



REPORT No. : KH18110035W04

# TEST REPORT

**APPLICANT** : Xiamen Four-Faith Communication Technology Co., Ltd.

**PRODUCT NAME** : F8L10GW LoRa Gateway

**MODEL NAME** : F8L10GW

**BRAND NAME** : Four-Faith

**FCC ID** : 2ALUW-F8L10GW

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

**TEST DATE** : 2018-11-10 to 2018-11-20

**ISSUE DATE** : 2018-11-21

Prepared by:

  
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Approved by:

  
\_\_\_\_\_  
Anne Liu (Supervisor)

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Change History		
Issue	Date	Reason for change
1.0	2018-11-21	First edition



# 1. Technical Information

**Note:** Provide by applicant.

## 1.1. Applicant and Manufacturer Information

<b>Applicant:</b>	Xiamen Four-Faith Communication Technology Co., Ltd.
<b>Applicant Address:</b>	11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.
<b>Manufacturer:</b>	Xiamen Four-Faith Communication Technology Co., Ltd.
<b>Manufacturer Address:</b>	11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

## 1.2. Equipment Under Test (EUT) Description

<b>Product Name:</b>	F8L10GW LoRa Gateway
<b>Serial No:</b>	(N/A, marked #1 by test site)
<b>Hardware Version:</b>	V1.3
<b>Software Version:</b>	20180927
<b>Modulation Type:</b>	DSSS, OFDM
<b>Operating Frequency Range:</b>	802.11b/g/n-20MHz: 2.412GHz - 2.462GHz 802.11n-40MHz: 2.422GHz - 2.452GHz
<b>Channel Number:</b>	802.11b/g/n-20MHz: 11 802.11n-40MHz: 7
<b>Antenna Type:</b>	Omni-Directional FRP Antenna
<b>Antenna Gain:</b>	2 dBi

**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  $F$  (MHz) = $2412+5*(n-1)$  ( $1 \leq n \leq 11$ ). 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  $F$  (MHz) = $2412+5*(n-1)$  ( $3 \leq n \leq 9$ ). 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 (10-1-15 Edition)	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	Nov 10, 2018	Scott Chen	<u>PASS</u>
3	15.247(a)	Bandwidth	Nov 12, 2018	Scott Chen	<u>PASS</u>
4	15.247(d)	Conducted Spurious Emission and Band Edge	Nov 12, 2018	Scott Chen	<u>PASS</u>
5	15.247(e)	Power spectral density (PSD)	Nov 12, 2018	Scott Chen	<u>PASS</u>
6	15.247(d)	Restricted Frequency Bands	Nov 18, 2018	Jinxin Huang	<u>PASS</u>
7	15.207	Conducted Emission	Nov 20, 2018	Jinxin Huang	<u>PASS</u>
8	15.209, 15.247(d)	Radiated Emission	Nov 20, 2018	Jinxin Huang	<u>PASS</u>

**Note:** 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 v04 (04/05/2017).

## 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 2dBi. Please refer to the EUT external photos.



## 2.2. Output Power

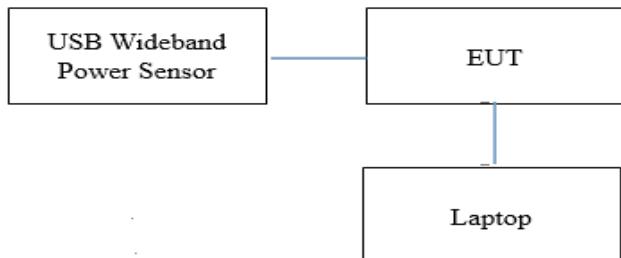
### 2.2.1. Requirement

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

#### 2.2.3.1 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



### 2.2.3.2 802.11b Test Mode

Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	16.96	0.050	30	1	PASS
6	2437	17.34	0.054			PASS
11	2462	17.16	0.052			PASS

### 2.2.3.3 802.11g Test mode

Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	15.85	0.038	30	1	PASS
6	2437	16.16	0.041			PASS
11	2462	15.96	0.039			PASS

### 2.2.3.4 802.11n-20MHz Test mode

Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
		dBm	W	dBm	W	
1	2412	15.79	0.038	30	1	PASS
6	2437	16.08	0.041			PASS
11	2462	15.85	0.038			PASS

### 2.2.3.5 802.11n-40MHz Test mode

Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
		dBm	W	dBm	W	
3	2422	14.18	0.026	30	1	PASS
6	2437	14.40	0.028			PASS
9	2452	14.01	0.025			PASS

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



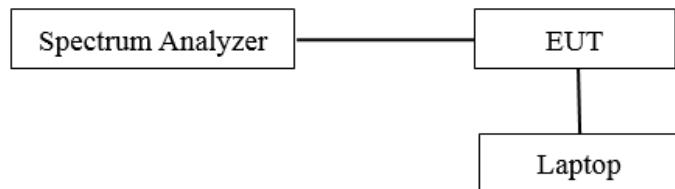
## 2.3. Bandwidth

### 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 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.

KDB 558074 Section 8.1 Option 1 was used in order to prove compliance.

#### B. Equipments List:

Please refer ANNEX B(4).



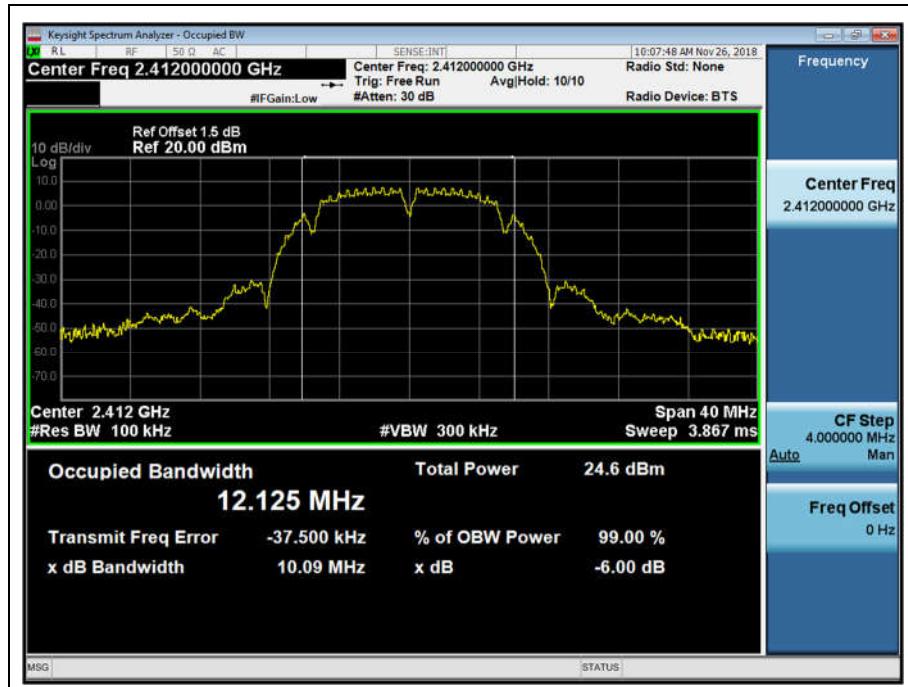
### 2.3.3. Test Result

#### 802.11b Test mode

##### A. Test Verdict:

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits(kHz)	Result
1	2412	10.09	≥500	PASS
6	2437	10.08	≥500	PASS
11	2462	10.09	≥500	PASS

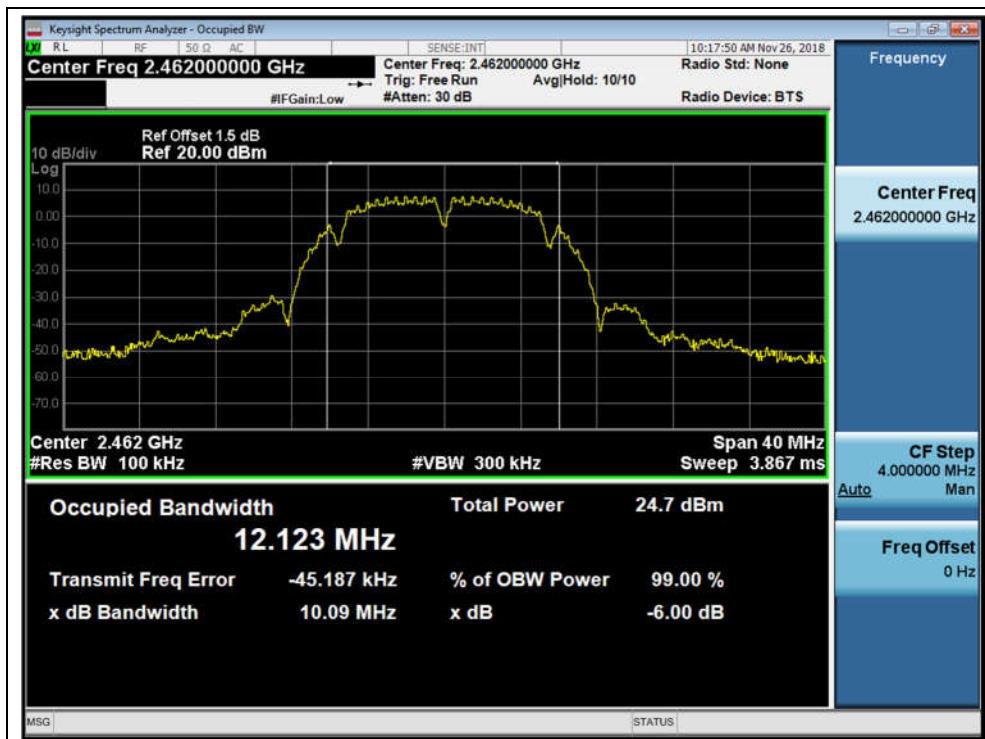
##### B. Test Plots



(Channel 1, 2412MHz, 802.11b)



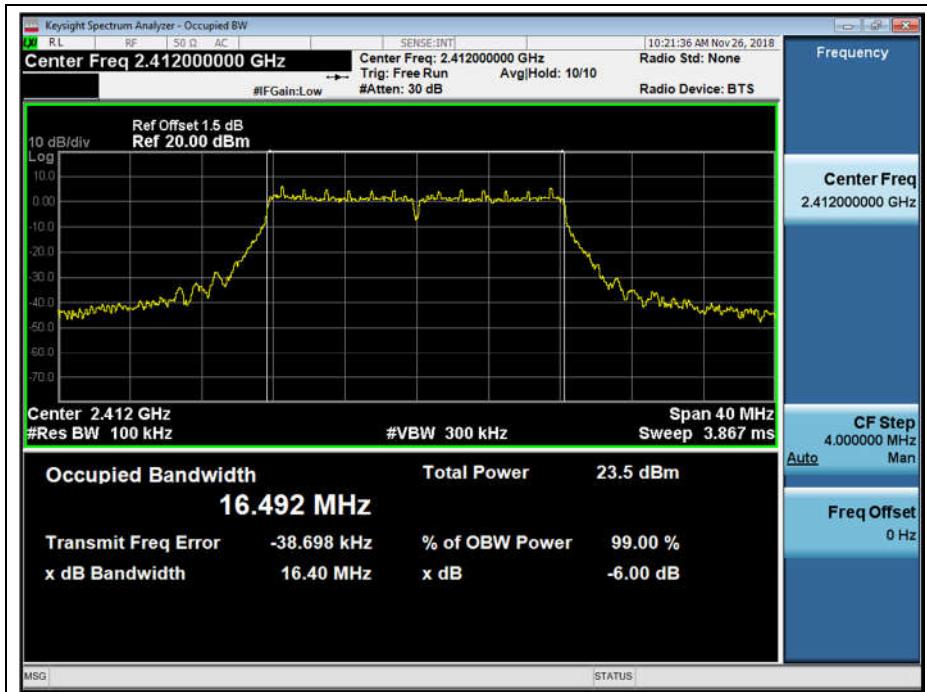
(Channel 6, 2437 MHz, 802.11b)



(Channel 11, 2462MHz, 802.11b)

**802.11g Test mode****A. Test Verdict:**

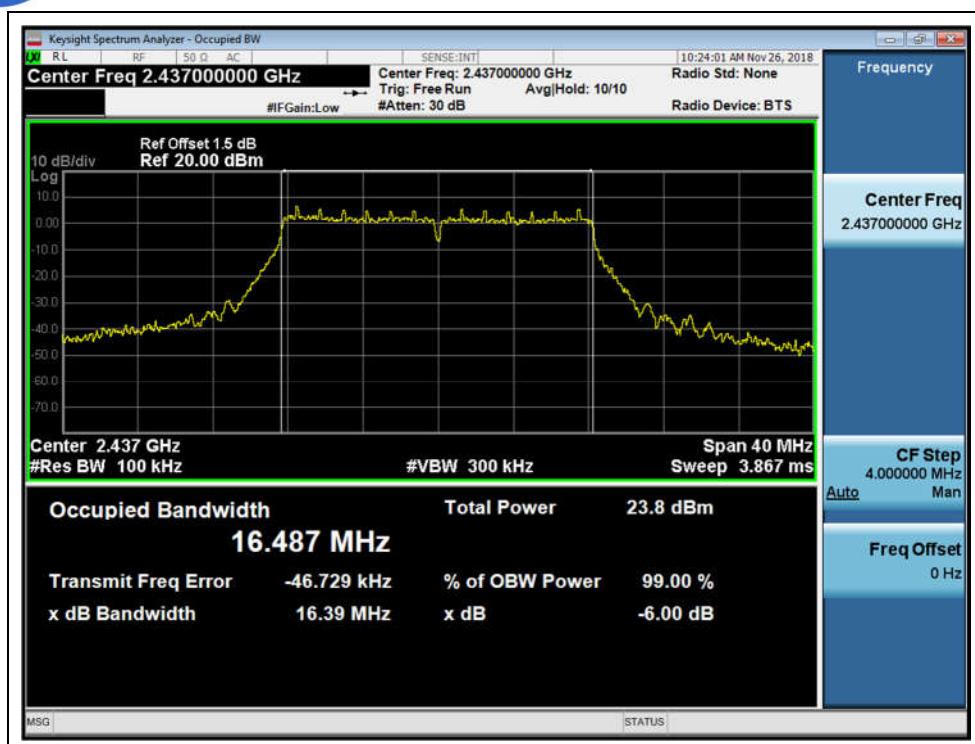
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	16.40	≥500	PASS
6	2437	16.39	≥500	PASS
11	2462	16.40	≥500	PASS

**B. Test Plots:**

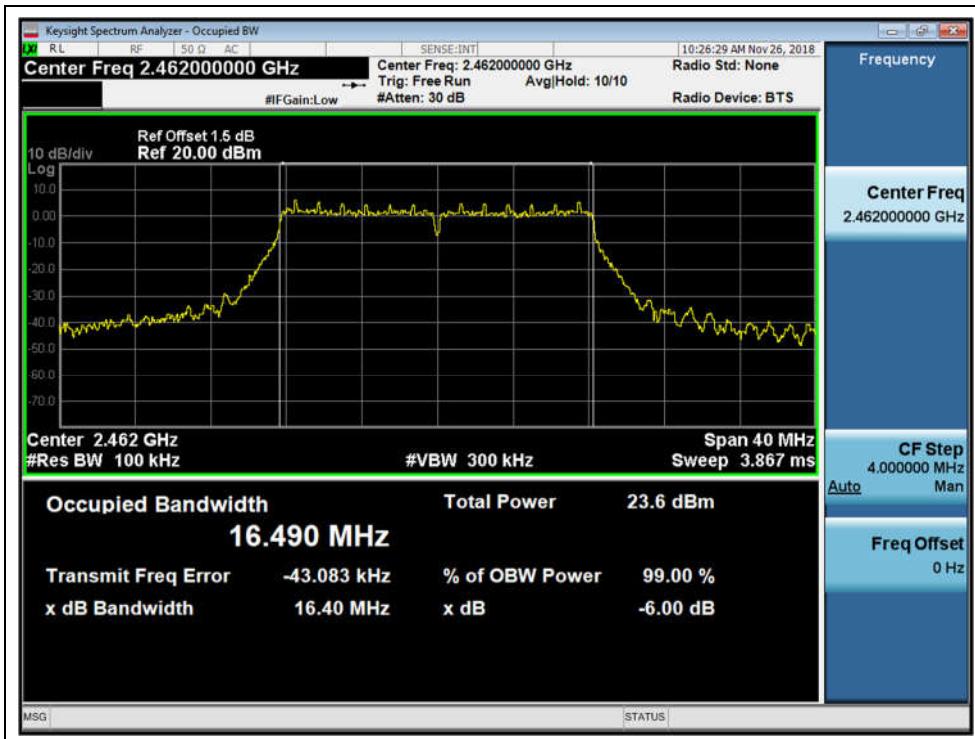
(Channel 1, 2412MHz, 802.11g)



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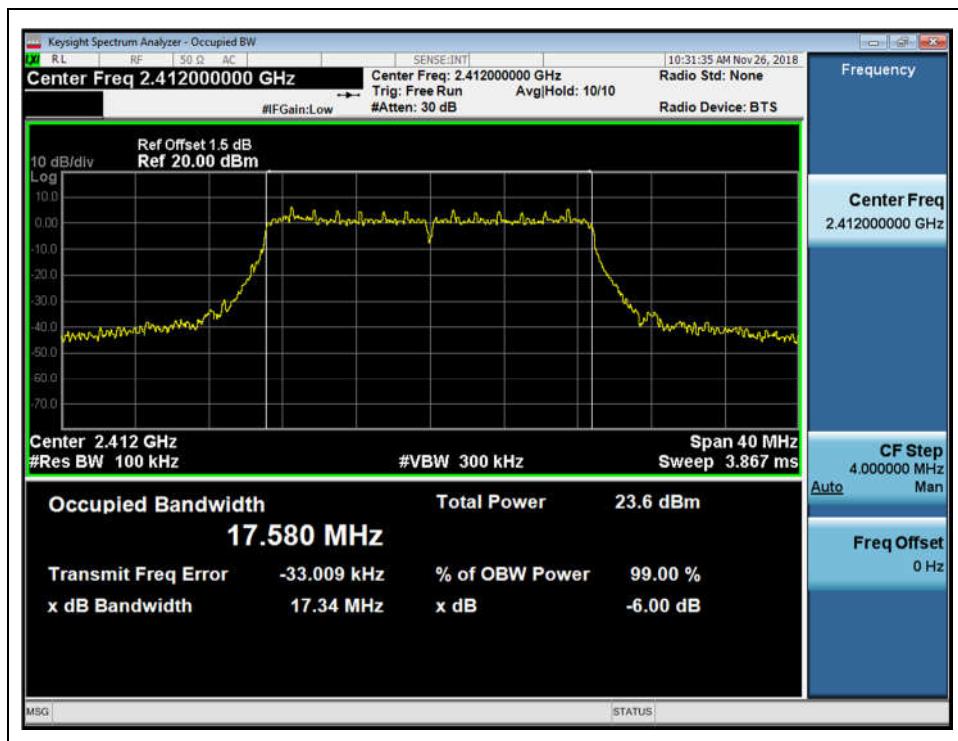
(Channel 6, 2437MHz, 802.11g)



(Channel 11, 2462MHz, 802.11g)

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

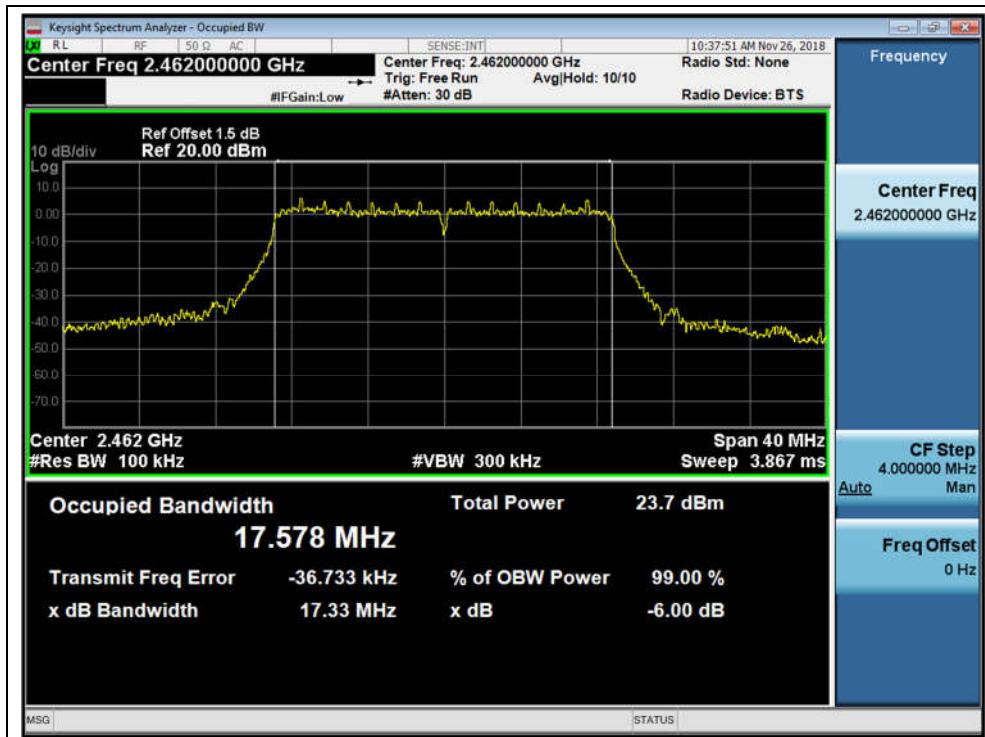
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	17.34	≥500	PASS
6	2437	17.32	≥500	PASS
11	2462	17.33	≥500	PASS

**B. Test Plots:**

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



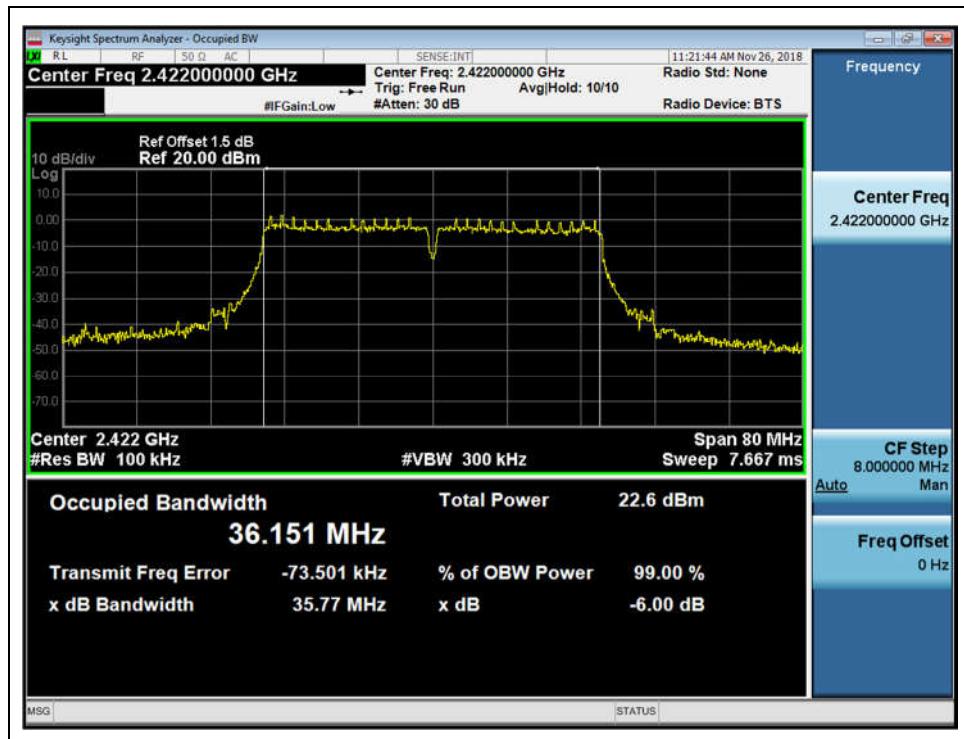
(Channel 6, 2437MHz, 802.11n-20)



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

**802.11n-40 Test mode****A. Test Verdict:**

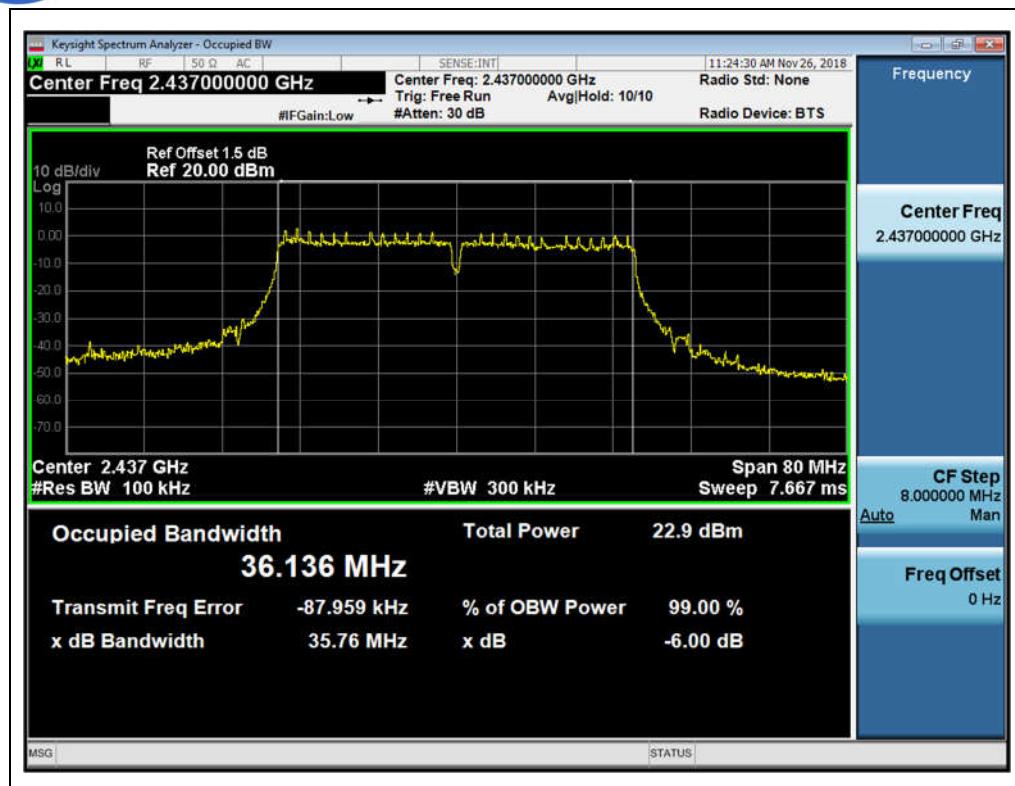
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limits (kHz)	Result
3	2422	35.77	≥500	PASS
6	2437	35.76	≥500	PASS
9	2452	35.78	≥500	PASS

**B. Test Plots:**

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



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



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



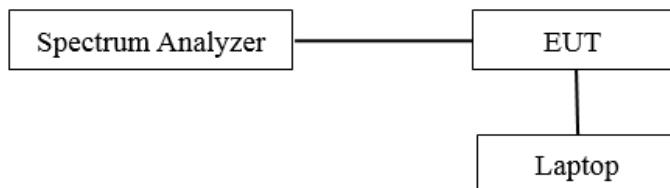
## 2.4. Conducted Spurious Emissions and Band Edge

### 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.

KDB 558074 Section 11.0 was used in order to prove compliance.

#### B. Equipments List:

Please refer ANNEX B(4).



### 2.4.3. Test Result

#### 802.11b Test mode

##### A. Test Verdict:

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -30dBc Limit	
1	2412	-42.073	6.70	-23.30	PASS
6	2437	-41.276	7.70	-22.30	PASS
11	2462	-40.554	6.90	-2.10	PASS

##### B. Test Plots:

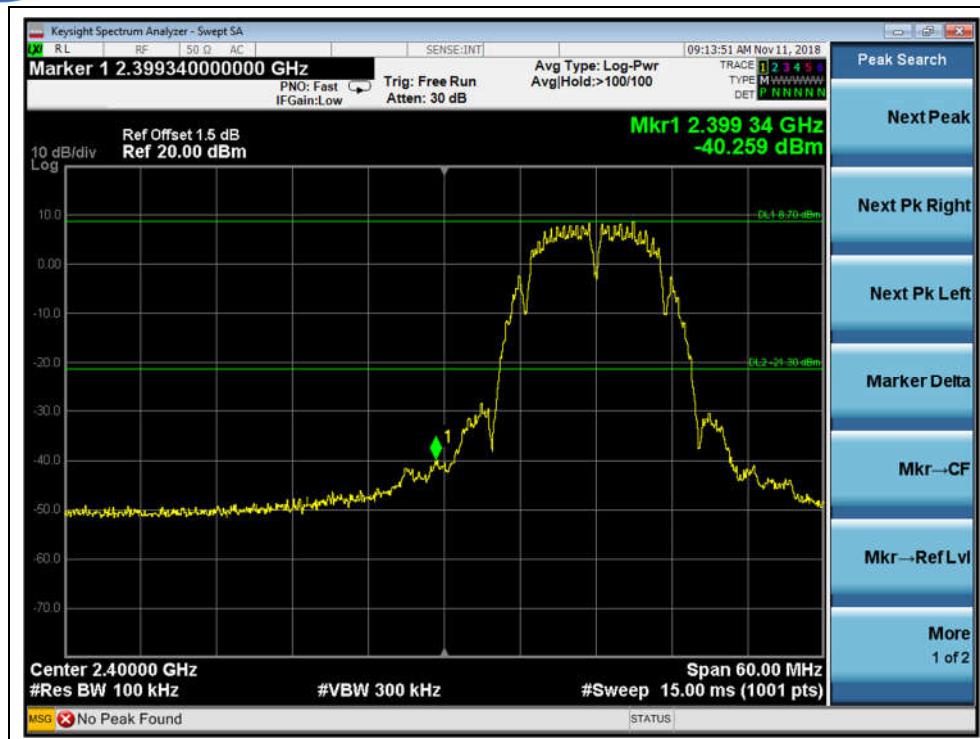
Note: The power of the Module transmitting frequency should be ignored.



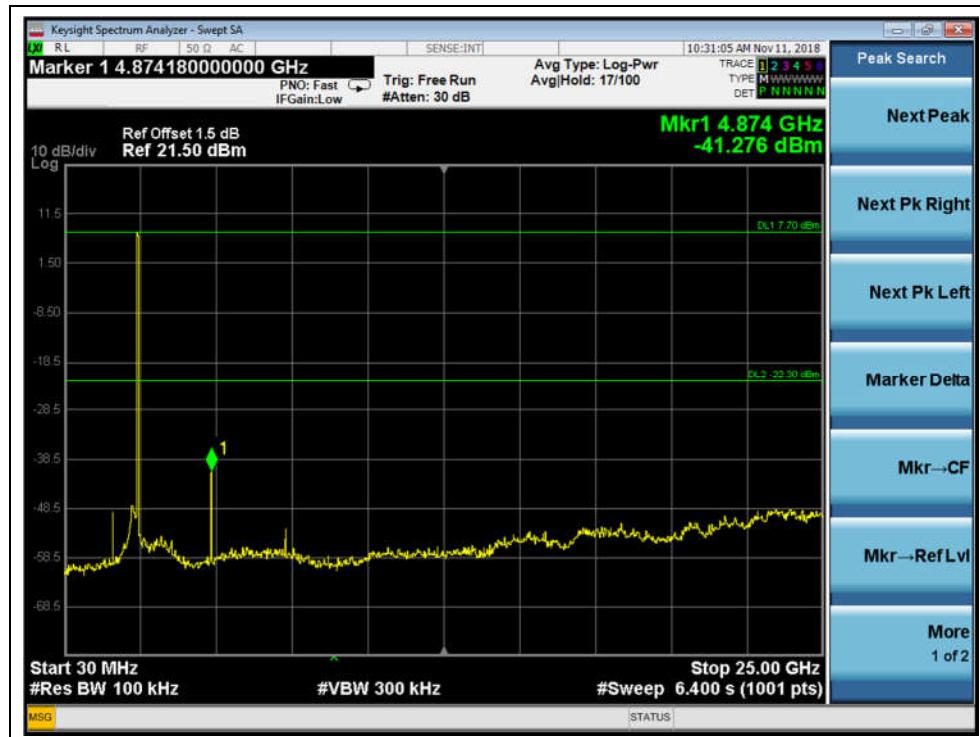
(Channel = 1, 30MHz to 25GHz)



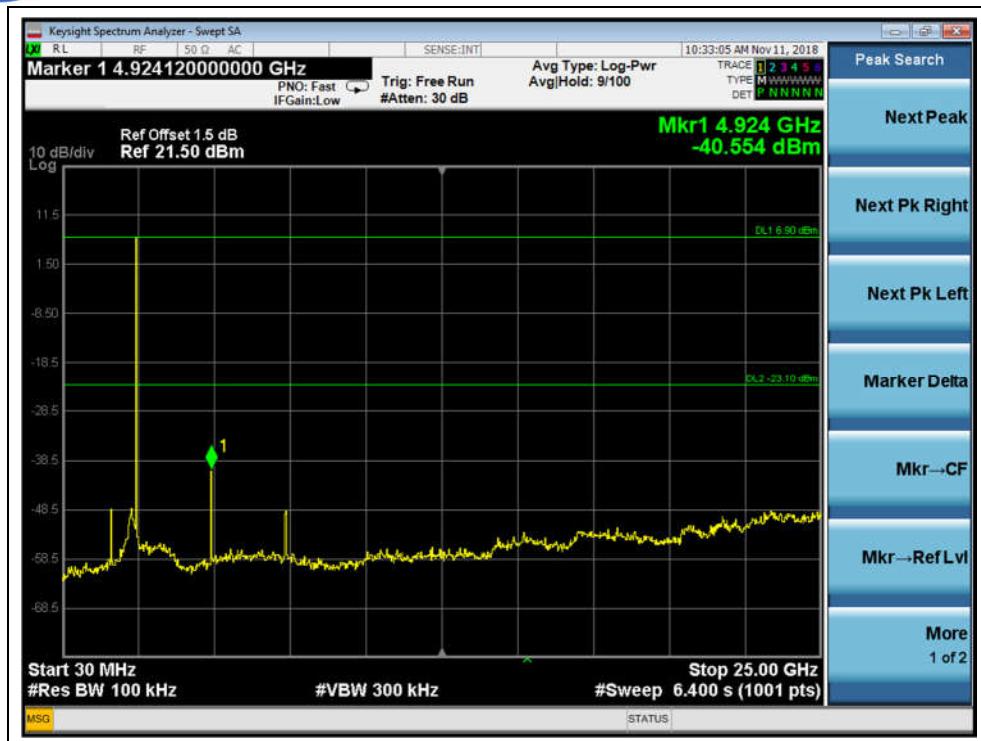
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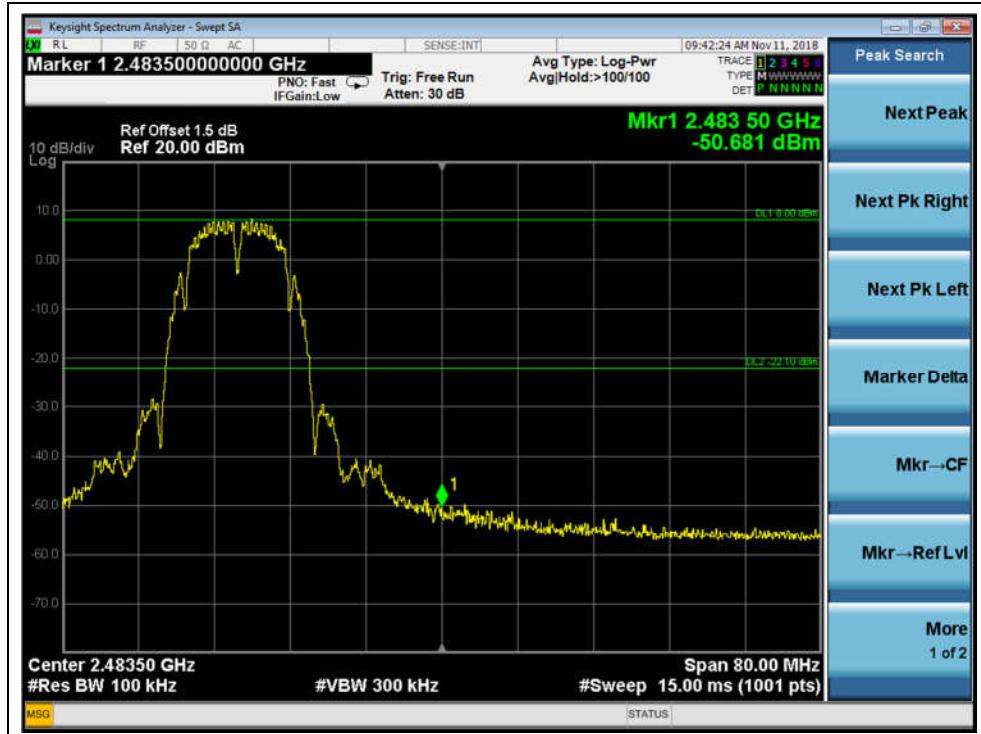
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

**802.11g Test mode****A. Test Verdict:**

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -30dBc Limit	
1	2412	-48.437	4.40	-25.60	PASS
6	2437	-48.328	4.00	-26.00	PASS
11	2462	-46.927	4.20	-25.80	PASS

**B. Test Plots:**

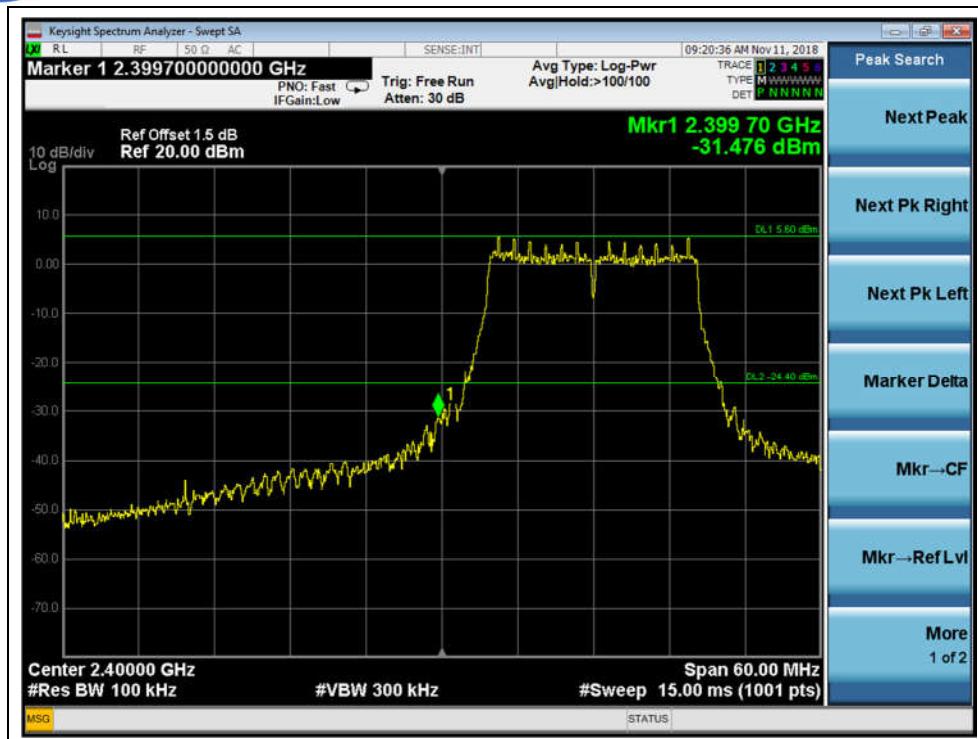
**Note:** The power of the Module transmitting frequency should be ignored.



(Channel = 1, 30MHz to 25GHz)



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(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



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(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

**02.11n -20MHz Test mode****A. Test Verdict:**

Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -30dBc Limit	
1	2412	-48.513	2.20	-27.80	PASS
6	2437	-48.480	3.50	-26.50	PASS
11	2462	-47.590	4.50	-25.50	PASS

**B. Test Plots:**

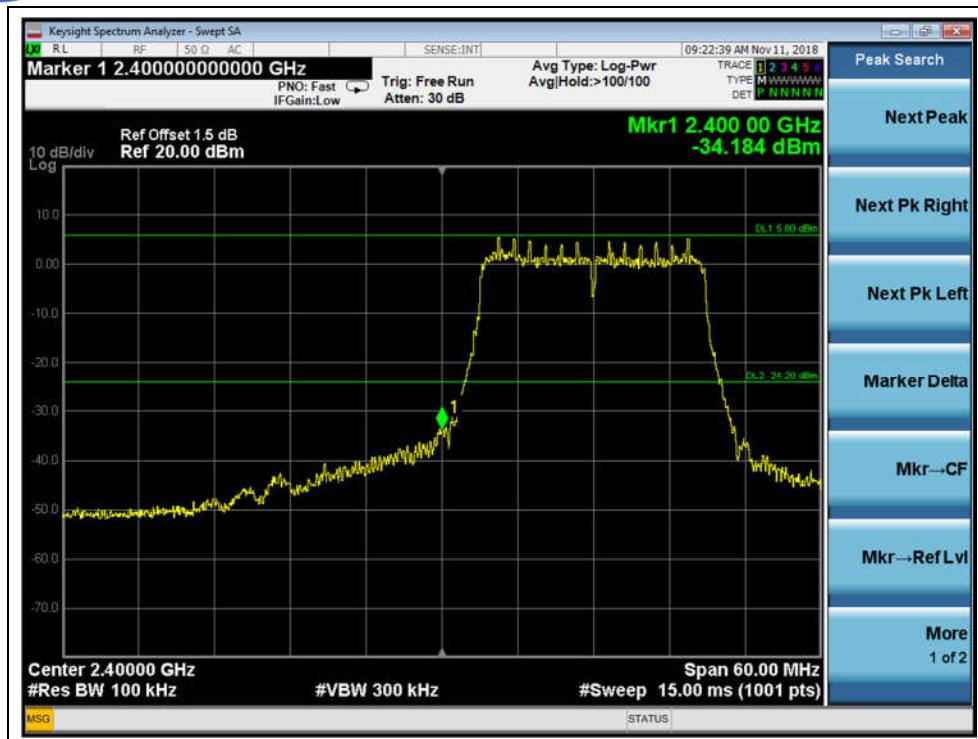
**Note:** The power of the Module transmitting frequency should be ignored.



(Channel = 1, 30MHz to 25GHz)



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(Band Edge @ Channel = 1)



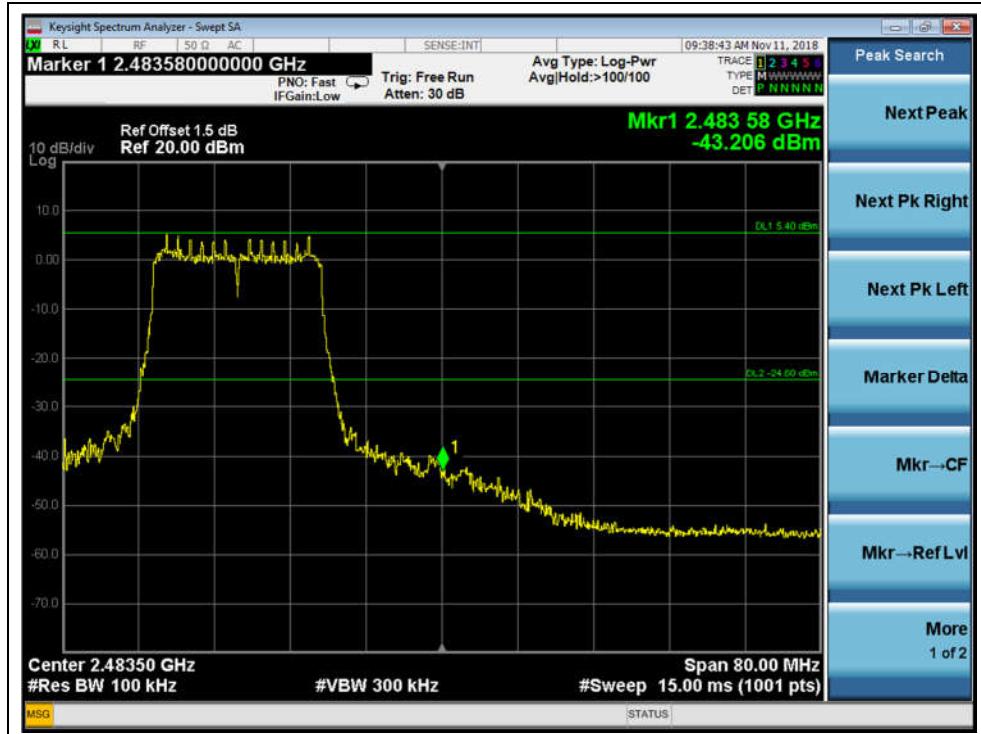
(Channel = 6, 30MHz to 25GHz)



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(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

**802.11n -40MHz Test mode****A. Test Verdict:**

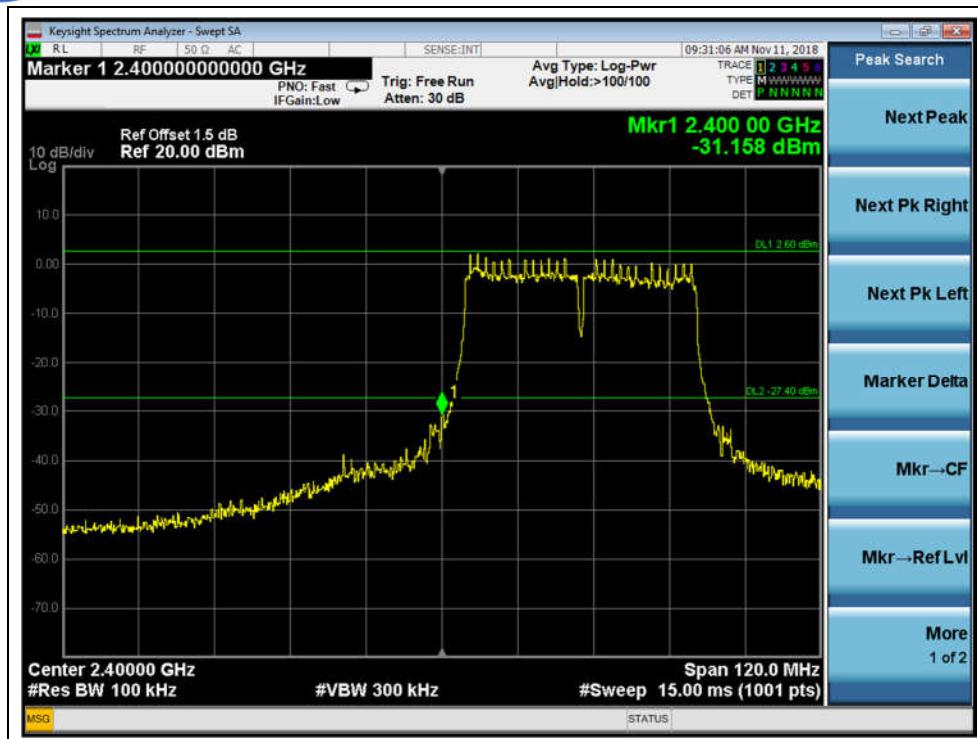
Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
			Carrier Level	Calculated -30dBc Limit	
3	2422	-48.452	-0.90	-30.10	<b>PASS</b>
6	2437	-48.004	-0.50	-30.50	<b>PASS</b>
9	2452	-44.413	-0.20	-30.80	<b>PASS</b>

**B. Test Plots:**

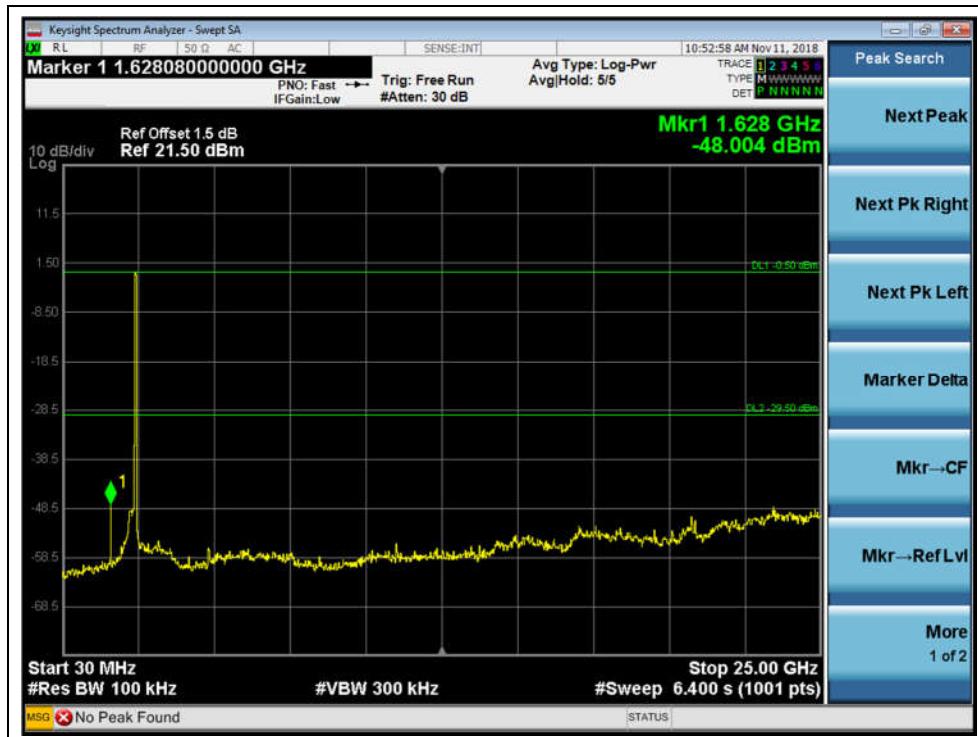
**Note:** The power of the Module transmitting frequency should be ignored.



(Channel = 3, 30MHz to 25GHz)



(Band Edge @ Channel = 3)



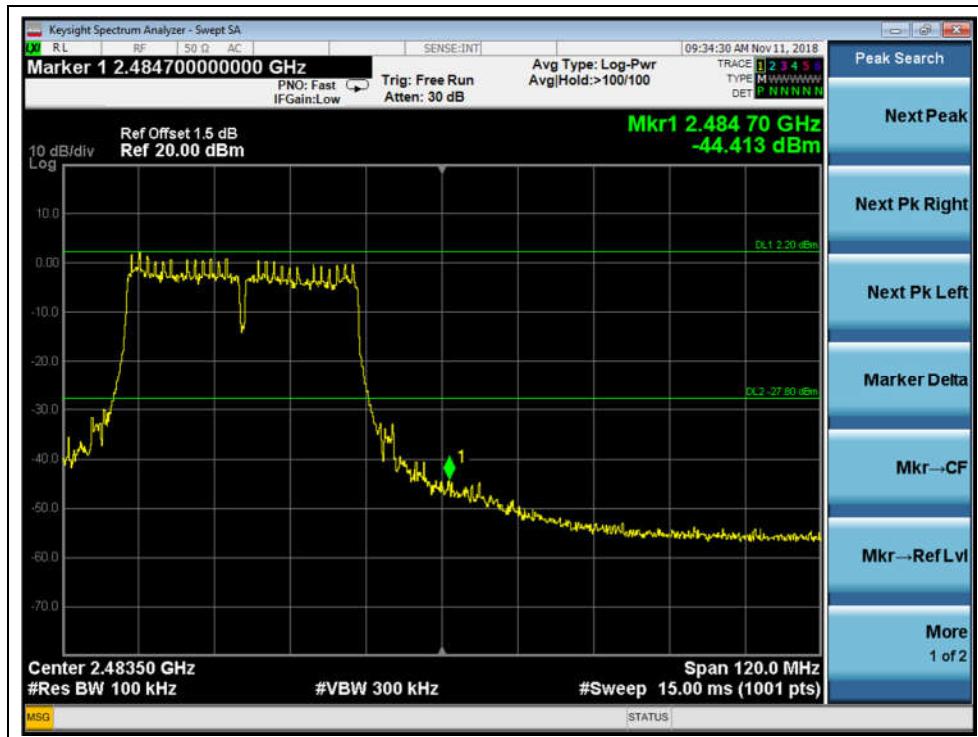
(Channel = 6, 30MHz to 25GHz)



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(Channel = 9, 30MHz to 25GHz)



(Band Edge @ Channel = 9)



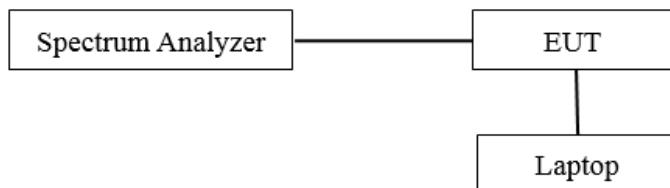
## 2.5. Power spectral density (PSD)

### 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.

KDB 558074 Section 10.2 was used in order to prove compliance.

#### B. Equipments List:

Please refer ANNEX B(4).



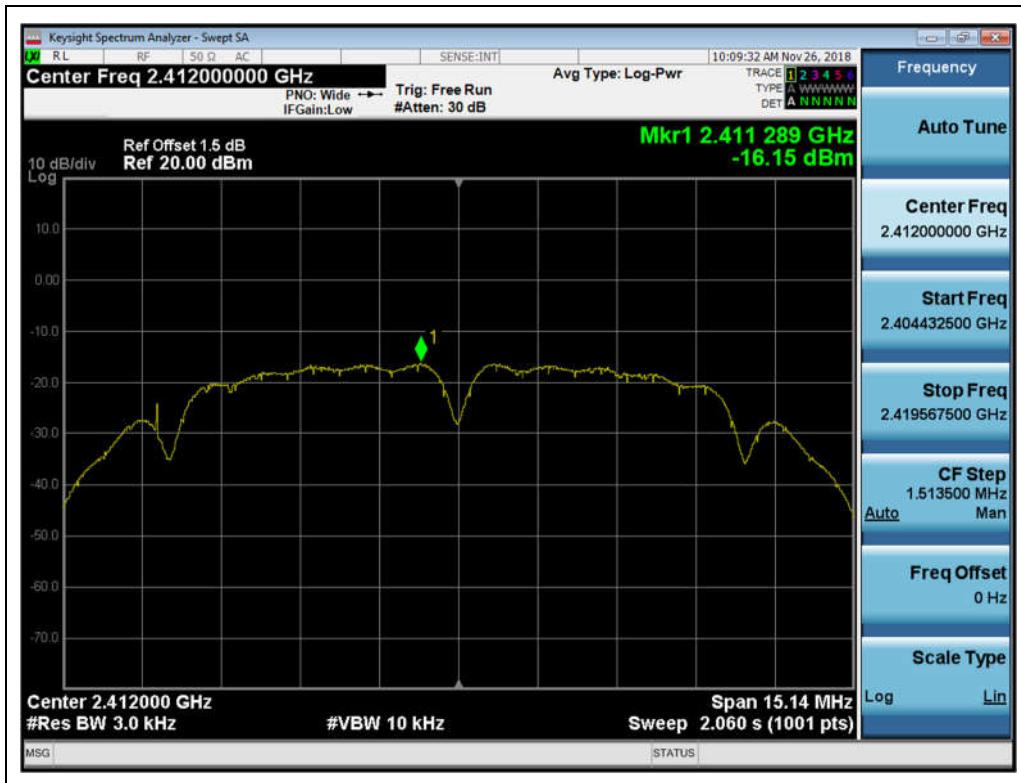
### 2.5.3. Test Result

#### 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	-16.15	8	PASS
6	2437	-15.43	8	PASS
11	2462	-15.99	8	PASS

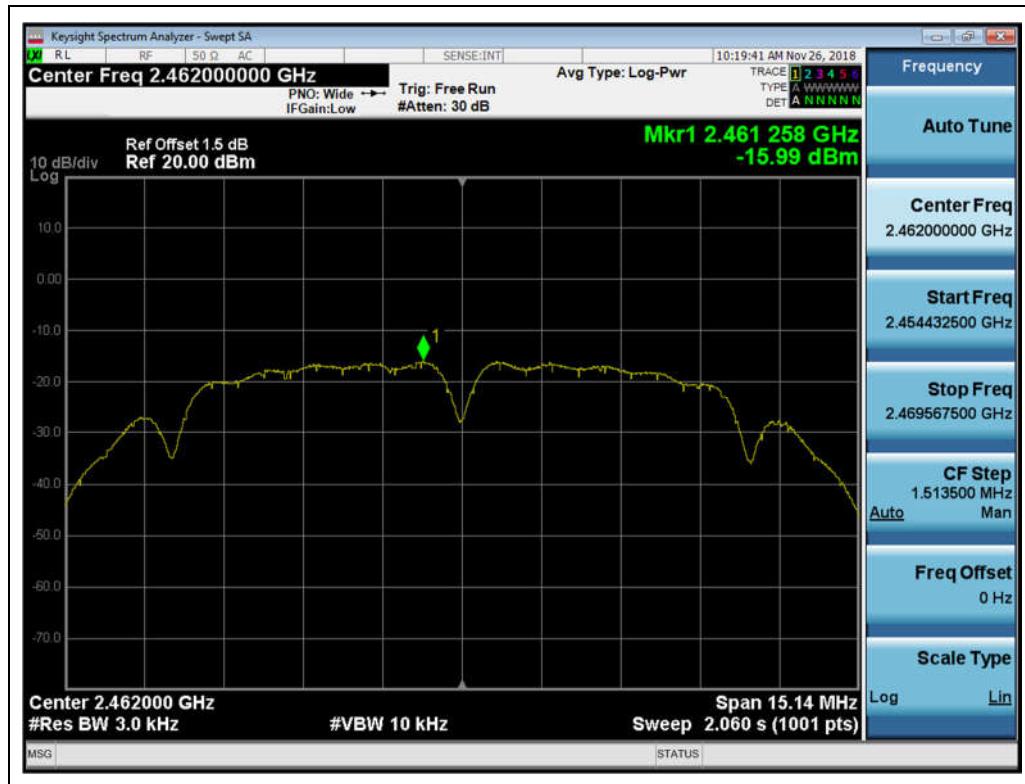
##### B. Test Plots:



(Channel = 1, 802.11b)



(Channel = 6, 802.11b)



(Channel = 11, 802.11b)

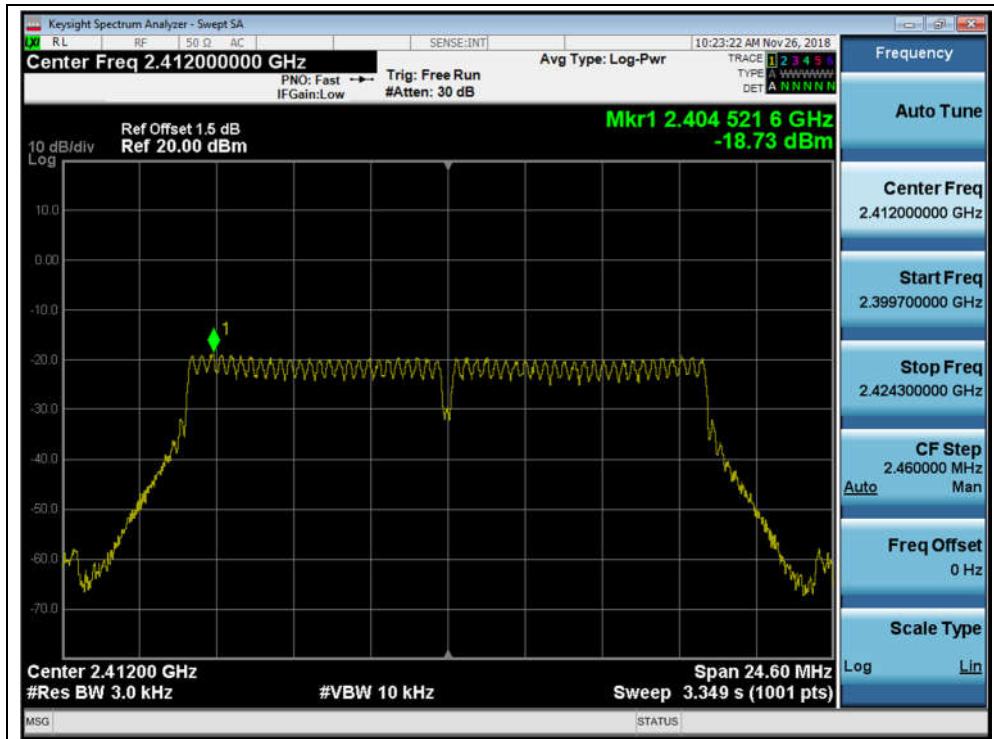


## 802.11g Test mode

### A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-18.73	8	PASS
6	2437	-18.31	8	PASS
11	2462	-18.43	8	PASS

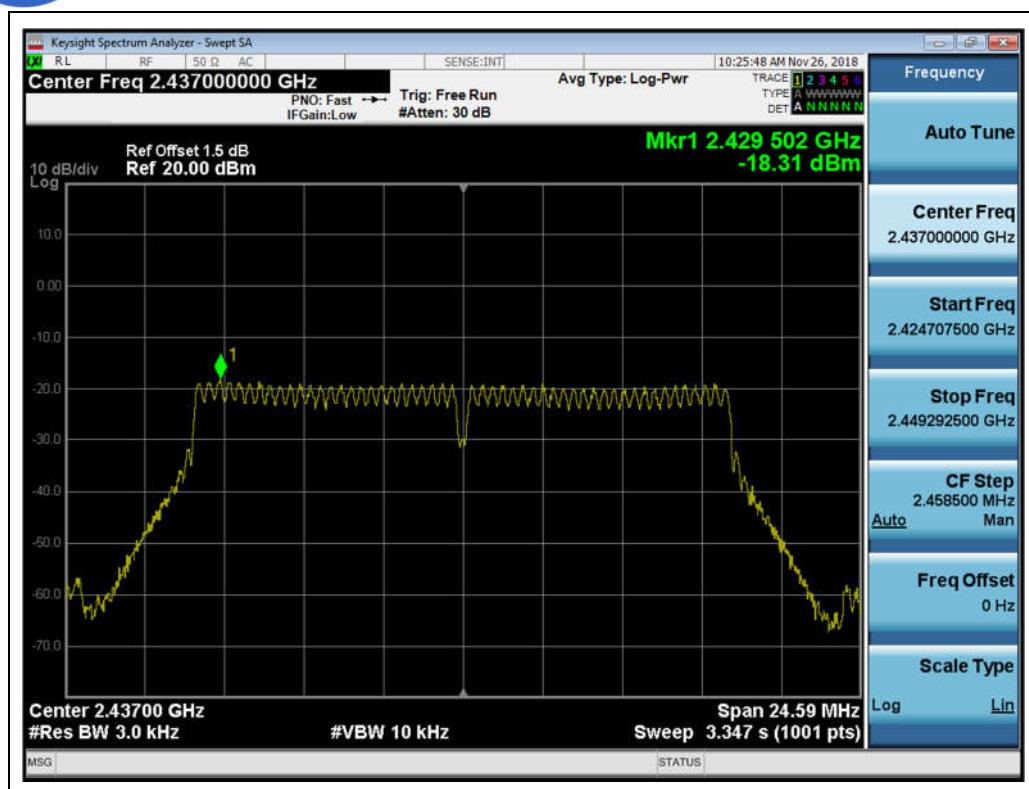
### B. Test Plots:



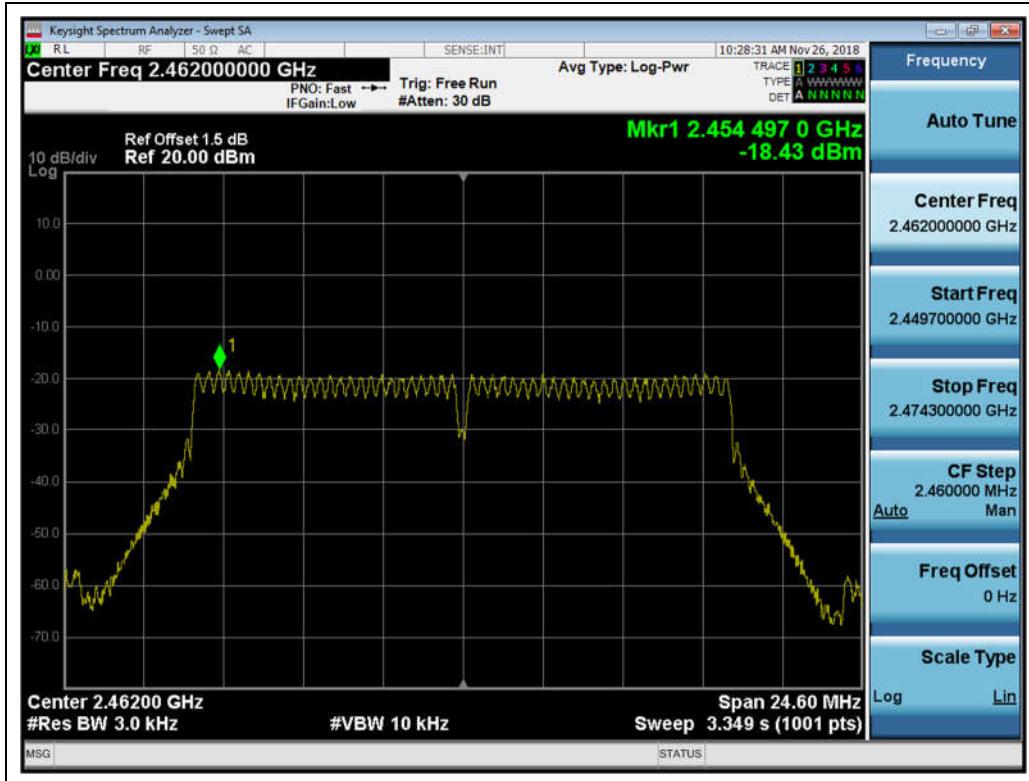
(Channel = 1, 802.11g)



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(Channel = 6, 802.11g)



(Channel = 11, 802.11g)



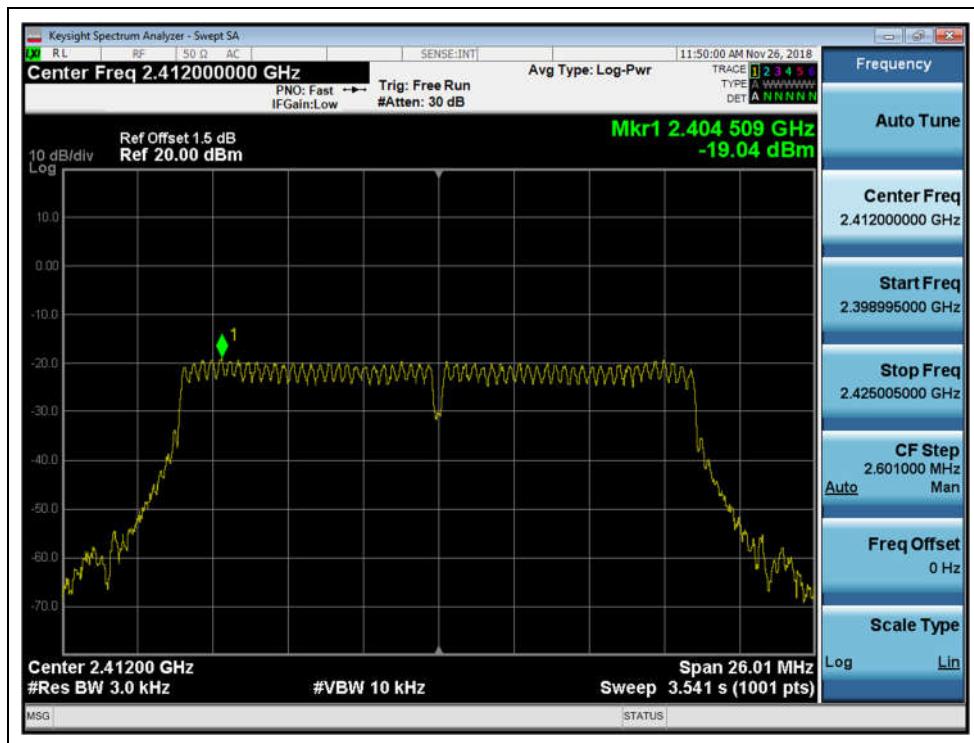
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## 802.11n-20MHz Test mode

### A. Test Verdict:

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-19.04	8	PASS
6	2437	-18.21	8	PASS
11	2462	-18.50	8	PASS

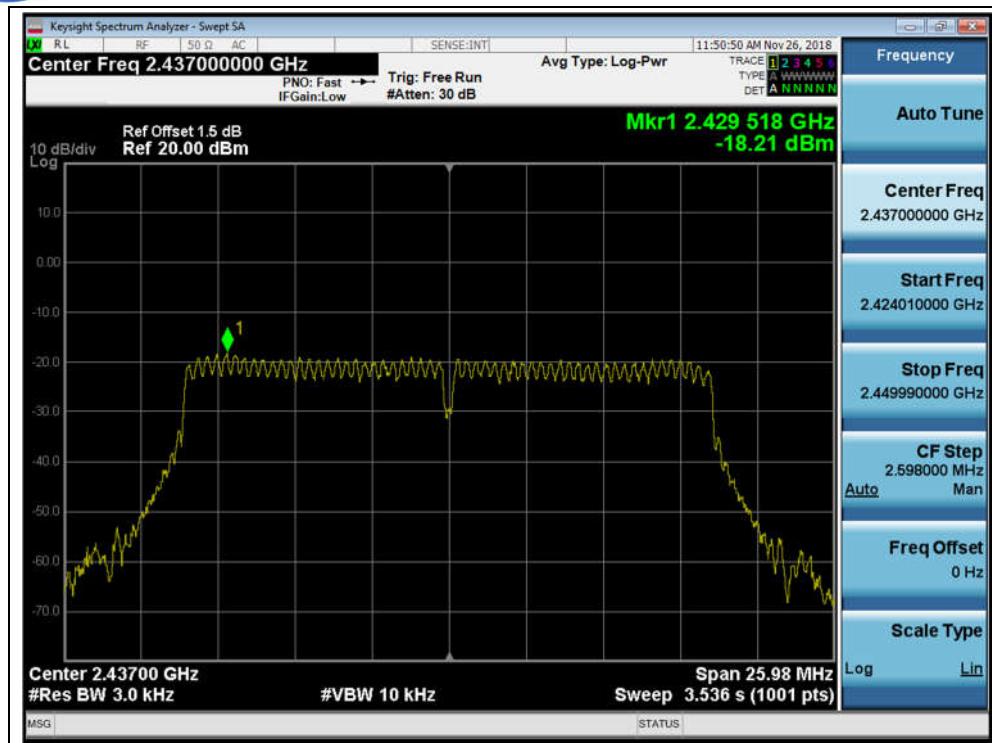
### B. Test Plots:



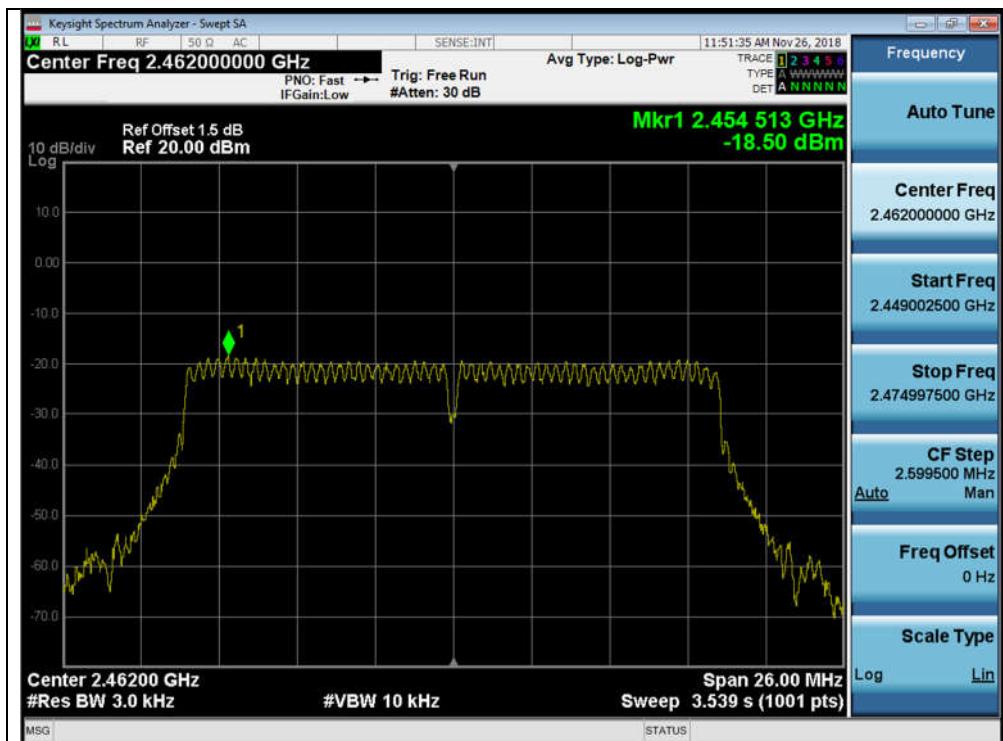
(Channel = 1, 802.11n-20MHz)



REPORT No. : KH18110035W04



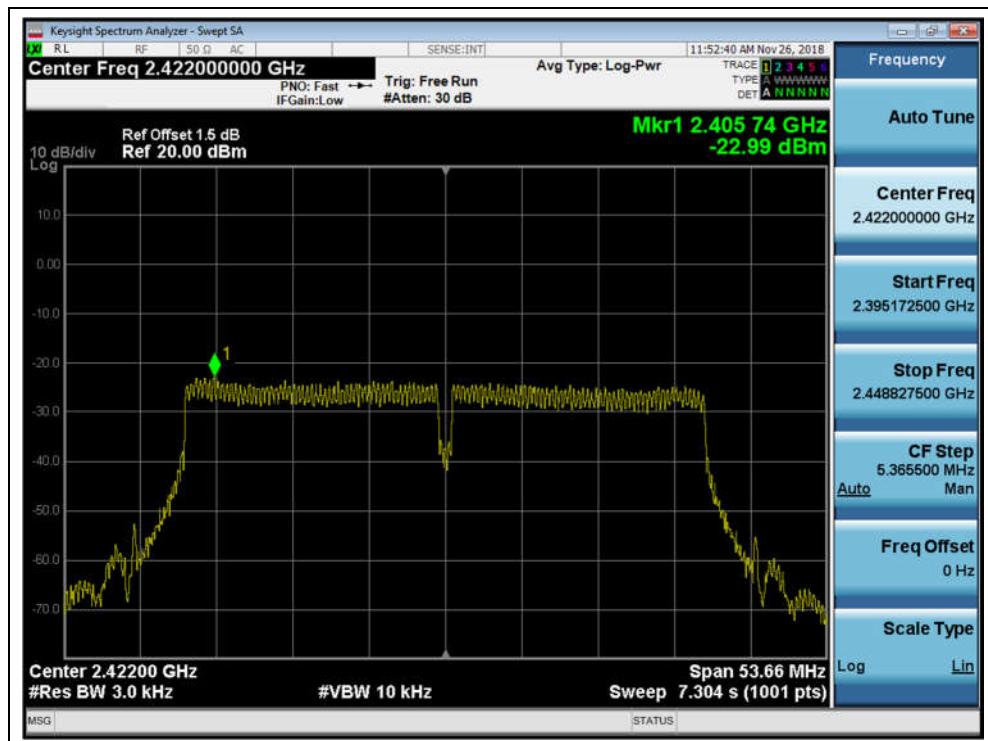
(Channel = 6, 802.11n-20MHz)



(Channel = 11, 802.11n-20MHz)

**802.11n-40MHz Test mode****A. Test Verdict:**

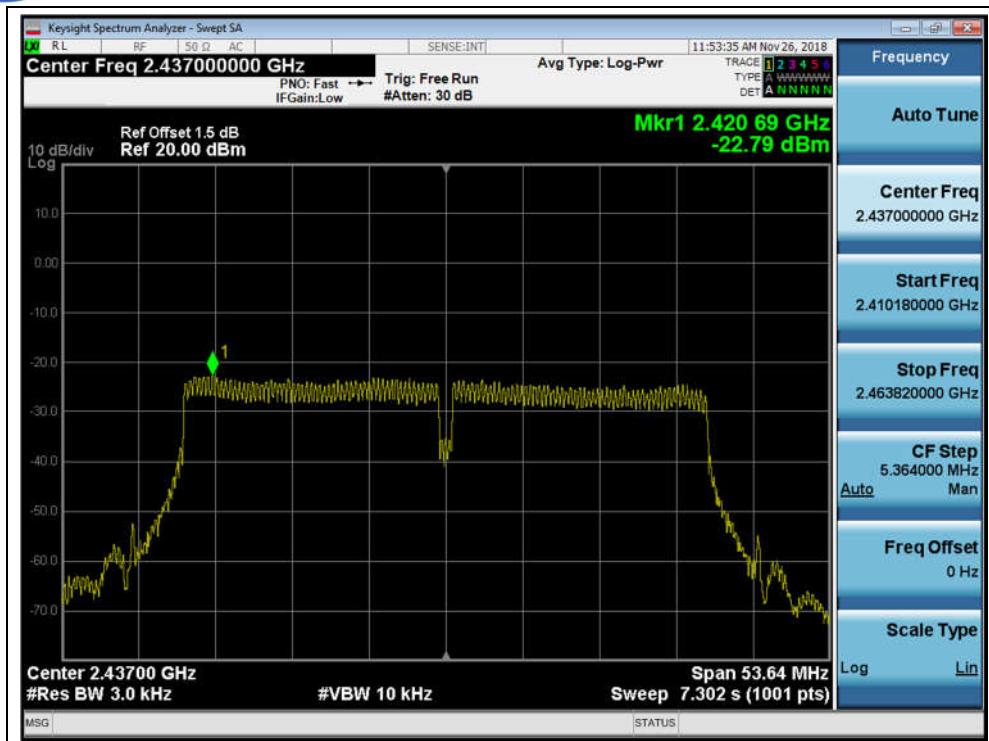
Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
3	2422	-22.99	8	<b>PASS</b>
6	2437	-22.79	8	<b>PASS</b>
9	2452	-23.40	8	<b>PASS</b>

**B. Test Plots:**

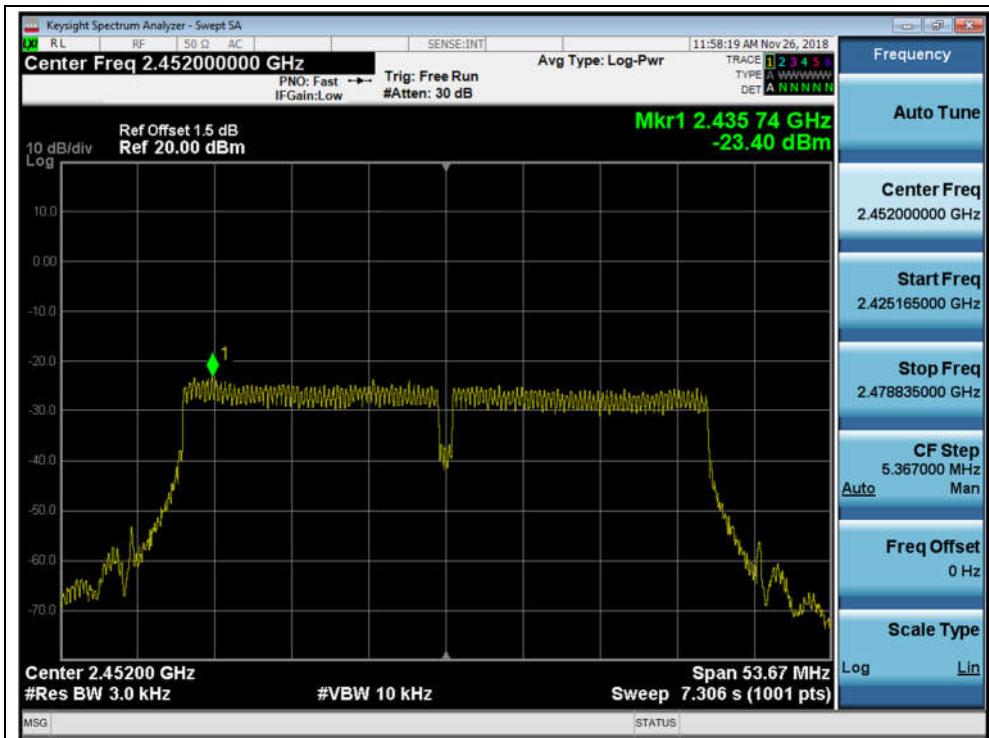
(Channel = 3, 802.11n-40MHz)



REPORT No. : KH18110035W04



(Channel = 6, 802.11n-40MHz)



(Channel = 9, 802.11n-40MHz)

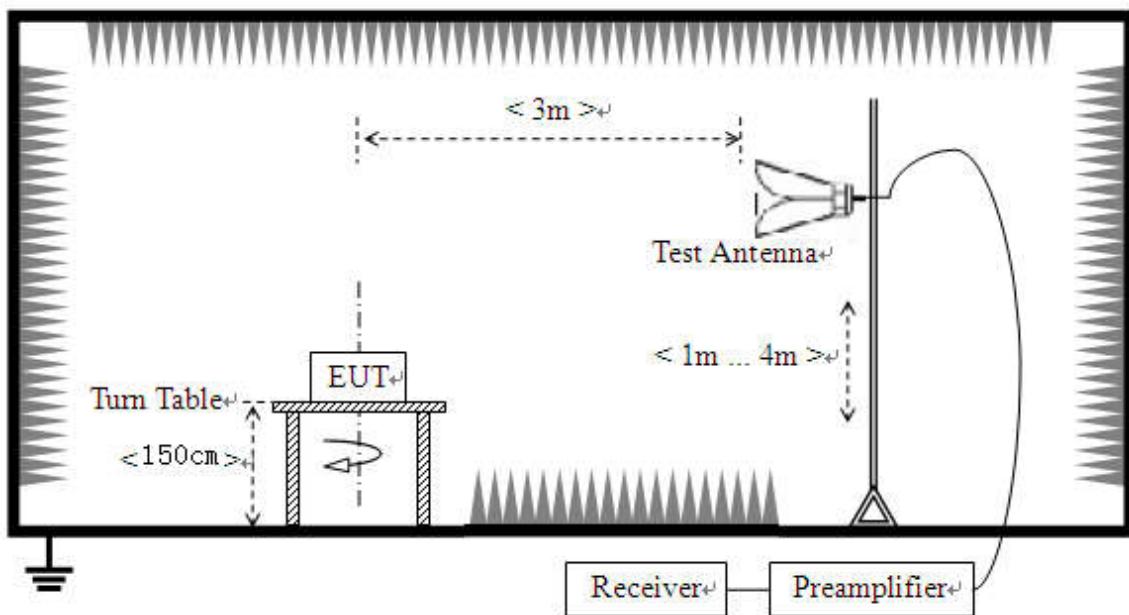
## 2.6. Restricted Frequency Bands

### 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.

KDB 558074 Section 12.1 was used in order to prove compliance.

**B. Equipments List:**

Please refer ANNEX B(4).

**2.6.3. Test Result**

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

$A_T$ : Total correction Factor except Antenna

$U_R$ : Receiver Reading

$G_{\text{preamp}}$ : Preamplifier Gain

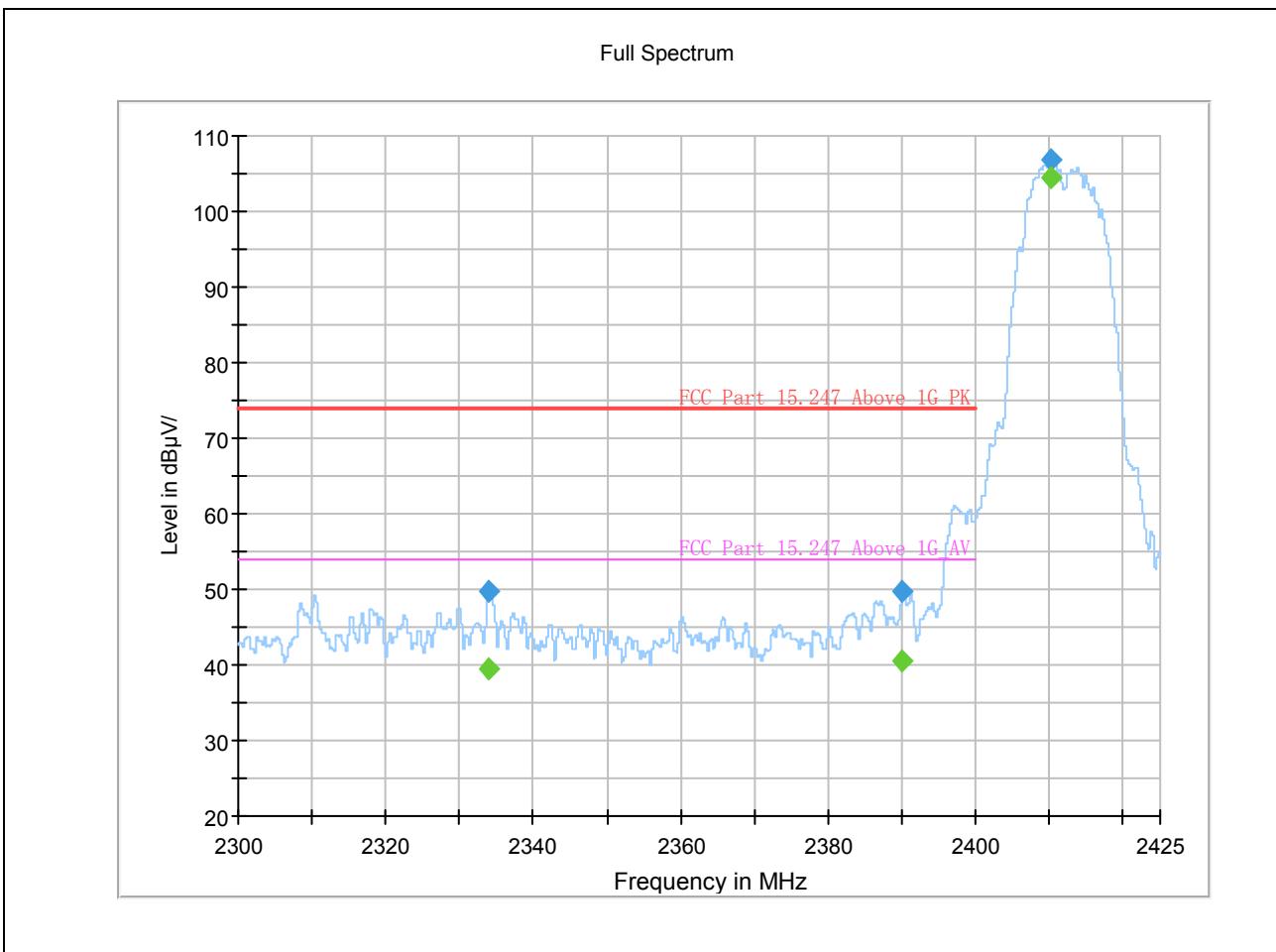
$A_{\text{Factor}}$ : Antenna Factor at 3m

**Note:** Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.



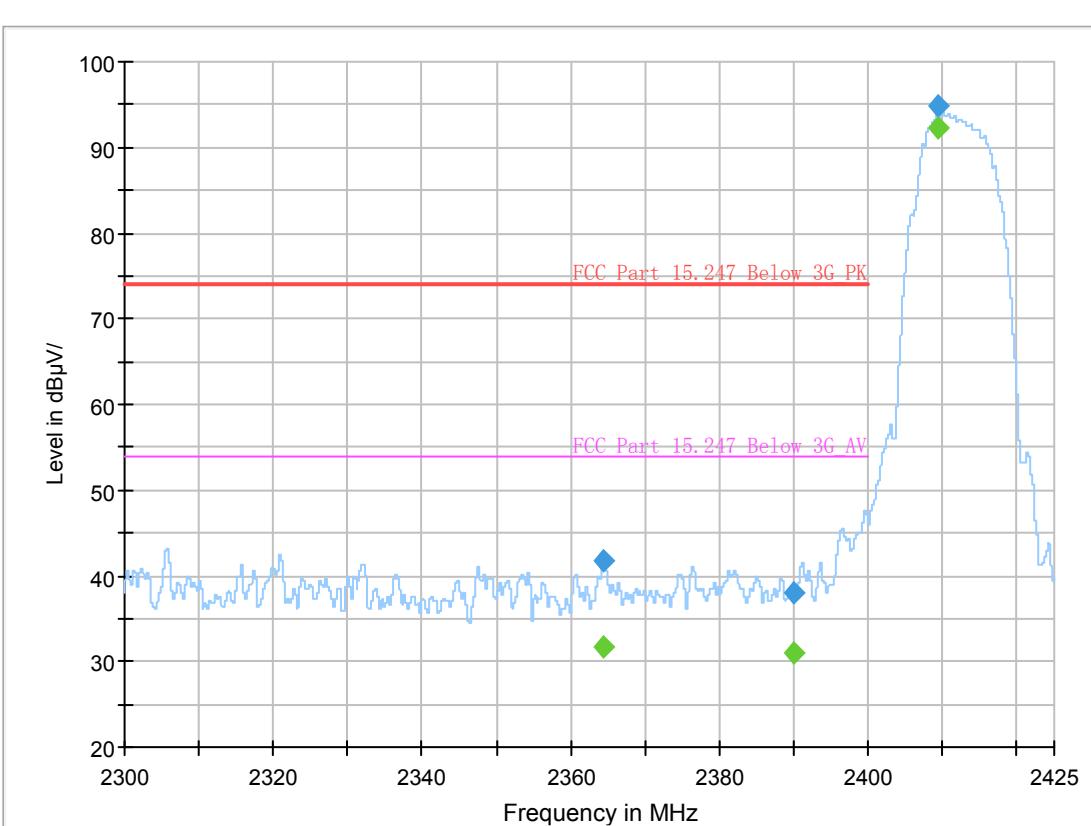
REPORT No. : KH18110035W04

## 802.11b Test mode



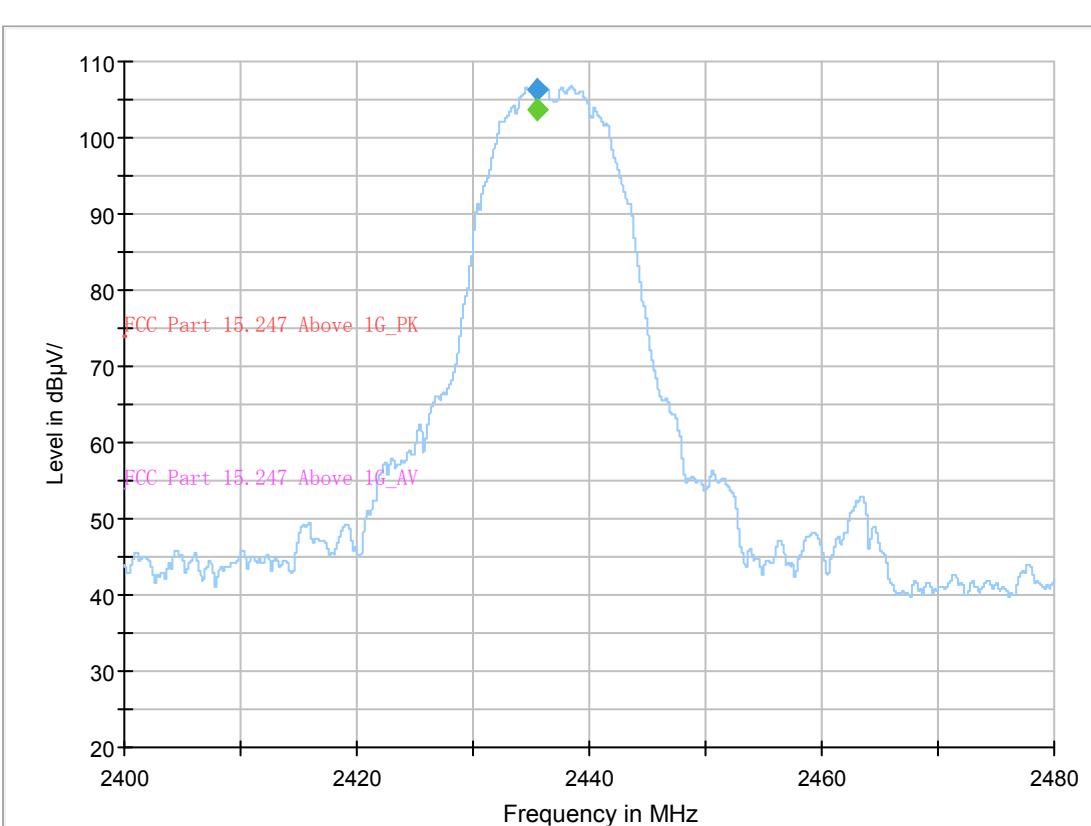
(802.11b \_2412MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2333.930556	49.69	---	74.00	24.32	H	7.4
2333.930556	---	39.35	54.00	14.65	H	7.4
2390.000000	49.66	---	74.00	24.34	H	8.0
2390.000000	---	40.42	54.00	13.58	H	8.0
2410.048611	---	104.56	---	---	H	8.7
2410.048611	106.77	---	---	---	H	8.7



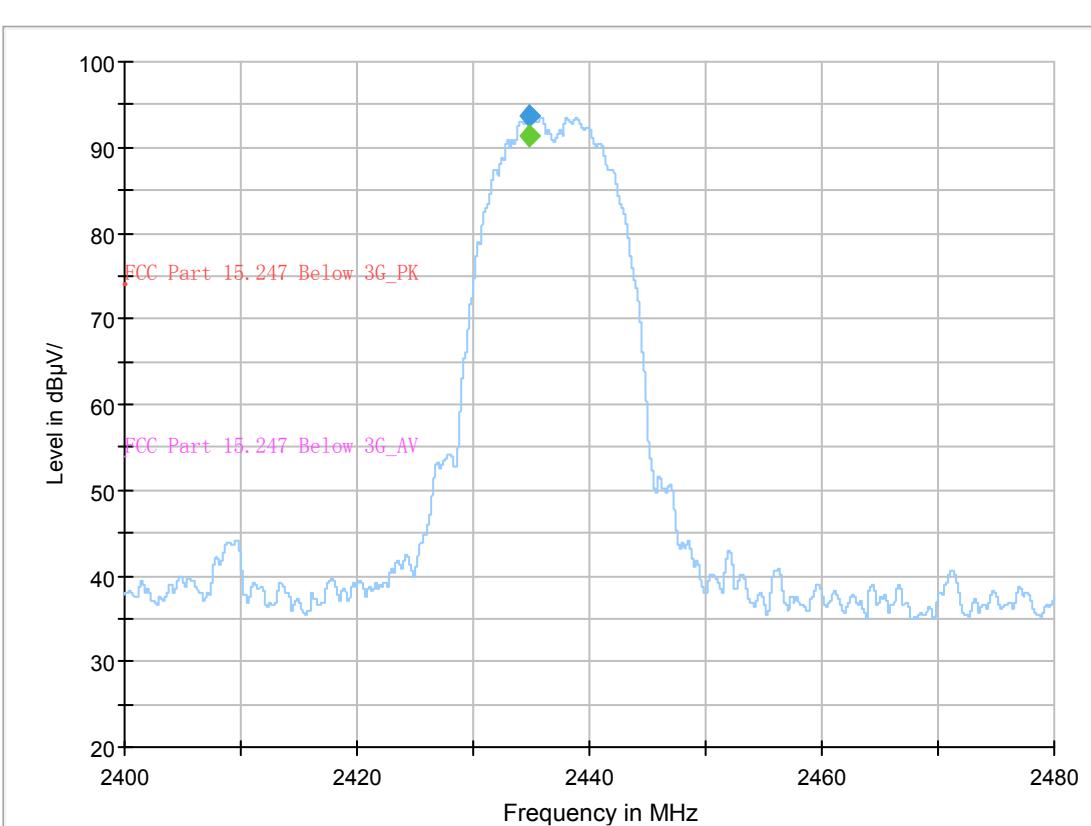
(802.11b \_2412MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2364.381945	41.76	---	74.00	32.24	V	7.5
2364.381945	---	31.76	54.00	22.24	V	7.5
2390.000000	38.06	---	74.00	35.94	V	8.0
2390.000000	---	30.92	54.00	23.08	V	8.0
2409.368056	---	92.25	---	---	V	8.7
2409.368056	94.87	---	---	---	V	8.7



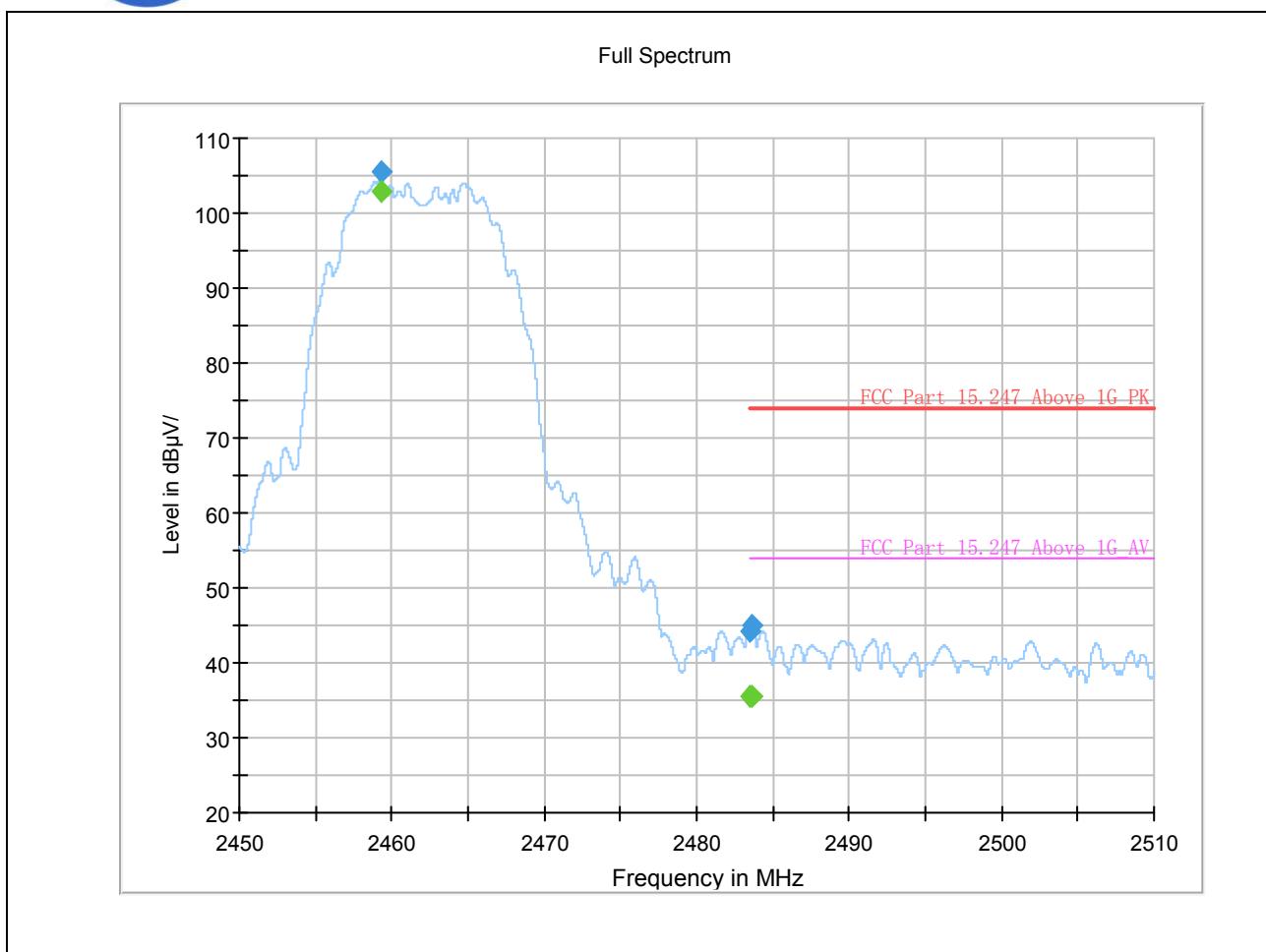
(802.11b \_2437MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2435.484445	---	103.80	---	---	H	8.1
2435.484445	106.23	---	---	---	H	8.1



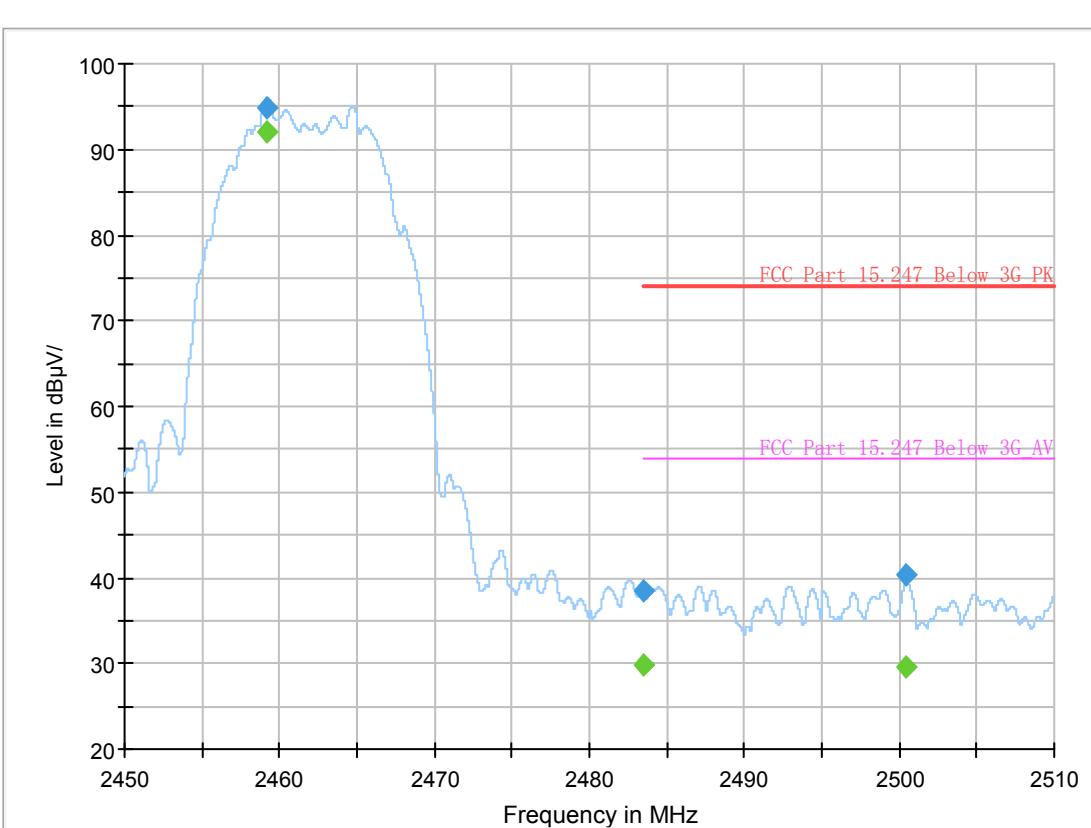
(802.11b \_2437MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2434.871111	---	91.46	---	---	V	8.1
2434.871111	93.79	---	---	---	V	8.1



(802.11b \_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)
2459.323333	---	102.85	---	---	H	7.9
2459.323333	105.55	---	---	---	H	7.9
2483.500000	44.29	---	74.00	29.71	H	8.3
2483.500000	---	35.56	54.00	18.44	H	8.3
2483.556667	44.93	---	74.00	29.07	H	8.3
2483.556667	---	35.50	54.00	18.50	H	8.3



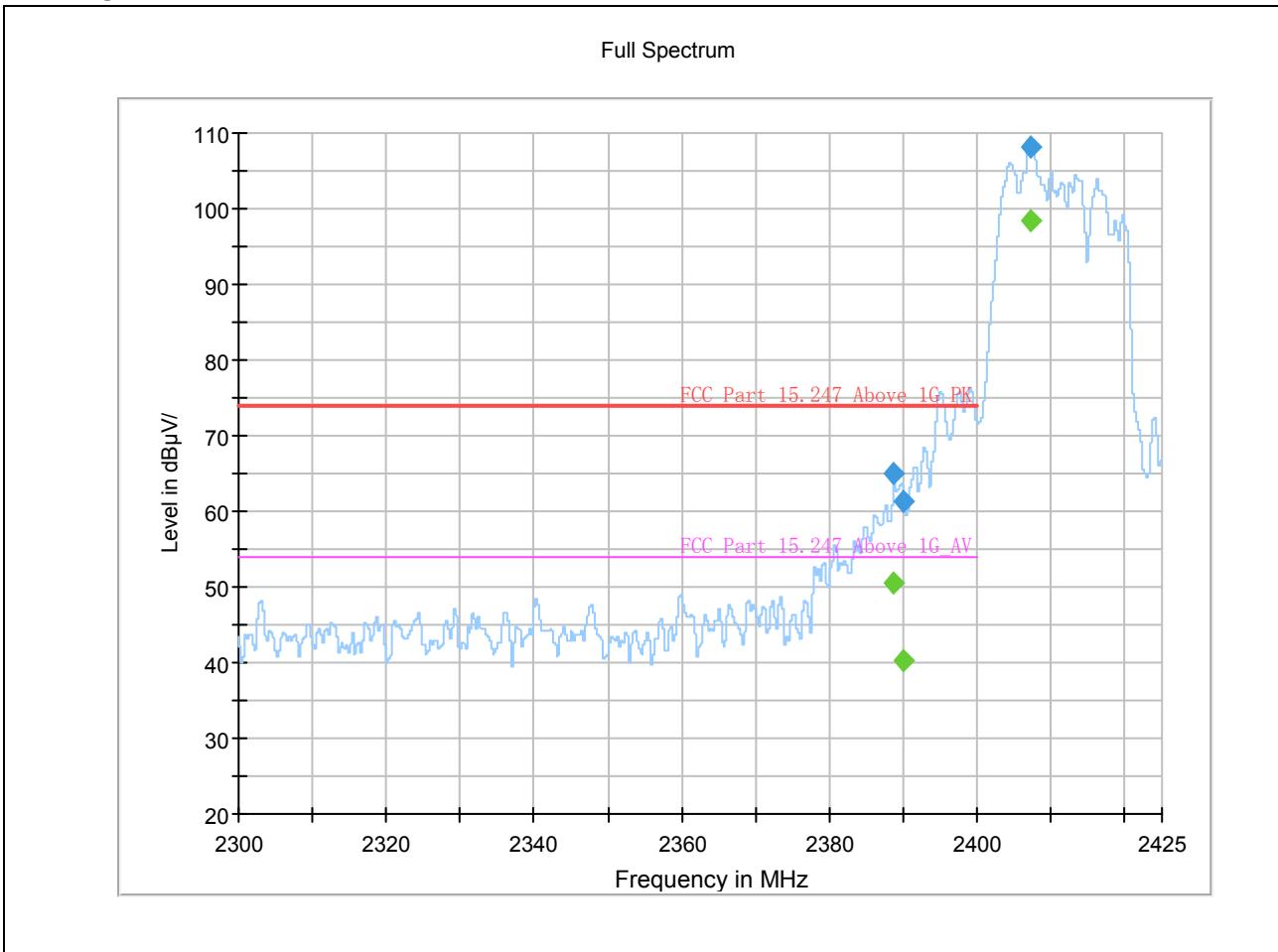
(802.11b \_2462MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
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



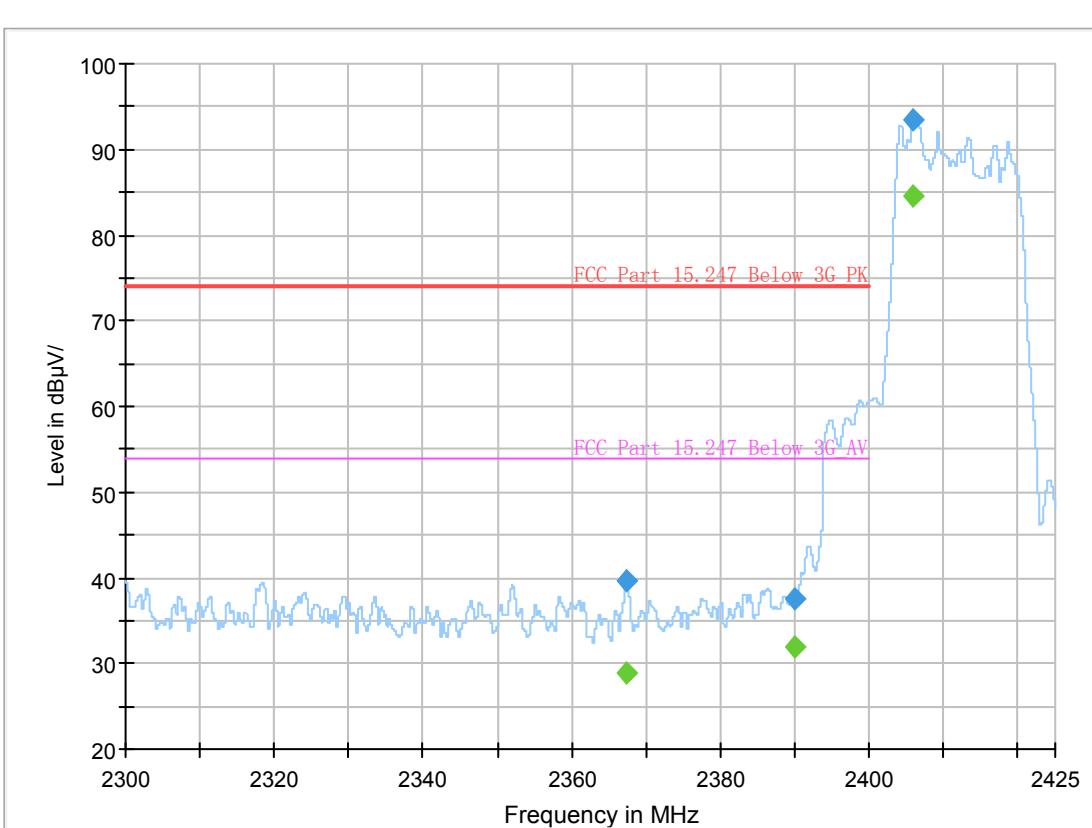
REPORT No. : KH18110035W04

## 802.11g Test mode



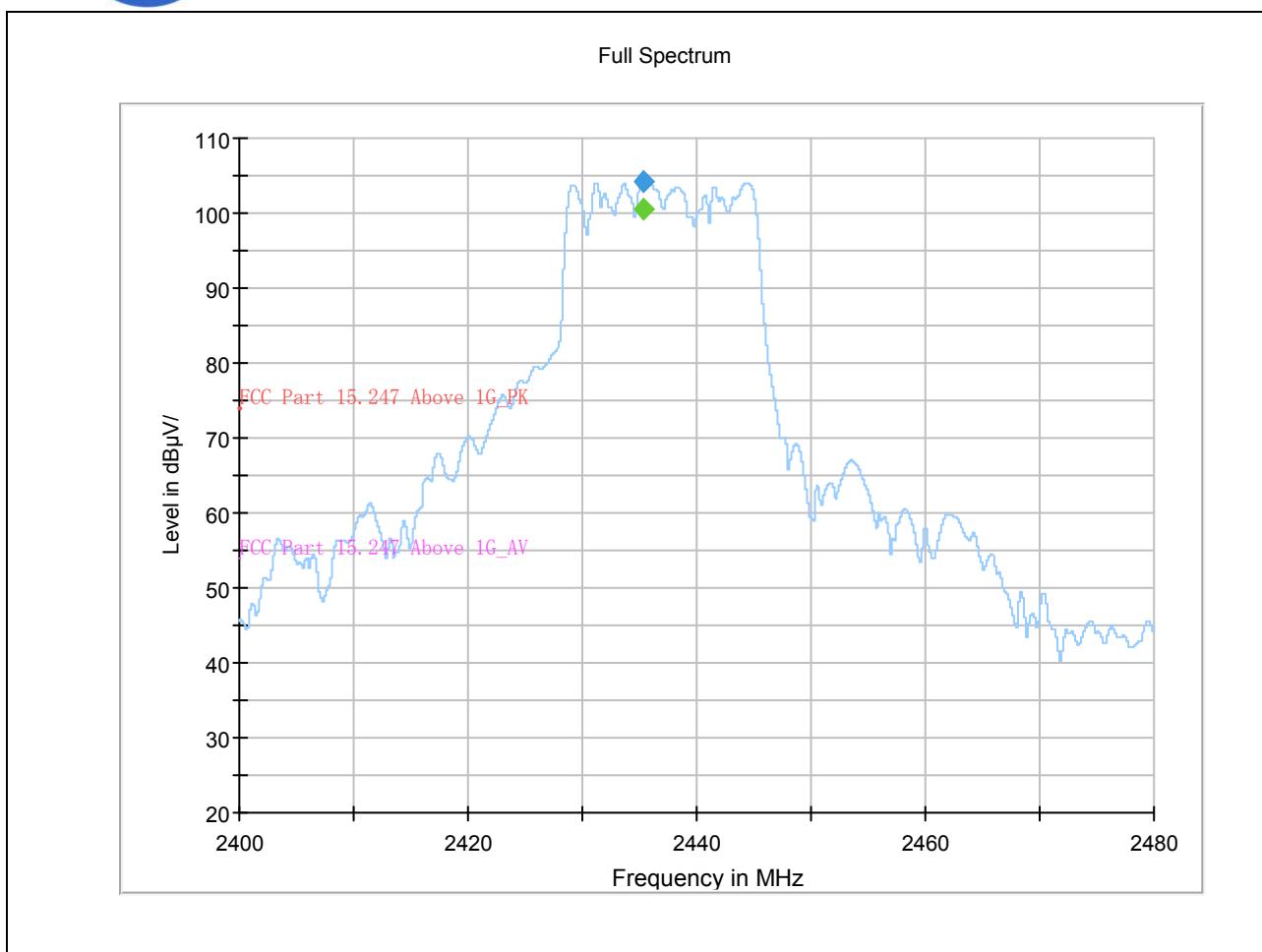
(802.11g \_2412MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2388.701389	---	50.42	54.00	3.58	H	7.9
2388.701389	65.02	---	74.00	8.98	H	7.9
2390.000000	---	40.27	54.00	13.73	H	8.0
2390.000000	61.23	---	74.00	12.77	H	8.0
2407.194445	---	98.39	---	---	H	8.7
2407.194445	108.23	---	---	---	H	8.7



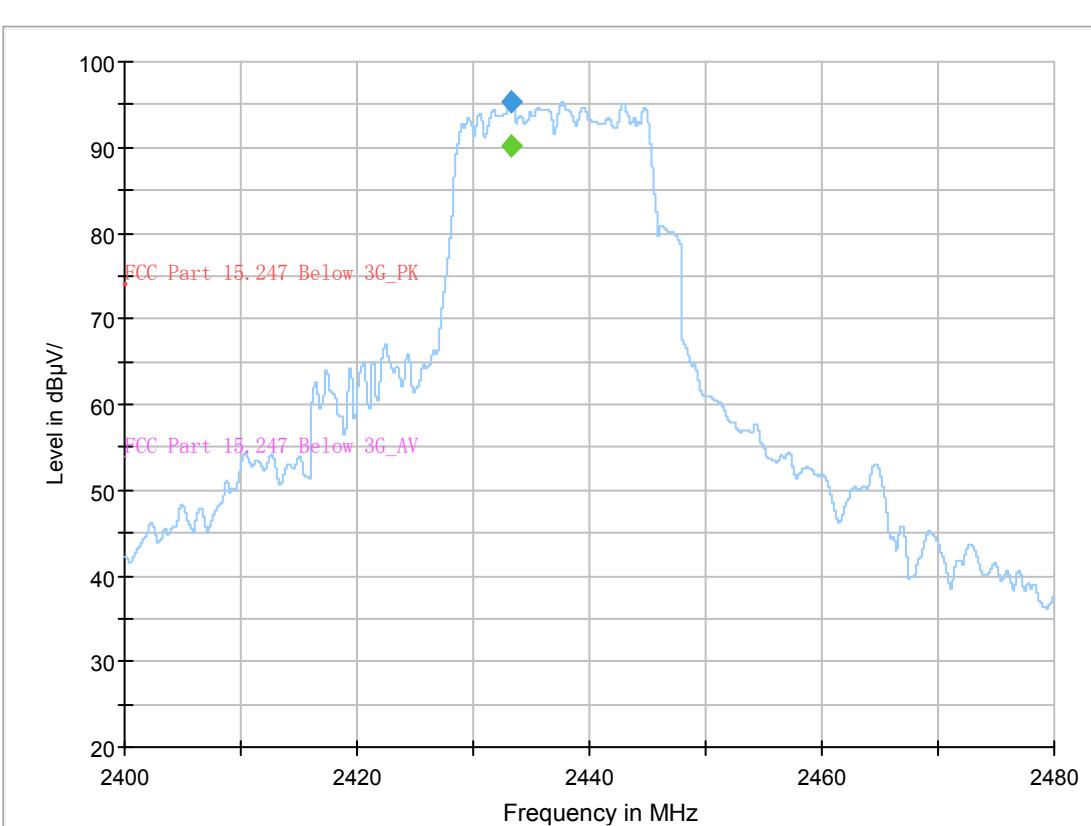
(802.11g \_2412MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2367.277778	---	28.79	54.00	25.21	V	7.4
2367.277778	39.73	---	74.00	34.27	V	7.4
2390.006945	---	31.99	54.00	22.01	V	8.0
2390.006945	37.46	---	74.00	36.54	V	8.0
2405.986111	---	84.49	---	---	V	8.7
2405.986111	93.49	---	---	---	V	8.7



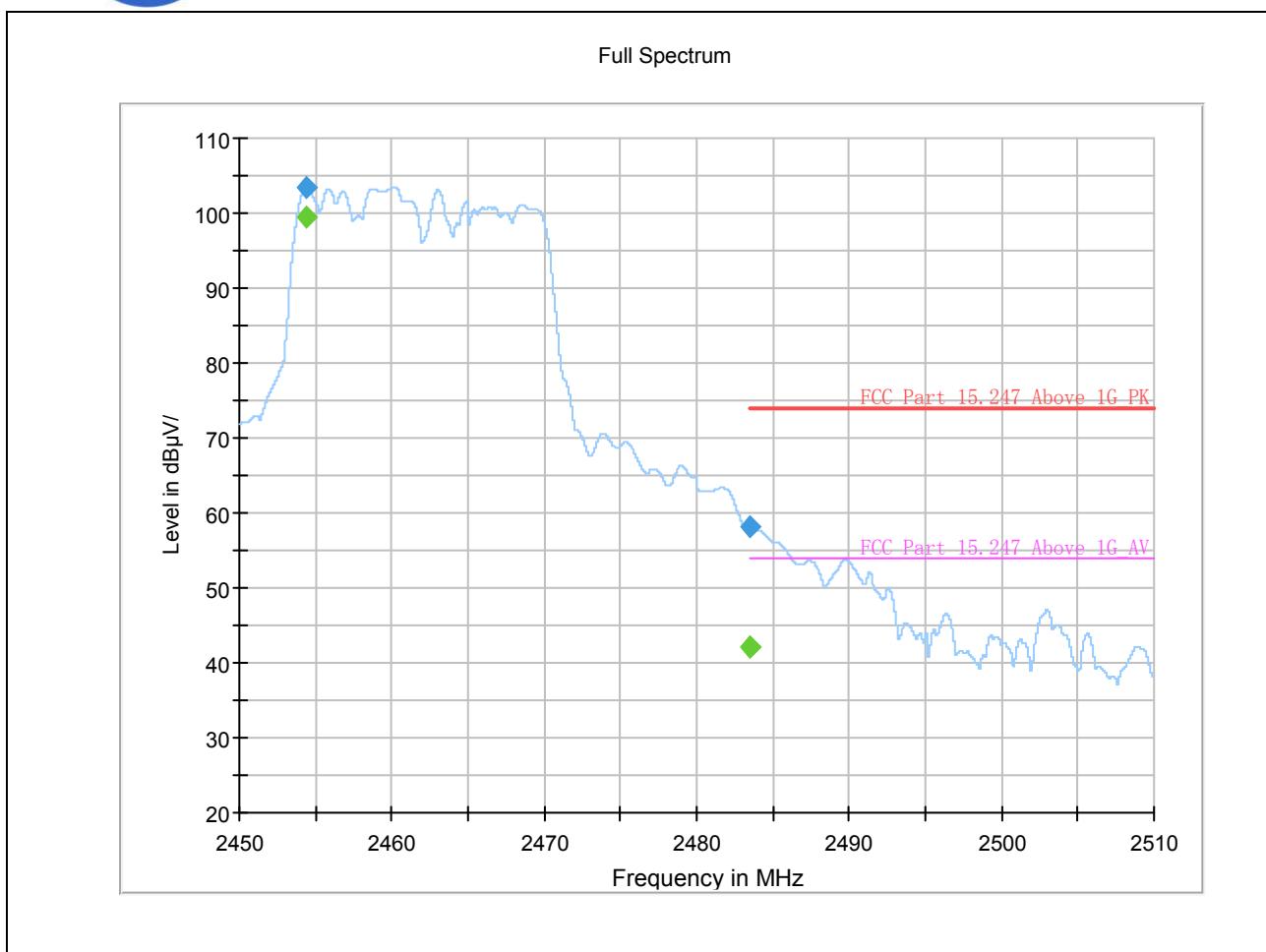
(802.11g \_2437MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2435.342222	---	100.54	---	---	H	8.1
2435.342222	104.25	---	---	---	H	8.1



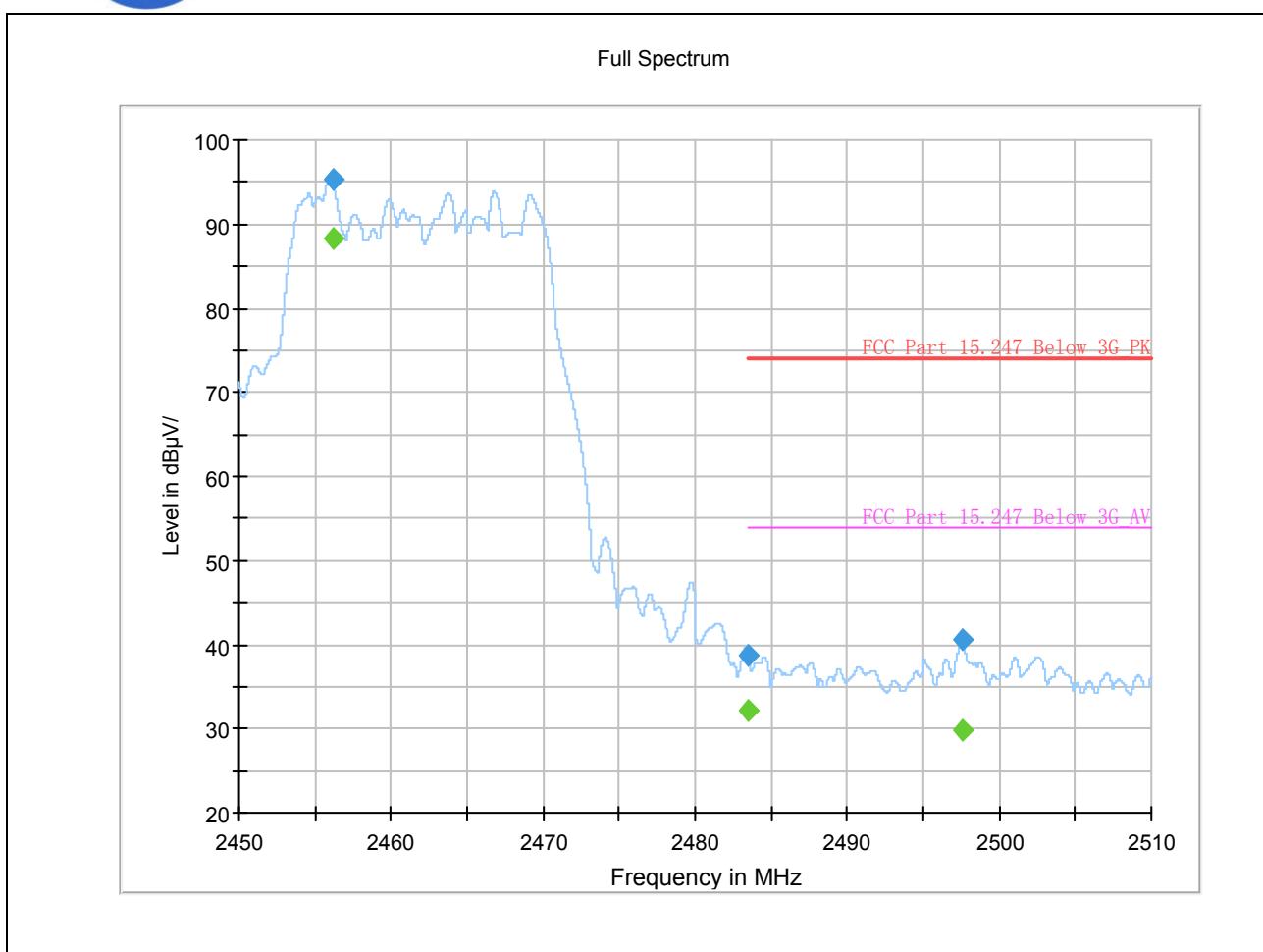
(802.11g \_2437MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2433.333333	---	90.07	---	---	V	8.2
2433.333333	95.28	---	---	---	V	8.2



(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)
2454.443333	---	99.53	---	---	H	7.9
2454.443333	103.30	---	---	---	H	7.9
2483.500000	58.15	---	74.00	15.85	H	8.3
2483.500000	---	42.16	54.00	11.84	H	8.3
2483.513333	65137521.00	---	74.00	15.78	H	8.4
2483.513333	---	42.14	54.00	11.86	H	8.4

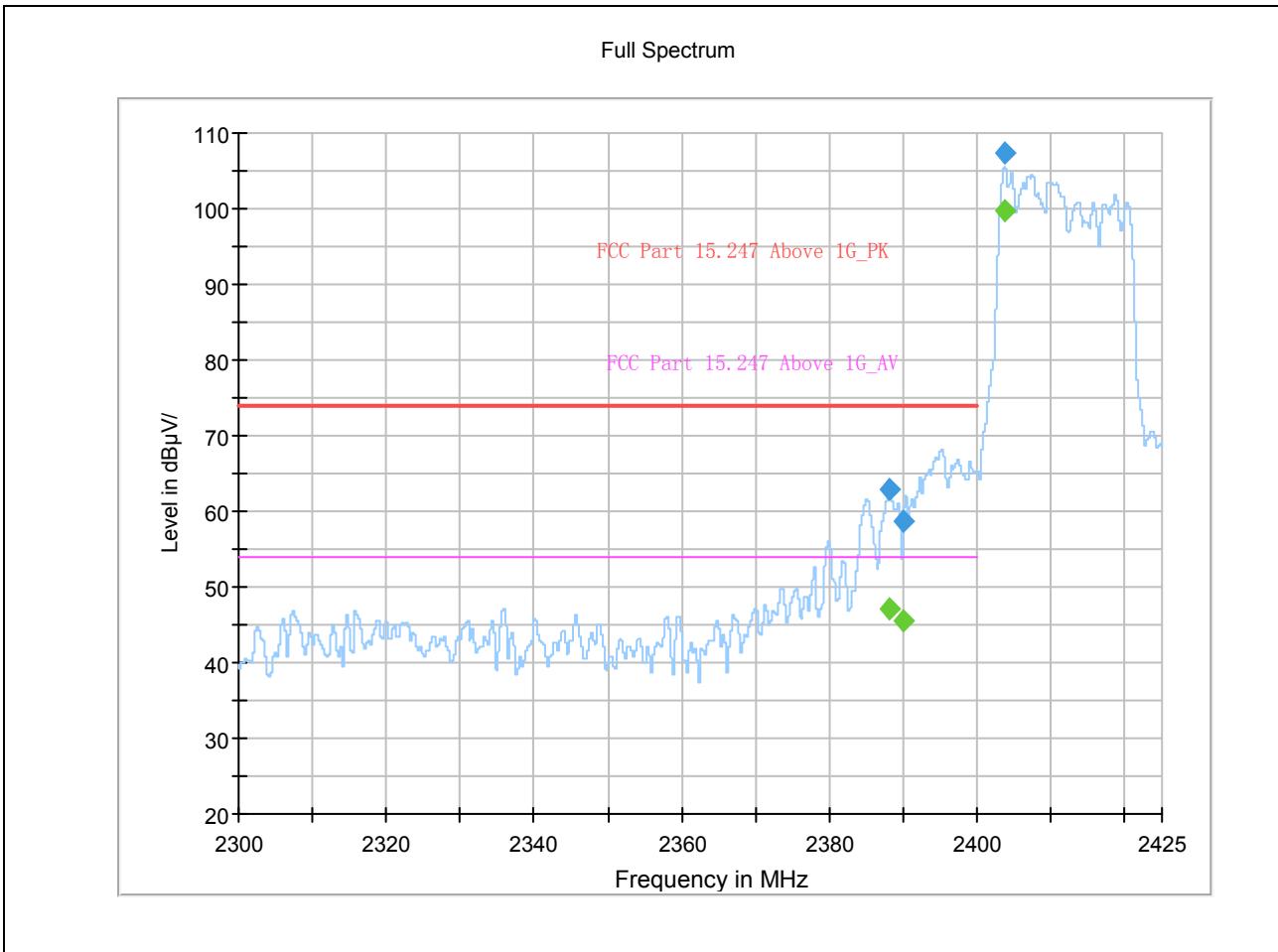


Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2456.163333	---	88.33	---	---	V	7.8
2456.163333	95.24	---	---	---	V	7.8
2483.500000	38.65	---	74.00	35.35	V	8.3
2483.500000	---	32.09	54.00	21.91	V	8.3
2497.646667	40.54	---	74.00	33.46	V	8.4
2497.646667	---	29.93	54.00	24.07	V	8.4



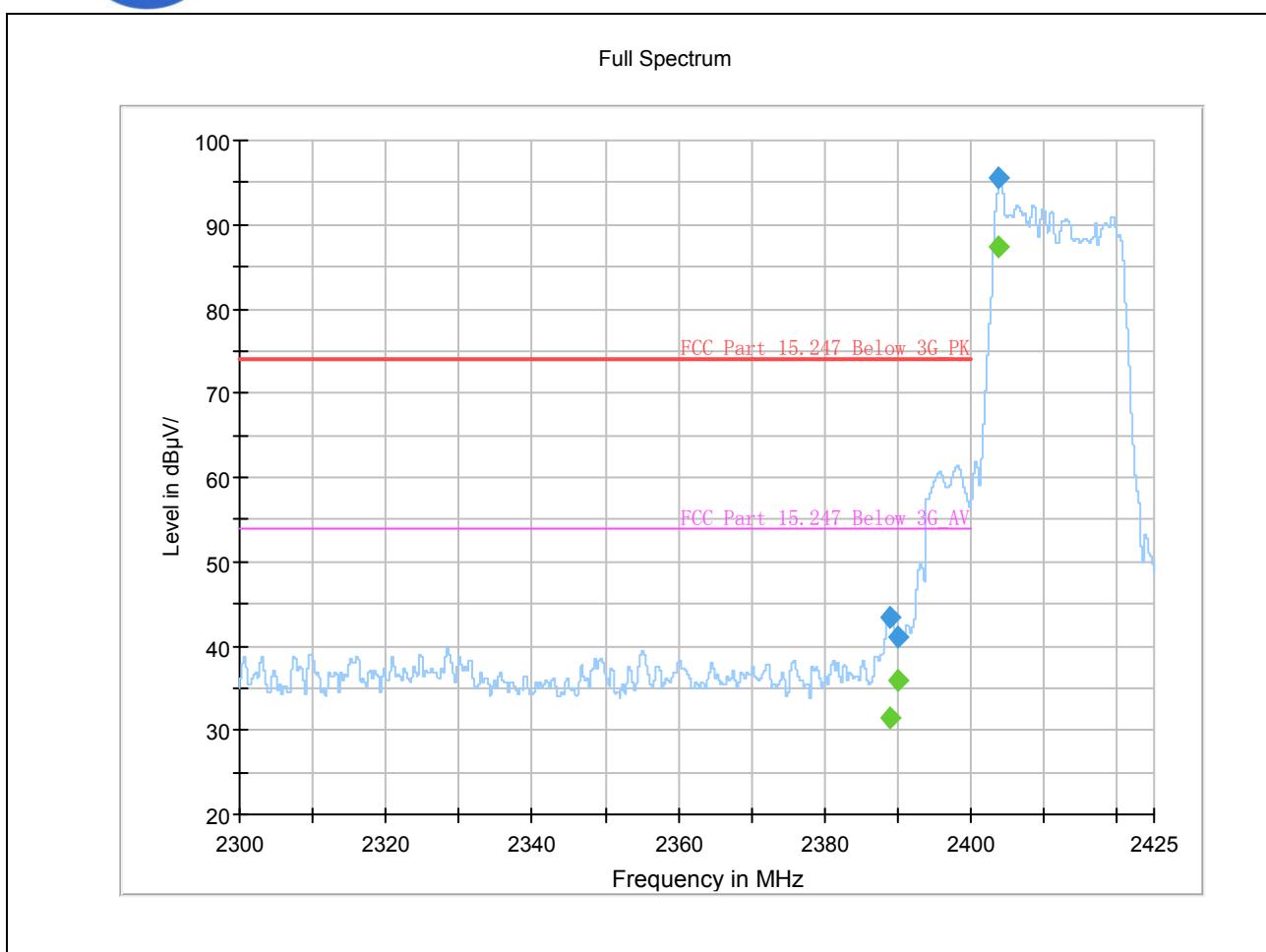
REPORT No. : KH18110035W04

## 802.11n-20MHz Test mode



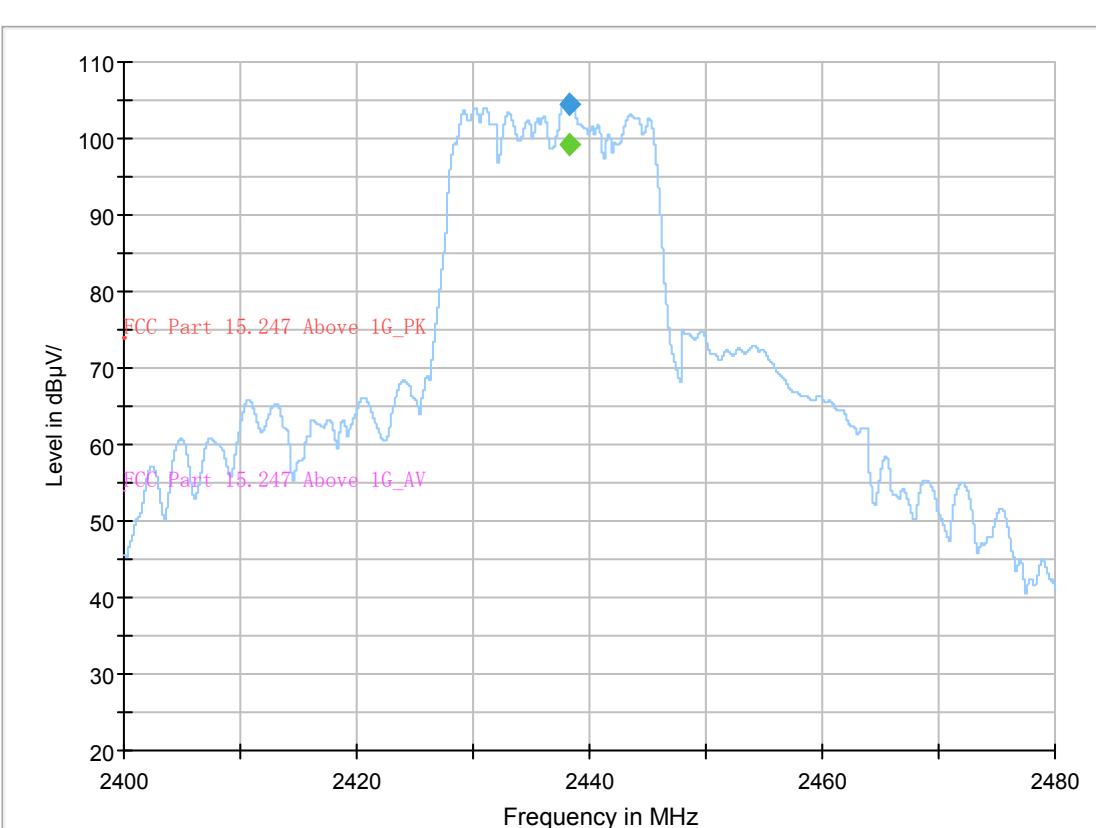
(802.11n\_20M \_2412MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2388.055556	62.79	---	74.00	11.21	H	7.9
2388.055556	---	47.05	54.00	6.95	H	7.9
2390.000000	58.70	---	74.00	15.30	H	8.0
2390.000000	---	45.63	54.00	8.37	H	8.0
2403.701389	---	99.84	---	---	H	8.7
2403.701389	107.39	---	---	---	H	8.7



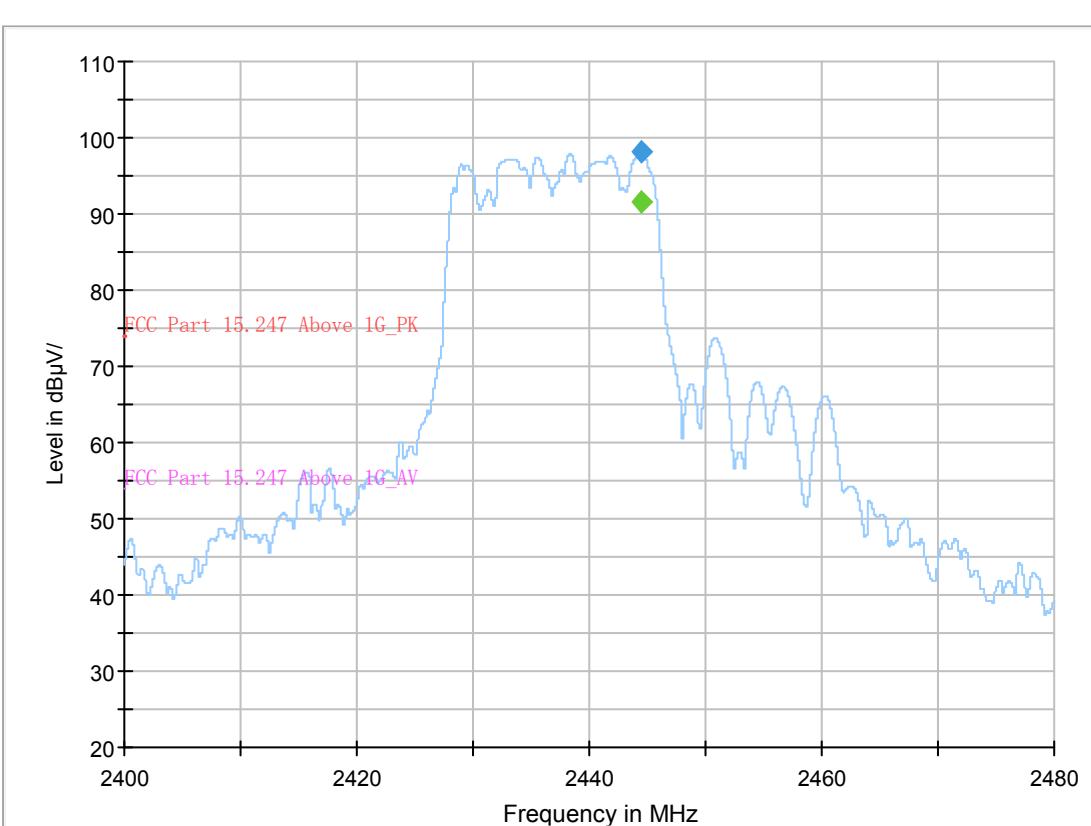
(802.11n\_20M \_2412MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2388.916667	43.40	---	74.00	30.60	V	7.9
2388.916667	---	31.47	54.00	22.53	V	7.9
2390.006945	41.02	---	74.00	32.98	V	8.0
2390.006945	---	36.00	54.00	18.00	V	8.0
2403.833333	---	87.37	---	---	V	8.7
2403.833333	95.59	---	---	---	V	8.7



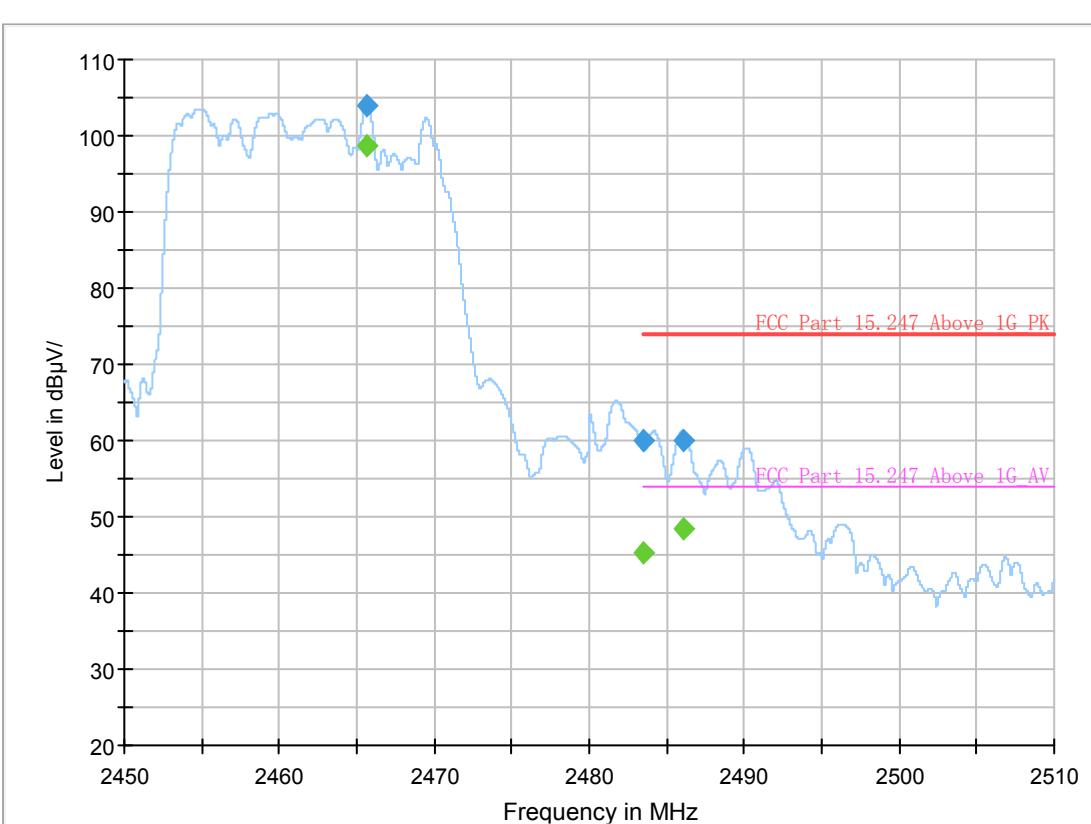
(802.11n\_20M \_2437MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2438.240000	---	99.09	---	---	H	8.3
2438.240000	104.40	---	---	---	H	8.3



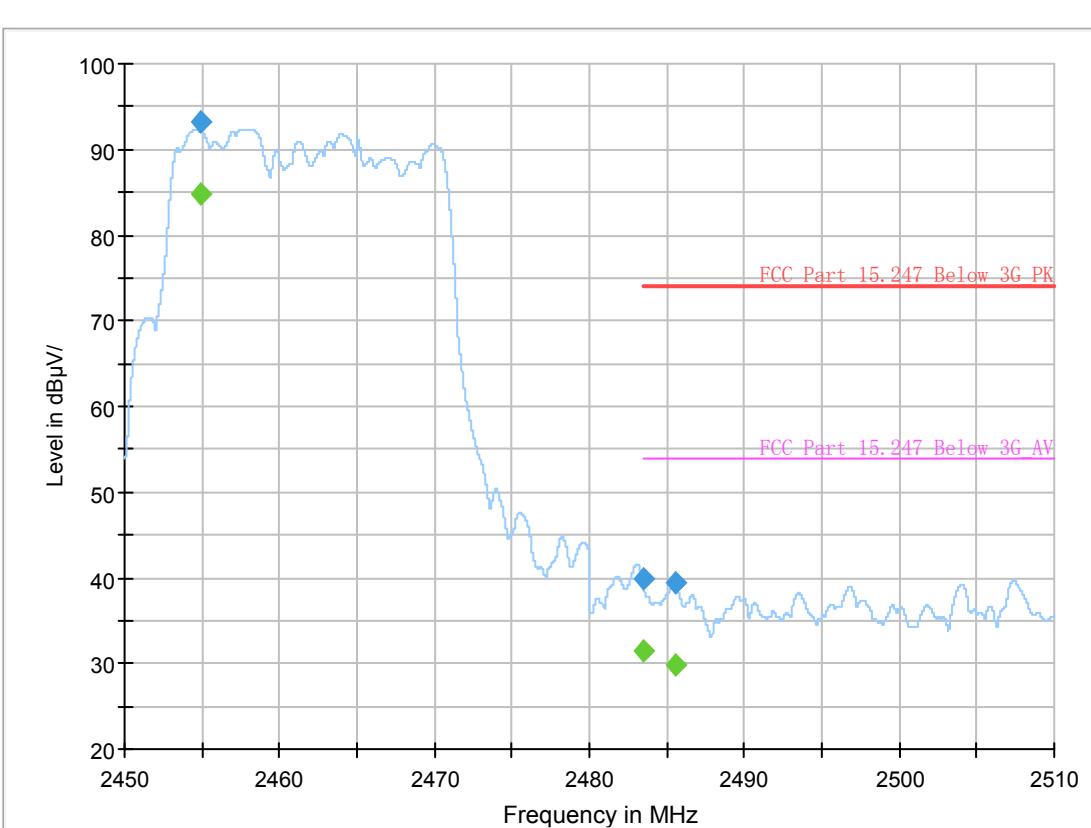
(802.11n\_20M \_2437MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2444.431111	---	91.66	---	---	V	8.2
2444.431111	98.23	---	---	---	V	8.2



(802.11n\_20M \_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)
2465.646667	103.96	---	---	---	H	7.9
2465.646667	---	98.75	---	---	H	7.9
2483.500000	59.96	---	74.00	14.04	H	8.3
2483.500000	---	45.18	54.00	8.82	H	8.3
2486.020000	---	48.50	54.00	5.50	H	8.4
2486.020000	60.13	---	74.00	13.87	H	8.4



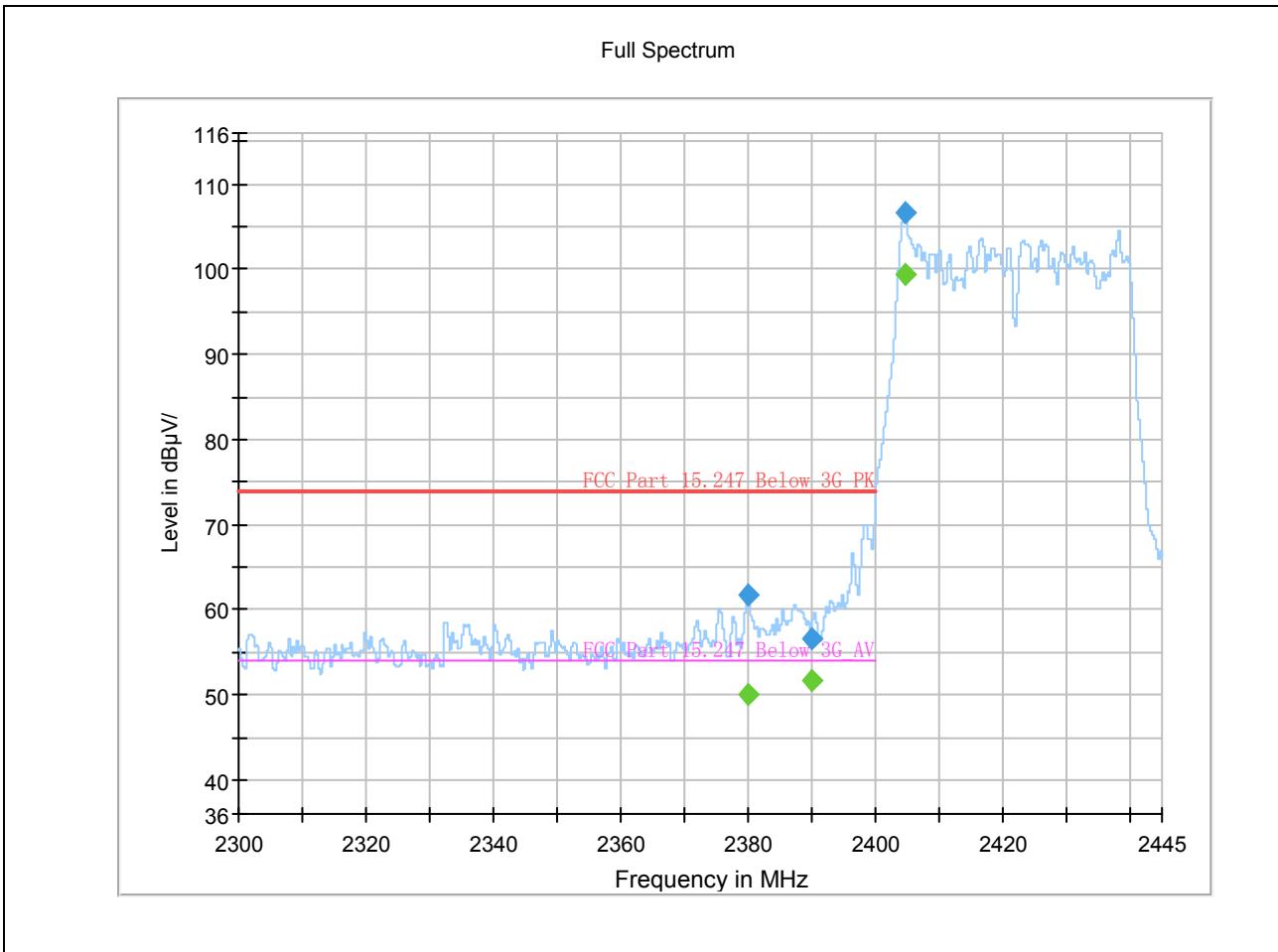
(802.11n\_20M \_2462MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2454.873333	93.11	---	---	---	V	7.8
2454.873333	---	84.73	---	---	V	7.8
2483.500000	39.82	---	74.00	34.18	V	8.3
2483.500000	---	31.56	54.00	22.44	V	8.3
2485.583333	---	29.76	54.00	24.24	V	8.3
2485.583333	39.43	---	74.00	34.57	V	8.3



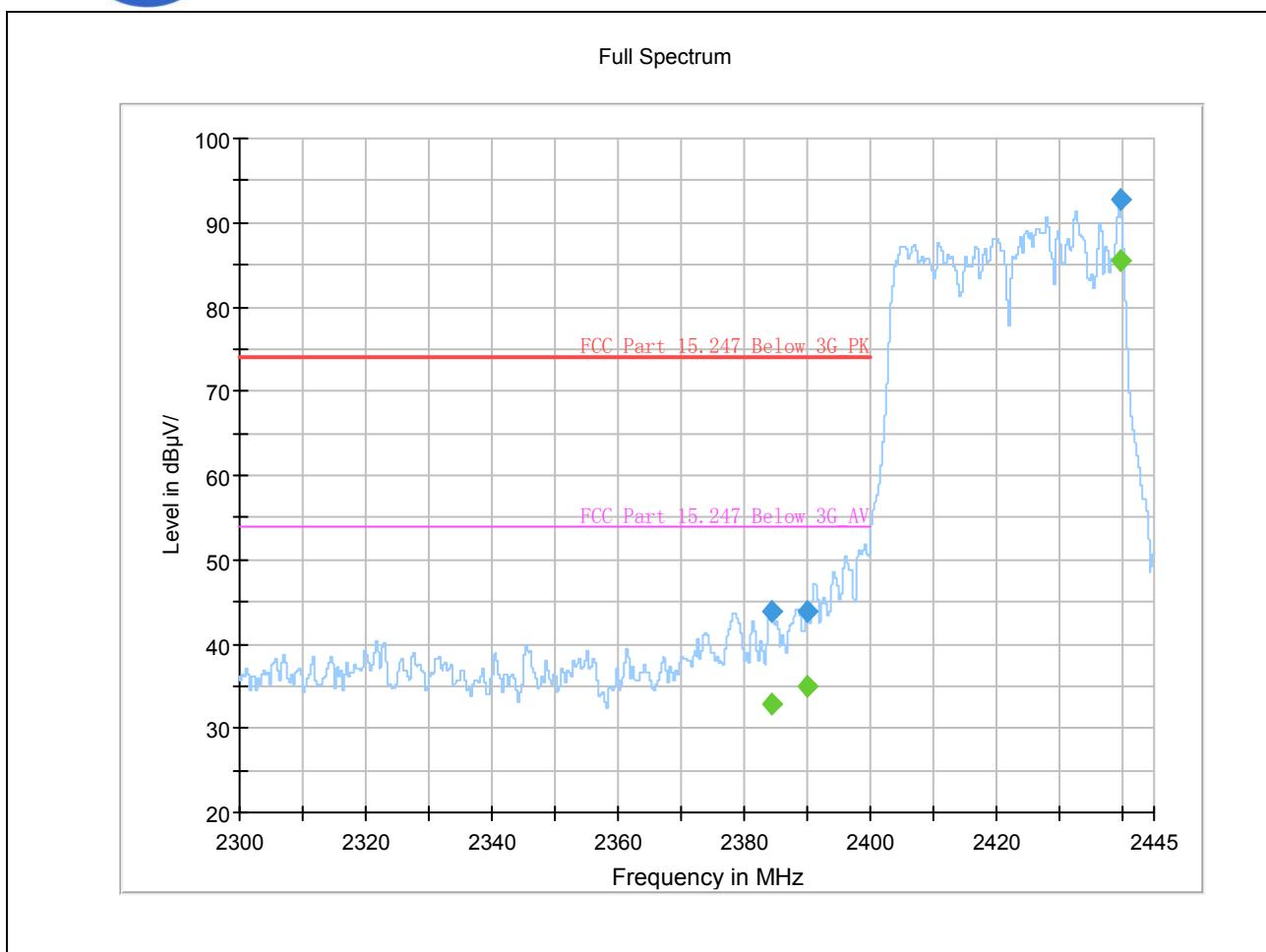
REPORT No. : KH18110035W04

## 802.11n-40MHz Test mode



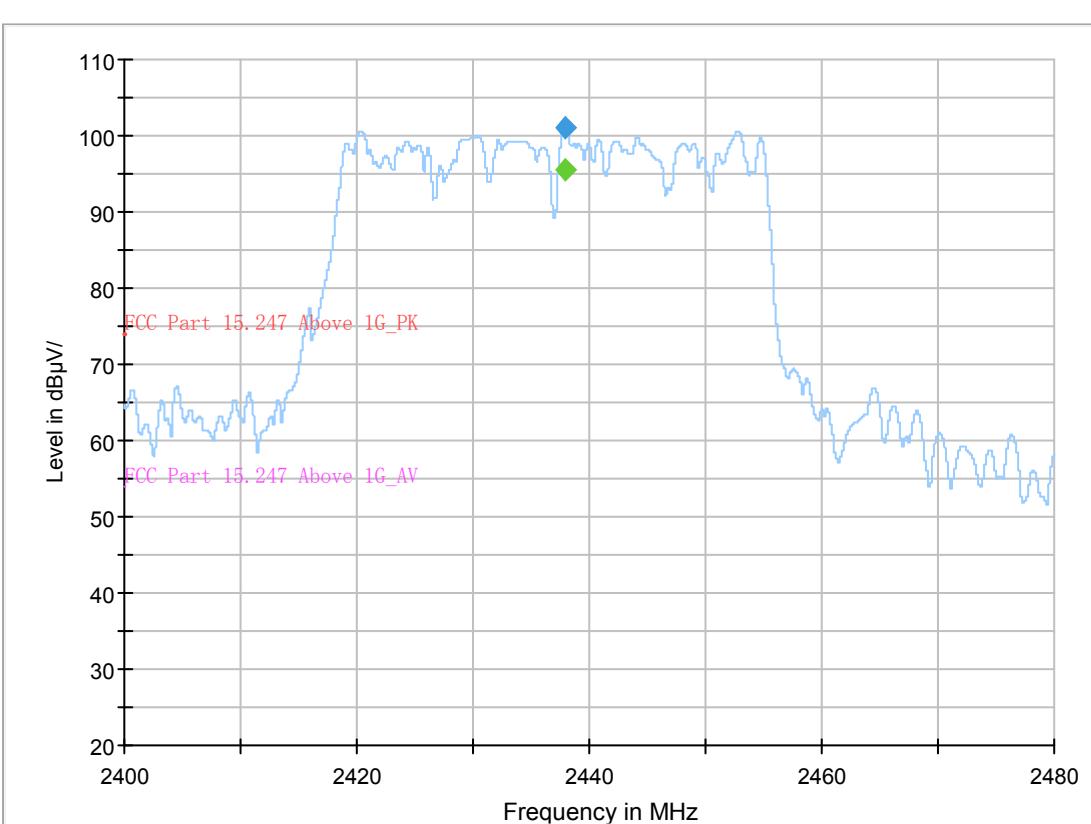
(802.11n\_40M \_2422MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2380.040000	61.84	---	74.00	12.16	H	7.8
2380.040000	---	50.08	54.00	3.92	H	7.8
2390.004722	---	51.77	54.00	2.23	H	8.0
2390.004722	56.59	---	74.00	17.41	H	8.0
2404.553056	106.63	---	---	---	H	8.7
2404.553056	---	99.29	---	---	H	8.7



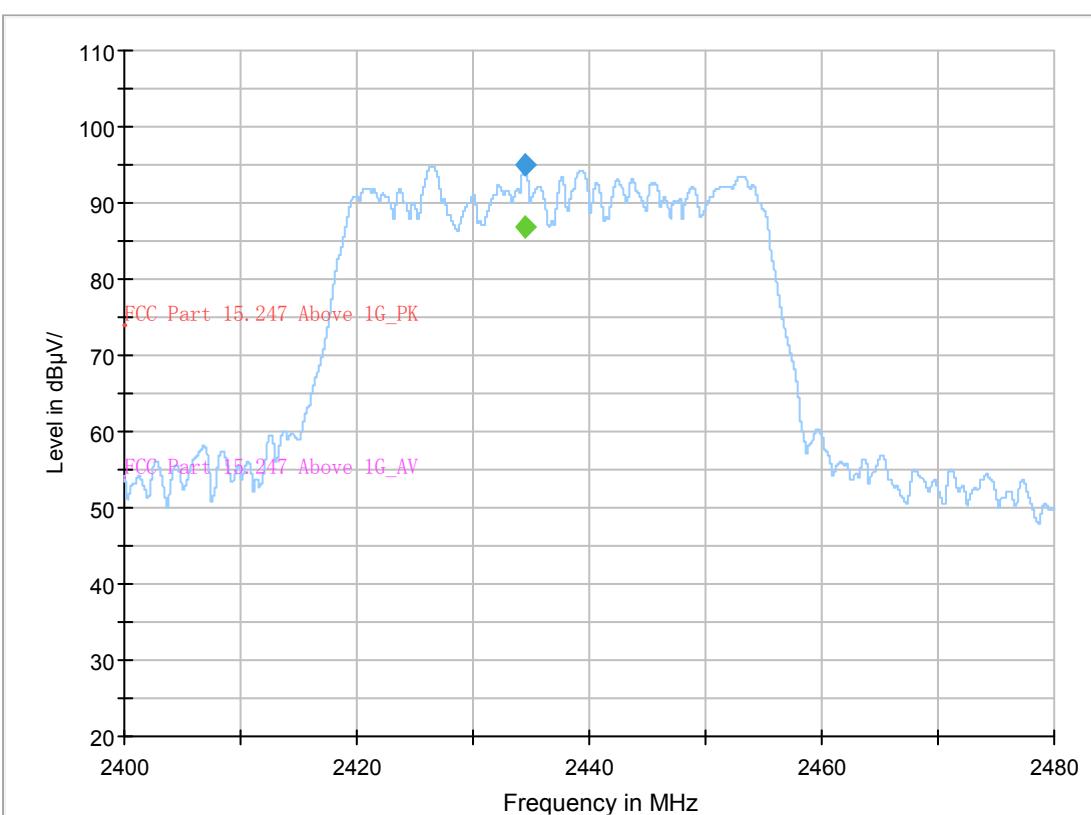
(802.11n\_40M \_2422MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2384.277222	---	32.78	54.00	21.22	V	7.6
2384.277222	43.90	---	74.00	30.10	V	7.6
2389.996667	43.86	---	74.00	30.14	V	8.0
2389.996667	---	34.88	54.00	16.12	V	8.0
2439.626944	92.74	---	---	---	V	7.9
2439.626944	---	85.46	---	---	V	7.9



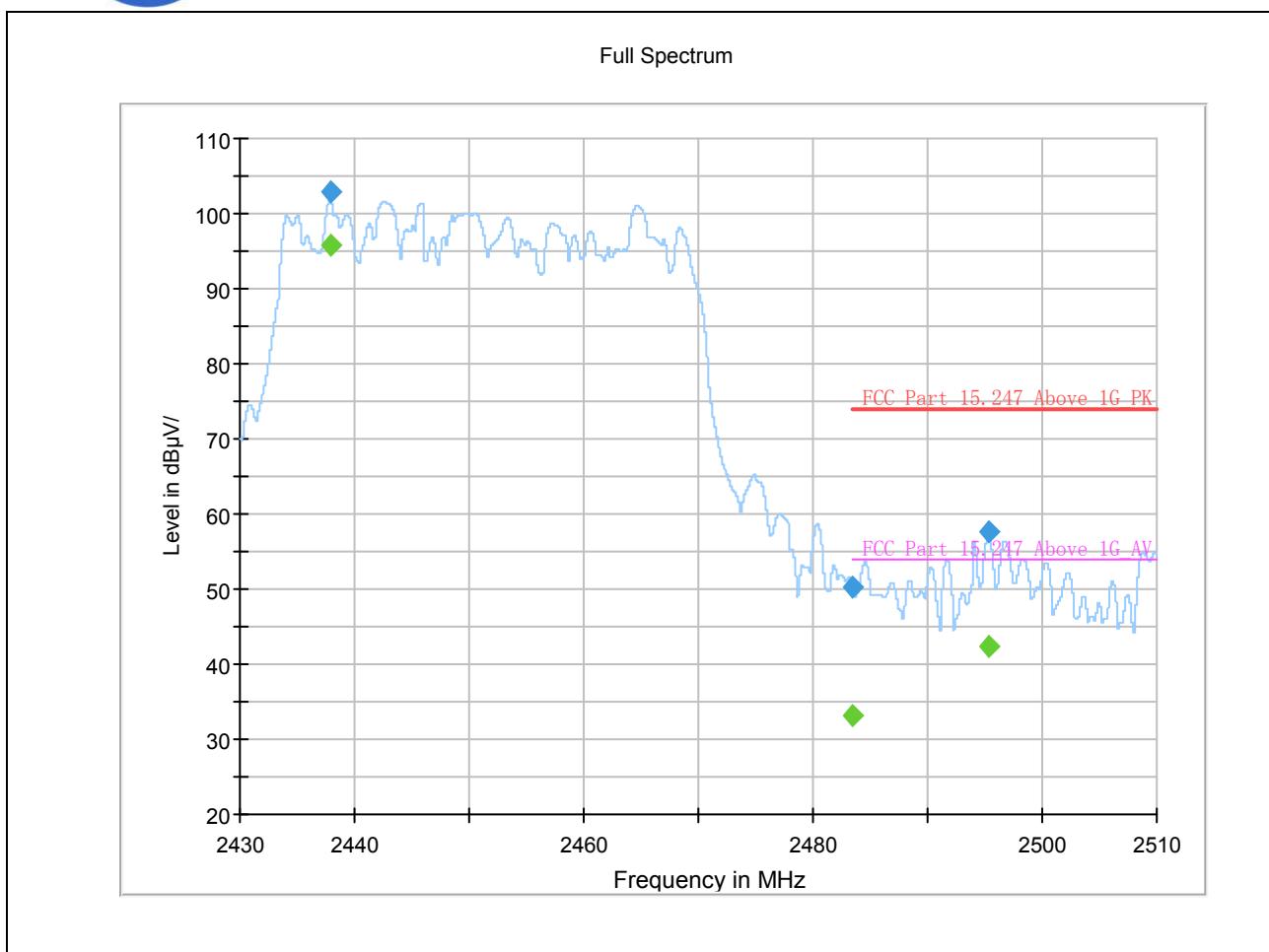
(802.11n\_40M \_2437MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2437.893333	---	95.61	---	---	H	8.6
2437.893333	101.14	---	---	---	H	8.6



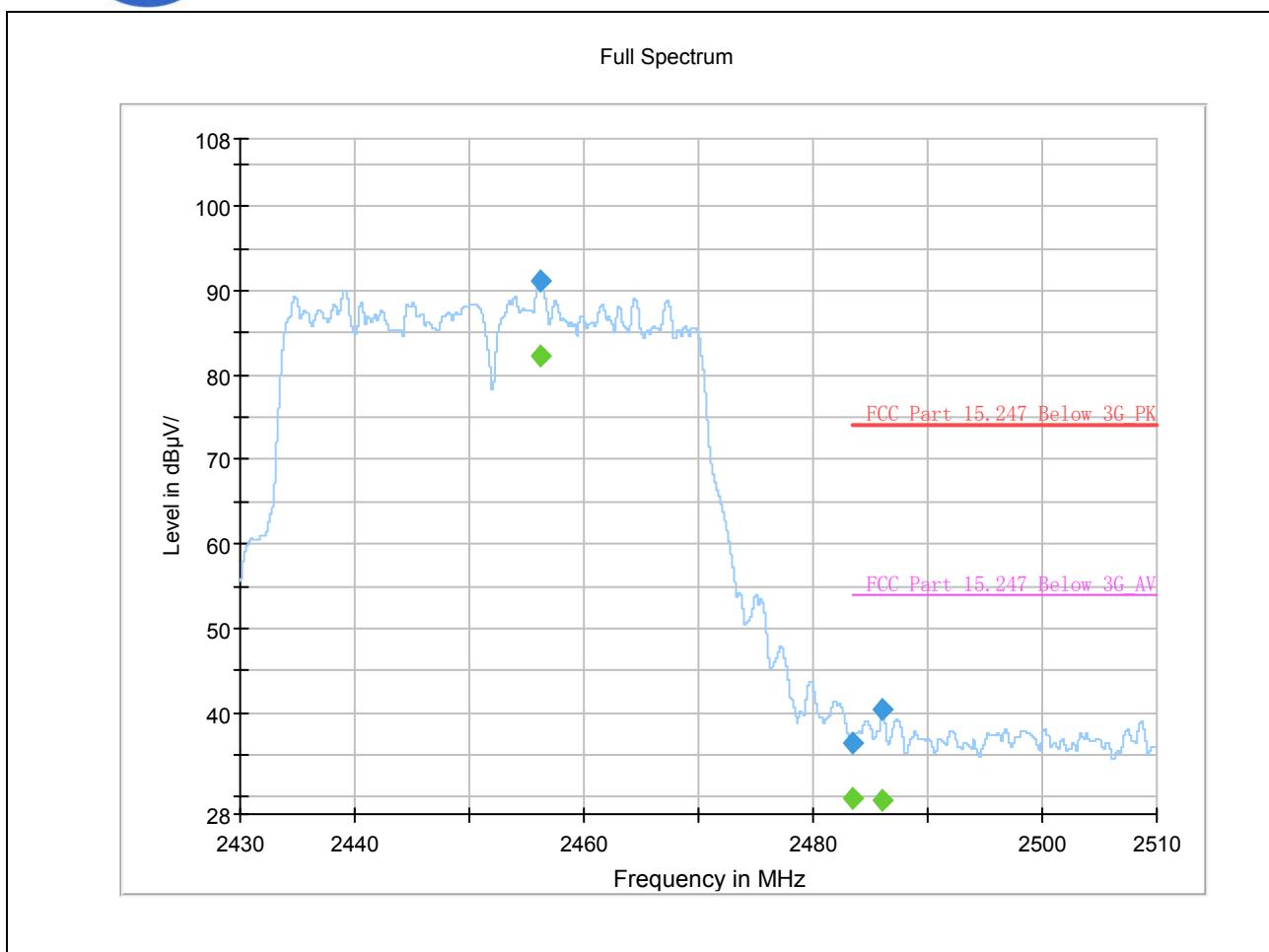
(802.11n\_40M \_2437MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2434.453333	---	86.97	---	---	V	8.4
2434.453333	95.03	---	---	---	V	8.4



(802.11n\_40M \_2452MHz, 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)
2437.884445	---	95.84	---	---	H	8.0
2437.884445	102.89	---	---	---	H	8.0
2483.502222	---	33.25	54.00	20.75	H	8.3
2483.502222	50.26	---	74.00	23.74	H	8.3
2495.302222	---	42.45	54.00	11.55	H	8.4
2495.302222	57.70	---	74.00	16.30	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)
2456.280000	---	82.31	---	---	V	7.8
2456.280000	91.09	---	---	---	V	7.8
2483.502222	36.53	---	74.00	37.47	V	8.3
2483.502222	---	29.76	54.00	24.24	V	8.3
2486.084445	40.42	---	74.00	33.58	V	8.3
2486.084445	---	29.66	54.00	24.34	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).

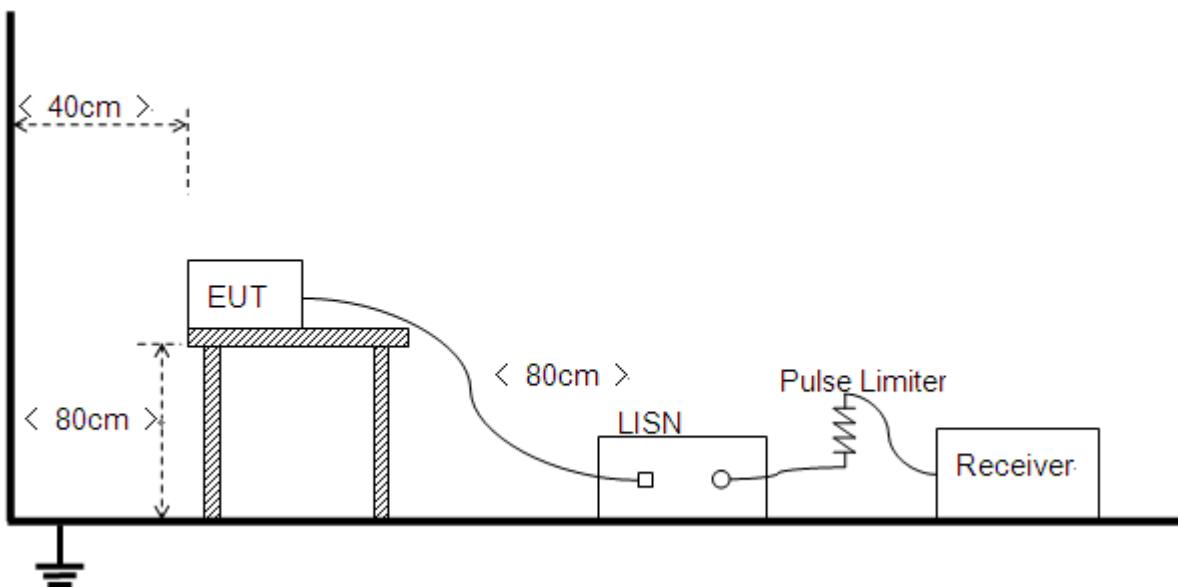
Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

**NOTE:**

- (a) The lower limit shall apply at the band edges.
- (b) 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**

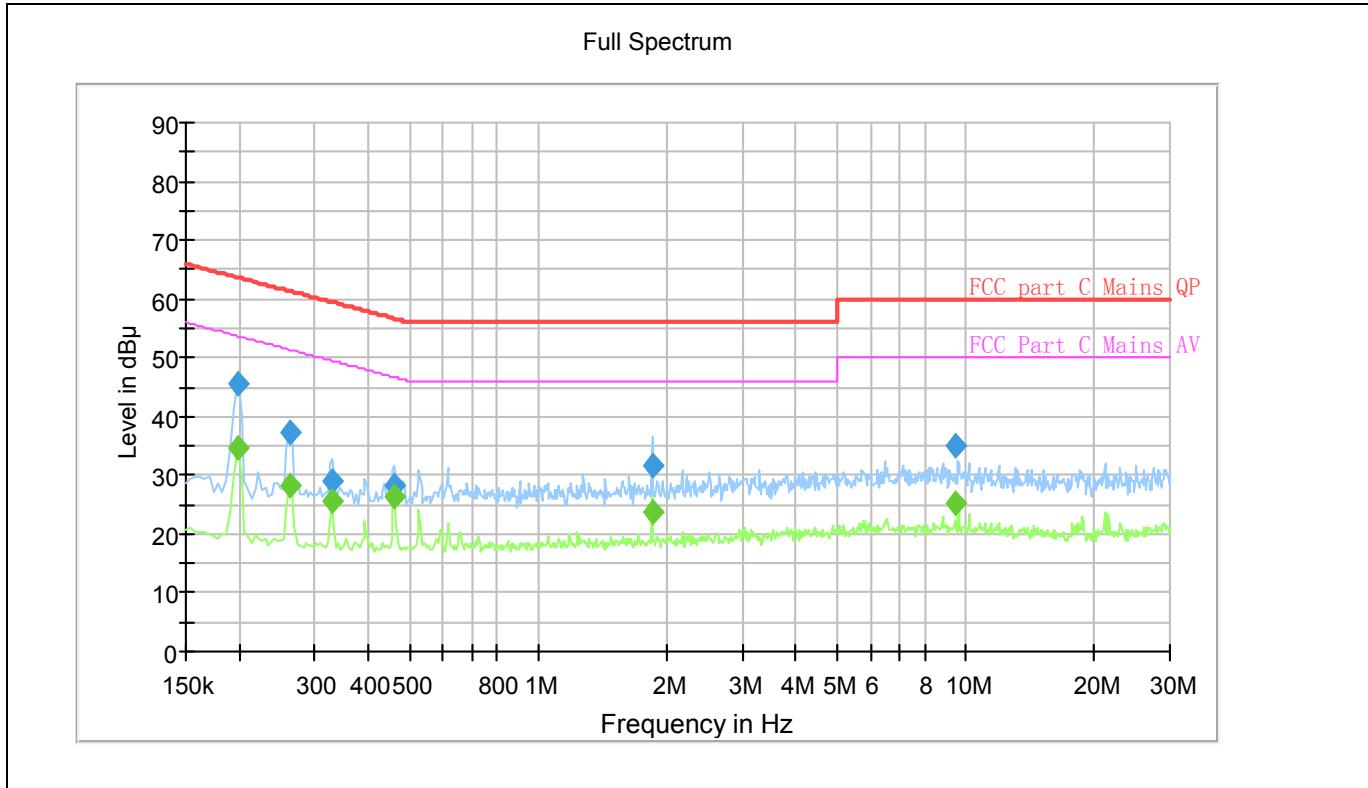
The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT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

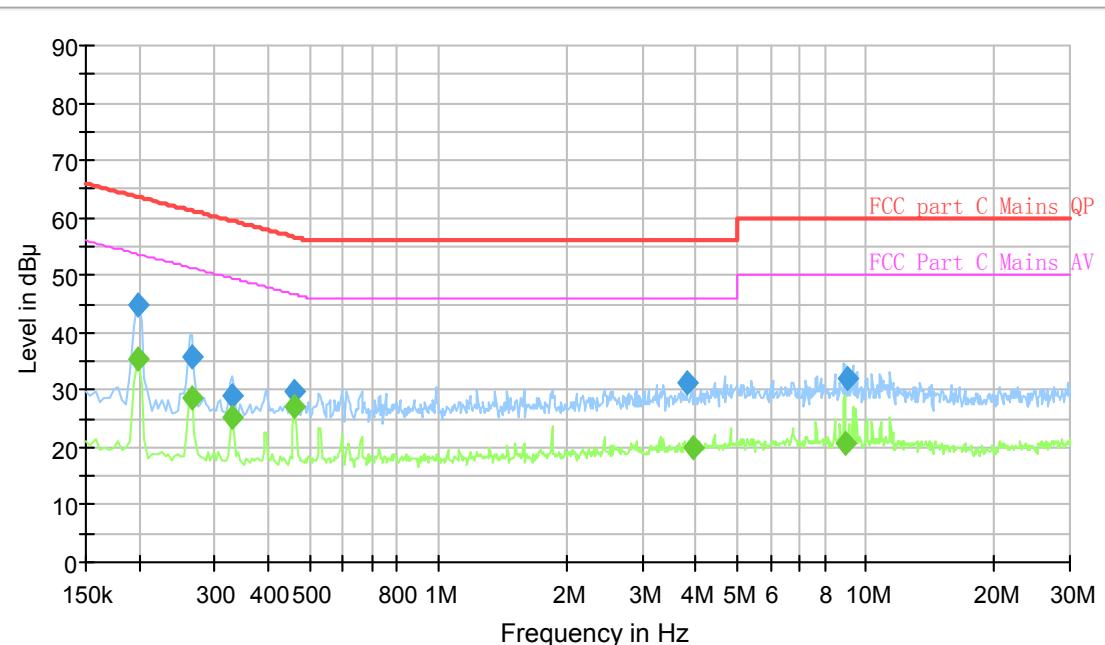
**B. Test Plots:**

(Plot A: L Phase)

Frequency (MHz)	MaxPeak (dB $\mu$ V)	Average (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Line	Corr. (dB)
0.198000	45.48	---	63.69	18.21	L1	10.2
0.198000	---	34.60	53.69	19.10	L1	10.2
0.262000	37.32	---	61.37	24.04	L1	10.2
0.262000	---	28.39	51.37	22.98	L1	10.2
0.330000	28.87	---	59.45	30.58	L1	10.2
0.330000	---	25.62	49.45	23.83	L1	10.2
0.462000	---	26.24	46.66	20.42	L1	10.2
0.462000	28.40	---	56.66	28.26	L1	10.2
1.846000	---	23.70	46.00	22.30	L1	10.3
1.846000	31.79	---	56.00	24.21	L1	10.3
9.414000	35.06	---	60.00	24.94	L1	10.7
9.478000	---	25.27	50.00	24.73	L1	10.7



Full Spectrum



(Plot A: N Phase)

Frequency (MHz)	MaxPeak (dB $\mu$ V)	Average (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Line	Corr. (dB)
0.198000	---	35.44	53.69	18.26	N	10.2
0.198000	44.66	---	63.69	19.03	N	10.2
0.266000	---	28.76	51.24	22.48	N	10.2
0.266000	35.76	---	61.24	25.48	N	10.2
0.330000	---	25.29	49.45	24.16	N	10.2
0.330000	29.04	---	59.45	30.41	N	10.2
0.462000	29.64	---	56.66	27.01	N	10.2
0.462000	---	27.26	46.66	19.40	N	10.2
3.830000	31.39	---	56.00	24.61	N	10.4
3.962000	---	20.01	46.00	25.99	N	10.4
8.978000	---	20.75	50.00	29.25	N	10.6
9.042000	32.13	---	60.00	27.87	N	10.6



## 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 ( $\mu$ 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.

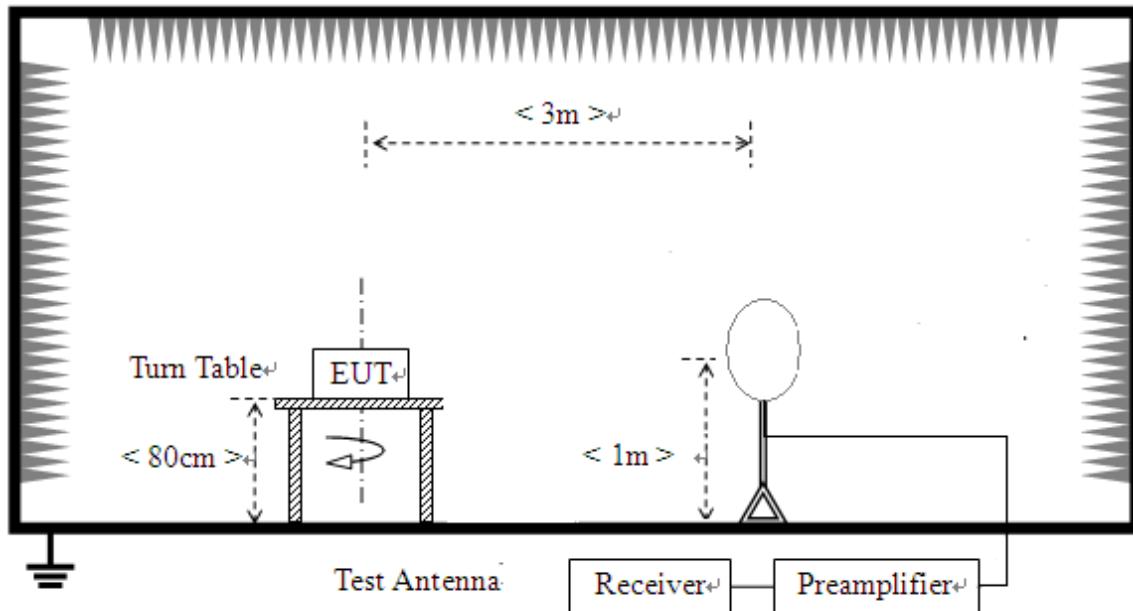
For above 1000MHz, limit field strength of harmonics: 54dB<sub>UV</sub>/m@3m (AV) and 74dB<sub>UV</sub>/m@3m (PK)

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)

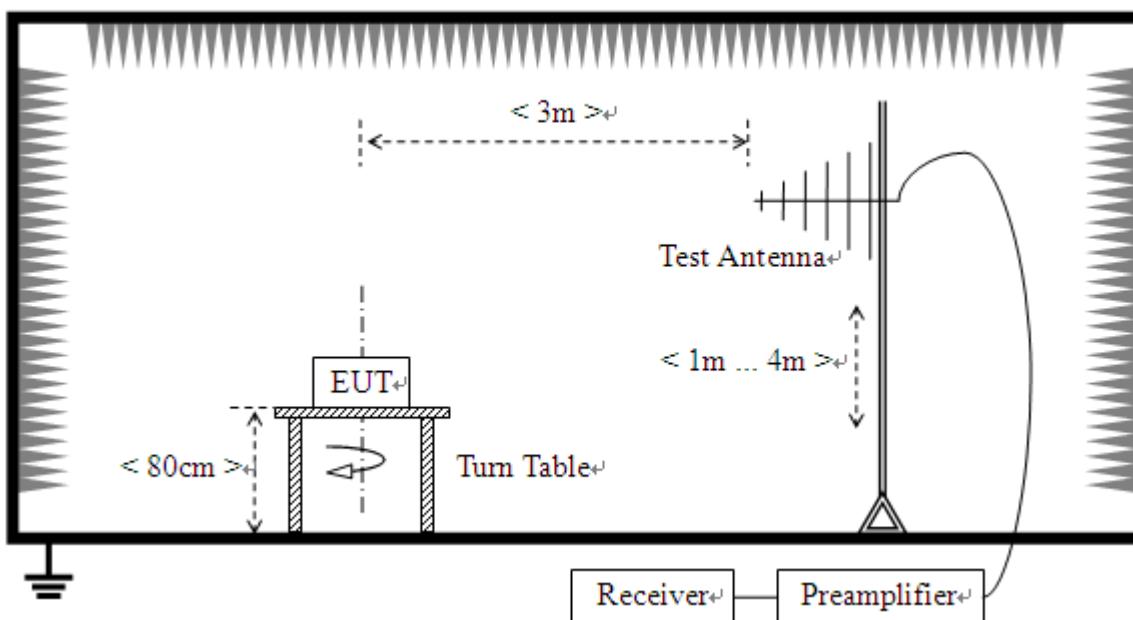
### 2.8.2. Test Description

#### A. Test Setup:

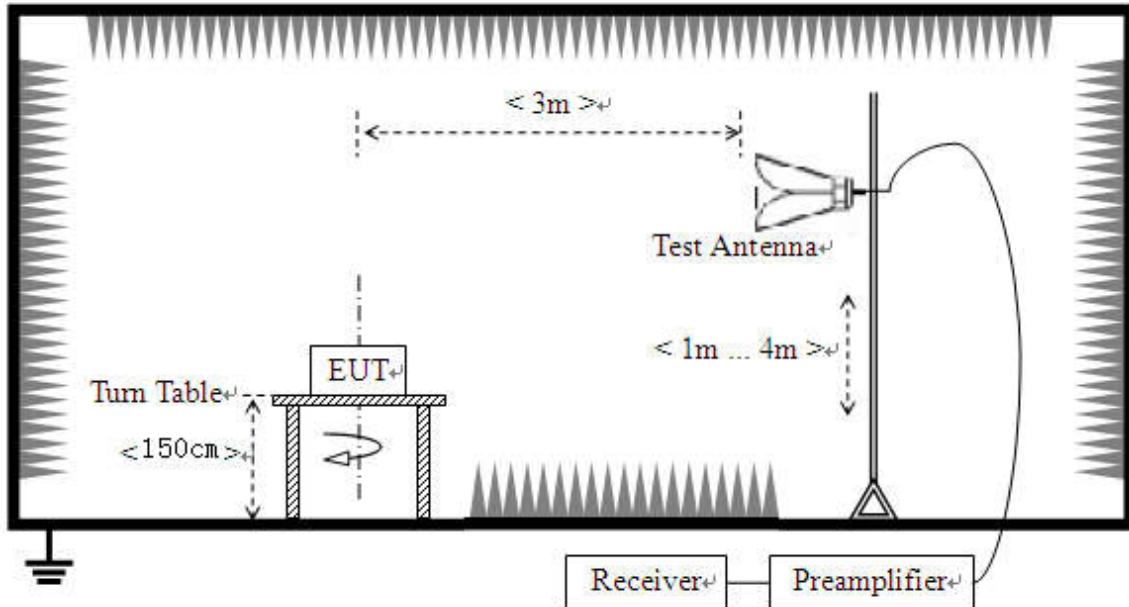
- 1) For radiated emissions from 9kHz to 30MHz



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.

#### A. Equipments List:

Please refere ANNEX B(4).

#### 2.8.3. Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

$A_T$ : Total correction Factor except Antenna

$U_R$ : Receiver Reading

$G_{\text{preamp}}$ : Preamplifier Gain

$A_{\text{Factor}}$ : Antenna Factor at 3m

During the test, the total correction Factor  $A_T$  and  $A_{\text{Factor}}$  were built in test software.

**Note1:** All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

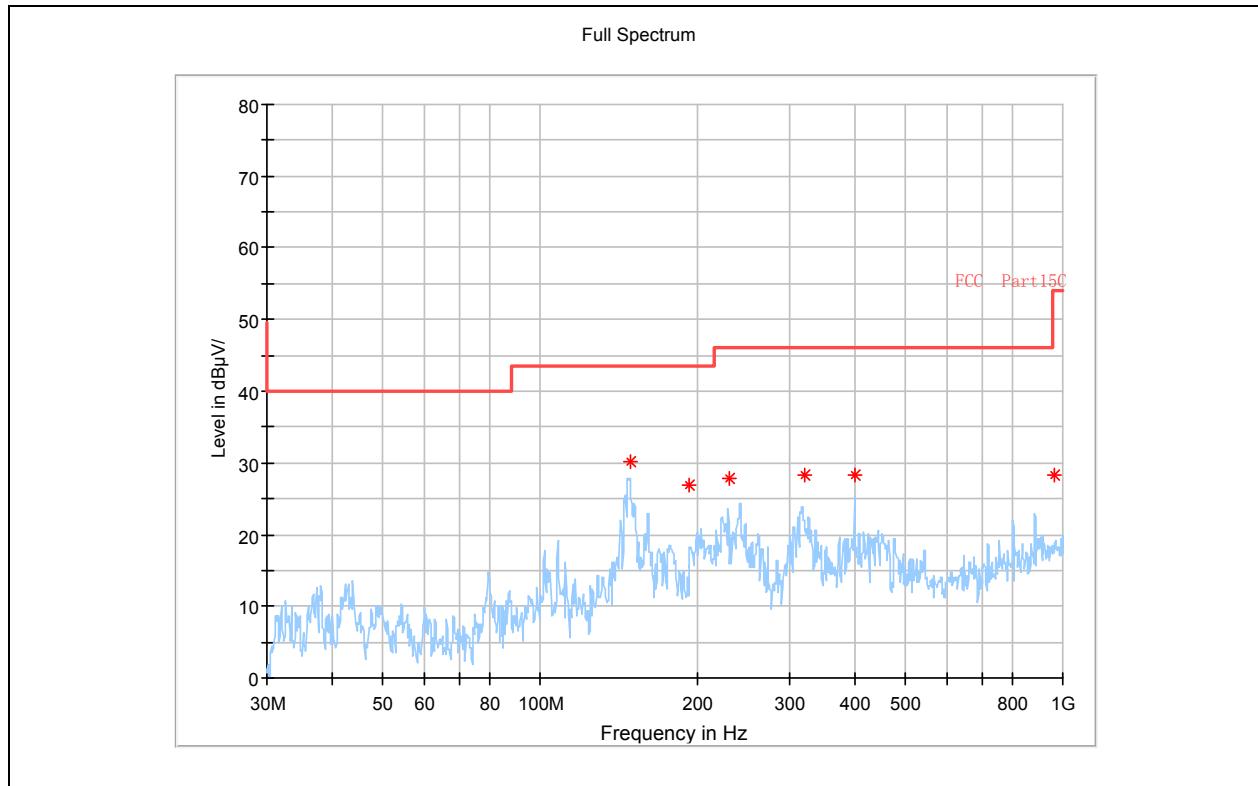
**Note2:** For the frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note3:** For the frequency, which started from 25GHz to 40GHz, was pre-scanned and the result which was 10dB lower than the limit was not recorded.



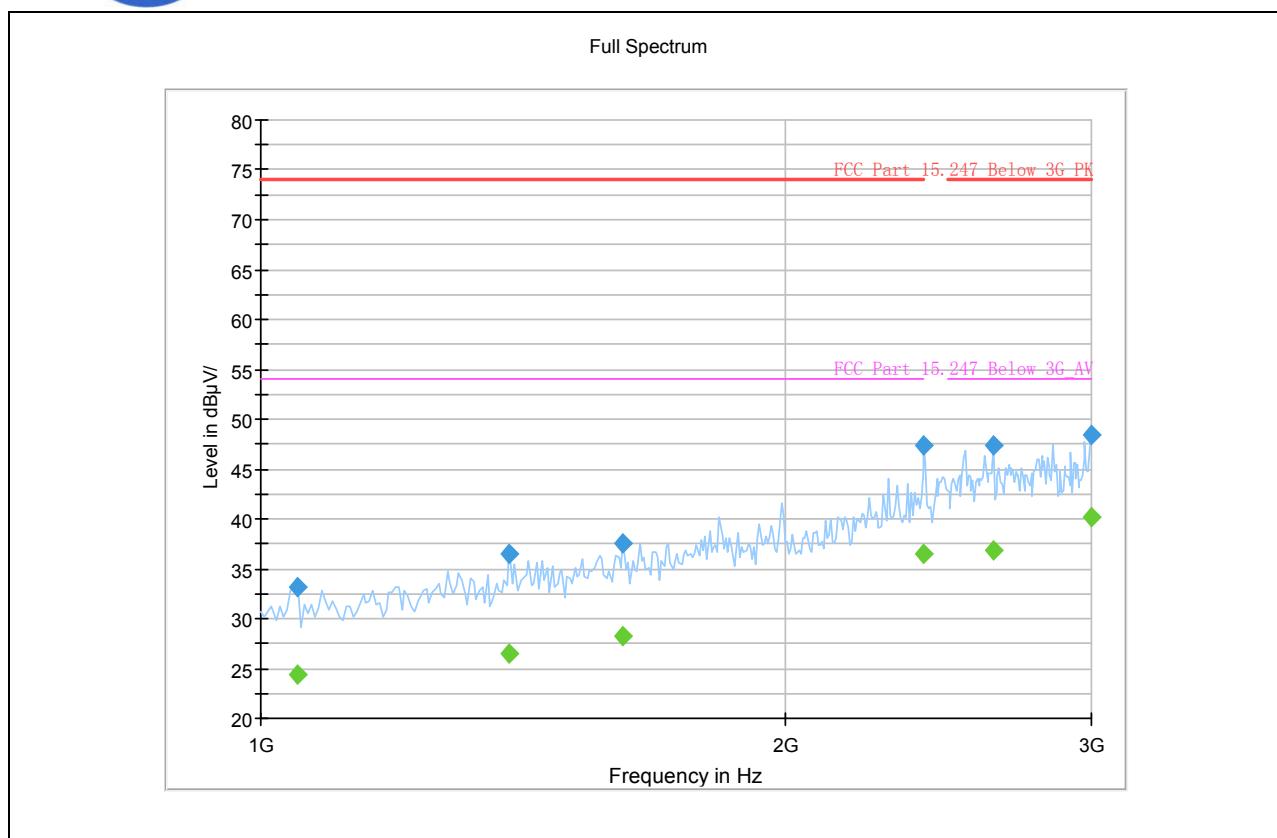
REPORT No. : KH18110035W04

## 802.11b Test mode



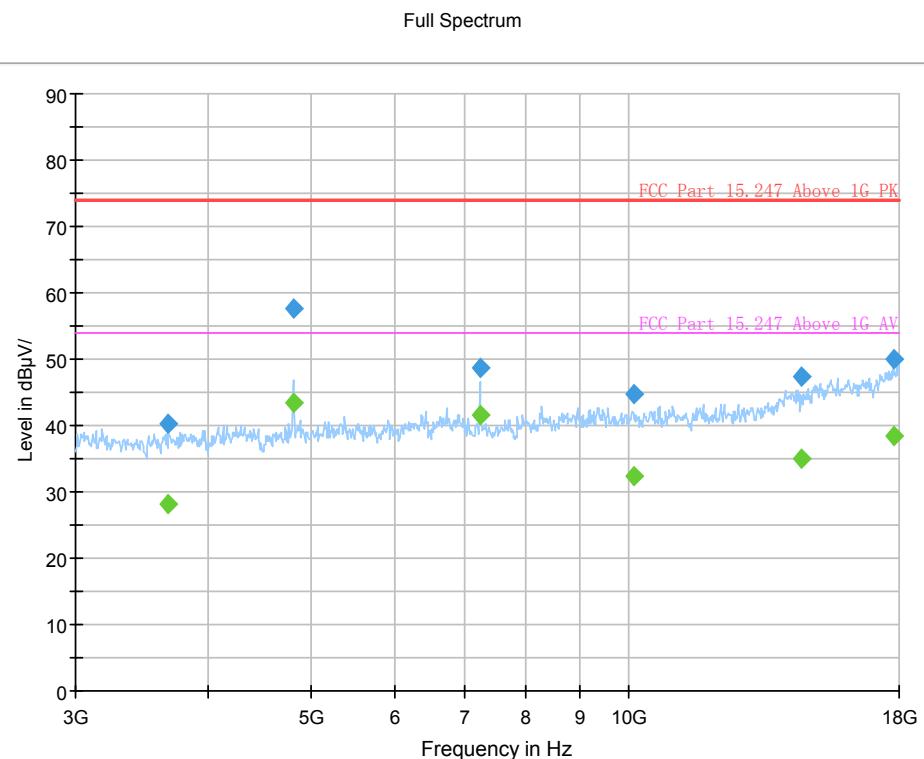
(802.11b \_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
148.393889	30.13	---	43.50	13.37	H	-21.6
193.337222	26.89	---	43.50	16.61	H	-19.7
229.981667	27.83	---	46.00	18.17	H	-18.5
321.215556	28.31	---	46.00	17.69	H	-14.6
398.977222	28.27	---	46.00	17.73	H	-13.0
966.642778	28.29	---	54.00	25.71	H	-2.9



(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)
1050.000000	---	24.42	54.00	29.58	H	-1.9
1050.000000	33.22	---	74.00	40.78	H	-1.9
1390.000000	---	26.58	54.00	27.42	H	1.2
1390.000000	36.56	---	74.00	37.44	H	1.2
1615.000000	37.54	---	74.00	36.46	H	3.5
1615.000000	---	28.27	54.00	25.73	H	3.5
2405.000000	---	36.57	---	---	H	13.2
2405.000000	47.34	---	---	---	H	13.2
2635.000000	---	36.79	54.00	17.21	H	14.9
2635.000000	47.40	---	74.00	26.60	H	14.9
3000.000000	48.37	---	74.00	25.63	H	18.4
3000.000000	---	40.22	54.00	13.78	H	18.4

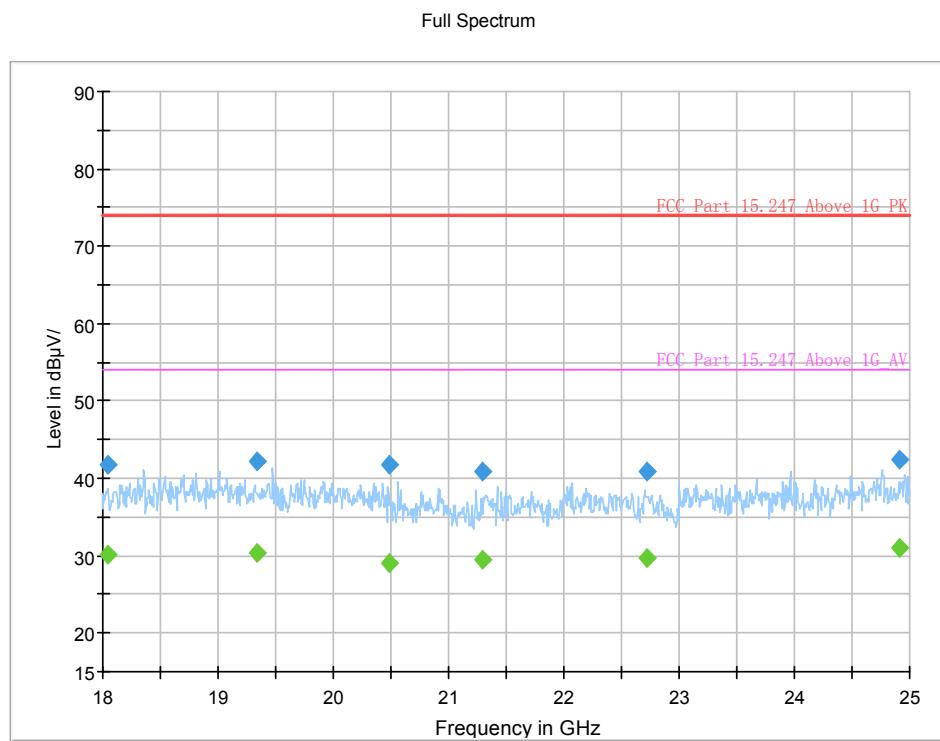


(802.11b \_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3675.000000	40.26	---	74.00	33.74	H	-5.4
3675.000000	---	28.21	54.00	25.79	H	-5.4
4822.500000	57.68	---	74.00	16.32	H	-3.2
4822.500000	---	43.55	54.00	10.45	H	-3.2
7237.500000	48.74	---	74.00	25.26	H	-0.4
7237.500000	---	41.54	54.00	12.46	H	-0.4
10102.50000	44.84	---	74.00	29.16	H	2.3
10102.50000	---	32.36	54.00	21.64	H	2.3
14572.50000	47.38	---	74.00	26.62	H	8.6
14572.50000	---	35.08	54.00	18.92	H	8.6
17767.50000	49.93	---	74.00	24.07	H	15.1
17767.50000	---	38.49	54.00	15.51	H	15.1



REPORT No. : KH18110035W04

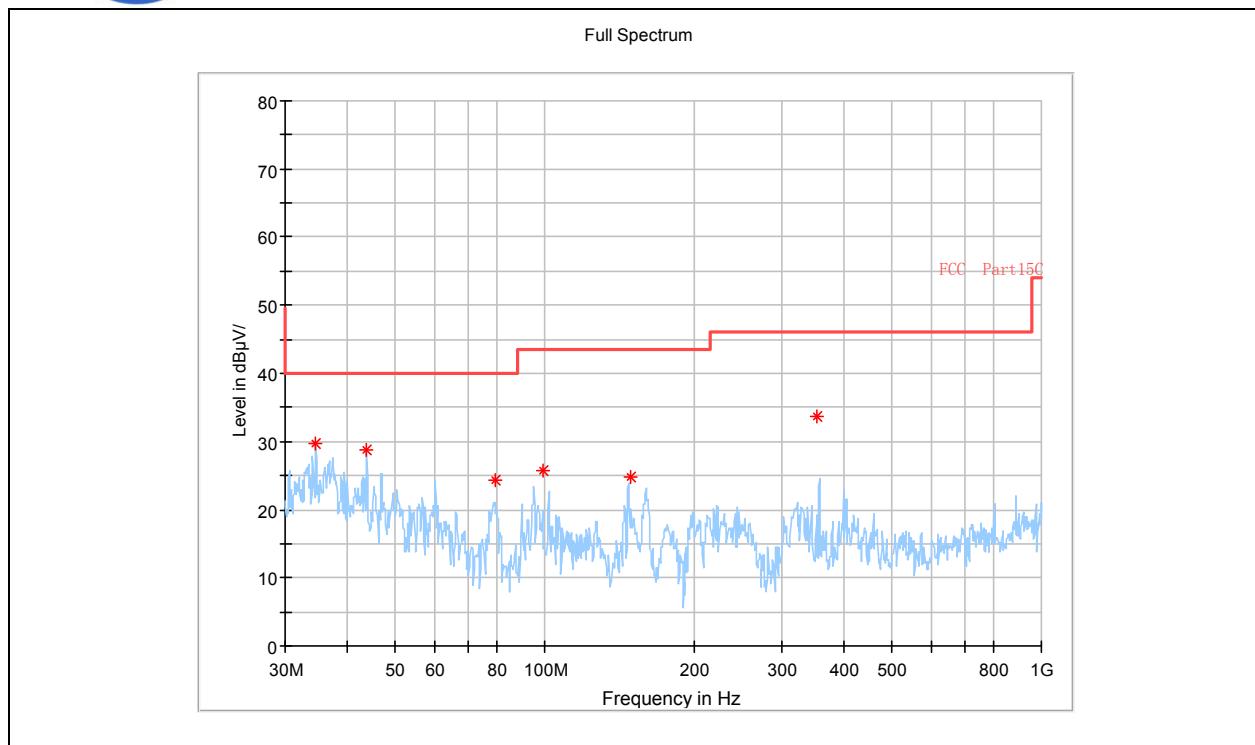


(802.11b \_2412MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18049.777778	---	30.12	54.00	23.88	H	-5.6
18049.777778	41.78	---	74.00	32.22	H	-5.6
19336.222222	---	30.30	54.00	23.70	H	-5.4
19336.222222	42.12	---	74.00	31.88	H	-5.4
20483.444444	---	29.11	54.00	24.89	H	-5.1
20483.444444	41.70	---	74.00	32.30	H	-5.1
21288.833333	---	29.45	54.00	24.55	H	-5.0
21288.833333	40.97	---	74.00	33.03	H	-5.0
22714.888889	40.90	---	74.00	33.10	H	-4.9
22714.888889	---	29.68	54.00	24.32	H	-4.9
24918.333333	42.35	---	74.00	31.65	H	-4.8
24918.333333	---	31.05	54.00	22.95	H	-4.8

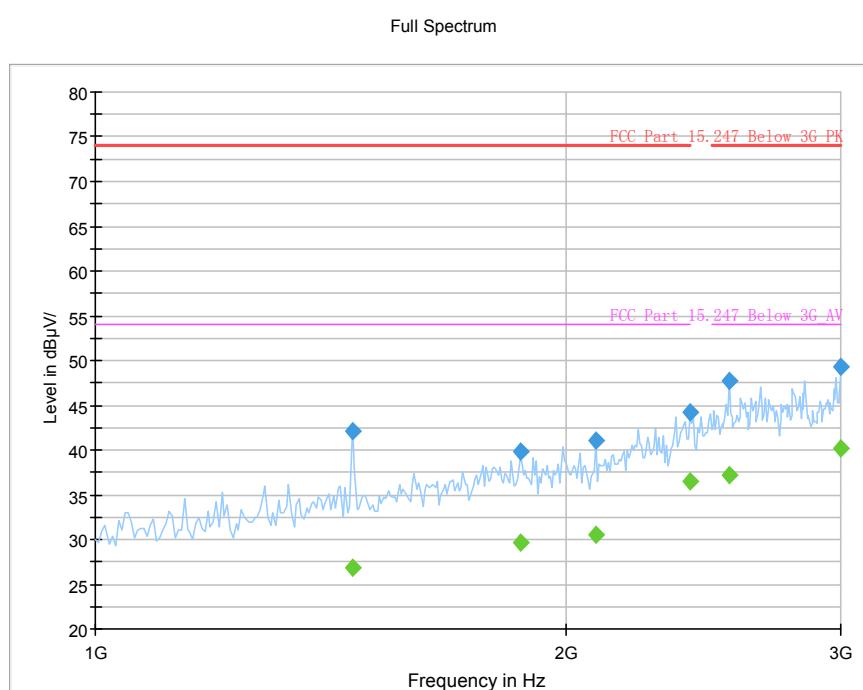


REPORT No. : KH18110035W04



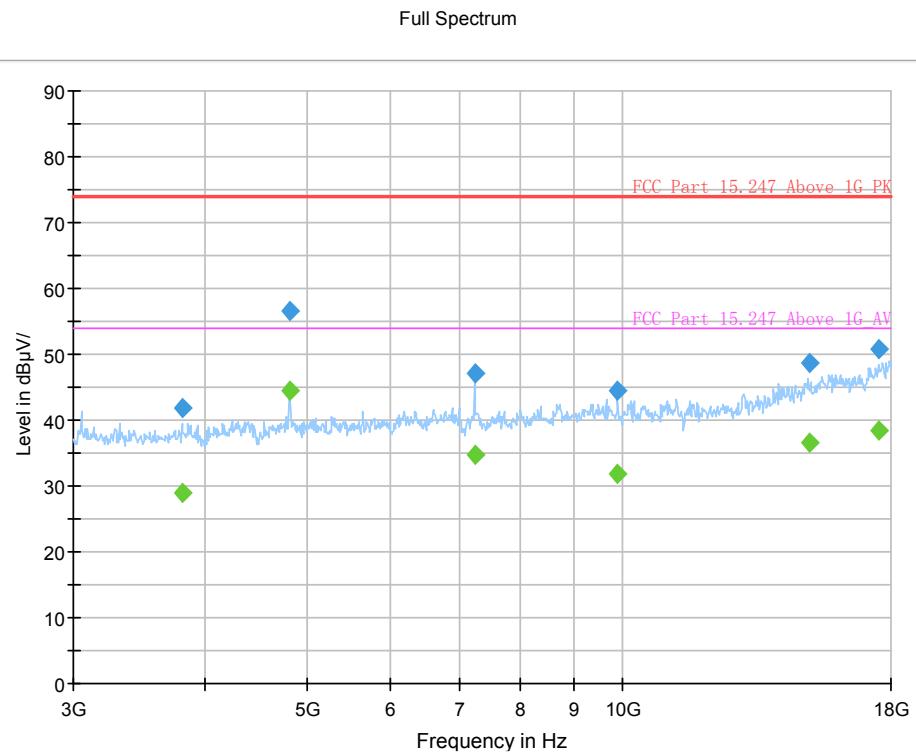
(802.11b \_2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
34.634444	29.80	---	40.00	10.20	V	-20.3
43.795556	28.80	---	40.00	11.20	V	-17.6
79.470000	24.43	---	40.00	15.57	V	-22.3
98.977778	25.67	---	43.50	17.83	V	-18.8
148.501667	24.76	---	43.50	18.74	V	-21.6
353.279444	33.70	---	46.00	12.30	V	-14.5



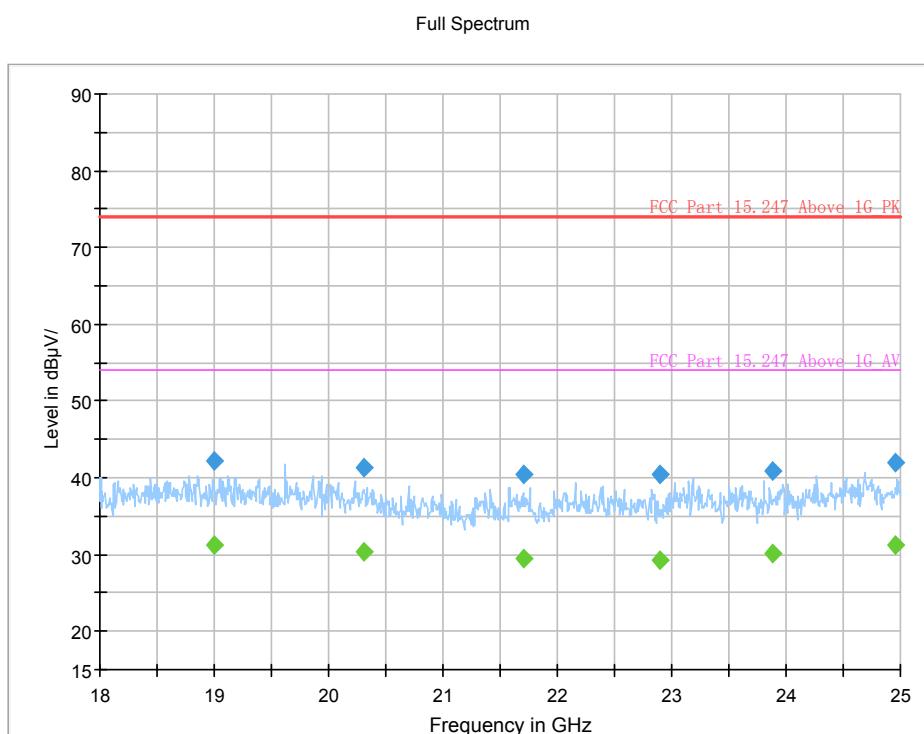
(802.11b \_2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
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



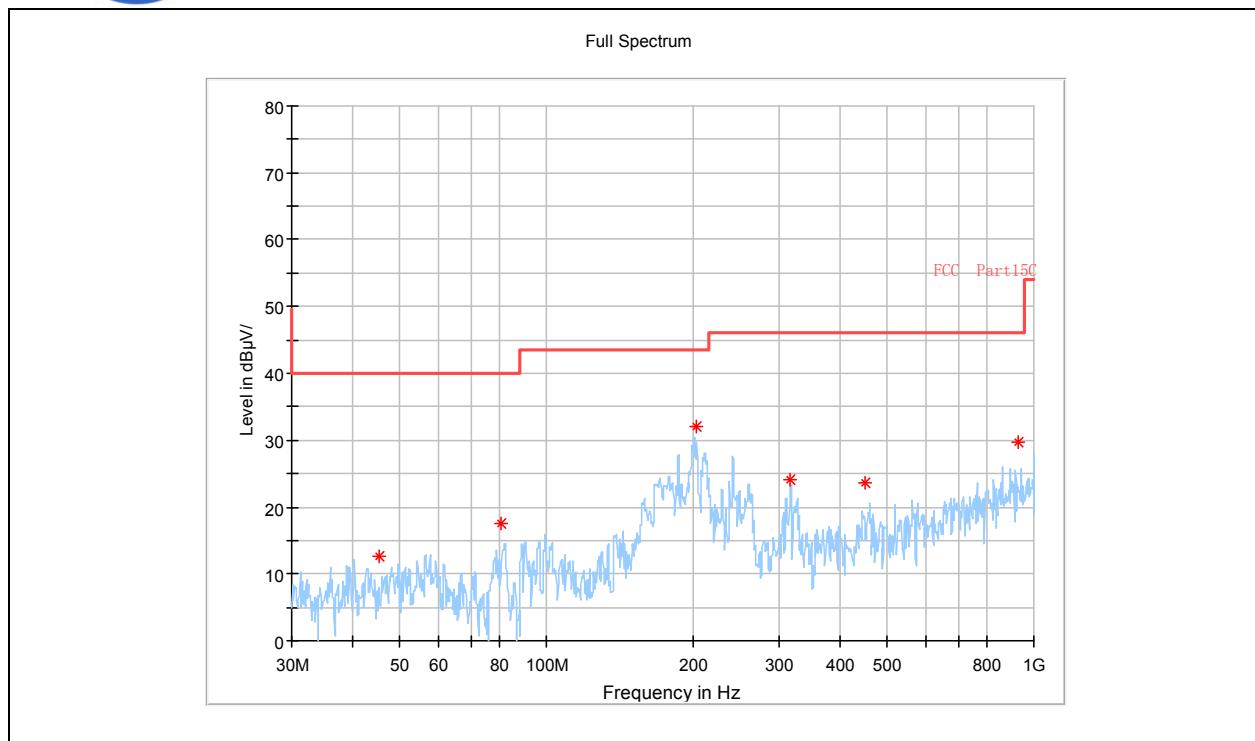
(802.11b \_2412MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3810.000000	---	29.06	54.00	24.94	V	-5.0
3810.000000	41.75	---	74.00	32.25	V	-5.0
4822.500000	56.53	---	74.00	17.47	V	-3.2
4822.500000	---	44.55	54.00	9.45	V	-3.2
7230.000000	47.05	---	74.00	26.95	V	-0.4
7230.000000	---	34.71	54.00	19.29	V	-0.4
9892.500000	44.40	---	74.00	29.60	V	2.0
9892.500000	---	31.89	54.00	22.11	V	2.0
15045.000000	48.81	---	74.00	25.19	V	10.4
15045.000000	---	36.46	54.00	17.54	V	10.4
17550.000000	---	38.29	54.00	15.71	V	13.5
17550.000000	50.84	---	74.00	23.16	V	13.5



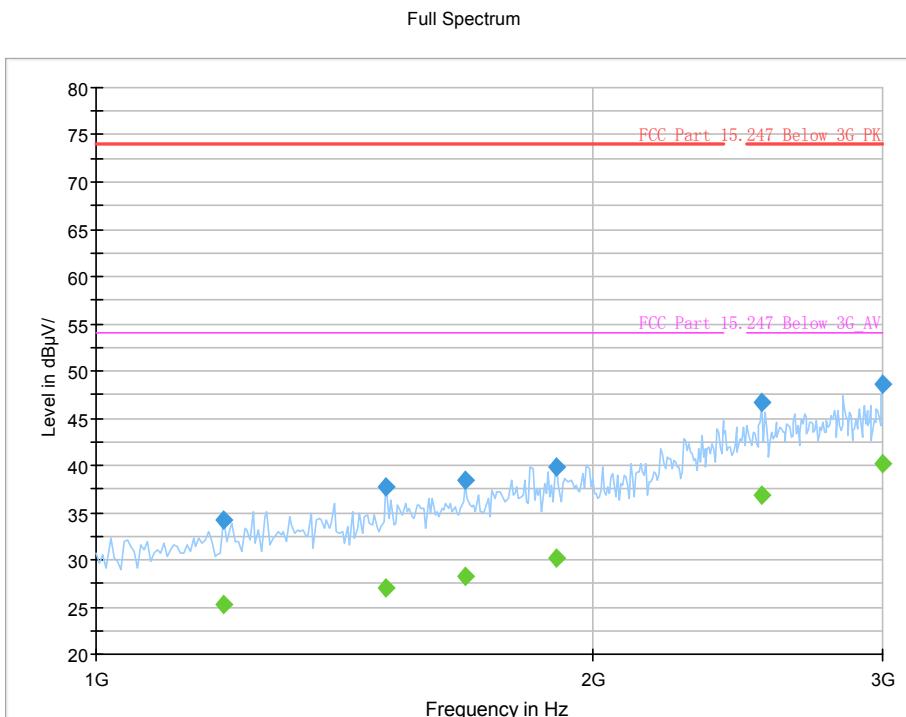
(802.11b \_2412MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
19004.888889	42.25	---	74.00	31.75	V	-5.3
19004.888889	---	31.31	54.00	22.69	V	-5.3
20302.611111	41.41	---	74.00	32.59	V	-5.0
20302.611111	---	30.30	54.00	23.70	V	-5.0
21699.500000	40.54	---	74.00	33.46	V	-5.1
21699.500000	---	29.57	54.00	24.43	V	-5.1
22897.666667	---	29.29	54.00	24.72	V	-4.9
22897.666667	40.42	---	74.00	33.58	V	-4.9
23881.166667	---	30.21	54.00	23.79	V	-4.7
23881.166667	40.95	---	74.00	33.05	V	-4.7
24961.111111	42.06	---	74.00	31.94	V	-4.8
24961.111111	---	31.14	54.00	22.86	V	-4.8



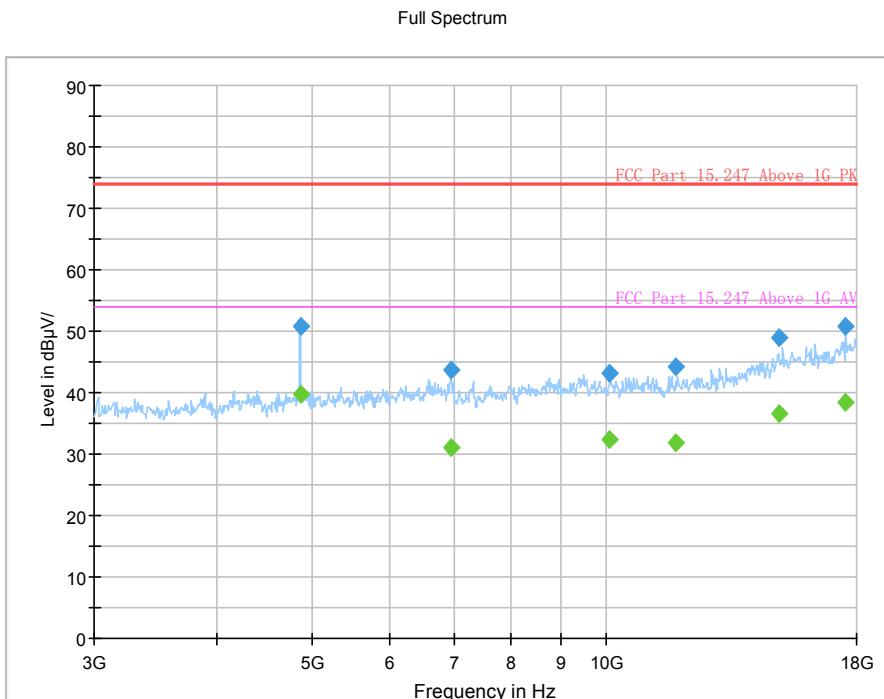
(802.11b \_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
45.304444	12.58	---	40.00	27.42	H	15.4
80.601667	17.54	---	40.00	22.46	H	10.6
202.444444	31.94	---	43.50	11.56	H	13.9
315.934444	24.10	---	46.00	21.90	H	17.3
449.255556	23.51	---	46.00	22.49	H	19.3
931.022222	29.66	---	46.00	16.34	H	28.1



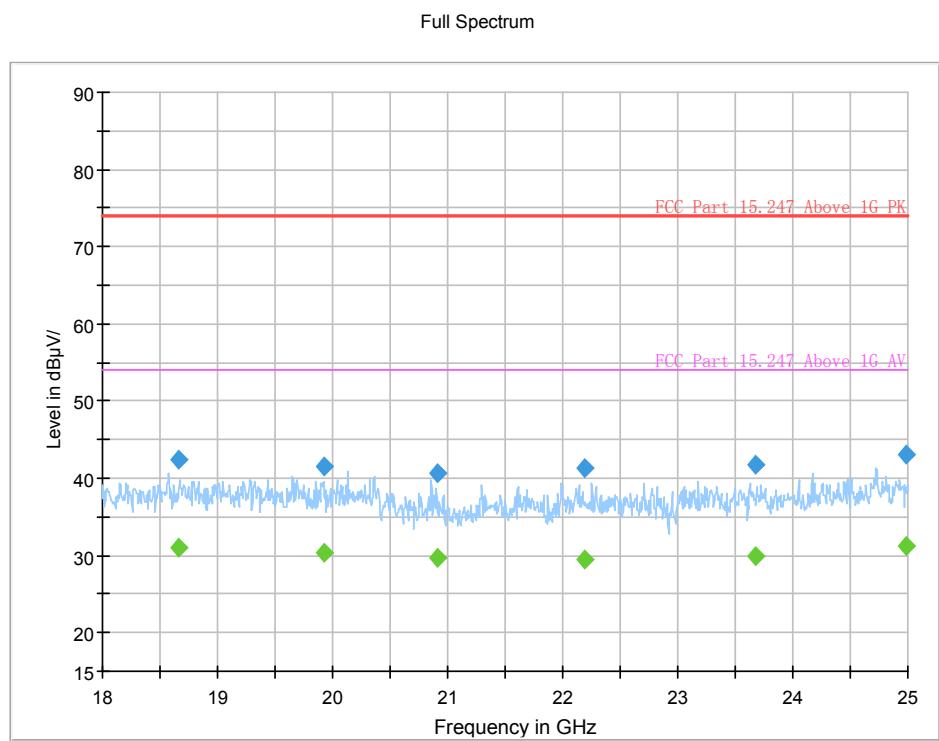
(802.11b \_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	34.28	---	74.00	39.72	H	-0.6
1195.000000	---	25.20	54.00	28.80	H	-0.6
1500.000000	---	26.96	54.00	27.04	H	2.0
1500.000000	37.75	---	74.00	36.25	H	2.0
1675.000000	38.38	---	74.00	35.62	H	3.4
1675.000000	---	28.28	54.00	25.72	H	3.4
1900.000000	39.84	---	74.00	34.16	H	6.2
1900.000000	---	30.09	54.00	23.91	H	6.2
2535.000000	---	36.91	54.00	17.09	H	14.2
2535.000000	46.64	---	74.00	27.36	H	14.2
3000.000000	48.66	---	74.00	25.34	H	18.4
3000.000000	---	40.22	54.00	13.78	H	18.4



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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4875.000000	50.92	---	74.00	23.08	H	-2.9
4875.000000	---	39.65	54.00	14.35	H	-2.9
6952.500000	---	31.10	54.00	22.90	H	-0.5
6952.500000	43.55	---	74.00	30.45	H	-0.5
10087.50000	---	32.35	54.00	21.65	H	2.3
10087.50000	43.20	---	74.00	30.80	H	2.3
11760.00000	---	31.92	54.00	22.08	H	3.8
11760.00000	44.22	---	74.00	29.78	H	3.8
15007.50000	48.83	---	74.00	25.17	H	10.7
15007.50000	---	36.69	54.00	17.31	H	10.7
17557.50000	---	38.29	54.00	15.71	H	13.4
17557.50000	50.80	---	74.00	23.20	H	13.4

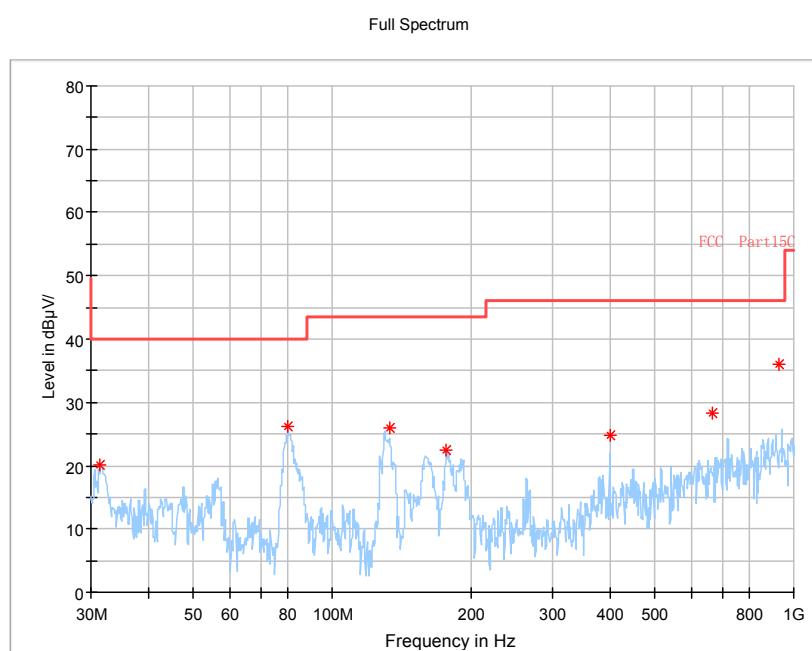


(802.11b \_2437MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18656.444444	42.44	---	74.00	31.56	H	-5.3
18656.444444	---	30.94	54.00	23.06	H	-5.3
19924.222222	---	30.30	54.00	23.70	H	-5.0
19924.222222	41.56	---	74.00	32.44	H	-5.0
20907.722222	---	29.61	54.00	24.39	H	-5.1
20907.722222	40.57	---	74.00	33.43	H	-5.1
22193.000000	---	29.38	54.00	24.62	H	-5.1
22193.000000	41.31	---	74.00	32.69	H	-5.1
23673.500000	41.68	---	74.00	32.32	H	-5.0
23673.500000	---	29.82	54.00	24.18	H	-5.0
24987.944444	---	31.27	54.00	22.73	H	-4.8
24987.944444	43.01	---	74.00	30.99	H	-4.8

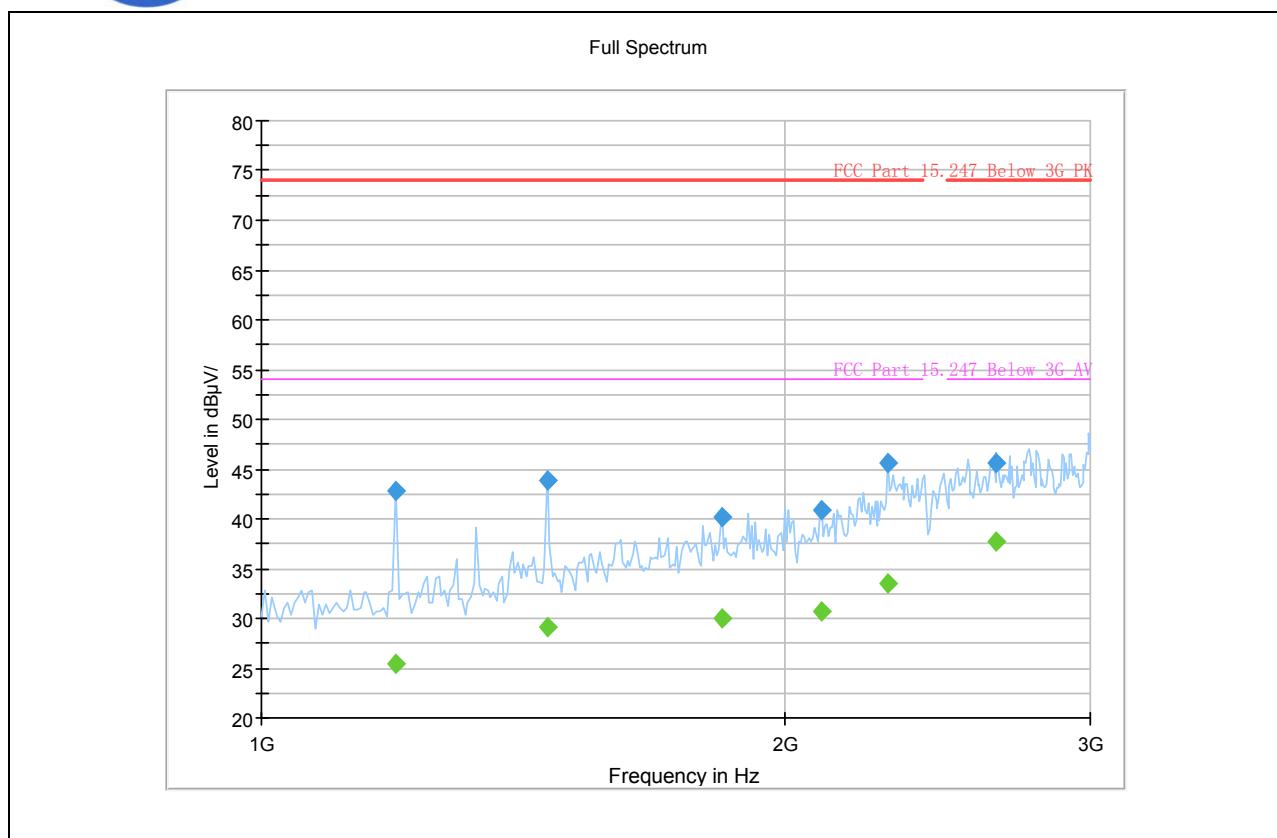


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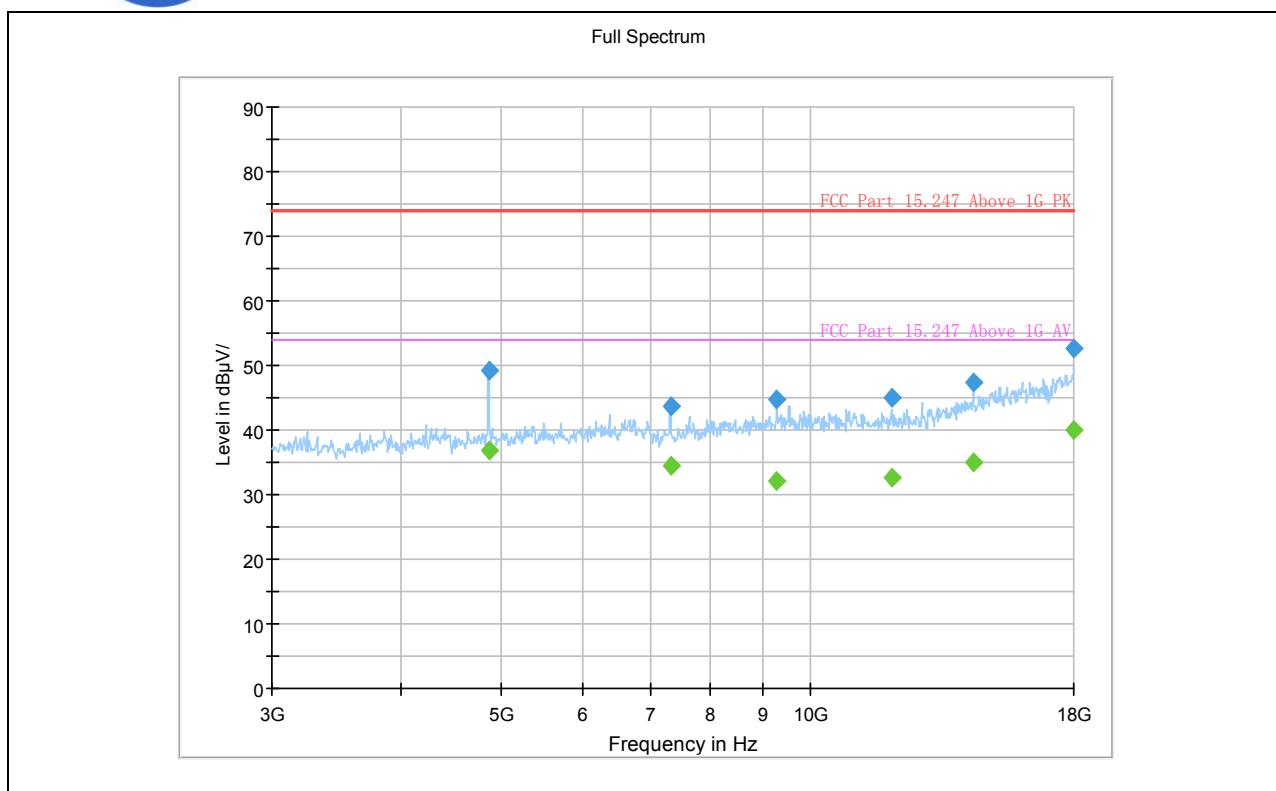
(802.11b \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.455000	20.02	---	40.00	19.98	V	12.1
80.224444	26.14	---	40.00	13.86	V	10.8
132.981667	25.98	---	43.50	17.52	V	11.2
177.062778	22.46	---	43.50	21.04	V	12.0
398.977222	24.71	---	46.00	21.29	V	19.6
665.026667	28.26	---	46.00	17.74	V	24.3



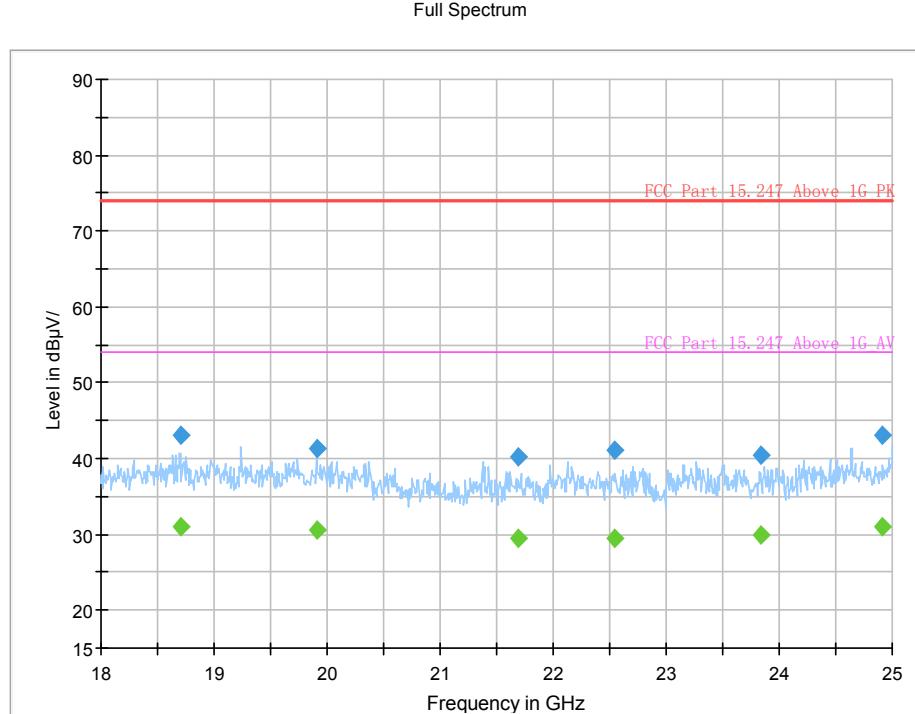
(802.11b \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	42.85	---	74.00	31.15	V	-0.6
1195.000000	---	25.40	54.00	28.60	V	-0.6
1460.000000	43.94	---	74.00	30.06	V	1.6
1460.000000	---	29.12	54.00	24.88	V	1.6
1840.000000	40.15	---	74.00	33.85	V	5.9
1840.000000	---	30.01	54.00	23.99	V	5.9
2100.000000	40.80	---	74.00	33.20	V	7.7
2100.000000	---	30.77	54.00	23.23	V	7.7
2295.000000	---	33.43	54.00	20.57	V	10.3
2295.000000	45.61	---	74.00	28.39	V	10.3
2650.000000	---	37.66	54.00	16.34	V	15.6
2650.000000	45.69	---	74.00	28.31	V	15.6



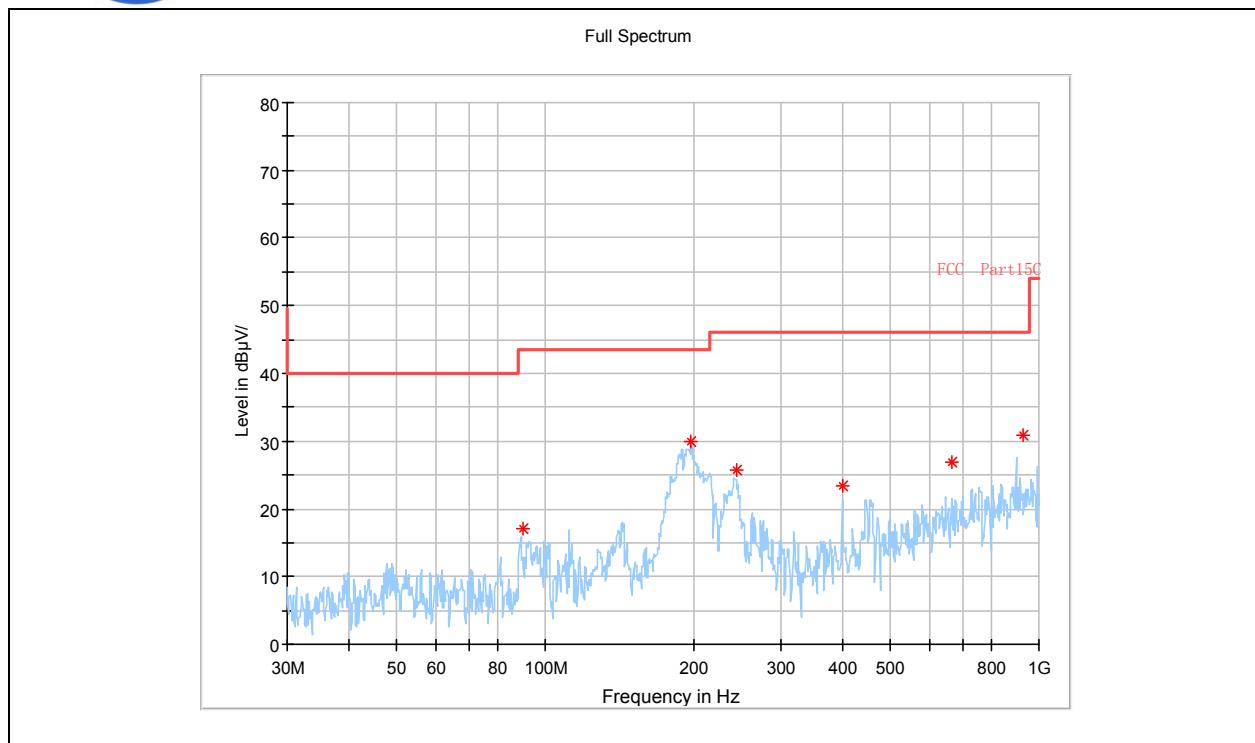
(802.11b \_2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4875.000000	49.30	---	74.00	24.70	V	-2.9
4875.000000	---	36.74	54.00	17.26	V	-2.9
7312.500000	43.56	---	74.00	30.44	V	-0.3
7312.500000	---	34.43	54.00	19.57	V	-0.3
9277.500000	---	32.22	54.00	21.78	V	2.2
9277.500000	44.66	---	74.00	29.34	V	2.2
12000.000000	---	32.67	54.00	21.33	V	3.8
12000.000000	44.91	---	74.00	29.09	V	3.8
14407.50000	---	35.13	54.00	18.87	V	9.4
14407.50000	47.35	---	74.00	26.65	V	9.4
18000.00000	---	39.92	54.00	14.08	V	14.9
18000.00000	52.57	---	74.00	21.43	V	14.9



(802.11b \_2437MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
18707.777778	---	31.09	54.00	22.91	V	-5.3
18707.777778	42.96	---	74.00	31.04	V	-5.3
19904.777778	41.31	---	74.00	32.69	V	-5.0
19904.777778	---	30.55	54.00	23.45	V	-5.0
21692.888889	---	29.50	54.00	24.50	V	-5.1
21692.888889	40.32	---	74.00	33.68	V	-5.1
22544.944444	41.11	---	74.00	32.89	V	-5.0
22544.944444	---	29.50	54.00	24.50	V	-5.0
23839.555556	---	30.00	54.00	24.00	V	-4.8
23839.555556	40.53	---	74.00	33.47	V	-4.8
24915.611111	---	30.97	54.00	23.03	V	-4.8
24915.611111	43.02	---	74.00	30.98	V	-4.8

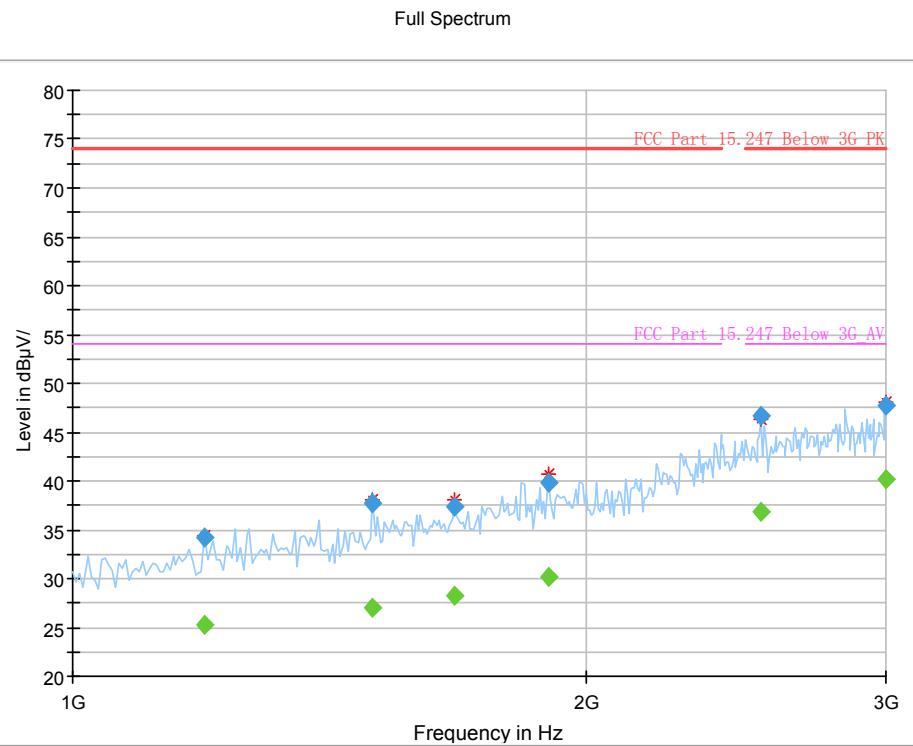


(802.11b \_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
89.978333	17.15	---	43.50	26.35	H	13.3
197.702222	29.84	---	43.50	13.66	H	13.9
243.507778	25.65	---	46.00	20.35	H	14.9
398.977222	23.46	---	46.00	22.54	H	19.6
665.026667	26.81	---	46.00	19.19	H	24.3
931.022222	30.87	---	46.00	15.13	H	28.1

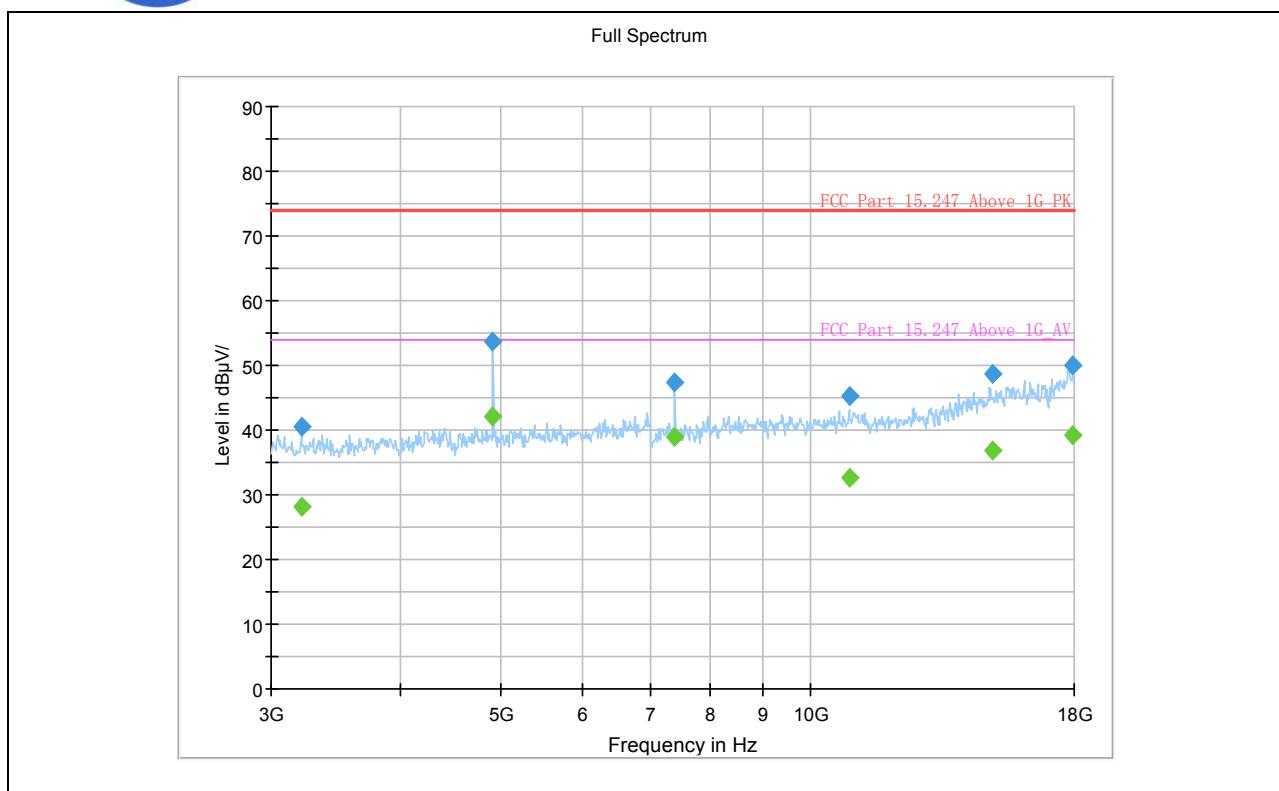


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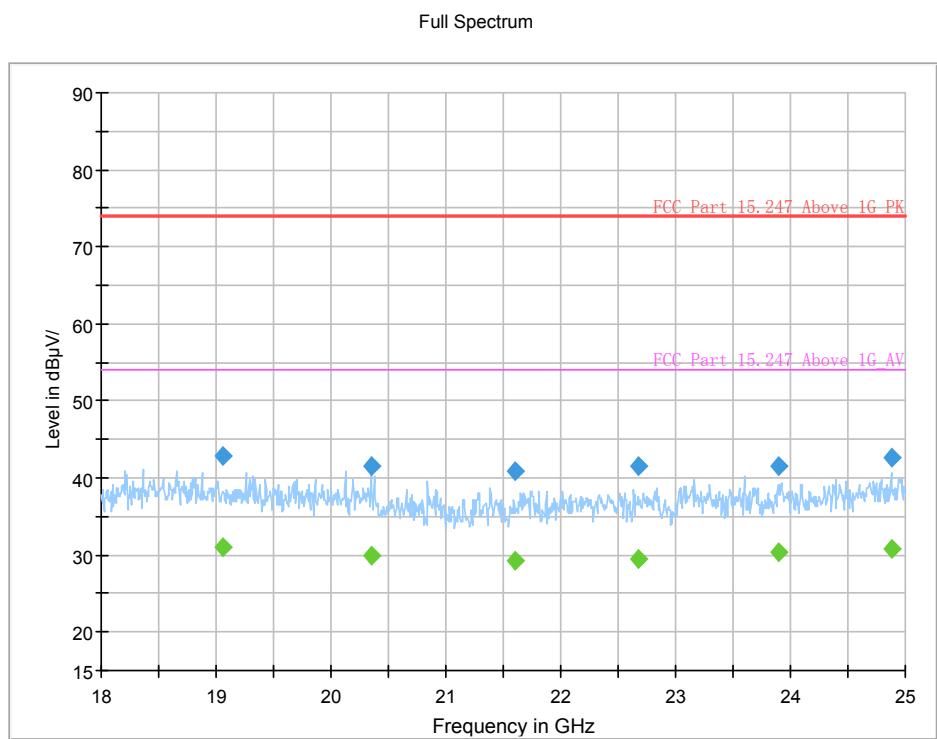
(802.11b \_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	34.28	---	74.00	39.72	H	-0.6
1195.000000	---	25.20	54.00	28.80	H	-0.6
1500.000000	---	26.96	54.00	27.04	H	2.0
1500.000000	37.75	---	74.00	36.25	H	2.0
1675.000000	37.38	---	74.00	36.62	H	3.4
1675.000000	---	28.28	54.00	25.72	H	3.4
1900.000000	39.84	---	74.00	34.16	H	6.2
1900.000000	---	30.09	54.00	23.91	H	6.2
2535.000000	---	36.91	54.00	17.09	H	14.2
2535.000000	46.64	---	74.00	27.36	H	14.2
3000.000000	47.66	---	74.00	26.34	H	18.4
3000.000000	---	40.22	54.00	13.78	H	18.4



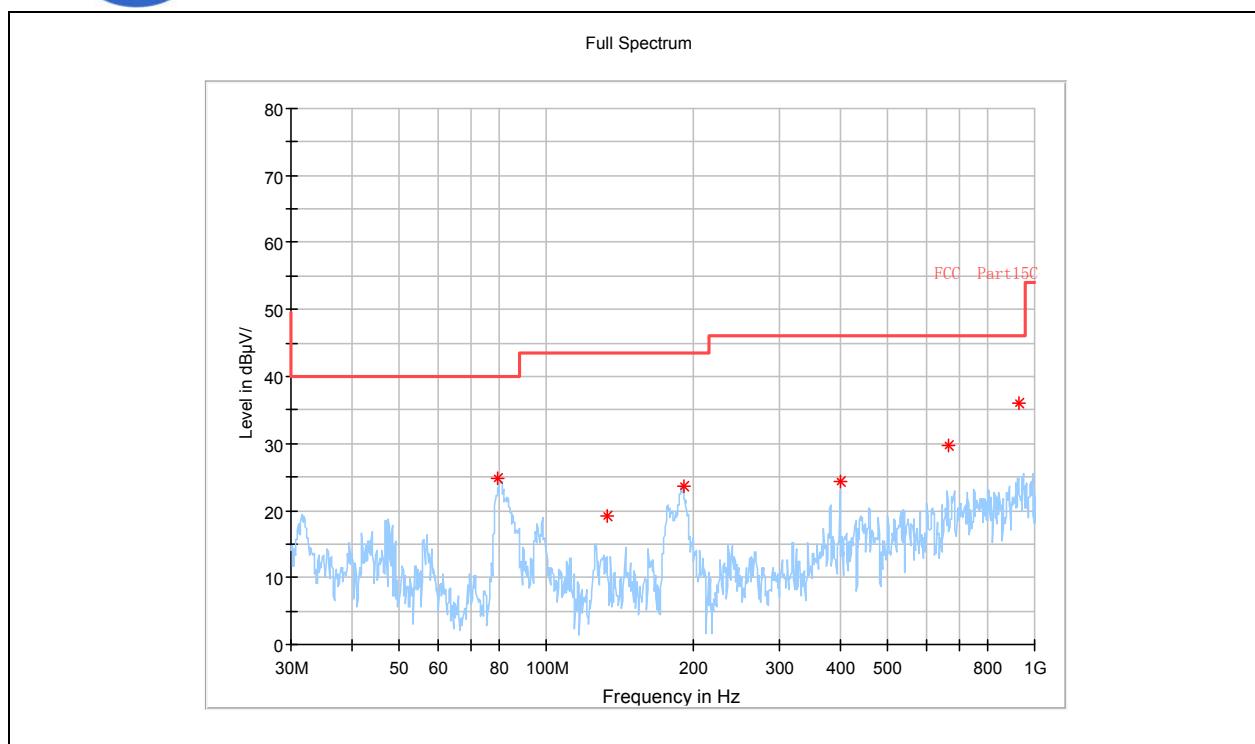
(802.11b \_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3210.000000	40.52	---	74.00	33.48	H	-6.3
3210.000000	---	28.11	54.00	25.89	H	-6.3
4920.000000	53.79	---	74.00	10.21	H	-2.8
4920.000000	---	42.19	54.00	11.81	H	-2.8
7387.500000	---	38.90	54.00	15.10	H	-0.4
7387.500000	47.24	---	74.00	26.76	H	-0.4
10905.000000	---	32.50	54.00	21.50	H	3.2
10905.000000	45.13	---	74.00	28.87	H	3.2
15022.500000	48.67	---	74.00	25.33	H	10.8
15022.500000	---	36.73	54.00	17.27	H	10.8
17947.500000	49.91	---	74.00	20.09	H	14.5
17947.500000	---	39.26	54.00	14.74	H	14.5



(802.11b \_2462MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
19053.888889	---	31.08	54.00	22.92	H	-5.4
19053.888889	42.93	---	74.00	31.07	H	-5.4
20351.611111	---	29.98	54.00	24.02	H	-5.1
20351.611111	41.55	---	74.00	32.45	H	-5.1
21608.500000	40.92	---	74.00	33.08	H	-5.1
21608.500000	---	29.25	54.00	24.75	H	-5.1
22681.055556	41.55	---	74.00	32.45	H	-4.9
22681.055556	---	29.45	54.00	24.55	H	-4.9
23894.388889	41.44	---	74.00	32.56	H	-4.7
23894.388889	---	30.40	54.00	23.60	H	-4.7
24888.000000	42.63	---	74.00	31.37	H	-4.8
24888.000000	---	30.89	54.00	23.11	H	-4.8

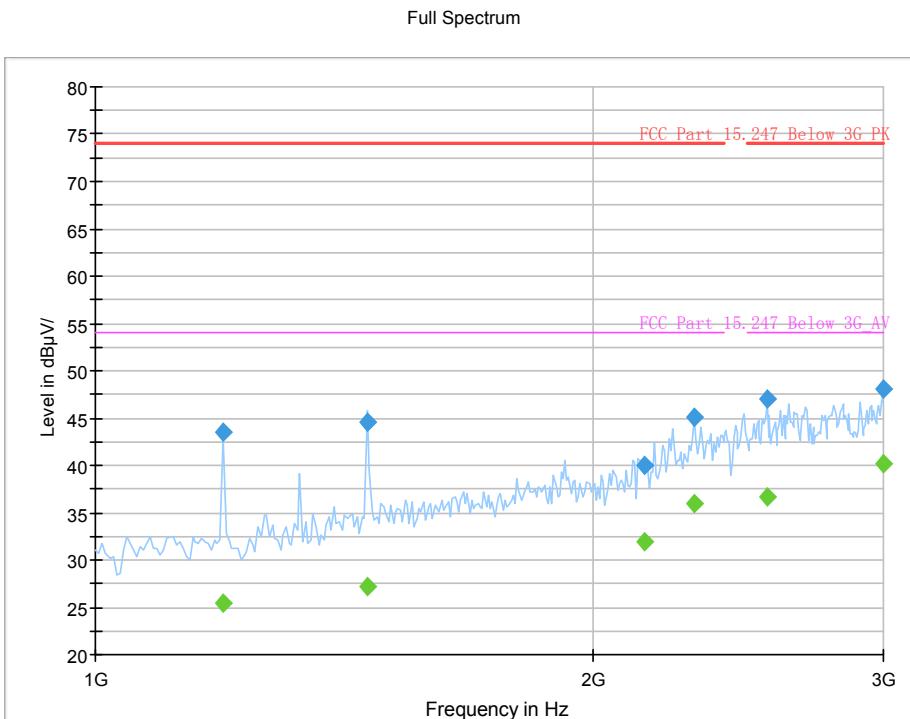


(802.11b \_2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.577778	24.88	---	40.00	15.12	V	10.6
132.981667	19.11	---	43.50	24.39	V	11.2
191.558889	23.63	---	43.50	19.87	V	13.4
399.031111	24.39	---	46.00	21.61	V	19.6
665.026667	29.68	---	46.00	16.32	V	24.3
931.022222	36.08	---	46.00	9.92	V	28.1

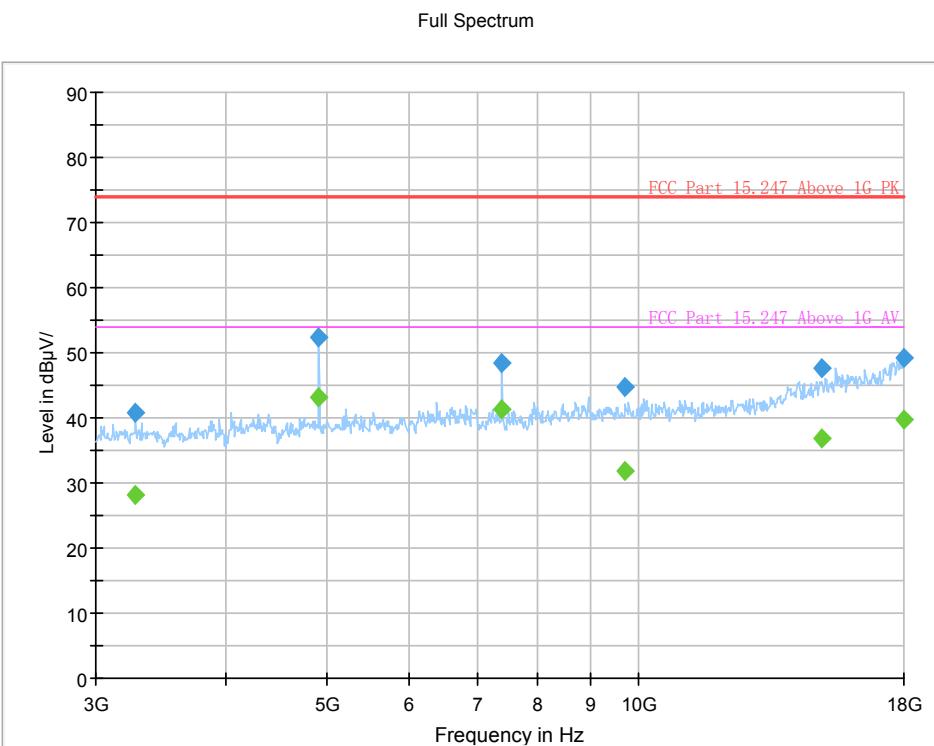


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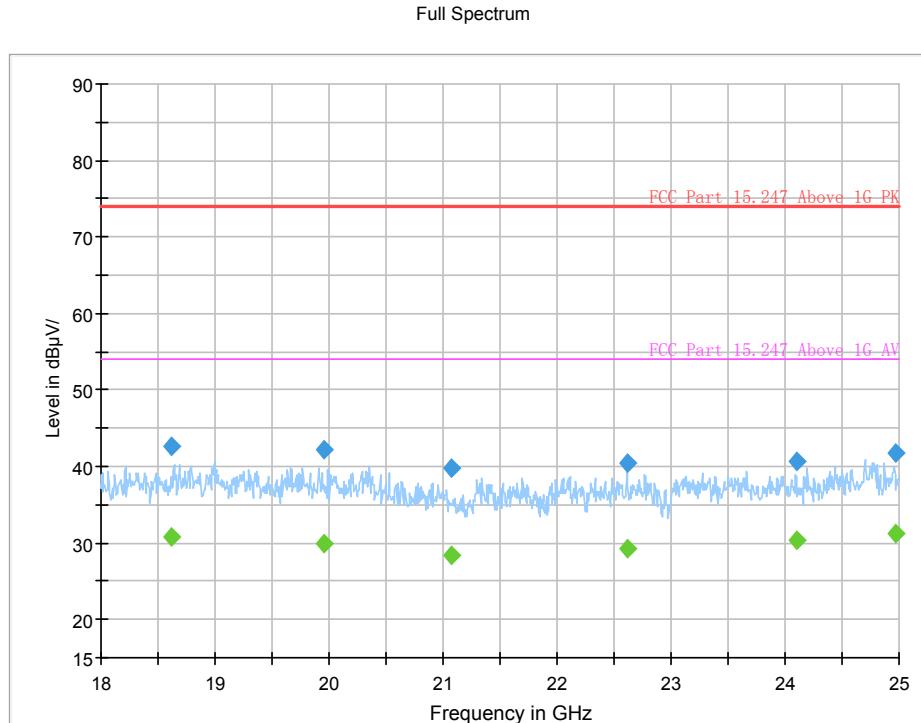
(802.11b \_2462MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.48	54.00	28.52	V	-0.6
1195.000000	43.49	---	74.00	30.51	V	-0.6
1460.000000	---	27.18	54.00	26.82	V	1.6
1460.000000	44.63	---	74.00	29.37	V	1.6
2150.000000	---	31.87	54.00	22.13	V	8.2
2150.000000	40.07	---	74.00	33.93	V	8.2
2305.000000	45.03	---	74.00	28.97	V	10.3
2305.000000	---	35.97	54.00	18.03	V	10.3
2550.000000	---	36.74	54.00	17.26	V	14.4
2550.000000	46.96	---	74.00	27.04	V	14.4
3000.000000	48.07	---	74.00	25.93	V	18.4
3000.000000	---	40.18	54.00	13.82	V	18.4



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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3277.500000	---	28.16	54.00	25.84	V	-5.9
3277.500000	40.76	---	74.00	33.24	V	-5.9
4920.000000	---	43.15	54.00	10.85	V	-2.8
4920.000000	52.42	---	74.00	21.58	V	-2.8
7387.500000	---	41.43	54.00	12.57	V	-0.4
7387.500000	48.42	---	74.00	25.58	V	-0.4
9697.500000	---	31.83	54.00	22.17	V	1.8
9697.500000	44.64	---	74.00	29.36	V	1.8
15015.000000	47.72	---	74.00	26.28	V	10.8
15015.000000	---	36.77	54.00	17.23	V	10.8
17992.500000	49.11	---	74.00	14.89	V	15.0
17992.500000	---	39.76	54.00	14.24	V	15.0



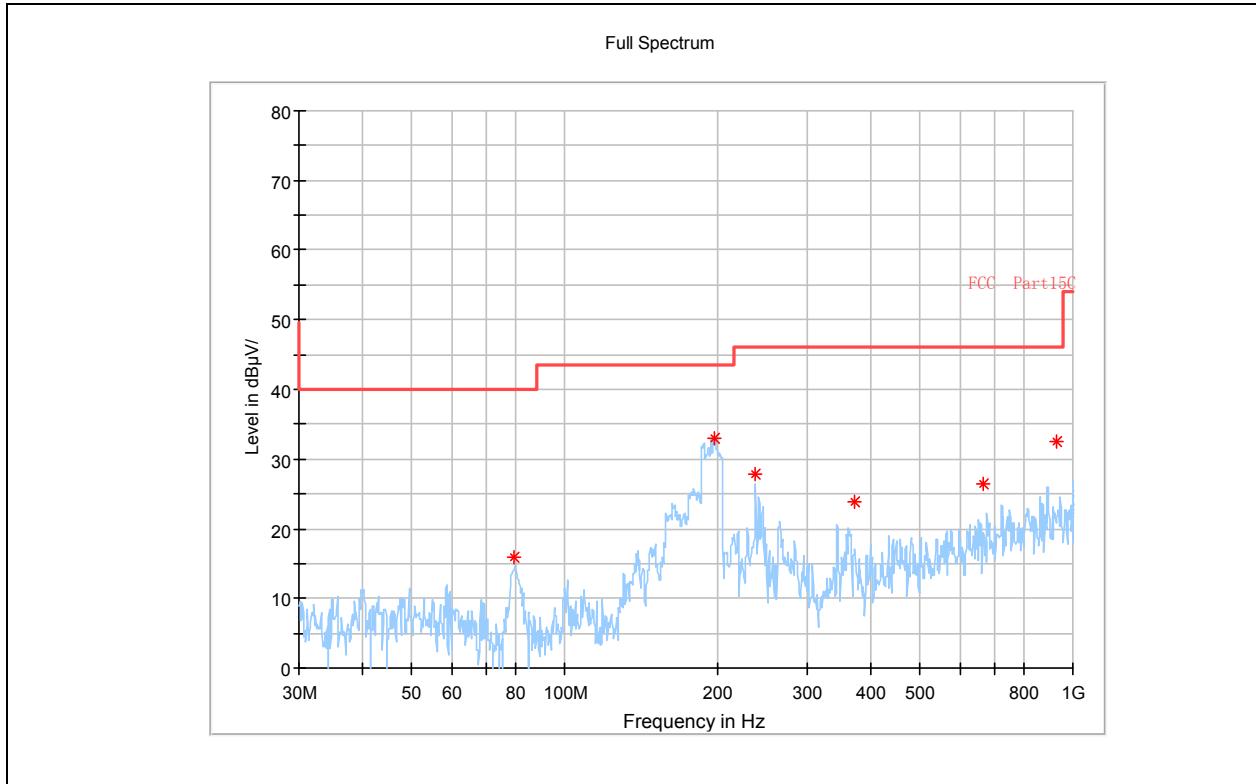
(802.11b \_2462MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18617.944444	---	30.89	54.00	23.11	V	-5.2
18617.944444	42.74	---	74.00	31.26	V	-5.2
19958.833333	42.10	---	74.00	31.90	V	-5.0
19958.833333	---	29.96	54.00	24.04	V	-5.0
21074.166667	---	28.31	54.00	25.69	V	-5.1
21074.166667	39.79	---	74.00	34.21	V	-5.1
22611.055556	---	29.24	54.00	24.76	V	-4.9
22611.055556	40.55	---	74.00	33.45	V	-4.9
24107.111111	40.77	---	74.00	33.23	V	-4.6
24107.111111	---	30.28	54.00	23.72	V	-4.6
24971.222222	---	31.27	54.00	22.73	V	-4.8
24971.222222	41.83	---	74.00	32.17	V	-4.8



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## 802.11g Test mode

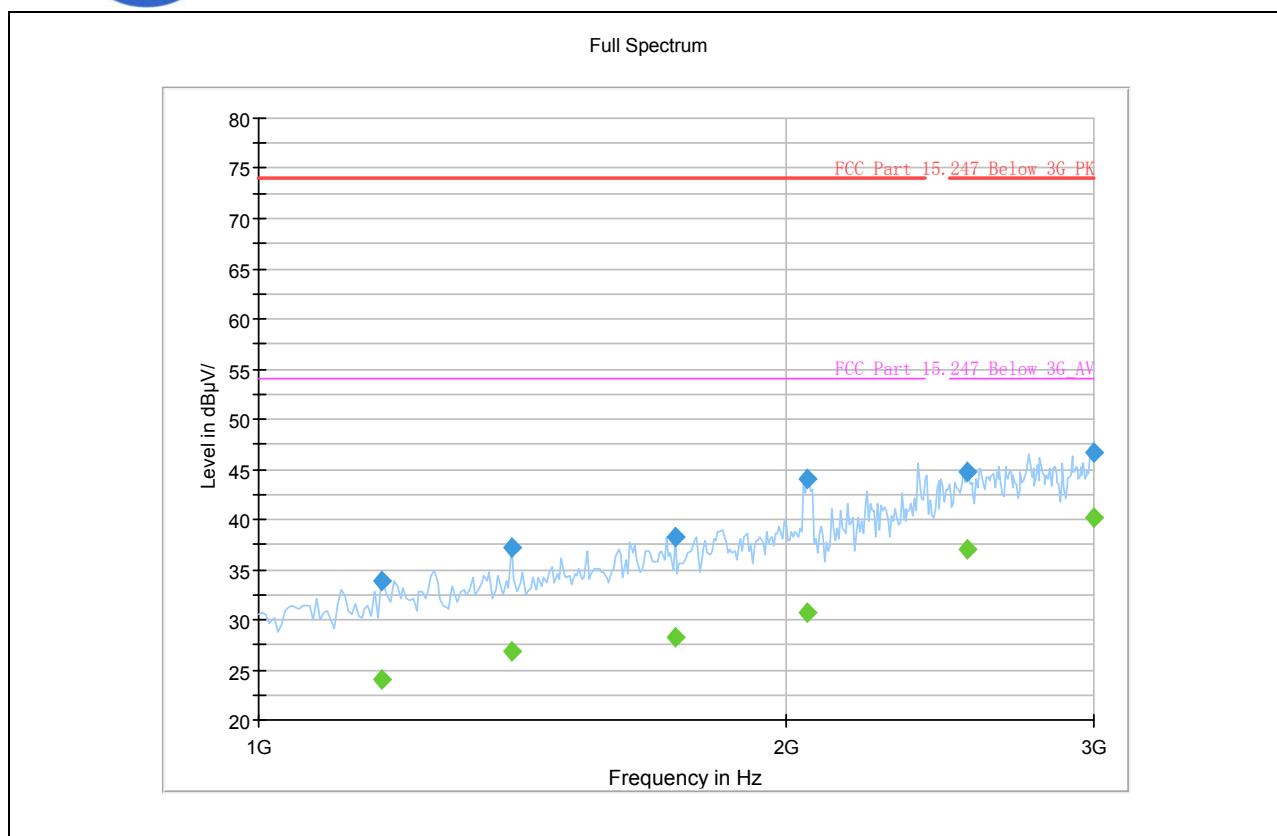


(802.11g \_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.577778	15.93	---	40.00	24.07	H	10.6
197.810000	32.95	---	43.50	10.55	H	13.9
237.849444	27.85	---	46.00	18.15	H	14.9
372.463889	23.84	---	46.00	22.16	H	18.0
664.972778	26.46	---	46.00	19.54	H	24.3
931.022222	32.44	---	46.00	13.56	H	28.1

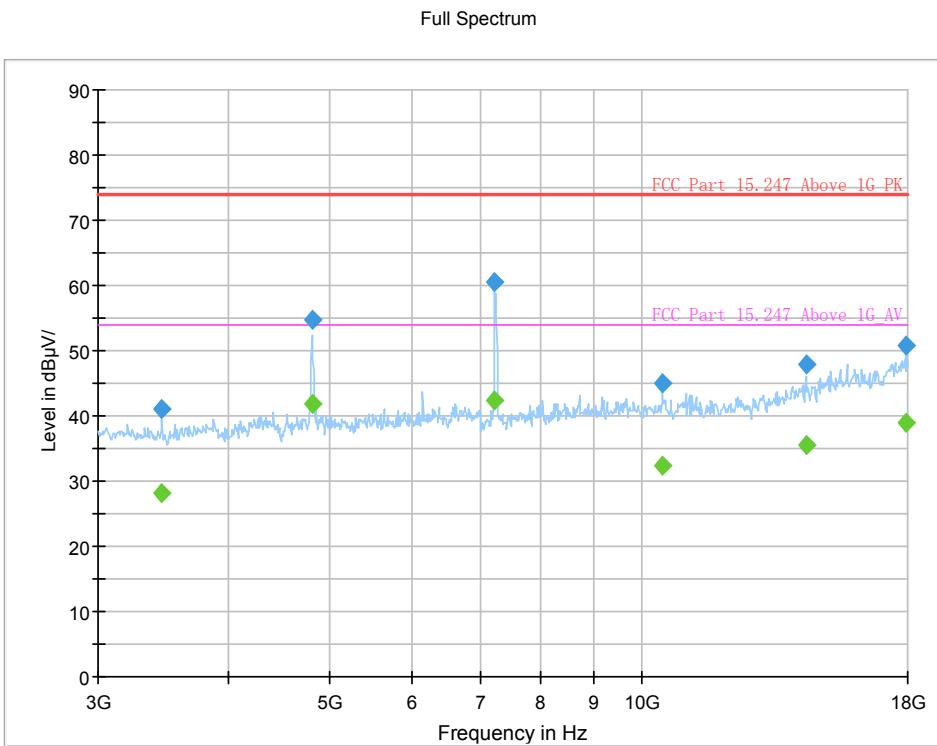


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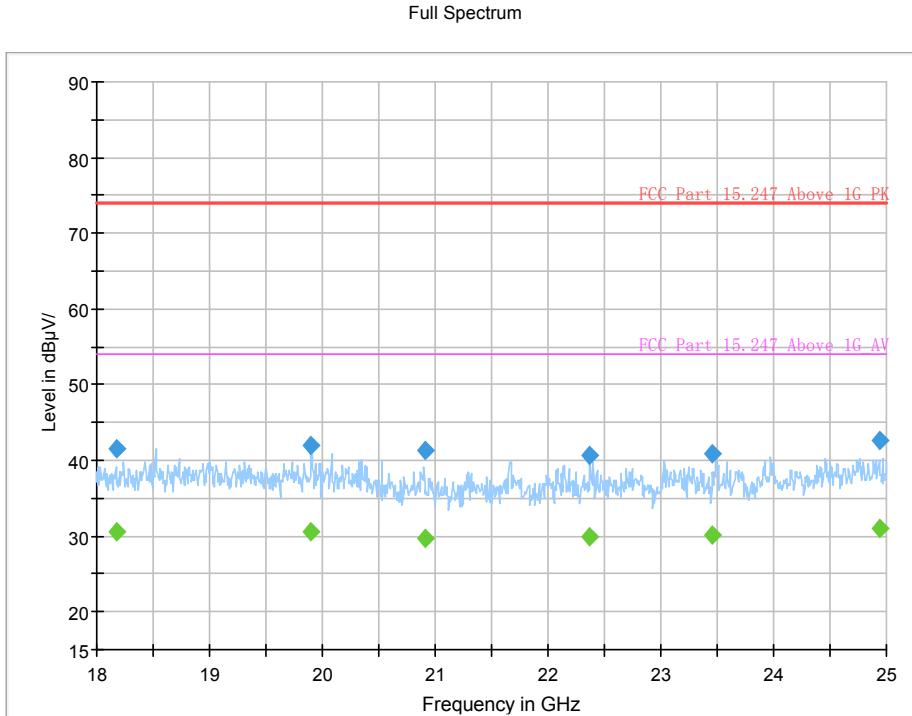
(802.11g \_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1175.000000	---	24.12	54.00	29.88	H	-1.6
1175.000000	33.90	---	74.00	40.10	H	-1.6
1395.000000	---	26.80	54.00	27.20	H	1.5
1395.000000	37.19	---	74.00	36.81	H	1.5
1730.000000	---	28.28	54.00	25.72	H	4.1
1730.000000	38.24	---	74.00	35.76	H	4.1
2060.000000	---	30.74	54.00	23.26	H	7.0
2060.000000	43.96	---	74.00	30.04	H	7.0
2540.000000	---	37.00	54.00	17.00	H	14.4
2540.000000	44.75	---	74.00	29.25	H	14.4
3000.000000	---	40.23	54.00	13.77	H	18.4
3000.000000	46.75	---	74.00	27.25	H	18.4



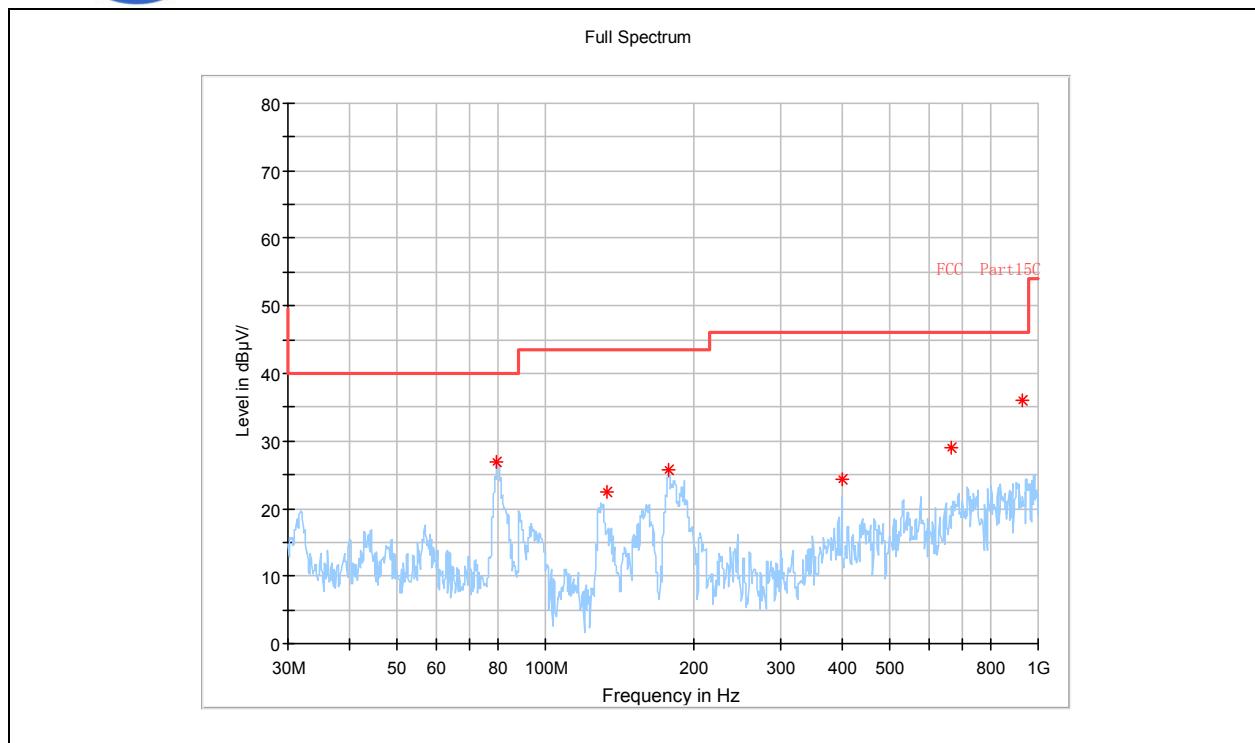
(802.11g \_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3457.500000	---	28.06	54.00	25.94	H	-6.0
3457.500000	41.14	---	74.00	32.86	H	-6.0
4822.500000	---	41.96	54.00	12.04	H	-3.2
4822.500000	54.70	---	74.00	19.30	H	-3.2
7222.500000	---	42.28	54.00	11.72	H	-0.4
7222.500000	60.64	---	74.00	13.36	H	-0.4
10462.50000	45.01	---	74.00	28.99	H	2.7
10462.50000	---	32.41	54.00	21.59	H	2.7
14362.50000	---	35.48	54.00	18.52	H	9.3
14362.50000	47.97	---	74.00	26.03	H	9.3
17902.50000	50.76	---	74.00	23.24	H	14.5
17902.50000	---	38.93	54.00	15.07	H	14.5



(802.11g \_2412MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18173.833333	41.47	---	74.00	32.53	H	-5.5
18173.833333	---	30.48	54.00	23.52	H	-5.5
19904.388889	---	30.50	54.00	23.50	H	-5.0
19904.388889	41.92	---	74.00	32.08	H	-5.0
20906.555556	---	29.68	54.00	24.32	H	-5.1
20906.555556	41.21	---	74.00	32.79	H	-5.1
22374.222222	40.72	---	74.00	33.28	H	-4.9
22374.222222	---	29.87	54.00	24.13	H	-4.9
23462.722222	40.90	---	74.00	33.10	H	-4.9
23462.722222	---	30.14	54.00	23.86	H	-4.9
24940.500000	42.60	---	74.00	31.40	H	-4.8
24940.500000	---	31.08	54.00	22.92	H	-4.8

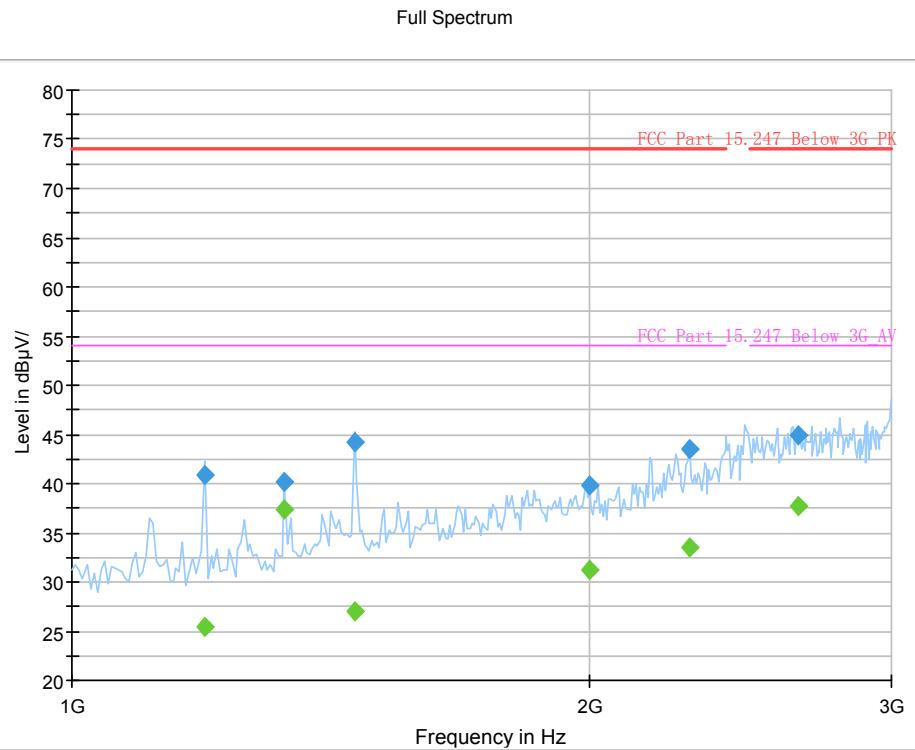


(802.11g \_2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.739444	26.86	---	40.00	13.14	V	10.8
132.981667	22.53	---	43.50	20.97	V	11.2
177.763333	25.74	---	43.50	17.76	V	12.2
398.977222	24.39	---	46.00	21.61	V	19.6
665.026667	29.02	---	46.00	16.98	V	24.3
931.022222	35.95	---	46.00	10.05	V	28.1

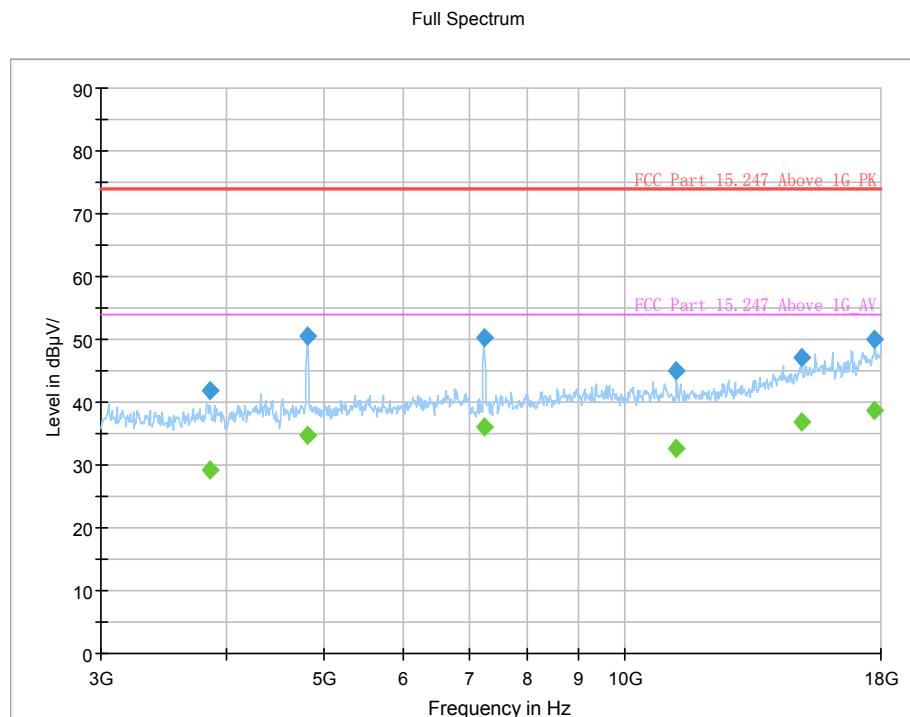


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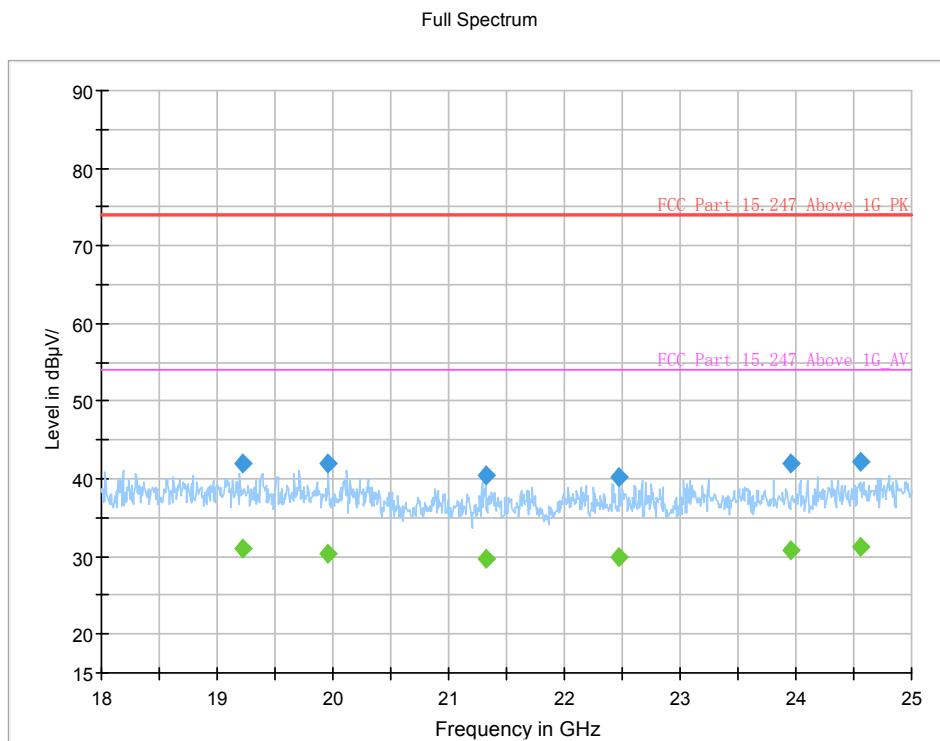
(802.11g \_2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
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



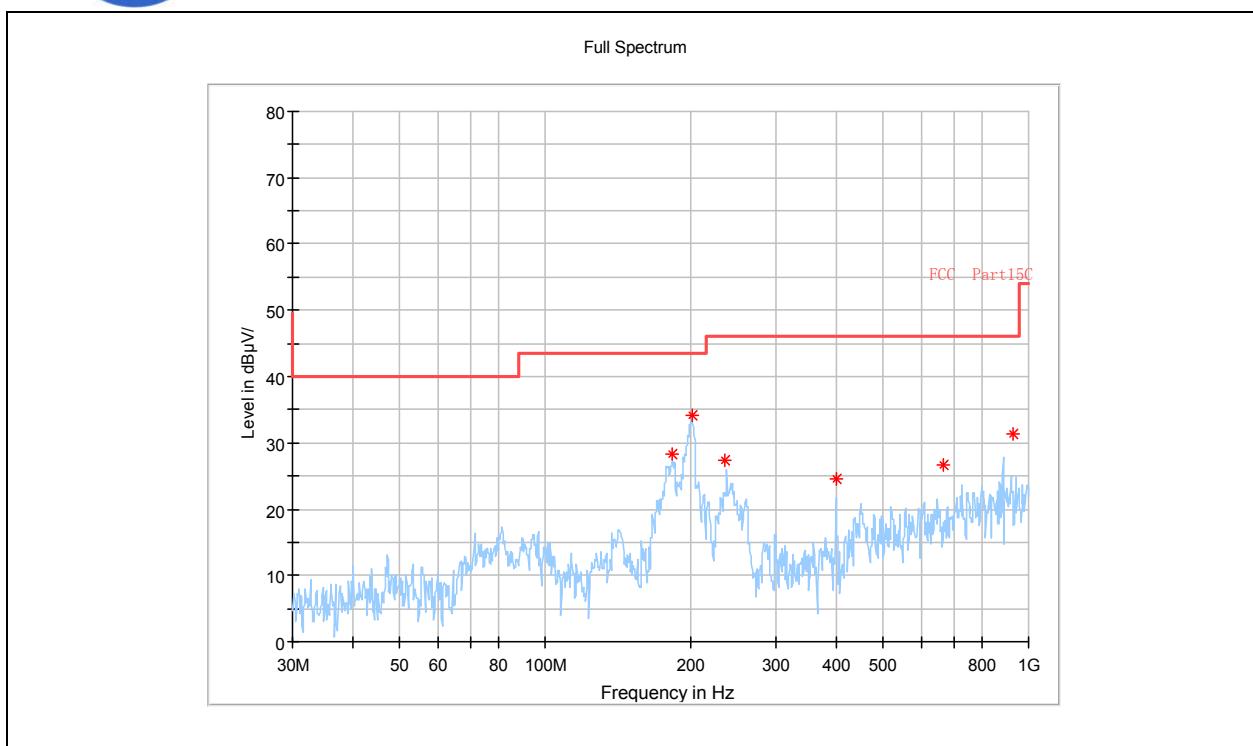
(802.11g \_2412MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3855.000000	---	29.08	54.00	24.92	V	-4.6
3855.000000	41.84	---	74.00	32.16	V	-4.6
4830.000000	50.55	---	74.00	23.45	V	-3.2
4830.000000	---	34.62	54.00	19.38	V	-3.2
7230.000000	---	36.04	54.00	17.96	V	-0.4
7230.000000	50.36	---	74.00	23.64	V	-0.4
11257.50000	---	32.76	54.00	21.24	V	3.1
11257.50000	44.87	---	74.00	29.13	V	3.1
15015.00000	47.10	---	74.00	26.90	V	10.8
15015.00000	---	36.77	54.00	17.23	V	10.8
17760.00000	---	38.72	54.00	15.28	V	15.2
17760.00000	50.02	---	74.00	23.98	V	15.2



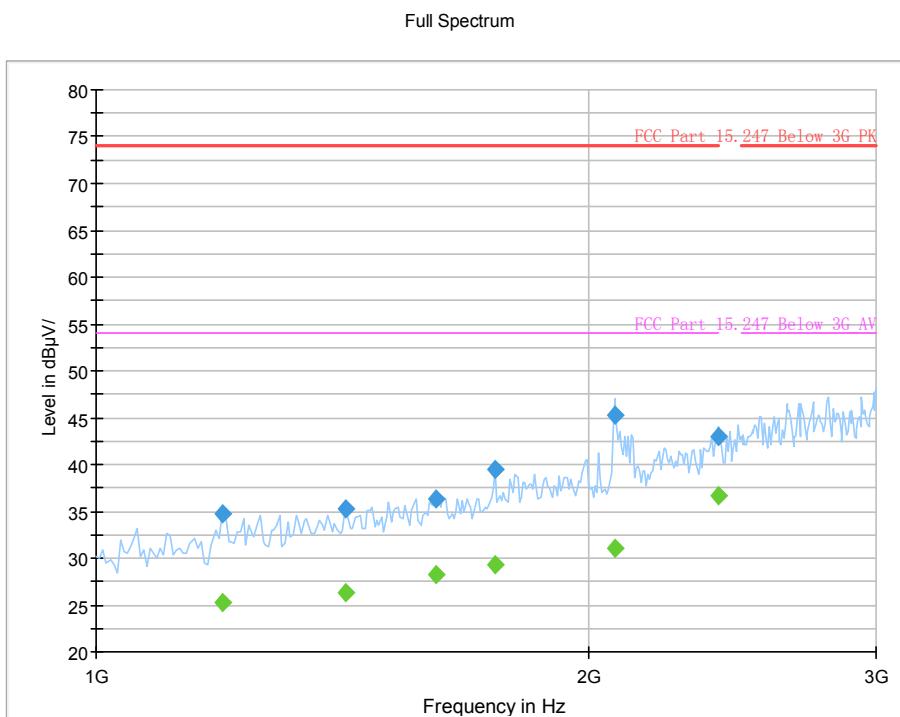
(802.11g \_2412MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
19216.833333	41.90	---	74.00	32.10	V	-5.4
19216.833333	---	30.91	54.00	23.09	V	-5.4
19963.111111	42.06	---	74.00	31.94	V	-5.0
19963.111111	---	30.33	54.00	23.67	V	-5.0
21324.222222	40.49	---	74.00	33.51	V	-4.9
21324.222222	---	29.60	54.00	24.40	V	-4.9
22477.666667	---	29.92	54.00	24.08	V	-4.9
22477.666667	40.16	---	74.00	33.84	V	-4.9
23951.555556	---	30.71	54.00	23.29	V	-4.7
23951.555556	42.05	---	74.00	31.95	V	-4.7
24565.611111	42.19	---	74.00	31.81	V	-4.6
24565.611111	---	31.27	54.00	22.73	V	-4.6



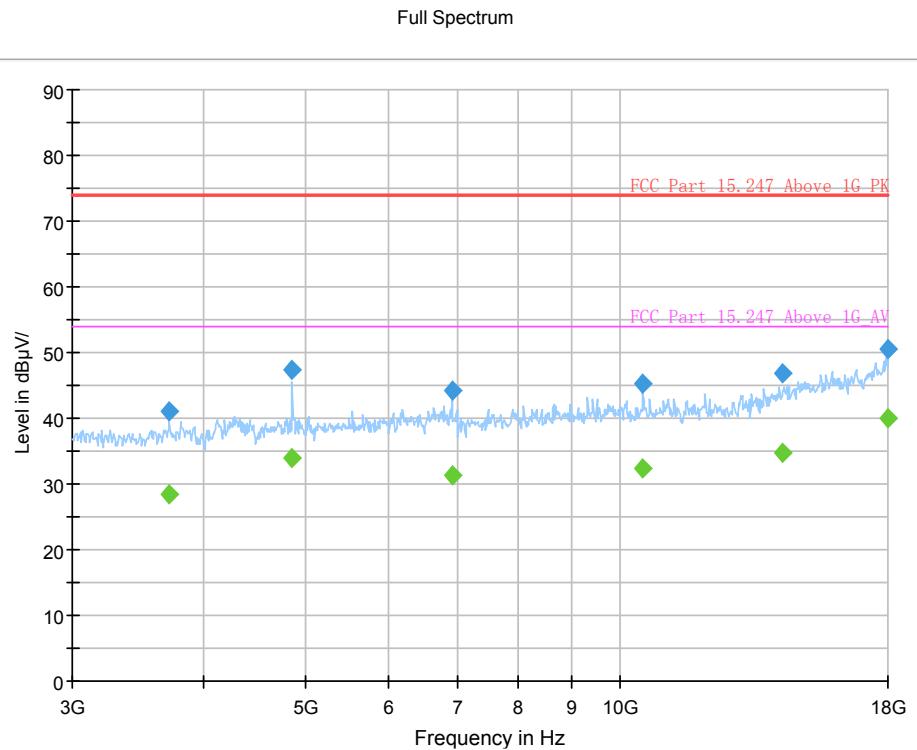
(802.11g \_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
183.475556	28.33	---	43.50	15.17	H	12.4
202.067222	34.25	---	43.50	9.25	H	14.0
235.693889	27.33	---	46.00	18.67	H	14.7
398.977222	24.45	---	46.00	21.55	H	19.6
665.026667	26.71	---	46.00	19.29	H	24.3
931.022222	31.41	---	46.00	14.59	H	28.1



(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)
1195.000000	34.70	---	74.00	39.30	H	-0.6
1195.000000	---	25.22	54.00	28.78	H	-0.6
1420.000000	---	26.26	54.00	27.74	H	1.1
1420.000000	35.24	---	74.00	38.76	H	1.1
1615.000000	36.27	---	74.00	37.73	H	3.5
1615.000000	---	28.30	54.00	25.70	H	3.5
1755.000000	---	29.24	54.00	24.76	H	4.8
1755.000000	39.43	---	74.00	34.57	H	4.8
2075.000000	45.28	---	74.00	28.72	H	7.3
2075.000000	---	30.98	54.00	23.02	H	7.3
2400.000000	43.00	---	74.00	31.00	H	13.5
2400.000000	---	36.64	54.00	17.36	H	13.5

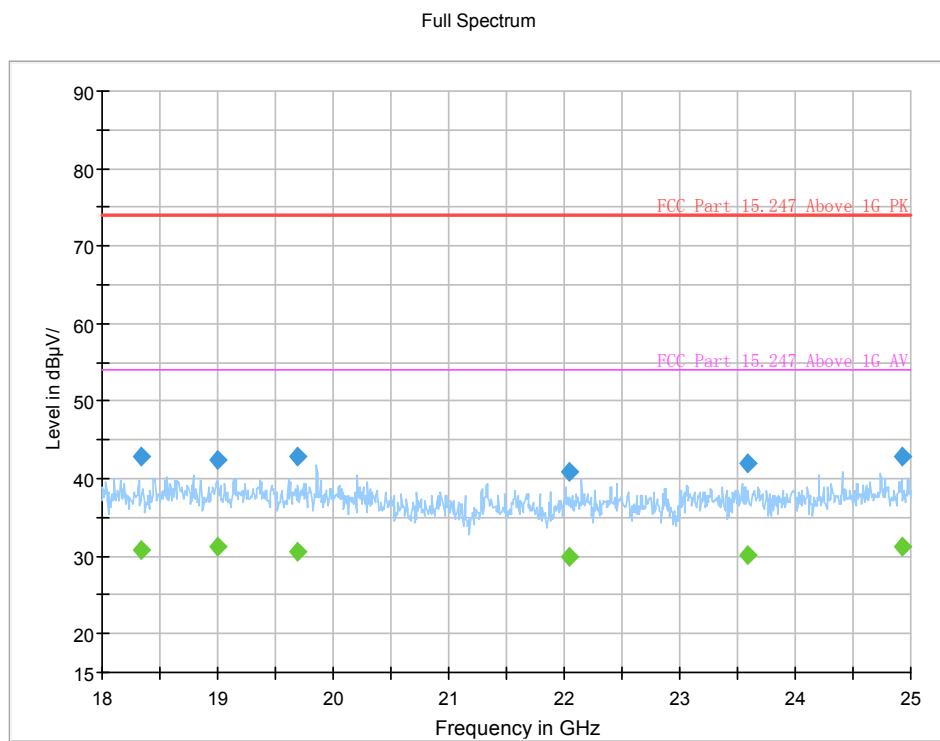


(802.11g \_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3712.500000	41.16	---	74.00	32.84	H	-5.3
3712.500000	---	28.50	54.00	25.50	H	-5.3
4867.500000	---	34.07	54.00	19.93	H	-2.9
4867.500000	47.26	---	74.00	26.74	H	-2.9
6907.500000	---	31.30	54.00	22.70	H	-0.9
6907.500000	44.15	---	74.00	29.85	H	-0.9
10515.000000	---	32.33	54.00	21.67	H	2.6
10515.000000	45.23	---	74.00	28.77	H	2.6
14295.000000	---	34.85	54.00	19.15	H	8.2
14295.000000	46.85	---	74.00	27.15	H	8.2
18000.000000	50.55	---	74.00	23.45	H	14.9
18000.000000	---	39.88	54.00	14.12	H	14.9

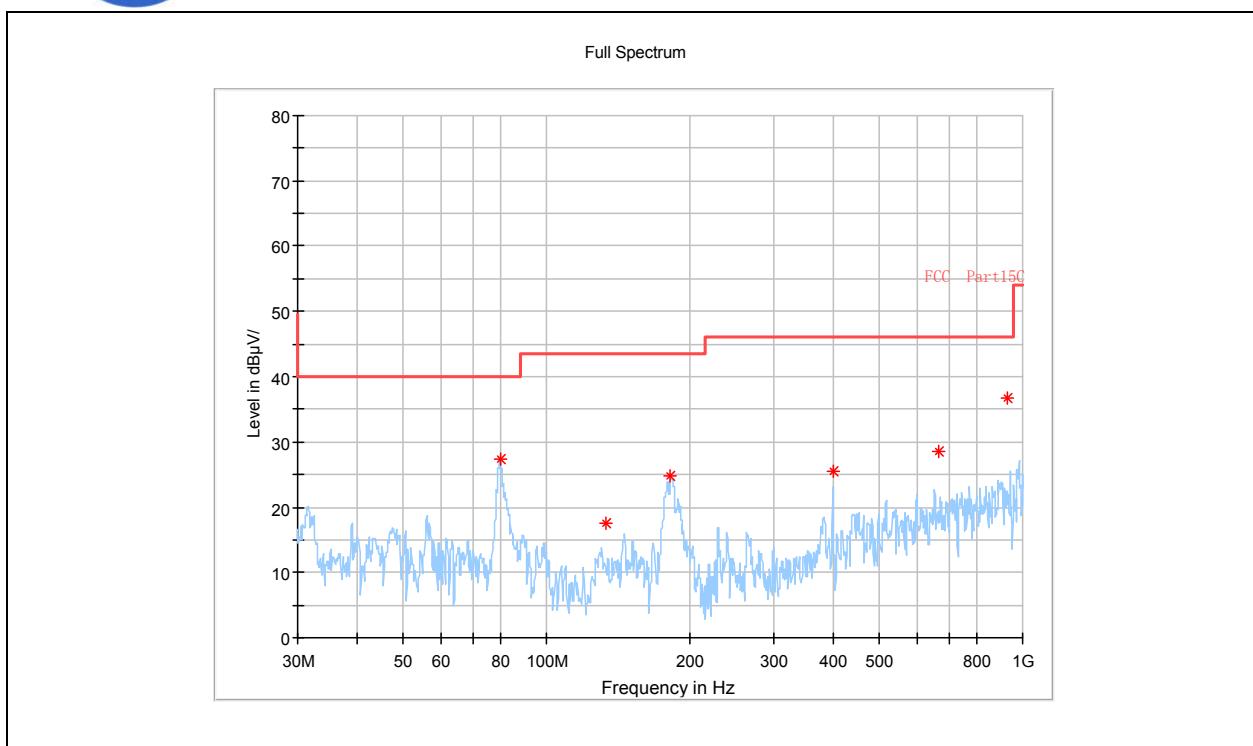


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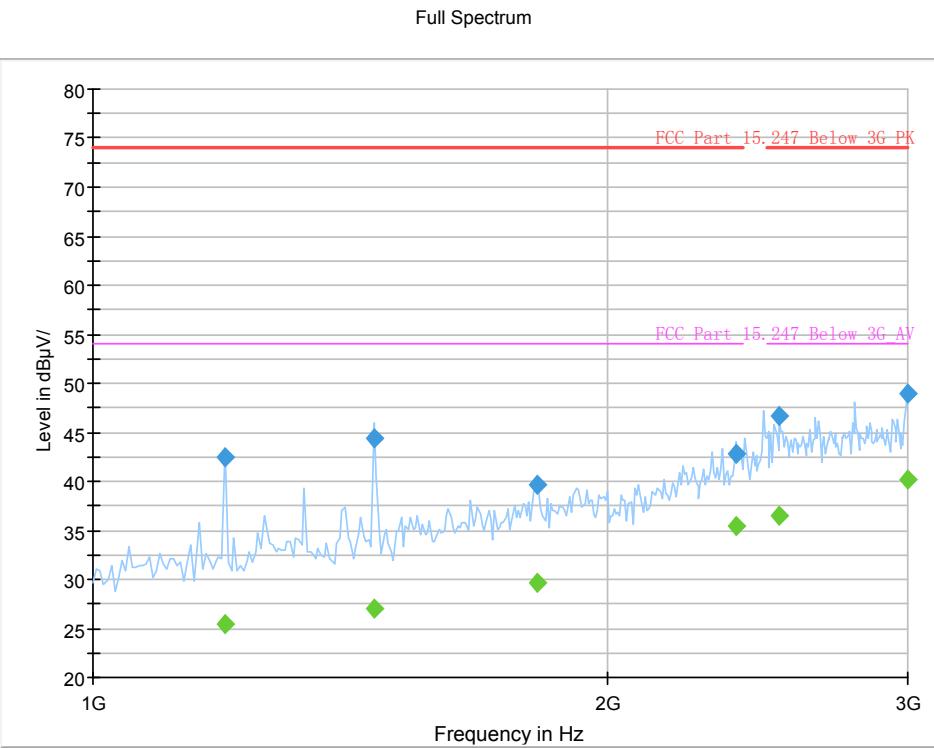
(802.11g \_2437MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18334.444444	42.92	---	74.00	31.08	H	-5.4
18334.444444	---	30.71	54.00	23.29	H	-5.4
19004.888889	42.51	---	74.00	31.49	H	-5.3
19004.888889	---	31.31	54.00	22.69	H	-5.3
19696.722222	---	30.47	54.00	23.53	H	-5.3
19696.722222	42.94	---	74.00	31.06	H	-5.3
22041.333333	---	29.96	54.00	24.04	H	-5.1
22041.333333	40.90	---	74.00	33.10	H	-5.1
23587.944444	41.95	---	74.00	32.05	H	-5.0
23587.944444	---	30.03	54.00	23.97	H	-5.0
24932.722222	42.91	---	74.00	31.09	H	-4.8
24932.722222	---	31.12	54.00	22.88	H	-4.8



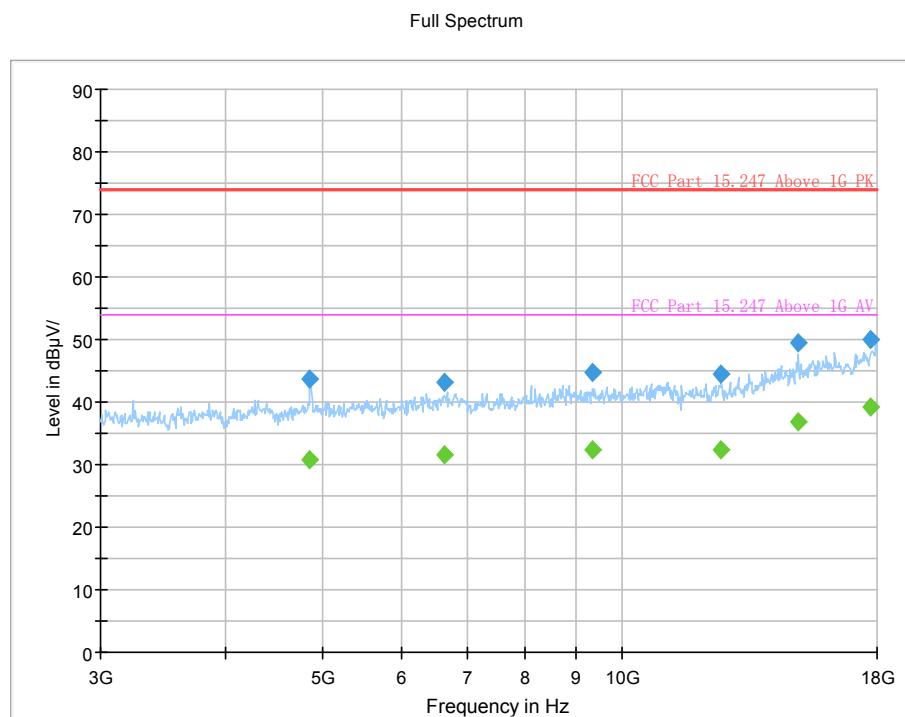
(802.11g \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.847222	27.29	---	40.00	12.71	V	10.8
132.981667	17.57	---	43.50	25.93	V	11.2
181.427778	24.72	---	43.50	18.78	V	12.7
398.977222	25.53	---	46.00	20.47	V	19.6
665.026667	28.51	---	46.00	17.49	V	24.3
931.022222	36.62	---	46.00	9.38	V	28.1



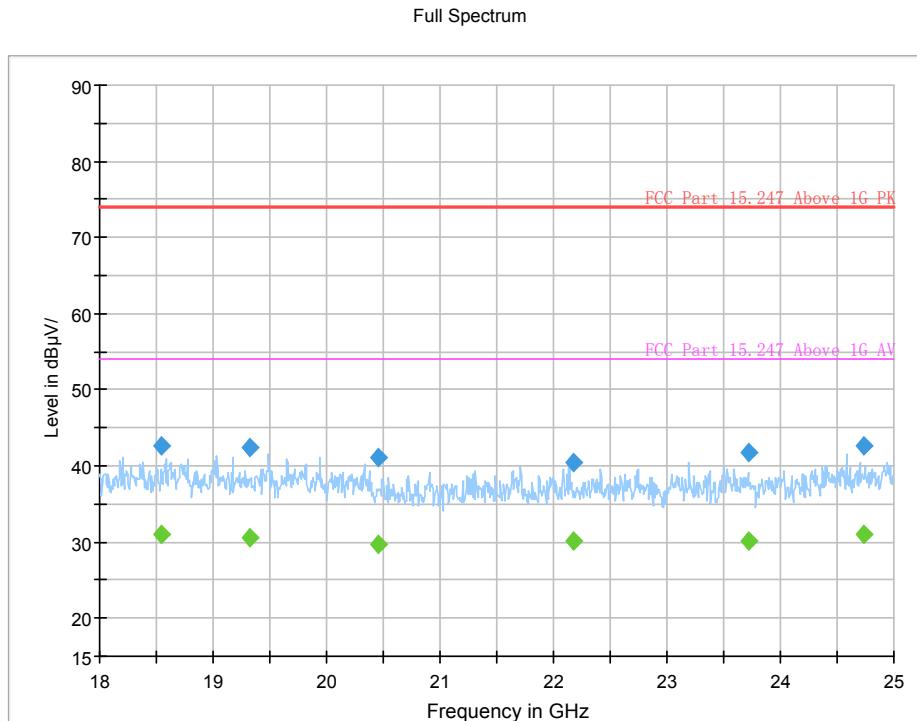
(802.11g \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
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



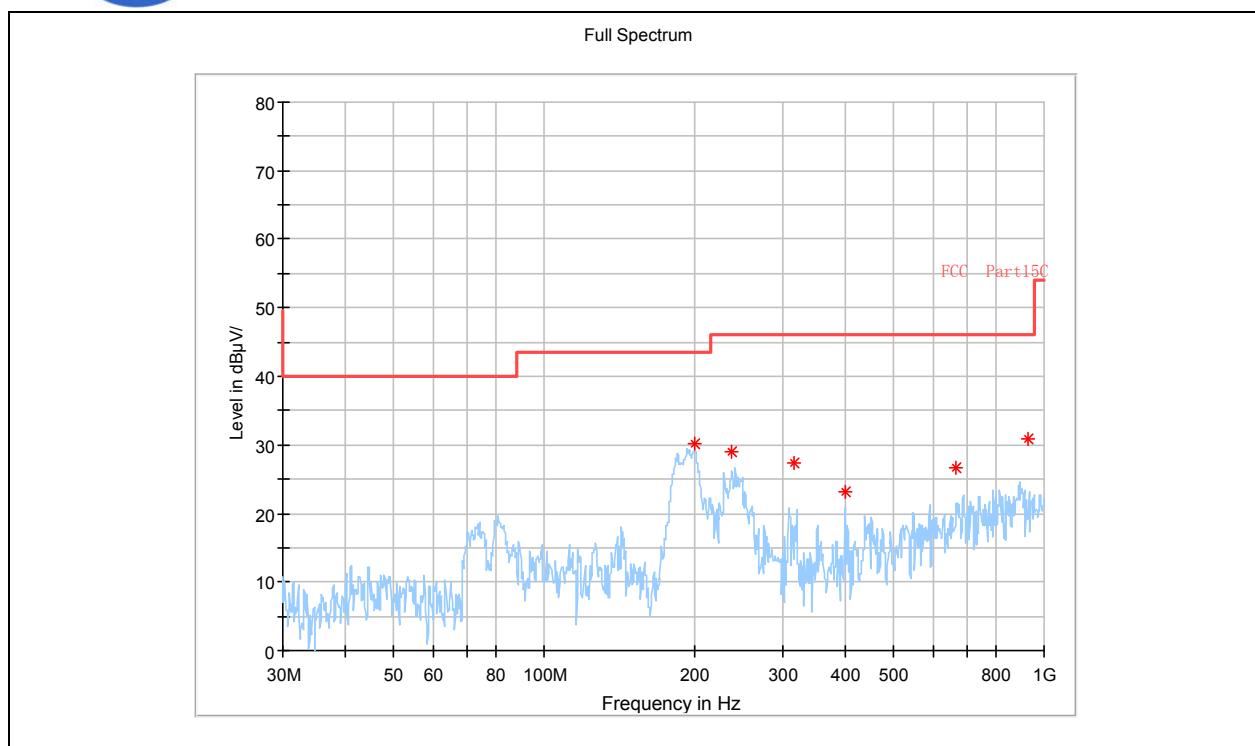
(802.11g \_2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/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
12570.000000	---	32.41	54.00	21.59	V	4.5
12570.000000	44.49	---	74.00	29.51	V	4.5
15022.50000	49.48	---	74.00	24.52	V	10.8
15022.50000	---	36.73	54.00	17.27	V	10.8
17730.00000	---	39.30	54.00	14.70	V	14.9
17730.00000	50.11	---	74.00	23.89	V	14.9



(802.11g \_2437MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18549.500000	---	31.06	54.00	22.94	V	-5.2
18549.500000	42.65	---	74.00	31.35	V	-5.2
19328.055556	42.49	---	74.00	31.51	V	-5.4
19328.055556	---	30.54	54.00	23.46	V	-5.4
20457.777778	41.01	---	74.00	32.99	V	-5.1
20457.777778	---	29.60	54.00	24.40	V	-5.1
22177.055556	---	30.07	54.00	23.93	V	-5.1
22177.055556	40.35	---	74.00	33.65	V	-5.1
23718.222222	---	30.04	54.00	23.96	V	-5.0
23718.222222	41.77	---	74.00	32.23	V	-5.0
24735.944444	---	30.92	54.00	23.08	V	-4.8
24735.944444	42.57	---	74.00	31.43	V	-4.8

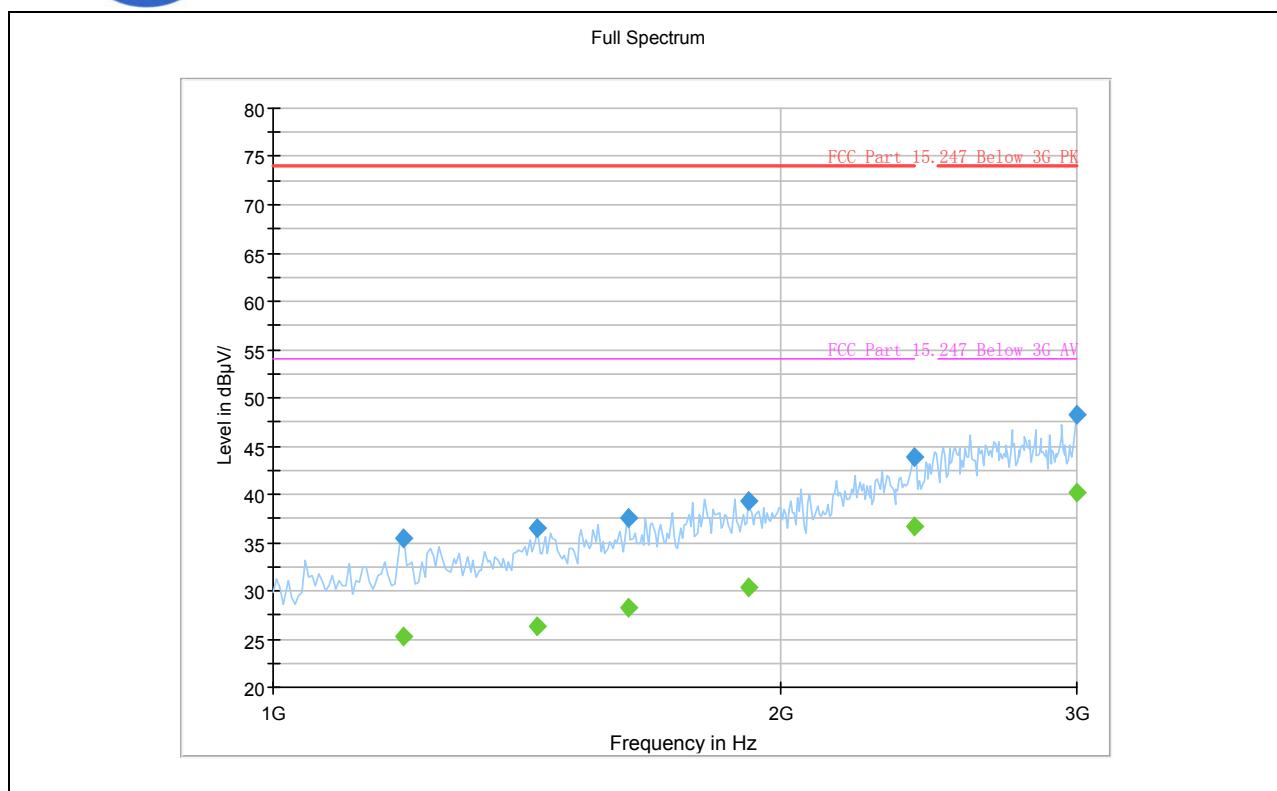


(802.11g \_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
200.288889	30.11	---	43.50	13.39	H	14.3
237.095000	28.99	---	46.00	17.01	H	14.9
316.096111	27.29	---	46.00	18.71	H	17.3
399.031111	23.18	---	46.00	22.82	H	19.6
664.972778	26.72	---	46.00	19.28	H	24.3
931.022222	30.96	---	46.00	15.04	H	28.1

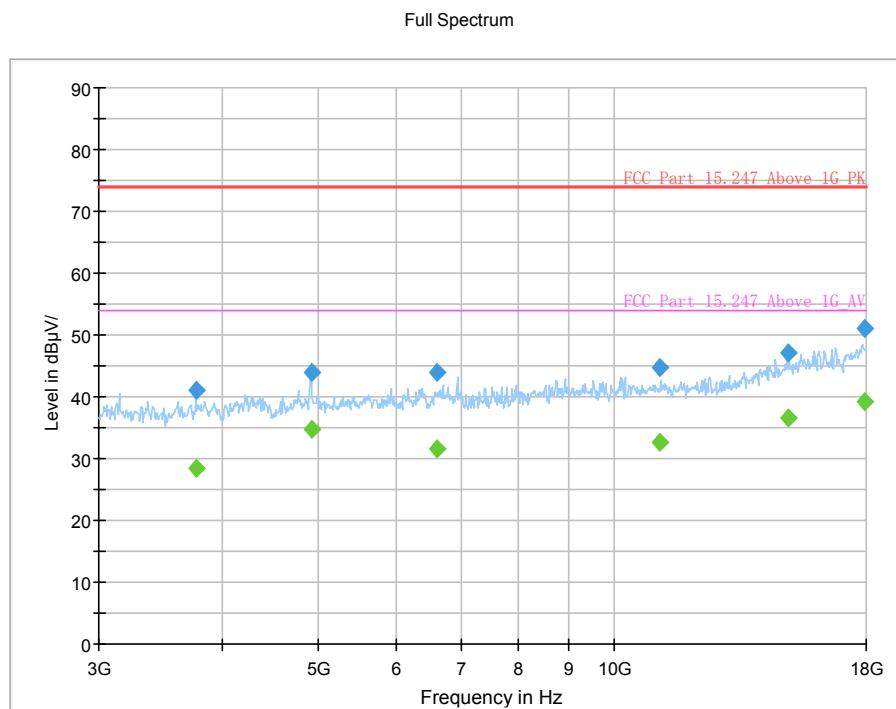


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(802.11g \_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	35.39	---	74.00	38.61	H	-0.6
1195.000000	---	25.22	54.00	28.78	H	-0.6
1435.000000	---	26.34	54.00	27.66	H	1.2
1435.000000	36.51	---	74.00	37.49	H	1.2
1625.000000	37.55	---	74.00	36.45	H	3.3
1625.000000	---	28.17	54.00	25.83	H	3.3
1915.000000	39.34	---	74.00	34.66	H	6.2
1915.000000	---	30.37	54.00	23.63	H	6.2
2400.000000	43.83	---	74.00	30.17	H	13.5
2400.000000	---	36.64	54.00	17.36	H	13.5
3000.000000	---	40.25	54.00	13.75	H	18.4
3000.000000	48.33	---	74.00	25.67	H	18.4

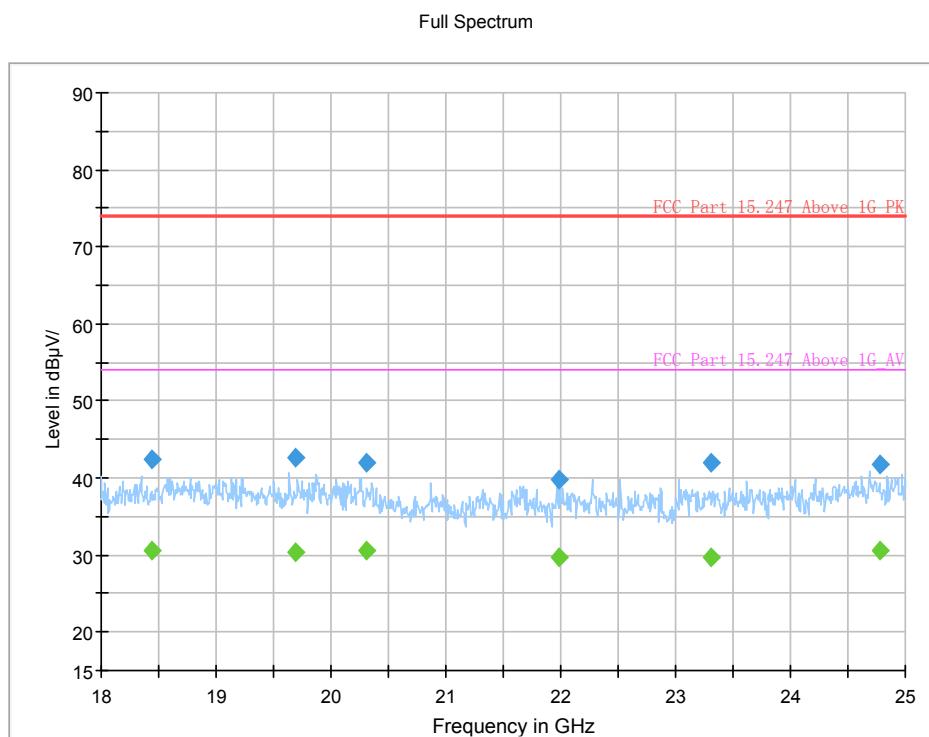


(802.11g \_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3765.000000	---	28.54	54.00	25.46	H	-5.0
3765.000000	40.95	---	74.00	33.05	H	-5.0
4927.500000	---	34.71	54.00	19.29	H	-2.8
4927.500000	43.97	---	74.00	30.03	H	-2.8
6607.500000	---	31.68	54.00	22.32	H	-0.9
6607.500000	43.97	---	74.00	30.03	H	-0.9
11122.500000	---	32.50	54.00	21.50	H	3.2
11122.500000	44.78	---	74.00	29.22	H	3.2
15000.000000	47.16	---	74.00	26.84	H	10.6
15000.000000	---	36.60	54.00	17.40	H	10.6
17940.000000	50.96	---	74.00	23.04	H	14.4
17940.000000	---	39.10	54.00	14.90	H	14.4

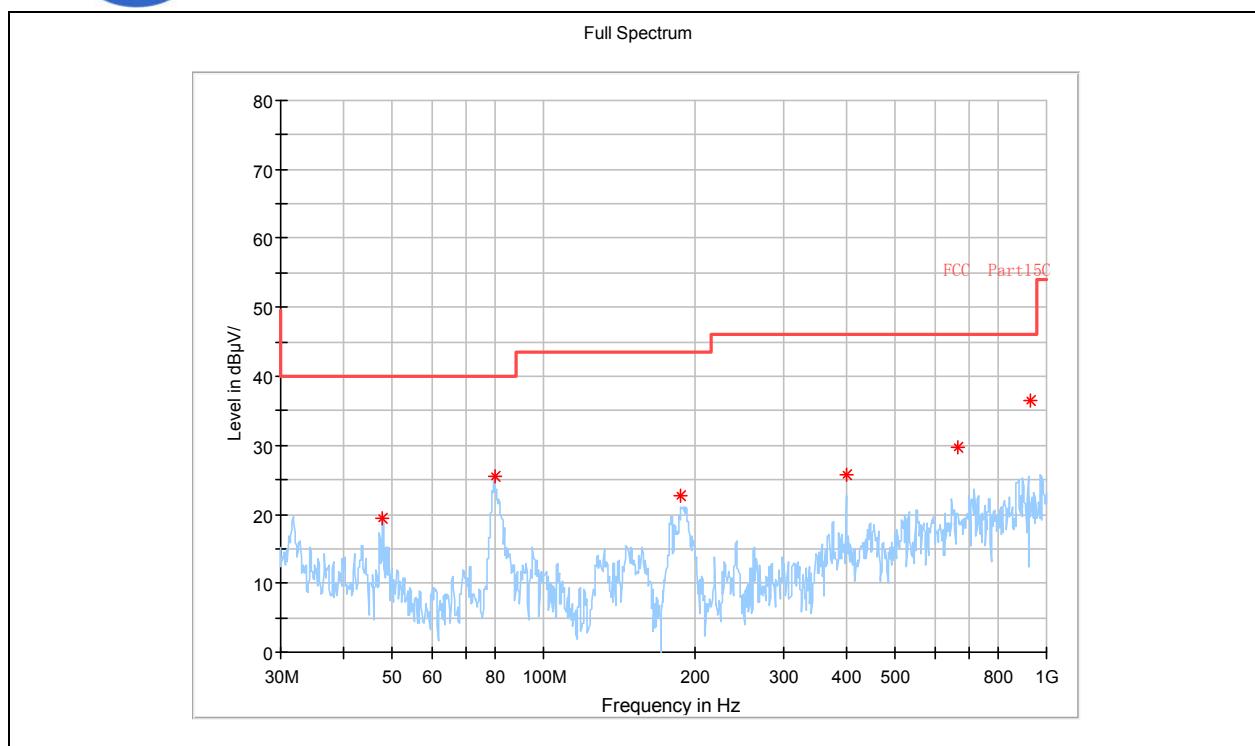


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(802.11g \_2462MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18447.222222	---	30.65	54.00	23.35	H	-5.3
18447.222222	42.52	---	74.00	31.48	H	-5.3
19690.888889	42.68	---	74.00	31.32	H	-5.3
19690.888889	---	30.42	54.00	23.58	H	-5.3
20308.055556	42.01	---	74.00	31.99	H	-5.0
20308.055556	---	30.64	54.00	23.36	H	-5.0
21991.944444	39.82	---	74.00	34.18	H	-5.1
21991.944444	---	29.68	54.00	24.32	H	-5.1
23303.277778	---	29.71	54.00	24.29	H	-5.0
23303.277778	41.94	---	74.00	32.06	H	-5.0
24784.166667	41.76	---	74.00	32.24	H	-4.8
24784.166667	---	30.62	54.00	23.38	H	-4.8

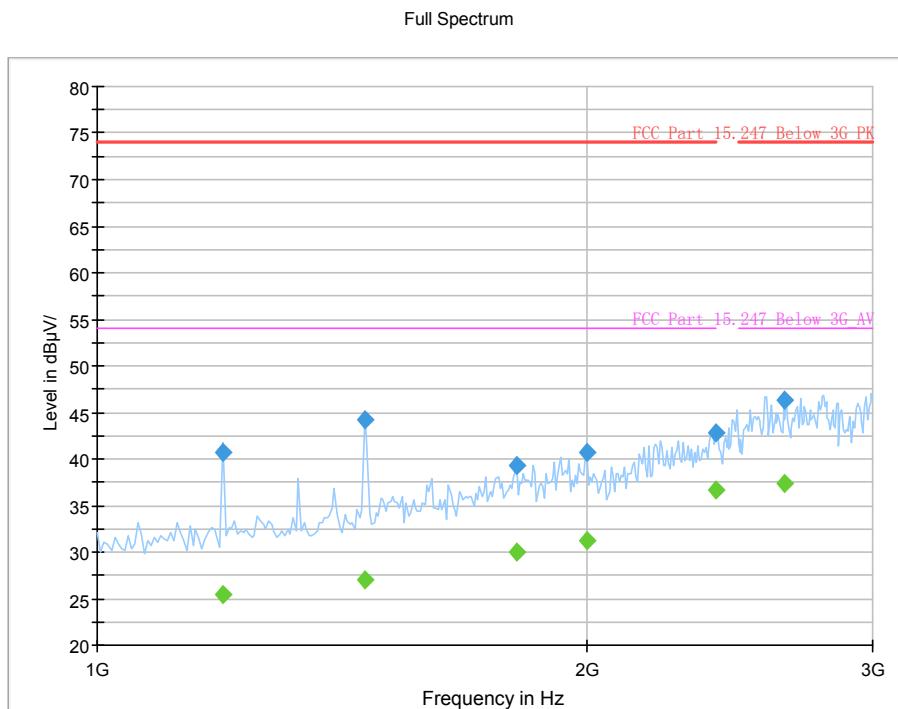


(802.11g \_2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
47.891111	19.50	---	40.00	20.50	V	15.5
79.847222	25.49	---	40.00	14.51	V	10.8
187.301667	22.59	---	43.50	20.91	V	12.8
399.031111	25.65	---	46.00	20.35	V	19.6
665.026667	29.61	---	46.00	16.39	V	24.3
931.022222	36.55	---	46.00	9.45	V	28.1

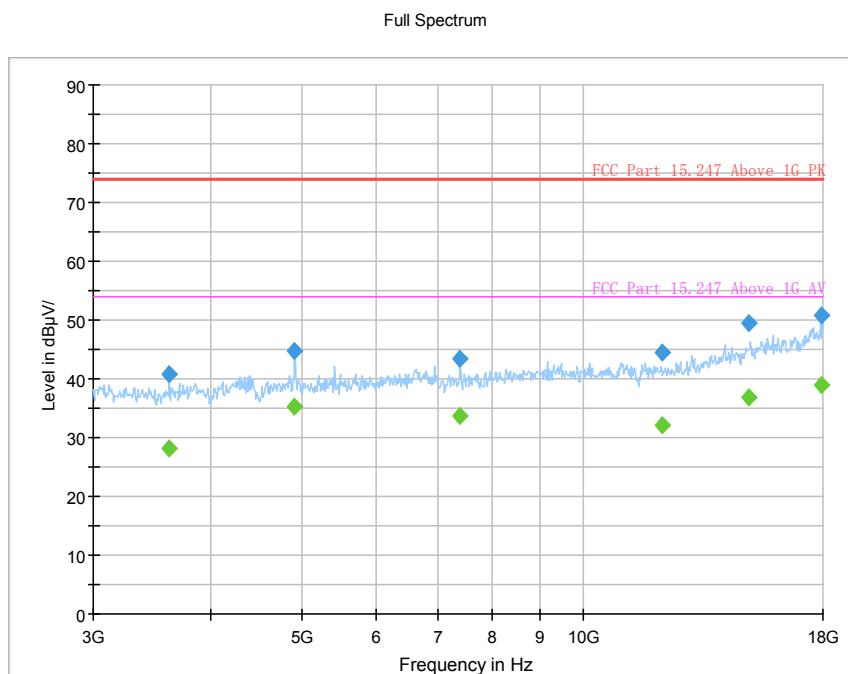


REPORT No. : KH18110035W04



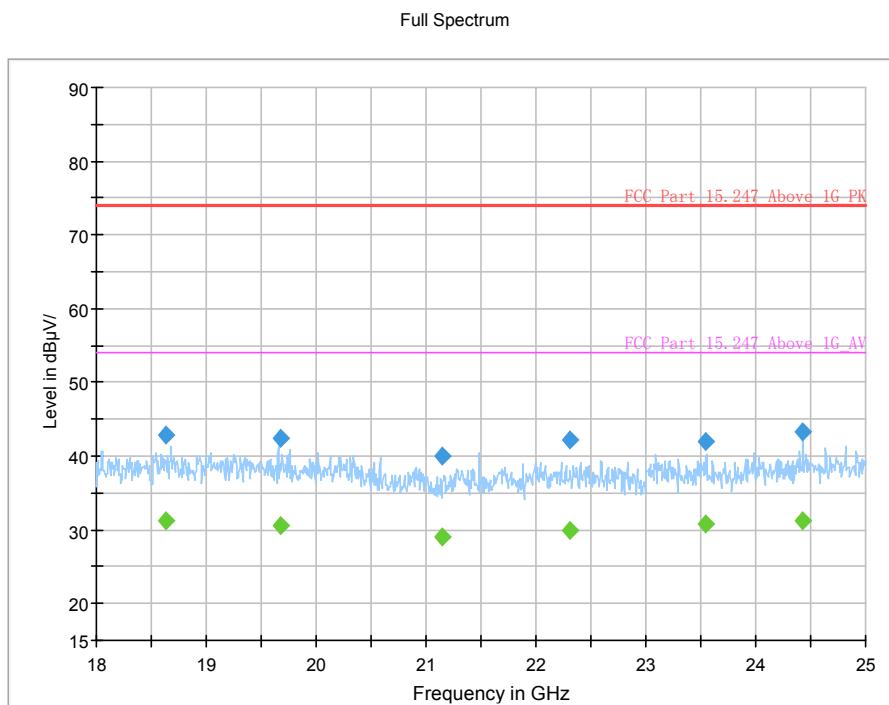
(802.11g \_2462MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.47	54.00	28.53	V	-0.6
1195.000000	40.63	---	74.00	33.37	V	-0.6
1460.000000	---	27.06	54.00	26.94	V	1.6
1460.000000	44.15	---	74.00	29.85	V	1.6
1810.000000	---	30.02	54.00	23.98	V	6.0
1810.000000	39.32	---	74.00	34.68	V	6.0
2000.000000	40.77	---	74.00	33.23	V	7.5
2000.000000	---	31.19	54.00	22.81	V	7.5
2400.000000	42.88	---	74.00	31.12	V	13.5
2400.000000	---	36.58	54.00	17.42	V	13.5
2645.000000	---	37.36	54.00	16.64	V	15.5
2645.000000	46.26	---	74.00	27.74	V	15.5



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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3615.000000	40.71	---	74.00	33.29	V	-5.8
3615.000000	---	28.12	54.00	25.88	V	-5.8
4920.000000	---	35.33	54.00	18.67	V	-2.8
4920.000000	44.66	---	74.00	29.34	V	-2.8
7387.500000	43.29	---	74.00	20.71	V	-0.4
7387.500000	---	33.68	54.00	20.32	V	-0.4
12120.000000	---	32.08	54.00	21.92	V	3.9
12120.000000	44.43	---	74.00	29.57	V	3.9
15015.000000	49.41	---	74.00	24.59	V	10.8
15015.000000	---	36.77	54.00	17.23	V	10.8
17917.50000	50.81	---	74.00	23.19	V	14.3
17917.50000	---	39.00	54.00	15.00	V	14.3



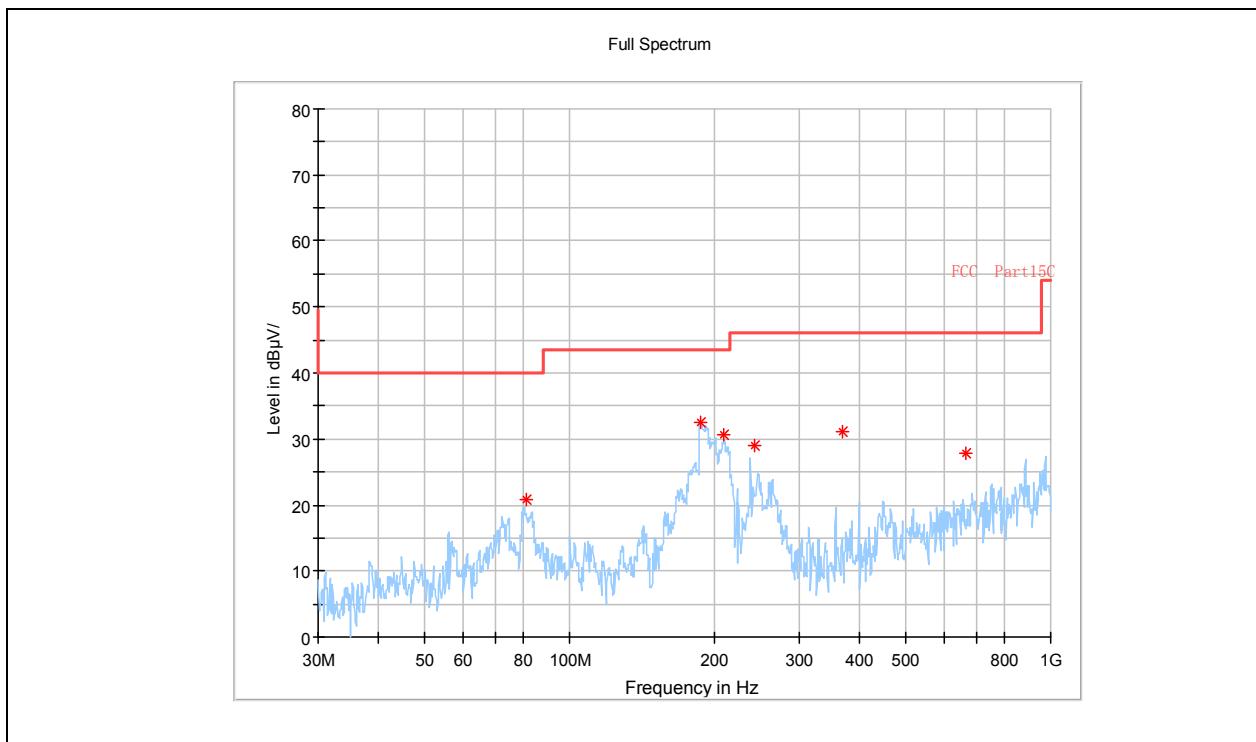
(802.11g \_2462MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18636.611111	42.87	---	74.00	31.13	V	-5.3
18636.611111	---	31.33	54.00	22.67	V	-5.3
19678.444444	42.31	---	74.00	31.69	V	-5.3
19678.444444	---	30.61	54.00	23.39	V	-5.3
21143.000000	---	28.95	54.00	25.05	V	-5.1
21143.000000	40.07	---	74.00	33.93	V	-5.1
22308.500000	---	29.88	54.00	24.12	V	-4.9
22308.500000	42.26	---	74.00	31.74	V	-4.9
23544.388889	---	30.69	54.00	23.31	V	-4.9
23544.388889	42.06	---	74.00	31.94	V	-4.9
24433.777778	---	31.33	54.00	22.67	V	-4.6
24433.777778	43.20	---	74.00	30.80	V	-4.6



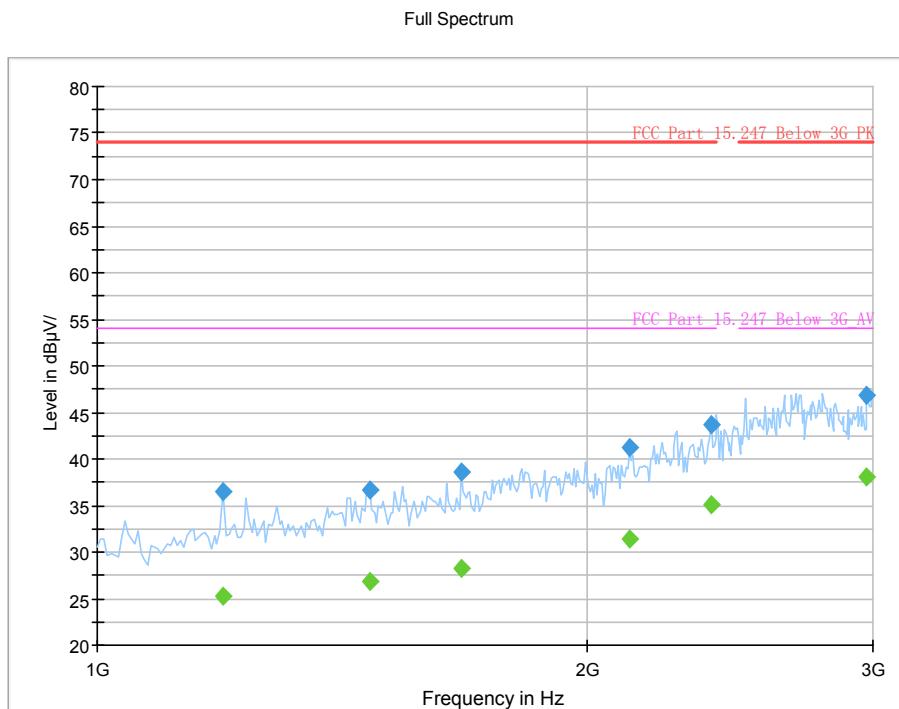
REPORT No. : KH18110035W04

## 802.11n-20MHz Test mode



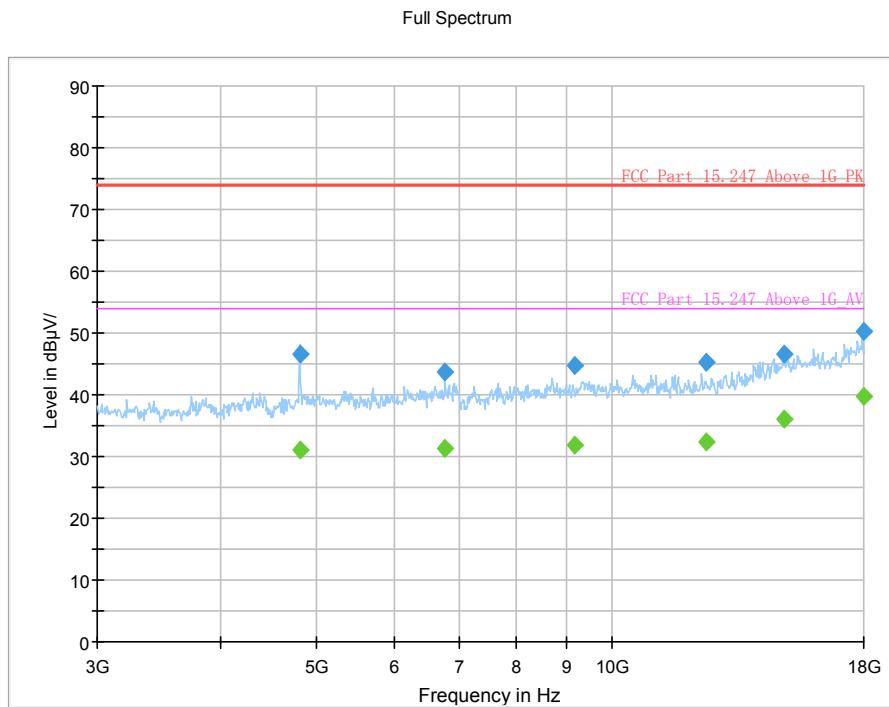
(802.11n\_20M \_2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
81.194444	20.91	---	40.00	19.09	H	10.3
186.547222	32.47	---	43.50	11.03	H	12.6
209.719444	30.59	---	43.50	12.91	H	13.3
242.106667	29.11	---	46.00	16.89	H	15.1
368.637778	31.11	---	46.00	14.89	H	17.7
665.026667	27.90	---	46.00	18.10	H	24.3



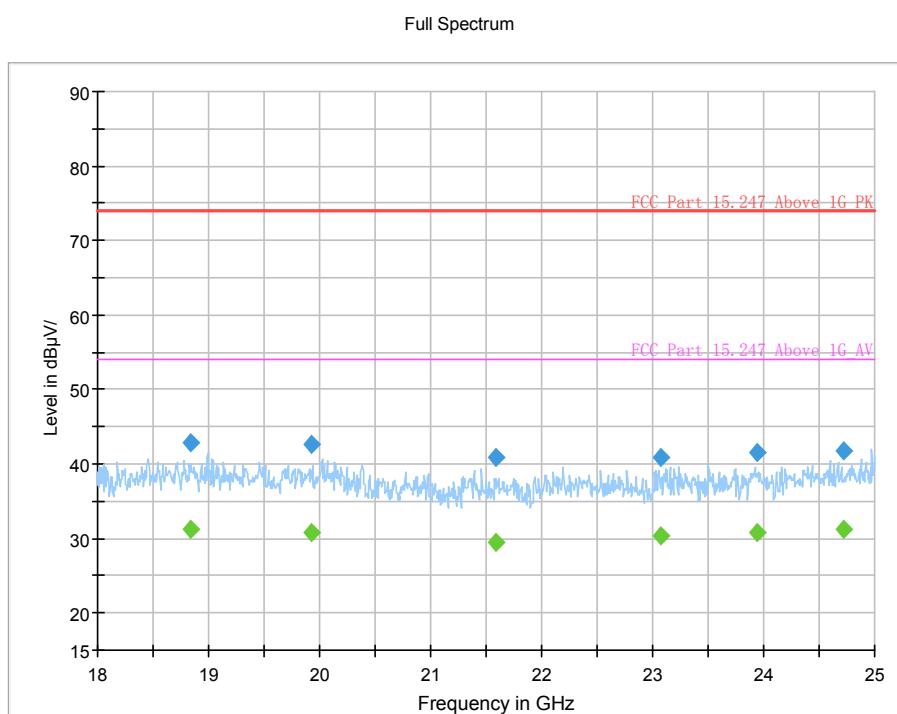
(802.11n\_20M \_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	36.45	---	74.00	37.55	H	-0.6
1195.000000	---	25.19	54.00	28.81	H	-0.6
1470.000000	---	26.81	54.00	27.19	H	1.7
1470.000000	36.61	---	74.00	37.39	H	1.7
1675.000000	38.54	---	74.00	35.46	H	3.4
1675.000000	---	28.28	54.00	25.72	H	3.4
2125.000000	---	31.39	54.00	22.61	H	8.2
2125.000000	41.25	---	74.00	32.75	H	8.2
2385.000000	---	35.15	54.00	18.85	H	12.3
2385.000000	43.70	---	74.00	30.30	H	12.3
2975.000000	---	38.04	54.00	15.96	H	16.3
2975.000000	46.92	---	74.00	27.08	H	16.3



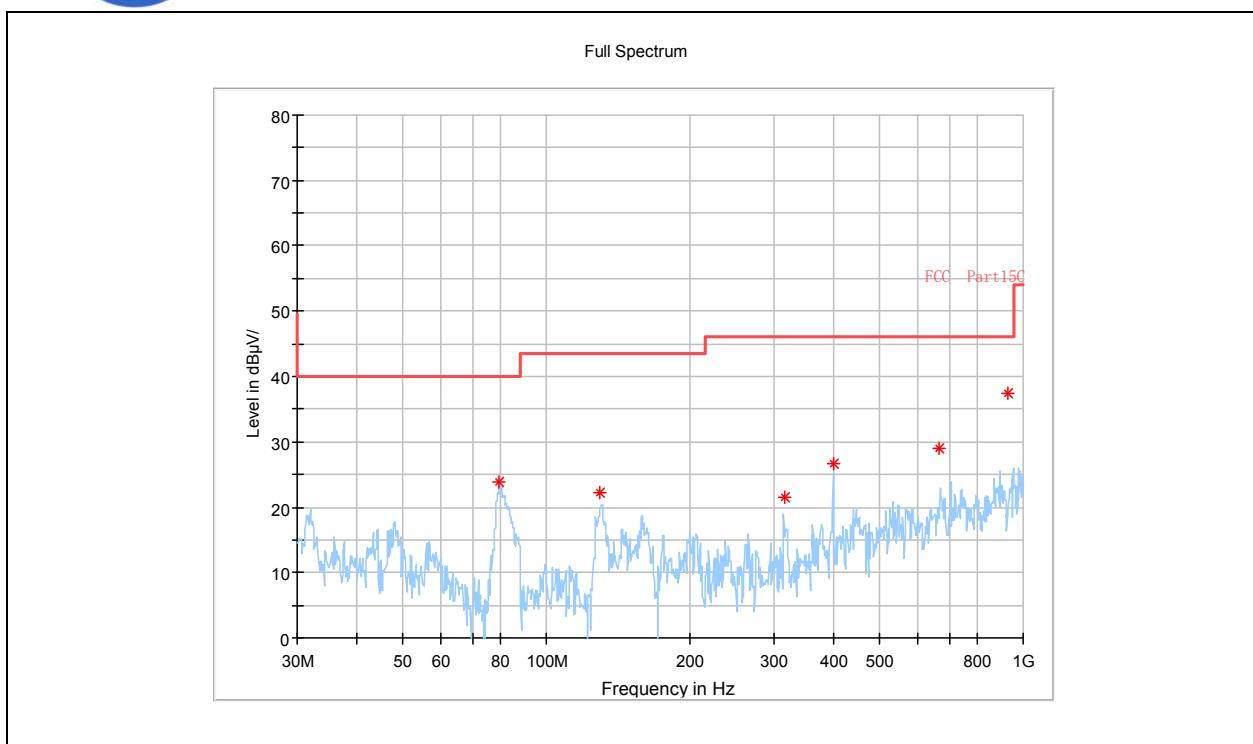
(802.11n\_20M \_2412MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4815.000000	46.54	---	74.00	27.46	H	-3.3
4815.000000	---	31.13	54.00	22.87	H	-3.3
6765.000000	---	31.27	54.00	22.73	H	-1.2
6765.000000	43.64	---	74.00	30.36	H	-1.2
9150.000000	44.85	---	74.00	29.15	H	1.6
9150.000000	---	31.71	54.00	22.29	H	1.6
12442.50000	45.24	---	74.00	28.76	H	4.6
12442.50000	---	32.38	54.00	21.62	H	4.6
14970.00000	46.67	---	74.00	27.33	H	10.0
14970.00000	---	36.16	54.00	17.84	H	10.0
17992.50000	---	39.71	54.00	14.29	H	15.0
17992.50000	50.38	---	74.00	23.62	H	15.0



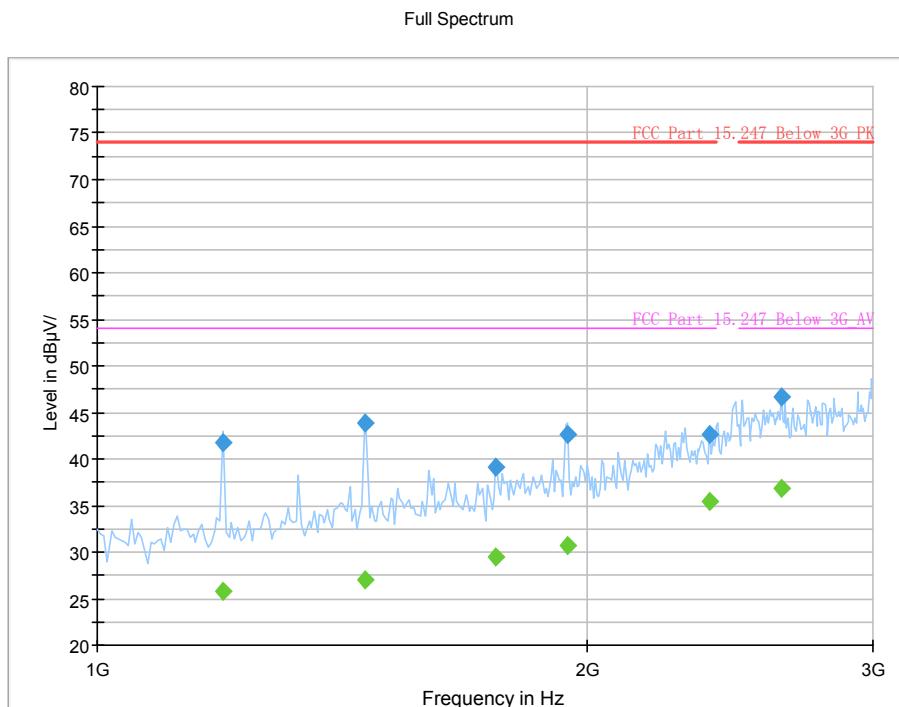
(802.11n\_20M \_2412MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18833.777778	42.86	---	74.00	31.14	H	-5.3
18833.777778	---	31.24	54.00	22.76	H	-5.3
19929.277778	---	30.73	54.00	23.27	H	-5.0
19929.277778	42.64	---	74.00	31.36	H	-5.0
21582.444444	---	29.58	54.00	24.42	H	-5.1
21582.444444	40.84	---	74.00	33.16	H	-5.1
23078.888889	---	30.46	54.00	23.54	H	-5.0
23078.888889	40.84	---	74.00	33.16	H	-5.0
23939.500000	41.56	---	74.00	32.44	H	-4.7
23939.500000	---	30.81	54.00	23.19	H	-4.7
24721.166667	---	31.12	54.00	22.88	H	-4.8
24721.166667	41.72	---	74.00	32.28	H	-4.8



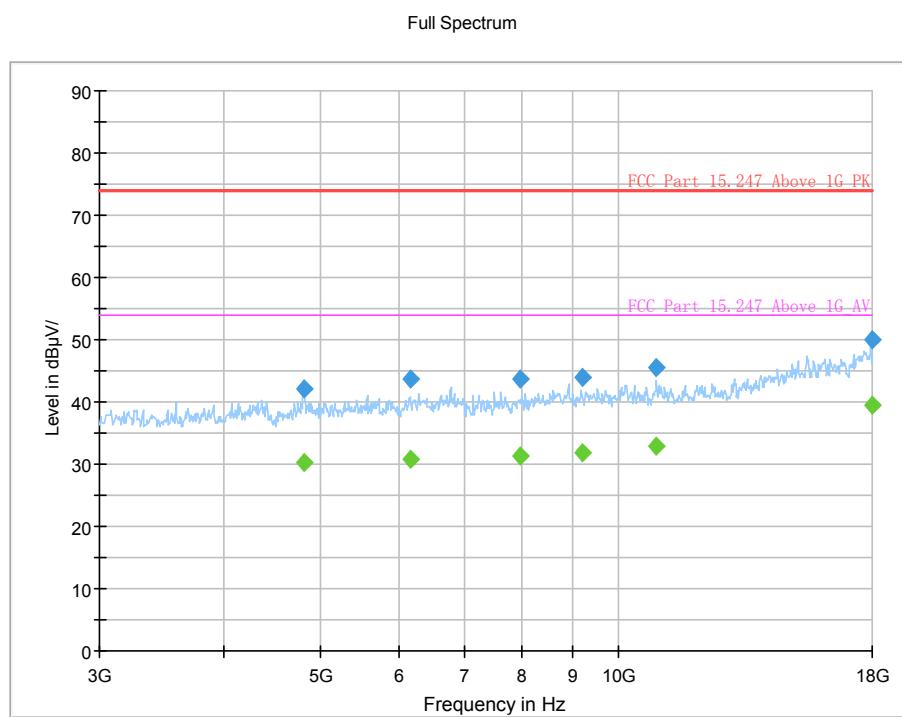
(802.11n\_20M \_2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.739444	23.84	---	40.00	16.16	V	10.8
129.155556	22.17	---	43.50	21.33	V	12.1
317.066111	21.47	---	46.00	24.53	V	17.5
398.977222	26.75	---	46.00	19.25	V	19.6
665.026667	29.03	---	46.00	16.97	V	24.3
931.022222	37.33	---	46.00	8.67	V	28.1



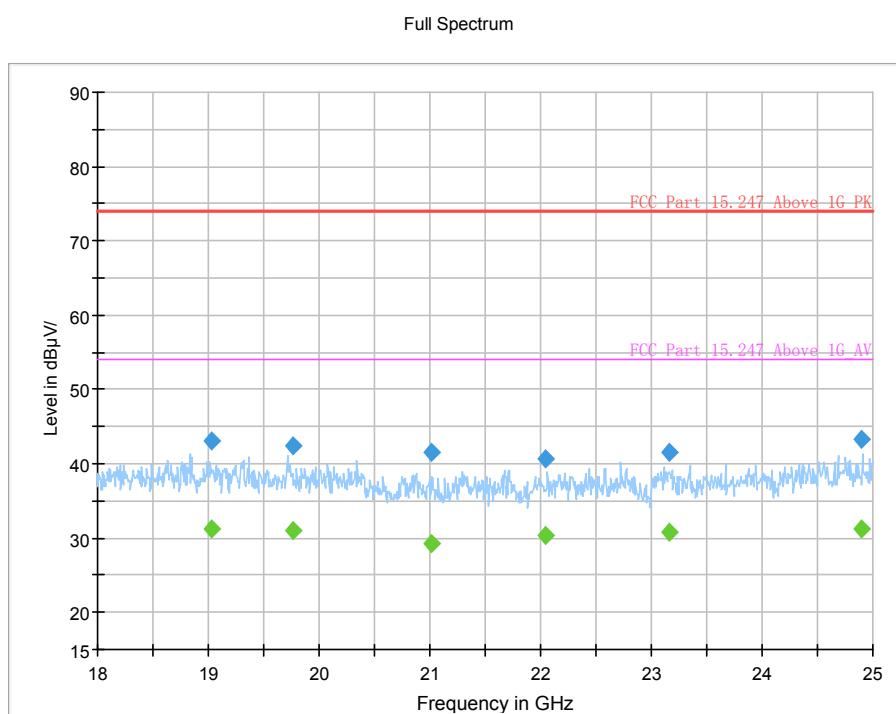
(802.11n\_20M \_2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.75	54.00	28.25	V	-0.6
1195.000000	41.75	---	74.00	32.25	V	-0.6
1460.000000	---	27.04	54.00	26.96	V	1.6
1460.000000	43.91	---	74.00	30.09	V	1.6
1760.000000	39.15	---	74.00	34.85	V	5.0
1760.000000	---	29.48	54.00	24.52	V	5.0
1945.000000	42.64	---	74.00	31.36	V	6.8
1945.000000	---	30.71	54.00	23.29	V	6.8
2380.000000	42.72	---	74.00	31.28	V	12.0
2380.000000	---	35.42	54.00	18.58	V	12.0
2635.000000	46.67	---	74.00	27.33	V	14.9
2635.000000	---	36.77	54.00	17.23	V	14.9



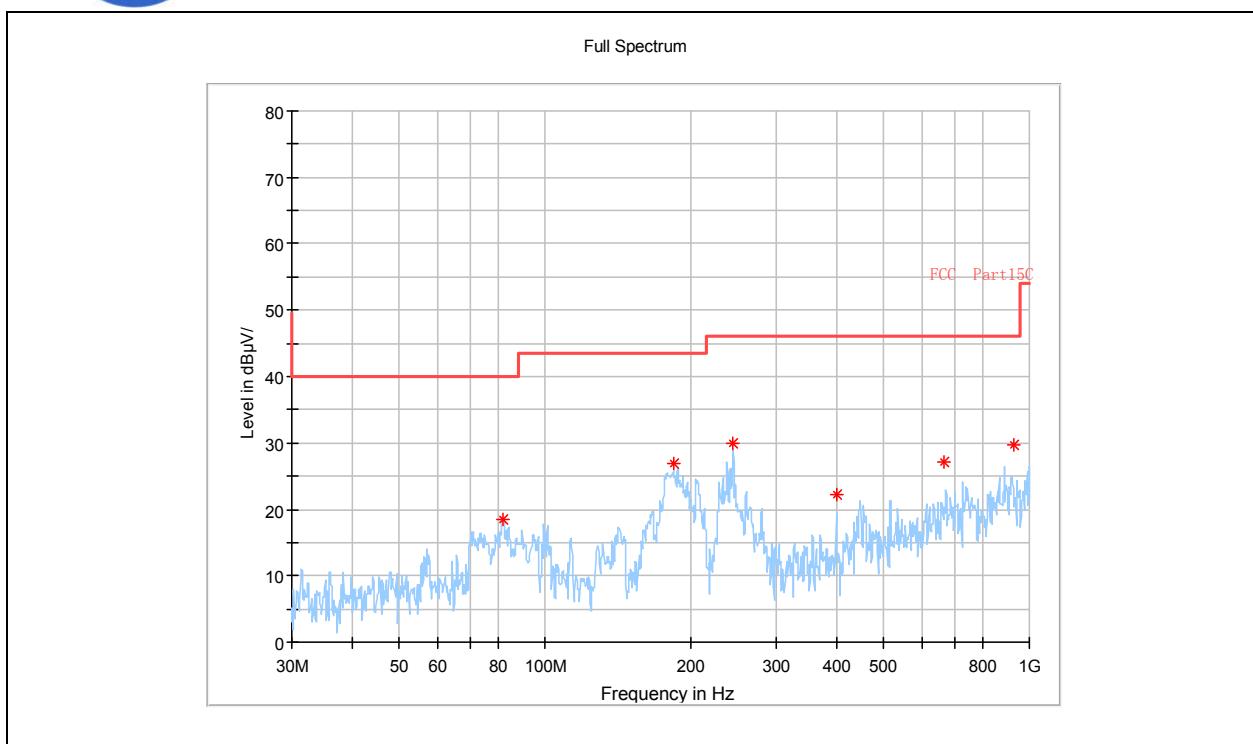
(802.11n\_20M \_2412MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4822.500000	---	30.33	54.00	23.67	V	-3.2
4822.500000	42.00	---	74.00	32.00	V	-3.2
6172.500000	---	30.83	54.00	23.17	V	-1.6
6172.500000	43.77	---	74.00	30.23	V	-1.6
7965.000000	---	31.39	54.00	22.61	V	1.2
7965.000000	43.75	---	74.00	30.25	V	1.2
9195.000000	43.96	---	74.00	30.04	V	1.5
9195.000000	---	31.84	54.00	22.16	V	1.5
10920.000000	45.53	---	74.00	28.47	V	3.3
10920.000000	---	32.79	54.00	21.21	V	3.3
17985.000000	---	39.49	54.00	14.51	V	15.0
17985.000000	50.11	---	74.00	23.89	V	15.0



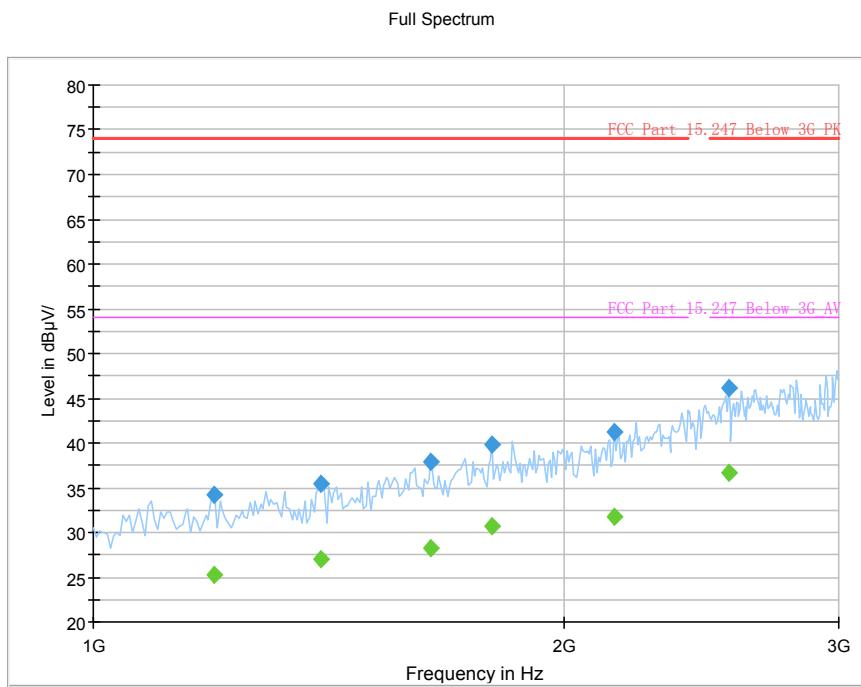
(802.11n\_20M \_2412MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
19034.444444	---	31.22	54.00	22.78	V	-5.4
19034.444444	42.98	---	74.00	31.02	V	-5.4
19762.444444	---	31.06	54.00	22.94	V	-5.2
19762.444444	42.42	---	74.00	31.58	V	-5.2
21009.222222	41.52	---	74.00	32.48	V	-5.1
21009.222222	---	29.26	54.00	24.74	V	-5.1
22043.277778	40.71	---	74.00	33.29	V	-5.1
22043.277778	---	30.26	54.00	23.74	V	-5.1
23167.555556	41.48	---	74.00	32.52	V	-5.0
23167.555556	---	30.71	54.00	23.29	V	-5.0
24900.444444	43.18	---	74.00	30.82	V	-4.8
24900.444444	---	31.15	54.00	22.85	V	-4.8



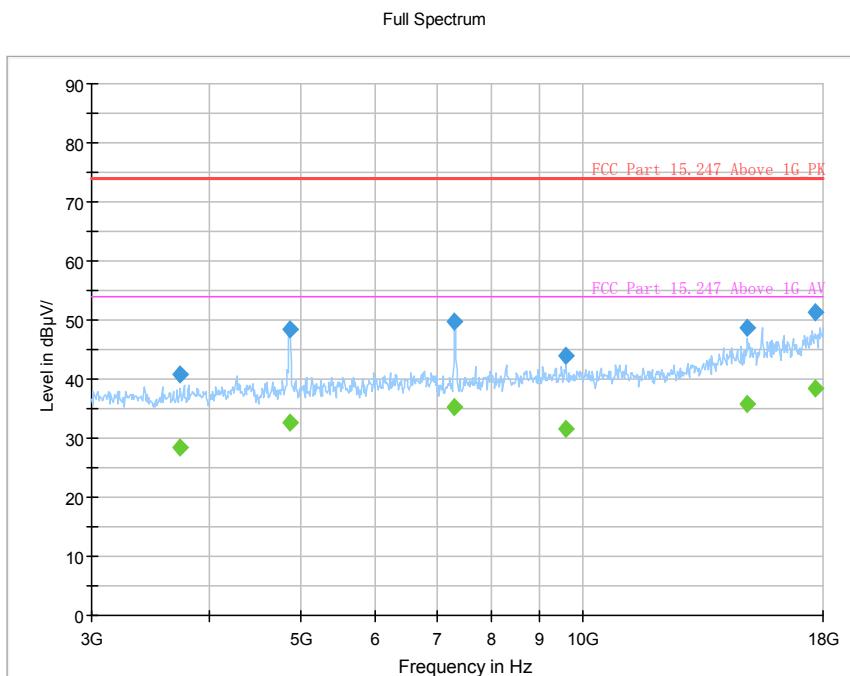
(802.11n\_20M \_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
82.110556	18.44	---	40.00	21.56	H	9.9
184.014444	26.97	---	43.50	16.53	H	12.3
244.962778	29.89	---	46.00	16.11	H	14.9
398.977222	22.25	---	46.00	23.75	H	19.6
664.972778	27.14	---	46.00	18.86	H	24.3
931.022222	29.72	---	46.00	16.28	H	28.1



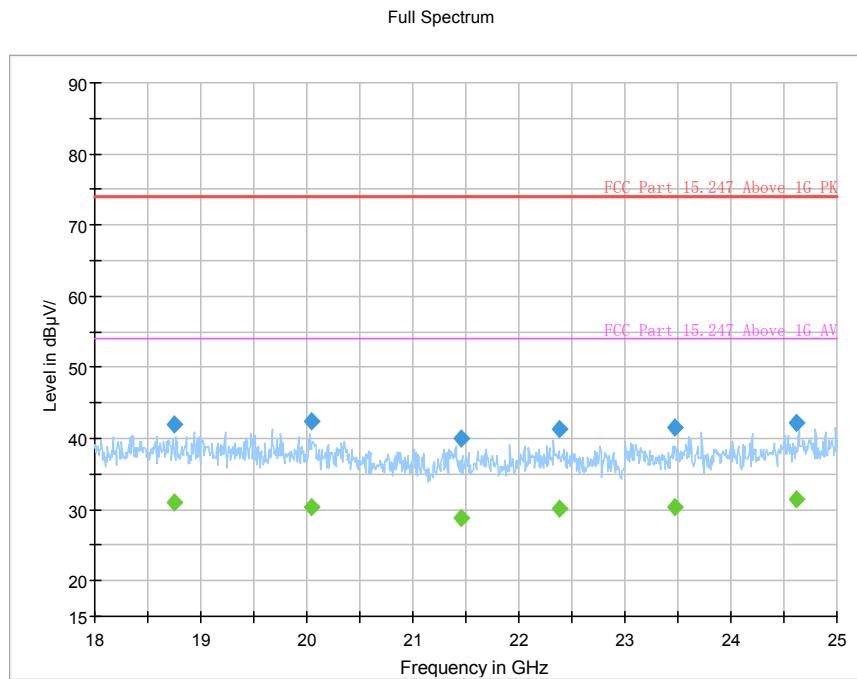
(802.11n\_20M \_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.19	54.00	28.81	H	-0.6
1195.000000	34.14	---	74.00	39.86	H	-0.6
1400.000000	---	26.99	54.00	27.01	H	1.7
1400.000000	35.43	---	74.00	38.57	H	1.7
1645.000000	---	28.17	54.00	25.83	H	3.4
1645.000000	37.82	---	74.00	36.18	H	3.4
1800.000000	---	30.62	54.00	23.38	H	6.7
1800.000000	39.80	---	74.00	34.20	H	6.7
2155.000000	41.31	---	74.00	32.69	H	8.3
2155.000000	---	31.72	54.00	22.28	H	8.3
2550.000000	46.19	---	74.00	27.81	H	14.4
2550.000000	---	36.72	54.00	17.28	H	14.4



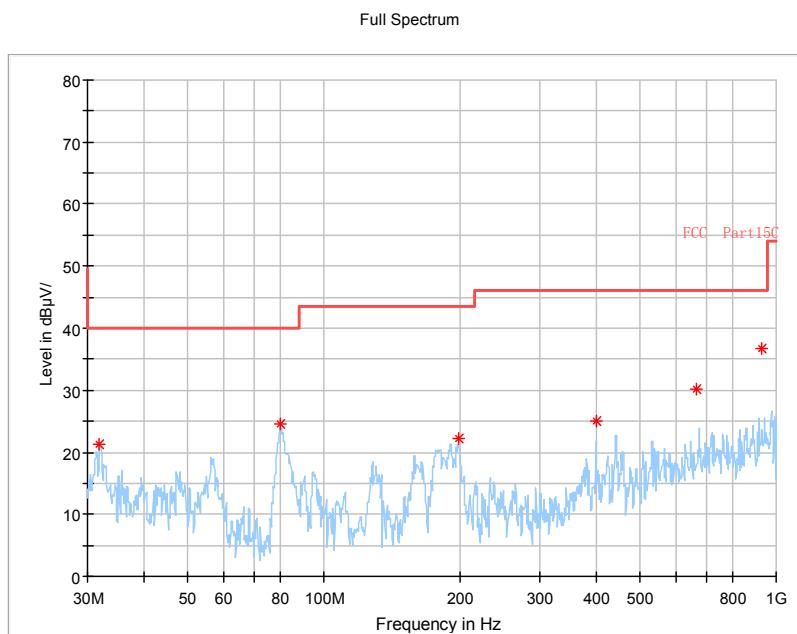
(802.11n\_20M \_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
3727.500000	40.78	---	74.00	33.22	H	-5.2
3727.500000	---	28.44	54.00	25.56	H	-5.2
4882.500000	48.30	---	74.00	25.70	H	-2.8
4882.500000	---	32.60	54.00	21.40	H	-2.8
7305.000000	49.62	---	74.00	24.38	H	-0.3
7305.000000	---	35.38	54.00	18.62	H	-0.3
9600.000000	---	31.60	54.00	22.40	H	2.0
9600.000000	43.92	---	74.00	30.08	H	2.0
14955.000000	---	35.92	54.00	18.08	H	9.7
14955.000000	48.65	---	74.00	25.35	H	9.7
17685.000000	51.37	---	74.00	22.63	H	14.0
17685.000000	---	38.53	54.00	15.47	H	14.0



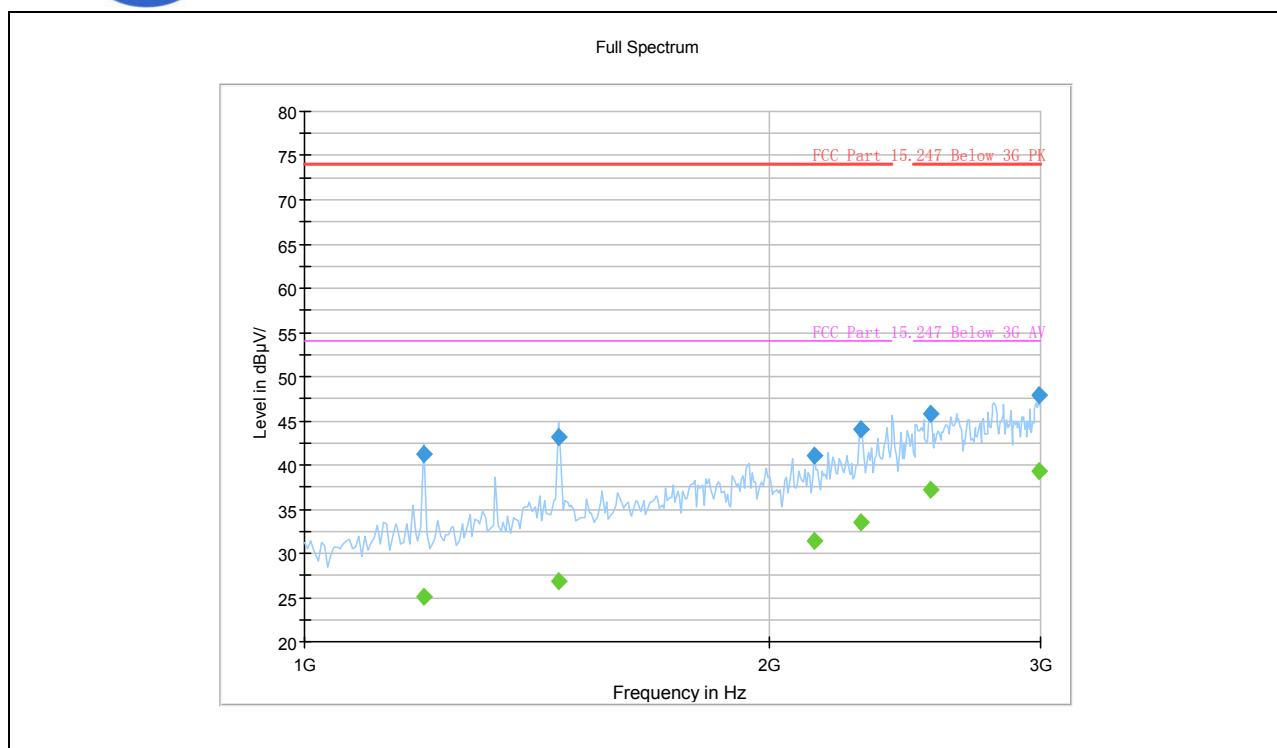
(802.11n\_20M \_2437MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18747.833333	---	30.95	54.00	23.05	H	-5.3
18747.833333	42.06	---	74.00	31.94	H	-5.3
20039.333333	---	30.39	54.00	23.61	H	-5.0
20039.333333	42.35	---	74.00	31.65	H	-5.0
21449.833333	40.08	---	74.00	33.92	H	-5.0
21449.833333	---	28.92	54.00	25.08	H	-5.0
22384.333333	---	30.14	54.00	23.86	H	-4.9
22384.333333	41.34	---	74.00	32.66	H	-4.9
23463.888889	---	30.39	54.00	23.61	H	-4.9
23463.888889	41.47	---	74.00	32.53	H	-4.9
24622.000000	42.25	---	74.00	31.75	H	-4.7
24622.000000	---	31.43	54.00	22.57	H	-4.7



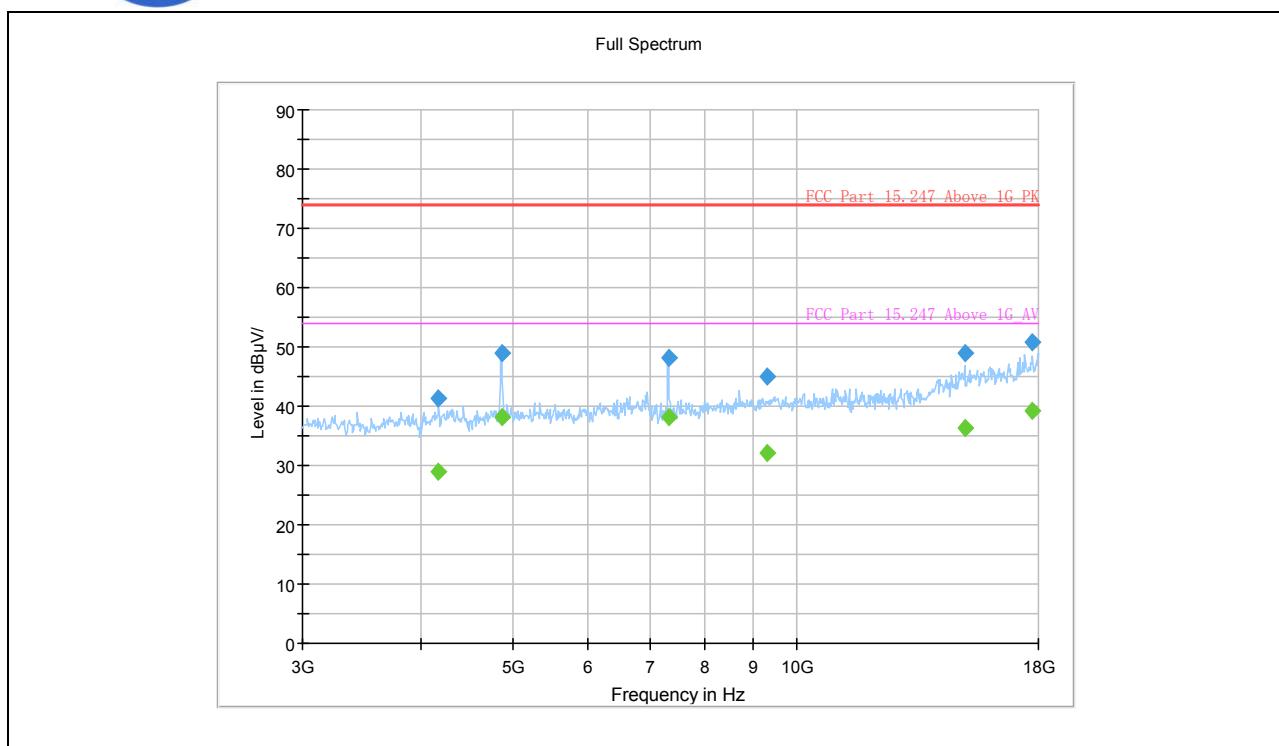
(802.11n\_20M \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
31.940000	21.20	---	40.00	18.80	V	12.1
79.847222	24.54	---	40.00	15.46	V	10.8
199.157222	22.17	---	43.50	21.33	V	14.2
398.977222	24.92	---	46.00	21.08	V	19.6
665.026667	30.08	---	46.00	15.92	V	24.3
931.022222	36.84	---	46.00	9.16	V	28.1



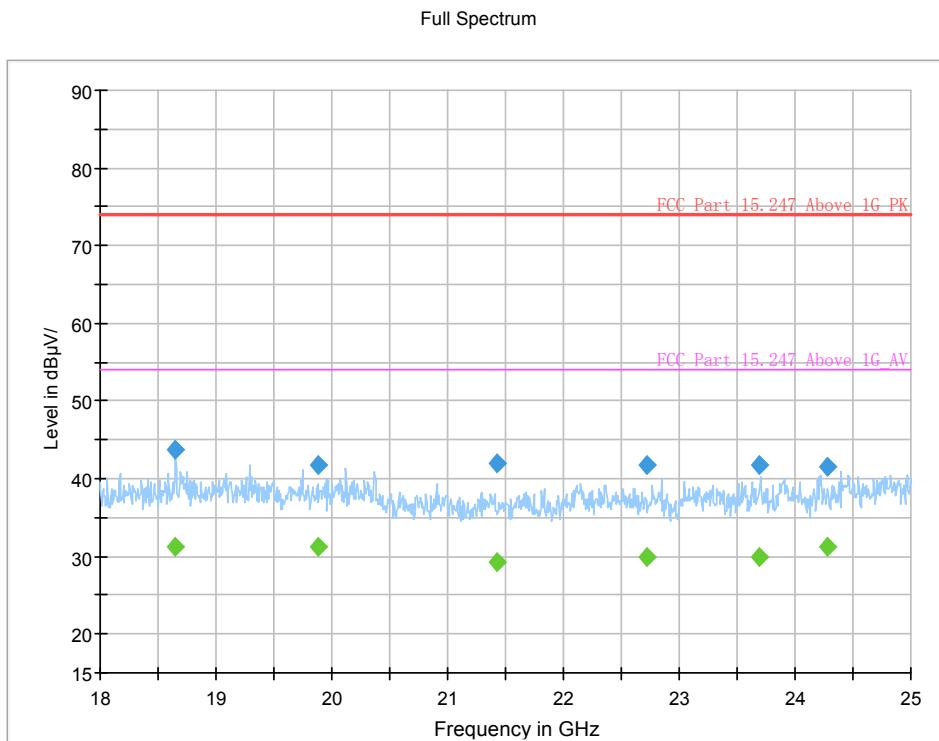
(802.11n\_20M \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	41.31	---	74.00	32.69	V	-0.6
1195.000000	---	25.16	54.00	28.84	V	-0.6
1460.000000	---	26.85	54.00	27.15	V	1.6
1460.000000	43.15	---	74.00	30.85	V	1.6
2140.000000	41.04	---	74.00	32.96	V	8.2
2140.000000	---	31.32	54.00	22.68	V	8.2
2295.000000	---	33.57	54.00	20.43	V	10.3
2295.000000	44.01	---	74.00	29.99	V	10.3
2545.000000	---	37.24	54.00	16.76	V	14.6
2545.000000	45.87	---	74.00	28.13	V	14.6
2990.000000	---	39.24	54.00	14.76	V	17.4
2990.000000	47.82	---	74.00	26.18	V	17.4



(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)
4177.500000	41.42	---	74.00	32.58	V	-4.2
4177.500000	---	29.07	54.00	24.93	V	-4.2
4875.000000	48.83	---	74.00	25.17	V	-2.9
4875.000000	---	38.09	54.00	15.91	V	-2.9
7312.500000	48.20	---	74.00	25.80	V	-0.3
7312.500000	---	38.19	54.00	15.81	V	-0.3
9300.000000	---	32.05	54.00	21.95	V	1.9
9300.000000	44.93	---	74.00	29.07	V	1.9
15037.50000	48.93	---	74.00	25.07	V	10.5
15037.50000	---	36.40	54.00	17.60	V	10.5
17730.00000	---	39.26	54.00	14.74	V	14.9
17730.00000	50.81	---	74.00	23.19	V	14.9

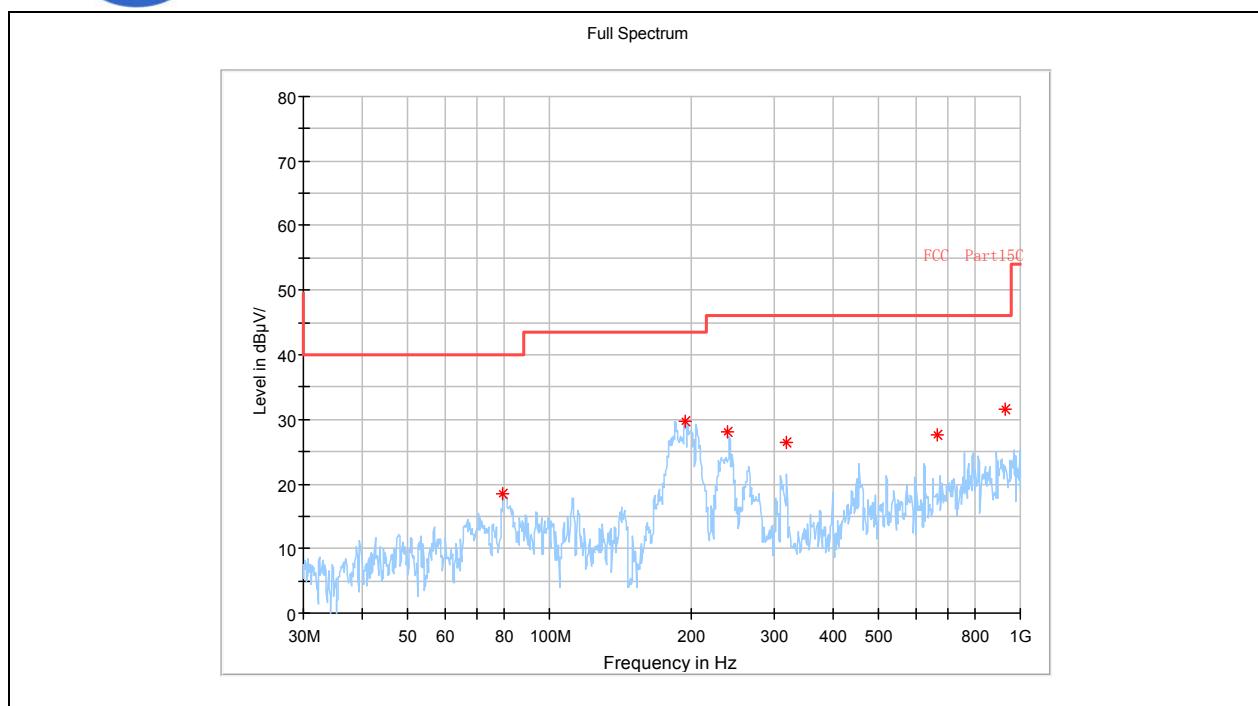


(802.11n\_20M \_2437MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18654.111111	43.67	---	74.00	30.33	V	-5.3
18654.111111	---	31.22	54.00	22.78	V	-5.3
19877.555556	---	31.12	54.00	22.88	V	-5.1
19877.555556	41.83	---	74.00	32.17	V	-5.1
21422.222222	---	29.34	54.00	24.66	V	-5.0
21422.222222	41.93	---	74.00	32.07	V	-5.0
22716.444444	---	30.00	54.00	24.00	V	-4.9
22716.444444	41.75	---	74.00	32.25	V	-4.9
23684.388889	41.78	---	74.00	32.22	V	-5.0
23684.388889	---	29.89	54.00	24.11	V	-5.0
24279.000000	---	31.23	54.00	22.77	V	-4.6
24279.000000	41.46	---	74.00	32.54	V	-4.6

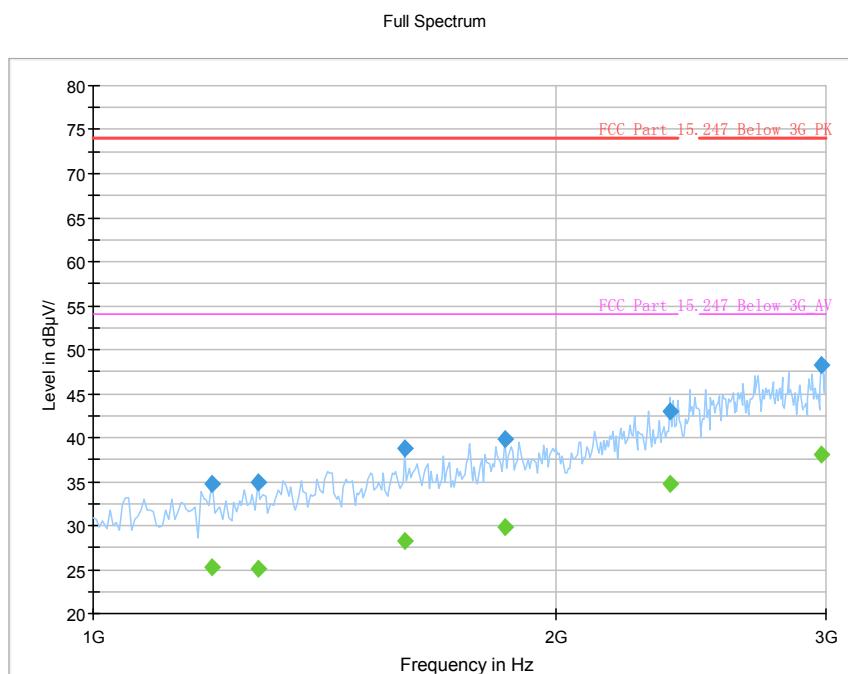


REPORT No. : KH18110035W04



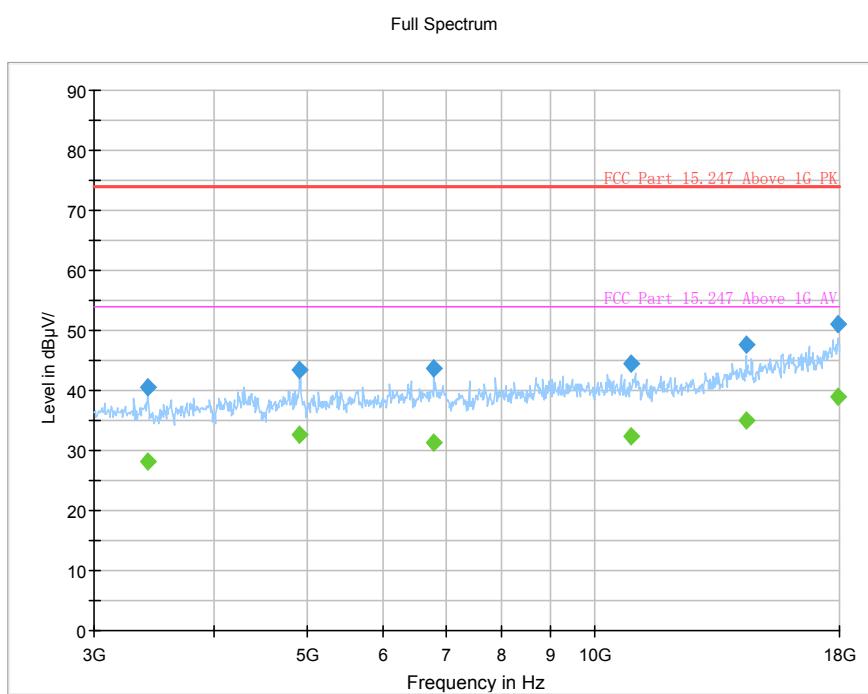
(802.11n\_20M \_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
79.739444	18.54	---	40.00	21.46	H	10.8
194.145556	29.77	---	43.50	13.73	H	13.3
239.304444	28.02	---	46.00	17.98	H	15.2
319.383333	26.44	---	46.00	19.56	H	17.9
665.026667	27.69	---	46.00	18.31	H	24.3
931.022222	31.56	---	46.00	14.44	H	28.1



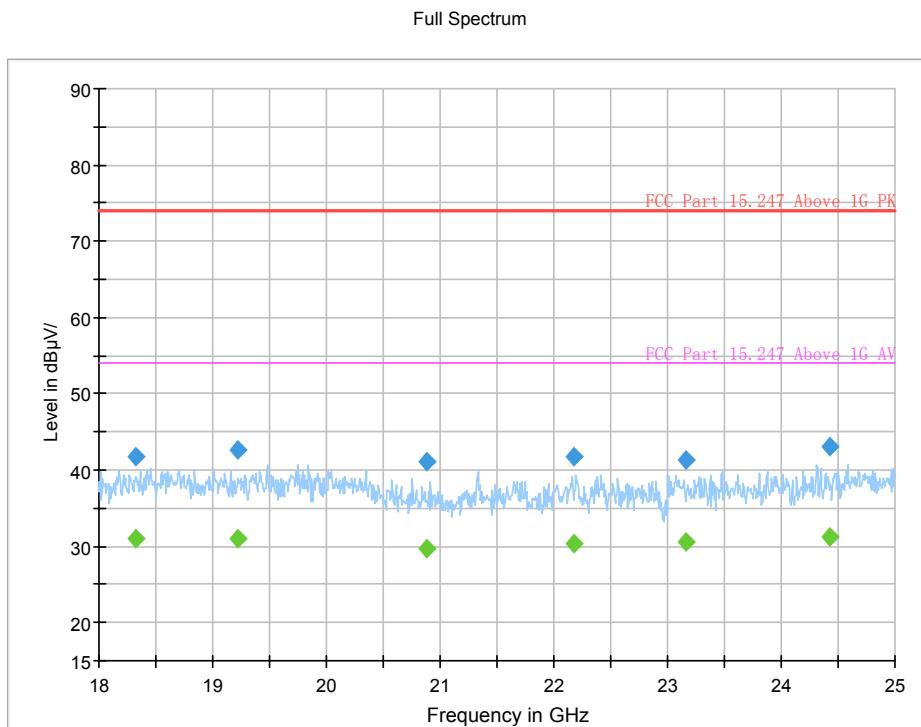
(802.11n\_20M \_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	34.75	---	74.00	39.25	H	-0.6
1195.000000	---	25.19	54.00	28.81	H	-0.6
1280.000000	---	25.16	54.00	28.84	H	-0.2
1280.000000	34.85	---	74.00	39.15	H	-0.2
1595.000000	---	28.26	54.00	25.74	H	3.5
1595.000000	38.69	---	74.00	35.31	H	3.5
1855.000000	---	29.81	54.00	24.19	H	5.8
1855.000000	39.83	---	74.00	34.17	H	5.8
2375.000000	---	34.66	54.00	19.34	H	11.9
2375.000000	43.02	---	74.00	30.98	H	11.9
2980.000000	48.33	---	74.00	25.67	H	16.3
2980.000000	---	38.09	54.00	15.91	H	16.3



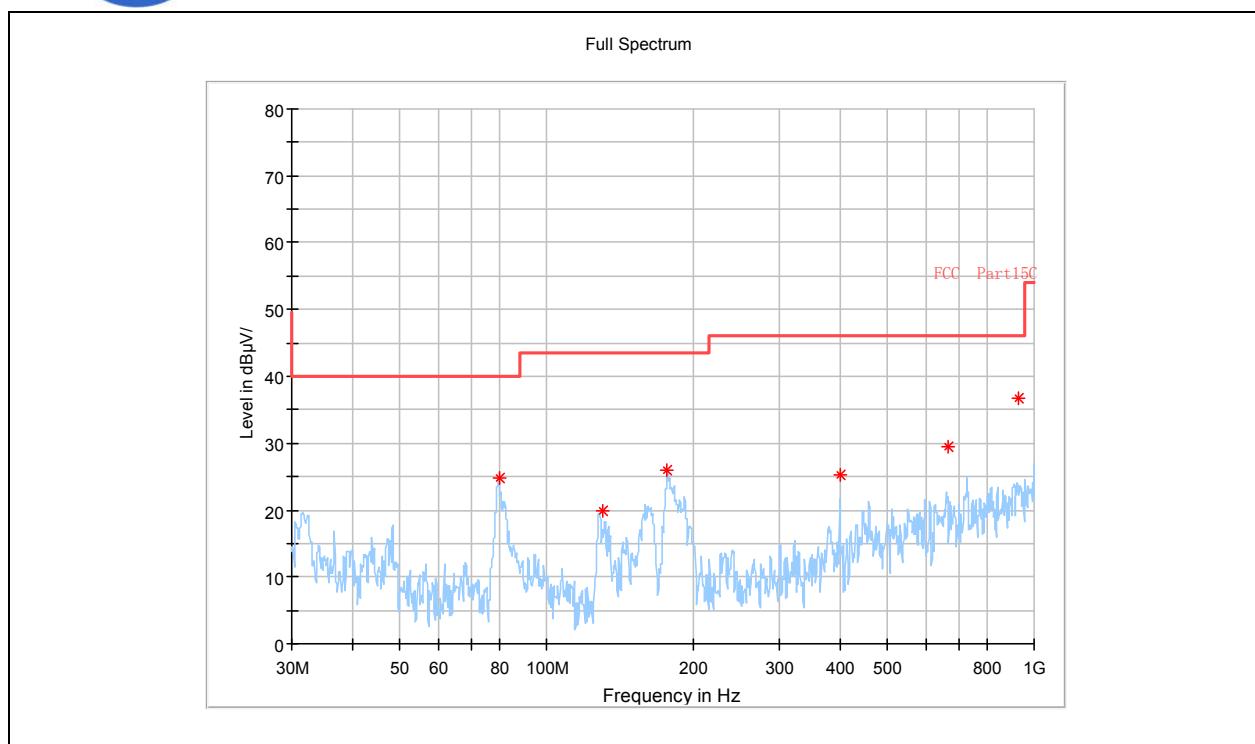
(802.11n\_20M \_2462MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3412.500000	40.61	---	74.00	33.39	H	-5.9
3412.500000	---	28.28	54.00	25.72	H	-5.9
4920.000000	43.55	---	74.00	30.45	H	-2.8
4920.000000	---	32.67	54.00	21.33	H	-2.8
6795.000000	43.63	---	74.00	30.37	H	-1.1
6795.000000	---	31.31	54.00	22.69	H	-1.1
10897.500000	---	32.36	54.00	21.64	H	3.2
10897.500000	44.48	---	74.00	29.52	H	3.2
14385.000000	---	35.04	54.00	18.96	H	9.4
14385.000000	47.51	---	74.00	26.49	H	9.4
17925.000000	50.99	---	74.00	23.01	H	14.2
17925.000000	---	38.87	54.00	15.13	H	14.2



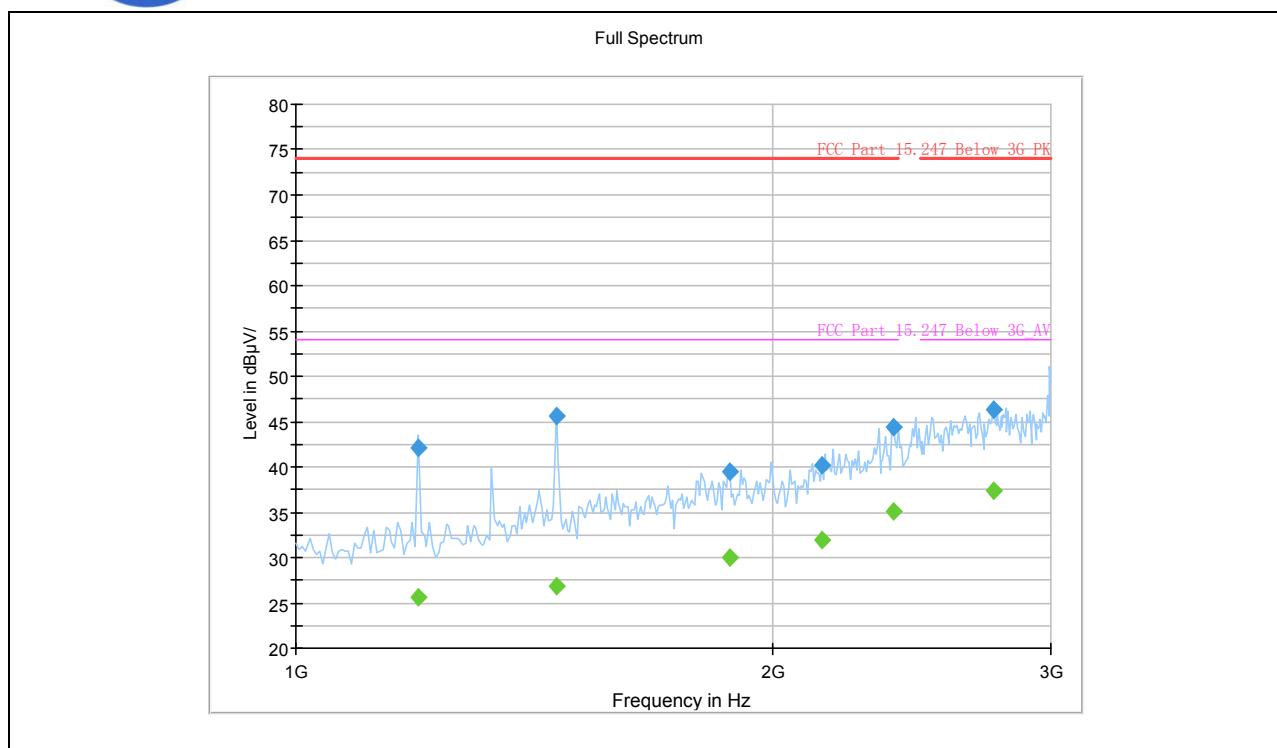
(802.11n\_20M \_2462MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18324.333333	---	30.90	54.00	23.10	H	-5.4
18324.333333	41.83	---	74.00	32.17	H	-5.4
19223.833333	---	30.99	54.00	23.01	H	-5.4
19223.833333	42.70	---	74.00	31.30	H	-5.4
20883.611111	41.19	---	74.00	32.81	H	-5.1
20883.611111	---	29.68	54.00	24.32	H	-5.1
22170.833333	41.66	---	74.00	32.34	H	-5.1
22170.833333	---	30.28	54.00	23.72	H	-5.1
23167.944444	41.33	---	74.00	32.67	H	-5.0
23167.944444	---	30.58	54.00	23.42	H	-5.0
24431.833333	43.17	---	74.00	30.83	H	-4.6
24431.833333	---	31.21	54.00	22.79	H	-4.6



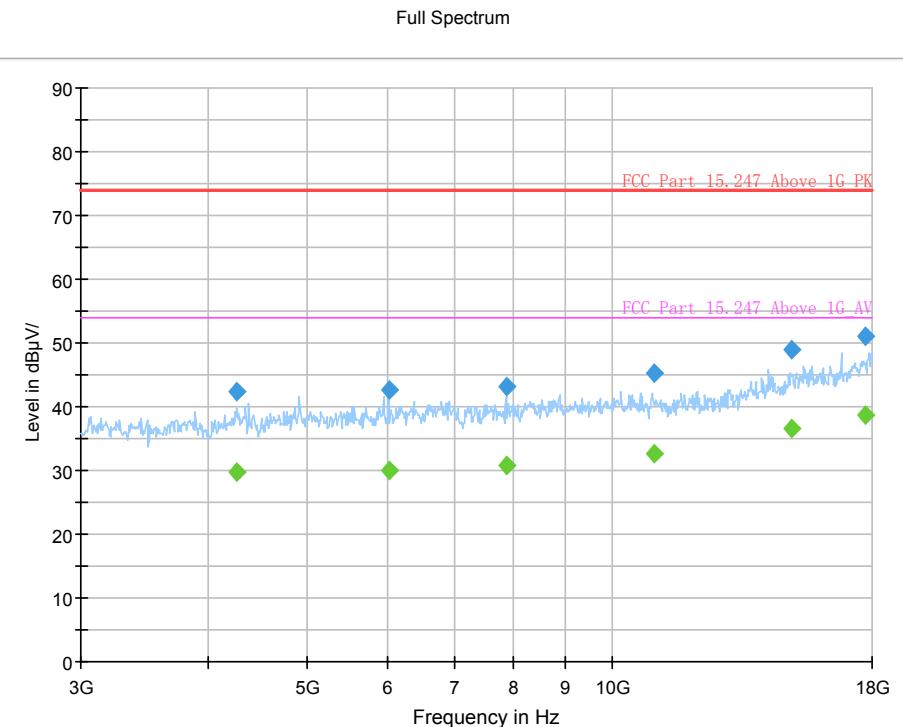
(802.11n\_20M \_2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
79.847222	24.84	---	40.00	15.16	V	10.8
130.017778	19.77	---	43.50	23.73	V	12.3
177.008889	25.85	---	43.50	17.65	V	12.0
398.977222	25.28	---	46.00	20.72	V	19.6
665.026667	29.58	---	46.00	16.42	V	24.3
931.022222	36.78	---	46.00	9.22	V	28.1



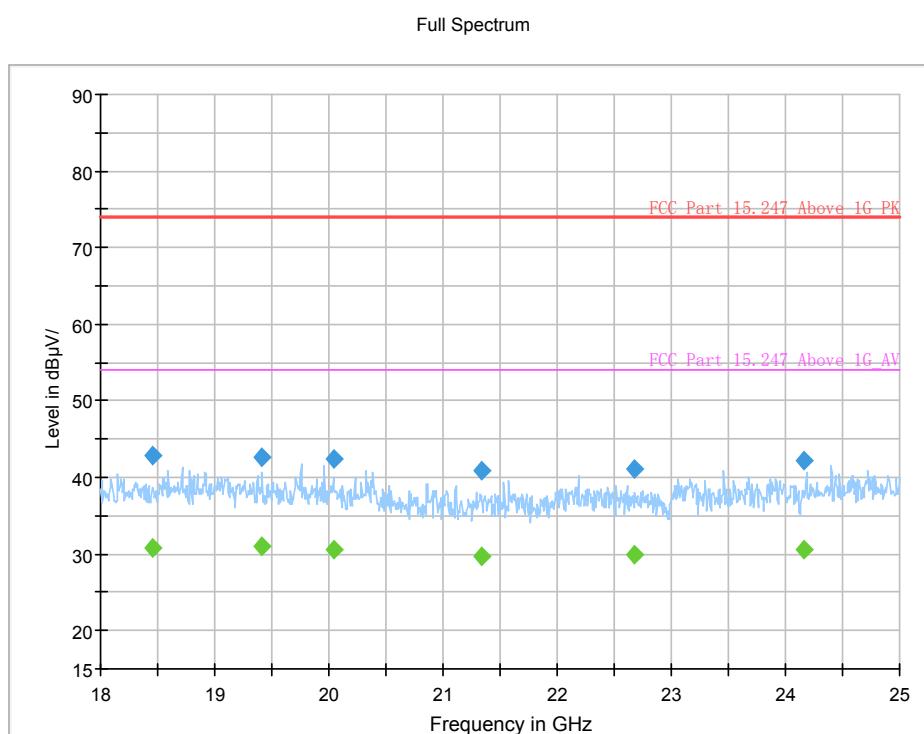
(802.11n\_20M \_2462MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.58	54.00	28.42	V	-0.6
1195.000000	42.16	---	74.00	31.84	V	-0.6
1460.000000	---	26.83	54.00	27.17	V	1.6
1460.000000	45.64	---	74.00	28.36	V	1.6
1880.000000	---	30.01	54.00	23.99	V	6.0
1880.000000	39.42	---	74.00	34.58	V	6.0
2150.000000	---	31.86	54.00	22.14	V	8.2
2150.000000	40.22	---	74.00	33.78	V	8.2
2385.000000	---	35.14	54.00	18.86	V	12.3
2385.000000	44.39	---	74.00	29.61	V	12.3
2760.000000	---	37.34	54.00	16.66	V	15.1
2760.000000	46.28	---	74.00	27.72	V	15.1



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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4275.000000	42.43	---	74.00	31.57	V	-3.4
4275.000000	---	29.68	54.00	24.32	V	-3.4
6022.500000	---	29.96	54.00	24.04	V	-2.5
6022.500000	42.64	---	74.00	31.36	V	-2.5
7860.000000	---	30.88	54.00	23.12	V	0.3
7860.000000	43.12	---	74.00	30.88	V	0.3
10987.50000	45.19	---	74.00	28.81	V	3.3
10987.50000	---	32.68	54.00	21.32	V	3.3
15000.00000	---	36.57	54.00	17.43	V	10.6
15000.00000	49.05	---	74.00	24.95	V	10.6
17752.50000	---	38.68	54.00	15.32	V	15.3
17752.50000	50.98	---	74.00	23.02	V	15.3



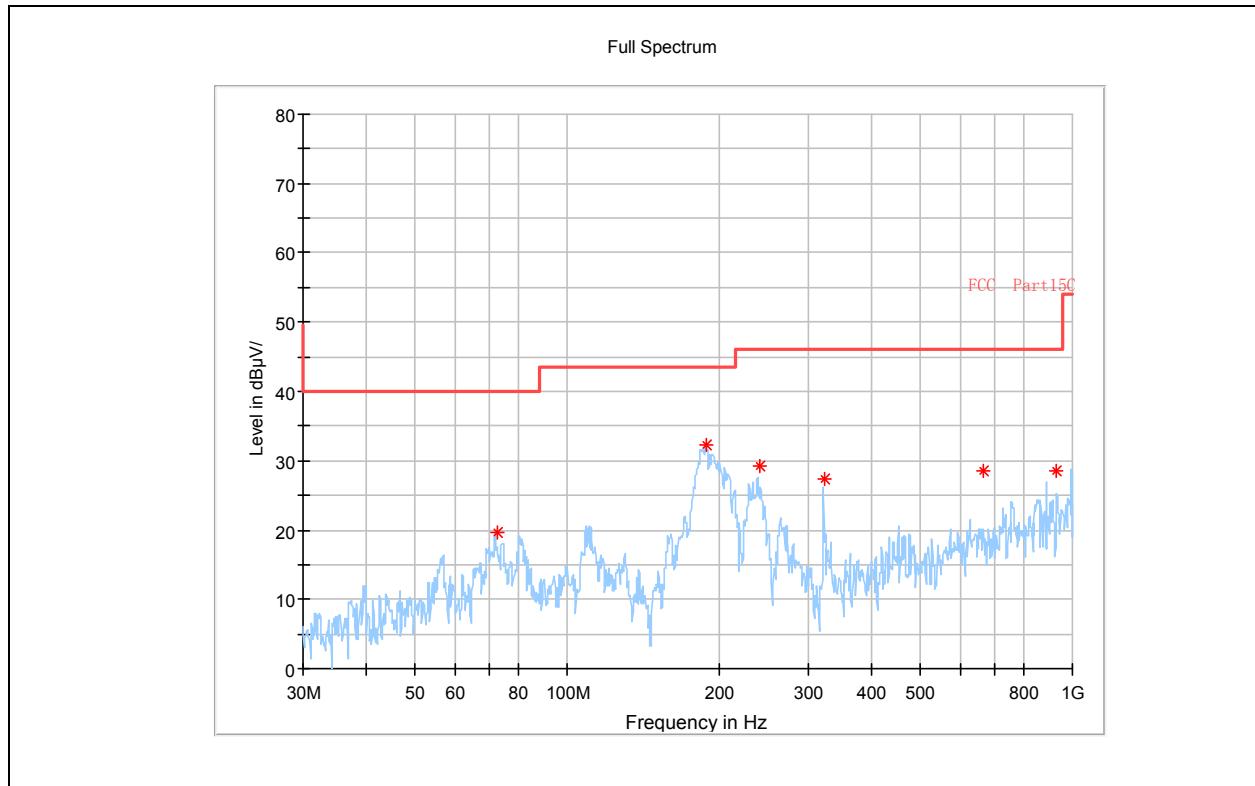
(802.11n\_20M \_2462MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18449.944444	42.94	---	74.00	31.06	V	-5.3
18449.944444	---	30.78	54.00	23.22	V	-5.3
19408.944444	---	31.03	54.00	22.97	V	-5.4
19408.944444	42.71	---	74.00	31.29	V	-5.4
20047.500000	42.38	---	74.00	31.62	V	-5.0
20047.500000	---	30.53	54.00	23.47	V	-5.0
21331.611111	---	29.73	54.00	24.27	V	-4.9
21331.611111	40.83	---	74.00	33.17	V	-4.9
22677.555556	41.08	---	74.00	32.92	V	-4.9
22677.555556	---	29.92	54.00	24.08	V	-4.9
24168.555556	42.26	---	74.00	31.74	V	-4.6
24168.555556	---	30.65	54.00	23.35	V	-4.6



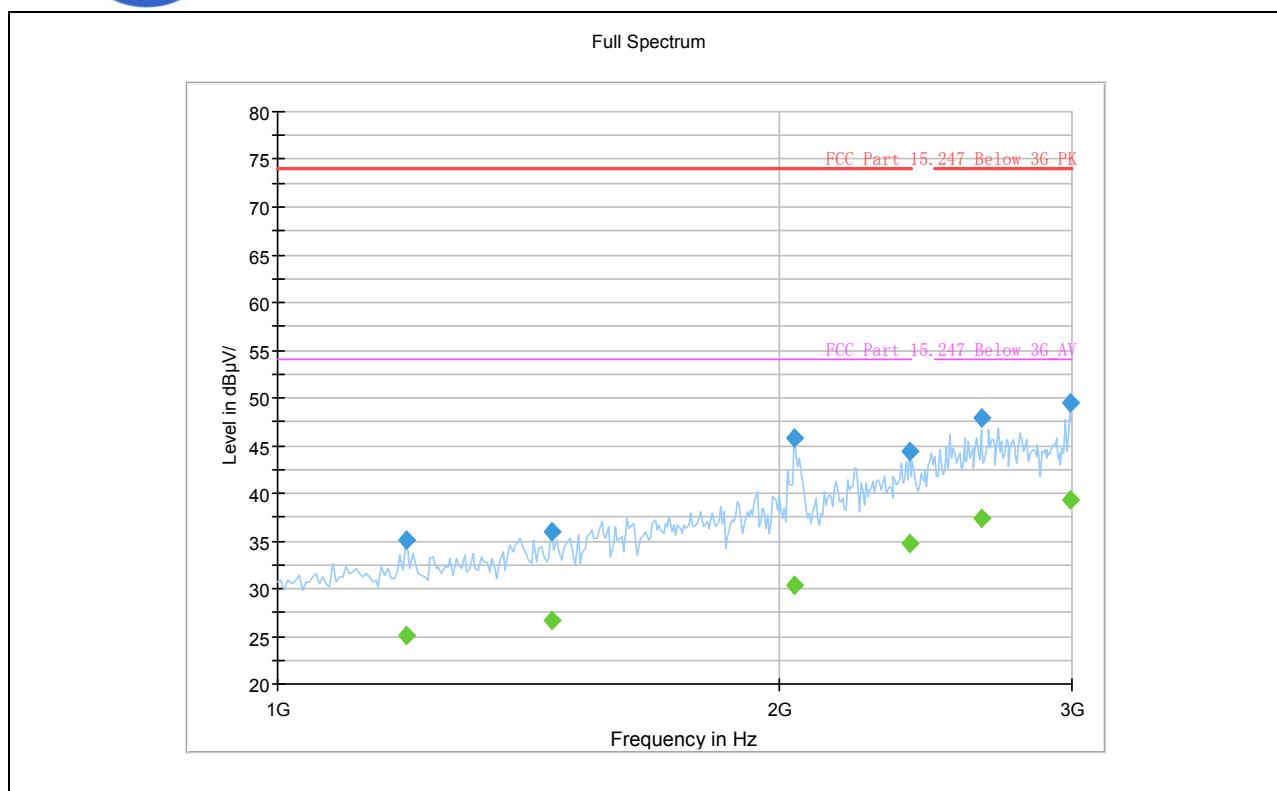
REPORT No. : KH18110035W04

## 802.11n-40MHz Test mode



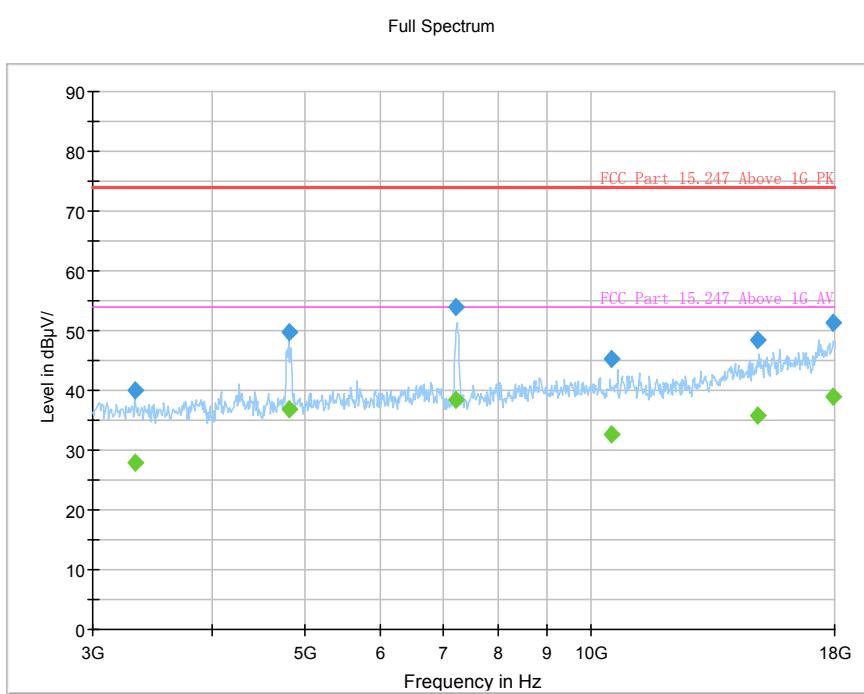
(802.11n\_40M \_2422MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
72.733889	19.71	---	40.00	20.29	H	10.3
187.894444	32.20	---	43.50	11.30	H	13.0
240.705556	29.31	---	46.00	16.69	H	15.3
322.293333	27.36	---	46.00	18.64	H	17.8
665.026667	28.63	---	46.00	17.37	H	24.3
931.022222	28.63	---	46.00	17.37	H	28.1



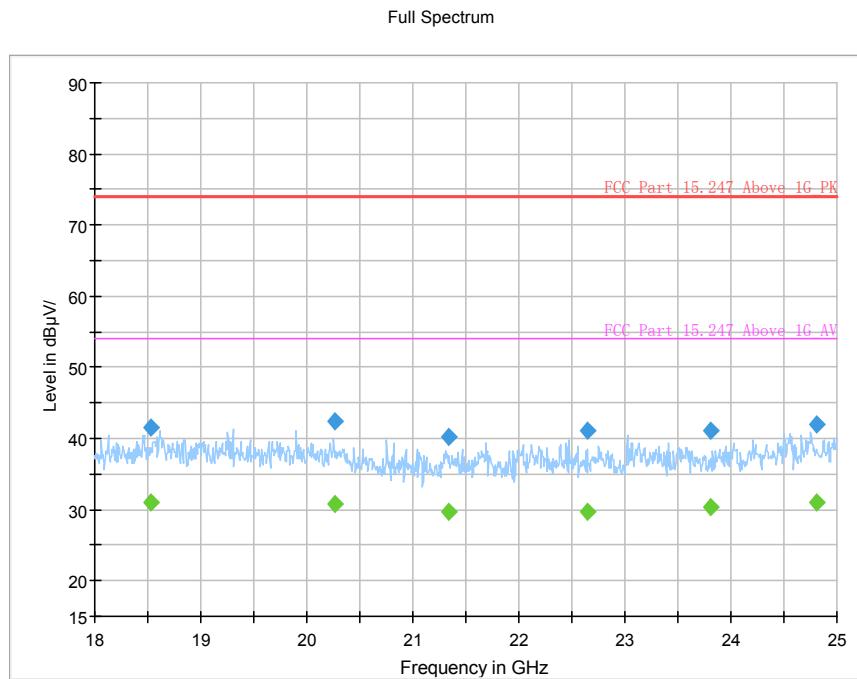
(802.11n\_40M \_2422MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.17	54.00	28.83	H	-0.6
1195.000000	35.05	---	74.00	38.95	H	-0.6
1460.000000	35.99	---	74.00	38.01	H	1.6
1460.000000	---	26.62	54.00	27.38	H	1.6
2045.000000	45.81	---	74.00	28.19	H	6.8
2045.000000	---	30.37	54.00	23.63	H	6.8
2395.000000	44.44	---	74.00	29.56	H	13.1
2395.000000	---	34.74	54.00	19.26	H	13.1
2645.000000	---	37.37	54.00	16.63	H	15.5
2645.000000	47.93	---	74.00	26.07	H	15.5
2990.000000	49.48	---	74.00	24.52	H	17.4
2990.000000	---	39.23	54.00	14.77	H	17.4



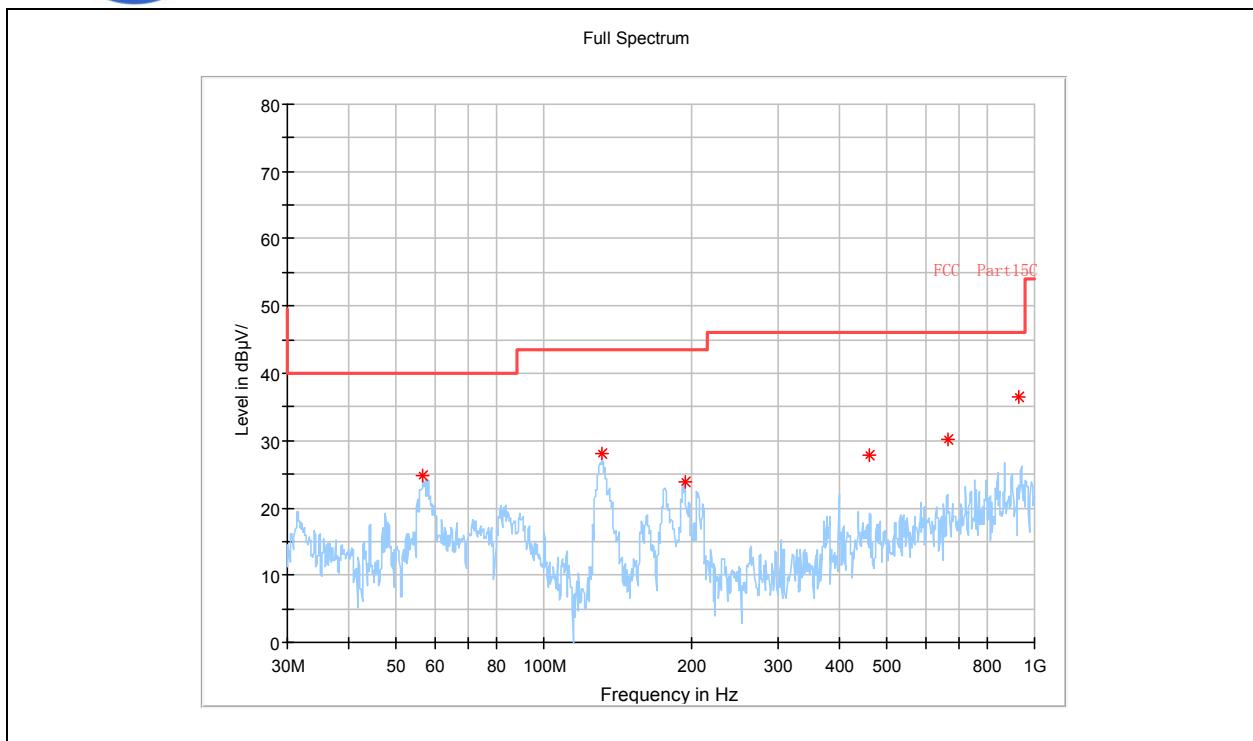
(802.11n\_40M \_2422MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3322.500000	39.95	---	74.00	34.05	H	-6.4
3322.500000	---	27.91	54.00	26.09	H	-6.4
4844.000000	49.73	---	74.00	24.27	H	-3.3
4844.000000	---	36.88	54.00	17.12	H	-3.3
7265.500000	---	38.49	54.00	15.51	H	-0.4
7265.500000	54.00	---	74.00	20.00	H	-0.4
10492.50000	---	32.54	54.00	21.46	H	2.7
10492.50000	45.21	---	74.00	28.79	H	2.7
14955.00000	48.34	---	74.00	25.66	H	9.7
14955.00000	---	35.88	54.00	18.12	H	9.7
17940.00000	51.25	---	74.00	22.75	H	14.4
17940.00000	---	39.07	54.00	14.93	H	14.4



(802.11n\_40M \_2422MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18528.500000	---	30.92	54.00	23.08	H	-5.2
18528.500000	41.52	---	74.00	32.48	H	-5.2
20262.944444	---	30.72	54.00	23.28	H	-5.0
20262.944444	42.50	---	74.00	31.50	H	-5.0
21341.333333	---	29.61	54.00	24.39	H	-4.9
21341.333333	40.29	---	74.00	33.71	H	-4.9
22643.722222	---	29.74	54.00	24.26	H	-4.9
22643.722222	41.02	---	74.00	32.98	H	-4.9
23809.222222	41.10	---	74.00	32.90	H	-4.8
23809.222222	---	30.25	54.00	23.75	H	-4.8
24803.611111	42.03	---	74.00	31.97	H	-4.8
24803.611111	---	30.97	54.00	23.03	H	-4.8

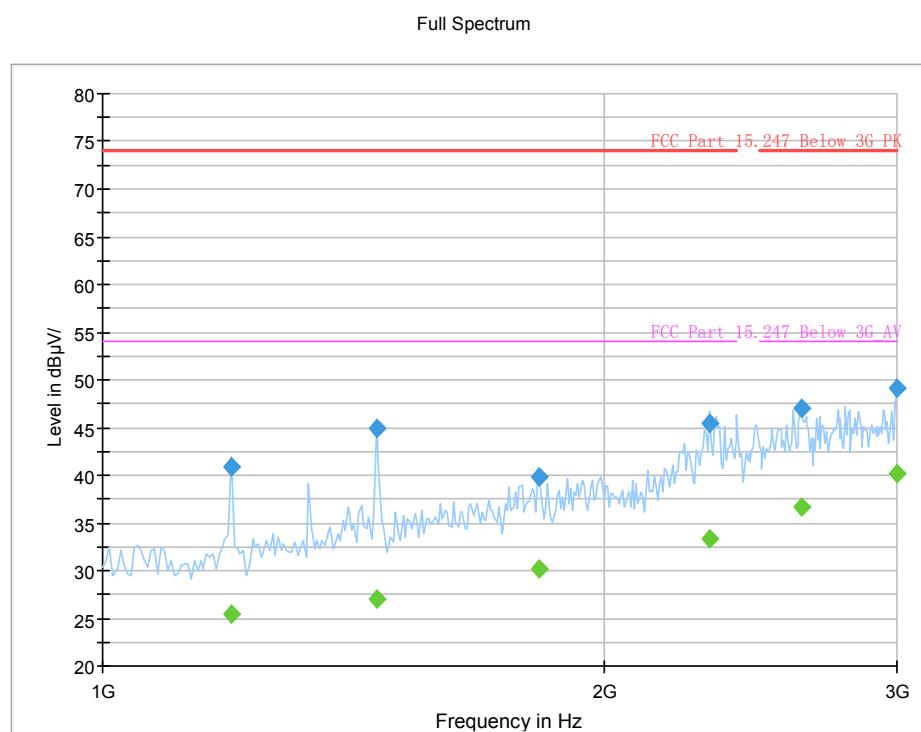


(802.11n\_40M \_2422MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
56.728889	24.86	---	40.00	15.14	V	14.6
131.041667	28.08	---	43.50	15.42	V	11.9
193.714444	23.91	---	43.50	19.59	V	13.4
459.171111	27.73	---	46.00	18.27	V	21.1
664.972778	30.11	---	46.00	15.89	V	24.3
931.022222	36.39	---	46.00	9.61	V	28.1

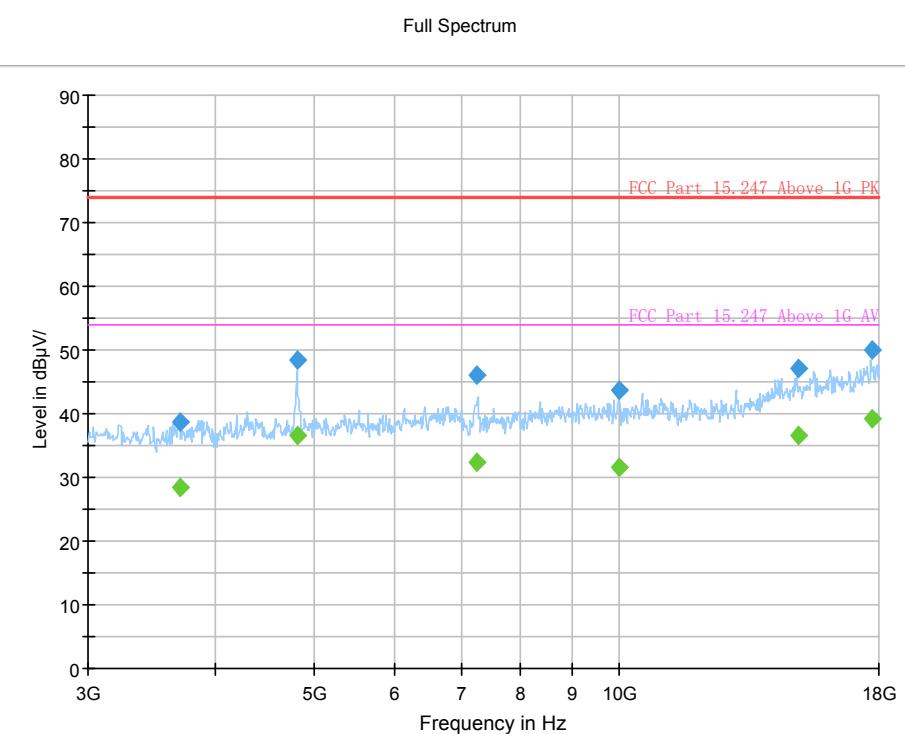


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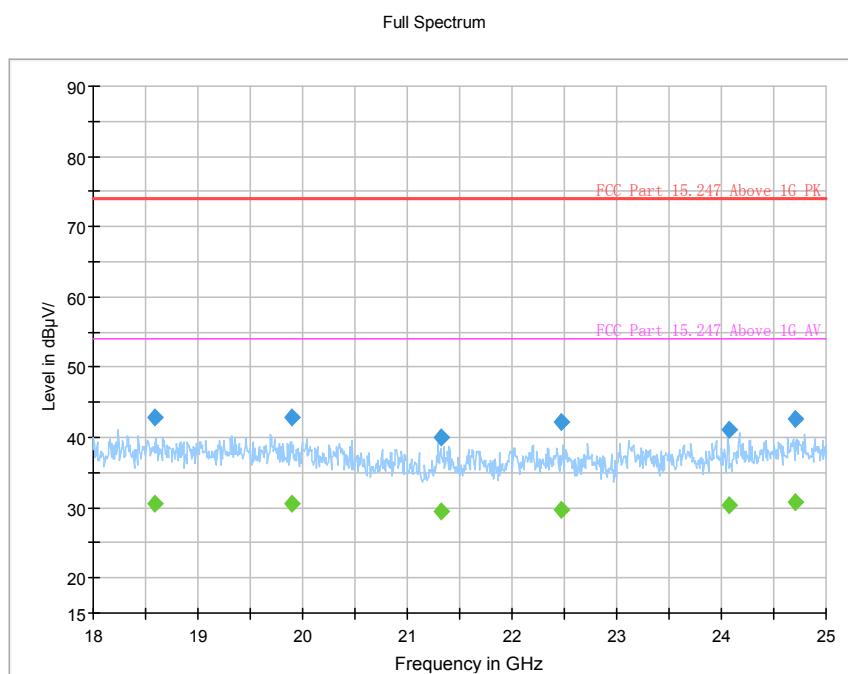
(802.11n\_40M \_2422MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	25.45	54.00	28.55	V	-0.6
1195.000000	40.93	---	74.00	33.07	V	-0.6
1460.000000	44.96	---	74.00	29.04	V	1.6
1460.000000	---	27.04	54.00	26.96	V	1.6
1830.000000	39.91	---	74.00	34.09	V	5.9
1830.000000	---	30.15	54.00	23.85	V	5.9
2315.000000	45.40	---	74.00	28.60	V	10.7
2315.000000	---	33.36	54.00	20.64	V	10.7
2630.000000	47.02	---	74.00	26.98	V	14.6
2630.000000	---	36.74	54.00	17.26	V	14.6
3000.000000	---	40.20	54.00	13.80	V	18.4
3000.000000	49.19	---	74.00	24.81	V	18.4



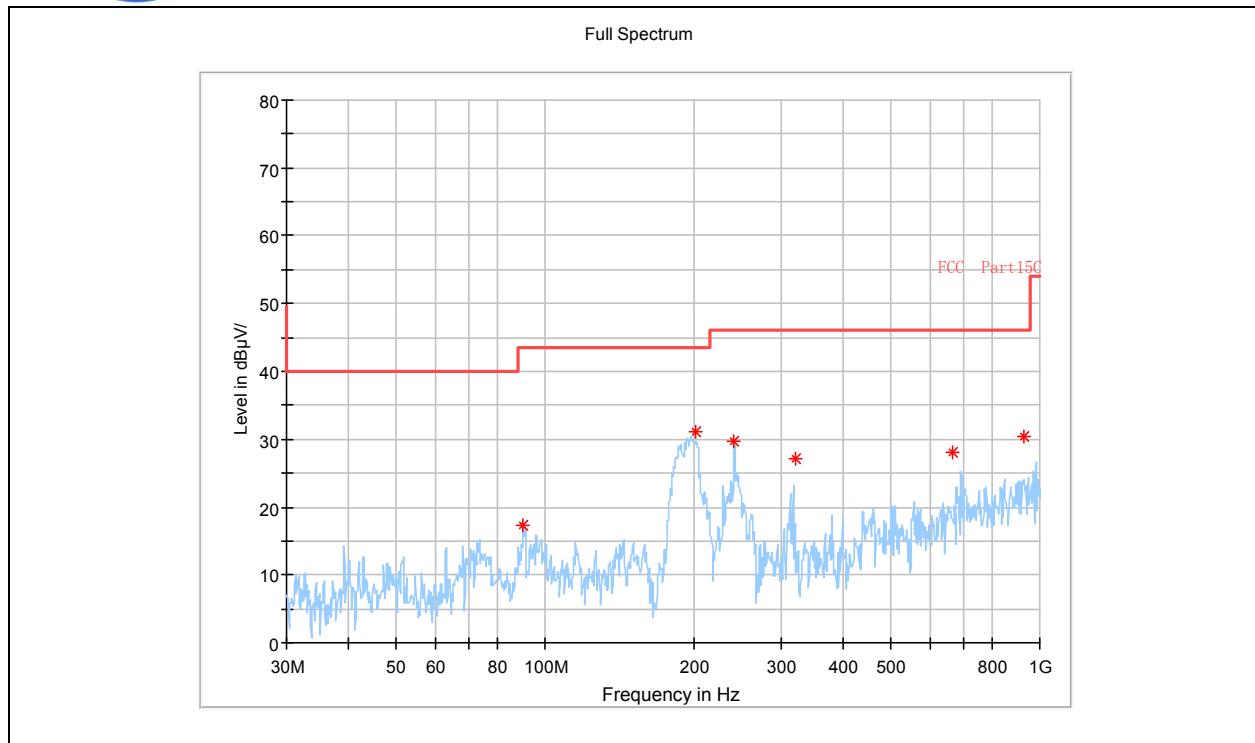
(802.11n\_40M \_2422MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3690.000000	---	28.38	54.00	25.62	V	-5.3
3690.000000	38.72	---	74.00	35.28	V	-5.3
4844.500000	48.49	---	74.00	25.51	V	-3.2
4822.500000	---	36.57	54.00	17.43	V	-3.2
7264.500000	---	32.47	54.00	21.53	V	-0.4
7264.500000	46.14	---	74.00	27.86	V	-0.4
9975.000000	---	31.50	54.00	22.50	V	2.0
9975.000000	43.80	---	74.00	30.20	V	2.0
14992.50000	47.05	---	74.00	26.95	V	10.4
14992.50000	---	36.53	54.00	17.47	V	10.4
17730.00000	---	39.24	54.00	14.76	V	14.9
17730.00000	49.91	---	74.00	24.09	V	14.9



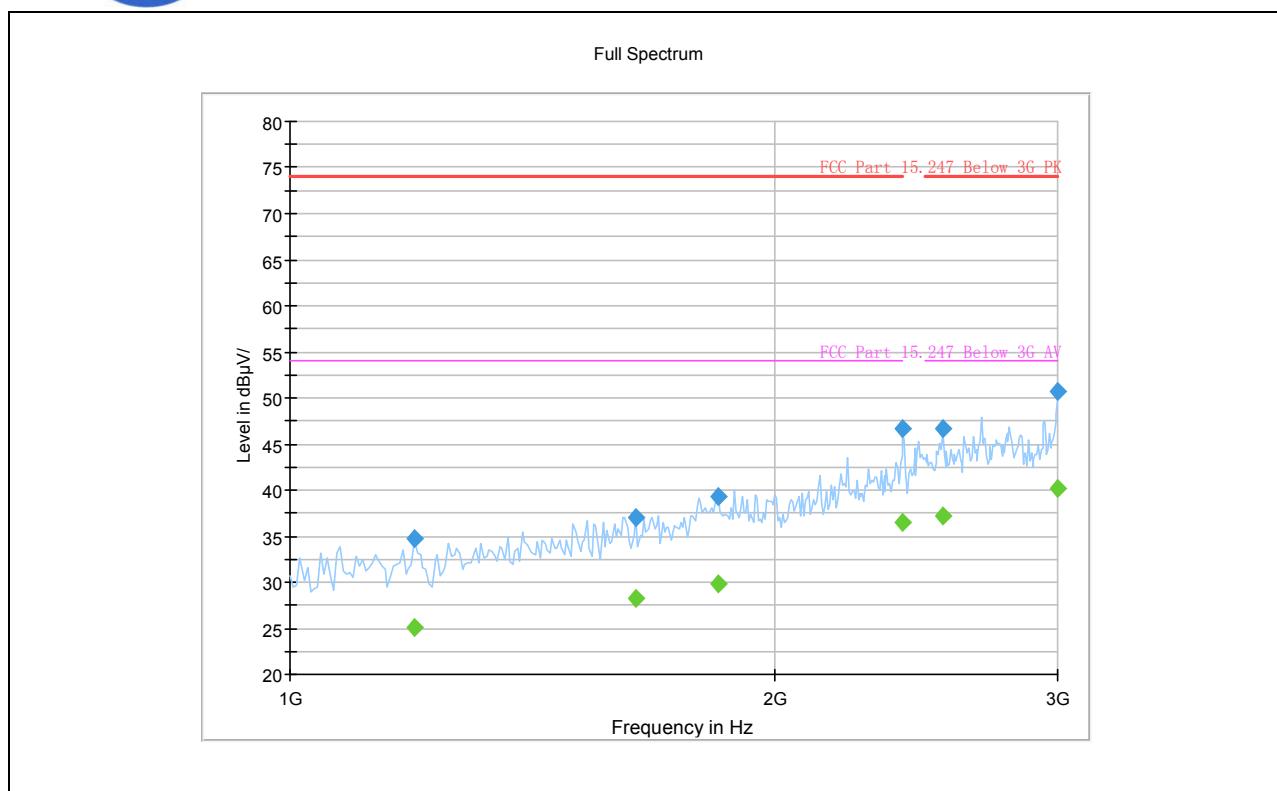
(802.11n\_40M\_2422MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18592.277778	---	30.48	54.00	23.52	V	-5.2
18592.277778	42.84	---	74.00	31.16	V	-5.2
19901.666667	42.79	---	74.00	31.21	V	-5.0
19901.666667	---	30.66	54.00	23.34	V	-5.0
21319.166667	---	29.52	54.00	24.48	V	-4.9
21319.166667	40.08	---	74.00	33.92	V	-4.9
22469.500000	42.13	---	74.00	31.87	V	-4.9
22469.500000	---	29.76	54.00	24.24	V	-4.9
24069.000000	40.99	---	74.00	33.01	V	-4.6
24069.000000	---	30.42	54.00	23.58	V	-4.6
24705.222222	42.62	---	74.00	31.38	V	-4.8
24705.222222	---	30.79	54.00	23.21	V	-4.8



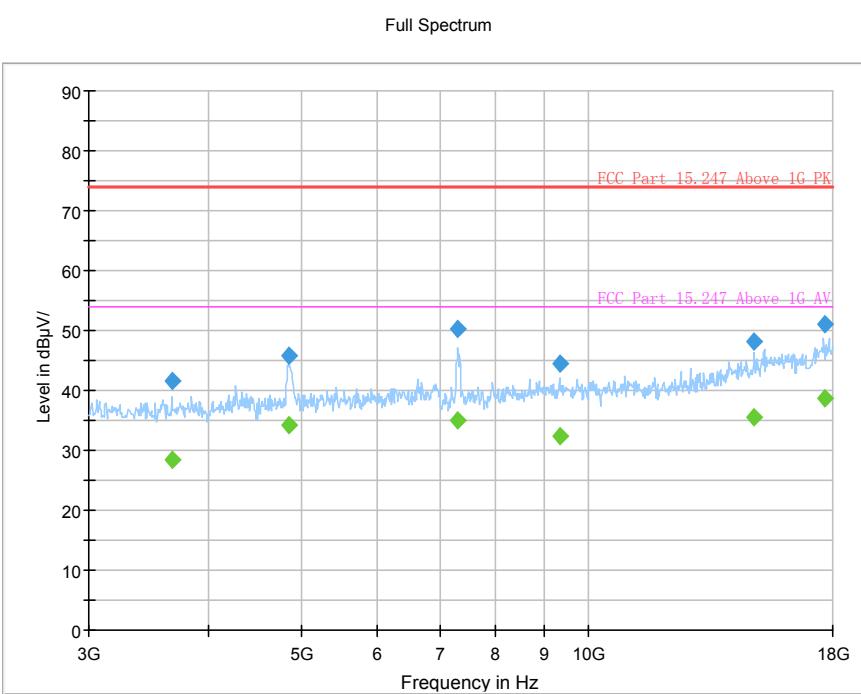
(802.11n\_40M \_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
90.409444	17.39	---	43.50	26.11	H	13.2
202.121111	31.08	---	43.50	12.42	H	14.0
241.406111	29.67	---	46.00	16.33	H	15.2
320.730556	27.17	---	46.00	18.83	H	17.9
664.972778	28.14	---	46.00	17.86	H	24.3
931.022222	30.46	---	46.00	15.54	H	28.1



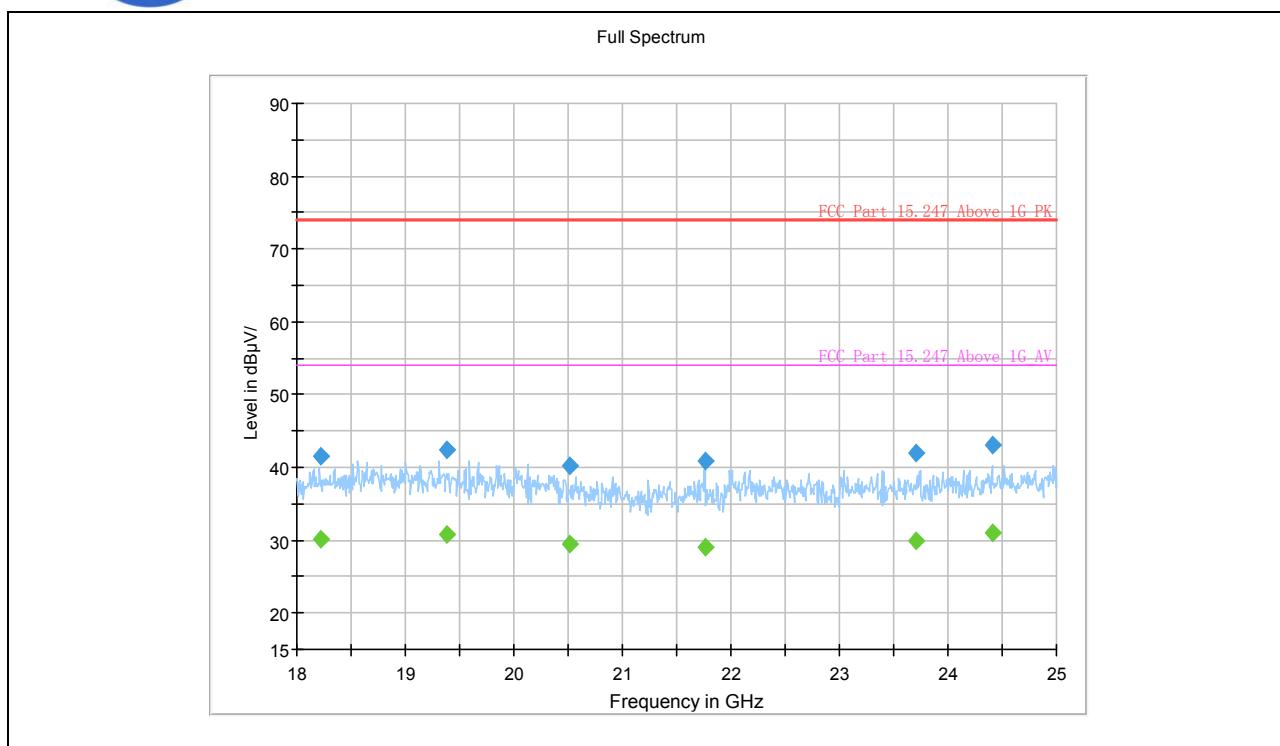
(802.11n\_40M \_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	34.78	---	74.00	39.22	H	-0.6
1195.000000	---	25.14	54.00	28.86	H	-0.6
1640.000000	37.08	---	74.00	36.92	H	3.4
1640.000000	---	28.22	54.00	25.78	H	3.4
1845.000000	---	29.83	54.00	24.17	H	5.8
1845.000000	39.34	---	74.00	34.66	H	5.8
2405.000000	---	36.54	---	---	H	13.2
2405.000000	46.59	---	---	---	H	13.2
2545.000000	---	37.22	54.00	16.78	H	14.6
2545.000000	46.68	---	74.00	27.32	H	14.6
3000.000000	---	40.19	54.00	13.81	H	18.4
3000.000000	50.76	---	74.00	23.24	H	18.4



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

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3667.500000	41.50	---	74.00	32.50	H	-5.5
3667.500000	---	28.33	54.00	25.67	H	-5.5
4860.000000	45.77	---	74.00	28.23	H	-3.0
4860.000000	---	34.16	54.00	19.84	H	-3.0
7290.000000	50.13	---	74.00	23.87	H	-0.3
7290.000000	---	35.05	54.00	18.95	H	-0.3
9322.500000	---	32.26	54.00	21.74	H	1.6
9322.500000	44.58	---	74.00	29.42	H	1.6
14910.00000	---	35.64	54.00	18.36	H	9.3
14910.00000	48.19	---	74.00	25.81	H	9.3
17647.50000	51.06	---	74.00	22.94	H	13.6
17647.50000	---	38.69	54.00	15.31	H	13.6

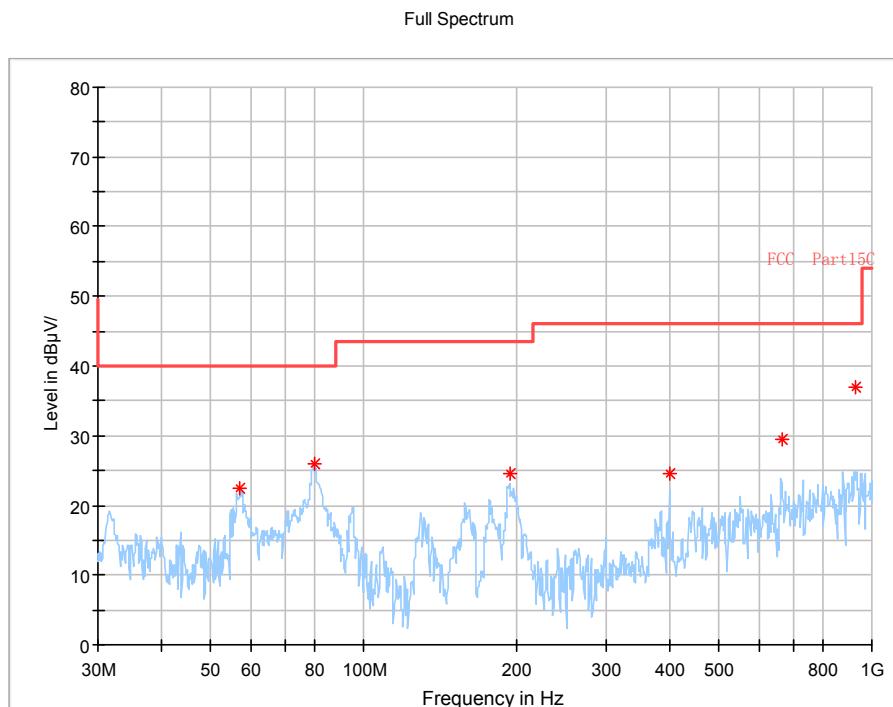


(802.11n\_40M \_2437MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18218.555556	41.63	---	74.00	32.37	H	-5.5
18218.555556	---	30.17	54.00	23.83	H	-5.5
19377.444444	42.43	---	74.00	31.57	H	-5.4
19377.444444	---	30.87	54.00	23.13	H	-5.4
20520.000000	---	29.41	54.00	24.59	H	-5.1
20520.000000	40.13	---	74.00	33.87	H	-5.1
21757.444444	40.84	---	74.00	33.16	H	-5.1
21757.444444	---	29.06	54.00	24.94	H	-5.1
23705.777778	42.08	---	74.00	31.92	H	-5.0
23705.777778	---	29.94	54.00	24.06	H	-5.0
24408.111111	---	31.06	54.00	22.94	H	-4.6
24408.111111	43.07	---	74.00	30.93	H	-4.6

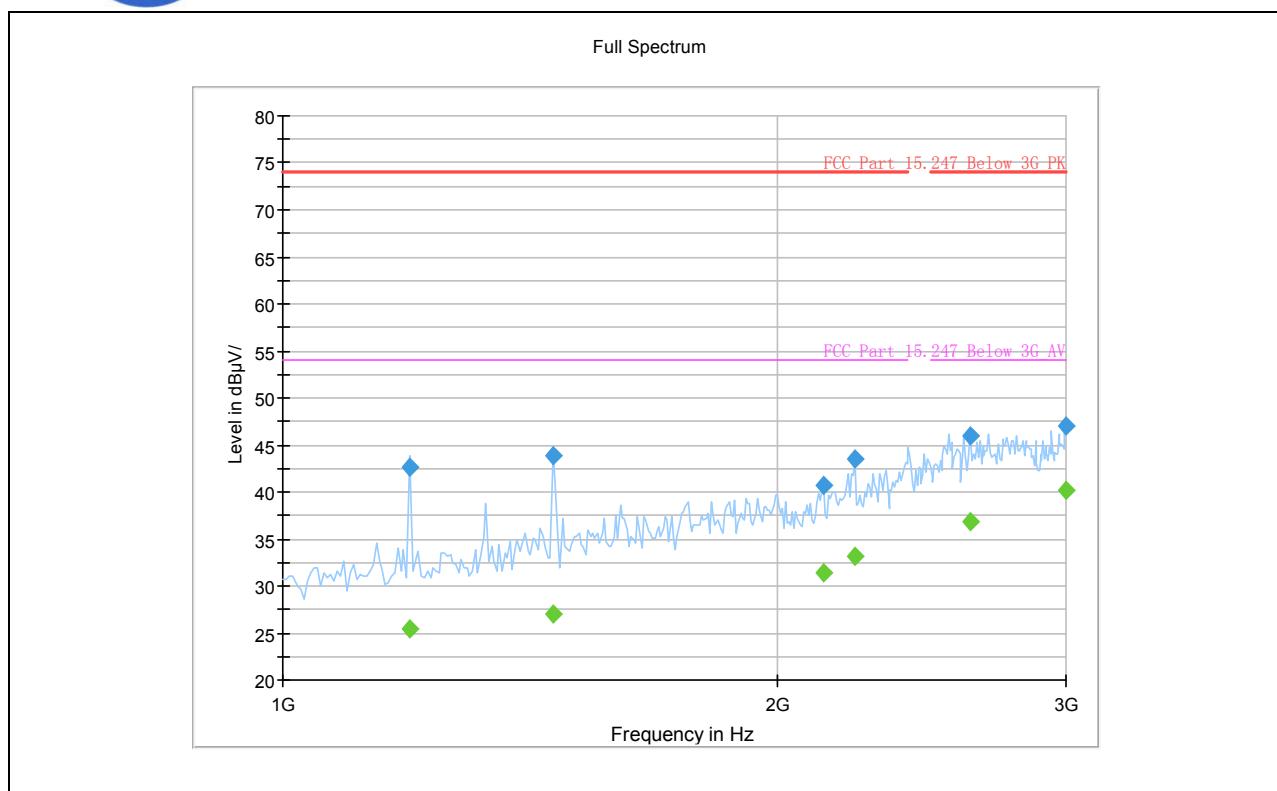


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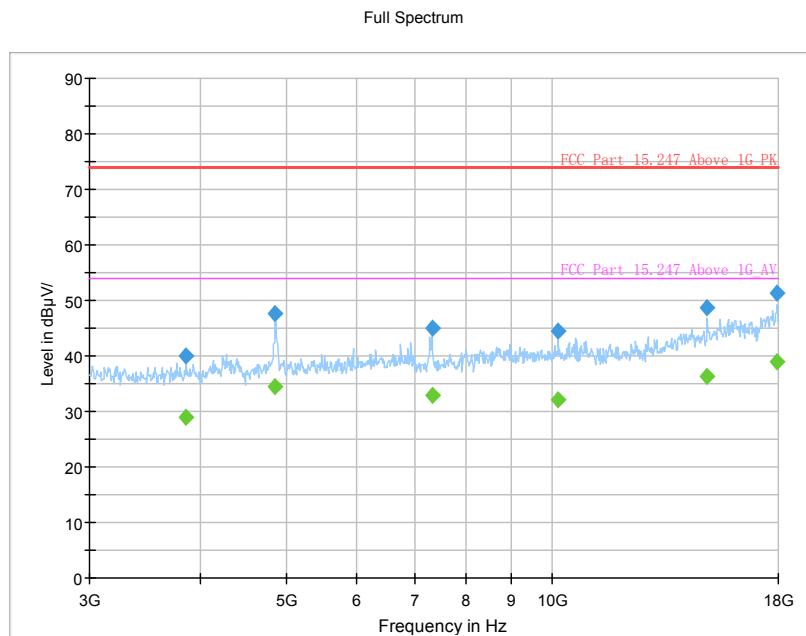
(802.11n\_40M \_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
57.160000	22.40	---	40.00	17.60	V	14.5
79.793333	25.90	---	40.00	14.10	V	10.8
193.606667	24.57	---	43.50	18.93	V	13.4
399.031111	24.46	---	46.00	21.54	V	19.6
665.026667	29.45	---	46.00	16.55	V	24.3
931.022222	37.05	---	46.00	8.95	V	28.1



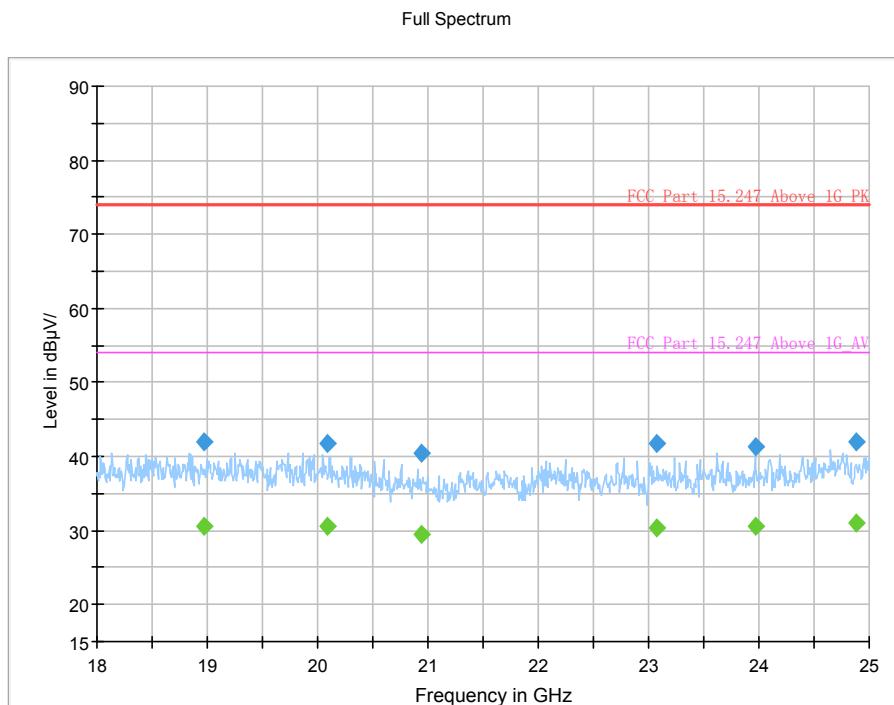
(802.11n\_40M \_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	---	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



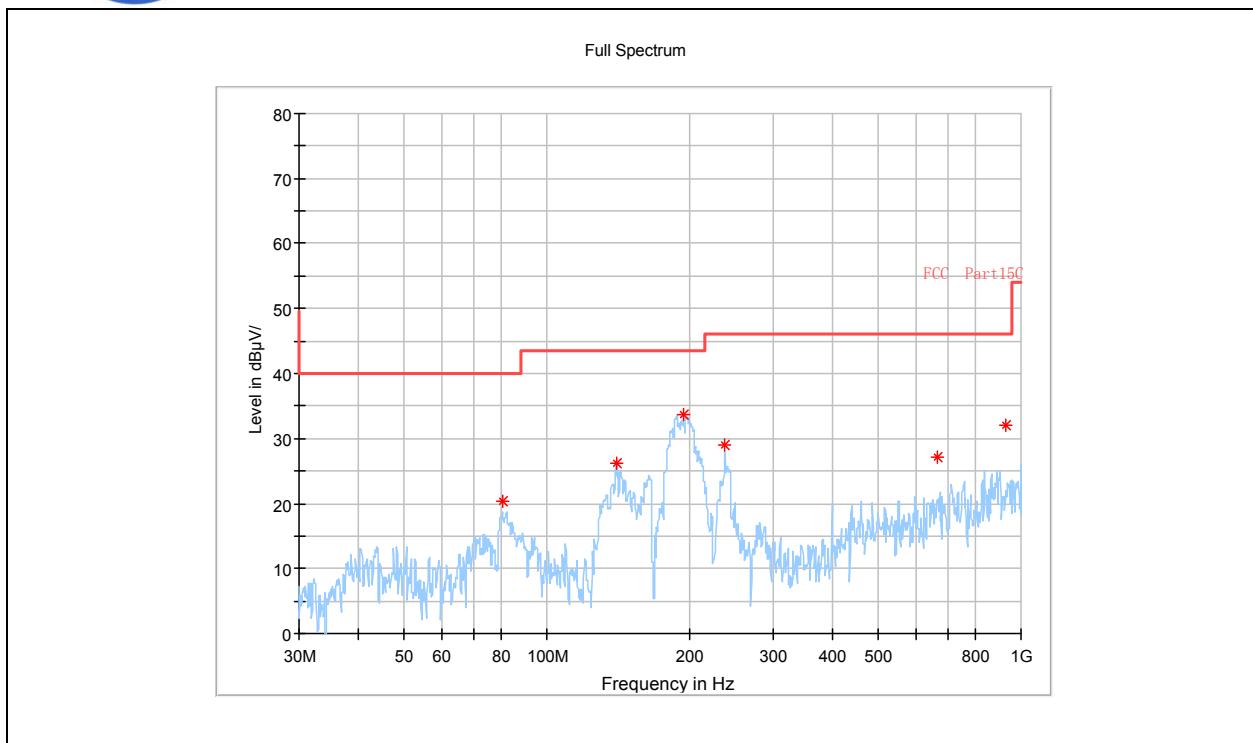
(802.11n\_40M \_2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3855.000000	---	28.98	54.00	25.02	V	-4.6
3855.000000	39.98	---	74.00	34.02	V	-4.6
4867.500000	---	34.44	54.00	19.56	V	-2.9
4867.500000	47.55	---	74.00	26.45	V	-2.9
7312.500000	---	32.83	54.00	21.17	V	-0.3
7312.500000	45.00	---	74.00	19.00	V	-0.3
10162.50000	---	32.12	54.00	21.88	V	2.0
10162.50000	44.59	---	74.00	29.41	V	2.0
14970.00000	---	36.20	54.00	17.80	V	10.0
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 \_2437MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18964.055556	---	30.64	54.00	23.36	V	-5.3
18964.055556	41.92	---	74.00	32.08	V	-5.3
20083.277778	---	30.60	54.00	23.40	V	-5.0
20083.277778	41.75	---	74.00	32.25	V	-5.0
20945.833333	40.41	---	74.00	33.59	V	-5.1
20945.833333	---	29.49	54.00	24.51	V	-5.1
23070.333333	41.78	---	74.00	32.22	V	-5.0
23070.333333	---	30.44	54.00	23.56	V	-5.0
23964.000000	41.41	---	74.00	32.59	V	-4.7
23964.000000	---	30.46	54.00	23.54	V	-4.7
24881.777778	42.02	---	74.00	31.98	V	-4.8
24881.777778	---	30.99	54.00	23.01	V	-4.8

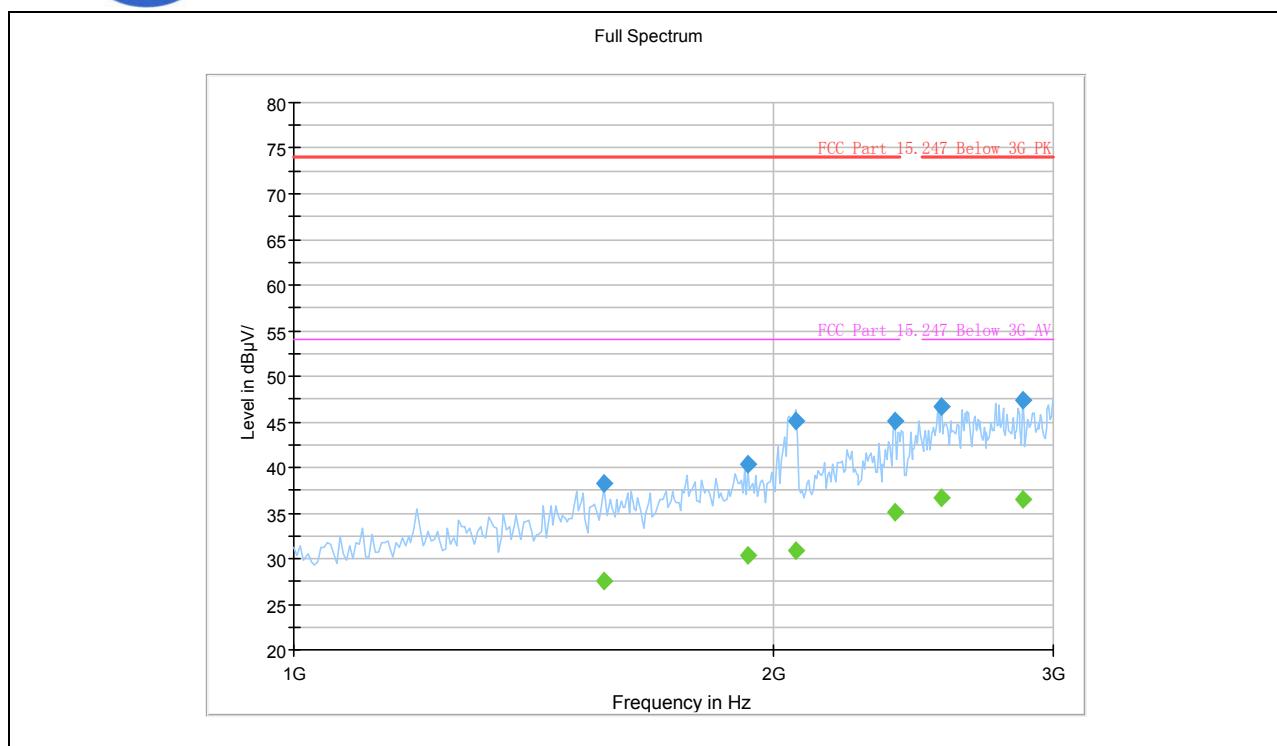


(802.11n\_40M \_2452MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
80.655556	20.31	---	40.00	19.69	H	10.6
140.580000	26.20	---	43.50	17.30	H	11.9
193.822222	33.79	---	43.50	9.71	H	13.4
237.849444	28.91	---	46.00	17.09	H	14.9
665.026667	27.03	---	46.00	18.97	H	24.3
931.022222	31.95	---	46.00	14.05	H	28.1

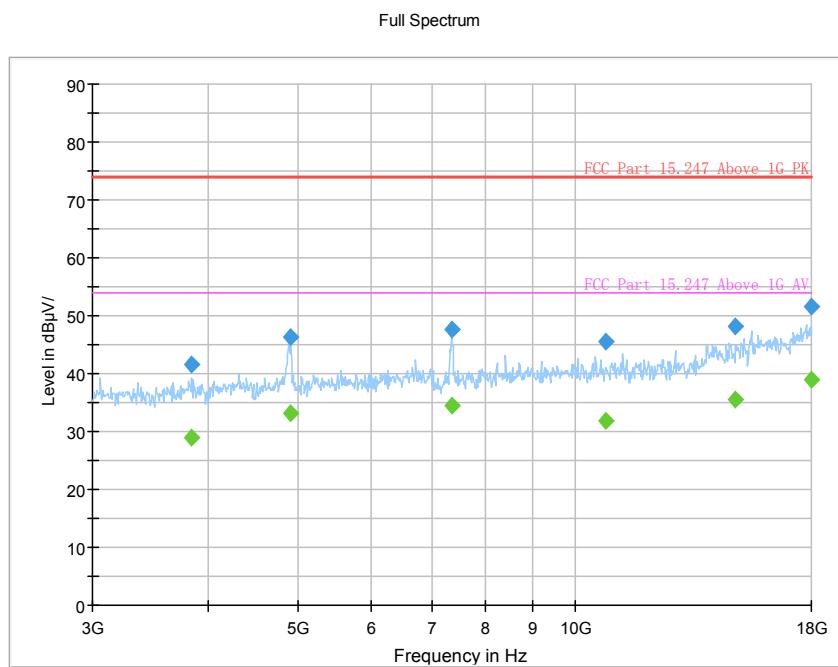


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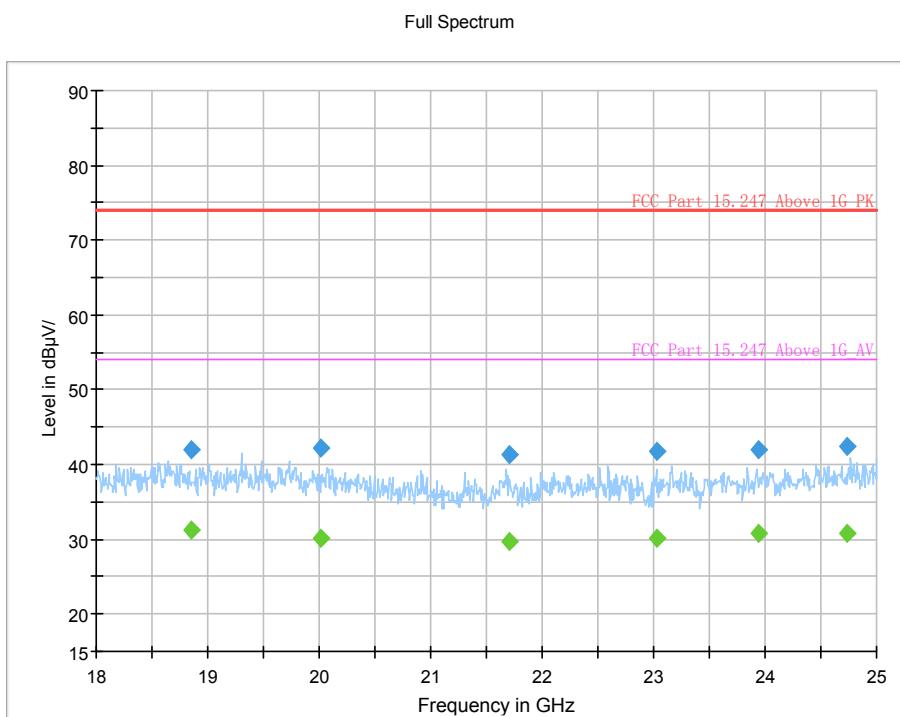
(802.11n\_40M \_2452MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1565.000000	---	27.60	54.00	26.40	H	3.0
1565.000000	38.17	---	74.00	35.83	H	3.0
1930.000000	40.34	---	74.00	33.66	H	6.3
1930.000000	---	30.35	54.00	23.65	H	6.3
2065.000000	45.15	---	74.00	28.85	H	7.1
2065.000000	---	30.83	54.00	23.17	H	7.1
2385.000000	---	35.13	54.00	18.87	H	12.3
2385.000000	45.09	---	74.00	28.91	H	12.3
2550.000000	---	36.71	54.00	17.29	H	14.4
2550.000000	46.70	---	74.00	27.30	H	14.4
2870.000000	---	36.45	54.00	17.55	H	14.9
2870.000000	47.32	---	74.00	26.68	H	14.9



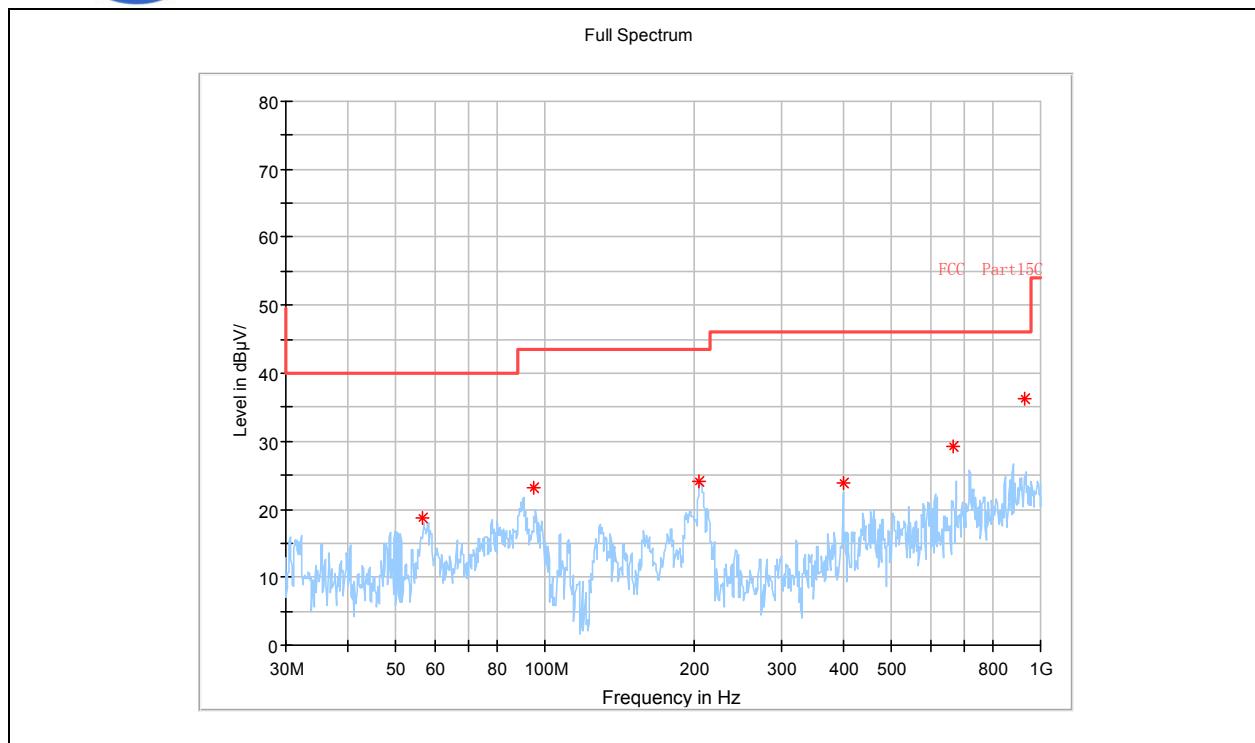
(802.11n\_40M \_2452MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3840.000000	41.45	---	74.00	32.55	H	-4.8
3840.000000	---	29.01	54.00	24.99	H	-4.8
4920.000000	---	33.23	54.00	20.77	H	-2.8
4920.000000	46.20	---	74.00	27.80	H	-2.8
7335.000000	---	34.37	54.00	19.63	H	-0.2
7335.000000	47.69	---	74.00	26.31	H	-0.2
10792.500000	45.62	---	74.00	28.38	H	2.5
10792.500000	---	31.96	54.00	22.04	H	2.5
14895.000000	---	35.62	54.00	18.38	H	9.2
14895.000000	48.16	---	74.00	25.84	H	9.2
17977.500000	---	39.08	54.00	14.92	H	14.9
17977.500000	51.53	---	74.00	22.47	H	14.9



(802.11n\_40M \_2452MHz, Antenna Horizontal, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18847.000000	---	31.20	54.00	22.80	H	-5.3
18847.000000	41.97	---	74.00	32.03	H	-5.3
20013.277778	---	30.23	54.00	23.77	H	-5.0
20013.277778	42.23	---	74.00	31.77	H	-5.0
21704.944444	---	29.74	54.00	24.26	H	-5.1
21704.944444	41.36	---	74.00	32.64	H	-5.1
23034.555556	41.68	---	74.00	32.32	H	-5.0
23034.555556	---	30.18	54.00	23.82	H	-5.0
23941.833333	41.94	---	74.00	31.06	H	-4.7
23941.833333	---	30.75	54.00	23.25	H	-4.7
24734.777778	---	30.88	54.00	23.12	H	-4.8
24734.777778	42.38	---	74.00	31.62	H	-4.8

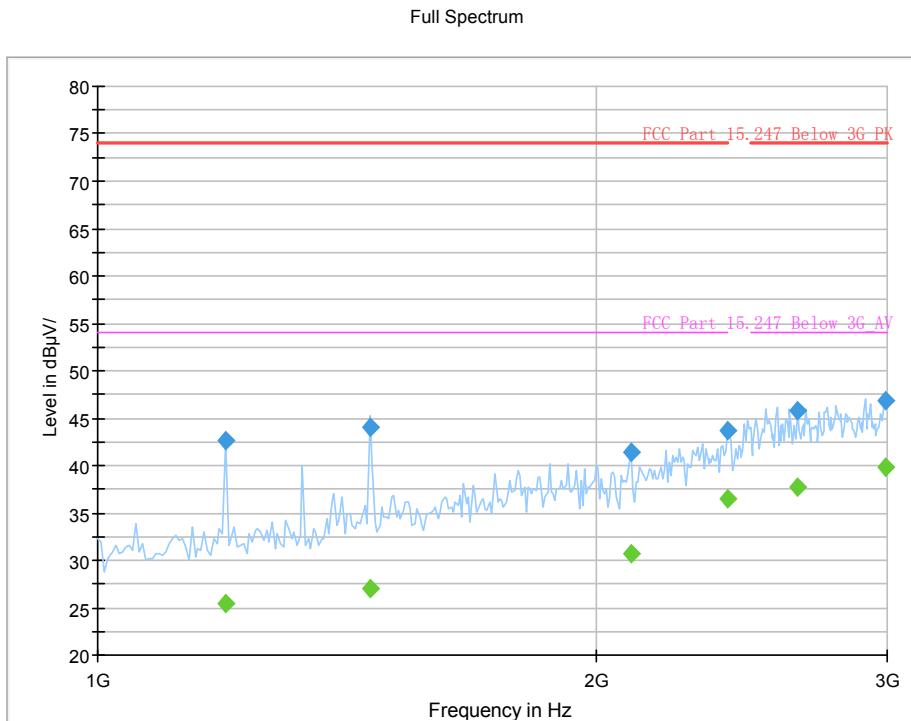


(802.11n\_40M \_2452MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
56.728889	18.78	---	40.00	21.22	V	14.6
94.936111	23.13	---	43.50	20.37	V	13.0
204.653889	24.14	---	43.50	19.36	V	13.5
399.031111	23.86	---	46.00	22.14	V	19.6
665.026667	29.17	---	46.00	16.83	V	24.3
931.022222	36.26	---	46.00	9.74	V	28.1



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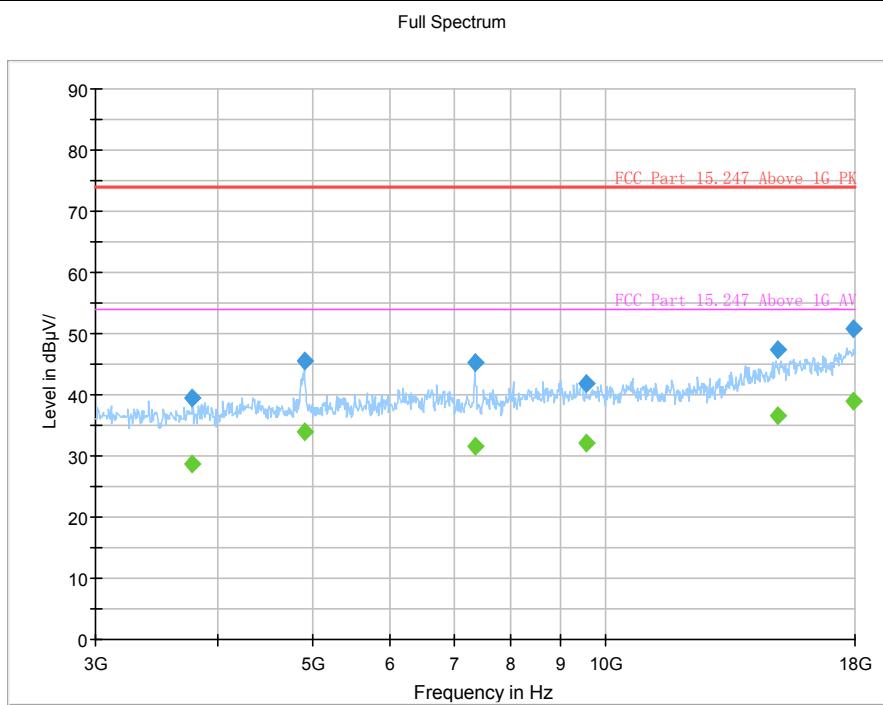


(802.11n\_40M \_2452MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	Corr. (dB/m)
1195.000000	42.60	---	74.00	31.40	V	-0.6
1195.000000	---	25.43	54.00	28.57	V	-0.6
1460.000000	---	27.04	54.00	26.96	V	1.6
1460.000000	44.04	---	74.00	29.96	V	1.6
2100.000000	41.34	---	74.00	32.66	V	7.7
2100.000000	---	30.78	54.00	23.22	V	7.7
2400.000000	---	36.55	54.00	17.45	V	13.5
2400.000000	43.65	---	74.00	30.35	V	13.5
2650.000000	45.77	---	74.00	28.23	V	15.6
2650.000000	---	37.63	54.00	16.37	V	15.6
2995.000000	46.91	---	74.00	27.09	V	17.9
2995.000000	---	39.75	54.00	14.25	V	17.9

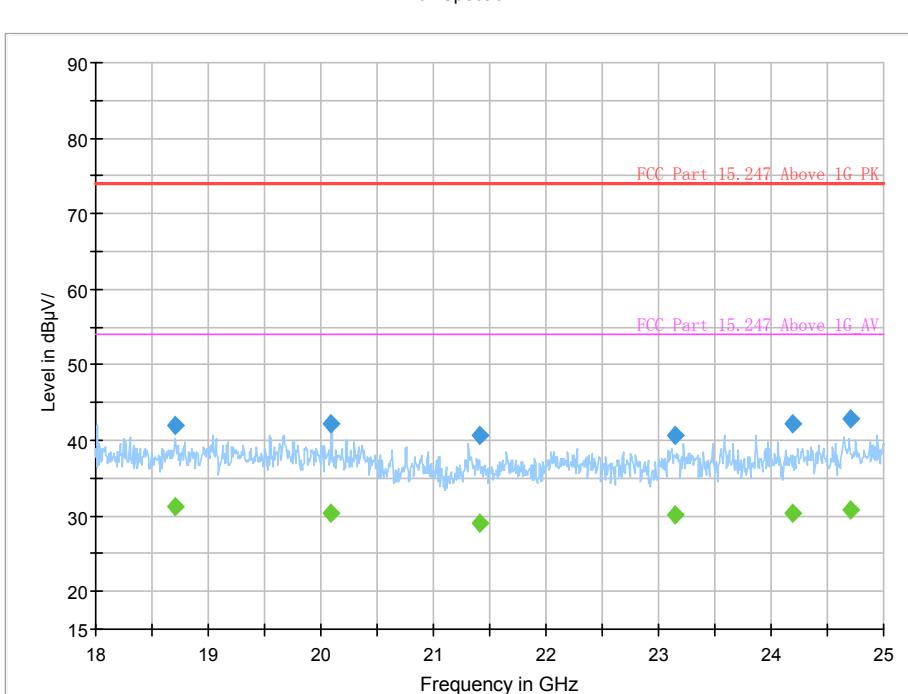


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(802.11n\_40M \_2452MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3772.500000	---	28.64	54.00	25.36	V	-5.0
3772.500000	39.55	---	74.00	34.45	V	-5.0
4905.000000	45.43	---	74.00	28.57	V	-2.7
4905.000000	---	33.84	54.00	20.16	V	-2.7
7335.000000	45.19	---	74.00	28.81	V	-0.2
7335.000000	---	31.63	54.00	22.37	V	-0.2
9532.500000	---	32.08	54.00	21.92	V	2.0
9532.500000	41.76	---	74.00	32.24	V	2.0
15000.000000	47.42	---	74.00	26.58	V	10.6
15000.000000	---	36.59	54.00	17.41	V	10.6
17917.50000	50.66	---	74.00	23.34	V	14.3
17917.50000	---	38.92	54.00	15.08	V	14.3



(802.11n\_40M \_2452MHz, Antenna Vertical, 18GHz to 25GHz)

Frequency (MHz)	MaxPeak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Pol	Corr. (dB/m)
18707.000000	41.96	---	74.00	32.04	V	-5.3
18707.000000	---	31.19	54.00	22.81	V	-5.3
20095.333333	42.28	---	74.00	31.72	V	-5.0
20095.333333	---	30.38	54.00	23.62	V	-5.0
21416.000000	40.69	---	74.00	33.31	V	-5.0
21416.000000	---	29.10	54.00	24.90	V	-5.0
23141.888889	40.72	---	74.00	33.28	V	-5.0
23141.888889	---	30.18	54.00	23.82	V	-5.0
24191.500000	---	30.34	54.00	23.66	V	-4.6
24191.500000	42.26	---	74.00	31.74	V	-4.6
24709.500000	---	30.83	54.00	23.17	V	-4.8
24709.500000	42.88	---	74.00	31.12	V	-4.8



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## 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	±2.22dB
Power spectral density (PSD)	±2.22dB
Bandwidth	±5%
Conducted Spurious Emission	±2.77 dB
Restricted Frequency Bands	±5%
Radiated Emission	±3.1dB
Conducted Emission	±1.8dB

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 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 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 CN1192.

### 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	2017.11.30	2018.11.29
2	Power Sensor	MY56410006	U2021XA	Keysight	2017.11.30	2018.11.29
3	Coaxial cable	RF02	N/A	Morlab	N/A	N/A
4	SMA connector	RF03	N/A	Xingbo	N/A	N/A

#### 4.2 Auxiliary Test Equipment

No .	Equipment Name	Serial No.	Model No.	Manufacturer	Cal.Date	Cal. Due Date
1	Laptop	N/A	ThinkPad T470	Lenovo Group	N/A	N/A



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#### 4.3 Conducted Emission Test Equipments

No.	Equipment Name	Serial No.	Model No.	Manufacturer	Cal.Date	Cal.Due Date
1	EMI Receiver	102174	ESR3	ESR3	2017.11.27	2018.11.26
2	LISN	101338	ENV432	ENV432	2017.11.27	2018.11.26
3	Pulse Limiter (10dB)	317	VTSD 9561 F	VTSD 9561 F	2017.11.27	2018.11.26
4	Coaxial cable(BNC) (30MHz-3GHz)	EMC01	N/A	Morlab	N/A	N/A

#### 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	2017.11.27	2018.11.26
2	Signal Analyzer	101294	FSV40	R&S	2017.12.01	2018.11.30
3	Active Ring Antenna	FMZB 1513 #269	FMZB 1513	Schwarzbeck	2017.11.26	2018.11.25
4	Linear Log Periodic Broad Band Antenna	949	VULB 9163	Schwarzbeck	2017.12.03	2018.12.02
5	Ultra-Wideband Horn Antenna	102615	HF907	R&S	2017.12.03	2018.12.02
6	Steatite Antennas	17868	QSH-SL-18-26-S-20	Seibersdorf	2018.01.18	2019.01.17
7	RF Switch and Control Platform	N/A	RSC	CDSI	N/A	N/A
8	Coaxial cable (N male) (9kHz -3GHz)	EMC02	N/A	Morlab	N/A	N/A
9	Coaxial cable (N male) (9kHz -3GHz)	EMC03	N/A	Morlab	N/A	N/A
10	Coaxial cable (N male)	EMC04	N/A	Morlab	N/A	N/A



	(1GHz-26.5GHz)					
11	Coaxial cable (N male) (1GHz-26.5GHz)	EMC05	N/A	Morlab	N/A	N/A
12	Pre-amplifier (1GHz-18GHz)	8810011	PAP-1G18	CDSI	2017.11.27	2018.11.26
13	Pre-amplifier (18GHz-40GHz)	17021-1702 4	PAP-1840	CDSI	2018.07.05	2019.07.04
14	Band stop Filter	EMC11	BJF2400/24 85-60	CDSI	N/A	N/A
15	High Pass Filter	EMC12	HFP-3.0/18 G-60	CDSI	N/A	N/A

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END OF REPORT

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