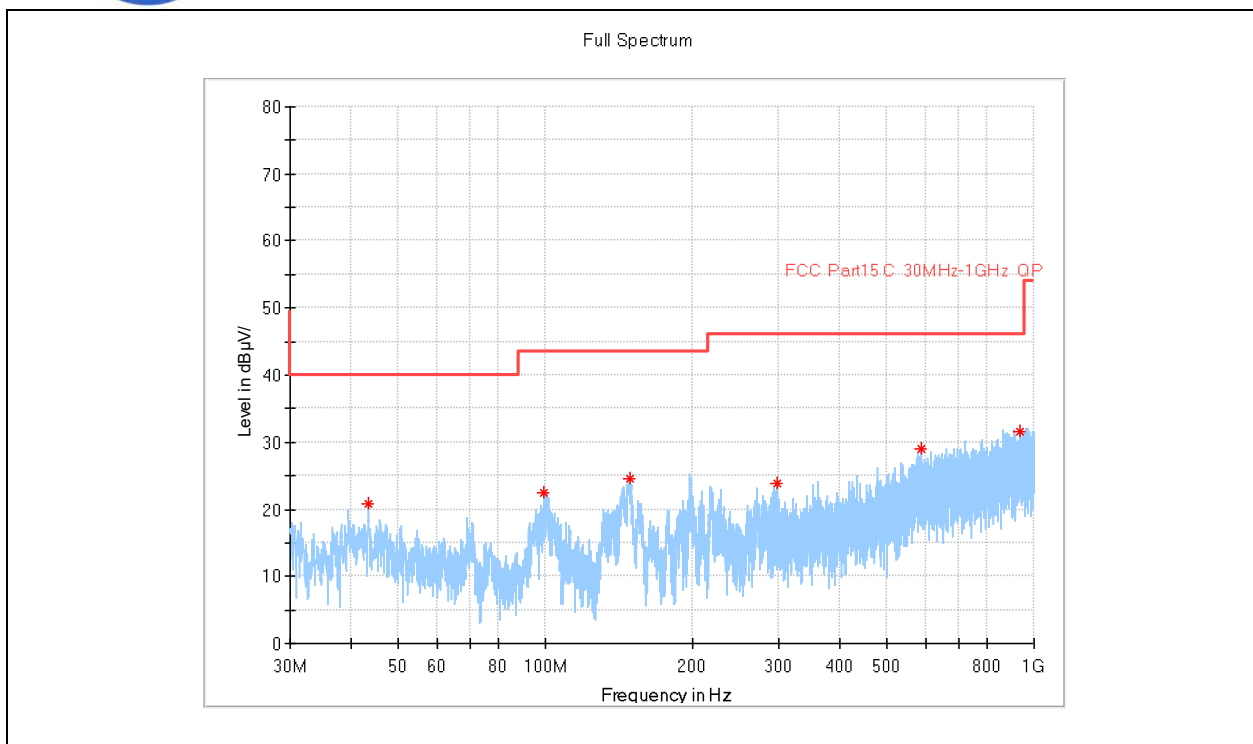
(802.11g \_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1120.000000     | 35.33            | ---              | 74.00          | 38.67       | H   | -2.0         |
| 1120.000000     | ---              | 24.04            | 54.00          | 29.96       | H   | -2.0         |
| 1325.000000     | 34.79            | ---              | 74.00          | 39.21       | H   | 0.2          |
| 1325.000000     | ---              | 25.17            | 54.00          | 28.83       | H   | 0.2          |
| 1545.000000     | 37.30            | ---              | 74.00          | 36.70       | H   | 2.8          |
| 1545.000000     | ---              | 27.49            | 54.00          | 26.51       | H   | 2.8          |
| 1790.000000     | ---              | 29.40            | 54.00          | 24.60       | H   | 5.9          |
| 1790.000000     | 39.34            | ---              | 74.00          | 34.66       | H   | 5.9          |
| 2390.000000     | ---              | 35.03            | 54.00          | 18.97       | H   | 12.7         |
| 2390.000000     | 45.96            | ---              | 74.00          | 28.04       | H   | 12.7         |
| 2650.000000     | 48.22            | ---              | 74.00          | 25.78       | H   | 15.6         |
| 2650.000000     | ---              | 37.30            | 54.00          | 16.70       | H   | 15.6         |



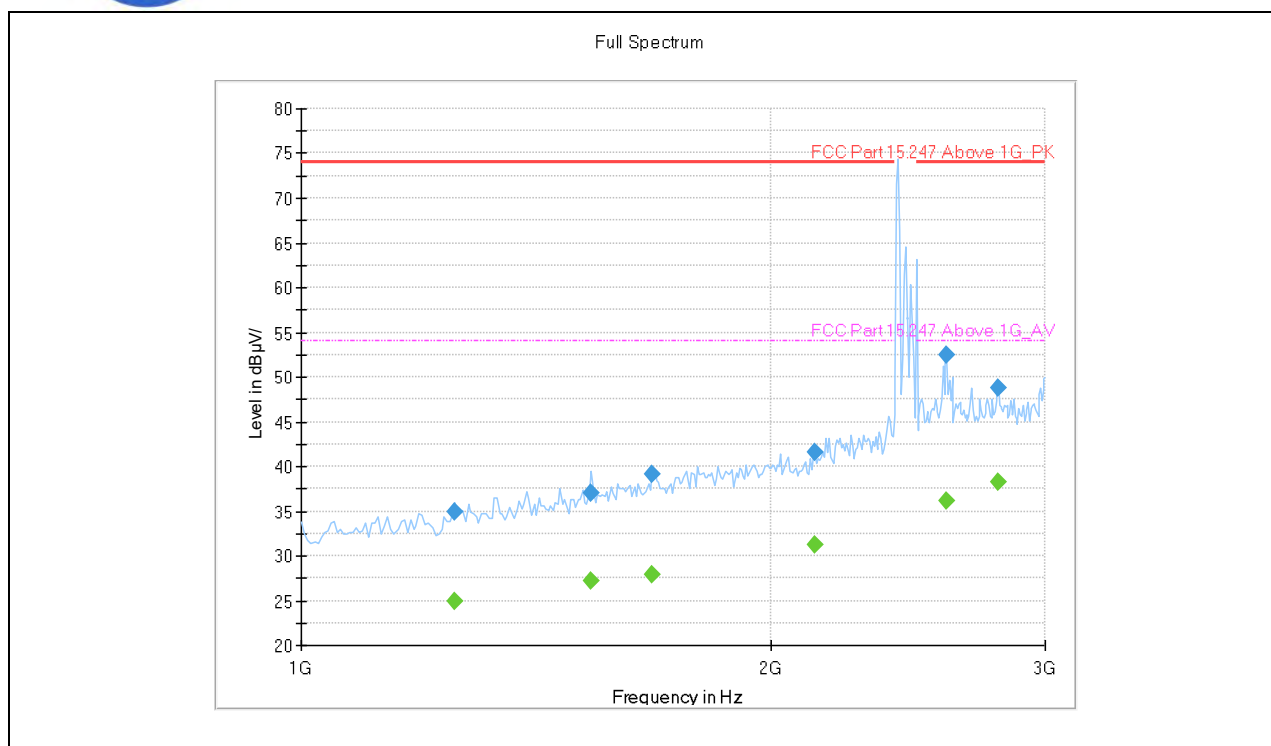
(802.11g \_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4860.000000     | 41.09            | ---              | 74.00          | 32.91       | H   | -3.0         |
| 4860.000000     | ---              | 29.16            | 54.00          | 24.84       | H   | -3.0         |
| 6930.000000     | 41.91            | ---              | 74.00          | 32.09       | H   | -0.7         |
| 6930.000000     | ---              | 30.69            | 54.00          | 23.31       | H   | -0.7         |
| 8745.000000     | ---              | 31.01            | 54.00          | 22.99       | H   | 1.4          |
| 8745.000000     | 43.28            | ---              | 74.00          | 30.72       | H   | 1.4          |
| 12135.000000    | ---              | 31.33            | 54.00          | 22.67       | H   | 3.9          |
| 12135.000000    | 42.57            | ---              | 74.00          | 31.43       | H   | 3.9          |
| 14962.500000    | 45.31            | ---              | 74.00          | 28.69       | H   | 9.8          |
| 14962.500000    | ---              | 35.18            | 54.00          | 18.82       | H   | 9.8          |
| 17985.000000    | 48.36            | ---              | 74.00          | 25.64       | H   | 15.0         |
| 17985.000000    | ---              | 38.19            | 54.00          | 15.81       | H   | 15.0         |



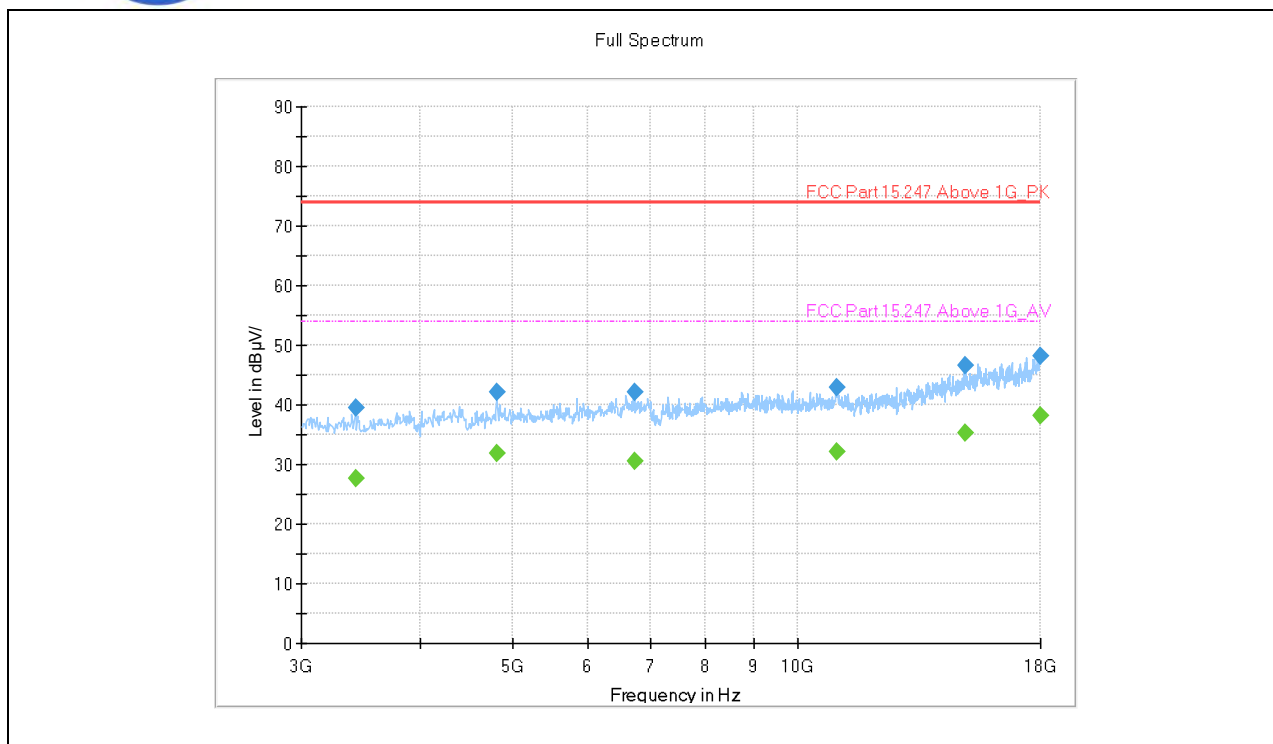
(802.11g \_2412MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 43.337500       | 20.71            | ---                | 40.00          | 19.29       | V   | 15.3         |
| 99.193333       | 22.50            | ---                | 43.50          | 21.00       | V   | 14.5         |
| 149.269583      | 24.55            | ---                | 43.50          | 18.95       | V   | 11.5         |
| 298.770833      | 23.90            | ---                | 46.00          | 22.10       | V   | 17.1         |
| 587.871250      | 28.93            | ---                | 46.00          | 17.07       | V   | 23.2         |
| 932.342500      | 31.60            | ---                | 46.00          | 14.40       | V   | 28.1         |



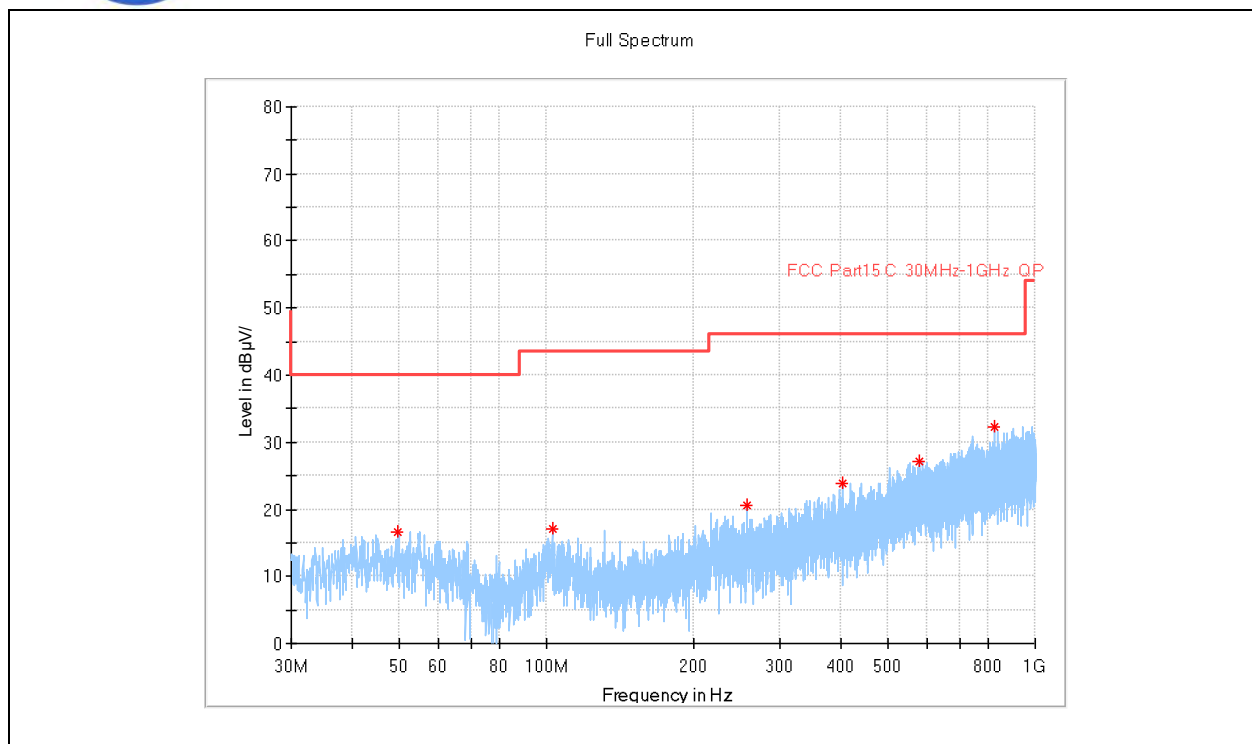
(802.11g \_2412MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1255.000000     | 34.94            | ---              | 74.00          | 39.06       | V   | -0.2         |
| 1255.000000     | ---              | 24.96            | 54.00          | 29.04       | V   | -0.2         |
| 1535.000000     | ---              | 27.27            | 54.00          | 26.73       | V   | 2.7          |
| 1535.000000     | 37.05            | ---              | 74.00          | 36.95       | V   | 2.7          |
| 1680.000000     | ---              | 27.97            | 54.00          | 26.03       | V   | 3.5          |
| 1680.000000     | 39.15            | ---              | 74.00          | 34.85       | V   | 3.5          |
| 2135.000000     | ---              | 31.19            | 54.00          | 22.81       | V   | 8.2          |
| 2135.000000     | 41.52            | ---              | 74.00          | 32.48       | V   | 8.2          |
| 2595.000000     | ---              | 36.17            | 54.00          | 17.83       | V   | 14.9         |
| 2595.000000     | 52.47            | ---              | 74.00          | 21.53       | V   | 14.9         |
| 2800.000000     | 48.84            | ---              | 74.00          | 25.16       | V   | 16.5         |
| 2800.000000     | ---              | 38.20            | 54.00          | 15.80       | V   | 16.5         |

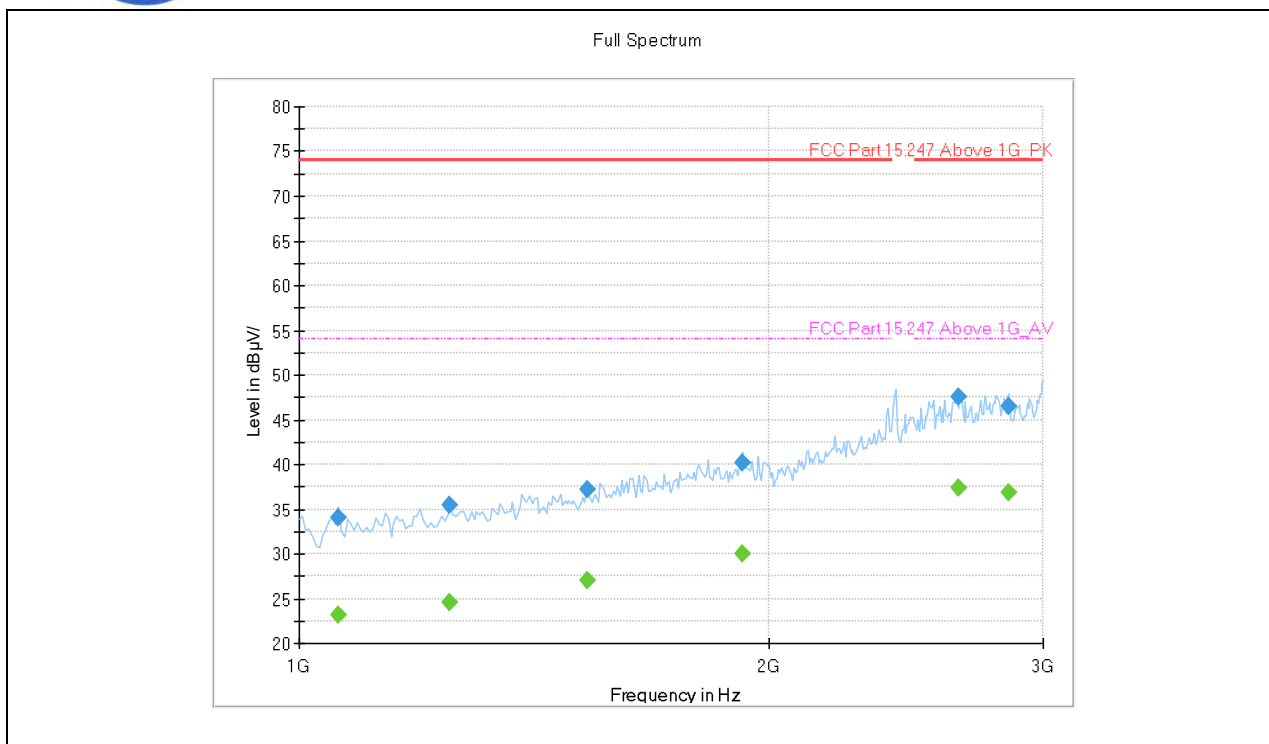


(802.11g \_2412MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3420.000000     | 39.48            | ---              | 74.00          | 34.52       | V   | -5.9         |
| 3420.000000     | ---              | 27.51            | 54.00          | 26.49       | V   | -5.9         |
| 4815.000000     | ---              | 31.72            | 54.00          | 22.28       | V   | -3.3         |
| 4815.000000     | 42.07            | ---              | 74.00          | 31.93       | V   | -3.3         |
| 6727.500000     | 42.01            | ---              | 74.00          | 31.99       | V   | -1.1         |
| 6727.500000     | ---              | 30.48            | 54.00          | 23.52       | V   | -1.1         |
| 11002.500000    | ---              | 32.09            | 54.00          | 21.91       | V   | 3.4          |
| 11002.500000    | 42.87            | ---              | 74.00          | 31.13       | V   | 3.4          |
| 14985.000000    | 46.67            | ---              | 74.00          | 27.33       | V   | 10.3         |
| 14985.000000    | ---              | 35.38            | 54.00          | 18.62       | V   | 10.3         |
| 17992.500000    | 48.05            | ---              | 74.00          | 25.95       | V   | 15.0         |
| 17992.500000    | ---              | 38.28            | 54.00          | 15.72       | V   | 15.0         |

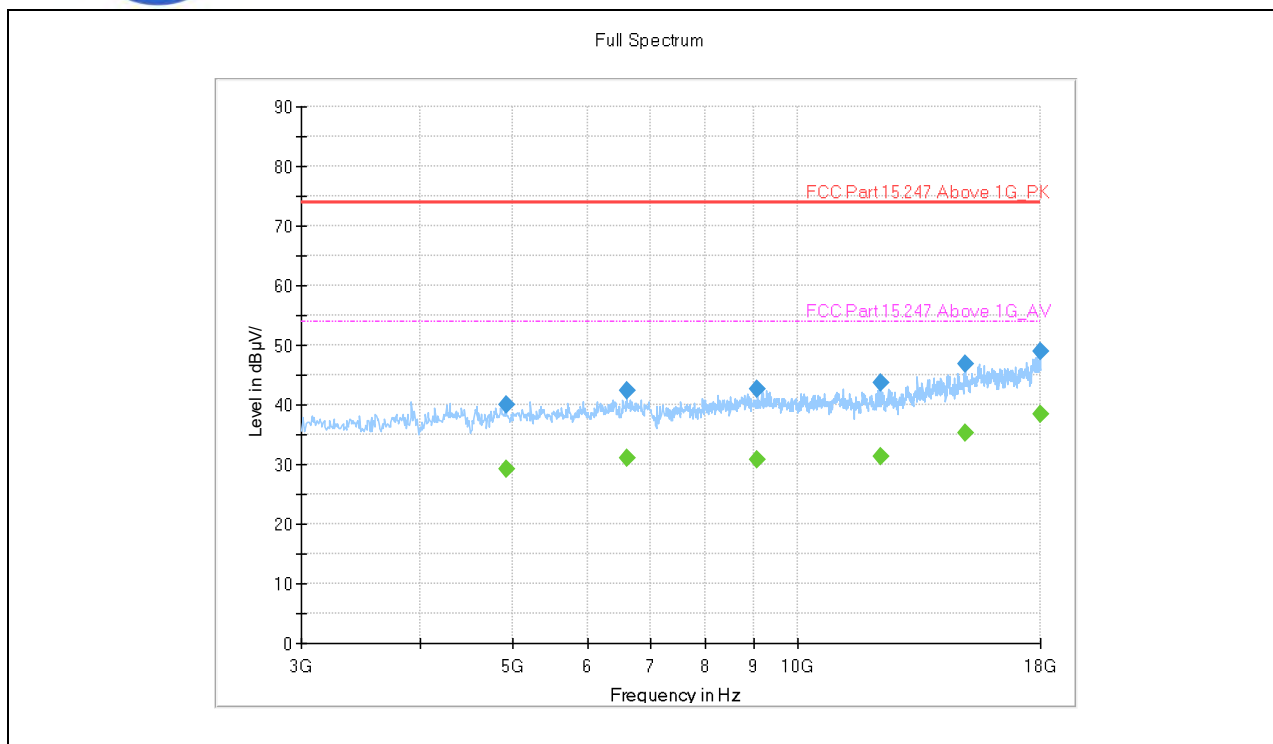


| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 49.642500       | 16.72            | ---                | 40.00          | 23.28       | H   | 16.0         |
| 102.628750      | 16.98            | ---                | 43.50          | 26.52       | H   | 14.6         |
| 256.818333      | 20.49            | ---                | 46.00          | 25.51       | H   | 15.4         |
| 403.409583      | 23.75            | ---                | 46.00          | 22.25       | H   | 19.4         |
| 580.232500      | 27.22            | ---                | 46.00          | 18.78       | H   | 23.1         |
| 824.793750      | 32.38            | ---                | 46.00          | 13.62       | H   | 26.4         |



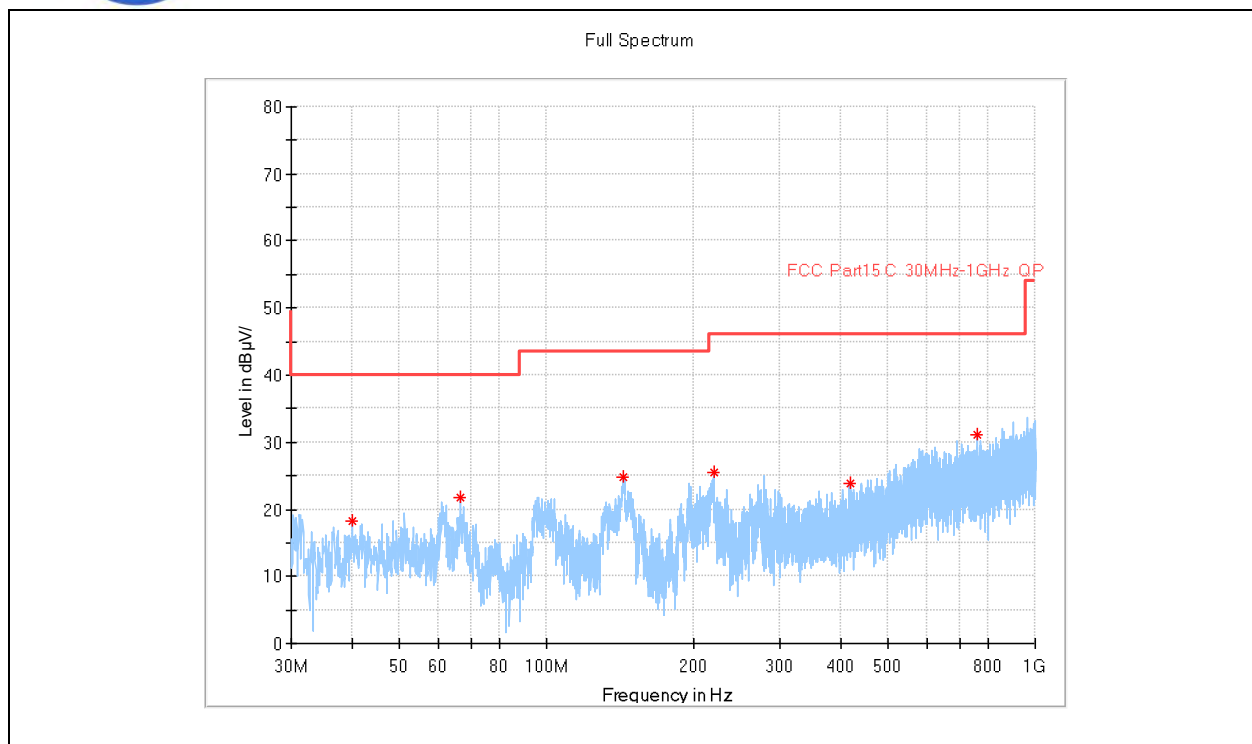
(802.11g \_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1060.000000     | ---                    | 23.17                  | 54.00                | 30.83       | H   | -2.5         |
| 1060.000000     | 34.12                  | ---                    | 74.00                | 39.88       | H   | -2.5         |
| 1250.000000     | ---                    | 24.61                  | 54.00                | 29.39       | H   | -0.4         |
| 1250.000000     | 35.43                  | ---                    | 74.00                | 38.57       | H   | -0.4         |
| 1530.000000     | ---                    | 27.09                  | 54.00                | 26.91       | H   | 2.6          |
| 1530.000000     | 37.17                  | ---                    | 74.00                | 36.83       | H   | 2.6          |
| 1925.000000     | ---                    | 30.04                  | 54.00                | 23.96       | H   | 6.1          |
| 1925.000000     | 40.12                  | ---                    | 74.00                | 33.88       | H   | 6.1          |
| 2650.000000     | 47.53                  | ---                    | 74.00                | 26.47       | H   | 15.6         |
| 2650.000000     | ---                    | 37.30                  | 54.00                | 16.70       | H   | 15.6         |
| 2850.000000     | 46.57                  | ---                    | 74.00                | 27.43       | H   | 15.3         |
| 2850.000000     | ---                    | 36.85                  | 54.00                | 17.15       | H   | 15.3         |



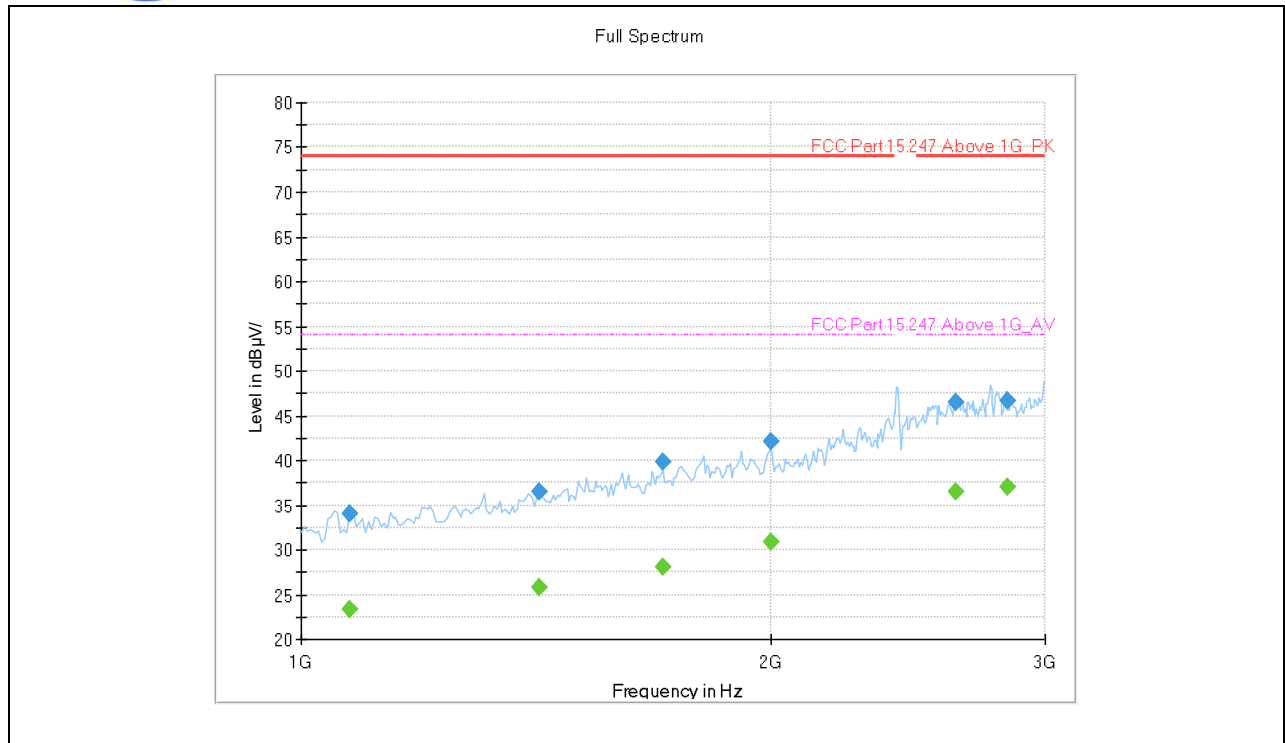
(802.11g \_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4927.500000     | 40.00            | ---              | 74.00          | 34.00       | H   | -2.8         |
| 4927.500000     | ---              | 29.29            | 54.00          | 24.71       | H   | -2.8         |
| 6607.500000     | ---              | 30.94            | 54.00          | 23.06       | H   | -0.9         |
| 6607.500000     | 42.36            | ---              | 74.00          | 31.64       | H   | -0.9         |
| 9067.500000     | ---              | 30.91            | 54.00          | 23.09       | H   | 1.3          |
| 9067.500000     | 42.63            | ---              | 74.00          | 31.37       | H   | 1.3          |
| 12232.50000     | 43.79            | ---              | 74.00          | 30.21       | H   | 4.0          |
| 12232.50000     | ---              | 31.20            | 54.00          | 22.80       | H   | 4.0          |
| 15007.50000     | 46.74            | ---              | 74.00          | 27.26       | H   | 10.7         |
| 15007.50000     | ---              | 35.37            | 54.00          | 18.63       | H   | 10.7         |
| 18000.00000     | 48.98            | ---              | 74.00          | 25.02       | H   | 14.9         |
| 18000.00000     | ---              | 38.51            | 54.00          | 15.49       | H   | 14.9         |



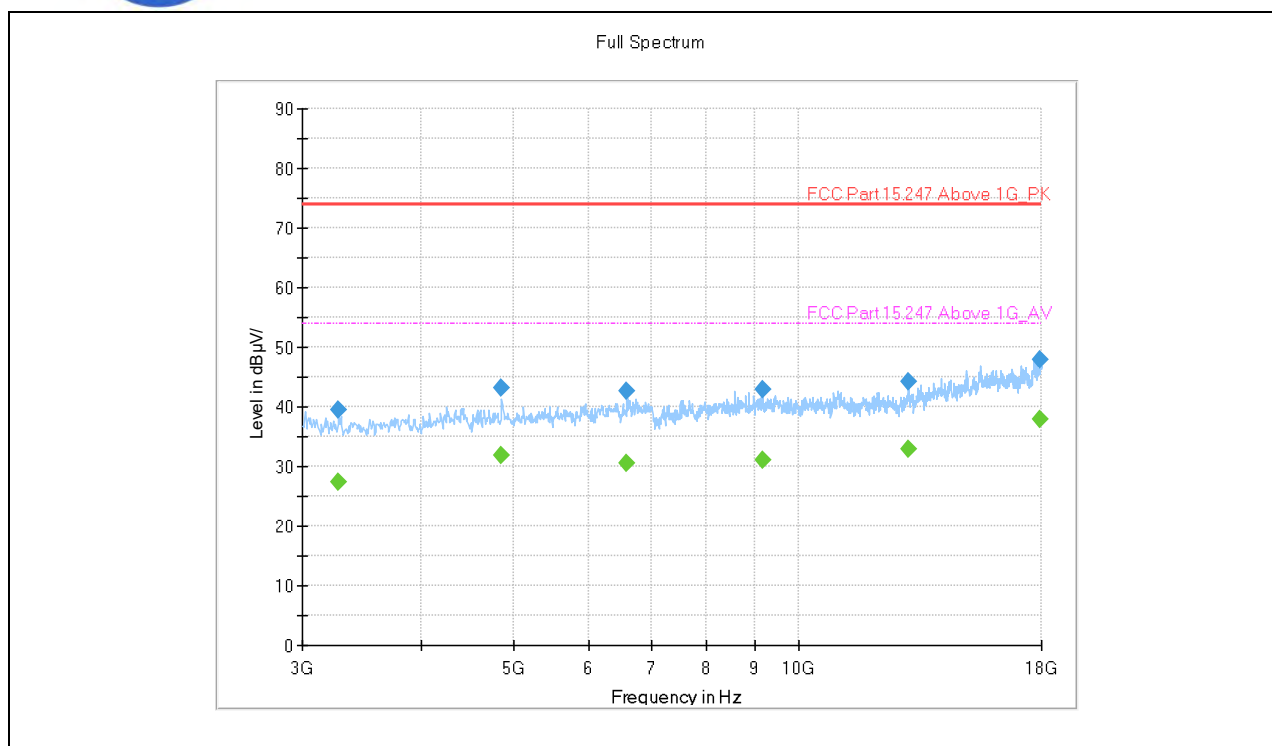
(802.11g \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 40.023333       | 18.17            | ---                | 40.00          | 21.83       | V   | 15.7         |
| 66.657917       | 21.82            | ---                | 40.00          | 18.18       | V   | 12.9         |
| 143.368750      | 24.90            | ---                | 43.50          | 18.60       | V   | 10.8         |
| 219.432917      | 25.40            | ---                | 46.00          | 20.60       | V   | 14.6         |
| 417.757500      | 23.87            | ---                | 46.00          | 22.13       | V   | 19.9         |
| 762.067083      | 31.13            | ---                | 46.00          | 14.87       | V   | 26.2         |



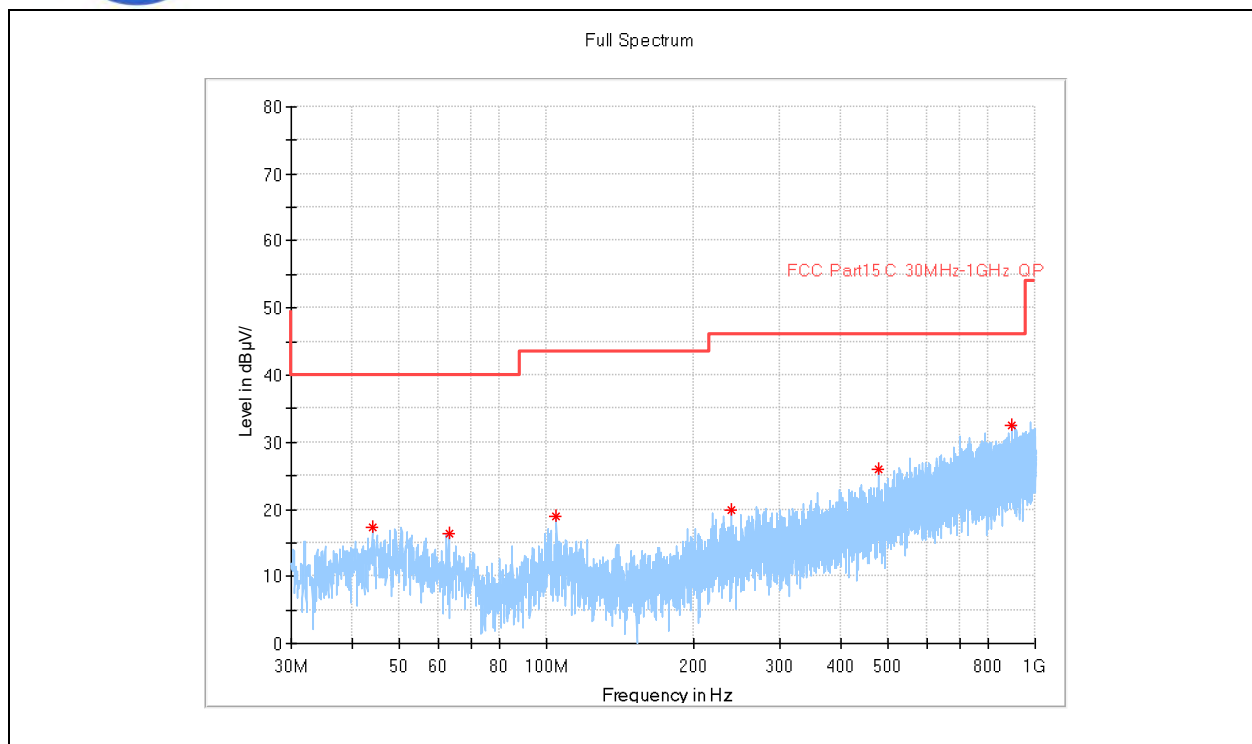
(802.11g \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1075.000000     | 34.00                  | ---                    | 74.00                | 40.00       | V   | -2.6         |
| 1075.000000     | ---                    | 23.33                  | 54.00                | 30.67       | V   | -2.6         |
| 1420.000000     | ---                    | 25.85                  | 54.00                | 28.15       | V   | 1.1          |
| 1420.000000     | 36.55                  | ---                    | 74.00                | 37.45       | V   | 1.1          |
| 1705.000000     | ---                    | 28.07                  | 54.00                | 25.93       | V   | 4.0          |
| 1705.000000     | 39.88                  | ---                    | 74.00                | 34.12       | V   | 4.0          |
| 2000.000000     | ---                    | 30.86                  | 54.00                | 23.14       | V   | 7.5          |
| 2000.000000     | 42.10                  | ---                    | 74.00                | 31.90       | V   | 7.5          |
| 2630.000000     | 46.47                  | ---                    | 74.00                | 27.53       | V   | 14.6         |
| 2630.000000     | ---                    | 36.44                  | 54.00                | 17.56       | V   | 14.6         |
| 2840.000000     | ---                    | 37.00                  | 54.00                | 17.00       | V   | 15.5         |
| 2840.000000     | 46.69                  | ---                    | 74.00                | 27.31       | V   | 15.5         |



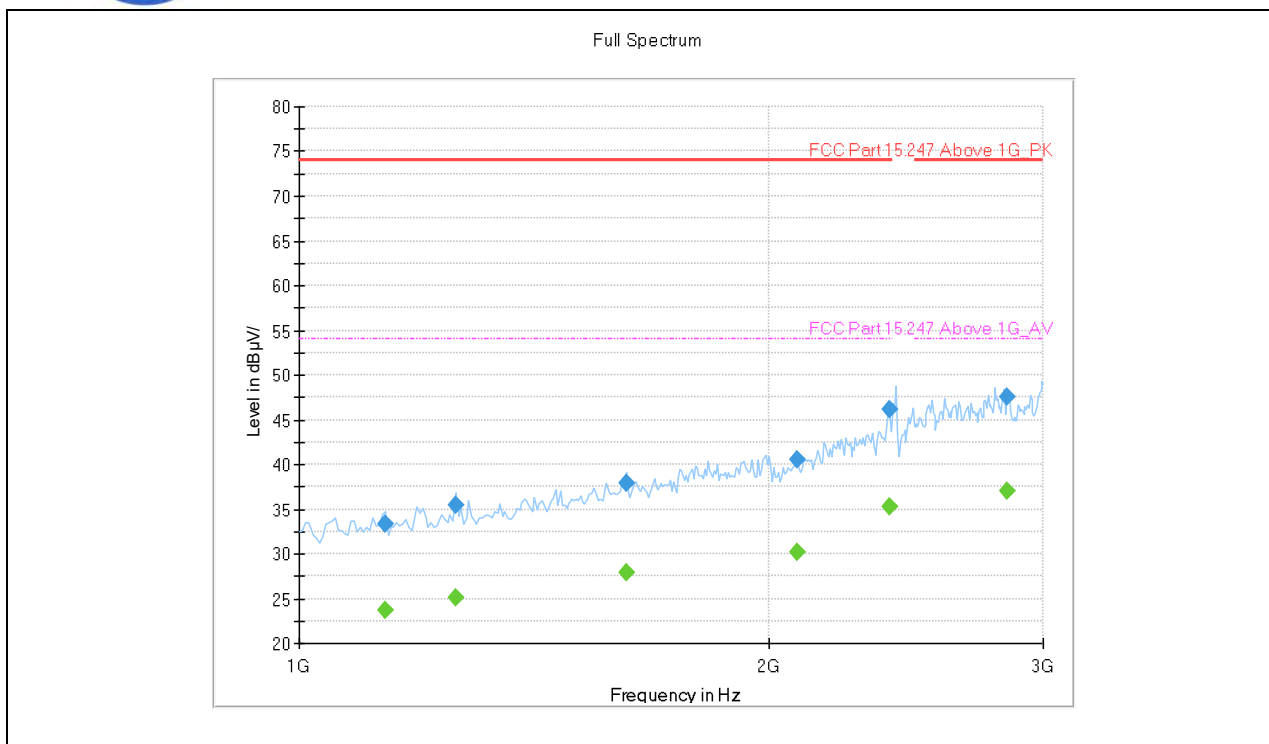
(802.11g \_2437MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3277.500000     | 39.56            | ---              | 74.00          | 34.44       | V   | -5.9         |
| 3277.500000     | ---              | 27.42            | 54.00          | 26.58       | V   | -5.9         |
| 4867.500000     | ---              | 31.74            | 54.00          | 22.26       | V   | -2.9         |
| 4867.500000     | 43.22            | ---              | 74.00          | 30.78       | V   | -2.9         |
| 6592.500000     | ---              | 30.64            | 54.00          | 23.36       | V   | -1.2         |
| 6592.500000     | 42.66            | ---              | 74.00          | 31.34       | V   | -1.2         |
| 9165.000000     | ---              | 31.09            | 54.00          | 22.91       | V   | 1.5          |
| 9165.000000     | 42.78            | ---              | 74.00          | 31.22       | V   | 1.5          |
| 13020.000000    | ---              | 32.82            | 54.00          | 21.18       | V   | 6.1          |
| 13020.000000    | 44.25            | ---              | 74.00          | 29.75       | V   | 6.1          |
| 17925.000000    | 48.02            | ---              | 74.00          | 24.98       | V   | 14.2         |
| 17925.000000    | ---              | 37.90            | 54.00          | 16.10       | V   | 14.2         |



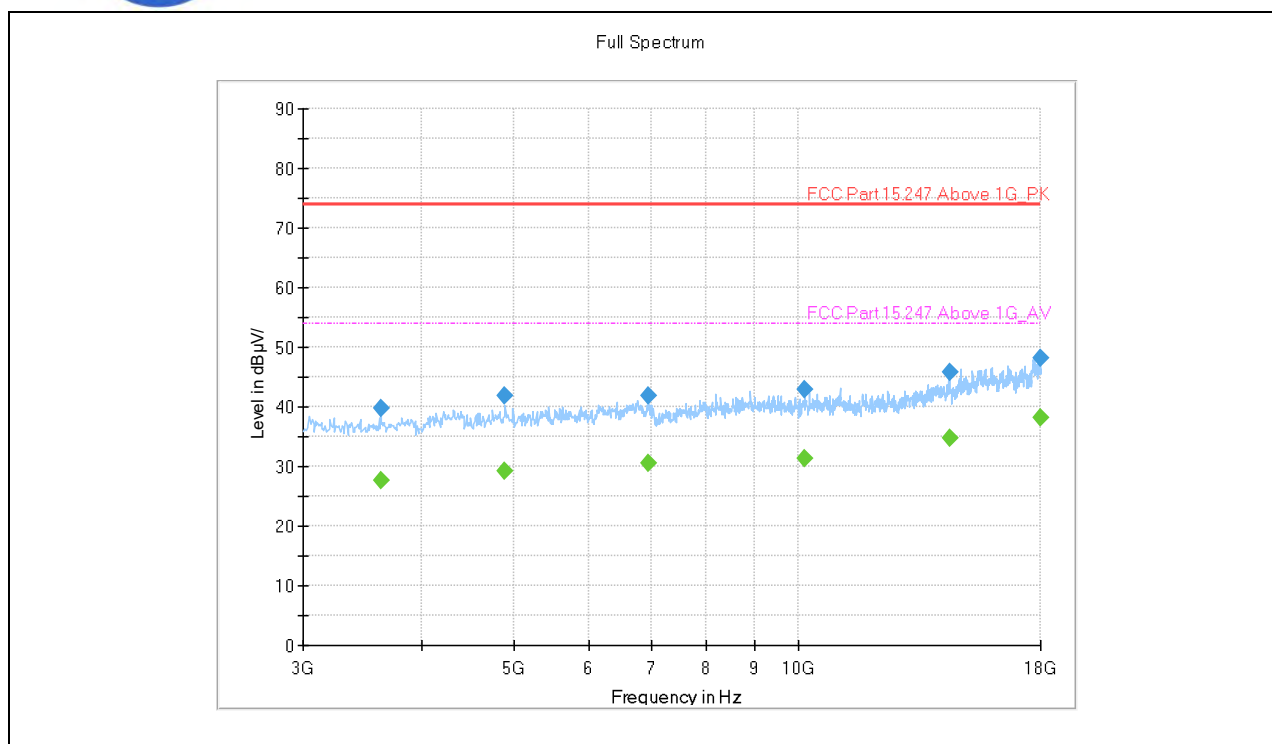
(802.11g \_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 43.943750       | 17.39            | ---                | 40.00          | 22.61       | H   | 15.3         |
| 63.060833       | 16.28            | ---                | 40.00          | 23.72       | H   | 13.6         |
| 104.770833      | 18.85            | ---                | 43.50          | 24.65       | H   | 14.2         |
| 239.479583      | 19.86            | ---                | 46.00          | 26.14       | H   | 15.2         |
| 479.433333      | 25.87            | ---                | 46.00          | 20.13       | H   | 21.4         |
| 892.532083      | 32.44            | ---                | 46.00          | 13.56       | H   | 27.9         |



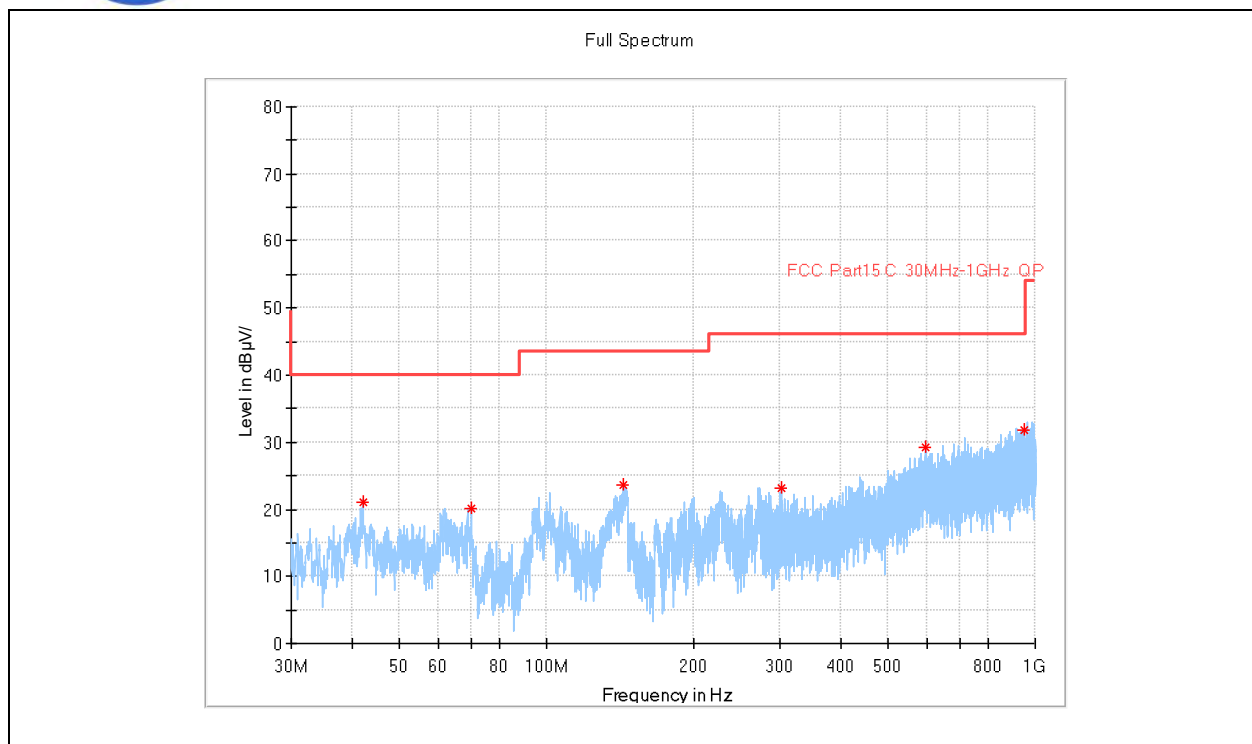
(802.11g \_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1135.000000     | ---              | 23.67            | 54.00          | 30.33       | H   | -1.9         |
| 1135.000000     | 33.27            | ---              | 74.00          | 40.73       | H   | -1.9         |
| 1260.000000     | ---              | 25.09            | 54.00          | 28.91       | H   | -0.1         |
| 1260.000000     | 35.42            | ---              | 74.00          | 38.58       | H   | -0.1         |
| 1620.000000     | 37.90            | ---              | 74.00          | 36.10       | H   | 3.3          |
| 1620.000000     | ---              | 27.88            | 54.00          | 26.12       | H   | 3.3          |
| 2085.000000     | ---              | 30.19            | 54.00          | 23.81       | H   | 7.4          |
| 2085.000000     | 40.58            | ---              | 74.00          | 33.42       | H   | 7.4          |
| 2390.000000     | 46.09            | ---              | 74.00          | 27.91       | H   | 12.7         |
| 2390.000000     | ---              | 35.27            | 54.00          | 18.73       | H   | 12.7         |
| 2845.000000     | ---              | 37.05            | 54.00          | 16.95       | H   | 15.4         |
| 2845.000000     | 47.54            | ---              | 74.00          | 26.46       | H   | 15.4         |



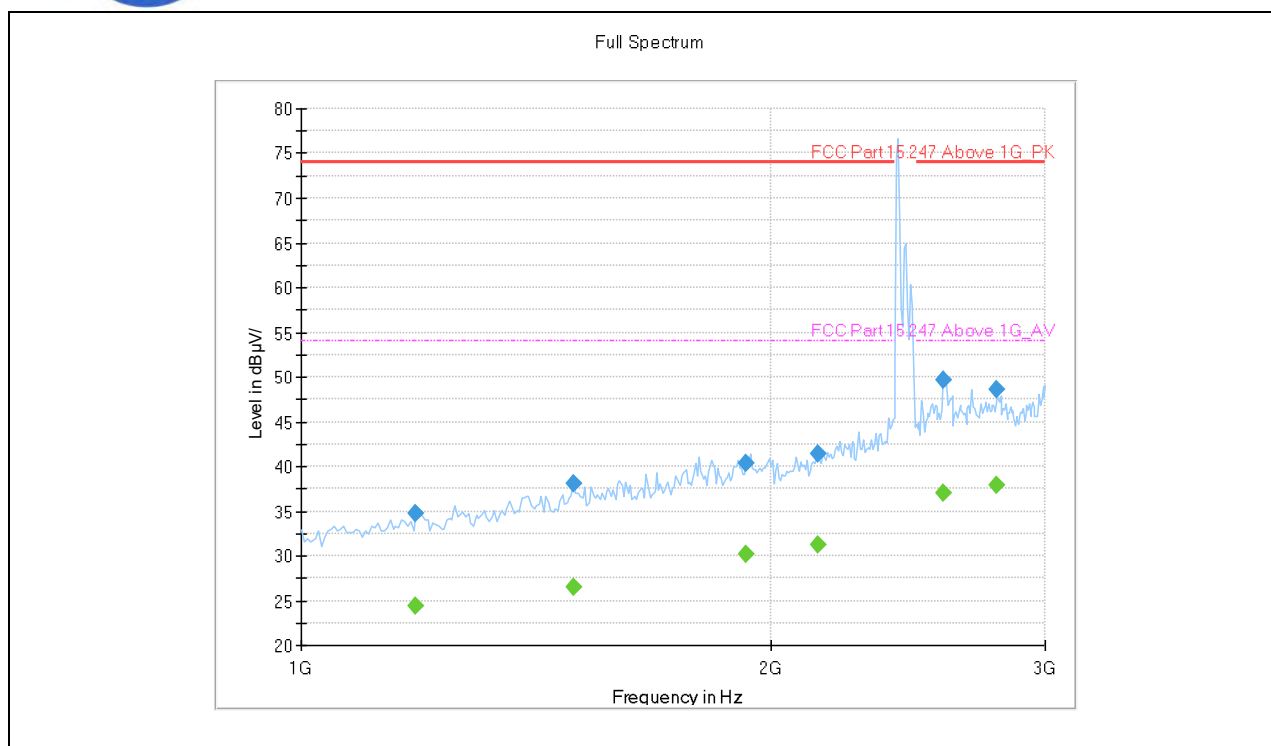
(802.11g \_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency<br>(MHz) | MaxPeak<br>(dBμV/m) | Average<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pol | Corr.<br>(dB/m) |
|--------------------|---------------------|---------------------|-------------------|----------------|-----|-----------------|
| 3622.500000        | ---                 | 27.57               | 54.00             | 26.43          | H   | -5.8            |
| 3622.500000        | 39.81               | ---                 | 74.00             | 34.19          | H   | -5.8            |
| 4897.500000        | ---                 | 29.19               | 54.00             | 24.81          | H   | -2.7            |
| 4897.500000        | 41.83               | ---                 | 74.00             | 32.17          | H   | -2.7            |
| 6937.500000        | 41.86               | ---                 | 74.00             | 32.14          | H   | -0.6            |
| 6937.500000        | ---                 | 30.56               | 54.00             | 23.44          | H   | -0.6            |
| 10140.000000       | 42.96               | ---                 | 74.00             | 31.04          | H   | 2.1             |
| 10140.000000       | ---                 | 31.26               | 54.00             | 22.74          | H   | 2.1             |
| 14422.500000       | 45.84               | ---                 | 74.00             | 28.16          | H   | 9.3             |
| 14422.500000       | ---                 | 34.73               | 54.00             | 19.27          | H   | 9.3             |
| 17992.500000       | 48.25               | ---                 | 74.00             | 25.75          | H   | 15.0            |
| 17992.500000       | ---                 | 38.26               | 54.00             | 15.74          | H   | 15.0            |



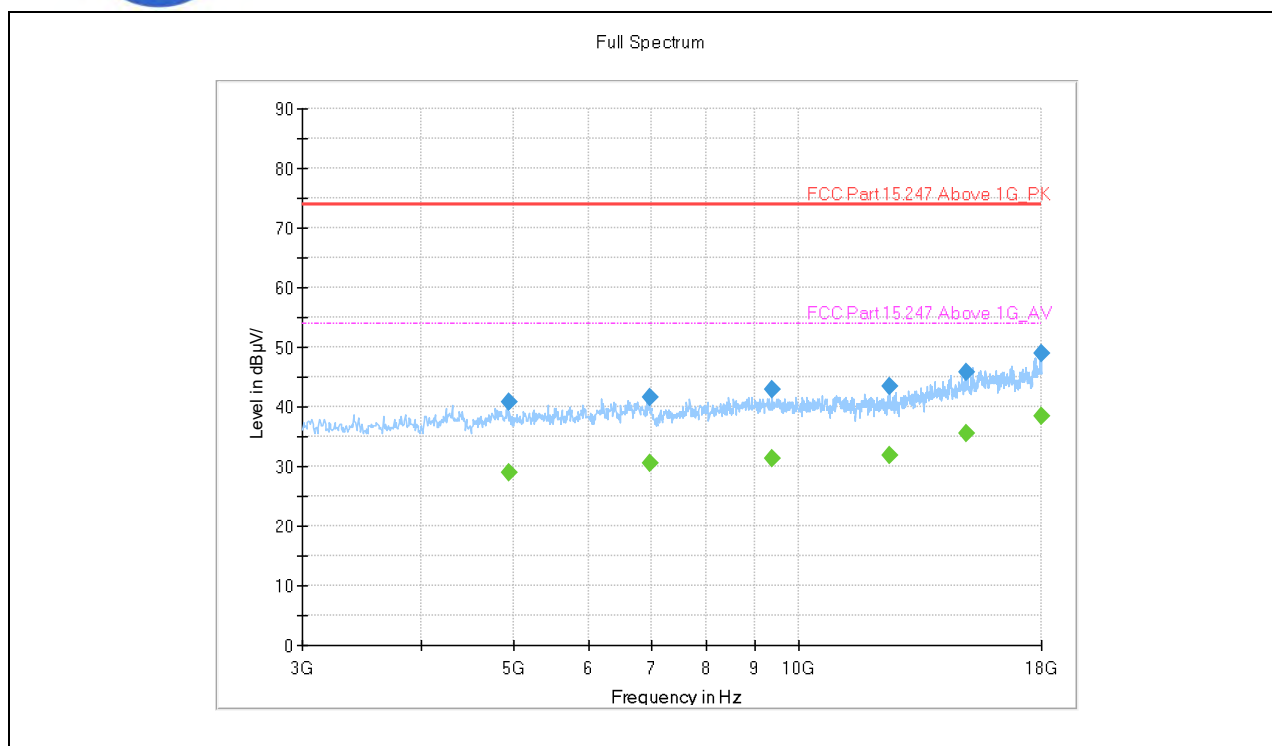
(802.11g \_2462MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 42.003750       | 21.17            | ---                | 40.00          | 18.83       | V   | 15.1         |
| 70.174167       | 20.17            | ---                | 40.00          | 19.83       | V   | 12.0         |
| 143.449583      | 23.53            | ---                | 43.50          | 19.97       | V   | 10.8         |
| 301.842500      | 23.05            | ---                | 46.00          | 22.95       | V   | 17.2         |
| 594.701667      | 29.35            | ---                | 46.00          | 16.65       | V   | 23.6         |
| 948.509167      | 31.75            | ---                | 46.00          | 14.25       | V   | 28.3         |



(802.11g \_2462MHz, Antenna Vertical , 1GHz to 3GHz)

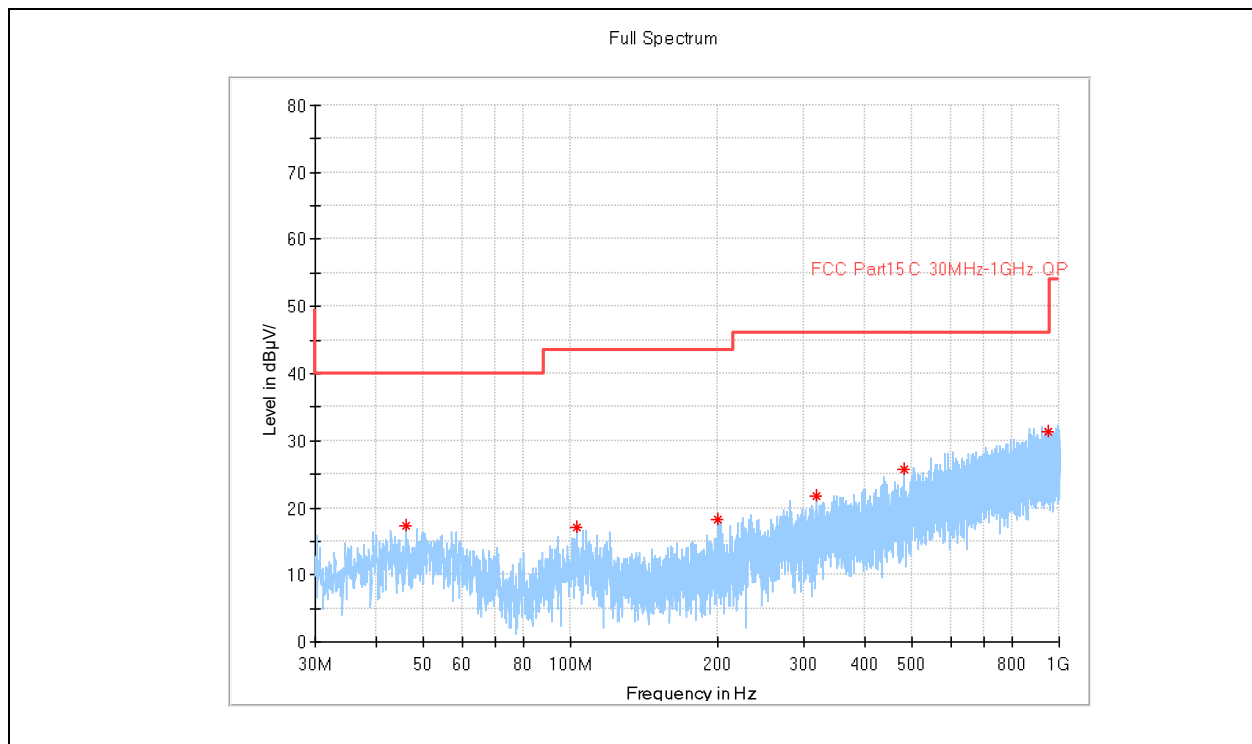
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1185.000000     | 34.66            | ---              | 74.00          | 39.34       | V   | -1.2         |
| 1185.000000     | ---              | 24.36            | 54.00          | 29.64       | V   | -1.2         |
| 1495.000000     | 38.12            | ---              | 74.00          | 35.88       | V   | 1.9          |
| 1495.000000     | ---              | 26.47            | 54.00          | 27.53       | V   | 1.9          |
| 1930.000000     | ---              | 30.24            | 54.00          | 23.76       | V   | 6.3          |
| 1930.000000     | 40.27            | ---              | 74.00          | 33.73       | V   | 6.3          |
| 2145.000000     | ---              | 31.30            | 54.00          | 22.70       | V   | 8.2          |
| 2145.000000     | 41.37            | ---              | 74.00          | 32.63       | V   | 8.2          |
| 2580.000000     | ---              | 37.04            | 54.00          | 16.96       | V   | 13.9         |
| 2580.000000     | 49.69            | ---              | 74.00          | 24.31       | V   | 13.9         |
| 2795.000000     | ---              | 37.95            | 54.00          | 16.05       | V   | 16.1         |
| 2795.000000     | 48.58            | ---              | 74.00          | 25.42       | V   | 16.1         |



(802.11g \_2462MHz, Antenna Vertical, 3GHz to 18GHz)

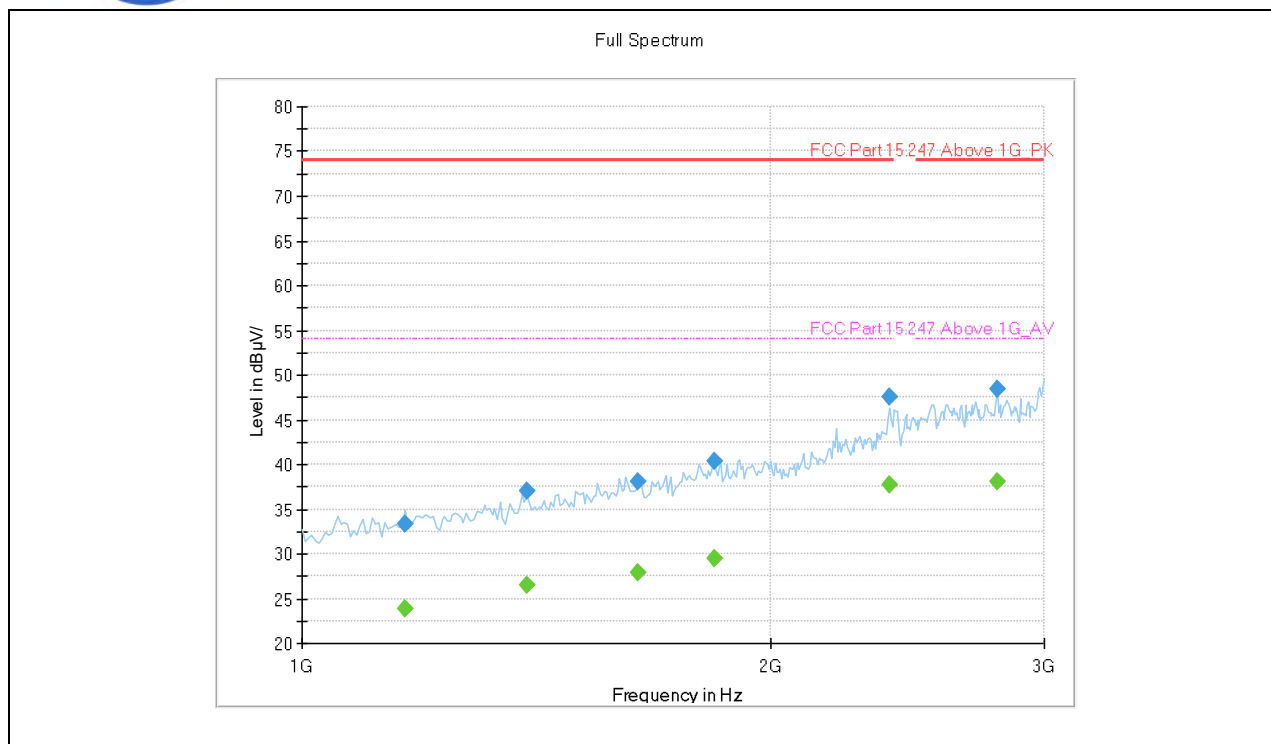
| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4957.500000     | 40.88            | ---              | 74.00          | 33.12       | V   | -3.0         |
| 4957.500000     | ---              | 28.96            | 54.00          | 25.04       | V   | -3.0         |
| 6960.000000     | 41.71            | ---              | 74.00          | 32.29       | V   | -0.6         |
| 6960.000000     | ---              | 30.46            | 54.00          | 23.54       | V   | -0.6         |
| 9367.500000     | 42.91            | ---              | 74.00          | 31.09       | V   | 1.9          |
| 9367.500000     | ---              | 31.36            | 54.00          | 22.64       | V   | 1.9          |
| 12442.50000     | ---              | 31.85            | 54.00          | 22.15       | V   | 4.6          |
| 12442.50000     | 43.39            | ---              | 74.00          | 30.61       | V   | 4.6          |
| 15022.50000     | ---              | 35.40            | 54.00          | 18.60       | V   | 10.8         |
| 15022.50000     | 45.84            | ---              | 74.00          | 28.16       | V   | 10.8         |
| 18000.00000     | 48.84            | ---              | 74.00          | 25.16       | V   | 14.9         |
| 18000.00000     | ---              | 38.50            | 54.00          | 15.50       | V   | 14.9         |

## 802.11n-20MHz Test mode



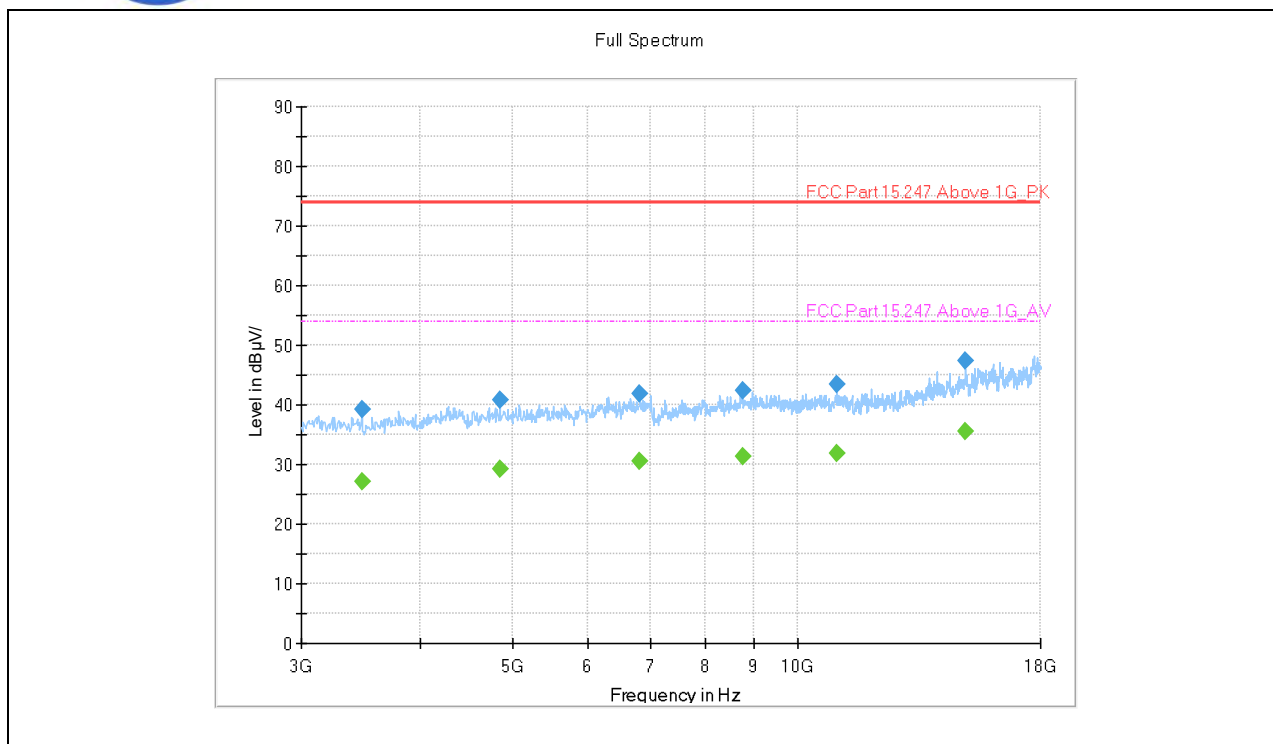
(802.11n\_20M\_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 45.924167       | 17.20            | ---                | 40.00          | 22.80       | H   | 15.5         |
| 102.952083      | 17.00            | ---                | 43.50          | 26.50       | H   | 14.5         |
| 200.760417      | 18.25            | ---                | 43.50          | 25.25       | H   | 14.2         |
| 318.938750      | 21.86            | ---                | 46.00          | 24.14       | H   | 17.8         |
| 480.847917      | 25.81            | ---                | 46.00          | 20.19       | H   | 21.4         |
| 946.286250      | 31.35            | ---                | 46.00          | 14.65       | H   | 28.3         |



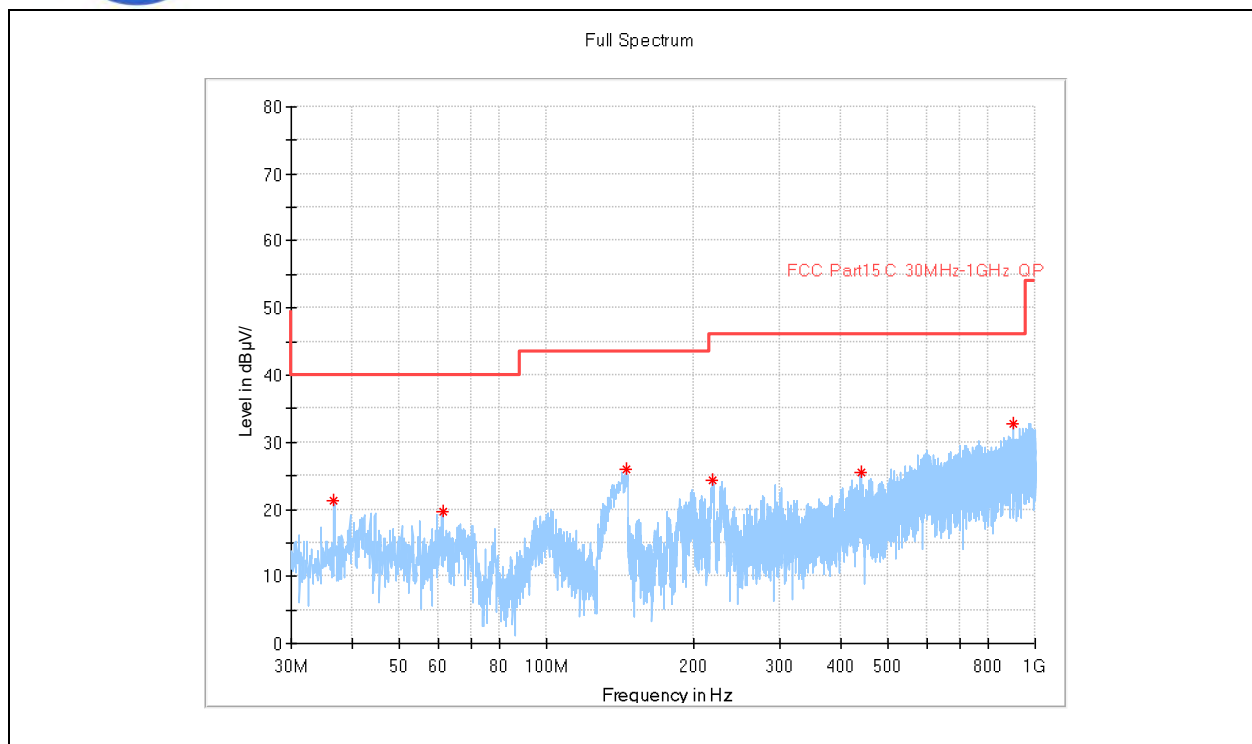
(802.11n\_20M\_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1165.000000     | 33.36            | ---              | 74.00          | 40.64       | H   | -1.8         |
| 1165.000000     | ---              | 23.94            | 54.00          | 30.06       | H   | -1.8         |
| 1395.000000     | ---              | 26.42            | 54.00          | 27.58       | H   | 1.5          |
| 1395.000000     | 37.06            | ---              | 74.00          | 36.94       | H   | 1.5          |
| 1645.000000     | ---              | 27.82            | 54.00          | 26.18       | H   | 3.4          |
| 1645.000000     | 38.09            | ---              | 74.00          | 35.91       | H   | 3.4          |
| 1840.000000     | ---              | 29.54            | 54.00          | 24.46       | H   | 5.9          |
| 1840.000000     | 40.27            | ---              | 74.00          | 33.73       | H   | 5.9          |
| 2385.000000     | 47.62            | ---              | 74.00          | 26.38       | H   | 12.3         |
| 2385.000000     | ---              | 37.69            | 54.00          | 16.31       | H   | 12.3         |
| 2800.000000     | ---              | 38.05            | 54.00          | 15.95       | H   | 16.5         |
| 2800.000000     | 48.35            | ---              | 74.00          | 25.65       | H   | 16.5         |

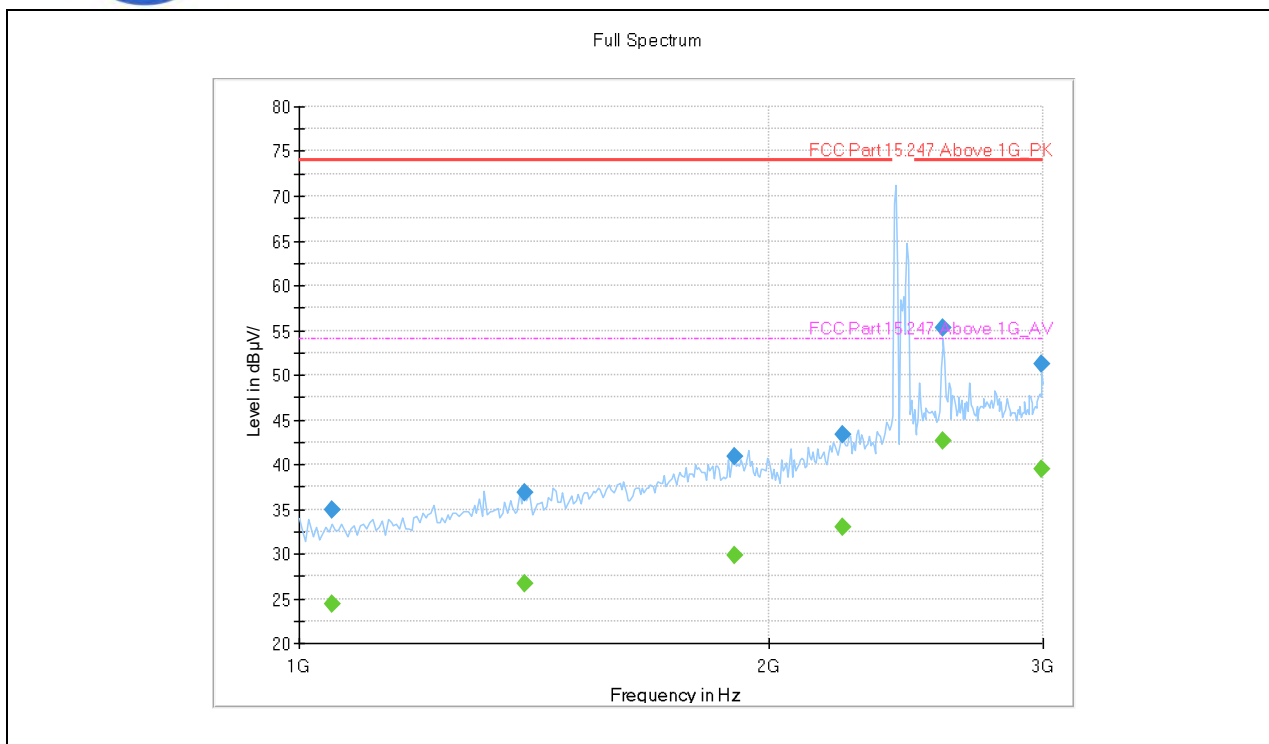


(802.11n\_20M\_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3472.500000     | 39.33            | ---              | 74.00          | 34.67       | H   | -6.3         |
| 3472.500000     | ---              | 27.04            | 54.00          | 26.96       | H   | -6.3         |
| 4852.500000     | ---              | 29.21            | 54.00          | 24.79       | H   | -3.0         |
| 4852.500000     | 40.78            | ---              | 74.00          | 33.22       | H   | -3.0         |
| 6810.000000     | 41.96            | ---              | 74.00          | 32.04       | H   | -1.0         |
| 6810.000000     | ---              | 30.59            | 54.00          | 23.41       | H   | -1.0         |
| 8737.500000     | 42.33            | ---              | 74.00          | 31.67       | H   | 1.4          |
| 8737.500000     | ---              | 31.20            | 54.00          | 22.80       | H   | 1.4          |
| 10980.000000    | 43.35            | ---              | 74.00          | 30.65       | H   | 3.3          |
| 10980.000000    | ---              | 31.89            | 54.00          | 22.11       | H   | 3.3          |
| 15000.000000    | ---              | 35.45            | 54.00          | 18.55       | H   | 10.6         |
| 15000.000000    | 47.24            | ---              | 74.00          | 26.76       | H   | 10.6         |

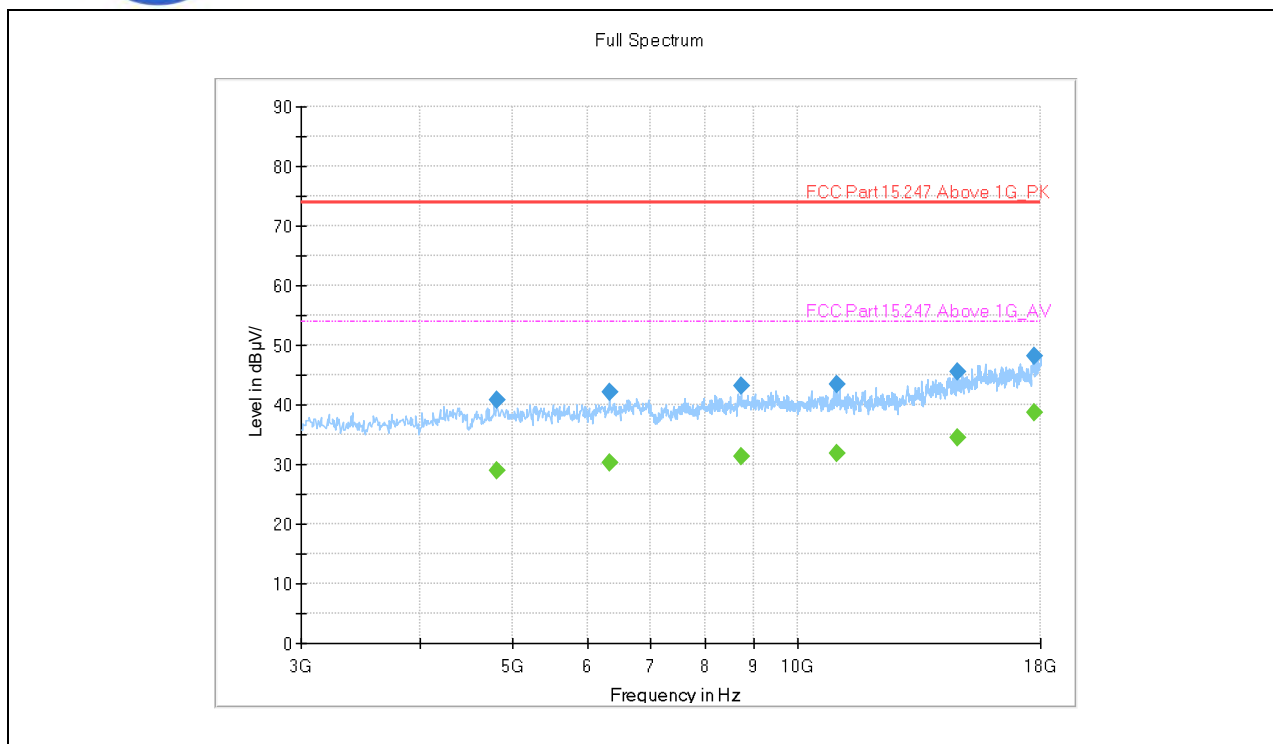


| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 36.749583       | 21.18            | ---                | 40.00          | 18.82       | V   | 13.5         |
| 61.525000       | 19.55            | ---                | 40.00          | 20.45       | V   | 13.9         |
| 145.591667      | 25.89            | ---                | 43.50          | 17.61       | V   | 10.5         |
| 217.977917      | 24.36            | ---                | 46.00          | 21.64       | V   | 14.2         |
| 440.027083      | 25.51            | ---                | 46.00          | 20.49       | V   | 20.6         |
| 904.212500      | 32.76            | ---                | 46.00          | 13.24       | V   | 28.1         |



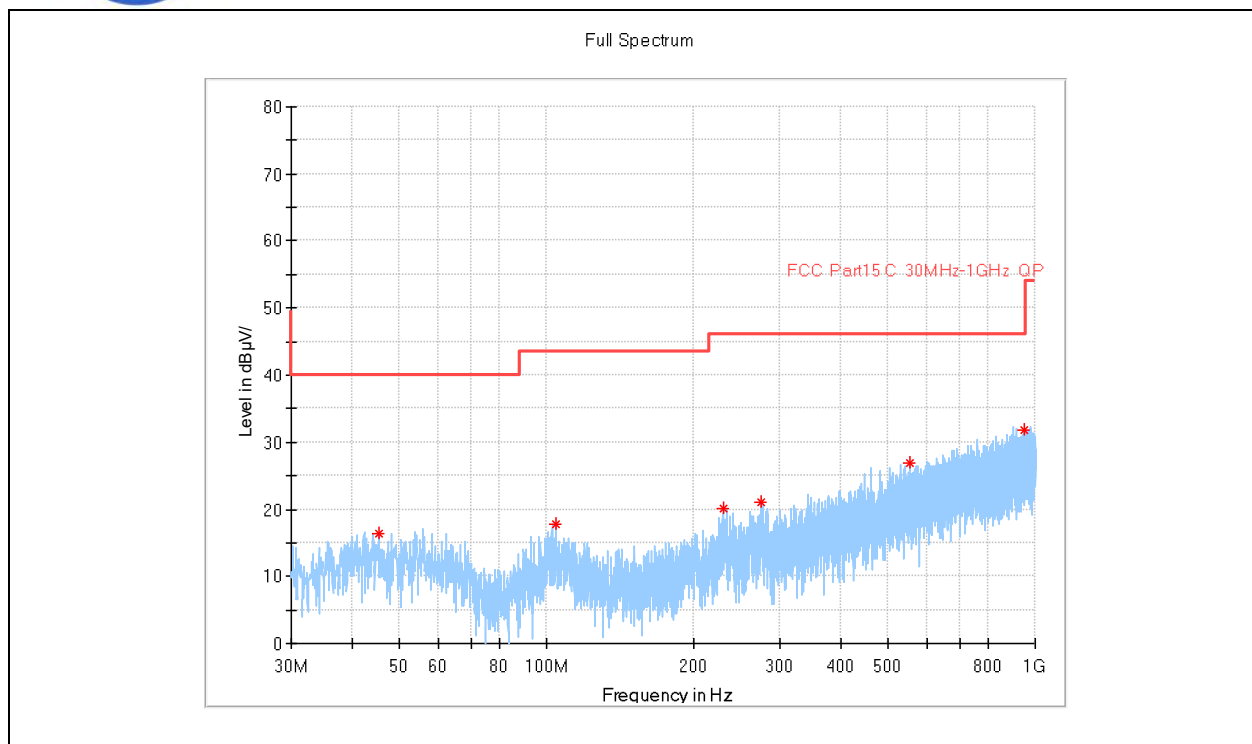
(802.11n\_20M\_2412MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1050.000000     | 34.92                  | ---                    | 74.00                | 39.09       | V   | -1.9         |
| 1050.000000     | ---                    | 24.36                  | 54.00                | 29.64       | V   | -1.9         |
| 1395.000000     | ---                    | 26.63                  | 54.00                | 27.37       | V   | 1.5          |
| 1395.000000     | 36.86                  | ---                    | 74.00                | 37.14       | V   | 1.5          |
| 1900.000000     | 40.90                  | ---                    | 74.00                | 33.10       | V   | 6.2          |
| 1900.000000     | ---                    | 29.79                  | 54.00                | 24.21       | V   | 6.2          |
| 2230.000000     | ---                    | 33.01                  | 54.00                | 20.99       | V   | 9.7          |
| 2230.000000     | 43.36                  | ---                    | 74.00                | 30.64       | V   | 9.7          |
| 2590.000000     | ---                    | 42.57                  | 54.00                | 11.43       | V   | 14.5         |
| 2590.000000     | 55.23                  | ---                    | 74.00                | 18.77       | V   | 14.5         |
| 2995.000000     | ---                    | 39.52                  | 54.00                | 14.48       | V   | 17.9         |
| 2995.000000     | 51.16                  | ---                    | 74.00                | 22.84       | V   | 17.9         |



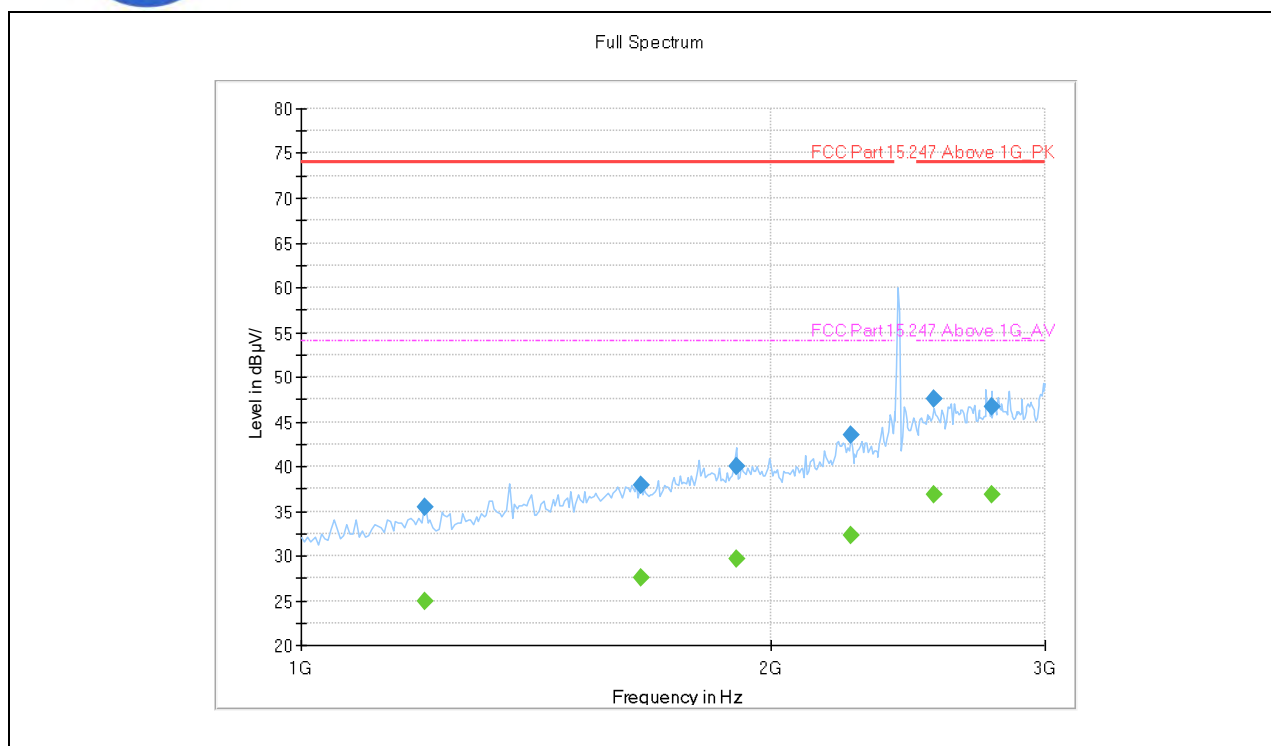
(802.11n\_20M\_2412MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4822.500000     | ---              | 29.00            | 54.00          | 21.00       | V   | -3.2         |
| 4822.500000     | 40.77            | ---              | 74.00          | 33.23       | V   | -3.2         |
| 6330.000000     | 42.08            | ---              | 74.00          | 29.92       | V   | -1.2         |
| 6330.000000     | ---              | 30.21            | 54.00          | 23.79       | V   | -1.2         |
| 8715.000000     | ---              | 31.28            | 54.00          | 22.72       | V   | 1.3          |
| 8715.000000     | 43.10            | ---              | 74.00          | 30.90       | V   | 1.3          |
| 10980.00000     | ---              | 31.82            | 54.00          | 22.18       | V   | 3.3          |
| 10980.00000     | 43.31            | ---              | 74.00          | 30.69       | V   | 3.3          |
| 14737.50000     | 45.65            | ---              | 74.00          | 28.35       | V   | 9.2          |
| 14737.50000     | ---              | 34.39            | 54.00          | 19.61       | V   | 9.2          |
| 17722.50000     | ---              | 38.62            | 54.00          | 15.38       | V   | 14.7         |
| 17722.50000     | 48.04            | ---              | 74.00          | 25.96       | V   | 14.7         |



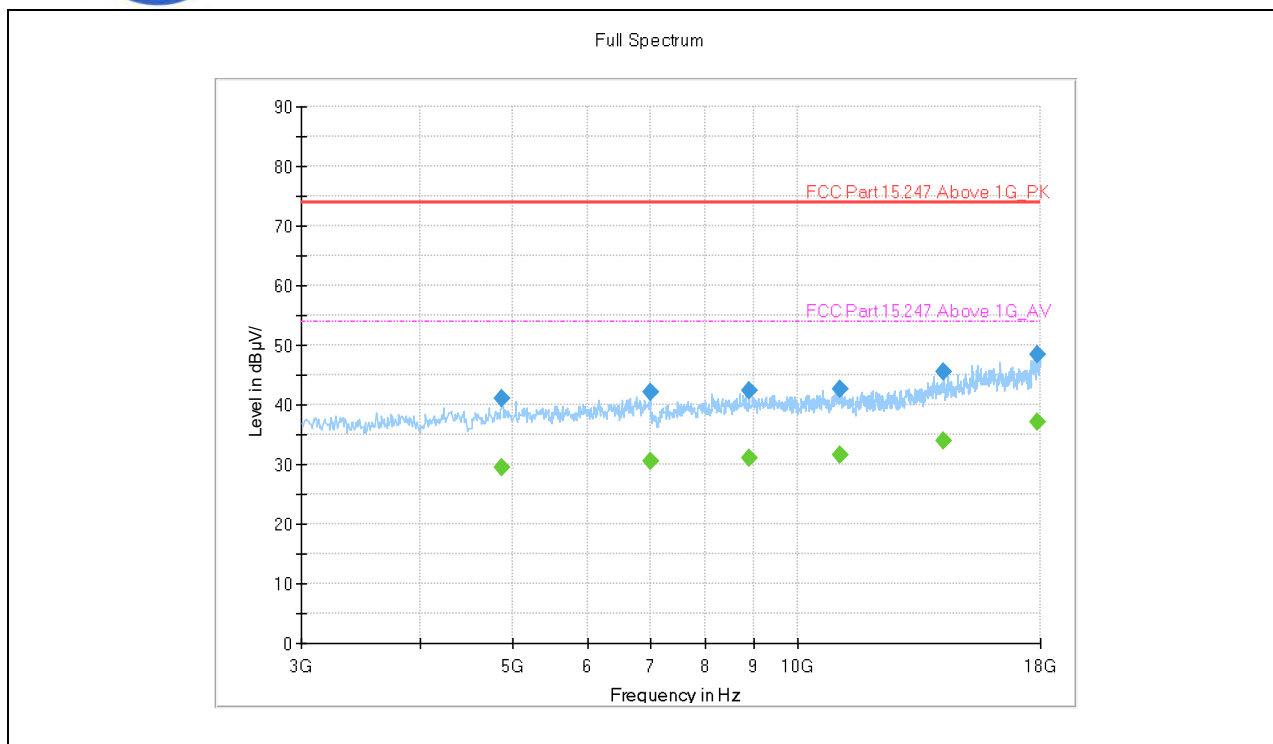
(802.11n\_20M\_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 45.398750       | 16.41            | ---                | 40.00          | 23.59       | H   | 15.4         |
| 104.164583      | 17.68            | ---                | 43.50          | 25.82       | H   | 14.3         |
| 229.335000      | 20.16            | ---                | 46.00          | 25.84       | H   | 14.4         |
| 274.763333      | 20.96            | ---                | 46.00          | 25.04       | H   | 15.5         |
| 554.285000      | 26.86            | ---                | 46.00          | 19.14       | H   | 22.7         |
| 948.711250      | 31.75            | ---                | 46.00          | 14.25       | H   | 28.3         |



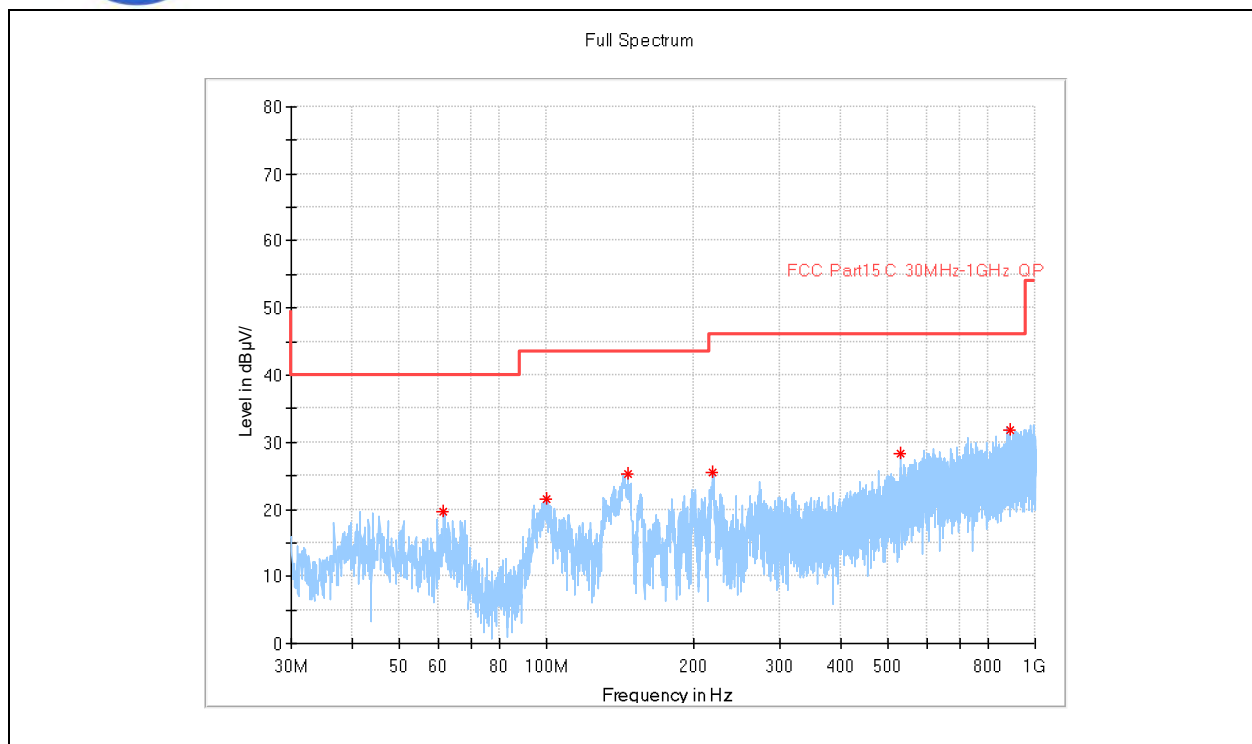
(802.11n\_20M\_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1200.000000     | ---              | 24.93            | 54.00          | 29.07       | H   | -0.4         |
| 1200.000000     | 35.49            | ---              | 74.00          | 38.51       | H   | -0.4         |
| 1650.000000     | 37.84            | ---              | 74.00          | 36.16       | H   | 3.3          |
| 1650.000000     | ---              | 27.63            | 54.00          | 26.37       | H   | 3.3          |
| 1900.000000     | 40.03            | ---              | 74.00          | 33.97       | H   | 6.2          |
| 1900.000000     | ---              | 29.63            | 54.00          | 24.37       | H   | 6.2          |
| 2250.000000     | 43.44            | ---              | 74.00          | 30.56       | H   | 9.8          |
| 2250.000000     | ---              | 32.36            | 54.00          | 21.64       | H   | 9.8          |
| 2545.000000     | 47.52            | ---              | 74.00          | 26.48       | H   | 14.6         |
| 2545.000000     | ---              | 36.91            | 54.00          | 17.09       | H   | 14.6         |
| 2770.000000     | ---              | 36.85            | 54.00          | 17.15       | H   | 15.1         |
| 2770.000000     | 46.72            | ---              | 74.00          | 27.28       | H   | 15.1         |



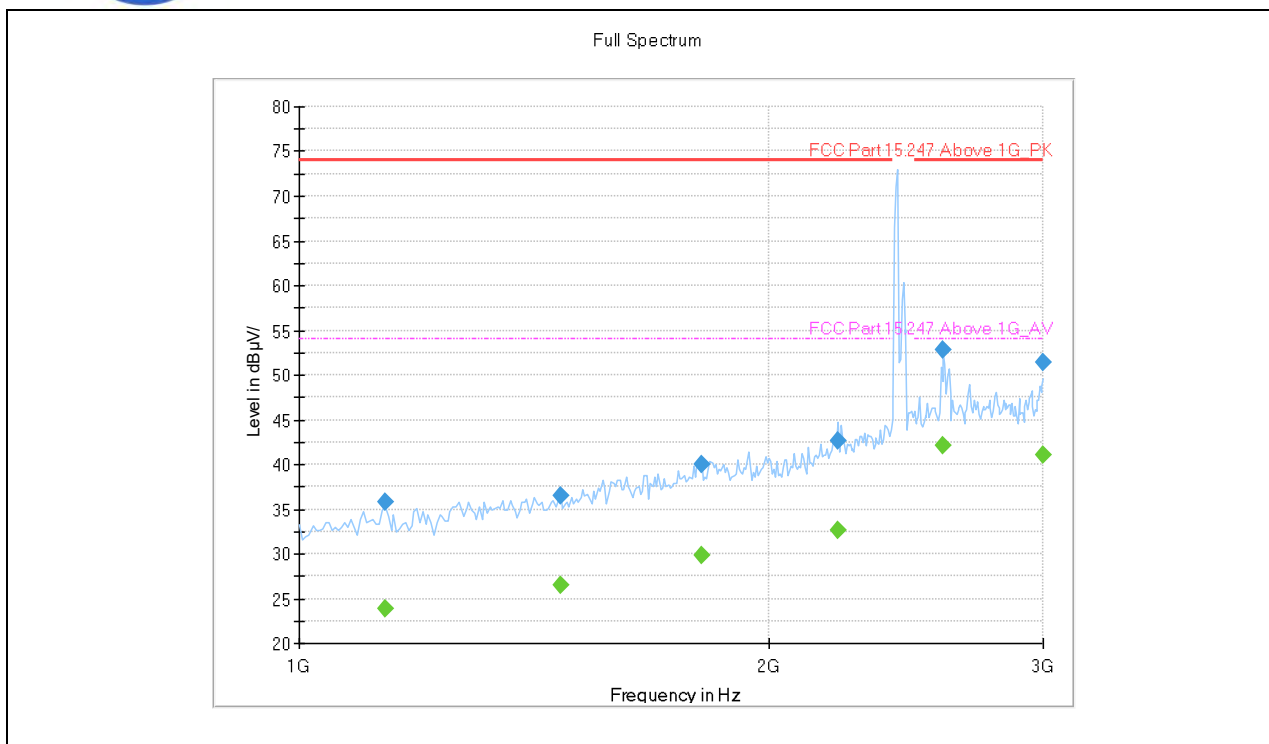
(802.11n\_20M\_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4882.500000     | ---              | 29.49            | 54.00          | 24.51       | H   | -2.8         |
| 4882.500000     | 40.97            | ---              | 74.00          | 33.03       | H   | -2.8         |
| 6990.000000     | 42.16            | ---              | 74.00          | 31.84       | H   | -0.8         |
| 6990.000000     | ---              | 30.53            | 54.00          | 23.47       | H   | -0.8         |
| 8887.500000     | ---              | 30.92            | 54.00          | 23.08       | H   | 1.4          |
| 8887.500000     | 42.46            | ---              | 74.00          | 31.54       | H   | 1.4          |
| 11092.50000     | 42.58            | ---              | 74.00          | 31.42       | H   | 3.2          |
| 11092.50000     | ---              | 31.67            | 54.00          | 22.33       | H   | 3.2          |
| 14250.00000     | 45.65            | ---              | 74.00          | 28.35       | H   | 8.4          |
| 14250.00000     | ---              | 33.96            | 54.00          | 20.04       | H   | 8.4          |
| 17850.00000     | 48.34            | ---              | 74.00          | 25.66       | H   | 14.7         |
| 17850.00000     | ---              | 37.21            | 54.00          | 16.79       | H   | 14.7         |



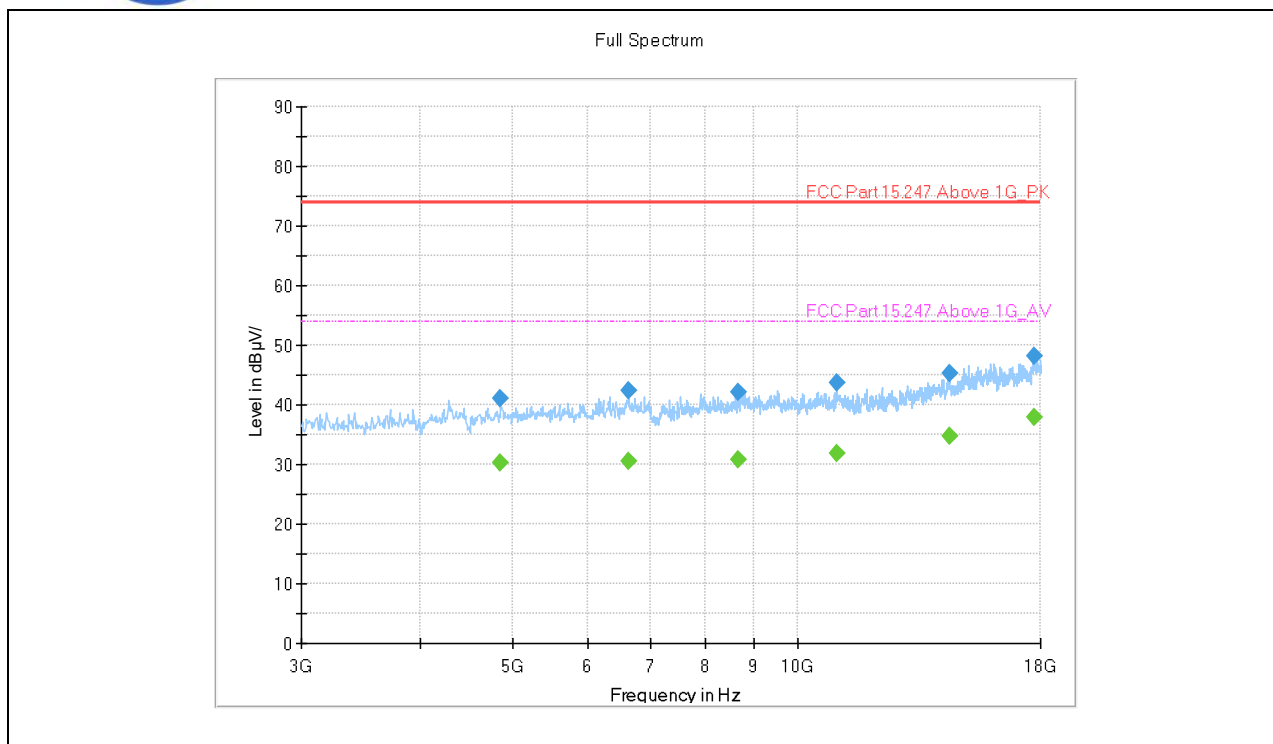
(802.11n\_20M\_2437MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 61.565417       | 19.59            | ---                | 40.00          | 20.41       | V   | 13.9         |
| 100.001667      | 21.63            | ---                | 43.50          | 21.87       | V   | 15.2         |
| 147.127500      | 25.31            | ---                | 43.50          | 18.19       | V   | 10.9         |
| 219.190417      | 25.42            | ---                | 46.00          | 20.58       | V   | 14.6         |
| 530.883750      | 28.20            | ---                | 46.00          | 17.80       | V   | 22.2         |
| 890.107083      | 31.87            | ---                | 46.00          | 14.13       | V   | 27.9         |



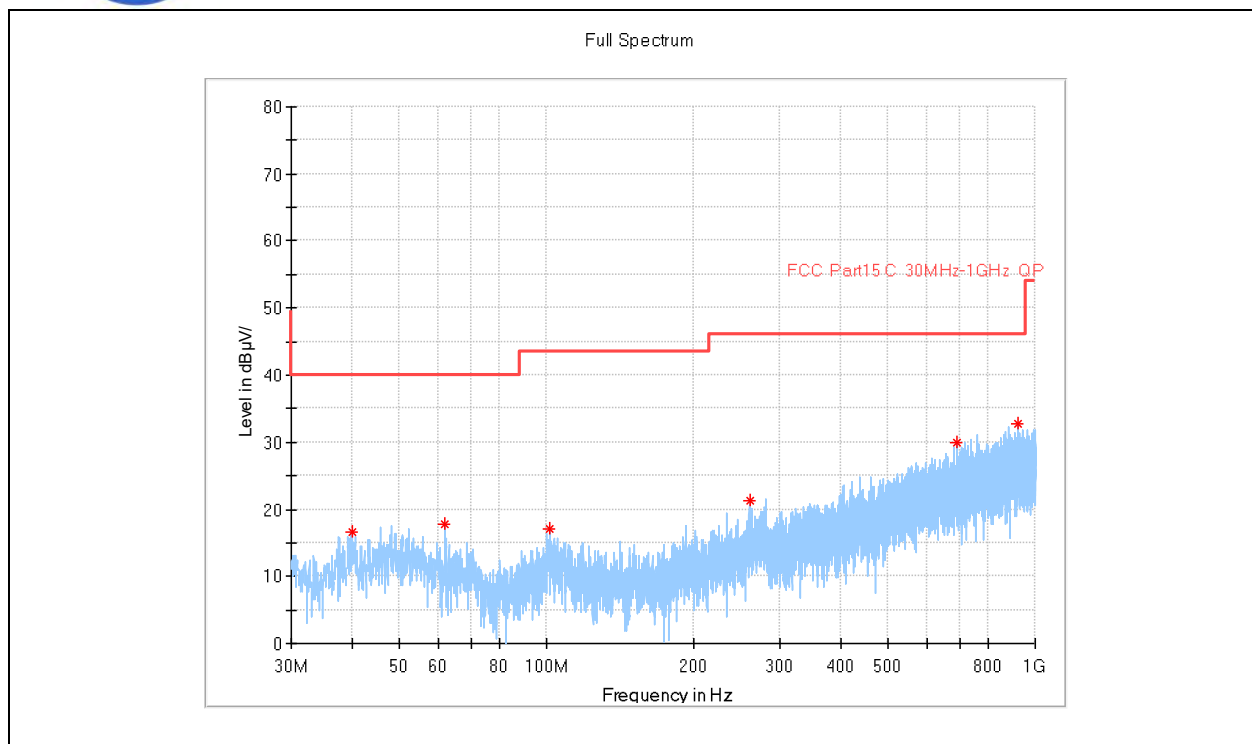
(802.11n\_20M\_2437MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1135.000000     | ---              | 23.95            | 54.00          | 30.05       | V   | -1.9         |
| 1135.000000     | 35.75            | ---              | 74.00          | 38.25       | V   | -1.9         |
| 1470.000000     | ---              | 26.54            | 54.00          | 27.46       | V   | 1.7          |
| 1470.000000     | 36.44            | ---              | 74.00          | 37.56       | V   | 1.7          |
| 1810.000000     | ---              | 29.78            | 54.00          | 24.22       | V   | 6.0          |
| 1810.000000     | 39.92            | ---              | 74.00          | 34.08       | V   | 6.0          |
| 2215.000000     | ---              | 32.58            | 54.00          | 21.42       | V   | 9.5          |
| 2215.000000     | 42.55            | ---              | 74.00          | 31.45       | V   | 9.5          |
| 2590.000000     | 52.74            | ---              | 74.00          | 21.26       | V   | 14.5         |
| 2590.000000     | ---              | 42.06            | 54.00          | 11.94       | V   | 14.5         |
| 3000.000000     | 51.36            | ---              | 74.00          | 22.64       | V   | 18.4         |
| 3000.000000     | ---              | 41.04            | 54.00          | 12.96       | V   | 18.4         |



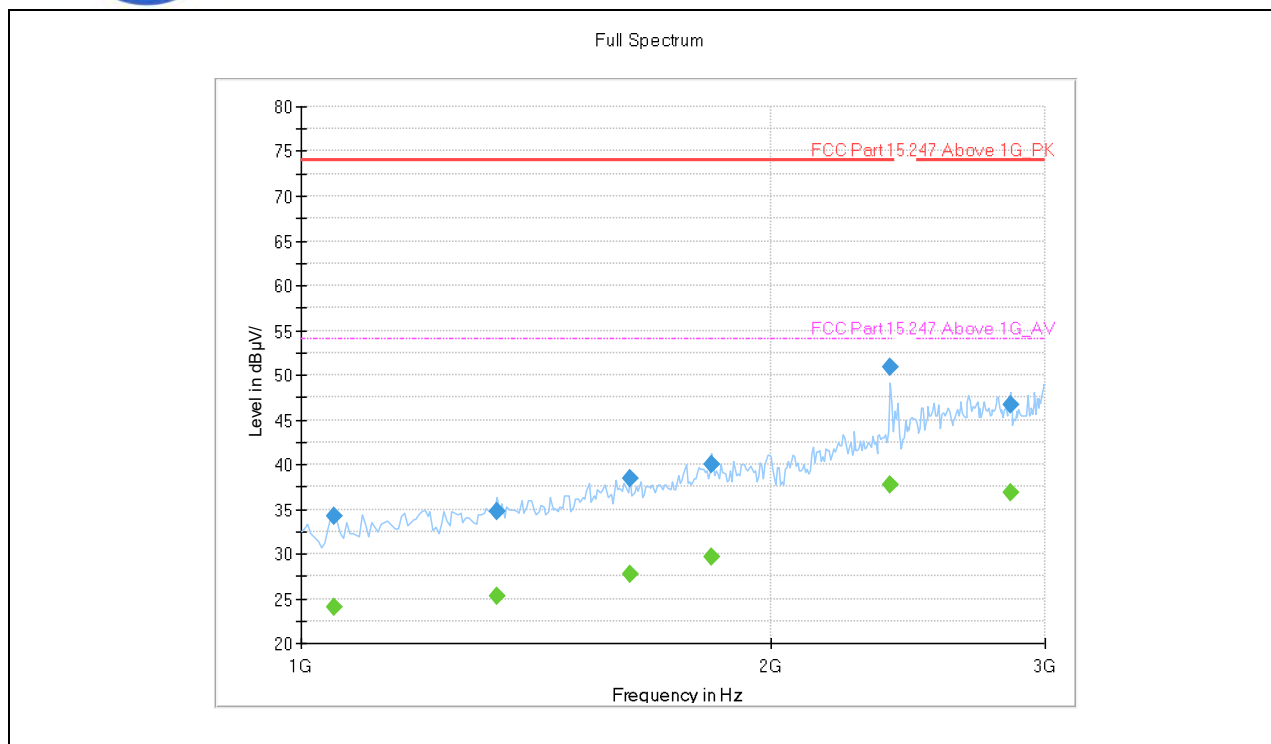
(802.11n\_20M\_2437MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4867.500000     | ---              | 30.13            | 54.00          | 23.87       | V   | -2.9         |
| 4867.500000     | 40.93            | ---              | 74.00          | 33.07       | V   | -2.9         |
| 6645.000000     | ---              | 30.66            | 54.00          | 23.35       | V   | -0.3         |
| 6645.000000     | 42.27            | ---              | 74.00          | 31.73       | V   | -0.3         |
| 8647.500000     | ---              | 30.66            | 54.00          | 23.34       | V   | 1.2          |
| 8647.500000     | 42.22            | ---              | 74.00          | 31.78       | V   | 1.2          |
| 10987.50000     | ---              | 31.86            | 54.00          | 22.14       | V   | 3.3          |
| 10987.50000     | 43.71            | ---              | 74.00          | 30.29       | V   | 3.3          |
| 14430.00000     | ---              | 34.73            | 54.00          | 19.27       | V   | 9.1          |
| 14430.00000     | 45.37            | ---              | 74.00          | 28.63       | V   | 9.1          |
| 17700.00000     | ---              | 37.93            | 54.00          | 16.07       | V   | 14.2         |
| 17700.00000     | 48.05            | ---              | 74.00          | 25.95       | V   | 14.2         |



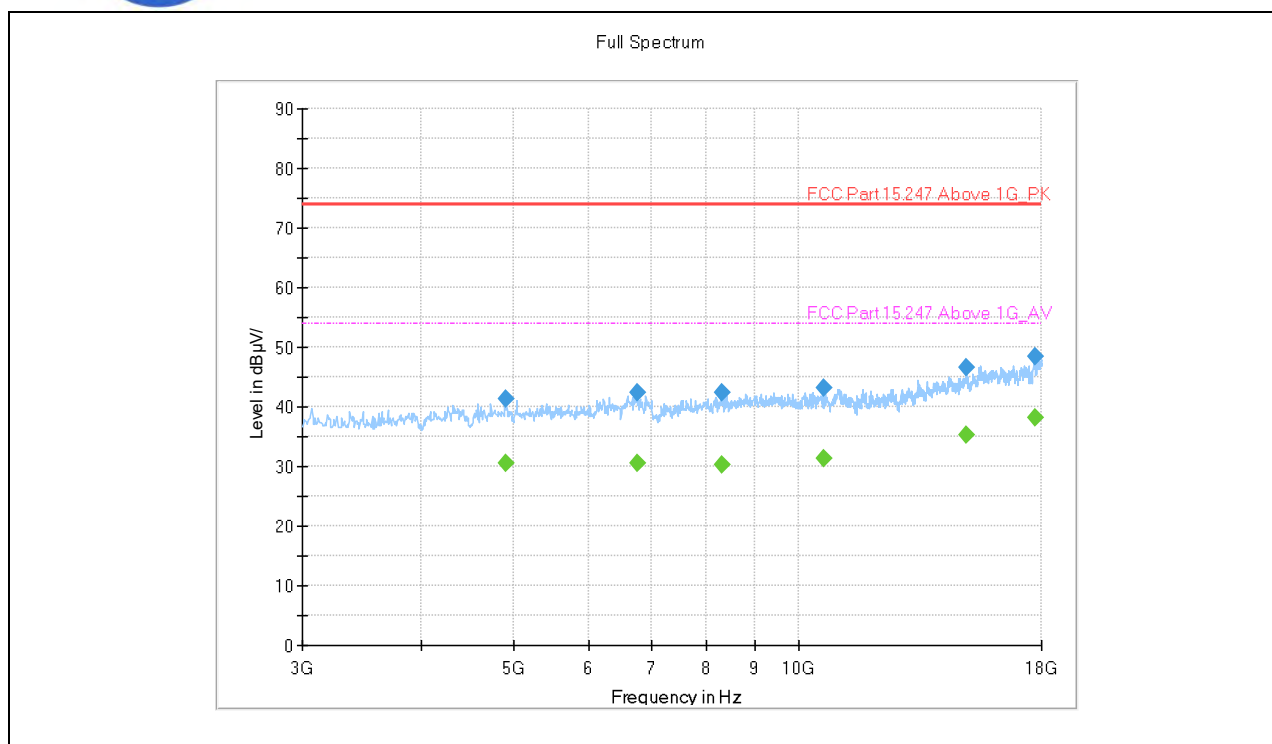
(802.11n\_20M\_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency<br>(MHz) | MaxPeak<br>(dBμV/m) | QuasiPeak<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pol | Corr.<br>(dB/m) |
|--------------------|---------------------|-----------------------|-------------------|----------------|-----|-----------------|
| 39.861667          | 16.54               | ---                   | 40.00             | 23.46          | H   | 15.5            |
| 61.767500          | 17.67               | ---                   | 40.00             | 22.33          | H   | 13.8            |
| 101.497083         | 17.10               | ---                   | 43.50             | 26.40          | H   | 14.9            |
| 259.970833         | 21.35               | ---                   | 46.00             | 24.65          | H   | 16.1            |
| 689.842500         | 30.00               | ---                   | 46.00             | 16.00          | H   | 24.8            |
| 920.783333         | 32.68               | ---                   | 46.00             | 13.32          | H   | 28.0            |



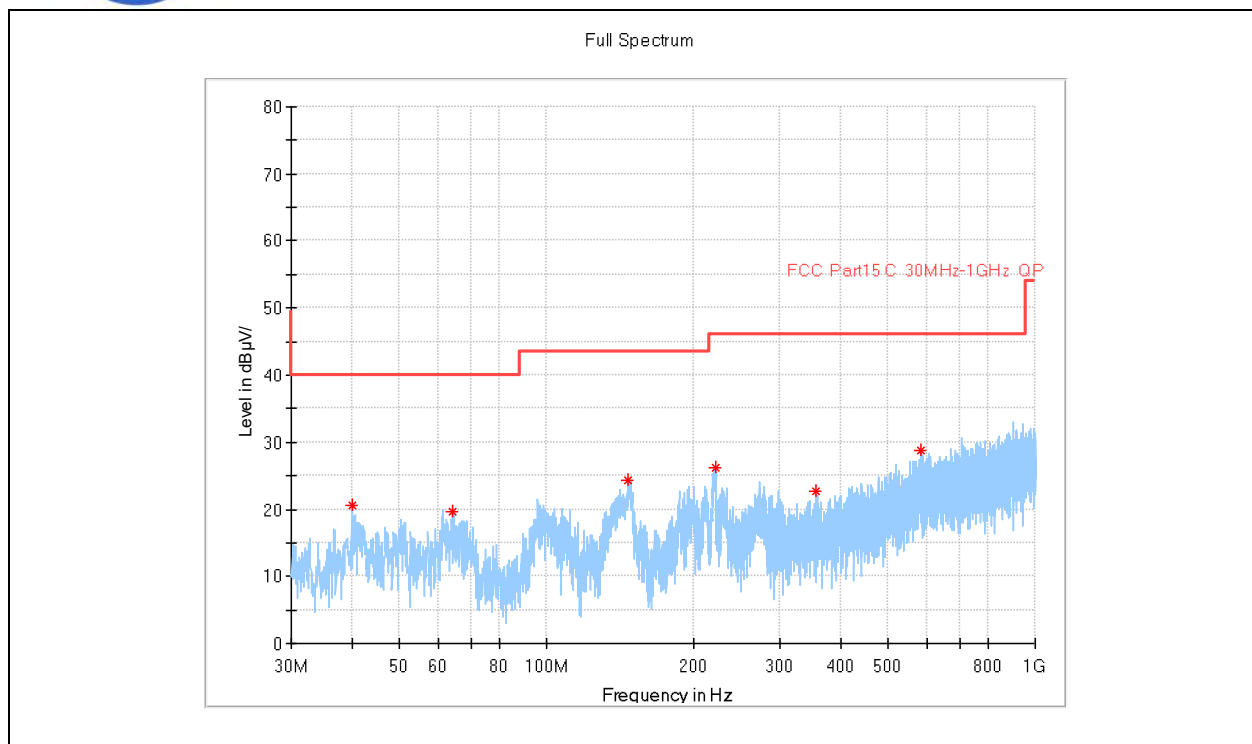
(802.11n\_20M\_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1050.000000     | 34.28                  | ---                    | 74.00                | 39.72       | H   | -1.9         |
| 1050.000000     | ---                    | 24.09                  | 54.00                | 29.91       | H   | -1.9         |
| 1335.000000     | ---                    | 25.35                  | 54.00                | 28.65       | H   | 0.3          |
| 1335.000000     | 34.77                  | ---                    | 74.00                | 39.23       | H   | 0.3          |
| 1625.000000     | ---                    | 27.75                  | 54.00                | 26.25       | H   | 3.3          |
| 1625.000000     | 38.45                  | ---                    | 74.00                | 35.55       | H   | 3.3          |
| 1835.000000     | ---                    | 29.69                  | 54.00                | 24.31       | H   | 6.0          |
| 1835.000000     | 39.95                  | ---                    | 74.00                | 34.05       | H   | 6.0          |
| 2385.000000     | 50.95                  | ---                    | 74.00                | 23.05       | H   | 12.3         |
| 2385.000000     | ---                    | 37.75                  | 54.00                | 16.25       | H   | 12.3         |
| 2850.000000     | ---                    | 36.81                  | 54.00                | 17.19       | H   | 15.3         |
| 2850.000000     | 46.70                  | ---                    | 74.00                | 27.30       | H   | 15.3         |



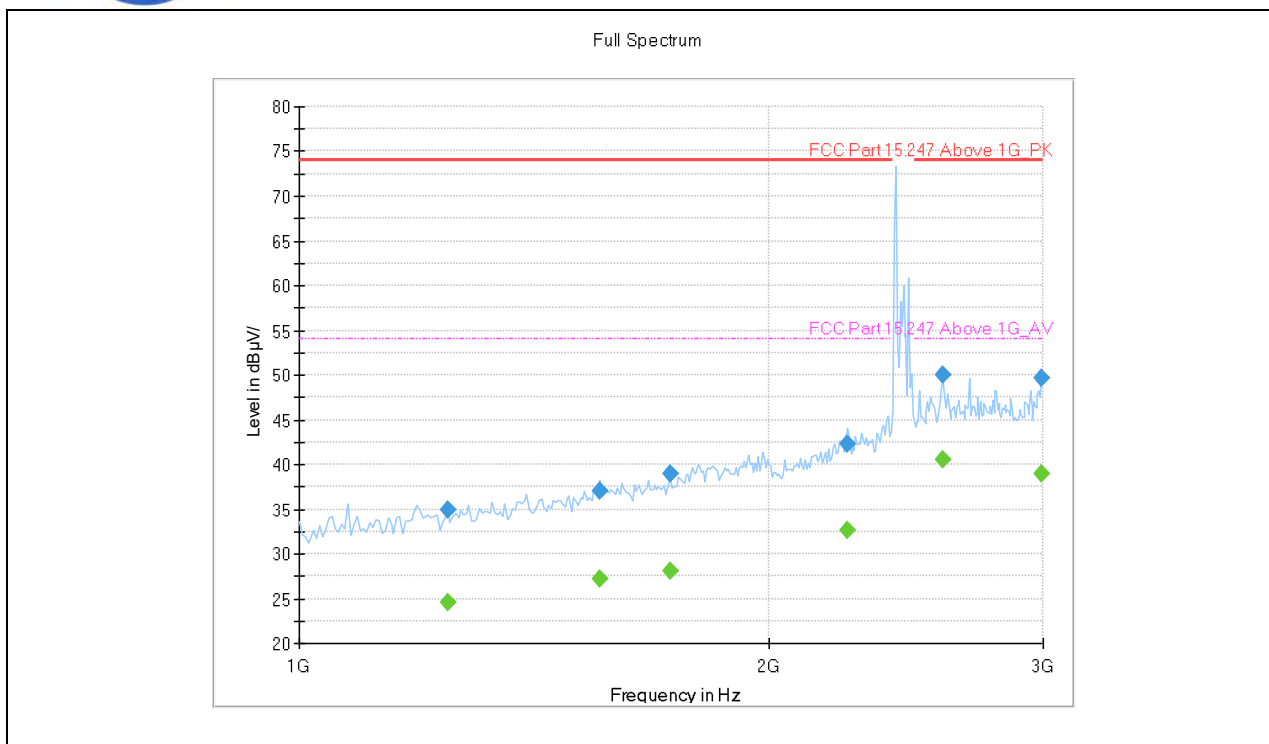
(802.11n\_20M\_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4920.000000     | 41.36            | ---              | 74.00          | 32.64       | H   | -2.8         |
| 4920.000000     | ---              | 30.59            | 54.00          | 23.41       | H   | -2.8         |
| 6772.500000     | ---              | 30.50            | 54.00          | 23.50       | H   | -1.2         |
| 6772.500000     | 42.50            | ---              | 74.00          | 31.50       | H   | -1.2         |
| 8310.000000     | 42.32            | ---              | 74.00          | 31.68       | H   | 0.8          |
| 8310.000000     | ---              | 30.33            | 54.00          | 23.67       | H   | 0.8          |
| 10620.000000    | 43.14            | ---              | 74.00          | 30.86       | H   | 2.6          |
| 10620.000000    | ---              | 31.22            | 54.00          | 22.78       | H   | 2.6          |
| 15030.000000    | 46.56            | ---              | 74.00          | 27.44       | H   | 10.6         |
| 15030.000000    | ---              | 35.34            | 54.00          | 18.66       | H   | 10.6         |
| 17707.500000    | ---              | 38.17            | 54.00          | 15.83       | H   | 14.4         |
| 17707.500000    | 48.54            | ---              | 74.00          | 25.46       | H   | 14.4         |



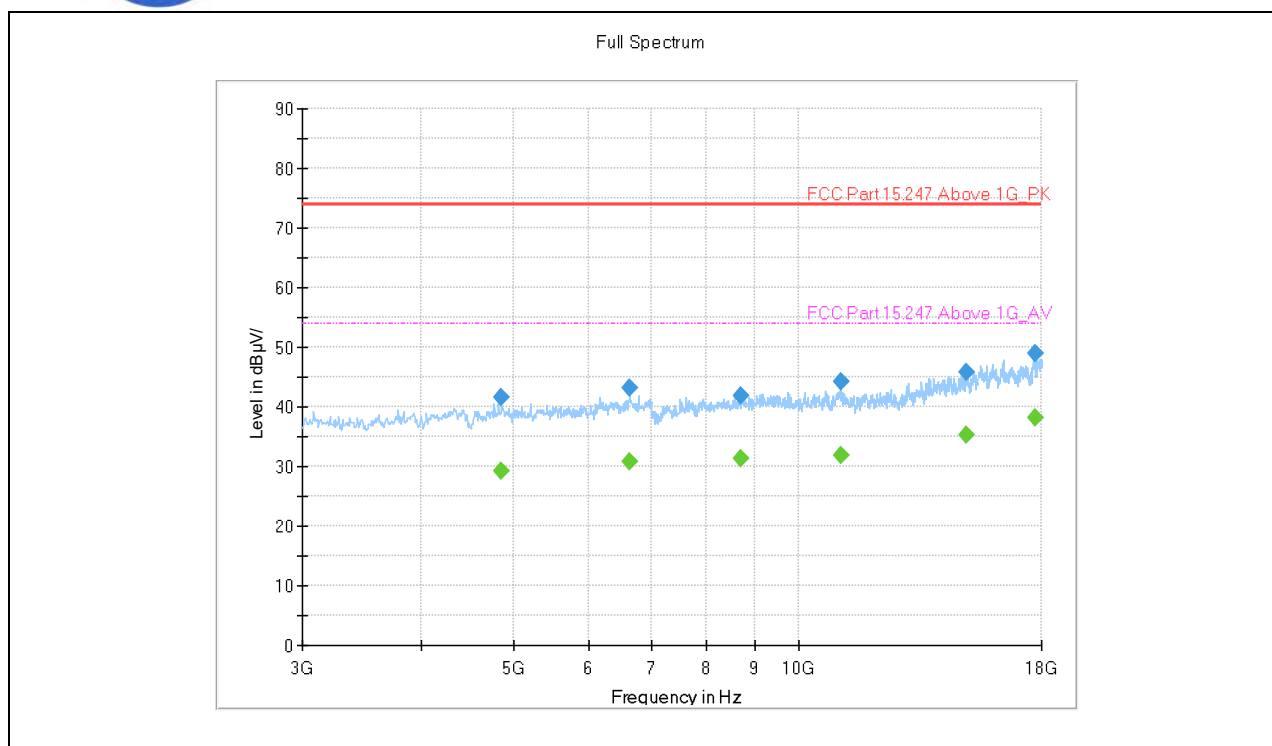
(802.11n\_20M\_2462MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 39.942500       | 20.55            | ---                | 40.00          | 19.45       | V   | 15.6         |
| 64.152083       | 19.56            | ---                | 40.00          | 20.44       | V   | 13.6         |
| 147.087083      | 24.32            | ---                | 43.50          | 19.18       | V   | 10.8         |
| 221.453750      | 26.12            | ---                | 46.00          | 19.88       | V   | 14.5         |
| 355.879583      | 22.65            | ---                | 46.00          | 23.35       | V   | 18.2         |
| 582.617083      | 28.69            | ---                | 46.00          | 17.31       | V   | 23.1         |



(802.11n\_20M\_2462MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1245.000000     | ---                    | 24.57                  | 54.00                | 29.43       | V   | -0.7         |
| 1245.000000     | 34.99                  | ---                    | 74.00                | 39.01       | V   | -0.7         |
| 1560.000000     | 36.99                  | ---                    | 74.00                | 37.01       | V   | 2.9          |
| 1560.000000     | ---                    | 27.13                  | 54.00                | 26.87       | V   | 2.9          |
| 1730.000000     | 38.88                  | ---                    | 74.00                | 35.12       | V   | 4.1          |
| 1730.000000     | ---                    | 28.09                  | 54.00                | 25.91       | V   | 4.1          |
| 2245.000000     | 42.25                  | ---                    | 74.00                | 31.75       | V   | 9.8          |
| 2245.000000     | ---                    | 32.68                  | 54.00                | 21.32       | V   | 9.8          |
| 2590.000000     | ---                    | 40.58                  | 54.00                | 13.42       | V   | 14.5         |
| 2590.000000     | 50.06                  | ---                    | 74.00                | 23.94       | V   | 14.5         |
| 2990.000000     | 49.65                  | ---                    | 74.00                | 24.35       | V   | 17.4         |
| 2990.000000     | ---                    | 38.99                  | 54.00                | 15.01       | V   | 17.4         |

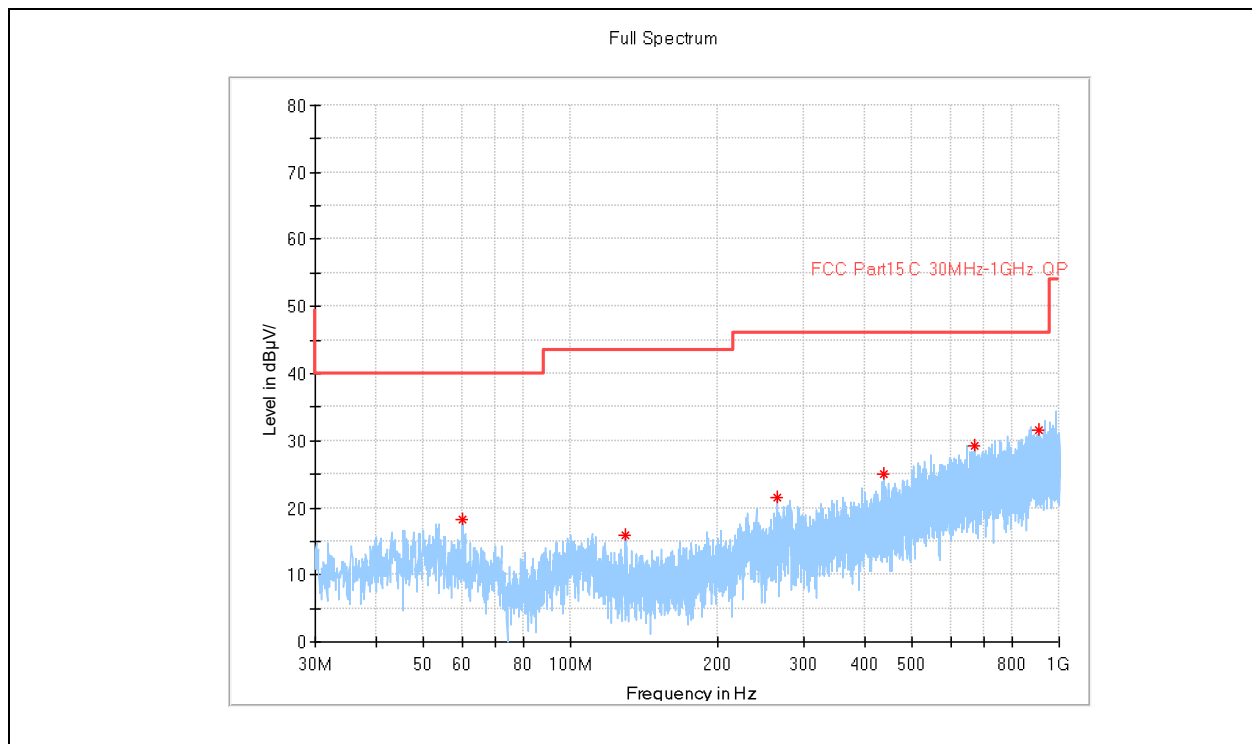


(802.11n\_20M\_2462MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4860.000000     | 41.64            | ---              | 74.00          | 32.36       | V   | -3.0         |
| 4860.000000     | ---              | 29.19            | 54.00          | 24.81       | V   | -3.0         |
| 6630.000000     | ---              | 30.70            | 54.00          | 23.30       | V   | -0.6         |
| 6630.000000     | 43.22            | ---              | 74.00          | 30.78       | V   | -0.6         |
| 8692.500000     | ---              | 31.20            | 54.00          | 22.80       | V   | 1.3          |
| 8692.500000     | 41.94            | ---              | 74.00          | 32.06       | V   | 1.3          |
| 11062.500000    | 44.27            | ---              | 74.00          | 29.73       | V   | 3.4          |
| 11062.500000    | ---              | 31.74            | 54.00          | 22.26       | V   | 3.4          |
| 15030.000000    | 45.73            | ---              | 74.00          | 28.27       | V   | 10.6         |
| 15030.000000    | ---              | 35.29            | 54.00          | 18.71       | V   | 10.6         |
| 17707.500000    | 48.83            | ---              | 74.00          | 25.17       | V   | 14.4         |
| 17707.500000    | ---              | 38.15            | 54.00          | 15.85       | V   | 14.4         |

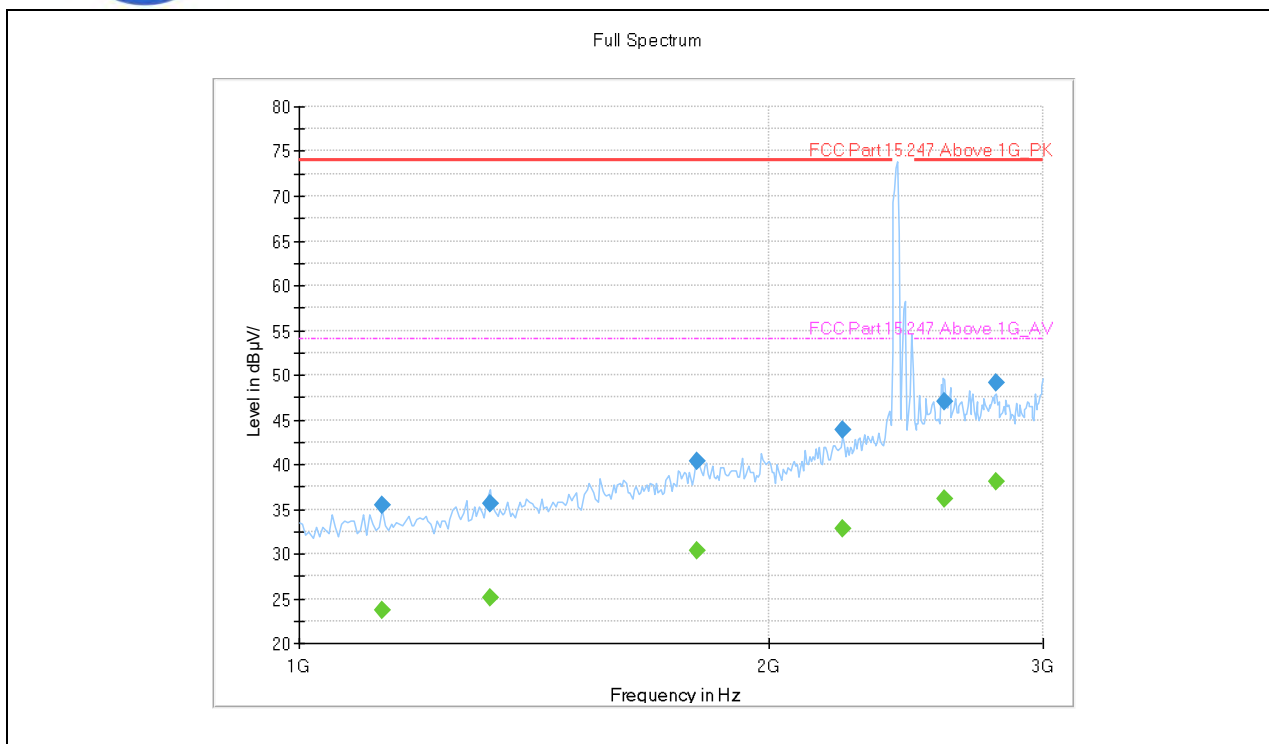


# 802.11n-40MHz Test mode



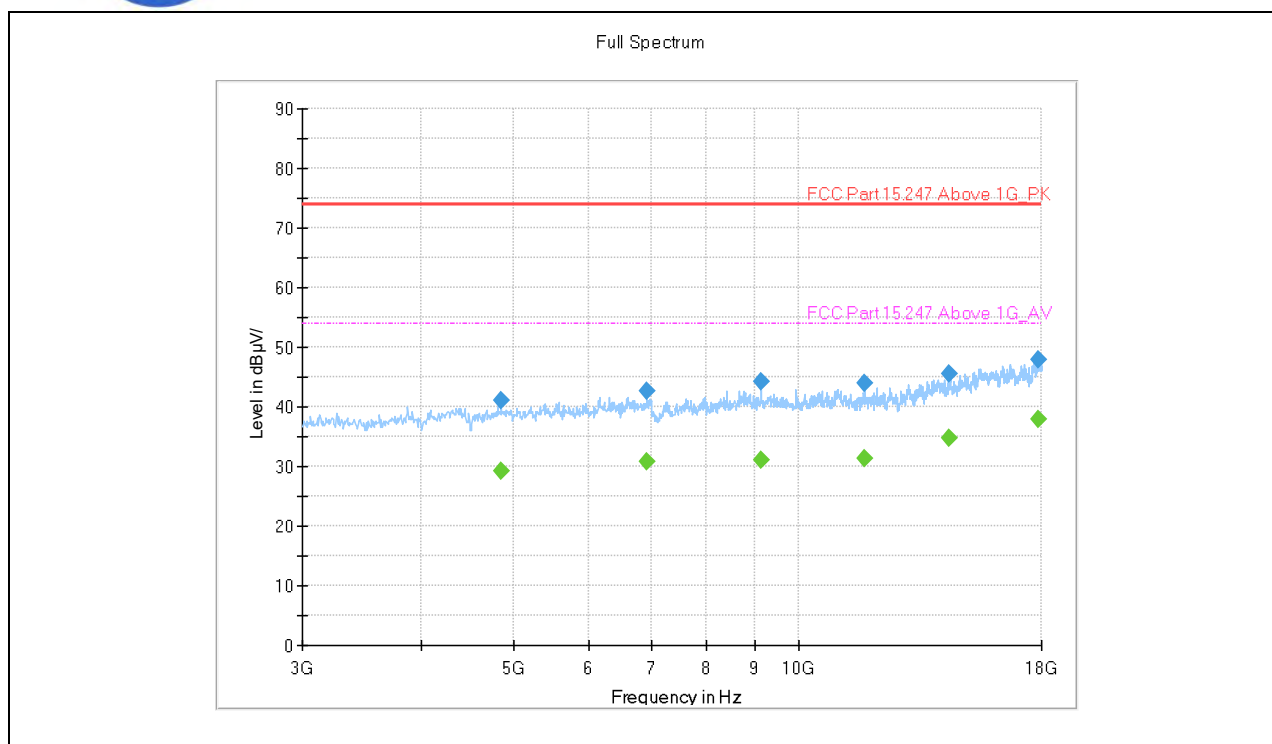
(802.11n\_40M \_2422MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 60.150833       | 18.33            | ---                | 40.00          | 21.67       | H   | 14.8         |
| 129.546250      | 15.93            | ---                | 43.50          | 27.57       | H   | 12.2         |
| 264.093333      | 21.61            | ---                | 46.00          | 24.39       | H   | 15.4         |
| 438.248750      | 25.10            | ---                | 46.00          | 20.90       | H   | 20.3         |
| 672.261250      | 29.31            | ---                | 46.00          | 16.69       | H   | 24.6         |
| 906.192917      | 31.60            | ---                | 46.00          | 14.40       | H   | 28.1         |



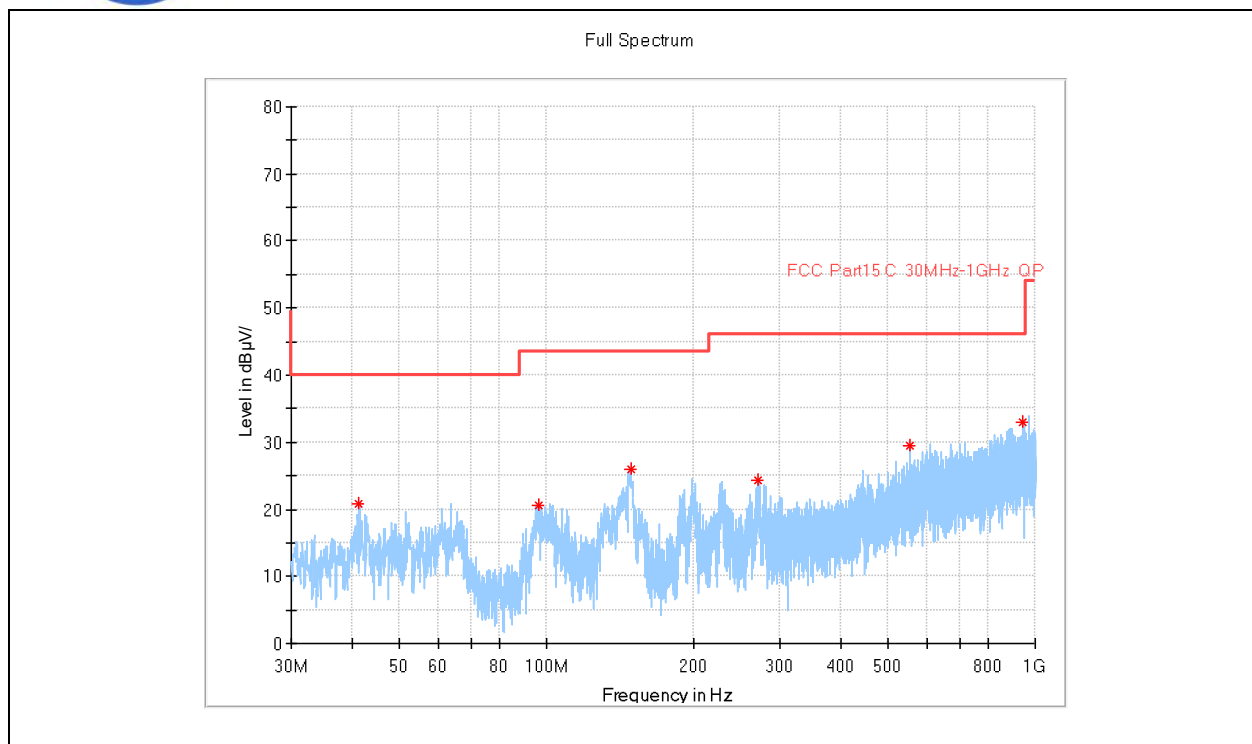
(802.11n\_40M\_2422MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1130.000000     | ---                    | 23.61                  | 54.00                | 30.39       | H   | -2.0         |
| 1130.000000     | 35.44                  | ---                    | 74.00                | 38.56       | H   | -2.0         |
| 1325.000000     | ---                    | 25.16                  | 54.00                | 28.84       | H   | 0.2          |
| 1325.000000     | 35.68                  | ---                    | 74.00                | 38.32       | H   | 0.2          |
| 1800.000000     | ---                    | 30.29                  | 54.00                | 23.71       | H   | 6.7          |
| 1800.000000     | 40.38                  | ---                    | 74.00                | 33.62       | H   | 6.7          |
| 2230.000000     | ---                    | 32.87                  | 54.00                | 21.13       | H   | 9.7          |
| 2230.000000     | 43.84                  | ---                    | 74.00                | 30.16       | H   | 9.7          |
| 2595.000000     | 46.94                  | ---                    | 74.00                | 27.06       | H   | 14.9         |
| 2595.000000     | ---                    | 36.06                  | 54.00                | 17.94       | H   | 14.9         |
| 2800.000000     | 49.17                  | ---                    | 74.00                | 24.83       | H   | 16.5         |
| 2800.000000     | ---                    | 38.05                  | 54.00                | 15.95       | H   | 16.5         |



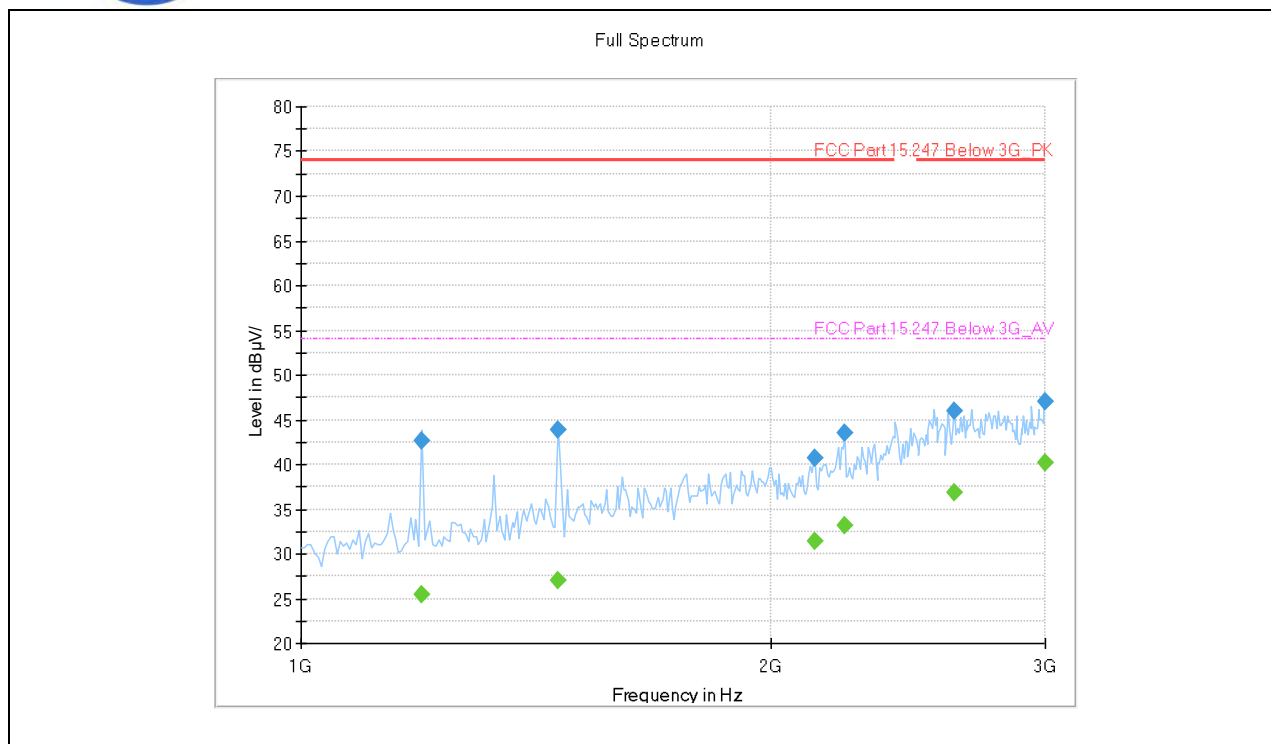
(802.11n\_40M\_2422MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4860.000000     | 40.94            | ---              | 74.00          | 33.06       | H   | -3.0         |
| 4860.000000     | ---              | 29.19            | 54.00          | 24.81       | H   | -3.0         |
| 6915.000000     | 42.70            | ---              | 74.00          | 31.30       | H   | -0.8         |
| 6915.000000     | ---              | 30.68            | 54.00          | 23.32       | H   | -0.8         |
| 9120.000000     | 44.22            | ---              | 74.00          | 29.78       | H   | 1.5          |
| 9120.000000     | ---              | 30.92            | 54.00          | 23.08       | H   | 1.5          |
| 11730.000000    | 43.83            | ---              | 74.00          | 30.17       | H   | 3.9          |
| 11730.000000    | ---              | 31.38            | 54.00          | 22.62       | H   | 3.9          |
| 14400.000000    | ---              | 34.62            | 54.00          | 19.38       | H   | 9.4          |
| 14400.000000    | 45.51            | ---              | 74.00          | 28.49       | H   | 9.4          |
| 17895.000000    | ---              | 37.89            | 54.00          | 16.11       | H   | 14.6         |
| 17895.000000    | 48.01            | ---              | 74.00          | 25.99       | H   | 14.6         |



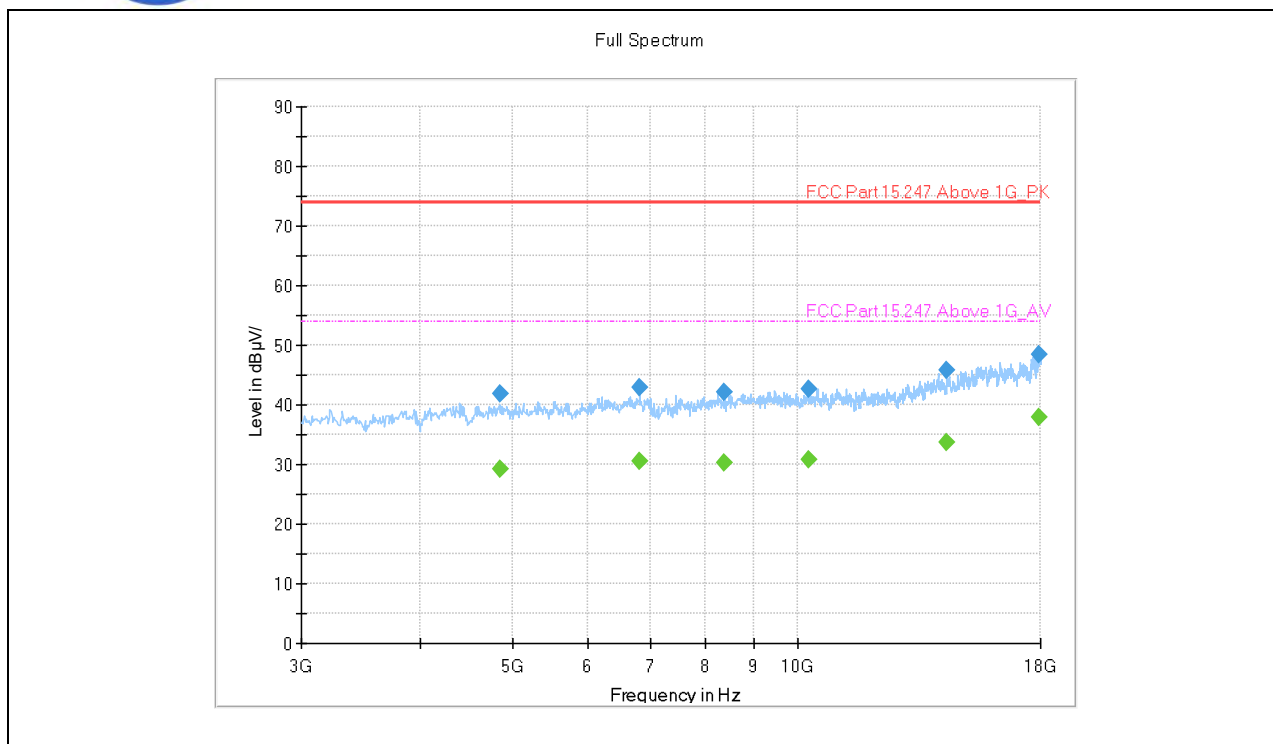
(802.11n\_40M\_2422MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 41.357083       | 20.77            | ---                | 40.00          | 19.23       | V   | 14.9         |
| 96.485417       | 20.68            | ---                | 43.50          | 22.82       | V   | 13.3         |
| 148.825000      | 25.87            | ---                | 43.50          | 17.63       | V   | 11.3         |
| 270.519583      | 24.29            | ---                | 46.00          | 21.71       | V   | 15.3         |
| 553.557500      | 29.41            | ---                | 46.00          | 16.59       | V   | 22.7         |
| 943.376250      | 33.07            | ---                | 46.00          | 12.93       | V   | 28.4         |



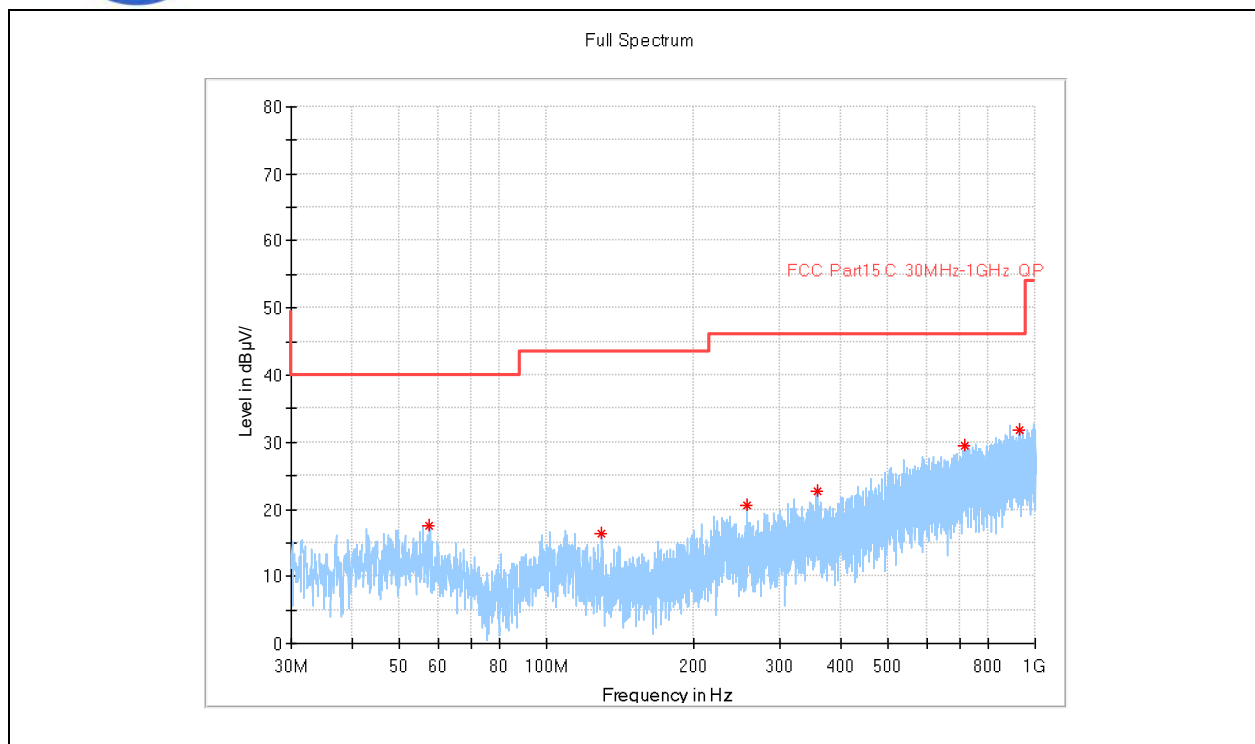
(802.11n\_40M\_2422MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1195.000000     | ---              | 25.45            | 54.00          | 28.55       | V   | -0.6         |
| 1195.000000     | 42.70            | ---              | 74.00          | 31.30       | V   | -0.6         |
| 1460.000000     | ---              | 27.00            | 54.00          | 27.00       | V   | 1.6          |
| 1460.000000     | 43.90            | ---              | 74.00          | 30.10       | V   | 1.6          |
| 2135.000000     | 40.72            | ---              | 74.00          | 33.28       | V   | 8.2          |
| 2135.000000     | ---              | 31.42            | 54.00          | 22.58       | V   | 8.2          |
| 2230.000000     | 43.43            | ---              | 74.00          | 30.57       | V   | 9.7          |
| 2230.000000     | ---              | 33.22            | 54.00          | 20.78       | V   | 9.7          |
| 2625.000000     | 46.01            | ---              | 74.00          | 27.99       | V   | 14.2         |
| 2625.000000     | ---              | 36.88            | 54.00          | 17.12       | V   | 14.2         |
| 3000.000000     | 46.94            | ---              | 74.00          | 27.06       | V   | 18.4         |
| 3000.000000     | ---              | 40.20            | 54.00          | 13.80       | V   | 18.4         |



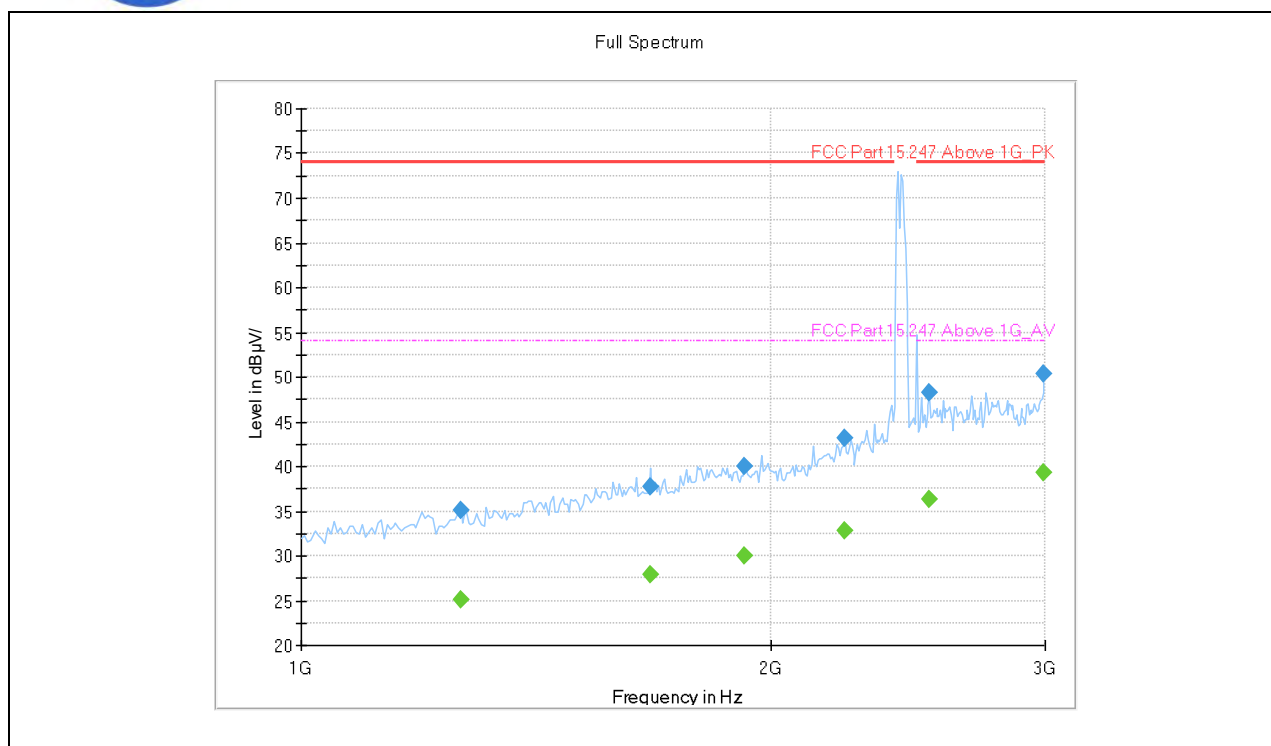
(802.11n\_40M\_2422MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4852.500000     | ---              | 29.22            | 54.00          | 24.78       | V   | -3.0         |
| 4852.500000     | 41.84            | ---              | 74.00          | 32.16       | V   | -3.0         |
| 6810.000000     | 42.88            | ---              | 74.00          | 31.12       | V   | -1.0         |
| 6810.000000     | ---              | 30.60            | 54.00          | 23.40       | V   | -1.0         |
| 8370.000000     | 42.13            | ---              | 74.00          | 31.87       | V   | 0.7          |
| 8370.000000     | ---              | 30.21            | 54.00          | 23.79       | V   | 0.7          |
| 10245.000000    | 42.60            | ---              | 74.00          | 31.40       | V   | 2.2          |
| 10245.000000    | ---              | 30.81            | 54.00          | 23.19       | V   | 2.2          |
| 14340.000000    | ---              | 33.81            | 54.00          | 20.19       | V   | 8.8          |
| 14340.000000    | 45.87            | ---              | 74.00          | 28.13       | V   | 8.8          |
| 17955.000000    | 48.33            | ---              | 74.00          | 25.67       | V   | 14.6         |
| 17955.000000    | ---              | 37.95            | 54.00          | 16.05       | V   | 14.6         |



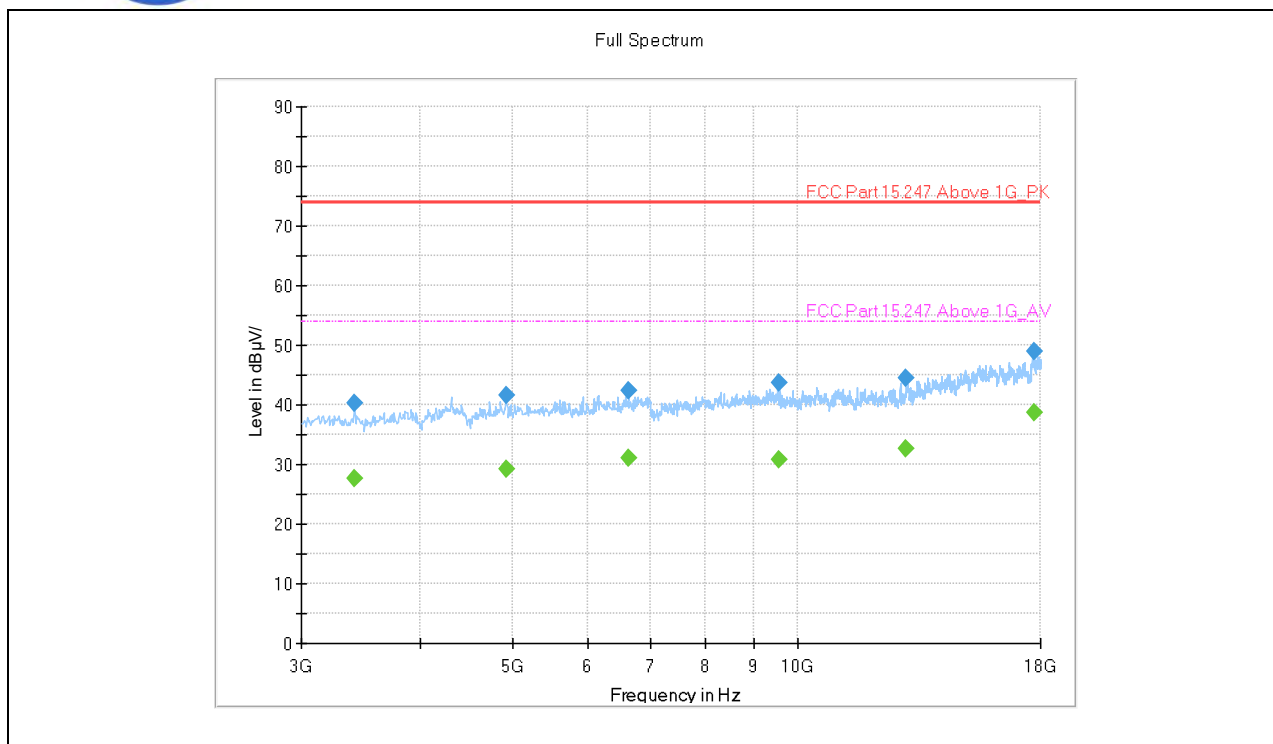
(802.11n\_40M\_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 57.645000       | 17.60            | ---                | 40.00          | 22.40       | H   | 14.4         |
| 129.829167      | 16.31            | ---                | 43.50          | 27.19       | H   | 12.3         |
| 257.182083      | 20.67            | ---                | 46.00          | 25.33       | H   | 15.5         |
| 359.234167      | 22.77            | ---                | 46.00          | 23.23       | H   | 18.5         |
| 717.164167      | 29.47            | ---                | 46.00          | 16.53       | H   | 25.0         |
| 928.664583      | 31.70            | ---                | 46.00          | 14.30       | H   | 28.1         |



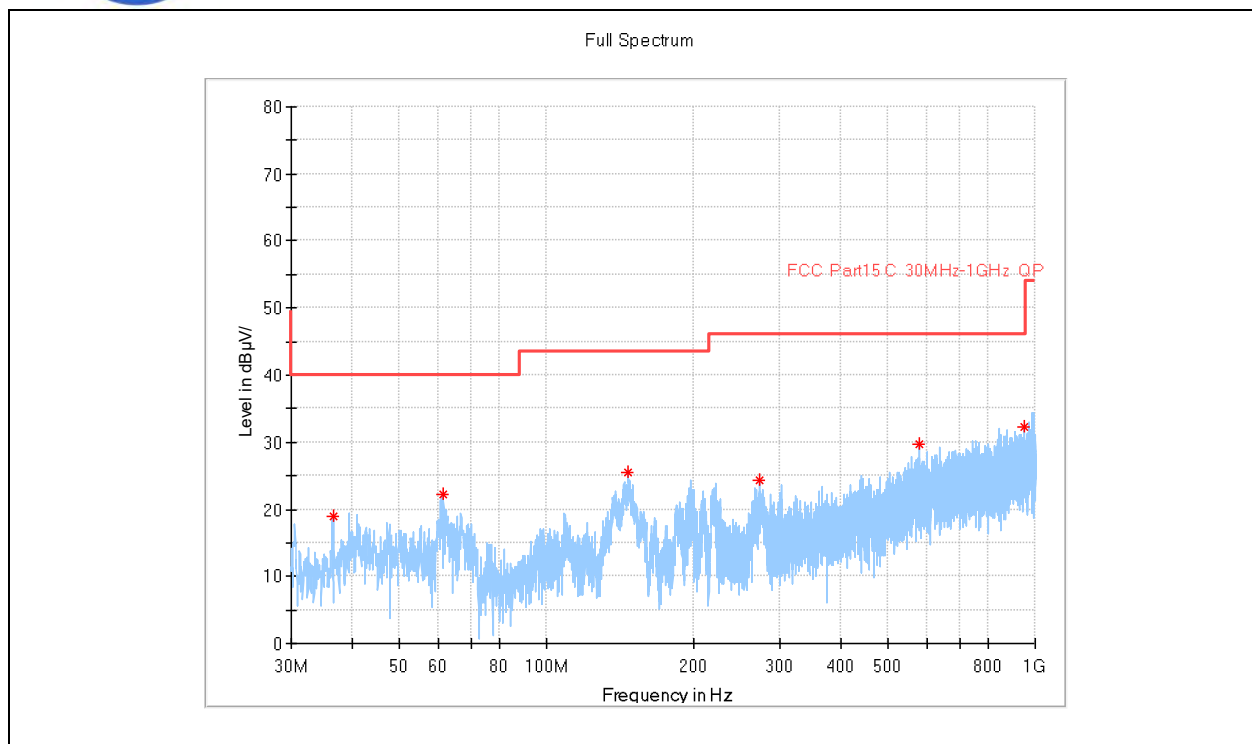
(802.11n\_40M\_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1265.000000     | 35.05            | ---              | 74.00          | 38.95       | H   | -0.1         |
| 1265.000000     | ---              | 25.13            | 54.00          | 28.87       | H   | -0.1         |
| 1675.000000     | 37.66            | ---              | 74.00          | 36.34       | H   | 3.4          |
| 1675.000000     | ---              | 27.92            | 54.00          | 26.08       | H   | 3.4          |
| 1925.000000     | 39.99            | ---              | 74.00          | 34.01       | H   | 6.1          |
| 1925.000000     | ---              | 30.03            | 54.00          | 23.97       | H   | 6.1          |
| 2230.000000     | ---              | 32.87            | 54.00          | 21.13       | H   | 9.7          |
| 2230.000000     | 43.22            | ---              | 74.00          | 30.78       | H   | 9.7          |
| 2530.000000     | 48.22            | ---              | 74.00          | 25.78       | H   | 13.9         |
| 2530.000000     | ---              | 36.27            | 54.00          | 17.73       | H   | 13.9         |
| 2995.000000     | ---              | 39.35            | 54.00          | 14.65       | H   | 17.9         |
| 2995.000000     | 50.37            | ---              | 74.00          | 23.63       | H   | 17.9         |



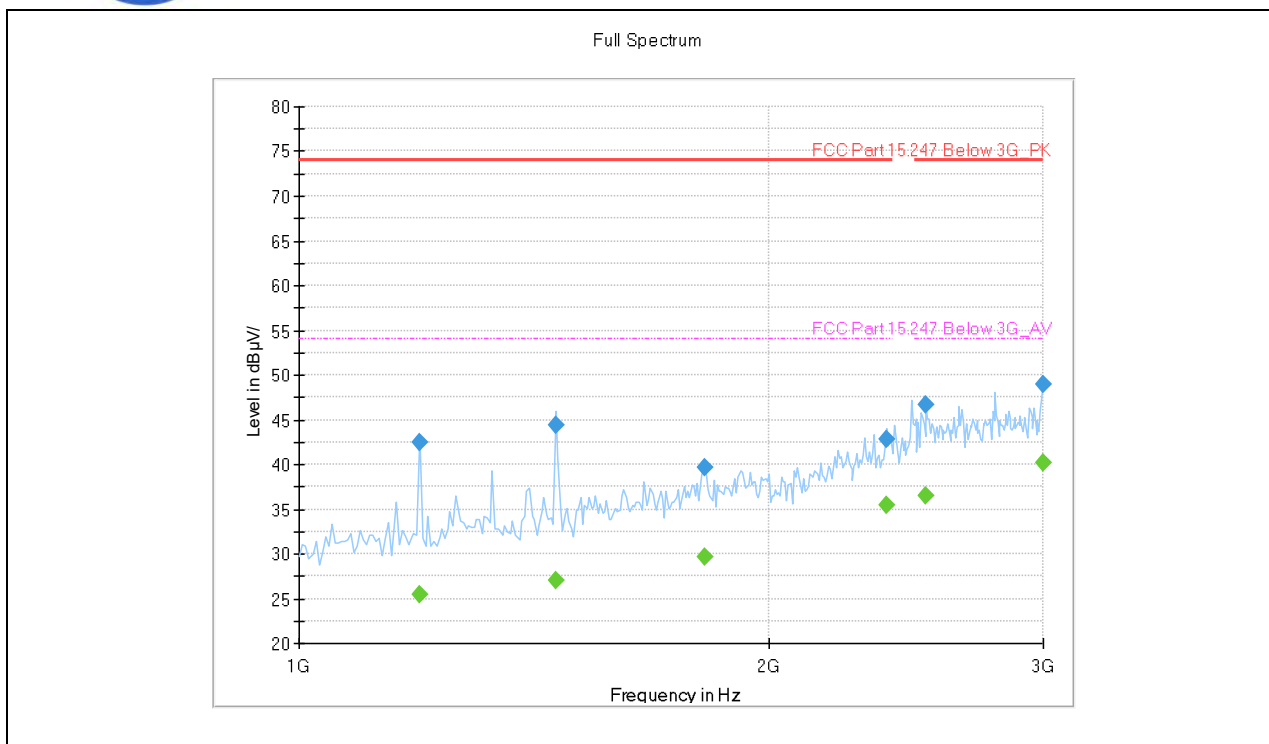
(802.11n\_40M\_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3412.500000     | 40.22            | ---              | 74.00          | 33.78       | H   | -5.9         |
| 3412.500000     | ---              | 27.58            | 54.00          | 26.42       | H   | -5.9         |
| 4927.500000     | ---              | 29.34            | 54.00          | 24.66       | H   | -2.8         |
| 4927.500000     | 41.64            | ---              | 74.00          | 32.36       | H   | -2.8         |
| 6637.500000     | ---              | 30.93            | 54.00          | 23.07       | H   | -0.5         |
| 6637.500000     | 42.47            | ---              | 74.00          | 31.53       | H   | -0.5         |
| 9562.500000     | 43.56            | ---              | 74.00          | 30.44       | H   | 2.3          |
| 9562.500000     | ---              | 30.86            | 54.00          | 23.14       | H   | 2.3          |
| 13005.000000    | 44.36            | ---              | 74.00          | 29.64       | H   | 5.9          |
| 13005.000000    | ---              | 32.70            | 54.00          | 21.30       | H   | 5.9          |
| 17722.500000    | 48.92            | ---              | 74.00          | 25.08       | H   | 14.7         |
| 17722.500000    | ---              | 38.57            | 54.00          | 15.43       | H   | 14.7         |



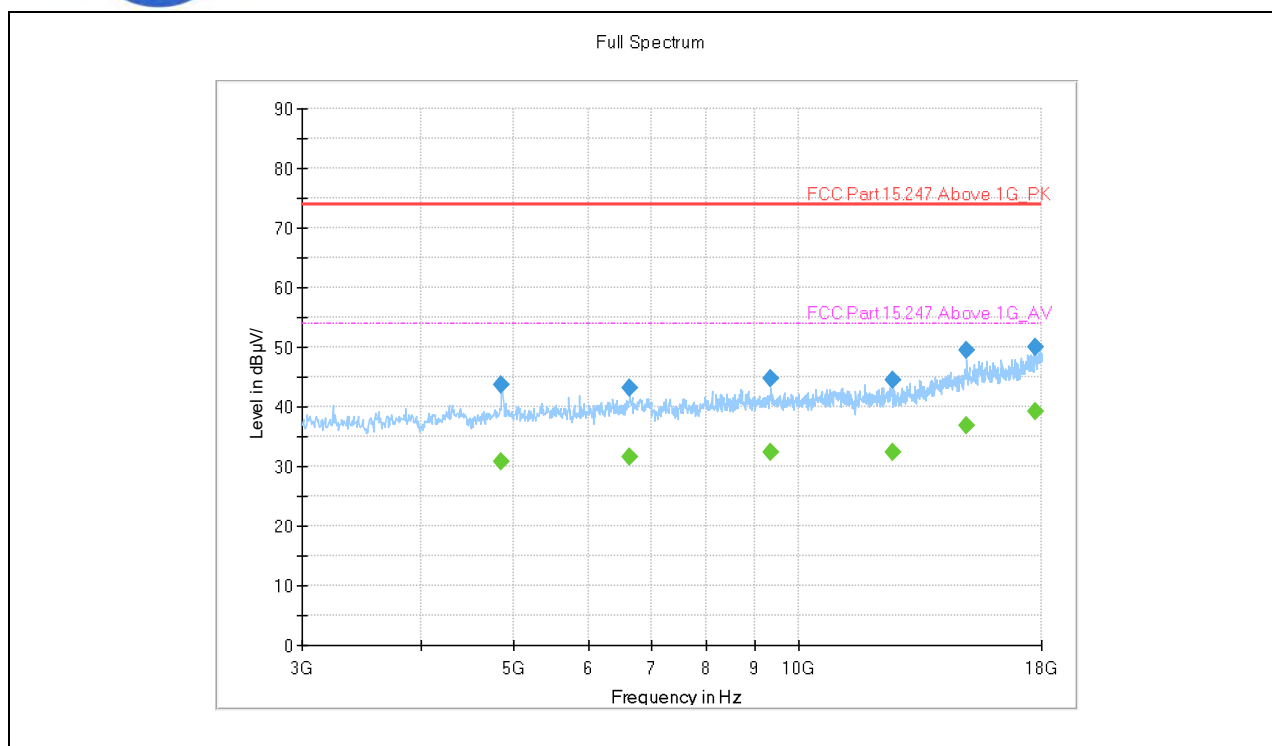
(802.11n\_40M\_2437MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 36.668750       | 18.85            | ---                | 40.00          | 21.15       | V   | 13.4         |
| 61.525000       | 22.22            | ---                | 40.00          | 17.78       | V   | 13.9         |
| 146.561667      | 25.43            | ---                | 43.50          | 18.07       | V   | 10.8         |
| 273.025417      | 24.37            | ---                | 46.00          | 21.63       | V   | 15.4         |
| 581.081250      | 29.81            | ---                | 46.00          | 16.19       | V   | 23.1         |
| 949.236667      | 32.37            | ---                | 46.00          | 13.63       | V   | 28.3         |



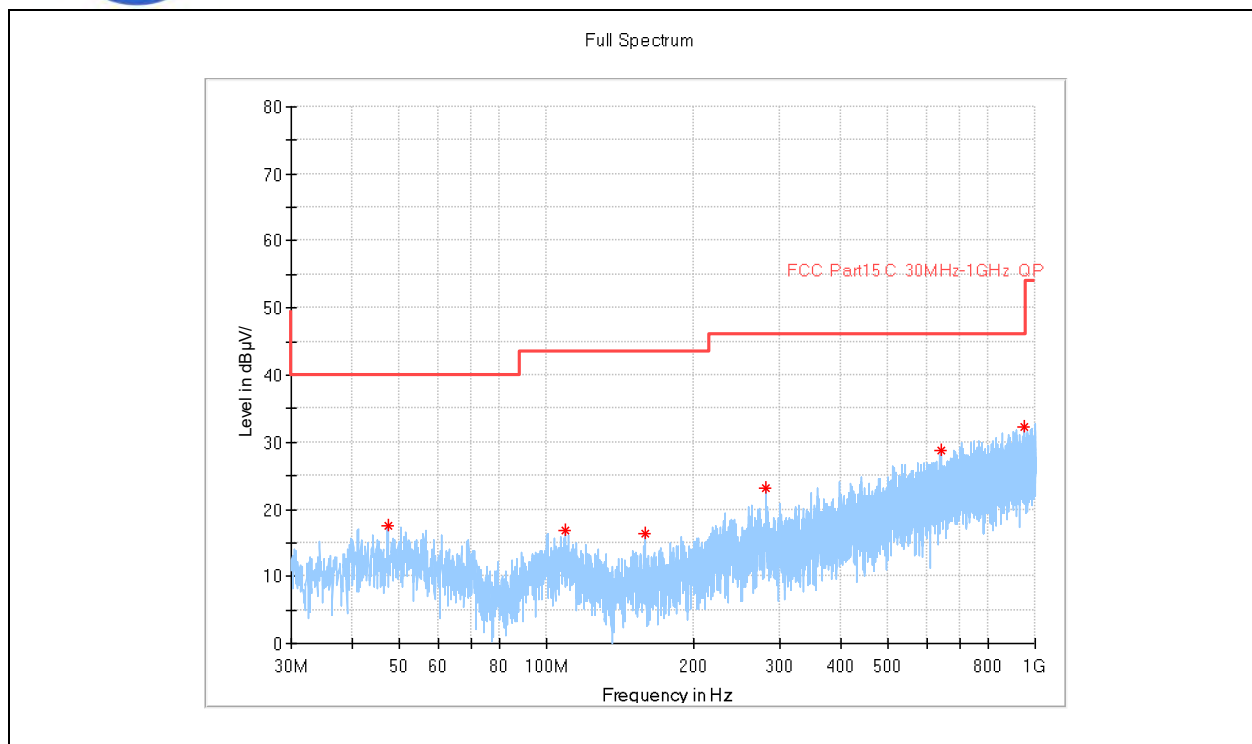
(802.11n\_40M\_2437MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1195.000000     | 42.44            | ---              | 74.00          | 31.56       | V   | -0.6         |
| 1195.000000     | ---              | 25.46            | 54.00          | 28.54       | V   | -0.6         |
| 1460.000000     | 44.37            | ---              | 74.00          | 29.63       | V   | 1.6          |
| 1460.000000     | ---              | 27.06            | 54.00          | 26.94       | V   | 1.6          |
| 1820.000000     | 39.59            | ---              | 74.00          | 34.41       | V   | 5.5          |
| 1820.000000     | ---              | 29.71            | 54.00          | 24.29       | V   | 5.5          |
| 2380.000000     | 42.76            | ---              | 74.00          | 31.24       | V   | 12.0         |
| 2380.000000     | ---              | 35.45            | 54.00          | 18.55       | V   | 12.0         |
| 2525.000000     | ---              | 36.56            | 54.00          | 17.44       | V   | 13.6         |
| 2525.000000     | 46.68            | ---              | 74.00          | 27.32       | V   | 13.6         |
| 3000.000000     | ---              | 40.22            | 54.00          | 13.78       | V   | 18.4         |
| 3000.000000     | 48.92            | ---              | 74.00          | 25.08       | V   | 18.4         |



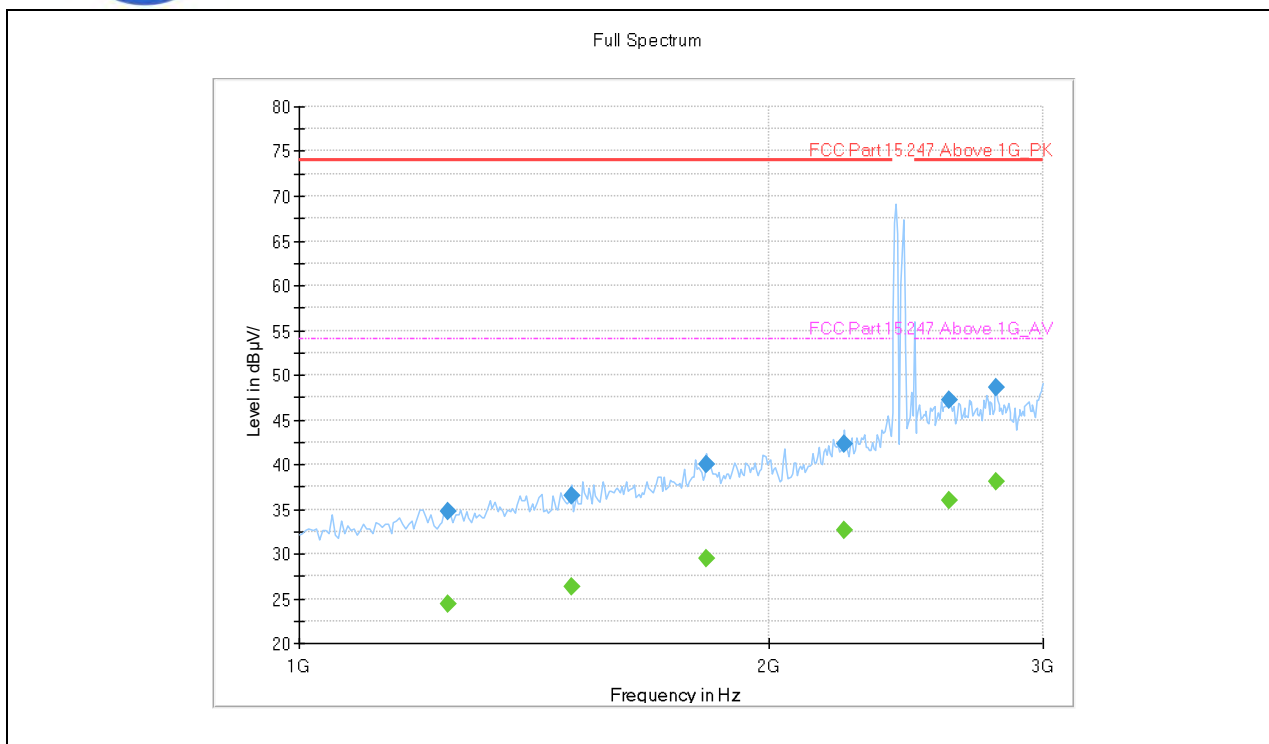
(802.11n\_40M\_2437MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4867.500000     | 43.67            | ---              | 74.00          | 30.33       | V   | -2.9         |
| 4867.500000     | ---              | 30.86            | 54.00          | 23.14       | V   | -2.9         |
| 6637.500000     | ---              | 31.68            | 54.00          | 22.32       | V   | -0.5         |
| 6637.500000     | 43.23            | ---              | 74.00          | 30.77       | V   | -0.5         |
| 9330.000000     | ---              | 32.24            | 54.00          | 21.76       | V   | 1.7          |
| 9330.000000     | 44.87            | ---              | 74.00          | 29.13       | V   | 1.7          |
| 12570.00000     | ---              | 32.41            | 54.00          | 21.59       | V   | 4.5          |
| 12570.00000     | 44.49            | ---              | 74.00          | 29.51       | V   | 4.5          |
| 15022.50000     | 49.48            | ---              | 74.00          | 24.52       | V   | 10.8         |
| 14970.00000     | 48.74            | ---              | 74.00          | 25.26       | V   | 10.0         |
| 17962.50000     | ---              | 38.95            | 54.00          | 15.05       | V   | 14.7         |
| 17962.50000     | 51.40            | ---              | 74.00          | 22.60       | V   | 14.7         |



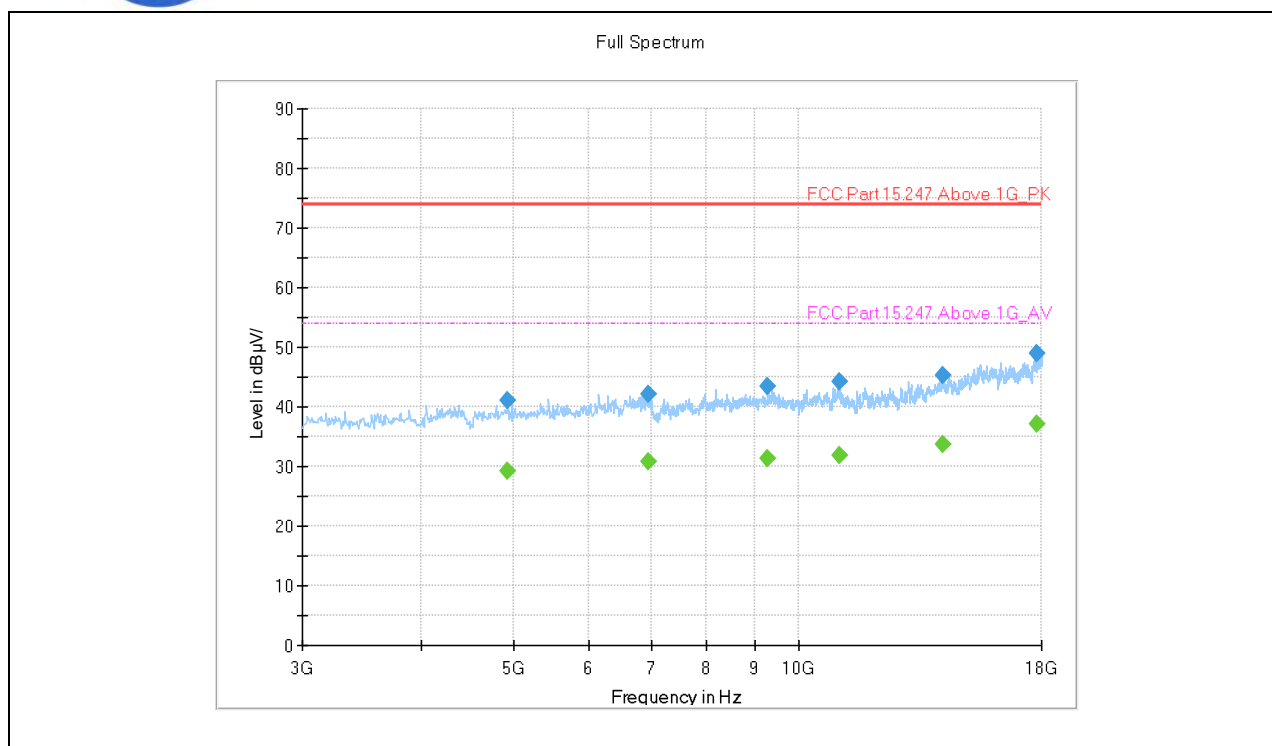
(802.11n\_40M\_2452MHz, Antenna Horizontal, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 47.257917       | 17.46            | ---                | 40.00          | 22.54       | H   | 15.5         |
| 109.459167      | 16.90            | ---                | 43.50          | 26.60       | H   | 14.9         |
| 159.535417      | 16.29            | ---                | 43.50          | 27.21       | H   | 12.1         |
| 280.785417      | 23.07            | ---                | 46.00          | 22.93       | H   | 16.6         |
| 641.706250      | 28.81            | ---                | 46.00          | 17.19       | H   | 24.2         |
| 947.579583      | 32.21            | ---                | 46.00          | 13.79       | H   | 28.3         |



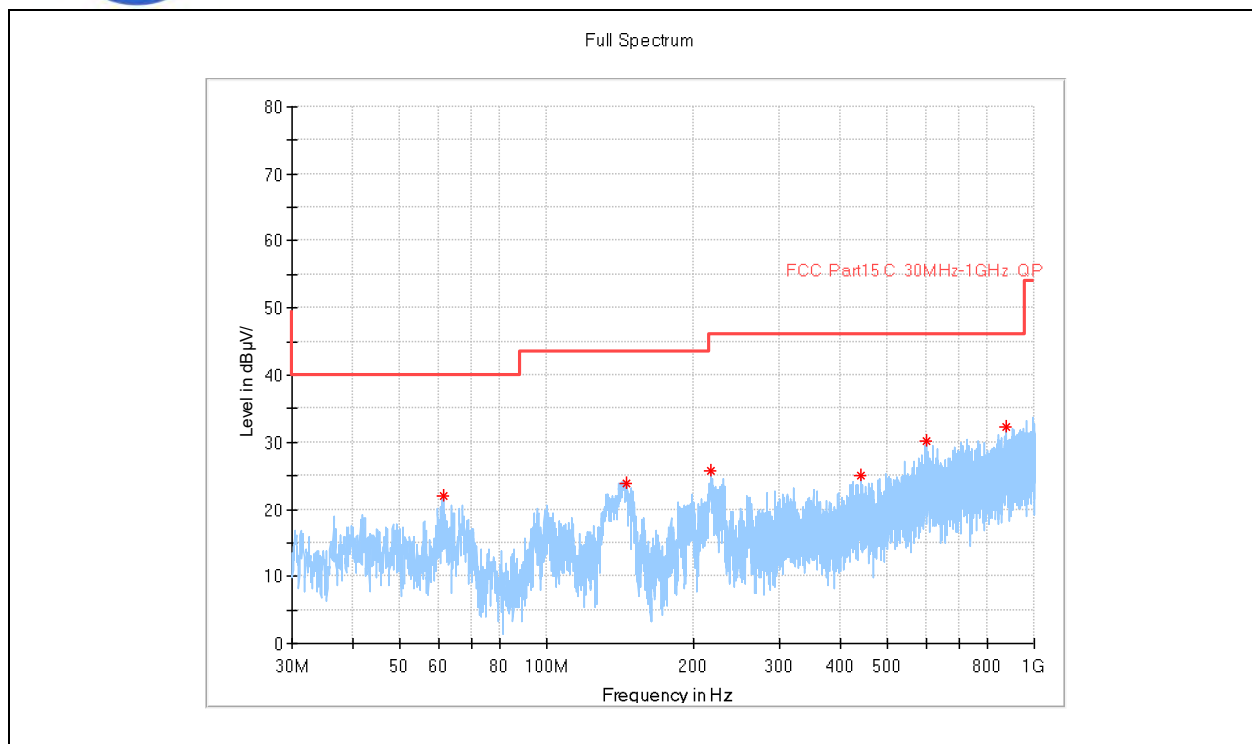
(802.11n\_40M\_2452MHz, Antenna Horizontal, 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Average (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------------|------------------------|----------------------|-------------|-----|--------------|
| 1245.000000     | ---                    | 24.47                  | 54.00                | 29.53       | H   | -0.7         |
| 1245.000000     | 34.67                  | ---                    | 74.00                | 39.33       | H   | -0.7         |
| 1495.000000     | ---                    | 26.37                  | 54.00                | 27.63       | H   | 1.9          |
| 1495.000000     | 36.45                  | ---                    | 74.00                | 37.55       | H   | 1.9          |
| 1825.000000     | ---                    | 29.54                  | 54.00                | 24.46       | H   | 5.7          |
| 1825.000000     | 39.95                  | ---                    | 74.00                | 34.05       | H   | 5.7          |
| 2235.000000     | ---                    | 32.58                  | 54.00                | 21.42       | H   | 9.7          |
| 2235.000000     | 42.22                  | ---                    | 74.00                | 31.78       | H   | 9.7          |
| 2610.000000     | ---                    | 36.00                  | 54.00                | 18.00       | H   | 14.5         |
| 2610.000000     | 47.28                  | ---                    | 74.00                | 26.72       | H   | 14.5         |
| 2800.000000     | ---                    | 38.05                  | 54.00                | 15.95       | H   | 16.5         |
| 2800.000000     | 48.55                  | ---                    | 74.00                | 25.45       | H   | 16.5         |



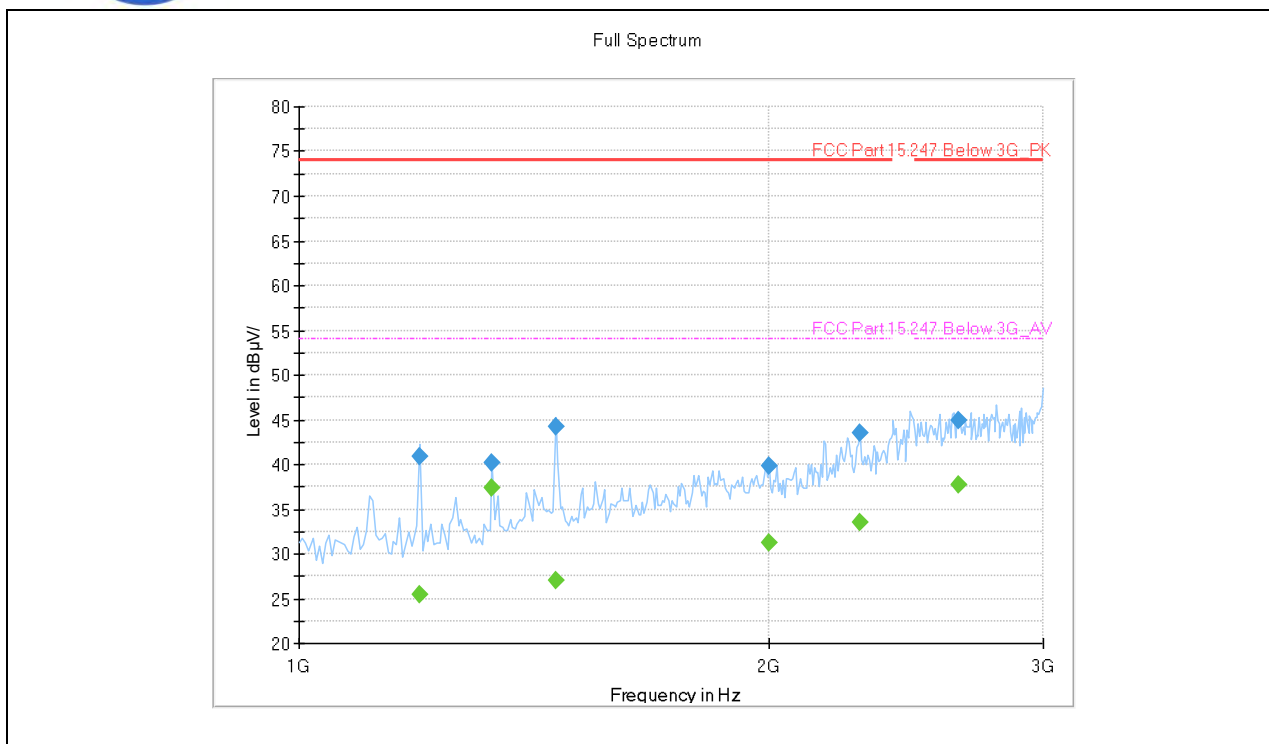
(802.11n\_40M\_2452MHz, Antenna Horizontal, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 4935.000000     | 41.12            | ---              | 74.00          | 32.88       | H   | -2.9         |
| 4935.000000     | ---              | 29.20            | 54.00          | 24.80       | H   | -2.9         |
| 6945.000000     | 42.03            | ---              | 74.00          | 31.97       | H   | -0.5         |
| 6945.000000     | ---              | 30.73            | 54.00          | 23.27       | H   | -0.5         |
| 9262.500000     | 43.51            | ---              | 74.00          | 30.49       | H   | 2.5          |
| 9262.500000     | ---              | 31.22            | 54.00          | 22.78       | H   | 2.5          |
| 11040.000000    | ---              | 31.77            | 54.00          | 22.23       | H   | 3.5          |
| 11040.000000    | 44.20            | ---              | 74.00          | 29.80       | H   | 3.5          |
| 14145.000000    | 45.34            | ---              | 74.00          | 28.66       | H   | 8.0          |
| 14145.000000    | ---              | 33.64            | 54.00          | 20.36       | H   | 8.0          |
| 17797.500000    | ---              | 37.08            | 54.00          | 16.92       | H   | 14.6         |
| 17797.500000    | 48.89            | ---              | 74.00          | 25.12       | H   | 14.6         |



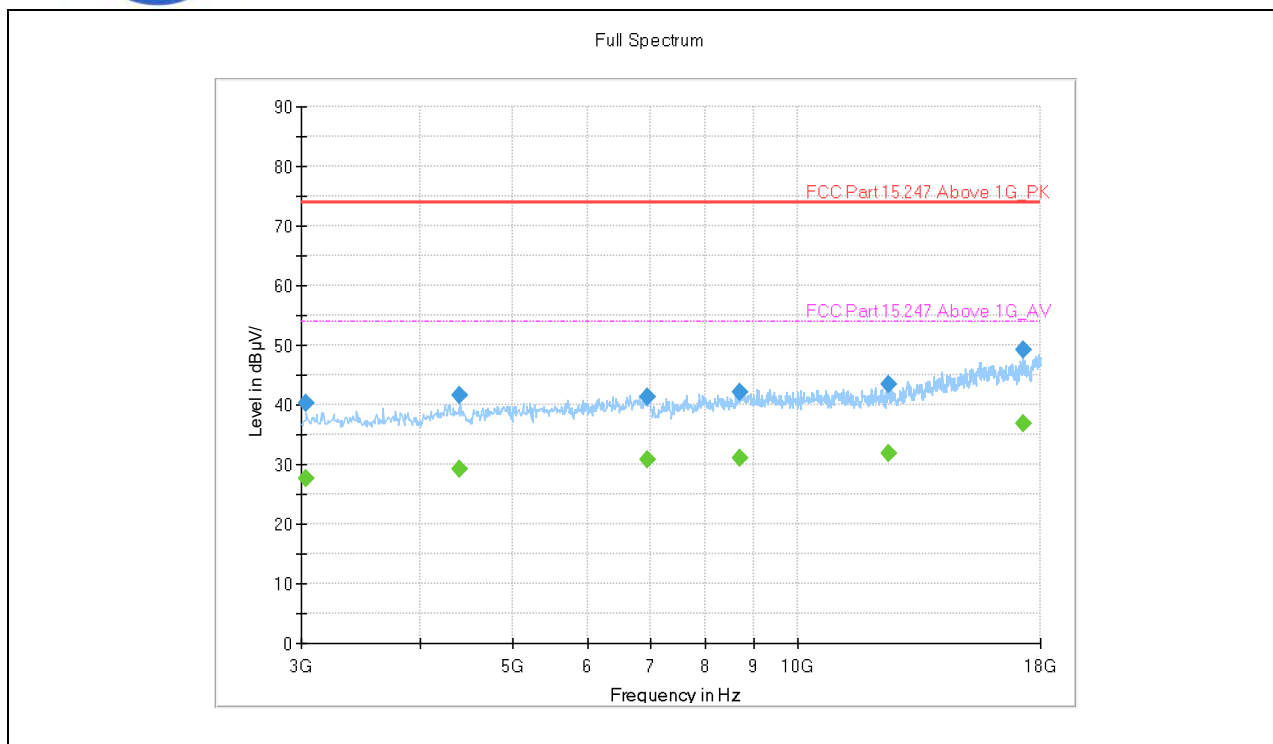
(802.11n\_40M\_2452MHz, Antenna Vertical, 30MHz to 1GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | QuasiPeak (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|--------------------|----------------|-------------|-----|--------------|
| 61.484583       | 22.01            | ---                | 40.00          | 17.99       | V   | 13.9         |
| 145.753333      | 23.96            | ---                | 43.50          | 19.54       | V   | 10.5         |
| 216.725000      | 25.63            | ---                | 46.00          | 20.37       | V   | 13.9         |
| 441.765000      | 24.96            | ---                | 46.00          | 21.04       | V   | 20.4         |
| 601.410833      | 30.11            | ---                | 46.00          | 15.89       | V   | 23.4         |
| 877.497083      | 32.25            | ---                | 46.00          | 13.75       | V   | 27.6         |



(802.11n\_40M\_2452MHz, Antenna Vertical , 1GHz to 3GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 1195.000000     | 40.96            | ---              | 74.00          | 33.04       | V   | -0.6         |
| 1195.000000     | ---              | 25.49            | 54.00          | 28.51       | V   | -0.6         |
| 1330.000000     | 40.22            | ---              | 74.00          | 33.78       | V   | 0.3          |
| 1330.000000     | ---              | 37.31            | 54.00          | 16.69       | V   | 0.3          |
| 1460.000000     | ---              | 27.06            | 54.00          | 26.94       | V   | 1.6          |
| 1460.000000     | 44.24            | ---              | 74.00          | 29.77       | V   | 1.6          |
| 2000.000000     | 39.79            | ---              | 74.00          | 34.21       | V   | 7.5          |
| 2000.000000     | ---              | 31.23            | 54.00          | 22.77       | V   | 7.5          |
| 2290.000000     | 43.45            | ---              | 74.00          | 30.55       | V   | 10.2         |
| 2290.000000     | ---              | 33.56            | 54.00          | 20.44       | V   | 10.2         |
| 2650.000000     | ---              | 37.71            | 54.00          | 16.29       | V   | 15.6         |
| 2650.000000     | 44.92            | ---              | 74.00          | 29.08       | V   | 15.6         |



(802.11n\_40M\_2452MHz, Antenna Vertical, 3GHz to 18GHz)

| Frequency (MHz) | MaxPeak (dBμV/m) | Average (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Pol | Corr. (dB/m) |
|-----------------|------------------|------------------|----------------|-------------|-----|--------------|
| 3037.500000     | 40.21            | ---              | 74.00          | 33.79       | V   | -6.1         |
| 3037.500000     | ---              | 27.54            | 54.00          | 26.46       | V   | -6.1         |
| 4410.000000     | ---              | 29.13            | 54.00          | 24.87       | V   | -3.7         |
| 4410.000000     | 41.53            | ---              | 74.00          | 32.47       | V   | -3.7         |
| 6930.000000     | ---              | 30.75            | 54.00          | 23.25       | V   | -0.7         |
| 6930.000000     | 41.21            | ---              | 74.00          | 32.80       | V   | -0.7         |
| 8685.000000     | 42.04            | ---              | 74.00          | 31.96       | V   | 1.3          |
| 8685.000000     | ---              | 31.12            | 54.00          | 22.88       | V   | 1.3          |
| 12442.50000     | ---              | 31.87            | 54.00          | 22.13       | V   | 4.6          |
| 12442.50000     | 43.41            | ---              | 74.00          | 30.59       | V   | 4.6          |
| 17235.00000     | ---              | 36.72            | 54.00          | 17.28       | V   | 12.7         |
| 17235.00000     | 49.31            | ---              | 74.00          | 24.69       | V   | 12.7         |



## Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

| Test items                   | Uncertainty          |
|------------------------------|----------------------|
| Peak Output Power            | $\pm 2.22\text{dB}$  |
| Power spectral density (PSD) | $\pm 2.22\text{dB}$  |
| Bandwidth                    | $\pm 5\%$            |
| Conducted Spurious Emission  | $\pm 2.77\text{ dB}$ |
| Restricted Frequency Bands   | $\pm 5\%$            |
| Radiated Emission            | $\pm 3.1\text{dB}$   |
| Conducted Emission           | $\pm 1.8\text{dB}$   |

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$



## Annex B Testing Laboratory Information

### 1. Identification of the Responsible Testing Laboratory

|                                      |                                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Company Name:</b>                 | Kehu-Morlab Test Laboratory                                                                  |
| <b>Address:</b>                      | Unit 101, No.1732 Gangzhong Road, Xiamen<br>Area, Pilot Free Trade Zone (Fujian), P.R. China |
| <b>Responsible Test Lab Manager:</b> | Mr. Di Dehai                                                                                 |
| <b>Telephone:</b>                    | +86-592-5612050                                                                              |
| <b>Facsimile:</b>                    | +86-592-5612095                                                                              |

### 2. Identification of the Responsible Testing Location

|                 |                                                                                              |
|-----------------|----------------------------------------------------------------------------------------------|
| <b>Name:</b>    | Kehu-Morlab Test Laboratory                                                                  |
| <b>Address:</b> | Unit 101, No.1732 Gangzhong Road, Xiamen<br>Area, Pilot Free Trade Zone (Fujian), P.R. China |

### 3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian), P.R. China.

The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1249.

### 4. Test Equipments Utilized

#### 4.1 Conducted Test Equipments

| No. | Equipment Name              | Serial No. | Model No. | Manufacturer | Cal.Date   | Cal.Due Date |
|-----|-----------------------------|------------|-----------|--------------|------------|--------------|
| 1   | MXA Signal Analyzer         | MY53421845 | N9020A    | Keysight     | 2019.01.05 | 2020.01.04   |
| 2   | RF cable<br>(30MHz-26.5GHz) | RF01       | N/A       | Morlab       | 2019.01.05 | 2020.01.04   |
| 3   | Coaxial cable               | RF02       | N/A       | Morlab       | 2019.01.05 | 2020.01.04   |
| 4   | SMA connector               | RF03       | N/A       | Xingbo       | 2019.01.05 | 2020.01.04   |
| 5   | USB Power Sensor            | MY56410006 | U2021XA   | Keysight     | 2019.01.03 | 2020.01.02   |



#### 4.2 Conducted Emission Test Equipments

| No. | Equipment Name                     | Serial No. | Model No.   | Manufacturer | Cal.Date   | Cal.Due Date |
|-----|------------------------------------|------------|-------------|--------------|------------|--------------|
| 1   | EMI Receiver                       | 102174     | ESR3        | ESR3         | 2019.01.08 | 2020.01.07   |
| 2   | LISN                               | 101338     | ENV432      | ENV432       | 2019.01.14 | 2020.01.13   |
| 3   | Pulse Limiter (10dB)               | 317        | VTSD 9561 F | VTSD 9561 F  | 2019.01.14 | 2020.01.13   |
| 4   | Coaxial cable(BNC)<br>(30MHz-3GHz) | EMC01      | N/A         | Morlab       | 2019.01.14 | 2020.01.13   |

#### 4.4 List of Software Used

| No. | Model | Version Number | Producer     | Test Item |
|-----|-------|----------------|--------------|-----------|
| 1   | EMC32 | V10.00.00      | Rode&Schwarz | RE        |
| 2   | EMC32 | V10.20.01      | Rode&Schwarz | CE        |

#### 4.5 Radiated Test Equipments

| RSE Test System |                                           |                |                    |              |            |              |
|-----------------|-------------------------------------------|----------------|--------------------|--------------|------------|--------------|
| No.             | Equipment Name                            | Serial No.     | Model No.          | Manufacturer | Cal. Date  | Cal.Due Date |
| 1               | Anechoic Chamber                          | N/A            | 9m*6m*6m           | ETS-Lindgren | 2017.07.21 | 2020.07.20   |
| 2               | Signal Analyzer                           | 101294         | FSV40              | R&S          | 2019.01.04 | 2020.01.03   |
| 3               | Active Ring Antenna                       | FMZB 1513 #269 | FMZB 1513          | Schwarzbeck  | 2019.01.12 | 2020.01.11   |
| 4               | Linear Log Periodic Broad Band Antenna    | 949            | VULB 9163          | Schwarzbeck  | 2018.09.25 | 2019.09.24   |
| 5               | Ultra-Wideband Horn Antenna               | 102615         | HF907              | R&S          | 2019.01.19 | 2020.01.18   |
| 6               | Steatite Antennas                         | 17868          | QSH-SL-1 8-26-S-20 | Seibersdorf  | 2019.01.12 | 2020.01.11   |
| 7               | RF Switch and Control Platform            | N/A            | RSC                | CDSI         | N/A        | N/A          |
| 8               | Coaxial cable<br>(N male)<br>(9kHz -3GHz) | EMC02          | N/A                | Morlab       | 2019.01.04 | 2020.01.03   |
| 9               | Coaxial cable<br>(N male)                 | EMC03          | N/A                | Morlab       | 2019.01.04 | 2020.01.03   |



|    |                                             |             |                     |        |            |            |
|----|---------------------------------------------|-------------|---------------------|--------|------------|------------|
|    | (9kHz -3GHz)                                |             |                     |        |            |            |
| 10 | Coaxial cable<br>(N male)<br>(1GHz-26.5GHz) | EMC04       | N/A                 | Morlab | 2019.01.04 | 2020.01.03 |
| 11 | Coaxial cable<br>(N male)<br>(1GHz-26.5GHz) | EMC05       | N/A                 | Morlab | 2019.01.04 | 2020.01.03 |
| 12 | Pre-amplifier<br>(1GHz-18GHz)               | 8810011     | PAP-1G18            | CDSI   | 2019.01.04 | 2020.01.03 |
| 13 | Pre-amplifier<br>(18GHz-40GHz)              | 17021-17024 | PAP-1840            | CDSI   | 2018.07.05 | 2019.07.04 |
| 14 | Band stop Filter                            | EMC19       | BJF2400/2<br>485-60 | CDSI   | 2019.01.04 | 2020.01.03 |
| 15 | High Pass Filter                            | EMC22       | HFP-3.0/1<br>8G-60  | CDSI   | 2019.01.04 | 2020.01.03 |

\_\_\_\_\_ END OF REPORT \_\_\_\_\_