SGS-CSTC Standards Technical Services Co., Ltd.

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FCC REPORT

Application No:	SZEM1205002466RF (SGS HK NO.: 2026324/EE)
Applicant:	CATALANA DE INVESTIGACION Y DESARROLLO DE ELECTRONICA-INTERACTIVE SL
Product Name:	Kurio 7, Android Tablet
Model No.(EUT):	CI1100
FCC ID:	NXM-CI1100
Standards:	FCC CFR Title 47 Part 15 (2010)
Date of Receipt:	2012-05-11
Date of Test:	2012-05-24 to 2012-06-04
Date of Issue:	2012-07-18
Test Result:	**PASS ***

. * In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	FCC CFR Title 47 Part 15C Section 15.203/15.247 (c)	ANSI C63.10 (2009)	PASS
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15C Section 15.207	ANSI C63.10(2009)	PASS
Conducted Peak Output Power	FCC CFR Title 47 Part 15C Section 15.247 (b)(3)	ANSI C63.10(2009)	PASS
6dB Occupied Bandwidth	FCC CFR Title 47 Part 15C Section 15.247 (a)(2)	ANSI C63.10(2009)	PASS
Power Spectral Density	FCC CFR Title 47 Part 15C Section 15.247 (e)	ANSI C63.10(2009)	PASS
Band-edge for RF Conducted Emissions	FCC CFR Title 47 Part 15C Section 15.247(d)	ANSI C63.10(2009)	PASS
RF Conducted Spurious Emissions	FCC CFR Title 47 Part 15C Section 15.247(d)	ANSI C63.10(2009)	PASS
Radiated Spurious Emissions	FCC CFR Title 47 Part 15C Section 15.205/15.209	ANSI C63.10(2009)	PASS
Band Edge (Radiated Emission)	FCC CFR Title 47 Part 15C Section 15.205/15.209	ANSI C63.10（2009）	PASS

3 Contents

4 General Information

4.1 Client Information

Applicant:	CATALANA DE INVESTIGACION Y DESARROLLO DE ELECTRONICA-INTERACTIVE SL
Address of Applicant:	Edificio Europa Avenida Electricitat 19 Piso 6 P4 PO Box 121 08191 Rubi Barcelona Spain

4.2 General Description of EUT

Product Name:	Kurio 7, Android Tablet	
Model No.:	CI1100	
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz	
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels	
Channel Separation:	5MHz	
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n (HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)	
Sample Type:	Portable production	
Test Power Grade:	44(manufacturer declare)	
Test Software of EUT:	adb (manufacturer declare)	
Antenna Type:	Integral	
Antenna Gain:	1.0dBi	
Power Supply:	Adapter:	Model: FY0502000 Input: AC 100-240V 50/60Hz 0.6A Max Output: DC 5.0V ⎓ 2000mA
	Battery:	PL486495P 3200mAh 3.7V LE26
DC cable:	145cm shielded wire	
USB cable:	80cm shielded wire	
USB host cable:	5cm shielded wire	

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Operation Frequency each of channel(802.11n HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2422MHz	4	2437MHz	7	2452MHz
2	2427MHz	5	2442MHz		
3	2432MHz	6	2447MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11b/g/n (HT20):

Channel	Frequency
The Lowest channel	2412MHz
The Middle channel	2437MHz
The Highest channel	2462MHz

For 802.11n (HT40):

Channel	Frequency
The Lowest channel	2422MHz
The Middle channel	2437MHz
The Highest channel	2452MHz

4.3 Test Environment and Mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	51 % RH
Atmospheric Pressure:	1006 mbar
Test mode:	
Transmitting mode:	The EUT transmitted the continuous modulation test signal at the specific channel(s).

4.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
Earphone	N/A	N/A

4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**
  CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.
- **VCCI**
  The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.
- **FCC – Registration No.: 556682**
  SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.
- **Industry Canada (IC)**
  The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

4.7 Deviation from Standards

None.

4.8 Abnormalities from Standard Conditions

None.

4.9 Other Information Requested by the Customer

None.

4.10 Test Instruments List

RE in Chamber					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Due date (yyyy-mm-dd)**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2013-06-10
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2013-05-17
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2013-05-29
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2012-10-29
6	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2012-10-29
7	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2012-10-29
8	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2013-05-17
9	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2012-10-26
11	Band filter	Amindeon	82346	SEL0094	2013-05-17

Conducted Emission					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Due date (yyyy-mm-dd)**
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	2013-06-10
2	LISN	Rohde & Schwarz	ENV216	SEL0152	2012-10-23
3	Two-Line V-Network	ETS-LINDGREN	3816/2	SEL0021	2013-05-17
4	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2013-05-17
5	Coaxial Cable	SGS	N/A	SEL0024	2013-05-29

RF conducted					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Due date (yyyy-mm-dd)**
1	Spectrum Analyzer	Rohde & Schwarz	FSP 30	SEL0154	2012-10-23
2	Coaxial cable	SGS	N/A	SEL0028	2013-05-29

General used equipment					
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Due date (yyyy-mm-dd)**
1	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	SEL0102 to SEL0103	2012-10-27
2	Humidity/ Temperature Indicator	Shanghai	ZJ1-2B	SEL0101	2012-10-27
3	Barometer	ChangChun	DYM3	SEL0088	2013-05-17

5 Test results and Measurement Data

5.1 Antenna Requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

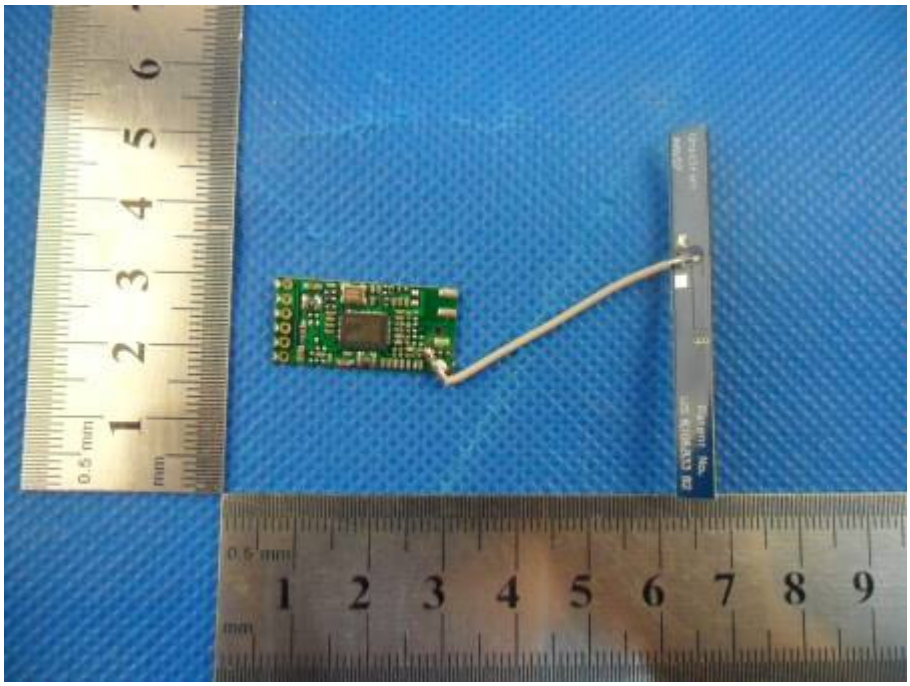
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

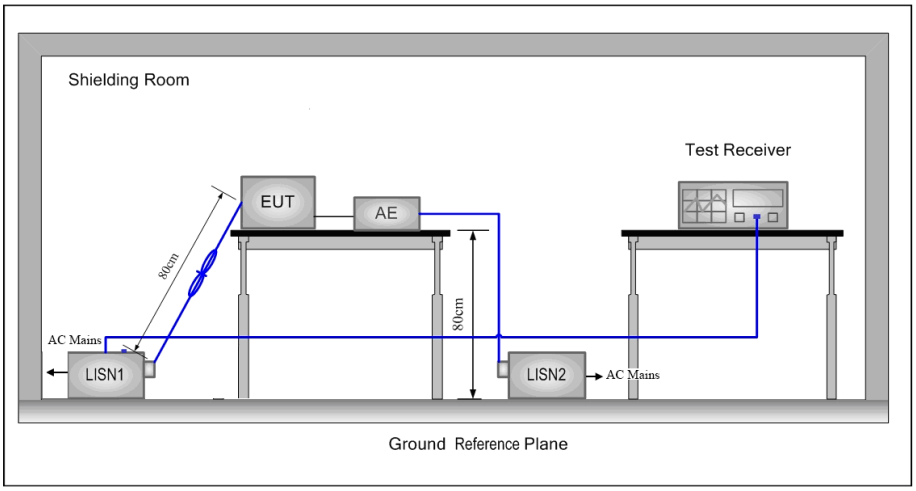
EUT Antenna:	

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.0dBi.



5.2 Conducted Emissions

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10: 2009</td></tr>
<tr><td>Test Frequency Range:</td><td>150kHz to 30MHz</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr>
<tr><th>Quasi-peak</th><th>Average</th></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* Decreases with the logarithm of the frequency.
</td></tr>
<tr><td>Test Procedure:</td><td>1) The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2009 on conducted measurement.</td></tr>
</table>

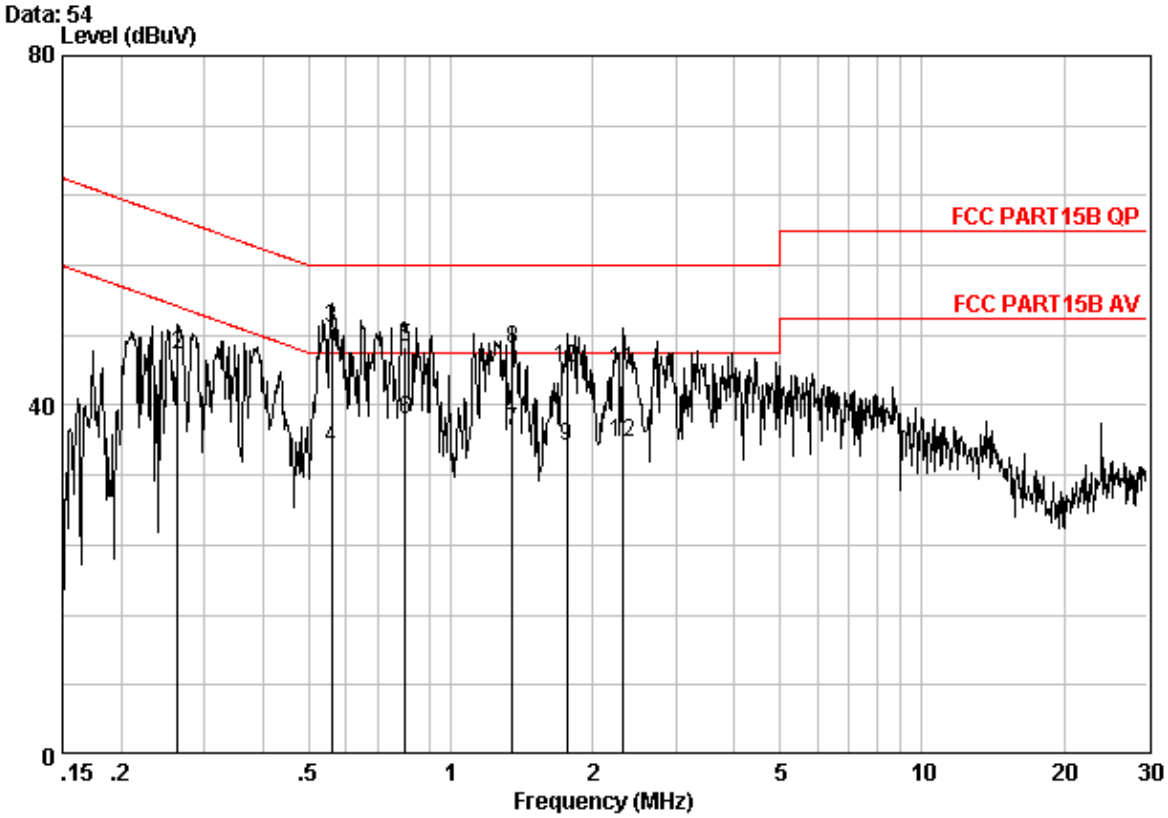
Test Setup:	
Test Mode:	Transmitting mode
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

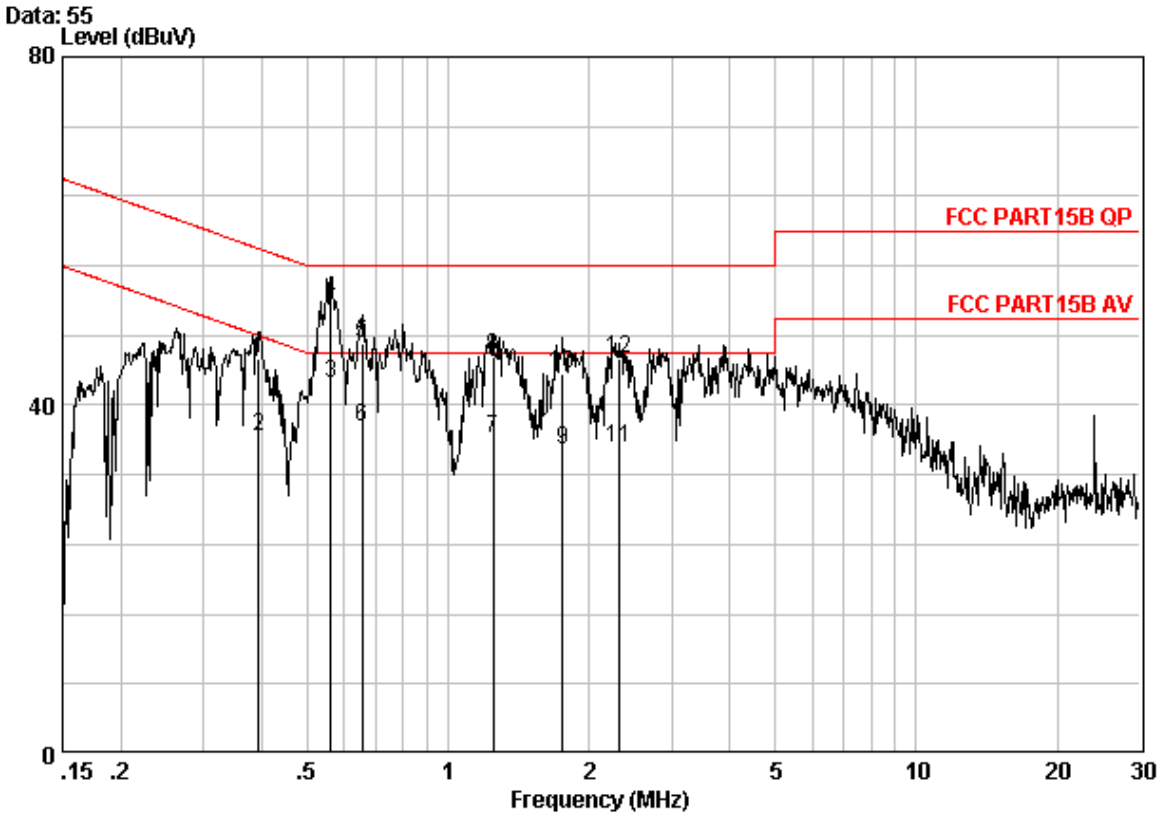
Live Line:



Site : Shielding Room
Condition : FCC PART15B QP CE-20101216 LINE
Job No. : 2466RF
Mode : TX

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.26303	0.05	9.60	28.71	38.36	51.34	-12.98	Average
2	0.26303	0.05	9.60	36.11	45.76	61.34	-15.58	QP
3	0.55920	0.06	9.63	39.20	48.89	56.00	-7.11	QP
4	0.55920	0.06	9.63	25.40	35.09	46.00	-10.91	Average
5	0.80023	0.07	9.70	36.79	46.56	56.00	-9.44	QP
6	0.80023	0.07	9.70	28.65	38.42	46.00	-7.58	Average
7	1.352	0.10	9.70	27.31	37.10	46.00	-8.90	Average
8	1.352	0.10	9.70	36.65	46.45	56.00	-9.55	QP
9	1.762	0.11	9.70	25.46	35.27	46.00	-10.73	Average
10	1.762	0.11	9.70	34.43	44.24	56.00	-11.76	QP
11	2.321	0.13	9.72	34.18	44.02	56.00	-11.98	QP
12	2.321	0.13	9.72	25.94	35.78	46.00	-10.22	Average

Neutral Line:



Site : Shielding Room
Condition : FCC PART15B QP CE-20101216 NEUTRAL
Job No. : 2466RF
Mode : TX

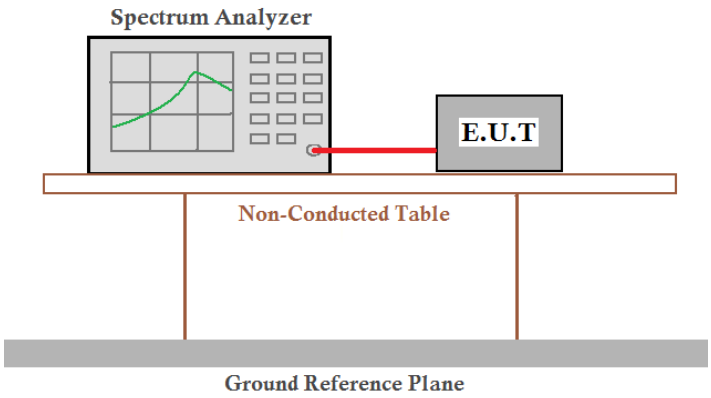
	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.39344	0.06	9.60	35.61	45.27	57.99	-12.73	QP
2	0.39344	0.06	9.60	26.83	36.48	47.99	-11.51	Average
3 @	0.56100	0.06	9.63	32.80	42.49	46.00	-3.51	Average
4	0.56100	0.06	9.63	42.50	52.19	56.00	-3.81	QP
5	0.65430	0.06	9.68	37.44	47.18	56.00	-8.82	QP
6	0.65430	0.06	9.68	27.71	37.45	46.00	-8.55	Average
7	1.249	0.09	9.70	26.42	36.21	46.00	-9.79	Average
8	1.249	0.09	9.70	35.76	45.55	56.00	-10.45	QP
9	1.753	0.11	9.70	25.00	34.81	46.00	-11.19	Average
10	1.753	0.11	9.70	33.87	43.68	56.00	-12.32	QP
11	2.309	0.13	9.72	25.25	35.09	46.00	-10.91	Average
12	2.309	0.13	9.72	35.46	45.30	56.00	-10.70	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

5.3 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2009
Test Setup:	 *Remark:* *Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.*
Test Instruments:	Refer to section 4.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40)
Limit:	30dBm
Test Results:	Pass

Pre-scan under all rate at lowest channel 1								
Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power (dBm)	19.09	19.08	20.63	21.52				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power (dBm)	18.94	18.96	18.99	19.01	19.12	19.19	19.25	19.34
Mode	802.11n(HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power (dBm)	18.88	18.90	18.96	19.05	19.13	19.25	19.26	19.28
Mode	802.11n(HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power (dBm)	18.82	18.92	19.06	19.12	19.16	19.20	19.23	19.36

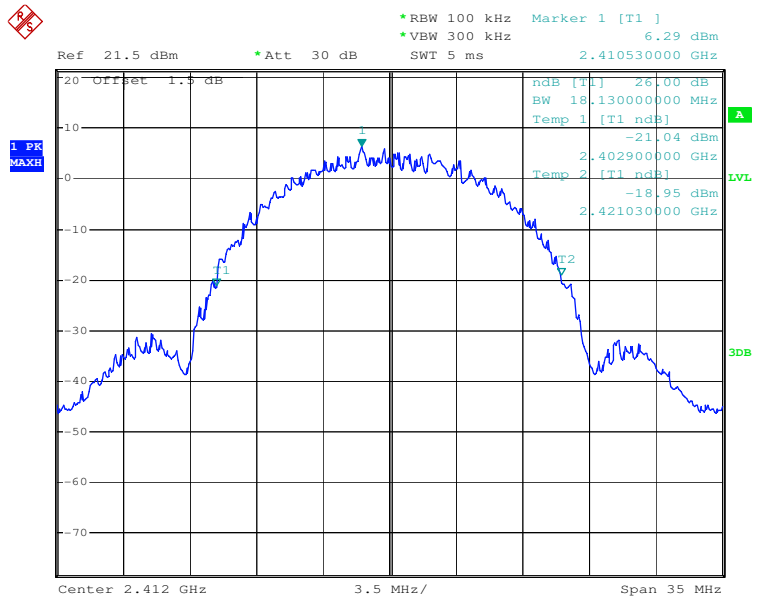
Through Pre-scan, 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40);

Measurement Data

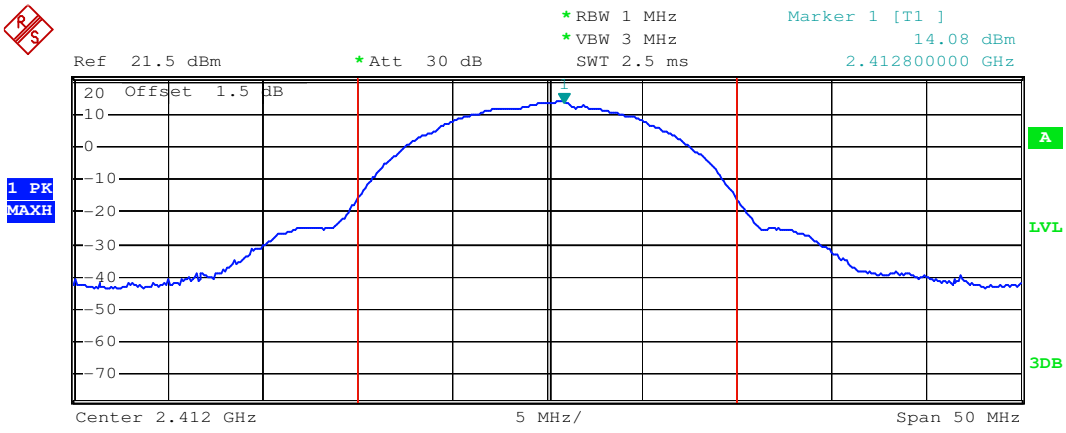
802.11b mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	21.52	30.00	Pass
Middle	21.05	30.00	Pass
Highest	20.68	30.00	Pass
802.11g mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	19.34	30.00	Pass
Middle	19.16	30.00	Pass
Highest	18.82	30.00	Pass
802.11n(HT20)mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	19.28	30.00	Pass
Middle	19.01	30.00	Pass
Highest	18.56	30.00	Pass
802.11n(HT40)mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	19.36	30.00	Pass
Middle	19.20	30.00	Pass
Highest	18.92	30.00	Pass

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest	-26 bandwidth



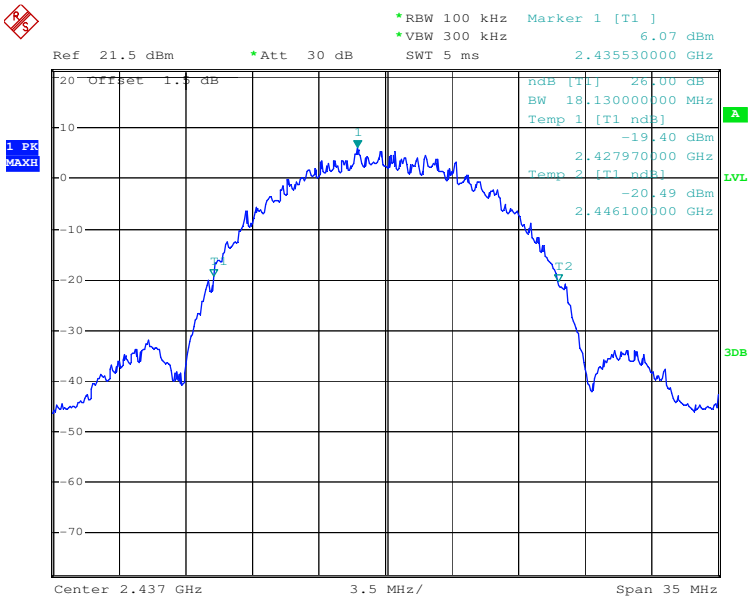
Test mode:	802.11b	Test channel:	Lowest



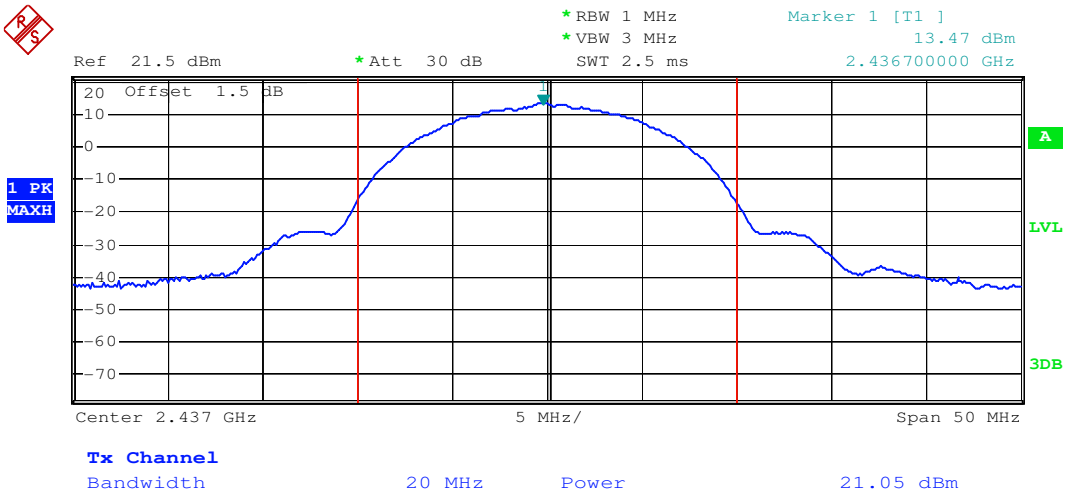
Tx Channel

Bandwidth 20 MHz Power 21.52 dBm

Test mode:	802.11b	Test channel:	Middle	-26 bandwidth



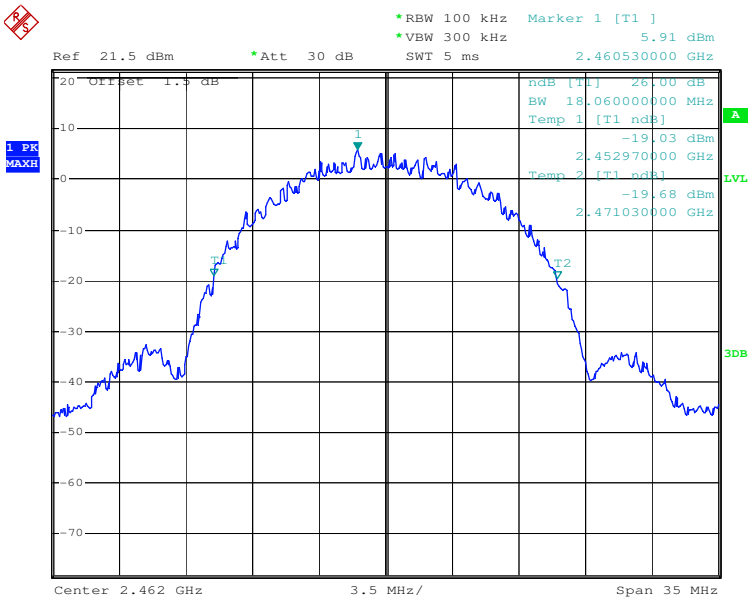
Test mode:	802.11b	Test channel:	Middle



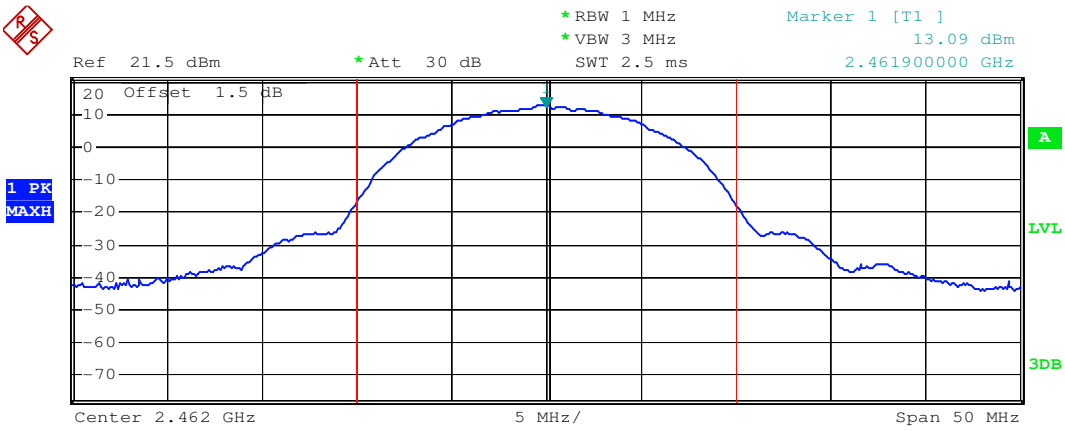
Tx Channel

Bandwidth 20 MHz Power 21.05 dBm

Test mode:	802.11b	Test channel:	Highest	-26 bandwidth



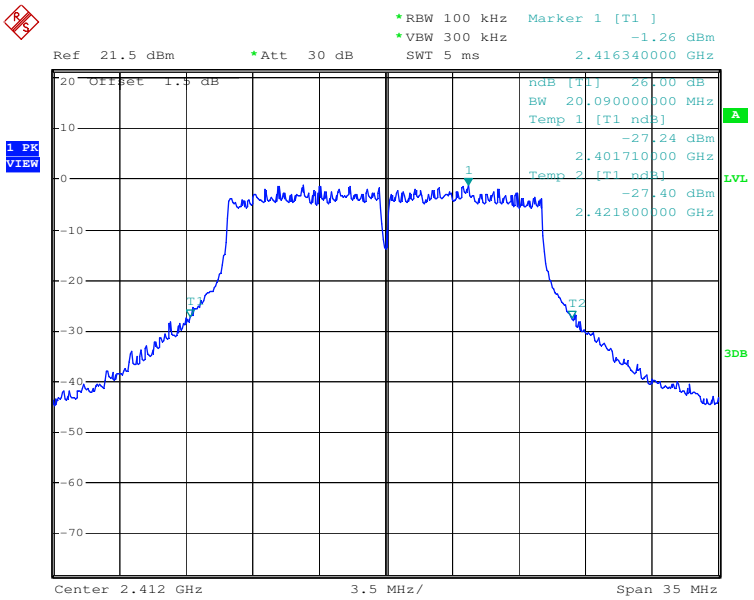
Test mode:	802.11b	Test channel:	Highest



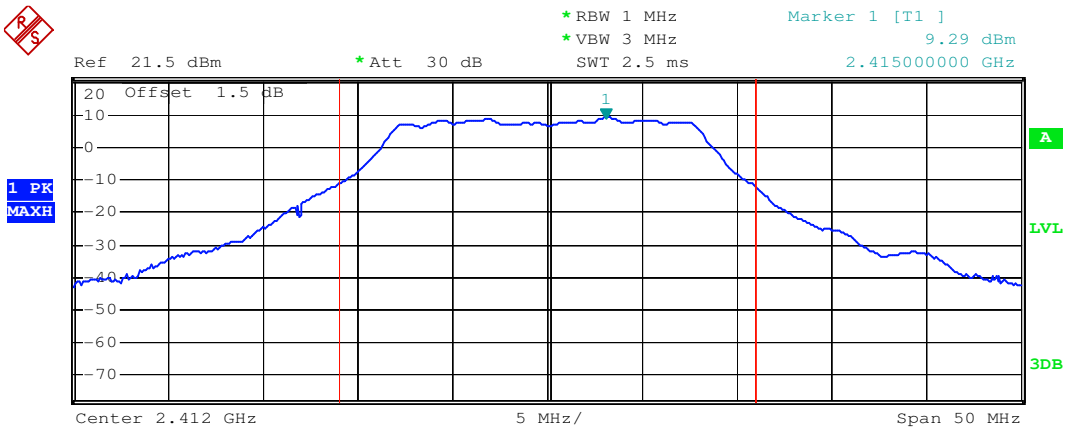
Tx Channel

Bandwidth 20 MHz Power 20.68 dBm

Test mode:	802.11g	Test channel:	Lowest	-26 bandwidth



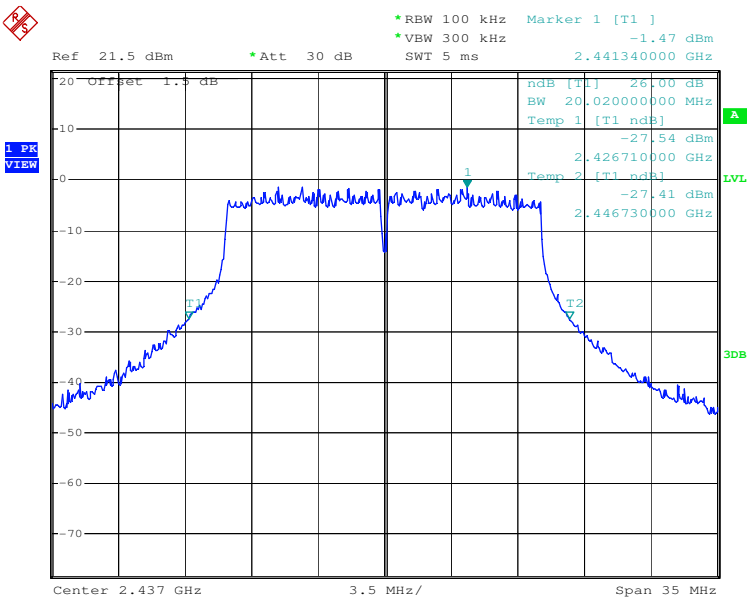
Test mode:	802.11g	Test channel:	Lowest



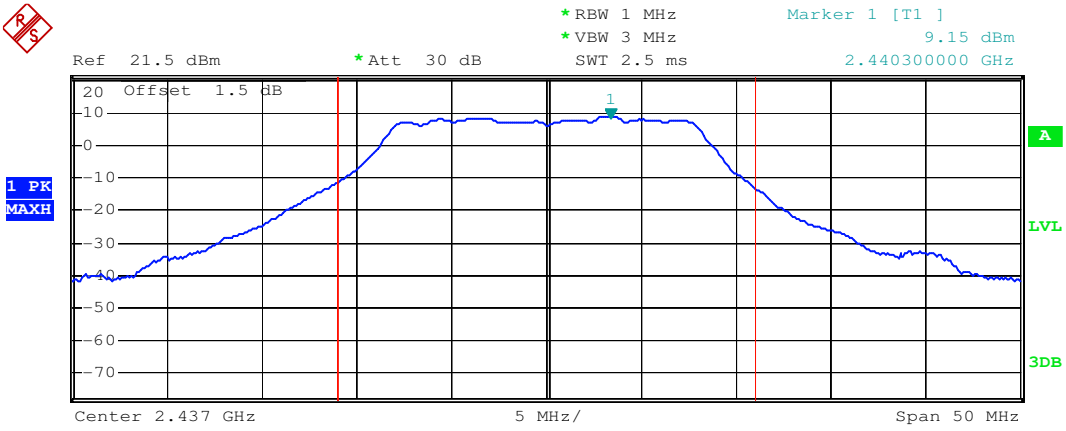
Tx Channel

Bandwidth 22 MHz Power 19.34 dBm

Test mode:	802.11g	Test channel:	Middle	-26 bandwidth



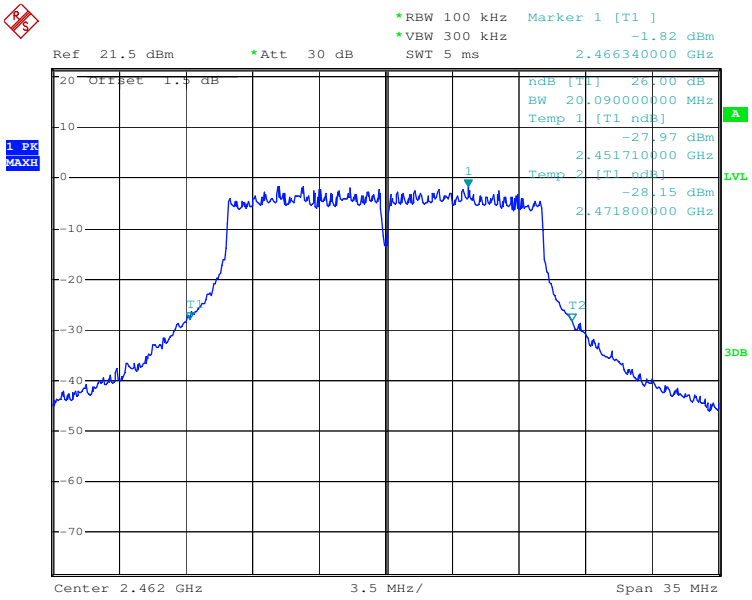
Test mode:	802.11g	Test channel:	Middle



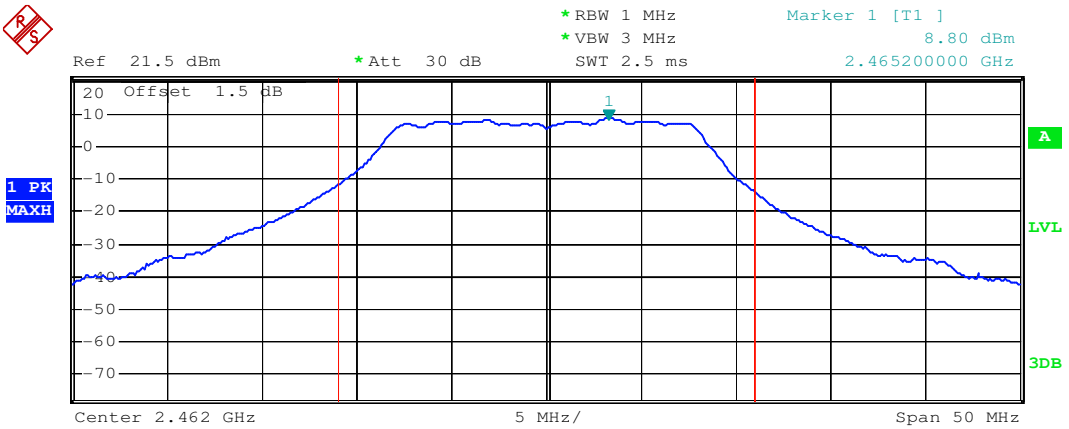
Tx Channel

Bandwidth 22 MHz Power 19.16 dBm

Test mode:	802.11g	Test channel:	Highest	-26 bandwidth



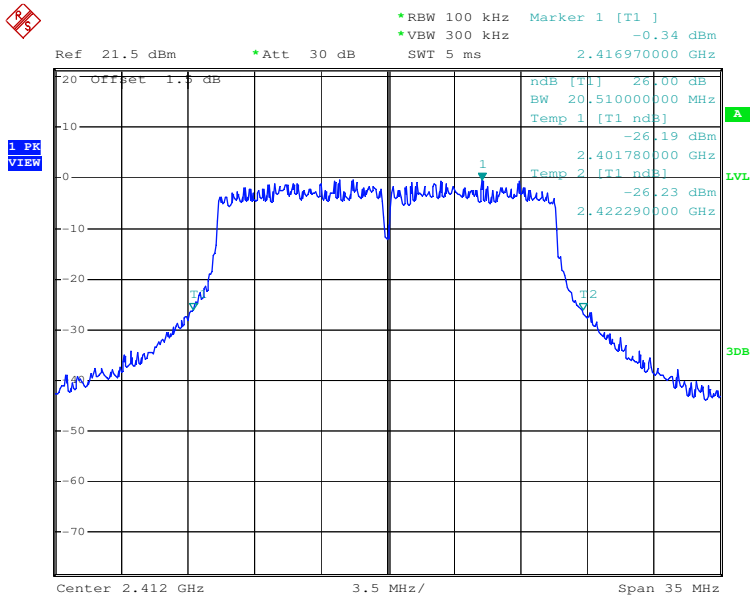
Test mode:	802.11g	Test channel:	Highest



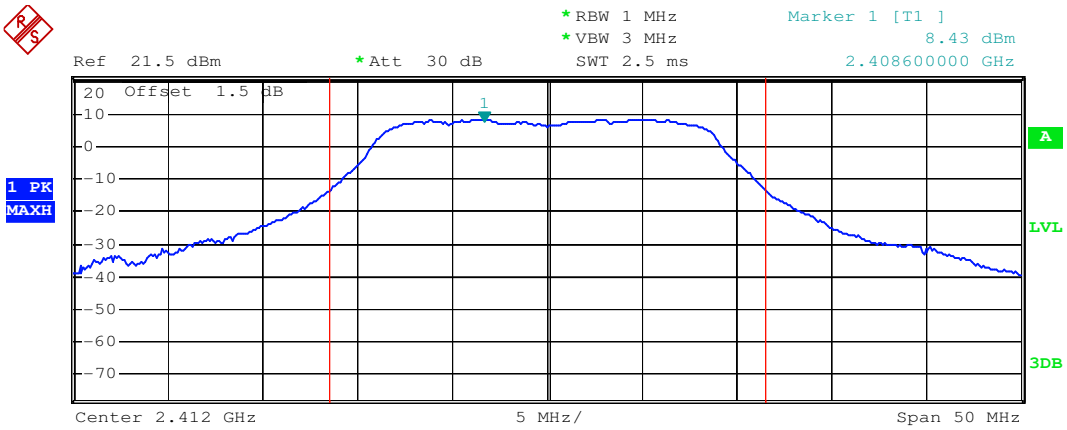
Tx Channel

Bandwidth 22 MHz Power 18.82 dBm

Test mode:	802.11n(HT20)	Test channel:	Lowest	-26 bandwidth



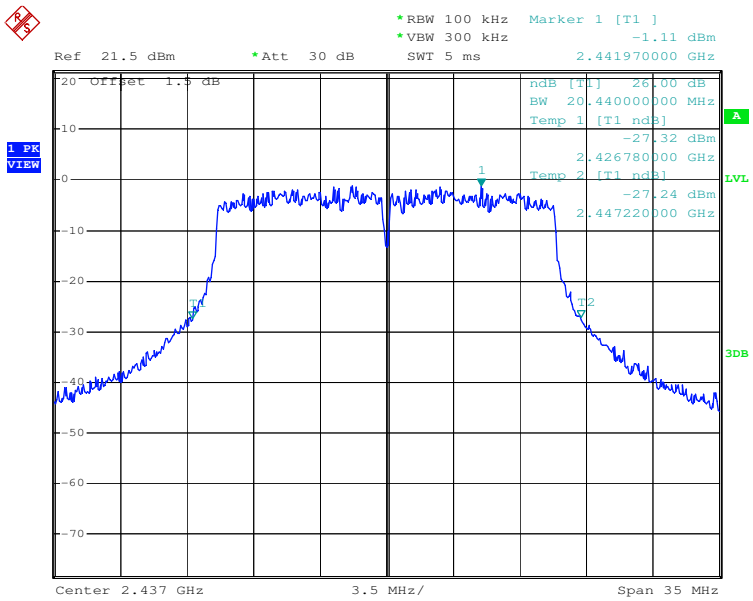
Test mode:	802.11n(HT20)	Test channel:	Lowest



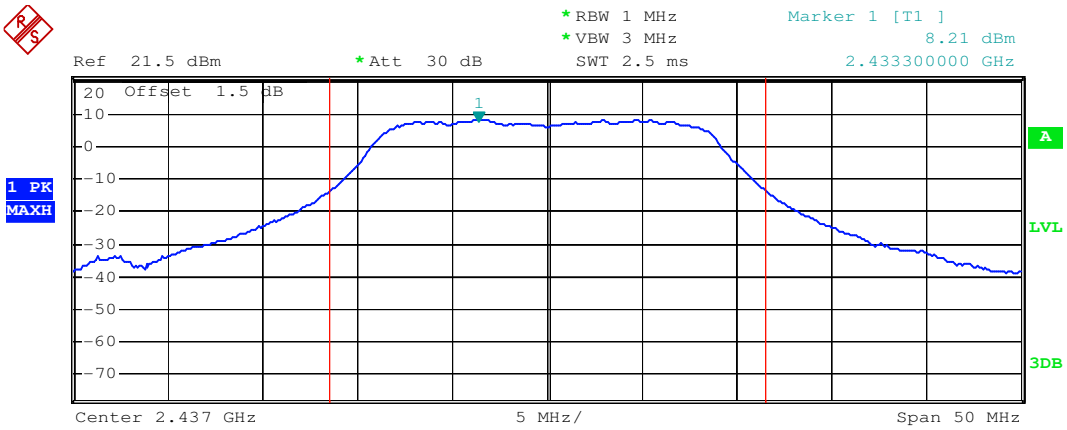
Tx Channel

Bandwidth 23 MHz Power 19.28 dBm

Test mode:	802.11n(HT20)	Test channel:	Middle	-26 bandwidth



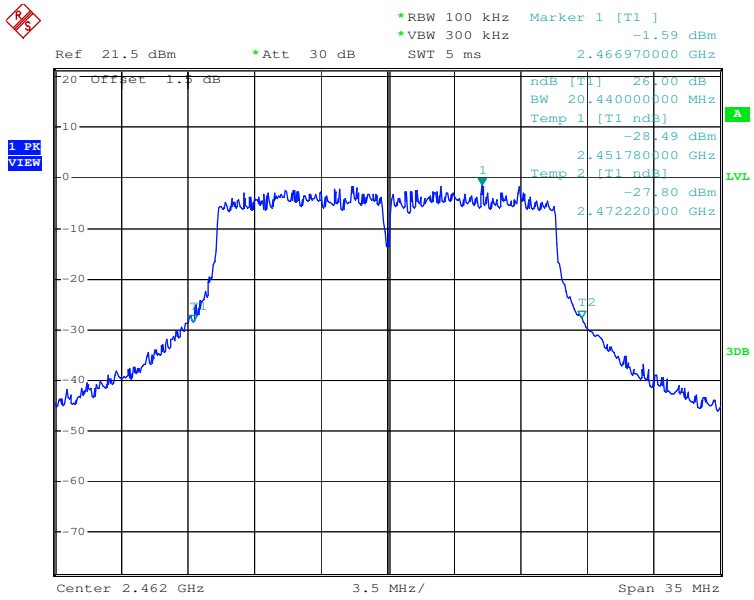
Test mode:	802.11n(HT20)	Test channel:	Middle



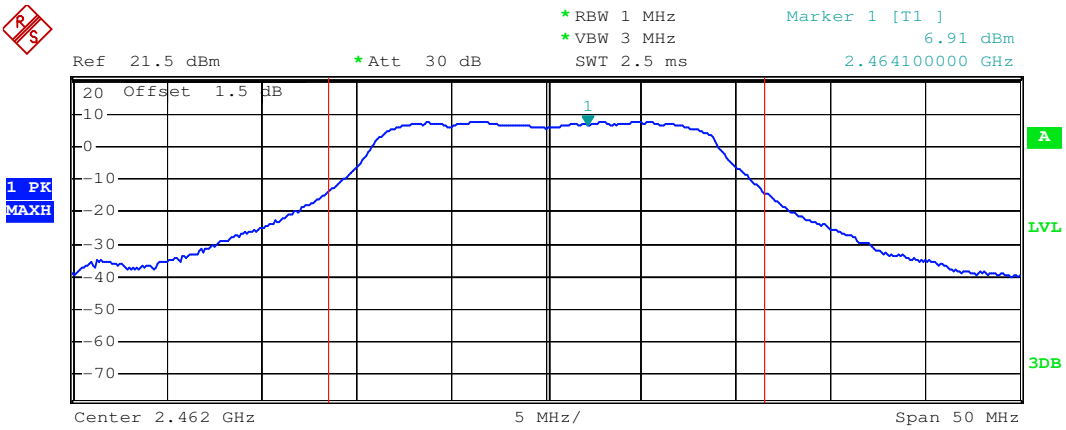
Tx Channel

Bandwidth 23 MHz Power 19.01 dBm

Test mode:	802.11n(HT20)	Test channel:	Highest	-26 bandwidth



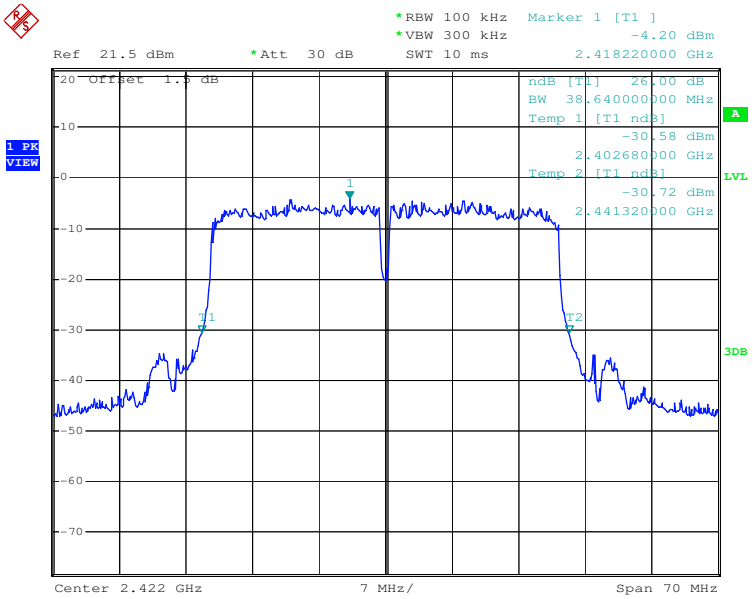
Test mode:	802.11n(HT20)	Test channel:	Highest



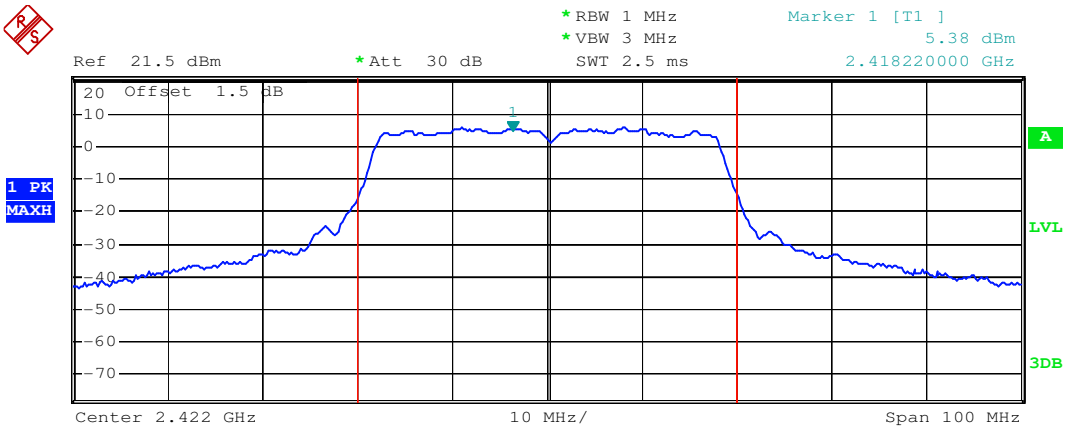
Tx Channel

Bandwidth 23 MHz Power 18.56 dBm

Test mode:	802.11n(HT40)	Test channel:	Lowest	-26 bandwidth



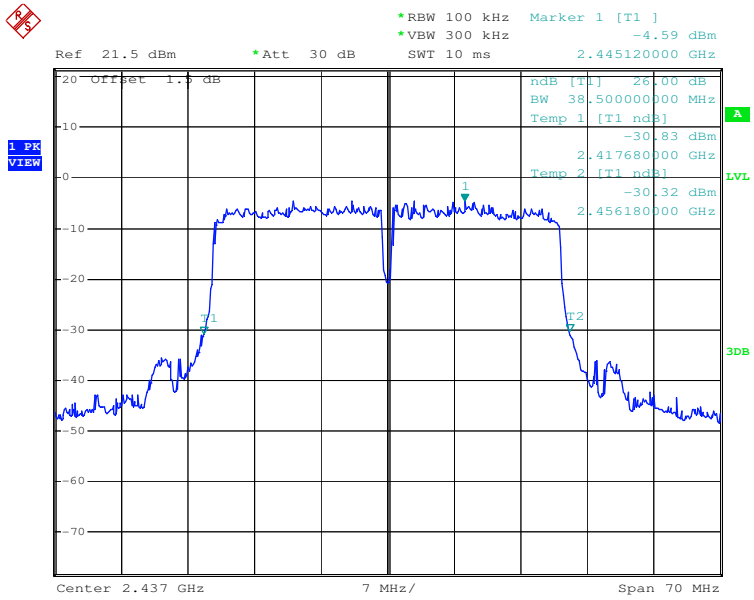
Test mode:	802.11n(HT40)	Test channel:	Lowest



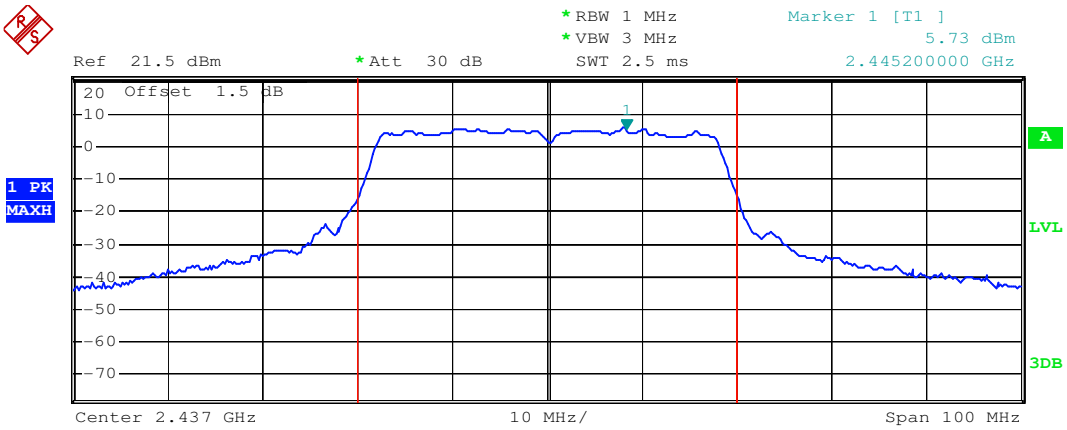
Tx Channel

Bandwidth 40 MHz Power 19.36 dBm

Test mode:	802.11n(HT40)	Test channel:	Middle	-26 bandwidth



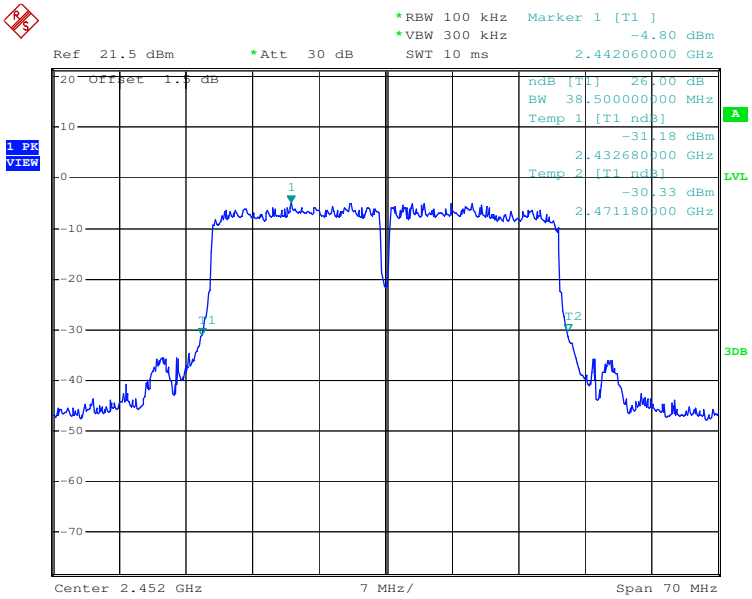
Test mode:	802.11n(HT40)	Test channel:	Middle



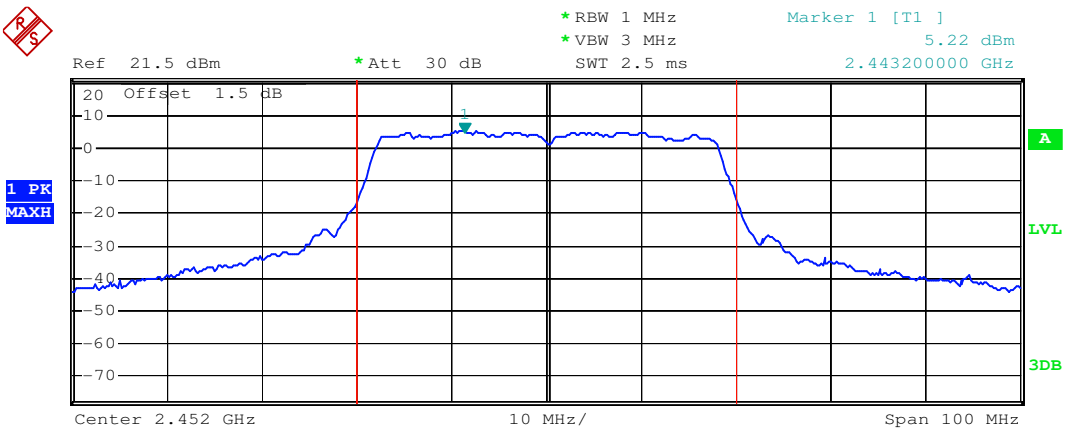
Tx Channel

Bandwidth 40 MHz Power 19.20 dBm

Test mode:	802.11n(HT40)	Test channel:	Highest	-26 bandwidth



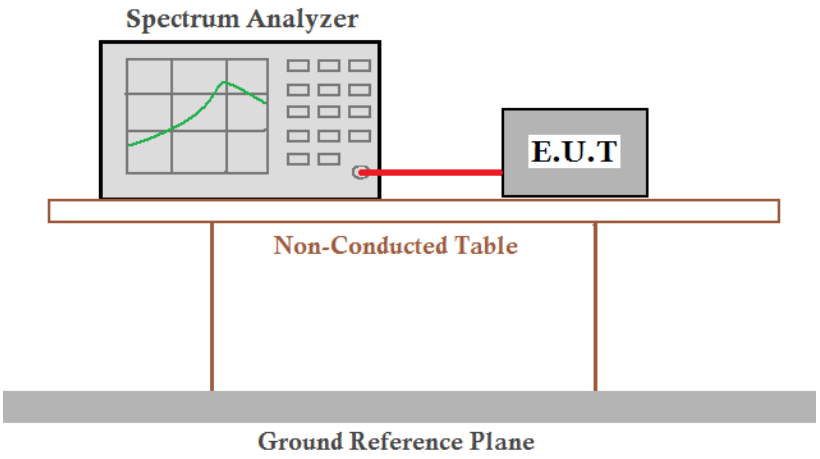
Test mode:	802.11n(HT40)	Test channel:	Highest



Tx Channel

Bandwidth 40 MHz Power 18.92 dBm

5.4 6dB Occupy Bandwidth

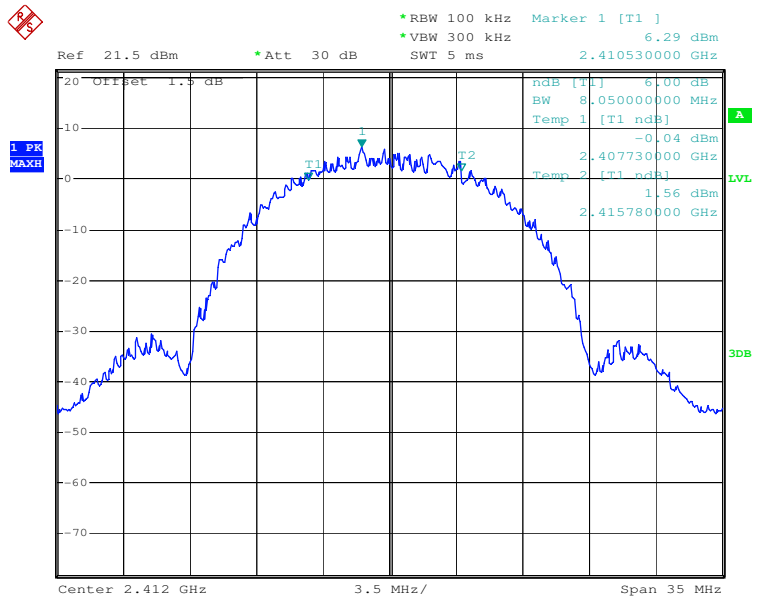
Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2009
Test Setup:	
Instruments Used:	Refer to section 4.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40)
Limit:	⩾500 kHz
Test Results:	Pass

Measurement Data

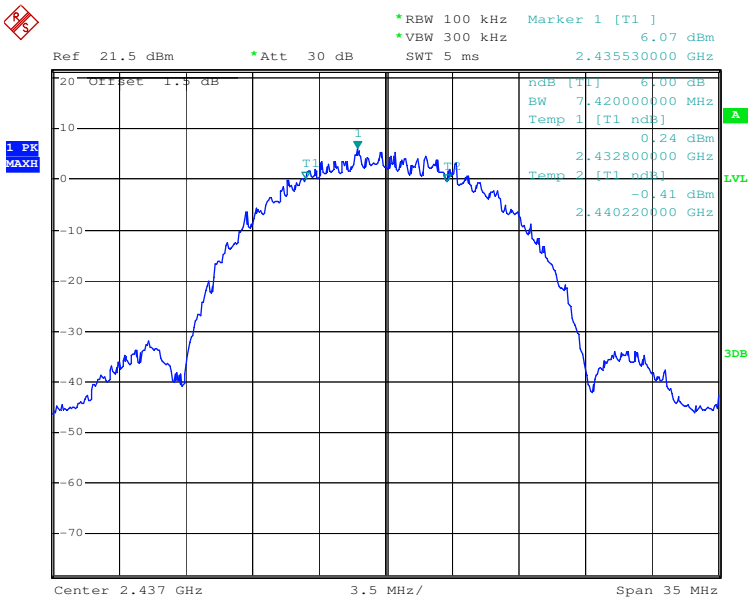
802.11b mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	8.05	⩾500	Pass
Middle	7.42	⩾500	Pass
Highest	6.79	⩾500	Pass
802.11g mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	16.73	⩾500	Pass
Middle	16.66	⩾500	Pass
Highest	16.59	⩾500	Pass
802.11n(HT20) mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	17.85	⩾500	Pass
Middle	17.85	⩾500	Pass
Highest	17.92	⩾500	Pass
802.11n(HT40) mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	36.68	⩾500	Pass
Middle	36.54	⩾500	Pass
Highest	36.68	⩾500	Pass

Test plot as follows:

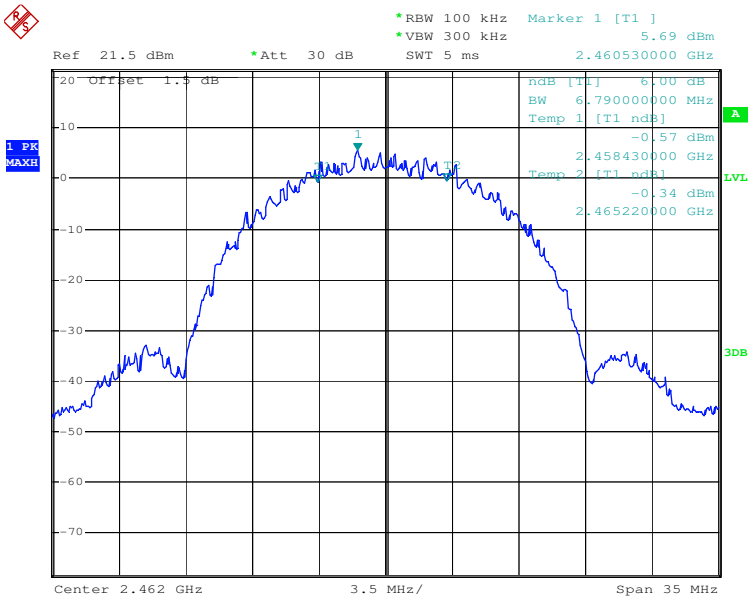
Test mode:	802.11b	Test channel:	Lowest



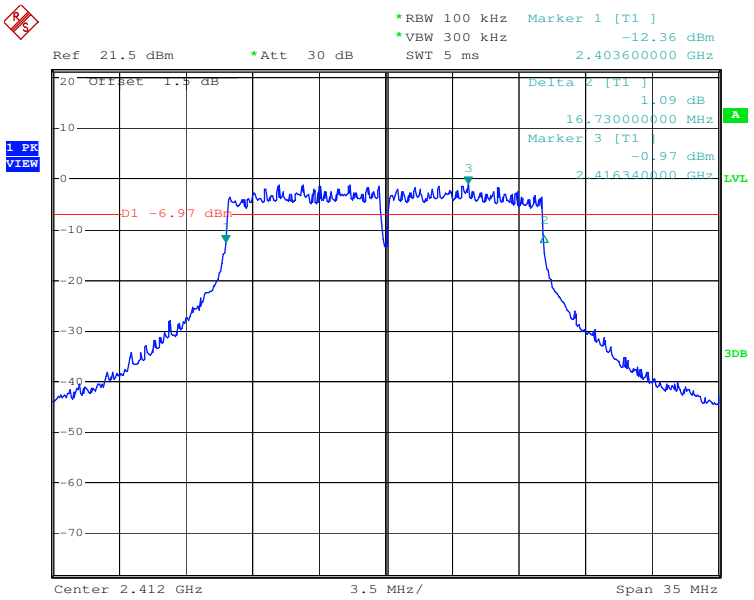
Test mode:	802.11b	Test channel:	Middle



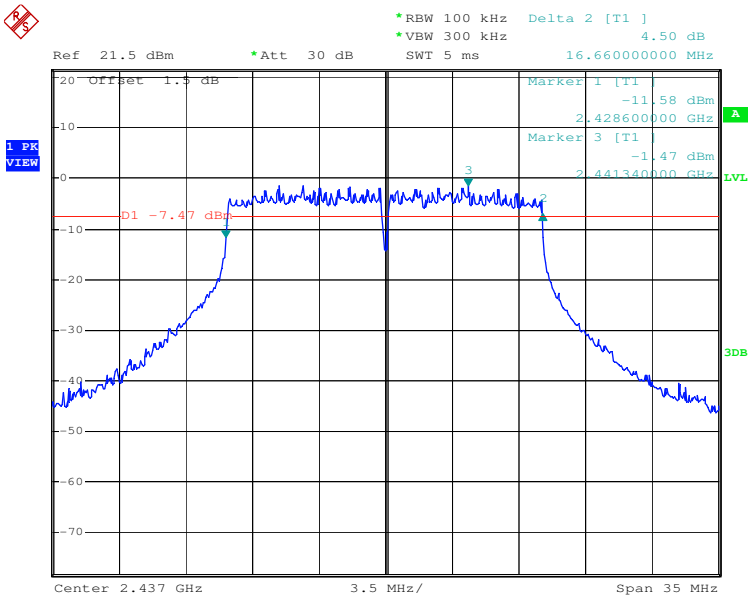
Test mode:	802.11b	Test channel:	Highest



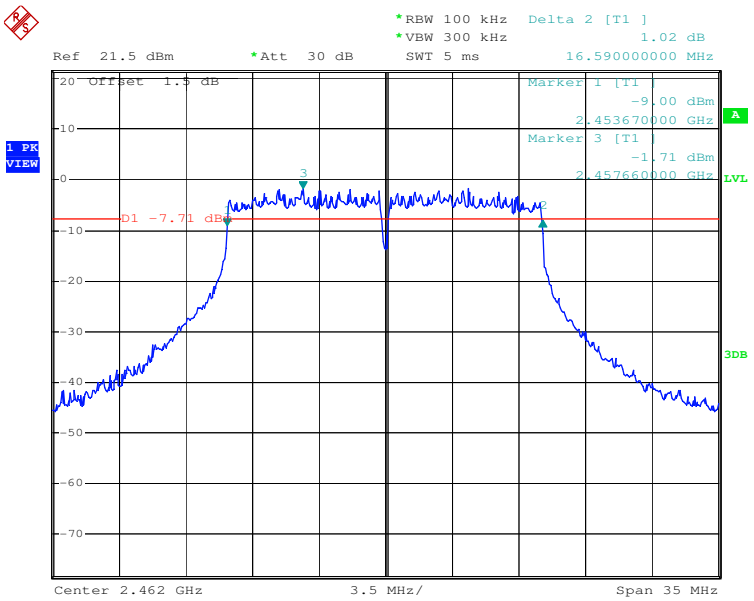
Test mode:	802.11g	Test channel:	Lowest



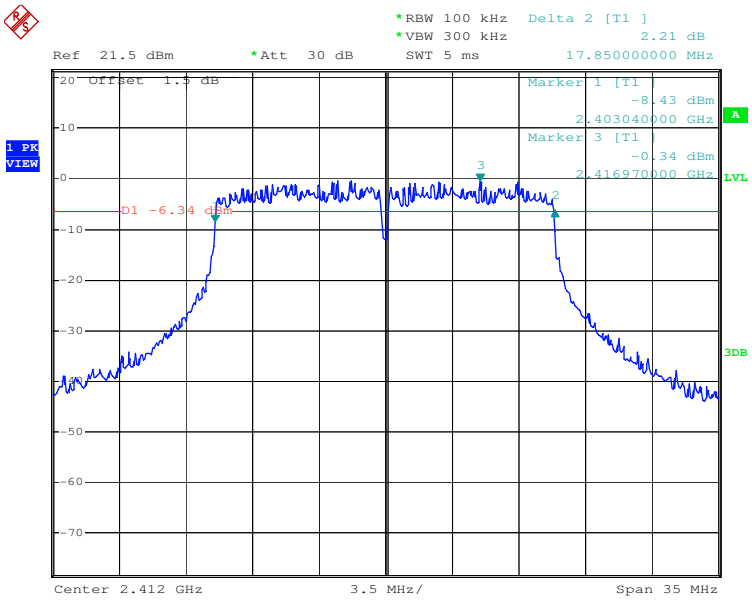
Test mode:	802.11g	Test channel:	Middle



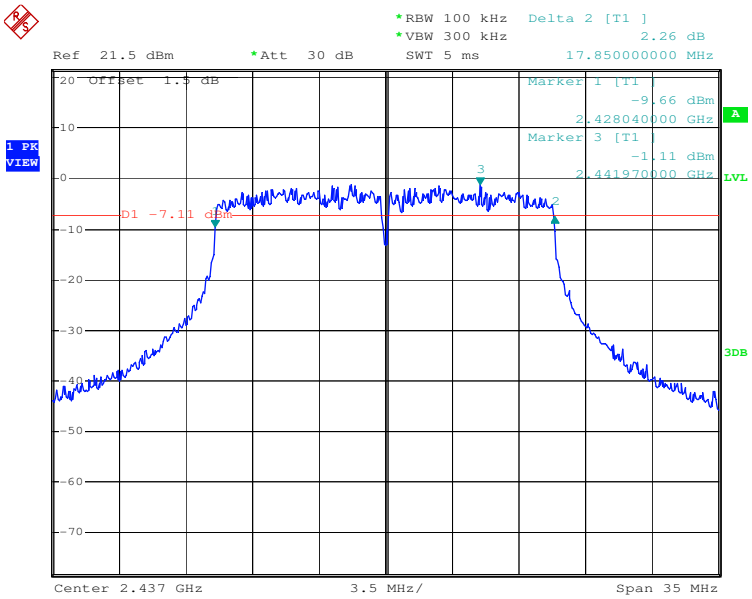
Test mode:	802.11g	Test channel:	Highest



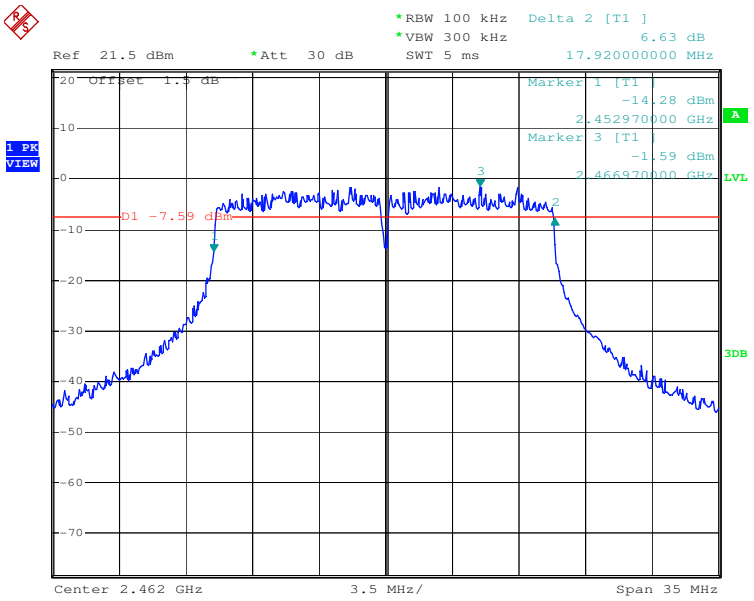
Test mode:	802.11n(HT20)	Test channel:	Lowest



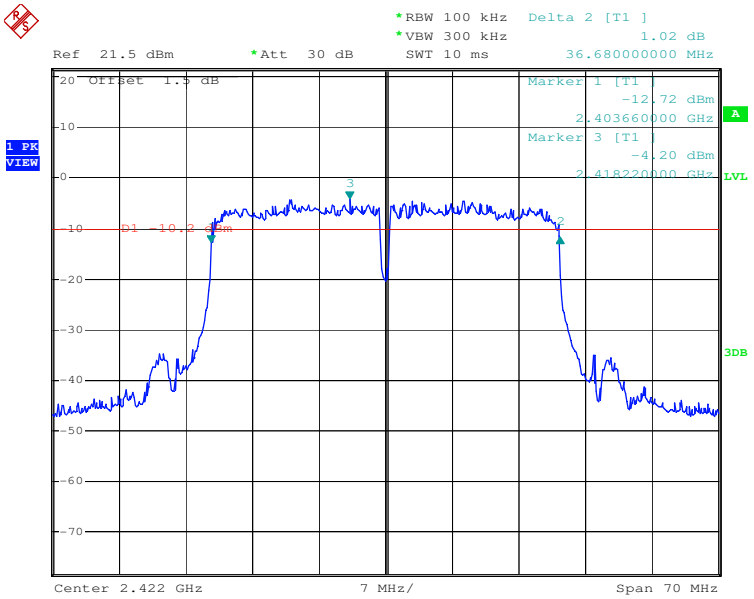
Test mode:	802.11n(HT20)	Test channel:	Middle



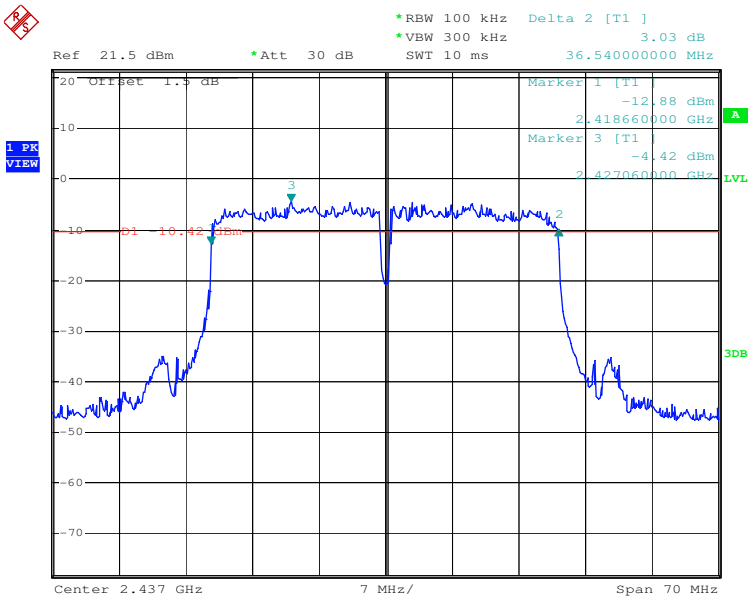
Test mode:	802.11n(HT20)	Test channel:	Highest



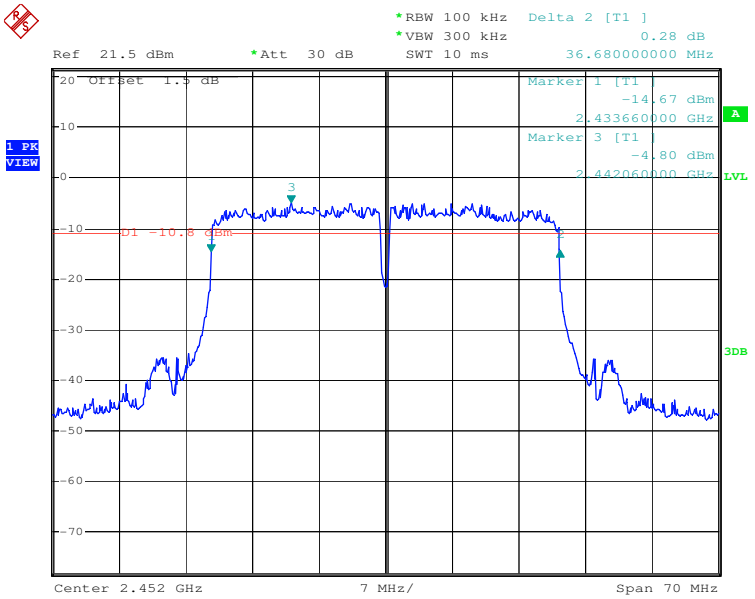
Test mode:	802.11n(HT40)	Test channel:	Lowest



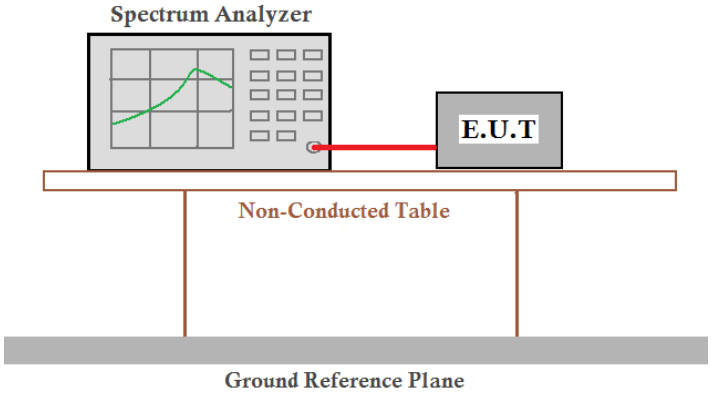
Test mode:	802.11n(HT40)	Test channel:	Middle



Test mode:	802.11n(HT40)	Test channel:	Highest



5.5 Power Spectral Density

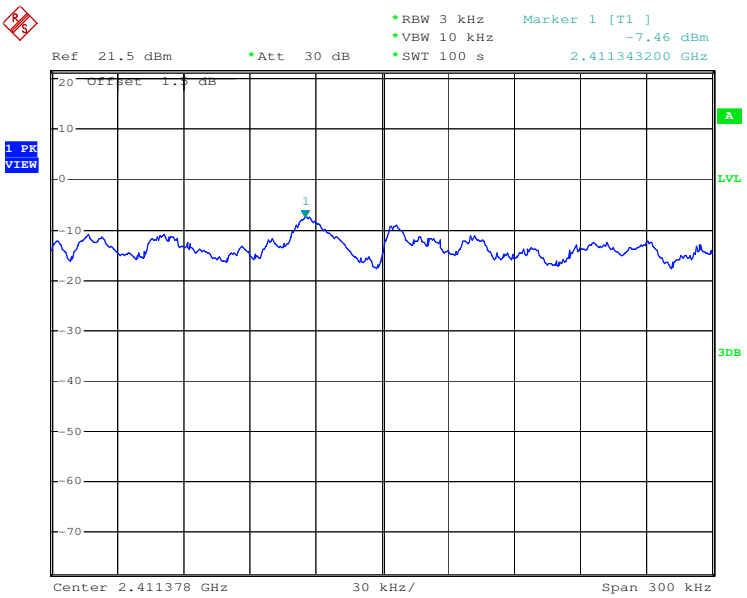
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2009
Test Setup:	 *Remark:* *Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.*
Test Instruments:	Refer to section 4.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40).
Limit:	≤8.00dBm
Test Results:	Pass

Measurement Data

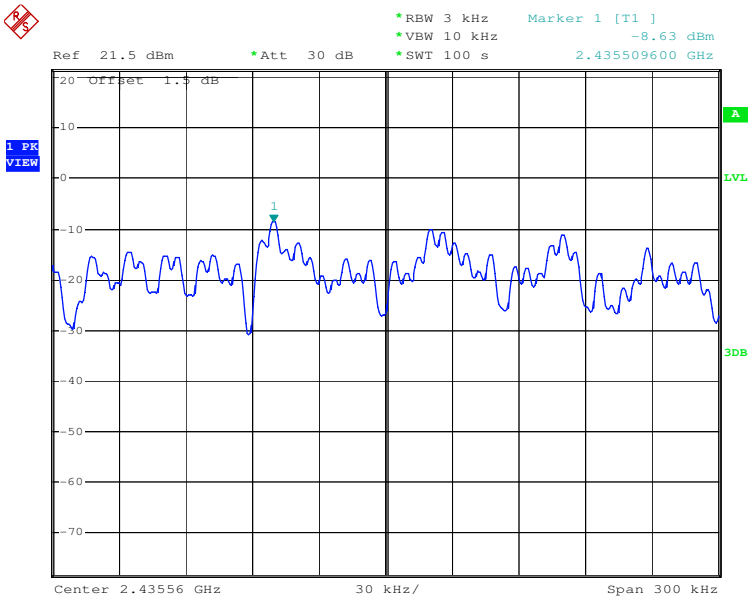
802.11b mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-7.46	≤8.00	Pass
Middle	-8.63	≤8.00	Pass
Highest	-9.15	≤8.00	Pass
802.11g mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-16.93	≤8.00	Pass
Middle	-16.27	≤8.00	Pass
Highest	-17.58	≤8.00	Pass
802.11n (HT20) mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-15.59	≤8.00	Pass
Middle	-16.17	≤8.00	Pass
Highest	-17.06	≤8.00	Pass
802.11n(HT40) mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm)	Result
Lowest	-18.70	≤8.00	Pass
Middle	-18.34	≤8.00	Pass
Highest	-18.52	≤8.00	Pass

Test plot as follows:

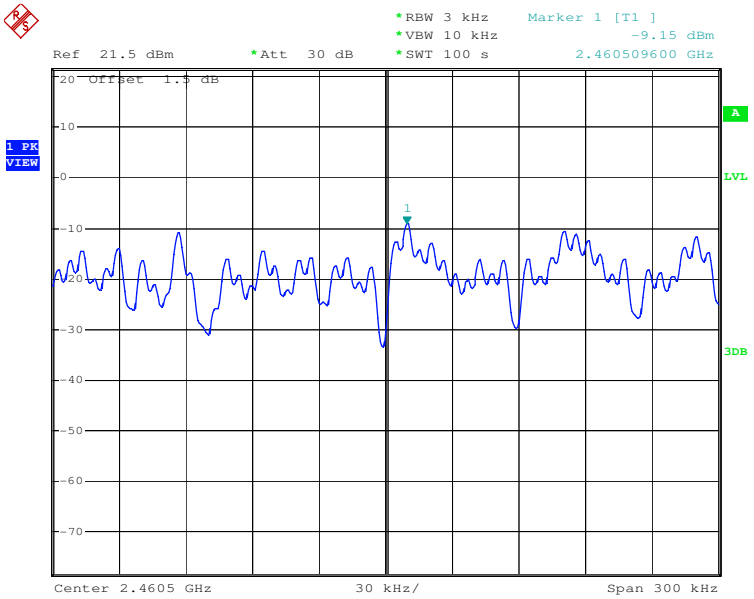
Test mode:	802.11b	Test channel:	Lowest



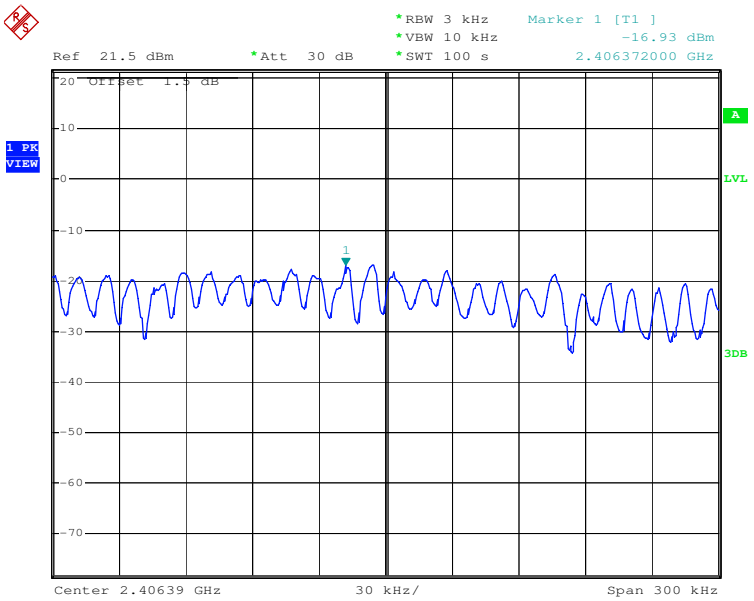
Test mode:	802.11b	Test channel:	Middle



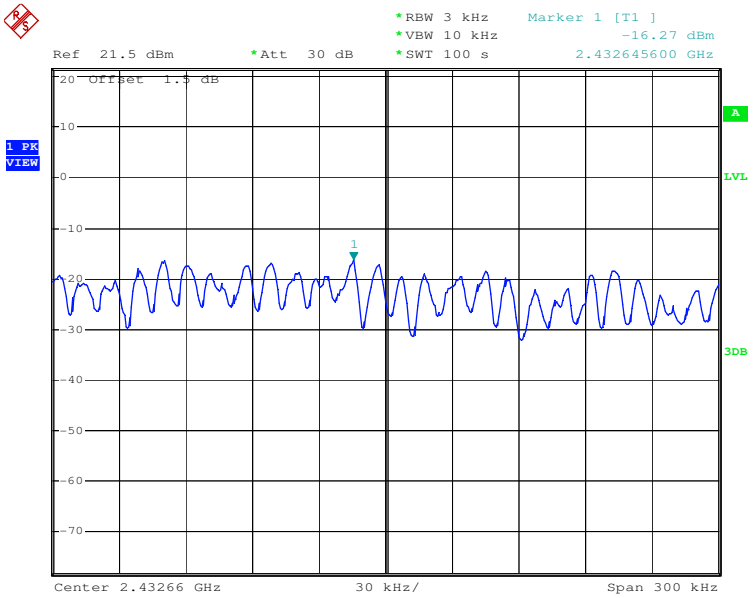
Test mode:	802.11b	Test channel:	Highest



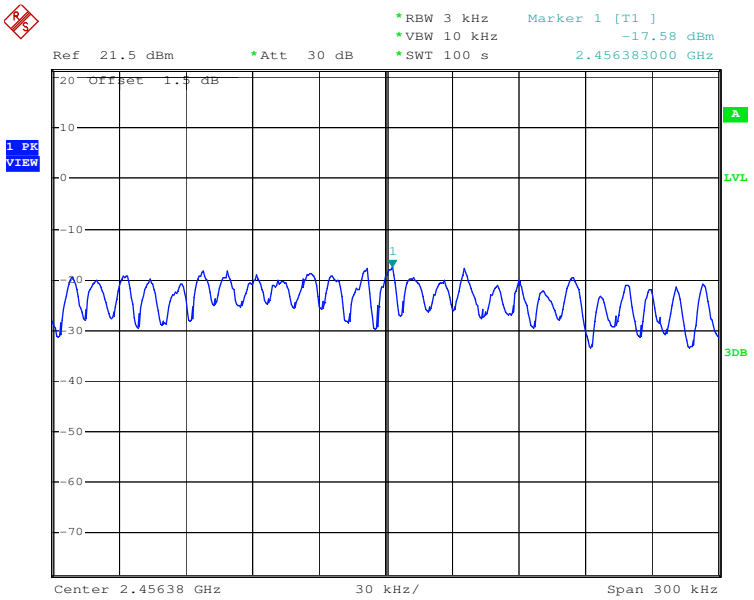
Test mode:	802.11g	Test channel:	Lowest



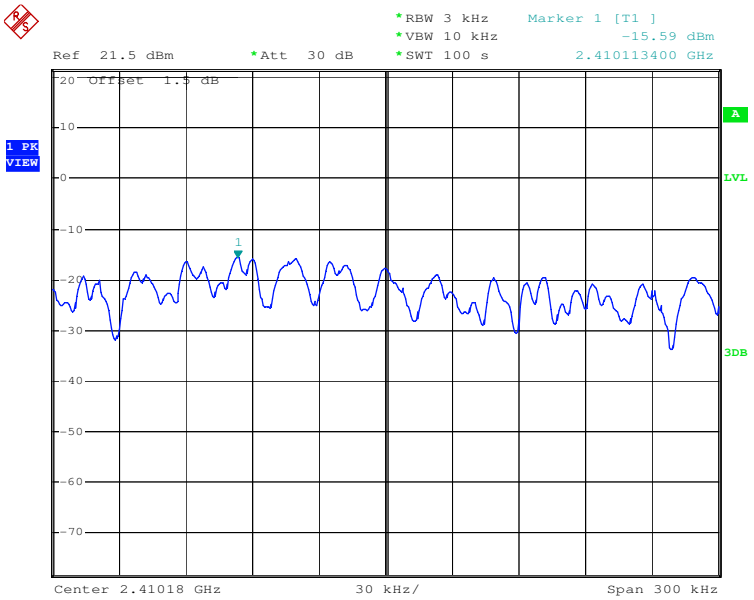
Test mode:	802.11g	Test channel:	Middle



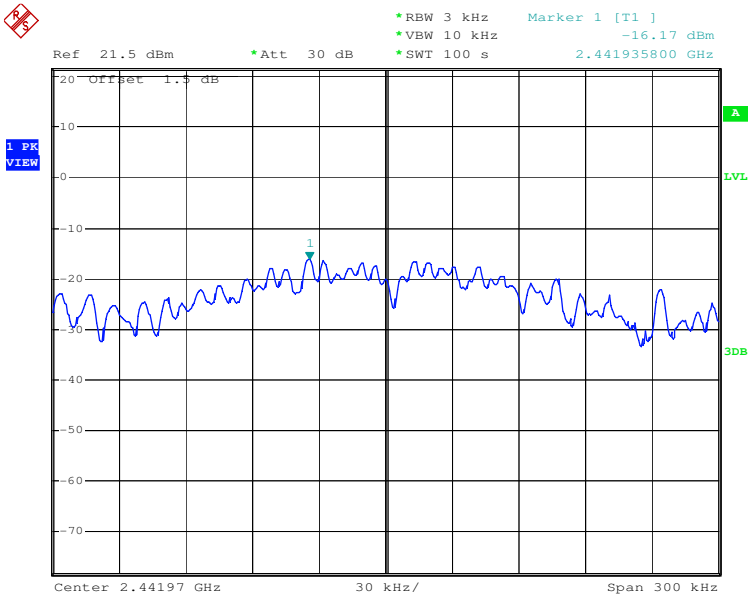
Test mode:	802.11g	Test channel:	Highest



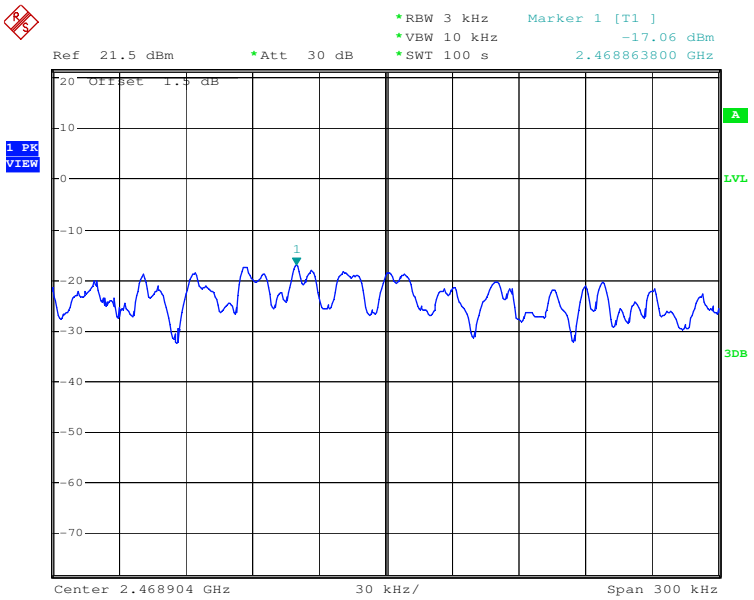
Test mode:	802.11n (HT20)	Test channel:	Lowest



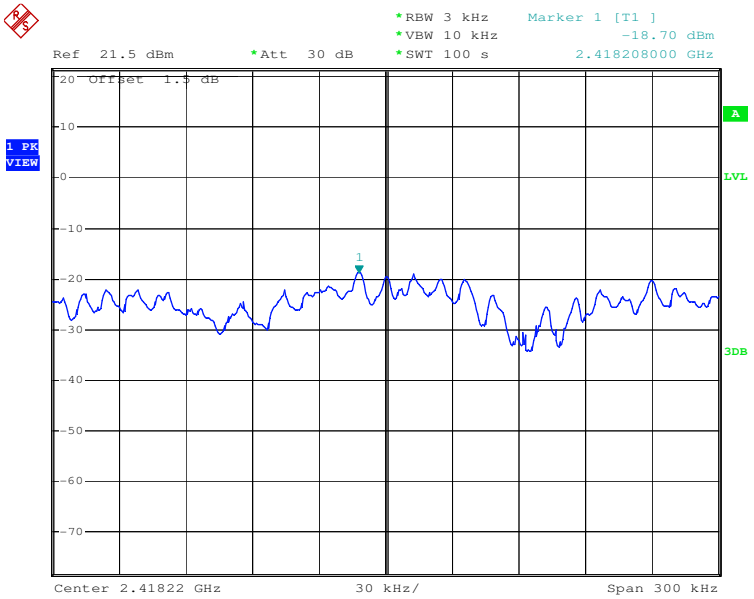
Test mode:	802.11n (HT20)	Test channel:	Middle



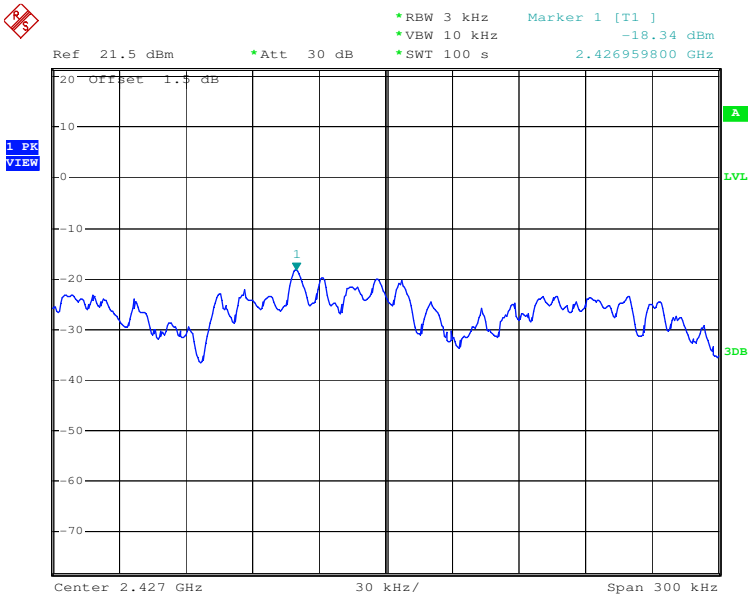
Test mode:	802.11n (HT20)	Test channel:	Highest



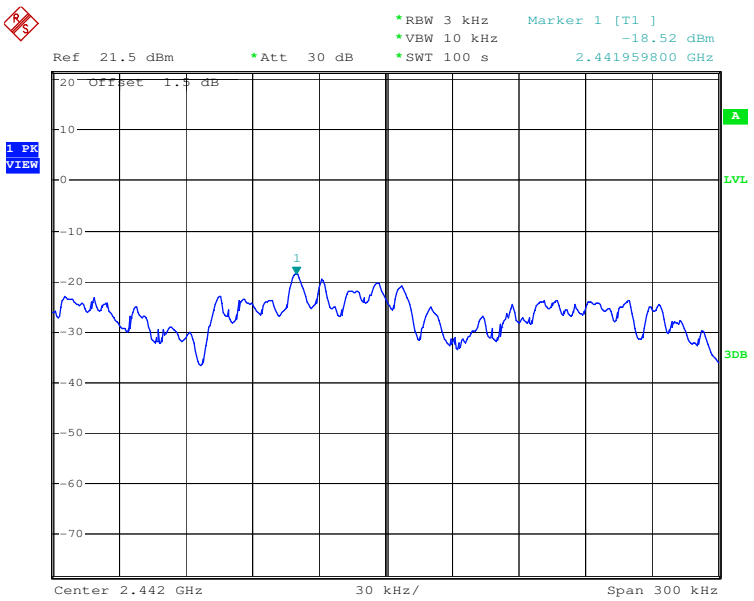
Test mode:	802.11n (HT40)	Test channel:	Lowest



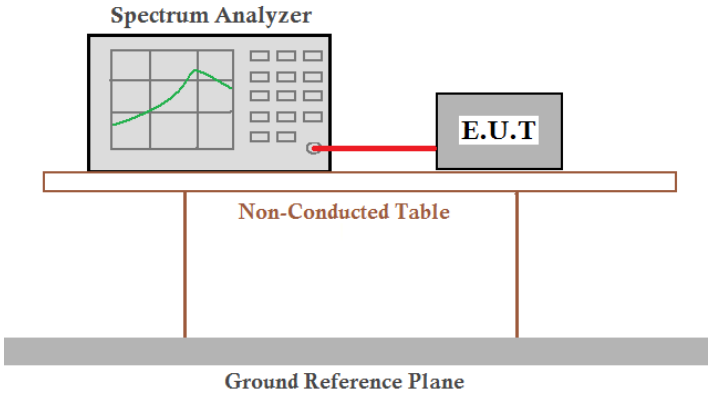
Test mode:	802.11n (HT40)	Test channel:	Middle



Test mode:	802.11n (HT40)	Test channel:	Highest

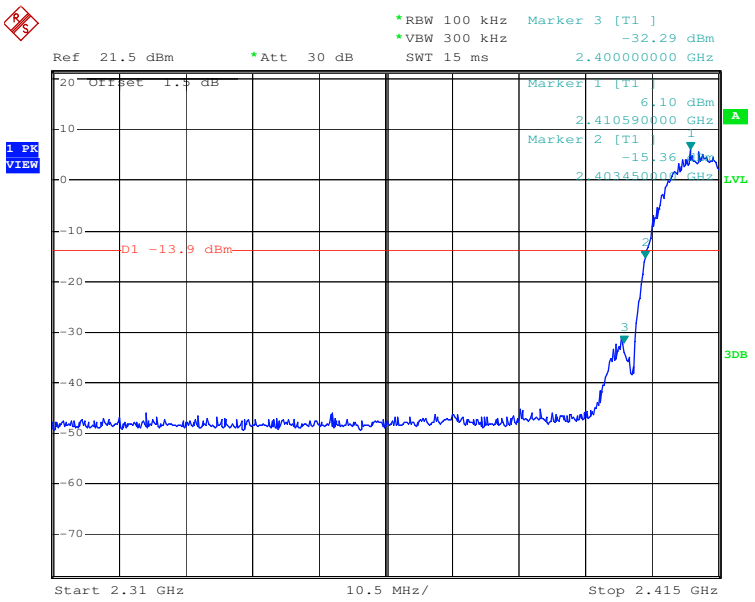


5.6 Band-edge for RF Conducted Emissions

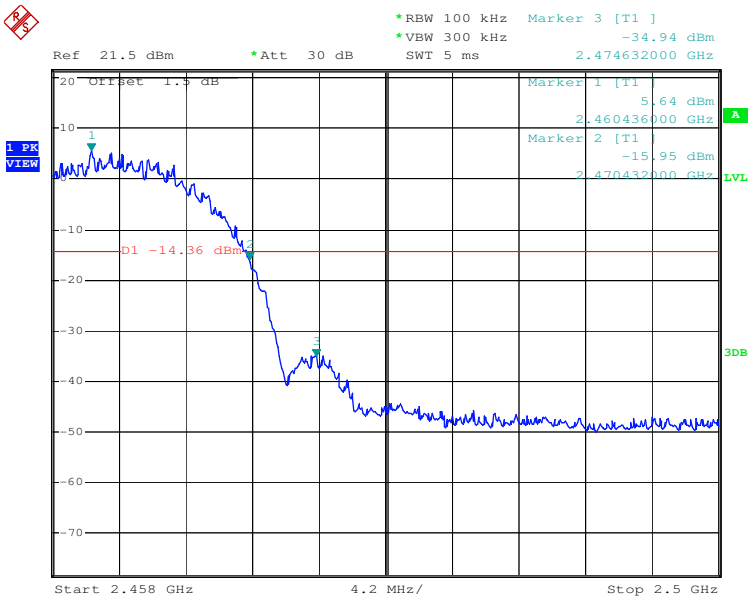
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2009
Test Setup:	 *Remark:* *Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.*
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40).
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

Test plot as follows:

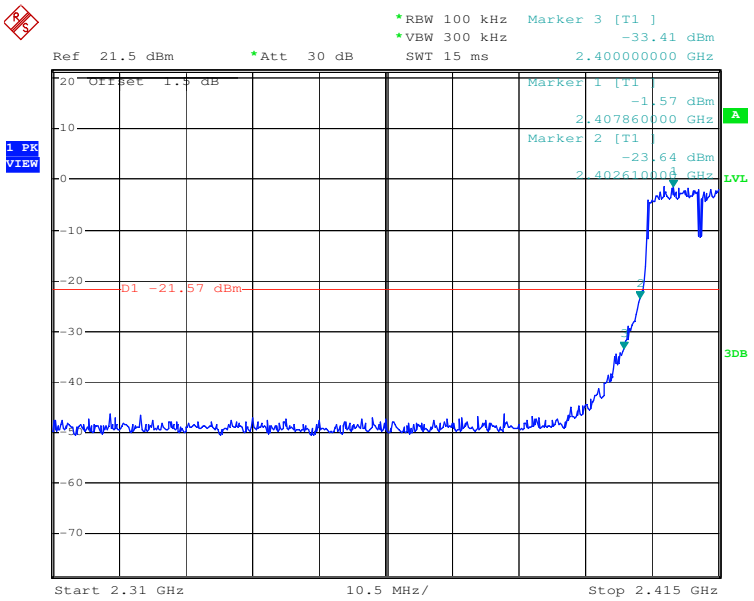
Test mode:	802.11b	Test channel:	Lowest



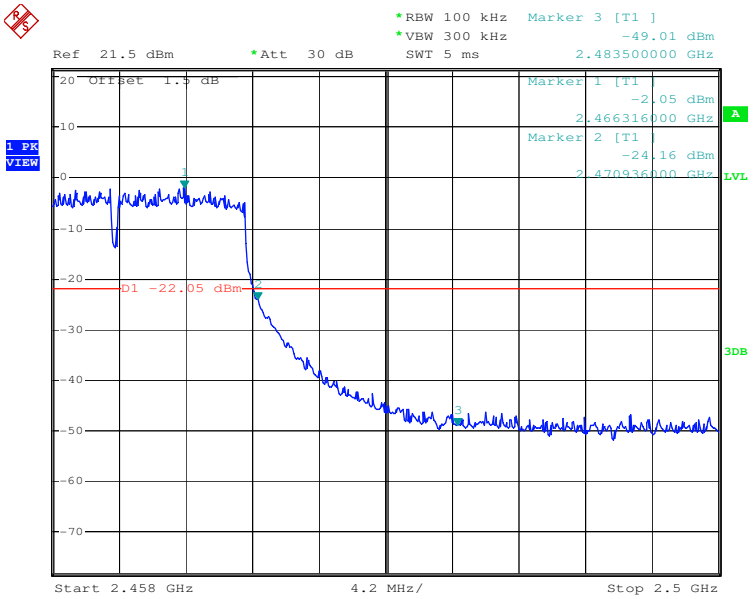
Test mode:	802.11b	Test channel:	Highest



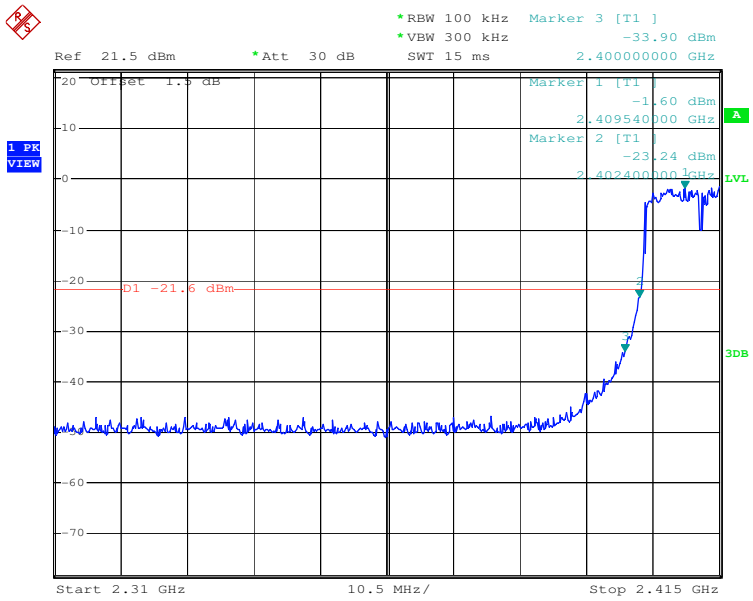
Test mode:	802.11g	Test channel:	Lowest



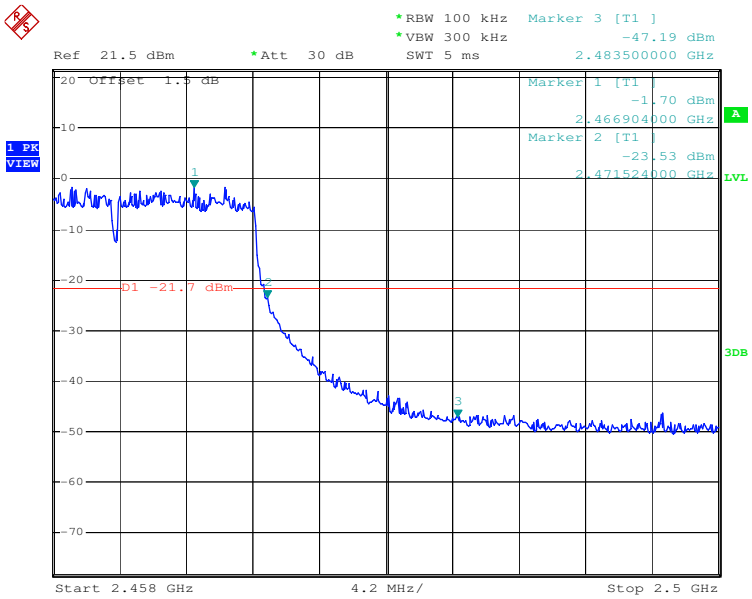
Test mode:	802.11g	Test channel:	Highest



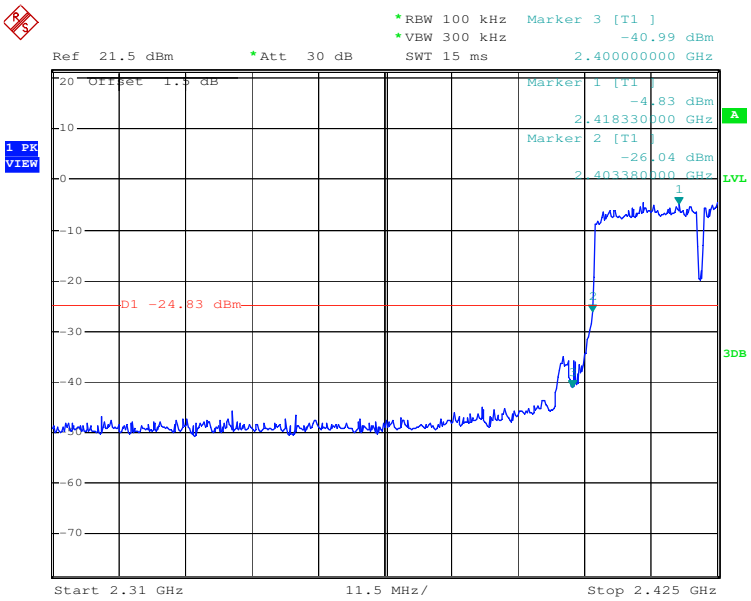
Test mode:	802.11n (HT20)	Test channel:	Lowest



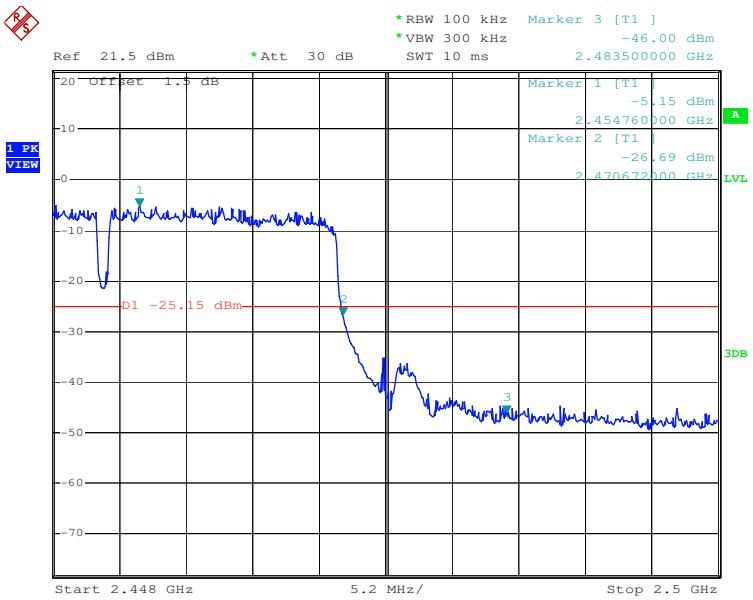
Test mode:	802.11n (HT20)	Test channel:	Highest



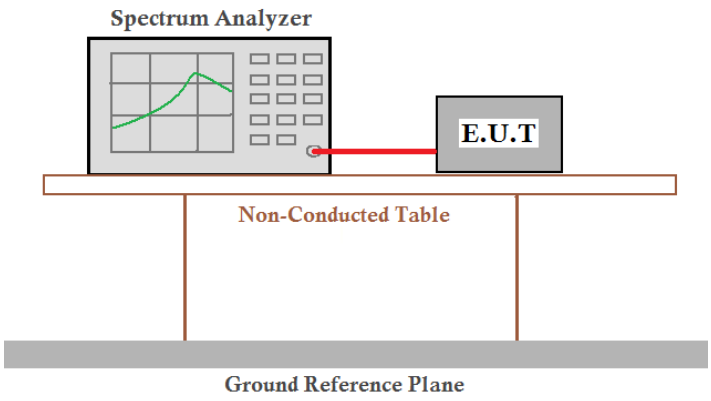
Test mode:	802.11n (HT40)	Test channel:	Lowest



Test mode:	802.11n (HT40)	Test channel:	Highest

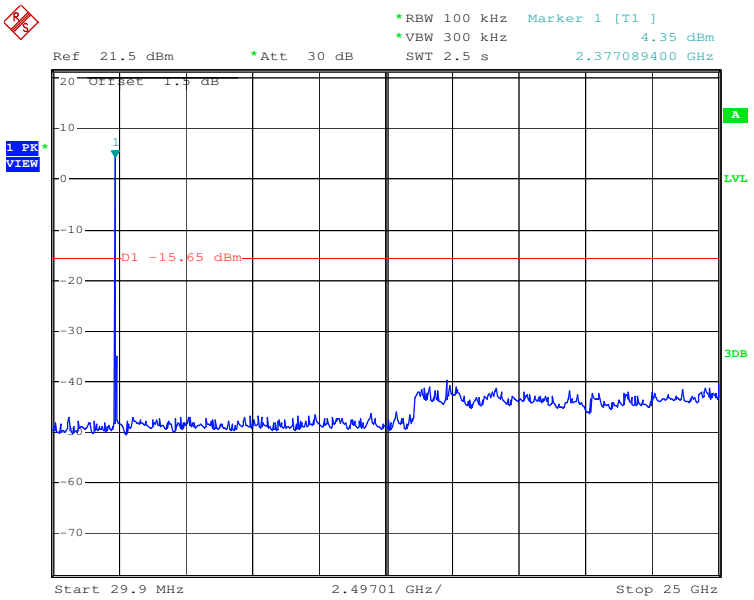


5.7 RF Conducted Spurious Emissions

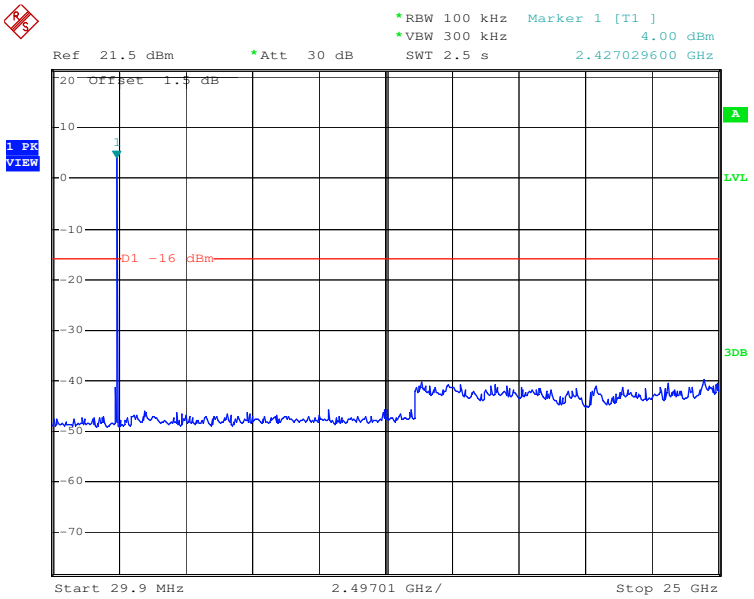
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2009
Test Setup:	 *Remark:* *Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.*
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40).
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

Test plot as follows:

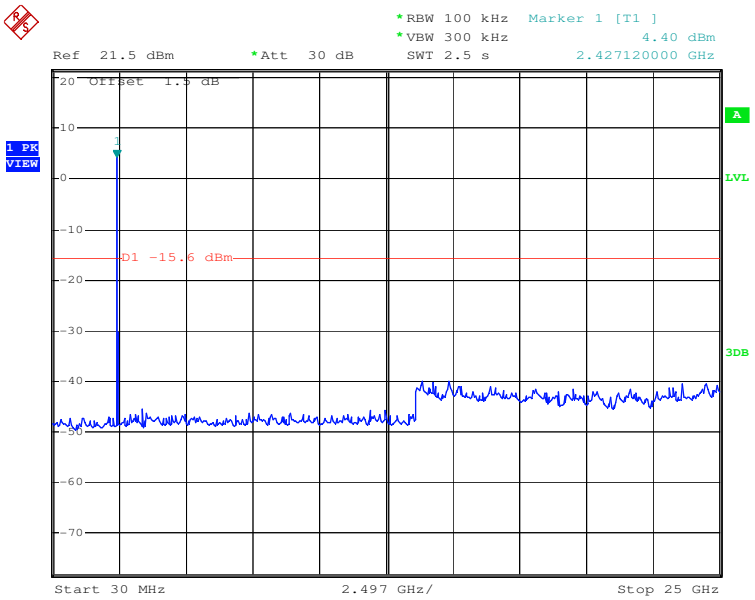
Test mode:	802.11b	Test channel:	Lowest



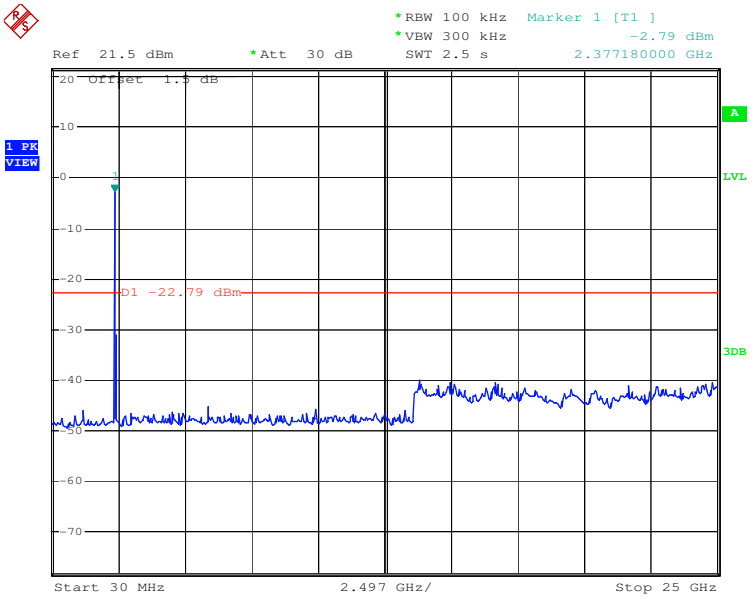
Test mode:	802.11b	Test channel:	Middle



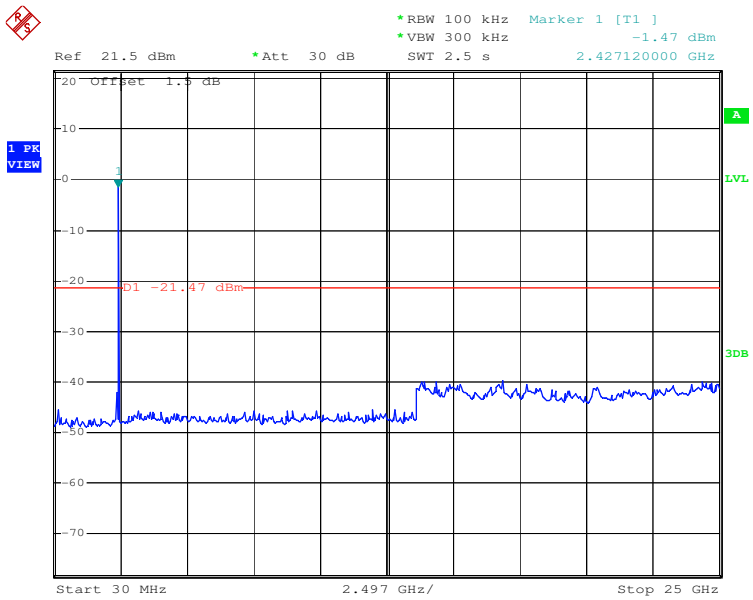
Test mode:	802.11b	Test channel:	Highest



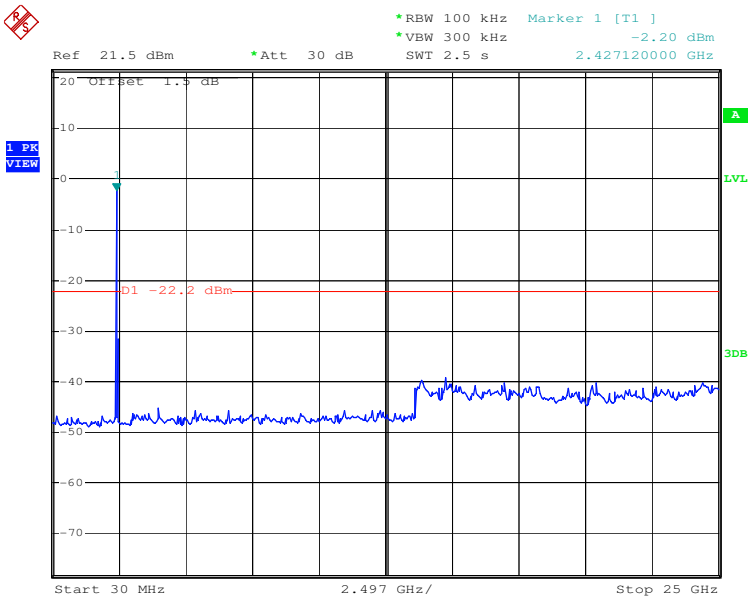
Test mode:	802.11g	Test channel:	Lowest



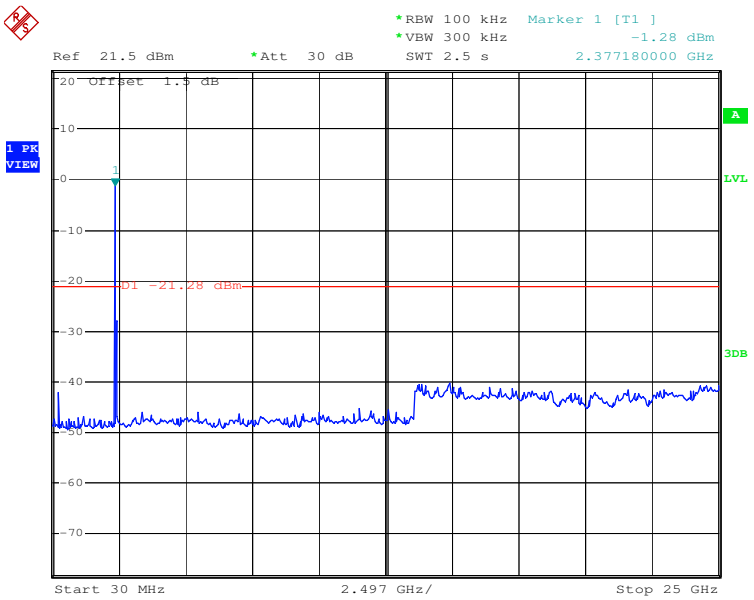
Test mode:	802.11g	Test channel:	Middle



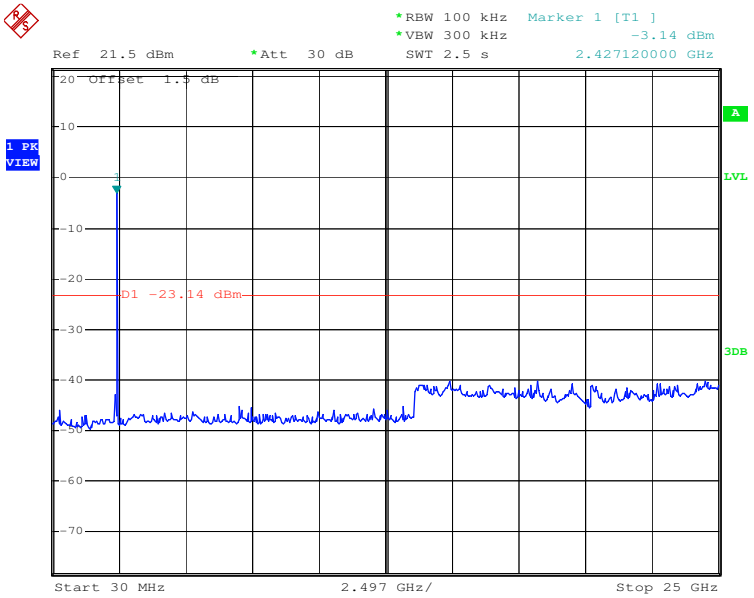
Test mode:	802.11g	Test channel:	Highest



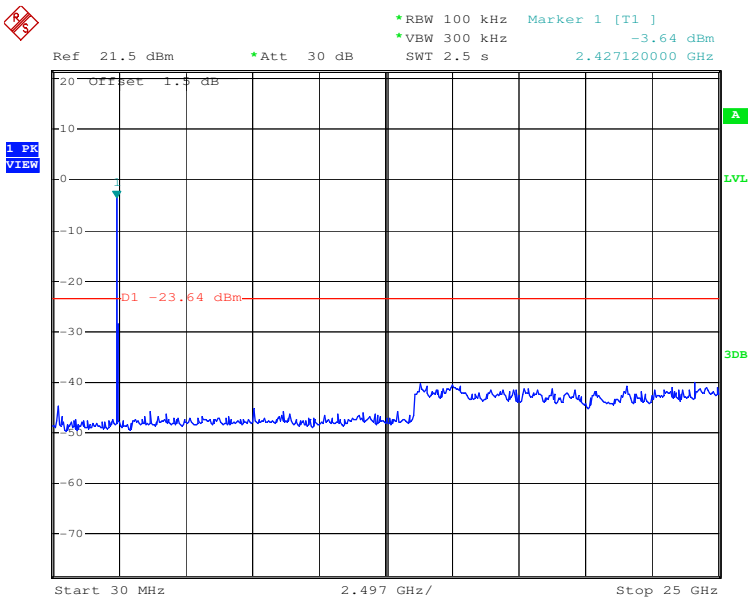
Test mode:	802.11n (HT20)	Test channel:	Lowest



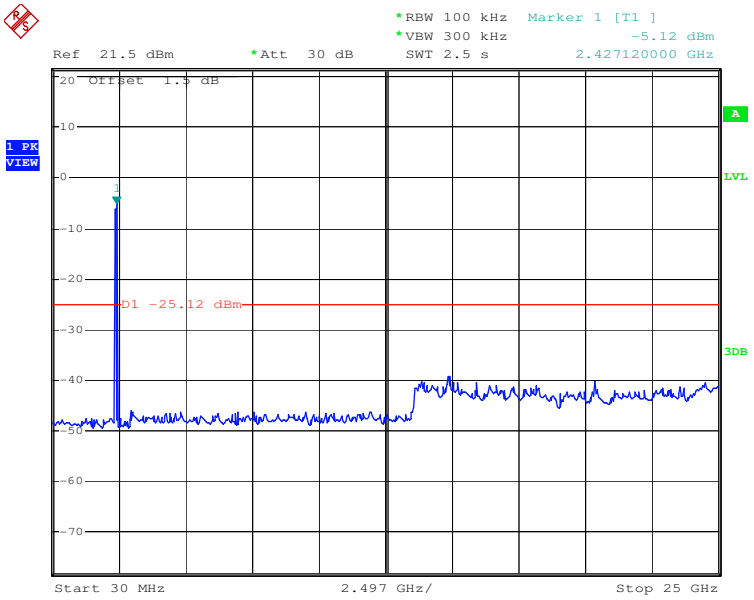
Test mode:	802.11n (HT20)	Test channel:	Middle



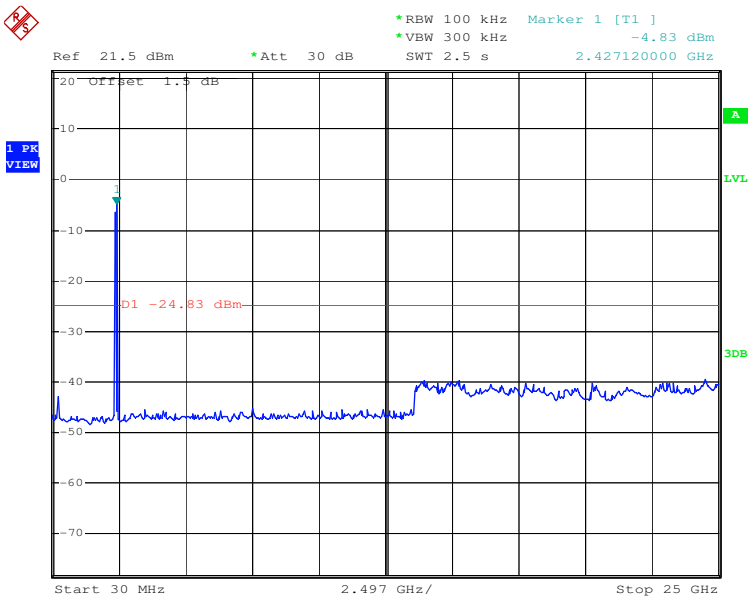
Test mode:	802.11n (HT20)	Test channel:	Highest



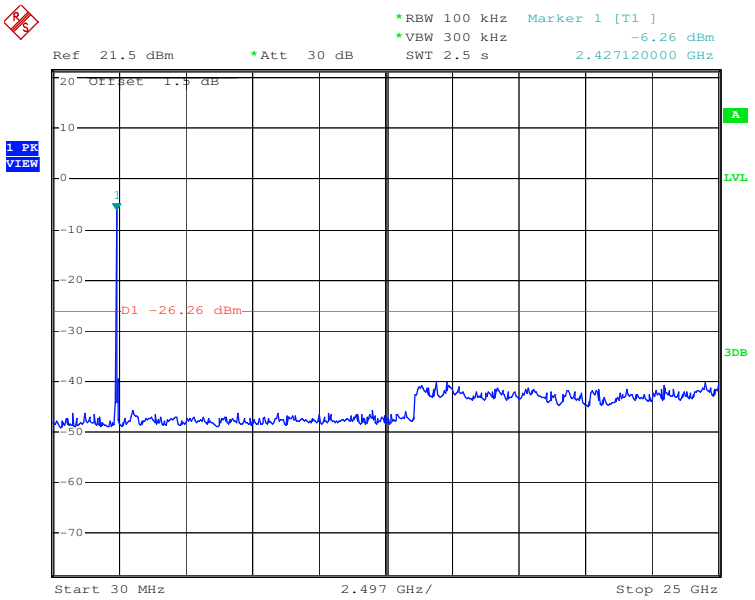
Test mode:	802.11n (HT40)	Test channel:	Lowest



Test mode:	802.11n (HT40)	Test channel:	Middle



Test mode:	802.11n (HT40)	Test channel:	Highest



5.8 Radiated Spurious Emissions

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2009
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak Value
Above 1GHz	Peak	1MHz	3MHz	Peak Value
	Peak	1MHz	10Hz	Average Value

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test Setup:

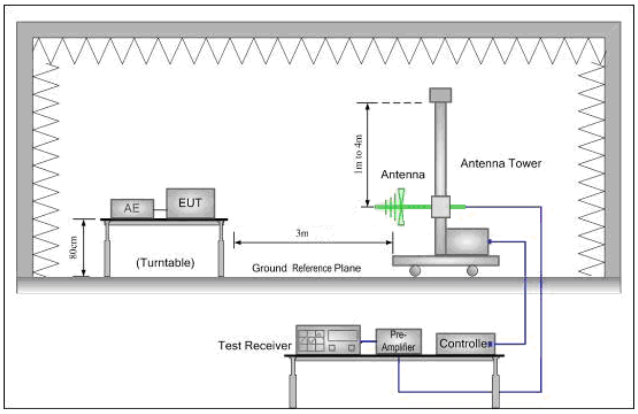


Figure 1. 30MHz to 1GHz

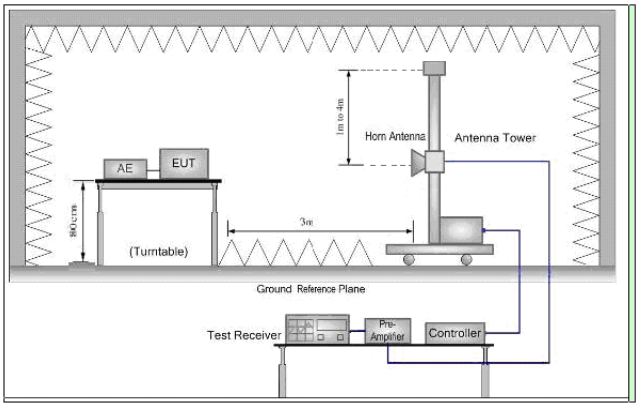


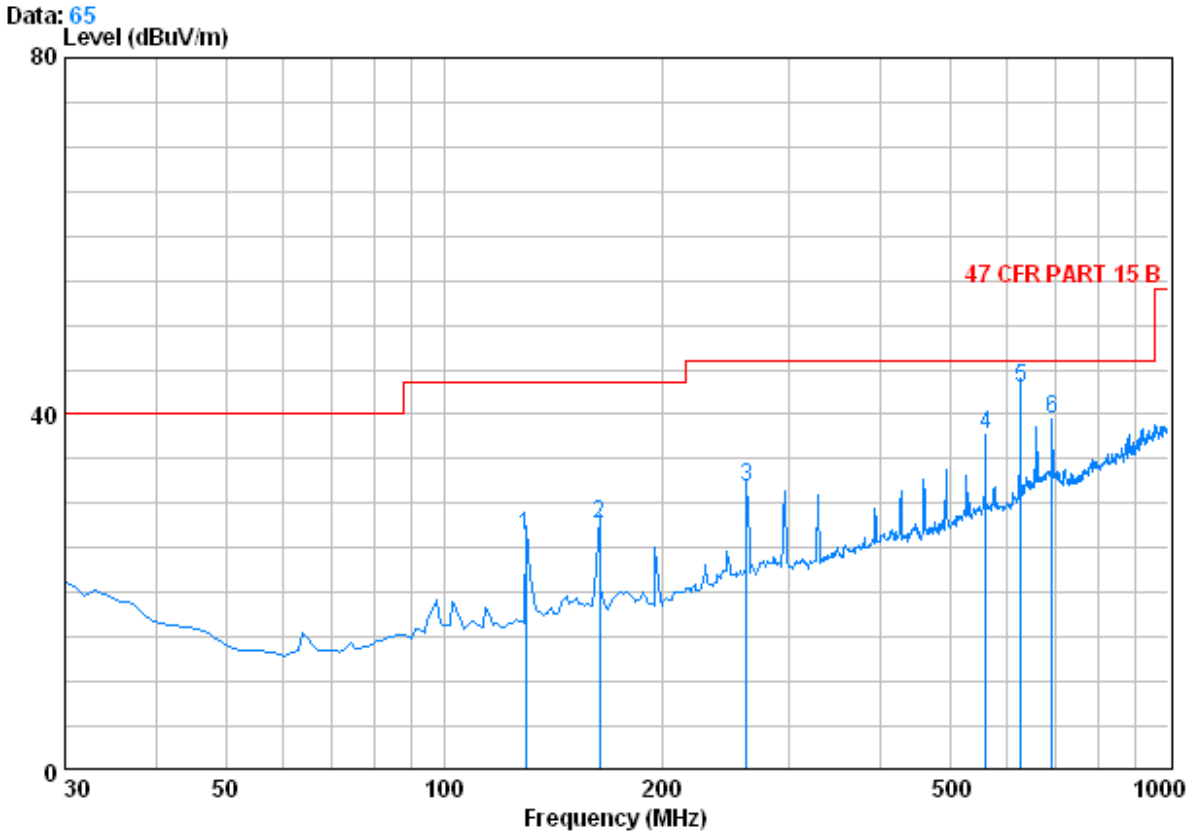
Figure 2. Above 1 GHz

Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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 antenna height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel ,the middle channel ,the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case. Only the test worst case mode is recorded in the report. i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40).
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

5.8.1 Radiated emission below 1GHz

30MHz~1GHz（QP）	
Test mode:	Transmitting

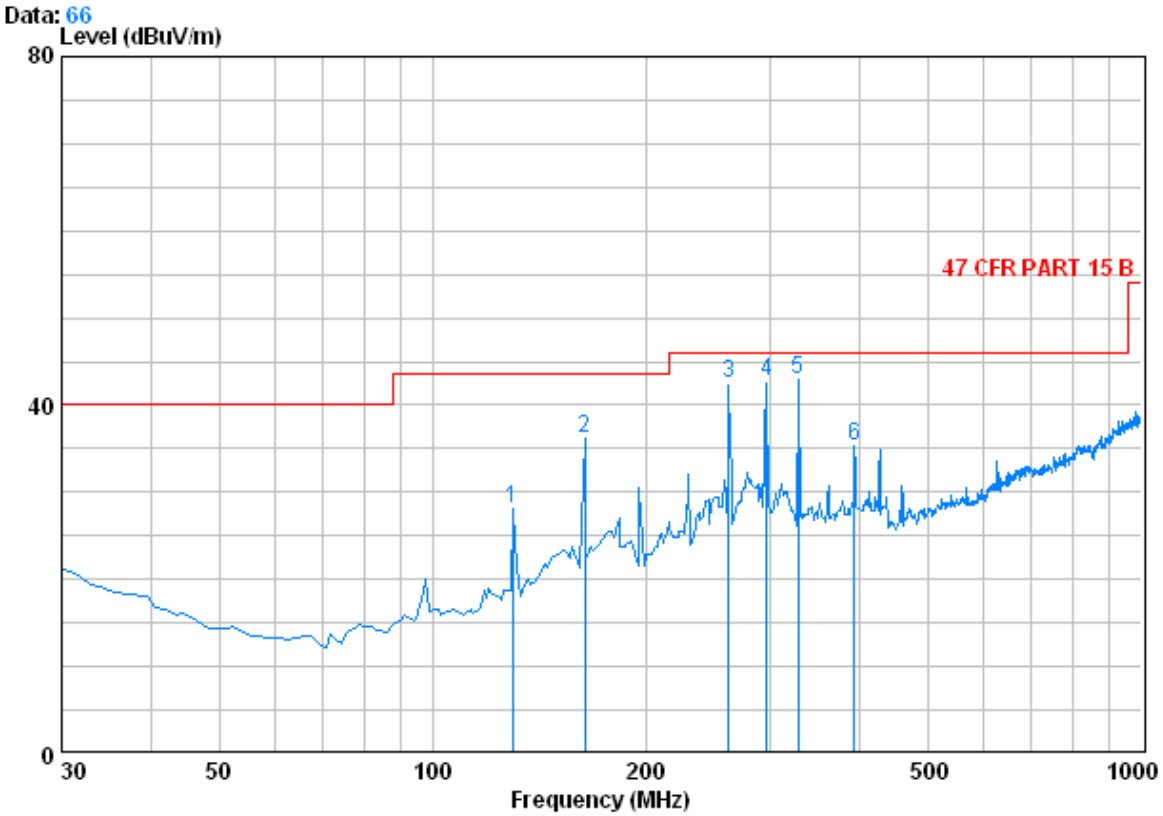
Vertical:



Condition : 47 CFR PART 15 B 3m 3142C VERTICAL
Job No. : 2466RF
Mode : Tx

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	129.910	1.28	7.70	27.01	44.43	26.40	43.50	-17.10
2	163.860	1.34	9.56	26.84	43.70	27.77	43.50	-15.73
3	261.830	1.73	12.55	26.50	43.98	31.76	46.00	-14.24
4	559.620	2.66	18.98	27.60	43.77	37.82	46.00	-8.18
5 @	625.580	2.75	20.50	27.51	47.21	42.96	46.00	-3.04
6	691.540	2.88	21.54	27.42	42.53	39.53	46.00	-6.47

Horizontal:



Condition : 47 CFR PART 15 B 3m 3142C HORIZONTAL
Job No. : 2466RF
Mode : Tx

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	129.910	1.28	7.70	27.01	46.05	28.01	43.50	-15.49
2	163.860	1.34	9.56	26.84	52.22	36.29	43.50	-7.21
3	261.830	1.73	12.55	26.50	54.79	42.57	46.00	-3.43
4	295.780	1.88	13.72	26.41	53.57	42.76	46.00	-3.24
5 @	327.790	1.99	14.89	26.62	52.61	42.88	46.00	-3.12
6	393.750	2.18	16.22	27.09	44.08	35.39	46.00	-10.61

5.8.2 Transmitter emission above 1GHz

Test mode:	802.11b	Test channel:	Lowest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1479.955	3.88	28.07	39.34	47.47	40.08	74	-33.92	Vertical
3561.636	5.85	33.28	40.72	48.18	46.59	74	-27.41	Vertical
4821.757	7.45	34.68	41.64	53.11	53.6	74	-20.40	Vertical
6478.053	8.14	36.26	40.51	48.43	52.32	74	-21.68	Vertical
8615.126	9.51	36.29	38.65	45.26	52.41	74	-21.59	Vertical
11486.41	10.91	38.40	38.06	42.74	53.99	74	-20.01	Vertical
1621.985	4.00	29.09	39.41	45.46	39.14	74	-34.86	Horizontal
3700.26	6.05	33.45	40.81	47.70	46.39	74	-27.61	Horizontal
4821.757	7.45	34.68	41.64	52.79	53.28	74	-20.72	Horizontal
7338.621	8.90	35.94	39.75	48.19	53.28	74	-20.72	Horizontal
9370.083	9.65	37.03	37.99	43.54	52.23	74	-21.77	Horizontal
11428.08	10.87	38.42	38.04	41.62	52.87	74	-21.13	Horizontal

Test mode:	802.11b	Test channel:	Middle	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1541.476	3.94	28.47	39.37	45.38	38.42	74	-35.58	Vertical
4871.103	7.48	34.59	41.68	53.19	53.58	74	-20.42	Vertical
6956.627	8.41	35.85	40.08	48.04	52.22	74	-21.78	Vertical
7860.737	9.29	36.00	39.31	46.83	52.81	74	-21.19	Vertical
10480.59	10.19	38.28	37.65	42.45	53.27	74	-20.73	Vertical
12334.98	11.42	39.24	38.42	41.30	53.54	74	-20.46	Vertical
1795.839	4.16	30.32	39.48	46.50	41.50	74	-32.50	Horizontal
4871.103	7.48	34.59	41.68	53.38	53.77	74	-20.23	Horizontal
5806.408	7.89	35.4	41.09	51.6	53.80	74	-20.20	Horizontal
7489.599	9.08	36.00	39.62	48.35	53.81	74	-20.19	Horizontal
10480.59	10.19	38.28	37.65	41.61	52.43	74	-21.57	Horizontal
12055.6	11.31	38.95	38.3	41.58	53.54	74	-20.46	Horizontal

Test mode:	802.11b	Test channel:	Highest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1569.189	3.96	28.59	39.38	46.14	39.31	74	-34.69	Vertical
4920.955	7.50	34.51	41.71	51.71	52.01	74	-21.99	Vertical
6032.401	7.99	35.74	40.89	48.58	51.42	74	-22.58	Vertical
7357.326	8.92	35.94	39.74	48.75	53.87	74	-20.13	Vertical
9960.375	9.83	37.67	37.48	42.61	52.63	74	-21.37	Vertical
11027.98	10.59	38.49	37.88	42.50	53.70	74	-20.30	Vertical
1814.218	4.18	30.44	39.49	46.42	41.55	74	-32.45	Horizontal
4920.955	7.50	34.51	41.71	50.32	50.62	74	-23.38	Horizontal
5865.832	7.92	35.48	41.04	48.66	51.02	74	-22.98	Horizontal
7394.878	8.96	35.96	39.71	47.09	52.30	74	-21.70	Horizontal
9538.543	9.67	37.23	37.86	42.57	51.61	74	-22.39	Horizontal
11486.41	10.91	38.40	38.06	41.94	53.19	74	-20.81	Horizontal

Test mode:	802.11g	Test channel:	Lowest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1605.554	3.99	28.96	39.40	45.95	39.50	74	-34.50	Vertical
3662.775	5.98	33.41	40.79	47.47	46.07	74	-27.93	Vertical
4821.757	7.45	34.68	41.64	53.41	53.90	74	-20.10	Vertical
7338.621	8.90	35.94	39.75	47.21	52.30	74	-21.70	Vertical
9636.161	9.68	37.34	37.76	43.14	52.40	74	-21.60	Vertical
11140.85	10.67	38.47	37.92	41.75	52.97	74	-21.03	Vertical
1693.716	4.07	29.58	39.44	46.35	40.56	74	-33.44	Horizontal
4821.757	7.45	34.68	41.64	51.15	51.64	74	-22.36	Horizontal
6428.771	8.12	36.20	40.55	48.68	52.45	74	-21.55	Horizontal
7941.185	9.31	36.00	39.24	43.95	50.02	74	-23.98	Horizontal
9441.913	9.66	37.14	37.94	43.54	52.40	74	-21.60	Horizontal
10480.59	10.19	38.28	37.65	42.08	52.90	74	-21.10	Horizontal

Test mode:	802.11g	Test channel:	Middle	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1746.251	4.11	29.95	39.46	46.38	40.98	74	-33.02	Vertical
4871.103	7.48	34.59	41.68	50.24	50.63	74	-23.37	Vertical
6363.645	8.10	36.14	40.61	48.45	52.08	74	-21.92	Vertical
7489.599	9.08	36.00	39.62	47.56	53.02	74	-20.98	Vertical
10062.31	9.89	37.78	37.47	42.18	52.38	74	-21.62	Vertical
11963.89	11.26	38.87	38.26	41.52	53.39	74	-20.61	Vertical
1837.456	4.19	30.57	39.50	46.30	41.56	74	-32.44	Horizontal
4871.103	7.48	34.59	41.68	49.72	50.11	74	-23.89	Horizontal
6428.771	8.12	36.20	40.55	48.41	52.18	74	-21.82	Horizontal
7394.878	8.96	35.96	39.71	48.00	53.21	74	-20.79	Horizontal
9441.913	9.66	37.14	37.94	43.03	51.89	74	-22.11	Horizontal
11486.41	10.91	38.40	38.06	41.17	52.42	74	-21.58	Horizontal

Test mode:	802.11g	Test channel:	Highest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1561.221	3.96	28.59	39.38	46.89	40.06	74	-33.94	Vertical
4065.707	6.55	33.99	41.08	47.16	46.62	74	-27.38	Vertical
5865.832	7.92	35.48	41.04	47.64	50.00	74	-24.00	Vertical
6974.358	8.43	35.83	40.08	48.09	52.27	74	-21.73	Vertical
9562.854	9.67	37.27	37.83	43.04	52.15	74	-21.85	Vertical
11722.72	11.08	38.62	38.16	40.93	52.47	74	-21.53	Vertical
1777.646	4.15	30.20	39.47	46.46	41.34	74	-32.66	Horizontal
3176.155	5.30	33.33	40.44	47.25	45.44	74	-28.56	Horizontal
4582.422	7.18	35.06	41.47	47.92	48.69	74	-25.31	Horizontal
6363.645	8.10	36.14	40.61	47.87	51.50	74	-22.50	Horizontal
8104.559	9.36	36.04	39.10	45.08	51.38	74	-22.62	Horizontal
11112.52	10.64	38.48	37.91	41.63	52.84	74	-21.16	Horizontal

Test mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1626.12	4.00	29.09	39.41	48.04	41.72	74	-32.28	Vertical
4821.757	7.45	34.68	41.64	51.77	52.26	74	-21.74	Vertical
6544.35	8.16	36.27	40.45	48.62	52.60	74	-21.40	Vertical
8022.456	9.34	36.01	39.16	46.05	52.24	74	-21.76	Vertical
10374.42	10.11	38.14	37.60	42.58	53.23	74	-20.77	Vertical
12055.6	11.31	38.95	38.30	42.03	53.99	74	-20.01	Vertical
1706.7	4.08	29.70	39.44	46.33	40.67	74	-33.33	Horizontal
3903.444	6.33	33.70	40.97	47.91	46.97	74	-27.03	Horizontal
4821.757	7.45	34.68	41.64	50.48	50.97	74	-23.03	Horizontal
7338.621	8.90	35.94	39.75	48.05	53.14	74	-20.86	Horizontal
10165.29	9.97	37.90	37.51	42.18	52.54	74	-21.46	Horizontal
12334.98	11.42	39.24	38.42	40.90	53.14	74	-20.86	Horizontal

Test mode:	802.11n(HT20)	Test channel:	Middle	Remark:	Peak

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1561.221	3.96	28.59	39.38	47.48	40.65	74	-33.35	Vertical
3973.622	6.43	33.78	41.02	47.47	46.66	74	-27.34	Vertical
4871.103	7.48	34.59	41.68	49.96	50.35	74	-23.65	Vertical
6628.177	8.19	36.18	40.38	48.70	52.69	74	-21.31	Vertical
8042.903	9.34	36.01	39.15	47.65	53.85	74	-20.15	Vertical
10480.59	10.19	38.28	37.65	41.05	51.87	74	-22.13	Vertical
1655.354	4.04	29.33	39.42	50.00	43.95	74	-30.05	Horizontal
3625.669	5.93	33.34	40.76	48.12	46.63	74	-27.37	Horizontal
4883.519	7.48	34.59	41.68	49.70	50.09	74	-23.91	Horizontal
7547.013	9.14	36.00	39.57	47.99	53.56	74	-20.44	Horizontal
9960.375	9.83	37.67	37.48	42.90	52.92	74	-21.08	Horizontal
11633.54	11.02	38.54	38.13	40.89	52.32	74	-21.68	Horizontal

Test mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Peak		

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1782.177	4.15	30.20	39.47	46.66	41.54	74	-32.46	Vertical
4410.75	6.96	34.97	41.35	47.32	47.90	74	-26.10	Vertical
5806.408	7.89	35.40	41.09	48.32	50.52	74	-23.48	Vertical
8022.456	9.34	36.01	39.16	47.08	53.27	74	-20.73	Vertical
9538.543	9.67	37.23	37.86	41.59	50.63	74	-23.37	Vertical
11112.52	10.64	38.48	37.91	41.16	52.37	74	-21.63	Vertical
1746.251	4.11	29.95	39.46	45.82	40.42	74	-33.58	Horizontal
3700.26	6.05	33.45	40.81	47.35	46.04	74	-27.96	Horizontal
5674.896	7.83	35.18	41.20	47.84	49.65	74	-24.35	Horizontal
6611.326	8.18	36.20	40.40	48.03	52.01	74	-21.99	Horizontal
8042.903	9.34	36.01	39.15	47.79	53.99	74	-20.01	Horizontal
12429.54	11.46	39.33	38.46	40.29	52.62	74	-21.38	Horizontal

Test mode:	802.11n(HT40)	Test channel:	Lowest	Remark:	Peak		

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1655.354	4.04	29.33	39.42	46.24	40.19	74	-33.81	Vertical
3933.367	6.38	33.74	40.98	46.78	45.92	74	-28.08	Vertical
5732.974	7.86	35.26	41.15	47.93	49.90	74	-24.10	Vertical
7624.25	9.22	36.00	39.51	47.76	53.47	74	-20.53	Vertical
10165.29	9.97	37.90	37.51	41.65	52.01	74	-21.99	Vertical
10999.95	10.56	38.5	37.86	42.66	53.86	74	-20.14	Vertical
1392.247	3.80	27.91	39.31	47.79	40.19	74	-33.81	Horizontal
4834.046	7.46	34.65	41.65	49.97	50.43	74	-23.57	Horizontal
6478.053	8.14	36.26	40.51	48.43	52.32	74	-21.68	Horizontal
8462.975	9.47	36.19	38.78	46.92	53.80	74	-20.20	Horizontal
9370.083	9.65	37.03	37.99	43.84	52.53	74	-21.47	Horizontal
11486.41	10.91	38.40	38.06	42.09	53.34	74	-20.66	Horizontal

Test mode:	802.11n(HT40)	Test channel:	Middle	Remark:	Peak		

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1525.86	3.92	28.35	39.37	46.37	39.27	74	-34.73	Vertical
3662.775	5.98	33.41	40.79	47.28	45.88	74	-28.12	Vertical
4883.519	7.48	34.59	41.68	48.28	48.67	74	-25.33	Vertical
5910.798	7.93	35.56	41.01	48.59	51.07	74	-22.93	Vertical
8042.903	9.34	36.01	39.15	47.03	53.23	74	-20.77	Vertical
10453.95	10.17	38.24	37.64	42.25	53.02	74	-20.98	Vertical
1711.05	4.08	29.70	39.44	46.68	41.02	74	-32.98	Horizontal
3552.582	5.83	33.26	40.70	47.54	45.93	74	-28.07	Horizontal
5284.497	7.67	34.68	41.55	48.17	48.97	74	-25.03	Horizontal
7027.823	8.49	35.81	40.03	48.74	53.01	74	-20.99	Horizontal
9346.262	9.65	37.01	38.03	43.38	52.01	74	-21.99	Horizontal
11486.41	10.91	38.40	38.06	41.77	53.02	74	-20.98	Horizontal

Test mode:	802.11n(HT40)	Test channel:	Highest	Remark:	Peak		

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1406.496	3.81	27.94	39.31	47.41	39.85	74	-34.15	Vertical
3120.061	5.22	33.35	40.40	48.84	47.01	74	-26.99	Vertical
4594.102	7.18	35.06	41.47	47.96	48.73	74	-25.27	Vertical
6172.197	8.03	35.90	40.78	47.73	50.88	74	-23.12	Vertical
8527.851	9.49	36.23	38.73	45.2	52.19	74	-21.81	Vertical
11112.52	10.64	38.48	37.91	42.35	53.56	74	-20.44	Vertical
1323.141	3.75	27.79	39.28	48.61	40.87	74	-33.13	Horizontal
3672.11	6.00	33.41	40.80	47.74	46.35	74	-27.65	Horizontal
5230.963	7.65	34.63	41.58	48.82	49.52	74	-24.48	Horizontal
7566.249	9.17	36.00	39.56	47.61	53.22	74	-20.78	Horizontal
9346.262	9.65	37.01	38.03	45.13	53.76	74	-20.24	Horizontal
11963.89	11.26	38.87	38.26	41.40	53.27	74	-20.73	Horizontal

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

   Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) The disturbance above 13GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.

5.9 Band Edge (Radiated Emission)

Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2009
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Limit:

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test Setup:

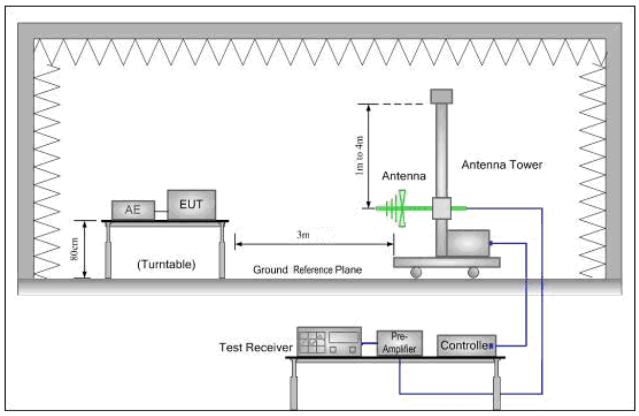


Figure 1. 30MHz to 1GHz

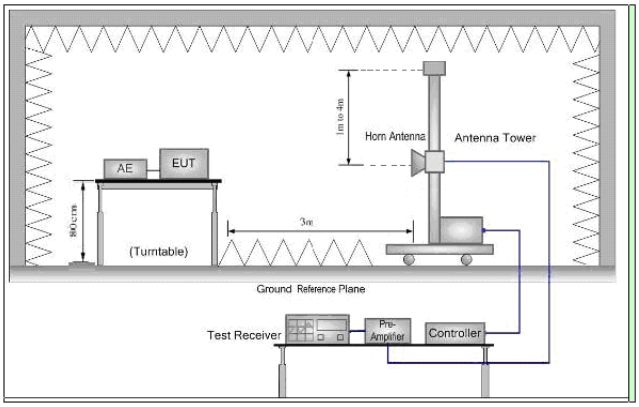
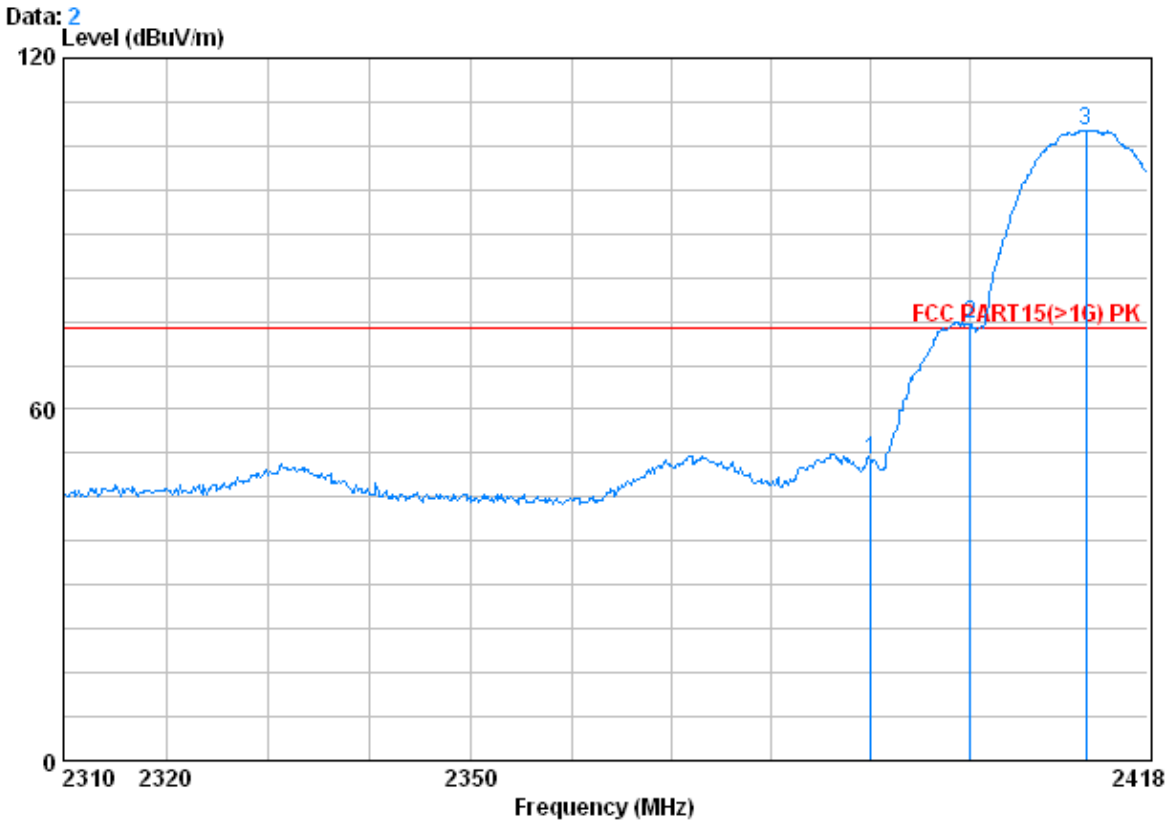


Figure 2. Above 1 GHz

Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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 antenna height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel g. Test the EUT in the lowest channel , the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case. Only the test worst case mode is recorded in the report. i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Through Pre-scan, find the 11Mbps of rate is the worst case of 802.11b; 54Mbps of rate is the worst case of 802.11g ; 65Mbps of rate is the worst case of 802.11n(HT20) ; 135Mbps of rate is the worst case of 802.11n(HT40).
Test Mode:	Transmitter mode
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass

Band edge (Radiated Emission)

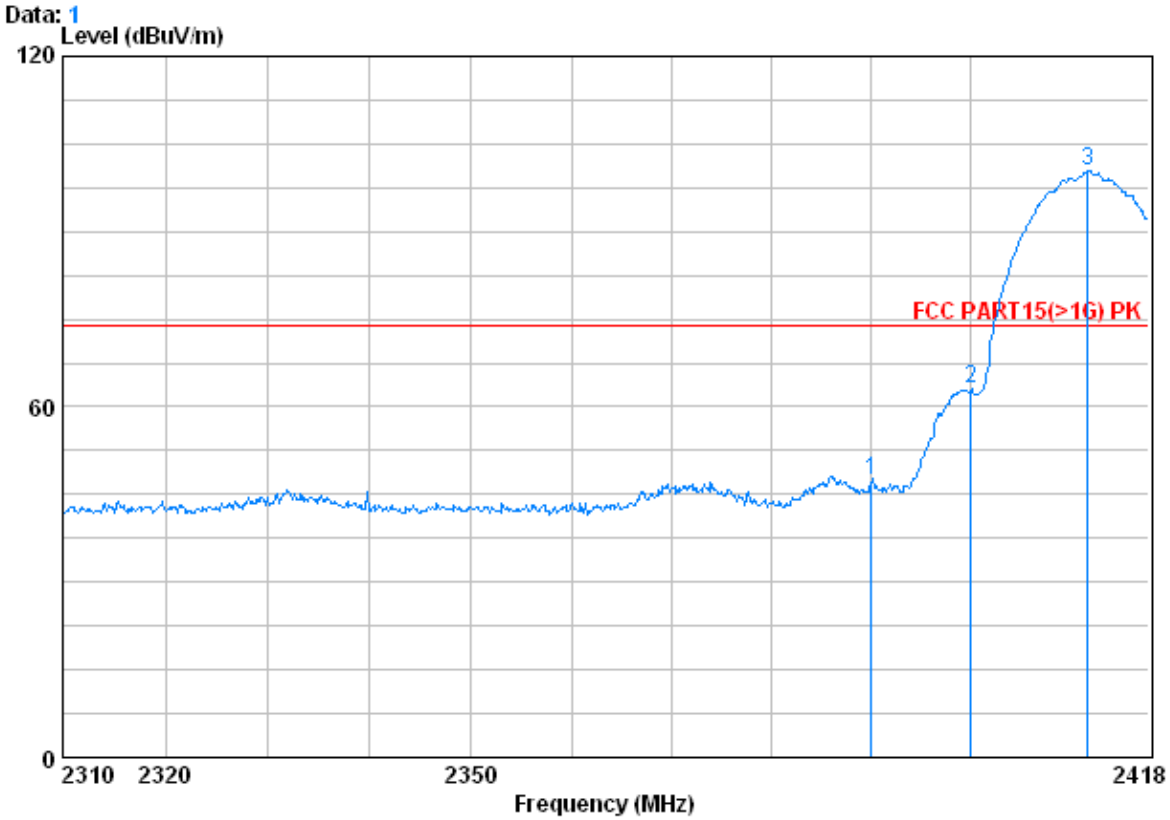
Test mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : b2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	55.56	51.20	74.00	-22.80
2 X	2400.000	2.98	32.51	39.86	79.01	74.65	74.00	0.65
3 @	2411.736	2.99	32.54	39.86	112.06	107.74	74.00	33.74

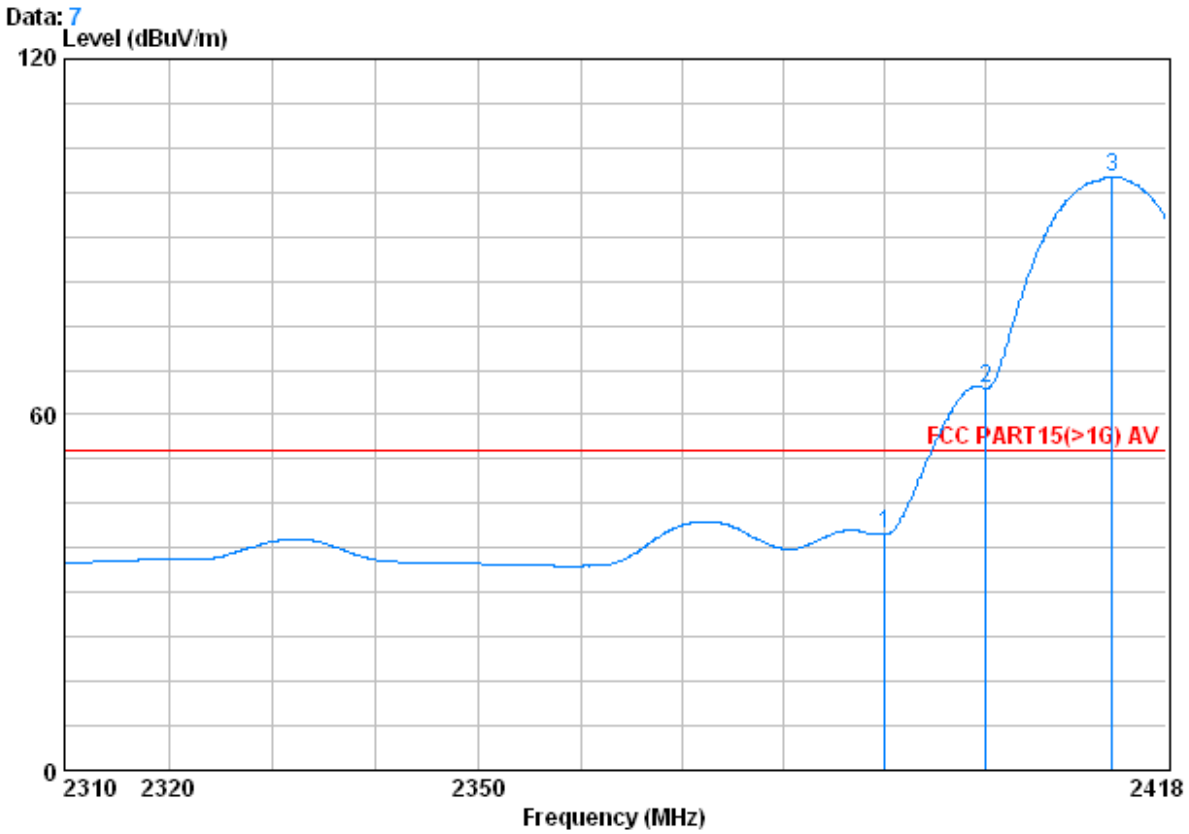
Test mode:	802.11b	Test channel:	Lowest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : b2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	51.63	47.28	74.00	-26.72
2	2400.000	2.98	32.51	39.86	67.41	63.04	74.00	-10.96
3 @	2411.844	2.99	32.54	39.86	104.83	100.51	74.00	26.51

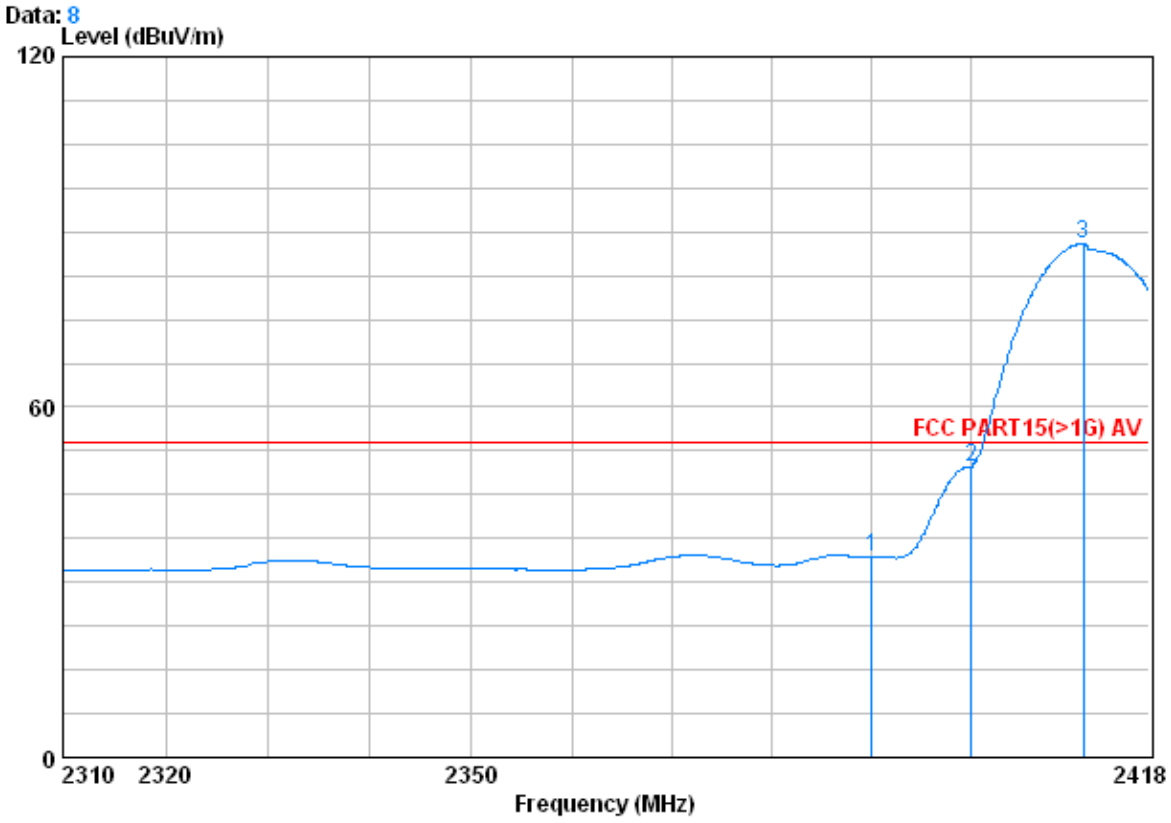
Test mode:	802.11b	Test channel:	Lowest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : b2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	44.17	39.82	54.00	-14.18
2 X	2400.000	2.98	32.51	39.86	68.73	64.36	54.00	10.36
3 @	2412.600	2.99	32.54	39.86	104.47	100.15	54.00	46.15

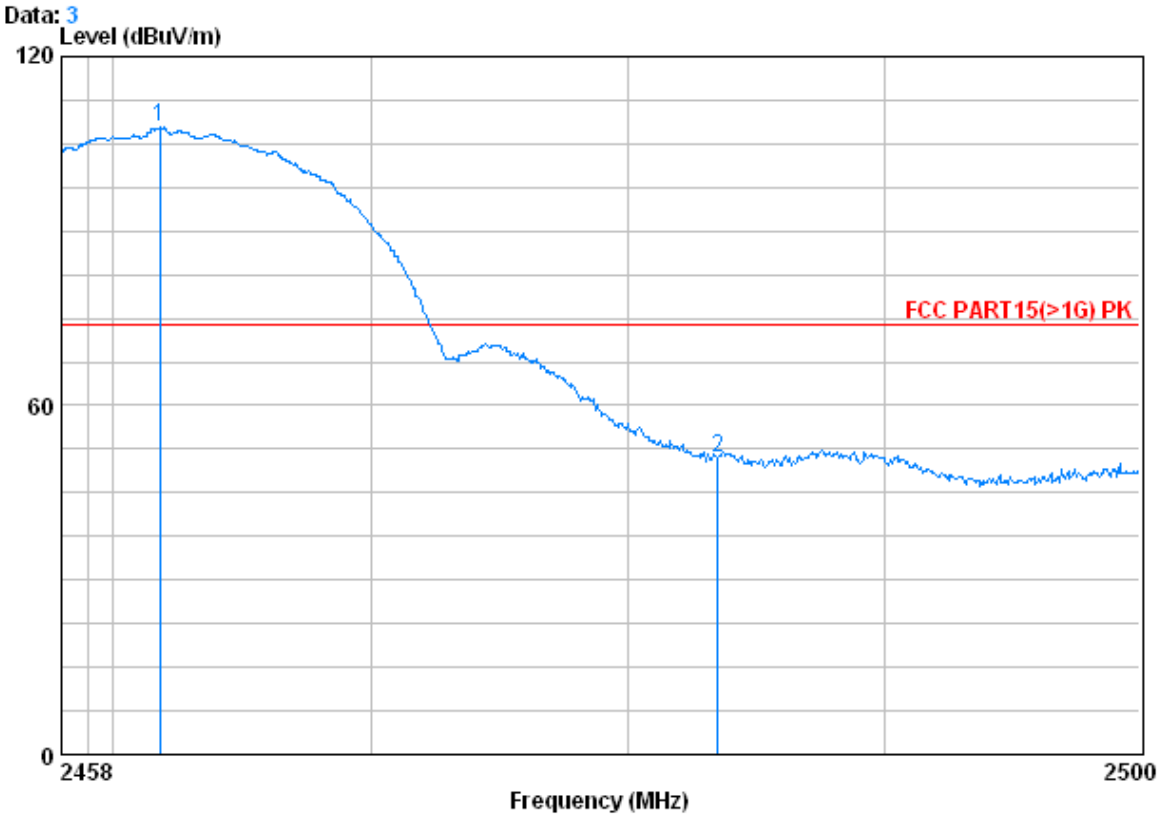
Test mode:	802.11b	Test channel:	Lowest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : b2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	38.64	34.28	54.00	-19.72
2	2400.000	2.98	32.51	39.86	54.14	49.77	54.00	-4.23
3 @	2411.304	2.99	32.54	39.86	92.42	88.09	54.00	34.09

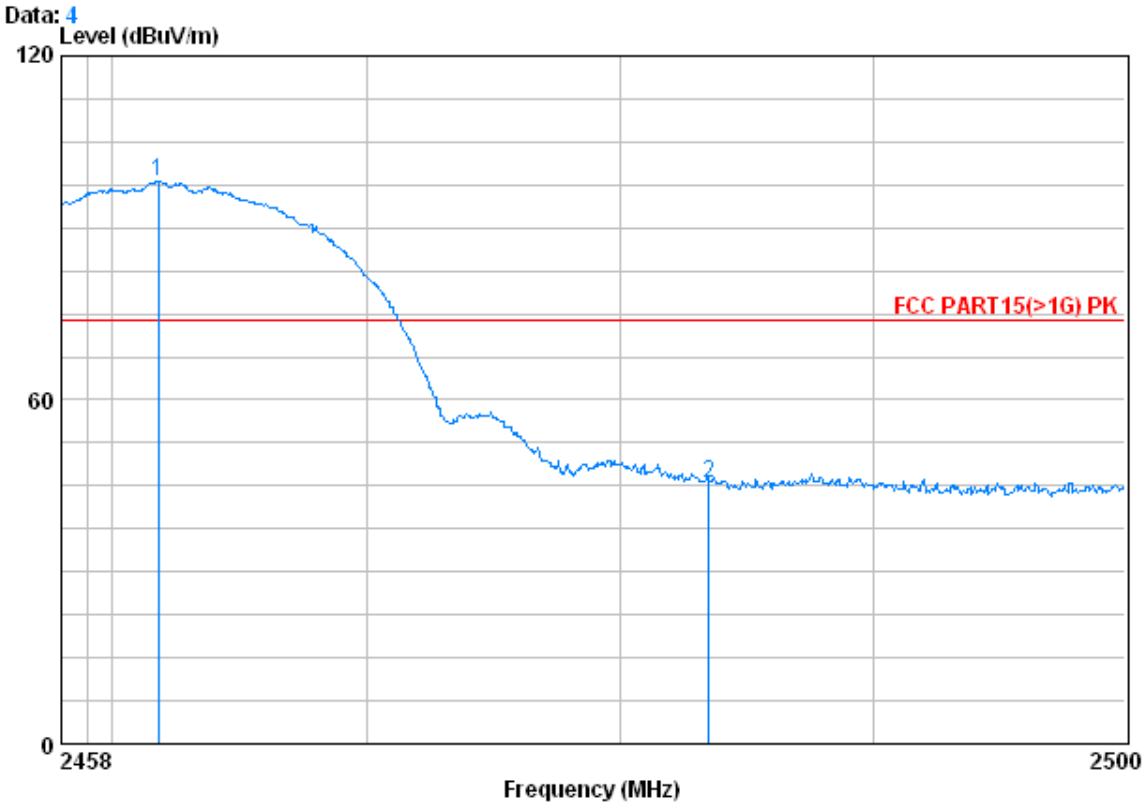
Test mode:	802.11b	Test channel:	Highest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : b2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2461.822	3.02	32.64	39.91	112.09	107.85	74.00	33.85
2	2483.500	3.03	32.67	39.92	55.33	51.11	74.00	-22.89

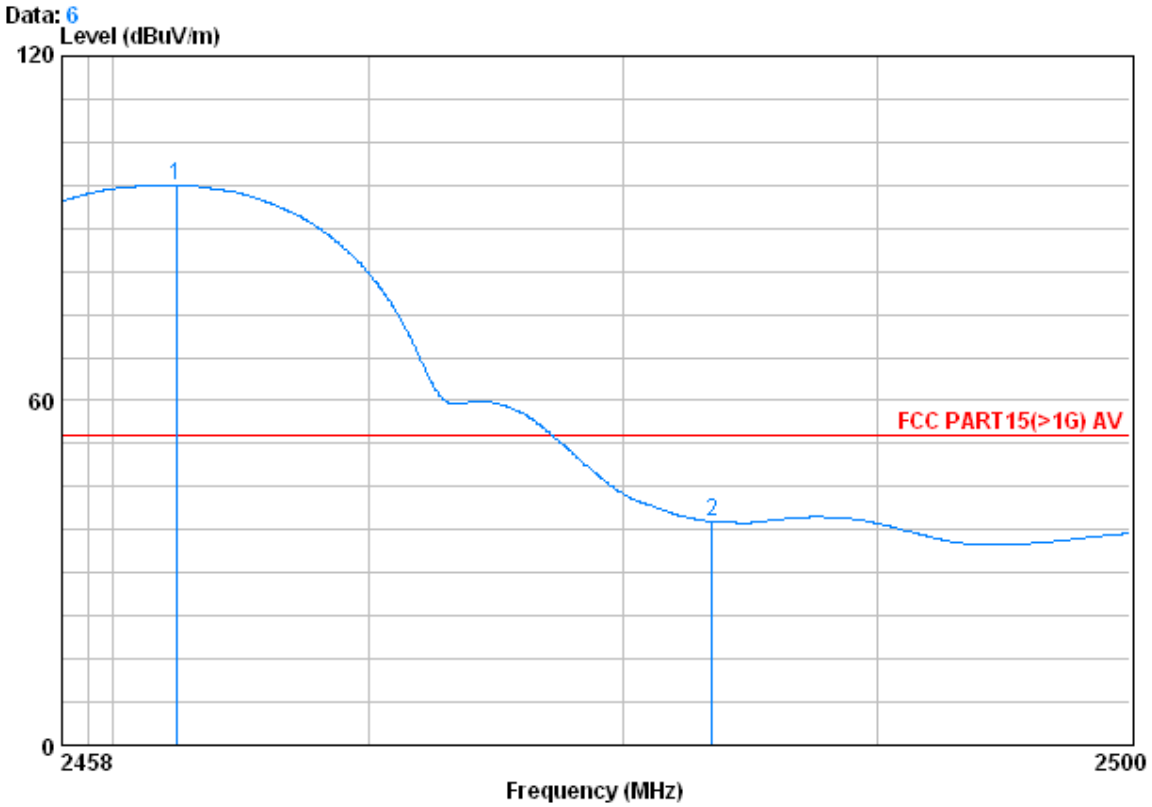
Test mode:	802.11b	Test channel:	Highest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : b2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2461.822	3.02	32.64	39.91	102.40	98.16	74.00	24.16
2	2483.500	3.03	32.67	39.92	49.81	45.59	74.00	-28.41

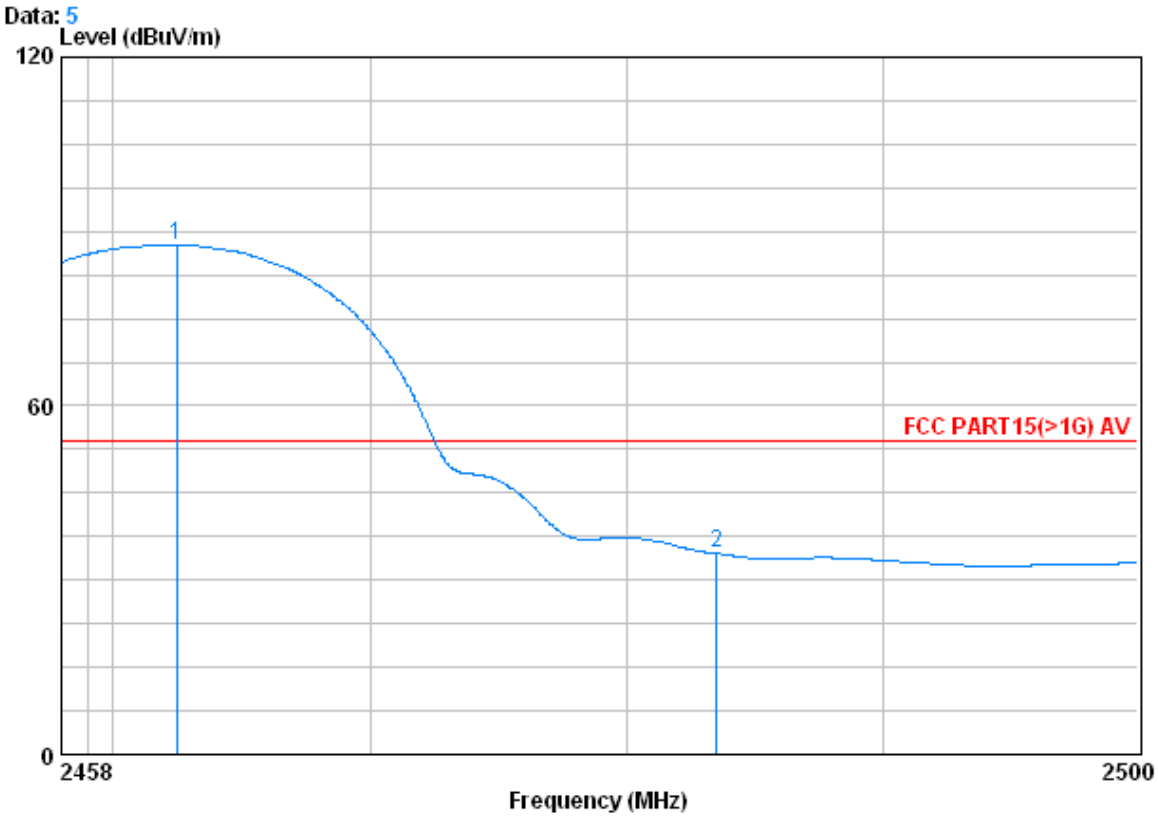
Test mode:	802.11b	Test channel:	Highest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : b2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2462.452	3.02	32.64	39.91	101.72	97.47	54.00	43.47
2	2483.500	3.03	32.67	39.92	43.22	39.00	54.00	-15.00

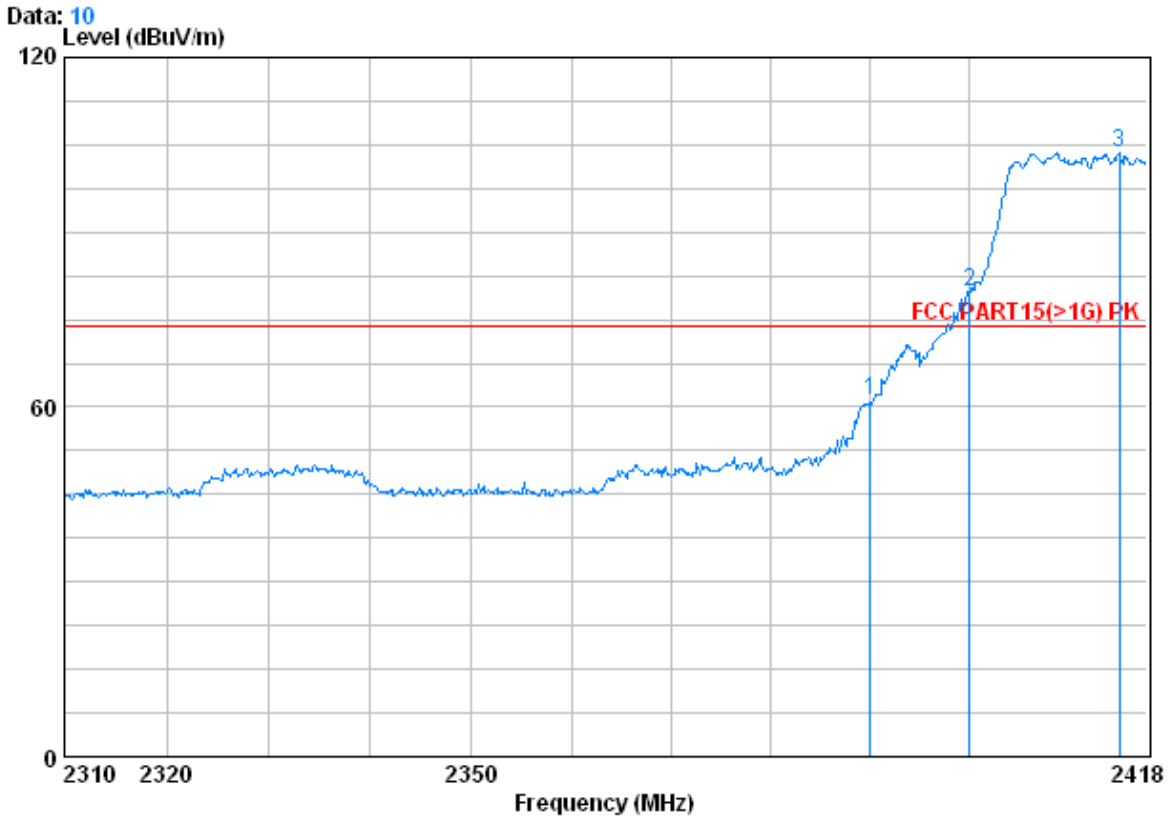
Test mode:	802.11b	Test channel:	Highest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : b2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2462.452	3.02	32.64	39.91	91.90	87.65	54.00	33.65
2	2483.500	3.03	32.67	39.92	38.77	34.55	54.00	-19.45

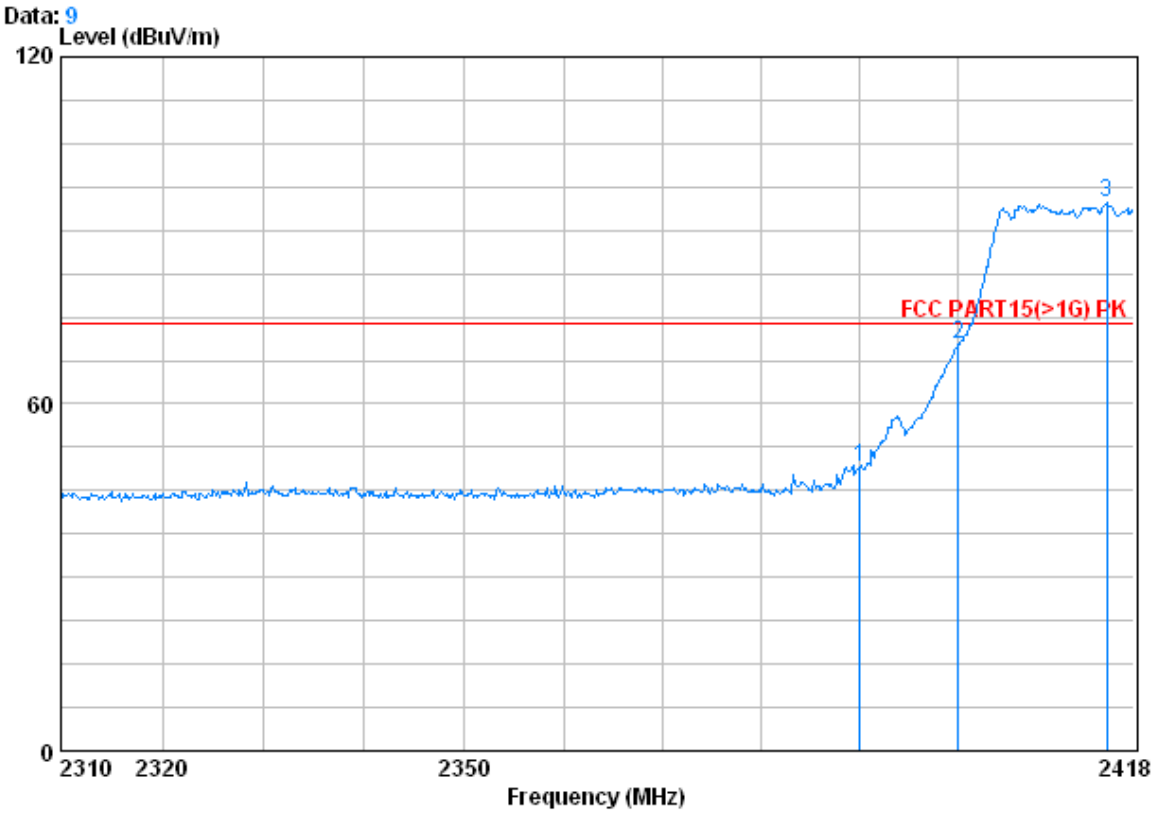
Test mode:	802.11g	Test channel:	Lowest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : g2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	65.44	61.09	74.00	-12.91
2 X	2400.000	2.98	32.51	39.86	84.29	79.92	74.00	5.92
3 @	2415.192	2.99	32.54	39.86	107.94	103.61	74.00	29.61

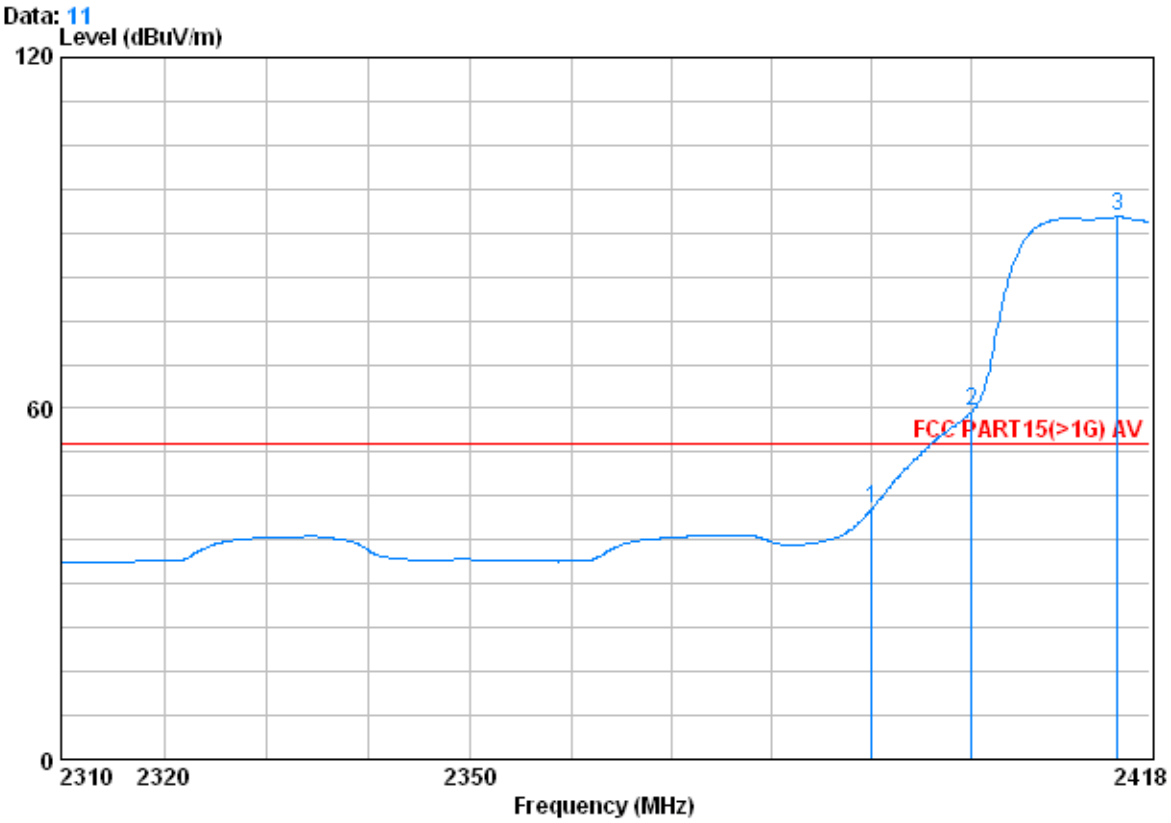
Test mode:	802.11g	Test channel:	Lowest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : g2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	53.43	49.08	74.00	-24.92
2	2400.000	2.98	32.51	39.86	74.53	70.16	74.00	-3.84
3 X	2415.192	2.99	32.54	39.86	99.22	94.89	74.00	20.89

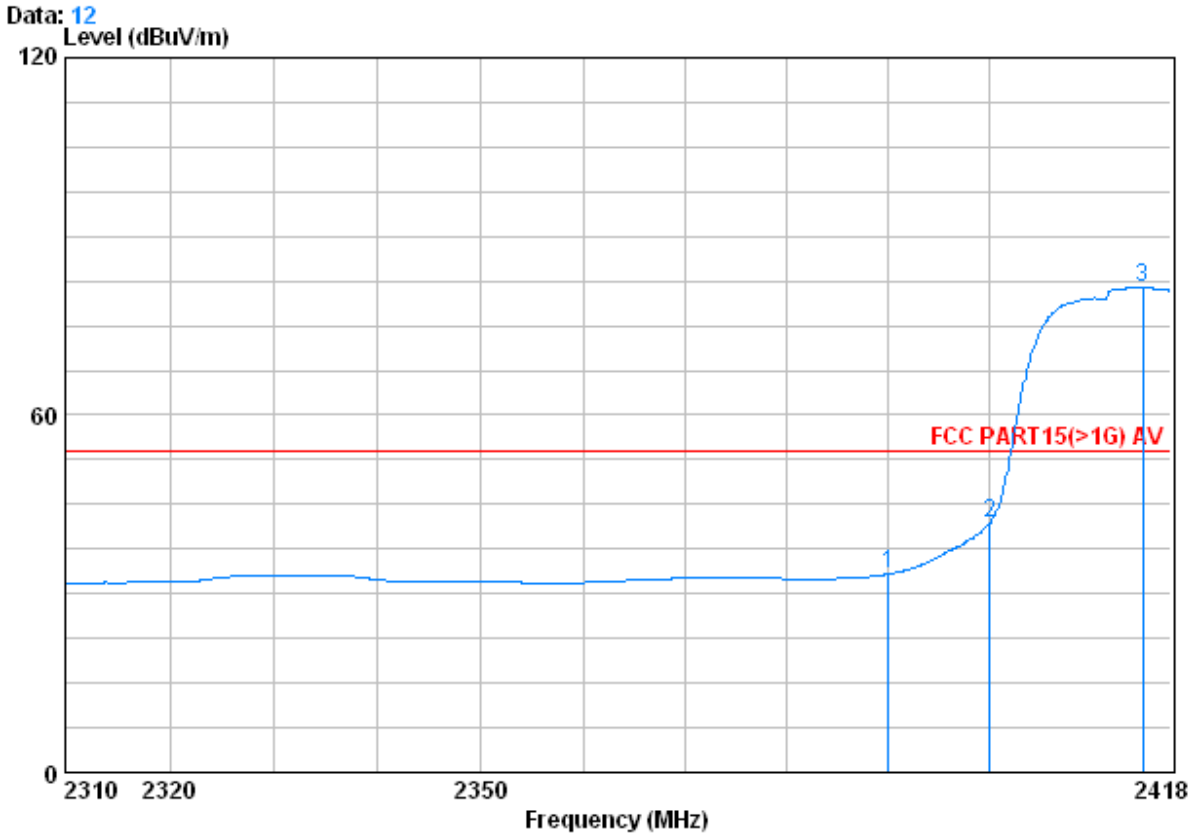
Test mode:	802.11g	Test channel:	Lowest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : g2412 bandedge

		Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1		2390.000	2.98	32.51	39.85	47.24	42.89	54.00	-11.11
2	X	2400.000	2.98	32.51	39.86	63.80	59.43	54.00	5.43
3	@	2414.760	2.99	32.54	39.86	97.05	92.73	54.00	38.73

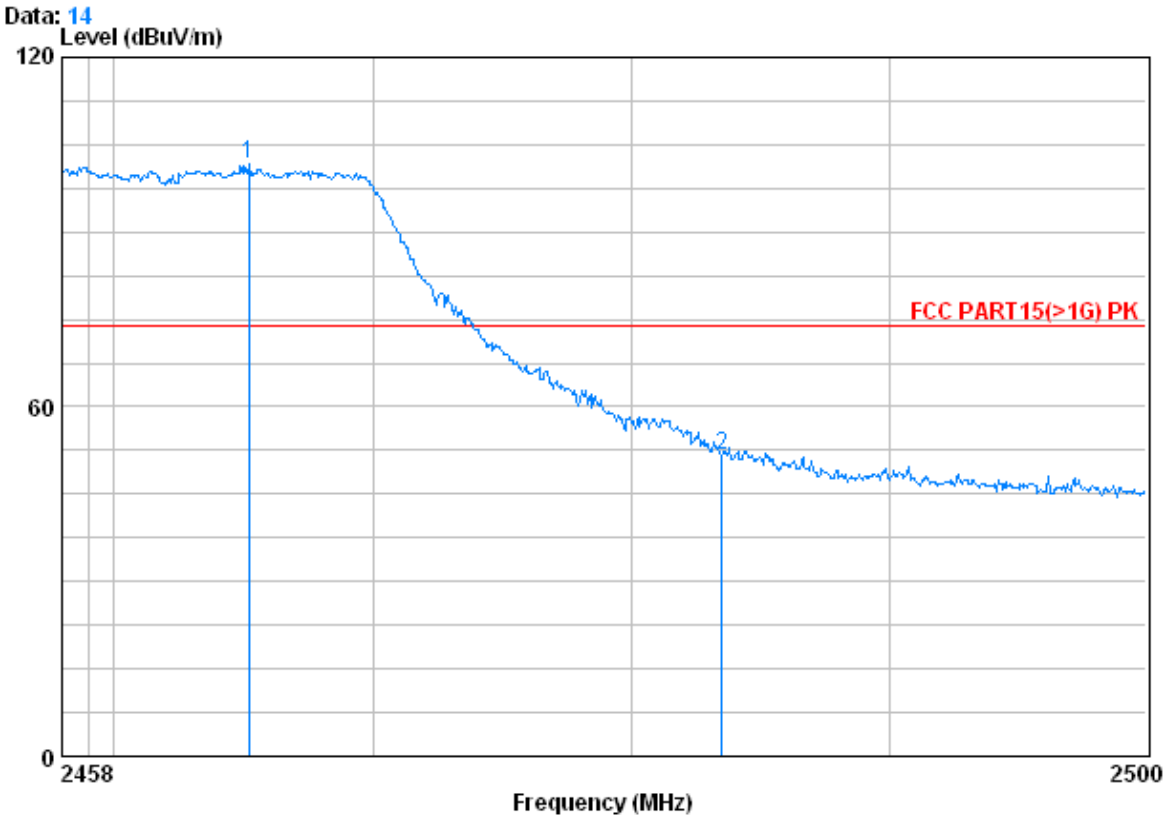
Test mode:	802.11g	Test channel:	Lowest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : g2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	37.69	33.34	54.00	-20.66
2	2400.000	2.98	32.51	39.86	46.35	41.98	54.00	-12.02
3 @	2415.192	2.99	32.54	39.86	85.84	81.51	54.00	27.51

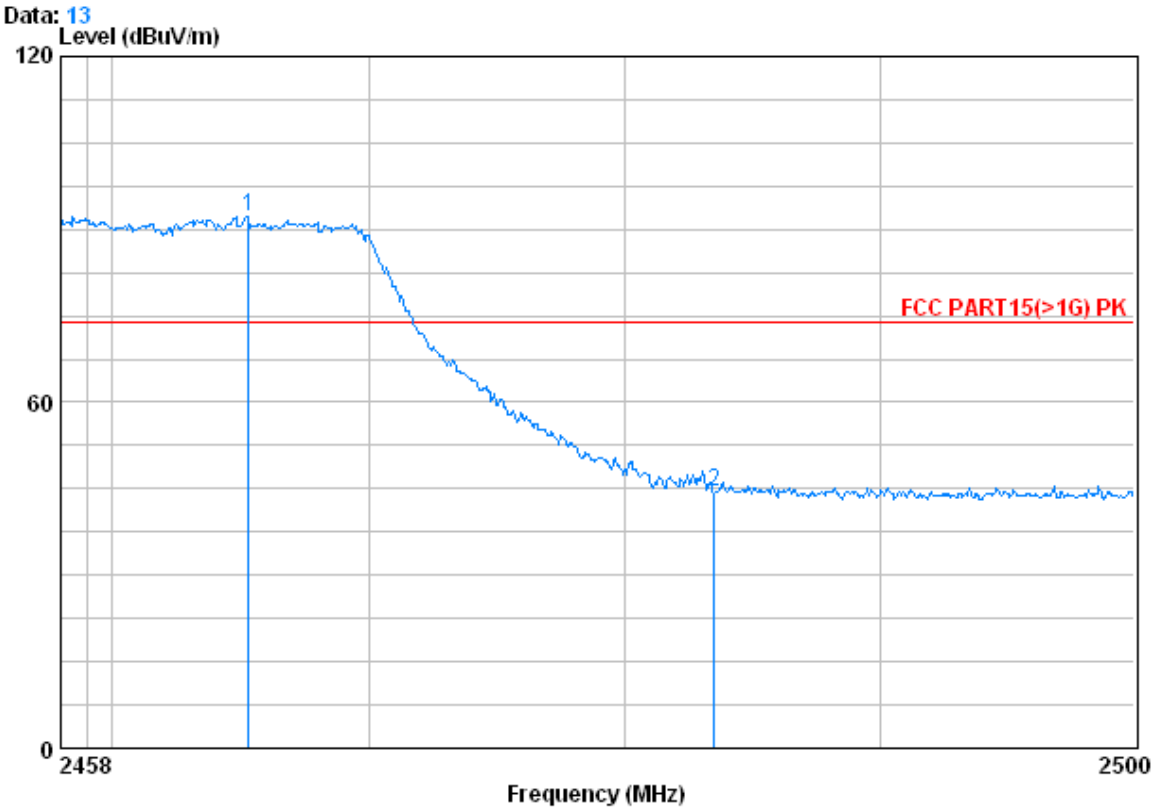
Test mode:	802.11g	Test channel:	Highest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : g2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2465.182	3.02	32.64	39.91	105.88	101.64	74.00	27.64
2	2483.500	3.03	32.67	39.92	55.83	51.61	74.00	-22.39

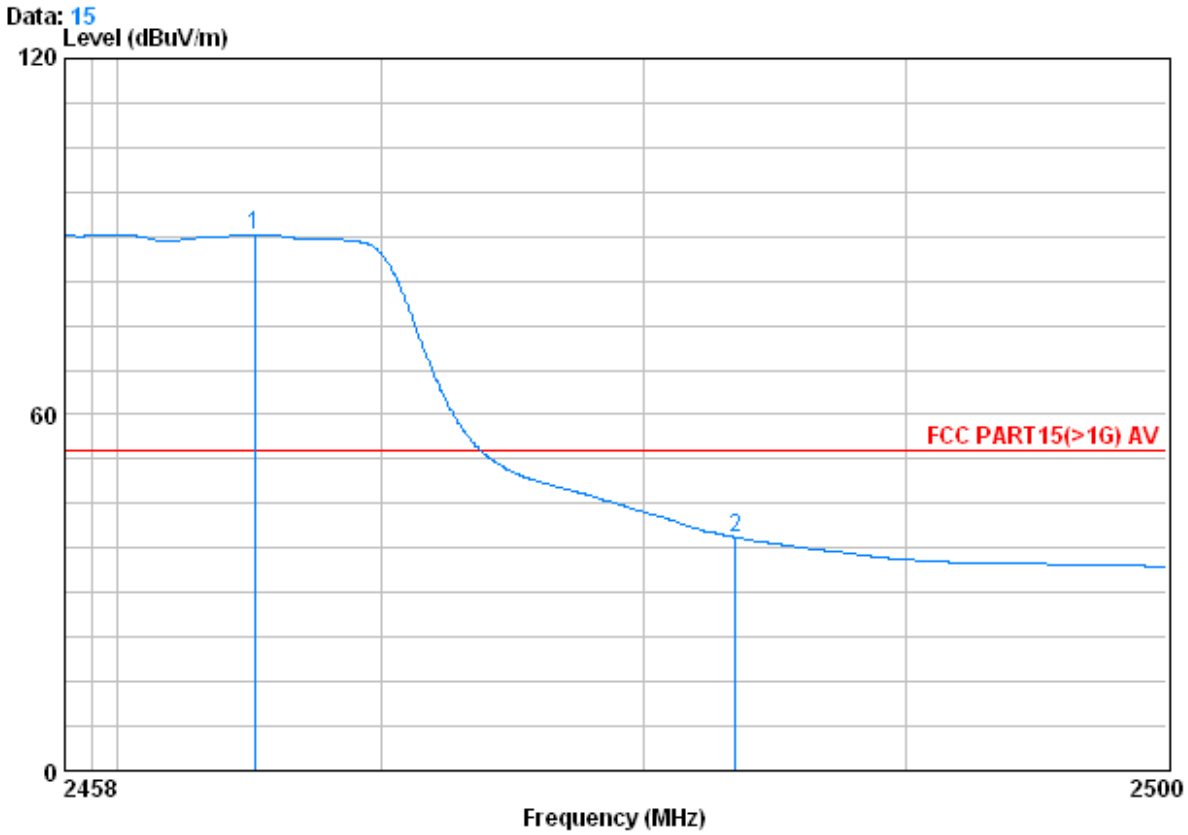
Test mode:	802.11g	Test channel:	Highest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : g2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 X	2465.308	3.02	32.64	39.91	96.46	92.21	74.00	18.21
2	2483.500	3.03	32.67	39.92	48.59	44.38	74.00	-29.62

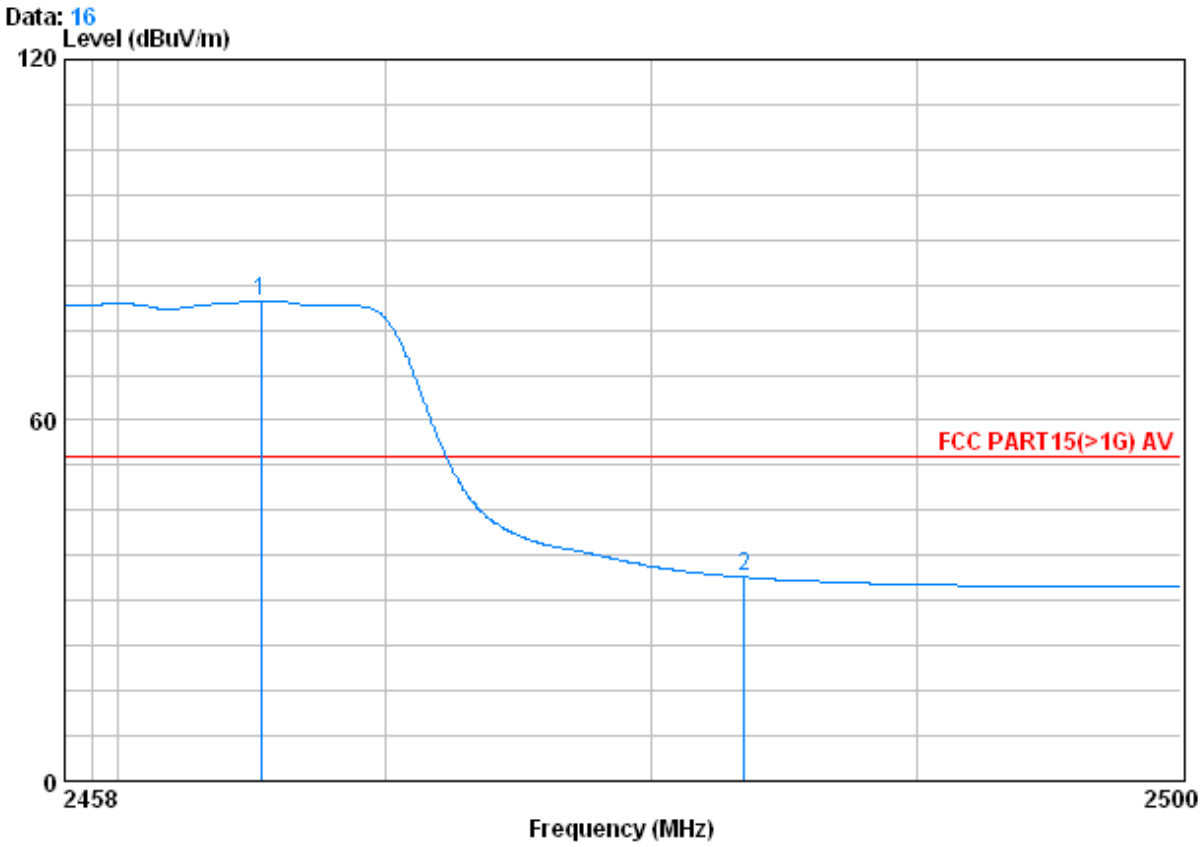
Test mode:	802.11g	Test channel:	Highest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : g2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2465.182	3.02	32.64	39.91	94.60	90.36	54.00	36.36
2	2483.500	3.03	32.67	39.92	43.51	39.29	54.00	-14.71

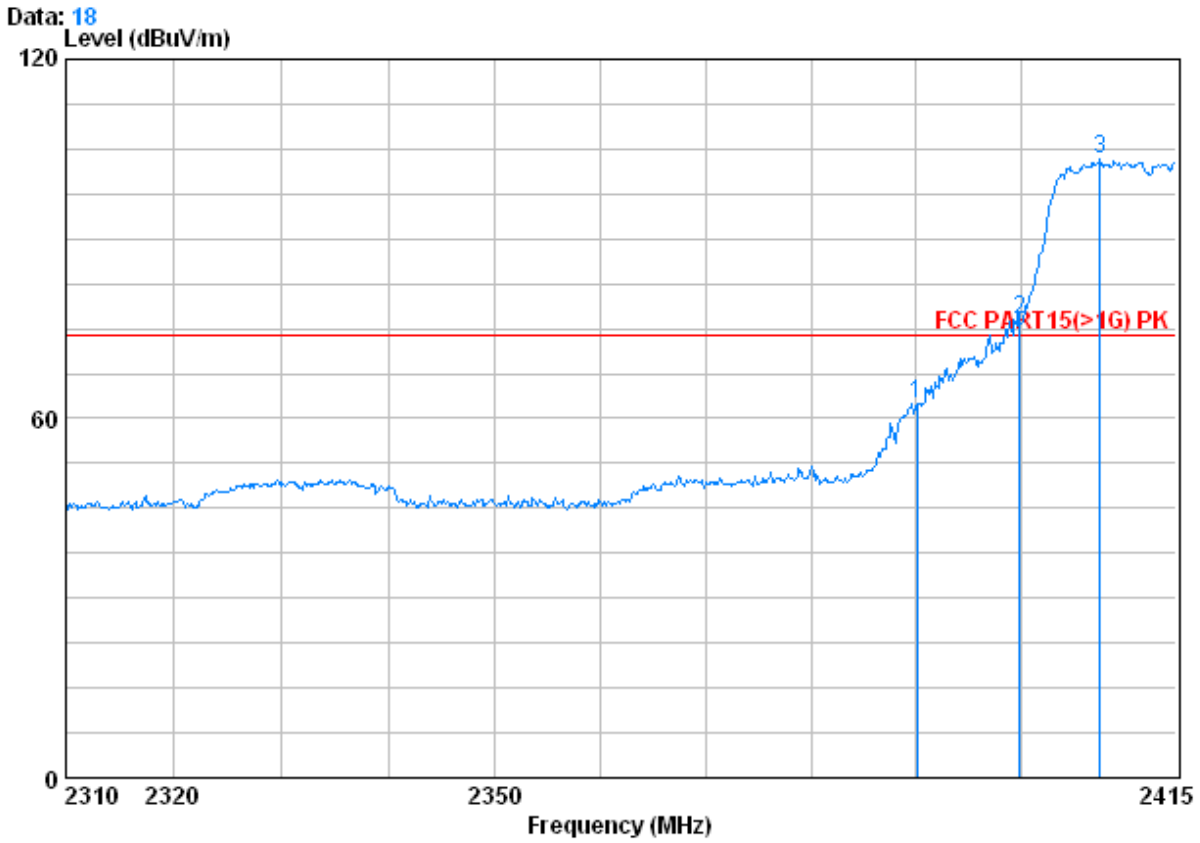
Test mode:	802.11g	Test channel:	Highest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : g2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2465.350	3.02	32.64	39.91	84.10	79.86	54.00	25.86
2	2483.500	3.03	32.67	39.92	38.11	33.89	54.00	-20.11

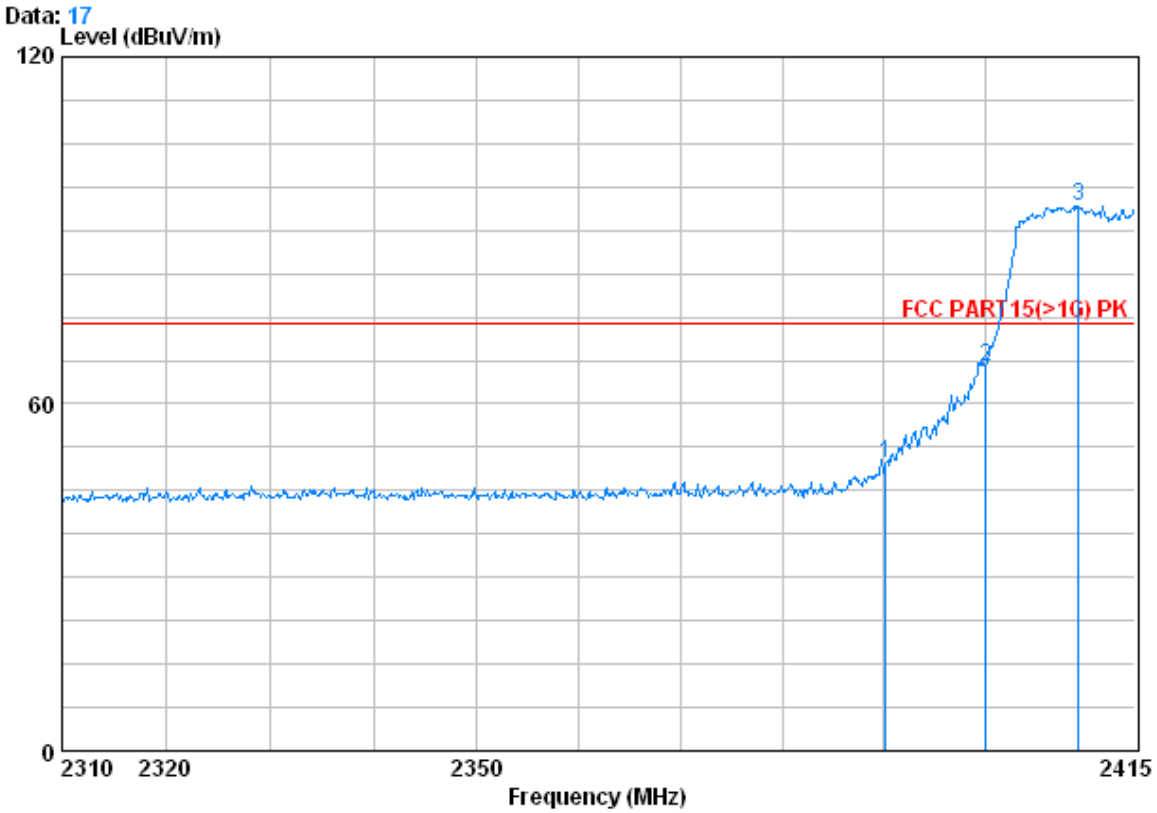
Test mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : n(HT20)2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.115	2.98	32.51	39.85	66.88	62.52	74.00	-11.48
2 X	2399.985	2.98	32.51	39.86	80.91	76.55	74.00	2.55
3 @	2407.650	2.99	32.54	39.86	107.60	103.27	74.00	29.27

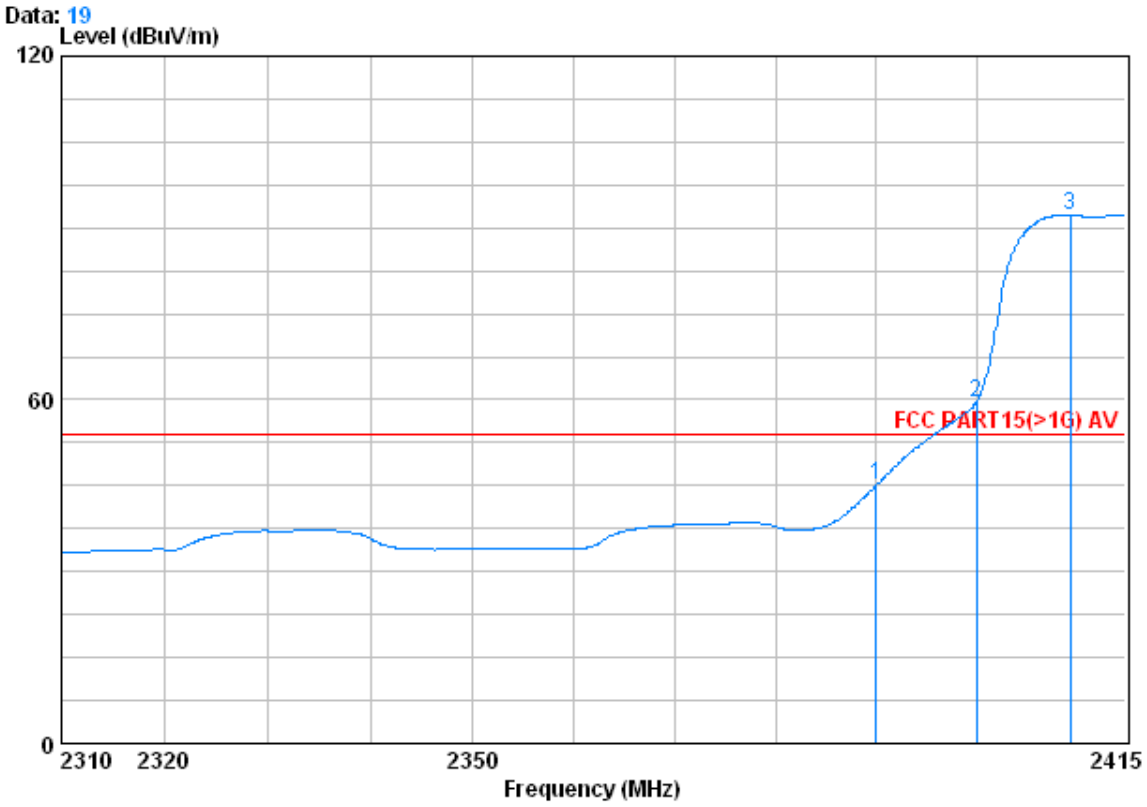
Test mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : n(HT20)2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.220	2.98	32.51	39.85	54.08	49.72	74.00	-24.28
2	2400.090	2.98	32.51	39.86	70.86	66.49	74.00	-7.51
3 X	2409.330	2.99	32.54	39.86	98.63	94.30	74.00	20.30

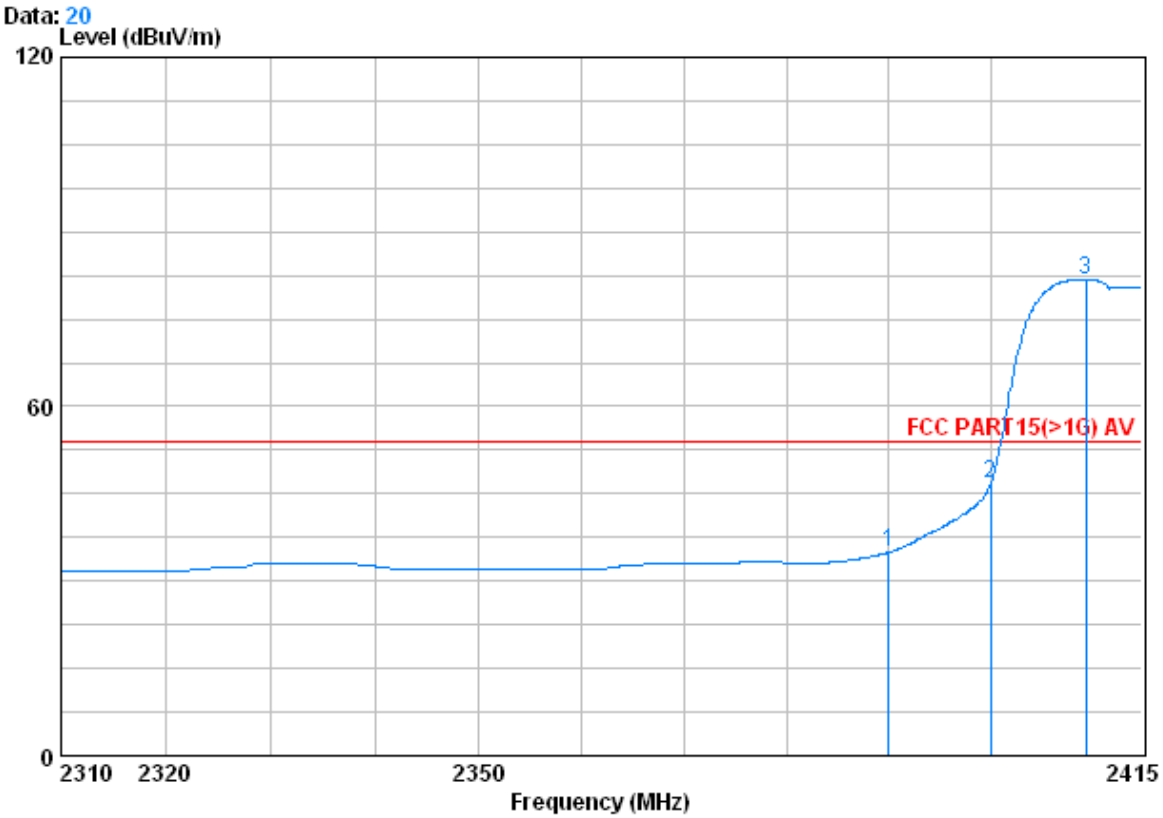
Test mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : n(HT20) 2412bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	49.34	44.99	54.00	-9.01
2 X	2400.000	2.98	32.51	39.86	63.96	59.60	54.00	5.60
3 @	2409.435	2.99	32.54	39.86	96.70	92.37	54.00	38.37

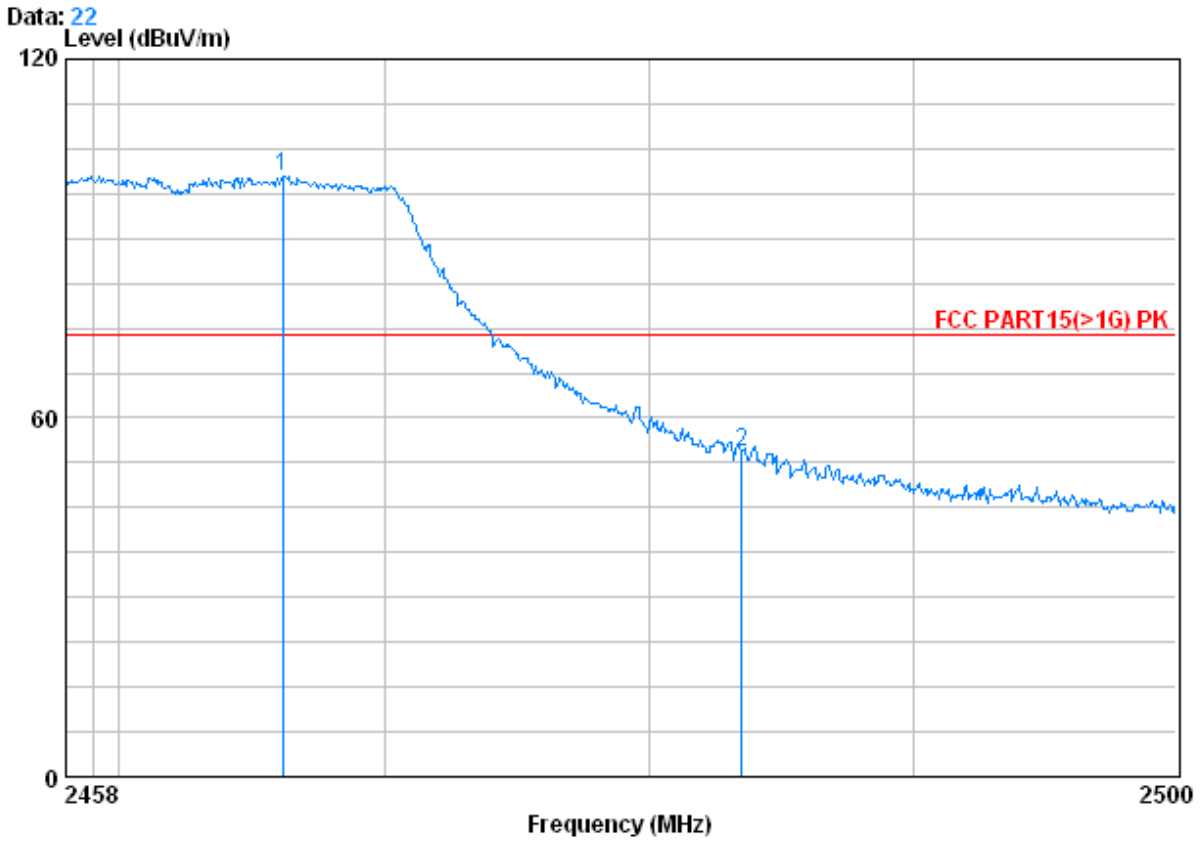
Test mode:	802.11n(HT20)	Test channel:	Lowest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : n(HT20)2412 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	39.40	35.04	54.00	-18.96
2	2400.000	2.98	32.51	39.86	51.15	46.78	54.00	-7.22
3 @	2409.435	2.99	32.54	39.86	86.22	81.90	54.00	27.90

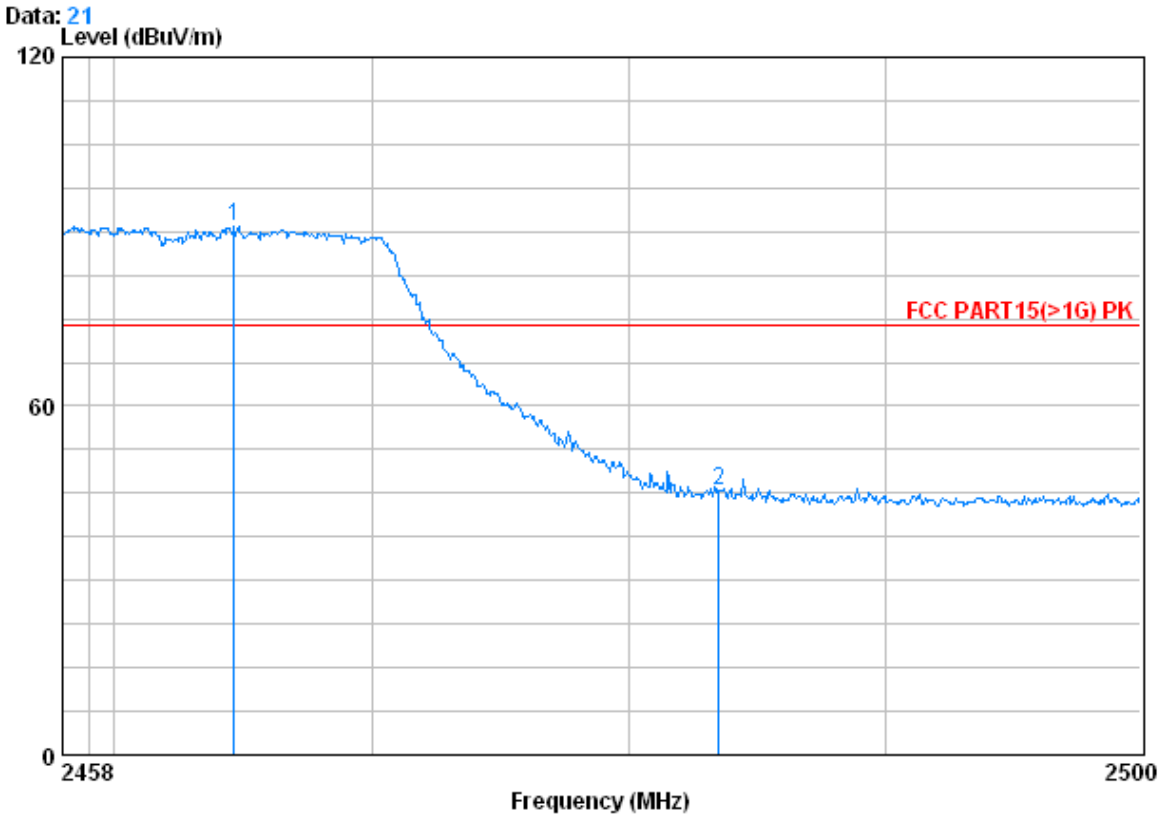
Test mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : n(HT20)2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2466.148	3.02	32.64	39.91	104.66	100.41	74.00	26.41
2	2483.500	3.03	32.67	39.92	58.54	54.32	74.00	-19.68

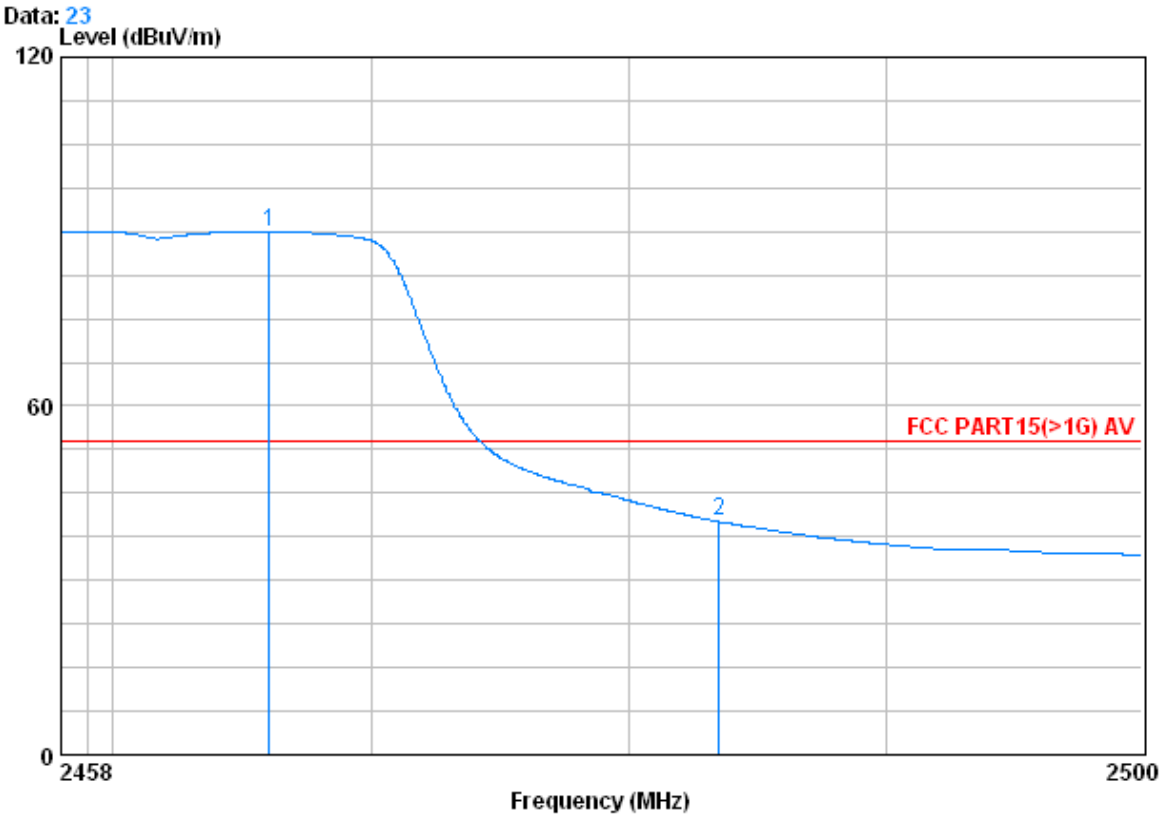
Test mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : n(HT20)2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 X	2464.636	3.02	32.64	39.91	95.03	90.78	74.00	16.78
2	2483.500	3.03	32.67	39.92	49.76	45.54	74.00	-28.46

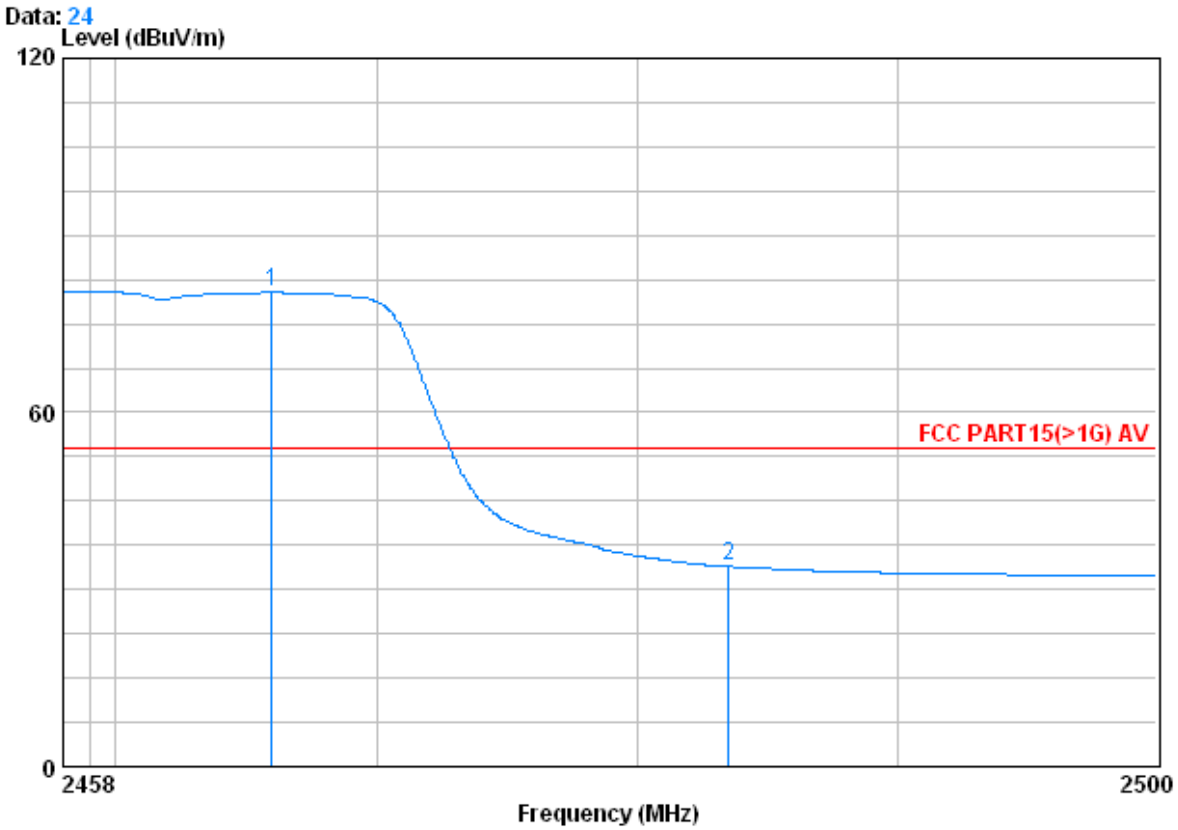
Test mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : n(HT20)2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2466.022	3.02	32.64	39.91	94.19	89.95	54.00	35.95
2	2483.500	3.03	32.67	39.92	44.29	40.07	54.00	-13.93

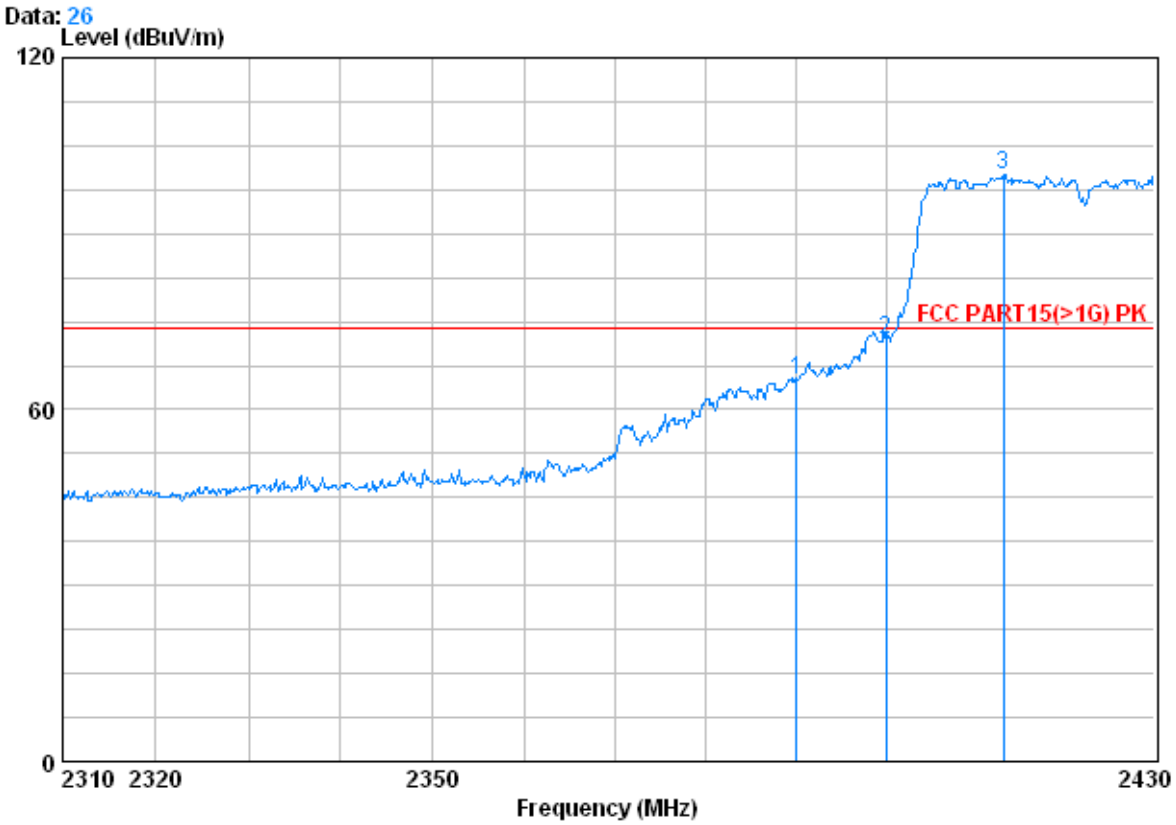
Test mode:	802.11n(HT20)	Test channel:	Highest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : n(HT20)2462 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2465.980	3.02	32.64	39.91	84.55	80.30	54.00	26.30
2	2483.500	3.03	32.67	39.92	38.10	33.88	54.00	-20.12

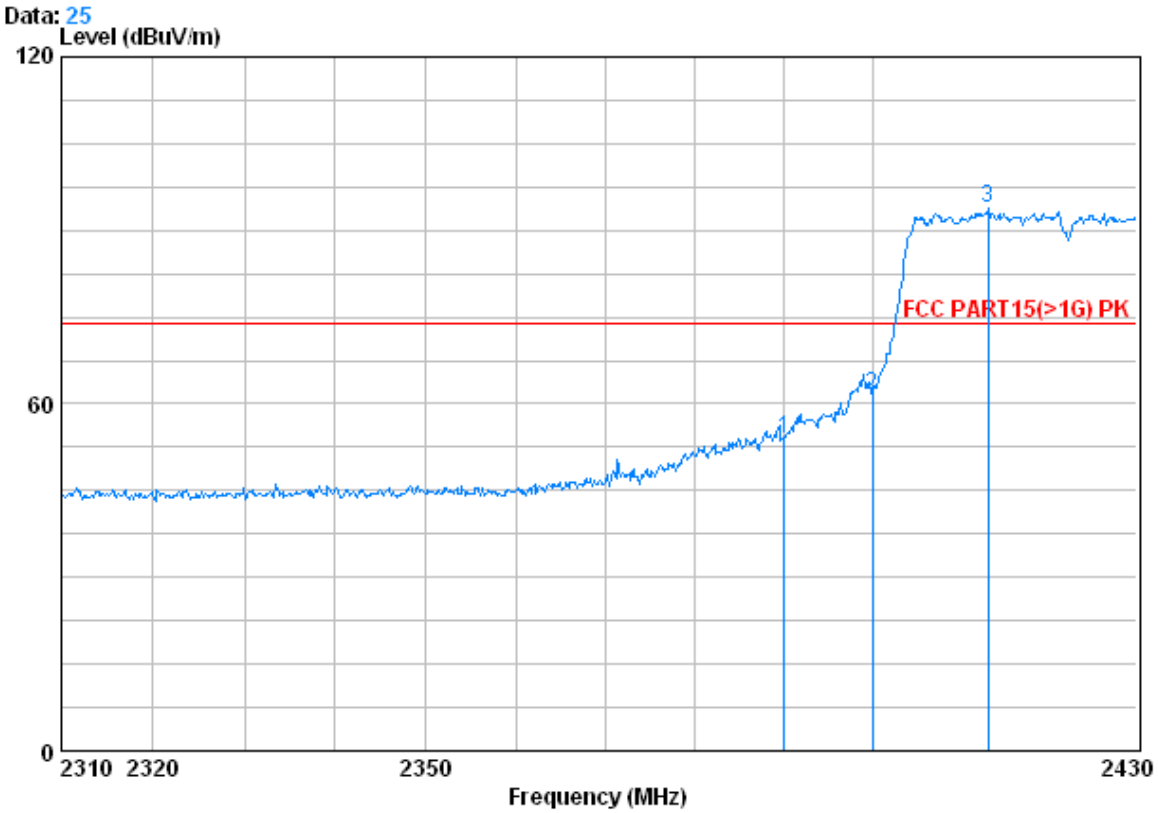
Test mode:	802.11n(HT40)	Test channel:	Lowest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : n(HT40)2422 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	69.39	65.04	74.00	-8.96
2	2400.000	2.98	32.51	39.86	76.40	72.04	74.00	-1.96
3 @	2413.080	2.99	32.54	39.86	104.32	100.00	74.00	26.00

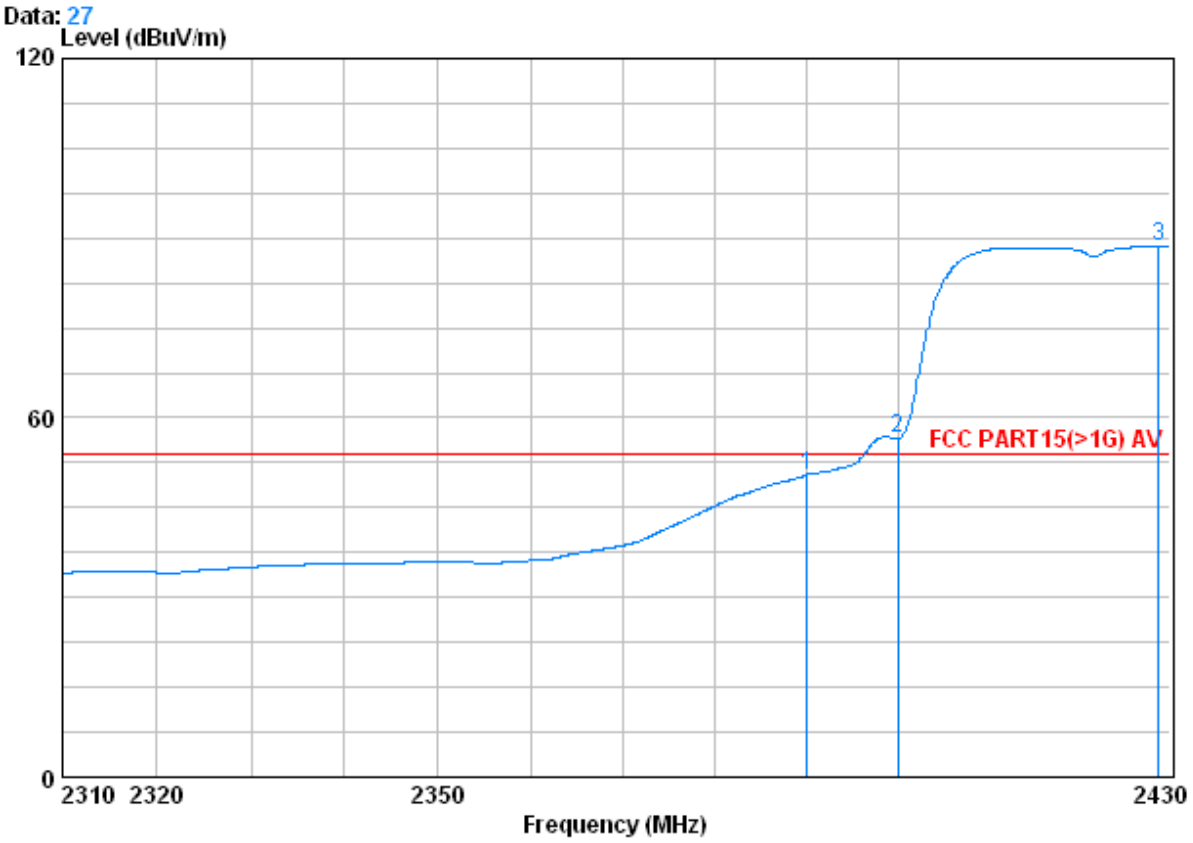
Test mode:	802.11n(HT40)	Test channel:	Lowest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : n(HT40)2422 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	58.24	53.89	74.00	-20.11
2	2400.000	2.98	32.51	39.86	65.84	61.47	74.00	-12.53
3 X	2413.080	2.99	32.54	39.86	98.12	93.79	74.00	19.79

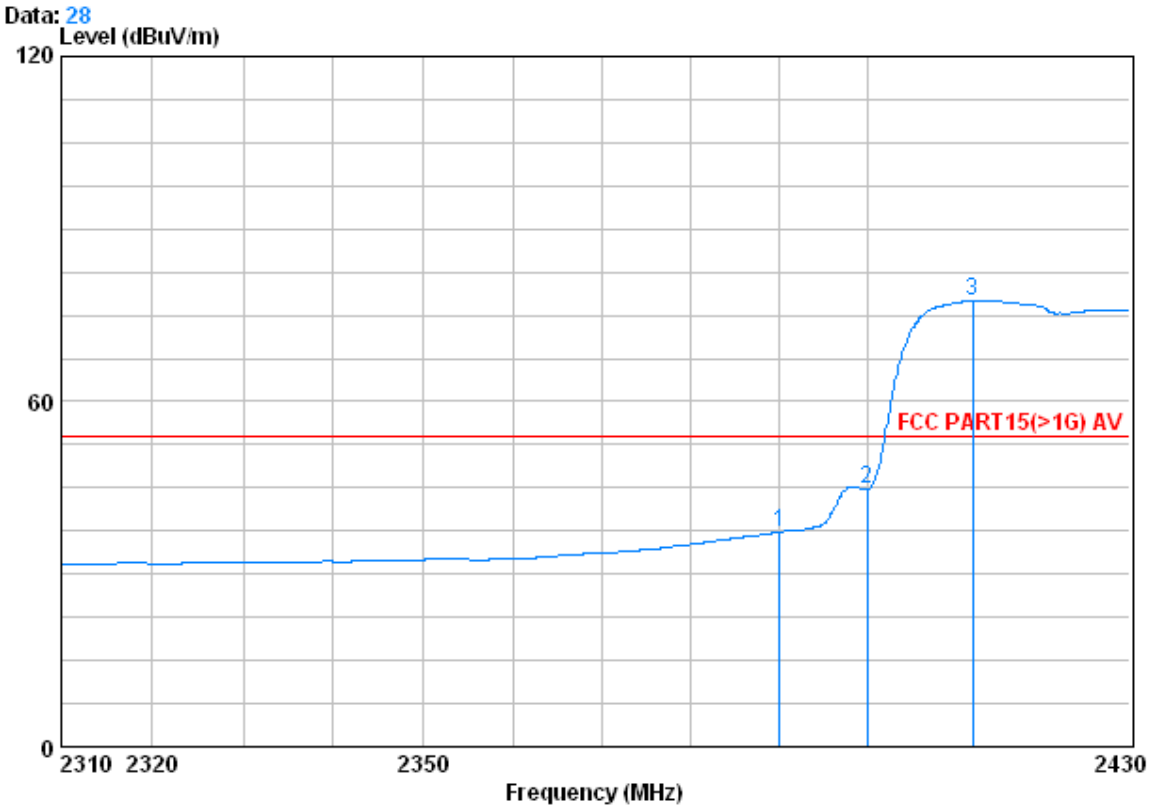
Test mode:	802.11n(HT40)	Test channel:	Lowest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : n(HT40)2422 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	54.74	50.39	54.00	-3.61
2 X	2400.000	2.98	32.51	39.86	60.96	56.59	54.00	2.59
3 @	2428.800	3.00	32.58	39.88	92.98	88.68	54.00	34.68

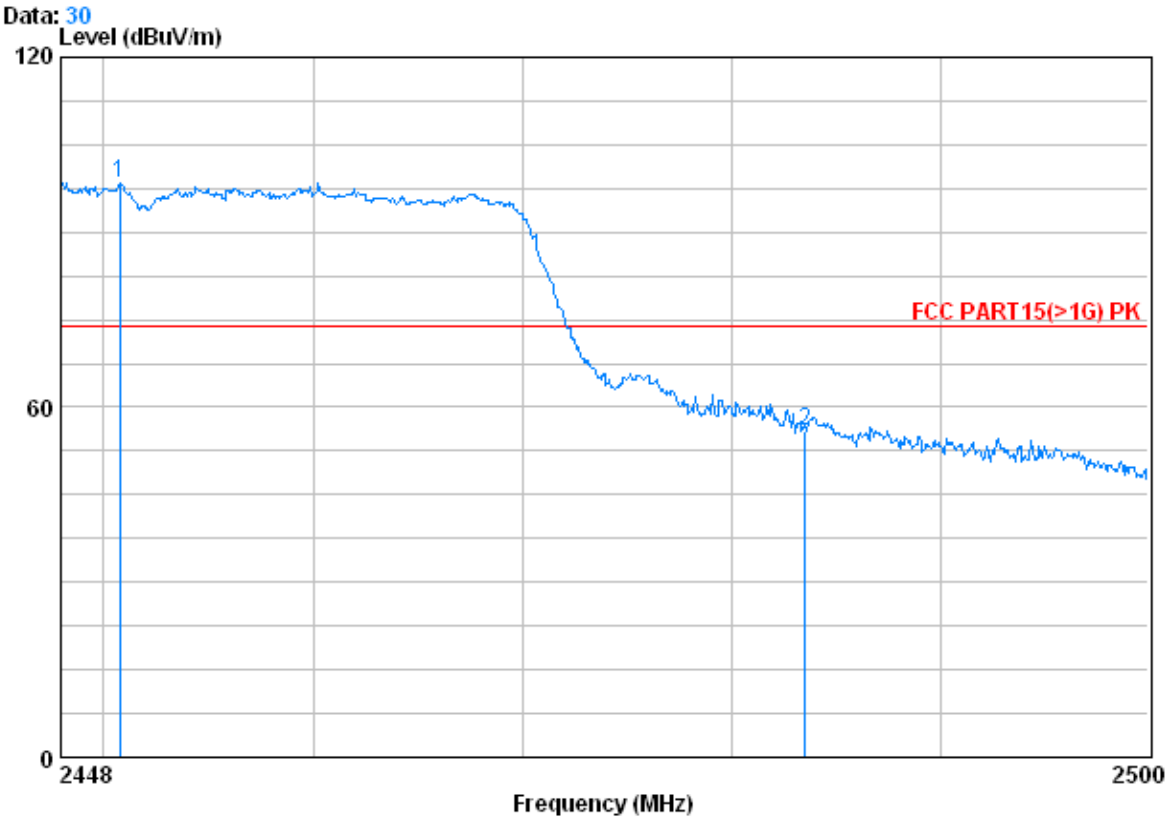
Test mode:	802.11n(HT40)	Test channel:	Lowest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : n(HT40)2422 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2390.000	2.98	32.51	39.85	41.71	37.36	54.00	-16.64
2	2400.000	2.98	32.51	39.86	49.06	44.69	54.00	-9.31
3 @	2412.000	2.99	32.54	39.86	81.85	77.52	54.00	23.52

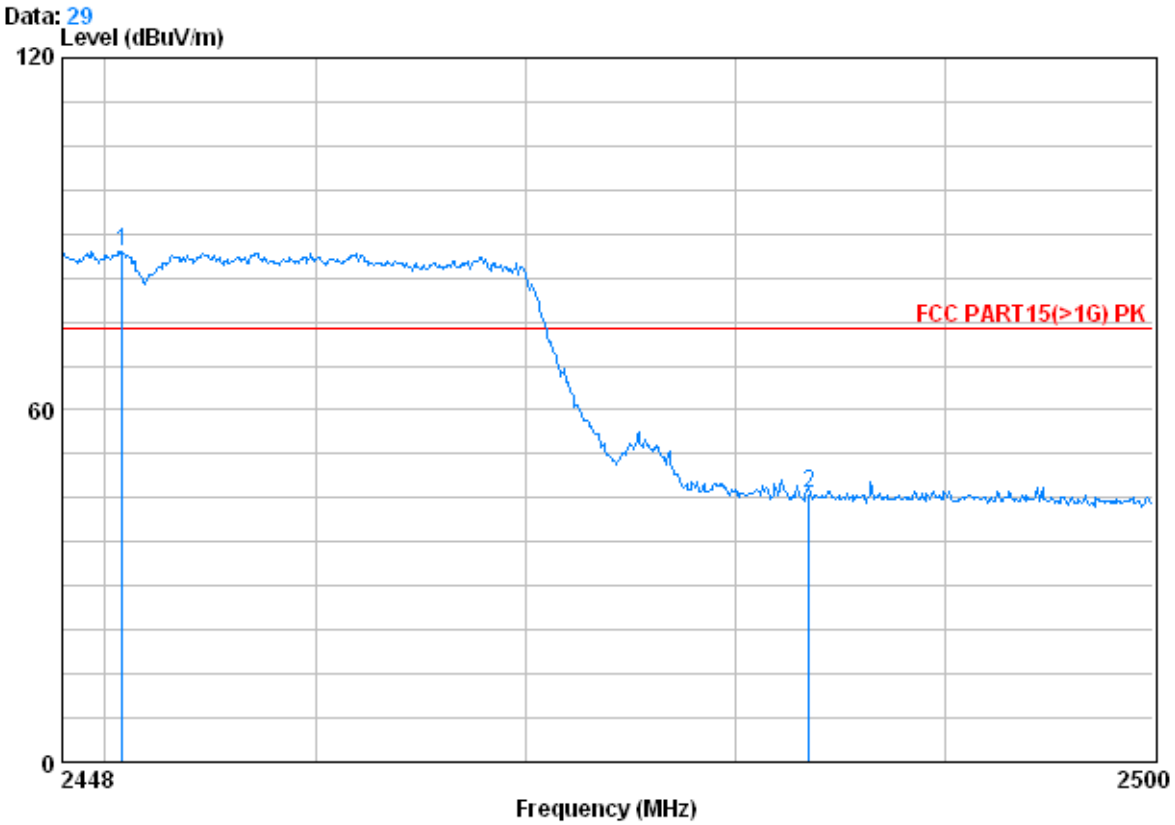
Test mode:	802.11n(HT40)	Test channel:	Highest	Remark:	Peak	Vertical



Condition : FCC PART15(>1G) PK 3m VERTICAL
model: : n(HT40)2452 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2450.808	3.01	32.61	39.89	102.60	98.33	74.00	24.33
2	2483.500	3.03	32.67	39.92	60.06	55.84	74.00	-18.16

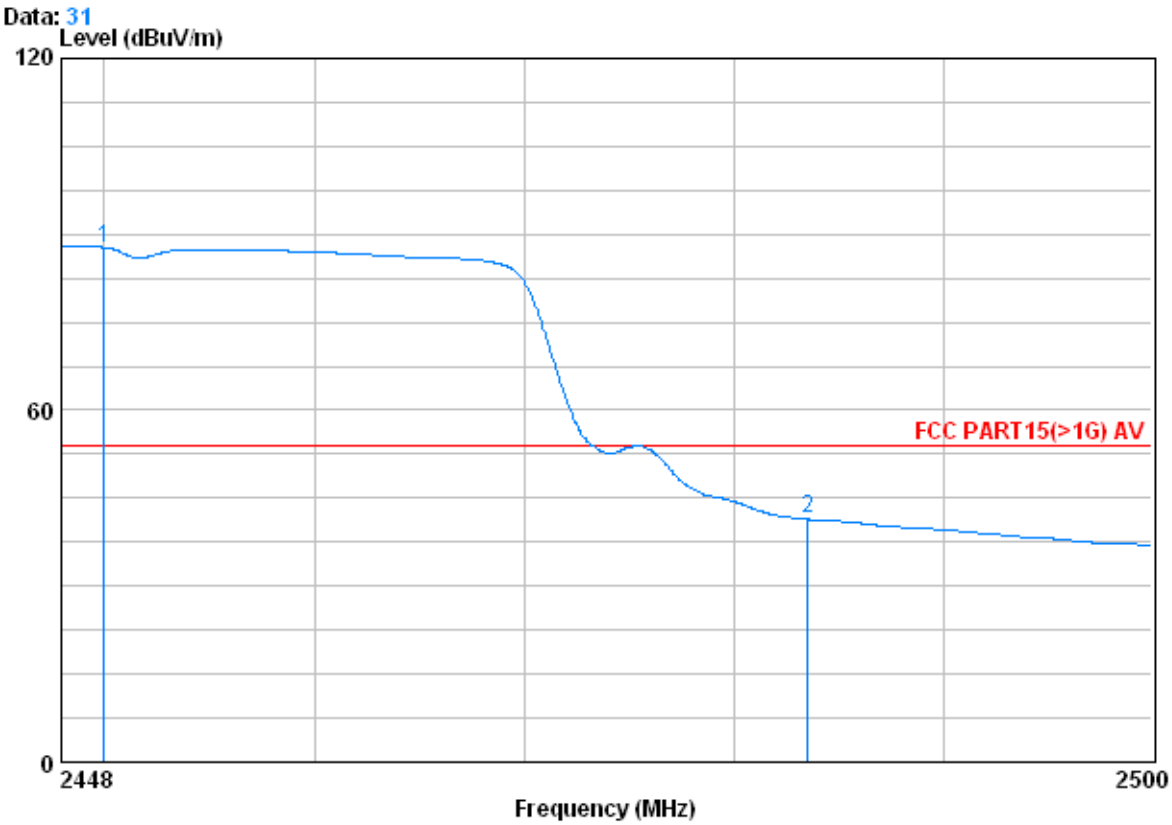
Test mode:	802.11n(HT40)	Test channel:	Highest	Remark:	Peak	Horizontal



Condition : FCC PART15(>1G) PK 3m HORIZONTAL
model: : n(HT40)2452 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 X	2450.860	3.01	32.61	39.89	91.21	86.94	74.00	12.94
2	2483.500	3.03	32.67	39.92	50.02	45.80	74.00	-28.20

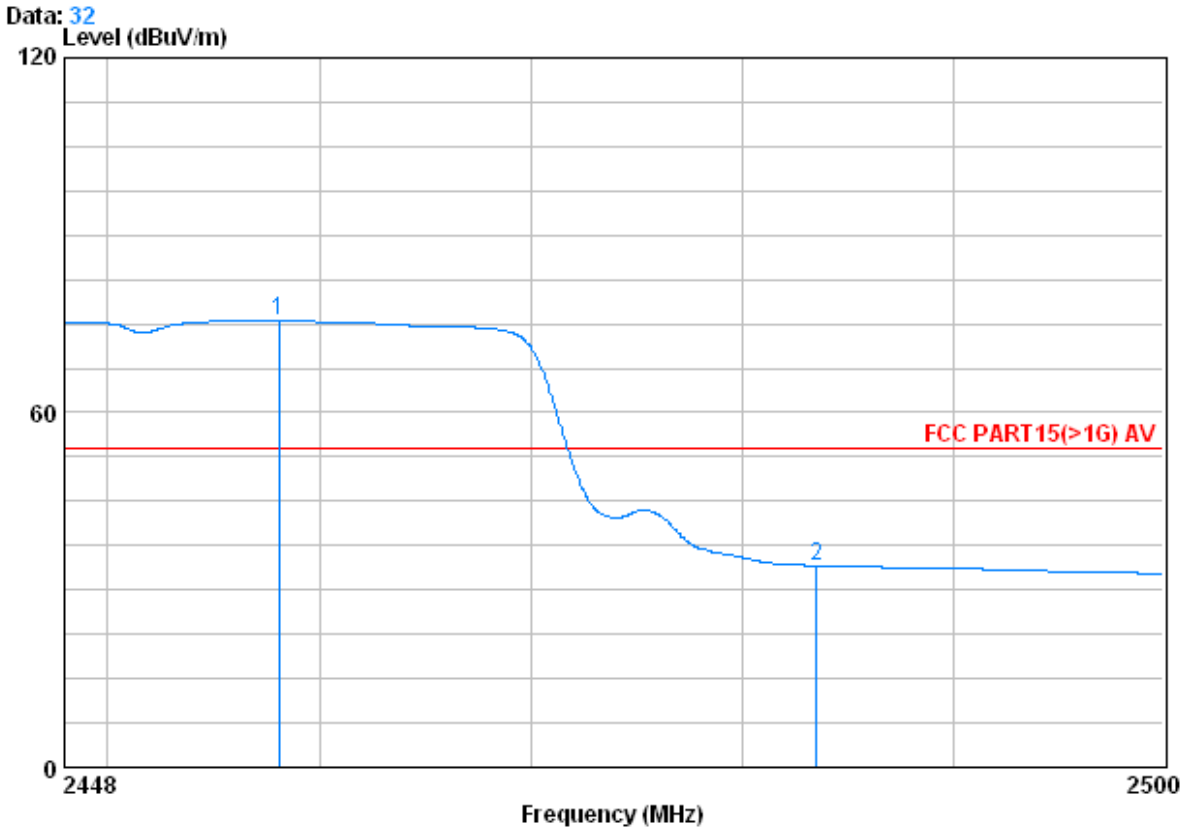
Test mode:	802.11n(HT40)	Test channel:	Highest	Remark:	Average	Vertical



Condition : FCC PART15(>1G) AV 3m VERTICAL
model: : n(HT40)2452 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2450.028	3.01	32.61	39.89	92.02	87.75	54.00	33.75
2	2483.500	3.03	32.67	39.92	45.59	41.37	54.00	-12.63

Test mode:	802.11n(HT40)	Test channel:	Highest	Remark:	Average	Horizontal



Condition : FCC PART15(>1G) AV 3m HORIZONTAL
model: : n(HT40)2452 bandedge

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 @	2458.088	3.02	32.64	39.91	79.75	75.50	54.00	21.50
2	2483.500	3.03	32.67	39.92	38.34	34.12	54.00	-19.88

Note:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor