



TEST REPORT

APPLICANT : Nanjing Juplink Intelligent Technologies Co., Ltd.

PRODUCT NAME : Dual-band Gigabit Router

MODEL NAME : RX4-1500

BRAND NAME : JupLink

FCC ID : 2AT9Z-RX4-1500

STANDARD(S) : 47 CFR Part 15 Subpart C

RECEIPT DATE : 2019-08-06

TEST DATE : 2019-08-07 to 2019-08-21

ISSUE DATE : 2019-09-02

Edited by:

Bowers Zeng

Bowers Zeng (Test Engineer)

Approved by:

Anne Liu

Anne Liu(Supervisor)

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Change History		
Version	Date	Reason for change
1.0	2019-09-02	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Nanjing Juplink Intelligent Technologies Co., Ltd.
Applicant Address:	No. 757, Dixiu Road, Binjiang Economic Development Zone, Jiangning District, Nanjing, China
Manufacturer:	Sichuan Tianyi Comheart Telecom Co., Ltd.
Manufacturer Address:	No. 198, Section 1, Xueshan Avenue, Dayi County, Chengdu, Sichuan, China

1.2. Equipment Under Test (EUT) Description

Product Name:	Dual-band Gigabit Router	
Serial No:	(N/A, marked #1 by test site)	
Hardware Version:	V1.0.0	
Software Version:	V1.0.1	
Modulation Type:	DSSS, OFDM	
Operating Frequency Range:	802.11b/g/n-20MHz: 2.412GHz - 2.462GHz 802.11n-40MHz: 2.422GHz - 2.452GHz	
Channel Number:	802.11b/g/n-20MHz: 11 802.11n-40MHz: 7	
Antenna Type:	External antenna	
Antenna Gain:	Ant 0:5dBi;Ant 1:5dBi	
Accessory Information:	AC Adapter	
	Brand Name:	Transin
	Model No:	TS-A012-120010Aq
	Serial No:	(N/A, marked #1 by test site)
	Rated Output:	12V=1A
	Rated Input:	200-240V~50/60Hz

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

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



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

Note 2: During test, the duty cycle of the EUT was setting to 100%.

Note 3: The EUT has two antennas and supports a MIMO function. Physically, the EUT provides two completed transmitters and two receivers for 802.11n modulation mode.

Modulation Mode:	TX Function
802.11b	1TX
802.11g	1TX
802.11n20	2TX
802.11n40	2TX

Note 4: 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 5: For conducted test item Maximum conducted output Power and Peak Power spectral density of each modulation mode, we recorded the test result of two antennas separately, for other conducted test items both of the two antennas were tested separately, we only recorded the worst test result(Ant 0) in this report.

Note 6: All radiation test items for 802.11n modulation mode operate at MIMO mode during the test. Other modulation mode operate at SISO mode, both of the two antennas were tested separately, we only recorded the worst test result(ANT0) in this report.

Note 7: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Test Standards and Results

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

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

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

No.	Section	Description	Test Date	Test Engineer	Result
1	15.203	Antenna Requirement	N/A	N/A	<u>PASS</u>
2	15.247(b)	Output Power	Aug 08, 2019 Aug 15, 2019	Elvis Wang	<u>PASS</u>
3	15.247(a)	Bandwidth	Aug 08, 2019 Aug 16, 2019	Elvis Wang	<u>PASS</u>
4	15.247(d)	Conducted Spurious Emission and Band Edge	Aug 08, 2019 Aug 16, 2019	Elvis Wang	<u>PASS</u>
5	15.247(e)	Power spectral density (PSD)	Aug 08, 2019 Aug 16, 2019	Elvis Wang	<u>PASS</u>
6	15.247(d)	Restricted Frequency Bands	Aug 12, 2019	Bowers Zeng	<u>PASS</u>
7	15.207	Conducted Emission	Aug 09, 2019	Bowers Zeng	<u>PASS</u>
8	15.209, 15.247(d)	Radiated Emission	Aug 20, 2019 Aug 21, 2019	Qingxiang Liao	<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 v05r02.

1.4. Environmental Conditions

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

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



2. 47 CFR Part 15C Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

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

2.1.2. Result: Compliant

The EUT has a N type antenna connector. The antenna is N type Omni-Directional FRP antenna and max gain is 5 dBi. Please refer to the EUT external photos.

2.2. Output Power

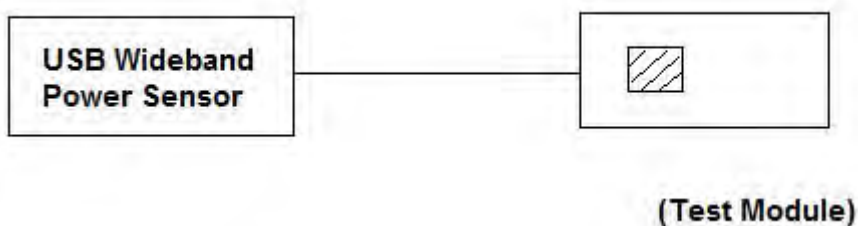
2.2.1. Requirement

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

2.2.2. Test Description

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

A. Test Setup:



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

B. Equipments List:

Please refer ANNEX B(4).

2.2.3. Test Result

Duty Cycle Factor

Antenna 0

Mode	Channel	Frequency (MHz)	T _{on} (ms)	T _(on+off) (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



Antenna 1

Mode	Channel	Frequency (MHz)	T _{on} (ms)	T _(on+off) (ms)	Duty Cycle (%)	Duty Cycle Factor
802.11b	6	2437	100	100	100	0
802.11g	6	2437	100	100	100	0
802.11n-20MHz	6	2437	100	100	100	0
802.11n-40MHz	6	2437	100	100	100	0

Output Average Power

ANT0							
Mode	Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 b	1	2412	17.20	0.052	30	1	PASS
	6	2437	17.07	0.051			PASS
	11	2462	16.70	0.047			PASS
802.11 g	1	2412	17.86	0.061			PASS
	6	2437	17.16	0.052			PASS
	11	2462	17.33	0.054			PASS
802.11 HT20	1	2412	17.86	0.061			PASS
	6	2437	17.62	0.058			PASS
	11	2462	17.57	0.057			PASS
802.11 HT40	3	2422	17.67	0.058			PASS
	6	2437	18.83	0.076			PASS
	9	2452	18.60	0.073			PASS



ANT1							
Mode	Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 b	1	2412	17.31	0.054	30	1	PASS
	6	2437	17.18	0.052			PASS
	11	2462	16.88	0.049			PASS
802.11 g	1	2412	16.68	0.047			PASS
	6	2437	17.14	0.052			PASS
	11	2462	17.06	0.051			PASS
802.11 HT20	1	2412	16.88	0.049			PASS
	6	2437	17.50	0.056			PASS
	11	2462	17.40	0.055			PASS
802.11 HT40	3	2422	16.30	0.043			PASS
	6	2437	16.62	0.046			PASS
	9	2452	16.74	0.047			PASS

Total Average Power (ANT0+ANT1)

Mode	Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 HT20	1	2412	18.32	0.068	30	1	PASS
	6	2437	17.87	0.061			PASS
	11	2462	17.87	0.061			PASS
802.11 HT40	3	2422	18.25	0.067			PASS
	6	2437	18.42	0.069			PASS
	9	2452	18.35	0.068			PASS

**Output Peak Power**

ANT0							
Mode	Channel	Frequency (MHz)	Output Peak Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 b	1	2412	17.94	0.062	30	1	PASS
	6	2437	17.80	0.060			PASS
	11	2462	18.40	0.069			PASS
802.11 g	1	2412	17.87	0.061			PASS
	6	2437	17.48	0.056			PASS
	11	2462	18.05	0.064			PASS
802.11 HT20	1	2412	18.00	0.063			PASS
	6	2437	17.73	0.059			PASS
	11	2462	18.24	0.067			PASS
802.11 HT40	3	2422	18.50	0.071			PASS
	6	2437	18.84	0.077			PASS
	9	2452	18.67	0.074			PASS

ANT1							
Mode	Channel	Frequency (MHz)	Output Peak Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 b	1	2412	20.23	0.105	30	1	PASS
	6	2437	20.30	0.107			PASS
	11	2462	20.19	0.104			PASS
802.11 g	1	2412	19.59	0.091			PASS
	6	2437	20.02	0.100			PASS
	11	2462	19.43	0.088			PASS
802.11 HT20	1	2412	19.94	0.099			PASS
	6	2437	20.19	0.104			PASS
	11	2462	19.45	0.088			PASS
802.11 HT40	3	2422	19.82	0.096			PASS
	6	2437	20.08	0.102			PASS
	9	2452	20.17	0.104			PASS

**Total Peak Power (ANT0+ANT1)**

Mode	Channel	Frequency (MHz)	Output Average Power		Limit		Verdict
			dBm	W	dBm	W	
802.11 HT20	1	2412	18.60	0.072	30	1	PASS
	6	2437	18.29	0.067			PASS
	11	2462	18.30	0.068			PASS
802.11 HT40	3	2422	18.31	0.068			PASS
	6	2437	18.80	0.076			PASS
	9	2452	18.81	0.076			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.

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

B. Equipments List:

Please refer ANNEX B(4).



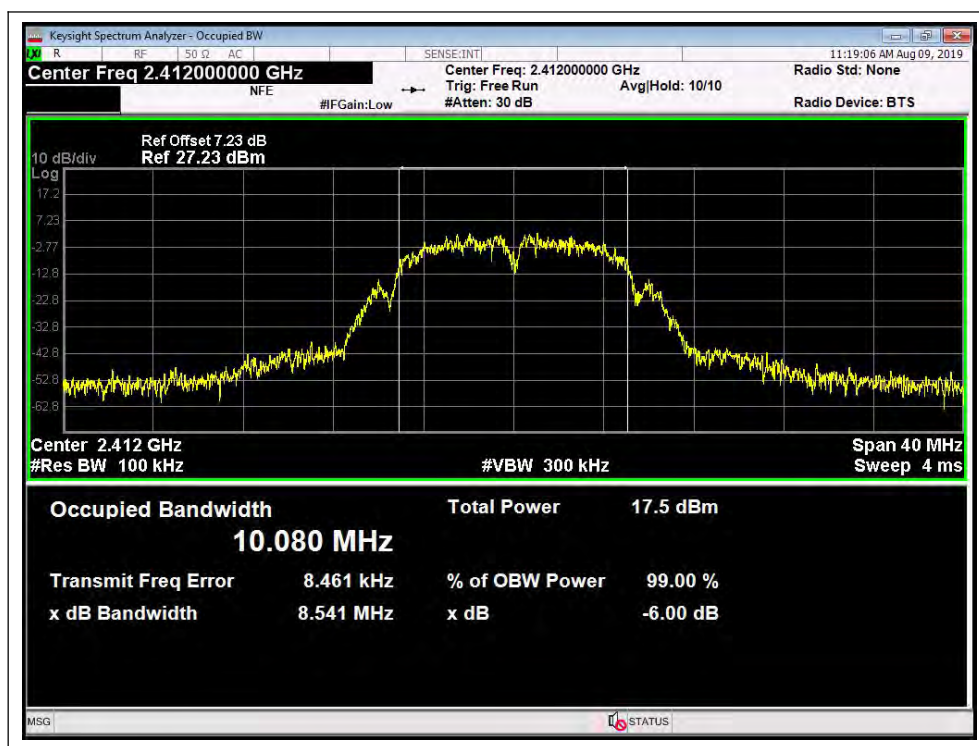
2.3.3. Test Result

802.11b Test mode

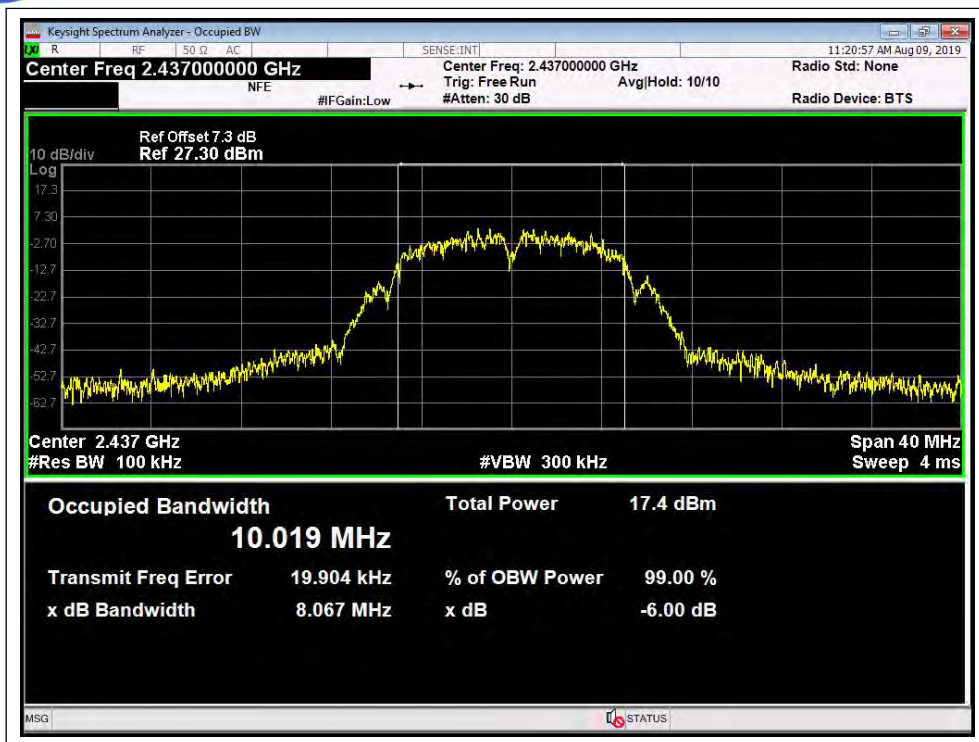
A. Test Verdict:

Channel	Frequency (MHz)	ANT0 6 dB Bandwidth (MHz)	Limits(kHz)	Result
1	2412	8.541	≥500	PASS
6	2437	8.067	≥500	PASS
11	2462	8.039	≥500	PASS

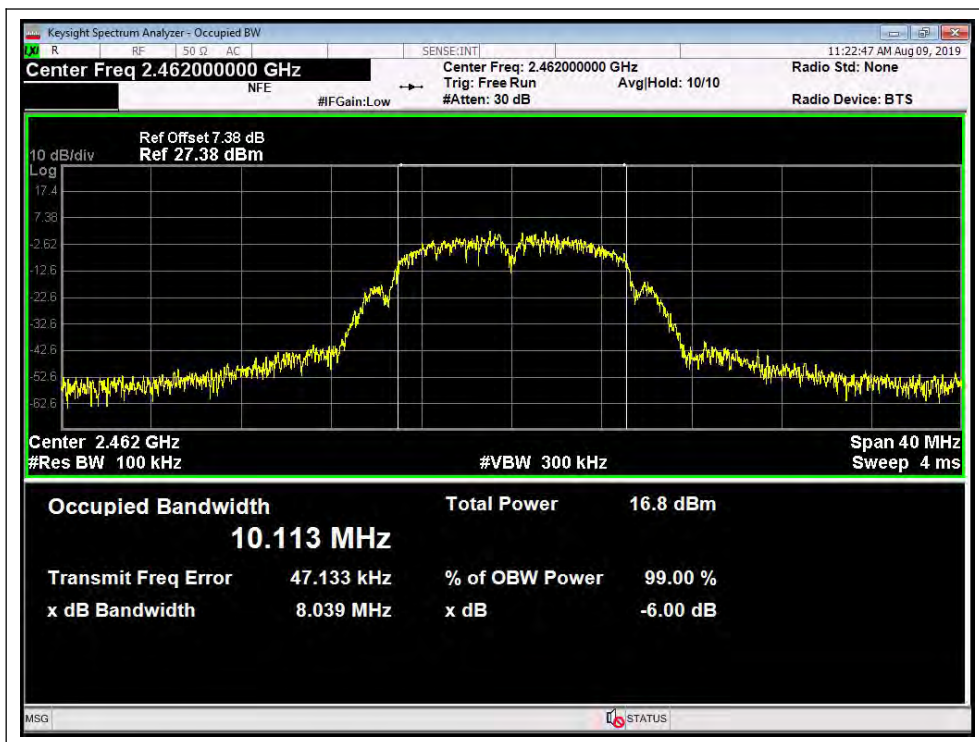
B. Test Plots



(Channel 1, 2412MHz, 802.11b)



(Channel 6, 2437 MHz, 802.11b)



(Channel 11, 2462MHz, 802.11b)



802.11g Test mode

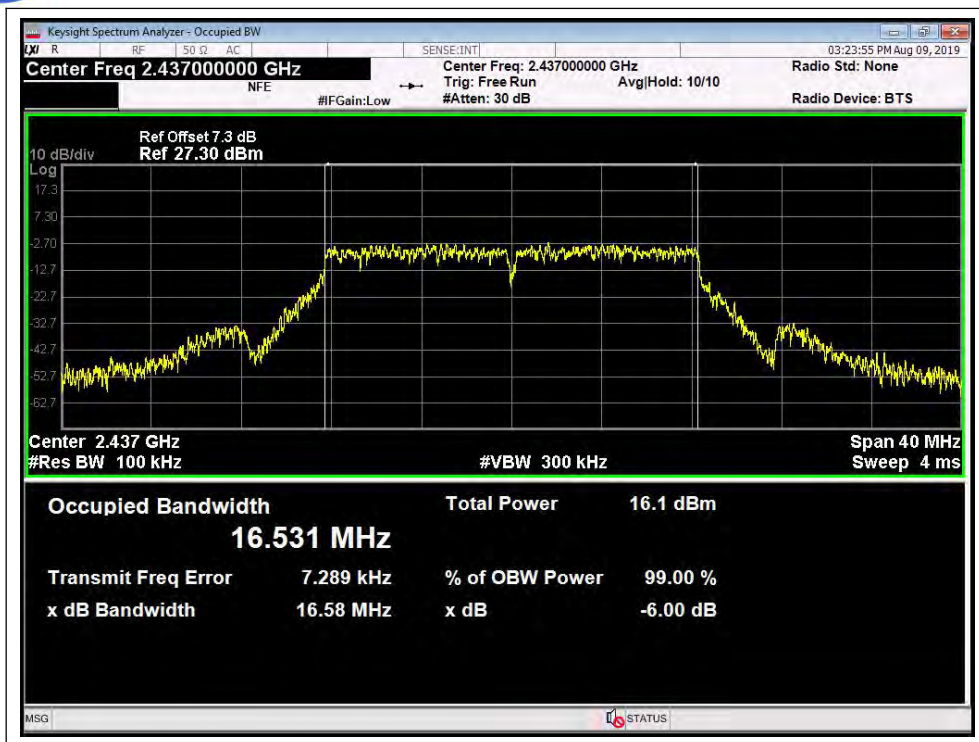
A. Test Verdict:

Channel	Frequency (MHz)	ANT0 6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	16.590	≥500	PASS
6	2437	16.580	≥500	PASS
11	2462	16.390	≥500	PASS

B. Test Plots:



(Channel 1, 2412MHz, 802.11g)



(Channel 6, 2437MHz, 802.11g)



(Channel 11, 2462MHz, 802.11g)

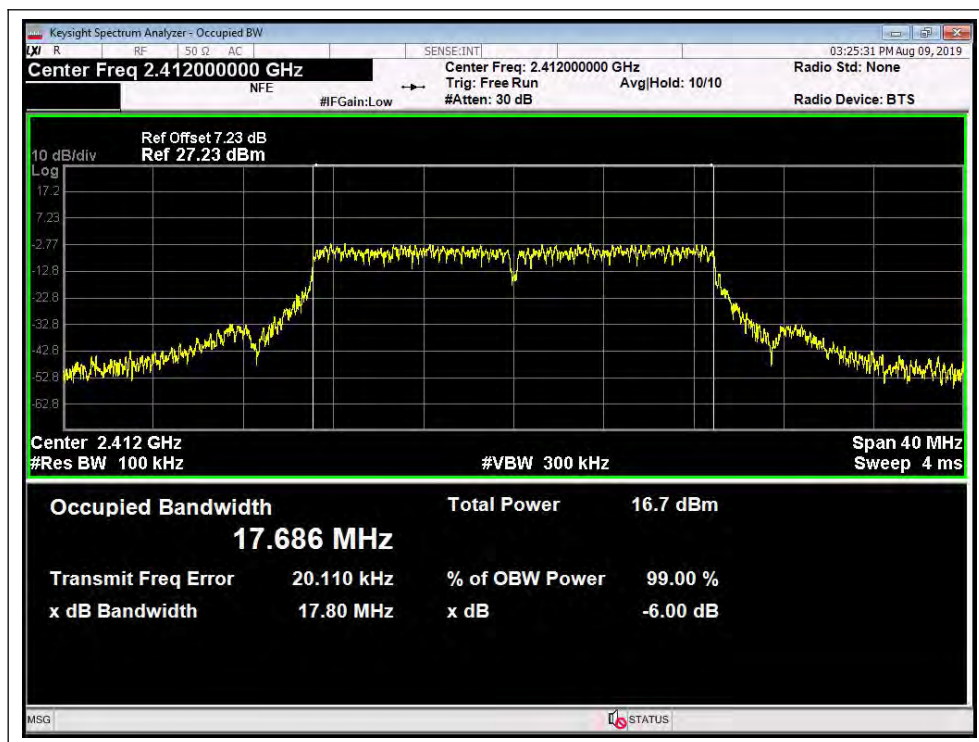


802.11n-20 Test mode

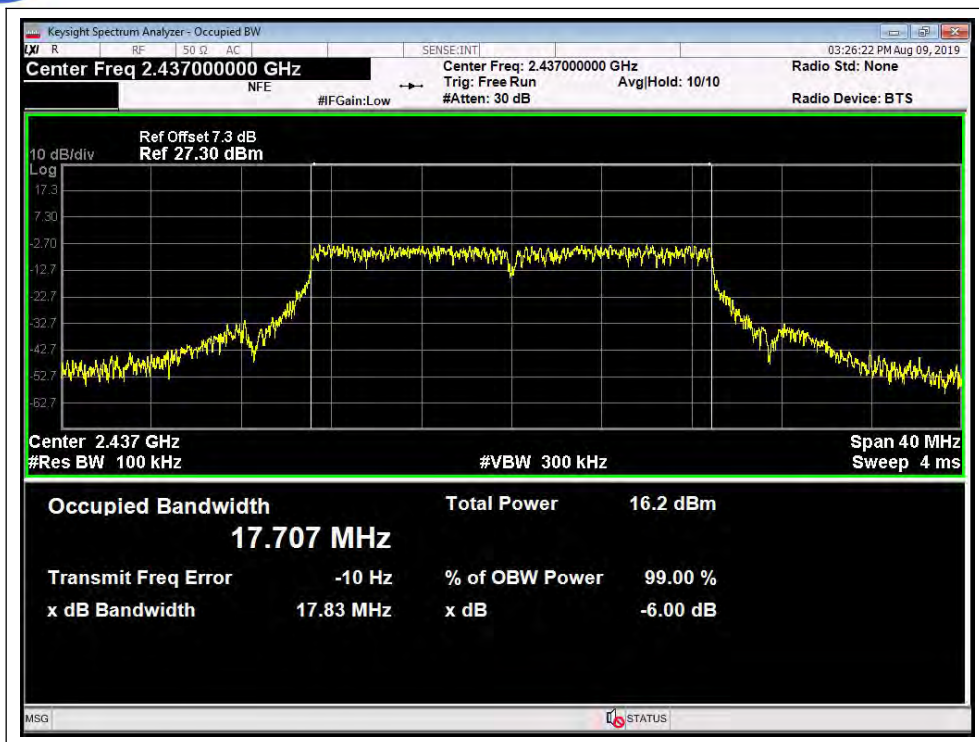
A. Test Verdict:

Channel	Frequency (MHz)	ANT0 6 dB Bandwidth (MHz)	Limits (kHz)	Result
1	2412	17.80	≥500	PASS
6	2437	17.83	≥500	PASS
11	2462	17.63	≥500	PASS

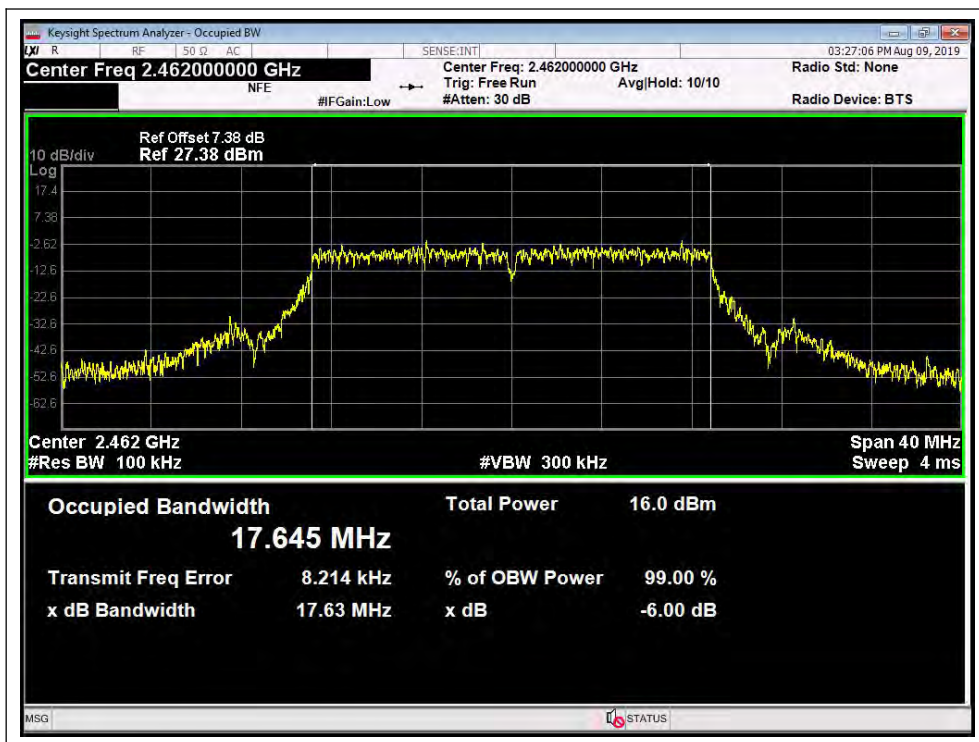
B. Test Plots:



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



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



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



802.11n-40 Test mode

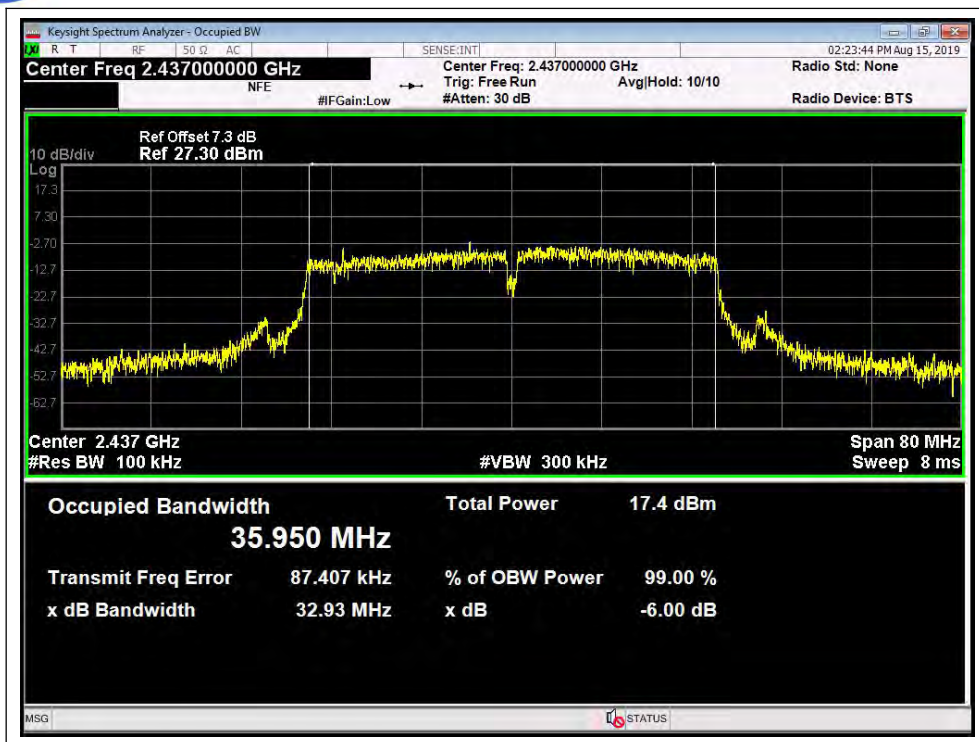
A. Test Verdict:

Channel	Frequency (MHz)	ANT0 6 dB Bandwidth (MHz)	Limits (kHz)	Result
3	2422	36.31	≥500	PASS
6	2437	35.93	≥500	PASS
9	2452	36.75	≥500	PASS

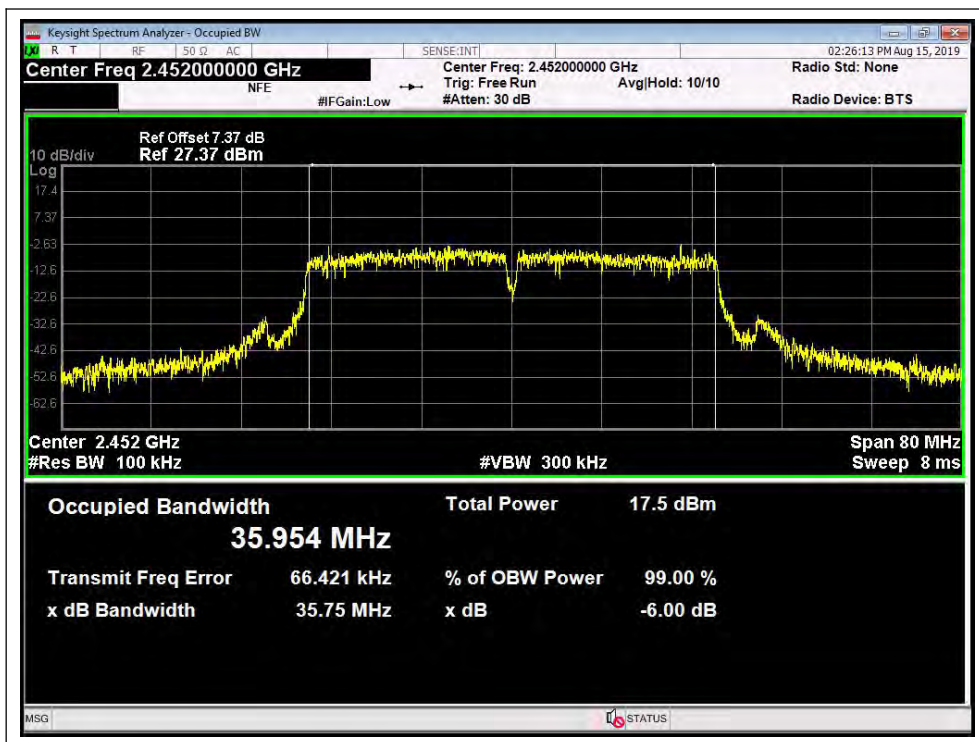
B. Test Plots:



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



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



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

2.4. Conducted Spurious Emissions and Band Edge

2.4.1. Requirement

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

2.4.2. Test Description

A. Test Set:



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

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

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

B. Equipments List:

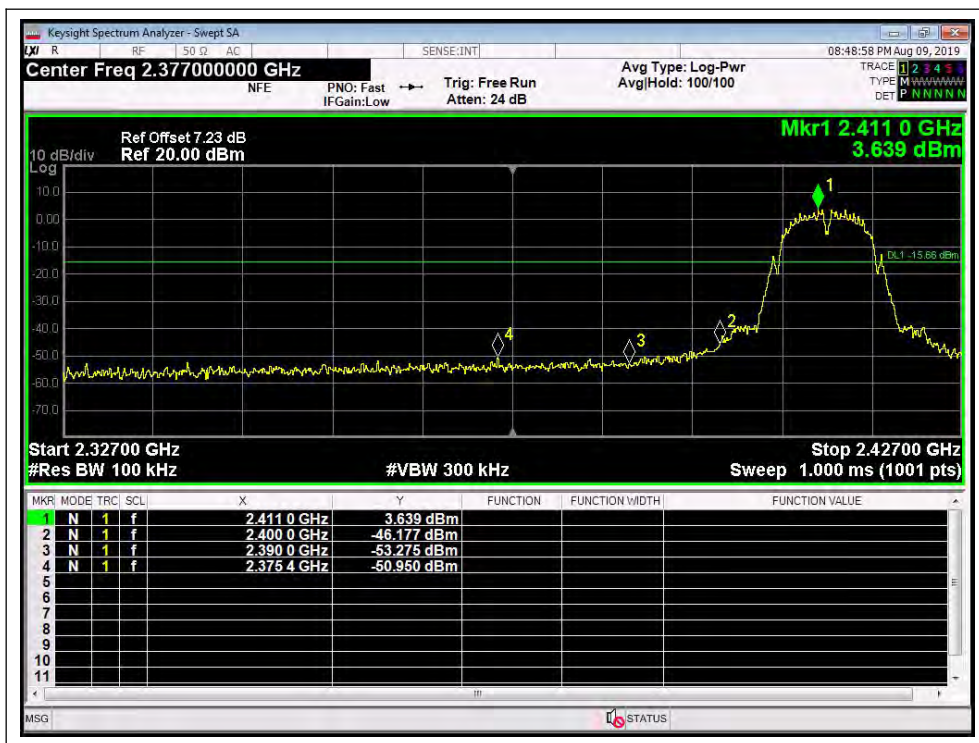
Please refer ANNEX B(4).



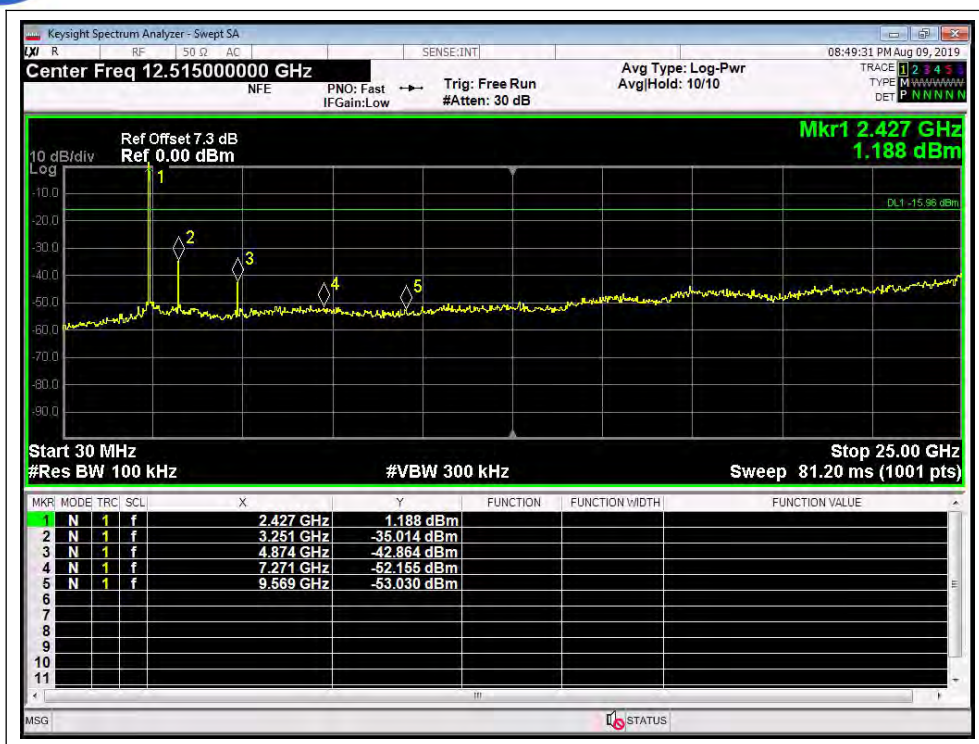
2.4.3. Test Result



(802.11 b, Channel = 1, 30MHz to 25GHz;ANT0)



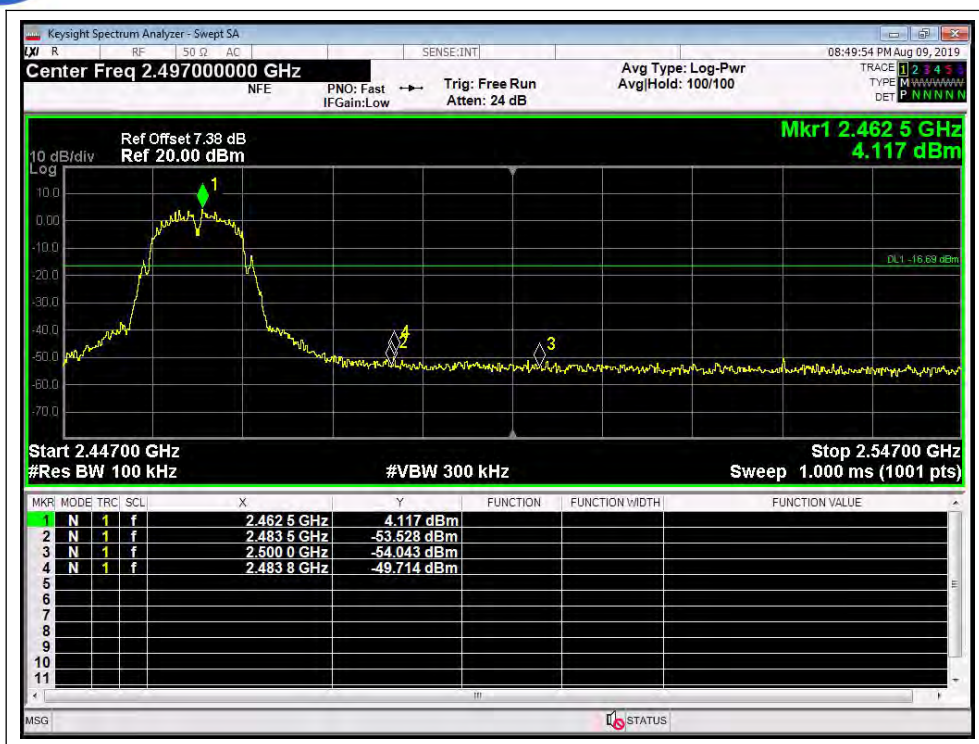
(802.11 b, Band Edge @ Channel = 1;ANT0)



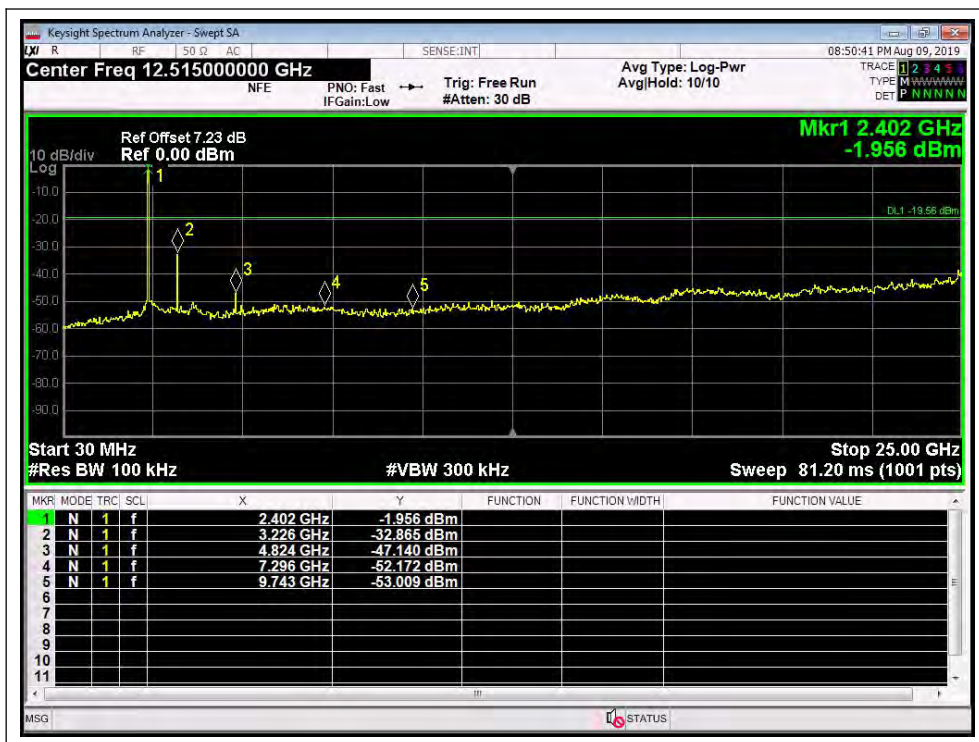
(802.11 b, Channel = 6, 30MHz to 25GHz;ANT0)



(802.11 b, Channel = 11, 30MHz to 25GHz;ANT0)



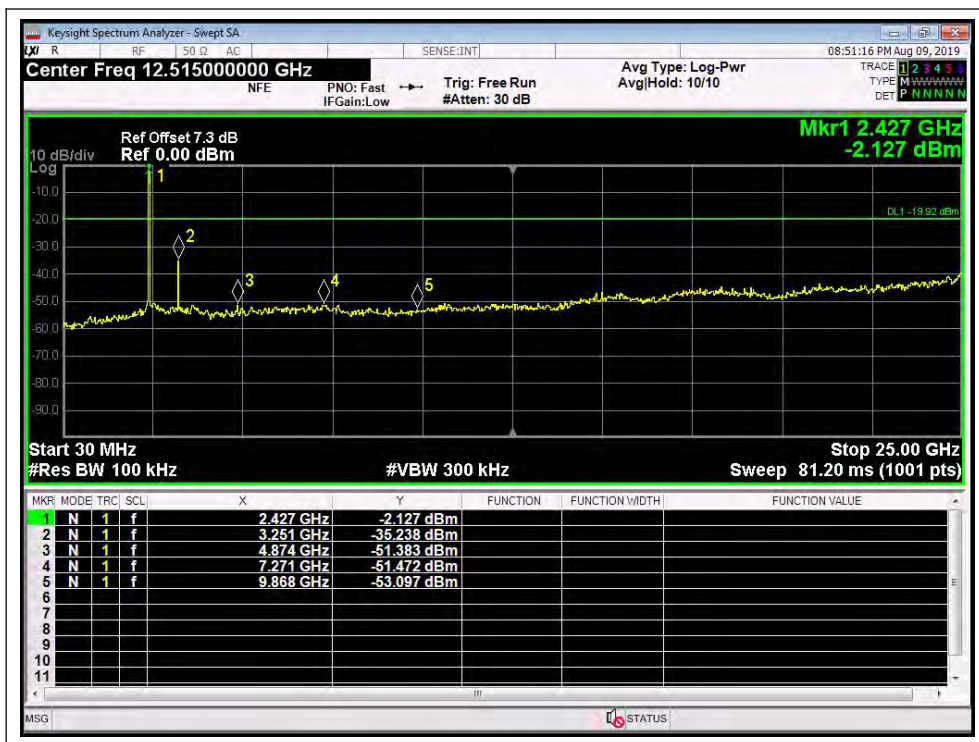
(802.11 b, Band Edge @ Channel = 11;ANT0)



(802.11 g, Channel = 1, 30MHz to 25GHz;ANT0)



(802.11 g, Band Edge @ Channel = 1;ANT0)



(802.11 g, Channel = 6, 30MHz to 25GHz;ANT0)



(802.11 g, Channel = 11, 30MHz to 25GHz;ANT0)



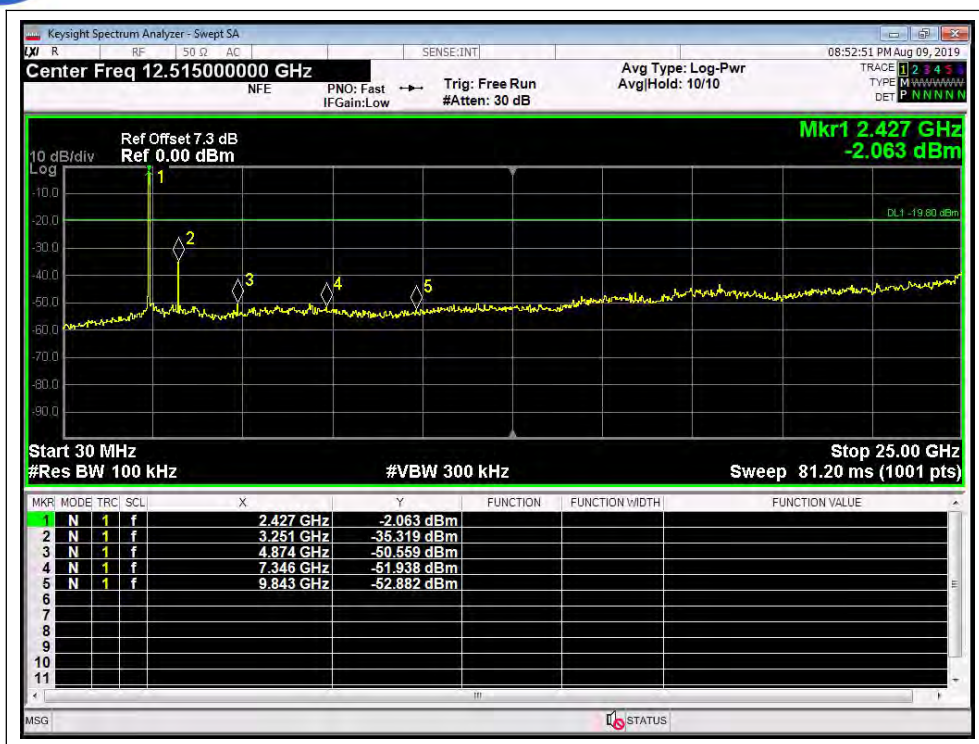
(802.11 g, Band Edge @ Channel = 11;ANT0)



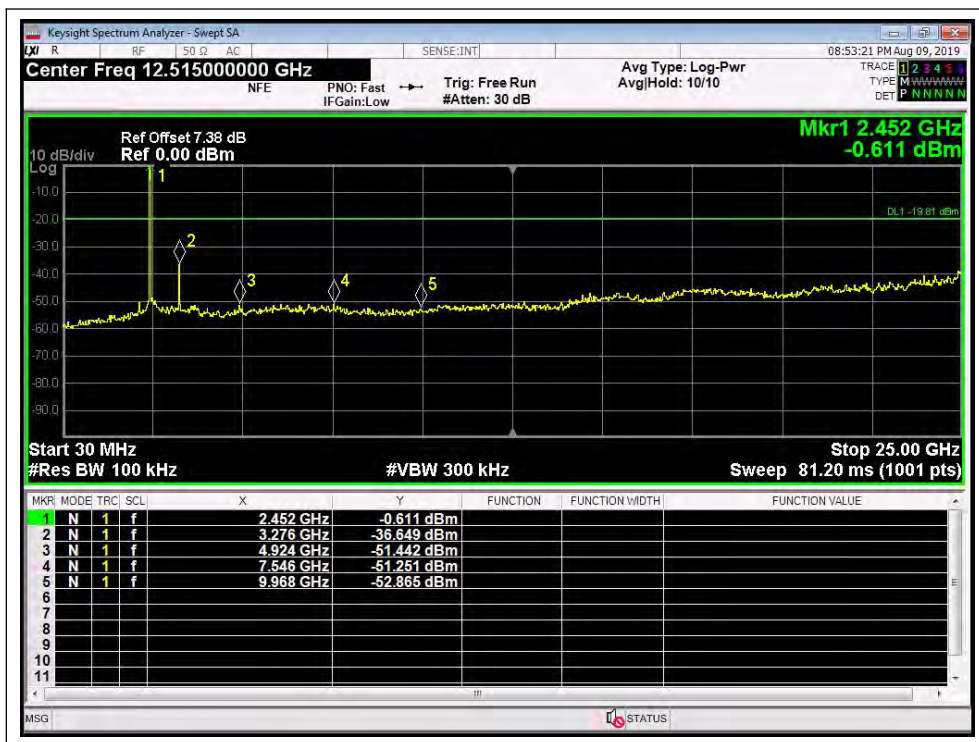
(802.11 HT20, Channel = 1, 30MHz to 25GHz;ANT0)



(802.11 HT20, Band Edge @ Channel = 1;ANT0)



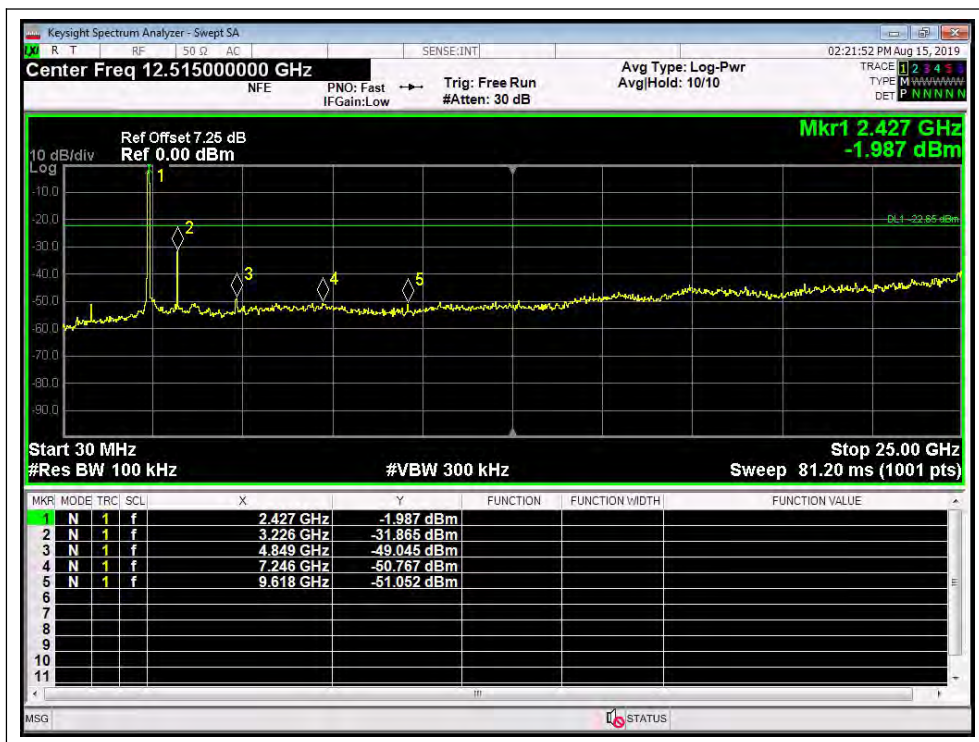
(802.11 HT20, Channel = 6, 30MHz to 25GHz;ANT0)



(802.11 HT20, Channel = 11, 30MHz to 25GHz;ANT0)



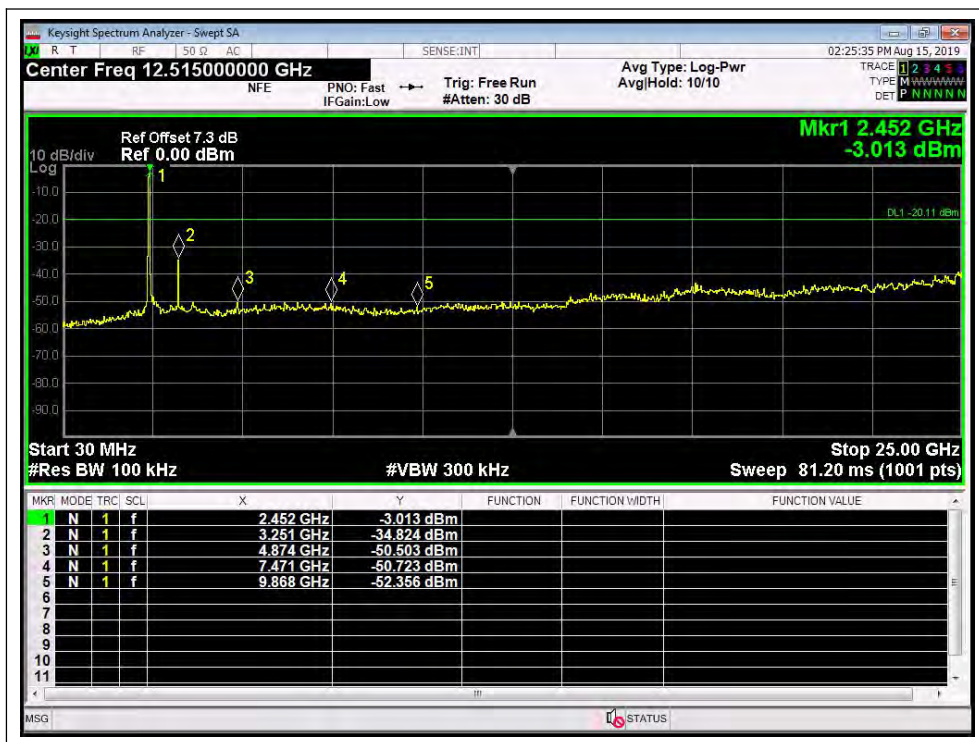
(802.11 HT20, Band Edge @ Channel = 11;ANT0)



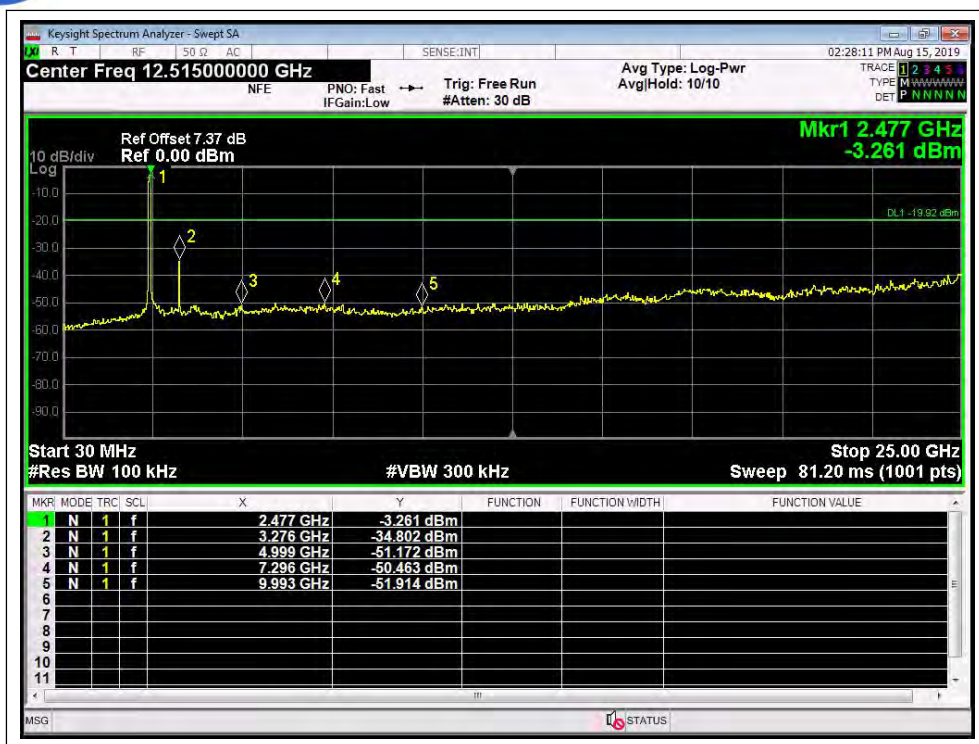
(802.11 HT40, Channel = 3, 30MHz to 25GHz;ANT0)



(802.11 HT40, Band Edge @ Channel = 3;ANT0)



(802.11 HT40, Channel = 6, 30MHz to 25GHz;ANT0)



(802.11 HT40, Channel = 9, 30MHz to 25GHz;ANT0)



(802.11 HT40, Band Edge @ Channel = 9;ANT0)

2.5. Power spectral density (PSD)

2.5.1. Requirement

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

2.5.2. Test Description

A. Test Set:



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

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

B. Equipments List:

Please refer ANNEX B(4).

**2.5.3. Test Result****802.11b Test mode****A. Test Verdict:****ANT 0**

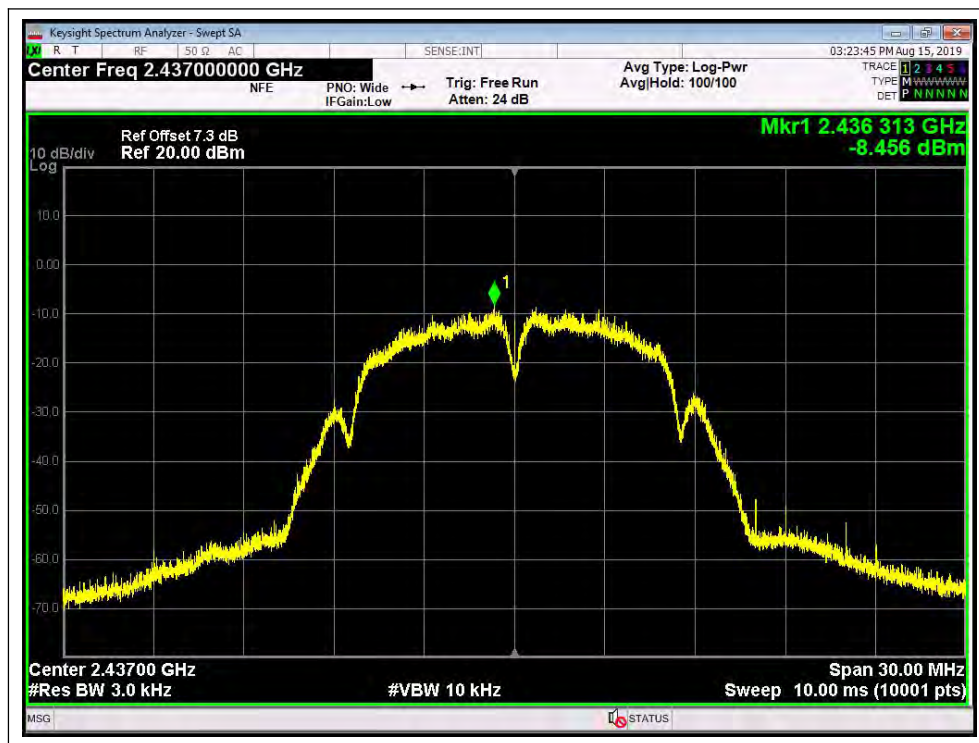
Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-8.104	8	PASS
6	2437	-8.456	8	PASS
11	2462	-8.506	8	PASS

ANT 1

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-8.111	8	PASS
6	2437	-8.352	8	PASS
11	2462	-8.545	8	PASS

**B. Test Plots:**

(Channel = 1, 802.11b;ANT0)



(Channel = 6, 802.11b;ANT0)



(Channel = 11, 802.11b;ANT0)



(Channel = 1, 802.11b;ANT1)



(Channel = 6, 802.11b;ANT1)



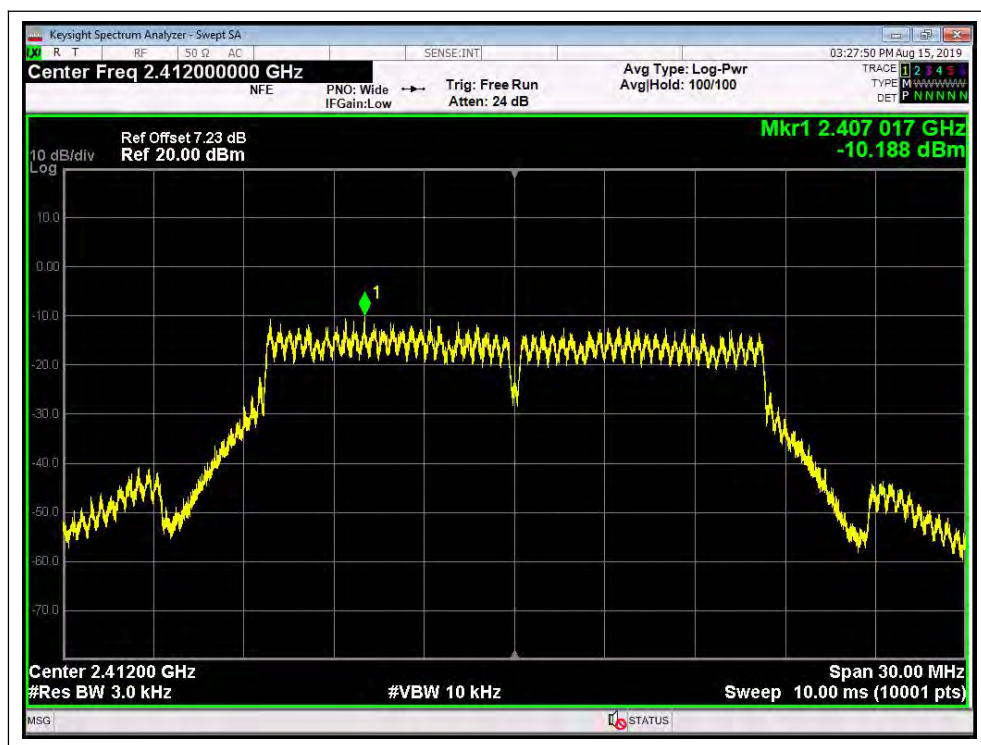
(Channel = 11, 802.11b;ANT1)

**802.11g Test mode****A. Test Verdict:****ANT0**

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-10.188	8	PASS
6	2437	-11.306	8	PASS
11	2462	-11.868	8	PASS

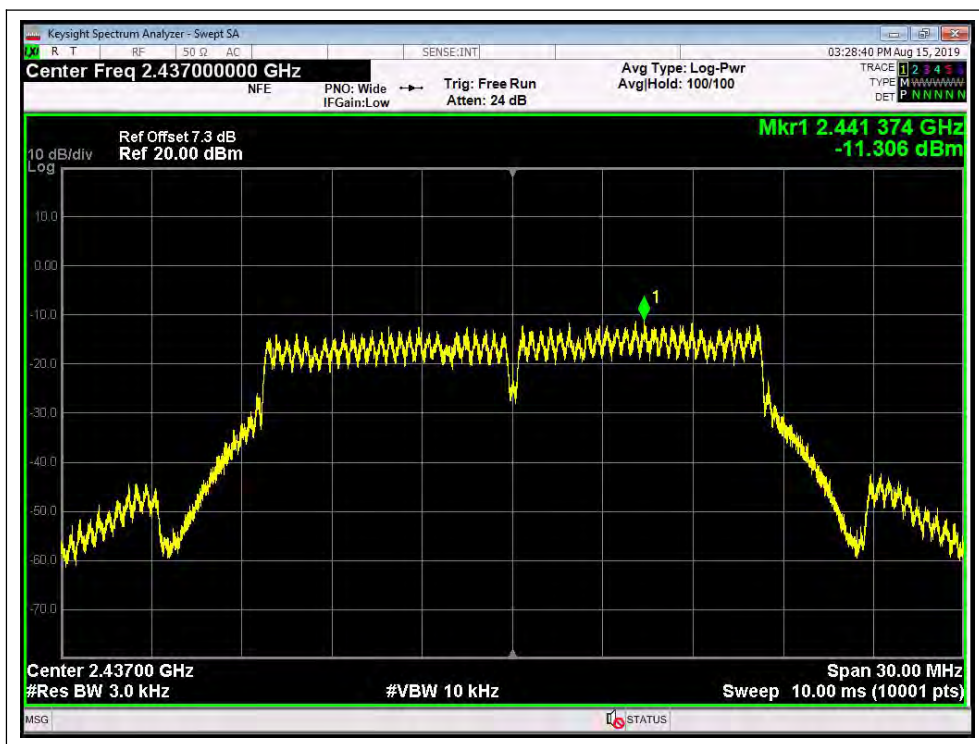
ANT1

Spectral power density (dBm/3kHz)				
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
1	2412	-11.381	8	PASS
6	2437	-11.366	8	PASS
11	2462	-11.891	8	PASS

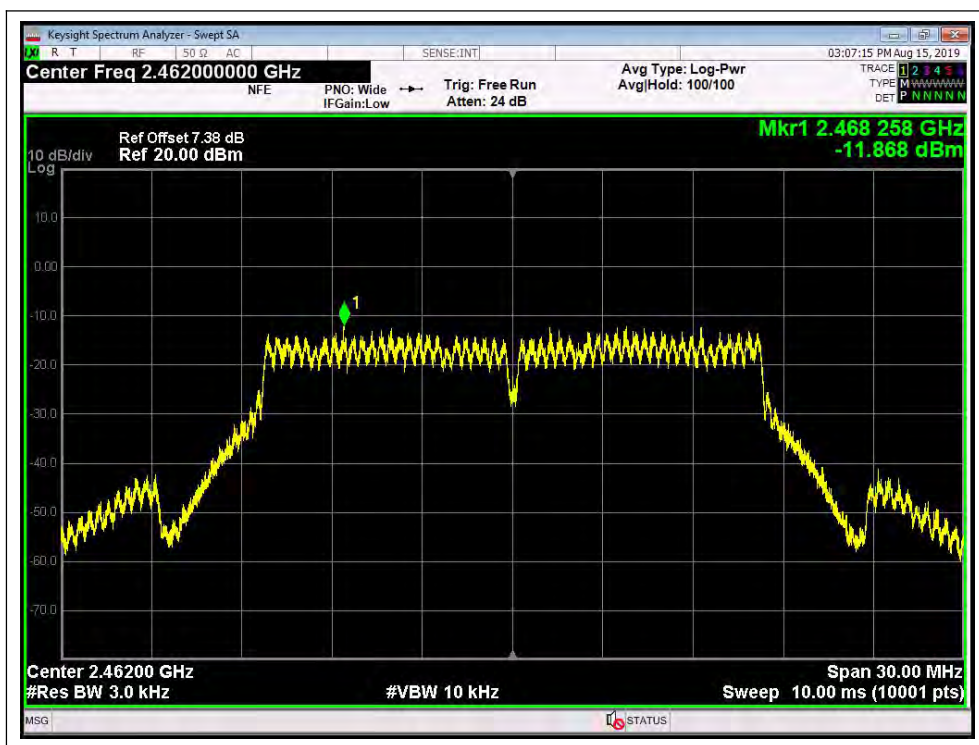
B. Test Plots:



(Channel = 1, 802.11g;ANT0)



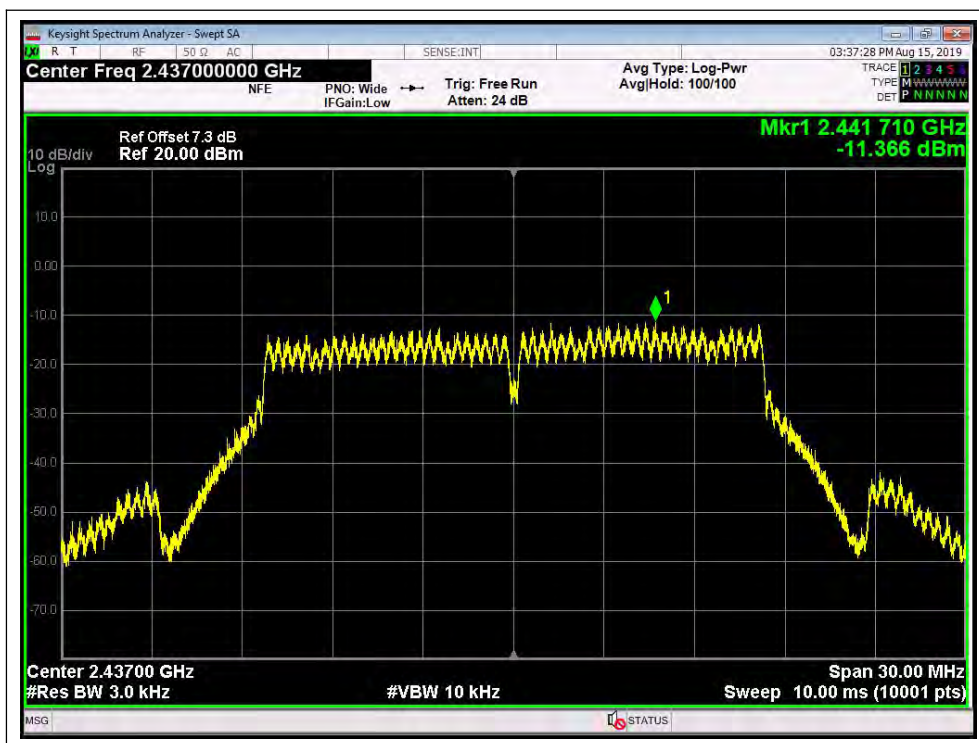
(Channel = 6, 802.11g;ANT0)



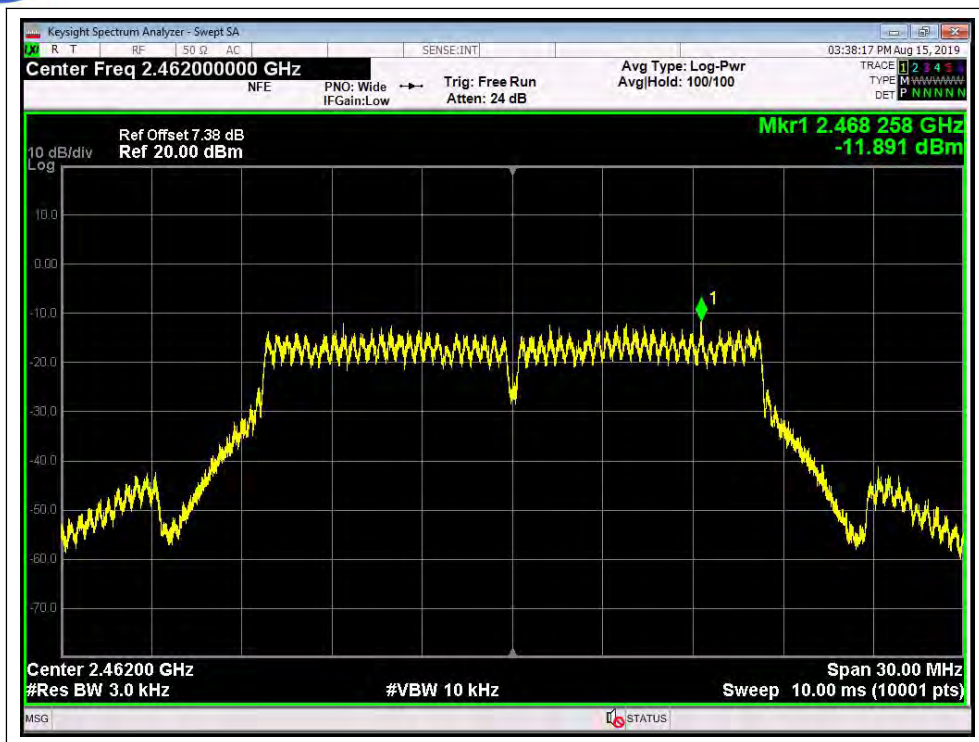
(Channel = 11, 802.11g;ANT0)



(Channel = 1, 802.11g;ANT1)



(Channel = 6, 802.11g;ANT1)



(Channel = 11, 802.11g;ANT1)

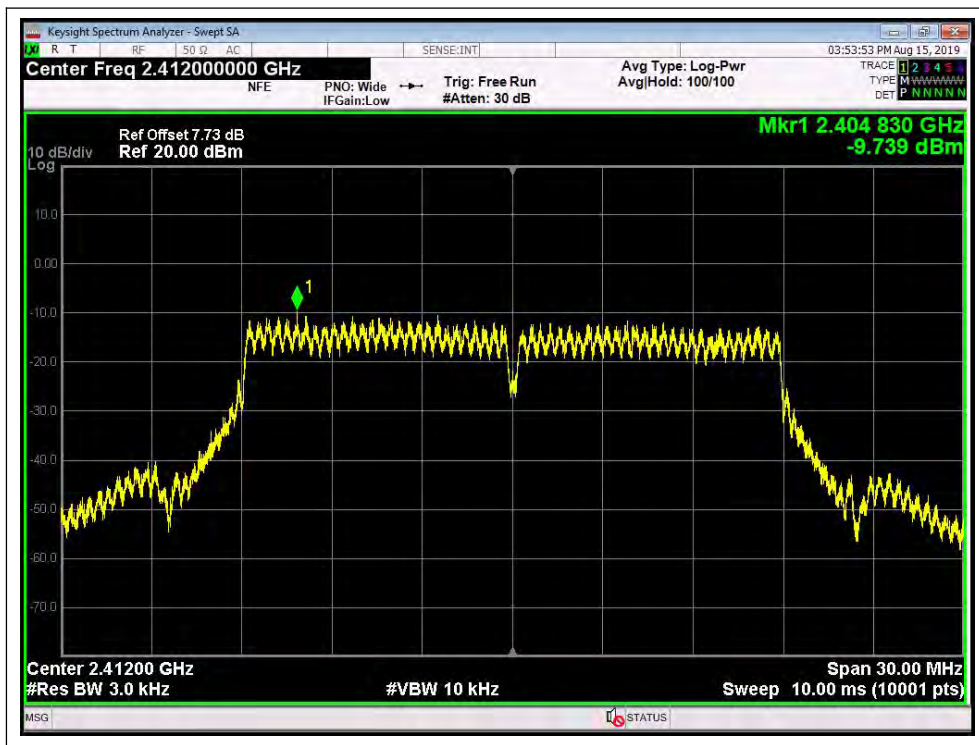
802.11n-20MHz Test mode

A. Test Verdict:

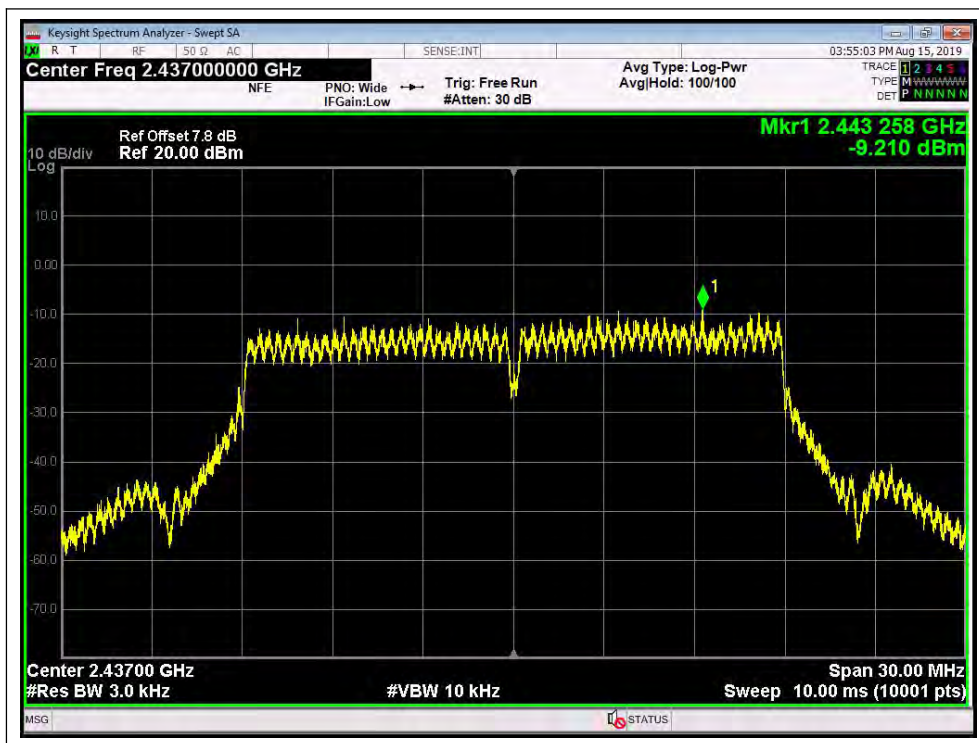
Spectral power density (dBm/3kHz)						
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)			Limit (dBm/3kHz)	Verdict
		ANT0	ANT1	Total		
1	2412	-9.739	-10.523	-7.103	8	PASS
6	2437	-9.210	-9.825	-6.496	8	PASS
11	2462	-10.992	-10.575	-7.768	8	PASS



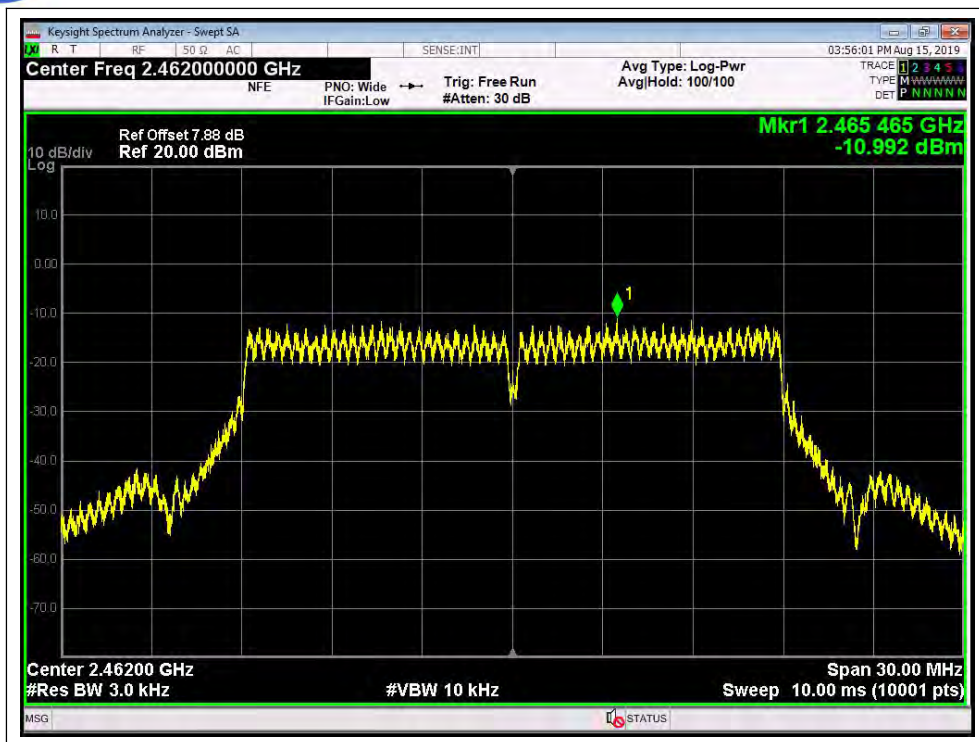
B. Test Plots:



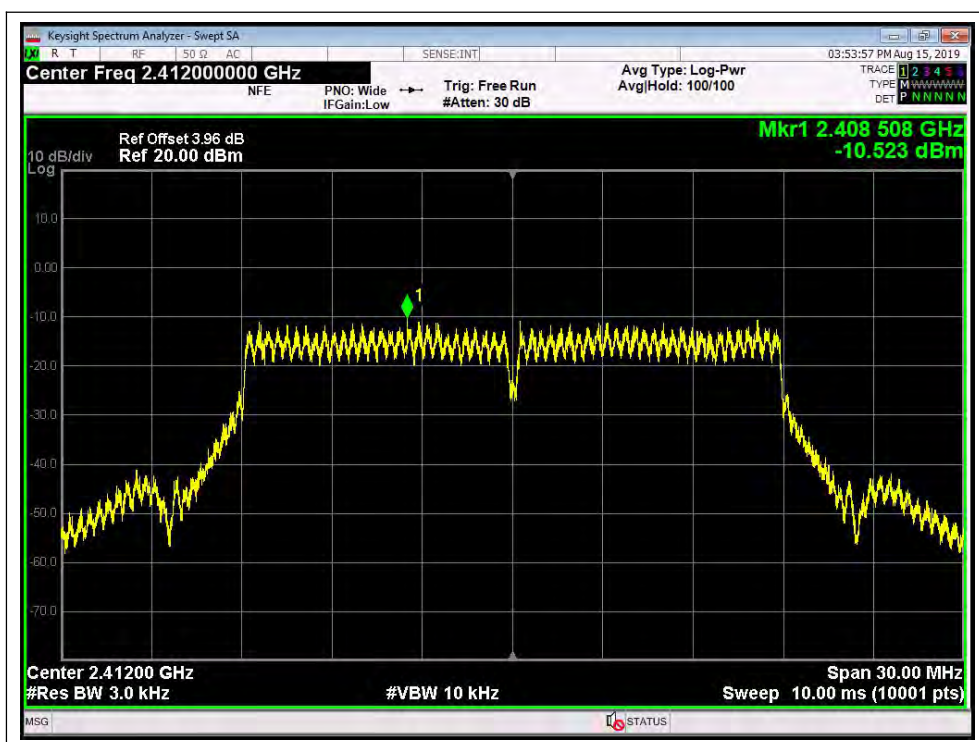
(Channel = 1, 802.11n-20MHz;ANT0)



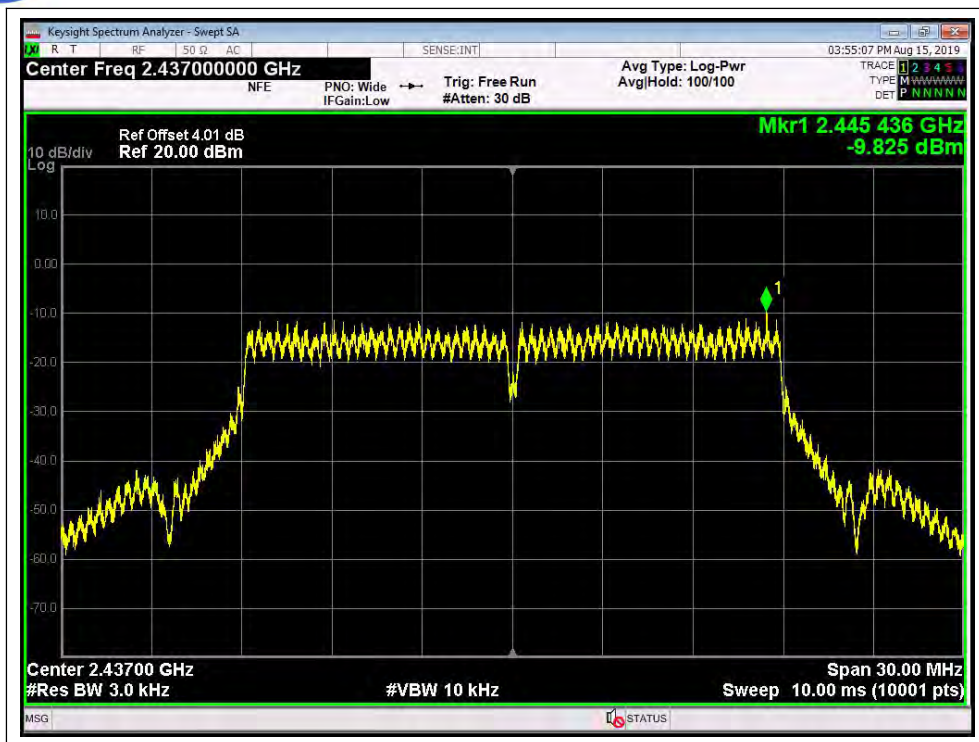
(Channel = 6, 802.11n-20MHz;ANT0)



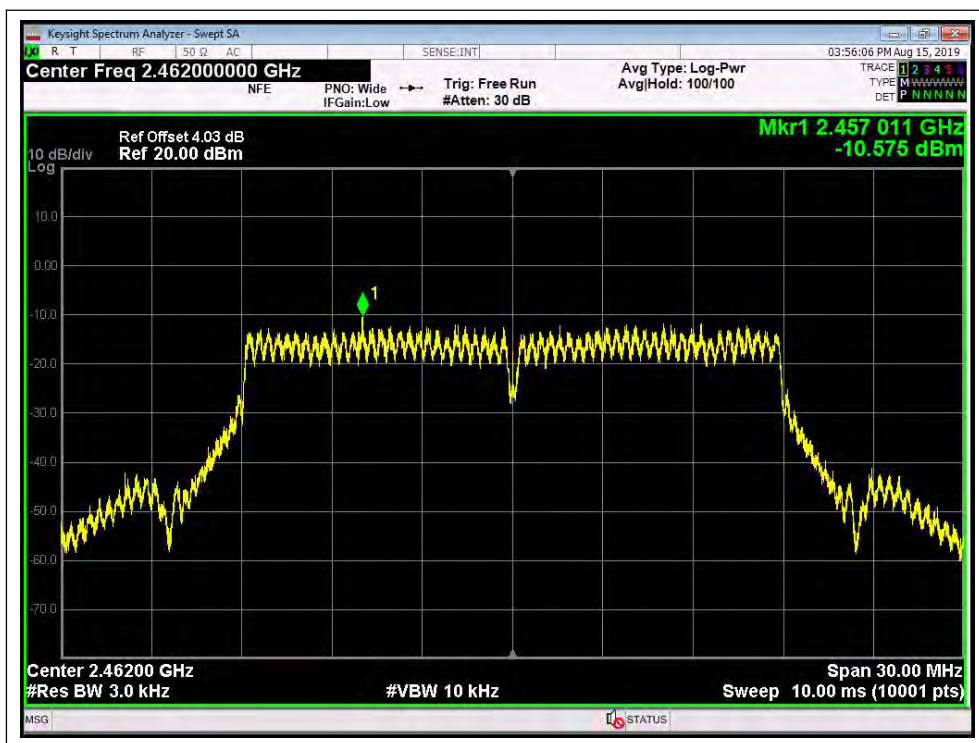
(Channel = 11, 802.11n-20MHz;ANT0)



(Channel = 1, 802.11n-20MHz;ANT1)



(Channel = 6, 802.11n-20MHz;ANT1)



(Channel = 11, 802.11n-20MHz;ANT1)

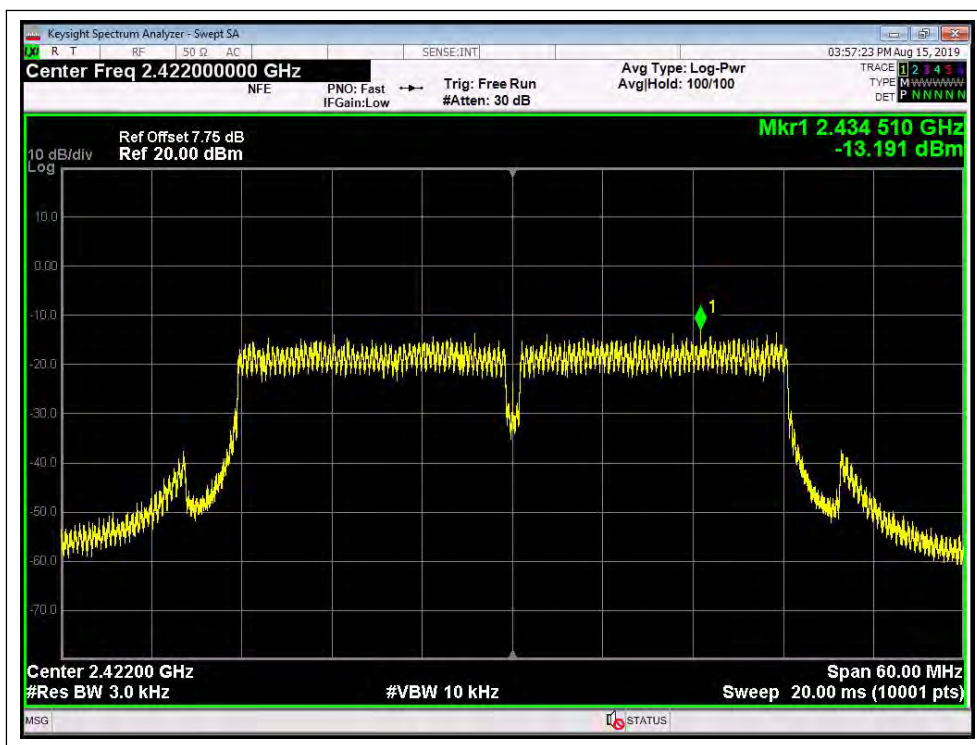


802.11n-40MHz Test mode

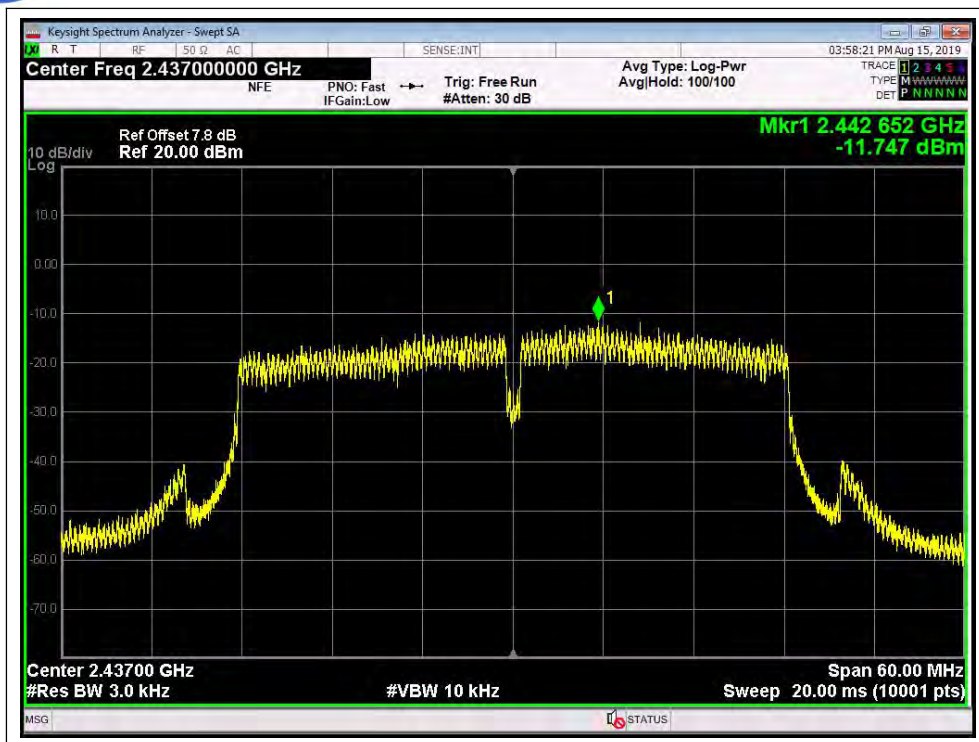
A. Test Verdict:

Spectral power density (dBm/3kHz)						
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)			Limit (dBm/3kHz)	Verdict
		ANT0	ANT1	Total		
3	2422	-13.191	-12.573	-9.861	8	PASS
6	2437	-11.747	-13.622	-9.574	8	PASS
9	2452	-12.670	-12.546	-9.597	8	PASS

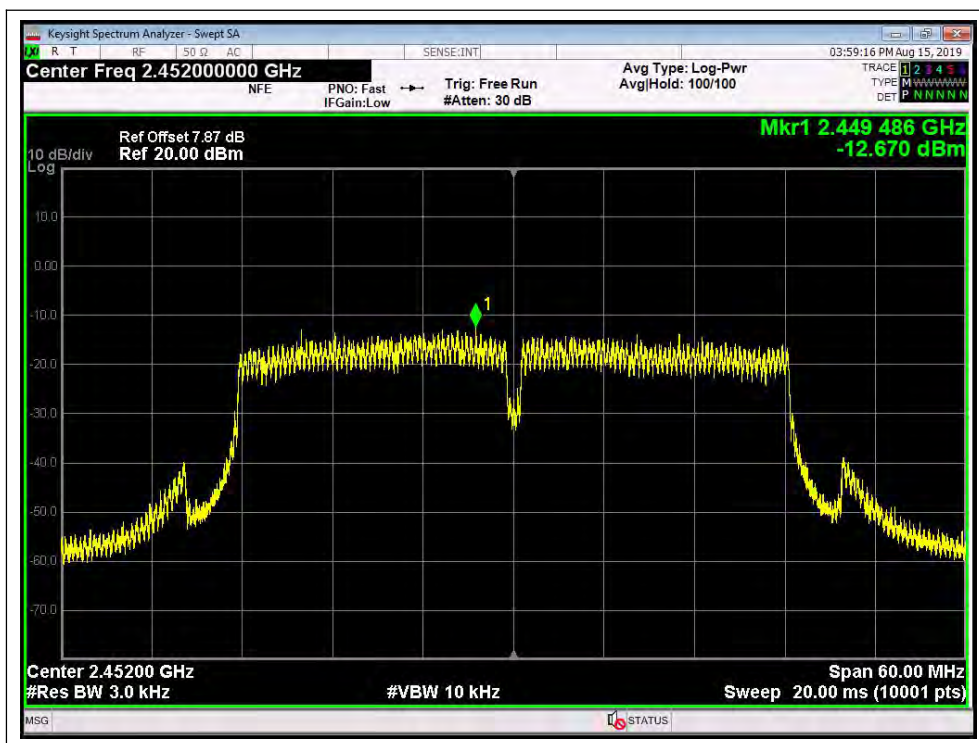
B. Test Plots:



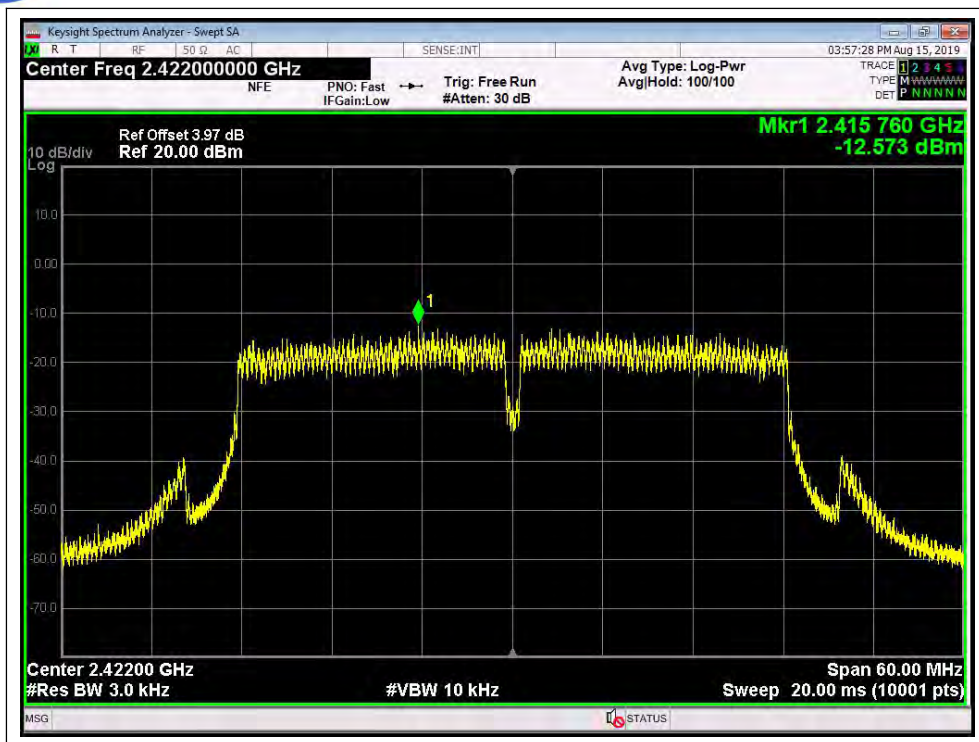
(Channel = 3, 802.11n-40MHz;ANT0)



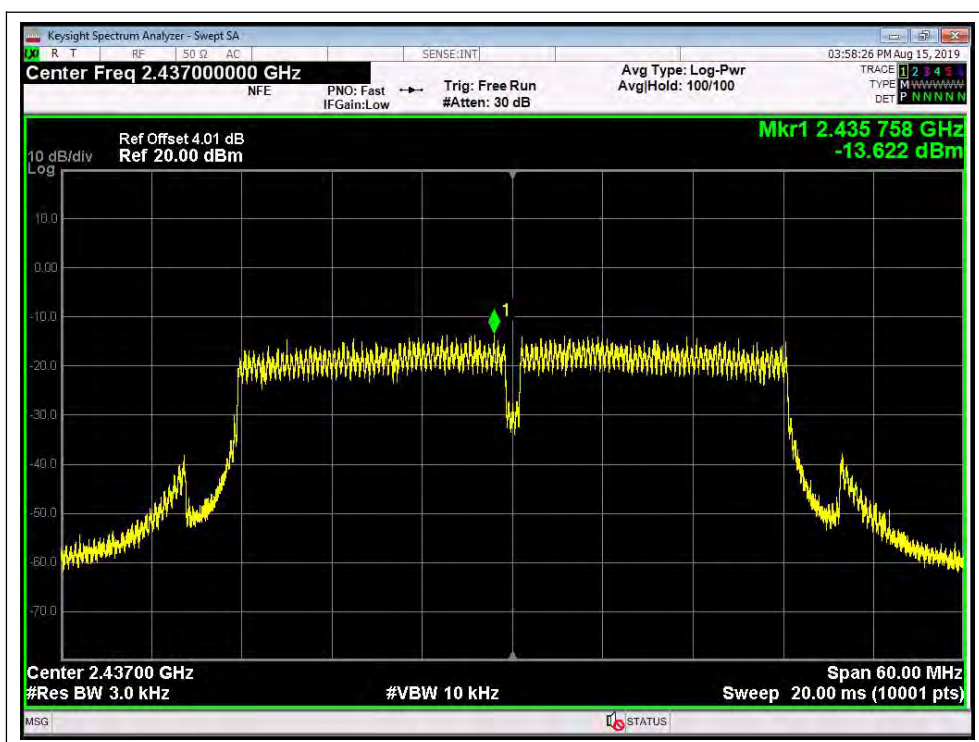
(Channel = 6, 802.11n-40MHz;ANT0)



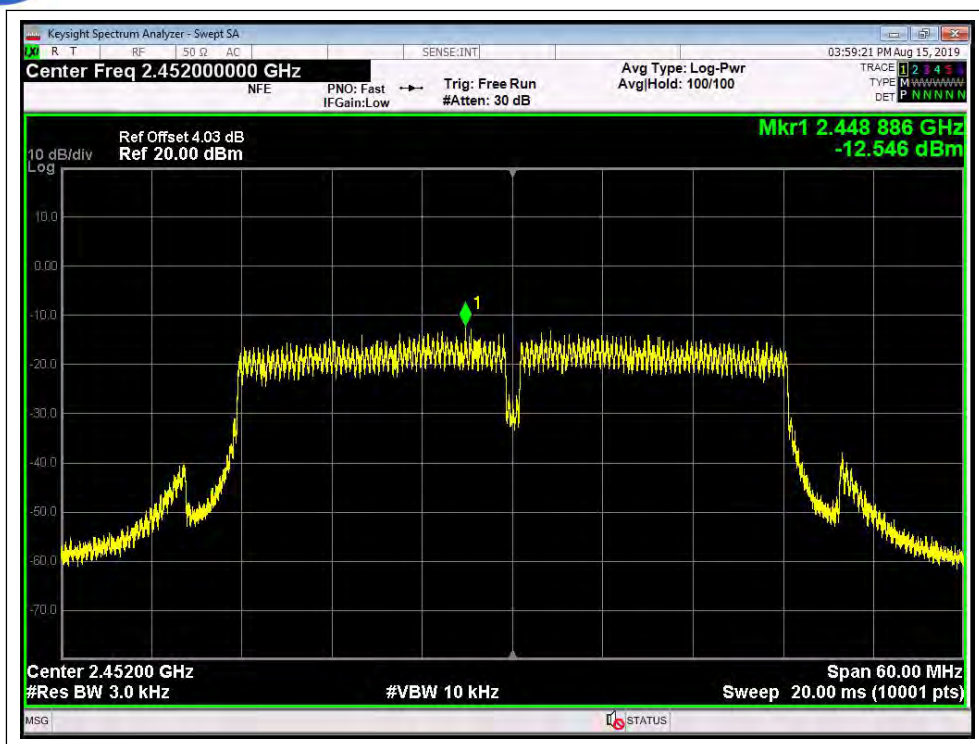
(Channel = 9, 802.11n-40MHz;ANT0)



(Channel = 3, 802.11n-40MHz;ANT1)



(Channel = 6, 802.11n-40MHz;ANT1)



(Channel = 9, 802.11n-40MHz;ANT1)

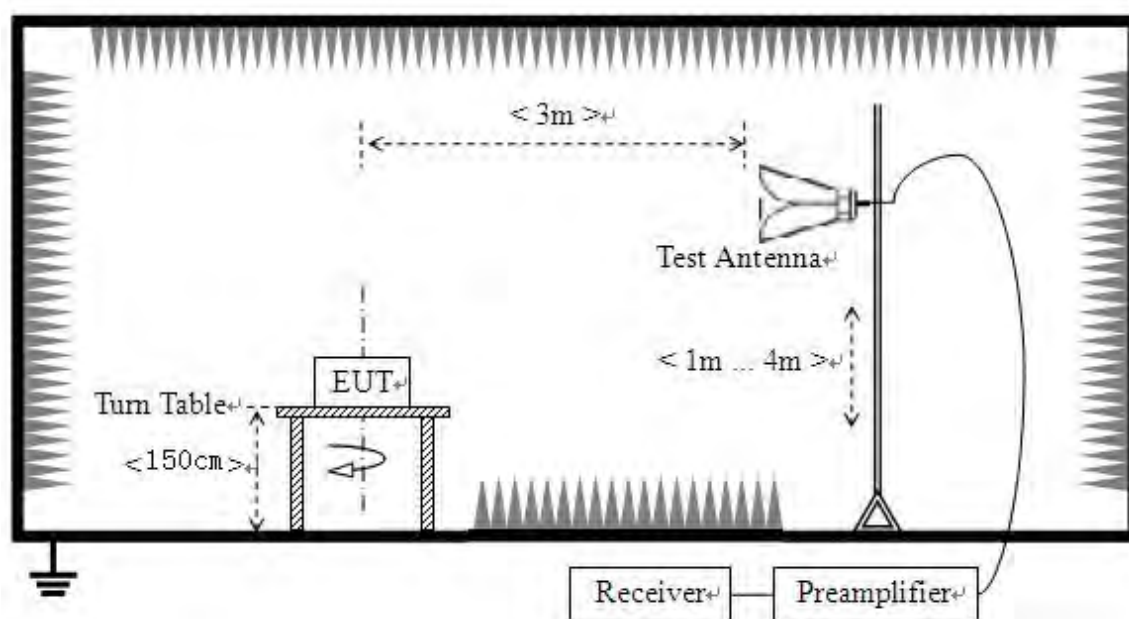
2.6. Restricted Frequency Bands

2.6.1. Requirement

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

2.6.2. Test Description

A. Test Setup



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

For the Test Antenna:

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

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



For Radiated emission above 30MHz

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

Note:

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

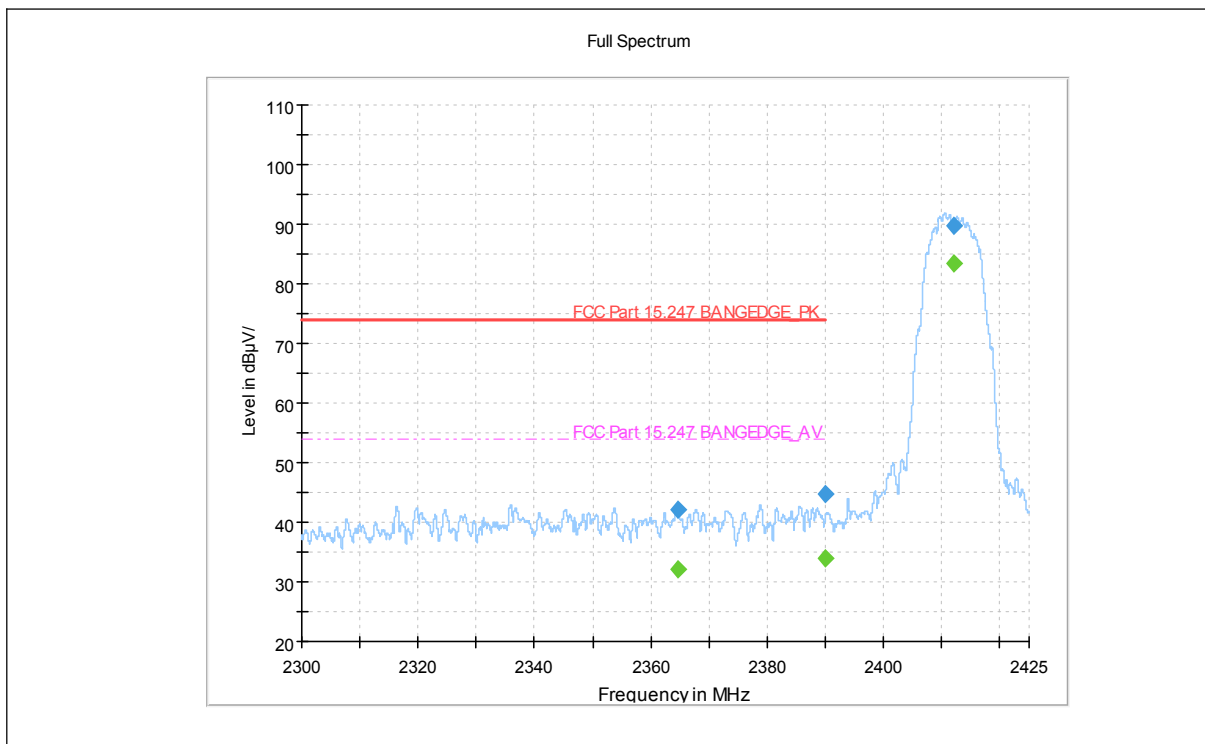
B. Equipments List:

Please refer ANNEX B(4).



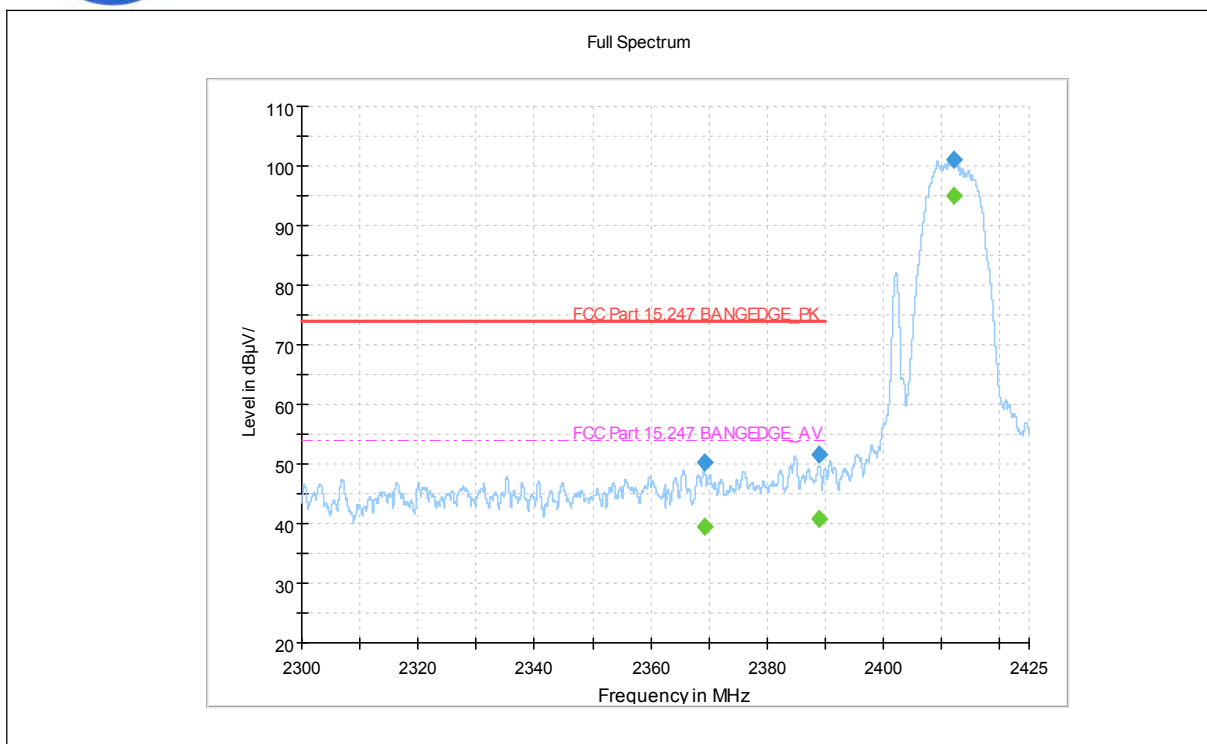
2.6.3. Test Result

802.11b Test mode

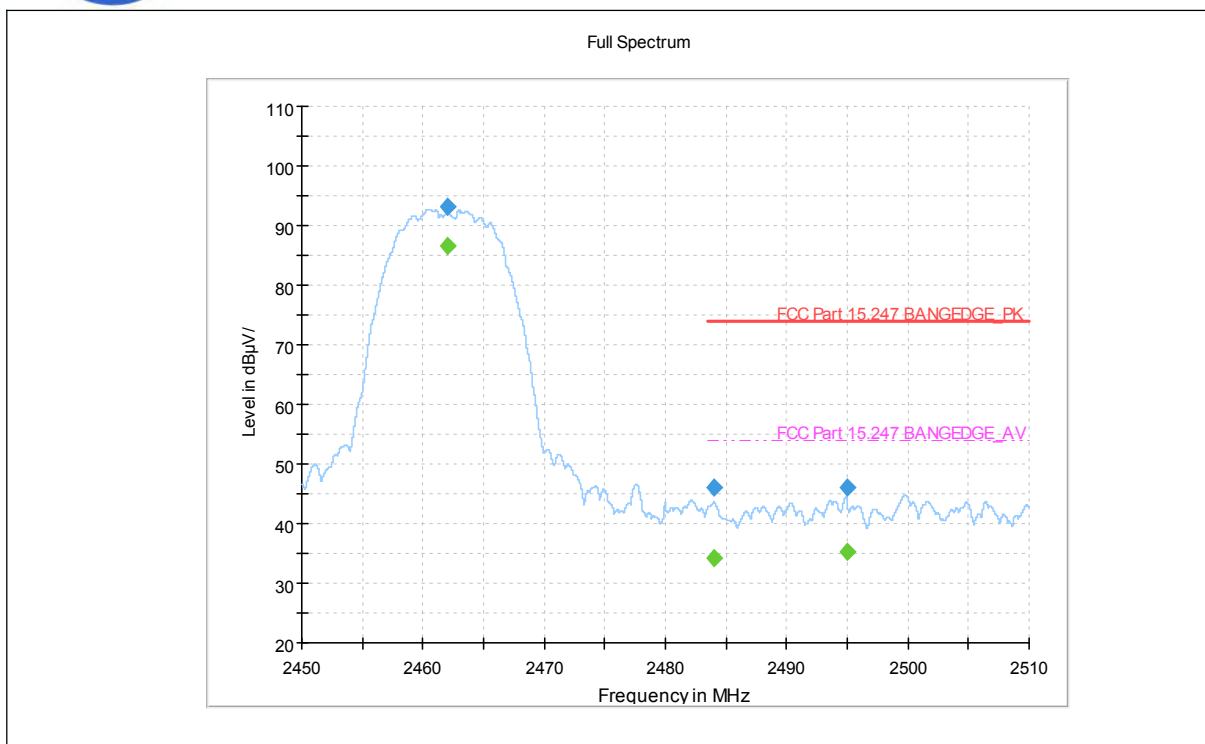


(802.11b _2412MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2364.645833	---	32.11	54.00	21.89	H	7.4
2364.645833	42.18	---	74.00	31.82	H	7.4
2390.000000	44.70	---	74.00	29.30	H	8.0
2390.000000	---	33.87	54.00	20.13	H	8.0
2412.020833	89.63	---	---	---	H	8.7
2412.020833	---	83.30	---	---	H	8.7

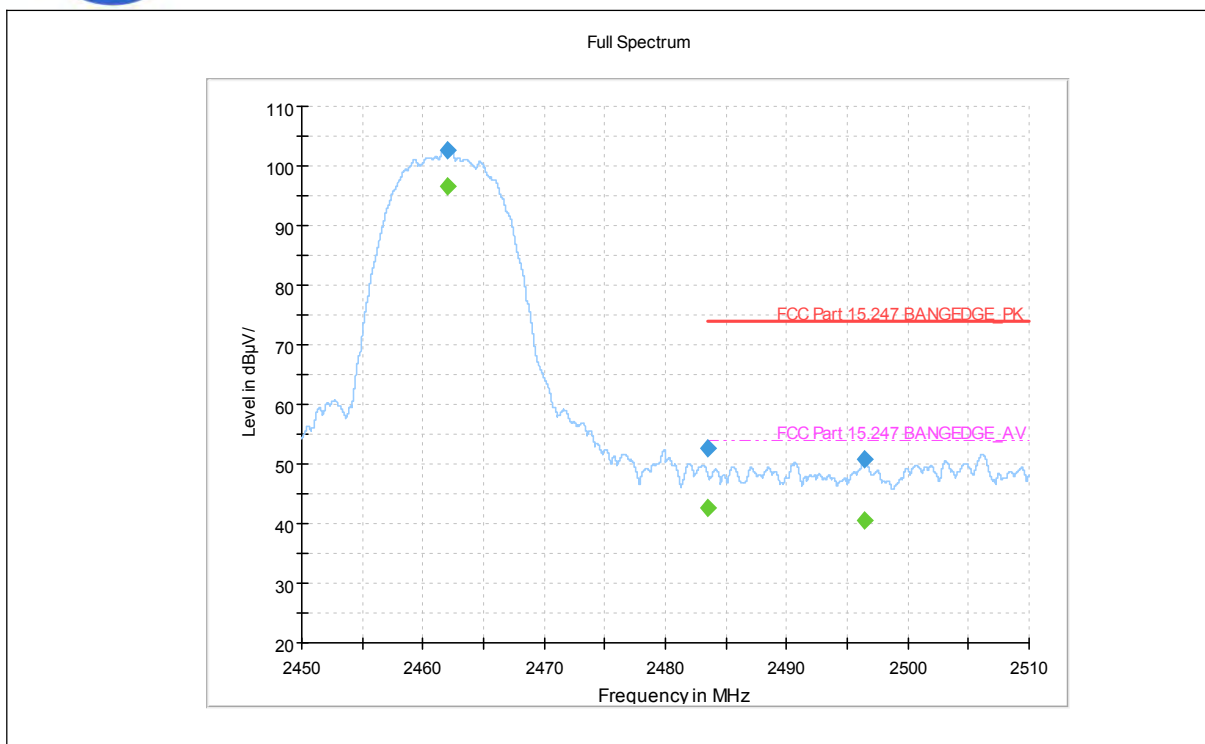


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2369.131945	---	39.44	54.00	14.56	V	7.4
2369.131945	50.16	---	74.00	23.84	V	7.4
2388.944445	---	40.90	54.00	13.10	V	7.9
2388.944445	51.58	---	74.00	22.42	V	7.9
2411.993056	---	94.99	---	---	V	8.7
2411.993056	101.11	---	---	---	V	8.7



(802.11b _2462MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2462.003333	93.12	---	---	---	H	7.9
2462.003333	---	86.65	---	---	H	7.9
2483.976667	---	34.11	54.00	19.89	H	8.3
2483.976667	46.05	---	74.00	27.95	H	8.3
2494.936667	46.06	---	74.00	27.94	H	8.4
2494.936667	---	35.21	54.00	18.79	H	8.4

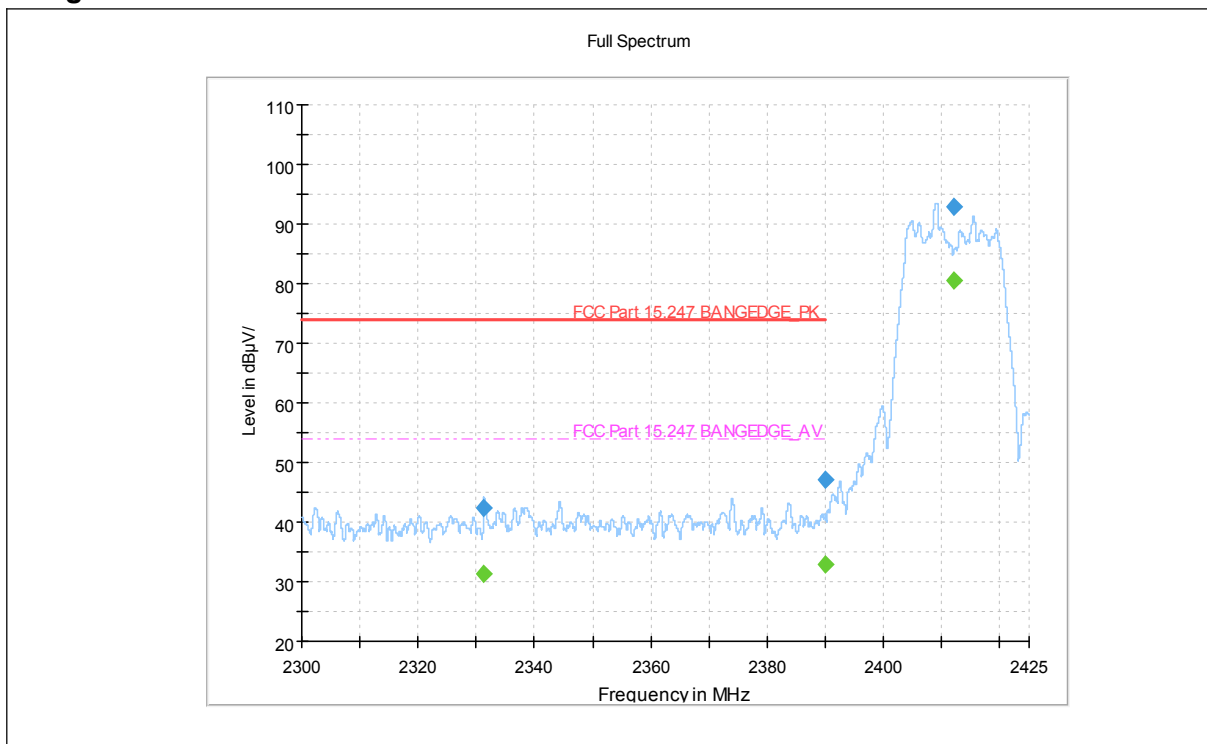


(802.11b _2462MHz, Antenna Vertical)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2461.993333	---	96.46	---	---	V	7.9
2461.993333	102.63	---	---	---	V	7.9
2483.503333	52.76	---	74.00	21.24	V	8.3
2483.503333	---	42.66	54.00	11.34	V	8.3
2496.410000	50.91	---	74.00	23.09	V	8.4
2496.410000	---	40.43	54.00	13.57	V	8.4

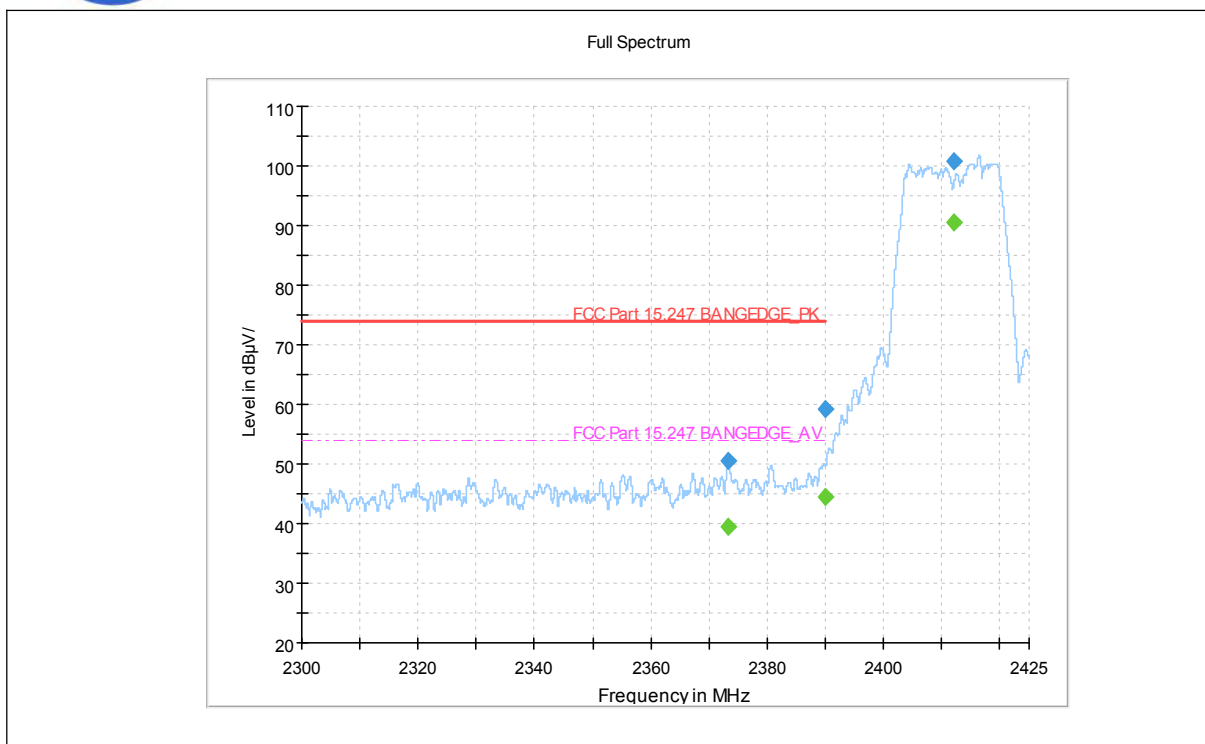


802.11g Test mode

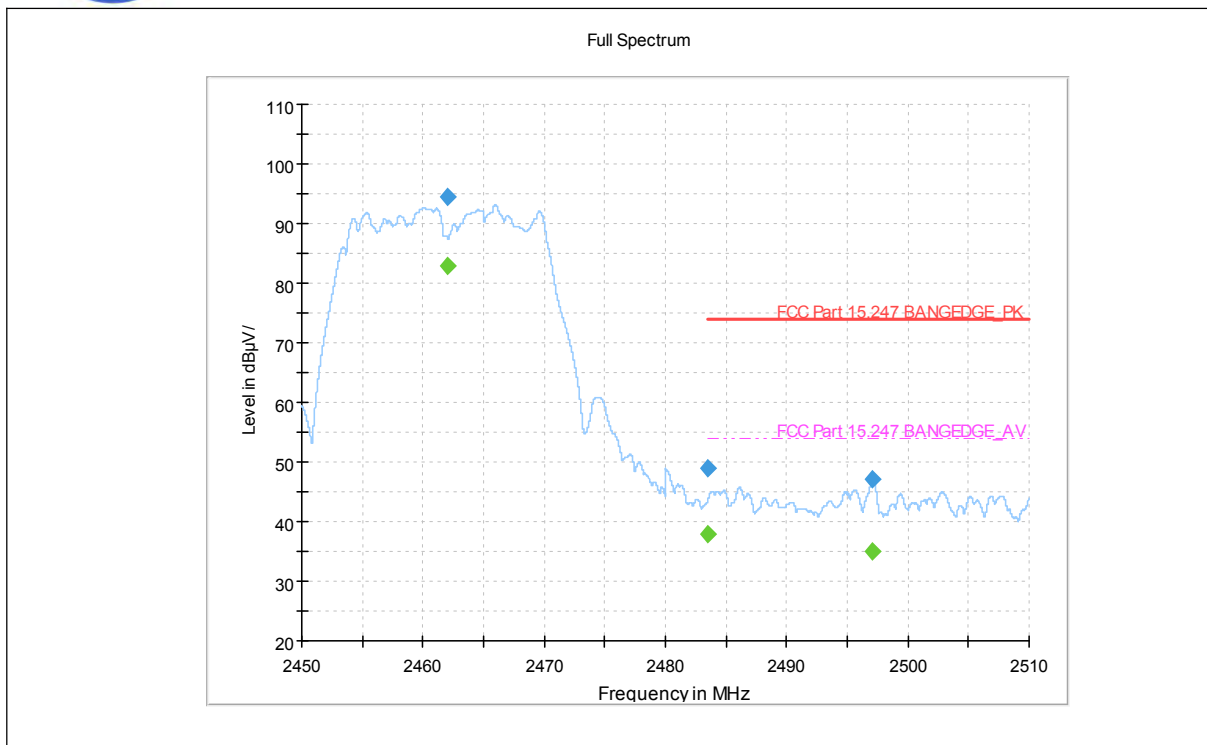


(802.11g _2412MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2331.250000	---	31.44	54.00	22.56	H	7.4
2331.250000	42.27	---	74.00	31.73	H	7.4
2390.000000	47.23	---	74.00	26.77	H	8.0
2390.000000	---	32.88	54.00	21.12	H	8.0
2412.020833	92.88	---	---	---	H	8.7
2412.020833	---	80.58	---	---	H	8.7

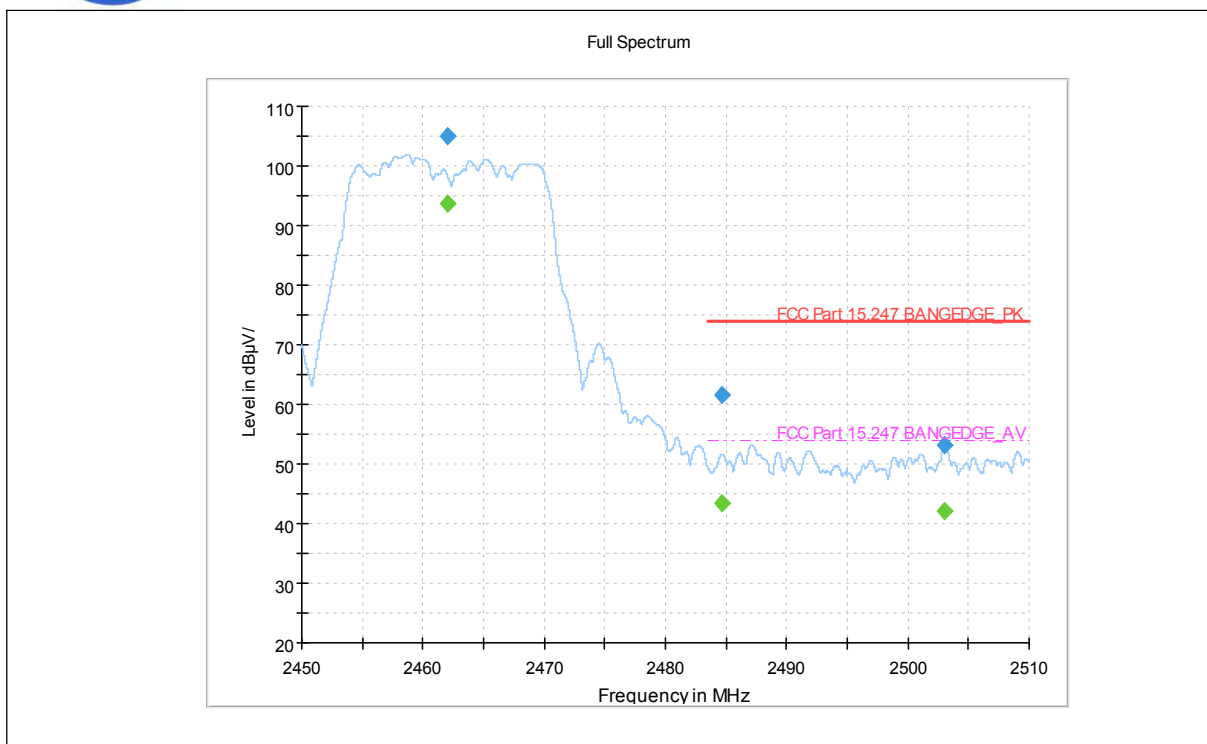


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2373.326389	50.50	---	74.00	23.50	V	7.3
2373.326389	---	39.40	54.00	14.60	V	7.3
2389.993056	---	44.37	54.00	9.63	V	8.0
2389.993056	59.11	---	74.00	14.89	V	8.0
2411.993056	100.72	---	---	---	V	8.7
2411.993056	---	90.55	---	---	V	8.7



(802.11g _2462MHz, Antenna Horizontal)

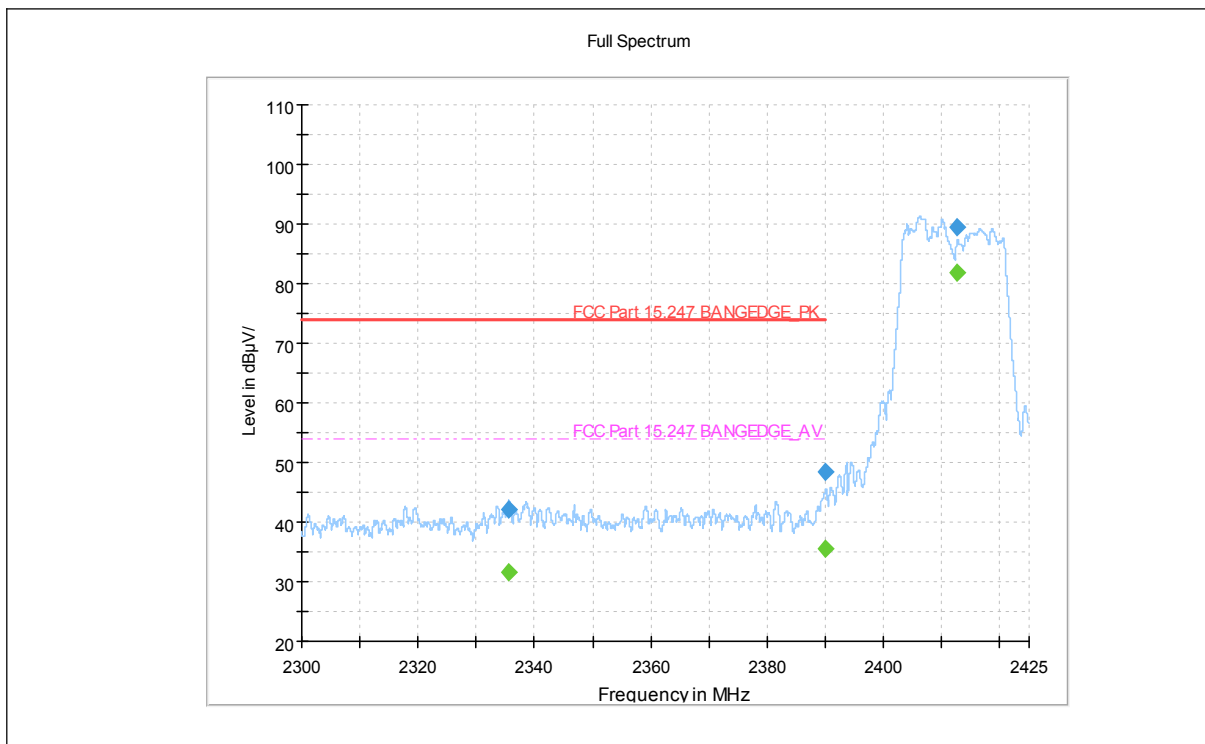
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2462.000000	94.51	---	---	---	H	7.9
2462.000000	---	82.94	---	---	H	7.9
2483.500000	48.82	---	74.00	25.18	H	8.3
2483.500000	---	38.00	54.00	16.00	H	8.3
2497.103333	---	35.01	54.00	18.99	H	8.4
2497.103333	47.03	---	74.00	26.97	H	8.4



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2462.000000	104.98	---	---	---	V	7.9
2462.000000	---	93.71	---	---	V	7.9
2484.660000	---	43.44	54.00	10.56	V	8.3
2484.660000	61.54	---	74.00	12.46	V	8.3
2503.060000	53.26	---	74.00	20.74	V	8.3
2503.060000	---	42.07	54.00	11.93	V	8.3

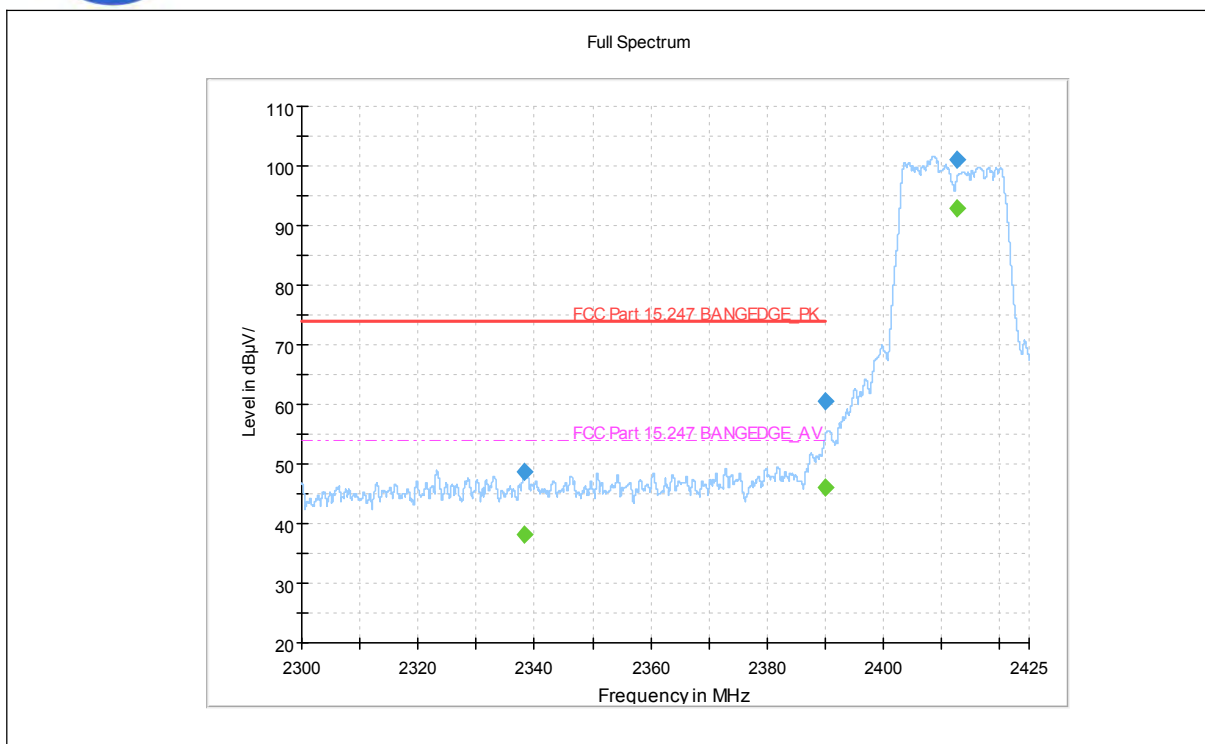


802.11n-20MHz Test mode

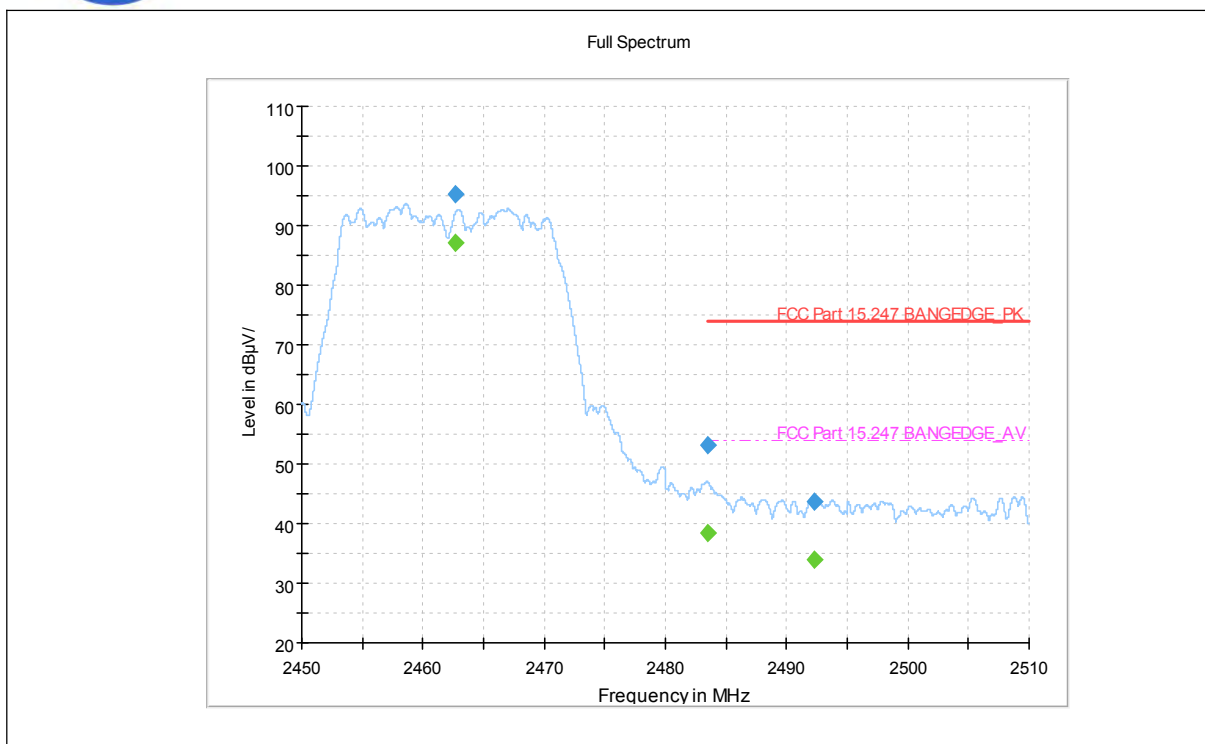


(802.11n_20M _2412MHz, Antenna Horizontal)

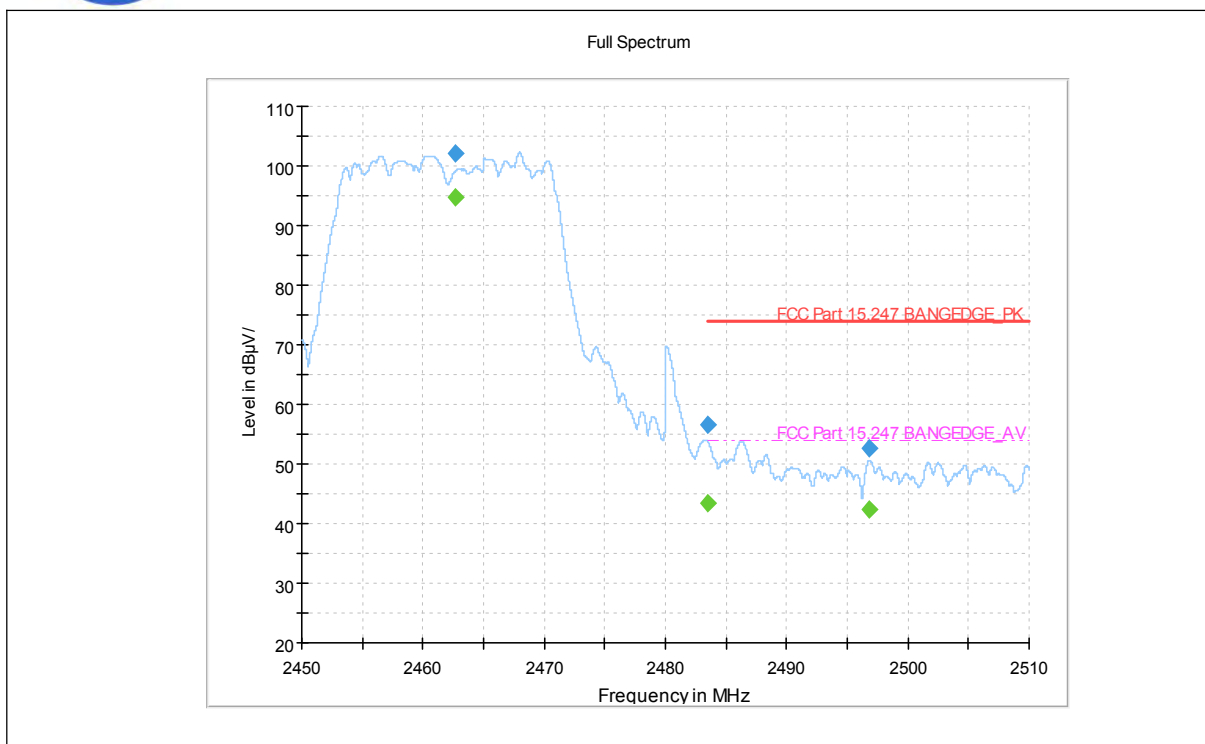
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2335.625000	---	31.58	54.00	22.42	H	7.5
2335.625000	42.11	---	74.00	31.89	H	7.5
2390.000000	---	35.53	54.00	18.47	H	8.0
2390.000000	48.44	---	74.00	25.56	H	8.0
2412.645833	89.55	---	---	---	H	8.6
2412.645833	---	81.90	---	---	H	8.6



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2338.277778	48.81	---	74.00	25.19	V	7.5
2338.277778	---	38.08	54.00	15.92	V	7.5
2390.000000	60.45	---	74.00	13.55	V	8.0
2390.000000	---	45.94	54.00	8.06	V	8.0
2412.708333	---	93.02	---	---	V	8.6
2412.708333	100.97	---	---	---	V	8.6

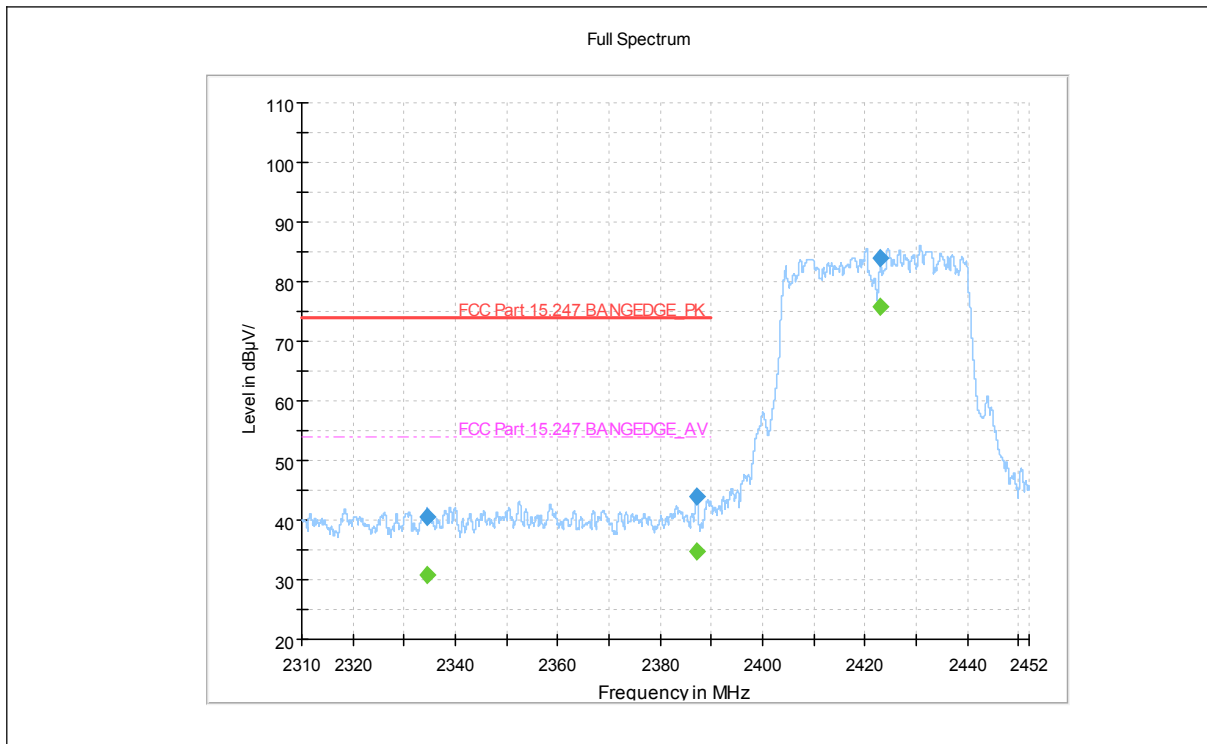


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2462.680000	95.38	---	---	---	H	7.9
2462.680000	---	87.09	---	---	H	7.9
2483.500000	53.20	---	74.00	20.80	H	8.3
2483.500000	---	38.44	54.00	15.56	H	8.3
2492.250000	---	33.88	54.00	20.12	H	8.4
2492.250000	43.78	---	74.00	30.22	H	8.4



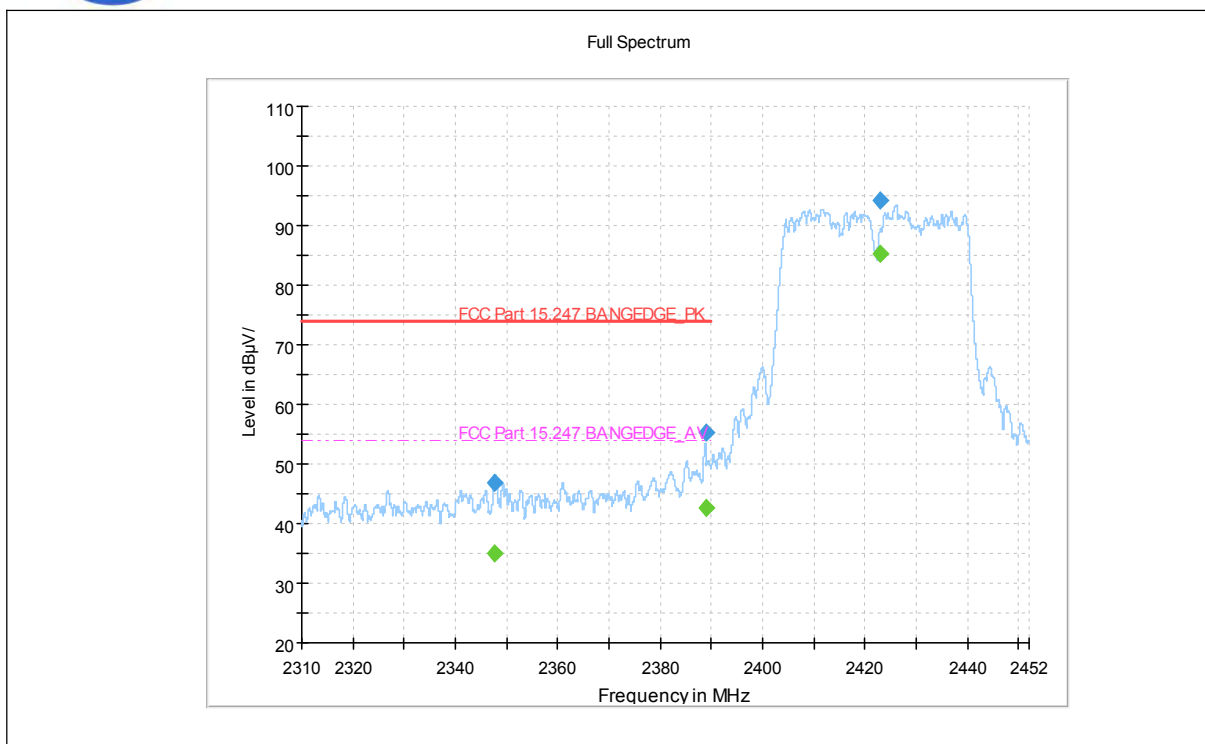
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2462.710000	102.22	---	---	---	V	7.9
2462.710000	---	94.66	---	---	V	7.9
2483.500000	56.58	---	74.00	17.42	V	8.3
2483.500000	---	43.31	54.00	10.69	V	8.3
2496.856667	---	42.31	54.00	11.69	V	8.4
2496.856667	52.66	---	74.00	21.34	V	8.4

802.11n-40MHz Test mode

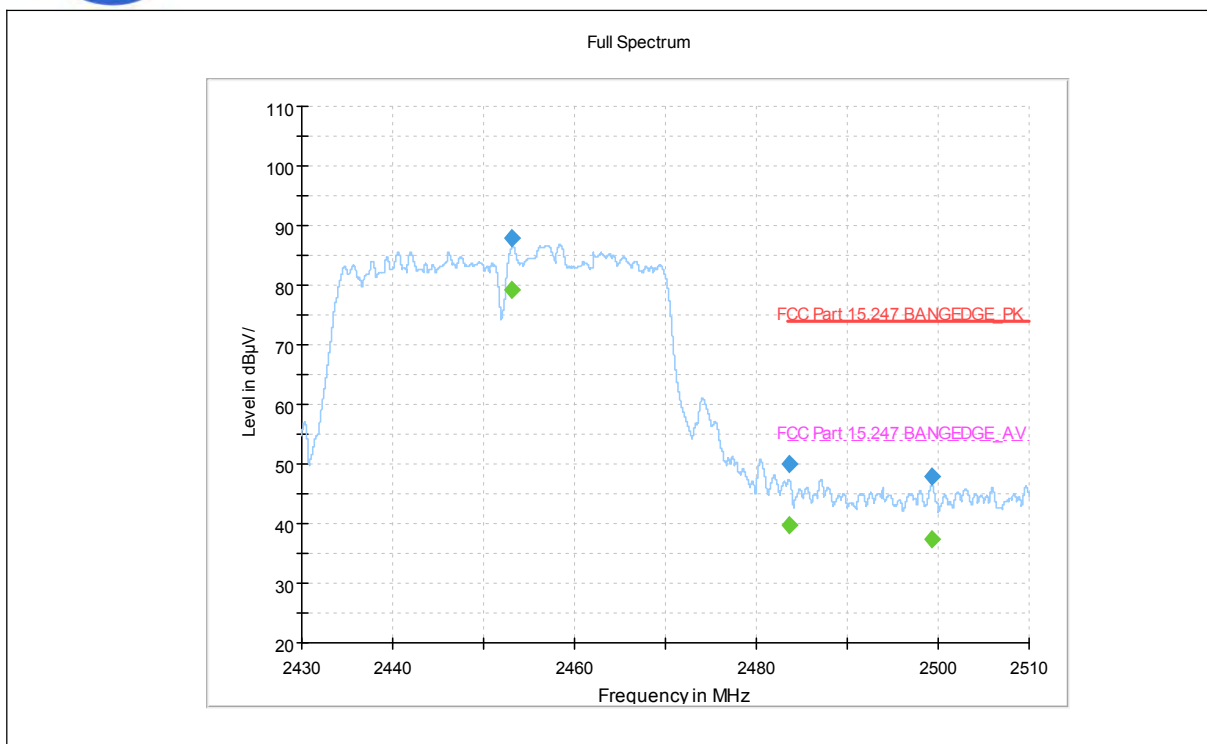


(802.11n_40M _2422MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2334.573889	---	30.77	54.00	23.23	H	7.5
2334.573889	40.52	---	74.00	33.48	H	7.5
2387.074445	---	34.83	54.00	19.17	H	7.8
2387.074445	43.85	---	74.00	30.15	H	7.8
2422.913667	---	75.75	---	---	H	8.6
2422.913667	84.02	---	---	---	H	8.6

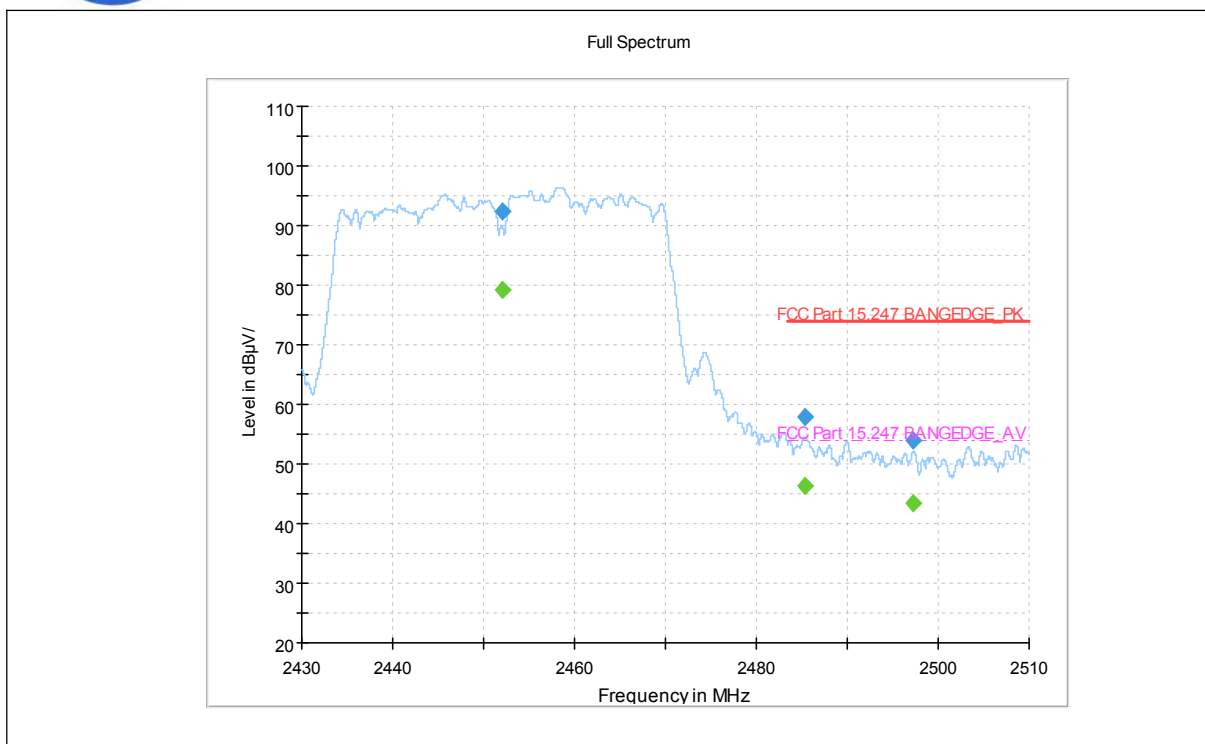


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2347.772000	---	35.00	54.00	19.00	V	7.7
2347.772000	46.96	---	74.00	27.04	V	7.7
2388.841556	55.37	---	74.00	18.63	V	7.9
2388.841556	---	42.56	54.00	11.44	V	7.9
2422.858445	94.11	---	---	---	V	8.6
2422.858445	---	85.30	---	---	V	8.6



(802.11n_40M_2452MHz, Antenna Horizontal)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2453.080000	---	79.19	---	---	H	7.8
2453.080000	87.91	---	---	---	H	7.8
2483.568889	50.08	---	74.00	23.92	H	8.3
2483.568889	---	39.71	54.00	14.29	H	8.3
2499.280000	47.95	---	74.00	26.05	H	8.4
2499.280000	---	37.46	54.00	16.54	H	8.4



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
2452.057778	92.40	---	---	---	V	7.8
2452.057778	---	79.33	---	---	V	7.8
2485.360000	58.01	---	74.00	15.99	V	8.3
2485.360000	---	46.40	54.00	7.60	V	8.3
2497.311111	---	43.43	54.00	10.57	V	8.4
2497.311111	53.98	---	74.00	20.02	V	8.4

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 μ H/50 Ω line impedance stabilization network (LISN).

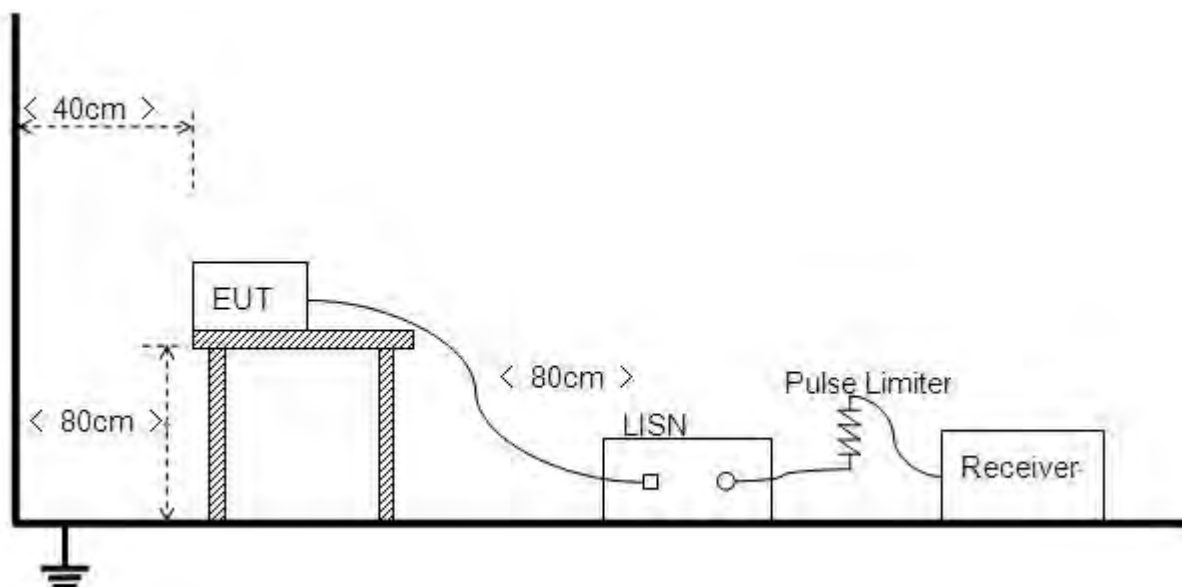
Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

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

2.7.2. Test Description

A. Test Setup:



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



B. Equipments List:

Please refer ANNEX B(4).

2.7.3. Test Result

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

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

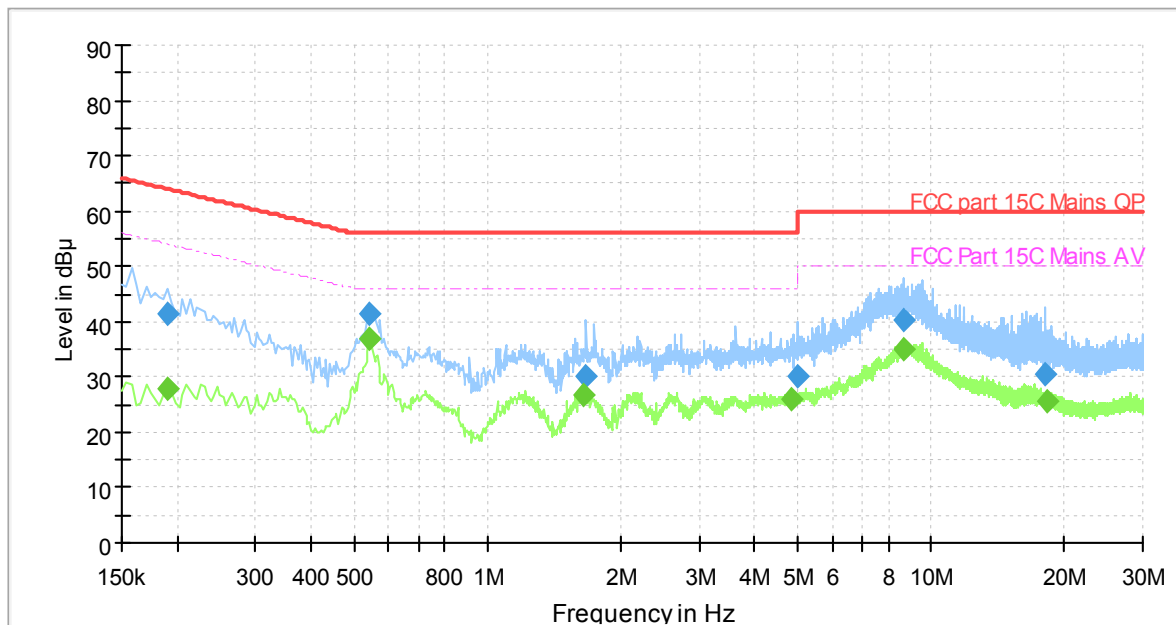
A. Test setup:

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

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

B. Test Plots:

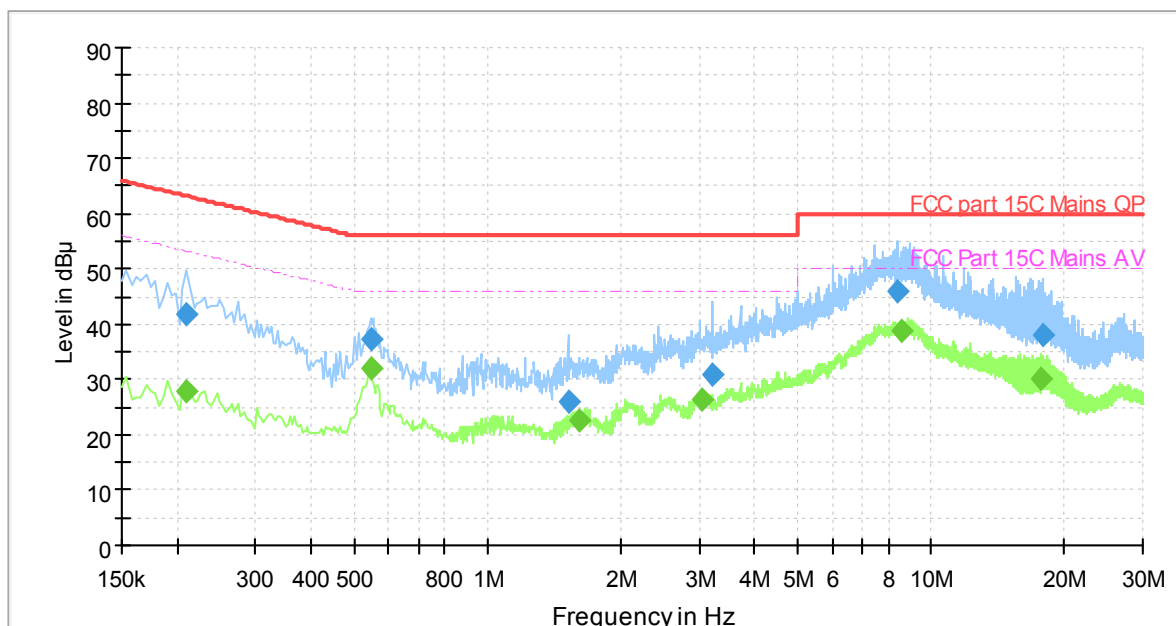
Full Spectrum



(Plot A: L Phase)

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.190000	---	27.82	54.04	26.22	L1	10.2
0.190000	41.42	---	64.04	22.61	L1	10.2
0.542000	---	36.78	46.00	9.22	L1	10.2
0.542000	41.44	---	56.00	14.56	L1	10.2
1.650000	---	26.89	46.00	19.11	L1	10.3
1.670000	30.10	---	56.00	25.90	L1	10.3
4.846000	---	25.96	46.00	20.04	L1	10.4
5.010000	30.21	---	60.00	29.79	L1	10.4
8.662000	---	35.04	50.00	14.96	L1	10.6
8.674000	40.30	---	60.00	19.70	L1	10.6
18.046000	30.49	---	60.00	29.51	L1	10.7
18.298000	---	25.79	50.00	24.21	L1	10.7

Full Spectrum



(Plot A: N Phase)

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.210000	---	28.04	53.21	25.17	N	10.2
0.210000	41.66	---	63.21	21.55	N	10.2
0.546000	---	31.89	46.00	14.11	N	10.2
0.546000	37.18	---	56.00	18.82	N	10.2
1.522000	26.12	---	56.00	29.89	N	10.3
1.606000	---	22.73	46.00	23.27	N	10.3
3.046000	---	26.18	46.00	19.82	N	10.4
3.226000	30.86	---	56.00	25.14	N	10.4
8.434000	45.98	---	60.00	14.02	N	10.5
8.586000	---	38.67	50.00	11.33	N	10.5
17.770000	---	30.24	50.00	19.76	N	10.7
17.874000	38.12	---	60.00	21.88	N	10.7



2.8. Radiated Emission

2.8.1. Requirement

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

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

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

Note:

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

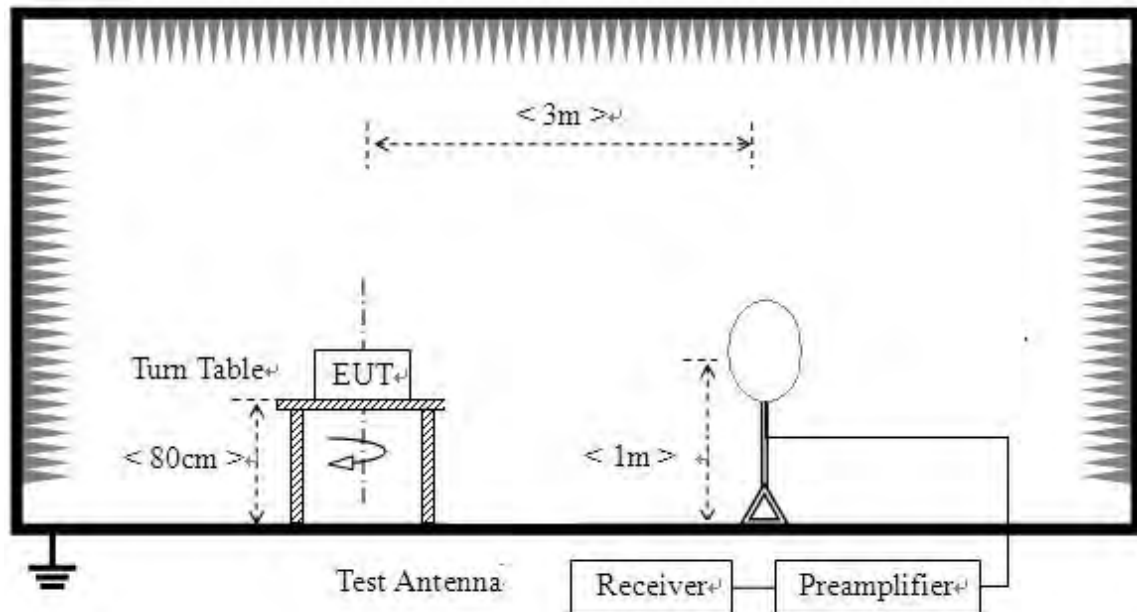
For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK)

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

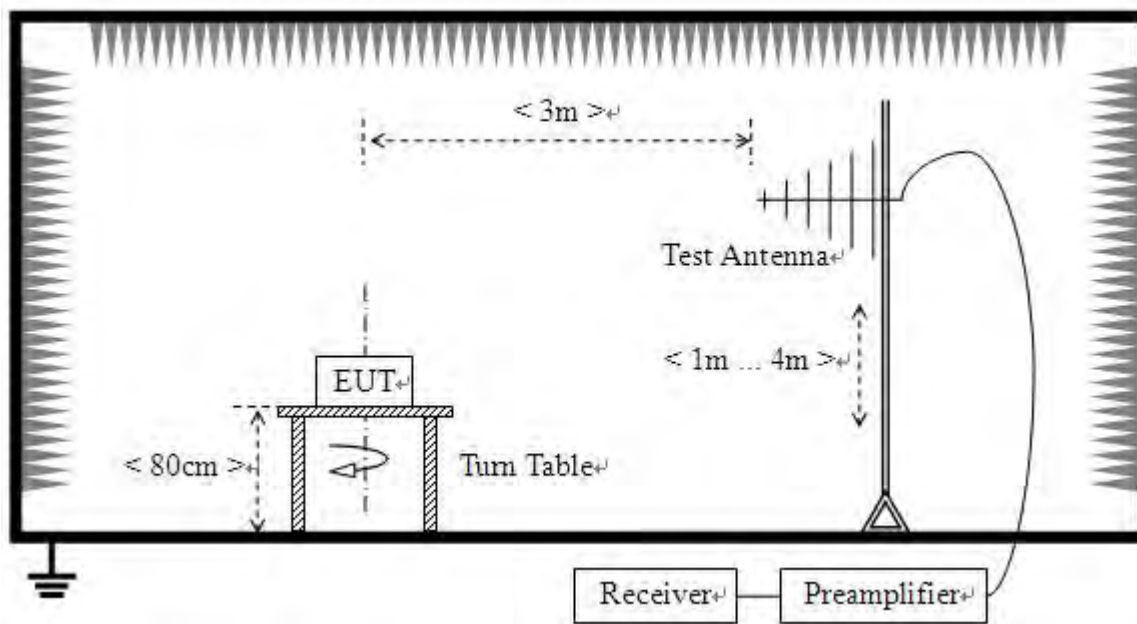
2.8.2. Test Description

A. Test Setup:

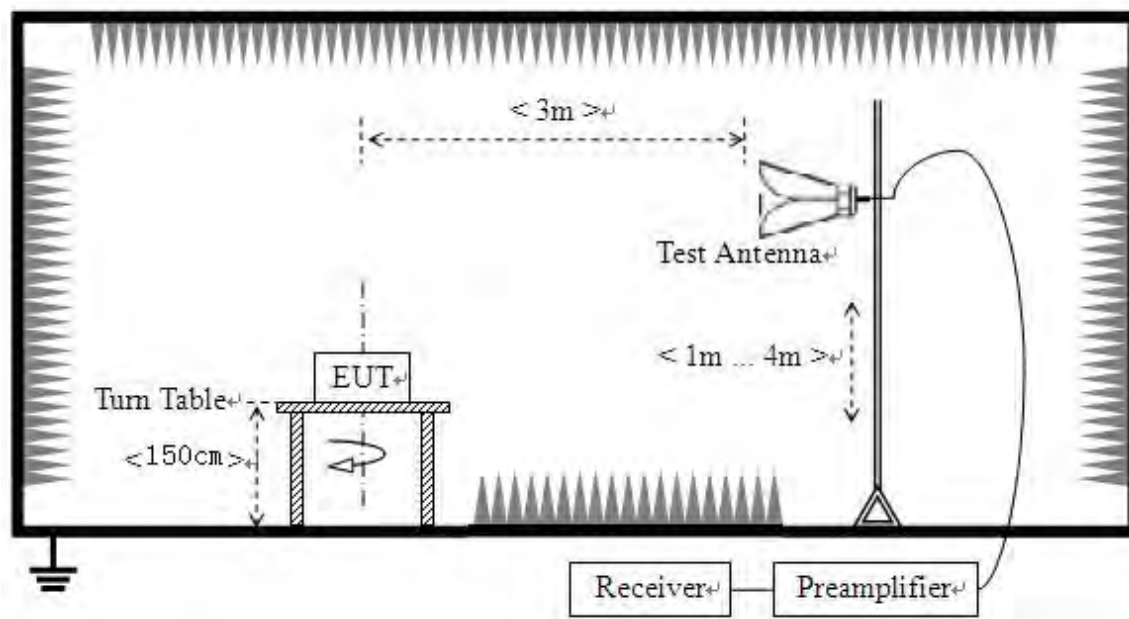
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



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

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

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

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



For the Test Antenna:

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

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

For Radiated emission below 30MHz

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

NOTE:

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

For Radiated emission above 30MHz

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



set to make the measurement.

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

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

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

Note:

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

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

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

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

A. Equipments List:

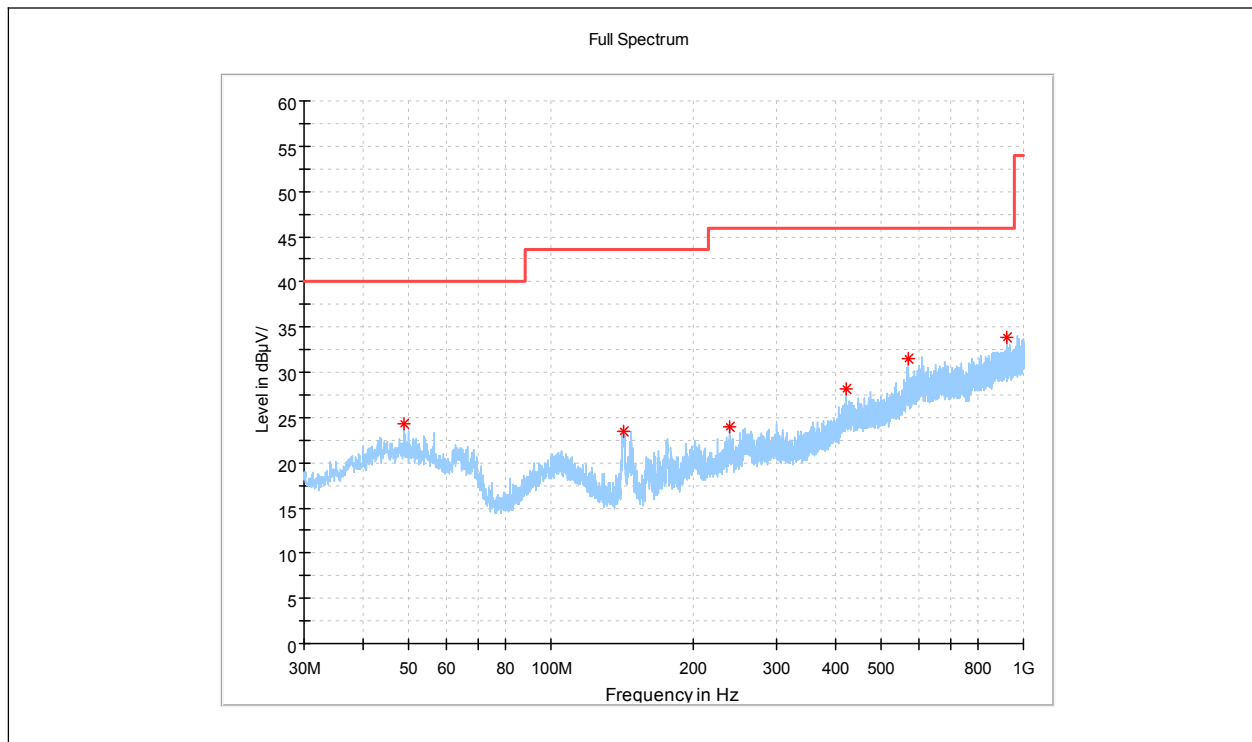
Please refer ANNEX B(4).

2.8.3. Test Result

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

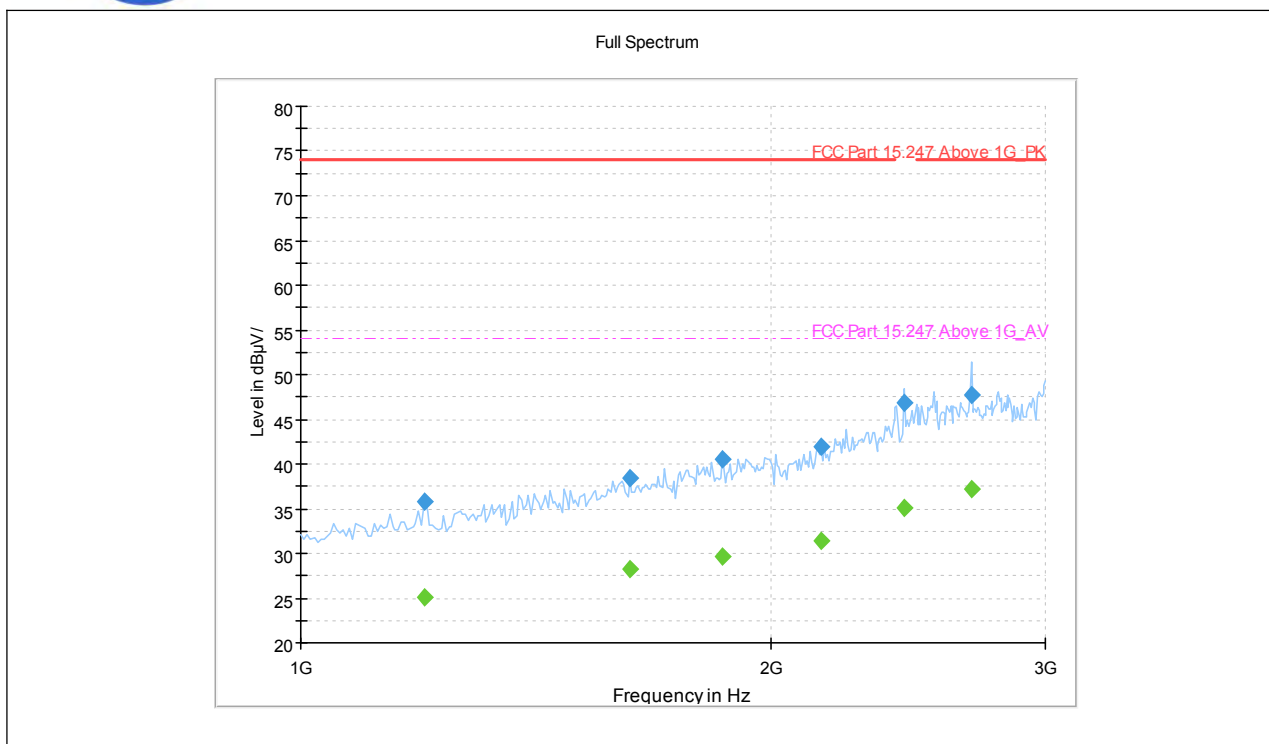
Note2: For the frequency, which started from 18GHz to 40GHz, was pre-scanned and the result which was 10dB lower than the limit was not recorded.

802.11b Test mode



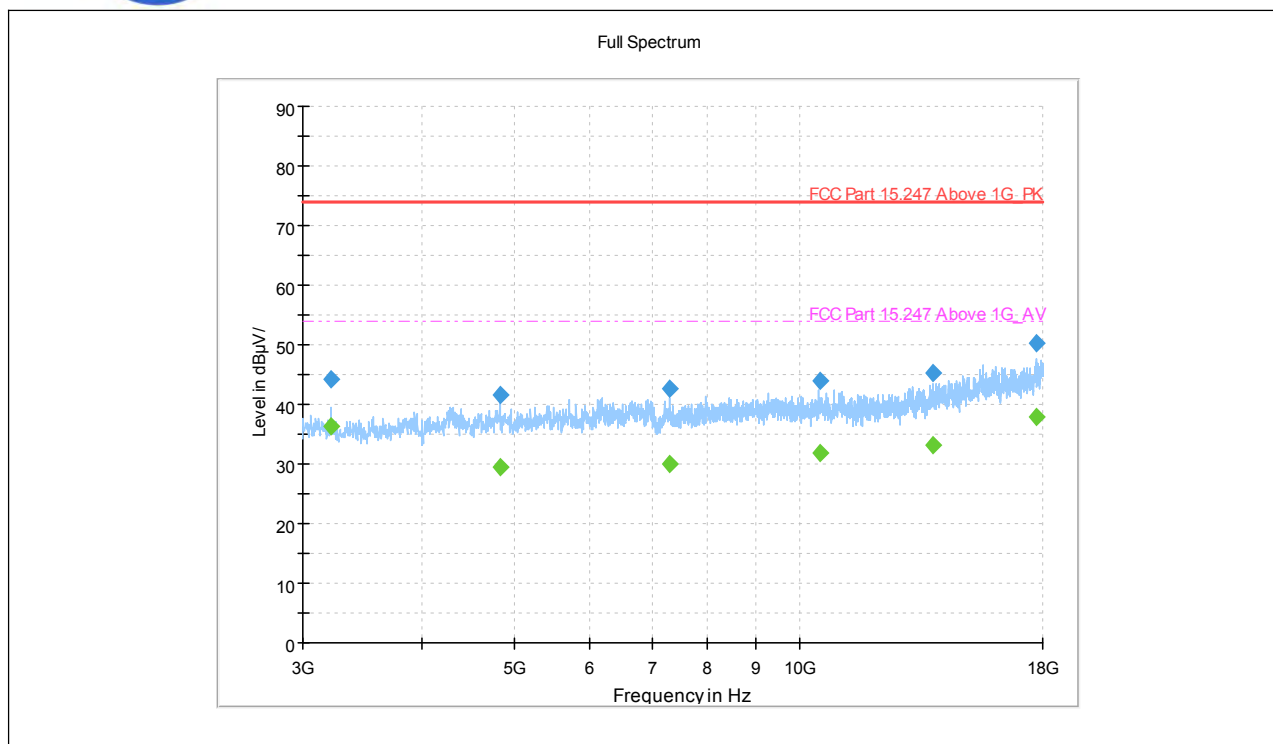
(802.11b _2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
48.874583	24.25	---	40.00	15.75	H	15.3
142.600833	23.47	---	43.50	20.03	H	12.0
239.358333	23.90	---	46.00	22.10	H	12.1
422.890417	28.10	---	46.00	17.90	H	16.7
569.643333	31.48	---	46.00	14.52	H	23.9
920.015417	33.93	---	46.00	12.07	H	28.3



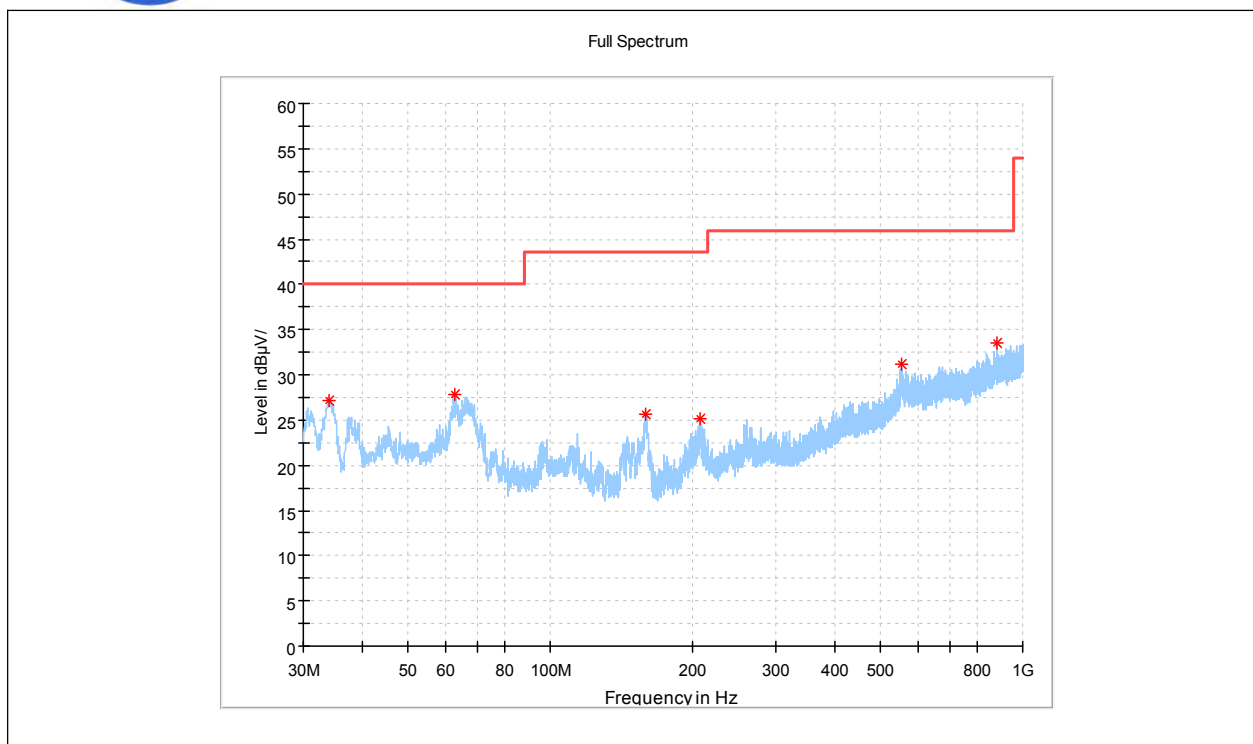
(802.11b _2412MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1200.000000	---	25.16	54.00	28.84	H	-0.4
1200.000000	35.73	---	74.00	38.27	H	-0.4
1625.000000	38.49	---	74.00	35.51	H	3.3
1625.000000	---	28.17	54.00	25.83	H	3.3
1865.000000	---	29.67	54.00	24.33	H	5.8
1865.000000	40.57	---	74.00	33.43	H	5.8
2155.000000	---	31.43	54.00	22.57	H	8.3
2155.000000	41.93	---	74.00	32.07	H	8.3
2435.000000	46.88	---	---	---	H	12.4
2435.000000	---	35.06	---	---	H	12.4
2690.000000	---	37.18	54.00	16.82	H	14.8
2690.000000	47.77	---	74.00	26.23	H	14.8



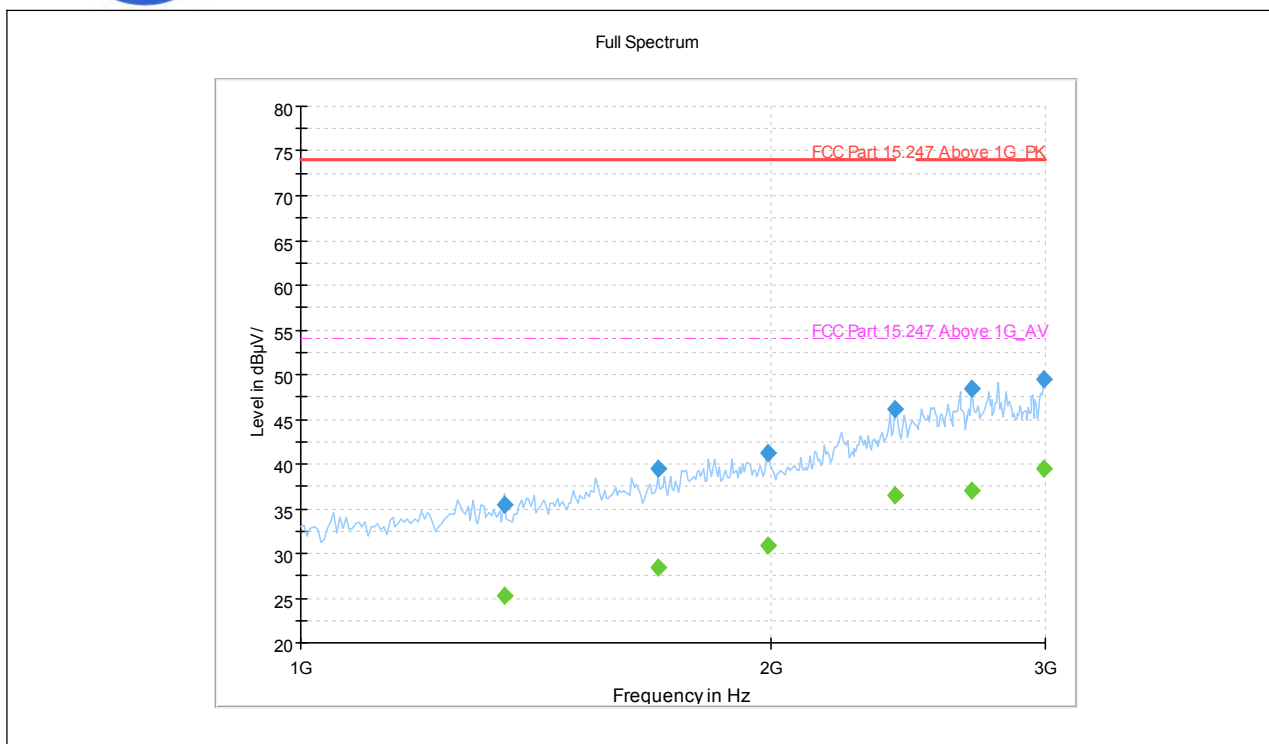
(802.11b _2412MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3216.047867	---	36.34	54.00	17.66	H	-6.3
3216.047867	44.30	---	74.00	29.70	H	-6.3
4835.864788	---	29.37	54.00	24.63	H	-3.1
4835.864788	41.67	---	74.00	32.33	H	-3.1
7284.829191	---	29.93	54.00	24.07	H	-0.3
7284.829191	42.54	---	74.00	31.46	H	-0.3
10518.65932	---	31.78	54.00	22.22	H	2.6
10518.65932	44.05	---	74.00	29.95	H	2.6
13783.59645	---	33.09	54.00	20.91	H	7.1
13783.59645	45.31	---	74.00	28.69	H	7.1
17756.04807	---	37.82	54.00	16.18	H	15.2
17756.04807	50.23	---	74.00	23.77	H	15.2



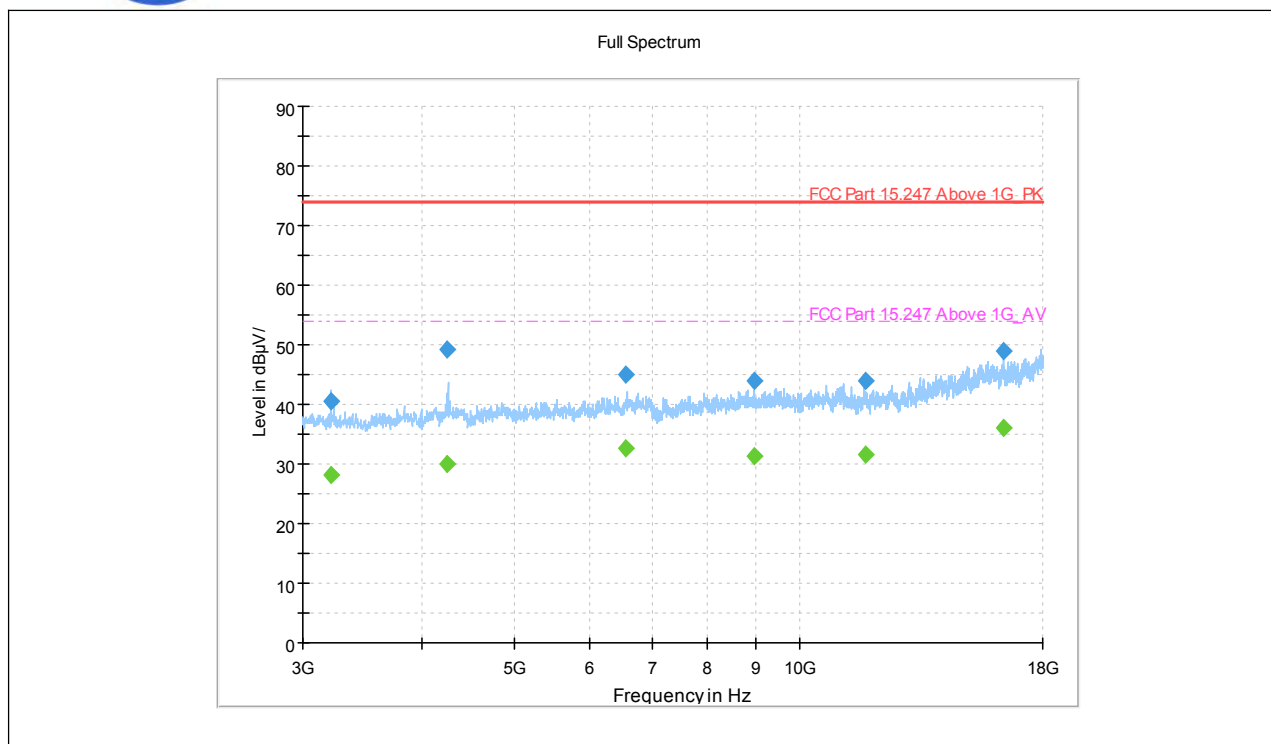
(802.11b _2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.041667	27.20	---	40.00	12.80	V	14.2
62.939583	27.82	---	40.00	12.18	V	12.3
159.454583	25.69	---	43.50	17.81	V	14.3
208.237500	25.20	---	43.50	18.30	V	19.8
555.012500	31.09	---	46.00	14.91	V	24.9
878.992500	33.46	---	46.00	12.54	V	28.4

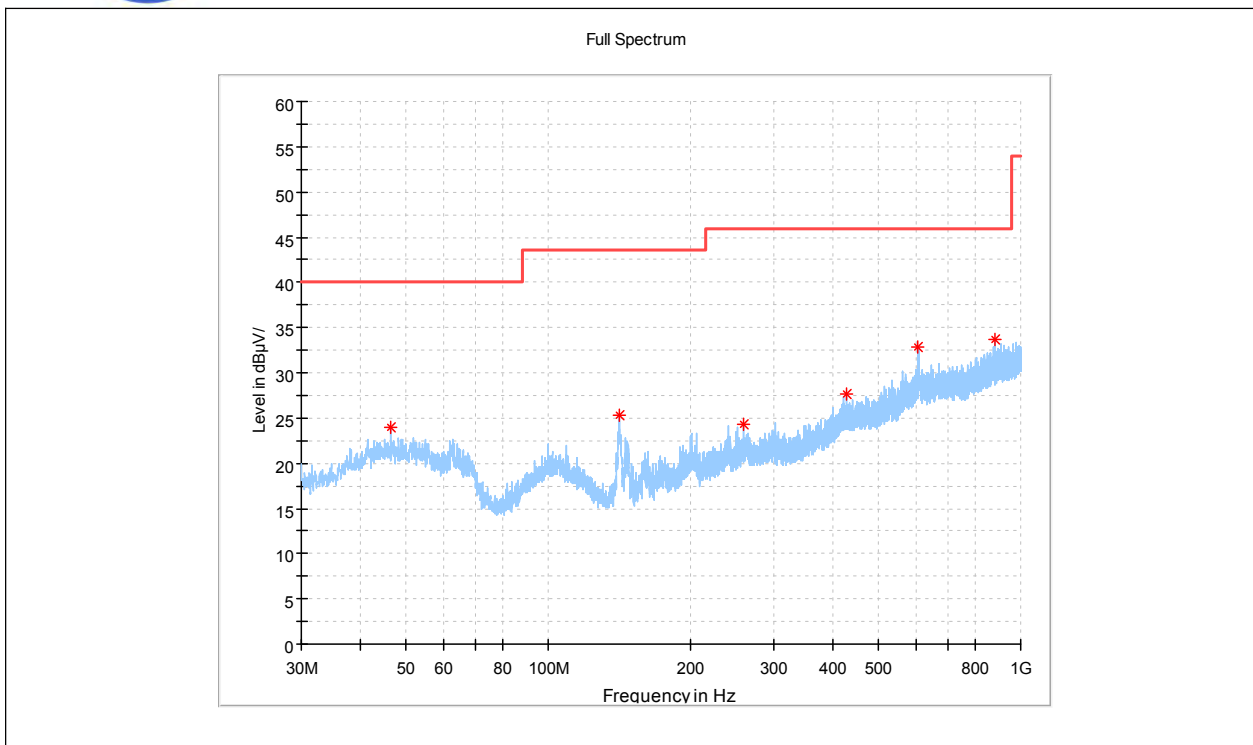


(802.11b _2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1350.000000	---	25.26	54.00	28.74	V	0.3
1350.000000	35.45	---	74.00	38.55	V	0.3
1695.000000	---	28.41	54.00	25.59	V	3.8
1695.000000	39.49	---	74.00	34.51	V	3.8
1990.000000	---	30.90	54.00	23.10	V	7.3
1990.000000	41.25	---	74.00	32.75	V	7.3
2400.000000	46.08	---	74.00	27.92	V	13.5
2400.000000	---	36.48	54.00	17.52	V	13.5
2690.000000	---	36.97	54.00	17.03	V	14.8
2690.000000	48.49	---	74.00	25.51	V	14.8
2995.000000	49.56	---	74.00	24.44	V	17.9
2995.000000	---	39.55	54.00	14.45	V	17.9

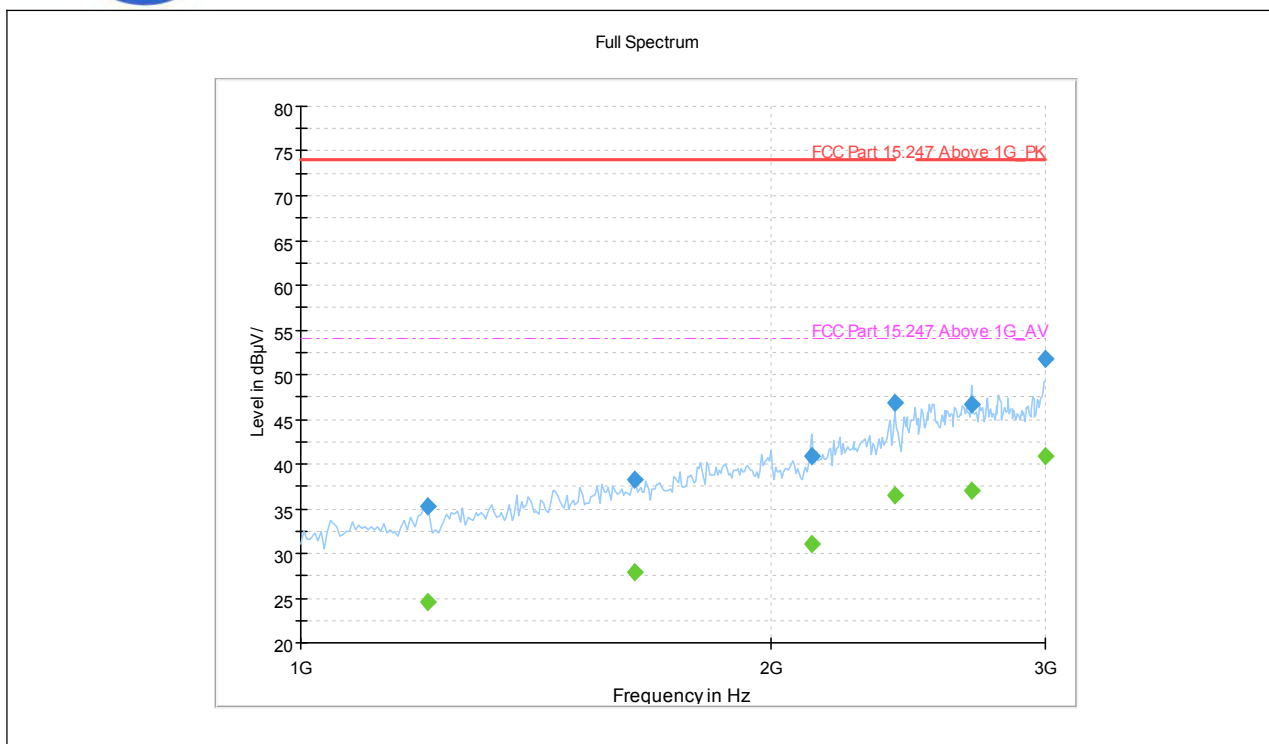


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3216.063936	---	28.19	54.00	25.81	V	-6.3
3216.063936	40.56	---	74.00	33.44	V	-6.3
4248.613510	---	29.98	54.00	24.02	V	-3.7
4248.613510	49.15	---	74.00	24.85	V	-3.7
6553.821000	---	32.52	54.00	21.48	V	-1.3
6553.821000	45.13	---	74.00	28.87	V	-1.3
8943.067463	43.91	---	74.00	30.09	V	1.7
8943.067463	---	31.24	54.00	22.76	V	1.7
11709.15873	---	31.46	54.00	22.54	V	4.0
11709.15873	43.91	---	74.00	30.09	V	4.0
16372.42621	48.96	---	74.00	25.04	V	11.2
16372.42621	---	36.07	54.00	17.93	V	11.2



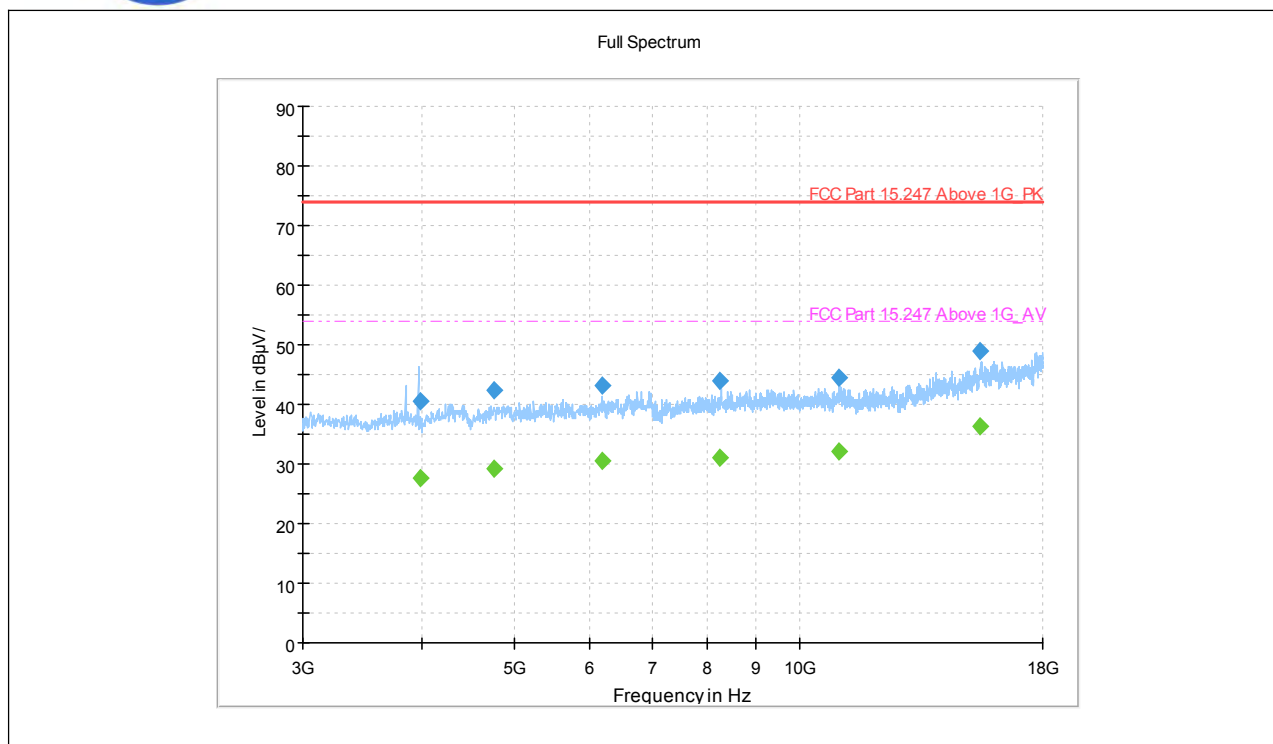
(802.11b _2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
46.328333	23.98	---	40.00	16.02	H	15.4
141.671250	25.29	---	43.50	18.21	H	10.6
258.475417	24.31	---	46.00	21.69	H	13.9
428.710417	27.73	---	46.00	18.27	H	17.3
607.554167	32.81	---	46.00	13.19	H	19.3
879.477500	33.67	---	46.00	12.33	H	28.1



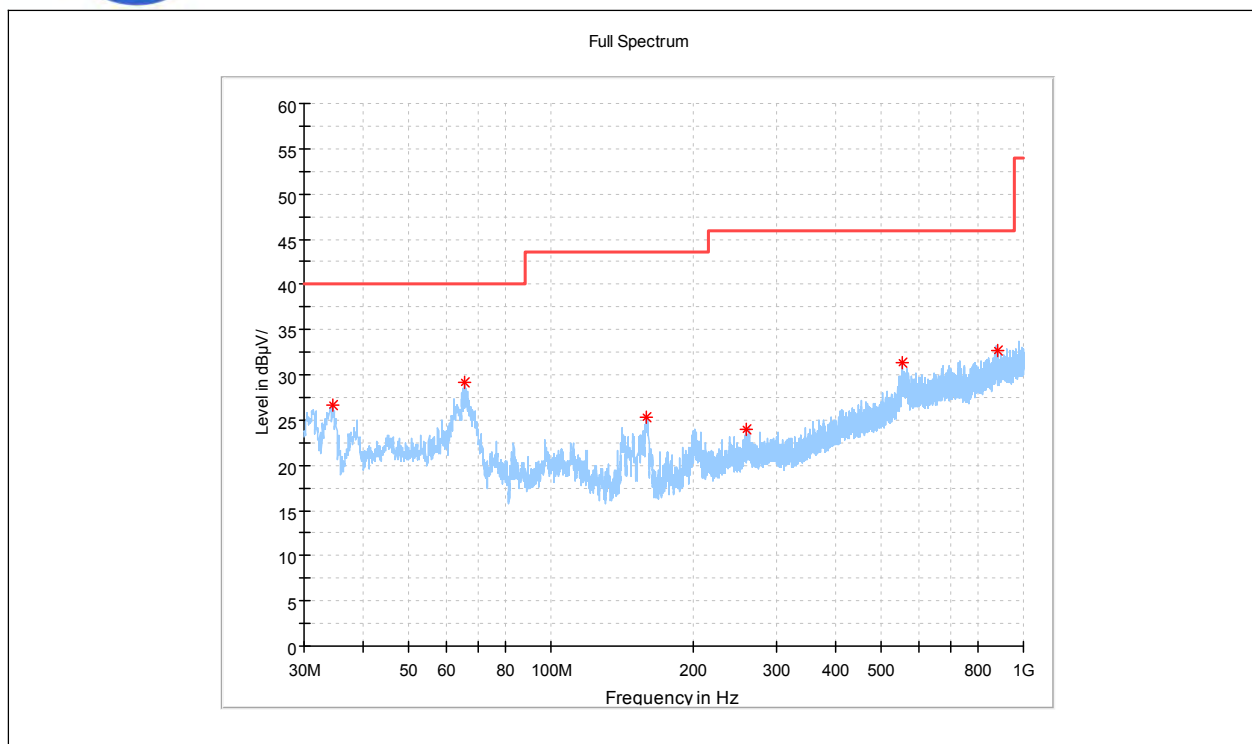
(802.11b _2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1205.000000	35.22	---	74.00	38.78	H	-0.8
1205.000000	---	24.55	54.00	29.45	H	-0.8
1635.000000	---	27.85	54.00	26.15	H	3.4
1635.000000	38.23	---	74.00	35.77	H	3.4
2125.000000	---	31.12	54.00	22.88	H	8.2
2125.000000	40.83	---	74.00	33.17	H	8.2
2400.000000	46.89	---	74.00	27.11	H	13.5
2400.000000	---	36.51	54.00	17.49	H	13.5
2690.000000	---	36.98	54.00	17.02	H	14.8
2690.000000	46.73	---	74.00	27.27	H	14.8
3000.000000	---	40.81	54.00	13.19	H	18.4
3000.000000	51.81	---	74.00	22.19	H	18.4



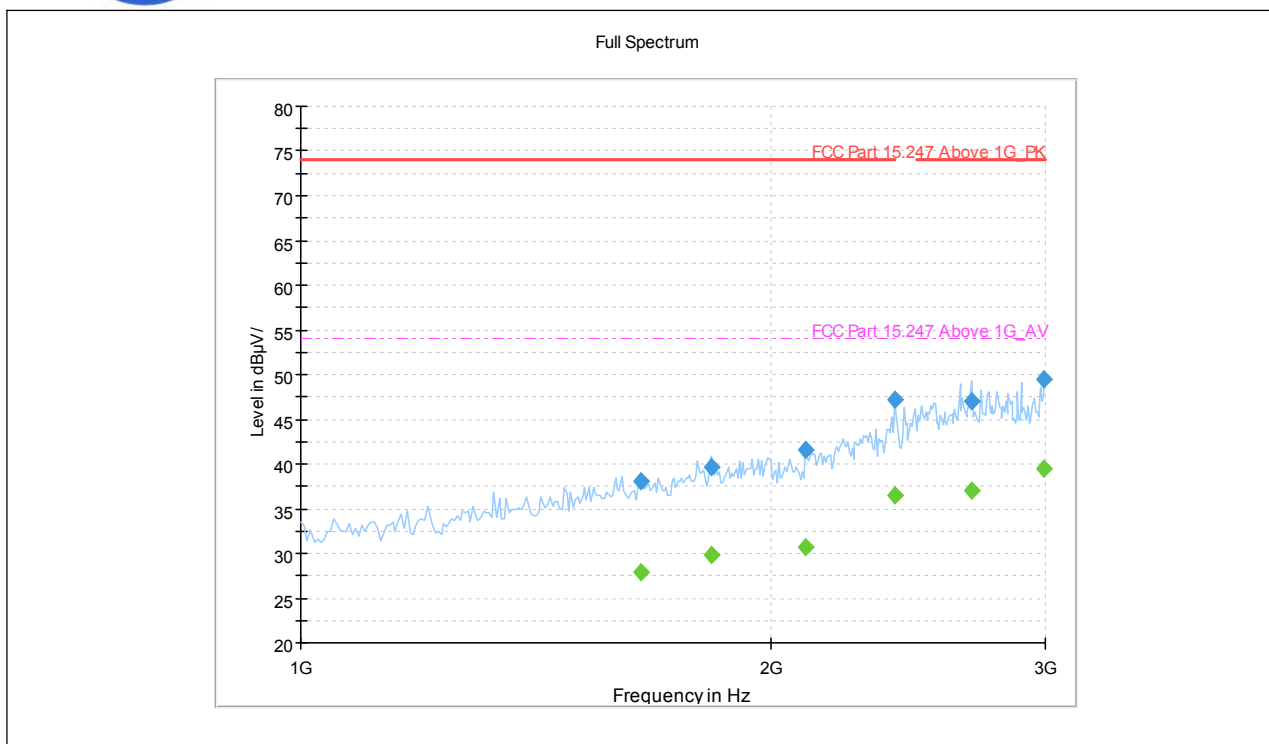
(802.11b _2437MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3983.580576	---	27.68	54.00	26.32	H	-5.6
3983.580576	40.45	---	74.00	33.55	H	-5.6
4759.908000	42.40	---	74.00	31.60	H	-3.4
4759.908000	---	29.11	54.00	24.89	H	-3.4
6195.542063	43.25	---	74.00	30.75	H	-1.5
6195.542063	---	30.57	54.00	23.43	H	-1.5
8247.921300	43.92	---	74.00	30.08	H	1.4
8247.921300	---	30.96	54.00	23.04	H	1.4
10990.64290	44.46	---	74.00	29.54	H	3.3
10990.64290	---	32.00	54.00	22.00	H	3.3
15470.86653	---	36.35	54.00	17.65	H	11.0
15470.86653	48.91	---	74.00	25.09	H	11.0



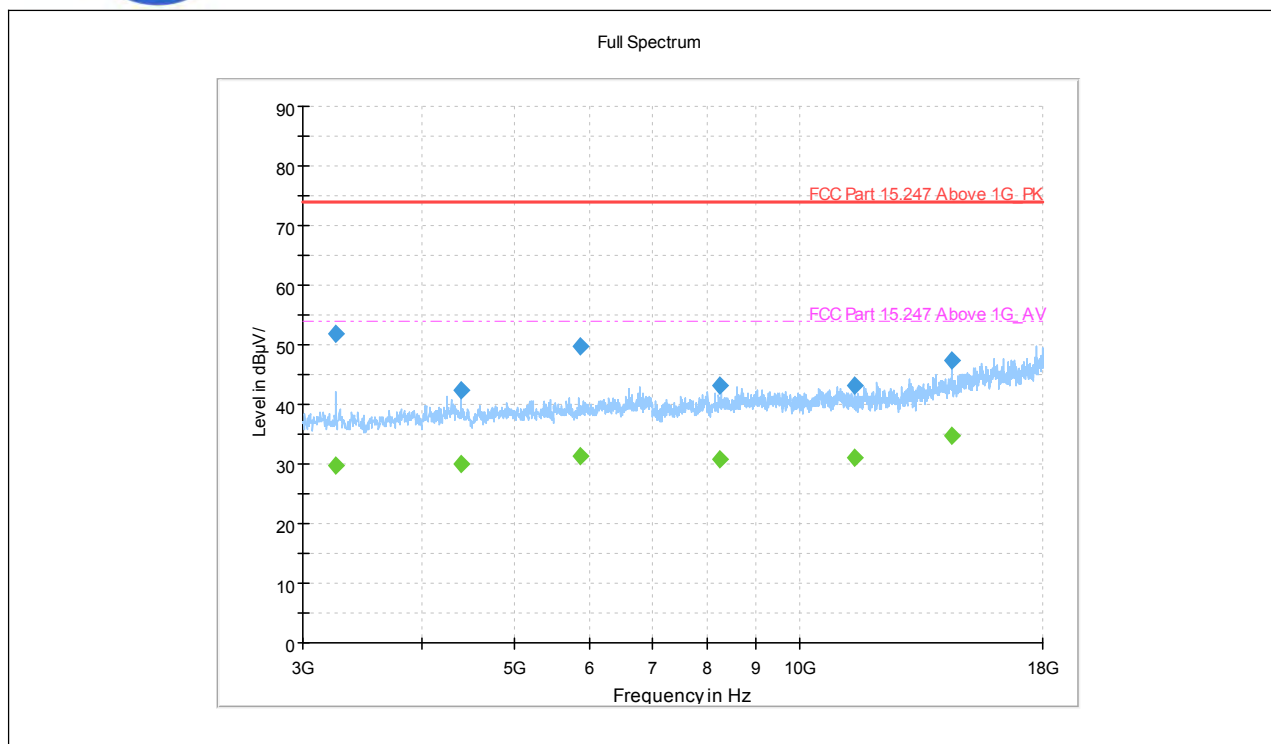
(802.11b _2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.486250	26.57	---	40.00	13.43	V	15.0
65.445417	29.19	---	40.00	10.81	V	13.9
159.050417	25.36	---	43.50	18.14	V	10.9
258.556250	23.99	---	46.00	22.01	V	14.5
555.901667	31.36	---	46.00	14.64	V	22.0
881.700417	32.65	---	46.00	13.35	V	28.3



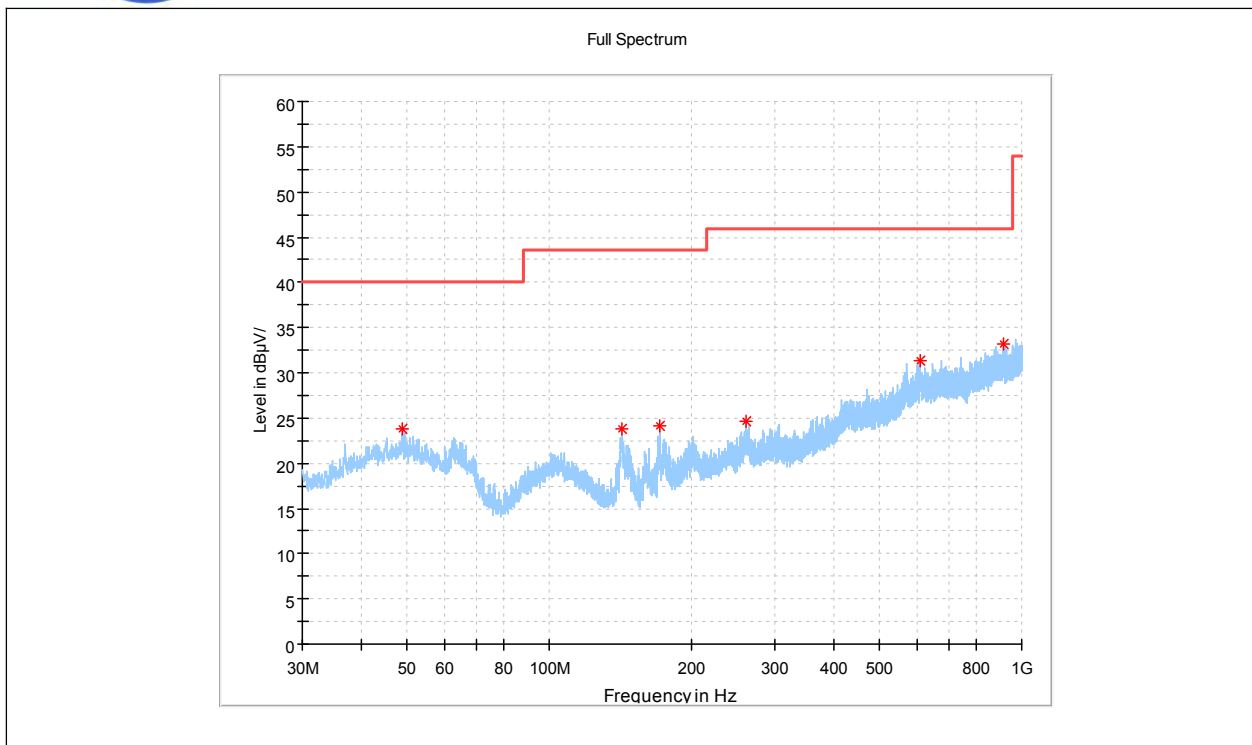
(802.11b _2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1650.000000	---	27.85	54.00	26.15	V	3.3
1650.000000	38.06	---	74.00	35.94	V	3.3
1835.000000	39.57	---	74.00	34.43	V	6.0
1835.000000	---	29.86	54.00	24.14	V	6.0
2105.000000	41.59	---	74.00	32.41	V	7.8
2105.000000	---	30.63	54.00	23.37	V	7.8
2400.000000	---	36.46	54.00	17.54	V	13.5
2400.000000	47.13	---	74.00	26.87	V	13.5
2690.000000	---	36.97	54.00	17.03	V	14.8
2690.000000	47.02	---	74.00	26.98	V	14.8
2995.000000	---	39.54	54.00	14.46	V	17.9
2995.000000	49.42	---	74.00	24.58	V	17.9



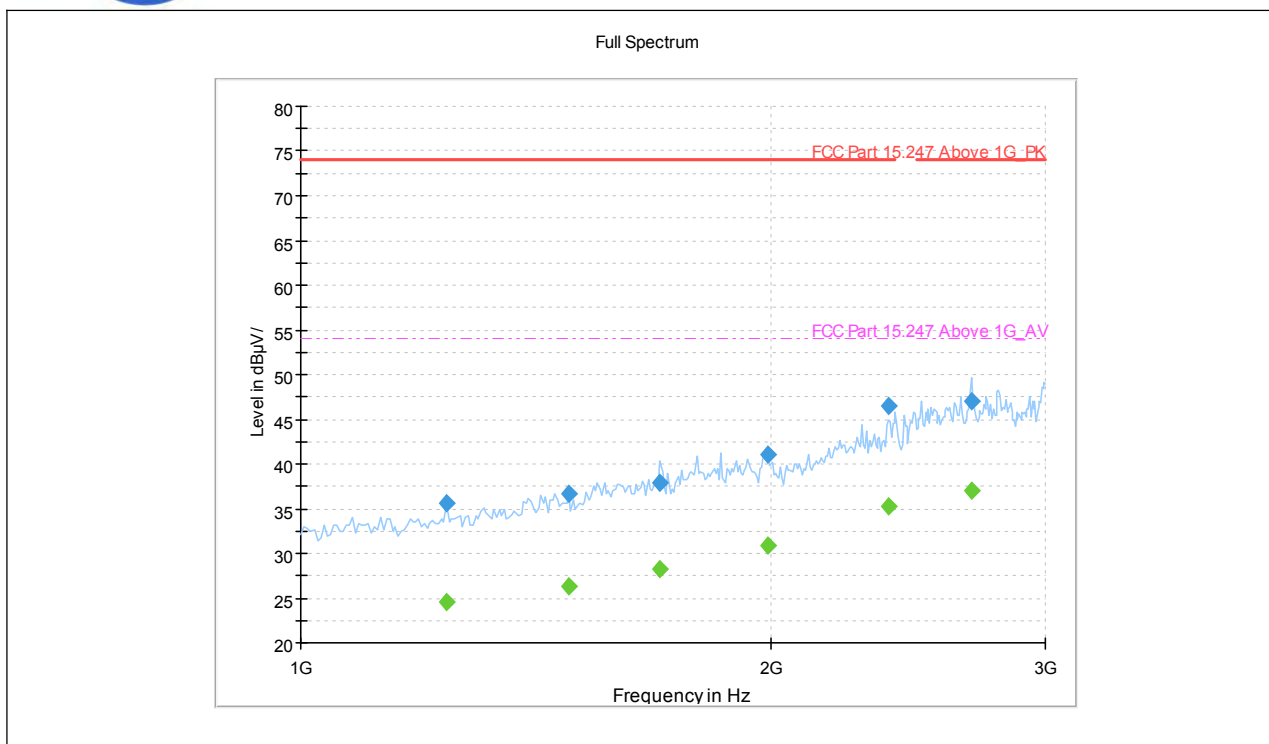
(802.11b _2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3249.269888	---	29.69	54.00	24.31	V	-6.1
3249.269888	51.75	---	74.00	22.25	V	-6.1
4408.256269	42.46	---	74.00	31.54	V	-3.7
4408.256269	---	29.92	54.00	24.08	V	-3.7
5878.894519	---	31.24	54.00	22.76	V	-2.3
5878.894519	49.64	---	74.00	24.36	V	-2.3
8243.013360	---	30.78	54.00	23.22	V	1.3
8243.013360	43.29	---	74.00	30.71	V	1.3
11402.21048	---	30.97	54.00	23.03	V	3.2
11402.21048	43.28	---	74.00	30.72	V	3.2
14431.05022	47.41	---	74.00	26.59	V	9.1
14431.05022	---	34.71	54.00	19.29	V	9.1



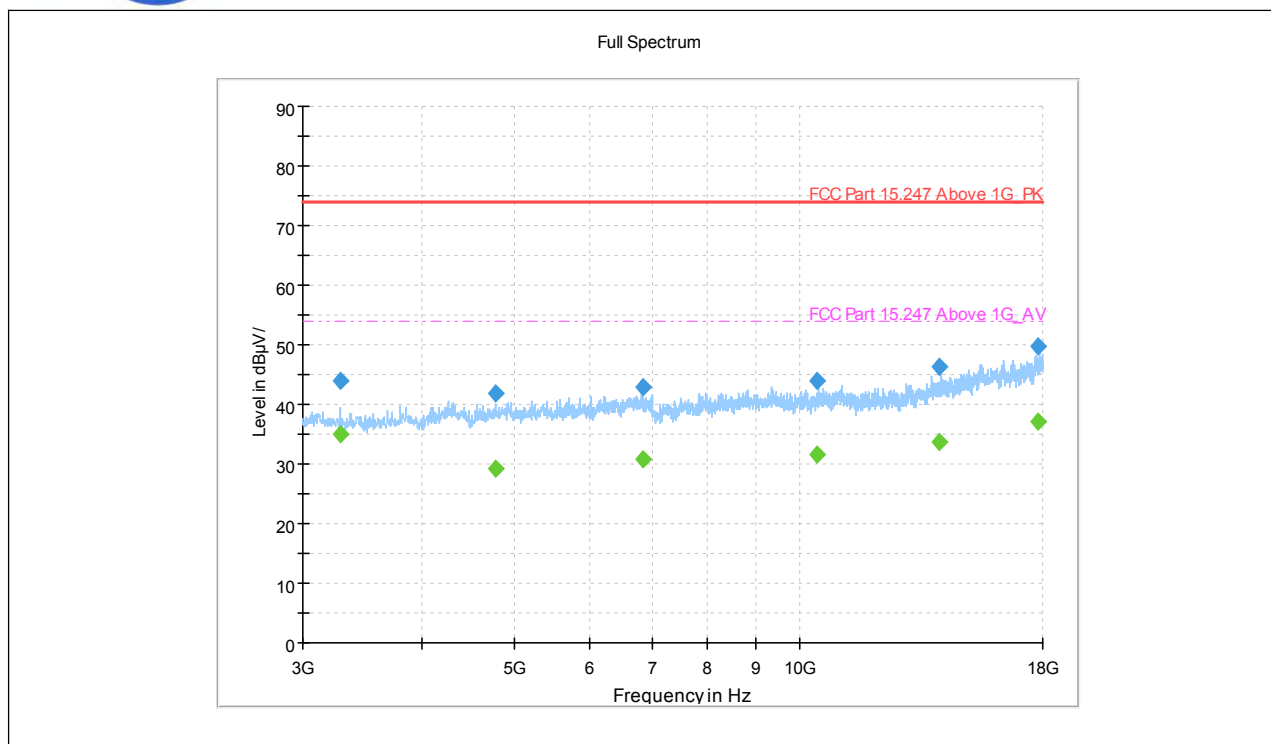
(802.11b _2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
48.995833	23.75	---	40.00	16.25	H	15.3
142.439167	23.76	---	43.50	19.74	H	14.1
171.054167	24.16	---	43.50	19.34	H	14.5
261.102500	24.66	---	46.00	21.34	H	18.6
608.079583	31.27	---	46.00	14.73	H	23.1
914.640000	33.26	---	46.00	12.74	H	28.4

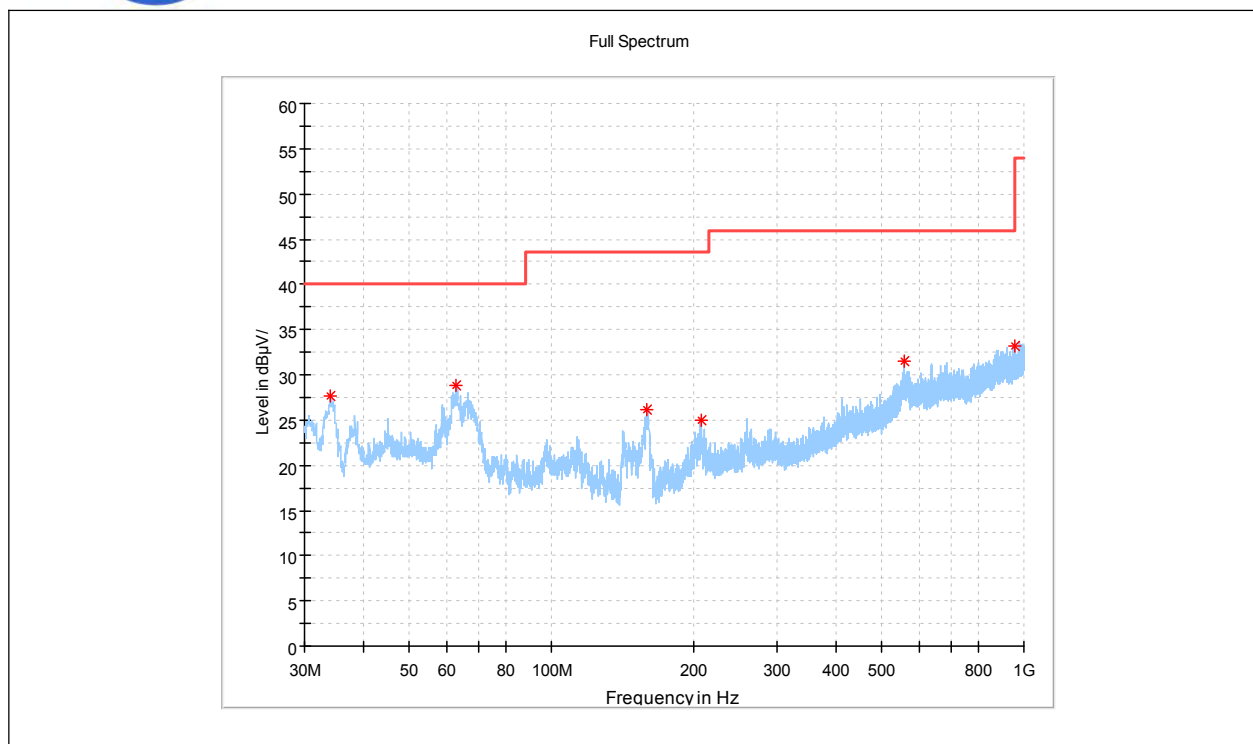


(802.11b _2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1240.000000	35.67	---	74.00	38.33	H	-0.9
1240.000000	---	24.64	54.00	29.36	H	-0.9
1485.000000	---	26.40	54.00	27.60	H	1.7
1485.000000	36.68	---	74.00	37.32	H	1.7
1700.000000	37.91	---	74.00	36.09	H	3.9
1700.000000	---	28.29	54.00	25.71	H	3.9
1990.000000	41.13	---	74.00	32.87	H	7.3
1990.000000	---	30.90	54.00	23.10	H	7.3
2380.000000	46.49	---	74.00	27.51	H	12.0
2380.000000	---	35.27	54.00	18.73	H	12.0
2690.000000	---	37.00	54.00	17.00	H	14.8
2690.000000	46.95	---	74.00	27.05	H	14.8

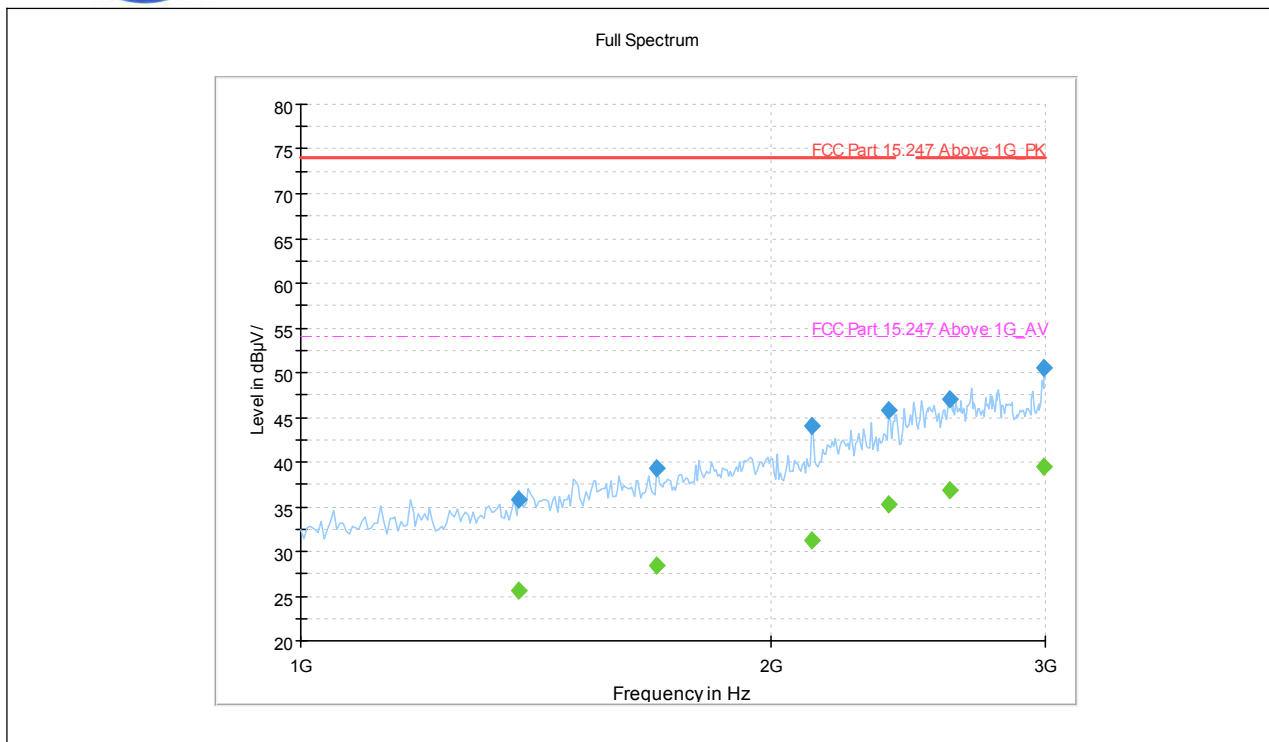


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.857788	---	35.02	54.00	18.98	H	-6.0
3282.857788	43.94	---	74.00	30.06	H	-6.0
4779.636345	---	29.24	54.00	24.76	H	-3.4
4779.636345	41.92	---	74.00	32.08	H	-3.4
6843.244128	---	30.67	54.00	23.33	H	-1.0
6843.244128	42.97	---	74.00	31.03	H	-1.0
10423.502064	43.89	---	74.00	30.11	H	2.7
10423.502064	---	31.54	54.00	22.46	H	2.7
14023.019531	---	33.60	54.00	20.40	H	8.1
14023.019531	46.31	---	74.00	27.69	H	8.1
17804.794950	49.66	---	74.00	24.34	H	14.5
17804.794950	---	37.24	54.00	16.76	H	14.5



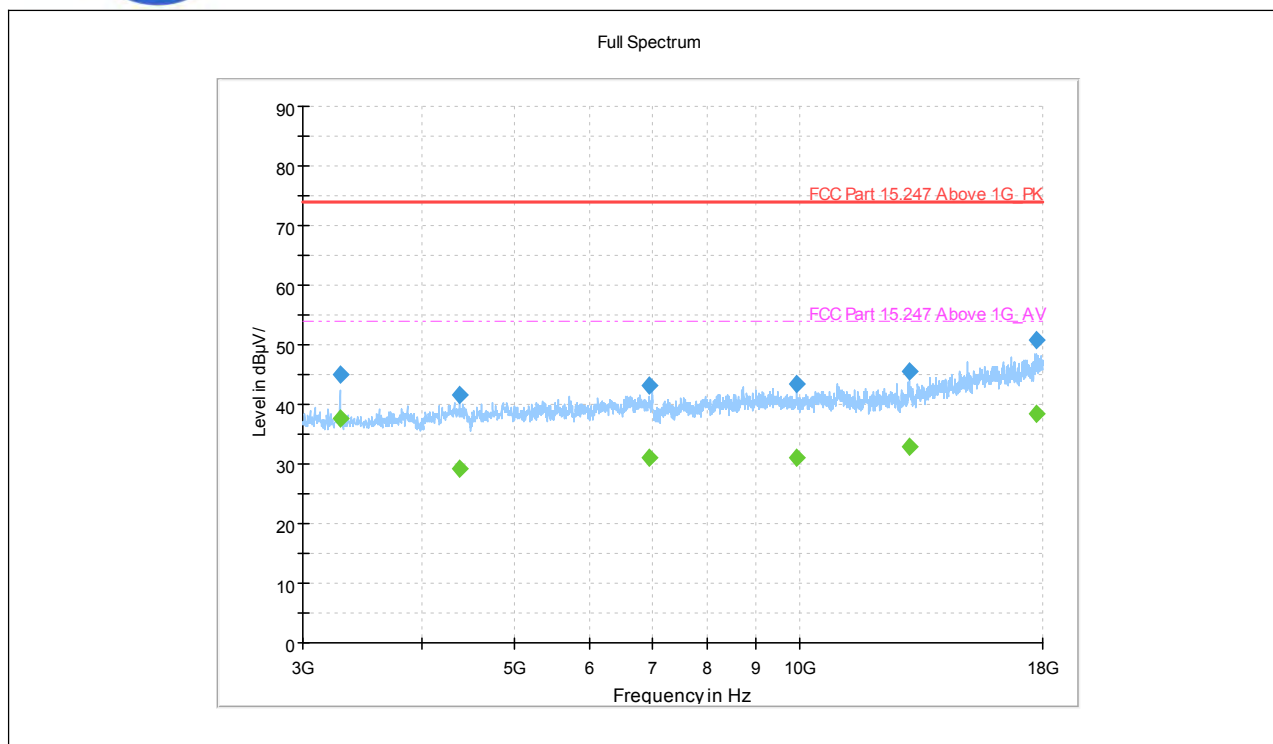
(802.11b _2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.122500	27.61	---	40.00	12.39	V	15.2
62.980000	28.76	---	40.00	11.24	V	12.2
159.616250	26.08	---	43.50	17.42	V	11.2
207.307917	25.00	---	43.50	18.50	V	16.6
557.154583	31.43	---	46.00	14.57	V	23.1
954.046250	33.24	---	46.00	12.76	V	28.0



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

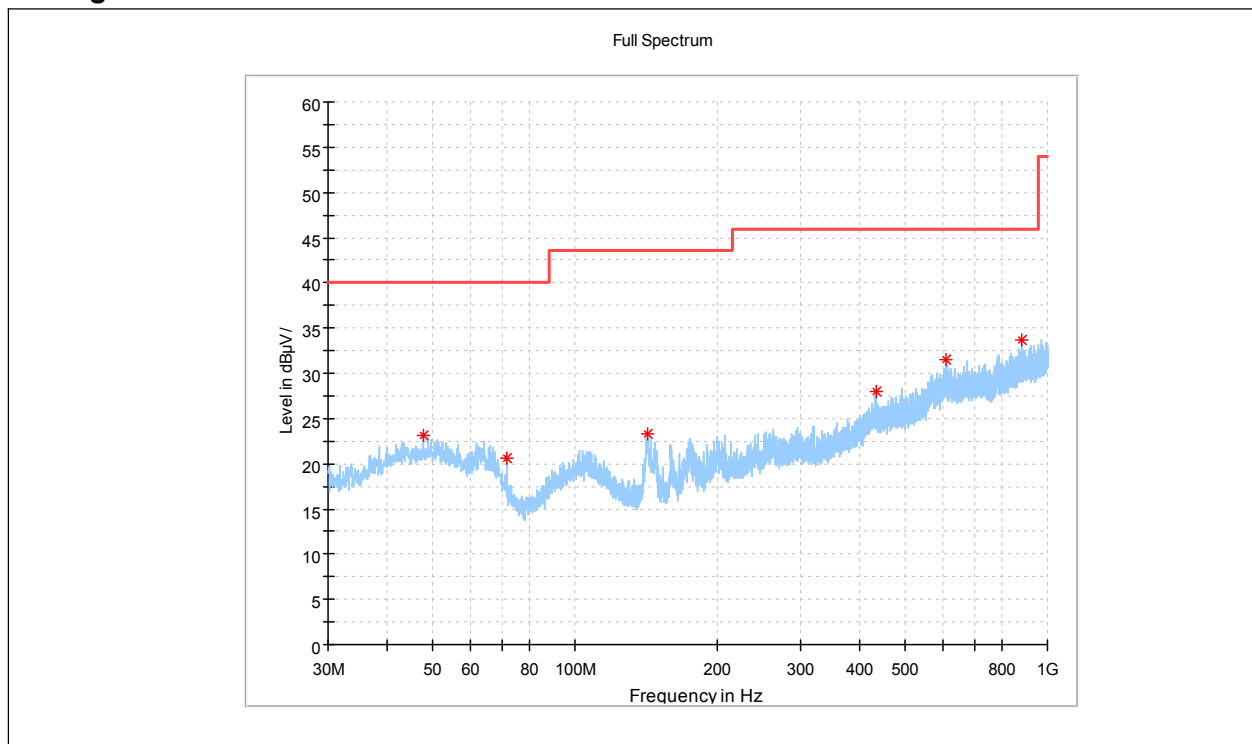
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1380.000000	35.82	---	74.00	38.18	V	0.5
1380.000000	---	25.66	54.00	28.34	V	0.5
1690.000000	---	28.36	54.00	25.64	V	3.7
1690.000000	39.24	---	74.00	34.76	V	3.7
2125.000000	44.08	---	74.00	29.92	V	8.2
2125.000000	---	31.16	54.00	22.84	V	8.2
2380.000000	45.85	---	74.00	28.15	V	12.0
2380.000000	---	35.23	54.00	18.77	V	12.0
2605.000000	---	36.90	54.00	17.10	V	14.9
2605.000000	47.02	---	74.00	26.98	V	14.9
2995.000000	50.59	---	74.00	23.41	V	17.9
2995.000000	---	39.54	54.00	14.46	V	17.9



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.521465	44.93	---	74.00	29.07	V	-5.9
3282.521465	---	37.61	54.00	16.39	V	-5.9
4386.699281	---	29.31	54.00	24.69	V	-3.5
4386.699281	41.68	---	74.00	32.32	V	-3.5
6948.477769	---	30.97	54.00	23.03	V	-0.5
6948.477769	43.11	---	74.00	30.89	V	-0.5
9926.922788	---	31.05	54.00	22.95	V	2.1
9926.922788	43.44	---	74.00	30.56	V	2.1
13033.69303	45.53	---	74.00	28.47	V	6.3
13033.69303	---	33.01	54.00	20.99	V	6.3
17710.55265	---	38.35	54.00	15.65	V	14.5
17710.55265	50.72	---	74.00	23.28	V	14.5

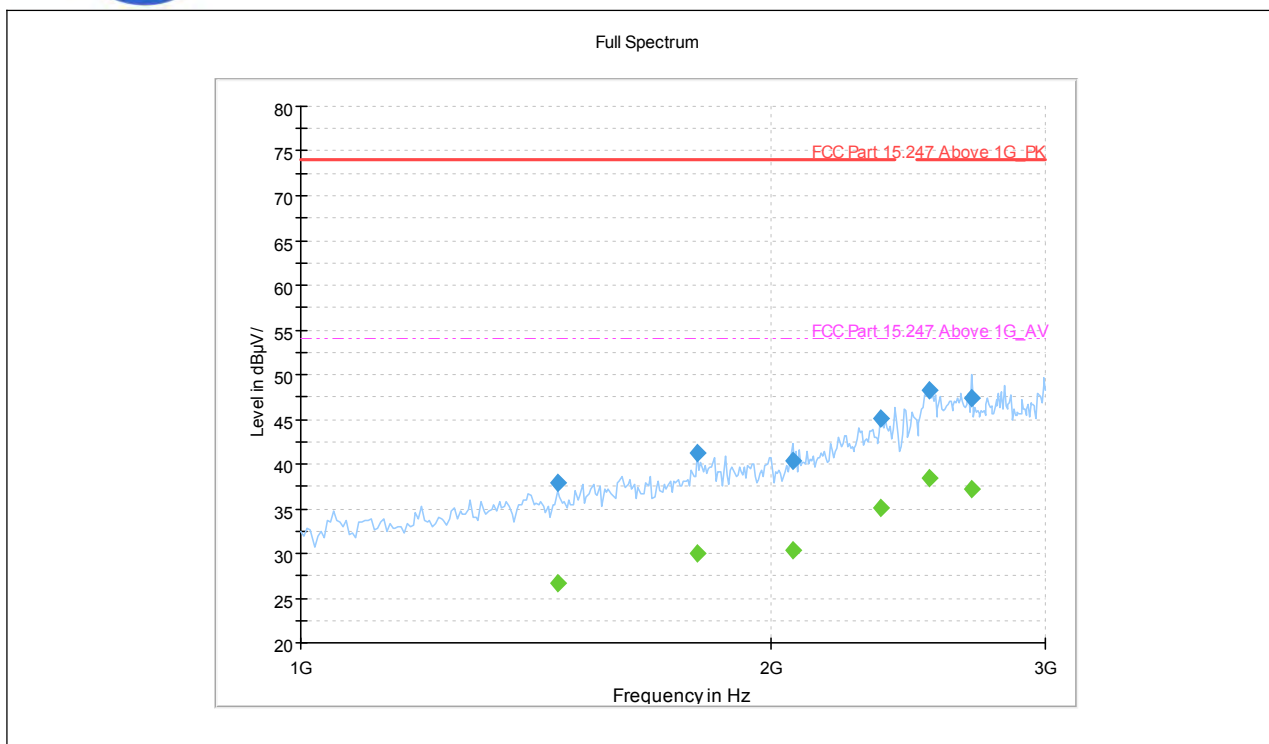


802.11g Test mode



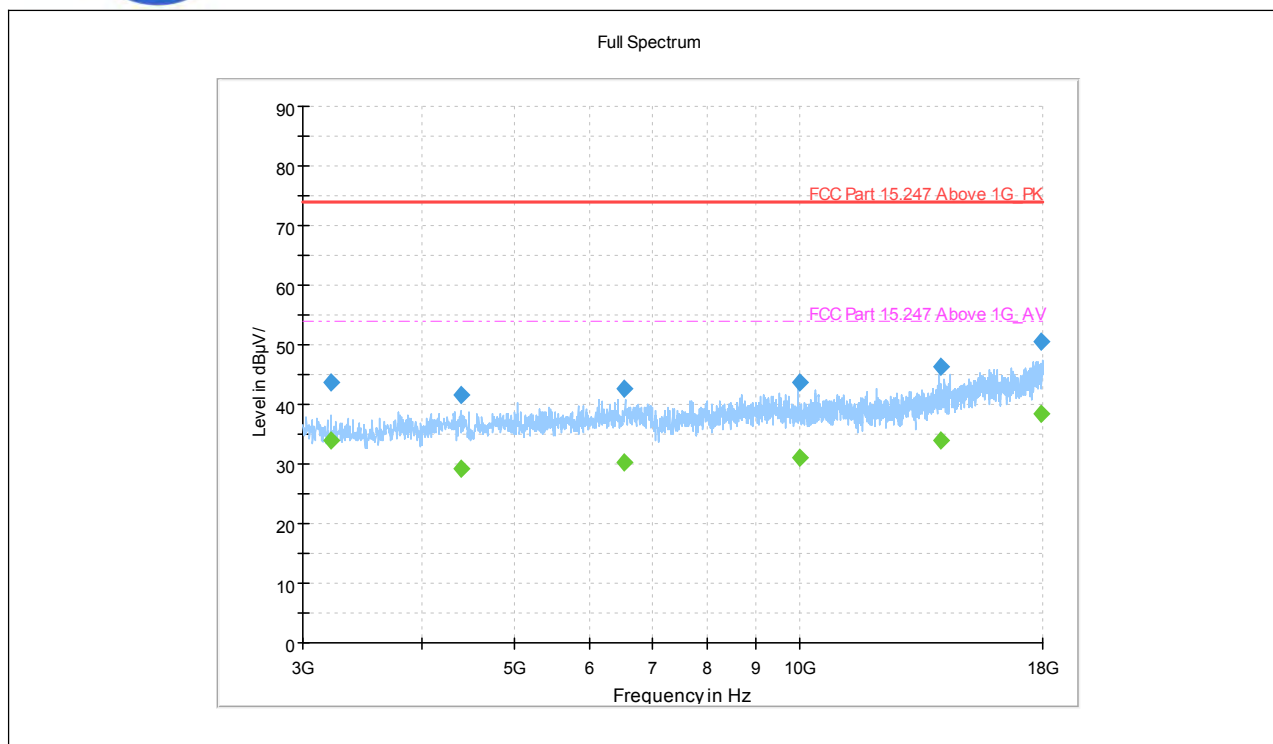
(802.11g _2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
47.621667	23.10	---	40.00	16.90	H	16.2
71.750417	20.68	---	40.00	19.32	H	13.9
142.156250	23.28	---	43.50	20.22	H	12.6
433.802917	27.97	---	46.00	18.03	H	15.5
608.322083	31.51	---	46.00	14.49	H	20.0
879.396667	33.74	---	46.00	12.26	H	28.0



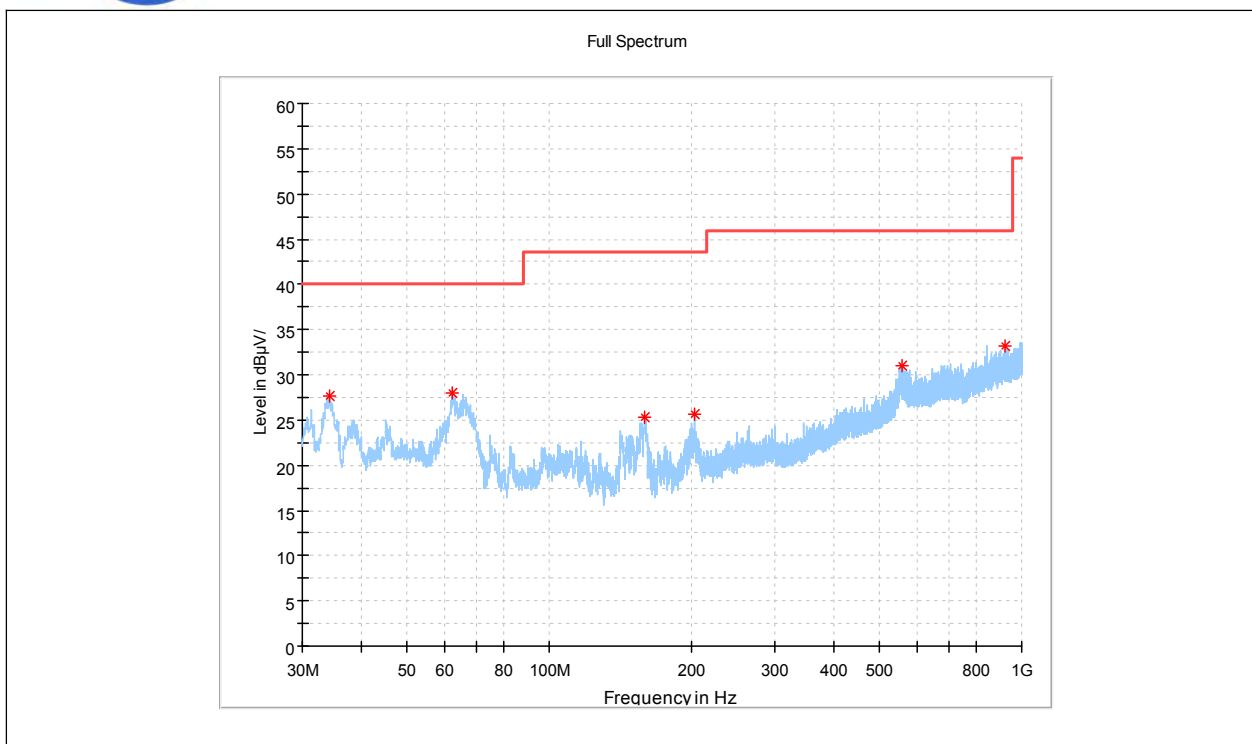
(802.11g _2412MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1460.000000	37.96	---	74.00	36.04	H	1.6
1460.000000	---	26.61	54.00	27.39	H	1.6
1795.000000	---	30.08	54.00	23.92	H	6.4
1795.000000	41.20	---	74.00	32.80	H	6.4
2065.000000	---	30.35	54.00	23.65	H	7.1
2065.000000	40.29	---	74.00	33.71	H	7.1
2355.000000	45.16	---	74.00	28.84	H	11.5
2355.000000	---	35.08	54.00	18.92	H	11.5
2530.000000	---	38.50	54.00	15.50	H	13.9
2530.000000	48.32	---	74.00	25.68	H	13.9
2690.000000	---	37.17	54.00	16.83	H	14.8
2690.000000	47.41	---	74.00	26.59	H	14.8



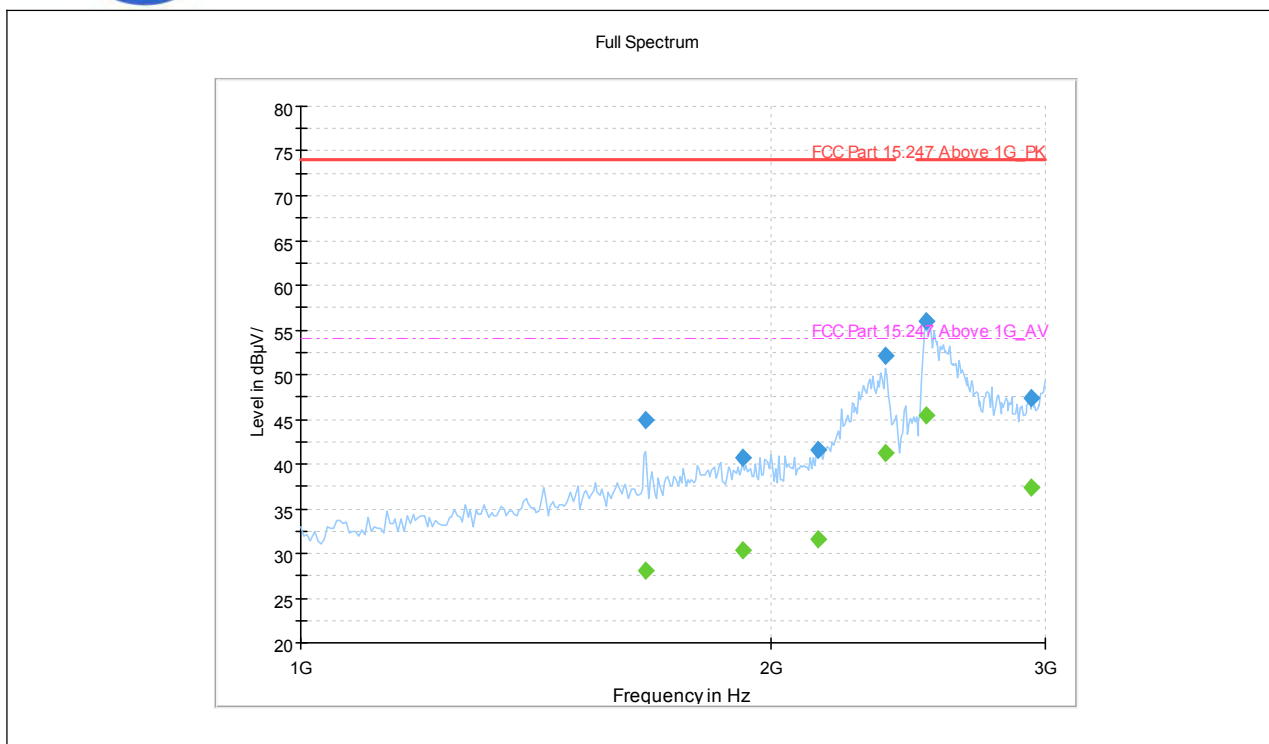
(802.11g _2412MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3216.211350	---	33.94	54.00	20.06	H	-6.3
3216.211350	43.58	---	74.00	30.42	H	-6.3
4409.690288	---	29.25	54.00	24.75	H	-3.7
4409.690288	41.54	---	74.00	32.46	H	-3.7
6542.523900	---	30.22	54.00	23.78	H	-1.3
6542.523900	42.59	---	74.00	31.41	H	-1.3
9995.260640	---	31.03	54.00	22.97	H	2.0
9995.260640	43.75	---	74.00	30.25	H	2.0
14044.58881	46.37	---	74.00	27.63	H	8.3
14044.58881	---	33.83	54.00	20.17	H	8.3
17903.37121	50.64	---	74.00	23.36	H	14.5
17903.37121	---	38.33	54.00	15.67	H	14.5



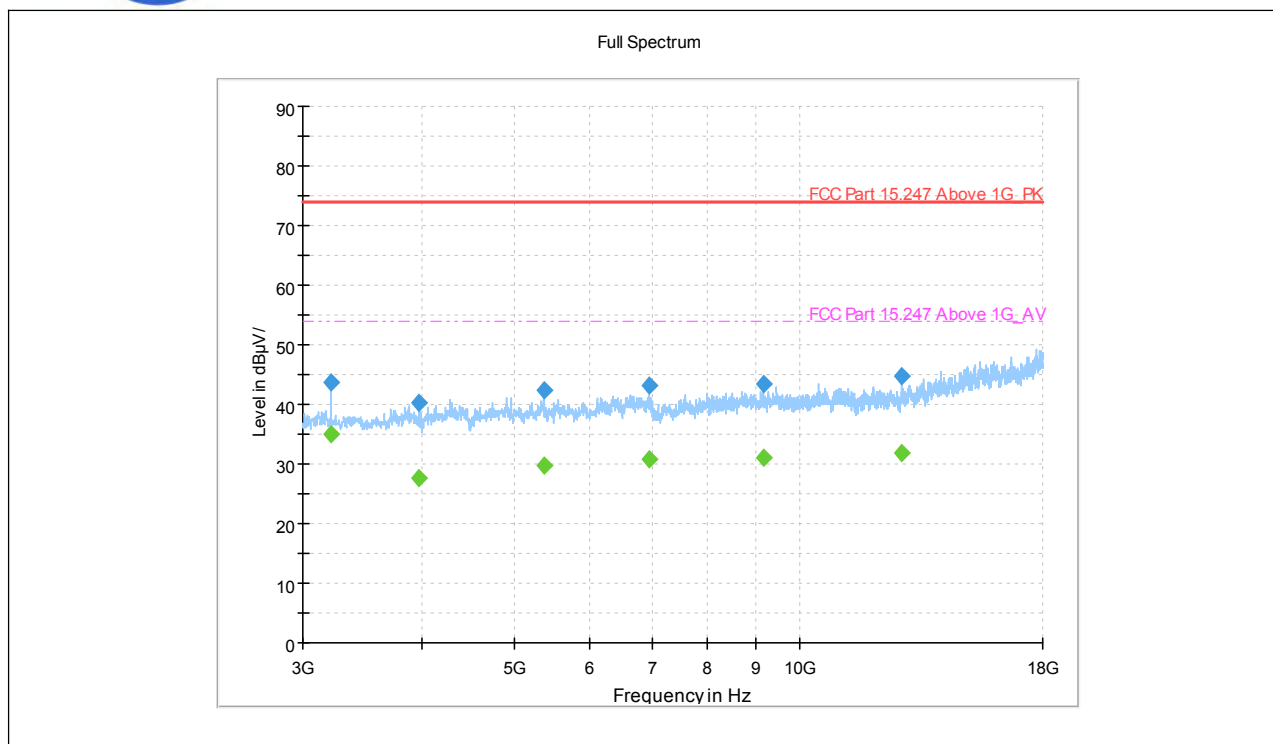
(802.11g _2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.284167	27.71	---	40.00	12.29	V	15.3
62.454583	27.94	---	40.00	12.06	V	14.5
159.373750	25.36	---	43.50	18.14	V	11.5
203.630000	25.59	---	43.50	17.91	V	17.1
559.377500	30.98	---	46.00	15.02	V	23.2
919.005000	33.26	---	46.00	12.74	V	28.1

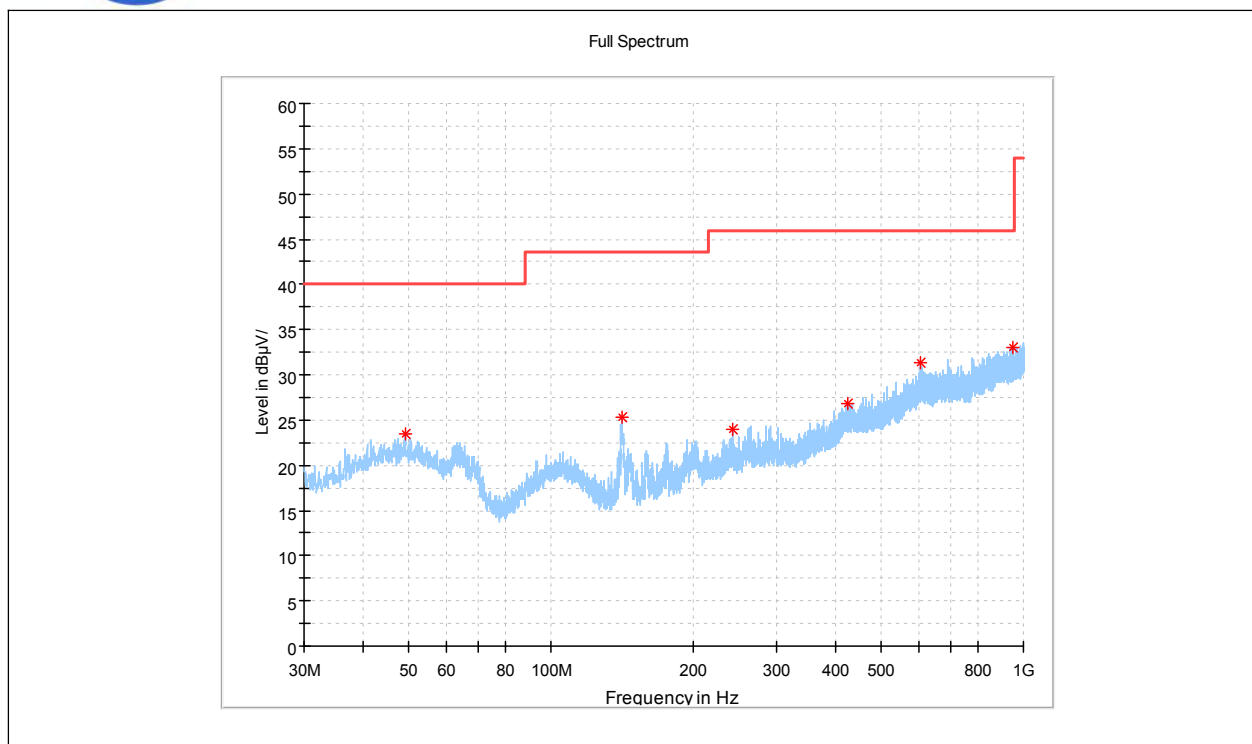


(802.11g _2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1665.000000	---	28.00	54.00	26.00	V	3.3
1665.000000	44.92	---	74.00	29.08	V	3.3
1920.000000	---	30.27	54.00	23.73	V	6.2
1920.000000	40.63	---	74.00	33.37	V	6.2
2145.000000	---	31.55	54.00	22.45	V	8.2
2145.000000	41.65	---	74.00	32.35	V	8.2
2370.000000	52.04	---	74.00	21.96	V	11.8
2370.000000	---	41.14	54.00	12.86	V	11.8
2515.000000	---	45.49	54.00	8.51	V	13.2
2515.000000	55.88	---	74.00	18.12	V	13.2
2940.000000	47.30	---	74.00	26.70	V	15.7
2940.000000	---	37.33	54.00	16.67	V	15.7

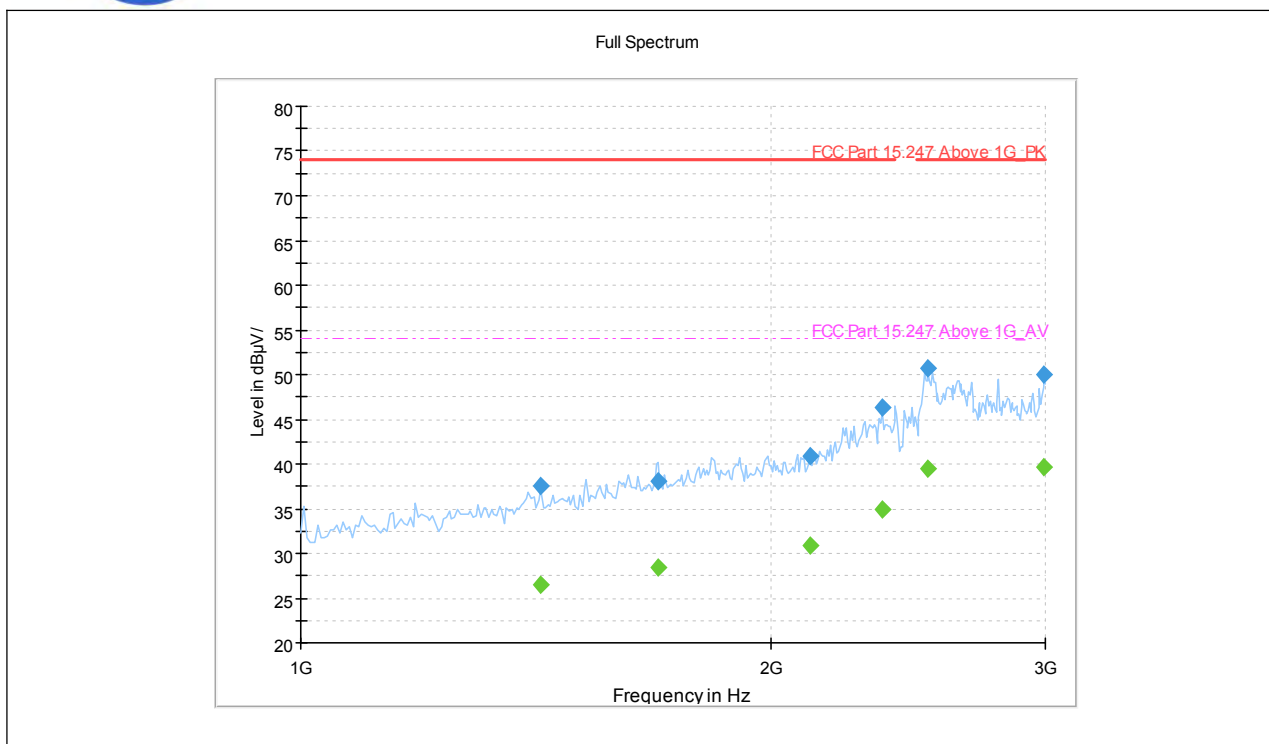


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3216.361213	---	35.01	54.00	18.99	V	-6.3
3216.361213	43.81	---	74.00	30.19	V	-6.3
3978.441643	40.38	---	74.00	33.62	V	-5.6
3978.441643	---	27.51	54.00	26.49	V	-5.6
5377.404184	---	29.71	54.00	24.29	V	-2.3
5377.404184	42.42	---	74.00	31.58	V	-2.3
6954.497288	---	30.72	54.00	23.28	V	-0.5
6954.497288	43.08	---	74.00	30.92	V	-0.5
9152.602463	43.46	---	74.00	30.54	V	1.5
9152.602463	---	31.13	54.00	22.87	V	1.5
12804.75618	---	31.90	54.00	22.10	V	4.9
12804.75618	44.68	---	74.00	29.32	V	4.9



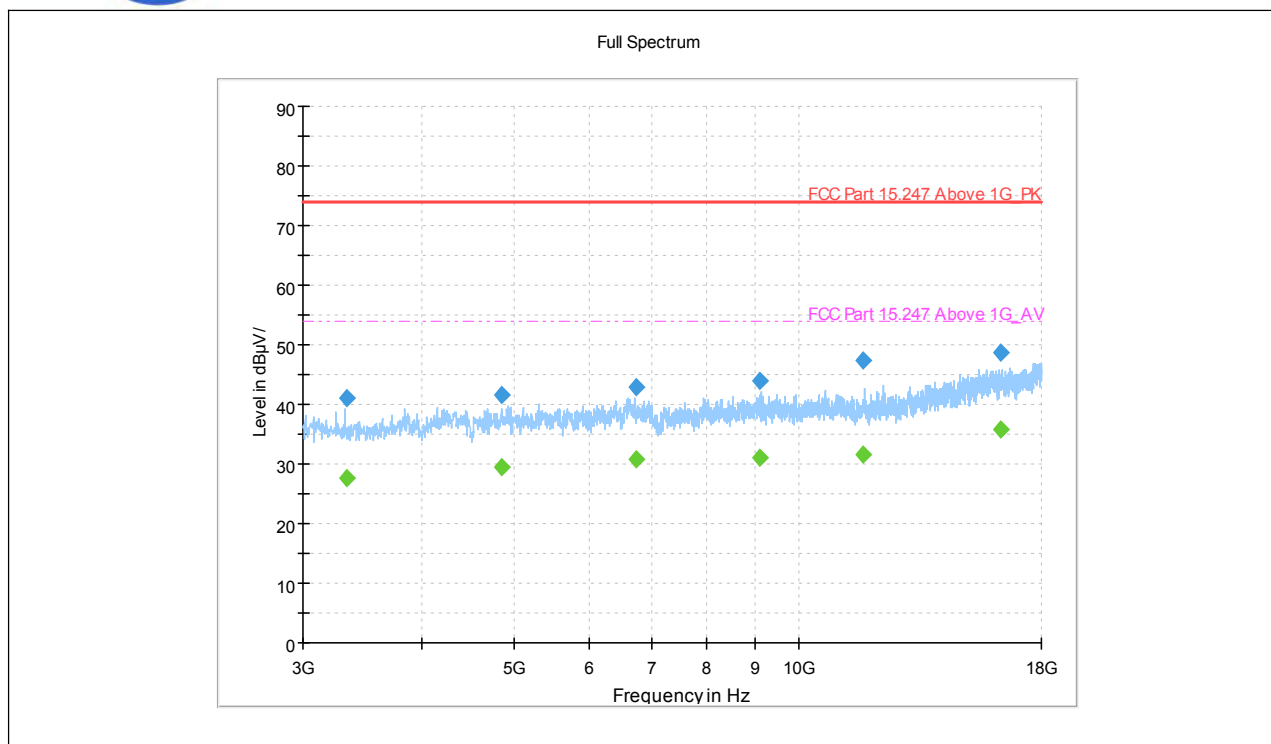
(802.11g _2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
49.036250	23.38	---	40.00	16.62	H	16.0
141.186250	25.35	---	43.50	18.15	H	14.6
242.470417	23.96	---	46.00	22.04	H	15.4
423.496667	26.83	---	46.00	19.17	H	19.4
607.473333	31.32	---	46.00	14.68	H	23.1
952.874167	33.07	---	46.00	12.93	H	26.4

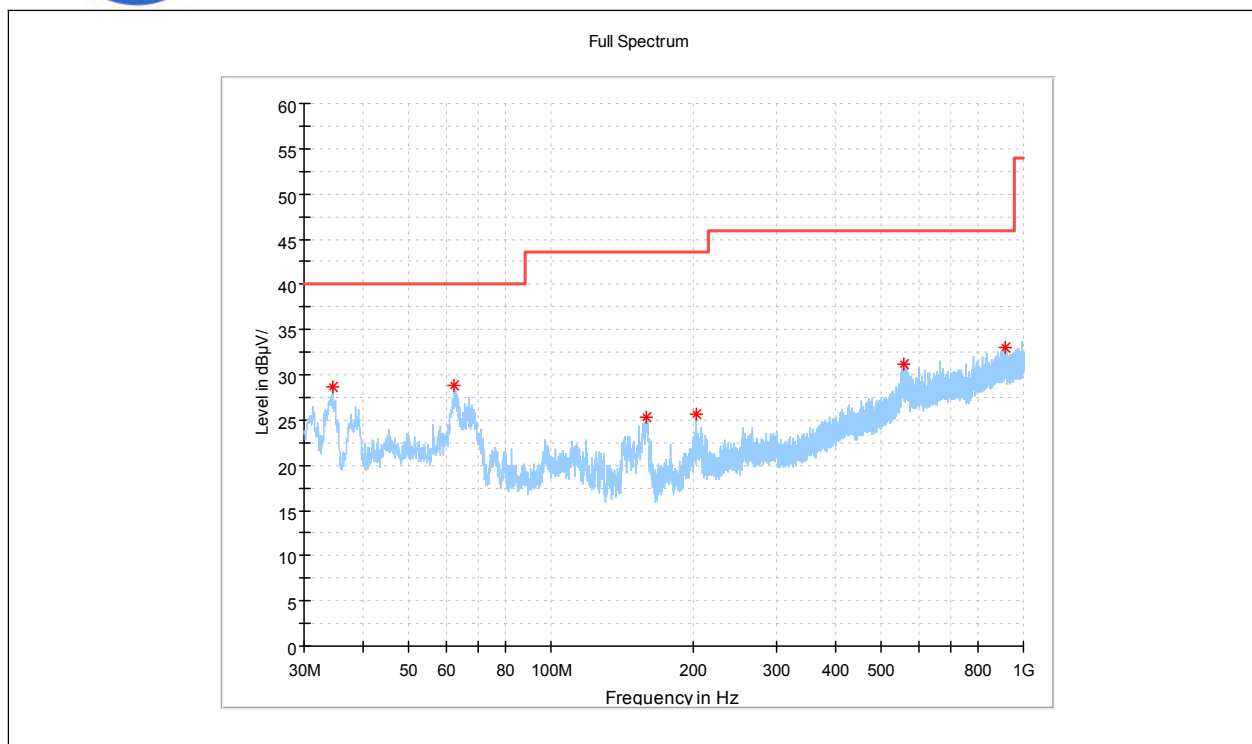


(802.11g _2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1425.000000	37.55	---	74.00	36.45	H	1.3
1425.000000	---	26.55	54.00	27.45	H	1.3
1695.000000	---	28.47	54.00	25.53	H	3.8
1695.000000	37.98	---	74.00	36.02	H	3.8
2120.000000	40.90	---	74.00	33.11	H	8.1
2120.000000	---	30.83	54.00	23.17	H	8.1
2360.000000	---	34.93	54.00	19.07	H	11.6
2360.000000	46.28	---	74.00	27.72	H	11.6
2525.000000	50.69	---	74.00	23.31	H	13.6
2525.000000	---	39.48	54.00	14.52	H	13.6
2995.000000	49.95	---	74.00	24.05	H	17.9
2995.000000	---	39.61	54.00	14.39	H	17.9

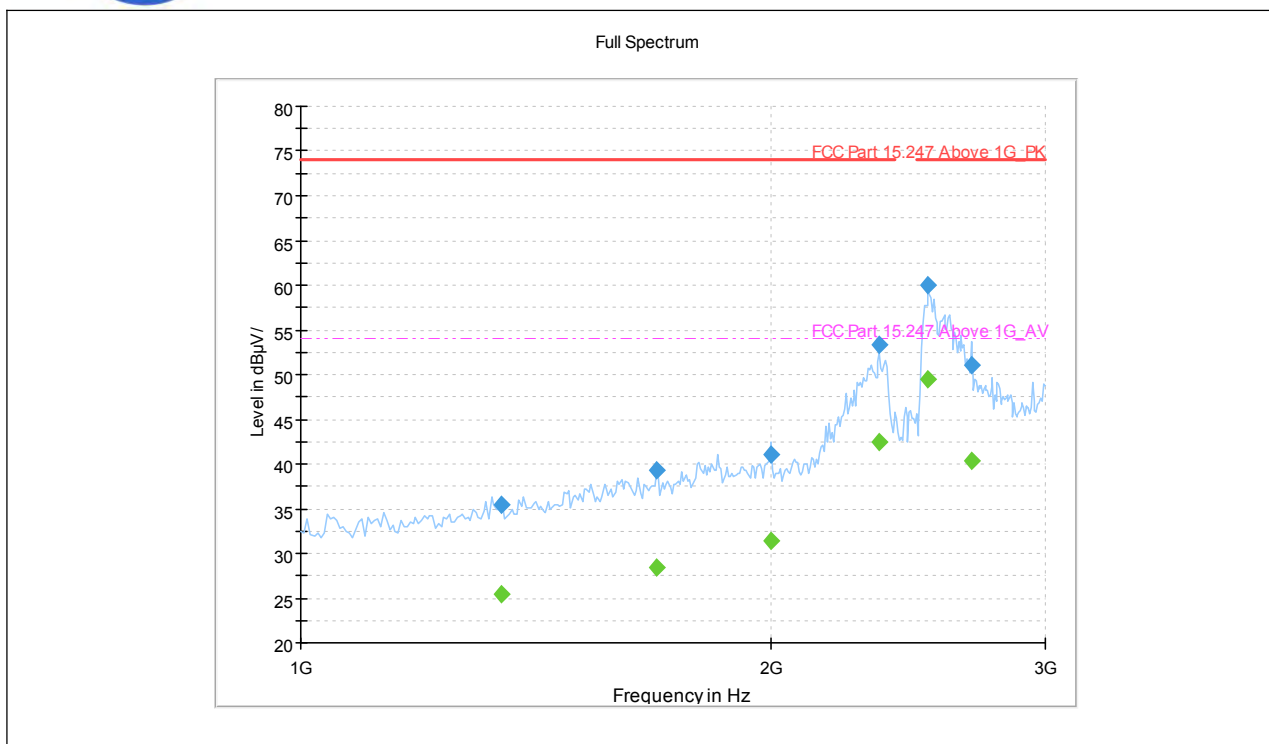


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3330.706575	40.98	---	74.00	33.02	H	-6.4
3330.706575	---	27.70	54.00	26.30	H	-6.4
4858.071075	---	29.55	54.00	24.45	H	-3.0
4858.071075	41.55	---	74.00	32.45	H	-3.0
6739.555200	43.00	---	74.00	31.00	H	-1.1
6739.555200	---	30.76	54.00	23.24	H	-1.1
9083.269200	---	31.17	54.00	22.83	H	1.5
9083.269200	44.06	---	74.00	29.94	H	1.5
11699.00996	47.45	---	74.00	26.55	H	4.0
11699.00996	---	31.65	54.00	22.35	H	4.0
16301.73168	48.72	---	74.00	25.28	H	11.4
16301.73168	---	35.80	54.00	18.20	H	11.4



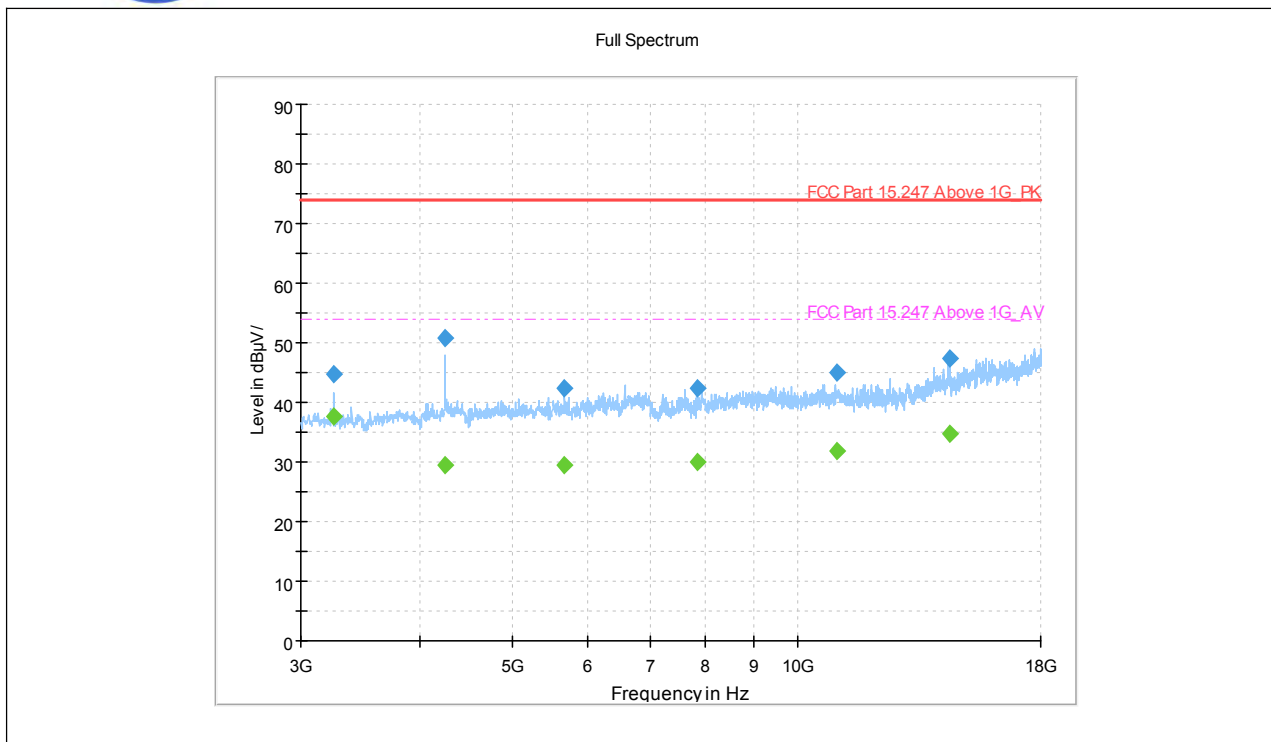
(802.11g _2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.445833	28.66	---	40.00	11.34	V	15.7
62.454583	28.76	---	40.00	11.24	V	12.9
159.373750	25.35	---	43.50	18.15	V	10.8
202.740833	25.70	---	43.50	17.80	V	14.6
557.114167	31.24	---	46.00	14.76	V	19.9
913.831667	32.98	---	46.00	13.02	V	26.2

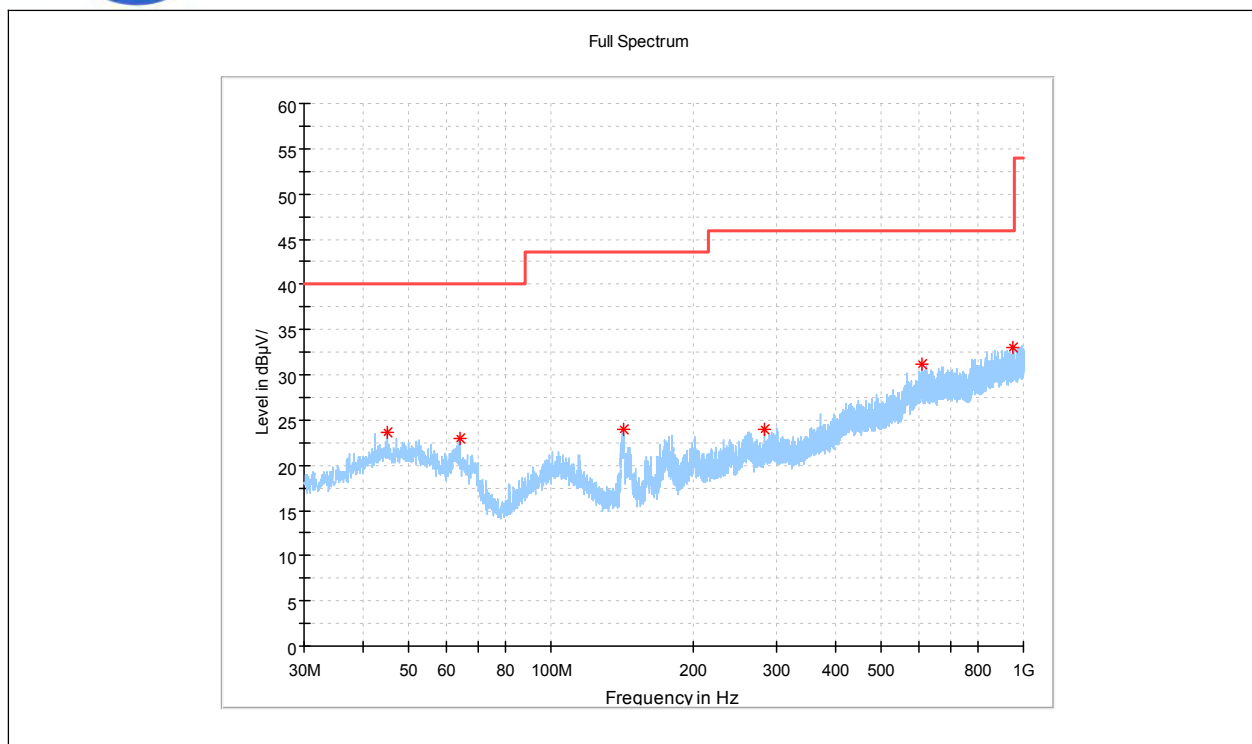


(802.11g_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1345.000000	35.45	---	74.00	38.55	V	0.3
1345.000000	---	25.41	54.00	28.59	V	0.3
1690.000000	---	28.38	54.00	25.62	V	3.7
1690.000000	39.22	---	74.00	34.78	V	3.7
2000.000000	---	31.43	54.00	22.57	V	7.5
2000.000000	41.03	---	74.00	32.97	V	7.5
2350.000000	53.35	---	74.00	20.65	V	11.4
2350.000000	---	42.48	54.00	11.52	V	11.4
2525.000000	---	49.40	54.00	4.60	V	13.6
2525.000000	60.01	---	74.00	13.99	V	13.6
2690.000000	---	40.35	54.00	13.65	V	14.8
2690.000000	51.08	---	74.00	22.92	V	14.8

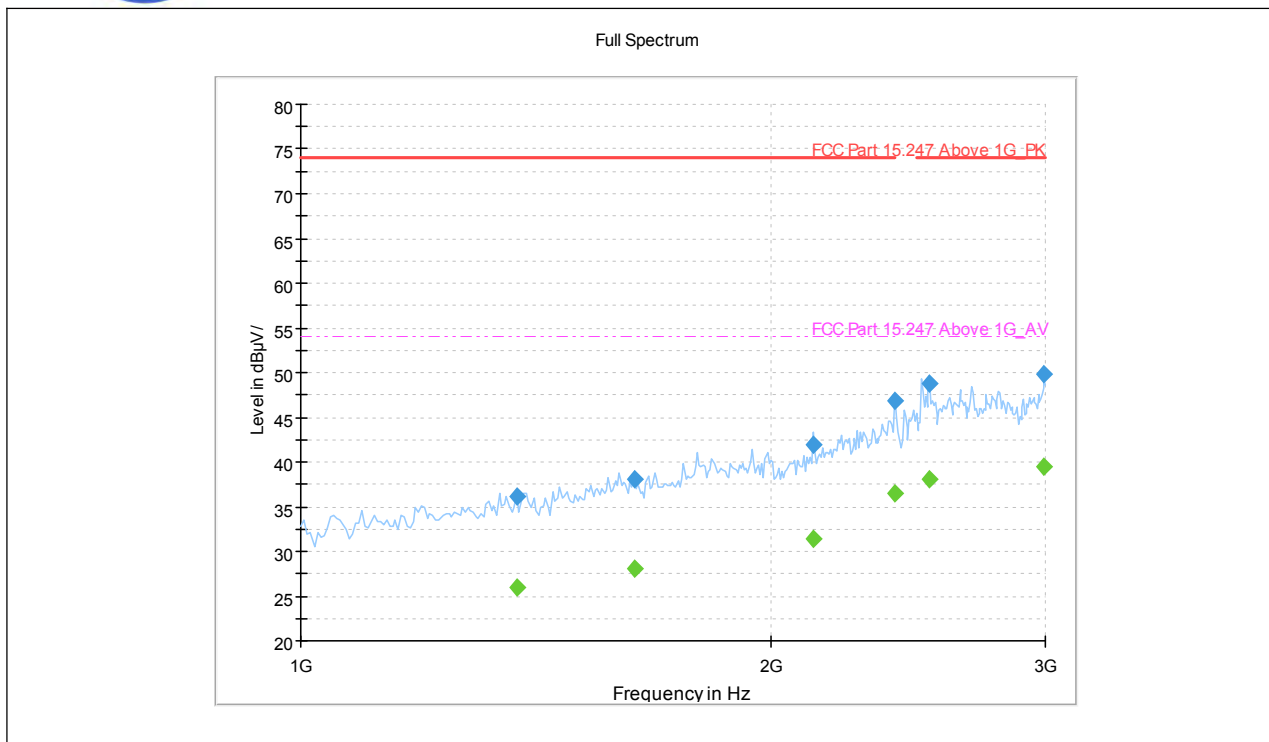


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3249.204938	---	37.53	54.00	16.47	V	-6.1
3249.204938	44.83	---	74.00	29.17	V	-6.1
4257.794363	50.73	---	74.00	23.27	V	-3.6
4257.794363	---	29.53	54.00	24.47	V	-3.6
5686.335975	42.33	---	74.00	31.67	V	-2.4
5686.335975	---	29.58	54.00	24.42	V	-2.4
7837.695818	42.48	---	74.00	31.52	V	0.3
7837.695818	---	29.98	54.00	24.02	V	0.3
10996.07040	44.96	---	74.00	29.04	V	3.4
10996.07040	---	31.93	54.00	22.07	V	3.4
14418.63574	---	34.73	54.00	19.27	V	9.3
14418.63574	47.28	---	74.00	26.72	V	9.3



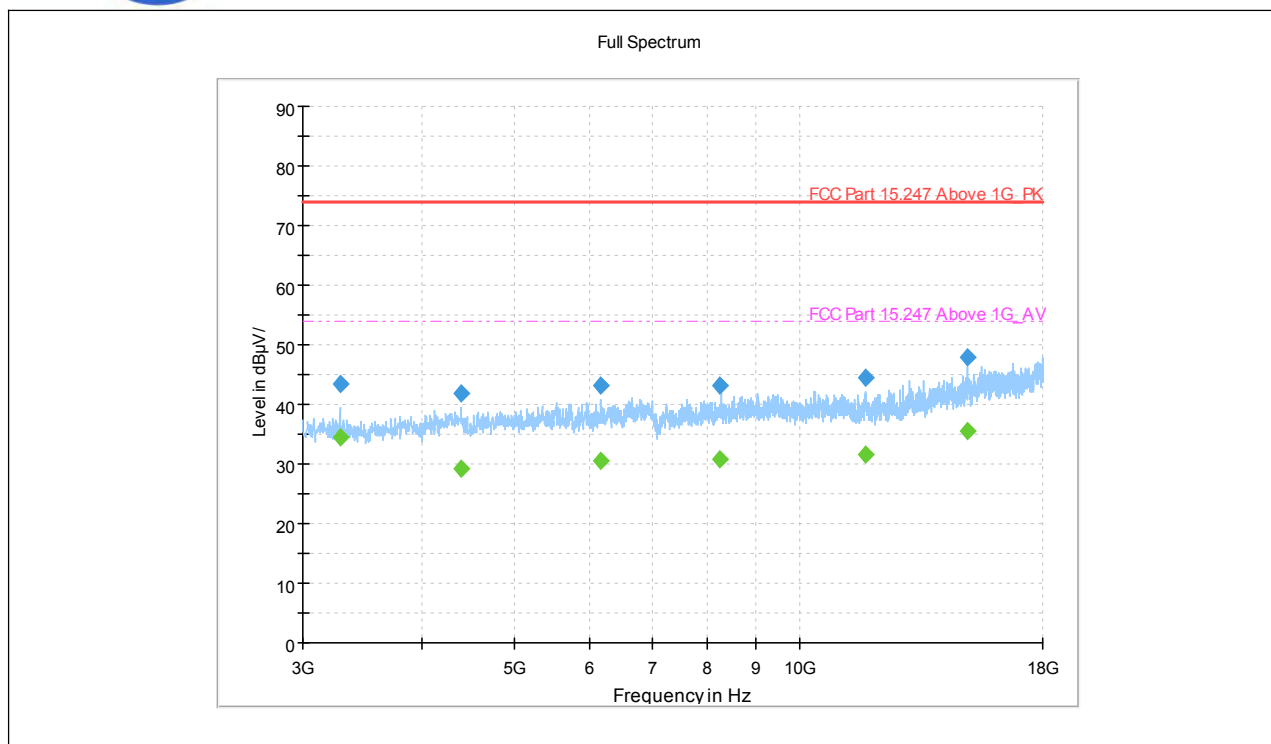
(802.11g _2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
44.954167	23.69	---	40.00	16.31	H	15.3
64.313750	22.94	---	40.00	17.06	H	13.6
141.913750	23.96	---	43.50	19.54	H	14.2
282.280833	23.99	---	46.00	22.01	H	15.2
610.747083	31.16	---	46.00	14.84	H	21.4
947.700833	33.02	---	46.00	12.98	H	27.9

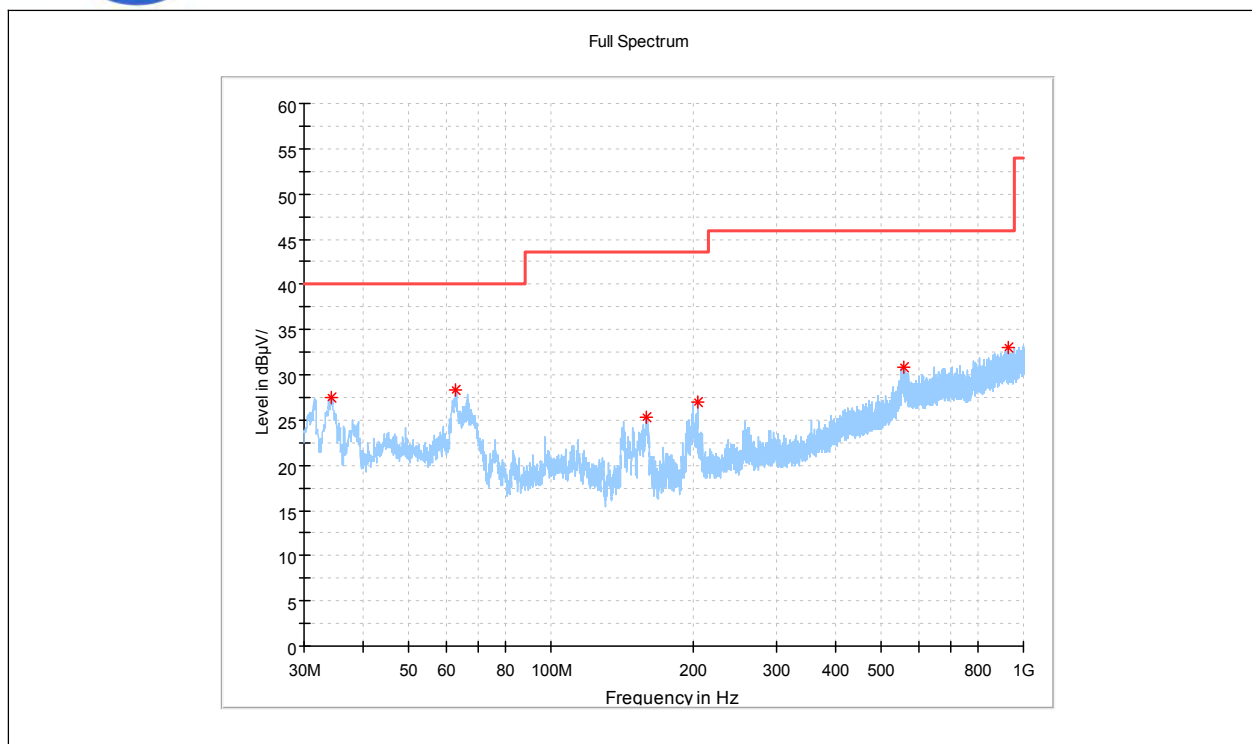


(802.11g _2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1375.000000	---	25.93	54.00	28.07	H	0.4
1375.000000	36.20	---	74.00	37.80	H	0.4
1635.000000	38.01	---	74.00	35.99	H	3.4
1635.000000	---	28.11	54.00	25.89	H	3.4
2130.000000	41.90	---	74.00	32.10	H	8.2
2130.000000	---	31.34	54.00	22.66	H	8.2
2400.000000	46.78	---	74.00	27.22	H	13.5
2400.000000	---	36.53	54.00	17.47	H	13.5
2530.000000	---	38.14	54.00	15.86	H	13.9
2530.000000	48.80	---	74.00	25.20	H	13.9
2995.000000	49.88	---	74.00	24.12	H	17.9
2995.000000	---	39.55	54.00	14.45	H	17.9

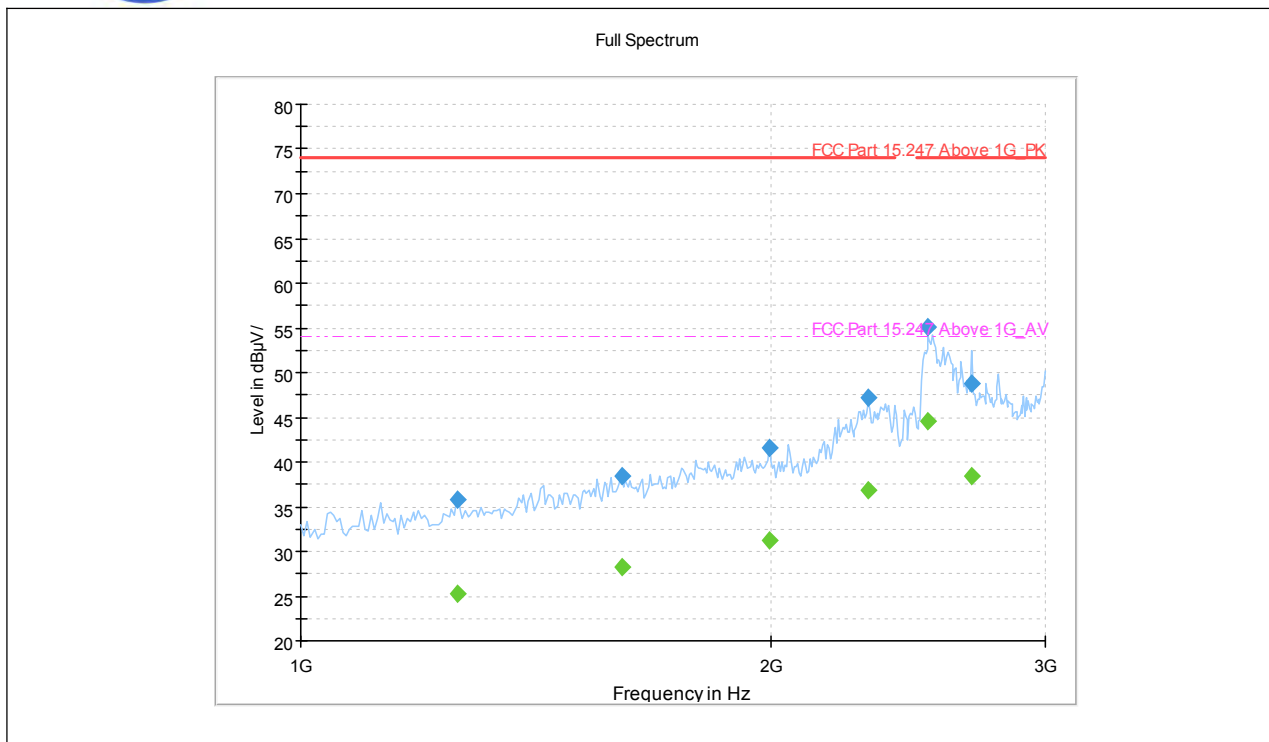


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.693728	---	34.59	54.00	19.41	H	-5.9
3282.693728	43.54	---	74.00	30.46	H	-5.9
4407.067594	---	29.21	54.00	24.79	H	-3.7
4407.067594	41.88	---	74.00	32.12	H	-3.7
6179.197163	43.07	---	74.00	30.93	H	-1.5
6179.197163	---	30.59	54.00	23.41	H	-1.5
8243.798896	---	30.81	54.00	23.19	H	1.3
8243.798896	43.27	---	74.00	30.73	H	1.3
11734.301531	---	31.65	54.00	22.35	H	3.9
11734.301531	44.52	---	74.00	29.48	H	3.9
14994.443475	47.91	---	74.00	26.09	H	10.5
14994.443475	---	35.54	54.00	18.46	H	10.5



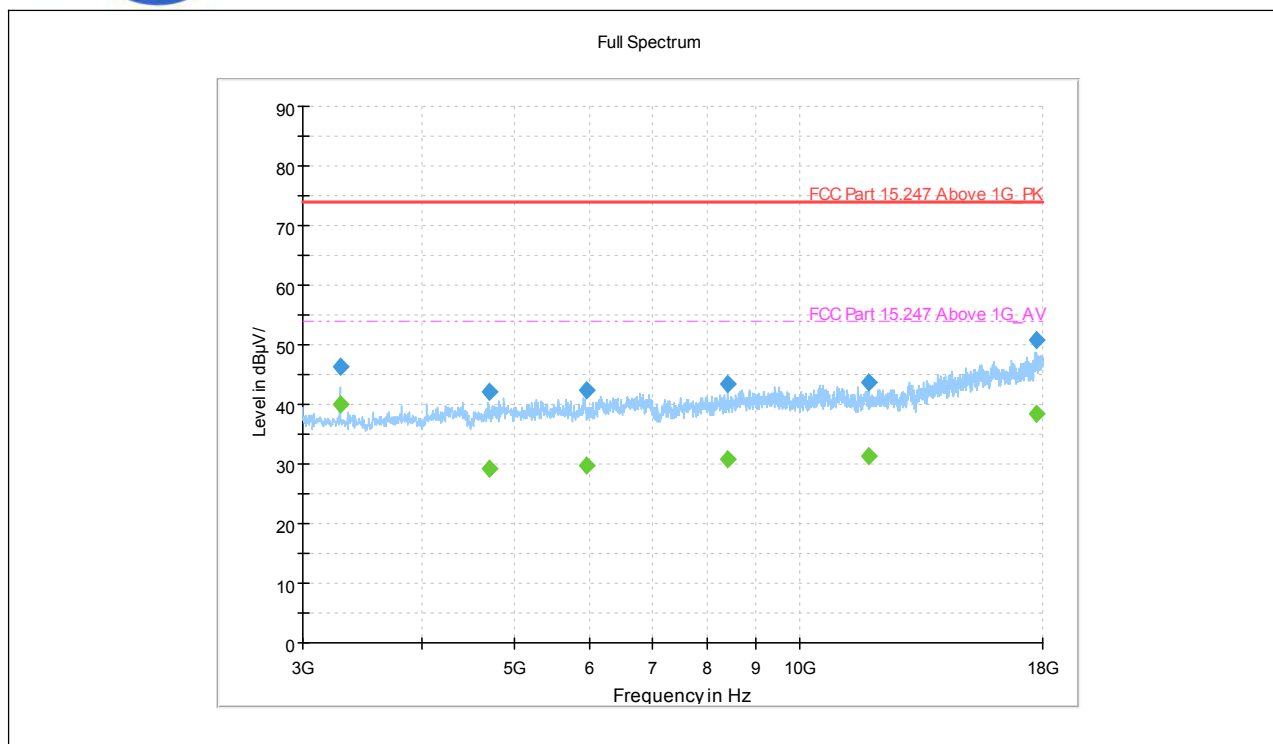
(802.11g _2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.365000	27.44	---	40.00	12.56	V	15.1
62.980000	28.26	---	40.00	11.74	V	12.0
159.131250	25.37	---	43.50	18.13	V	10.8
204.559583	27.03	---	43.50	16.47	V	17.2
557.760833	30.90	---	46.00	15.10	V	23.6
930.321667	33.06	---	46.00	12.94	V	28.3



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

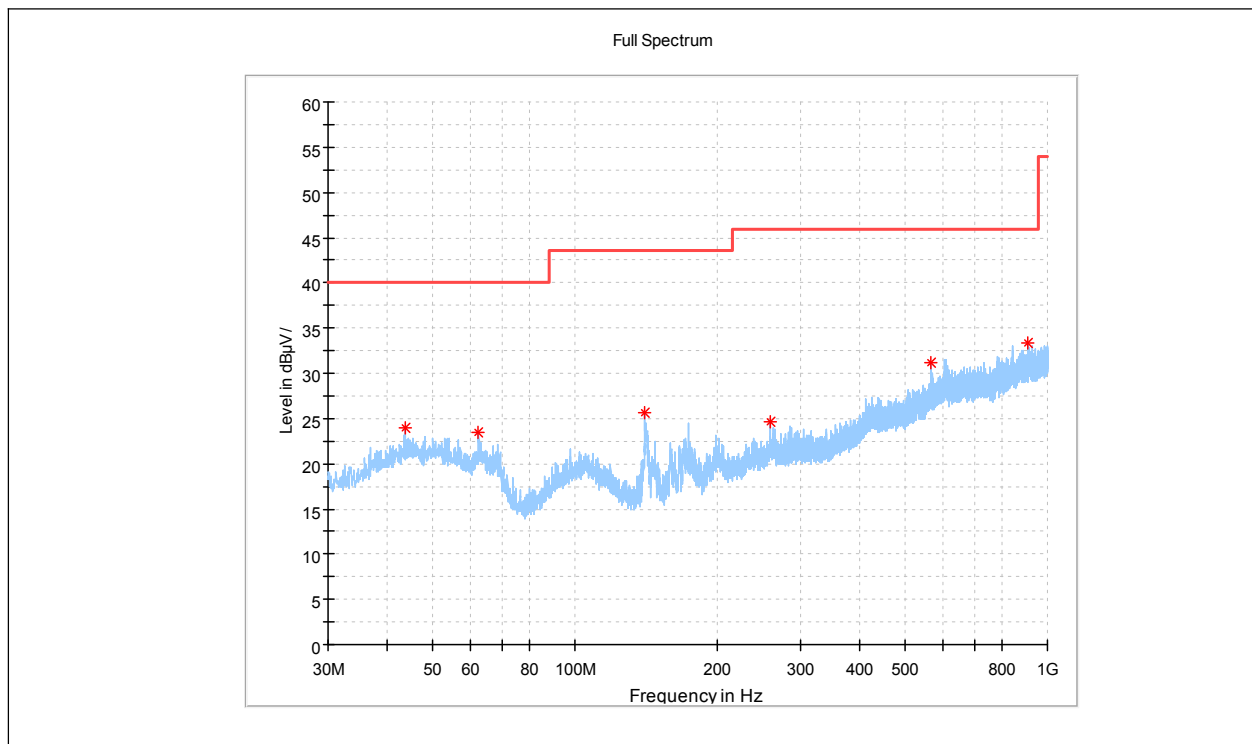
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1260.000000	---	25.35	54.00	28.65	V	-0.1
1260.000000	35.80	---	74.00	38.20	V	-0.1
1605.000000	38.45	---	74.00	35.55	V	3.6
1605.000000	---	28.30	54.00	25.70	V	3.6
1995.000000	---	31.18	54.00	22.82	V	7.4
1995.000000	41.55	---	74.00	32.45	V	7.4
2310.000000	---	36.82	54.00	17.18	V	10.5
2310.000000	47.26	---	74.00	26.74	V	10.5
2525.000000	55.06	---	74.00	18.94	V	13.6
2525.000000	---	44.57	54.00	9.43	V	13.6
2690.000000	---	38.41	54.00	15.59	V	14.8
2690.000000	48.80	---	74.00	25.20	V	14.8



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

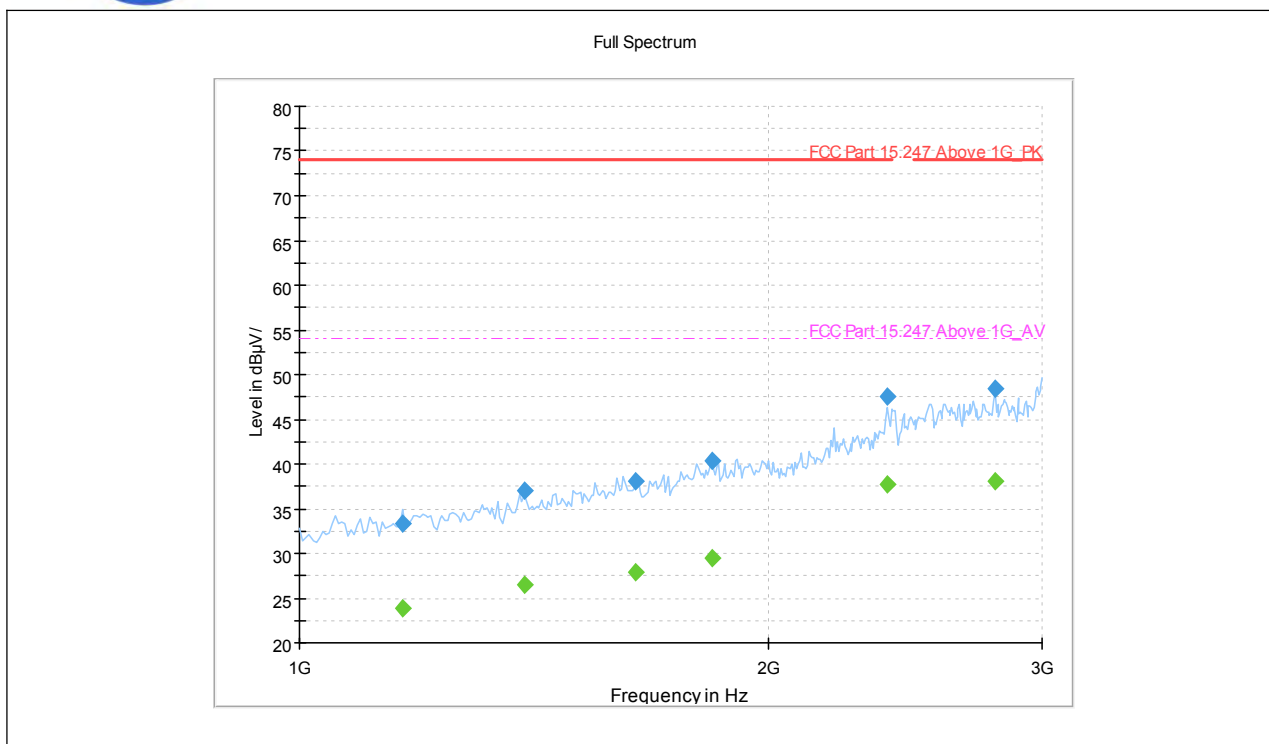
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.734743	46.38	---	74.00	27.62	V	-5.9
3282.734743	---	40.11	54.00	13.89	V	-5.9
4705.375950	42.18	---	74.00	31.82	V	-3.3
4705.375950	---	29.16	54.00	24.84	V	-3.3
5973.892031	42.24	---	74.00	31.76	V	-2.4
5973.892031	---	29.68	54.00	24.32	V	-2.4
8390.855442	43.43	---	74.00	30.57	V	0.8
8390.855442	---	30.78	54.00	23.22	V	0.8
11793.19190	43.78	---	74.00	30.22	V	3.4
11793.19190	---	31.40	54.00	22.60	V	3.4
17741.87303	50.73	---	74.00	23.27	V	15.2
17741.87303	---	38.35	54.00	15.65	V	15.2

802.11n-20MHz Test mode



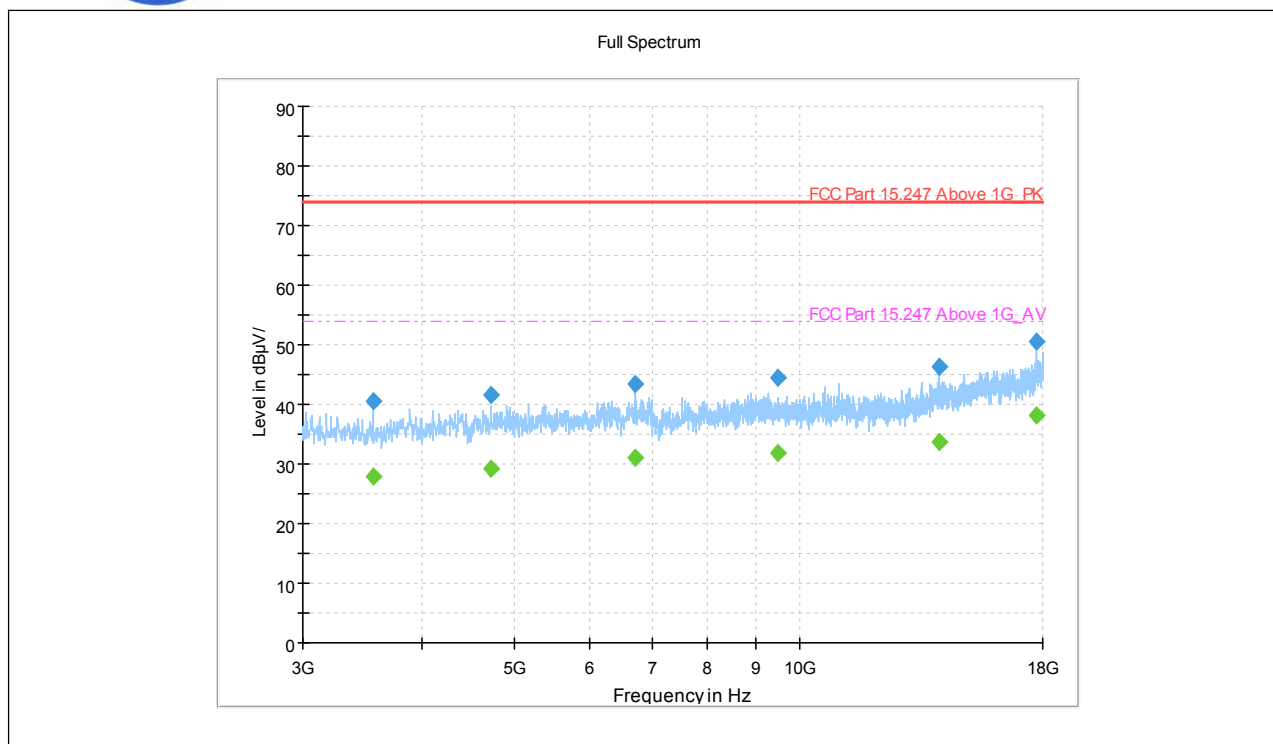
(802.11n_20M _2412MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
43.741667	24.01	---	40.00	15.99	H	15.5
62.495000	23.50	---	40.00	16.50	H	14.5
140.741667	25.72	---	43.50	17.78	H	14.2
259.687917	24.57	---	46.00	21.43	H	17.8
568.147917	31.24	---	46.00	14.76	H	21.4
910.477083	33.36	---	46.00	12.64	H	28.3

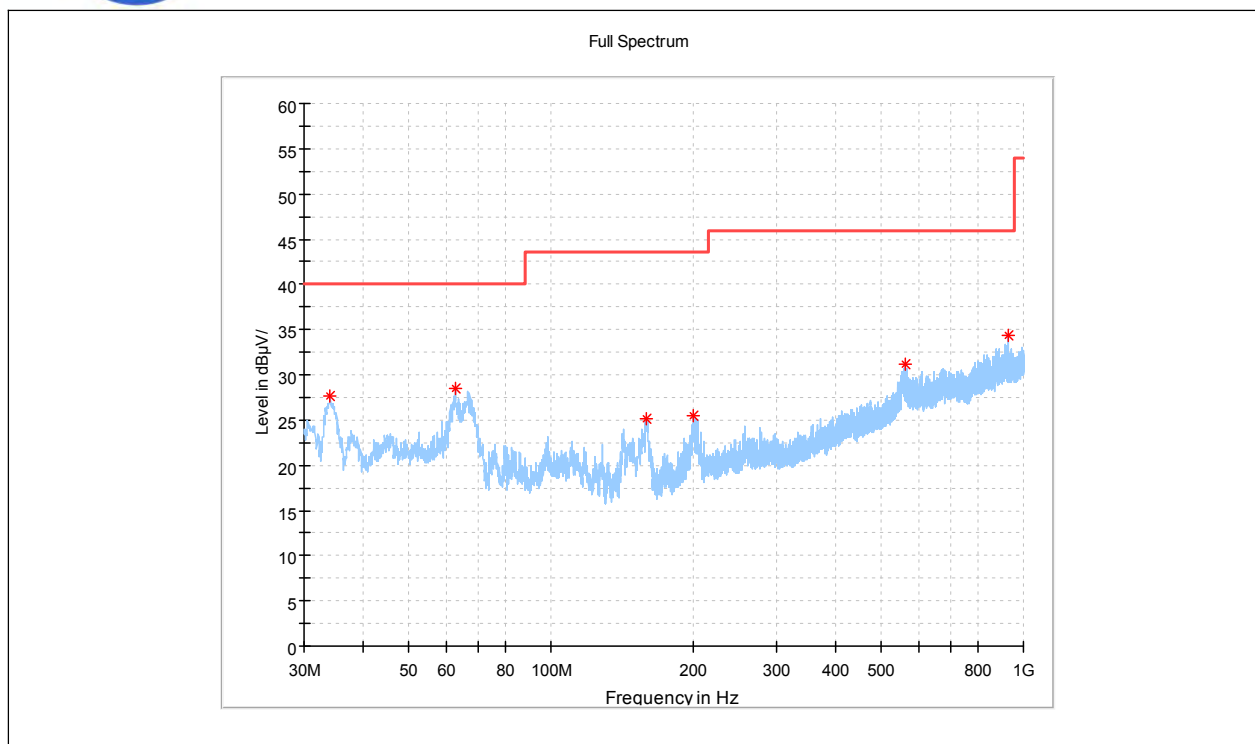


(802.11n_20M_2412MHz, Antenna Horizontal, 1GHz to 3GHz)

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

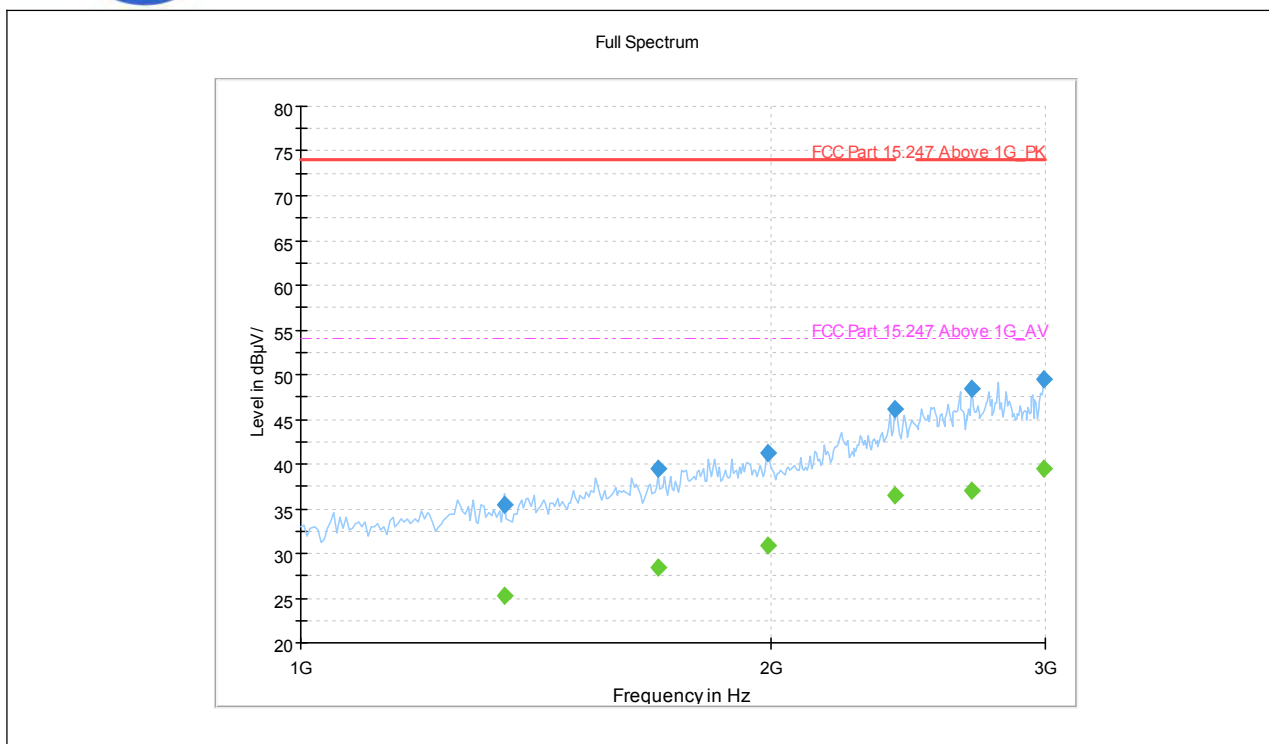


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3563.736413	40.41	---	74.00	33.59	H	-5.7
3563.736413	---	27.96	54.00	26.04	H	-5.7
4726.087463	---	29.19	54.00	24.81	H	-3.1
4726.087463	41.50	---	74.00	32.50	H	-3.1
6717.530400	43.48	---	74.00	30.52	H	-1.0
6717.530400	---	30.98	54.00	23.02	H	-1.0
9468.738675	44.60	---	74.00	29.40	H	1.8
9468.738675	---	31.76	54.00	22.24	H	1.8
14018.85339	46.25	---	74.00	27.75	H	8.1
14018.85339	---	33.74	54.00	20.26	H	8.1
17737.00335	---	38.24	54.00	15.76	H	15.1
17737.00335	50.64	---	74.00	23.36	H	15.1



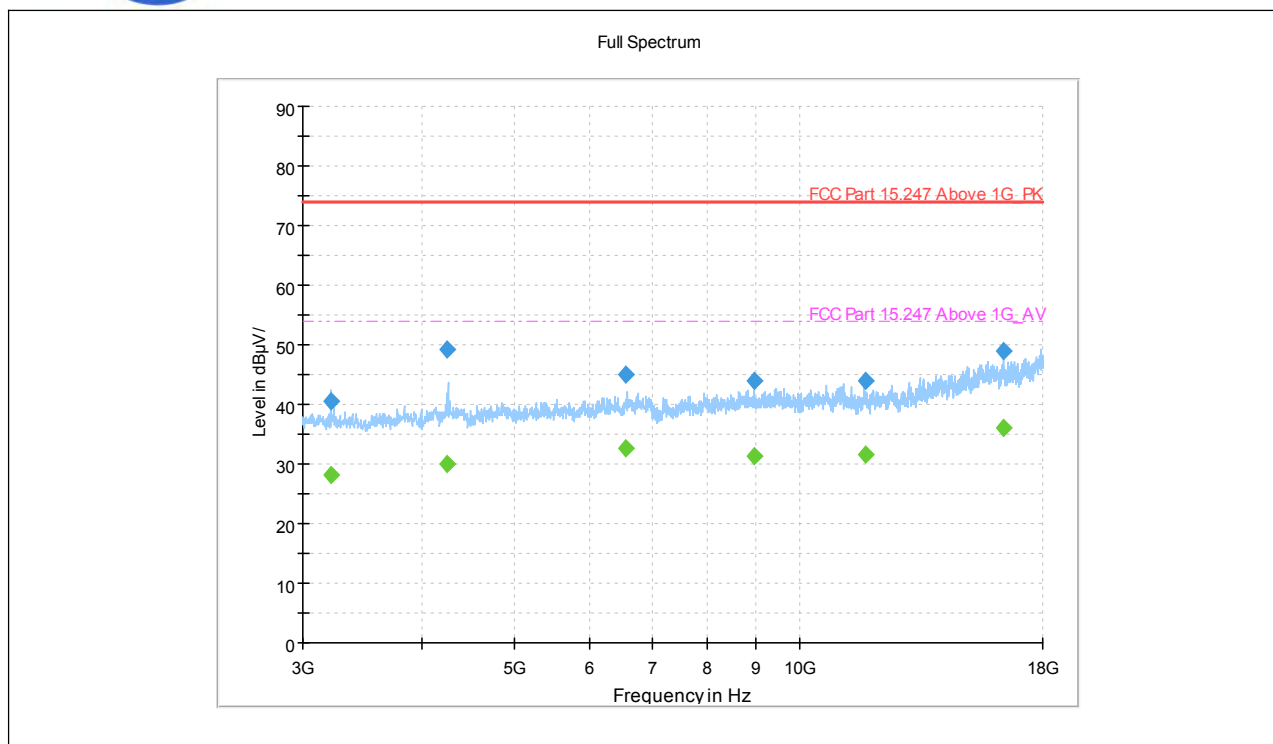
(802.11n_20M_2412MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.082083	27.73	---	40.00	12.27	V	13.5
62.777917	28.55	---	40.00	11.45	V	13.9
158.888750	25.21	---	43.50	18.29	V	10.5
200.517917	25.52	---	43.50	17.98	V	14.2
563.338333	31.24	---	46.00	14.76	V	20.6
930.806667	34.35	---	46.00	11.65	V	28.1

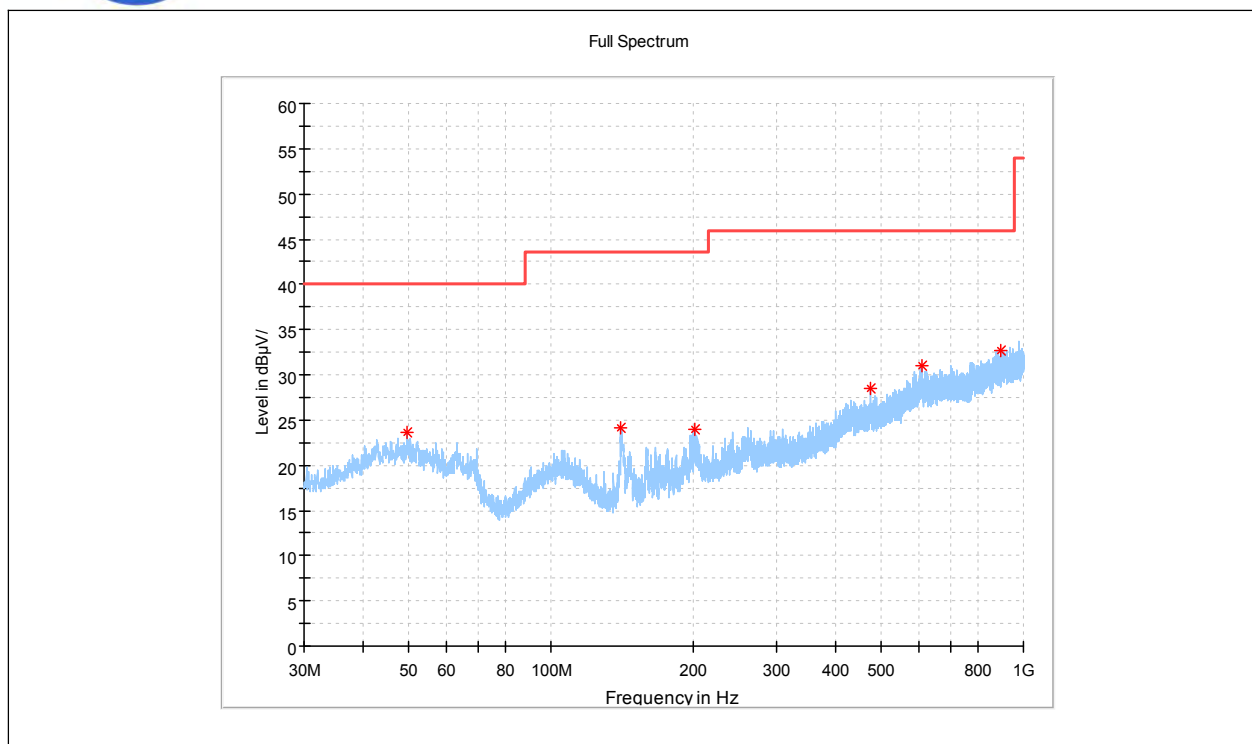


(802.11n_20M_2412MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1350.000000	---	25.22	54.00	28.78	V	0.3
1350.000000	35.43	---	74.00	38.57	V	0.3
1695.000000	---	28.41	54.00	25.59	V	3.8
1695.000000	39.69	---	74.00	34.31	V	3.8
1990.000000	---	30.90	54.00	23.10	V	7.3
1990.000000	41.25	---	74.00	32.75	V	7.3
2400.000000	46.18	---	74.00	27.82	V	13.5
2400.000000	---	36.48	54.00	17.52	V	13.5
2690.000000	---	36.97	54.00	17.03	V	14.8
2690.000000	48.49	---	74.00	25.51	V	14.8
2995.000000	49.51	---	74.00	24.49	V	17.9
2995.000000	---	39.55	54.00	14.45	V	17.9

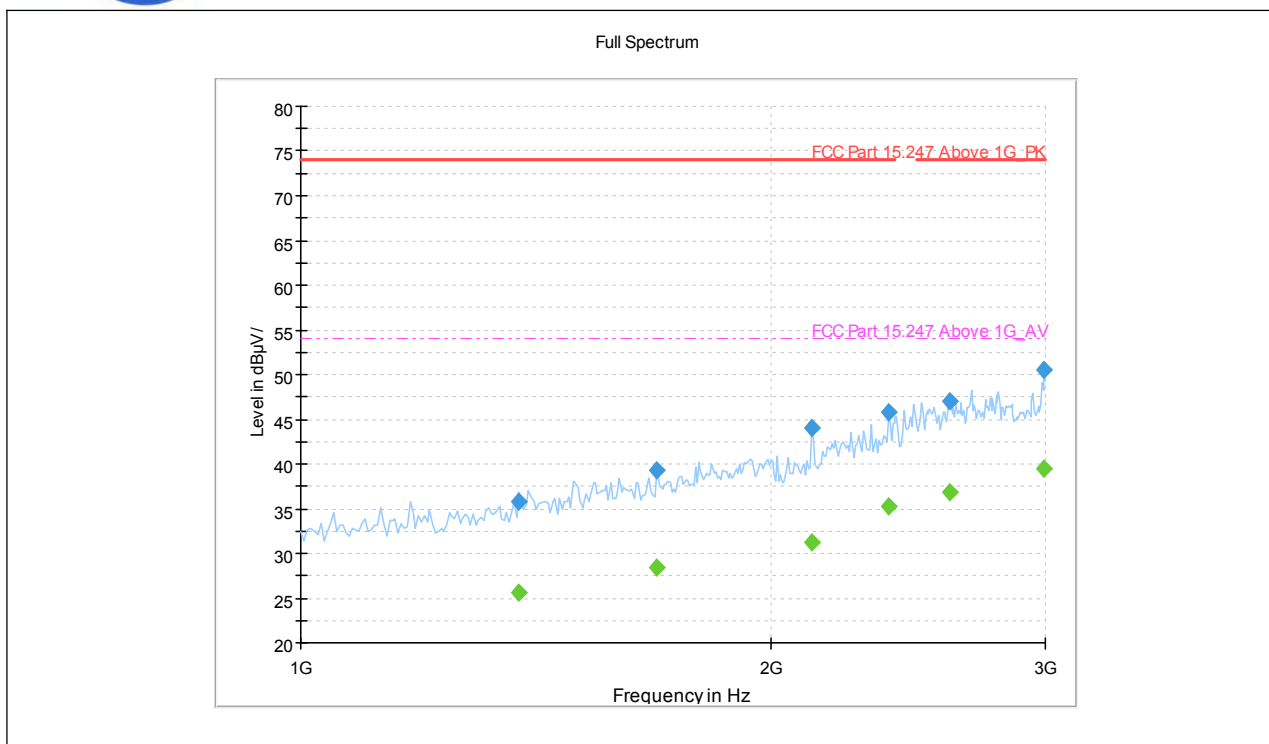


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3216.063936	---	28.19	54.00	25.81	V	-6.3
3216.063936	40.56	---	74.00	33.44	V	-6.3
4248.613510	---	29.98	54.00	24.02	V	-3.7
4248.613510	49.15	---	74.00	24.85	V	-3.7
6553.821000	---	32.52	54.00	21.48	V	-1.3
6553.821000	45.13	---	74.00	28.87	V	-1.3
8943.067463	43.91	---	74.00	30.09	V	1.7
8943.067463	---	31.24	54.00	22.76	V	1.7
11709.15873	---	31.46	54.00	22.54	V	4.0
11709.15873	43.91	---	74.00	30.09	V	4.0
16372.42621	48.96	---	74.00	25.04	V	11.2
16372.42621	---	36.07	54.00	17.93	V	11.2



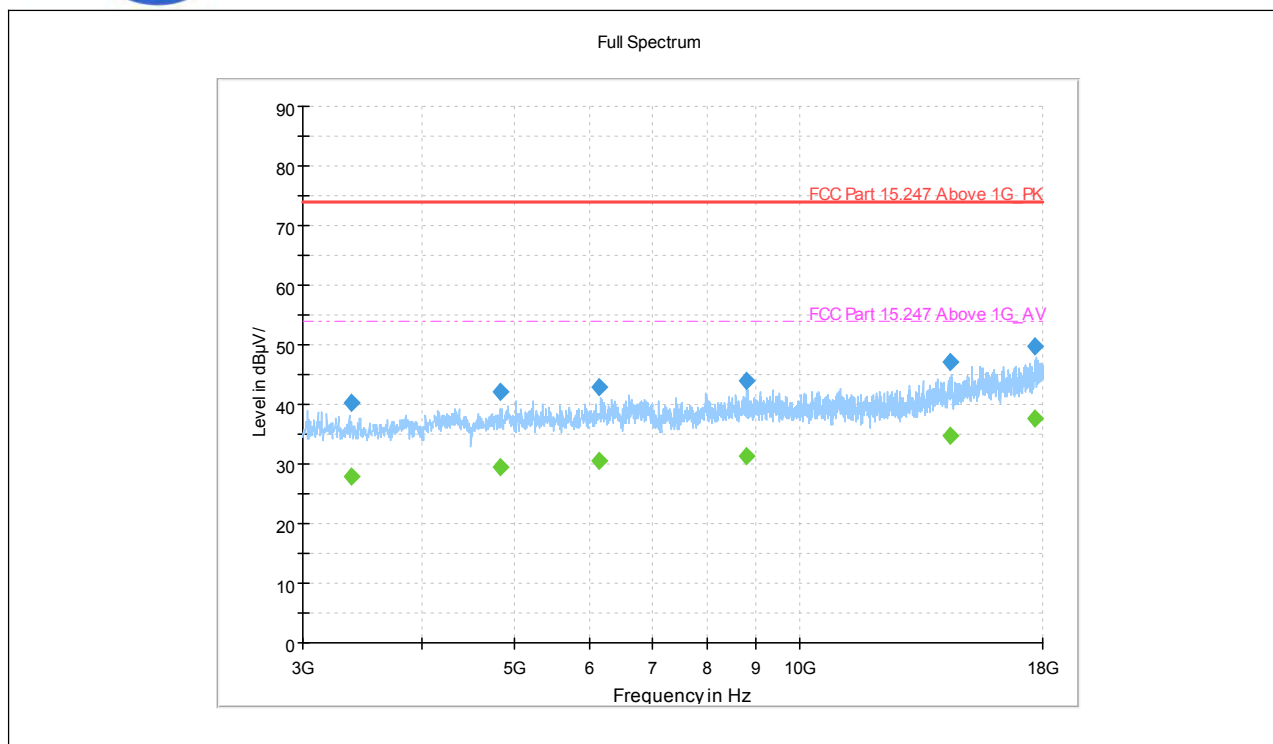
(802.11n_20M_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
49.602083	23.63	---	40.00	16.37	H	15.4
140.782083	24.14	---	43.50	19.36	H	14.3
201.892083	23.89	---	43.50	19.61	H	14.4
474.300417	28.45	---	46.00	17.55	H	15.5
610.949167	31.05	---	46.00	14.95	H	22.7
898.150000	32.71	---	46.00	13.29	H	28.3

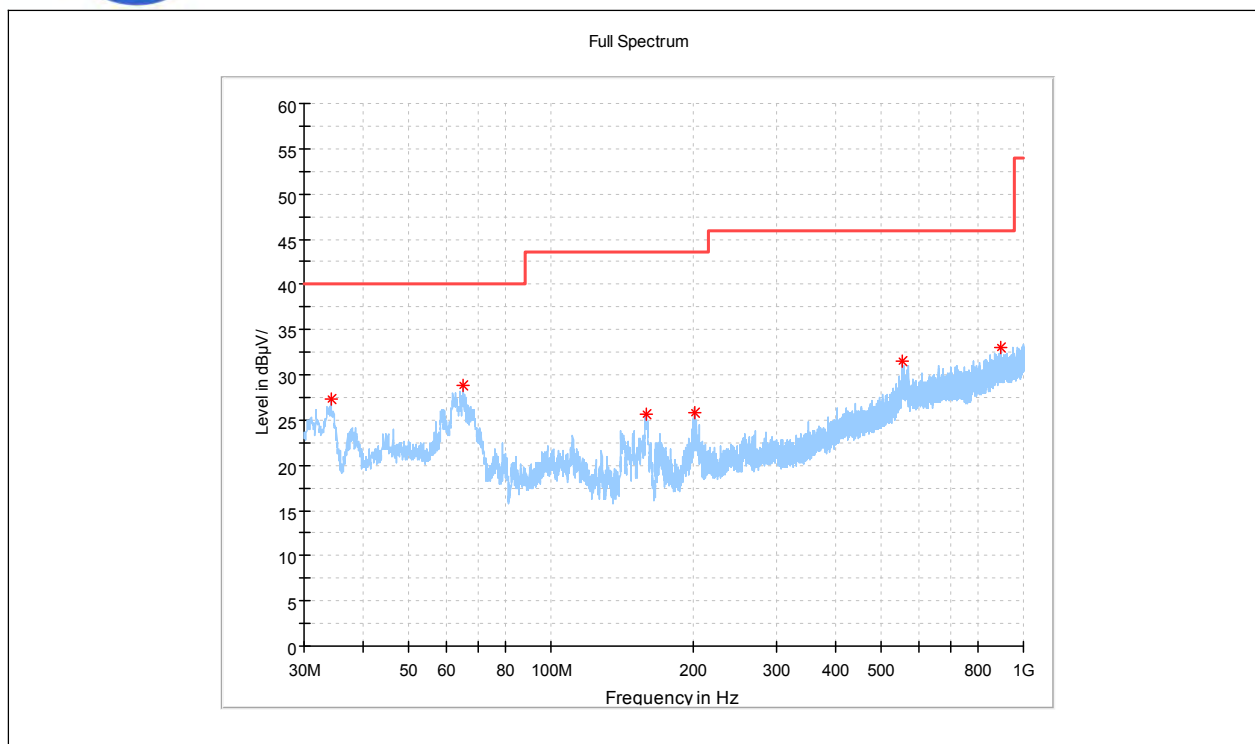


(802.11n_20M_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1380.000000	35.84	---	74.00	38.16	H	0.5
1380.000000	---	25.63	54.00	28.37	H	0.5
1690.000000	---	28.34	54.00	25.66	H	3.7
1690.000000	39.23	---	74.00	34.77	H	3.7
2125.000000	44.08	---	74.00	29.92	H	8.2
2125.000000	---	31.16	54.00	22.84	H	8.2
2380.000000	45.85	---	74.00	28.15	H	12.0
2380.000000	---	35.22	54.00	18.78	H	12.0
2605.000000	---	36.95	54.00	17.05	H	14.9
2605.000000	47.09	---	74.00	26.91	H	14.9
2995.000000	50.59	---	74.00	23.41	H	17.9
2995.000000	---	39.54	54.00	14.46	H	17.9

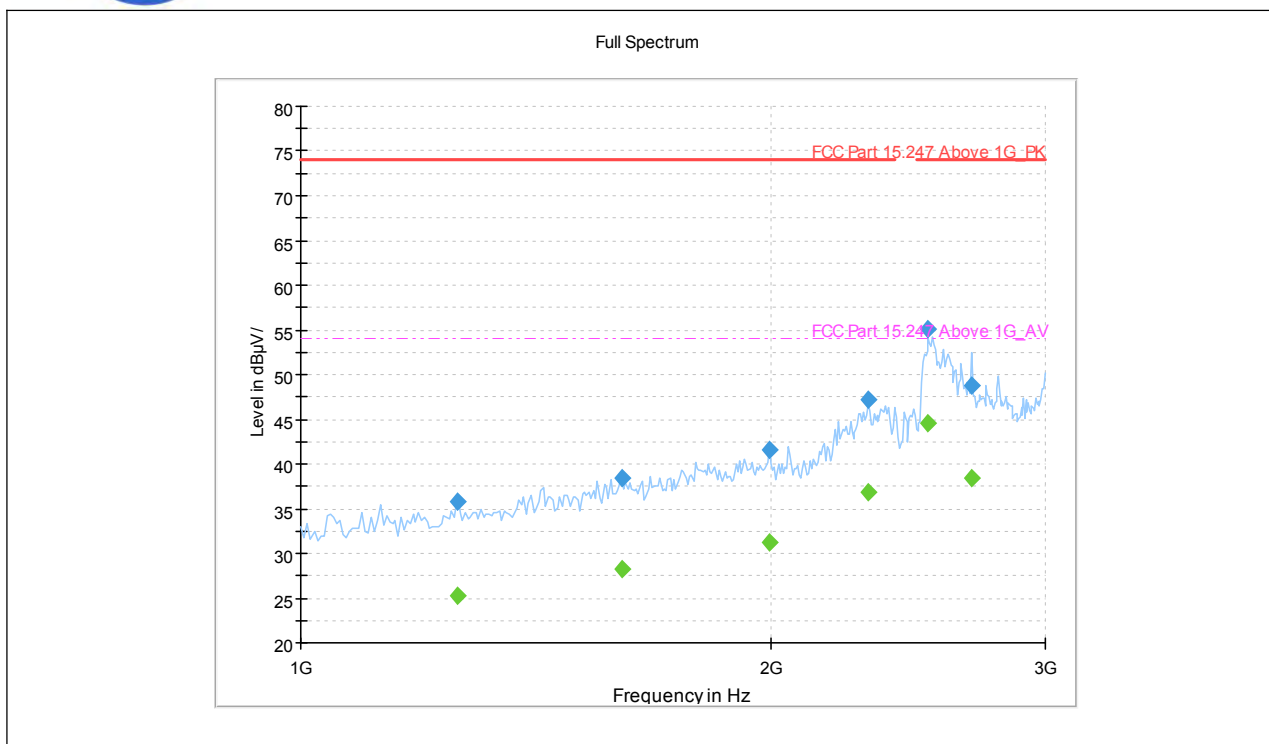


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3371.898283	---	28.02	54.00	25.98	H	-5.9
3371.898283	40.30	---	74.00	33.70	H	-5.9
4837.486050	---	29.50	54.00	24.50	H	-3.1
4837.486050	42.06	---	74.00	31.94	H	-3.1
6149.877788	---	30.54	54.00	23.46	H	-1.9
6149.877788	42.92	---	74.00	31.08	H	-1.9
8789.648231	43.84	---	74.00	30.16	H	1.5
8789.648231	---	31.34	54.00	22.66	H	1.5
14405.62889	47.22	---	74.00	26.78	H	9.4
14405.62889	---	34.87	54.00	19.13	H	9.4
17680.72158	---	37.52	54.00	16.48	H	13.9
17680.72158	49.72	---	74.00	24.28	H	13.9



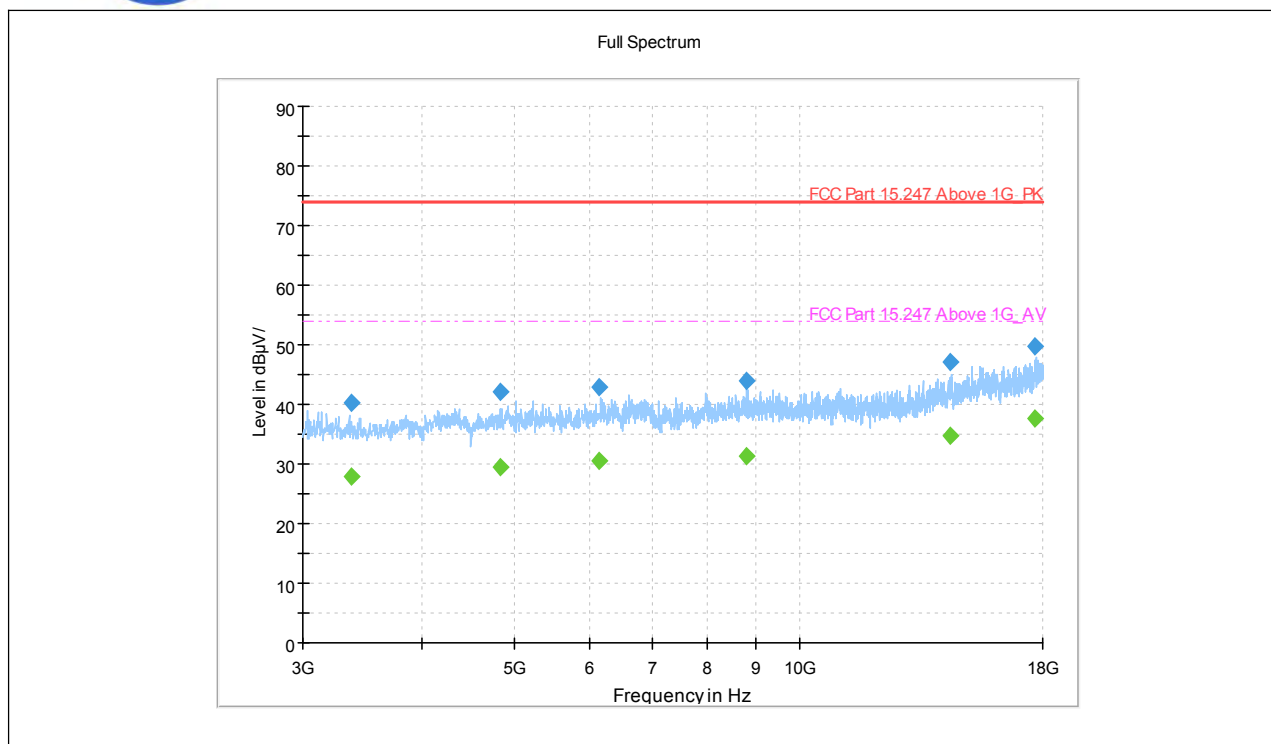
(802.11n_20M_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.203333	27.34	---	40.00	12.66	V	13.9
65.162500	28.89	---	40.00	11.11	V	15.2
159.131250	25.70	---	43.50	17.80	V	10.9
201.730417	25.85	---	43.50	17.65	V	14.6
554.972083	31.48	---	46.00	14.52	V	22.2
893.946667	33.01	---	46.00	12.99	V	27.9



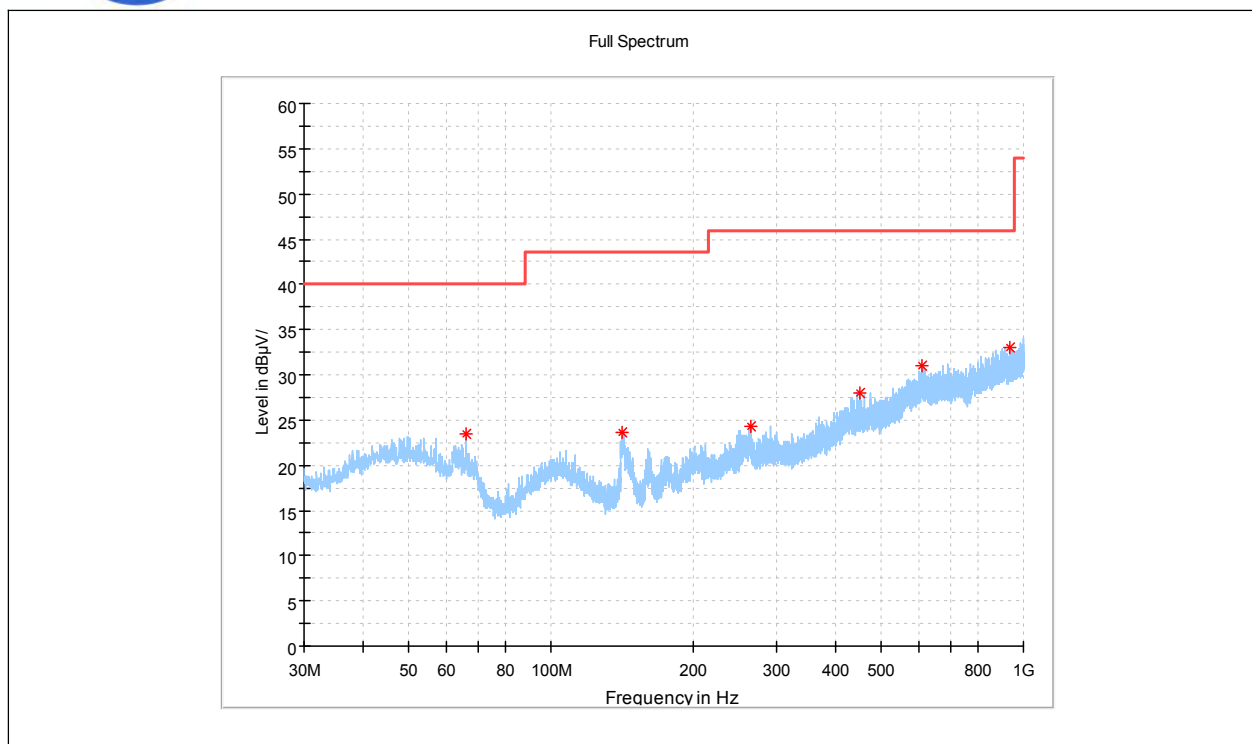
(802.11n_20M_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1260.000000	---	25.31	54.00	28.69	V	-0.1
1260.000000	35.83	---	74.00	38.17	V	-0.1
1605.000000	38.44	---	74.00	35.56	V	3.6
1605.000000	---	28.30	54.00	25.70	V	3.6
1995.000000	---	31.18	54.00	22.82	V	7.4
1995.000000	41.55	---	74.00	32.45	V	7.4
2310.000000	---	36.82	54.00	17.18	V	10.5
2310.000000	47.26	---	74.00	26.74	V	10.5
2525.000000	55.08	---	74.00	18.92	V	13.6
2525.000000	---	44.52	54.00	9.48	V	13.6
2690.000000	---	38.41	54.00	15.59	V	14.8
2690.000000	48.85	---	74.00	25.15	V	14.8



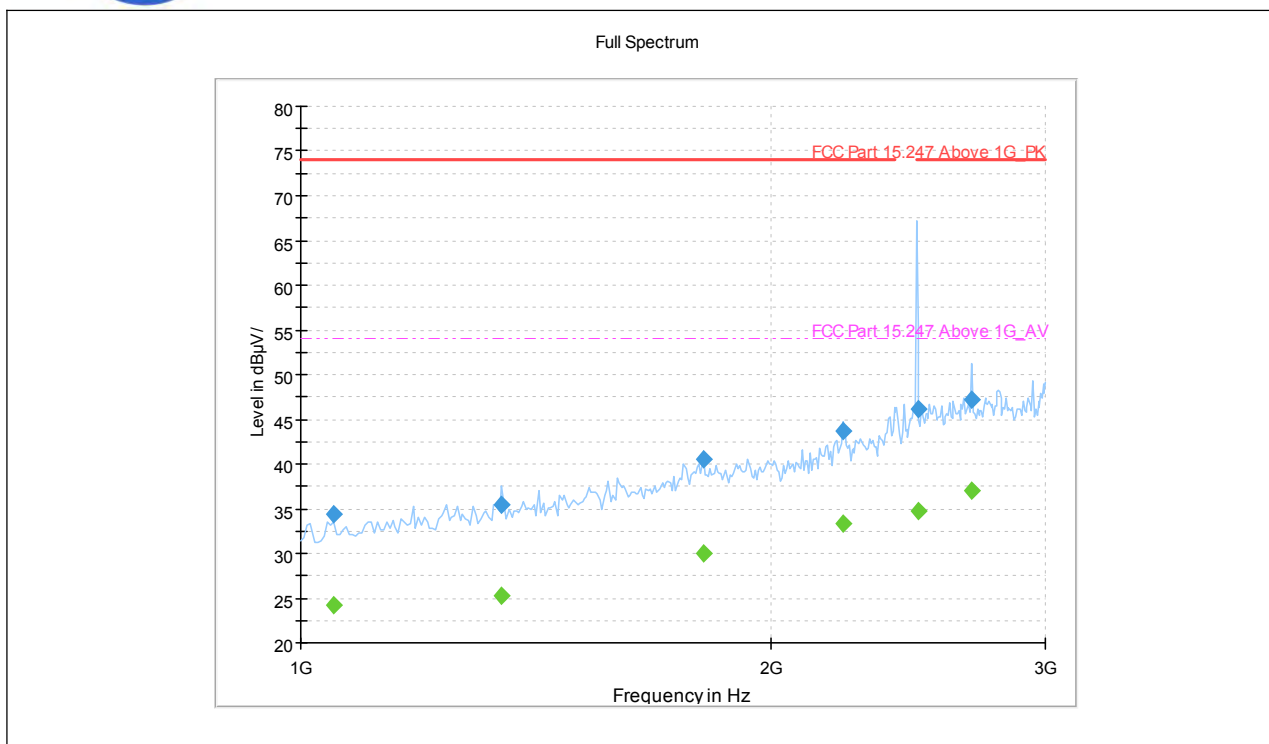
(802.11n_20M_2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
3371.898283	---	28.02	54.00	25.98	V	-5.9
3371.898283	40.30	---	74.00	33.70	V	-5.9
4837.486050	---	29.50	54.00	24.50	V	-3.1
4837.486050	42.06	---	74.00	31.94	V	-3.1
6149.877788	---	30.54	54.00	23.46	V	-1.9
6149.877788	42.92	---	74.00	31.08	V	-1.9
8789.648231	43.84	---	74.00	30.16	V	1.5
8789.648231	---	31.34	54.00	22.66	V	1.5
14405.62889	47.22	---	74.00	26.78	V	9.4
14405.62889	---	34.87	54.00	19.13	V	9.4
17680.72158	---	37.52	54.00	16.48	V	13.9
17680.72158	49.72	---	74.00	24.28	V	13.9



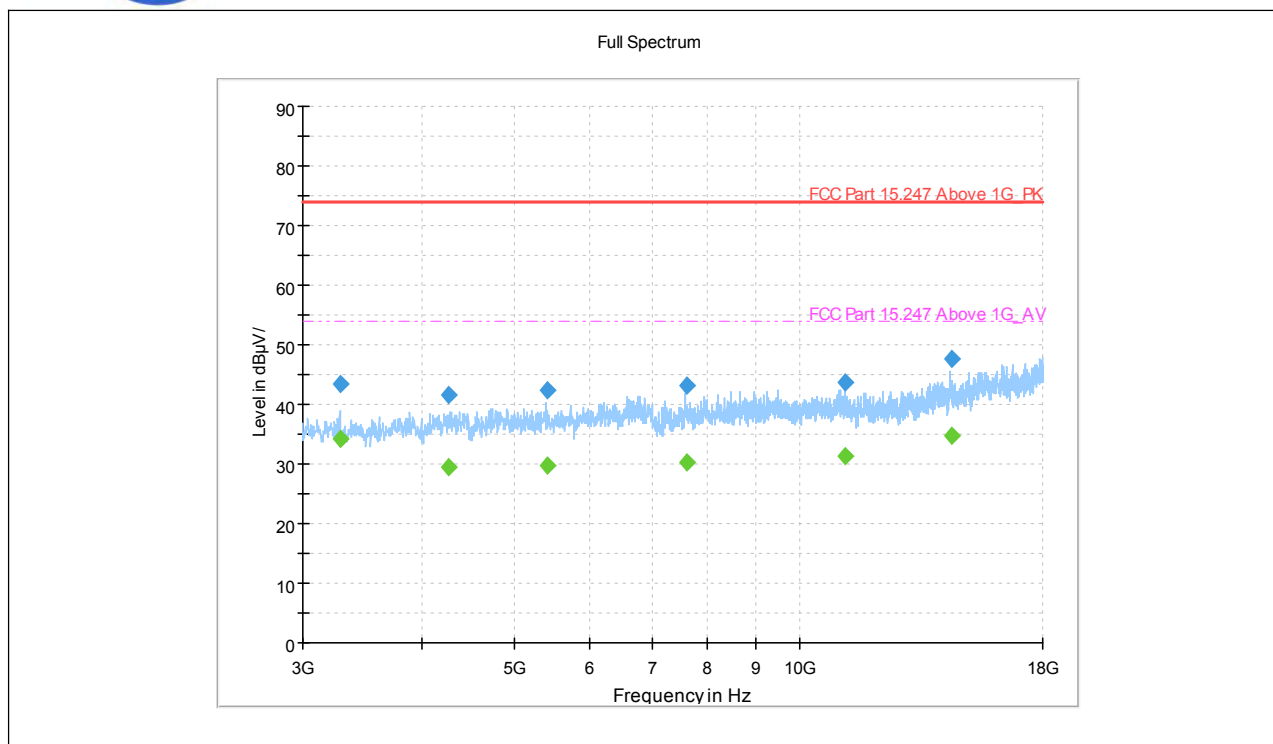
(802.11n_20M_2462MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
66.011250	23.48	---	40.00	16.52	H	15.5
141.873333	23.67	---	43.50	19.83	H	13.8
264.820833	24.23	---	46.00	21.77	H	14.9
449.565417	28.05	---	46.00	17.95	H	16.1
608.079583	30.96	---	46.00	15.04	H	24.8
934.080417	33.04	---	46.00	12.96	H	28.0

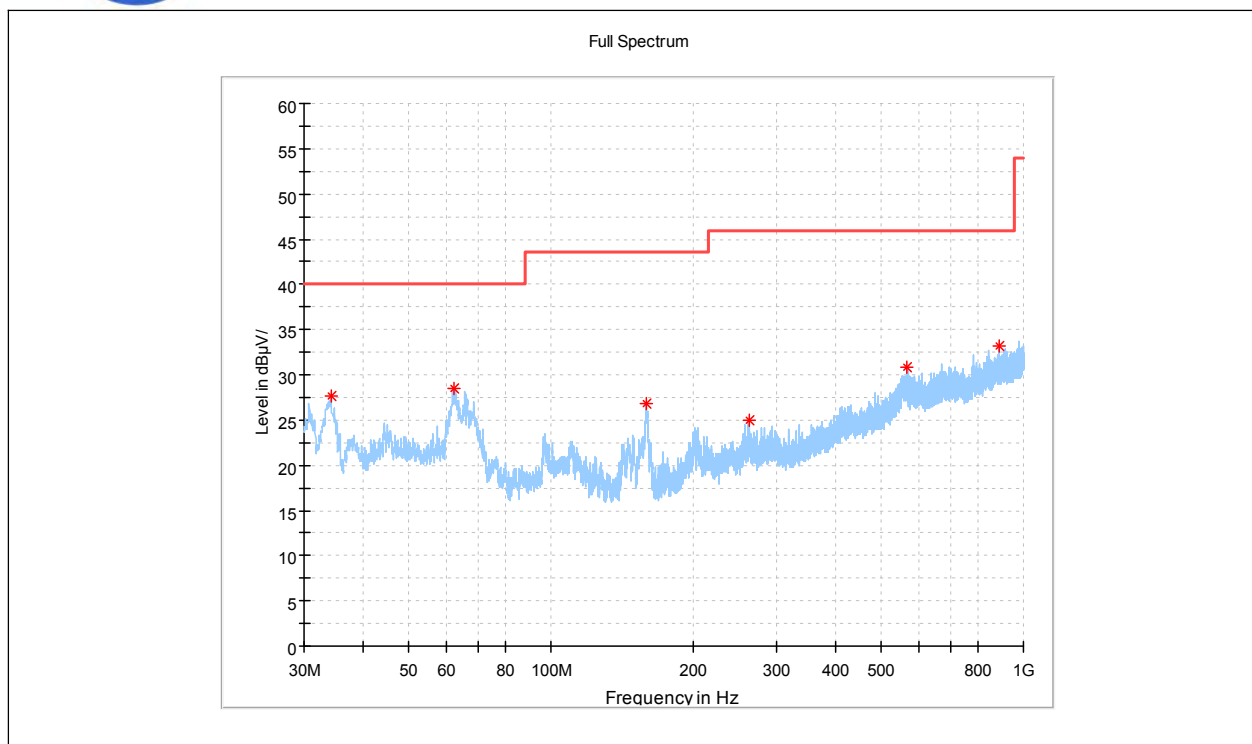


(802.11n_20M_2462MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1050.000000	34.33	---	74.00	39.67	H	-1.9
1050.000000	---	24.18	54.00	29.82	H	-1.9
1345.000000	---	25.24	54.00	28.76	H	0.3
1345.000000	35.47	---	74.00	38.53	H	0.3
1810.000000	---	30.02	54.00	23.98	H	6.0
1810.000000	40.53	---	74.00	33.47	H	6.0
2225.000000	---	33.34	54.00	20.66	H	9.6
2225.000000	43.75	---	74.00	30.25	H	9.6
2485.000000	46.11	---	74.00	27.89	H	13.2
2485.000000	---	34.71	54.00	19.29	H	13.2
2690.000000	---	37.04	54.00	16.96	H	14.8
2690.000000	47.26	---	74.00	26.74	H	14.8

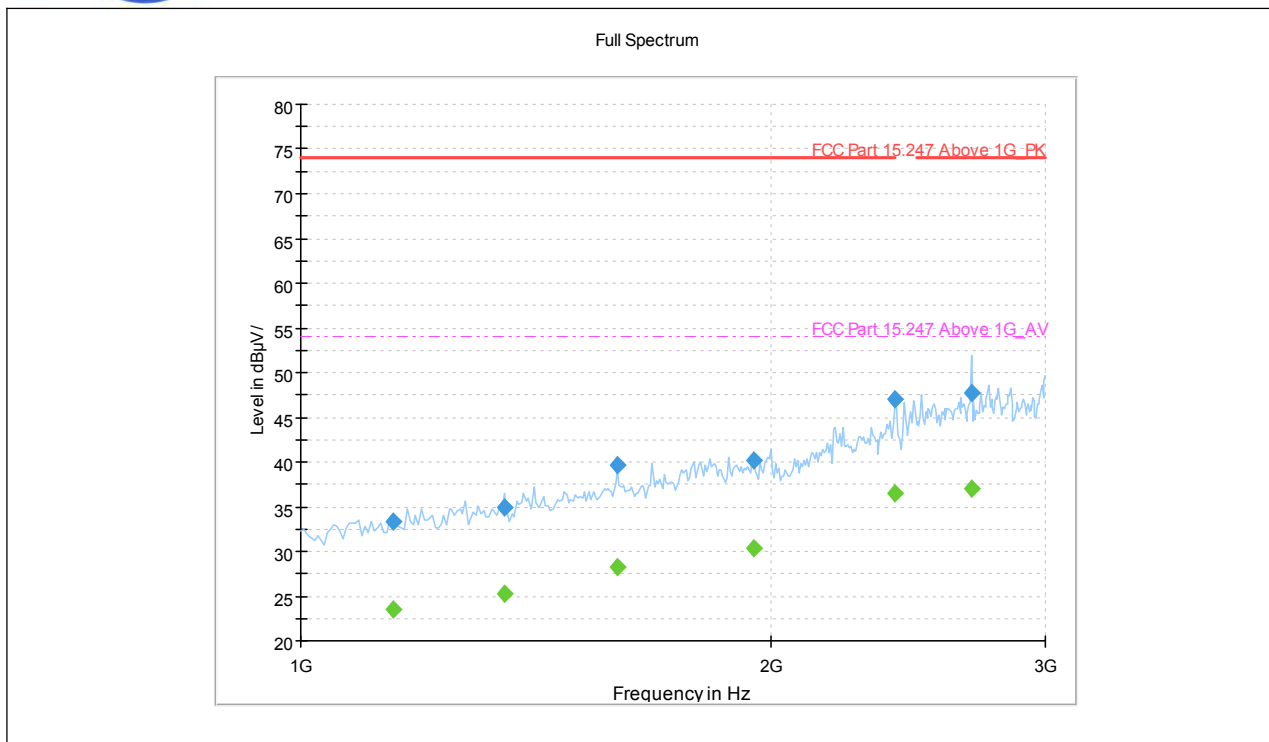


Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3283.021848	---	34.13	54.00	19.87	H	-6.0
3283.021848	43.51	---	74.00	30.49	H	-6.0
4277.613319	41.70	---	74.00	32.30	H	-3.4
4277.613319	---	29.45	54.00	24.55	H	-3.4
5415.070500	---	29.64	54.00	24.36	H	-2.6
5415.070500	42.37	---	74.00	31.63	H	-2.6
7614.062156	---	30.37	54.00	23.63	H	0.4
7614.062156	43.09	---	74.00	30.91	H	0.4
11166.119775	43.81	---	74.00	30.19	H	3.1
11166.119775	---	31.29	54.00	22.71	H	3.1
14432.290352	---	34.79	54.00	19.21	H	9.1
14432.290352	47.52	---	74.00	26.48	H	9.1



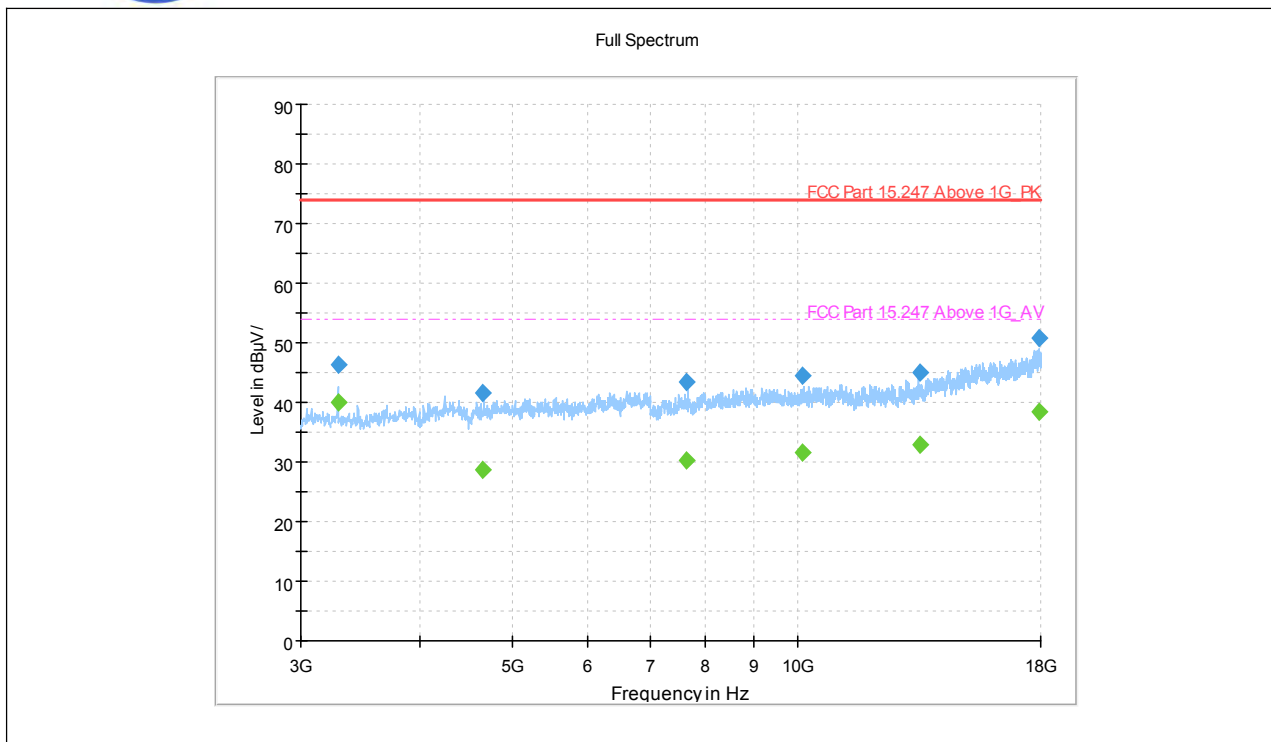
(802.11n_20M_2462MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.203333	27.62	---	40.00	12.38	V	15.6
62.414167	28.42	---	40.00	11.58	V	13.6
159.373750	26.73	---	43.50	16.77	V	10.8
262.234167	25.05	---	46.00	20.95	V	14.5
568.228750	30.92	---	46.00	15.08	V	18.2
889.379583	33.20	---	46.00	12.80	V	23.1



(802.11n_20M_2462MHz, Antenna Vertical , 1GHz to 3GHz)

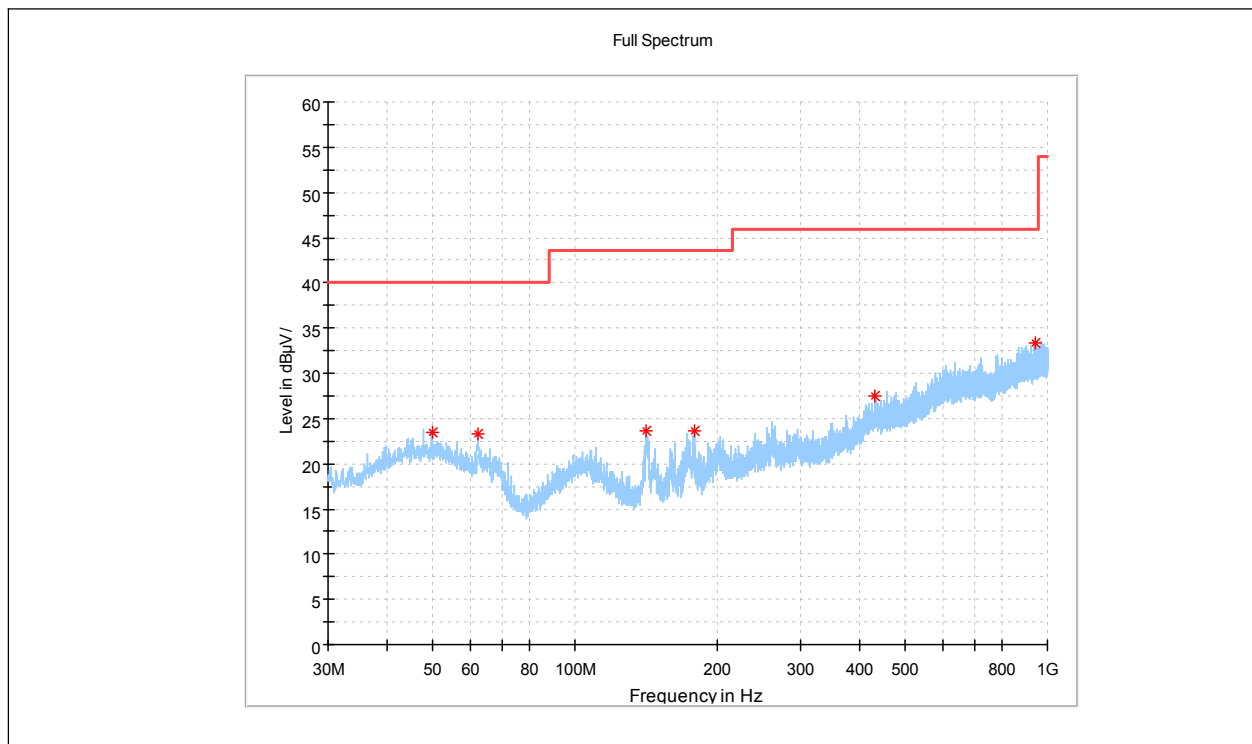
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1145.000000	33.32	---	74.00	40.68	V	-2.0
1145.000000	---	23.56	54.00	30.44	V	-2.0
1350.000000	---	25.20	54.00	28.80	V	0.3
1350.000000	34.92	---	74.00	39.08	V	0.3
1595.000000	---	28.27	54.00	25.73	V	3.5
1595.000000	39.62	---	74.00	34.38	V	3.5
1950.000000	40.16	---	74.00	33.84	V	6.6
1950.000000	---	30.27	54.00	23.73	V	6.6
2405.000000	46.94	---	---	---	V	13.2
2405.000000	---	36.42	---	---	V	13.2
2690.000000	47.81	---	74.00	26.19	V	14.8
2690.000000	---	37.04	54.00	16.96	V	14.8



(802.11n_20M_2462MHz, Antenna Vertical, 3GHz to 18GHz)

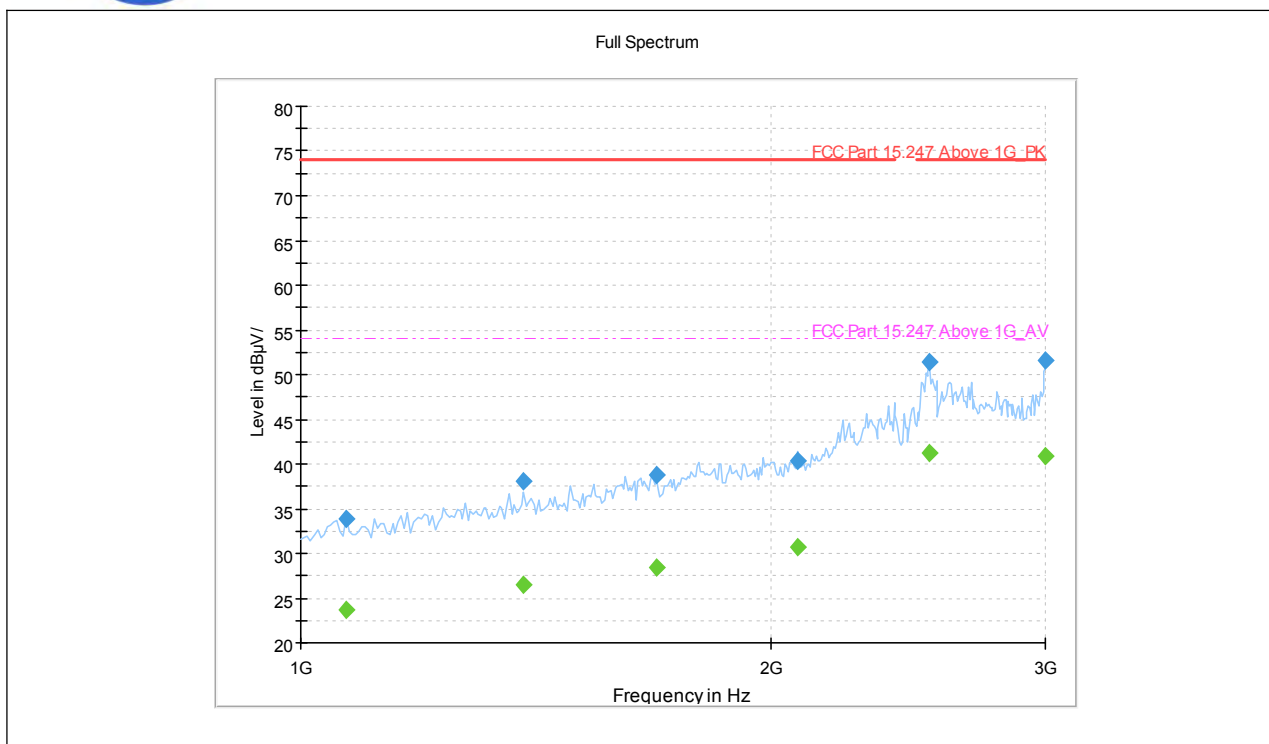
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.685525	---	39.88	54.00	14.12	V	-5.9
3282.685525	46.20	---	74.00	27.80	V	-5.9
4659.754705	---	28.81	54.00	25.19	V	-3.8
4659.754705	41.61	---	74.00	32.39	V	-3.8
7639.820475	43.31	---	74.00	30.69	V	0.8
7639.820475	---	30.38	54.00	23.62	V	0.8
10091.04254	---	31.65	54.00	22.35	V	2.4
10091.04254	44.39	---	74.00	29.61	V	2.4
13415.13160	---	32.79	54.00	21.21	V	6.3
13415.13160	45.06	---	74.00	28.94	V	6.3
17904.08970	50.75	---	74.00	23.25	V	14.5
17904.08970	---	38.40	54.00	15.60	V	14.5

802.11n-40MHz Test mode



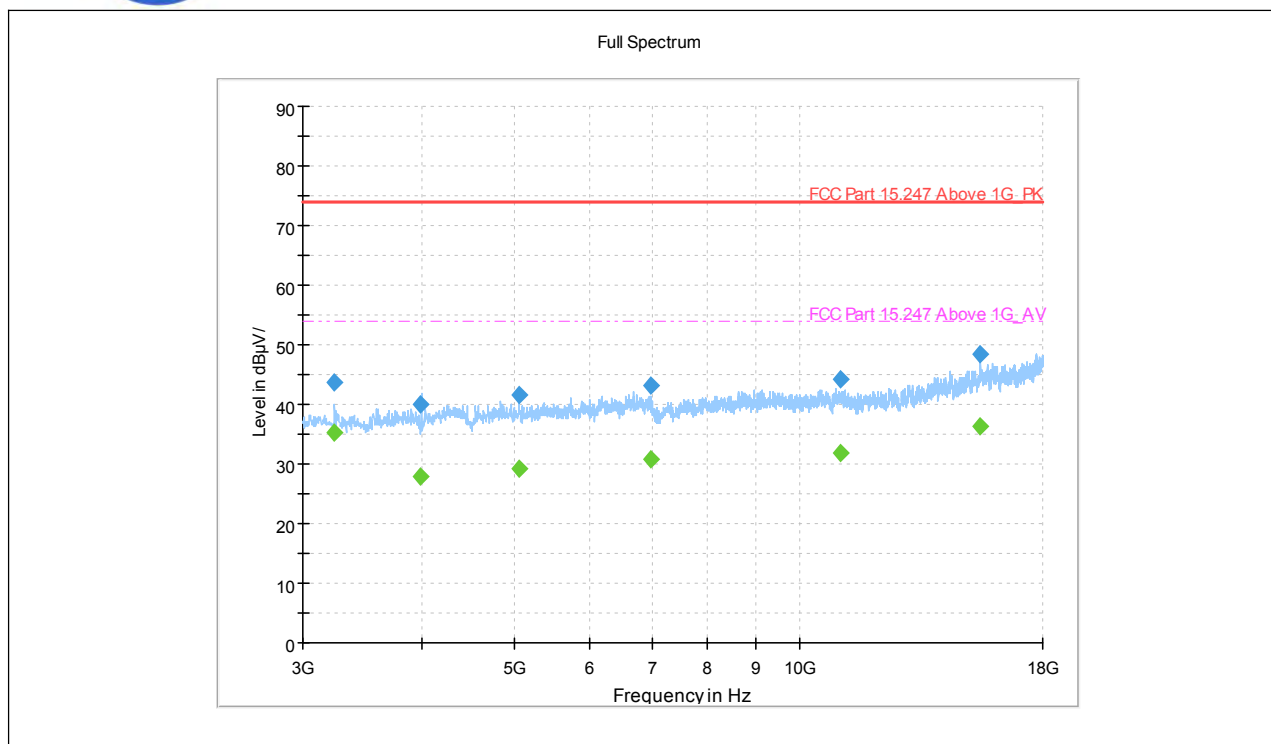
(802.11n_40M _2422MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dB μ V/m)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
49.763750	23.50	---	40.00	16.50	H	14.8
62.414167	23.30	---	40.00	16.70	H	12.2
141.671250	23.70	---	43.50	19.80	H	15.4
178.652500	23.71	---	43.50	19.79	H	20.3
430.731250	27.49	---	46.00	18.51	H	24.6
945.316250	33.31	---	46.00	12.69	H	28.1

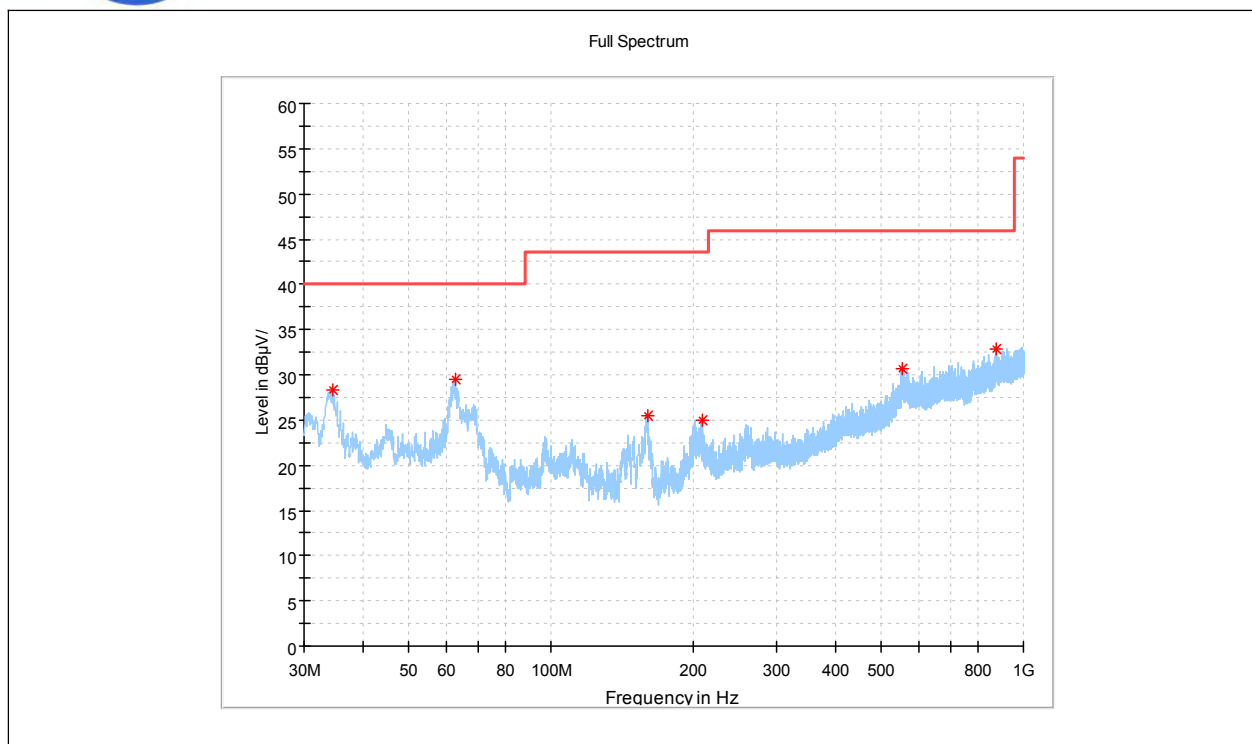


(802.11n_40M_2422MHz, Antenna Horizontal, 1GHz to 3GHz)

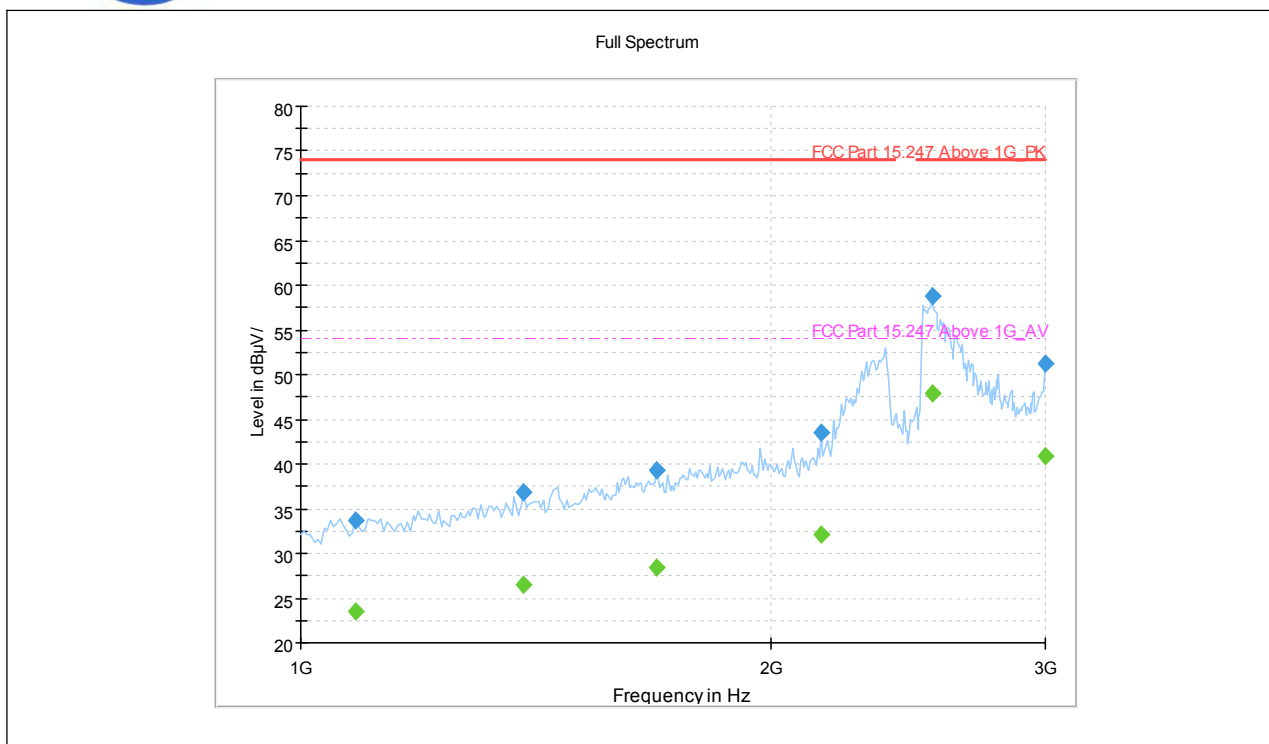
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1070.000000	---	23.60	54.00	30.40	H	-2.6
1070.000000	33.81	---	74.00	40.19	H	-2.6
1390.000000	---	26.49	54.00	27.51	H	1.2
1390.000000	38.02	---	74.00	35.98	H	1.2
1690.000000	---	28.47	54.00	25.53	H	3.7
1690.000000	38.72	---	74.00	35.28	H	3.7
2080.000000	---	30.68	54.00	23.32	H	7.3
2080.000000	40.42	---	74.00	33.58	H	7.3
2530.000000	---	41.20	54.00	12.80	H	13.9
2530.000000	51.34	---	74.00	22.66	H	13.9
3000.000000	---	40.83	54.00	13.17	H	18.4
3000.000000	51.60	---	74.00	22.40	H	18.4



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3242.745900	---	35.38	54.00	18.62	H	-6.2
3242.745900	43.79	---	74.00	30.21	H	-6.2
3983.448788	---	27.93	54.00	26.07	H	-5.6
3983.448788	39.99	---	74.00	34.01	H	-5.6
5073.102036	41.63	---	74.00	32.37	H	-3.0
5073.102036	---	29.14	54.00	24.86	H	-3.0
6955.138575	---	30.68	54.00	23.32	H	-0.5
6955.138575	43.10	---	74.00	30.90	H	-0.5
11010.92763	---	31.91	54.00	22.09	H	3.4
11010.92763	44.26	---	74.00	29.74	H	3.4
15488.19693	48.53	---	74.00	25.47	H	11.2
15488.19693	---	36.20	54.00	17.80	H	11.2

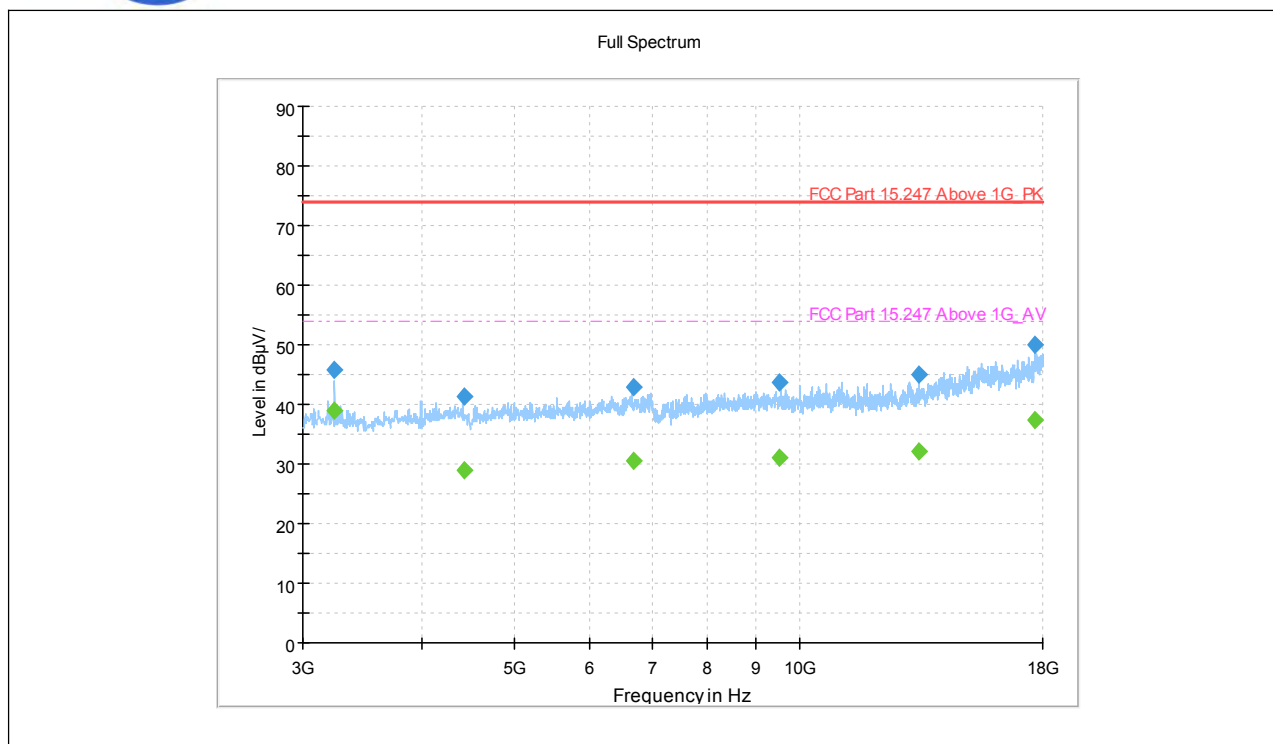


Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.445833	28.30	---	40.00	11.70	V	14.9
62.737500	29.48	---	40.00	10.52	V	13.3
159.697083	25.52	---	43.50	17.98	V	11.3
209.086250	25.04	---	43.50	18.46	V	15.3
554.123333	30.66	---	46.00	15.34	V	22.7
875.799583	32.88	---	46.00	13.12	V	28.4



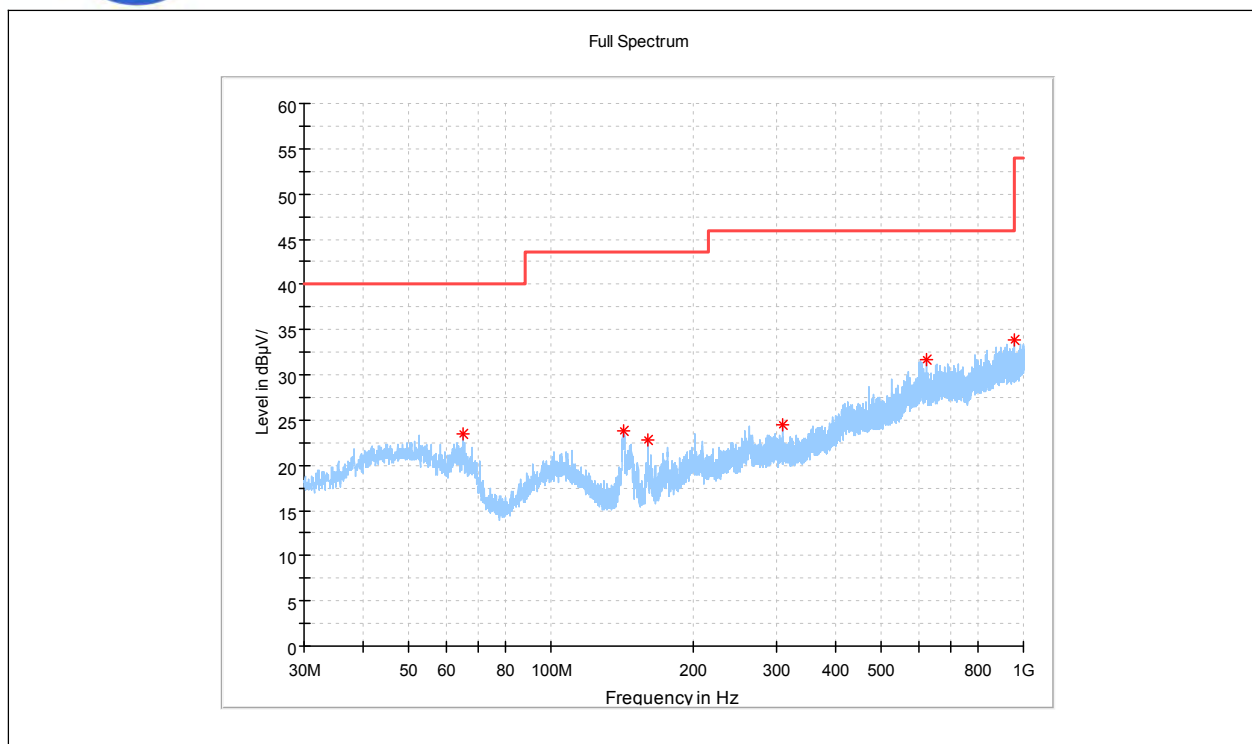
(802.11n_40M_2422MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1085.000000	33.63	---	74.00	40.37	V	-2.5
1085.000000	---	23.44	54.00	30.56	V	-2.5
1390.000000	---	26.46	54.00	27.54	V	1.2
1390.000000	36.79	---	74.00	37.21	V	1.2
1690.000000	---	28.42	54.00	25.58	V	3.7
1690.000000	39.39	---	74.00	34.61	V	3.7
2155.000000	43.43	---	74.00	30.57	V	8.3
2155.000000	---	32.10	54.00	21.90	V	8.3
2540.000000	58.71	---	74.00	15.29	V	14.4
2540.000000	---	47.94	54.00	6.06	V	14.4
3000.000000	51.25	---	74.00	22.75	V	18.4
3000.000000	---	40.85	54.00	13.15	V	18.4



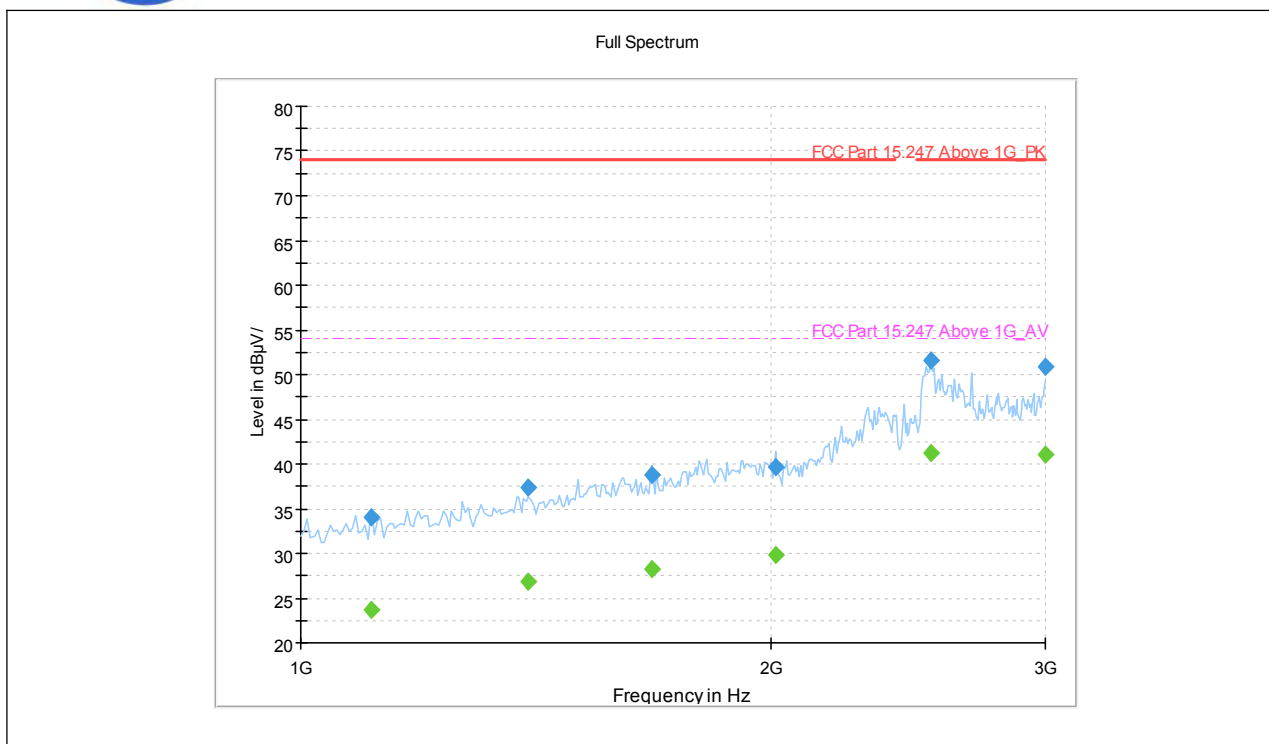
(802.11n_40M_2422MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3242.543400	45.73	---	74.00	28.27	V	-6.2
3242.543400	---	39.03	54.00	14.97	V	-6.2
4440.426955	---	28.98	54.00	25.02	V	-3.8
4440.426955	41.20	---	74.00	32.80	V	-3.8
6692.221086	42.97	---	74.00	31.03	V	-0.8
6692.221086	---	30.57	54.00	23.43	V	-0.8
9506.025068	43.77	---	74.00	30.23	V	1.6
9506.025068	---	31.00	54.00	23.00	V	1.6
13323.58456	---	32.17	54.00	21.83	V	6.1
13323.58456	44.87	---	74.00	29.13	V	6.1
17689.42125	50.02	---	74.00	23.98	V	14.0
17689.42125	---	37.49	54.00	16.51	V	14.0



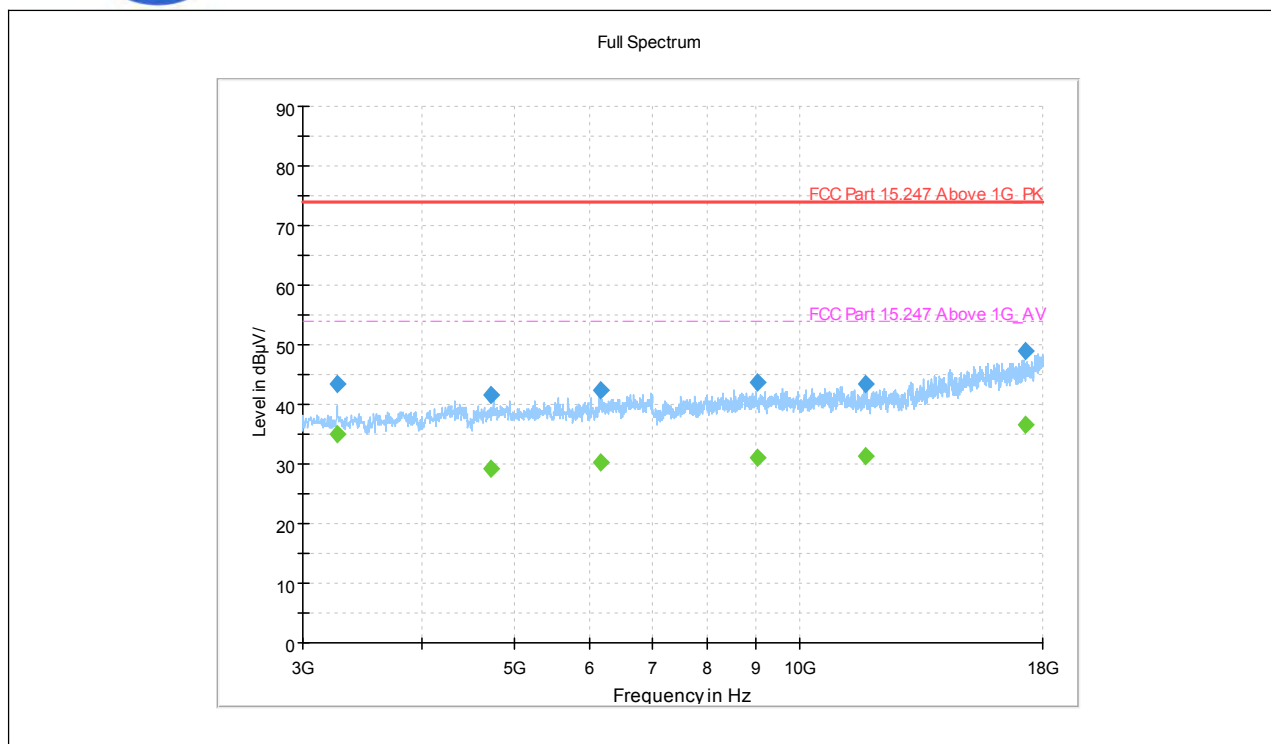
(802.11n_40M_2437MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
65.162500	23.45	---	40.00	16.55	H	14.4
142.520000	23.79	---	43.50	19.71	H	12.3
159.980000	22.79	---	43.50	20.71	H	15.5
308.996250	24.51	---	46.00	21.49	H	18.5
621.417083	31.64	---	46.00	14.36	H	25.0
955.420417	33.83	---	46.00	12.17	H	28.1



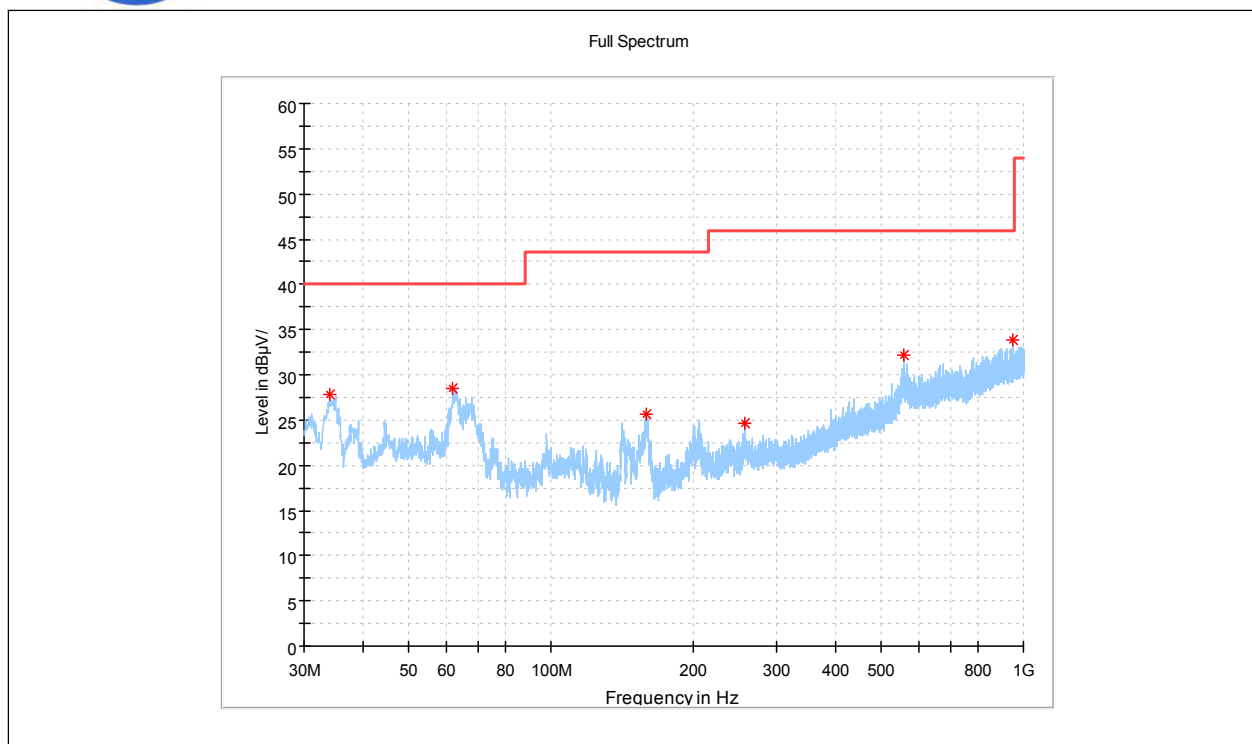
(802.11n_40M_2437MHz, Antenna Horizontal, 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1110.000000	34.07	---	74.00	39.93	H	-2.0
1110.000000	---	23.62	54.00	30.38	H	-2.0
1400.000000	37.29	---	74.00	36.71	H	1.7
1400.000000	---	26.85	54.00	27.15	H	1.7
1680.000000	---	28.23	54.00	25.77	H	3.5
1680.000000	38.82	---	74.00	35.18	H	3.5
2015.000000	39.68	---	74.00	34.32	H	6.8
2015.000000	---	29.79	54.00	24.21	H	6.8
2535.000000	51.61	---	74.00	22.39	H	14.2
2535.000000	---	41.28	54.00	12.72	H	14.2
3000.000000	---	41.04	54.00	12.96	H	18.4
3000.000000	50.86	---	74.00	23.14	H	18.4



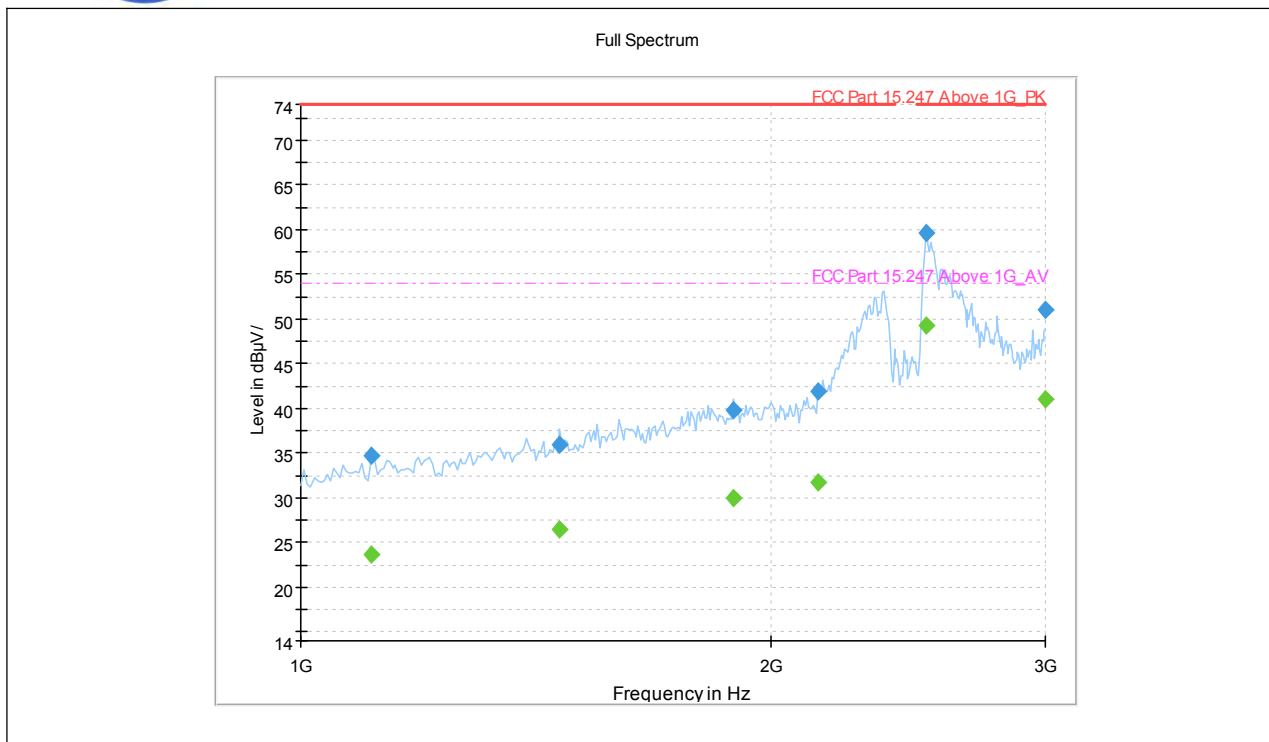
(802.11n_40M_2437MHz, Antenna Horizontal, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3262.761000	43.45	---	74.00	30.55	H	-5.8
3262.761000	---	34.98	54.00	19.02	H	-5.8
4738.525100	41.69	---	74.00	32.31	H	-3.2
4738.525100	---	29.12	54.00	24.88	H	-3.2
6169.450219	42.47	---	74.00	31.53	H	-1.6
6169.450219	---	30.37	54.00	23.63	H	-1.6
9018.795064	---	31.05	54.00	22.95	H	1.0
9018.795064	43.79	---	74.00	30.21	H	1.0
11723.27831	---	31.29	54.00	22.71	H	3.9
11723.27831	43.50	---	74.00	30.50	H	3.9
17264.47567	48.84	---	74.00	25.16	H	12.7
17264.47567	---	36.69	54.00	17.31	H	12.7



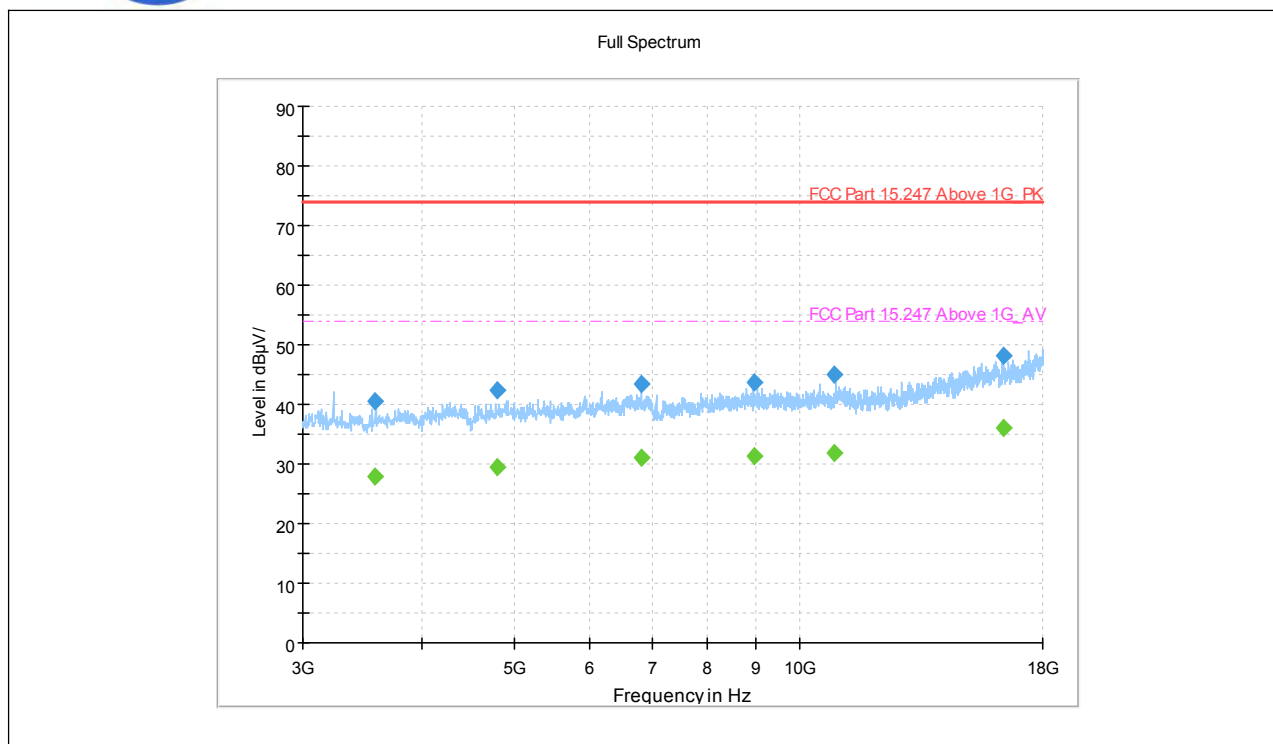
(802.11n_40M_2437MHz, Antenna Vertical, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
34.041667	27.84	---	40.00	12.16	V	13.4
61.969583	28.57	---	40.00	11.43	V	13.9
159.575833	25.65	---	43.50	17.85	V	10.8
257.060833	24.67	---	46.00	21.33	V	15.4
556.386667	32.13	---	46.00	13.87	V	23.1
950.045000	33.83	---	46.00	12.17	V	28.3



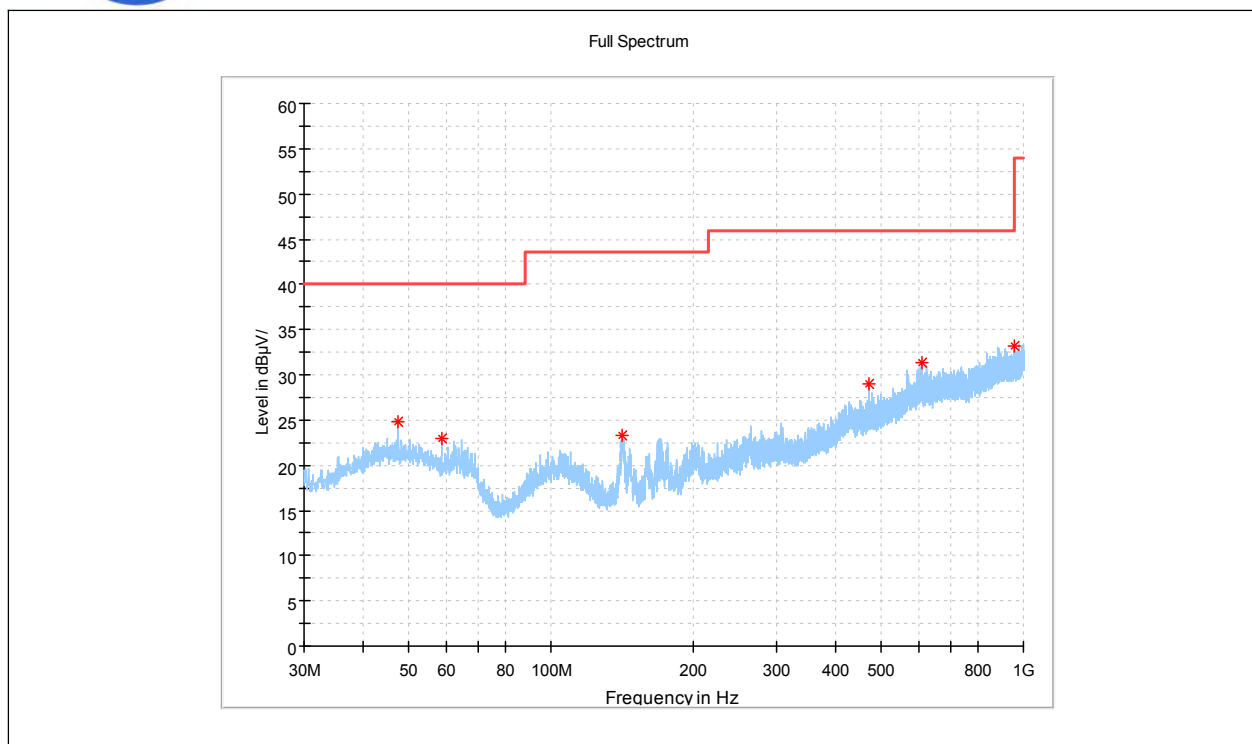
(802.11n_40M_2437MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1110.000000	---	23.57	54.00	30.43	V	-2.0
1110.000000	34.63	---	74.00	39.37	V	-2.0
1465.000000	35.99	---	74.00	38.01	V	1.6
1465.000000	---	26.51	54.00	27.49	V	1.6
1895.000000	---	30.01	54.00	23.99	V	6.1
1895.000000	39.77	---	74.00	34.23	V	6.1
2145.000000	41.86	---	74.00	32.14	V	8.2
2145.000000	---	31.68	54.00	22.32	V	8.2
2515.000000	59.65	---	74.00	14.35	V	13.2
2515.000000	---	49.32	54.00	4.68	V	13.2
3000.000000	51.03	---	74.00	22.97	V	18.4
3000.000000	---	40.96	54.00	13.04	V	18.4



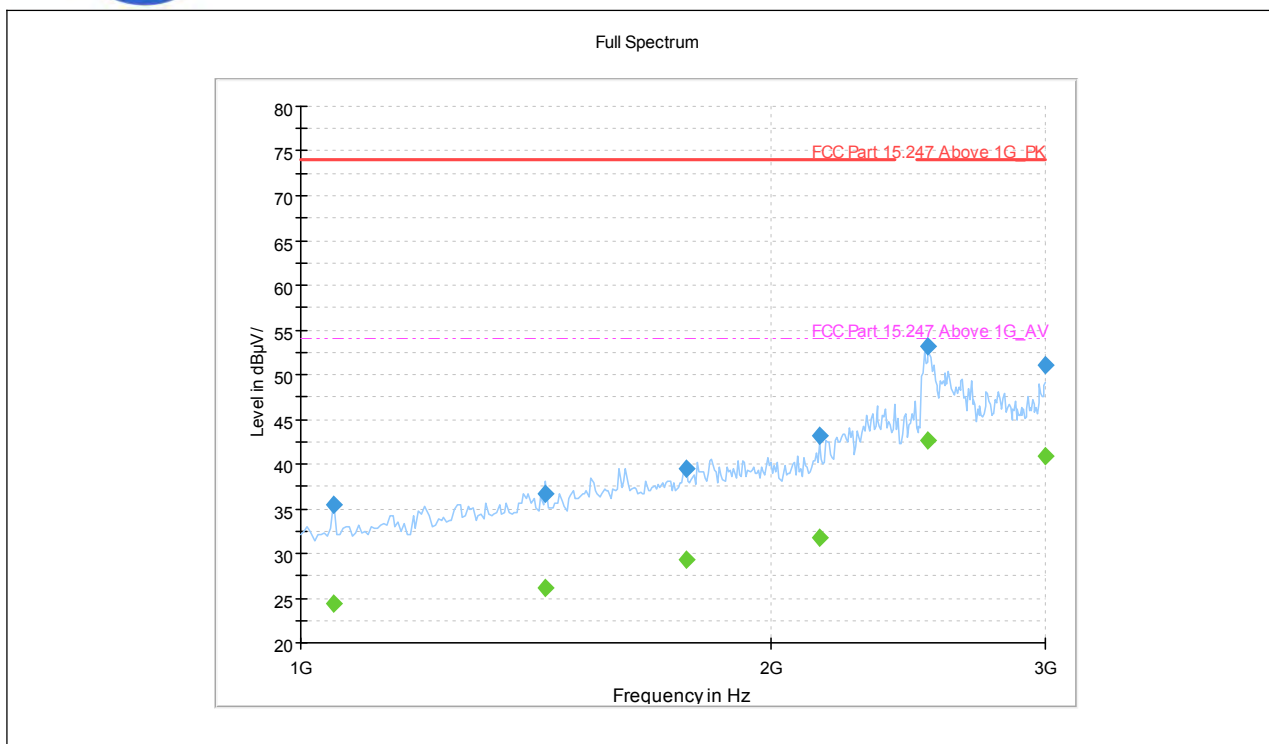
(802.11n_40M_2437MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3572.681979	---	27.96	54.00	26.04	V	-5.6
3572.681979	40.62	---	74.00	33.38	V	-5.6
4797.993019	42.44	---	74.00	31.56	V	-3.4
4797.993019	---	29.48	54.00	24.52	V	-3.4
6808.501800	43.31	---	74.00	30.69	V	-1.0
6808.501800	---	31.01	54.00	22.99	V	-1.0
8944.859162	---	31.24	54.00	22.76	V	1.7
8944.859162	43.58	---	74.00	30.42	V	1.7
10882.48590	---	31.97	54.00	22.03	V	3.1
10882.48590	44.99	---	74.00	29.01	V	3.1
16345.65858	---	36.07	54.00	17.93	V	11.5
16345.65858	48.24	---	74.00	25.76	V	11.5



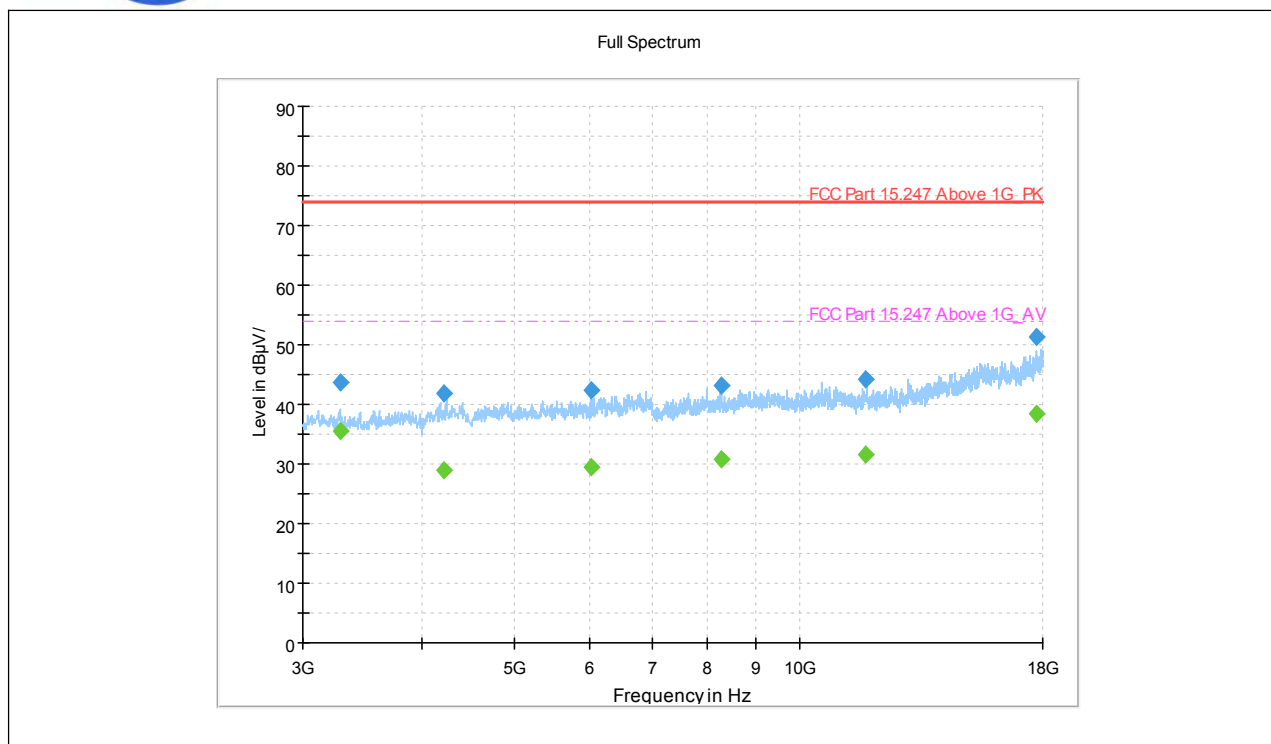
(802.11n_40M_2452MHz, Antenna Horizontal, 30MHz to 1GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
47.540833	24.74	---	40.00	15.26	H	15.5
58.615000	22.92	---	40.00	17.08	H	14.9
141.105417	23.23	---	43.50	20.27	H	12.1
471.592500	28.92	---	46.00	17.08	H	16.6
611.151250	31.38	---	46.00	14.62	H	24.2
957.360417	33.12	---	46.00	12.88	H	28.3

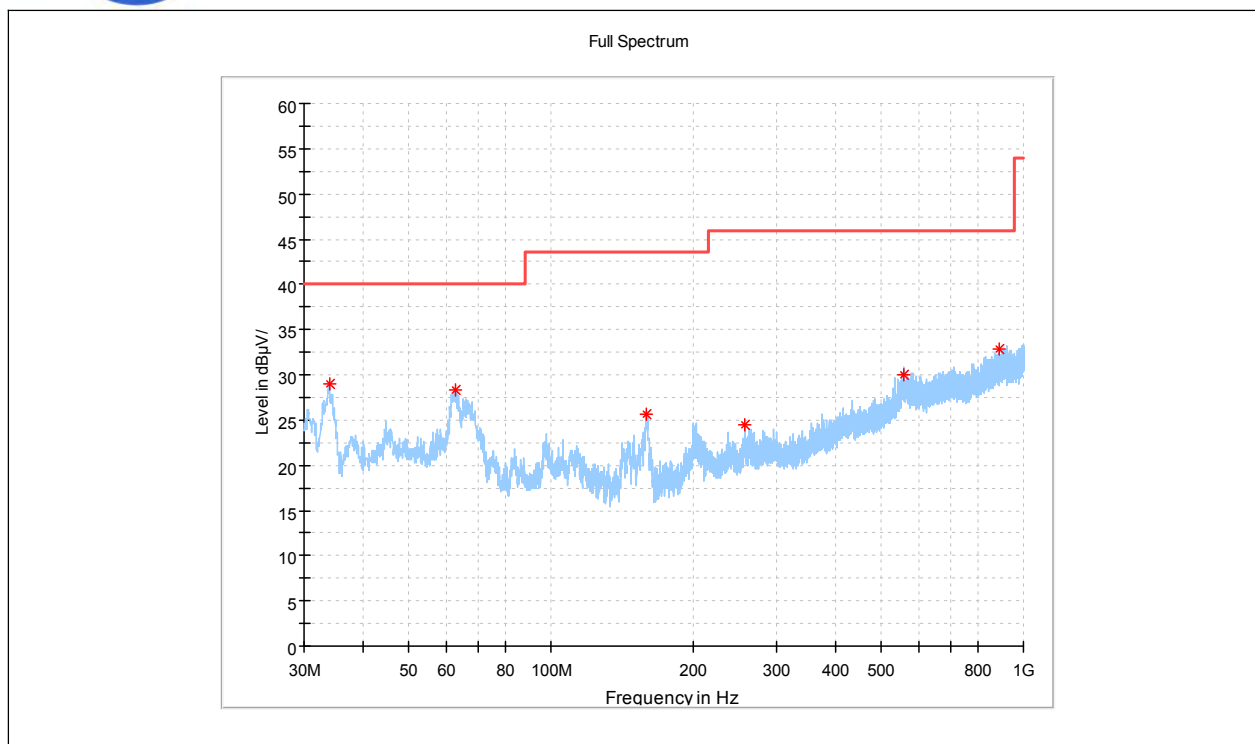


(802.11n_40M_2452MHz, Antenna Horizontal, 1GHz to 3GHz)

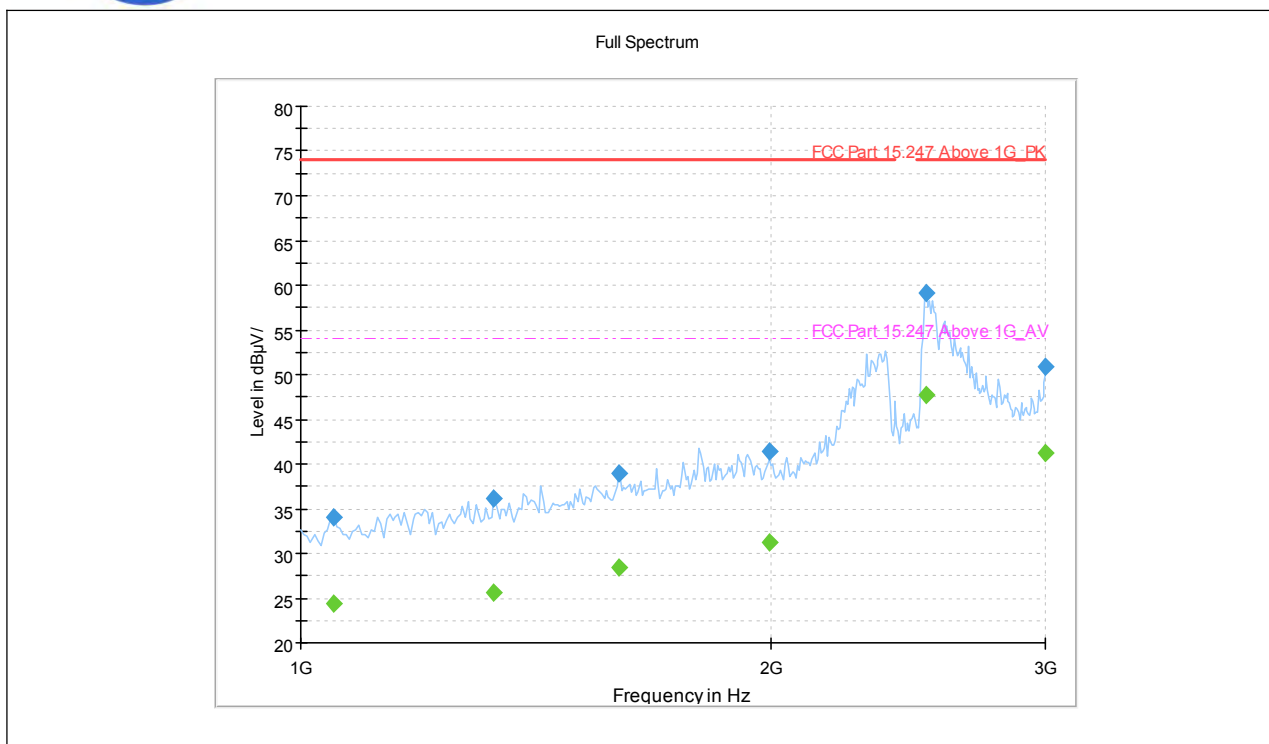
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1050.000000	35.47	---	74.00	38.53	H	-1.9
1050.000000	---	24.32	54.00	29.68	H	-1.9
1435.000000	---	26.11	54.00	27.89	H	1.2
1435.000000	36.69	---	74.00	37.31	H	1.2
1765.000000	39.55	---	74.00	34.45	H	5.1
1765.000000	---	29.38	54.00	24.62	H	5.1
2150.000000	---	31.78	54.00	22.22	H	8.2
2150.000000	43.18	---	74.00	30.82	H	8.2
2525.000000	53.21	---	74.00	20.79	H	13.6
2525.000000	---	42.60	54.00	11.40	H	13.6
3000.000000	51.14	---	74.00	22.86	H	18.4
3000.000000	---	40.92	54.00	13.08	H	18.4



Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.677322	---	35.44	54.00	18.56	H	-5.9
3282.677322	43.60	---	74.00	30.40	H	-5.9
4228.621310	41.79	---	74.00	32.21	H	-3.9
4228.621310	---	29.03	54.00	24.97	H	-3.9
6034.936463	42.36	---	74.00	31.64	H	-2.3
6034.936463	---	29.39	54.00	24.61	H	-2.3
8257.442416	---	30.88	54.00	23.12	H	1.4
8257.442416	43.29	---	74.00	30.71	H	1.4
11714.950763	44.11	---	74.00	29.89	H	4.0
11714.950763	---	31.60	54.00	22.40	H	4.0
17715.481334	51.40	---	74.00	22.60	H	14.6
17715.481334	---	38.51	54.00	15.49	H	14.6

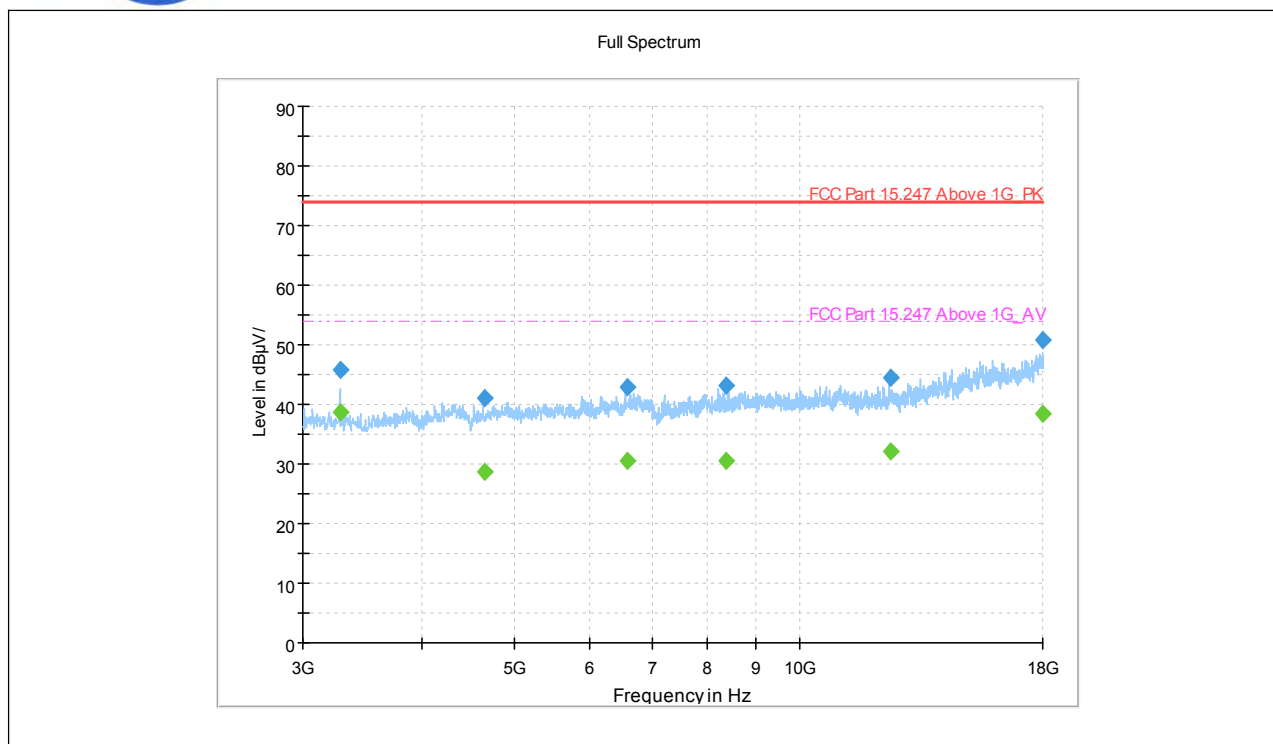


Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
33.920417	29.07	---	40.00	10.93	V	13.9
62.980000	28.37	---	40.00	11.63	V	10.5
159.090833	25.67	---	43.50	17.83	V	13.9
256.575833	24.50	---	46.00	21.50	V	20.4
557.841667	29.92	---	46.00	16.08	V	23.4
889.783750	32.83	---	46.00	13.17	V	27.6



(802.11n_40M_2452MHz, Antenna Vertical , 1GHz to 3GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
1050.000000	34.06	---	74.00	39.94	V	-1.9
1050.000000	---	24.36	54.00	29.64	V	-1.9
1330.000000	36.19	---	74.00	37.81	V	0.3
1330.000000	---	25.56	54.00	28.44	V	0.3
1600.000000	38.89	---	74.00	35.11	V	3.8
1600.000000	---	28.49	54.00	25.51	V	3.8
1995.000000	---	31.19	54.00	22.81	V	7.4
1995.000000	41.40	---	74.00	32.60	V	7.4
2515.000000	---	47.79	54.00	6.21	V	13.2
2515.000000	59.18	---	74.00	14.82	V	13.2
3000.000000	50.89	---	74.00	23.11	V	18.4
3000.000000	---	41.20	54.00	12.80	V	18.4



(802.11n_40M_2452MHz, Antenna Vertical, 3GHz to 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
3282.874194	45.68	---	74.00	28.32	V	-6.0
3282.874194	---	38.57	54.00	15.43	V	-6.0
4659.821749	41.12	---	74.00	32.88	V	-3.8
4659.821749	---	28.72	54.00	25.28	V	-3.8
6573.493575	---	30.56	54.00	23.44	V	-1.3
6573.493575	43.02	---	74.00	30.98	V	-1.3
8375.526169	---	30.53	54.00	23.47	V	0.8
8375.526169	43.23	---	74.00	30.77	V	0.8
12452.79017	---	32.03	54.00	21.97	V	4.7
12452.79017	44.59	---	74.00	29.41	V	4.7
17991.02250	---	38.48	54.00	15.52	V	15.0
17991.02250	50.90	---	74.00	23.10	V	15.0



Annex A Test Uncertainty

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

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

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



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	XIAMEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd. Kehu-Morlab Test Laboratory
Laboratory Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian) China
Telephone:	+86-592-5612050
Facsimile:	+86-592-5612095

2. Identification of the Responsible Testing Location

Name:	XIAMEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd. Kehu-Morlab Test Laboratory
Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian) China

3. Facilities and Accreditations

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

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

4. Test Equipments Utilized

4.1 Conducted Test Equipments

No.	Equipment Name	Serial No.	Model No.	Manufacturer	Cal.Date	Cal.Due Date
1	MXA Signal Analyzer	MY53421845	N9020A	Keysight	2019.01.05	2020.01.04
2	RF cable (30MHz-26.5GHz)	RF01	N/A	Morlab	2019.01.05	2020.01.04
3	Coaxial cable	RF02	N/A	Morlab	2019.01.05	2020.01.04
4	SMA connector	RF03	N/A	Xingbo	2019.01.05	2020.01.04



5	USB Power Sensor	MY56410006	U2021XA	Keysight	2019.01.03	2020.01.02
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4.2 Conducted Emission Test Equipments

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

4.4 List of Software Used

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

4.5 Radiated Test Equipments

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



	(N male) (9kHz -3GHz)					
10	Coaxial cable (N male) (1GHz-26.5GHz)	EMC04	N/A	Morlab	2019.01.04	2020.01.03
11	Coaxial cable (N male) (1GHz-26.5GHz)	EMC05	N/A	Morlab	2019.01.04	2020.01.03
12	Pre-amplifier (1GHz-18GHz)	8810011	PAP-1G18	CDSI	2019.01.04	2020.01.03
13	Pre-amplifier (18GHz-40GHz)	17021-17024	PAP-1840	CDSI	2019.01.29	2020.01.28
14	Band stop Filter	EMC19	BJF2400/2 485-60	CDSI	2019.01.04	2020.01.03
15	High Pass Filter	EMC22	HFP-3.0/1 8G-60	CDSI	2019.01.04	2020.01.03

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