FCC Test Report
(Class II Permissive Change)

Product Name	Intel® Dual Band Wireless-AC 3160
Model No	3160NGW
FCC ID.	2AEDY-EM10-00

Applicant	Empathy Co., Ltd.
Address	KDX Nakameguro Bldg. 6F, 1-5-4, Higashiyama, Meguro-ku, Tokyo, 150-0043

Date of Receipt	March 16, 2015
Issue Date	Dec. 15, 2015
Report No.	1530316R-RFUSP25V00
Report Version	V1.0

Testing Laboratory
3023

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 report of the equipment and evaluated measurement uncertainty herein.
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Test Report

Issue Date: Dec. 15, 2015
Report No.: 1530316R-RFUSP25V00

Product Name	Intel® Dual Band Wireless-AC 3160
Applicant	Empathy Co., Ltd.
Address	KDX Nakameguro Bldg. 6F, 1-5-4, Higashiyama, Meguro-ku, Tokyo, 150-0043
Manufacturer	Empathy Co., Ltd.
Model No.	3160NGW
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	AC 120V, 60Hz
Trade Name	EMPATHY
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 v03r03
Test Result	Complied

Documented By : Joanne Lin

(Senior Adm. Specialist / Joanne Lin)

Tested By : Nick Chen

(Engineer / Nick Chen)

Approved By :

(Director / Vincent Lin)

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Dual Band Wireless-AC 3160
Trade Name	EMPATHY
Model No.	3160NGW
FCC ID.	2AEDY-EM10-00
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: 5775MHz,
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/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna Type	Dipole Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Test Platform	Brand Name: EMPATHY, M/N: EM10

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	EMPATHY	ATWLN0	Dipole Antenna	0.10dBi for 2.4 GHz 1.70dBi For 5.725~5.825GHz

Note: The antenna of EUT is conform to FCC 15.203

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 1:	2422 MHz	Channel 2:	2427 MHz	Channel 3:	2432 MHz	Channel 4:	2437 MHz
Channel 5:	2442 MHz	Channel 6:	2447 MHz	Channel 7:	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 Center Working Frequency of Each Channel:

Channel	Frequency
Channel 155:	5775 MHz

Note:

1. This device is a Intel® Dual Band Wireless-AC 3160 with a built-in 2.4GHz and 5GHz WLAN transceiver.
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. (802.11b is 1Mbps、802.11g is 6Mbps、802.11n(20M-BW) is 7.2Mbps、802.11n(40M-BW) is 15Mbps and 802.11ac(80M-BW) is 32.5 Mbps).
4. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
5. 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.
6. This is to request a Class II permissive change for FCC ID: 2AEDY-EM10-00, originally granted on 09/15/2015.

   The differences are listed as below:
   Change #1: Addition a new antenna (ATWLN0), the antenna type is Dipole.
   Change #2: Additional platform added, Brand Name: EMPATHY, M/N: EM10.

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)

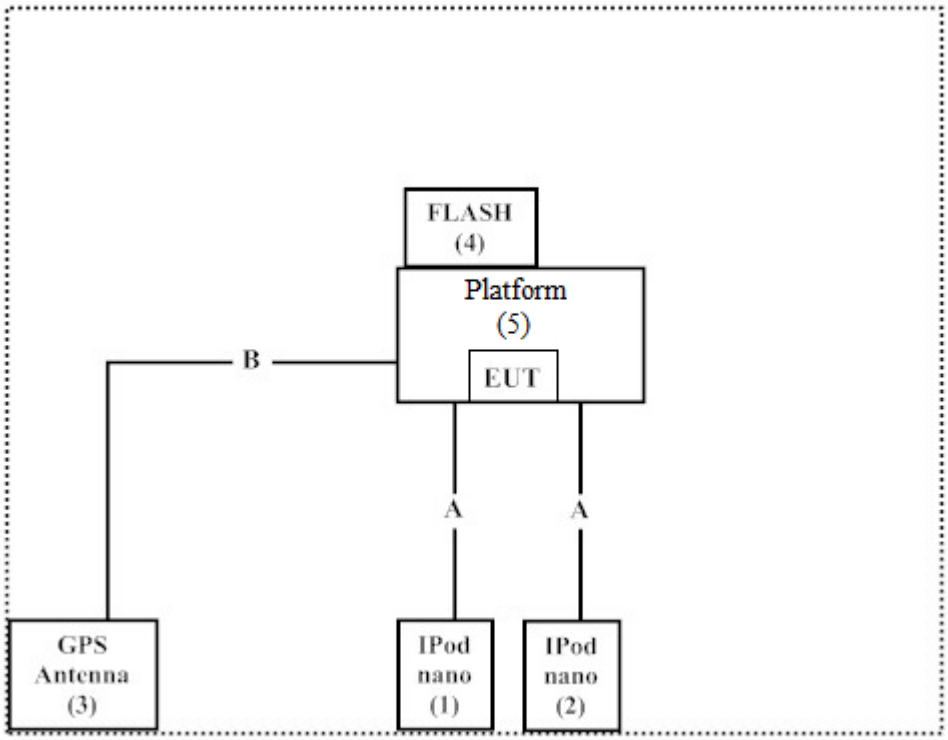
1.3. Tested System Details

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	IPod nano	Apple	A1199	YM7333MHVQ5	N/A
2	IPod nano	Apple	A1199	YM7333SHVQ5	N/A
3	GPS Antenna	DSPR	GPS 316K-S6-06-A	N/A	N/A
4	FLASH	Transcend	JetFlash110	155422-2931	N/A
5	Platform	EMPATHY	EM10	N/A	N/A

Signal Cable Type		Signal cable Description
A	USB Cable	Shielded, 1.2m, two PCS.
B	GPS Antenna Cable	Non-Shielded, 2.5m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1. Setup the EUT as shown in Section 1.4
2. Execute software ” DRTU v1.8.1-01253” on the Tablet 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/chinese/about/certificates.aspx?bval=5
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
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Peak Power Output

2.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 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

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 D01 DTS Meas Guidance v03r02 section 9.1.2 PKPM1 Peak power meter methodfor for 802.11a/b/g/n, section 9.2.2 Measurement using a spectrum analyzer (SA) for 802.11ac.

2.5. Uncertainty

± 1.27 dB

2.6. Test Result of Peak Power Output

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power 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		
01	2412	16.34	--	--	--	<30dBm	Pass
06	2437	16.21	16.19	16.14	16.1	<30dBm	Pass
11	2462	16.47	--	--	--	<30dBm	Pass

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

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

Channel No	Frequency (MHz)	Peak Power For different Data Rate (Mbps)								Required Limit	Result
		6	9	12	18	24	36	48	54		
01	2412	17.52	--	--	--	--	--	--	--	<30dBm	Pass
06	2437	19.59	19.51	19.45	19.39	19.3	19.24	19.16	19.11	<30dBm	Pass
11	2462	17.61	--	--	--	--	--	--	--	<30dBm	Pass

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

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

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Average Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
149	5745	15.83	--	--	--	--	--	--	--	24.01	<30dBm	Pass
157	5785	16.01	15.9	15.82	15.71	15.62	15.51	15.4	15.33	23.95	<30dBm	Pass
165	5825	15.81	--	--	--	--	--	--	--	23.91	<30dBm	Pass

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

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)

Channel No	Frequency (MHz)	Peak Power For different Data Rate (Mbps)								Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7		
01	2412	17.44	--	--	--	--	--	--	--	<30dBm	Pass
06	2437	19.58	19.52	19.45	19.38	19.31	19.22	19.17	19.08	<30dBm	Pass
11	2462	17.49	--	--	--	--	--	--	--	<30dBm	Pass

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

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)

Channel No	Frequency (MHz)	Peak Power For different Data Rate (Mbps)								Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7		
03	2422	15.15	--	--	--	--	--	--	--	<30dBm	Pass
06	2437	19.09	19.01	18.96	18.88	18.82	18.73	18.68	18.60	<30dBm	Pass
09	2452	16.76	--	--	--	--	--	--	--	<30dBm	Pass

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

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power 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 For different Data Rate (Mbps)								Average Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
149	5745	15.81	--	--	--	--	--	--	--	23.96	<30dBm	Pass
157	5785	16.03	15.92	15.81	15.73	15.61	15.48	15.35	15.29	23.89	<30dBm	Pass
165	5825	15.82	--	--	--	--	--	--	--	23.98	<30dBm	Pass

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

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)

Channel No	Frequency (MHz)	Peak Power Output (dBm)										
		Peak Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		HT0	HT1	HT2	HT3	HT4	HT5	HT6	HT7	HT0		
151	5755	19.63	19.54	19.42	19.31	19.2	19.11	19	18.88	23.80	<30dBm	Pass
159	5795	19.61	--	--	--	--	--	--	--	23.84	<30dBm	Pass

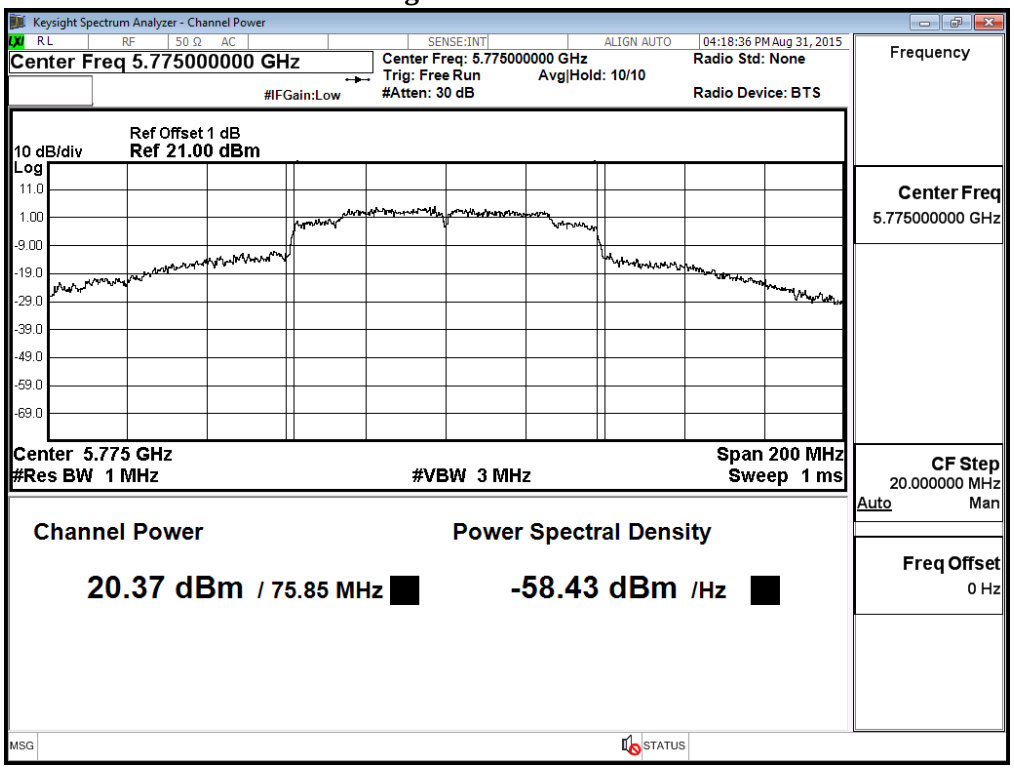
Note: Power Output Value =Reading value on power meter + cable loss

Product : Intel® Dual Band Wireless-AC 3160
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit - 802.11ac-80BW_32.5Mbps(5G Band)

Channel No	Frequency (MHz)	Peak Power Output (dBm)												
		Peak Power For different Data Rate (Mbps)										Peak Power	Required Limit	Result
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	VTH0		
155	5775	20.37	20.28	20.15	20.05	19.98	19.91	19.82	19.74	19.68	19.55	20.37	<30dBm	Pass

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

Figure Channel 155:



3. Radiated Emission

3.1. Test Equipment

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

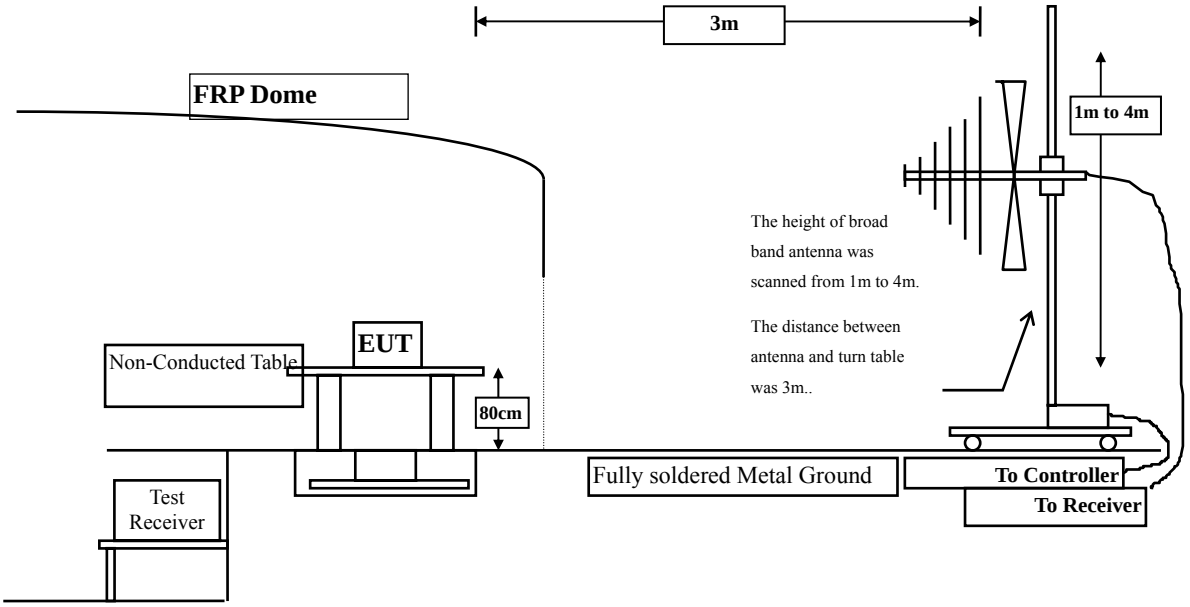
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep., 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun., 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun., 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun., 2015
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun., 2015

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct., 2015
	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., 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan., 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul., 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul., 2015

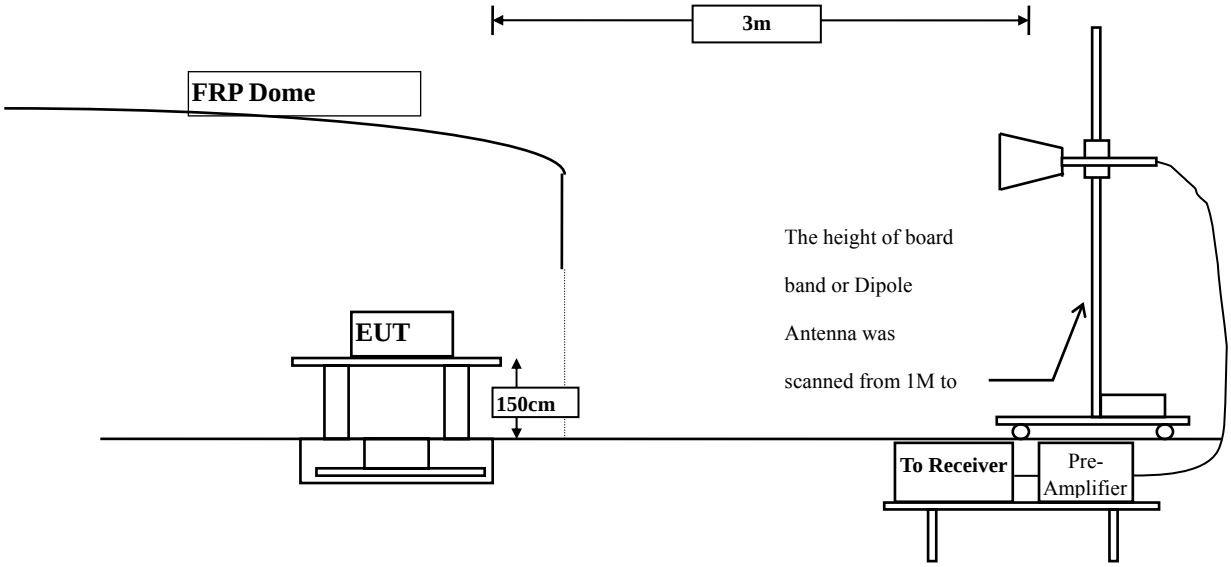
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

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.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
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 (dBμV /m) = 20 log E field strength (uV/m)

3.4. 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 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 form 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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4824.000	3.261	47.420	50.681	-23.319	74.000
7236.000	10.650	34.170	44.820	-29.180	74.000
9648.000	13.337	33.890	47.226	-26.774	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	45.100	51.521	-22.479	74.000
7236.000	11.495	35.490	46.985	-27.015	74.000
9648.000	13.807	33.610	47.416	-26.584	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
4874.000	3.038	48.590	51.627	-22.373	74.000
7311.000	11.795	34.710	46.504	-27.496	74.000
9748.000	12.635	33.630	46.265	-27.735	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	45.540	51.351	-22.649	74.000
7311.000	12.630	34.390	47.019	-26.981	74.000
9748.000	13.126	33.810	46.936	-27.064	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4924.000	2.857	47.260	50.117	-23.883	74.000
7386.000	12.128	34.940	47.068	-26.932	74.000
9848.000	12.853	33.720	46.573	-27.427	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.52	44.690	50.210	-23.790	74.000
7386.000	13.254	35.120	48.374	-25.626	74.000
9848.000	13.367	33.910	47.277	-26.723	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4824.000	3.261	45.850	49.111	-24.889	74.000
7236.000	10.65	34.610	45.260	-28.740	74.000
9648.000	13.336	33.290	46.626	-27.374	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	44.270	50.691	-23.309	74.000
7236.000	11.495	34.810	46.305	-27.695	74.000
9648.000	13.806	33.720	47.526	-26.474	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
4874.000	3.038	48.120	51.157	-22.843	74.000
7311.000	11.795	34.490	46.284	-27.716	74.000
9748.000	12.635	33.270	45.905	-28.095	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.811	44.720	50.531	-23.469	74.000
7311.000	12.629	34.720	47.349	-26.651	74.000
9748.000	13.126	33.510	46.636	-27.364	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4924.000	2.858	44.920	47.777	-26.223	74.000
7386.000	12.127	34.710	46.838	-27.162	74.000
9848.000	12.852	33.290	46.143	-27.857	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	43.590	49.110	-24.890	74.000
7386.000	13.254	34.610	47.864	-26.136	74.000
9848.000	13.367	33.820	47.187	-26.813	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11490.000	14.325	39.010	53.335	-20.665	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11490.000	15.842	37.930	53.771	-20.229	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11570.000	14.849	37.810	52.659	-21.341	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11570.000	16.215	37.560	53.774	-20.226	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11650.000	13.179	37.630	50.809	-23.191	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11650.000	14.634	38.010	52.644	-21.356	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4824.000	3.261	45.760	49.021	-24.979	74.000
7236.000	10.65	34.490	45.140	-28.860	74.000
9648.000	13.336	33.910	47.246	-26.754	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	6.421	44.590	51.011	-22.989	74.000
7236.000	11.495	34.510	46.005	-27.995	74.000
9648.000	13.807	33.170	46.976	-27.024	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
4874.000	3.038	47.980	51.017	-22.983	74.000
7311.000	11.795	34.730	46.524	-27.476	74.000
9748.000	12.635	33.560	46.195	-27.805	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	5.812	45.320	51.131	-22.869	74.000
7311.000	12.630	34.610	47.239	-26.761	74.000
9748.000	13.126	33.590	46.716	-27.284	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
Peak Detector:					
4924.000	2.857	45.740	48.597	-25.403	74.000
7386.000	12.128	35.170	47.298	-26.702	74.000
9848.000	12.853	33.910	46.763	-27.237	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.52	42.950	48.470	-25.530	74.000
7386.000	13.254	34.610	47.864	-26.136	74.000
9848.000	13.367	33.780	47.147	-26.853	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4844.000	3.171	42.610	45.781	-28.219	74.000
7266.000	11.162	34.170	45.332	-28.668	74.000
9688.000	12.965	33.410	46.375	-27.625	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4844.000	6.178	40.160	46.338	-27.662	74.000
7266.000	11.982	33.680	45.662	-28.338	74.000
9688.000	13.507	33.090	46.598	-27.402	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4874.000	3.038	46.510	49.547	-24.453	74.000
7311.000	11.795	35.110	46.904	-27.096	74.000
9748.000	12.635	33.870	46.505	-27.495	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	5.811	43.170	48.981	-25.019	74.000
7311.000	12.629	34.980	47.609	-26.391	74.000
9748.000	13.126	33.530	46.656	-27.344	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
4904.000	2.914	43.760	46.675	-27.325	74.000
7356.000	11.995	34.910	46.904	-27.096	74.000
9808.000	12.475	34.190	46.665	-27.335	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4904.000	5.530	40.790	46.321	-27.679	74.000
7356.000	13.005	33.810	46.814	-27.186	74.000
9808.000	12.901	33.450	46.351	-27.649	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
11490.000	14.326	38.430	52.755	-21.245	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
11490.000	15.842	37.910	53.751	-20.249	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11570.000	14.849	37.630	52.479	-21.521	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11570.000	16.215	37.760	53.974	-20.026	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal Peak Detector:					
11650.000	13.179	37.790	50.969	-23.031	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11650.000	14.634	38.170	52.804	-21.196	74.000
Average Detector:					
--					

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 Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
Peak Detector:					
11510.000	14.402	37.630	52.032	-21.968	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
11510.000	15.894	37.870	53.764	-20.236	74.000
Average					
Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11590.000	15.138	37.830	52.968	-21.032	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11590.000	16.461	37.430	53.891	-20.109	74.000
Average Detector:					
--					

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) (5775 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal Peak Detector:					
11550.000	14.599	37.630	52.229	-21.771	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11550.000	16.007	37.840	53.847	-20.153	74.000
Average Detector:					
--					

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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
61.040	-12.057	48.472	36.415	-3.585	40.000
150.280	-7.870	47.173	39.303	-4.197	43.500
255.040	-5.409	44.544	39.135	-6.865	46.000
400.540	0.942	41.455	42.397	-3.603	46.000
699.300	2.956	30.746	33.702	-12.298	46.000
875.840	5.816	35.357	41.173	-4.827	46.000
Vertical					
62.980	-11.979	48.922	36.943	-3.057	40.000
150.280	-5.350	37.932	32.582	-10.918	43.500
338.460	-1.640	39.497	37.856	-8.144	46.000
499.480	-0.199	32.460	32.260	-13.740	46.000
709.000	-0.656	32.453	31.797	-14.203	46.000
875.840	0.516	35.213	35.729	-10.271	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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
61.040	-12.057	47.346	35.289	-4.711	40.000
146.400	-7.756	47.202	39.446	-4.054	43.500
301.600	-4.465	44.746	40.281	-5.719	46.000
398.600	0.879	41.029	41.908	-4.092	46.000
699.300	2.956	39.889	42.845	-3.155	46.000
875.840	5.816	33.631	39.447	-6.553	46.000
Vertical					
62.980	-11.979	48.862	36.883	-3.117	40.000
146.400	-5.456	38.321	32.865	-10.635	43.500
309.360	-4.043	38.134	34.091	-11.909	46.000
398.600	-2.371	36.888	34.517	-11.483	46.000
666.320	-0.951	28.243	27.292	-18.708	46.000
875.840	0.516	34.641	35.157	-10.843	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 3: Transmit - 802.11a 6Mbps (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
64.920	-12.587	49.294	36.707	-3.293	40.000
148.340	-7.806	46.021	38.215	-5.285	43.500
307.420	-4.120	46.860	42.740	-3.260	46.000
398.600	0.879	38.968	39.847	-6.153	46.000
666.320	1.879	32.696	34.575	-11.425	46.000
875.840	5.816	35.255	41.071	-4.929	46.000
Vertical					
68.800	-12.433	47.909	35.476	-4.524	40.000
111.480	-3.439	41.365	37.927	-5.573	43.500
299.660	-4.061	36.631	32.570	-13.430	46.000
600.360	1.302	32.729	34.031	-11.969	46.000
730.340	-0.821	29.447	28.626	-17.374	46.000
875.840	0.516	33.686	34.202	-11.798	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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
146.400	-7.756	44.994	37.238	-6.262	43.500
303.540	-4.068	43.780	39.712	-6.288	46.000
398.600	0.879	42.006	42.885	-3.115	46.000
699.300	2.956	34.985	37.941	-8.059	46.000
875.840	5.816	33.942	39.758	-6.242	46.000
1000.000	9.564	30.312	39.876	-14.124	54.000
Vertical					
62.980	-11.979	48.873	36.894	-3.106	40.000
150.280	-5.350	38.280	32.930	-10.570	43.500
332.640	-2.255	39.910	37.655	-8.345	46.000
499.480	-0.199	33.076	32.876	-13.124	46.000
732.280	-0.833	28.961	28.128	-17.872	46.000
875.840	0.516	34.989	35.505	-10.495	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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
146.400	-7.756	45.685	37.929	-5.571	43.500
299.660	-4.751	43.543	38.792	-7.208	46.000
398.600	0.879	40.837	41.716	-4.284	46.000
697.360	3.231	29.905	33.136	-12.864	46.000
875.840	5.816	32.881	38.697	-7.303	46.000
1000.000	9.564	29.342	38.906	-15.094	54.000
Vertical					
62.980	-11.979	48.849	36.870	-3.130	40.000
152.220	-5.306	37.686	32.380	-11.120	43.500
336.520	-1.999	37.695	35.696	-10.304	46.000
499.480	-0.199	30.875	30.675	-15.325	46.000
732.280	-0.833	29.117	28.284	-17.716	46.000
875.840	0.516	34.719	35.235	-10.765	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 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5785 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
62.980	-12.319	46.966	34.647	-5.353	40.000
154.160	-8.002	46.667	38.665	-4.835	43.500
299.660	-4.751	47.336	42.585	-3.415	46.000
398.600	0.879	40.863	41.742	-4.258	46.000
600.360	3.472	31.237	34.709	-11.291	46.000
875.840	5.816	34.607	40.423	-5.577	46.000
Vertical					
111.480	-3.439	41.001	37.563	-5.937	43.500
299.660	-4.061	35.405	31.344	-14.656	46.000
398.600	-2.371	32.704	30.333	-15.667	46.000
600.360	1.302	31.941	33.243	-12.757	46.000
732.280	-0.833	29.807	28.974	-17.026	46.000
875.840	0.516	33.567	34.083	-11.917	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	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV /m	dB	dBµV /m
Horizontal					
154.160	-8.002	46.552	38.550	-4.950	43.500
303.540	-4.068	45.950	41.882	-4.118	46.000
398.600	0.879	40.275	41.154	-4.846	46.000
666.320	1.879	32.223	34.102	-11.898	46.000
800.180	6.417	27.339	33.756	-12.244	46.000
875.840	5.816	34.827	40.643	-5.357	46.000
Vertical					
68.800	-12.433	48.775	36.342	-3.658	40.000
111.480	-3.439	40.367	36.929	-6.571	43.500
328.760	-2.407	35.067	32.660	-13.340	46.000
600.360	1.302	33.038	34.340	-11.660	46.000
796.300	2.639	28.341	30.980	-15.020	46.000
875.840	0.516	33.110	33.626	-12.374	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 8: Transmit - 802.11ac-80BW_32.5Mbps(5G Band) (5775MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV /m	dB	dBμV /m
Horizontal					
68.800	-14.673	51.245	36.572	-3.428	40.000
150.280	-7.870	47.087	39.217	-4.283	43.500
303.540	-4.068	46.601	42.533	-3.467	46.000
398.600	0.879	42.017	42.896	-3.104	46.000
732.280	3.527	31.075	34.602	-11.398	46.000
875.840	5.816	36.994	42.810	-3.190	46.000
Vertical					
68.800	-12.433	48.881	36.448	-3.552	40.000
148.340	-5.406	38.533	33.127	-10.373	43.500
336.520	-1.999	36.215	34.216	-11.784	46.000
600.360	1.302	31.809	33.111	-12.889	46.000
800.180	2.637	26.738	29.375	-16.625	46.000
875.840	0.516	36.058	36.574	-9.426	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.

4. Band Edge

4.1. Test Equipment

RF Conducted Measurement

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

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015
	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	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.

RF Radiated Measurement:

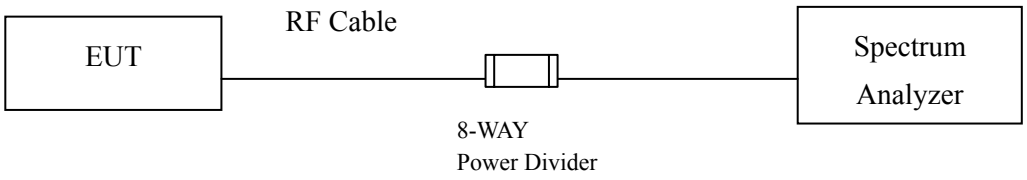
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct., 2015
	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., 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul., 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul., 2015

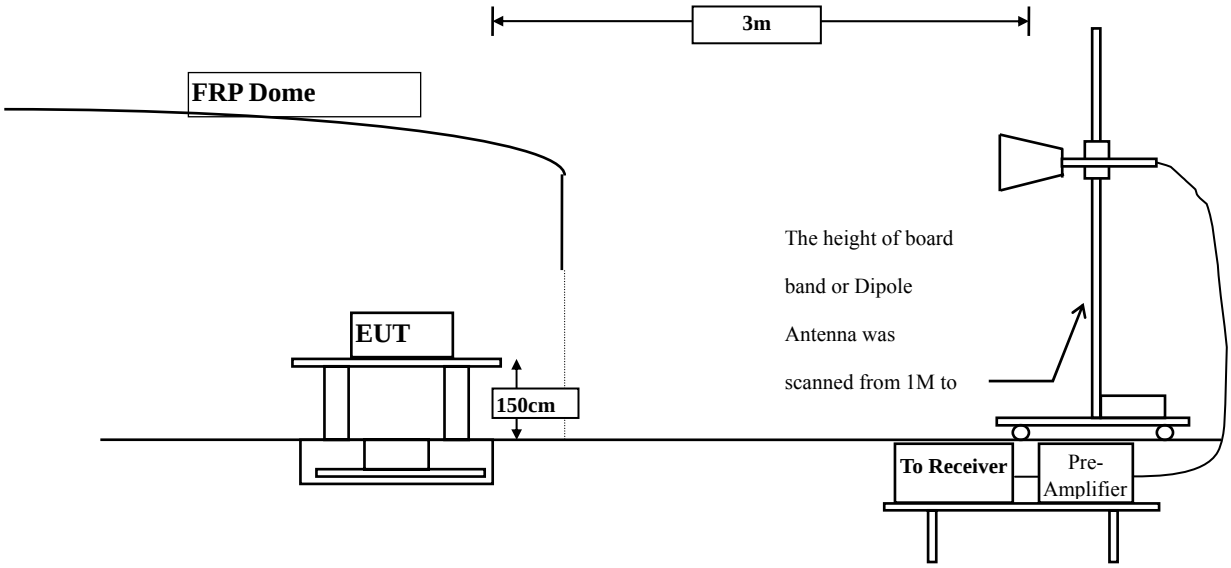
Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement



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.
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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2386.200	33.735	24.577	58.313	74.00	54.00	Pass
01 (Peak)	2390.000	33.739	23.336	57.075	74.00	54.00	Pass
01 (Peak)	2397.000	33.746	31.019	64.766	--	--	--
01 (Peak)	2400.000	33.752	26.814	60.565	--	--	--
01 (Peak)	2410.600	33.769	66.593	100.362	--	--	--
01 (Average)	2390.000	33.739	12.115	45.854	74.00	54.00	Pass
01 (Average)	2397.200	33.747	24.047	57.794	--	--	--
01 (Average)	2400.000	33.752	18.395	52.146	--	--	--
01 (Average)	2409.400	33.767	62.455	96.222	--	--	--

Figure Channel 01: Horizontal (Peak)

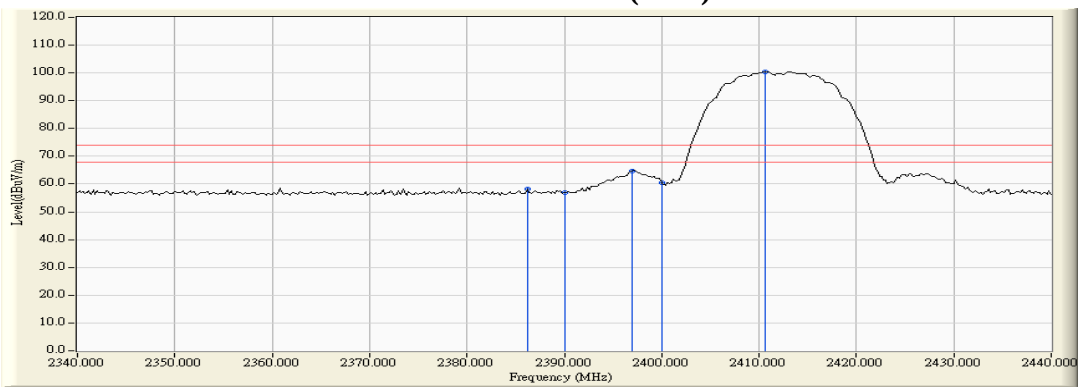
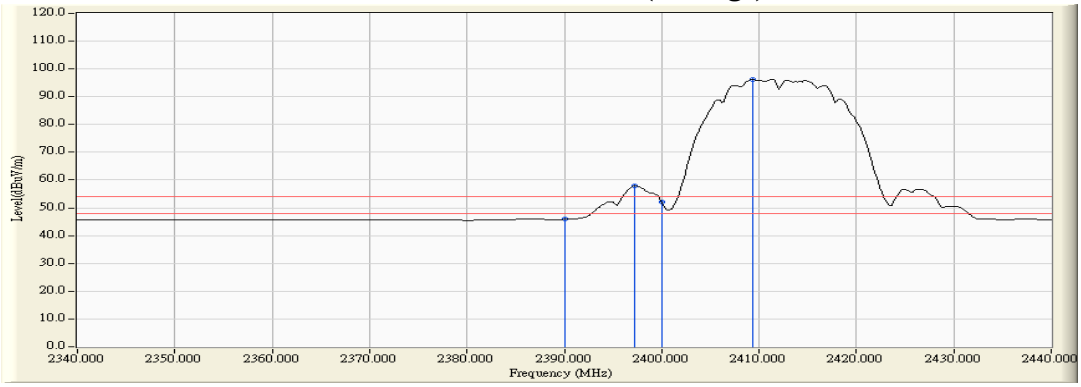


Figure Channel 01: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2377.200	32.357	24.476	56.832	74.00	54.00	Pass
01 (Peak)	2390.000	32.267	23.751	56.018	74.00	54.00	Pass
01 (Peak)	2396.800	32.239	31.019	63.259	--	--	--
01 (Peak)	2400.000	32.241	26.416	58.657	--	--	--
01 (Peak)	2411.000	32.244	66.547	98.791	--	--	--
01 (Average)	2390.000	32.267	12.115	44.382	74.00	54.00	Pass
01 (Average)	2397.200	32.240	23.952	56.192	--	--	--
01 (Average)	2400.000	32.241	18.308	50.549	--	--	--
01 (Average)	2409.400	32.245	62.413	94.657	--	--	--

Figure Channel 01: Vertical (Peak)

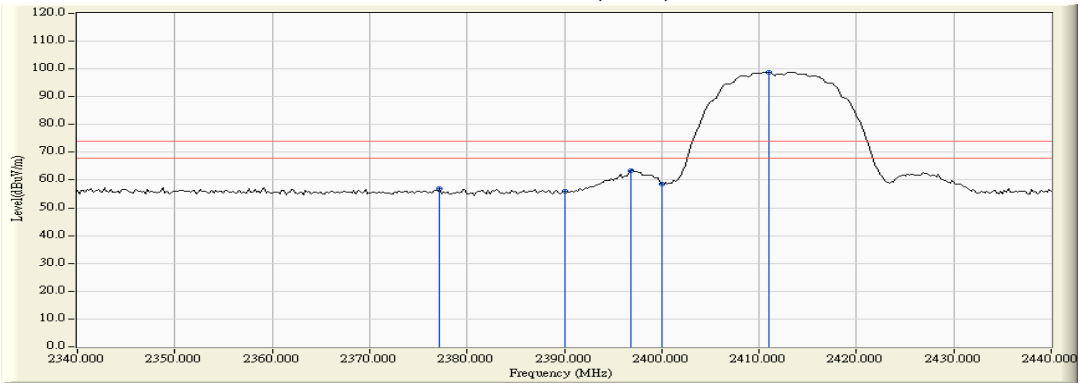
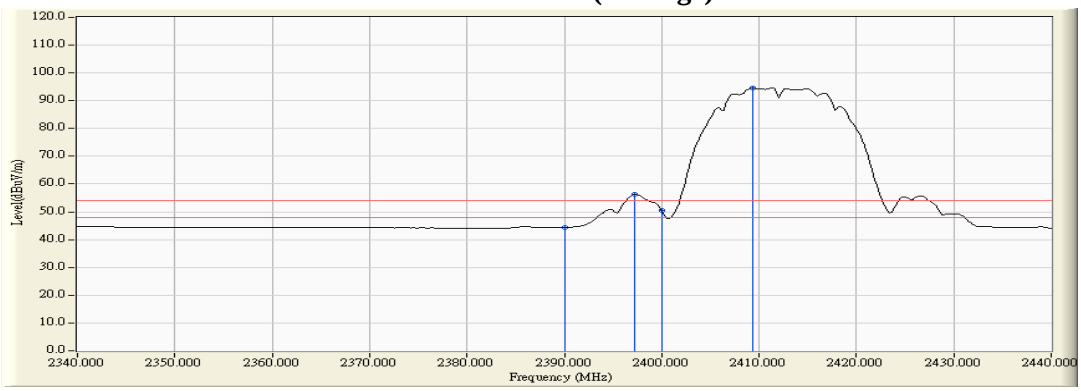


Figure Channel 01: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2463.100	33.895	67.570	101.465	--	--	--
11 (Peak)	2483.500	33.951	24.246	58.196	74.00	54.00	Pass
11 (Average)	2461.300	33.890	63.351	97.242	--	--	--
11 (Average)	2483.500	33.951	13.358	47.308	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

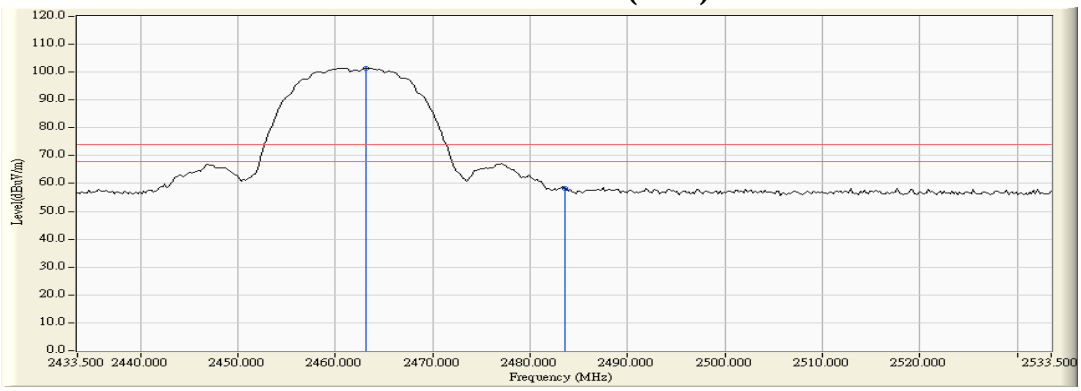
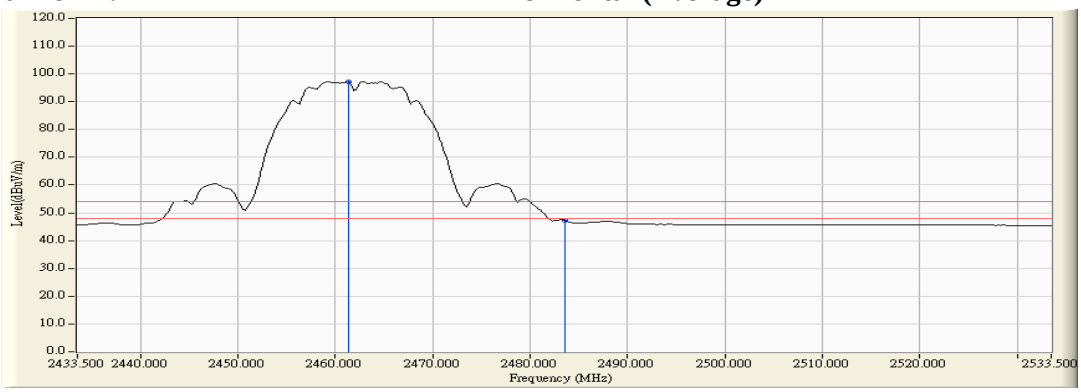


Figure Channel 11: Horizontal (Average)



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 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2462.900	32.485	67.747	100.232	--	--	--
11 (Peak)	2483.500	32.586	23.719	56.304	74.00	54.00	Pass
11 (Peak)	2492.500	32.629	24.870	57.499	74.00	54.00	Pass
11 (Average)	2459.300	32.468	63.619	96.086	--	--	--
11 (Average)	2483.500	32.586	12.888	45.473	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

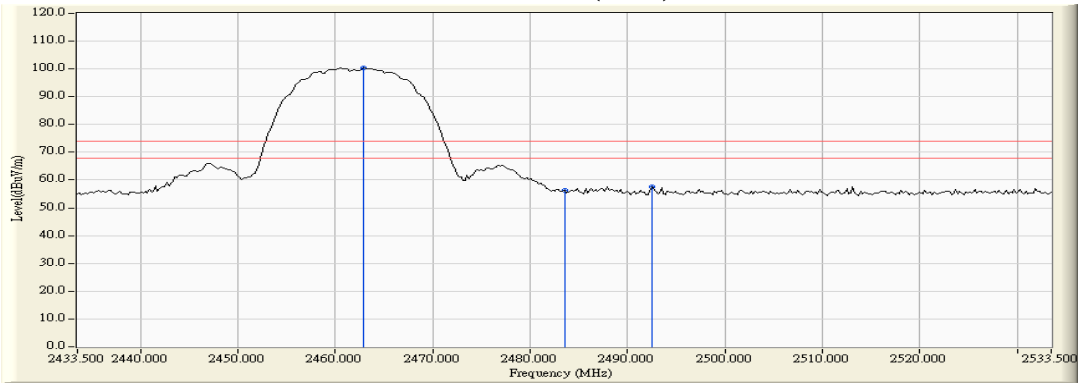
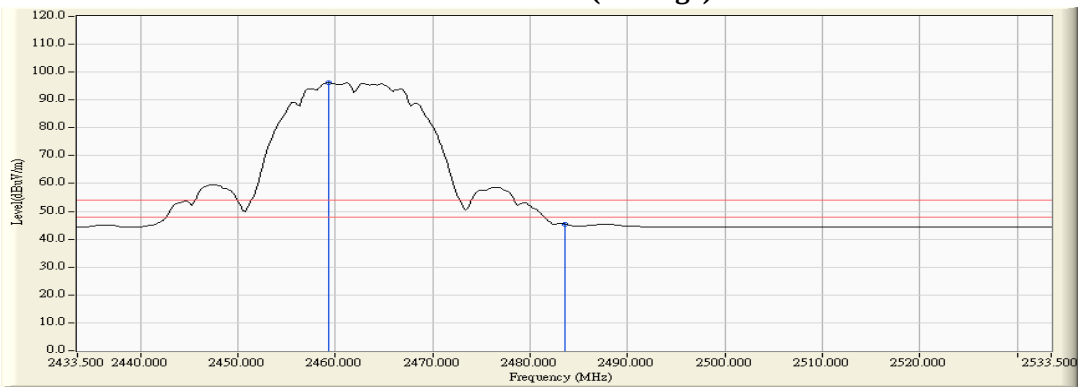


Figure Channel 11: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2367.600	33.721	25.597	59.318	74.00	54.00	Pass
01 (Peak)	2390.000	33.739	24.432	58.171	74.00	54.00	Pass
01 (Peak)	2400.000	33.752	43.753	77.504	--	--	--
01 (Peak)	2417.600	33.785	66.491	100.276	--	--	--
01 (Average)	2390.000	33.739	13.143	46.882	74.00	54.00	Pass
01 (Average)	2400.000	33.752	24.341	58.092	--	--	--
01 (Average)	2408.600	33.766	56.481	90.246	--	--	--

Figure Channel 01: Horizontal (Peak)

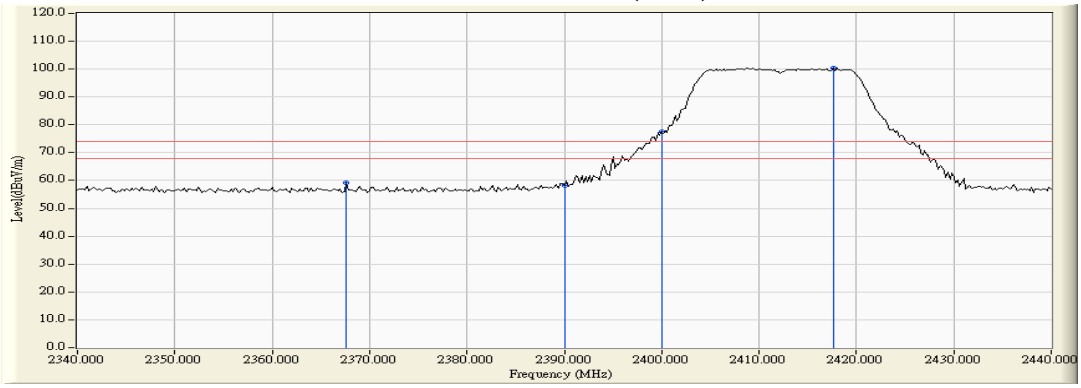
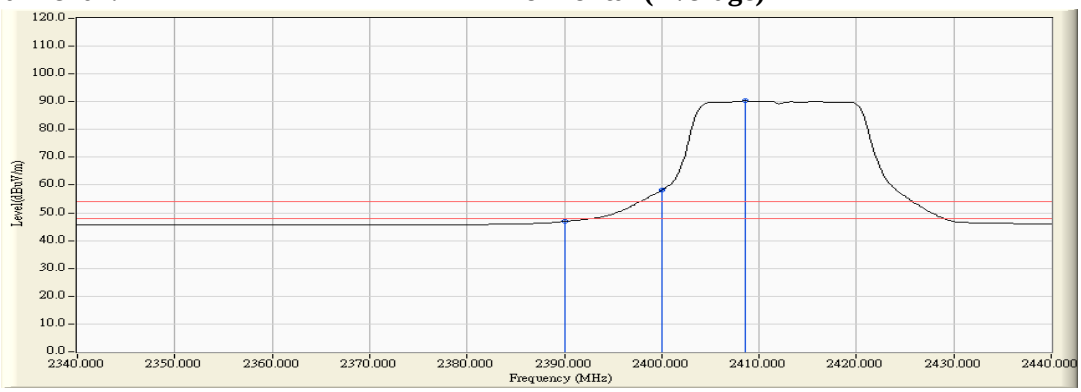


Figure Channel 01: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2389.600	32.270	26.822	59.092	74.00	54.00	Pass
01 (Peak)	2390.000	32.267	25.413	57.680	74.00	54.00	Pass
01 (Peak)	2400.000	32.241	44.312	76.553	--	--	--
01 (Peak)	2416.400	32.269	67.606	99.875	--	--	--
01 (Average)	2390.000	32.267	13.323	45.590	74.00	54.00	Pass
01 (Average)	2400.000	32.241	24.453	56.694	--	--	--
01 (Average)	2419.200	32.282	56.801	89.082	--	--	--

Figure Channel 01: Vertical (Peak)

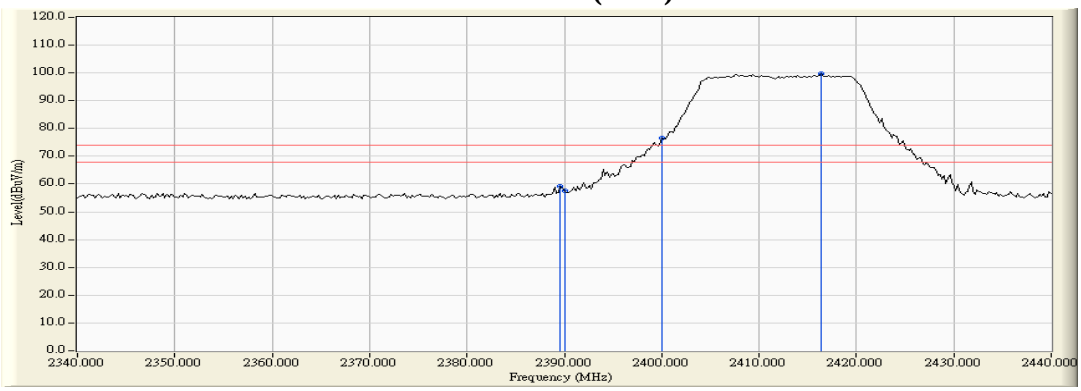
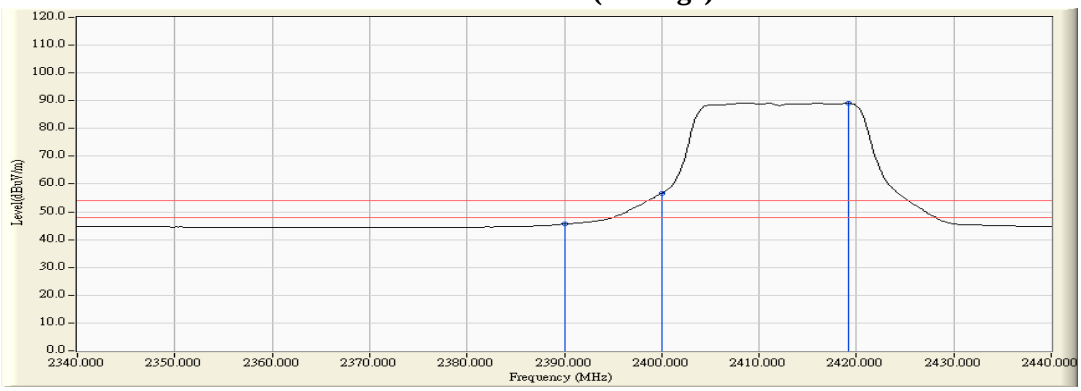


Figure Channel 01: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2459.900	33.887	67.849	101.736	--	--	--
11 (Peak)	2483.500	33.951	25.877	59.827	74.00	54.00	Pass
11 (Average)	2458.300	33.883	57.208	91.091	--	--	--
11 (Average)	2483.500	33.951	13.685	47.635	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

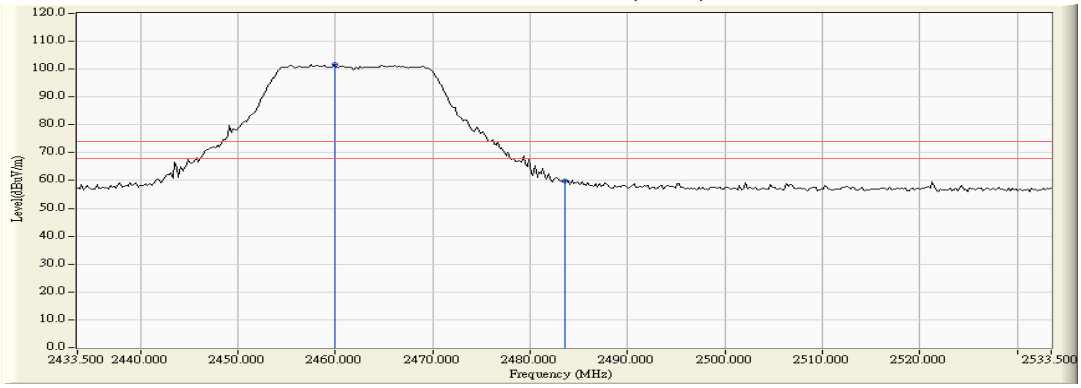
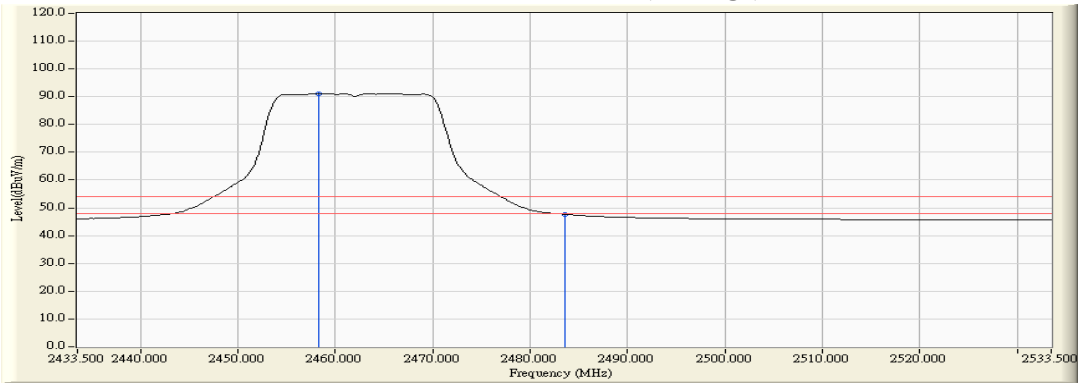


Figure Channel 11: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2465.700	32.498	69.004	101.502	--	--	--
11 (Peak)	2483.500	32.586	25.634	58.219	74.00	54.00	Pass
11 (Peak)	2483.900	32.587	27.709	60.296	74.00	54.00	Pass
11 (Average)	2458.100	32.462	57.543	90.005	--	--	--
11 (Average)	2483.500	32.586	13.501	46.086	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

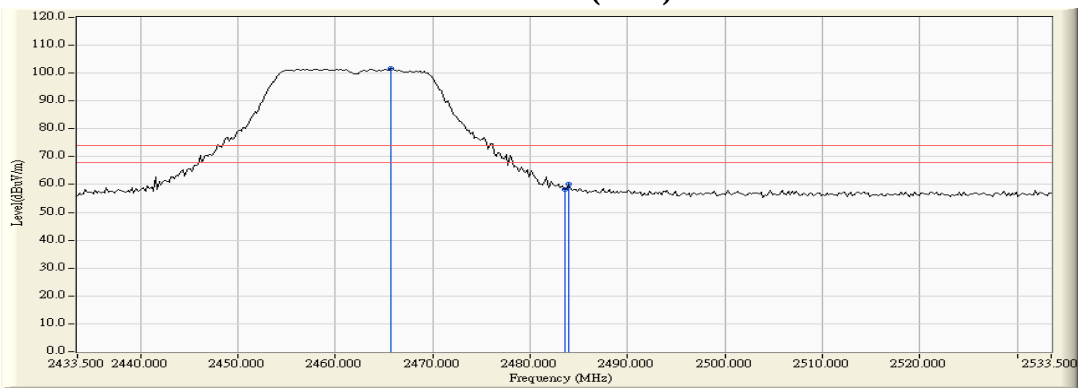
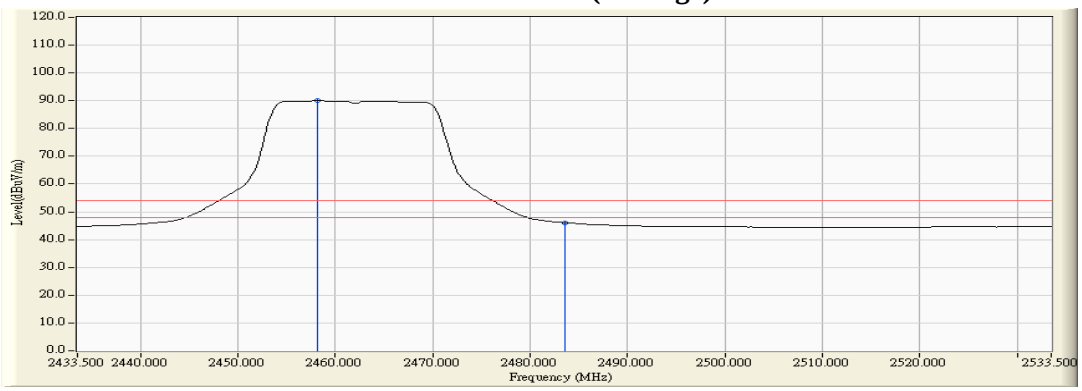


Figure Channel 11: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2390.000	33.739	28.378	62.117	74.00	54.00	Pass
01 (Peak)	2400.000	33.752	45.697	79.448	--	--	--
01 (Peak)	2409.400	33.767	66.794	100.561	--	--	--
01 (Average)	2390.000	33.739	13.679	47.418	74.00	54.00	Pass
01 (Average)	2400.000	33.752	25.031	58.782	--	--	--
01 (Average)	2409.000	33.766	56.245	90.011	--	--	--

Figure Channel 01: Horizontal (Peak)

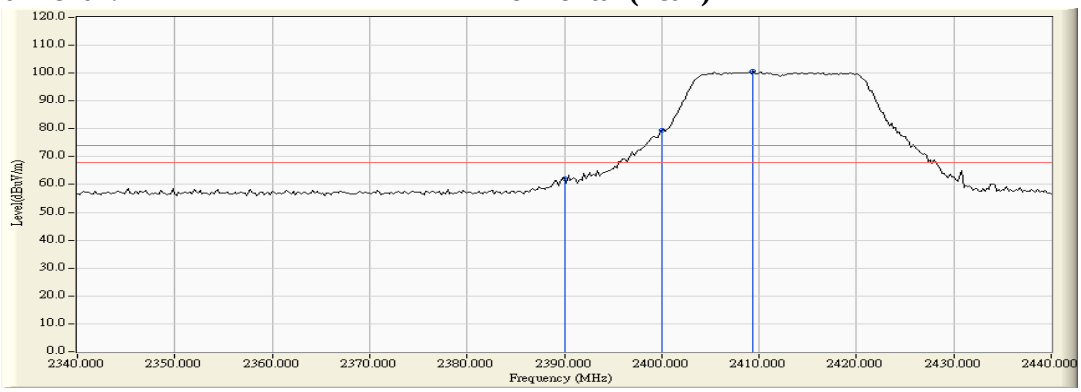
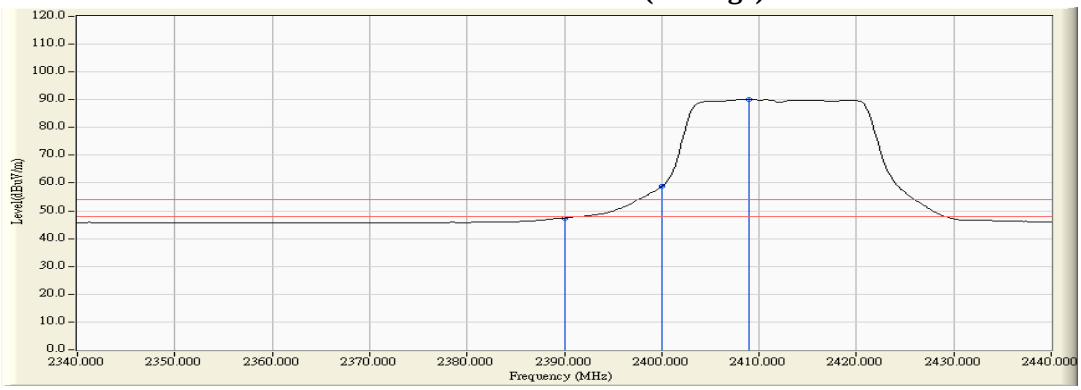


Figure Channel 01: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
01 (Peak)	2390.000	32.267	27.495	59.762	74.00	54.00	Pass
01 (Peak)	2400.000	32.241	44.900	77.141	--	--	--
01 (Peak)	2410.400	32.244	68.110	100.354	--	--	--
01 (Average)	2390.000	32.267	13.856	46.123	74.00	54.00	Pass
01 (Average)	2400.000	32.241	25.310	57.551	--	--	--
01 (Average)	2419.200	32.282	56.544	88.825	--	--	--

Figure Channel 01: Vertical (Peak)

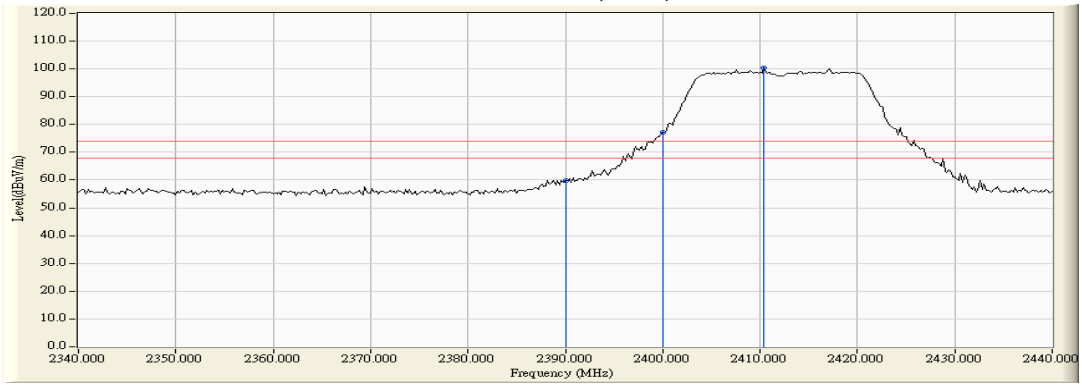
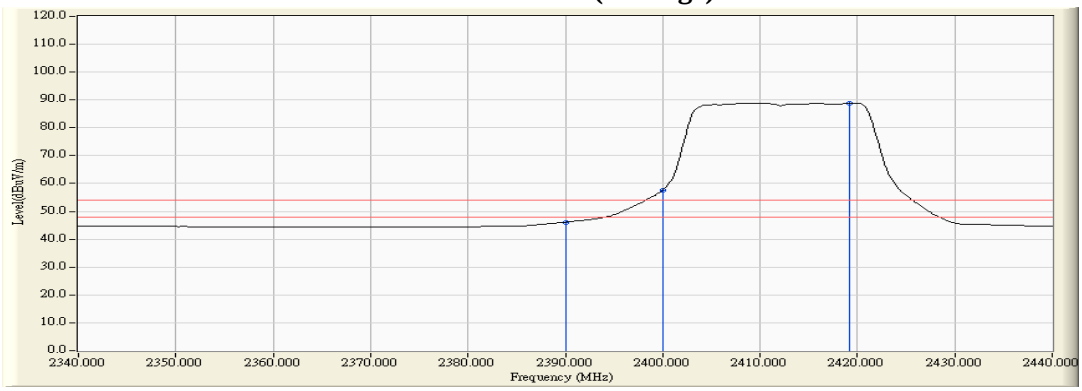


Figure Channel 01: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2457.700	33.881	67.893	101.775	--	--	--
11 (Peak)	2483.500	33.951	27.209	61.159	74.00	54.00	Pass
11 (Peak)	2484.700	33.954	28.694	62.647	74.00	54.00	Pass
11 (Average)	2458.100	33.883	56.900	90.783	--	--	--
11 (Average)	2483.500	33.951	14.254	48.204	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

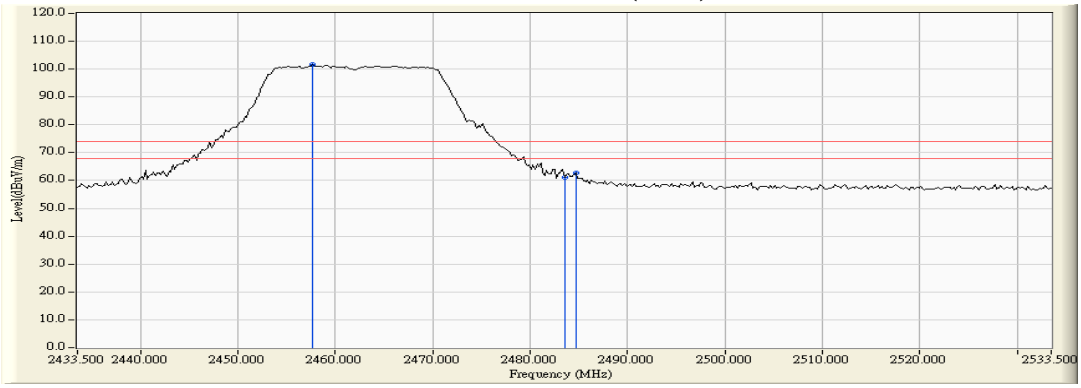
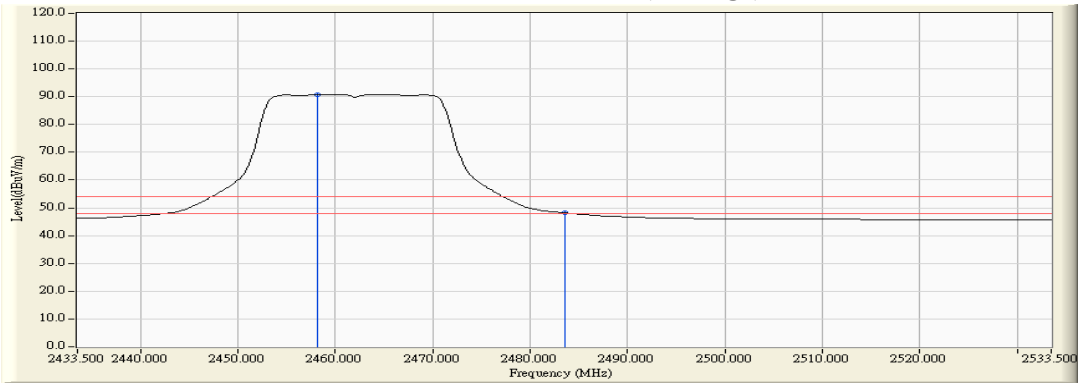


Figure Channel 11: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
11 (Peak)	2460.300	32.472	68.582	101.054	--	--	--
11 (Peak)	2483.500	32.586	27.190	59.775	74.00	54.00	Pass
11 (Peak)	2483.700	32.586	29.750	62.336	74.00	54.00	Pass
11 (Average)	2457.900	32.460	57.258	89.719	--	--	--
11 (Average)	2483.500	32.586	13.884	46.469	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

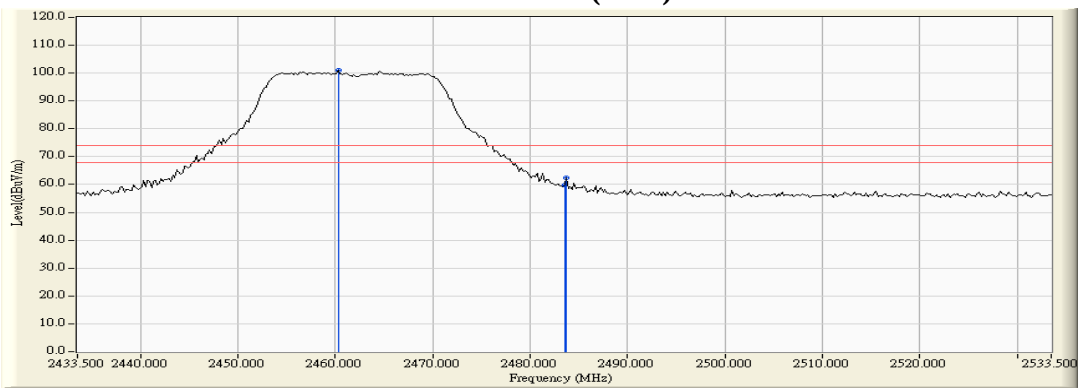
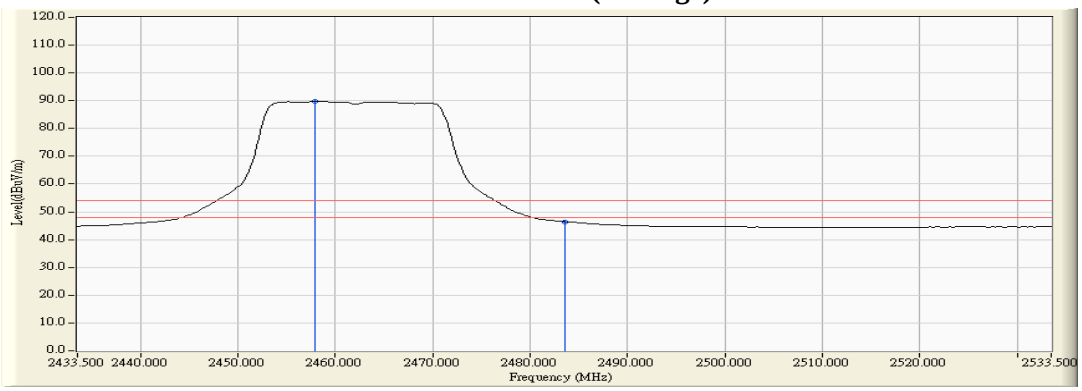


Figure Channel 11: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
03 (Peak)	2389.800	33.738	26.803	60.542	74.00	54.00	Pass
03 (Peak)	2390.000	33.739	24.773	58.512	74.00	54.00	Pass
03 (Peak)	2400.000	33.752	37.576	71.327	--	--	--
03 (Peak)	2425.800	33.805	63.120	96.925	--	--	--
03 (Average)	2390.000	33.739	13.240	46.979	74.00	54.00	Pass
03 (Average)	2400.000	33.752	21.992	55.743	--	--	--
03 (Average)	2418.600	33.788	51.705	85.493	--	--	--

Figure Channel 03: Horizontal (Peak)

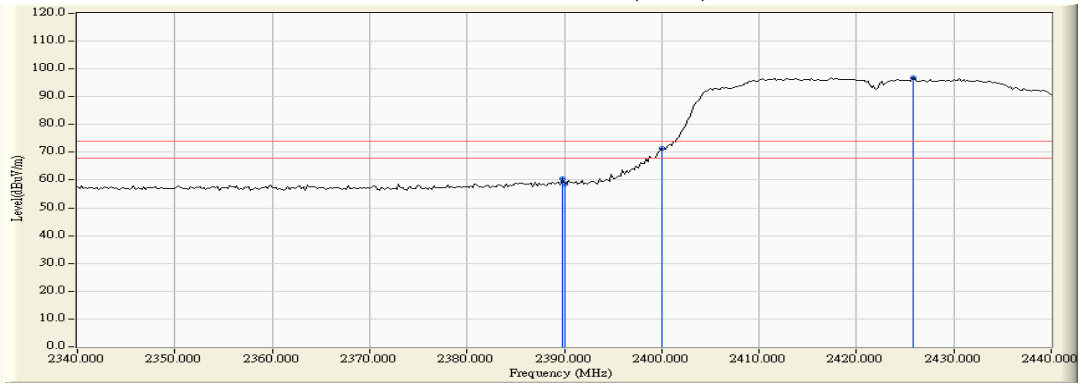
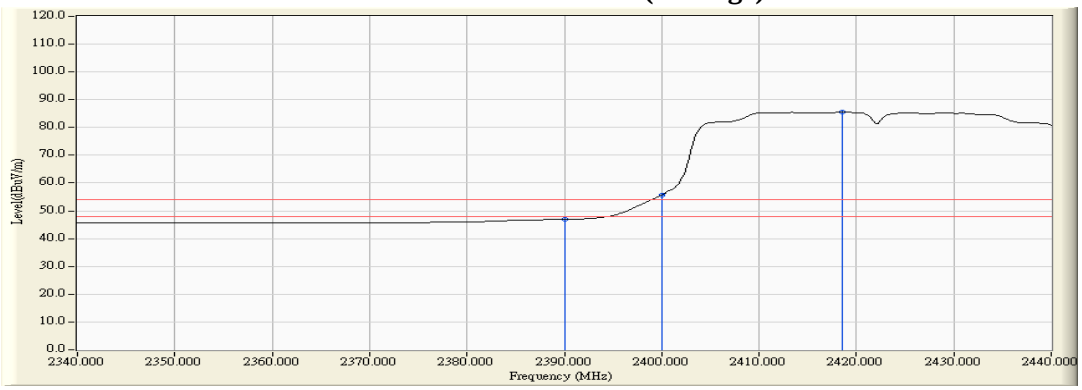


Figure Channel 03: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
03 (Peak)	2389.200	32.273	26.986	59.258	74.00	54.00	Pass
03 (Peak)	2390.000	32.267	25.512	57.779	74.00	54.00	Pass
03 (Peak)	2400.000	32.241	36.693	68.934	--	--	--
03 (Peak)	2430.600	32.333	63.544	95.877	--	--	--
03 (Average)	2390.000	32.267	13.437	45.704	74.00	54.00	Pass
03 (Average)	2400.000	32.241	22.293	54.534	--	--	--
03 (Average)	2419.200	32.282	52.305	84.586	--	--	--

Figure Channel 03: Vertical (Peak)

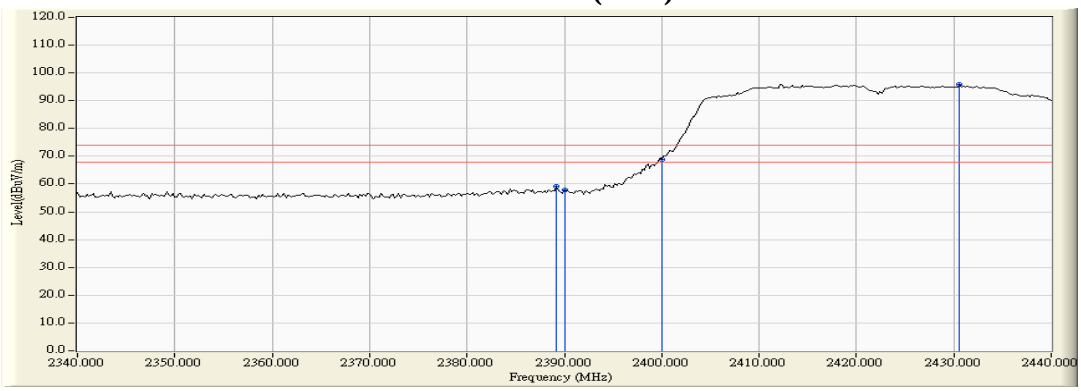
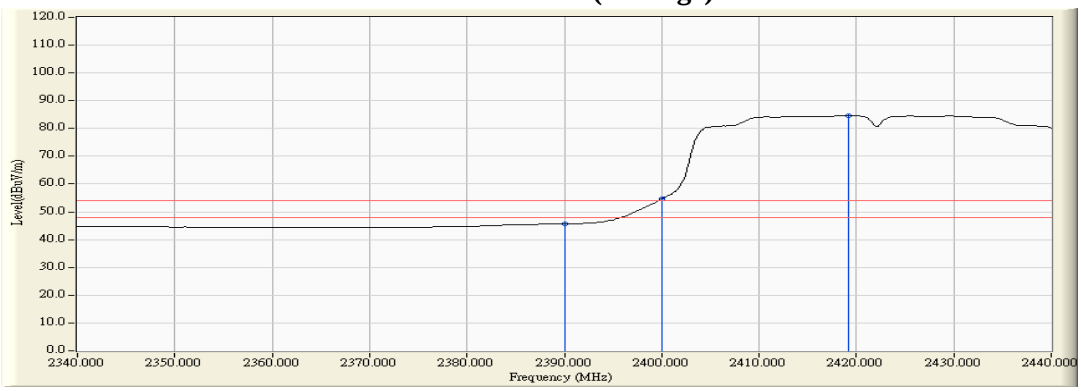


Figure Channel 03: Vertical (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
09 (Peak)	2454.500	33.874	65.462	99.336	--	--	--
09 (Peak)	2483.500	33.951	27.578	61.528	74.00	54.00	Pass
09 (Average)	2459.300	33.886	54.053	87.939	--	--	--
09 (Average)	2483.500	33.951	14.572	48.522	74.00	54.00	Pass

Figure Channel 09: Horizontal (Peak)

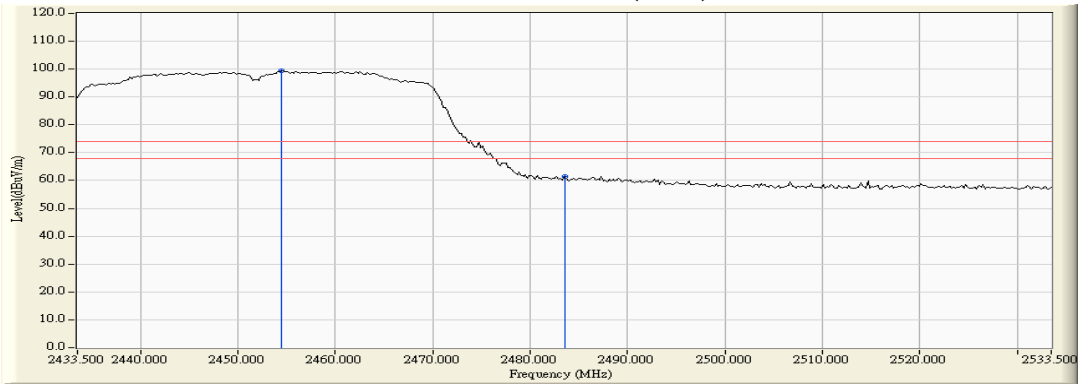
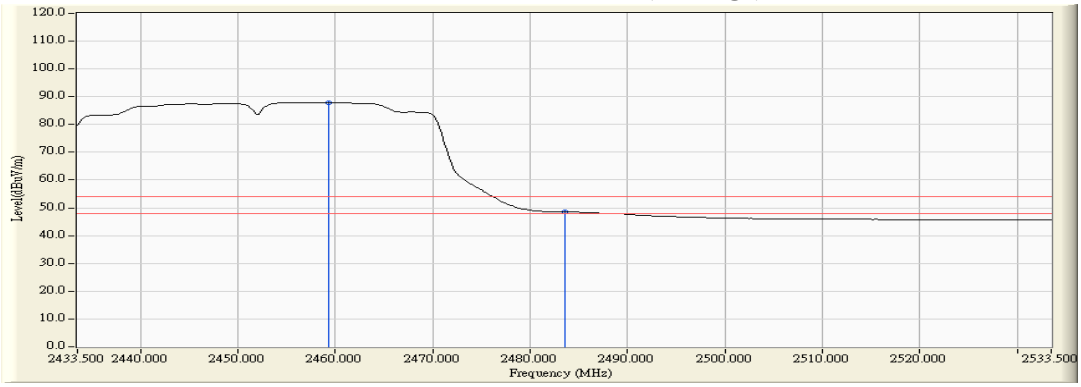


Figure Channel 09: Horizontal (Average)



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 (dBμV)	Emission Level (dBμV /m)	Peak Limit (dBμV /m)	Arerage Limit (dBμV /m)	Result
09 (Peak)	2455.900	32.451	65.838	98.289	--	--	--
09 (Peak)	2483.500	32.586	25.596	58.181	74.00	54.00	Pass
09 (Peak)	2484.500	32.590	26.323	58.913	74.00	54.00	Pass
09 (Average)	2455.300	32.449	54.456	86.904	--	--	--
09 (Average)	2483.500	32.586	14.093	46.678	74.00	54.00	Pass

Figure Channel 09: Vertical (Peak)

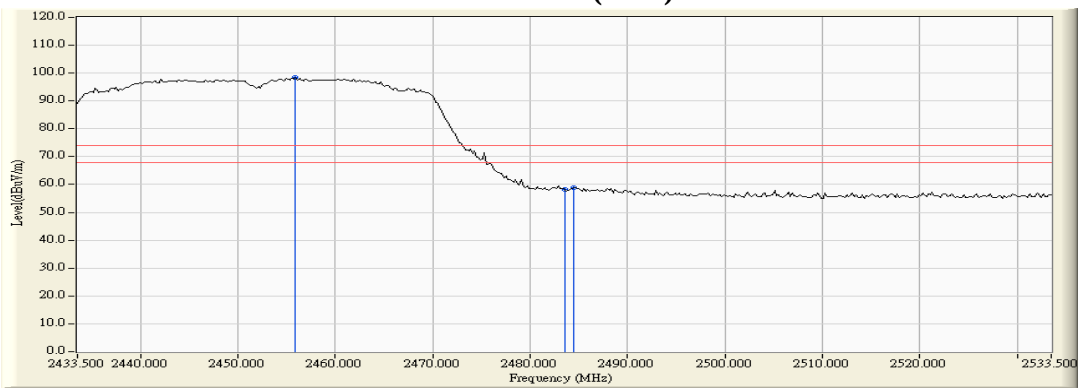
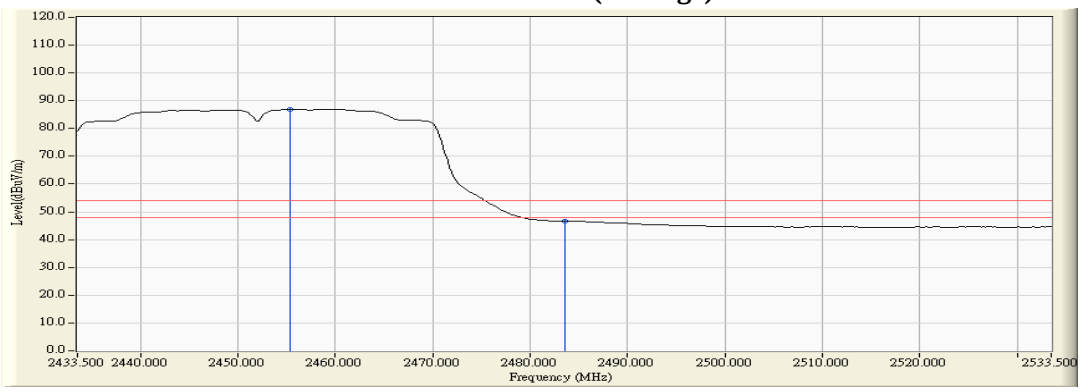


Figure Channel 09: Vertical (Average)



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. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs