

# FCC Test Report

## (Class II Permissive Change)

Product Name	Intel® Dual Band Wireless-AC 3160
Model No	3160NGW
FCC ID.	PD93160NG, PD93160NGU

\*FCC ID: PD93160NG (for OEM factory install)

\*FCC ID: PD93160NGU (for User Installation w/bios lock feature.)

Applicant	Intel Mobile Communications France SAS
Address	Le Navigator B 505 route des Lucioles CS 70293 06905 Sophia Antipolis cedex

Date of Receipt	March 13, 2015
Issue Date	April 07, 2015
Report No.	1530265R-RFUSP25V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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# Test Report

Issue Date: April 07, 2015

Report No.: 1530265R-RFUSP25V00



Product Name	Intel® Dual Band Wireless-AC 3160
Applicant	Intel Mobile Communications France SAS
Address	Le Navigator B 505 route des Lucioles CS 70293 06905 Sophia Antipolis cedex
Manufacturer	Intel Mobile Communications France SAS
Model No.	3160NGW
FCC ID.	PD93160NG, PD93160NGU
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	AC 120V/60Hz
Trade Name	Intel
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2013 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r02
Test Result	Complied

Documented By : Rita Huang  
( Senior Adm. Specialist / Rita Huang )

Tested By : Alan Chen  
( Engineer / Alan Chen )

Approved By : [Signature]  
( Director / Vincent Lin )

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**1. GENERAL INFORMATION**

**1.1. EUT Description**

Product Name	Intel® Dual Band Wireless-AC 3160
Trade Name	Intel
Model No.	3160NGW
FCC ID.	PD93160NG, PD93160NGU
Frequency Range	802.11b/g/n-20MHz: 2412-2462MHz, 802.11n-40MHz: 2422-2452MHz 802.11a/n-20MHz: 5745-5825MHz, 802.11n-40MHz: 5755-5795MHz 802.11ac-80MHz: 5775 MHz
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7 802.11a/n-20MHz: 5, n-40MHz: 2 802.11ac-80MHz: 1
Data Speed	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 150Mbps 802.11ac-80MHz: up to 433.3MHz
Channel separation	802.11b/g/n-20MHz: 5 MHz, 802.11a/n-20MHz: 20MHz 802.11n-40MHz: 40MHz, 802.11ac-80MHz: 80MHz
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11a/g/n: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna Type	Dipole Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Contain Module	Intel / 3160NGW

**Antenna List**

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Wistron Neweb Corp.	81XCAA15.G03 (497317-003) (Tx/Rx1)	Dipole	1.26 dBi For 2.4GHz
		81XCAA15.G03 (497317-003) ( Tx/Rx2)		1.09 dBi For 5725-5850GHz
2	WIESON Technologies co ., ltd	GY121HT0321-003-H (External)	Dipole	2.89 dBi For 2.4GHz
		(WIFI)		4.22 dBi For 5725-5850GHz

Note:

1. The antenna of EUT is conform to FCC 15.203
2. Only the higher gain antenna was tested and recorded in this report.

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 149:	5745 MHz	Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz
Channel 165:	5825 MHz						

802.11n-40MHz (2.4G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 3:	2422 MHz	Channel 4:	2427 MHz	Channel 5:	2432 MHz	Channel 6:	2437 MHz
Channel 7:	2442 MHz	Channel 8:	2447 MHz	Channel 9:	2452 MHz		

802.11n-40MHz (5G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
Channel 151:	5755 MHz	Channel 159:	5795 MHz

802.11ac-80MHz Carrier Frequency of Each Channel:

Channel	Frequency
Channel 155:	5775 MHz

Note:

1. This device is an Intel® Dual Band Wireless-AC 3160, Contains functions and so on WLAN 、 Bluetooth , This report for WLAN.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps 、 802.11n(20M-BW) is 7.2Mbps 、 802.11n(40M-BW) is 15Mbps 、 802.11ac(20M-BW) is 7.2Mbps 、 802.11ac(40M-BW) is 15Mbps and 802.11ac(80M-BW) is 32.5Mbps.).
4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11a/b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
5. This is to request a Class II permissive change for FCC ID: PD93160NG, PD93160NGU, originally granted on 06/26/2013.

The major change filed under this application is:

Change #1: Addition new antenna, antenna type is different with the original application.

(Antenna type: Dipole antenna)

Test Mode:	Mode 1: Transmit - 802.11b 1Mbps
	Mode 2: Transmit - 802.11g 6Mbps
	Mode 3: Transmit - 802.11a 6Mbps
	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)
	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)
	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)
	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)
	Mode 8: Transmit - 802.11ac-80BW_32.5Mbps(5G Band)

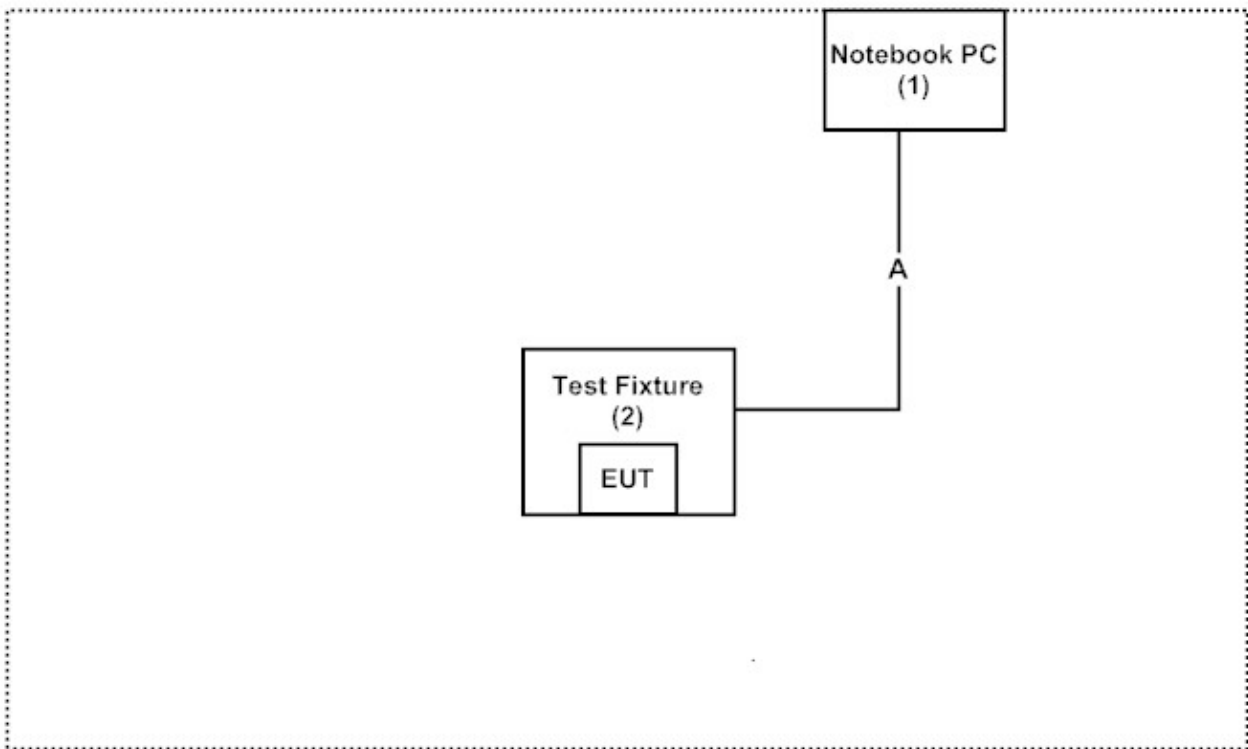
**1.3. Tested System Details**

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	N/A	Non-Shielded, 1.8m
2	Test Fixture	Intel	N/A	N/A

Signal Cable Type	Signal cable Description
A	Test Fixture Line
	Non-Shielded, 1.0m

**1.4. Configuration of Tested System**



**1.5. EUT Exercise Software**

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute "DRTU Ver 1.7.3-895" program on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press "OK" to start the continuous Transmit.
- (5) Verify that the EUT works properly.

**1.6. Test Facility**

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation’s Web Site : <http://www.quietek.com/tw/ctg/cts/accreditations.htm>  
 The address and introduction of QuieTek Corporation’s laboratories can be founded in our Web site : <http://www.quietek.com/>

Site Description: File on  
 Federal Communications Commission  
 FCC Engineering Laboratory  
 7435 Oakland Mills Road  
 Columbia, MD 21046  
 Registration Number: 92195

Site Name: Quietek Corporation  
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FCC Accreditation Number: TW1014



## 2. Maximum Power Output

### 2.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Power Meter	Anritsu	ML2495A/6K00003357	May, 2014
	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2014
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2014
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2014
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

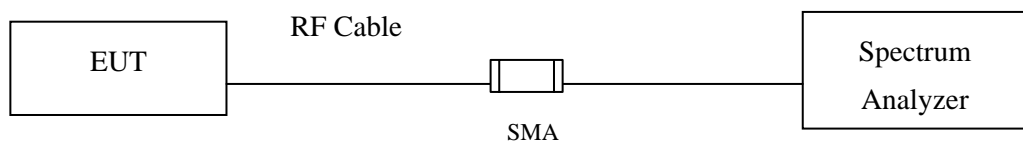
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

### 2.2. Test Setup

Average Power For different Data Rate (Mbps)



Peak Power Measurement



**2.3. Limits**

The maximum peak power shall be less 1 Watt.

**2.4. Test Procedure**

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.2 PKPM1 Peak power meter method.

**2.5. Uncertainty**

$\pm 1.27$  dB

**2.6. Test Result of Maximum Power Output**

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Required Limit	Result
		1	2	5.5	11		
		Measurement Level (dBm)					
01	2412	16.51	--	--	--	<30dBm	Pass
06	2437	16.52	16.46	16.4	16.34	<30dBm	Pass
11	2462	16.69	--	--	--	<30dBm	Pass

Note: Average Power Output Value = Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2		
Measurement Level (dBm)											
01	2412	14.17	--	--	--	--	--	--	--	<30dBm	Pass
06	2437	16.56	16.48	16.4	16.32	16.24	16.16	16.08	16.01	<30dBm	Pass
11	2462	14.24	--	--	--	--	--	--	--	<30dBm	Pass

Note: Average Power Output Value =Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		6	9	12	18	24	36	48	54		
Measurement Level (dBm)											
149	5745	16.58	--	--	--	--	--	--	--	<30dBm	Pass
157	5785	16.56	16.49	16.42	16.35	16.28	16.21	16.14	16.07	<30dBm	Pass
165	5825	16.59	--	--	--	--	--	--	--	<30dBm	Pass

Note: Average Power Output Value = Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band)

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2		
Measurement Level (dBm)											
01	2412	14.11	--	--	--	--	--	--	--	<30dBm	Pass
06	2437	16.59	16.51	16.43	16.35	16.27	16.19	16.11	16.03	<30dBm	Pass
11	2462	13.95	--	--	--	--	--	--	--	<30dBm	Pass

Note: Average Power Output Value =Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band)

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		15	30	45	60	90	120	135	150		
Measurement Level (dBm)											
01	2422	13.04	--	--	--	--	--	--	--	<30dBm	Pass
04	2437	16.54	16.68	16.62	16.56	16.5	16.44	16.38	16.32	<30dBm	Pass
07	2452	14.13	--	--	--	--	--	--	--	<30dBm	Pass

Note: Average Power Output Value =Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit - 802.11n-20BW\_7.2Mbps(5G Band)

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2		
Measurement Level (dBm)											
149	5745	16.61	--	--	--	--	--	--	--	<30dBm	Pass
157	5785	16.73	16.68	16.63	16.58	16.53	16.48	16.43	16.38	<30dBm	Pass
165	5825	16.51	--	--	--	--	--	--	--	<30dBm	Pass

Note: Average Power Output Value =Reading value on power meter + cable loss



Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 7: Transmit - 802.11n-40BW\_15Mbps(5G Band)

Channel No	Frequency (MHz)	Average Power								Required Limit	Result
		For different Data Rate (Mbps)									
		15	30	45	60	90	120	135	150		
Measurement Level (dBm)											
151	5755	16.69	--	--	--	--	--	--	--	<30dBm	Pass
159	5795	16.55	16.48	16.41	16.34	16.27	16.2	16.13	16.06	<30dBm	Pass

Note: Average Power Output Value = Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Maximum Output Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 8: Transmit - 802.11ac-80BW\_32.5Mbps(5G Band)

Channel No	Frequency (MHz)	Average Power										Required Limit	Result
		For different Data Rate (Mbps)											
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9		
Measurement Level (dBm)													
155	5775	16.54	16.49	16.44	16.39	16.34	16.29	16.24	16.19	16.14	16.09	<30dBm	Pass

Note: Average Power Output Value =Reading value on power meter + cable loss

**3. Radiated Emission**

**3.1. Test Equipment**

The following test equipment are used during the radiated emission test:

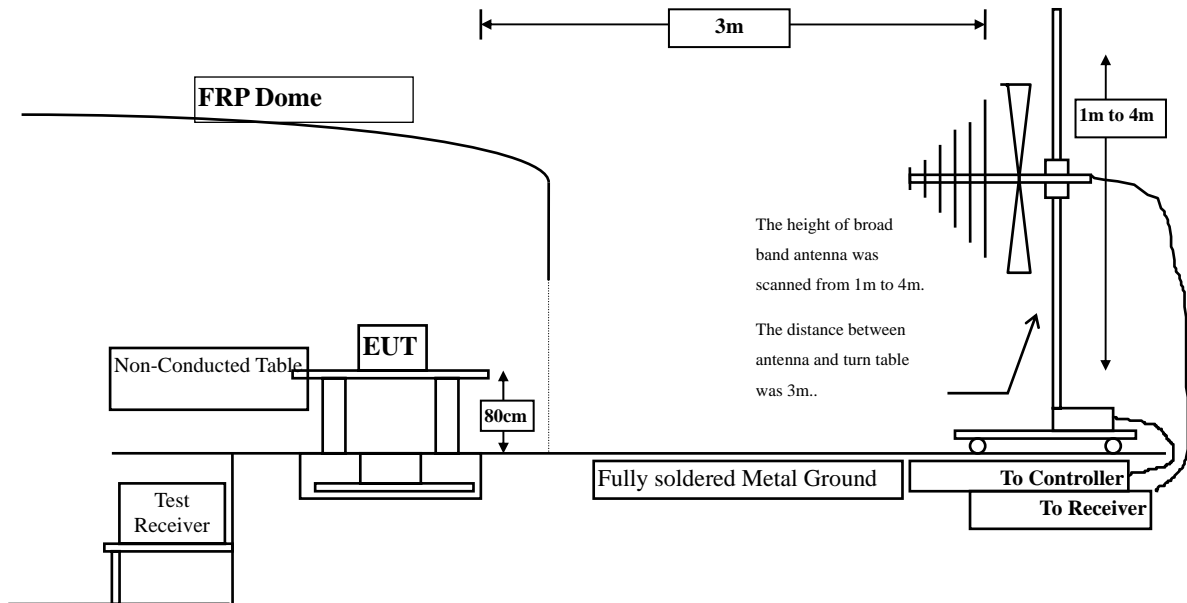
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2014
	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2014
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2014
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
	X	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2014
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2014
	X	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2015
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2014
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2015
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒ CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2014
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2014
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2014

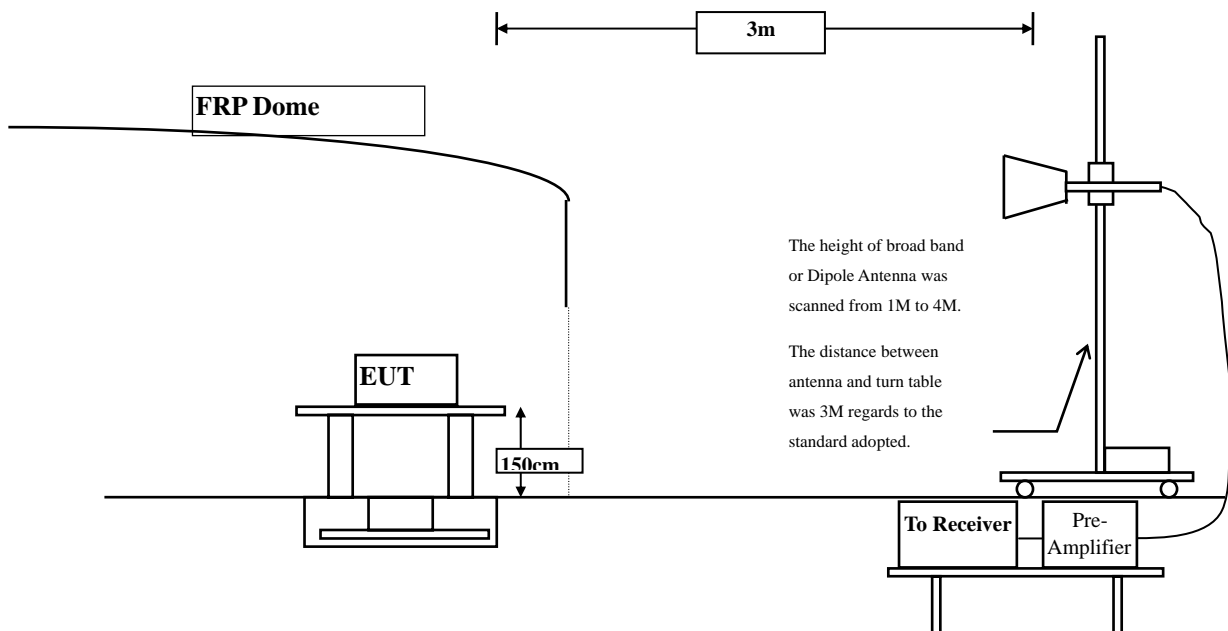
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
  2. The test instruments marked with “X” are used to measure the final test results.

### 3.2. Test Setup

#### Radiated Emission Below 1GHz



#### Radiated Emission Above 1GHz



**3.3. Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

<b>FCC Part 15 Subpart C Paragraph 15.209(a) Limits</b>		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

### 3.4. Test Procedure

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

### 3.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

**3.6. Test Result of Radiated Emission**

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4824.000	3.261	46.660	49.921	-24.079	74.000
7236.000	10.650	36.060	46.710	-27.290	74.000
9648.000	13.337	37.420	50.756	-23.244	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4824.000	6.421	49.280	55.701	-18.299	74.000
7236.000	11.495	36.340	47.835	-26.165	74.000
9648.000	13.807	37.370	51.176	-22.824	74.000
<b>Average Detector:</b>					
4824.000	6.421	46.950	53.371	-0.629	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	3.038	45.530	48.567	-25.433	74.000
7311.000	11.795	35.450	47.244	-26.756	74.000
9748.000	12.635	36.790	49.425	-24.575	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4874.000	5.812	49.210	55.021	-18.979	74.000
7311.000	12.630	35.730	48.359	-25.641	74.000
9748.000	13.126	36.540	49.666	-24.334	74.000
<b>Average Detector:</b>					
4874.000	5.812	46.790	52.601	-1.399	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4924.000	2.858	46.250	49.107	-24.893	74.000
7386.000	12.127	35.950	48.078	-25.922	74.000
9848.000	12.852	36.600	49.453	-24.547	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4924.000	5.521	49.940	55.460	-18.540	74.000
7386.000	13.254	35.880	49.134	-24.866	74.000
9848.000	13.367	36.350	49.717	-24.283	74.000
<b>Average Detector:</b>					
4924.000	5.521	49.940	55.460	-18.540	4924.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4824.000	3.261	43.100	46.361	-27.639	74.000
7236.000	10.650	36.390	47.040	-26.960	74.000
9648.000	13.337	37.320	50.656	-23.344	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4824.000	6.421	46.120	52.541	-21.459	74.000
7236.000	11.495	36.830	48.325	-25.675	74.000
9648.000	13.807	36.960	50.766	-23.234	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	3.038	43.880	46.917	-27.083	74.000
7311.000	11.795	36.280	48.074	-25.926	74.000
9748.000	12.635	37.200	49.835	-24.165	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4874.000	5.812	47.410	53.221	-20.779	74.000
7311.000	12.630	36.200	48.829	-25.171	74.000
9748.000	13.126	37.410	50.536	-23.464	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4924.000	2.858	43.440	46.297	-27.703	74.000
7386.000	12.127	35.590	47.718	-26.282	74.000
9848.000	12.852	36.660	49.513	-24.487	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4924.000	5.521	46.250	51.770	-22.230	74.000
7386.000	13.254	35.800	49.054	-24.946	74.000
9848.000	13.367	36.670	50.037	-23.963	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5745 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11490.000	17.106	35.570	52.677	-21.323	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11490.000	18.034	35.260	53.295	-20.705	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11570.000	16.809	35.690	52.499	-21.501	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11570.000	17.698	35.660	53.358	-20.642	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5825 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11650.000	16.158	35.700	51.858	-22.142	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11650.000	17.274	35.920	53.195	-20.805	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4824.000	3.261	43.310	46.571	-27.429	74.000
7236.000	10.650	36.570	47.220	-26.780	74.000
9648.000	13.337	37.600	50.936	-23.064	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4824.000	6.421	45.690	52.111	-21.889	74.000
7236.000	11.495	36.970	48.465	-25.535	74.000
9648.000	13.807	37.090	50.896	-23.104	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	3.038	43.370	46.407	-27.593	74.000
7311.000	11.795	35.840	47.634	-26.366	74.000
9748.000	12.635	37.240	49.875	-24.125	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4874.000	5.812	47.050	52.861	-21.139	74.000
7311.000	12.630	35.610	48.239	-25.761	74.000
9748.000	13.126	36.890	50.016	-23.984	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4924.000	2.858	42.480	45.337	-28.663	74.000
7386.000	12.127	35.640	47.768	-26.232	74.000
9848.000	12.852	36.840	49.693	-24.307	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4924.000	5.521	45.890	51.410	-22.590	74.000
7386.000	13.254	36.280	49.534	-24.466	74.000
9848.000	13.367	37.520	50.887	-23.113	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2422MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4844.000	3.171	40.170	43.341	-30.659	74.000
7266.000	11.162	36.070	47.232	-26.768	74.000
9688.000	12.964	37.030	49.995	-24.005	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4844.000	6.178	38.170	44.348	-29.652	74.000
7266.000	11.982	35.590	47.572	-26.428	74.000
9688.000	13.507	37.090	50.598	-23.402	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4874.000	3.038	41.770	44.807	-29.193	74.000
7311.000	11.795	36.240	48.034	-25.966	74.000
9748.000	12.635	37.420	50.055	-23.945	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4874.000	5.812	44.370	50.181	-23.819	74.000
7311.000	12.630	35.820	48.449	-25.551	74.000
9748.000	13.126	37.030	50.156	-23.844	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2452 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
4904.000	2.914	41.990	44.905	-29.095	74.000
7356.000	11.995	35.670	47.664	-26.336	74.000
9808.000	12.475	36.590	49.065	-24.935	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
4904.000	5.530	44.990	50.521	-23.479	74.000
7356.000	13.005	35.650	48.654	-25.346	74.000
9808.000	12.901	37.090	49.991	-24.009	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit - 802.11n-20BW\_7.2Mbps(5G Band) (5745MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11490.000	17.106	36.090	53.197	-20.803	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11490.000	18.034	35.450	53.485	-20.515	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit - 802.11n-20BW\_7.2Mbps(5G Band) (5785 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11570.000	16.809	35.630	52.439	-21.561	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11570.000	17.698	35.880	53.578	-20.422	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit - 802.11n-20BW\_7.2Mbps(5G Band) (5825 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11650.000	16.158	35.300	51.458	-22.542	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11650.000	17.274	35.190	52.465	-21.535	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 7: Transmit - 802.11n-40BW\_15Mbps(5G Band) (5755MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
MHz	Factor	Level	Level	dB	dBuV/m
	dB	dBuV	dBuV/m		

**Horizontal**

**Peak Detector:**

11510.000	17.124	35.030	52.154	-21.846	74.000
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**Average**

**Detector:**

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**Vertical**

**Peak Detector:**

11510.000	18.081	35.660	53.741	-20.259	74.000
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**Average**

**Detector:**

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 7: Transmit - 802.11n-40BW\_15Mbps(5G Band) (5795 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11590.000	16.701	35.340	52.040	-21.960	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11590.000	17.567	35.600	53.166	-20.834	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 8: Transmit - 802.11ac-80BW\_32.5Mbps(5G Band) (5775MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11550.000	16.914	36.060	52.974	-21.026	74.000
<b>Average Detector:</b>					
--					
<b>Vertical</b>					
<b>Peak Detector:</b>					
11550.000	16.914	36.602	53.515	-20.485	74.000
<b>Average Detector:</b>					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
229.820	-8.001	33.565	25.564	-20.436	46.000
528.580	3.074	26.783	29.857	-16.143	46.000
610.060	3.657	25.637	29.294	-16.706	46.000
833.160	6.616	27.483	34.099	-11.901	46.000
901.060	5.878	26.670	32.548	-13.452	46.000
972.840	7.189	26.540	33.729	-20.271	54.000
<b>Vertical</b>					
111.480	-3.439	33.012	29.574	-13.926	43.500
173.560	-2.713	33.020	30.307	-13.193	43.500
340.400	-1.287	38.565	37.278	-8.722	46.000
600.360	1.302	36.074	37.376	-8.624	46.000
798.240	2.629	32.539	35.167	-10.833	46.000
918.520	1.958	29.041	30.999	-15.001	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
229.820	-8.001	32.943	24.942	-21.058	46.000
410.240	-0.122	26.676	26.555	-19.445	46.000
553.800	3.147	27.074	30.221	-15.779	46.000
749.740	3.963	24.869	28.832	-17.168	46.000
854.500	7.380	24.102	31.482	-14.518	46.000
957.320	6.615	25.011	31.626	-14.374	46.000
<b>Vertical</b>					
390.840	-0.768	33.922	33.154	-12.846	46.000
542.160	1.855	26.092	27.947	-18.053	46.000
643.040	-2.610	26.498	23.888	-22.112	46.000
749.740	2.023	24.869	26.892	-19.108	46.000
879.720	1.188	24.920	26.108	-19.892	46.000
965.080	3.832	24.921	28.753	-25.247	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
173.560	-9.543	32.663	23.120	-20.380	43.500
305.480	-3.836	35.069	31.233	-14.767	46.000
437.400	0.819	27.730	28.549	-17.451	46.000
549.920	3.662	25.501	29.162	-16.838	46.000
635.280	1.798	24.727	26.525	-19.475	46.000
796.300	6.389	26.250	32.639	-13.361	46.000
<b>Vertical</b>					
99.840	-6.063	36.441	30.378	-13.122	43.500
179.380	-0.824	32.288	31.464	-12.036	43.500
293.840	-4.990	32.259	27.269	-18.731	46.000
371.440	-0.310	37.463	37.153	-8.847	46.000
540.220	2.169	24.940	27.109	-18.891	46.000
833.160	1.716	29.116	30.832	-15.168	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
227.880	-8.769	34.735	25.967	-20.033	46.000
334.580	-3.523	41.803	38.280	-7.720	46.000
460.680	4.030	27.204	31.234	-14.766	46.000
633.340	1.530	26.442	27.972	-18.028	46.000
833.160	6.616	28.185	34.801	-11.199	46.000
976.720	7.054	28.761	35.815	-18.185	54.000
<b>Vertical</b>					
121.180	-3.559	27.823	24.264	-19.236	43.500
181.320	-1.910	30.542	28.632	-14.868	43.500
361.740	-0.646	31.925	31.278	-14.722	46.000
600.360	1.302	29.429	30.731	-15.269	46.000
796.300	2.639	24.854	27.493	-18.507	46.000
897.180	0.937	25.652	26.589	-19.411	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
243.400	-6.546	29.965	23.419	-22.581	46.000
386.960	1.112	33.452	34.564	-11.436	46.000
522.760	3.176	28.185	31.361	-14.639	46.000
606.180	4.196	25.042	29.238	-16.762	46.000
796.300	6.389	25.269	31.658	-14.342	46.000
965.080	7.222	24.855	32.077	-21.923	54.000
<b>Vertical</b>					
109.540	-3.507	32.879	29.371	-14.129	43.500
222.060	-6.484	34.390	27.905	-18.095	46.000
386.960	-0.708	33.452	32.744	-13.256	46.000
534.400	1.272	25.632	26.904	-19.096	46.000
800.180	2.637	25.607	28.244	-17.756	46.000
965.080	3.832	24.855	28.687	-25.313	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.



Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 6: Transmit - 802.11n-20BW\_7.2Mbps(5G Band) (5785 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
274.440	-6.417	33.212	26.795	-19.205	46.000
437.400	0.819	28.491	29.310	-16.690	46.000
551.860	3.390	26.970	30.360	-15.640	46.000
796.300	6.389	26.020	32.409	-13.591	46.000
881.660	6.789	27.928	34.717	-11.283	46.000
965.080	7.222	26.215	33.437	-20.563	54.000
<b>Vertical</b>					
177.440	-1.248	32.668	31.420	-12.080	43.500
386.960	-0.708	34.358	33.650	-12.350	46.000
528.580	1.164	27.434	28.598	-17.402	46.000
602.300	1.704	27.550	29.254	-16.746	46.000
833.160	1.716	28.633	30.349	-15.651	46.000
937.920	3.110	26.162	29.272	-16.728	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 7: Transmit - 802.11n-40BW\_15Mbps(5G Band) (5755MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
198.780	-9.958	34.775	24.817	-18.683	43.500
388.900	1.034	33.608	34.642	-11.358	46.000
612.000	3.403	26.014	29.416	-16.584	46.000
796.300	6.389	25.477	31.866	-14.134	46.000
901.060	5.878	26.986	32.864	-13.136	46.000
959.260	6.640	24.530	31.170	-14.830	46.000
<b>Vertical</b>					
181.320	-1.910	31.581	29.671	-13.829	43.500
396.660	-2.039	31.231	29.192	-16.808	46.000
598.420	1.114	29.895	31.009	-14.991	46.000
699.300	-0.024	32.985	32.961	-13.039	46.000
844.800	2.462	23.952	26.414	-19.586	46.000
967.020	3.889	24.197	28.086	-25.914	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : General Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 8: Transmit - 802.11ac-80BW\_32.5Mbps(5G Band) (5775MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
99.840	-9.873	35.768	25.895	-17.605	43.500
243.400	-6.546	29.390	22.844	-23.156	46.000
546.040	4.386	25.452	29.838	-16.162	46.000
718.700	3.818	25.472	29.290	-16.710	46.000
833.160	6.616	28.225	34.841	-11.159	46.000
934.040	6.956	27.422	34.378	-11.622	46.000
<b>Vertical</b>					
171.620	-3.691	32.775	29.084	-14.416	43.500
321.000	-4.153	39.167	35.014	-10.986	46.000
542.160	1.855	27.932	29.787	-16.213	46.000
796.300	2.639	27.807	30.446	-15.554	46.000
934.040	2.986	27.422	30.408	-15.592	46.000
1000.000	-1.166	34.303	33.137	-20.863	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

**4. Band Edge**

**4.1. Test Equipment**

**RF Radiated Measurement:**

The following test equipments are used during the band edge tests:

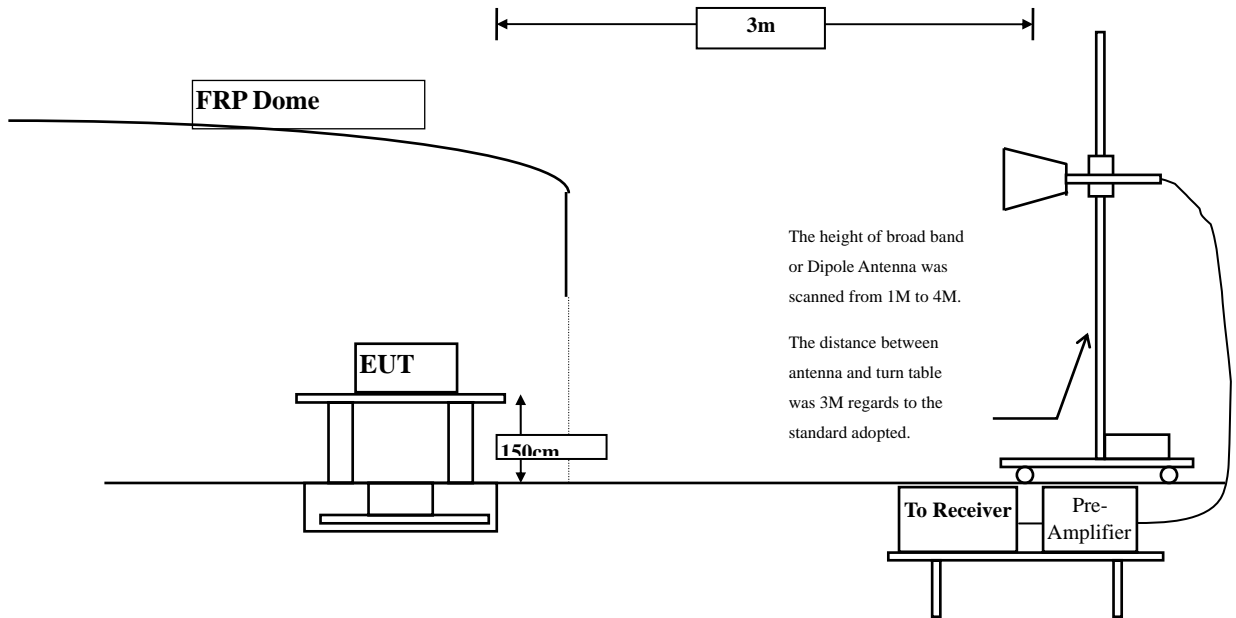
Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.	
☒ Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2014
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2014
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2014
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2014
	X	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2014
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2015
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2014
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2014
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2015
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.	
☒ CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2014
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2014
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2014
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2014

- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
  2. The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup

RF Radiated Measurement:



#### 4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

#### 4.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013. on radiated measurement.

#### 4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Band Edge

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2412Mhz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2386.200	31.494	26.468	57.962	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	24.863	56.372	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	33.207	64.768	--	--	--
01 (Peak)	2413.000	31.646	68.656	100.302	--	--	--
01 (Average)	2385.400	31.492	14.304	45.795	74.00	54.00	Pass
01 (Average)	2390.000	31.509	13.093	44.602	74.00	54.00	Pass
01 (Average)	2400.000	31.561	27.067	58.628	--	--	--
01 (Average)	2409.400	31.621	64.439	96.059	--	--	--

Figure Channel 01: Horizontal (Peak)

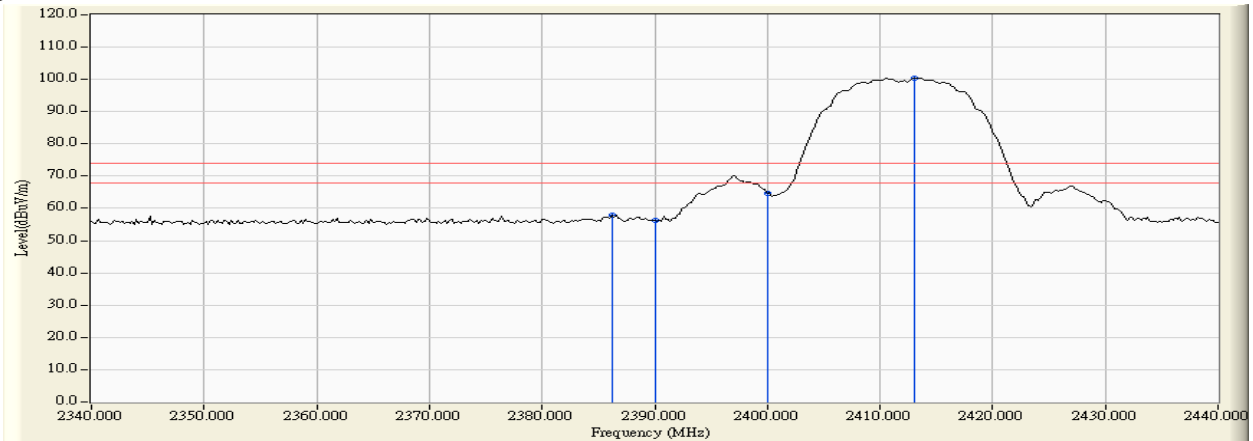
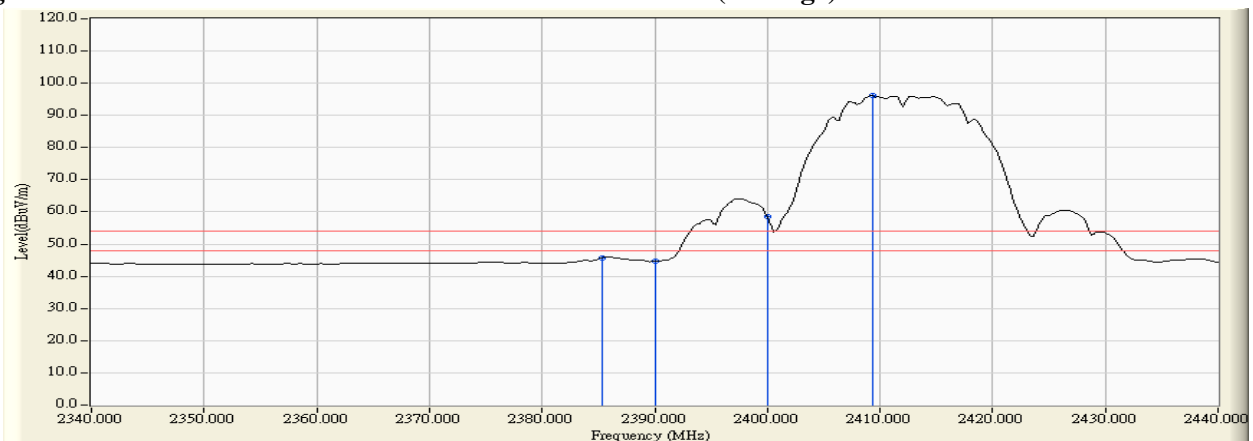


Figure Channel 01: Horizontal (Average)



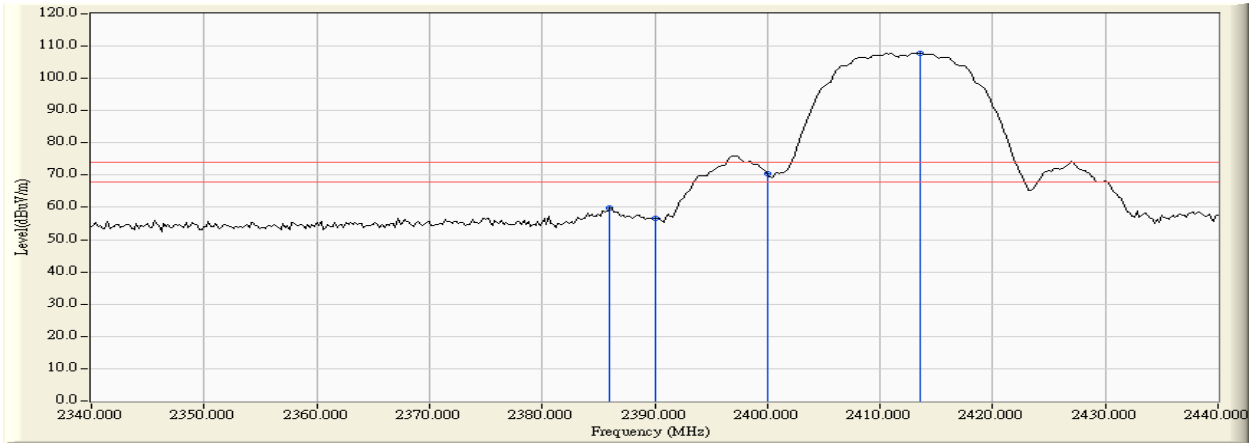
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement Level = Reading Level + Correct Factor.  
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2412Mhz)

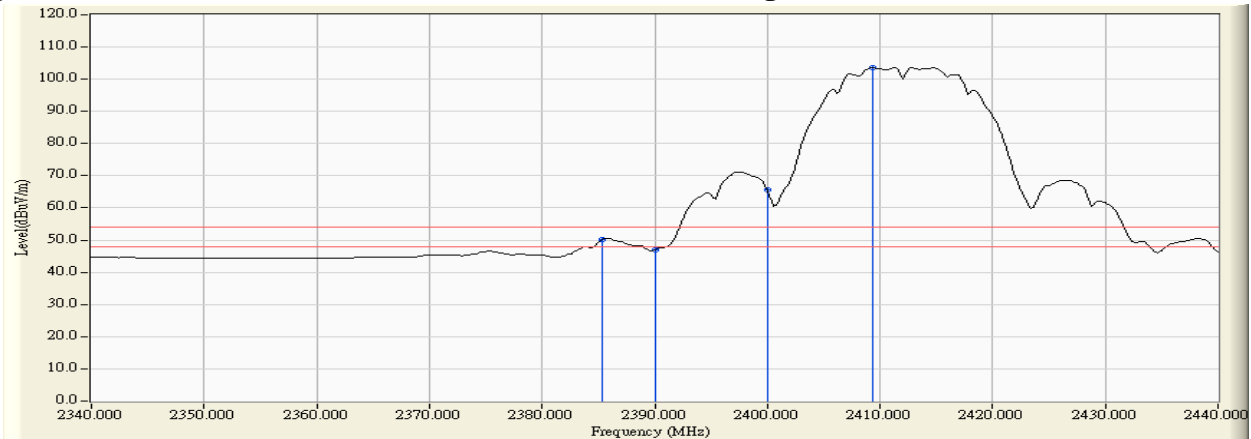
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2386.000	30.934	28.956	59.890	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	25.642	56.557	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	39.416	70.328	--	--	--
01 (Peak)	2413.600	30.960	76.905	107.865	--	--	--
01 (Average)	2385.400	30.937	19.322	50.259	74.00	54.00	Pass
01 (Average)	2390.000	30.915	16.015	46.930	74.00	54.00	Pass
01 (Average)	2400.000	30.912	34.619	65.531	--	--	--
01 (Average)	2409.400	30.939	72.631	103.569	--	--	--

**Figure Channel 01: Vertical (Peak)**



**Figure Channel 01: Vertical (Average)**



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement Level = Reading Level + Correct Factor.  
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

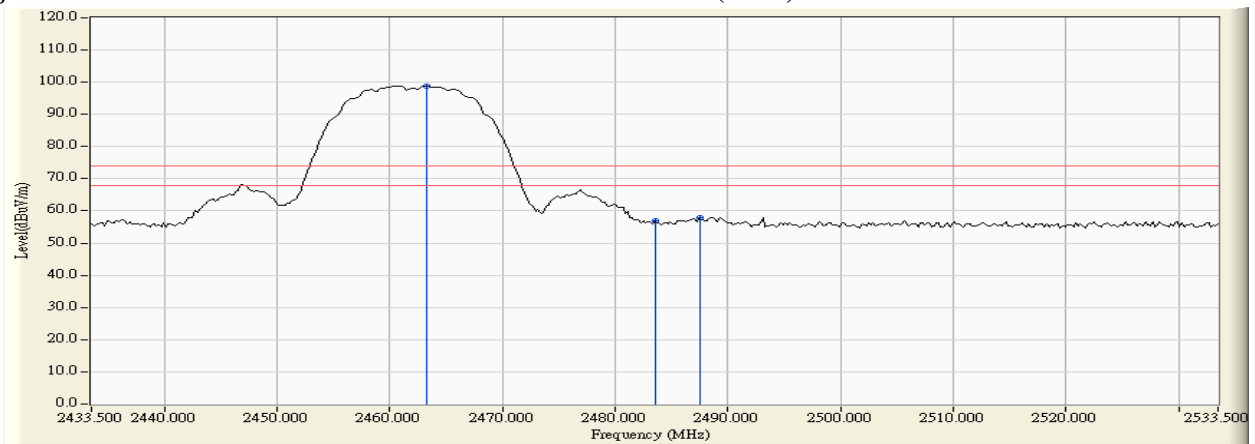


Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2462Mhz)

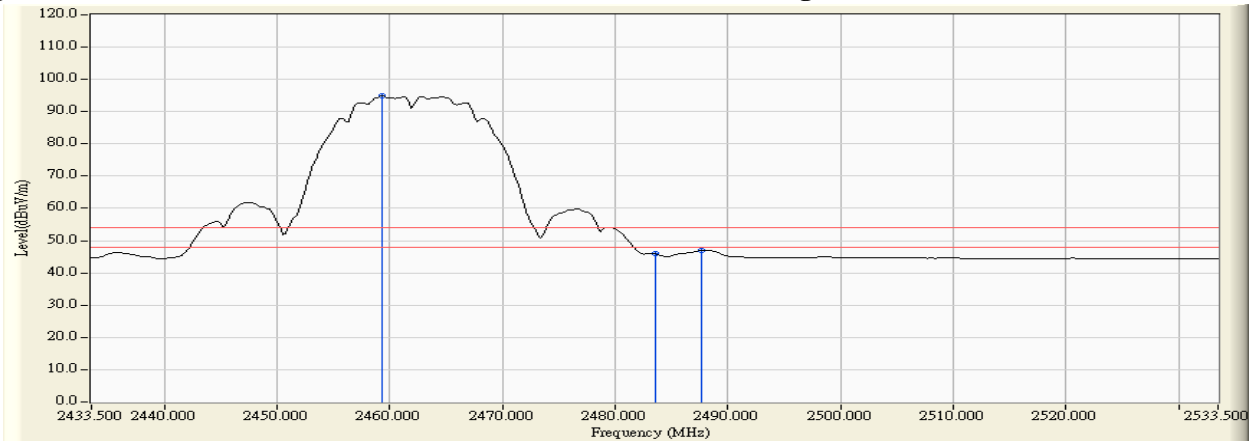
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2463.300	32.029	66.866	98.895	--	--	--
11 (Peak)	2483.500	32.182	24.887	57.069	74.00	54.00	Pass
11 (Peak)	2487.500	32.212	25.551	57.763	74.00	54.00	Pass
11 (Average)	2459.300	31.999	62.747	94.746	--	--	--
11 (Average)	2483.500	32.182	13.741	45.923	74.00	54.00	Pass
11 (Average)	2487.700	32.213	14.686	46.900	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



**Figure Channel 11: Horizontal (Average)**



Note:

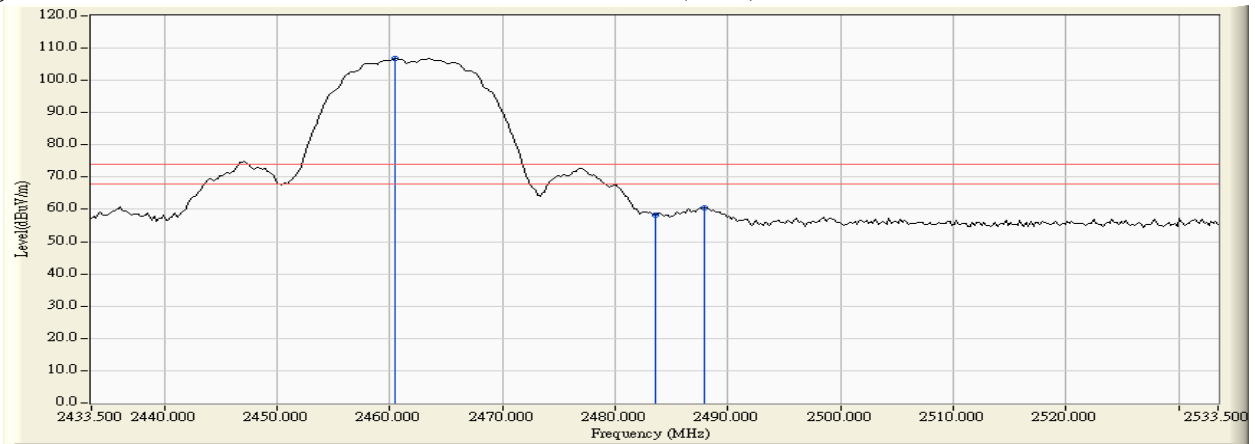
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit - 802.11b 1Mbps (2462Mhz)

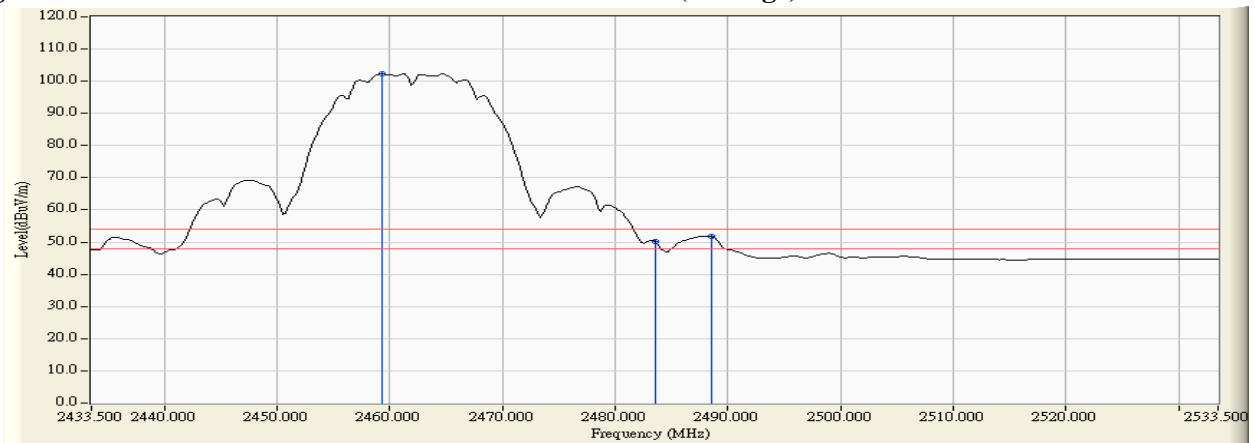
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.500	31.280	75.426	106.706	--	--	--
11 (Peak)	2483.500	31.435	26.803	58.238	74.00	54.00	Pass
11 (Peak)	2487.900	31.465	29.163	60.628	74.00	54.00	Pass
11 (Average)	2459.300	31.272	71.040	102.312	--	--	--
11 (Average)	2483.500	31.435	18.667	50.102	74.00	54.00	Pass
11 (Average)	2488.500	31.469	20.290	51.759	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



**Figure Channel 11: Vertical (Average)**



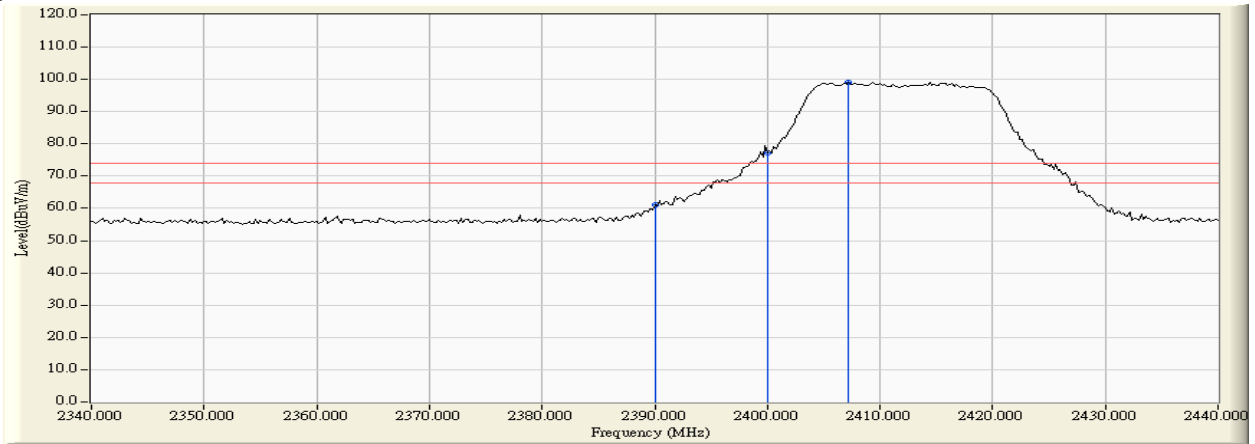
- Note:
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  4. “ \* ”, means this data is the worst emission level.
  5. Measurement Level = Reading Level + Correct Factor.
  6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2412Mhz)

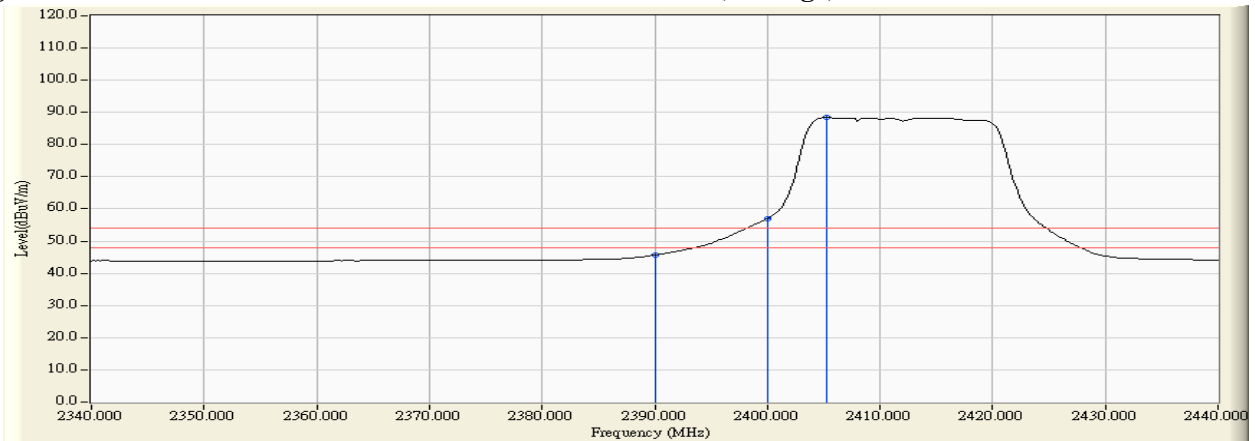
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	29.527	61.036	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	45.576	77.137	--	--	--
01 (Peak)	2407.200	31.606	67.456	99.062	--	--	--
01(Average)	2390.000	31.509	14.176	45.685	74.00	54.00	Pass
01(Average)	2400.000	31.561	25.421	56.982	--	--	--
01(Average)	2405.200	31.594	56.768	88.362	--	--	--

**Figure Channel 01: Horizontal (Peak)**



**Figure Channel 01: Horizontal (Average)**



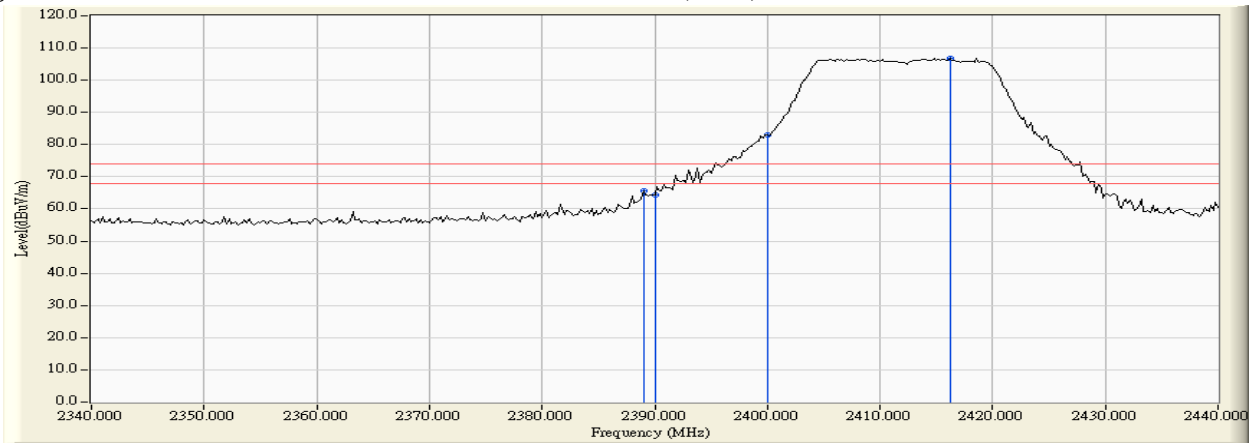
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement Level = Reading Level + Correct Factor.  
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2412Mhz)

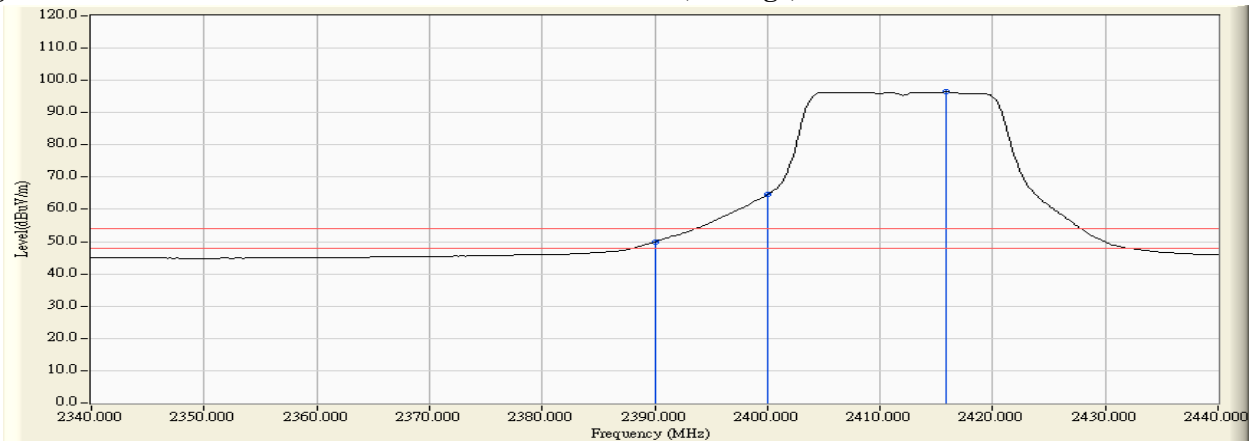
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.000	30.920	34.565	65.485	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	33.574	64.489	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	51.968	82.880	--	--	--
01 (Peak)	2416.200	30.978	75.850	106.828	--	--	--
01 (Average)	2390.000	30.915	19.061	49.976	74.00	54.00	Pass
01 (Average)	2400.000	30.912	33.704	64.616	--	--	--
01 (Average)	2415.800	30.975	65.404	96.379	--	--	--

**Figure Channel 01: Vertical (Peak)**



**Figure Channel 01: Vertical (Average)**



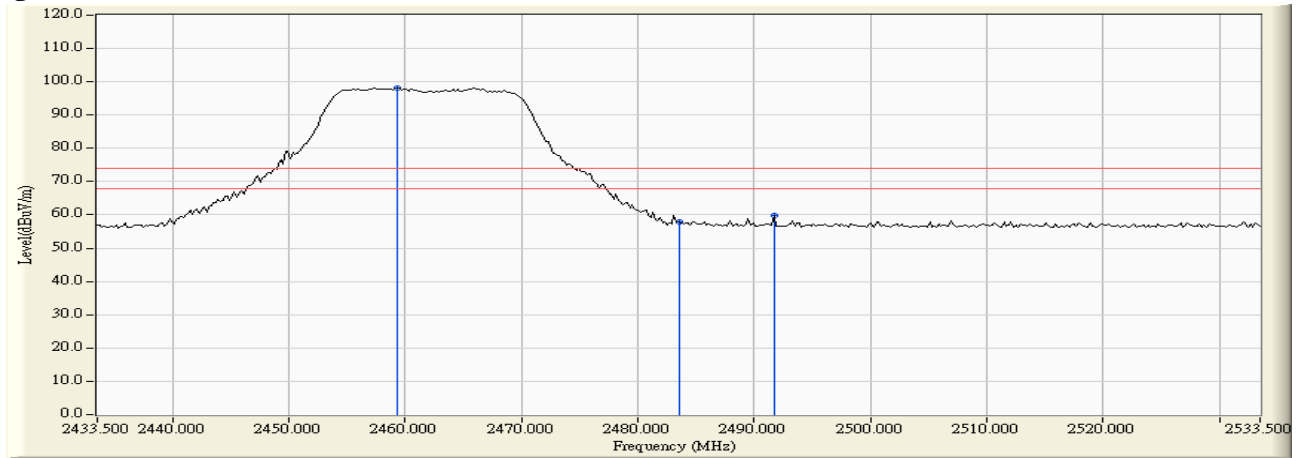
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement Level = Reading Level + Correct Factor.  
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2462Mhz)

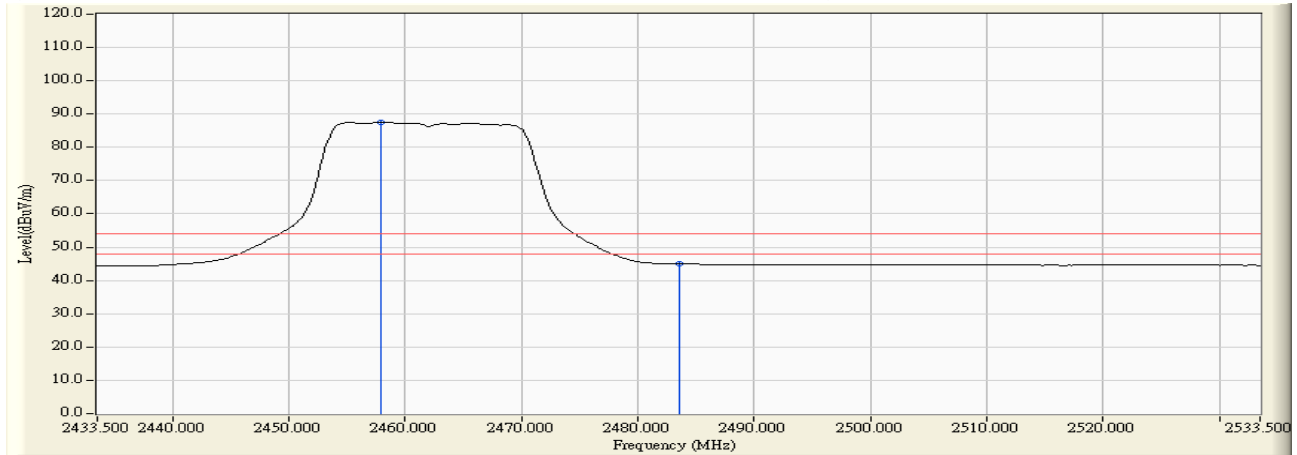
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.300	31.999	66.210	98.209	--	--	--
11 (Peak)	2483.500	32.182	25.581	57.763	74.00	54.00	Pass
11 (Peak)	2491.700	32.244	27.606	59.850	74.00	54.00	Pass
11 (Average)	2457.900	31.988	55.528	87.516	--	--	--
11 (Average)	2483.500	32.182	12.769	44.951	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



**Figure Channel 11: Horizontal (Average)**



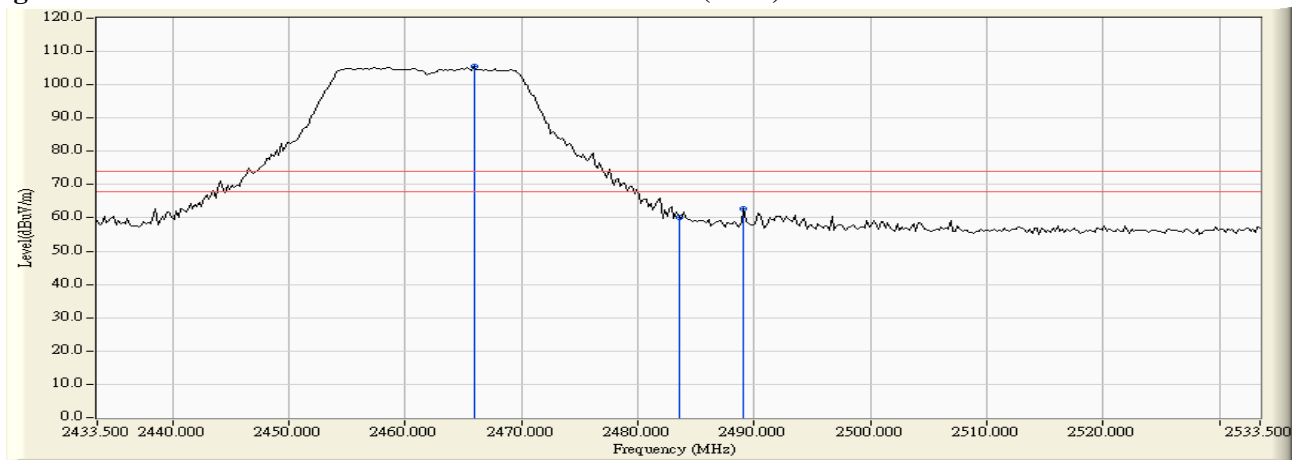
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.  
 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.  
 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.  
 4. “ \* ”, means this data is the worst emission level.  
 5. Measurement Level = Reading Level + Correct Factor.  
 6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit - 802.11g 6Mbps (2462Mhz)

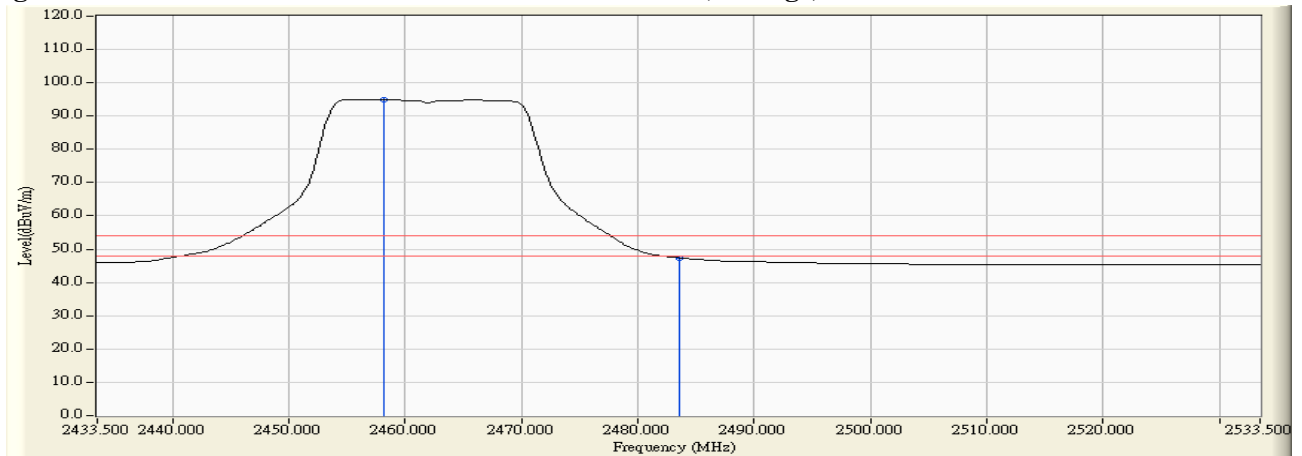
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2465.900	31.317	74.103	105.420	--	--	--
11 (Peak)	2483.500	31.435	28.807	60.242	74.00	54.00	Pass
11 (Peak)	2489.100	31.473	31.115	62.588	74.00	54.00	Pass
11 (Average)	2458.100	31.263	63.766	95.030	--	--	--
11 (Average)	2483.500	31.435	16.007	47.442	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



**Figure Channel 11: Vertical (Average)**



**Note:**

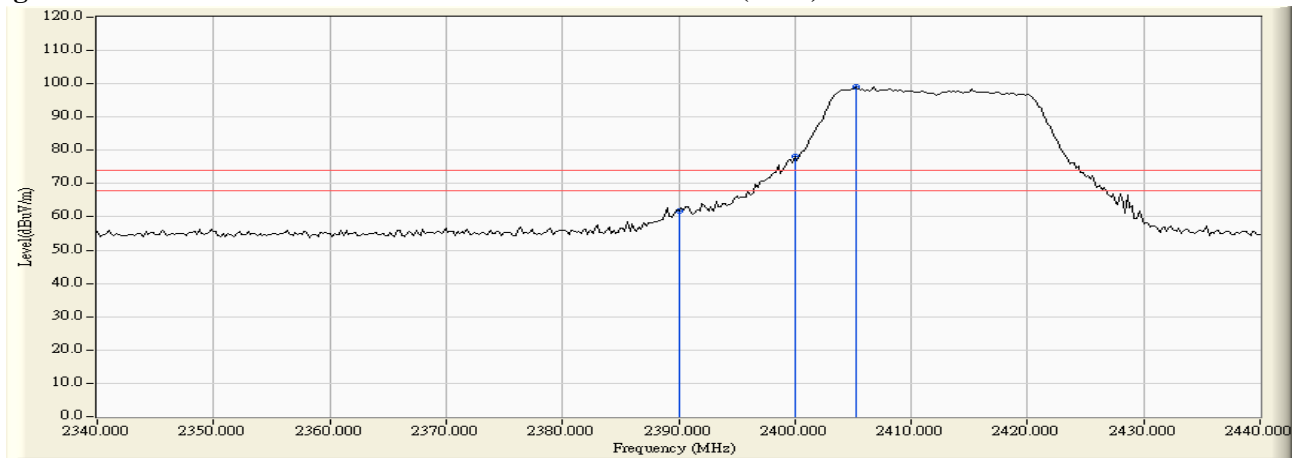
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2412Mhz)

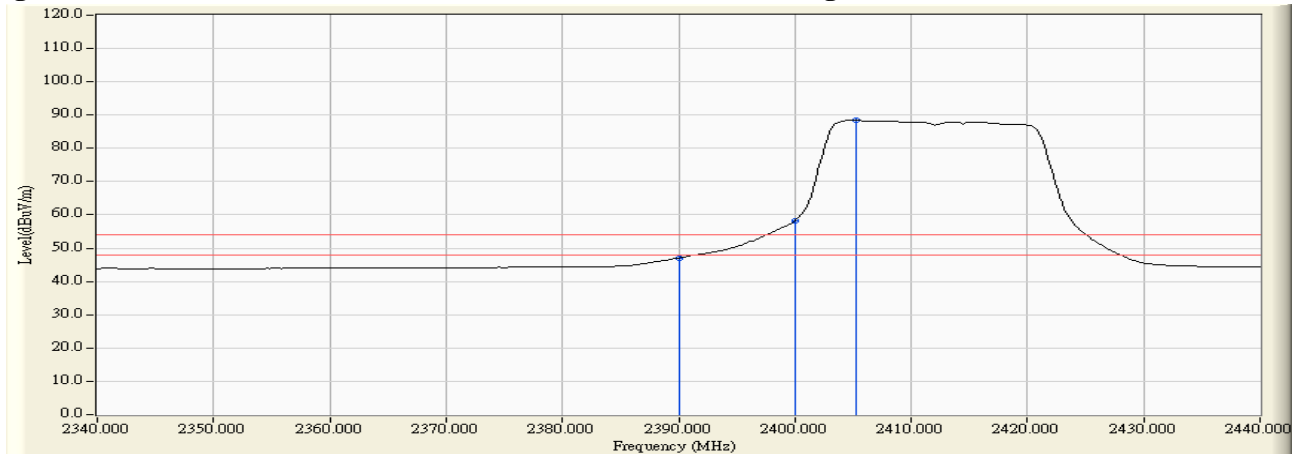
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	30.316	61.825	74.00	54.00	Pass
01 (Peak)	2400.000	31.561	46.568	78.129	--	--	--
01 (Peak)	2405.200	31.594	67.579	99.173	--	--	--
01 (Average)	2390.000	31.509	15.575	47.084	74.00	54.00	Pass
01 (Average)	2400.000	31.561	26.659	58.220	--	--	--
01 (Average)	2405.200	31.594	56.910	88.504	--	--	--

**Figure Channel 01: Horizontal (Peak)**



**Figure Channel 01: Horizontal (Average)**



**Note:**

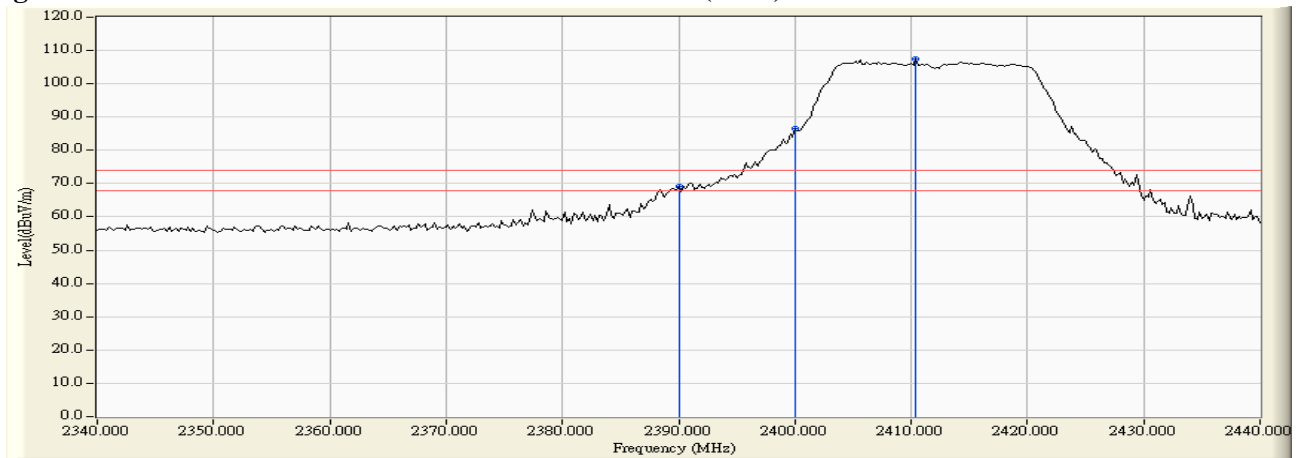
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2412Mhz)

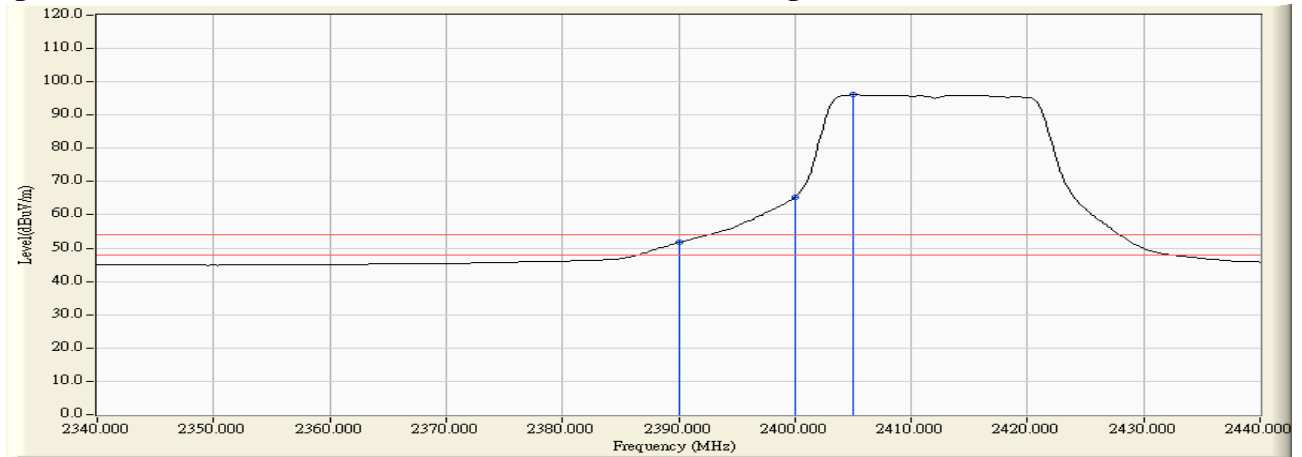
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.915	38.116	69.031	74.00	54.00	Pass
01 (Peak)	2400.000	30.912	55.661	86.573	--	--	--
01 (Peak)	2410.400	30.941	76.370	107.311	--	--	--
01 (Average)	2390.000	30.915	20.738	51.653	74.00	54.00	Pass
01 (Average)	2400.000	30.912	34.402	65.314	--	--	--
01 (Average)	2405.000	30.926	65.211	96.137	--	--	--

**Figure Channel 01: Vertical (Peak)**



**Figure Channel 01: Vertical (Average)**



**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

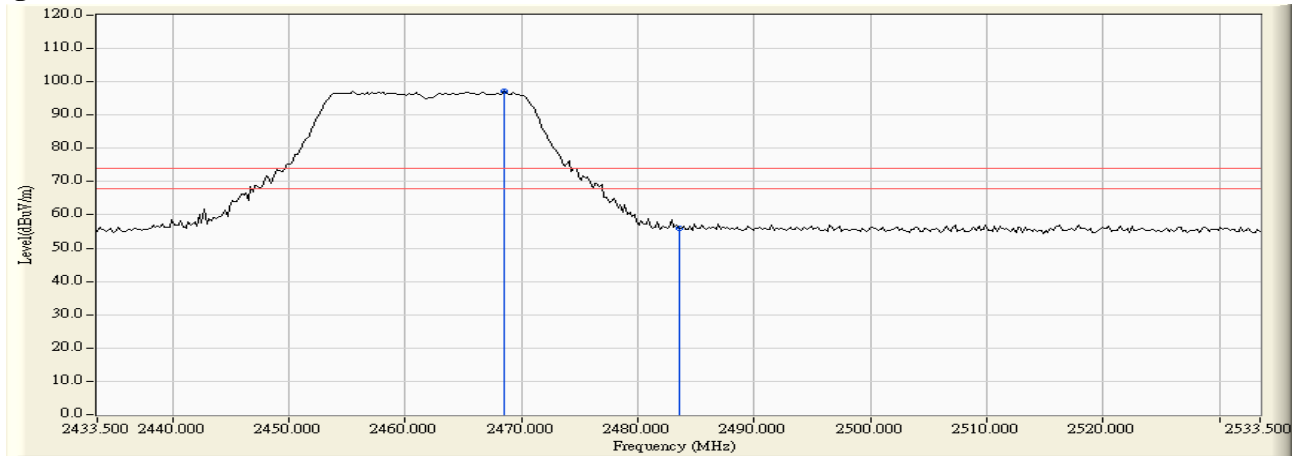


Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2462Mhz)

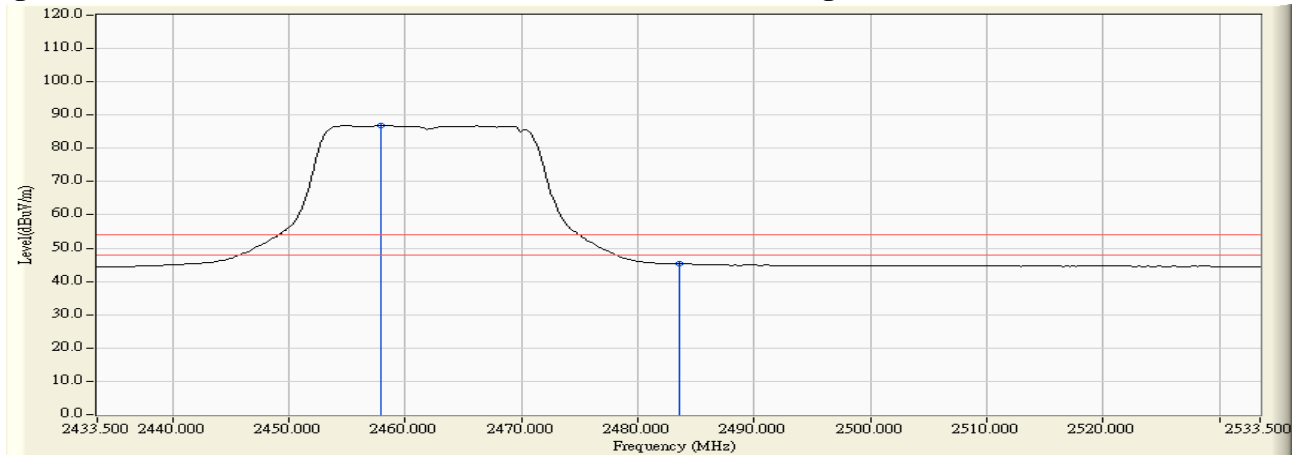
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2468.500	32.068	64.961	97.029	--	--	--
11 (Peak)	2483.500	32.182	23.809	55.991	74.00	54.00	Pass
11 (Average)	2457.900	31.988	54.841	86.829	--	--	--
11 (Average)	2483.500	32.182	13.126	45.308	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



**Figure Channel 11: Horizontal (Average)**



**Note:**

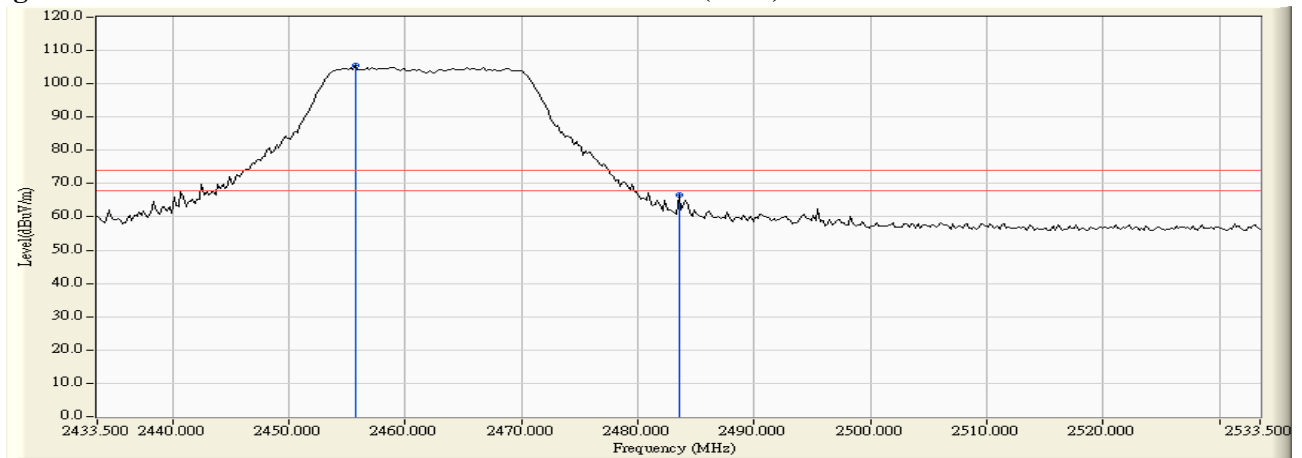
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 4: Transmit - 802.11n-20BW\_7.2Mbps(2.4G Band) (2462Mhz)

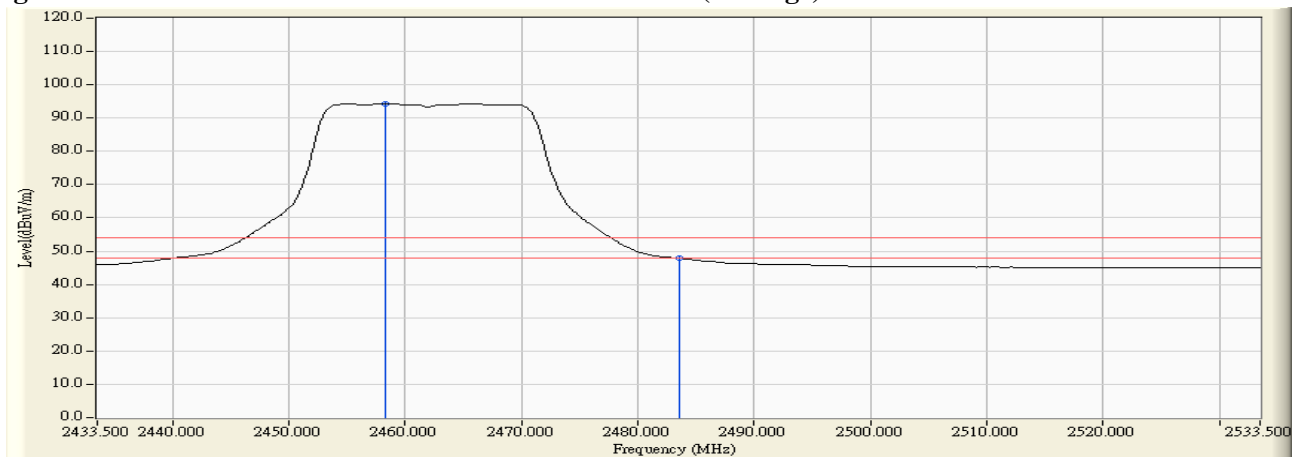
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBUV)	Emission Level (dBUV/m)	Peak Limit (dBUV/m)	Average Limit (dBUV/m)	Result
11 (Peak)	2455.700	31.247	74.251	105.498	--	--	--
11 (Peak)	2483.500	31.435	35.002	66.437	74.00	54.00	Pass
11 (Average)	2458.300	31.264	63.024	94.289	--	--	--
11 (Average)	2483.500	31.435	16.422	47.857	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



**Figure Channel 11: Vertical (Average)**



**Note:**

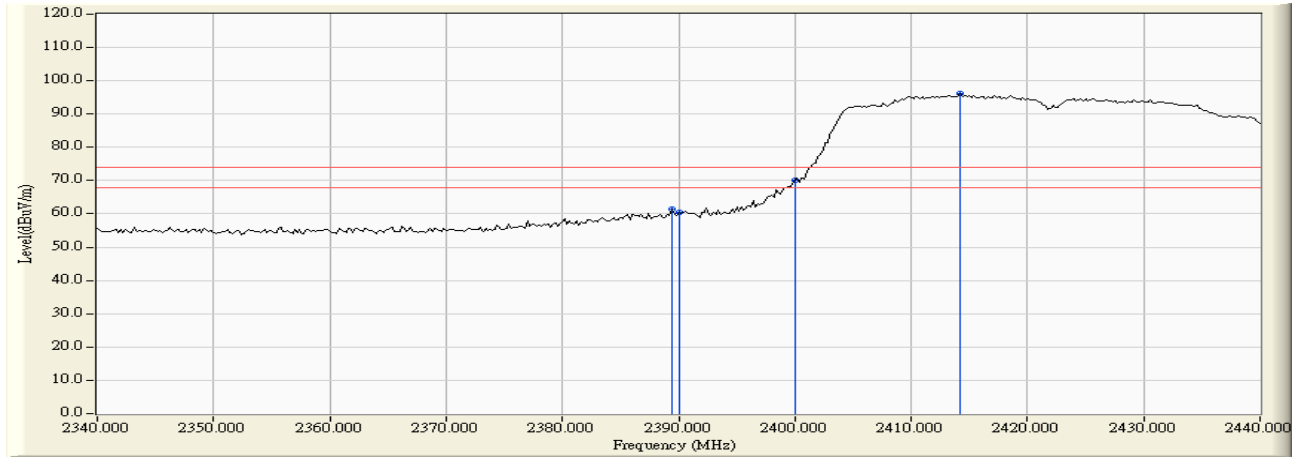
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2422Mhz)

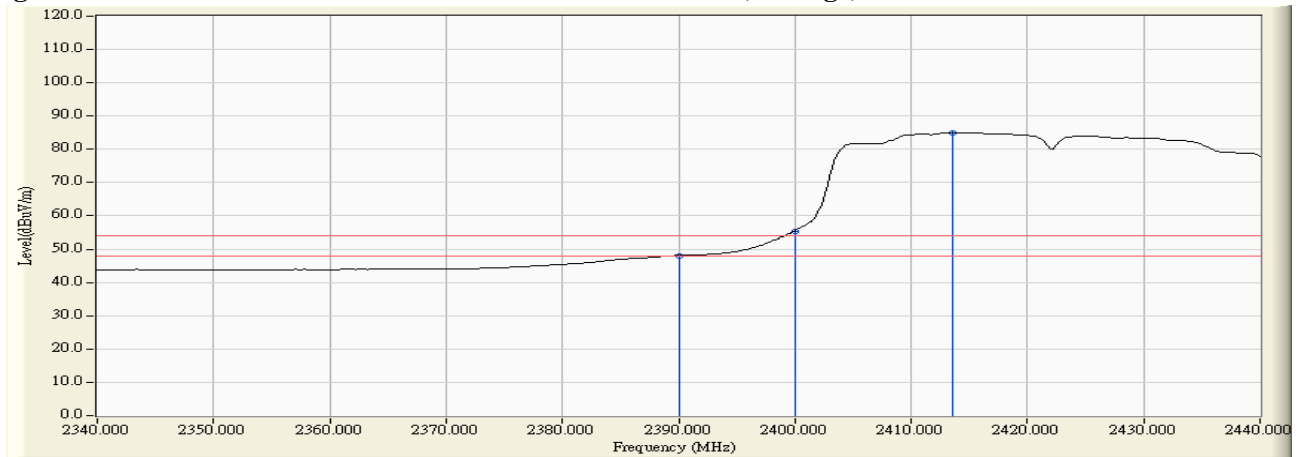
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2389.400	31.507	30.019	61.526	74.00	54.00	Pass
03 (Peak)	2390.000	31.509	28.897	60.406	74.00	54.00	Pass
03 (Peak)	2400.000	31.561	38.593	70.154	--	--	--
03 (Peak)	2414.200	31.655	64.429	96.084	--	--	--
03 (Average)	2390.000	31.509	16.575	48.084	74.00	54.00	Pass
03 (Average)	2400.000	31.561	23.926	55.487	--	--	--
03 (Average)	2413.600	31.650	53.327	84.977	--	--	--

**Figure Channel 03: Horizontal (Peak)**



**Figure Channel 03: Horizontal (Average)**



**Note:**

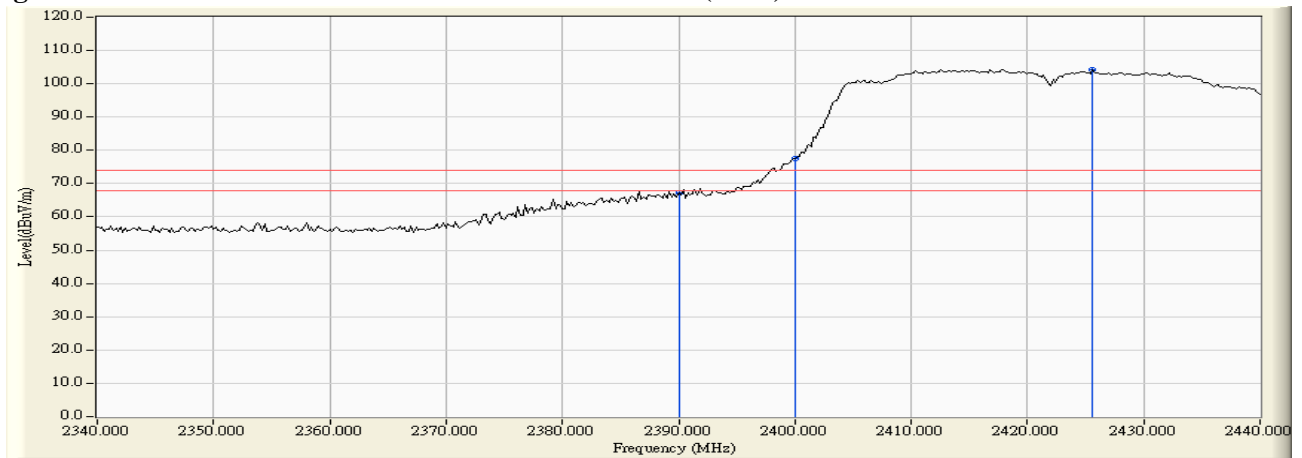
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2422Mhz)

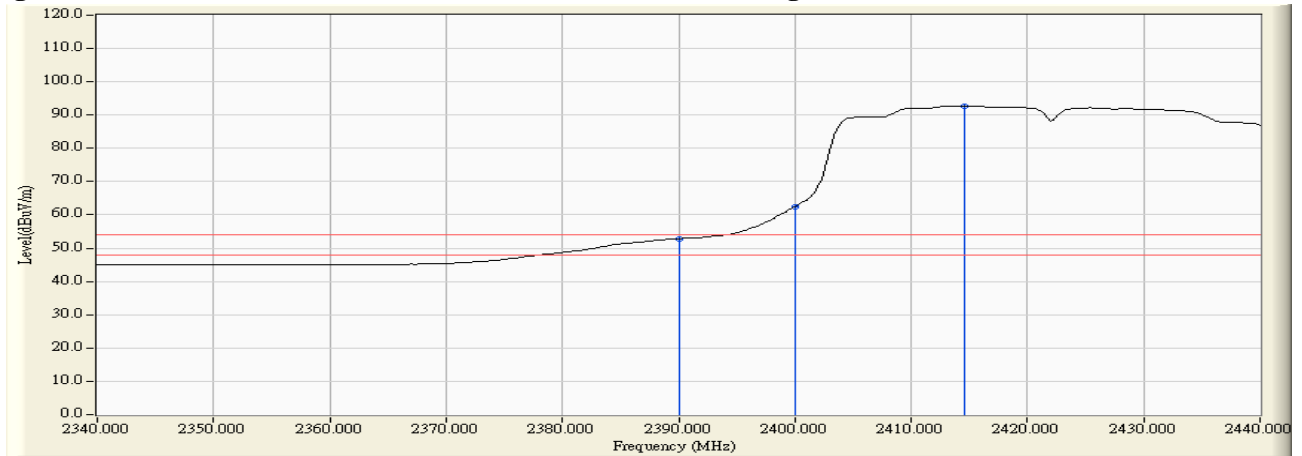
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2390.000	30.915	36.166	67.081	74.00	54.00	Pass
03 (Peak)	2400.000	30.912	46.529	77.441	--	--	--
03 (Peak)	2425.600	31.041	73.272	104.314	--	--	--
03 (Average)	2390.000	30.915	21.900	52.815	74.00	54.00	Pass
03 (Average)	2400.000	30.912	31.473	62.385	--	--	--
03 (Average)	2414.600	30.967	61.781	92.748	--	--	--

**Figure Channel 03: Vertical (Peak)**



**Figure Channel 03: Vertical (Average)**



**Note:**

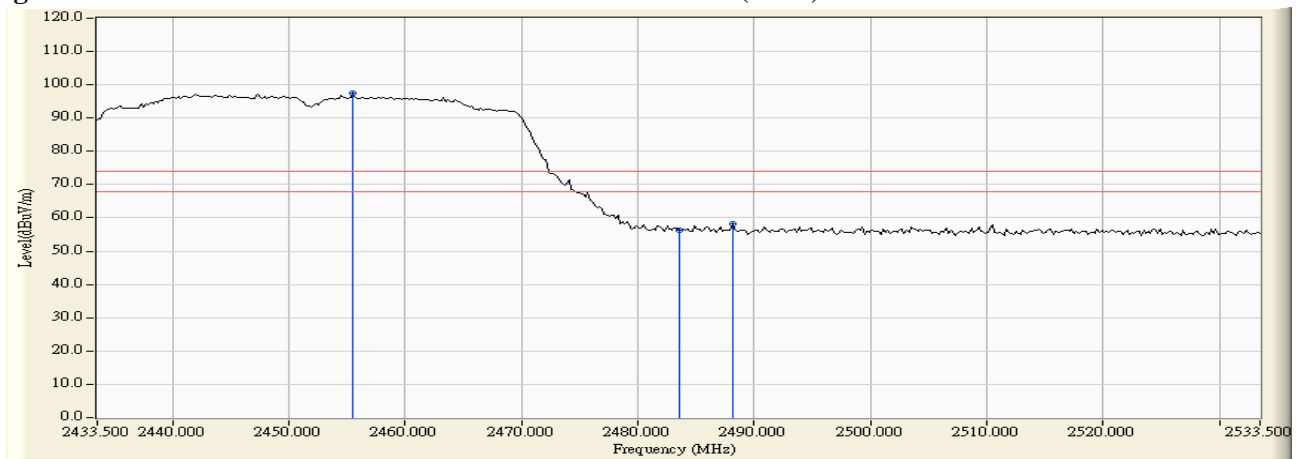
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2452Mhz)

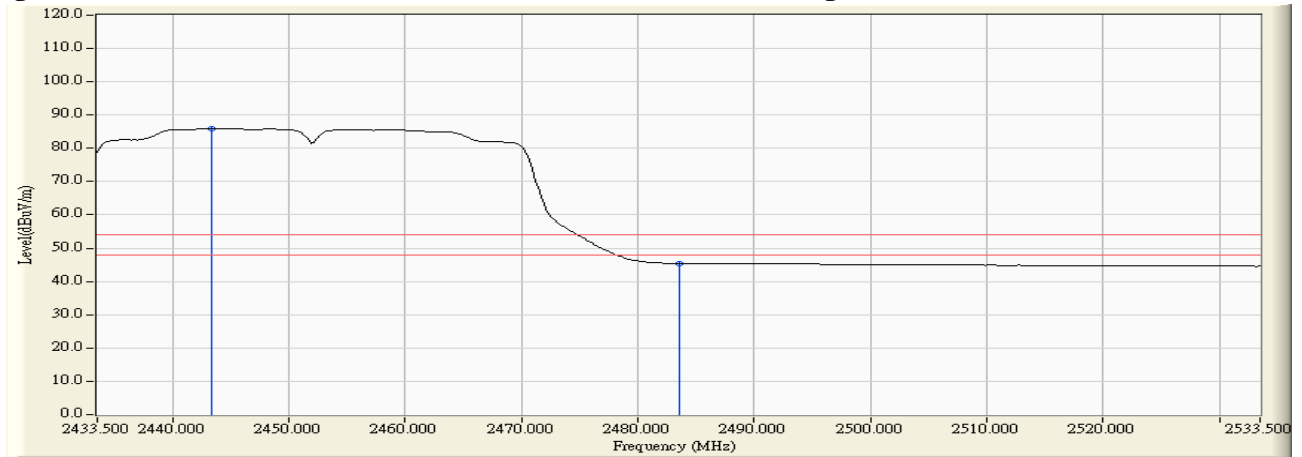
**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2455.500	31.971	65.363	97.333	--	--	--
09 (Peak)	2483.500	32.182	24.121	56.303	74.00	54.00	Pass
09 (Peak)	2488.100	32.217	25.865	58.082	74.00	54.00	Pass
09 (Average)	2443.300	31.877	54.082	85.959	--	--	--
09 (Average)	2483.500	32.182	13.267	45.449	74.00	54.00	Pass

**Figure Channel 09: Horizontal (Peak)**



**Figure Channel 09: Horizontal (Average)**



**Note:**

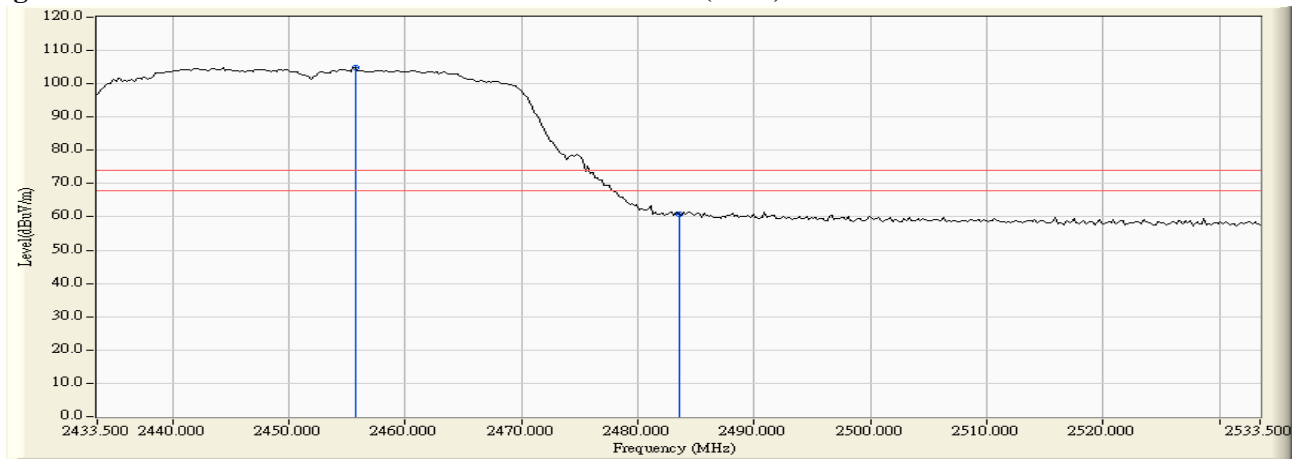
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Intel® Dual Band Wireless-AC 3160  
 Test Item : Band Edge  
 Test Site : No.3 OATS  
 Test Mode : Mode 5: Transmit - 802.11n-40BW\_15Mbps(2.4G Band) (2452Mhz)

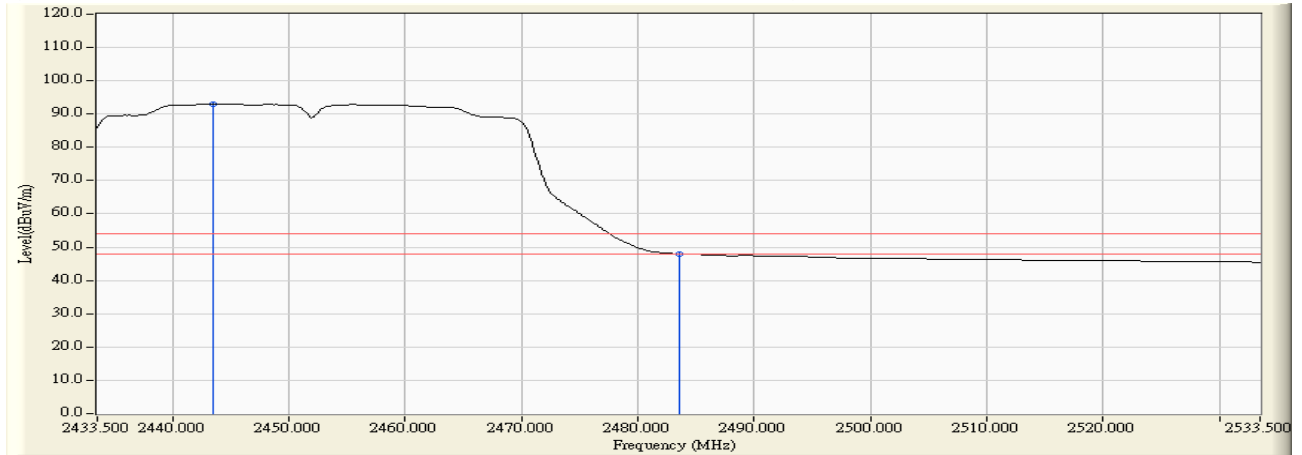
**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2455.700	31.247	73.525	104.772	--	--	--
09 (Peak)	2483.500	31.435	29.313	60.748	74.00	54.00	Pass
09 (Average)	2443.500	31.163	61.881	93.044	--	--	--
09 (Average)	2483.500	31.435	16.560	47.995	74.00	54.00	Pass

**Figure Channel 09: Vertical (Peak)**



**Figure Channel 09: Vertical (Average)**



**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ \* ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

**5. During Compliance Testing**

No modification was made during testing.

Attachment 1: EUT Test Photographs



Attachment 2: EUT Detailed Photographs